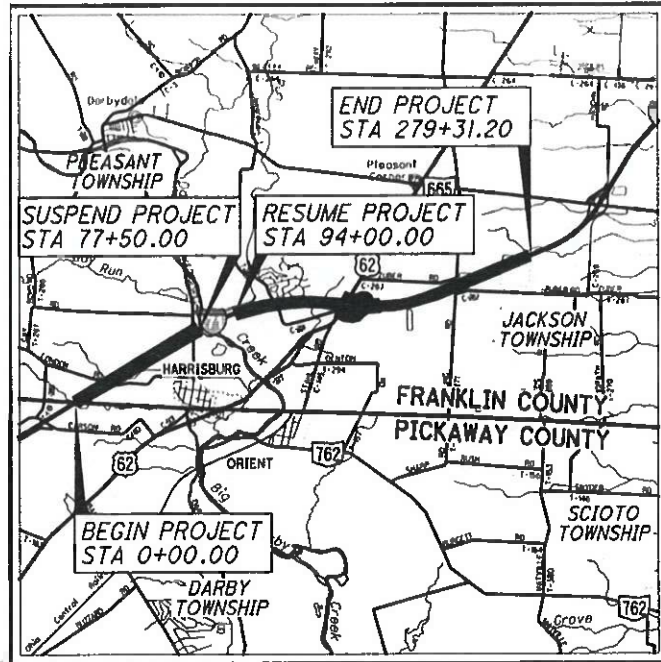


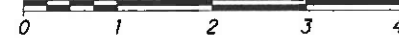
FRA - IR 71 - 0.00 (PIC)
 200389 PID - 107201
 Dist 06 08/13/2020



LOCATION MAP

LATITUDE: 39°49'30" LONGITUDE: 83°09'00"

SCALE IN MILES



PORTION TO BE IMPROVED	-----
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	-----
STATE ROUTES	-----
COUNTY & TOWNSHIP ROADS	-----
OTHER ROADS	-----

DESIGN DESIGNATION AND DESIGN EXCEPTIONS

SEE SHEET 2



PLAN PREPARED BY:

Mead & Hunt
 4700 LAKEHURST CT, STE 110
 COLUMBUS, OH 43018
 (614) 792-5900 PHONE

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

FRA-71-0.00 (PIC)

(DARBY TOWNSHIP)
 JACKSON TOWNSHIP
 PLEASANT TOWNSHIP
 FRANKLIN COUNTY
 (PICKAWAY COUNTY)

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TRAFFIC CONTROL	1031-1100		

PROJECT DESCRIPTION

THIS PROJECT WILL CONSIST OF WIDENING 4.98 MILES OF I-71 FROM THE FRANKLIN/PICKAWAY COUNTY LINE NORTH TO JUST SOUTH OF THE I-71 AND SR 665 INTERCHANGE. THE PROJECT INCLUDES ADDING A THIRD LANE TO THE MEDIAN SIDE IN BOTH DIRECTIONS, REPLACING TWIN SUPERSTRUCTURES OVER THE INDIANA & OHIO RAILWAY COMPANY RAILROAD TRACKS AND US 62, AND ASSOCIATED ROADWAY, SIGNING AND DRAINAGE IMPROVEMENTS. THE PROJECT ALSO INCLUDES RECONSTRUCTION OF ALL THE RAMPS AT THE US 62 INTERCHANGE. THE PROJECT DOES NOT INCLUDE 0.31 MILE OF PREVIOUSLY CONSTRUCTED IMPROVEMENTS AT THE BIG DARBY CREEK.

PROJECT EARTH DISTURBED AREA: 139 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 14 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: 153 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ENGINEERS SEAL:

STRUCTURES

 SIGNED: Balasubramanian V.
 DATE: 4/9/2020

ENGINEERS SEAL:

ROADWAY

 SIGNED: Daniel C. Barnhart
 DATE: 4/9/2020

ENGINEERS SEAL:

MOT AND LIGHTING

 SIGNED: Shawn M. McPherson
 DATE: 4/9/2020

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS			
BP-1.1	7/28/00	DM-1.1	7/21/17	MGS-5.2	7/15/16	HL-10.11	7/19/19	MT-95.30	7/19/19	MT-100.00	1/15/16	TC-41.50	10/18/13	800-2019	4/17/20
BP-2.1	7/17/15	DM-1.2	1/18/13	MGS-5.3	7/15/16	HL-10.12	1/20/17	MT-95.40	1/17/20	MT-101.60	1/17/20	TC-42.10	10/18/13	808	1/18/19
BP-2.2	7/18/08	DM-4.1	7/20/18	MGS-6.1	1/19/18	HL-10.13	1/17/20	MT-95.45	1/17/20	MT-101.70	1/17/20	TC-42.20	10/18/13	813	10/19/18
BP-2.3	7/18/14	DM-4.2	7/20/12	MGS-6.2	7/19/19	HL-10.31	1/19/18	MT-95.70	1/17/20	MT-101.75	1/17/20	TC-51.11	1/15/16	821	4/20/12
BP-3.1	1/17/20	DM-4.3	1/15/16			HL-20.11	4/21/17	MT-95.71	1/17/20	MT-101.80	1/17/20	TC-52.10	10/18/13	832	10/19/18
BP-5.1	1/18/19	DM-4.4	1/15/16	RM-1.1	7/18/14	HL-20.21	1/19/18	MT-95.72	1/17/20	MT-101.90	7/21/17	TC-52.20	7/20/18	833	7/19/19
BP-6.1	7/19/13			RM-4.3	7/18/14	HL-30.11	7/19/19	MT-95.82	7/19/13	MT-102.10	1/17/20	TC-61.10	1/17/20	839	1/17/20
BP-9.1	1/18/19	F-2.1	7/20/18	RM-4.5	7/21/17	HL-30.21	1/17/14	MT-98.10	1/17/20	MT-102.20	4/19/19	TC-64.10	1/17/20	841	1/15/16
		F-3.1	7/19/13	RM-4.6	7/19/13	HL-30.22	1/17/14	MT-98.11	1/17/20	MT-102.30	10/16/15	TC-65.10	1/17/14	875	1/18/19
CB-2.1	7/20/18	F-3.3	7/19/13			HL-30.31	1/17/20	MT-98.20	4/19/19	MT-103.10	1/19/18	TC-65.11	7/21/17	878	1/17/20
CB-2.2	7/20/18	F-3.4	7/19/13	AS-1-15	7/17/15	HL-30.32	1/17/20	MT-98.21	1/17/20	MT-104.10	10/16/15	TC-71.10	1/19/18	908	10/20/17
CB-2.3	1/15/16			AS-2-15	1/18/19	HL-40.20	1/17/20	MT-98.22	1/17/20	MT-105.10	1/17/20	TC-72.20	7/20/18	913	4/21/17
CB-3.2	1/15/16	MGS-1.1	1/19/18	GSD-1-19	1/18/19	HL-50.21	1/18/19	MT-98.28	1/17/20			TC-73.20	1/17/20	921	4/20/12
CB-3.3	1/15/16	MGS-2.1	1/19/18	PCB-91	1/18/13	HL-60.11	7/21/17	MT-98.29	1/17/20	TC-12.30	1/19/18			939	1/17/20
CB-3.4	1/15/16	MGS-3.1	1/19/18	SBR-1-13	7/20/18	HL-60.12	7/15/16	MT-98.30	7/19/19	TC-21.20	7/20/18				
I-2.2	7/19/19	MGS-3.2	1/18/13	SICD-1-96	7/18/14	HL-60.21	7/20/18	MT-99.20	4/19/19	TC-41.10	7/19/13				
		MGS-4.2	7/19/13	SICD-2-14	7/18/14	HL-60.31	1/17/20	MT-99.30	1/17/20	TC-41.20	10/18/13				
MH-1.2	1/15/16	MGS-4.3	1/18/13	VFF-1-90	7/20/18			MT-99.60	7/15/16	TC-41.30	10/18/13				

SPECIAL PROVISIONS

ICRY PPM APRIL 2019
 S&W Track Monitoring 01/16

APPROVED DATE 4/16/2020 DISTRICT DEPUTY DIRECTOR

APPROVED DATE 4/16/2020 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E180 (796)

PID NO. 107201

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00

Contract Proposal available @ www.contracts.dot.state.oh.us/home

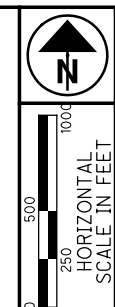
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DESIGN DESIGNATION

	SOUTH OF US 62	NORTH OF US 62	NORTH OF YOUNG RD.
CURRENT ADT (2017)	44,670	55,010	55,010
DESIGN YEAR ADT (2037)	64,070	73,810	73,810
DESIGN HOURLY VOLUME (2037)	6,170	7,110	7,110
DIRECTIONAL DISTRIBUTION	55%	53%	53%
TRUCKS (24 HOUR B&C)	30%	25%	25%
T _b	18%	15%	15%
DESIGN SPEED	75 MPH	75 MPH	70 MPH
LEGAL SPEED	70 MPH	70 MPH	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION: RURAL INTERSTATE			
NHS PROJECT	YES	YES	YES

DESIGN EXCEPTIONS

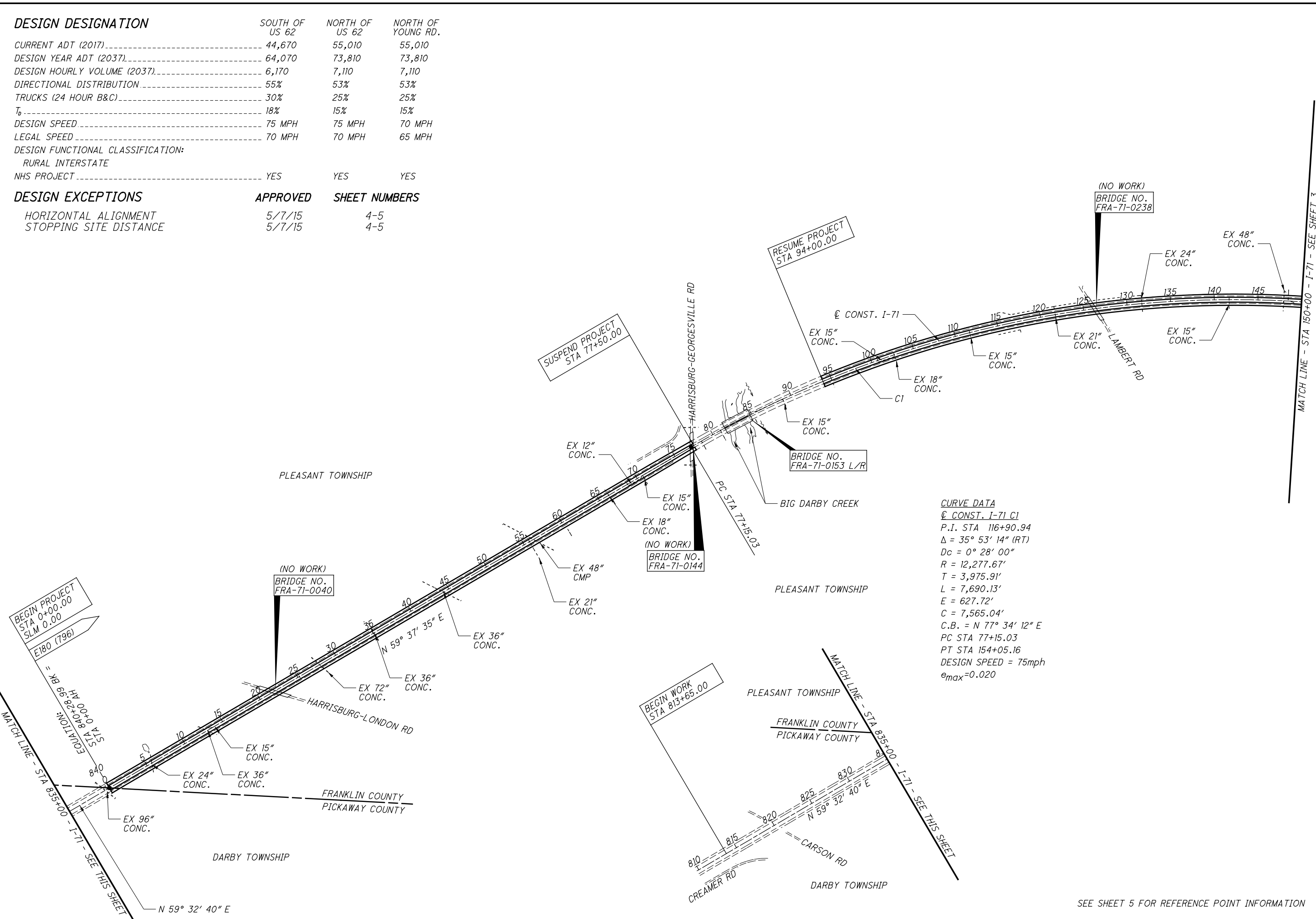
	APPROVED	SHEET NUMBERS
HORIZONTAL ALIGNMENT	5/7/15	4-5
STOPPING SITE DISTANCE	5/7/15	4-5



SCHEMATIC PLAN

FRA-71-0.00

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CURVE DATA
 @ CONST. I-71 C1
 P.I. STA 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 C.B. = N 77° 34' 12" E
 PC STA 77+15.03
 PT STA 154+05.16
 DESIGN SPEED = 75mph
 $e_{max} = 0.020$

SEE SHEET 5 FOR REFERENCE POINT INFORMATION

FOR RAMP DETAILS, SEE NEXT SHEET
SEE SHEET 5 FOR REFERENCE POINT INFORMATION

CURVE DATA

CONST. I-71 C1
P.I. STA 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
C.B. = N $77^\circ 34' 12''$ E
PC STA 77+15.03
PT STA 154+05.16
DESIGN SPEED = 75mph
 $e_{max} = 0.020$

CURVE DATA
CONST. I-71 C3
P.I. STA 305+11.40
 $\Delta = 36^\circ 28' 21''$ (LT)
 $D_c = 1^\circ 00' 01''$
 $R = 5,727.20'$
 $T = 1,887.03'$
 $L = 3,645.74'$
 $E = 302.87'$
 $C = 3,584.50'$
C.B. = N $49^\circ 24' 36''$ E
PC STA 286+24.38
PT STA 322+70.12
DESIGN SPEED = 70mph
 $e_{max} = 0.036$

CURVE DATA

CONST. I-71 C2
P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N $81^\circ 34' 48''$ E
PC STA 173+32.50
PT STA 215+12.62
DESIGN SPEED = 75mph
 $e_{max} = 0.028$

* STA 158+17.14 @ R/W & CONST. I-71 =
STA 3067+45.16 @ IORY RR (MP 58.096)

STA 164+39.36 @ R/W & CONST. I-71 =
STA 91+46.77 @ HARRISBURG PIKE (US 62)

POWER LINE SAFETY REGULATIONS

THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH AEP AND SHALL FOLLOW AEP, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), NATIONAL ELECTRICAL SAFETY CODE (NEC) REGULATIONS CONCERNING POWER LINE CLEARANCES FOR PERSONNEL AND EQUIPMENT

COORDINATION WITH UTILITIES

IT IS ANTICIPATED THAT PILE DRIVING OPERATIONS WILL ENCRoACH THE NESC CLEARANCE ZONE FOR PERSONNEL AND EQUIPMENT. THE PILE DRIVING AT PIER 3 OF BRIDGES FRA-71-0308 L/R WILL ENCRoACH THE NESC CLEARANCE WITH OHIO POWER DISTRIBUTION'S 13.2 KV LINES. THE PILE DRIVING AT THE REAR ABUTMENT OF BRIDGES FRA-71-0296 L/R WILL ENCRoACH THE NESC CLEARANCE WITH OHIO POWER DISTRIBUTION'S 13.2 KV LINES AND AEP TRANSMISSION'S 69.2 KV LINES. OHIO POWER-DISTRIBUTION AND AEP TRANSMISSION ARE ABLE DE-ENERGIZE THEIR LINES GIVEN THE APPROPRIATE COORDINATION WITH THE CONTRACTOR. HOWEVER, ADVANCE COORDINATION IS REQUIRED. DUE TO THE PROPOSED MOT SCHEME, PILE DRIVING AT FRA-71-0296 L/R WILL OCCUR DURING MOT PHASE 1, 2, AND 3. PILE DRIVING AT FRA-71-0308 L/R WILL OCCUR DURING MOT PHASE 1 AND 3.

OHIO POWER-DISTRIBUTION WILL BE ABLE TO DE-ENERGIZE THEIR LINES IN CONFLICT. HOWEVER, LINES CAN ONLY BE DE-ENERGIZED AT ONE BRIDGE AT ANY GIVEN TIME. THE DE-ENERGIZED LINE MUST BE RE-ENERGIZED BEFORE THE LINE AT THE NEXT BRIDGE IS DE-ENERGIZED. OHIO POWER-DISTRIBUTION WILL HAVE THE REQUIRED EQUIPMENT INSTALLED BY MARCH 15, 2021. THE CONTRACTOR SHOULD NOT PLAN TO HAVE THE LINES DE-ENERGIZED BEFORE THIS DATE. COORDINATION WILL BE WITH:

COORDINATION WITH UTILITIES (CONTINUED)

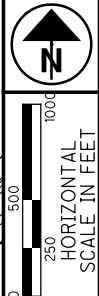
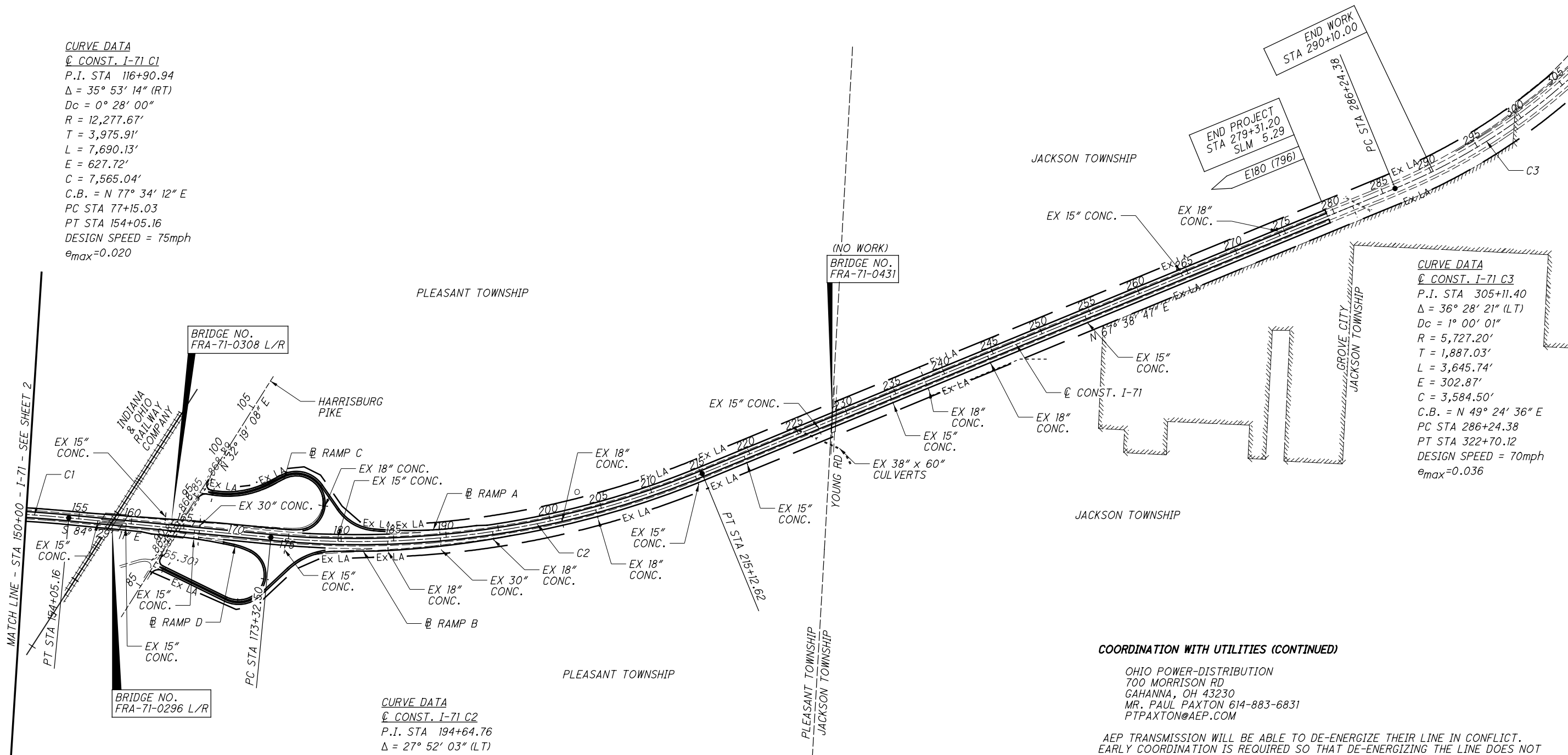
OHIO POWER-DISTRIBUTION
700 MORRISON RD
GAHANNA, OH 43230
MR. PAUL PAXTON 614-883-6831
PTPAXTON@AEP.COM

AEP TRANSMISSION WILL BE ABLE TO DE-ENERGIZE THEIR LINE IN CONFLICT. EARLY COORDINATION IS REQUIRED SO THAT DE-ENERGIZING THE LINE DOES NOT CONFLICT WITH OTHER PLANNED OUTAGES. COORDINATION WILL BE WITH:
AEP TRANSMISSION

8400 SMITH MILL ROAD
NEW ALBANY, OH 43054
MR. BENJAMIN T BURNHAM 614-413-2167
BTBURNHAM@AEP.COM

OHIO POWER-DISTRIBUTION AND AEP TRANSMISSION WILL BE INVITED TO THE PRECONSTRUCTION MEETING TO FACILITATE COORDINATION. AS PART OF THE CONTRACTOR'S CPM SCHEDULE, SUBMITTED WITHIN 60 DAYS OF THE PRECONSTRUCTION MEETING, THE PILE DRIVING DATES SHALL BE IDENTIFIED FOR THOSE IN CONFLICT WITH THE ELECTRIC LINES. UPON SUBMITTING THE SCHEDULE, THE CONTRACTOR SHALL SCHEDULE A COORDINATION MEETING WITH ODOT, OHIO POWER-DISTRIBUTION, AND AEP TRANSMISSION. THE MEETING WILL ALLOW OHIO POWER-DISTRIBUTION AND AEP TRANSMISSION TO BEGIN THEIR PROCESSES NECESSARY TO CONFIRM THAT DE-ENERGIZATION CAN OCCUR ON THE REQUESTED DATES. THE CONTRACTOR SHALL ALSO NOTIFY OHIO POWER-DISTRIBUTION AND AEP TRANSMISSION A MINIMUM OF 35 DAYS BEFORE EACH REQUESTED DE-ENERGIZATION. AS PART OF THE REQUEST FOR THE FIRST DE-ENERGIZATION, A FIELD MEETING SHALL BE SCHEDULED WITH THE ODOT, OHIO POWER-DISTRIBUTION, AND AEP TRANSMISSION. AEP TRANSMISSION CURRENTLY HAS A PROJECT (AEP REQ-21-082815 TRANSFORMER 1 AT HARRISON) DURING WHICH THE 69.2 KV LINE CANNOT BE TAKEN OUT OF SERVICE. IT IS CURRENTLY SCHEDULED FROM 9/8/2021 TO 11/18/2021.

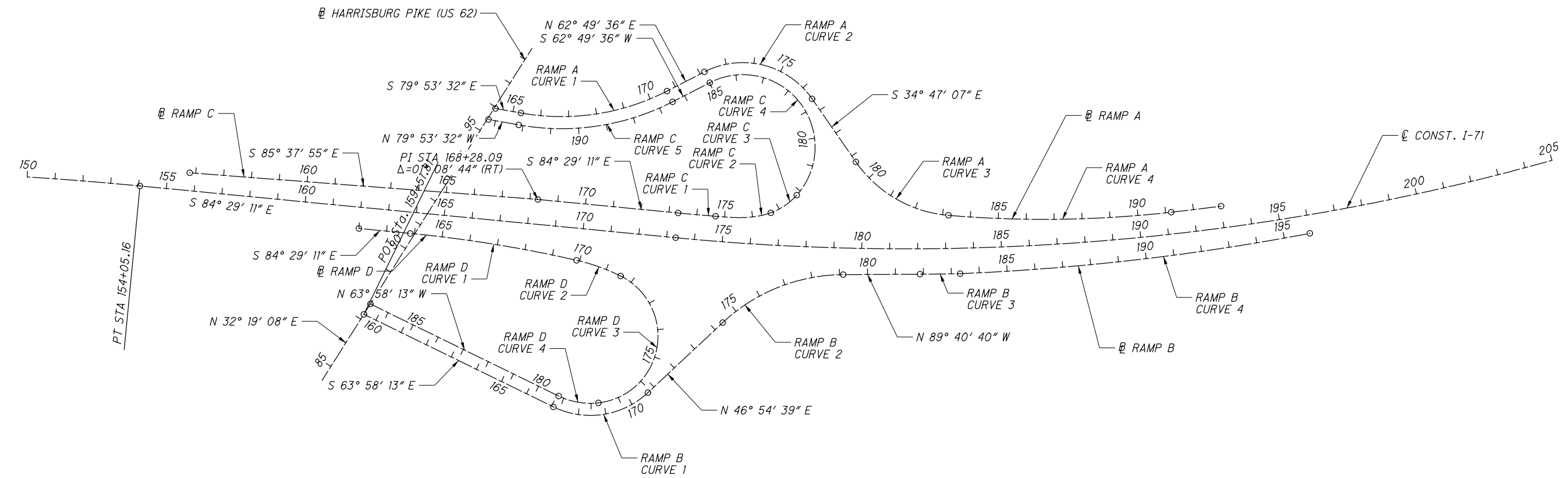
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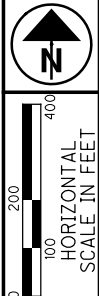
SCHEMATIC PLAN

FRA-71-0.00

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* STA 164+39.36 @ R/W & CONST. I-71 =
 STA 91+46.77 @ HARRISBURG PIKE (US 62)



FRA - 71 - 0.00
SCHEMATIC PLAN - I-71 AND US 62 INTERCHANGE

FRA - 71 - 0.00

FOR RAMP CURVE DATA, SEE NEXT SHEET

RAMP A CURVE 1
P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
C.B. = N $81^\circ 28' 02''$ E
PC STA 165+28.17
PT STA 170+66.86
DESIGN SPEED = 30mph
NDC = 40mph
 $e_{max} = 0.046$

RAMP A CURVE 2
P.I. STA 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$
C.B. = S $75^\circ 58' 45''$ E
PC STA 172+16.86
PT STA 176+51.11
DESIGN SPEED = 30mph
NDC = 40mph
 $e_{max} = -0.075$

RAMP A CURVE 3
P.I. STA 181+37.39
 $\Delta = 50^\circ 25' 26''$ (LT)
 $D_c = 12^\circ 45' 00''$
 $R = 449.38'$
 $T = 211.58'$
 $L = 395.48'$
 $E = 47.32'$
 $C = 382.84'$
C.B. = S $59^\circ 59' 50''$ E
PC STA 179+25.81
PT STA 183+21.30
DESIGN SPEED = 40mph
 $e_{max} = 0.080$

RAMP A CURVE 4
P.I. STA 187+21.97
 $\Delta = 11^\circ 11' 00''$ (LT)
 $D_c = 1^\circ 24' 00''$
 $R = 4,092.56'$
 $T = 400.68'$
 $L = 798.81'$
 $E = 19.57'$
 $C = 797.54'$
C.B. = N $89^\circ 11' 57''$ E
PCC STA 183+21.30
PCC STA 191+20.11
DESIGN SPEED = 65mph
 $e_{max} = 0.043$

RAMP A CURVE 5
P.I. STA 192+10.06
 $\Delta = 1^\circ 12' 37''$ (LT)
 $D_c = 0^\circ 40' 22''$
 $R = 8,516.37'$
 $T = 89.95'$
 $L = 179.89'$
 $E = 0.48'$
 $C = 179.89'$
C.B. = N $83^\circ 00' 08''$ E
PCC STA 191+20.11
PT STA 193+00.00
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP B CURVE 1
P.I. STA 169+14.53
 $\Delta = 69^\circ 07' 08''$ (LT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 208.02'$
 $L = 364.31'$
 $E = 64.71'$
 $C = 342.62'$
C.B. = N $81^\circ 28' 13''$ E
PC STA 167+06.51
PT STA 170+70.83
DESIGN SPEED = 30mph
NDC = 40mph
 $e_{max} = -0.075$

RAMP B CURVE 2
P.I. STA 176+86.95
 $\Delta = 42^\circ 46' 01''$ (RT)
 $D_c = 9^\circ 00' 00''$
 $R = 636.62'$
 $T = 249.28'$
 $L = 475.19'$
 $E = 47.06'$
 $C = 464.23'$
C.B. = N $68^\circ 17' 39''$ E
PC STA 174+37.68
CS STA 179+12.87
DESIGN SPEED = 40mph
 $e_{max} = 0.080$

RAMP B CURVE 3
P.I. STA 182+59.67
 $\Delta = 0^\circ 56' 50''$ (LT)
 $D_c = 0^\circ 39' 35''$
 $R = 8,685.37'$
 $T = 71.80'$
 $L = 143.60'$
 $E = 0.30'$
 $C = 143.60'$
C.B. = N $89^\circ 12' 15''$ E
PC STA 181+87.87
PCC STA 183+31.47
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP B CURVE 4
P.I. STA 189+63.41
 $\Delta = 8^\circ 20' 00''$ (LT)
 $D_c = 0^\circ 39' 38''$
 $R = 8,674.56'$
 $T = 631.95'$
 $L = 1,261.66'$
 $E = 22.99'$
 $C = 1,260.55'$
C.B. = N $83^\circ 25' 49''$ E
PCC STA 183+31.47
PT STA 195+93.13
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP C CURVE 1
P.I. STA 173+99.90
 $\Delta = 0^\circ 54' 17''$ (LT)
 $D_c = 0^\circ 40' 25''$
 $R = 8,505.37'$
 $T = 67.15'$
 $L = 134.30'$
 $E = 0.27'$
 $C = 134.30'$
C.B. = S $84^\circ 56' 19''$ E
PC STA 173+32.75
CS STA 174+67.05
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP C CURVE 2
P.I. STA 176+01.71
 $L_s = 200.00'$
 $\theta_s = 24^\circ 45' 00''$
 $LT = 134.66'$
 $ST = 67.87'$
 $x = 196.30'$
 $y = 28.42'$
 $k = 99.38'$
 $p = 7.15'$
CS STA 174+67.05
SC STA 176+67.05

RAMP C CURVE 3
P.I. STA 177+24.87
 $\Delta = 28^\circ 02' 45''$ (LT)
 $D_c = 24^\circ 45' 00''$
 $R = 231.50'$
 $T = 57.82'$
 $L = 113.32'$
 $E = 7.11'$
 $C = 112.19'$
C.B. = N $55^\circ 50' 10''$ E
SC STA 176+67.05
PCC STA 177+80.36
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

RAMP C CURVE 4
P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
C.B. = N $37^\circ 40' 48''$ W
PCC STA 177+80.36
PT STA 184+98.34
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

RAMP C CURVE 5
P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $D_c = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$
C.B. = S $81^\circ 28' 02''$ W
PT STA 186+48.34
PT STA 192+15.17
DESIGN SPEED = 30mph
 $e_{max} = -0.045$

RAMP D CURVE 1
P.I. STA 166+87.05
 $\Delta = 7^\circ 20' 40''$ (RT)
 $D_c = 1^\circ 13' 00''$
 $R = 4,709.24'$
 $T = 302.24'$
 $L = 603.66'$
 $E = 9.69'$
 $C = 603.24'$
C.B. = S $80^\circ 48' 50''$ E
PC STA 163+84.80
PCC STA 169+88.46
DESIGN SPEED = 65mph
 $e_{max} = 0.038$

RAMP D CURVE 2
P.I. STA 170+72.67
 $\Delta = 13^\circ 24' 44''$ (RT)
 $D_c = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 84.21'$
 $L = 167.65'$
 $E = 4.93'$
 $C = 167.27'$
C.B. = S $70^\circ 26' 08''$ E
PCC STA 169+88.46
PCC STA 171+56.12
DESIGN SPEED = 45mph
 $e_{max} = 0.080$

RAMP D CURVE 3
P.I. STA 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $D_c = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
C.B. = S $9^\circ 56' 09''$ W
PCC STA 171+56.12
PCC STA 177+73.85
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

RAMP D CURVE 4
P.I. STA 178+49.10
 $\Delta = 32^\circ 25' 43''$ (RT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 75.24'$
 $L = 146.45'$
 $E = 10.72'$
 $C = 144.50'$
C.B. = N $80^\circ 11' 05''$ W
PCC STA 177+73.85
PT STA 179+20.30
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

CENTERLINE REFERENCE POINTS						
POINT NUMBER	STATION	OFFSET	GRID COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
			NORTHING (Y)	EASTING (X)		
CP83700	837+00.00	0.00	659,685.24	1,773,069.02	908.97	CMON
CP87200	31+70.67	-0.19	661,455.35	1,776,088.01	866.21	CMON
CP88100	40+71.26	-0.09	661,910.64	1,776,865.04	847.95	CMON
CP89000	49+71.15	-0.03	662,365.61	1,777,641.44	830.15	CMON
CP89900	58+70.98	0.04	662,820.53	1,778,417.80	811.92	CMON
CP90800	67+71.02	-0.02	663,275.67	1,779,194.28	797.22	CMON
CP91700	76+70.85	0.05	663,730.60	1,779,970.65	799.25	CMON
CP93400	93+71.58	0.04	664,491.75	1,781,490.02	798.81	CMON
CP95000	109+71.25	0.03	665,009.83	1,783,002.28	803.43	CMON
CP95800	117+71.24	-0.02	665,194.03	1,783,780.62	819.36	CMON
CP96600	125+71.21	0.05	665,327.04	1,784,569.31	835.44	CMON
CP97600	135+70.95	-0.14	665,420.92	1,785,564.36	855.69	CMON
CP98500	144+70.84	-0.22	665,435.86	1,786,463.93	873.71	CMON
CP99439	154+09.79	-0.27	665,381.15	1,787,401.08	889.71	CMON
CP1006	165+70.88	-0.08	665,269.39	1,788,556.79	890.64	CMON
CP101360	173+31.13	0.05	665,196.22	1,789,313.50	879.92	CMON
CP10500	182+43.17	0.07	665,156.70	1,790,224.26	877.04	CMON
CP14500	222+43.00	0.10	666,079.89	1,794,084.83	872.24	CMON
CP150	227+42.23	0.04	666,269.81	1,794,546.52	869.11	CMON
CP15500	232+42.19	-0.02	666,460.02	1,795,008.89	869.11	CMON
CP16000	237+42.32	-0.08	666,650.28	1,795,471.41	867.23	CMON
CP16500	242+42.29	-0.02	666,840.37	1,795,933.84	865.60	CMON
CP17000	247+42.07	-0.06	667,030.49	1,796,396.04	864.12	CMON
CP17500	252+42.07	-0.03	667,220.63	1,796,858.48	862.68	CMON
CP18000	257+42.06	0.02	667,410.74	1,797,320.92	861.44	CMON
CP18500	262+42.12	-0.03	667,600.96	1,797,783.38	859.85	CMON
CP19000	267+42.09	-0.02	667,791.11	1,798,245.79	858.60	CMON
CP19500	272+42.21	-0.03	667,981.33	1,798,708.32	857.22	CMON
CP20000	277+42.19	0.09	668,171.37	1,799,170.77	855.89	CMON
CP20881	286+24.37	0.03	668,506.94	1,799,986.63	851.89	CMON

NOTES:
 1. SEE TABLE 3 ON SHEET 7 FOR STATION RANGE OF WHEN EXCAVATION OF SUBGRADE WITH GEOTEXTILE FABRIC AND GRANULAR MATERIAL, TYPE B ARE USED INSTEAD OF CEMENT STABILIZED SUBGRADE.

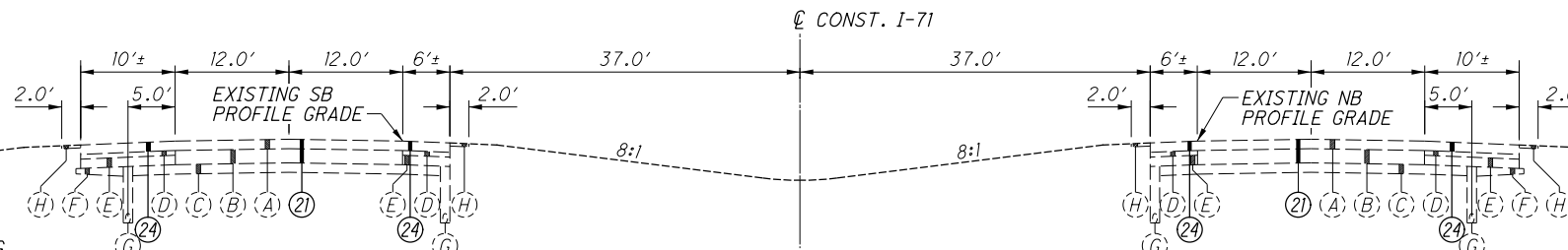
2. THE SUPERELEVATED SECTION EDGE OF PAVEMENT UNDERDRAINS SHIFT LATERAL LOCATIONS WHEN THE TRANSITIONING LANE EXCEEDS 0.000, NOT AT WHERE THE PAVEMENT FIRST BEGINS THE CROSS SLOPE TRANSITION.

3. THE SOUTHBOUND (SB) AND NORTHBOUND (NB) PROFILE GRADES ARE IDENTICAL EXCEPT FOR THE FOLLOWING STATION RANGES:
 73+83.80 - 77+50.00
 94+00.00 - 151+50.00
 153+05.00 - 171+12.50
 274+77.50 - 279+31.20

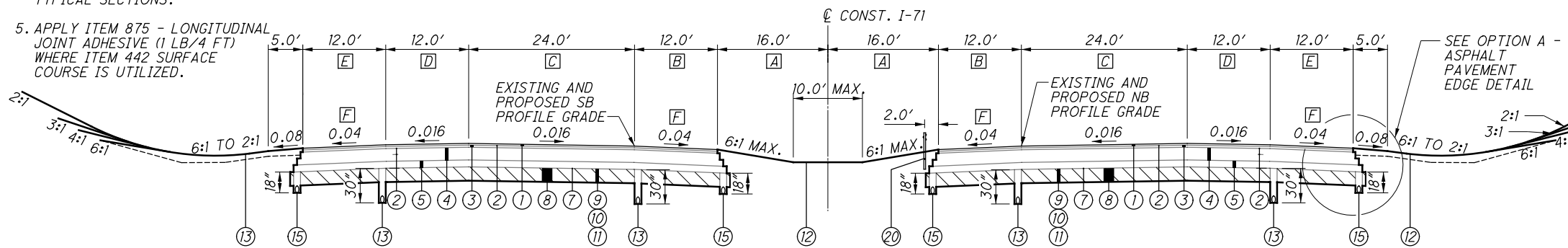
4. SEE SHEET 9 FOR OPTION B - CONCRETE PAVEMENT BUILDUP TYPICAL SECTIONS.

5. APPLY ITEM 875 - LONGITUDINAL JOINT ADHESIVE (1 LB/4 FT) WHERE ITEM 442 SURFACE COURSE IS UTILIZED.

SUBGRADE STABILIZATION - SEE NOTE 1
 ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP
 OR
 ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP



EXISTING NORMAL SECTION - I-71

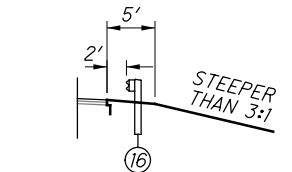


NORMAL SECTION - I-71 - OPTION A - ASPHALT

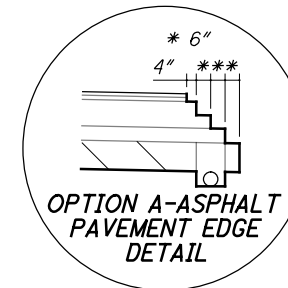
SOUTHBOUND
 STA 0+00.00 TO STA 74+37.03
 STA 156+83.16 TO STA 157+24.60
 STA 159+38.16 TO STA 163+61.21
 STA 165+86.69 TO STA 170+03.84
 STA 218+41.28 TO STA 279+31.20

NORTHBOUND
 STA 0+00.00 TO STA 74+37.03
 STA 156+83.16 TO STA 156+95.89
 STA 159+09.45 TO STA 163+32.83
 STA 165+58.31 TO STA 170+03.84
 STA 218+41.28 TO STA 279+31.20

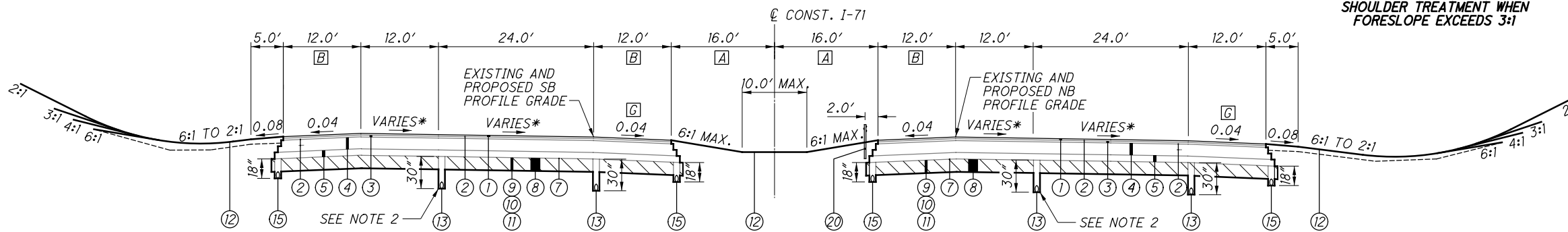
* SEE SHEETS 903-908 FOR SUPERELEVATION DETAILS



TYPICAL OUTSIDE GRADED SHOULDER TREATMENT WHEN FORESLOPE EXCEEDS 3:1



OPTION A-ASPHALT PAVEMENT EDGE DETAIL



SUPERELEVATED SECTION - I-71 - OPTION A - ASPHALT

SOUTHBOUND
 STA 74+37.03 TO STA 74+50.00 (*0.016 - 0.015)
 STA 94+00.00 TO STA 156+83.16 (*0.020 - 0.016)

NORTHBOUND
 STA 74+37.03 TO STA 74+50.00 (*0.016 - 0.015)
 STA 94+00.00 TO STA 156+83.16 (*0.020 - 0.016)

LEGEND

- (A) EXISTING ASPHALT OVERLAY (6" AVERAGE DEPTH)
- (B) EXISTING REINFORCED PCC (9" AVERAGE DEPTH)
- (C) EXISTING AGGREGATE BASE (6" AVERAGE DEPTH)
- (D) EXISTING BITUMINOUS AGGREGATE (13" AVERAGE DEPTH)
- (E) EXISTING STABILIZED AGGREGATE SHOULDER (VARIABLE DEPTH)
- (F) EXISTING AGGREGATE BASE (VARIABLE DEPTH)
- (G) EXISTING 6" PIPE UNDERDRAIN
- (H) EXISTING COMPACTED AGGREGATE (2" AVERAGE DEPTH)
- (I) EXISTING CONCRETE BARRIER, TYPE A
- (J) EXISTING ASPHALT SURFACE COURSE (VARIABLE DEPTH)
- (K) EXISTING ASPHALT INTERMEDIATE COURSE (1 3/4" AVERAGE DEPTH)
- (L) EXISTING ASPHALT BASE (11" AVERAGE DEPTH)
- (M) EXISTING NON-REINFORCED CONCRETE (13 1/2" AVERAGE DEPTH)

- (1) ITEM 442 - 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, (447), AS PER PLAN
- (2) ITEM 407 - NON-TRACKING TACK COAT
- (3) ITEM 442 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A, (446)
- (4) ITEM 302 - ASPHALT CONCRETE BASE, 11" (2 LIFTS)
- (5) ITEM 304 - 6" AGGREGATE BASE
- (6) ITEM 526 - APPROACH SLAB (T=17")
- (7) ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
- (8) ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP
- (9) ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP
- (10) ITEM 204 - GEOTEXTILE FABRIC
- (11) ITEM 204 - 12" GRANULAR MATERIAL, TYPE B
- (12) ITEM 659 - SEEDING AND MULCHING
- (13) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
- (14) ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS

- (15) ITEM 605 - 6" BASE PIPE UNDERDRAINS
- (16) ITEM 606 - GUARDRAIL, TYPE MGS
- (17) ITEM 622 - SINGLE SLOPE CONCRETE BRIDGE RAILING
- (18) ITEM 452 - 12 1/2" NON-REINFORCED CONCRETE PAVEMENT CLASS QC 1P WITH QC/QA
- (19) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1
- (20) ITEM 606 - CABLE BARRIER (ONLY ON NORTHBOUND SIDE)
- (21) ITEM 202 - PAVEMENT REMOVED, AS PER PLAN
- (22) ITEM 452 - 13 1/2" NON-REINFORCED CONCRETE PAVEMENT CLASS QC 1P WITH QC/QA
- (23) ITEM 526 - APPROACH SLAB (T=15")
- (24) ITEM 202 - PAVEMENT REMOVED
- (25) LONGITUDINAL JOINT
- (26) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
- (27) ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE
- (28) ITEM 848 - OVERLAY, MISC.: CONCRETE PAVEMENT CLASS QC 1P WITH QC/QA

(A) VARIES FROM 16' AT STA 72+00.00 TO 13.41' AT STA 74+50.00. VARIES FROM 16' AT STA 177+00.00 TO 18' AT STA 179+00.00. 18' FROM STA 179+00.00 TO STA 279+31.20.

(B) PLEASE SEE TABLE 1 ABOVE.

(C) VARIES FROM 25.93' (NB) AND 25.55' (SB) AT STA 0+00.00 TO 24' AT STA 1+00.00 (SB) AND STA 1+50.00 (NB).

(D) VARIES FROM 11.84' (NB) AND 11.64' (SB) AT STA 0+00.00 TO 12' AT STA 1+00+00 (SB) AND STA 1+50.00 (NB).

(E) VARIES FROM 10.23' (NB) AND 10.81' (SB) AT STA 0+00.00 TO 12' AT STA 1+00.00 (SB) AND STA 1+50.00 (NB). ALSO, PLEASE SEE TABLE 1 ABOVE.

(F) TRANSITION BETWEEN 0.04 ON NORMAL SECTION TO 0.016 AT APPROACH SLABS OVER 90'. SEE TABLE 2, NEXT SHEET.

(G) TRANSITION BETWEEN 0.04 ON SUPER-ELEVATED SECTION TO 0.020 AT APPROACH SLABS. SEE TABLE 2, NEXT SHEET.

SB OUTSIDE SHOULDER	NB OUTSIDE SHOULDER
12' AT STA 20+20.00 TO	12' AT STA 21+81.85 TO
14' AT STA 20+70.00	14' AT STA 21+91.85
14' AT STA 21+63.15 TO	14' AT STA 23+00.00 TO
12' AT STA 21+73.15	12' AT STA 23+50.00
12' AT STA 125+00.00 TO	12' AT STA 125+96.74 TO
14' AT STA 125+50.00	14' AT STA 126+06.74
14' AT STA 126+43.03 TO	14' AT STA 126+95.00 TO
12' AT STA 126+53.03	12' AT STA 127+45.00
12' AT STA 142+80.00 TO ***	12' AT STA 156+25.00 TO
14' AT STA 143+30.00	14' AT STA 156+35.00
14' AT STA 148+20.00 TO ***	14' AT STA 158+83.79 TO
12' AT STA 148+30.00	12' AT STA 159+33.79
12' AT STA 155+50.26 TO	12' AT STA 161+00.00 TO
8' AT STA 158+77.76	8' AT STA 162+00.00 (DECEL LANE)
8' AT STA 163+42.83 TO	8' AT STA 162+75.00 TO
10' AT STA 163+92.78 (ACCEL LANE)	10' AT STA 162+85.00 (DECEL LANE)
10' AT STA 166+55.00 TO	10' AT STA 165+27.82 TO
8' AT STA 166+65.00 (ACCEL LANE)	8' AT STA 165+77.85 (DECEL LANE)

SB MEDIAN SHOULDER	NB MEDIAN SHOULDER
12' AT STA 156+67.42 TO	12' AT STA 155+59.46 TO **
14' AT STA 157+17.42	14' AT STA 156+84.93
14' AT STA 159+49.12 TO	14' AT STA 159+16.64 TO
12' AT STA 159+59.12	12' AT STA 160+39.50 **
12' AT STA 163+04.11 TO	12' AT STA 162+36.48 TO **
14' AT STA 163+54.11	14' AT STA 163+21.78
14' AT STA 166+12.00 TO	14' AT STA 165+65.41 TO
12' AT STA 166+22.00	12' AT STA 166+65.41 **

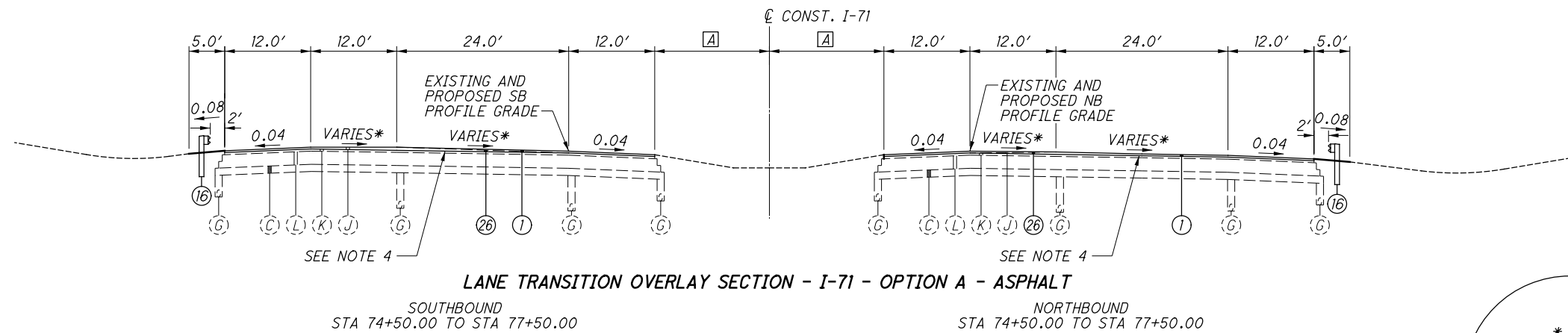
** REQUIRED FOR MAINTENANCE OF TRAFFIC
 *** REQUIRED FOR NOISE BARRIER

NOTES:
1. SEE SHEET 6 FOR LEGEND.

2. THE SUPERELEVATED SECTION EDGE OF PAVEMENT UNDERDRAINS SHIFT LATERAL LOCATIONS WHEN THE TRANSITIONING LANE EXCEEDS 0.000, NOT AT WHERE THE PAVEMENT FIRST BEGINS THE CROSS SLOPE TRANSITION.

3. THE SOUTHBOUND (SB) AND NORTHBOUND (NB) PROFILE GRADES ARE IDENTICAL EXCEPT FOR THE FOLLOWING STATION RANGES:
73+83.80 - 77+50.00
94+00.00 - 151+50.00
153+05.00 - 171+12.50
274+77.50 - 279+31.20

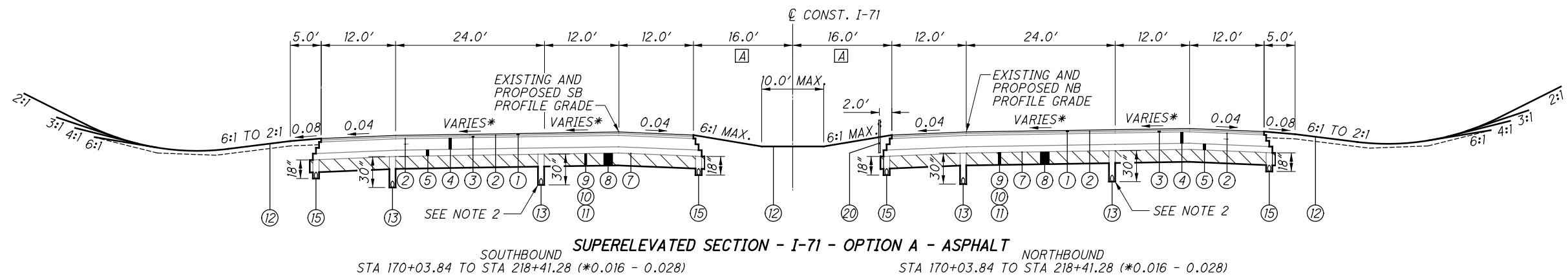
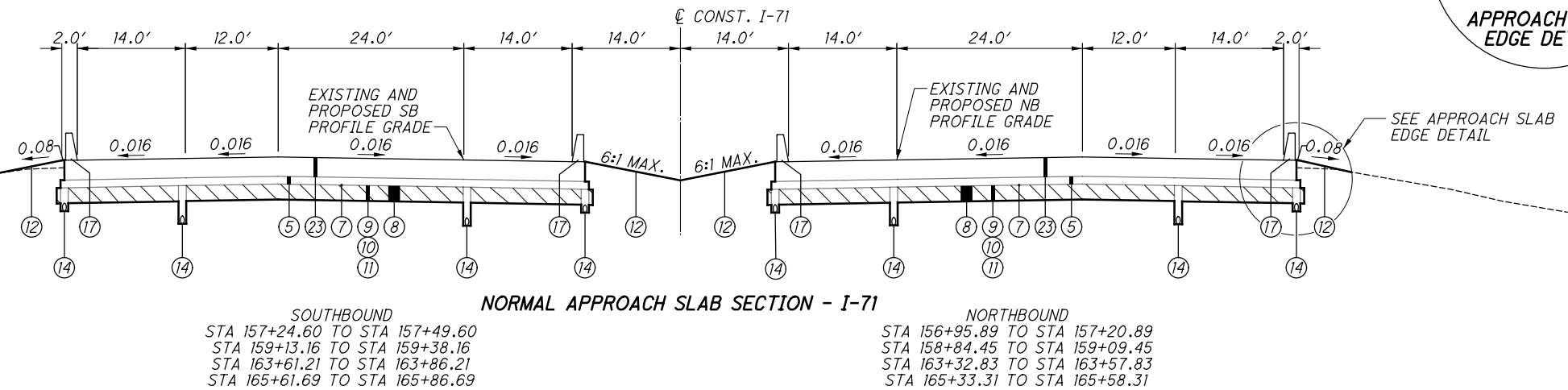
4. A VARIABLE THICKNESS SURFACE COURSE TRANSITION TO ALIGN EXISTING CROWN AND PAVEMENT EDGES TO FULL-BUILD CONDITION WAS BUILT IN FRA-71-1.53, FROM STA 74+50 TO STA 77+50. THIS COURSE SHALL BE REMOVED PER ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE AND REPLACED WITH ITEM 806 - 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A.



* SEE SHEET 903 FOR SUPERELEVATION DETAILS. ONLY APPLIES FOR SURFACE COURSE PER SUPERELEVATION DETAILS AS REMAINDER OF PAVEMENT WAS BUILT IN FRA-71-1.53.

TABLE 2

PAVED SHOULDER CROSS SLOPE TRANSITIONS AT BRIDGES	
SB MEDIAN SHOULDER	SB OUTSIDE SHOULDER
0.040 AT STA 156+27.00 TO 0.016 AT STA 157+17.00	0.040 AT STA 156+54.00 TO 0.016 AT STA 157+44.00
0.016 AT STA 159+39.00 TO 0.040 AT STA 160+29.00	0.016 AT STA 159+65.00 TO 0.040 AT STA 160+55.00
0.040 AT STA 162+64.00 TO 0.016 AT STA 163+54.00	0.040 AT STA 162+97.00 TO 0.016 AT STA 163+87.00
0.016 AT STA 165+87.00 TO 0.040 AT STA 166+77.00	0.016 AT STA 166+21.00 TO 0.040 AT STA 167+11.00
NB MEDIAN SHOULDER	NB OUTSIDE SHOULDER
0.040 AT STA 156+05.00 TO 0.016 AT STA 156+95.00	0.040 AT STA 155+80.00 TO 0.016 AT STA 156+70.00
0.016 AT STA 159+17.00 TO 0.040 AT STA 160+07.00	0.016 AT STA 158+91.00 TO 0.040 AT STA 159+81.00
0.040 AT STA 162+42.00 TO 0.016 AT STA 163+32.00	0.040 AT STA 162+13.00 TO 0.016 AT STA 163+03.00
0.016 AT STA 165+66.00 TO 0.040 AT STA 166+56.00	0.016 AT STA 163+49.59 TO 0.038 AT STA 164+31.78
	0.038 AT STA 165+33.00 TO 0.040 AT STA 165+43.00



* SEE SHEETS 909-912 FOR SUPERELEVATION DETAILS

▨ SUBGRADE STABILIZATION - SEE TABLE 3 BELOW
ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP OR
ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP

TABLE 3

EXCAVATION OF SUBGRADE, 12" DEEP STATION RANGES (BOTH DIRECTIONS)	
I-71	RAMPS
STA 94+00 TO 96+00	ENTIRE LENGTH OF EACH RAMP
STA 100+00 TO 108+00	
STA 128+00 TO 136+00	
STA 180+00 TO 188+00	
STA 196+00 TO 204+00	
STA 214+00 TO 228+00	
STA 238+00 TO 242+00	
STA 275+00 TO 279+00	

[A] VARIES FROM 13.41' AT STA 74+50.00 TO 10.30' AT STA 77+50.00
VARIES FROM 16' AT STA 177+00.00 TO 18' AT STA 179+00.00

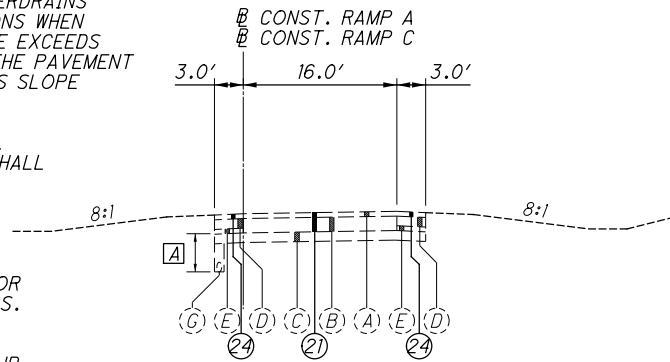
TYPICAL SECTIONS

FRA-71-0.00

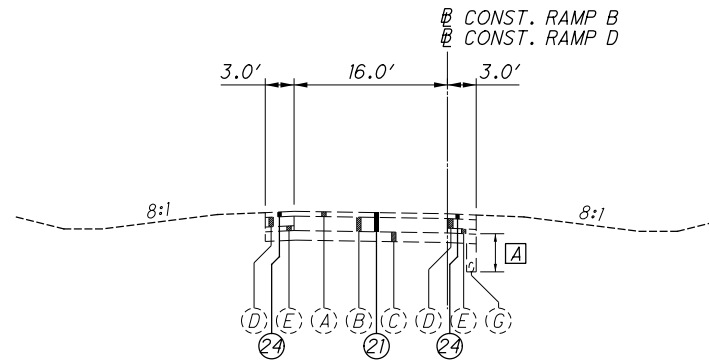
ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP

NOTES:

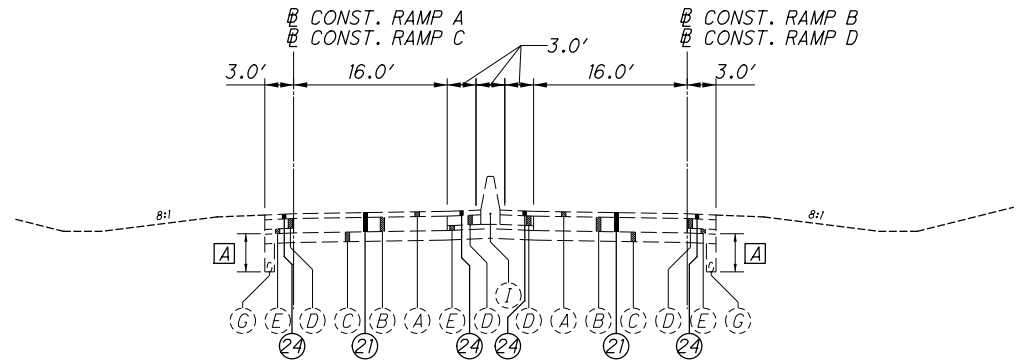
1. SEE SHEET 6 FOR LEGEND.
2. THE SUPERELEVATED SECTION EDGE OF PAVEMENT UNDERDRAINS SHIFT LATERAL LOCATIONS WHEN THE TRANSITIONING LANE EXCEEDS 0.000, NOT AT WHERE THE PAVEMENT FIRST BEGINS THE CROSS SLOPE TRANSITION.
3. STANDARD LONGITUDINAL JOINTS AS PER BP-2.1 SHALL BE PLACED ALONG THE CENTER OF ALL RAMPS AND AT THEIR EDGES OF PAVEMENT.
4. SEE SHEETS 1021-1030 FOR PAVEMENT JOINT DETAILS.
5. RAMPS SHALL BE PER SHOWN CONCRETE BUILDUP REGARDLESS OF MAINLINE OPTIONAL PAVEMENT SELECTED.



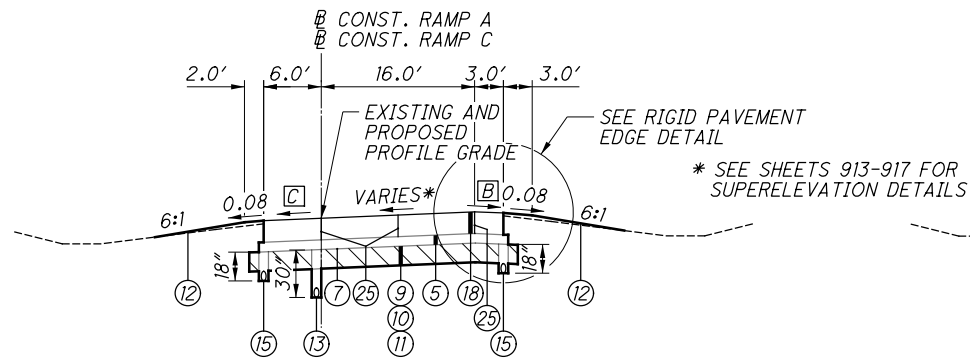
EXISTING NORMAL SECTION - RAMPS A AND C



EXISTING NORMAL SECTION - RAMPS B AND D



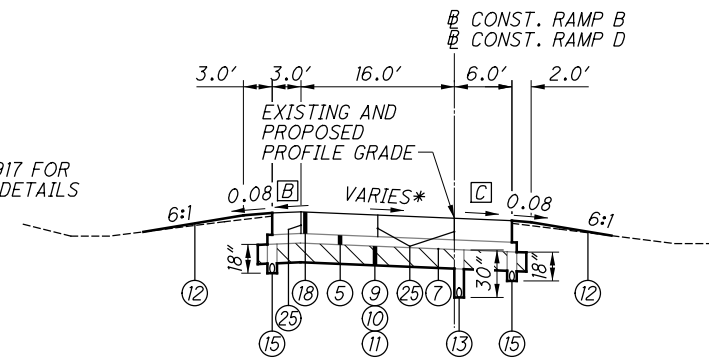
EXISTING COMBINED SECTION - RAMPS



SUPERELEVATED SECTION - RAMPS A AND C

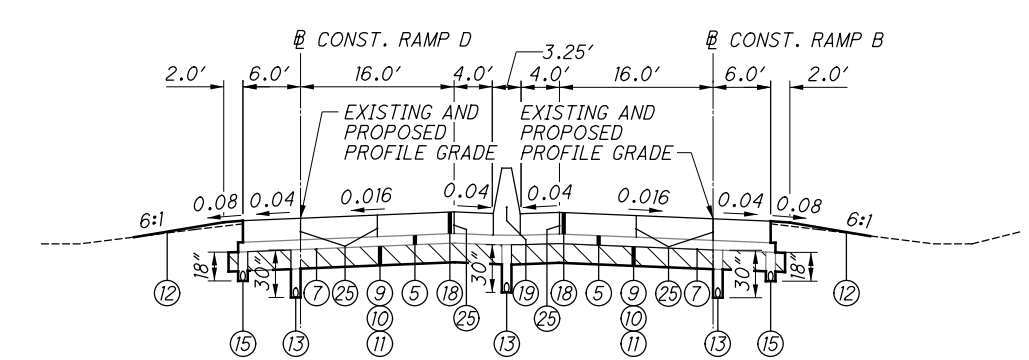
RAMP A - STA 177+00.00 TO STA 177+85.22
 **RAMP A - STA 177+85.22 TO STA 178+21.47
 RAMP A - STA 178+21.47 TO STA 184+68.33
 RAMP C - STA 176+27.38 TO STA 180+80.97
 SEE COMBINED SECTIONS FOR REMAINDER OF RAMP C LENGTH

** NORMAL SECTION WITH 0.016 CROSS SLOPE FOR THIS STATION RANGE



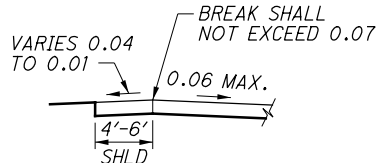
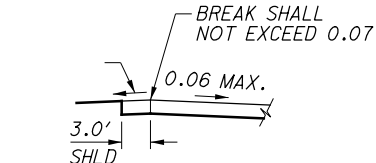
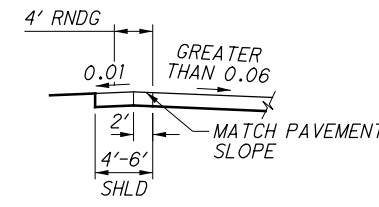
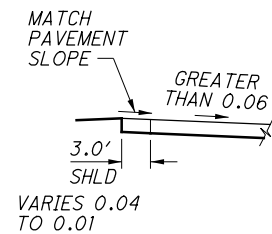
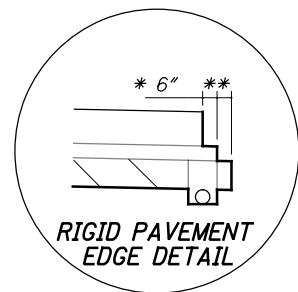
SUPERELEVATED SECTION - RAMPS B AND D

RAMP B - STA 170+70.83 TO STA 178+27.64
 RAMP D - STA 168+88.15 TO STA 176+07.85
 SEE COMBINED SECTIONS FOR REMAINDER OF RAMP D LENGTH

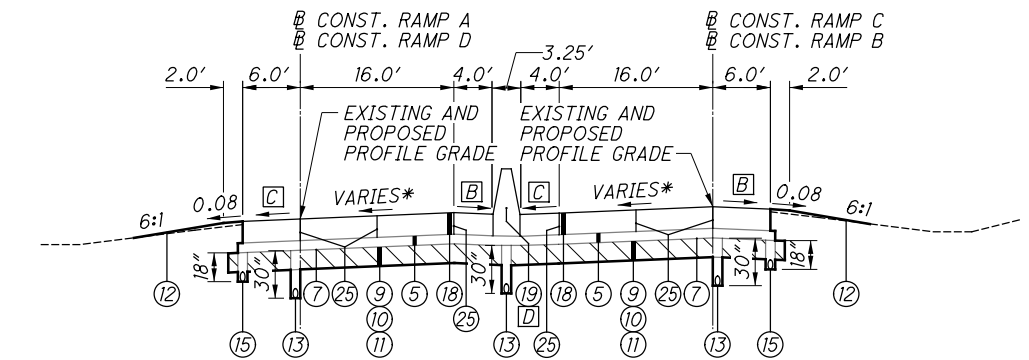


NORMAL COMBINED SECTION - RAMPS B AND D

RAMP B - STA 160+70.81 TO STA 165+43.98
 RAMP D - STA 180+82.83 TO STA 185+56.00
 INTERSECTION AREA
 RAMP B/D - STA 159+51.81 TO STA 160+70.81 (SAME PAVEMENT BUILD-UP)



DETAIL A
 HIGH SIDE OF SUPERELEVATED SECTION

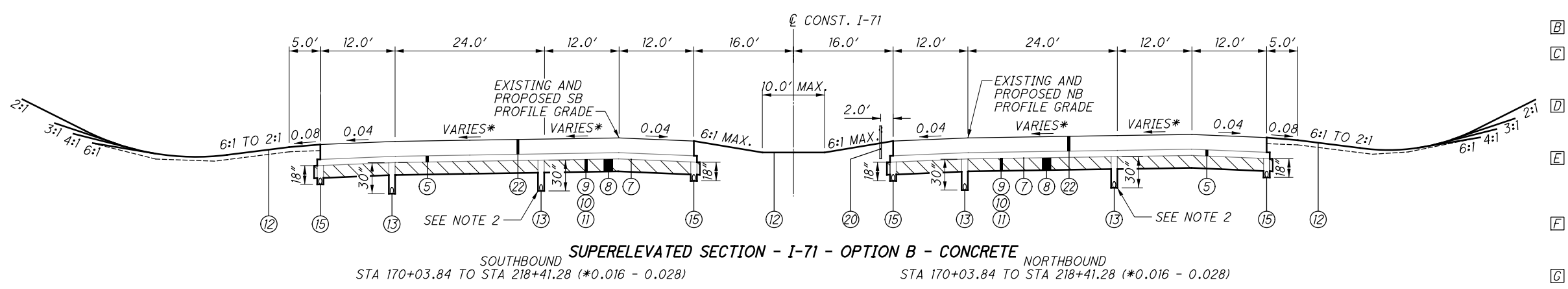
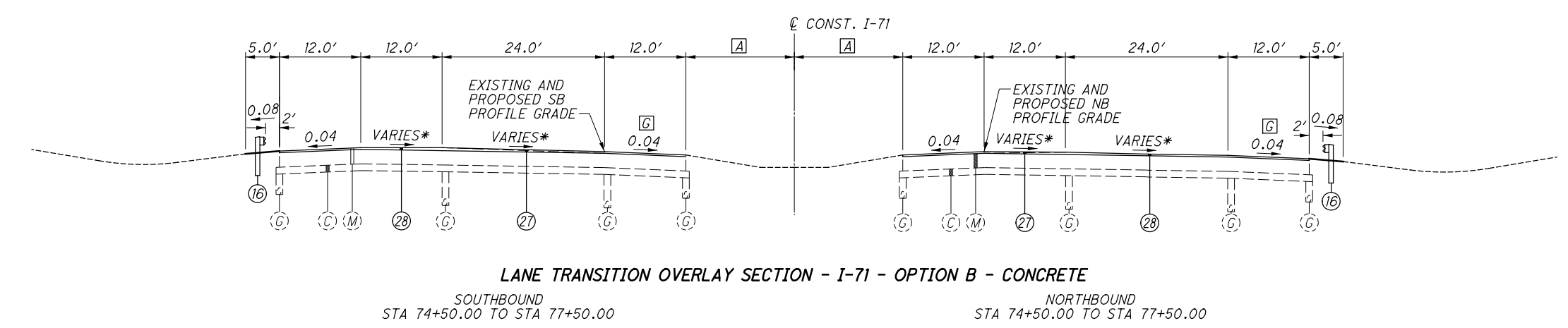
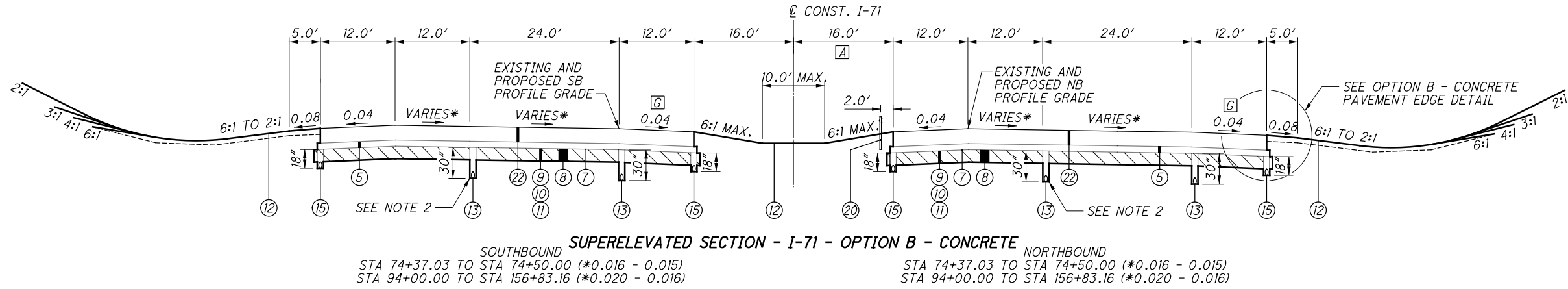
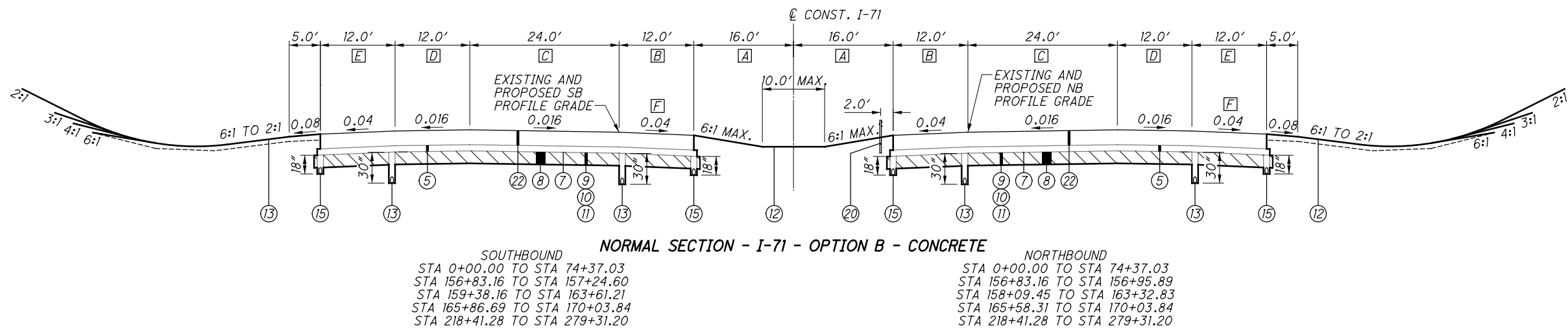


SUPERELEVATED COMBINED SECTION - RAMPS

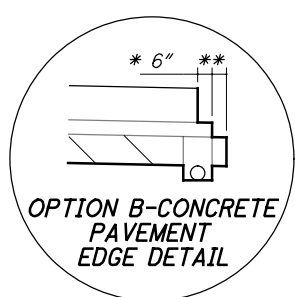
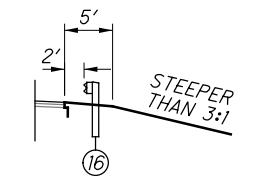
RAMP A/C - STA 165+61.56 TO STA 171+22.86
 RAMP B/D - STA 165+43.98 TO STA 170+70.83
 MIRROR SECTION
 RAMP A/C - STA 171+22.86 TO STA 177+00.00
 INTERSECTION AREA
 RAMP A/C - STA 164+35.95 TO STA 165+61.56 (SAME PAVEMENT BUILD-UP)
 STATIONS LISTED FOR THIS SECTION ARE FOR RAMPS A AND B

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X:\4037000\121957.16\107201\roadway\sheet\107201GY004.dgn Sheet 10/28/2019 11:07:12 AM 1458sjs



- NOTES:**
- SEE TABLE 3 ON SHEET 7 FOR STATION RANGE OF WHEN EXCAVATION OF SUBGRADE WITH GEOTEXTILE FABRIC AND GRANULAR MATERIAL, TYPE B ARE USED INSTEAD OF CEMENT STABILIZED SUBGRADE.
 - THE SUPERELEVATED SECTION EDGE OF PAVEMENT UNDERDRAINS SHIFT LATERAL LOCATIONS WHEN THE TRANSITIONING LANE EXCEEDS 0.000, NOT AT WHERE THE PAVEMENT FIRST BEGINS THE CROSS SLOPE TRANSITION.
 - STANDARD LONGITUDINAL JOINTS AS PER BP-2.1 SHALL BE PLACED ALONG ALL LANE LINES AND AT THE EDGES OF PAVEMENT.
 - THE SOUTHBOUND (SB) AND NORTHBOUND (NB) PROFILE GRADES ARE IDENTICAL EXCEPT FOR THE FOLLOWING STATION RANGES:
73+83.80 - 151+50.00
153+05.00 - 171+12.50
274+77.50 - 279+31.20
 - SEE SHEETS 6-7 FOR OPTION A - ASPHALT PAVEMENT BUILDUP TYPICAL SECTIONS.
 - SEE SHEET 6 FOR PAVED SHOULDER WIDTH TRANSITIONS.



- [A] VARIES FROM 16' AT STA 72+00.00 TO 13.41' AT STA 74+50.00. VARIES FROM 16' AT STA 177+00.00 TO 18' AT STA 179+00.00. 18' FROM STA 179+00.00 TO STA 279+31.20.
- [B] PLEASE SEE TABLE 1, SHEET 6.
- [C] VARIES FROM 25.93' (NB) AND 25.55' (SB) AT STA 0+00.00 TO 24' AT STA 1+00.00 (SB) AND STA 1+50.00 (NB).
- [D] VARIES FROM 11.84' (NB) AND 11.64' (SB) AT STA 0+00.00 TO 12' AT STA 1+00+00 (SB) AND STA 1+50.00 (NB).
- [E] VARIES FROM 10.23' (NB) AND 10.81' (SB) AT STA 0+00.00 TO 12' AT STA 1+00.00 (SB) AND STA 1+50.00 (NB). ALSO, PLEASE SEE TABLE 1, SHEET 6.
- [F] TRANSITION BETWEEN 0.04 ON NORMAL SECTION TO 0.016 AT APPROACH SLABS OVER 90'. PLEASE SEE TABLE 2, SHEET 7.
- [G] TRANSITION BETWEEN 0.04 ON SUPERELEVATED SECTION TO 0.020 AT APPROACH SLABS. PLEASE SEE TABLE 2, SHEET 7.

* SEE SHEETS 903-912 FOR SUPERELEVATION DETAILS

TYPICAL SECTIONS (RIGID)

FRA - 71 - 0.00

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CAPITAL ELECTRIC LINE BUILDERS 3150 ENCRETE LANE DAYTON, OH 45401 JOE HUTSELL 937-604-5838 MATT SLUSHER 513-617-6488 OHIO POWER - DISTRIBUTION 700 MORRISON RD. GAHANNA, OH 43230 PAUL PAXTON 614-883-6831

CITY OF COLUMBUS DEPT. OF PUBLIC UTILITIES 910 DUBLIN RD. COLUMBUS, OH 43215 614-645-8276 CITY OF COLUMBUS DIVISION OF WATER 910 DUBLIN RD. COLUMBUS, OH 43215 614-645-7788

MCI COMMUNICATIONS 2400 NORTH GLENNVILLE RICHARDSON, TX 75082 JOHN BACHELDER 972-729-6322 AMERICAN ELECTRIC POWER TRANSMISSION 8400 SMITH MILL RD. NEW ALBANY, OH 43054 BENJAMIN T. BURNHAM 614-413-2167

ODOT DISTRICT 6 400 E. WILLIAM STREET DELAWARE, OH 43015 KENNETH GREEN 740-833-8198

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

UTILITIES

THE ODOT CONTRACTOR IS REQUIRED TO CONTACT OUPS A MINIMUM OF 48 HOURS EXCLUDING WEEKENDS AND HOLIDAYS TO PERMIT ALL UNDERGROUND UTILITIES AN OPPORTUNITY TO MARK THEIR LINES. IT IS ALSO THE ODOT CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL NON-MEMBERS OF OUPS DIRECTLY A MINIMUM OF 48 HOURS' NOTICE EXCLUDING WEEKENDS AND HOLIDAYS TO PROVIDE THEM WITH THE SAME OPPORTUNITY.

IT IS ODOT'S EXPECTATION THAT ALL GUARDRAIL POSTS WILL BE INSTALLED IN THE SAME LOCATIONS AND THERE WILL BE NO DISRUPTION TO UNDERGROUND UTILITIES. IF THERE IS A UTILITY MARKING WITHIN THE TOLERANCE ZONE OF A UTILITY LOCATE FROM THE PROPOSED GUARDRAIL PLACEMENT IT IS THE ODOT CONTRACTOR'S RESPONSIBILITY TO DIRECTLY CONTACT THE IMPACTED UTILITY AND WORK WITH THEM TO FIND A SOLUTION THAT DOES NOT CHANGE THE GUARDRAIL PLACEMENT OR DAMAGE THE EXISTING UTILITY. NO UTILITY RELOCATION WILL BE REIMBURSED NOR WILL DELAY CLAIMS BE PERMISSIBLE BASED ON LACK OF COORDINATION BETWEEN THE ODOT CONTRACTOR AND THE IMPACTED UTILITY.

UTILITY NOTIFICATION

THE OHIO DEPARTMENT OF TRANSPORTATION HAS UTILITY FACILITIES (HIGHWAY LIGHTING, TRAFFIC SIGNALS, AND ITS) WITHIN THE LIMITS OF THIS PROJECT.

IN ADDITION TO THE INFORMATION OUTLINED IN THE UTILITY NOTE OF THIS CONTRACT, THE CONTRACTOR SHALL TAKE THE FOLLOWING ACTION TO PROTECT ODOT'S FACILITIES DURING CONSTRUCTION:

HIGHWAY LIGHTING AND TRAFFIC SIGNALS:

EVEN THOUGH ODOT IS LISTED AS A MEMBER OF THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE ODOT CONTRACTOR IS REQUIRED TO CONTACT ODOT, DISTRICT 6 TRAFFIC MAINTENANCE DEPARTMENT DIRECTLY ONCE LINES ARE MARKED BY OUPS SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT CAN BE DISCUSSED OR CONFIRMED AS NECESSARY PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY DISTRICT 6 TRAFFIC MAINTENANCE AT 740-833-8198 AND THE CONSTRUCTION PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO VERIFY/DISCUSS ODOT OWNED UTILITIES.

ITS:

ITS FACILITIES ARE NOT AN OUPS MEMBER SO THE ODOT CONTRACTOR IS REQUIRED TO CONTACT ODOT CENTRAL OFFICE ITS LAB DIRECTLY SO THAT THE ODOT ITS UTILITIES LOCATED WITHIN THIS PROJECT ARE FIELD MARKED. THE ODOT CONTRACTOR SHALL NOTIFY ODOT CENTRAL OFFICE ITS LAB AT THE CONTACT INFORMATION LISTED BELOW AND THE CONSTRUCTION PROJECT ENGINEER FOR FIELD MARKINGS. THE FIELD MARKINGS WILL BE COMPLETED FOURTEEN (14) CALENDAR DAYS EXCLUDING WEEKENDS AND HOLIDAYS FROM THE TIME THE CALL WAS MADE.

CENTRAL OFFICE ITS LAB 614-387-4113 - PHONE 614-887-4134 - FAX CEN.ITS.LAB@DOT.OHIO.GOV - EMAIL

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE UTILITY NOTE.

THE ODOT CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS EXCLUDING WEEKENDS AND HOLIDAYS IN ADVANCE OF ANY EXCAVATION WORK.

ABBREVIATIONS

THE FOLLOWING IS A LIST OF ABBREVIATIONS USED THROUGHOUT THE PLAN SET:

- AA ANCHOR ASSEMBLY
ABD ABANDON
ADJ ADJUST
ADT AVERAGE DAILY TRAFFIC
AGG AGGREGATE
AH AHEAD
ATT ATTENUATOR
AVE AVENUE
BK BACK
BLDG BASE LINE
BLVD BUILDING
BM BOULEVARD
BOT BENCHMARK
BR BOTTOM
BR BRIDGE
BTA BRIDGE TERMINAL ASSEMBLY
C LONG CHORD
CATV CABLE TELEVISION
CB CATCH BASIN
C.B. CHORD BEARING
CIP CAST IN PLACE
CL CENTER LINE
CMP CORRUGATED METAL PIPE
CONC CONCRETE
CONST. CONSTRUCTION
CR COUNTY ROAD
CS CURVE TO SPIRAL
CU CUBIC
Dc DEGREE OF CURVE
DND DO NOT DISTURB
DR DRIVE
E ELECTRIC OR EXTERNAL DISTANCE
e SUPERELEVATION RATE
Emax MAXIMUM SUPERELEVATION RATE
EB EASTBOUND
ELEV ELEVATION

ABBREVIATIONS (continued)

- ELEC ELECTRIC
EMB EMBANKMENT
EP EDGE OF PAVEMENT
ES EDGE OF SHOULDER
ESMT EASEMENT
EST ESTABLISH OR ESTABLISHED
EX EXISTING
EXC EXCAVATION
EXP EXPANSION
FL FLOW LINE
FDN FOUNDATION
FH FIRE HYDRANT
FO FIBER OPTIC
fs DEGREE OF SPIRAL
G GAS
GR GUARDRAIL
HC HORIZONTAL CLEARANCE
HW HEADWALL
HWY HIGHWAY
I INTERSTATE
INC INCORPORATED OR INCLUDING
INV INVERT
JT JOINT
K DISTANCE FROM THE TS TO THE PERPENDICULAR PROJECTION OF THE CENTER OF CURVE
L DESIGN HOUR FACTOR
LA LENGTH OR LENGTH OF CURVE
LEO LIMITED ACCESS
LN LAW ENFORCEMENT OFFICER
Ls LANE
LT LENGTH OF SPIRAL
MAX LEFT OR LONG TANGENT
MB MAXIMUM
MED MAIL BOX
MGS MEDIAN
MH MIDWEST GUARDRAIL SYSTEM
MIN MANHOLE
MISC MINIMUM
MOT MISCELLANEOUS
MPH MAINTENANCE OF TRAFFIC
MUTCD MILES PER HOUR
N MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NA OR N/A NORTH
NAVD NOT AVAILABLE OR NOT APPLICABLE
NB NORTH AMERICAN VERTICAL DATUM
NC NORTHBOUND
NDC NORMAL CROWN
NE NORMAL DESIGN CRITERIA
NGS NORTHEAST
NGVD NATIONAL GEODETIC SURVEY
NHS NATIONAL GEODETIC VERTICAL DATUM OF 1929
NHV NATIONAL HIGHWAY SYSTEM
NO. NORMAL HIGH WATER
NTS NUMBER
NW NOT TO SCALE
OC NORTHWEST
OD ON CENTER
OE OUTSIDE DIAMETER
OHWM OVERHEAD ELECTRIC
P ORDINARY HIGH WATER MARK
PC PROPERTY LINE
PCB OFFSET OF CURVE TO TANGENT
PCC POINT OF CURVATURE
PCMS PORTABLE CONCRETE BARRIER
PED POINT OF COMPOUND CURVE
PGL PORTABLE CONCRETE MESSAGE SIGN
PH PEDESTAL OR PEDESTRIAN
PI PROFILE GRADE LINE
PKWY PHASE
POT POINT OF INTERSECTION
PP PARKWAY
PRC POINT ON TANGENT
PROP POWER POLE
PT POINT OF REVERSE CURVATURE
PVC PROPOSED
Q POINT OF TANGENCY
R POLYVINYL CHLORIDE
RC PEAK DISCHARGE OR FLOW VOLUME
RCP RADIUS
RD REVERSE CROWN
REL REINFORCED CONCRETE PIPE OR ROCK CHANNEL PROTECTION
RELOCATE ROAD
REMOVE RELOCATE
REPLACE REMOVE
RPM RAISED PAVEMENT MARKER
RR RAILROAD
RT RIGHT
R/W RIGHT OF WAY
S SOUTH
SAN SANITARY
SB SOUTHBOUND

ABBREVIATIONS (continued)

- SC SPIRAL TO CURVE
SE SOUTHEAST
SECT SECTION
SHLD SHOULDER
SQ SQUARE
SR STATE ROUTE
ST STREET OR SPIRAL TO TANGENT
STA STATION
SW SOUTHWEST OR SIDEWALK
T TANGENT LENGTH OR TELEPHONE
TC TANGENT TO CURVE OR TRAFFIC CONTROL
Td PERCENT TRUCKS
TELE TELECOMMUNICATIONS
TEMP TEMPORARY
TR TOWNSHIP ROAD OR TRAIL
TS TANGENT TO SPIRAL
TWP TOWNSHIP
TYP TYPICAL
UD UNDERDRAIN
UG UNDERGROUND
VAR VARIES
VC VERTICAL CURVE
W WEST
WB WESTBOUND
XS CROSS SECTION
YD YARD

EXISTING PLANS

EXISTING PLANS ENTITLED PIC-1-3.06/FRA-1-0.00, FRA-61-2.12, FRA-71-1.53, FRA-71-4.31 AND FRA-71-5.29 MAY BE INSPECTED IN THE ODOT DISTRICT 6 OFFICE IN DELAWARE, OHIO.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 5 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83(CORS96)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE - SOUTH ZONE
COMBINED SCALE FACTOR: 1.00000000 (GRID)
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

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CALCULATED DCB CHECKED SJS

GENERAL NOTES

FRA-71-0.00

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING ----58 HOUR.

ADDITIONAL SOIL INFORMATION

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATIONS SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATION INFORMATION IS AVAILABLE FROM THE DISTRICT 6 OFFICE IN DELAWARE, OHIO.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

ALL PROVISIONS OF ITEM 204 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. IF THE ENGINEER DETERMINES A LOCALIZED AREA IS UNTREATABLE FOR CHEMICAL STABILIZATION AND CHEMICAL STABILIZATION IS NON-PERFORMED WITHIN THIS AREA, THEN THE AREA SHALL BE PROOF ROLLED ACCORDING TO ITEM 204 PROOF ROLLING AND UNSTABLE SUBGRADE SHALL BE REMOVED TO A MINIMUM DEPTH DETERMINED BY THE ENGINEER AND REPLACED WITH MATERIAL CONFORMING TO ITEM 204 GRANULAR EMBANKMENT OR REPLACED WITH ITEM 304 AT THE ENGINEER'S DISCRETION. THE ENGINEER SHALL EVALUATE THE SUBGRADE CONDITIONS AND CONSULT WITH THE DISTRICT GEOTECHNICAL ENGINEER AS NEEDED ON THE USE OF GEOGRID WITHIN UNDERCUT AREAS. IF GEOGRID IS RECOMMENDED FOR SUBGRADE STABILIZATION WITHIN UNDERCUT AND REPLACE SITUATIONS, THEN ALL SPECIFICATIONS OF SUPPLEMENTAL SPECIFICATION 861 SHALL APPLY. EXCAVATE UNSTABLE SUBGRADES TO 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS, INCLUDING UNDER NEW CURBS AND GUTTERS. COMPACT SUBGRADE MATERIALS ACCORDING TO ITEM 204 SUBGRADE COMPACTION. AFTER COMPACTION THE AREA SHALL BE PROOF ROLLED ONCE MORE TO DEMONSTRATE STABILITY OF THE NEWLY CONSTRUCTED SUBGRADE. PAYMENT FOR EXCAVATION SHALL FALL UNDER ITEM 204 EXCAVATION OF SUBGRADE.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 204 - SUBGRADE COMPACTION	14,467 SY
ITEM 204 - PROOF ROLLING	8 HR
ITEM 204 - EXCAVATION OF SUBGRADE	4823 CY
ITEM 204 - GRANULAR MATERIAL, TYPE B	4823 CY
ITEM 204 - GEOTEXTILE FABRIC	14,467 SY

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	3 EACH
659, TOPSOIL	28,125 CU. YD.
659, REPAIR SEEDING AND MULCHING	12,669 SQ. YD.
659, INTER-SEEDING	12,669 SQ. YD.
659, COMMERCIAL FERTILIZER	35.33 TON
659, LIME	52.35 ACRES
659, WATER	1403 M. GAL.
659, MOWING	570 M. SQ. FT.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE B, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL, 75 MPH, 36", CONCRETE FOUNDATION)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE 1 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 (75 MPH, 36", BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - IMPACT ATTENUATOR, TYPE 2, (BIDIRECTIONAL, 35 MPH, 36", CONCRETE FOUNDATION)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED

SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606,IMPACT ATTENUATOR, TYPE 2 (35 MPH, 36", BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM 606 - CABLE GUARDRAIL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE HIGH TENSION FOUR CABLE GUARDRAIL SYSTEMS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, GUARDRAIL, MISC., TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED), AND ITEM 606, GUARDRAIL, MISC. TENSIONED CABLE ANCHOR TERMINAL AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL HIGH TENSION CABLE GUARDRAIL SYSTEM NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

SYSTEMS SHALL HAVE A MAXIMUM DEFLECTION OF 8 FEET AND THE MAXIMUM LONGITUDINAL DISTANCE BETWEEN POSTS SHALL BE 15 FEET.

INSTALLATION WILL BE A FOUR CABLE HIGH TENSION SYSTEM INSTALLED IN SOCKETED POSTS FOUNDATION WITH A FOUR FOOT WIDE "NO MOW STRIP".

CONTRACTOR SHALL PROVIDE DELINEATORS ON THE POSTS AT A MINIMUM INTERVAL OF 100 FEET AND ON ALL ANCHOR TERMINALS.

TRANSITIONS TO W-BEAM GUARDRAIL ARE NOT ALLOWED.

REFER TO MANUFACTURER FOR MAXIMUM OFFSET FROM BREAK POINT.

TORPEDO OR BULLET SPLICES ARE NOT ALLOWED. ALL CABLE SPLICES SHALL BE A SWAGED OR OPEN BODY DESIGN THAT ALLOWS FOR ANNUAL INSPECTION BETWEEN THE WEDGE AND STRANDS OF CABLE.

POSTS ARE SET IN SOCKETED CONCRETE FOUNDATIONS AND SHALL NOT BE PERMANENTLY INSTALLED UNTIL THEIR RESPECTIVE RUNS OF TENSIONED CABLE GUARDRAIL ARE READY FOR FINAL CONNECTION TO THE END TERMINAL ASSEMBLY. THE CONTRACTOR SHALL REPLACE ANY POSTS DAMAGED DURING INSTALLATION AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

PAYMENT FOR THE WORK DESCRIBED ABOVE WILL BE INCLUDED IN THE FOLLOWING ITEMS:

GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED), FT
GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL, EACH

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GENERAL NOTES

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CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

RAILROAD COORDINATION

FOR RAILROAD COORDINATION NOTES, DETAILS AND INFORMATION, SEE SHEETS 1111 AND 1112.

ODOT TRAFFIC COUNTING STATION

THE CONTRACTOR SHALL CONTACT DAVE GARDNER AT ODOT CENTRAL OFFICE FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION AT 614-752-5740 SO THAT ODOT CAN MAKE ARRANGEMENTS TO MOVE THE AFFECTED CABINET USED FOR TRAFFIC COUNT STATIONS.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 18 IN DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACK-FILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

ITEM 611 - CONDUIT BORED OR JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 30 FEET TO THE EDGE OF PAVEMENT. PROVIDE A STEEL CASING PIPE CONFORMING TO 748.06 HAVING JOINTS WITH A CIRCUMFERENTIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER. THE INSTALLED CASING PIPE IS THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND RE-GALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM SPECIAL - PIPE CLEAN-OUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEAN-OUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEAN-OUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEAN-OUT.

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 24" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION 50 FT.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY STATE FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM 511 WINGWALLS OR HEADWALLS FOR 611 ITEMS

FOR ITEMS 706.05, 706.051, 706.052 AND 706.053 WITH A CAST-IN-PLACE WING-WALL OR HEAD-WALL A PRECAST ALTERNATIVE MAY BE FURNISHED PER 602.03. THE PRECAST ALTERNATIVE WILL MEET THE CAST-IN-PLACE STRUCTURAL DESIGN LOADINGS, DESIGN HEIGHT, AND DESIGN LENGTH DIMENSIONS.

FULL COMPENSATION FOR THE PRECAST WING-WALL OR HEAD-WALL IS THE NUMBER OF CUBIC YARDS OF ITEM 511, AND POUNDS OF ITEM 509 FOR THE CORRESPONDING CAST-IN-PLACE STRUCTURE.

**ITEM 611 24" CONDUIT, TYPE C, AS PER PLAN
ITEM 611 36" CONDUIT, TYPE C, AS PER PLAN**

THE CONTRACTOR SHALL USE CARE IN CONSTRUCTING THE FOUNDATIONS OF BRIDGE FRA-71-0308 L/R DUE TO THE CLOSE PROXIMITY OF EXISTING 36" AND 24" STORM SEWERS. IN THE EVENT THAT THE BACKFILL IS DAMAGED OR ANOTHER DEFECT IS DISCOVERED, THE ENGINEER WILL DIRECT THE CONTRACTOR TO PERFORM THE FOLLOWING WORK:

- REMOVE THE EXISTING HDPE CONDUIT FOR REUSE.
- REINSTALL THE HDPE CONDUIT WITH NEW BEDDING AND BACKFILL.

THE REINSTALLATION OF THE CONDUIT SHALL BE IN ACCORDANCE WITH 611.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR THIS WORK AND INCLUDE ALL NECESSARY COSTS REQUIRED TO REMOVE AND REINSTALL THE PIPE INCLUDING EXCAVATION, PROVIDING AND INSTALLING BEDDING AND BACKFILL MATERIAL, LAYING THE CONDUIT, AND MAKING CONNECTIONS TO THE EXISTING STORM SEWER.

611, 24" CONDUIT, TYPE C, AS PER PLAN 250 FT.
611, 36" CONDUIT, TYPE C, AS PER PLAN 250 FT.

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EXISTING UNDERDRAINS

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDER-DRAINS THAT OUTLET TO A SLOPE.

UNDER-DRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDER-DRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDER-DRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 601, TIED CONCRETE BLOCK MAT, TYPE 1 3.6 SQ. YD.
- 611 6" CONDUIT, TYPE F 50 FT.
- 611, PRECAST REINFORCED CONCRETE OUTLET 2 EACH
- 605 6" UNCLASSIFIED PIPE UNDER-DRAINS 50 FT.

ASPHALT SURFACE COURSE, AS PER PLAN LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)

LOCATE LONGITUDINAL JOINTS IN THE SURFACE COURSE SUBJECT TO THE FOLLOWING REQUIREMENTS:

PLACE THE MAINLINE PAVEMENT SURFACE COURSE WITH A SINGLE COLD LONGITUDINAL JOINT LOCATED BETWEEN LANES 2 AND 3. A COLD LONGITUDINAL JOINT IS PERMITTED BETWEEN THE SHOULDER AND MAINLINE PAVEMENT. NO OTHER COLD JOINTS ARE PERMITTED IN THE SURFACE COURSE OF MAINLINE PAVEMENT.

ITEM 442, ANTI-SEGREGATION

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH CMS 401.12.

ITEM 622, CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN

REINFORCED END ANCHORAGE LENGTH WILL BE EXTENDED FROM INLET EXPANSION JOINT TO INLET EXPANSION JOINT FOR INLETS WITH LESS THAN 30 FEET CLEAR. ALL OTHER DETAILS OF THE REINFORCED END ANCHORAGES WILL BE PER RPM-4.3

PROJECT STANDARD OPERATING PROCEDURE FOR SUBGRADE TREATMENT

CHEMICAL STABILIZATION OF SUBGRADE SHALL NOT BE PERFORMED WITHIN HIGH SULFATE SOILS WITHOUT THE APPROVAL BY THE ENGINEER AND CONSULTING THE DISTRICT GEOTECHNICAL ENGINEER.

SULFATE READINGS ENCOUNTERED DURING THE SUPPLEMENT 1120 MIXTURE DESIGN TESTING THAT ARE ABOVE 5000PPM ARE CONSIDERED "HIGH".

AREAS NOT BEING CHEMICALLY STABILIZED SHALL BE TREATED ACCORDING TO ITEM 204 EXCAVATION OF SUBGRADE, 12" DEEP, ITEM 204 GEOTEXTILE FABRIC, ITEM 204 12" GRANULAR MATERIAL, TYPE B AND ITEM 204 SUBGRADE COMPACTION AND PROOF ROLLING.

ITEM 206 - MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, AS PER PLAN

ALL SAMPLING AND TESTING FOR ITEM 206 MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS SHALL BE PERFORMED ACCORDING TO CMS ITEM 206 AND SUPPLEMENT 1120 EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES.

ALL SAMPLING AND TESTING OF ITEM 206 MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS FOR THE PROJECT SHALL BE COMPLETED PRIOR TO TRAFFIC SHIFTING INTO PHASE 1.

SAMPLING AND TESTING SHALL BE IN ACCORDANCE WITH ODOT SUPPLEMENT 1120 AND AS SPECIFIED HEREIN. A MINIMUM OF ONE SOIL SAMPLE FOR EVERY 5000 SQUARE YARDS OF PROPOSED CHEMICALLY STABILIZED SUBGRADE AREA, BUT NOT LESS THAN A TOTAL OF FOUR (4) SOIL SAMPLES FOR EACH CONSTRUCTION PHASE OF THE PROJECT SHALL BE PERFORMED.

IF ADDITIONAL HIGH SULFATE CONTENTS ARE ENCOUNTERED DURING THE ITEM 206 MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, THEN CONTACT THE DISTRICT GEOTECHNICAL ENGINEER IMMEDIATELY.

ITEM 619, FIELD OFFICE, TYPE C, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS PROVIDED IN CMS FOR THE TYPE OF FIELD OFFICE SPECIFIED, PROVIDE THE FOLLOWING ITEMS.

1. FOR EACH TELEPHONE AND/OR COMPUTER STATION SPECIFIED, PROVIDE ALL ETHERNET WIRING NECESSARY TO CONNECT THE PHONE AND/OR COMPUTER AND MULTI-FUNCTION COPIER TO THE INTERNET COMPANY SYSTEM.
2. PROVIDE A BROADBAND INTERNET CONNECTION CAPABLE OF MINIMUM DOWNLOAD SPEEDS AS FOLLOWS:
 - 30 MBPS DOWNLOAD 5 MBPS UPLOAD - NETWORK LATENCY LESS THAN 50 MILLISECONDS. IF SPEEDS ARE NOT AVAILABLE THROUGH AN INDIVIDUAL OR SINGULAR CIRCUIT, PROVIDE THE HIGHEST SPEED AVAILABLE IN THE AREA AND INSTALL MULTIPLE CIRCUITS TO ACHIEVE THE SPECIFIED SPEEDS. WHEN MULTIPLE BROADBAND SERVICES ARE AVAILABLE. THE FOLLOWING IS THE DESCENDING ORDER OF PRECEDENCE: CABLE, DSL, CELLULAR, AND WIRELESS RADIO (SATELLITE COMMUNICATION IS NOT COMPATIBLE WITH ODOT VPN CONNECTION AND WILL NOT BE ACCEPTED). SUPPLY MODEMS CAPABLE OF BEING CONFIGURED IN BRIDGE MODE. IF A CELLULAR NETWORK IS USED, PROVIDE THE CELLULAR EQUIPMENT, INCLUDING SOFTWARE AND ROUTER EQUIPMENT TO CONNECT TO THE ODOT PROVIDED CISCO ASA 5505 FIREWALL. SUPPLY ODOT WITH ALL DOCUMENTATION FOR THE BROADBAND CIRCUIT INCLUDING ALL USERNAME/USER IDS, PASSWORDS AND ACCOUNT INFORMATION. VERIFY THAT THE BROADBAND INTERNET CONNECTION IS ACTIVE AND WORKING AS SPECIFIED. ODOT IT PERSONNEL WILL CONFIRM THAT BANDWIDTH AND NETWORK LATENCY ARE COMPLIANT WITH THE REQUIRED FIELD OFFICE SPECIFICATIONS. ALL FIELD OFFICE INTERNET CONNECTIONS ARE FOR ODOT USE ONLY.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 1:

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 2 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 2.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 2.0 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448). GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 1 150 SY

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 2:

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 4 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 3.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 3.0 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) (2 LIFTS). GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 2 600 SY

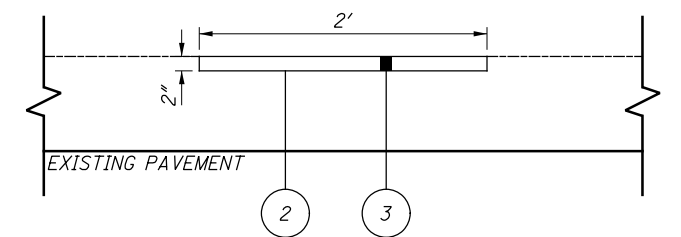
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 3:

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 6 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 6.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 1.5 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) AND 4.5 INCHES OF ITEM 301 - ASPHALT CONCRETE BASE. GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

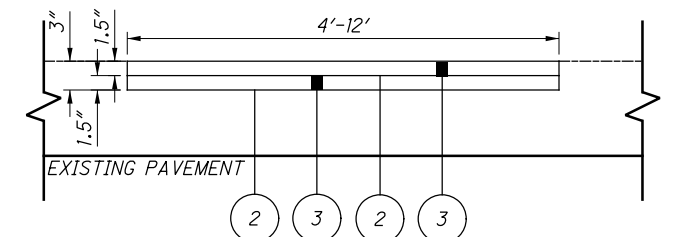
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 3 3000 SY



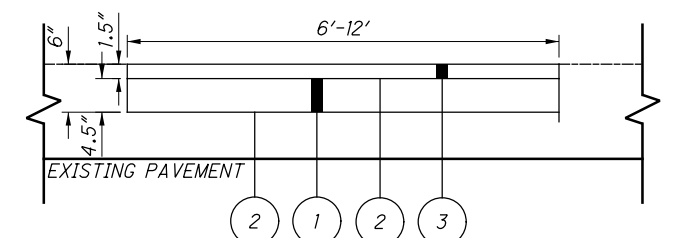
TYPE 1 DETAIL

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 1 FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 1, SEE NOTE TO THE LEFT.



TYPE 2 DETAIL

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 2 FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 2, SEE NOTE TO THE LEFT.



TYPE 3 DETAIL

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 3 FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 3, SEE NOTE TO THE LEFT.

LEGEND:

- 1 ITEM 301 - ASPHALT CONCRETE BASE, PG64-22
- 2 ITEM 407 - NON-TRACKING TACK COAT (RATE PER CMS TABLE 407.06-1)
- 3 ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)

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GENERAL NOTES

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GENERAL, MAINTENANCE OF TRAFFIC DURING CONSTRUCTION

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICER VIA EMAIL (DO6.PIO@DOT.OHIO.GOV) 21 DAYS IN ADVANCE OF THE START OF CONSTRUCTION ACTIVITIES TO PROPERLY COORDINATE EFFORTS TO NOTIFY THE TRAVELING PUBLIC, INCLUDING RESIDENTS, BUSINESSES, LOCAL EMERGENCY SERVICES, LAW ENFORCEMENT, AND SCHOOLS. THE DISTRICT 6 PIO SHALL PROVIDE NOTIFICATION NO LATER THAN 15 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. IF, SUBSEQUENT TO THE ADVANCE NOTIFICATION, THE START DATE IS CHANGED, THEN A NEW SEVEN (7) DAY NOTIFICATION SHALL BE REQUIRED. THE ROAD CANNOT BE CLOSED UNLESS PRIOR NOTIFICATION HAS BEEN ACCOMPLISHED. THE SAME PARTIES SHALL BE NOTIFIED WHEN THE CLOSURE HAS CONCLUDED AND THE ROAD IS BACK OPEN TO TRAFFIC. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC INFORMATION OFFICE.

NOISE

1. THE CONTRACTOR SHALL INSTALL ONE NOISE BARRIER AT NSA 1 AS INCLUDED IN THE PLANS. NSA1- THE RESIDENTIAL SIDE OF THE NOISE BARRIER SHALL BE CONSTRUCTED WITH DRYSTACK TEXTURE IN ACCORDANCE WITH THE RESULTS OF PUBLIC INVOLVEMENT.

ESA

ENVIRONMENTAL SITE ASSESSMENT STUDIES HAVE SHOWN THAT PETROLEUM CONTAMINATED SOIL WILL BE ENCOUNTERED DURING EXCAVATIONS FOR CONSTRUCTION ACTIVITIES AT THE FOLLOWING SITES:

SITE NAME,	SITE ADDRESS,	APPROX. STA. TO STA.
ESA #4	4333 ZUBER ROAD,	181+0L TO 225+0L (ALONG IR71)
ESA #9	6948/6972 HARRISBURG PK,	96+0R TO 102+0R
ESA #11	7163 HARRISBURG PK,	84+0L TO 86+0L
ESA #12	7139 HARRISBURG PK,	86+0L TO 89+0L
ESA #14	6997 HARRISBURG PK,	92+0L TO 97+0L

THE CONTRACTOR SHALL MANAGE THIS MATERIAL ACCORDING TO THE FOLLOWING NOTES. THE ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK. ALL EXCAVATIONS AT THE AFOREMENTIONED LOCATION SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS.

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH TEN (10) DAYS NOTICE PRIOR TO ANY EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS TO PERMIT ARRANGING FOR THE NECESSARY TESTING SERVICES. ALL MATERIAL EXCAVATED BY THE CONTRACTOR BETWEEN THE AFOREMENTIONED LIMITS SHALL BE SUBJECT TO TESTING BY AN INSPECTOR PROVIDED BY THE ENGINEER.

THE PETROLEUM CONTAMINATED SOIL, WITHIN THE AFOREMENTIONED LIMITS, MAY BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL IN A LINED AND COVERED ROLL-OFF BOX. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHALL BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECTED SOIL FROM COMING IN CONTACT WITH THE ORIGINAL SOIL. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF. THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED CONTAMINATED MATERIAL INTO TRUCKS.

THE CONTRACTOR SHALL COMPLETE ALL MANIFEST FOR MATERIAL TO BE TRANSPORTED AND PROVIDE TO THE ENGINEER

FOR SIGNATURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS AND TO TRANSPORT THE MATERIAL TO A LICENSED AND PERMITTED SOLID WASTE DISPOSAL FACILITY. THE CONTRACTOR SHALL CONTACT THE FACILITY TO DETERMINE IF ANY ADDITIONAL TESTING IS REQUIRED FOR DISPOSAL AND WILL BE RESPONSIBLE FOR CONDUCTING ANY ADDITIONAL SAMPLING AND ANALYSIS OF THIS MATERIAL.

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE (IF NECESSARY), TEST FOR DISPOSAL, TRANSPORT, AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID PER TON. THE BASIS FOR CONVERSION FROM TONS TO CUBIC YARDS IS 1.5 TON/CUBIC YARD. ALL EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

690E65016 ITEM SPECIAL - WORK INVOLVING PETROLEUM CONTAMINATED SOIL 80 TON

ECOLOGICAL, AGENCY COORDINATION

1. THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSE OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

2. THE CONTRACTOR MUST ABIDE BY ALL STATE AND FEDERAL REQUIREMENTS FOR THE STORAGE OF FUELS, PETROCHEMICALS, EQUIPMENT AS WELL AS THESE ADDITIONAL REQUIREMENTS: IDLE EQUIPMENT (INACTIVE FOR MORE THAN 6 HOURS), PETROCHEMICALS, TOXIC/HAZARDOUS MATERIALS SHALL NOT BE STORED OR DISCHARGED IN THE 100-YEAR FLOODPLAIN, OR NEAR ANY DRAINAGE WAYS, DITCHES, OR STREAMS THAT COULD CONVEY SUCH MATERIALS INTO THE BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER) OR ANY OF ITS TRIBUTARIES. REFUELING OF EQUIPMENT SHOULD NOT OCCUR IN THE FLOODPLAIN OR NEAR ANY DRAINAGE WAYS, DITCHES, OR STREAMS.

3. ANY DISTURBED AREAS IN THE STREAM BOTTOM SHALL BE RETURNED TO PRE-CONSTRUCTION CONTOURS. STREAM BOTTOM ELEVATIONS SHALL BE DETERMINED BEFORE IN-STREAM WORK COMMENCES TO ENSURE THAT ALL FILL MATERIAL AND DEBRIS IS COMPLETELY REMOVED BEFORE CONSTRUCTION IS COMPLETE. THE CONTRACTOR WILL PROVIDE PRE AND POST-CONSTRUCTION SURVEY ELEVATIONS OF THE STREAM BOTTOM TO THE DEC TO VERIFY THIS COMMITMENT IS MET.

4. DE-WATERING: NO WASTEWATER OF ANY KIND SHOULD BE DIRECTLY DISCHARGED INTO BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER) OR ANY OF ITS TRIBUTARY STREAMS, DRAINAGE WAYS OR DITCHES. IF DEWATERING IS NECESSARY TO FACILITATE IN-STREAM WORK OR PIER CONSTRUCTION, ALL WASTEWATER SHOULD BE PUMPED ONTO A VEGETATED AREA AT LEAST 100 FEET FROM THE RIVERBANK TO ALLOW FOR COMPLETE INFILTRATION. IF DISCHARGE TO A VEGETATED AREA IS NOT FEASIBLE, THEN WASTEWATER SHALL

BE DISCHARGED INTO A SEDIMENT FILTER BAG OR INTO A TEMPORARY DETENTION/RETENTION POND WITH SUFFICIENT RETENTION TIME TO PERMIT FOR THE SETTLING OF ALL SUSPENDED SOLIDS PER THE BMP REQUIREMENTS.

5. CLEARING AND GRUBBING: ALL STREAMBANK VEGETATION SHALL BE LEFT UNDISTURBED TO THE MAXIMUM EXTENT POSSIBLE.

6. DISTURBANCES TO THE RIPARIAN ZONE MUST BE LIMITED TO THE ACCESS POINTS AND CONSTRUCTION LIMITS. PROVISIONS SHALL BE IN PLACE TO PROTECT REMAINING VEGETATION/TREES FROM DAMAGE BY CONSTRUCTION EQUIPMENT. THESE PROVISIONS MUST LIMIT THE REMOVAL OF RIPARIAN VEGETATION AND INCLUDE MEASURES TO AVOID DAMAGE TO REMAINING TREES (TRUNKS, BRANCHES, AND/OR ROOTS) LOCATED IN OR ADJACENT TO THE WORK AREA. THE OPERATION OF MACHINERY WITHIN THE DRIP LINE OF TREES SCHEDULED TO REMAIN MUST BE AVOIDED TO THE GREATEST EXTENT POSSIBLE. SEVERELY DAMAGED TREES (WHERE DAMAGE WOULD LEAD TO MORTALITY) MAY REMAIN ONSITE WHERE UNLIKELY TO POSE A SAFETY HAZARD TO SERVE AS NESTING CAVITIES, HOLD SOIL, AND PREVENT EROSION.

7. THE CONTRACTOR SHALL NOT USE CONSTRUCTION DEBRIS AS ROCK CHANNEL PROTECTION OR ALLOW CONSTRUCTION DEBRIS TO REMAIN IN THE VICINITY OF THE RIVER. SPOIL PILES SHALL BE COVERED OR OTHERWISE MANAGED TO REDUCE SEDIMENTATION. ALL TEMPORARY STRUCTURES MUST BE COMPLETELY REMOVED FROM THE RIVERBED/BANKS FOLLOWING PROJECT COMPLETION. TEMPORARY ROCK USED FOR ACCESS ROADS AND DOCKS OR OTHER TEMPORARY RIVER ACCESS SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE PROJECT AND STORED/DISPOSED OF AT AN APPROPRIATE UPLAND SITE OUTSIDE OF THE 100-YEAR FLOODPLAIN AREA.

OTHER RESOURCES, DRINKING WATER

1. WATERSHED PROTECTION - THE PROJECT IS LOCATED WITHIN THE OHIO DEPARTMENT OF REHABILITATION AND CORRECTIONS PICKAWAY CORRECTIONS FACILITY WATER SYSTEM AND TIMBERLAKE WATER SYSTEM SOURCE WATER PROTECTION AREAS. IT IS ESSENTIAL THAT ALL ACTIVITIES ASSOCIATED WITH THIS WORK BE PERFORMED IN A MANNER CONSISTENT WITH BEST WATERSHED MANAGEMENT PRACTICES INCLUDING, BUT NOT LIMITED TO: AREAS OF DISTURBED GROUND SHALL HAVE APPROPRIATE EROSION AND SEDIMENT CONTROLS. IF HAZARDOUS/TOXIC MATERIALS INCLUDING BUT NOT LIMITED TO FUELS, OILS, BITUMEN'S PAINTS, SEALANTS, OR OTHER CHEMICALS, ARE STORED ON SITE, THEY SHALL BE STORED IN A DOUBLE-CONTAINMENT MANNER. ALL EQUIPMENT REPAIRS, MAINTENANCE, AND MECHANICAL WORK THAT COULD RESULT IN THE RELEASE OF HAZARDOUS/TOXIC MATERIALS SHALL BE PERFORMED IN AN APPROPRIATELY CONTAINED AREA, PREFERABLY OFF SITE OR AN APPROPRIATE OFF-SITE FACILITY. IN THE EVENT THAT ANY HAZARDOUS/TOXIC MATERIALS INCLUDING, BUT NOT LIMITED TO FUELS, OILS, BITUMEN'S PAINTS, SEALANTS, OR OTHER CHEMICALS ARE SPILLED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY EMERGENCY SERVICES BY CALLING 911 AND THE OHIO EPA 24 HOUR SPILL REPORTING LINE AT (800) 282-9378. THE CONTRACTOR SHOULD BE PREPARED TO PROVIDE DETAILED INFORMATION RELATIVE TO THE TYPE AND QUANTITY OF MATERIAL THAT HAS BEEN SPILLED AS WELL AS THE EXACT LOCATION AND THE EXACT TIME AT WHICH THE SPILL OCCURRED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INFORMING ALL SUBCONTRACTORS AND OTHER AGENTS OF THESE RESPONSIBILITIES, PRECAUTIONS, AND PROHIBITIONS.)

SECTION 4F, IDENTIFIED SECTION 4(F) PROPERTIES

1. THE CONTRACTOR SHALL NOT STAGE AND/OR STORE CONSTRUCTION EQUIPMENT OUTSIDE PROPOSED CONSTRUCTION LIMITS OR WITHIN BATTLETTLE DARBY CREEK METRO PARK PROPERTY BOUNDARIES.

PERMITS, WATERWAY PERMITS

1. ODOT SHALL OBTAIN ALL APPROPRIATE WATERWAY PERMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND ALL SPECIAL PROVISIONS FOR WATERWAY PERMITS WILL BE INCLUDED IN THE PROJECT PLANS. THE CONTRACTOR IS NOT PERMITTED TO WORK BELOW THE ORDINARY HIGH WATER MARK UNTIL THE PERMITS ARE RECEIVED.

PERMITS, STORM WATER PERMITS

1. PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS, THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SWPPP, AS PER PLAN (SEE SHEET 410). SEDIMENT AND EROSION CONTROLS SHALL BE PROPERLY INSTALLED AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. STRAW BALES SHALL NOT BE PERMITTED AS A FORM OF SEDIMENT CONTROL. ENSURE TIMELY ADHERENCE TO THE GENERAL CONSTRUCTION PERMIT FOR ALL SEDIMENT AND EROSION CONTROLS, INCLUDING SEEDING AND MULCHING. PARTICULAR ATTENTION SHALL BE GIVEN TO ANY DRAINAGE WAYS, UNPROTECTED SLOPES, DITCHES AND STREAMS THAT COULD CONVEY SEDIMENT LADEN WATERS DIRECTLY TO THE BIG DARBY.

PERMITS, FLOODPLAINS

1. THE PROJECT DESIGNER SHALL DELINEATE THE 100-YEAR FLOODPLAIN AND DELINEATE THE LIMITS OF 1,000 FEET FROM THE BANK OF THE BIG DARBY CREEK IN THE PROJECT PLANS.

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ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN CONSTRUCTION SEQUENCE

RECONSTRUCTION AND WIDENING OF I-71 SHALL BE COMPLETED OVER 3 PRIMARY PHASES AS FOLLOWS:

PRE-PHASE 1 WORK

PRIOR TO THE START OF PHASE 1, THE NORTHBOUND OUTSIDE SHOULDER AND PARTS OF THE SOUTHBOUND INSIDE AND OUTSIDE SHOULDERS MUST BE RECONSTRUCTED IN ORDER TO CARRY SHIFTED PRE-PHASE 1 AND PHASE 1 TRAFFIC. ADDITIONALLY, A 1 FOOT WIDE SECTION OF EXISTING PAVEMENT (ADJACENT TO THE SHOULDER RECONSTRUCTION) SHALL BE MILLED AND RESURFACED. SHOULDER RECONSTRUCTION AND ADJACENT RESURFACING WORK SHALL BE LIMITED TO THAT WHICH CAN BE COMPLETED IN TWO NIGHTS AS DETAILED IN THE PRE-PHASE 1 TYPICAL SECTIONS.

THE MAINLINE CROSSOVER AT THE SOUTH END OF THE PROJECT AND THE CULVERT CROSSOVERS LOCATED NEAR YOUNG RD. SHALL BE CONSTRUCTED IN CONJUNCTION WITH THE SHOULDER REPLACEMENT. ADDITIONALLY, THE EXISTING PAVEMENT JOINT UNDER THE NORTHBOUND LANE SHALL BE REPAIRED AS IT WILL FALL IN OR NEAR THE PHASE 1 WHEEL PATH (SEE ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2). PRE-PHASE 1 WORK WILL ALSO INCLUDE REPAIRS TO THE EXISTING PAVEMENT AS DETAILED ON SHEET 13. REPAIRS MUST BE COMPLETE BY 10/15/2020 (SEE INCENTIVE/DISINCENTIVE CONTRACT TABLE ON THIS SHEET). ANY PRE-PHASE 1 WORK THAT IMPACTS TRAVEL LANES SHALL BE COMPLETED BY UTILIZING NIGHTTIME LANE CLOSURES PER ODOT SCD MT-95.30. THE LANE CLOSURES MAY ONLY BE IMPLEMENTED DURING HOURS ALLOWED AS LISTED IN THIS PLAN.

PRE-PHASE 1 PARTS A AND B

UPON COMPLETION OF PRE-PHASE 1 TEMPORARY PAVEMENT WORK, THE CULVERT CROSSING OF NORTHBOUND I-71, JUST SOUTH OF YOUNG ROAD SHALL BE REPLACED. THIS WORK SHALL BE COMPLETED IN TWO PARTS, WITH ONE NORTHBOUND LANE MAINTAINED ON THE EXISTING NORTHBOUND SIDE, AND THE OTHER NORTHBOUND LANE MAINTAINED IN CONTRAFLOW WITH SOUTHBOUND TRAFFIC VIA THE CULVERT CROSSOVER THAT WAS CONSTRUCTED PRIOR.

PHASE 1

PHASE 1 CONSTRUCTS THE WESTERN HALF OF NORTHBOUND I-71 (PROPOSED RUMBLE STRIPS SHALL BE NON-PERFORMED). THIS WORK IS COMPLETED WITH NORTHBOUND TRAFFIC SHIFTED AWAY FROM THE WORKZONE, UTILIZING THE RECENTLY REPLACED OUTSIDE SHOULDER. ADDITIONALLY 2-LANE CROSSOVER SHALL BE CONSTRUCTED AT THE NORTH PROJECT TERMINI, AS WELL AS 2-RAMP CROSSOVERS AT THE SOUTHBOUND EXIT TO US 62. SOUTHBOUND TRAFFIC (INCLUDING RAMPS) SHALL BE MAINTAINED IN EXISTING LANES FOR THE DURATION OF PHASE 1 WORK. ALL RAMPS AT THE US 62 INTERCHANGE SHALL REMAIN OPEN DURING PHASE 1. ALL MEDIAN GRADING, SHALL BE COMPLETED IN PHASE 1. ADDITIONALLY, THE TEMPORARY PAVEMENT ADJACENT TO NB-71 THAT WAS LEFT IN PLACE FROM PROJECT FRA-71-5.29 PID 84868 SHALL BE REMOVED.

PHASE 2

PHASE 2 CONSTRUCTS THE REMAINING EASTERN HALF OF NORTHBOUND I-71 (PROPOSED RUMBLE STRIPS SHALL BE NON-PERFORMED). THIS WORK IS COMPLETED WITH NORTHBOUND TRAFFIC SHIFTED AWAY FROM THE WORKZONE, UTILIZING THE RECENTLY CONSTRUCTED WESTERN HALF OF I-71. ALL SOUTHBOUND TRAFFIC (INCLUDING RAMPS) SHALL BE MAINTAINED IN EXISTING LANES FOR THE DURATION OF PHASE 2. RAMP D (NORTHBOUND EXIT RAMP TO US 62) SHALL BE CONSTRUCTED UNDER FULL CLOSURE WITH TRAFFIC DETOURED AS DETAILED WITHIN. THIS RAMP SHALL THEN BE

OPENED PRIOR TO THE START OF PHASE 2A. THE NORTHBOUND ENTRANCE RAMP FROM US 62 (RAMP B) SHALL REMAIN OPEN DURING PHASE 2. RAMP B AND D CAN BE CLOSED FOR ONE WEEKEND TO COMPLETE INTERSECTION WORK.

SUB-PHASE 2A

SUB-PHASE 2A CONSTRUCTS RAMP B UNDER CLOSURE (NORTHBOUND ENTRANCE RAMP FROM US 62). THIS SHALL BE COMPLETED CONCURRENTLY WITH PHASE 2, BUT SHALL NOT BE CONSTRUCTED AT THE SAME TIME RAMP D IS CLOSED. THE PHASE 2A CLOSURE SHALL BE LIMITED TO 30 DAYS MAXIMUM. THE DETOUR ROUTE HAS BEEN DETAILED WITHIN. RAMP D SHALL REMAIN OPEN WITH THE EXCEPTION OF THE PHASE 2A 30-DAY CLOSURE.

WINTERIZATION

AT THE CONCLUSION OF PHASE 2A, THE PROJECT SHALL ENTER A WINTERIZATION MODE. SOUTHBOUND TRAFFIC SHALL REMAIN IN EXISTING LANES, WHILE NORTHBOUND TRAFFIC SHALL BE OPENED TO THREE LANES AS DETAILED WITHIN. ALL RAMPS SHALL BE OPEN DURING THE WINTER SET-UP WITH THE EXCEPTION OF PRE-PHASE 3 WORK. THE WINTERIZATION SET-UP SHALL BE IN PLACE BY 10/01/2021 (SEE INCENTIVE/DISINCENTIVE CONTRACT TABLE ON THIS SHEET).

PRE-PHASE 3 WORK

DURING PRE-PHASE 3, THE RAMP A/US 62 INTERSECTION SHALL BE CONSTRUCTED UTILITIZING TWO WEEKEND CLOSURES. RAMP A (SOUTHBOUND EXIT TO US 62) AND RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62) WILL BE DETOURED DURING THE TWO WEEKENDS AS DETAILED WITHIN. ADDITIONALLY, TEMPORARY PAVEMENT SLONG RAMP A SHALL BE CONSTRUCTED FOR USE IN PHASE 3.

IF THE CONCRETE PAVEMENT OPTION IS ULTIMATELY IMPLEMENTED, TEMPORARY PAVEMENT FROM PHASE 2 (ALONG NB INSIDE SHOULDER) SHALL BE REMOVED DURING PRE-PHASE 3. THIS WORK SHALL BE COMPLETED UNDER SHOULDER CLOSURE. THE SHOULDER CLOSURES SHALL BE PER ODOT SCD MT-95.45 EXCEPT DRUMS MAY BE USED IN PLACE OF PCB AS LONG AS DROP-OFF REQUIREMENTS ARE MET (PER ODOT SCD MT-101.90).

PHASE 3

PHASE 3 CONSTRUCTS THE MAJORITY OF SOUTHBOUND I-71. BOTH LANES OF SOUTHBOUND TRAFFIC ARE MAINTAINED BY CROSSING OVER ONTO THE NORTHBOUND SIDE OF THE FREEWAY. RAMP A (SOUTHBOUND EXIT RAMP TO US 62) SHALL ALSO BE CONSTRUCTED WITH TRAFFIC BEING MAINTAINED ON TEMPORARY PAVEMENT AND EXISTING RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62). RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62) SHALL REMAIN CLOSED FOR THE DURATION OF THIS PHASE. THE DETOUR ROUTE HAS BEEN DETAILED WITHIN. ADDITIONALLY, THE TEMPORARY PAVEMENT ADJACENT TO NB-71 THAT WAS LEFT IN PLACE FROM PROJECT FRA-71-5.29 PID 84868 SHALL BE REMOVED. WITH THE EXCEPTION OF THE CROSSOVERS, THE FINAL WEARING COURSE FOR SOUTHBOUND I-71 SHALL BE PLACED AT THE CONCLUSION OF PHASE 3

SUB-PHASE 3A

SUB PHASE 3A CONSTRUCTS THE REMAIN PORTION OF I-71 IN THE VICINITY OF RAMP C. ALL LANES SHALL REMAIN IN THE PHASE 3 SET-UP EXCEPT THAT RAMP A IS MAINTAINED UTILIZING THE NEWLY CONSTRUCTED PAVEMENT. RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62) SHALL REMAIN CLOSED FOR THE DURATION OF THIS PHASE. THE DETOUR ROUTE HAS BEEN DETAILED WITHIN.

POST PHASE 3

AT THE CONCLUSION OF PHASE 3 AND 3A, TRAFFIC SHALL BE PLACED INTO THEIR FINAL CONDITION AND THE REMAINING EXISTING I-71 PAVEMENT THAT IS TO BE RESURFACED (OUTSIDE THE FULL DEPTH LIMITS) SHALL BE MILLED TO THE DEPTH SPECIFIED IN THE ROADWAY PLANS. THE FINAL WEARING COURSE OF BOTH NEWLY CONSTRUCTED AND EXISTING MILLED PAVEMENTS SHALL THEN BE INSTALLED UNLESS PREVIOUSLY CONSTRUCTED. ONCE COMPLETED, FINAL PAVEMENT MARKINGS SHALL BE APPLIED PER THE TRAFFIC CONTROL PLANS AND NON-PERFORMED RUMBLE STRIPS FROM PHASE 1 AND PHASE 2 SHALL BE INSTALLED. THIS WORK SHALL BE COMPLETED BY UTILIZING ODOT SCD MT-97.11. IN ADDITION TO THIS WORK, THE MEDIAN CABLE BARRIER SHALL BE INSTALLED PER THE ROADWAY PLANS AND TEMPORARY PAVEMENT SHALL BE REMOVED BY UTILIZING ODOT SCD MT-95.45 EXCEPT DRUMS MAY BE USED IN PLACE OF PCB AS LONG AS DROP-OFF REQUIREMENTS ARE MET (PER ODOT SCD MT-101.90).

GENERAL

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION), COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF TRAFFIC ENGINEERING, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223.

THE ROADWAY SHALL NOT BE OPENED TO TRAFFIC UNTIL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS, APPROVED BY THE ENGINEER, ARE INSTALLED. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING THE CONSTRUCTION. PERMANENT TRAFFIC CONTROL THAT IS NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED AND IMPROPERLY PLACED TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL PROVIDE A 24 HOUR CONTACT WHO WILL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC FOR THE DURATION OF THE PROJECT.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE IN PLACE AND APPROVED BY THE ENGINEER AND THE DISTRICT.

MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES INCLUDING DRUMS, SIGNS, BARRICADES, SIGN BOARDS, DETOUR SIGNAGE, ETC., SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

STEADY-BURNING TYPE "C" LIGHTS SHALL BE REQUIRED ON ALL BARRICADES IN USE AT NIGHT. ALL ADVANCE SIGNING SHALL BE EQUIPPED WITH TYPE "A" FLASHING LIGHTS AND (2) ORANGE FLAGS (24"X24"). CONES ARE NOT APPROVED FOR USE AT NIGHT. LIGHTS ARE NOT REQUIRED ON SIGNS IN PLACE DURING DAYLIGHT HOURS.

FOR AREAS ADJACENT TO VEHICULAR TRAFFIC, OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH THE PROPER TRAFFIC CONTROL DEVICES AT ALL TIMES. DROP OFFS WITHIN THE WORK ZONE SHALL CONFORM TO THE REQUIREMENTS SET FORTH ON ODOT STANDARD CONSTRUCTION DRAWING MT-101.90.

TEMPORARY PAVEMENT WEDGE

TEMPORARY PAVEMENT WEDGES SHALL BE PROVIDED AT ALL TIMES WHERE TRAFFIC IS REQUIRED TO TRAVEL FROM OR ONTO A PAVEMENT SURFACE OF A DIFFERENT ELEVATION, AROUND MANHOLES, AT CATCH BASINS, ETC. THE MINIMUM SLOPE OF THE TEMPORARY PAVEMENT WEDGE SHALL BE 3:1 ALONG LONGITUDINAL JOINTS AND 120:1 AT TRANSVERSE JOINTS. THESE WEDGES SHALL BE REMOVED PRIOR TO PLACING THE SPECIFIED FINAL PAVEMENT COURSE. PAYMENT FOR ALL WORK, MATERIALS, ETC. ASSOCIATED WITH THIS ITEM SHALL BE PAID FOR UNDER THE ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN LUMP SUM.

WEEKLY MAINTENANCE OF TRAFFIC MEETING

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITIES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

TIME LIMITATION ON A DETOUR

INTERCHANGE RAMPS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT WHERE SPECIFIED IN THE PLANS AS OUTLINED IN THE CHART BELOW. FOR EACH RESPECTIVE DETOUR AND CLOSURE, A DISINCENTIVE SHALL BE ASSESSED FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

WINDOW CONTRACT TABLE			
RAMP (MOVEMENT)	PHASE	MAXIMUM DURATION OF CLOSURE	DISINCENTIVE PER DAY
RAMP A (I-71 SB TO US 62)	PRE-PHASE 3	2-WEEKENDS (7PM FRI-7AM MON)	\$4,600
RAMP B (US-62 TO I-71 NB)	PHASE 2A	30 DAYS	\$7,400
RAMP C (US 62 TO I-71 SB)	PRE-PHASE 3	2-WEEKENDS	\$1,100

INCENTIVE/DISINCENTIVE CONTRACT TABLE			
DESCRIPTION OR LOCATION OF CRITICAL WORK	COMPLETION DATE	TIME PERIOD	DISINCENTIVE \$ PER TIME PERIOD
PRE-PHASE 1 PAVEMENT REPAIRS COMPLETED	10/15/2020	DAY	\$3,200
COMPLETE PHASE 2 AND IMPLEMENT WINTERIZATION SET-UP	10/01/2021	DAY	\$6,000

ANY NECESSARY INTERCHANGE RAMP CLOSURES OCCURRING DURING TIMES NOT OUTLINED IN THE "LANE VALUE CONTRACT TABLE" SHALL BE PER THE REQUIREMENTS OF THE "RAMP CLOSURE RESTRICTIONS" TABLE BELOW.

RAMP CLOSURE RESTRICTIONS INTERSTATE ROUTE 71 IN FRANKLIN COUNTY					
SECONDARY ROUTE: US ROUTE 62 SLM ALONG 71: 3.08					
RAMP	MOVEMENT	NO CLOSURES ALLOWED		DETOUR ROUTES	
		MON TO FRI	SAT TO SUN	PRIMARY ROUTE	SECONDARY ROUTE
A	I-71 SB TO US-62/SR-3	5AM-7PM	8AM-7PM	I-71 S TO OH-56 TO I-71 N TO US-62/OH-3 (RAMP D)	NONE
B	US-62/SR-3 TO I-71 NB	5AM-7PM	8AM-7PM	US-62/OH-3 N TO OH-665 E TO I-71 N	US-62/OH-3 N TO I-71 S (RAMP C) TO OH-56 TO I-71 N
C	US-62/SR-3 TO I-71 SB	5AM-9AM & 3PM-7PM	NO RESTRICTION	US-62/OH-3 TO I-71 N (RAMP B) TO OH-665 TO I-71 S	US-62/OH-3 N TO OH-665 E TO I-71 S
D	I-71 NB TO US-62/SR-3	5AM-9AM & 3PM-7PM	NO RESTRICTION	I-71 N TO OH-665 TO I-71 S TO US-62/OH-3 (RAMP A)	I-71 N TO OH-665 W TO US-62/OH-3 S
SECONDARY ROUTE: US ROUTE 665 SLM ALONG 71: 6.09					
RAMP	MOVEMENT	NO CLOSURES ALLOWED		DETOUR ROUTES	
		MON TO FRI	SAT TO SUN	PRIMARY ROUTE	SECONDARY ROUTE
AB	OH-665 TO I-71 NB	5AM-10PM	8AM-8PM	OH-665 TO I-71 S TO US-62/OH-3 TO I-71 N	OH-665 W TO US-62/OH-3 S TO I-71 N
AD	I-71 NB TO OH-665	5AM-9AM & 3PM-7PM	NO RESTRICTION	I-71 N TO STRINGTOWN RD. TO I-71 S TO OH-665 (RAMP BC)	I-71 N TO STRINGTOWN RD. W TO HOOVER RD. S TO OH-665
BC	I-71 SB TO OH-665	5AM-9PM	8AM-7PM	I-71 S TO US-62/OH-3 TO I-71 N TO OH-665 (RAMP AD)	I-71 S TO US-62/OH-3 N TO OH-665 E
CA	OH-665 TO I-71 SB	5AM-9AM & 3PM-7PM	NO RESTRICTION	OH-665 E TO I-71 N TO STRINGTOWN RD. TO I-71 S	OH-665 W TO US-62/OH-3 S TO I-71 S

SHORT DURATION RAMP CLOSURES

FOR THE PURPOSE OF PERFORMING THE REQUIRED WORK OR WHEN REQUIRED BY THE INTERSTATE ENTRANCE RAMP CLOSURE NOTE, RAMPS MAY BE CLOSED FOR SHORT DURATIONS AND DETOURED IN ACCORDANCE WITH THE RAMP CLOSURE TABLE IF APPROVED BY THE ENGINEER. RAMP CLOSURES ARE SUBJECT TO DISINCENTIVES.

FOR ALL SERVICE RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 60 HOURS AND/OR, FOR ALL SYSTEM RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 24 HOURS

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

- A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.
- POSITIVE GUIDANCE ALONG THE DETOUR ROUTE WITH DETOUR SIGNS (M4-9 SERIES) IN ACCORDANCE WITH THE DETOUR SIGNS NOTE.

FOR ALL RAMP CLOSURES LASTING LESS THAN 12 HOURS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

- A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.

WHEN CLOSING ENTRANCE RAMPS, CORRESPONDING LEAD-IN LANES AND TURN LANES SHALL ALSO BE CLOSED.

IF A DESIGNATED DETOUR ROUTE IS NOT PROVIDED IN THE PLANS, TRAFFIC SHALL BE DIRECTED TO THE NEXT INTERCHANGE, IF AVAILABLE, TO TURN AROUND. IF THE USE OF THE NEXT INTERCHANGE IS NOT POSSIBLE, AN ALTERNATIVE DETOUR ROUTE SHALL BE PROVIDED BY THE ENGINEER.

SERVICE RAMP: INTERCHANGE RAMPS BETWEEN FREEWAYS (OR EXPRESSWAYS) AND NON-FREEWAYS (OR NONEXPRESSWAYS). THESE RAMPS PROVIDE ACCESS (CONNECTIONS) BETWEEN FREEWAYS/EXPRESSWAYS AND OTHER PRINCIPAL/MINOR ARTERIALS, COLLECTORS OR LOCAL ROADS.

SYSTEM RAMP: INTERCHANGE RAMPS (OR CONNECTORS) BETWEEN FREEWAYS (OR EXPRESSWAYS) AND FREEWAYS (OR EXPRESSWAYS).

INTERSTATE ENTRANCE RAMP CLOSURES (FRANKLIN COUNTY ONLY)

IF THE INTERSTATE IS REDUCED TO ONE THROUGH LANE, ALL NON-INTERSTATE ENTRANCE RAMPS ENTERING DIRECTLY INTO THE WORK ZONE TRANSITION AREA, ACTIVITY AREA OR TERMINATION AREA AS DEFINED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) OR ENTERING WITHIN 1000 FEET OF THE FIRST ARROW BOARD SHALL BE CLOSED IN ACCORDANCE WITH THE SHORT DURATION RAMP CLOSURES NOTE.

LANE CLOSURE/REDUCTION REQUIRED

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

LANE VALUE CONTRACT

THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME A LANE/SHOULDER/RAMP IS CLOSED BY THE CONTRACTOR'S ACTION WHILE NOT OTHERWISE PERMITTED BY THE LANE VALUE CONTRACT TABLE.

PHASES 1, 2 & 3 LANE VALUE CONTRACT PIC-71						
SECTION	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO THUR	FRI TO SAT	SUN	
MADISON COUNTY LINE (0.00) TO FRANKLIN COUNTY LINE (3.16) NORTHBOUND	2	2 TO 1	7AM-7PM	7AM-8PM	9AM-8PM	\$210
MADISON COUNTY LINE (0.00) TO FRANKLIN COUNTY LINE (3.16) SOUTHBOUND	2	2 TO 1	7AM-7PM	7AM-8PM	9AM-7PM	\$210
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 7AM-9AM AND 3PM-6PM MONDAY-FRIDAY						
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO THUR	FRI TO SAT	SUN	
FRA-71						
PICKAWAY COUNTY LINE (0.00) TO US 62 (3.08) NORTHBOUND	2	2 TO 1	6AM-7PM	6AM-8PM	9AM-8PM	\$210
PICKAWAY COUNTY LINE (0.00) TO US 62 (3.08) SOUTHBOUND	2	2 TO 1	6AM-7PM	6AM-8PM	9AM-7PM	\$210
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO FRI	SAT	SUN	
US 62 (3.08) TO SR 665 (6.09)	2	2 TO 1	6AM-8PM	6AM-8PM	6AM-7PM	\$305
SR 665 (6.09) TO STRINGTOWN ROAD (9.53)	3	3 TO 2	7AM-9PM & 2PM-7PM	7AM-9PM & 2PM-7PM	NO RESTRICTIONS	\$205
		3 TO 1	6AM-8PM	6AM-9PM	6AM-8PM	\$205
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 5AM-9AM AND 3PM-6PM MONDAY-FRIDAY						

I-71 NORTHBOUND WINTERIZATION PHASE & I-71 NORTHBOUND & SOUTHBOUND POST PHASE 3 LANE VALUE CONTRACT PIC-71						
SECTION	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO THUR	FRI TO SAT	SUN	
MADISON COUNTY LINE (0.00) TO FRANKLIN COUNTY LINE (3.16) NORTHBOUND	2	2 TO 1	7AM-7PM	7AM-8PM	9AM-8PM	\$210
MADISON COUNTY LINE (0.00) TO FRANKLIN COUNTY LINE (3.16) SOUTHBOUND	2	2 TO 1	7AM-7PM	7AM-8PM	9AM-7PM	\$210
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 7AM-9AM AND 3PM-6PM MONDAY-FRIDAY						
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO THUR	FRI TO SAT	SUN	
FRA-71						
PICKAWAY COUNTY LINE (0.00) TO US 62 (3.08) NORTHBOUND	3	3 TO 2	7AM-9PM & 2PM-6PM	NO RESTRICTIONS	NO RESTRICTIONS	\$140
		3 TO 1	6AM-7PM	6AM-8PM	9AM-7PM	\$140
PICKAWAY COUNTY LINE (0.00) TO US 62 (3.08) SOUTHBOUND	3	3 TO 2	7AM-9PM & 2PM-6PM	NO RESTRICTIONS	NO RESTRICTIONS	\$140
		3 TO 1	6AM-7PM	6AM-10PM	9AM-7PM	\$140
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO THUR	FRI TO SAT	SUN	
US 62 (3.08) TO SR 665 (6.09)	3	3 TO 2	7AM-9PM & 2PM-6PM	NO RESTRICTIONS	NO RESTRICTIONS	\$205
		3 TO 1	6AM-8PM	6AM-8PM	6AM-7PM	\$205
SR 665 (6.09) TO STRINGTOWN ROAD (9.53)	3	3 TO 2	7AM-9PM & 2PM-7PM	7AM-9PM & 2PM-7PM	NO RESTRICTIONS	\$205
		3 TO 1	6AM-8PM	6AM-9PM	6AM-8PM	\$205
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 5AM-9AM AND 3PM-6PM MONDAY-FRIDAY						

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MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA-71-0.00

LANES OPEN DURING HOLIDAYS AND SPECIAL EVENTS

NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

HOLIDAYS	
CHRISTMAS	FOURTH OF JULY
NEW YEAR'S EVE	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY	TIMES ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00 NOON FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00 NOON MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00 NOON TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00 NOON WEDNESDAY THROUGH 6:00 AM FRIDAY
THANKSGIVING	5:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00 NOON THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

PERMITTED LANE CLOSURES

THE EXISTING NUMBER OF LANES IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING PERIODS OF WORK AT WHICH TIME LANES MAY BE CLOSED IN ACCORDANCE WITH THE LANE VALUE CONTRACT TABLE FOR EACH LOCATION UNLESS OTHERWISE SHOWN IN THE PLANS.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

PUBLIC OUTREACH AND NOTIFICATION (ROAD CLOSURE)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICE VIA EMAIL AT D06.PIO@DOT.STATE.OH.US TO COORDINATE EFFORTS TO NOTIFY ALL LOCAL COUNTY, STATE AND FEDERAL EMERGENCY SERVICES, SCHOOL DISTRICTS AND ADJACENT RESIDENTS AND BUSINESSES OF THE UPCOMING CLOSURE. ADVANCE NOTIFICATION SHALL OCCUR NO LATER THAN FOURTEEN (14) DAYS PRIOR TO CLOSING THE ROAD. IT, SUBSEQUENT TO THE ADVANCE NOTIFICATION, THE START DATE IS CHANGED, THAN A NEW SEVEN (7) DAY NOTIFICATION WILL BE REQUIRED. THE ROAD CANNOT BE CLOSED UNLESS PRIOR NOTIFICATION HAS BEEN ACCOMPLISHED. THE SAME PARTIES SHALL BE NOTIFIED WHEN THE CLOSURE HAS CONCLUDED AND THE ROAD IS BACK OPEN TO TRAFFIC. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC NOTIFICATION OFFICE.

PUBLIC OUTREACH AND NOTIFICATION (RESURFACING PROJECTS)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICE VIA EMAIL AT D06.PIO@DOT.STATE.OH.US TO COORDINATE EFFORTS TO NOTIFY ADJACENT RESIDENTS AND BUSINESSES OF THE UPCOMING RESURFACING PROJECT. ADVANCE NOTIFICATION SHALL OCCUR NO LATER THAN FOURTEEN (14) DAYS PRIOR TO THE FIRST DAY OF WORK. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC NOTIFICATION OFFICE.

NOTICE OF CLOSURE SIGN

NOTICE OF CLOSURE SIGNS, W20-H13, SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

ITEM	DURATION OF CLOSURE	SIGN DISPLAY TO PUBLIC	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE
RAMP & ROAD CLOSURES	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE	21 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE	4 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN SHALL DISPLAY THE PHONE NUMBER OF THE DISTRICT 6 PUBLIC INFORMATION CONSTRUCTION LINE, (740)833-8268, WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE PIO (D06.PIO@DOT.OHIO.GOV). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE BUT IS NOT LIMITED TO ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

ITEM	DURATION OF CLOSURE	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>=2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE	14 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE	7 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE	2 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURE & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE	
	<2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE	
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION	

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME FRAME TABLE.

NOTIFICATION OF CONSTRUCTION INITIATION

AT LEAST FOURTEEN DAYS PRIOR TO STARTING INITIAL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT D06.PIO@DOT.OHIO.GOV, THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT D06.MOT@DOT.OHIO.GOV AND THE CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION VIA EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

PRE-MAINTENANCE OF TRAFFIC MEETING

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM 10 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT MAINTENANCE OF TRAFFIC ENGINEER (D06.MOT@DOT.STATE.OH.US) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

INGRESS/EGRESS

WORKSITE INGRESS AND EGRESS MEETING THE DESCRIPTIONS BELOW SHALL NOT OCCUR DURING PEAK HOURS. PEAK HOURS ARE CONSIDERED TO BE 5AM-9AM AND 3PM-6PM MONDAY-FRIDAY.

- ENTERING THE WORKSITE FROM RAMPS, INTERSTATE SHOULDERS OR INTERSTATE LANES
- EXITING THE WORKSITE ONTO OR ALONGSIDE RAMPS, INTERSTATE SHOULDERS OR INTERSTATE LANES

DRUM REQUIREMENTS

IN ADDITION TO THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL, DRUMS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AT THE TIME OF ARRIVAL ON THE PROJECT. ANY DRUMS BROUGHT ON THE PROJECT, WHICH HAVE PREVIOUSLY BEEN USED ELSEWHERE, WILL NOT BE ACCEPTED.

PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

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FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

PAYMENT

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ESTIMATED QUANTITIES

FOR THE ASPHALT OPTION, A WEDGE COURSE SHALL BE INSTALLED AT THE CONCLUSION OF PHASE 1 AND PHASE 2 TO PROVIDE A SMOOTH TRANSITION APPROACHING AND DEPARTING THE APPROACH SLABS/BRIDGE DECKS. THIS TRANSITION SHALL BE AT A MINIMUM OF 120:1. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
 144 CU. YD.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 962 M. GAL.

WORK ZONE MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

ITEM 614, LANE LINE, CLASS III, 6", 642 PAINT
 24.56 MILE

ITEM 614, EDGE LINE, CLASS III, 6", 642 PAINT
 25.58 MILE

ITEM 614, CHANNELIZING LINE, CLASS III, 12", 642 PAINT
 4051 FT

ITEM 614, DOTTED LINE, CLASS III, 642 PAINT
 4714 FT

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 300 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER	COUNTY-ROUTE-SECTION	DIRECTION
WZ-35645	FRA-71-0.00	NORTHBOUND
WZ-35645	FRA-71-0.00	SOUTHBOUND

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS SHALL BE IN ACCORDANCE WITH THIS NOTE AND SCD MT-104.10. ADDITIONALLY PAYMENT MAY BE REMOVED, OR A DISINCENTIVE APPLIED, FOR WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS THE SAME AS DESCRIBED IN THE MOST RECENT PUBLICATION OF SS 808 IN REGARDS TO WZSZS USING DSL SIGN ASSEMBLIES (SEE SS 808.06 PARAGRAPHS 4 THROUGH 7, INCLUDING TABLE 1). ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMTUCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRE-CONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT
 SLM 0.00 TO SLM 4.2570 MPH
 SLM 4.25 TO SLM 5.2965 MPH

ORIGINAL POSTED SPEED LIMIT	W/ POSITIVE PROT.		W/OUT POSITIVE PROT.	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE SPEED LIMIT SIGN 4 EACH
 ASSUMING 4 SIGNS (WINTERIZATION)

ITEM 614, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 160 SIGN MNTH
 ASSUMING 2 DSL SIGN ASSEMBLIES FOR 2 MONTHS (PRE-PHASE 1, PARTS A & B)
 ASSUMING 7 DSL SIGN ASSEMBLIES FOR 4 MONTHS (PHASE 1)
 ASSUMING 8 DSL SIGN ASSEMBLIES FOR 4 MONTHS (PHASE 2)
 ASSUMING 12 DSL SIGN ASSEMBLIES FOR 8 MONTHS (PHASE 3)

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR

HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

(THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5A-24. R11-H5A-24 SIGNS MAY BE USED IN THE MEDIAN IN LIEU OF R11-H5A-48 SIGNS IF IT IS NOT PHYSICALLY POSSIBLE TO PROVIDE R11-H5A-48 SIGNS IN THE MEDIAN.)

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 40 EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AT THE LOCATIONS DETAILED IN THE PLANS.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

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THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR A SINGLE CROSSOVER, OR OVERLAPPING A PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.04, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FEET (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGHOUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS ARE USED.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE AS DETAILED IN THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE

PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN22 SIGN MONTH ASSUMING 1 PCMS SIGNS FOR 4 MONTHS (PHASE 2) ASSUMING 2 PCMS SIGNS FOR 1 MONTHS (PRE-PHASE 3) ASSUMING 2 PCMS SIGNS FOR 8 MONTHS (PHASE 3)

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PREQUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER'S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.
2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.
3. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.
4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.
5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.
6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.
7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.
8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.
9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.
11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
 - A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).
 - B. DAILY TTC SETUP AND REMOVAL.
 - C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.
 - D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.
 - E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.
 - F. ALL OTHER EMERGENCY TTC NEEDS.
12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.
13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

- A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.
- B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.
- C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCUR, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.

IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

- RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.
- RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS, AND CARRIED TO THE GENERAL SUMMARY:

CONCRETE OPTION
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN 3431 EACH

ASPHALT OPTION
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN 5150 EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKERS ON PERMANENT CONCRETE SURFACES

RAISED PAVEMENT MARKERS IN WORK ZONES, INSTALLED ON PERMANENT CONCRETE SURFACES, SHALL BE ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS. WZRPMS ARE INTENDED FOR USE ONLY DURING THE NON-SNOW-PLOWING SEASON. WZRPMS SHALL NOT BE PROVIDED DURING THE SNOW-PLOWING SEASON.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

WHERE A TEMPORARY ALIGNMENT WILL REMAIN IN USE THROUGH THE WINTER, THE WZRPMS SHALL BE REMOVED PRIOR TO THE BEGINNING OF THE SNOW-PLOWING SEASON AND REPLACED APPROXIMATELY APRIL 1, OR AS OTHERWISE DETERMINED BY THE ENGINEER.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS, AND CARRIED TO THE GENERAL SUMMARY:

CONCRETE OPTION
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER 1793 EACH

ASPHALT OPTION
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER 254 EACH

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

CONCRETE OPTION
ITEM 614, BARRIER REFLECTOR, TYPE 2 (ONE-WAY) 210 EACH
ITEM 614, OBJECT MARKER, ONE-WAY 210 EACH

ASPHALT OPTION
ITEM 614, BARRIER REFLECTOR, TYPE 2 (ONE-WAY) 298 EACH
ITEM 614, OBJECT MARKER, ONE-WAY 298 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

BARRIER REFLECTORS AND OBJECT MARKERS

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER WITHIN THE RIGHT-OF-WAY IN ACCORDANCE WITH THE ALTERNATIVE DELINEATION METHOD (TRIPLE STACKED) SHOWN ON STANDARD CONSTRUCTION DRAWING MT-101.70. BARRIER REFLECTOR AND OBJECT MARKER MATERIALS AND INSTALLATION SHALL CONFORM TO CMS 626.02 AND 626.04. AN ESTIMATED QUANTITY OF ITEM 614 BARRIER REFLECTOR, TYPE 1 AND ITEM 614 OBJECT MARKER, ONE-WAY HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE ODOT INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 1500 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 - DETOUR SIGNING

SIZE AND PLACEMENT OF DETOUR SIGNS (M4-9) SHOULD FOLLOW THE REQUIREMENTS OF THE OMUTCD SECTION 6F.03, SECTION 2A.11 AND TABLE 6F.01. DETOUR SIGNING SHALL PROVIDE DRIVERS ADEQUATE TIME TO CLEARLY READ THE SIGNS AND MAKE THE PROPER DECISIONS AT EACH REQUIRED TURNING MOVEMENT. THE DESIGNATED DETOUR ROUTE SHALL BE SIGNED IN ACCORDANCE WITH THE REQUIREMENTS BELOW:

- APPROXIMATELY 1500 FEET PRIOR TO TIP OF THE PAINTED GORE AT AN INTERCHANGE WHEN EXITING A HIGH SPEED (45 MPH OR HIGHER) FACILITY.
- AT OR NEAR THE EXISTING SIGN IN THE GORE OF AN INTERCHANGE RAMP.
- AT OR NEAR THE FIRST EXISTING LANE ASSIGNMENT SIGN ON AN INTERCHANGE EXIT RAMP.
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT THE END OF AN EXIT RAMP.
- APPROXIMATELY 500 FEET PRIOR TO A REQUIRED TURN AT AN INTERSECTION NOT CONTROLLED BY A STOP SIGN (FOR 45 MPH OR HIGHER ONLY).
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT AN INTERSECTION.
- EVERY TWO MILES ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS OUTSIDE A CITY.
- EVERY TWO BLOCKS ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS WITHIN A CITY.
- AT ANY OTHER INTERSECTION OR DECISION POINT WHERE THE DETOUR ROUTE IS CONTRARY TO THE NORMAL, EXPECTED TURNING MANEUVER OR OTHERWISE UNCLEAR.

DETOUR SIGNS SHALL BE PLACED, WHEN POSSIBLE, NEXT TO BUT NOT BLOCKING EXISTING ROUTE MARKERS OR LANE ASSIGNMENT SIGNS. DETOUR SIGNS SHALL NOT OBSCURE OR BE OBSCURED BY OTHER EXISTING OR TEMPORARY SIGNS.

DETOUR SIGNS SHALL BE ERECTED AND/OR UNCOVERED PRIOR TO THE ROAD OR RAMP BEING CLOSED TO TRAFFIC BUT NO EARLIER THAN FOUR HOURS PRIOR TO THE CLOSURE. DETOUR SIGNS SHALL BE COVERED AND/OR REMOVED NO LATER THAN FOUR HOURS FOLLOWING THE ROAD OR RAMP RE-OPENING TO TRAFFIC.

PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, PROPER SIGN PLACEMENT AND SIZING, TIMELY ERECTING AND/OR UNCOVERING OF SIGNS, MAINTAINING SIGNS, AND TIMELY COVERING AND/OR REMOVING SIGNS AND SUPPORTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - DETOUR SIGNING = LUMP SUM

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.
2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.
3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.
4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:
 - A. COLLABORATE WITH ODOT AND SAFETY FORCES;
 - B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
 - C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.
5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:
 - A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
 - I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
 - II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
 - III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
 - IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
 - V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
 - VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE

B. FOLLOWING AN INCIDENT/CRASH:

- I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
- II. RECOMMEND ROADWAY REPAIR NEEDS.
- III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
- IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

ITEM 614 MAINTAINING TRAFFIC MISC: BRIDGE DECK AND PAVEMENT PATCHING:

THIS WORK WILL BE AS DIRECTED BY THE ENGINEER AND WILL INCLUDE ALL ASSOCIATED MOT COSTS WITH THE ACTIVITY. THE COST FOR THIS ITEM SHALL BE \$1.00. THE FIXED AMOUNT SHOWN IN THE PROPOSAL IS INCLUDED (AS ANY OTHER BID ITEMS) IN THE TOTAL BID AMOUNT. THIS FIXED AMOUNT IS THE DEPARTMENT'S ESTIMATE OF THE TOTAL COST OF BRIDGE DECK AND PAVEMENT PATCHING WORK, THIS ITEM OF WORK EXCLUDES THE FOUR REPAIR TYPES LISTED IN THE ITEM - PAVEMENT FOR MAINTAINING TRAFFIC-APP, REQUIRED TO BE PERFORMED WITHIN THE WORK LIMITS AS DIRECTED BY THE ENGINEER. C&MS TABLE 104.02-2 DOES NOT APPLY TO REDUCTIONS IN THIS CONTRACT ITEM. FORCE ACCOUNT RECORDS SHALL BE KEPT TO TRACK AND ULTIMATELY DETERMINE THE AMOUNT OF THE PAY ITEM USED. THE WORK ITEM SHALL INCLUDE ALL WORK, AS DIRECTED BY THE ENGINEER, NEEDED TO RE-ESTABLISH A REASONABLY SAFE AND PASSABLE CONDITION OF THE DECK AND/OR PAVEMENT FOR THE DURATION OF THE REQUIRED UPCOMING MOT PHASES. THE CONTRACTOR SHALL MEET WITH THE ENGINEER TO ESTABLISH THE WORK AFTER EXECUTION OF THE CONTRACT. THE CONTRACTOR'S PROPOSED PHASING AND PHASING DURATIONS WILL ASSIST THE ENGINEER IN DETERMINING THE EXTENT OF THE WORK. THIS WORK IS ONLY INTENDED TO ESTABLISH A SAFE AND DRIVABLE CONDITION FOR THE DURATION OF THE PROJECT. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITIES OF 614.02B.

ITEM 614 MAINTAINING TRAFFIC MISC: BRIDGE DECK AND PAVEMENT PATCHING = \$180,000 EACH

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

PRE-PHASE 1 WORK DETAILS EXISTING SHOULDERS THAT SHALL BE RECONSTRUCTED PRIOR TO SHIFTING TRAFFIC. THE EXISTING SHOULDERS SHALL BE PLANED 9 INCHES DOWN TO THE EXISTING ITEM 304 (AGGREGATE WHICH WILL REMAIN IN PLACE) AND REPAVED WITH CLASS A PAVEMENT FOR MAINTAINING TRAFFIC. THE CONTRACTOR SHALL CONSTRUCT 7 1/2 INCHES OF ITEM 302, ASPHALT CONCRETE BASE IN ONE LIFT AND 1 1/2 INCHES OF ITEM 441, TYPE 1 IN ANOTHER LIFT. THE CROSS SLOPE OF THE RECONSTRUCTED SHOULDER SHALL MATCH THE ADJACENT TRAVEL LANE.

IN ADDITION TO THE SHOULDER RECONSTRUCTION, THE CONTRACTOR SHALL MILL 1 FOOT INTO THE ADJACENT TRAVEL LANE, TO A DEPTH OF 1 1/2 INCHES. THIS 1 FOOT WIDE SECTION SHALL THEN BE RESURFACED WITH 1 1/2 INCHES OF ITEM 441, TYPE I.

ALL COST ASSOCIATED WITH PLANING AND REPAVING OF EXISTING SHOULDERS, INCLUDING THE 1' WIDE SECTION OF THE ADJACENT LANE, SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

ITEM 615, ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN

A LUMP SUM QUANTITY HAS BEEN PROVIDED PER SECTION 615 OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMS). THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY. PAYMENT FOR ALL COSTS ASSOCIATED WITH TEMPORARY EARTHWORK, GUARDRAIL, RUMBLE STRIPS OUTSIDE THE FULL DEPTH PAVEMENT AND DRAINAGE SHALL BE INCLUDED IN THE CONTRACTOR PRICE PER LUMP SUM FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

CONCRETE OPTION	
EXCAVATION FOR MAINTAINING TRAFFIC	3922 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	6964 CU. YD.
ITEM 411 STABILIZED CRUSHED AGGREGATE	2214 CU. YD.
ITEM 606 GUARDRAIL, TYPE MGS	2225 FT.
ITEM 606 ANCHOR ASSEMBLY, MGS TYPE E	15 EACH
ITEM 606 ANCHOR ASSEMBLY, MGS TYPE B	2 EACH
ITEM 606 ANCHOR ASSEMBLY, MGS TYPE T	6 EACH
ITEM 606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	3 EACH
ITEM 611 12" CONDUIT, TYPE B	62 FT.
ITEM 611 15" CONDUIT, TYPE B	172 FT.
ITEM 611 18" CONDUIT, TYPE B	95 FT.
ITEM 611 CATCH BASIN, NO.2-2B	2 EACH
ITEM 618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	200 FT.

ASPHALT OPTION	
EXCAVATION FOR MAINTAINING TRAFFIC	4016 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	5535 CU. YD.
ITEM 411 STABILIZED CRUSHED AGGREGATE	2241 CU. YD.
ITEM 606 GUARDRAIL, TYPE MGS	8075 FT.
ITEM 606 ANCHOR ASSEMBLY, MGS TYPE E	21 EACH
ITEM 606 ANCHOR ASSEMBLY, MGS TYPE B	2 EACH
ITEM 606 ANCHOR ASSEMBLY, MGS TYPE T	11 EACH
ITEM 606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	4 EACH
ITEM 606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	1 EACH
ITEM 611 12" CONDUIT, TYPE B	62 FT.
ITEM 611 15" CONDUIT, TYPE B	172 FT.
ITEM 611 18" CONDUIT, TYPE B	95 FT.
ITEM 611 CATCH BASIN, NO.2-2B	2 EACH
ITEM 618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	200 FT.

ADDITIONALLY, THE TEMPORARY PAVEMENT LEFT IN PLACE FROM PROJECT FRA-71-5.29 PID 84868 FROM STA. 59+00 SB TO STA. 71+37 SB, FROM STA. 61+90 NB TO STA. 71+37 NB, FROM STA. 96+80 SB TO STA. 109+50 SB AND FROM STA. 96+80 NB TO STA. 112+50 NB SHALL BE REMOVED AND SHALL BE INCIDENTAL TO ITEM 615 ROADS FOR MAINTAINING TRAFFIC.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

MAINTENANCE OF TRAFFIC MARKING PAVEMENT REPAIRS

PROVIDE LANE CLOSURES AS PER THE MAINTENANCE OF TRAFFIC NOTES IN THESE PLANS A MINIMUM OF 24 HOURS PRIOR TO PERFORMING PAVEMENT REPAIRS TO ALLOW THE ENGINEER TO IDENTIFY AND MARK THE AREAS OF THE PAVEMENT IN NEED OF REPAIRS.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, LEO HOURS, AND INCIDENTALS NEEDED TO PERFORM THE ABOVE LISTED WORK IS CONSIDERED INCIDENTAL TO MAINTAINING TRAFFIC ON THE PROJECT AND WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1:
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2:
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3:
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4:

THIS ITEM SHALL BE UTILIZED FOR THE PAVEMENT REPAIRS NEEDED DURING THIS CONSTRUCTION PROCESS. ALL AREAS TO BE REPAIRED SHALL BE LOCATED BY THE ENGINEER. IT IS LIKELY THAT REPAIRS WILL BE NEEDED PRIOR TO EACH PHASE SWITCH. GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE AS WELL AS ALL LONGITUDINAL SLOPES. THE TYPE OF REPAIR SHALL BE DETERMINED BY THE PROJECT ENGINEER. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED FOR MAINTENANCE OF TRAFFIC FOR PAVEMENT REPAIRS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

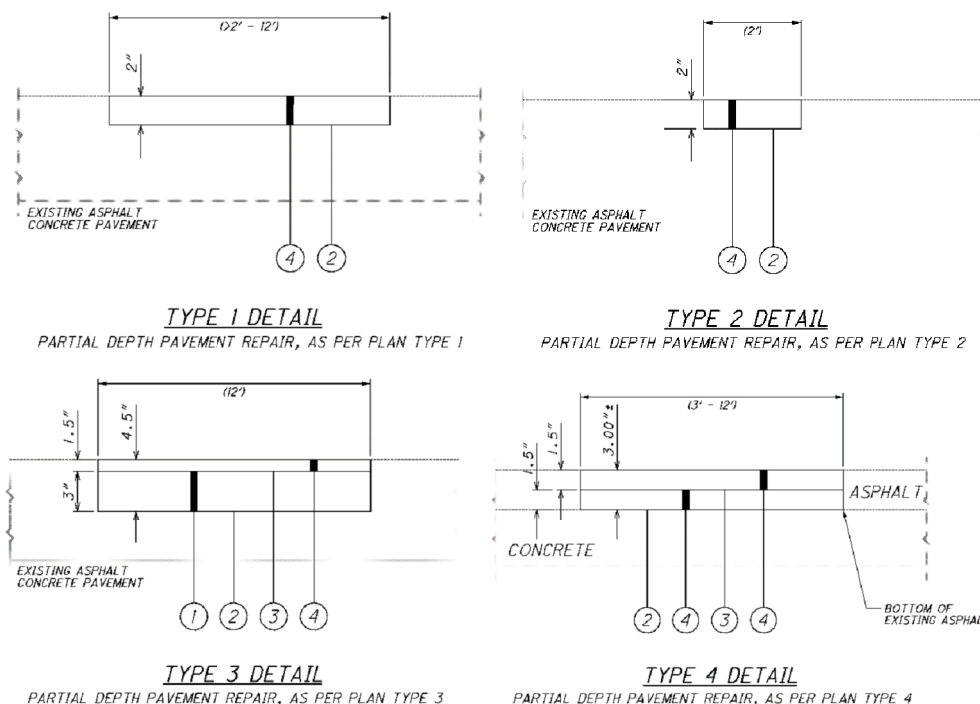
TYPE 1 - IS TO BE USED WHEN YOU NEED TO MILL & FILL AN AREA OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 2 FEET.

TYPE 2 - IS TO BE USED FOR FIXING THE LONGITUDINAL JOINT ISSUES OF VARYING LENGTH AND HAVE A CONSISTENT WIDTH OF 2 FEET. THE JOINT UNDER THE EXISTING NORTHBOUND LANE LINE IS EXPECTED TO BE WITHIN THE PHASE 1 WHEELPATH AND SHALL BE REPAIRED PRIOR TO SHIFTING TRAFFIC.

TYPE 3 - IS TO BE USED FOR DEEPER REPAIRS OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 4 FEET.

TYPE 4 - IS TO BE USED FOR COMPOSITE PAVEMENT REPAIRS OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 3 FEET.

ALL COSTS ASSOCIATED WITH REMOVING AND REPLACING PAVEMENT AND TACK COAT FOR THE REPAIRS SHALL BE INCIDENTAL TO ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN.



LEGEND:

- 1 ITEM 301 - ASPHALT CONCRETE BASE, PG64-22
- 2 ITEM 407 - TACK COAT @ 0.075 PER SY. YD.
- 3 ITEM 407 - TACK COAT FOR INTERMEDIATE @ 0.05 PER SY. YD.
- 4 ITEM 441 -TYPE 1 (AS DESCRIBED IN C&MS 615.05)

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1 = 300 S.Y.
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2 = 6844 S.Y.
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3 = 2000 S.Y.
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4 = 500 S.Y.

MATERIAL DELIVERY AND INSTALLATION

BRIDGE BEAM, NOISE WALL PANELS AND OTHER LARGE MATERIALS THAT ARE TYPICALLY INSTALLED DIRECTLY FROM DELIVERY TRUCKS MAY ARRIVE UP TO 12 HOURS BEFORE INSTALLATION.

DELIVERY TRUCKS WILL BE PERMITTED TO PARK ON THE SHOULDER WITH A SHOULDER CLOSURES AS DETAILED IN MT-95.45. A TRUCK MOUNTED ATTENUATOR SHOULD BE USED IF VEHICLES WILL BE OCCUPYING THE SHOULDER FOR 2 HOURS OR MORE.

NOISE WALL PANELS SHALL NOT BE INTALLED DURING PEAK HOURS IF ANY EQUIPMENT/VECHILES WILL BE WITH IN 12 FEET OF A TRAVEL LANE UNLESS SEPARATED BY PORTABLE BARRIER.

PORTABLE BARRIER SHALL NOT BE DELIVERED OR INSTALLED DURING PEAK HOURS.

MATERIAL DELIVERY TRUCKS SHALL NOT EGRESS THE WORKSITE DURING PEAK HOURS

PEAK HOURS ARE CONSIDERED TO BE 5AM-9AM AND 3PM-6PM MONDAY-FRIDAY.

REFER TO CMS 614.035 FOR ALL OTHER STORAGE OF EQUIPMENT, VEHICLES AND MATERIALS

SPEED MEASUREMENT MARKINGS

THE CONTRACTOR SHALL PLACE A SERIES OF SPEED MEASUREMENT MARKINGS ON THE ROADWAY TO ASSIST IN THE ENFORCEMENT OF SPEED REGULATIONS WITHIN THE WORK ZONE. EACH SPEED MEASUREMENT MARKING SHALL CONSIST OF ONE WHITE TRANSVERSE 24-INCH LINE, 4 FOOT IN LENGTH. THE MARKINGS SHALL BE PLACED AT ONE-QUARTER MILE INTERVALS FOR A MINIMUM OF 1 MILE LENGTH ALONG THE ROADWAY, AT LOCATIONS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. SPEED MEASUREMENT MARKINGS SHALL NOT BE LOCATED WITHIN 0.5 MILE OF A TAPER, SHIFT, CROSSOVER, ENTRANCE OR EXIT RAMP. SPEED MEASUREMENT MARKINGS ARE TYPICALLY LOCATED SUCH THAT THEY EXTEND 2 FEET ON EITHER SIDE OF THE CENTER LINE OR THE EDGE LINE, OR ARE LOCATED ENTIRELY ON THE SHOULDER; HOWEVER, IN WORK ZONES IT MAY BE NECESSARY TO CENTER THESE MARKINGS WITHIN A LANE.

THE MARKINGS SHALL BE LAID OUT BY A REGISTERED SURVEYOR. A RECORD IS TO BE KEPT AND ONE ORIGINAL SIGNED AND SEALED DOCUMENT IS TO BE SENT TO THE DISTRICT TRAFFIC ENGINEER AND ONE COPY IS TO BE SENT TO THE DISTRICT CONSTRUCTION ENGINEER.

PAYMENT WILL BE FOR EACH 24 INCH WIDE BY 4 FEET LONG MARKING AND SHALL INCLUDE THE PAVEMENT MARKING MATERIAL USED AND THE SURVEYING WORK. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

CONCRETE OPTION	
ITEM 646 SPECIAL - AIR SPEED ZONE MARKING (PHASE 3)	18 EACH
ASPHALT OPTION	
ITEM 644 SPECIAL - AIR SPEED ZONE MARKING (PHASE 3)	18 EACH

WEEKLY MAINTENANCE OF TRAFFIC MEETING

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

PRE-MAINTENANCE OF TRAFFIC MEETING

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM 14 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER (d06.mot@dot.ohio.gov) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

MAINTENANCE OF TRAFFIC FOR MARKING PAVEMENT REPAIRS

PROVIDE LANE CLOSURES AS PER THE MAINTENANCE OF TRAFFIC NOTES IN THESE PLANS A MINIMUM OF 24 HOURS PRIOR TO PERFORMING PAVEMENT REPAIRS TO ALLOW THE ENGINEER TO IDENTIFY AND MARK THE AREAS OF THE PAVEMENT IN NEED OF REPAIRS.

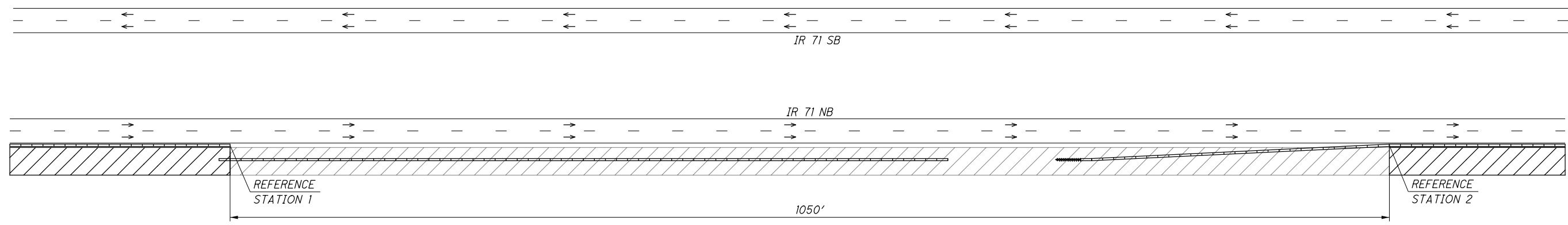
PAYMENT FOR ALL LABOR, EQUIPMENT, Law Enforcement Officers AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

PERMITS

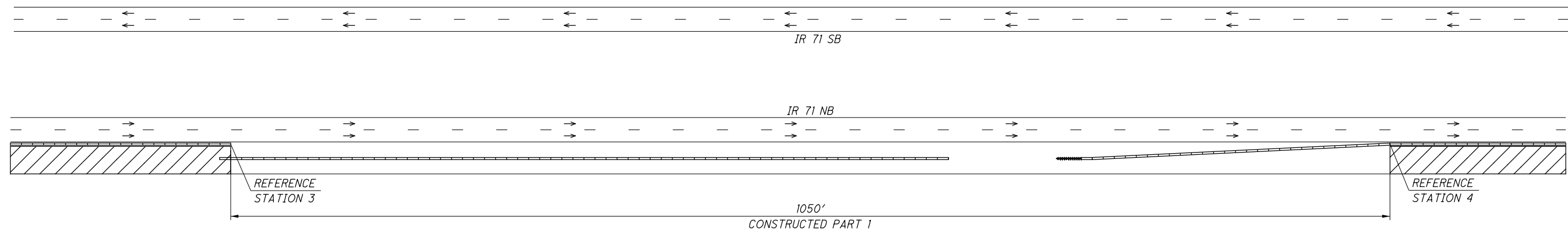
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS IN ADVANCE OF ANY WORK BEING DONE IN ALL LOCAL AGENCIES RIGHT OF WAY BY THE CONTRACTOR OR SUB-CONTRACTORS AS REQUIRED BY CMS 107.02.

CITY OF COLUMBUS PERMITS CAN BE OBTAINED FROM THE DIVISION OF PLANNING AND OPERATIONS PERMIT OFFICE: PHONE NUMBER IS 614-645-7497 (THIS PART WOULD ONLY BE USED FOR PROJECTS IN COLUMBUS)

PHASE 1 - PART 1
(SEE NOTE 1)



PHASE 1 - PART 2
(SEE NOTE 1)

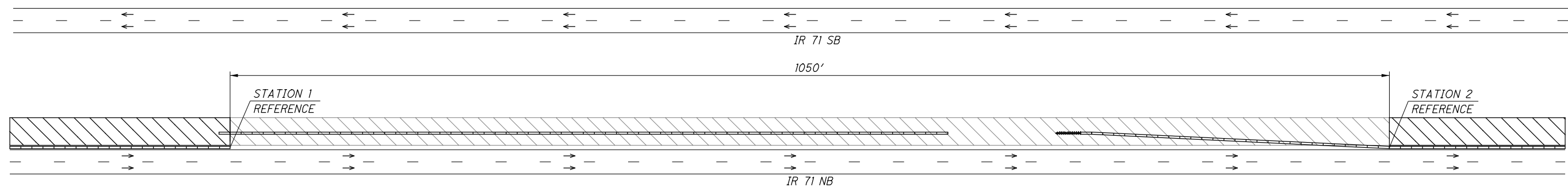


CONTRACTOR ACCESS LOCATIONS - NORTHBOUND					
CONTRACTOR ACCESS LOCATION		PHASE 1			
		REFERENCE STATION 1	REFERENCE STATION 2	REFERENCE STATION 3	REFERENCE STATION 4
BEGIN PROJECT TO 1.53	PART 1	40+00	50+50		
	PART 2			60+00	70+50
1.53 TO 2.96	PART 1	128+00	138+50		
	PART 2			139+00	149+50
2.96 TO END PROJECT	PART 1	205+00	215+50		
	PART 2			216+00	226+50

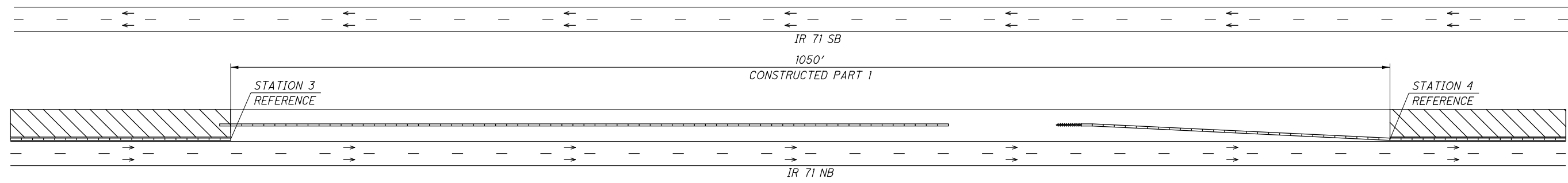
NOTES:
1. CONTRACTOR ACCESS LOCATIONS SHALL BE DESIGNED THROUGHOUT THE PROJECT PER ODOT SCD MT-103.10. WITH WORK OCCURRING DIRECTLY BEHIND THE PCB AT MOST LOCATIONS, THE ACCESS LOCATIONS ARE EXPECTED TO CONFLICT WITH THE WORK ZONE DURING EACH PHASE. AS A RESULT, TWO SEPARATE STATION RANGES PER PHASE HAVE BEEN PROVIDED (PART 1 AND PART 2) FOR EACH STRETCH OF THE PROJECT TO ENSURE THESE AREAS IN CONFLICT CAN BE COMPLETED. THE LOCATIONS OF THE ACCESS POINTS FOR EACH PHASE HAVE BEEN DETAILED ON THIS SHEET.

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PHASE 2 - PART 1
(SEE NOTE 1)



PHASE 2 - PART 2
(SEE NOTE 1)



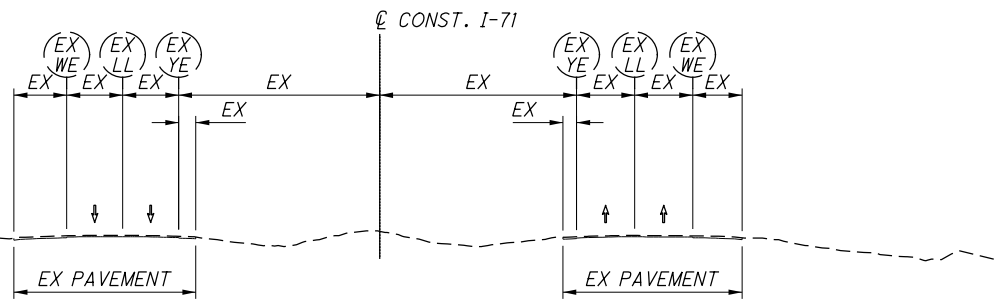
CONTRACTOR ACCESS LOCATIONS - NORTHBOUND					
CONTRACTOR ACCESS LOCATION		PHASE 2			
		REFERENCE STATION 1	REFERENCE STATION 2	REFERENCE STATION 3	REFERENCE STATION 4
BEGIN PROJECT TO 1.53	PART 1	40+00	50+50		
	PART 2			60+00	70+50
1.53 TO 2.96	PART 1	128+00	138+50		
	PART 2			139+00	149+50
2.96 TO END PROJECT	PART 1	205+00	215+50		
	PART 2			216+00	226+50

NOTES:
1. CONTRACTOR ACCESS LOCATIONS SHALL BE DESIGNED THROUGHOUT THE PROJECT PER ODOT SCD MT-103.10. WITH WORK OCCURRING DIRECTLY BEHIND THE PCB AT MOST LOCATIONS, THE ACCESS LOCATIONS ARE EXPECTED TO CONFLICT WITH THE WORK ZONE DURING EACH PHASE. AS A RESULT, TWO SEPARATE STATION RANGES PER PHASE HAVE BEEN PROVIDED (PART 1 AND PART 2) FOR EACH STRETCH OF THE PROJECT TO ENSURE THESE AREAS IN CONFLICT CAN BE COMPLETED. THE LOCATIONS OF THE ACCESS POINTS FOR EACH PHASE HAVE BEEN DETAILED ON THIS SHEET.

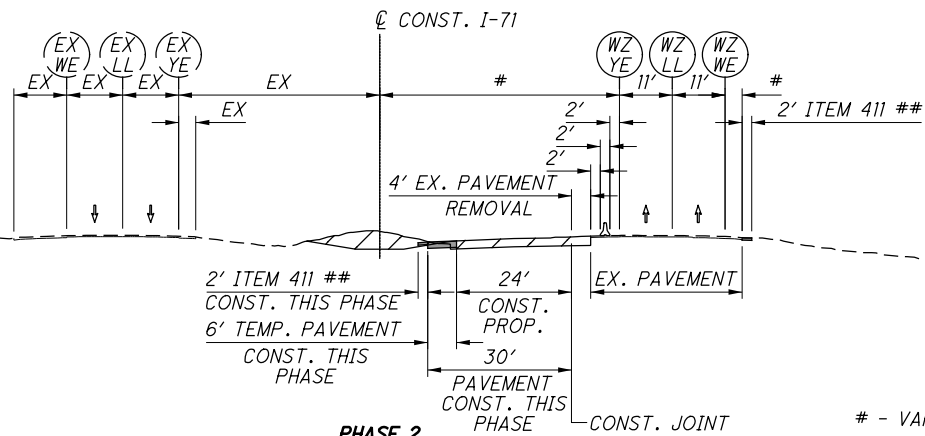
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CONCRETE CONSTRUCTION

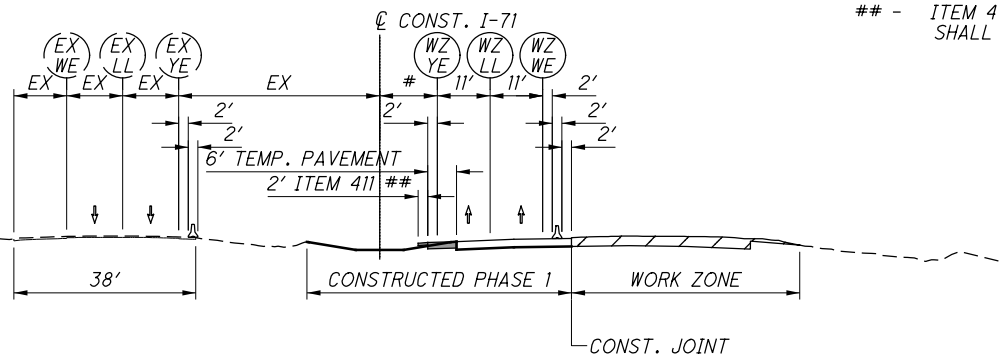
EXISTING CONDITION



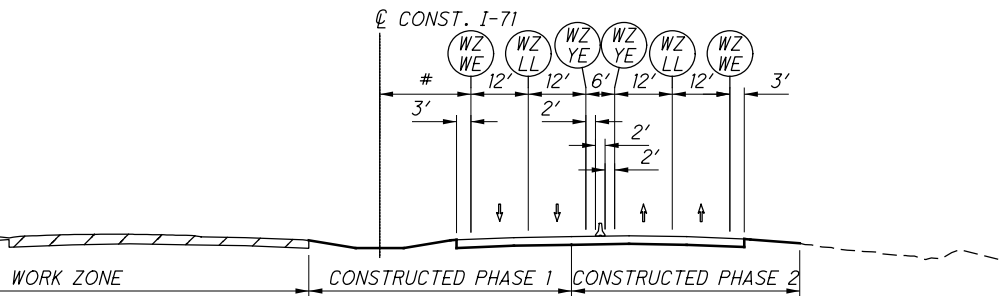
PHASE 1



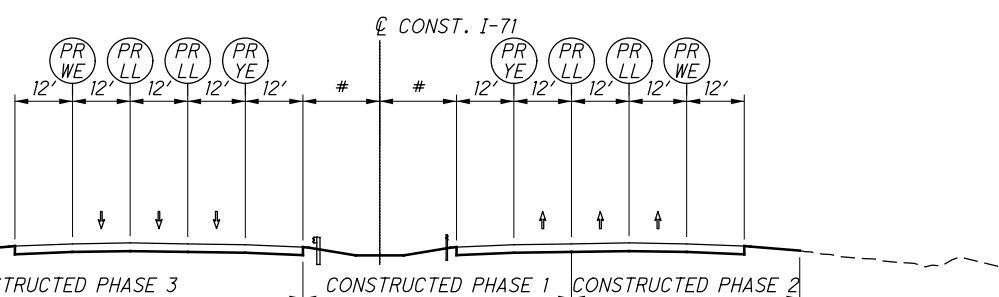
PHASE 2



PHASE 3

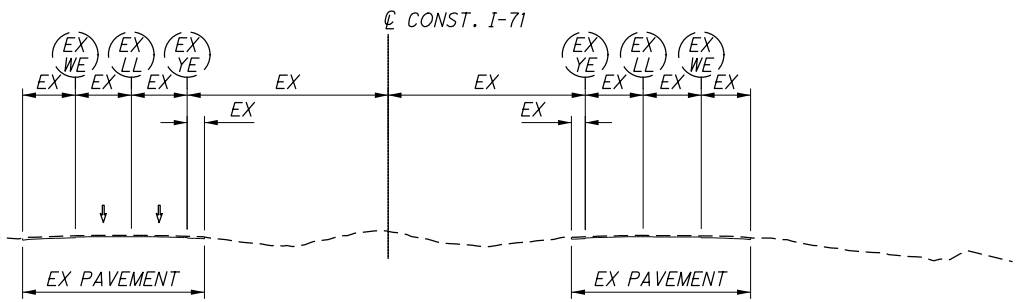


FINAL CONDITION

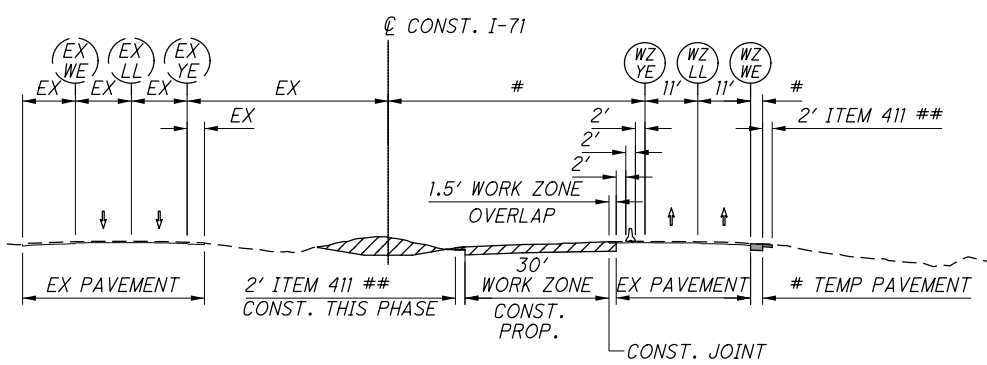


ASPHALT CONSTRUCTION

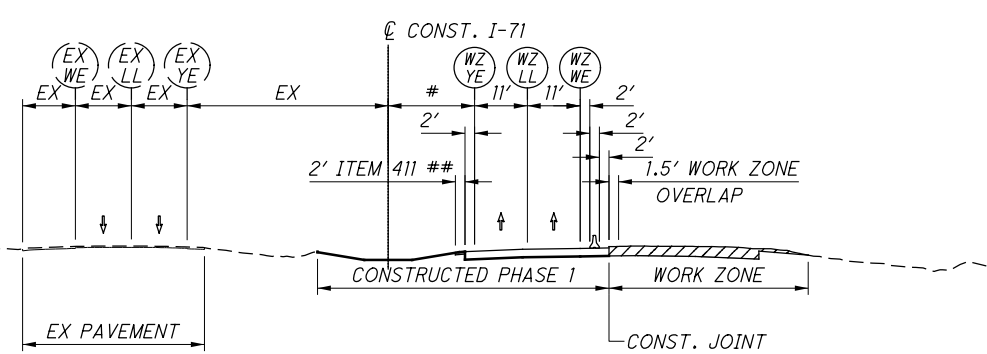
EXISTING CONDITION



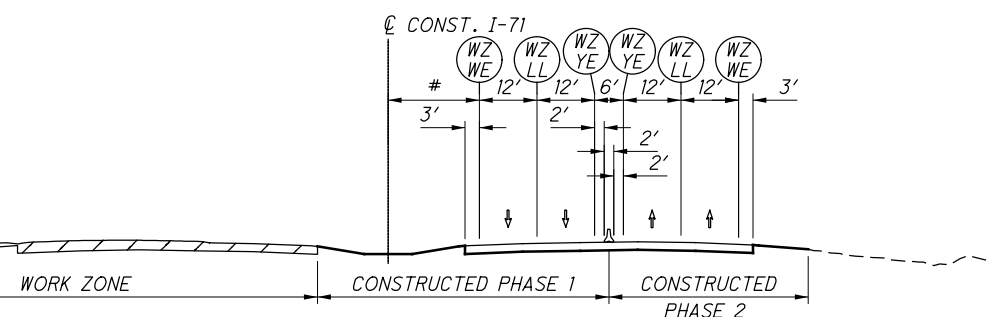
PHASE 1



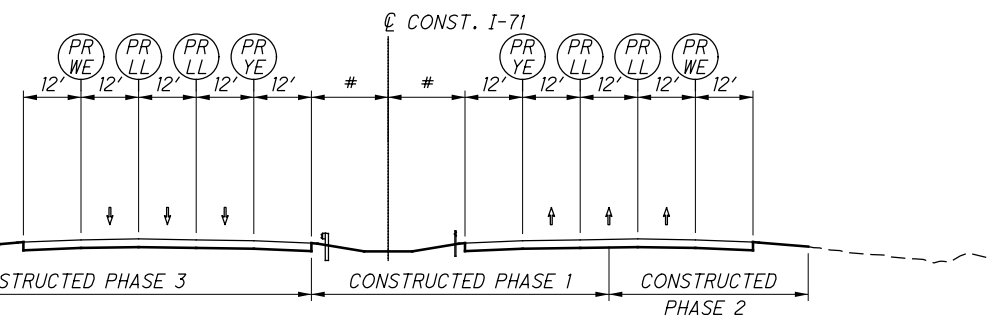
PHASE 2



PHASE 3



FINAL CONDITION



- VARIES (SEE TYPICAL SECTIONS ON PLAN SHEETS)

- ITEM 411, STABILIZED CRUSHED AGGREGATE SHALL BE A MINIMUM OF 6" DEEP

CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

FRA-71-0.00

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	615	615	615	615	615	616	646	808	
		MAINTAINING TRAFFIC, AS PER PLAN	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	DETOUR SIGNING	WORK ZONE SPEED LIMIT SIGN	WORK ZONE INCREASED PENALTIES SIGN	REPLACEMENT SIGN	REPLACEMENT DRUM	WORK ZONE CROSSOVER LIGHTING SYSTEM	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6" 642 PAINT	WORK ZONE EDGE LINE, CLASS III, 6" 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS III, 12", 642 PAINT	ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	WATER	SPECIAL - AIR SPEED ZONE MARKING	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
		PLAN	HOURLY	EACH	EACH	EACH	EACH	EACH	SNMT	MILE	FT	MILE	FT	FT		SY	SY	SY	SY	SY	SY	MGAL	EACH	SNMT		
16		LUMP																								
19				12	40	10	100				24.56	25.58	4051	4714								962		160		
20									22																	
21			1500																							
22				LUMP				\$180,000							LUMP											
23																		300	6844	2000	500		18			
46	PRE-PHASE 1											937					357	699								
47	PRE-PHASE 1											1444					4745	2871								
48	PRE-PHASE 1											1600					169	2035								
49	PRE-PHASE 1											1600						2055								
50	PRE-PHASE 1											1600						2009								
51	PRE-PHASE 1											765						958								
52	PRE-PHASE 1																									
53	PRE-PHASE 1																									
54	PRE-PHASE 1																									
55	PRE-PHASE 1											1400						1846								
56	PRE-PHASE 1											1600						2111								
57	PRE-PHASE 1											1439						1844								
58	PRE-PHASE 1											1308						1584								
59	PRE-PHASE 1											1328					152	1774								
60	PRE-PHASE 1											1832					34	2210								
61	PRE-PHASE 1											4512					6244	4639								
62	PRE-PHASE 1											4138					2770	4394								
63	PRE-PHASE 1											1600						2031								
64	PRE-PHASE 1											1600						2103								
65	PRE-PHASE 1											532						1471								
66	PRE-PHASE 1																	1273								
112	PRE-PHASE 1							1																		
113	PRE-PHASE 1							1																		
114	PRE-PHASE 1							1																		
SUB-TOTALS												29235 FT														
TOTALS CARRIED TO SHEET 392		LUMP	1,500	LUMP	12	40	10	100	3	\$180,000	22	24.56	5.54 MI	25.58	4,051	4,714	LUMP	14,471	37,907	300	6,844	2,000	500	962	18	160

CALCULATED	BER
	CHECKED
SMM	
MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)	
FRA - 71 - 0.00	
(28)	
1312	

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622	622						
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	WORK ZONE CROSSOVER LIGHTING SYSTEM	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	OBJECT MARKER, TWO-WAY	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED	GLARE SCREEN						
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	SY	SY	FT	FT	FT							
115	PRE-PHASE 1					81					460	530														
116	PRE-PHASE 1					171					1650	1125														
117	PRE-PHASE 1	1				191	60	8	28		63	4768	573		212			940						360		
118	PRE-PHASE 1					81	54	16	34		600	4000	200					900						800		
119	PRE-PHASE 1					200	15		5			3524	800					220						220		
120	PRE-PHASE 1					9						28	62													
121	PRE-PHASE 1					24						462														
122	PRE-PHASE 1					70						1600														
123	PRE-PHASE 1	1				20	14	4	19			1600						740								
124	PRE-PHASE 1					80	6	6	8			1289						100								
125	PHASE 1-3		4					14		14								700								
128	PHASE 1					87						532	566													
130	PHASE 1	1				98	45		15		200	1658	629		133			740								
132	PHASE 1					64	48	7	23		410	1600	390		553			800								
133	PHASE 1					120	48	7	23			1600	800		553			800								
134	PHASE 1					41	48		16		560	1600	240		553			800								
135	PHASE 1					7	48		16		800	1600			553			800								
136	PHASE 1					7	48		16		800	1600			553			800								
137	PHASE 1					7	48		16		800	1600			553			800								
138	PHASE 1					7	48		16		800	1600			553			800								
139	PHASE 1					7	48		16		800	1600			553			800								
140	PHASE 1					78	48		16		300	1600	500		500			800								
142	PHASE 1				1	78	3		1		310	1600	490		46			50								
144	PHASE 1	1			3	47	9	5	15		510	1600	290					110								
146	PHASE 1					106	48		16		100	1600	700		238			800								
148	PHASE 1					7	48		16		800	1600			553			800								
150	PHASE 1					7	48		16		800	1600			553			800								
151	PHASE 1					7	48		16		800	1600			553			800								
152	PHASE 1					7	54	2	20		800	1600			553			800								
153	PHASE 1					7	48		16		800	1600			553			800								
154	PHASE 1					7	48		16		800	1600			553			800								
156	PHASE 1					7	48		16		800	1600			553			800								
158	PHASE 1				2	5	57	10	29		800	1600			241			570	230							
160	PHASE 1				2	5		3	20		800	1647		420	282			550	250							
162	PHASE 1					7	48		16		800	1600			553			800								
164	PHASE 1					7	48		16		800	1600		368	553			800								
166	PHASE 1					7	48		16		800	1600		672	976	290		800								
168	PHASE 1					7	48		16		800	1600			2086			800								
169	PHASE 1					7	48		16		800	1600			661			800								
170	PHASE 1					7	48		16		800	1600			553			800								
171	PHASE 1					7	48		16		800	1600			553			800								
172	PHASE 1					7	48		16		800	1600			553			800								
173	PHASE 1					7	48		16		800	1600			553			800								
174	PHASE 1					7	48		16		800	1600			553			800								
175	PHASE 1					7	48		16		800	1600			553			800								
176	PHASE 1					7	48		16		800	1600			553			800								
177	PHASE 1					7	48		16		800	1600			553			800								
178	PHASE 1					78	36		12		300	1600	500		548			600								
180	PHASE 1					105						776	688		814											
204	PHASE 1				1																					
205	PHASE 1				1																					
SUB-TOTALS											24,953 FT	78,394 FT														
TOTALS CARRIED TO SHEET 392		4	4	2	8	2,014	1,759	68	684	14	4.73 MILE	14.85 MILE	9,083	1,460	212	20,350	290	30,220	480	1,380						

CALCULATED	BER	CHECKED	SMM
MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)			
FRA - 71-0:00			
29 1312			

SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	622	622							
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS 1, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS 1, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS 1, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED							
		EACH	EACH		EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	FT							
206	PHASE 2					66				274	437												
208	PHASE 2					120				1600	800												
210	PHASE 2					120	30	10		1600	800			500									
212	PHASE 2	1			9	96	96	32	134	1658	692			1610									
214	PHASE 2				7	96	96	32	800	1600				1600									
215	PHASE 2				7	96	96	32	800	1600				1600									
216	PHASE 2				7	96	96	32	800	1600				1600									
217	PHASE 2				7	96	96	32	800	1600				1600									
218	PHASE 2				7	96	96	32	800	1600				1600									
219	PHASE 2				7	96	96	32	800	1600				1600									
220	PHASE 2				7	96	96	32	800	1600				1600									
221	PHASE 2				7	96	96	32	800	1600				1600									
222	PHASE 2				93		84	44	300	1600	500			1400									
224	PHASE 2				78		50	5	23	310	1600	490		800									
226	PHASE 2				16		54	22	790	1600	10			800									
228	PHASE 2	1			120		90	30		1600	800			1500									
230	PHASE 2				32		96	32	620	1600	180			1600									
232	PHASE 2				7		96	32	800	1600				1600									
233	PHASE 2				7		96	32	800	1600				1600									
234	PHASE 2				7		96	32	800	1600				1600									
235	PHASE 2				7		96	32	800	1600				1600									
236	PHASE 2				7		96	32	800	1600				1600									
237	PHASE 2				7		96	32	800	1600				1600									
238	PHASE 2				7		63	6	43	800	1600			1370	230								
240	PHASE 2				7		111	3	40	800	1600			1350	250								
242	PHASE 2				7		111	32	800	1600				1600									
243	PHASE 2	1			7		93	31	800	2880				1530									
245	PHASE 2				7		96	32	800	2050			350	1600									
247	PHASE 2				7		96	32	800	1600			430	1600									
249	PHASE 2				7		96	32	800	1600				1600									
250	PHASE 2				7		96	32	800	1600				1600									
251	PHASE 2				7		96	32	800	1600				1600									
252	PHASE 2				7		96	32	800	1600				1600									
253	PHASE 2				7		96	32	800	1600				1600									
254	PHASE 2				7		96	32	800	1600				1600									
255	PHASE 2				7		96	32	800	1600				1600									
256	PHASE 2				7		96	32	800	1600				1600									
257	PHASE 2				7		96	32	800	1600				1600									
258	PHASE 2				36	42	84	28	310	1600	490			1400									
260	PHASE 2	1				75				408	504												
262	PHASE 2		1				39	13		1414				610									
263	PHASE 2						6	2		1564				460									
264	PHASE 2			LUMP																			
266	PHASE 2A									1396			25										
267	PHASE 2A									1654													
268	PHASE 2A						24			151													
270	PHASE 2A	1								1331			151										
272	PHASE 2A									200			269										
273	PHASE 2A																						
274	PHASE 2A						45	15						750									
275	PHASE 2A						48	16		350				800									
276	PHASE 2A			LUMP			27	9		430				430									
277	PHASE 2A			LUMP																			
SUB-TOTALS										25,664 FT	71,760 FT												
TOTALS CARRIED TO SHEET 392		5	1	LUMP	587	519	3,551	14	1,222	5.06 MILE	13.57 MILE	5,703	1,200	25	58,510	480							

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SHEET NO.	PHASE	614	614	614	614	644	644	644	646	646	646	646	646	646								
		WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	OBJECT MARKER, TWO-WAY	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	CHANNELIZING LINE, 12"	STOP LINE	DOTTED LINE, 12"								
		EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	FT	FT								
278	WINTER		4			437	437	437														
279	WINTER		7			800	800	800														
280	WINTER		7			800	800	800														
281	WINTER	2	6			629	629	629	200	200	250		150									
282	WINTER	14							800	800	1600											
283	WINTER	14							800	800	1600											
284	WINTER	14							800	800	1600											
285	WINTER	14							800	800	1600											
286	WINTER	14							800	800	1600											
287	WINTER	14							800	800	1600											
288	WINTER	14							800	800	1600											
289	WINTER	14							800	800	1600											
290	WINTER	14							800	800	1600											
291	WINTER	14							800	800	1600											
292	WINTER	14							800	800	1600											
293	WINTER	14							800	800	1600											
294	WINTER	14							800	800	1600											
295	WINTER	14							800	800	1600											
296	WINTER	14							800	800	1600											
297	WINTER	14							800	800	1600											
298	WINTER	14							800	800	1600											
299	WINTER	14							800	800	1600											
300	WINTER	14							800	800	1600											
301	WINTER	14							800	800	1600											
302	WINTER	32							911	911	1600	620		379								
303	WINTER	19							1080	1080	1600											
304	WINTER	28							849	849	1600	1002		250								
305	WINTER	14							800	800	1600			800								
306	WINTER	14							800	800	1600			200								
307	WINTER	14							800	800	1600											
308	WINTER	14							800	800	1600											
309	WINTER	14							800	800	1600											
310	WINTER	14							800	800	1600											
311	WINTER	14							800	800	1600											
312	WINTER	14							800	800	1600											
313	WINTER	14							800	800	1600											
314	WINTER	14							800	800	1600											
315	WINTER	14							800	800	1600											
316	WINTER	10	16			956	956	1912	532	532	1064											
317	WINTER	18		36	12				1567	1398			25									
318	WINTER	23		15	5				1725	1725												
SUB-TOTALS						3,622 FT	3,622 FT	4,578 FT	31,664 FT	31,495 FT	55,714 FT											
TOTALS CARRIED TO SHEET 392		566	40	51	17	1.38 MILE	0.87 MILE	11.97 MILE	10.56 MILE	1,622	25	1,879										

CALCULATED	BER	CHECKED	SMM
MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)			
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31			
1312			

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622						
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN						
		EACH		EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	SY	SY	FT	FT						
319	PRE-PHASE 3															30	65								
320	PRE-PHASE 3					33		11								1105	197	550							
321	PRE-PHASE 3	1				15		5								408	114	250							
322	PRE-PHASE 3		LUMP																						
332	PHASE 3				219					1696	1448														
333	PHASE 3	1		32	170	78	4	4	353	3200	1305		142					630	630						
334	PHASE 3			28		96	7	7	1500	3200	100							800	800						
335	PHASE 3			14		96	6	6	1600	3200								800	800						
336	PHASE 3			14		102	8	10	1600	3200								800	800						
337	PHASE 3			14		96	6	6	1600	3200								800	800						
338	PHASE 3			14		96			1600	3200								800	800						
339	PHASE 3			14		96			1600	3200								800	800						
340	PHASE 3			14		96			1600	3200								800	800						
341	PHASE 3			14		96			1600	3200								800	800						
342	PHASE 3			14		96	9	16	1600	3200								800	800						
343	PHASE 3			14		96	3	26	1600	3200								800	800						
344	PHASE 3			14		96	6	26	1600	3200								800	800						
345	PHASE 3			14		96			1600	3200								800	800						
346	PHASE 3			14		96			1600	3200								800	800						
347	PHASE 3			14		96	12	12	1600	3200								800	800						
348	PHASE 3			14		96	4	4	1600	3200								800	800						
349	PHASE 3			14		102	8	10	1600	3200								800	800						
350	PHASE 3			14		96			1600	3200								800	800						
351	PHASE 3			14		96	12	12	1600	3200								800	800						
352	PHASE 3			14		96	16	16	1600	3200								800	800						
353	PHASE 3			14		111	16	21	1600	3200			100					800	800						
354	PHASE 3			14		126	11	21	1600	3295			535					800	800						
355	PHASE 3			14		96			1600	3200								800	800						
356	PHASE 3			14		153		19	1600	3800								1750	800						
357	PHASE 3	1		14	18	144		16	1600	4800			250					1600	800						
358	PHASE 3	1		14	33	123		9	1600	3798			790		44			1220	800						
359	PHASE 3			14		96			1600	3200			305		112			800	800						
360	PHASE 3			14		96			1600	3200								800	800						
361	PHASE 3			14		96			1600	3200								800	800						
362	PHASE 3			14		96			1600	3200								800	800						
363	PHASE 3			14		96			1600	3200								800	800						
364	PHASE 3			14		96			1600	3200								800	800						
365	PHASE 3			14		96			1600	3200								800	800						
366	PHASE 3			14		96			1600	3200								800	800						
367	PHASE 3			14		96			1600	3200								800	800						
368	PHASE 3			52	64	96			891	3200	709							800	800						
369	PHASE 3				240	12				2768	1600							160	160						
370	PHASE 3				60						384														
374	PHASE 3					12		4		1208				14				160							
375	PHASE 3					54		18		1800								900							
376	PHASE 3		LUMP																						
SUB-TOTALS									55,544 FT	125,565 FT															
TOTALS CARRIED TO SHEET 392		4	LUMP	574	804	3,753	128	279	10.52 MILE	23.74 MILE	5,546	2,488	142	14	156	1,543	376	32,820	28,790						

CALCULATED	BER	CHECKED	SMM
MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)			
FRA-71-0.00			
(32)			
1312			

SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	622									
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PORTABLE BARRIER, UNANCHORED									
		EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT									
377	PHASE 3A				36	12	1160		16		580									
378	PHASE 3A	1			39	13	1800				620									
379	PHASE 3A				12	4	1200				156									
380	PHASE 3A				48	16	1600				800									
381	PHASE 3A	1	58	39	18	6	1847	115		155	254									
382	PHASE 3A			15			305	305												
SUB-TOTALS							7,912 FT													
TOTALS CARRIED TO SHEET 392		2	58	54	153	51	1.50 MILE	420	16	155	2,410									

CALCULATED	BER	CHECKED	SMM		
MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)					
FRA - 71 - 0:00		<table border="1"> <tr> <td style="text-align: center;">33</td> </tr> <tr> <td style="text-align: center;">1312</td> </tr> </table>		33	1312
33					
1312					

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	615	615	615	615	615	616	644	808
		MAINTAINING TRAFFIC, AS PER PLAN	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	DETOUR SIGNING	WORK ZONE SPEED LIMIT SIGN	WORK ZONE INCREASED PENALTIES SIGN	REPLACEMENT SIGN	REPLACEMENT DRUM	WORK ZONE CROSSOVER LIGHTING SYSTEM	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6" 642 PAINT	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS III, 12", 642 PAINT	ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	WATER	SPECIAL - AIR SPEED ZONE MARKING	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
		PLAN	HOURLY	EACH	EACH	EACH	EACH	EACH	CY	EACH	SNMT	MILE	FT	MILE	FT	FT		SY	SY	SY	SY	SY	SY	MGAL	EACH	SNMT	
16		LUMP																									
19				12	40	10	100		144			24.56		25.58	4051	4714								962		160	
20											22																
21		1500																									
22				LUMP														LUMP									
23																					300	6844	2000	500		18	
67	PRE-PHASE 1												757						165	560							
68	PRE-PHASE 1												2974						4348	3302							
69	PRE-PHASE 1												1600						342	2035							
70	PRE-PHASE 1												1600						465	2055							
71	PRE-PHASE 1												1600						449	2009							
72	PRE-PHASE 1												765						314	958							
73	PRE-PHASE 1																		146								
74	PRE-PHASE 1																		28								
75	PRE-PHASE 1																		302								
76	PRE-PHASE 1												1400						441	1846							
77	PRE-PHASE 1												1600						334	2111							
78	PRE-PHASE 1												1444						307	1845							
79	PRE-PHASE 1												1214						168	1483							
80	PRE-PHASE 1												1382						414	1842							
81	PRE-PHASE 1												1831						538	2210							
82	PRE-PHASE 1												4511						6264	4639							
83	PRE-PHASE 1												4138						3199	4394							
84	PRE-PHASE 1												1600						540	2031							
85	PRE-PHASE 1												1600						473	2103							
86	PRE-PHASE 1												532						192	1465							
112	PRE-PHASE 1								1																		
113	PRE-PHASE 1								1																		
114	PRE-PHASE 1								1																		
TOTALS CARRIED TO SHEET 392		LUMP	1,500	LUMP	12	40	10	100	3	144	\$180,000	22	24.56	5.79 MI	25.58	4,051	4,714	LUMP	19,429	36,888	300	6,844	2,000	500	962	18	160

CALCULATED	BER
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MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)	
FRA - 71-0.00	
34	1312

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622	622							
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	WORK ZONE CROSSOVER LIGHTING SYSTEM	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	OBJECT MARKER, TWO-WAY	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED	GLARE SCREEN							
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	SY	SY	FT	FT	FT								
115	PRE-PHASE 1					81					460	530															
116	PRE-PHASE 1					171					1650	1125															
117	PRE-PHASE 1	1				191	60	8	28		63	4768	573		212			940							360		
118	PRE-PHASE 1					81	54	16	34		600	4000	200					900							800		
119	PRE-PHASE 1					200	15		5			3524	800					220							220		
120	PRE-PHASE 1					9						28	62														
121	PRE-PHASE 1					24						462															
122	PRE-PHASE 1					70						1600															
123	PRE-PHASE 1	1				20	14	4	19			1600						740									
124	PRE-PHASE 1					80	6	6	8			1289						100									
125	PHASE 1-3		4					14		14								700									
127	PHASE 1					15							94														
129	PHASE 1					120						1188	800														
131	PHASE 1	1				85	45	15	30		283	1658	546					730									
132	PHASE 1					64	48	7	23		410	1600	390					800									
133	PHASE 1					120	48	7	23			1600	800					800									
134	PHASE 1					41	54	9	27		560	1600	240					800									
135	PHASE 1					7	48	7	23		800	1600						800									
136	PHASE 1					7	48		16		800	1600						800									
137	PHASE 1					7	48		16		800	1600						800									
138	PHASE 1					7	48		16		800	1600						800									
139	PHASE 1					7	48		16		800	1600						800									
141	PHASE 1					86	48		16		238	1600	563					800									
143	PHASE 1				1	99	9		3		145	1600	655					50									
145	PHASE 1					41	18	6	12		562	1600	238														
147	PHASE 1	1				120	48		16			1600	800		385			760									
149	PHASE 1					32	48		16		620	1600	180					800									
150	PHASE 1					7	48	13	29		800	1600						800									
151	PHASE 1					7	48	4	20		800	1600						800									
152	PHASE 1					7	54	2	20		800	1600						800									
153	PHASE 1					7	48		16		800	1600						800									
155	PHASE 1					7	48	10	26		800	1600						800									
157	PHASE 1					7	48	16	32		800	1600						800									
159	PHASE 1				2	5	57	12	31		800	1600						570	230								
161	PHASE 1				2	5	60	4	24		800	1647		420				550	250								
163	PHASE 1					7	48		16		800	1600						800									
165	PHASE 1					7	48		16		800	1600		422				800									
167	PHASE 1					7	48		16		800	1600		618		444	286	800									
168	PHASE 1					7	48		16		800	1600				2046		800									
169	PHASE 1					7	48		16		800	1600				308		800									
170	PHASE 1					7	48		16		800	1600						800									
171	PHASE 1					7	48	4	20		800	1600						800									
172	PHASE 1					7	48	6	22		800	1600						800									
173	PHASE 1					7	48		16		800	1600						800									
174	PHASE 1					7	48		16		800	1600						800									
175	PHASE 1					7	48		16		800	1600						800									
176	PHASE 1					7	48		16		800	1600						800									
177	PHASE 1					7	48		16		800	1600						800									
179	PHASE 1					78	36		12		300	1600	500		133			600									
181	PHASE 1					138						1220	910		814												
204	PHASE 1			1																							
205	PHASE 1			1																							
SUB-TOTALS											24,581 FT	79,494 FT															
TOTALS CARRIED TO SHEET 392		4	4	2	5	2,144	1,840	156	775	14	4.66 MILE	15.06 MILE	10,006	1,460	212	4,130	286	30,060	480	1,380							

CALCULATED
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MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)
FRA - 71-0:00
 35
 1312

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	622	622							
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS 1, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS 1, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS 1, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED							
		EACH	EACH		EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	FT							
207	PHASE 2					39					257												
209	PHASE 2					120				1514	800												
211	PHASE 2					120				1600	800												
213	PHASE 2	1				33	42		14	666	1658	163			710								
214	PHASE 2					7	48		16	800	1600				800								
215	PHASE 2					7	48		16	800	1600				800								
216	PHASE 2					7	48		16	800	1600				800								
217	PHASE 2					7	48		16	800	1600				800								
218	PHASE 2					7	48		16	800	1600				800								
219	PHASE 2					7	48		16	800	1600				800								
220	PHASE 2					7	48		16	800	1600				800								
221	PHASE 2					7	48		16	800	1600				800								
223	PHASE 2					47	42		18	528	1600	272			900								
225	PHASE 2				12	111	102	5	36		1600	800			800								
227	PHASE 2				2	5	114		38	800	1600				800								
229	PHASE 2	2				7	84		28	800	1600				1400								
231	PHASE 2					7	48		16	800	1600				800								
232	PHASE 2					7	48		16	800	1600				800								
233	PHASE 2					7	48		16	800	1600				800								
234	PHASE 2					7	48		16	800	1600				800								
235	PHASE 2					7	48		16	800	1600				800								
236	PHASE 2					7	48		16	800	1600				800								
237	PHASE 2					7	48		16	800	1600				800								
239	PHASE 2				2	5	60	6	22	800	1600				570	230							
241	PHASE 2				2	5	108	3	39	800	1600				1350	250							
242	PHASE 2	1				7	64		20	800	1600				1000								
244	PHASE 2	1				7	45		15	800	2852				730								
246	PHASE 2					7	48		16	800	2050			350	800								
248	PHASE 2					7	48		16	800	1600			430	800								
249	PHASE 2					7	48		16	800	1600				800								
250	PHASE 2					7	48		16	800	1600				800								
251	PHASE 2					7	48		16	800	1600				800								
252	PHASE 2					7	48		16	800	1600				800								
253	PHASE 2					7	48		16	800	1600				800								
254	PHASE 2					7	48		16	800	1600				800								
255	PHASE 2					7	48		16	800	1600				800								
256	PHASE 2					7	48		16	800	1600				800								
257	PHASE 2					7	48		16	800	1600				800								
259	PHASE 2					78	36		12	300	1600	500			600								
261	PHASE 2					63					234	417											
262	PHASE 2		1				39		13		1414				610								
263	PHASE 2						6		2		1564				460								
264	PHASE 2			LUMP																			
266	PHASE 2A										1396			25									
267	PHASE 2A										1654												
269	PHASE 2A						24				151			151									
271	PHASE 2A	1									1331			269									
272	PHASE 2A										200												
273	PHASE 2A																						
274	PHASE 2A						45		15						750								
275	PHASE 2A						48		16		350				800								
276	PHASE 2A						27		9		430				430								
277	PHASE 2A			LUMP																			
				LUMP																			
SUB-TOTALS										27,094 FT	71,198 FT												
TOTALS CARRIED TO SHEET 392		6	1	LUMP	18	829	2,134	14	713	5.13 MILE	13.48 MILE	4,009	1,200	25	32,710	480							

CALCULATED	BER
	CHECKED
SMM	
MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)	
FRA - 71 - 0.00	
36	
1312	

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SHEET NO.	PHASE	614	614	614	614	644	644	644	644	644	646	646	646	646	646									
		WORK ZONE RAISED PAVEMENT MARKER EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	OBJECT MARKER, TWO-WAY EACH	EDGE LINE, 6" (WHITE) FT	EDGE LINE, 6" (YELLOW) FT	LANE LINE, 6" FT	CHANNELIZING LINE, 12" FT	DOTTED LINE, 12" FT	EDGE LINE, 6" (WHITE) FT	EDGE LINE, 6" (YELLOW) FT	LANE LINE, 6" FT	STOP LINE FT	DOTTED LINE, 12" FT									
278	WINTER		4			437	437	437																
279	WINTER		7			800	800	800																
280	WINTER		7			800	800	800																
281	WINTER		8			829	829	829		150														
282	WINTER		14			800	800	1600																
283	WINTER		14			800	800	1600																
284	WINTER		14			800	800	1600																
285	WINTER		14			800	800	1600																
286	WINTER		14			800	800	1600																
287	WINTER		14			800	800	1600																
288	WINTER		14			800	800	1600																
289	WINTER		14			800	800	1600																
290	WINTER		14			800	800	1600																
291	WINTER	1	7			745	745	1490			55	55	110											
292	WINTER	47	80			493	493	986			307	307	614											
293	WINTER		14			800	800	1600																
294	WINTER		14			800	800	1600																
295	WINTER		14			800	800	1600																
296	WINTER		14			800	800	1600																
297	WINTER		14			800	800	1600																
298	WINTER		14			800	800	1600																
299	WINTER		14			800	800	1600																
300	WINTER		14			800	800	1600																
301	WINTER	4	10			586	586	1172		100	214	214	428											
302	WINTER	6	26			574	574	1148	620	153	337	337	452		226									
303	WINTER	5	14			800	800	1600			280	280												
304	WINTER	1	27			800	800	1600	1002	250	49	49												
305	WINTER		14			800	800	1600		800														
306	WINTER		14			800	800	1600		200														
307	WINTER		14			800	800	1600																
308	WINTER		14			800	800	1600																
309	WINTER		14			800	800	1600																
310	WINTER		14			800	800	1600																
311	WINTER		14			800	800	1600																
312	WINTER		14			800	800	1600																
313	WINTER		14			800	800	1600																
314	WINTER		14			800	800	1600																
315	WINTER		14			800	800	1600																
316	WINTER		26			1488	1488	2976																
317	WINTER	18		36	12					1567	1398		25											
318	WINTER	23		15	5					1725	1725													
SUM-TOTALS						30,752 FT	30,752 FT	58,638 FT			4,534 FT	4,365 FT	1,604 FT											
TOTALS CARRIED TO SHEET 392		105	608	51	17	11.65 MILE		11.11 MILE	1,622	1653	1.69 MILE		0.30 MILE	25	226									

Maintenance of Traffic Subsummary (Asphalt Option)

	CALCULATED	BER	CHECKED	SMM
37				
1312				

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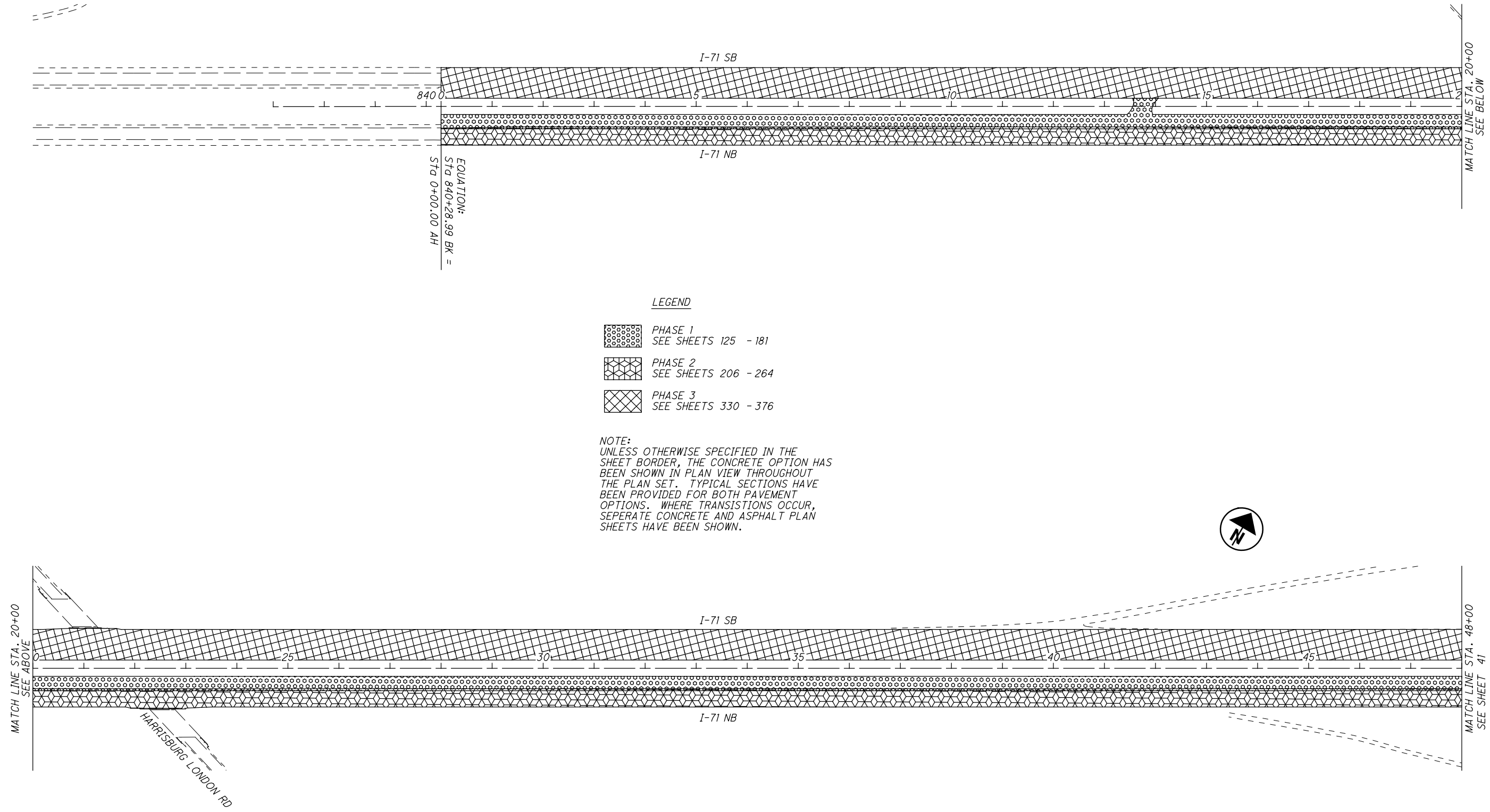
SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622						
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN						
		EACH		EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	SY	SY	FT	FT						
319	PRE-PHASE 3															30	65								
320	PRE-PHASE 3					33		11								1105	197	550							
321	PRE-PHASE 3	1				15		5								408	114	250							
322	PRE-PHASE 3		LUMP																						
332	PHASE 3				219					1696	1448														
333	PHASE 3	1			202	78	4	4	353	3200	1305		142					630	630						
334	PHASE 3				28	96	7	7	1500	3200	100							800	800						
335	PHASE 3				14	96	6	6	1600	3200								800	800						
336	PHASE 3				14	102	8	10	1600	3200								800	800						
337	PHASE 3				14	96	6	6	1600	3200								800	800						
338	PHASE 3				14	96			1600	3200								800	800						
339	PHASE 3				14	96			1600	3200								800	800						
340	PHASE 3				14	96			1600	3200								800	800						
341	PHASE 3				14	96			1600	3200								800	800						
342	PHASE 3				14	96	9	16	1600	3200								800	800						
343	PHASE 3			2	12	96	3	26	1600	3200								800	800						
344	PHASE 3			4	8	96	6	26	1600	3200								800	800						
345	PHASE 3				14	96			1600	3200								800	800						
346	PHASE 3				14	96			1600	3200								800	800						
347	PHASE 3				14	96	12	12	1600	3200								800	800						
348	PHASE 3				14	96	4	4	1600	3200								800	800						
349	PHASE 3				14	102	8	10	1600	3200								800	800						
350	PHASE 3				14	96			1600	3200								800	800						
351	PHASE 3				14	96	12	12	1600	3200								800	800						
352	PHASE 3				14	96	16	16	1600	3200								800	800						
353	PHASE 3			4	10	111	16	21	1600	3200			100					800	800						
354	PHASE 3			4	10	126	11	21	1600	3295			535					800	800						
355	PHASE 3				14	96			1600	3200								800	800						
356	PHASE 3				14	153		19	1600	3800								1750	800						
357	PHASE 3	1			32	144		16	1600	4800			250					1600	800						
358	PHASE 3	1			47	123		9	1600	3798			790		44			1220	800						
359	PHASE 3				14	96			1600	3200			305		112			800	800						
360	PHASE 3				14	96			1600	3200								800	800						
361	PHASE 3				14	96			1600	3200								800	800						
362	PHASE 3				14	96			1600	3200								800	800						
363	PHASE 3				14	96			1600	3200								800	800						
364	PHASE 3				14	96			1600	3200								800	800						
365	PHASE 3				14	96			1600	3200								800	800						
366	PHASE 3				14	96			1600	3200								800	800						
367	PHASE 3				14	96			1600	3200								800	800						
368	PHASE 3				116	96			891	3200	709							800	800						
369	PHASE 3				240	12				2768	1600							160	160						
370	PHASE 3				60						384														
374	PHASE 3					12		4		1208				14				160							
375	PHASE 3					54		18		1800								900							
376	PHASE 3		LUMP																						
SUB-TOTALS									55,544 FT	125,565 FT															
TOTALS CARRIED TO SHEET 392		4	LUMP	14	1,362	3,753	128	279	10.52 MILE	23.78 MILE	5,546	2,488	142	14	156	1,543	376	32,820	28,790						

CALCULATED
 BER
 CHECKED
 SMM
MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)
FRA - 71 - 0.00
 38
 1312

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


SHEET NO.	PHASE	614	614	614	614	614	614	614	614	622											
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PORTABLE BARRIER, UNANCHORED											
		EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT											
377	PHASE 3A			36	12	1160		16		580											
378	PHASE 3A	1		39	13	1800				620											
379	PHASE 3A			12	4	1200				156											
380	PHASE 3A			48	16	1600				800											
381	PHASE 3A	1	54	18	6	1847	115		155	254											
382	PHASE 3A		15			305	305														
SUB-TOTALS						7,912 FT															
TOTALS CARRIED TO SHEET 392		2	69	153	51	1.50 MILE	420	16	155	2,410											

FRA - 71 - 0.00	MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)
39 1312	<small>CALCULATED BER CHECKED SMM</small>



EQUATION:
 STA 840+28.99 BK =
 STA 0+00.00 AH

LEGEND

-  PHASE 1
SEE SHEETS 125 - 181
-  PHASE 2
SEE SHEETS 206 - 264
-  PHASE 3
SEE SHEETS 330 - 376

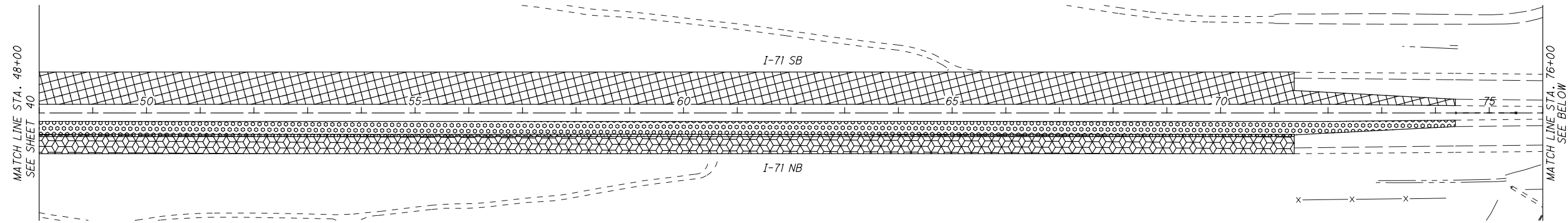
NOTE:
 UNLESS OTHERWISE SPECIFIED IN THE SHEET BORDER, THE CONCRETE OPTION HAS BEEN SHOWN IN PLAN VIEW THROUGHOUT THE PLAN SET. TYPICAL SECTIONS HAVE BEEN PROVIDED FOR BOTH PAVEMENT OPTIONS. WHERE TRANSITIONS OCCUR, SEPERATE CONCRETE AND ASPHALT PLAN SHEETS HAVE BEEN SHOWN.






MAINTENANCE OF TRAFFIC-PHASING OVERVIEW
 I-71 - STA. 0+00 TO STA. 48+00

FRA-71-0.00

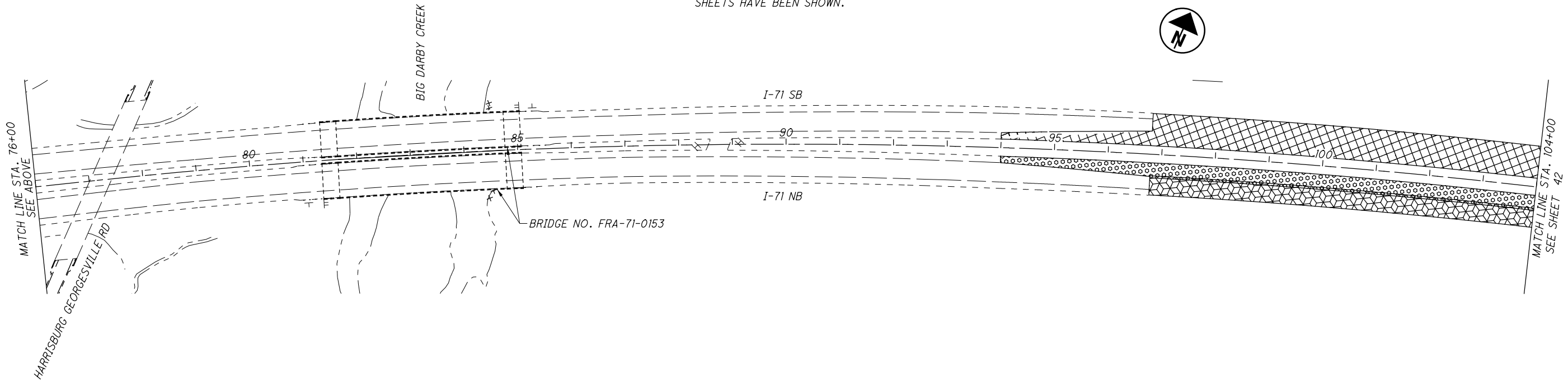
CALCULATED
 BER
 CHECKED
 SMM



LEGEND

-  PHASE 1
SEE SHEETS 125 - 181
-  PHASE 2
SEE SHEETS 206 - 264
-  PHASE 3
SEE SHEETS 330 - 376

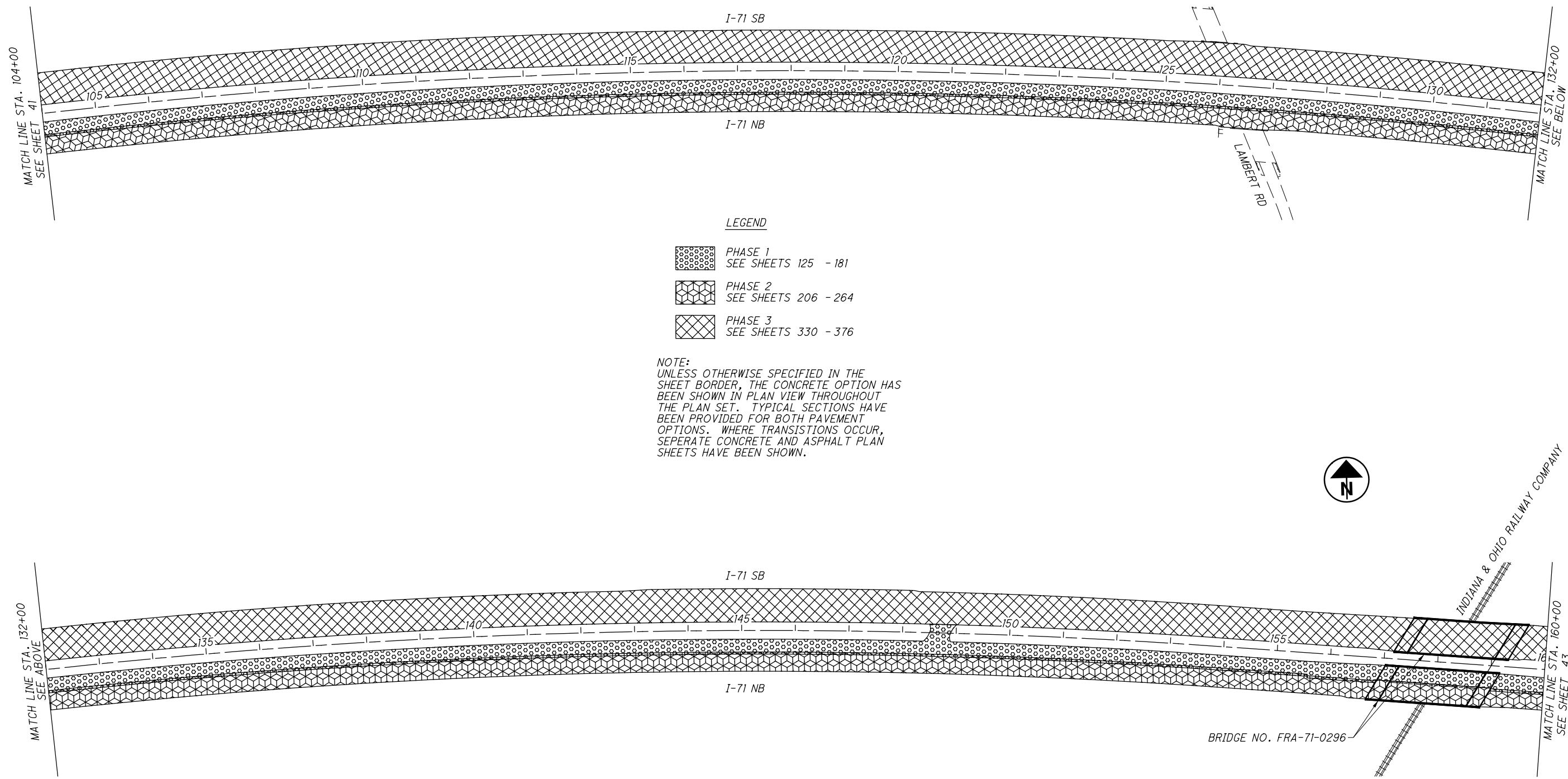
NOTE:
UNLESS OTHERWISE SPECIFIED IN THE SHEET BORDER, THE CONCRETE OPTION HAS BEEN SHOWN IN PLAN VIEW THROUGHOUT THE PLAN SET. TYPICAL SECTIONS HAVE BEEN PROVIDED FOR BOTH PAVEMENT OPTIONS. WHERE TRANSITIONS OCCUR, SEPERATE CONCRETE AND ASPHALT PLAN SHEETS HAVE BEEN SHOWN.






MAINTENANCE OF TRAFFIC-PHASING OVERVIEW
I-71 - STA. 48+00 TO STA. 104+00

FRA-71-0.00

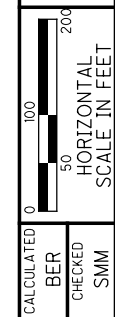
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LEGEND

-  PHASE 1
SEE SHEETS 125 - 181
-  PHASE 2
SEE SHEETS 206 - 264
-  PHASE 3
SEE SHEETS 330 - 376

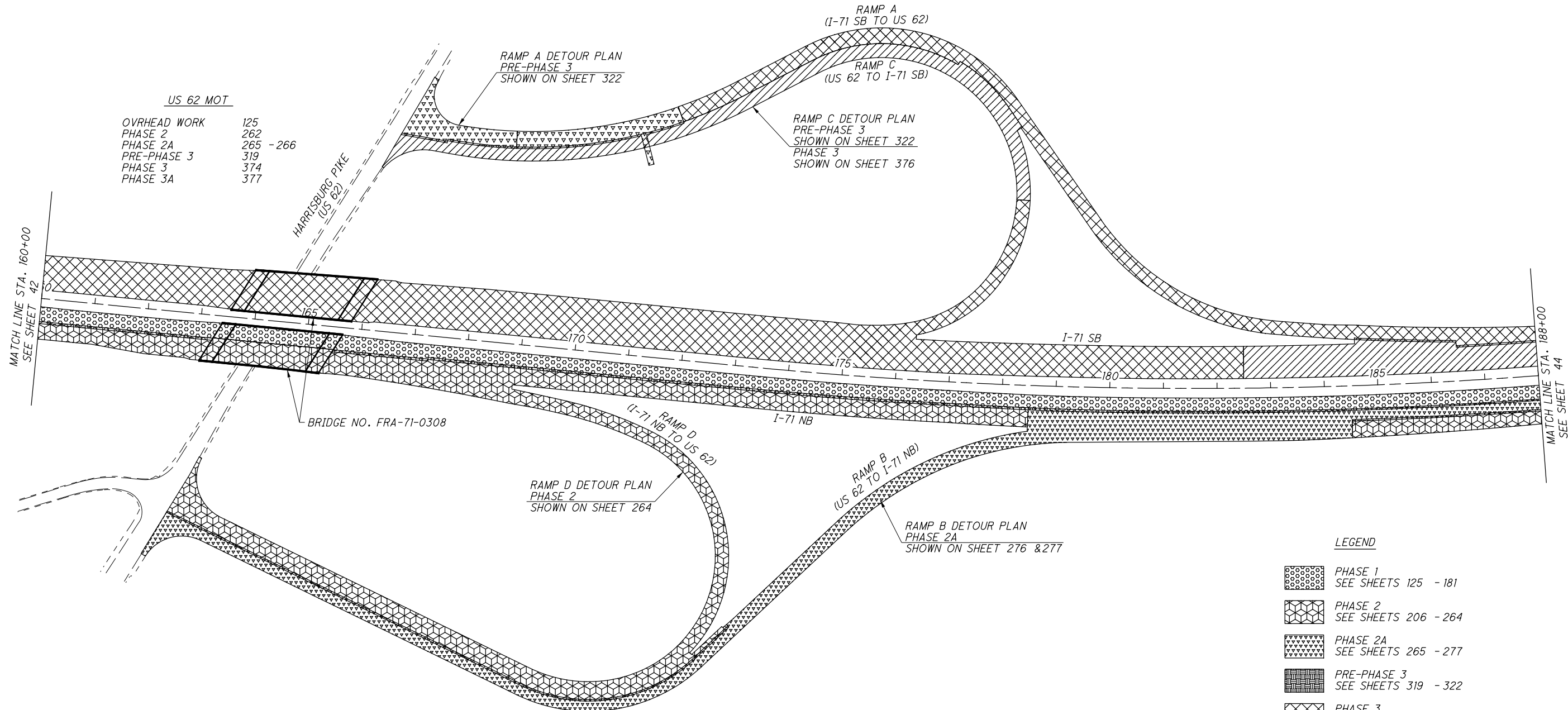
NOTE:
UNLESS OTHERWISE SPECIFIED IN THE SHEET BORDER, THE CONCRETE OPTION HAS BEEN SHOWN IN PLAN VIEW THROUGHOUT THE PLAN SET. TYPICAL SECTIONS HAVE BEEN PROVIDED FOR BOTH PAVEMENT OPTIONS. WHERE TRANSITIONS OCCUR, SEPERATE CONCRETE AND ASPHALT PLAN SHEETS HAVE BEEN SHOWN.



MAINTENANCE OF TRAFFIC-PHASING OVERVIEW
I-71 - STA. 104+00 TO STA. 160+00

FRA-71-0.00

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US 62 MOT

OVRHEAD WORK	125	
PHASE 2	262	
PHASE 2A	265	- 266
PRE-PHASE 3	319	
PHASE 3	374	
PHASE 3A	377	

RAMP A DETOUR PLAN
PRE-PHASE 3
SHOWN ON SHEET 322

RAMP C DETOUR PLAN
PRE-PHASE 3
PHASE 3
SHOWN ON SHEET 376

RAMP D DETOUR PLAN
PHASE 2
SHOWN ON SHEET 264

RAMP B DETOUR PLAN
PHASE 2A
SHOWN ON SHEET 276 & 277

LEGEND

	PHASE 1 SEE SHEETS 125 - 181
	PHASE 2 SEE SHEETS 206 - 264
	PHASE 2A SEE SHEETS 265 - 277
	PRE-PHASE 3 SEE SHEETS 319 - 322
	PHASE 3 SEE SHEETS 330 - 376
	PHASE 3A SEE SHEETS 377 - 383

NOTE:
UNLESS OTHERWISE SPECIFIED IN THE SHEET BORDER, THE CONCRETE OPTION HAS BEEN SHOWN IN PLAN VIEW THROUGHOUT THE PLAN SET. TYPICAL SECTIONS HAVE BEEN PROVIDED FOR BOTH PAVEMENT OPTIONS. WHERE TRANSITIONS OCCUR, SEPERATE CONCRETE AND ASPHALT PLAN SHEETS HAVE BEEN SHOWN.

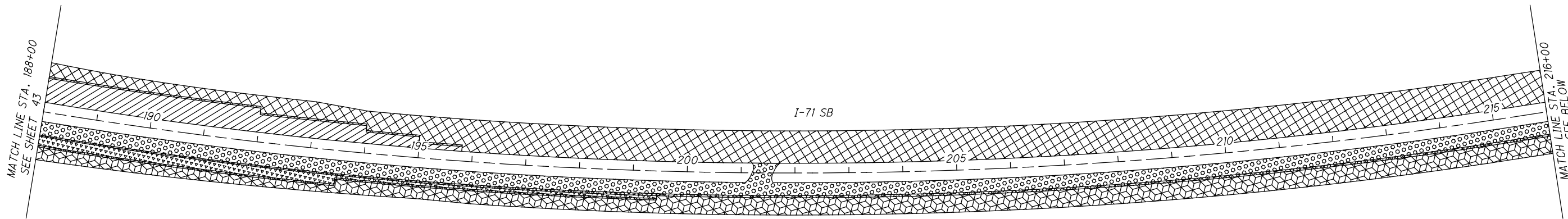


CALCULATED
BER
CHECKED
SMM






MAINTENANCE OF TRAFFIC-PHASING OVERVIEW
I-71 - STA. 160+00 TO STA. 188+00

FRA-71-0.00

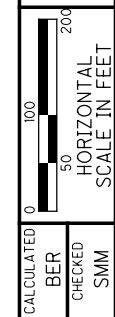
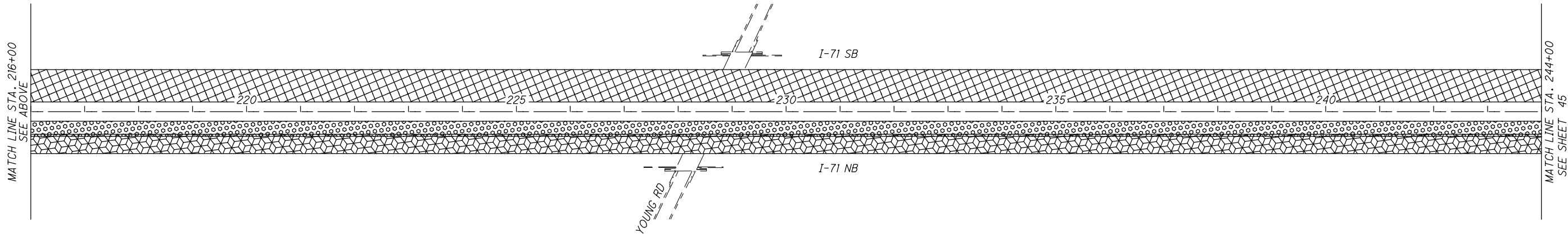
43
1312



LEGEND

-  PHASE 1
SEE SHEETS 125 - 181
-  PHASE 2
SEE SHEETS 206 - 264
-  PHASE 2A
SEE SHEETS 265 - 277
-  PHASE 3
SEE SHEETS 330 - 376
-  PHASE 3A
SEE SHEETS 377 - 383

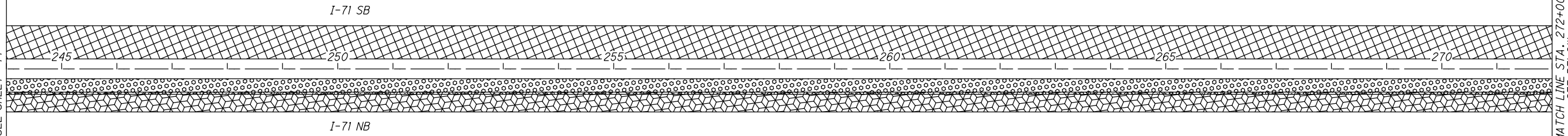
NOTE:
UNLESS OTHERWISE SPECIFIED IN THE SHEET BORDER, THE CONCRETE OPTION HAS BEEN SHOWN IN PLAN VIEW THROUGHOUT THE PLAN SET. TYPICAL SECTIONS HAVE BEEN PROVIDED FOR BOTH PAVEMENT OPTIONS. WHERE TRANSITIONS OCCUR, SEPERATE CONCRETE AND ASPHALT PLAN SHEETS HAVE BEEN SHOWN.



MAINTENANCE OF TRAFFIC-PHASING OVERVIEW
I-71 - STA. 188+00 TO STA. 244+00

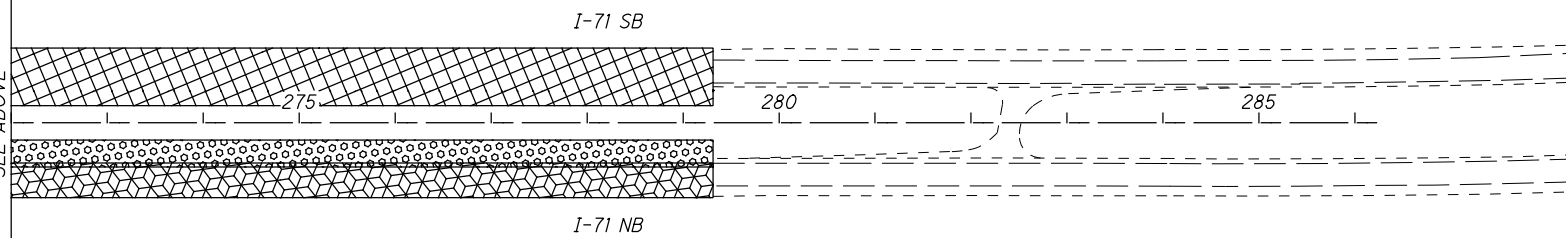
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MATCH LINE STA. 244+00
SEE SHEET 44






MATCH LINE STA. 272+00
SEE BELOW

MATCH LINE STA. 272+00
SEE ABOVE



LEGEND

-  PHASE 1
SEE SHEETS 125 - 181
-  PHASE 2
SEE SHEETS 206 - 264
-  PHASE 3
SEE SHEETS 330 - 376

NOTE:
UNLESS OTHERWISE SPECIFIED IN THE SHEET BORDER, THE CONCRETE OPTION HAS BEEN SHOWN IN PLAN VIEW THROUGHOUT THE PLAN SET. TYPICAL SECTIONS HAVE BEEN PROVIDED FOR BOTH PAVEMENT OPTIONS. WHERE TRANSITIONS OCCUR, SEPERATE CONCRETE AND ASPHALT PLAN SHEETS HAVE BEEN SHOWN.

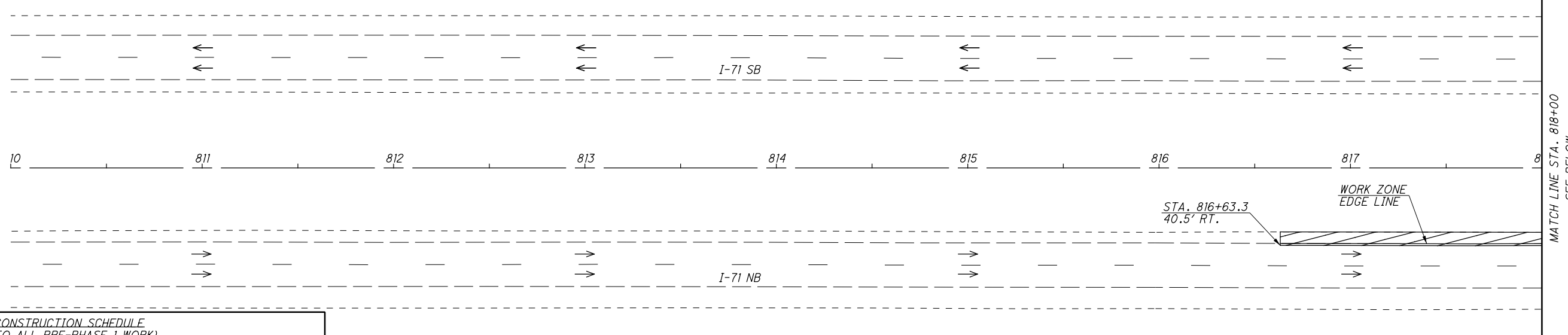
MAINTENANCE OF TRAFFIC-PHASING OVERVIEW
I-71 - STA. 244+00 TO STA. 279 +31

FRA - 71 - 0.00

CALCULATED
BER
CHECKED
SMM



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MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 810+00 TO STA. 826+00

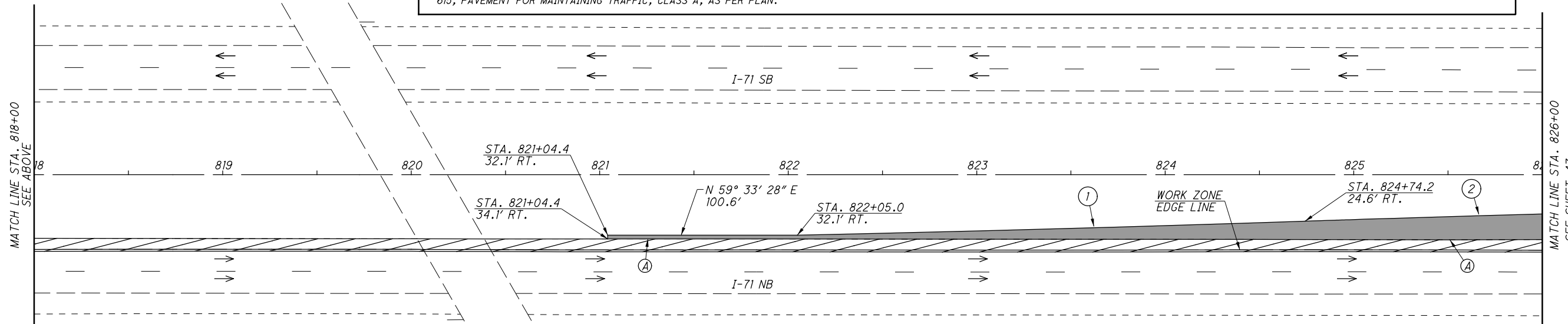
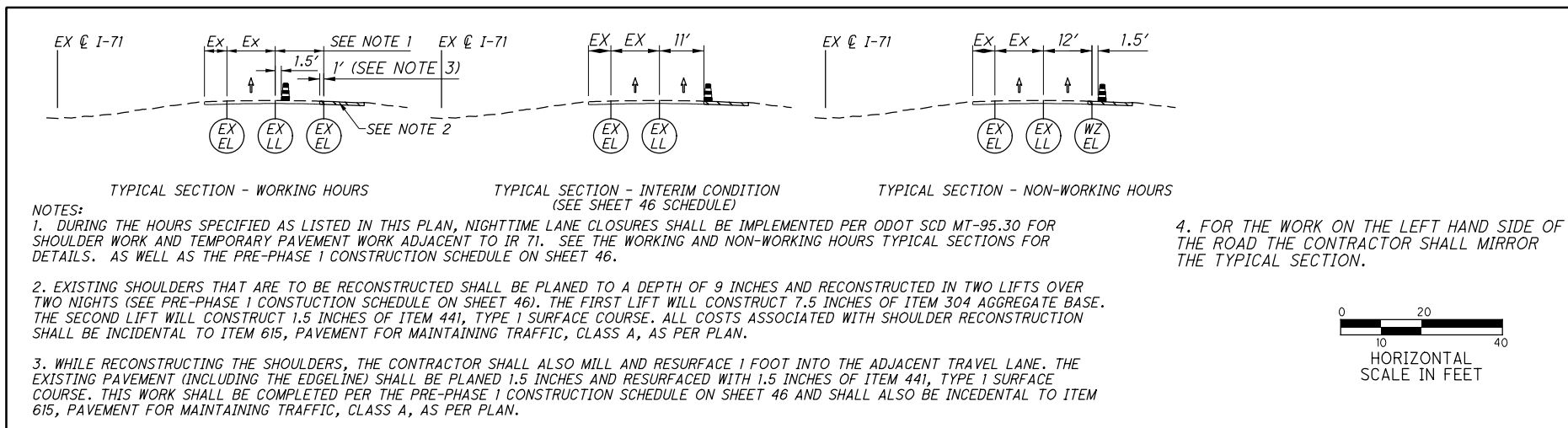
PRE-PHASE 1 CONSTRUCTION SCHEDULE
 (APPLICABLE TO ALL PRE-PHASE 1 WORK)

THE CONTRACTOR SHALL COMPLETE PRE-PHASE 1 IN PIECES, AND SHALL LIMIT THE LENGTH OF WORK ZONE TO THAT WHICH CAN BE COMPLETED OVER TWO CONSECUTIVE NIGHTS:

NIGHT 1:
 PLANE 9 INCHES OF EXISTING SHOULDER AND REPLACE WITH 7.5 INCHES OF AGGREGATE BASE. ALSO PLANE 1.5 INCHES OF EXISTING PAVEMENT, 1 FOOT INTO THE ADJACENT TRAVEL LANE

NEXT MORNING:
 OPEN RIGHT LANE (11 FEET WIDE) WITH DRUM PLACED IN THE DROPOFF. ADD "NO EDGE LINE" SIGN (W8-H12a-48), 500 FEET IN ADVANCE OF THE WORK ZONE. (SEE INTERIM CONDITION IN TYPICAL SECTIONS)

NIGHT 2:
 APPLY 1.5 INCHES OF SURFACE COURSE TO THE SHOULDER AND THE 1 FOOT AREA ADJACENT. INSTALL ITEM, 614 WORK ZONE EDGE LINE TO RESTORE 12' RIGHT LANE.



① Δ = 0° 40' 26" (LT) Dc = 0° 15' 01" R = 22,904' T = 134.72 L = 269.43 E = 0.40' C = 269.43' C.B. = N 57° 57' 23" E	② Δ = 1° 54' 02" (RT) Dc = 0° 14' 59" R = 22,932' T = 380.36' L = 760.66' E = 3.154' C = 760.62' C.B. = N 58° 35' 40" E
---	--

LEGEND

SHOULDER RECONSTRUCTION

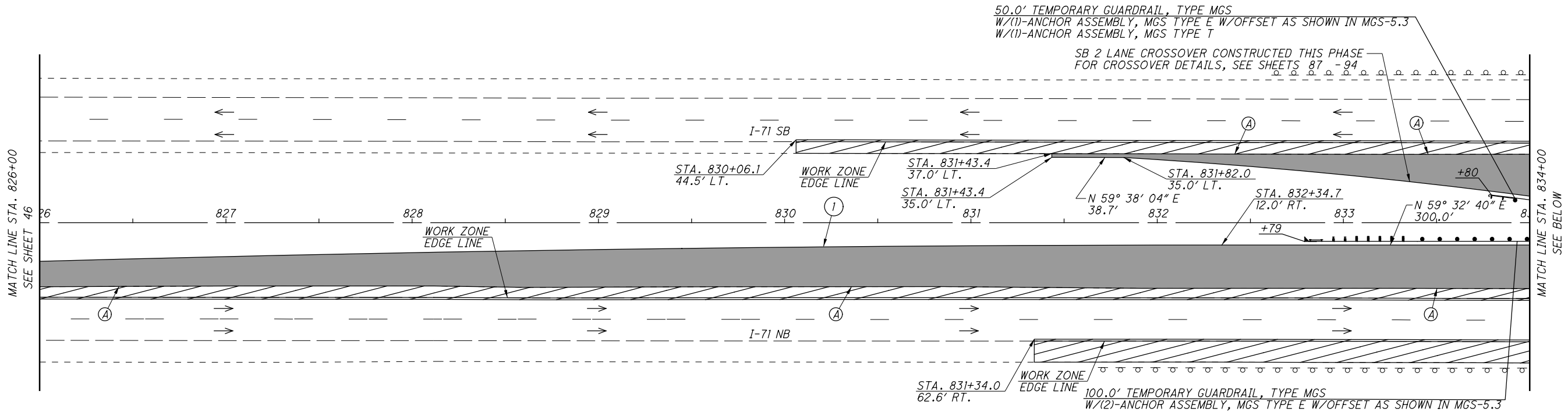
TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE

OPEN TRAVEL LANE

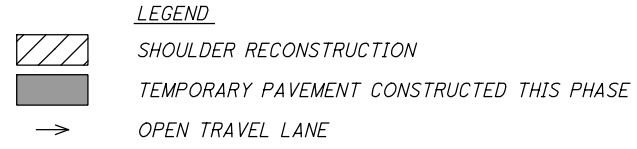
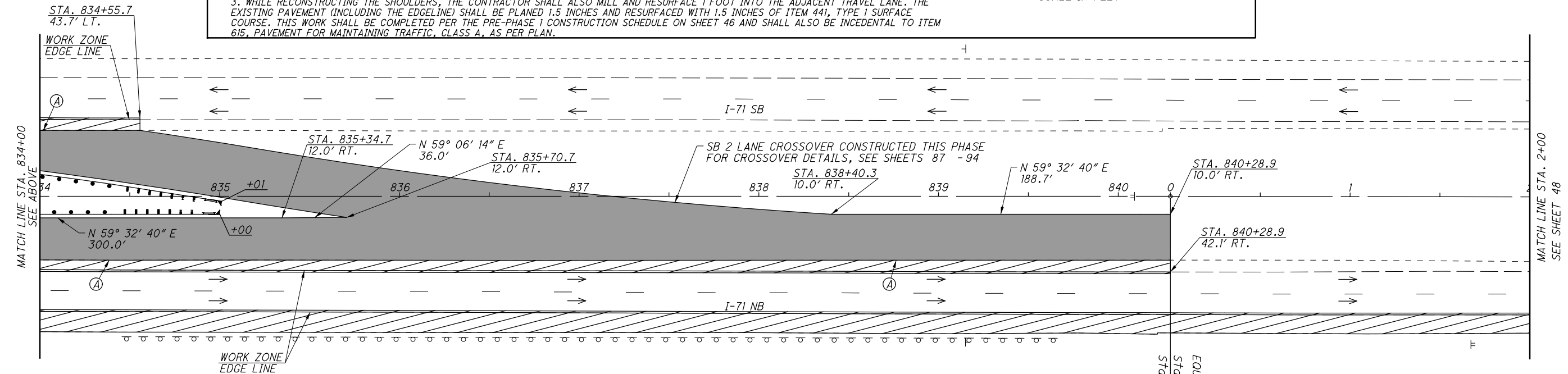
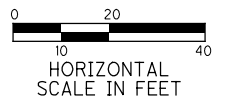
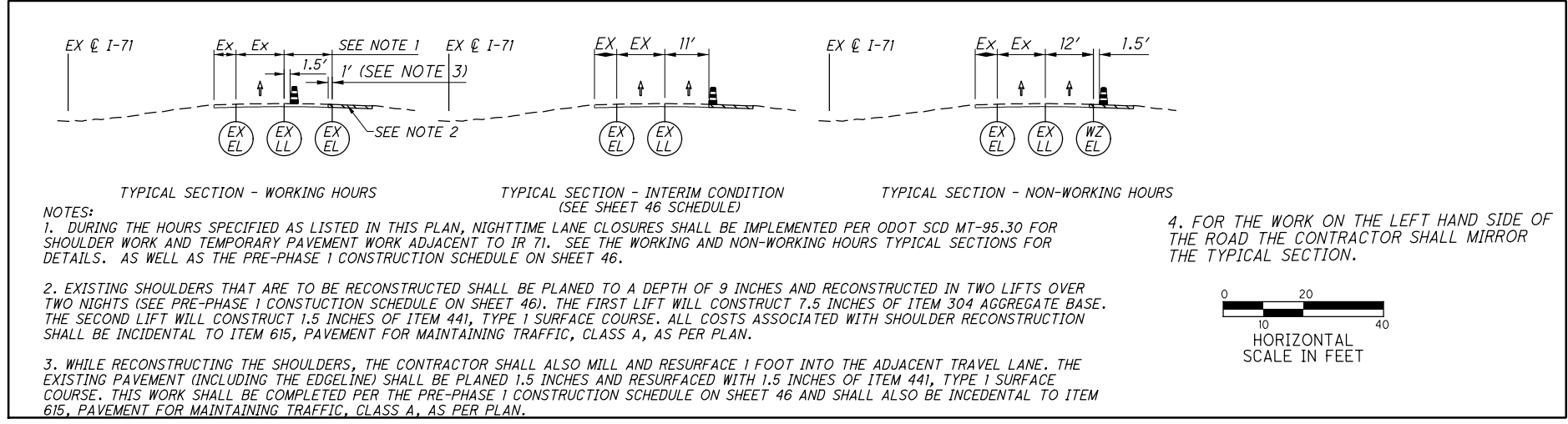
Ⓐ - MEET/MATCH EXISTING EDGE OF SHOULDER

FRA-71-0-00
 46
 1312

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① $\Delta = 1^\circ 54' 02''$ (RT)
 $D_c = 0^\circ 14' 59''$
 $R = 22,932'$
 $T = 380.36'$
 $L = 760.66'$
 $E = 3.15'$
 $C = 760.62'$
 $C.B. = N 58^\circ 35' 40'' E$



EQUATION:
 $STG\ 840+28.99\ BK =$
 $STG\ 0+00.00\ AH$

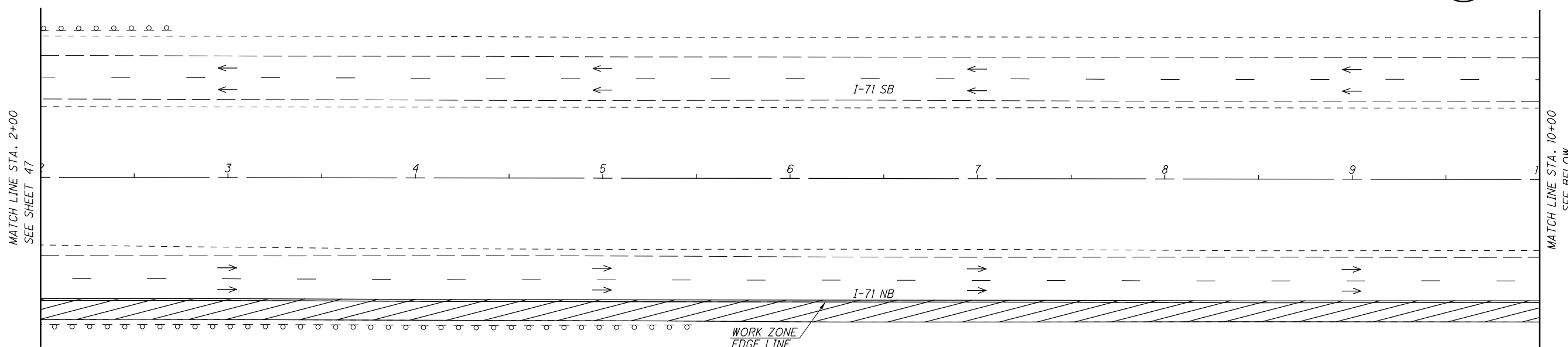
Ⓐ - MEET/MATCH EXISTING EDGE OF SHOULDER



MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 826+00 TO STA. 2+00

FRA-71-0.00

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EX @ I-71

SEE NOTE 1

EX @ I-71

SEE NOTE 2

SEE NOTE 3

TYPICAL SECTION - WORKING HOURS

TYPICAL SECTION - INTERIM CONDITION
(SEE SHEET 46 SCHEDULE)

TYPICAL SECTION - NON-WORKING HOURS

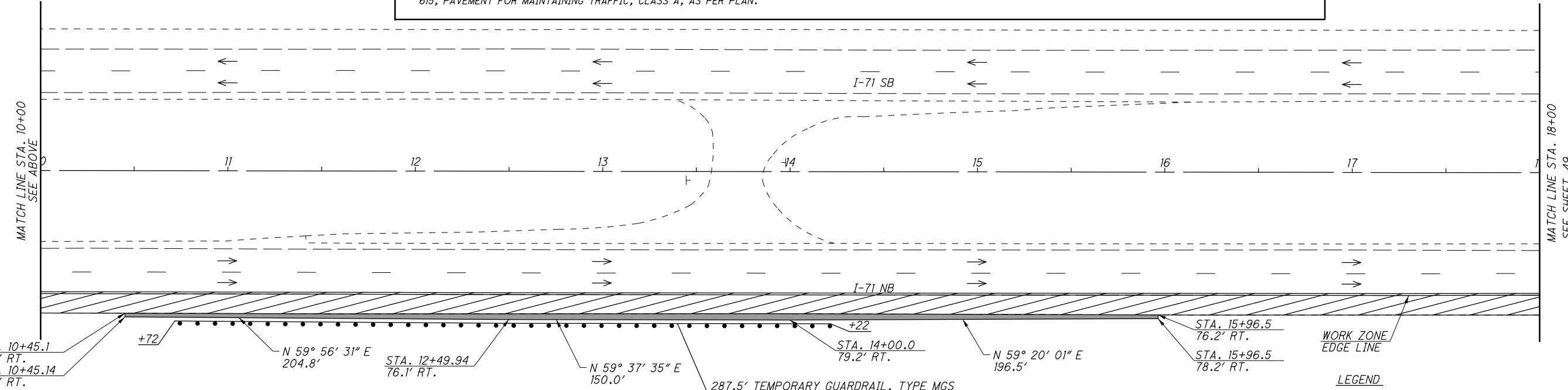
NOTES:

1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.

2. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

3. WHILE RECONSTRUCTING THE SHOULDERS, THE CONTRACTOR SHALL ALSO MILL AND RESURFACE 1 FOOT INTO THE ADJACENT TRAVEL LANE. THE EXISTING PAVEMENT (INCLUDING THE EDGELINE) SHALL BE PLANED 1.5 INCHES AND RESURFACED WITH 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. THIS WORK SHALL BE COMPLETED PER THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46 AND SHALL ALSO BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

0 20 40
HORIZONTAL
SCALE IN FEET



LEGEND

SHOULDER RECONSTRUCTION

TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE

OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

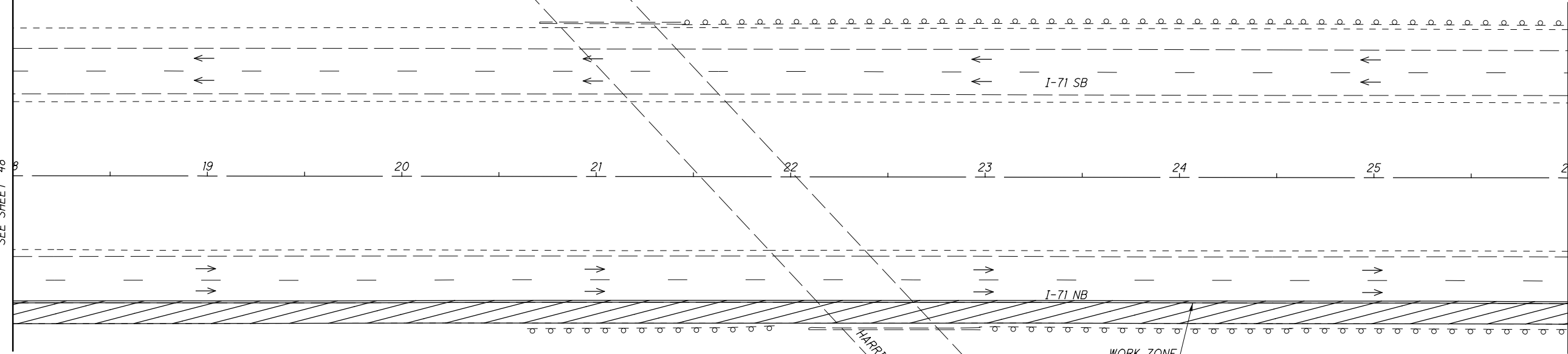
**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 2+00 TO STA. 18+00**

FRA-71-0.00

48
1312

J:\20130212\ODOT\FRA\107201\mot\sheet\107201MP155.dgn 4/13/2020 10:19:33 AM brieder

MATCH LINE STA. 18+00
SEE SHEET 48



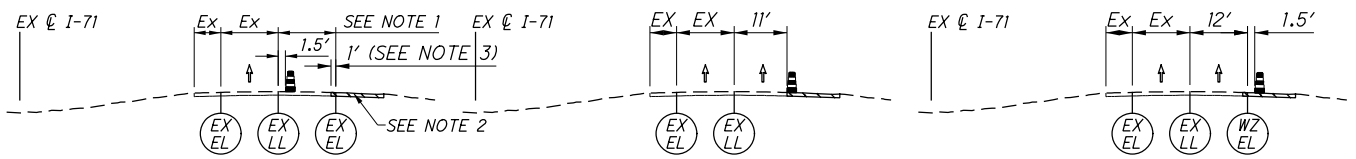
MATCH LINE STA. 26+00
SEE BELOW



CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 18+00 TO STA. 34+00**

FRA-71-0.00

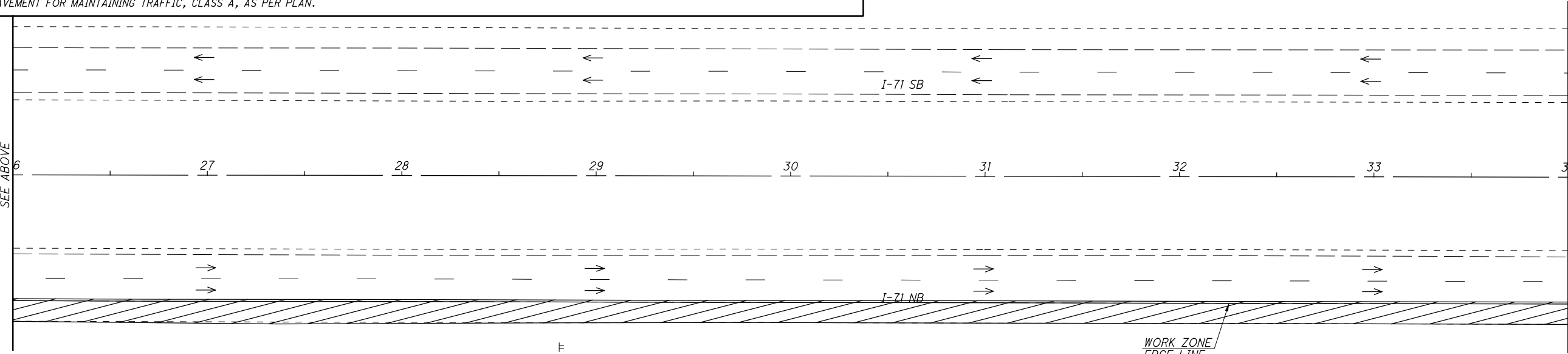


TYPICAL SECTION - WORKING HOURS TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE) TYPICAL SECTION - NON-WORKING HOURS

- NOTES:
- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
 - EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE IN FEET. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
 - WHILE RECONSTRUCTING THE SHOULDERS, THE CONTRACTOR SHALL ALSO MILL AND RESURFACE 1 FOOT INTO THE ADJACENT TRAVEL LANE. THE EXISTING PAVEMENT (INCLUDING THE EDGE LINE) SHALL BE PLANED 1.5 INCHES AND RESURFACED WITH 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. THIS WORK SHALL BE COMPLETED PER THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46 AND SHALL ALSO BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.



MATCH LINE STA. 26+00
SEE ABOVE



MATCH LINE STA. 34+00
SEE SHEET 50

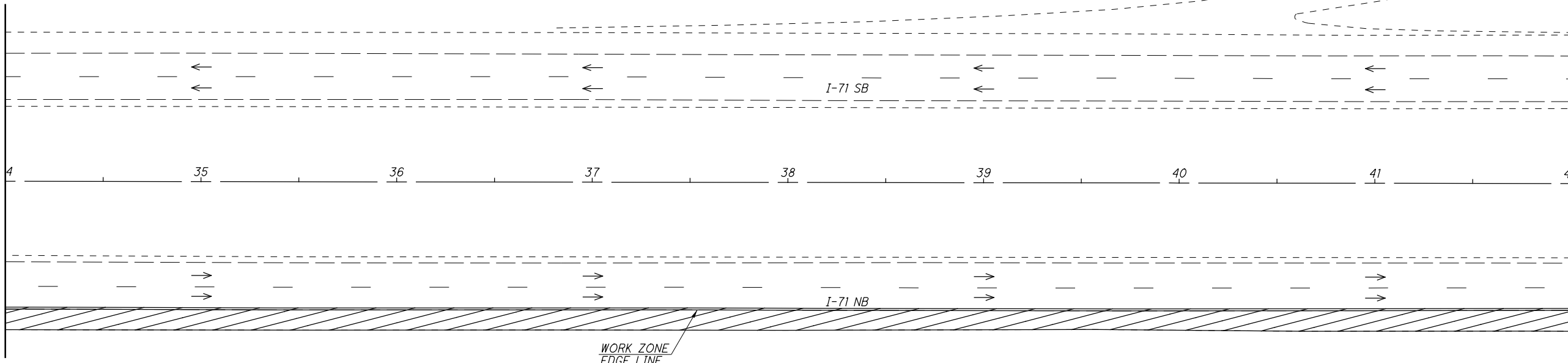


- LEGEND
- SHOULDER RECONSTRUCTION
 - OPEN TRAVEL LANE

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MATCH LINE STA. 34+00
SEE SHEET 49

MATCH LINE STA. 42+00
SEE BELOW



WORK ZONE
EDGE LINE

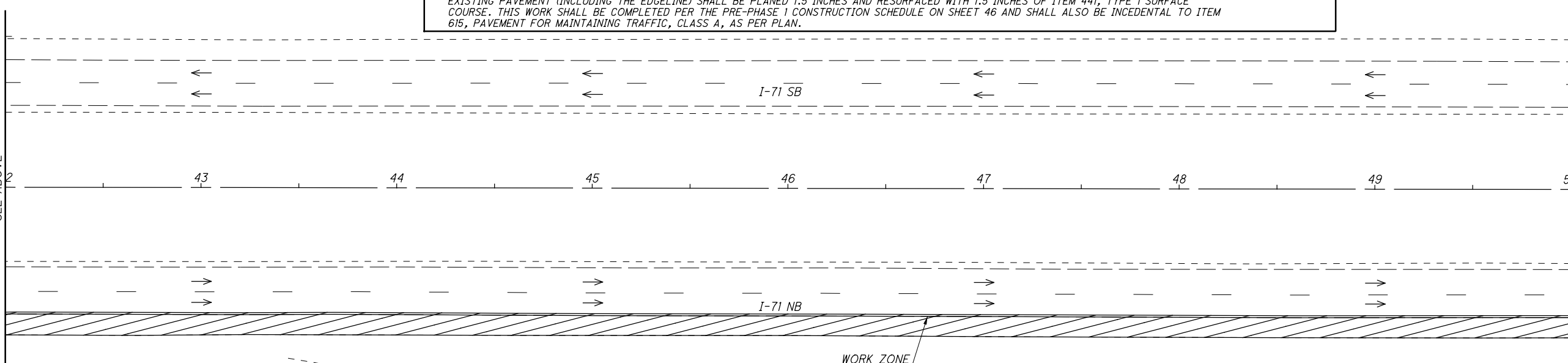
NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
- EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
- WHILE RECONSTRUCTING THE SHOULDERS, THE CONTRACTOR SHALL ALSO MILL AND RESURFACE 1 FOOT INTO THE ADJACENT TRAVEL LANE. THE EXISTING PAVEMENT (INCLUDING THE EDGELINE) SHALL BE PLANED 1.5 INCHES AND RESURFACED WITH 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. THIS WORK SHALL BE COMPLETED PER THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46 AND SHALL ALSO BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

0 20 40
HORIZONTAL
SCALE IN FEET

MATCH LINE STA. 42+00
SEE ABOVE

MATCH LINE STA. 50+00
SEE SHEET 51



WORK ZONE
EDGE LINE

- LEGEND**
- SHOULDER RECONSTRUCTION
 - OPEN TRAVEL LANE

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 34+00 TO STA. 50+00**

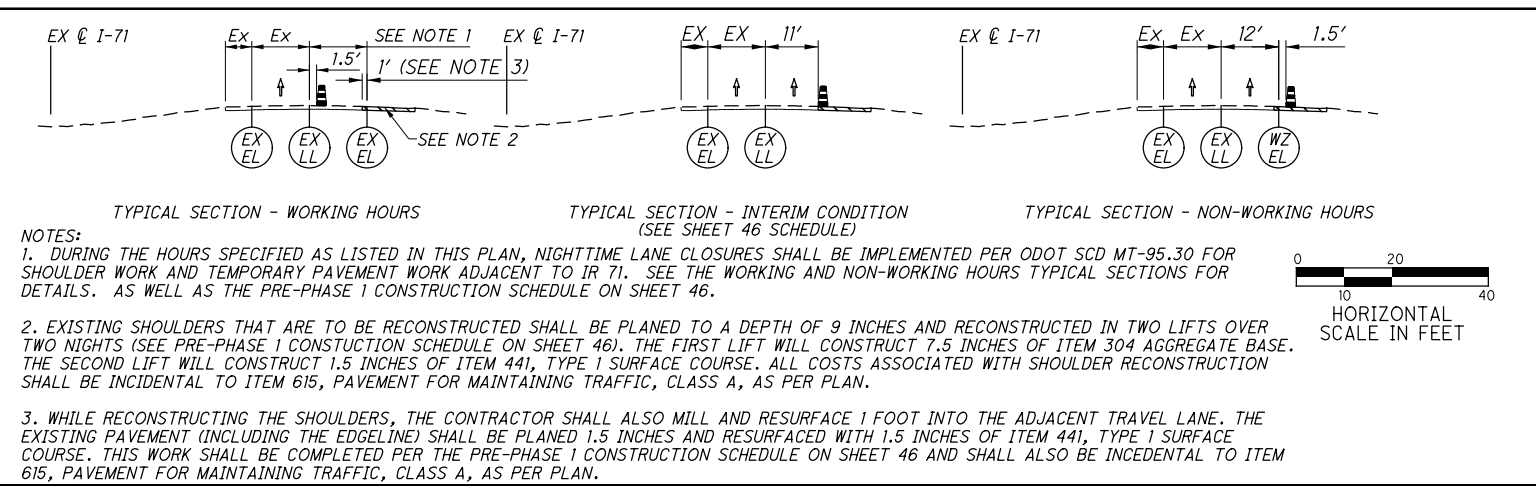
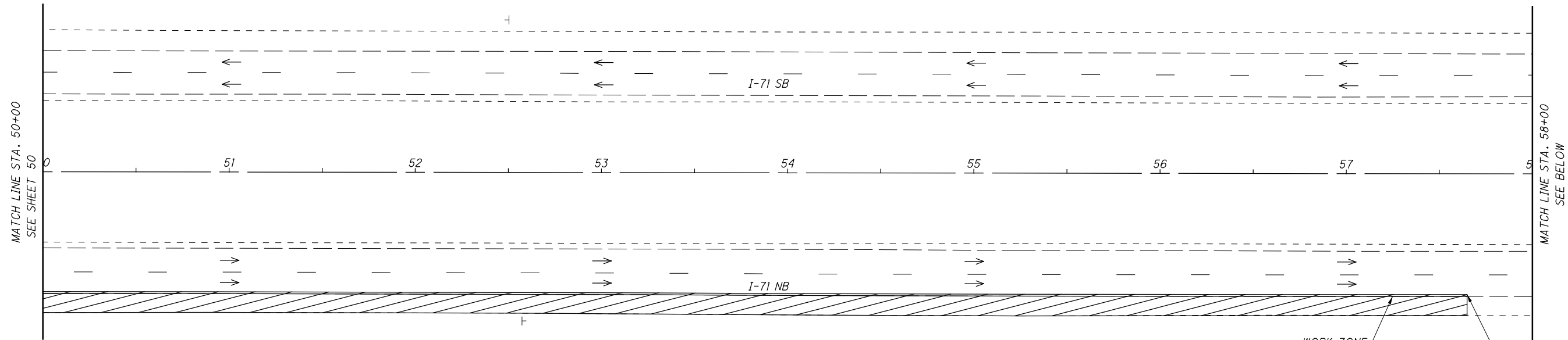
FRA-71-0.00

50
1312

CALCULATED
BER
CHECKED
SMM

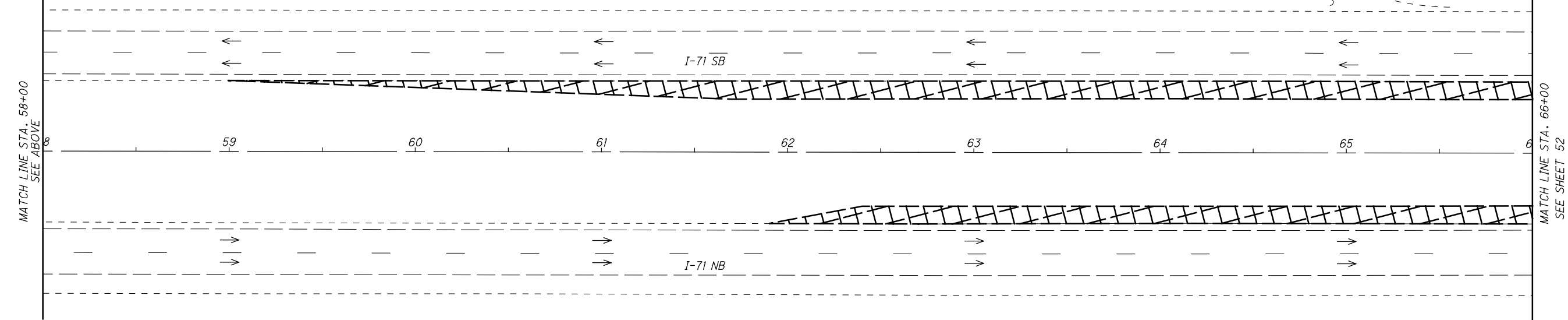
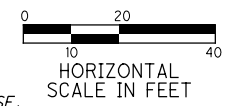


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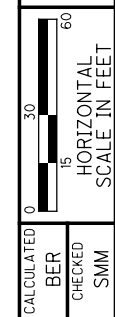


NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
- EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANNED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
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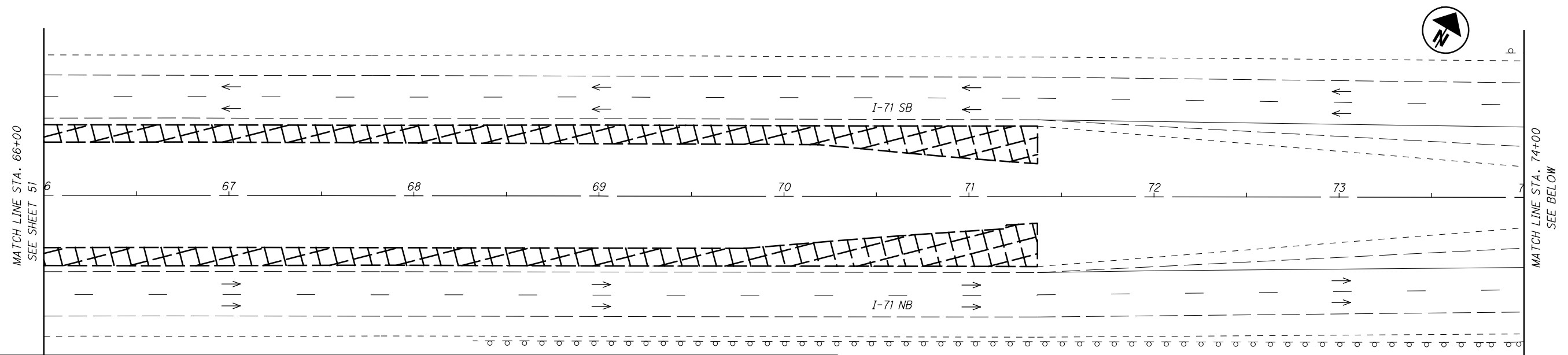
- LEGEND**
- SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - OPEN TRAVEL LANE



CALCULATED BY BER CHECKED BY SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1 (CONCRETE OPTION) I-71 - STA. 50+00 TO STA. 66+00

FRA-71-0.00

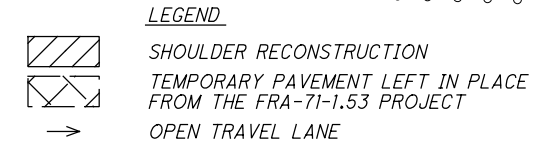
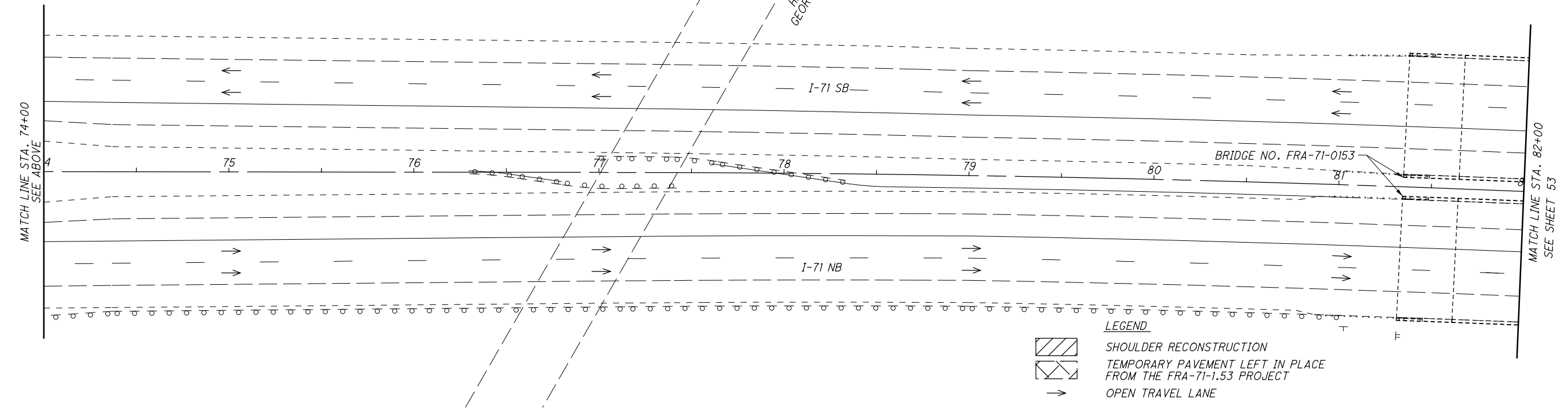
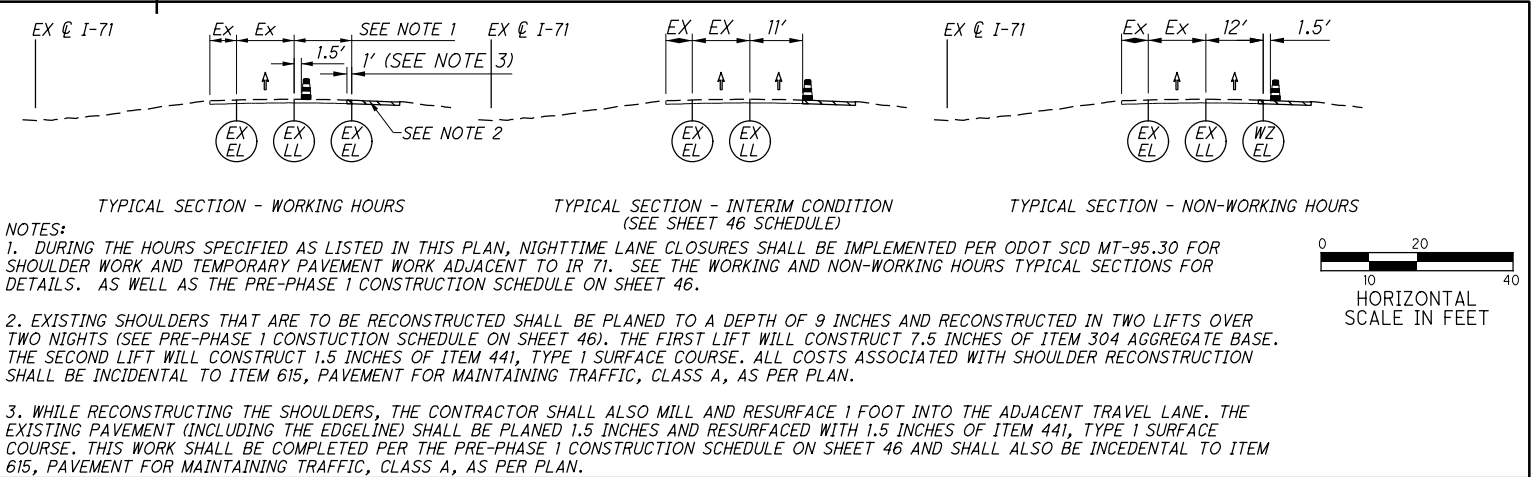
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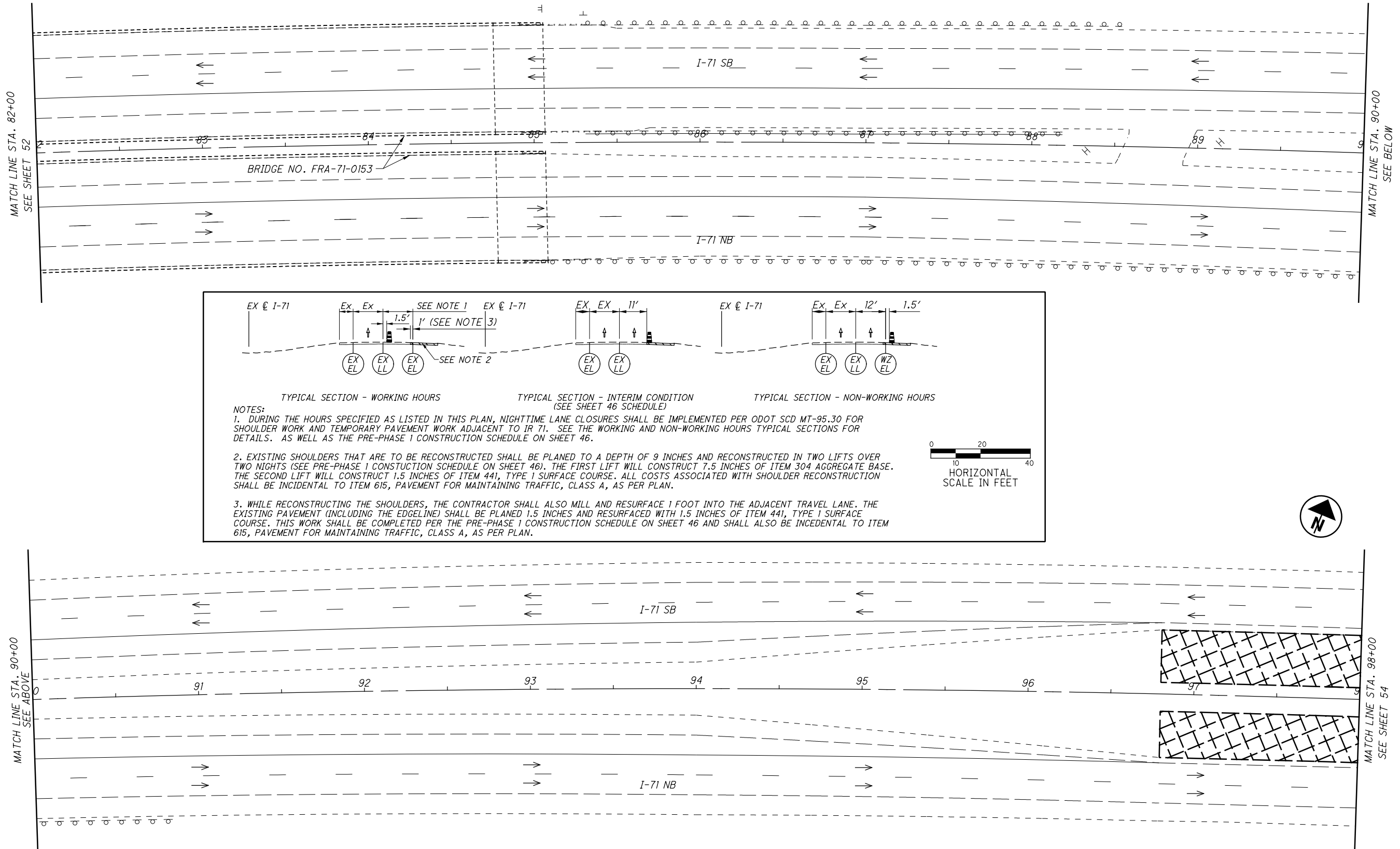
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 66+00 TO STA. 82+00

FRA-71-0.00

52
1312



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EX @ I-71 Ex Ex SEE NOTE 1 EX @ I-71 EX EX 11' EX @ I-71 Ex Ex 12' 1.5'

SEE NOTE 3

SEE NOTE 2

EX EL EX LL EX EL EX EL EX LL EX EL EX LL WZ EL

TYPICAL SECTION - WORKING HOURS TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE) TYPICAL SECTION - NON-WORKING HOURS

NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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0 10 20 40
HORIZONTAL SCALE IN FEET

LEGEND

SHOULDER RECONSTRUCTION

TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT

OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1 (CONCRETE OPTION) I-71 - STA. 82+00 TO STA. 98+00

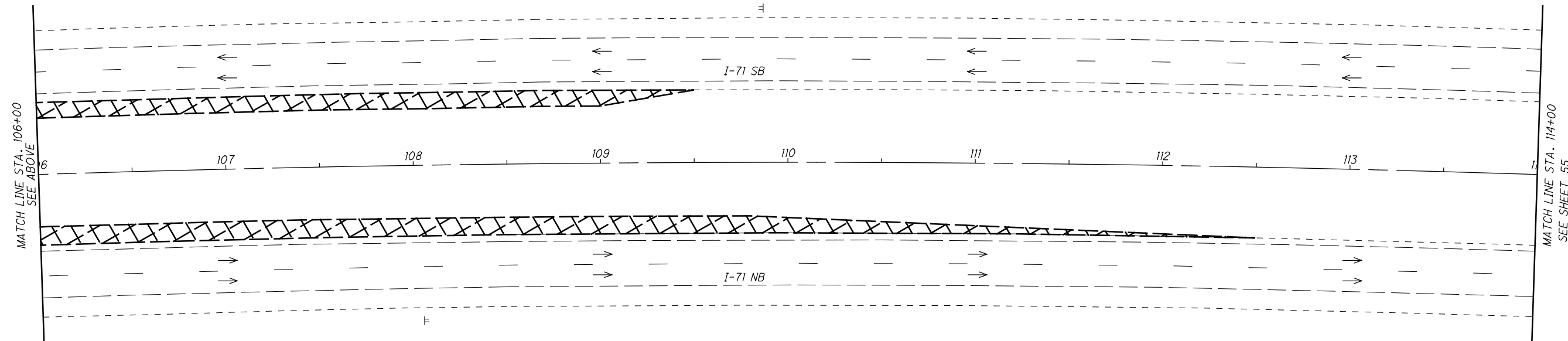
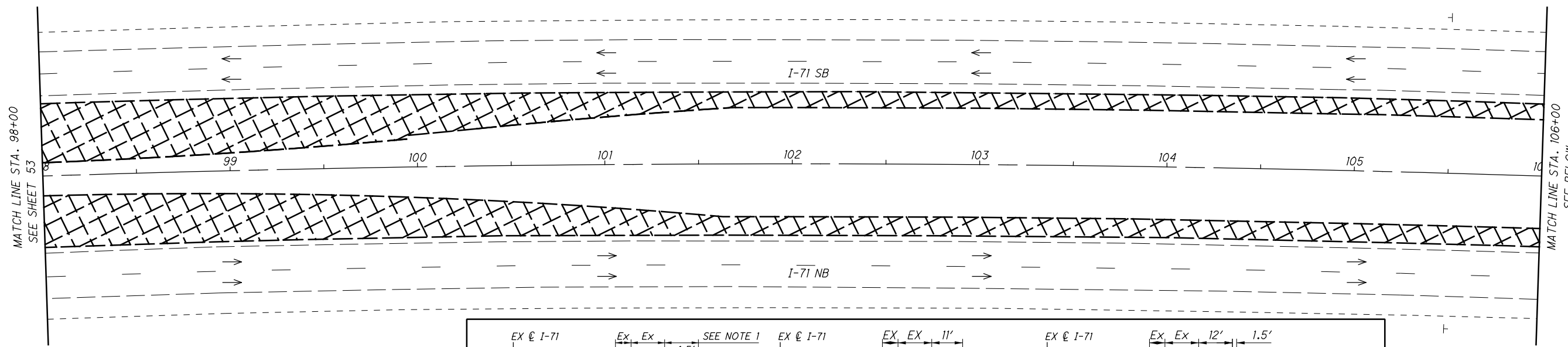
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53
1312

CALCULATED
BER
CHECKED
SMM

0 30 60
HORIZONTAL SCALE IN FEET

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TYPICAL SECTION - WORKING HOURS

TYPICAL SECTION - INTERIM CONDITION
(SEE SHEET 46 SCHEDULE)

TYPICAL SECTION - NON-WORKING HOURS

NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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HORIZONTAL SCALE IN FEET

- LEGEND**
- SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - OPEN TRAVEL LANE



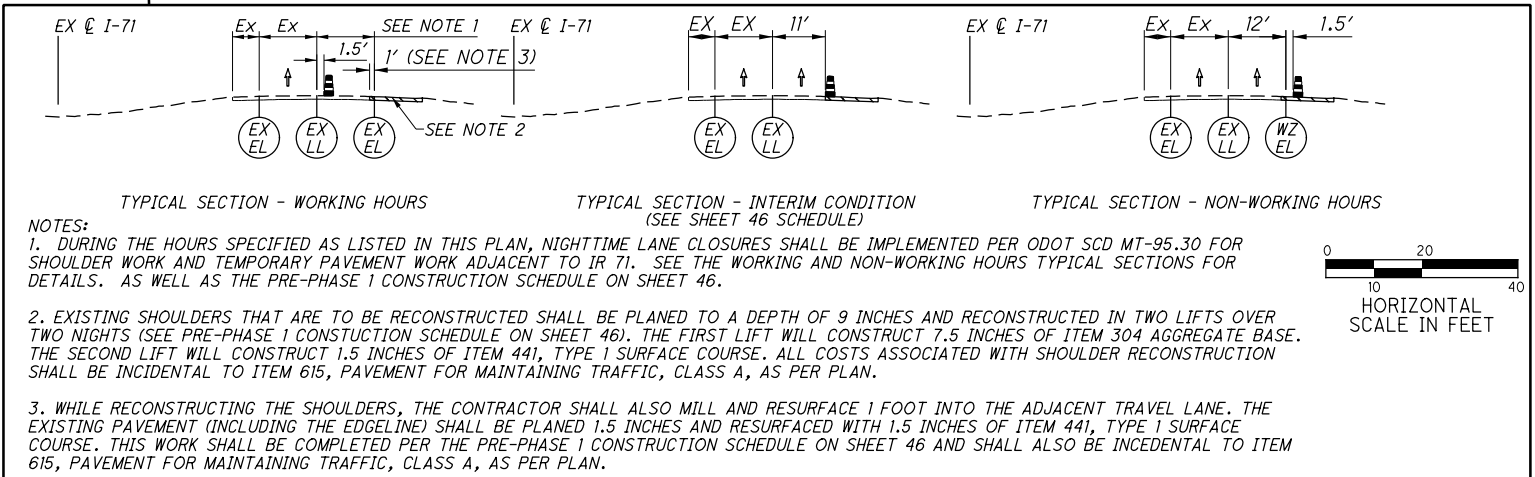
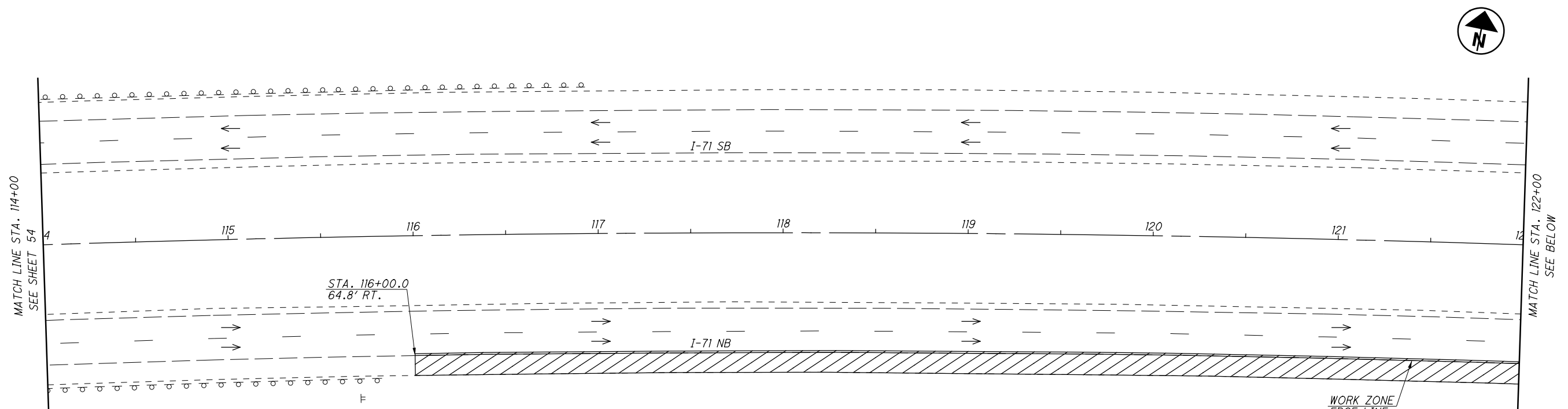
CALCULATED
BER
CHECKED
SMM

0 30 60
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 98+00 TO STA. 114+00**

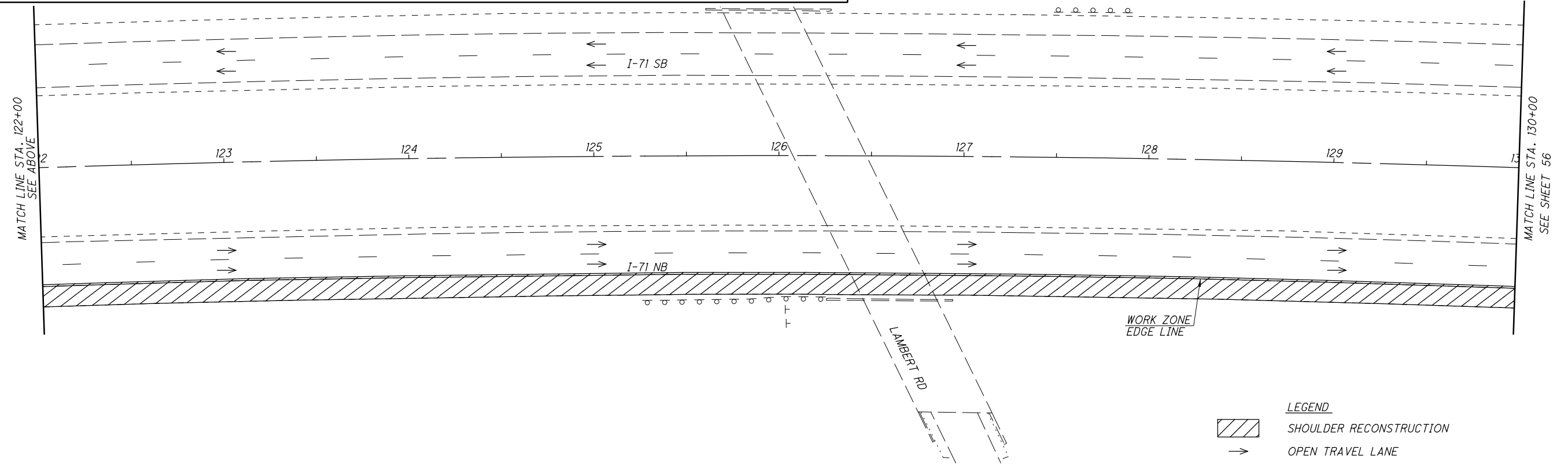
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① $\Delta = 25^\circ 24' 09''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,265.67'$
 $T = 2764.46'$
 $L = 5438.06'$
 $E = 307.67'$
 $C = 5393.64'$
 $C.B. = N 80^\circ 11' 26'' E$

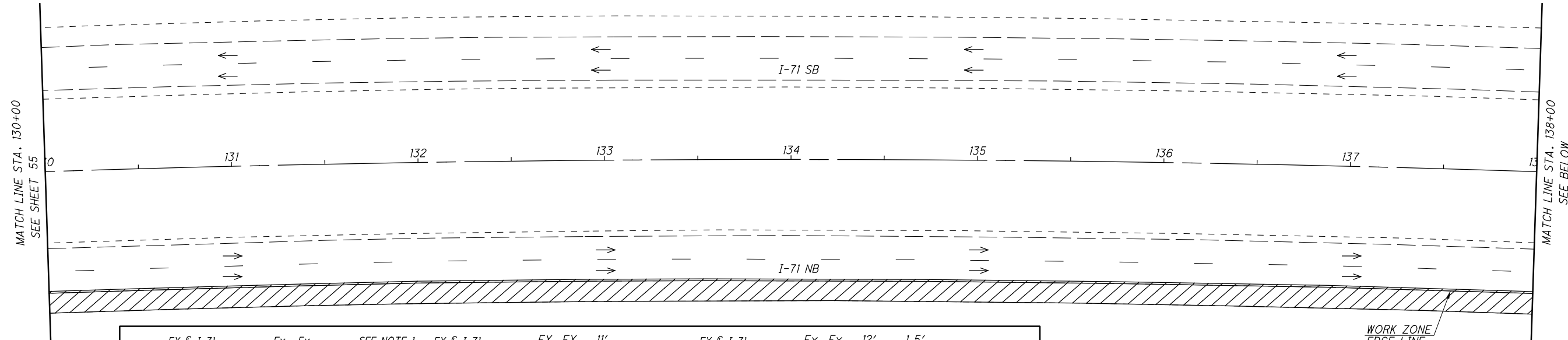
NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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LEGEND
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE

CALCULATED BER CHECKED SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1 (CONCRETE OPTION) I-71 - STA. 114+00 TO STA. 130+00
FRA-71-0.00
 55
 1312

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TYPICAL SECTION - WORKING HOURS

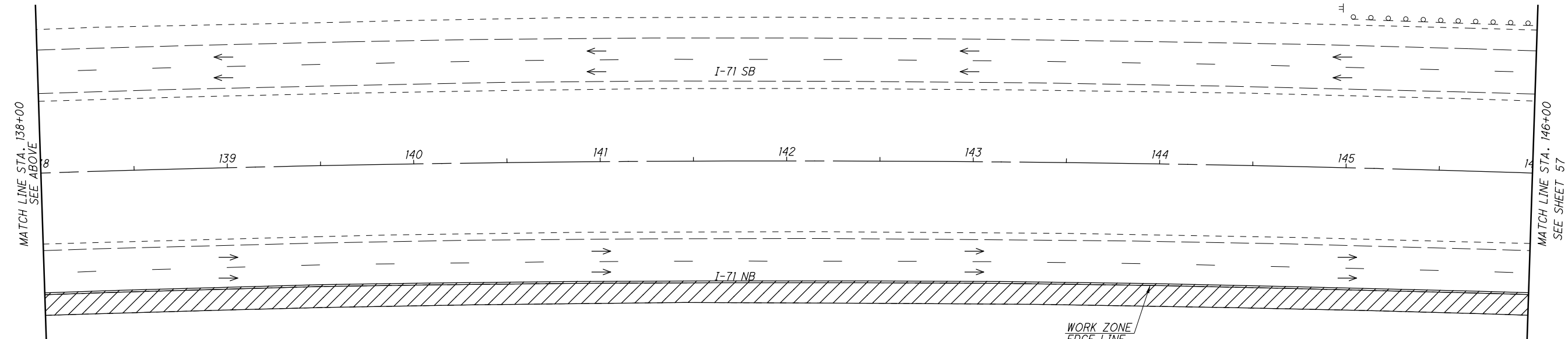
TYPICAL SECTION - INTERIM CONDITION
(SEE SHEET 46 SCHEDULE)

TYPICAL SECTION - NON-WORKING HOURS

NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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① $\Delta = 25^\circ 24' 09''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,265.67'$
 $T = 2764.46'$
 $L = 5438.06'$
 $E = 307.67'$
 $C = 5393.64'$
 $C.B. = N 80^\circ 11' 26'' E$



LEGEND
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE

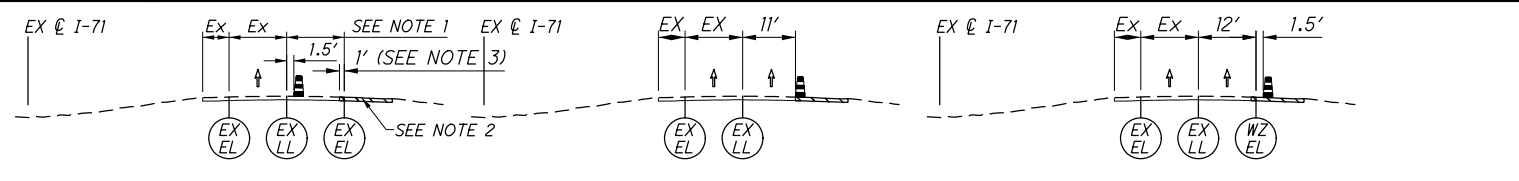
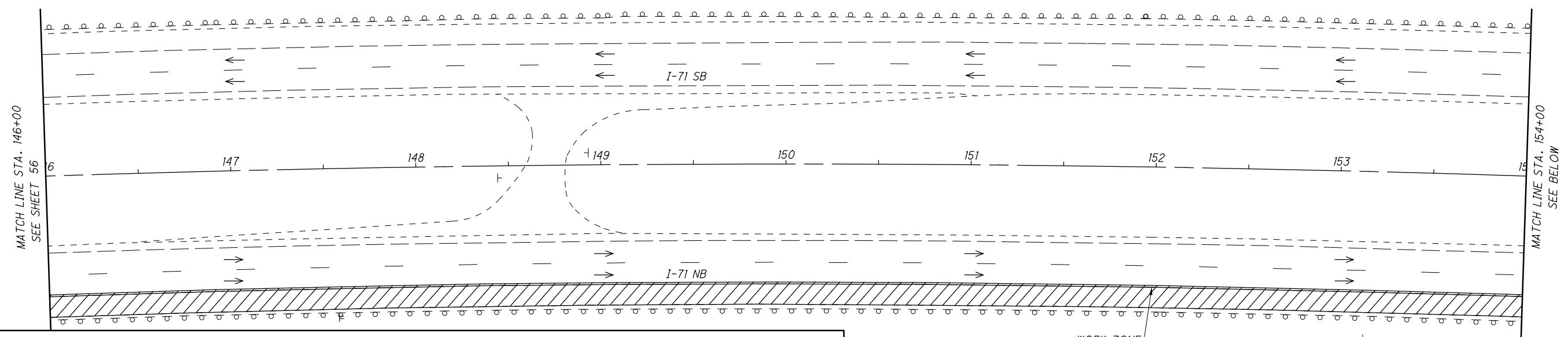
**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 130+00 TO STA. 146+00**

FRA-71-0.00

CALCULATED
BER
CHECKED
SMM



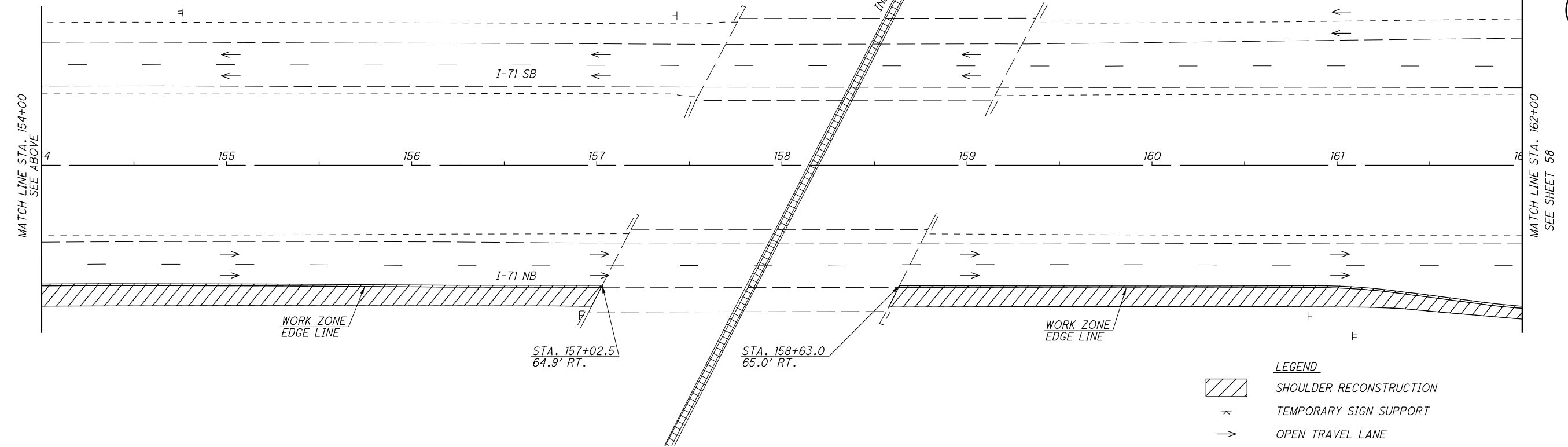
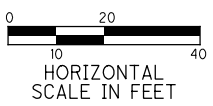
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TYPICAL SECTION - WORKING HOURS TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE) TYPICAL SECTION - NON-WORKING HOURS

NOTES:

1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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LEGEND

- SHOULDER RECONSTRUCTION
- TEMPORARY SIGN SUPPORT
- OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 146+00 TO STA. 162+00**

FRA-71-0.00

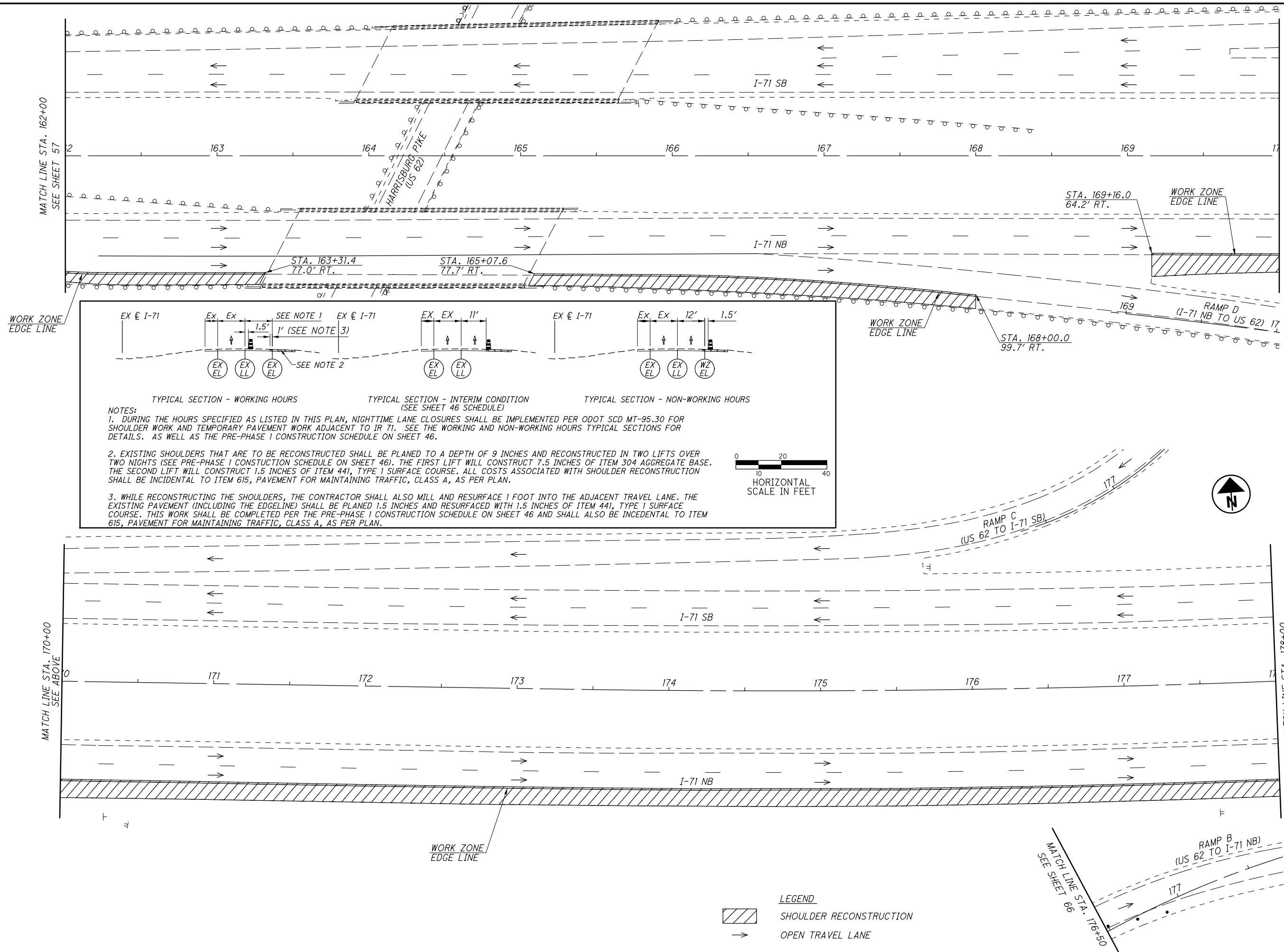
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MATCH LINE STA. 162+00
SEE SHEET 57

MATCH LINE STA. 170+00
SEE ABOVE

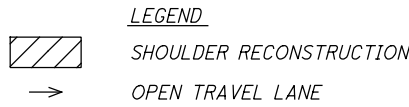
MATCH LINE STA. 170+00
SEE BELOW

MATCH LINE STA. 178+00
SEE SHEET 59



TYPICAL SECTION - WORKING HOURS
TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE)
TYPICAL SECTION - NON-WORKING HOURS

NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 162+00 TO STA. 178+00**



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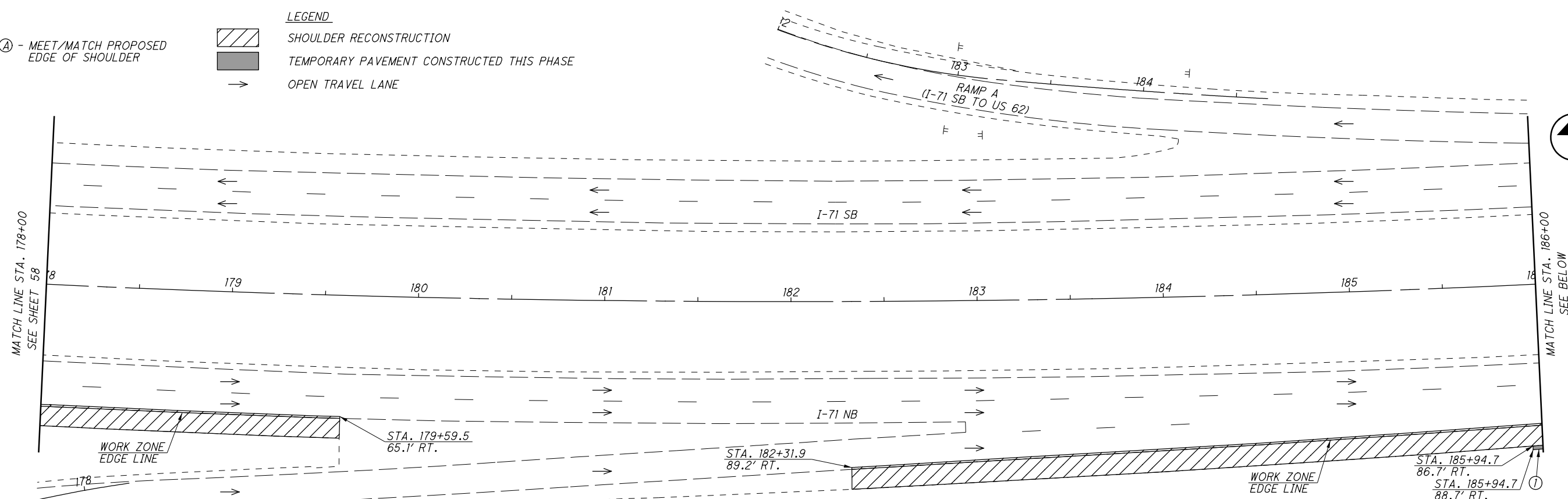
58
1312



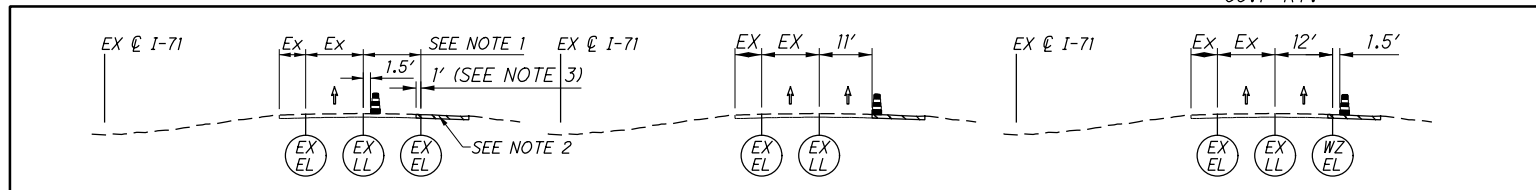
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(A) - MEET/MATCH PROPOSED EDGE OF SHOULDER

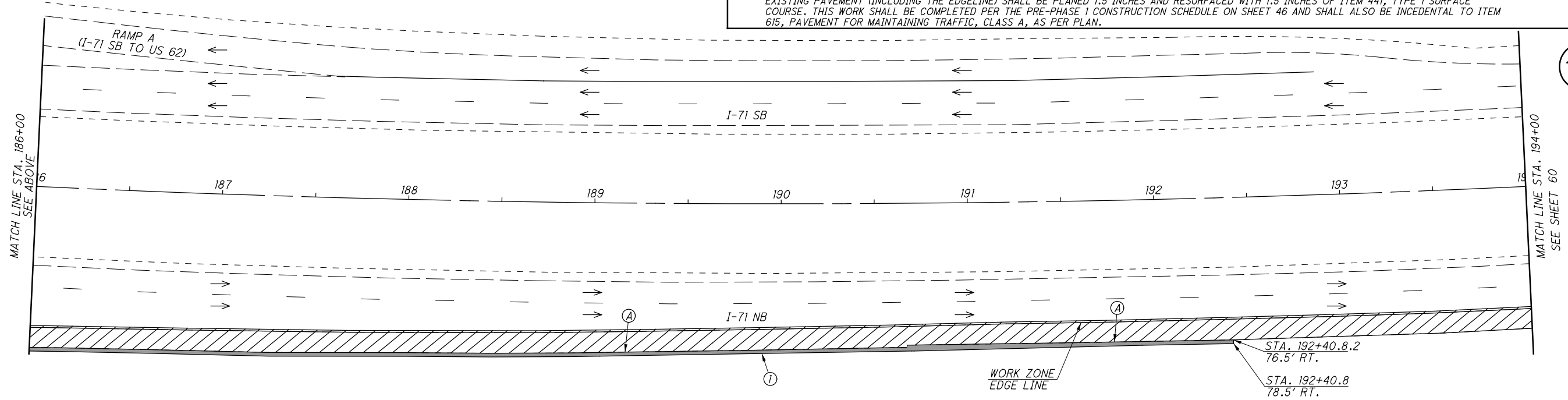
LEGEND
 SHOULDER RECONSTRUCTION
 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 OPEN TRAVEL LANE



(1) $\Delta = 3^\circ 09' 28''$ (LT)
 $D_c = 0^\circ 29' 03''$
 $R = 11,837'$
 $T = 326.28'$
 $L = 652.39'$
 $E = 4.50'$
 $C = 652.31'$
 $C.B. = N 84^\circ 03' 10'' E$



NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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 3. WHILE RECONSTRUCTING THE SHOULDERS, THE CONTRACTOR SHALL ALSO MILL AND RESURFACE 1 FOOT INTO THE ADJACENT TRAVEL LANE. THE EXISTING PAVEMENT (INCLUDING THE EDGELINE) SHALL BE PLANNED 1.5 INCHES AND RESURFACED WITH 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. THIS WORK SHALL BE COMPLETED PER THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46 AND SHALL ALSO BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

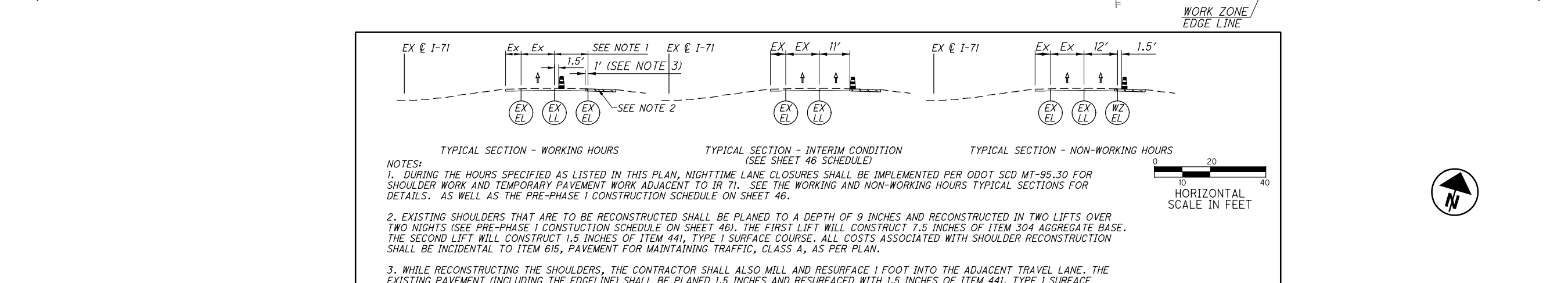
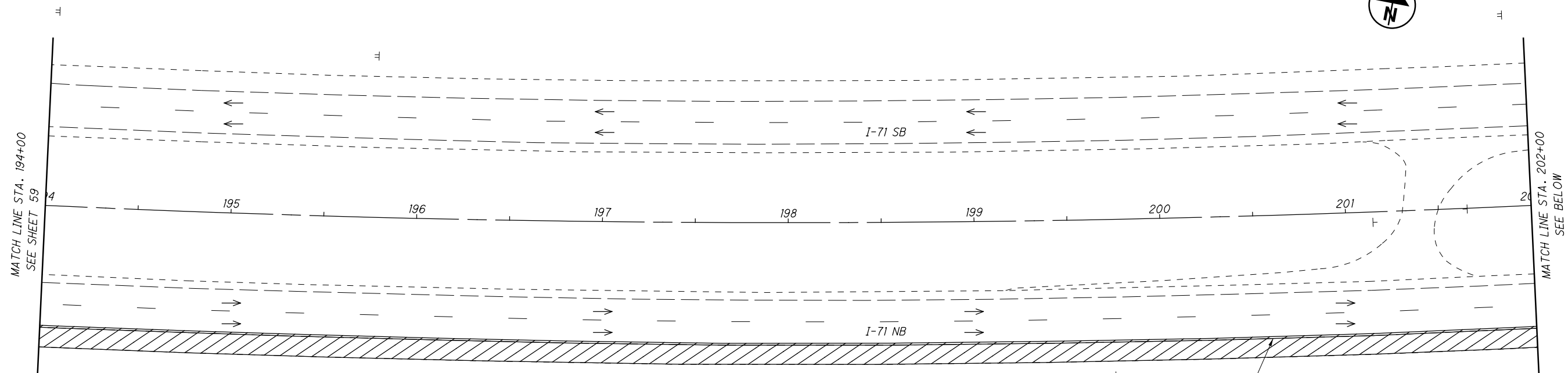


CALCULATED
 BER
 CHECKED
 SMM

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
 (CONCRETE OPTION) I-71 - STA. 178+00 TO STA. 194+00**

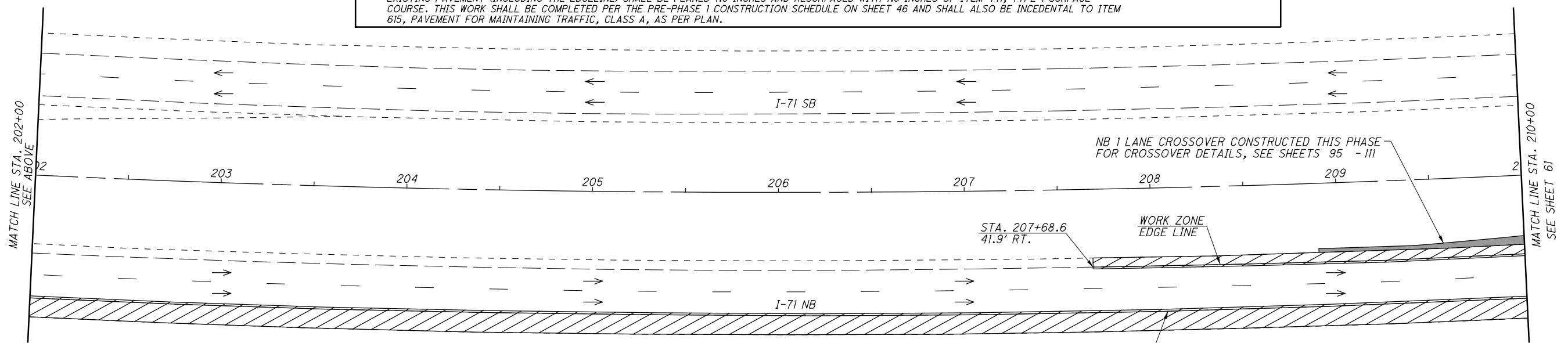
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TYPICAL SECTION - WORKING HOURS **TYPICAL SECTION - INTERIM CONDITION** (SEE SHEET 46 SCHEDULE) **TYPICAL SECTION - NON-WORKING HOURS**

NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
 2. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
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LEGEND
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE



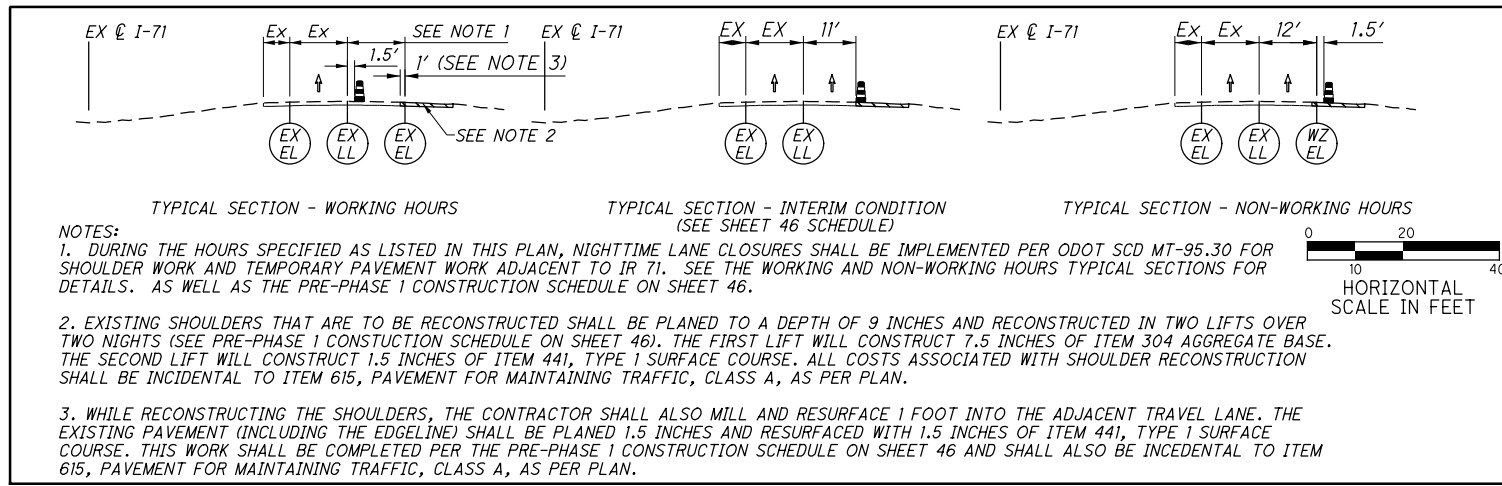
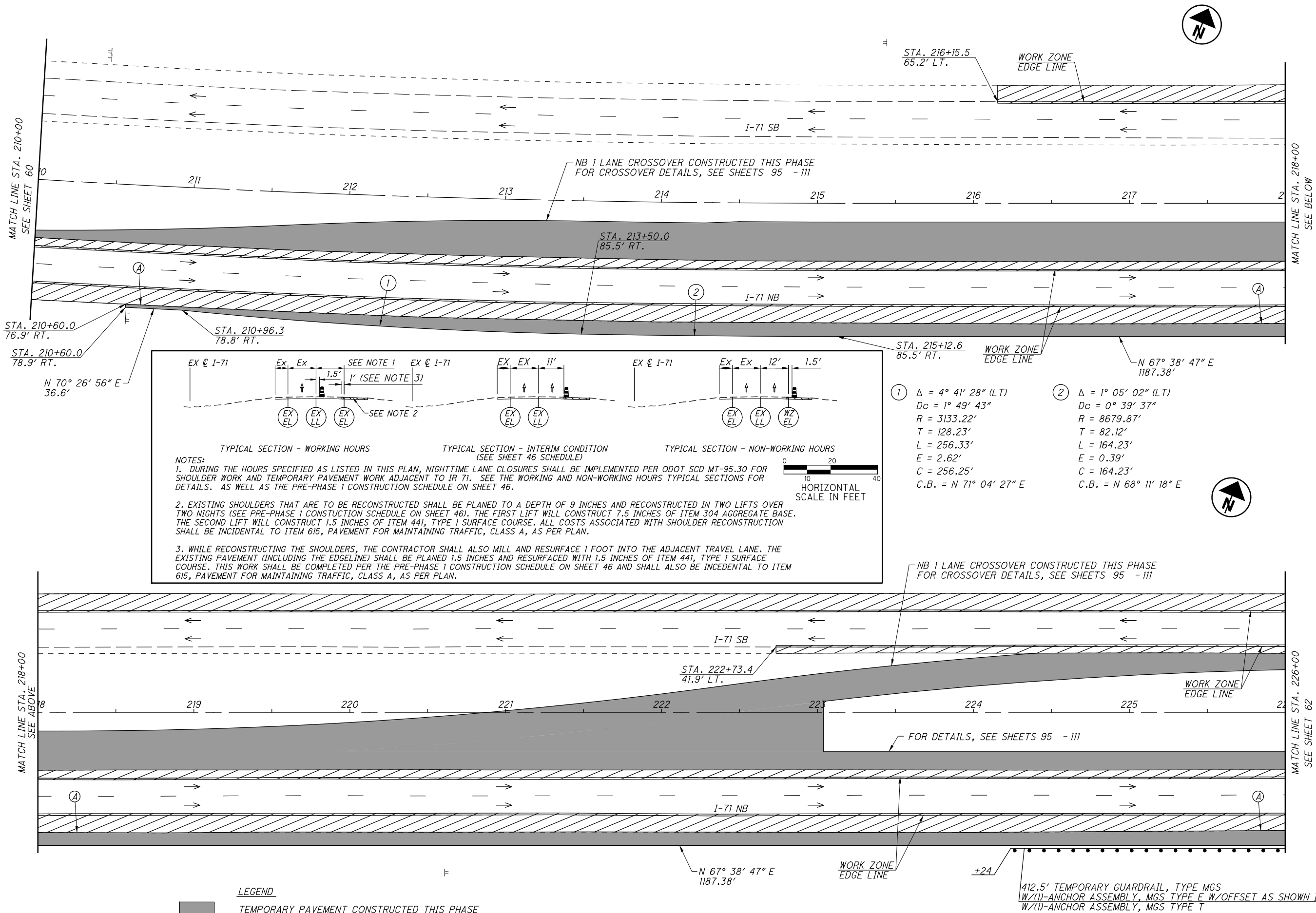
CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 194+00 TO STA. 210+00

FRA-71-0.00

60
 1312

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NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
- EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
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(A) - MEET/MATCH EXISTING EDGE OF SHOULDER

LEGEND

- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
- SHOULDER RECONSTRUCTION
- OPEN TRAVEL LANE

412.5' TEMPORARY GUARDRAIL, TYPE MGS W/(1)-ANCHOR ASSEMBLY, MGS TYPE E W/OFFSET AS SHOWN IN MGS-5.3 W/(1)-ANCHOR ASSEMBLY, MGS TYPE T

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 210+00 TO STA. 226+00

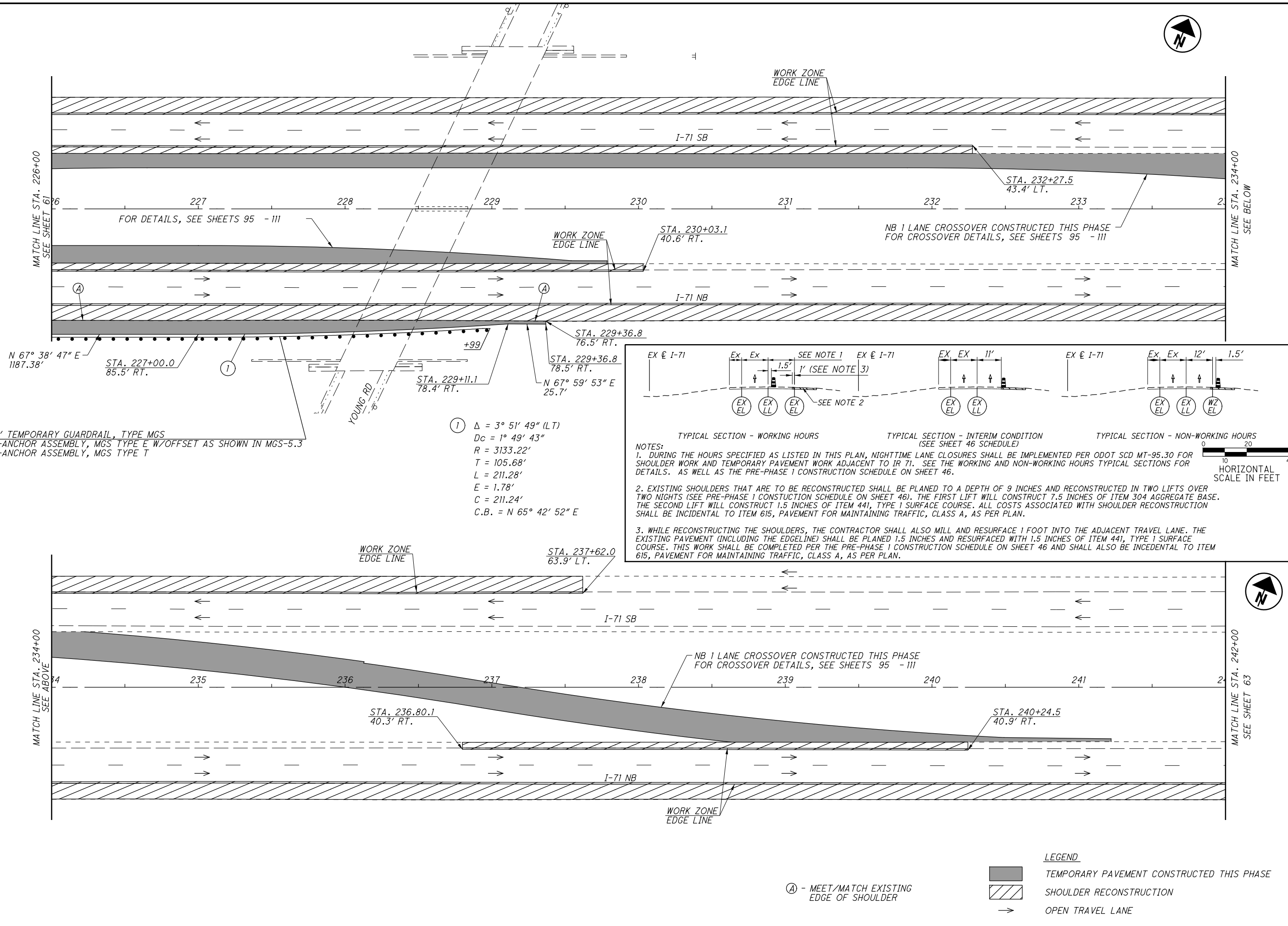
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61
1312

CALCULATED
 BER
 CHECKED
 SMM

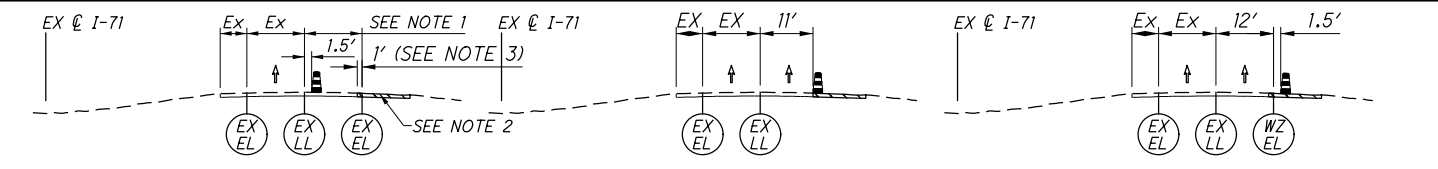


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412.5' TEMPORARY GUARDRAIL, TYPE MGS
 W/(1)-ANCHOR ASSEMBLY, MGS TYPE E W/OFFSET AS SHOWN IN MGS-5.3
 W/(1)-ANCHOR ASSEMBLY, MGS TYPE T

① $\Delta = 3^\circ 51' 49''$ (LT)
 $D_c = 1^\circ 49' 43''$
 $R = 3133.22'$
 $T = 105.68'$
 $L = 211.28'$
 $E = 1.78'$
 $C = 211.24'$
 $C.B. = N 65^\circ 42' 52'' E$



NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
 2. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
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LEGEND
 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE

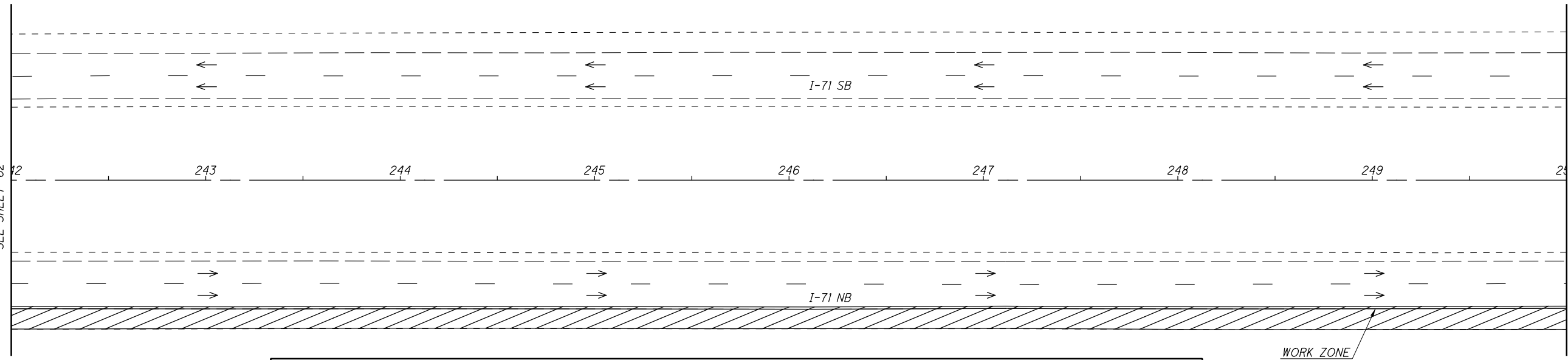
Ⓐ - MEET/MATCH EXISTING
 EDGE OF SHOULDER

CALCULATED BY BER CHECKED BY SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 226+00 TO STA. 242+00
FRA-71-0.00
 62
 1312

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MATCH LINE STA. 242+00
SEE SHEET 62

MATCH LINE STA. 250+00
SEE BELOW



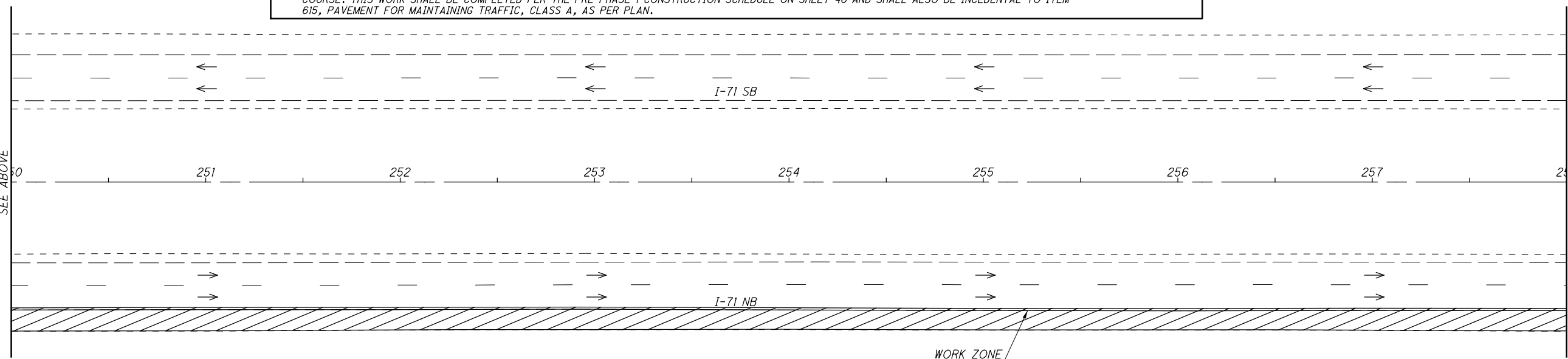
NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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MATCH LINE STA. 250+00
SEE ABOVE

MATCH LINE STA. 258+00
SEE SHEET 64

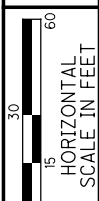


- LEGEND**
- SHOULDER RECONSTRUCTION
 - OPEN TRAVEL LANE

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 242+00 TO STA. 258+00**

FRA-71-0.00

CALCULATED
BER
CHECKED
SMM



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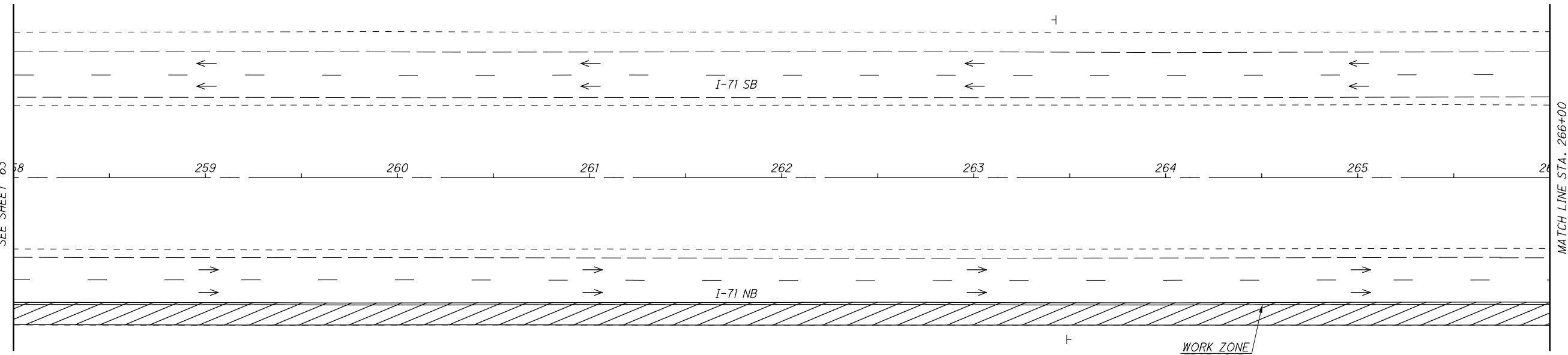


MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 258+00 TO STA. 274+00

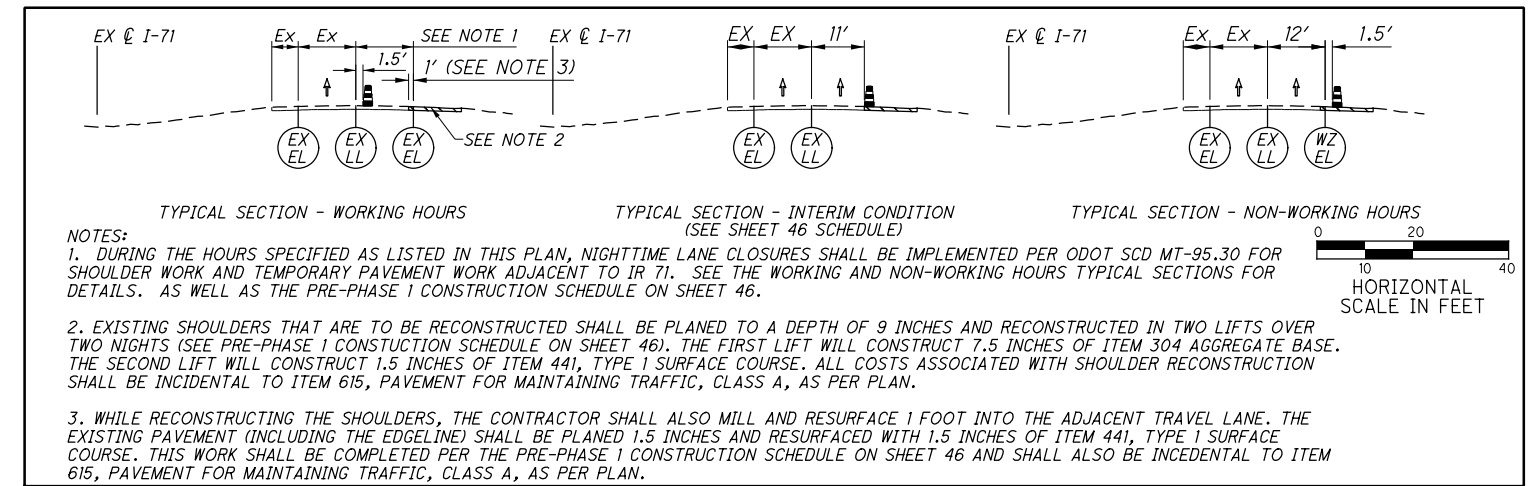
FRA-71-0.00

64
1312

MATCH LINE STA. 258+00
SEE SHEET 63



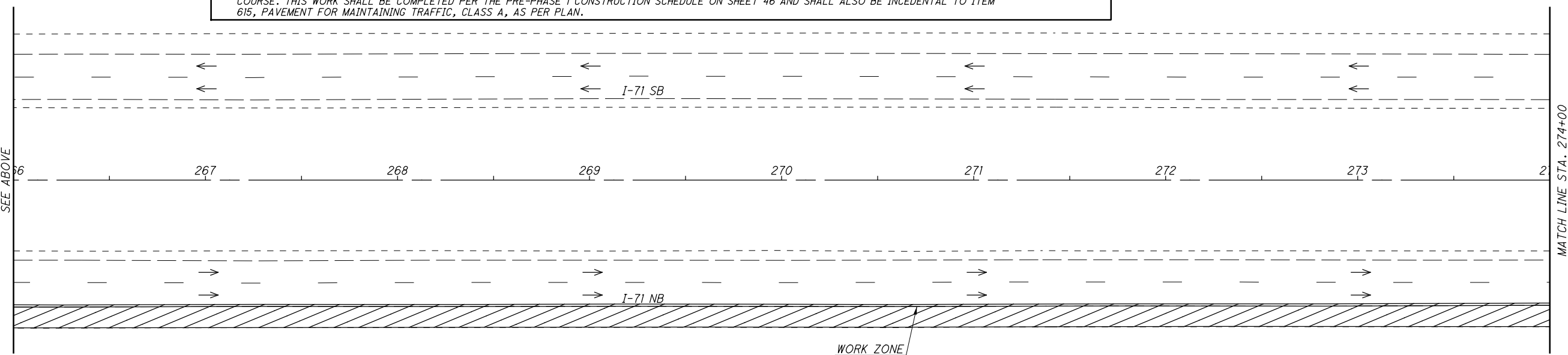
MATCH LINE STA. 266+00
SEE BELOW



NOTES:
1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
2. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
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MATCH LINE STA. 266+00
SEE ABOVE

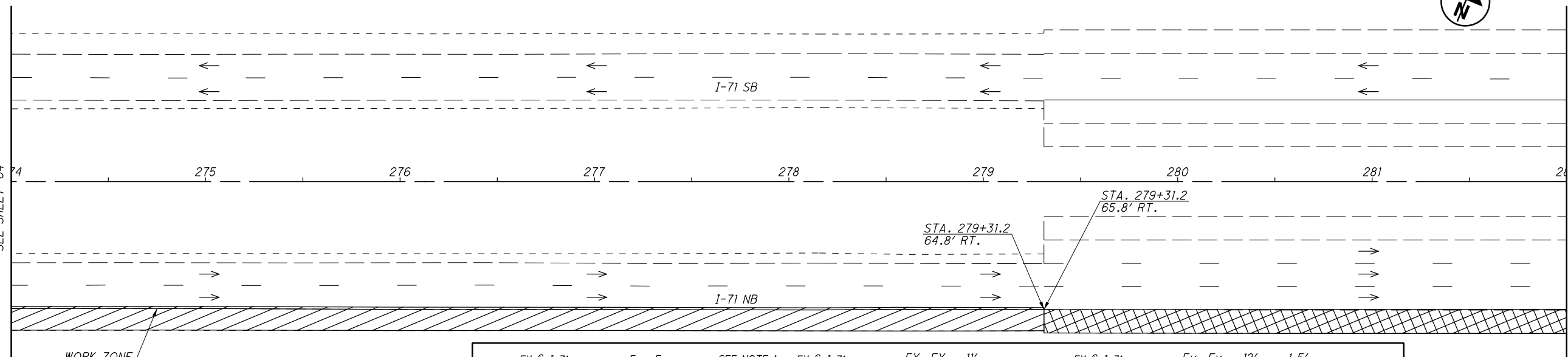


MATCH LINE STA. 274+00
SEE SHEET 65

LEGEND
▨ SHOULDER RECONSTRUCTION
→ OPEN TRAVEL LANE

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MATCH LINE STA. 274+00
SEE SHEET 64



MATCH LINE STA. 282+00
SEE BELOW

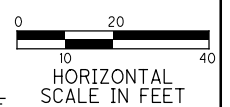
WORK ZONE
EDGE LINE

TYPICAL SECTION - WORKING HOURS
SEE NOTE 1
SEE NOTE 2
SEE NOTE 3

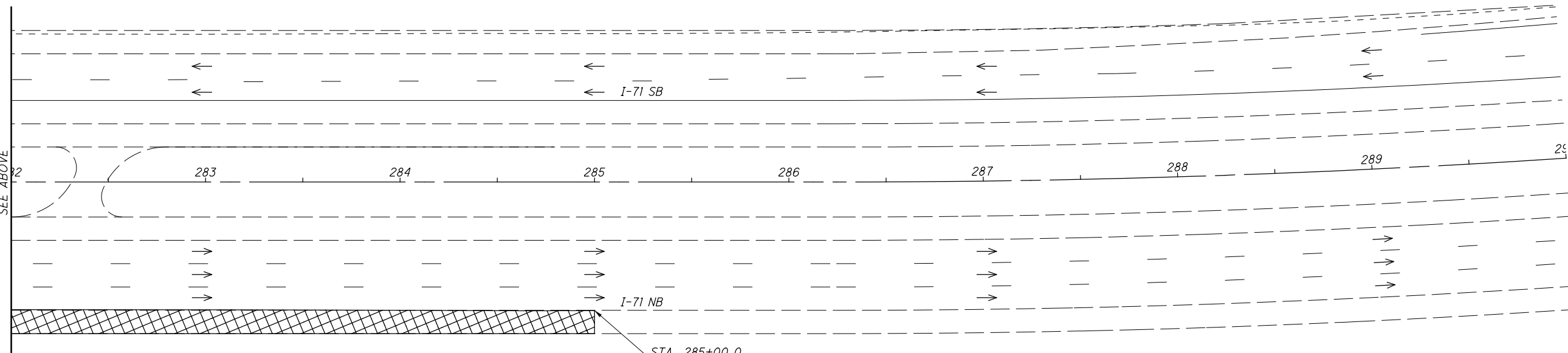
TYPICAL SECTION - INTERIM CONDITION
(SEE SHEET 46 SCHEDULE)

TYPICAL SECTION - NON-WORKING HOURS

NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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 4. THE SHOULDER RESURFACING SHOWN ON THIS SHEET SHALL CONSIST OF PLANING OFF 1.5 INCHES OF EXISTING PAVEMENT AND RESURFACING WITH 1.5 INCHES OF ITEM 441, TYPE 1. THIS RESURFACING SHALL ALSO BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.



MATCH LINE STA. 282+00
SEE ABOVE



STA. 285+00.0
66.1' RT.

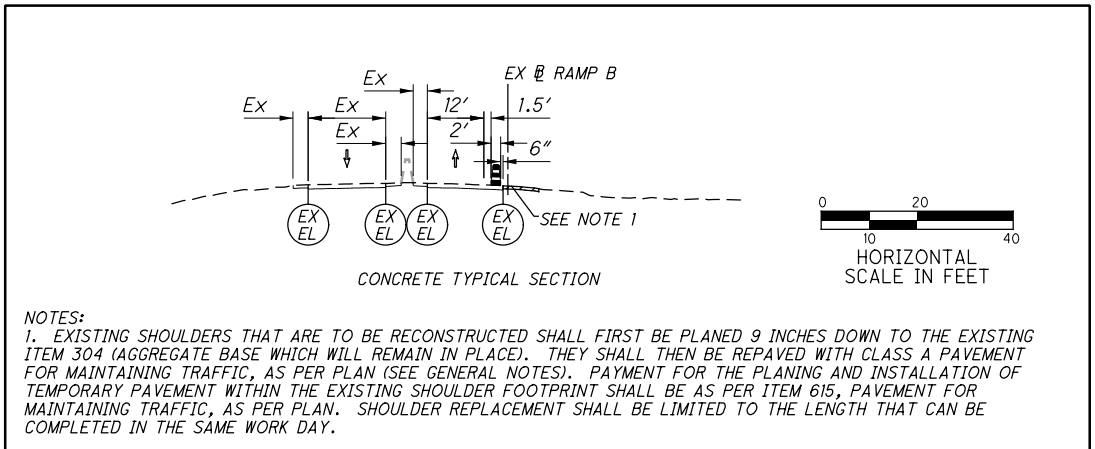
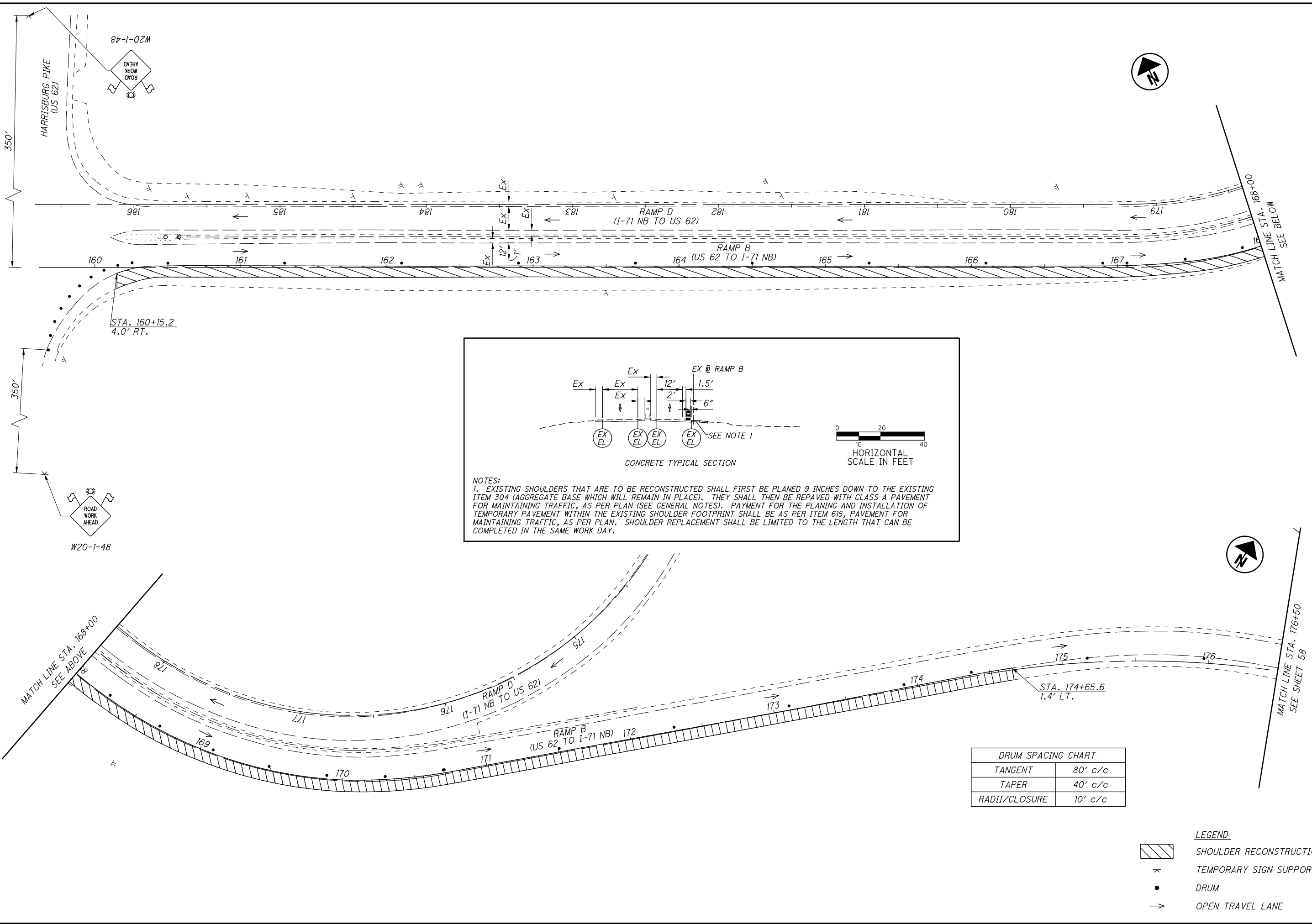
LEGEND

- SHOULDER RECONSTRUCTION
- SHOULDER RESURFACING (SEE NOTE 4)
- OPEN TRAVEL LANE

CALCULATED BER CHECKED SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(CONCRETE OPTION) I-71 - STA. 274+00 TO STA. 290+00

FRA-71-0.00

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NOTES:
 1. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL FIRST BE PLANED 9 INCHES DOWN TO THE EXISTING ITEM 304 (AGGREGATE BASE WHICH WILL REMAIN IN PLACE). THEY SHALL THEN BE REPAVED WITH CLASS A PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN (SEE GENERAL NOTES). PAYMENT FOR THE PLANING AND INSTALLATION OF TEMPORARY PAVEMENT WITHIN THE EXISTING SHOULDER FOOTPRINT SHALL BE AS PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN. SHOULDER REPLACEMENT SHALL BE LIMITED TO THE LENGTH THAT CAN BE COMPLETED IN THE SAME WORK DAY.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

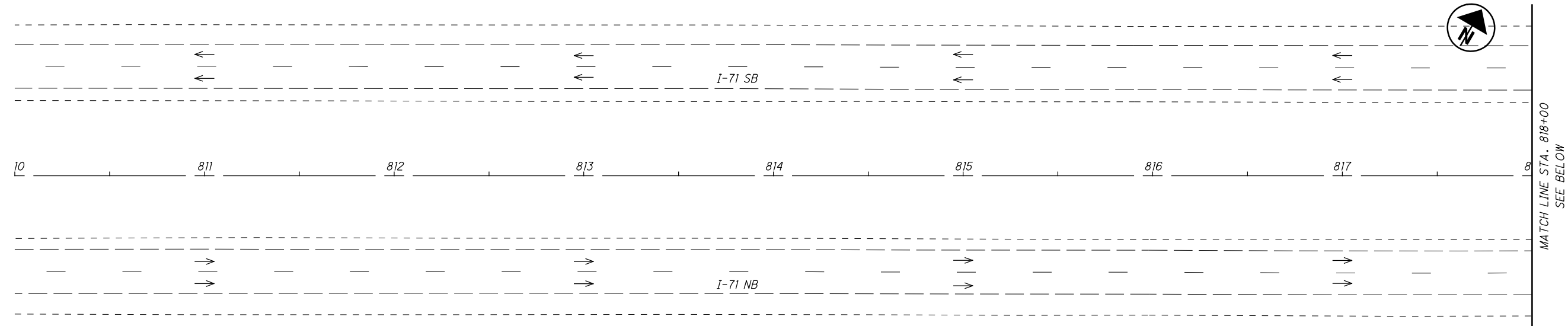
- LEGEND**
- SHOULDER RECONSTRUCTION
 - TEMPORARY SIGN SUPPORT
 - DRUM
 - OPEN TRAVEL LANE

FRA-71-0.00
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
RAMP B - STA. 160+00 TO STA. 176+50

CALCULATED BER CHECKED SMM

0 15 30 45 60
 HORIZONTAL SCALE IN FEET

66
 1312



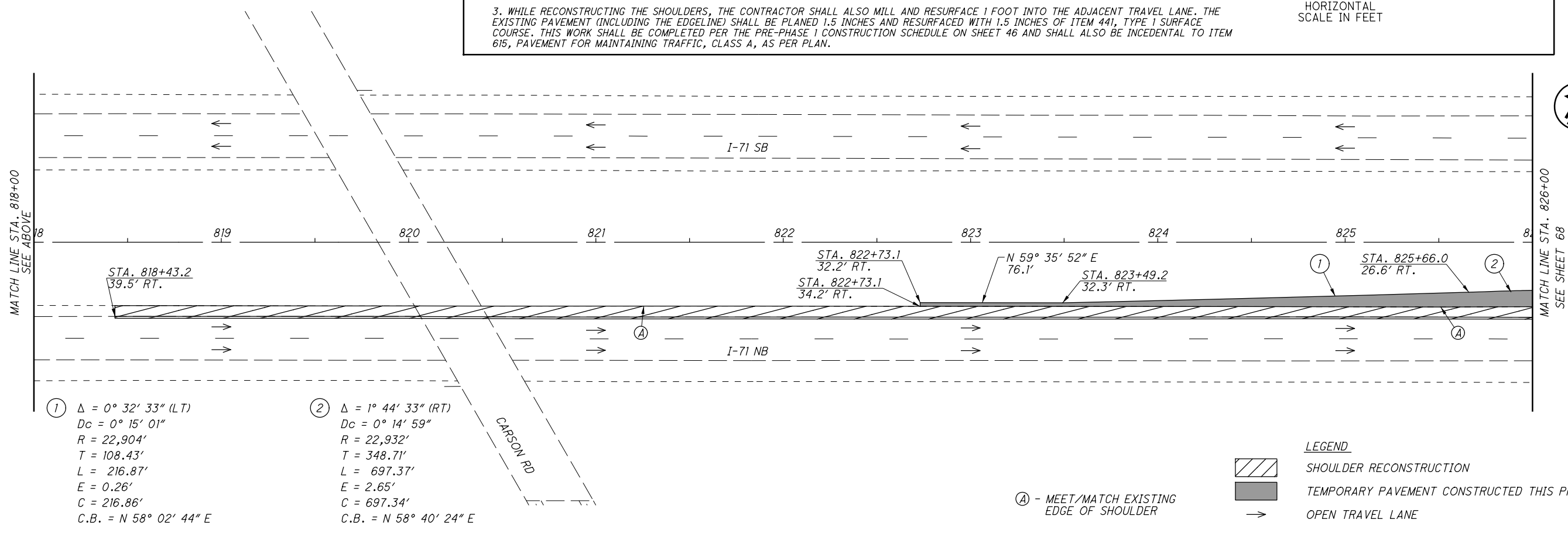
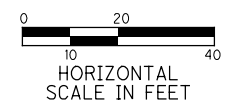
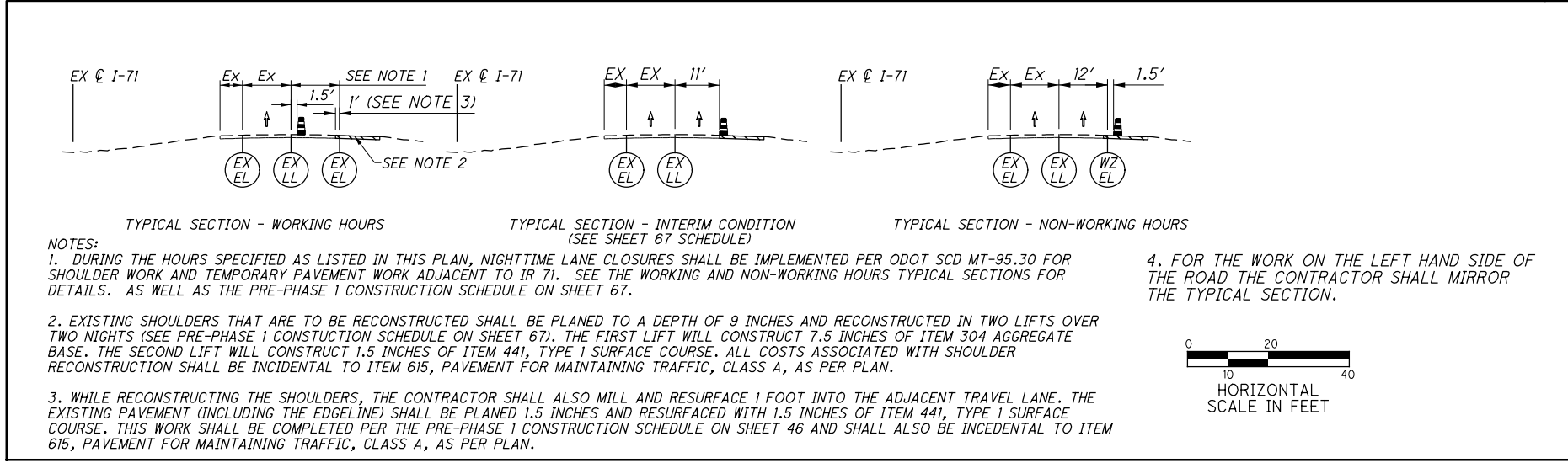
PRE-PHASE 1 CONSTRUCTION SCHEDULE
(APPLICABLE TO ALL PRE-PHASE 1 WORK)

THE CONTRACTOR SHALL COMPLETE PRE-PHASE 1 IN PIECES, AND SHALL LIMIT THE LENGTH OF WORK ZONE TO THAT WHICH CAN BE COMPLETED OVER TWO CONSECUTIVE NIGHTS:

NIGHT 1:
PLANE 9 INCHES OF EXISTING SHOULDER AND REPLACE WITH 7.5 INCHES OF AGGREGATE BASE. ALSO PLANE 1.5 INCHES OF EXISTING PAVEMENT, 1 FOOT INTO THE ADJACENT TRAVEL LANE

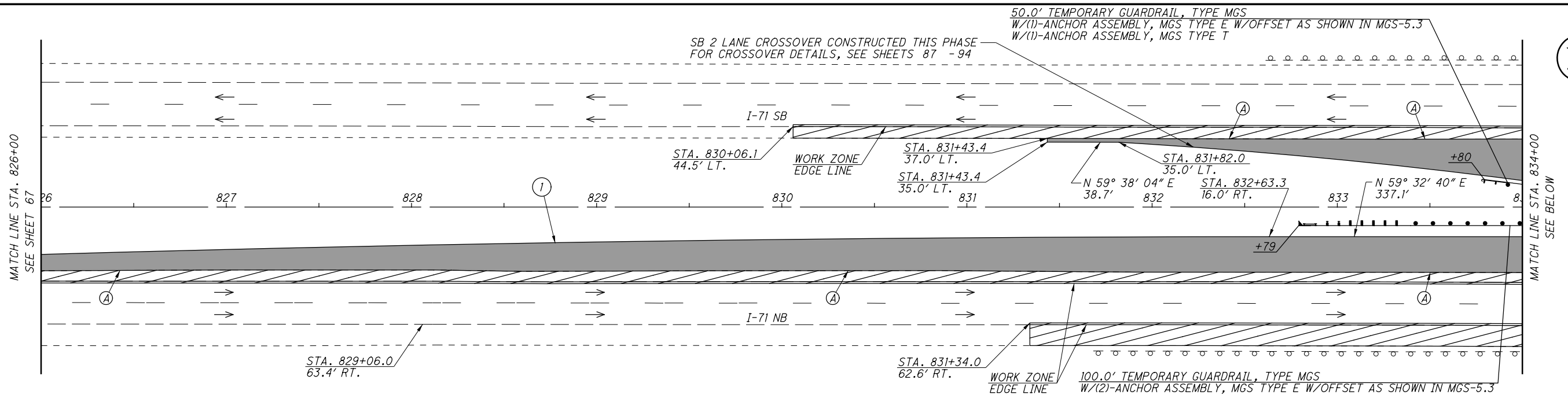
NEXT MORNING:
OPEN RIGHT LANE (11 FEET WIDE) WITH DRUM PLACED IN THE DROPOFF. ADD "NO EDGE LINE" SIGN (W8-H12a-48), 500 FEET IN ADVANCE OF THE WORK ZONE. (SEE INTERIM CONDITION IN TYPICAL SECTIONS)

NIGHT 2:
APPLY 1.5 INCHES OF SURFACE COURSE TO THE SHOULDER AND THE 1 FOOT AREA ADJACENT. INSTALL ITEM, 614 WORK ZONE EDGE LINE TO RESTORE 12' RIGHT LANE.

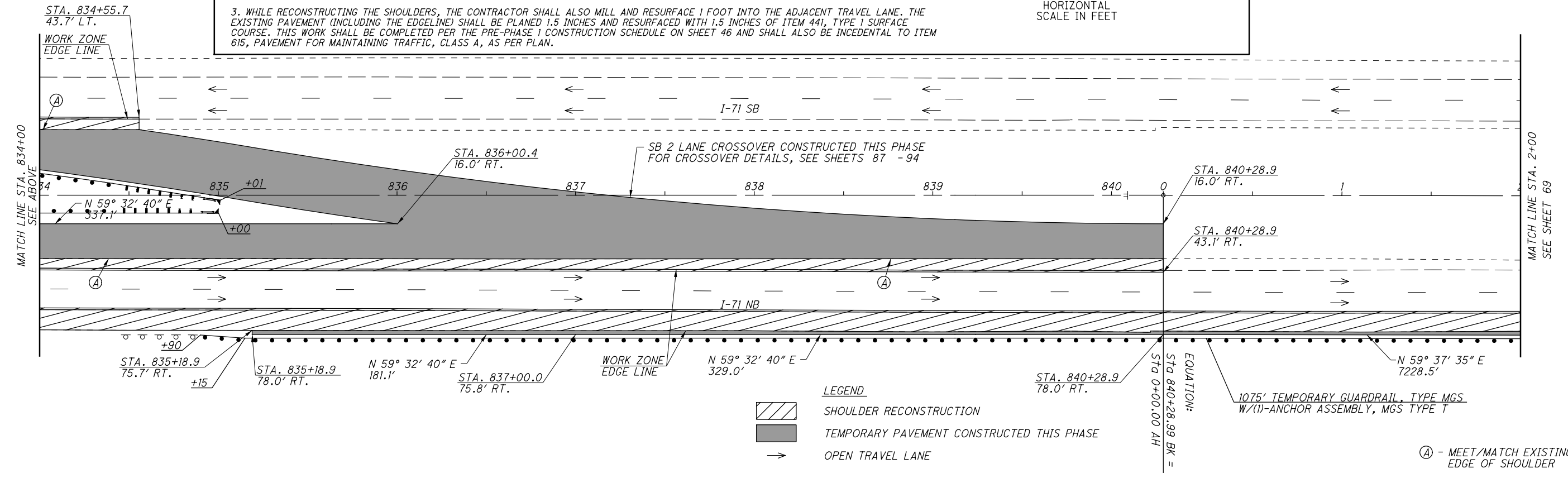
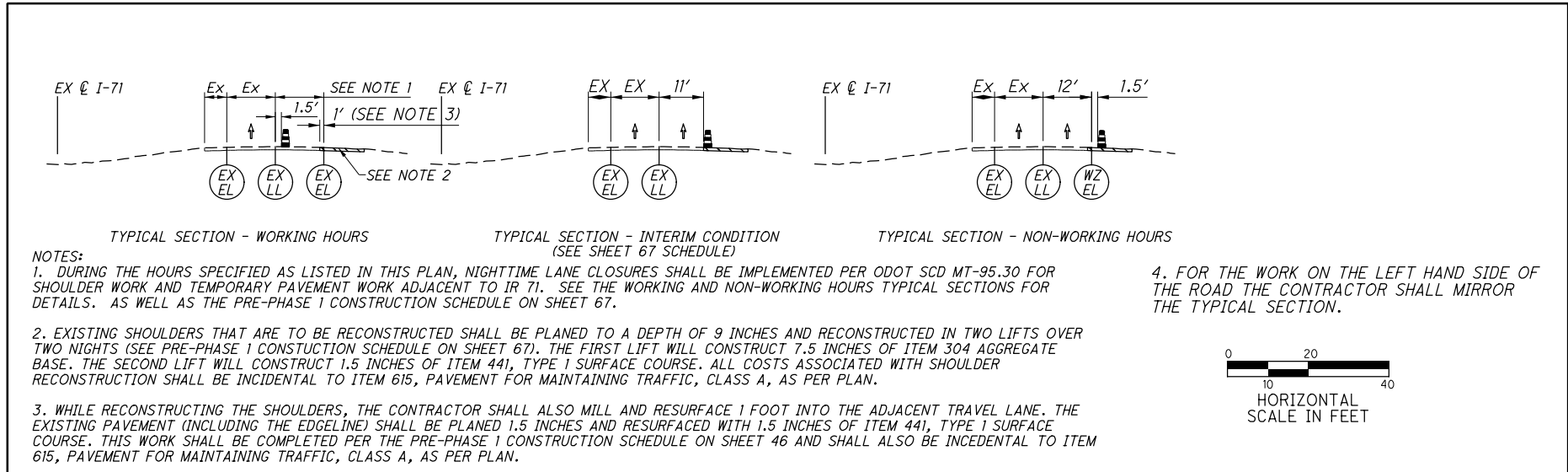


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① $\Delta = 1^\circ 44' 33''$ (RT)
 $D_c = 0^\circ 14' 59''$
 $R = 22,932'$
 $T = 348.71'$
 $L = 697.37'$
 $E = 2.65'$
 $C = 697.34'$
 $C.B. = N 58^\circ 40' 24'' E$



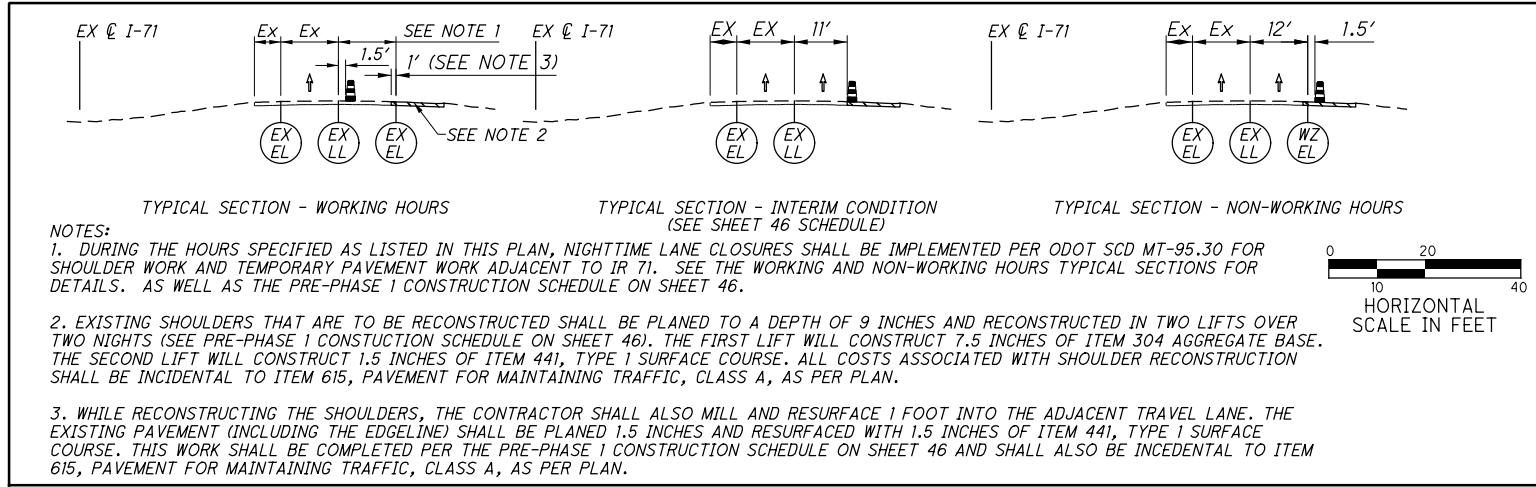
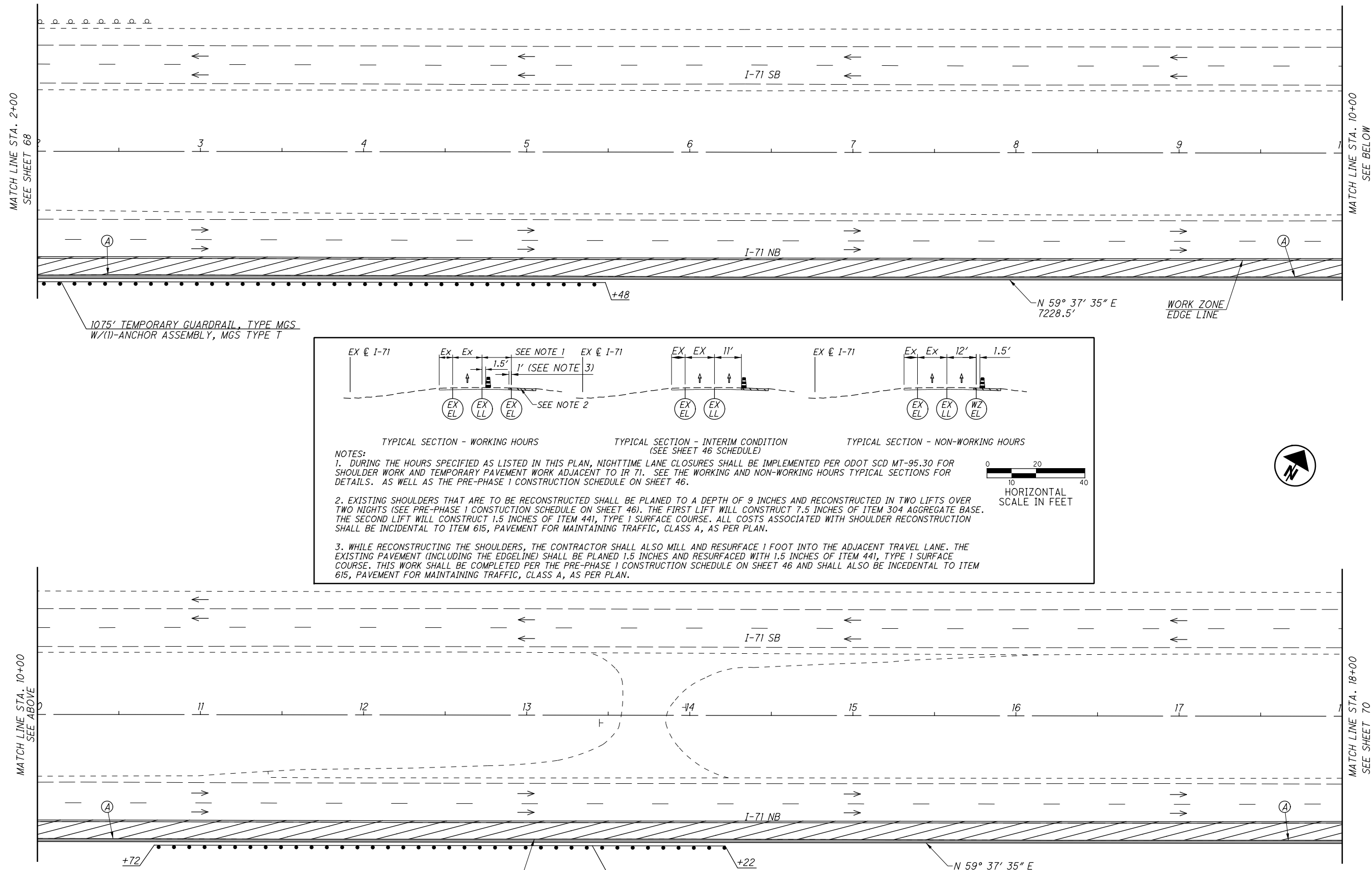
LEGEND
 SHOULDER RECONSTRUCTION
 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 OPEN TRAVEL LANE

EQUATION:
 $STG\ 840+28.9\ BK = STG\ 0+00.00\ AH$
 1075' TEMPORARY GUARDRAIL, TYPE MGS W/(1)-ANCHOR ASSEMBLY, MGS TYPE T

Ⓐ - MEET/MATCH EXISTING EDGE OF SHOULDER

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1 (ASPHALT OPTION) I-71 - STA. 826+00 TO STA. 2+00
 FRA-71-0.00
 68
 1312

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LEGEND

	TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
	SHOULDER RECONSTRUCTION
	OPEN TRAVEL LANE

(A) - MEET/MATCH EXISTING EDGE OF SHOULDER

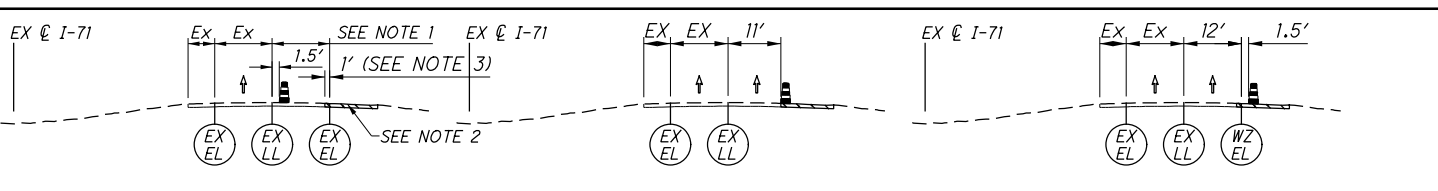
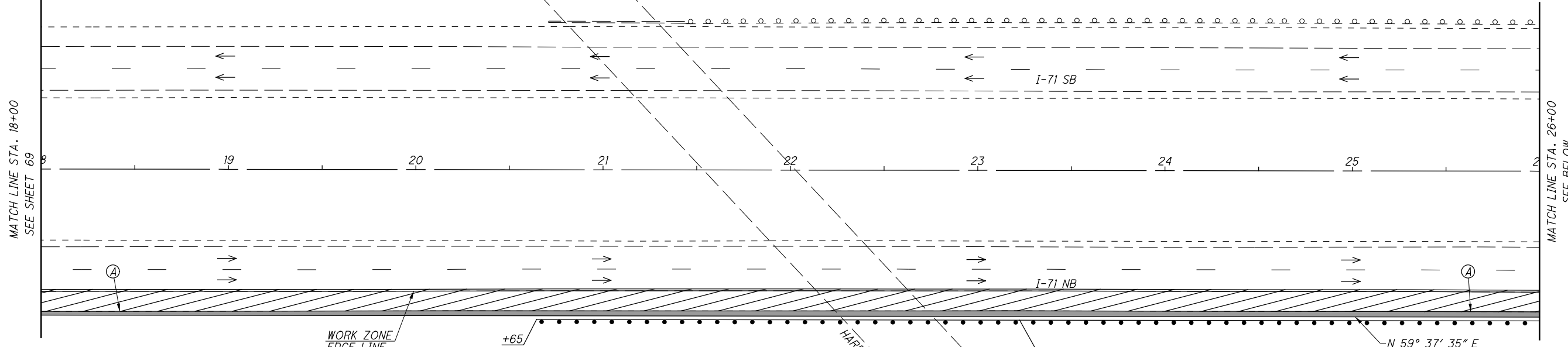
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 2+00 TO STA. 18+00

FRA-71-0.00

CALCULATED	BER	CHECKED	SMM

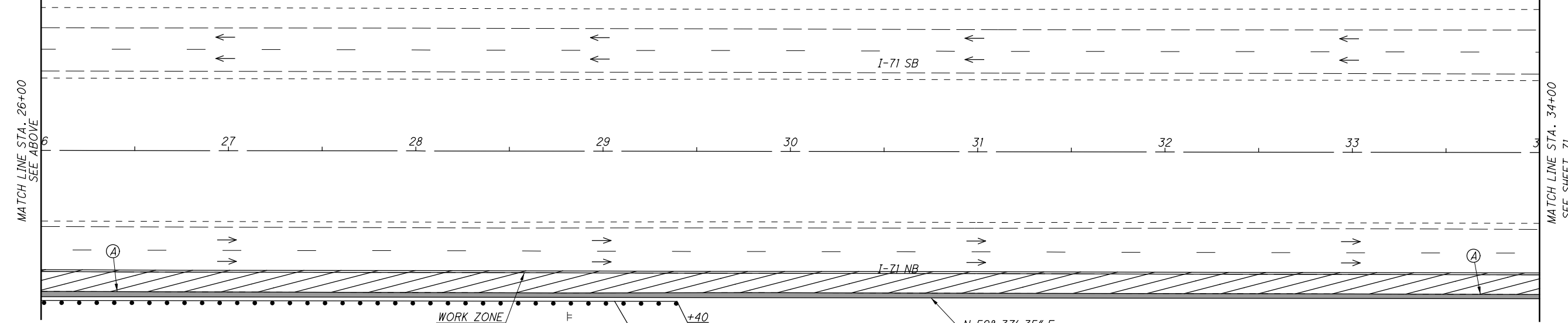


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TYPICAL SECTION - WORKING HOURS TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE) TYPICAL SECTION - NON-WORKING HOURS

NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
 2. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
 3. WHILE RECONSTRUCTING THE SHOULDERS, THE CONTRACTOR SHALL ALSO MILL AND RESURFACE 1 FOOT INTO THE ADJACENT TRAVEL LANE. THE EXISTING PAVEMENT (INCLUDING THE EDGELINE) SHALL BE PLANED 1.5 INCHES AND RESURFACED WITH 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. THIS WORK SHALL BE COMPLETED PER THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46 AND SHALL ALSO BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.



812.5' TEMPORARY GUARDRAIL, TYPE MGS
 W/(I)-ANCHOR ASSEMBLY, MGS TYPE E W/OFFSET AS SHOWN IN MGS-5.3
 W/(I)-ANCHOR ASSEMBLY, MGS TYPE T

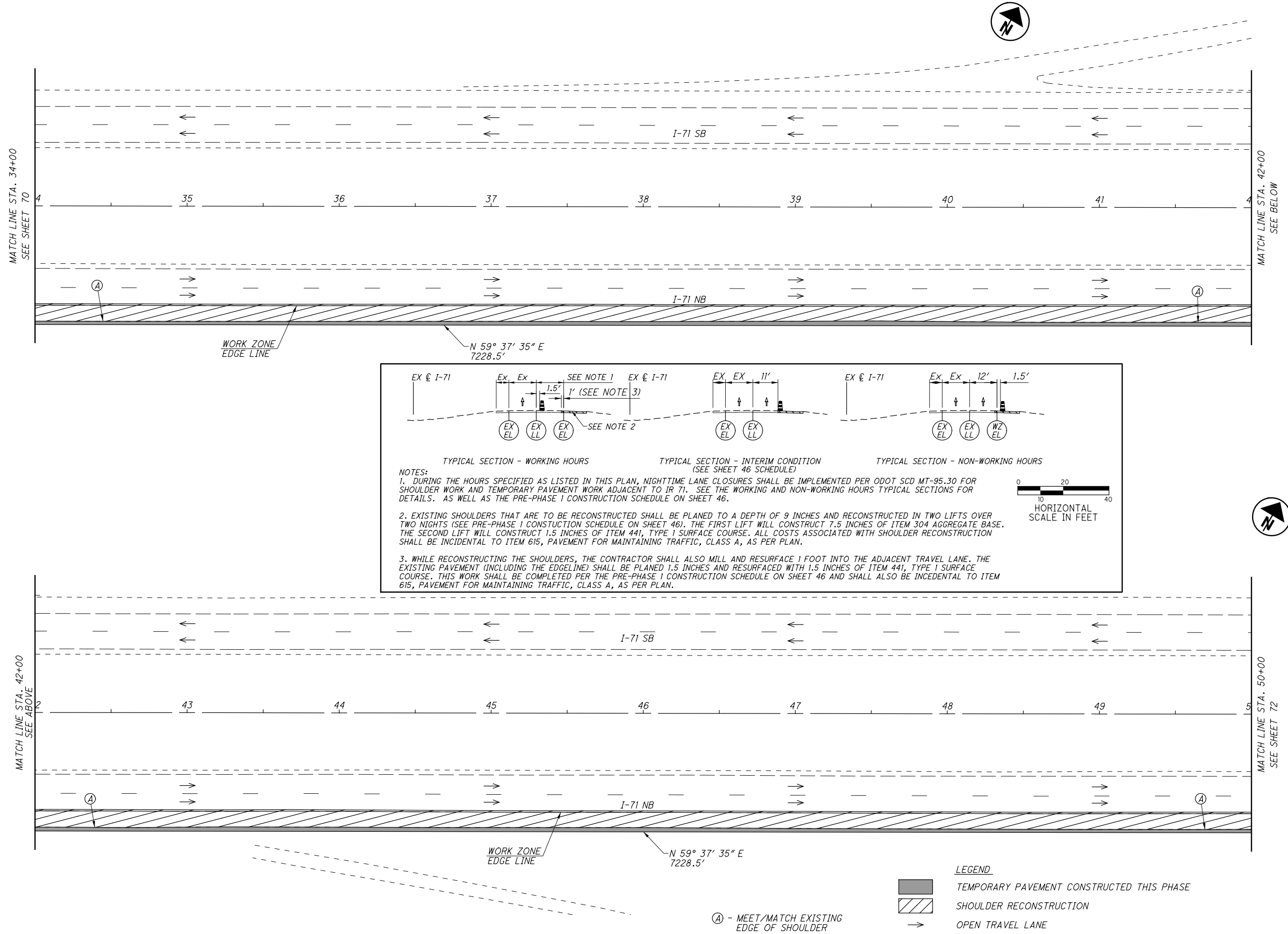
LEGEND

 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE

(A) - MEET/MATCH EXISTING EDGE OF SHOULDER

CALCULATED BER CHECKED SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1 (ASPHALT OPTION) I-71 - STA. 18+00 TO STA. 34+00
FRA-71-0.00
 70
 1312

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N 59° 37' 35" E
7228.5'

EX @ I-71

TYPICAL SECTION - WORKING HOURS

EX @ I-71

TYPICAL SECTION - INTERIM CONDITION
(SEE SHEET 46 SCHEDULE)

EX @ I-71

TYPICAL SECTION - NON-WORKING HOURS

SEE NOTE 1
SEE NOTE 2
SEE NOTE 3

EX EL, EX LL, WZ EL

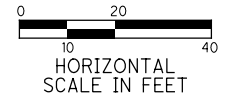
1.5', 1', 11', 12', 1.5'

LEGEND

- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
- SHOULDER RECONSTRUCTION
- OPEN TRAVEL LANE

NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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CALCULATED BY: BER
CHECKED BY: SMM

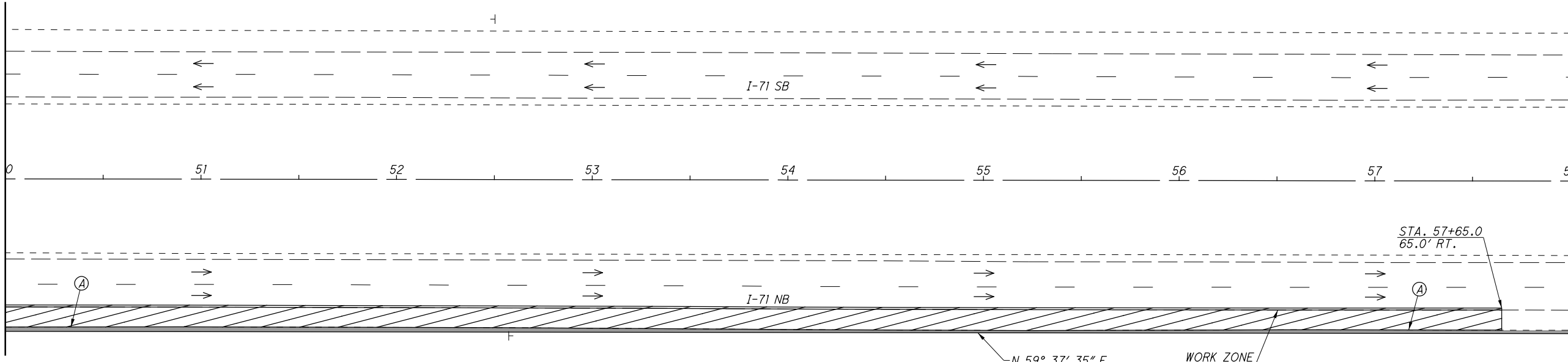
**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 34+00 TO STA. 50+00**

FRA-71-0.00

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MATCH LINE STA. 50+00
SEE SHEET 71

MATCH LINE STA. 58+00
SEE BELOW



EX @ I-71 EX EX SEE NOTE 1 EX @ I-71 EX EX 11' EX @ I-71 EX EX 12' 1.5'

SEE NOTE 2 SEE NOTE 3 SEE NOTE 2

TYPICAL SECTION - WORKING HOURS TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE) TYPICAL SECTION - NON-WORKING HOURS

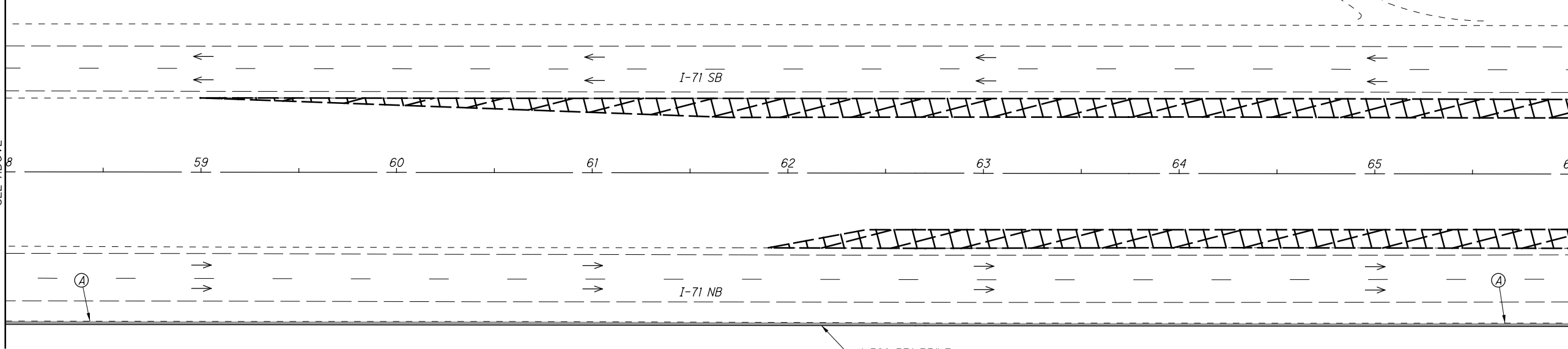
NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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0 10 20 40
HORIZONTAL SCALE IN FEET

MATCH LINE STA. 58+00
SEE ABOVE

MATCH LINE STA. 66+00
SEE SHEET 73



(A) - MEET/MATCH EXISTING
EDGE OF SHOULDER

LEGEND

- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
- SHOULDER RECONSTRUCTION
- TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
- OPEN TRAVEL LANE

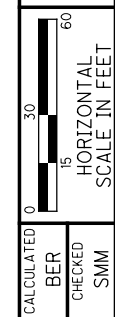


CALCULATED
BER
CHECKED
SMM

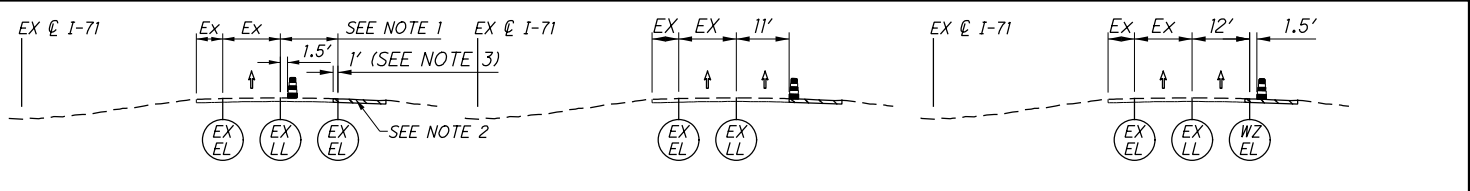
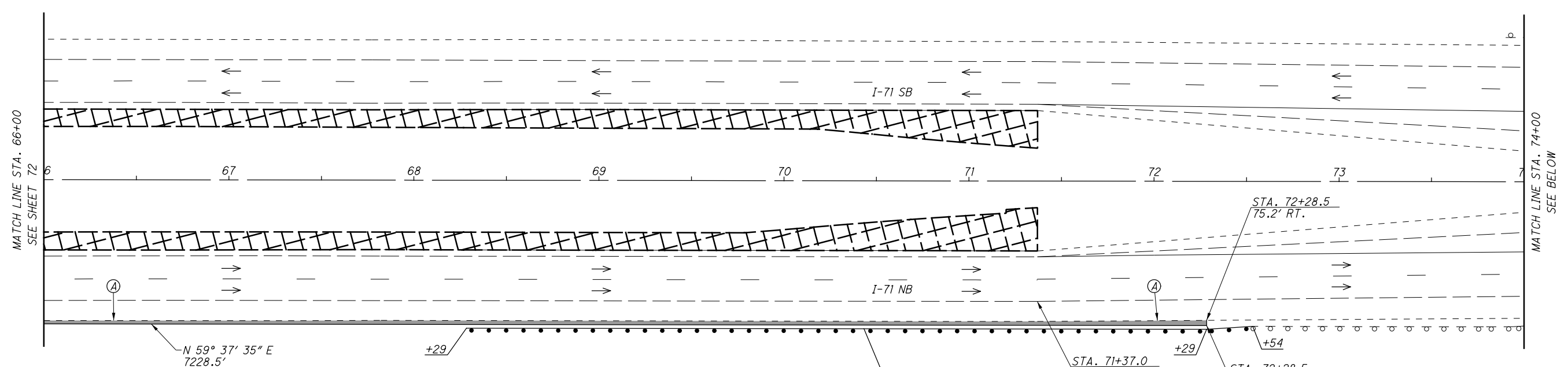
**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 50+00 TO STA. 66+00**

FRA-71-0.00

72
1312

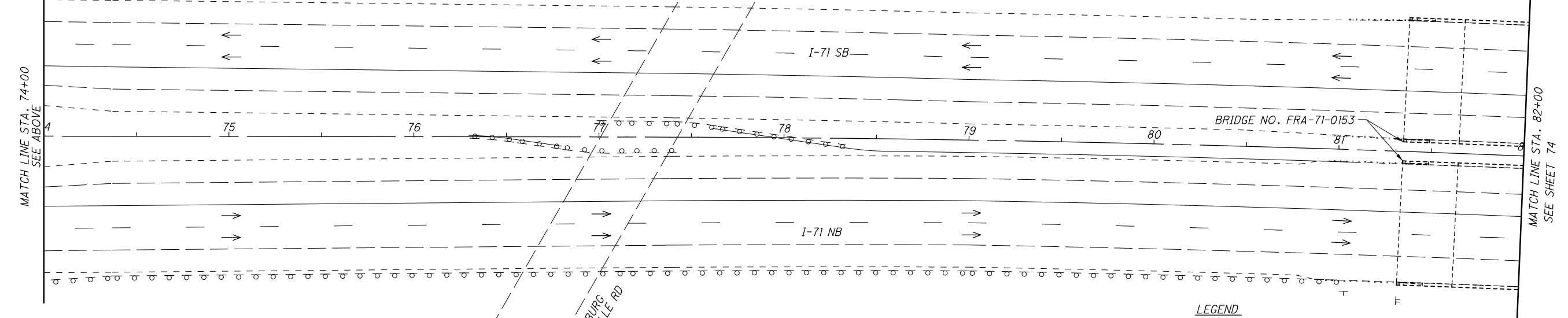


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NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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- LEGEND**
- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 - SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - OPEN TRAVEL LANE

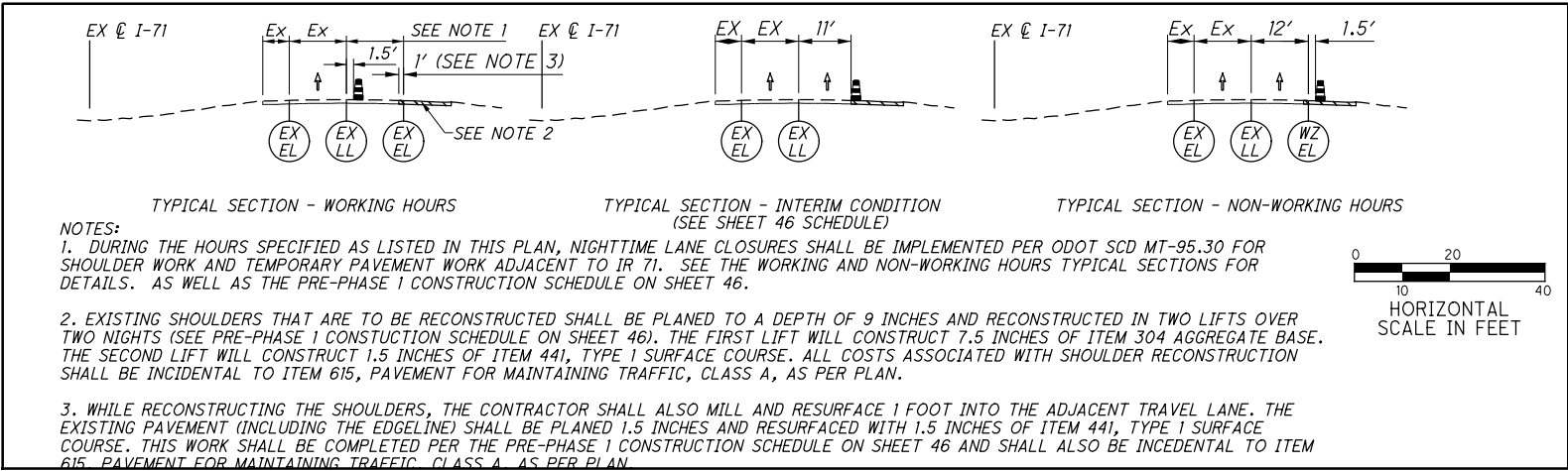
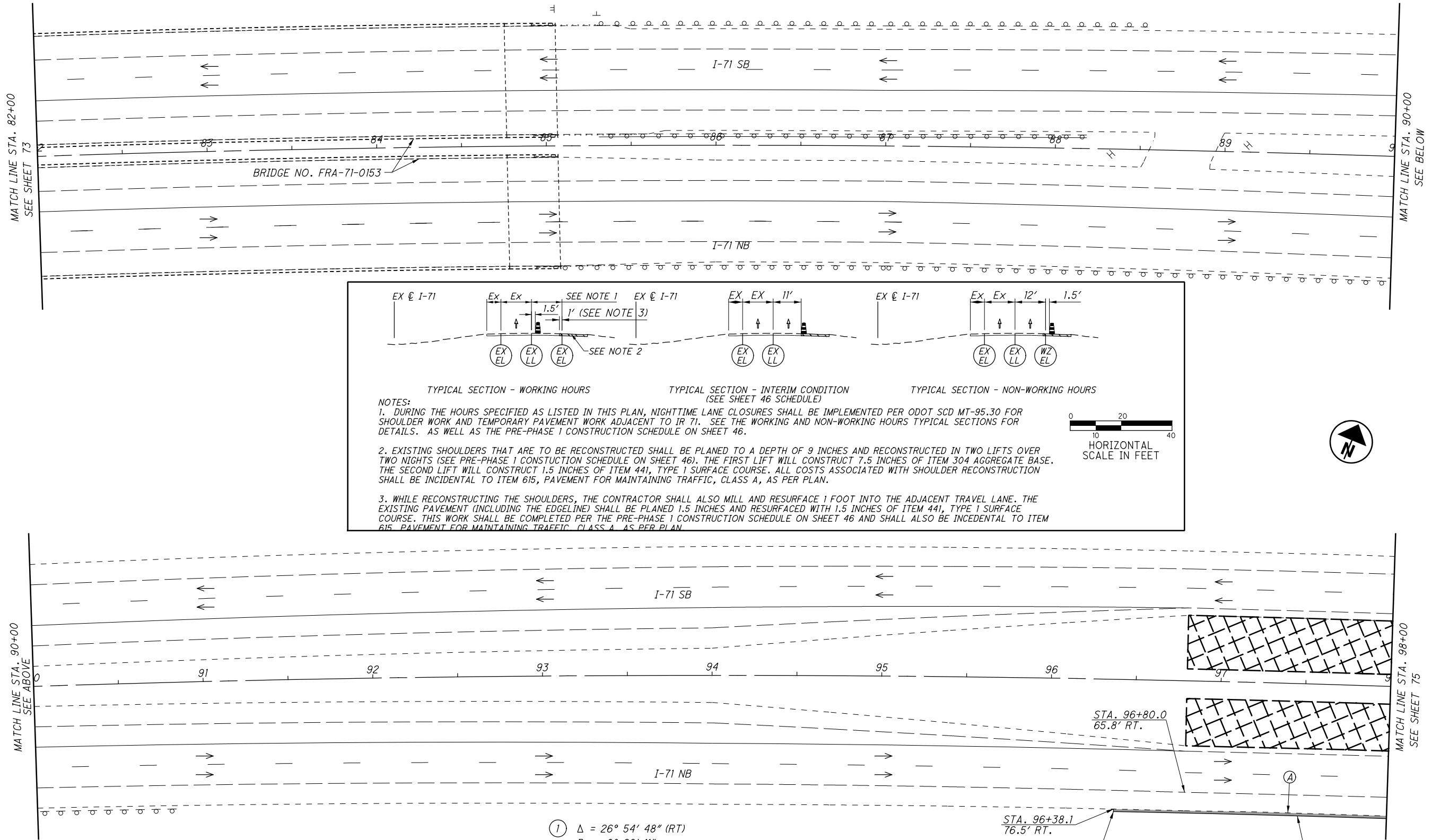
(A) - MEET/MATCH EXISTING EDGE OF SHOULDER

CALCULATED	BER	CHECKED	SMM

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1 (ASPHALT OPTION) I-71 - STA. 66+00 TO STA. 82+00

FRA-71-0.00

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NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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(A) - MEET/MATCH EXISTING EDGE OF SHOULDER

- LEGEND**
- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 - SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - OPEN TRAVEL LANE

(1) $\Delta = 26^\circ 54' 48''$ (RT)
 $D_c = 0^\circ 28' 11''$
 $R = 12,199.67'$
 $T = 2919.11'$
 $L = 5730.47'$
 $E = 344.38'$
 $C = 5677.93'$
 $C.B. = N 82^\circ 03' 26'' E$

STA. 96+80.0
65.8' RT.

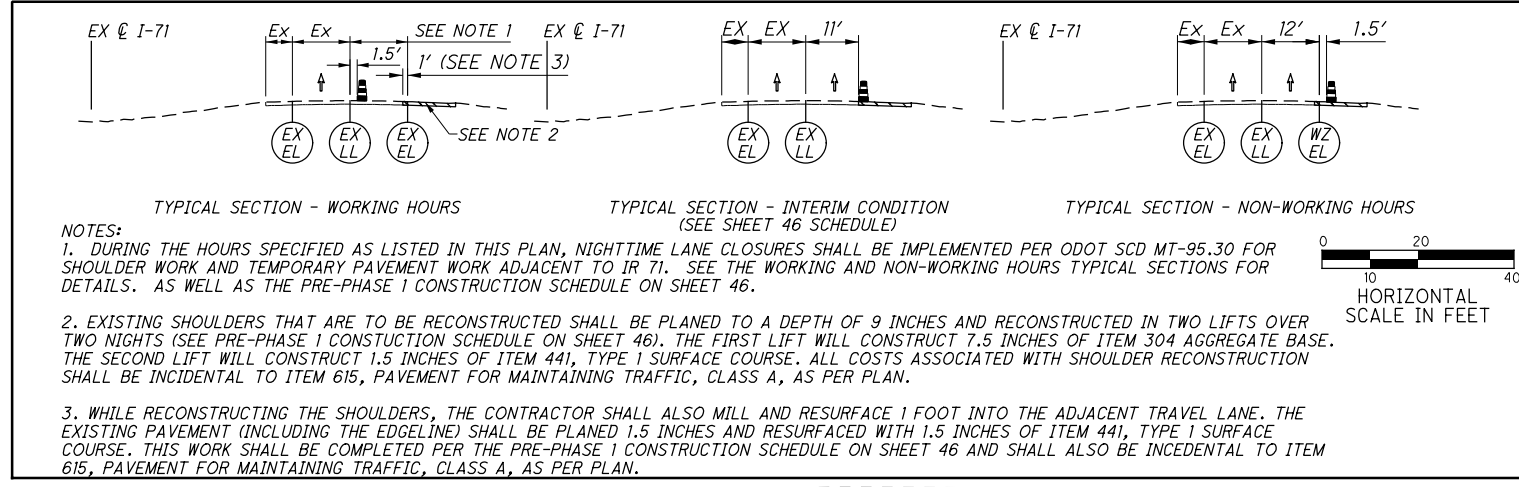
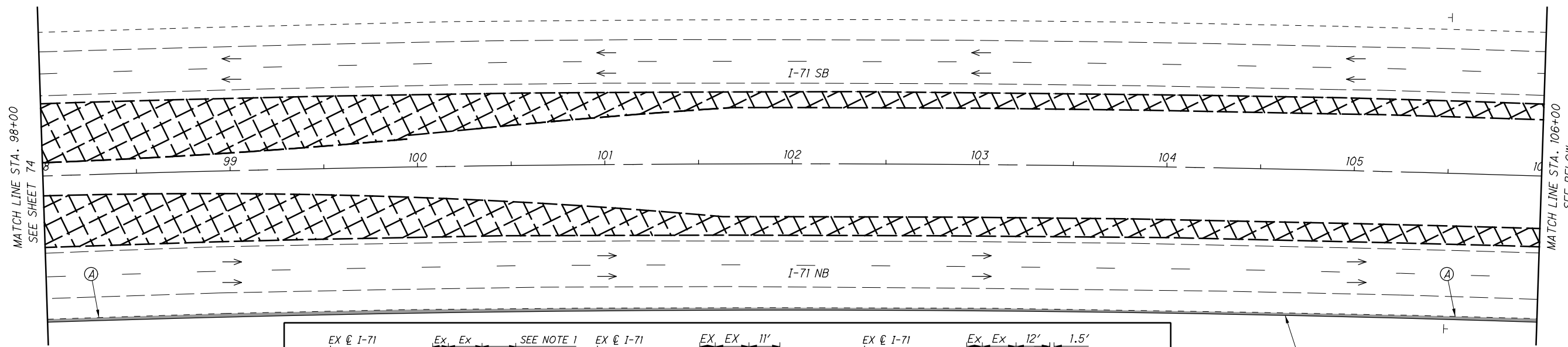
STA. 96+38.1
76.5' RT.

STA. 93+68.1
78.0' RT.

CALCULATED BER CHECKED SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 82+00 TO STA. 98+00

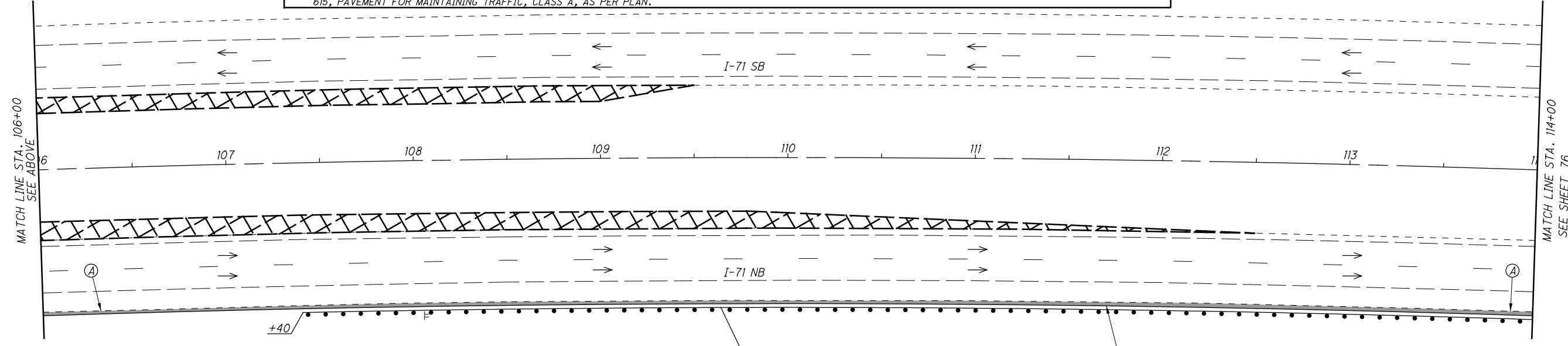
FRA-71-0.00

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NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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① $\Delta = 26^\circ 54' 48''$ (RT)
 $D_c = 0^\circ 28' 11''$
 $R = 12,199.67'$
 $T = 2919.11'$
 $L = 5730.47'$
 $E = 344.38'$
 $C = 5677.93'$
 $C.B. = N 82^\circ 03' 26'' E$



LEGEND

 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 SHOULDER RECONSTRUCTION
 TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 OPEN TRAVEL LANE

① 775' TEMPORARY GUARDRAIL, TYPE MGS
 W/(I)-ANCHOR ASSEMBLY, MGS TYPE E W/OFFSET AS SHOWN IN MGS-5.3
 W/(I)-ANCHOR ASSEMBLY, MGS TYPE T

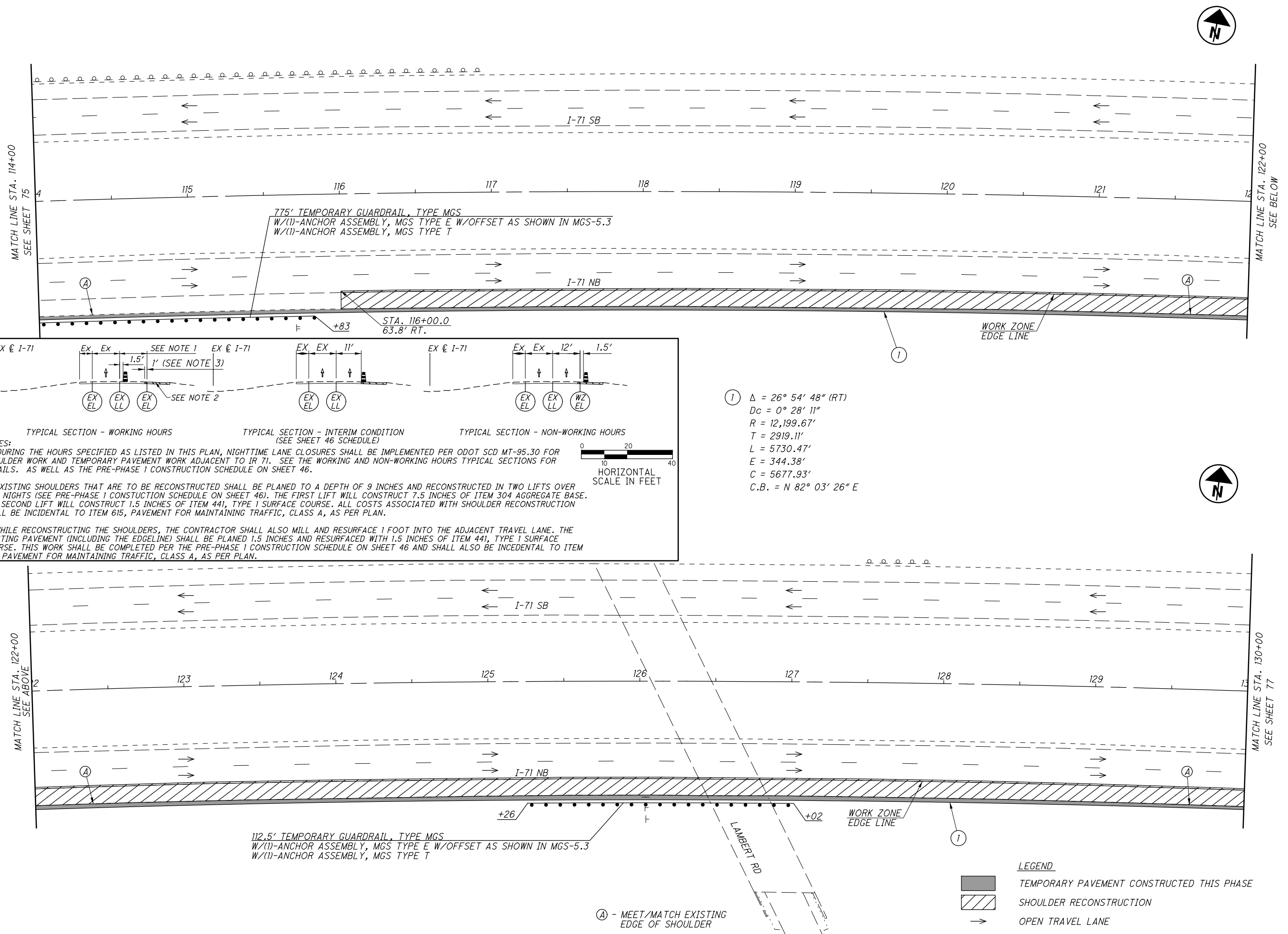
Ⓐ - MEET/MATCH EXISTING EDGE OF SHOULDER

CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 98+00 TO STA. 114+00

FRA-71-0.00

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MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 114+00 TO STA. 130+00

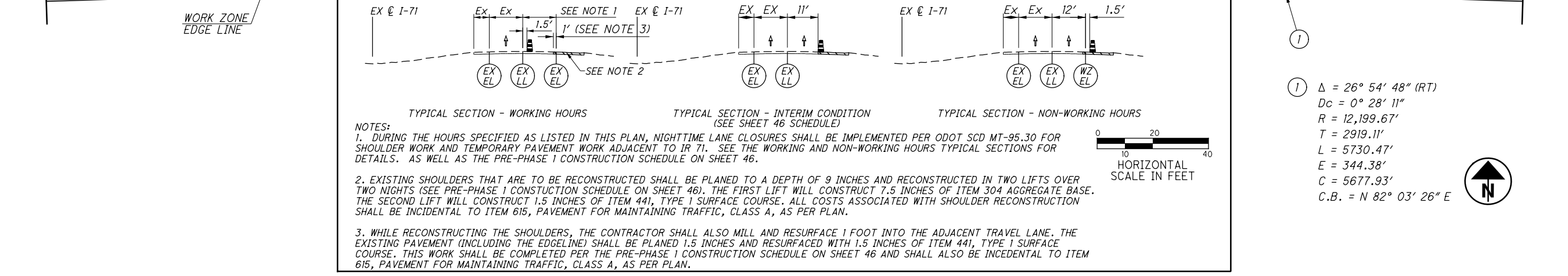
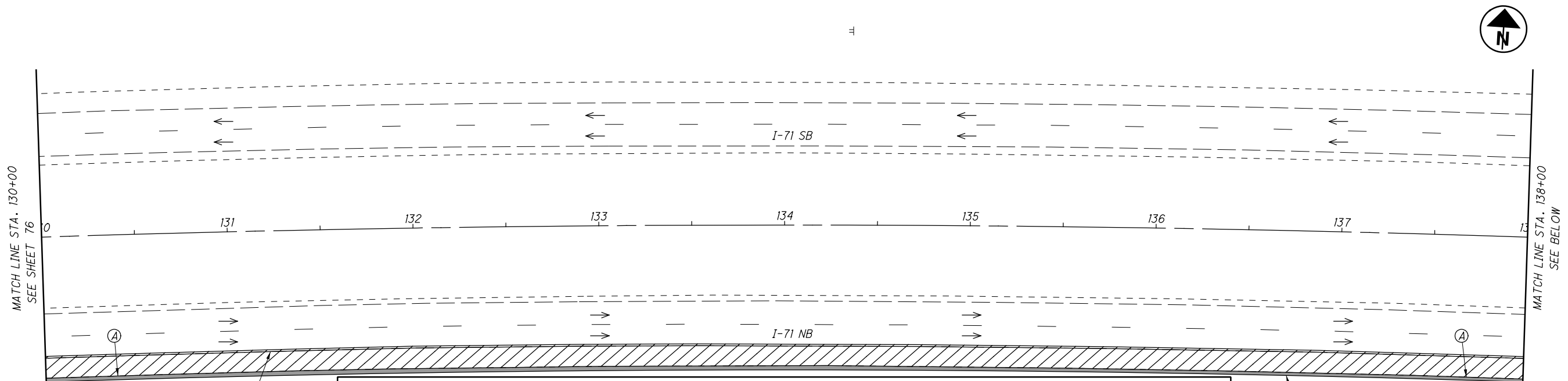
FRA-71-0.00

76
1312

CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

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EX C I-71 Ex Ex SEE NOTE 1 EX C I-71 EX EX 11' EX C I-71 Ex Ex 12' 1.5'

SEE NOTE 2 SEE NOTE 3

EX EL EX LL EX EL EX EL EX LL EX EL EX LL WZ EL

TYPICAL SECTION - WORKING HOURS TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE) TYPICAL SECTION - NON-WORKING HOURS

NOTES:

- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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0 10 20 40
HORIZONTAL SCALE IN FEET

① $\Delta = 26^\circ 54' 48''$ (RT)
 $D_c = 0^\circ 28' 11''$
 $R = 12,199.67'$
 $T = 2919.11'$
 $L = 5730.47'$
 $E = 344.38'$
 $C = 5677.93'$
 $C.B. = N 82^\circ 03' 26'' E$

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 130+00 TO STA. 146+00**

FRA-71-0.00

LEGEND

▨ TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE

▨ SHOULDER RECONSTRUCTION

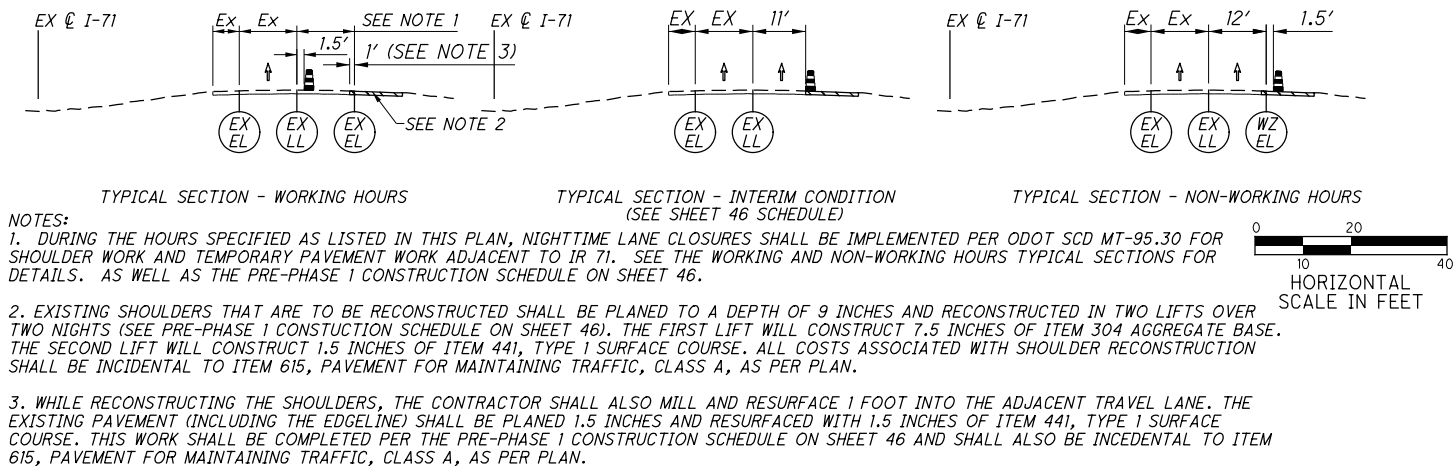
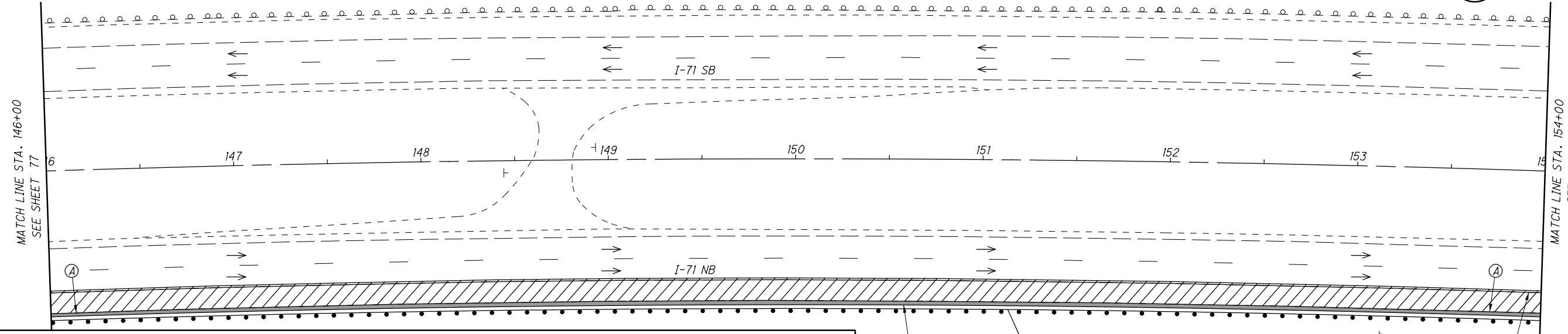
→ OPEN TRAVEL LANE

(A) - MEET/MATCH EXISTING EDGE OF SHOULDER

CALCULATED BER CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET

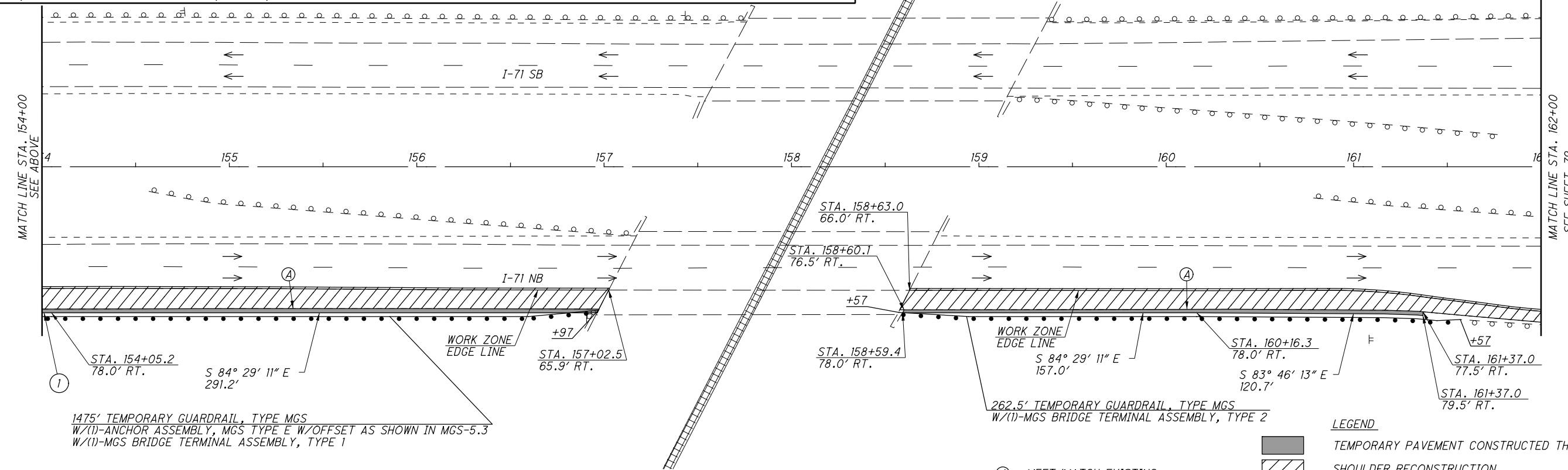
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NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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1475' TEMPORARY GUARDRAIL, TYPE MGS
 W/(1)-ANCHOR ASSEMBLY, MGS TYPE E W/OFFSET AS SHOWN IN MGS-5.3
 W/(1)-MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

① $\Delta = 26^\circ 54' 48''$ (RT)
 $D_c = 0^\circ 28' 11''$
 $R = 12,199.67'$
 $T = 2919.11'$
 $L = 5730.47'$
 $E = 344.38'$
 $C = 5677.93'$
 $C.B. = N 82^\circ 03' 26'' E$



1475' TEMPORARY GUARDRAIL, TYPE MGS
 W/(1)-ANCHOR ASSEMBLY, MGS TYPE E W/OFFSET AS SHOWN IN MGS-5.3
 W/(1)-MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

262.5' TEMPORARY GUARDRAIL, TYPE MGS
 W/(1)-MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2

Ⓐ - MEET/MATCH EXISTING
 EDGE OF SHOULDER

LEGEND

 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 146+00 TO STA. 162+00

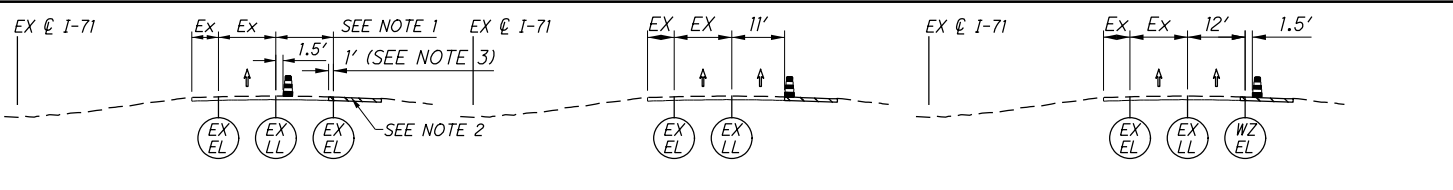
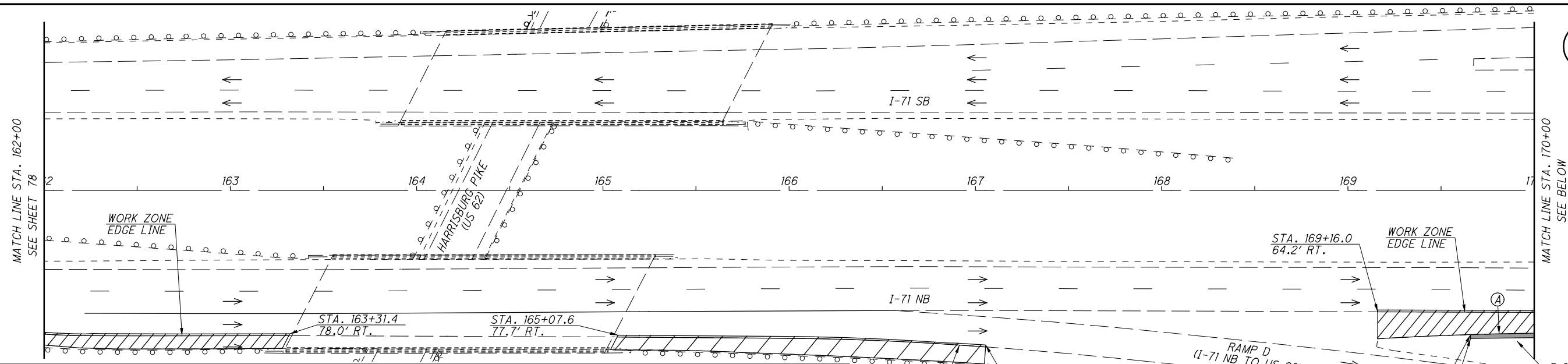
FRA-71-0.00

78
 1312

CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

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NOTES:

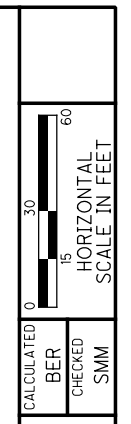
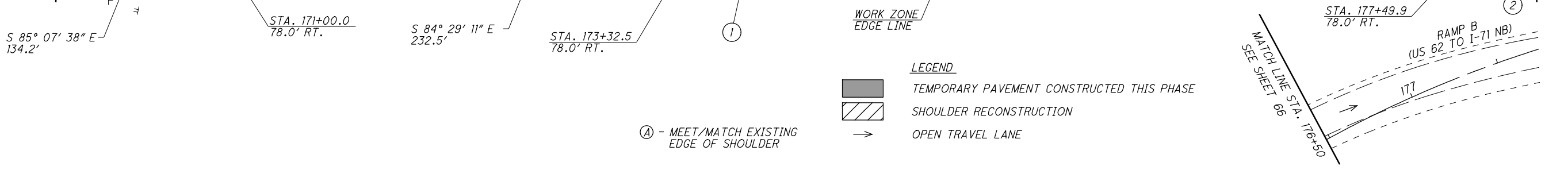
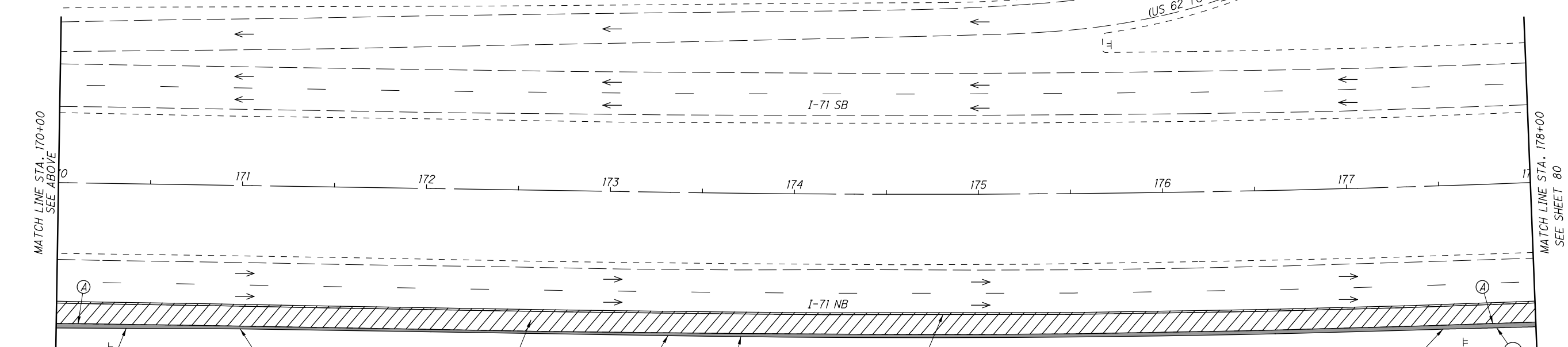
- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
- EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANNED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
- WHILE RECONSTRUCTING THE SHOULDERS, THE CONTRACTOR SHALL ALSO MILL AND RESURFACE 1 FOOT INTO THE ADJACENT TRAVEL LANE. THE EXISTING PAVEMENT (INCLUDING THE EDGELINE) SHALL BE PLANNED 1.5 INCHES AND RESURFACED WITH 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. THIS WORK SHALL BE COMPLETED PER THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46 AND SHALL ALSO BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

LEGEND

- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
- SHOULDER RECONSTRUCTION
- OPEN TRAVEL LANE

LEGEND

- $\Delta = 2^\circ 46' 57''$ (LT)
 $Dc = 0^\circ 39' 39''$
 $R = 8672.37'$
 $T = 210.63'$
 $L = 421.18'$
 $E = 2.56'$
 $C = 421.14'$
 $C.B. = S 85^\circ 52' 39'' E$
- $\Delta = 2^\circ 02' 44''$ (LT)
 $Dc = 0^\circ 58' 08''$
 $R = 5926.19'$
 $T = 105.79'$
 $L = 211.56'$
 $E = 0.94'$
 $C = 211.55'$
 $C.B. = S 87^\circ 33' 41'' E$

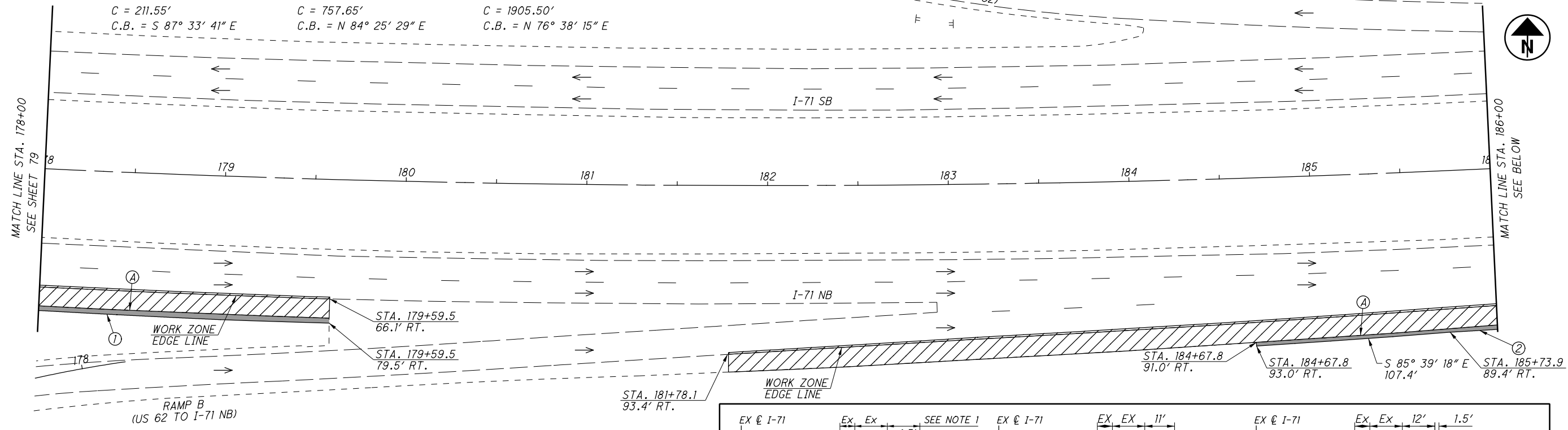


Maintenance of Traffic Plan-Phase 1
(Asphalt Option) I-71 - Sta. 162+00 to Sta. 178+00

FRA-71-0.00

79
1312

① $\Delta = 2^\circ 02' 44''$ (LT) Dc = $0^\circ 58' 08''$ R = 5926.19' T = 105.79' L = 211.56' E = 0.94' C = 211.55' C.B. = S $87^\circ 33' 41''$ E	② $\Delta = 4^\circ 23' 50''$ (LT) Dc = $0^\circ 34' 49''$ R = 9874.62' T = 379.10' L = 757.83' E = 7.28' C = 757.65' C.B. = N $84^\circ 25' 29''$ E	③ $\Delta = 12^\circ 36' 44''$ (LT) Dc = $0^\circ 39' 38''$ R = 8673.84' T = 958.55' L = 1909.35' E = 52.80' C = 1905.50' C.B. = N $76^\circ 38' 15''$ E
---	---	---



① - MEET/MATCH PROPOSED EDGE OF SHOULDER

LEGEND

- SHOULDER RECONSTRUCTION
- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
- OPEN TRAVEL LANE

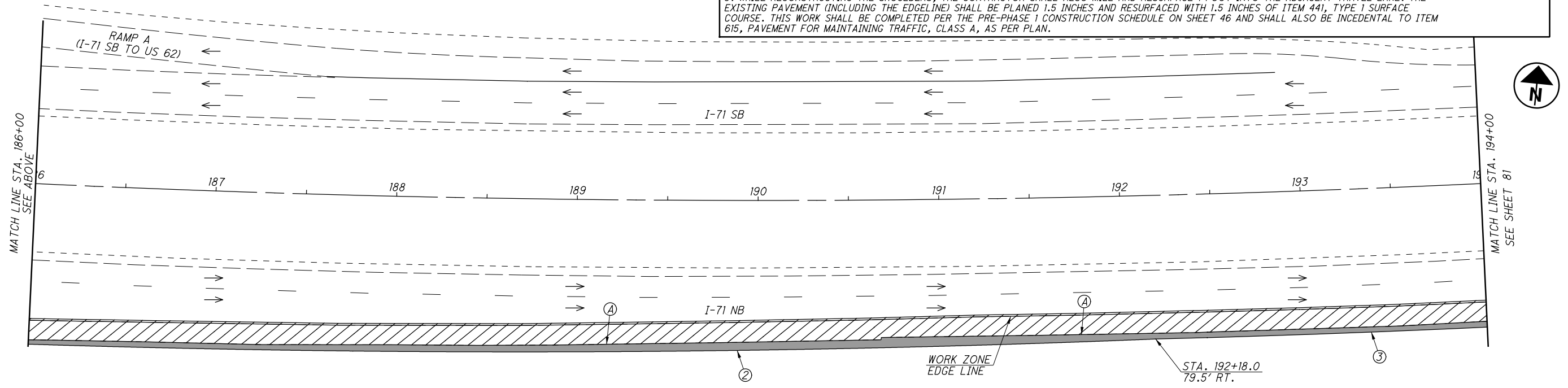
TYPICAL SECTION - WORKING HOURS

TYPICAL SECTION - INTERIM CONDITION
(SEE SHEET 46 SCHEDULE)

TYPICAL SECTION - NON-WORKING HOURS

NOTES:

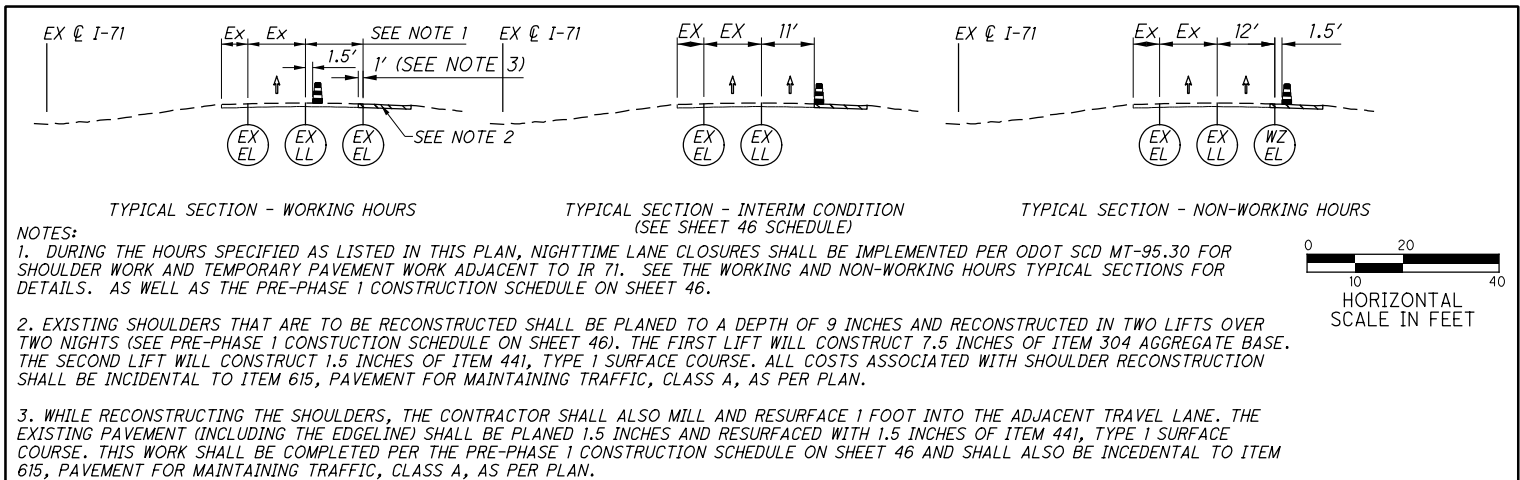
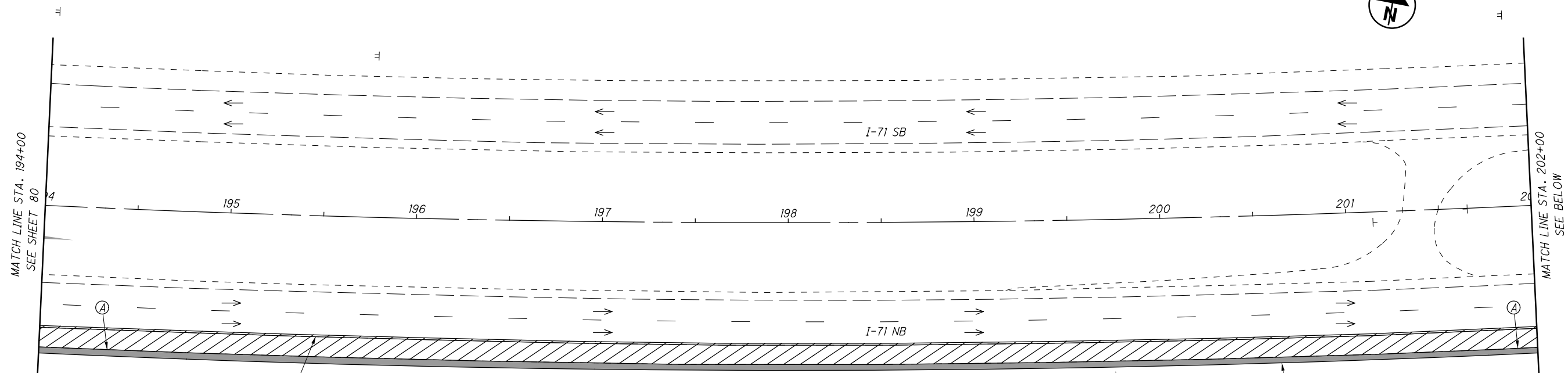
- DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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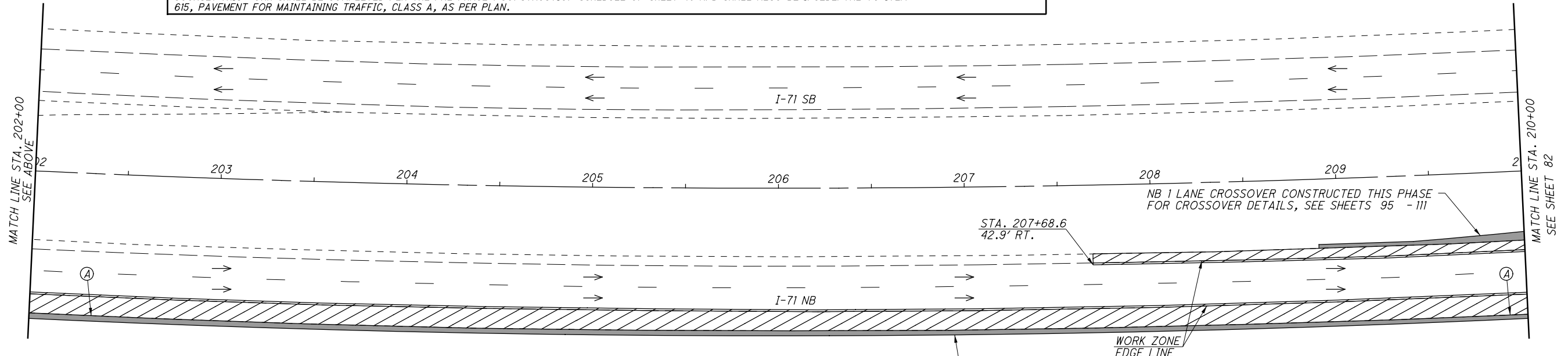
CALCULATED BY BER CHECKED BY SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 178+00 TO STA. 194+00
FRA-71-0.00
 80
 1312

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① $\Delta = 12^\circ 36' 44''$ (LT)
 $D_c = 0^\circ 39' 38''$
 $R = 8673.84'$
 $T = 958.55'$
 $L = 1909.35'$
 $E = 52.80'$
 $C = 1905.50'$
 $C.B. = N 76^\circ 38' 15'' E$



①

Ⓐ - MEET/MATCH EXISTING EDGE OF SHOULDER

LEGEND

 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE

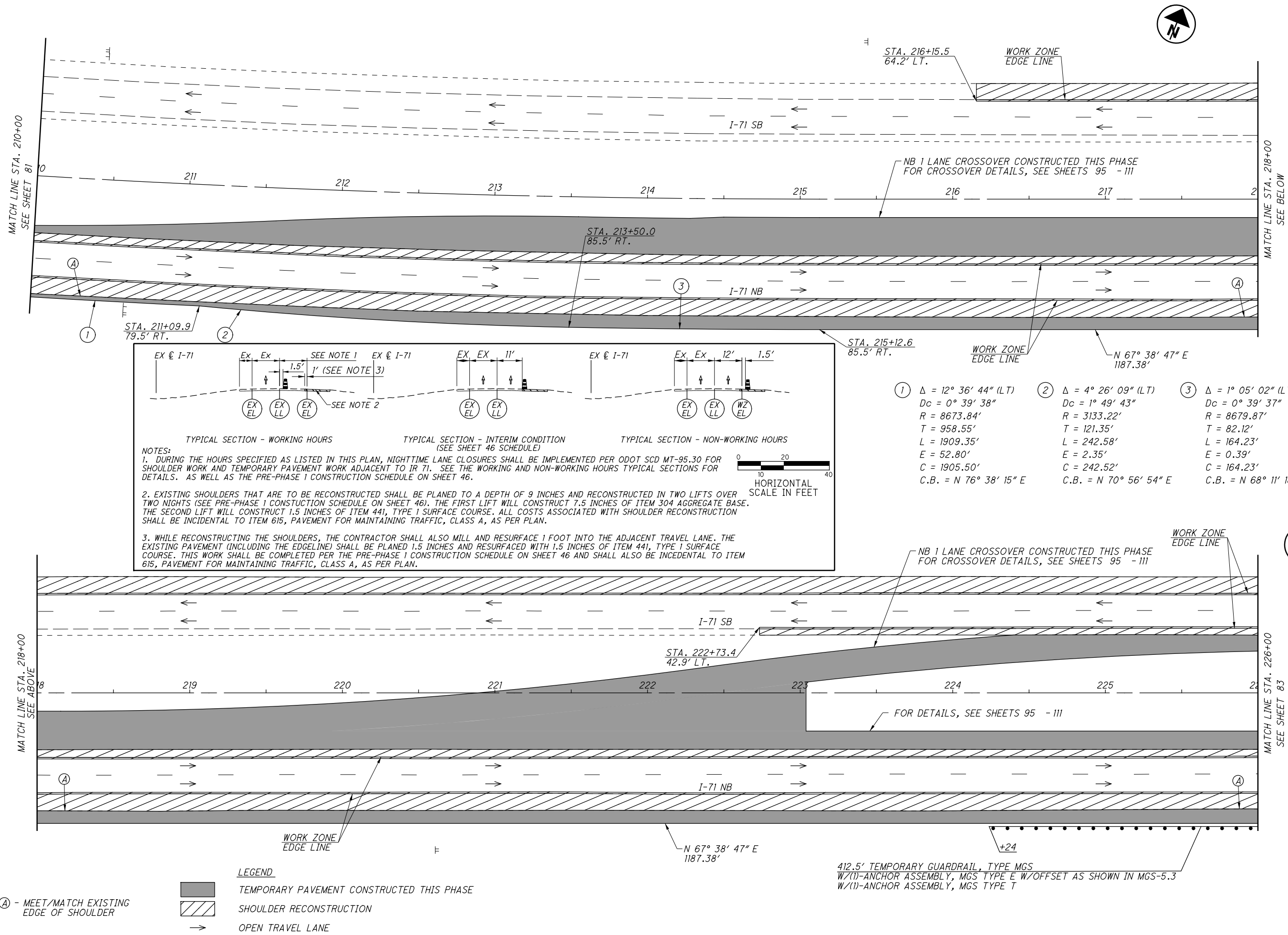


MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 194+00 TO STA. 210+00

FRA-71-0.00



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TYPICAL SECTION - WORKING HOURS **TYPICAL SECTION - INTERIM CONDITION** **TYPICAL SECTION - NON-WORKING HOURS**

NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
 2. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED IN TWO LIFTS OVER TWO NIGHTS (SEE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46). THE FIRST LIFT WILL CONSTRUCT 7.5 INCHES OF ITEM 304 AGGREGATE BASE. THE SECOND LIFT WILL CONSTRUCT 1.5 INCHES OF ITEM 441, TYPE 1 SURFACE COURSE. ALL COSTS ASSOCIATED WITH SHOULDER RECONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.
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①	$\Delta = 12^\circ 36' 44''$ (LT) $D_c = 0^\circ 39' 38''$ $R = 8673.84'$ $T = 958.55'$ $L = 1909.35'$ $E = 52.80'$ $C = 1905.50'$ $C.B. = N 76^\circ 38' 15'' E$	②	$\Delta = 4^\circ 26' 09''$ (LT) $D_c = 1^\circ 49' 43''$ $R = 3133.22'$ $T = 121.35'$ $L = 242.58'$ $E = 2.35'$ $C = 242.52'$ $C.B. = N 70^\circ 56' 54'' E$	③	$\Delta = 1^\circ 05' 02''$ (LT) $D_c = 0^\circ 39' 37''$ $R = 8679.87'$ $T = 82.12'$ $L = 164.23'$ $E = 0.39'$ $C = 164.23'$ $C.B. = N 68^\circ 11' 18'' E$
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Ⓐ - MEET/MATCH EXISTING EDGE OF SHOULDER

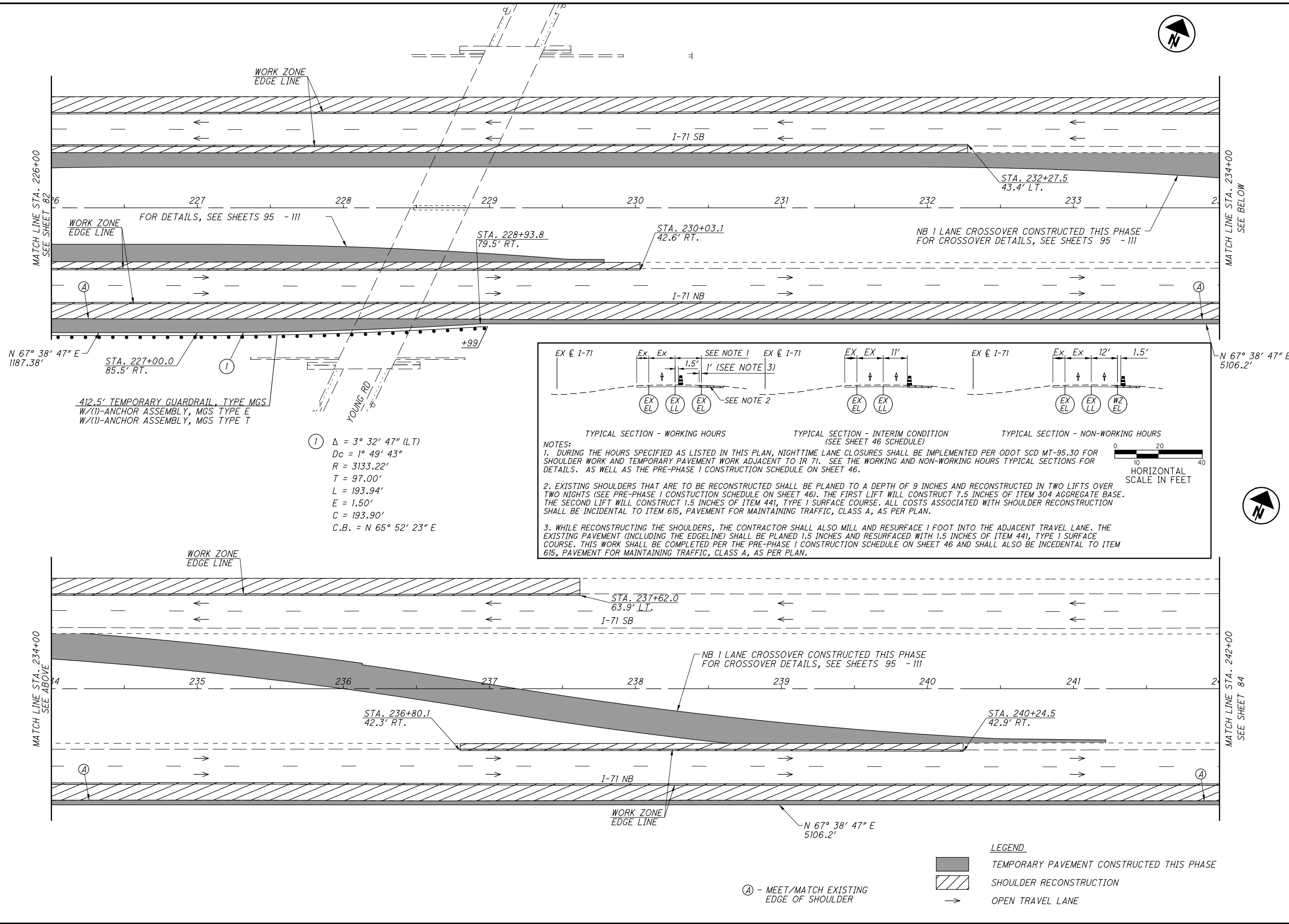
- LEGEND**
- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 - SHOULDER RECONSTRUCTION
 - OPEN TRAVEL LANE

CALCULATED
 BER
 CHECKED
 SMM

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
 (ASPHALT OPTION) I-71 - STA. 210+00 TO STA. 226+00**

FRA-71-0.00

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MATCH LINE STA. 226+00
SEE SHEET 82

MATCH LINE STA. 234+00
SEE BELOW

MATCH LINE STA. 234+00
SEE ABOVE

MATCH LINE STA. 242+00
SEE SHEET 84

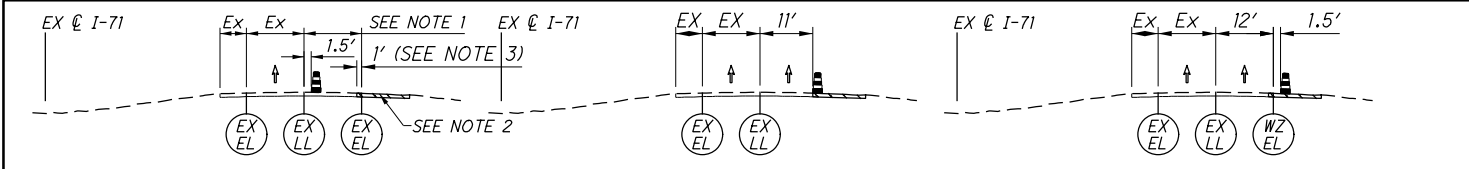
FOR DETAILS, SEE SHEETS 95 - 111

NB 1 LANE CROSSOVER CONSTRUCTED THIS PHASE
FOR CROSSOVER DETAILS, SEE SHEETS 95 - 111

NB 1 LANE CROSSOVER CONSTRUCTED THIS PHASE
FOR CROSSOVER DETAILS, SEE SHEETS 95 - 111

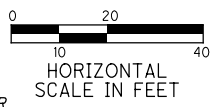
412.5' TEMPORARY GUARDRAIL, TYPE MGS
W/(1)-ANCHOR ASSEMBLY, MGS TYPE E
W/(1)-ANCHOR ASSEMBLY, MGS TYPE T

① $\Delta = 3^\circ 32' 47''$ (LT)
 $D_c = 1^\circ 49' 43''$
 $R = 3133.22'$
 $T = 97.00'$
 $L = 193.94'$
 $E = 1.50'$
 $C = 193.90'$
 $C.B. = N 65^\circ 52' 23'' E$



TYPICAL SECTION - WORKING HOURS
 TYPICAL SECTION - INTERIM CONDITION (SEE SHEET 46 SCHEDULE)
 TYPICAL SECTION - NON-WORKING HOURS

NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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LEGEND
 TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 SHOULDER RECONSTRUCTION
 OPEN TRAVEL LANE

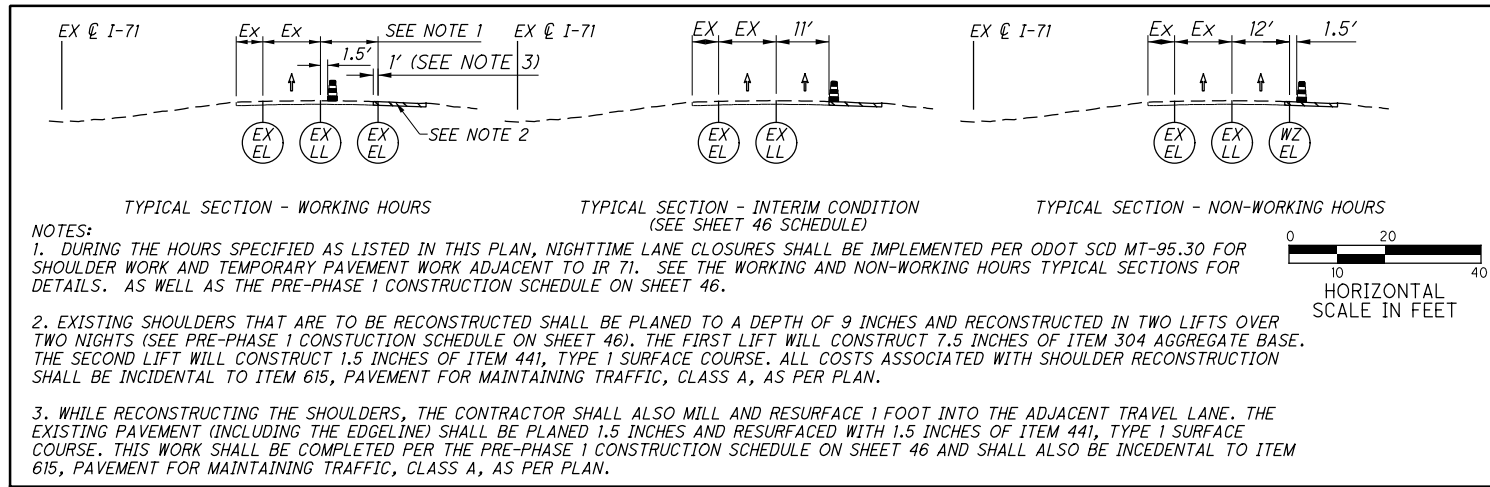
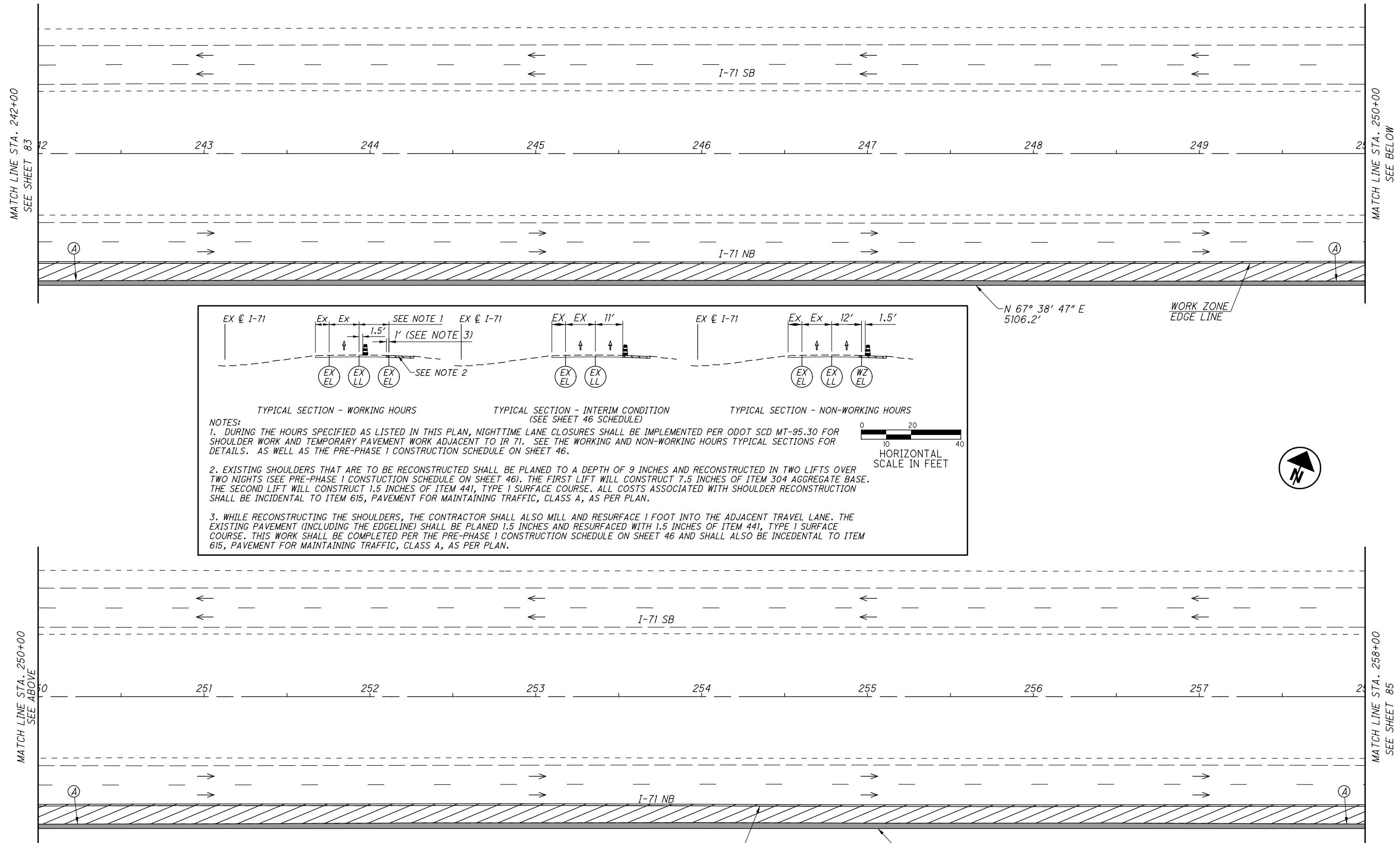
Ⓐ - MEET/MATCH EXISTING
EDGE OF SHOULDER

CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 226+00 TO STA. 242+00**

FRA-71-0.00

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NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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- LEGEND**
- SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
 - OPEN TRAVEL LANE
- (A) - MEET/MATCH EXISTING EDGE OF SHOULDER

CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 242+00 TO STA. 258+00**

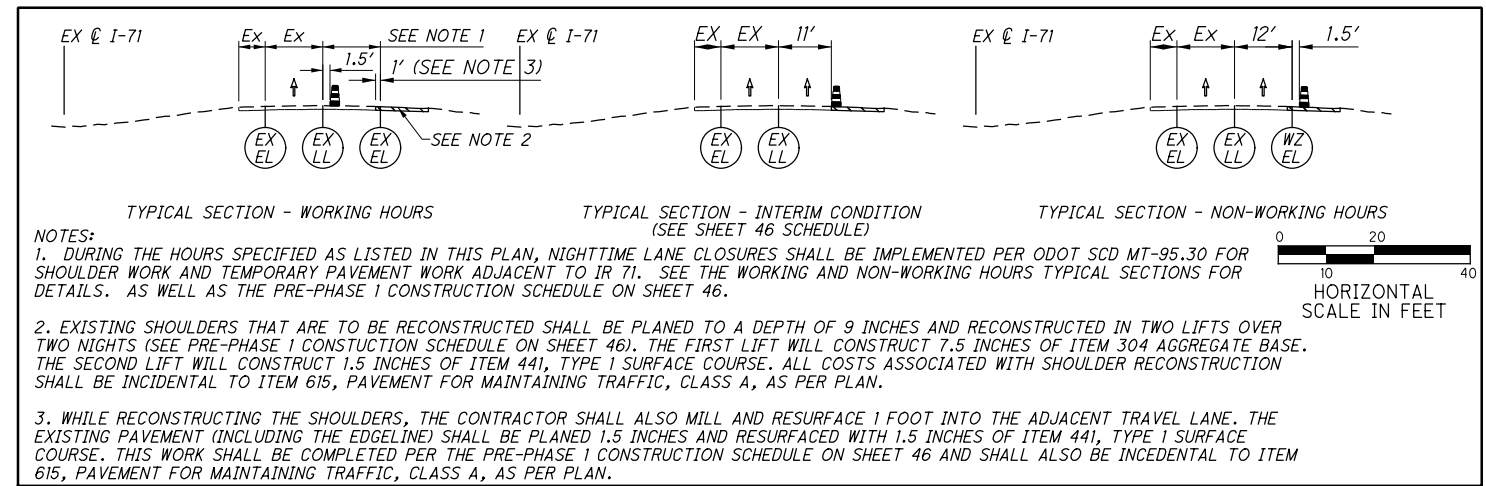
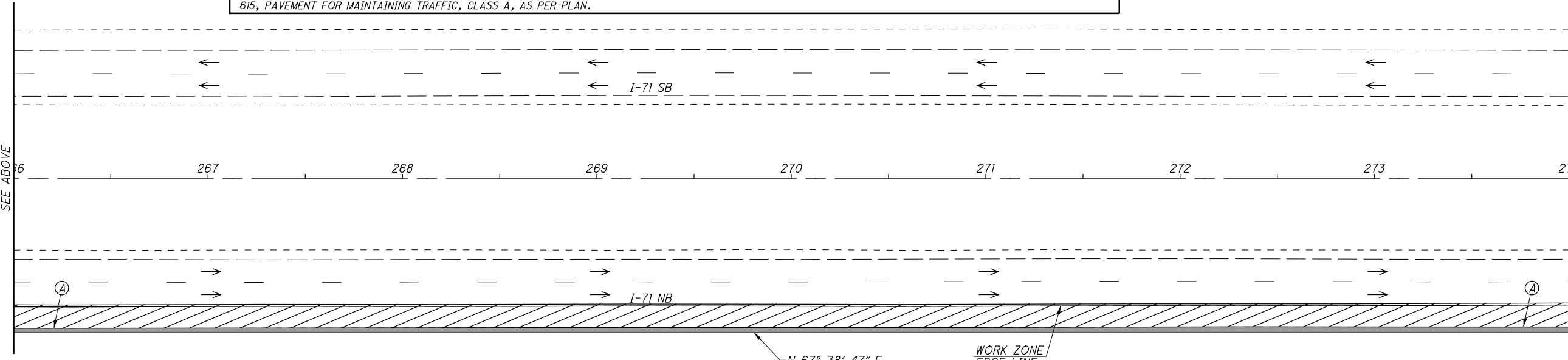
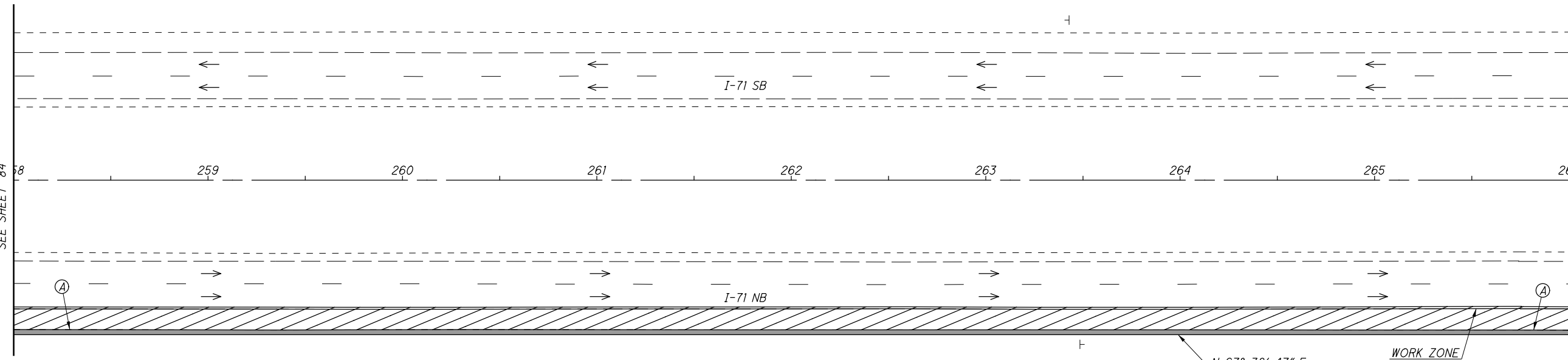
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MATCH LINE STA. 258+00
SEE SHEET 84

MATCH LINE STA. 266+00
SEE ABOVE

MATCH LINE STA. 266+00
SEE BELOW

MATCH LINE STA. 274+00
SEE SHEET 86



NOTES:
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS FOR DETAILS. AS WELL AS THE PRE-PHASE 1 CONSTRUCTION SCHEDULE ON SHEET 46.
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LEGEND

- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
- SHOULDER RECONSTRUCTION
- OPEN TRAVEL LANE

(A) - MEET/MATCH EXISTING EDGE OF SHOULDER

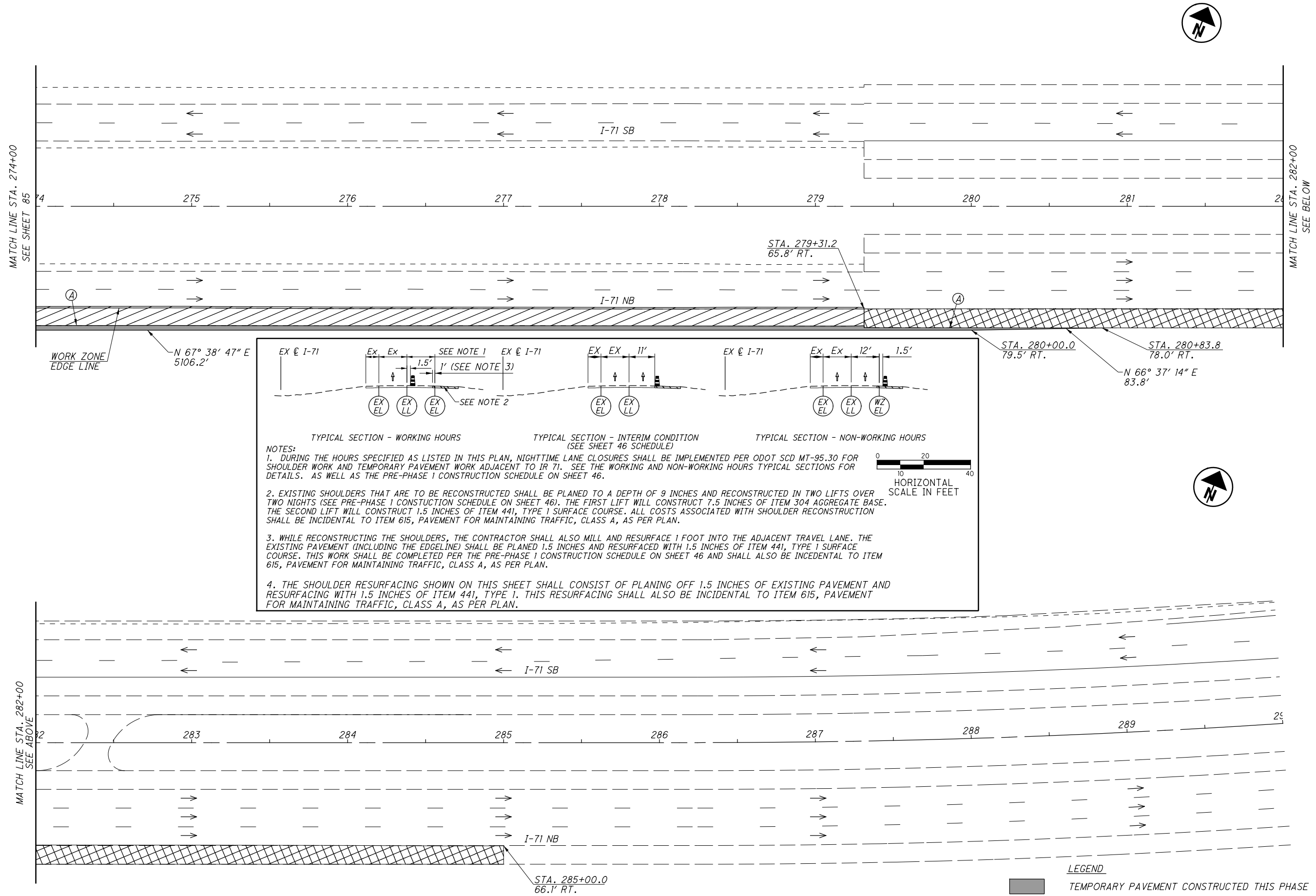
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1 (ASPHALT OPTION) I-71 - STA. 258+00 TO STA. 274+00

FRA-71-0.00

CALCULATED
BER
CHECKED
SMM



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LEGEND

- TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE
- SHOULDER RECONSTRUCTION
- SHOULDER RESURFACING (SEE NOTE 4)
- OPEN TRAVEL LANE

(A) - MEET/MATCH EXISTING
EDGE OF SHOULDER

**MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 1
(ASPHALT OPTION) I-71 - STA. 274+00 TO STA. 290+00**

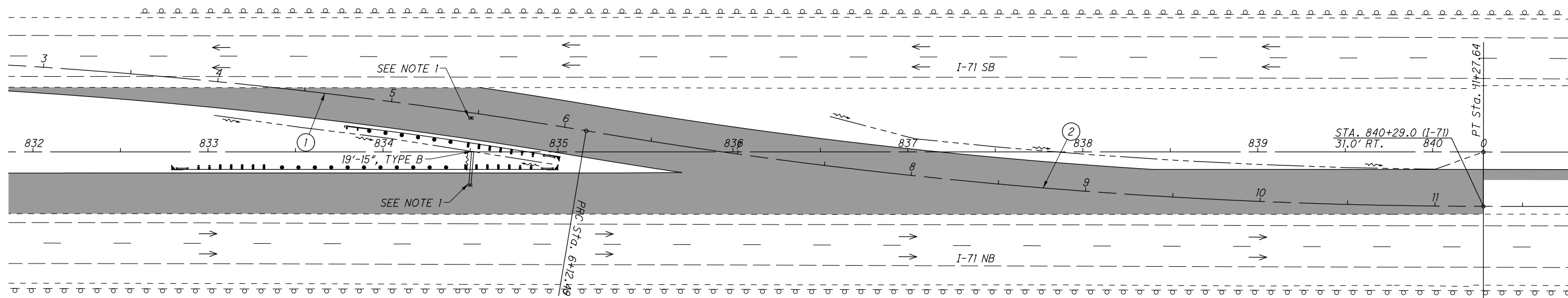
FRA-71-0.00

CALCULATED
BER
CHECKED
SMM



① P.I. STA. 3+56.82
 $\Delta = 9^\circ 23' 44''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 256.82'$
 $L = 512.49'$
 $E = 10.53'$
 $C = 511.91'$
 $C.B. = N 64^\circ 22' 23'' E$

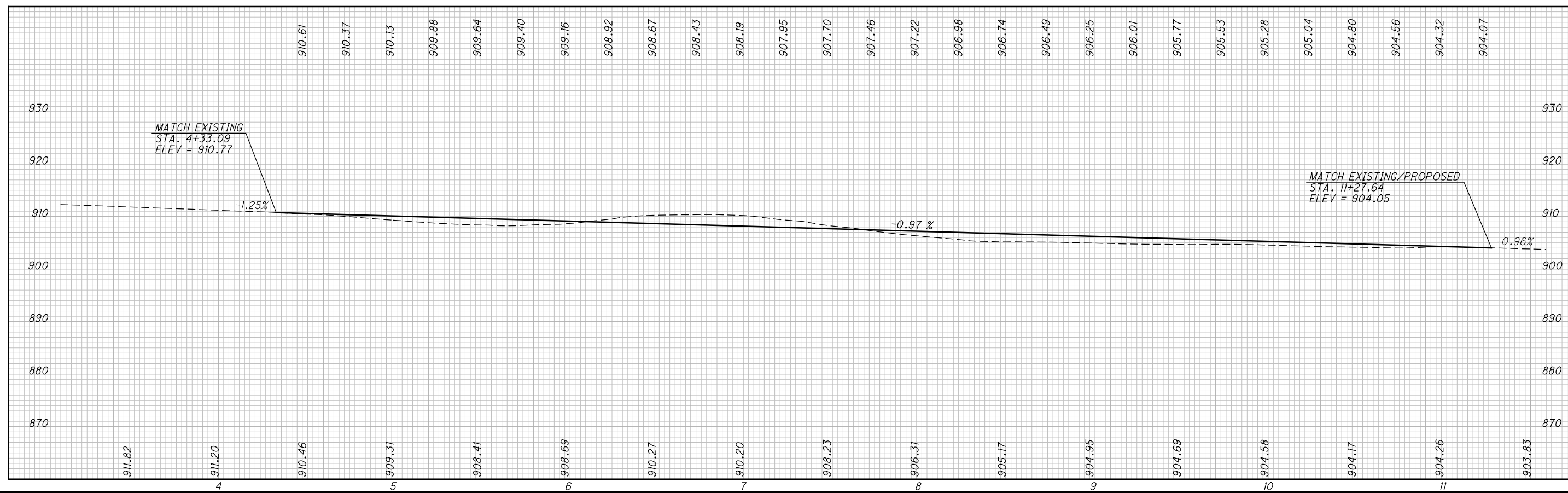
② P.I. STA. 8+70.65
 $\Delta = 9^\circ 26' 40''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 258.16'$
 $L = 515.15'$
 $E = 10.64'$
 $C = 514.56'$
 $C.B. = N 64^\circ 20' 55'' E$



NOTES:
 1. PLACE STEEL PLATE OVER CATCH BASIN TO MAINTAIN WATER FLOW OF EXISTING STORM SEWER.

LEGEND
 TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 OPEN TRAVEL LANE

EQUATION:
 $Sta\ 840+28.99\ BK =$
 $Sta\ 0+00+00\ AH$
 PT Sta. 11+27.64



CALCULATED BER CHECKED DLR
MAINTENANCE OF TRAFFIC - PRE-PHASE 1
CROSSOVER PLAN AND PROFILE - SOUTH CROSSOVER

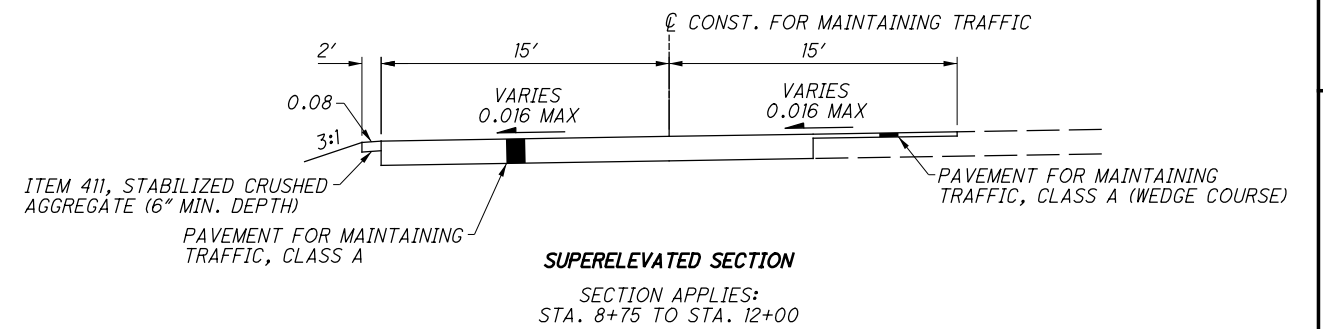
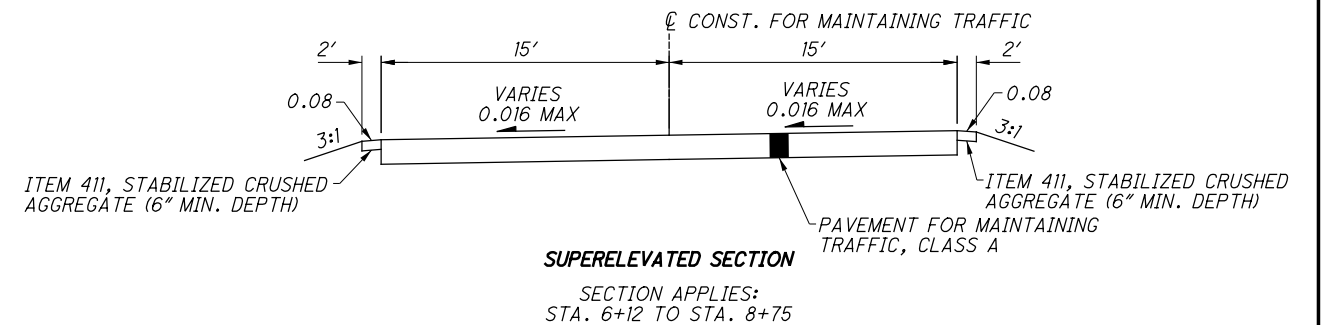
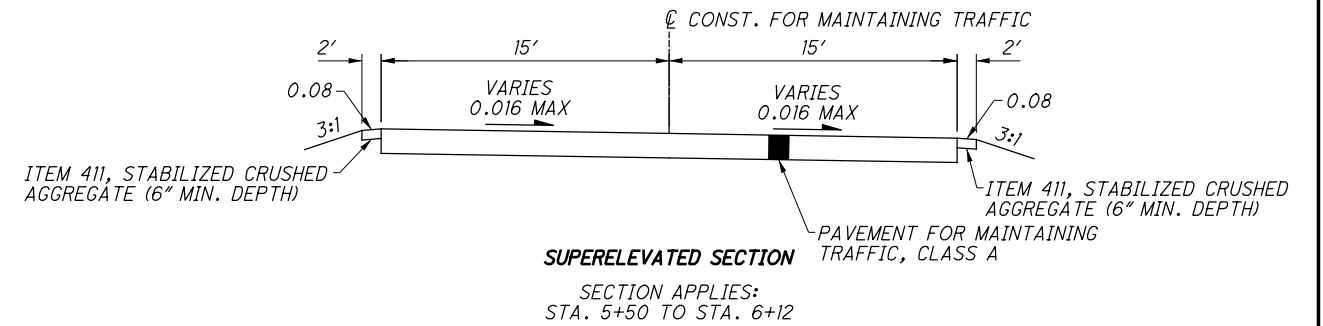
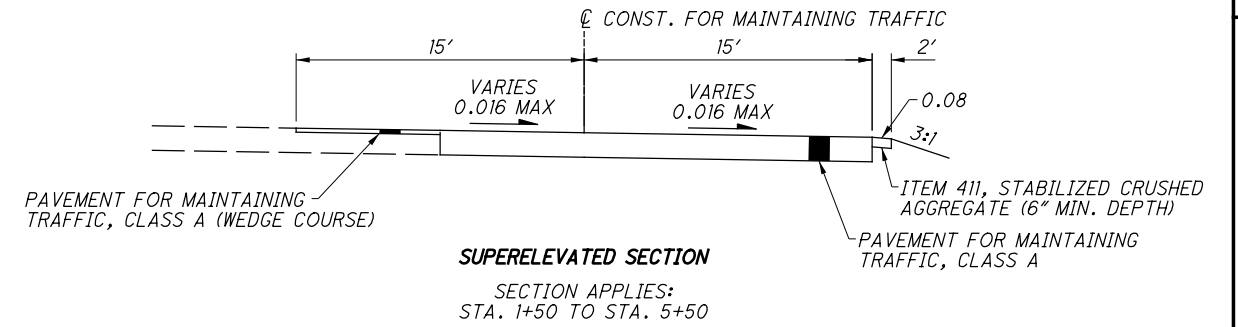
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 87
 1312

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ELEVATION TABLE

SOUTHBOUND I-71 SOUTH - 65 MPH

LEFT SIDE			CENTERLINE CONTROL		RIGHT SIDE		
EDGE ELEVATION	SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	15'	1+50	913.42	15'	EXISTING	EXISTING
EXISTING	EXISTING	15'	2+00	913.42	15'	EXISTING	EXISTING
EXISTING	EXISTING	15'	2+50	912.94	15'	EXISTING	912.56
EXISTING	EXISTING	15'	3+00	912.41	15'	EXISTING	912.06
EXISTING	EXISTING	15'	3+50	911.82	15'	EXISTING	911.48
EXISTING	EXISTING	15'	4+00	911.20	15'	EXISTING	910.92
EXISTING	+1.60%	15'	4+50	910.61	15'	-1.60%	910.37
910.34	+1.60%	15'	5+00	910.13	15'	-1.60%	909.86
909.88	+1.60%	15'	5+50	909.64	15'	-1.60%	909.40
909.28	+0.80%	15'	6+00	909.16	15'	-0.80%	909.04
908.43	-1.60%	15'	6+50	908.67	15'	+1.60%	908.91
907.95	-1.60%	15'	7+00	908.19	15'	+1.60%	908.43
907.46	-1.60%	15'	7+50	907.70	15'	+1.60%	907.94
906.98	-1.60%	15'	8+00	907.22	15'	+1.60%	907.46
906.50	-1.60%	15'	8+50	906.74	15'	+1.60%	906.98
906.01	-1.60%	15'	9+00	906.25	15'	+1.60%	906.49
905.53	-1.60%	15'	9+50	905.77	15'	+1.60%	906.01
905.04	-1.60%	15'	10+00	905.28	15'	+1.60%	EXISTING
904.56	-1.60%	15'	10+50	904.80	15'	+1.60%	EXISTING
904.08	-1.60%	15'	11+00	904.32	15'	+1.60%	EXISTING
EXISTING	EXISTING	15'	11+50	903.83	15'	EXISTING	EXISTING
EXISTING	EXISTING	15'	12+00	903.35	15'	EXISTING	EXISTING



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CALCULATED
BER
CHECKED
DLR

MAINTENANCE OF TRAFFIC - PRE-PHASE 1
CROSSOVER TYPICAL SECTIONS AND ELEVATIONS

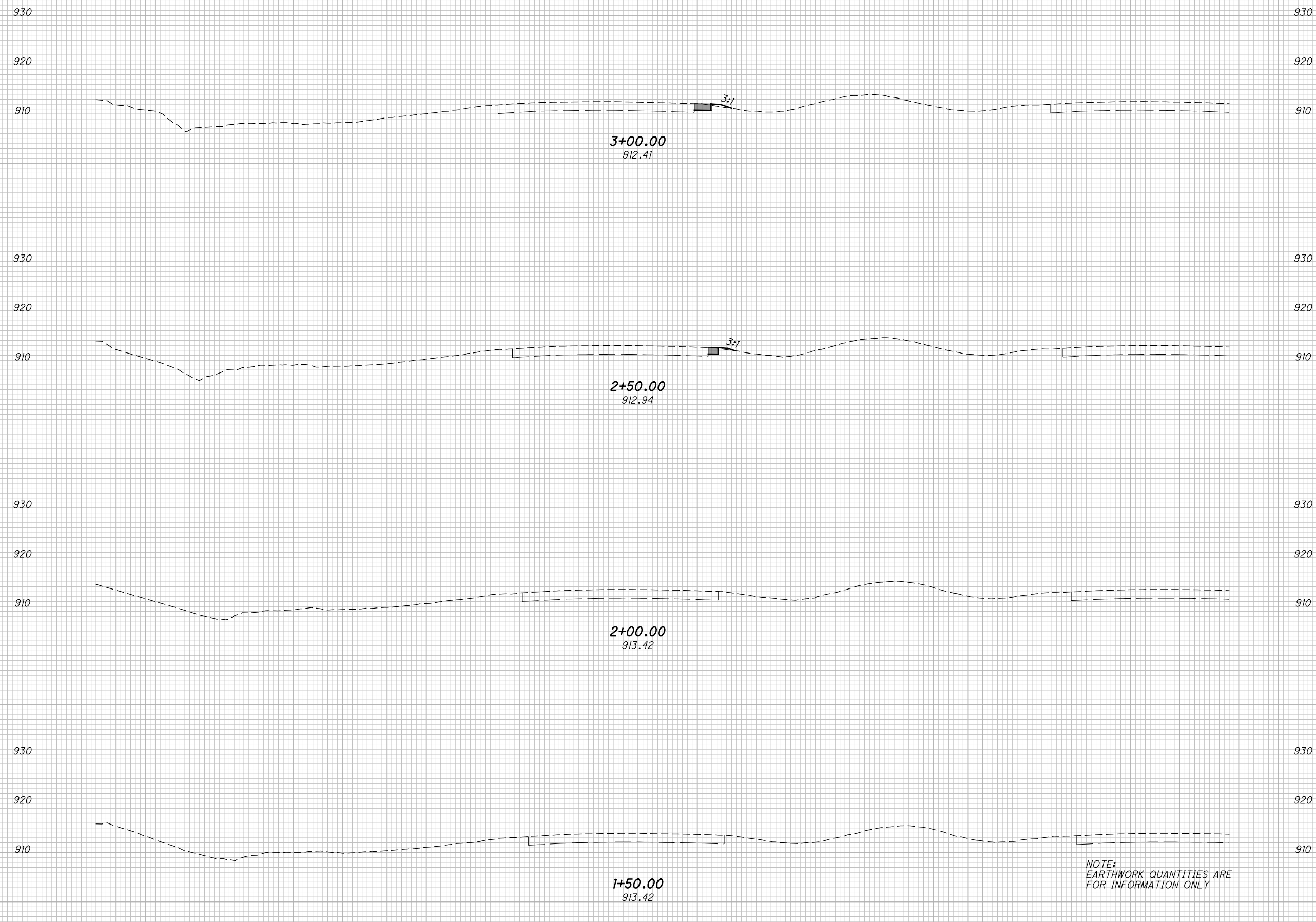
FRA-71-0.00

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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END AREA	VOLUME	CALCULATED	CHECKED
CUT	FILL	CUT	FILL
5	2	12	5
3	1	8	3
0	0	3	1
0	0	0	0
		23	9

**MAINTENANCE OF TRAFFIC - I-71 SB SOUTH CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 1+50 TO STA. 3+00**

FRA-71-0:00

89
1312

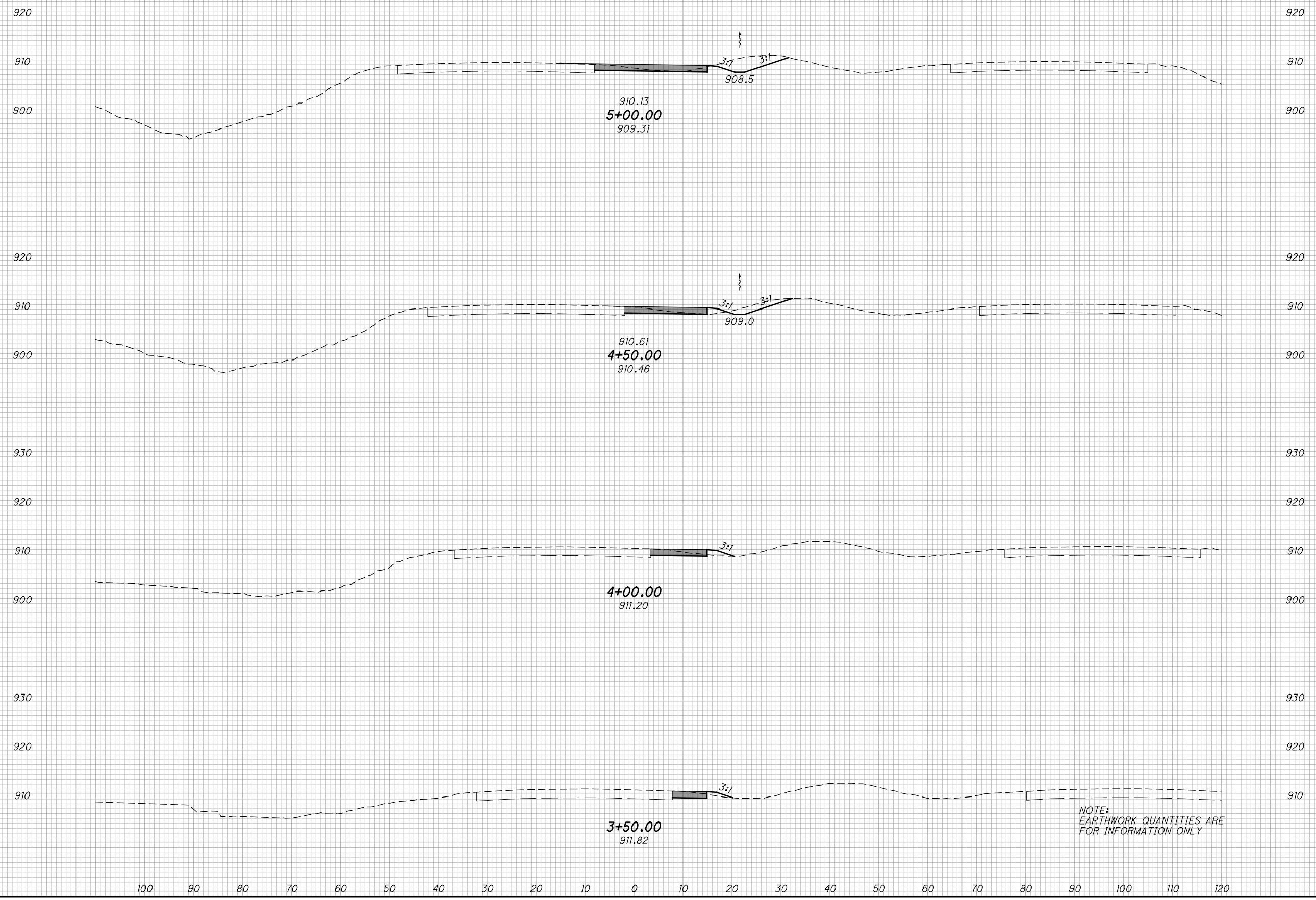
NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END AREA	VOLUME
CUT	FILL
41	1
61	5
24	4
32	8
10	4
17	7
8	3
211	22

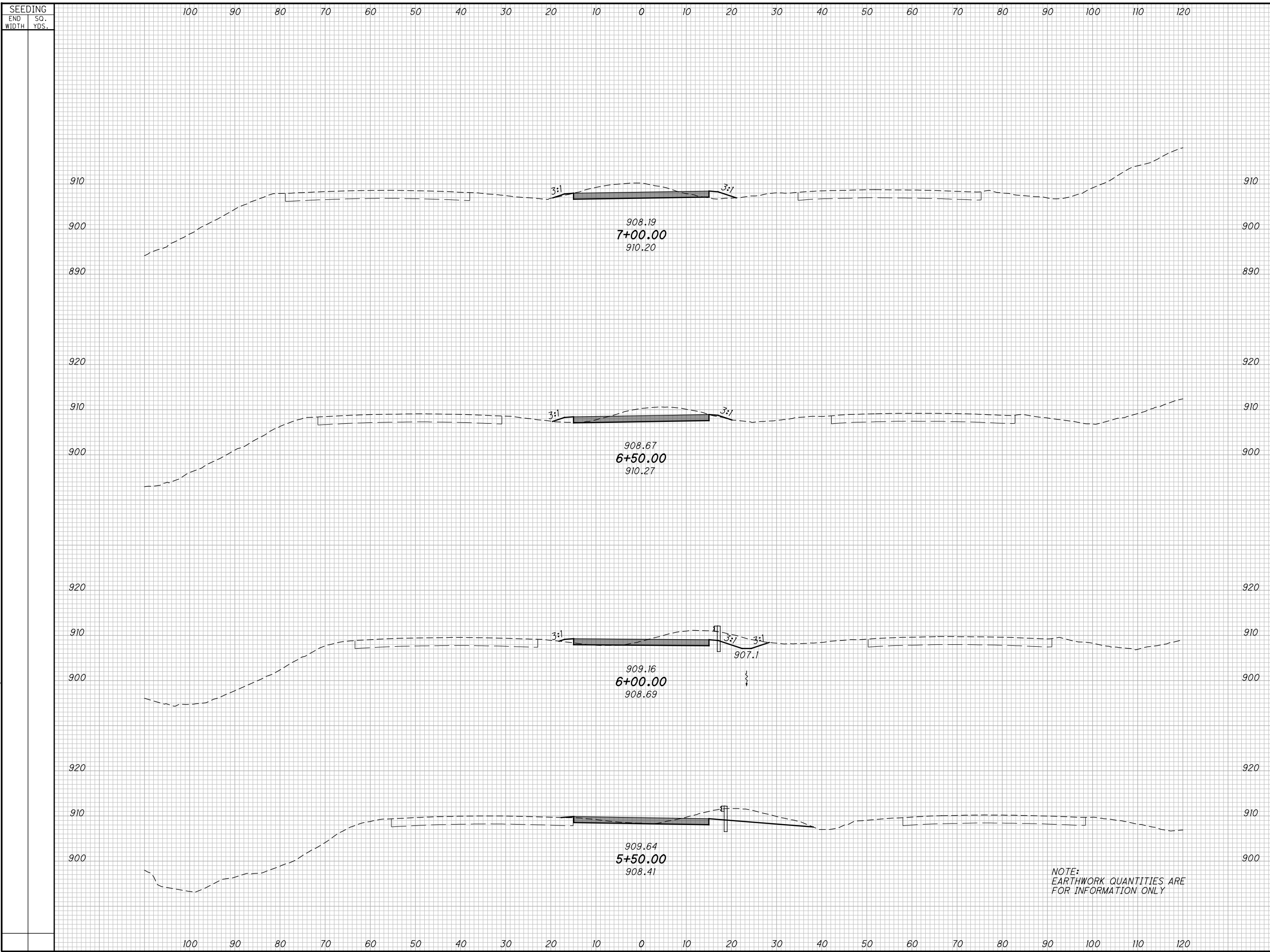
**MAINTENANCE OF TRAFFIC - I-71 SB SOUTH CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 3+50 TO STA. 5+00**

FRA-71-0.00

90
1312

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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END CUT	AREA FILL	VOLUME	
		CUT	FILL
65	8	113	13
60	5	116	2
66	3	117	8
68	1	124	4
		470	37

CALCULATED BER
 CHECKED DLR
MAINTENANCE OF TRAFFIC - I-71 SB SOUTH CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 5+50 TO STA. 7+00
FRA - 71-0.00
 91
 1312

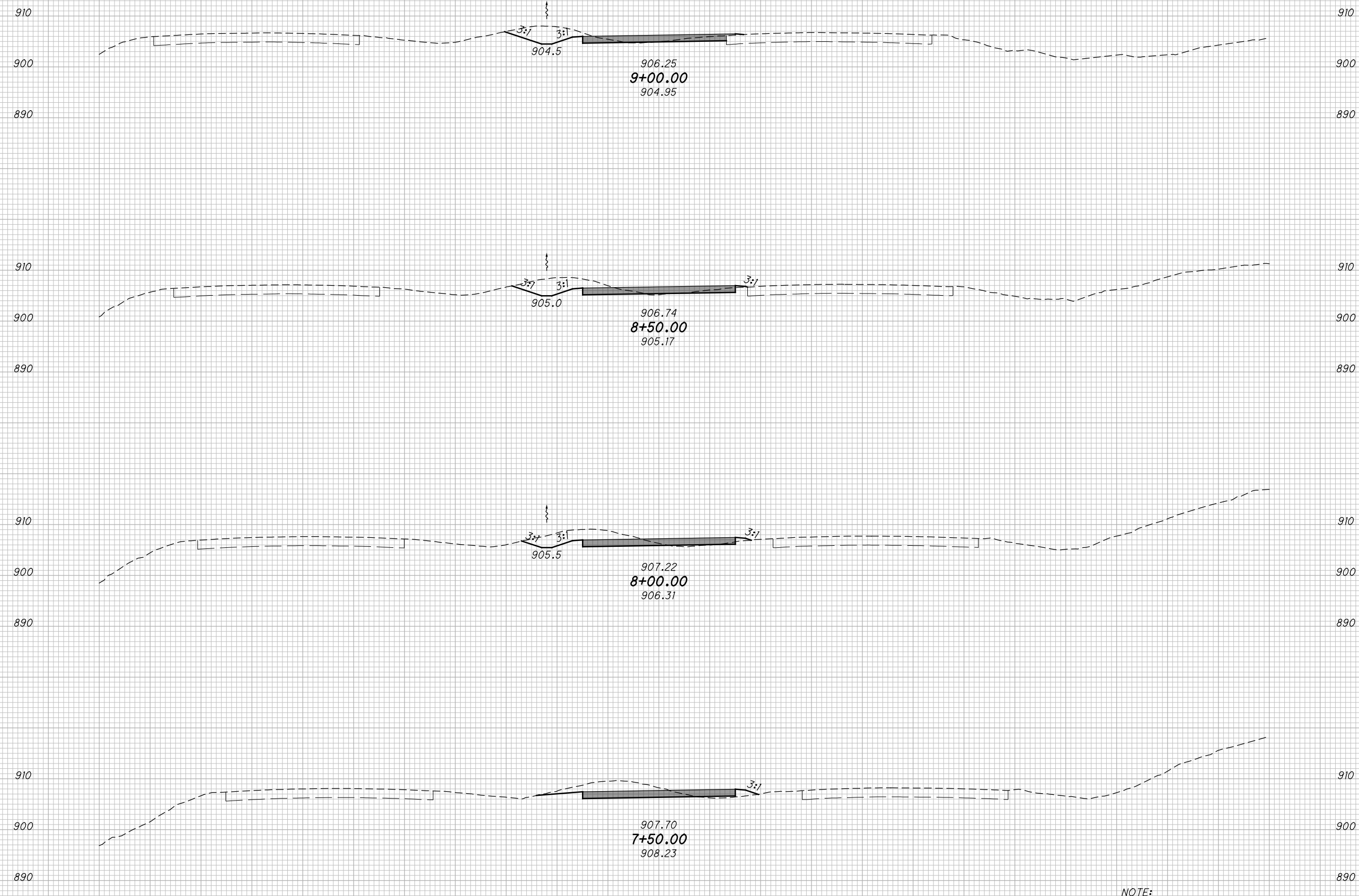
NOTE:
EARTHWORK QUANTITIES ARE
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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END AREA	VOLUME
CUT	FILL
49	83
57	99
58	107
107	107
57	6
406	22

MAINTENANCE OF TRAFFIC - I-71 SB SOUTH CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 7+50 TO STA. 9+00

FRA-71-0:00

92
1312

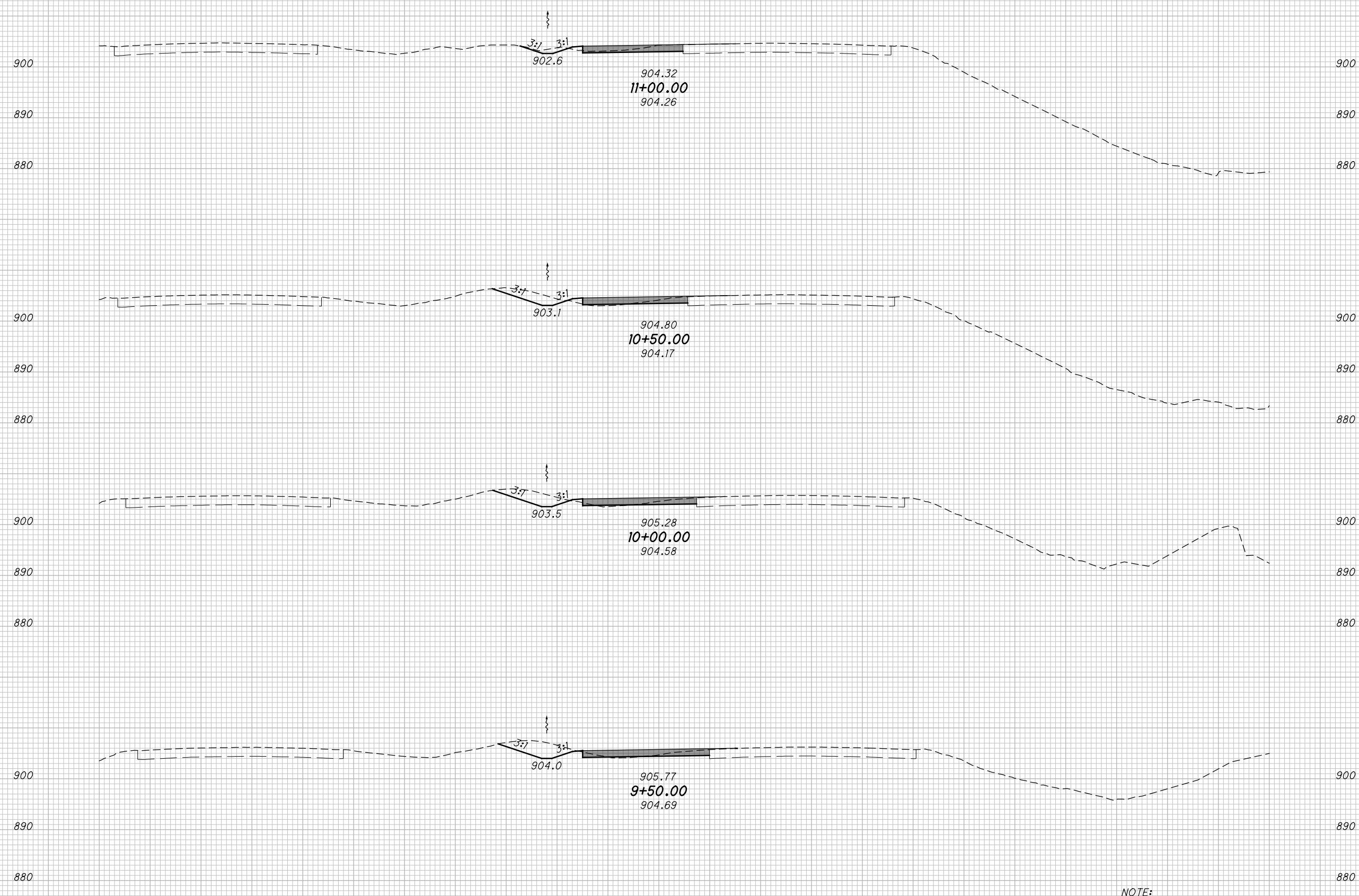
NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END AREA	VOLUME	CALCULATED	CHECKED
CUT	FILL	CUT	FILL
19	2	18	2
28	4	44	6
35	2	59	6
40	2	70	4
191	18	191	18

**MAINTENANCE OF TRAFFIC - I-71 SB SOUTH CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 9+50 TO STA 11+00**

FRA-71-0:00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

93
1312

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

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SEEDING
END SO.
WIDTH YDS.

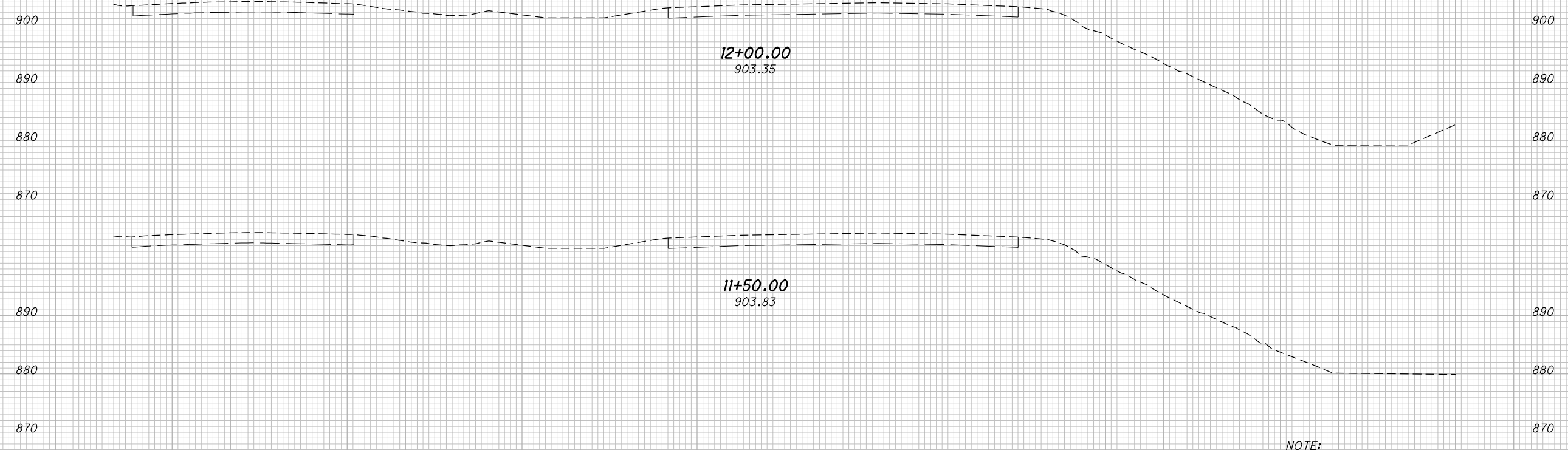
100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL

VOLUME
CUT FILL

CALCULATED
BER

CHECKED
DLR



900	0	0
890		
880		
870		
890	0	0
880		
870		

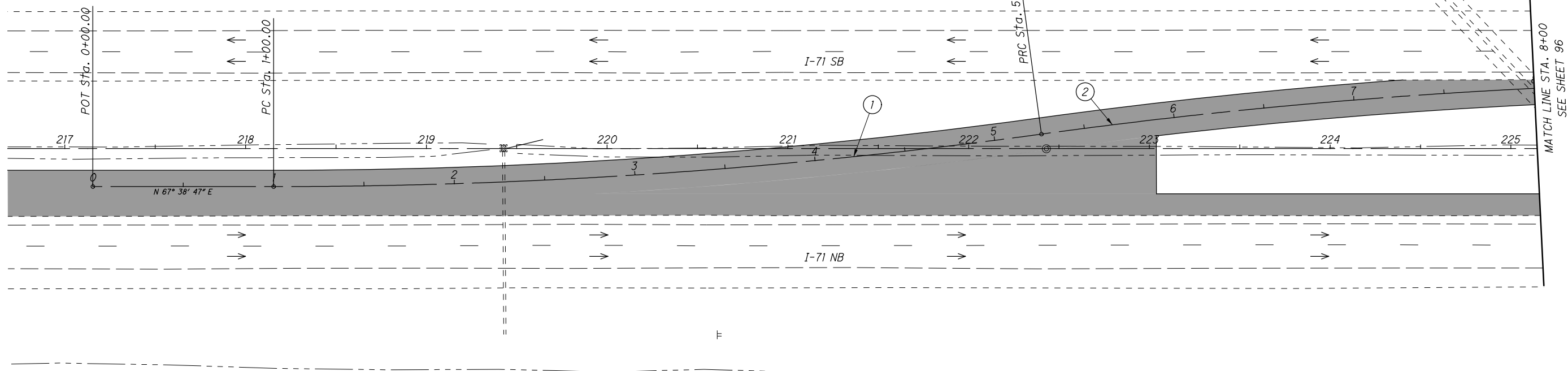
MAINTENANCE OF TRAFFIC - I-71 SB SOUTH CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 11+50 TO STA. 12+00

FRA-71-0.00

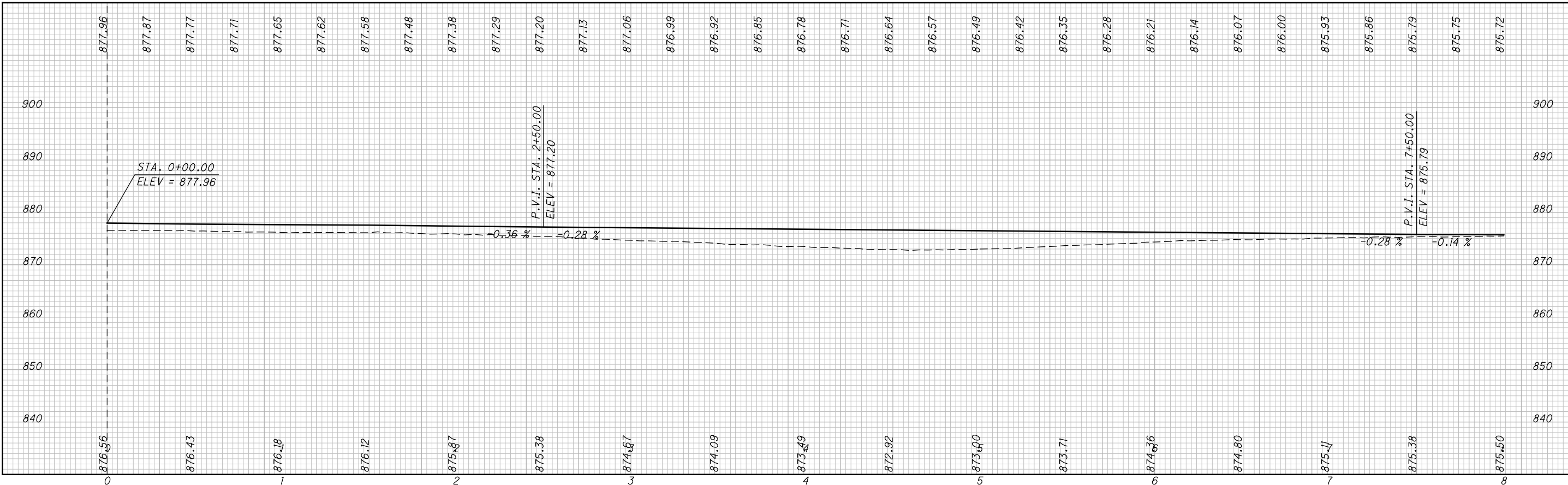
94
1312

① P.I. STA. 3+13.37
 $\Delta = 7^\circ 48' 14''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 213.37'$
 $L = 426.08'$
 $E = 7.28'$
 $C = 425.75'$
 $C.B. = N 63^\circ 44' 26'' E$

② P.I. STA. 7+39.45
 $\Delta = 7^\circ 48' 41''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 213.37'$
 $L = 426.08'$
 $E = 7.28'$
 $C = 425.75'$
 $C.B. = N 63^\circ 44' 26'' E$



LEGEND
 TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 OPEN TRAVEL LANE



CALCULATED
 BER
 CHECKED
 SMM

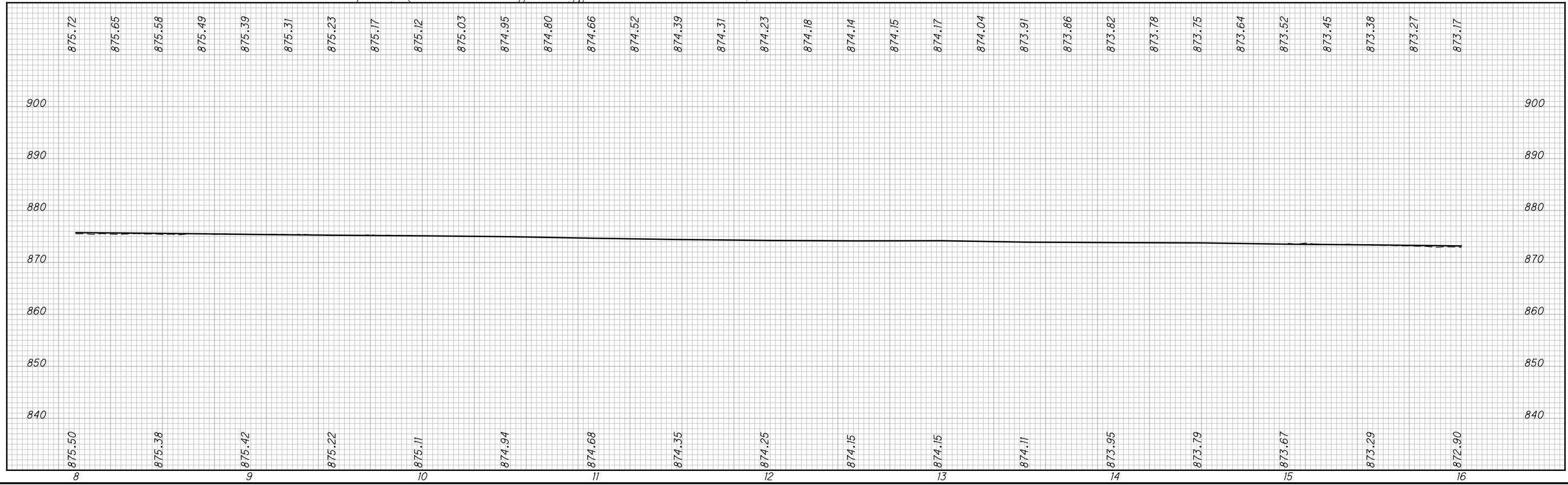
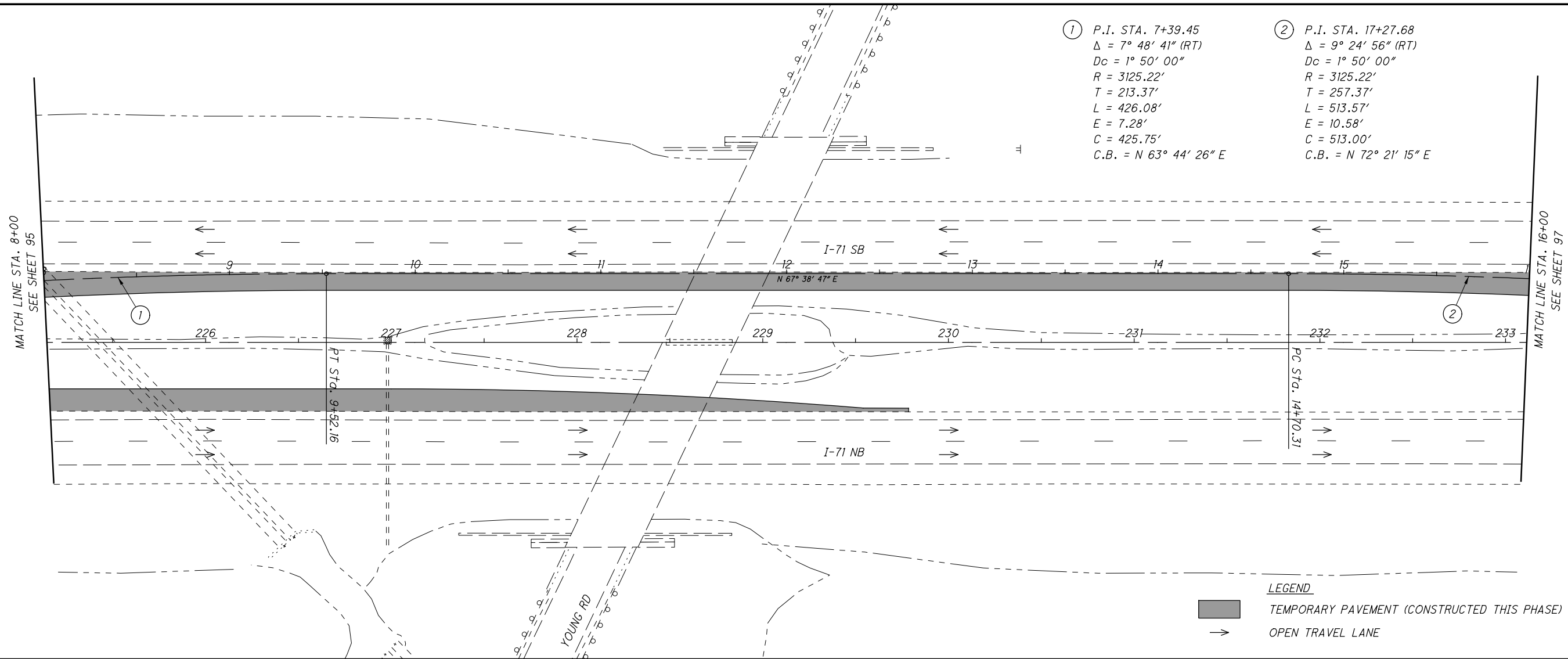
**MAINTENANCE OF TRAFFIC - PRE-PHASE 1
 CROSSOVER PLAN & PROFILE - CULVERT CROSSOVER**

FRA-71-0.00

95
 1312

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MAINTENANCE OF TRAFFIC - PRE-PHASE 1

CROSSOVER PLAN & PROFILE - CULVERT CROSSOVER

FRA - 71 - 0.00

96
1312

CALCULATED
BER
CHECKED
SMM

0 30 60
HORIZONTAL
SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1
CROSSOVER PLAN & PROFILE - CULVERT CROSSOVER**

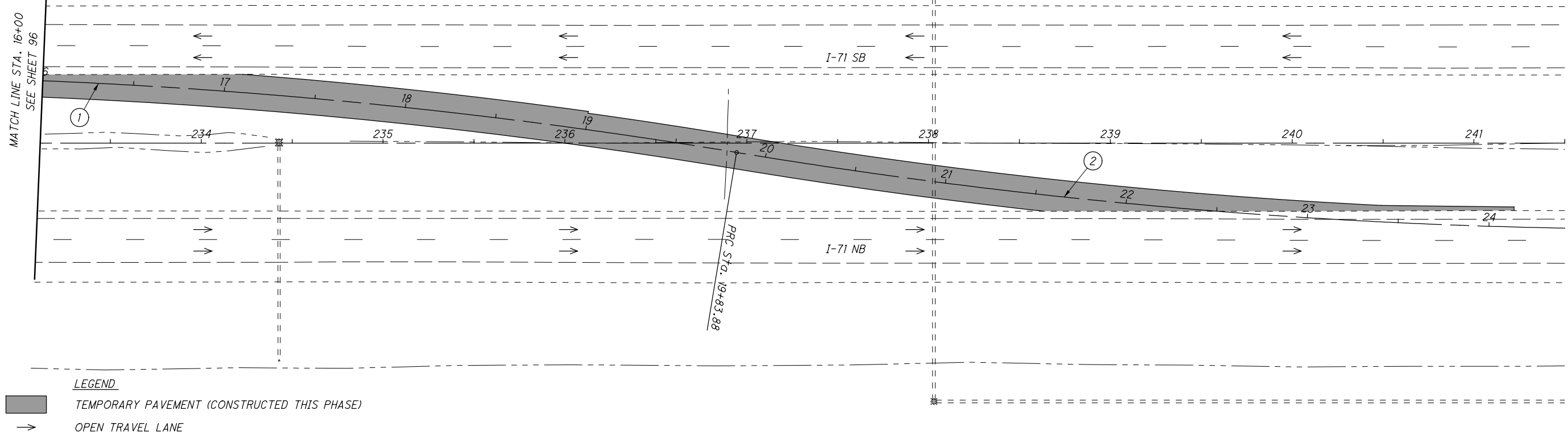
FRA-71-0.00

97
1312

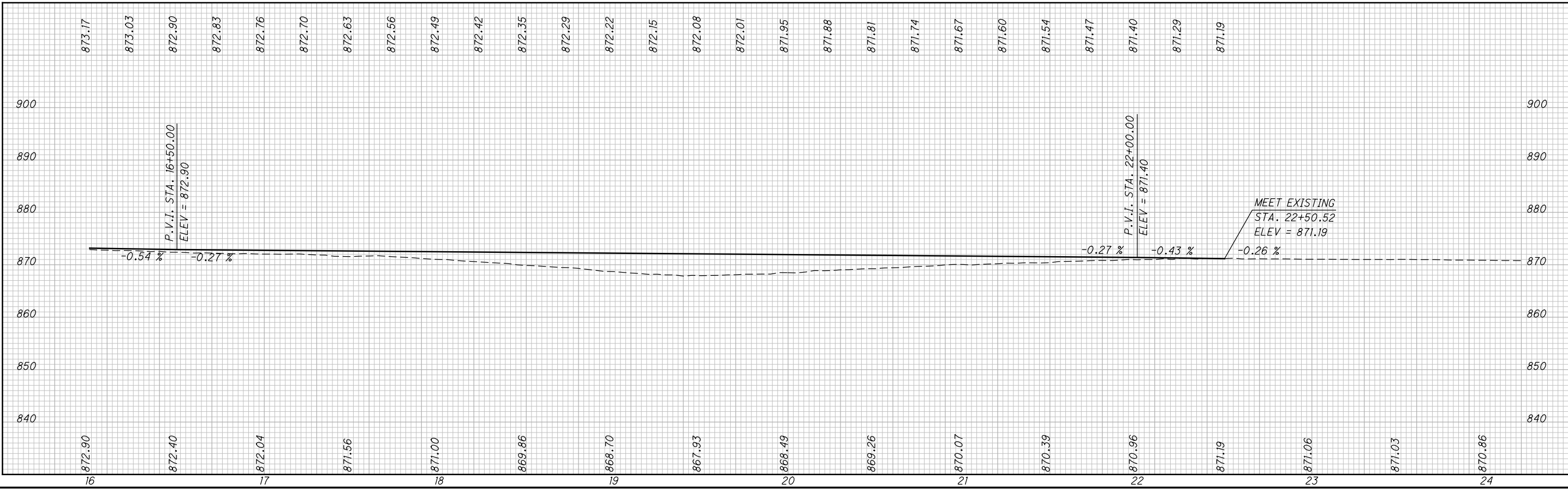
① P.I. STA. 17+27.68
 $\Delta = 9^\circ 24' 56''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 257.37'$
 $L = 513.57'$
 $E = 10.58'$
 $C = 513.00'$
 $C.B. = N 72^\circ 21' 15'' E$

② P.I. STA. 22+45.25
 $\Delta = 9^\circ 33' 40''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 261.37'$
 $L = 521.52'$
 $E = 10.91'$
 $C = 520.91'$
 $C.B. = N 72^\circ 16' 53'' E$

MATCH LINE STA. 16+00
SEE SHEET 96



LEGEND
 TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 OPEN TRAVEL LANE

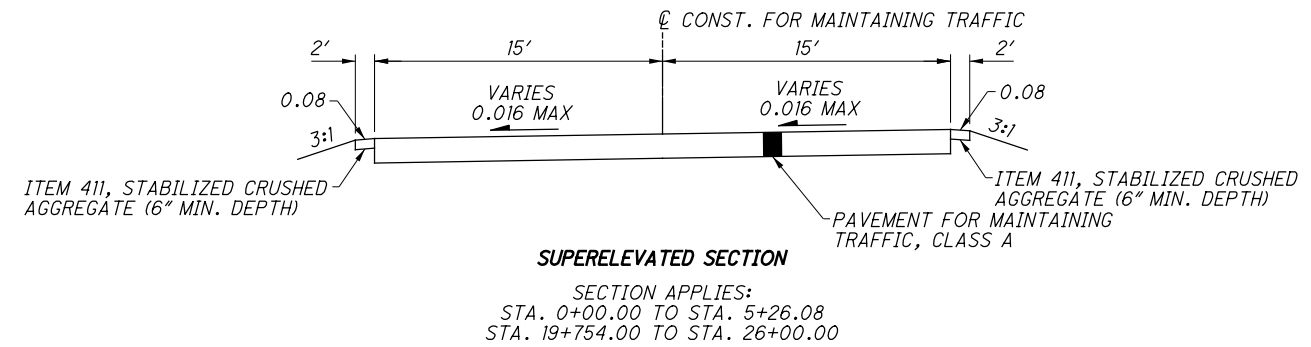
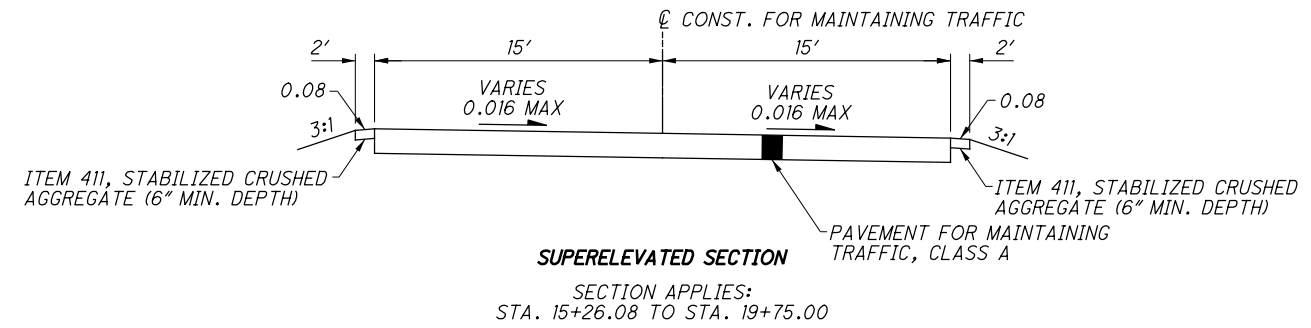


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ELEVATION TABLE

SOUTHBOUND I-71 NORTH CROSSOVER - 65 MPH

LEFT SIDE			CENTERLINE CONTROL		RIGHT SIDE		
EDGE ELEVATION	SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	SLOPE	EDGE ELEVATION
877.82	-1.60%	9'	0+00	877.96	16.4'	+1.60%	878.22
877.63	-1.60%	9'	0+50	877.77	16.4'	+1.60%	878.03
877.51	-1.60%	9'	1+00	877.65	16.2'	+1.60%	877.91
863.58	-1.60%	9'	1+50	877.58	16.5'	+1.60%	877.84
872.24	-1.60%	9'	2+00	877.38	17.7'	+1.60%	877.66
877.06	-1.60%	9'	2+50	877.20	19.6'	+0.74%	877.35
876.92	-1.60%	9'	3+00	877.06	9'	+1.60%	877.20
876.78	-1.60%	9'	3+50	876.92	9'	+1.60%	877.06
876.64	-1.60%	9'	4+00	876.78	9'	+1.60%	876.92
876.50	-1.60%	9'	4+50	876.64	9'	+1.60%	876.78
876.35	-1.60%	9'	5+00	876.49	9'	+1.60%	876.63
876.49	+1.60%	9'	5+50	876.35	9'	-1.60%	876.22
876.35	+1.60%	9'	6+00	876.21	9'	-1.60%	876.07
876.21	+1.60%	9'	6+50	876.07	9'	-1.60%	875.93
876.07	+1.60%	9'	7+00	875.93	9'	-1.60%	875.79
875.91	+1.60%	7.6'	7+50	875.79	9'	-1.60%	875.65
875.80	+1.60%	4.9'	8+00	875.72	9'	-1.60%	875.58
875.62	+1.60%	2.7'	8+50	875.58	9'	-1.60%	875.44
875.41	+1.60%	1.2'	9+00	875.39	9'	-1.60%	875.25
875.24	+1.60%	0.7'	9+50	875.23	9'	-1.60%	875.09
875.13	+1.60%	0.7'	10+00	875.12	9'	-1.60%	874.98
874.96	+1.60%	0.7'	10+50	874.95	9'	-1.60%	874.81
874.67	+1.60%	0.8'	11+00	874.66	9'	-1.60%	874.52
874.41	+1.60%	1'	11+50	874.39	9'	-1.60%	874.25
874.24	+1.60%	0.9'	12+00	874.23	9'	-1.60%	874.09
874.15	+1.60%	0.8'	12+50	874.14	9'	-1.60%	874.00
874.18	+1.60%	0.7'	13+00	874.17	9'	-1.60%	874.03
873.92	+1.60%	0.6'	13+50	873.91	9'	-1.60%	873.77
873.83	+1.60%	0.7'	14+00	873.82	9'	-1.60%	873.67
873.76	+1.60%	0.8'	14+50	873.75	9'	-1.60%	873.61
873.53	+1.60%	0.9'	15+00	873.52	9'	-1.60%	873.38
873.41	+1.60%	1.7'	15+50	873.38	9'	-1.60%	873.24
873.22	+1.60%	3.4'	16+00	873.17	9'	-1.60%	873.03
872.94	+0.06%	5.9'	16+50	872.90	9'	-1.60%	872.76
872.90	+1.60%	9'	17+00	872.76	9'	-1.60%	872.62
872.77	+1.60%	9'	17+50	872.63	9'	-1.60%	872.49
872.63	+1.60%	9'	18+00	872.49	9'	-1.60%	872.35
872.49	+1.60%	9'	18+50	872.35	9'	-1.60%	872.21
872.36	+1.60%	9'	19+00	872.22	9'	-1.60%	872.08
872.22	+1.60%	9'	19+50	872.08	9'	-1.60%	871.94
871.81	-1.60%	9'	20+00	871.95	9'	+1.60%	872.09
871.67	-1.60%	9'	20+50	871.81	9'	+1.60%	871.95
871.53	-1.60%	9'	21+00	871.67	9'	+1.60%	871.81
871.40	-1.60%	9'	21+50	871.54	9'	+1.60%	871.68
871.26	-1.60%	9'	22+00	871.40	4.4'	EXISTING	EXISTING
871.05	-1.60%	9'	22+50	871.19	0.4'	EXISTING	EXISTING
870.92	-1.60%	9'	23+00	871.06	EXISTING	EXISTING	EXISTING
870.88	-1.60%	9.37'	23+50	871.03	EXISTING	EXISTING	EXISTING
870.69	-1.60%	10.8'	24+00	870.86	EXISTING	EXISTING	EXISTING
EXISTING	EXISTING	EXISTING	24+50	870.75	EXISTING	EXISTING	EXISTING
EXISTING	EXISTING	EXISTING	25+00	870.61	EXISTING	EXISTING	EXISTING
EXISTING	EXISTING	EXISTING	25+50	870.45	EXISTING	EXISTING	EXISTING
EXISTING	EXISTING	EXISTING	26+00	870.28	EXISTING	EXISTING	EXISTING



CALCULATED
BER
CHECKED
DLR

MAINTENANCE OF TRAFFIC - PRE-PHASE 1
CROSSOVER TYPICAL SECTIONS AND ELEVATIONS

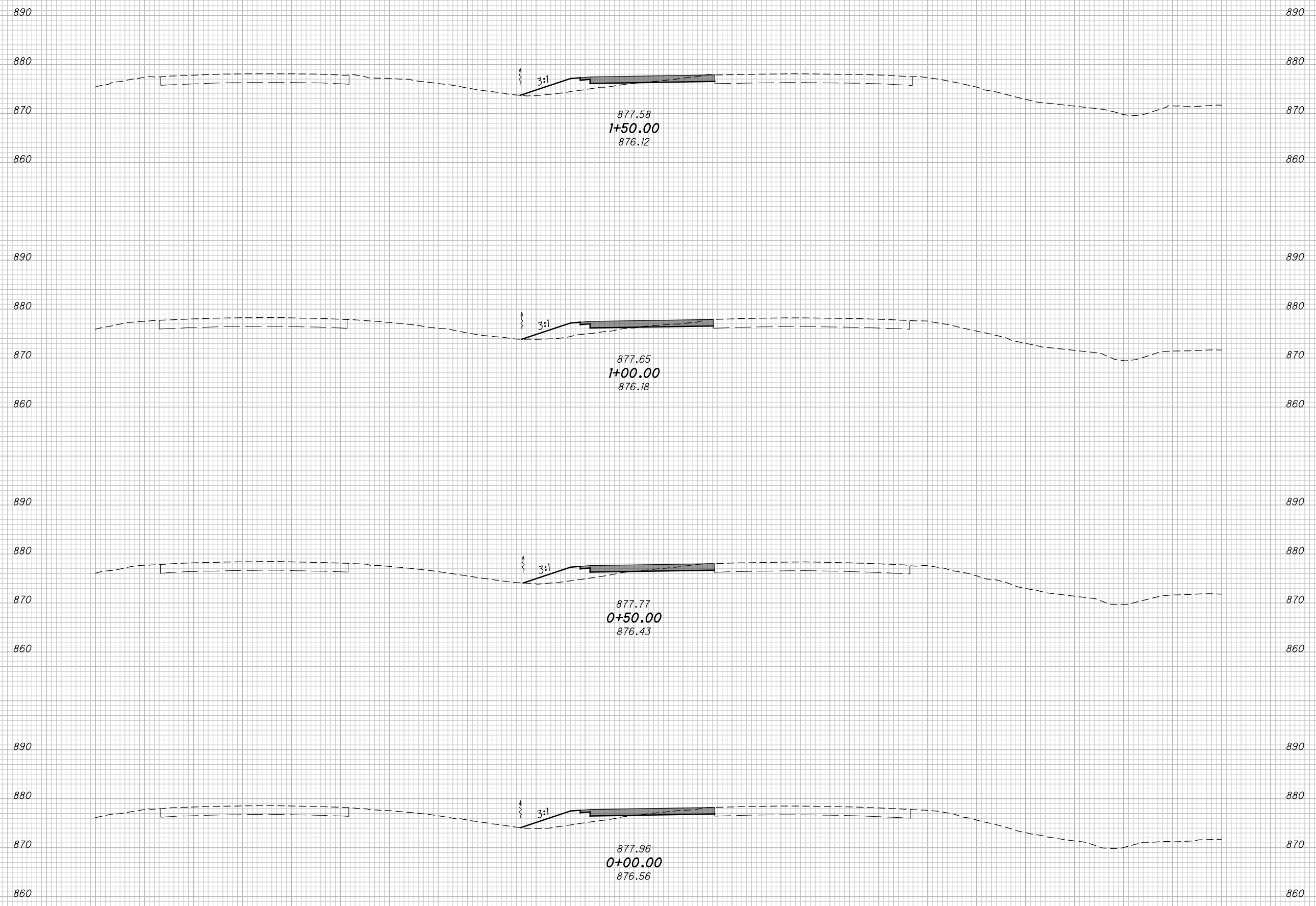
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SEEDING	
END WIDTH	SO. YDS.

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120



END CUT	AREA FILL	VOLUME		CALCULATED BER	CHECKED SMM
		CUT	FILL		
11	31	22	61		
9	31	19	58		
12	31	20	58		
12	33	23	60		
84	237	84	237		

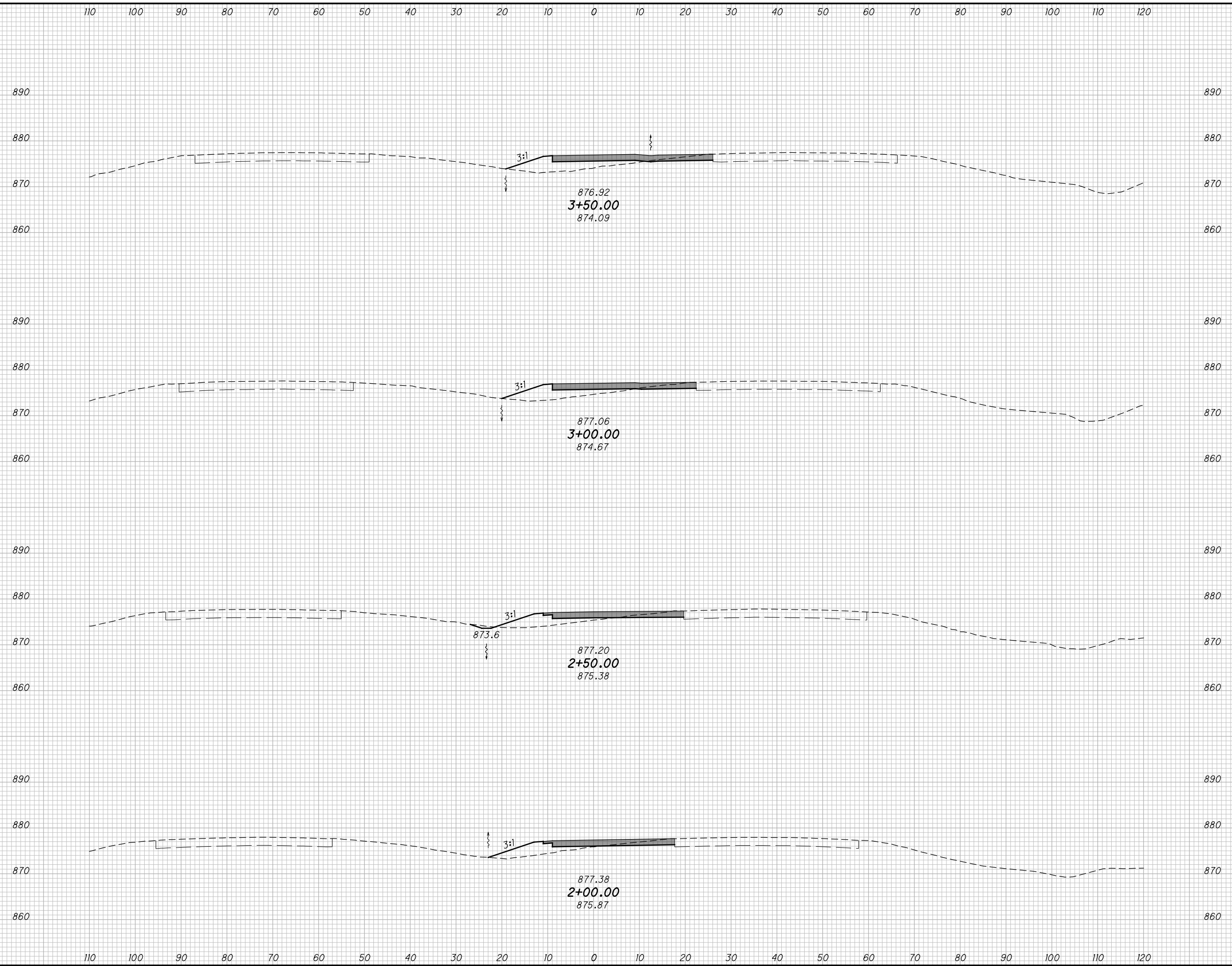
MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 0+00 TO STA. 1+50

FRA-70-0.00

99
1312

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SEEDING	
END WIDTH	SO. YDS.



END CUT	AREA FILL	VOLUME		CALCULATED BER	CHECKED SMM
		CUT	FILL		
11	54	21	107		
11	44	21	91		
14	34	24	73		
12	34	24	63		
90	334	90	334		

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 2+00 TO STA. 3+50

FRA-70-0.00

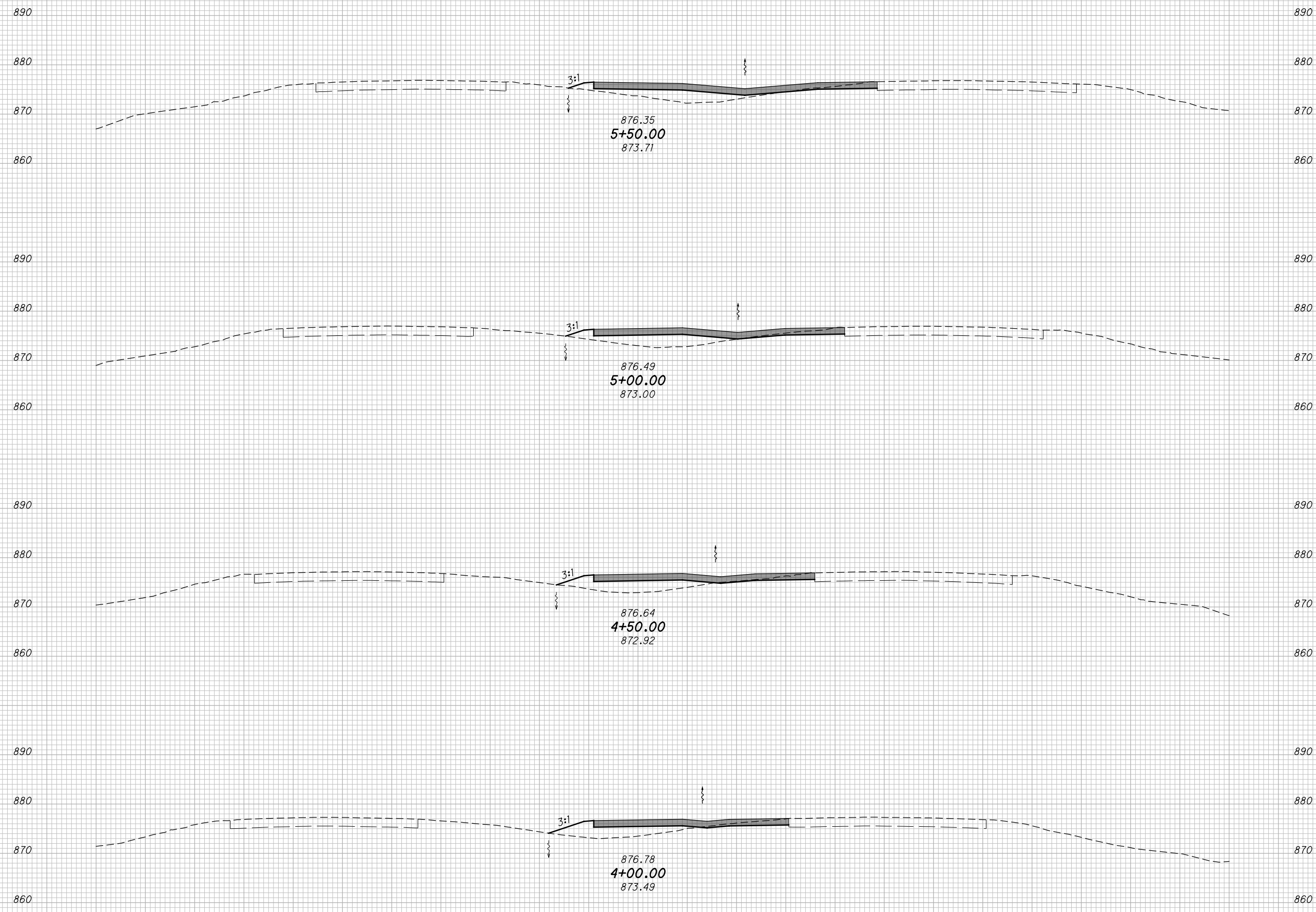
100
 1312

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SEEDING
END SO.
WIDTH YDS.

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
SMM



END AREA	VOLUME	CALCULATED	CHECKED
CUT	FILL	CUT	FILL
10	66	19	109
		20	126
11	70	19	130
9	70	19	122
11	61		
		77	487

**MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 4+00 TO STA. 5+50**

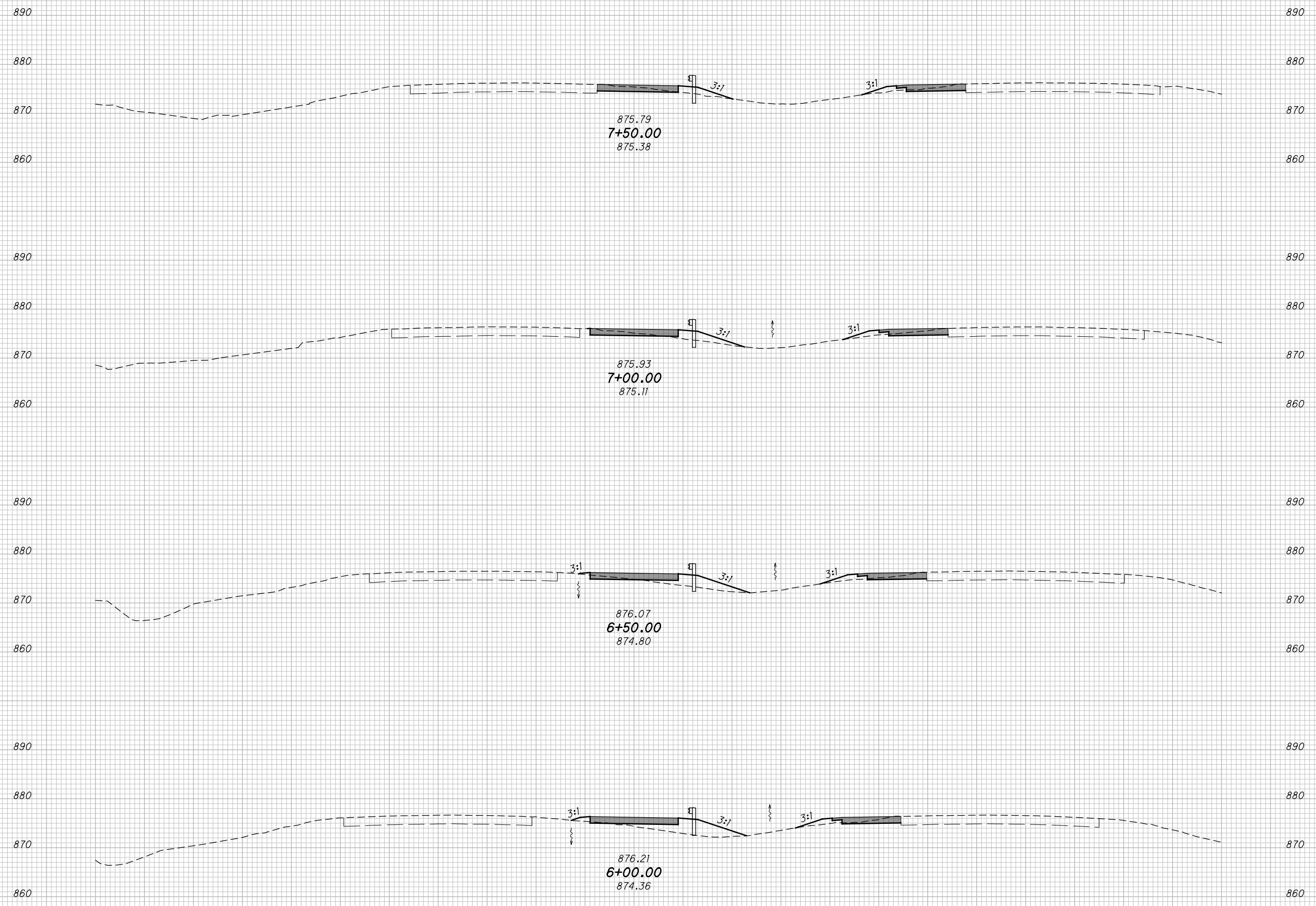
FRA-70-0.00

101
1312

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SEEDING	
END WIDTH	SO. YDS.

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120



END CUT	AREA FILL	VOLUME		CALCULATED BER	CHECKED SMM
		CUT	FILL		
23	17	44	28		
		40	37		
20	23				
		32	54		
14	35				
		23	80		
10	51				
		139	199		

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 6+00 TO STA. 7+50

FRA-70-0.00

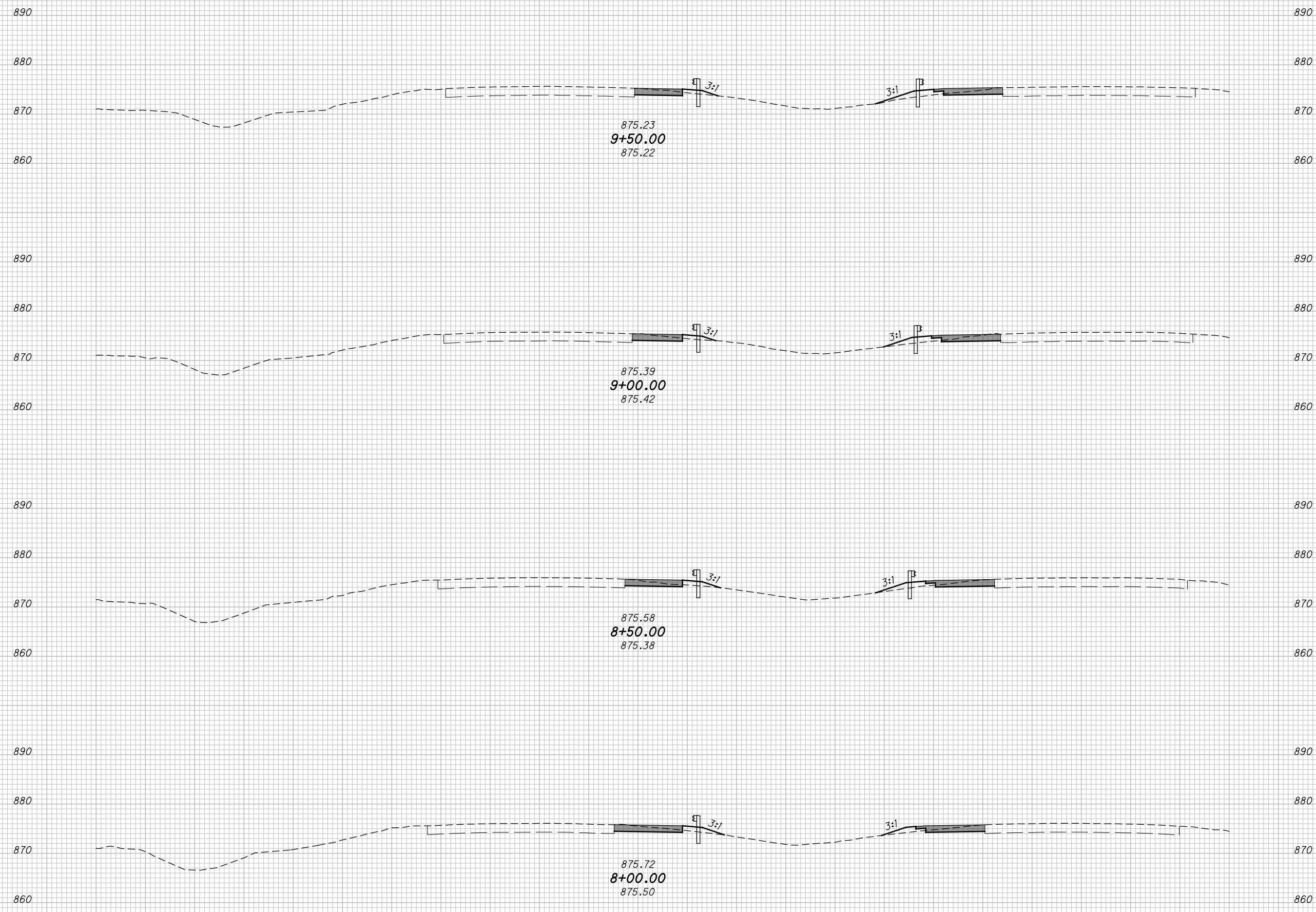
102
 1312

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SEEDING
END SO.
WIDTH YDS.

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
SMM



END AREA	VOLUME
CUT	FILL
21	15
40	27
22	14
40	27
21	15
42	26
24	13
161	105

**MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 8+00 TO STA. 9+50**

FRA-70-0.00

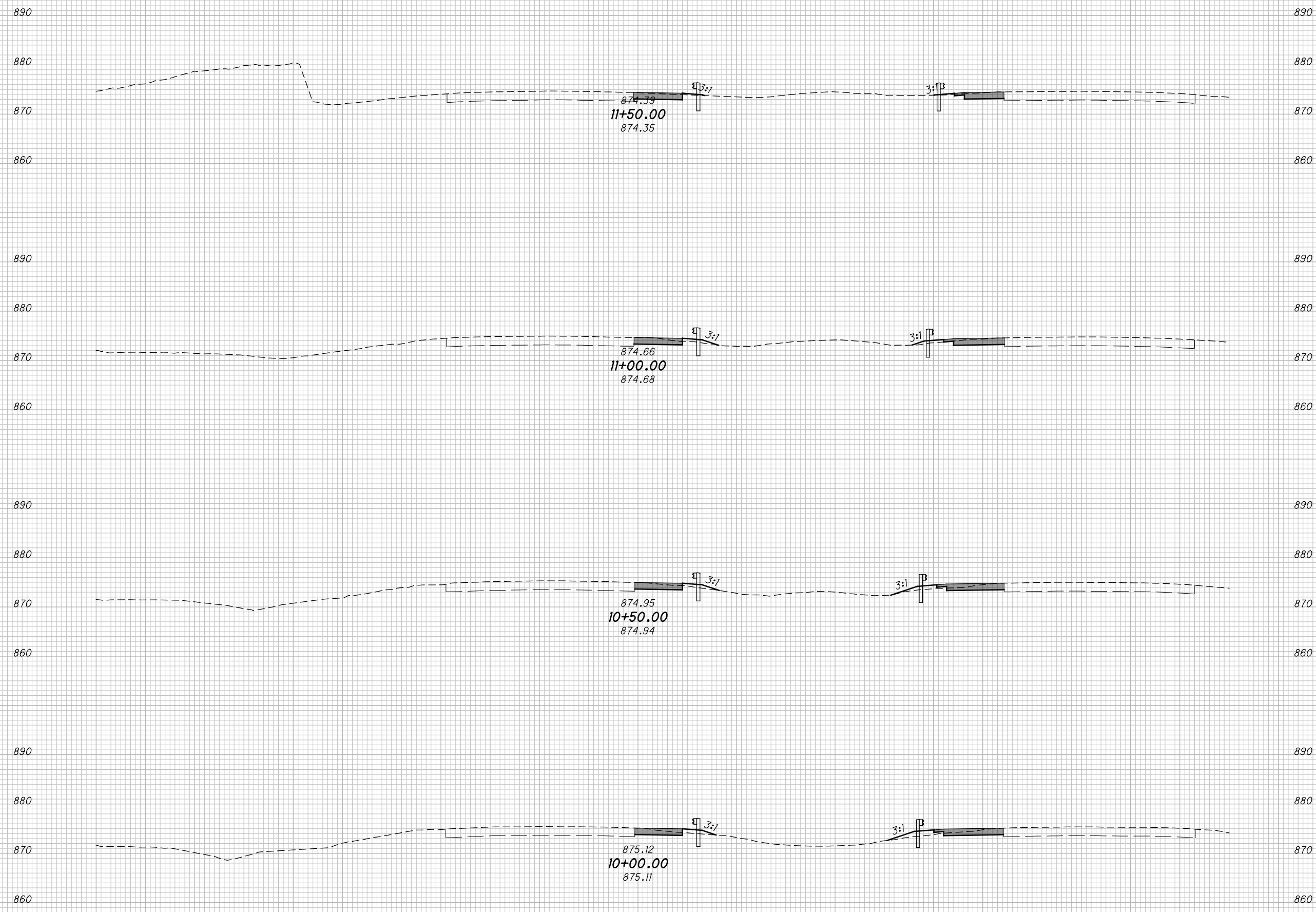
103
1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201\XMO4.dgn 4/13/2020 11:13:55 AM brieder

SEEDING
END SO.
WIDTH YDS.

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
SMM



END AREA	VOLUME
CUT	FILL
23	40
24	44
22	43
21	40
167	50

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 10+00 TO STA. 11+50

FRA-70-0.00

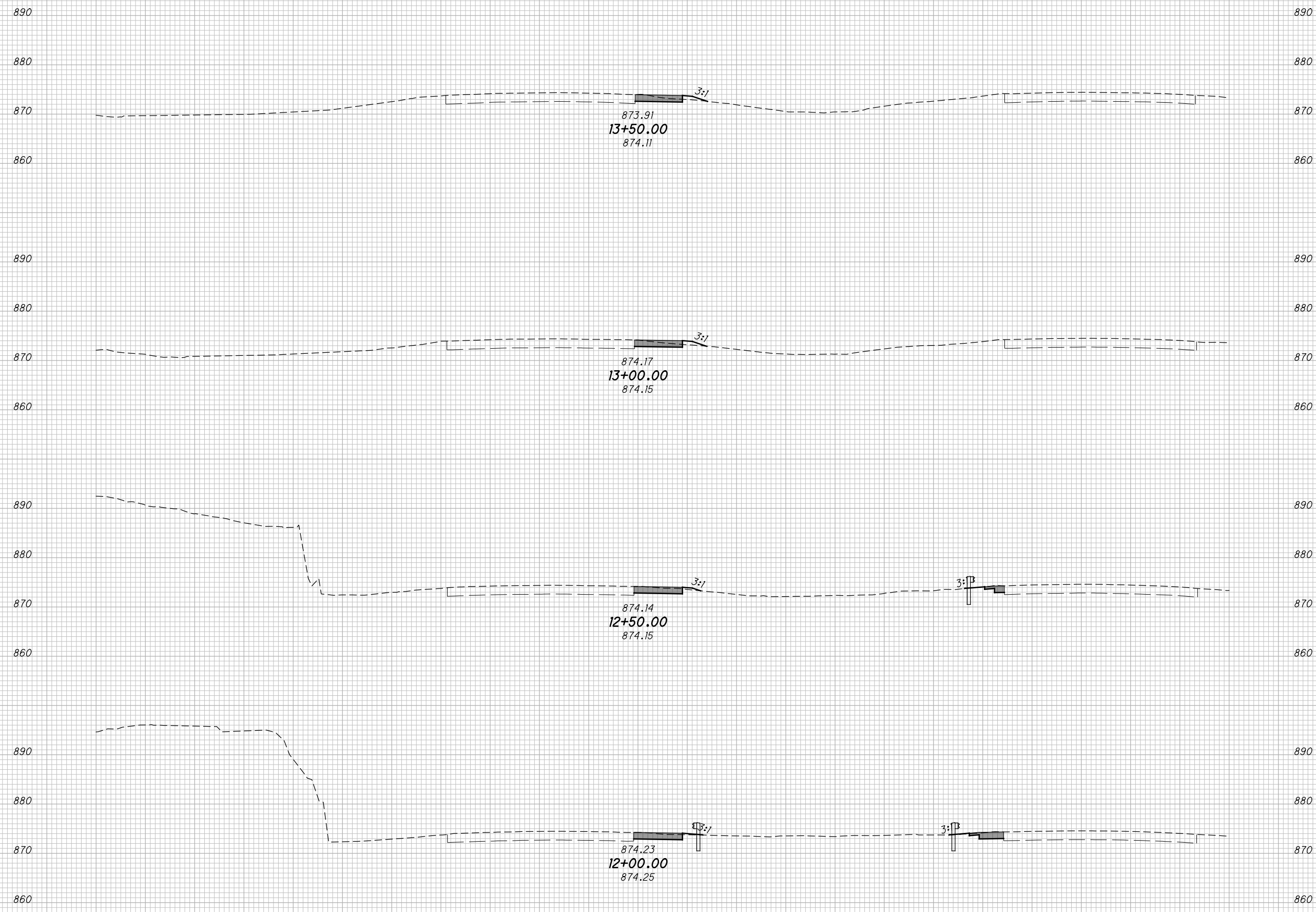
104
1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201\XMO45.dgn 4/13/2020 11:13:57 AM brieder

SEEDING
END SO.
WIDTH YDS.

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
SMM



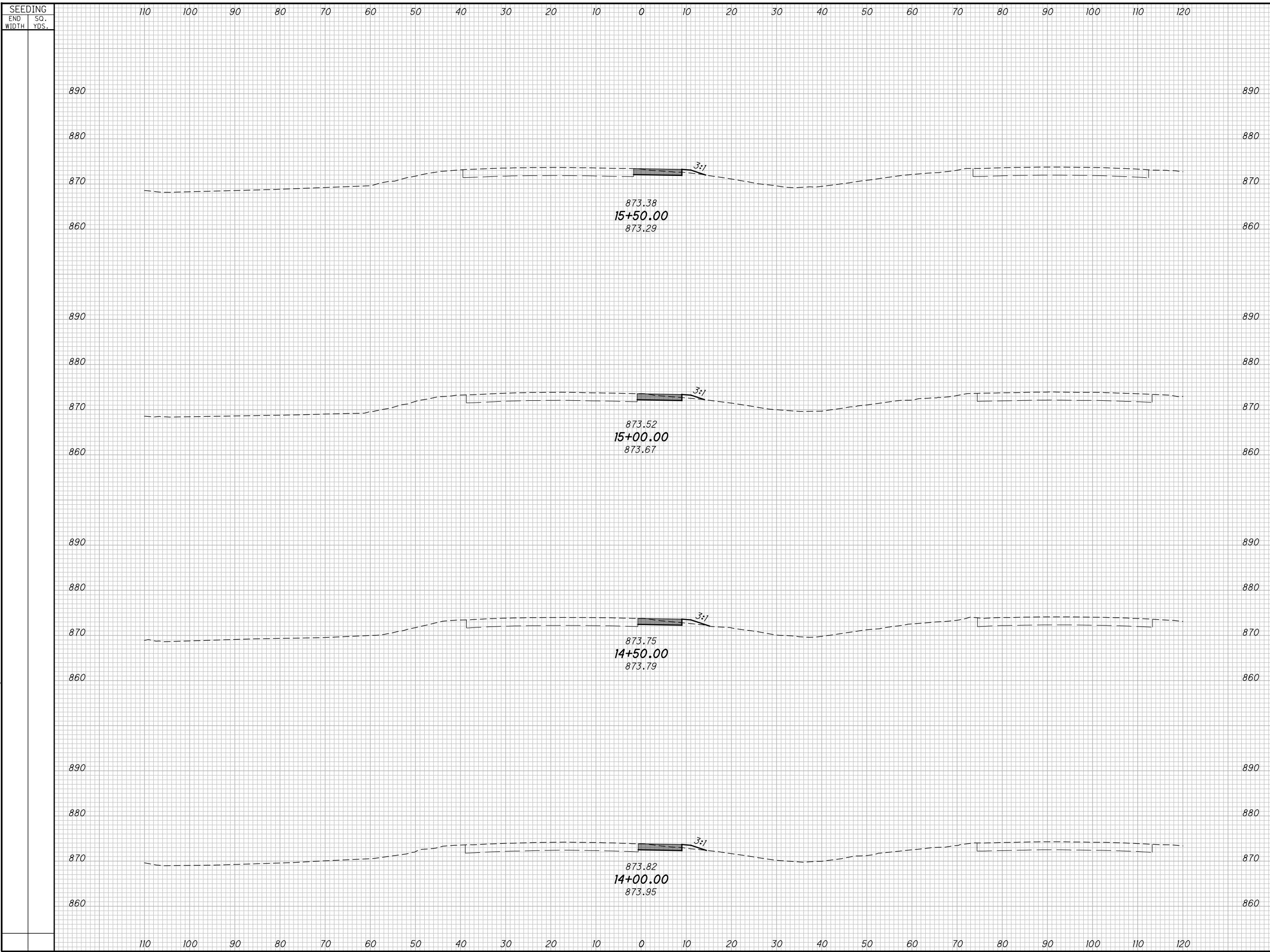
END CUT	END FILL	AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
10	3			19	6
9	3			18	6
16	2			24	5
20	2			34	4
95	21				

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
 PRE-PHASE 1 CROSS SECTIONS - STA. 12+00 TO STA. 13+50

FRA-70-0.00

105
1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201\XMO46.dgn 4/13/2020 11:13:58 AM brieder



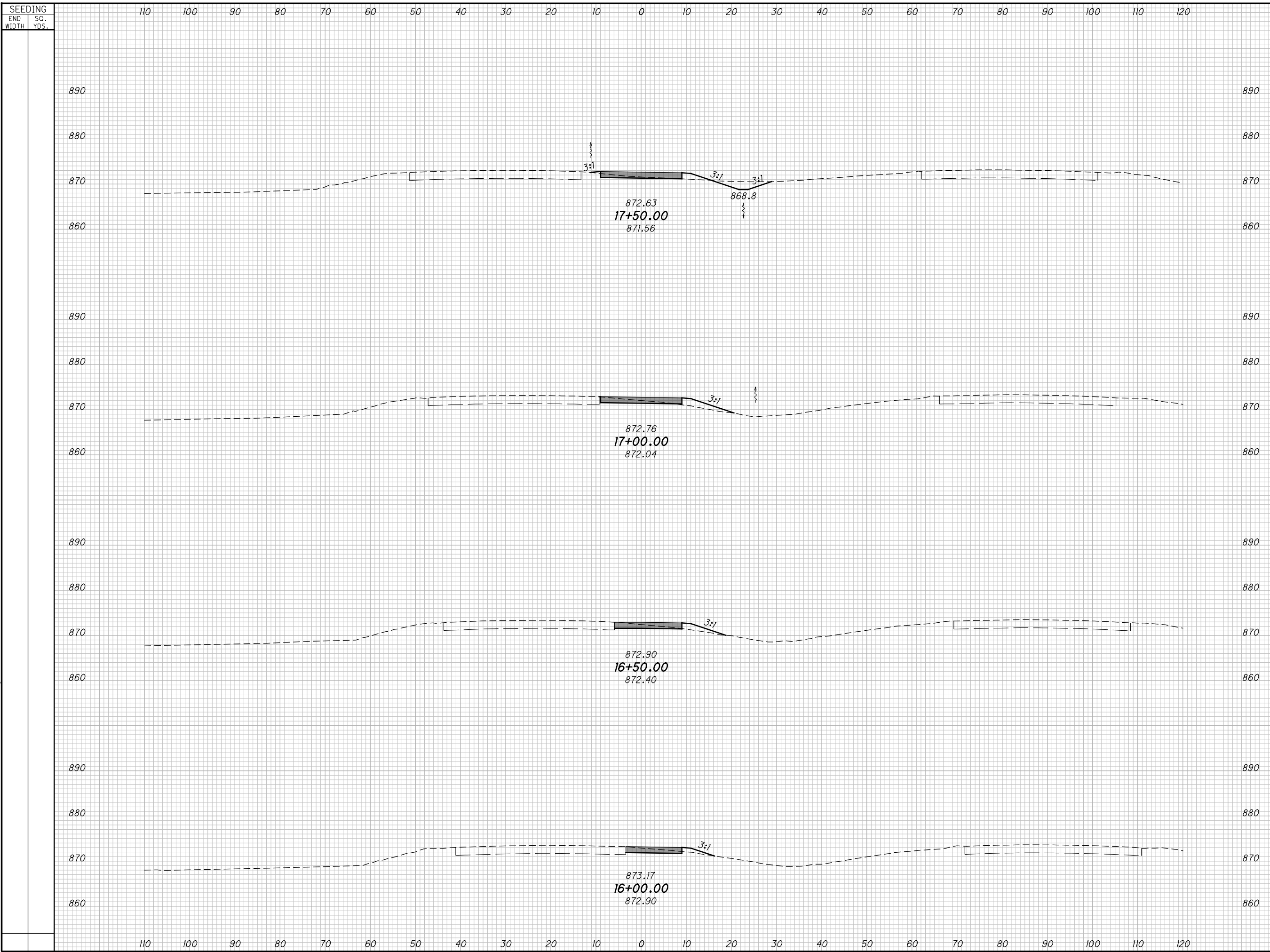
END STA	AREA		VOLUME		CALCULATED BER	CHECKED SMM
	CUT	FILL	CUT	FILL		
11		3	21	8		
10		3	20	6		
10		4	19	7		
10		3	19	7		
79		28				

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 14+00 TO STA. 15+50

FRA-70-0.00

106
 1312

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END	AREA		VOLUME		CALCULATED BER	CHECKED SMM
	CUT	FILL	CUT	FILL		
890			21	35		
870	19	7				
860			28	18		
890						
870	11	12				
860			21	19		
890						
870	11	8				
860						
890			21	12		
870	11	5				
860						
890			91	84		

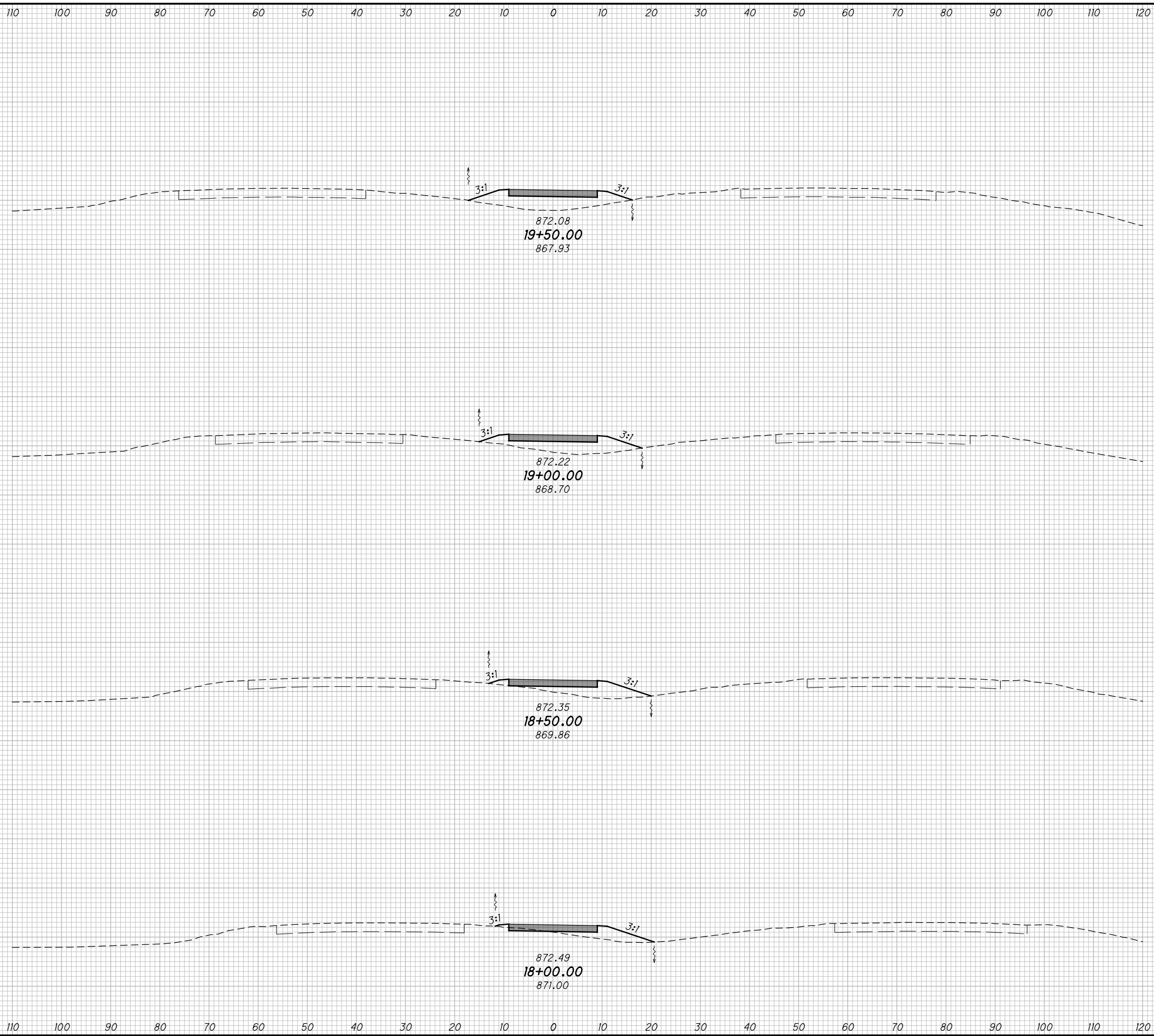
MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
 PRE-PHASE 1 CROSS SECTIONS - STA. 16+00 TO STA. 17+50

FRA-70-0.00

107
 1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201\XMO48.dgn 4/13/2020 11:14:00 AM brieder

SEEDING	
END WIDTH	SO. YDS.



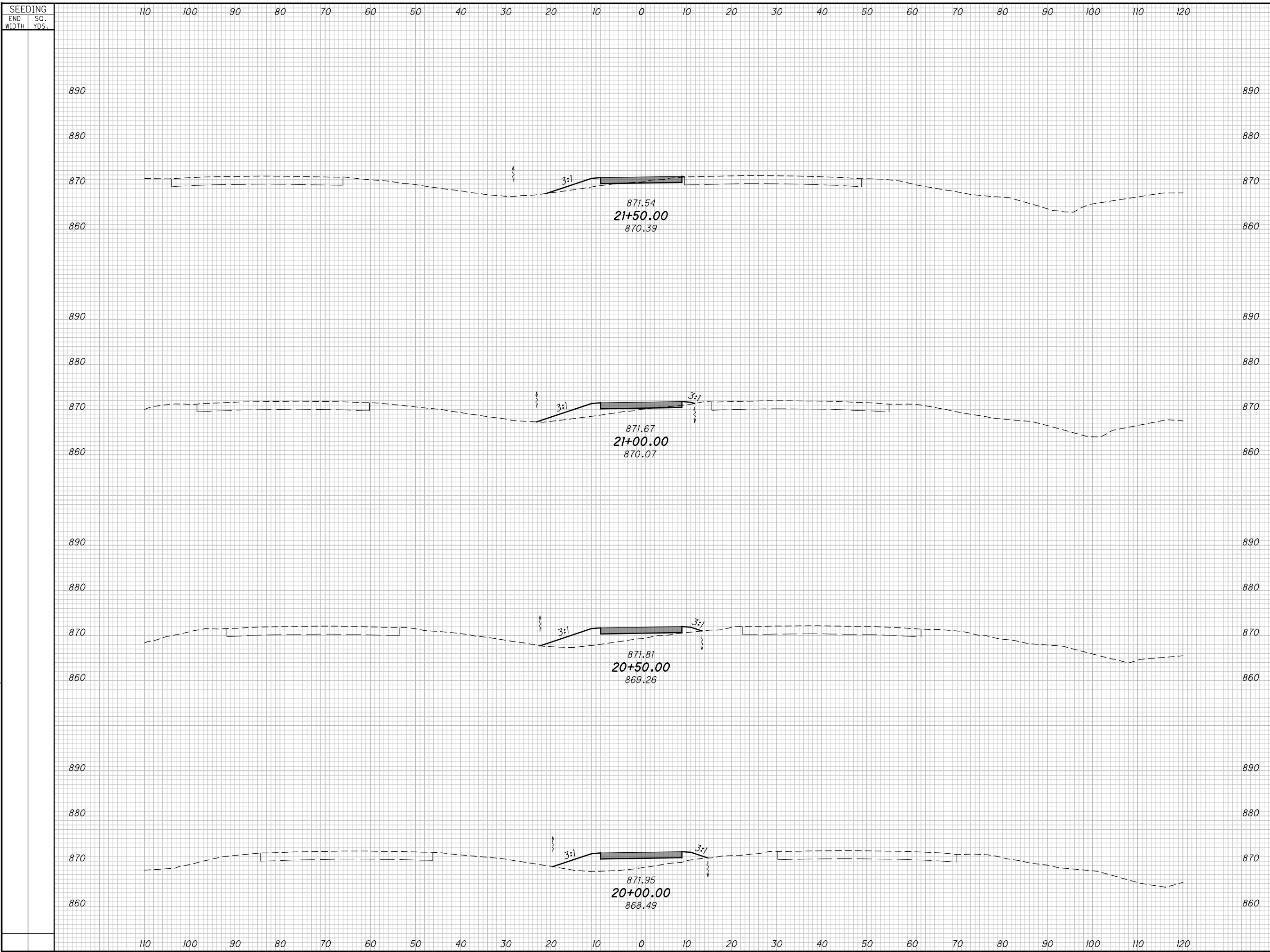
END CUT	AREA FILL	VOLUME		CALCULATED BER	CHECKED SMM
		CUT	FILL		
0	75	0	135		
0	63	0	128		
1	47	0	102		
4	72	4	72		
3	30	3	30		
		4	437		

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 18+00 TO STA. 19+50

FRA-70-0.00

108
 1312

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END CUT	AREA FILL	VOLUME		CALCULATED BER	CHECKED SMM
		CUT	FILL		
8	15	17	21		
2	35	10	47		
0	57	2	86		
0	70	0	118		
		29	272		

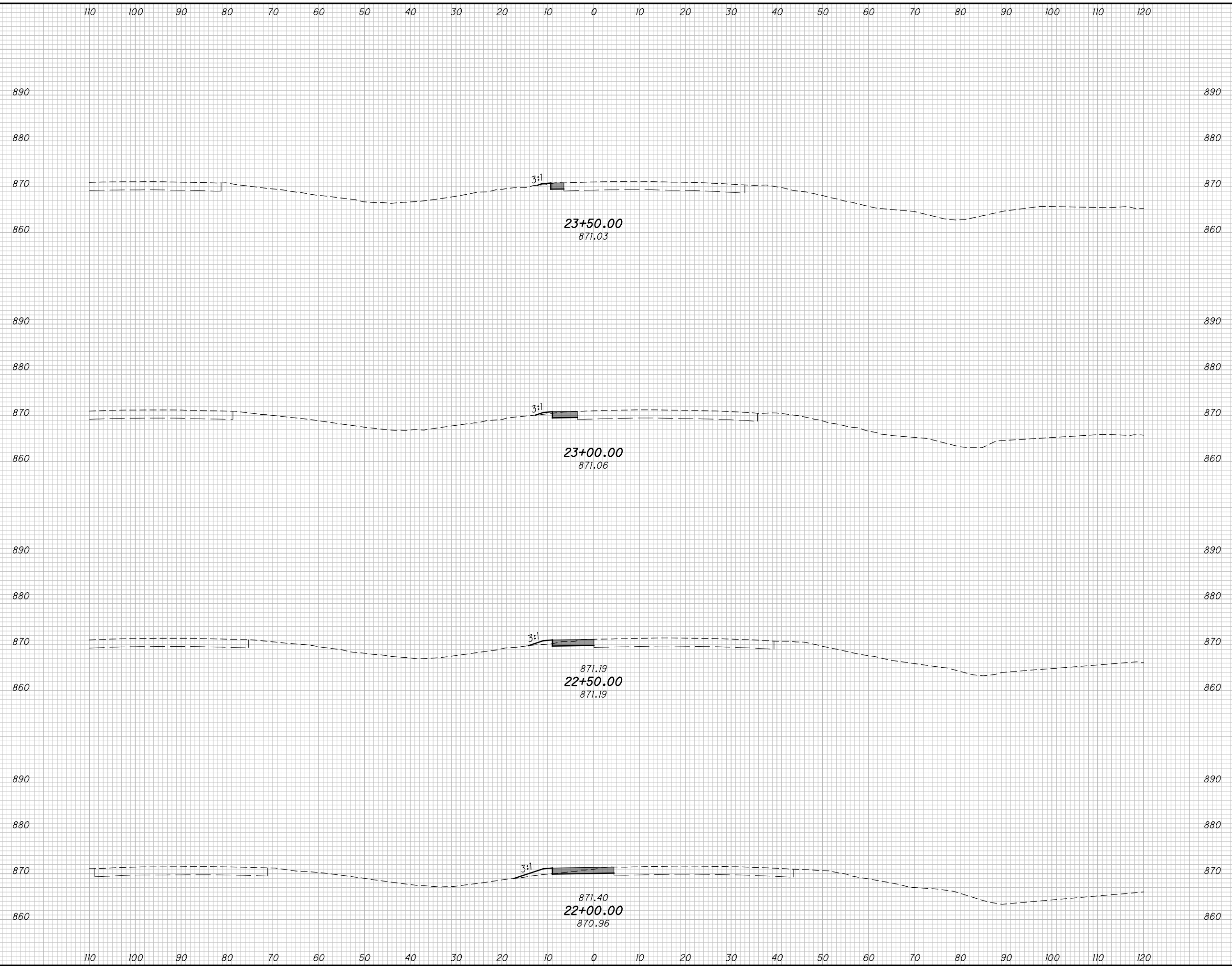
**MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 20+00 TO STA. 21+50**

FRA-70-0.00

109
1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201XM050.dgn 4/13/2020 11:14:03 AM brieder

SEEDING	
END WIDTH	SO. YDS.



END AREA		VOLUME		CALCULATED BER	CHECKED SMM
CUT	FILL	CUT	FILL		
4	1	7	2		
7	1	11	2		
10	3	16	4		
10	7	19	10		
		53	18		

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 22+00 TO STA. 23+50

FRA-70-0.00

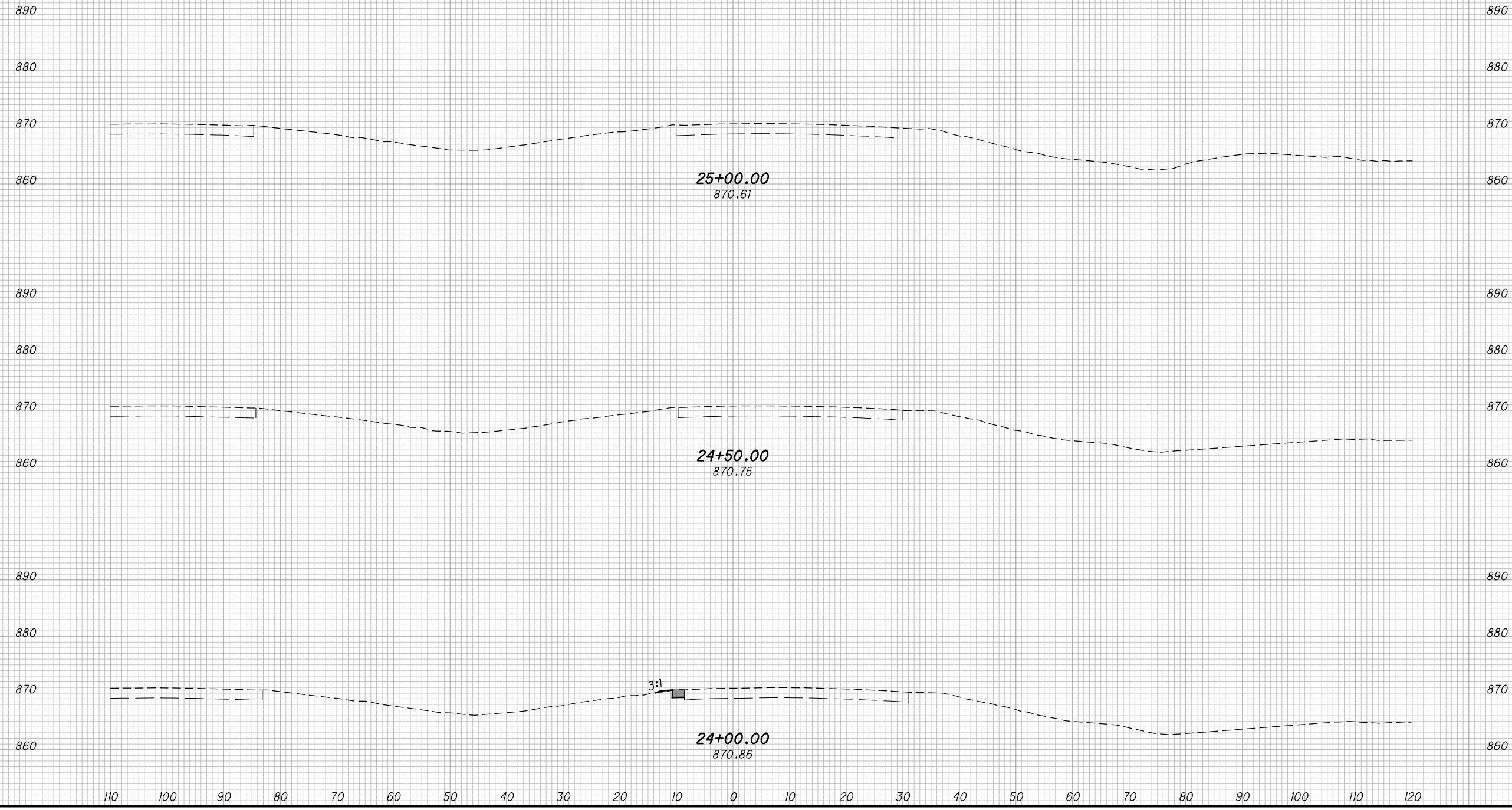
110
1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201XM051.dgn 4/13/2020 11:14:04 AM brieder

SEEDING
END SO.
WIDTH YDS.

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA		VOLUME		CALCULATED BER	CHECKED SMM
CUT	FILL	CUT	FILL		



0	0	0	0		
0	0	0	0		
3	1	3	1		
3	1	3	1		

MAINTENANCE OF TRAFFIC - CULVERT CROSSOVER
PRE-PHASE 1 CROSS SECTIONS - STA. 24+00 TO STA. 25+00

FRA-70-0.00

111
1312

J:\20130212\ODOT\FRA\107201\mot\sheet\107201MP220.dgn 4/13/2020 11:15:25 AM brieder

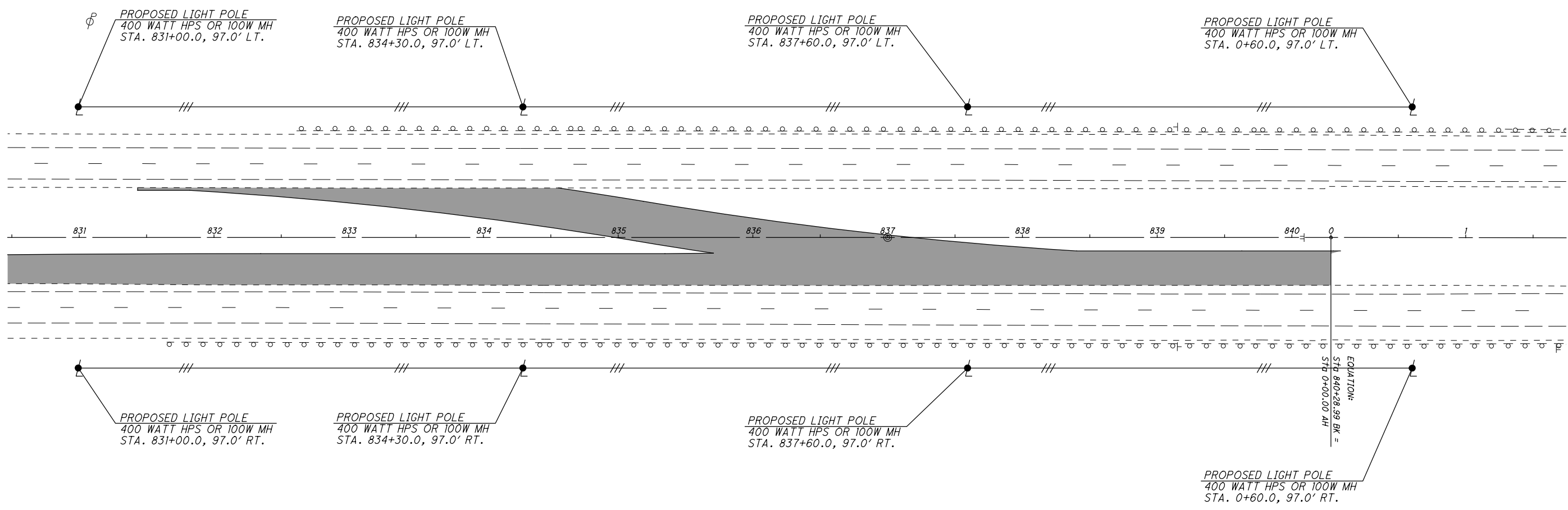
CALCULATED
BER
CHECKED
SMM

HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
CROSSOVER LIGHTING - SOUTH**

FRA-71-0.00

112
1312



PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 831+00.0, 97.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 834+30.0, 97.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 837+60.0, 97.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 0+60.0, 97.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 831+00.0, 97.0' RT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 834+30.0, 97.0' RT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 837+60.0, 97.0' RT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 0+60.0, 97.0' RT.

- NOTES:
1. ALL WORK ZONE LIGHTING SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING MT-100.00
 2. POWER FOR CROSSOVER LIGHTING SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ODOT POWER SHALL NOT BE USED TO POWER THE WORK ZONE LIGHTING SYSTEM.
 3. CROSSOVER LIGHTING SHALL BE INSTALLED PRIOR TO PHASE 3 AND SHALL REMAIN IN PLACE THROUGH PHASE 3A.

- LEGEND
- PROPOSED LIGHT POLE
 - - - PROPOSED OVERHEAD CIRCUIT CABLE

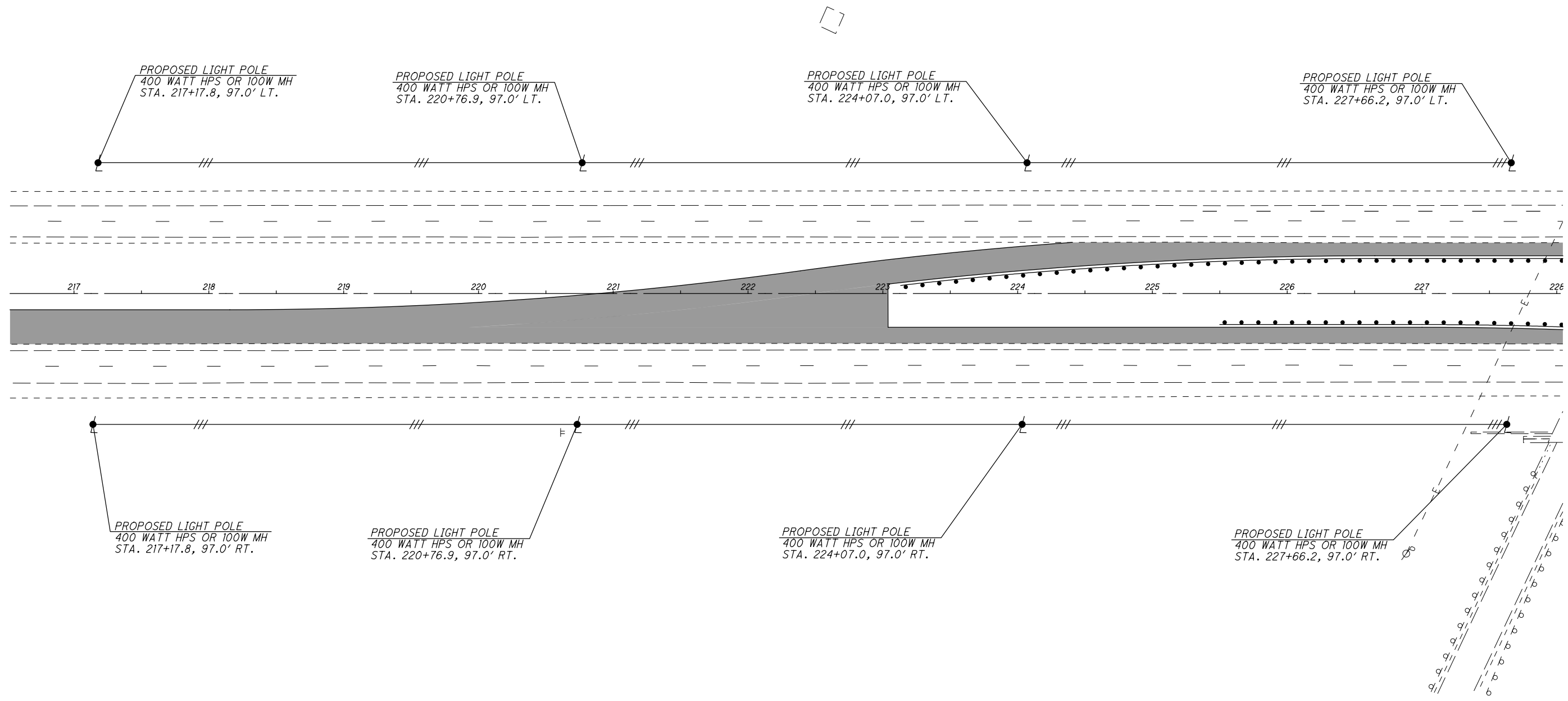


CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
CROSSOVER LIGHTING - CULVERT CROSSOVER**

FRA-71-0.00

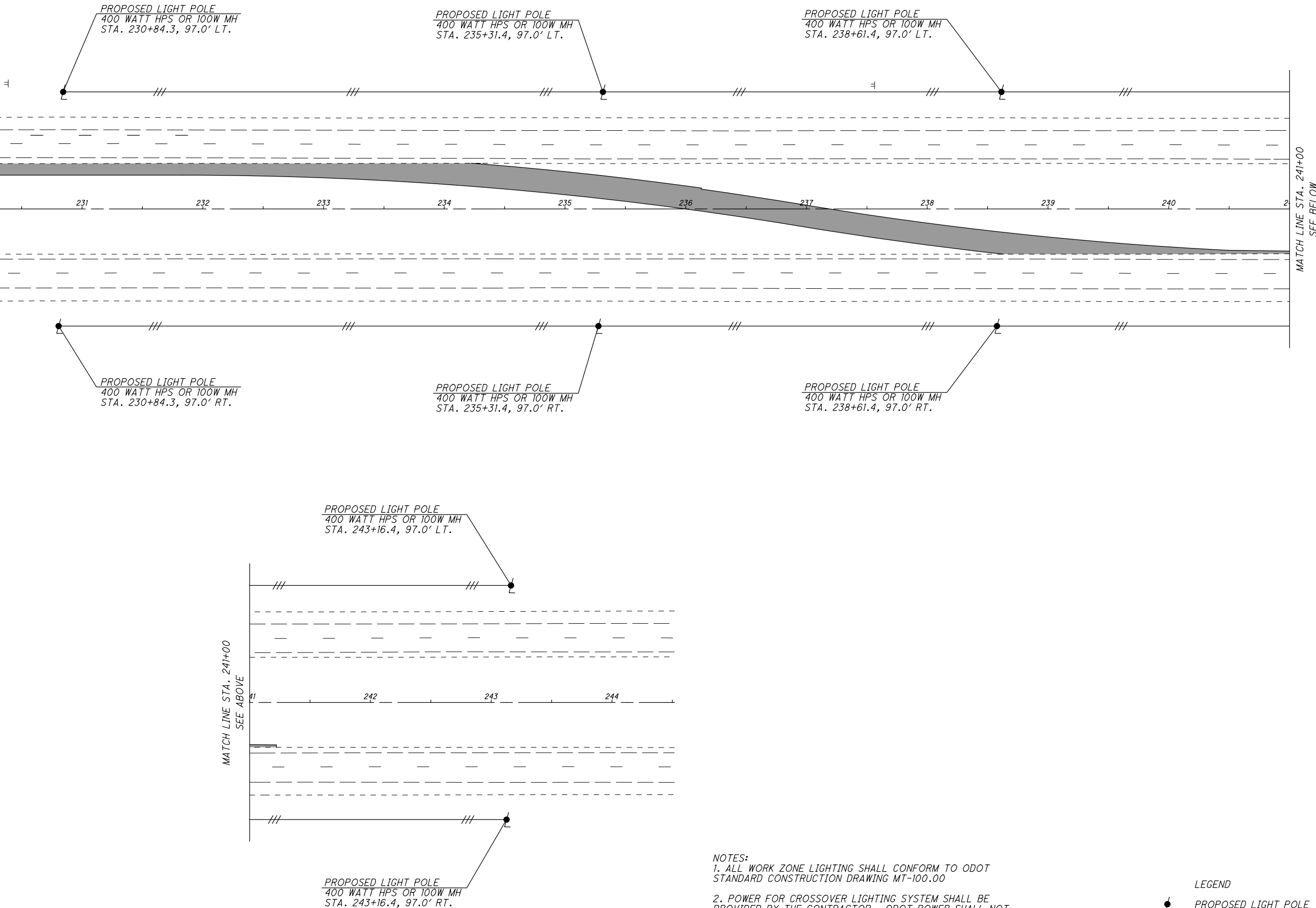
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
- NOTES:**
1. ALL WORK ZONE LIGHTING SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING MT-100.00
 2. POWER FOR CROSSOVER LIGHTING SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ODOT POWER SHALL NOT BE USED TO POWER THE WORK ZONE LIGHTING SYSTEM.

- LEGEND**
- PROPOSED LIGHT POLE
 - PROPOSED OVERHEAD CIRCUIT CABLE

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NOTES:
 1. ALL WORK ZONE LIGHTING SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING MT-100.00
 2. POWER FOR CROSSOVER LIGHTING SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ODOT POWER SHALL NOT BE USED TO POWER THE WORK ZONE LIGHTING SYSTEM.

LEGEND
 PROPOSED LIGHT POLE
 PROPOSED OVERHEAD CIRCUIT CABLE



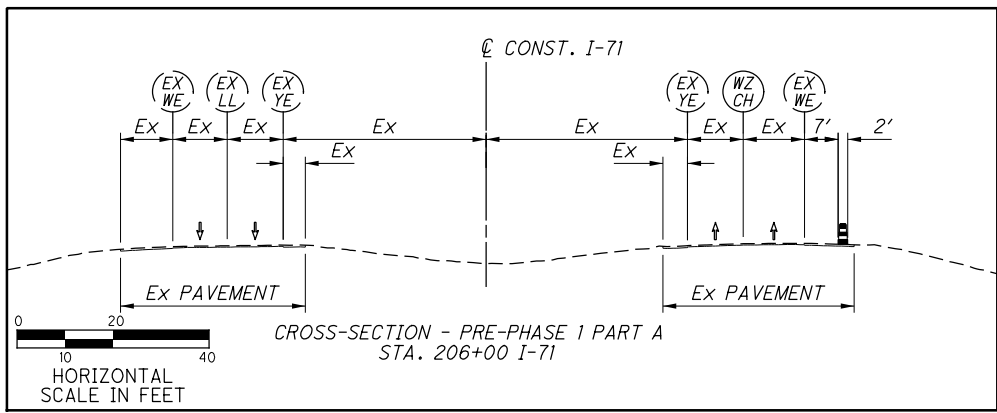
0 20 40 60 80
HORIZONTAL SCALE IN FEET

CALCULATED BER CHECKED SMM

**MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
CROSSOVER LIGHTING - CULVERT CROSSOVER**

FRA-71-0.00

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① $\Delta = 7^\circ 11' 51''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 196.55'$
 $L = 392.59'$
 $E = 6.18'$
 $C = 392.33'$
 $C.B. = N 68^\circ 40' 41'' E$

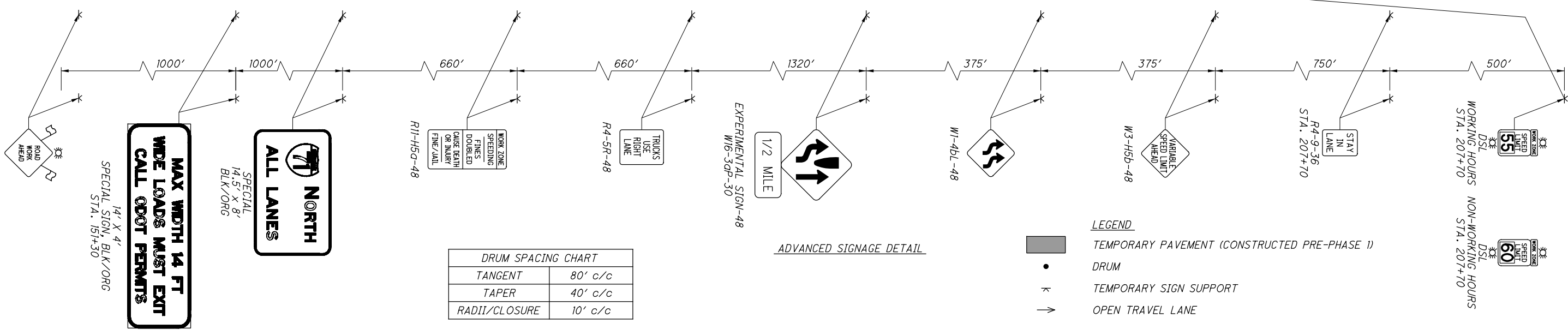
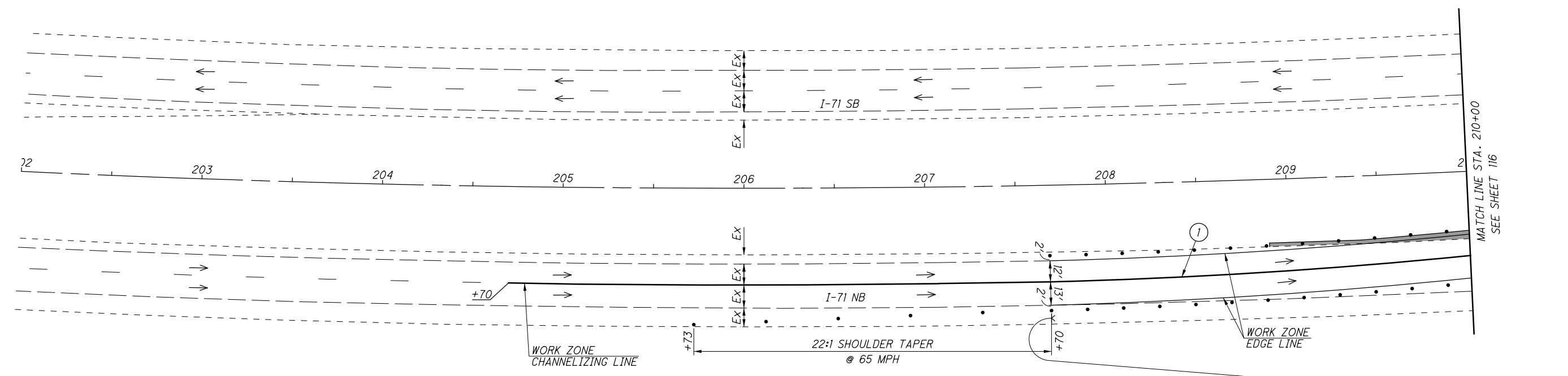
CALCULATED
 BER
 CHECKED
 SMM

1

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
PART A - I-71 - STA. 202+00 TO STA. 210+00

FRA-71-1-0-00

115
 1312



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

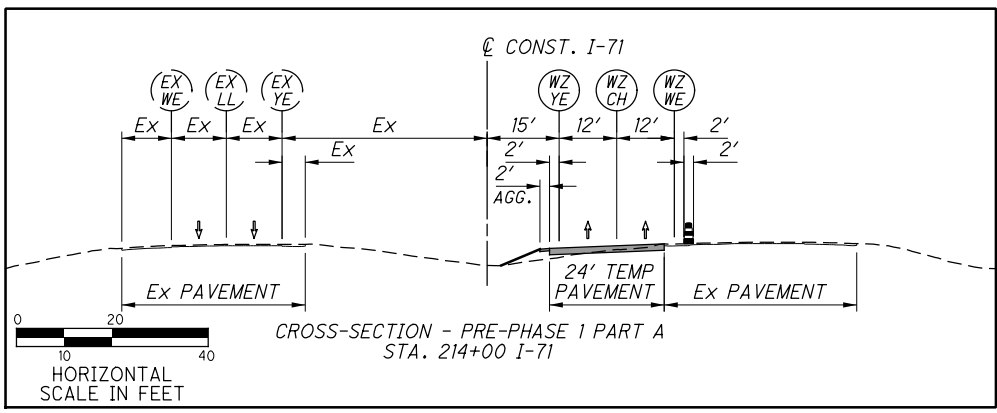
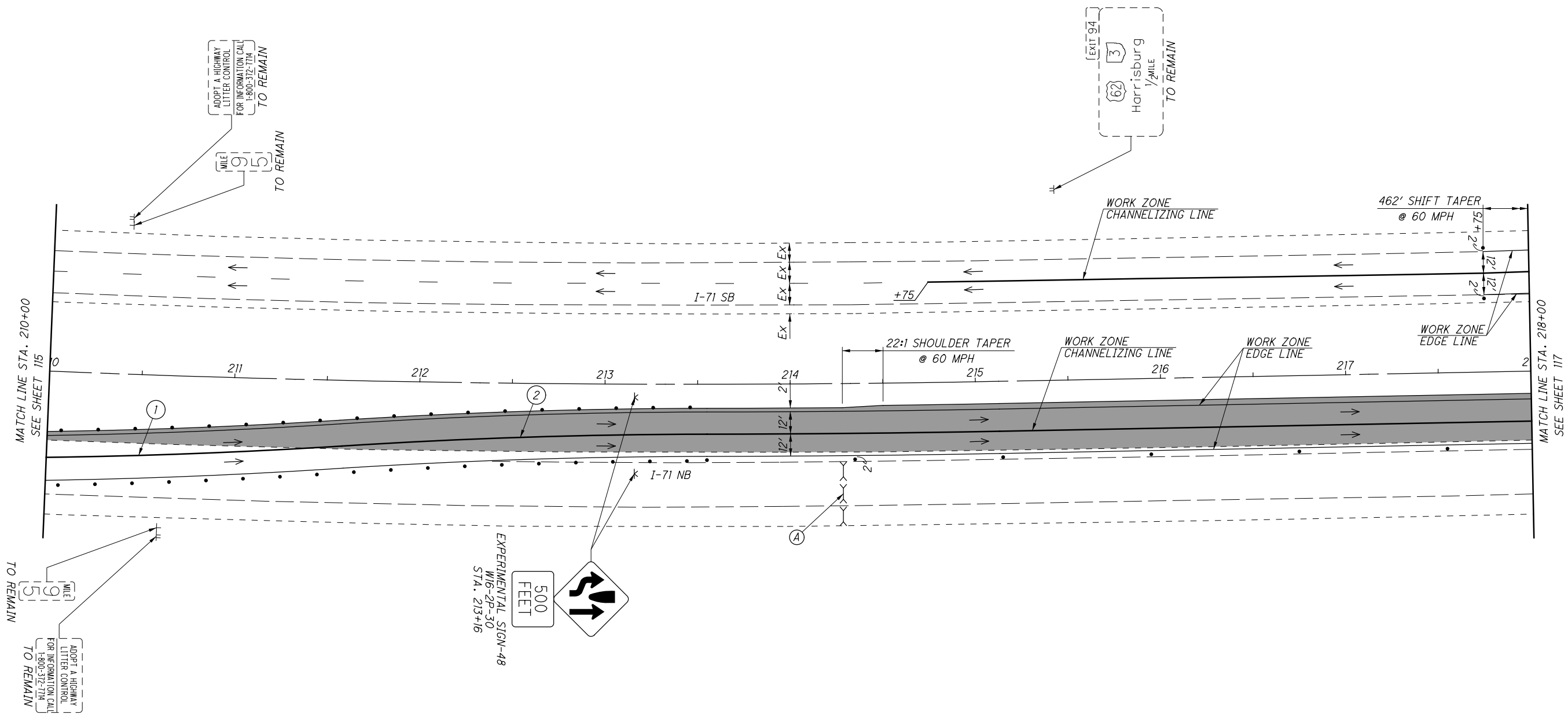
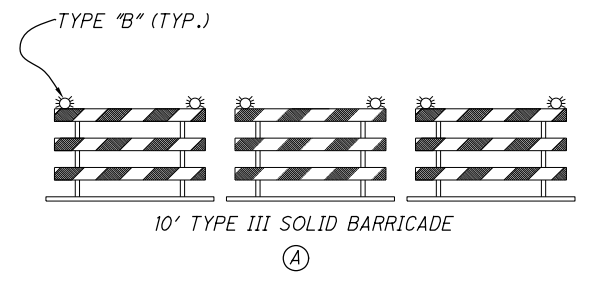


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
PART A - I-71 - STA. 210+00 TO STA. 218+00

FRA-71-0.00

- ① $\Delta = 7^\circ 11' 51''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 196.55'$
 $L = 392.59'$
 $E = 6.18'$
 $C = 392.33'$
 $C.B. = N 68^\circ 40' 41'' E$
- ② $\Delta = 98^\circ 42' 07''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 98.70'$
 $L = 197.34'$
 $E = 1.56'$
 $C = 197.31'$
 $C.B. = N 66^\circ 53' 17'' E$



NOTES:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 211+50 AND 223+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - TYPE III BARRICADE

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① $\Delta = 7^\circ 48' 41''$ (LT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 213.37'$
 $L = 426.08'$
 $E = 7.28'$
 $C = 425.75'$
 $C.B. = N 63^\circ 44' 26'' E$

② $\Delta = 7^\circ 48' 41''$ (RT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 213.37'$
 $L = 426.08'$
 $E = 7.28'$
 $C = 425.75'$
 $C.B. = N 63^\circ 44' 26'' E$

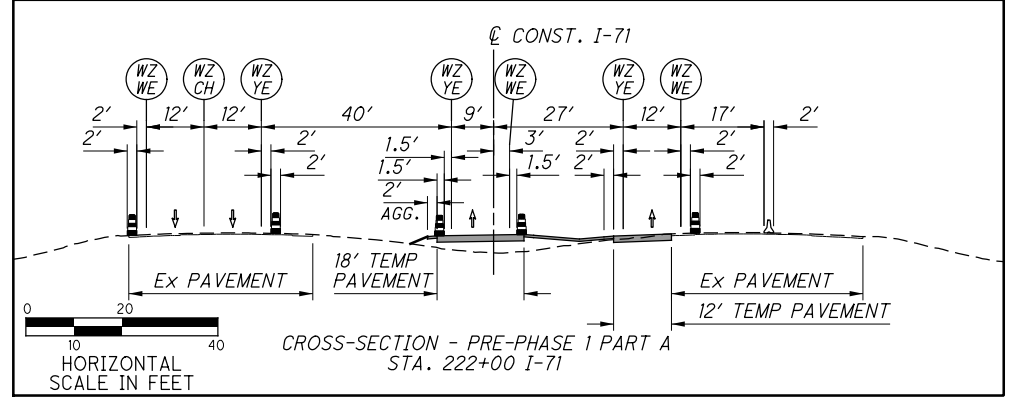
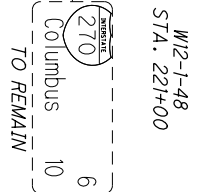
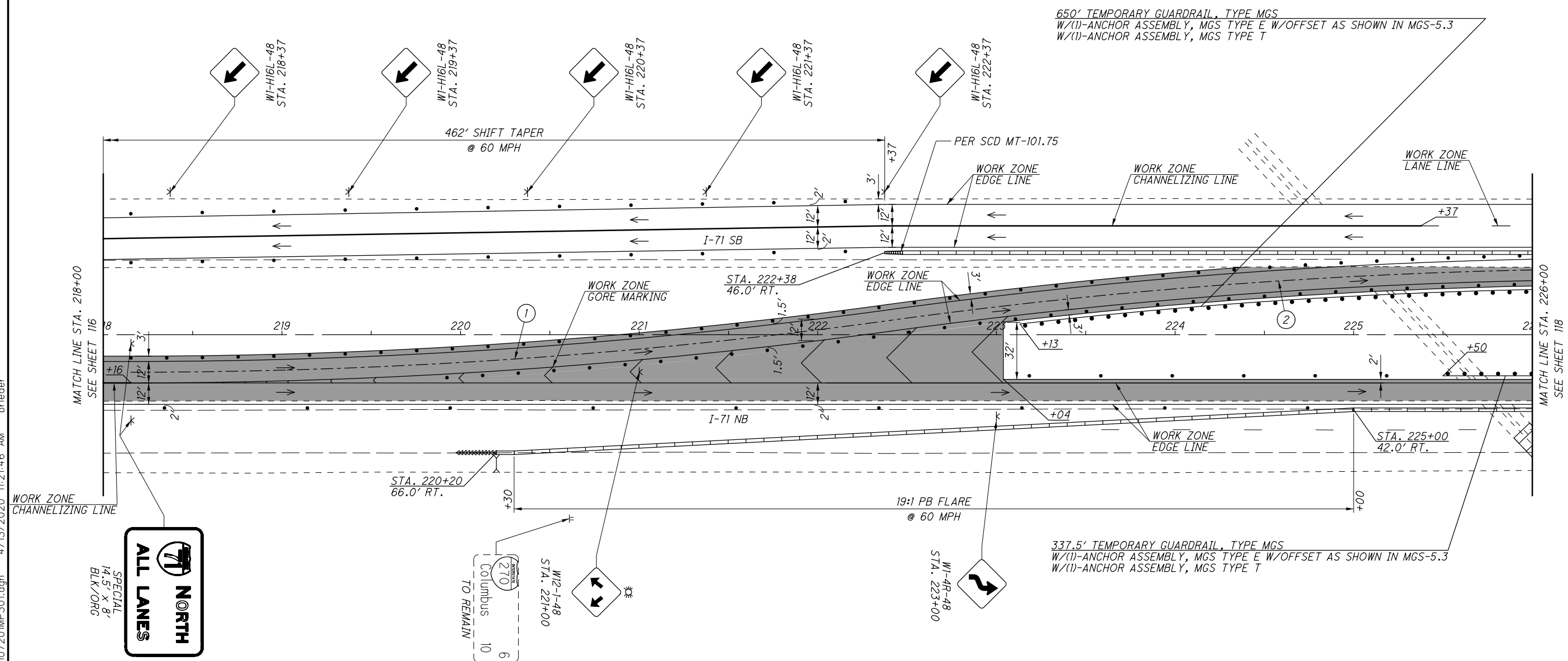
CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
PART A - I-71 - STA. 218+00 TO STA. 226+00

FRA-71-0.00

117
 1312

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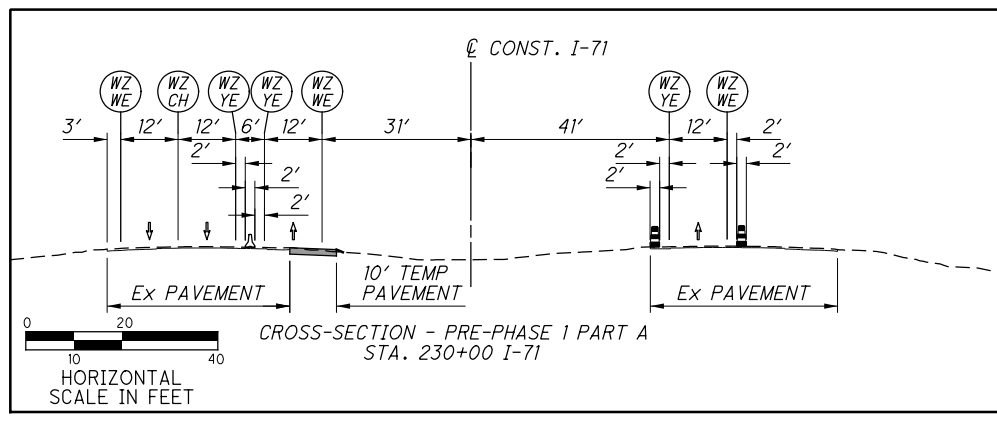
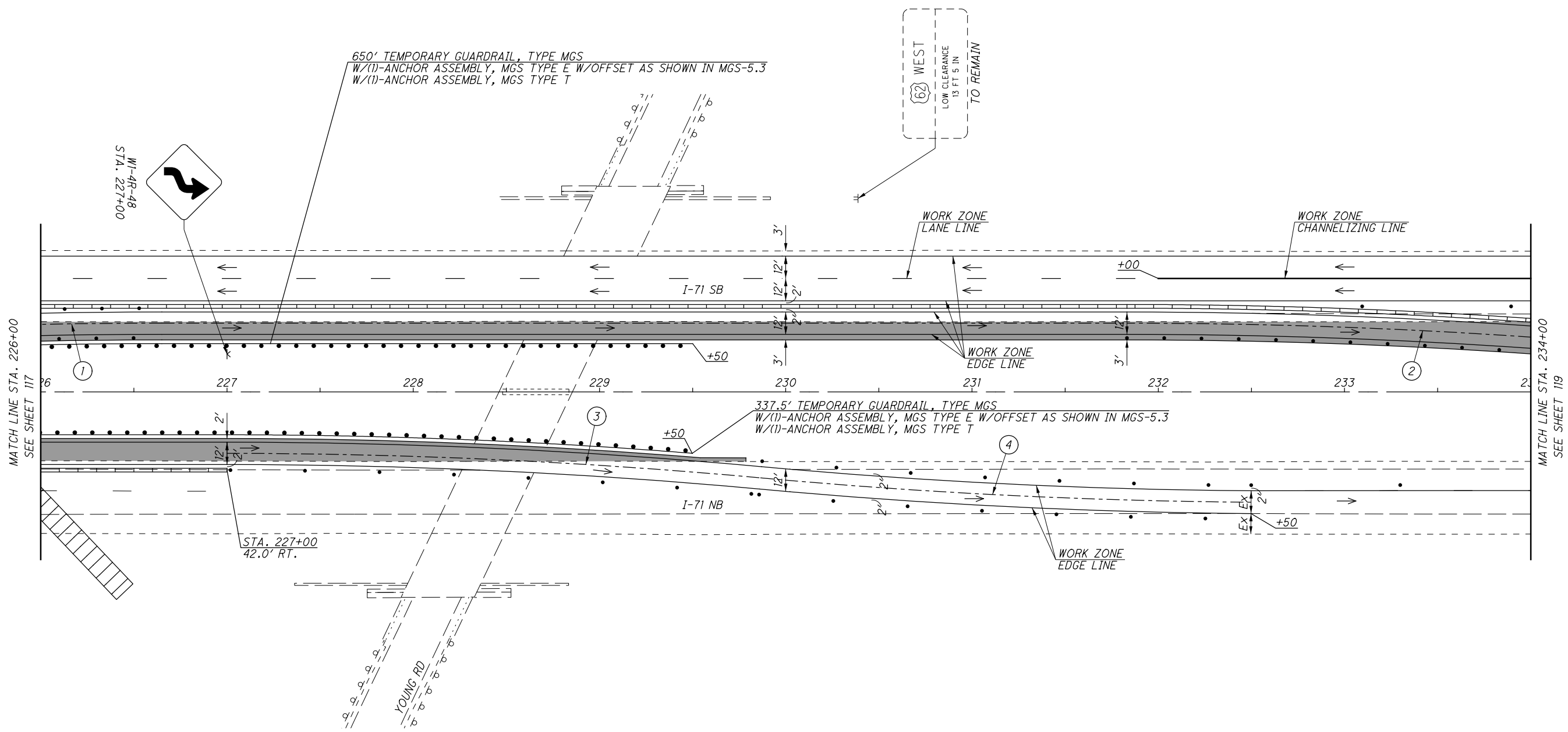


NOTES:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 211+50 AND 223+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PRE-PHASE 1 PART A WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TAPERED END SECTION
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - OPEN TRAVEL LANE
 - DRUM

- ① $\Delta = 7^\circ 48' 41''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 213.37'$
 $L = 426.08'$
 $E = 7.28'$
 $C = 425.75'$
 $C.B. = N 63^\circ 44' 26'' E$
- ② $\Delta = 9^\circ 24' 56''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 257.37'$
 $L = 513.57'$
 $E = 10.58'$
 $C = 513.00'$
 $C.B. = N 72^\circ 21' 15'' E$
- ③ $\Delta = 5^\circ 15' 36''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 143.55'$
 $L = 286.91'$
 $E = 3.30'$
 $C = 286.80'$
 $C.B. = N 70^\circ 16' 35'' E$
- ④ $\Delta = 4^\circ 50' 05''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 131.94'$
 $L = 263.71'$
 $E = 2.78'$
 $C = 263.64'$
 $C.B. = N 70^\circ 29' 20'' E$

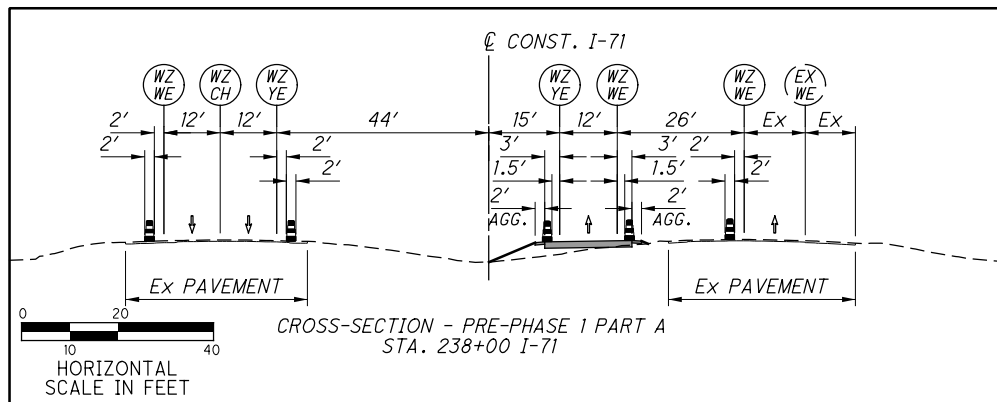
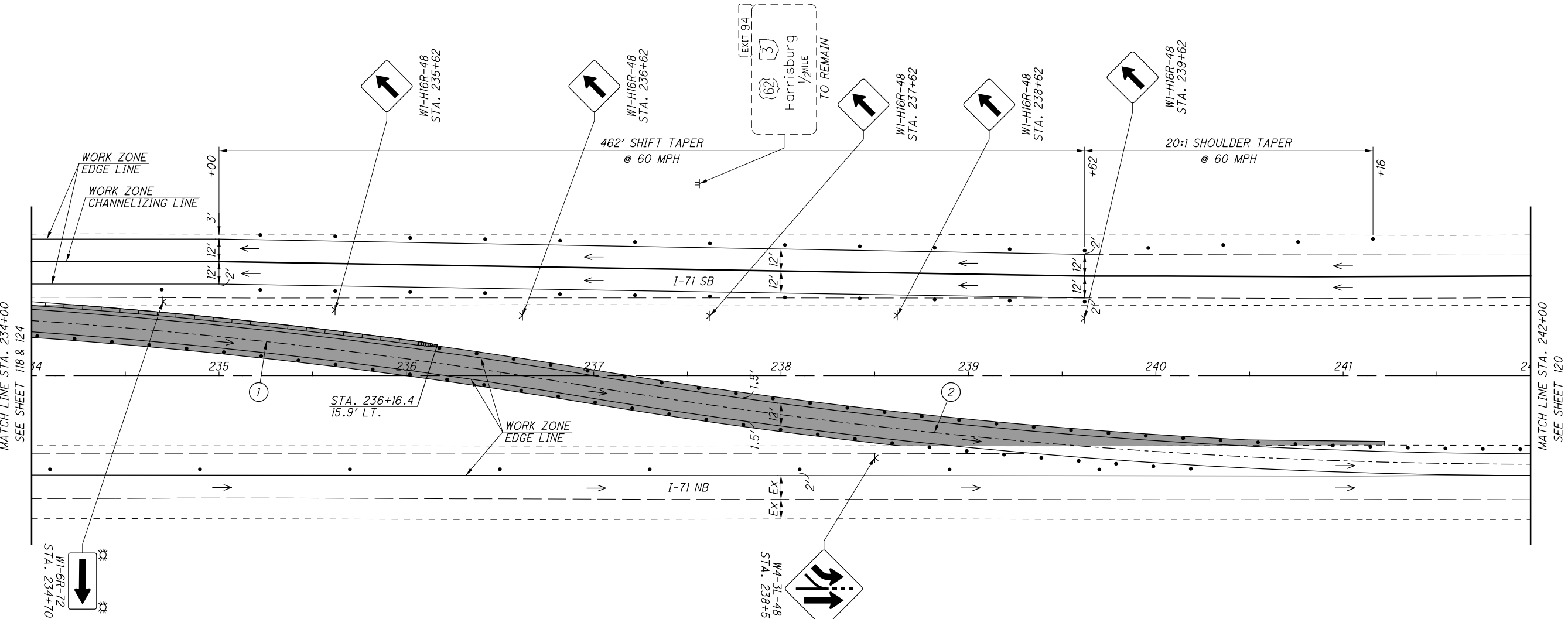


NOTES:
1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 227+50 AND 232+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

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① $\Delta = 9^\circ 24' 56''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 257.37'$
 $L = 513.57'$
 $E = 10.58'$
 $C = 513.00'$
 $C.B. = N 72^\circ 21' 15'' E$

② $\Delta = 9^\circ 33' 40''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 261.37'$
 $L = 521.52'$
 $E = 10.91'$
 $C = 520.91'$
 $C.B. = N 72^\circ 16' 53'' E$



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE I)
 - PORTABLE BARRIER
 - TAPERED END SECTION
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM



CALCULATED BY BER CHECKED BY SMM

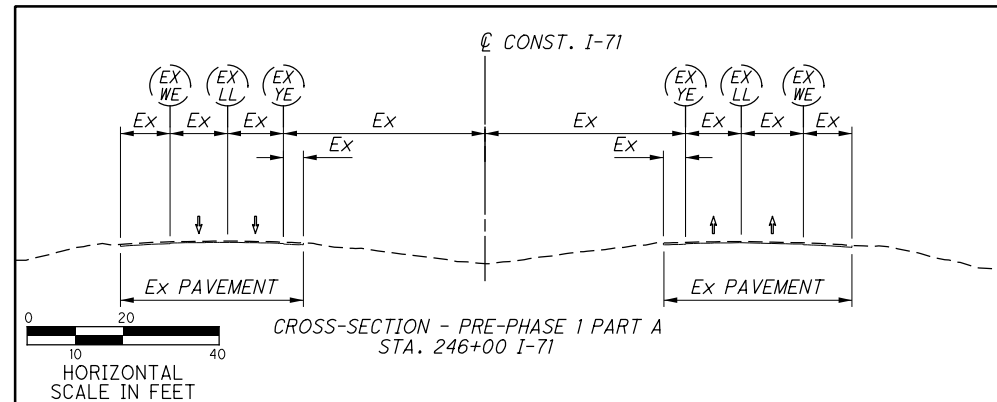
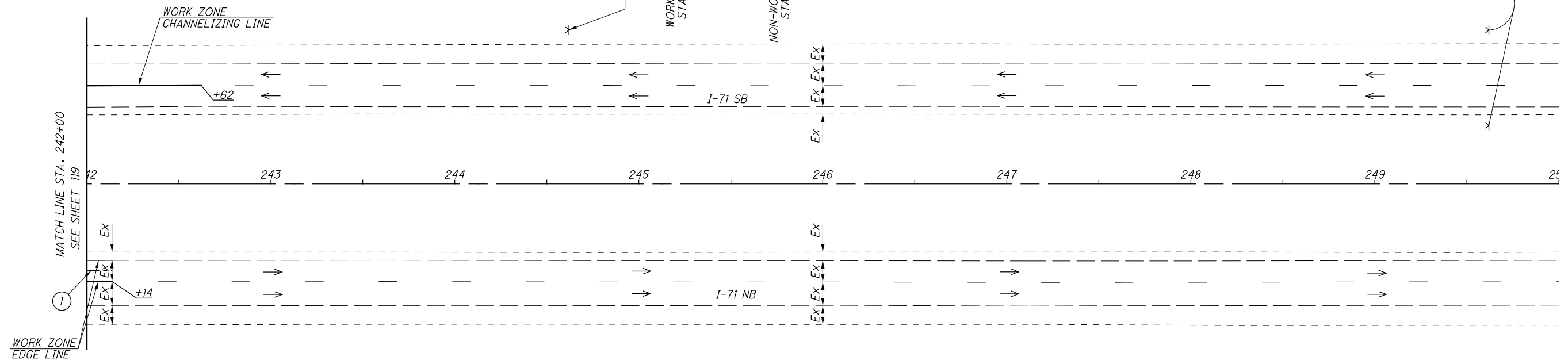
MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
PART A - I-71 - STA. 234+00 TO STA. 242+00

FRA-71-0.00

119
1312

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① $\Delta = 9^\circ 33' 40''$ (LT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 261.37'$
 $L = 521.52'$
 $E = 10.91'$
 $C = 520.91'$
 $C.B. = N 72^\circ 16' 53'' E$



LEGEND
 [Symbol] TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 [Symbol] TEMPORARY SIGN SUPPORT
 [Symbol] OPEN TRAVEL LANE



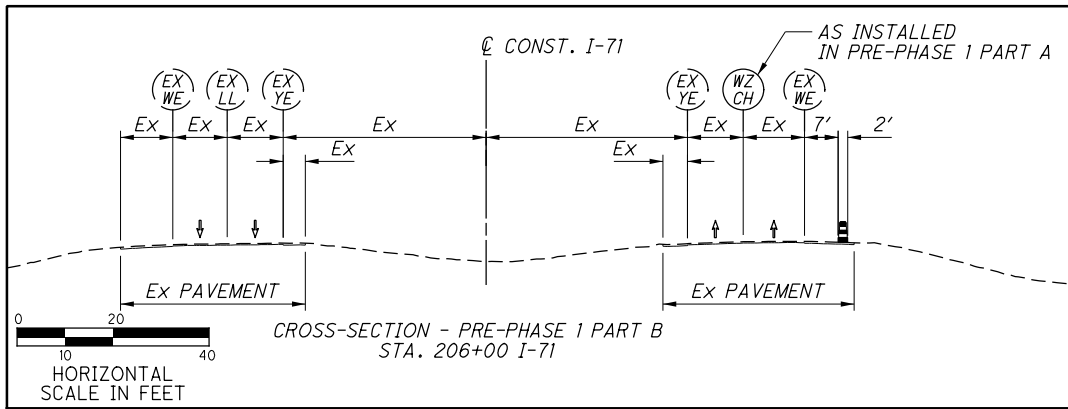
MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
 PART A - I-71 - STA. 242+00 TO STA. 250+00

FRA-71-0.00

120
1312

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① $\Delta = 2^\circ 58' 34''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 81.18'$
 $L = 162.33'$
 $E = 1.05'$
 $C = 162.31'$
 $C.B. = N 73^\circ 30' 51'' E$

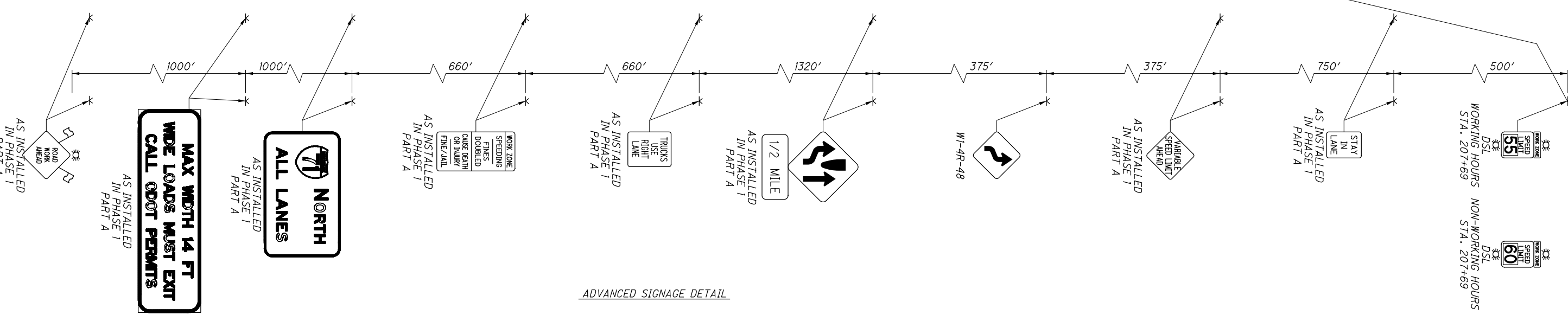
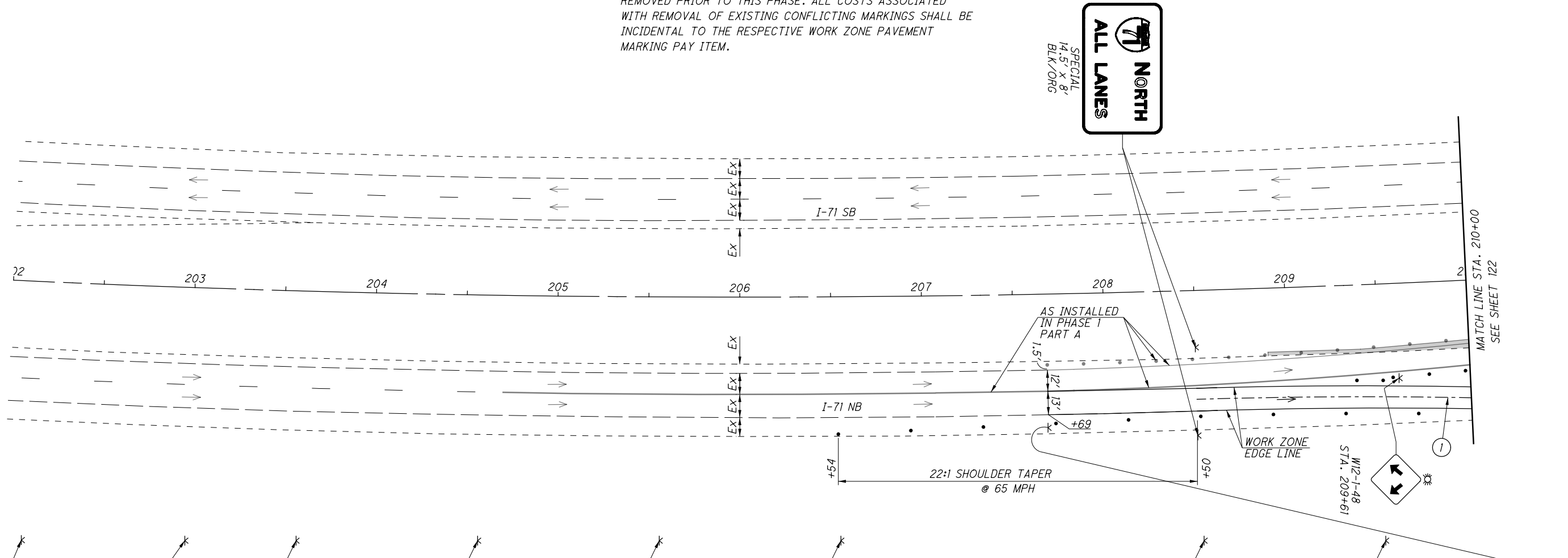
NOTES:

1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 208+00 AND 222+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

LEGEND

- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
- DRUM
- TEMPORARY SIGN SUPPORT
- OPEN TRAVEL LANE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



ADVANCED SIGNAGE DETAIL

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
 PART B - I-71 - STA. 202+00 TO STA. 210+00

FRA-71-0.00
 121
 1312

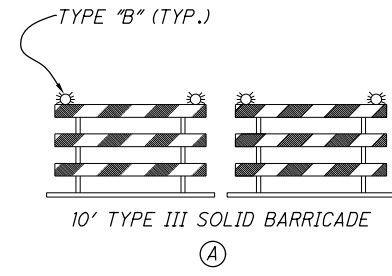


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CHECKED BY: SMM

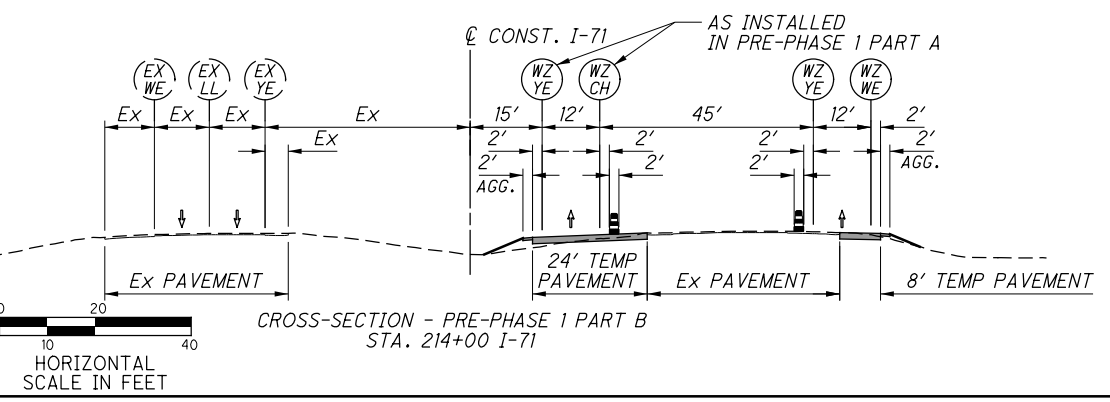
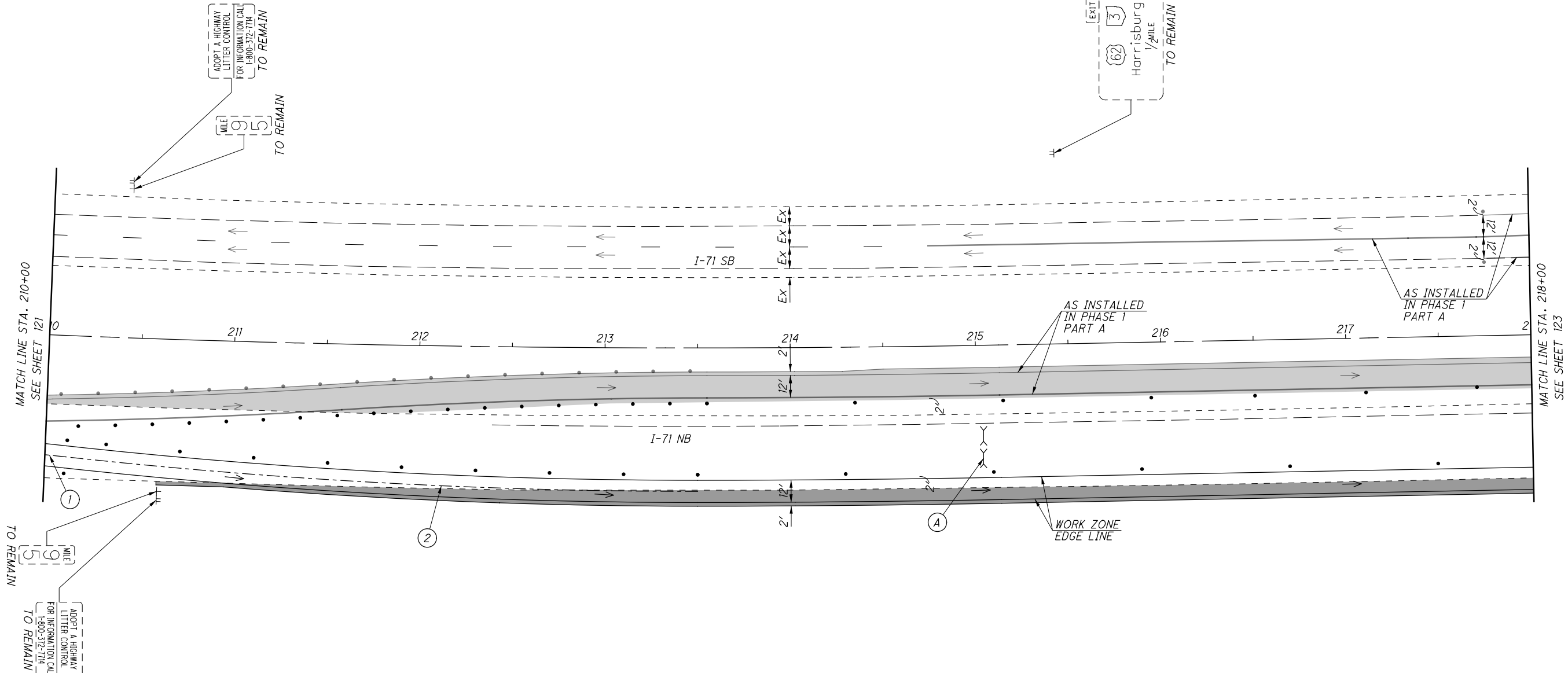
MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
PART B - I-71 - STA. 210+00 TO STA. 218+00

FRA-71-0.00

- ① $\Delta = 2^\circ 58' 34''$ (RT)
Dc = 1° 50' 00"
R = 3125.22'
T = 81.18'
L = 162.33'
E = 1.05'
C = 162.31'
C.B. = N 73° 30' 51" E
- ② $\Delta = 6^\circ 16' 18''$ (LT)
Dc = 1° 50' 00"
R = 3125.22'
T = 171.22'
L = 342.10'
E = 4.69'
C = 341.93'
C.B. = N 71° 51' 59" E



NOTES:
1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 208+00 AND 222+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - ✕ TEMPORARY SIGN SUPPORT
 - Y TYPE III BARRICADE
 - + EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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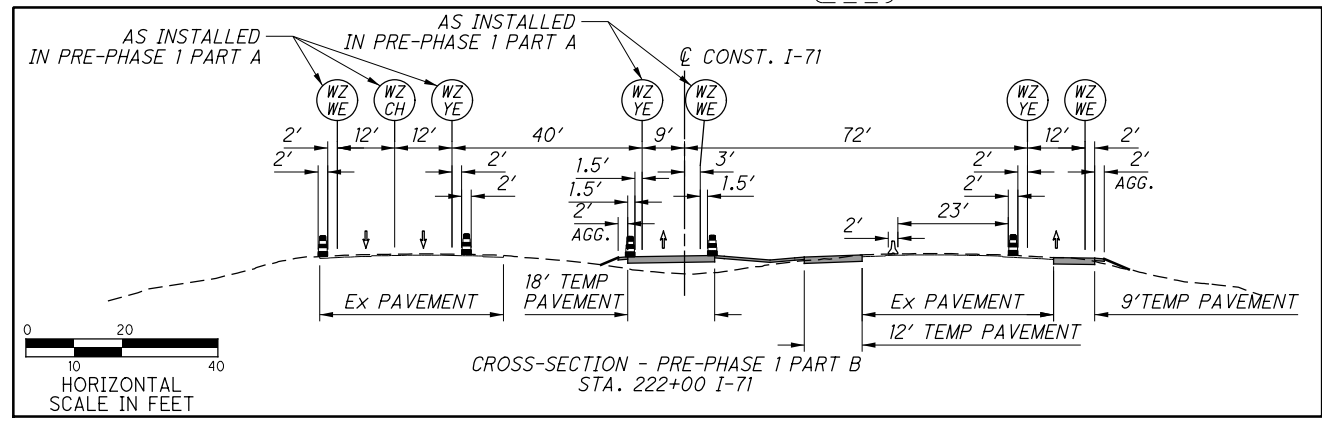
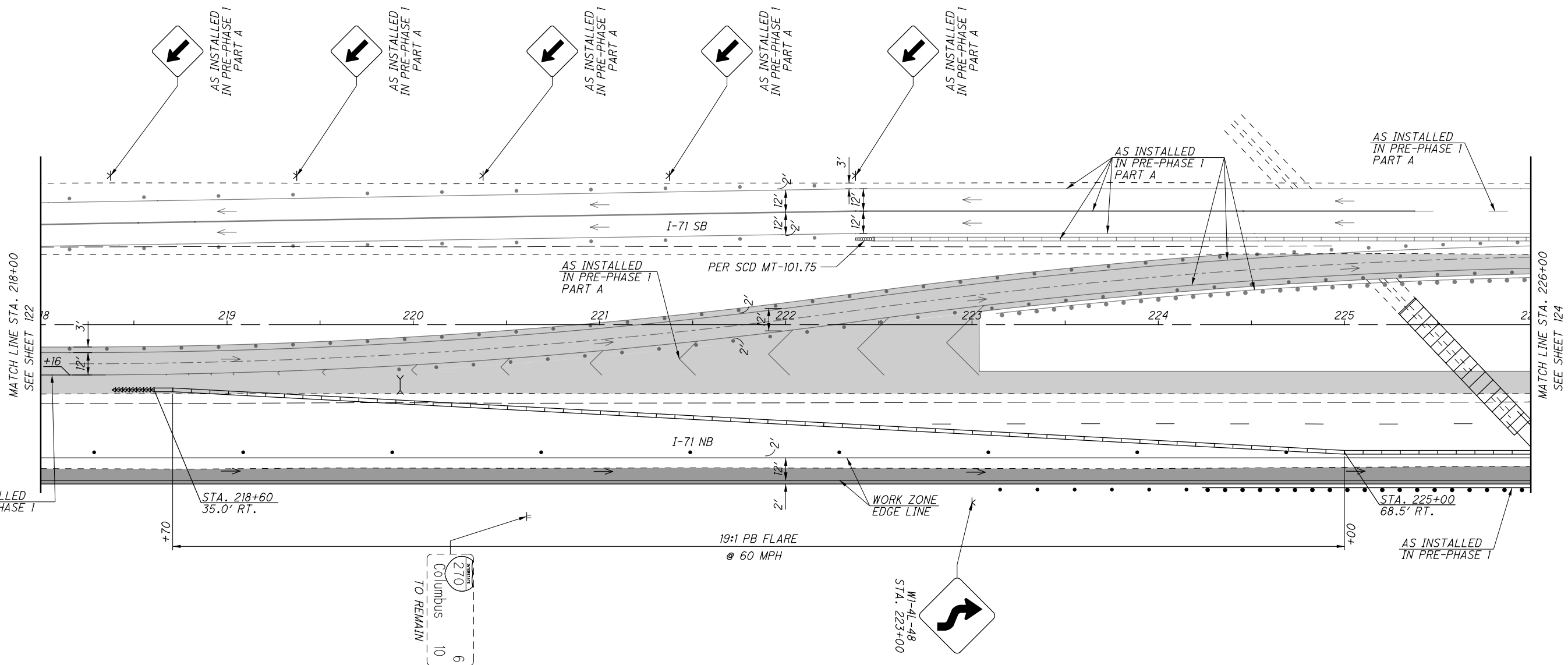
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MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
PART B - I-71 - STA. 218+00 TO STA. 226+00

FRA-71-0.00

123
1312

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADIUS/CLOSURE	10' c/c

- LEGEND**
- PRE-PHASE 1 PART A WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TAPERED END SECTION
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - OPEN TRAVEL LANE
 - DRUM

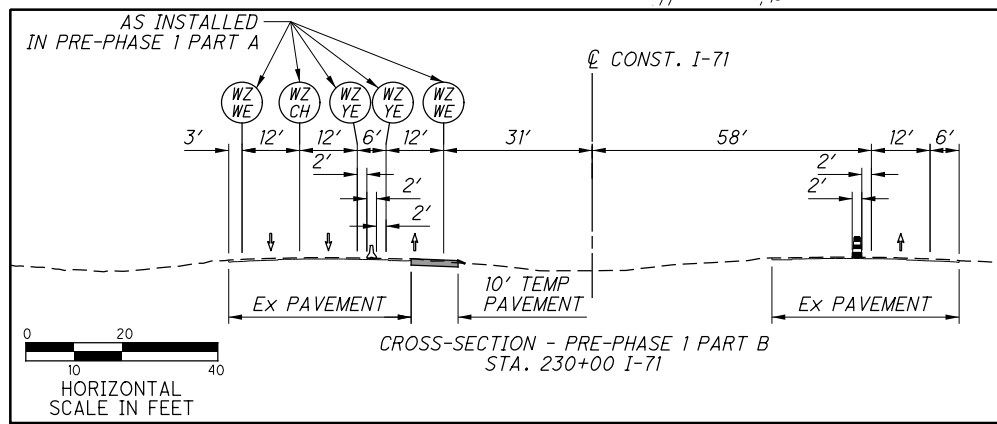
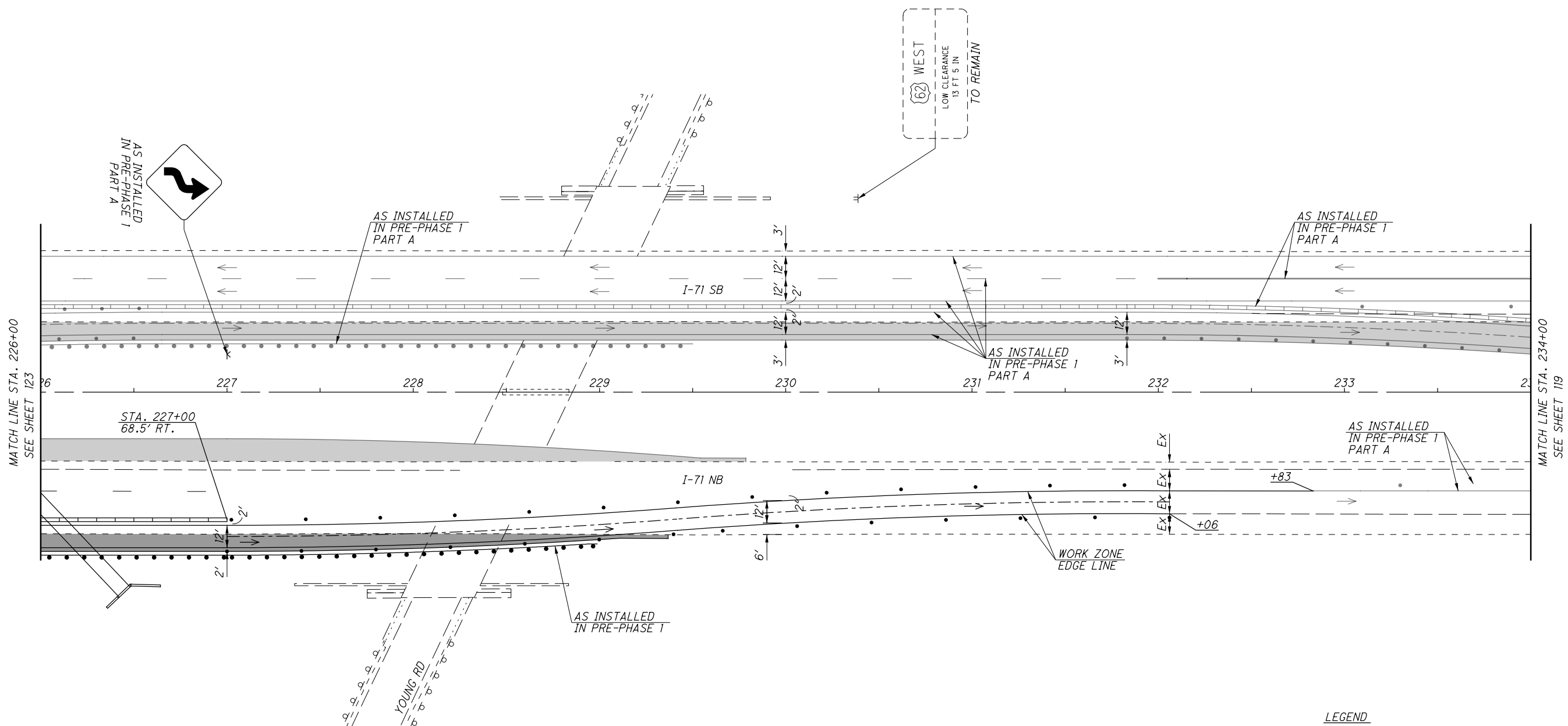
NOTES:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 208+00 AND 222+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.



CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
PART B - I-71 - STA. 226+00 TO STA. 234+00**

FRA-71-0-00

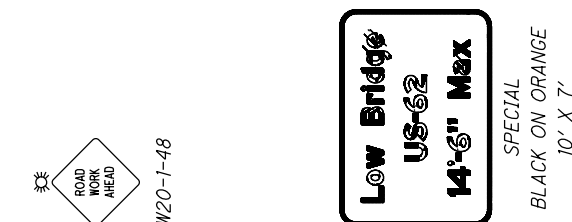
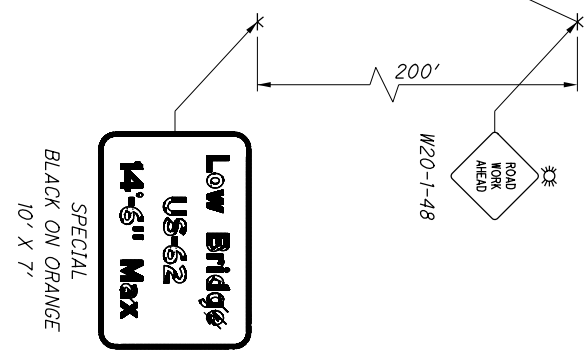
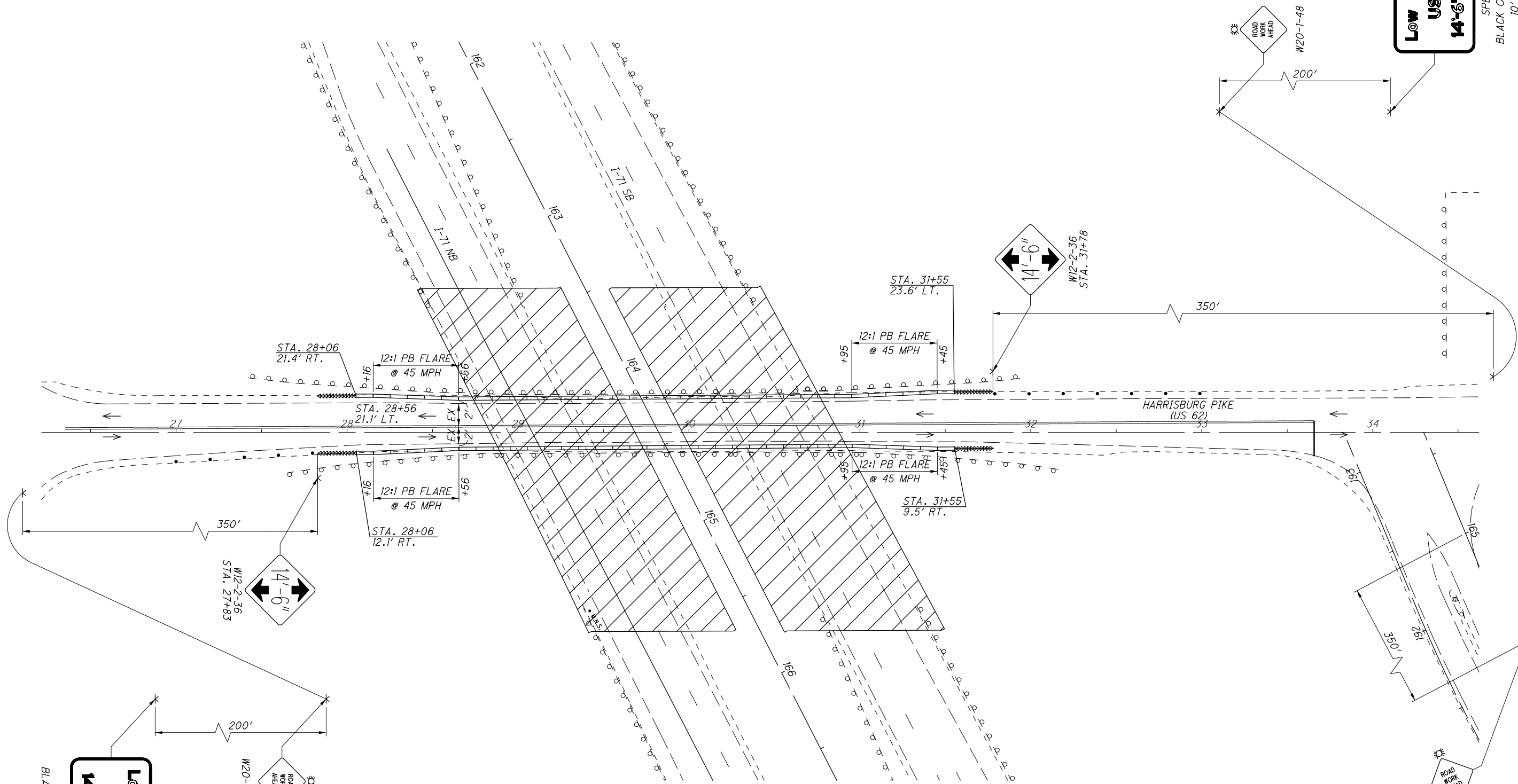


DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PRE-PHASE 1 PART A WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM

NOTES:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 227+00 AND 232+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

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- NOTES:**
1. WORK OVERHEAD OF US 62 MAY REQUIRE SHORT TERM CLOSURE (15 MIN. MAX) VIA LAW ENFORCEMENT OFFICERS DURING NON-PEAK HOURS ONLY. ALL LANES ON US 62 SHALL BE OPEN 6-9 AM AND 4-6 PM MON.-FRI.
 2. WORK ENCRANCHING THE TRAVEL LANES ON US 62 MAY REQUIRE ONE LANE OF TRAFFIC MAINTAINED VIA FLAGGER PER ODOT SCD MT-97.10 DURING NON-PEAK HOURS ONLY. ALL LANES ON US 62 SHALL BE OPEN 6-9 AM AND 4-6 PM MON.-FRI.
 3. ROAD WORK AHEAD SIGNS (W20-1-48) SHALL BE ADJUSTED IF OTHERWISE IN A SPECIFIC PHASE WITHIN.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1-3 WORK ZONE
 - DRUM
 - TEMPORARY SIGN SUPPORT

CALCULATED
BER
CHECKED
SMM

15
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1-3
US 62 OVERHEAD WORK - STA. 26+50 TO STA. 34+00**

FRA-71-0.00

125
1312

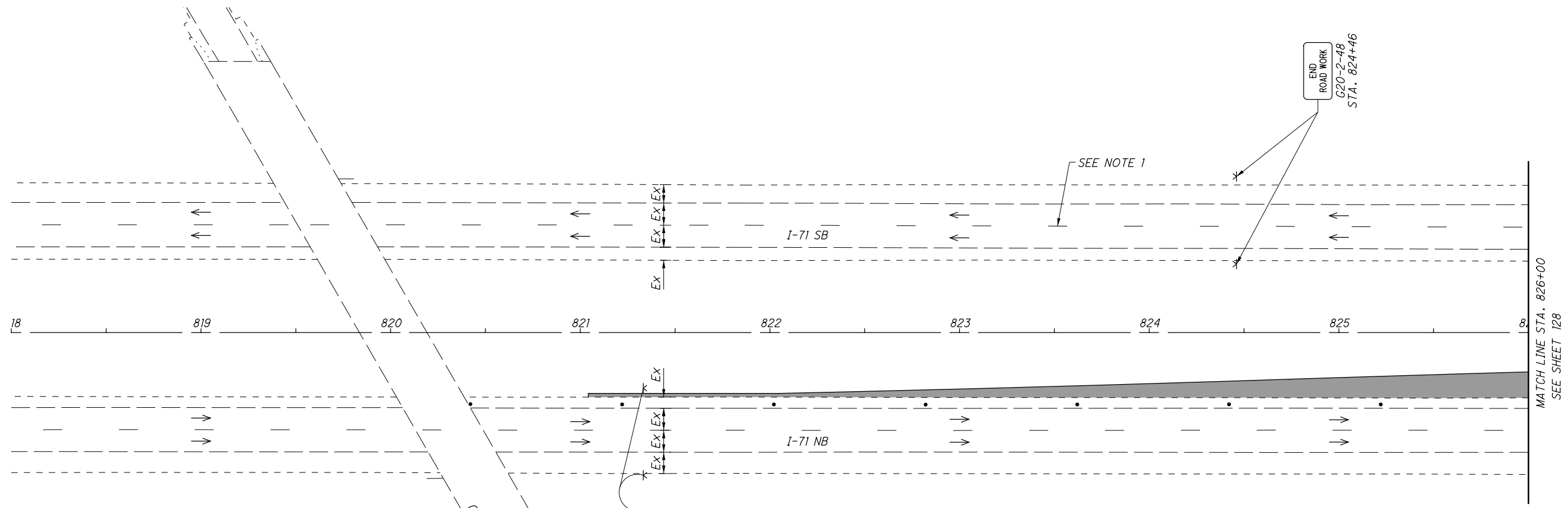
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CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 818+00 TO STA. 826+00**

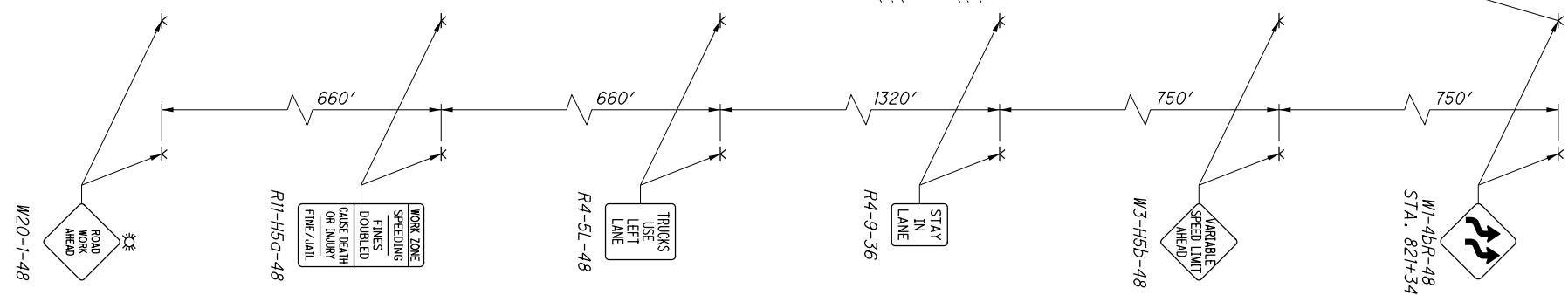
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NOTES:
1. UNLESS OTHERWISE DETAILED WITHIN, ALL SB TRAVEL LANES SHALL BE MAINTAINED WITH EXISTING PAVEMENT MARKINGS AND SIGNAGE FOR THE DURATION OF PHASE 1.

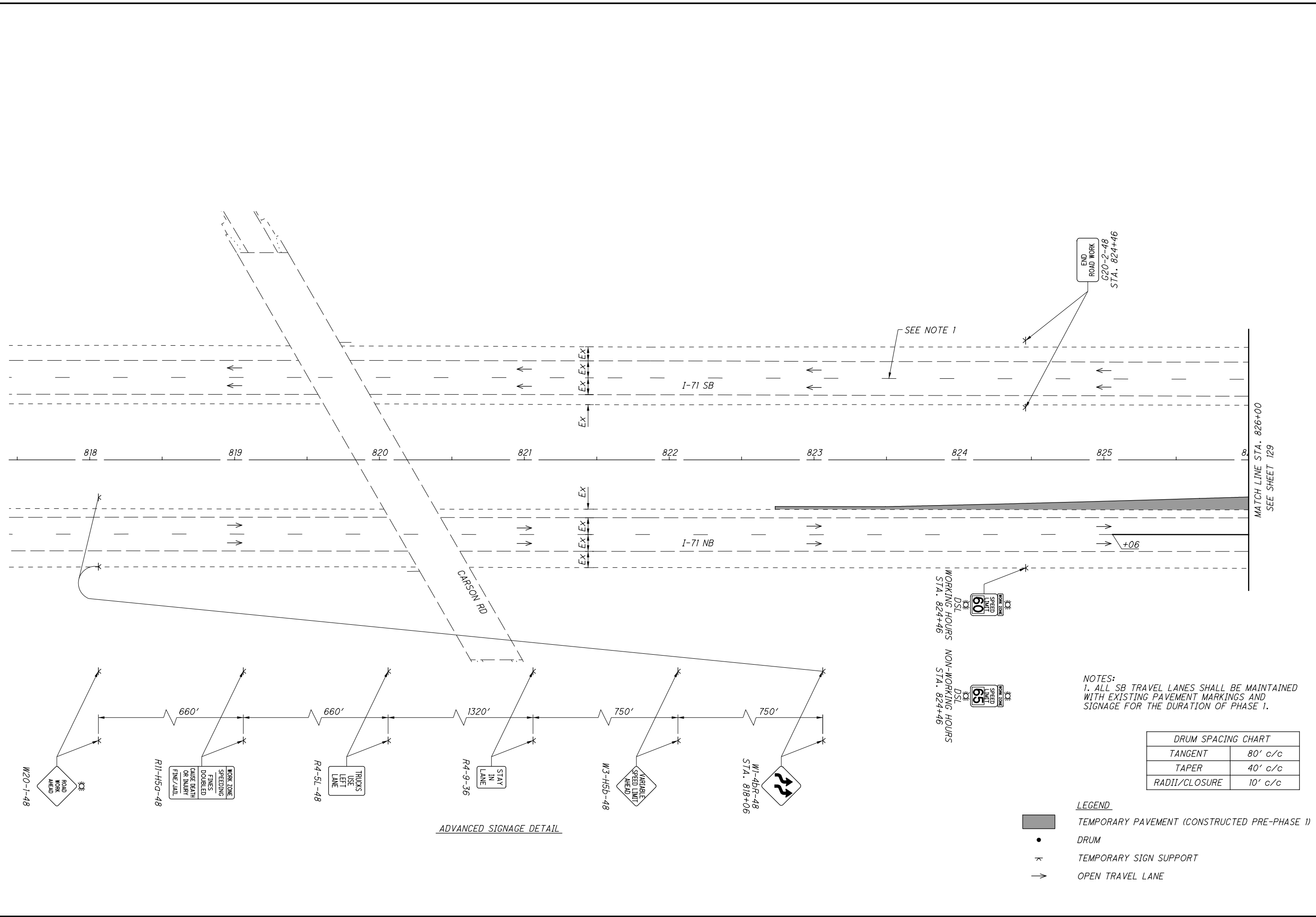
DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE



ADVANCED SIGNAGE DETAIL

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W20-1-48
ROAD WORK AHEAD

R11-H50-48
WORK ZONE
SPEEDING
FINES
DOUBLED
CAUSE BEATH
OR INJURY
FINE/MAIL

R4-5L-48
TRUCKS
USE
LEFT
LANE

R4-9-36
STAY
IN
LANE

W3-H5b-48
VARIABLE
SPEED
LIMIT
AHEAD

W1-4BR-48
STA. 818+06

ADVANCED SIGNAGE DETAIL

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

NOTES:
1. ALL SB TRAVEL LANES SHALL BE MAINTAINED WITH EXISTING PAVEMENT MARKINGS AND SIGNAGE FOR THE DURATION OF PHASE 1.

- LEGEND
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - ⋈ TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

WORKING HOURS STA. 824+46
NON-WORKING HOURS STA. 824+46
DSL
SPEED ZONE
60
SPEED LIMIT
65

END ROAD WORK
G20-2-48
STA. 824+46

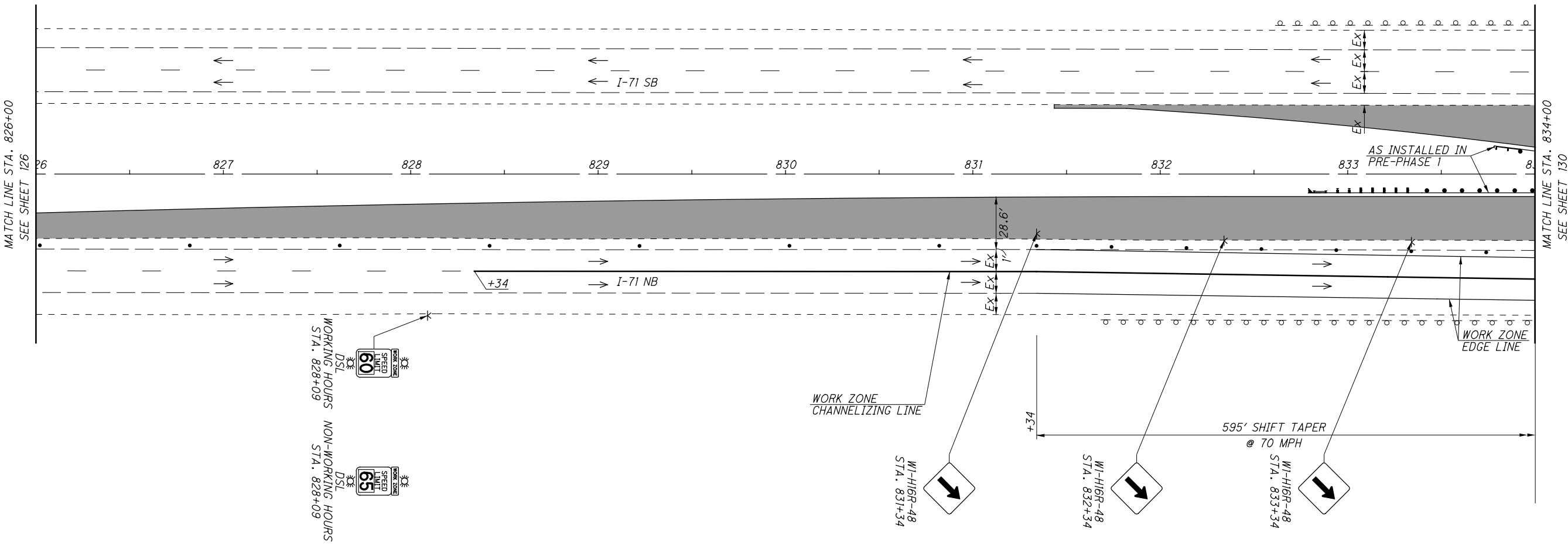
MATCH LINE STA. 826+00
SEE SHEET 129

CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 817+50 TO STA. 826+00**

FRA-71-0.00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

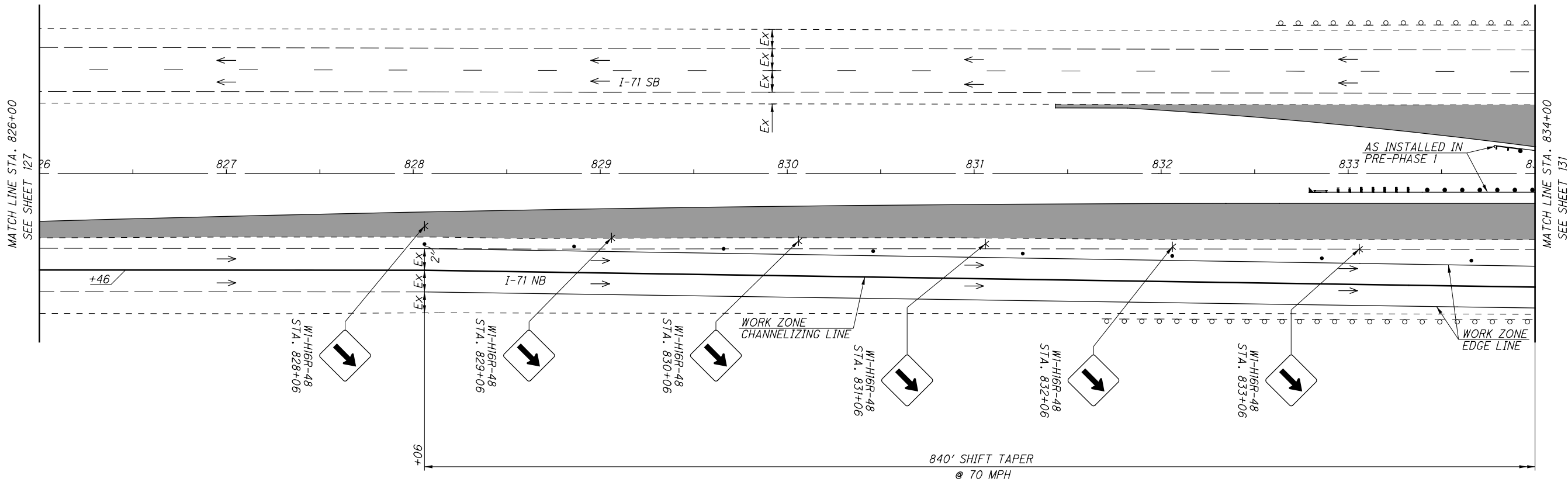
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - ⋈ TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 826+00 TO STA. 834+00**

FRA-71-0.00



W1-H16R-48 STA. 828+06
 W1-H16R-48 STA. 829+06
 W1-H16R-48 STA. 830+06
 W1-H16R-48 STA. 831+06
 W1-H16R-48 STA. 832+06
 W1-H16R-48 STA. 833+06

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - X TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (ASPHALT OPTION) I-71 - STA. 826+00 TO STA. 834+00**

FRA-71-0.00



CALCULATED
BER
CHECKED
SMM

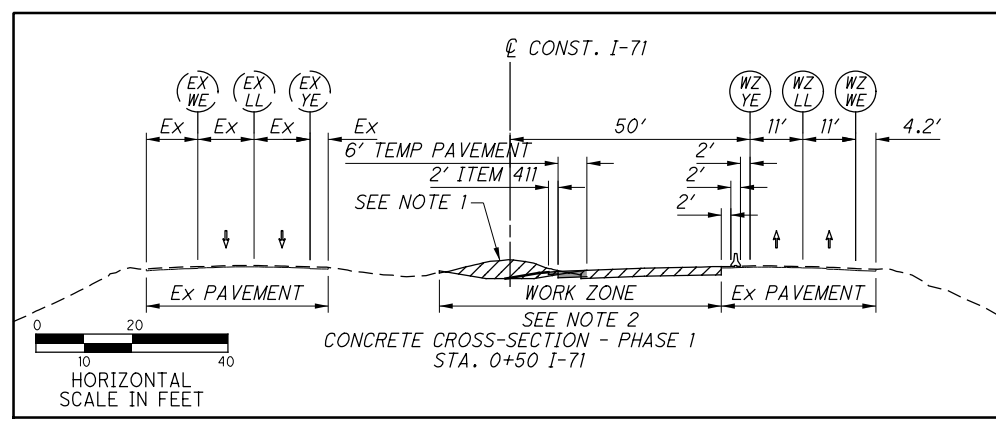
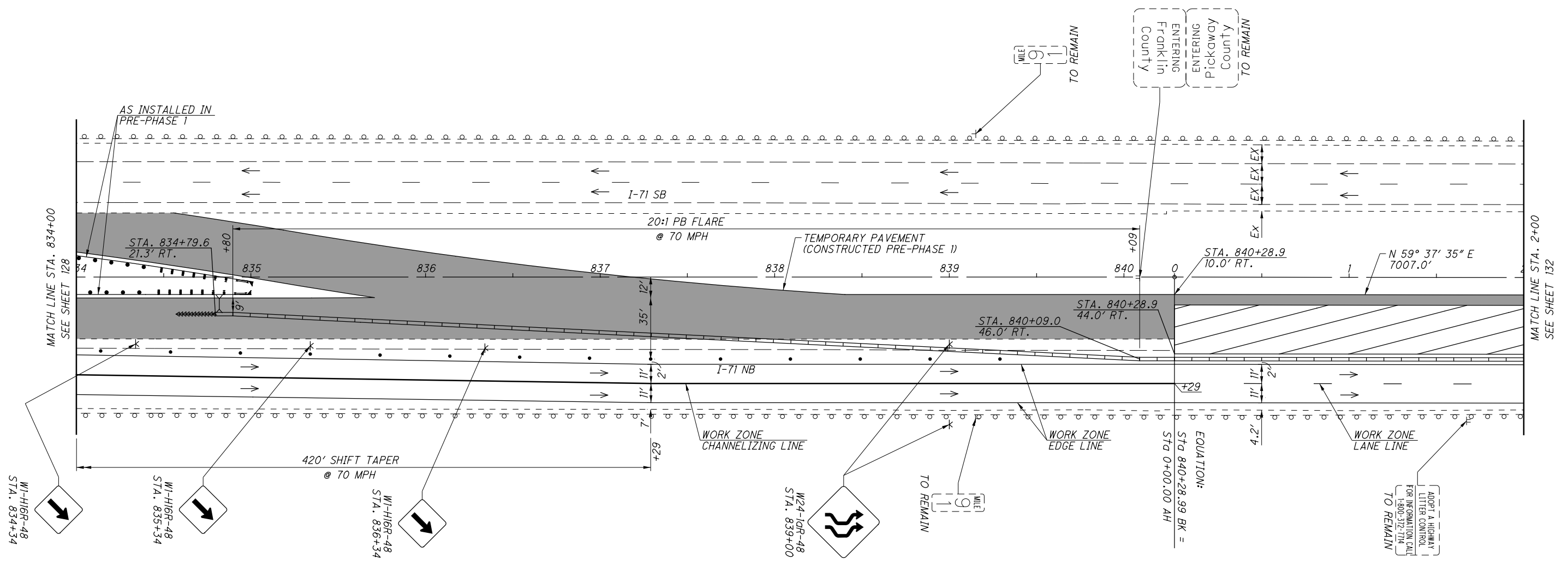
NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 834+00 TO STA. 2+00**

FRA-71-0.00

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADI/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



CALCULATED
BER
CHECKED
SMM

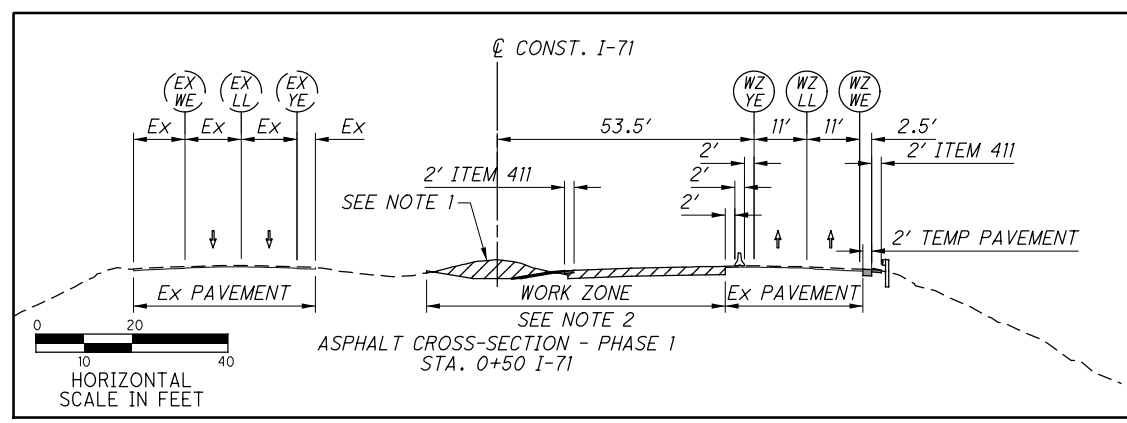
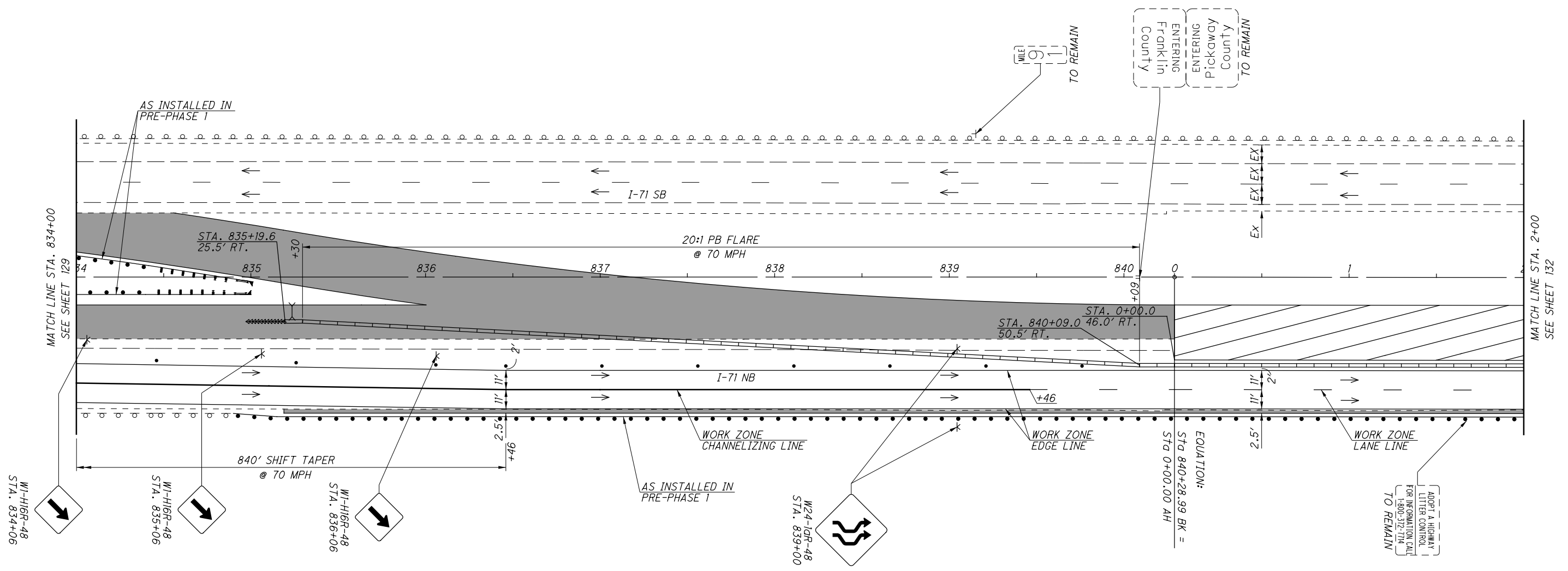
NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 834+00 TO STA. 2+00**

FRA-71-0.00

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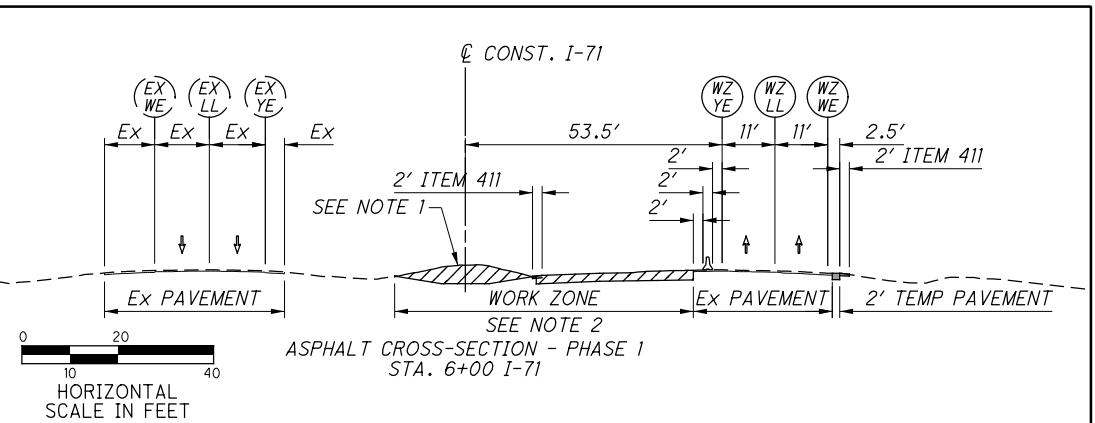
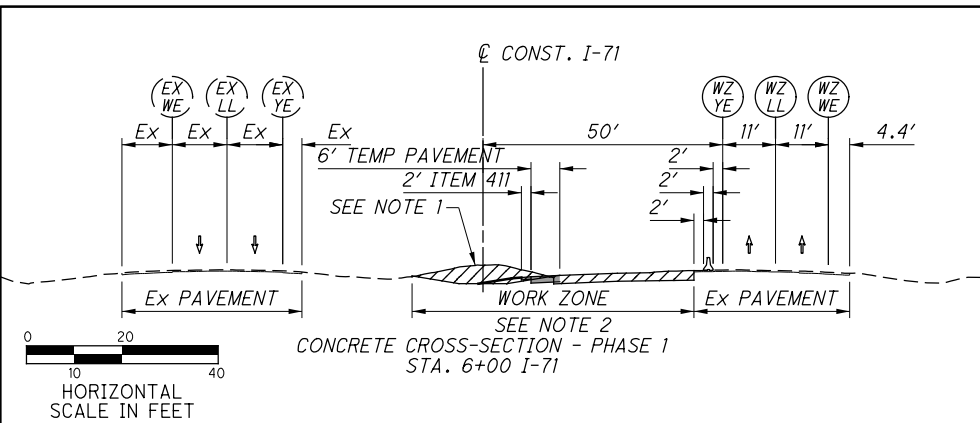
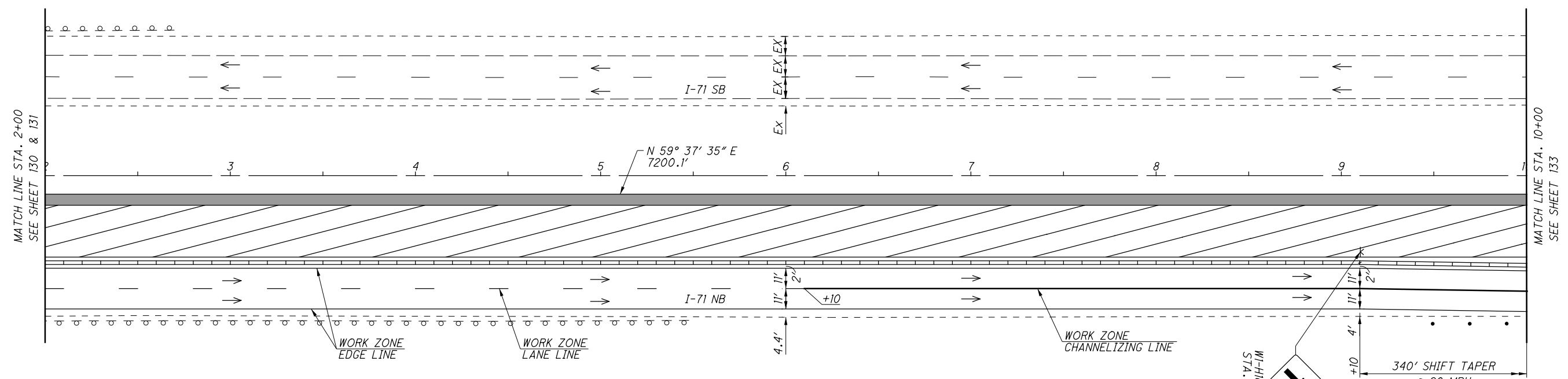
DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT CONSTRUCTED PRE-PHASE 1
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



CALCULATED
BER
CHECKED
SMM

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12" OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 I-71 - STA. 2+00 TO STA. 10+00

FRA-71-0.00

132
1312

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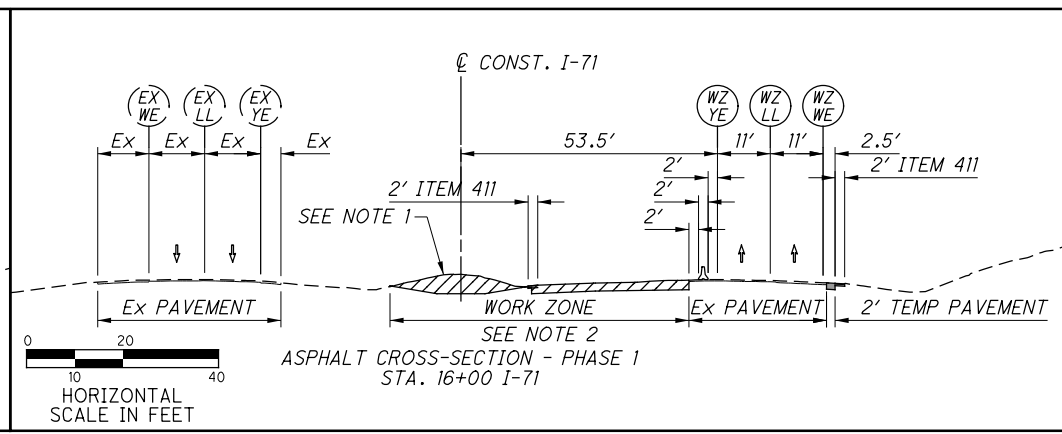
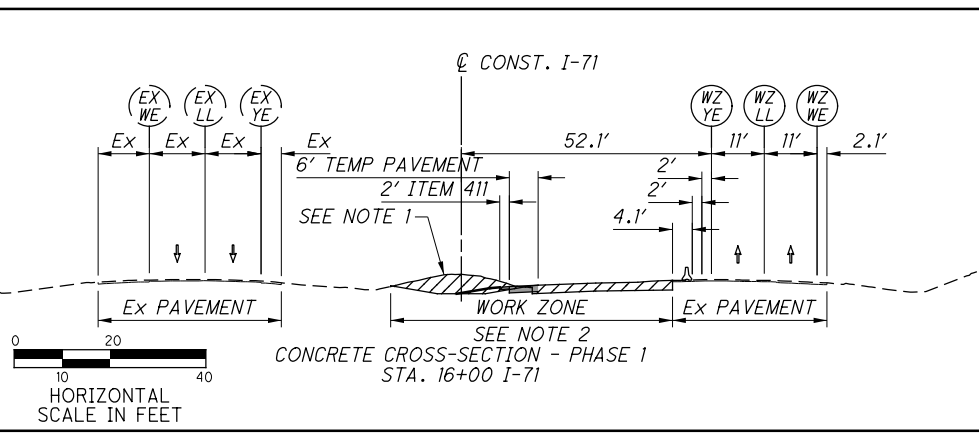
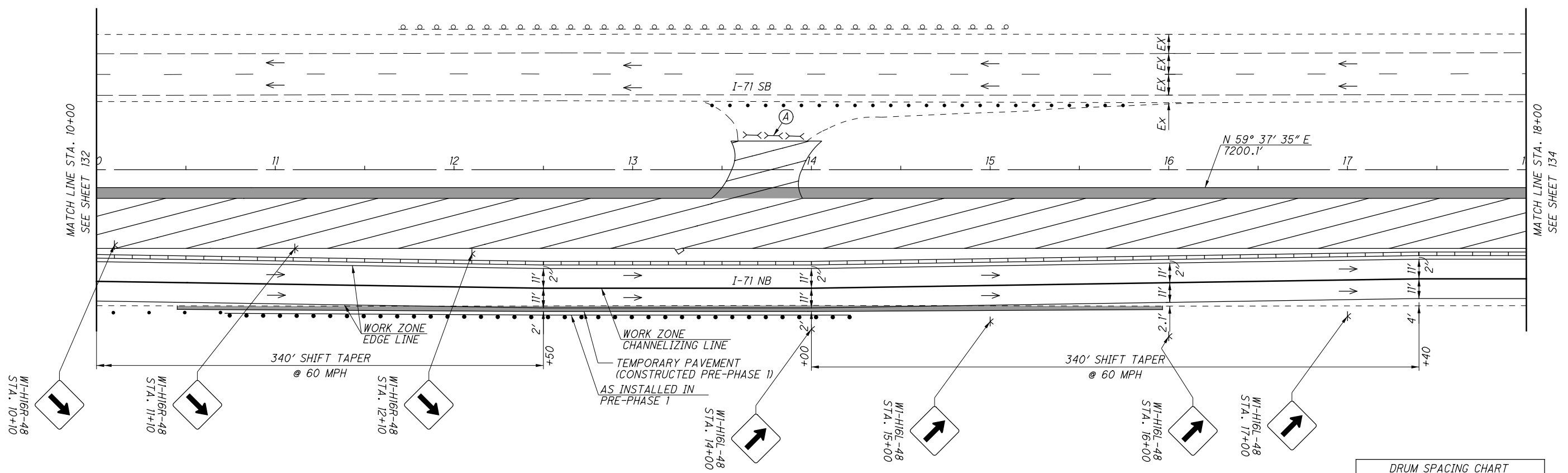
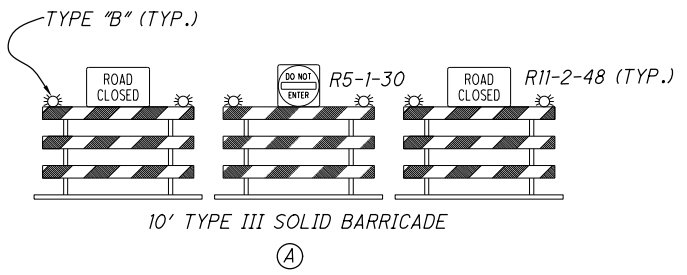
CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 10+00 TO STA. 18+00

FRA-71-0.00

133
1312

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - OPEN TRAVEL LANE

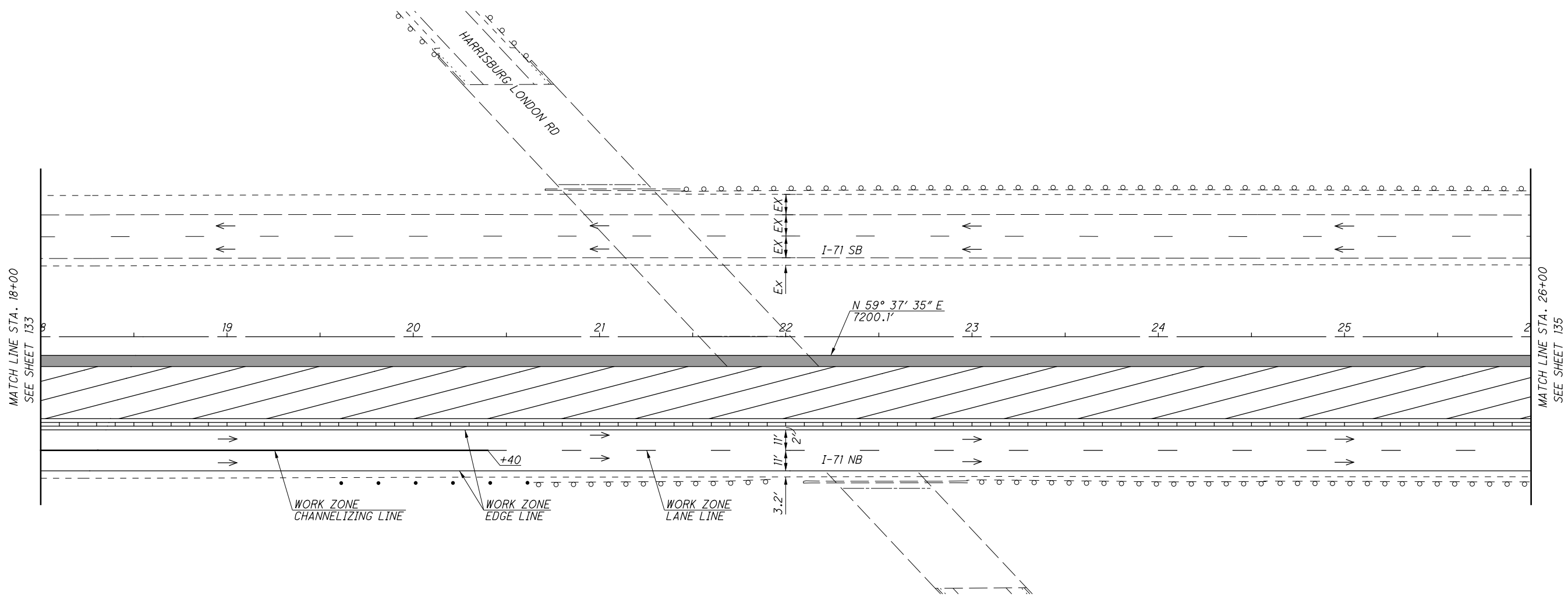
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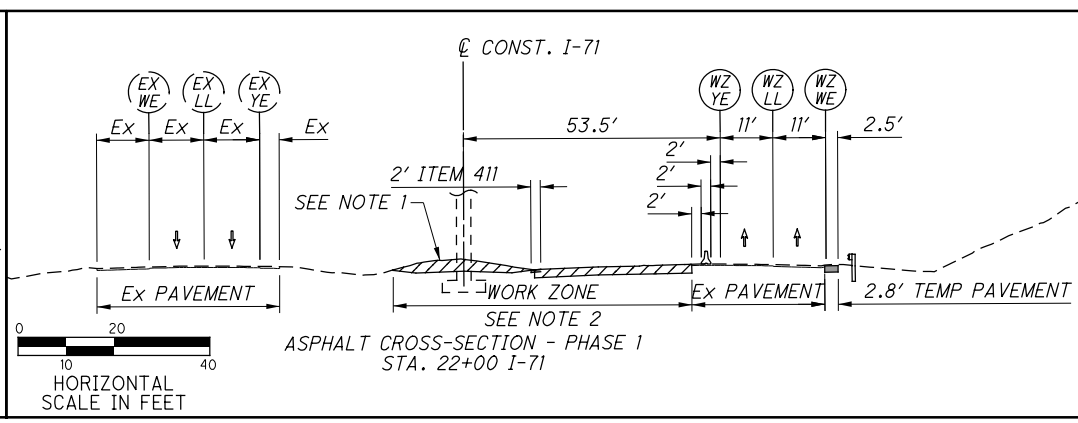
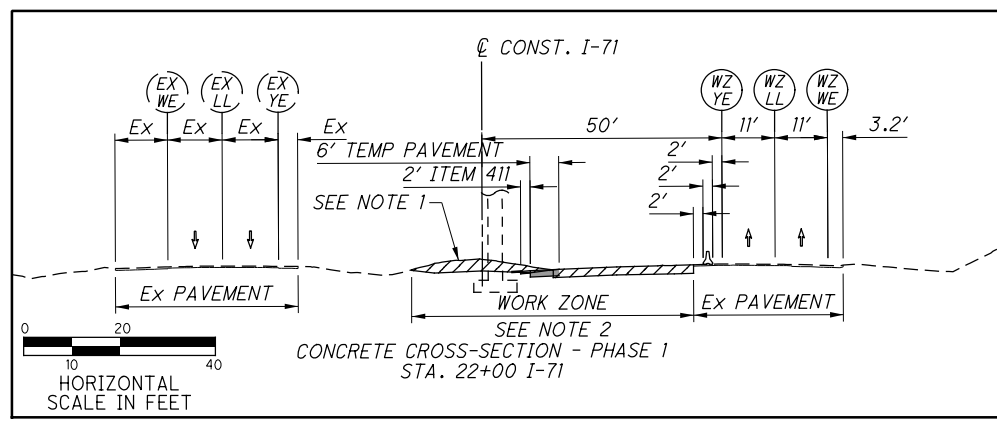
CALCULATED
BER
CHECKED
SMM

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12" OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 18+00 TO STA. 26+00



LEGEND
[Hatched Box] PHASE 1 WORK ZONE
[Solid Grey Box] TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
[Double Line] PORTABLE BARRIER
[Arrow] OPEN TRAVEL LANE

FRA-71-0.00

134
1312

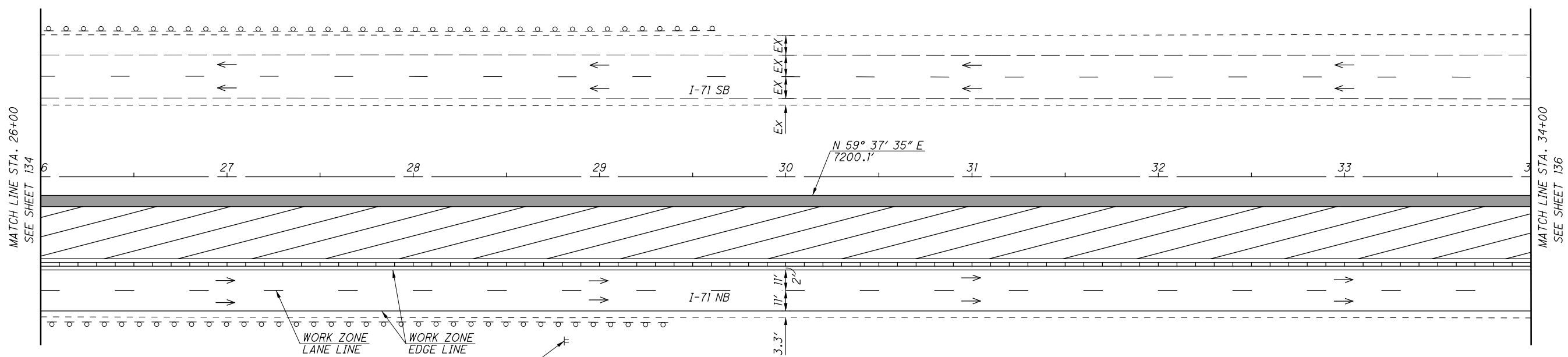
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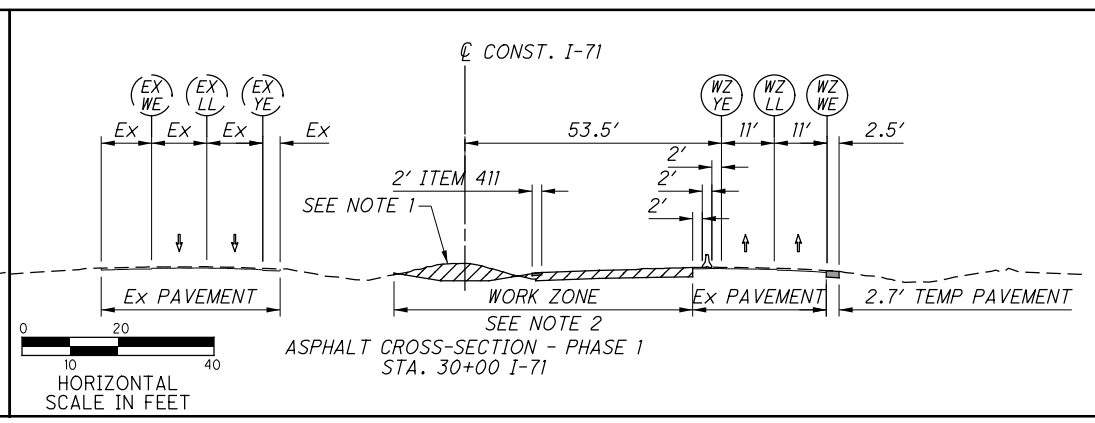
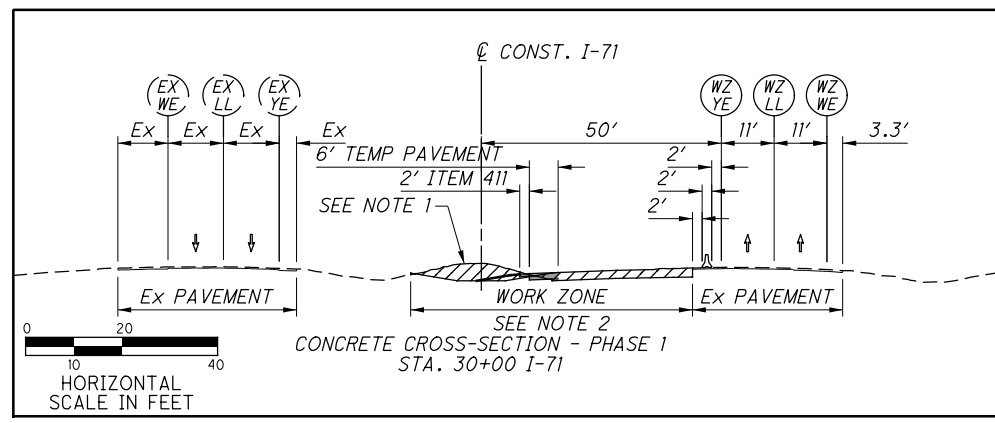
CALCULATED
BER
CHECKED
SMM

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12" OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



TRAFFIC INFO
TUNE RADIO TO
1620
AM
TRAFFIC ALERT
WHEN FLASHING
TO REMAIN



- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 26+00 TO STA. 34+00

FRA-71-0.00

135
1312

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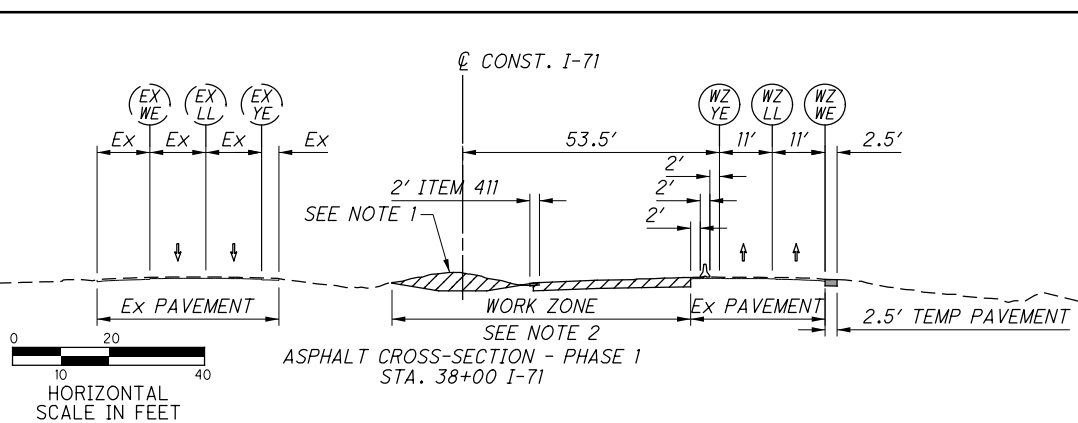
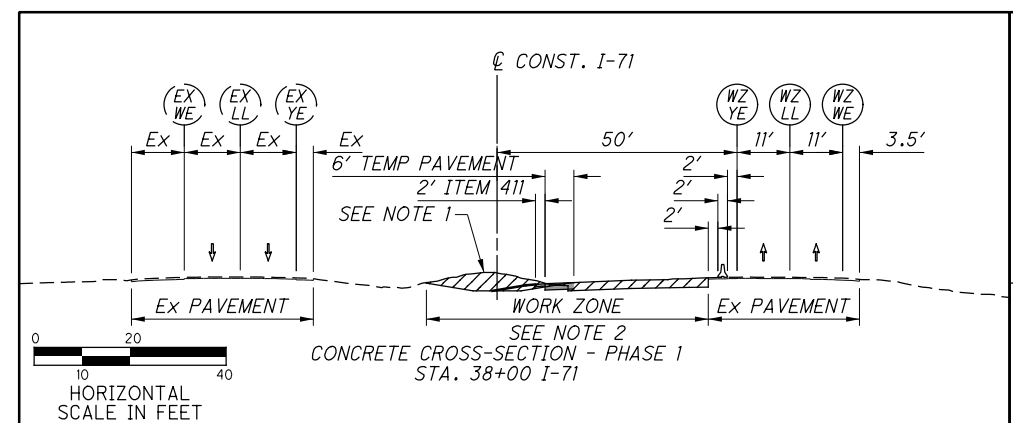
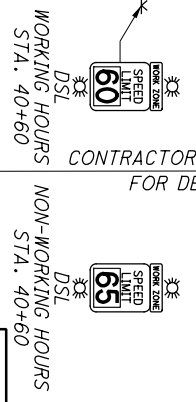
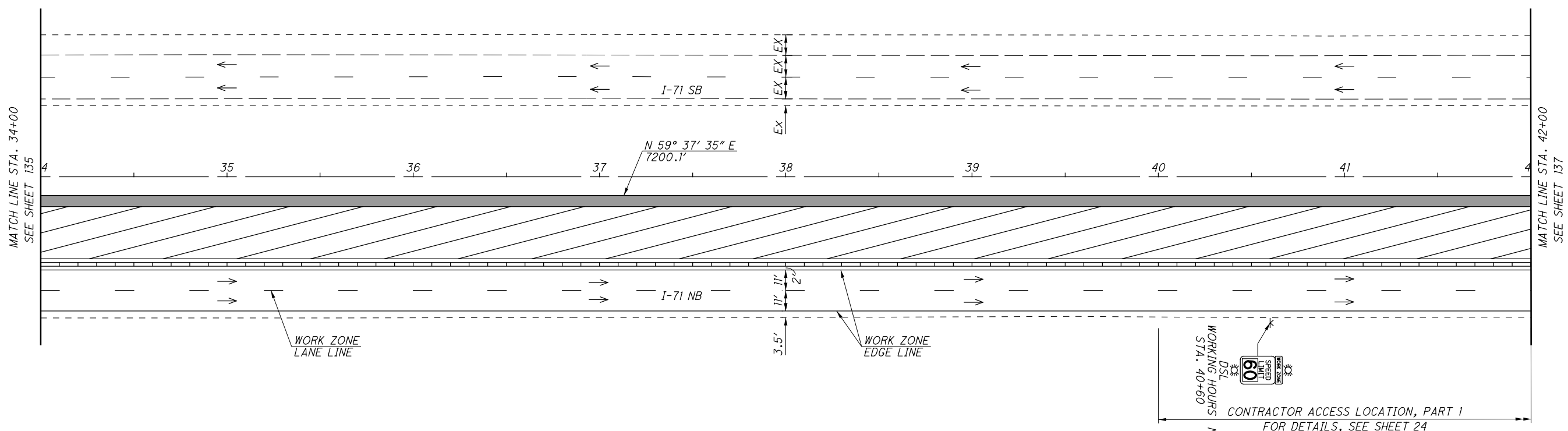
CALCULATED
BER
CHECKED
SMM

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 34+00 TO STA. 42+00

FRA-71-0.00

136
1312



- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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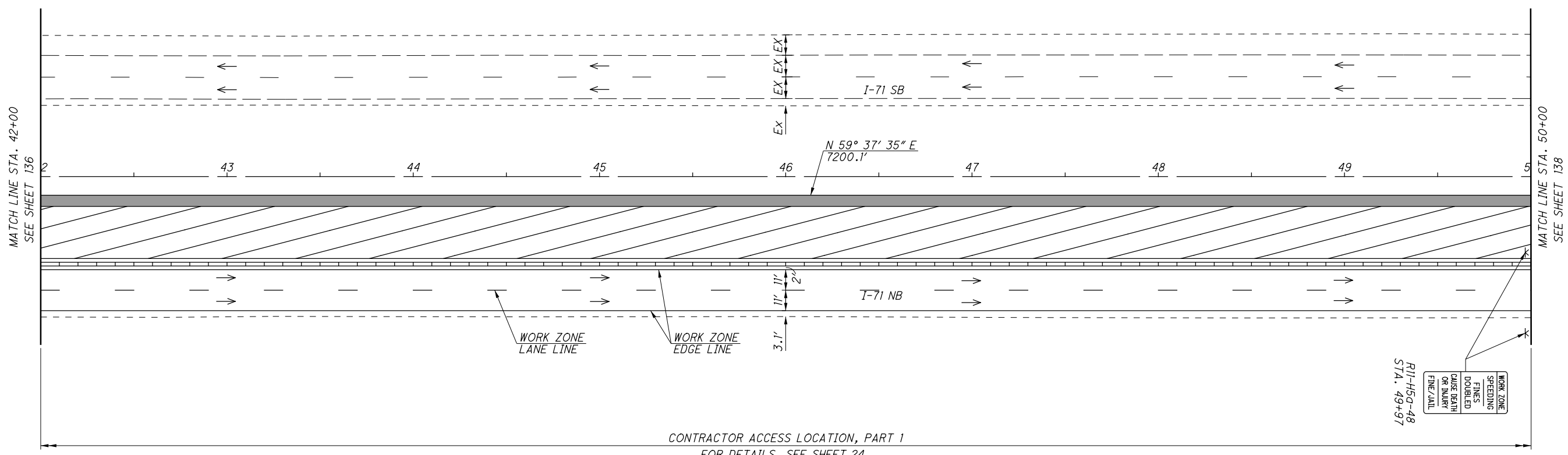
CALCULATED
BER
CHECKED
SMM

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

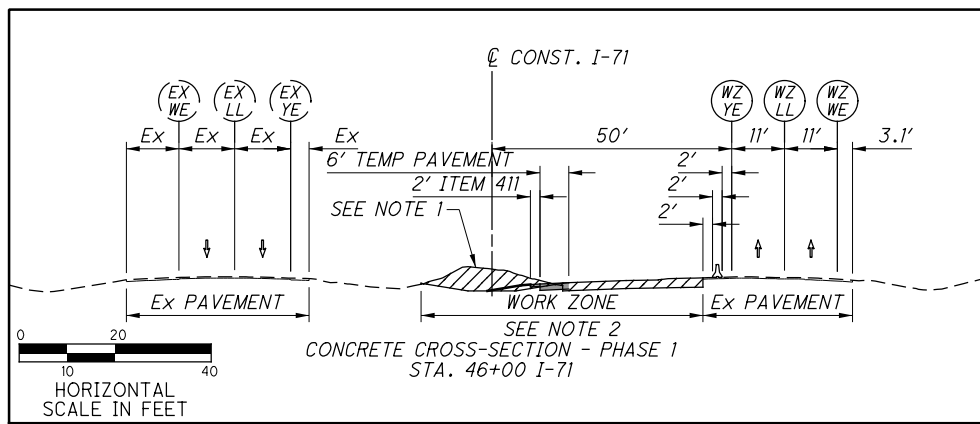
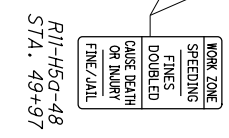
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 42+00 TO STA. 50+00

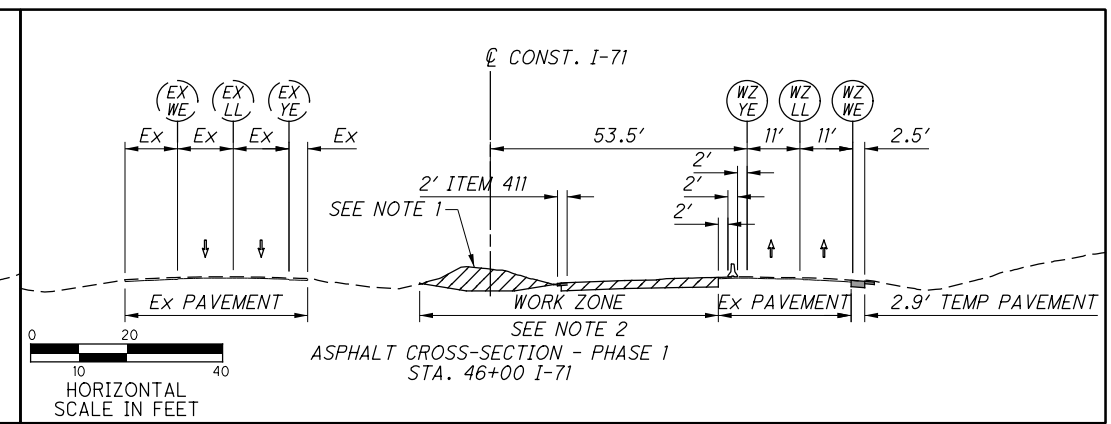
FRA-71-0.00



CONTRACTOR ACCESS LOCATION, PART 1
FOR DETAILS, SEE SHEET 24



CONCRETE CROSS-SECTION - PHASE 1
STA. 46+00 I-71



ASPHALT CROSS-SECTION - PHASE 1
STA. 46+00 I-71

- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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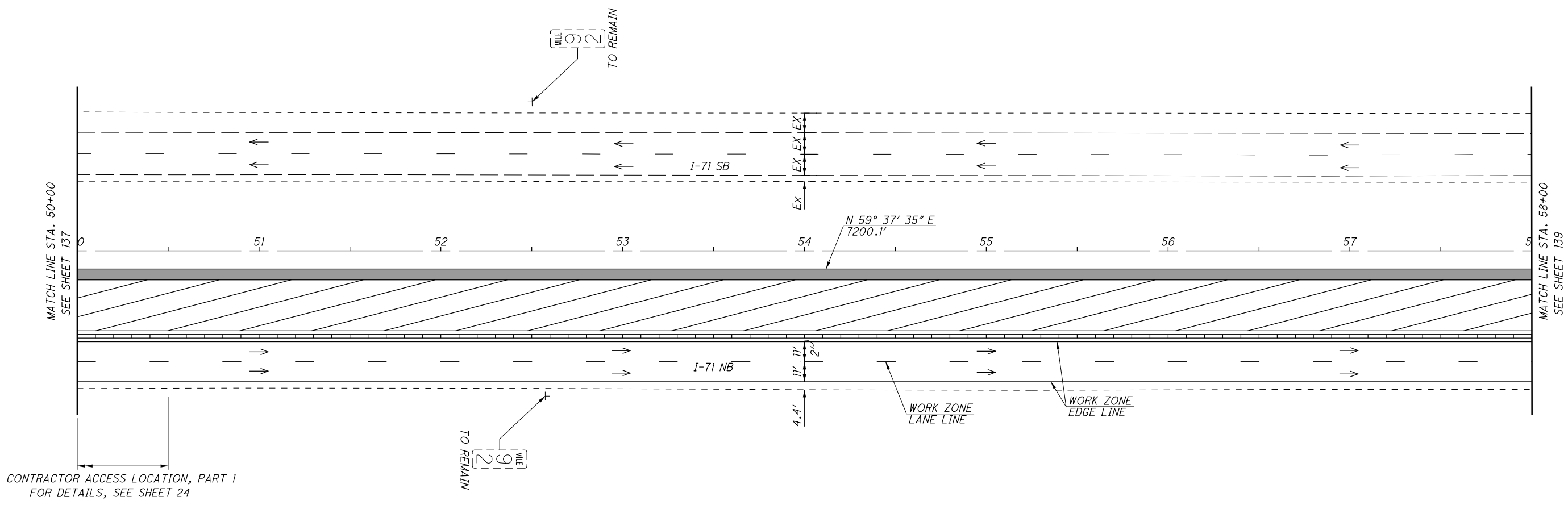


CALCULATED
BER
CHECKED
SMM

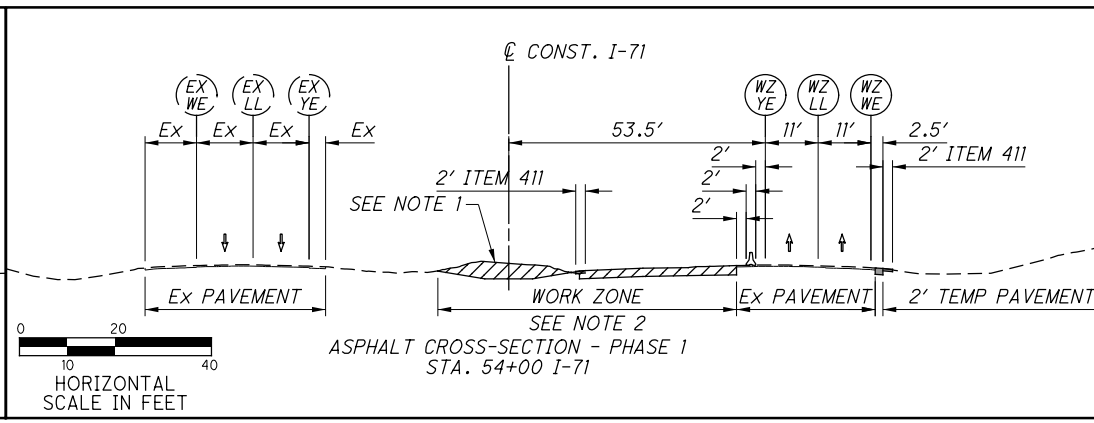
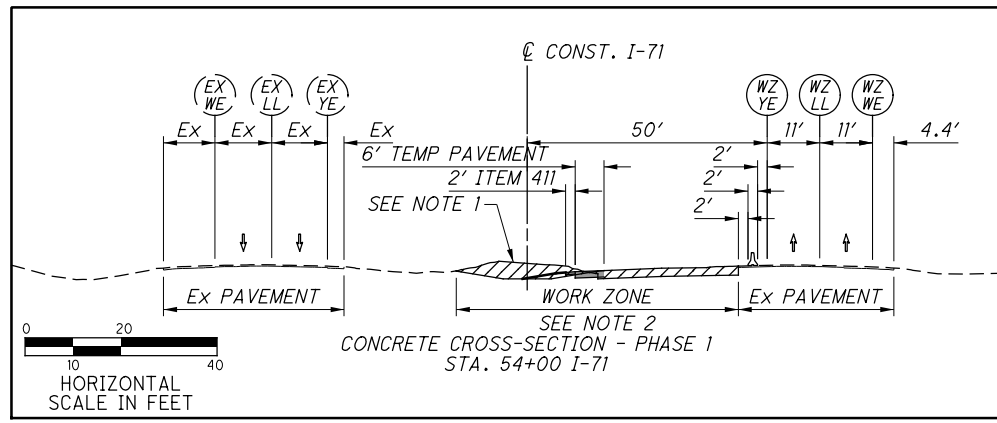
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 50+00 TO STA. 58+00

FRA-71-0.00

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



CONTRACTOR ACCESS LOCATION, PART 1
FOR DETAILS, SEE SHEET 24



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

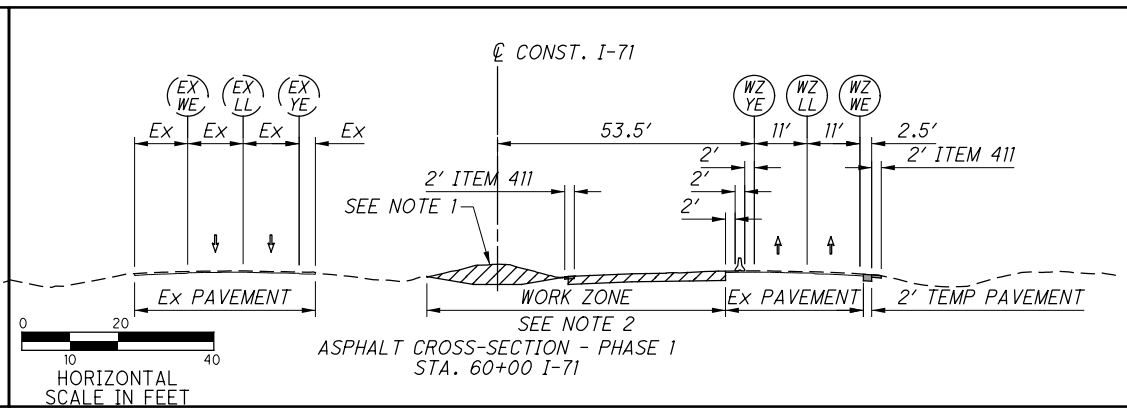
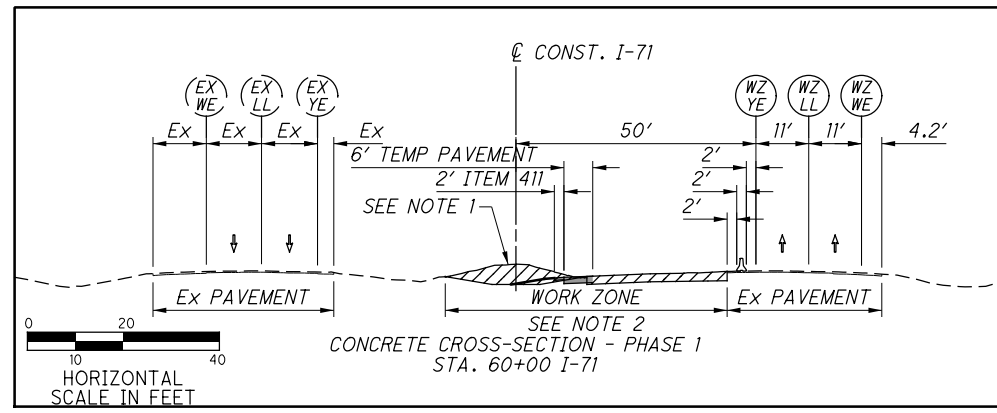
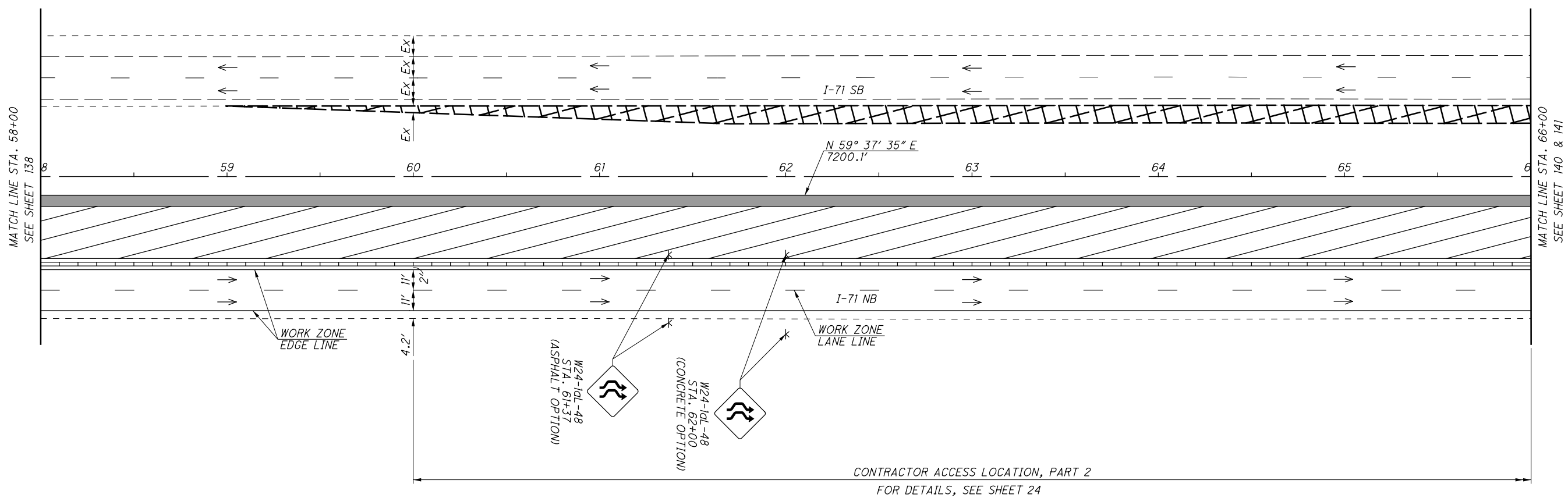
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CALCULATED
BER
CHECKED
SMM

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 58+00 TO STA. 66+00

FRA-71-0.00

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① $\Delta = 2^\circ 31' 43''$ (LT)
 $D_c = 1^\circ 30' 00''$
 $R = 3820.00'$
 $T = 84.31'$
 $L = 168.59'$
 $E = 0.93'$
 $C = 168.57'$
 $C.B. = N 58^\circ 11' 22'' E$

② $\Delta = 2^\circ 42' 05''$ (RT)
 $D_c = 1^\circ 30' 00''$
 $R = 3820.00'$
 $T = 90.07'$
 $L = 180.11'$
 $E = 1.06'$
 $C = 180.09'$
 $C.B. = N 58^\circ 16' 33'' E$

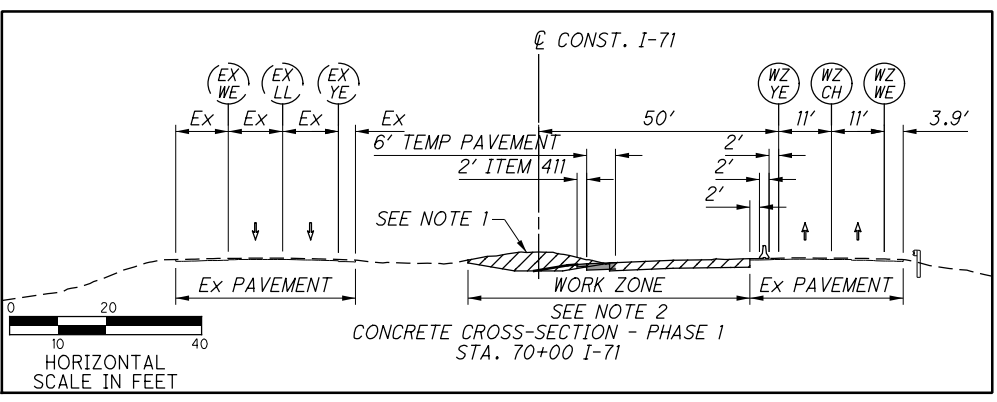
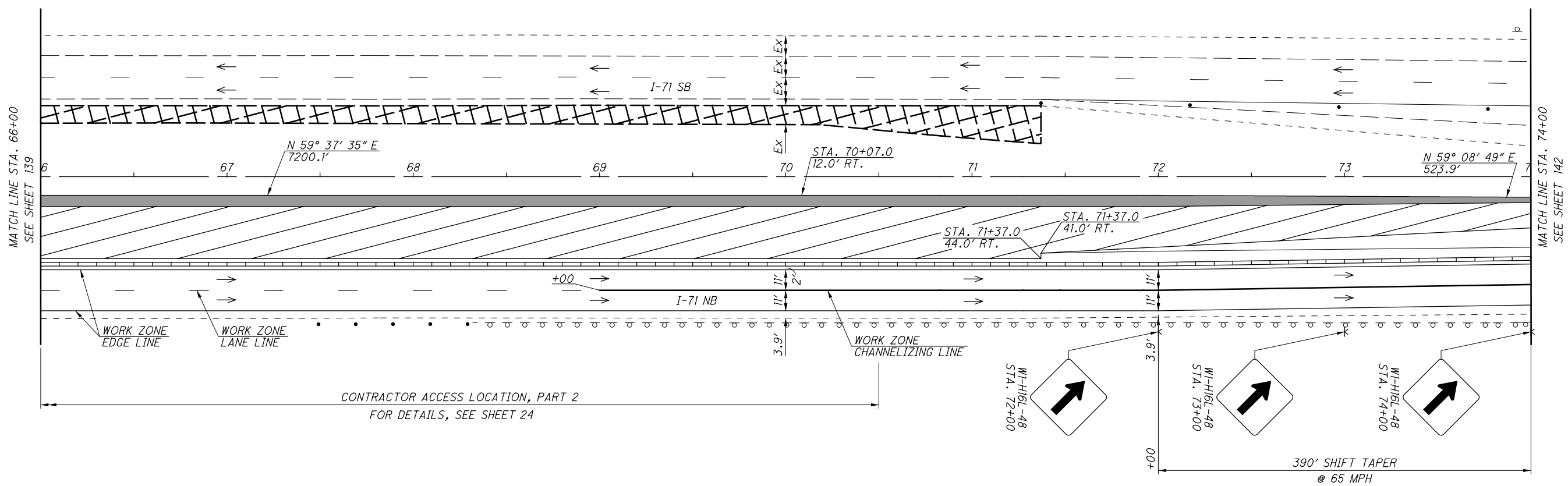
NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE I, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE I.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (CONCRETE OPTION) I-71 - STA. 66+00 TO STA. 74+00

FRA-71-0.00



LEGEND

PHASE I WORK ZONE

TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)

TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT

PORTABLE BARRIER

TEMPORARY SIGN SUPPORT

OPEN TRAVEL LANE

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① $\Delta = 2^\circ 31' 43''$ (LT)
 $Dc = 1^\circ 30' 00''$
 $R = 3820.00'$
 $T = 84.31'$
 $L = 168.59'$
 $E = 0.93'$
 $C = 168.57'$
 $C.B. = N 58^\circ 11' 22'' E$

② $\Delta = 2^\circ 42' 05''$ (RT)
 $Dc = 1^\circ 30' 00''$
 $R = 3820.00'$
 $T = 90.07'$
 $L = 180.11'$
 $E = 1.06'$
 $C = 180.09'$
 $C.B. = N 58^\circ 16' 33'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

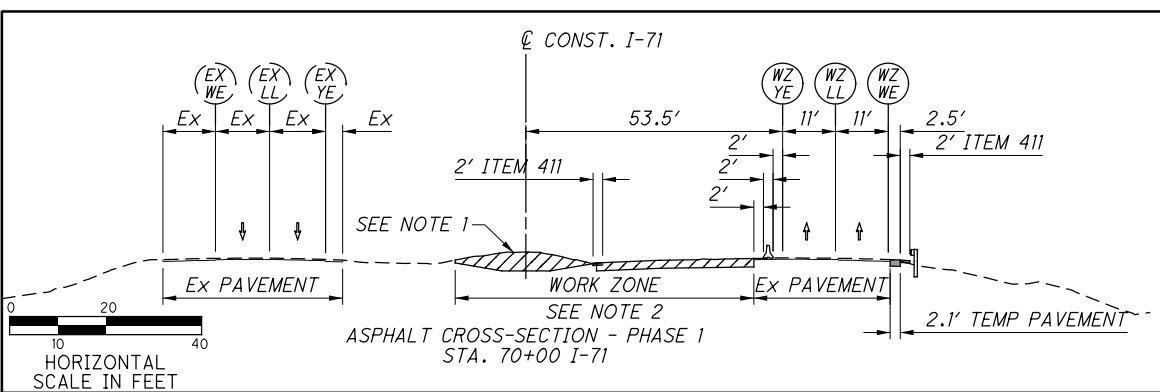
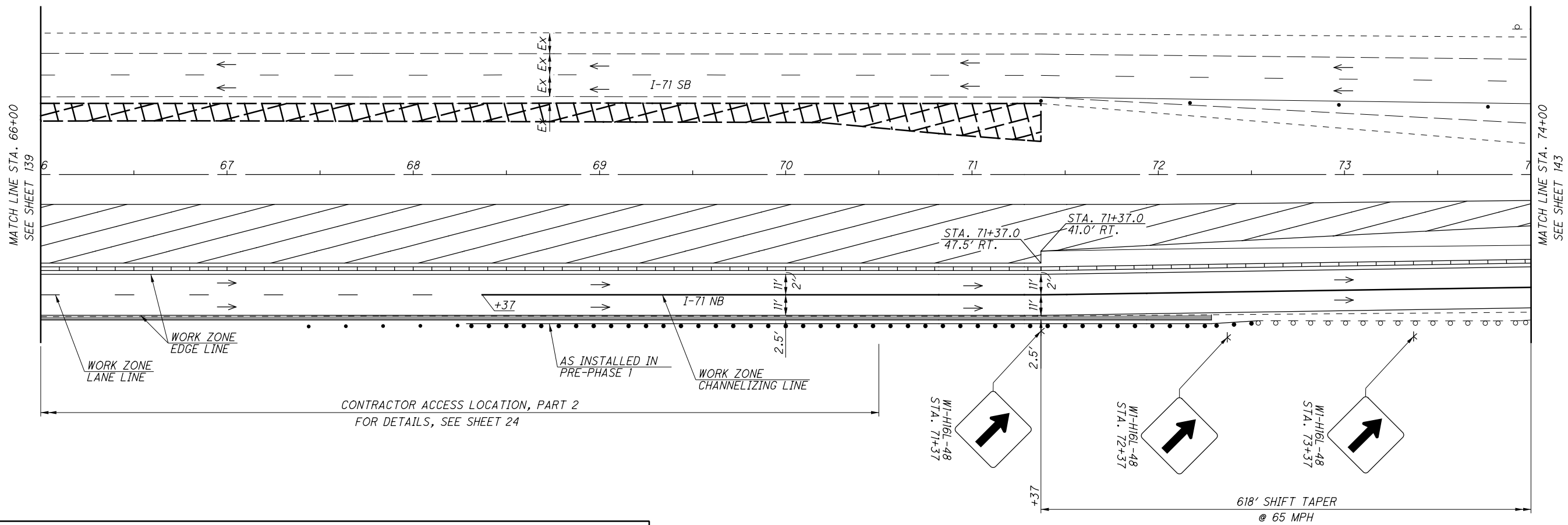
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (ASPHALT OPTION) I-71 - STA. 66+00 TO STA. 74+00**

FRA-71-0.00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM

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0 30 60
15
HORIZONTAL
SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

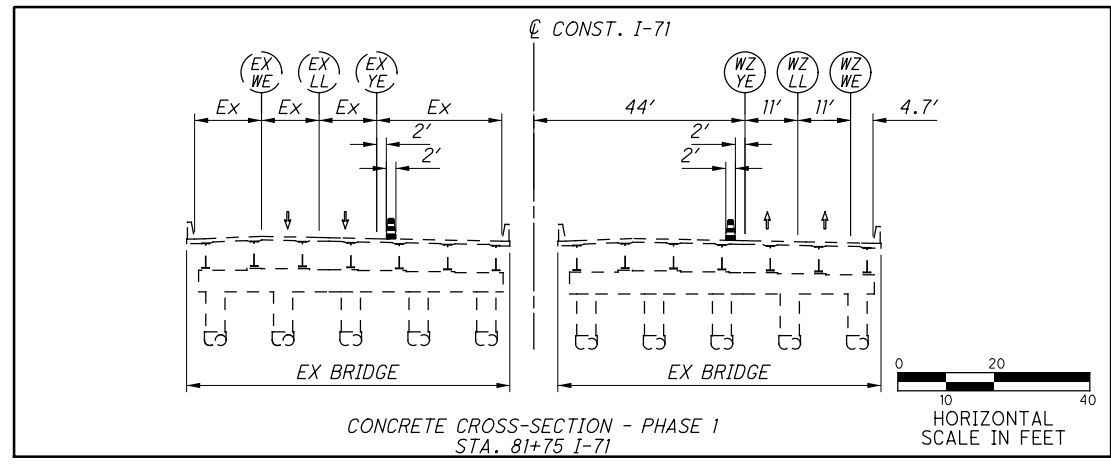
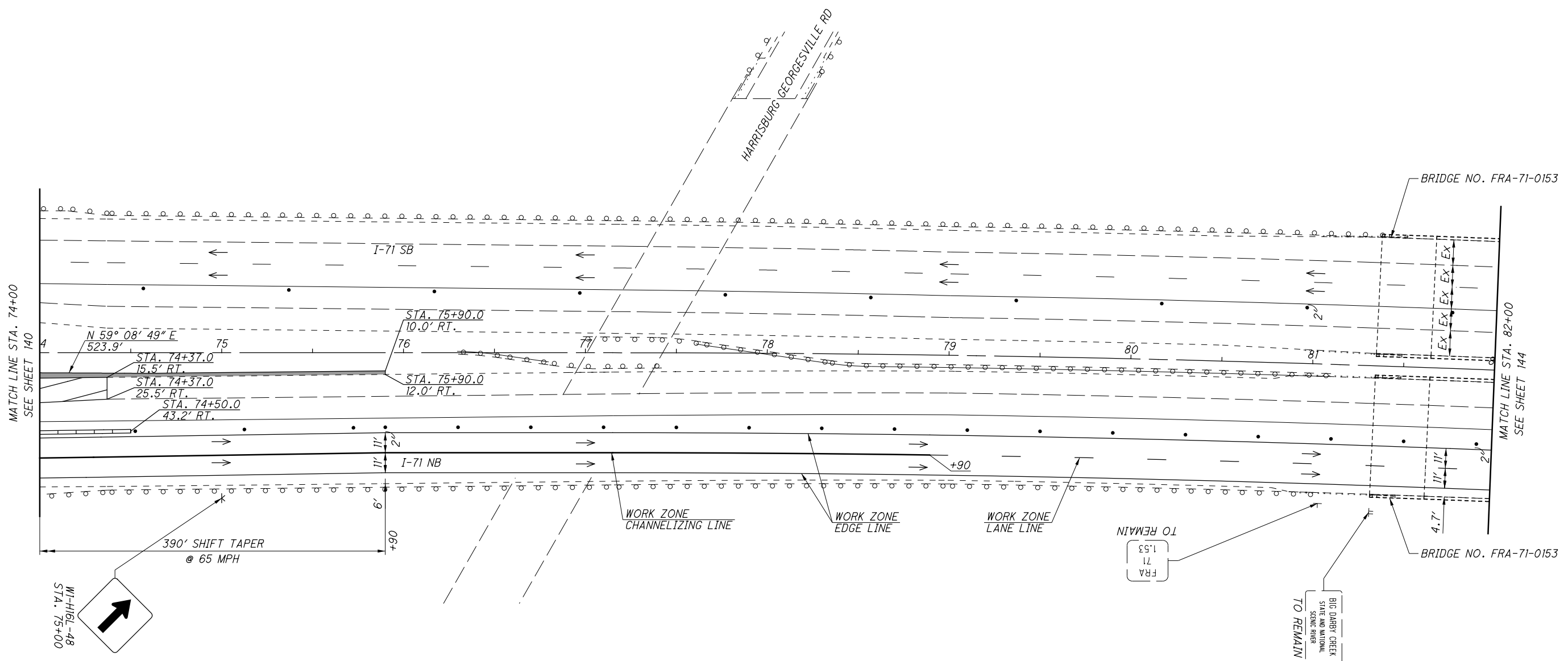
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 74+00 TO STA. 82+00

FRA-71-0.00

142
1312

① $\Delta = 0^\circ 33' 23''$ (RT)
 $Dc = 0^\circ 28' 01''$
 $R = 12,270.71'$
 $T = 59.56'$
 $L = 119.12'$
 $E = 0.15'$
 $C = 119.12'$
 $C.B. = N 61^\circ 14' 52'' E$

② $\Delta = 0^\circ 30' 44''$ (RT)
 $Dc = 0^\circ 28' 01''$
 $R = 12,270.92'$
 $T = 54.84'$
 $L = 109.69'$
 $E = 0.12'$
 $C = 109.69'$
 $C.B. = N 61^\circ 04' 08'' E$



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADIUS/CLOSURE	10' c/c

- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 1^\circ 29' 35''$ (LT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 40.72'$
 $L = 81.44'$
 $E = 0.27'$
 $C = 81.44'$
 $C.B. = N 58^\circ 52' 48'' E$

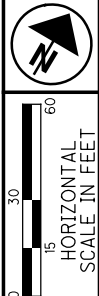
② $\Delta = 4^\circ 19' 12''$ (RT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 117.87'$
 $L = 235.63'$
 $E = 2.22'$
 $C = 235.57'$
 $C.B. = N 60^\circ 17' 36'' E$

CALCULATED
 BER
 CHECKED
 SMM

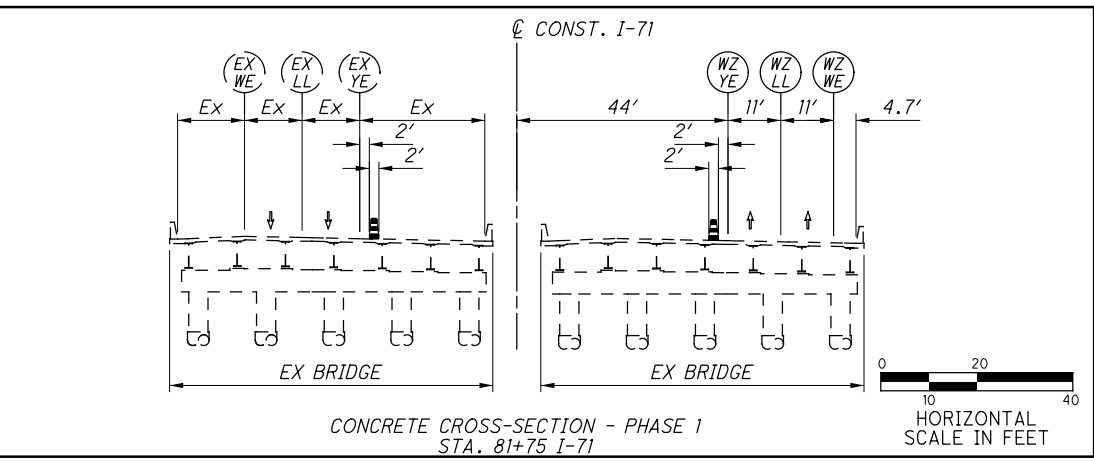
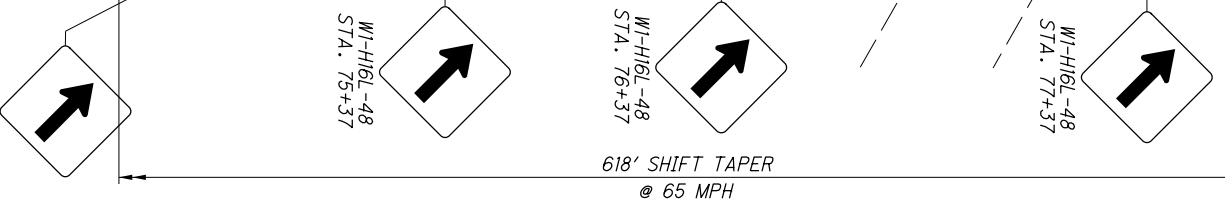
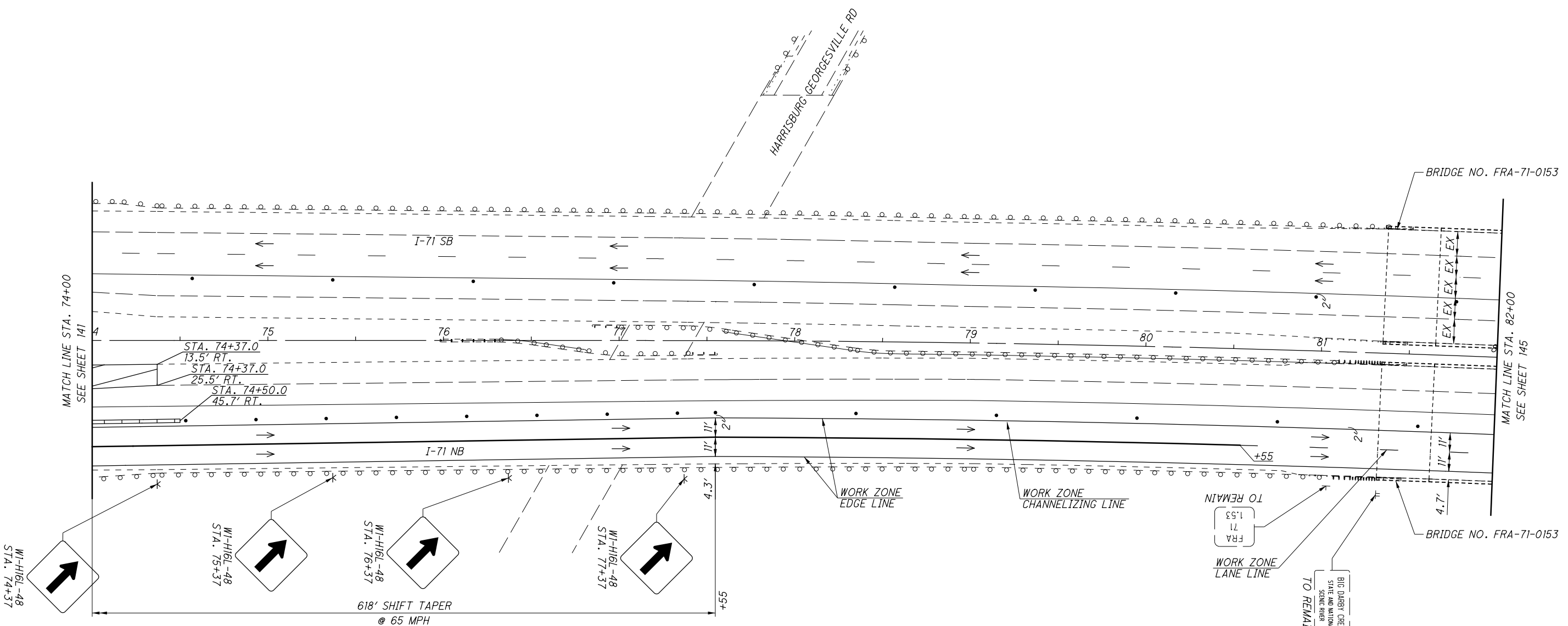
**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (ASPHALT OPTION) I-71 - STA. 74+00 TO STA. 82+00**

FRA-71-0.00

143
 1312



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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

- ① $\Delta = 0^\circ 07' 31''$ (RT)
 $Dc = 0^\circ 25' 06''$
 $R = 13,698.82'$
 $T = 14.97'$
 $L = 29.94'$
 $E = 0.01'$
 $C = 29.94'$
 $C.B. = N 64^\circ 56' 44'' E$
- ② $\Delta = 0^\circ 25' 57''$ (RT)
 $Dc = 0^\circ 28' 01''$
 $R = 12,270.92'$
 $T = 46.31'$
 $L = 92.62'$
 $E = 0.09'$
 $C = 92.62'$
 $C.B. = N 63^\circ 58' 22'' E$
- ③ $\Delta = 0^\circ 27' 12''$ (RT)
 $Dc = 0^\circ 27' 57''$
 $R = 12,300.92'$
 $T = 48.65'$
 $L = 97.30'$
 $E = 0.10'$
 $C = 97.30'$
 $C.B. = N 63^\circ 47' 17'' E$
- ④ $\Delta = 0^\circ 17' 32''$ (RT)
 $Dc = 0^\circ 28' 01''$
 $R = 12,271.00'$
 $T = 31.28'$
 $L = 62.57'$
 $E = 31.28'$
 $C = 62.57'$
 $C.B. = N 65^\circ 22' 58'' E$

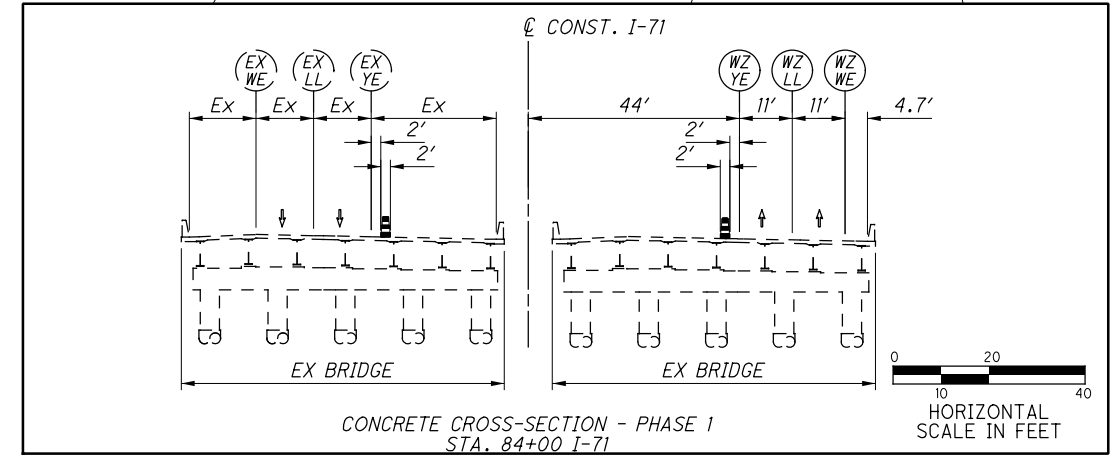
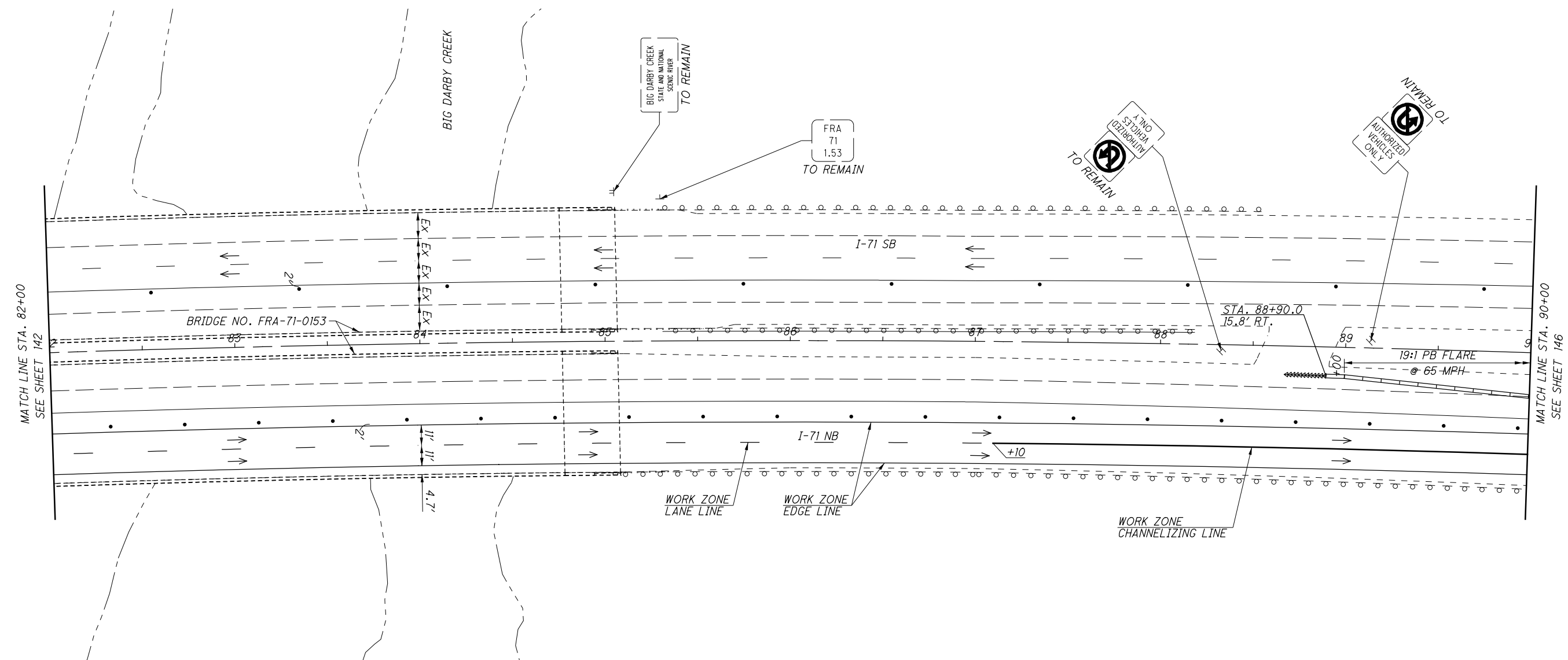
0 15 30 60
HORIZONTAL SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 82+00 TO STA. 90+00**

FRA-71-0.00

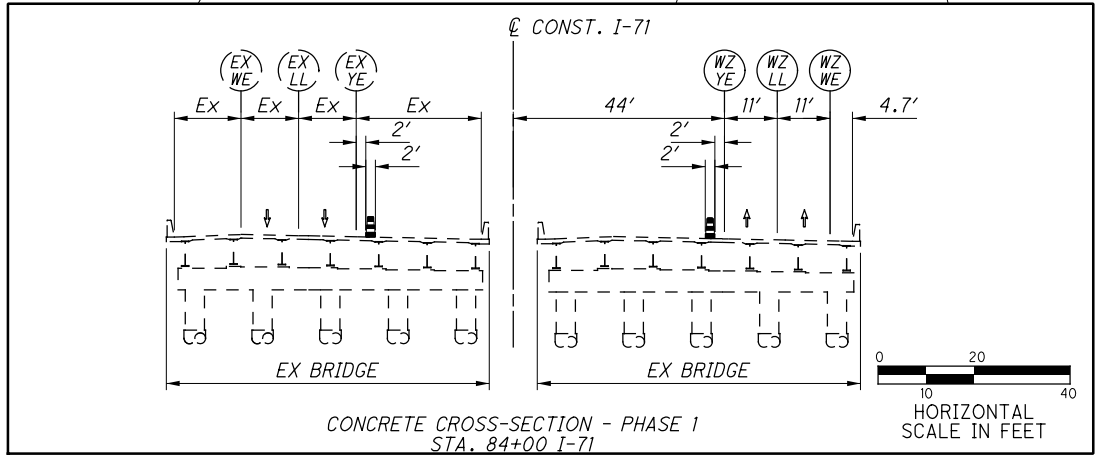
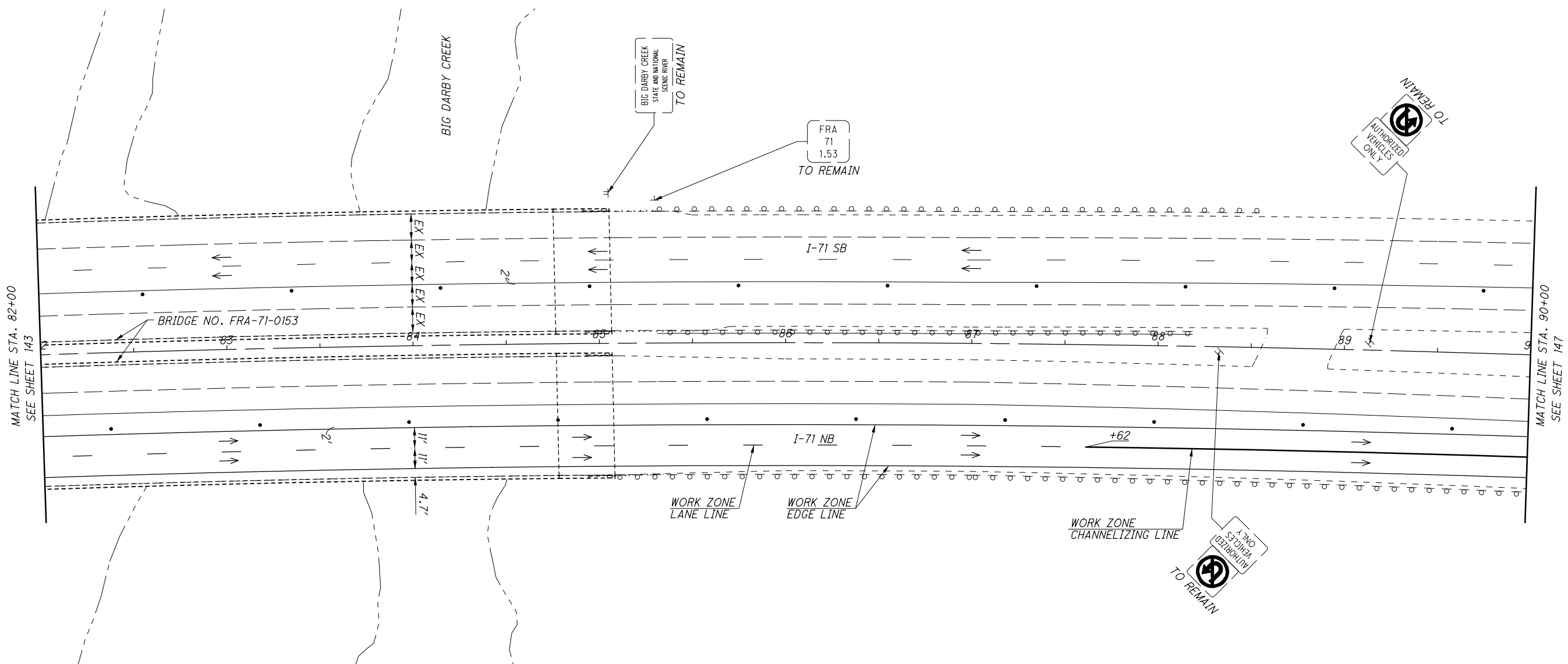
144
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- DRUM
 - ✕ TEMPORARY SIGN SUPPORT
 - T EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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0 30 60
15
HORIZONTAL
SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 90+00 TO STA. 98+00**

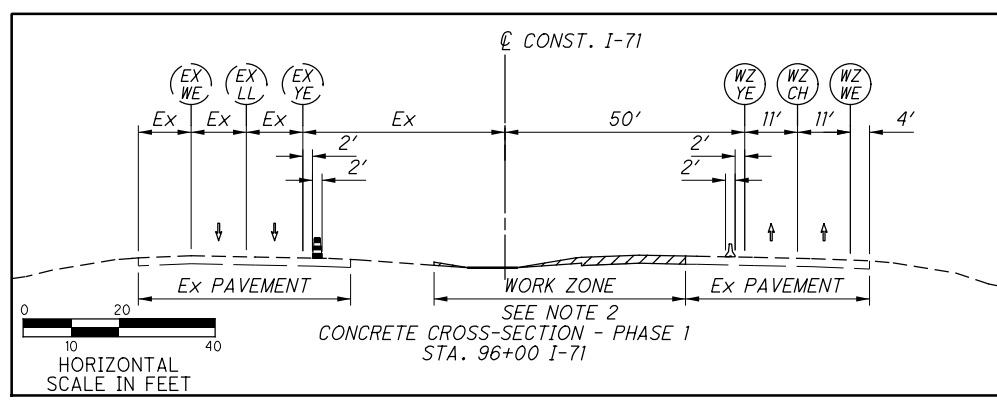
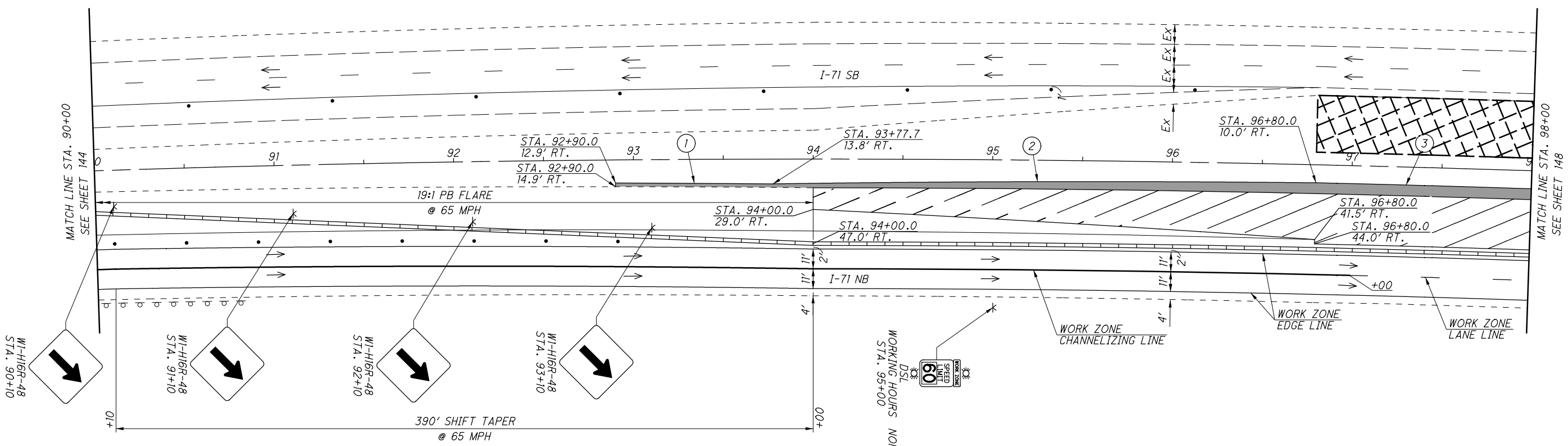
FRA-71-0.00

146
1312

- ① $\Delta = 0^\circ 24' 33''$ (RT)
Dc = $0^\circ 28' 01''$
R = 12,267.95'
T = 43.80'
L = 87.59'
E = 0.08'
C = 87.59'
C.B. = N $67^\circ 46' 29''$ E
- ② $\Delta = 1^\circ 24' 41''$ (RT)
Dc = $0^\circ 28' 02''$
R = 12,263.83'
T = 151.04'
L = 302.07'
E = 0.93'
C = 302.07'
C.B. = N $67^\circ 22' 34''$ E
- ③ $\Delta = 26^\circ 43' 03''$ (RT)
Dc = $0^\circ 28' 02''$
R = 12,267.67'
T = 2913.23'
L = 5720.50'
E = 341.16'
C = 5668.81'
C.B. = N $82^\circ 09' 18''$ E

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 0^\circ 21' 26''$ (RT)
 $D_c = 0^\circ 28' 01''$
 $R = 12,267.95'$
 $T = 38.23'$
 $L = 76.45'$
 $E = 0.06'$
 $C = 76.45'$
 $C.B. = N 67^\circ 39' 23'' E$

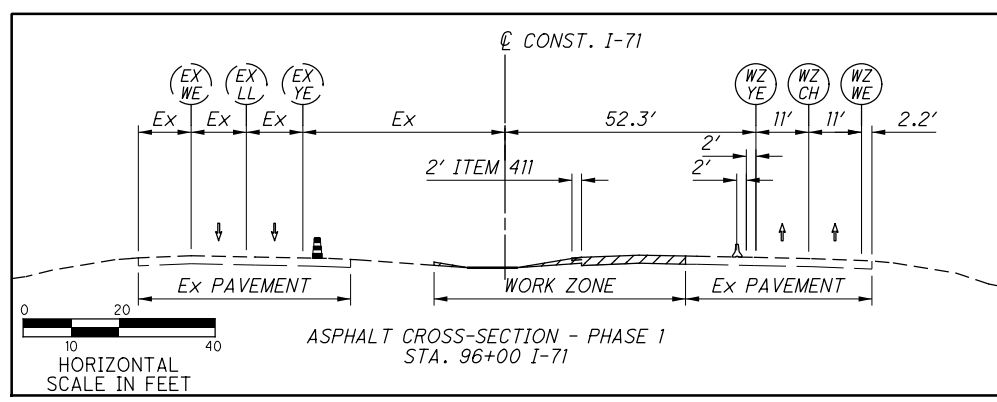
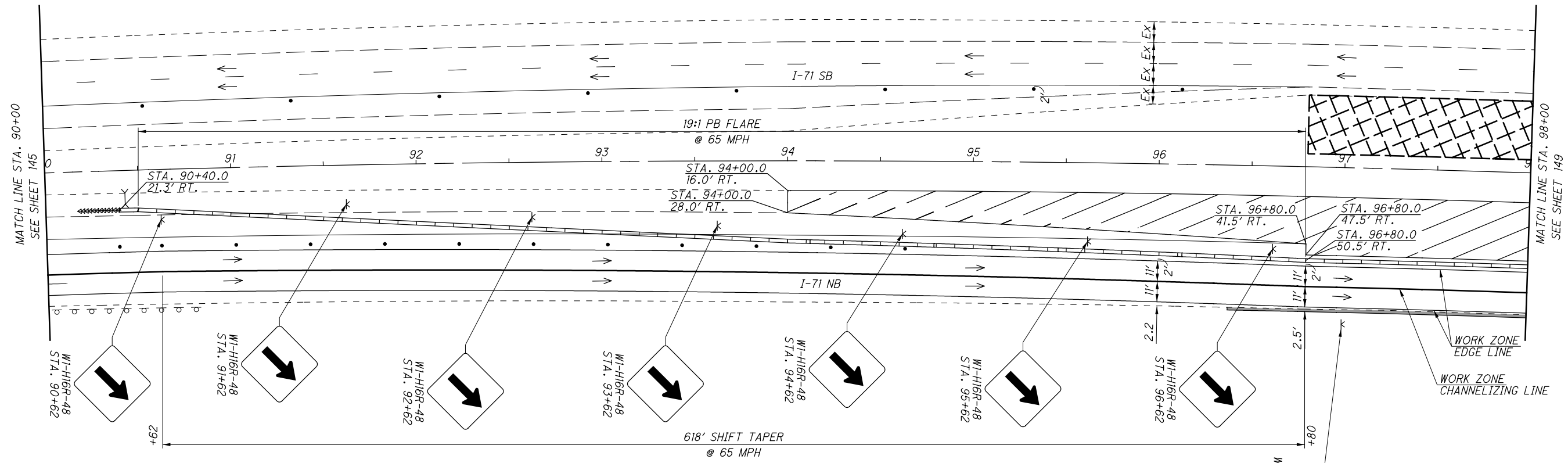
NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

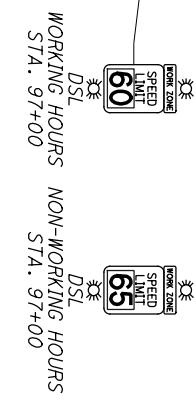
**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (ASPHALT OPTION) I-71 - STA. 90+00 TO STA. 98+00**

FRA-71-0.00



- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - OPEN TRAVEL LANE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



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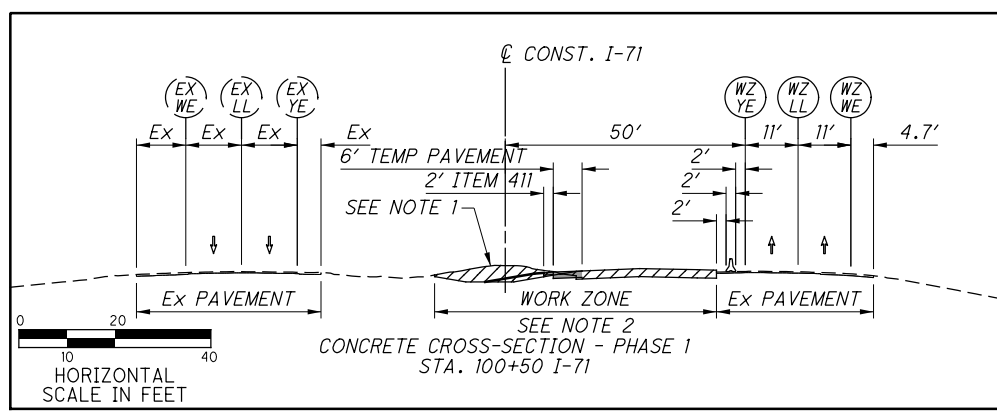
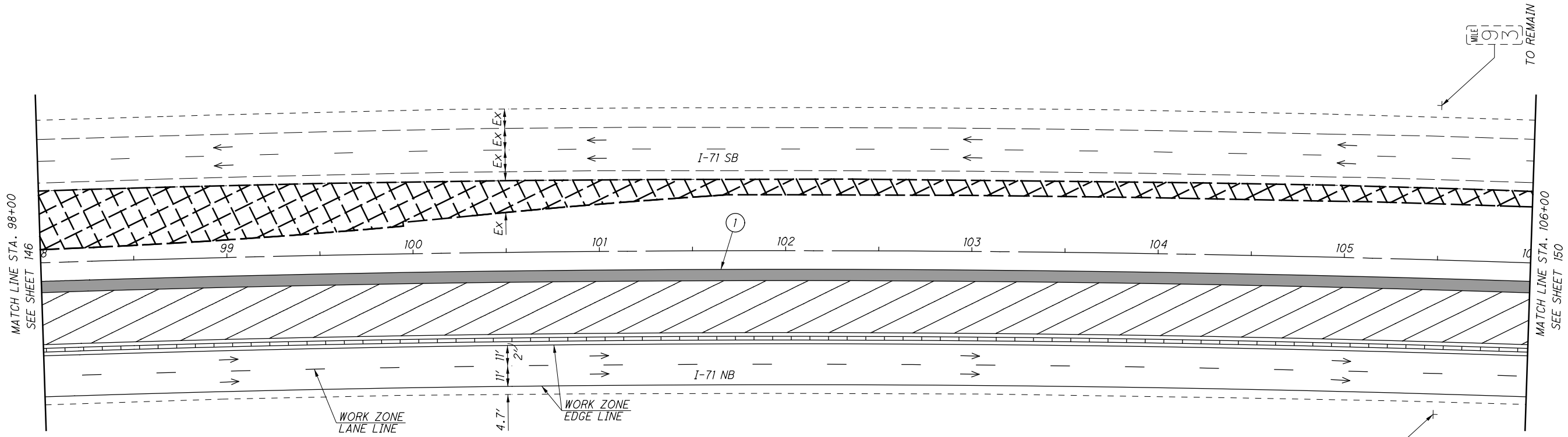
① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

CALCULATED
 BER
 CHECKED
 SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (CONCRETE OPTION) I-71 - STA. 98+00 TO STA. 106+00**

FRA-71-0.00



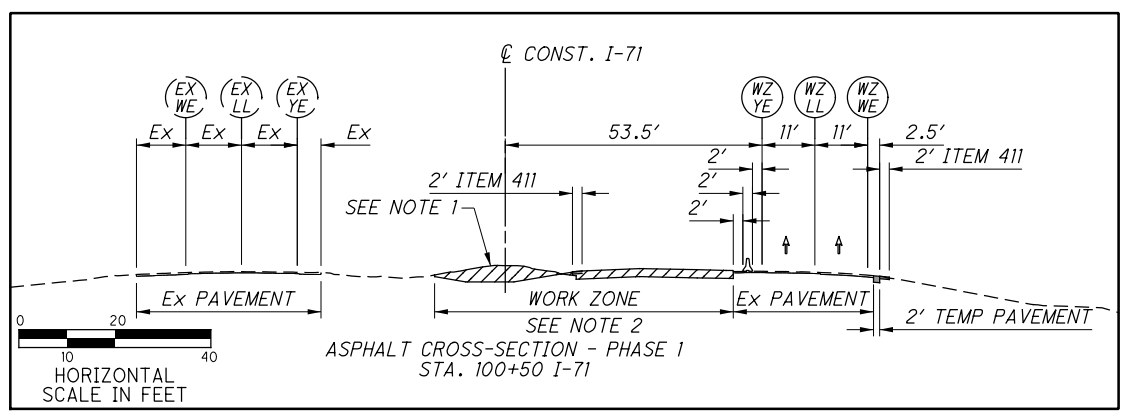
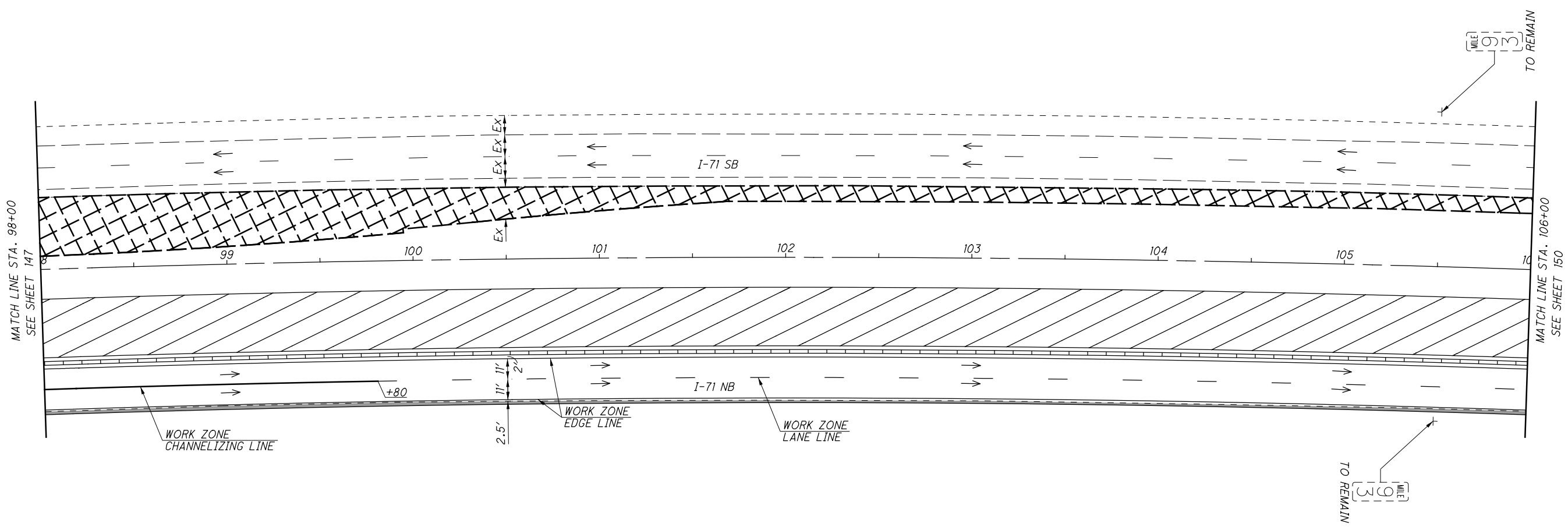
- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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CALCULATED
BER
CHECKED
SMM

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED IN PRE-PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 98+00 TO STA. 106+00

FRA-71-0.00

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① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

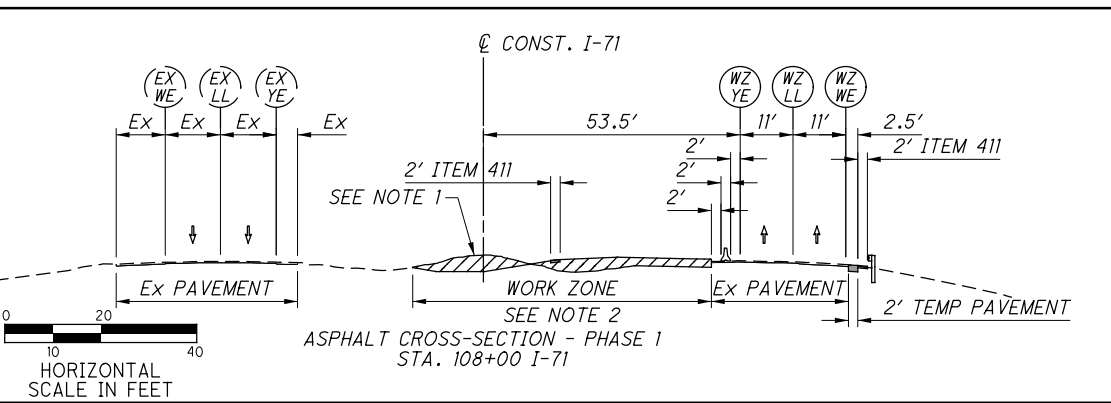
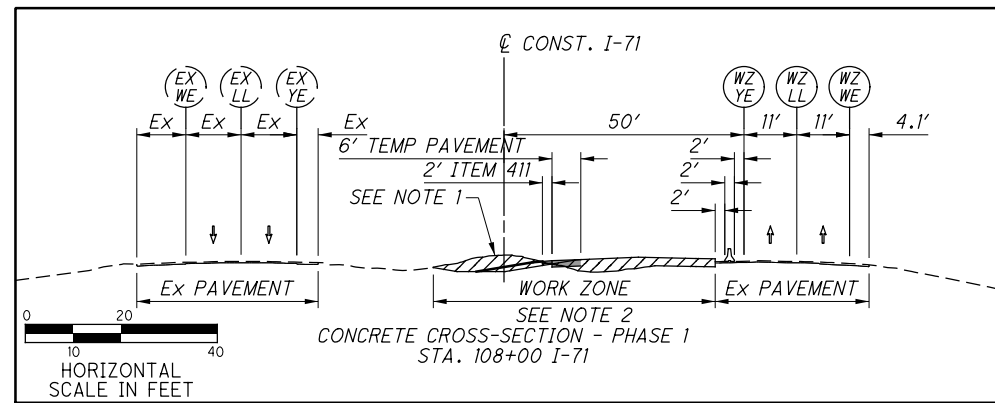
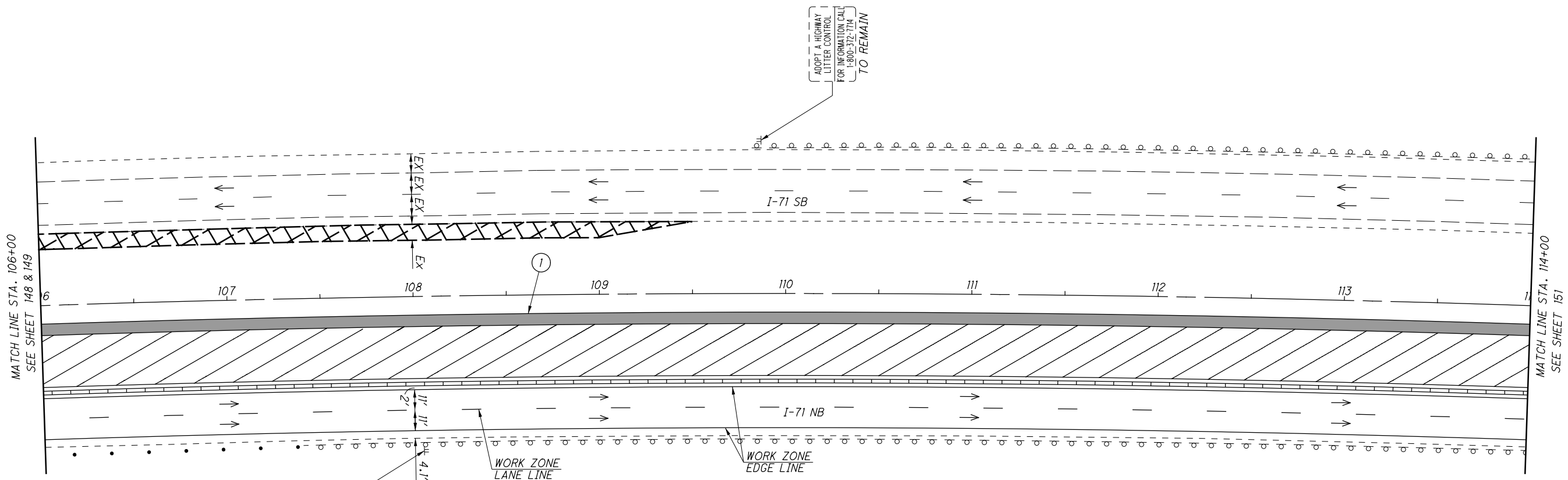
CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 I-71 - STA. 106+00 TO STA. 114+00

FRA-71-0.00

150
 1312



LEGEND

- PHASE 1 WORK ZONE
- TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
- TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE

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① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

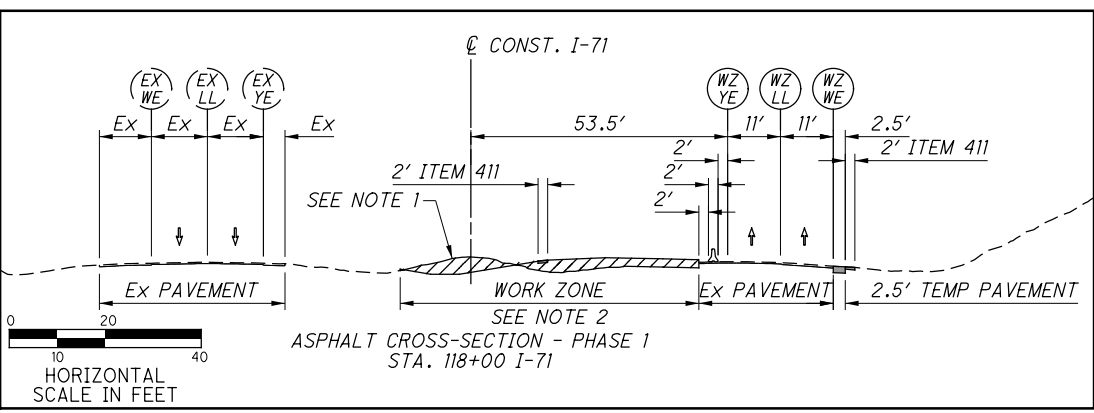
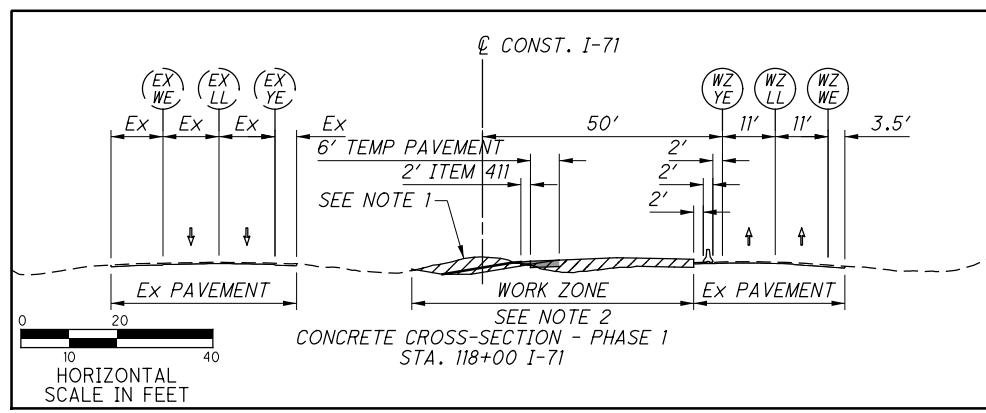
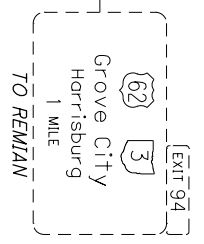
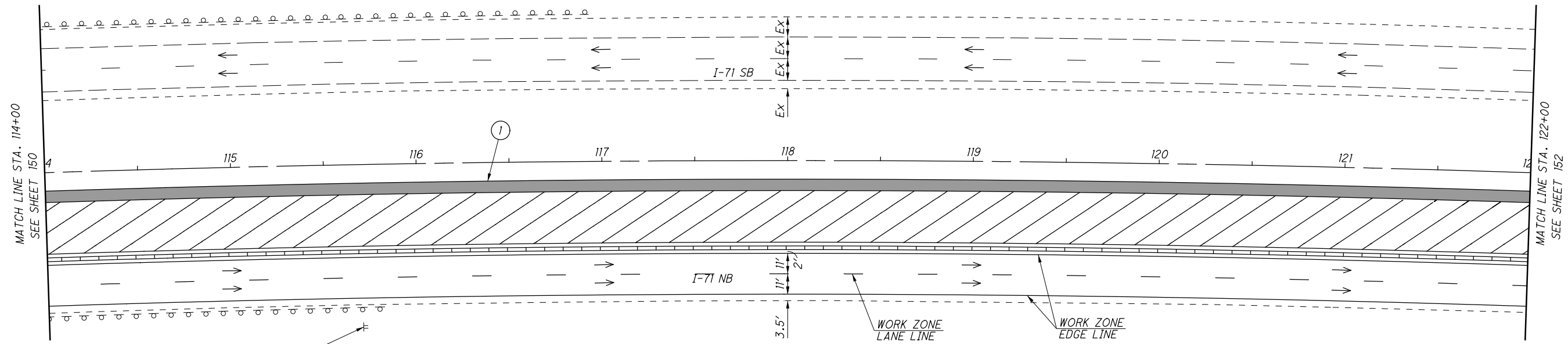


CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 114+00 TO STA. 122+00

FRA-71-0.00

151
 1312



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

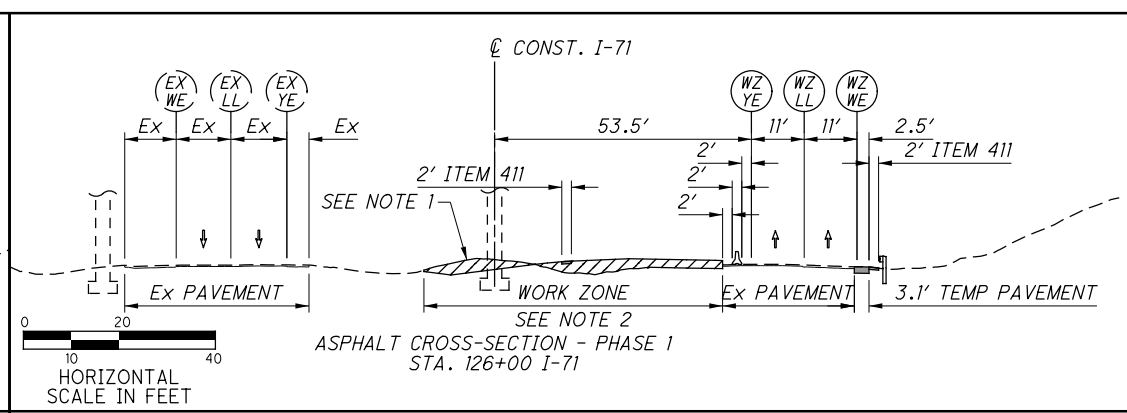
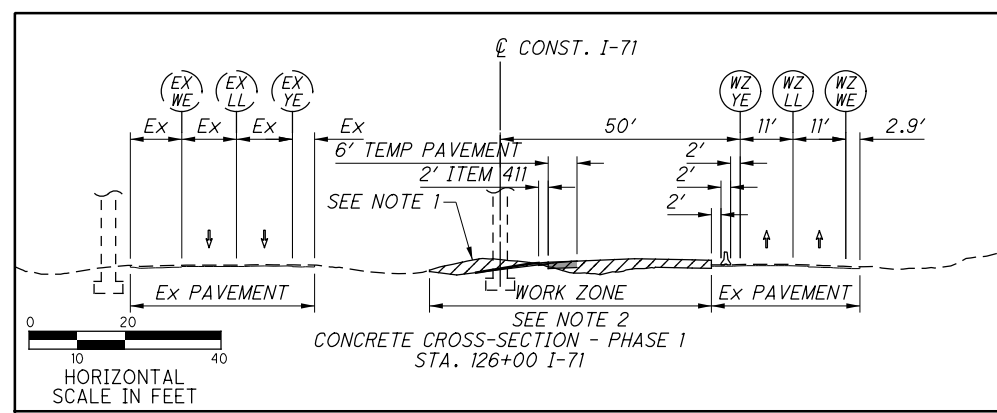
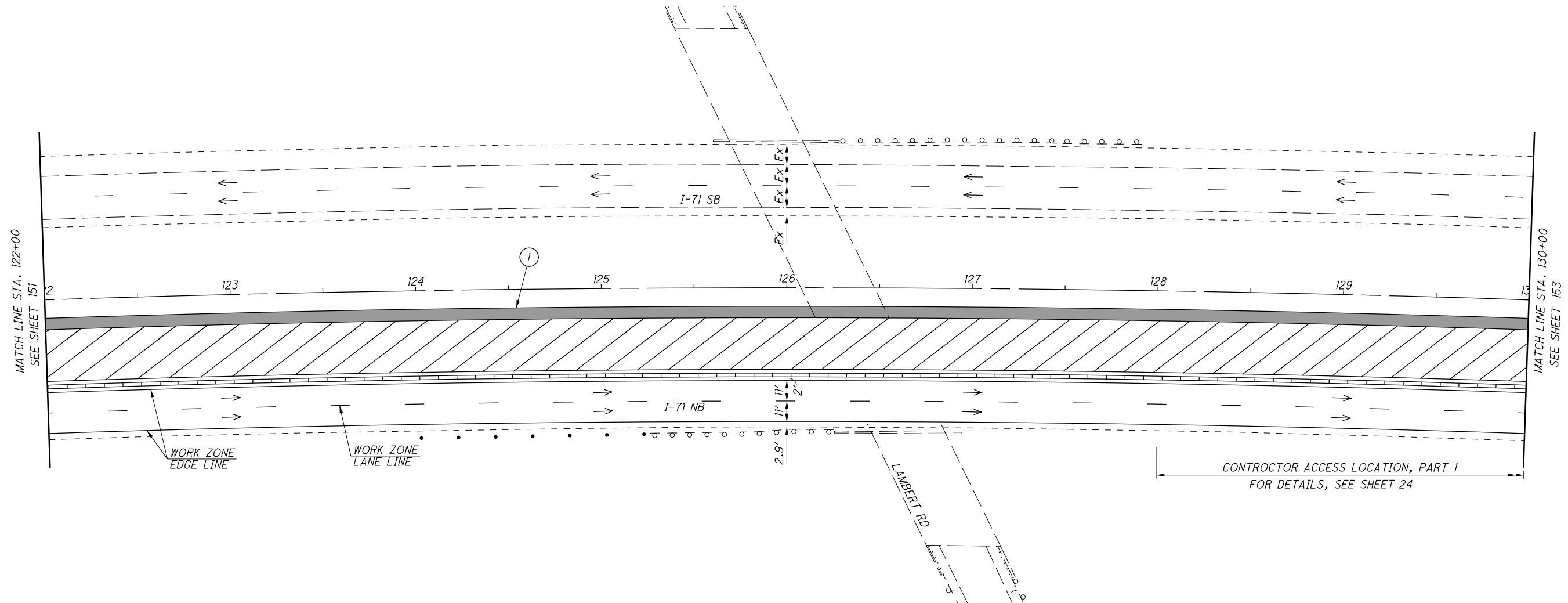
CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 I-71 - STA. 122+00 TO STA. 130+00

FRA-71-0.00

152
 1312



LEGEND

- PHASE 1 WORK ZONE
- TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
- PORTABLE BARRIER
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE

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① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$

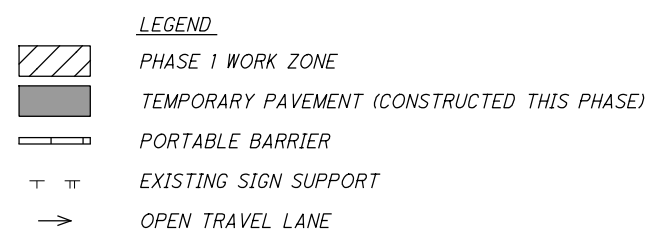
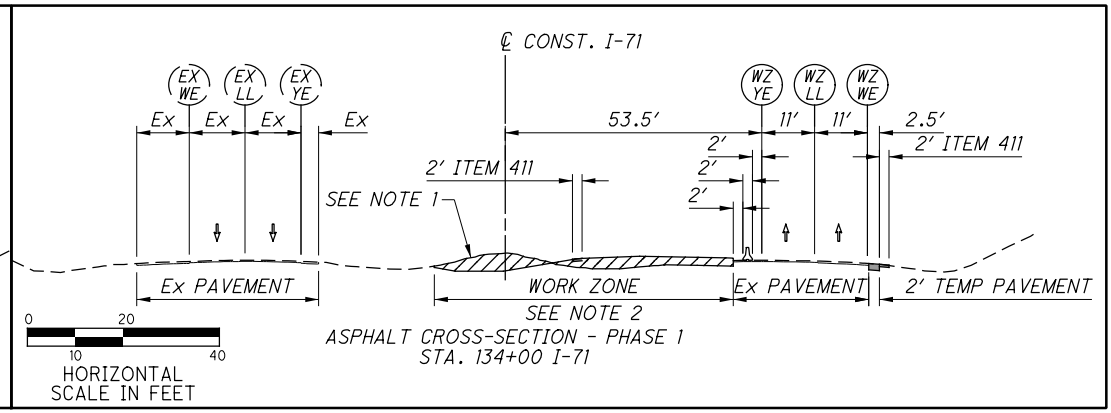
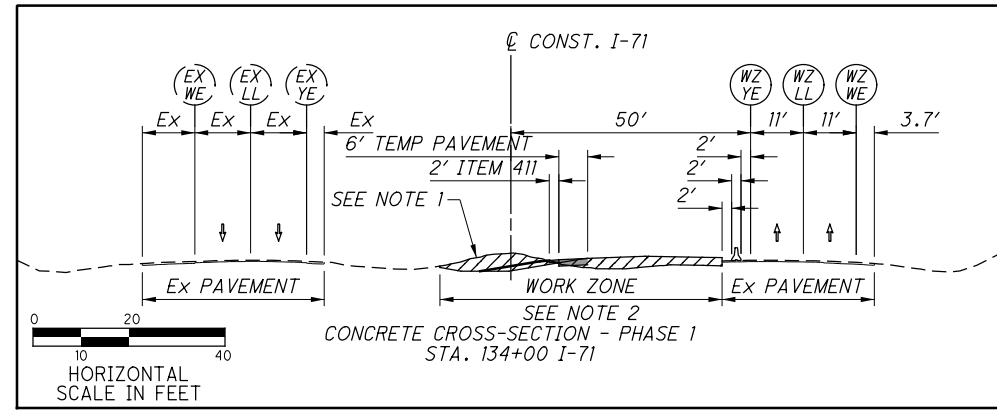
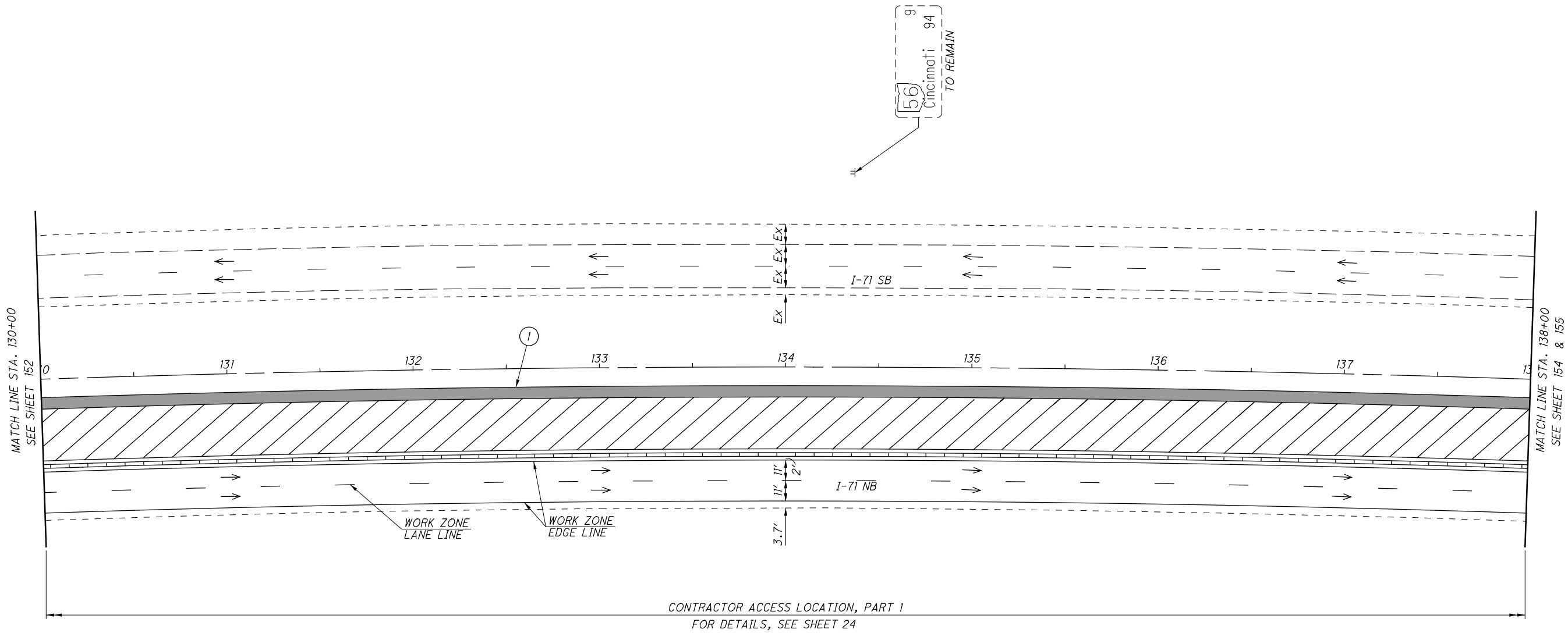
NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



CALCULATED BY BER CHECKED BY SMM
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 130+00 TO STA. 138+00

FRA-71-0.00
 153
 1312

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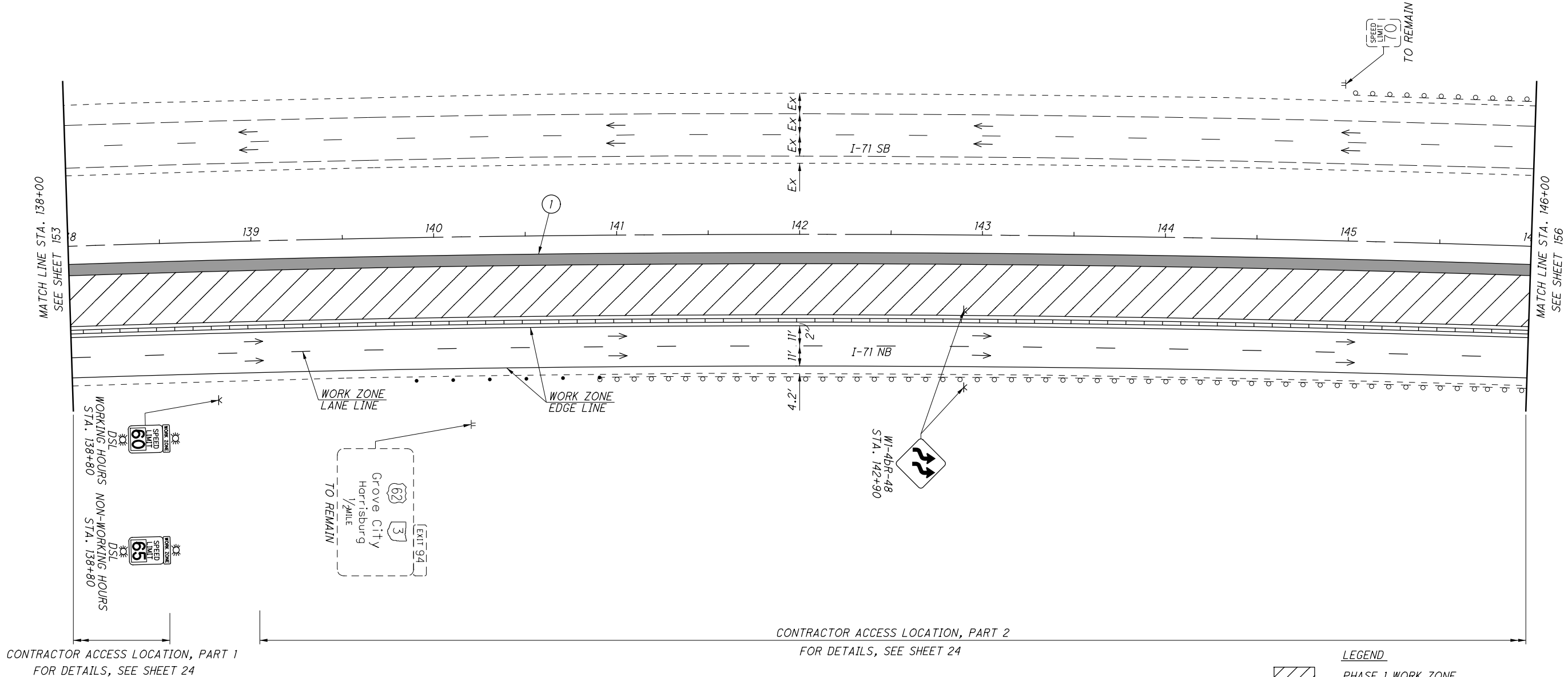
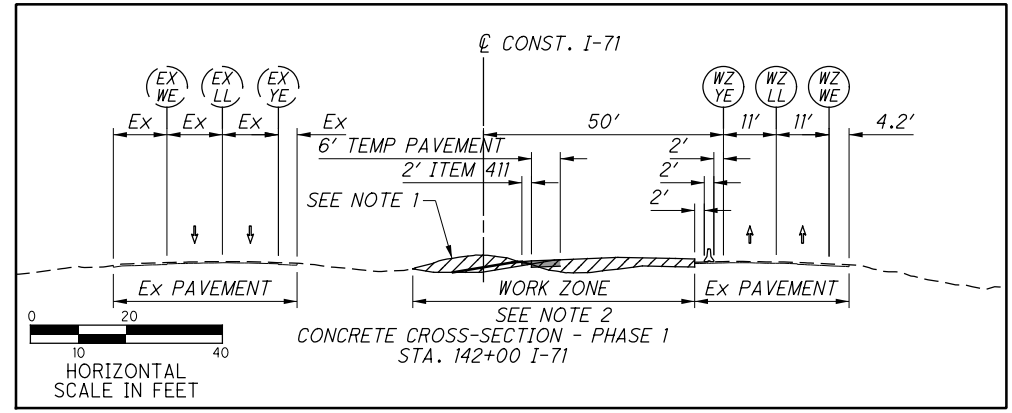
CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 138+00 TO STA. 146+00**

FRA-71-0:00
154
1312

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$



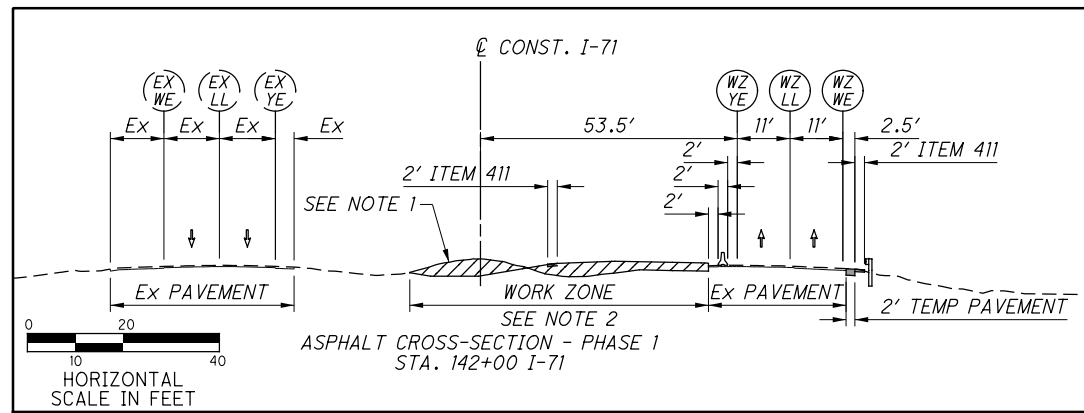
DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM

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NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

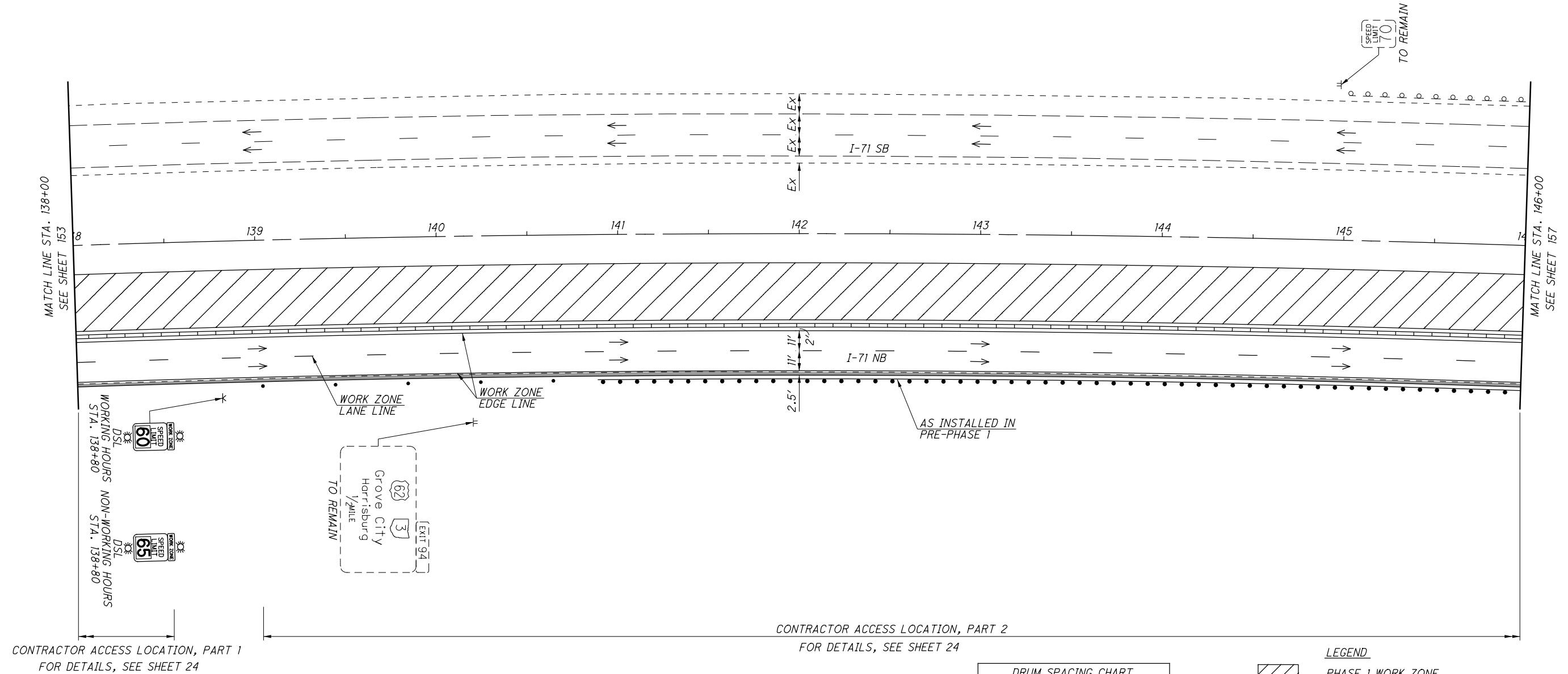
CALCULATED BER CHECKED SMM

0 15 30 45 60
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (ASPHALT OPTION) I-71 - STA. 138+00 TO STA. 146+00**

FRA-71-0.00

155
 1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADIUS/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM



CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 146+00 TO STA. 154+00**

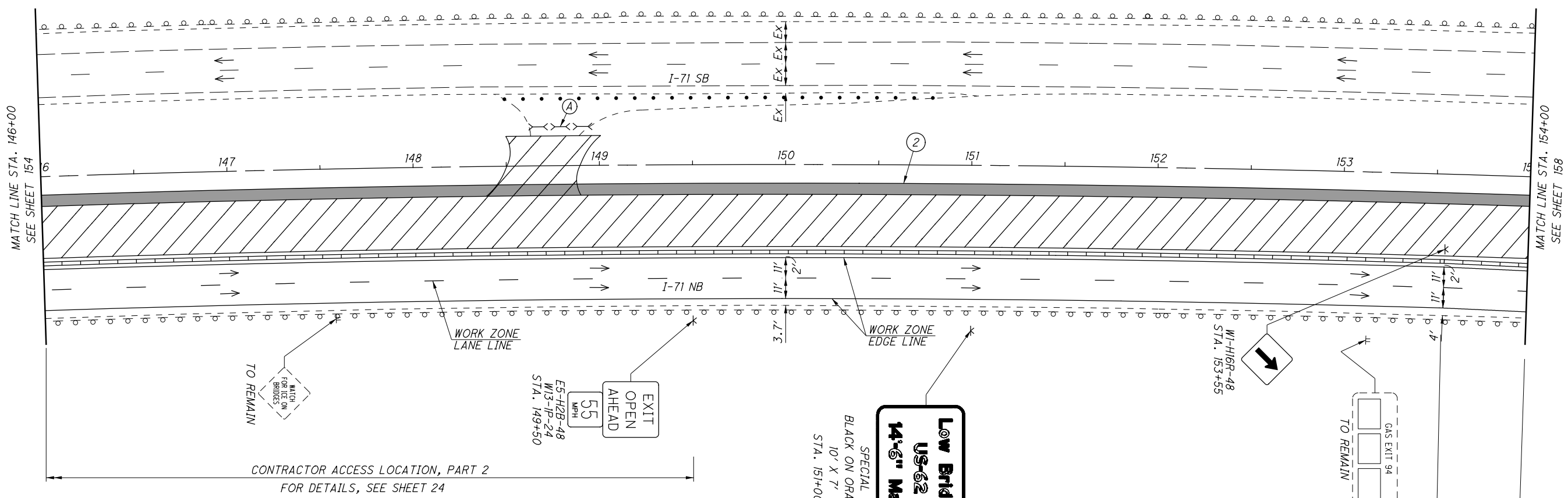
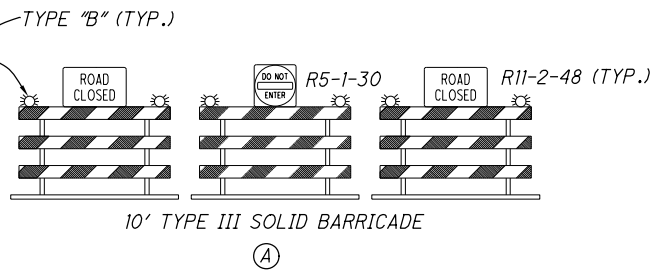
FRA-71-0.00

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

DRUM SPACING CHART @ 60 MPH

TANGENT	120' c/c
TAPER	60' c/c
RADII/CLOSURE	10' c/c

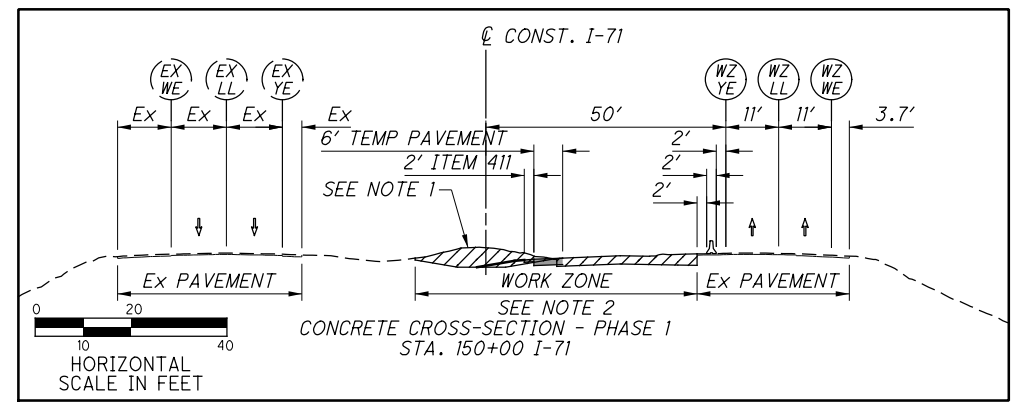
① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$



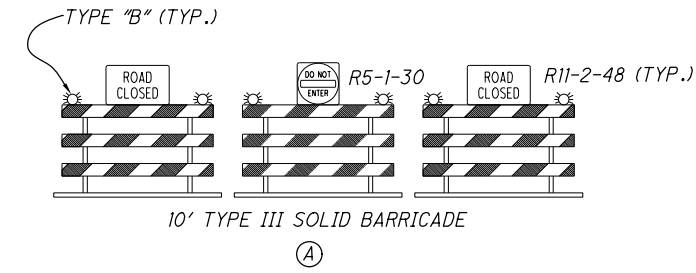
DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



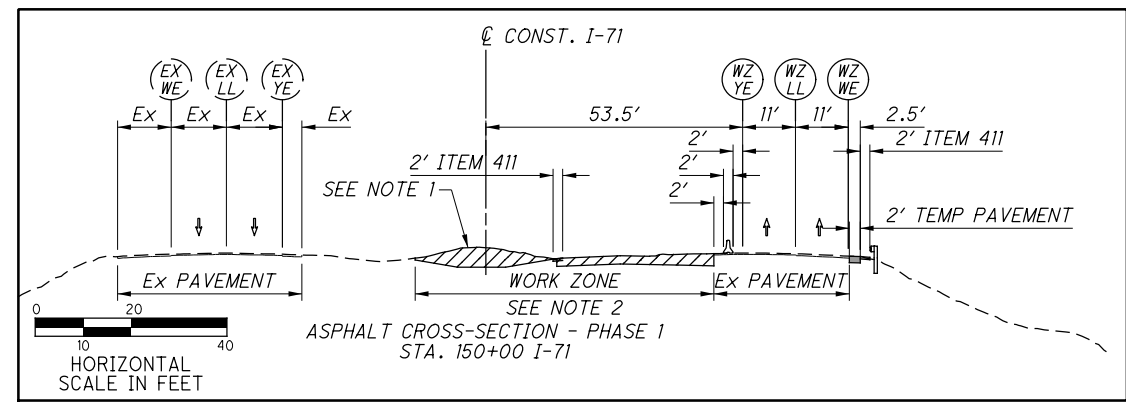
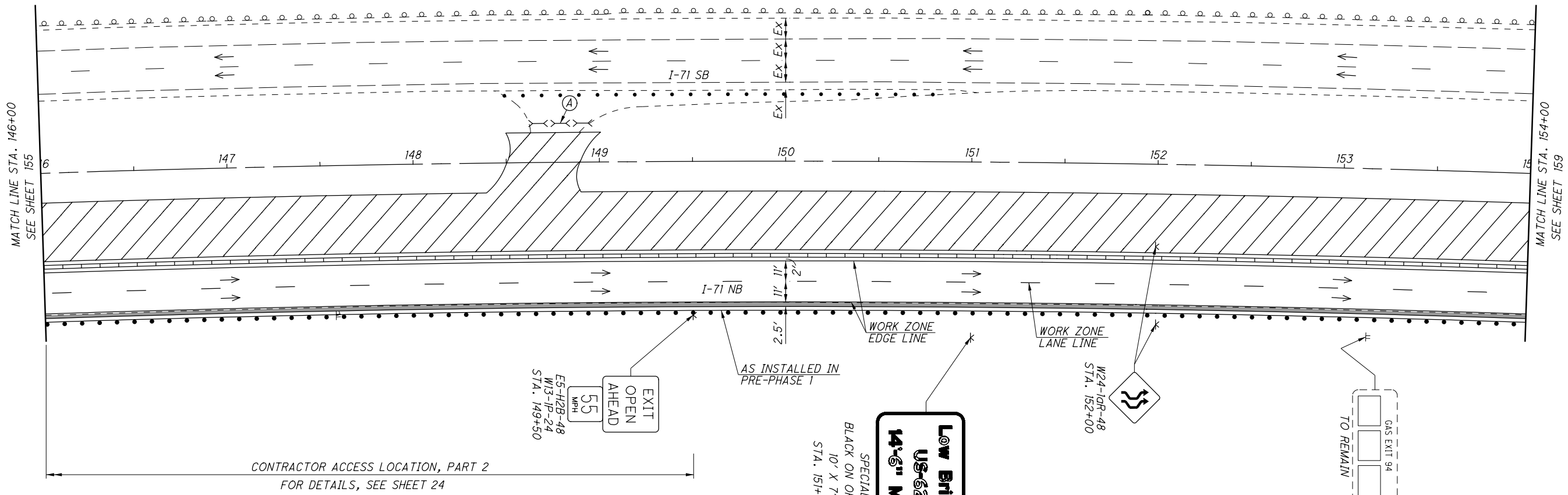
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NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

DRUM SPACING CHART @ 60 MPH

TANGENT	120' c/c
TAPER	60' c/c
RADII/CLOSURE	10' c/c



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE FOR DETAILS, SEE SHEETS 47 - 65
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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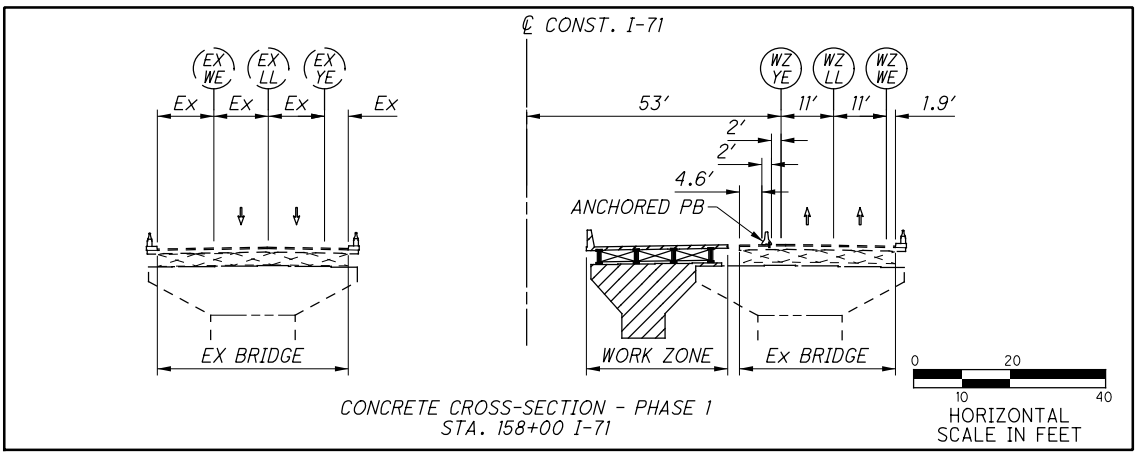
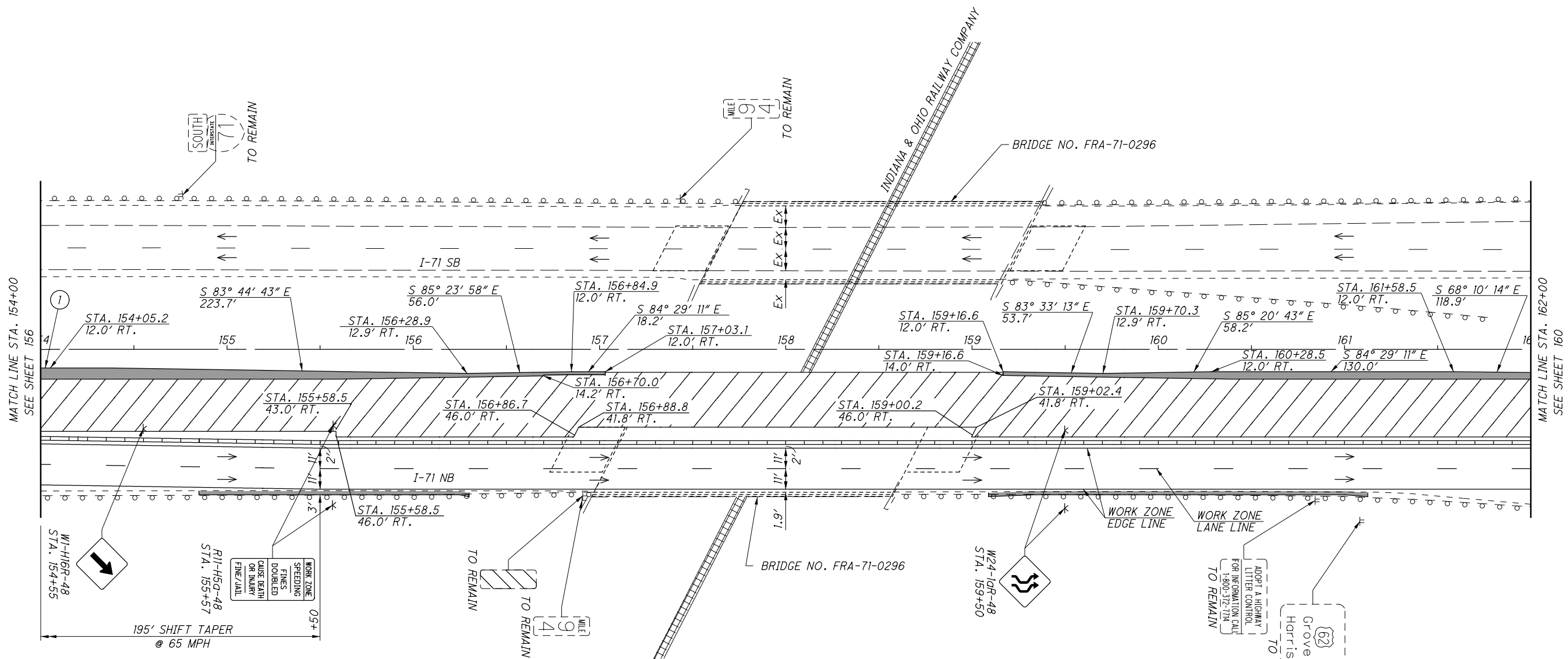
① $\Delta = 26^\circ 43' 03''$ (RT)
 $D_c = 0^\circ 28' 02''$
 $R = 12,267.67'$
 $T = 2913.23'$
 $L = 5720.50'$
 $E = 341.16'$
 $C = 5668.81'$
 $C.B. = N 82^\circ 09' 18'' E$

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (CONCRETE OPTION) I-71 - STA. 154+00 TO STA. 162+00**

FRA-71-0.00

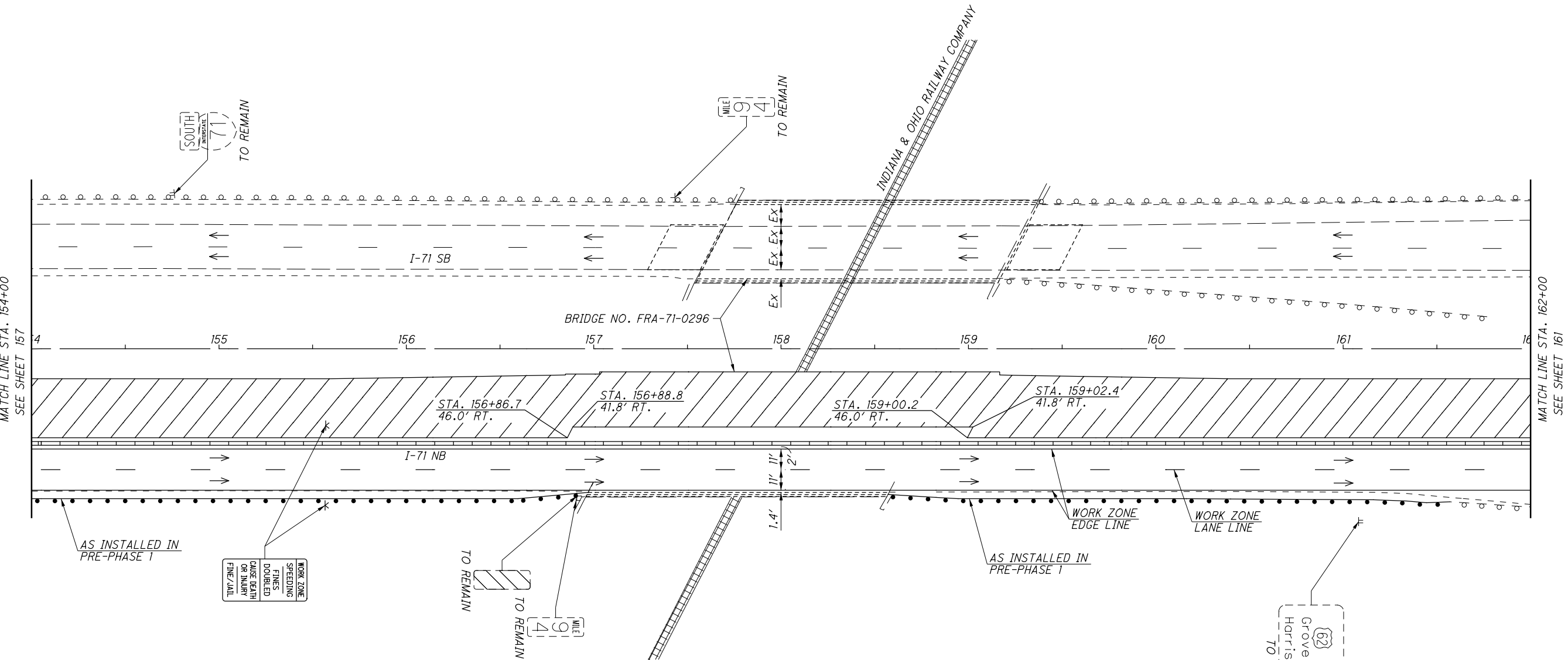


LEGEND

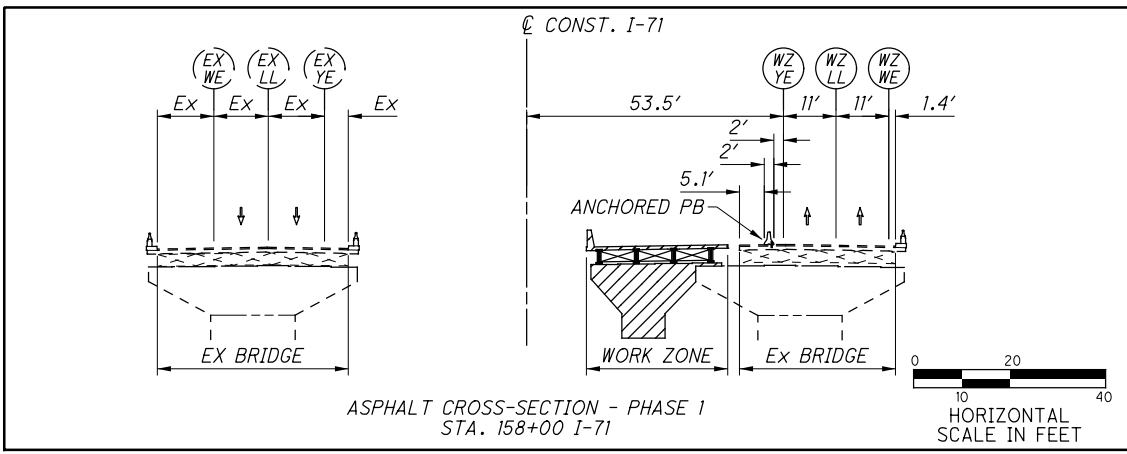
- PHASE 1 WORK ZONE
- TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE

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WORK ZONE
SPEEDING
FINES
DOUBLED
CRASH DEATH
OR INJURY
FINE/JAIL



- LEGEND**
- PHASE 1 WORK ZONE
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 154+00 TO STA. 162+00**

FRA-71-0.00



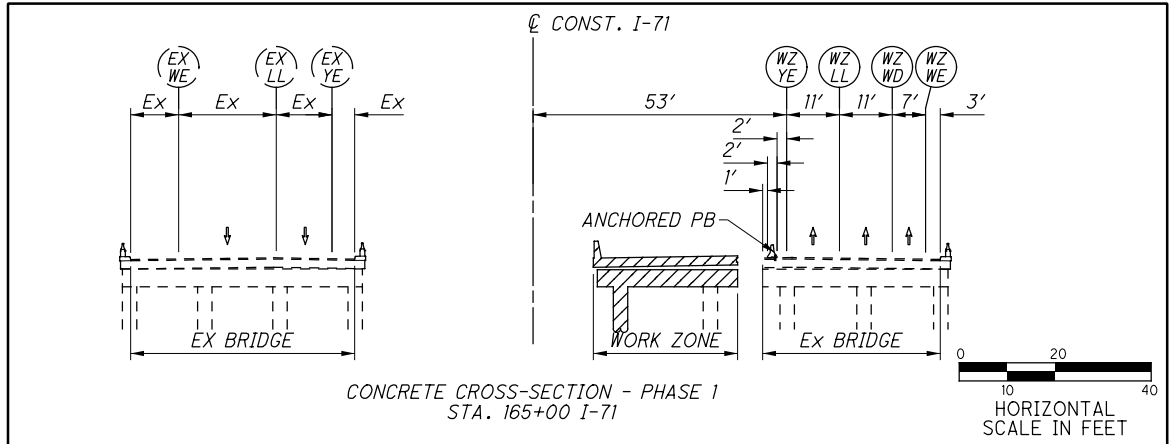
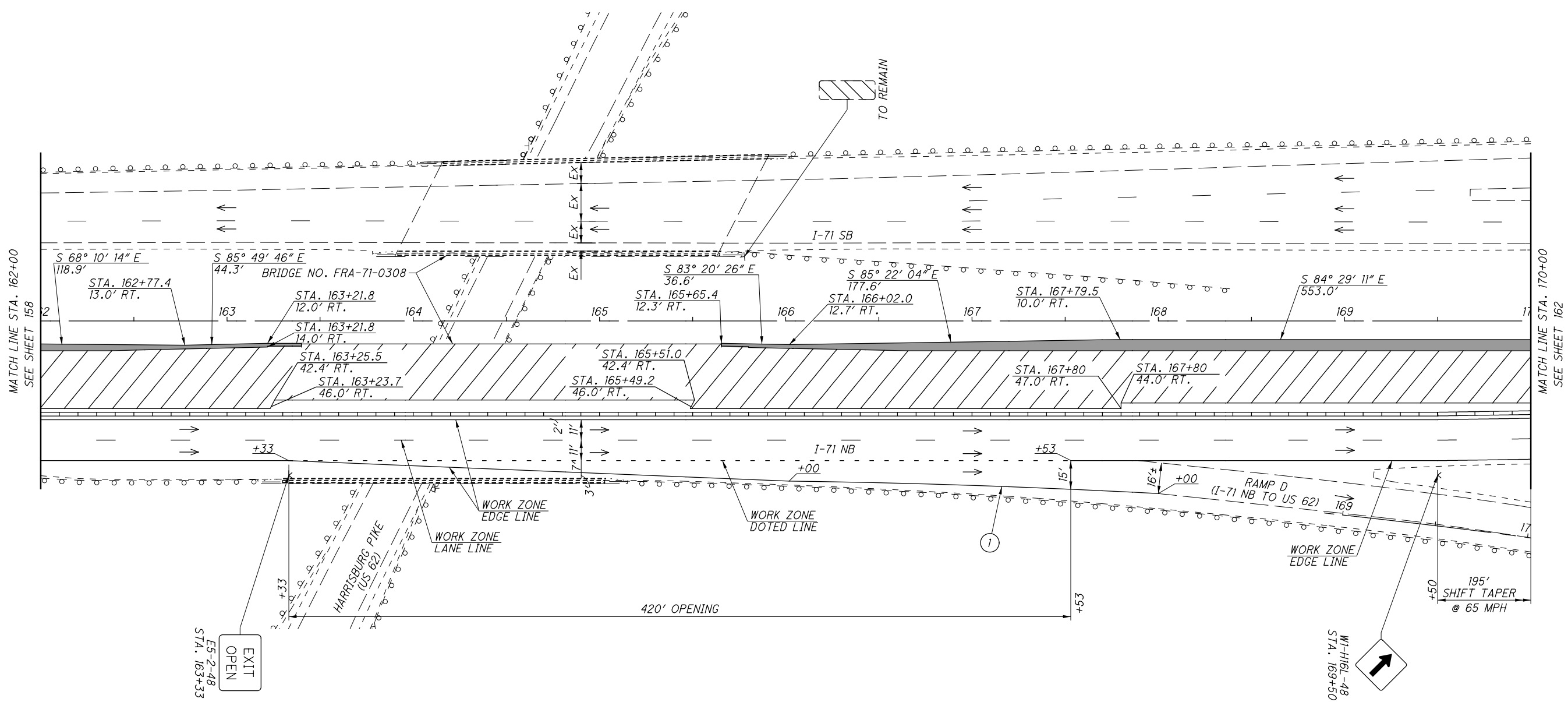
0 30 60
15
HORIZONTAL
SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 162+00 TO STA. 170+00**

FRA-71-0.00

160
1312



① $\Delta = 2^\circ 22' 48''$ (RT)
 $D_c = 1^\circ 12' 00''$
 $R = 4774.98'$
 $T = 99.19'$
 $L = 198.35'$
 $E = 1.03'$
 $C = 198.33'$
 $C.B. = S 82^\circ 33' 47'' E$

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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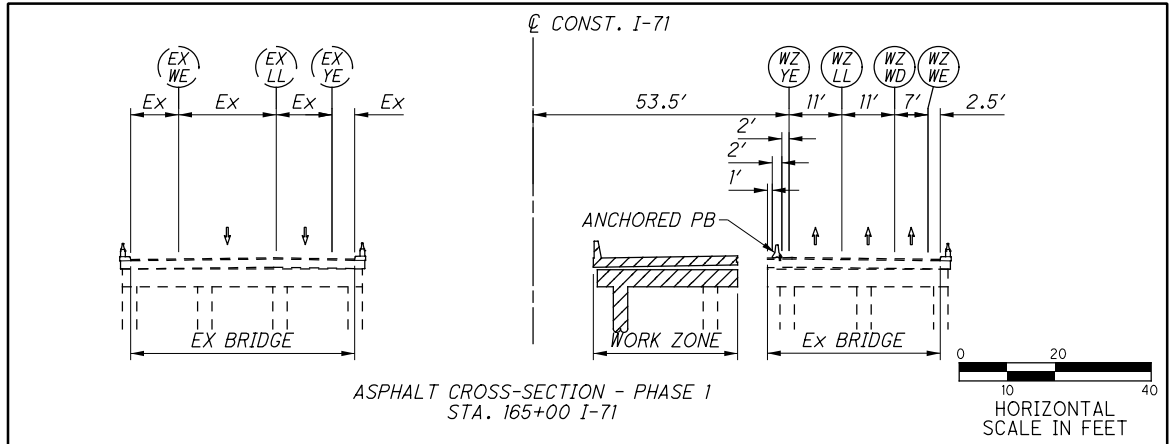
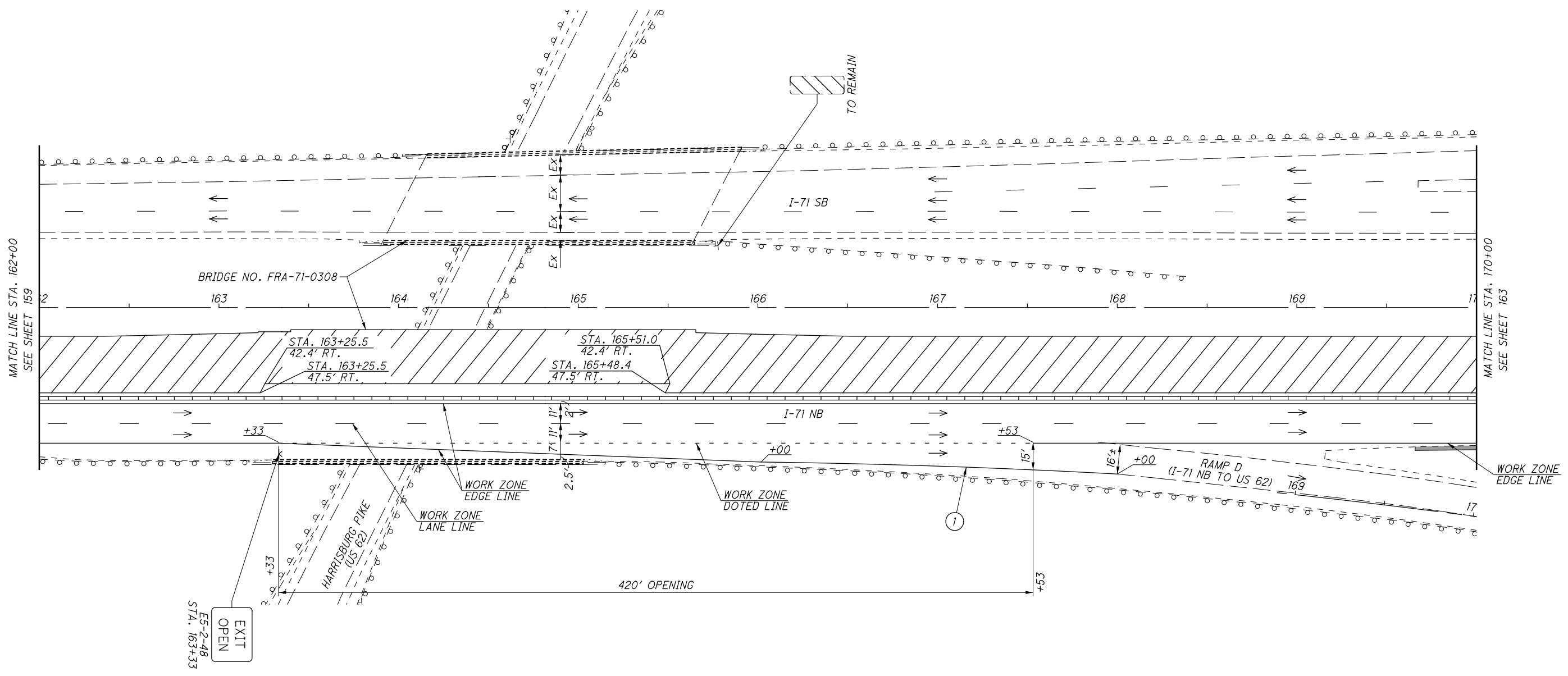
0 15 30 60
HORIZONTAL
SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 162+00 TO STA. 170+00**

FRA-71-0.00

161
1312



① $\Delta = 2^\circ 22' 48''$ (RT)
 $D_c = 1^\circ 12' 00''$
 $R = 4774.98'$
 $T = 99.19'$
 $L = 198.35'$
 $E = 1.03'$
 $C = 198.33'$
 $C.B. = S 82^\circ 33' 47'' E$

- LEGEND**
- PHASE 1 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 3^\circ 27' 00''$ (LT)
 $D_c = 0^\circ 39' 57''$
 $R = 8604.37'$
 $T = 259.13'$
 $L = 518.10'$
 $E = 3.90'$
 $C = 518.02'$
 $C.B. = S 86^\circ 12' 41'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

CALCULATED
 BER
 CHECKED
 SMM

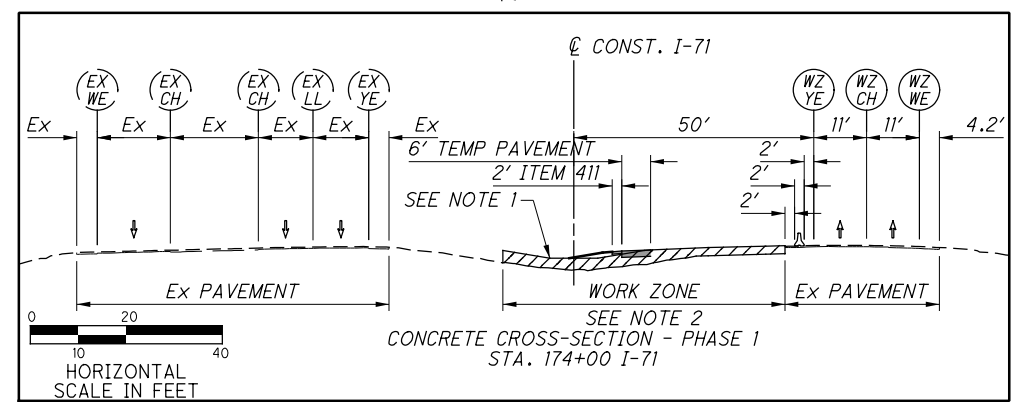
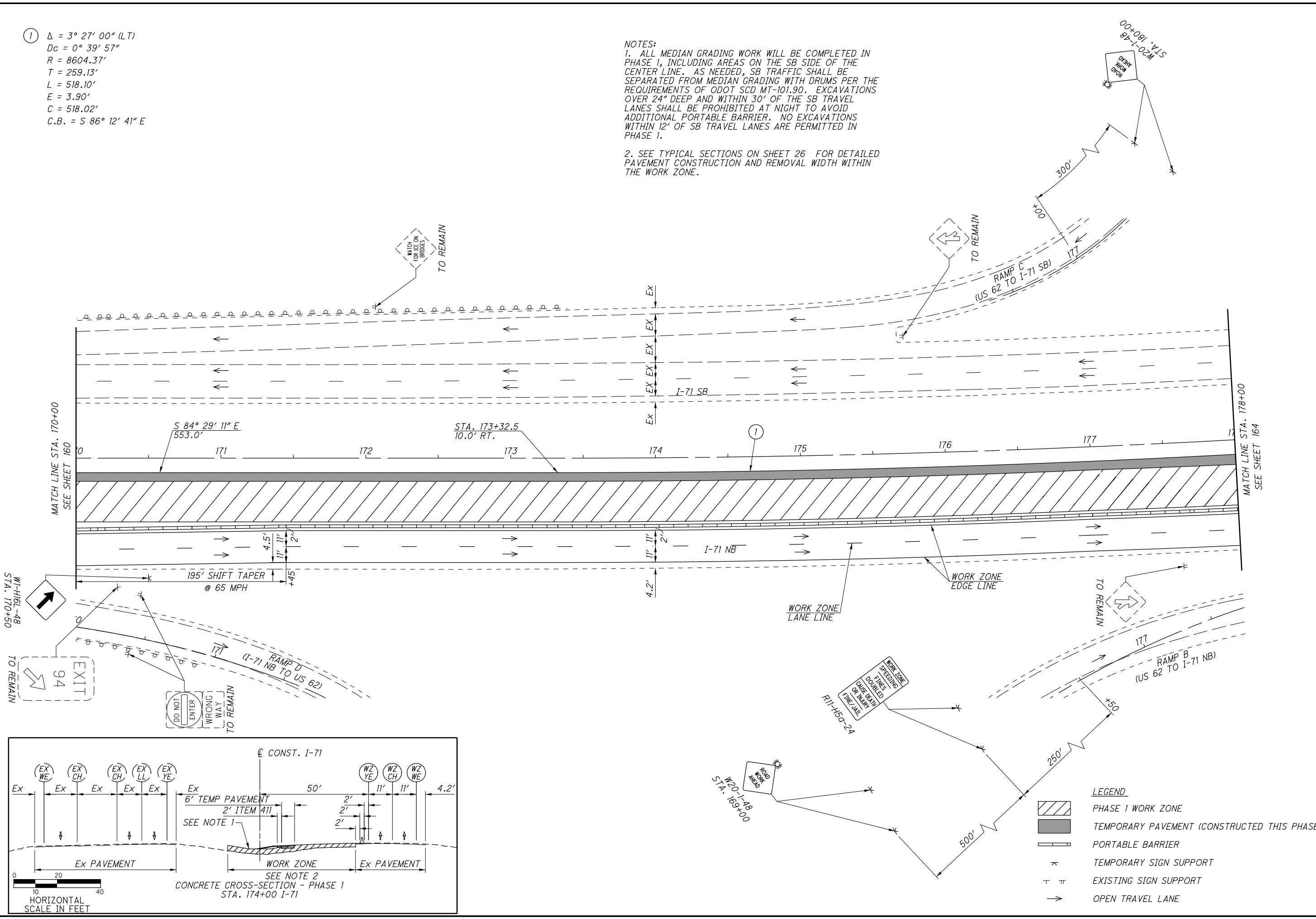
15
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (CONCRETE OPTION) I-71 - STA. 170+00 TO STA. 178+00**

FRA-71-0.00

162
 1312

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LEGEND

- PHASE 1 WORK ZONE
- TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE

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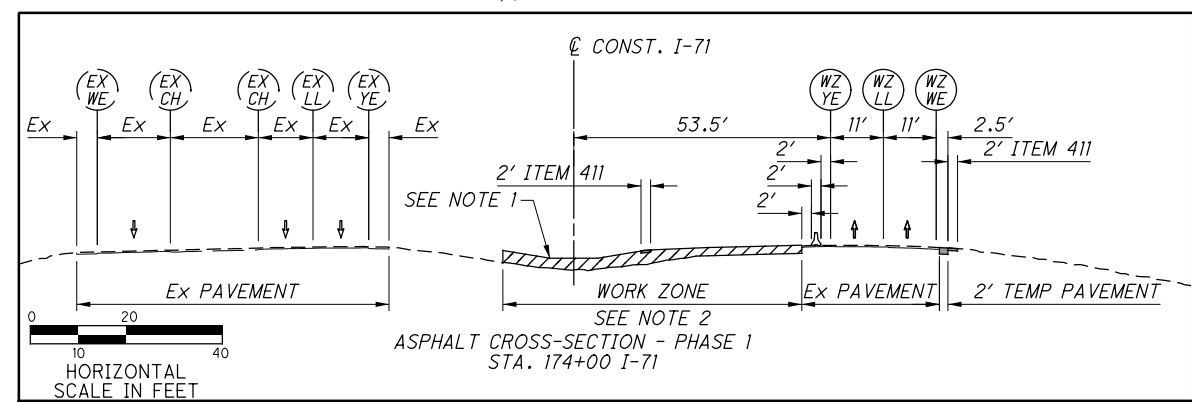
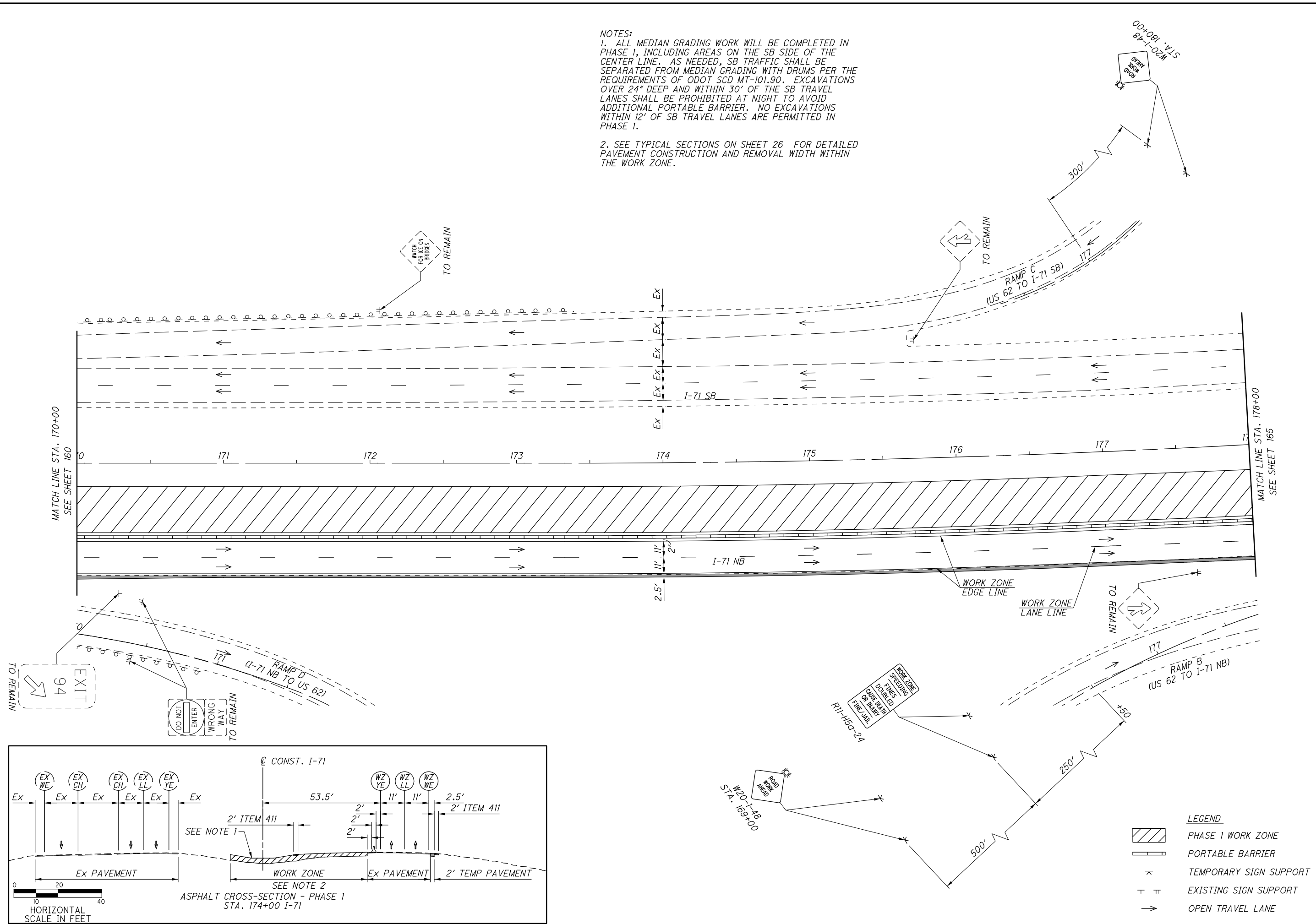
NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (ASPHALT OPTION) I-71 - STA. 170+00 TO STA. 178+00**

FRA-71-0.00



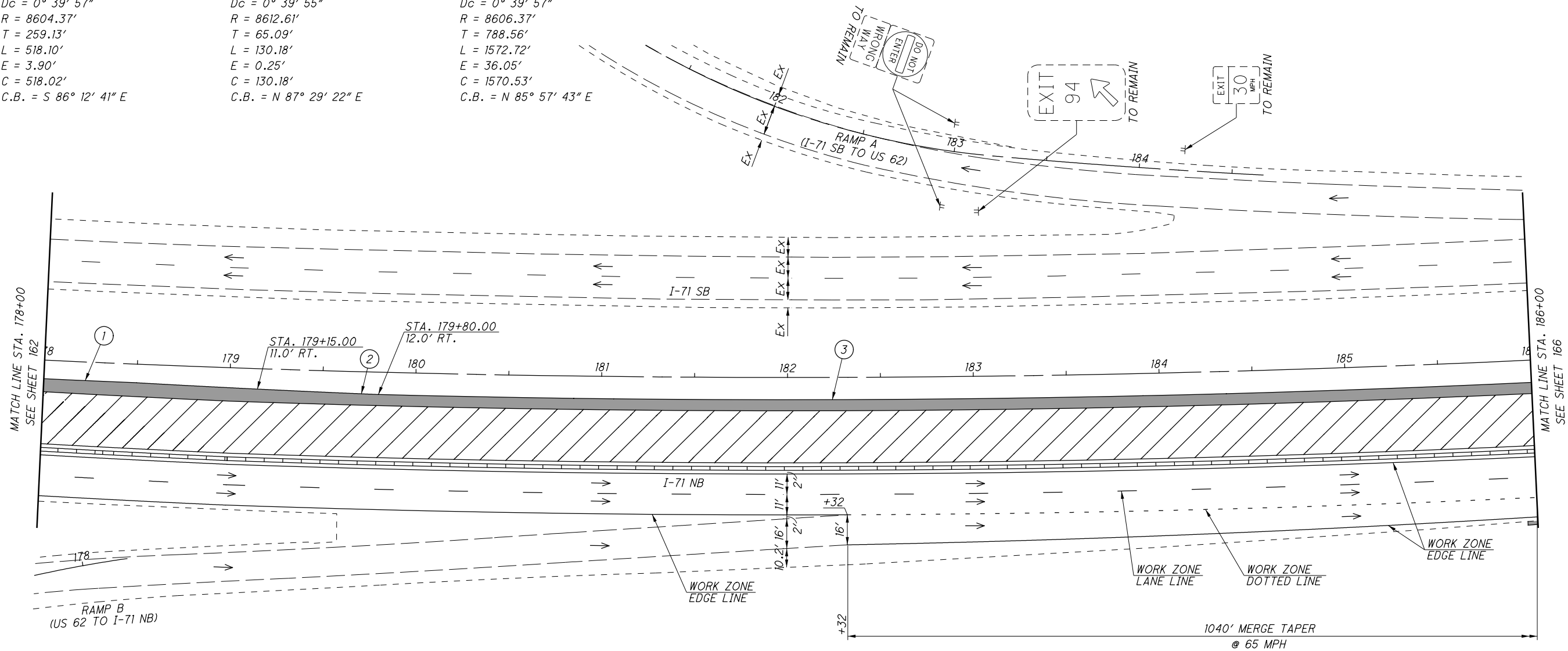
LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE

① $\Delta = 3^\circ 27' 00''$ (LT)
 $Dc = 0^\circ 39' 57''$
 $R = 8604.37'$
 $T = 259.13'$
 $L = 518.10'$
 $E = 3.90'$
 $C = 518.02'$
 $C.B. = S 86^\circ 12' 41'' E$

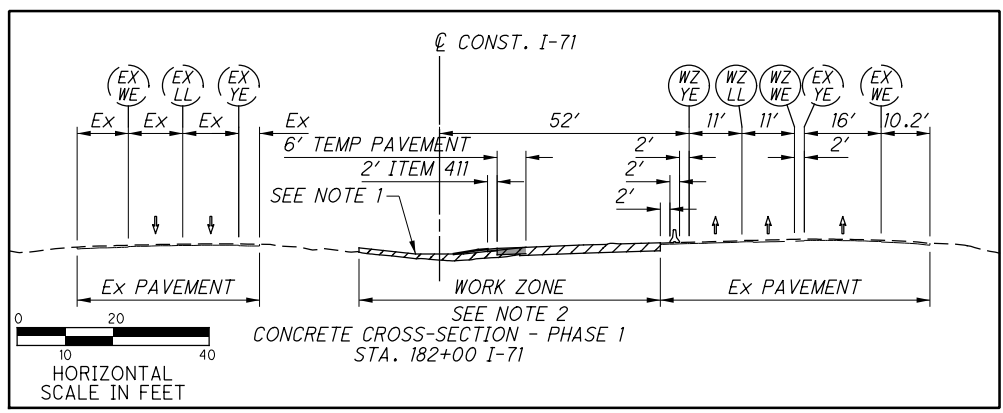
② $\Delta = 0^\circ 51' 57''$ (LT)
 $Dc = 0^\circ 39' 55''$
 $R = 8612.61'$
 $T = 65.09'$
 $L = 130.18'$
 $E = 0.25'$
 $C = 130.18'$
 $C.B. = N 87^\circ 29' 22'' E$

③ $\Delta = 10^\circ 28' 13''$ (LT)
 $Dc = 0^\circ 39' 57''$
 $R = 8606.37'$
 $T = 788.56'$
 $L = 1572.72'$
 $E = 36.05'$
 $C = 1570.53'$
 $C.B. = N 85^\circ 57' 43'' E$



NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



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CALCULATED BER CHECKED SMM

0 30 60
 15 HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (CONCRETE OPTION) I-71 - STA. 178+00 TO STA. 186+00

FRA-71-0.00

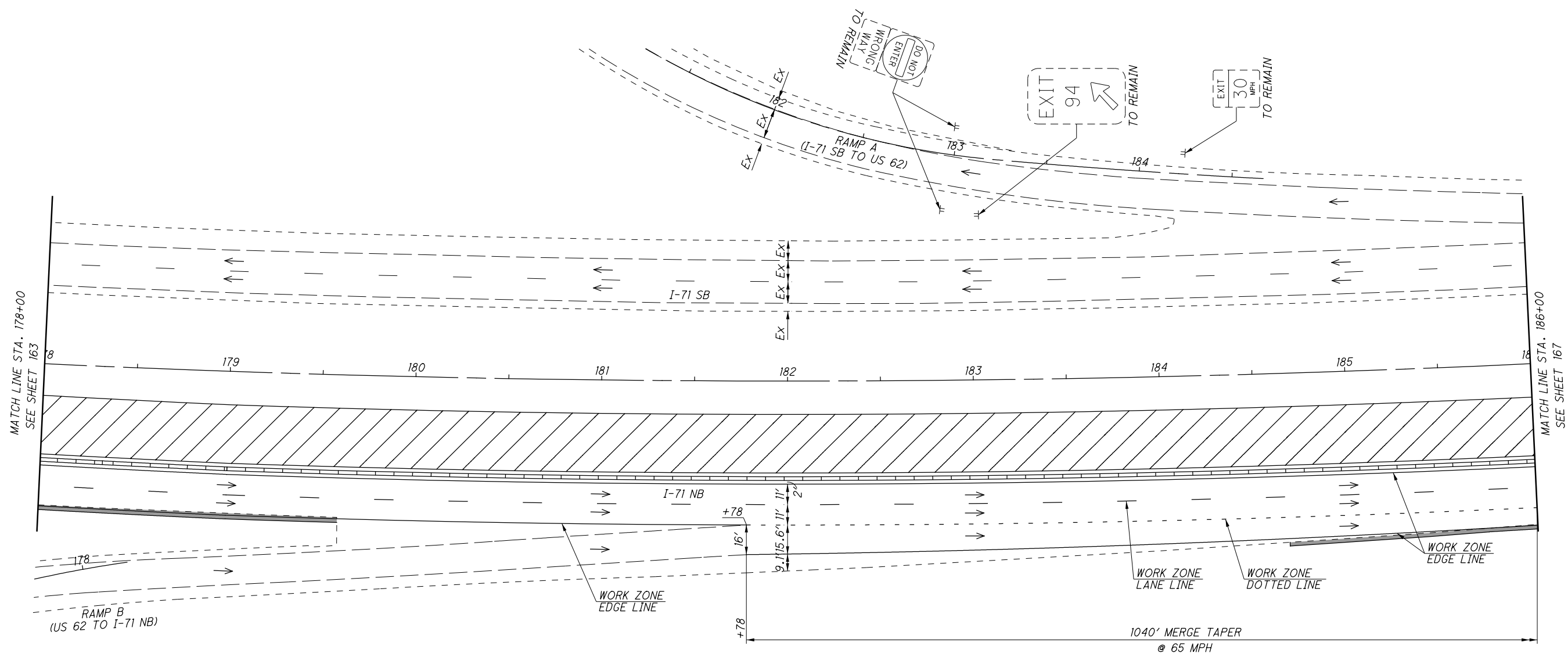


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 178+00 TO STA. 186+00

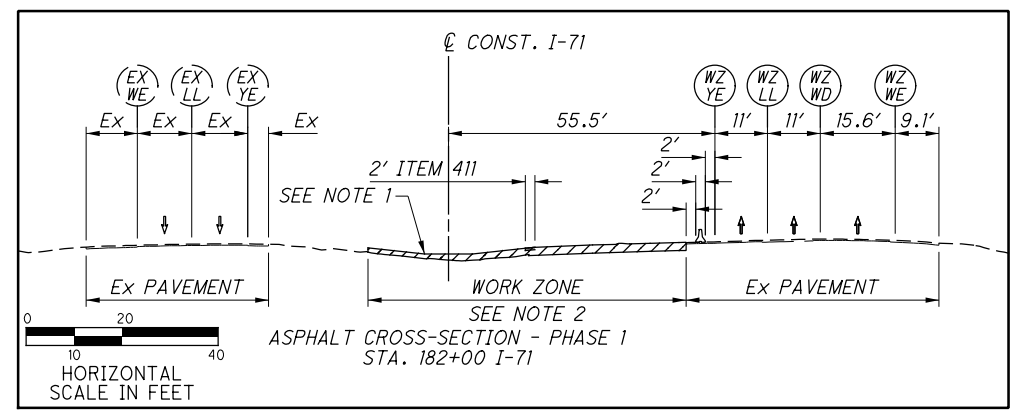
FRA-71-0.00

165
1312



NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

- LEGEND**
- PHASE 1 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



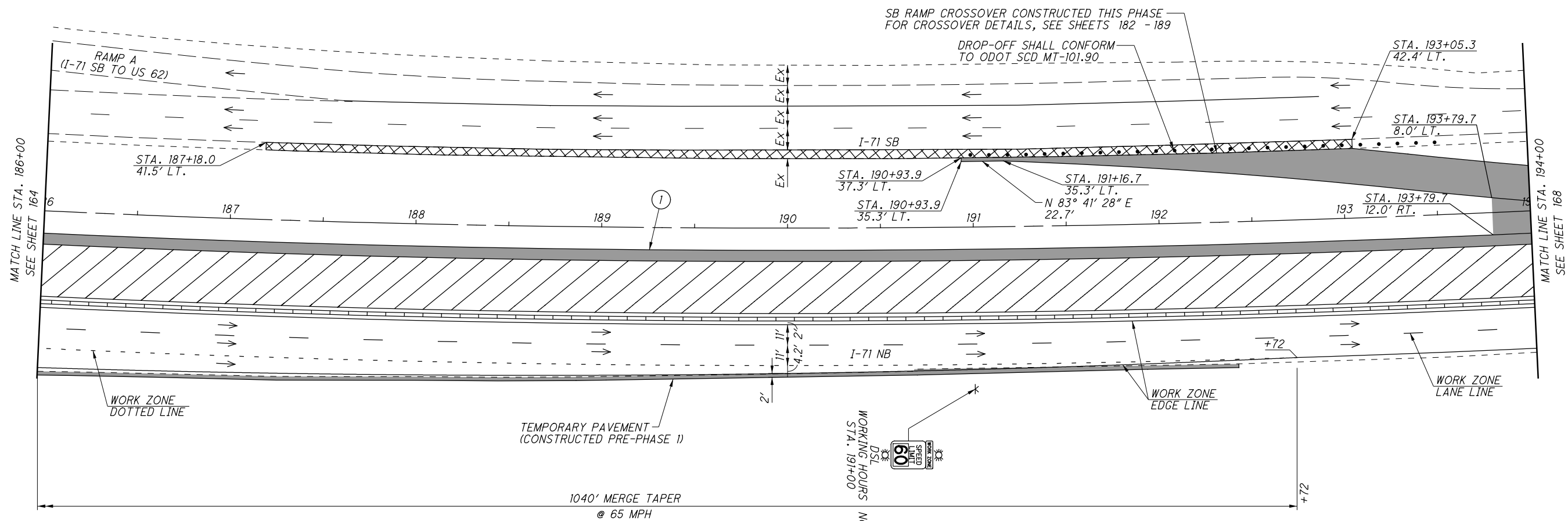
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① $\Delta = 10^\circ 28' 13''$ (LT)
 $D_c = 0^\circ 39' 57''$
 $R = 8606.37'$
 $T = 788.56'$
 $L = 1572.72'$
 $E = 36.05'$
 $C = 1570.53'$
 $C.B. = N 85^\circ 57' 43'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

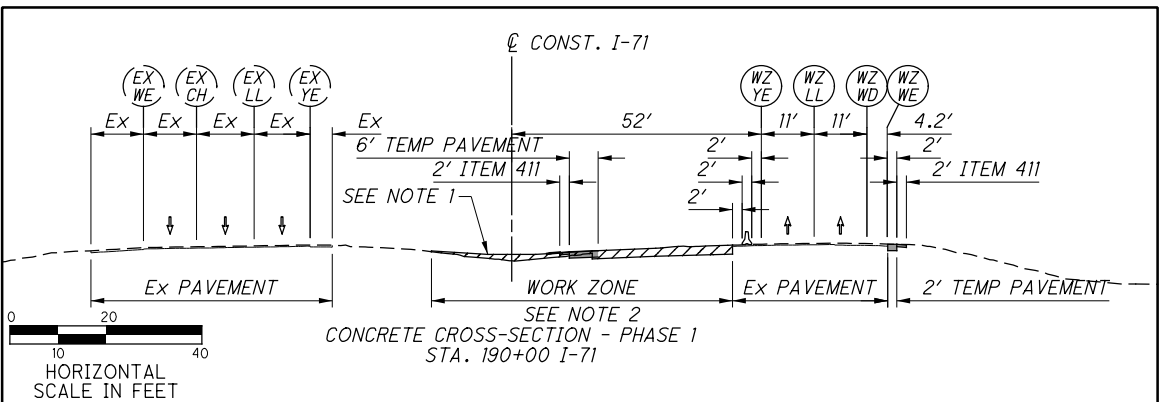


CALCULATED BER CHECKED SMM
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 186+00 TO STA. 194+00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM



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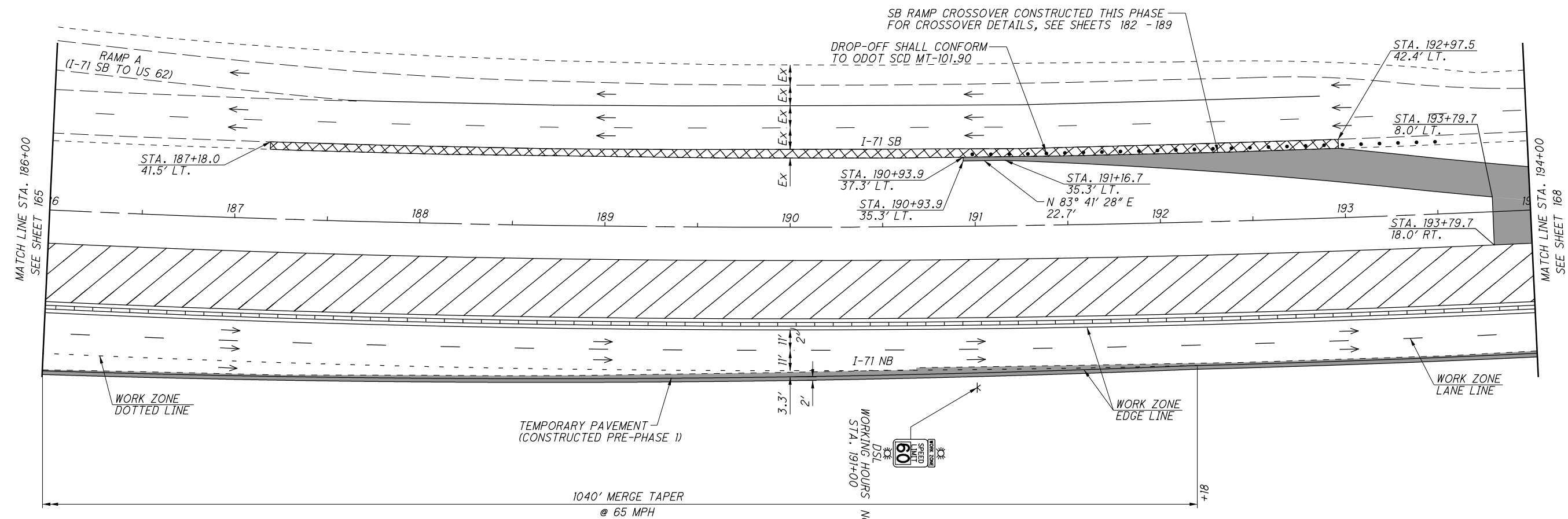


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 186+00 TO STA. 194+00

FRA-71-0.00

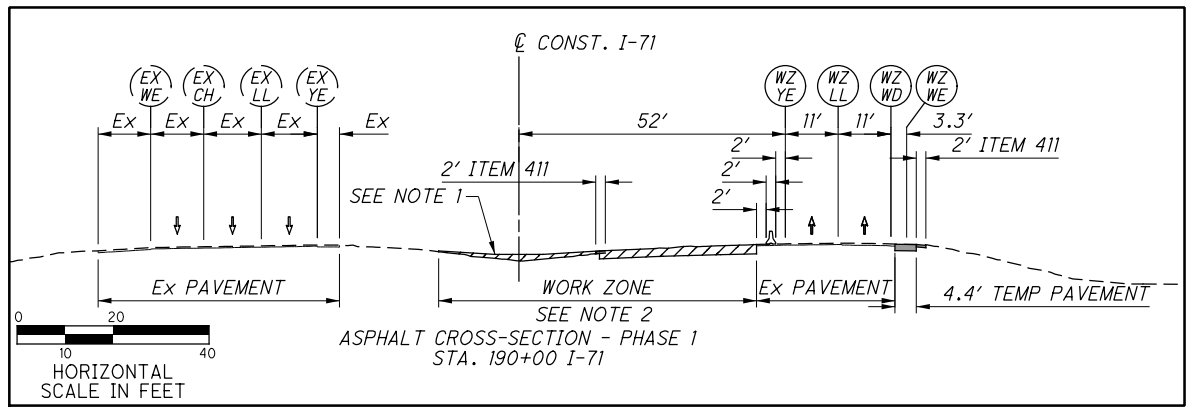
NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 1 WORK ZONE
 - SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT CONSTRUCTED PRE-PHASE 1
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM



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0 30 60
HORIZONTAL SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

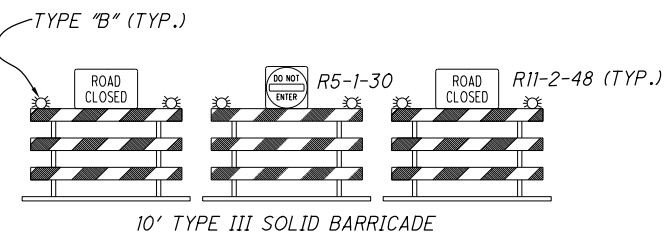
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 194+00 TO STA. 202+00

FRA-71-0.00

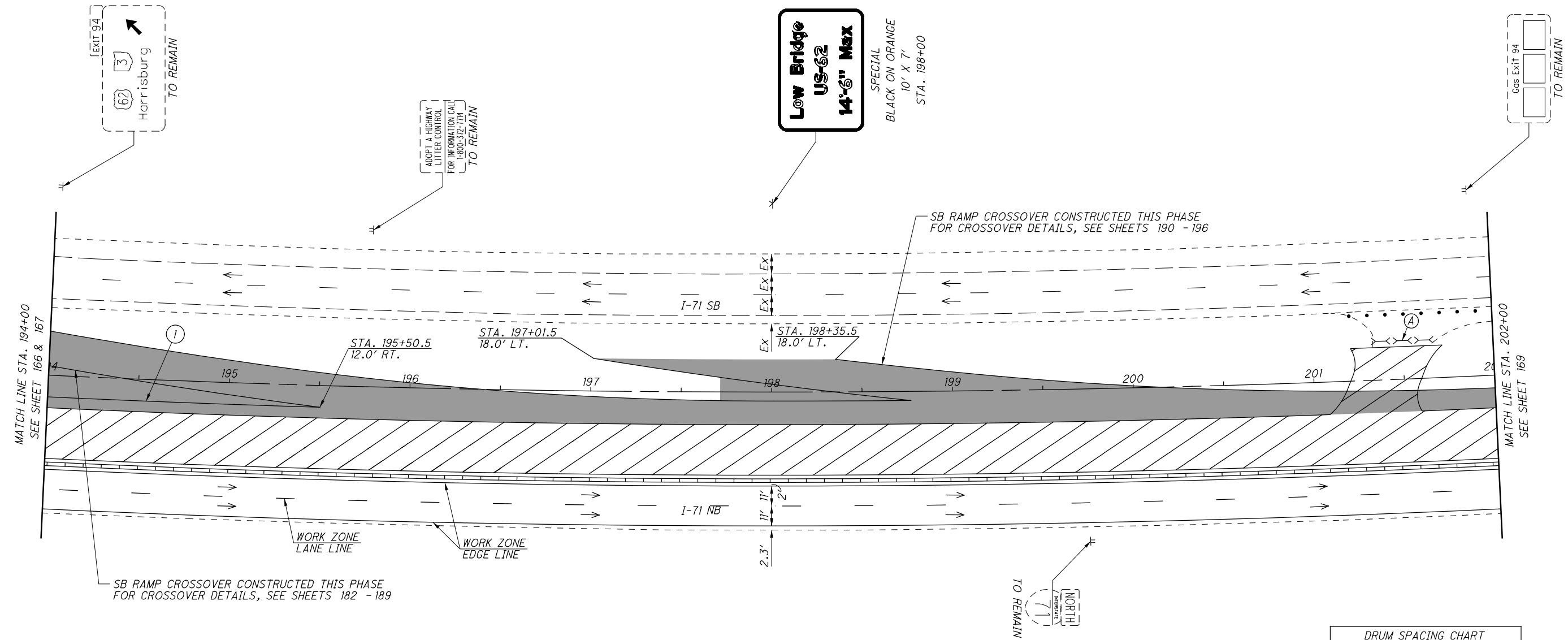
168
1312

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

① $\Delta = 10^\circ 28' 13''$ (LT)
 $D_c = 0^\circ 39' 57''$
 $R = 8606.37'$
 $T = 788.56'$
 $L = 1572.72'$
 $E = 36.05'$
 $C = 1570.53'$
C.B. = N 85° 57' 43" E

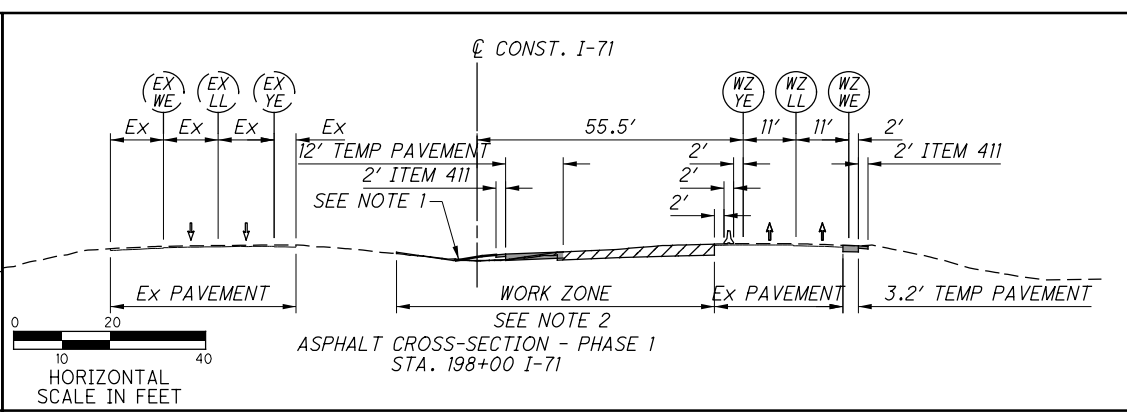
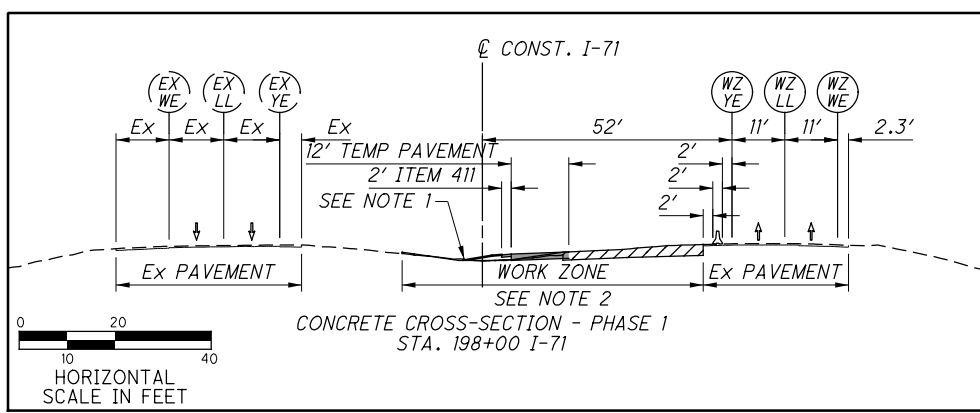


Low Bridge
US-62
14'-6" Max
SPECIAL
BLACK ON ORANGE
10' X 7'
STA. 198+00



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - DRUM
 - PORTABLE BARRIER
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 7^\circ 06' 06''$ (LT)
 $D_c = 0^\circ 39' 57''$
 $R = 8606.37'$
 $T = 534.05'$
 $L = 1066.73'$
 $E = 16.55'$
 $C = 1066.05'$
 $C.B. = N 71^\circ 11' 50'' E$

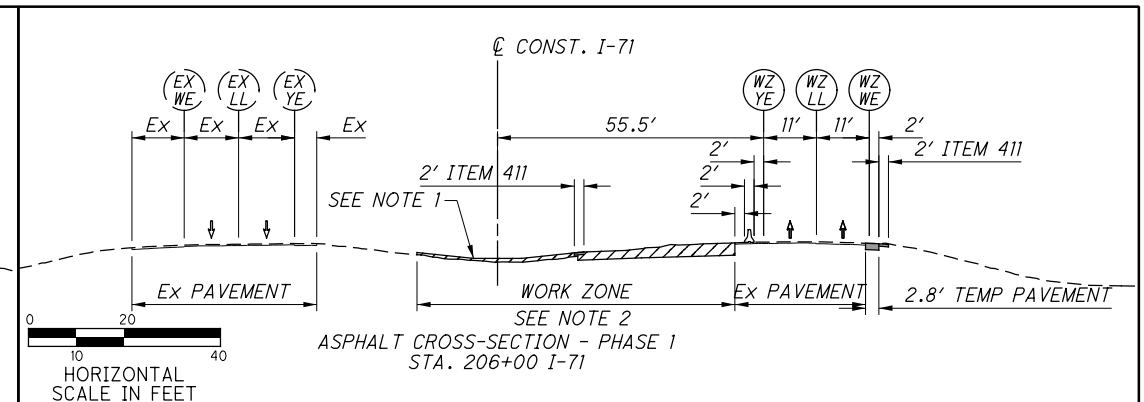
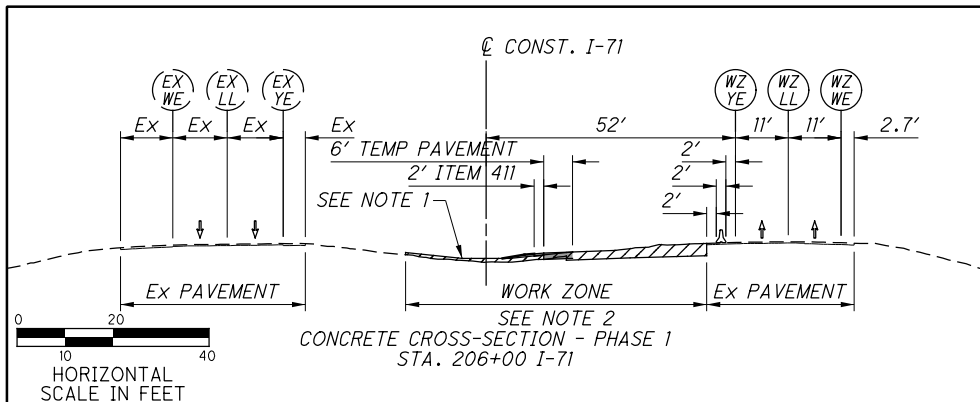
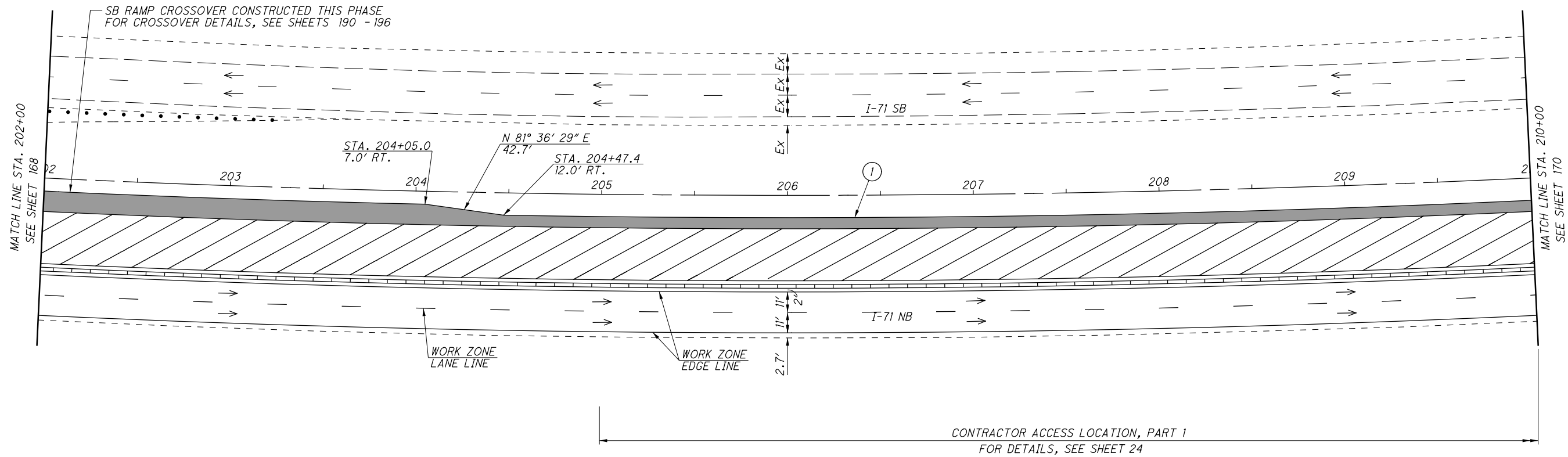
NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 I-71 - STA. 202+00 TO STA. 210+00

FRA-71-0.00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

LEGEND

- PHASE 1 WORK ZONE
- TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
- DRUM
- PORTABLE BARRIER
- OPEN TRAVEL LANE

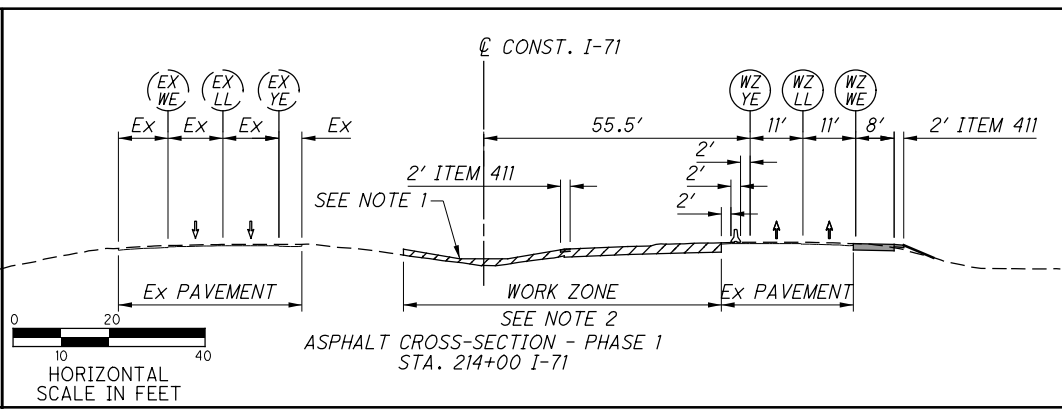
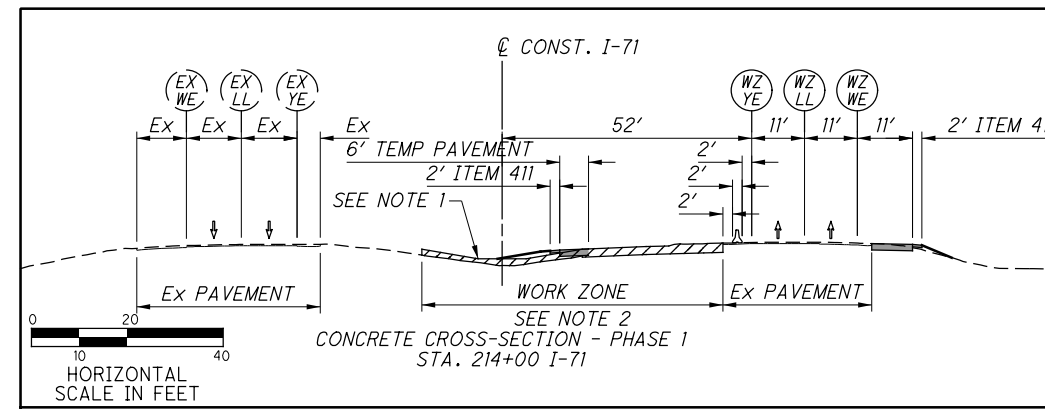
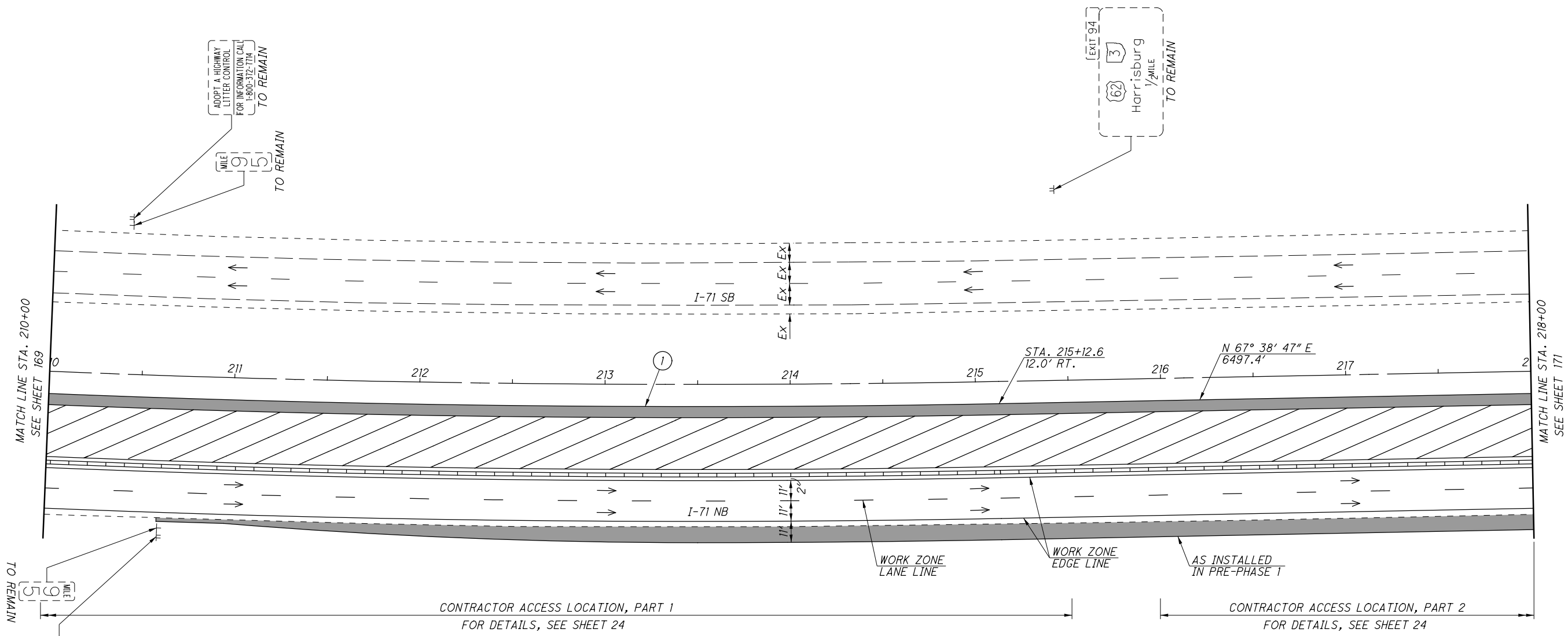
J:\20130212\ODOT\FRA\107201\mot\sheet\107201MP030.dgn 4/13/2020 12:16:42 PM brieder

① $\Delta = 7^\circ 06' 06''$ (LT)
 $D_c = 0^\circ 39' 57''$
 $R = 8606.37'$
 $T = 534.05'$
 $L = 1066.73'$
 $E = 16.55'$
 $C = 1066.05'$
 $C.B. = N 71^\circ 11' 50'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



CALCULATED BER CHECKED SMM
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 210+00 TO STA. 218+00

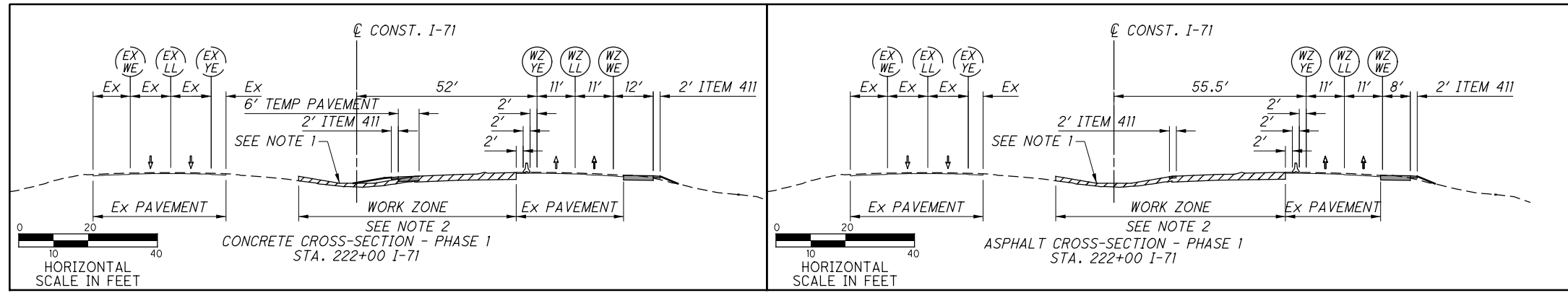


- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

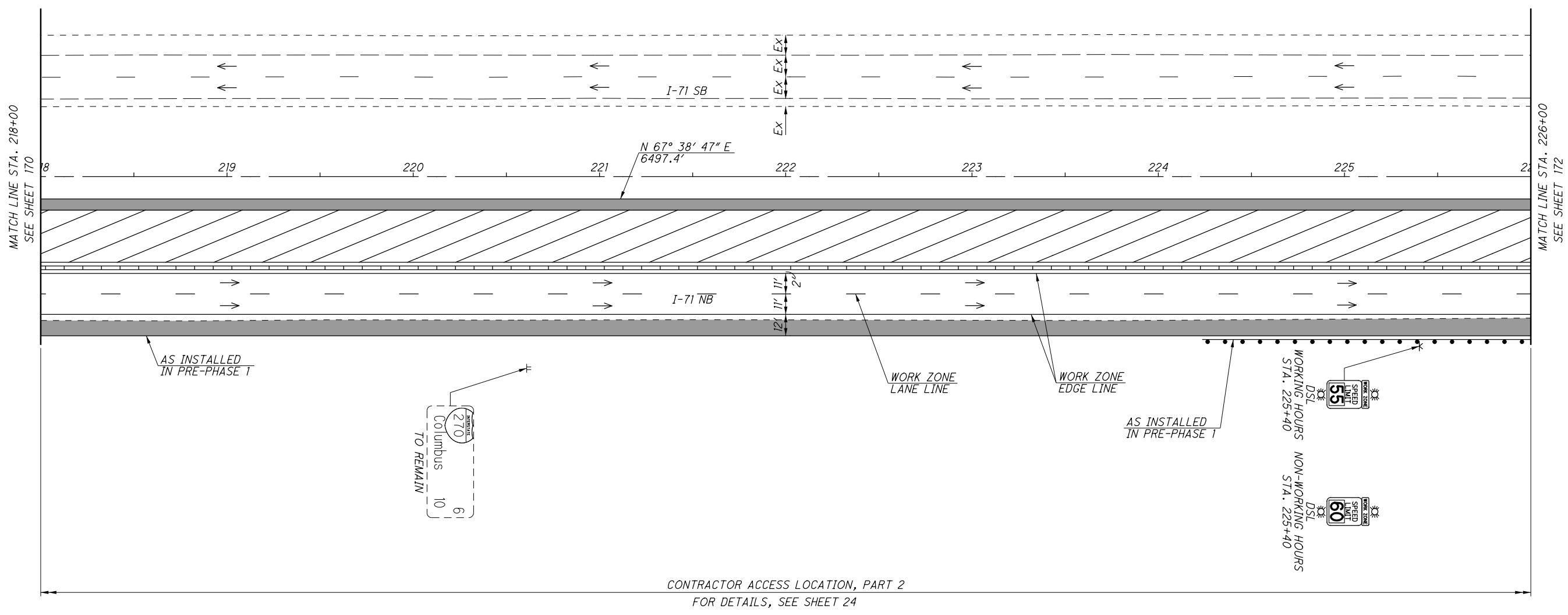
FRA-71-0.00
 170
 1312

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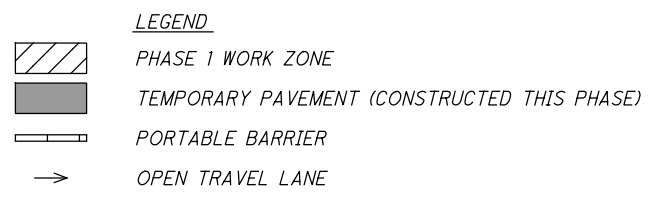
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NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



CONTRACTOR ACCESS LOCATION, PART 2
 FOR DETAILS, SEE SHEET 24



MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 I-71 - STA. 218+00 TO STA. 226+00

FRA-71-0.00

171
 1312



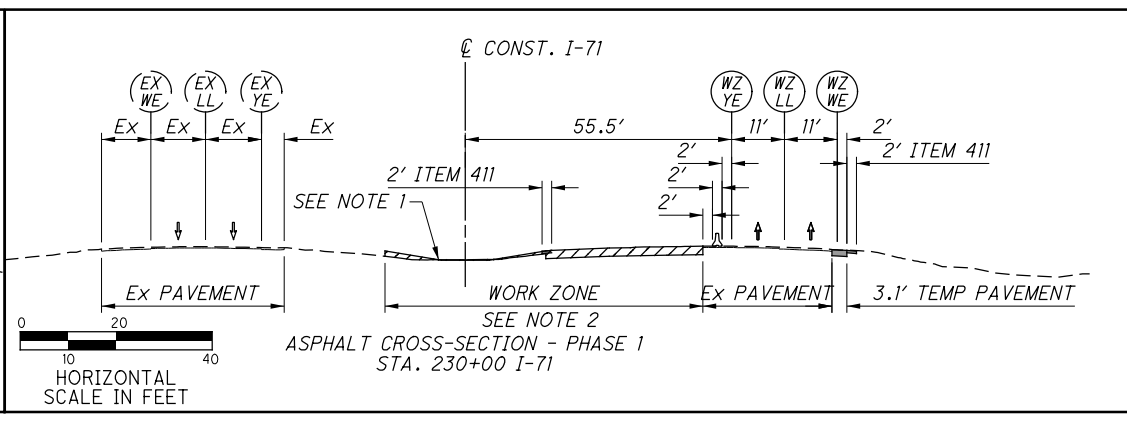
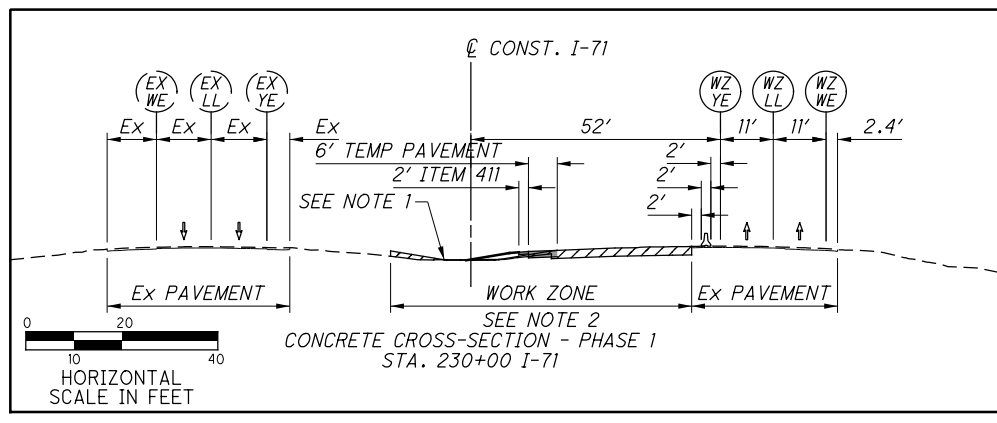
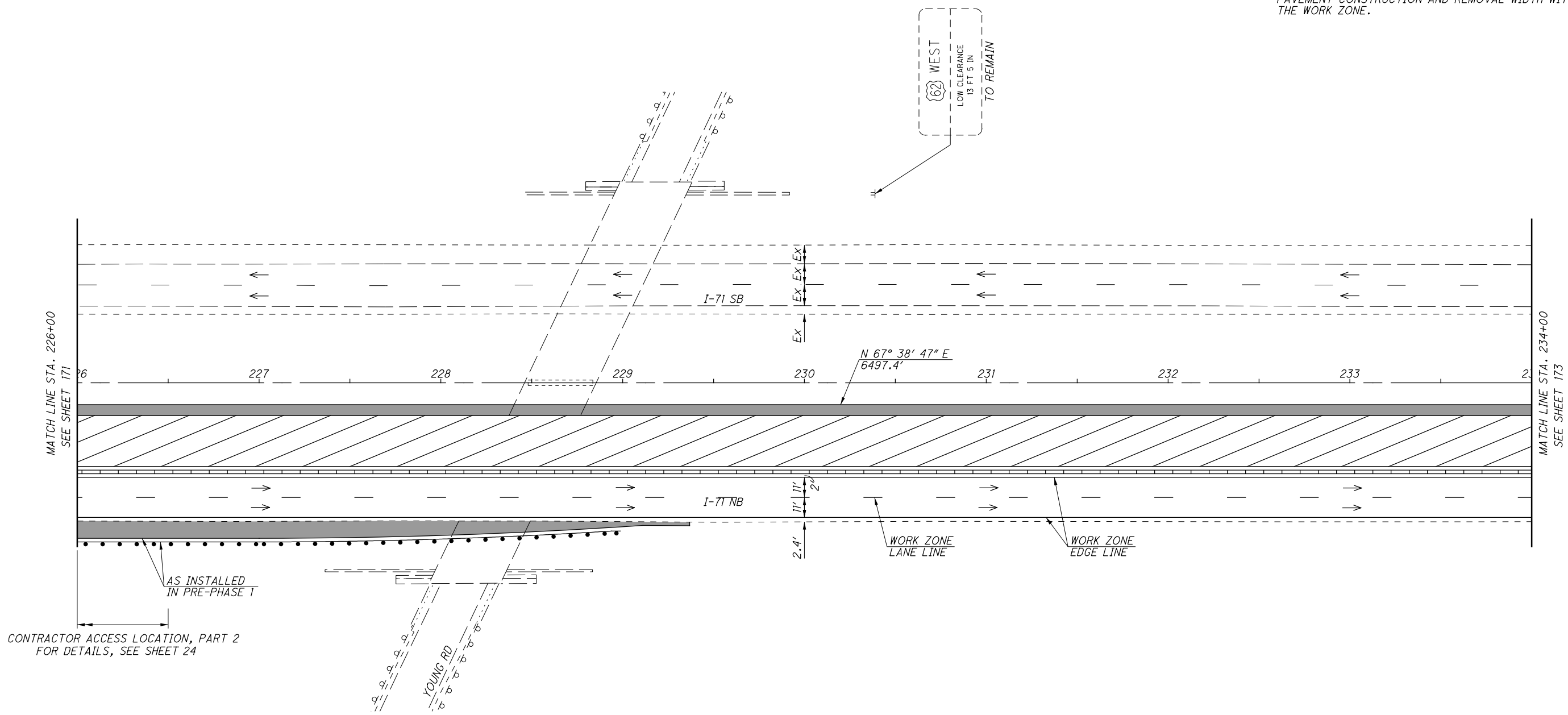
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NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 226+00 TO STA. 234+00

FRA-71-0.00



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

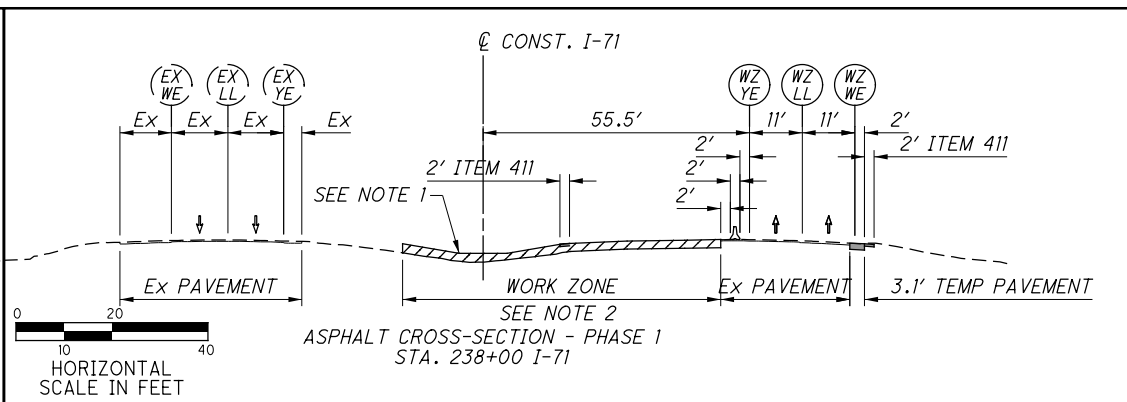
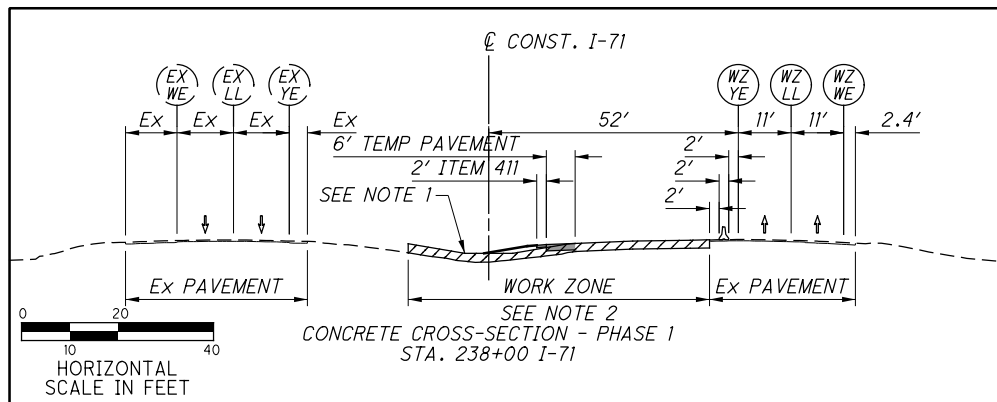
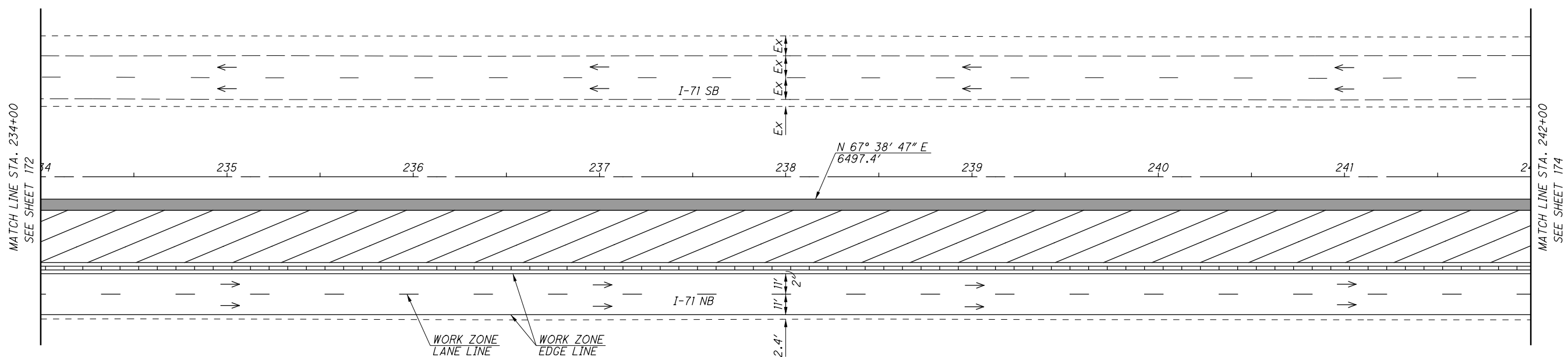
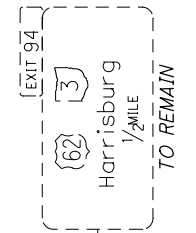
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NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 234+00 TO STA. 242+00

FRA-71-0.00

173
1312

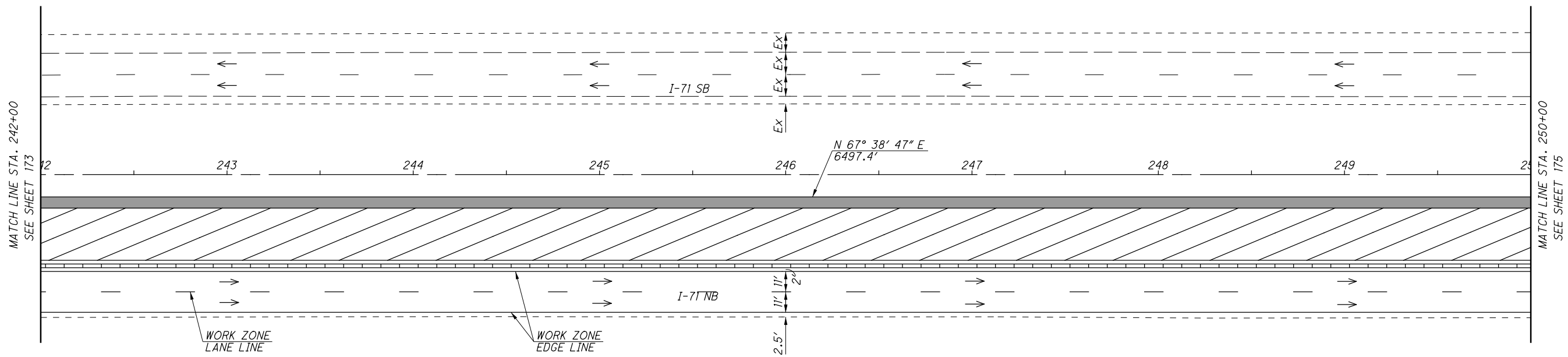
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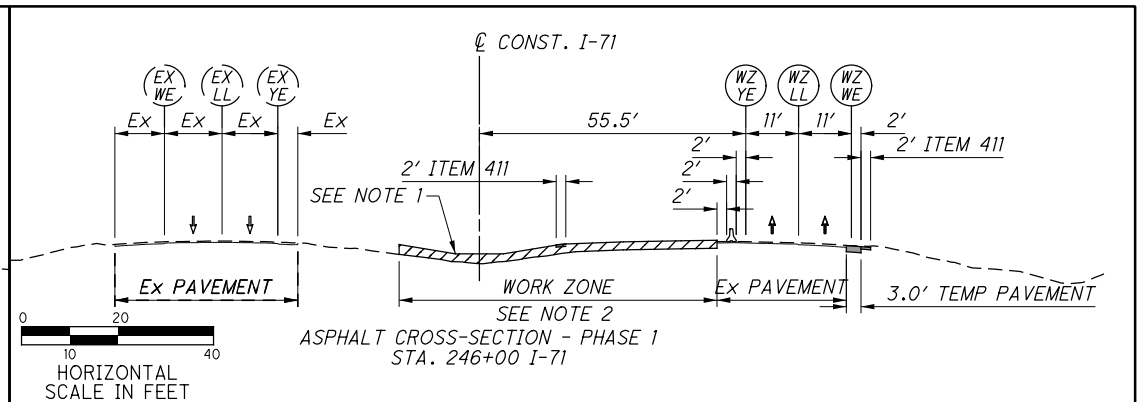
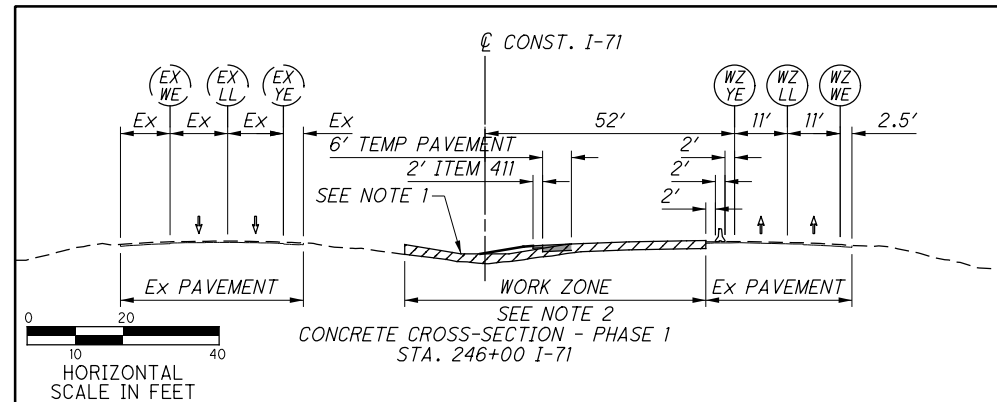
CALCULATED
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NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 242+00 TO STA. 250+00



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

FRA-71-0.00

174
1312

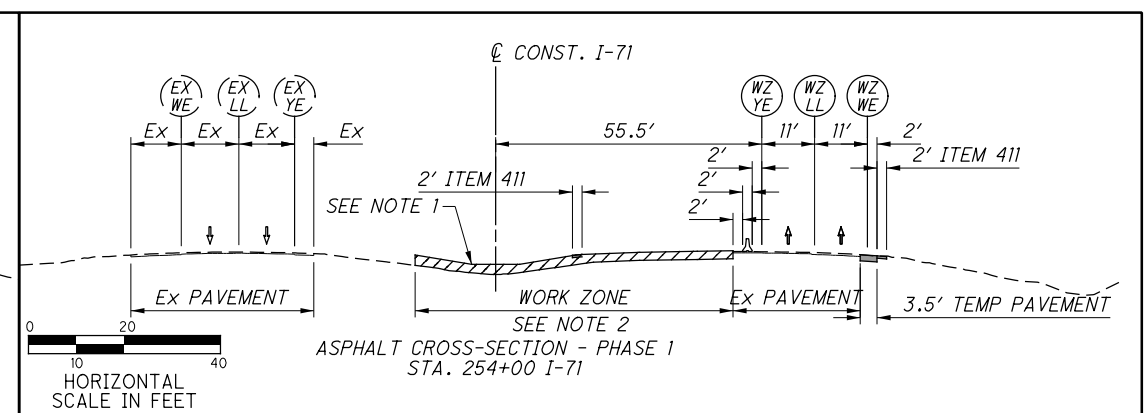
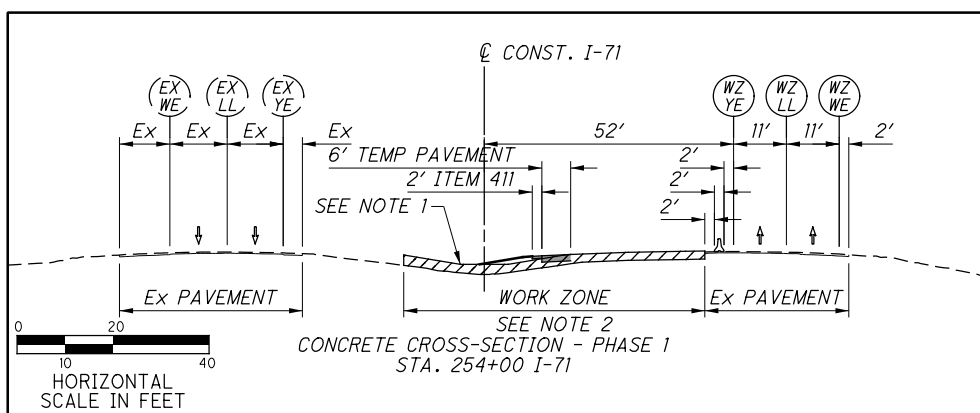
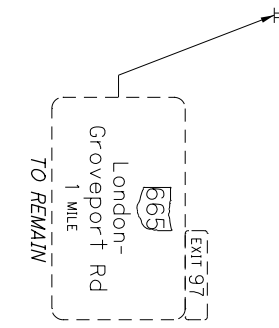
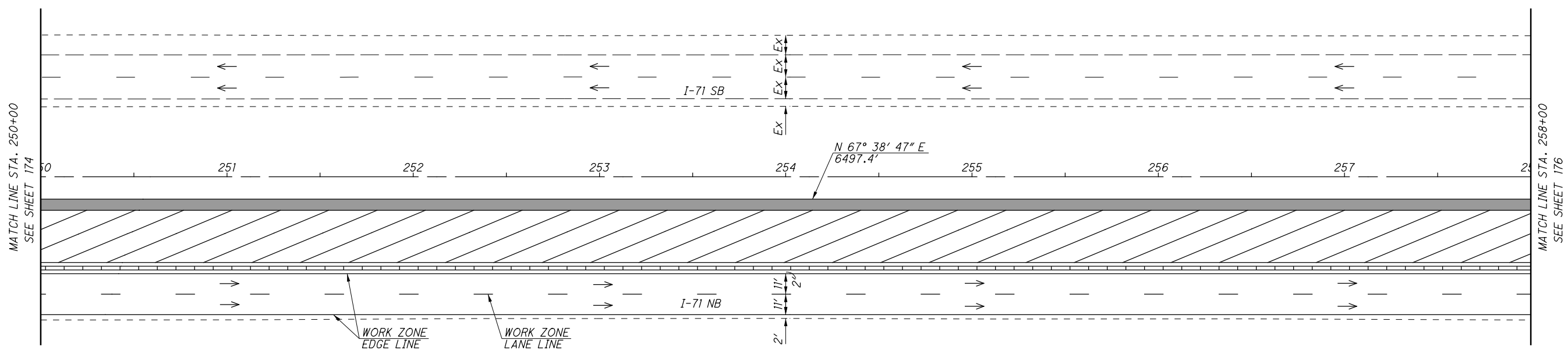
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CALCULATED
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NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.

2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 250+00 TO STA. 258+00

FRA-71-0:00

175
1312

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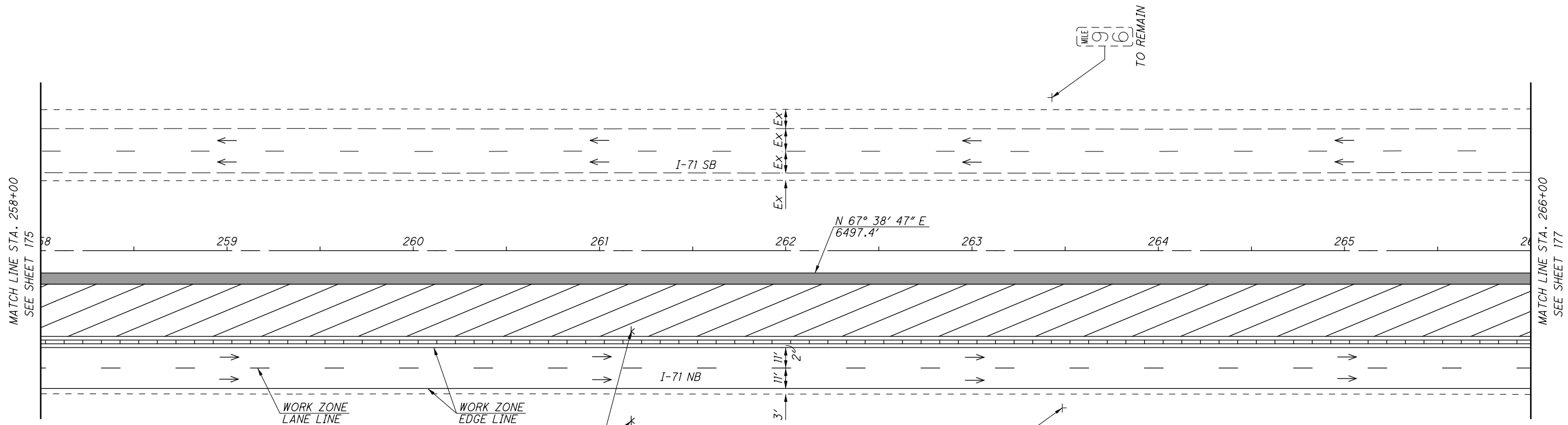


CALCULATED
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MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 258+00 TO STA. 266+00

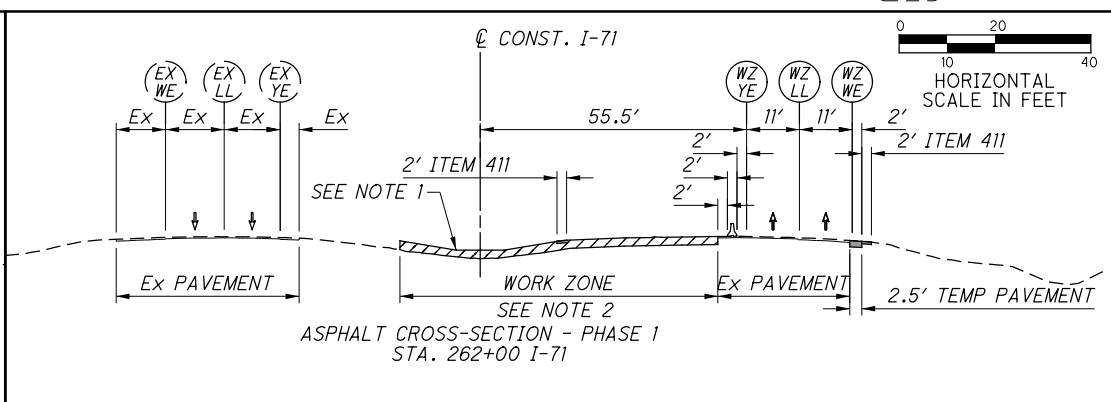
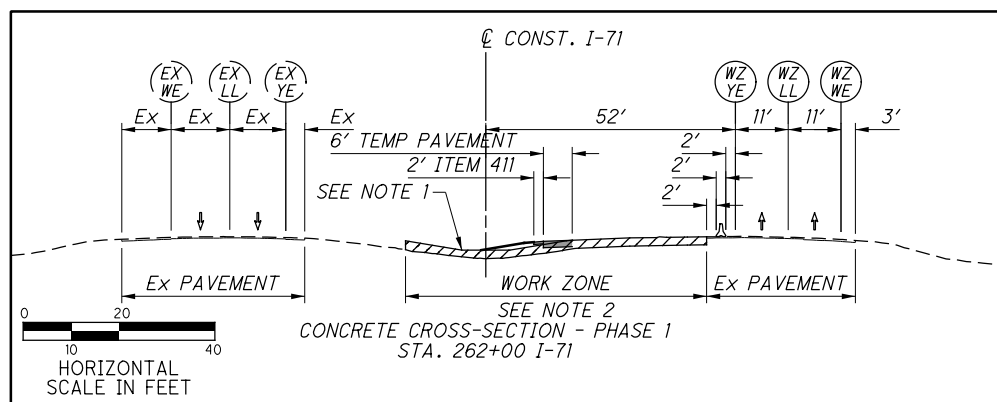
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NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



WORK ZONE
SPEEDING
FINES
DOUBLED
CAUSE DEATH
OR INJURY
FINE/MAIL
R11-H5G-48
STA. 261+17

TO REMAIN
Scioto Downs
[EXIT 97]



- LEGEND**
- [Hatched Box] PHASE 1 WORK ZONE
 - [Solid Grey Box] TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - [Double Line] PORTABLE BARRIER
 - [X Symbol] TEMPORARY SIGN SUPPORT
 - [T Symbol] EXISTING SIGN SUPPORT
 - [Arrow Symbol] OPEN TRAVEL LANE

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HORIZONTAL
SCALE IN FEET

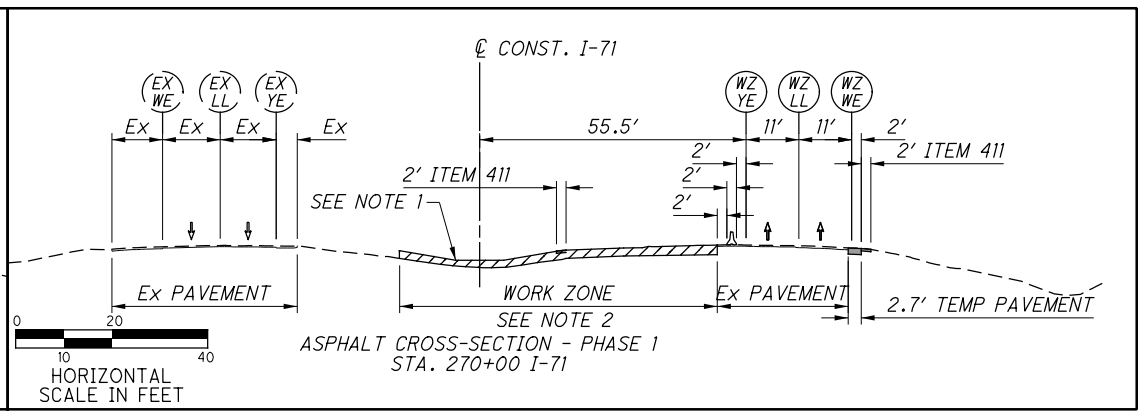
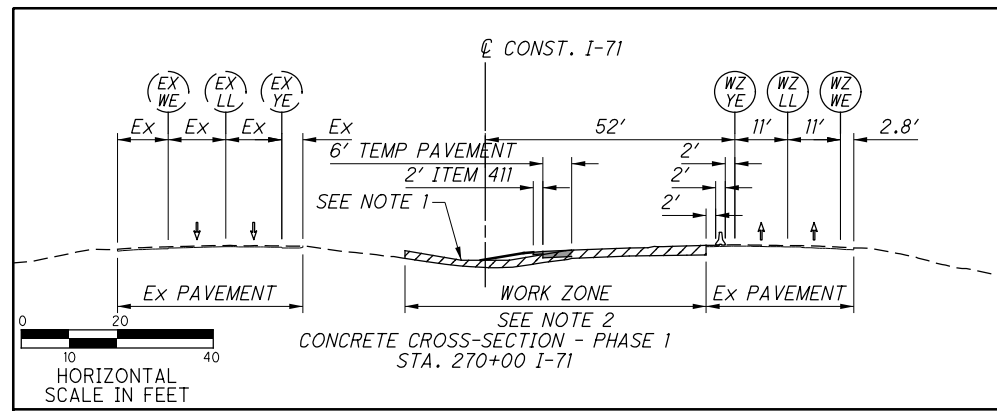
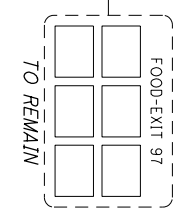
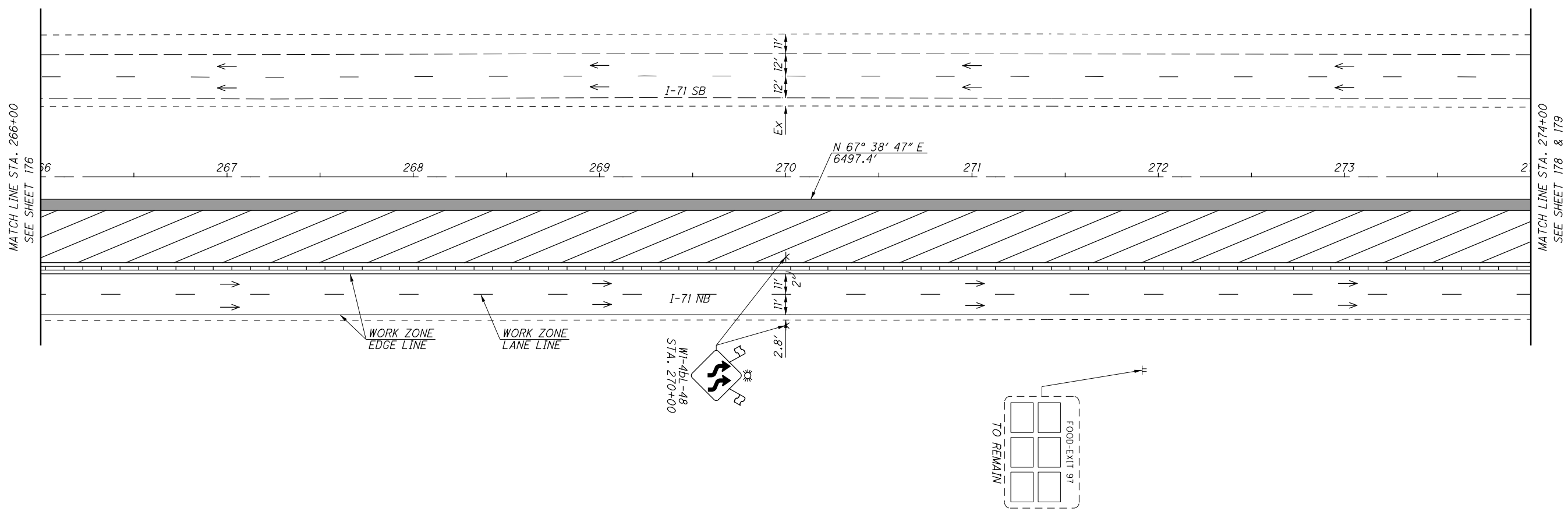
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MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-71 - STA. 266+00 TO STA. 274+00

FRA-71-0.00

177
1312

NOTES:
1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 2^\circ 08' 43''$ (RT)
 $D_c = 2^\circ 29' 09''$
 $R = 2305.00'$
 $T = 43.19'$
 $L = 86.31'$
 $E = 0.40'$
 $C = 86.30'$
 $C.B. = N 68^\circ 43' 08'' E$

NOTES:
 1. ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 2. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
 3. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 285+88 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

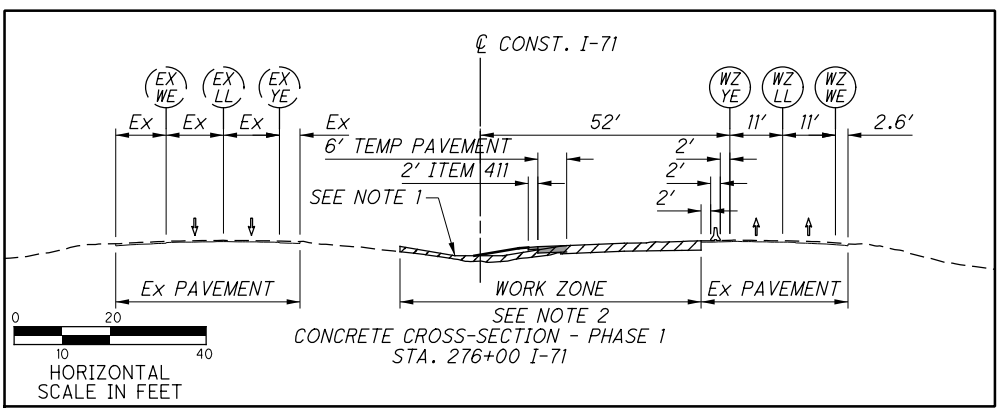
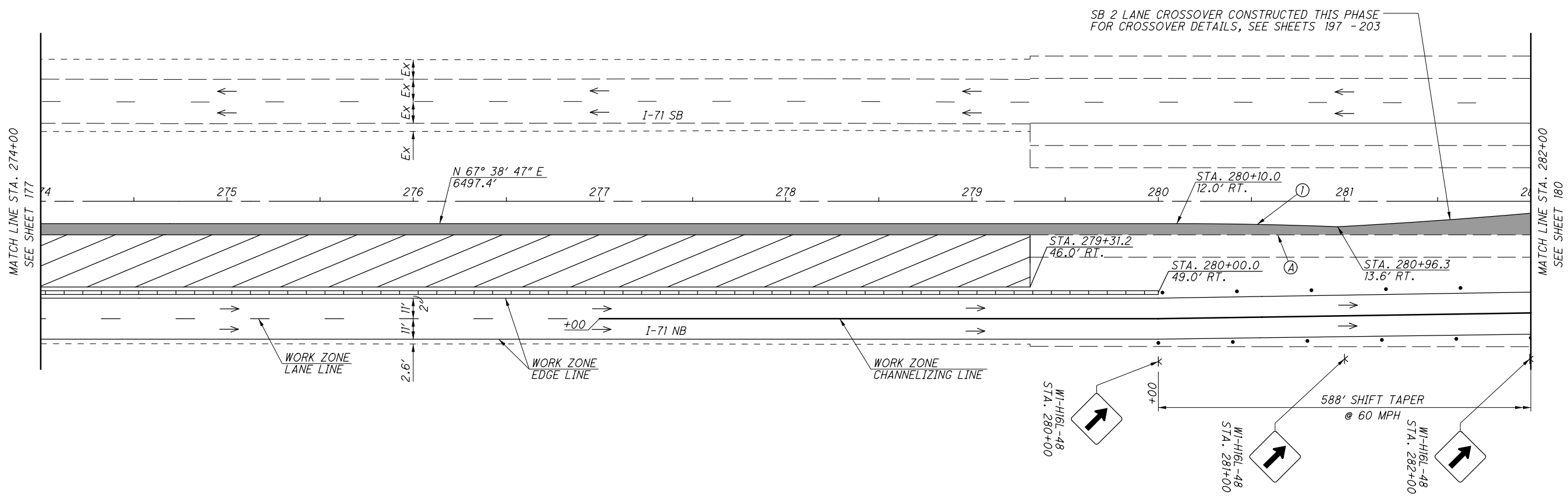


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MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(CONCRETE OPTION) I-71 - STA. 274+00 TO STA. 282+00

FRA-71-0.00

178
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 1 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

Ⓐ - MEET/MATCH EXISTING EDGE OF SHOULDER

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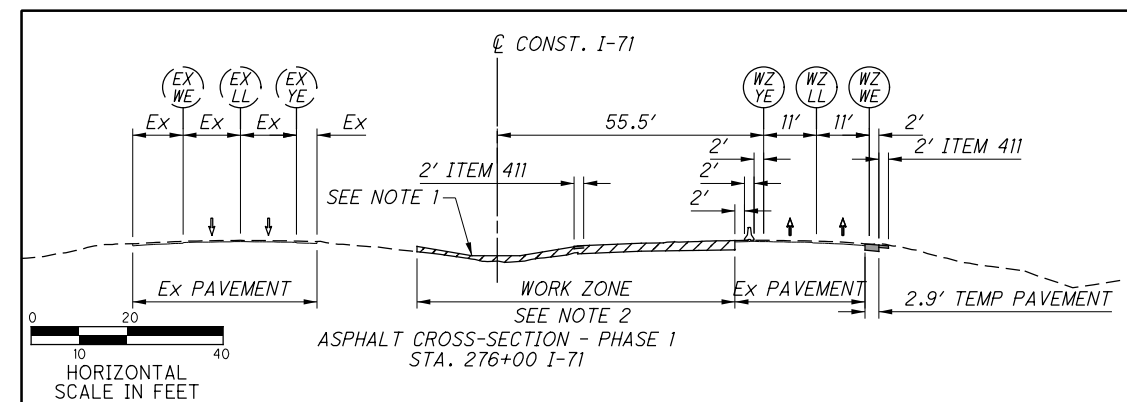
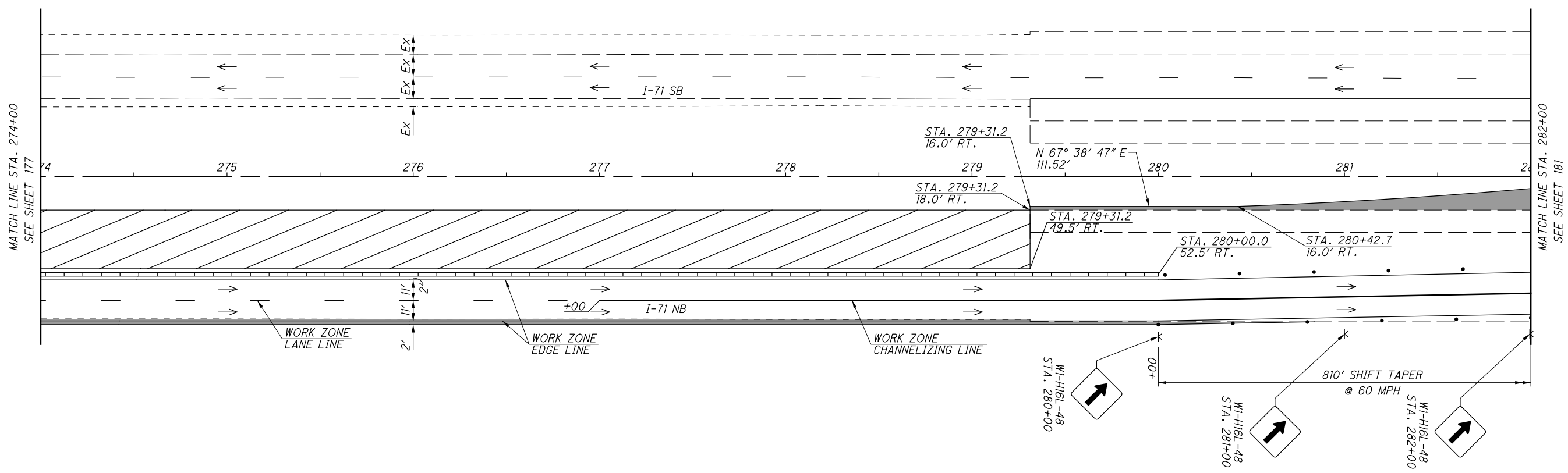


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**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
(ASPHALT OPTION) I-71 - STA. 274+00 TO STA. 282+00**

FRA-71-0.00

- NOTES:
- ALL MEDIAN GRADING WORK WILL BE COMPLETED IN PHASE 1, INCLUDING AREAS ON THE SB SIDE OF THE CENTER LINE. AS NEEDED, SB TRAFFIC SHALL BE SEPARATED FROM MEDIAN GRADING WITH DRUMS PER THE REQUIREMENTS OF ODOT SCD MT-101.90. EXCAVATIONS OVER 24" DEEP AND WITHIN 30' OF THE SB TRAVEL LANES SHALL BE PROHIBITED AT NIGHT TO AVOID ADDITIONAL PORTABLE BARRIER. NO EXCAVATIONS WITHIN 12' OF SB TRAVEL LANES ARE PERMITTED IN PHASE 1.
 - SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
 - EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 288+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 1 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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- (A) - 285+49.0, 16.0' LT.
- (B) - N 67° 38' 47" E, 14.1'
- (C) - 258+91.5, 16.0' LT.
- (D) - 258+91.5, 18.0' LT.

NOTE:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 285+88 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

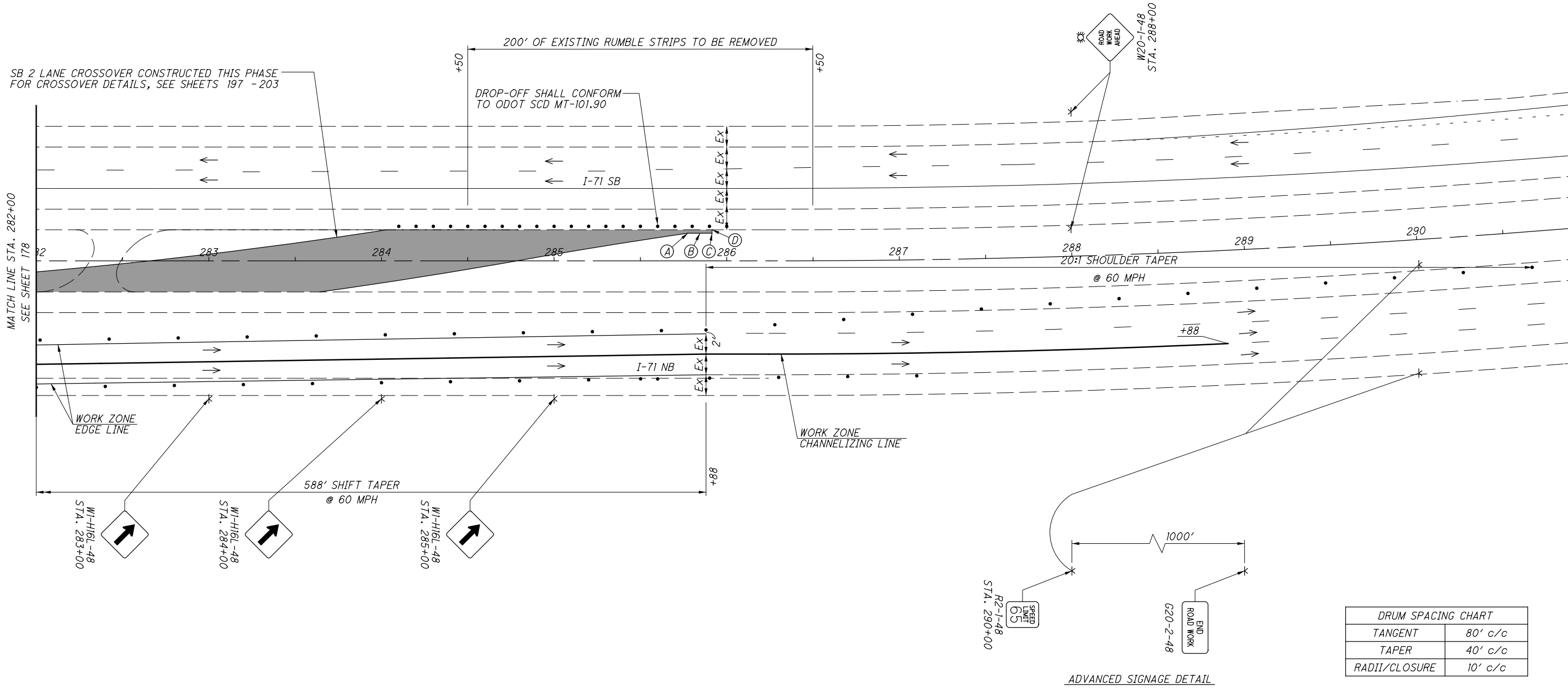
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 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (CONCRETE OPTION) I-71 - STA. 282+00 TO STA. 291+00**

FRA-71-0.00

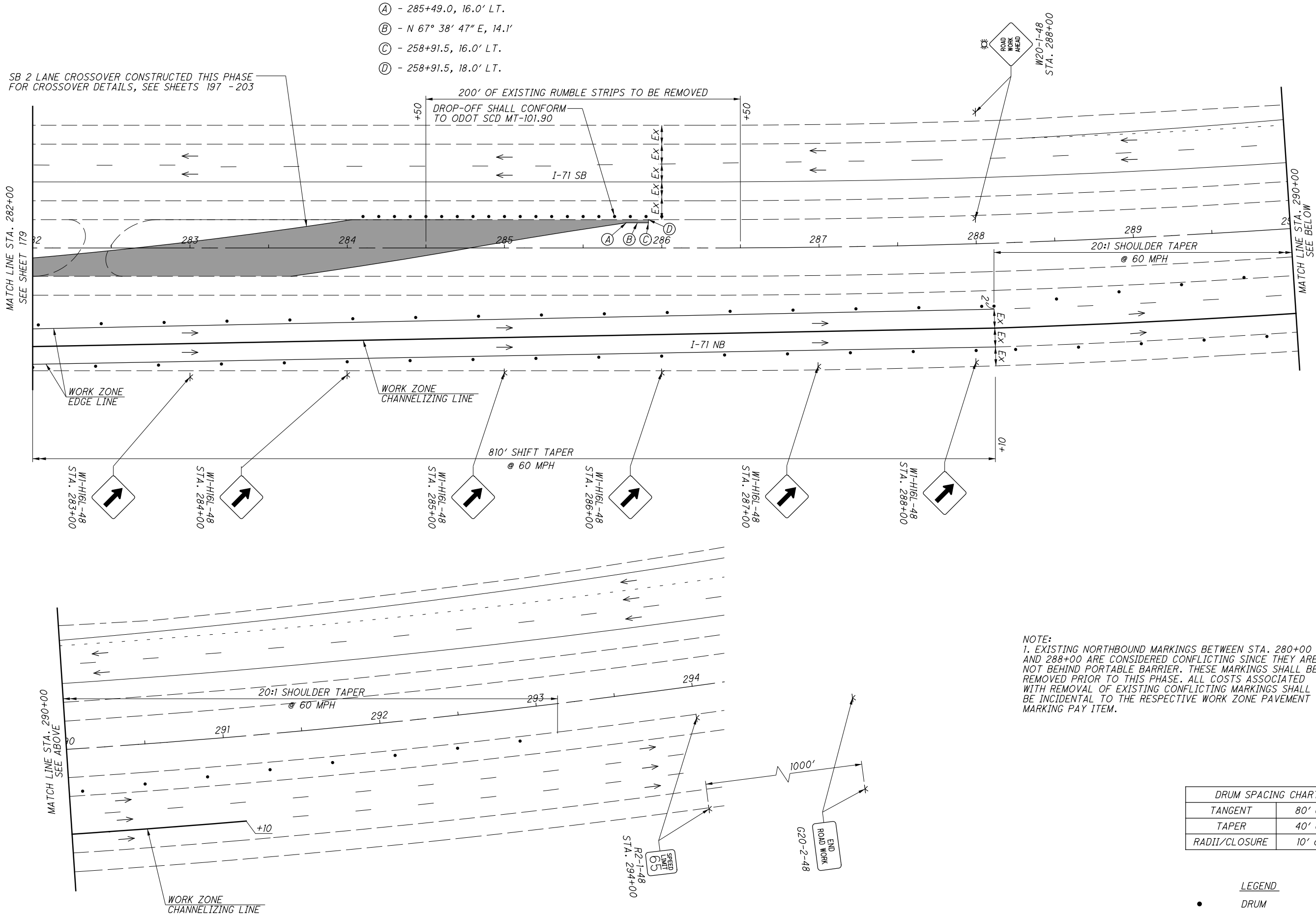
180
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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- DRUM
 - * TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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- (A) - 285+49.0, 16.0' LT.
- (B) - N 67° 38' 47" E, 14.1'
- (C) - 258+91.5, 16.0' LT.
- (D) - 258+91.5, 18.0' LT.

NOTE:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 288+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- DRUM
 - * TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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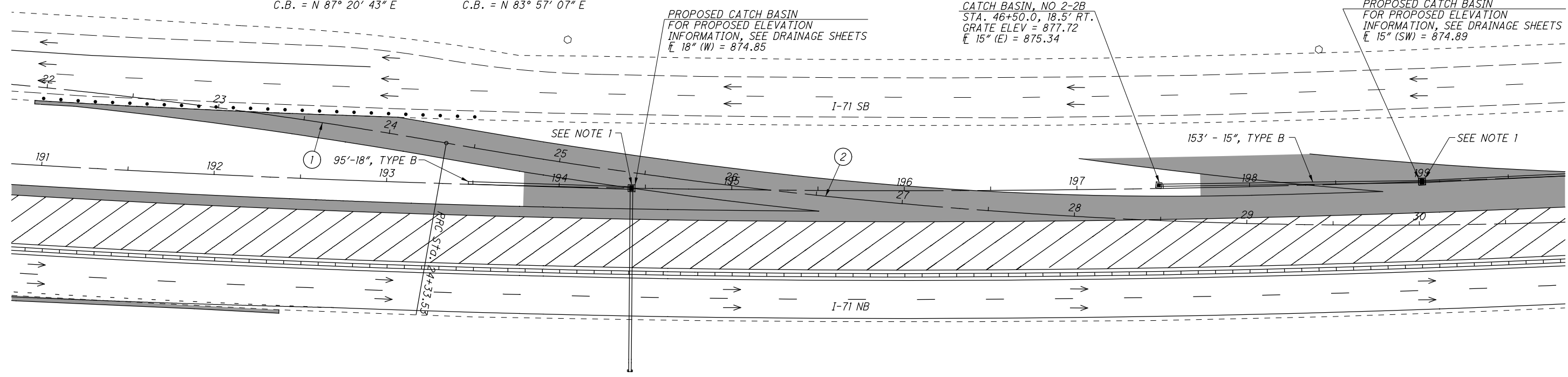
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 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 (ASPHALT OPTION) I-71 - STA. 282+00 TO STA. 294+00**

FRA-71-0.00

① P.I. STA. 22+66.94
 $\Delta = 6^\circ 06' 51''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 166.91'$
 $L = 333.51'$
 $E = 4.45'$
 $C = 333.35'$
 $C.B. = N 87^\circ 20' 43'' E$

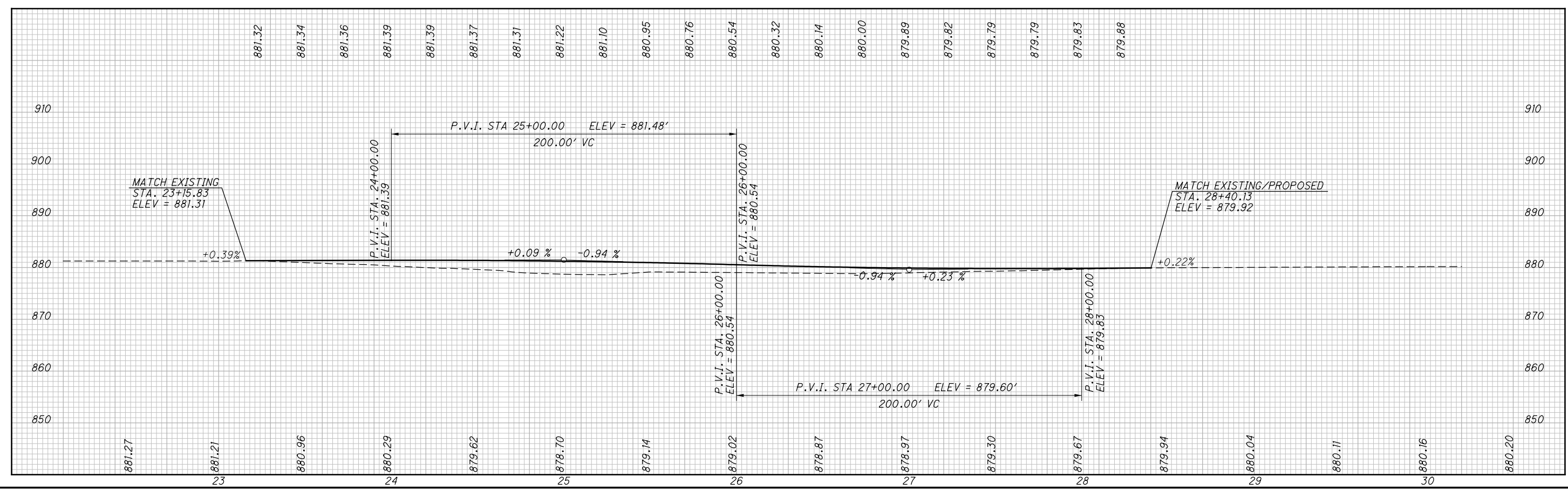
② P.I. STA. 27+86.87
 $\Delta = 12^\circ 54' 03''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 353.34'$
 $L = 703.68'$
 $E = 19.91'$
 $C = 702.20'$
 $C.B. = N 83^\circ 57' 07'' E$



NOTES:
 1. PLACE STEEL PLATE OVER CATCH BASIN TO MAINTAIN WATER FLOW OF PROPOSED STORM SEWER.

LEGEND

 TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 OPEN TRAVEL LANE



MAINTENANCE OF TRAFFIC - PHASE 1
 CROSSOVER PLAN AND PROFILE-RAMP A SOUTH CROSSOVER

FRA-71-0.00

182
 1312

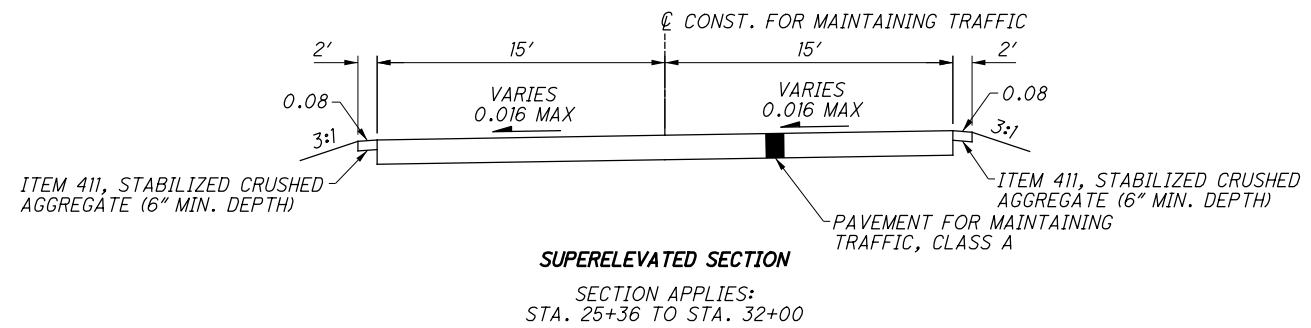
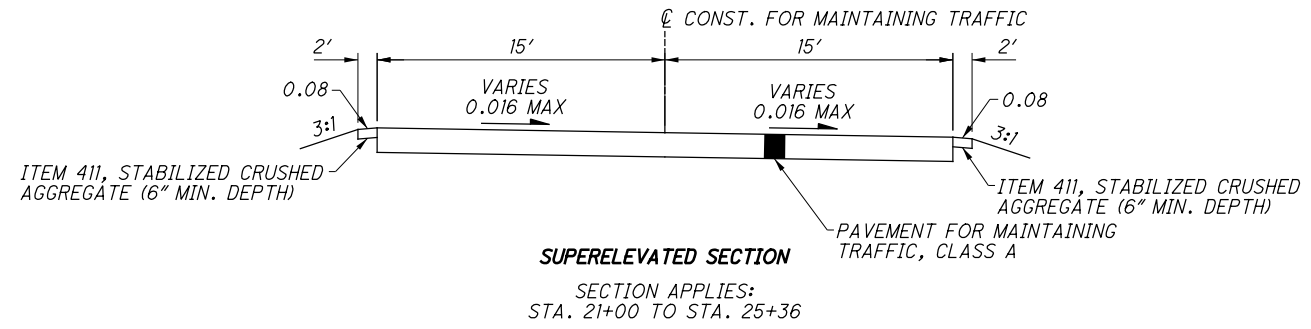
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ELEVATION TABLE

RAMP A SOUTH CROSSOVER - 65 MPH

LEFT SIDE			CENTERLINE CONTROL		RIGHT SIDE		
EDGE ELEVATION	SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	9'	21+00	881.18	9'	EXISTING	EXISTING
EXISTING	EXISTING	9'	21+50	881.20	9'	EXISTING	EXISTING
EXISTING	EXISTING	9'	22+00	881.26	9'	-1.60%	881.21
EXISTING	EXISTING	9'	22+50	881.27	9'	-1.60%	881.22
EXISTING	EXISTING	9'	23+00	881.21	9'	-1.60%	881.18
881.48	+1.60%	9'	23+50	881.34	9'	-1.60%	881.20
881.53	+1.60%	9'	24+00	881.39	9'	-1.60%	881.25
881.30	-0.80%	9'	24+50	881.37	9'	+0.80%	881.44
881.08	-1.60%	9'	25+00	881.22	9'	+1.60%	881.36
880.81	-1.60%	9'	25+50	880.95	9'	+1.60%	881.09
880.40	-1.60%	9'	26+00	880.54	9'	+1.60%	880.68
880.00	-1.60%	9'	26+50	880.14	9'	+1.60%	880.28
879.74	-1.60%	9.3'	27+00	879.89	9'	+1.60%	880.03
879.63	-1.60%	10.0'	27+50	879.79	9'	EXISTING	EXISTING
879.65	-1.60%	11.2'	28+00	879.83	9'	EXISTING	EXISTING
879.71	-1.60%	12.9'	28+50	879.94	9'	EXISTING	EXISTING
880.04	EXISTING	15.0'	29+00	880.04	9'	EXISTING	EXISTING
879.50	EXISTING	17.2'	29+50	880.11	9'	EXISTING	EXISTING
*	*	*	30+00	880.16	9'	EXISTING	EXISTING
*	*	*	30+50	880.20	9'	EXISTING	EXISTING
*	*	*	31+00	880.21	9'	EXISTING	EXISTING
*	*	*	31+50	880.21	9'	EXISTING	EXISTING
*	*	*	32+00	880.20	9'	EXISTING	EXISTING

* - SEE RAMP A NORTH CROSSOVER



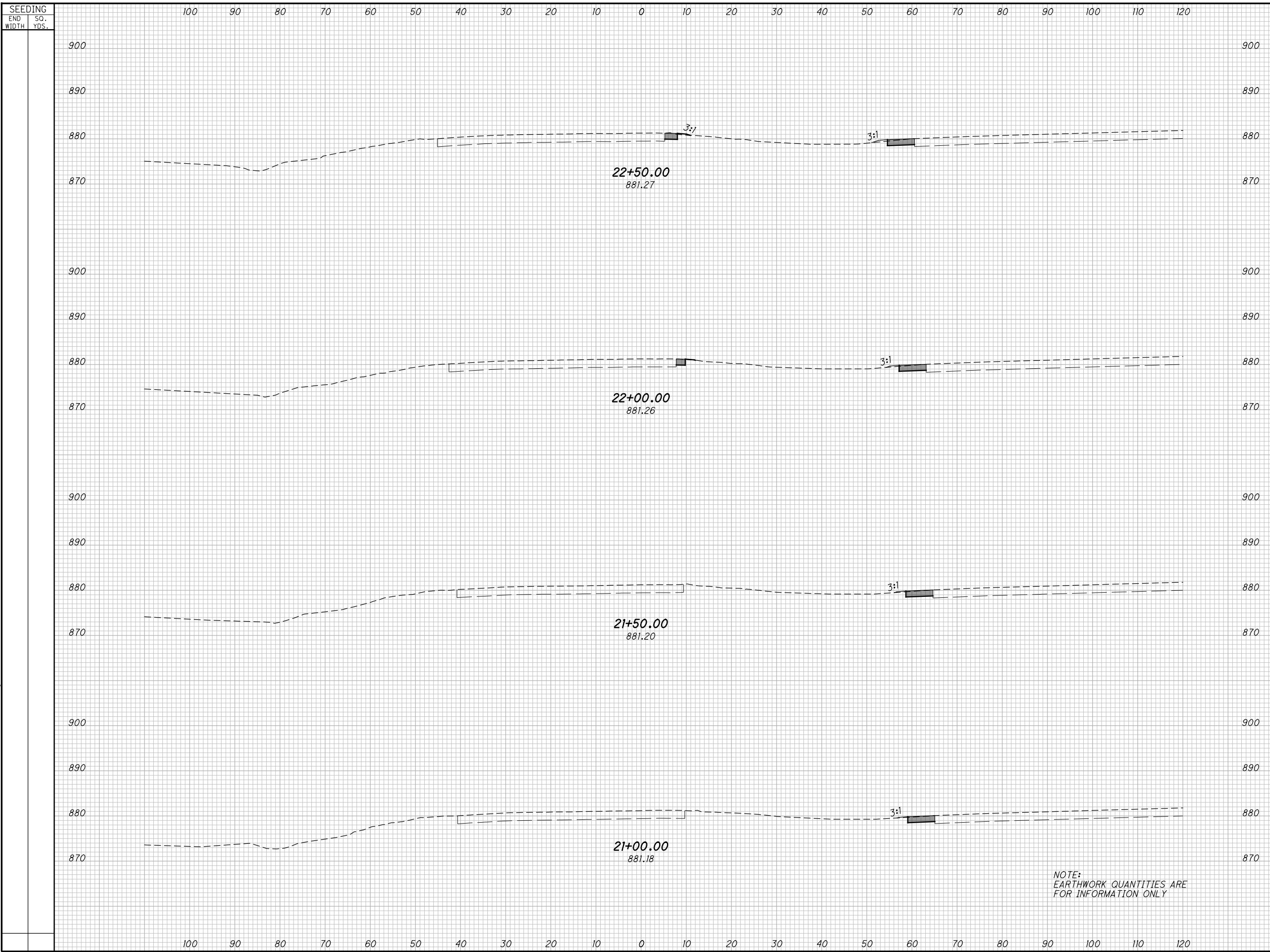
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CHECKED
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MAINTENANCE OF TRAFFIC - PHASE 1
CROSSOVER TYPICAL SECTIONS AND ELEVATIONS

FRA-71-0.00

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END STA	AREA		VOLUME	
	CUT	FILL	CUT	FILL
21+00.00	0	0	0	0
21+50.00	0	0	3	1
22+00.00	3	1	7	2
22+50.00	4	1	11	3
TOTAL	7	2	21	6

MAINTENANCE OF TRAFFIC - RAMP A SOUTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 21+00 TO STA. 22+50

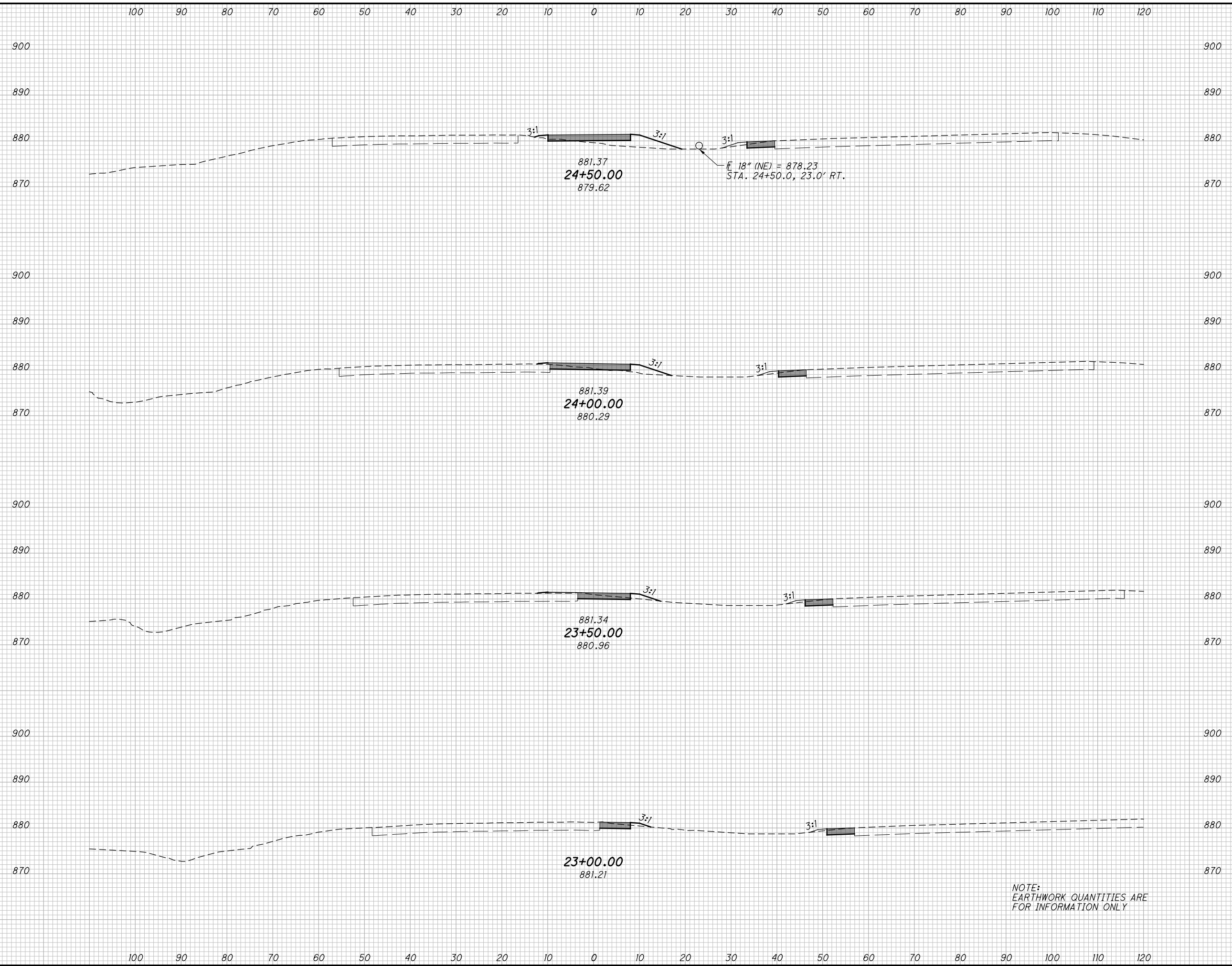
FRA-71-0.00

184
1312

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SO. YDS.



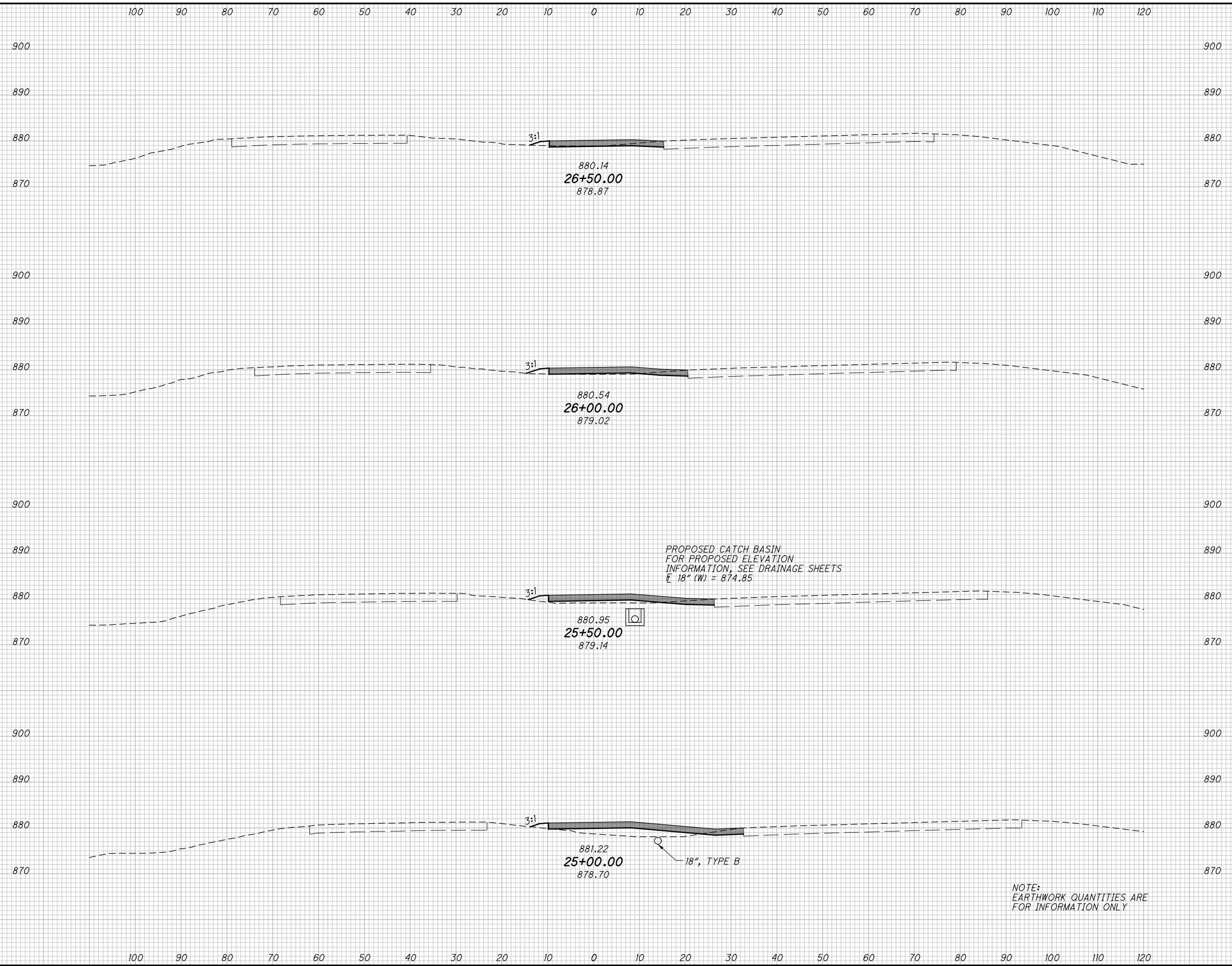
END CUT	AREA FILL	VOLUME	
		CUT	FILL
2	29	3	65
9	11	9	37
16	15	16	15
10	5	10	5
16	7	16	7
7	2	7	2
44	66	44	124

MAINTENANCE OF TRAFFIC - RAMP A SOUTH CROSSOVER
 PHASE 1 CROSS SECTIONS - STA. 23+00 TO STA. 24+50
 FRA - 71-0.00
 CALCULATED BER
 CHECKED DLR
 185
 1312

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SO. YDS.



END AREA	VOLUME	CALCULATED	CHECKED				
				CUT	FILL	CUT	FILL
3	5	12	9				
1	12	4	16				
1	32	1	32				
0	22	1	59				
1	41	18	116				

MAINTENANCE OF TRAFFIC - RAMP A SOUTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 25+00 TO STA. 26+50
FRA-71-0.00
 186
 1312

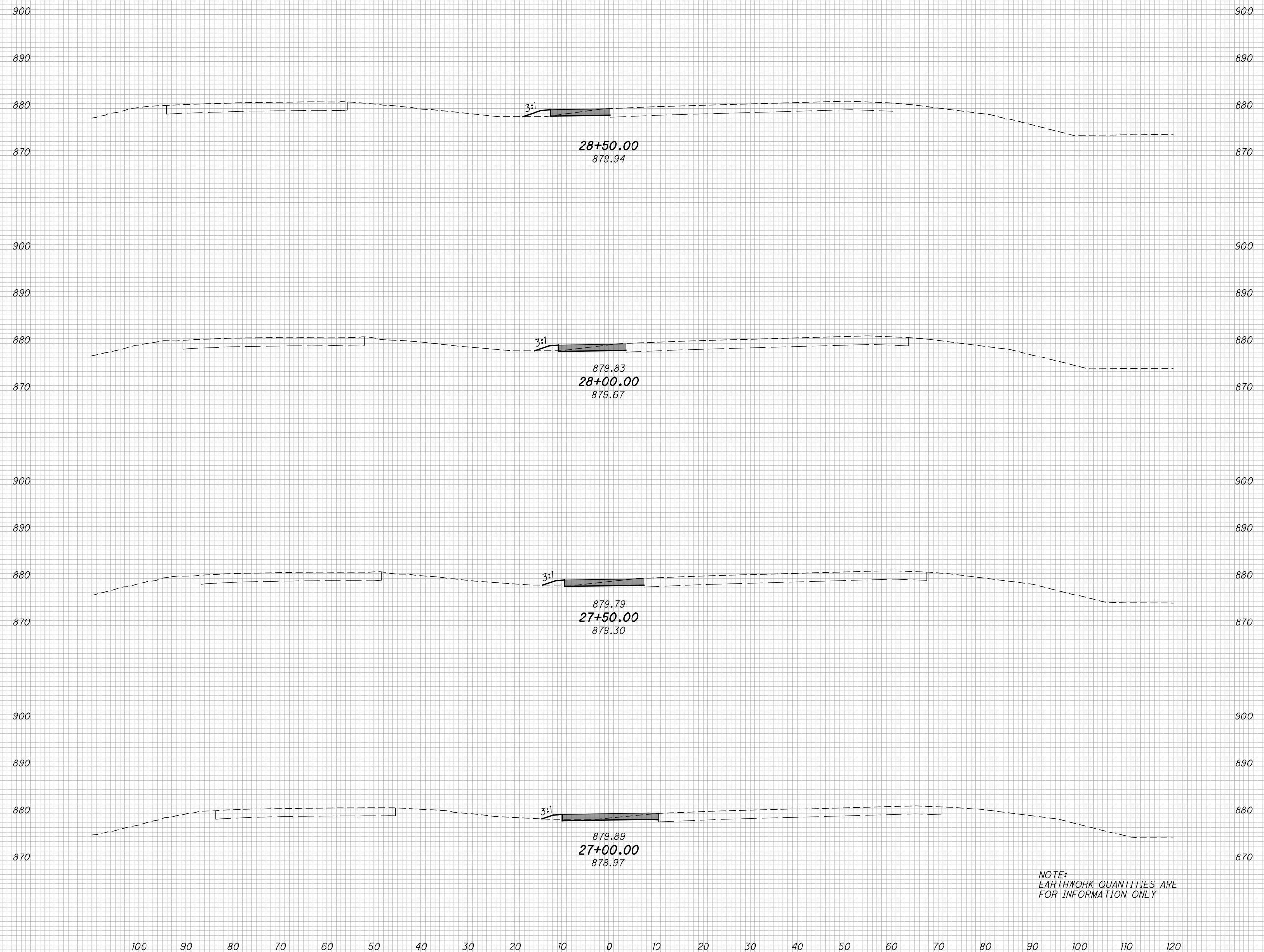
NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SO. YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA		VOLUME		CALCULATED BER	CHECKED DLR
CUT	FILL	CUT	FILL		



8	5	17	9	9	9
10	4	21	8	8	8
12	4	20	8	8	8
9	4	72	34	187	1312

MAINTENANCE OF TRAFFIC - RAMP A SOUTH CROSSOVER
 PHASE 1 CROSS SECTIONS - STA. 27+00 TO STA. 28+50

FRA - 71-0.00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

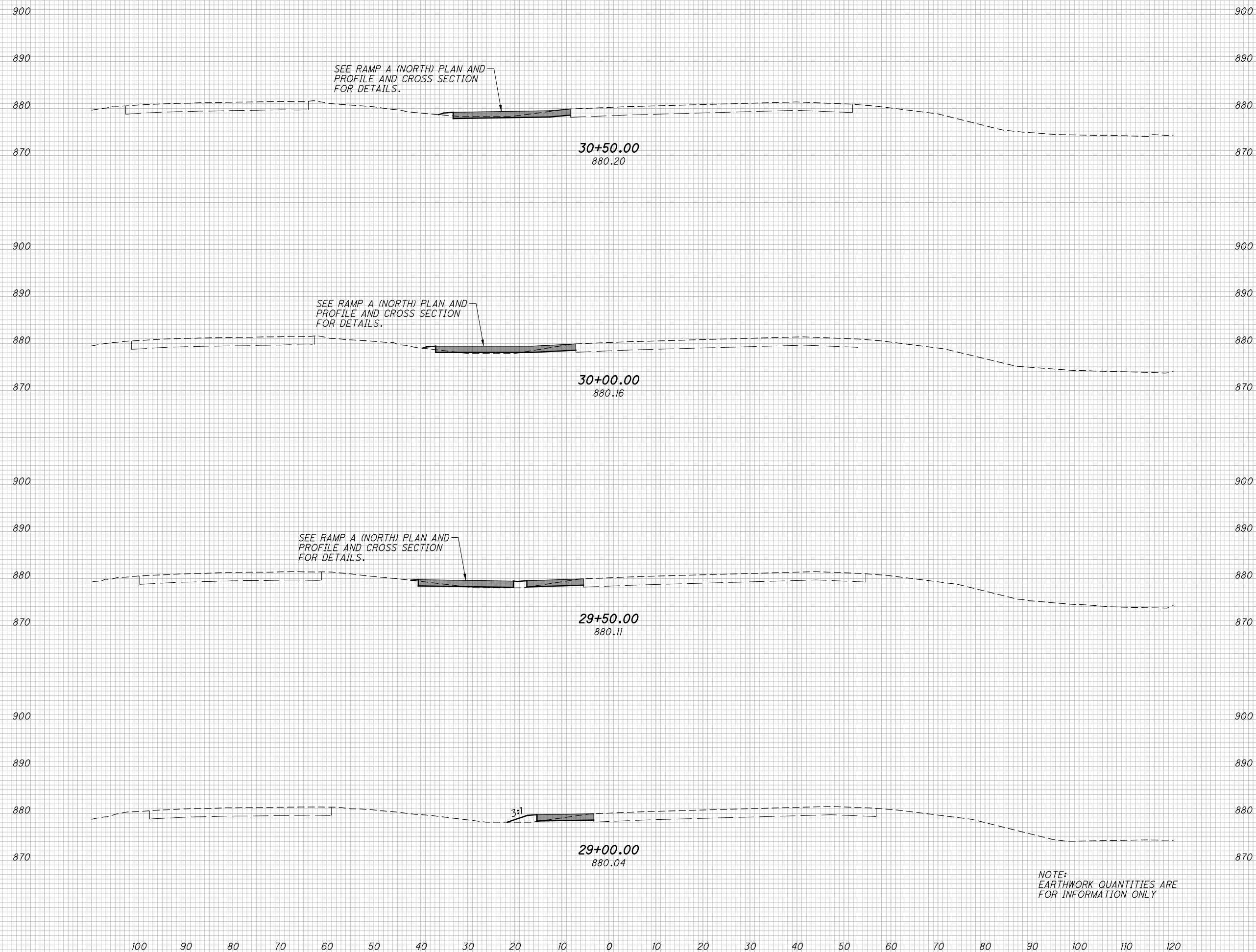
187
1312

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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END AREA	VOLUME
CUT	FILL
3	1
6	2
8	3
5	2
12	6
7	4
29	12

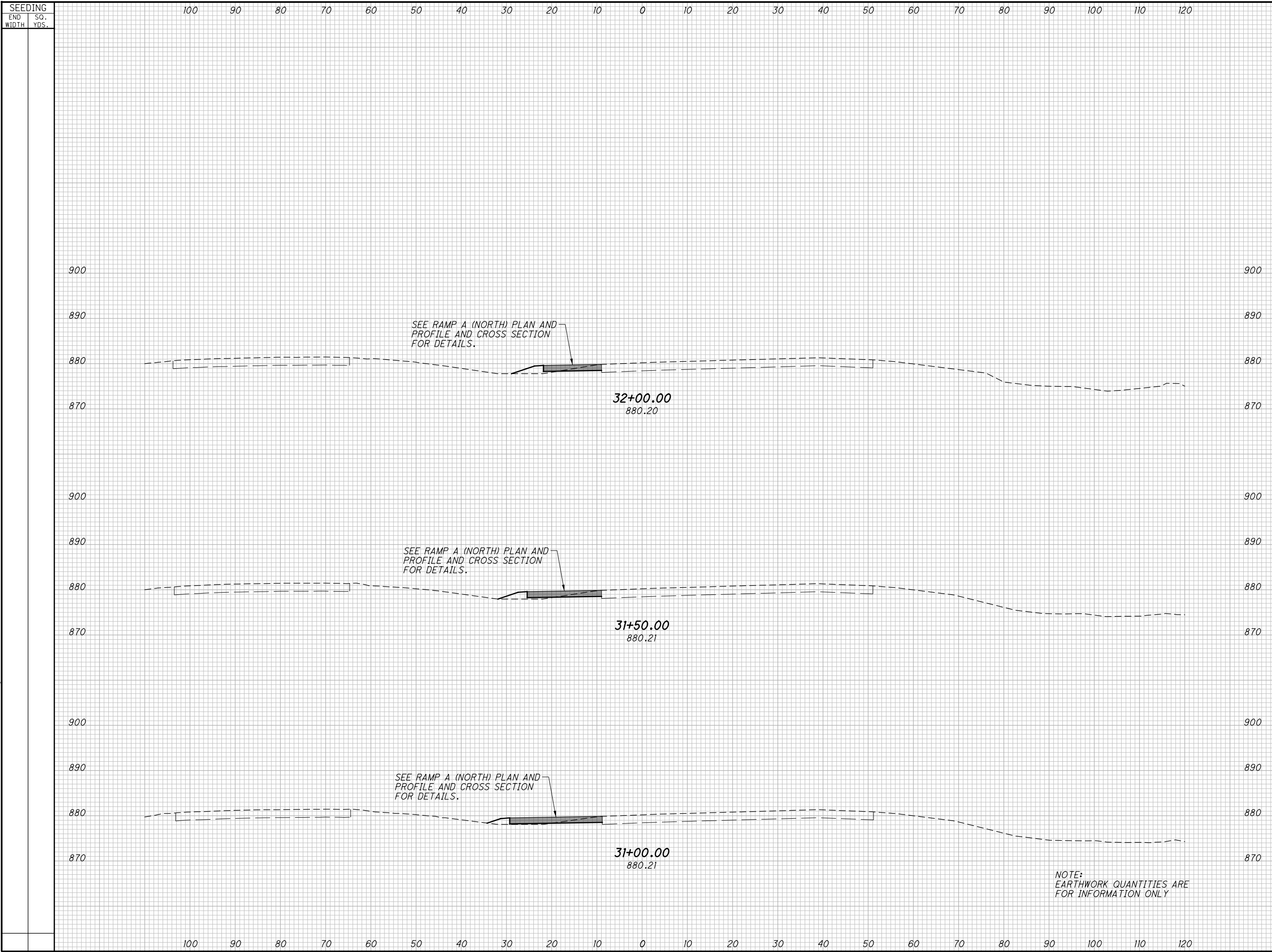
**MAINTENANCE OF TRAFFIC - RAMP A SOUTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 29+00 TO STA. 30+50**

FRA - 71-0.00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

188
1312

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SEE RAMP A (NORTH) PLAN AND PROFILE AND CROSS SECTION FOR DETAILS.

32+00.00
880.20

SEE RAMP A (NORTH) PLAN AND PROFILE AND CROSS SECTION FOR DETAILS.

31+50.00
880.21

SEE RAMP A (NORTH) PLAN AND PROFILE AND CROSS SECTION FOR DETAILS.

31+00.00
880.21

NOTE:
EARTHWORK QUANTITIES ARE FOR INFORMATION ONLY

SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	BER	DLR
		0	0				
		0	0				
		0	0				

MAINTENANCE OF TRAFFIC - RAMP A SOUTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 31+00 TO STA. 32+00

FRA - 71 - 0.00

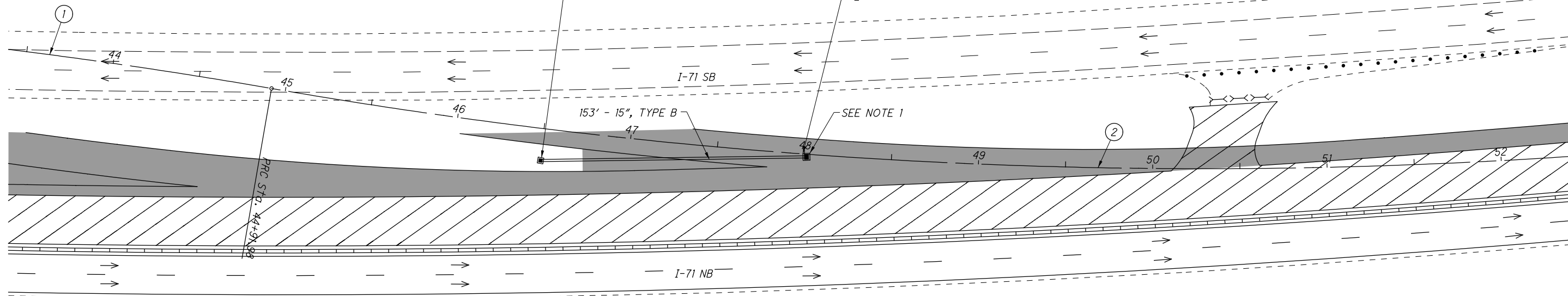
189
1312

① P.I. STA. 42+96.25
 $\Delta = 7^\circ 11' 10''$ (RT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 196.24'$
 $L = 391.98'$
 $E = 6.16'$
 $C = 391.72'$
 $C.B. = N 86^\circ 39' 25'' E$

② P.I. STA. 49+13.55
 $\Delta = 15^\circ 21' 54''$ (LT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 421.57'$
 $L = 838.09'$
 $E = 28.31'$
 $C = 835.58'$
 $C.B. = N 82^\circ 34' 03'' E$

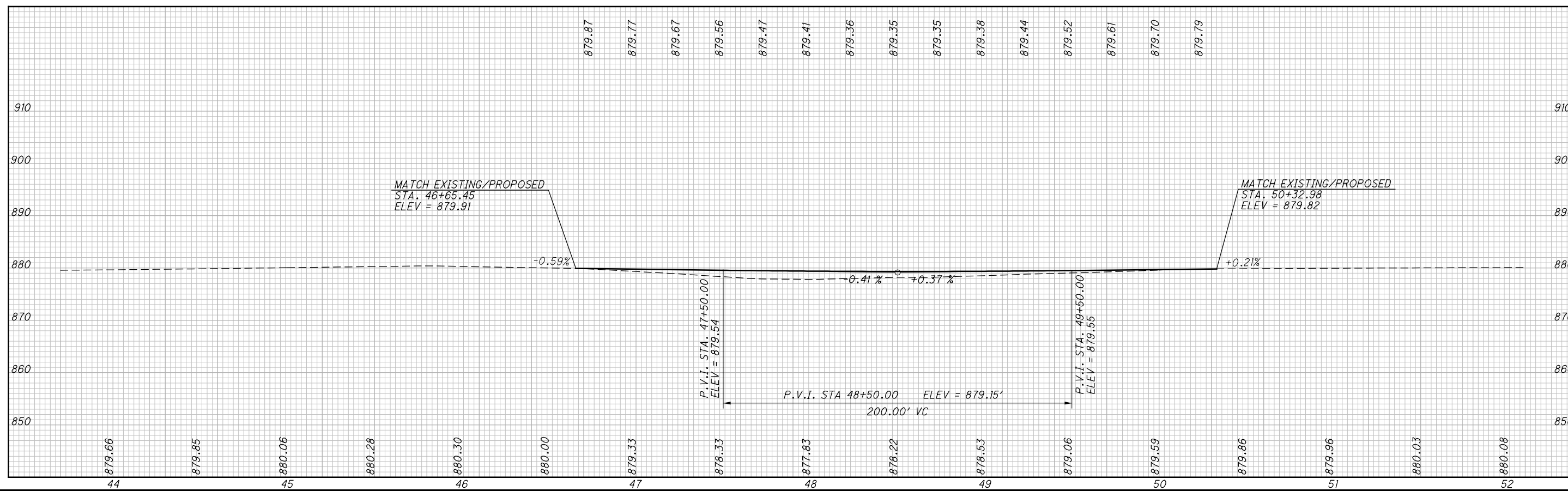
CATCH BASIN, NO 2-2B
 STA. 46+50.0, 18.5' RT.
 GRATE ELEV = 877.72
 $\nabla 15'' (E) = 875.34$

PROPOSED CATCH BASIN
 FOR PROPOSED ELEVATION
 INFORMATION, SEE DRAINAGE SHEETS
 $\nabla 15'' (SW) = 874.89$



NOTES:
 1. PLACE STEEL PLATE OVER CATCH BASIN TO MAINTAIN WATER FLOW OF PROPOSED STORM SEWER.

LEGEND



MAINTENANCE OF TRAFFIC - PHASE 1
 CROSSOVER PLAN AND PROFILE-RAMP A NORTH CROSSOVER

FRA-71-0.00

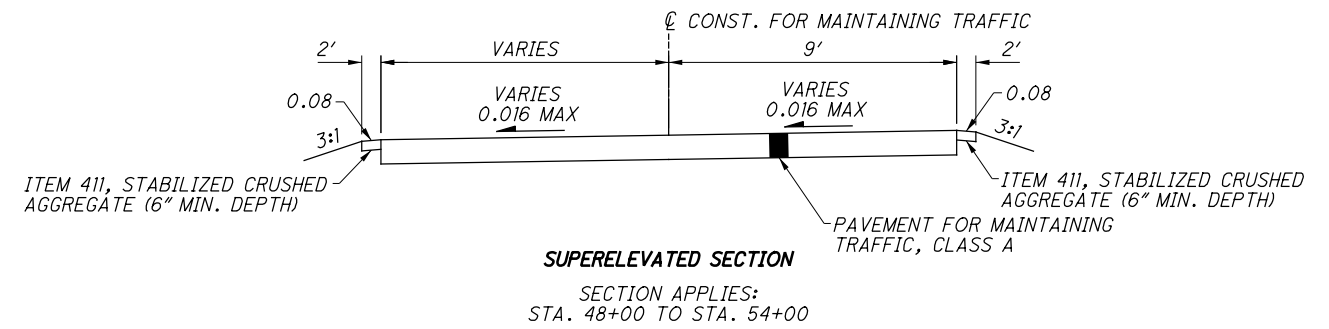
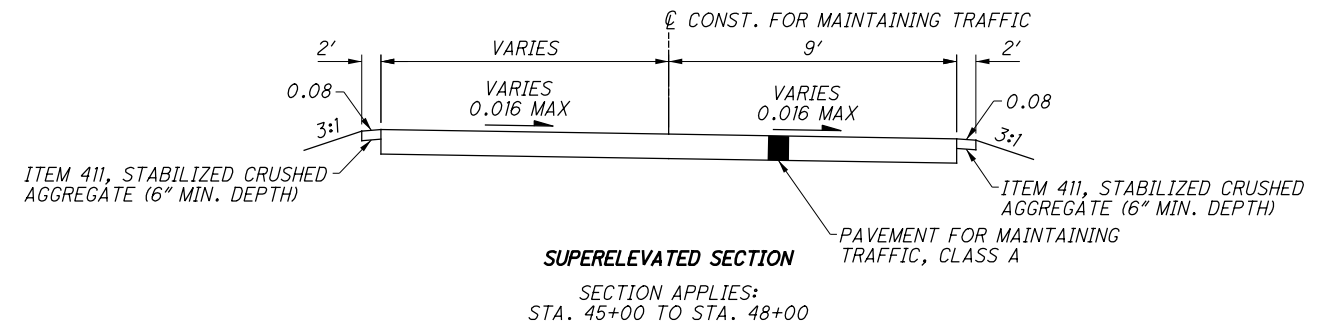
190
1312

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ELEVATION TABLE

RAMP A NORTH CROSSOVER - 65 MPH

LEFT SIDE			CENTERLINE CONTROL		RIGHT SIDE		
EDGE ELEVATION	SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	9.1'	45+00	880.06	9'	EXISTING	EXISTING
EXISTING	EXISTING	9.7'	45+50	880.28	9'	EXISTING	EXISTING
EXISTING	EXISTING	10.2'	46+00	880.30	9'	EXISTING	879.91
EXISTING	EXISTING	10.6'	46+50	880.00	9'	EXISTING	879.78
EXISTING	EXISTING	10.9'	47+00	879.77	9'	-1.60%	879.63
879.74	+1.60%	11.2'	47+50	879.56	9'	-1.60%	879.42
879.41	0.00%	11.4'	48+00	879.41	9'	0.00%	879.41
879.17	-1.60%	11.5'	48+50	879.35	9'	+1.60%	879.49
879.20	-1.60%	11.5'	49+00	879.38	9'	+1.60%	EXISTING
879.34	-1.60%	11.5'	49+50	879.52	9'	+1.60%	EXISTING
879.51	-1.60%	12.0'	50+00	879.70	9'	+1.60%	EXISTING
EXISTING	EXISTING	EXISTING	50+50	879.89	9'	EXISTING	EXISTING
879.63	EXISTING	15.2'	51+00	879.96	9'	EXISTING	EXISTING
879.62	EXISTING	17.1'	51+50	880.03	9'	EXISTING	EXISTING
879.61	EXISTING	18.6'	52+00	880.08	9'	EXISTING	EXISTING
879.60	EXISTING	19.5'	52+50	880.11	9'	EXISTING	EXISTING
879.60	EXISTING	19.5'	53+00	880.12	9'	EXISTING	EXISTING
879.68	EXISTING	13.7'	53+50	880.11	9'	EXISTING	EXISTING
879.68	EXISTING	13.0'	54+00	880.10	9'	EXISTING	EXISTING



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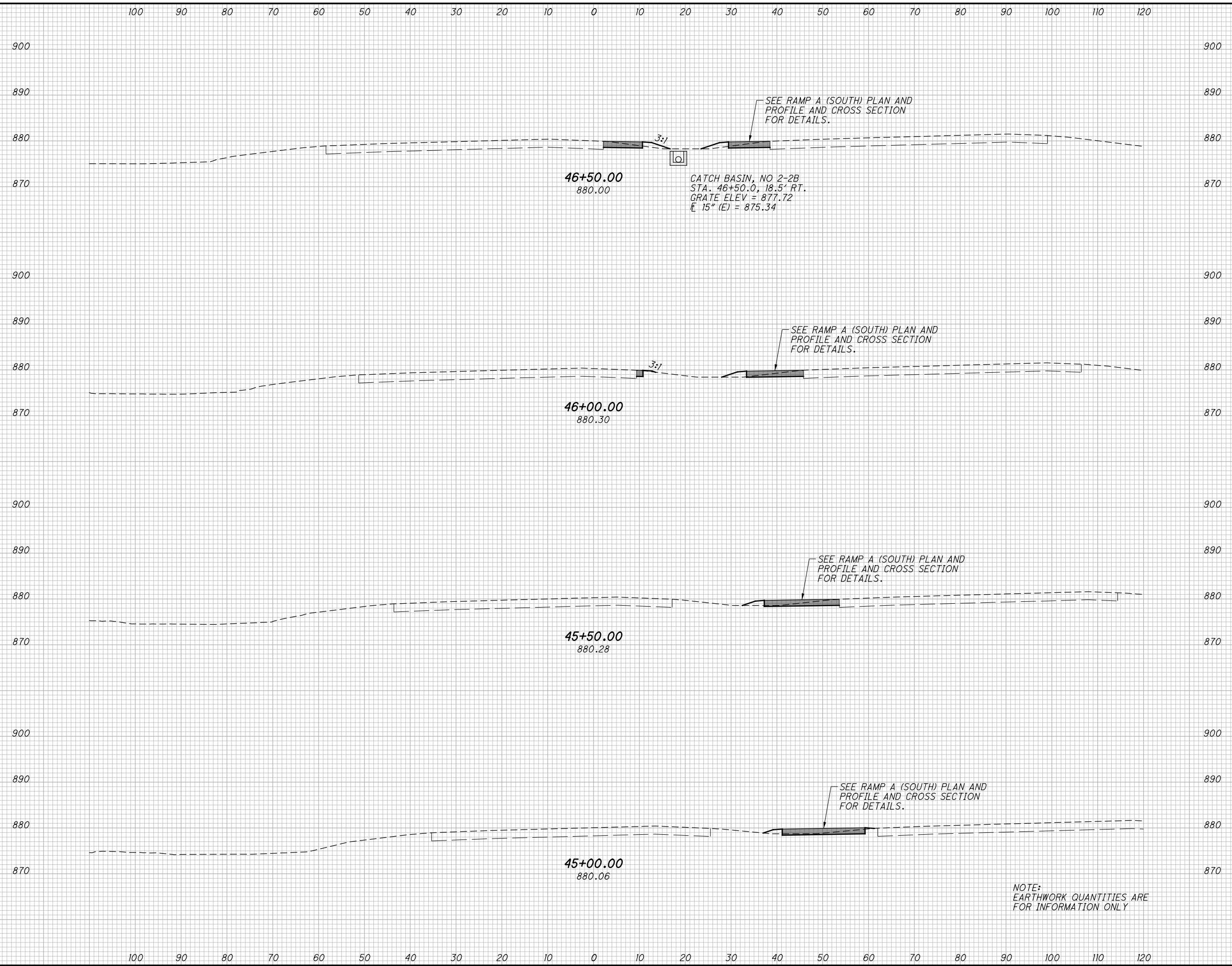
CALCULATED
BER
CHECKED
DLR

MAINTENANCE OF TRAFFIC - PHASE 1
CROSSOVER TYPICAL SECTIONS AND ELEVATIONS

FRA-71-0.00

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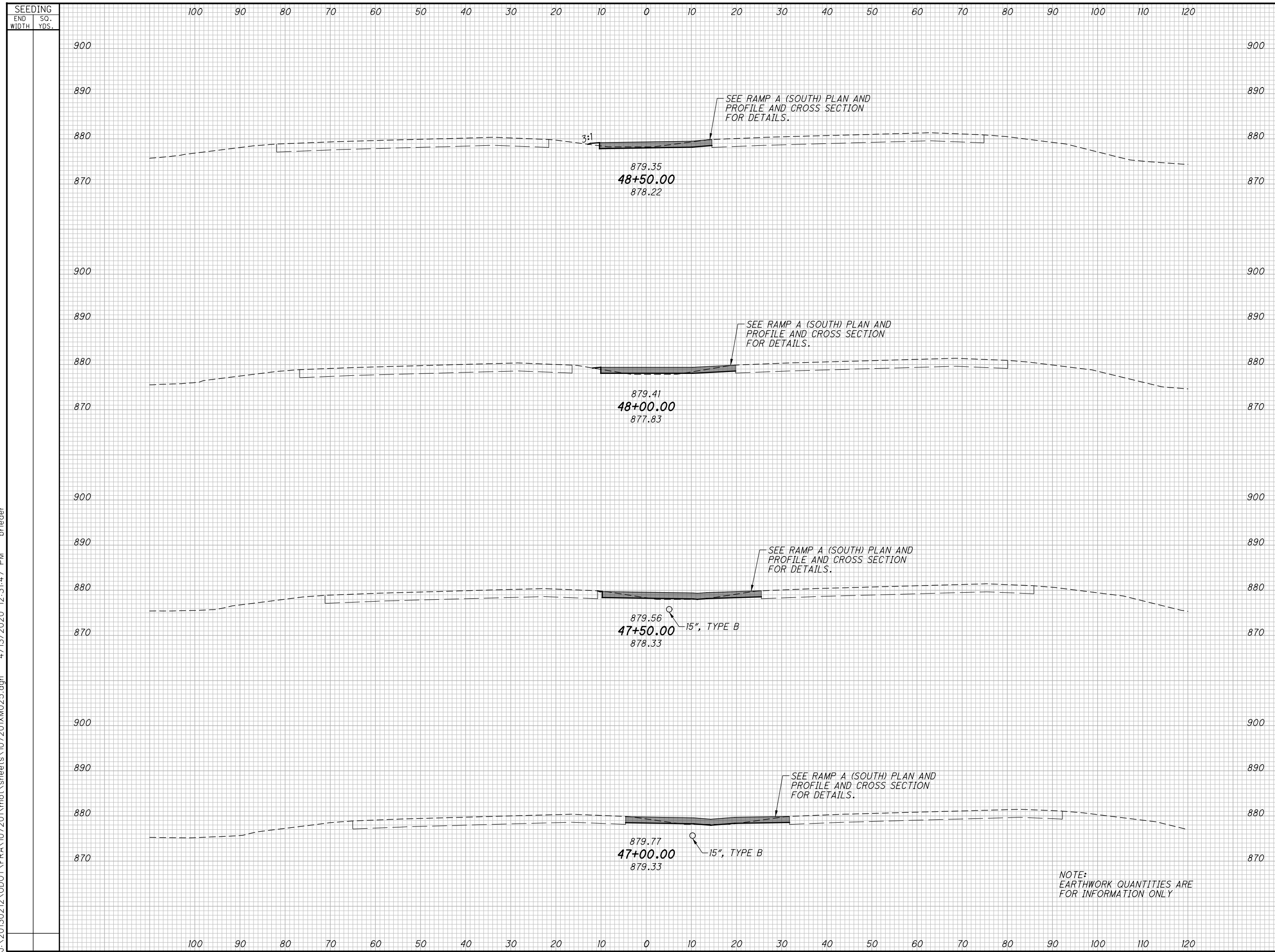
SEEDING	
END WIDTH	SO. YDS.



END CUT	AREA FILL	VOLUME	
		CUT	FILL
8	5	16	14
2	1	10	6
0	0	2	1
0	0		
0	0		
		28	21

CALCULATED BER CHECKED DLR
MAINTENANCE OF TRAFFIC - RAMP A NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 45+00 TO STA. 46+50
FRA-71-0:00
 192
 1312

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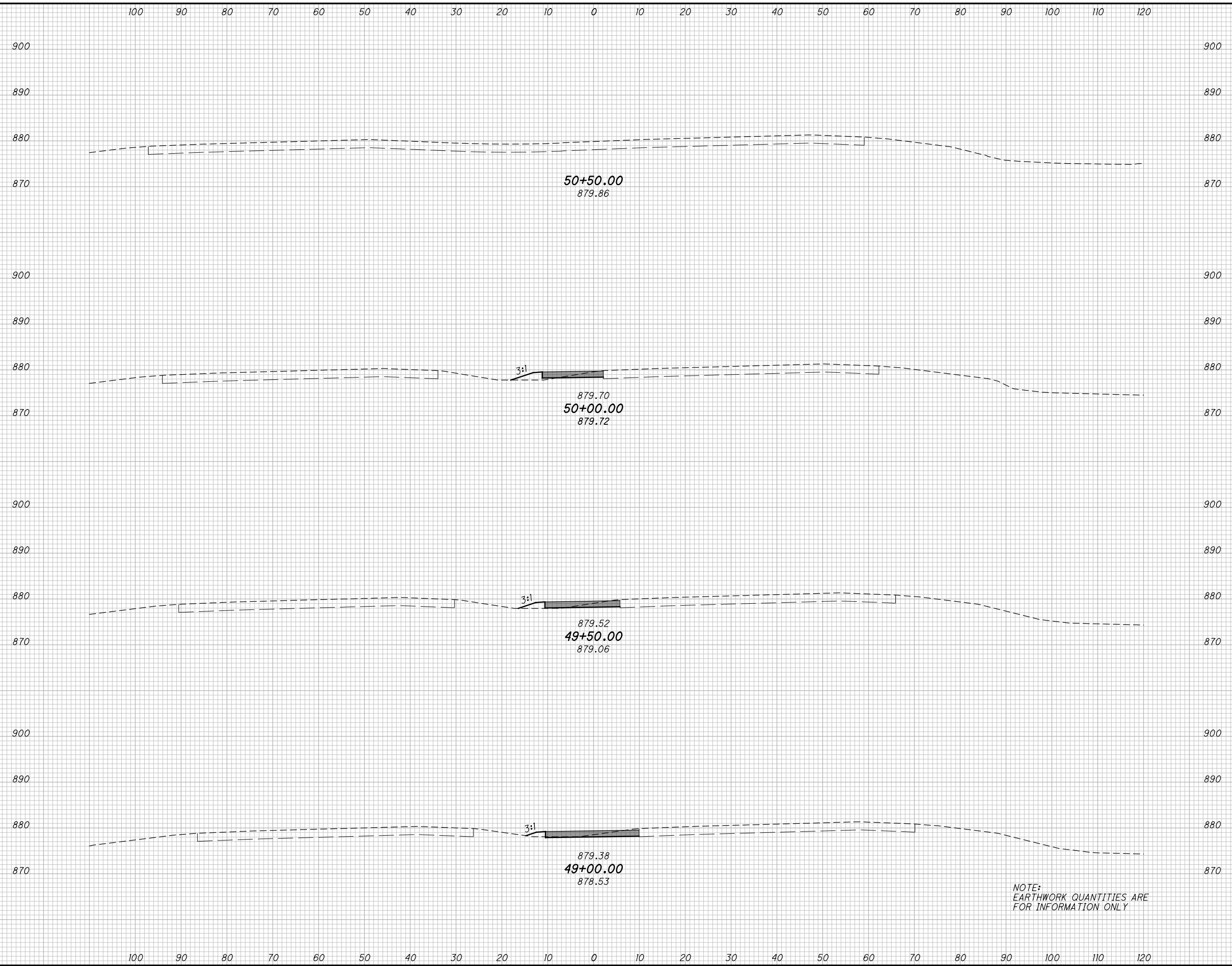
END STA.	AREA		VOLUME	
	CUT	FILL	CUT	FILL
48+50.00	10	2	22	6
48+00.00	4	6	14	8
47+50.00	8	6	12	12
47+00.00	9	10	16	15
TOTAL	31	24	64	41

MAINTENANCE OF TRAFFIC - RAMP A NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 47+00 TO STA. 48+50
 CALCULATED BER
 CHECKED DLR
FRA-71-0:00
 193
 1312

NOTE:
EARTHWORK QUANTITIES ARE
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SEEDING	
END WIDTH	SO. YDS.



END CUT	AREA FILL	VOLUME	
		CUT	FILL
0	0	8	3
8	8	8	8
10	6	17	14
22	10	22	10
13	4	55	35

MAINTENANCE OF TRAFFIC - RAMP A NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 49+00 TO STA. 50+50
 CALCULATED BER
 CHECKED DLR
FRA-71-0.00
 194
 1312

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING
END SO.
WIDTH YDS.

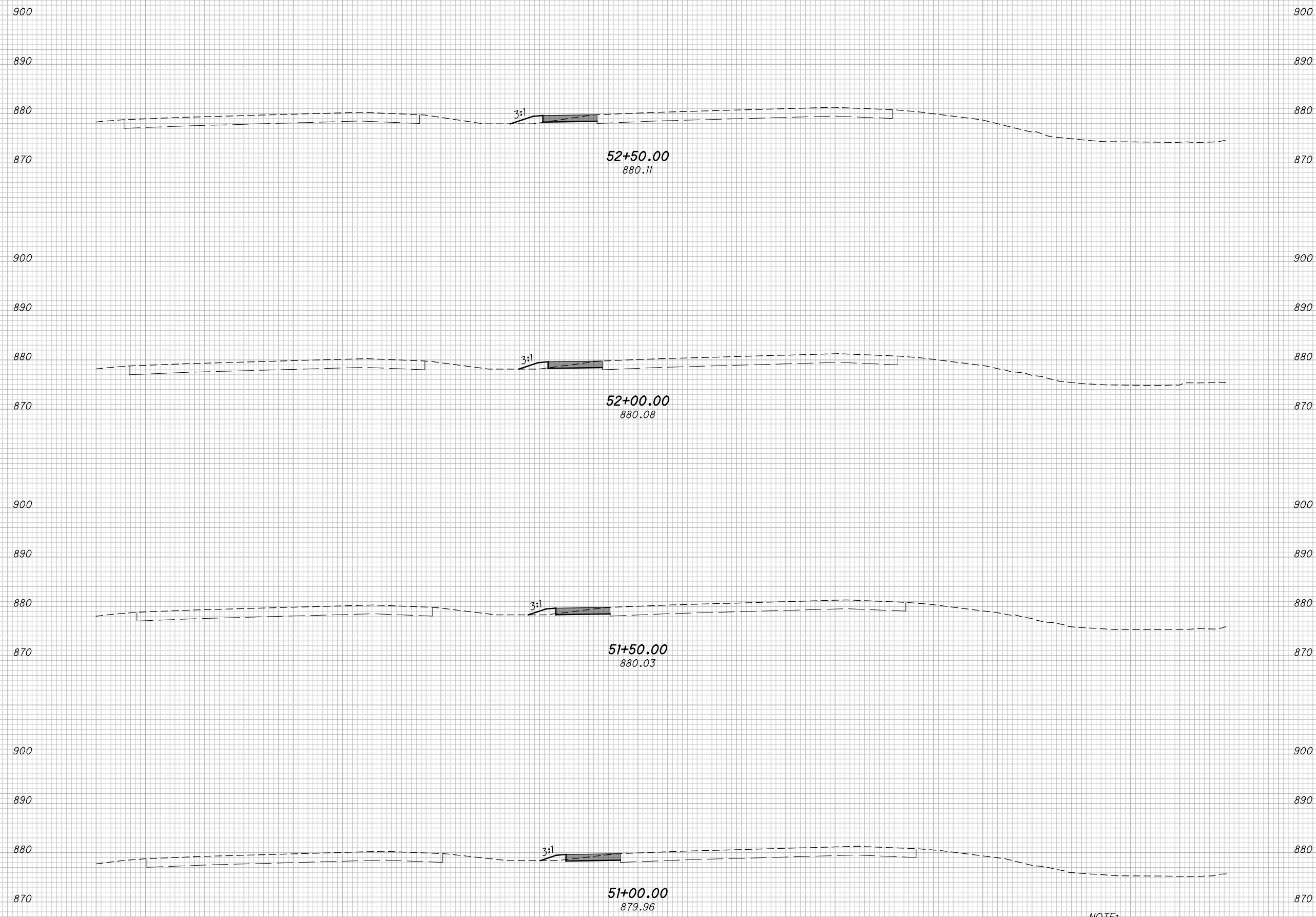
100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL

VOLUME
CUT FILL

CALCULATED
BER

CHECKED
DLR



END AREA	VOLUME
CUT FILL	CUT FILL
3	6
4	7
6	10
8	13
1	2
1	2
2	3
3	5
36	12

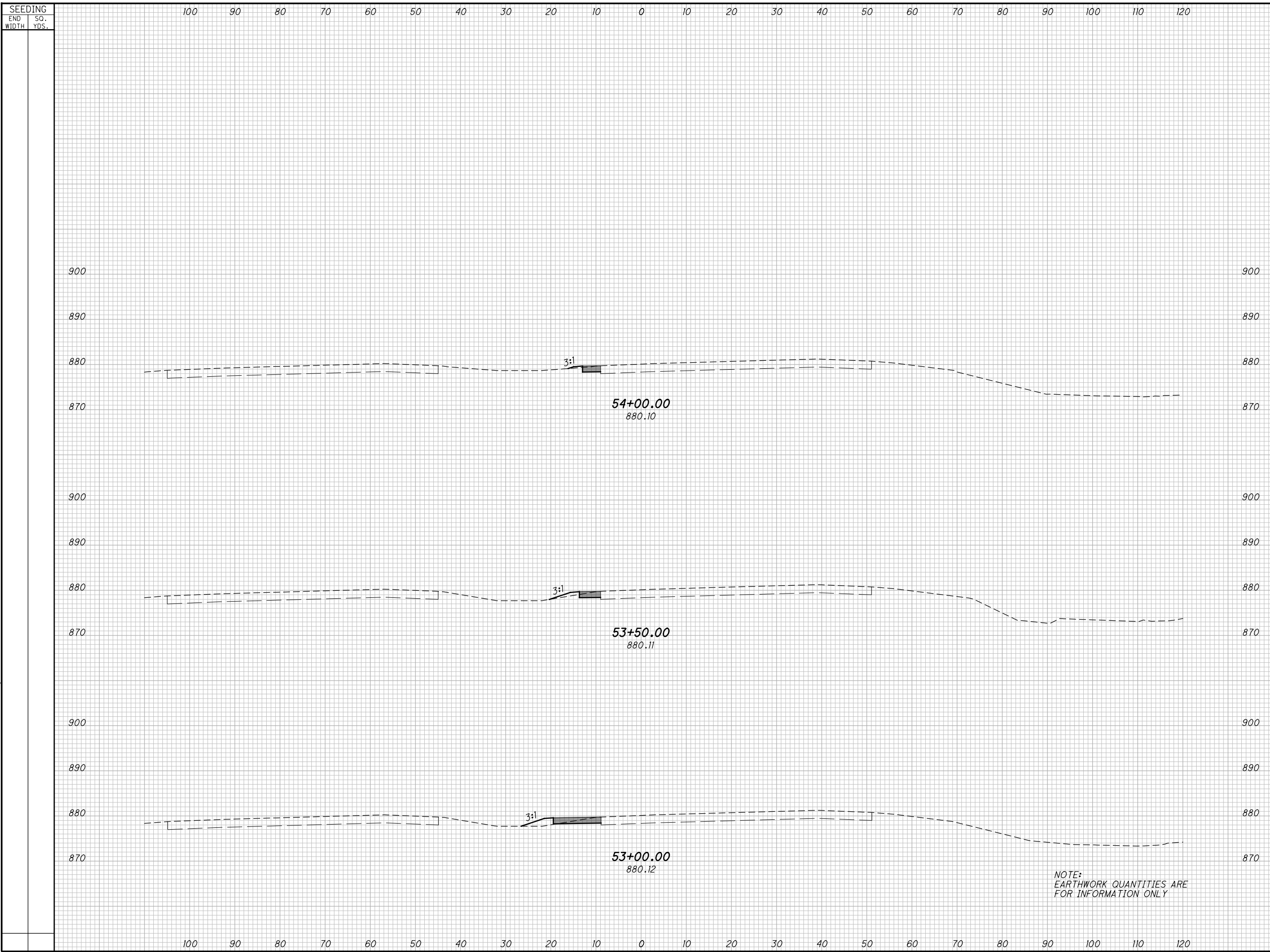
**MAINTENANCE OF TRAFFIC - RAMP A NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 51+00 TO STA. 52+50**

FRA-71-0.00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

195
1312

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	BER	DLR
		0	0				
				3	1		
				6	2		
		3	1				
		9	3				

**MAINTENANCE OF TRAFFIC - RAMP A NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 53+00 TO STA. 54+00**

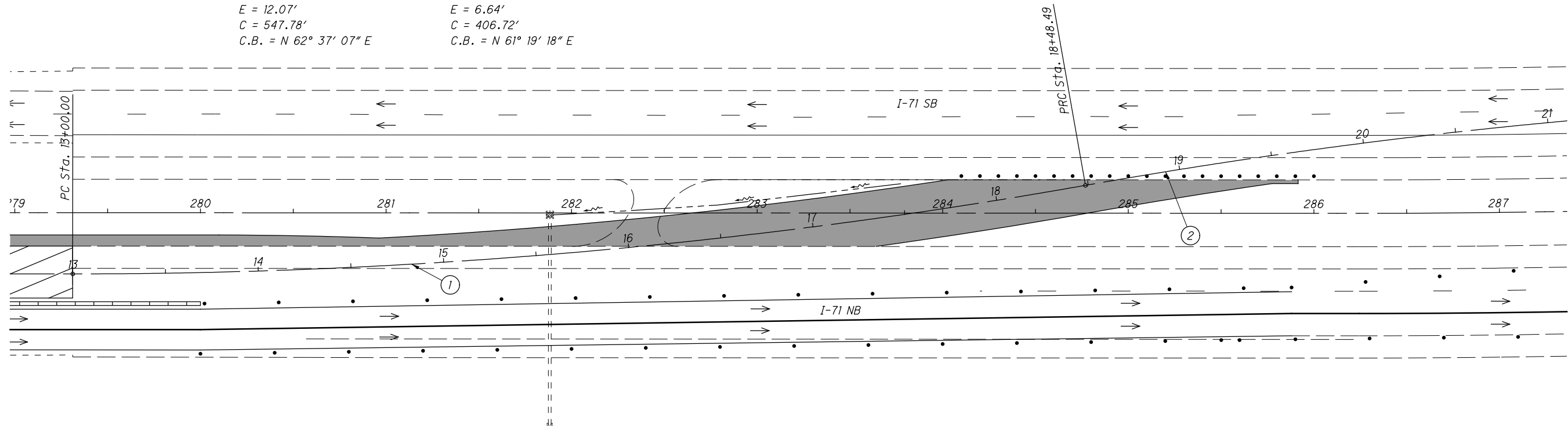
FRA - 71 - 0.00

196
1312

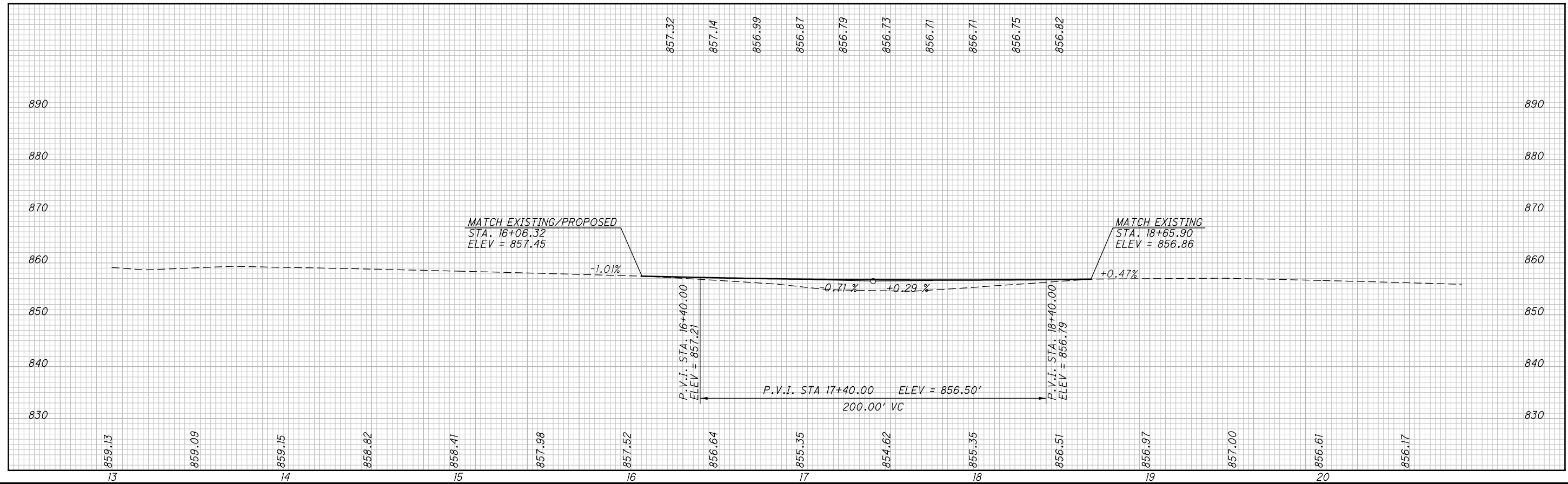
NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

① P.I. STA. 15+74.95
 $\Delta = 10^\circ 03' 20''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 274.95'$
 $L = 548.49'$
 $E = 12.07'$
 $C = 547.78'$
 $C.B. = N 62^\circ 37' 07'' E$

② P.I. STA. 20+52.28
 $\Delta = 7^\circ 27' 42''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 203.79'$
 $L = 407.01'$
 $E = 6.64'$
 $C = 406.72'$
 $C.B. = N 61^\circ 19' 18'' E$



LEGEND
 TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
 OPEN TRAVEL LANE



CALCULATED BER CHECKED DLR
MAINTENANCE OF TRAFFIC - PHASE 1
CROSSOVER PLAN AND PROFILE - NORTH CROSSOVER

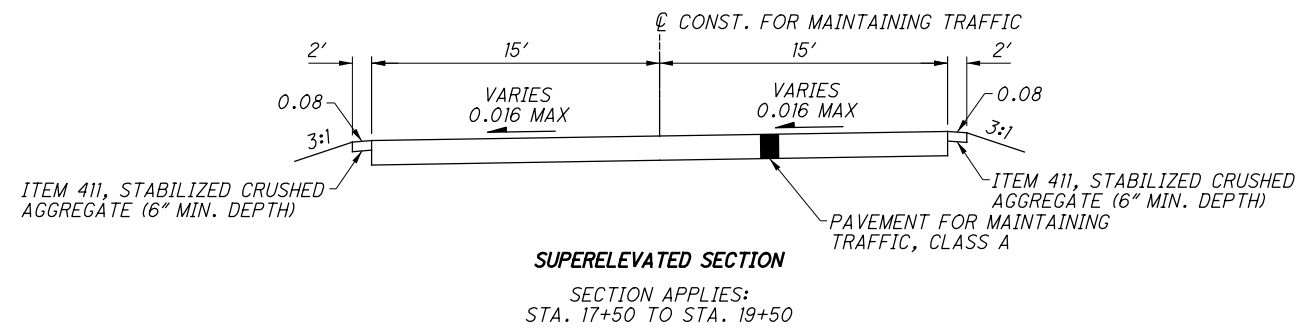
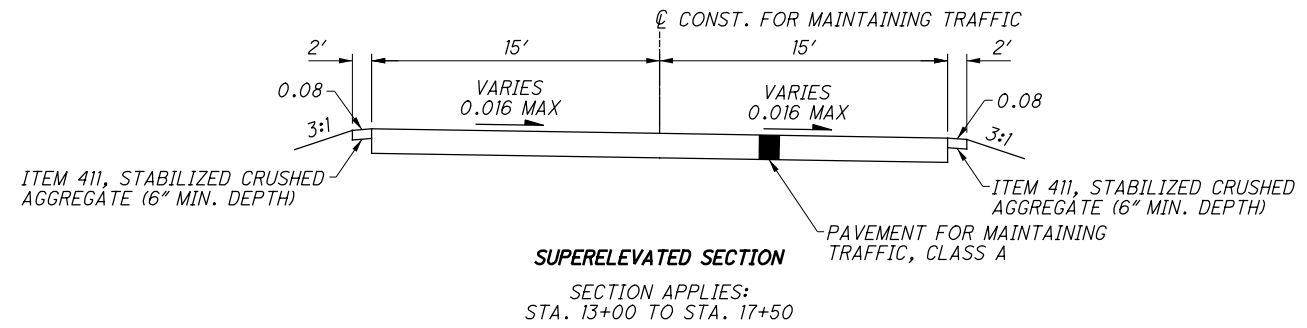
FRA-71-0.00
 197
 1312

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ELEVATION TABLE

SOUTHBOUND I-71 NORTH CROSSOVER - 65 MPH

LEFT SIDE			CENTERLINE CONTROL		RIGHT SIDE		
EDGE ELEVATION	SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	SLOPE	EDGE ELEVATION
858.57	EXISTING	15'	13+00	859.13	15'	EXISTING	EXISTING
858.53	EXISTING	15'	13+50	859.09	15'	EXISTING	EXISTING
858.62	EXISTING	15'	14+00	859.15	15'	EXISTING	EXISTING
858.31	EXISTING	15'	14+50	858.82	15'	EXISTING	EXISTING
857.97	EXISTING	15'	15+00	858.41	15'	EXISTING	EXISTING
857.62	EXISTING	15'	15+50	857.98	15'	EXISTING	EXISTING
857.26	EXISTING	15'	16+00	857.52	15'	EXISTING	EXISTING
856.90	-1.60%	15'	16+50	857.14	15'	+1.60%	EXISTING
856.63	-1.60%	15'	17+00	856.87	15'	+1.60%	EXISTING
856.73	0.00%	15'	17+50	856.73	15'	0.00%	856.73
EXISTING	+1.60%	15'	18+00	856.71	15'	-1.60%	856.47
EXISTING	+1.60%	15'	18+50	856.82	15'	-1.60%	856.58
EXISTING	+4.00%	15'	19+00	856.97	15'	-1.60%	856.59
EXISTING	+4.00%	15'	19+50	857.00	15'	-1.60%	856.50



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CALCULATED
BER
CHECKED
DLR

MAINTENANCE OF TRAFFIC - PHASE 1
CROSSOVER TYPICAL SECTIONS AND ELEVATIONS

FRA-71-0.00

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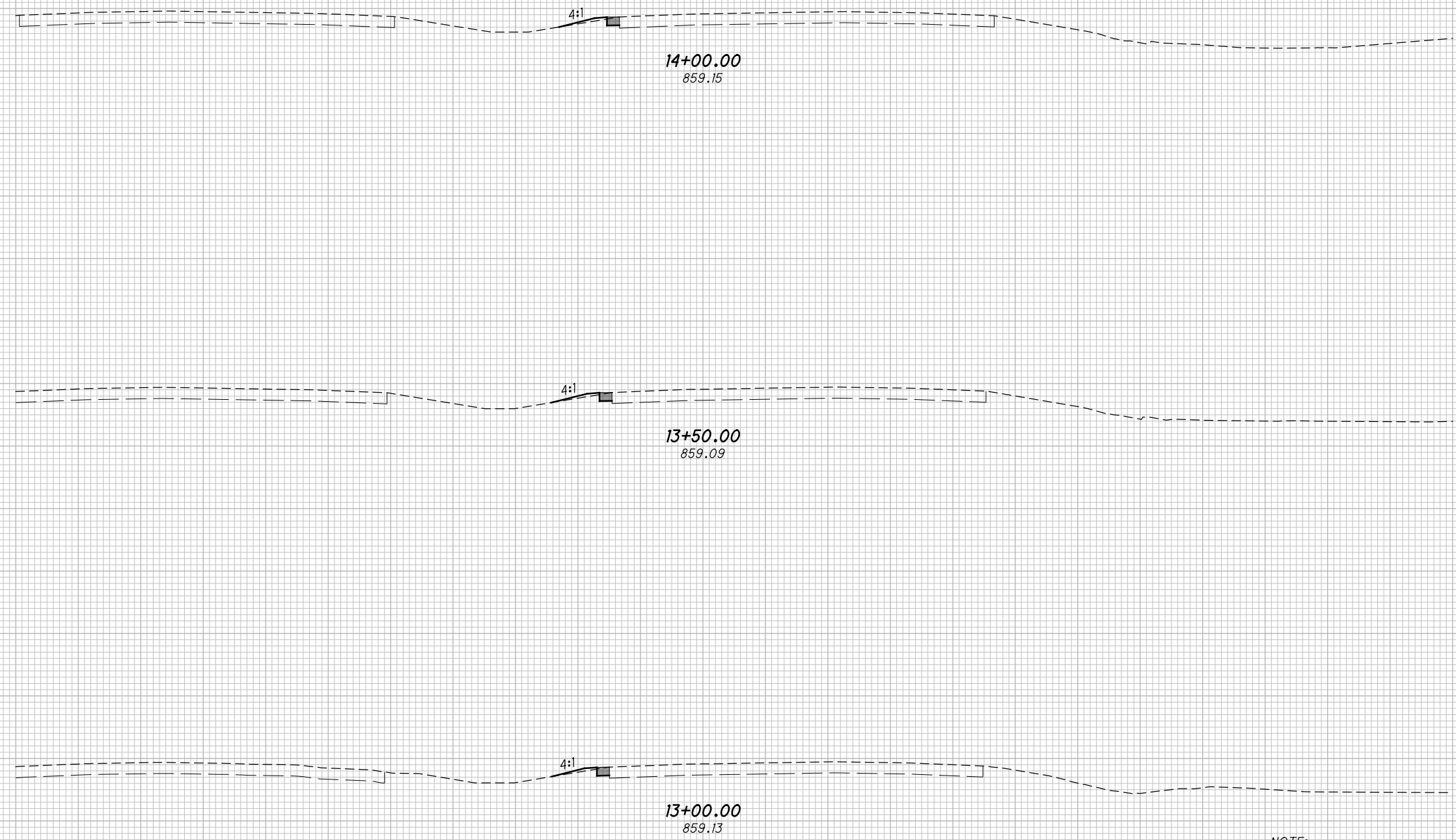
SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR

870
860
850
840
870
860
850
840
870
860
850
840
870
860
850
840

870
860
850
840
870
860
850
840
870
860
850
840



END AREA	VOLUME	CALCULATED	CHECKED
CUT	FILL	CUT	FILL
3	3	7	7
3	3	6	6
3	2	6	5
19	18		

NOTE:
EARTHWORK QUANTITIES ARE
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MAINTENANCE OF TRAFFIC - I-71 SB NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 13+00 TO STA. 14+00

FRA-71-0:00

199
1312

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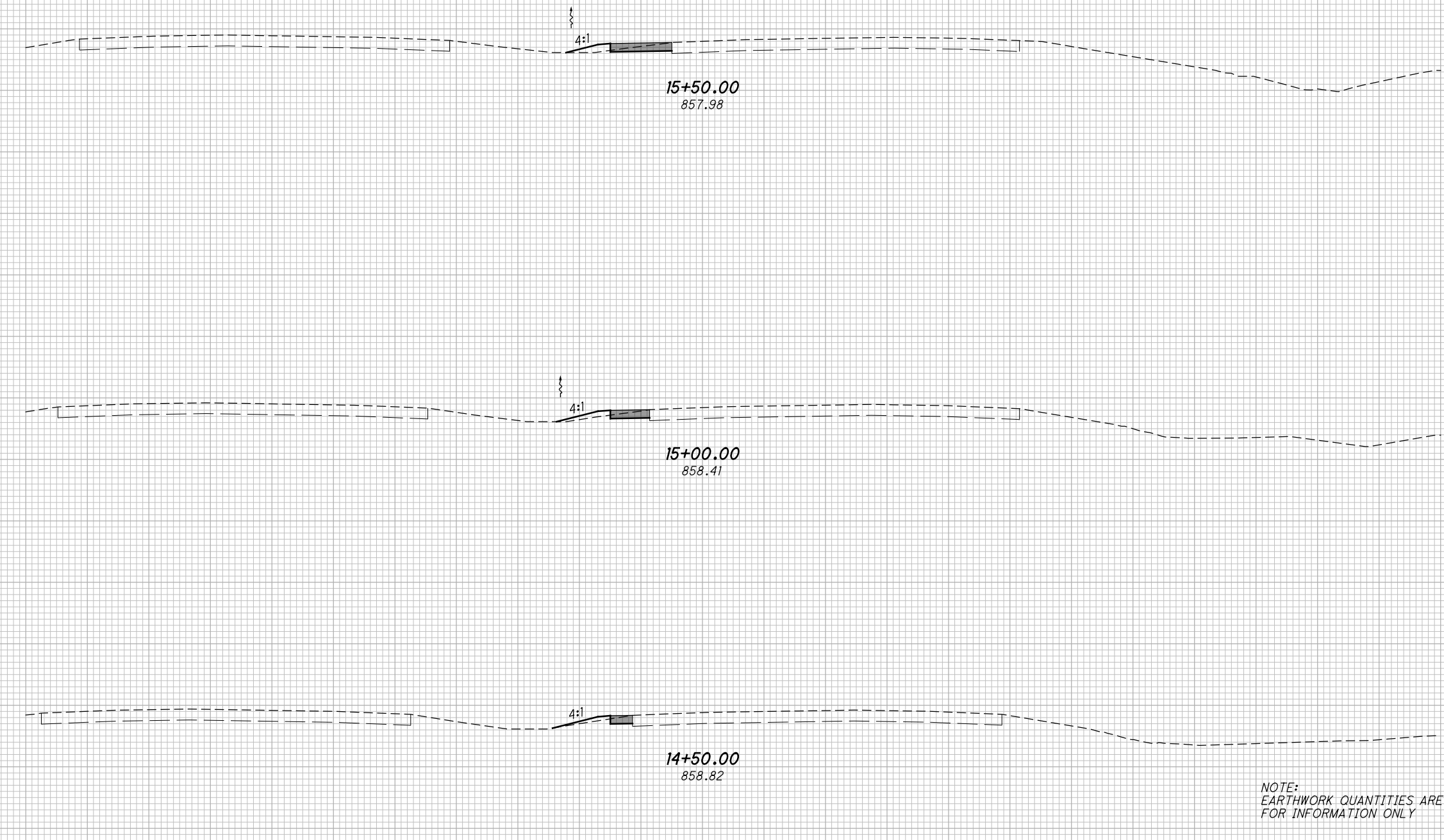
SEEDING	
END WIDTH	SO. YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	BER	DLR

870
860
850
840
880
870
860
850
840
870
860
850
840

870
860
850
840
880
870
860
850
840
870
860
850
840



15+50.00
857.98

15+00.00
858.41

14+50.00
858.82

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

8	6	16	11
6	6	13	12
4	4	10	10
39	33		

**MAINTENANCE OF TRAFFIC - I-71 SB NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 14+50 TO STA. 15+50**

FRA-71-0.00

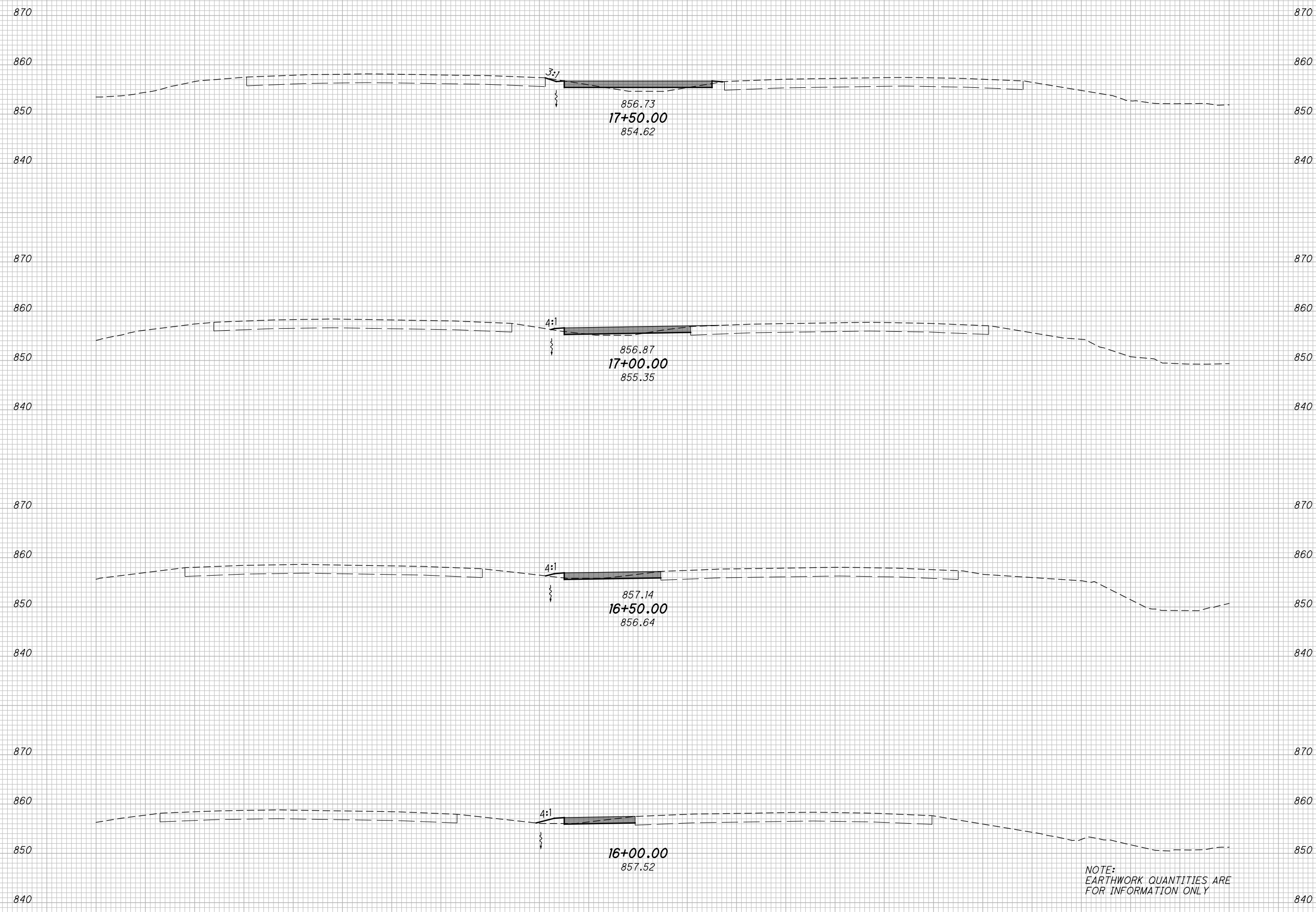
200
1312

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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END CUT	AREA FILL	VOLUME CUT	VOLUME FILL
9	11	17	25
8	6	16	16
10	3	17	9
9	5	18	8
		68	58

**MAINTENANCE OF TRAFFIC - I-71 SB NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 16+00 TO STA. 17+50**

FRA-71-0.00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

201
1312

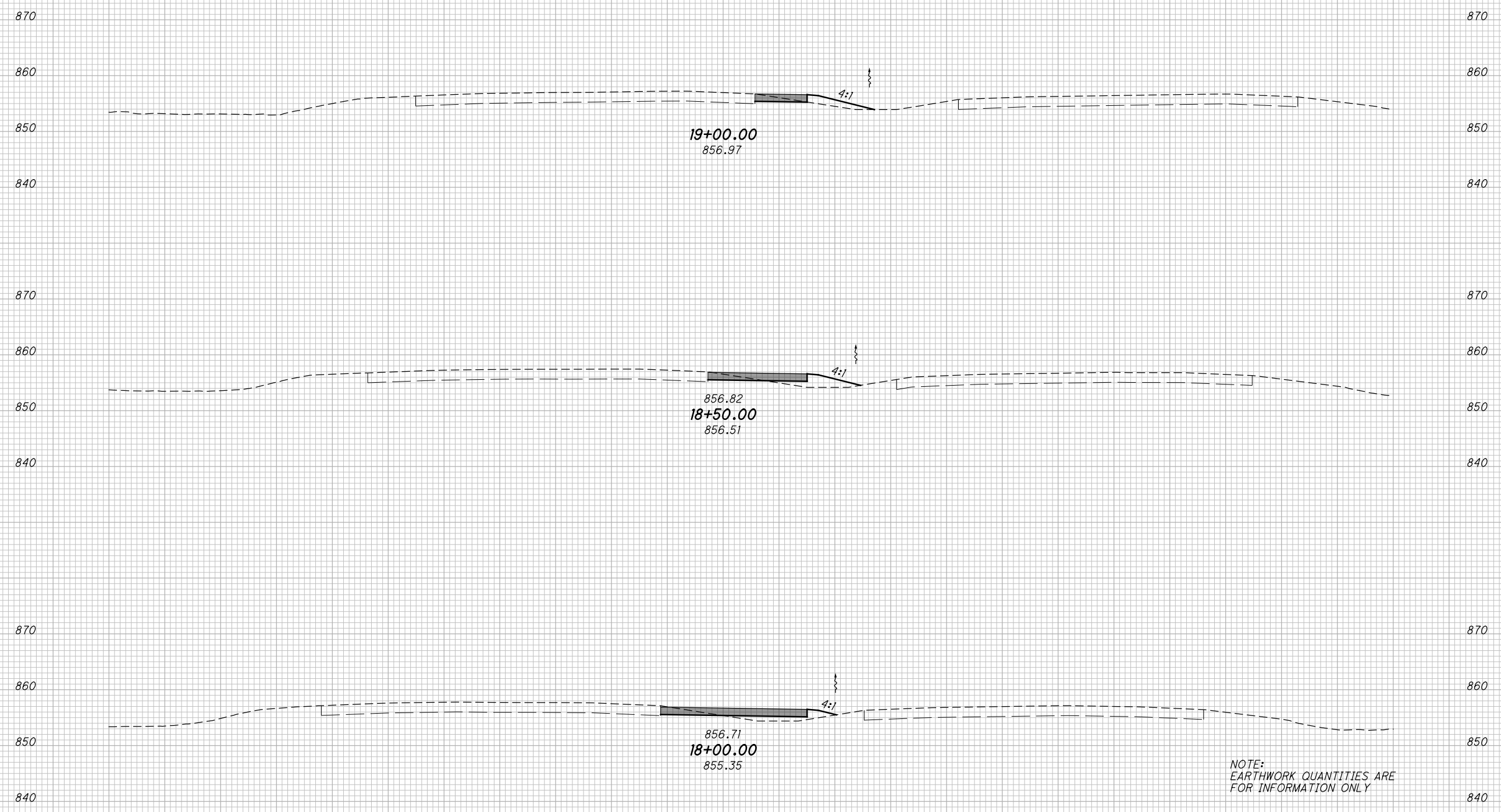
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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END AREA	VOLUME	CALCULATED	CHECKED
CUT	FILL	CUT	FILL
7	12	10	13
8	19	14	29
9	16	16	33
		40	75

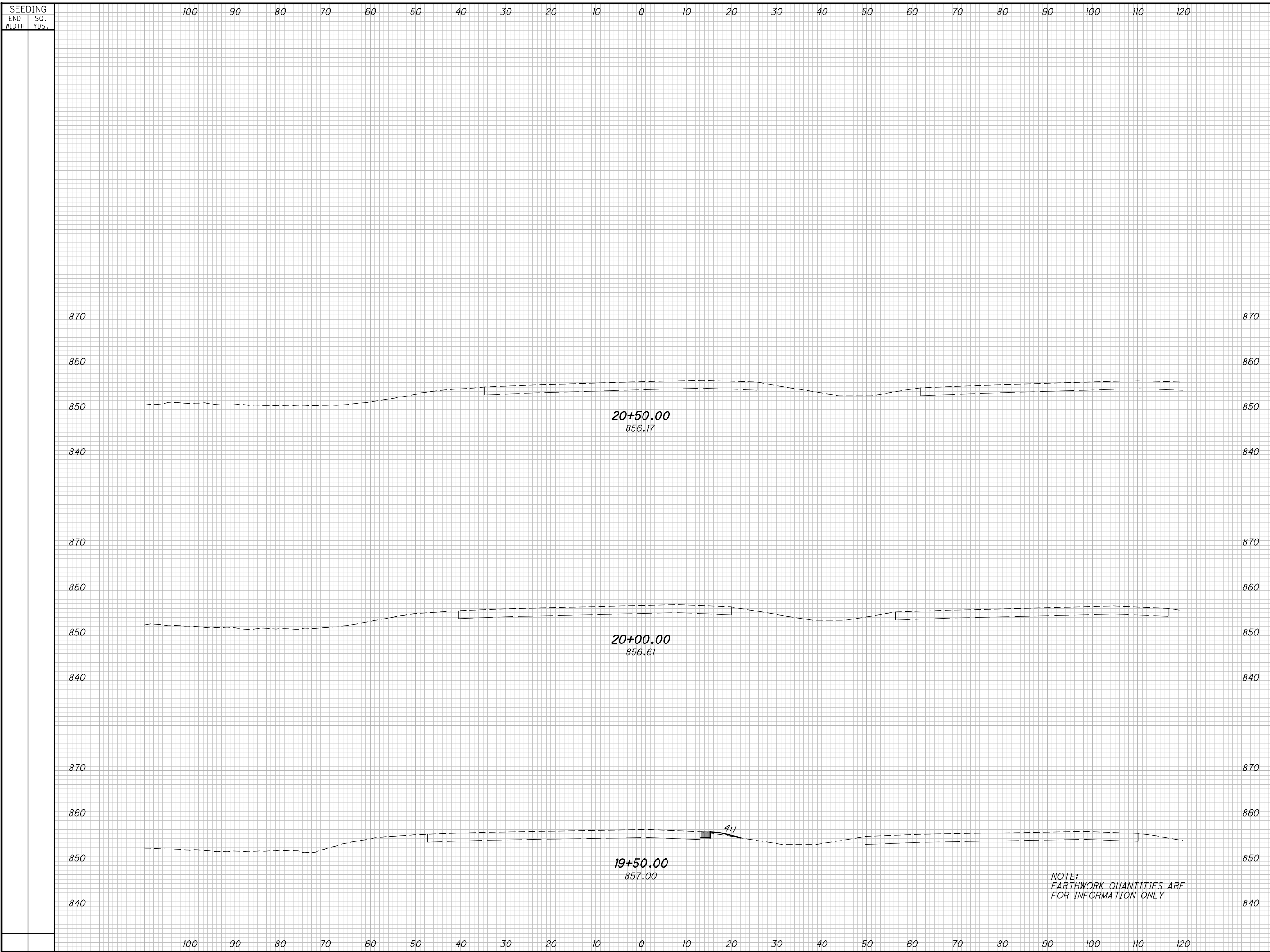
**MAINTENANCE OF TRAFFIC - I-71 SB NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 18+00 TO STA. 19+00**

FRA - 71 - 0.00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

202
1312

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	BER	DLR
		0	0				
		0	0				
		3	2	3	2		
				3	2		

MAINTENANCE OF TRAFFIC - I-71 SB NORTH CROSSOVER
PHASE 1 CROSS SECTIONS - STA. 19+50 TO STA. 20+50
FRA-71-0.00
 203
 1312



CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
CROSSOVER LIGHTING - RAMP A**

FRA-71-0.00

204
1312

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 189+00.0, 112.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 192+30.0, 112.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 195+60.0, 90.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 198+90.0, 90.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 189+00.0, 113.0' RT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 192+30.0, 113.0' RT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 205+50.0, 90.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 195+60.0, 105.0' RT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 198+90.0, 105.0' RT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 202+20.0, 90.0' LT.

PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 205+50.0, 105.0' RT.

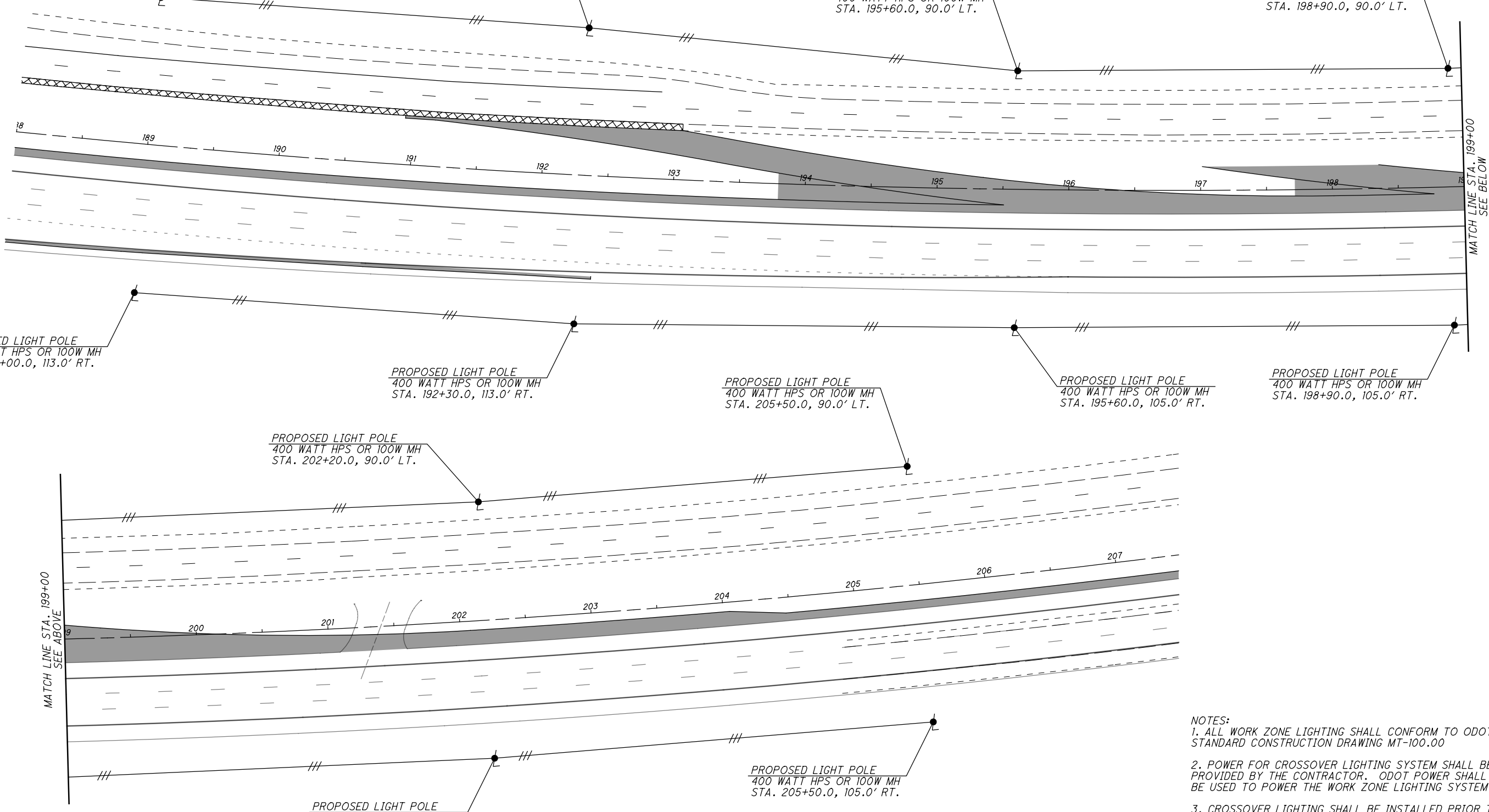
PROPOSED LIGHT POLE
400 WATT HPS OR 100W MH
STA. 202+20.0, 105.0' RT.

- NOTES:
1. ALL WORK ZONE LIGHTING SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING MT-100.00
 2. POWER FOR CROSSOVER LIGHTING SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ODOT POWER SHALL NOT BE USED TO POWER THE WORK ZONE LIGHTING SYSTEM.
 3. CROSSOVER LIGHTING SHALL BE INSTALLED PRIOR TO PHASE 3 AND SHALL REMAIN IN PLACE THROUGH PHASE 3A.

LEGEND

- PROPOSED LIGHT POLE
- PROPOSED OVERHEAD CIRCUIT CABLE

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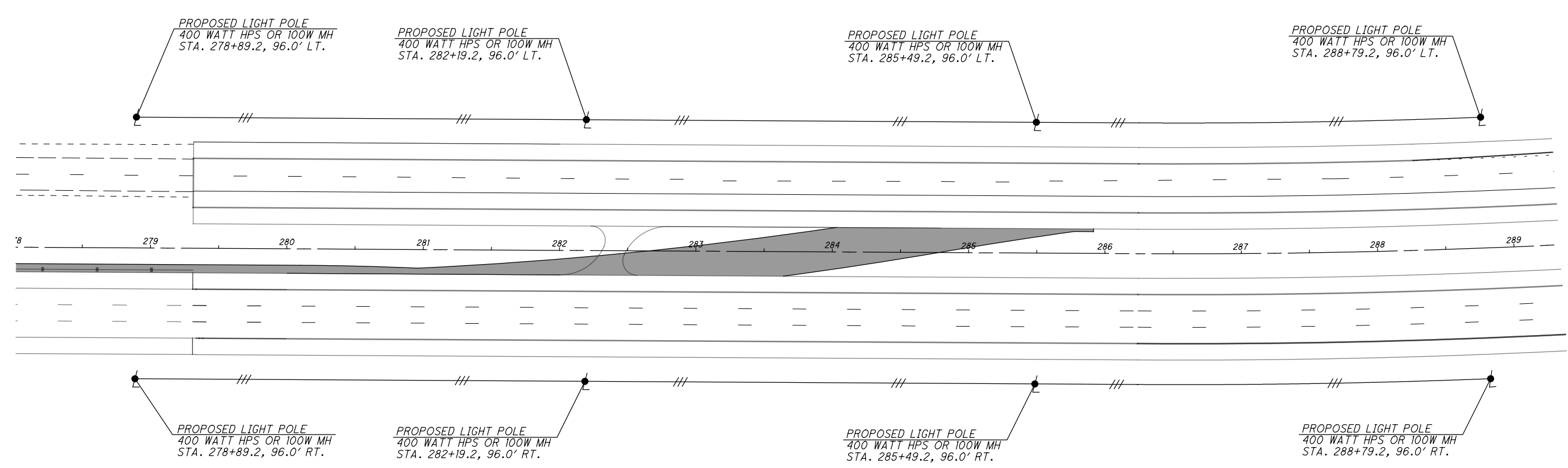
CALCULATED
BER
CHECKED
SMM

HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
CROSSOVER LIGHTING - NORTH**

FRA-71-0.00

205
1312



- NOTES:
1. ALL WORK ZONE LIGHTING SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING MT-100.00
 2. POWER FOR CROSSOVER LIGHTING SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ODOT POWER SHALL NOT BE USED TO POWER THE WORK ZONE LIGHTING SYSTEM.
 3. CROSSOVER LIGHTING SHALL BE INSTALLED PRIOR TO PHASE 3 AND SHALL REMAIN IN PLACE THROUGH PHASE 3A.

LEGEND

PROPOSED LIGHT POLE

PROPOSED OVERHEAD CIRCUIT CABLE

① $\Delta = 2^\circ 01' 43''$ (LT)
 $D_c = 00^\circ 15' 00''$
 $R = 22,918.00'$
 $T = 405.79'$
 $L = 811.49'$
 $E = 3.59'$
 $C = 811.44'$
 $C.B. = N 58^\circ 39' 30'' E$

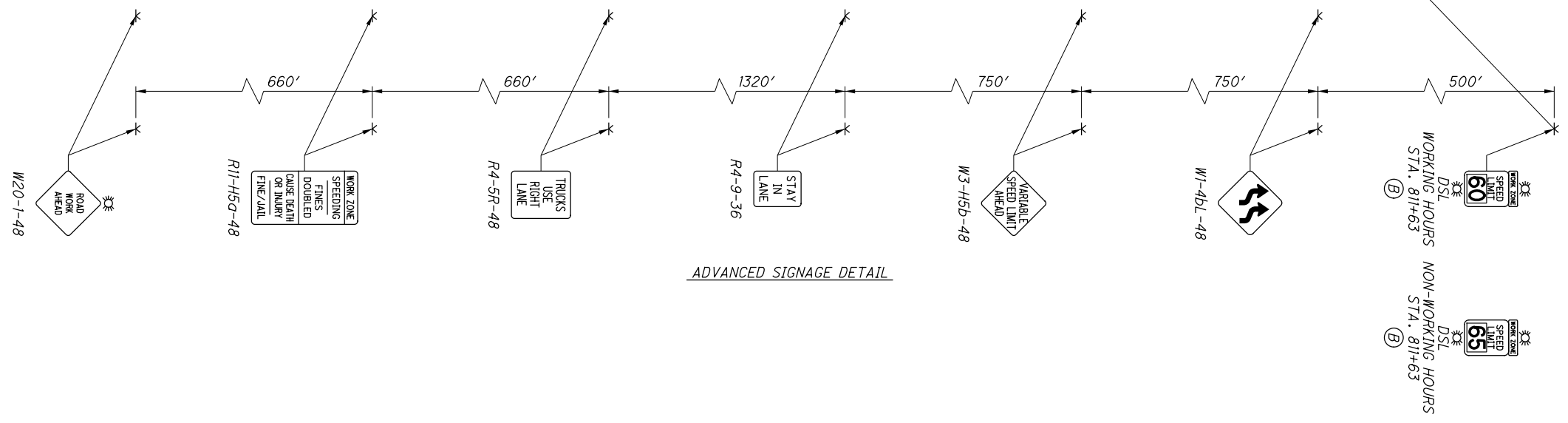
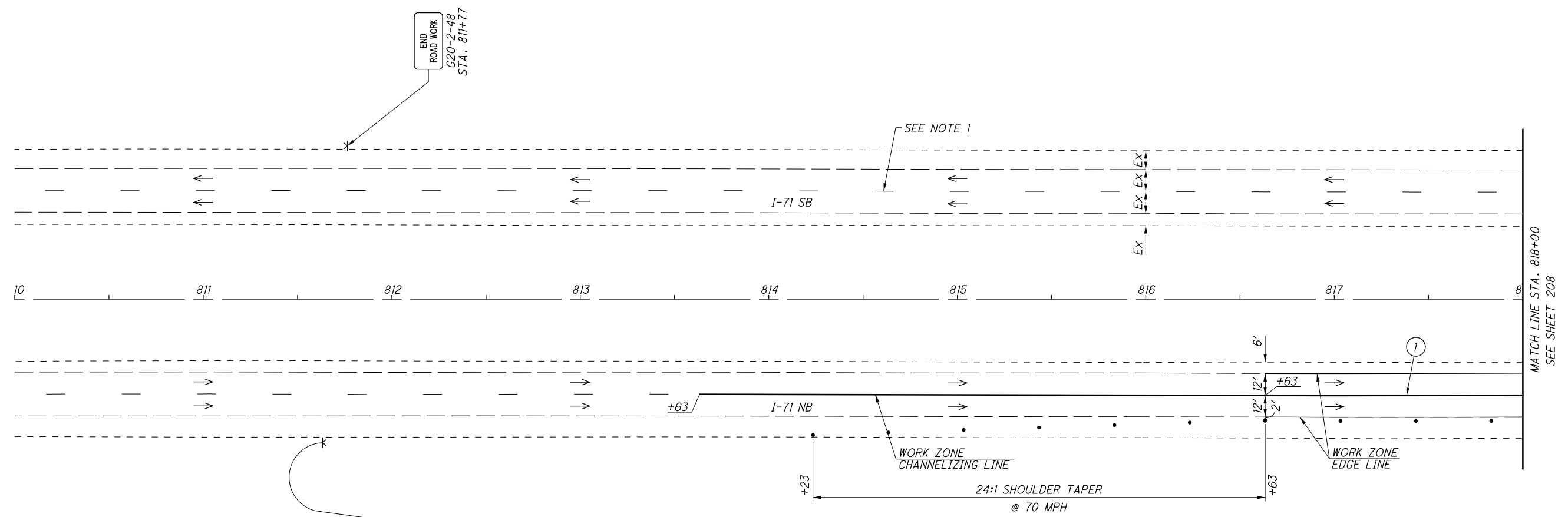
NOTES:
 1. ALL SB TRAVEL LANES SHALL BE MAINTAINED WITH EXISTING PAVEMENT MARKINGS AND SIGNAGE FOR THE DURATION OF PHASE 2.



CALCULATED
 BER
 CHECKED
 SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
 (CONCRETE OPTION) I-71 - STA. 810+00 TO STA. 818+00**

FRA-71-0.00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- DRUM
 - ✕ TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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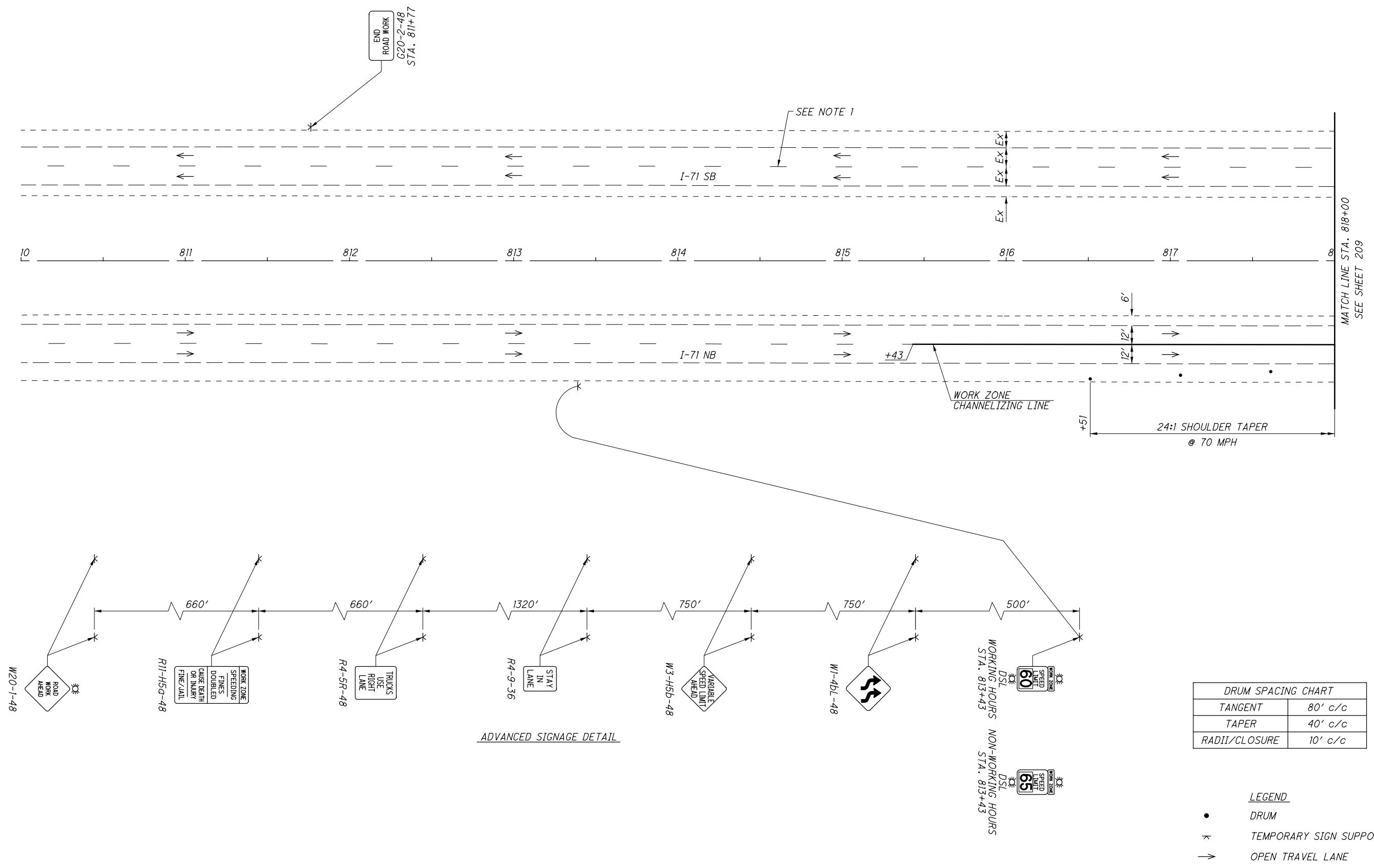
NOTES:
 1. ALL SB TRAVEL LANES SHALL BE MAINTAINED WITH EXISTING PAVEMENT MARKINGS AND SIGNAGE FOR THE DURATION OF PHASE 2.

CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
 (ASPHALT OPTION) I-71 - STA. 810+00 TO STA. 818+00**

FRA - 71 - 0.00



ADVANCED SIGNAGE DETAIL

DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- DRUM
 - ✱ TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 2^\circ 01' 43''$ (LT)
 $D_c = 00^\circ 15' 00''$
 $R = 22,918.00'$
 $T = 405.79'$
 $L = 811.49'$
 $E = 3.59'$
 $C = 811.44'$
 $C.B. = N 58^\circ 39' 30'' E$

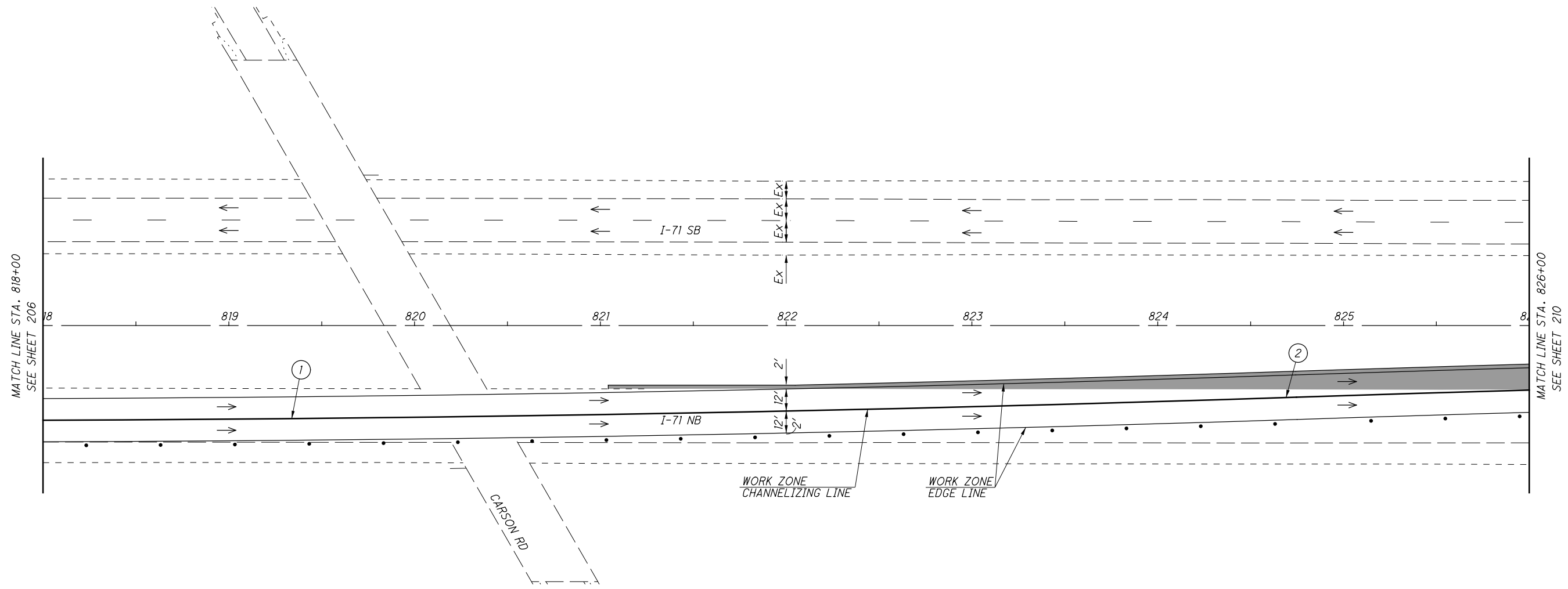
② $\Delta = 1^\circ 54' 01''$ (RT)
 $D_c = 0^\circ 15' 00''$
 $R = 22,918.00'$
 $T = 380.13'$
 $L = 760.19'$
 $E = 3.15'$
 $C = 760.16'$
 $C.B. = N 58^\circ 36' 40'' E$

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
 (CONCRETE OPTION) I-71 - STA. 818+00 TO STA. 826+00**

FRA-71-0.00



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

LEGEND

■ TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)

• DRUM

→ OPEN TRAVEL LANE



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CALCULATED
BER
CHECKED
SMM

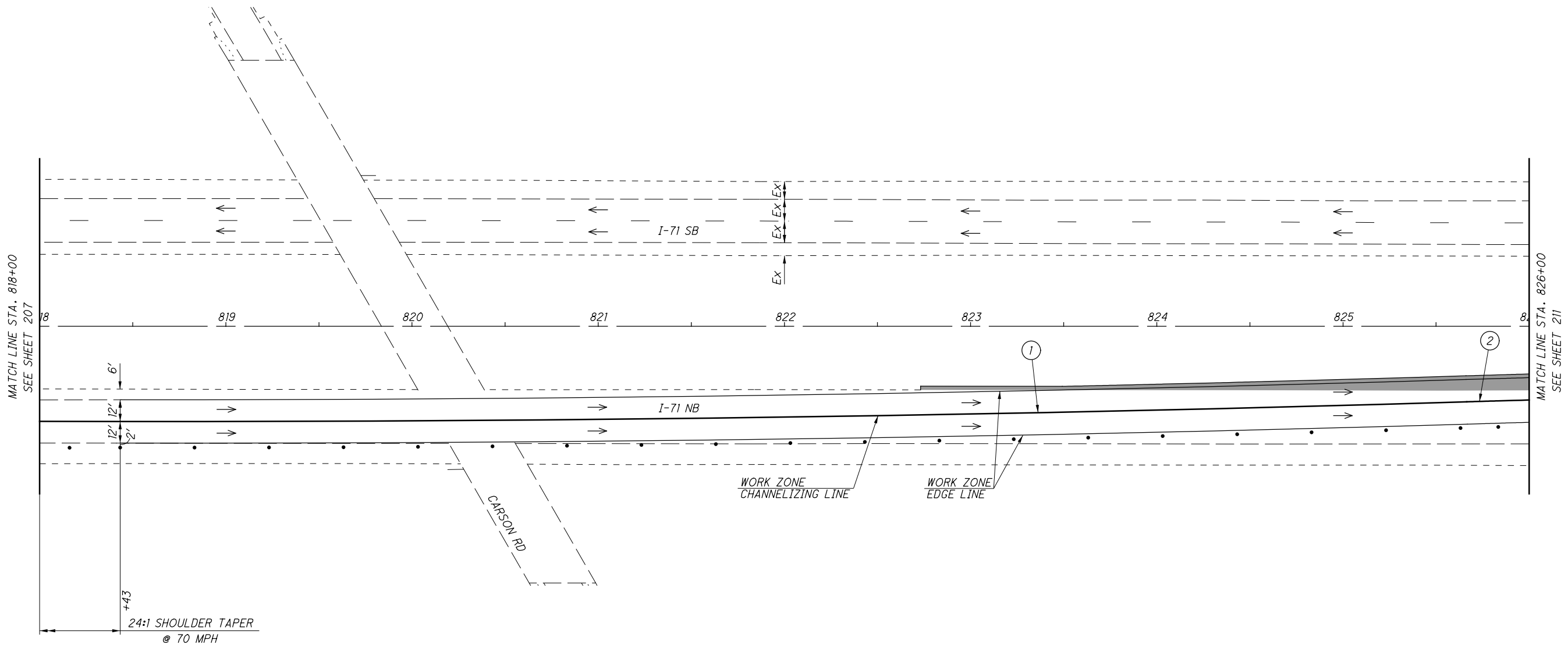
0 30 60
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 818+00 TO STA. 826+00

FRA-71-0.00

209
1312

- ① $\Delta = 1^\circ 48' 30''$ (LT)
 $D_c = 0^\circ 15' 00''$
 $R = 22,918.00'$
 $T = 361.70'$
 $L = 723.34'$
 $E = 2.84'$
 $C = 723.31'$
 $C.B. = N 58^\circ 42' 23'' E$
- ② $\Delta = 1^\circ 44' 33''$ (RT)
 $D_c = 0^\circ 15' 00''$
 $R = 22,918.00'$
 $T = 348.50'$
 $L = 696.94'$
 $E = 2.65'$
 $C = 696.92'$
 $C.B. = N 58^\circ 40' 24'' E$

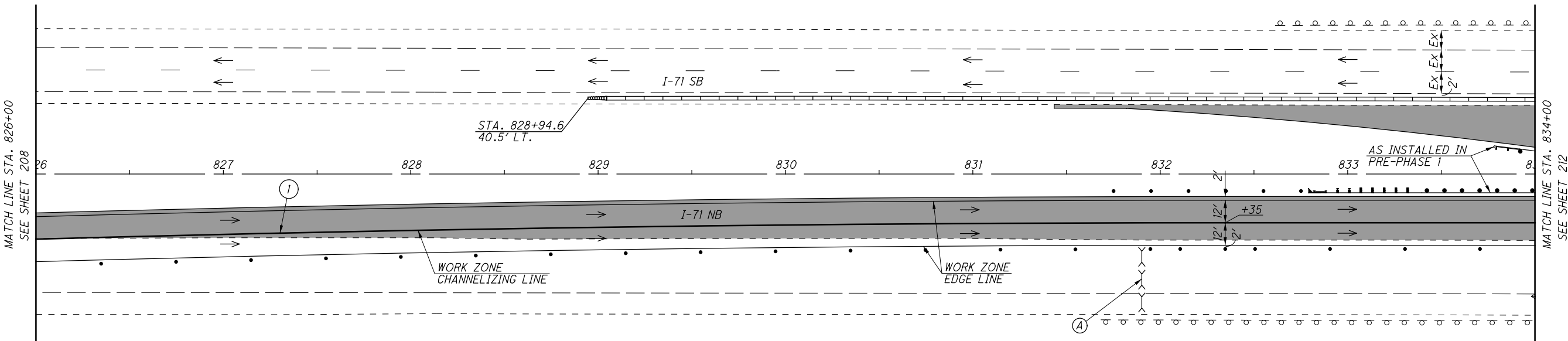
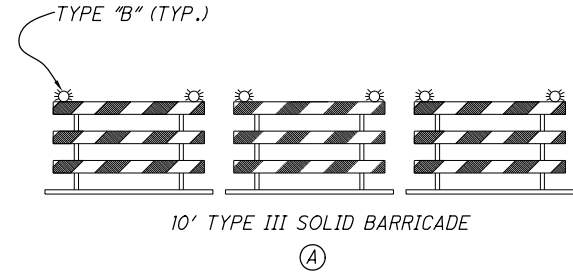


DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - ✈ TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

① $\Delta = 1^\circ 54' 01''$ (RT)
 $D_c = 0^\circ 15' 00''$
 $R = 22,918.00'$
 $T = 380.13'$
 $L = 760.19'$
 $E = 3.15'$
 $C = 760.16'$
 $C.B. = N 58^\circ 36' 40'' E$

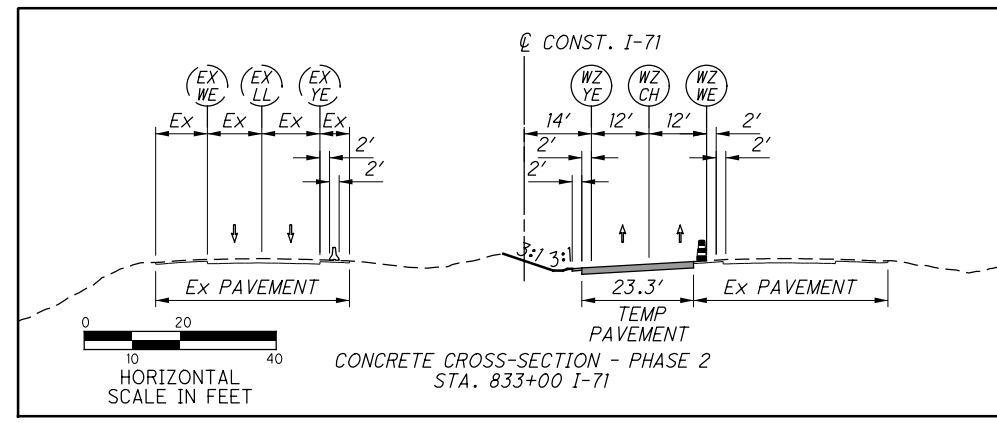


CALCULATED
BER
CHECKED
SMM

0 15 30 45 60
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
 (CONCRETE OPTION) I-71 - STA. 826+00 TO STA. 834+00**

FRA-71-0.00

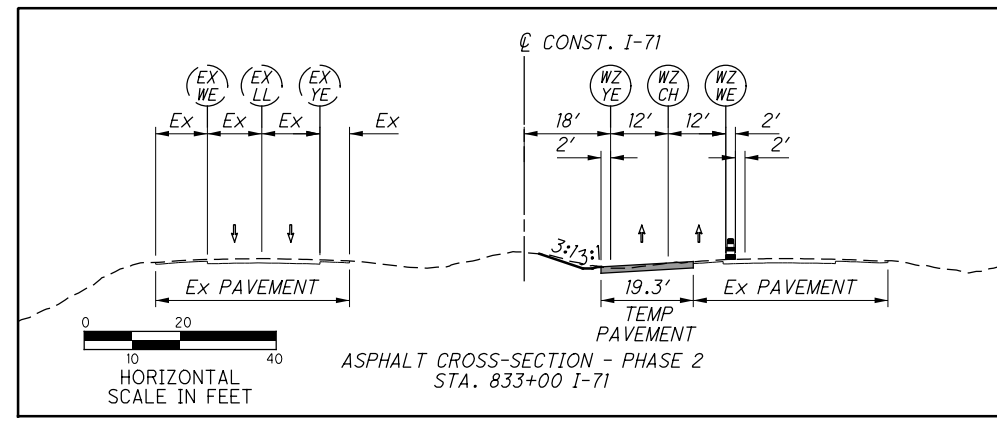
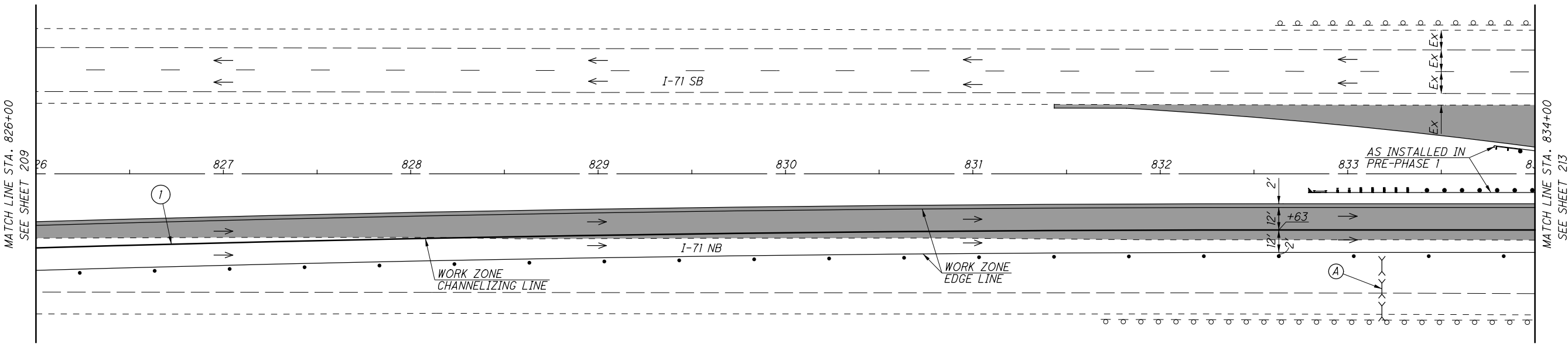
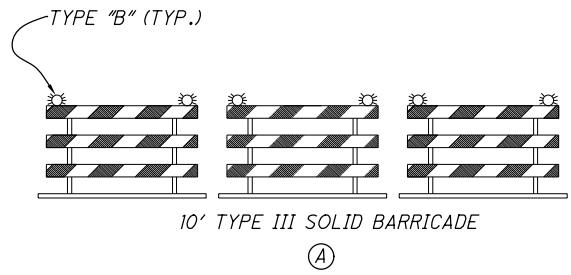


DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - TYPE III BARRICADE
 - OPEN TRAVEL LANE

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① $\Delta = 1^\circ 44' 33''$ (RT)
 $D_c = 0^\circ 15' 00''$
 $R = 22,918.00'$
 $T = 348.50'$
 $L = 696.94'$
 $E = 2.65'$
 $C = 696.92'$
 $C.B. = N 58^\circ 40' 24'' E$



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE
 - TYPE III BARRICADE

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
 (ASPHALT OPTION) I-71 - STA. 826+00 TO STA. 834+00**

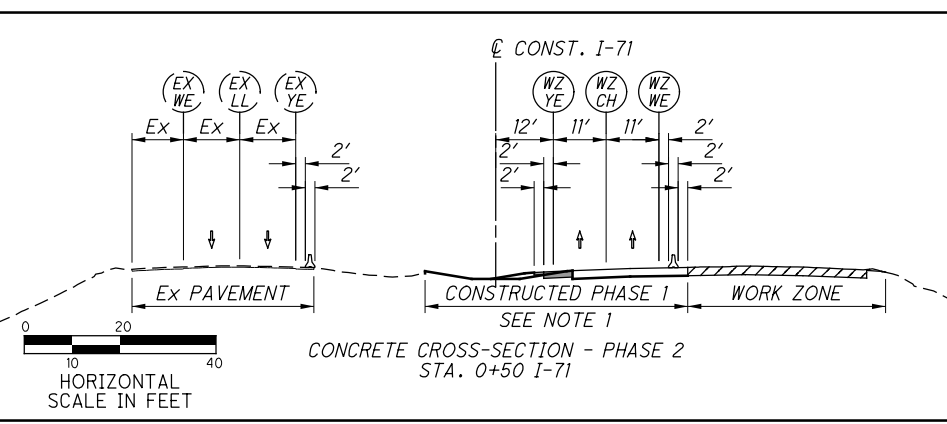
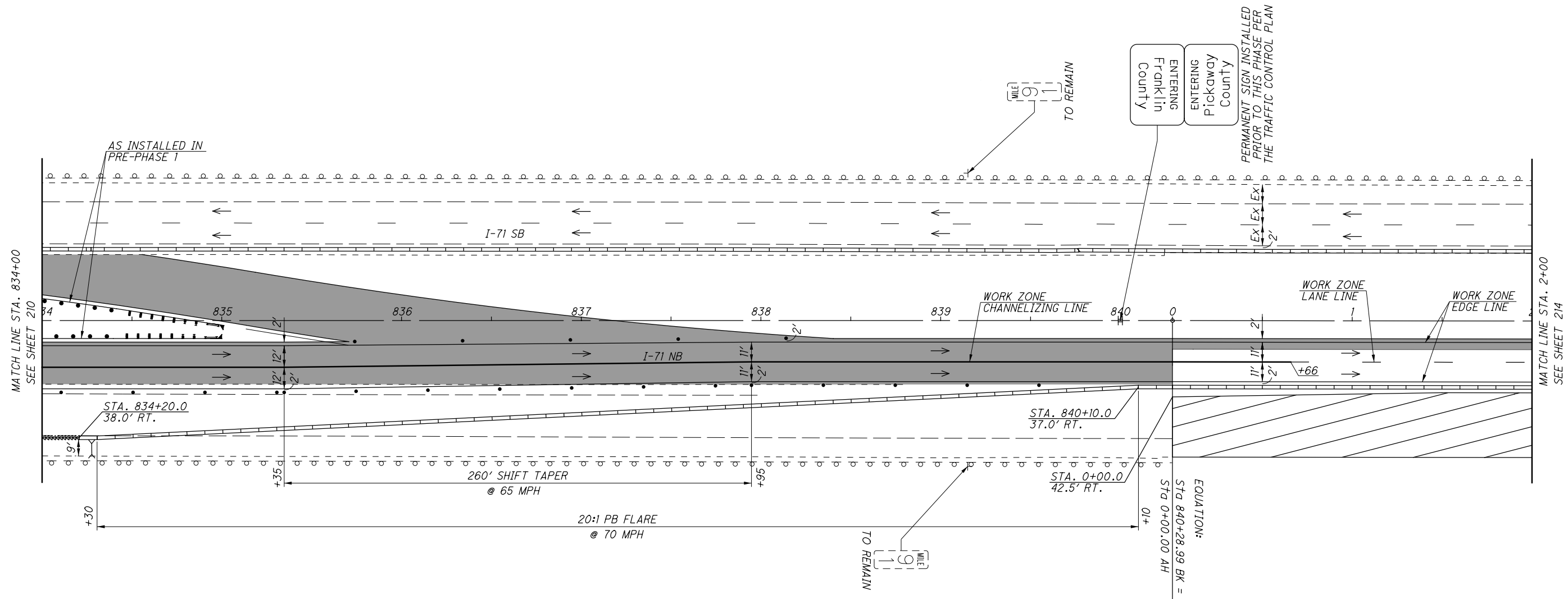
FRA-71-0:00

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CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1 AND PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 834+00 TO STA. 2+00

FRA-71-0.00

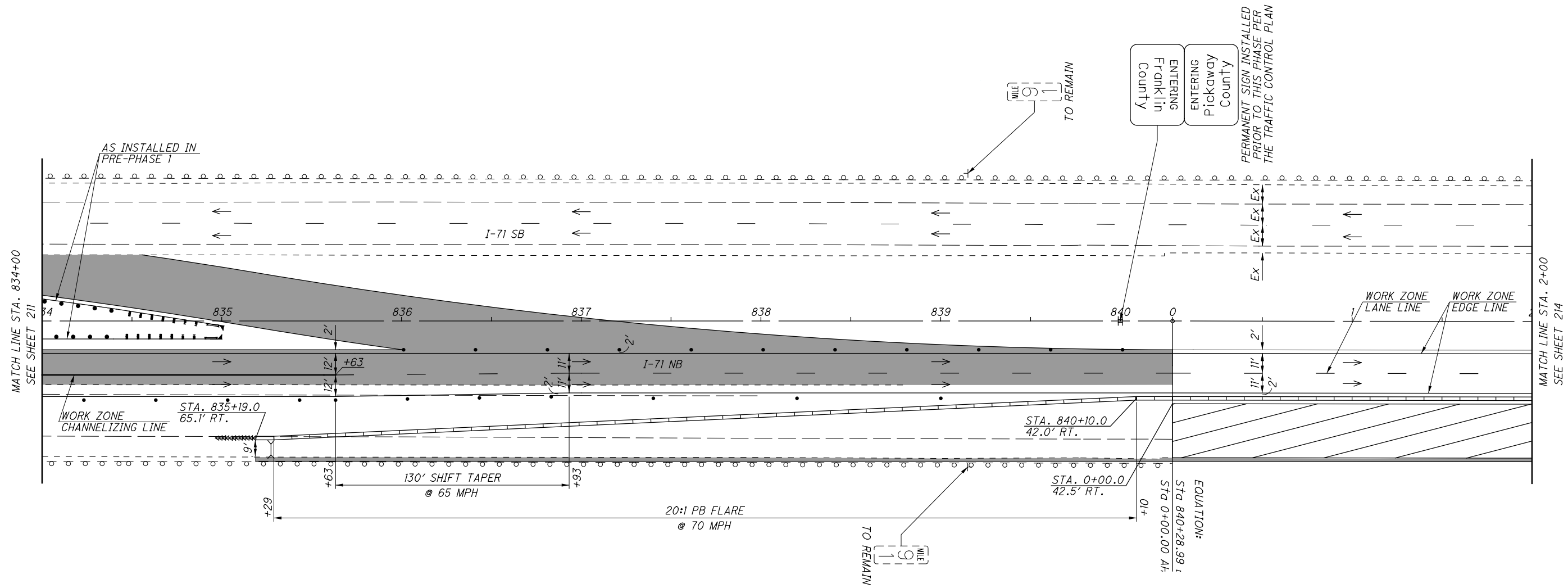
212
1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201MPO4.dgn 4/13/2020 12:39:25 PM brieder



CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



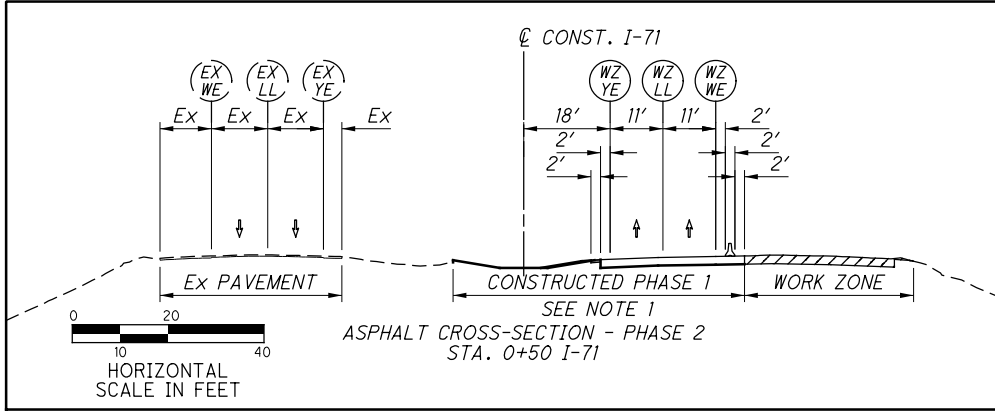
ENTERING
Franklin
County

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

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**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 834+00 TO STA. 2+00**

FRA-71-0.00



DRUM SPACING CHART

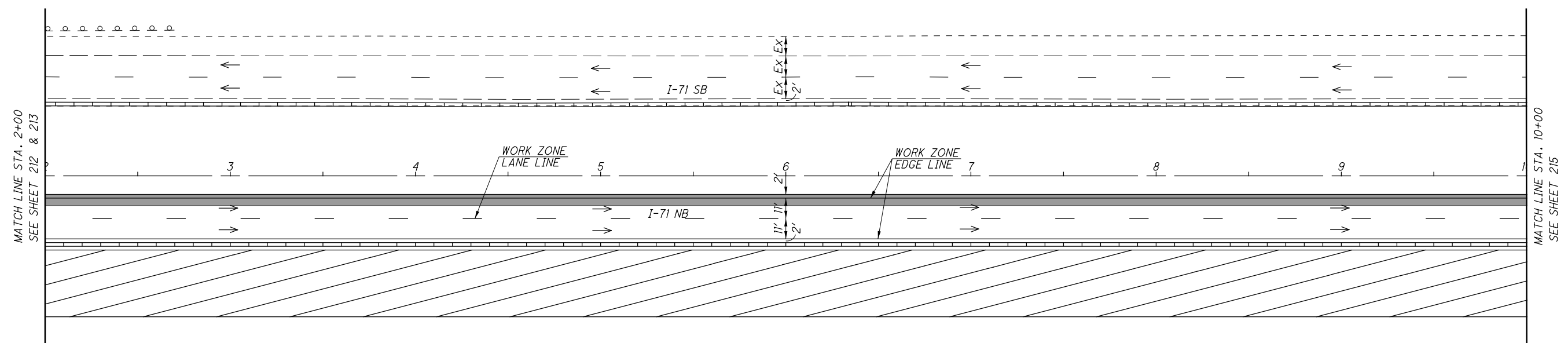
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

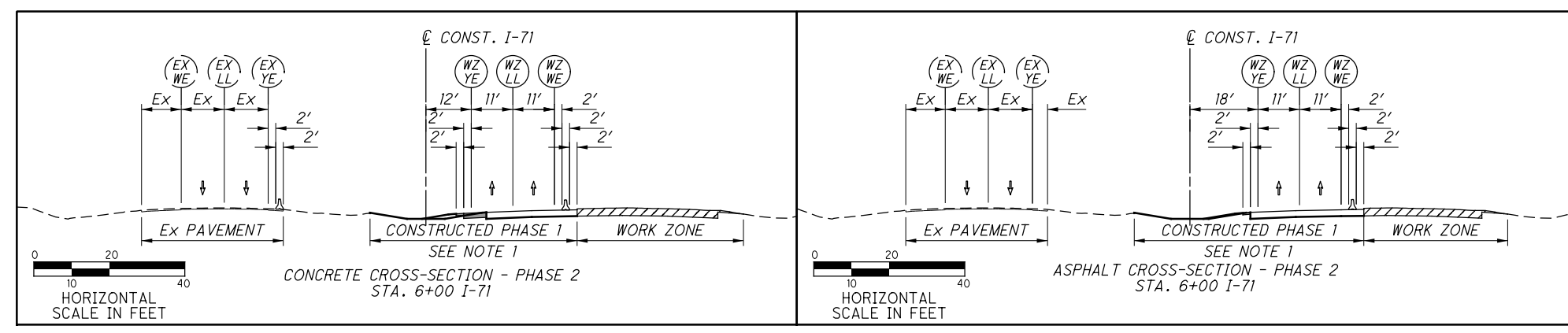


CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 2+00 TO STA. 10+00



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

FRA-71-0.00

214
1312

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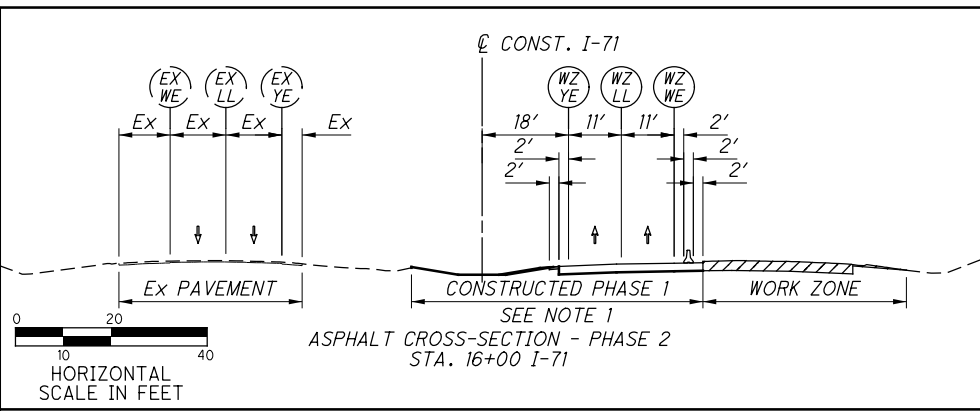
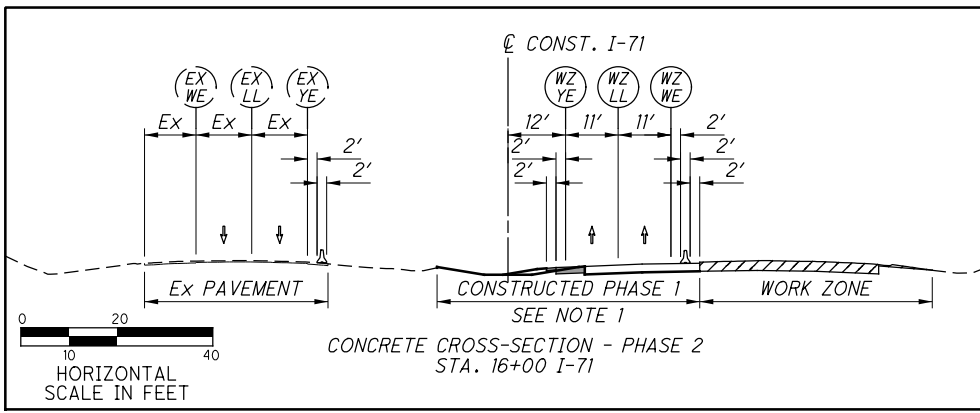
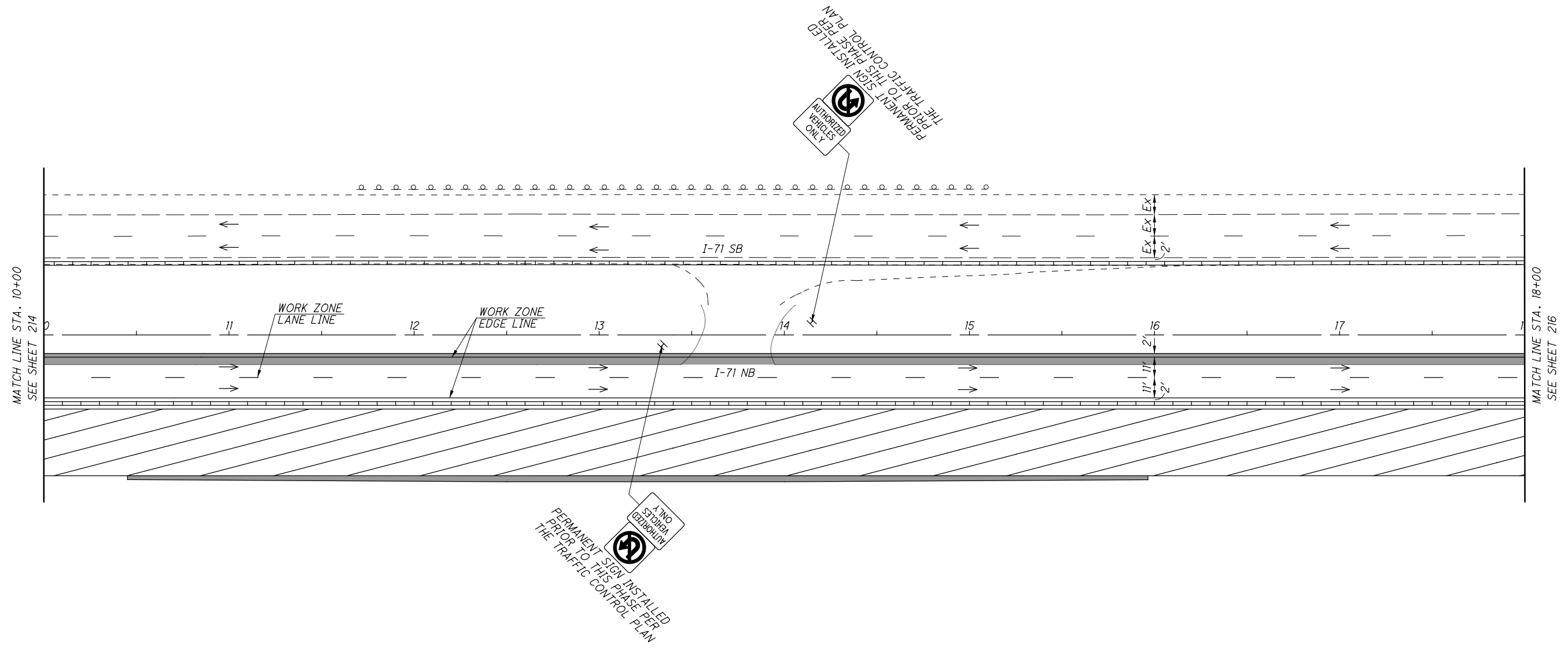
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 10+00 TO STA. 18+00

FRA-71-0.00

215
1312



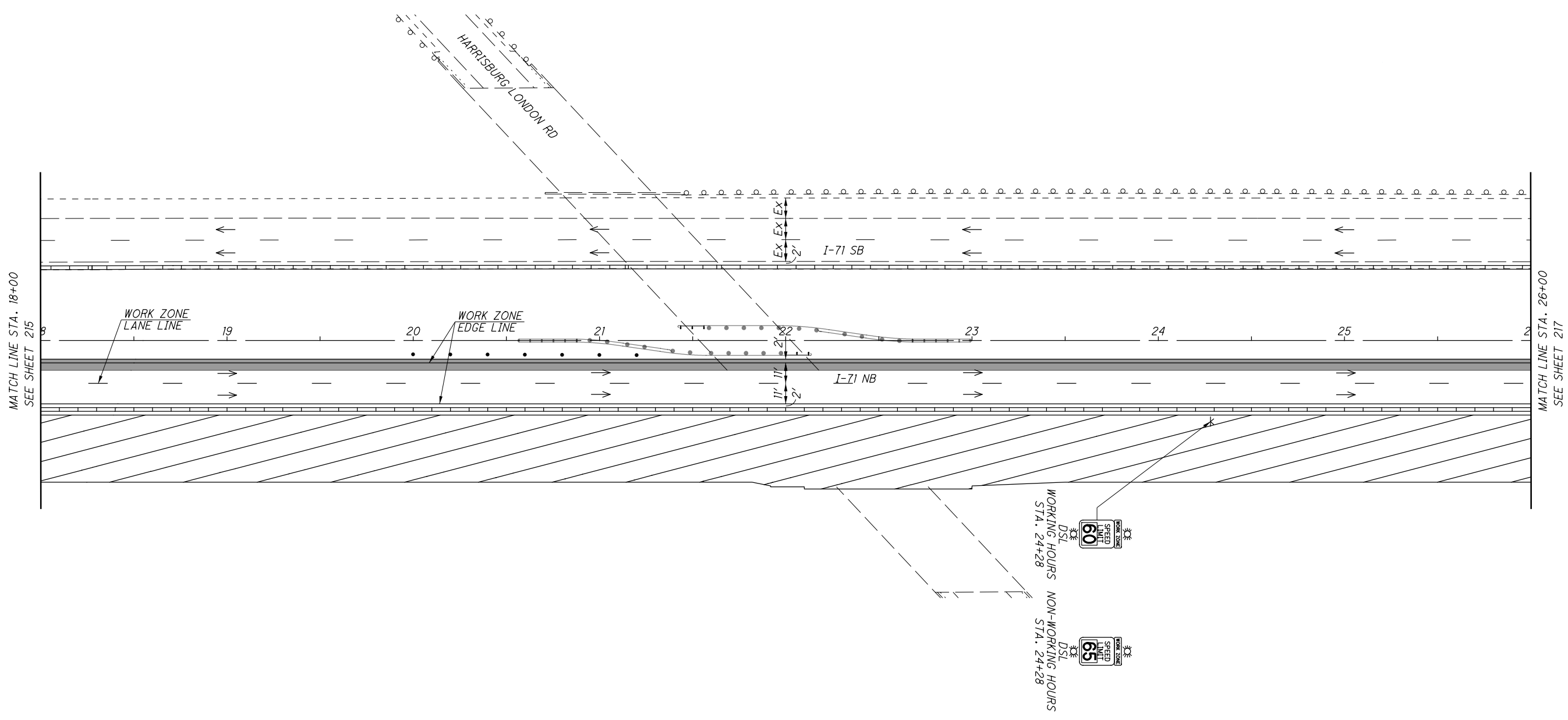
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

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CALCULATED
BER
CHECKED
SMM

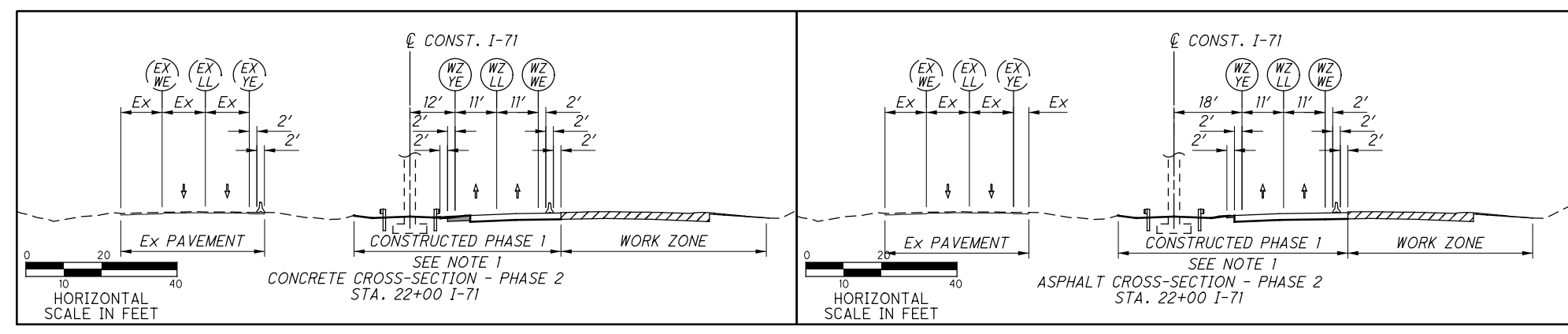
NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 18+00 TO STA. 26+00

FRA-71-0.00

216
1312



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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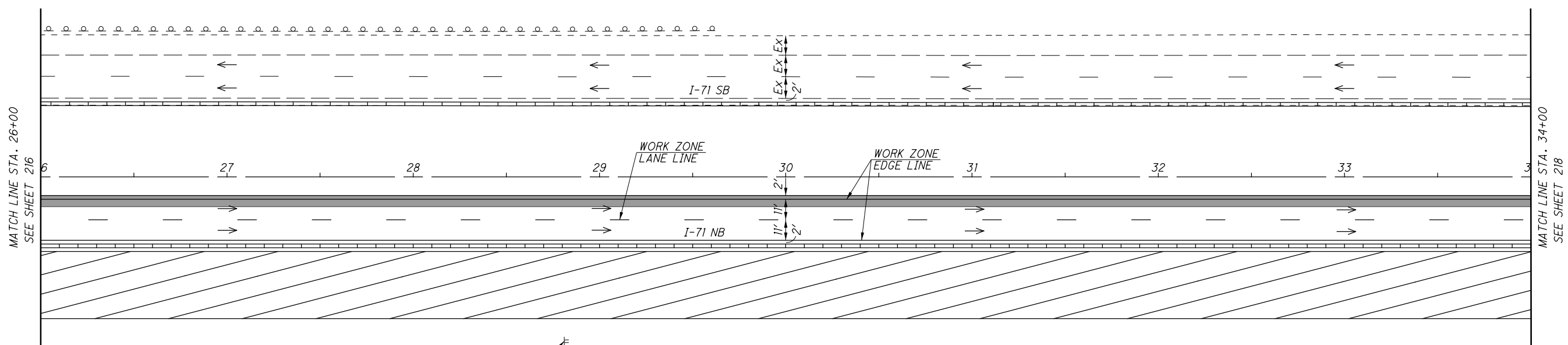
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

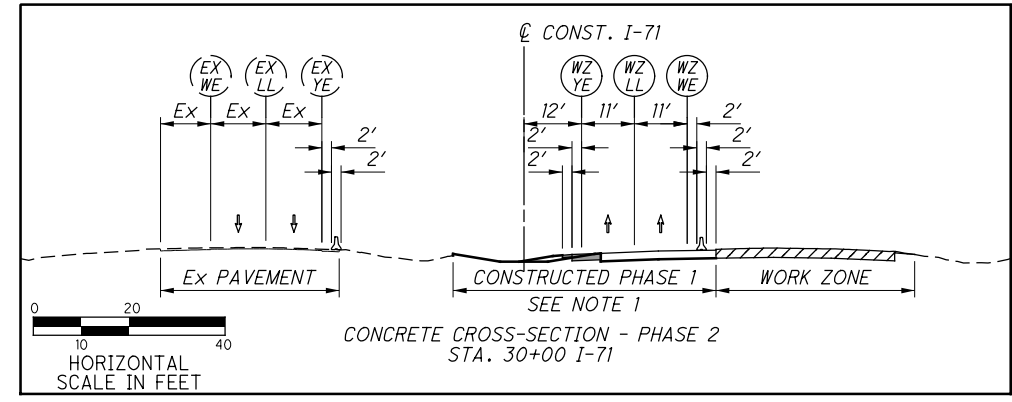
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 26+00 TO STA. 34+00

FRA-71-0.00

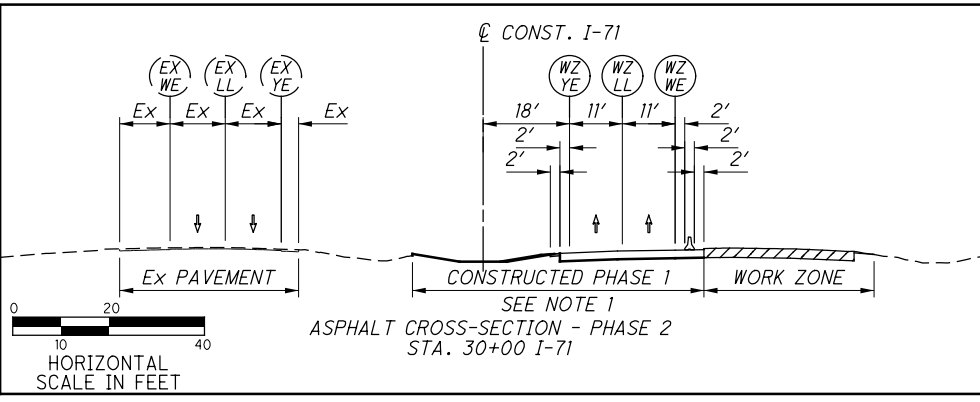
217
1312



TRAFFIC INFO
TUNE RADIO TO
1620
AM
TRAFFIC ALERT
WHEN FLASHING
TO REMAIN



CONCRETE CROSS-SECTION - PHASE 2
STA. 30+00 I-71



ASPHALT CROSS-SECTION - PHASE 2
STA. 30+00 I-71

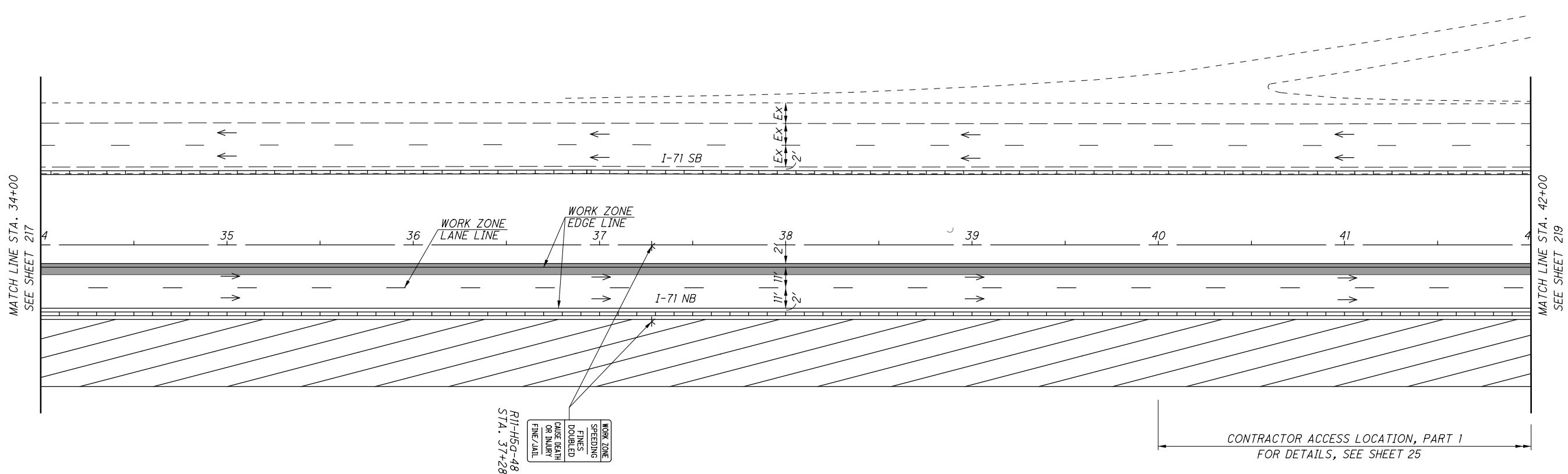
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE

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CALCULATED
BER
CHECKED
SMM

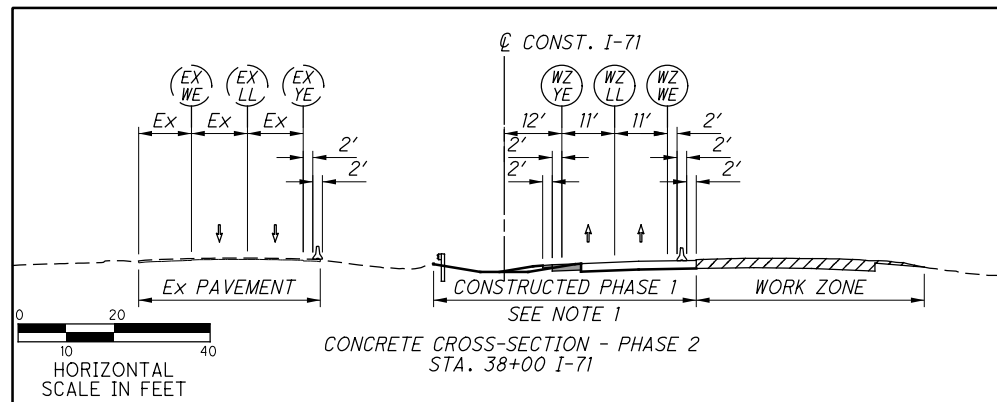
NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



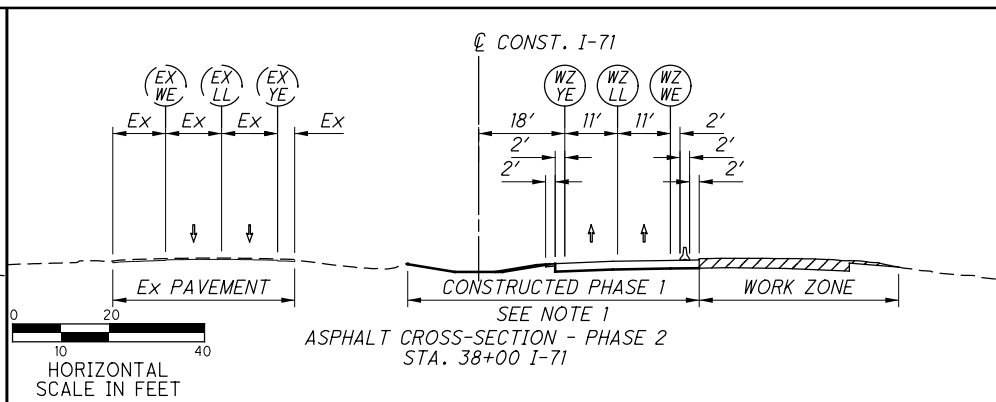
R11-H5G-48
STA. 37+28

WORK ZONE
SPREADING
FINES
DOUBLED
CAUSE DEATH
OR INJURY
FINE/JAIL

CONTRACTOR ACCESS LOCATION, PART 1
FOR DETAILS, SEE SHEET 25



CONCRETE CROSS-SECTION - PHASE 2
STA. 38+00 I-71



ASPHALT CROSS-SECTION - PHASE 2
STA. 38+00 I-71

- LEGEND
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 34+00 TO STA. 42+00

FRA-71-0.00

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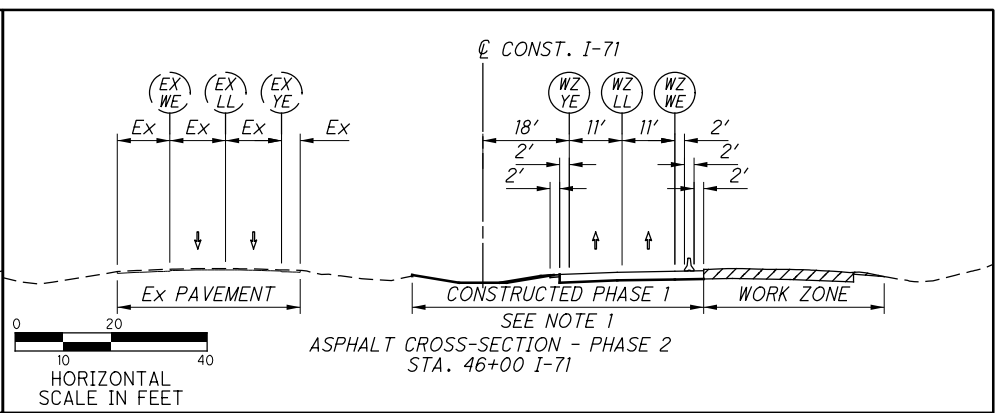
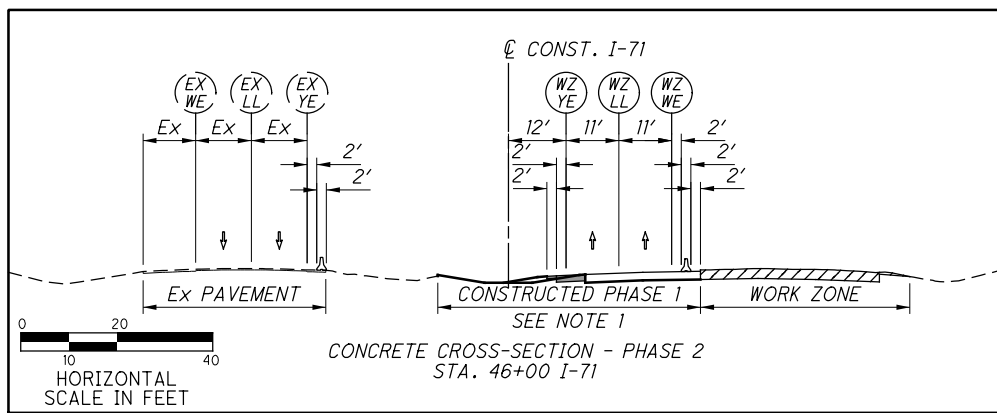
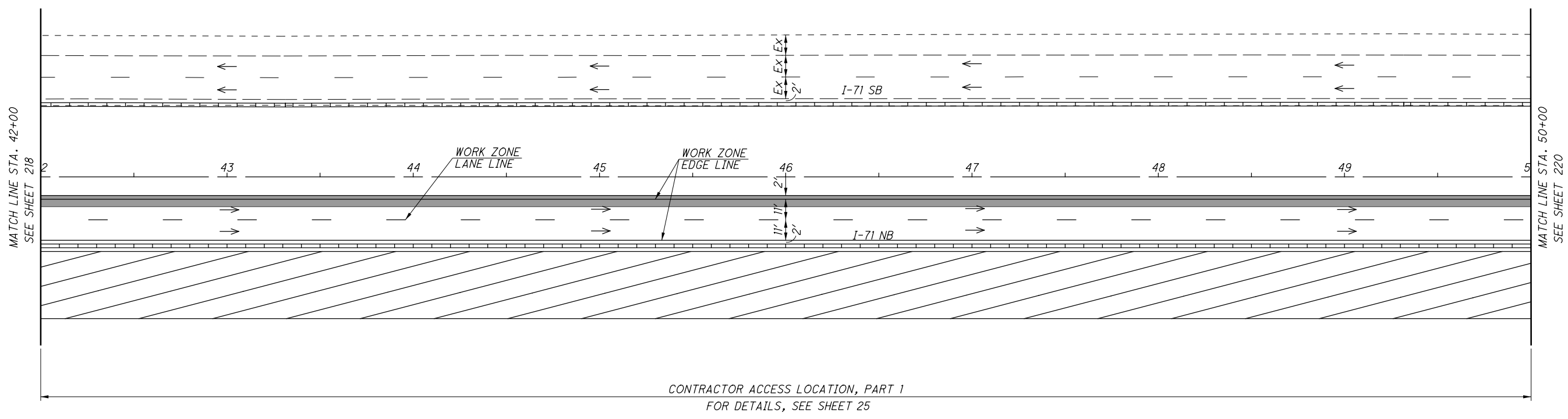


CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 42+00 TO STA. 50+00

FRA-71-0.00



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE

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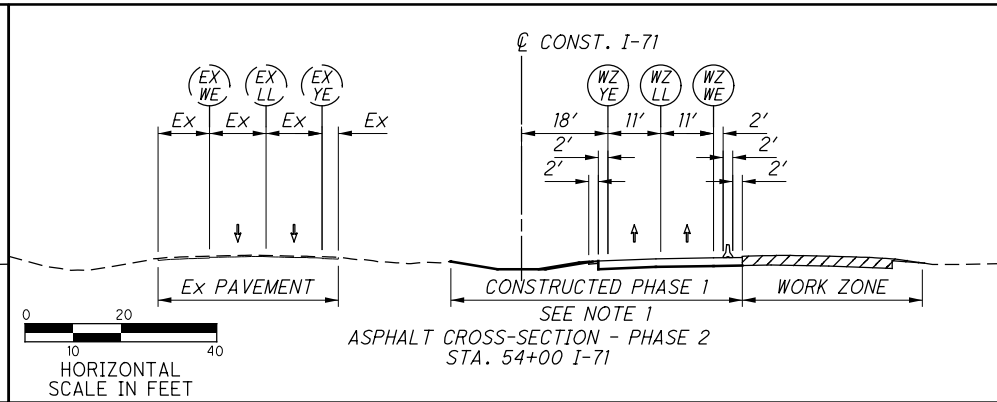
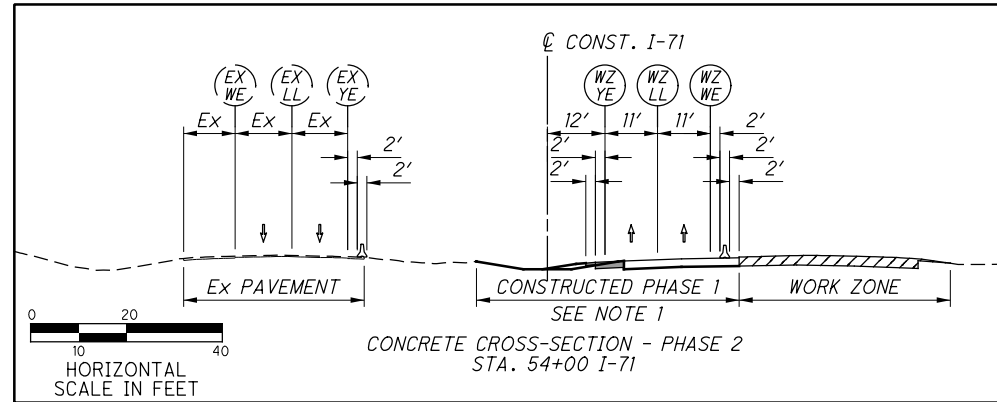
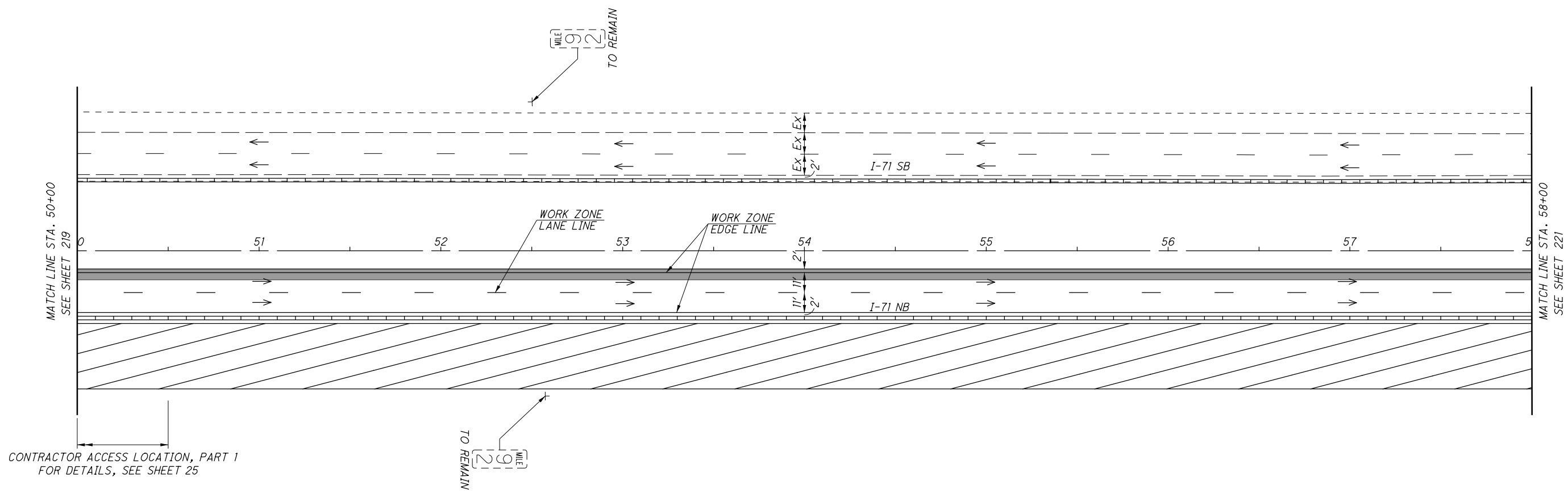
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 50+00 TO STA. 58+00

FRA-71-0.00

220
1312



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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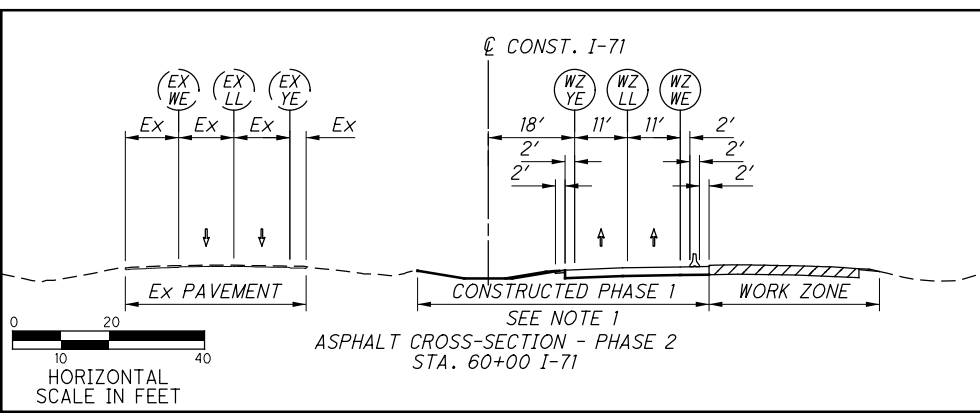
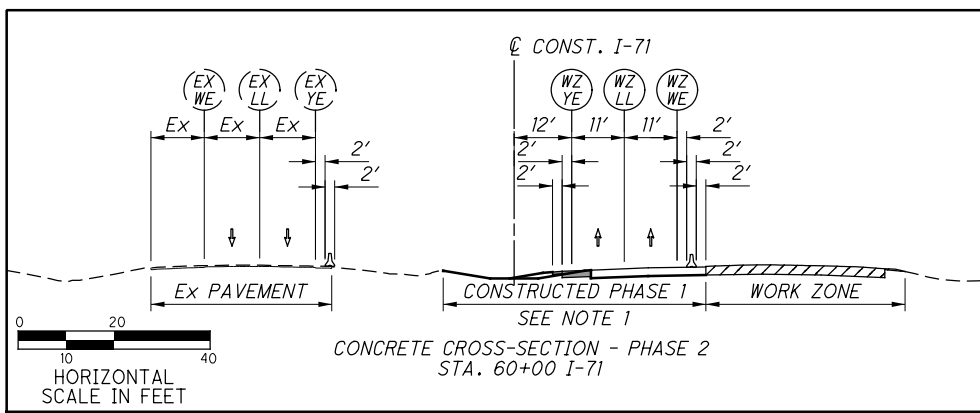
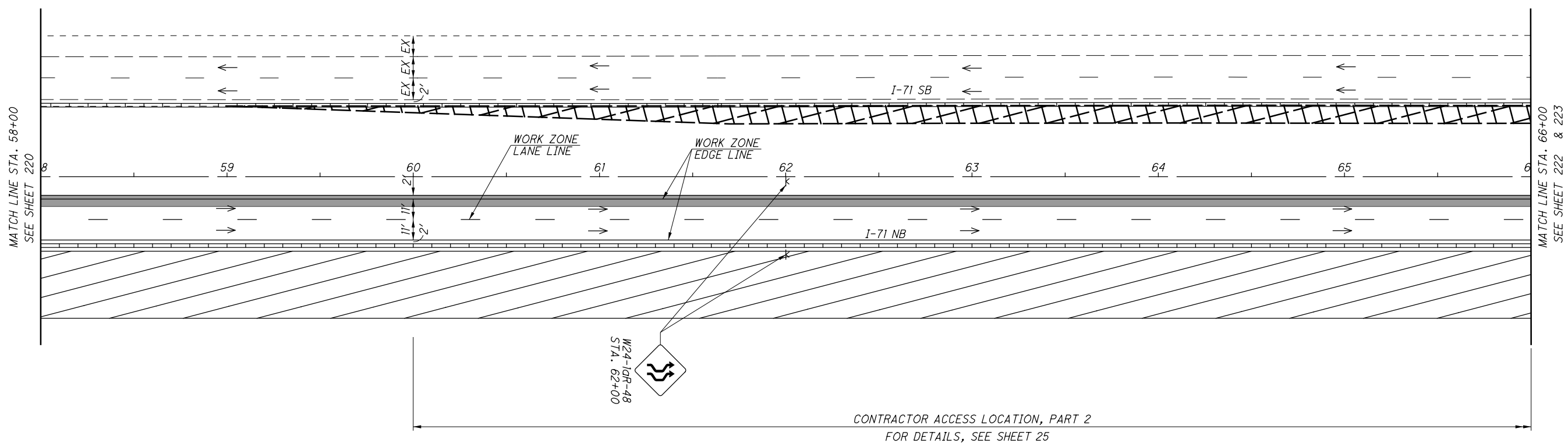
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 58+00 TO STA. 66+00

FRA-71-0.00

221
1312



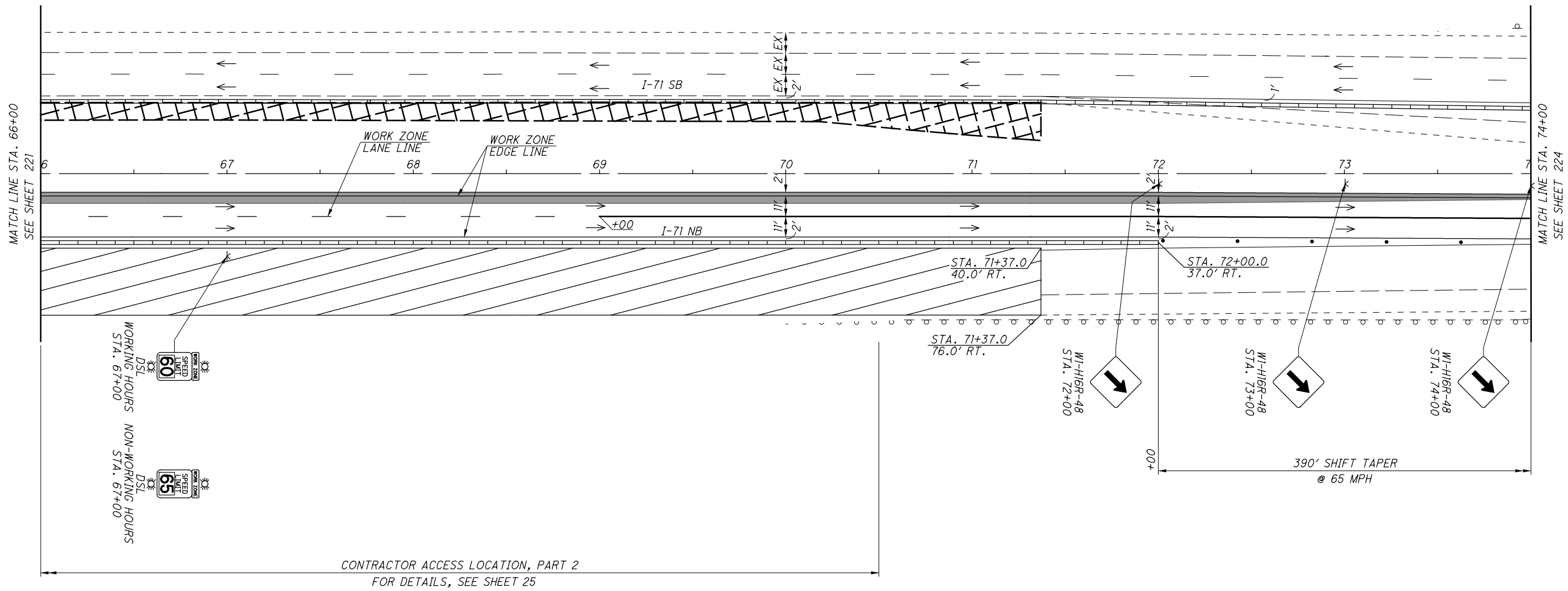
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE

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CALCULATED
BER
CHECKED
SMM

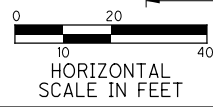
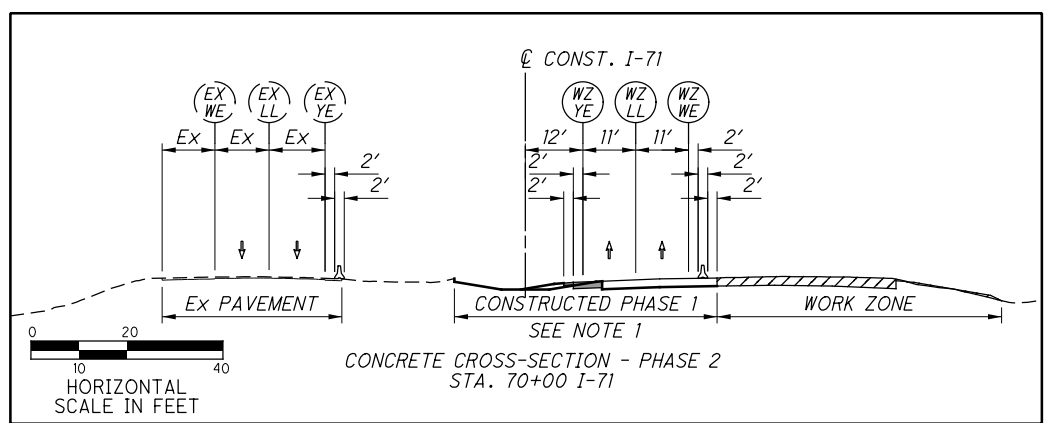
NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



CONTRACTOR ACCESS LOCATION, PART 2
FOR DETAILS, SEE SHEET 25

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE



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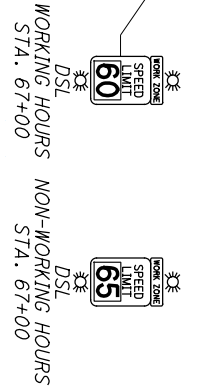
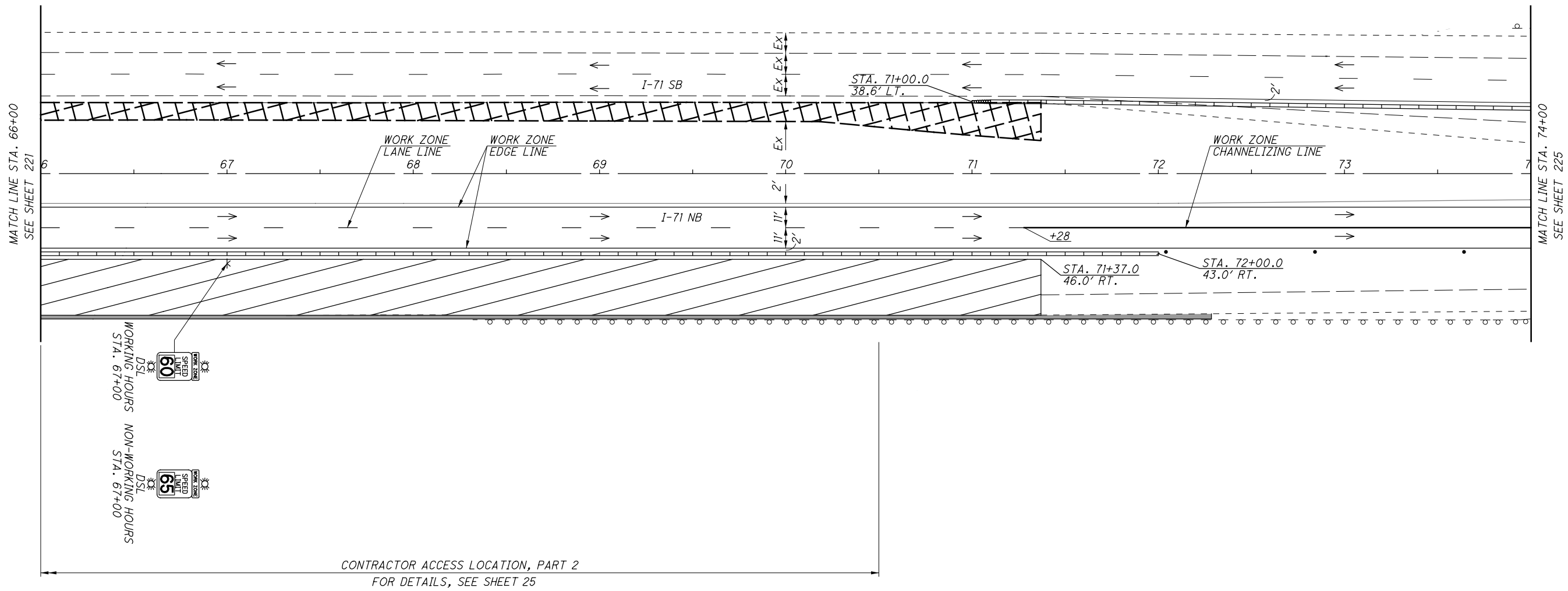
**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 66+00 TO STA. 74+00**

FRA-71-0.00



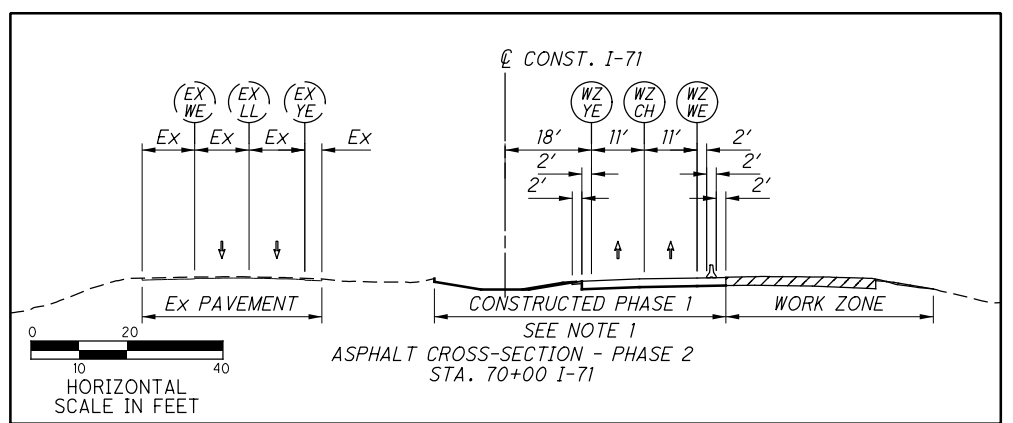
CALCULATED
BER
CHECKED
SMM

NOTES:
 1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
 2. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 72+00 AND 96+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - PORTABLE BARRIER
 - TAPERED END SECTION
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE



MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 66+00 TO STA. 74+00

FRA-71-0.00

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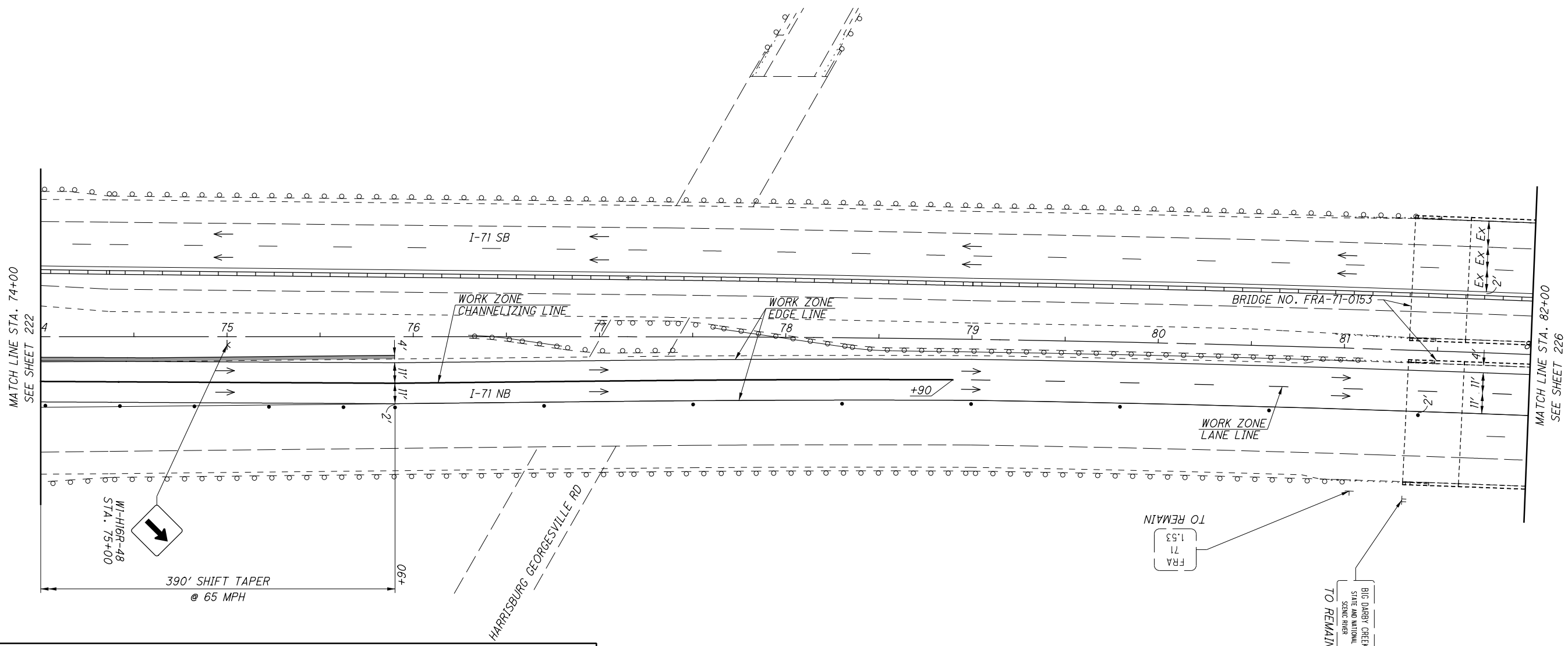


CALCULATED
BER
CHECKED
SMM

NOTES:
1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 72+00 AND 96+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 74+00 TO STA. 82+00**

FRA-71-0.00

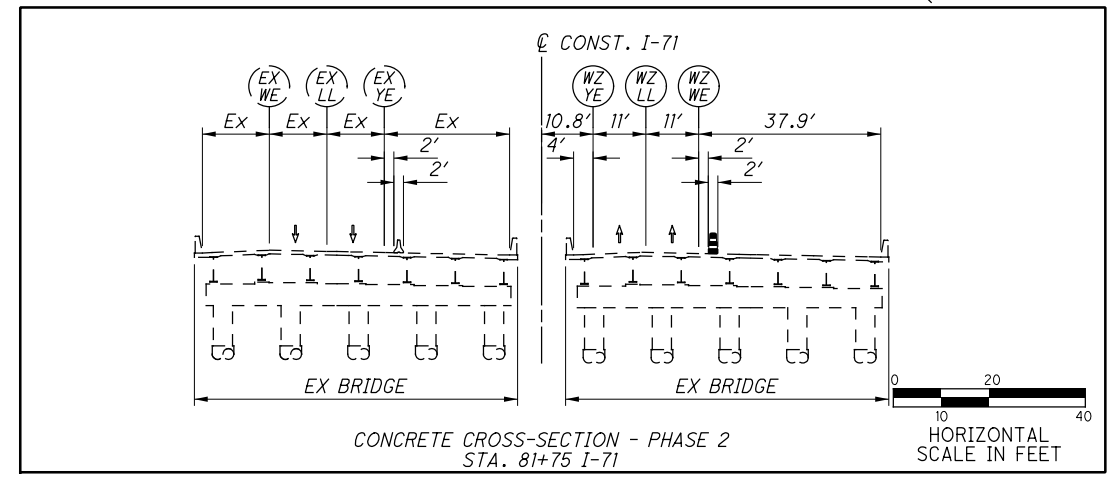


TO REMAIN
FRA
71
1.53

TO REMAIN
BIG DABBY CREEK
STATE AND NATIONAL
SCENIC RIVER

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM



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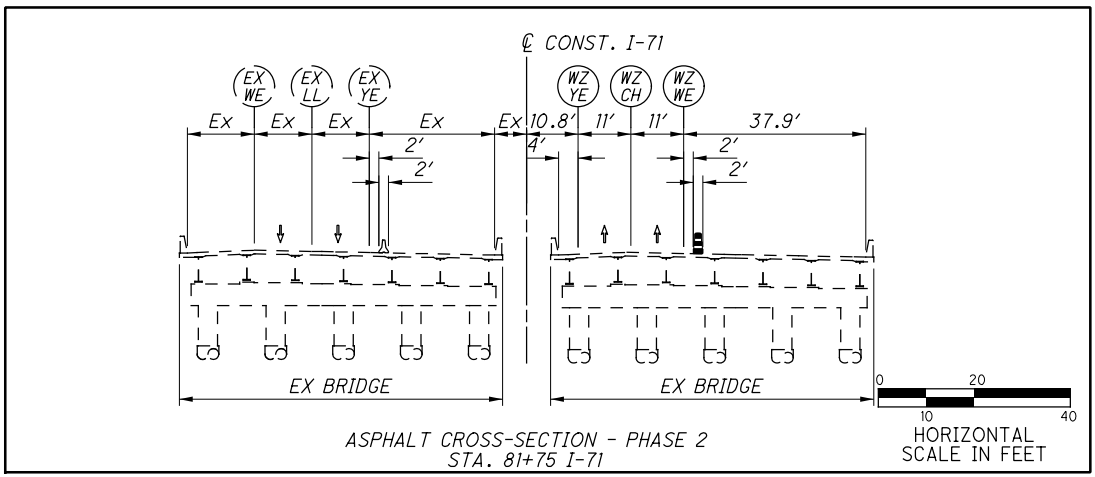
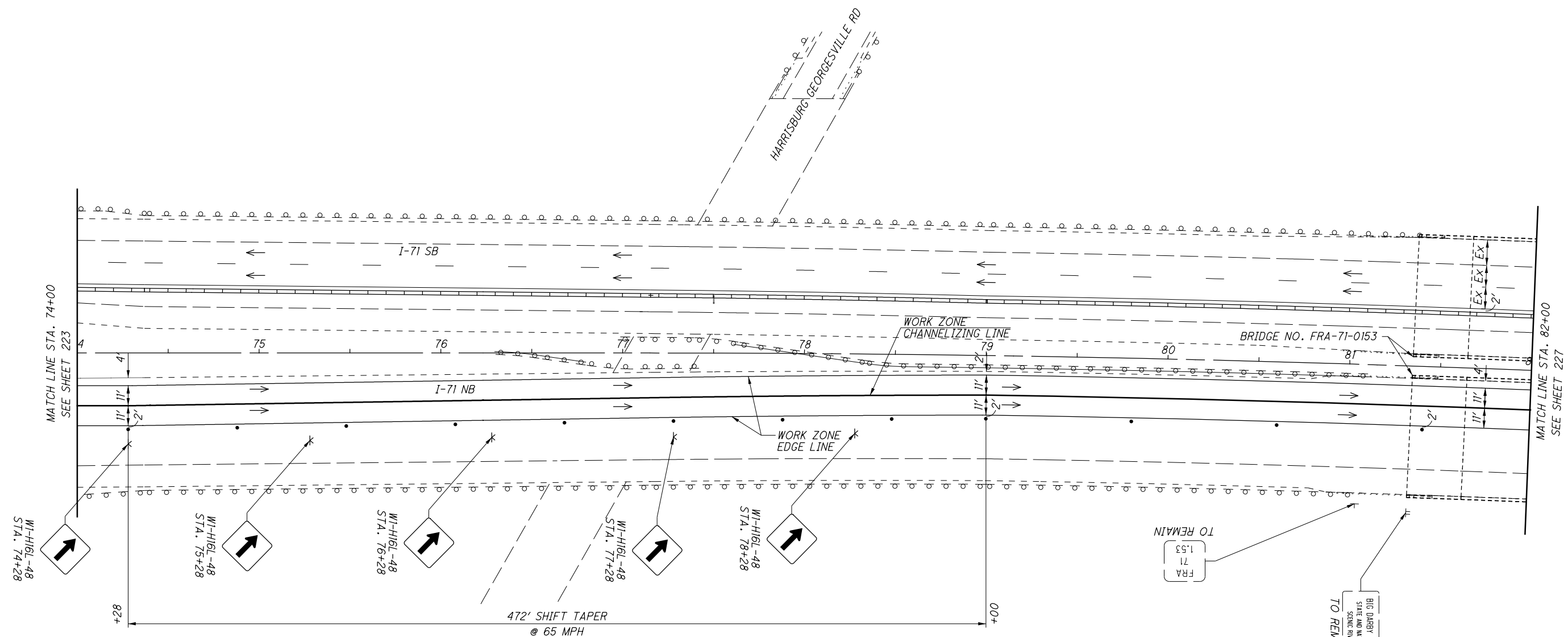
CALCULATED
BER
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SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 74+00 TO STA. 82+00**

FRA-71-0.00

225
1312

NOTES:
1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 72+00 AND 96+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

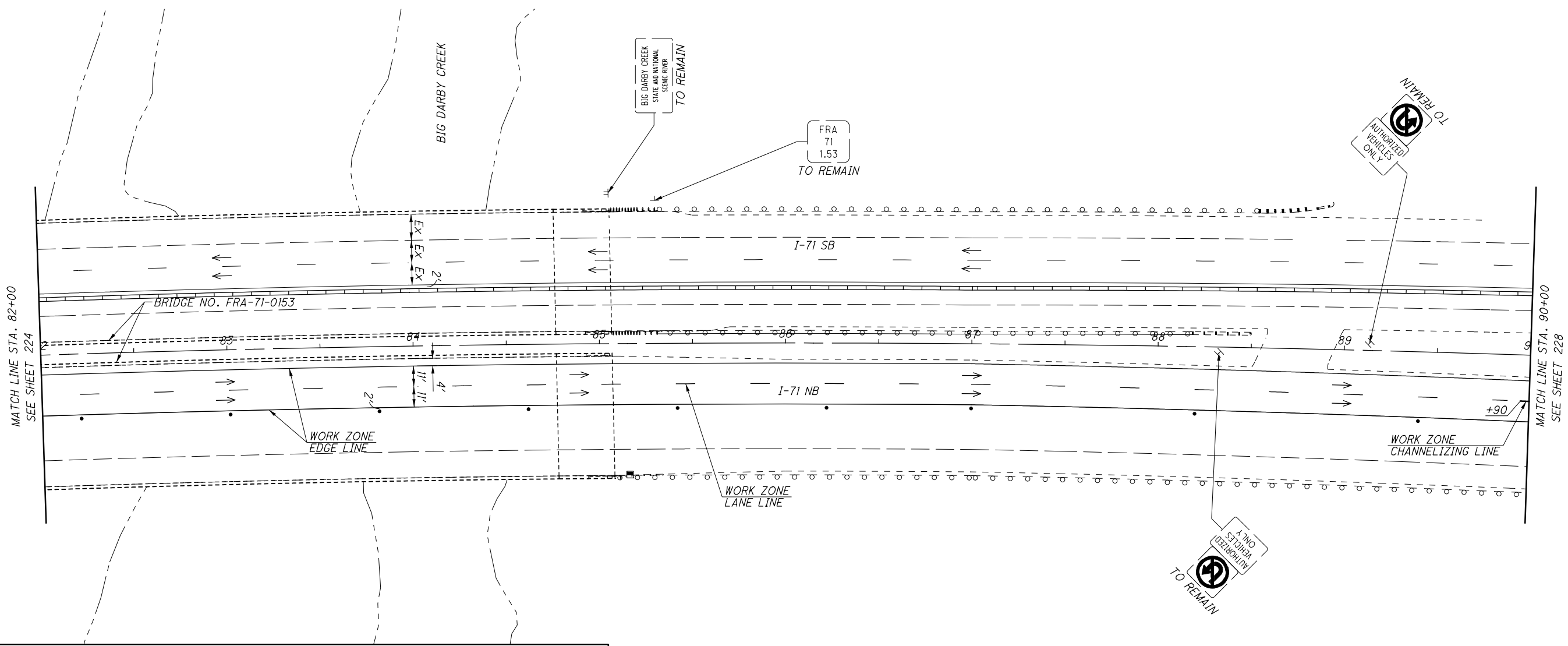
- LEGEND**
- PHASE 2 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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CALCULATED
BER
CHECKED
SMM

NOTES:
1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 72+00 AND 96+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

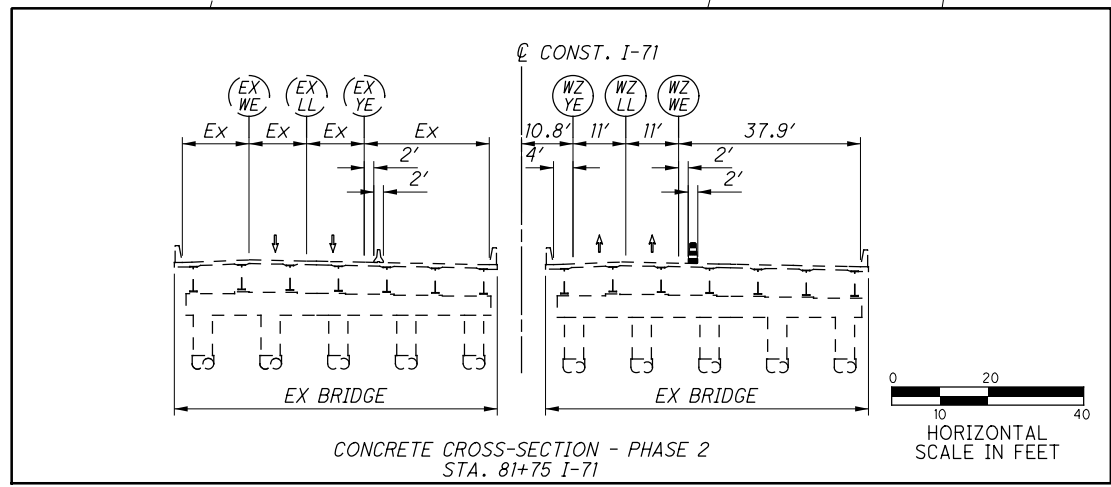


**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 82+00 TO STA. 90+00**

FRA-71-0.00

226
1312

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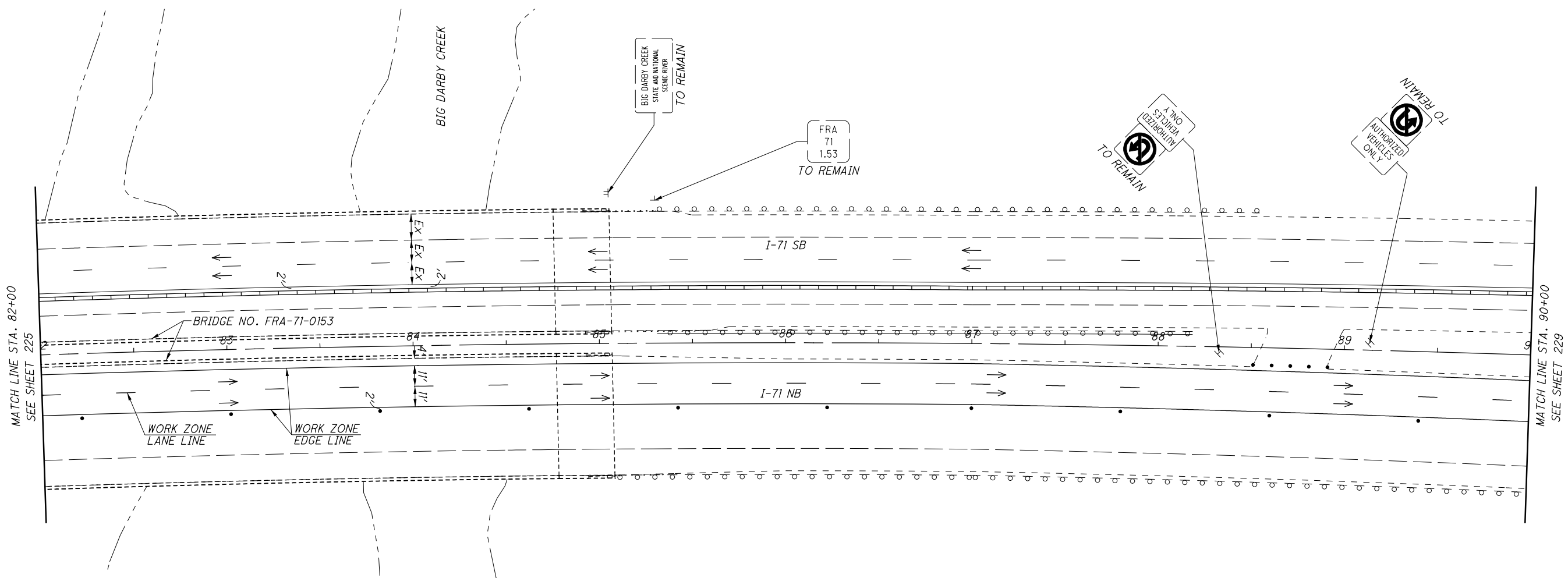
DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM



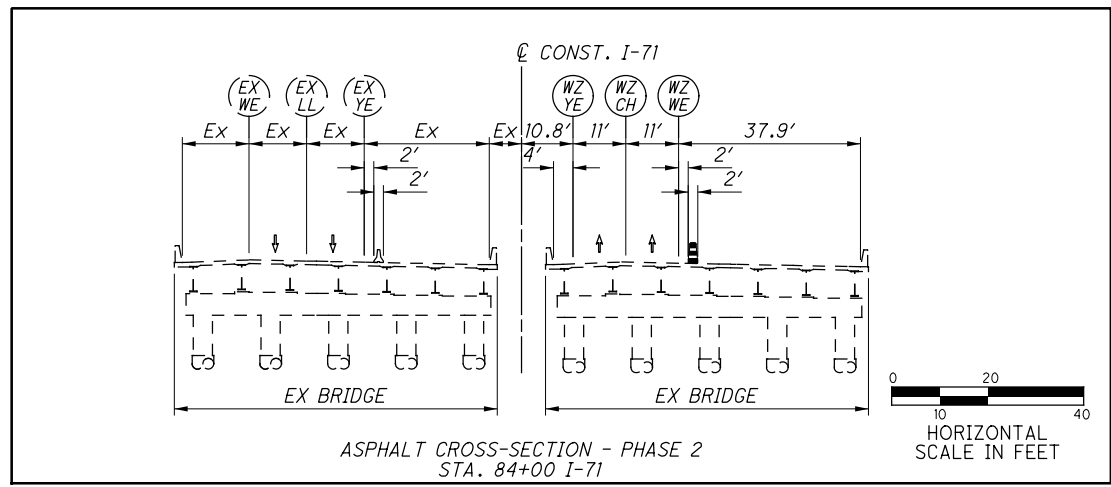
CALCULATED
BER
CHECKED
SMM

NOTES:
1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 72+00 AND 96+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

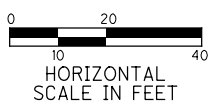


MATCH LINE STA. 82+00
SEE SHEET 225

MATCH LINE STA. 90+00
SEE SHEET 229



ASPHALT CROSS-SECTION - PHASE 2
STA. 84+00 I-71



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- DRUM
 - ▬ PORTABLE BARRIER
 - T T EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 82+00 TO STA. 90+00**

FRA-71-0.00

227
1312

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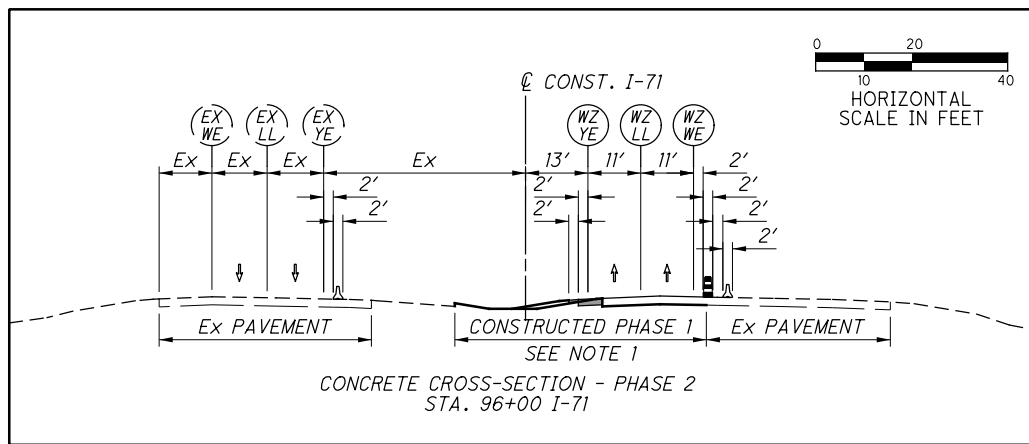
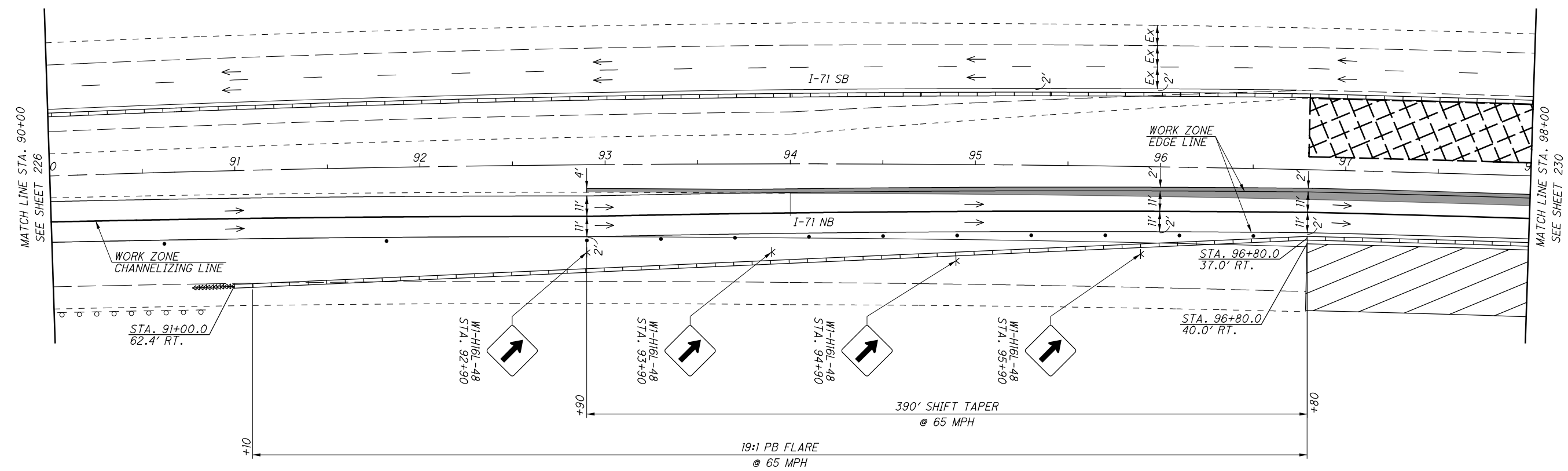


CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 90+00 TO STA. 98+00**

FRA-71-0.00

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
2. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 72+00 AND 96+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

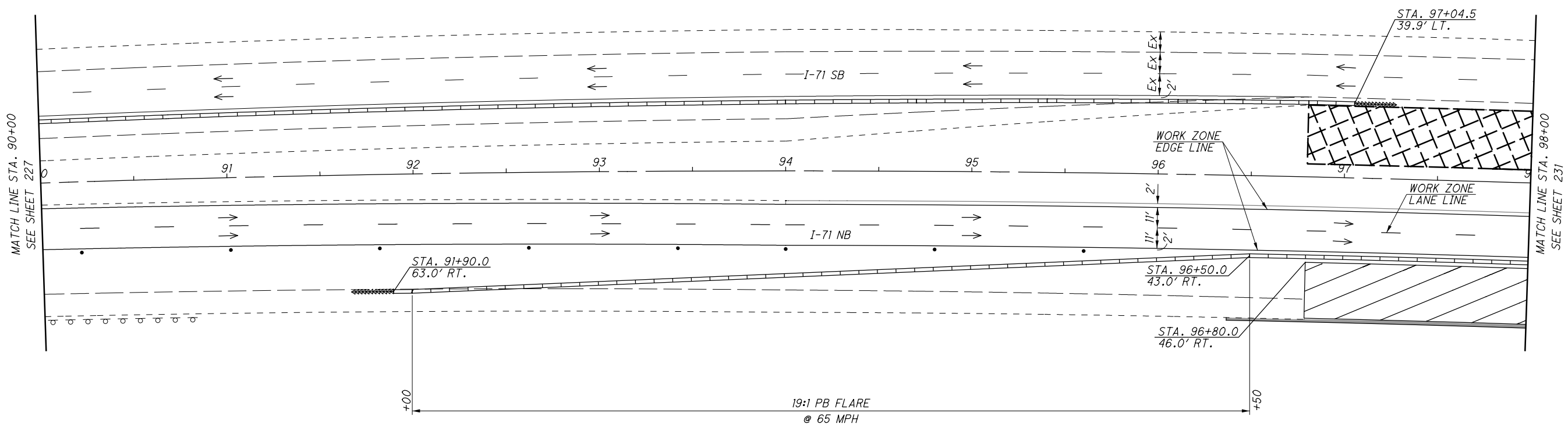
- LEGEND
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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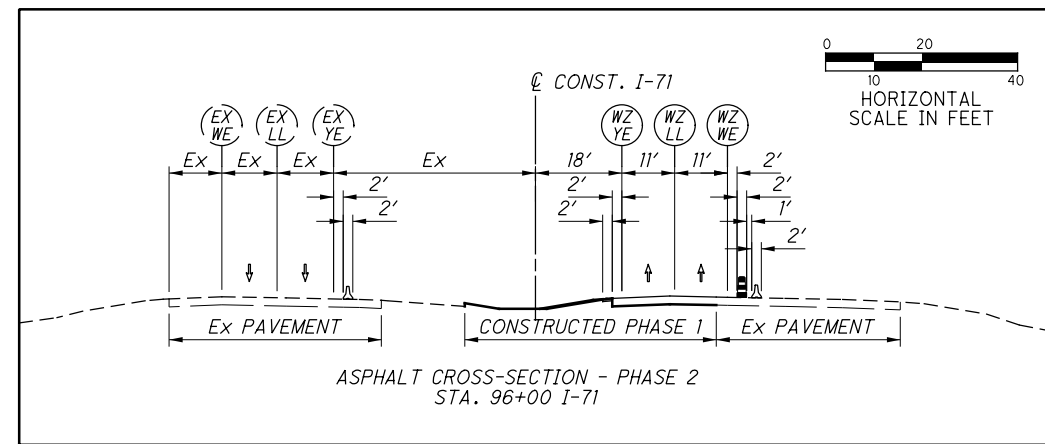


CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
2. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 72+00 AND 96+50 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 90+00 TO STA. 98+00

FRA-71-0.00

229
1312

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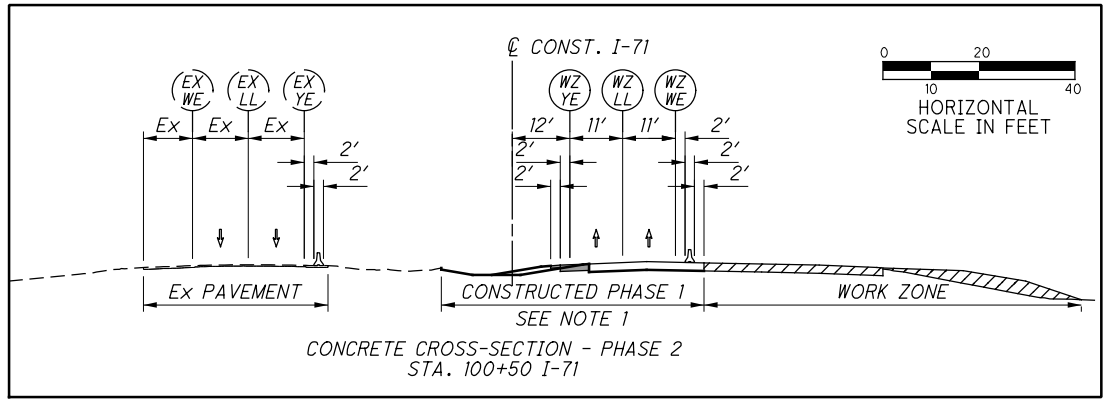
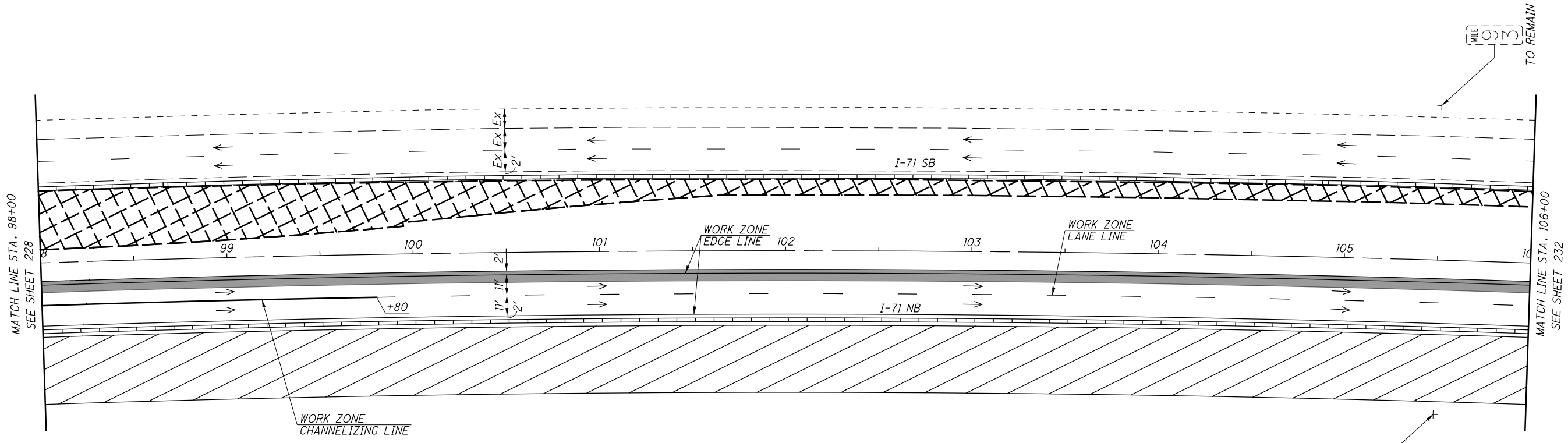
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 98+00 TO STA. 106+00**

FRA-71-0:00

230
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

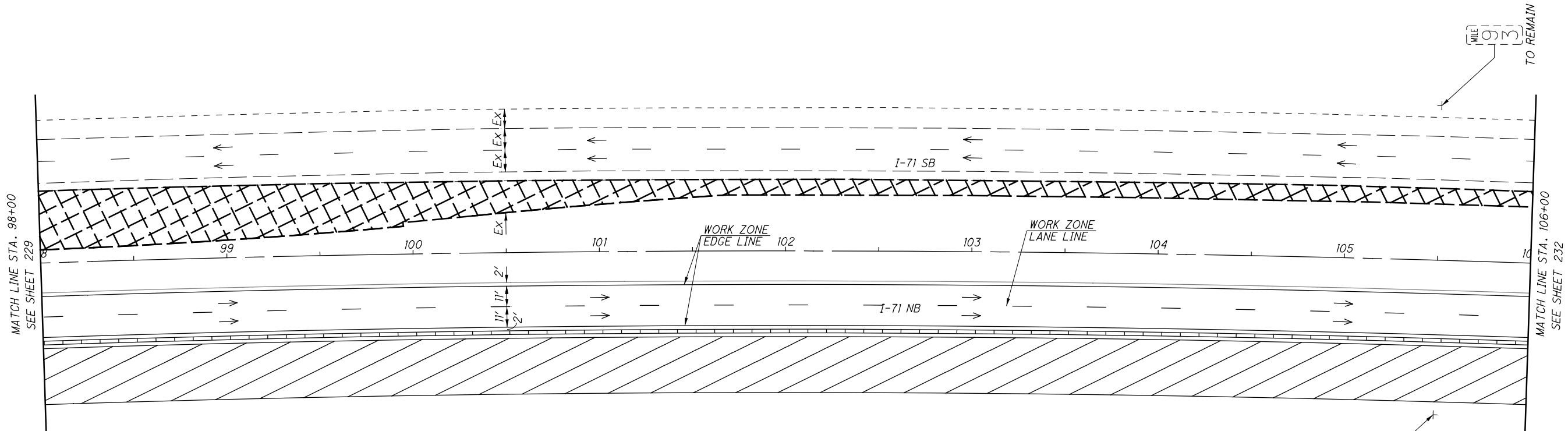
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



TO REMAIN
[0.3] MILE

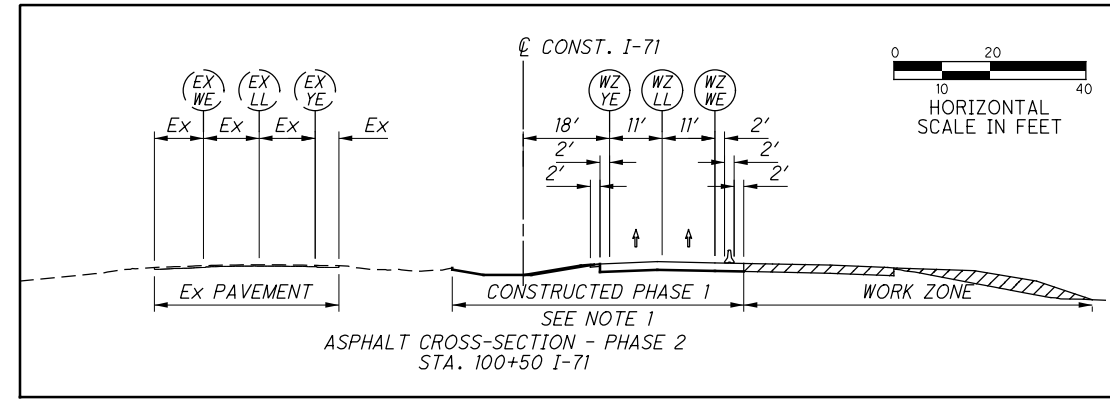
TO REMAIN
[0.3] MILE

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 98+00 TO STA. 106+00

FRA-71-0.00

231
1312

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ASPHALT CROSS-SECTION - PHASE 2
STA. 100+50 I-71
SEE NOTE 1

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



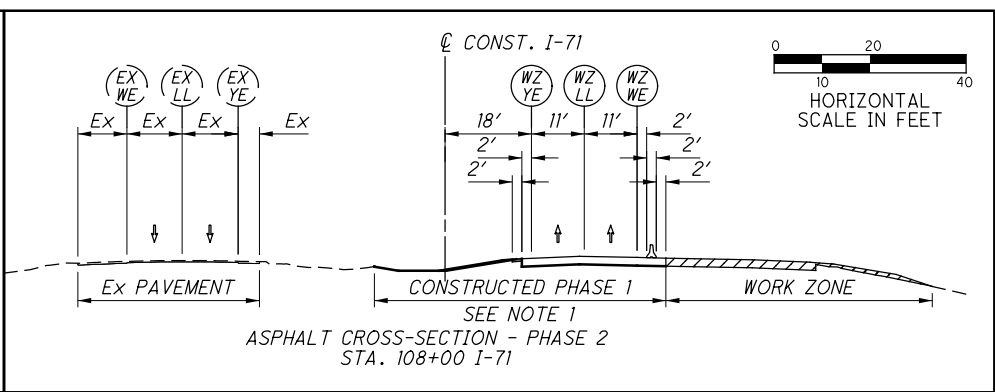
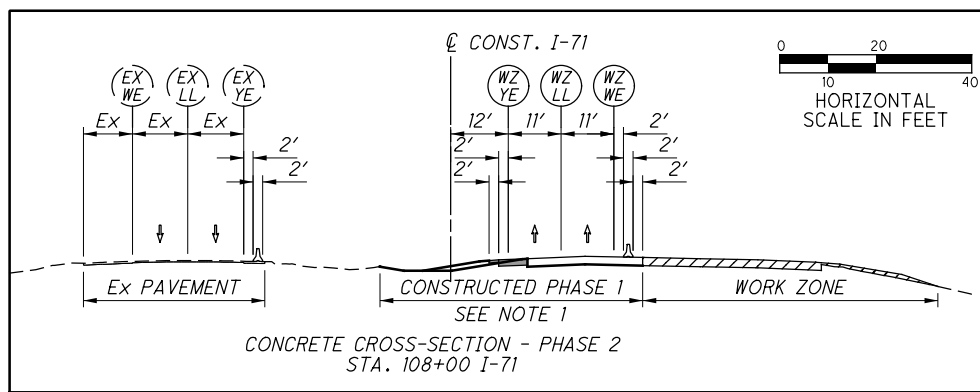
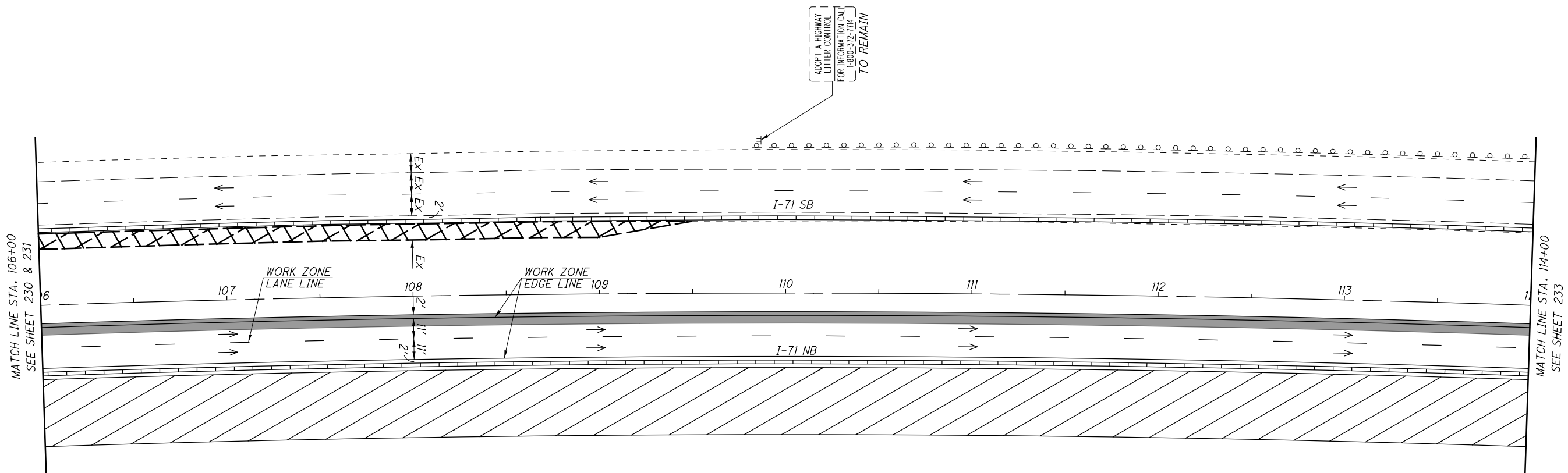
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 106+00 TO STA. 114+00

FRA-71-0.00

232
1312



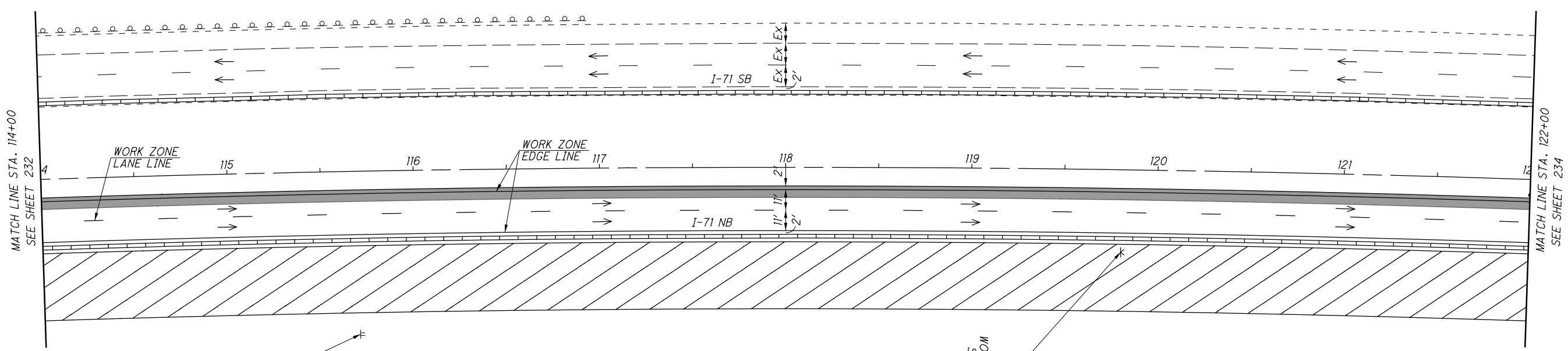
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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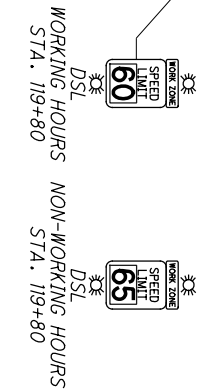
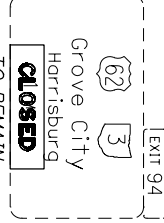


CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



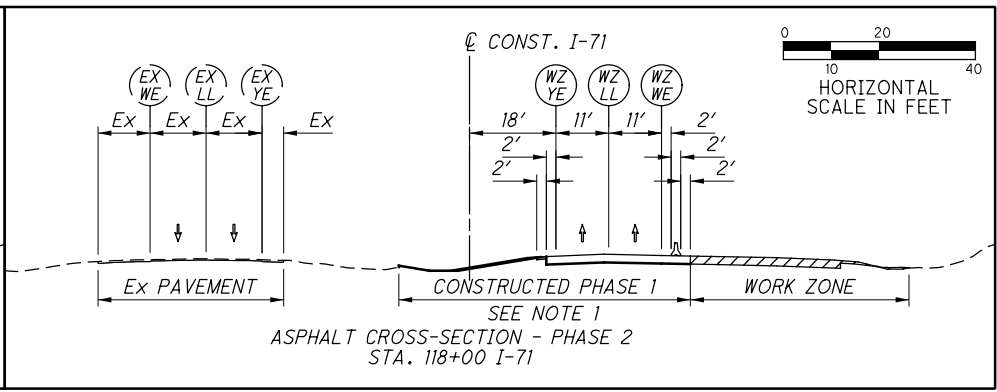
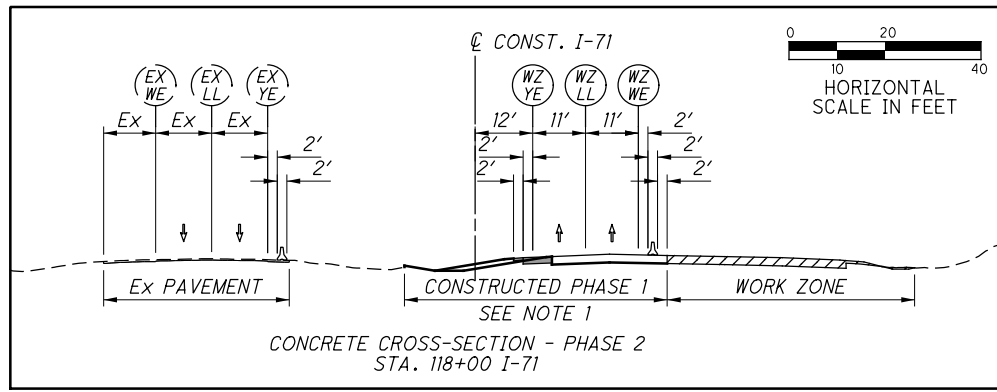
TO REMAIN
SEE SHEET 264
TEMPORARY OVERLAY
CLOSED 16' SERIES E
BLK/ORG
132" x 36"
REMOVE OVERLAY
PHASE 2A



MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 114+00 TO STA. 122+00

FRA-71-0.00

233
1312



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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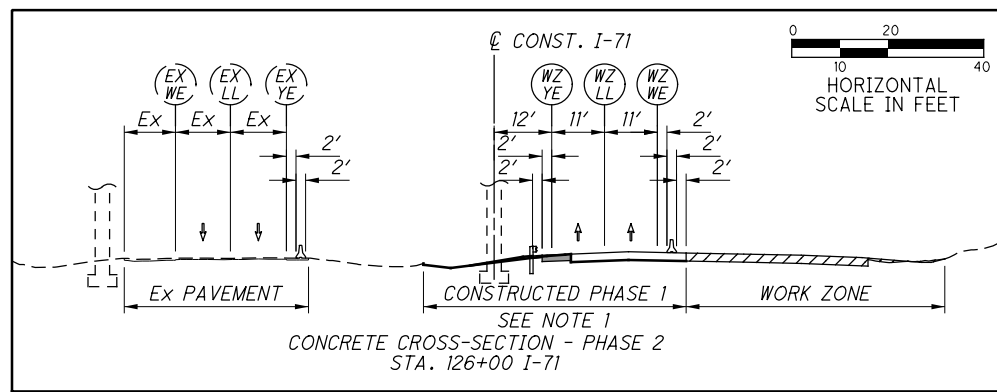
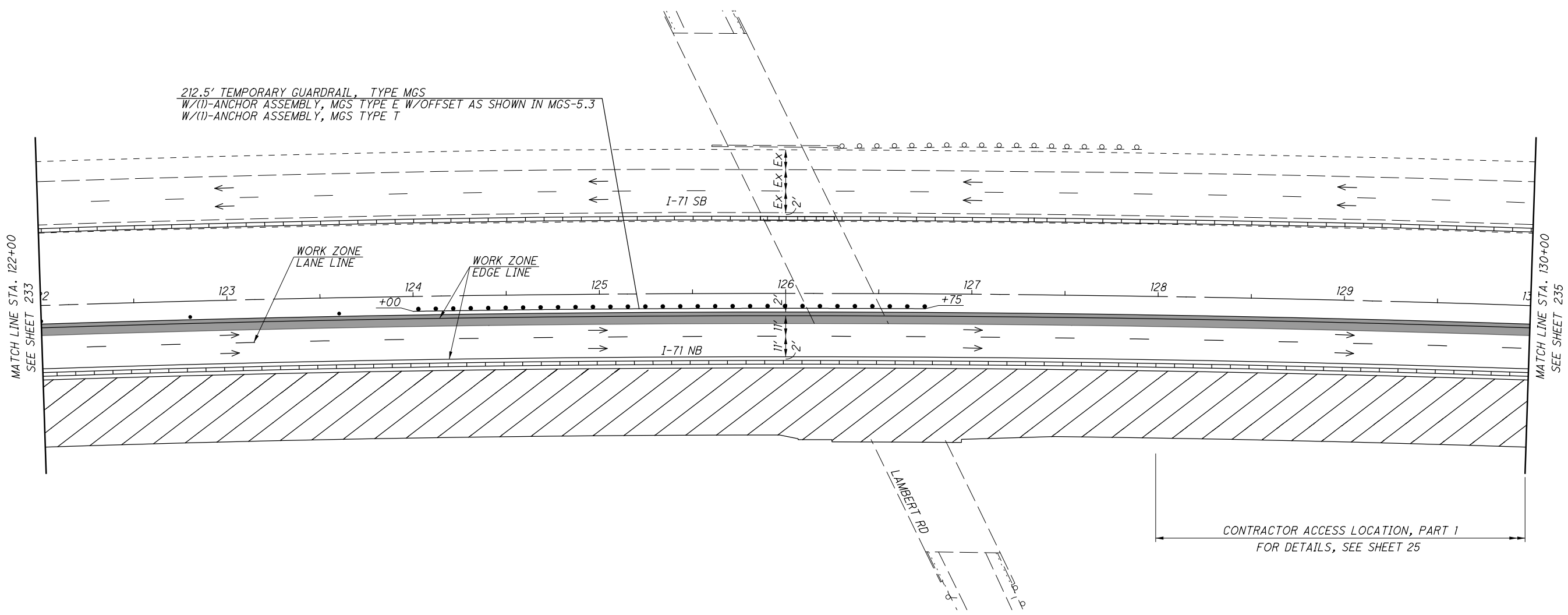
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

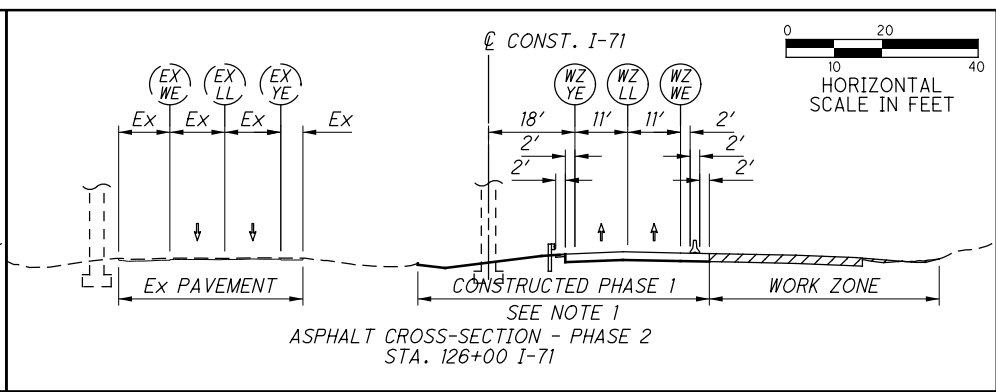
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 122+00 TO STA. 130+00

FRA-71-0-00

234
1312



CONCRETE CROSS-SECTION - PHASE 2
STA. 126+00 I-71



ASPHALT CROSS-SECTION - PHASE 2
STA. 126+00 I-71

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE
 - DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

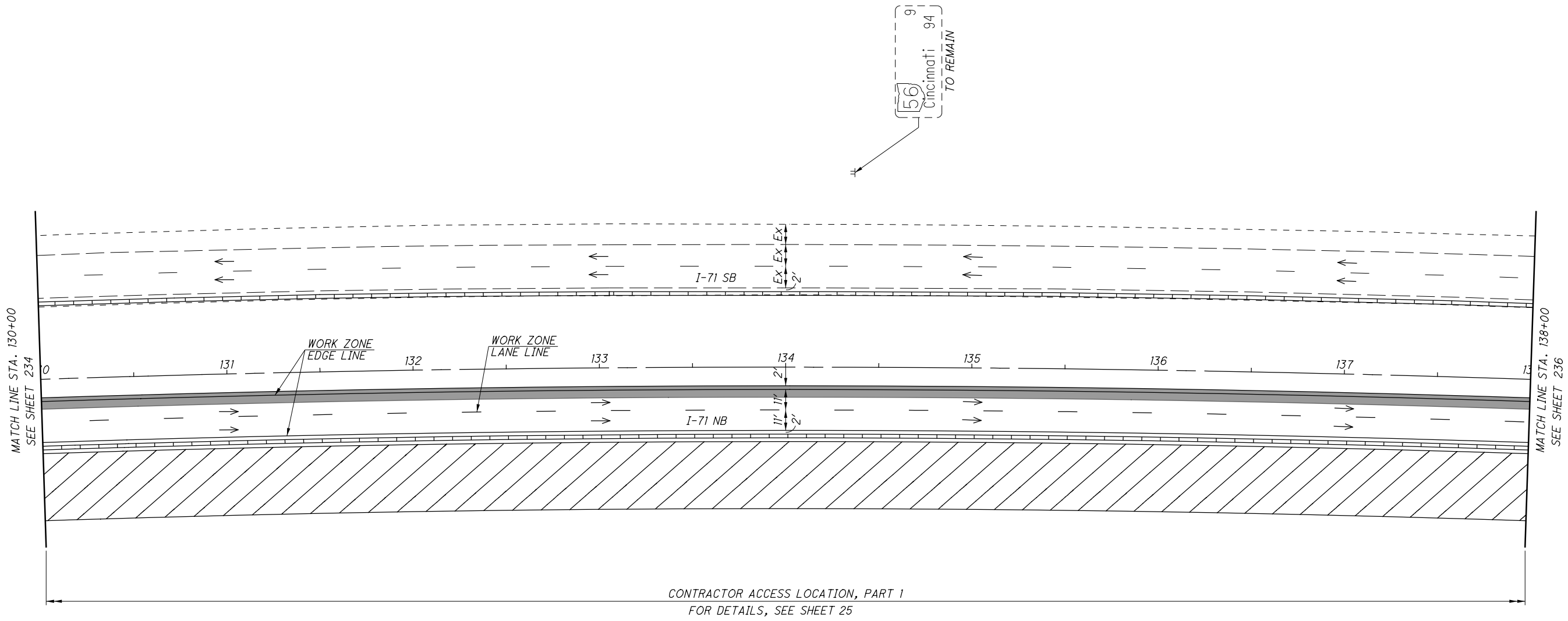
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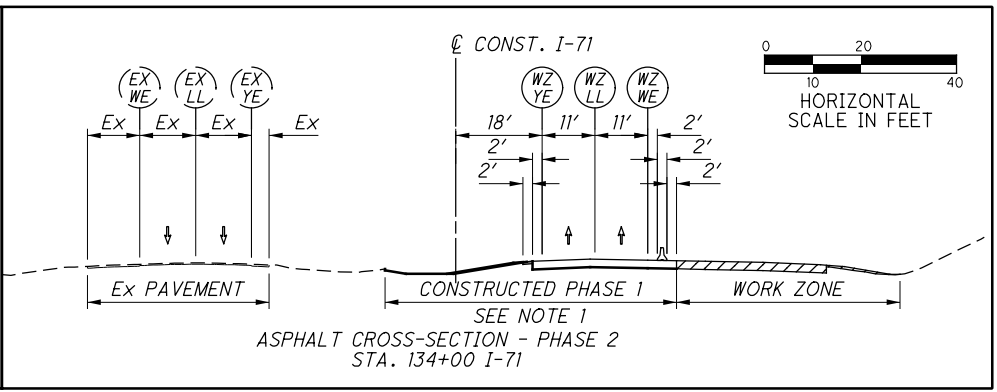
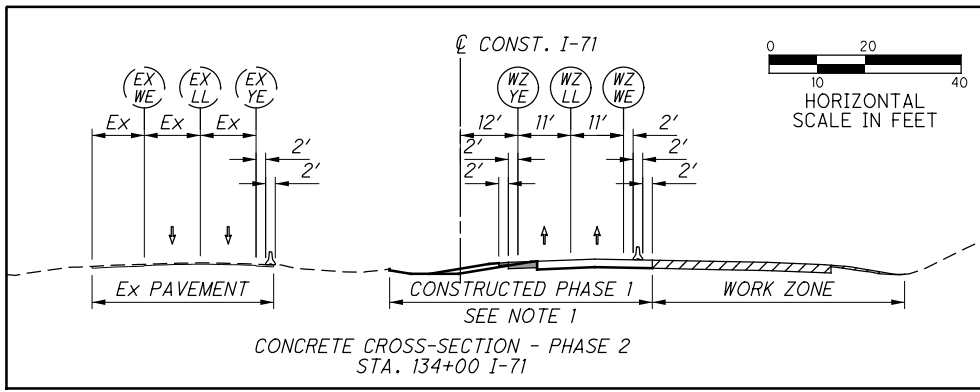
CALCULATED
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NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

56 Cincinnati 94
TO REMAIN



MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 130+00 TO STA. 138+00



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

FRA-71-0.00

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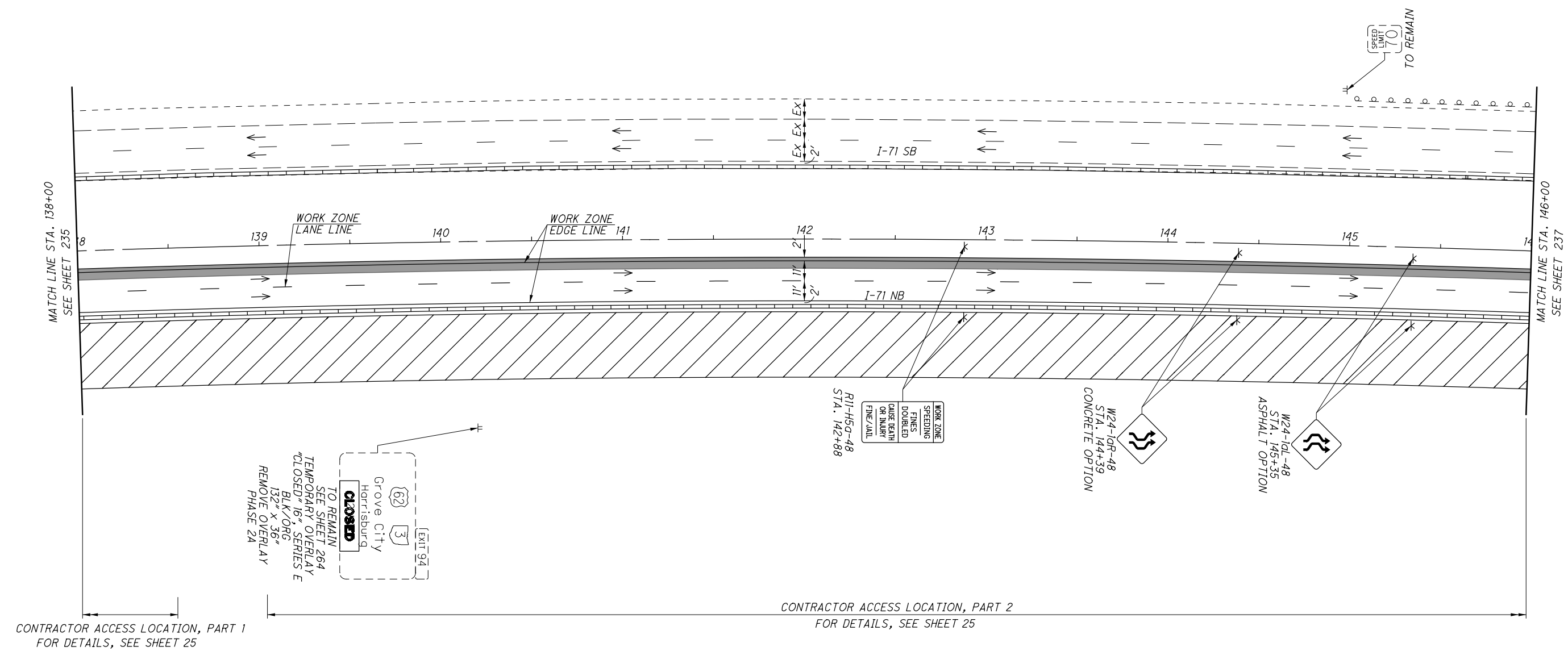
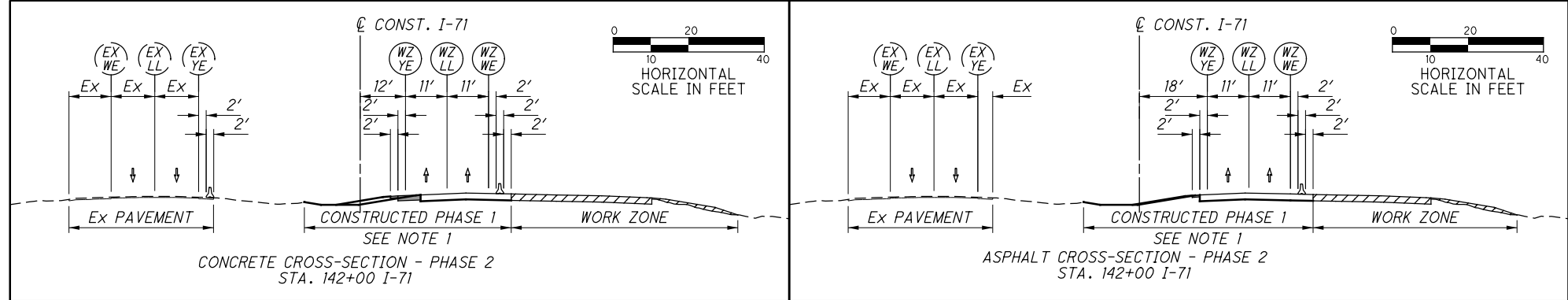
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BER
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SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 138+00 TO STA. 146+00

FRA-71-0.00

236
1312

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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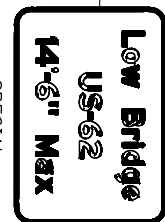
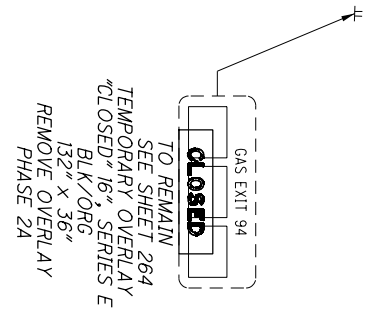
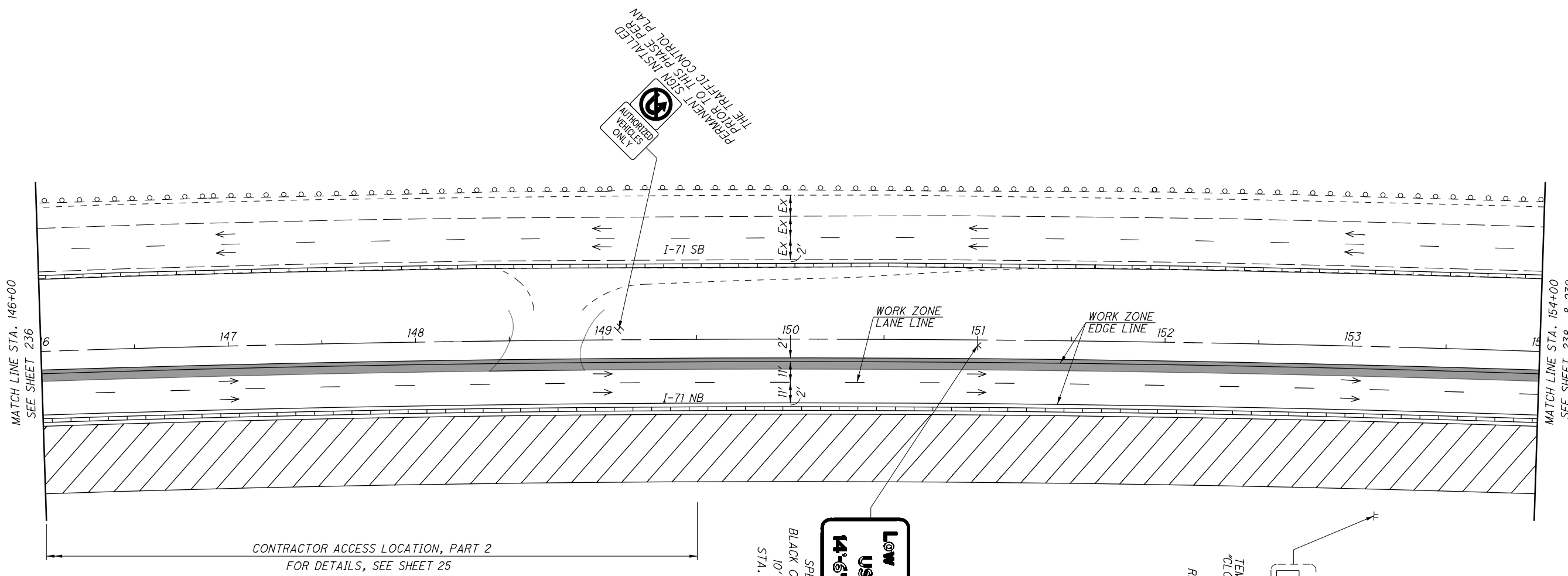
CALCULATED
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SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 146+00 TO STA. 154+00

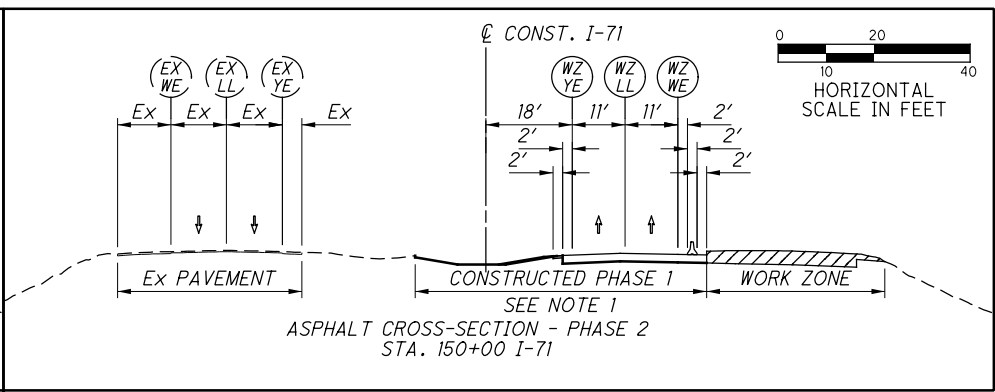
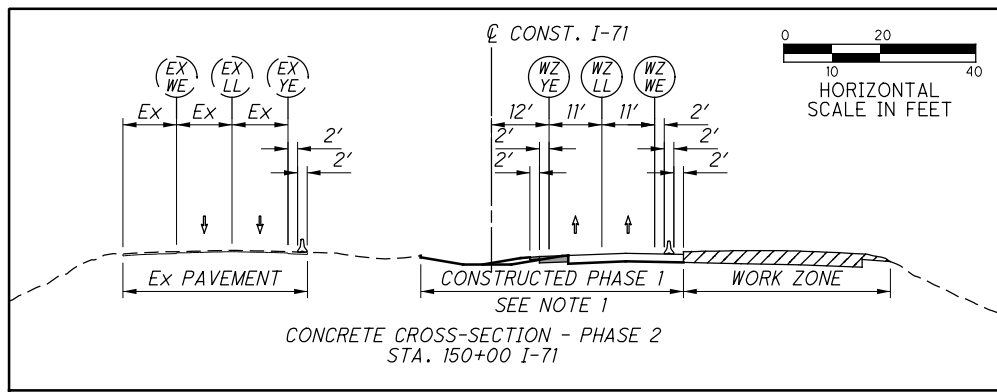
FRA-71-0.00

237
1312



SPECIAL
BLACK ON ORANGE
10' X 7'
STA. 151+00

CONTRACTOR ACCESS LOCATION, PART 2
FOR DETAILS, SEE SHEET 25



LEGEND

	PHASE 2 WORK ZONE
	TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
	PORTABLE BARRIER
	EXISTING SIGN SUPPORT
	PROPOSED SIGN SUPPORT
	OPEN TRAVEL LANE

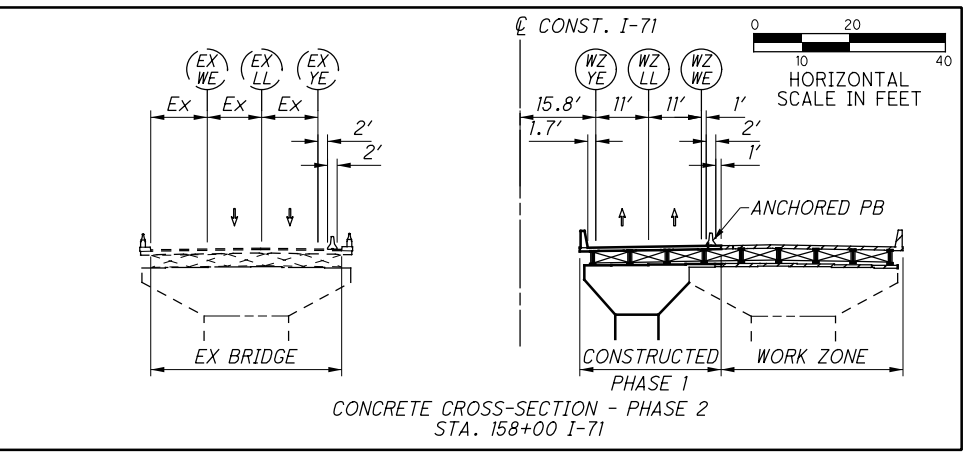
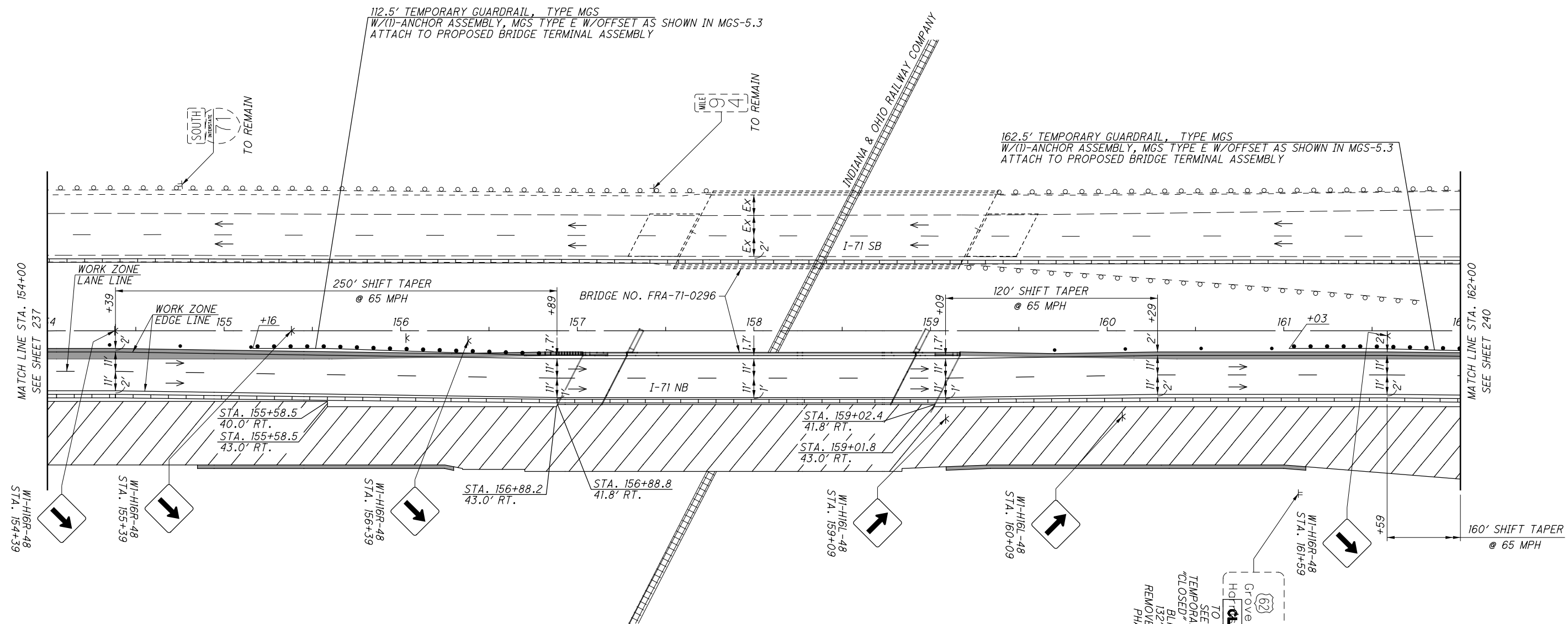
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CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 154+00 TO STA. 162+00**

FRA-71-0.00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

NOTES:
1. MAINLINE WORK (INCLUDING THE STRUCTURE) BETWEEN STA. 160+35 AND STA. 168+89, AS WELL AS RAMP D WORK SHALL BE COMPLETED PRIOR TO PHASE 2A.

TO REMAIN
SEE SHEET 264
TEMPORARY OVERLAY
CLOSED #16, SERIES E
BLK/ORG
132" X 36"
REMOVE OVERLAY
PHASE 2A

LEGEND

- PHASE 2 WORK ZONE
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- DRUM

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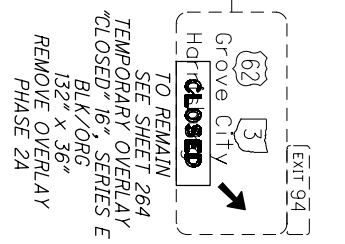
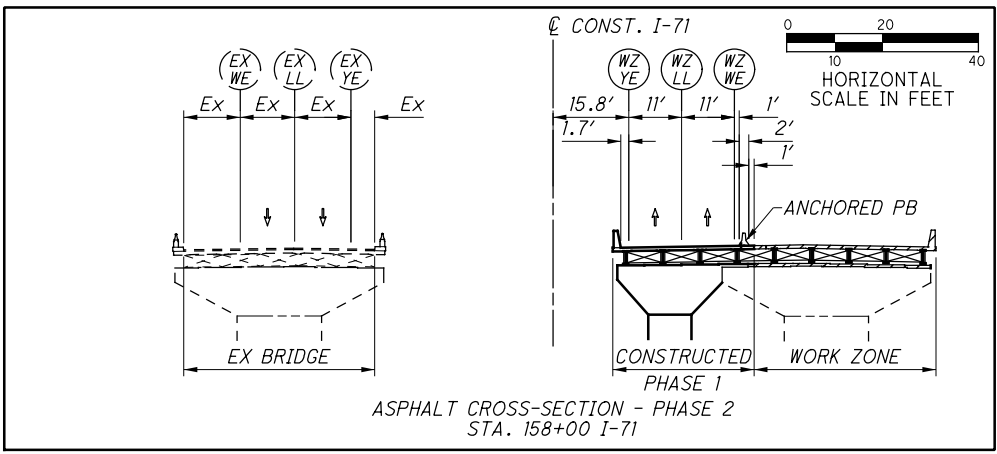
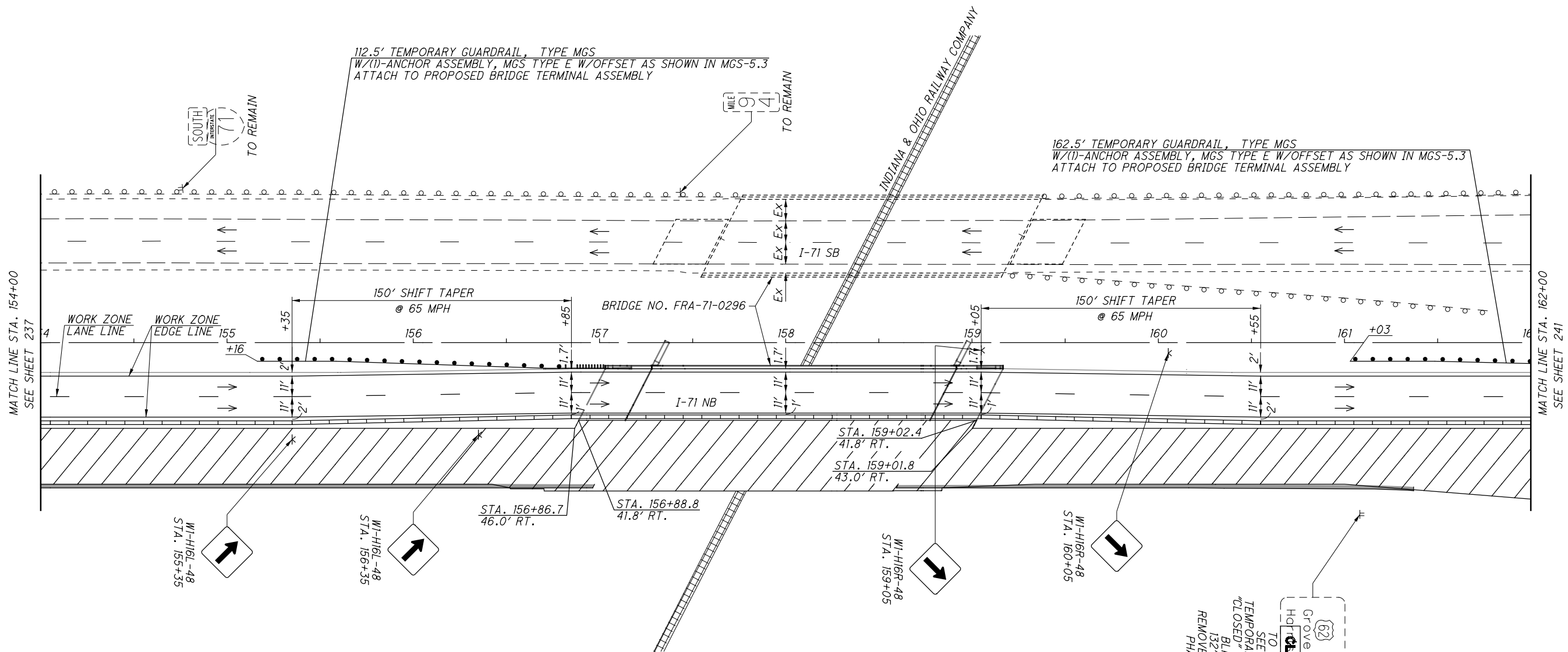


CALCULATED
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MAINTENANCE OF TRAFFIC PLAN - PHASE 2 (ASPHALT OPTION) I-71 - STA. 154+00 TO STA. 162+00

FRA-71-0.00

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- LEGEND**
- PHASE 2 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTES:
 1. MAINLINE WORK (INCLUDING THE STRUCTURE) BETWEEN STA. 160+35 AND STA. 168+89, AS WELL AS RAMP D WORK SHALL BE COMPLETED PRIOR TO PHASE 2A.



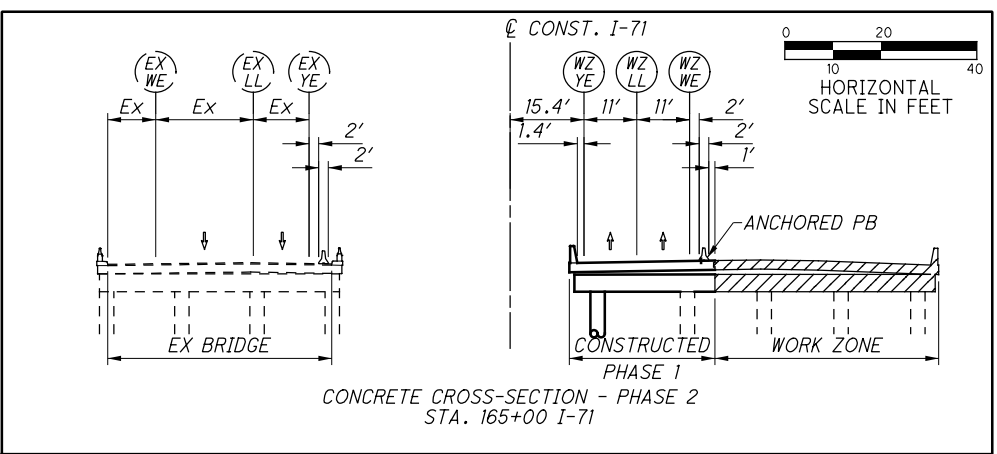
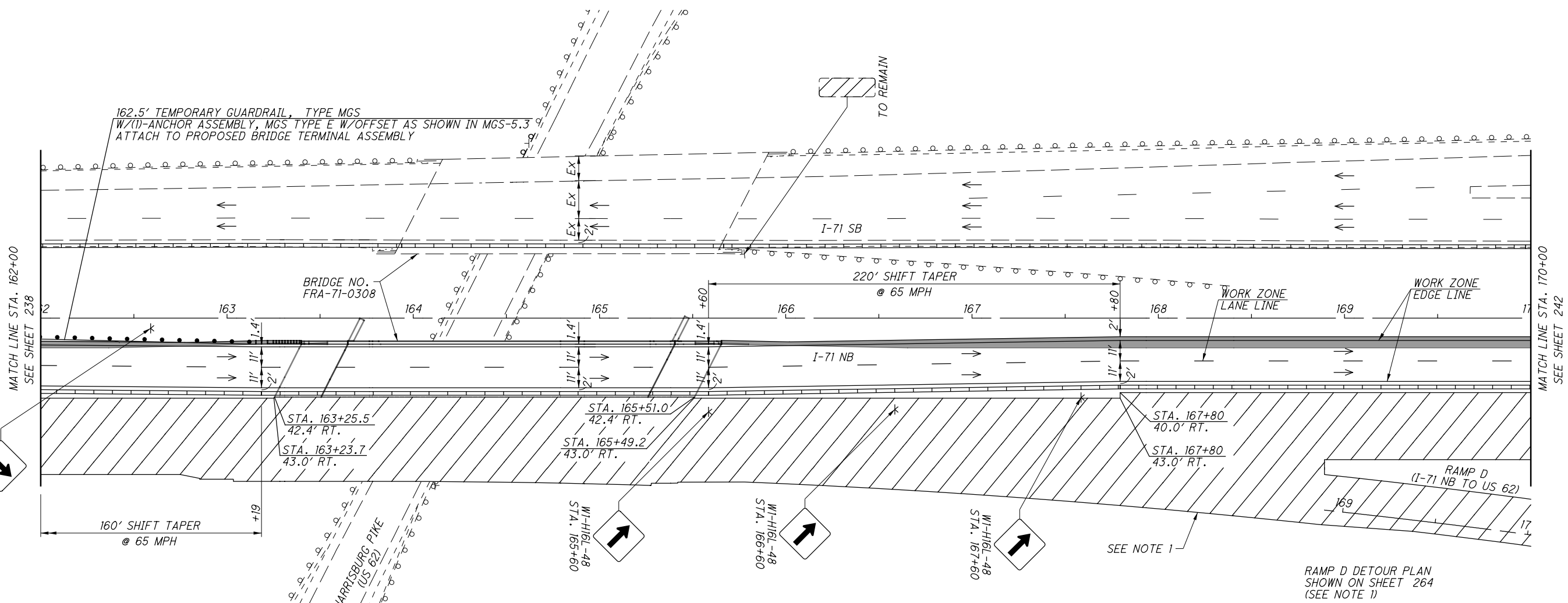
CALCULATED
BER
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SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 162+00 TO STA. 170+00**

FRA-71-0.00

240
1312

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WI-HIGL-48
STA. 162+55
67-16R-48



NOTES:
 1. MAINLINE WORK (INCLUDING THE STRUCTURE) BETWEEN STA. 160+35 AND STA. 168+89, AS WELL AS RAMP D WORK SHALL BE COMPLETED PRIOR TO PHASE 2A.

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



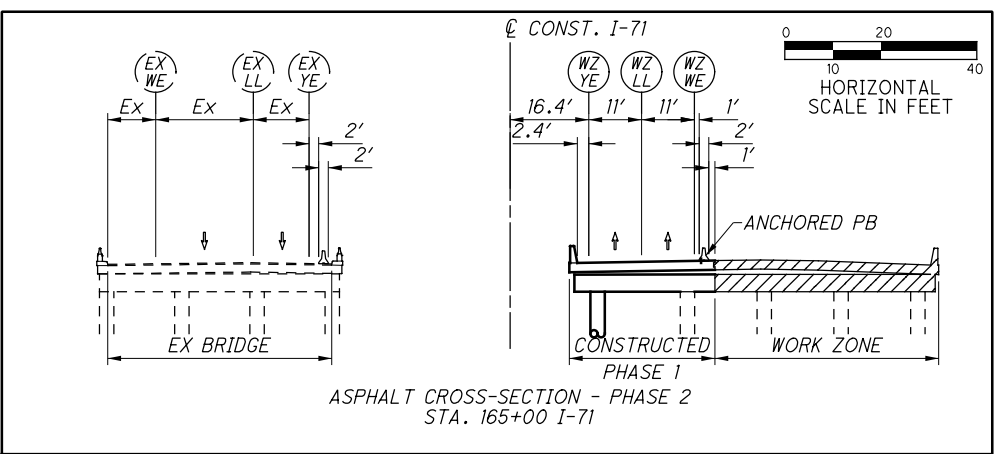
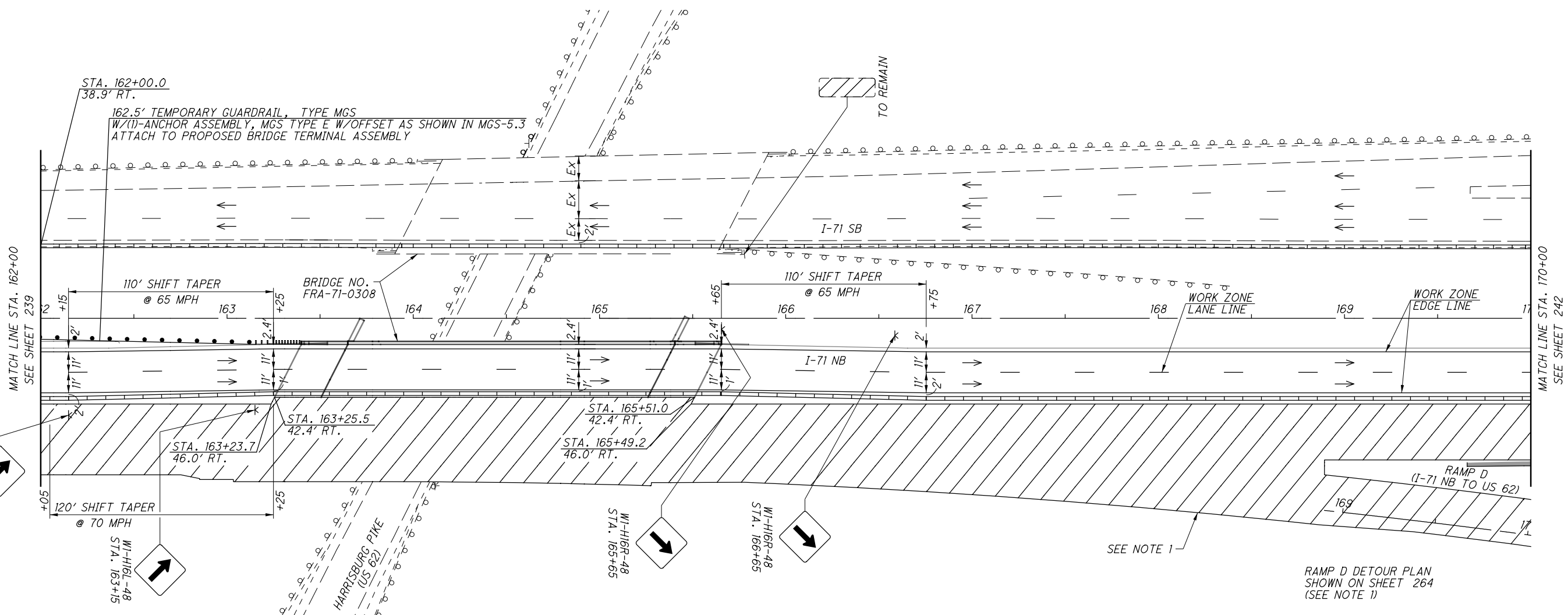
CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 162+00 TO STA. 170+00**

FRA-71-0.00

241
1312

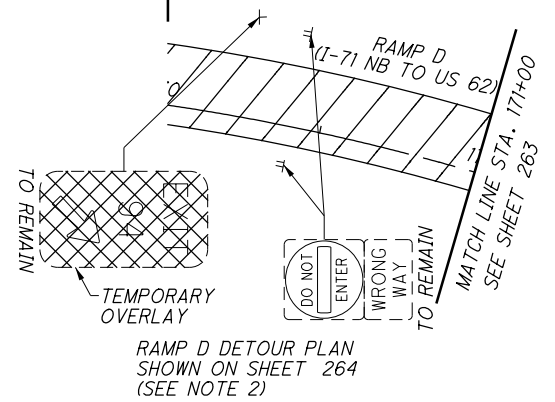
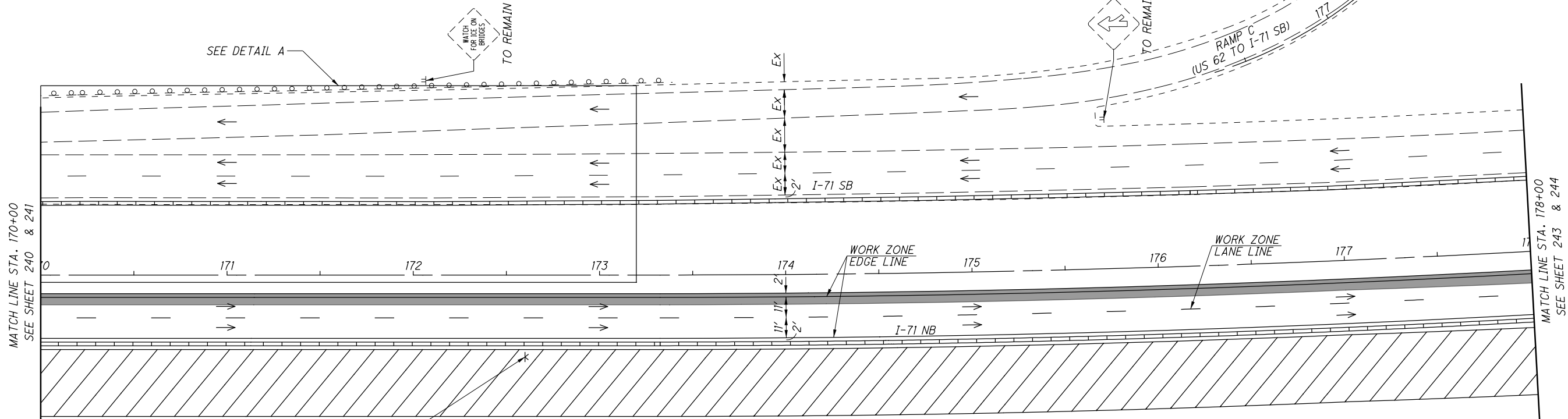
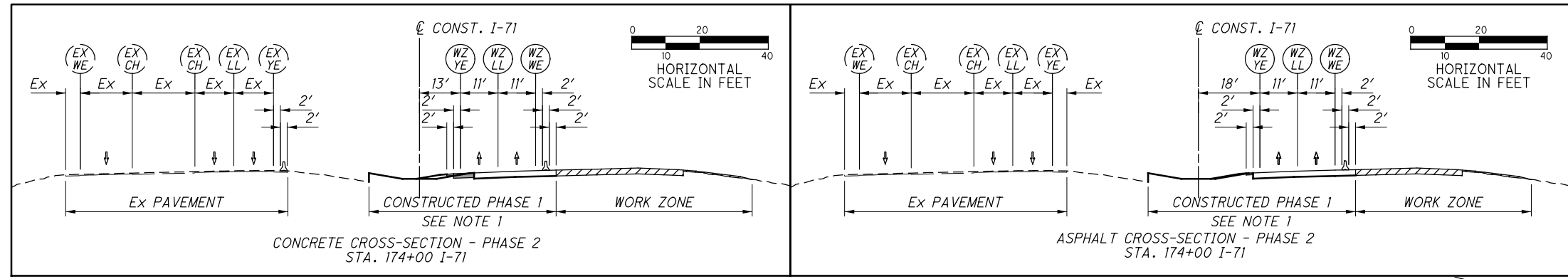
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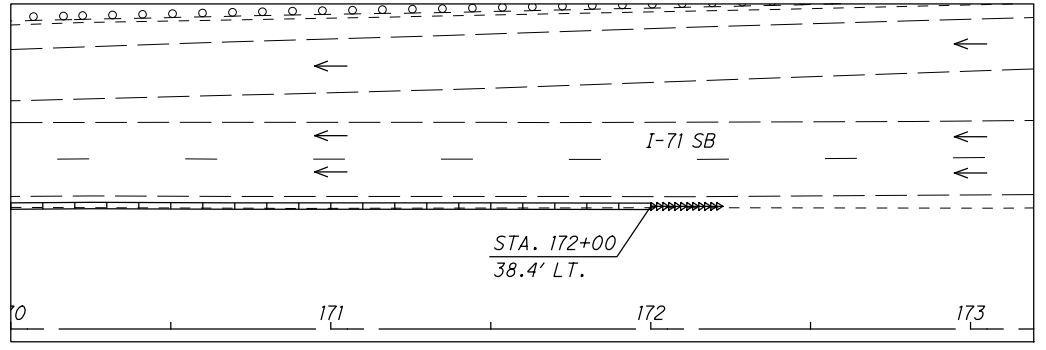
NOTES:
 1. MAINLINE WORK (INCLUDING THE STRUCTURE) BETWEEN STA. 160+35 AND STA. 168+89, AS WELL AS RAMP D WORK SHALL BE COMPLETED PRIOR TO PHASE 2A.

- LEGEND**
- PHASE 2 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
2. ALL RAMP D WORK SHALL BE COMPLETED PRIOR TO PHASE 2A.



WORKING HOURS
STA. 172+60
NON-WORKING HOURS
STA. 172+60



DETAIL A
ASPHALT OPTION

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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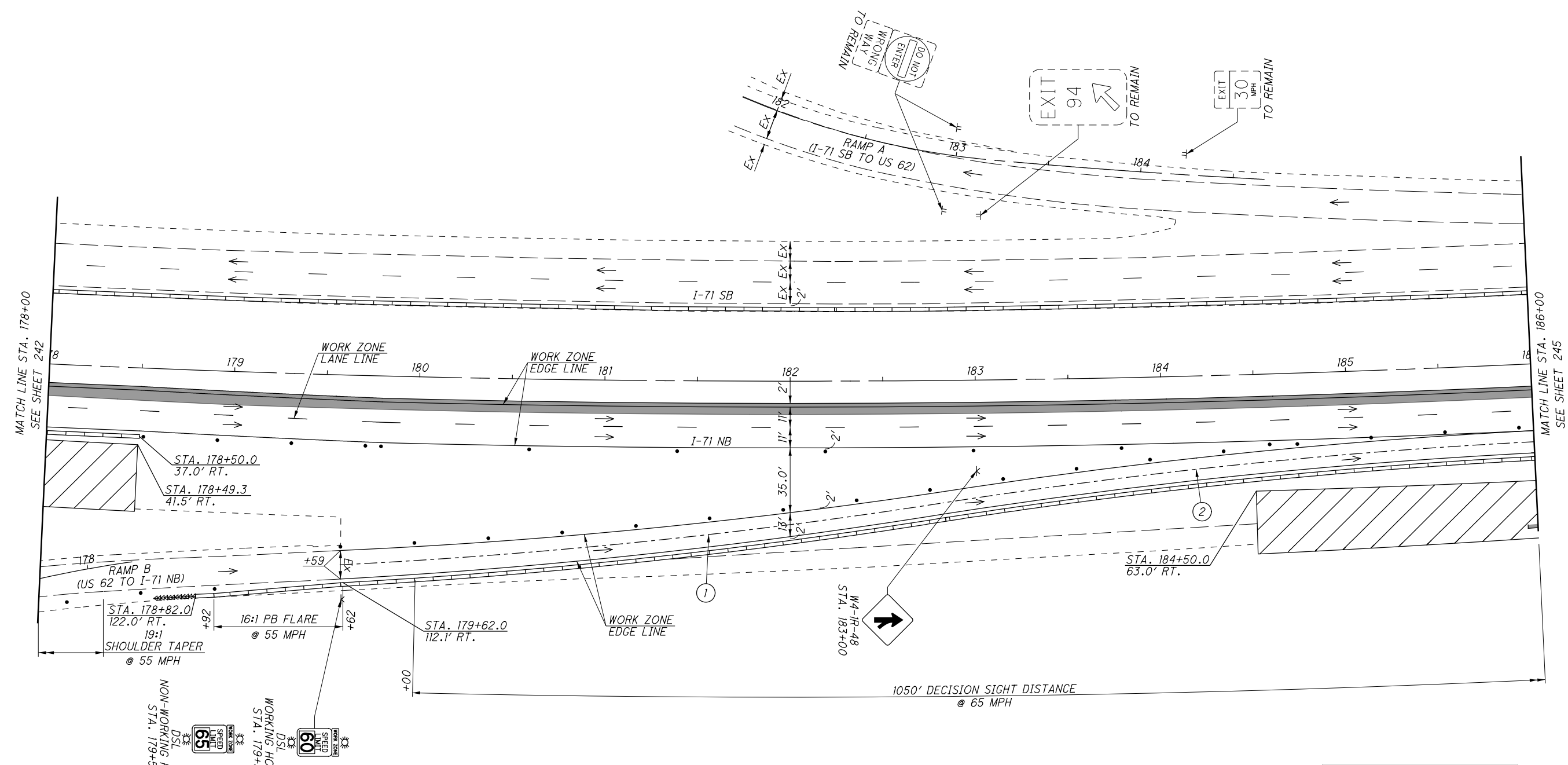
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**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 178+00 TO STA. 186+00**

FRA-71-0.00

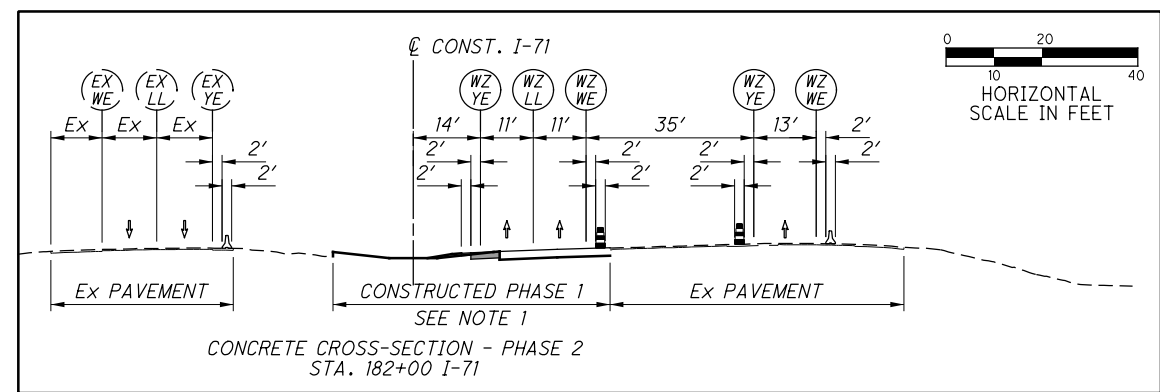
243
1312

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE



- ① $\Delta = 6^\circ 00' 20''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 163.93'$
 $L = 327.57'$
 $E = 4.30'$
 $C = 327.42'$
 $C.B. = N 83^\circ 52' 54'' E$
- ② $\Delta = 6^\circ 06' 15''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 166.74'$
 $L = 333.17'$
 $E = 4.44'$
 $C = 333.17'$
 $C.B. = N 83^\circ 55' 51'' E$

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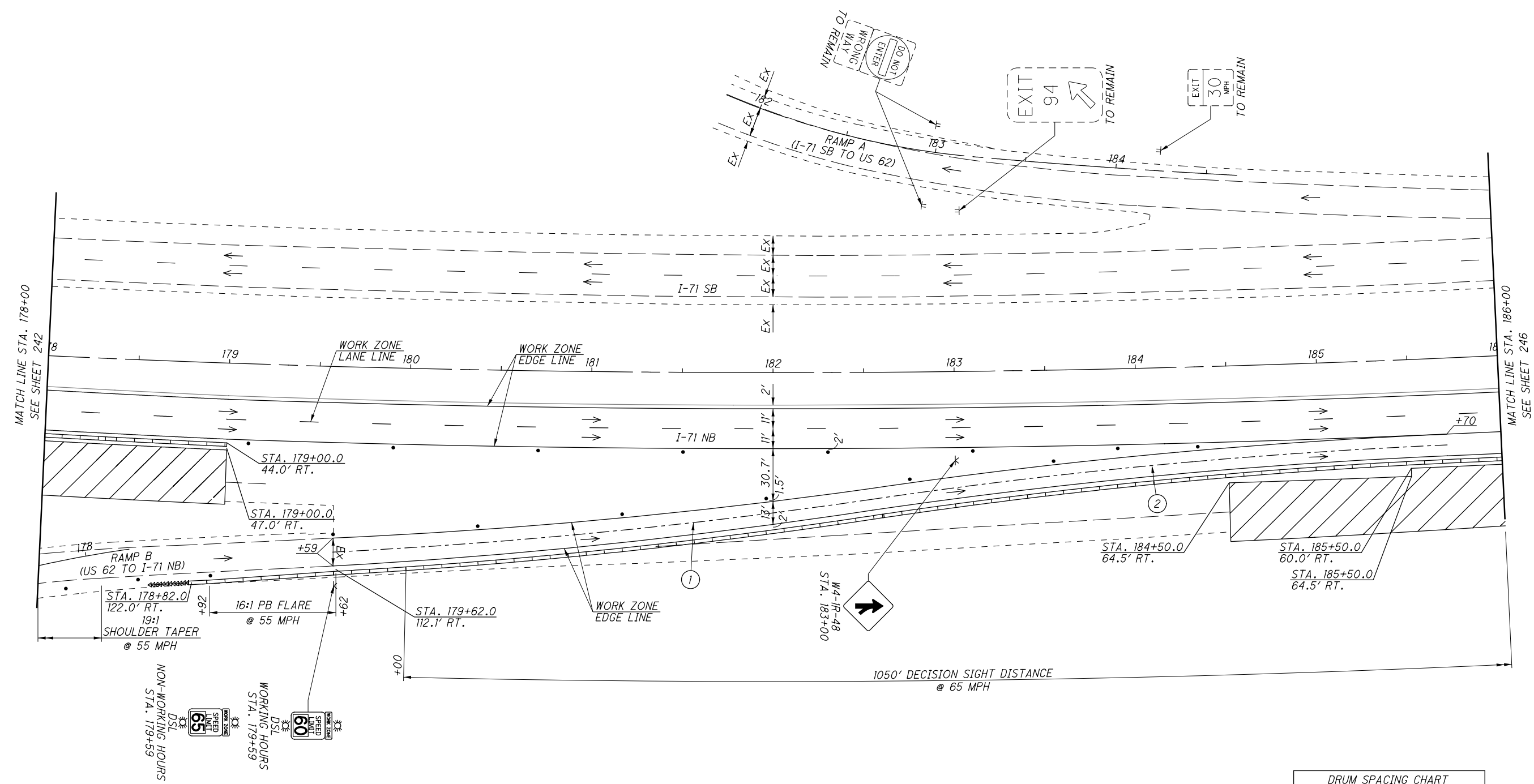


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**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 178+00 TO STA. 186+00**

FRA-71-0.00

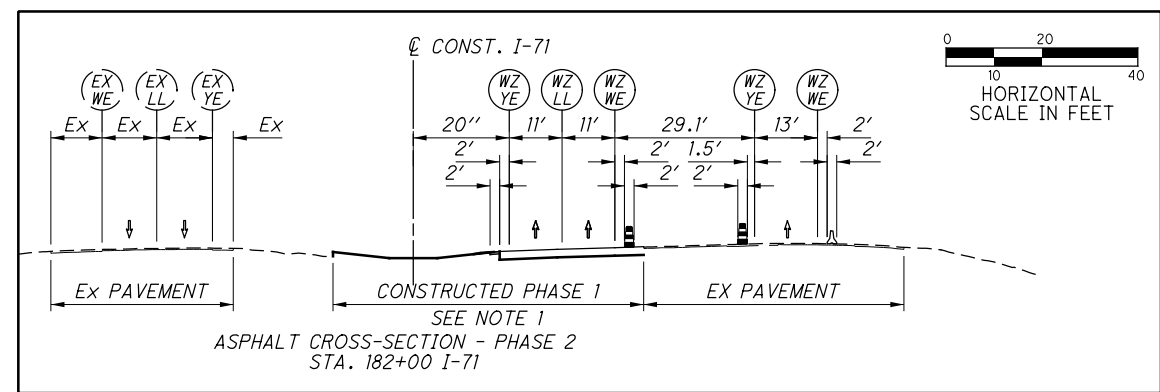
NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

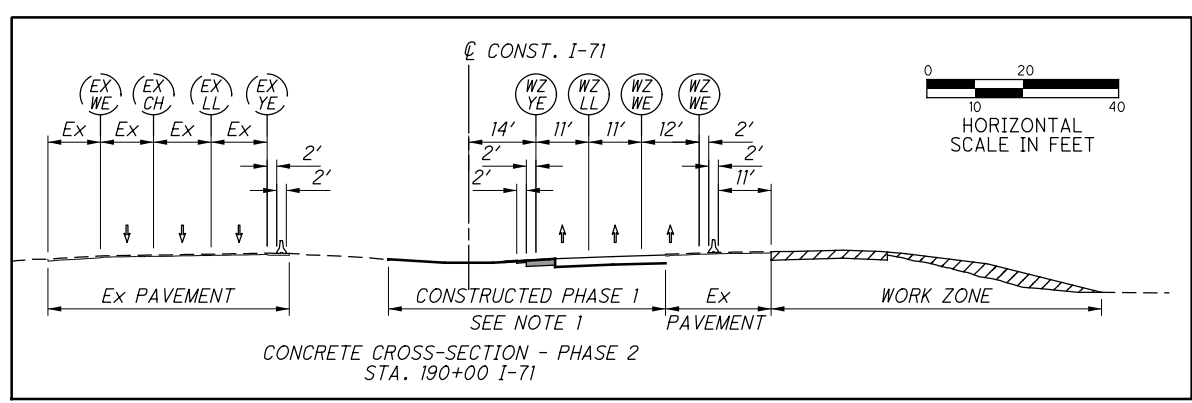
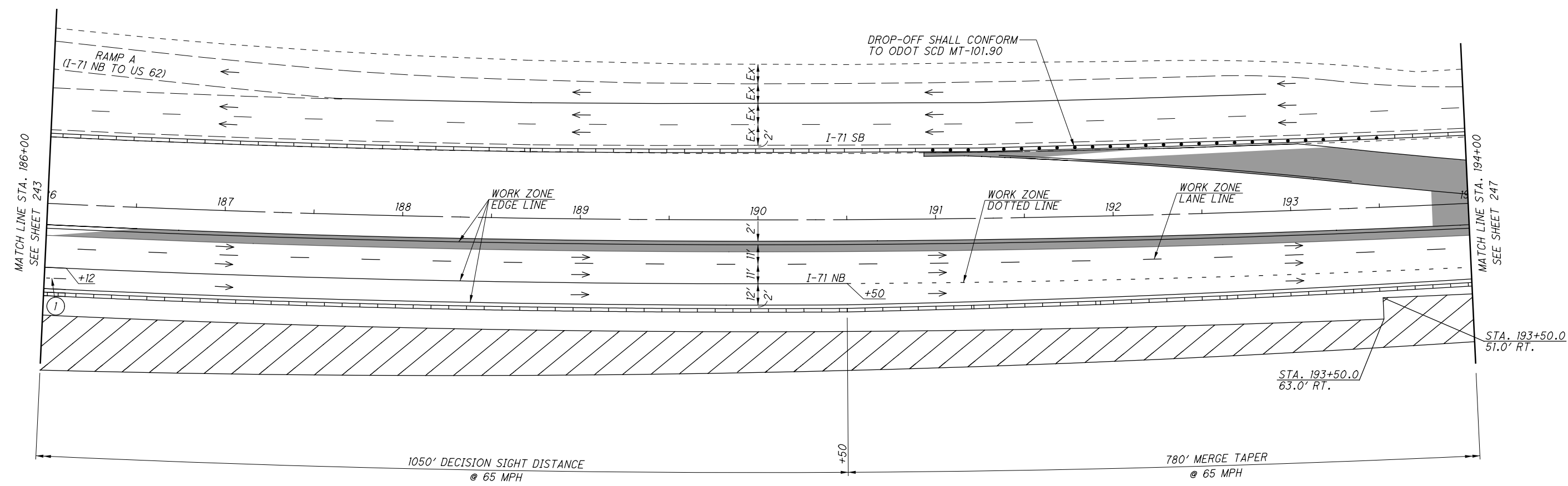
- LEGEND**
- PHASE 2 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

- ① $\Delta = 5^\circ 28' 43''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 149.53'$
 $L = 298.83'$
 $E = 3.58'$
 $C = 398.72'$
 $C.B. = N 84^\circ 08' 42'' E$
- ② $\Delta = 5^\circ 51' 24''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 159.87'$
 $L = 319.46'$
 $E = 4.09'$
 $C = 319.32'$
 $C.B. = N 84^\circ 20' 03'' E$








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NOTES:
 1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



① $\Delta = 6^\circ 06' 15''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 166.74'$
 $L = 333.17'$
 $E = 4.44'$
 $C = 333.17'$
 $C.B. = N 83^\circ 55' 51'' E$

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
-  PHASE 2 WORK ZONE
 -  TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 -  PORTABLE BARRIER
 -  OPEN TRAVEL LANE
 -  DRUM

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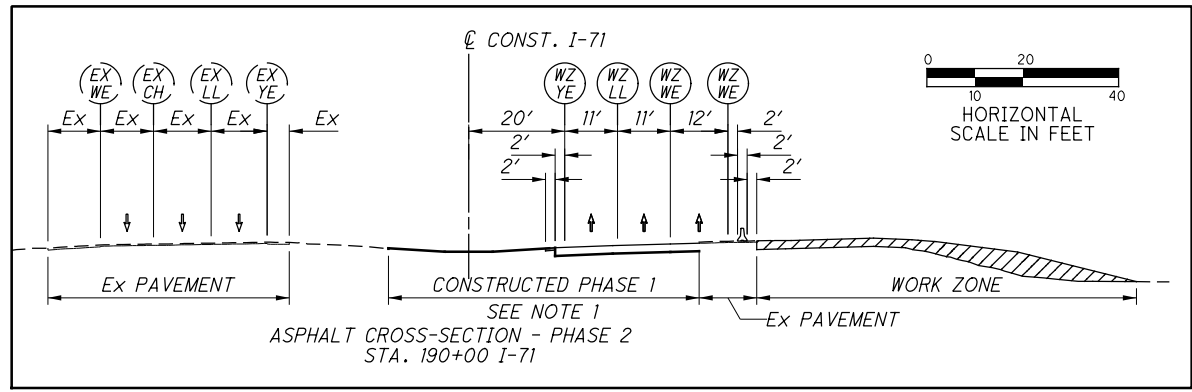
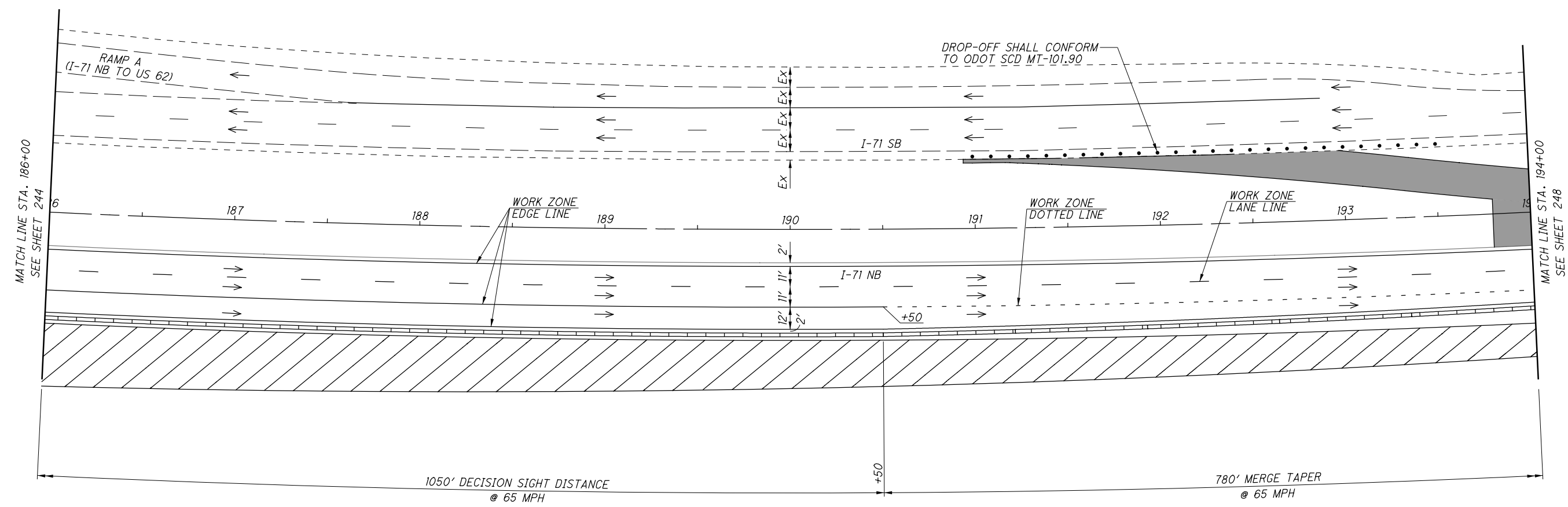
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NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 186+00 TO STA. 194+00**

FRA-71-0:00

246
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE

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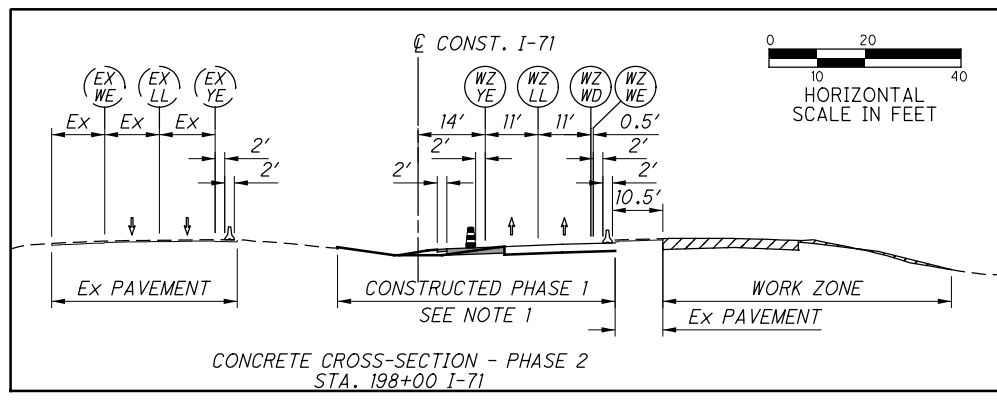
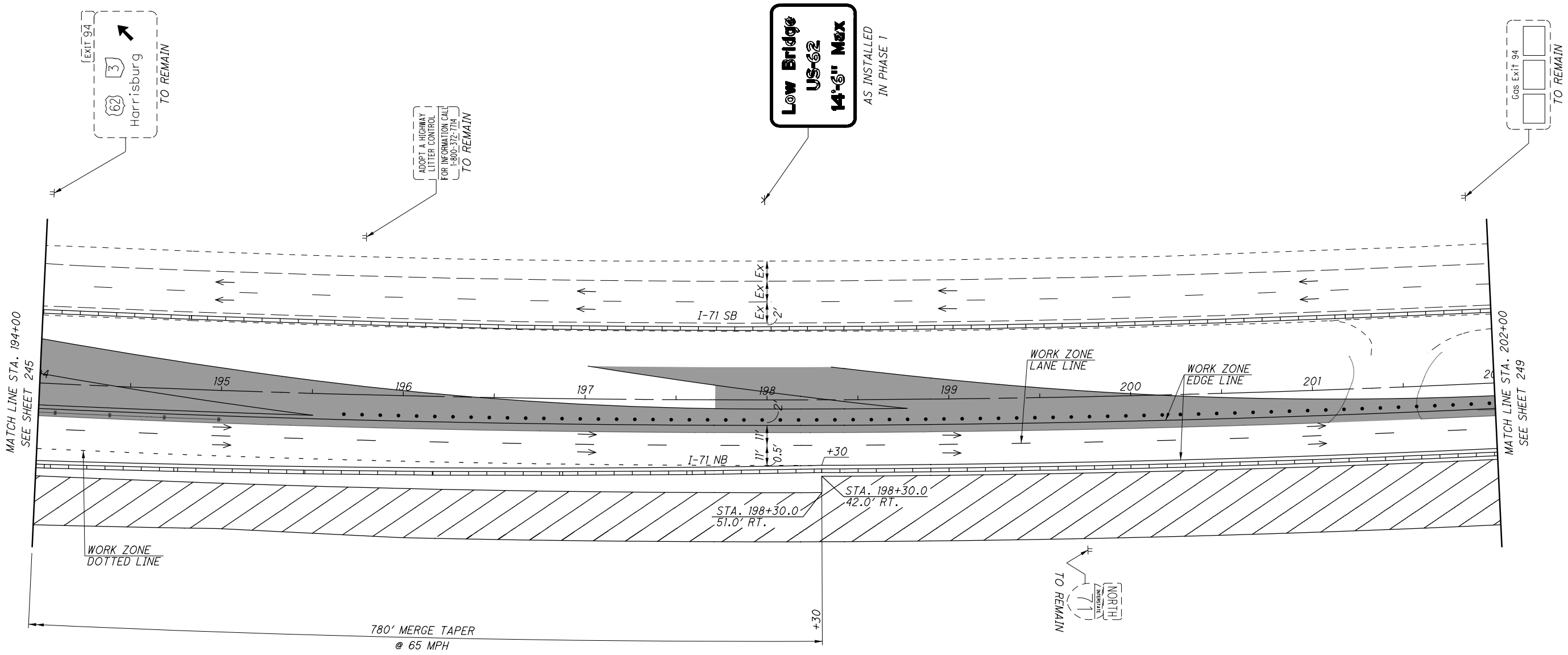
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SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 194+00 TO STA. 202+00**

FRA-71-0:00

247
1312

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADIUS/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM

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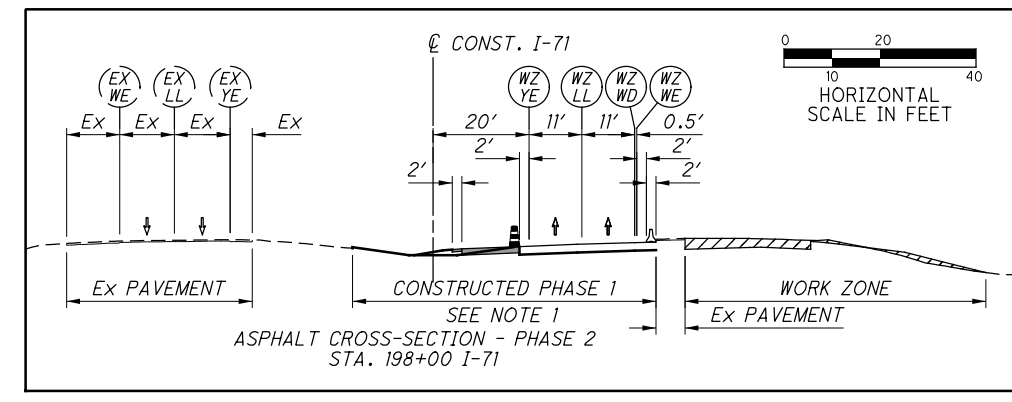
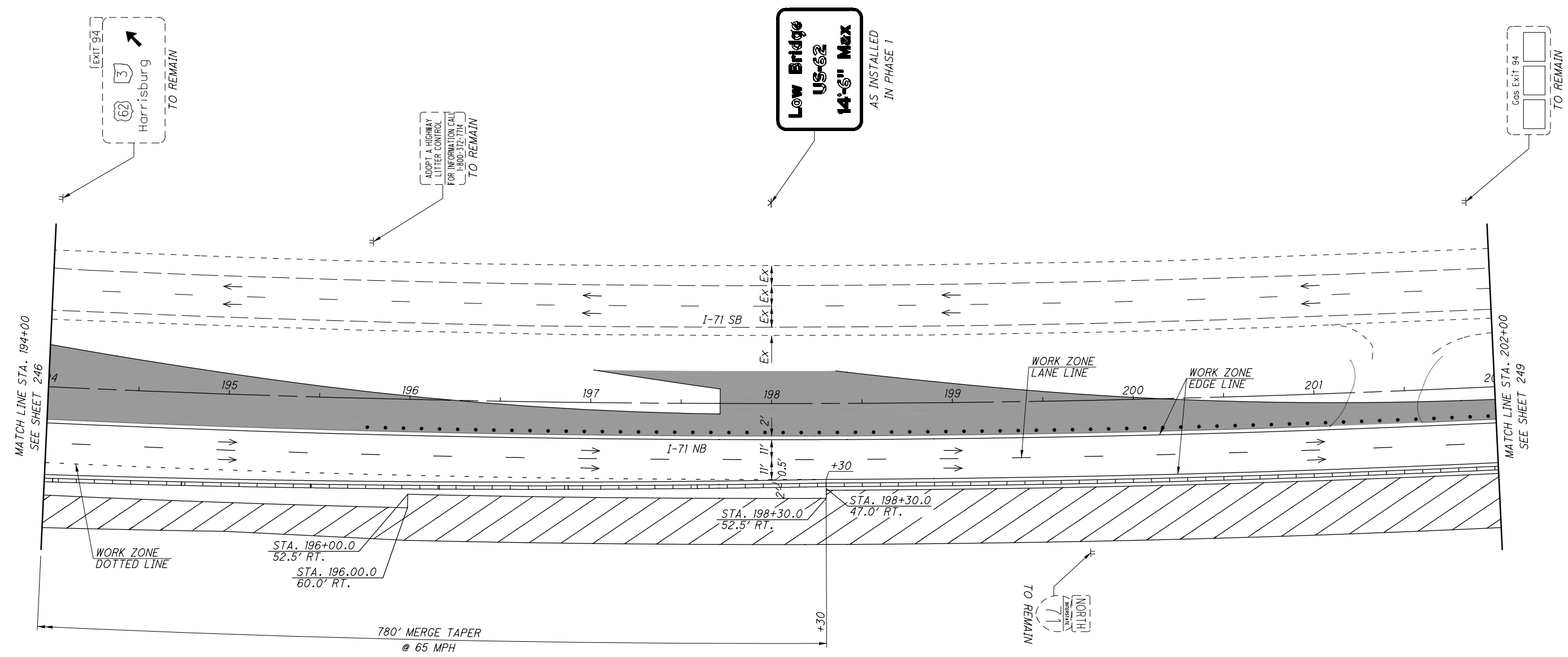


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MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(ASPHALT OPTION) I-71 - STA. 194+00 TO STA. 202+00

FRA-71-0.00

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

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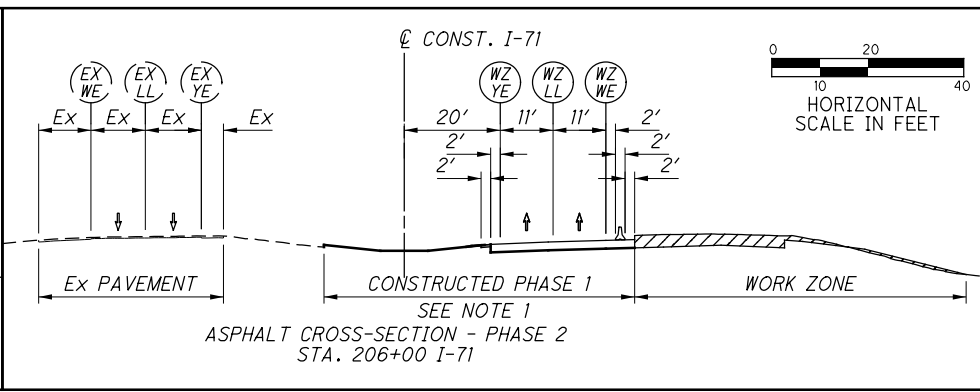
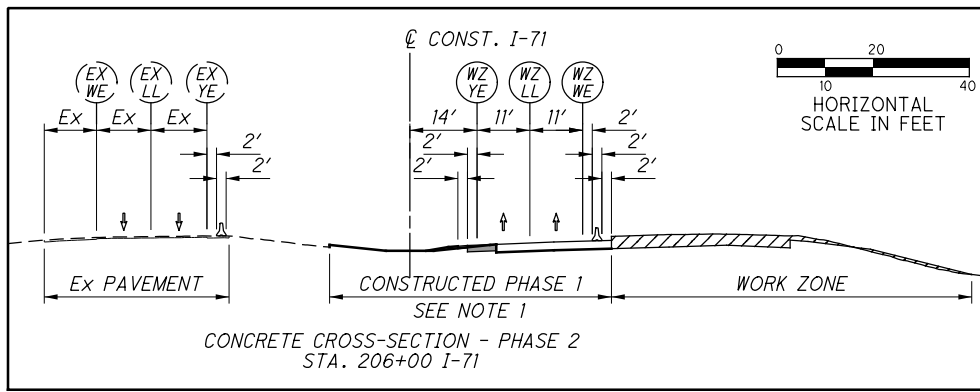
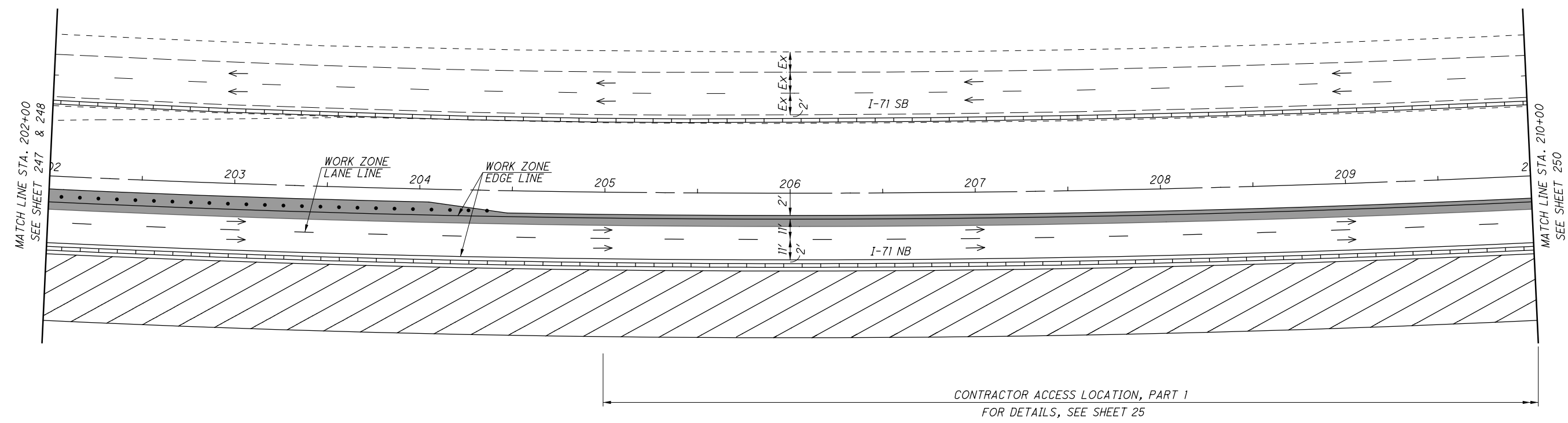
CALCULATED
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NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 202+00 TO STA. 210+00

FRA-71-0.00

249
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE
 - DRUM

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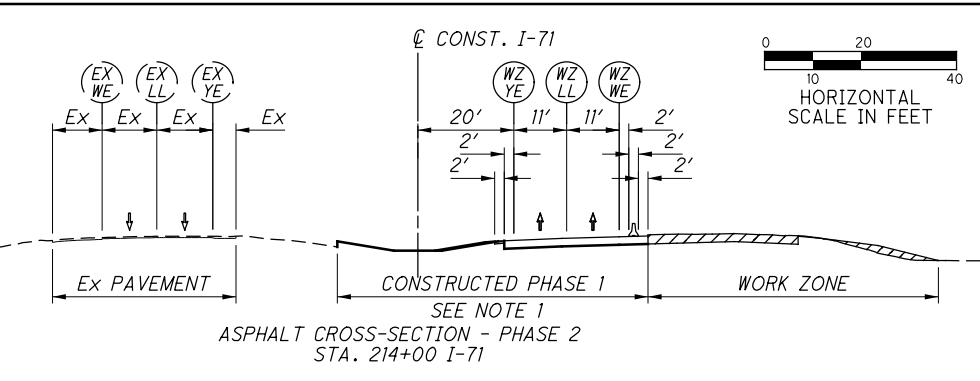
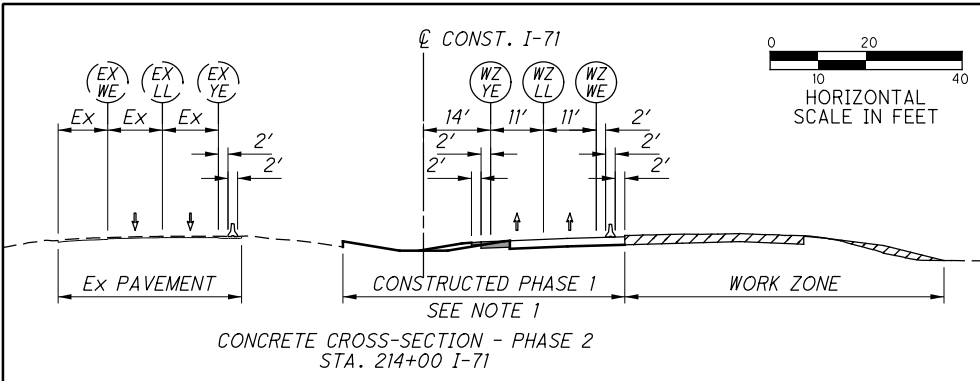
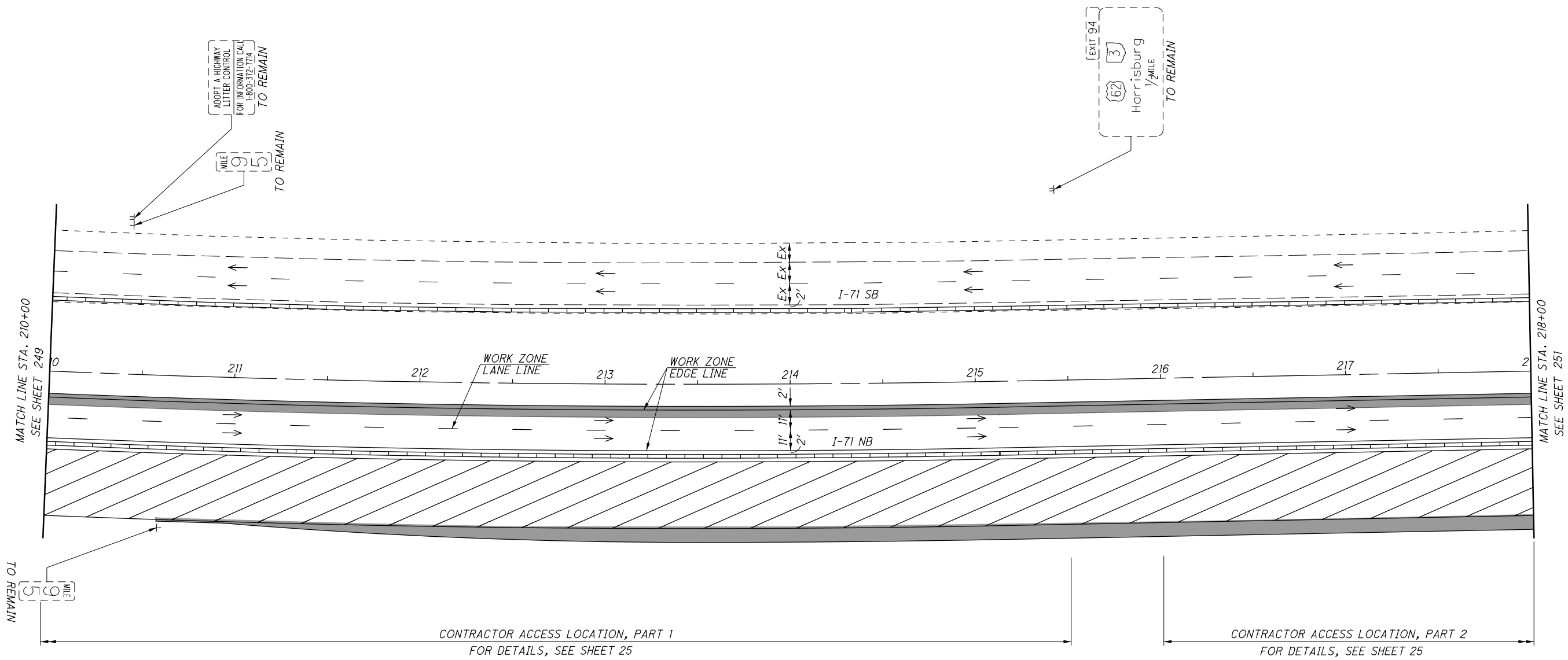
CALCULATED
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CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 210+00 TO STA. 218+00

FRA-71-0.00

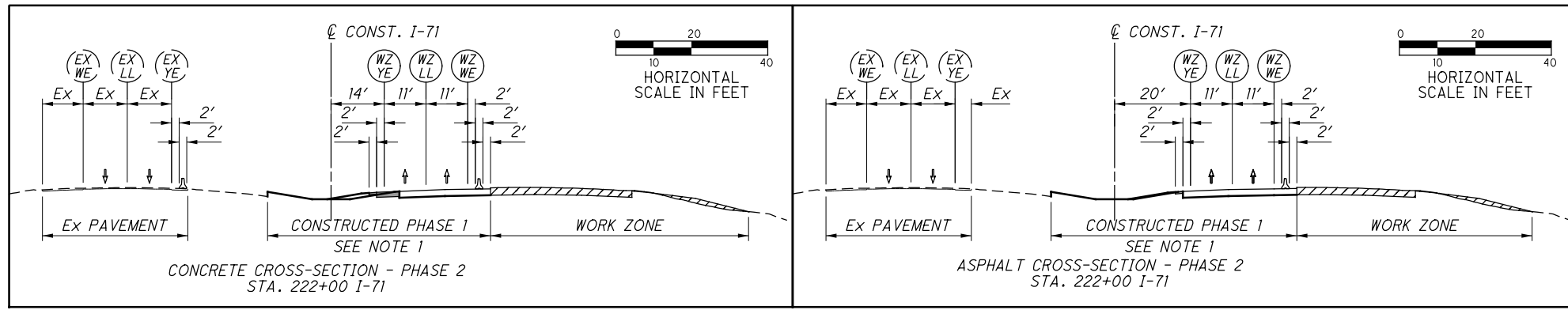
250
1312



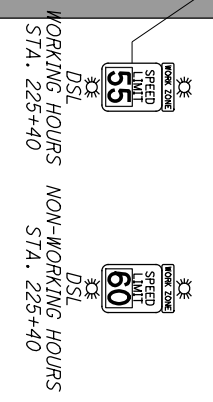
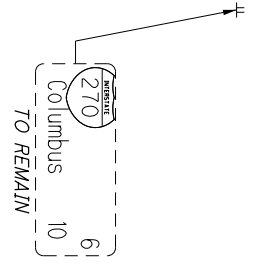
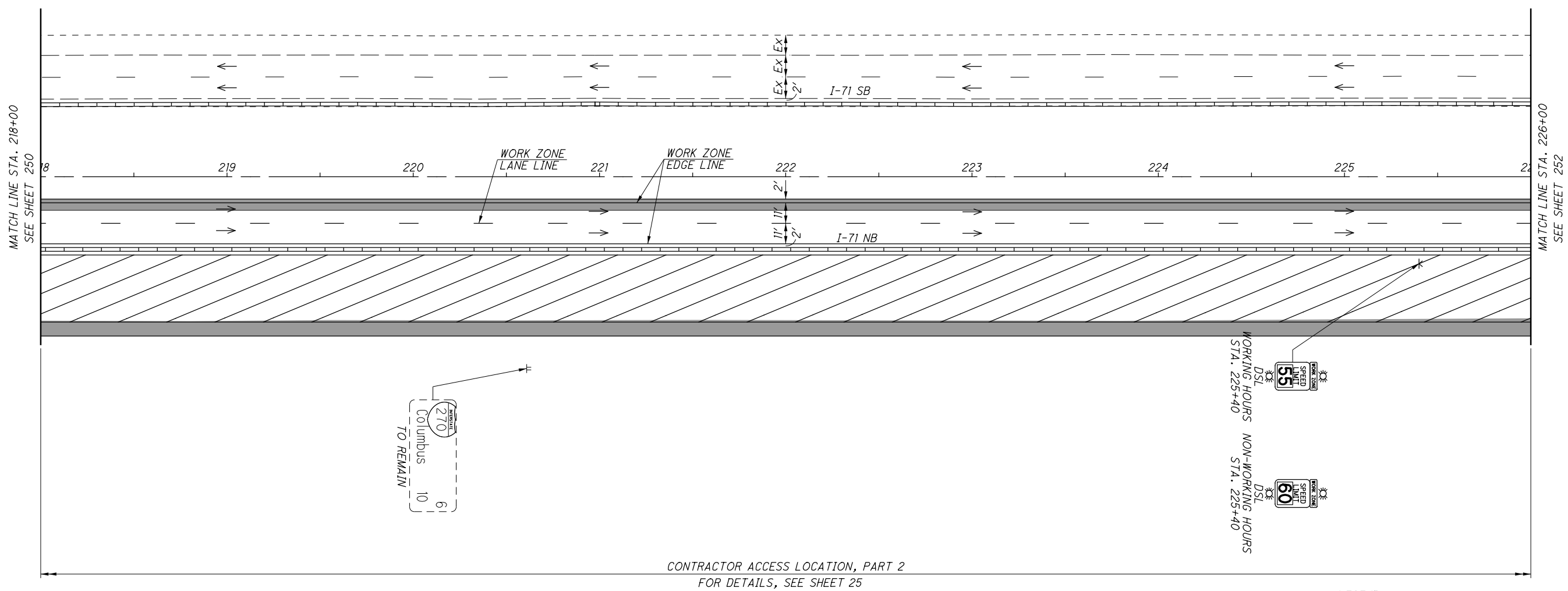
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 218+00 TO STA. 226+00

FRA-71-0.00

251
1312

CALCULATED
BER
CHECKED
SMM



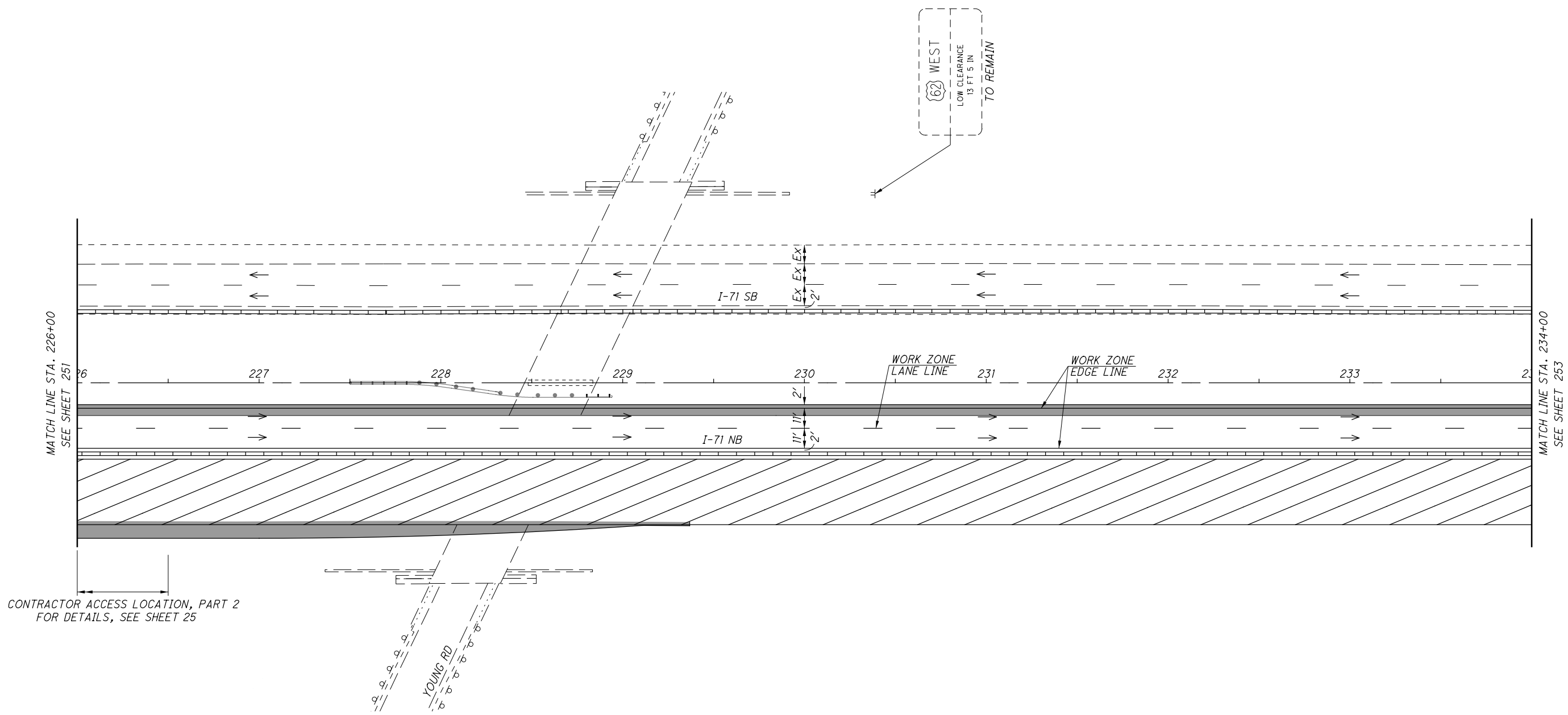
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BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

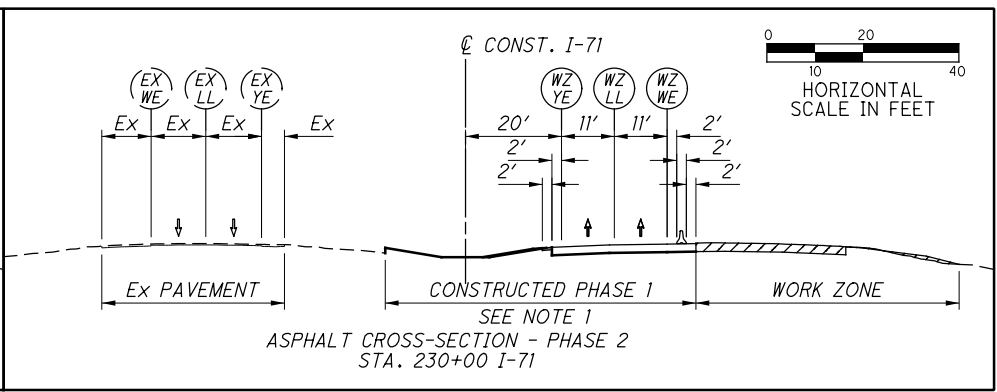
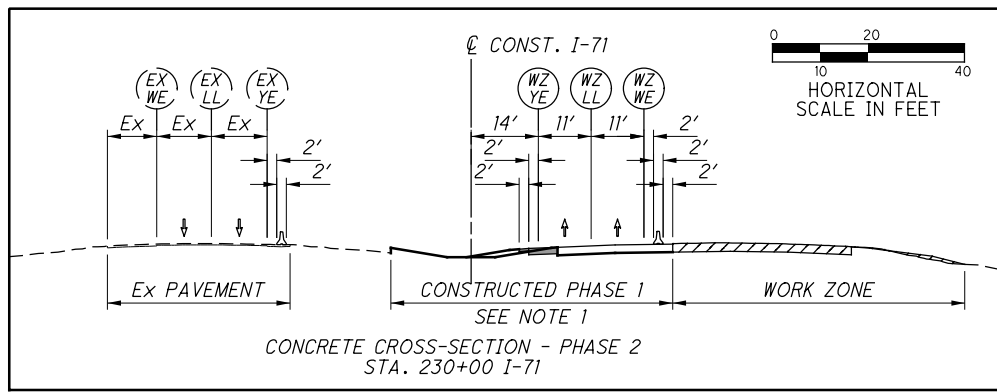
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 226+00 TO STA. 234+00

FRA-71-0:00

252
1312



CONTRACTOR ACCESS LOCATION, PART 2
FOR DETAILS, SEE SHEET 25



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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CALCULATED
BER
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SMM

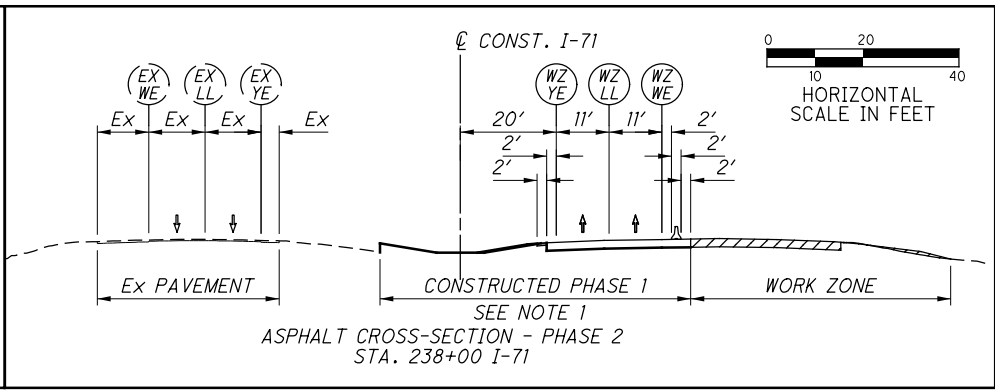
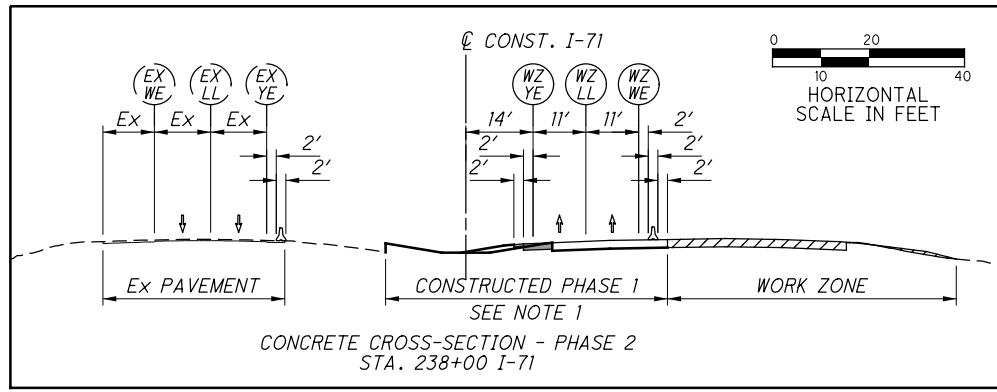
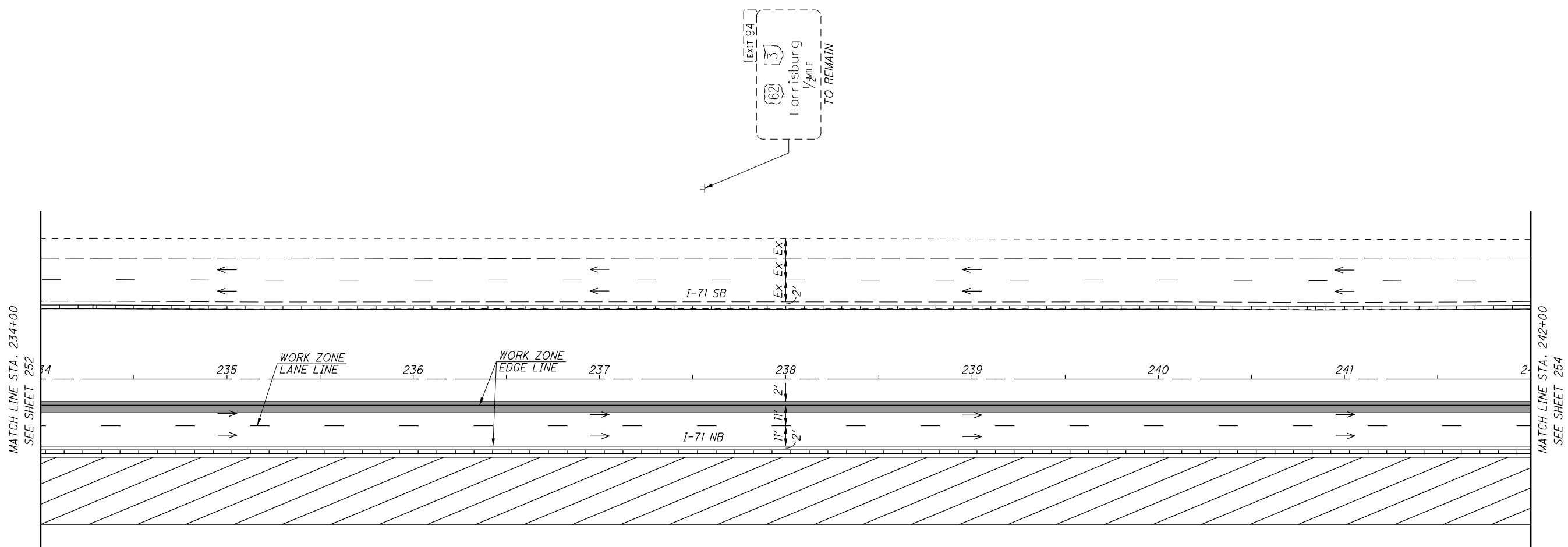
NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 234+00 TO STA. 242+00

FRA-71-0.00

253
1312

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- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



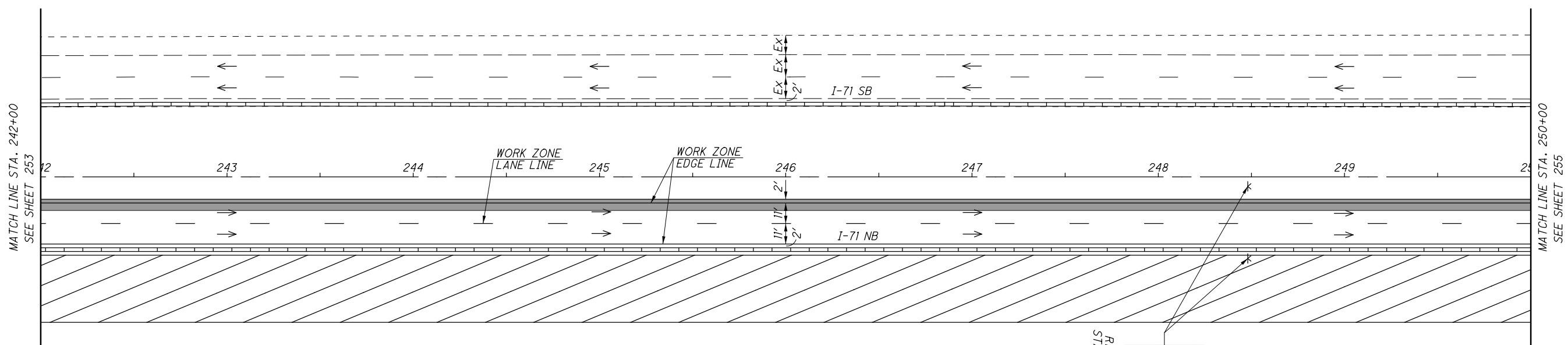
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

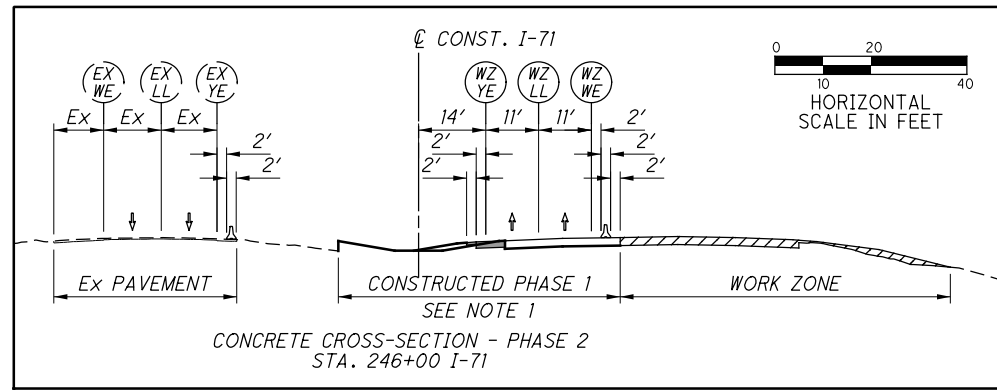
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 242+00 TO STA. 250+00

FRA-71-0.00

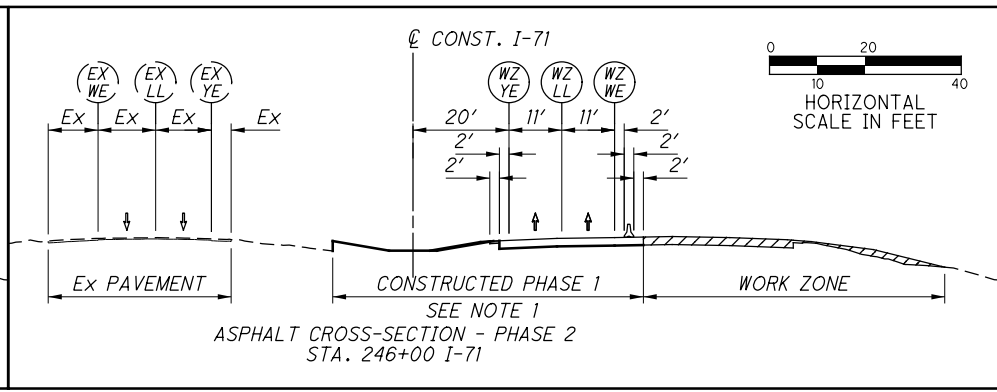
254
1312



R11-H5G-48
STA. 248+48
FINE/JAIL
SPEEDING
FINES
DOUBLED
CRASH BEATH
OR INJURY



CONCRETE CROSS-SECTION - PHASE 2
STA. 246+00 I-71



ASPHALT CROSS-SECTION - PHASE 2
STA. 246+00 I-71

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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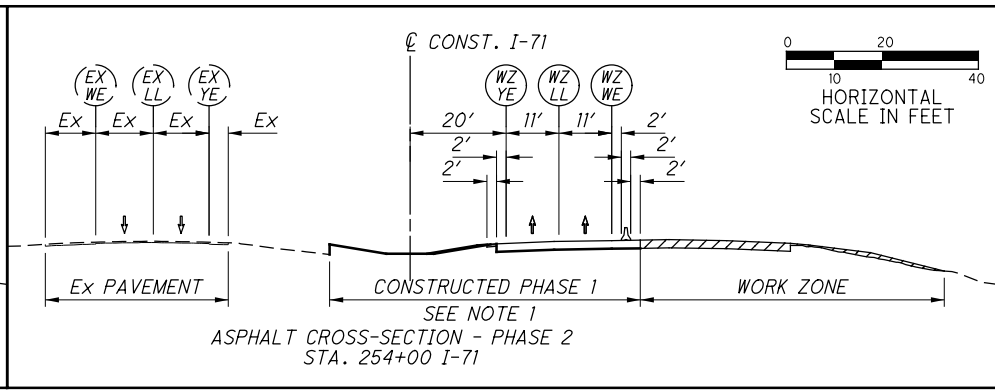
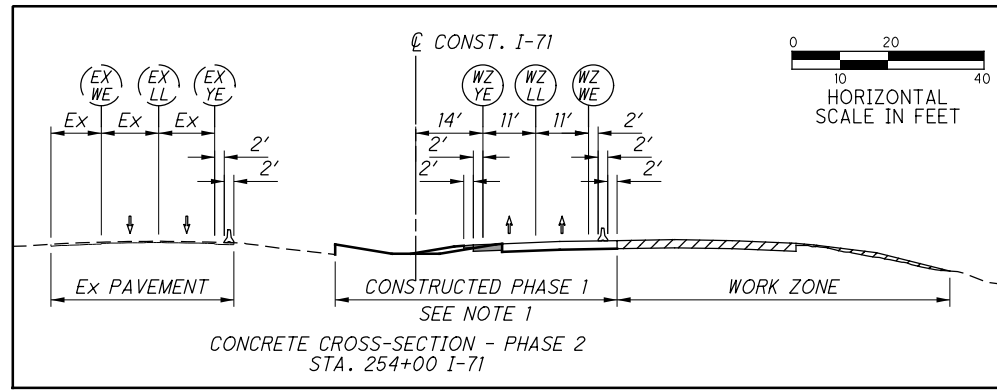
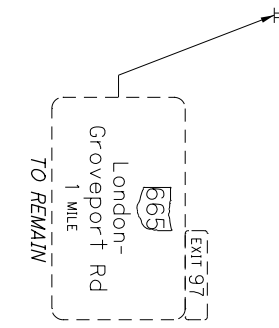
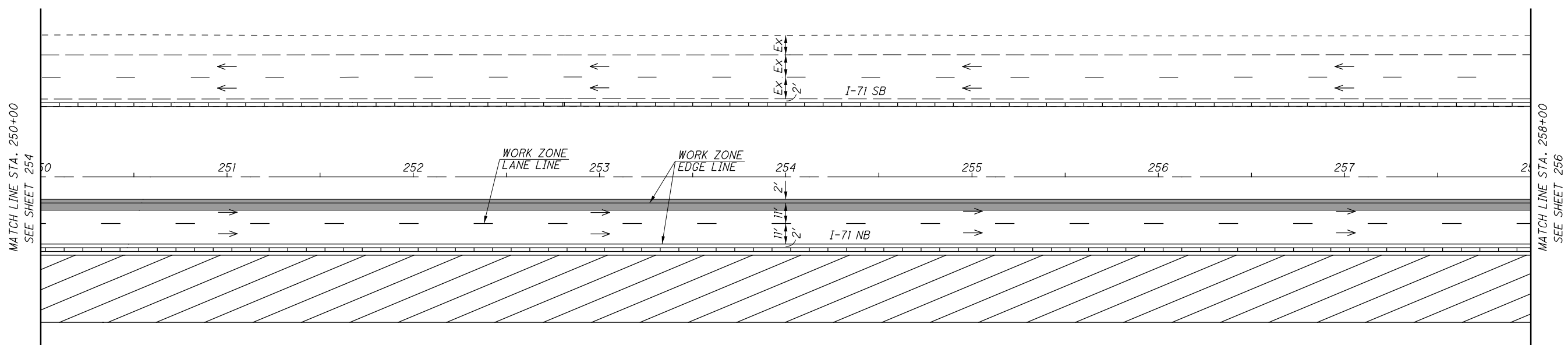
CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 250+00 TO STA. 258+00

FRA-71-0:00

255
1312



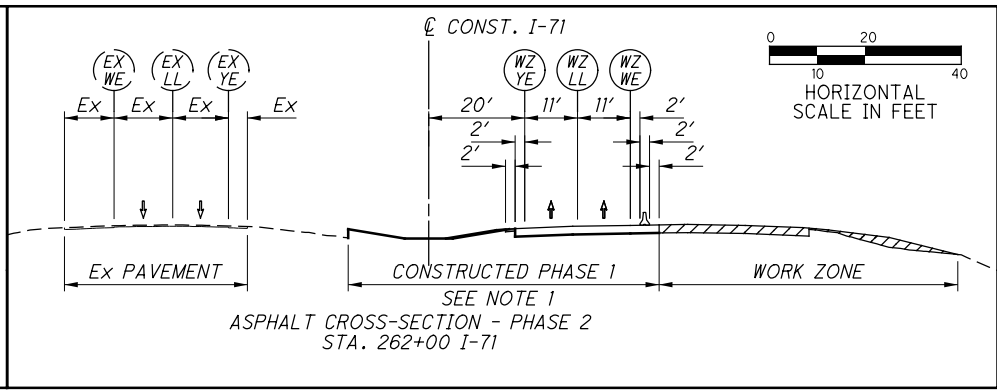
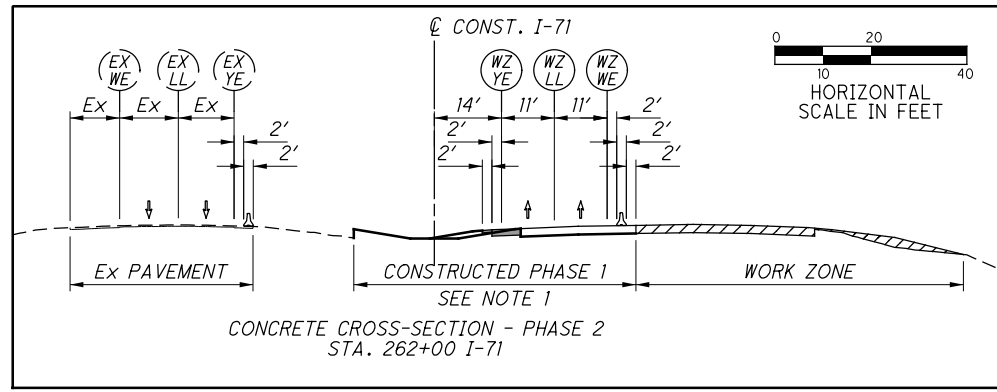
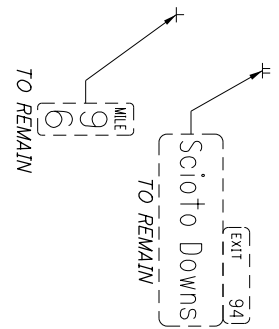
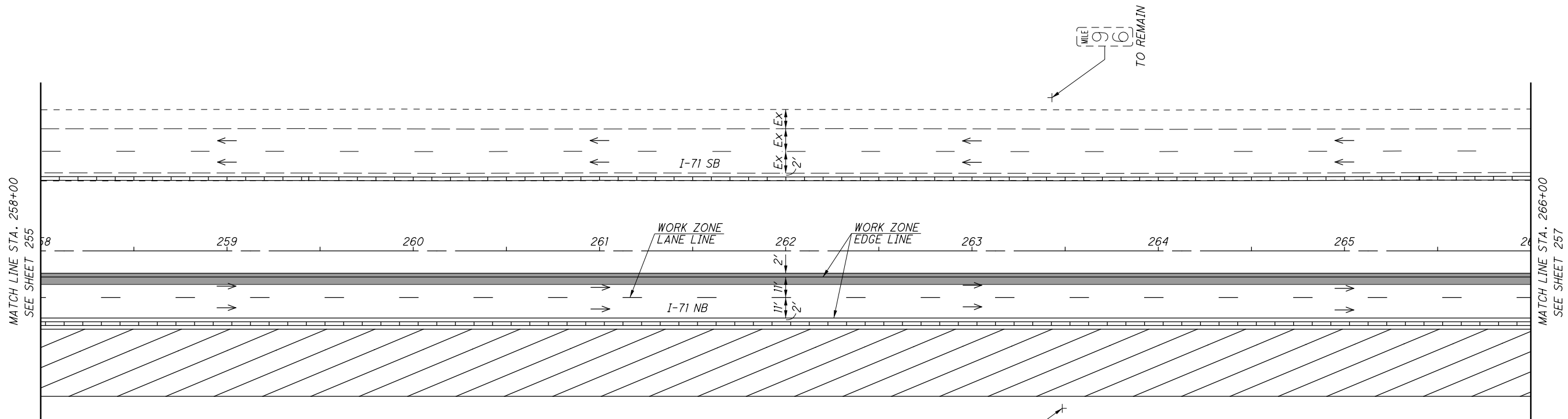
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 258+00 TO STA. 266+00

FRA-71-0.00

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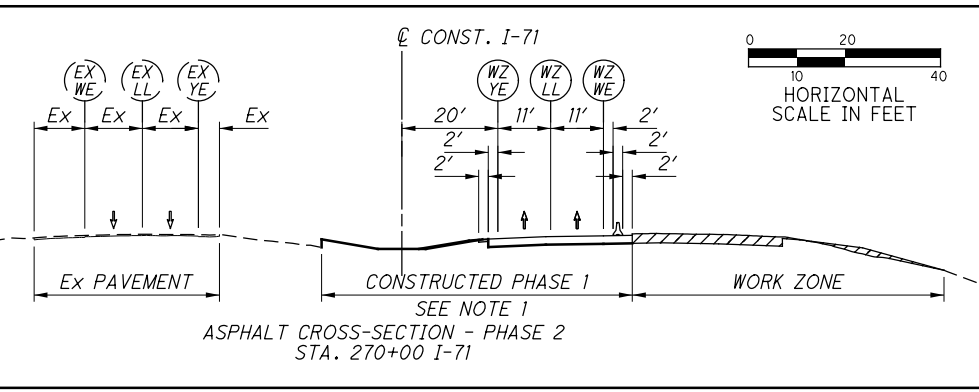
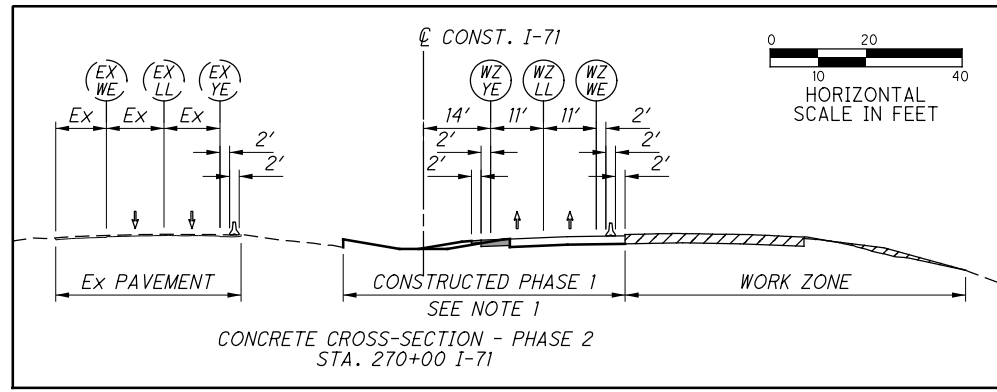
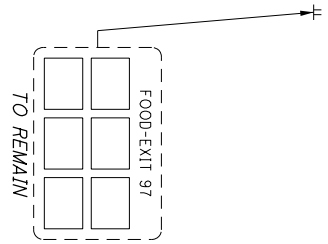
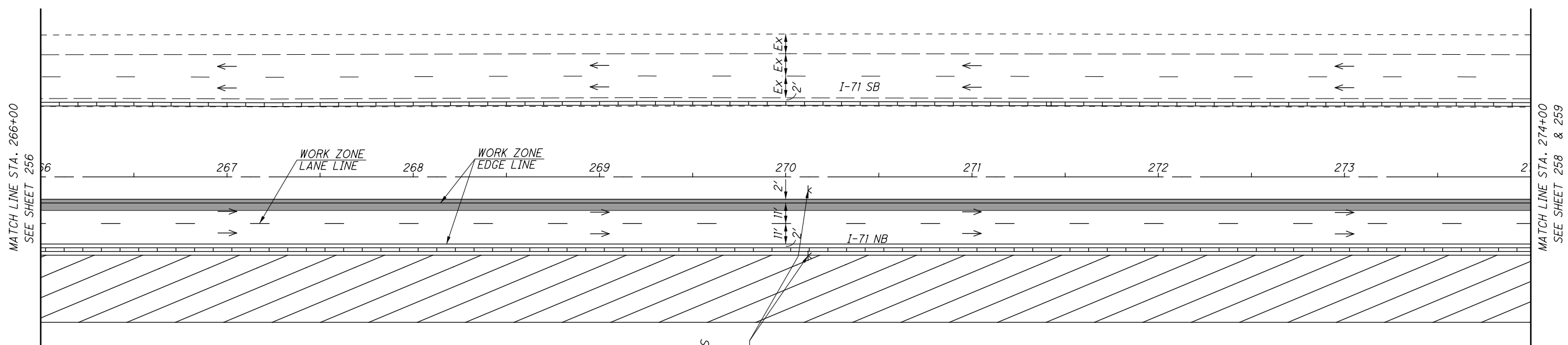


CALCULATED
BER
CHECKED
SMM

NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-71 - STA. 266+00 TO STA. 274+00

FRA-71-0:00



- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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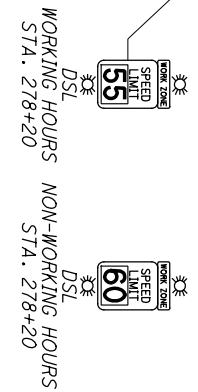
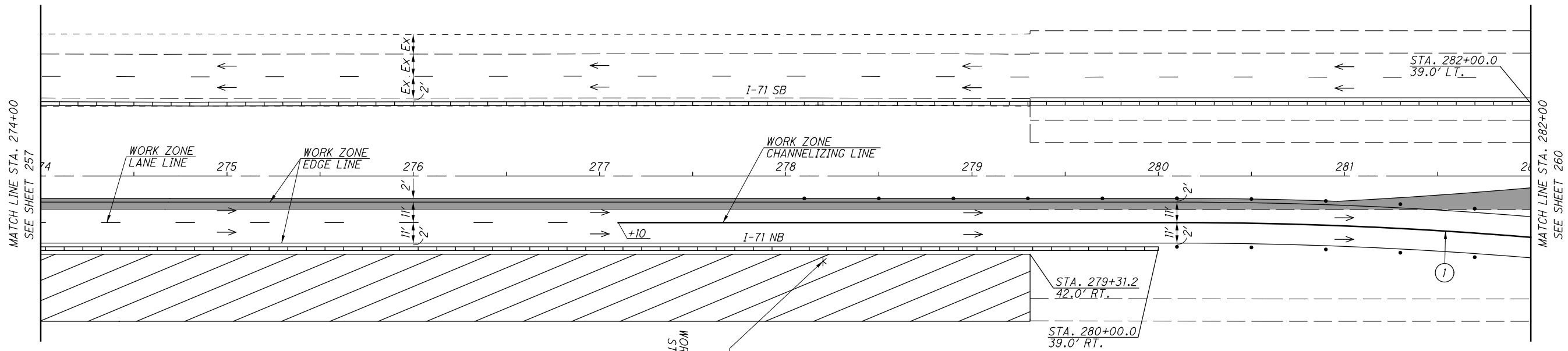


CALCULATED
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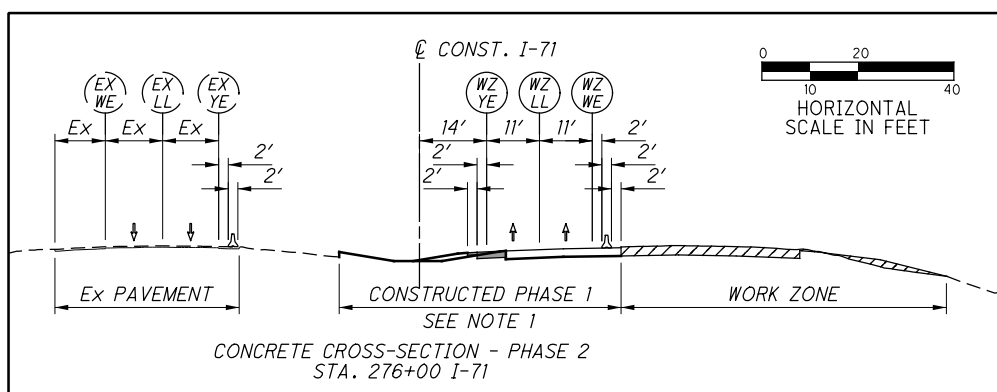
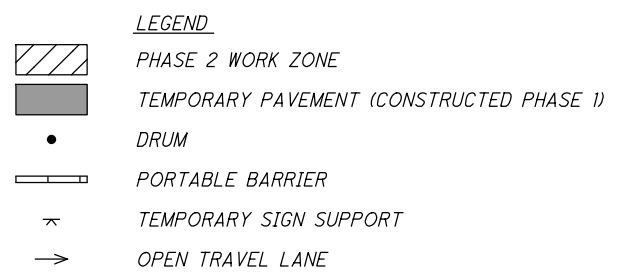
**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
(CONCRETE OPTION) I-71 - STA. 274+00 TO STA. 282+00**

FRA-71-0.00

① $\Delta = 4^\circ 56' 09''$ (RT)
 $D_c = 2^\circ 30' 00''$
 $R = 2292.00'$
 $T = 98.79'$
 $L = 197.46'$
 $E = 2.13'$
 $C = 197.39'$
 $C.B. = N 70^\circ 06' 52'' E$



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

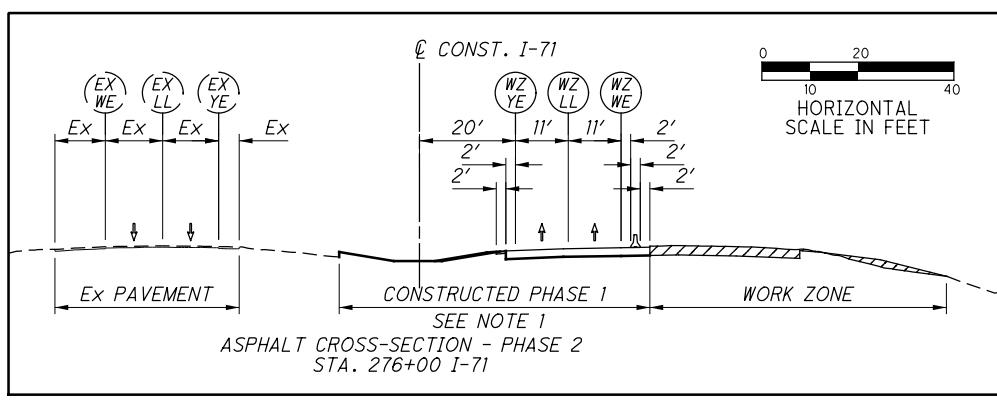
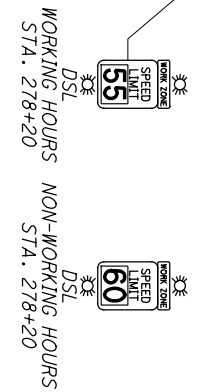
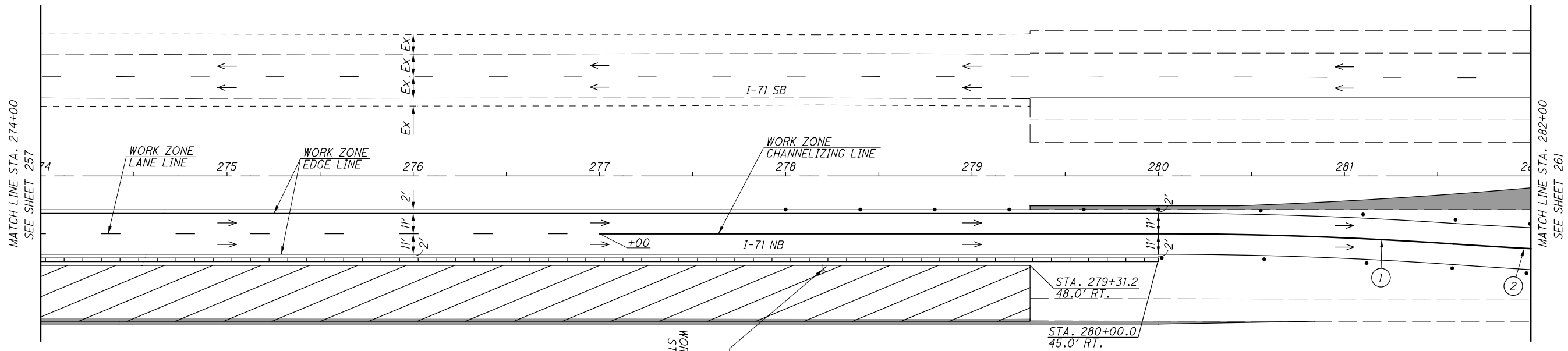


NOTES:
1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
2. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 284+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

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
① $\Delta = 3^\circ 58' 12''$ (RT)
 $D_c = 2^\circ 30' 00''$
 $R = 2292.00'$
 $T = 79.44'$
 $L = 158.82'$
 $E = 1.38'$
 $C = 158.78'$
 $C.B. = N 69^\circ 37' 53'' E$

② $\Delta = 3^\circ 58' 12''$ (LT)
 $D_c = 2^\circ 30' 00''$
 $R = 2292.00'$
 $T = 79.44'$
 $L = 158.82'$
 $E = 1.38'$
 $C = 158.78'$
 $C.B. = N 69^\circ 37' 53'' E$

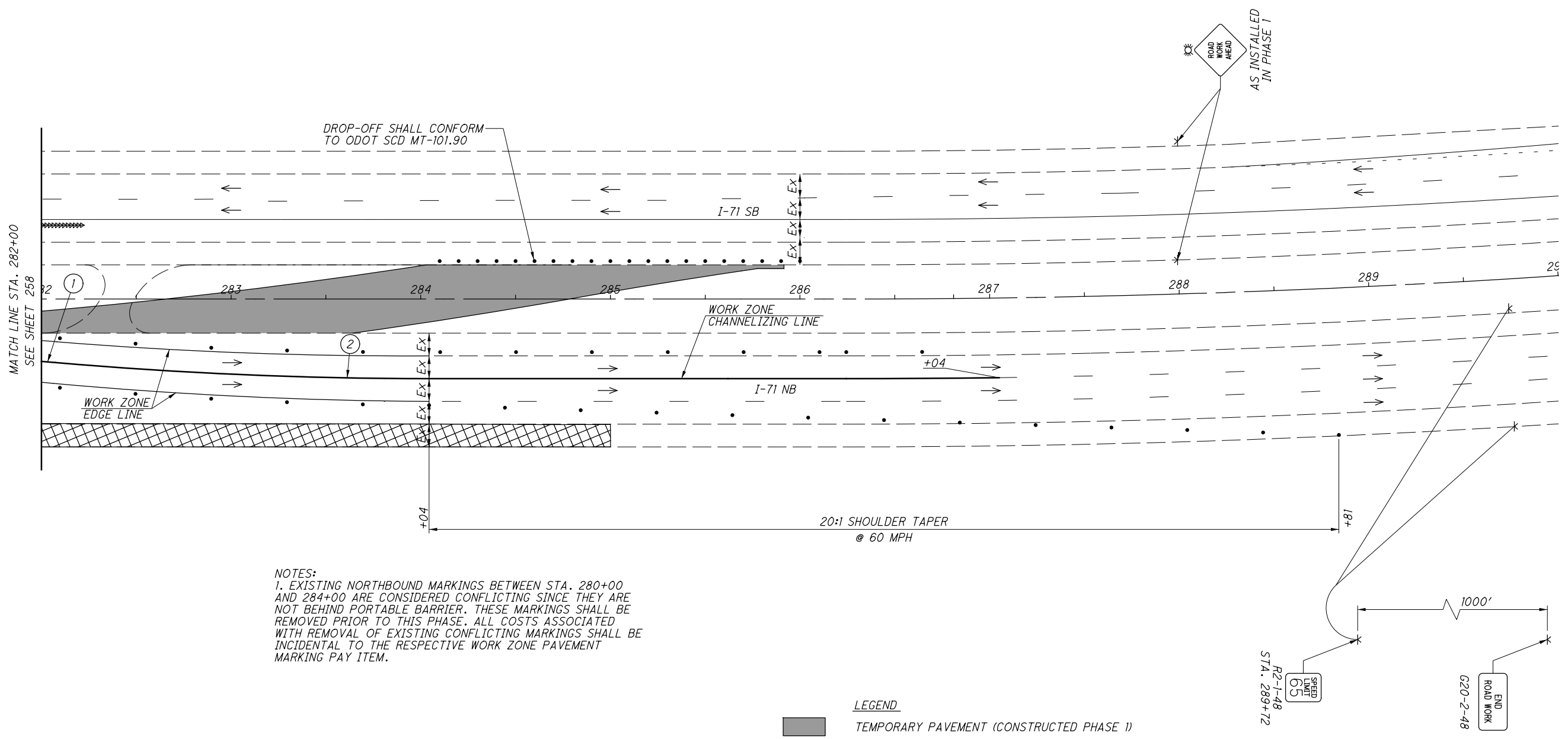


NOTES:
 1. SEE TYPICAL SECTIONS ON SHEET 26 FOR DETAILED PAVEMENT CONSTRUCTION AND REMOVAL WIDTH WITHIN THE WORK ZONE.
 2. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 283+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
-  TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 -  PHASE 2 WORK ZONE
 -  DRUM
 -  PORTABLE BARRIER
 -  TEMPORARY SIGN SUPPORT
 -  OPEN TRAVEL LANE

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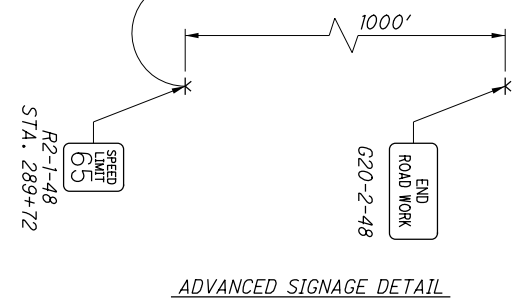


NOTES:
1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 284+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

- ① $\Delta = 4^\circ 56' 09''$ (RT)
 $D_c = 2^\circ 30' 00''$
 $R = 2292.00'$
 $T = 98.79'$
 $L = 197.46'$
 $E = 2.13'$
 $C = 197.39'$
 $C.B. = N 70^\circ 06' 52'' E$
- ② $\Delta = 4^\circ 56' 09''$ (LT)
 $D_c = 2^\circ 30' 00''$
 $R = 2292.00'$
 $T = 98.79'$
 $L = 197.46'$
 $E = 2.13'$
 $C = 197.39'$
 $C.B. = N 70^\circ 06' 52'' E$

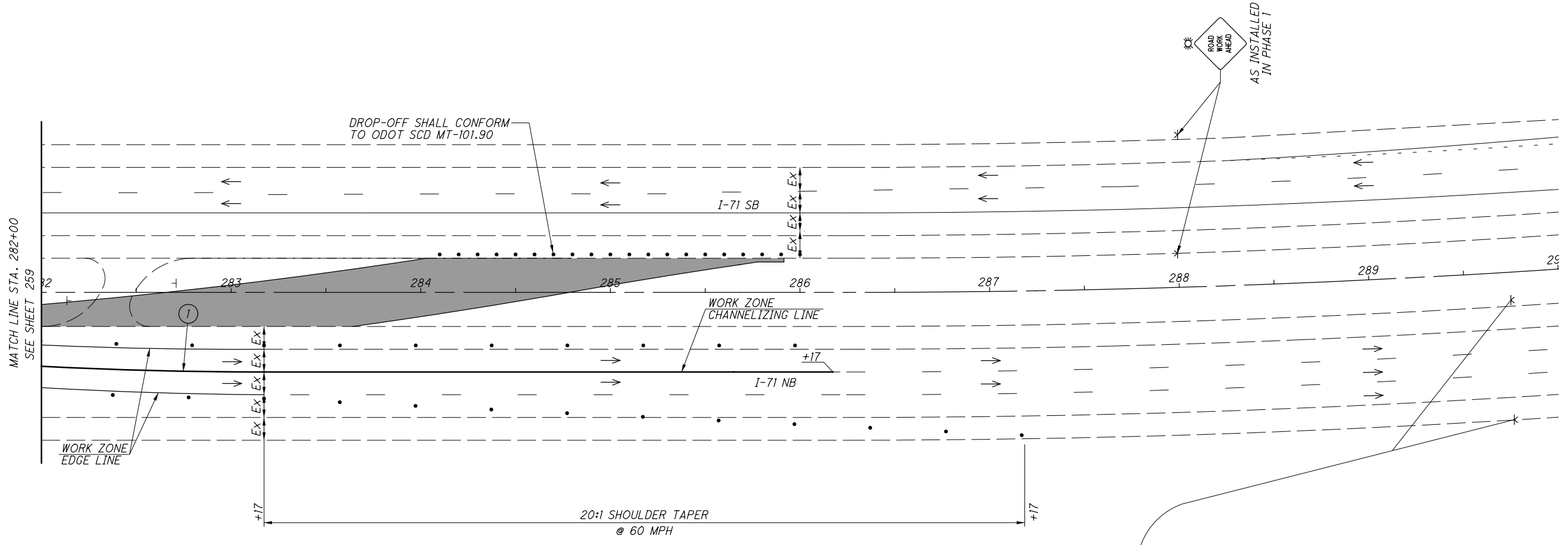
- LEGEND
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



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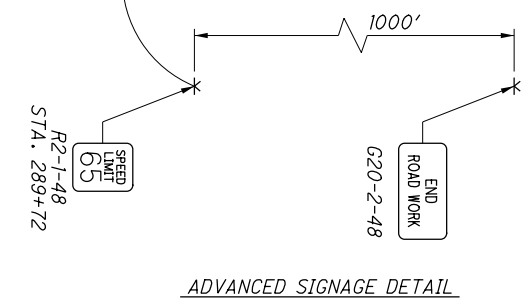
① $\Delta = 3^\circ 58' 12''$ (LT)
 $Dc = 2^\circ 30' 00''$
 $R = 2292.00'$
 $T = 79.44'$
 $L = 158.82'$
 $E = 1.38'$
 $C = 158.78'$
 $C.B. = N 69^\circ 37' 53'' E$



NOTES:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 280+00 AND 283+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



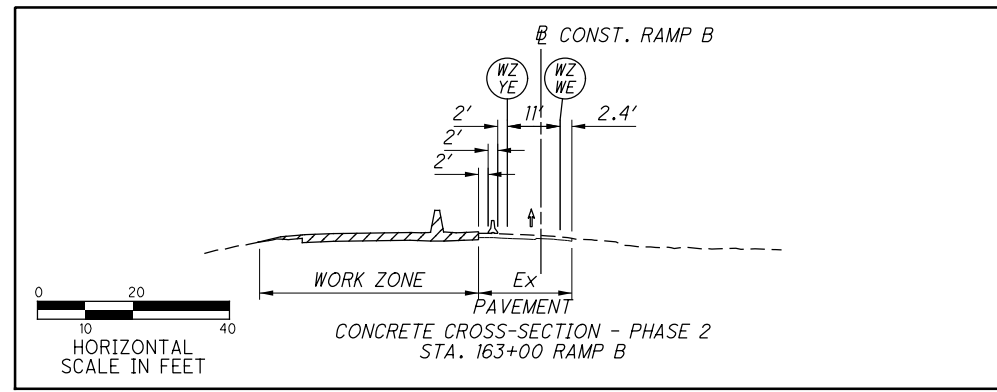
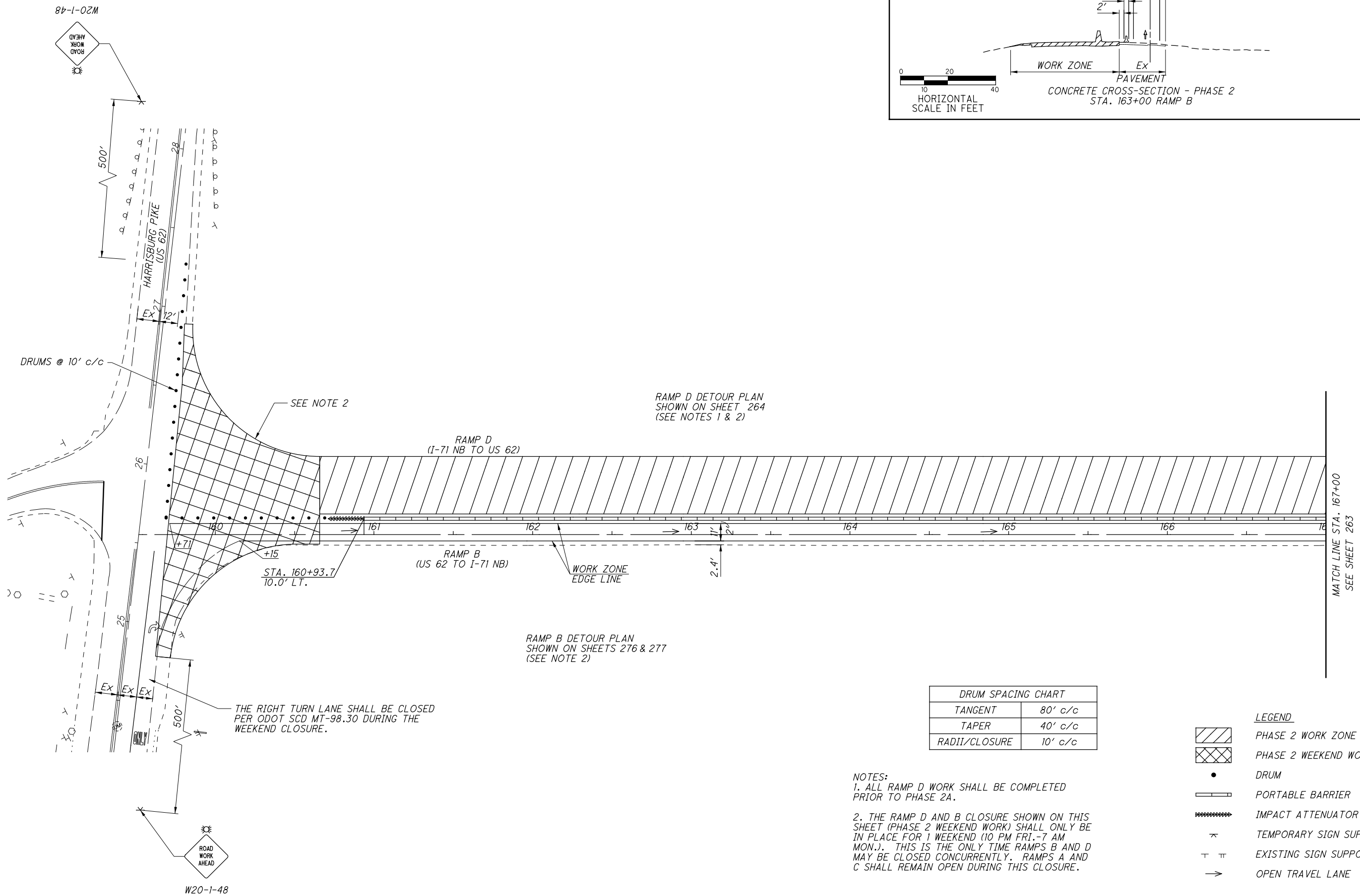
CALCULATED
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MAINTENANCE OF TRAFFIC PLAN - PHASE 2
 (ASPHALT OPTION) I-71 - STA. 282+00 TO STA. 290+00

FRA-71-0.00

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**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
RAMP B - STA. 159+52 TO STA. 167+00**

FRA-71-0.00

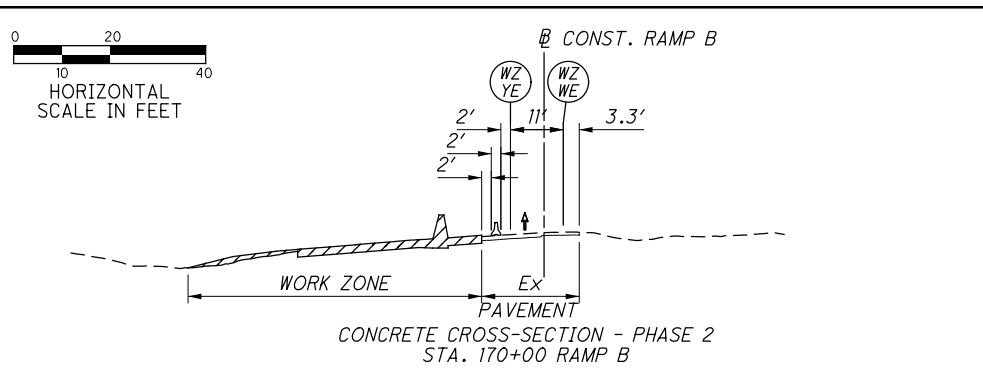
262
1312

CALCULATED
BER
CHECKED
SMM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - PHASE 2 WEEKEND WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

- NOTES:**
- ALL RAMP D WORK SHALL BE COMPLETED PRIOR TO PHASE 2A.
 - THE RAMP D AND B CLOSURE SHOWN ON THIS SHEET (PHASE 2 WEEKEND WORK) SHALL ONLY BE IN PLACE FOR 1 WEEKEND (10 PM FRI.-7 AM MON.). THIS IS THE ONLY TIME RAMPS B AND D MAY BE CLOSED CONCURRENTLY. RAMPS A AND C SHALL REMAIN OPEN DURING THIS CLOSURE.

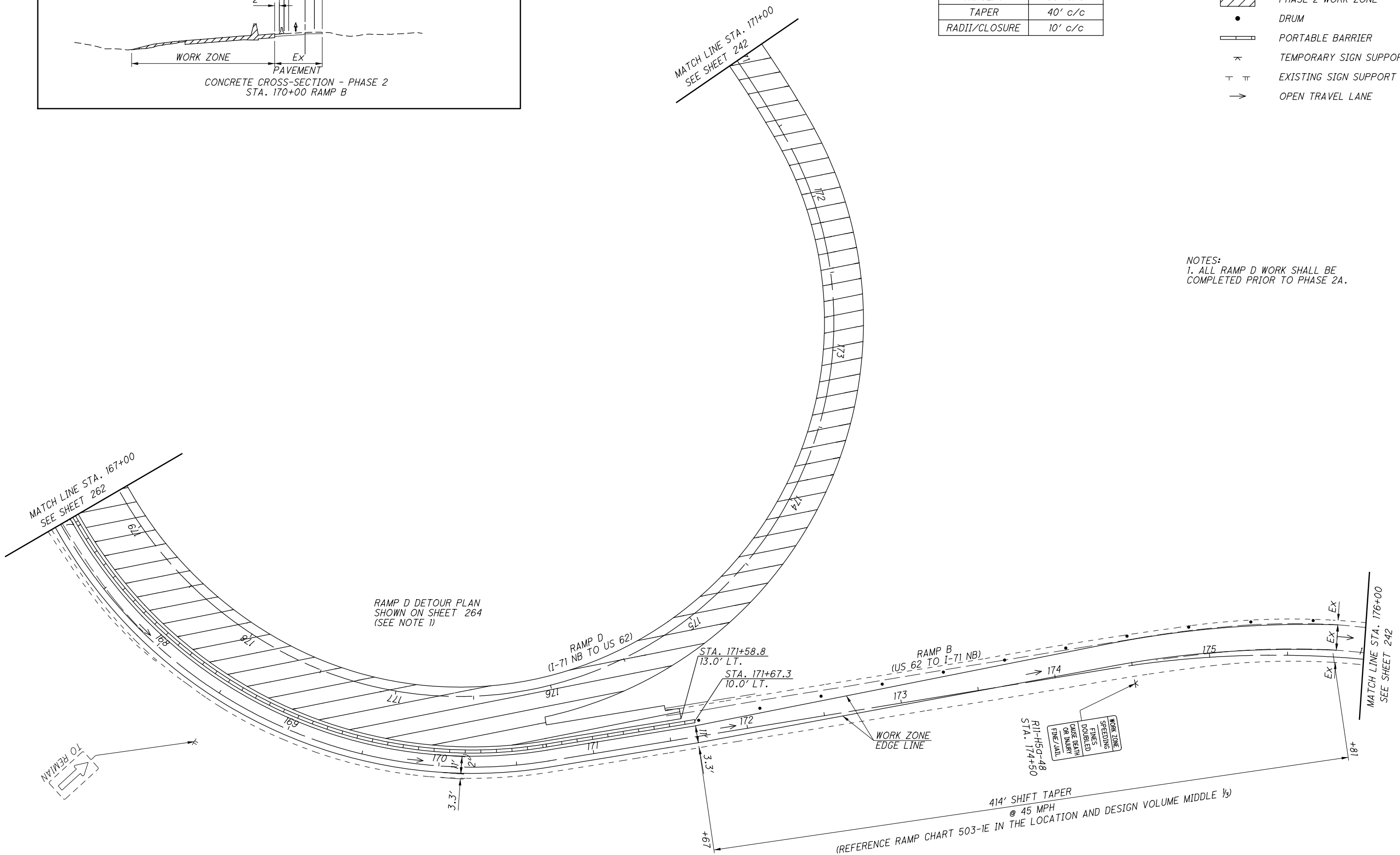


DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTES:
 1. ALL RAMP D WORK SHALL BE COMPLETED PRIOR TO PHASE 2A.

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HORIZONTAL SCALE IN FEET

CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 2

RAMP B - STA. 167+00 TO STA. 176+00

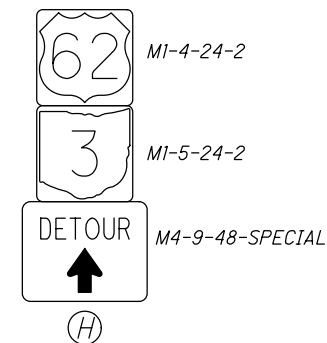
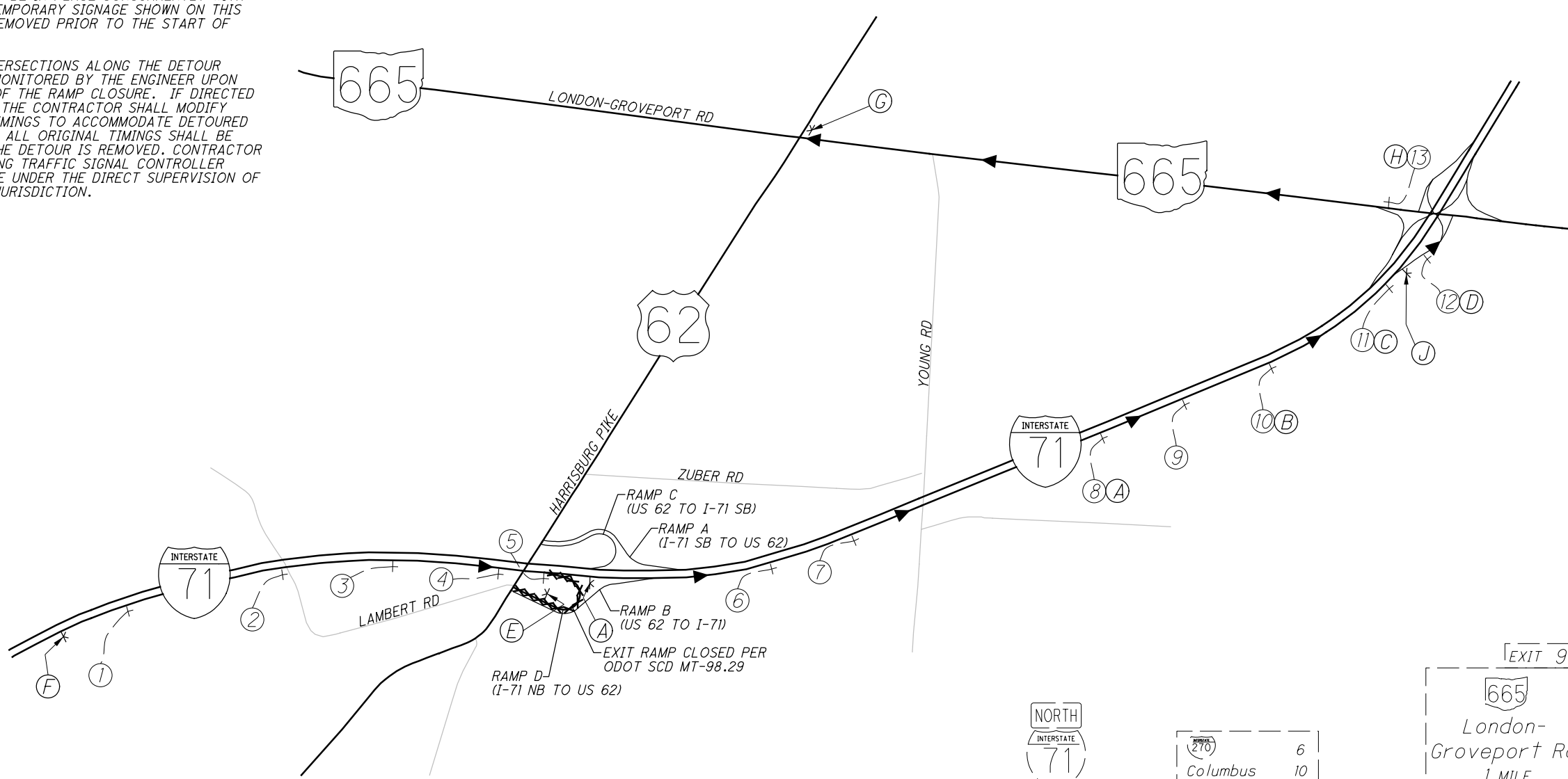
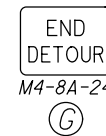
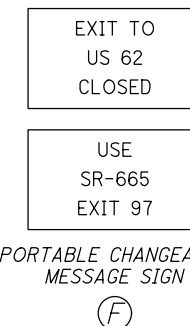
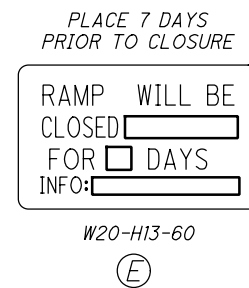
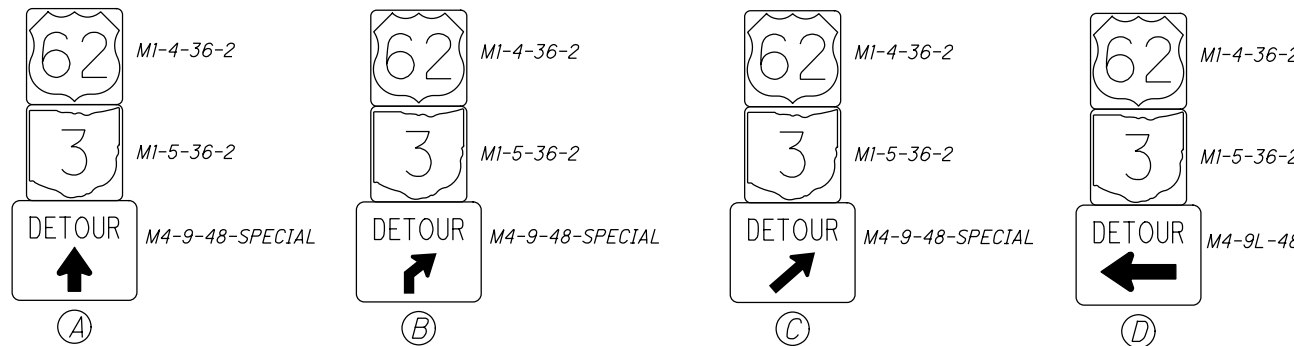
263
 1312

LEGEND

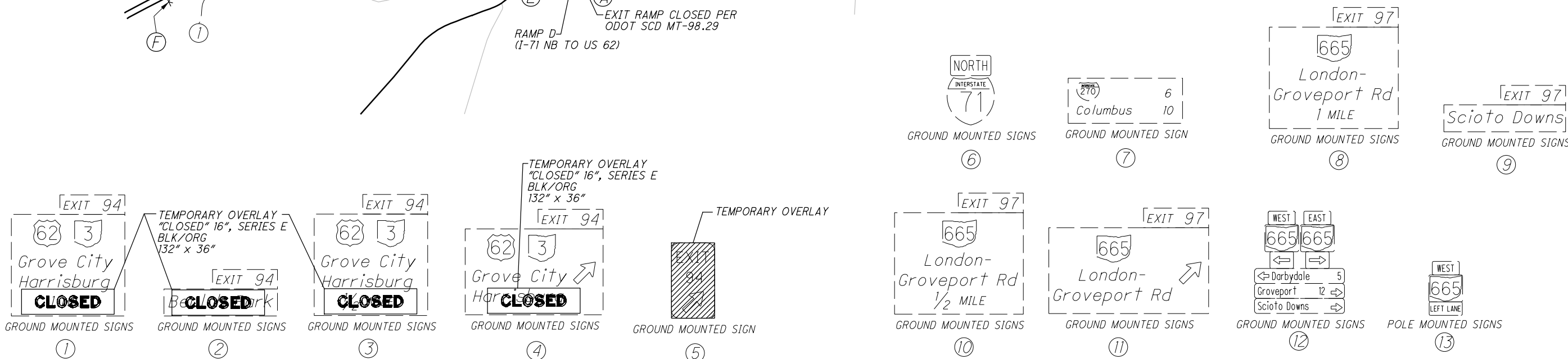
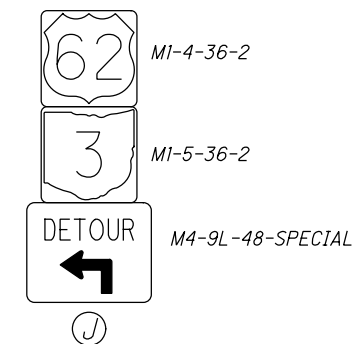
- DETOUR ROUTE - I-71 NB EXIT TO US 62 (RAMP D)
- X RAMP CLOSURE
- + EXISTING SIGN
- * TEMPORARY SIGN

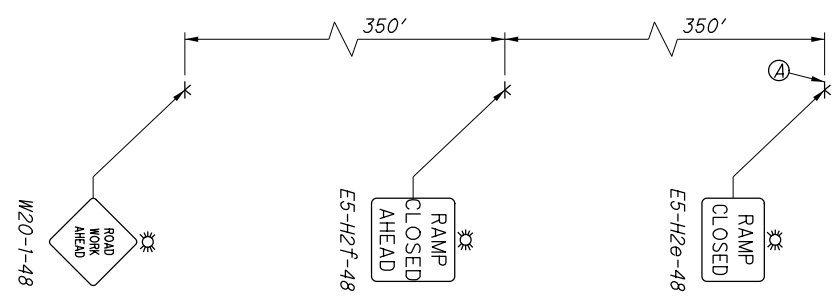
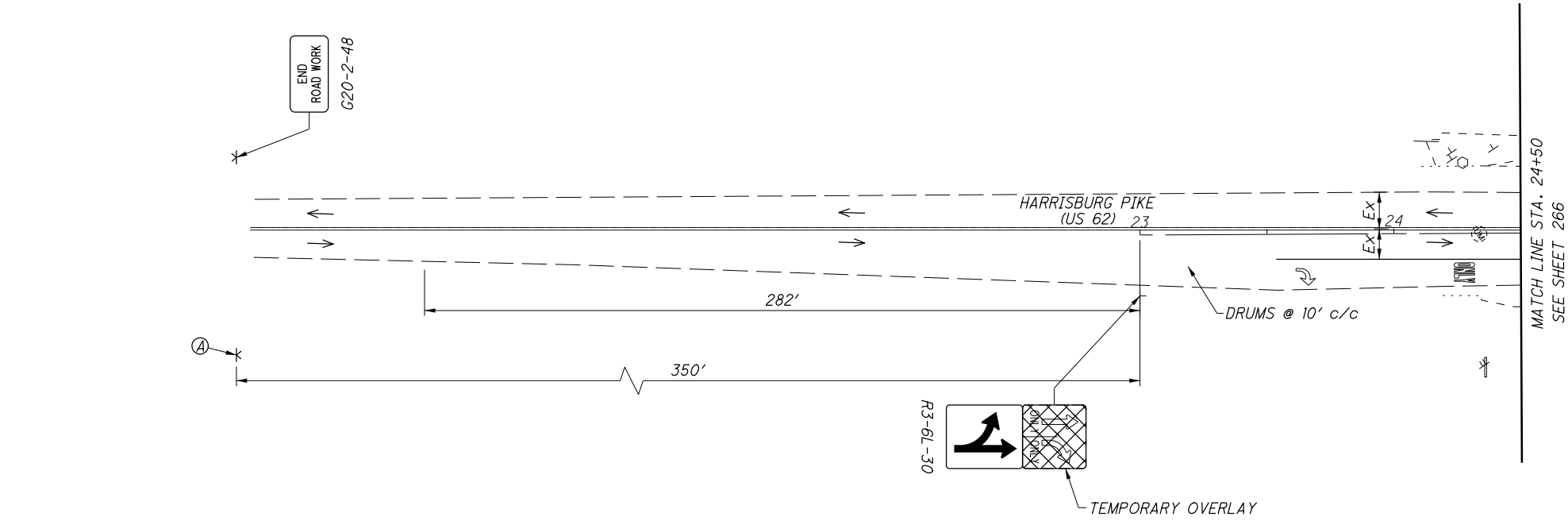
NOTES:
 1. PHASE 2 CLOSURE OF RAMP D SHALL BE IN PLACE FOR THE DURATION OF PHASE 2, EXCEPT THAT THIS DETOUR SHALL NOT BE IN PLACE CONCURRENTLY WITH PHASE 2A. ALL TEMPORARY SIGNAGE SHOWN ON THIS SHEET SHALL BE REMOVED PRIOR TO THE START OF PHASE 2A.

2. SIGNALIZED INTERSECTIONS ALONG THE DETOUR ROUTE SHALL BE MONITORED BY THE ENGINEER UPON IMPLEMENTATION OF THE RAMP CLOSURE. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MODIFY TRAFFIC SIGNAL TIMINGS TO ACCOMMODATE DETOURED TRAFFIC VOLUMES. ALL ORIGINAL TIMINGS SHALL BE RESTORED ONCE THE DETOUR IS REMOVED. CONTRACTOR ACCESS TO EXISTING TRAFFIC SIGNAL CONTROLLER CABINETS SHALL BE UNDER THE DIRECT SUPERVISION OF THE MAINTAINING JURISDICTION.



NOT USED
I





ADVANCED SIGNAGE DETAIL

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- DRUM
 - * TEMPORARY SIGN SUPPORT
 - ⊥ EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
US 62 - STA. 23+00 TO STA. 24+50

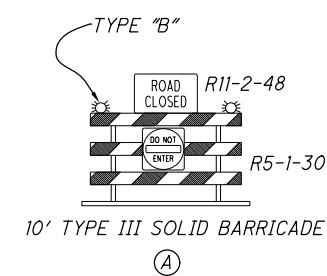
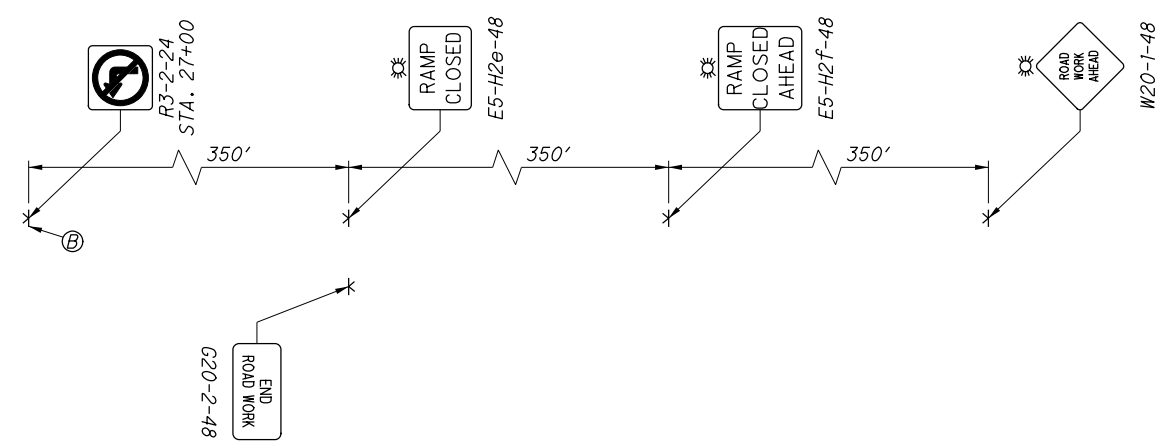
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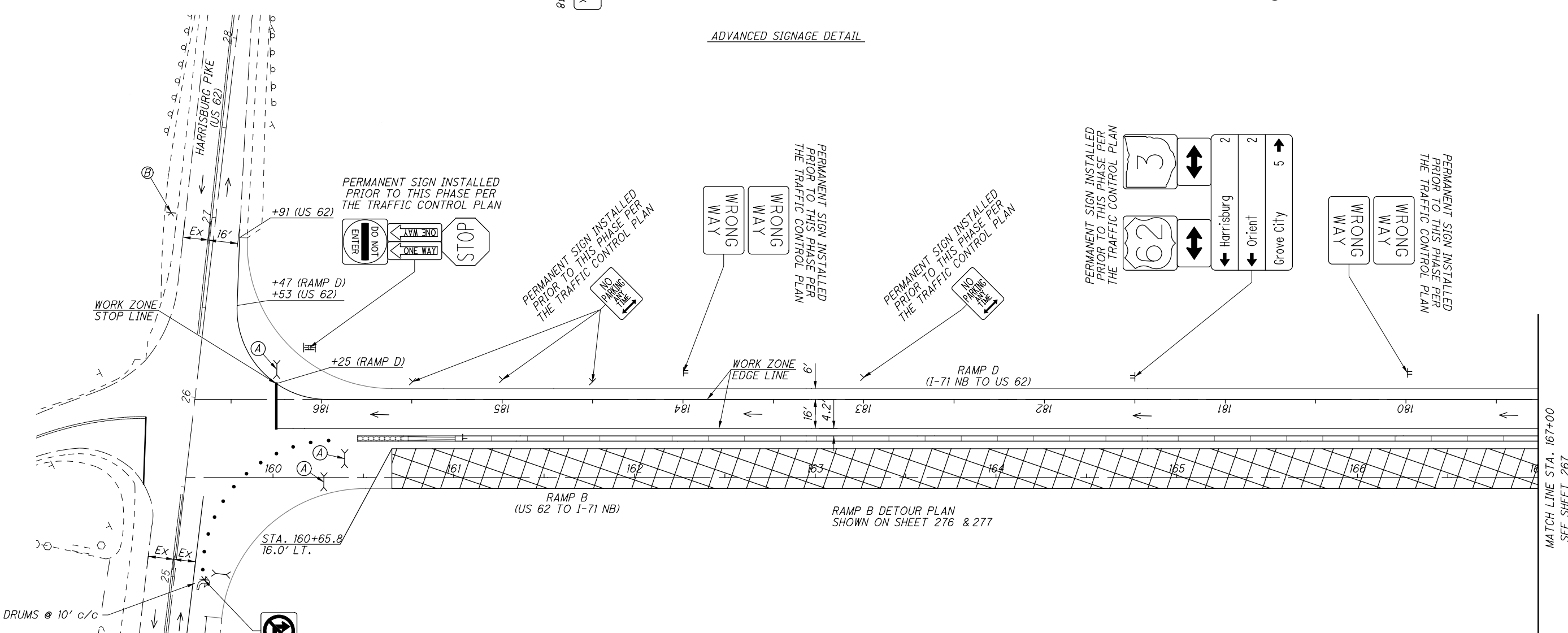


MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
RAMP B - STA. 159+52 TO STA. 167+00

FRA-71-0.00
266
1312

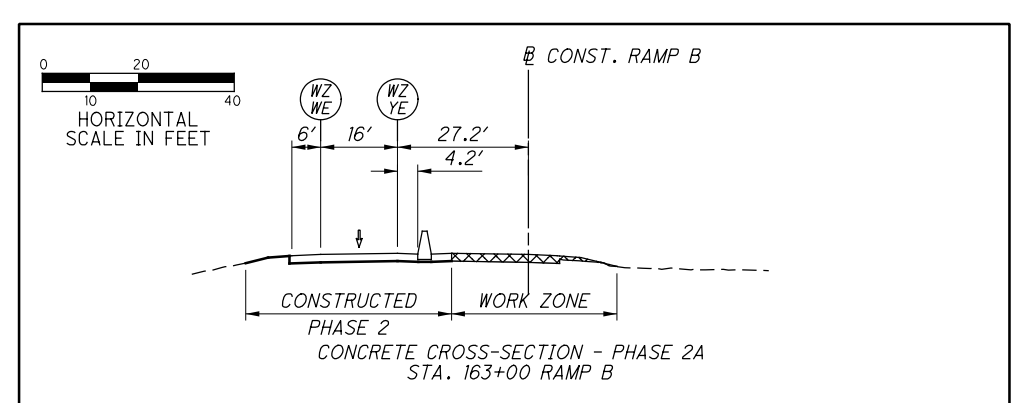


ADVANCED SIGNAGE DETAIL



MATCH LINE STA. 24+50
SEE SHEET 265

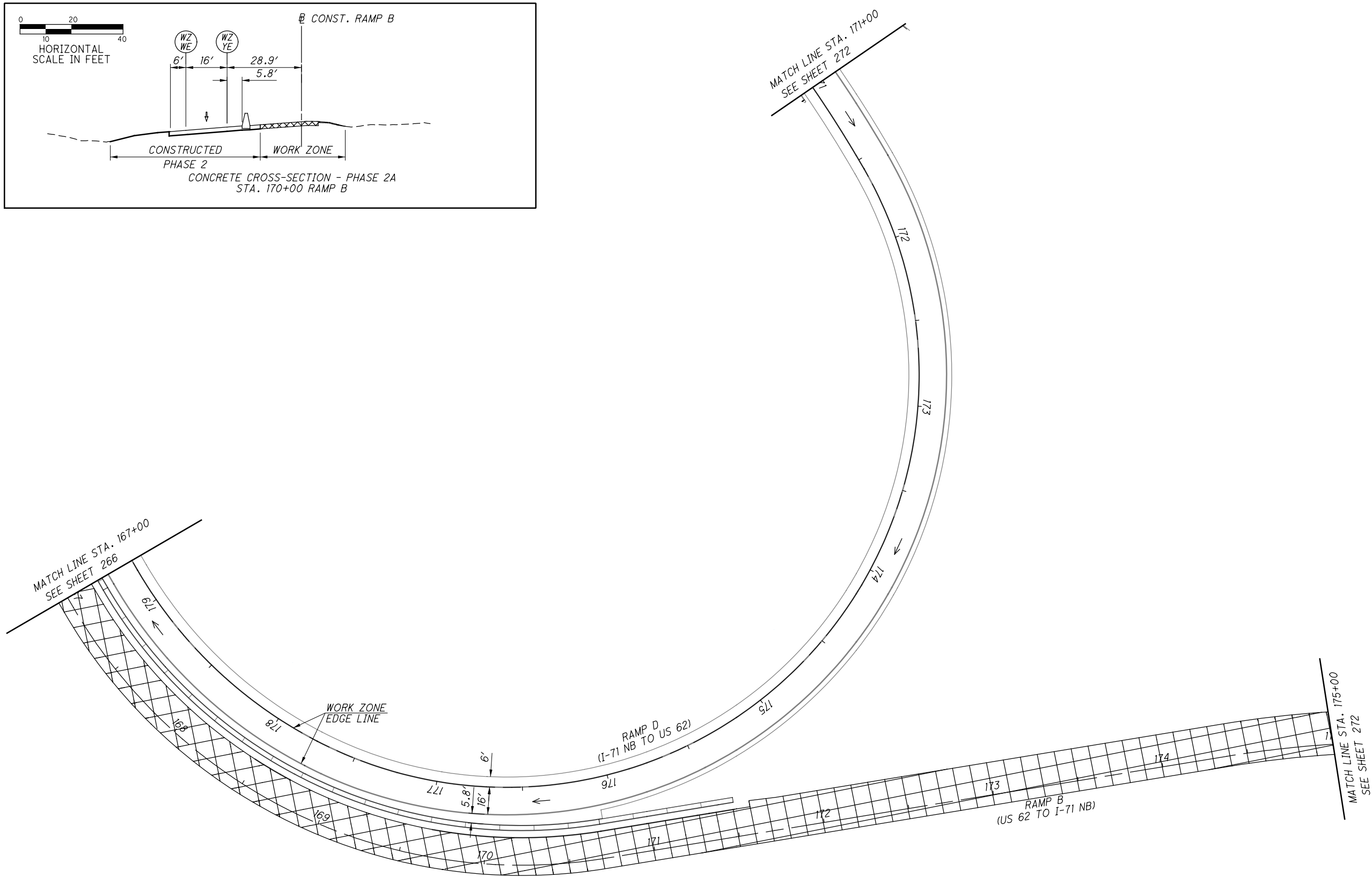
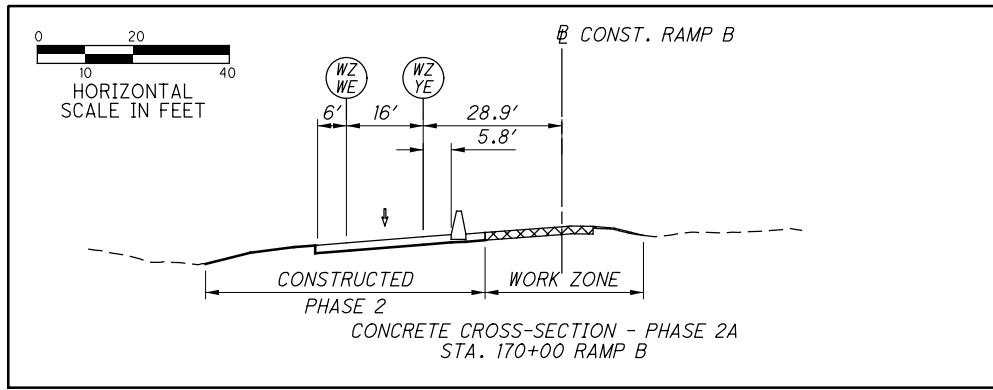
MATCH LINE STA. 167+00
SEE SHEET 267





DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

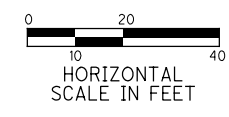
- LEGEND
- PHASE 2A WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

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RAMP B DETOUR PLAN
SHOWN ON SHEET 276 & 277

LEGEND
 PHASE 2A WORK ZONE
 OPEN TRAVEL LANE



CALCULATED	BER	CHECKED	SMM
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MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
RAMP B - STA. 167+00 TO STA. 175+00

FRA-71-0.00

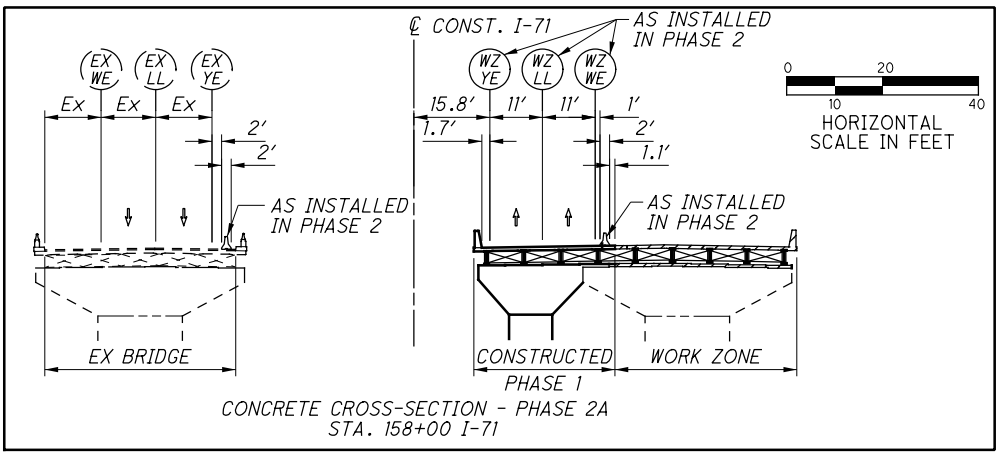
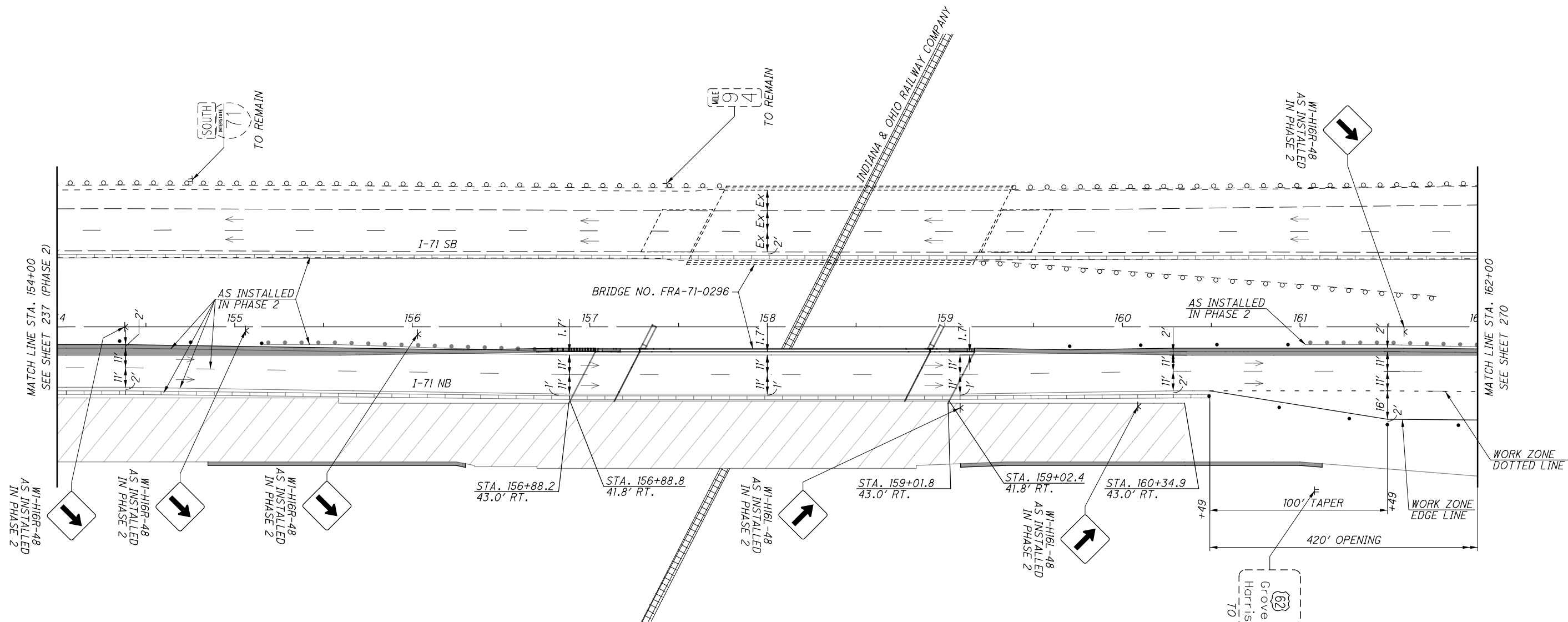


CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
(CONCRETE OPTION) I-71 - STA. 154+00 TO STA. 162+00**

FRA-71-0.00

268
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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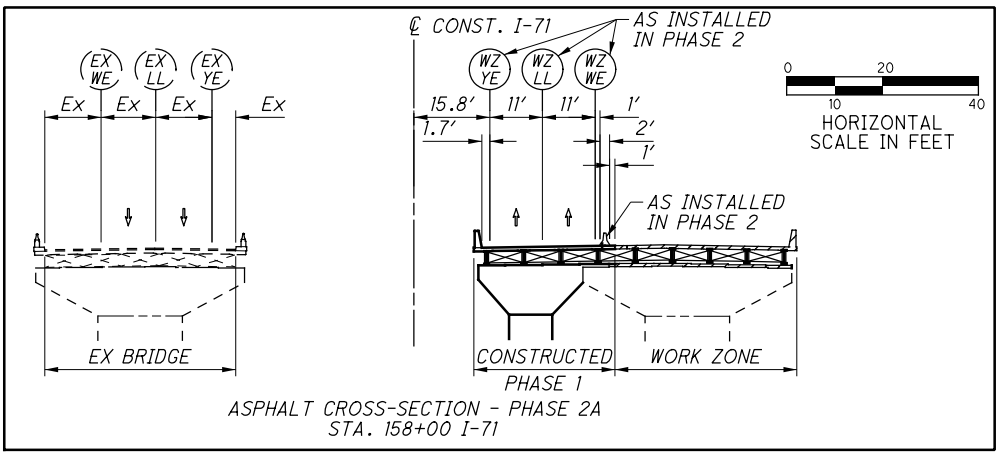
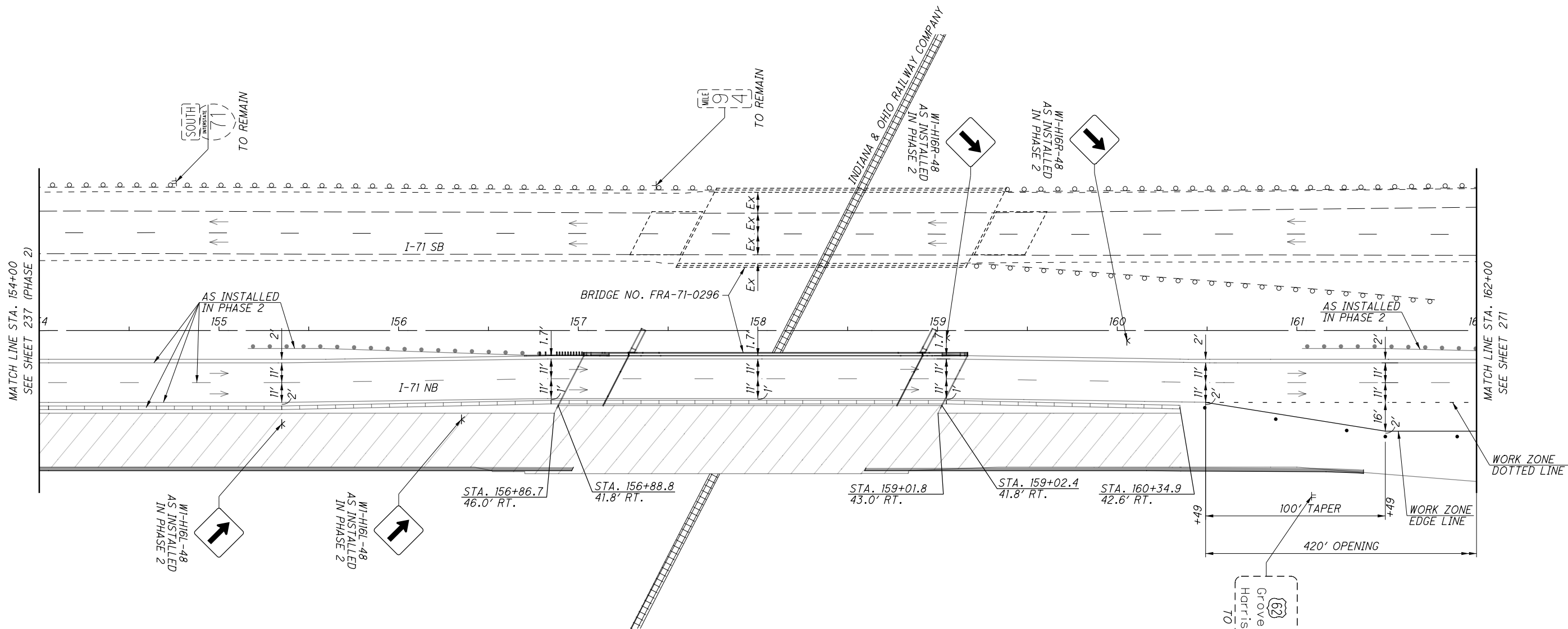


CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
(ASPHALT OPTION) I-71 - STA. 154+00 TO STA. 162+00**

FRA-71-0.00

269
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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0 15 30 60
HORIZONTAL
SCALE IN FEET

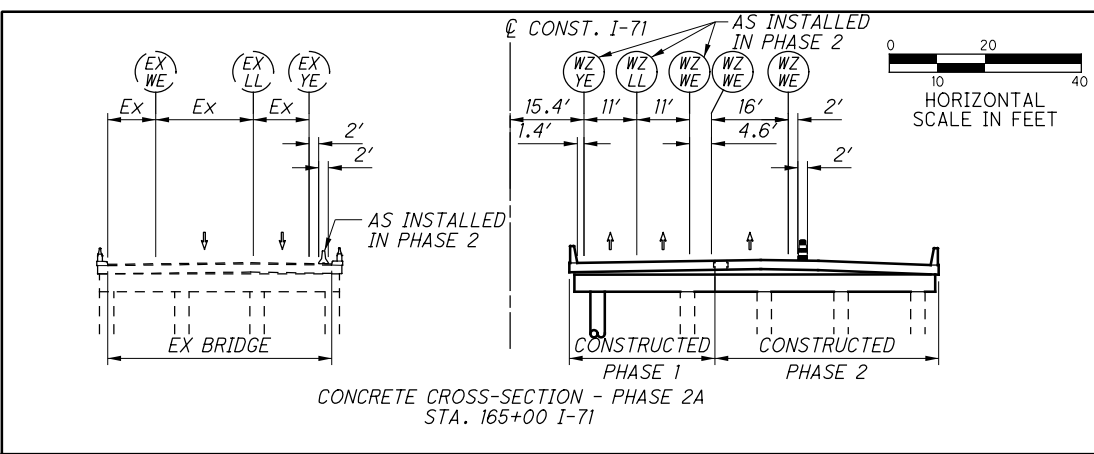
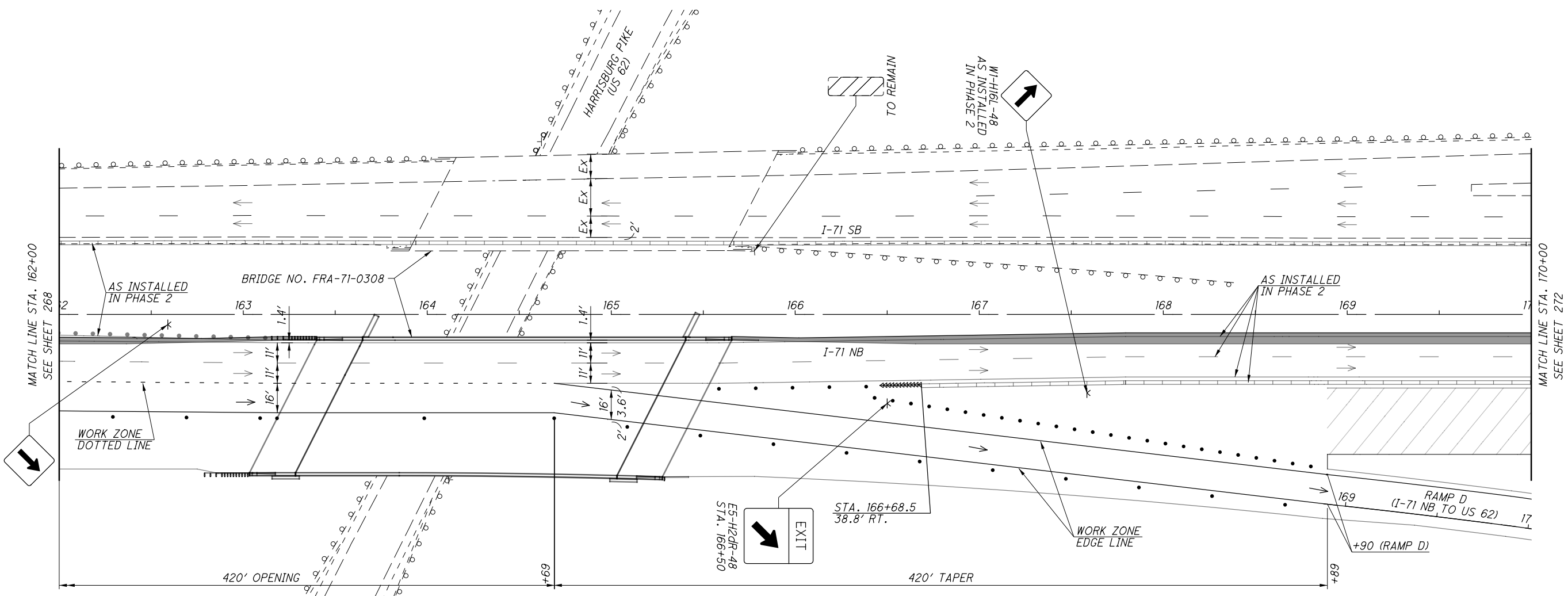
CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
(CONCRETE OPTION) I-71 - STA. 162+00 TO STA. 170+00**

FRA-71-0.00

270
1312

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADIИ/CLOSURE	10' c/c

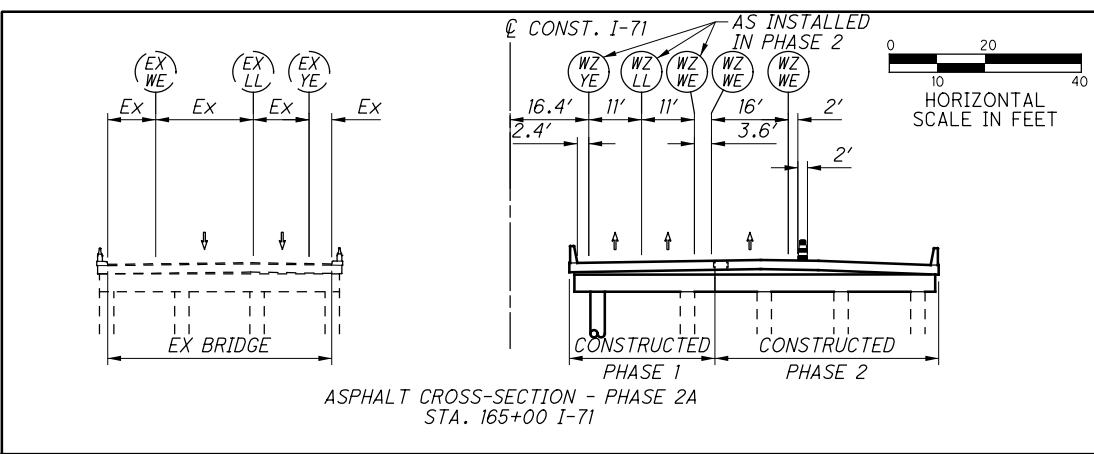
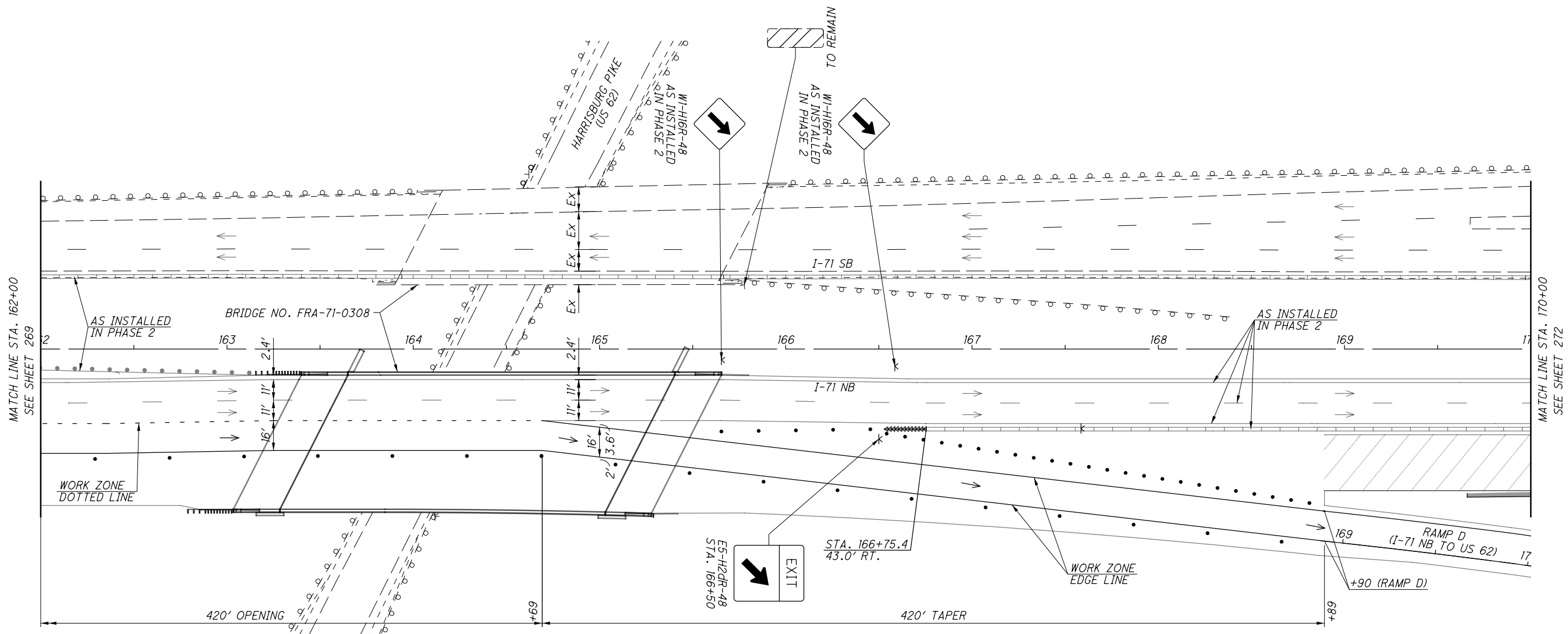
- LEGEND**
- PHASE 2 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE



CALCULATED
BER
CHECKED
SMM

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
(ASPHALT OPTION) I-71 - STA. 162+00 TO STA. 170+00**

FRA-71-0.00

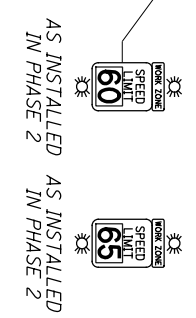
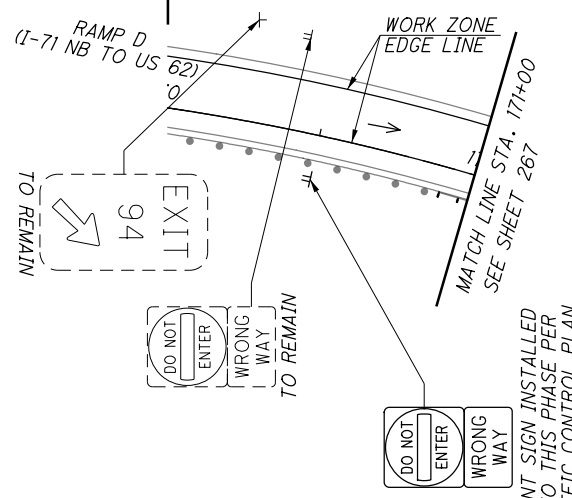
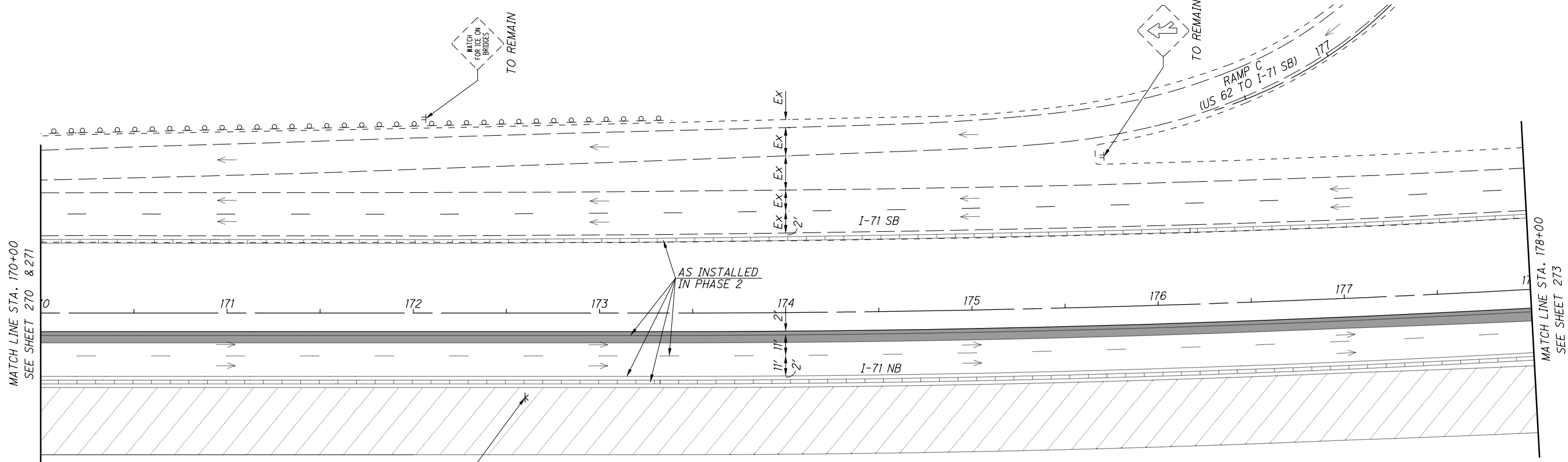
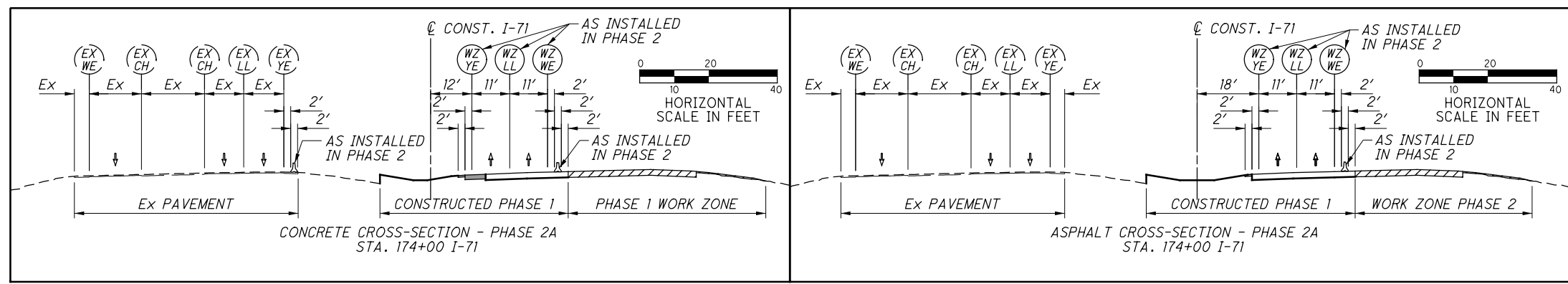


DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 2 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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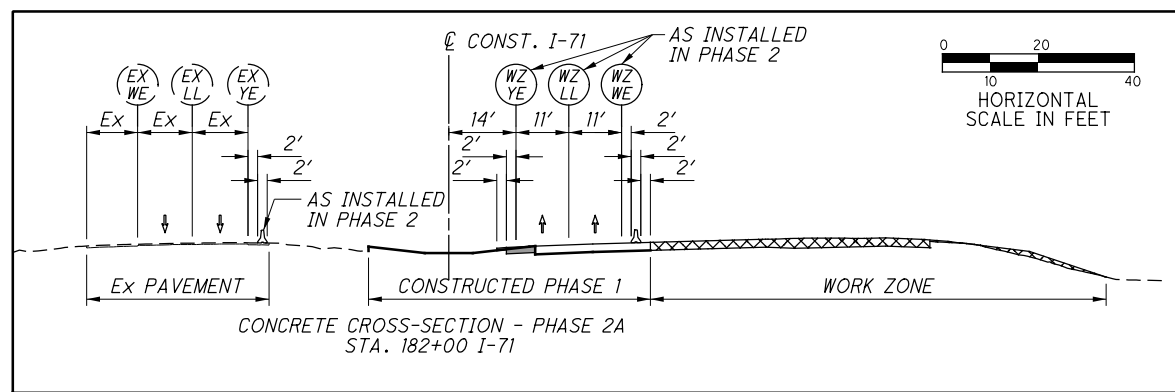
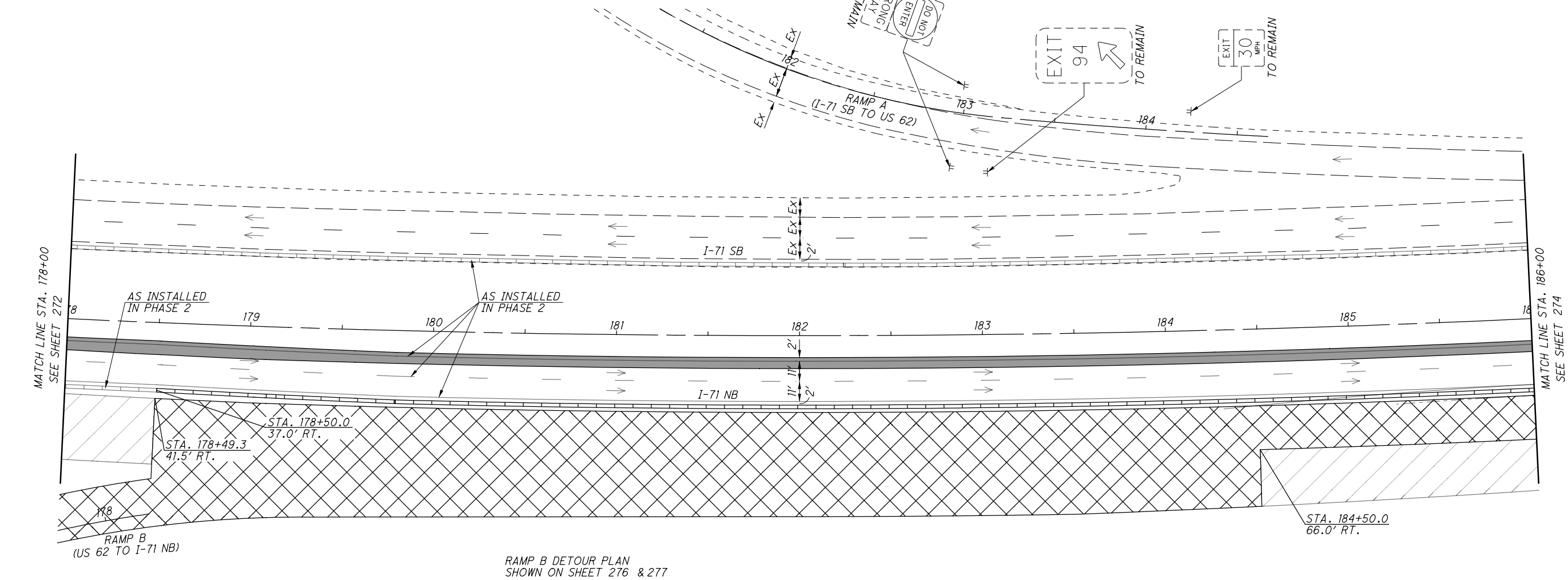
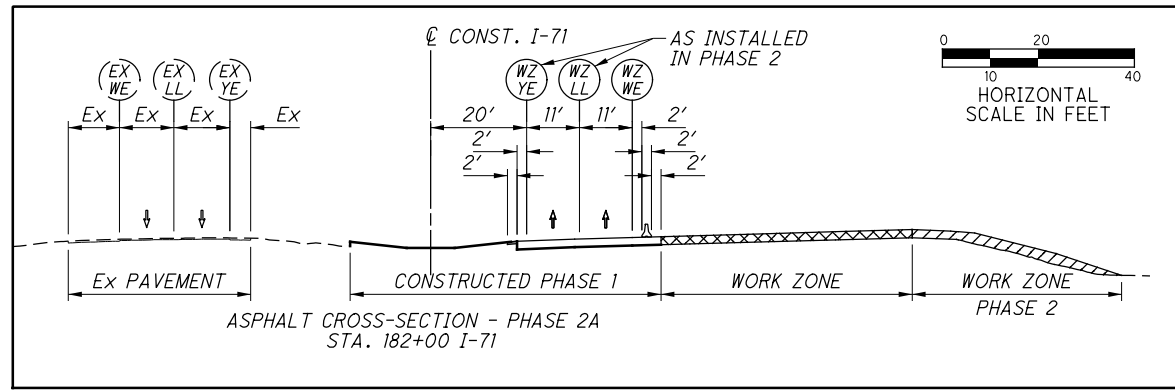
PERMANENT SIGN INSTALLED PRIOR TO THIS PHASE PER THE TRAFFIC CONTROL PLAN

- LEGEND**
- PHASE 2 WORK ZONE
 - PHASE 2A WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED BER CHECKED SMM

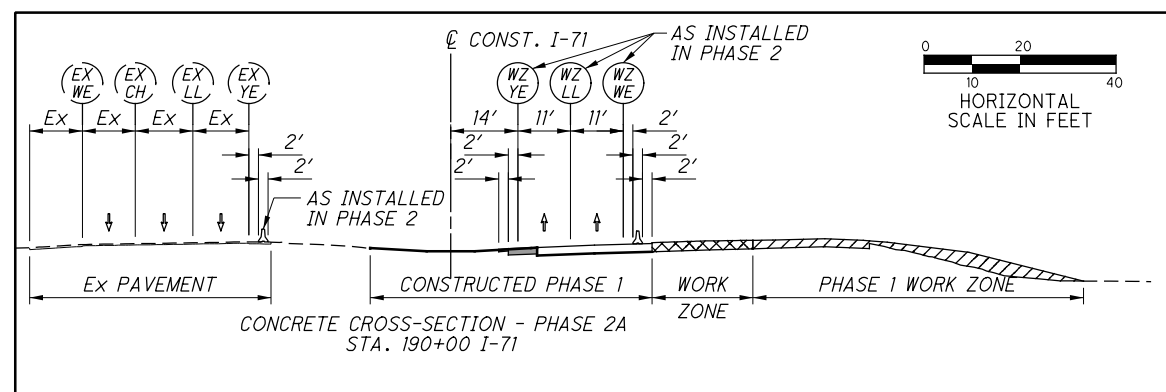
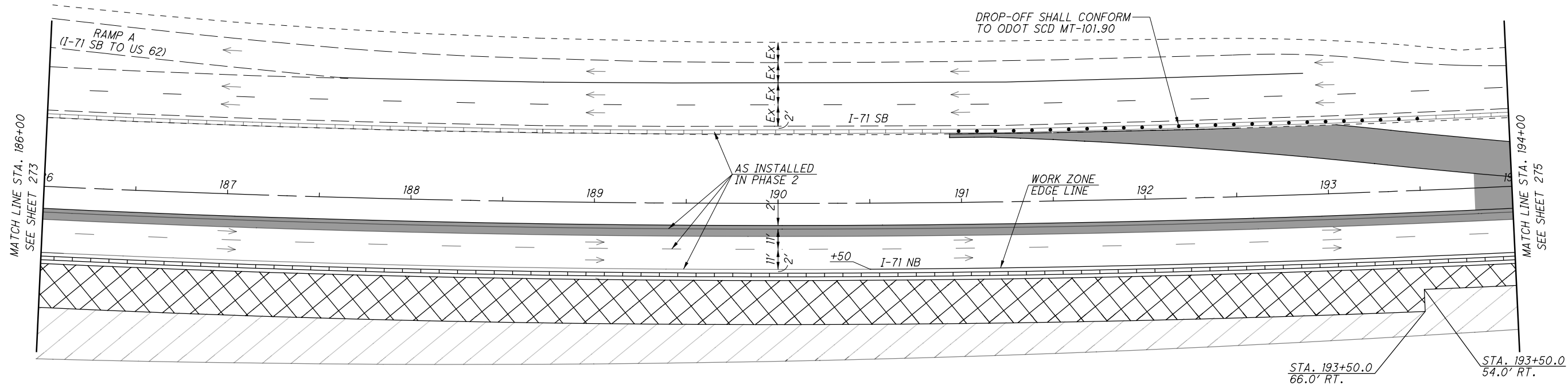
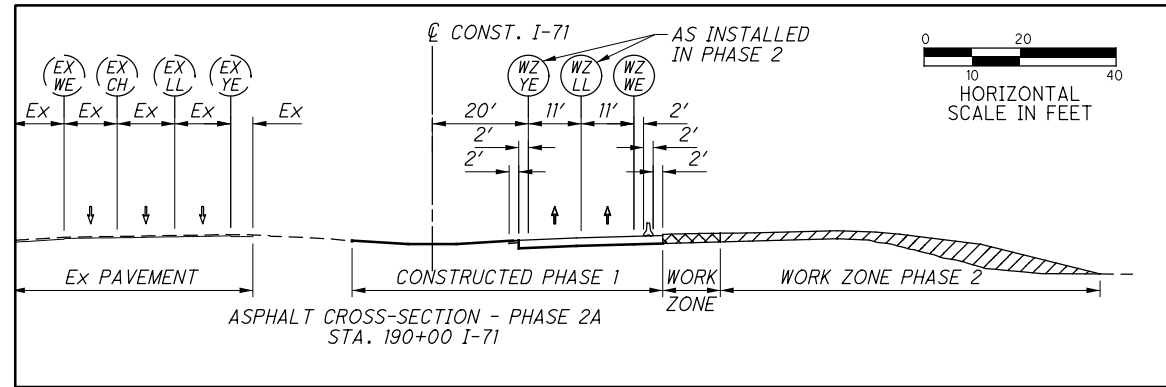
MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
I-71 - STA. 170+00 TO STA. 178+00

FRA-71-0.00









- LEGEND**
- PHASE 2 WORK ZONE
 - PHASE 2A WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
-  PHASE 2 WORK ZONE
 -  PHASE 2A WORK ZONE
 -  TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 -  PORTABLE BARRIER
 -  OPEN TRAVEL LANE
 -  DRUM

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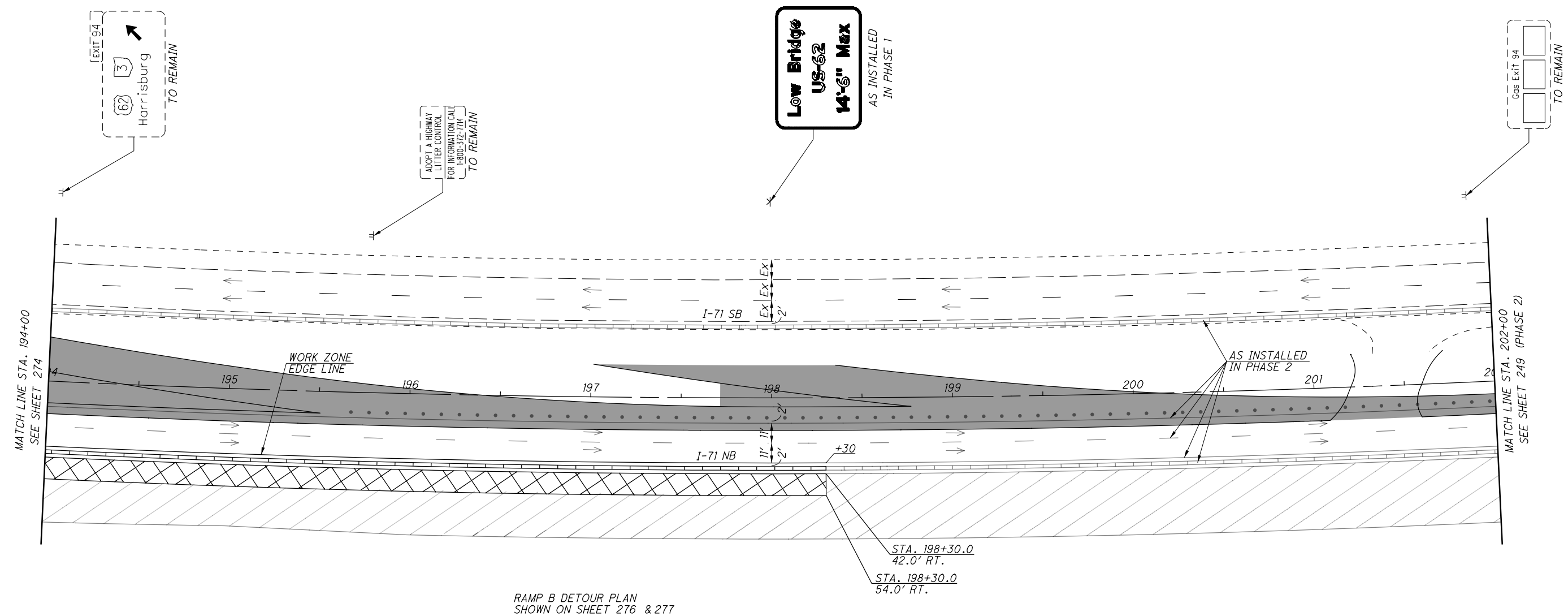


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 2A
I-71 - STA. 194+00 TO STA. 202+00

FRA-71-0.00

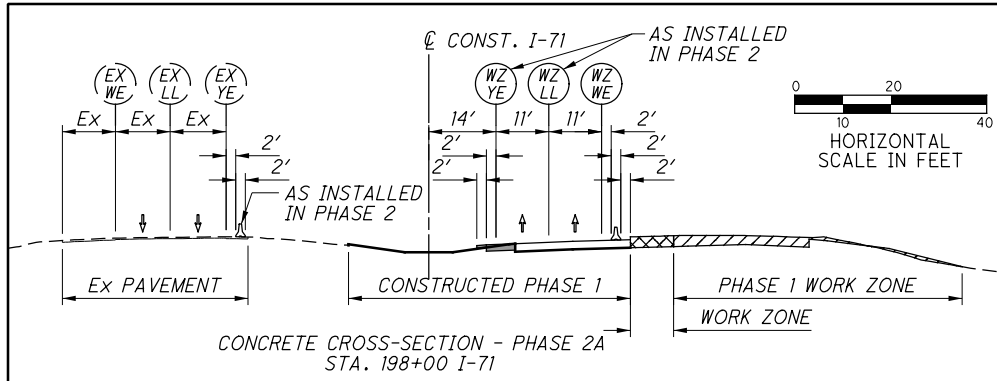
275
1312



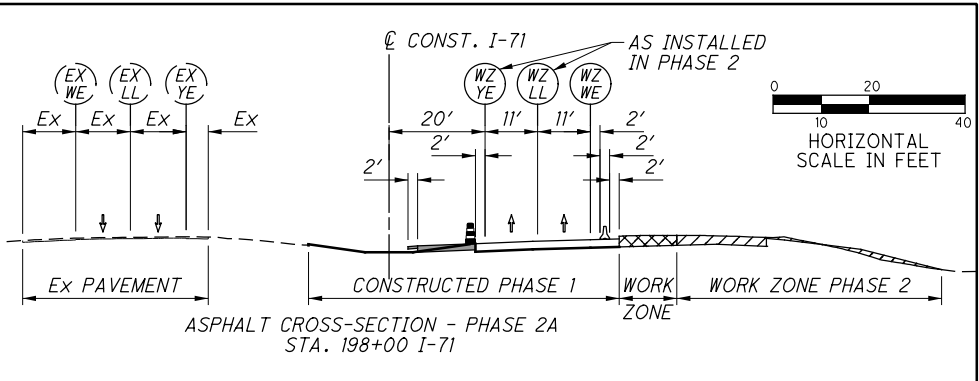
RAMP B DETOUR PLAN
SHOWN ON SHEET 276 & 277

STA. 198+30.0
42.0' RT.
STA. 198+30.0
54.0' RT.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



CONCRETE CROSS-SECTION - PHASE 2A
STA. 198+00 I-71



ASPHALT CROSS-SECTION - PHASE 2A
STA. 198+00 I-71

- LEGEND**
- PHASE 2 WORK ZONE
 - PHASE 2A WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM

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LEGEND

- ➔ DETOUR ROUTE - I-71 NB ENTRANCE FROM US 62 (RAMP B)
- X RAMP CLOSURE
- ⊥ EXISTING SIGN
- ✖ TEMPORARY SIGN

NOTES:
 1. PHASE 2A CLOSURE SHALL BE LIMITED TO 30 DAYS COMPLETED CONCURRENTLY WITH PHASE 2.
 2. THE PHASE 2 CLOSURE OF RAMP D (SEE SHEET 264) SHALL BE REMOVED PRIOR TO THE PHASE 2A CLOSURE OF RAMP B.
 3. SIGNALIZED INTERSECTIONS ALONG THE DETOUR ROUTE SHALL BE MONITORED BY THE ENGINEER UPON IMPLEMENTATION OF THE RAMP CLOSURE. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MODIFY TRAFFIC SIGNAL TIMINGS TO ACCOMMODATE DETOURED TRAFFIC VOLUMES. ALL ORIGINAL TIMINGS SHALL BE RESTORED ONCE THE DETOUR IS REMOVED. CONTRACTOR ACCESS TO EXISTING TRAFFIC SIGNAL CONTROLLER CABINETS SHALL BE UNDER THE DIRECT SUPERVISION OF THE MAINTAINING JURISDICTION.



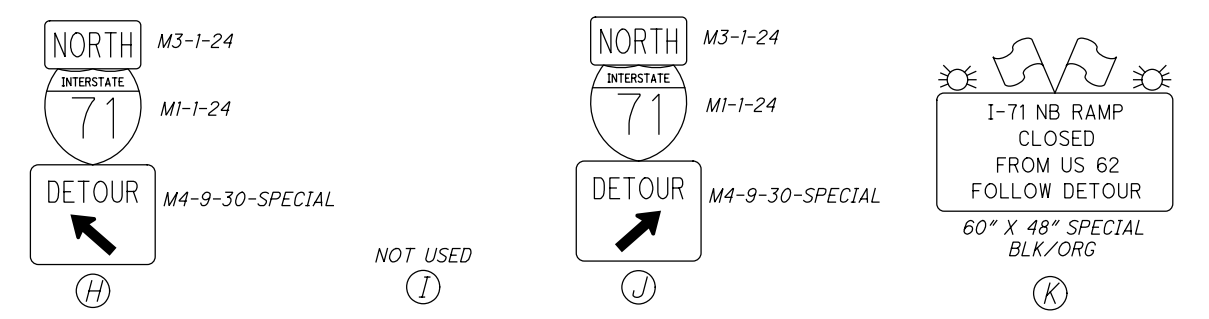
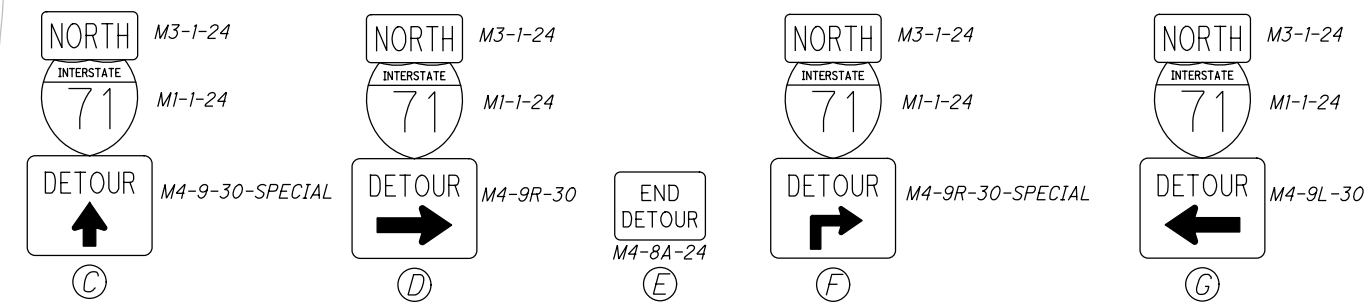
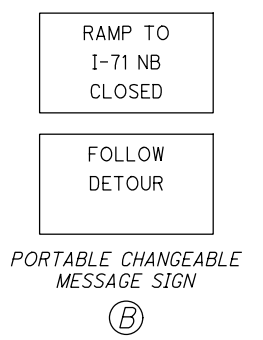
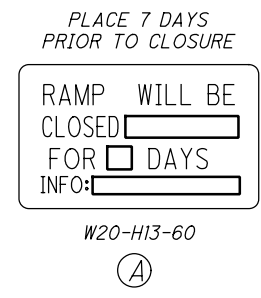
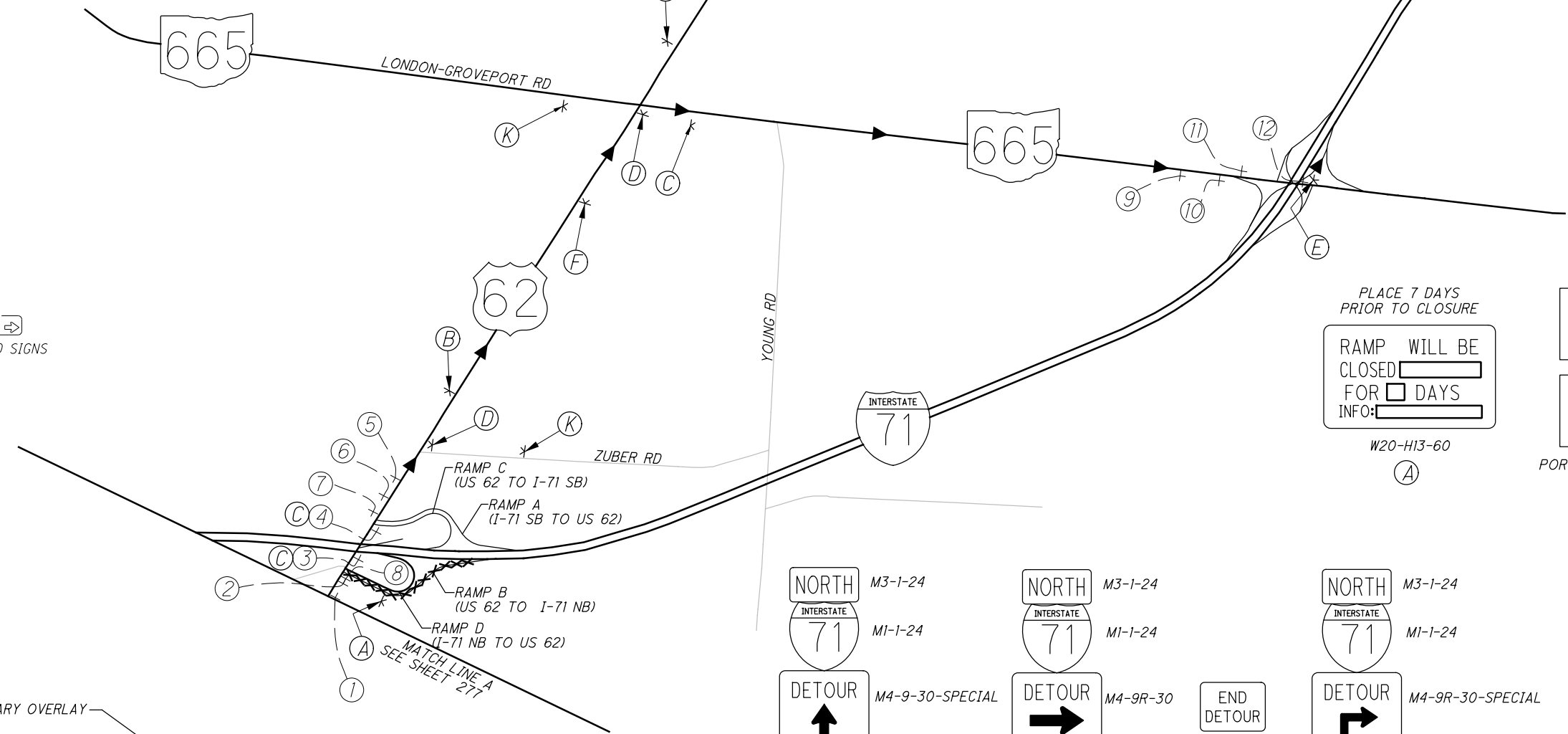
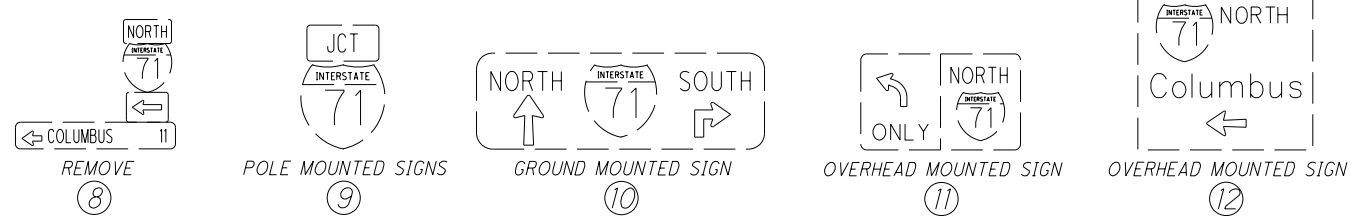
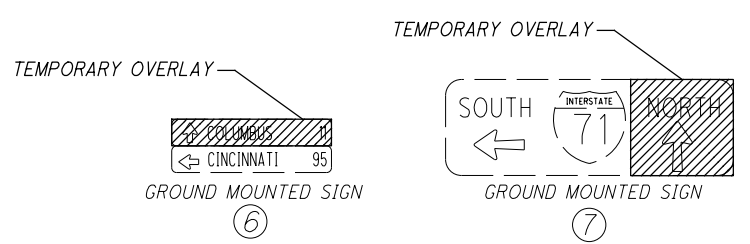
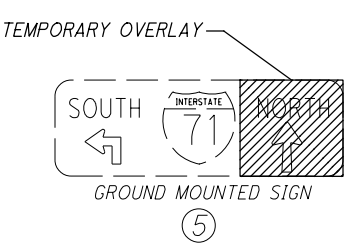
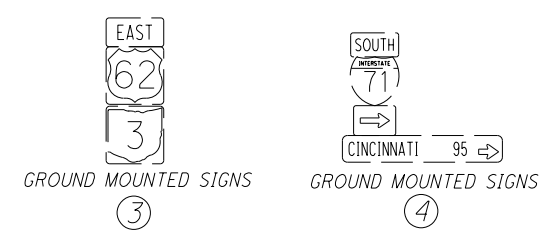
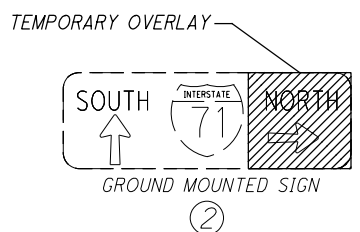
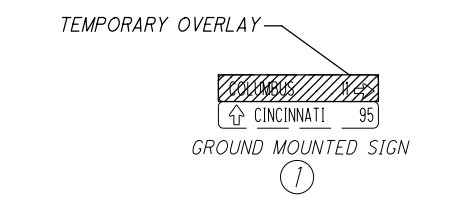
NOT TO SCALE

CALCULATED
 JMH
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN
 RAMP B - DETOUR PHASE 2A

FRA-71-0:00

276
 1312



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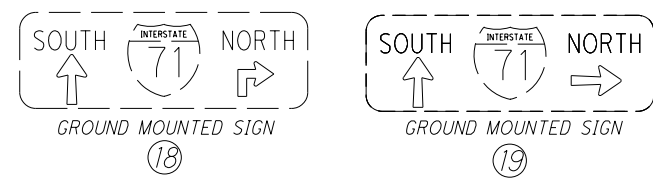
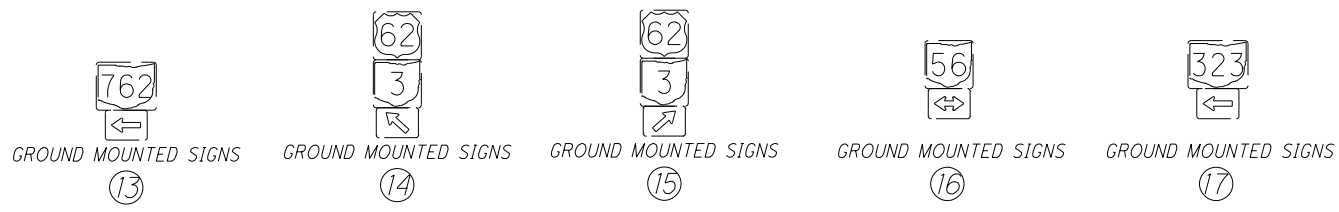
NOT TO SCALE

CALCULATED
JMH
CHECKED
SMM

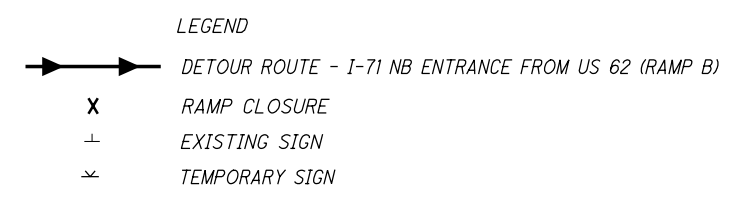
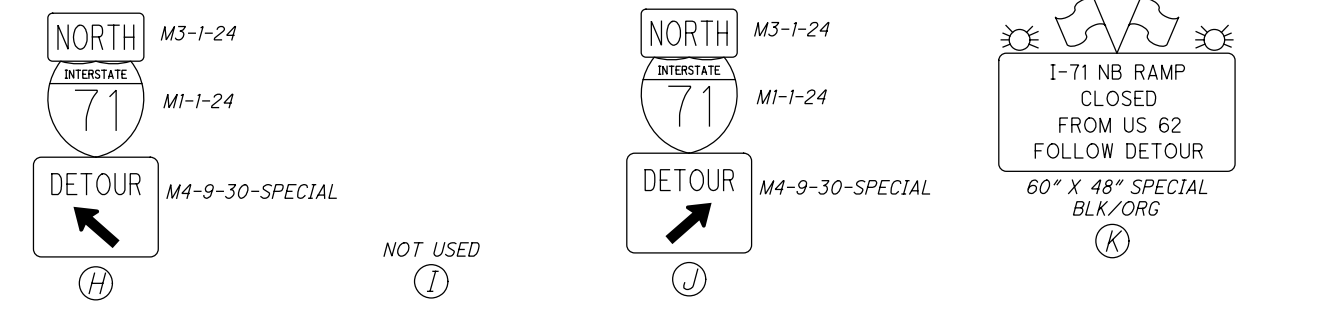
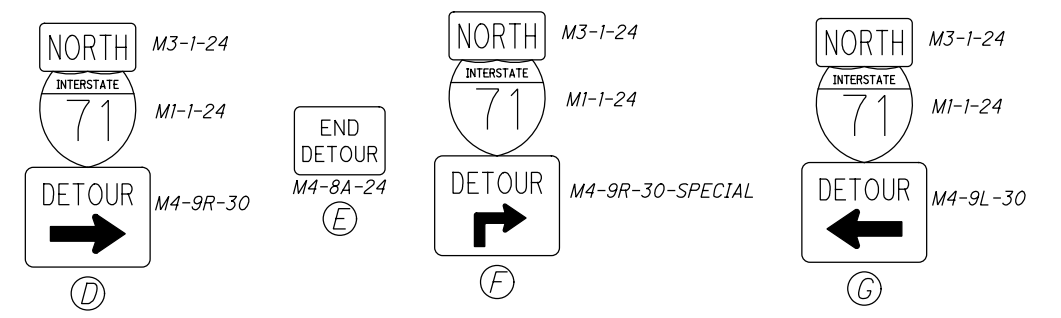
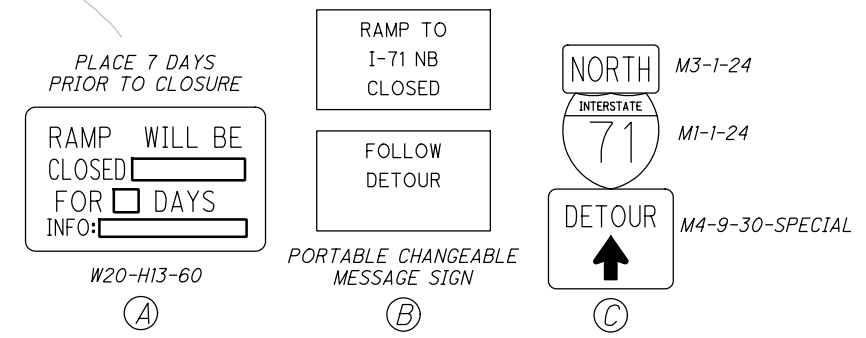
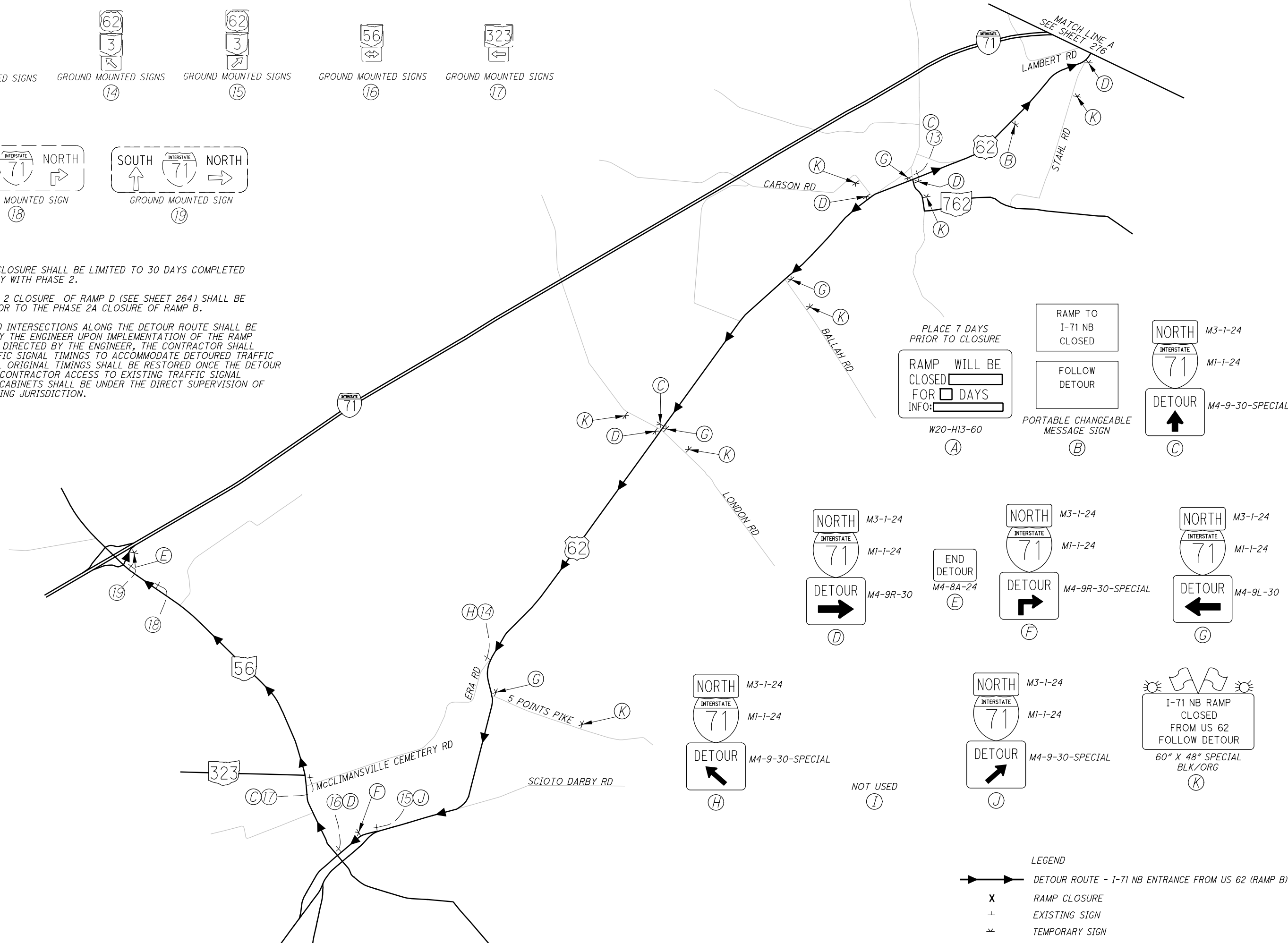
**MAINTENANCE OF TRAFFIC PLAN
RAMP B - DETOUR PHASE 2A**

FRA-71-0.00

277
1312

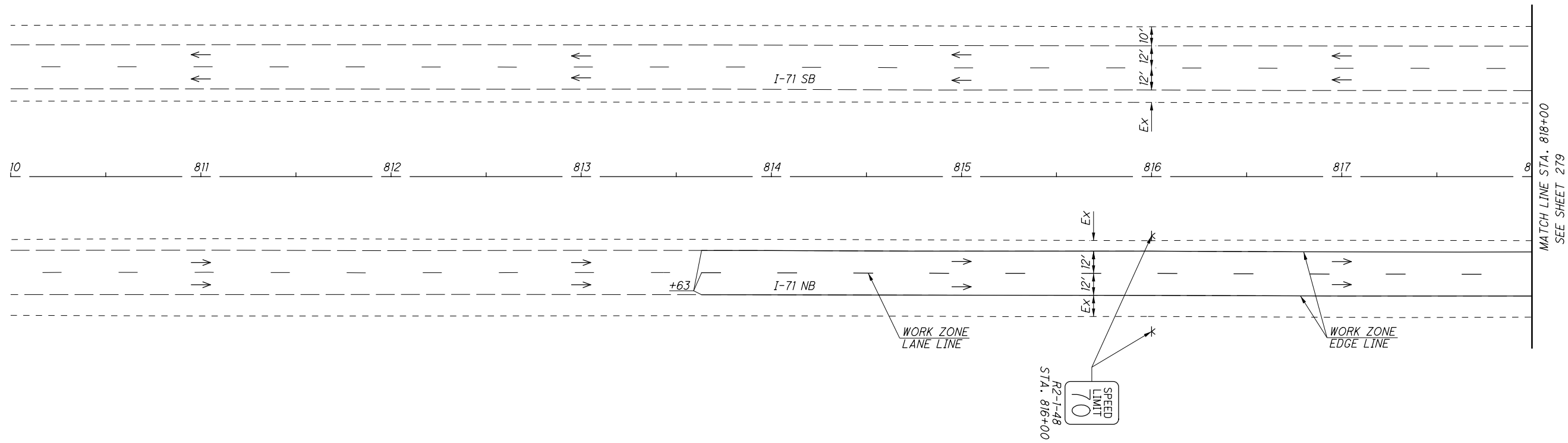


NOTES:
 1. PHASE 2A CLOSURE SHALL BE LIMITED TO 30 DAYS COMPLETED CONCURRENTLY WITH PHASE 2.
 2. THE PHASE 2 CLOSURE OF RAMP D (SEE SHEET 264) SHALL BE REMOVED PRIOR TO THE PHASE 2A CLOSURE OF RAMP B.
 3. SIGNALIZED INTERSECTIONS ALONG THE DETOUR ROUTE SHALL BE MONITORED BY THE ENGINEER UPON IMPLEMENTATION OF THE RAMP CLOSURE. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MODIFY TRAFFIC SIGNAL TIMINGS TO ACCOMMODATE DETOURED TRAFFIC VOLUMES. ALL ORIGINAL TIMINGS SHALL BE RESTORED ONCE THE DETOUR IS REMOVED. CONTRACTOR ACCESS TO EXISTING TRAFFIC SIGNAL CONTROLLER CABINETS SHALL BE UNDER THE DIRECT SUPERVISION OF THE MAINTAINING JURISDICTION.



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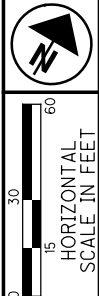


LEGEND
 ✕ TEMPORARY SIGN SUPPORT
 → OPEN TRAVEL LANE

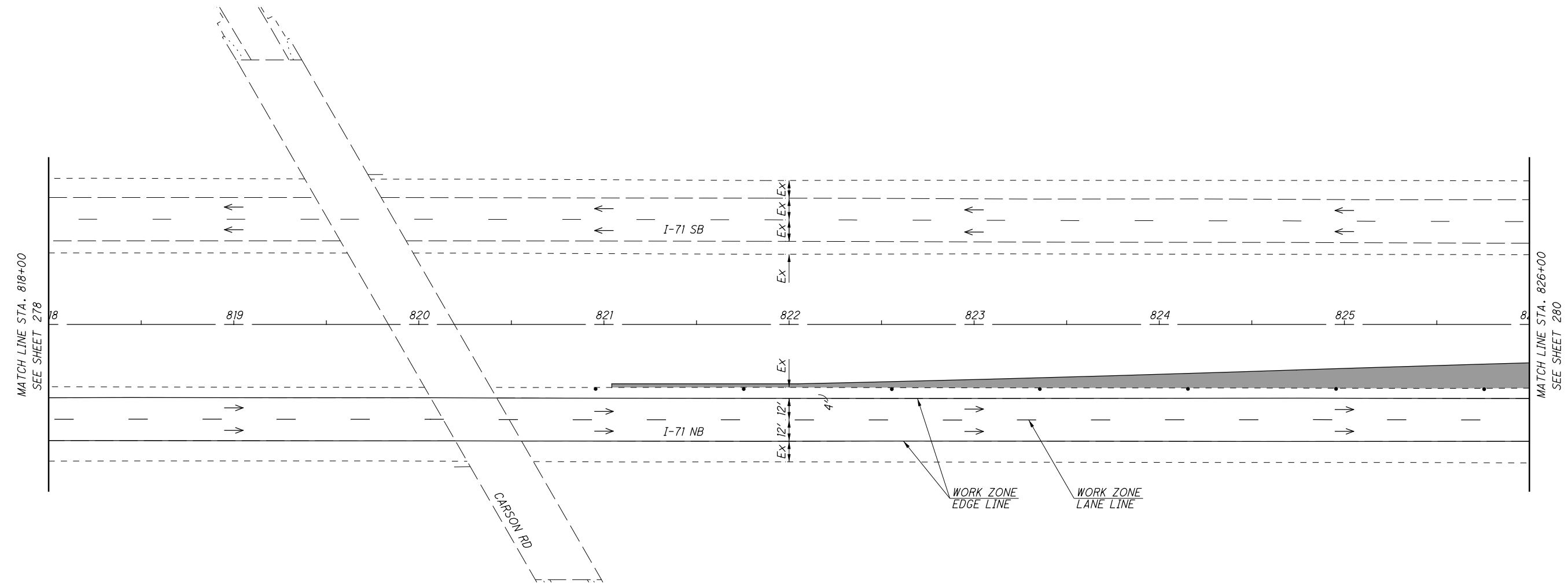
NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
 WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED	BER
CHECKED	SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 810+00 TO STA. 818+00



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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

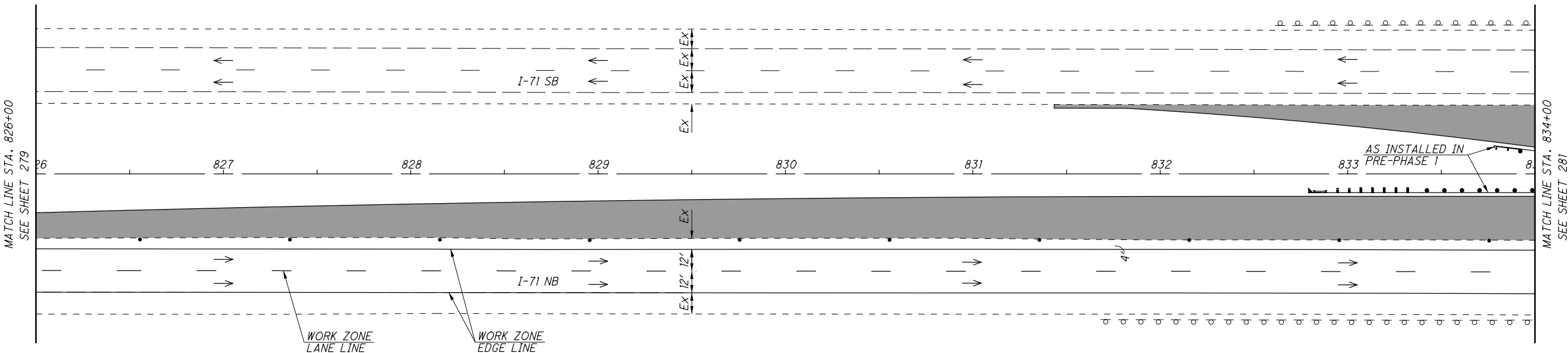
CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 818+00 TO STA. 826+00

FRA-71-0.00

J:\20130212\ODOT\FRA\107201\mot\sheets\107201MP175.dgn 4/13/2020 1:48:36 PM brieder



MATCH LINE STA. 826+00
SEE SHEET 279

MATCH LINE STA. 834+00
SEE SHEET 281

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
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CALCULATED
BER

CHECKED
SMM

15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 826+00 TO STA. 834+00

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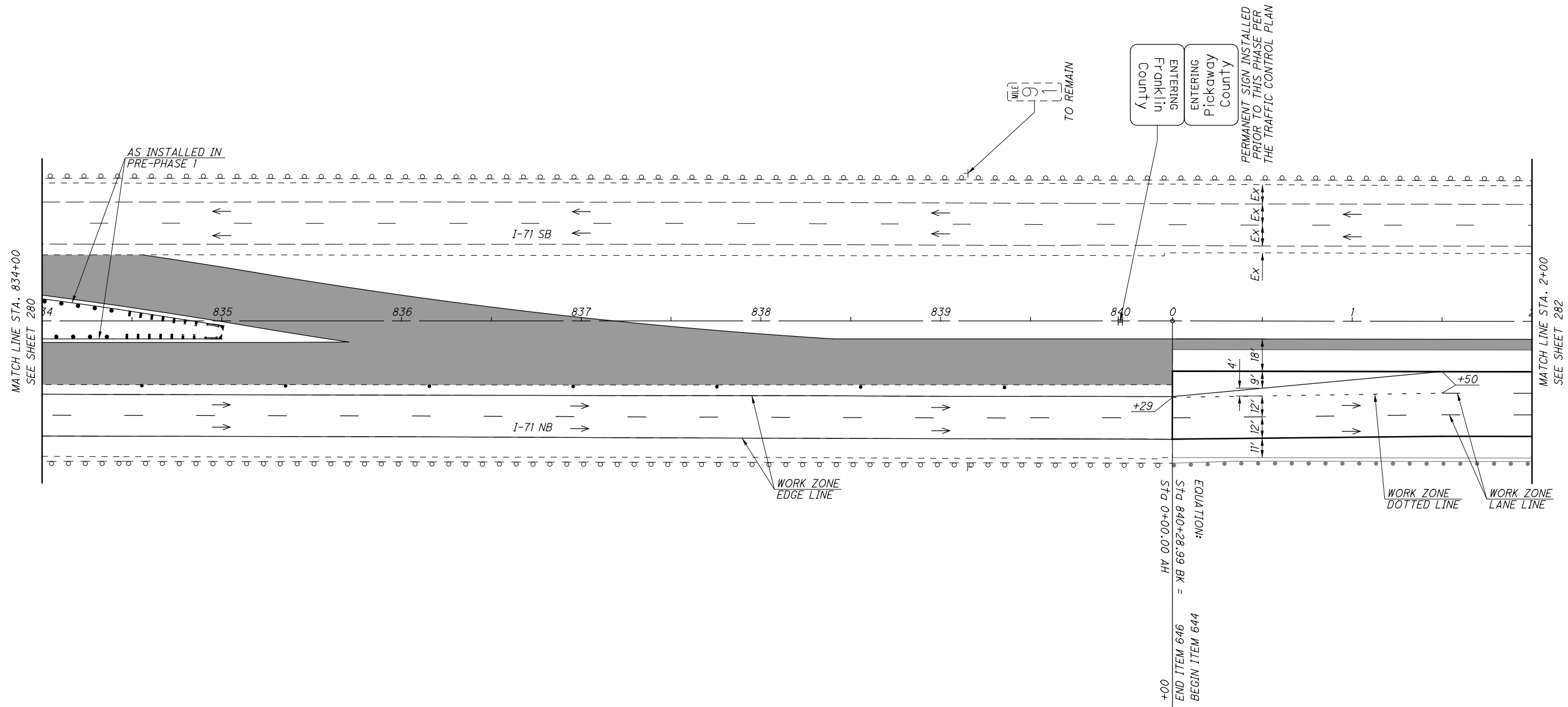


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 834+00 TO STA. 2+00

FRA-71-0.00

281
1312

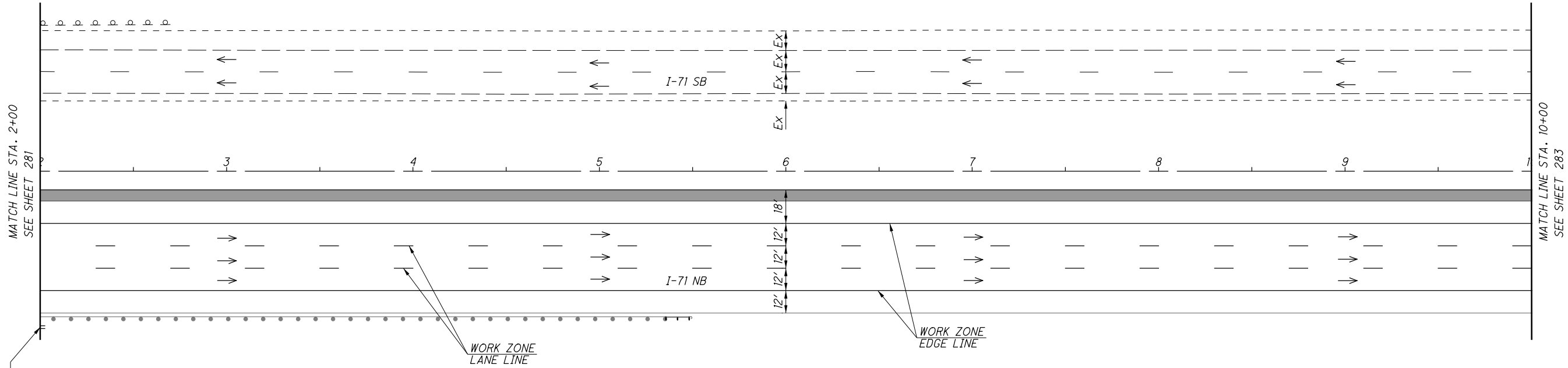


NOTE:
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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

ADOPT A HIGHWAY
LITTER CONTROL
FOR INFORMATION CALL
1-800-372-7714



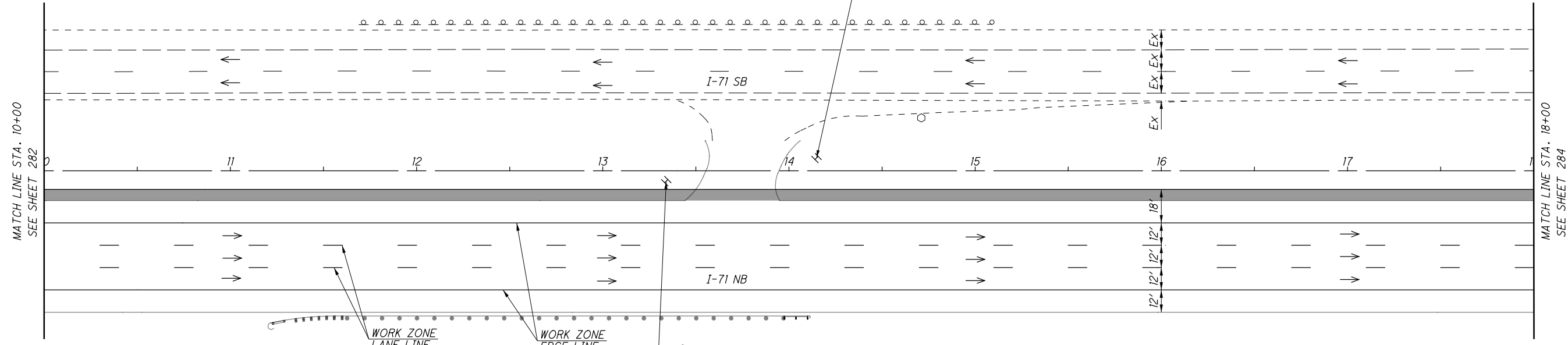
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - T T PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
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

CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 2+00 TO STA. 10+00




LEGEND

	TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
	PROPOSED SIGN SUPPORT
	OPEN TRAVEL LANE

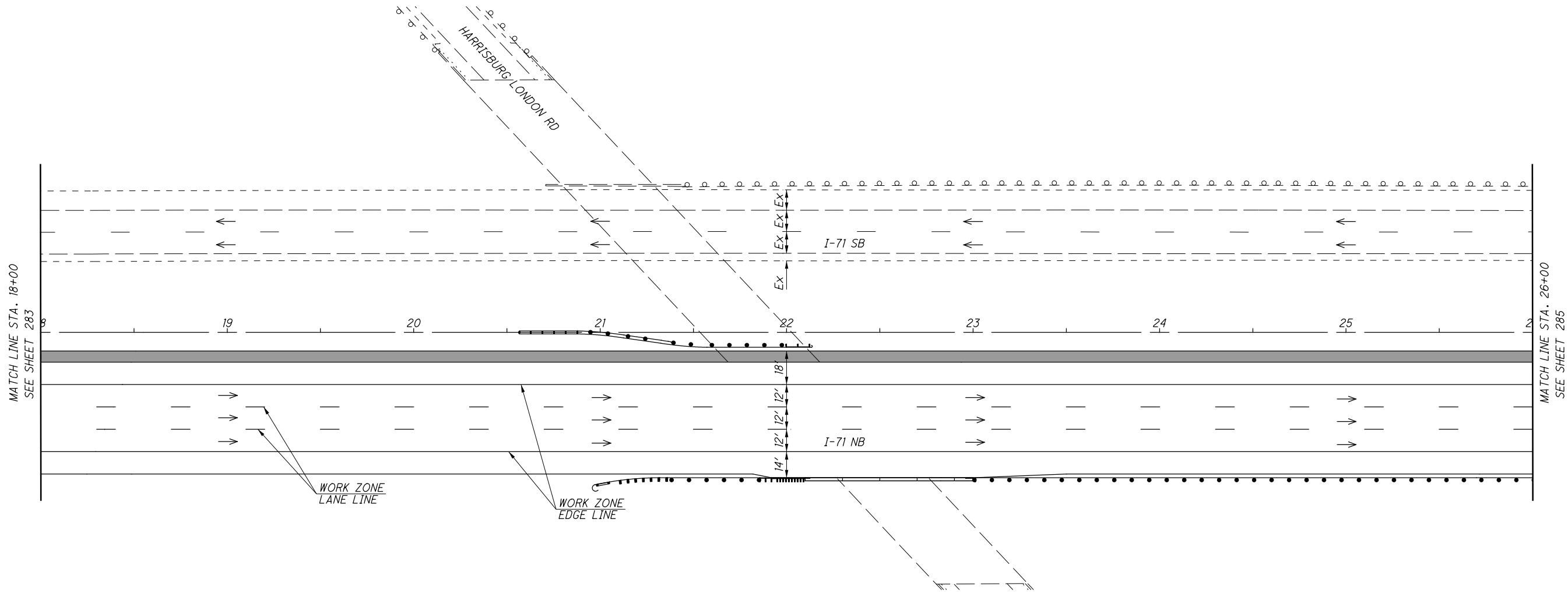
NOTE:
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CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET



MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 10+00 TO STA. 18+00

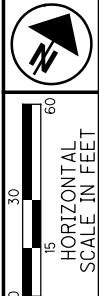


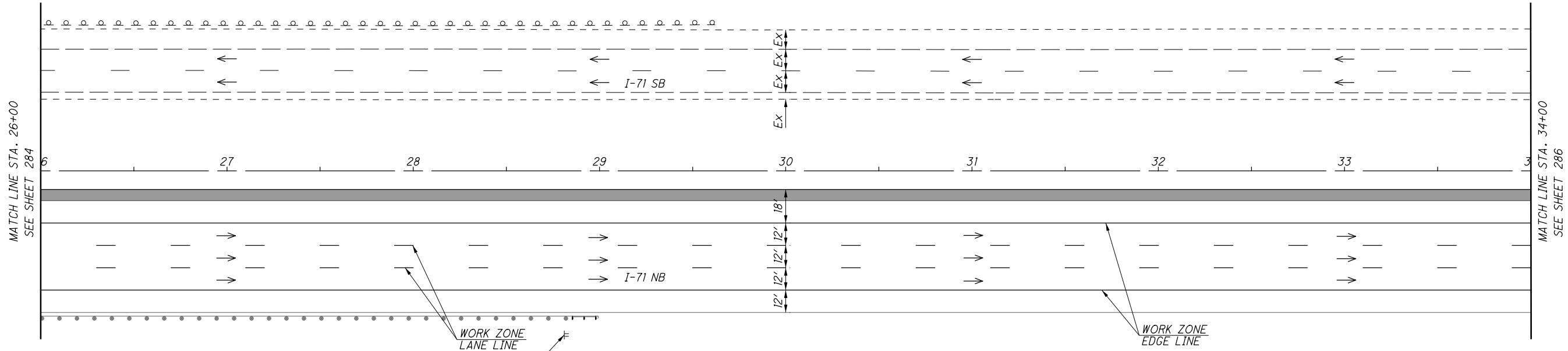
LEGEND
 [Grey Box] TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 [Arrow] OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 18+00 TO STA. 26+00





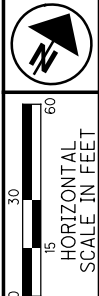
TO REMAIN
 TRAFFIC ALERT WHEN FLASHING
 1620 AM
 TUNE RADIO TO
 TRAFFIC INFO

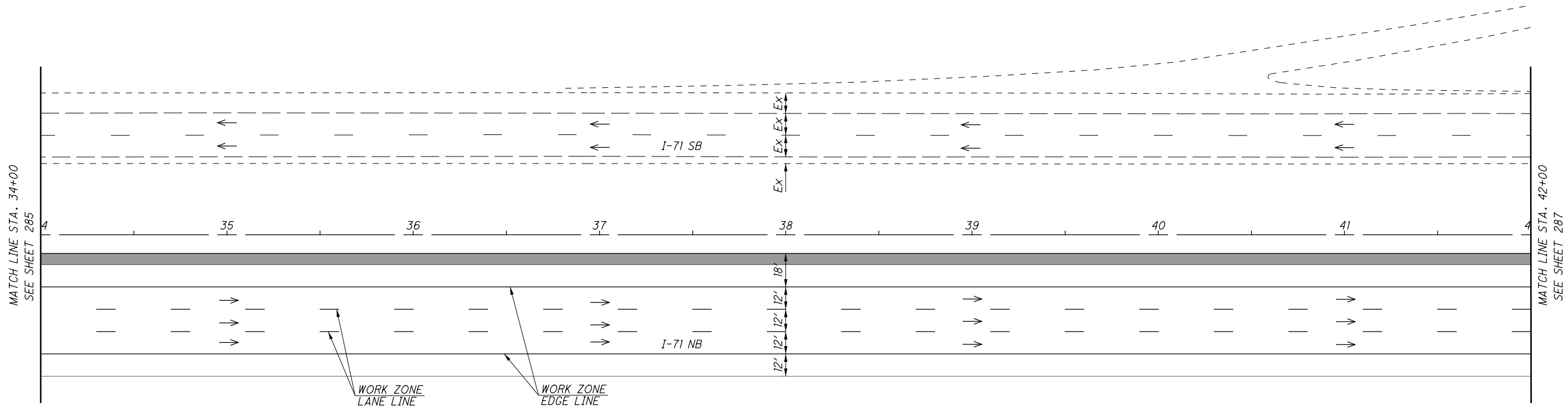
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - T T EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 26+00 TO STA. 34+00





LEGEND

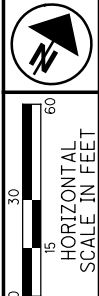
▬ TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)

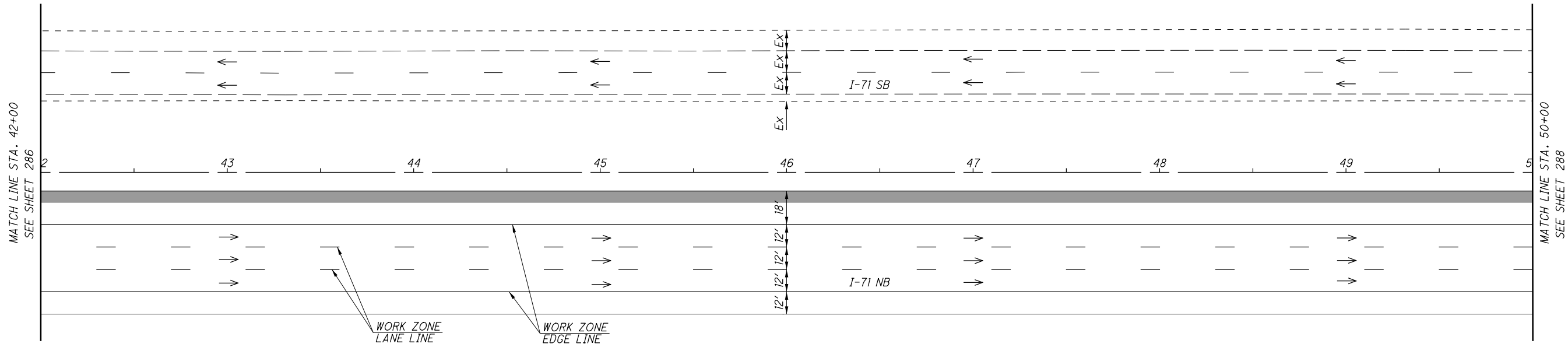
→ OPEN TRAVEL LANE

NOTE:
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CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 34+00 TO STA. 42+00





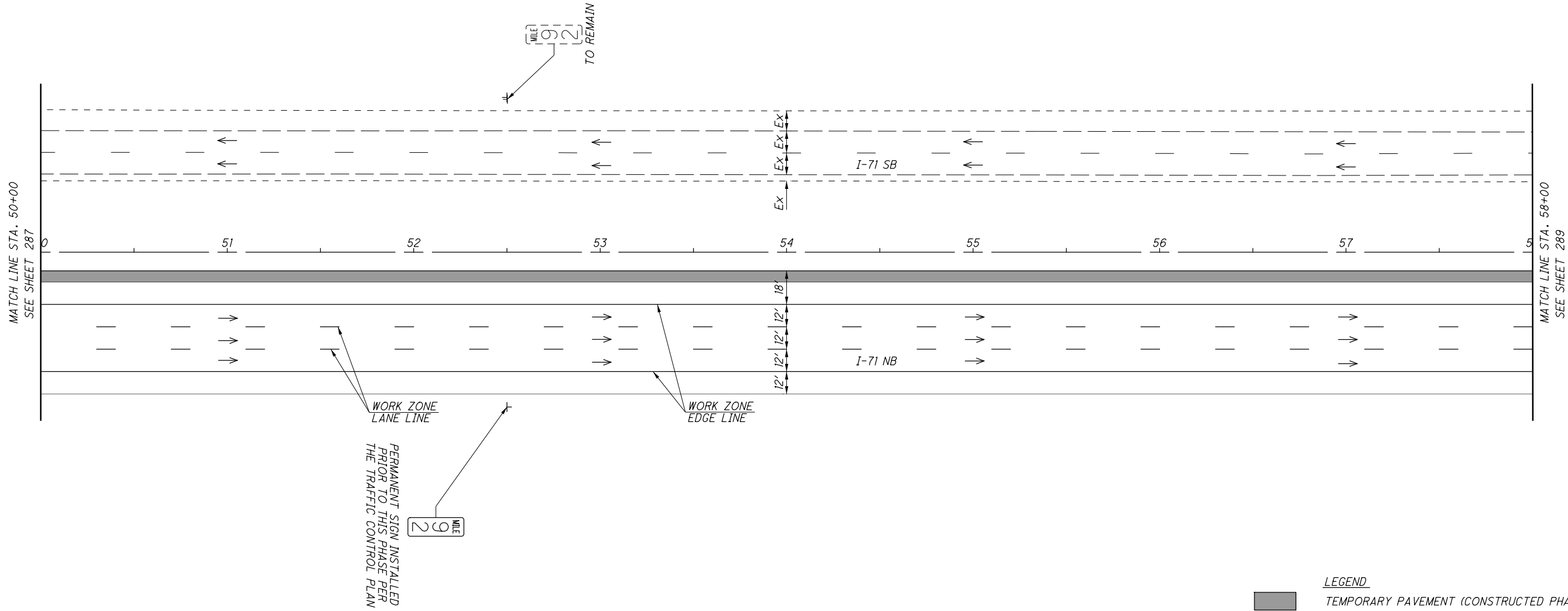
LEGEND
 [Shaded Box] TEMPORARY PAVEMENT (CONSTRUCTED PHASE I)
 → OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.





CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 42+00 TO STA. 50+00



LEGEND

	TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
	EXISTING SIGN SUPPORT
	PROPOSED SIGN SUPPORT
	OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED
 BER
 CHECKED
 SMM

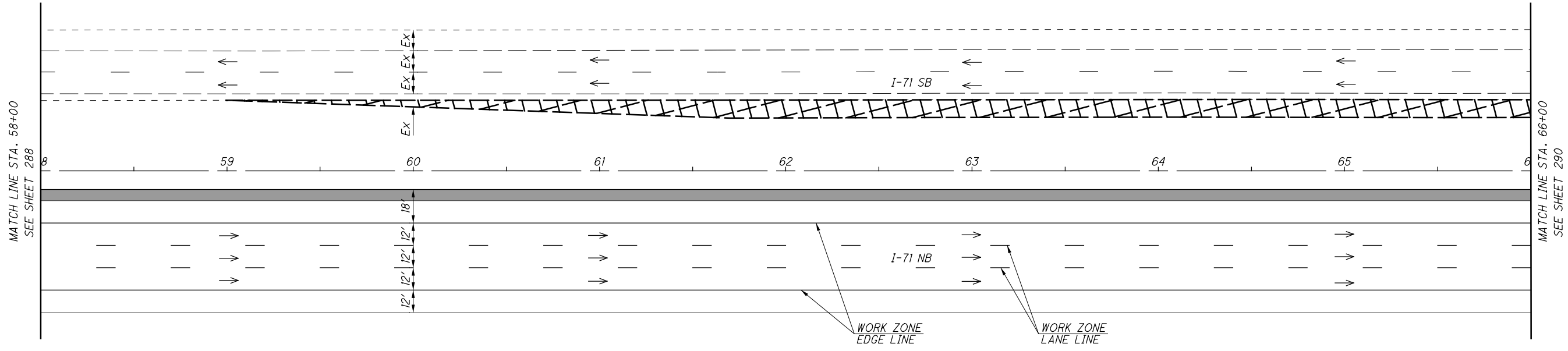
0 15 30 60
 HORIZONTAL
 SCALE IN FEET



MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 50+00 TO STA. 58+00

FRA-71-0.00

288
 1312



- LEGEND**
-  TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 -  TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 -  OPEN TRAVEL LANE

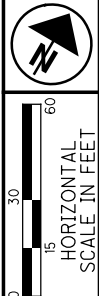
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CALCULATED
 BER
 CHECKED
 SMM

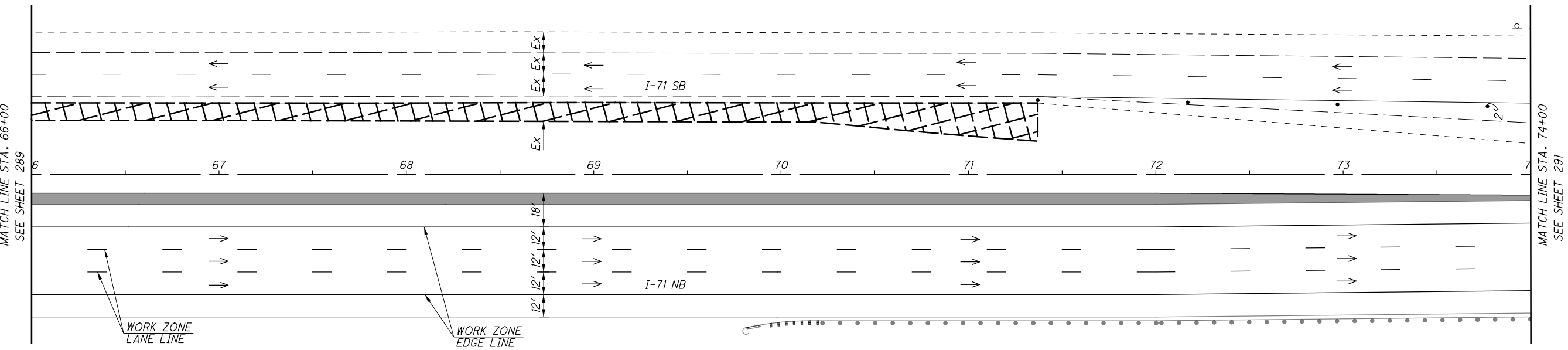
MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 58+00 TO STA. 66+00

FRA-71-0:00

289
 1312



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MATCH LINE STA. 66+00
SEE SHEET 289

MATCH LINE STA. 74+00
SEE SHEET 291

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

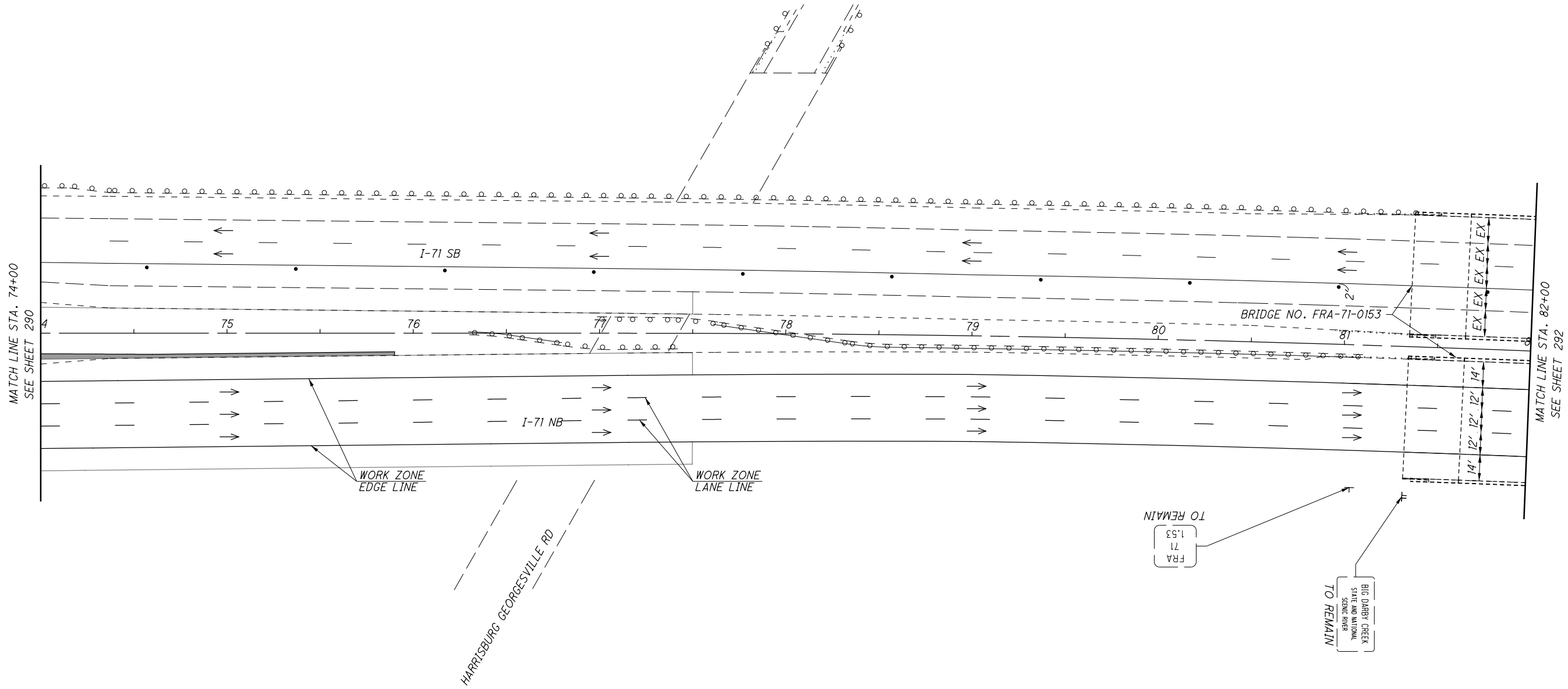
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - OPEN TRAVEL LANE

NOTE:
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CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 66+00 TO STA. 74+00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - ⊥ ⊥ EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

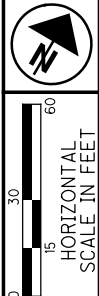
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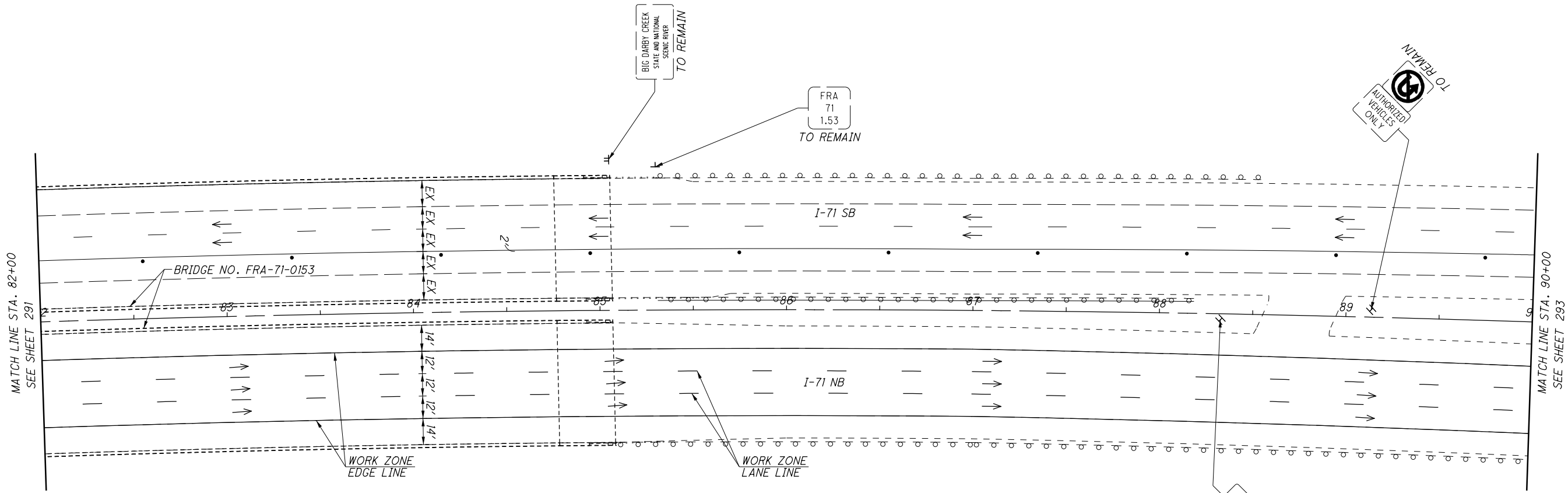
CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 74+00 TO STA. 82+00

FRA-71-0.00

291
 1312





MATCH LINE STA. 82+00
SEE SHEET 291

MATCH LINE STA. 90+00
SEE SHEET 293

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- DRUM
 - ⊥ EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
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CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 82+00 TO STA. 90+00

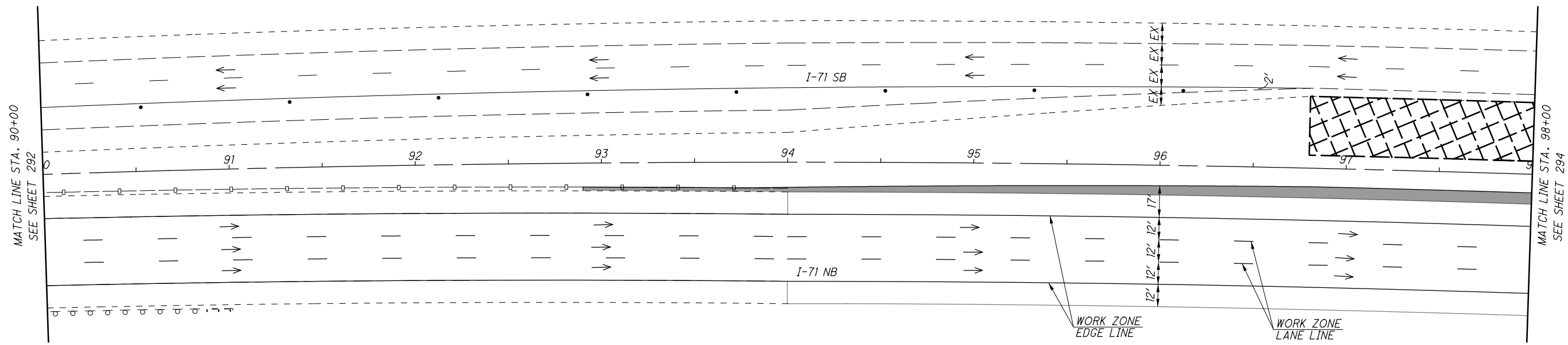
FRA-71-0.00



CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 90+00 TO STA. 98+00

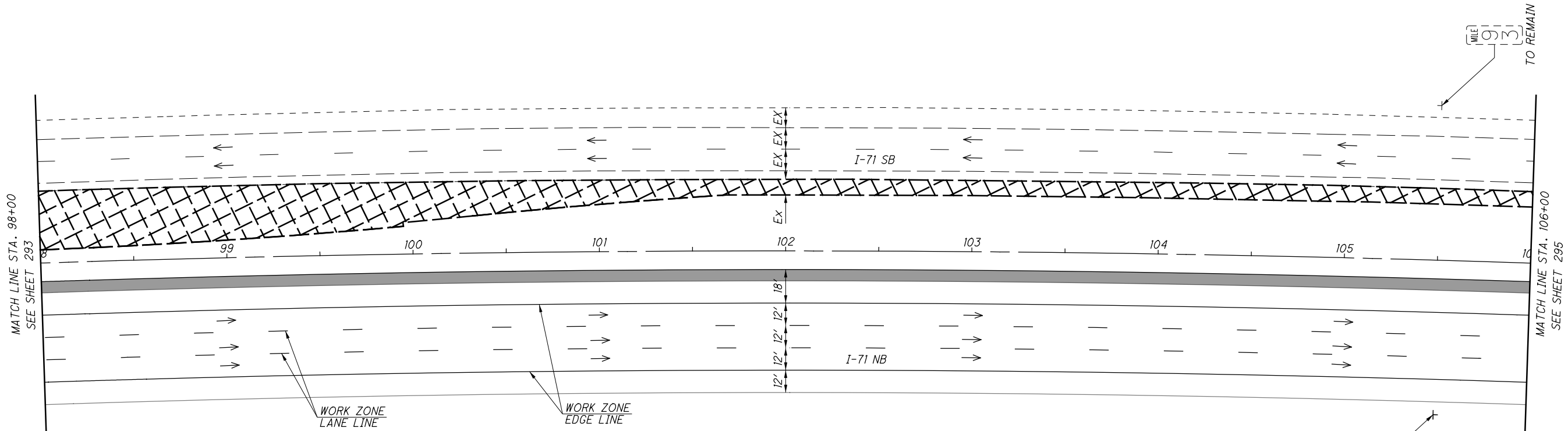
FRA-71-0.00







DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - DRUM
 - OPEN TRAVEL LANE

NOTE:
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- LEGEND**
-  TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 -  TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 -  EXISTING SIGN SUPPORT
 -  OPEN TRAVEL LANE

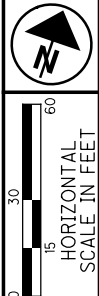
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CALCULATED
 BER
 CHECKED
 SMM

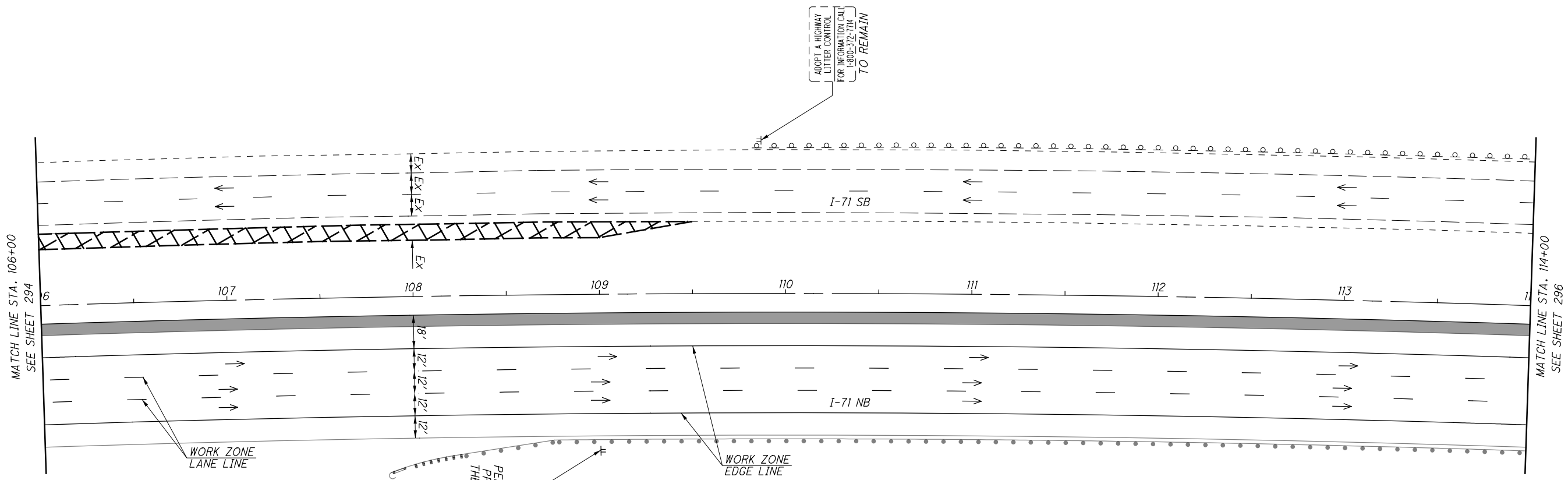
MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 98+00 TO STA. 106+00

FRA-71-0.00

294
 1312



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CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 106+00 TO STA. 114+00

FRA-71-0.00

295
1312

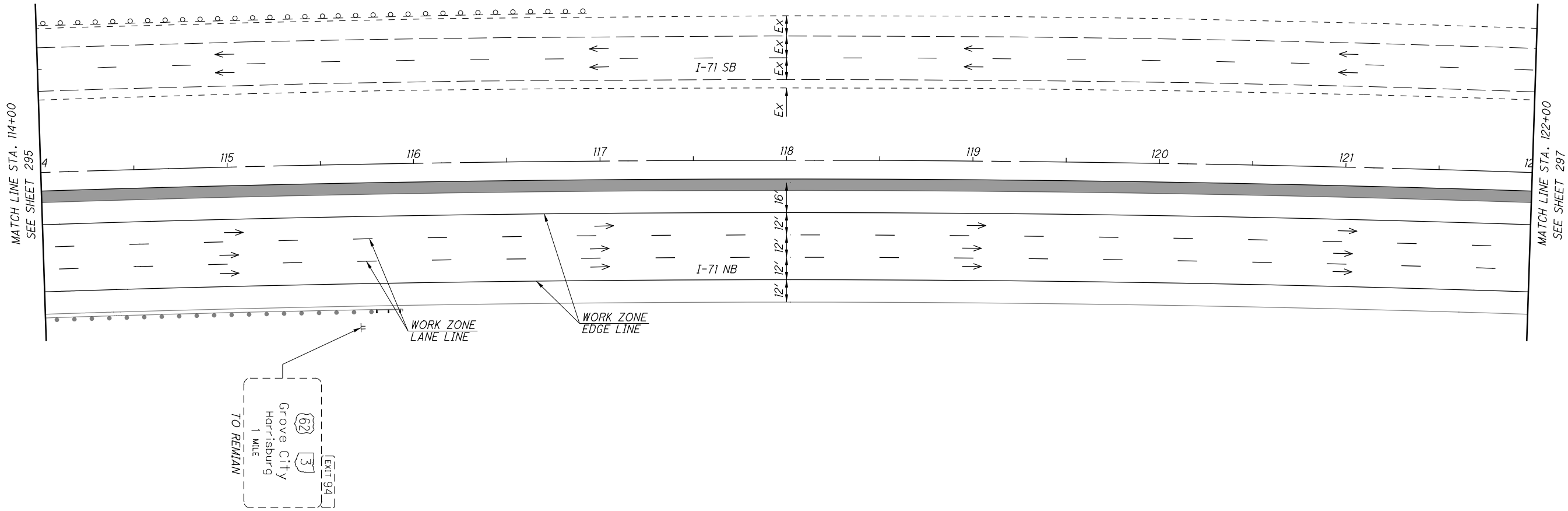
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - TEMPORARY PAVEMENT LEFT IN PLACE FROM THE FRA-71-1.53 PROJECT
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
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ADOPT A HIGHWAY
LITTER CONTROL
FOR INFORMATION CALL
1-800-372-7714

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

ADOPT A HIGHWAY
LITTER CONTROL
FOR INFORMATION CALL
1-800-372-7714
TO REMAIN



- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - T T EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
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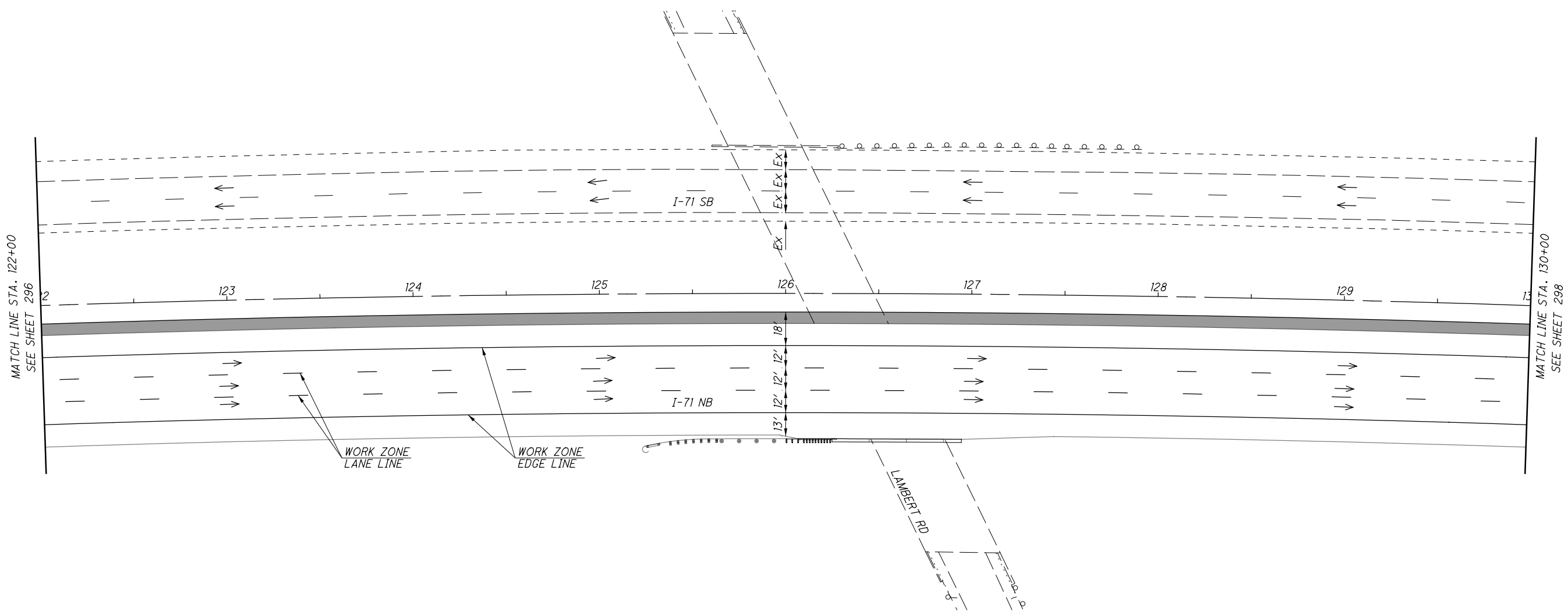
MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 114+00 TO STA. 122+00

FRA-71-0.00

CALCULATED
BER
CHECKED
SMM



J:\20130212\ODOT\FRA\107201\mot\sheets\107201MP192.dgn 4/13/2020 2:05:04 PM brieder

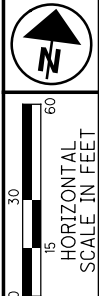


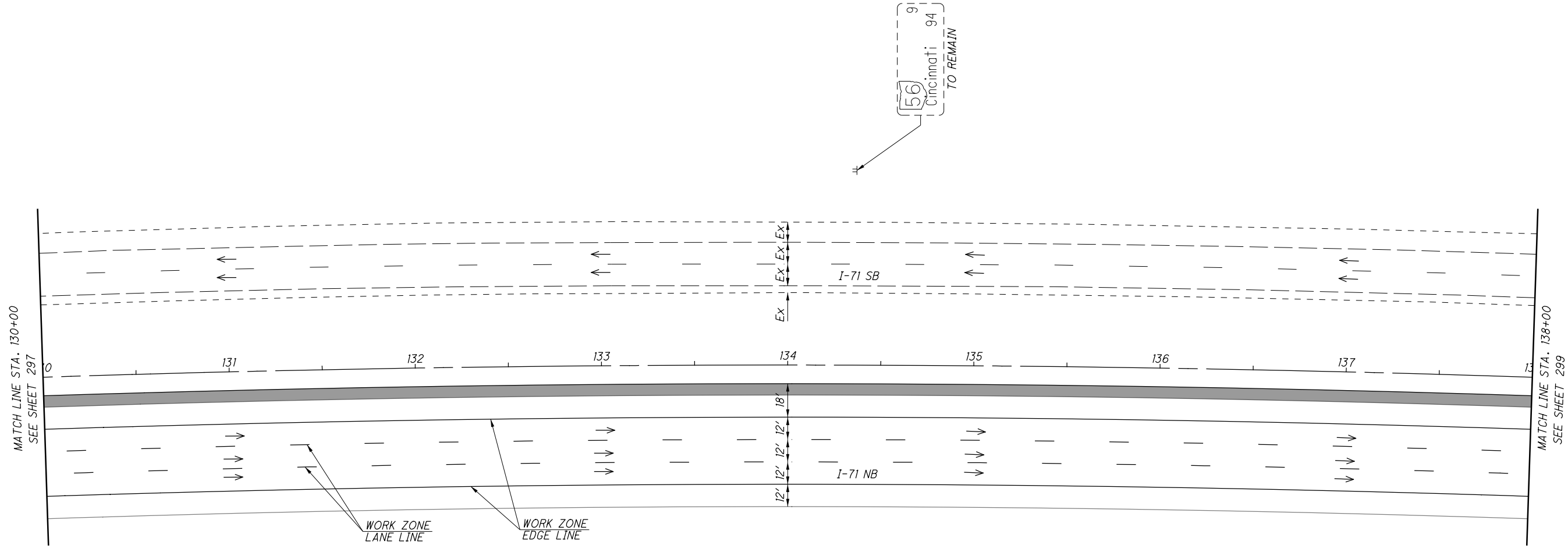
LEGEND
 [Gray Box] TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 [Arrow] OPEN TRAVEL LANE

NOTE:
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CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 122+00 TO STA. 130+00





- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - T T EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

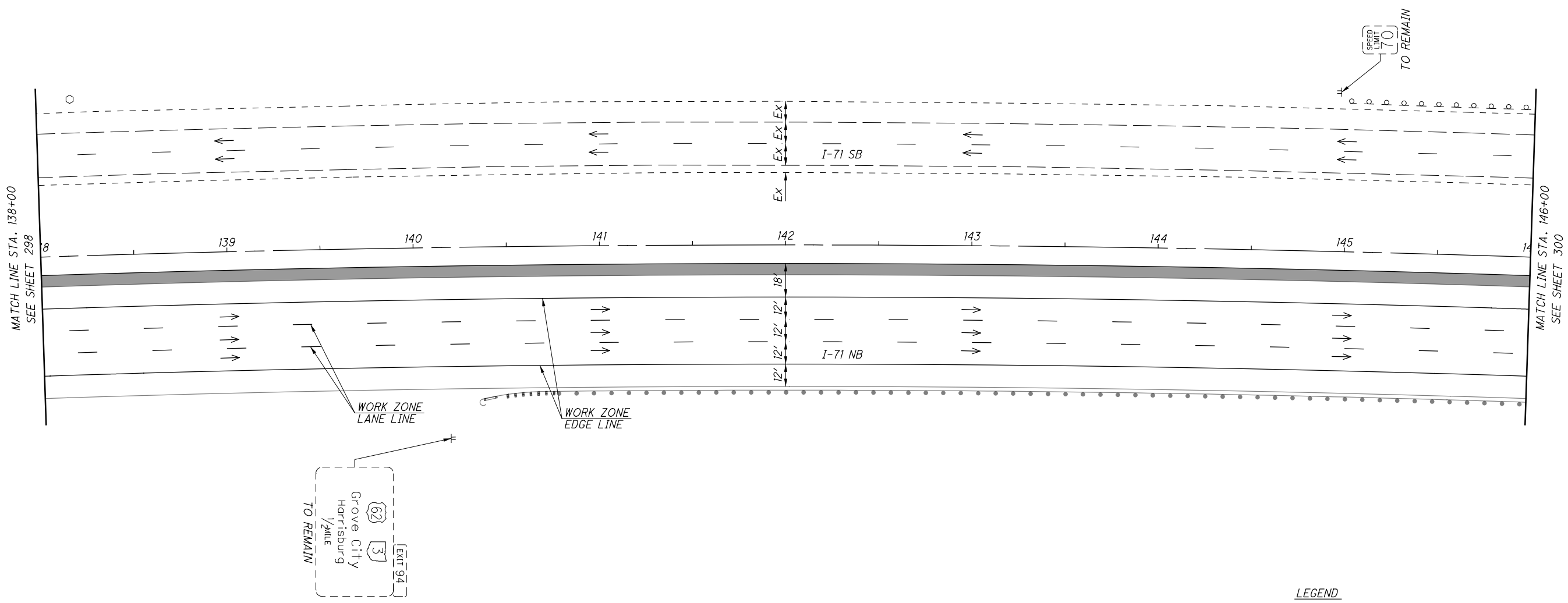
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MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 130+00 TO STA. 138+00

FRA-71-0.00

CALCULATED	BER
CHECKED	SMM

0 15 30 60
 HORIZONTAL SCALE IN FEET



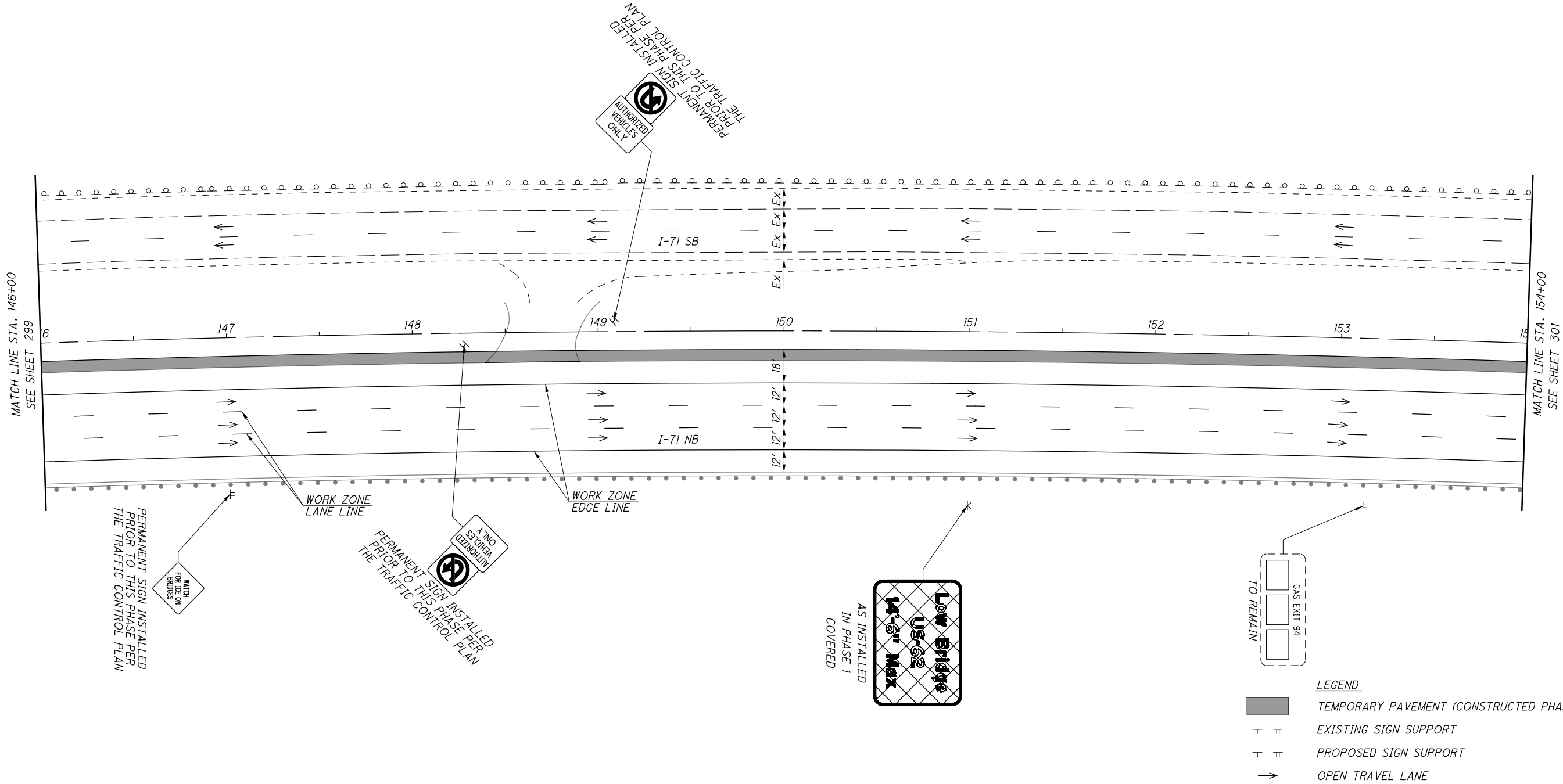
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - ⊥ ⊥ EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
 WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 138+00 TO STA. 146+00



LEGEND

- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
- EXISTING SIGN SUPPORT
- PROPOSED SIGN SUPPORT
- OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
 WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

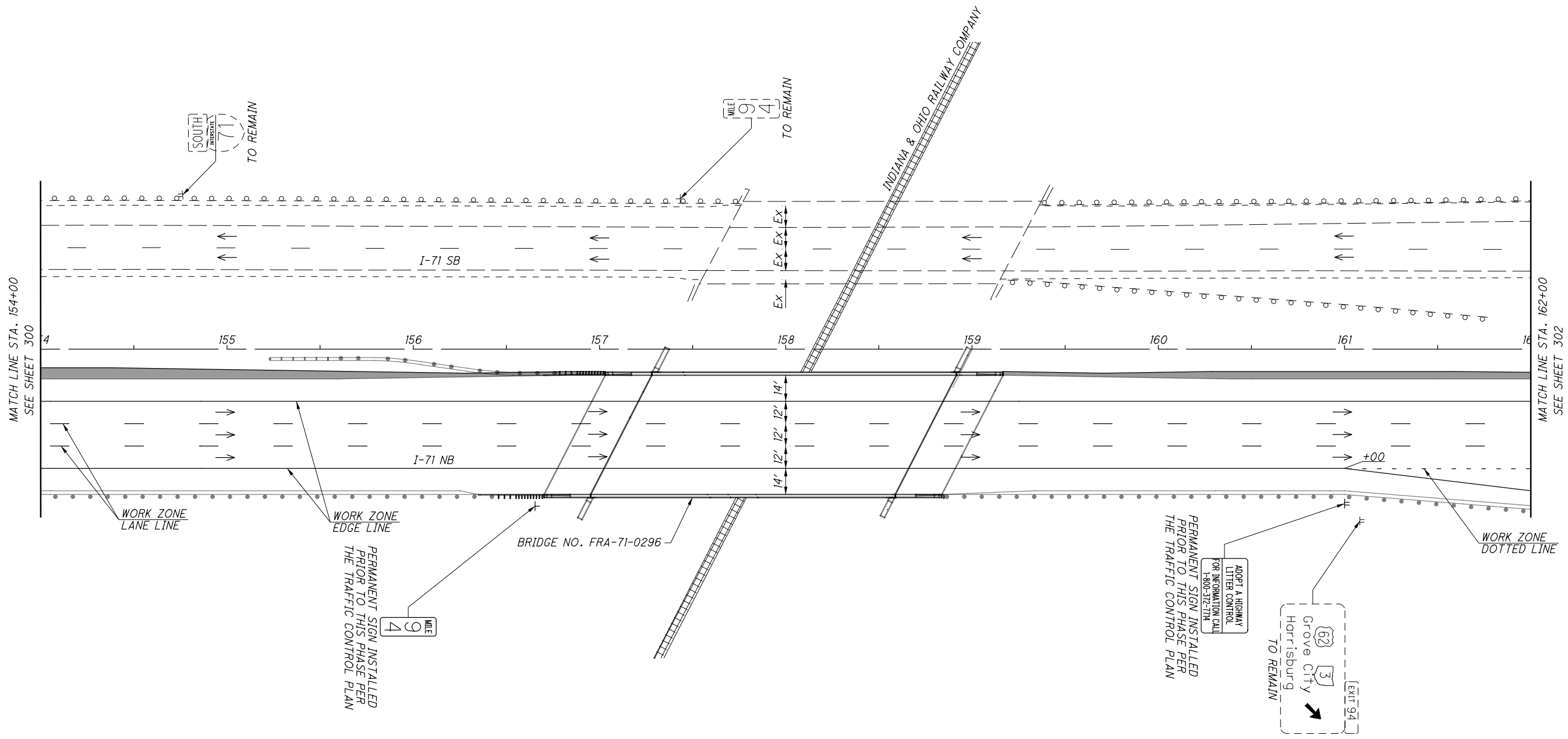
CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 146+00 TO STA. 154+00

FRA-71-0.00

300
1312



LEGEND

	TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
	EXISTING SIGN SUPPORT
	PROPOSED SIGN SUPPORT
	OPEN TRAVEL LANE

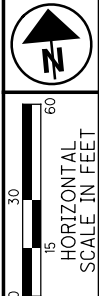
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 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED
 BER
 CHECKED
 SMM

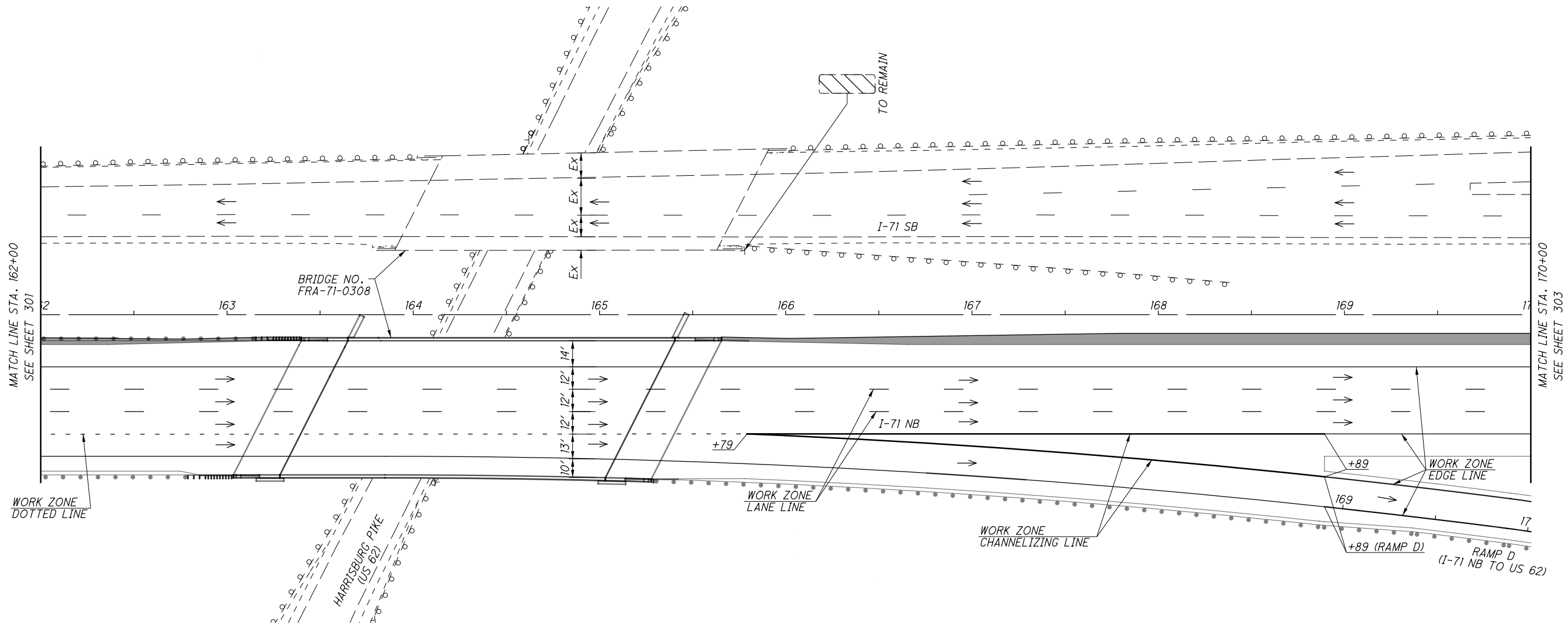
MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 154+00 TO STA. 162+00

FRA-71-0.00

301
 1312



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LEGEND

	TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
	EXISTING SIGN SUPPORT
	OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
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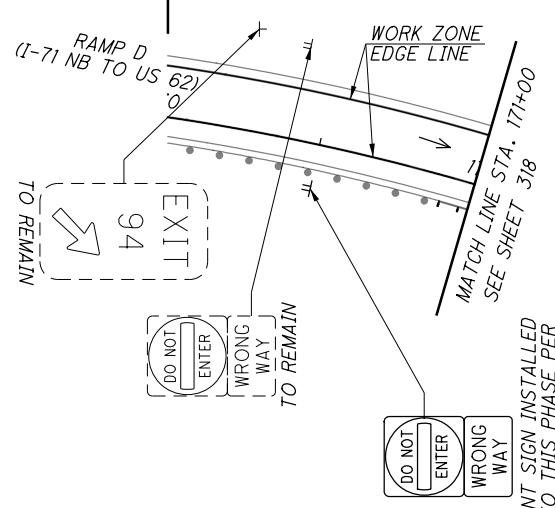
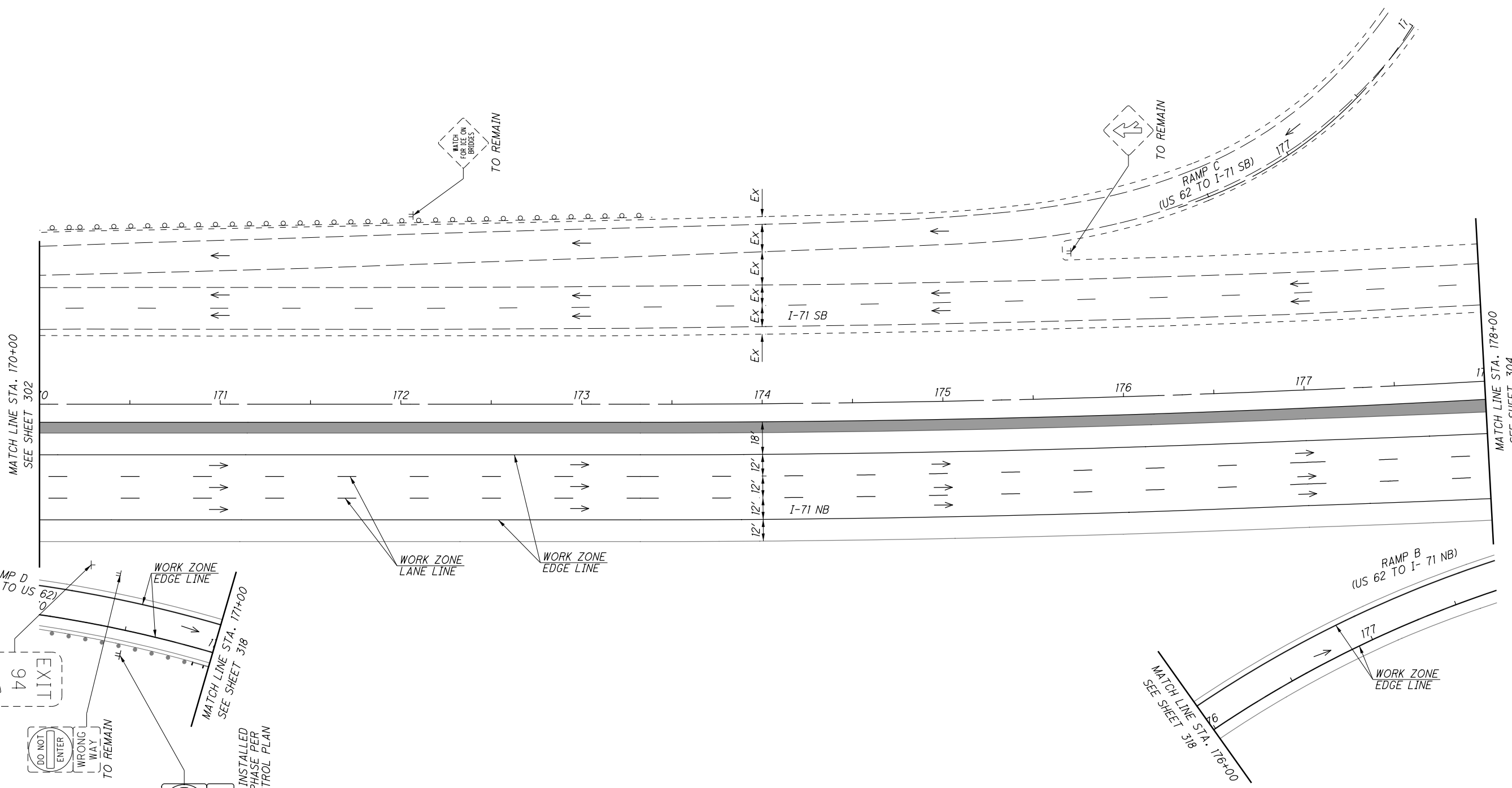
CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET



MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 162+00 TO STA. 170+00

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PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - + = EXISTING SIGN SUPPORT
 - + = PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

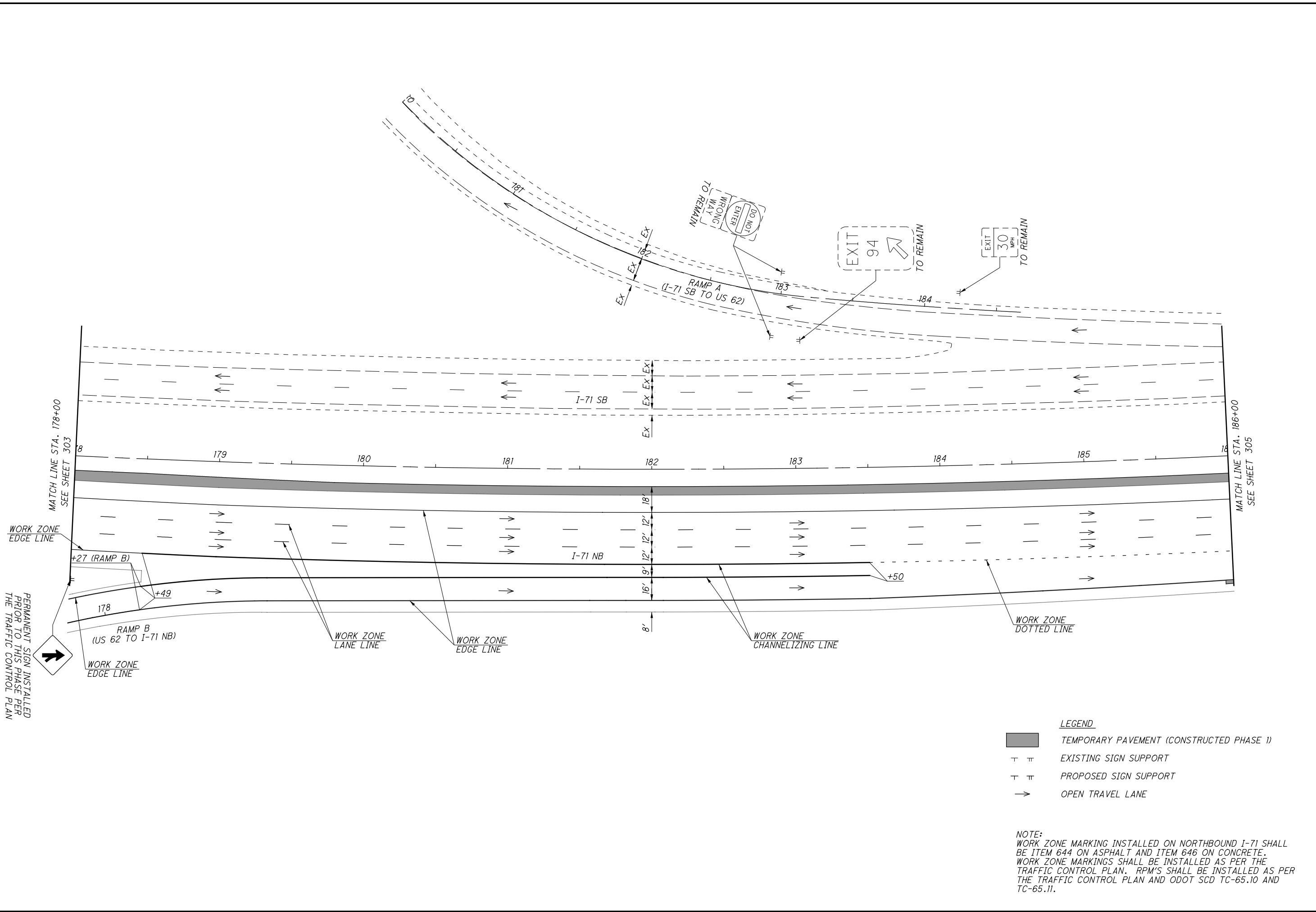
NOTE:
WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED
BER
CHECKED
SMM

15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 170+00 TO STA. 178+00

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PERMANENT SIGN INSTALLED PRIOR TO THIS PHASE PER THE TRAFFIC CONTROL PLAN

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
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0 15 30 60
 HORIZONTAL
 SCALE IN FEET

CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 178+00 TO STA. 186+00

FRA-71-0.00

304
 1312

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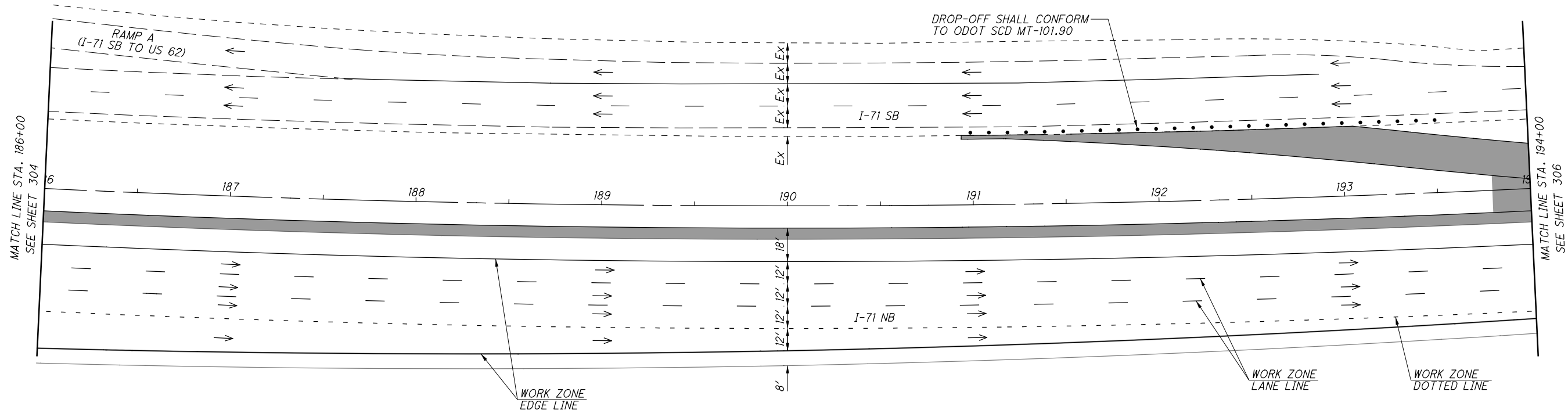


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 186+00 TO STA. 194+00

FRA-71-0.00

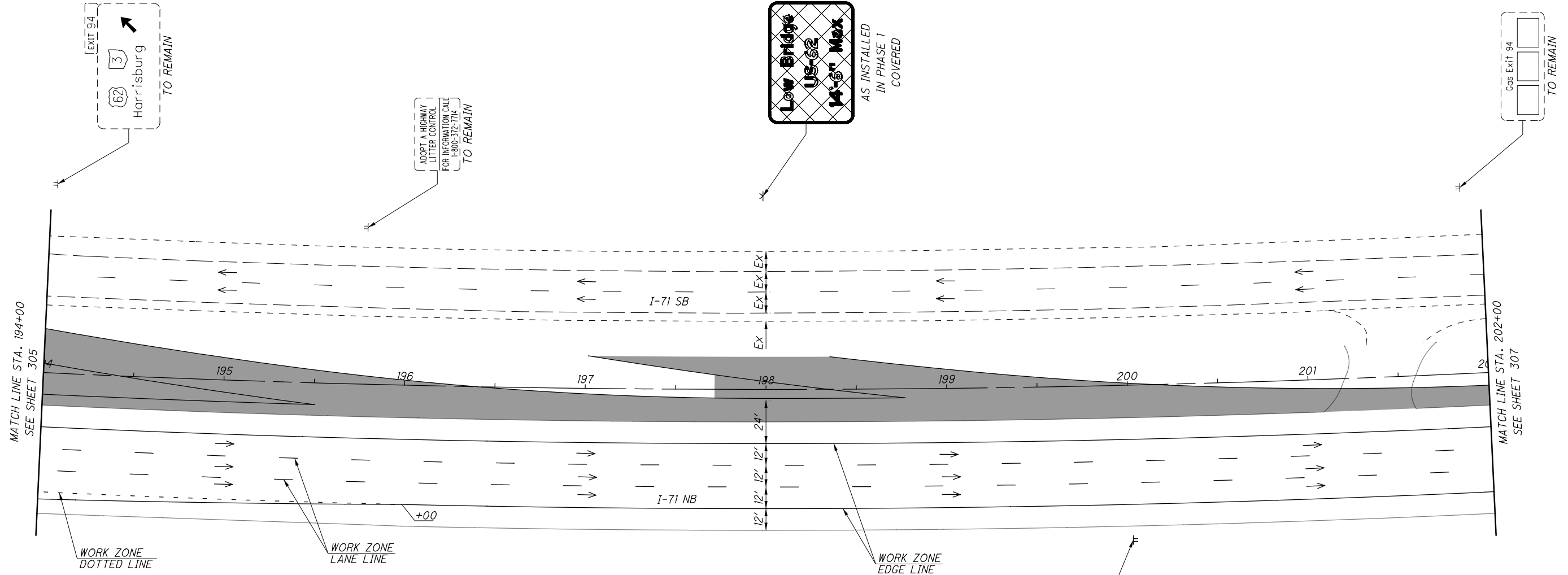
305
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - OPEN TRAVEL LANE

NOTE:
WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
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Low Bridge
US-62
14' 6" Max
 AS INSTALLED
 IN PHASE 1
 COVERED

ADOPT A HIGHWAY
 LITTER CONTROL
 FOR INFORMATION CALL
 1-800-372-7114
 TO REMAIN

EXIT 94
 Harrisburg
 TO REMAIN

Exit 94
 TO REMAIN

PERMANENT SIGN INSTALLED
 PRIOR TO THIS PHASE PER
 THE TRAFFIC CONTROL PLAN

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - + + EXISTING SIGN SUPPORT
 - + + PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

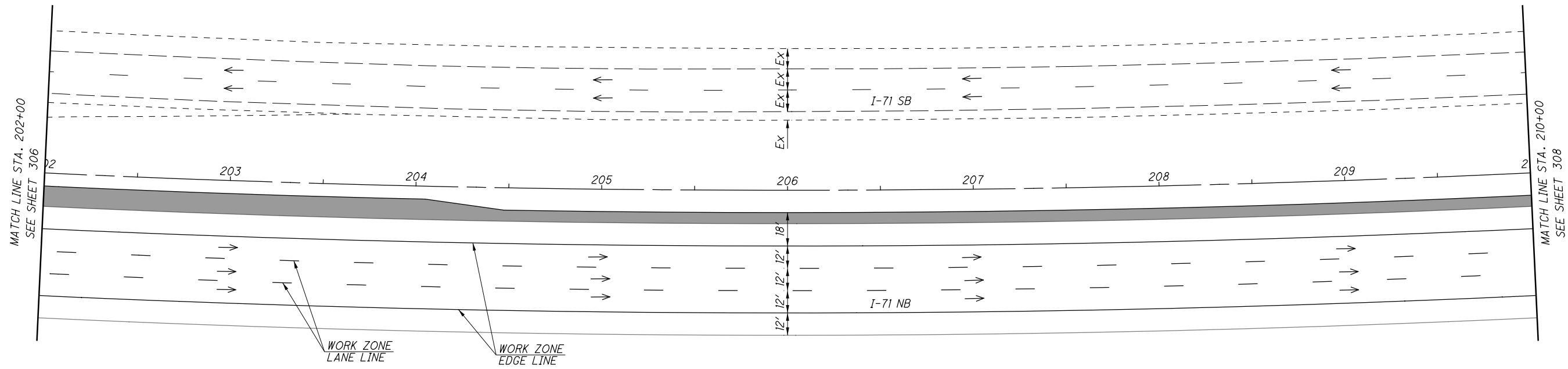
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 THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND
 TC-65.11.

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 194+00 TO STA. 202+00

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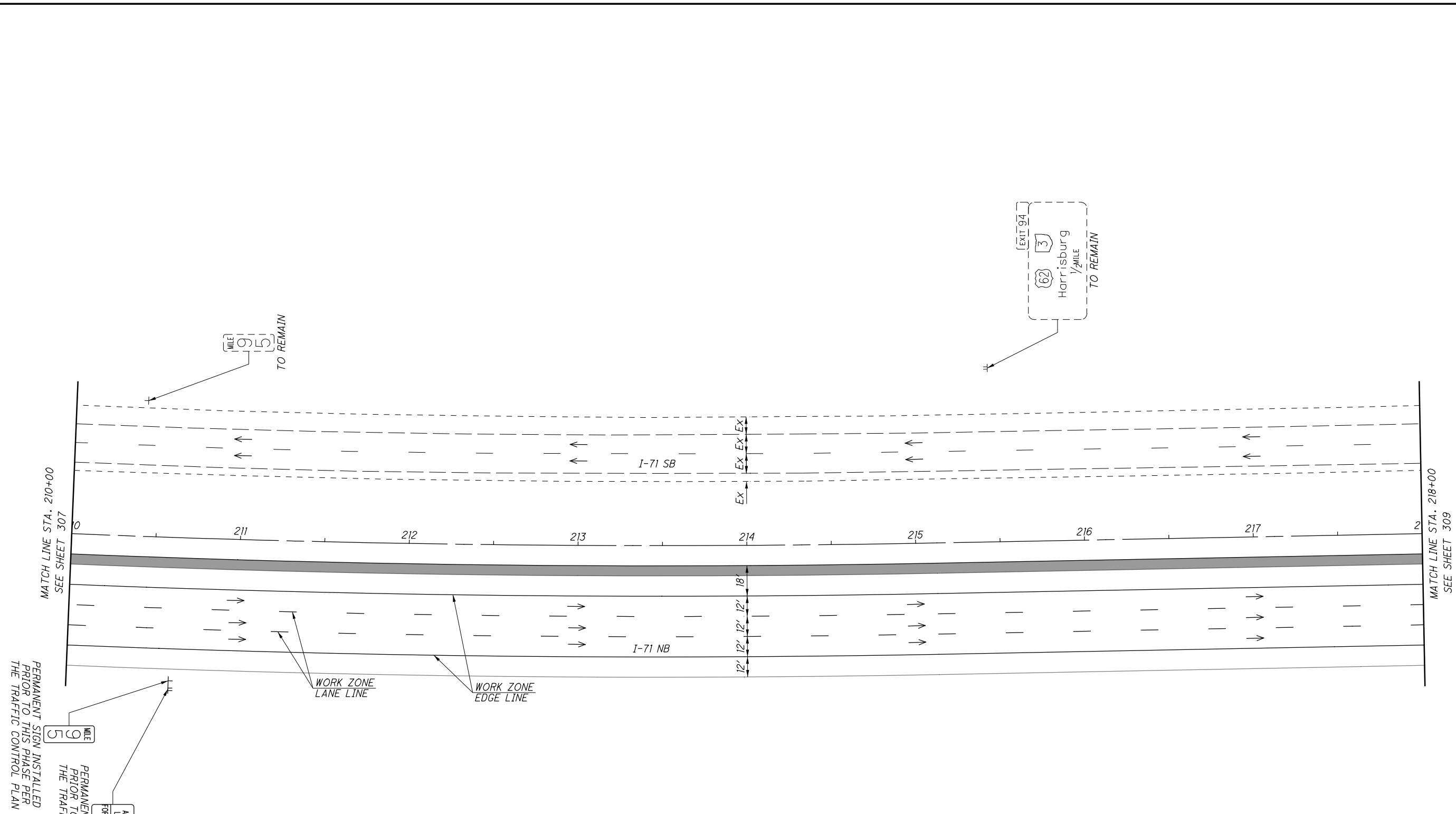
LEGEND
 [Shaded Box] TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 [Arrow] OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 202+00 TO STA. 210+00



PERMANENT SIGN INSTALLED PRIOR TO THIS PHASE PER THE TRAFFIC CONTROL PLAN

PERMANENT SIGN INSTALLED PRIOR TO THIS PHASE PER THE TRAFFIC CONTROL PLAN

ADOPT A HIGHWAY LITTER CONTROL 1-800-372-7714

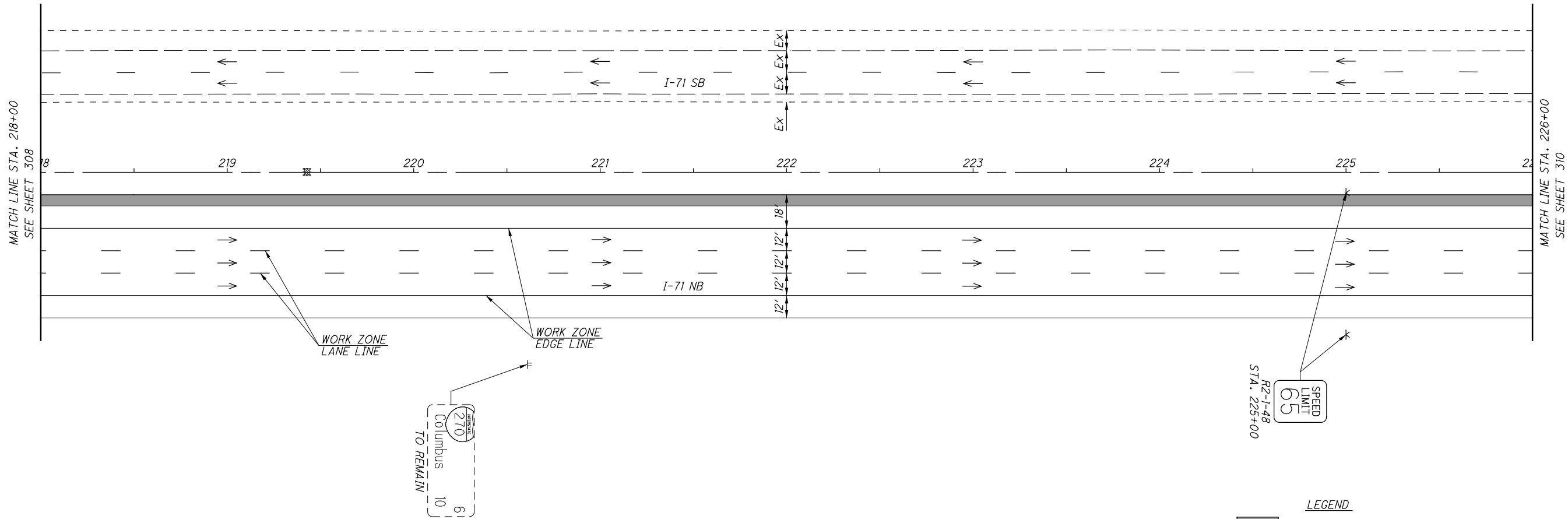
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - ⊥ ⊥ EXISTING SIGN SUPPORT
 - ⊥ ⊥ PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
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CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 210+00 TO STA. 218+00



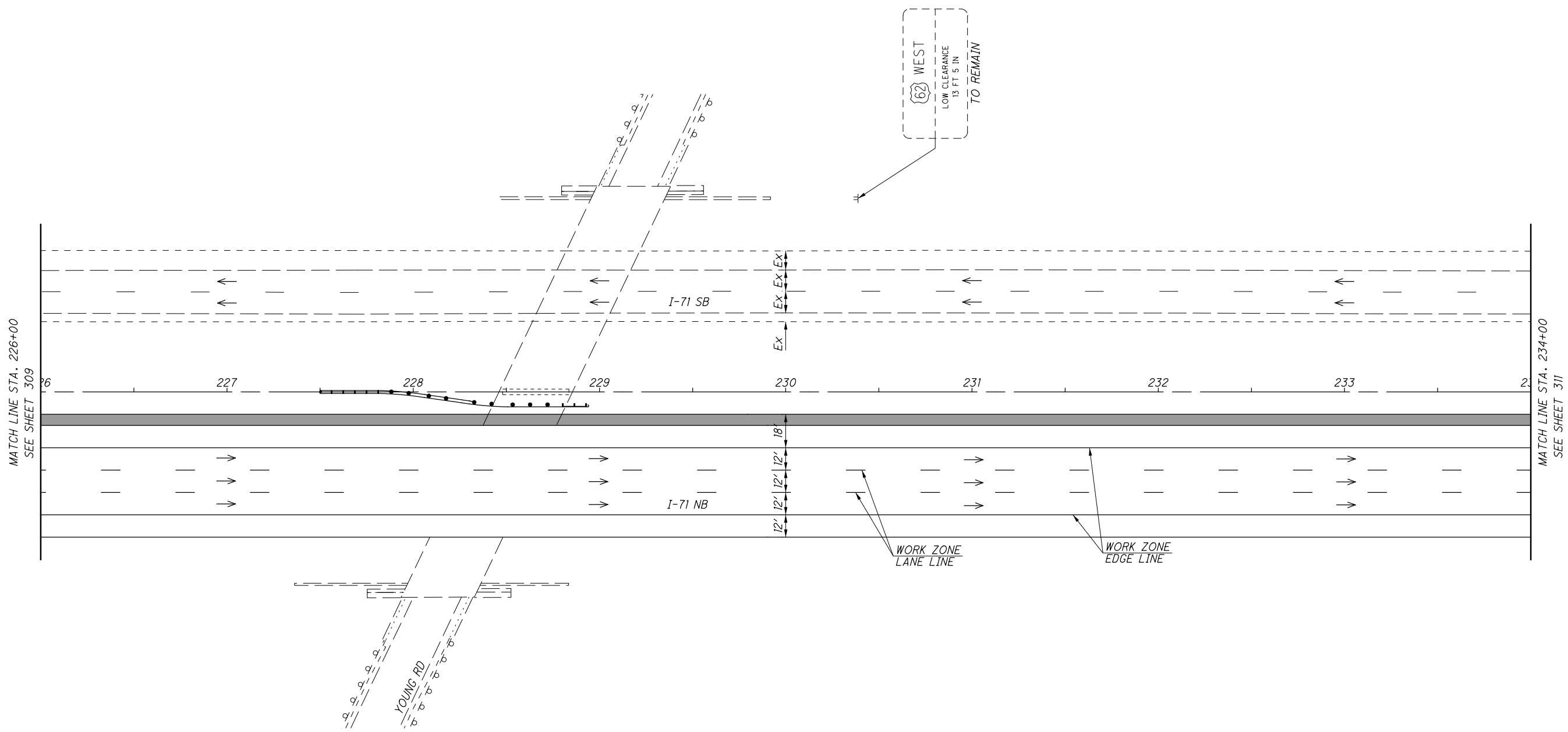
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE I)
 - * TEMPORARY SIGN SUPPORT
 - + = EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
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CALCULATED BER	CHECKED SMM
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15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 218+00 TO STA. 226+00



- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - + + EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

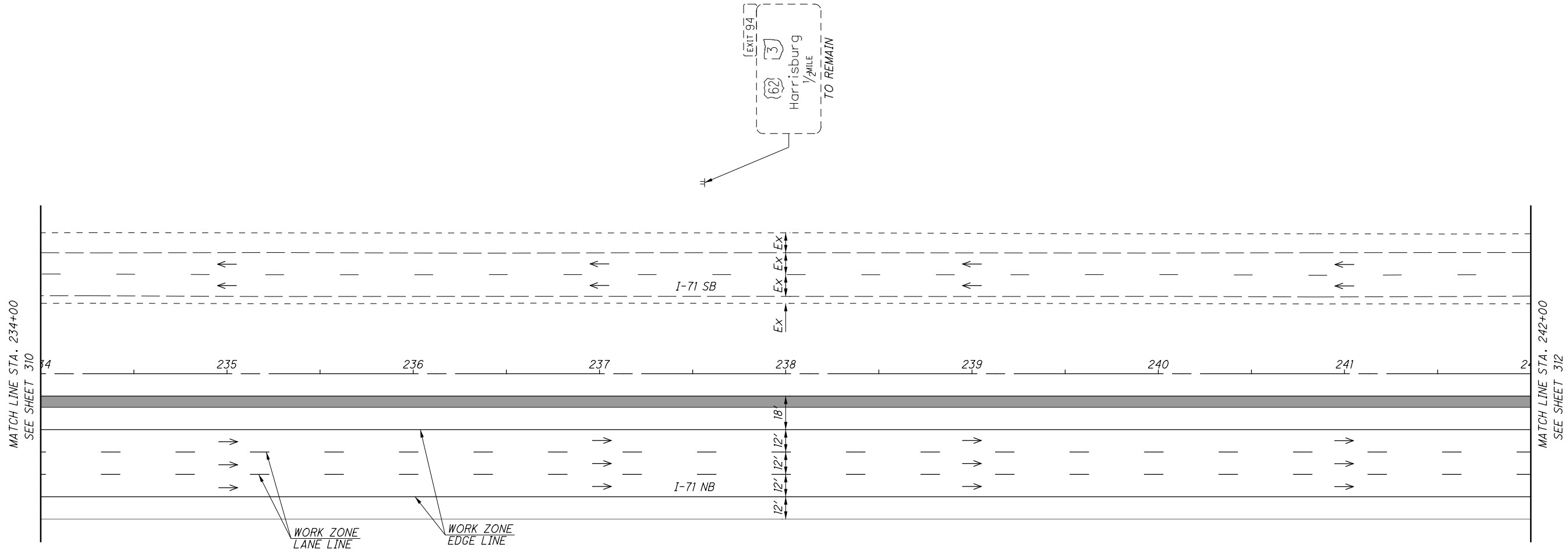
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CALCULATED
BER

CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 226+00 TO STA. 234+00



- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - ⊕ ⊕ EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

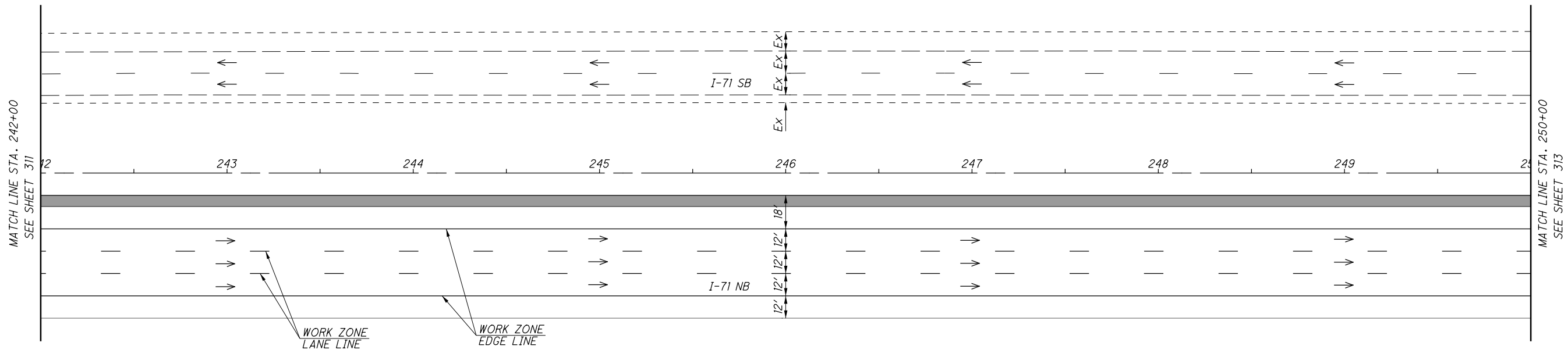
NOTE:
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CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 234+00 TO STA. 242+00

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LEGEND
 TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 OPEN TRAVEL LANE

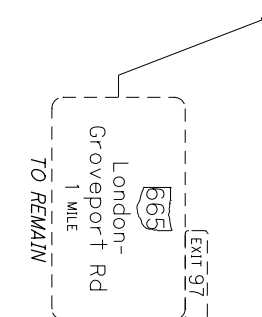
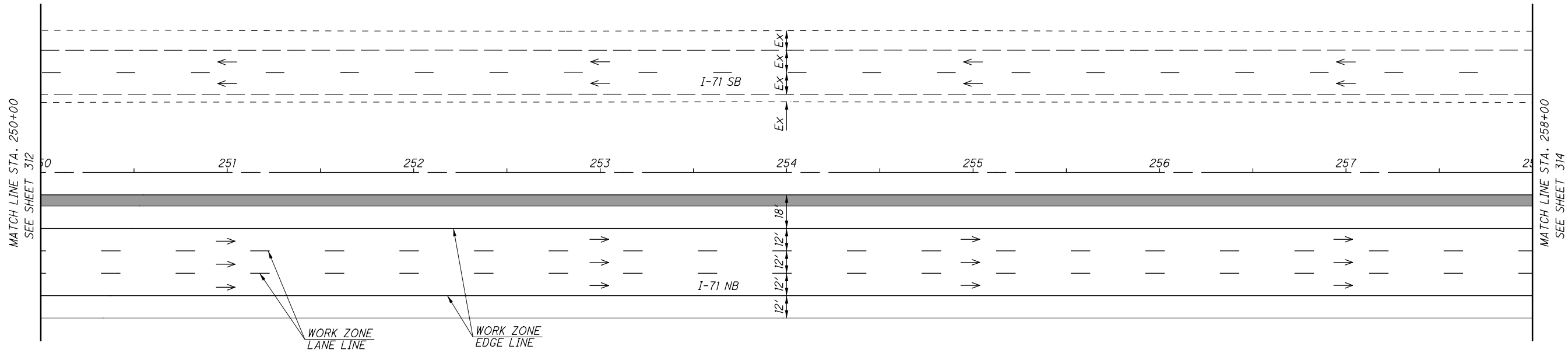
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CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET



MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 242+00 TO STA. 250+00



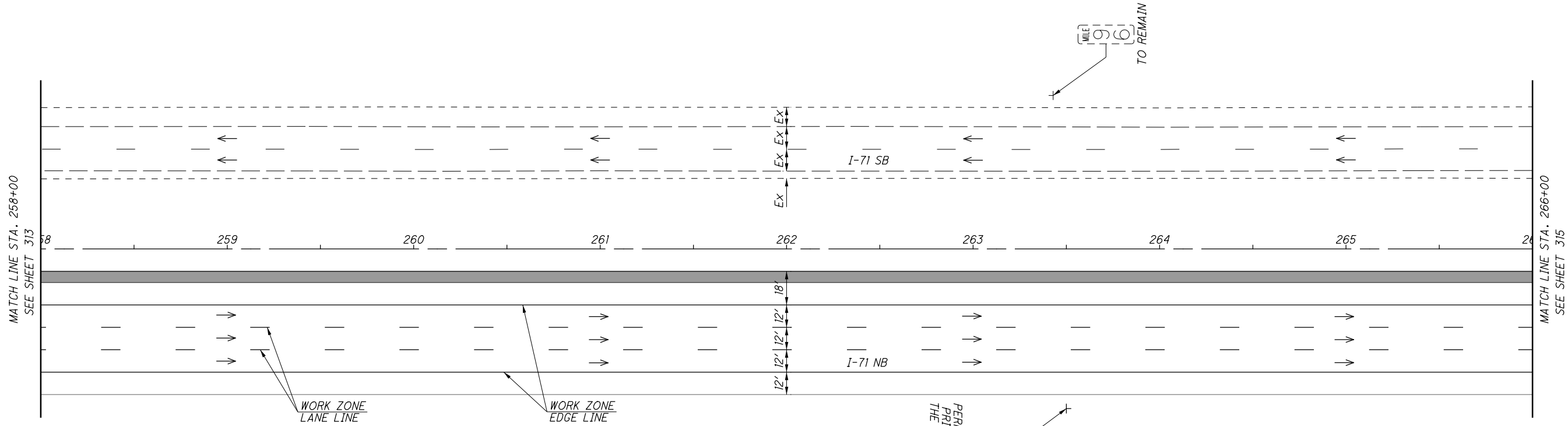
- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE.
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CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 250+00 TO STA. 258+00



LEGEND

	TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
	EXISTING SIGN SUPPORT
	PROPOSED SIGN SUPPORT
	OPEN TRAVEL LANE

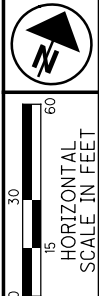
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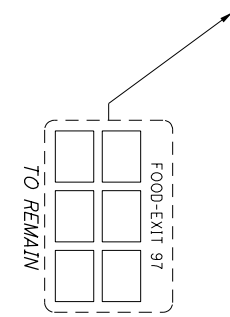
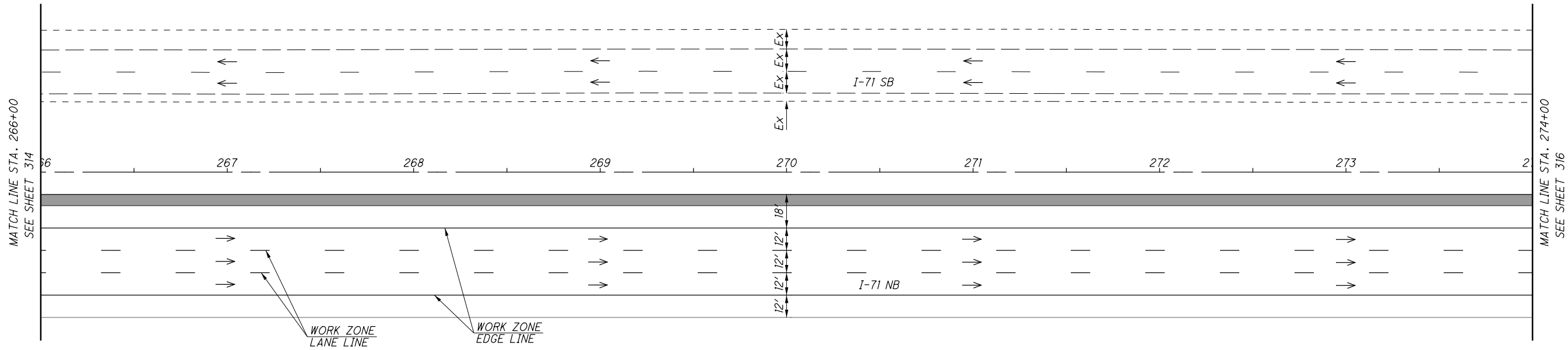
CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 258+00 TO STA. 266+00

FRA-71-0.00

314
 1312





- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - T T EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
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MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 266+00 TO STA. 274+00

FRA-71-0.00

CALCULATED BER	CHECKED SMM
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15
30
60
HORIZONTAL
SCALE IN FEET

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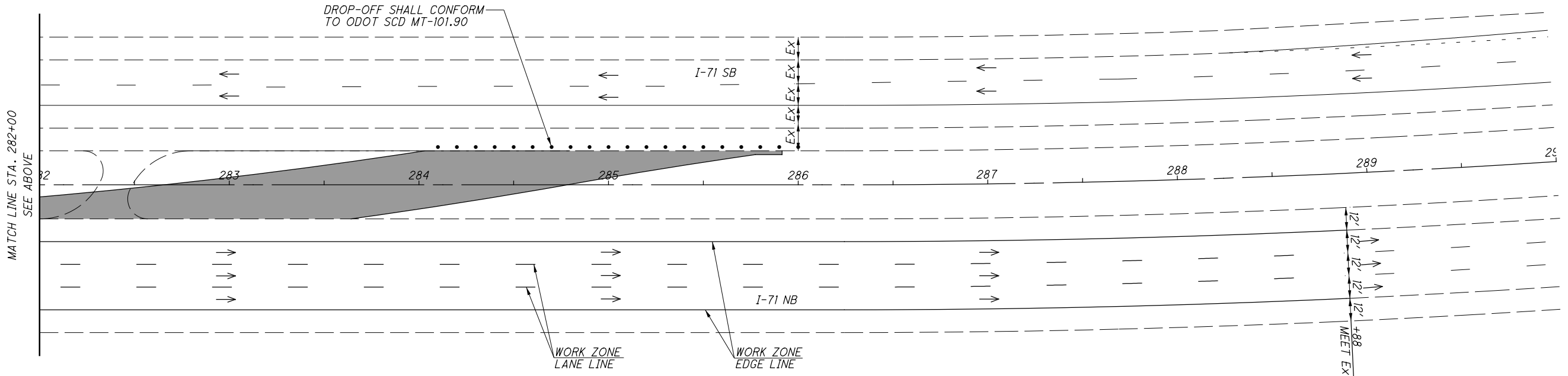
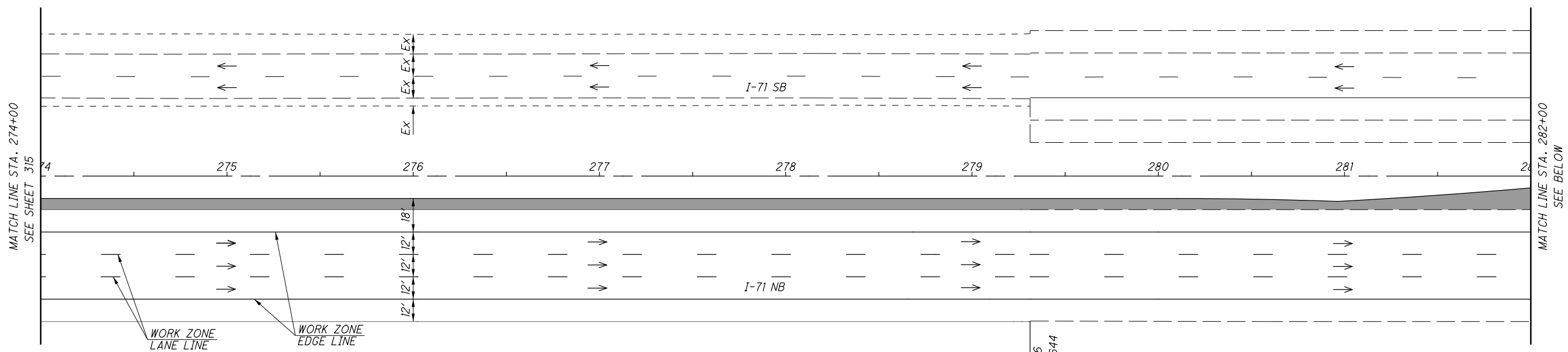


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
I-71 - STA. 274+00 TO STA. 290+00

FRA-71-0:00

316
1312

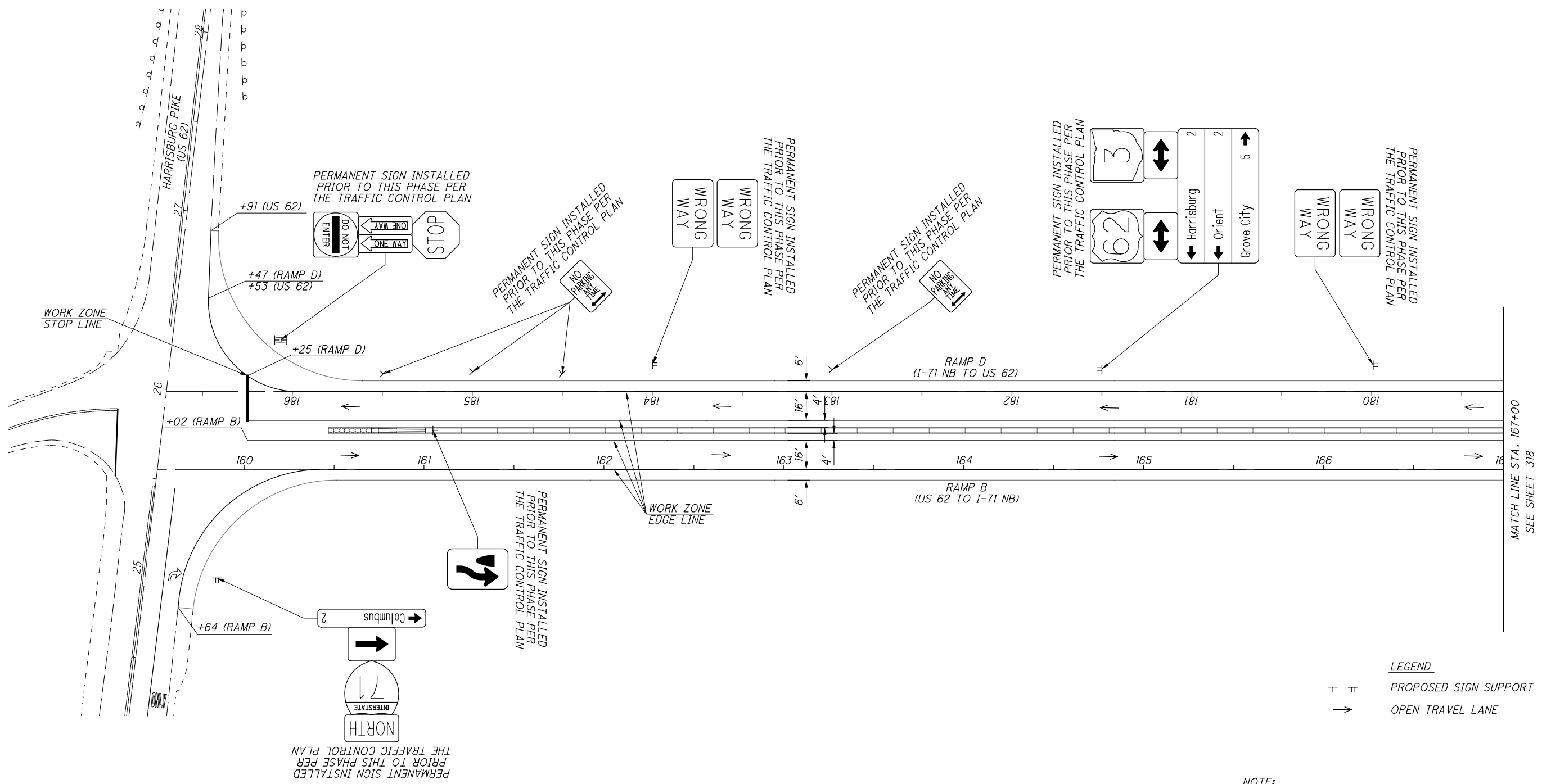


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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PHASE I)
 - OPEN TRAVEL LANE
 - DRUM

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NOTE:
 WORK ZONE MARKING INSTALLED ON NORTHBOUND I-71 SHALL BE ITEM 644 ON ASPHALT AND ITEM 646 ON CONCRETE. WORK ZONE MARKINGS SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN. RPM'S SHALL BE INSTALLED AS PER THE TRAFFIC CONTROL PLAN AND ODOT SCD TC-65.10 AND TC-65.11.

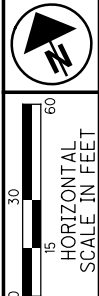
LEGEND
 T F PROPOSED SIGN SUPPORT
 → OPEN TRAVEL LANE

CALCULATED
 BER
 CHECKED
 SMM

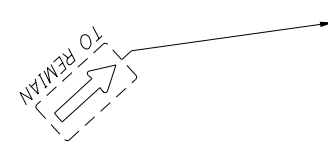
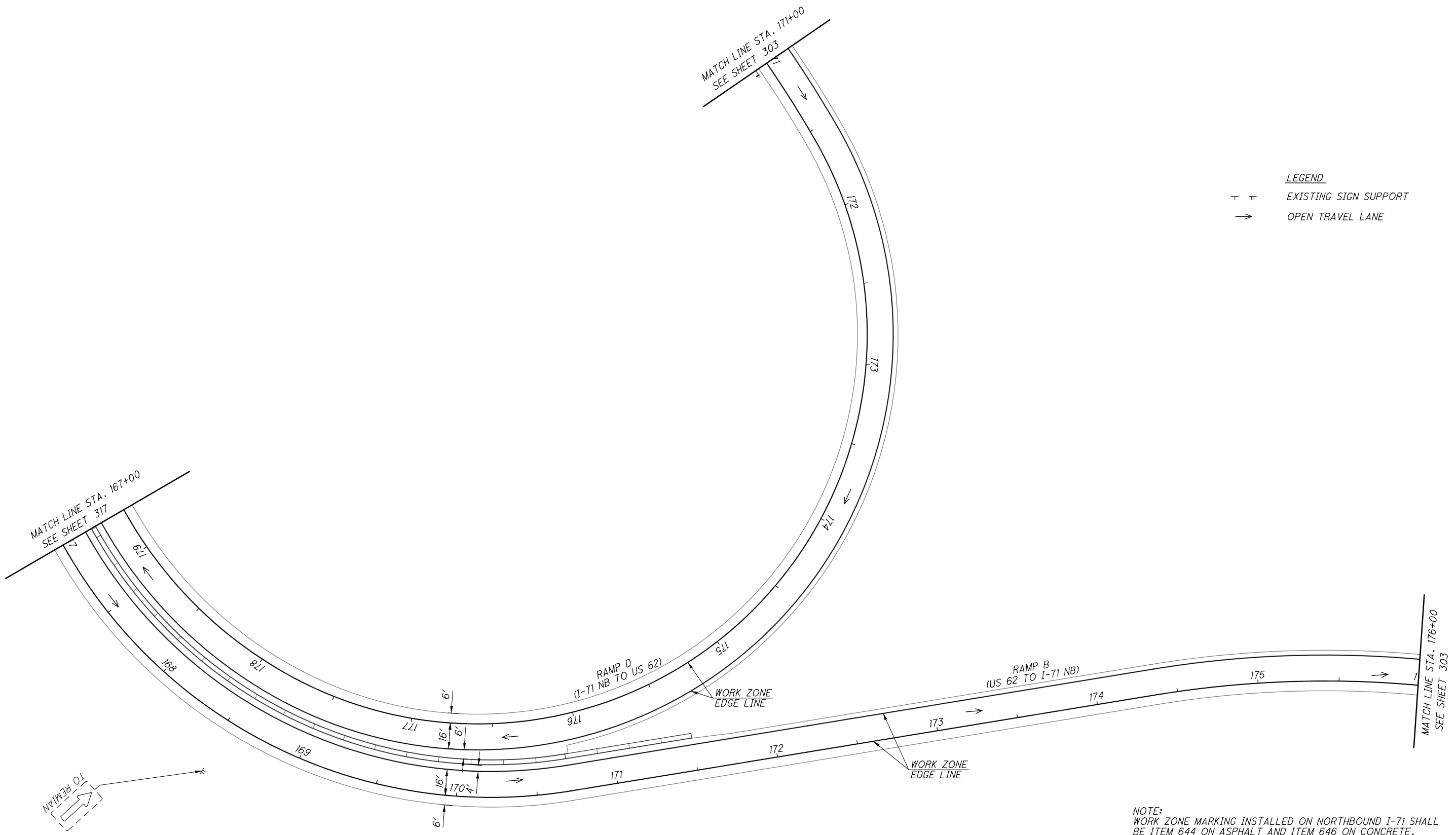
**MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
 RAMP B - STA. 159+52 TO STA. 167+00**

FRA-71-0.00

317
 1312



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NOTE:
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CALCULATED	BER	CHECKED	SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - WINTERIZATION PHASE
RAMP B - STA. 167+00 TO STA. 176+00

FRA-71-0.00

① $\Delta = 13^\circ 44' 38''$ (LT)

 $Dc = 6^\circ 07' 19''$

 $R = 935.90'$

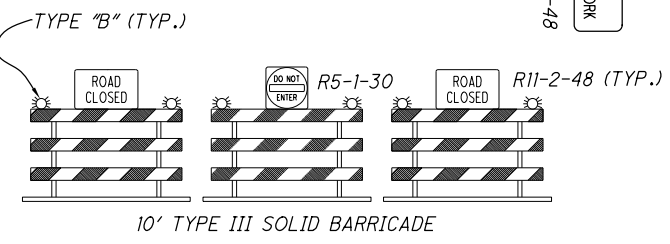
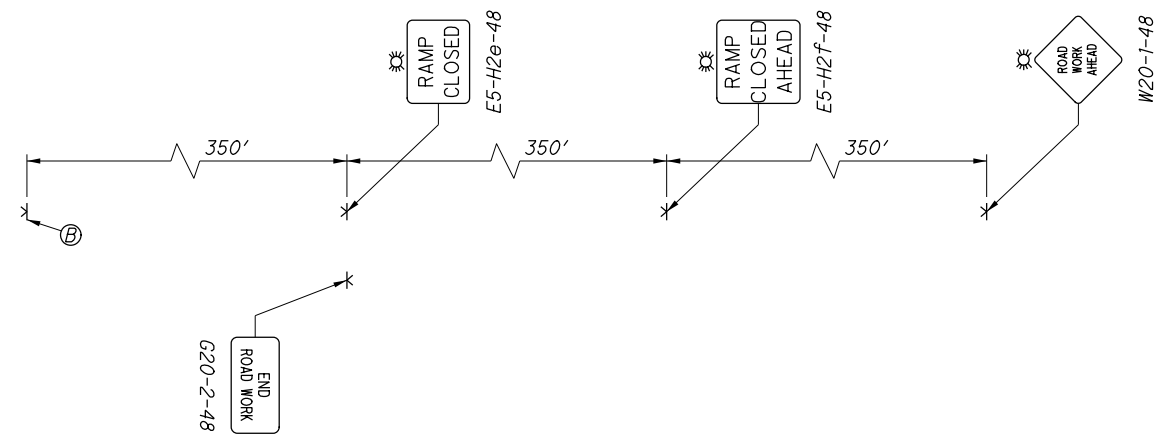
 $T = 112.79'$

 $L = 224.50'$

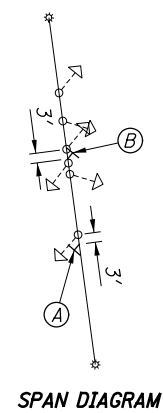
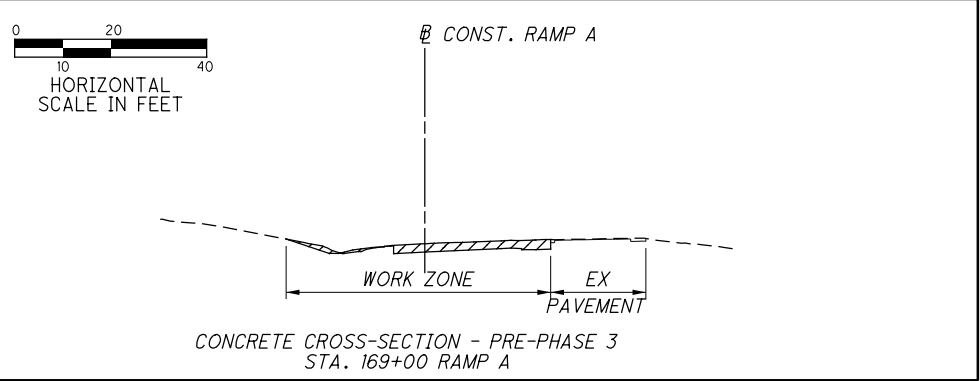
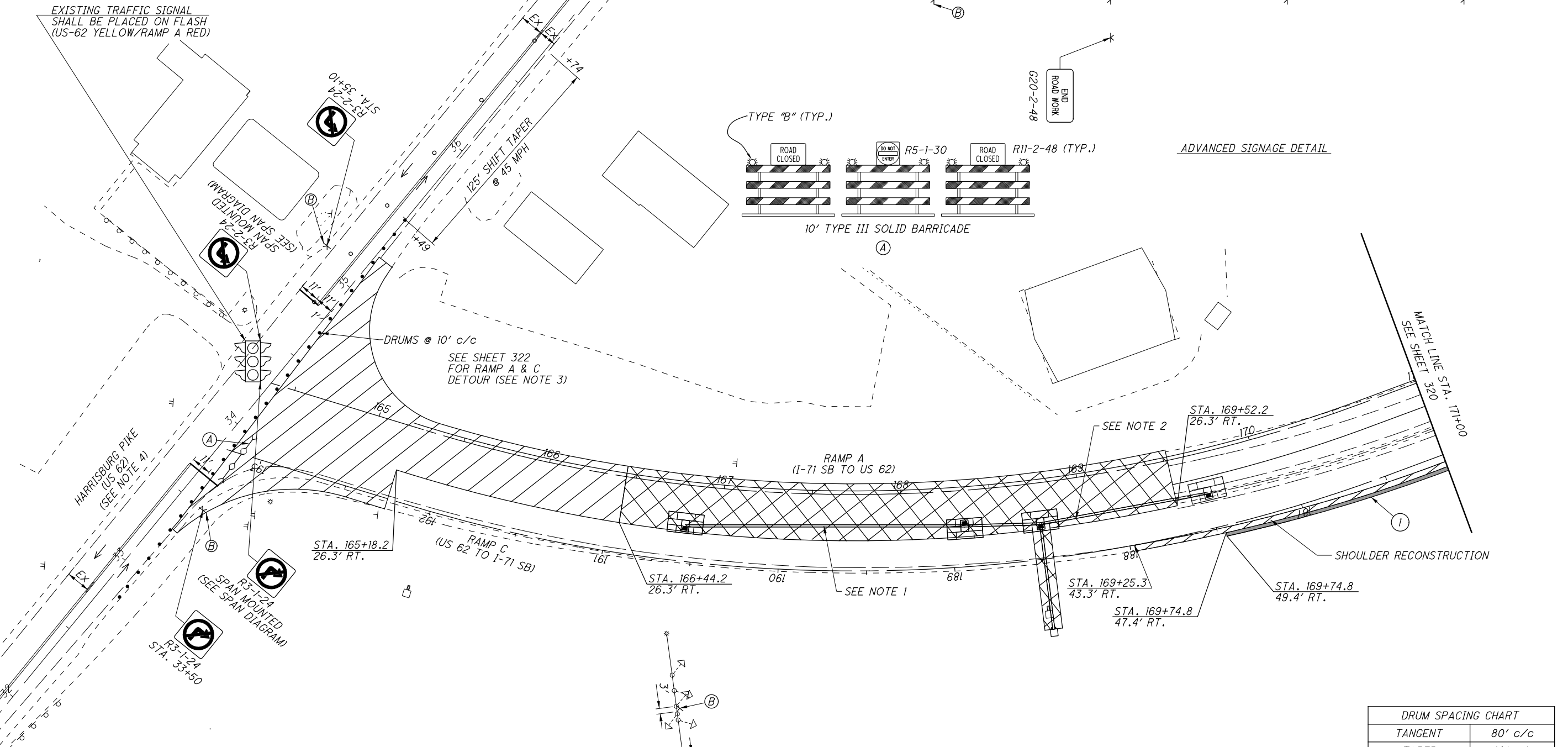
 $E = 6.77'$

 $C = 223.97'$

 $C.B. = N 63^\circ 43' 54'' E$



ADVANCED SIGNAGE DETAIL



NOTE: EXISTING SPAN WIRE AND SIGNAL HEADS SHALL REMAIN.

- NOTE:
1. THE PROPOSED STORM SEWER SHALL BE INSTALLED BETWEEN STA. 166+80.4 AND STA. 169+52.7. THE BARRIER INLETS SHALL BE CONSTRUCTED WITH TEMPORARY CB-6 GRATE (BOLTABLE) TO MAINTAIN TRAFFIC IN PHASE 3. THE INLETS SHALL BE RECONSTRUCTED TO PROPOSED SPECIFICATIONS DURING PHASE 3A.
 2. THE PROPOSED BARRIER WALL FROM STA. 165+50 TO STA. 169+52.7 SHALL BE NON-PERFORMED IN THIS PHASE.
 3. THE RAMP A AND C CLOSURE SHOWN ON THIS SHEET SHALL ONLY BE IN PLACE FOR 2 WEEKENDS (10 PM FRI.-7 AM MON.).
 4. TRAFFIC ON US 62 SHALL BE SHIFTED UTILIZING DRUMS/CHANNELIZER CONES DURING WEEKEND HOURS ONLY (10 PM FRI.-7 AM MON.).
 5. RAMP B AND D SHALL REMAIN OPEN DURING THIS CLOSURE.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- WEEKEND 1 WORK ZONE
 - WEEKEND 2 WORK ZONE
 - DRUM
 - CHANNELIZER CONE
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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NOTE:

1. THE RAMP A AND C CLOSURE SHOWN ON THIS SHEET SHALL ONLY BE IN PLACE FOR 2 WEEKENDS (10 PM FRI.-7 AM MON.).

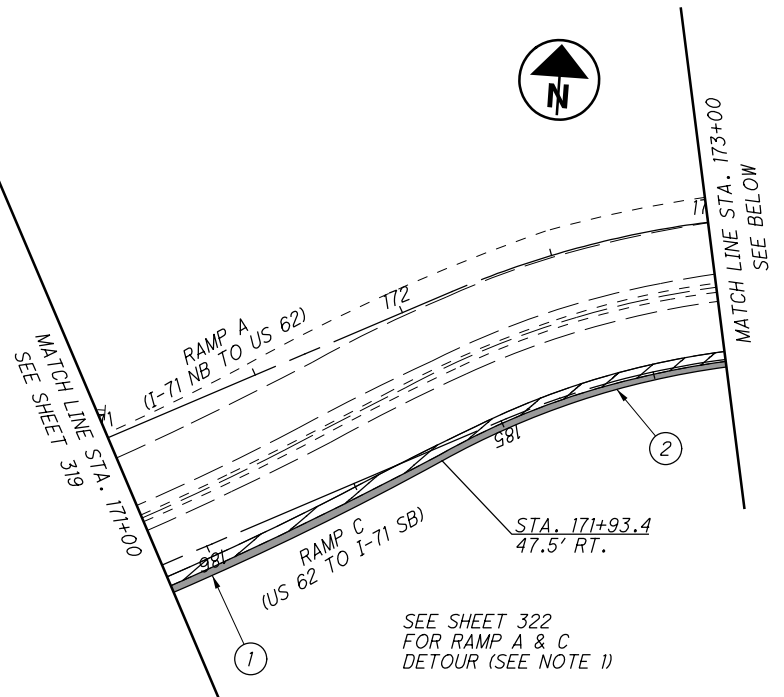
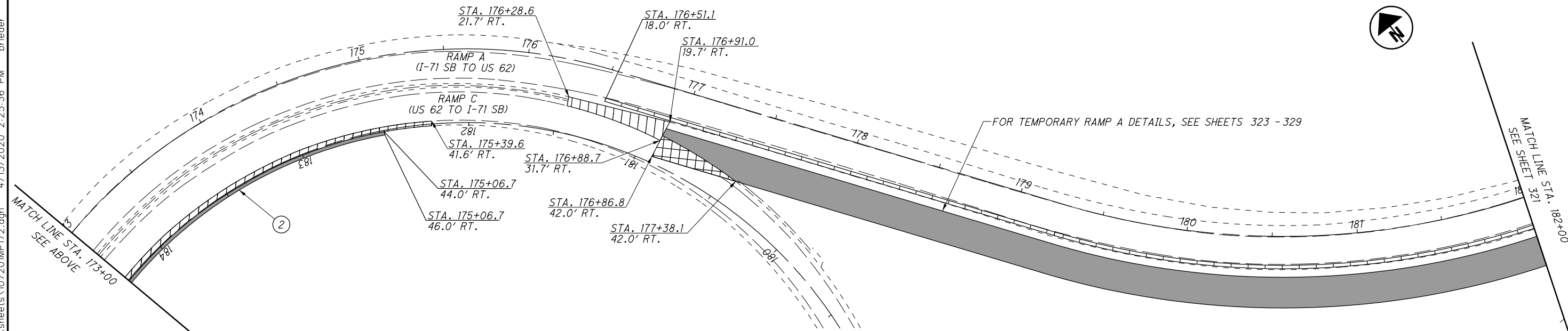
2. IN ORDER TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND TEMPORARY PAVEMENT, EXISTING PAVEMENT SHALL BE MILLED AND A PAVEMENT WEDGE SHALL BE ADDED PER THE REQUIREMENTS OF THE "TEMPORARY PAVEMENT WEDGE" NOTE ON SHEET 16

3. EXISTING SHOULDERS THAT ARE TO BE RECONSTRUCTED SHALL FIRST BE PLANED 9 INCHES DOWN TO THE EXISTING ITEM 304, AGGREGATE BASE WHICH WILL REMAIN IN PLACE. THEY SHALL THEN BE REPLACED WITH CLASS A PAVEMENT FOR MAINTAINING TRAFFIC. PAYMENT FOR THE PLANNING AND INSTALLATION OF TEMPORARY PAVEMENT WITHIN THE EXISTING SHOULDER FOOTPRINT SHALL BE AS PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN. SHOULDER REPLACEMENT SHALL BE LIMITED TO THE LENGTH THAT CAN BE COMPLETED IN THE SAME WORK DAY.

① $\Delta = 13^\circ 44' 38''$ (LT)
 $D_c = 6^\circ 07' 19''$
 $R = 935.90'$
 $T = 112.79'$
 $L = 224.50'$
 $E = 6.77'$
 $C = 223.97'$
 $C.B. = N 63^\circ 43' 54'' E$

② $\Delta = 61^\circ 26' 29''$ (RT)
 $D_c = 22^\circ 47' 43''$
 $R = 251.35'$
 $T = 149.36'$
 $L = 269.53'$
 $E = 41.03'$
 $C = 256.80'$
 $C.B. = N 87^\circ 36' 11'' E$

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SEE SHEET 322 FOR RAMP A & C DETOUR (SEE NOTE 1)

FOR TEMPORARY RAMP A DETAILS, SEE SHEETS 323 - 329

LEGEND

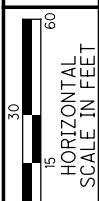
	SHOULDER RECONSTRUCTION
	PAVEMENT TRANSITION (SEE NOTE 2)
	TEMPORARY PAVEMENT (CONSTRUCTED THIS PHASE)
	PORTABLE BARRIER

MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 3
RAMP A - STA. 171+00 TO STA. 182+00

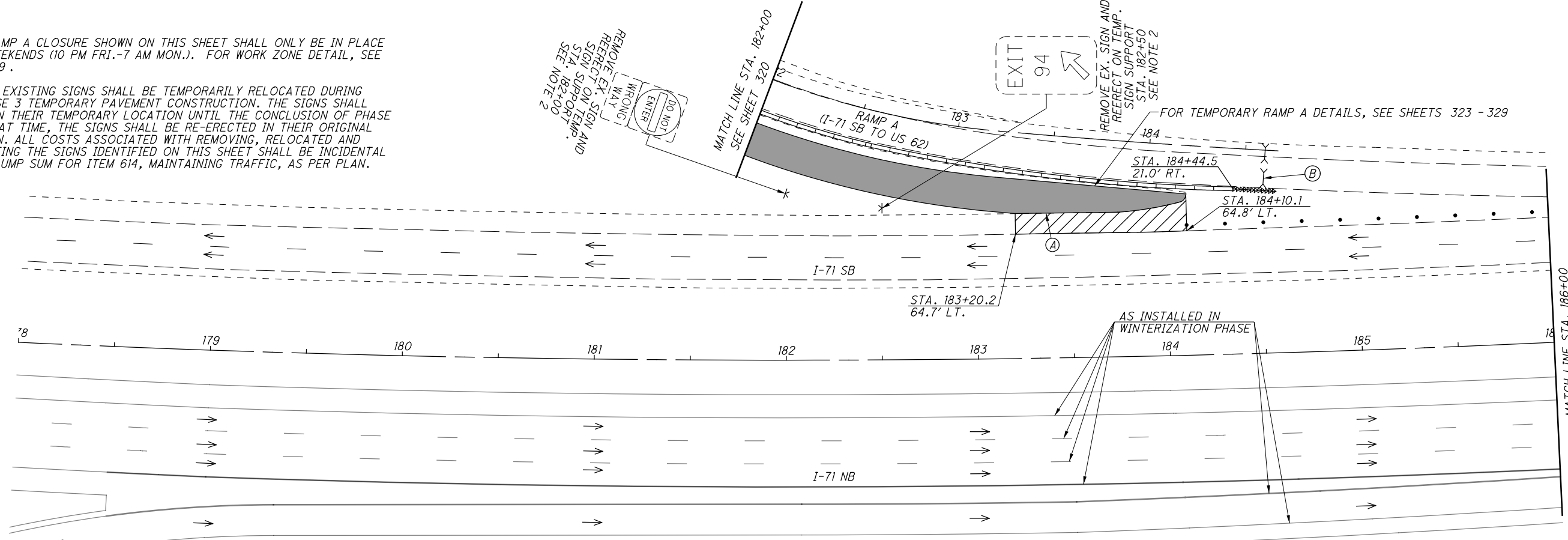
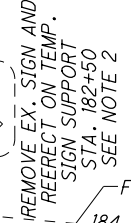
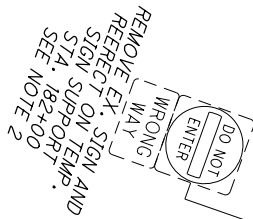
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320
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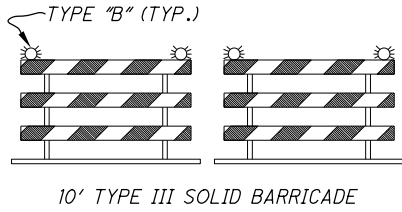
CALCULATED
 BER
 CHECKED
 SMM



NOTE:
 1. THE RAMP A CLOSURE SHOWN ON THIS SHEET SHALL ONLY BE IN PLACE FOR 2 WEEKENDS (10 PM FRI.-7 AM MON.). FOR WORK ZONE DETAIL, SEE SHEET 319.
 2. THESE EXISTING SIGNS SHALL BE TEMPORARILY RELOCATED DURING PRE-PHASE 3 TEMPORARY PAVEMENT CONSTRUCTION. THE SIGNS SHALL REMAIN IN THEIR TEMPORARY LOCATION UNTIL THE CONCLUSION OF PHASE 3. AT THAT TIME, THE SIGNS SHALL BE RE-ERECTED IN THEIR ORIGINAL LOCATION. ALL COSTS ASSOCIATED WITH REMOVING, RELOCATED AND RE-ERECTING THE SIGNS IDENTIFIED ON THIS SHEET SHALL BE INCIDENTAL TO THE LUMP SUM FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.



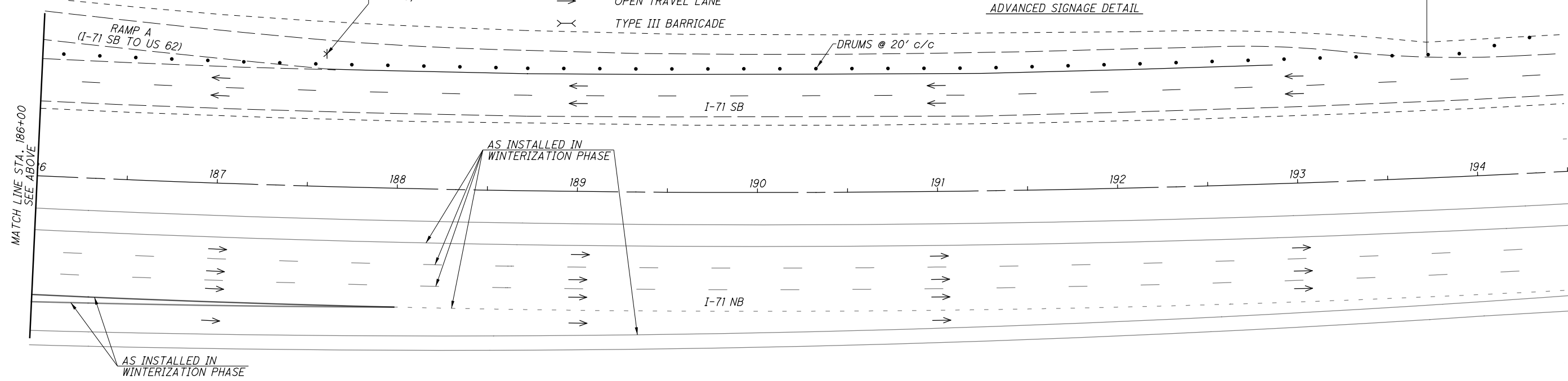
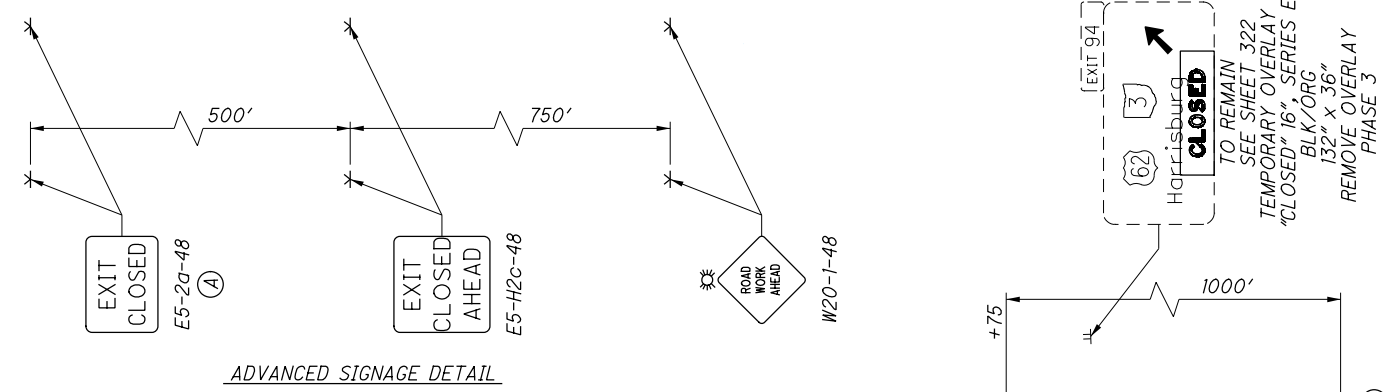
CALCULATED BY BER CHECKED BY SMM
MAINTENANCE OF TRAFFIC PLAN-PRE-PHASE 3
I-71 - STA. 178+00 TO STA. 194+00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

SEE SHEET 322 FOR RAMP A & C DETOUR (SEE NOTE 3)

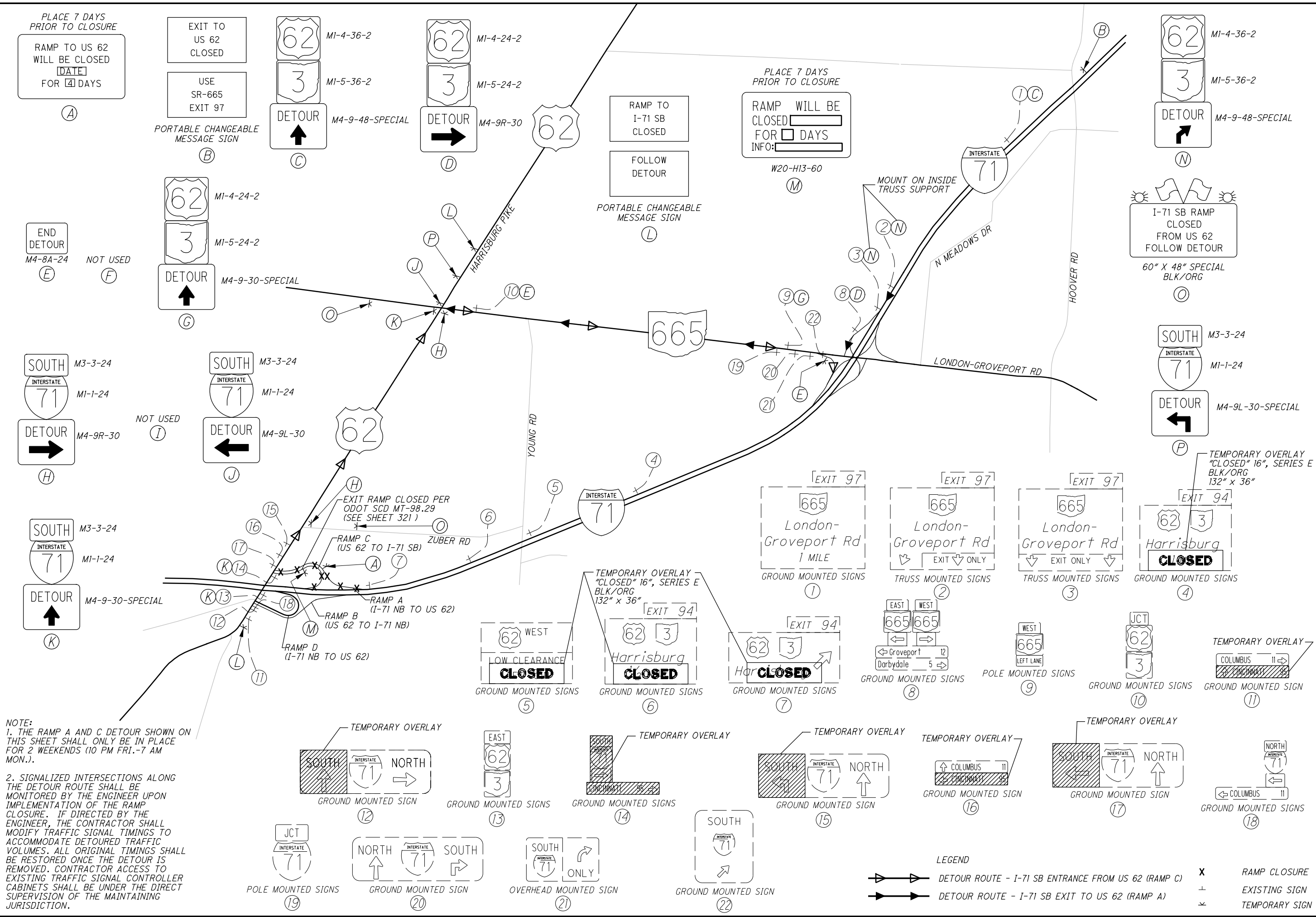
- LEGEND**
- SHOULDER RECONSTRUCTION
 - TEMPORARY PAVEMENT
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE
 - TYPE III BARRICADE



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 321
 1312

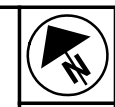
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NOTE:
 1. THE RAMP A AND C DETOUR SHOWN ON THIS SHEET SHALL ONLY BE IN PLACE FOR 2 WEEKENDS (10 PM FRI.-7 AM MON.).
 2. SIGNALIZED INTERSECTIONS ALONG THE DETOUR ROUTE SHALL BE MONITORED BY THE ENGINEER UPON IMPLEMENTATION OF THE RAMP CLOSURE. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MODIFY TRAFFIC SIGNAL TIMINGS TO ACCOMMODATE DETOURED TRAFFIC VOLUMES. ALL ORIGINAL TIMINGS SHALL BE RESTORED ONCE THE DETOUR IS REMOVED. CONTRACTOR ACCESS TO EXISTING TRAFFIC SIGNAL CONTROLLER CABINETS SHALL BE UNDER THE DIRECT SUPERVISION OF THE MAINTAINING JURISDICTION.

LEGEND
 → → → DETOUR ROUTE - I-71 SB ENTRANCE FROM US 62 (RAMP C)
 → → → DETOUR ROUTE - I-71 SB EXIT TO US 62 (RAMP A)
 X RAMP CLOSURE
 + EXISTING SIGN
 * TEMPORARY SIGN



CALCULATED
BER
CHECKED
DLR

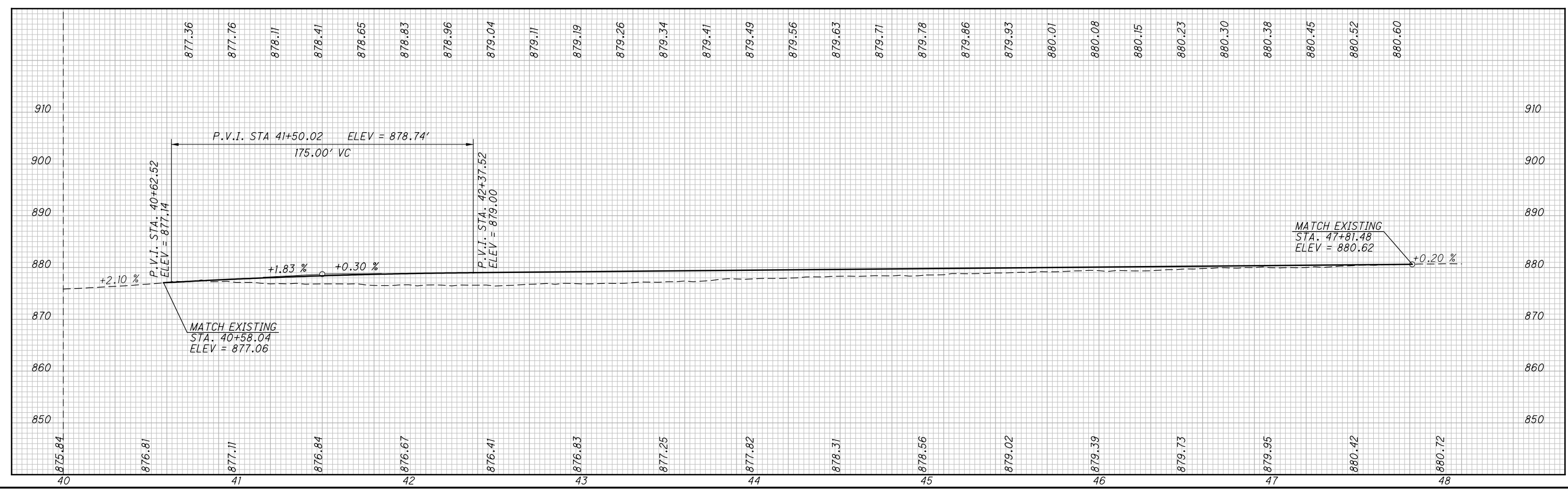
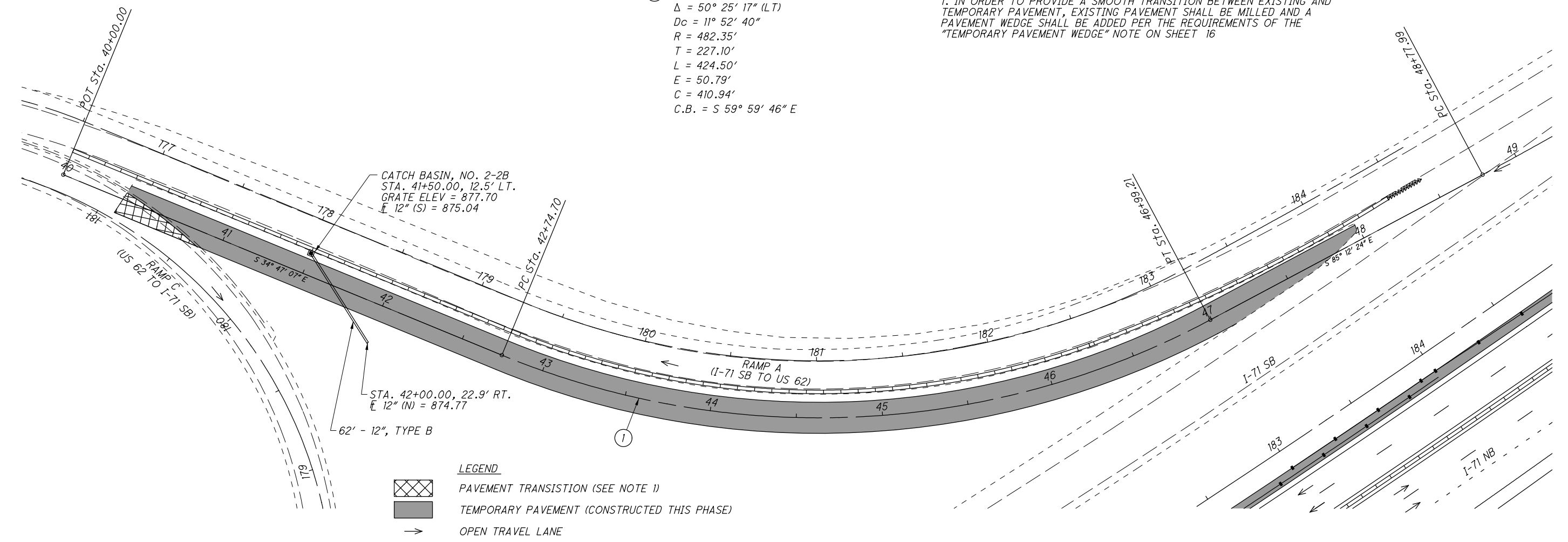
**MAINTENANCE OF TRAFFIC - PRE-PHASE 3
CROSSOVER PLAN AND PROFILE - TEMP. RAMP A**

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① P.I. STA. 45+01.80
 $\Delta = 50^\circ 25' 17''$ (LT)
 $D_c = 11^\circ 52' 40''$
 $R = 482.35'$
 $T = 227.10'$
 $L = 424.50'$
 $E = 50.79'$
 $C = 410.94'$
 $C.B. = S 59^\circ 59' 46'' E$

NOTE:
1. IN ORDER TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND TEMPORARY PAVEMENT, EXISTING PAVEMENT SHALL BE MILLED AND A PAVEMENT WEDGE SHALL BE ADDED PER THE REQUIREMENTS OF THE "TEMPORARY PAVEMENT WEDGE" NOTE ON SHEET 16

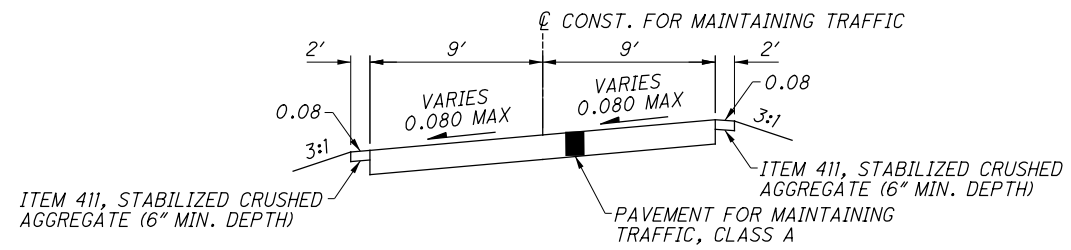


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ELEVATION TABLE

TEMPORARY RAMP A

LEFT SIDE			CENTERLINE CONTROL		RIGHT SIDE		
EDGE ELEVATION	SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	9'	40+00	875.84	9'	EXISTING	EXISTING
EXISTING	+1.70%	9'	40+50	876.81	9'	EXISTING	EXISTING
877.76	0.00%	9'	41+00	877.76	9'	0.00%	877.76
878.29	-1.30%	9'	41+50	878.41	9'	+1.30%	878.53
878.60	-2.60%	9'	42+00	878.83	9'	+2.60%	879.06
878.69	-3.90%	9'	42+50	879.04	9'	+3.90%	879.39
878.72	-5.20%	9'	43+00	879.19	9'	+5.20%	879.66
878.76	-6.50%	9'	43+50	879.34	9'	+6.50%	879.93
878.77	-8.00%	9'	44+00	879.49	9'	+8.00%	880.21
878.91	-8.00%	9'	44+50	879.63	9'	+8.00%	880.35
879.20	-6.50%	9'	45+00	879.78	9'	+6.50%	880.37
879.46	-5.20%	9'	45+50	879.93	9'	+5.20%	880.40
879.73	-3.90%	9'	46+00	880.08	9'	+3.90%	880.43
880.00	-2.60%	9'	46+50	880.23	9'	+2.60%	880.46
880.26	-1.30%	9'	47+00	880.38	9'	+1.53%	880.51
EXISTING	-0.88%	9'	47+50	880.52	9'	+1.53%	EXISTING
EXISTING	EXISTING	9'	48+00	880.72	9'	EXISTING	EXISTING



SUPERELEVATED SECTION

SECTION APPLIES:
RAMP A STA. 40+00 TO STA. 48+00

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CALCULATED
BER
CHECKED
DLR

**MAINTENANCE OF TRAFFIC - PRE-PHASE 3
CROSSOVER TYPICAL SECTIONS AND ELEVATIONS**

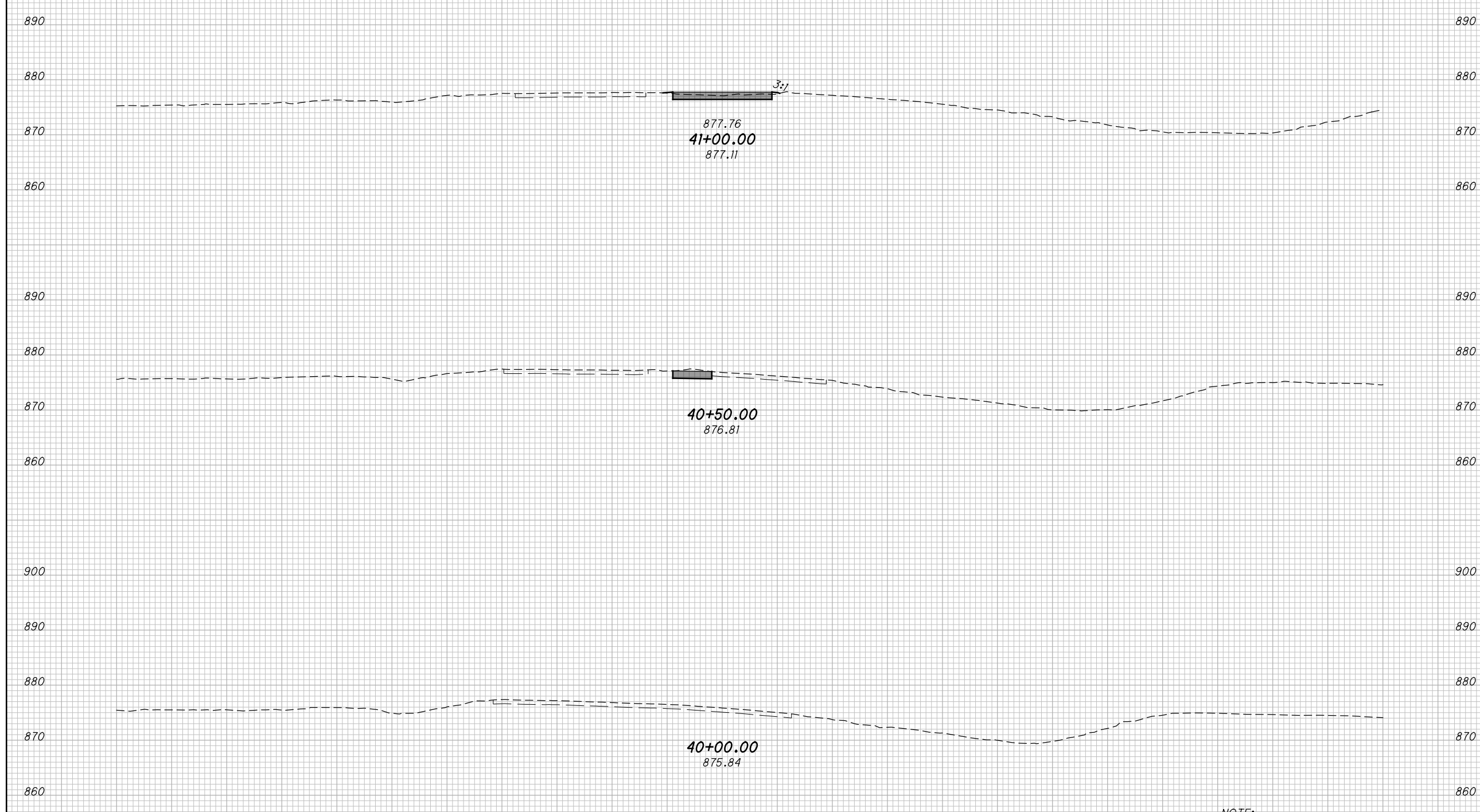
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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	BER	CHECKED
					DLR



16	2	17	23
11	0	25	2
0	0	11	0
53	25		

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP A
PRE-PHASE 3 CROSS SECTIONS - STA. 40+00 TO STA. 41+00

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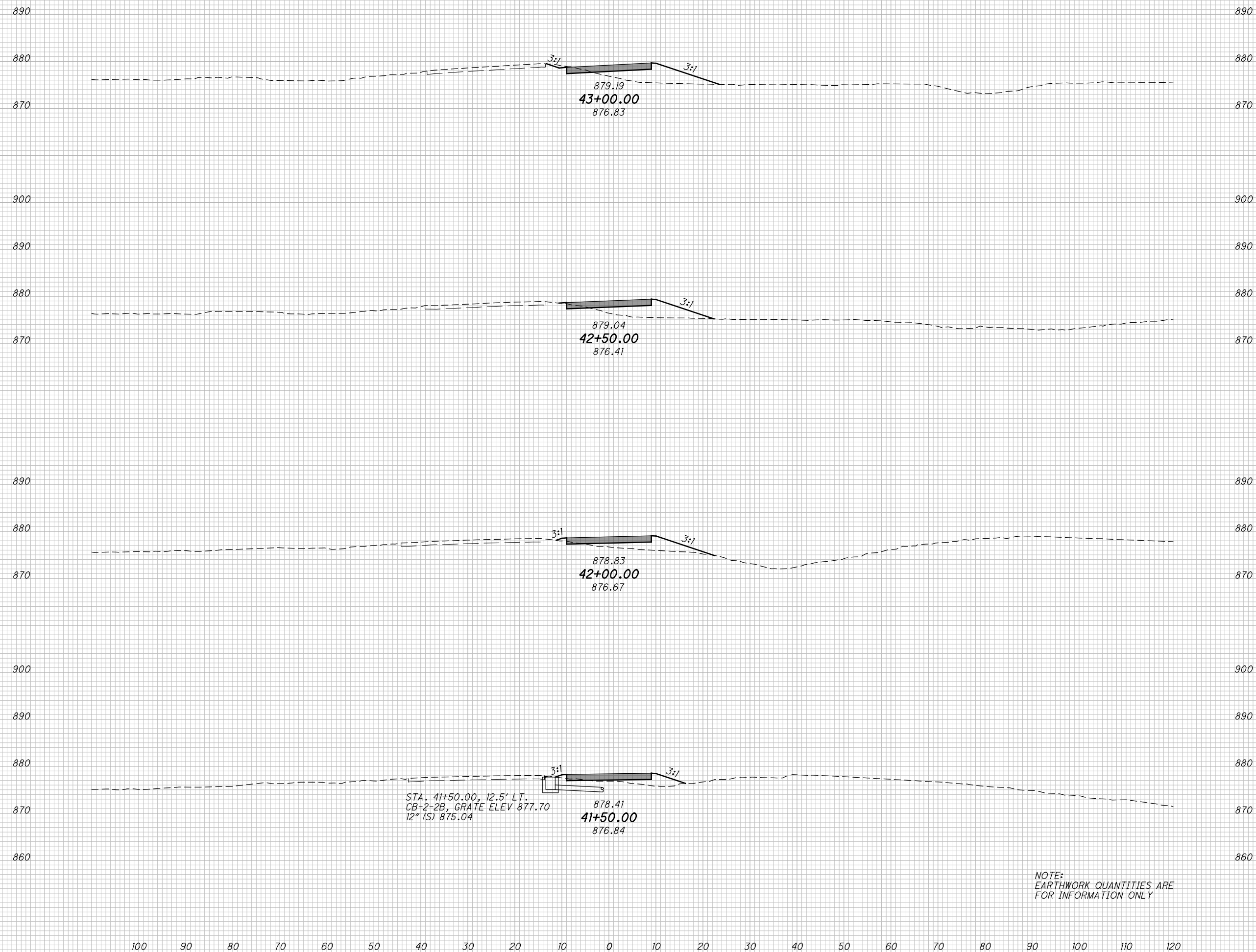
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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
BER
CHECKED
DLR



END AREA	VOLUME	CALCULATED	CHECKED
CUT	FILL	CUT	FILL
7	54	16	97
3	49	10	96
1	36	4	79
2	22	3	54
		33	326

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP A
 PRE-PHASE 3 CROSS SECTIONS - STA. 41+50 TO STA. 43+00

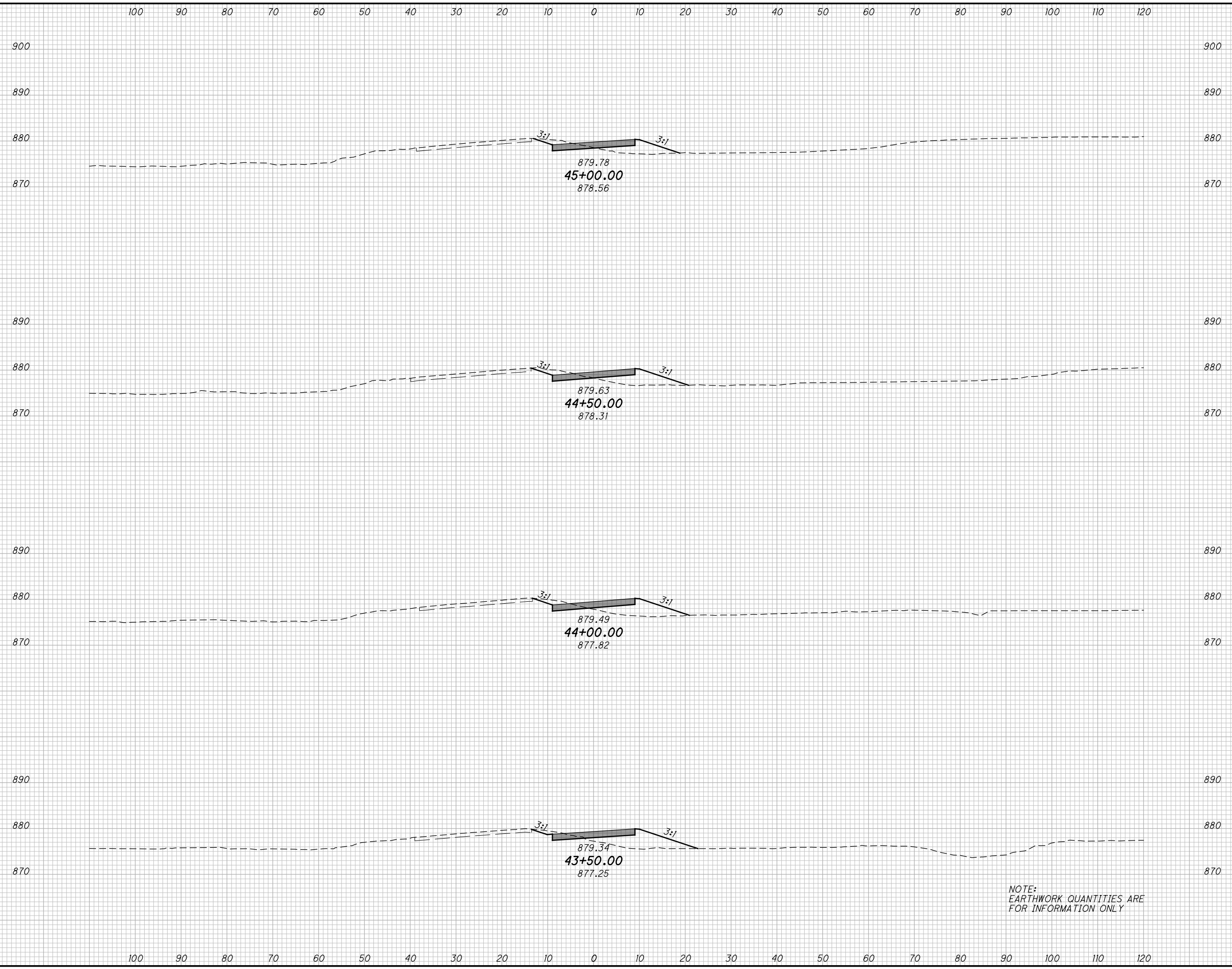
FRA - 71 - 0.00

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NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SO. YDS.



END CUT	AREA FILL	VOLUME		CALCULATED BER	CHECKED DLR
		CUT	FILL		
15	27	27	40		
		28	58		
15	35				
		26	70		
13	40				
		22	84		
10	50				
		103	252		

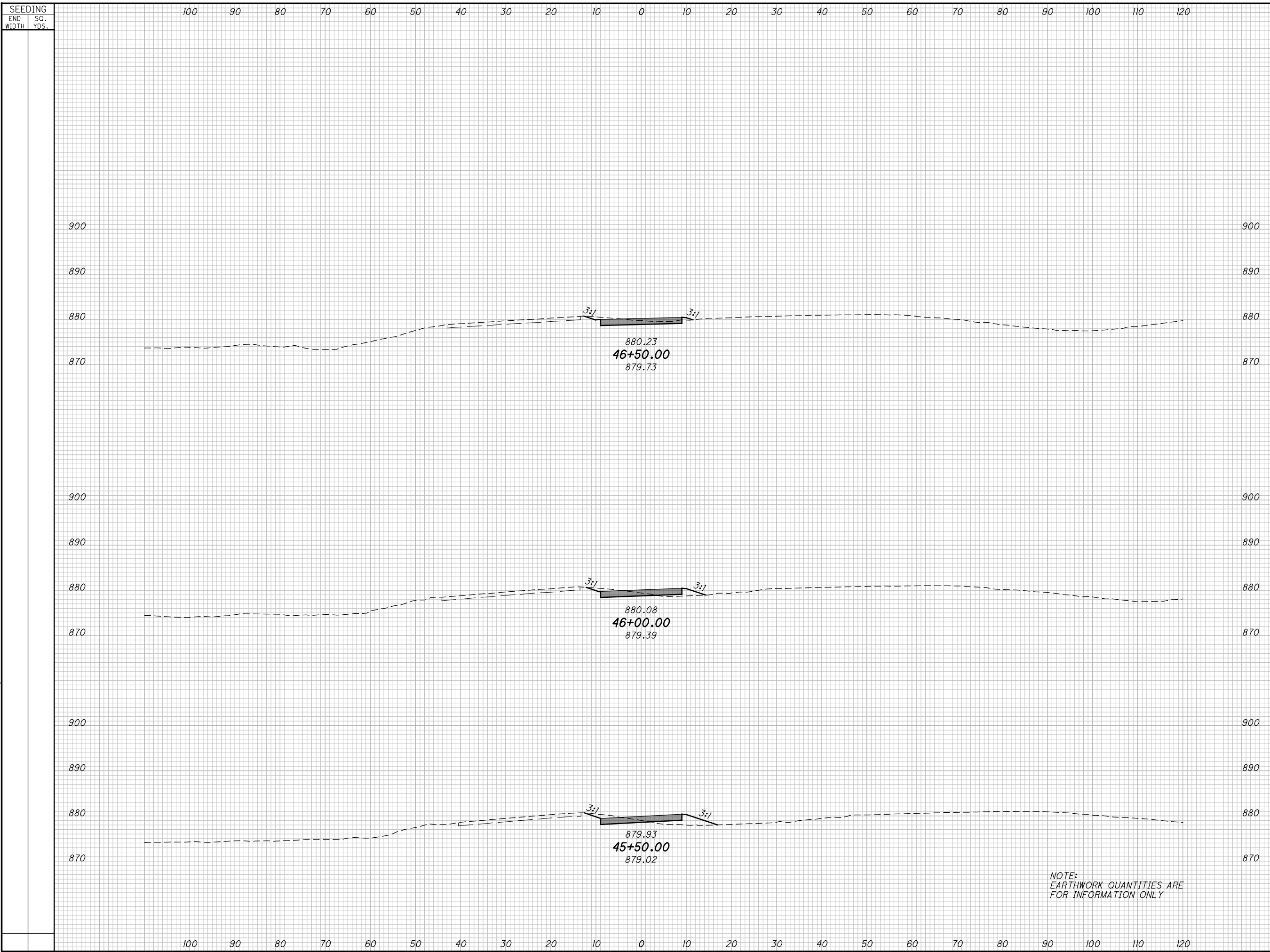
MAINTENANCE OF TRAFFIC - TEMPORARY RAMP A
PRE-PHASE 3 CROSS SECTIONS - STA. 43+50 TO STA. 45+00

FRA - 71 - 0.00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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END AREA	VOLUME		CALCULATED BER	CHECKED DLR
	CUT	FILL		
19	1	38	1	
15	7	32	8	
14	16	27	22	
		97	31	

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP A
PRE-PHASE 3 CROSS SECTIONS - STA. 45+50 TO STA. 46+50
FRA - 71 - 0.00

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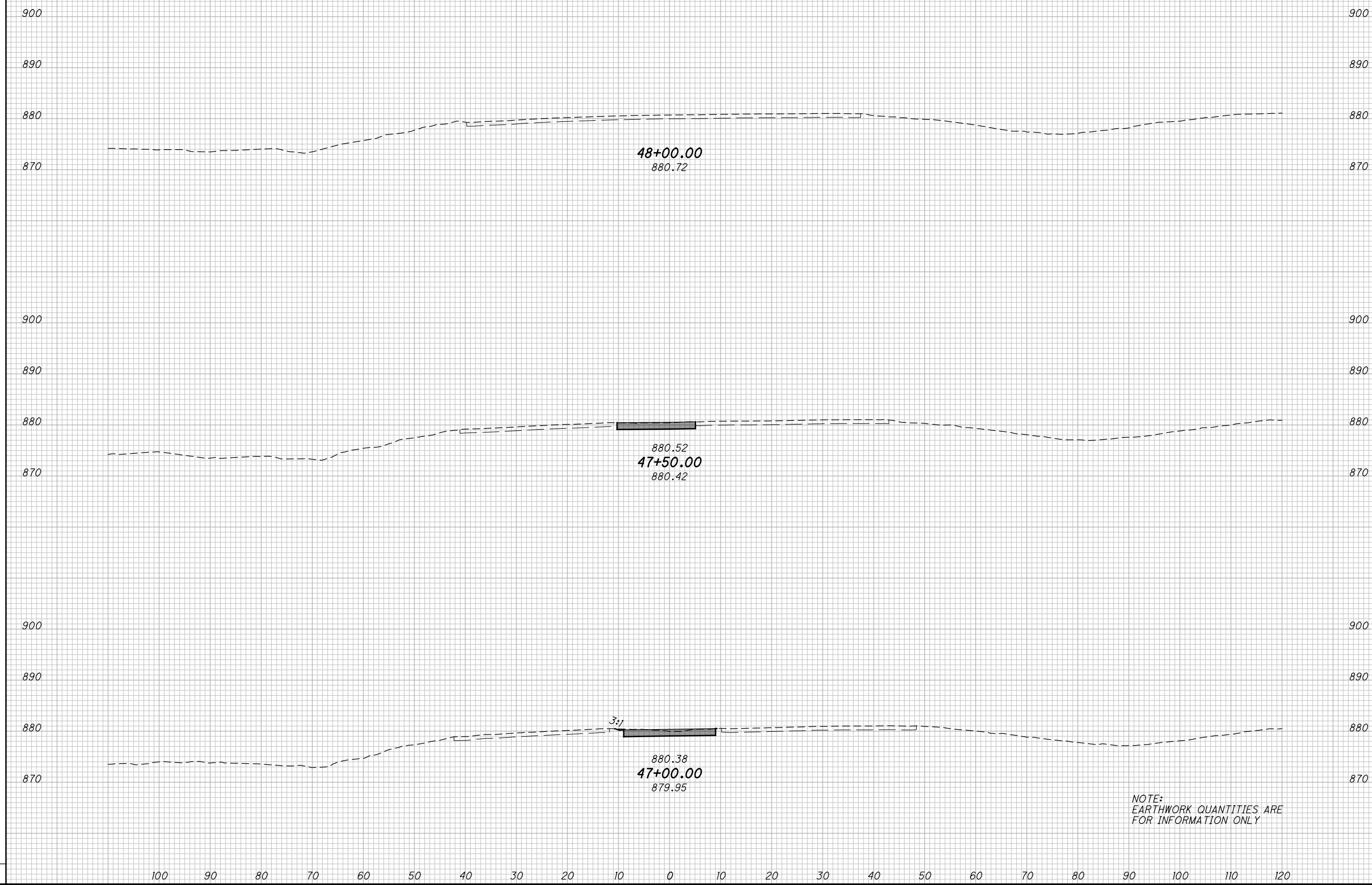
NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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SEEDING
END SO.
WIDTH YDS.

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

END AREA		VOLUME		CALCULATED BER	CHECKED DLR
CUT	FILL	CUT	FILL		



END AREA		VOLUME		CALCULATED BER	CHECKED DLR
CUT	FILL	CUT	FILL		
0	0	19	0		
20	0	39	0		
22	0	58	0		

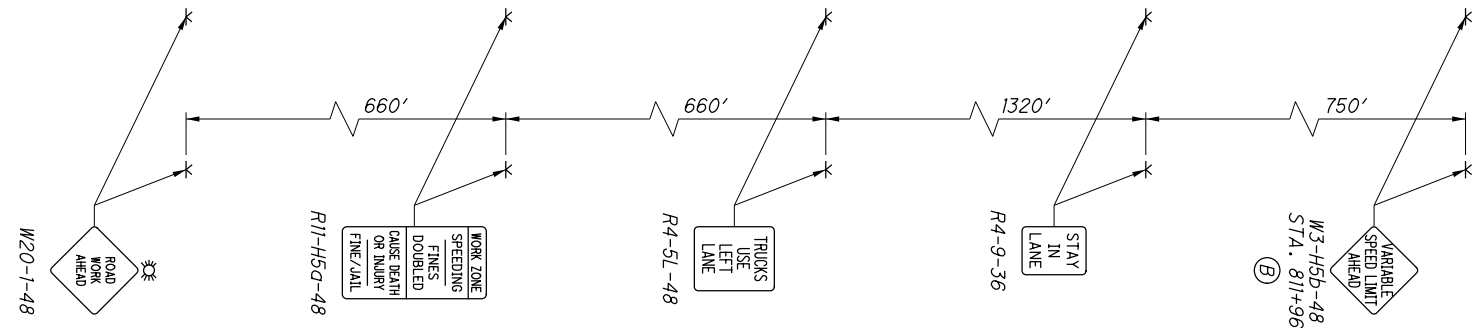
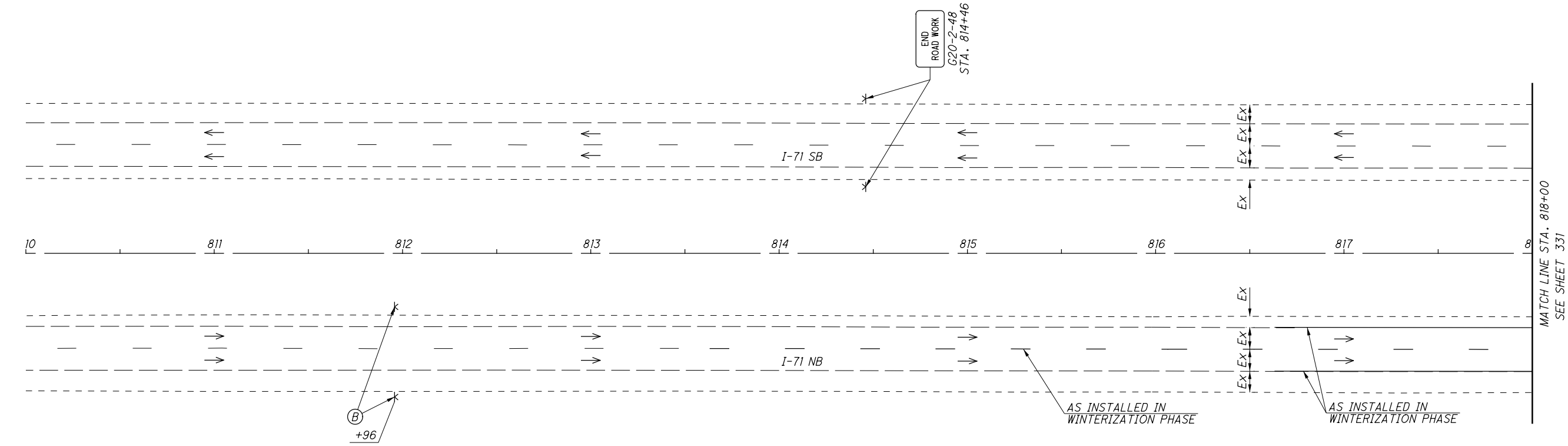
MAINTENANCE OF TRAFFIC - TEMPORARY RAMP A
PRE-PHASE 3 CROSS SECTIONS - STA. 47+00 TO STA. 48+00

FRA - 71-0.00

NOTE:
EARTHWORK QUANTITIES ARE
FOR INFORMATION ONLY

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ADVANCED SIGNAGE DETAIL

LEGEND
 ✖ TEMPORARY SIGN SUPPORT
 → OPEN TRAVEL LANE

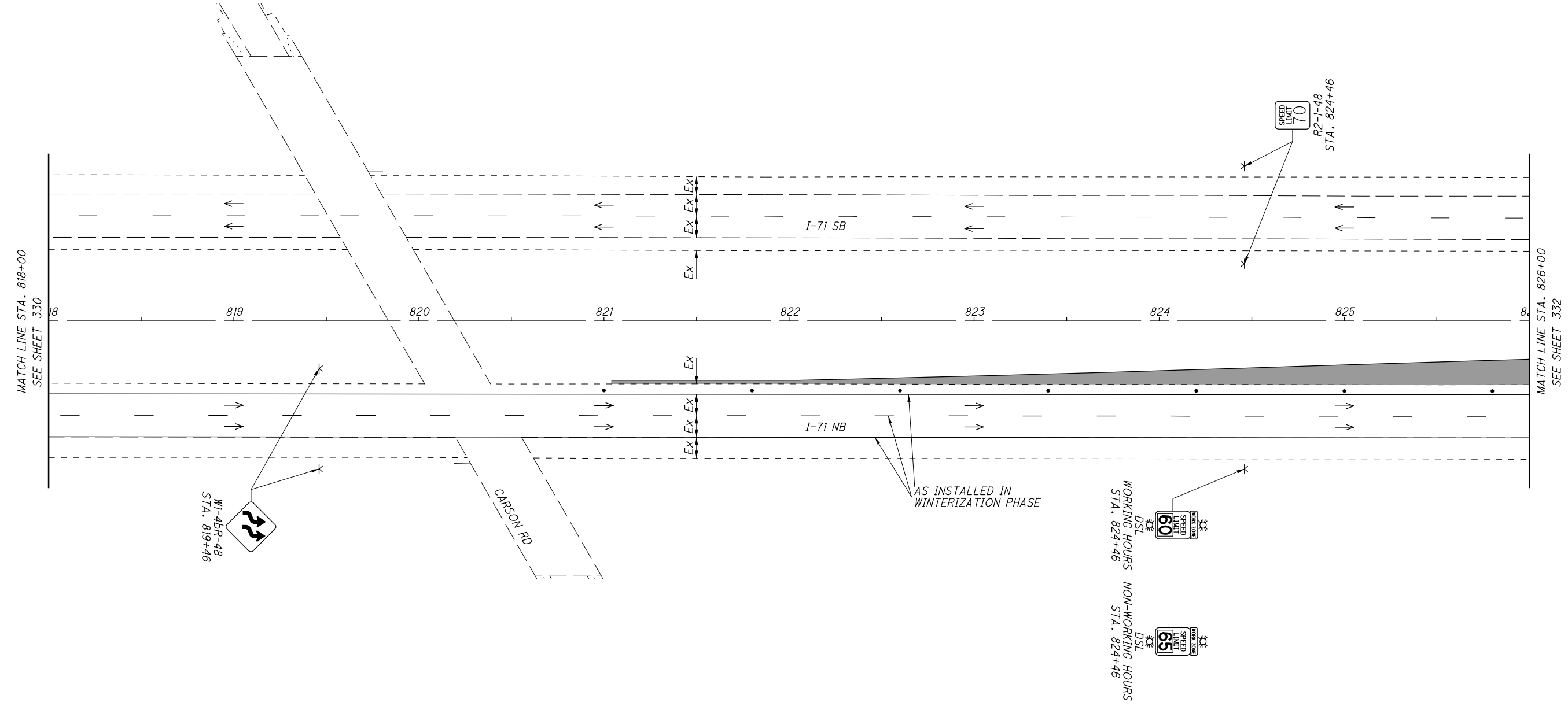
CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 810+00 TO STA. 818+00

FRA-71-0.00

330
 1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - ✱ TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

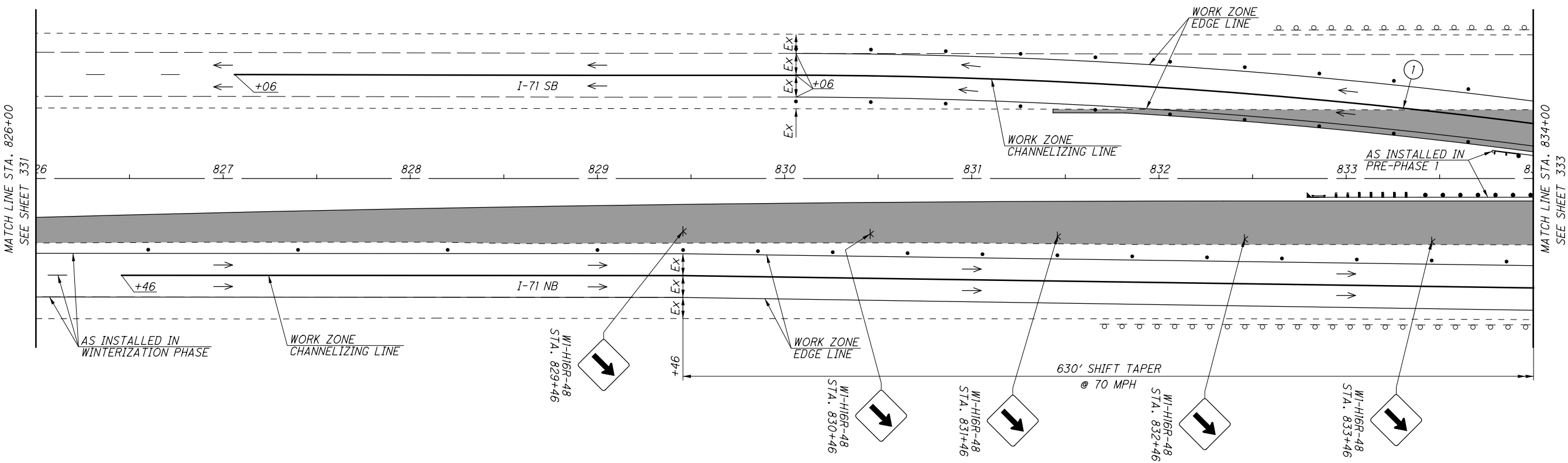
CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 818+00 TO STA. 826+00

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① $\Delta = 9^\circ 23' 44''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 256.82'$
 $L = 512.49'$
 $E = 10.53'$
 $C = 511.91'$
 $C.B. = N 64^\circ 22' 23'' E$

CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 826+00 TO STA. 834+00

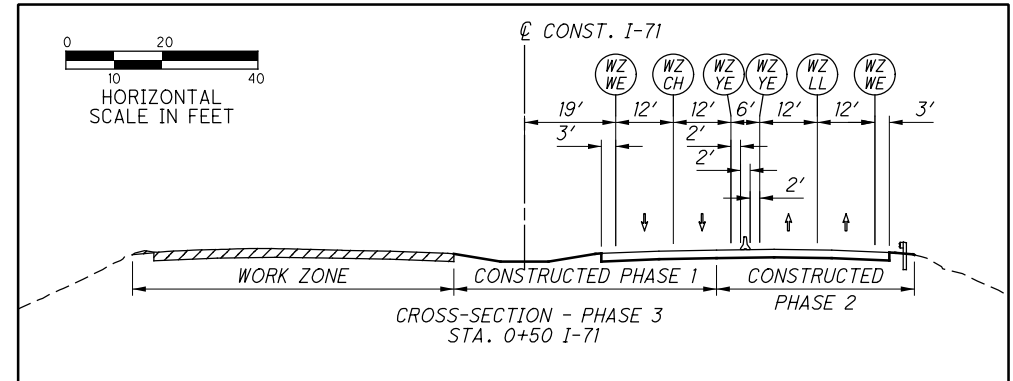
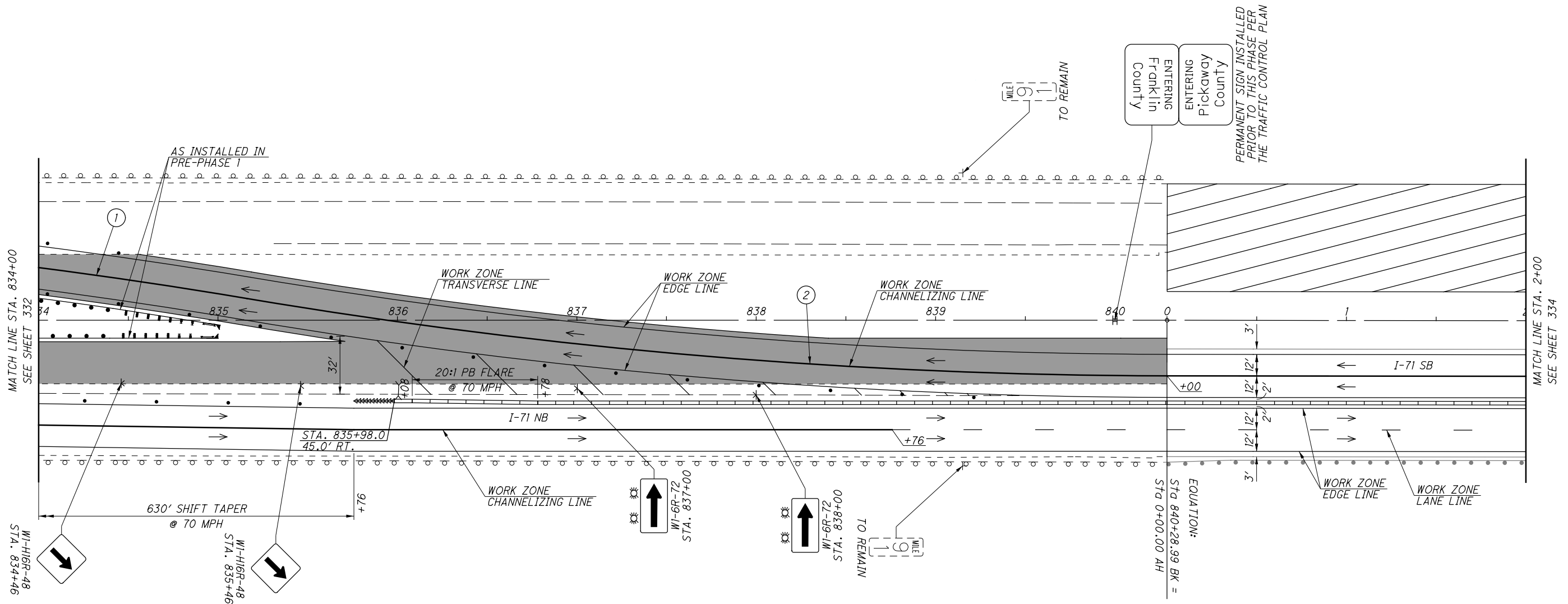
DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - ⋈ TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

① P.I. STA. 3+56.82
 $\Delta = 9^\circ 23' 44''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 256.82'$
 $L = 512.49'$
 $E = 10.53'$
 $C = 511.91'$
 $C.B. = N 64^\circ 22' 23'' E$

② P.I. STA. 8+70.65
 $\Delta = 9^\circ 26' 40''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 258.16'$
 $L = 515.15'$
 $E = 10.64'$
 $C = 514.56'$
 $C.B. = N 64^\circ 20' 55'' E$



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1 & 3)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE



MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 834+00 TO STA. 2+00

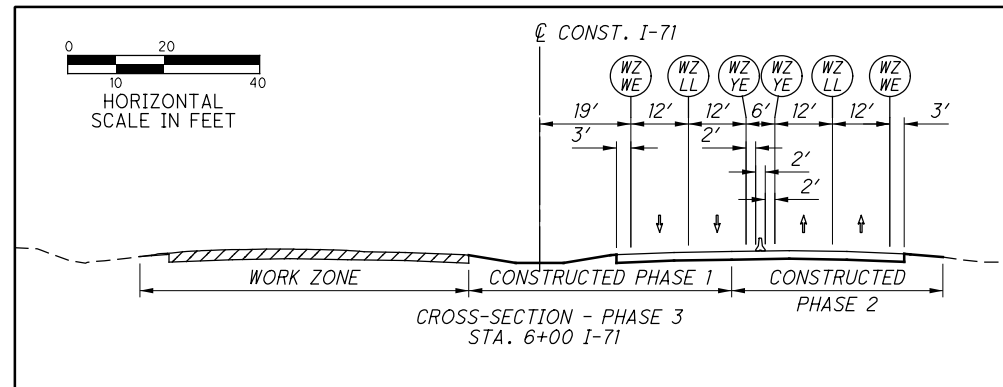
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 333
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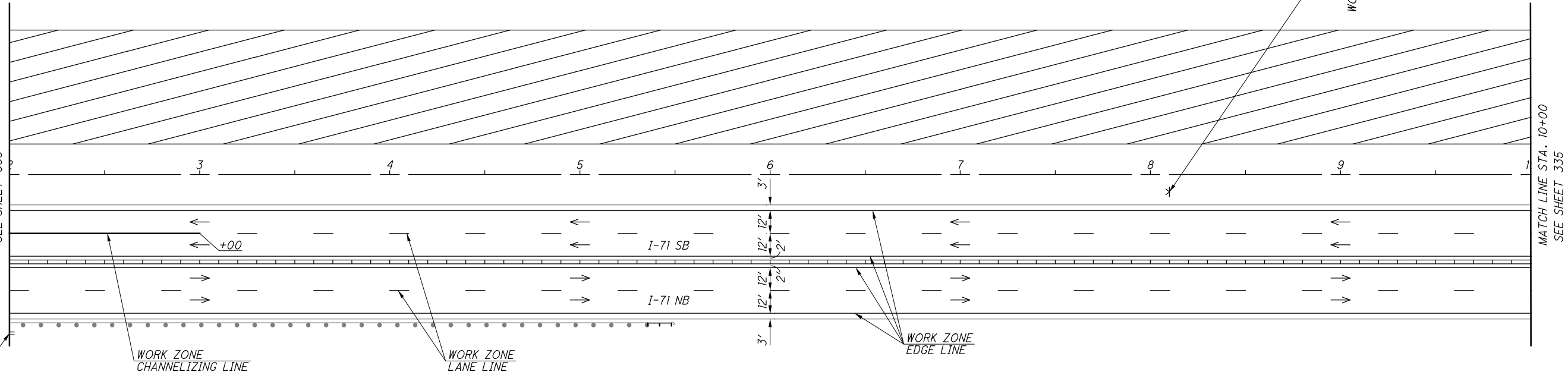
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PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

ADOPT A HIGHWAY
FOR INFORMATION CALL
1-800-372-7744



MATCH LINE STA. 2+00
SEE SHEET 333



WORK ZONE
SPEED
LIMIT
65

WORK ZONE
SPEED
LIMIT
60

DSL
NON-WORKING HOURS
STA. 8+10

DSL
WORKING HOURS
STA. 8+10

MATCH LINE STA. 10+00
SEE SHEET 335

- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 2+00 TO STA. 10+00

FRA-71-0.00

CALCULATED
BER
CHECKED
SMM

HORIZONTAL
SCALE IN FEET

334
1312

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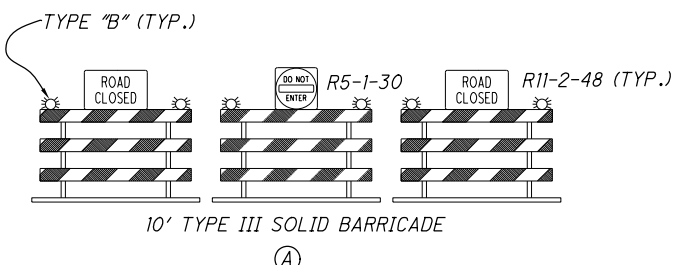
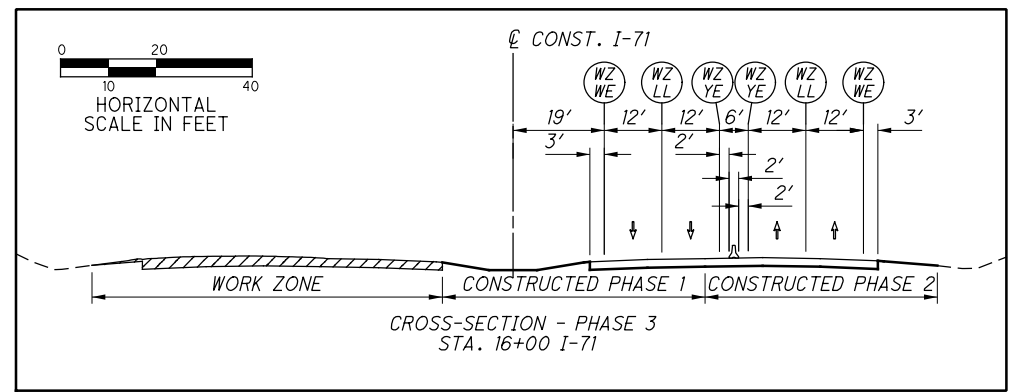
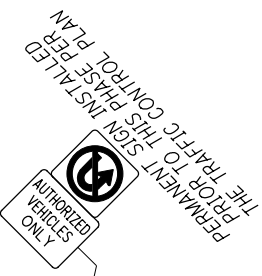
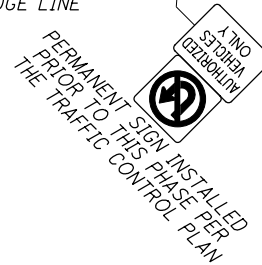
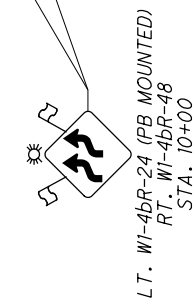
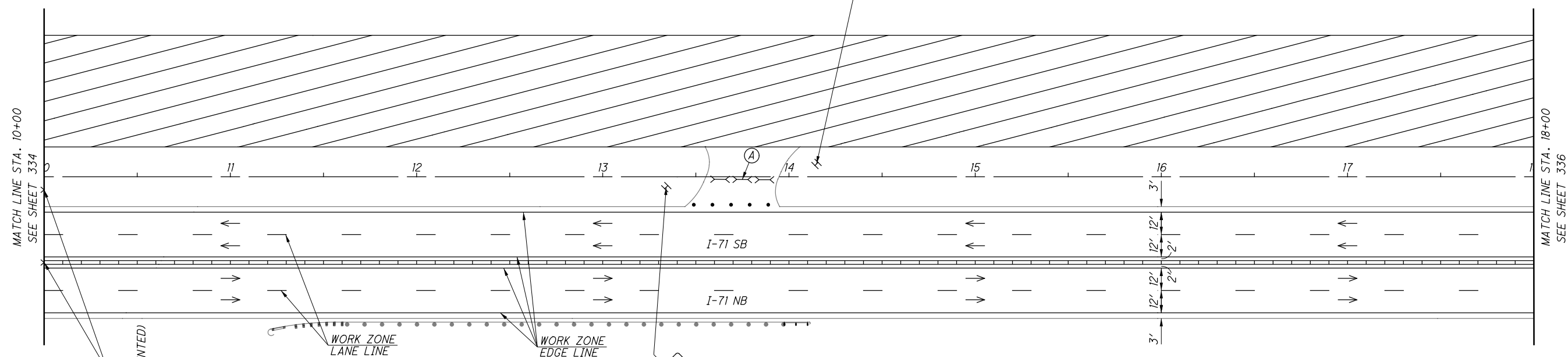
CALCULATED
BER
CHECKED
SMM

15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 10+00 TO STA. 18+00

FRA-71-0.00

335
1312



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 3 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

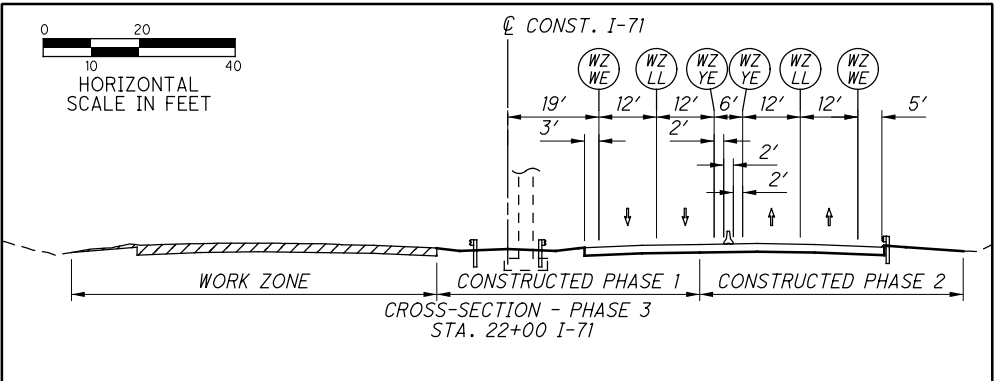
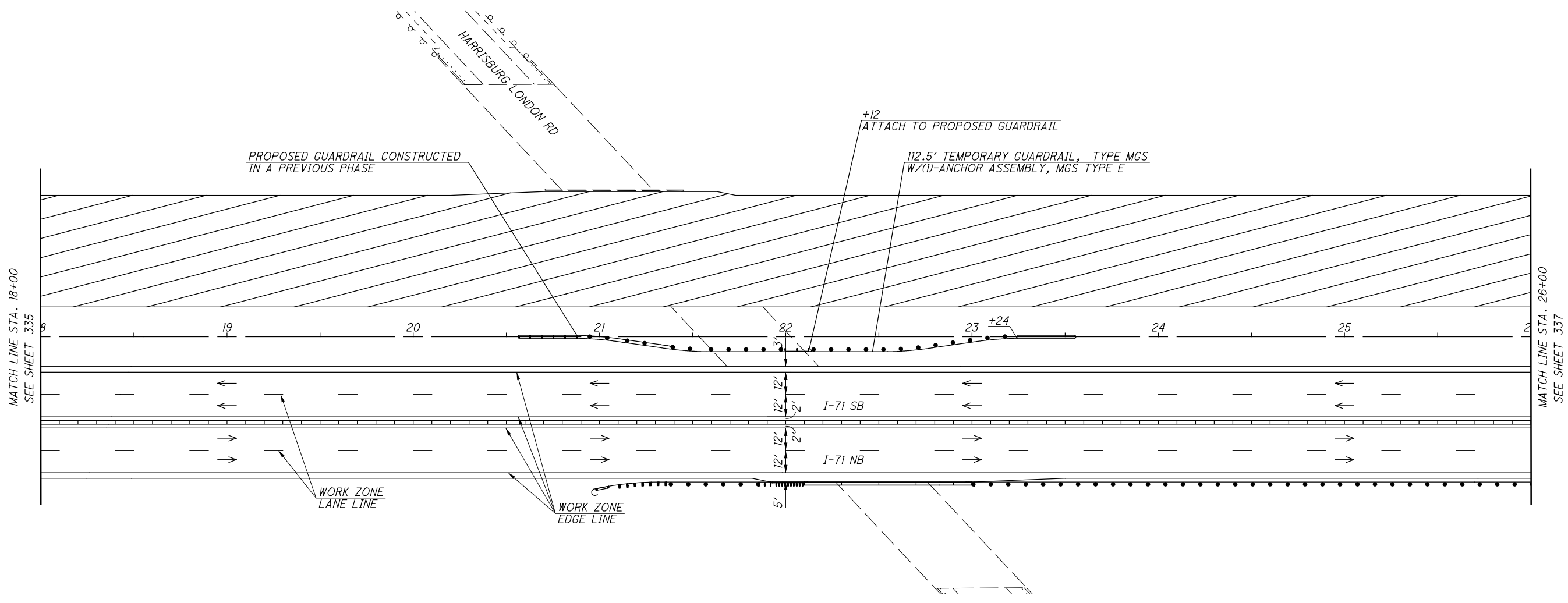


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 18+00 TO STA. 26+00

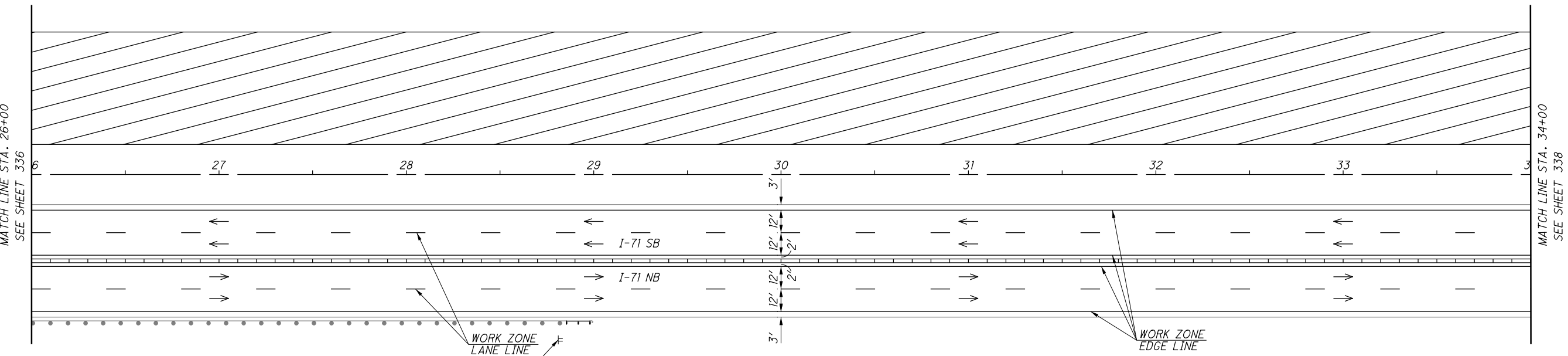
FRA-71-0.00

336
1312

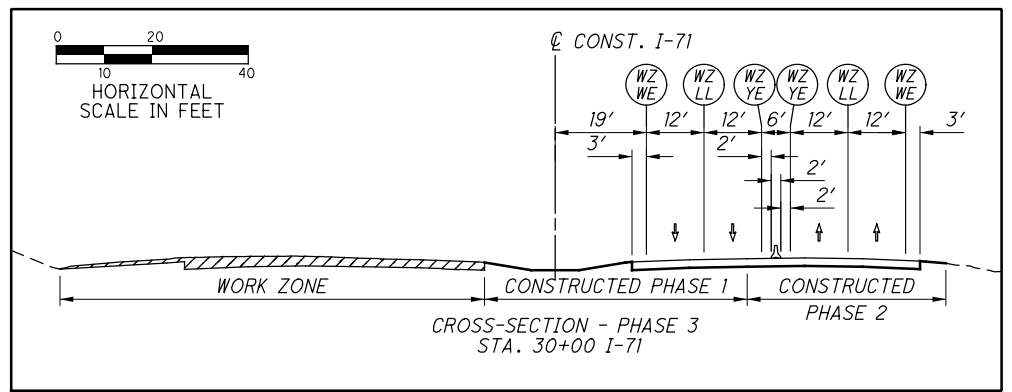


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TRAFFIC INFO
TUNE RADIO TO
1620
AM
TRAFFIC ALERT
WHEN FLASHING
TO REMAIN



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

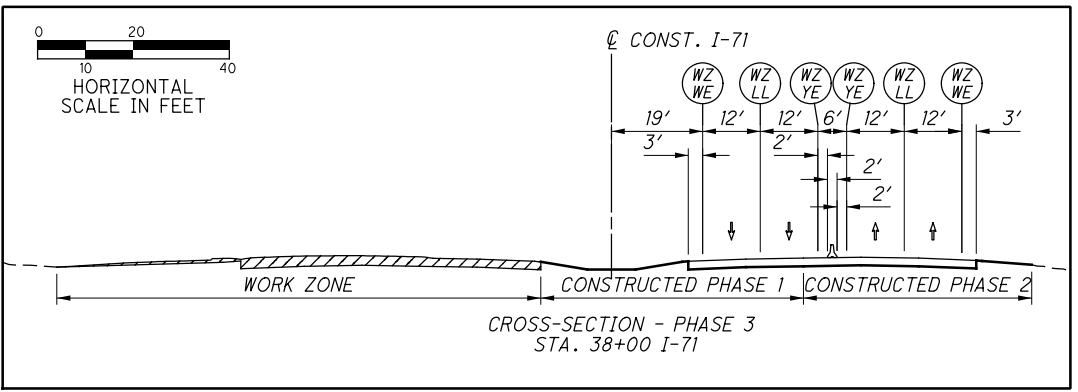
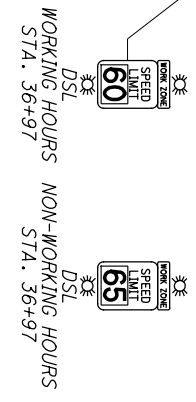
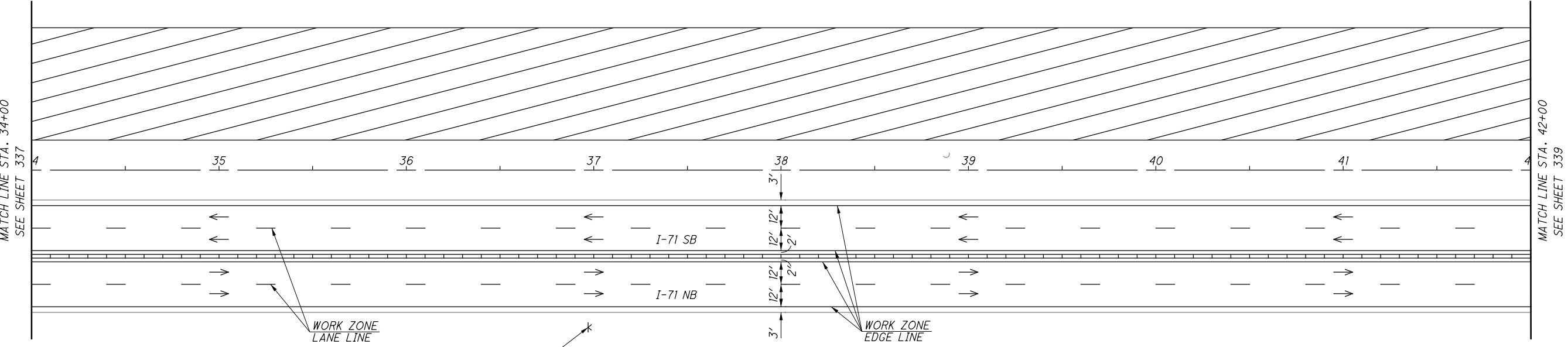
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 26+00 TO STA. 34+00

FRA-71-0.00

337
1312

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- LEGEND
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

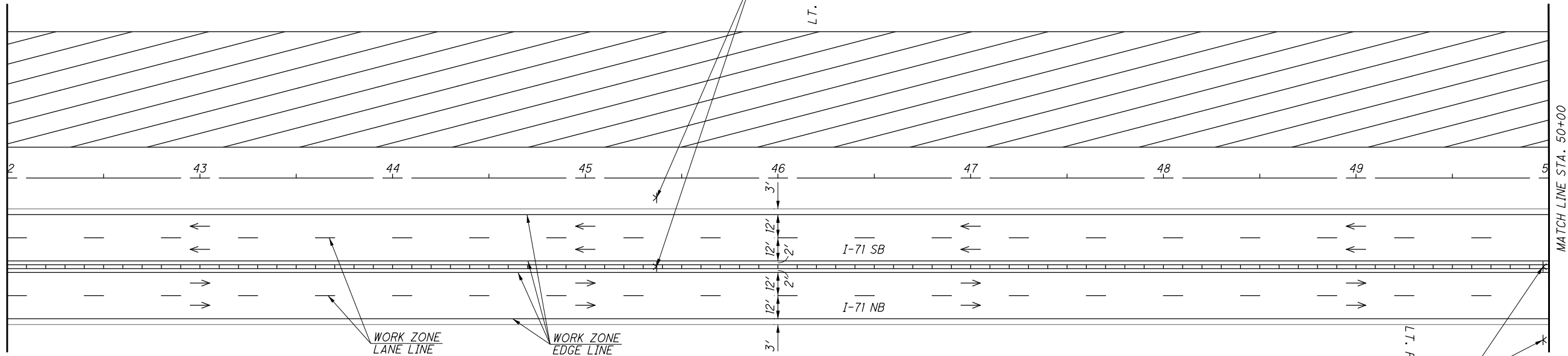
CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 34+00 TO STA. 42+00

FRA-71-0:00

MATCH LINE STA. 42+00
SEE SHEET 338



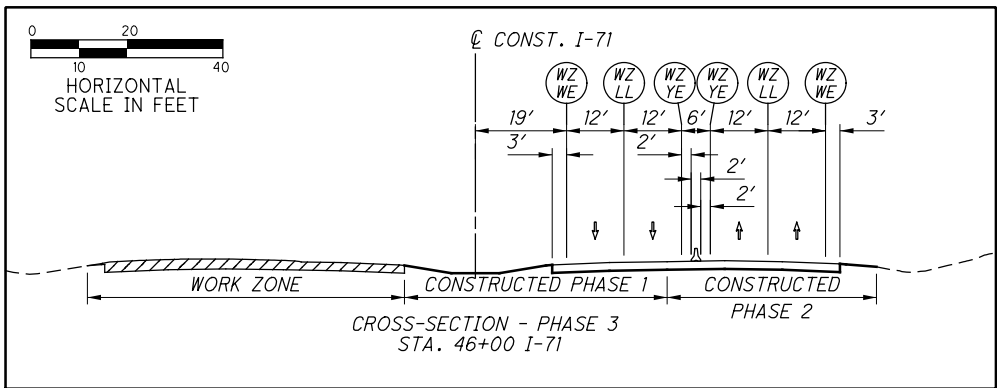
MATCH LINE STA. 50+00
SEE SHEET 340

WORK ZONE
SPEEDING
FINES
DOUBLED
CAUSE DEATH
OR INJURY
FINE/JAIL

LT. R11-H50-24 (PB MOUNTED)
RT. R11-H50-48
STA. 45+37

WORK ZONE
SPEEDING
FINES
DOUBLED
CAUSE DEATH
OR INJURY
FINE/JAIL

LT. R11-H50-24 (PB MOUNTED)
RT. R11-H50-48
STA. 49+97



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE



CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 42+00 TO STA. 50+00

FRA-71-0.00

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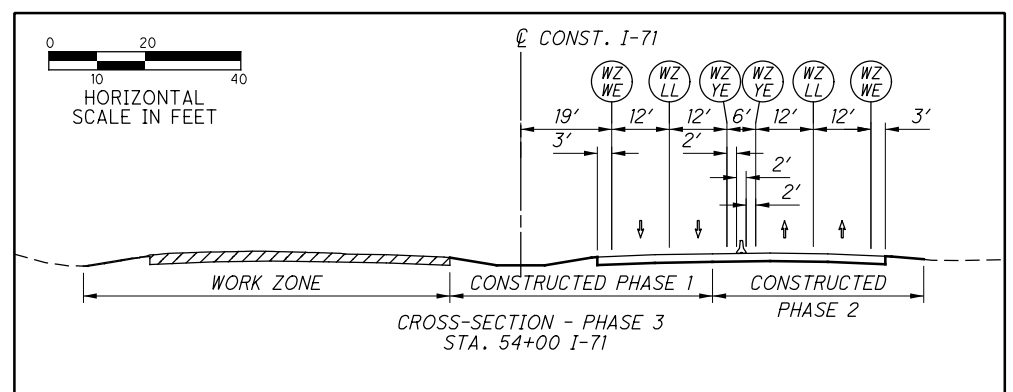
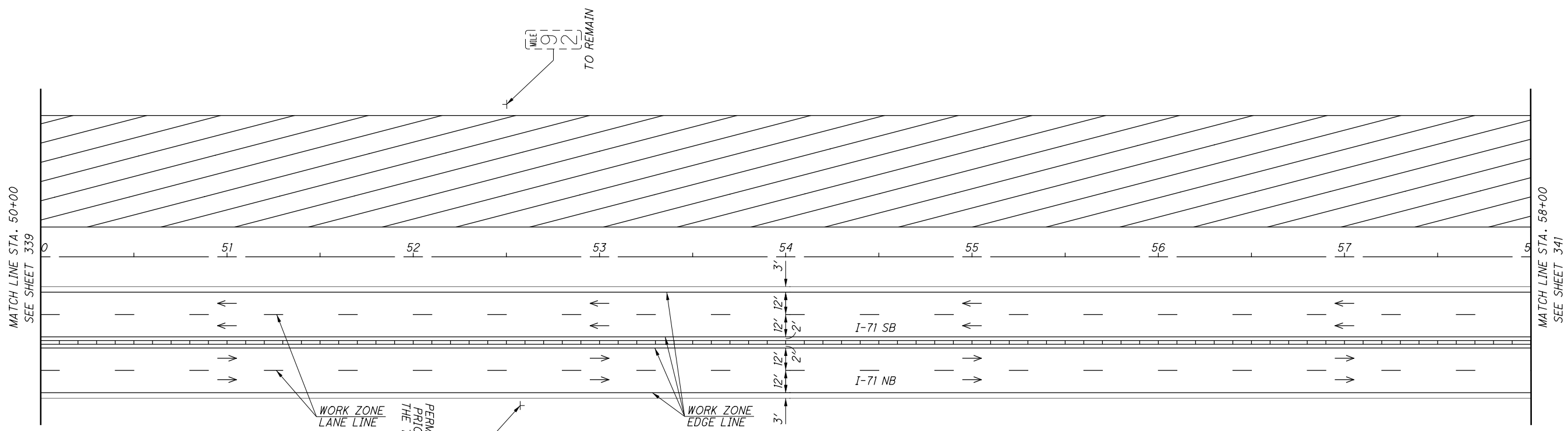


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 50+00 TO STA. 58+00

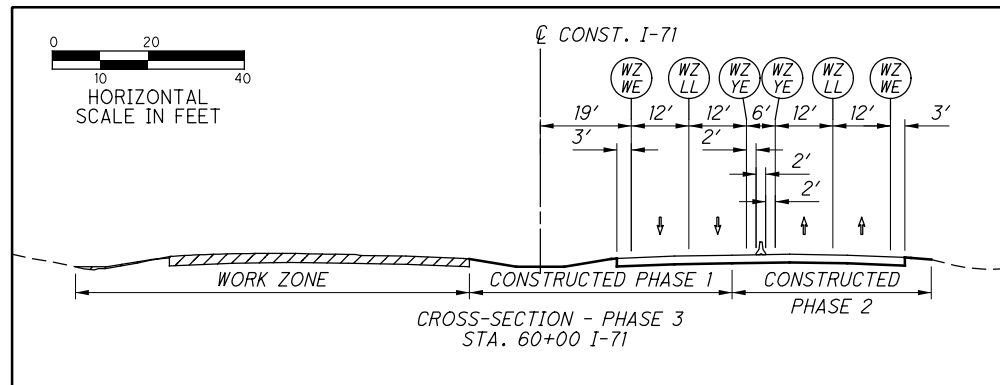
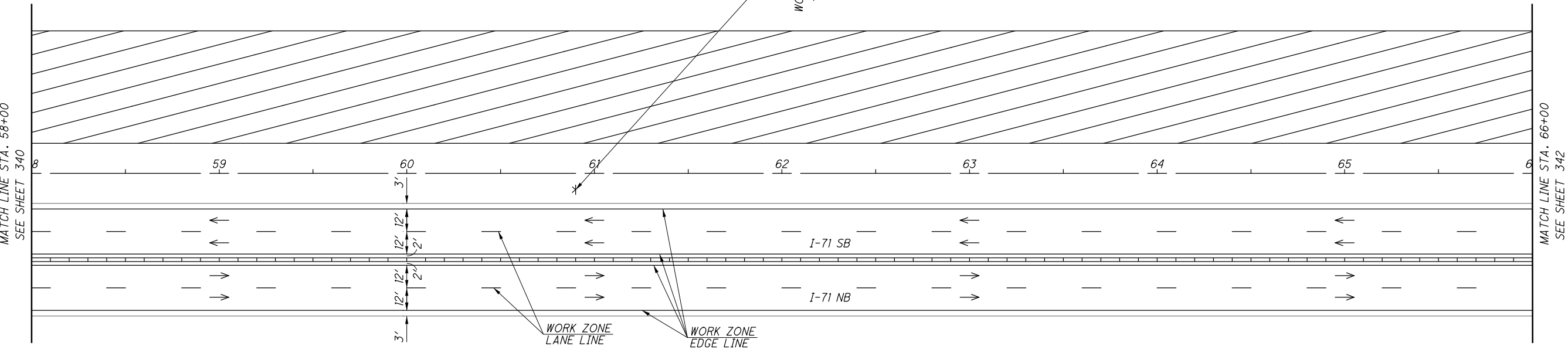
FRA-71-0.00

340
1312



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

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- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 58+00 TO STA. 66+00

FRA-71-0.00

341
1312

J:\20130212\ODOT\FRA\107201\mot\sheets\107201MP106.dgn 4/13/2020 2:43:55 PM brieder

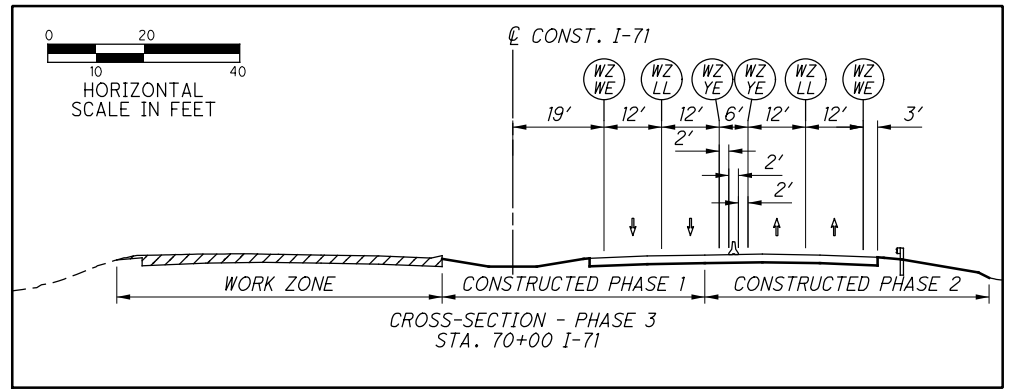
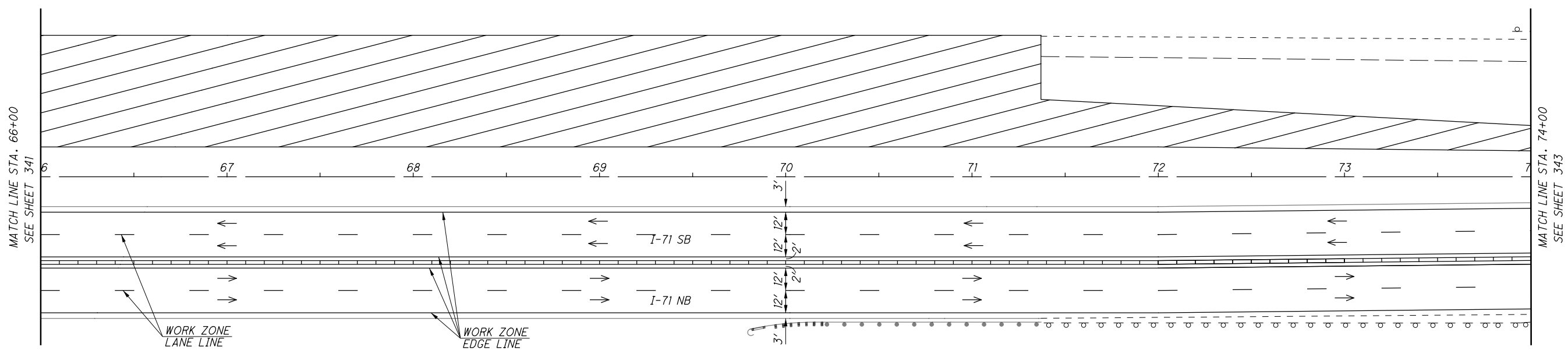


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 66+00 TO STA. 74+00

FRA-71-0.00

342
1312



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE



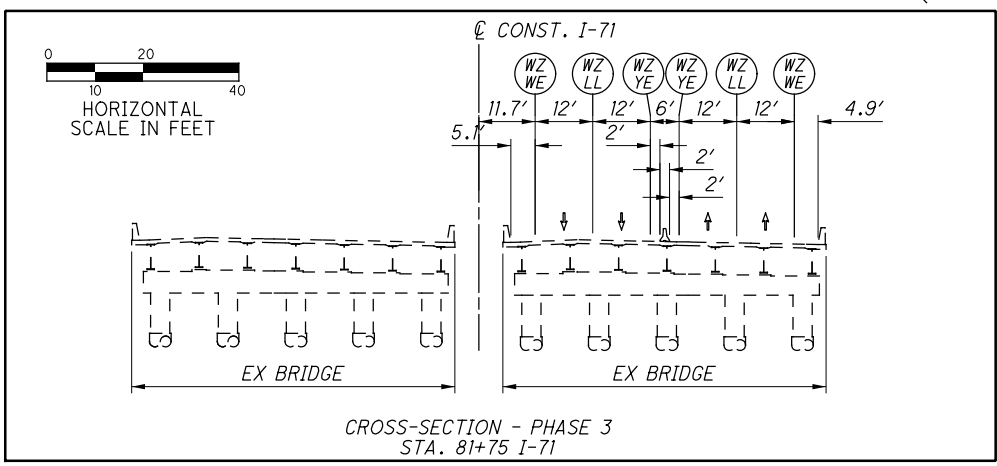
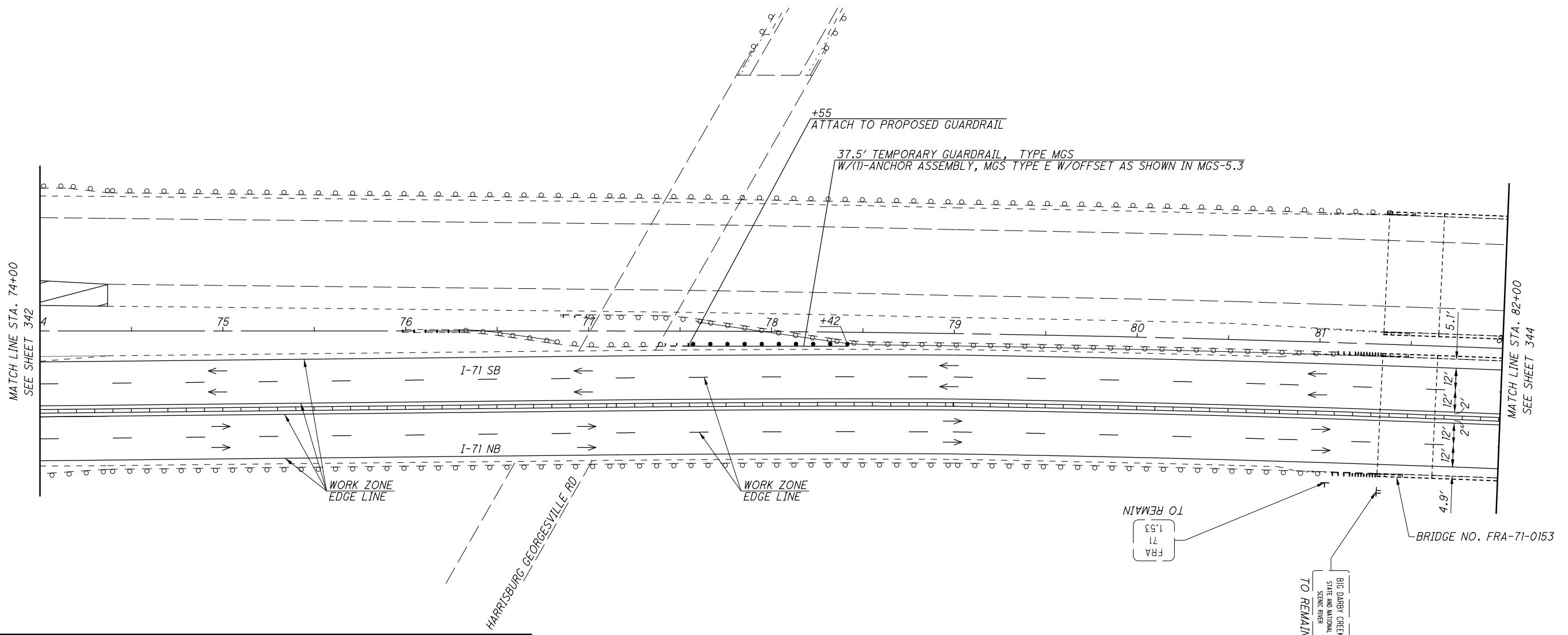
CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 74+00 TO STA. 82+00

FRA-71-0.00

343
1312

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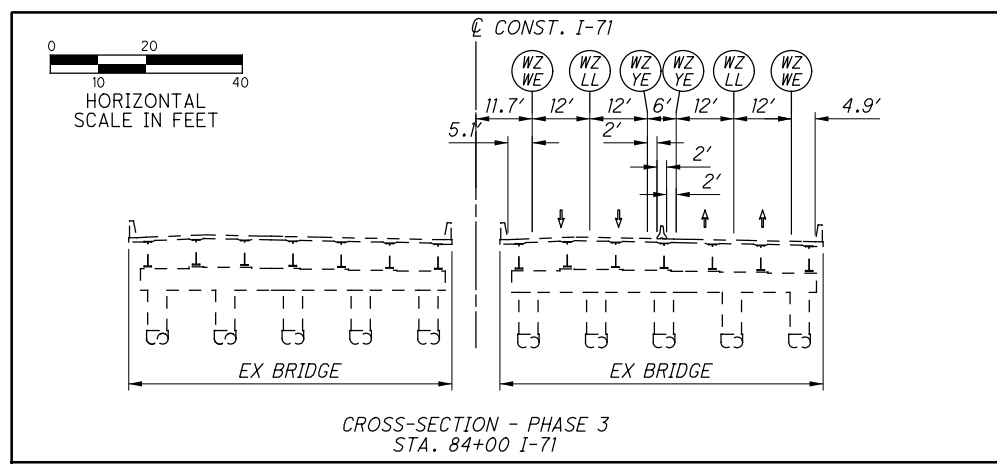
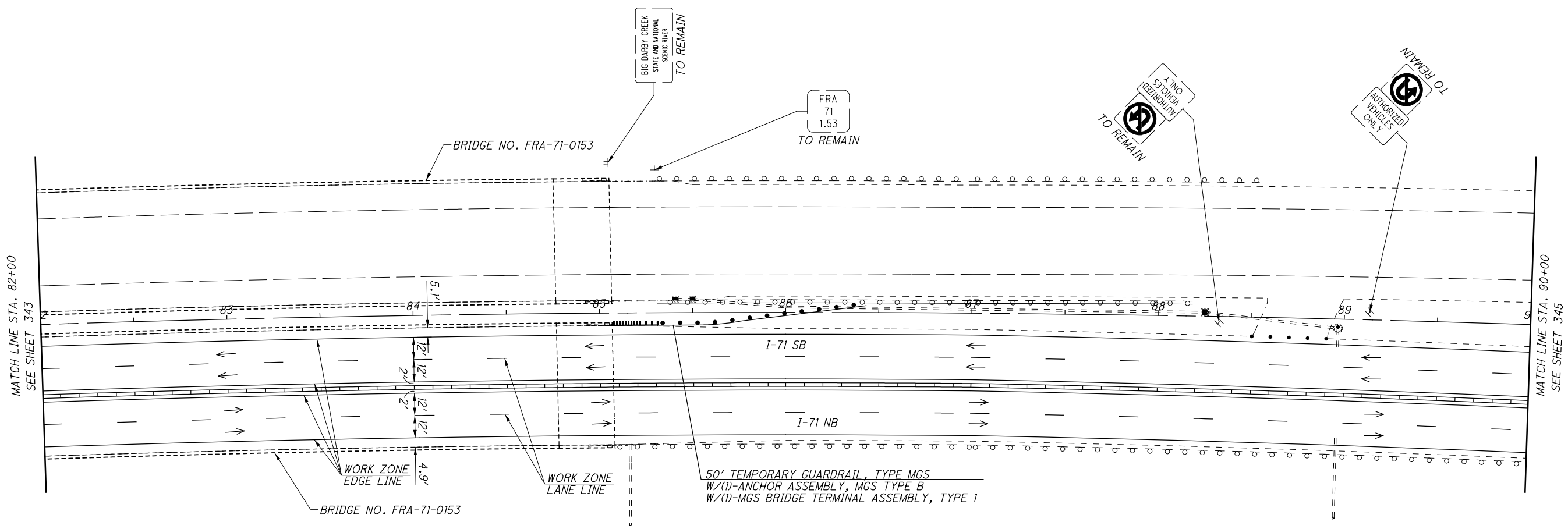


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 82+00 TO STA. 90+00

FRA-71-0.00

344
1312

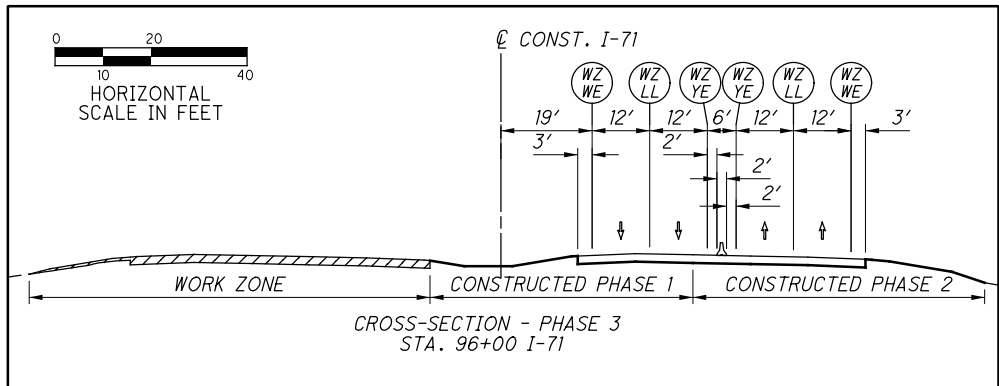
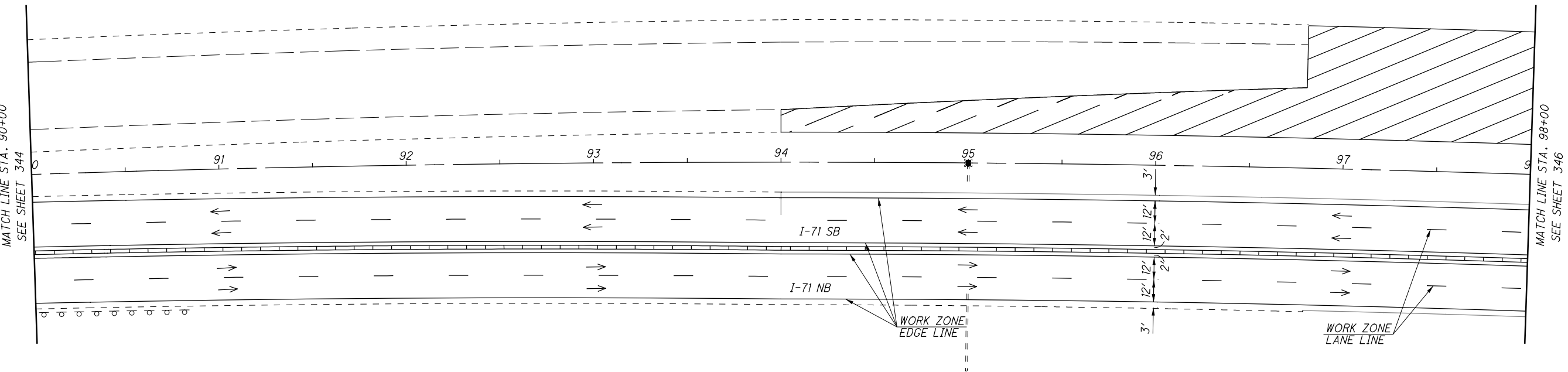


DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- DRUM
 - ▬ PORTABLE BARRIER
 - OPEN TRAVEL LANE

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LEGEND

PHASE 3 WORK ZONE

PORTABLE BARRIER

OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 90+00 TO STA. 98+00

FRA-71-0.00

345
1312

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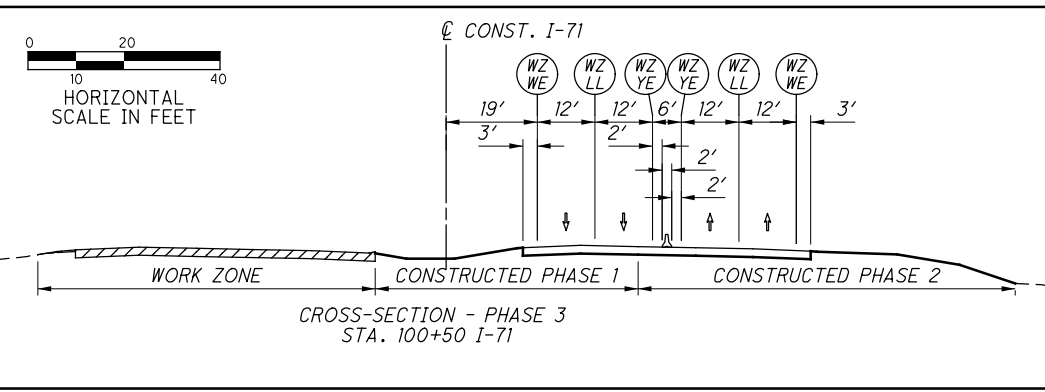
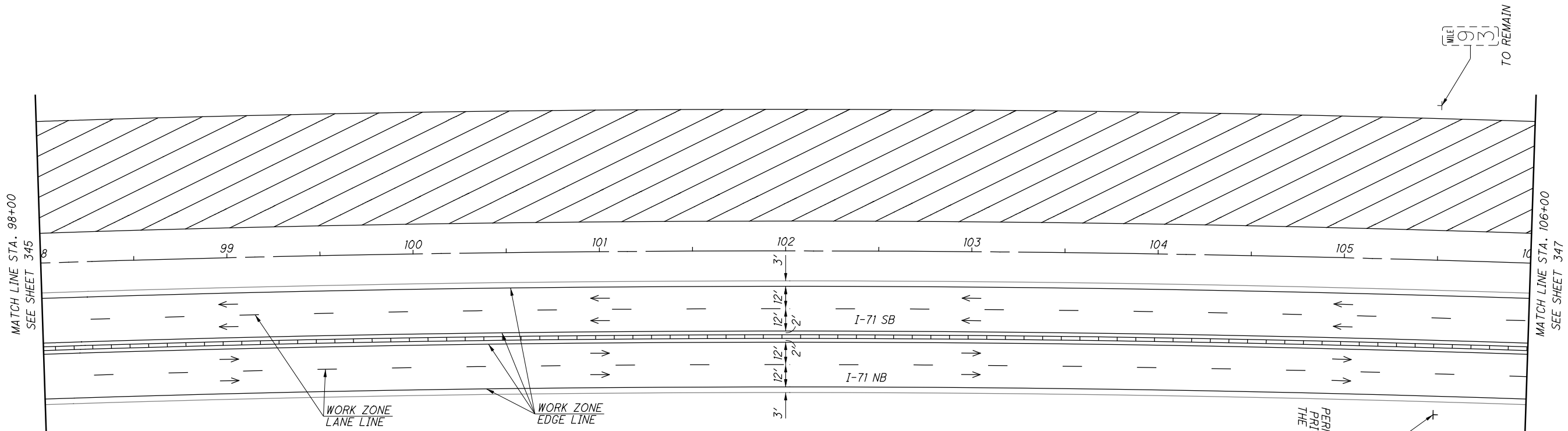
CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 98+00 TO STA. 106+00

FRA-71-0.00

346
1312



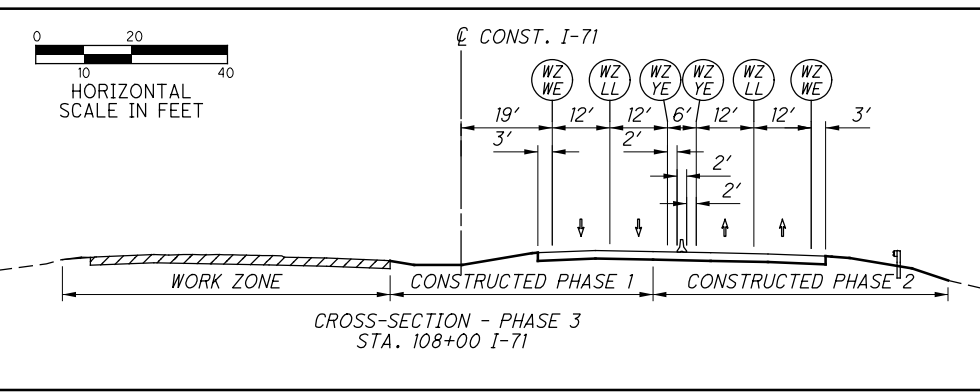
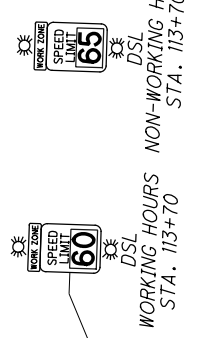
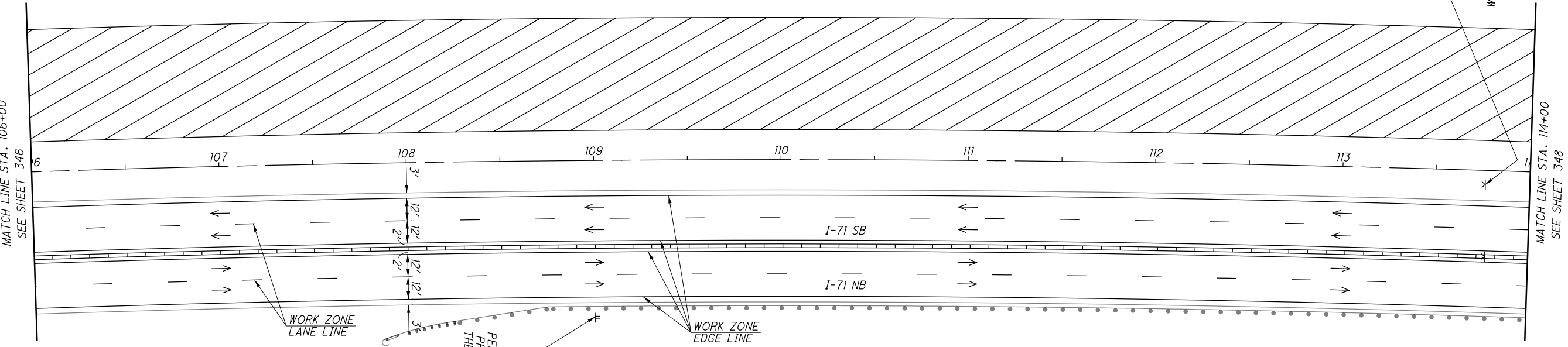
- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - PROPOSED SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

MILE 93
TO REMAIN

MATCH LINE STA. 98+00
SEE SHEET 345

MATCH LINE STA. 106+00
SEE SHEET 347



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

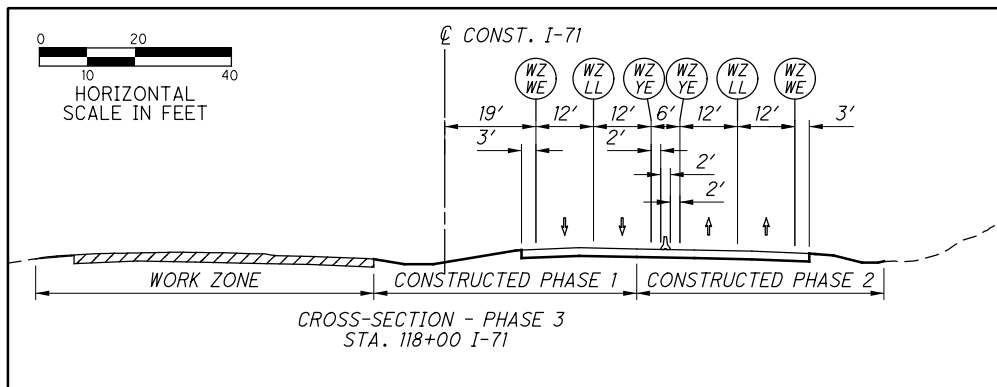
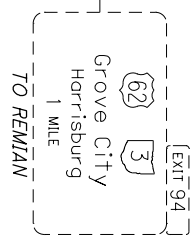
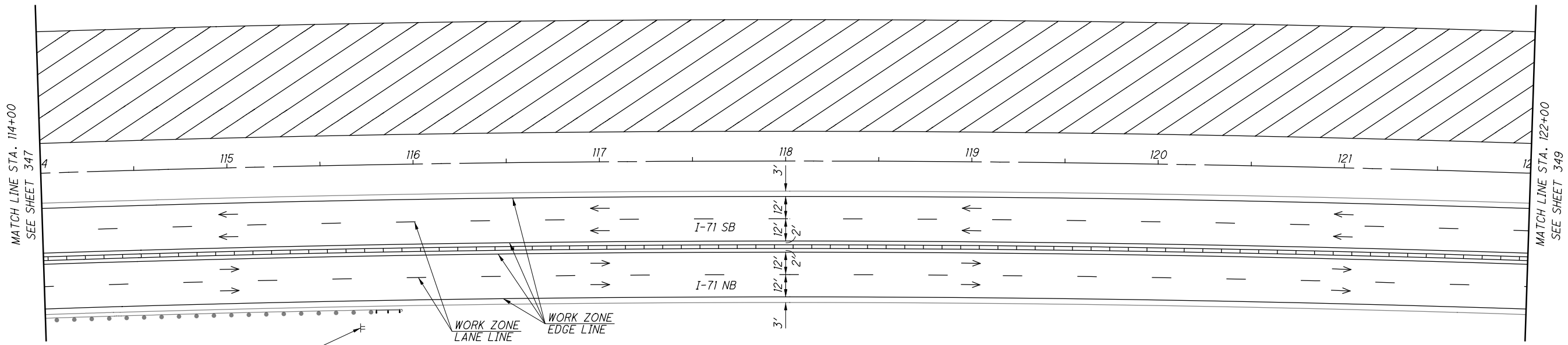
CALCULATED
BER
CHECKED
SMM





15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 106+00 TO STA. 114+00

FRA-71-0:00

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- LEGEND**
-  PHASE 3 WORK ZONE
 -  PORTABLE BARRIER
 -  EXISTING SIGN SUPPORT
 -  OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM




15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 114+00 TO STA. 122+00

FRA-71-0.00

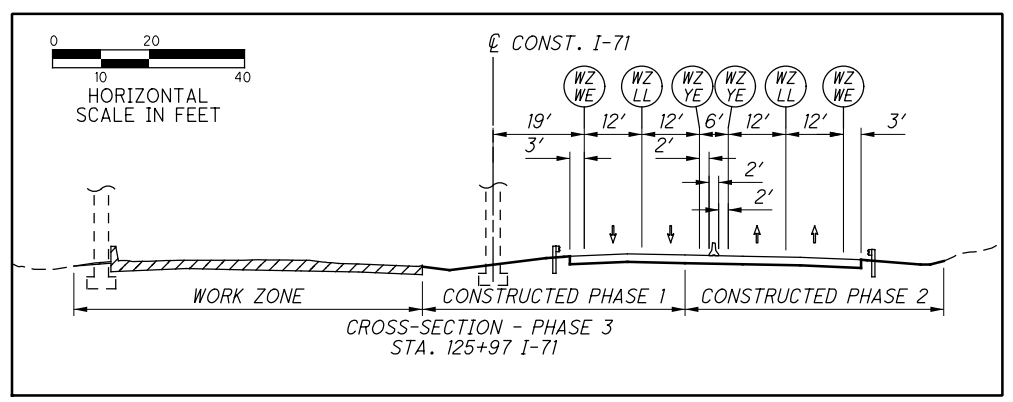
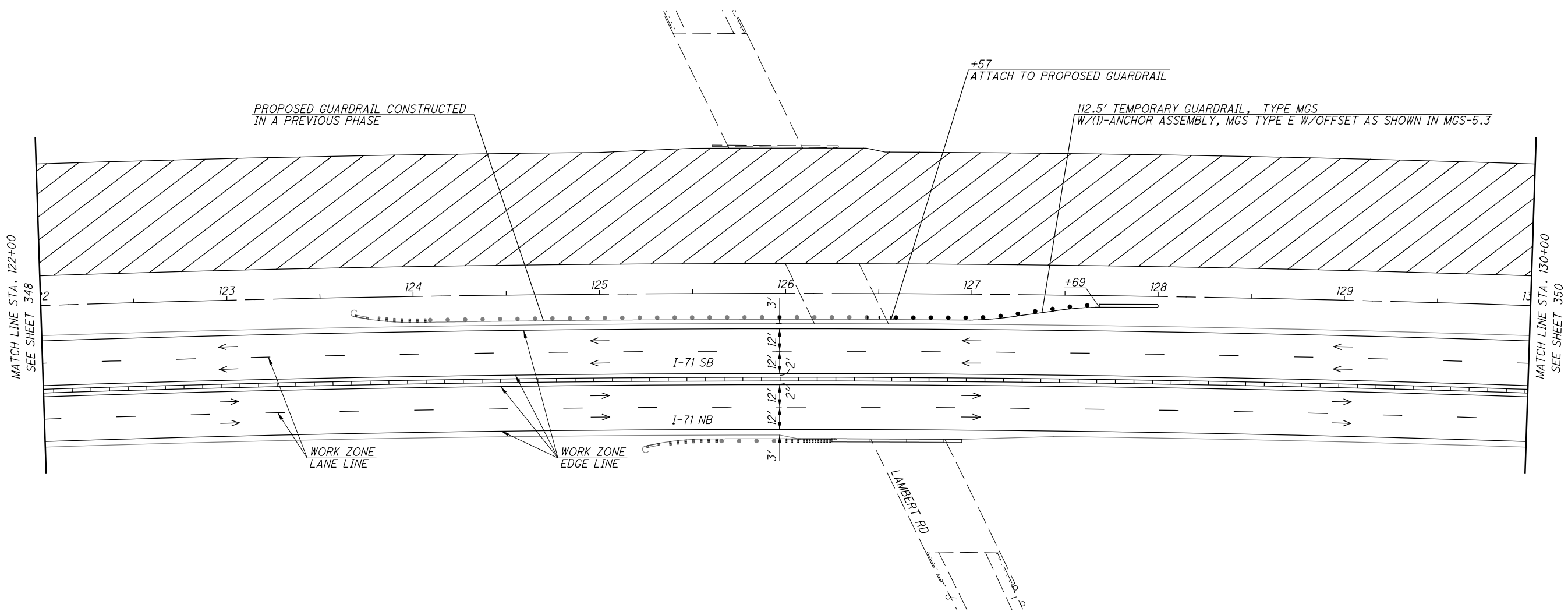


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 122+00 TO STA. 130+00

FRA-71-0.00

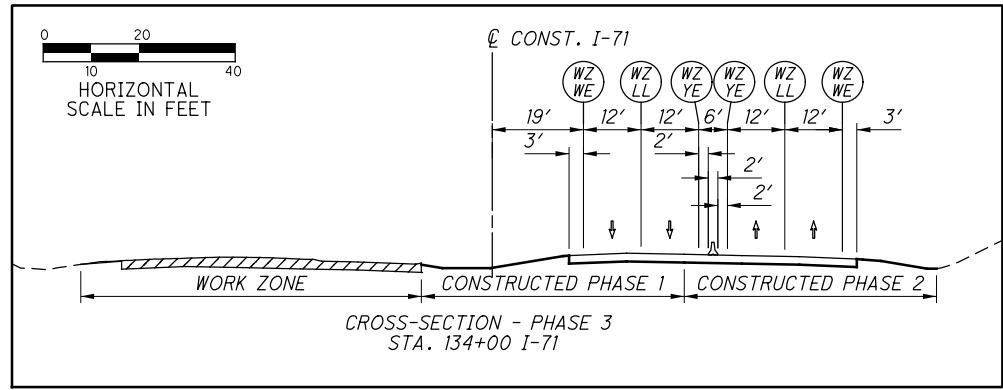
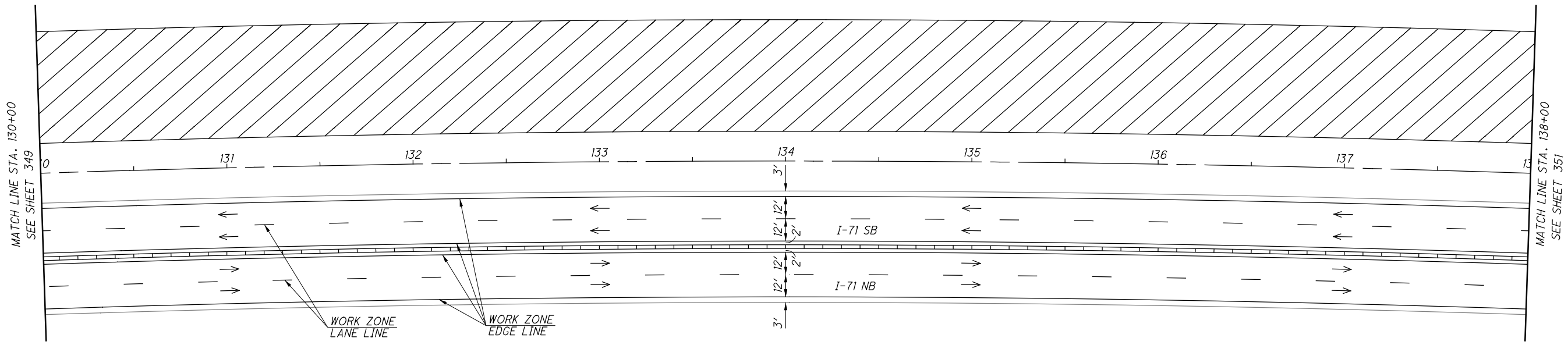
349
1312







- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - OPEN TRAVEL LANE

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- LEGEND**
-  PHASE 3 WORK ZONE
 -  PORTABLE BARRIER
 -  EXISTING SIGN SUPPORT
 -  OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM




15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 130+00 TO STA. 138+00

FRA-71-0.00

350
1312

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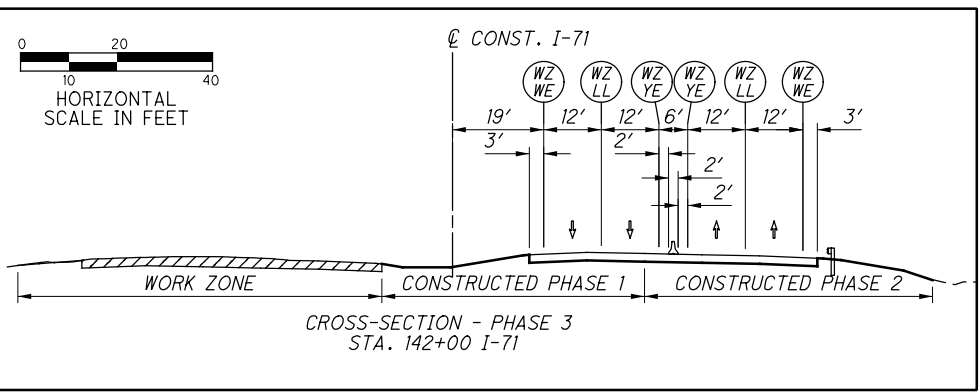
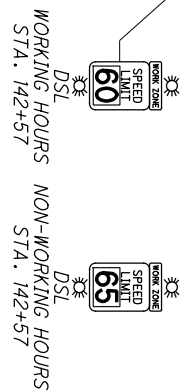
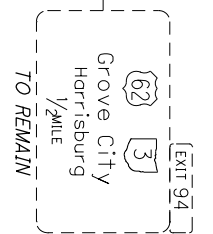
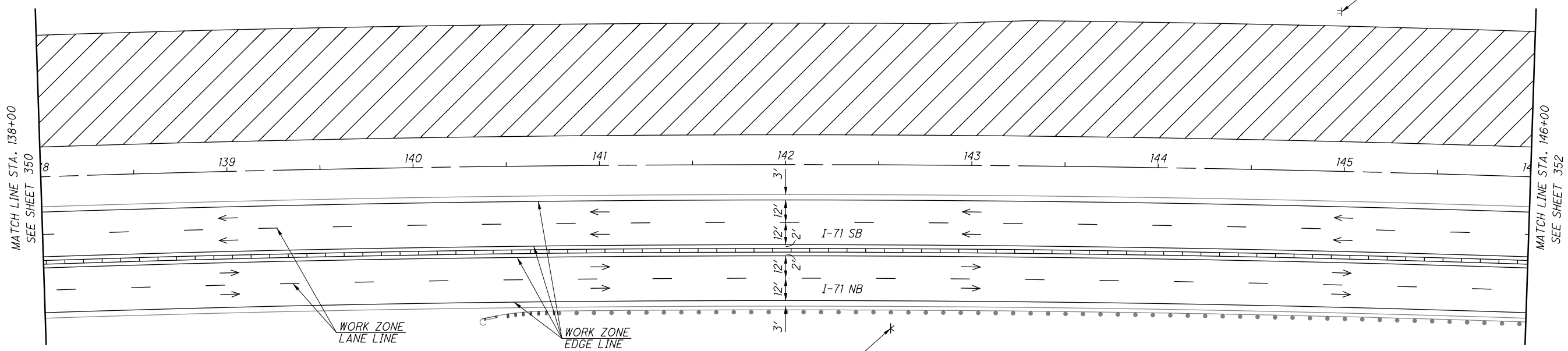
CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 138+00 TO STA. 146+00

FRA-71-0.00

351
1312



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE



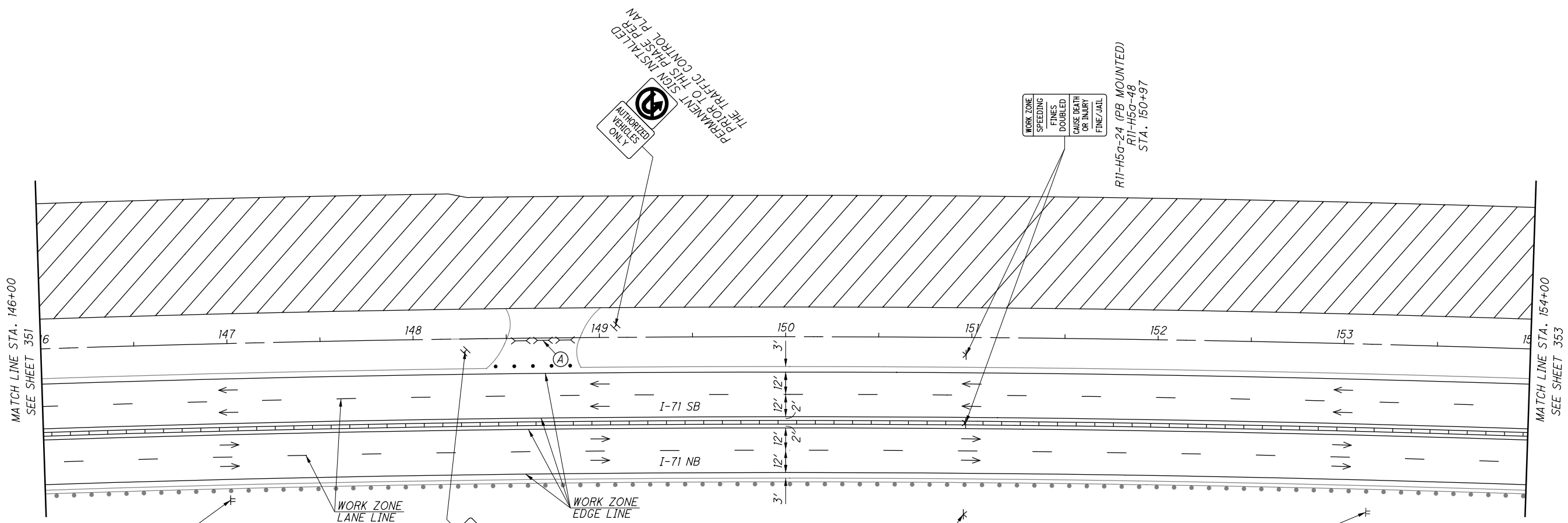
0 30 60
15
HORIZONTAL
SCALE IN FEET

CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 146+00 TO STA. 154+00

FRA-71-0.00

352
1312



WORK ZONE
SPEEDING
FINES
DOUBLED
CAUSE DEATH
OR INJURY
FINE/JAIL

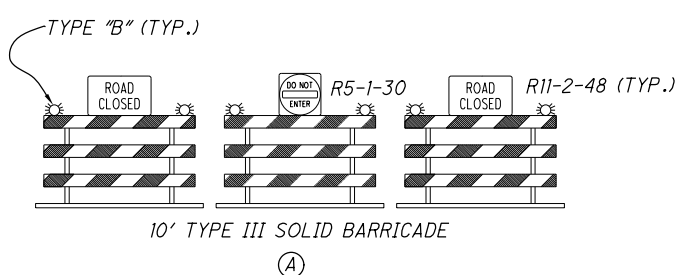
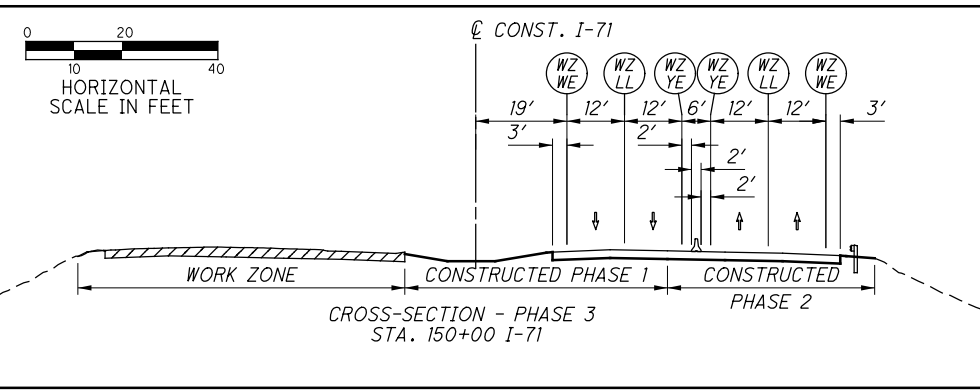
R11-H5a-24 (PB MOUNTED)
R11-H5c-48
STA. 150+97

TO REMAIN
MATCH FOR ICE ON BRIDGES

PERMANENT SIGN INSTALLED PRIOR TO THIS PHASE PER THE TRAFFIC CONTROL PLAN
NO STOPPING OR STANDING

AS INSTALLED IN PHASE 1
Low Bridge
US-62
14'-6" Max

TO REMAIN
GAS EXIT 94



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 3 WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

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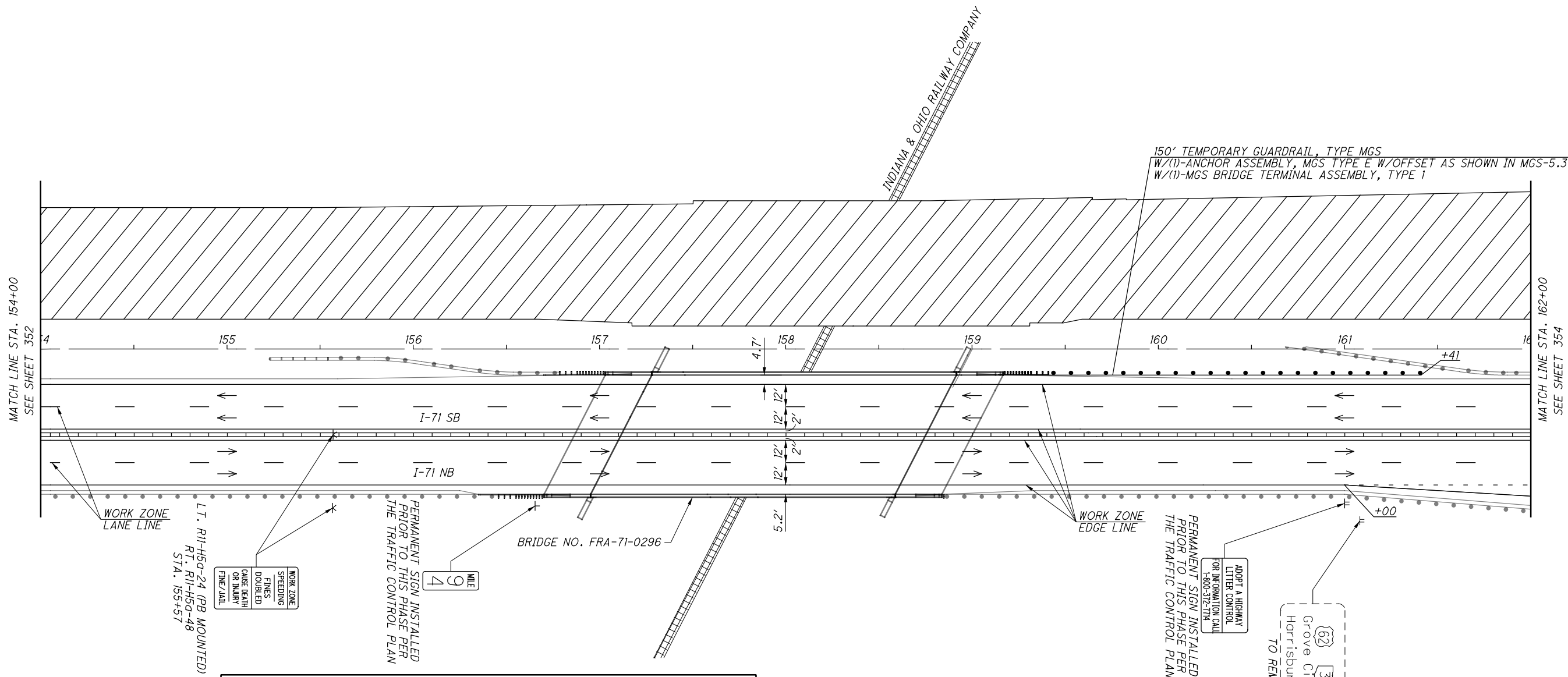
CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 154+00 TO STA. 162+00

FRA-71-0.00

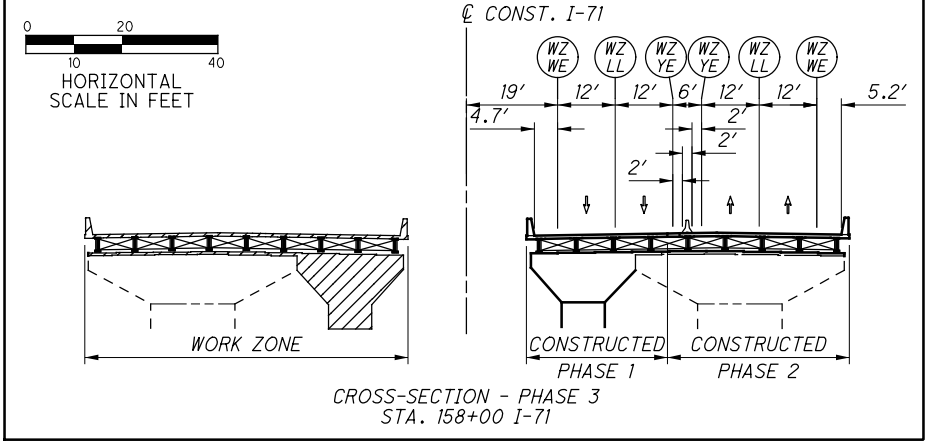
353
1312

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LT. R11-H50-24 (PB MOUNTED)
RT. R11-H50-48
STA. 155+57

WORK ZONE
SPEEDING
FINES
DOUBLED
CAUSE DEATH
OR INJURY
FINE/JAIL



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE



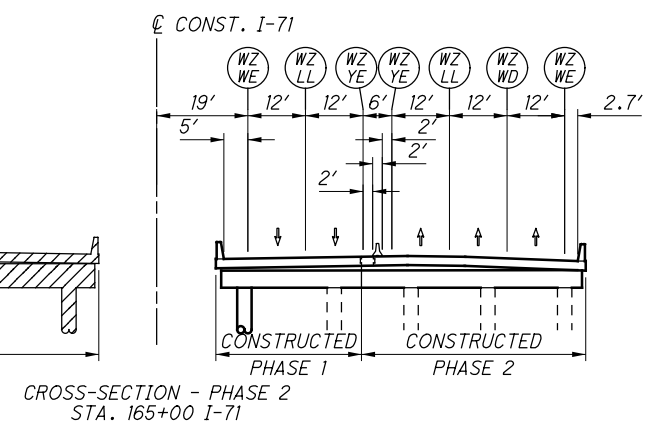
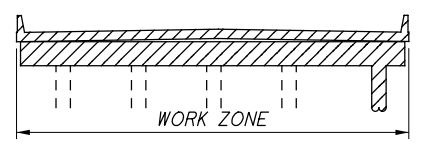
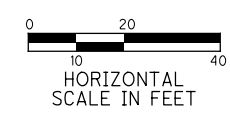
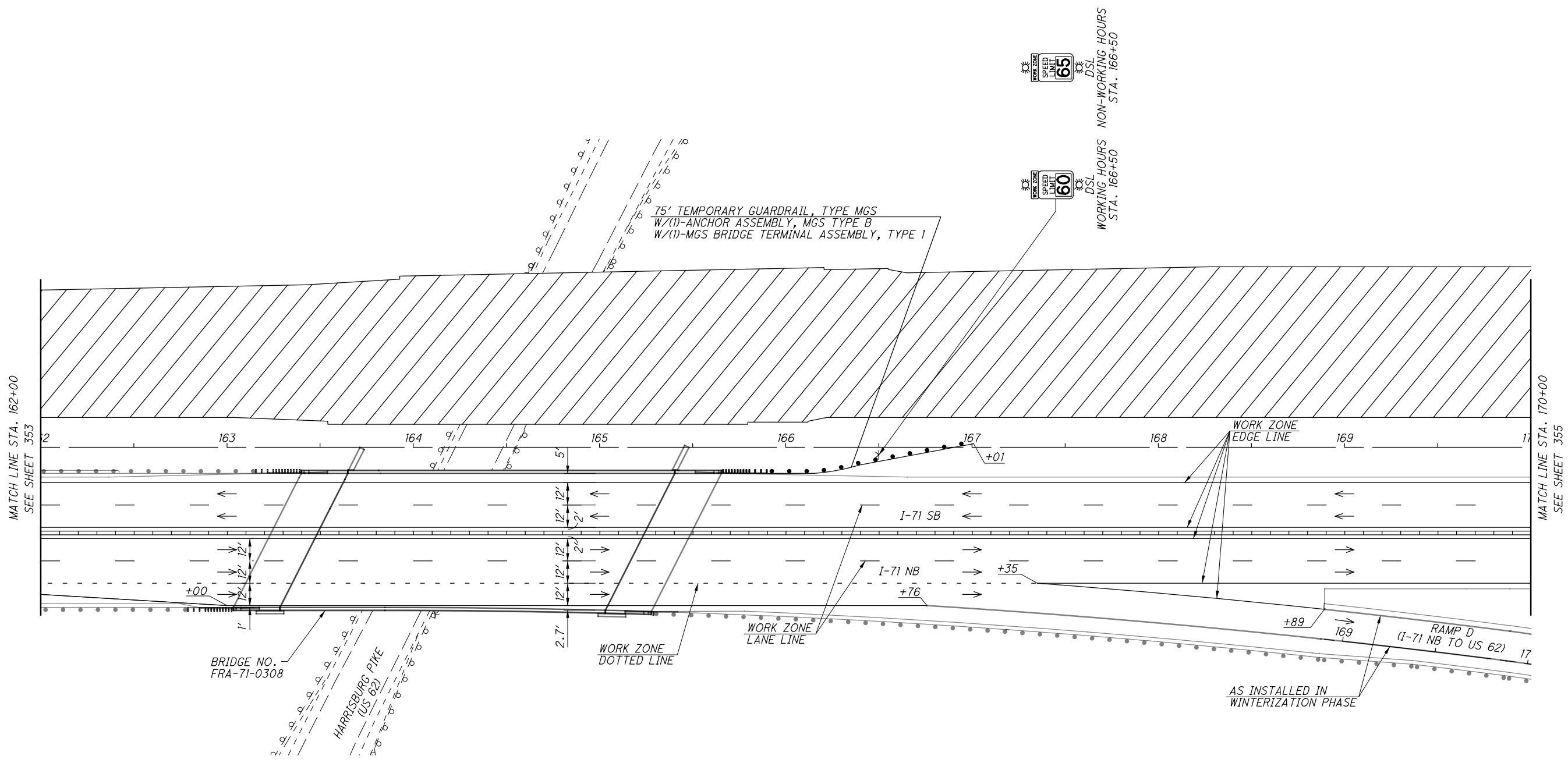
CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 162+00 TO STA. 170+00

FRA-71-0.00

354
1312

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- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

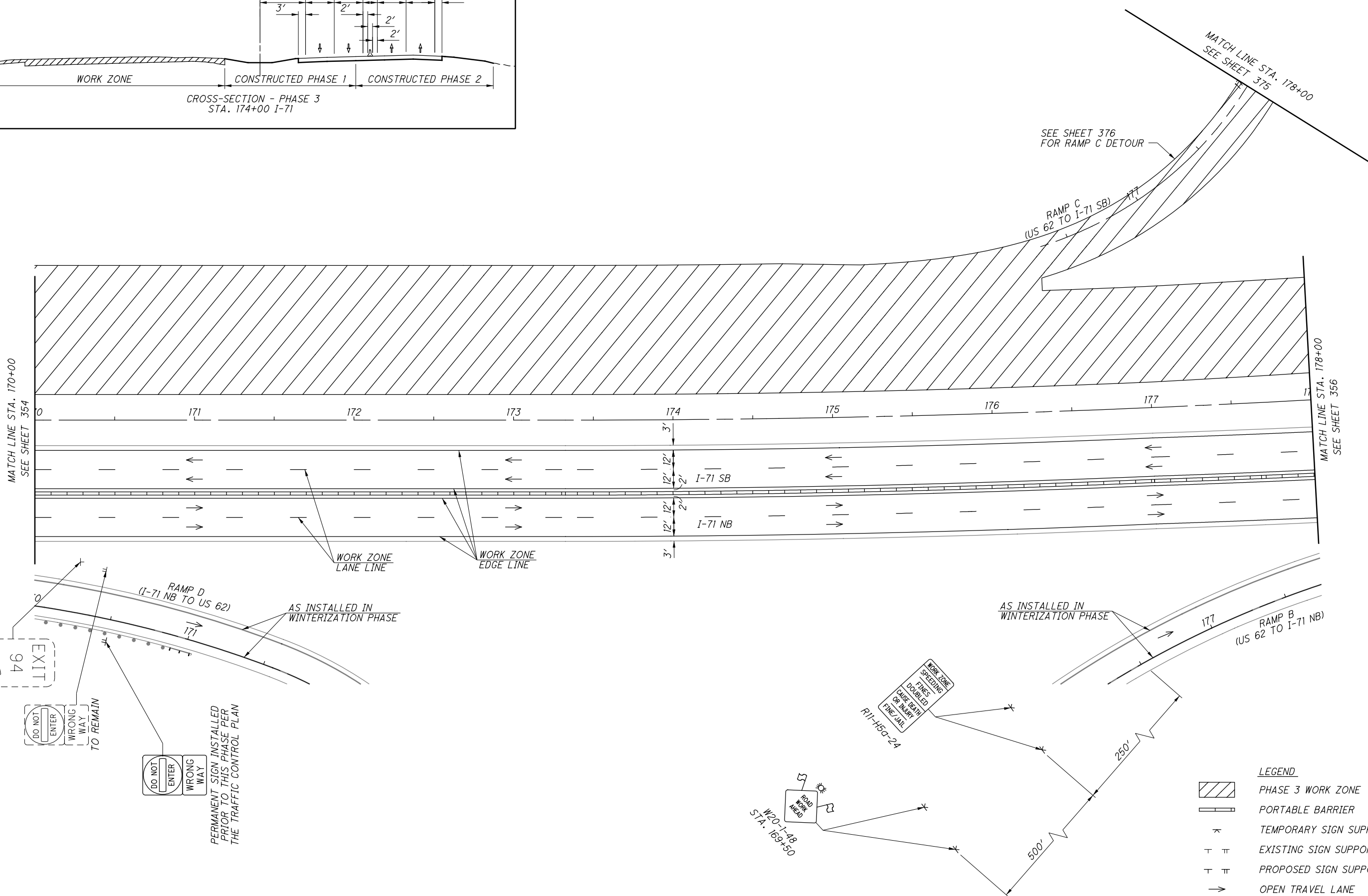
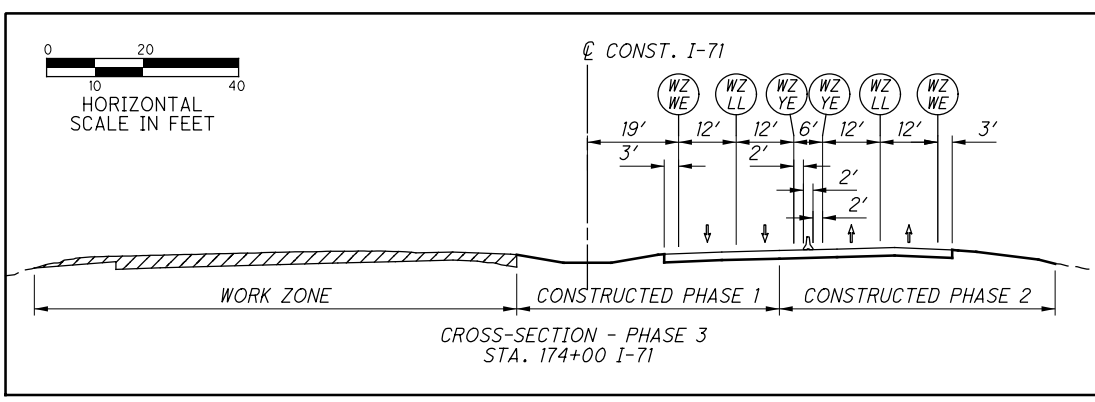


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-71 - STA. 170+00 TO STA. 178+00

FRA-71-0.00

355
1312



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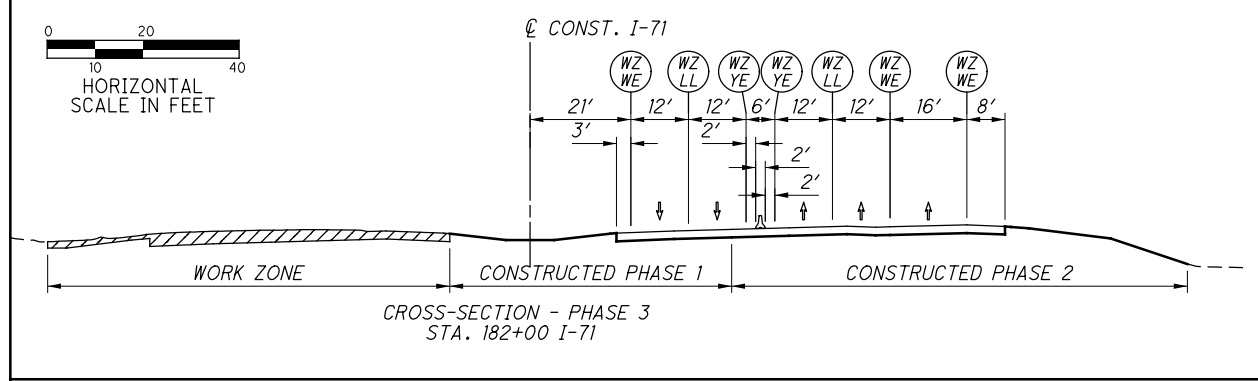
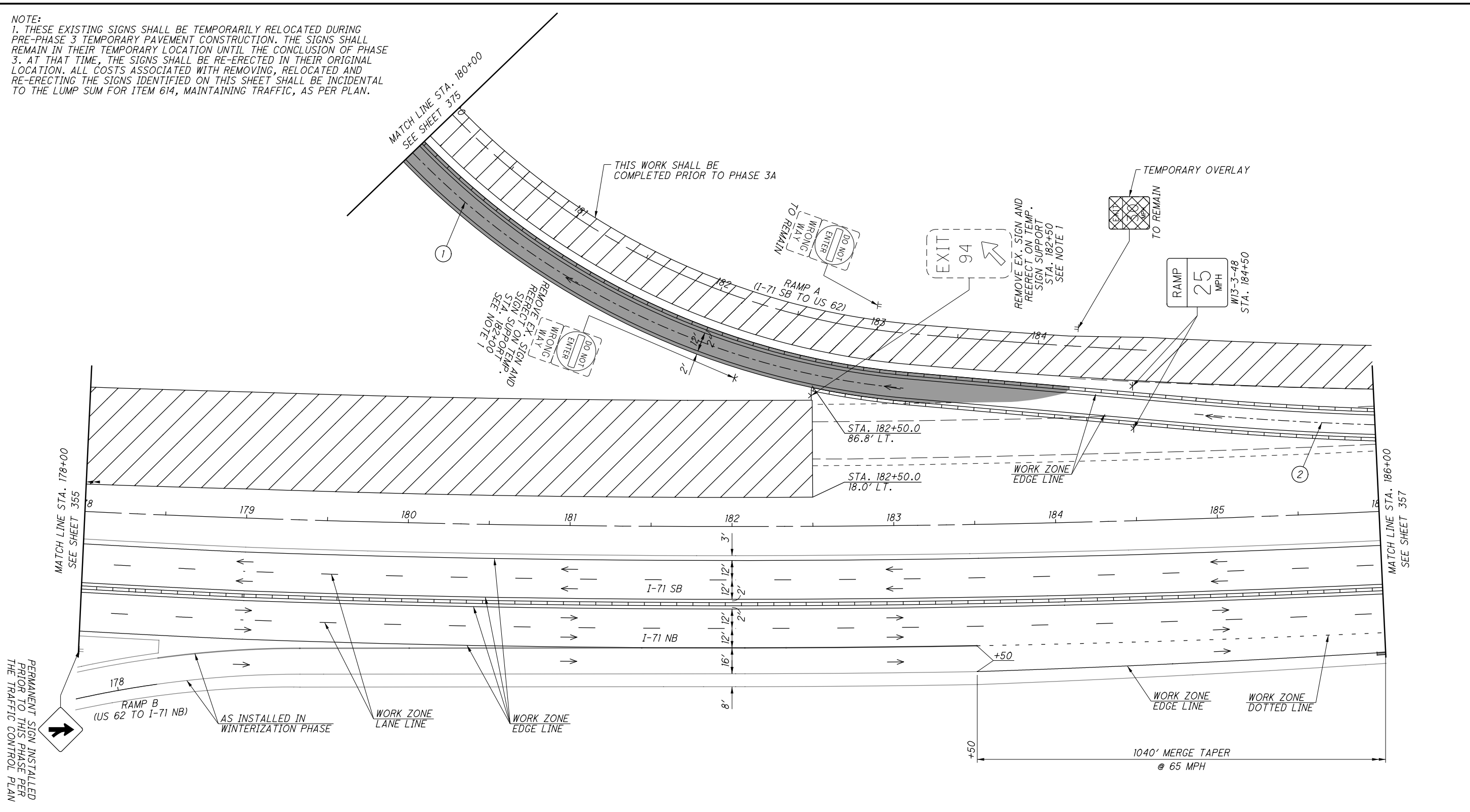
NOTE:
 1. THESE EXISTING SIGNS SHALL BE TEMPORARILY RELOCATED DURING PRE-PHASE 3 TEMPORARY PAVEMENT CONSTRUCTION. THE SIGNS SHALL REMAIN IN THEIR TEMPORARY LOCATION UNTIL THE CONCLUSION OF PHASE 3. AT THAT TIME, THE SIGNS SHALL BE RE-ERECTED IN THEIR ORIGINAL LOCATION. ALL COSTS ASSOCIATED WITH REMOVING, RELOCATED AND RE-ERECTING THE SIGNS IDENTIFIED ON THIS SHEET SHALL BE INCIDENTAL TO THE LUMP SUM FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.



CALCULATED BY BER CHECKED BY SMM
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 178+00 TO STA. 186+00

FRA-71-0.00
 356
 1312

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- ① $\Delta = 50^\circ 25' 17''$ (LT)
 $D_c = 11^\circ 52' 40''$
 $R = 482.35'$
 $T = 227.10'$
 $L = 424.50'$
 $E = 50.79'$
 $C = 410.94'$
 $C.B. = S 59^\circ 59' 46'' E$
- ② $\Delta = 09^\circ 31' 20''$ (LT)
 $D_c = 03^\circ 00' 00''$
 $R = 1910.00'$
 $T = 159.08'$
 $L = 317.44'$
 $E = 6.61'$
 $C = 317.07'$
 $C.B. = N 89^\circ 58' 04'' W$

LEGEND

	PHASE 3 WORK ZONE
	TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 3)
	PORTABLE BARRIER
	TEMPORARY SIGN SUPPORT
	EXISTING SIGN SUPPORT
	PROPOSED SIGN SUPPORT
	OPEN TRAVEL LANE



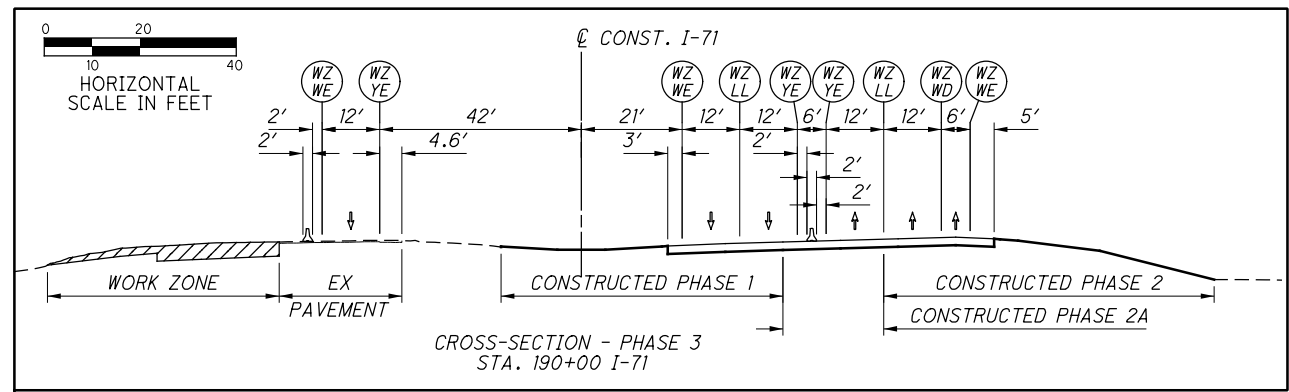
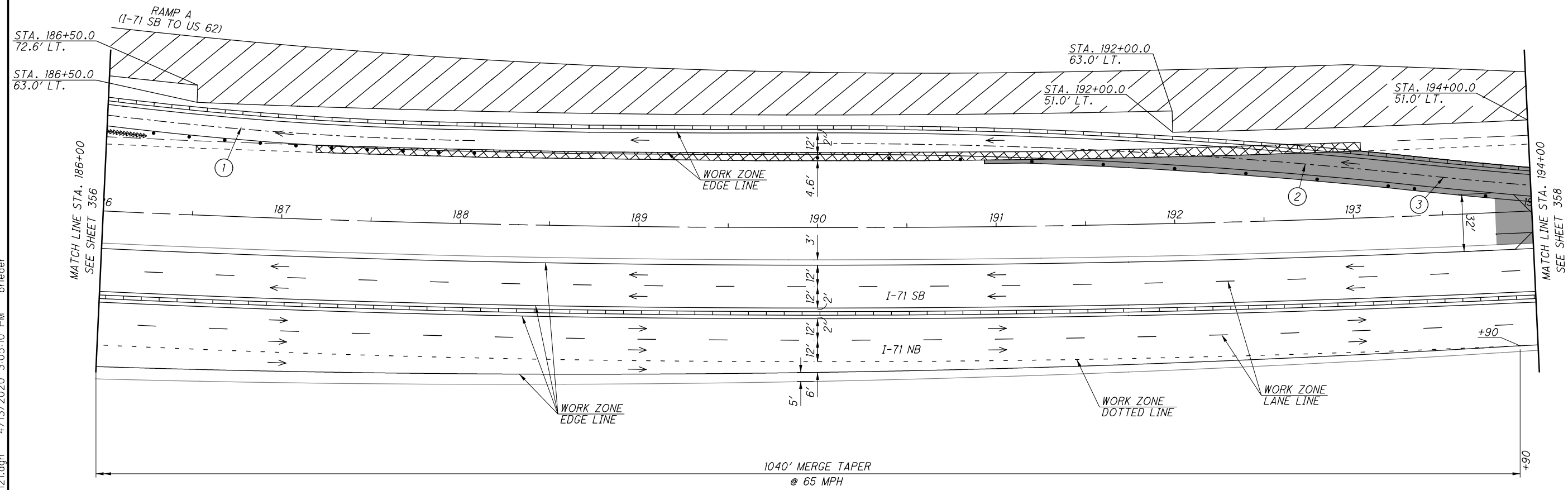
CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 186+00 TO STA. 194+00

FRA-71-0.00

357
1312

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① $\Delta = 09^\circ 31' 20''$ (LT)
 $D_c = 03^\circ 00' 00''$
 $R = 1910.00'$
 $T = 159.08'$
 $L = 317.44'$
 $E = 6.61'$
 $C = 317.07'$
 C.B. = N 89° 58' 04" W

② $\Delta = 6^\circ 06' 51''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 166.91'$
 $L = 333.51'$
 $E = 4.45'$
 $C = 333.35'$
 C.B. = N 87° 20' 43" E

③ $\Delta = 12^\circ 54' 03''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 353.34'$
 $L = 703.68'$
 $E = 19.91'$
 $C = 702.20'$
 C.B. = N 83° 57' 07" E

NOTES:
 1. ALL WORK SHOWN ON THIS SHEET SHALL BE COMPLETED PRIOR TO THE START OF PHASE 3A.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - OPEN TRAVEL LANE
 - DRUM



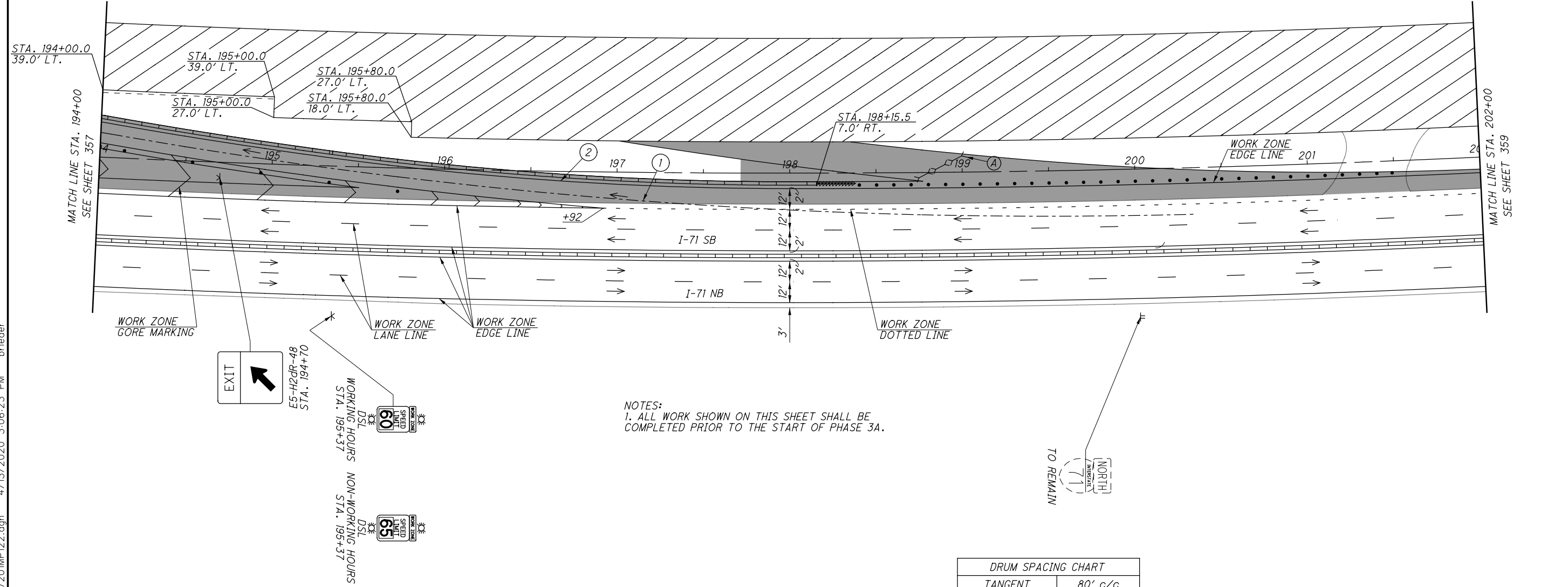
CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 194+00 TO STA. 202+00

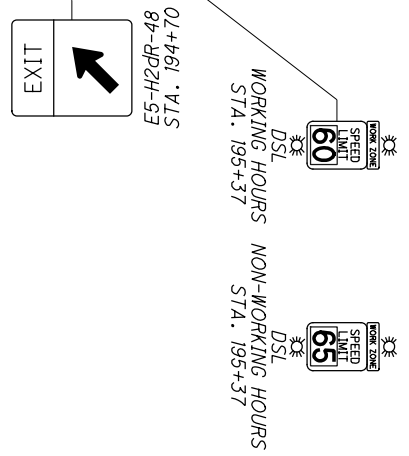
FRA-71-0.00

358
1312

- ① $\Delta = 12^\circ 54' 03''$ (LT)
 $Dc = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 353.34'$
 $L = 703.68'$
 $E = 19.91'$
 $C = 702.20'$
 $C.B. = N 83^\circ 57' 07'' E$
- ② $\Delta = 7^\circ 39' 21''$ (LT)
 $Dc = 2^\circ 51' 53''$
 $R = 2000.00'$
 $T = 133.82'$
 $L = 267.25'$
 $E = 4.47'$
 $C = 267.05'$
 $C.B. = N 82^\circ 53' 60'' E$

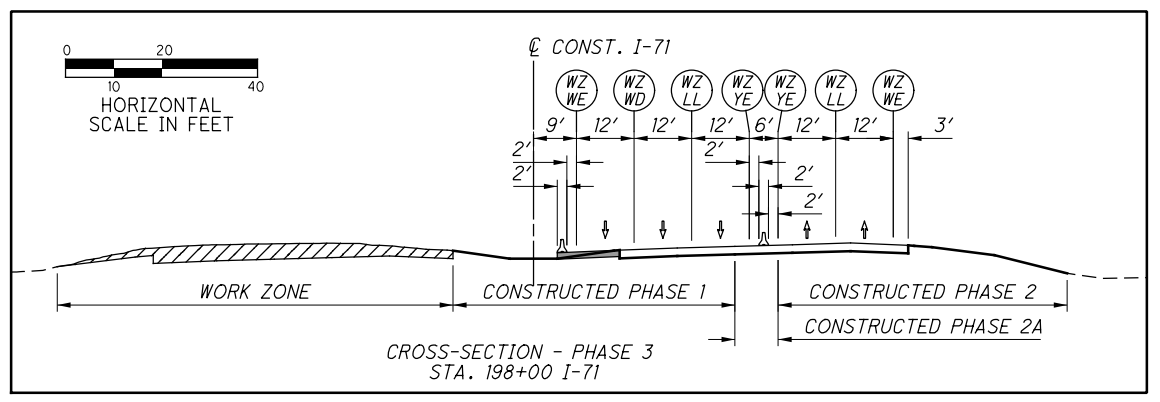
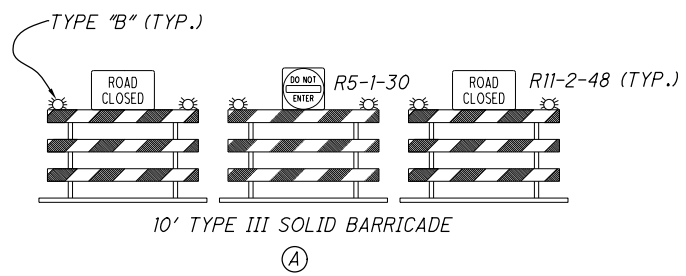


NOTES:
 1. ALL WORK SHOWN ON THIS SHEET SHALL BE COMPLETED PRIOR TO THE START OF PHASE 3A.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE



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CALCULATED
BER
CHECKED
SMM

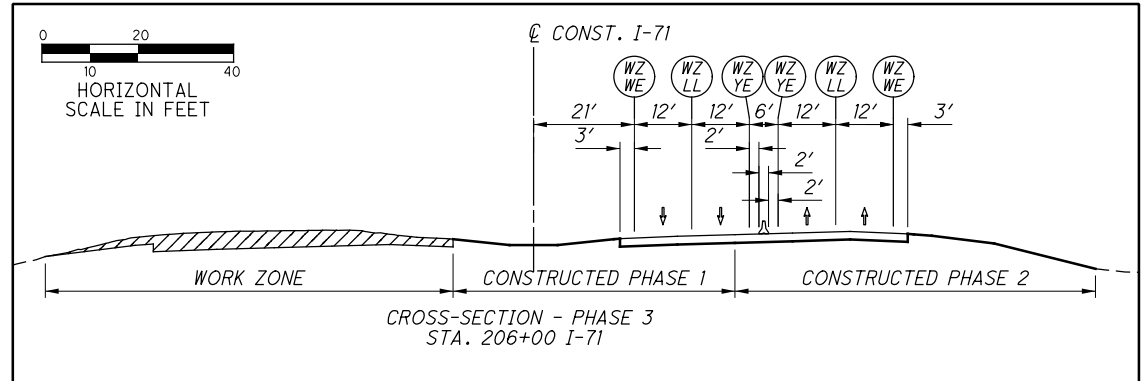
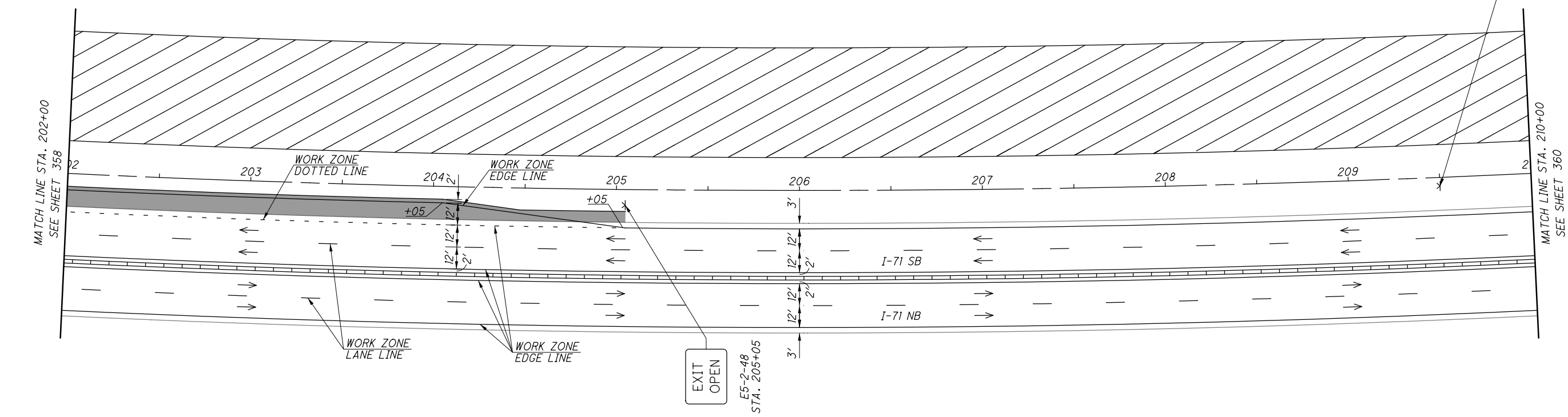
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 202+00 TO STA. 210+00

FRA-71-0.00

359
1312

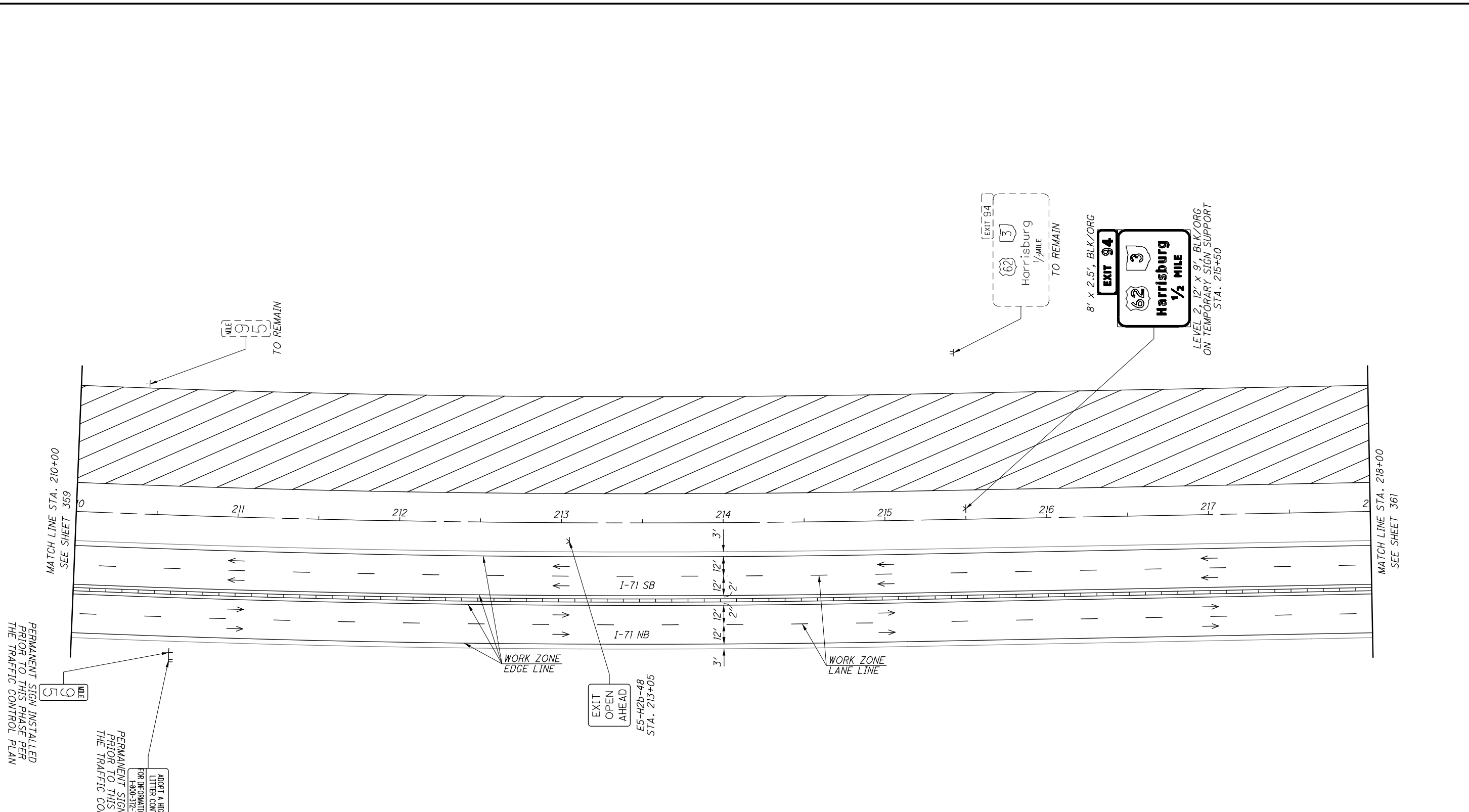
Low Bridge
US-62
14'-6" Max

SPECIAL
 BLACK ON ORANGE
 10' X 7'
 REMOVED AND REERECTED
 FROM STA. 198+00
 TO STA. 209+50



- LEGEND**
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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MILE 9 5
TO REMAIN

EXIT 94
Harrisburg
1/2 MILE
TO REMAIN

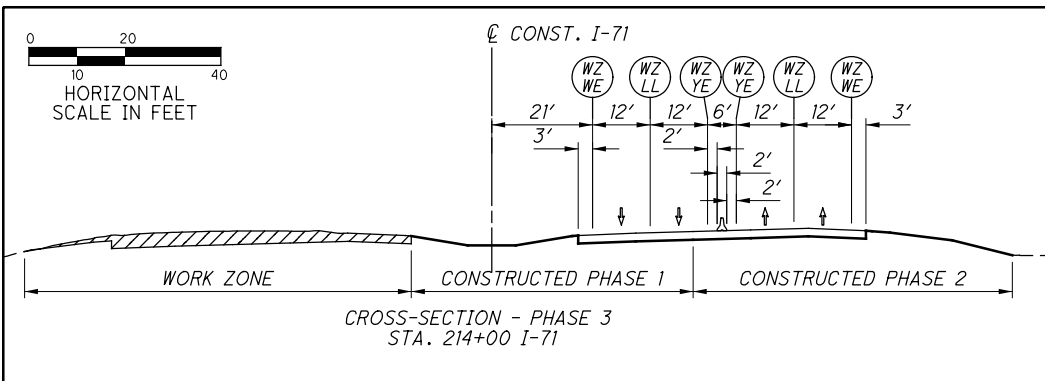
EXIT 94
Harrisburg
1/2 MILE
LEVEL 2, 12' x 9', BLK/ORG
ON TEMPORARY SIGN SUPPORT
STA. 215+50

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

ADOPT A HIGHWAY
LITTER CONTROL
FOR INFORMATION CALL
1-800-372-7714

EXIT OPEN
AHEAD
E5-H2b-48
STA. 213+05



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

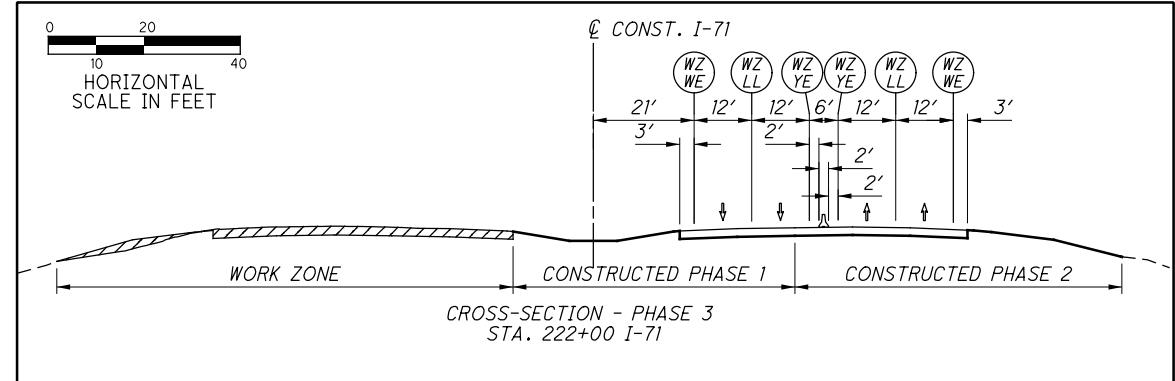
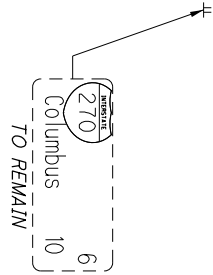
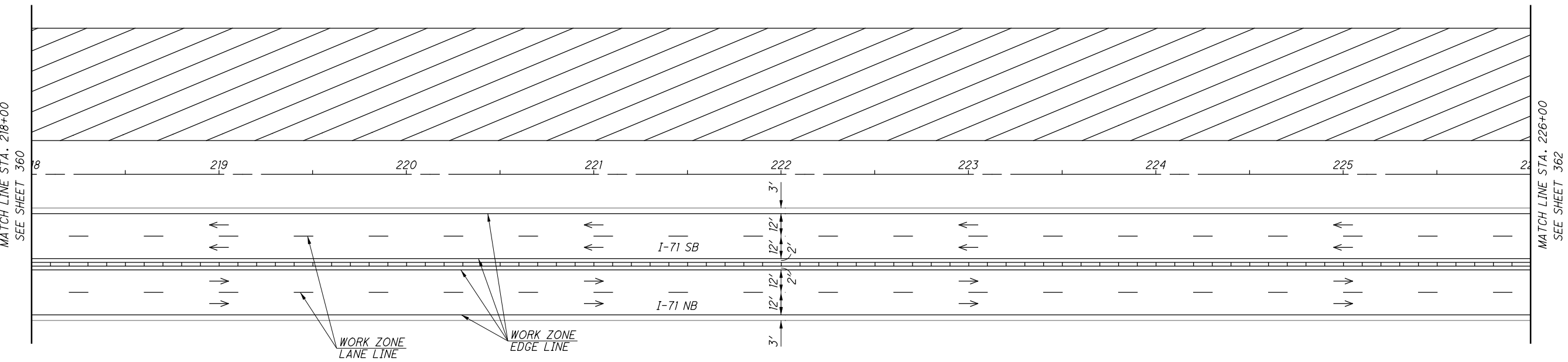
CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 210+00 TO STA. 218+00

FRA-71-0.00

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- LEGEND
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER

CHECKED
SMM

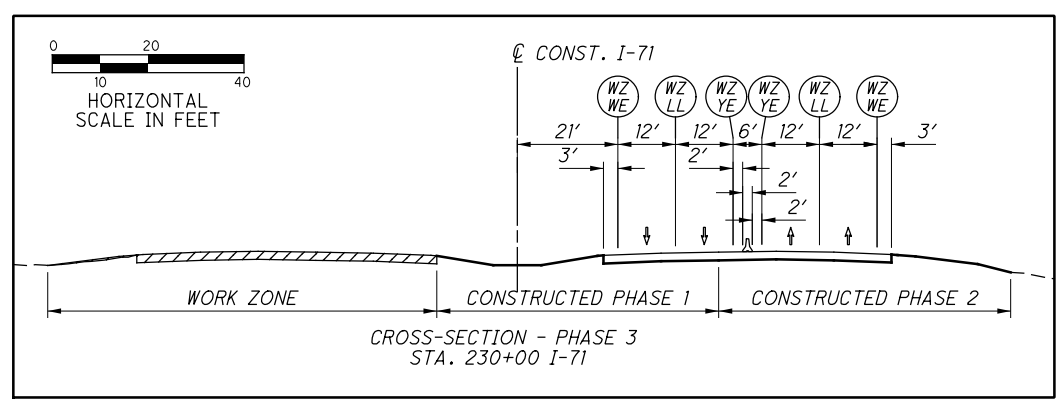
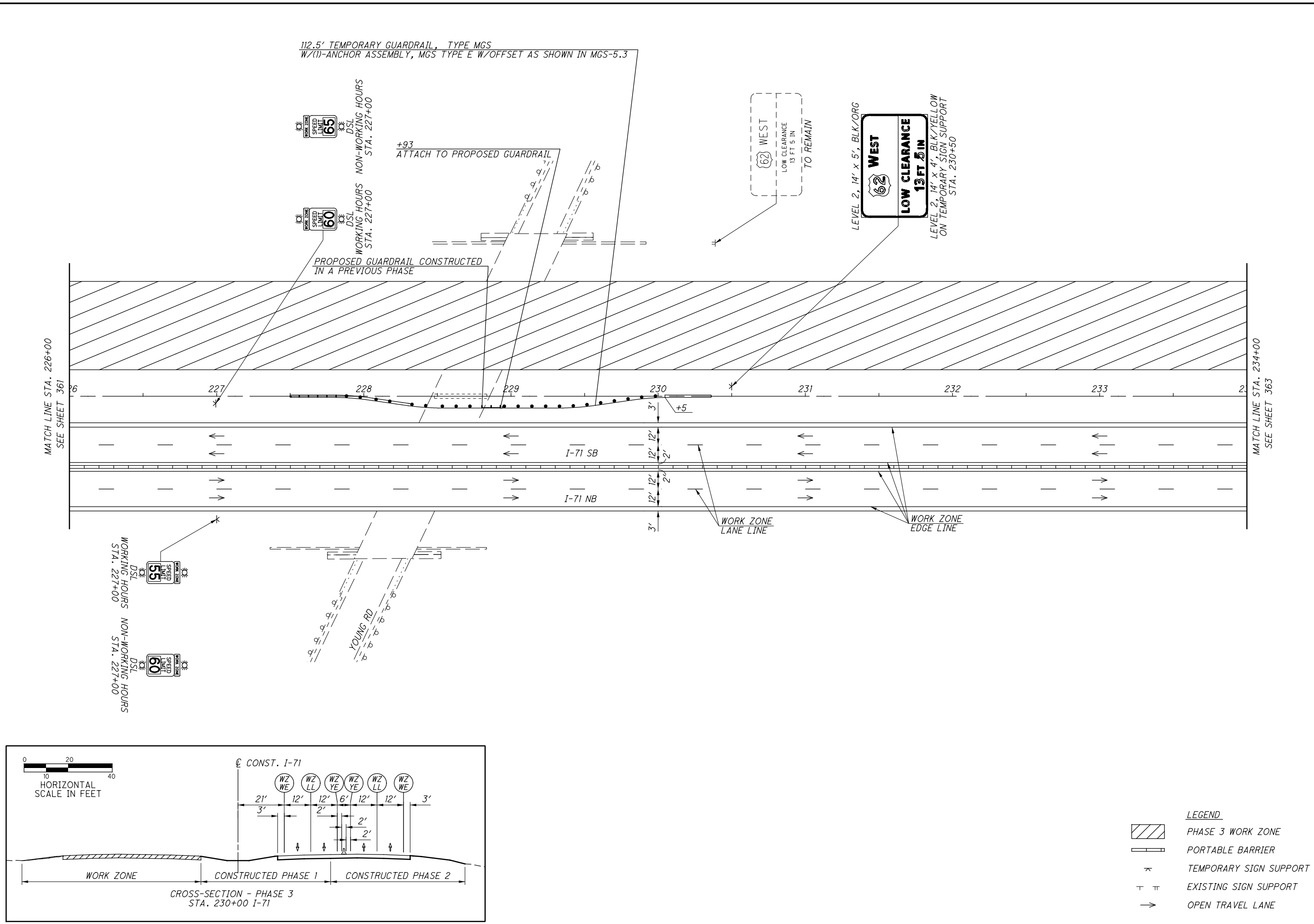
0 15 30 60

HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 218+00 TO STA. 226+00

FRA-71-0.00

361
1312

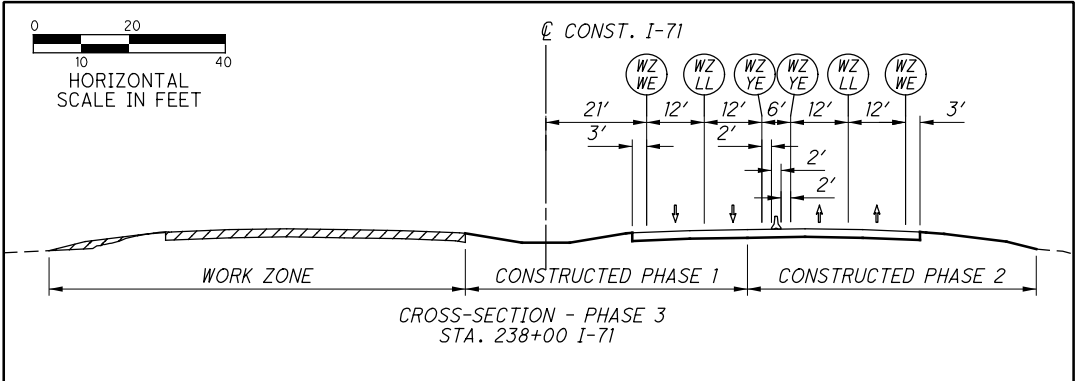
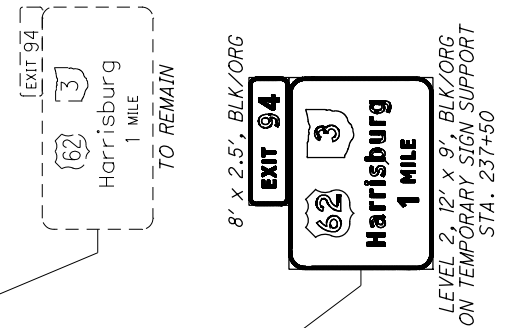
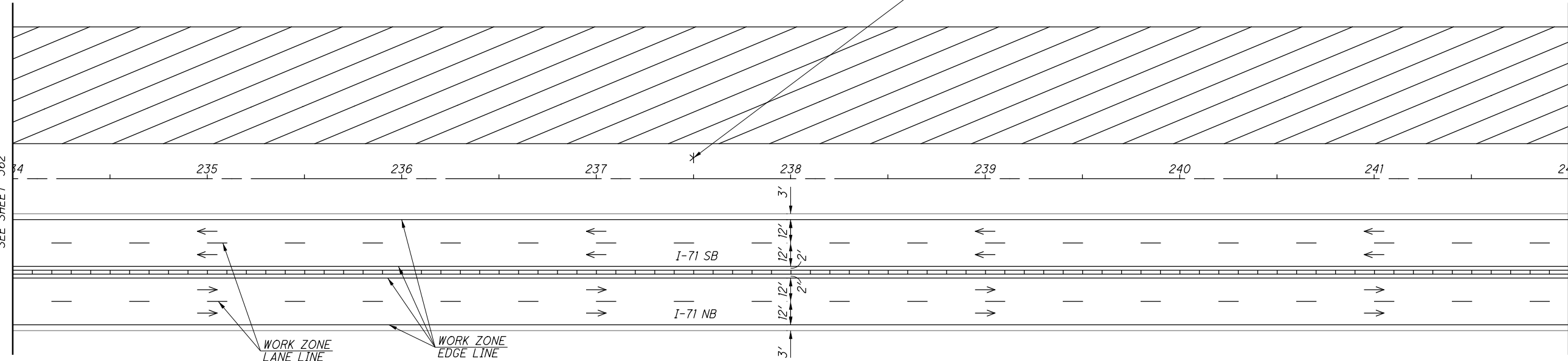


- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

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MATCH LINE STA. 234+00
SEE SHEET 362

MATCH LINE STA. 242+00
SEE SHEET 364



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

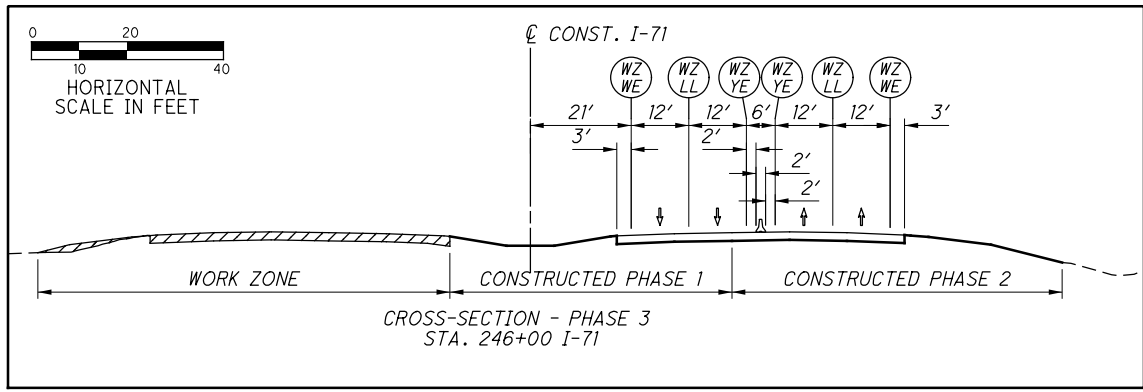
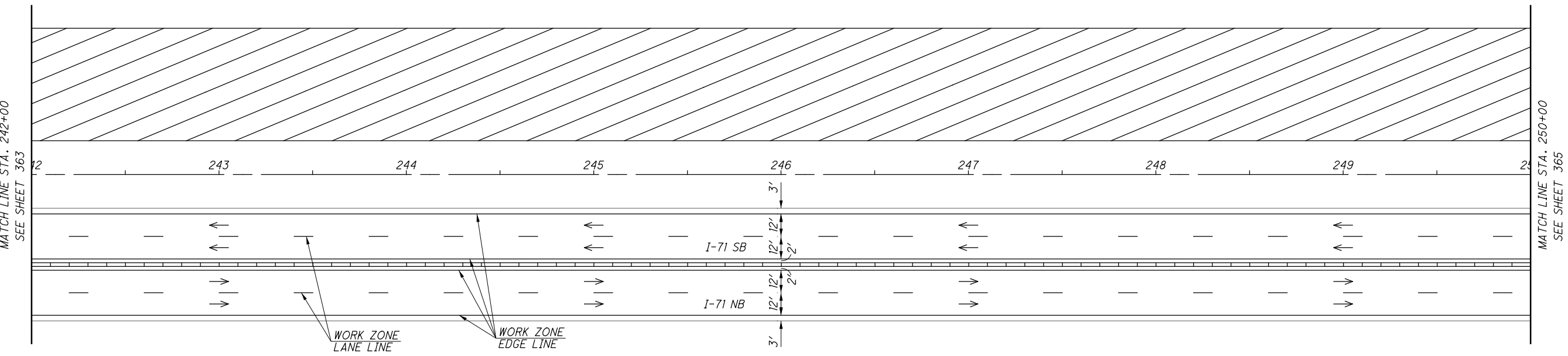
CALCULATED
BER
CHECKED
SMM

0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 234+00 TO STA. 242+00

FRA-71-0.00

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LEGEND

PHASE 3 WORK ZONE

PORTABLE BARRIER

OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

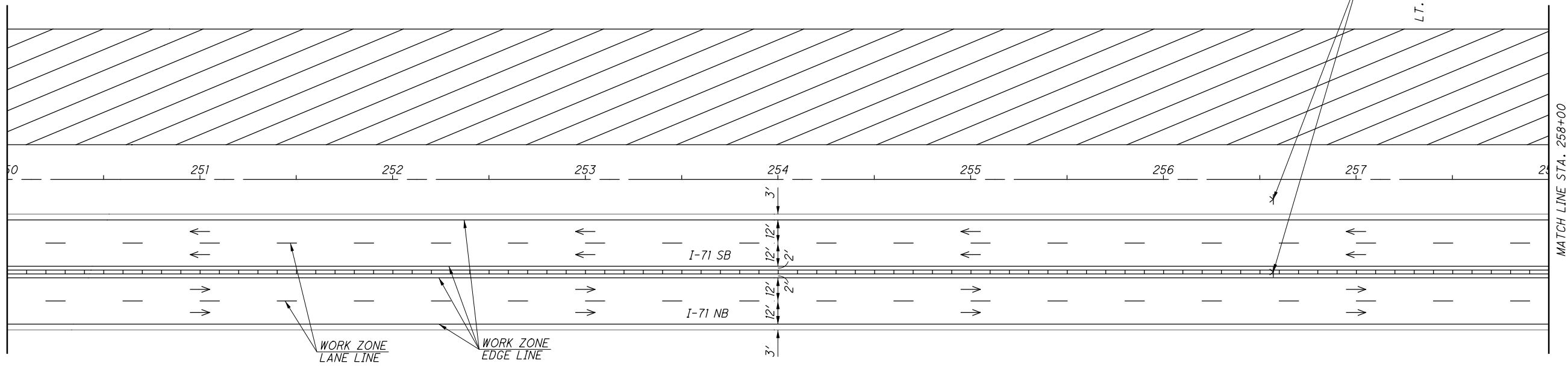
0 30 60
15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 242+00 TO STA. 250+00

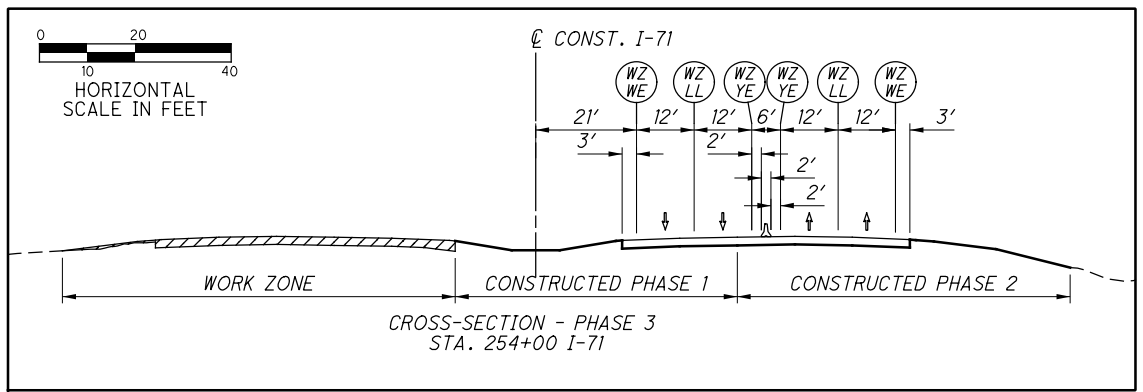
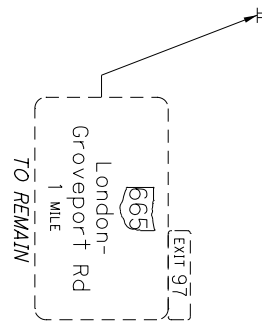
FRA-71-0.00

J:\20130212\ODOT\FRA\107201\mot\sheets\107201MP129.dgn 4/13/2020 3:15:09 PM brieder

MATCH LINE STA. 250+00
SEE SHEET 364



MATCH LINE STA. 258+00
SEE SHEET 366



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

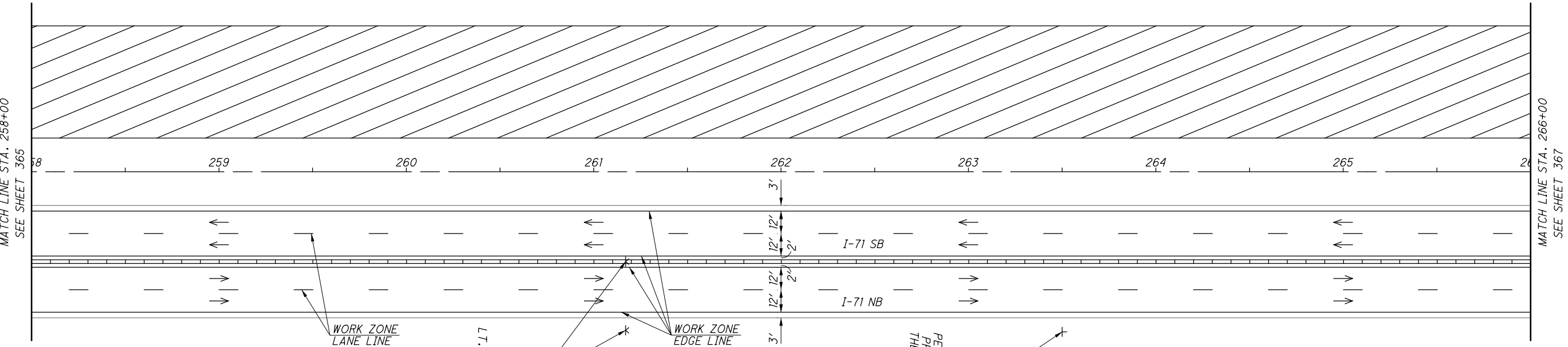
0 15 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 250+00 TO STA. 258+00

FRA-71-0.00

365
1312

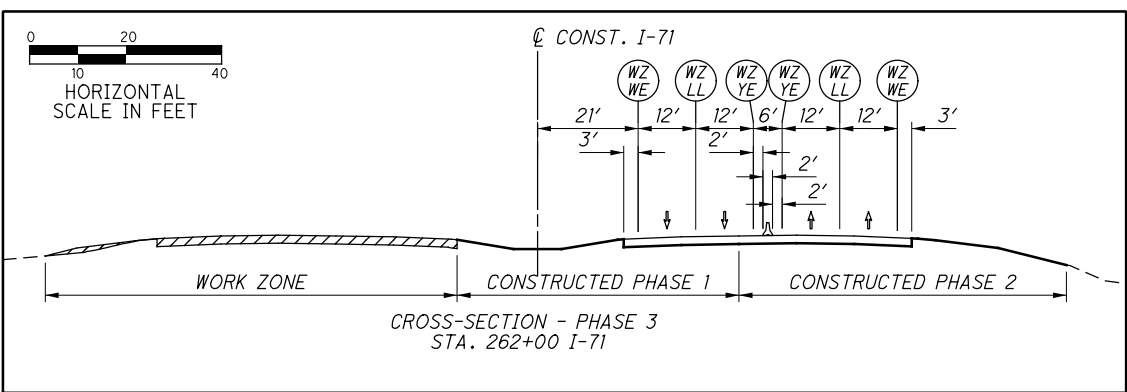
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WORK ZONE
SPEEDING
FINES
DOUBLED
CRUISE DEATH
OR INJURY
FINE/MI.
L.T. R11-H5G-24 (PB MOUNTED)
RT. R11-H5G-48
STA. 261+17

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN

SCIO TO DOWNS
TO REMAIN



- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

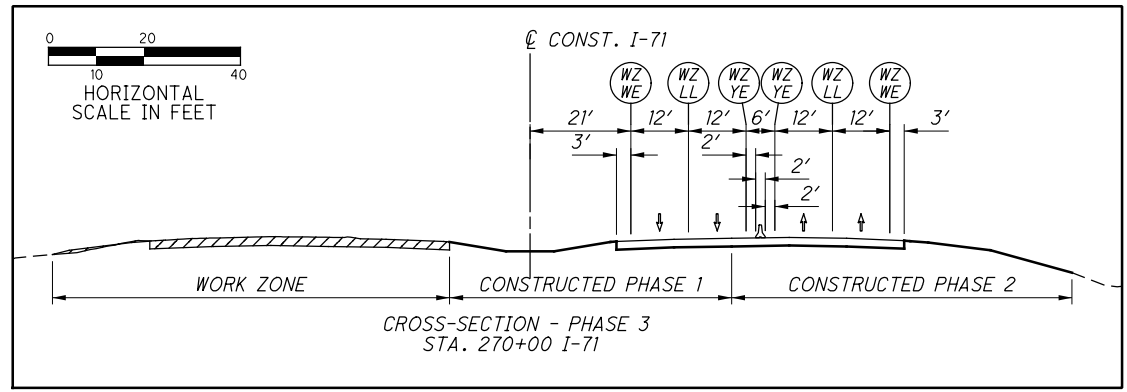
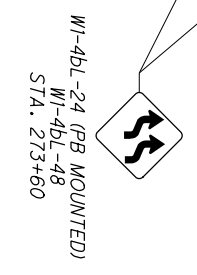
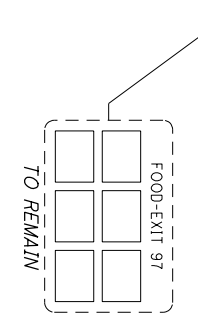
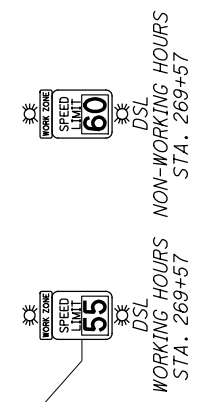
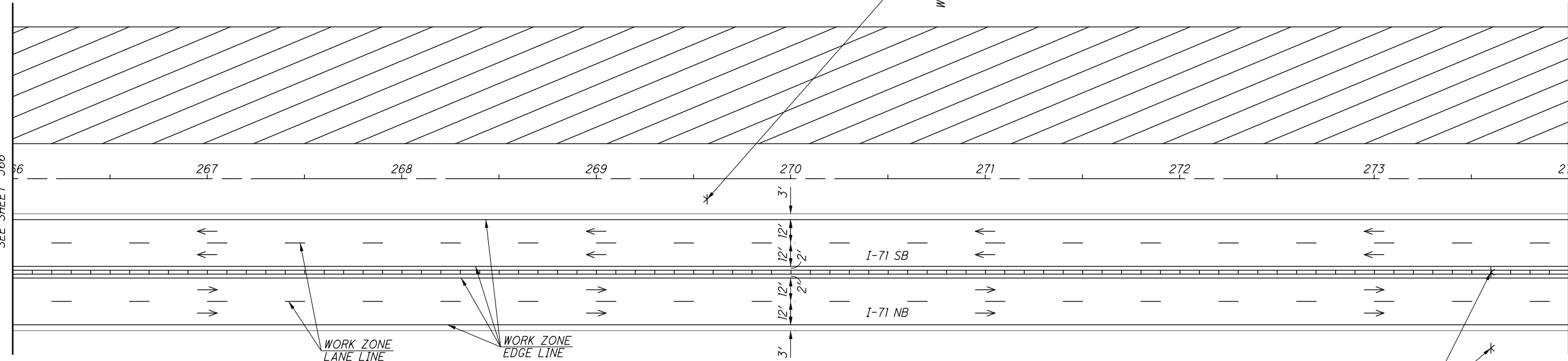
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 258+00 TO STA. 266+00

FRA-71-0.00

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MATCH LINE STA. 266+00
SEE SHEET 366

MATCH LINE STA. 274+00
SEE SHEET 368



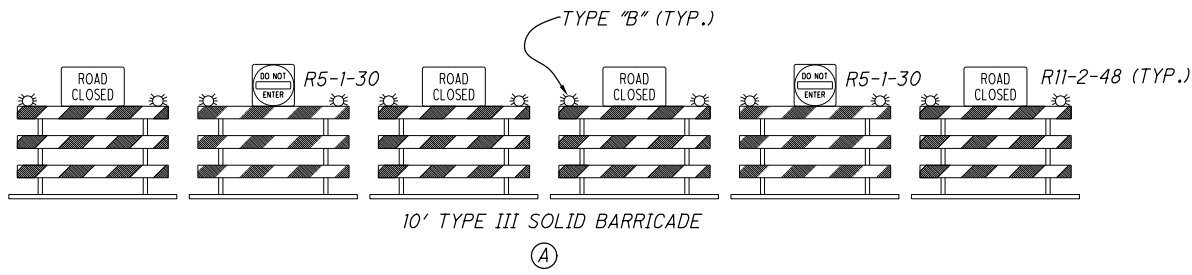
- LEGEND**
- PHASE 3 WORK ZONE
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - EXISTING SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

0 30 60
15
HORIZONTAL
SCALE IN FEET

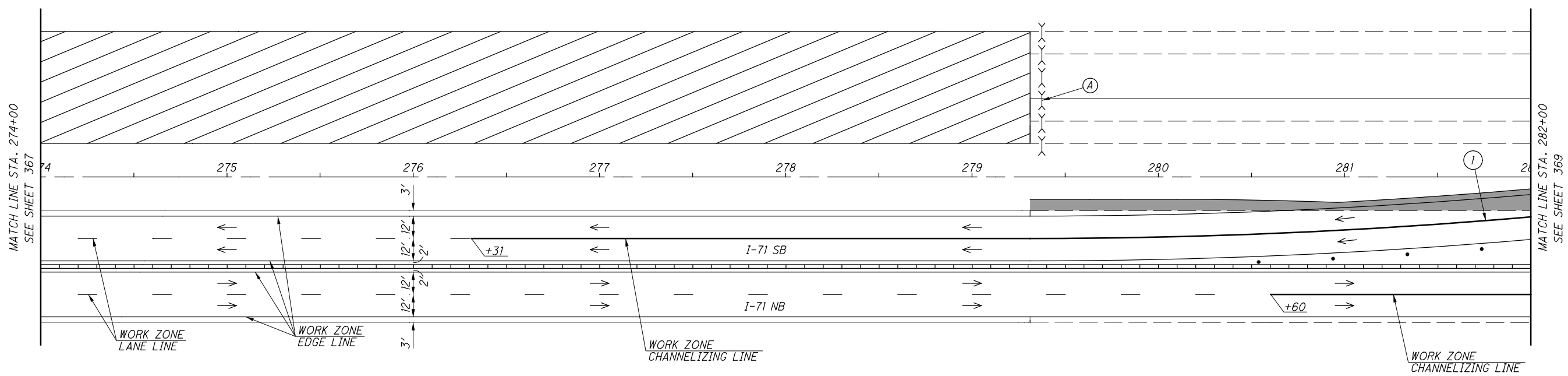
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 266+00 TO STA. 274+00

① $\Delta = 10^\circ 03' 20''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 274.95'$
 $L = 548.49'$
 $E = 12.07'$
 $C = 547.78'$
 $C.B. = N 62^\circ 37' 07'' E$



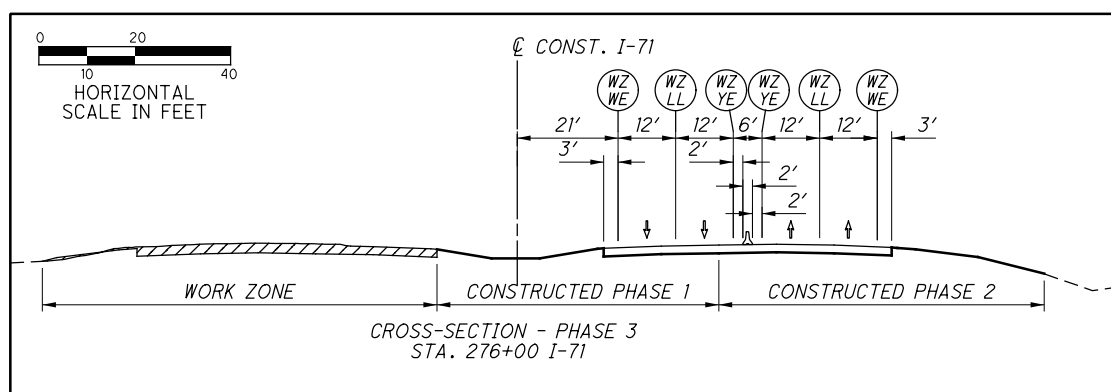
CALCULATED
 BER
 CHECKED
 SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 274+00 TO STA. 282+00



DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

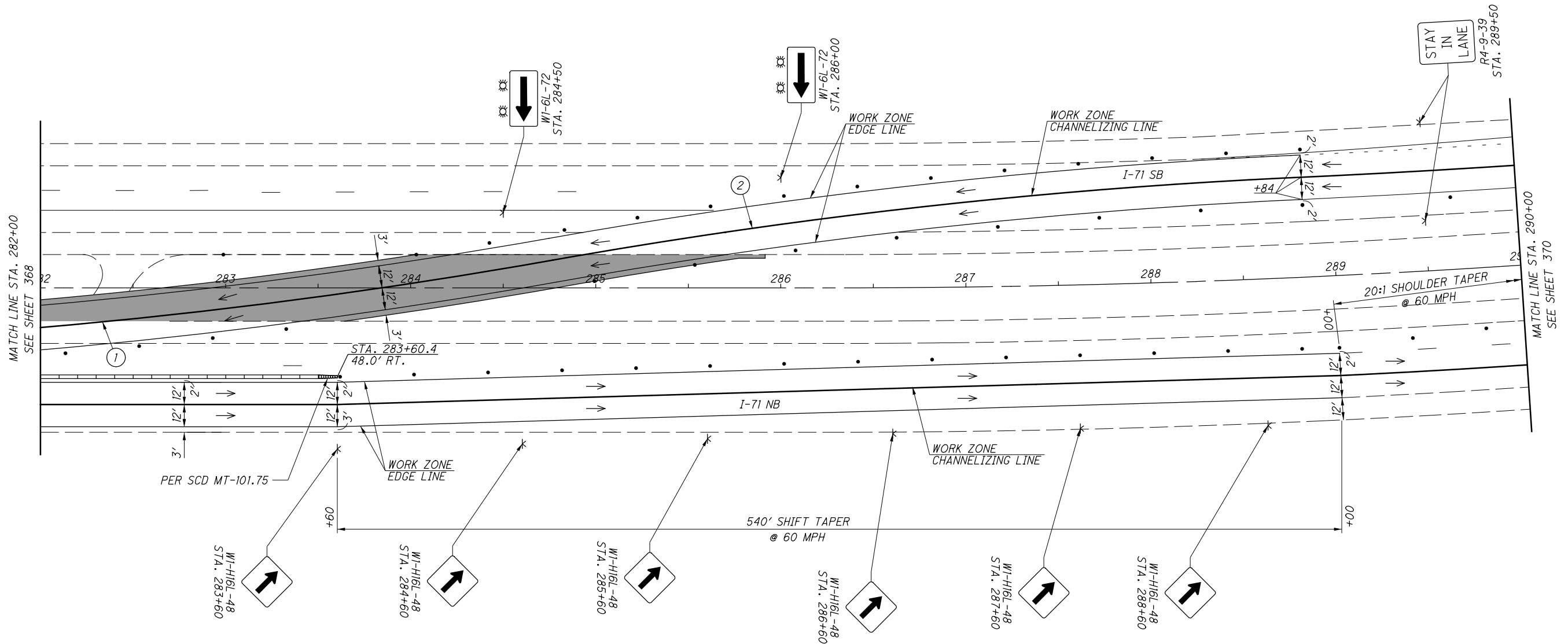
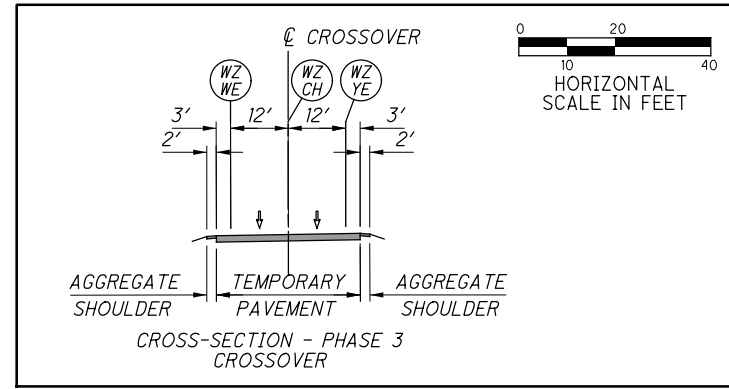


- LEGEND
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - OPEN TRAVEL LANE

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① $\Delta = 10^\circ 03' 20''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 274.95'$
 $L = 548.49'$
 $E = 12.07'$
 $C = 547.78'$
 $C.B. = N 62^\circ 37' 07'' E$

② $\Delta = 7^\circ 27' 43''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.25'$
 $T = 203.79'$
 $L = 407.00'$
 $E = 6.64'$
 $C = 406.72'$
 $C.B. = N 61^\circ 19' 18'' E$



NOTES:
 1. EXISTING NORTHBOUND MARKINGS BETWEEN STA. 283+50 AND 289+00 ARE CONSIDERED CONFLICTING SINCE THEY ARE NOT BEHIND PORTABLE BARRIER. THESE MARKINGS SHALL BE REMOVED PRIOR TO THIS PHASE. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE RESPECTIVE WORK ZONE PAVEMENT MARKING PAY ITEM.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - TAPERED END SECTION
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

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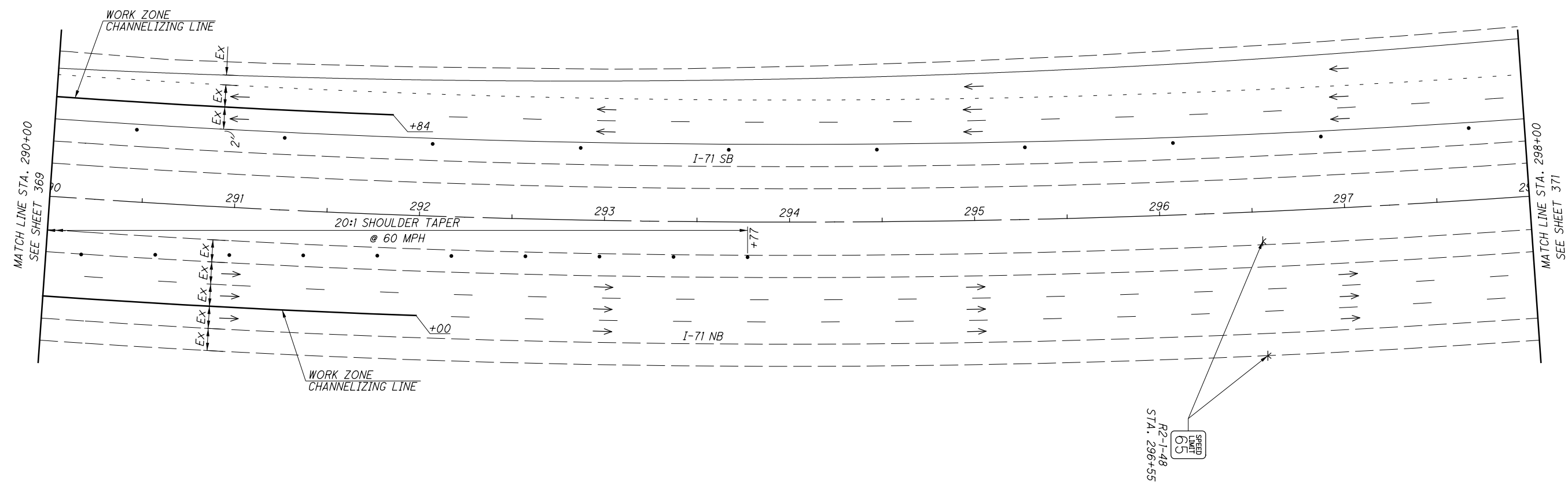
CALCULATED
 BER
 CHECKED
 SMM

0 15 30 45 60
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
 I-71 - STA. 282+00 TO STA. 290+00

FRA-71-0.00

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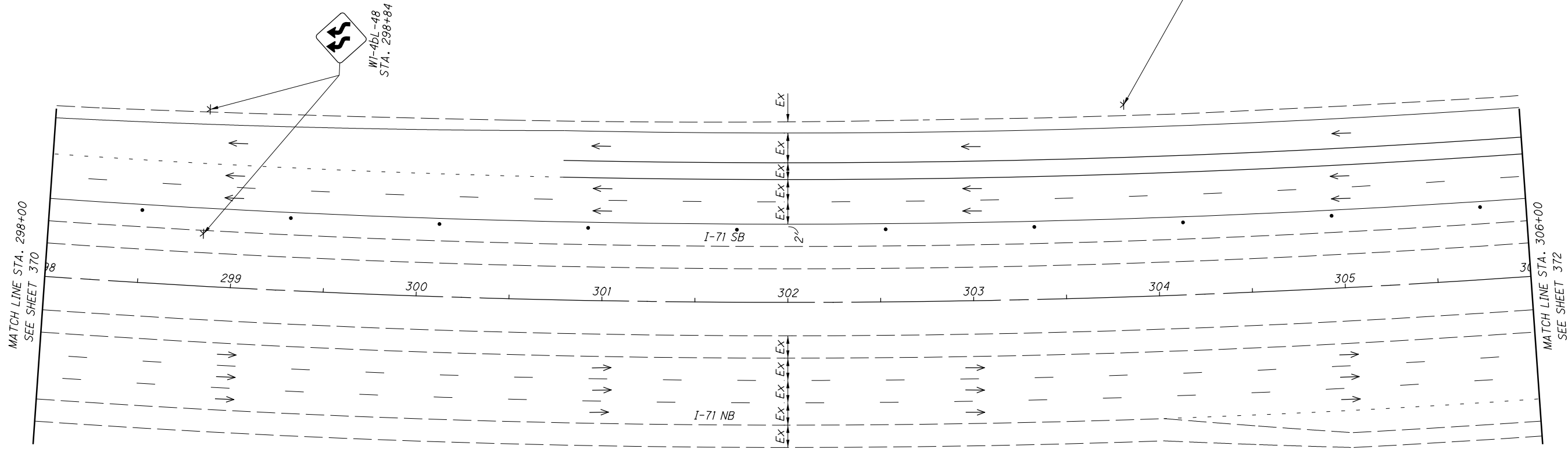
DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND
- DRUM
 - * TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

CALCULATED
BER
CHECKED
SMM

15
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 290+00 TO STA. 298+00



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- DRUM
 - * TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 298+00 TO STA. 306+00

FRA-71-0.00

371
1312

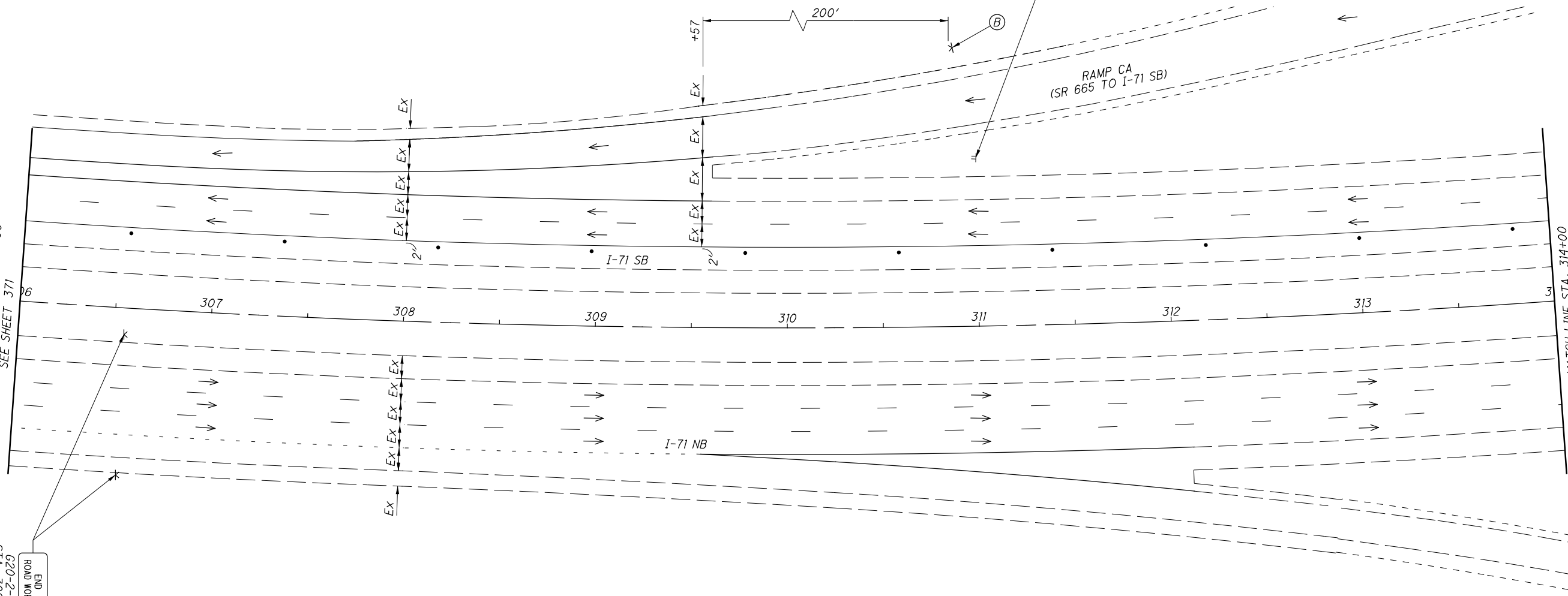
CALCULATED
BER
CHECKED
SMM



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MATCH LINE STA. 306+00
SEE SHEET 371

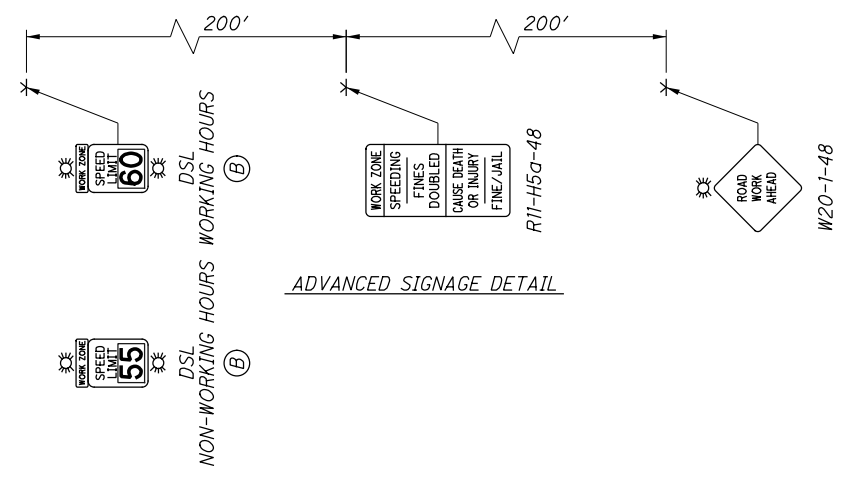
55+90.5
STA. 306+55
END
ROAD WORK

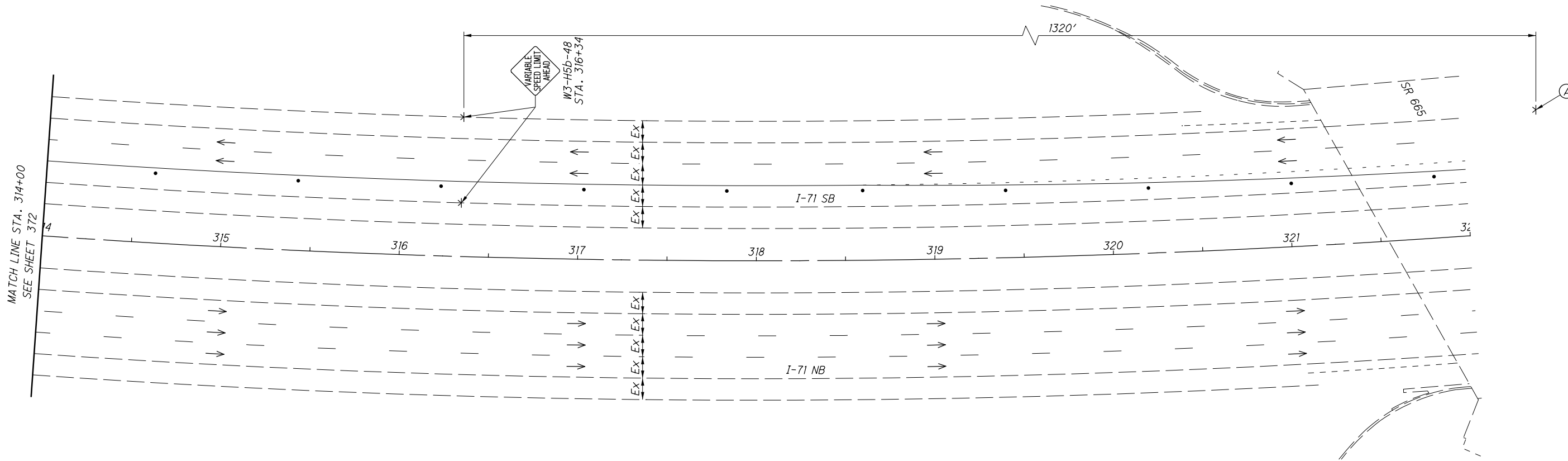


DRUM SPACING CHART

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

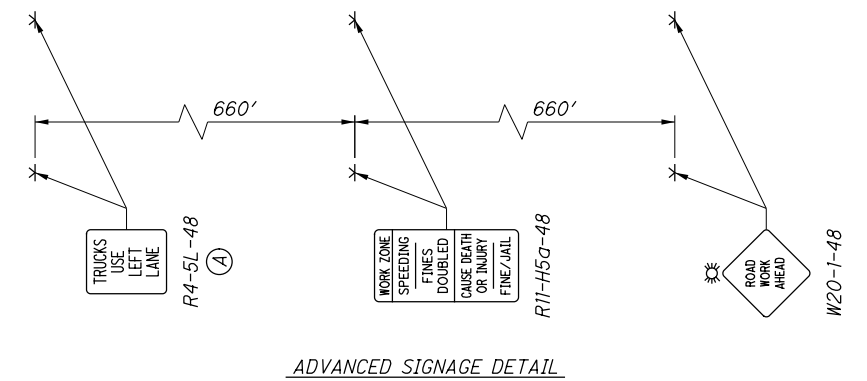
- LEGEND**
- DRUM
 - x TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE





DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

- LEGEND**
- DRUM
 - * TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE



CALCULATED
BER
CHECKED
SMM

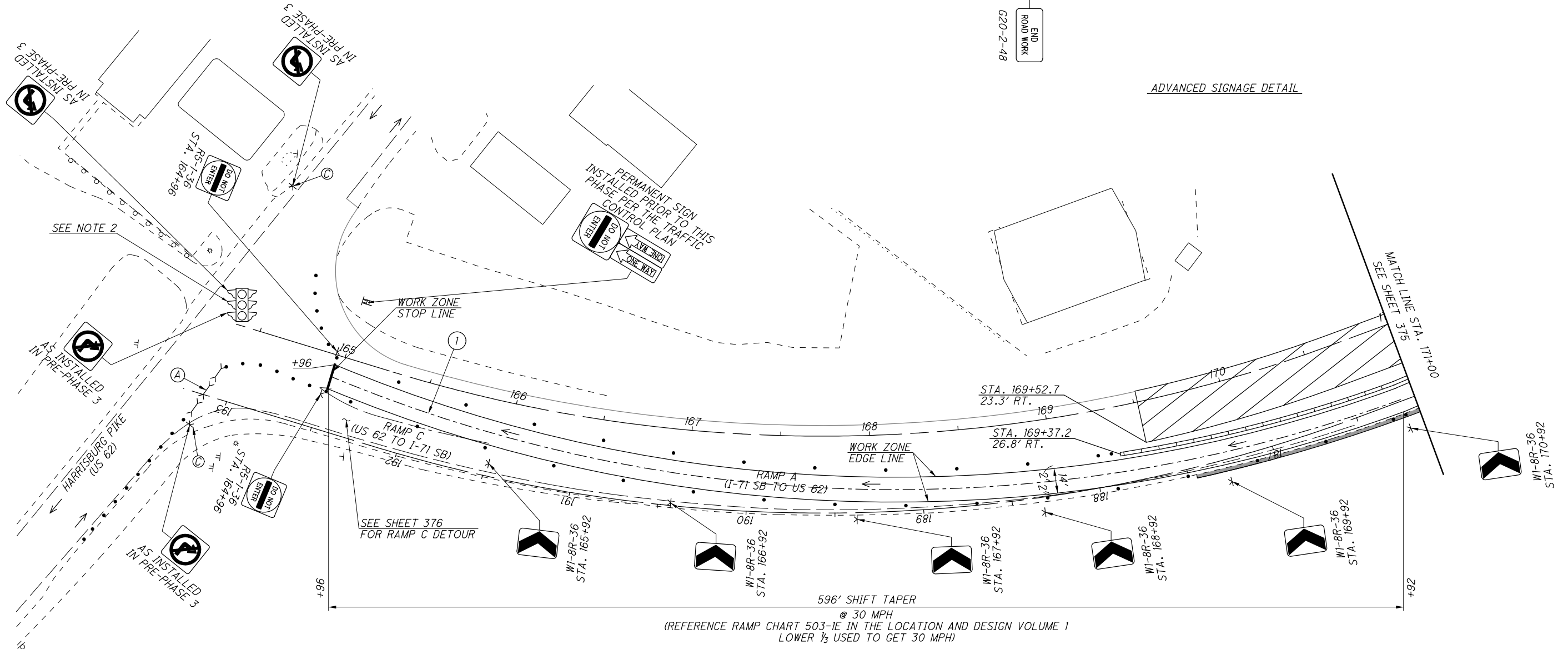
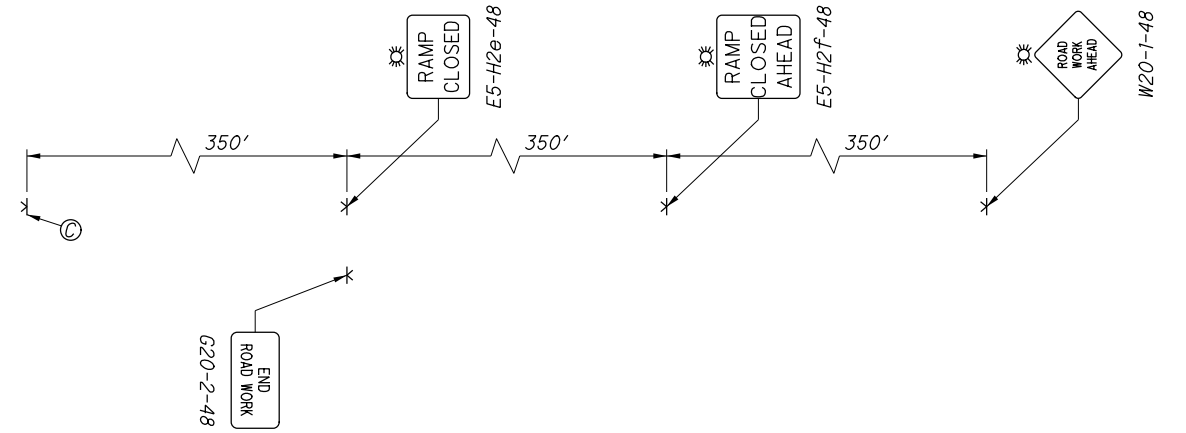
0 30 60
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-71 - STA. 314+00 TO STA. 322+00

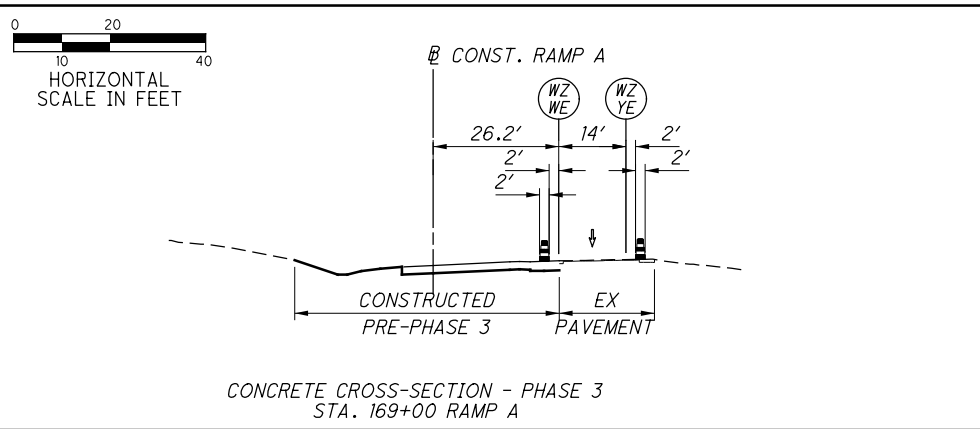
FRA-71-0.00

NOTE:
 1. ALL WORK SHOWN ON THIS SHEET SHALL BE COMPLETED PRIOR TO THE START OF PHASE 3A.
 2. THE EXISTING TRAFFIC SIGNAL USES WAVETRONIC RADAR DETECTION. THE CONTRACTOR SHALL ADJUST THE DETECTION ZONE FOR THE TEMPORARY ALIGNMENT SHOWN ON THIS SHEET. PRIOR TO THE START OF PHASE 3A, THE DETECTION ZONE SHALL AGAIN BE ADJUSTED PER THE FINAL STOP BAR LOCATION (SEE PHASE 3A AND TRAFFIC CONTROL PLANS).

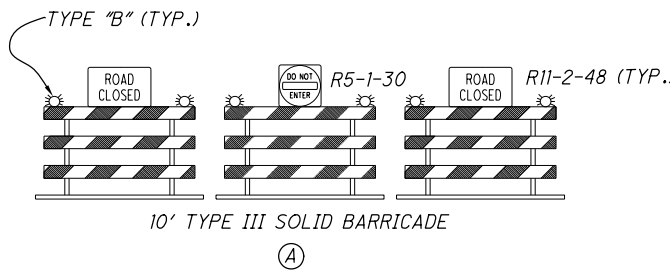
① $\Delta = 42^\circ 46' 08''$ (LT)
 $Dc = 6^\circ 56' 41''$
 $R = 825.00'$
 $T = 323.05'$
 $L = 615.82'$
 $E = 61.00'$
 $C = 601.63'$
 $C.B. = N 84^\circ 21' 11'' E$



596' SHIFT TAPER @ 30 MPH
 (REFERENCE RAMP CHART 503-1E IN THE LOCATION AND DESIGN VOLUME 1 LOWER 1/3 USED TO GET 30 MPH)



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADIUS/CLOSURE	10' c/c



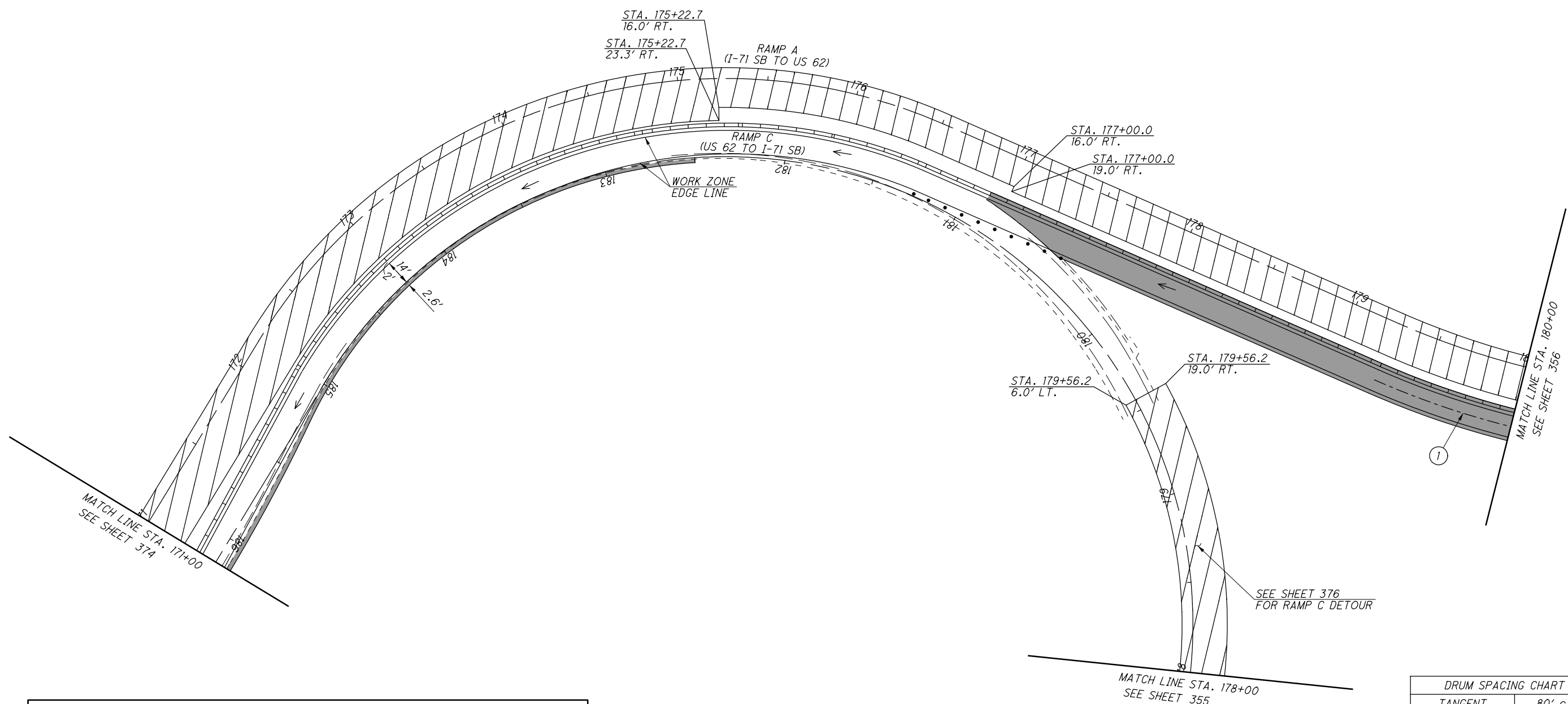
- LEGEND**
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - TAPERED END SECTION
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

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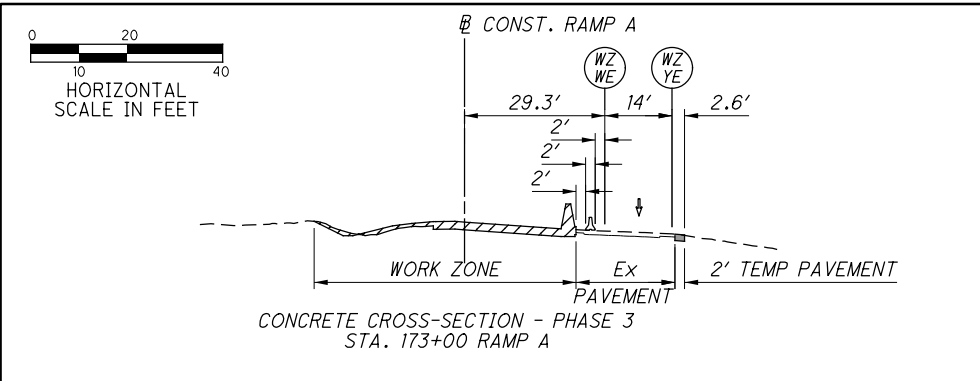
CALCULATED
BER
CHECKED
SMM

① $\Delta = 50^\circ 25' 17''$ (LT)
 $D_c = 11^\circ 52' 40''$
 $R = 482.35'$
 $T = 227.10'$
 $L = 424.50'$
 $E = 50.79'$
 $C = 410.94'$
 $C.B. = S 59^\circ 59' 46'' E$



SEE SHEET 376 FOR RAMP C DETOUR

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



NOTE:
 1. ALL WORK SHOWN ON THIS SHEET SHALL BE COMPLETED PRIOR TO THE START OF PHASE 3A.

- LEGEND
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PRE-PHASE 3)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE
 - DRUM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
 RAMP A - STA. 171+00 TO STA. 180+00

FRA-71-0:00

375
 1312

J:\20130212\ODOT\FRA\107201\mot\sheet\107201MP139.dgn 4/13/2020 3:26:07 PM brieder



NOT TO SCALE

CALCULATED
JM/JH
CHECKED
SMM

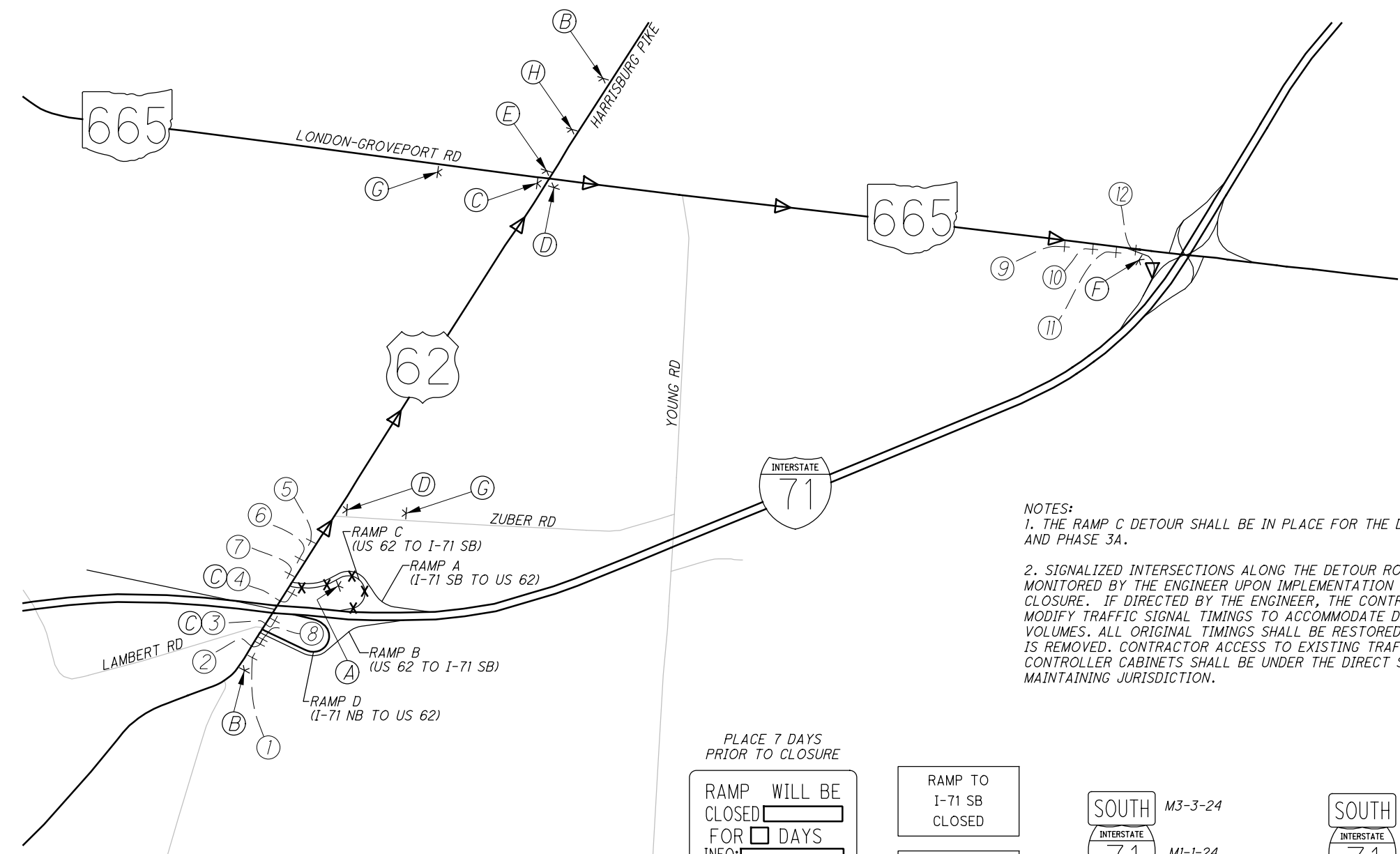
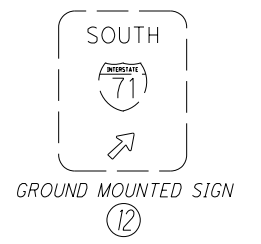
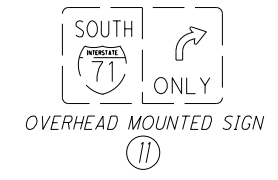
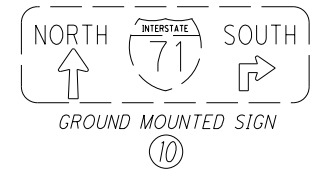
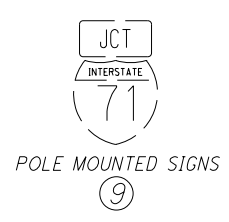
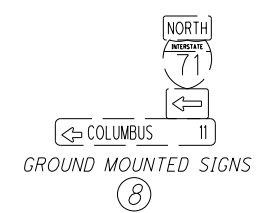
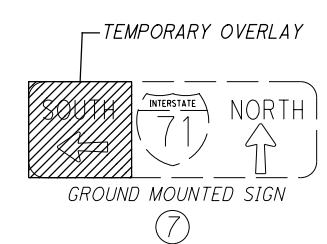
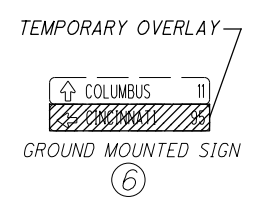
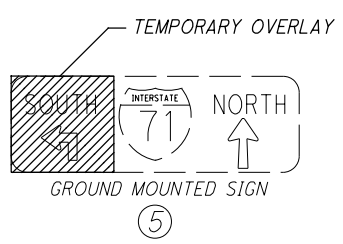
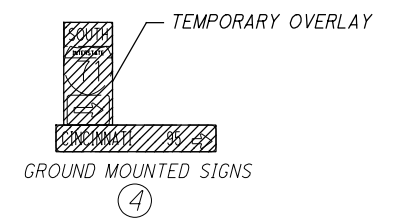
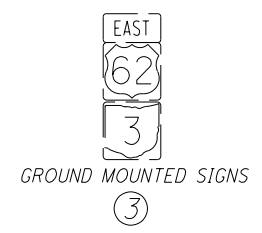
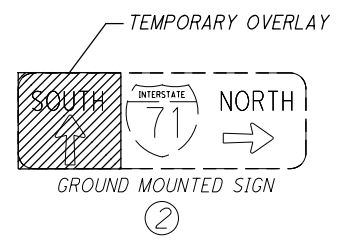
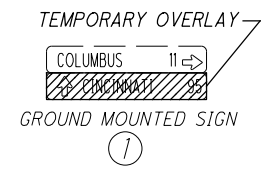
**MAINTENANCE OF TRAFFIC PLAN
RAMP C - DETOUR PHASE 3**

FRA-71-0.00

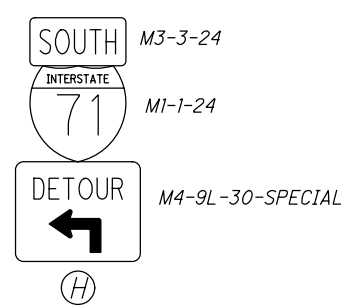
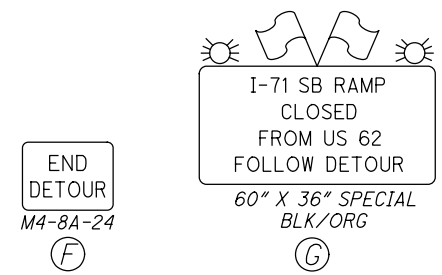
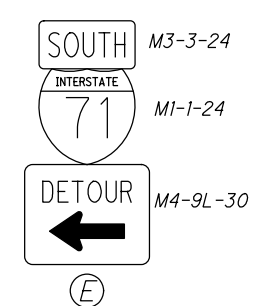
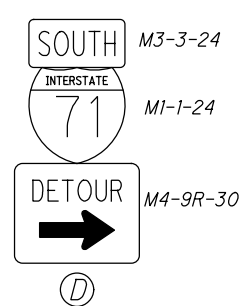
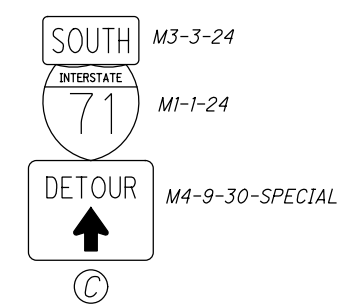
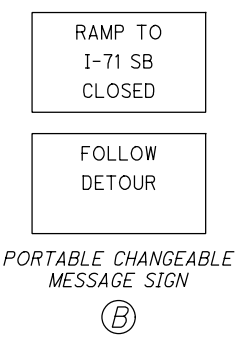
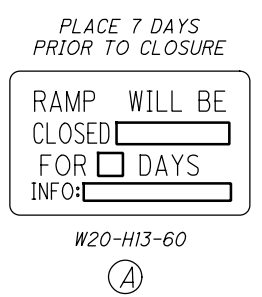
376
1312

LEGEND

- DETOUR ROUTE - I-71 SB ENTRANCE FROM US 62 (RAMP C)
- X** RAMP CLOSURE
- +** EXISTING SIGN
- k** TEMPORARY SIGN

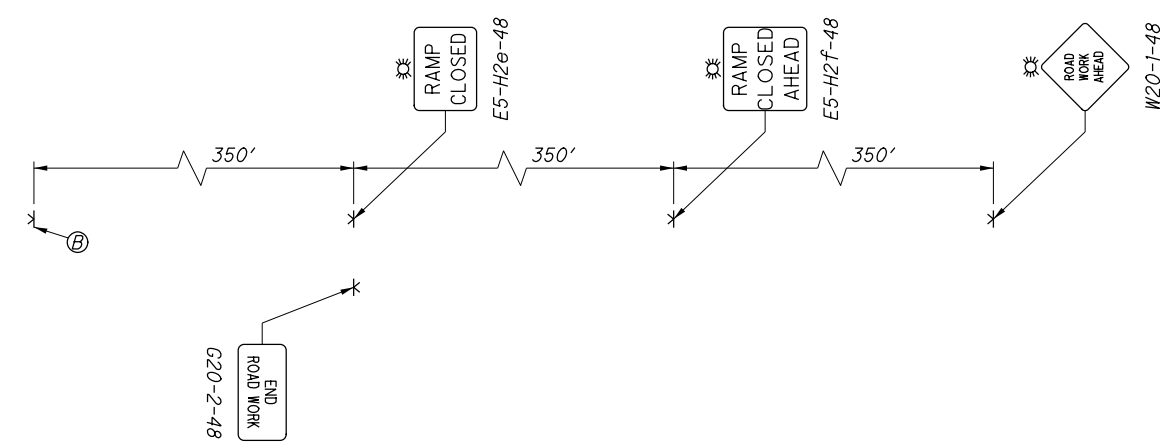
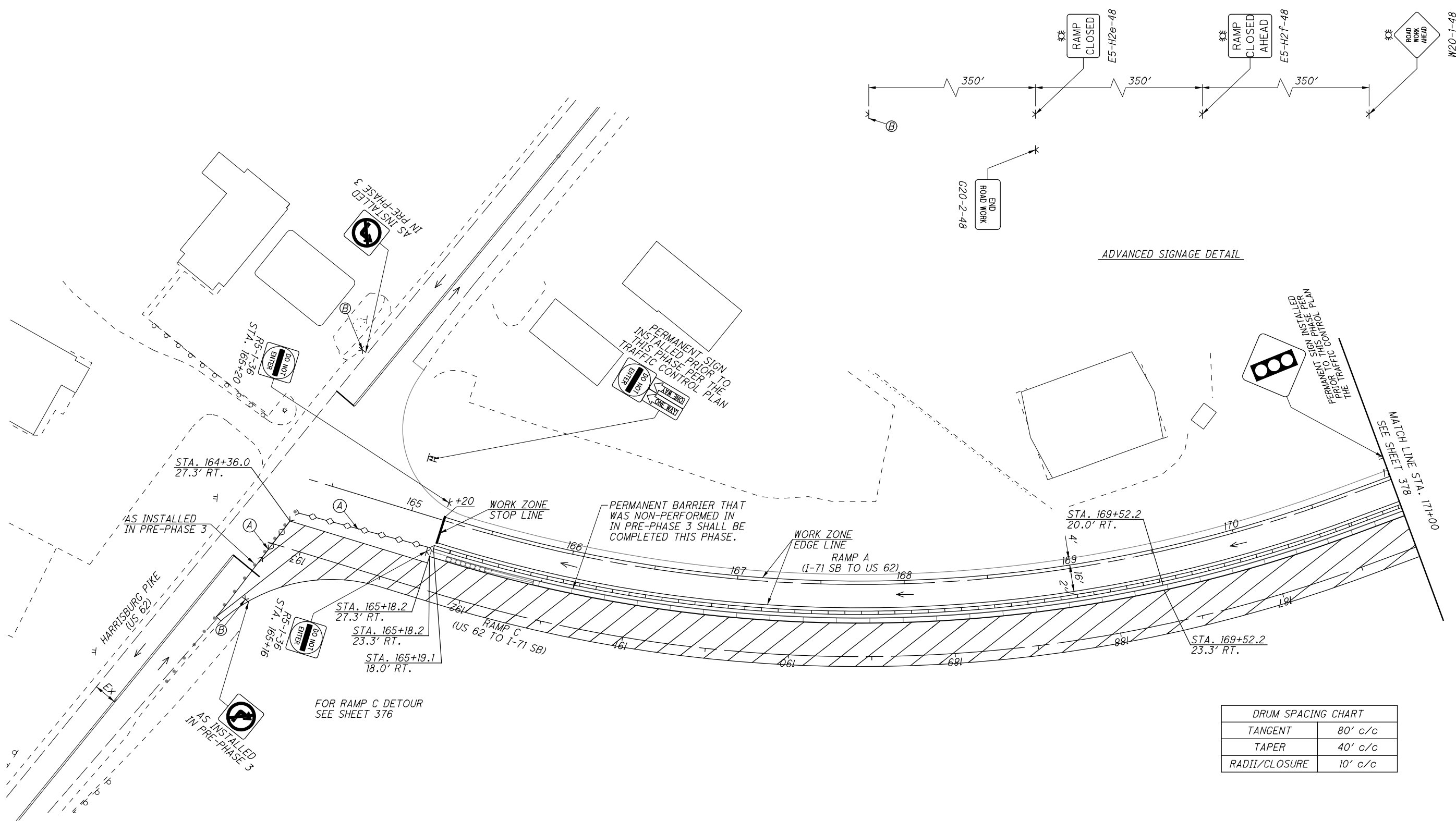


- NOTES:**
1. THE RAMP C DETOUR SHALL BE IN PLACE FOR THE DURATION OF PHASE 3 AND PHASE 3A.
 2. SIGNALIZED INTERSECTIONS ALONG THE DETOUR ROUTE SHALL BE MONITORED BY THE ENGINEER UPON IMPLEMENTATION OF THE RAMP CLOSURE. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MODIFY TRAFFIC SIGNAL TIMINGS TO ACCOMMODATE DETOURED TRAFFIC VOLUMES. ALL ORIGINAL TIMINGS SHALL BE RESTORED ONCE THE DETOUR IS REMOVED. CONTRACTOR ACCESS TO EXISTING TRAFFIC SIGNAL CONTROLLER CABINETS SHALL BE UNDER THE DIRECT SUPERVISION OF THE MAINTAINING JURISDICTION.

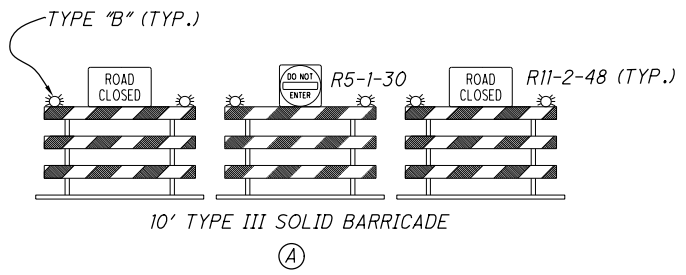
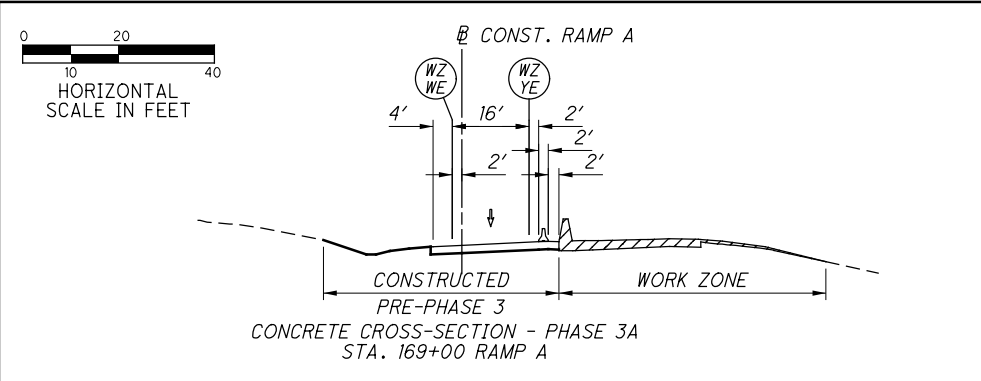


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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



- LEGEND**
- PHASE 3A WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

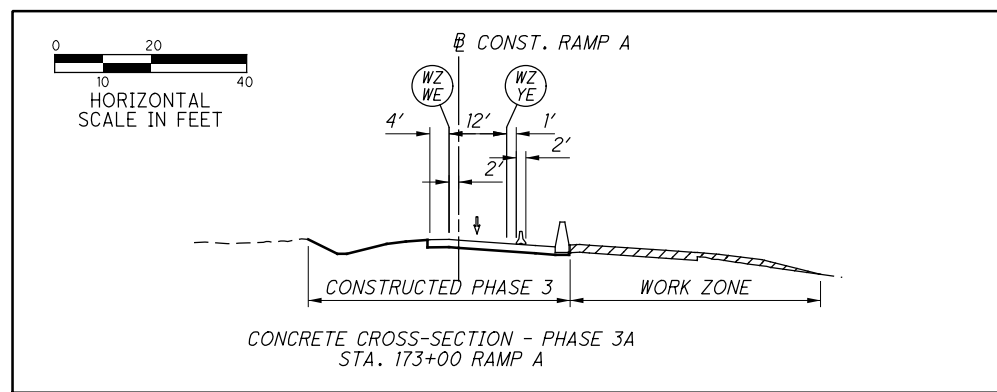
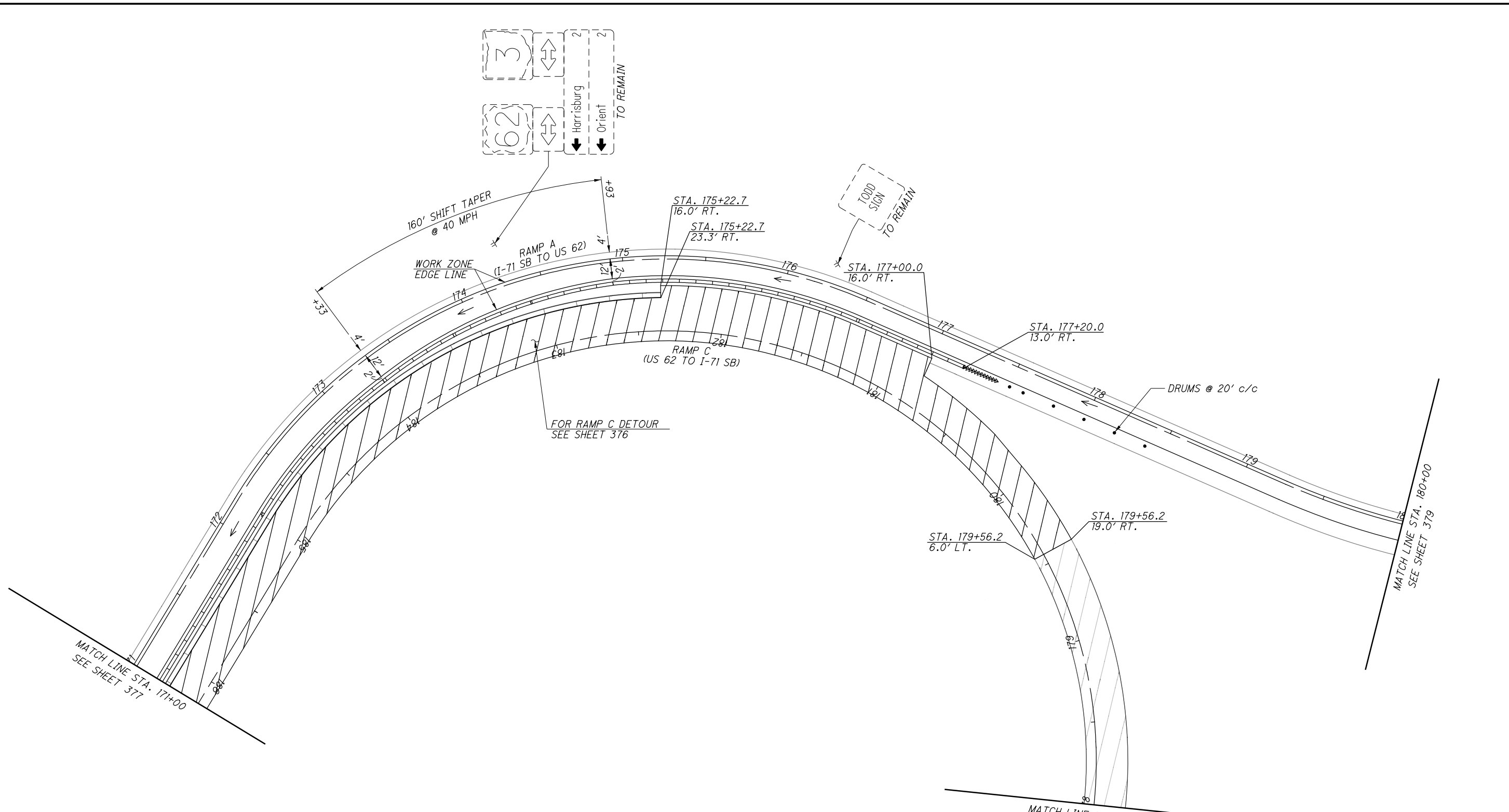


CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
RAMP A - STA. 171+00 TO STA. 180+00

FRA-71-0.00

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- LEGEND**
- PHASE 3 WORK ZONE
 - PHASE 3A WORK ZONE
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TAPERED END SECTION
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c

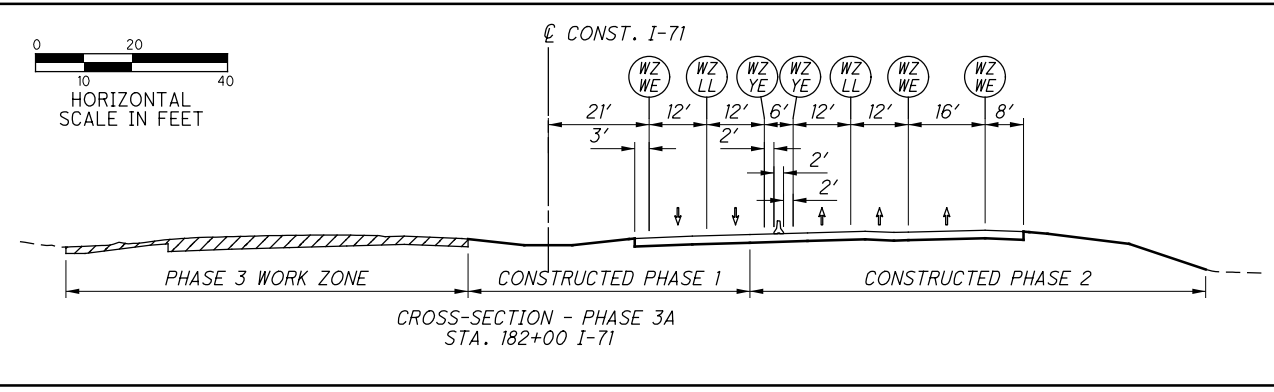
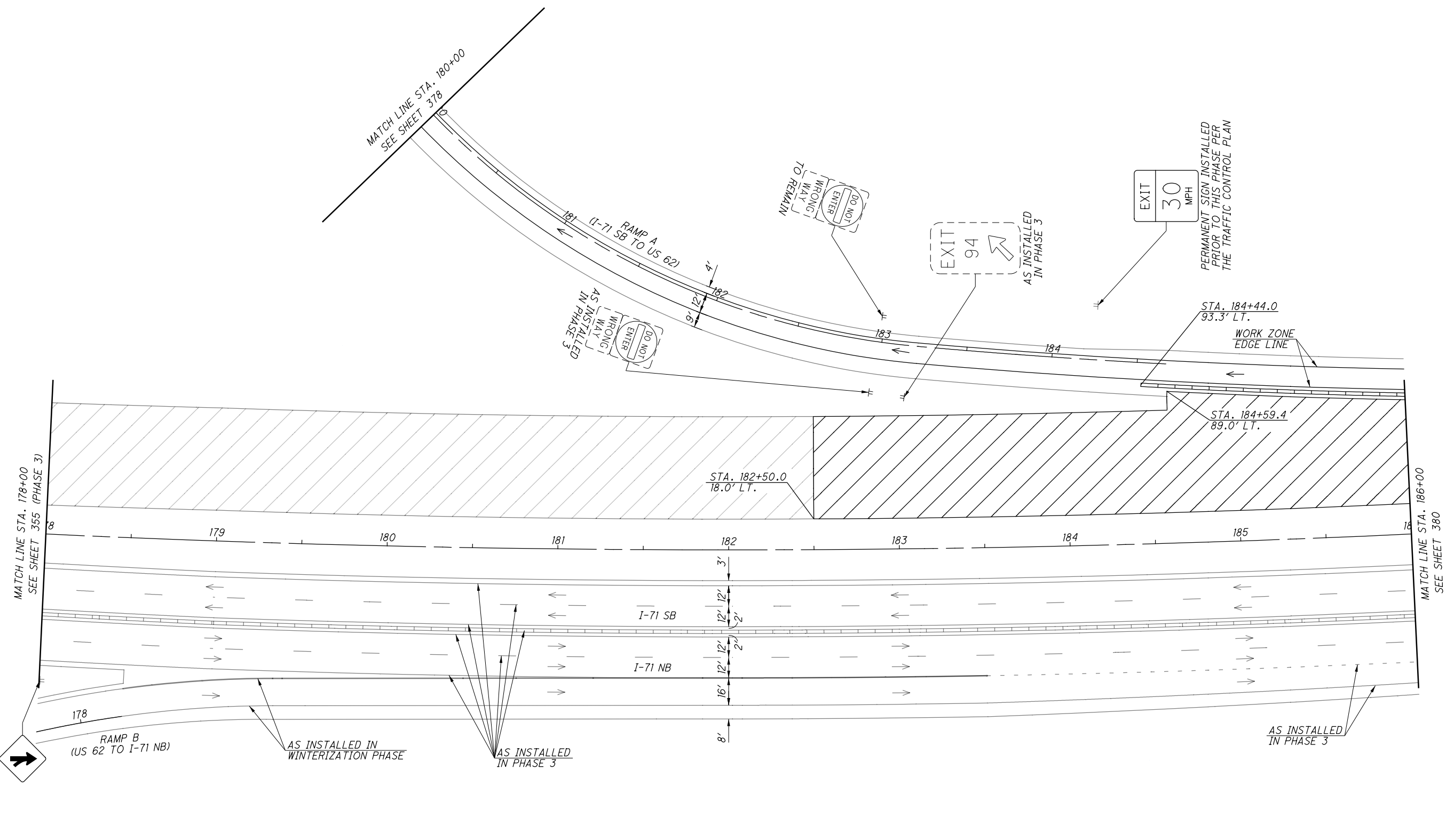
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MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
I-71 - STA. 178+00 TO STA. 186+00

FRA-71-0.00

379
1312



- LEGEND**
- PHASE 3 WORK ZONE
 - PHASE 3A WORK ZONE
 - PORTABLE BARRIER
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
1. PHASE 3A SHALL BE COMPLETED CONCURRENTLY WITH PHASE 3.

PERMANENT SIGN INSTALLED PRIOR TO THIS PHASE PER THE TRAFFIC CONTROL PLAN

MATCH LINE STA. 178+00 SEE SHEET 355 (PHASE 3)

MATCH LINE STA. 186+00 SEE SHEET 380

MATCH LINE STA. 180+00 SEE SHEET 378

J:\20130212\ODOT\FRA\107201\mot\sheet\107201MP14B.dgn 4/13/2020 3:31:20 PM brieder

① $\Delta = 7^\circ 11' 10''$ (RT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 196.24'$
 $L = 391.98'$
 $E = 6.16'$
 $C = 391.72'$
 $C.B. = N 86^\circ 39' 25'' E$

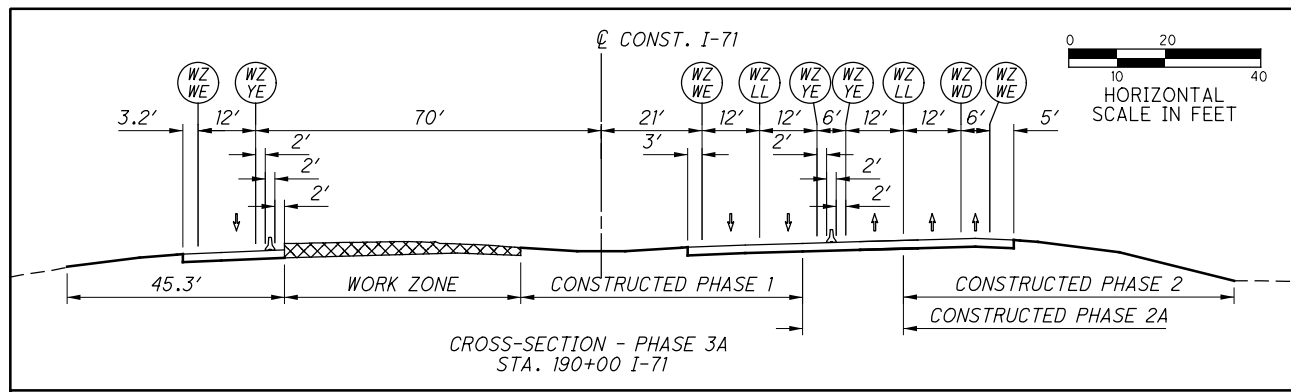
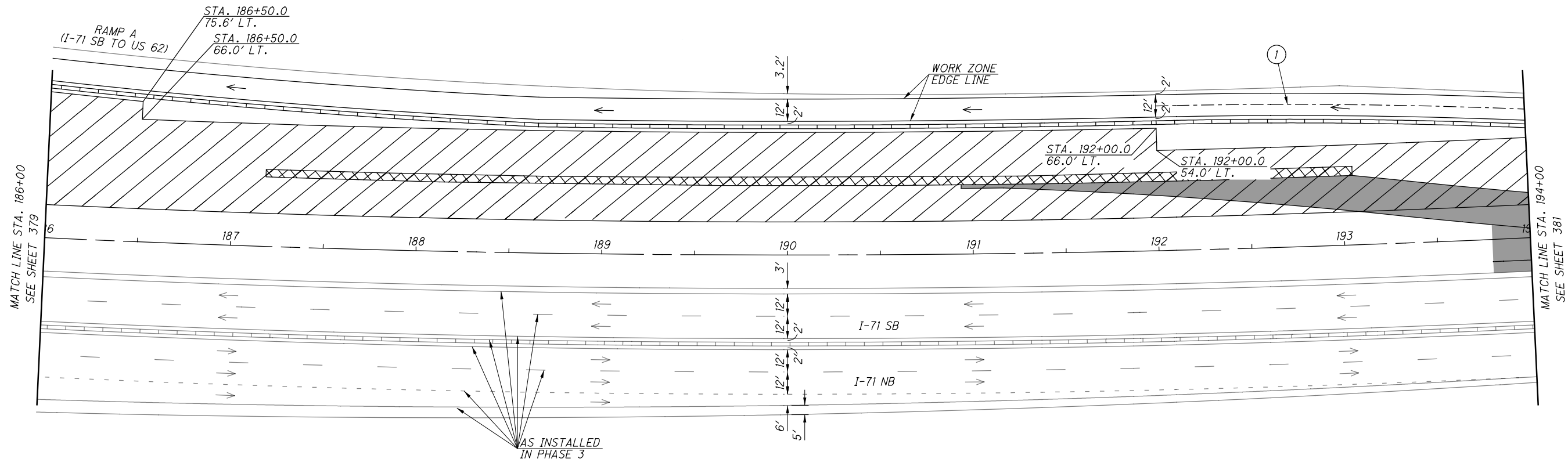
CALCULATED
 BER
 CHECKED
 SMM

0 30 60
 15
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
I-71 - STA. 186+00 TO STA. 194+00

FRA-71-0.00

380
 1312



LEGEND

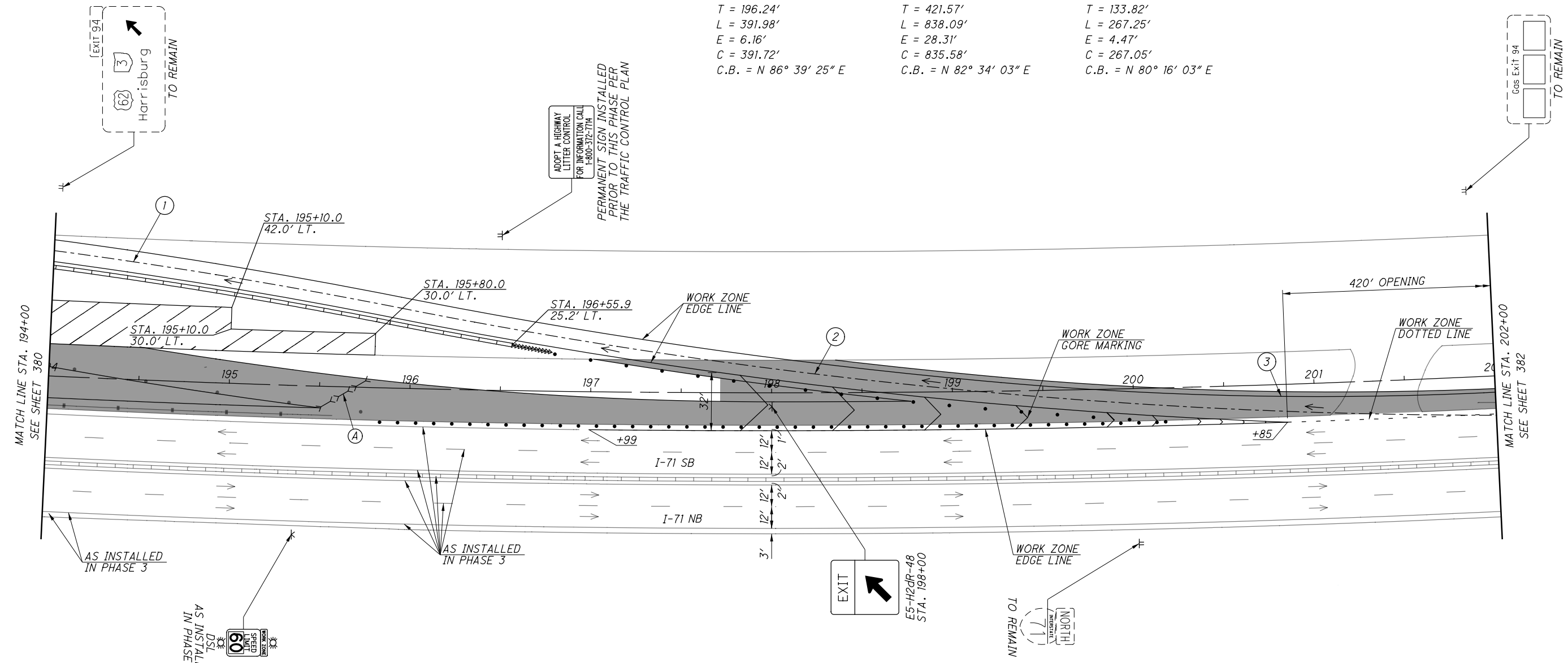
PHASE 3A WORK ZONE

PORTABLE BARRIER

OPEN TRAVEL LANE

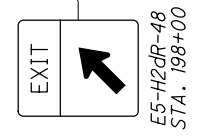
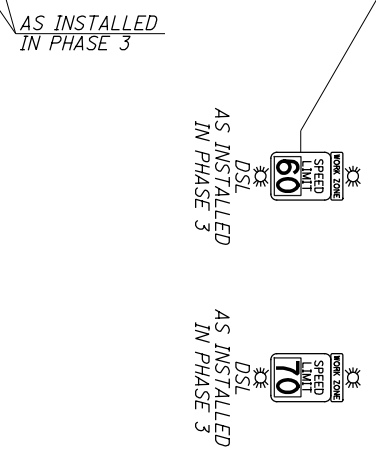
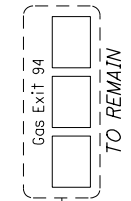
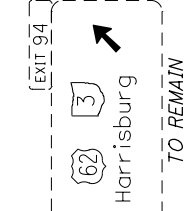
NOTE:
 1. PHASE 3A SHALL BE COMPLETED
 CONCURRENTLY WITH PHASE 3.

① $\Delta = 7^\circ 11' 10''$ (RT) $Dc = 1^\circ 50' 00''$ $R = 3125.22'$ $T = 196.24'$ $L = 391.98'$ $E = 6.16'$ $C = 391.72'$ $C.B. = N 86^\circ 39' 25'' E$	② $\Delta = 15^\circ 21' 54''$ (LT) $Dc = 1^\circ 50' 00''$ $R = 3125.22'$ $T = 421.57'$ $L = 838.09'$ $E = 28.31'$ $C = 835.58'$ $C.B. = N 82^\circ 34' 03'' E$	③ $\Delta = 7^\circ 39' 22''$ (LT) $Dc = 2^\circ 51' 53''$ $R = 2000.00'$ $T = 133.82'$ $L = 267.25'$ $E = 4.47'$ $C = 267.05'$ $C.B. = N 80^\circ 16' 03'' E$
---	---	---



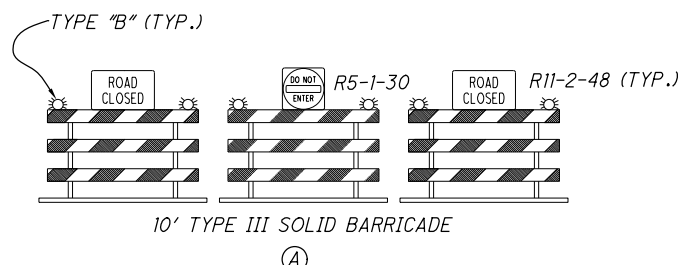
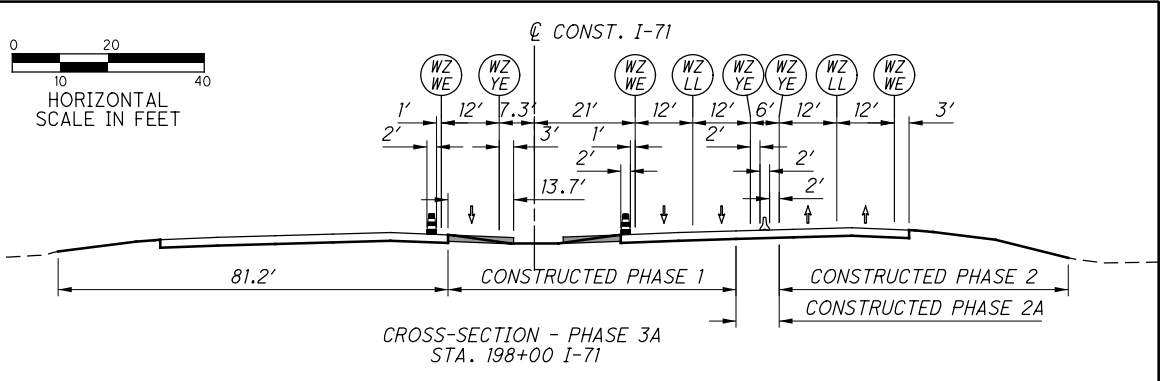
ADOPT A HIGHWAY
LITTER CONTROL
FOR INFORMATION CALL
1-800-312-7114

PERMANENT SIGN INSTALLED
PRIOR TO THIS PHASE PER
THE TRAFFIC CONTROL PLAN



NOTE:
1. PHASE 3A SHALL BE COMPLETED
CONCURRENTLY WITH PHASE 3.

TANGENT	80' c/c
TAPER	40' c/c
RADII/CLOSURE	10' c/c



- LEGEND**
- PHASE 3A WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - DRUM
 - PORTABLE BARRIER
 - IMPACT ATTENUATOR
 - TEMPORARY SIGN SUPPORT
 - TYPE III BARRICADE
 - EXISTING SIGN SUPPORT
 - PROPOSED SIGN SUPPORT
 - OPEN TRAVEL LANE

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① $\Delta = 15^\circ 21' 54''$ (LT)
 $D_c = 1^\circ 50' 00''$
 $R = 3125.22'$
 $T = 421.57'$
 $L = 838.09'$
 $E = 28.31'$
 $C = 835.58'$
 $C.B. = N 82^\circ 34' 03'' E$

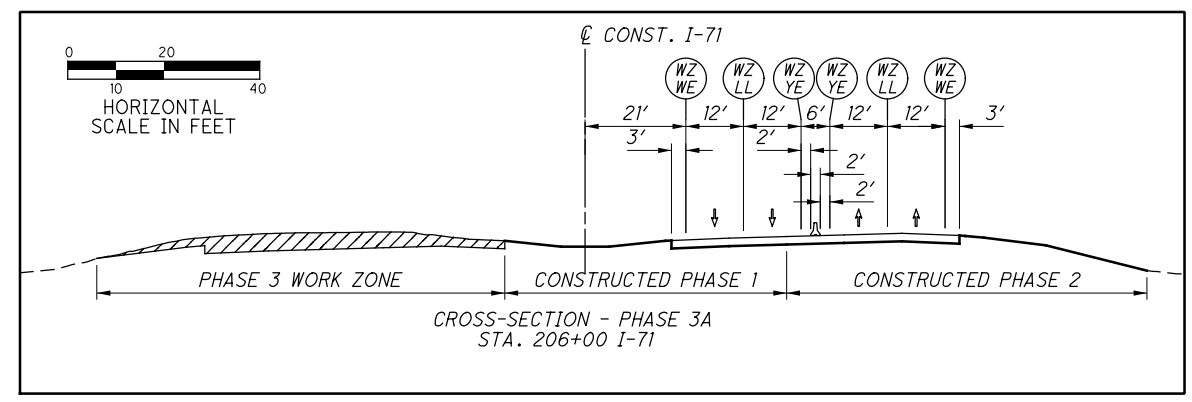
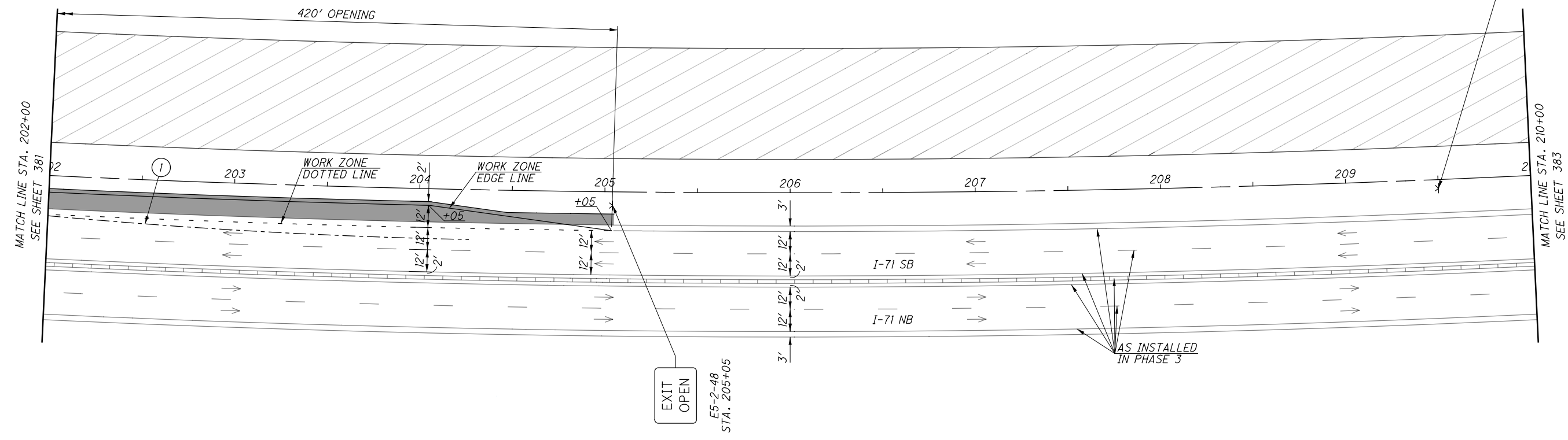
CALCULATED
 BER
 CHECKED
 SMM

0 15 30 60
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
I-71 - STA. 202+00 TO STA. 210+00

FRA-71-0.00

Low Bridge
US-62
14'-6" Max
 AS INSTALLED
 IN PHASE 3

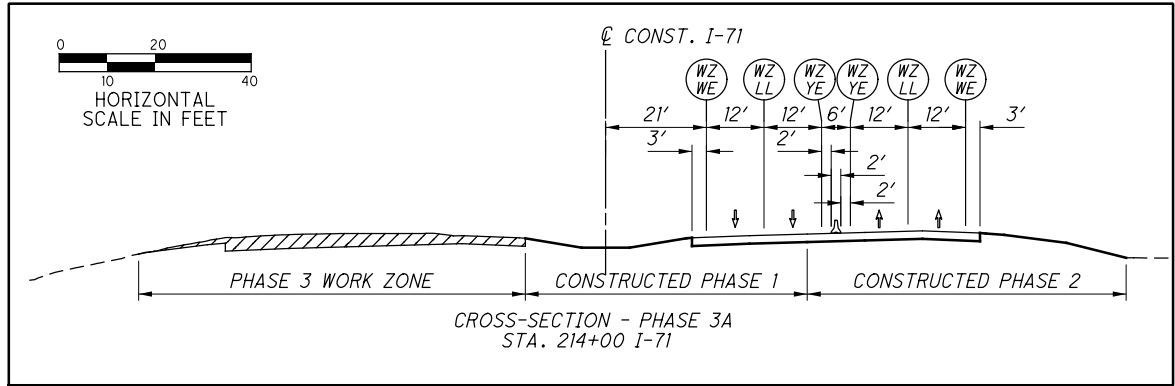
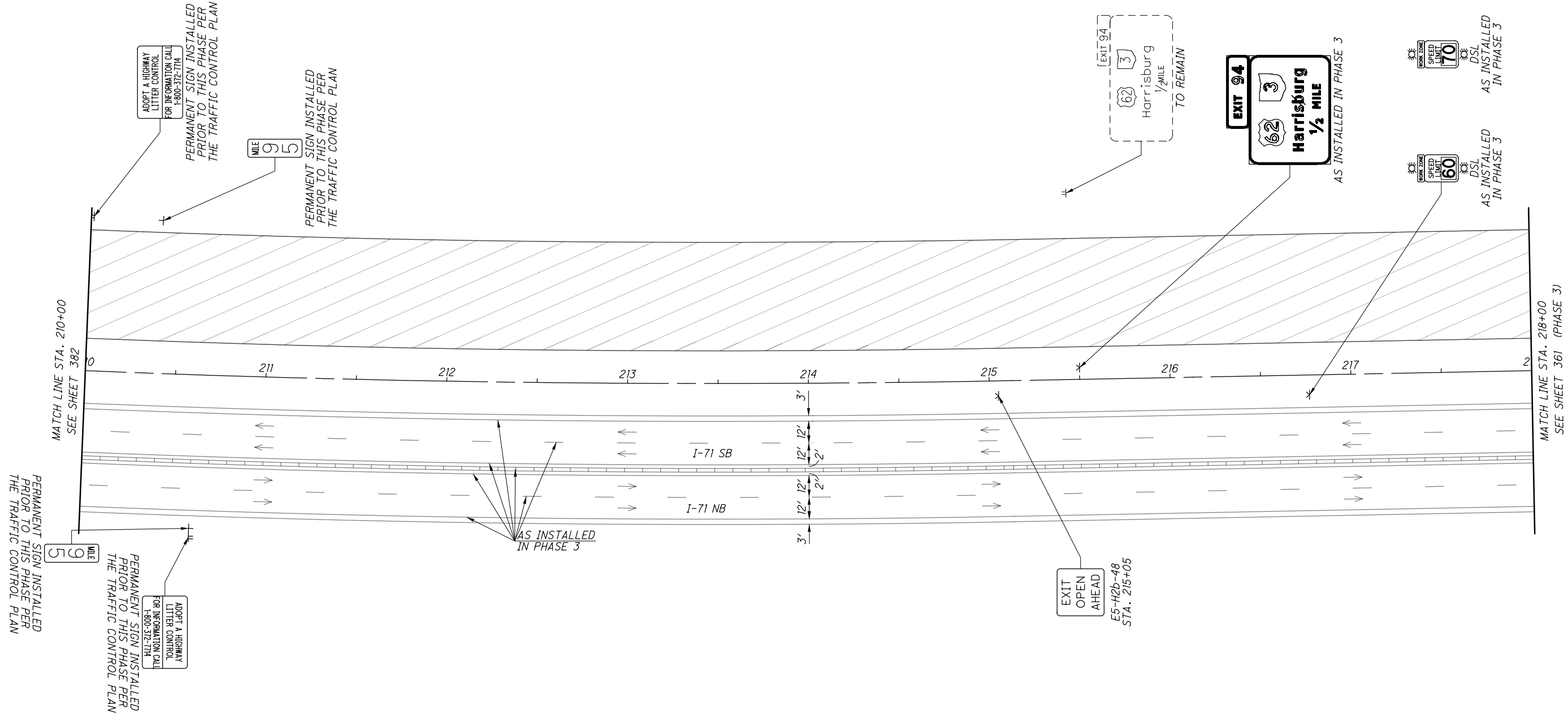


- LEGEND**
- PHASE 3 WORK ZONE
 - TEMPORARY PAVEMENT (CONSTRUCTED PHASE 1)
 - PORTABLE BARRIER
 - TEMPORARY SIGN SUPPORT
 - OPEN TRAVEL LANE

NOTE:
 1. PHASE 3A SHALL BE COMPLETED
 CONCURRENTLY WITH PHASE 3.

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MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
I-71 - STA. 210+00 TO STA. 218+00

FRA-71-0.00

383
1312

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SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
				01/IMS/PV	02/NHS/PV	03/IMS/BR	04/IMS/BR						
408													
40						25	15	518	40011	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	1217
19						19		519	11101	19	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	1197
3						3		523	20000	3	EACH	DYNAMIC LOAD TESTING	
456						291	165	526	25011	456	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	1260-1265
183						117	66	526	90030	183	FT	TYPE C INSTALLATION	
341						218	123	607	39900	341	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	
77						49	28	846	00110	77	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
STRUCTURE OVER 20 FOOT SPAN (FRA-71-0308R (NORTHBOUND))													
LS						LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1197
221						221		202	22900	221	SY	APPROACH SLAB REMOVED	
929						929		202	23500	929	SY	WEARING COURSE REMOVED	
LS						LS		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	1197
LS						LS		503	21300	LS		UNCLASSIFIED EXCAVATION	
LS						LS		505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
1,750						1,207	543	507	00500	1,750	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
2,045						1,411	634	507	00550	2,045	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	
235,776						162,685	73,091	509	10001	235,776	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	1197
500						345	155	509	20001	500	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	1197
226						155	71	510	10000	226	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
1,072						739	333	511	32212	1,072	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	
120						82	38	511	41012	120	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	
130						89	41	511	43512	130	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	
27						18	9	511	46510	27	CY	CLASS QC1 CONCRETE, FOOTING	
1,107						763	344	512	10050	1,107	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
49						33	16	512	33000	49	SY	TYPE 2 WATERPROOFING	
17						11	6	516	13600	17	SF	1" PREFORMED EXPANSION JOINT FILLER	
105						72	33	516	13900	105	SF	2" PREFORMED EXPANSION JOINT FILLER	
191						131	60	516	14020	191	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
46						31	15	516	43100	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (8" x 11" x 1.474)	
6						4	2	518	12500	6	EACH	SCUPPER, MISC.: CONCRETE SLAB BRIDGE SCUPPER	1267-1268
121						83	38	518	21200	121	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
218						150	68	518	40000	218	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
40						27	13	518	40011	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	1217
88						88		519	11101	88	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	1197
3						3		523	20000	3	EACH	DYNAMIC LOAD TESTING	
424						292	132	526	25011	424	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	1260-1265
170						117	53	526	90030	170	FT	TYPE C INSTALLATION	
344						237	107	607	39900	344	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	
72						49	23	846	00110	72	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	

GENERAL SUMMARY

FRA - 71 - 0:00

CALCULATED
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SHEET NO.	606	606	606	606	606	606	606	606	606	606	607	609	611	611	611	611	611	611	611	611	611	611	611	611
	GUARDRAIL, BARRIER DESIGN, TYPE MGS	GUARDRAIL REBUILT, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL), 75 MPH, 36"	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 35MPH, 36"	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED)	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL	FENCE, TYPE 4TRA	CURB, TYPE 4-C	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	15" CONDUIT, TYPE B	15" CONDUIT, TYPE B, 706.02	15" CONDUIT, TYPE C	15" CONDUIT, TYPE C, 706.02	15" CONDUIT, TYPE F, 707.05, TYPE C OR 707.21	15" CONDUIT, TYPE F, 707.05, TYPE C	18" CONDUIT, TYPE B	18" CONDUIT, TYPE B, 706.02	18" CONDUIT, TYPE C	18" CONDUIT, TYPE C, 706.02	18" CONDUIT, TYPE C, 706.08
	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
626								3050	2															
629																				115		293		
632																								
635																			116			292		
638																								
641																								292
644																								
647																								
653										1				545										
659										1				182	20						39			
665																								
670														53										
945													526											
946													698											
947													778											
948													527											
949													343											
950													238											
951													666											
952													634											
953													438											
954													474											
955													719											
956													628											
957													567											
958													581											
959													607											
960													152											
961													187											
962													143											
963													213											
964													252											
TOTALS FROM THIS SHEET	0	0	0	0	0	0	0	2	3050	2	0	0	9371	780	20	0	0	0	0	231	39	877	0	0
TOTALS FROM SHEET 396	687.5	600	20	20	13	6	5	0	22,916	24	498	350	0	323	260	5757	90	210	88	859	187	1569	56	20
TOTALS CARRIED TO GENERAL SUMMARY	687.5	600	20	20	13	6	5	2	25,966	26	498	350	9371	1103	280	5757	90	210	88	1090	226	2446	56	20

ROADWAY SUBSUMMARY	CALCULATED DCB CHECKED SJS
FRA - 71 - 0.00	400 1312

SHEET NO.	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611
	21" CONDUIT, TYPE B	21" CONDUIT, TYPE B, 706.02	21" CONDUIT, TYPE C, 706.02	CONDUIT, BORED OR JACKED, 18", TYPE C	24" CONDUIT, TYPE A	24" CONDUIT, TYPE A 706.02 OR 30" CONDUIT, TYPE A, 707.01, 707.02, 707.04, 707.05, 707.07 OR 707.21	24" CONDUIT, TYPE B	24" CONDUIT, TYPE B, 706.02	24" CONDUIT, TYPE C	24" CONDUIT, TYPE C, 706.02	30" CONDUIT, TYPE B	30" CONDUIT, TYPE C	30" CONDUIT, TYPE C, 706.02	30" CONDUIT, TYPE F, 707.05	36" CONDUIT, TYPE B, 706.02	36" CONDUIT, TYPE C	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	CATCH BASIN, NO. 6	CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 2-2B	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
626																									
629																									
632																						2			
635																						2			
638																									
641	111																					1	1		
644																									
647																									
653																									7
659																					2				3
665					90																				
670						100																			1
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TOTALS FROM THIS SHEET	111	0	0	0	90	100	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	1	0	11	
TOTALS FROM SHEET 397	94	64	34	192	0	0	184	119	999	8	113	501	34	40	245	0	0	7	7	11	1	43	6	0	
TOTALS CARRIED TO GENERAL SUMMARY	205	64	34	192	90	100	184	119	999	8	113	501	34	40	245	0	0	7	7	11	3	48	7	4	11

ROADWAY SUBSUMMARY	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	401 1312

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.				ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
FRA-71-0296L (SOUTHBOUND) 2506904L 03/IMS/BR	FRA-71-0296R (NORTHBOUND) 2506939R 03/IMS/BR	FRA-71-0308L (SOUTHBOUND) 2506963L 03/IMS/BR	FRA-71-0308R (NORTHBOUND) 2506998R 03/IMS/BR					
LS	LS	LS	LS	202	11203		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	
150	150	220	221	202	22900	SY	APPROACH SLAB REMOVED	
721	721	931	929	202	23500	SY	WEARING COURSE REMOVED	
LS	LS	LS	LS	503	11101		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	
LS	LS	LS	LS	503	21300		UNCLASSIFIED EXCAVATION	
LS	LS	LS	LS	505	11100		PILE DRIVING EQUIPMENT MOBILIZATION	
1,440	1,440			507	00100	FT	STEEL PILES HP10X42, FURNISHED	
1,280	1,280			507	00150	FT	STEEL PILES HP10X42, DRIVEN	
720	720			507	00200	FT	STEEL PILES HP12X53, FURNISHED	
640	640			507	00250	FT	STEEL PILES HP12X53, DRIVEN	
		2310	1750	507	00500	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
		2715	2045	507	00550	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	
48	48			507	93300	EACH	STEEL POINTS OR SHOES	
124,430	123,297	263,185	235,776	509	10001	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	
500	500	500	500	509	20001	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	
564	556	226	226	510	10000	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
459	458			511	21522	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	
		1,151	1,072	511	32212	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	
2	2			511	33500	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	
		184	120	511	41012	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	
92	81			511	42012	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	
168	166	166	130	511	43512	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	
28	28	44	27	511	46510	CY	CLASS QC1 CONCRETE, FOOTING	
962	950	1,227	1,107	512	10050	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
41	41	51	49	512	33000	SY	TYPE 2 WATERPROOFING	
192,896	192,896			513	10260	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3	
6,156	6,156			513	20000	EACH	WELDED STUD SHEAR CONNECTORS	
17	17	17	17	516	13600	SF	1" PREFORMED EXPANSION JOINT FILLER	
253	254	93	105	516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER	
179	178	204	191	516	14020	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
		47	46	516	43100	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (8" x 11" x 1.474)	
18	18			516	44100	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11" x 18" x 2.05" WITH 12" x 19" x 2.0" LOAD PLATE)	
18	18			516	44101	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10" x 14" x 2.95" WITH 11" x 15" x 1.5" LOAD PLATE)	
0	10			518	12301	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN	
		0	6	518	12500	EACH	SCUPPER, MISC.:	
139	140	151	121	518	21200	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
205	204	215	218	518	40000	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
40	40	40	40	518	40011	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	
		19	88	519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	
2	2	3	3	523	20000	EACH	DYNAMIC LOAD TESTING	
379	375	456	424	526	25011	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	
146	144	183	170	526	90030	FT	TYPE C INSTALLATION	
48	48			SPECIAL	53000400	EACH	STRUCTURES : CAPSULE ADHESIVE ANCHORES	
62	62	82	81	601	20001	SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN (PAIDFOR UNDER ROADWAY QUANTITIES)	
325	325	341	344	607	39900	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	
61	60	77	72	846	00110	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	

CALCULATED
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STRUCTURE SUBSUMMARY

FRA-71-0.00

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ITEM 832 STORM WATER POLLUTION PREVENTION PLAN, AS PER PLAN

ALL REFERENCES TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION EFFLUENT GUIDELINES LISTED IN SUPPLEMENTAL SPECIFICATION 832 (SS832) AND APPENDIX E WILL BE REPLACED WITH THE OEPA GENERAL PERMIT NO. OHC000005, AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY LOCATED WITHIN THE BIG DARBY CREEK WATERSHED (BIG DARBY PERMIT).

THE CONTRACTOR NEEDS TO FULLY UNDERSTAND ALL REQUIREMENTS OF THE BIG DARBY PERMIT BEFORE BEGINNING ANY WORK. FOR ANY DISCREPANCIES BETWEEN SS832 AND THIS PLAN NOTE, RESOLUTION SHOULD BE BASED ON THE BIG DARBY PERMIT.

THE REQUIREMENTS OF SS832 ARE REQUIRED TO BE MET. IN ADDITION, THE CONTRACTOR SHOULD NOTE THE FOLLOWING REQUIRED ITEMS REGARDING IMPLEMENTATION OF SS832 AND THE BIG DARBY PERMIT THAT ARE NOTED BELOW:

SECTION 832.04 REQUIREMENTS.

POST CONSTRUCTION CONTROLS AND MITIGATION FOR RIPARIAN SETBACK AND GROUNDWATER RECHARGE DESCRIBED IN THE BIG DARBY PERMIT ARE NOT TEMPORARY EROSION CONTROL FEATURES. CONSTRUCTION REQUIREMENTS AND COMPENSATION FOR POST CONSTRUCTION CONTROLS AND MITIGATION, IF ANY, FOR RIPARIAN SETBACK AND GROUNDWATER RECHARGE ARE DETAILED IN THE PROJECT PLANS.

SECTION 832.05 LOCATE AND FURNISH BMP.

H. SEDIMENT BASINS AND DAMS

CONSTRUCT BASINS TO RETAIN 134 CUBIC YARDS (102 M3) OF WATER FOR EVERY ACRE (0.4 HA) OF DRAINAGE AREA. SAMPLE AND TEST EFFLUENT ACCORDING TO PART III.G.2.H.II OF THE BIG DARBY PERMIT.

LOCATIONS FOR SEDIMENT BASINS ARE PROVIDED IN THE PLANS. REVISED SEDIMENT BASIN LOCATIONS DUE TO CONSTRUCTION ISSUES MUST HAVE PRIOR DISTRICT APPROVAL.

SECTION 832.09 STORMWATER POLLUTION PREVENTION PLAN (SWPPP).

THE LOCATION OF THE RIPARIAN SETBACKS AND SEDIMENT BASINS AS SHOWN IN THE PLANS MUST BE INCORPORATED INTO THE SWPPP. THE CONTRACTOR CANNOT AMEND THE LOCATIONS OF THE RIPARIAN SETBACKS. REVISED SEDIMENT BASIN LOCATIONS DUE TO CONSTRUCTION ISSUES MUST HAVE PRIOR DISTRICT APPROVAL.

ON THE SWPPP, FOR EACH SEDIMENT BASIN OR DAM, PROVIDE THE SETTLING VOLUME, CONTRIBUTING DRAINAGE AREA, AND DESIGNATE EACH WITH A UNIQUE THREE DIGIT NUMBER.

SECTION 832.12 COMPENSATION.

ALL WORK CONSISTING OF LOCATING, FURNISHING, INSTALLING, SAMPLING, TESTING AND MAINTAINING TEMPORARY SEDIMENT AND EROSION CONTROL BEST MANAGEMENT PRACTICES FOR EARTH DISTURBING ACTIVITY AREAS AND DEVELOPING A STORM WATER POLLUTION PREVENTION PLAN AND CO-PERMITTEE FORM SHALL MEET SS832 AND THE BIG DARBY PERMIT.

IN ADDITION TO WORK DESCRIBED, ALL TESTING AND REPORTING ASSOCIATED WITH THE ROUTINE INSPECTION OF THE SEDIMENT BASINS, DAMS AND OUTFALLS SHALL ALSO BE INCLUDED.

ITEM 832 STORM WATER POLLUTION PREVENTION PLAN, AS PER PLAN - CONTINUED

ALL WORK TO BE PAID FOR UNDER:

ITEM 832 STORM WATER POLLUTION PREVENTION PLAN, AS PER PLAN LUMP

SECTION 832.13 METHOD OF MEASUREMENT.

THE DEPARTMENT WILL MEASURE THE SWPPP, AS PER PLAN AS A LUMP SUM ITEM.

SECTION 832.14 BASIS OF PAYMENT.

THE DEPARTMENT WILL PAY THE CONTRACT LUMP SUM BID FOR SWPPP, AS PER PLAN.

ITEM 832 EROSION CONTROL

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR ITEM 832 - EROSION CONTROL:

ITEM 832 - EROSION CONTROL 930,000 EACH

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS:

ITEM 832 - STORM WATER POLLUTION INSPECTIONS LUMP

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE:

ITEM 832 - STORM WATER POLLUTION INSPECTION SOFTWARE LUMP

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZED STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTERS FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 859 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

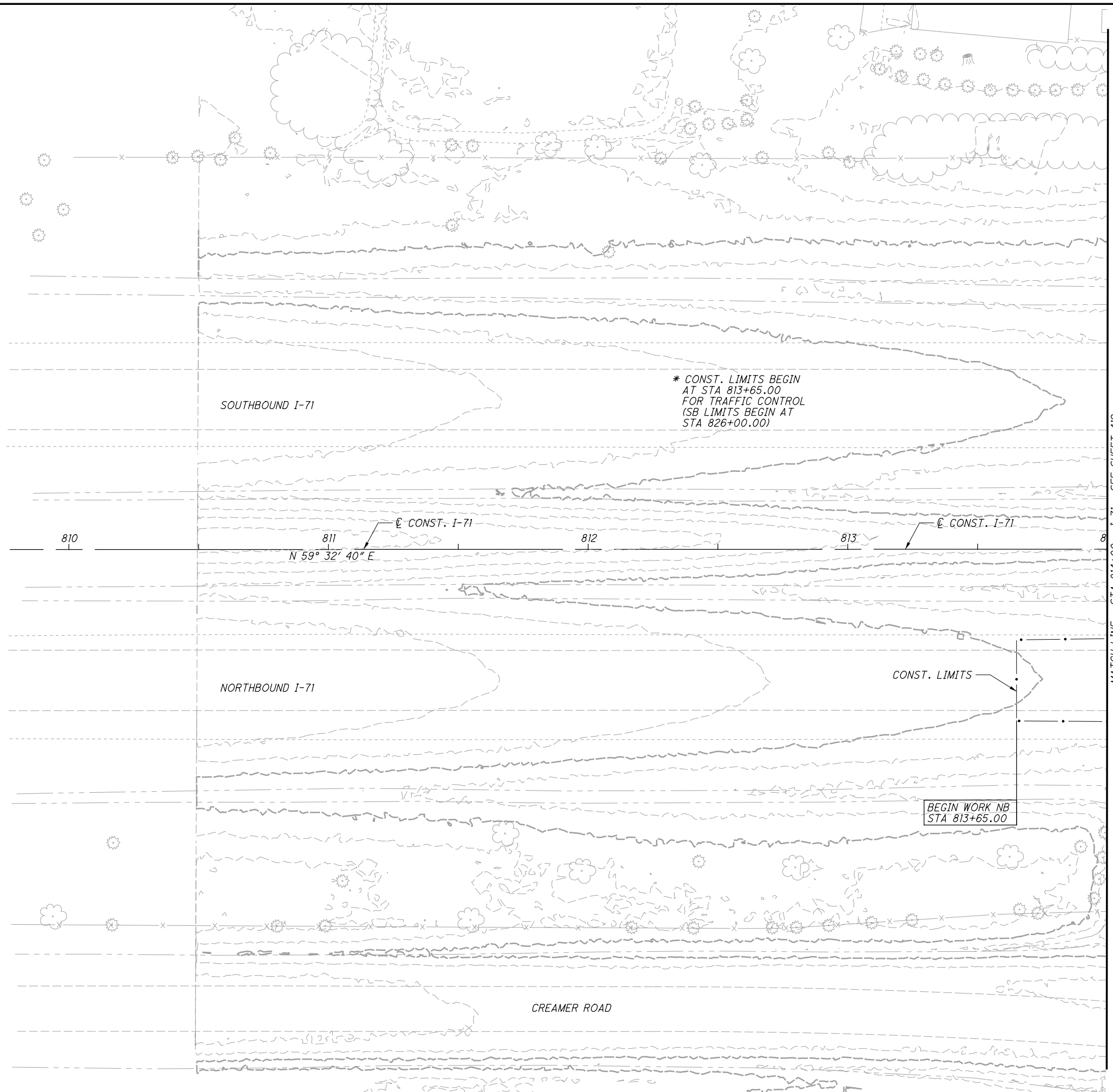
CALCULATED
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GENERAL NOTES FOR STORM WATER SITE PLAN

FRA - 71 - 0.00

410
1312

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MATCH LINE - STA 814+00 - I-71 - SEE SHEET 412

CALCULATED	CTW
CHECKED	MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 810+00 TO STA 814+00

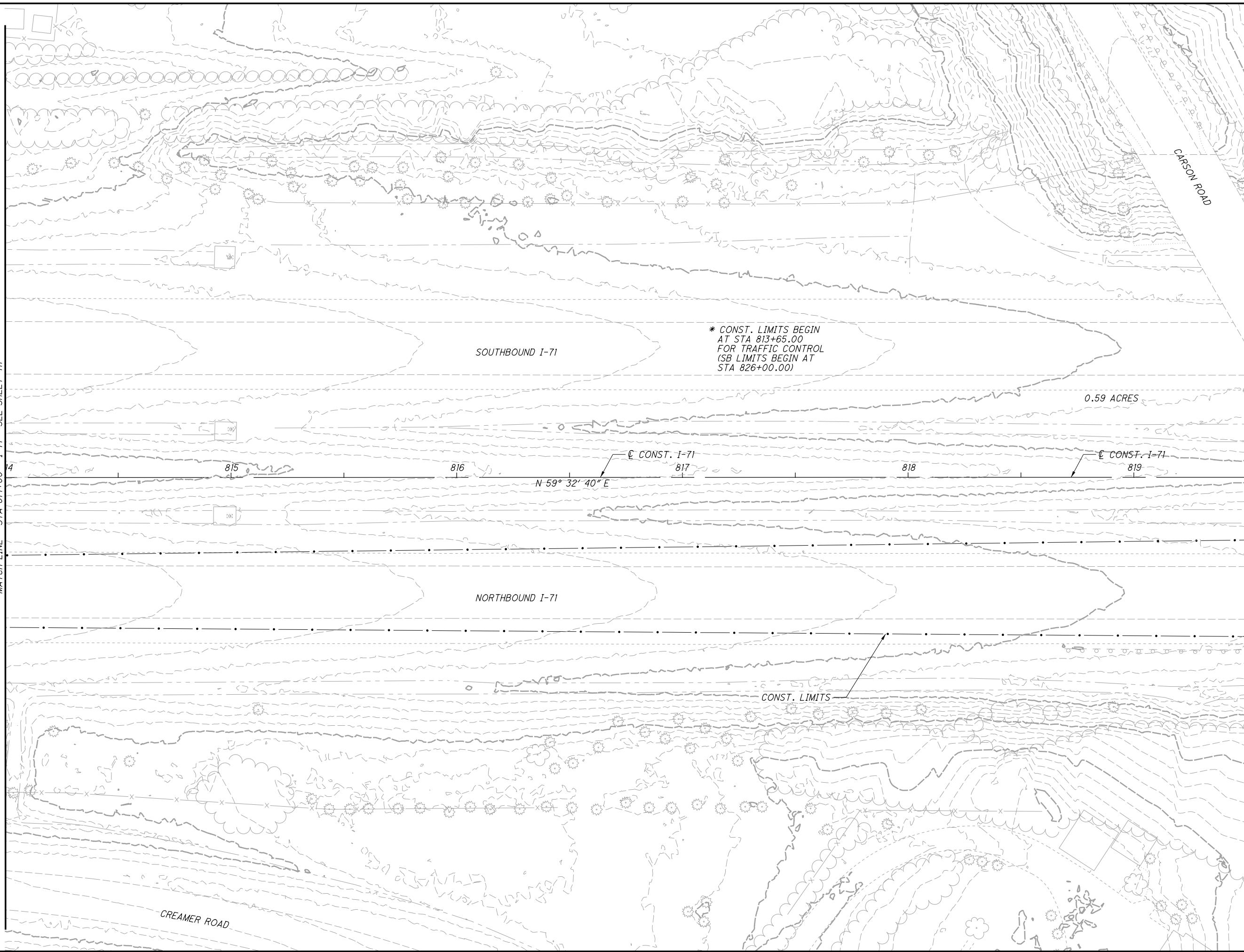
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MATCH LINE - STA 814+00 - I-71 - SEE SHEET 411

MATCH LINE - STA 819+50 - I-71 - SEE SHEET 413



CALCULATED
CTW
CHECKED
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0 20 40
HORIZONTAL
SCALE IN FEET

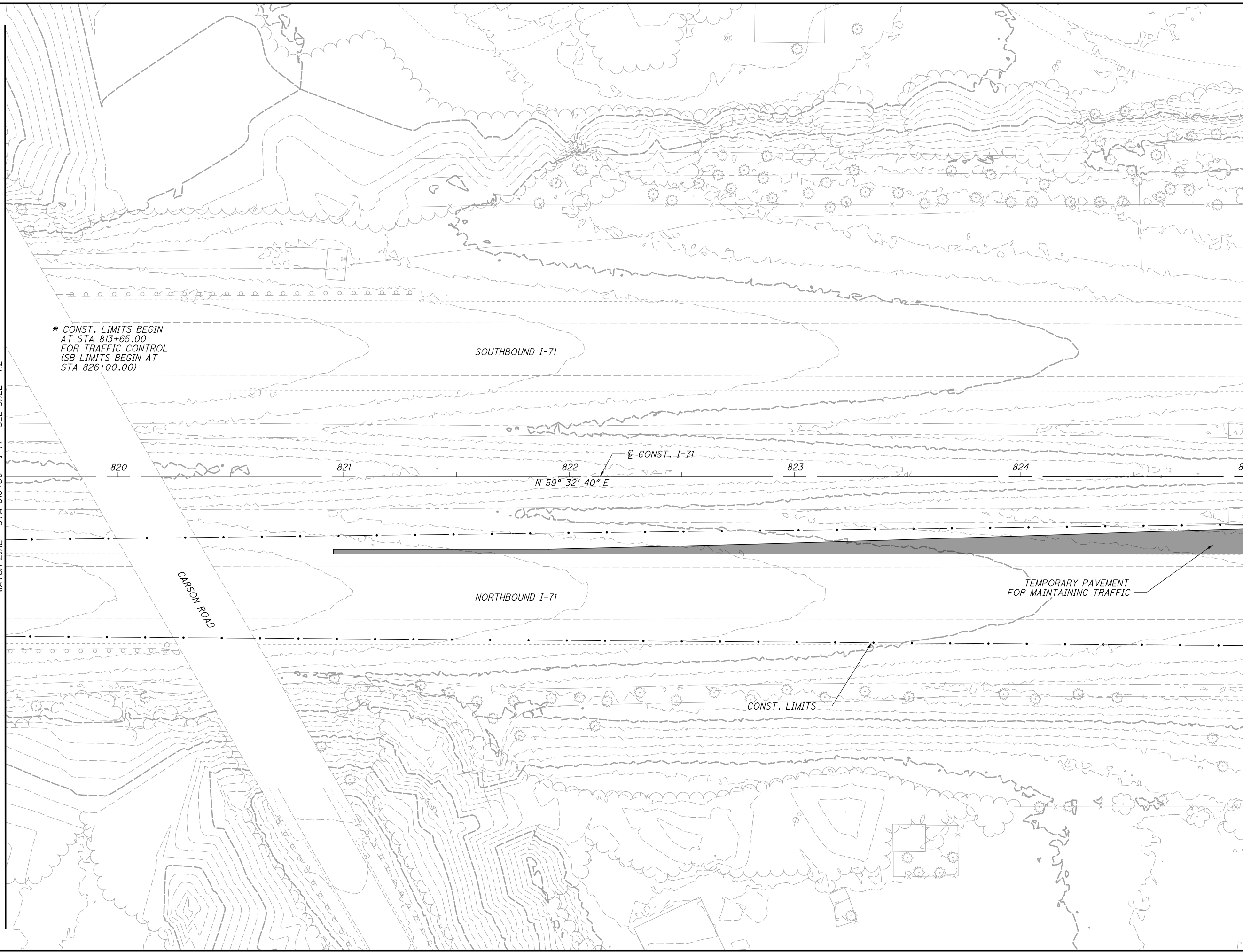
STORM WATER SITE PLAN
STA 814+00 TO STA 819+50

FRA-71-0.00

412
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MATCH LINE - STA 819+50 - I-71 - SEE SHEET 412



* CONST. LIMITS BEGIN
 AT STA 813+65.00
 FOR TRAFFIC CONTROL
 (SB LIMITS BEGIN AT
 STA 826+00.00)

SOUTHBOUND I-71

NORTHBOUND I-71

CARSON ROAD

N 59° 32' 40" E

CONST. I-71

TEMPORARY PAVEMENT
FOR MAINTAINING TRAFFIC

CONST. LIMITS

MATCH LINE - STA 825+00 - I-71 - SEE SHEET 414



CALCULATED
 CTW
 CHECKED
 MAH

STORM WATER SITE PLAN
STA 819+50 TO STA 825+00

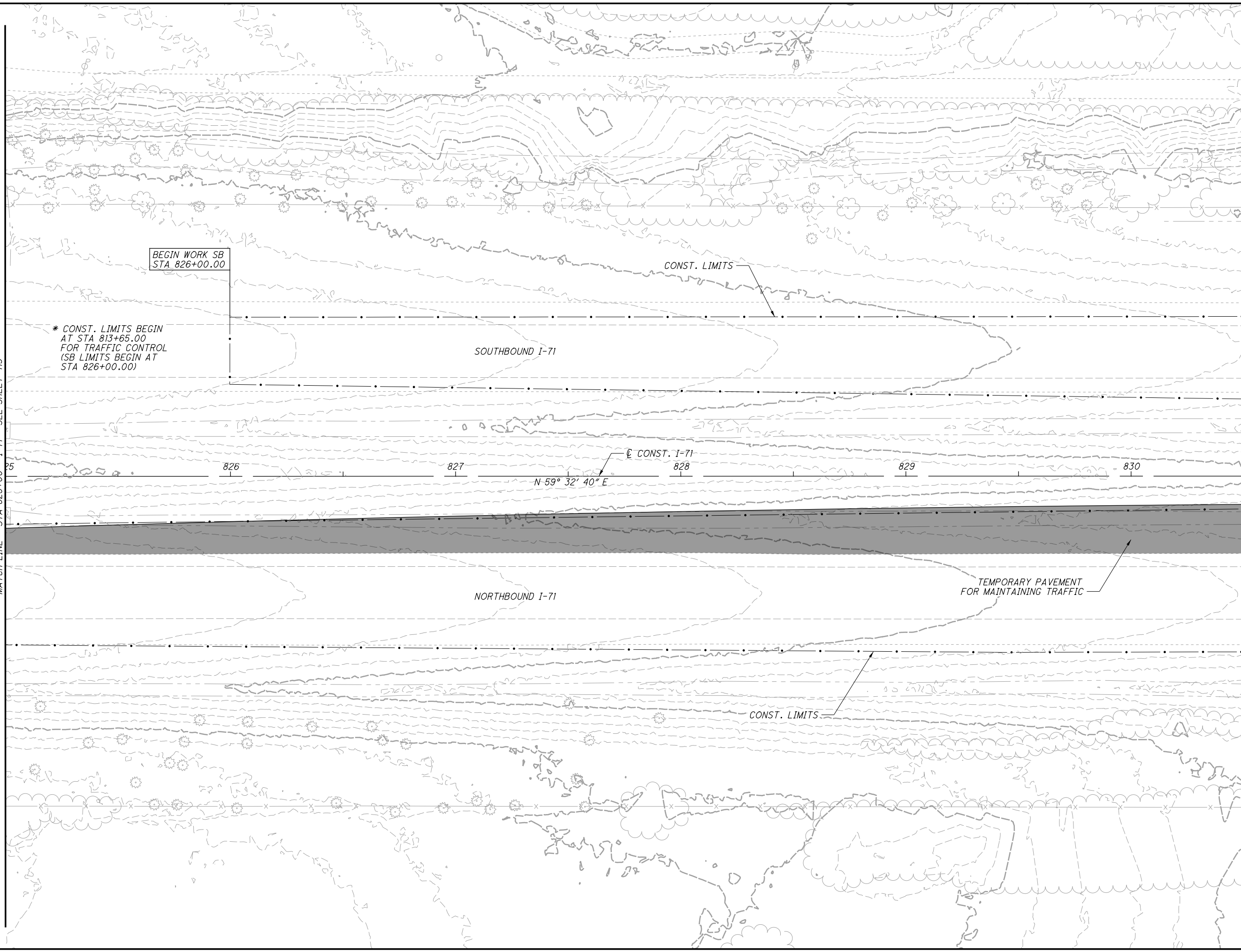
FRA-71-0.00

413
1312

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MATCH LINE - STA 825+00 - I-71 - SEE SHEET 413

MATCH LINE - STA 830+50 - I-71 - SEE SHEET 415



BEGIN WORK SB
STA 826+00.00

* CONST. LIMITS BEGIN
AT STA 813+65.00
FOR TRAFFIC CONTROL
(SB LIMITS BEGIN AT
STA 826+00.00)

SOUTHBOUND I-71

CONST. LIMITS

$N 59^\circ 32' 40" E$

CONST. I-71

NORTHBOUND I-71

TEMPORARY PAVEMENT
FOR MAINTAINING TRAFFIC

CONST. LIMITS



CALCULATED
CTW
CHECKED
MAH

STORM WATER SITE PLAN
STA 825+00 TO STA 830+50

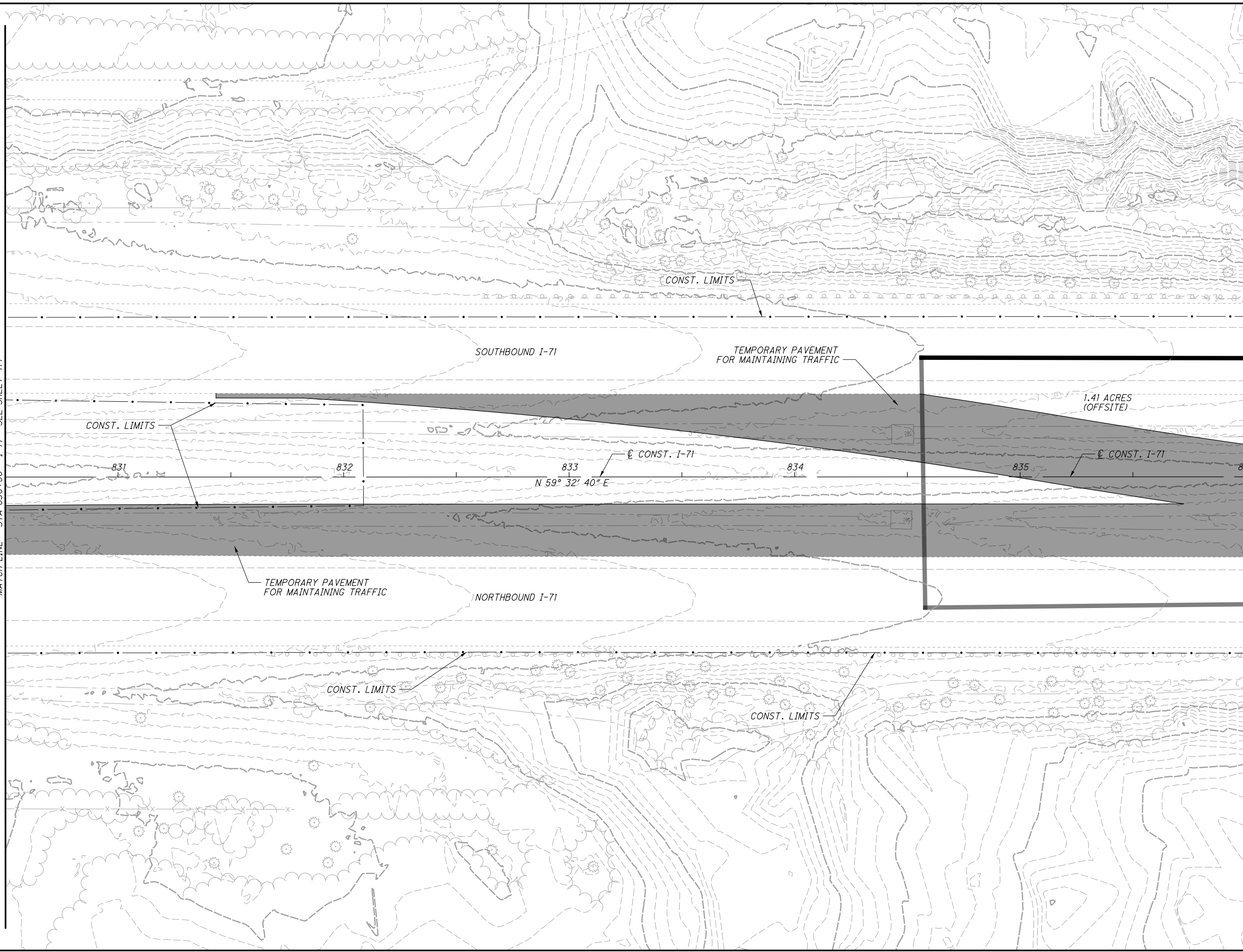
FRA-71-0.00

414
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO01e_sw3p.dgn Sheet 10/28/2019 11:07:35 AM 14588.js

MATCH LINE - STA 830+50 - I-71 - SEE SHEET 414

MATCH LINE - STA 836+00 - I-71 - SEE SHEET 416



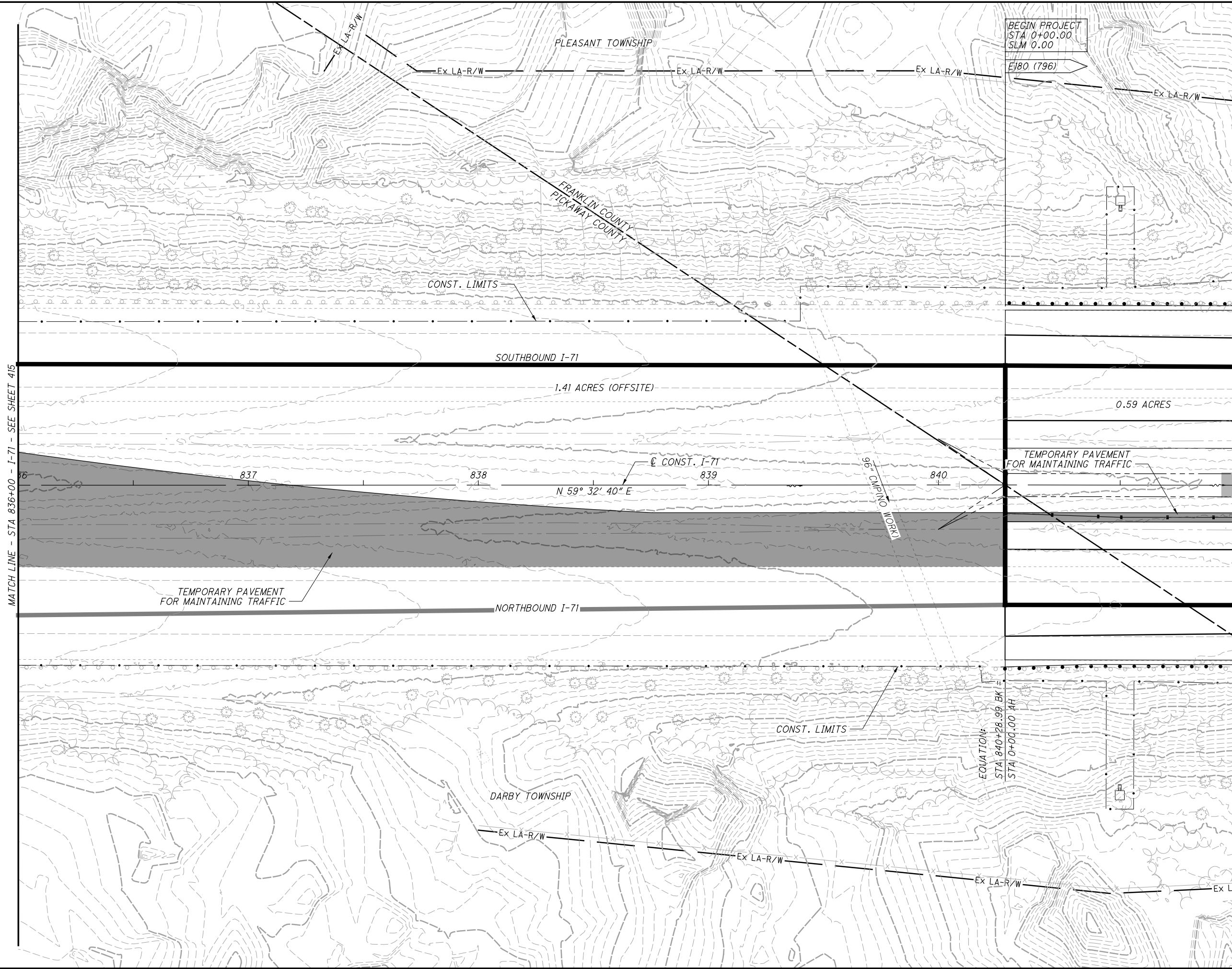
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 830+50 TO STA 836+00

FRA-71-0.00

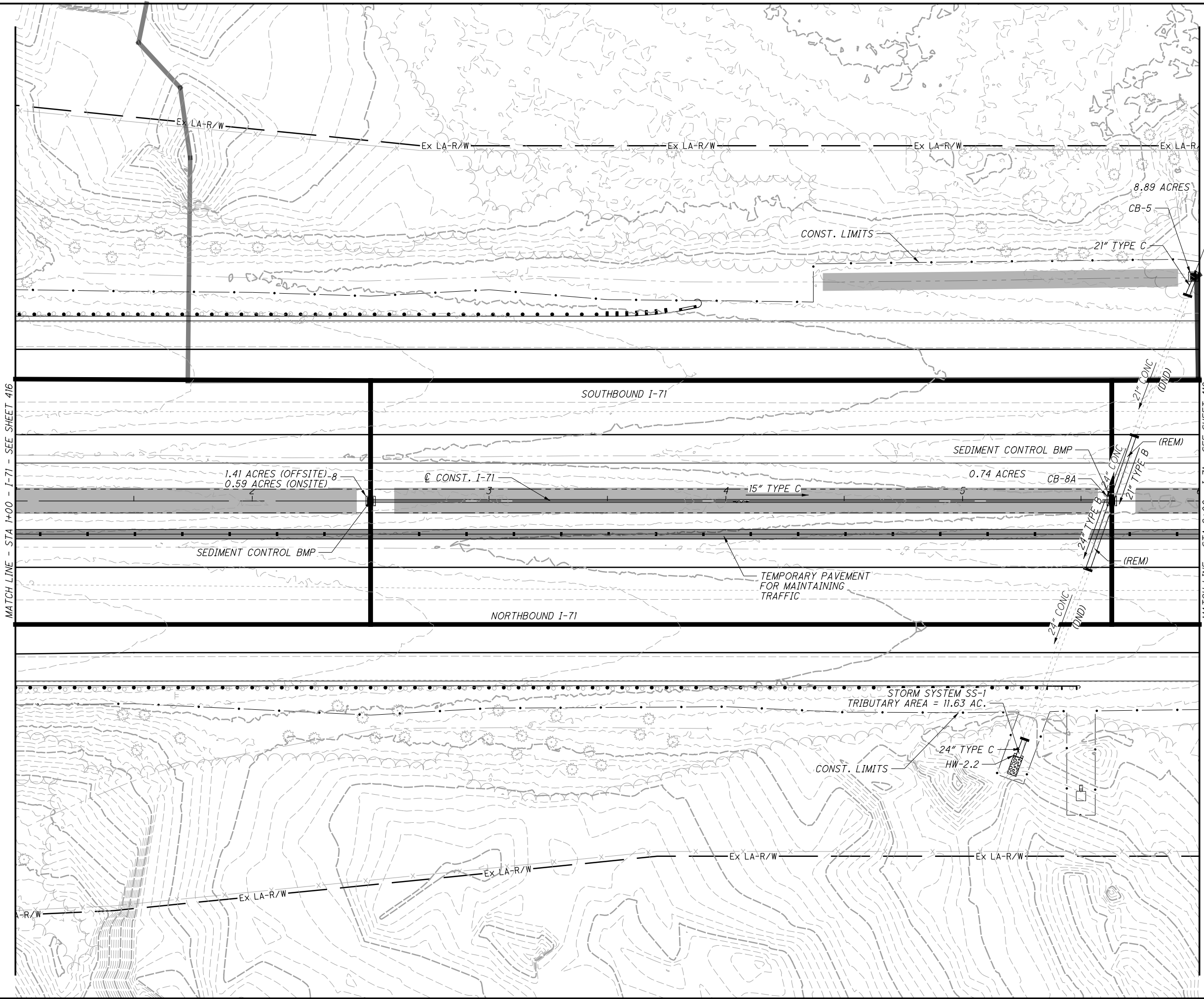
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STORM WATER SITE PLAN
STA 836+00 TO STA 1+00

FRA-71-0.00

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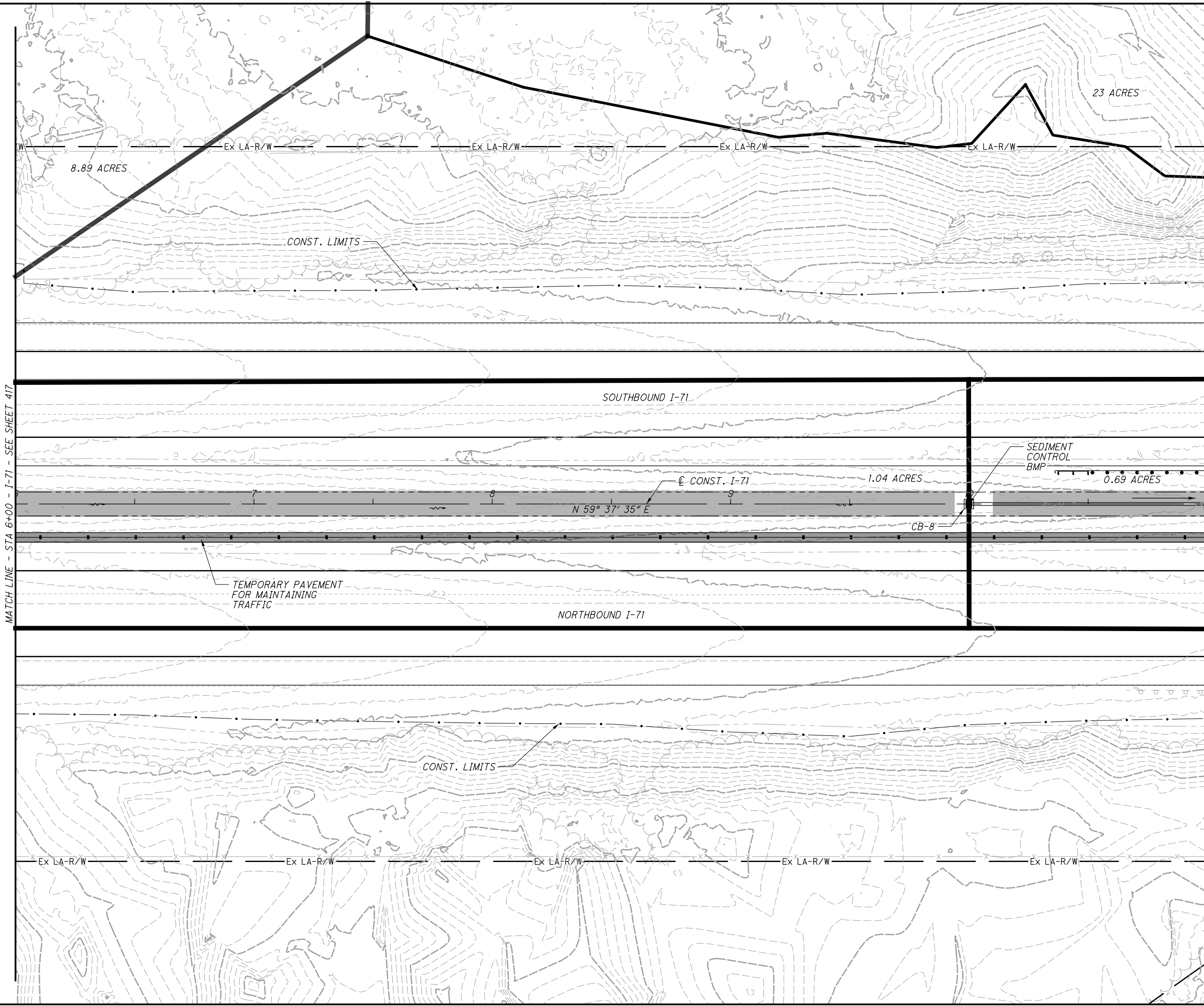
CALCULATED
CTW
CHECKED
MAH

0 20 40
10
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 1+00 TO STA 6+00

FRA-71-0.00

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MATCH LINE - STA 6+00 - I-71 - SEE SHEET 417

MATCH LINE - STA 11+00 - I-71 - SEE SHEET 419

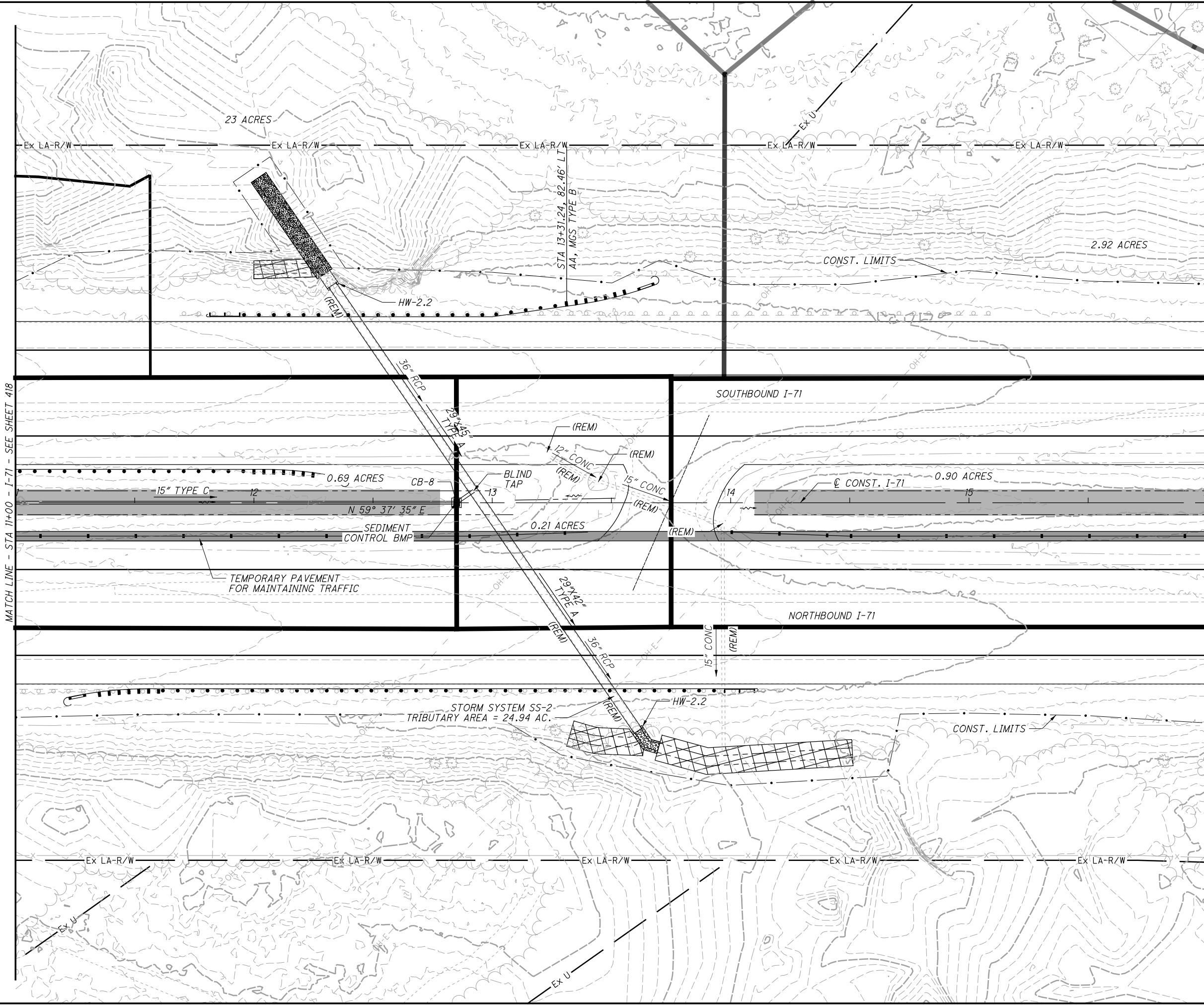


CALCULATED
CTW
CHECKED
MAH

STORM WATER SITE PLAN
STA 6+00 TO STA 11+00

FRA-71-0.00

418
1312



MATCH LINE - STA 11+00 - I-71 - SEE SHEET 418

MATCH LINE - STA 16+00 - I-71 - SEE SHEET 420

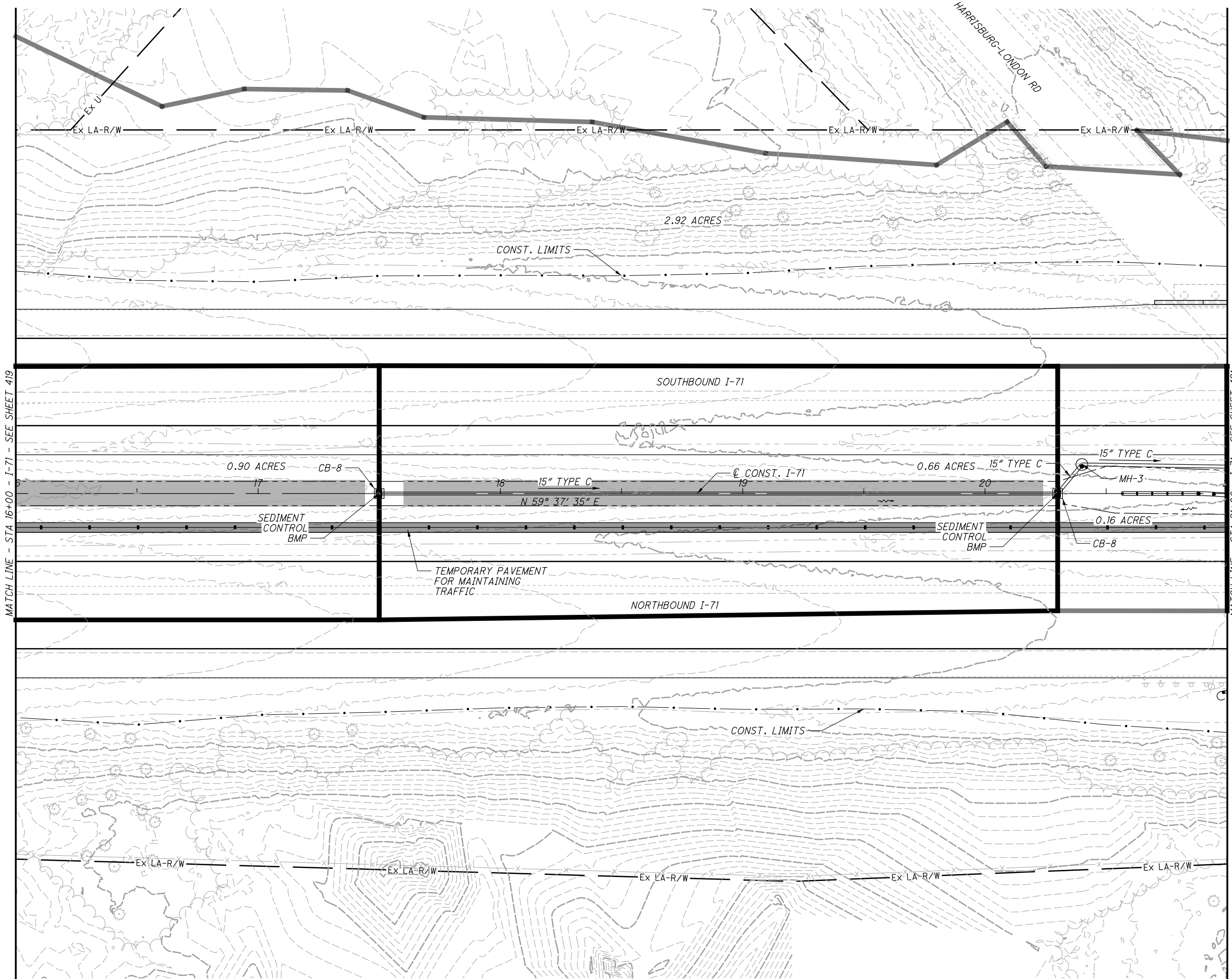
CALCULATED
CTW
CHECKED
MAH

0 10 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 11+00 TO STA 16+00

FRA-71-0.00

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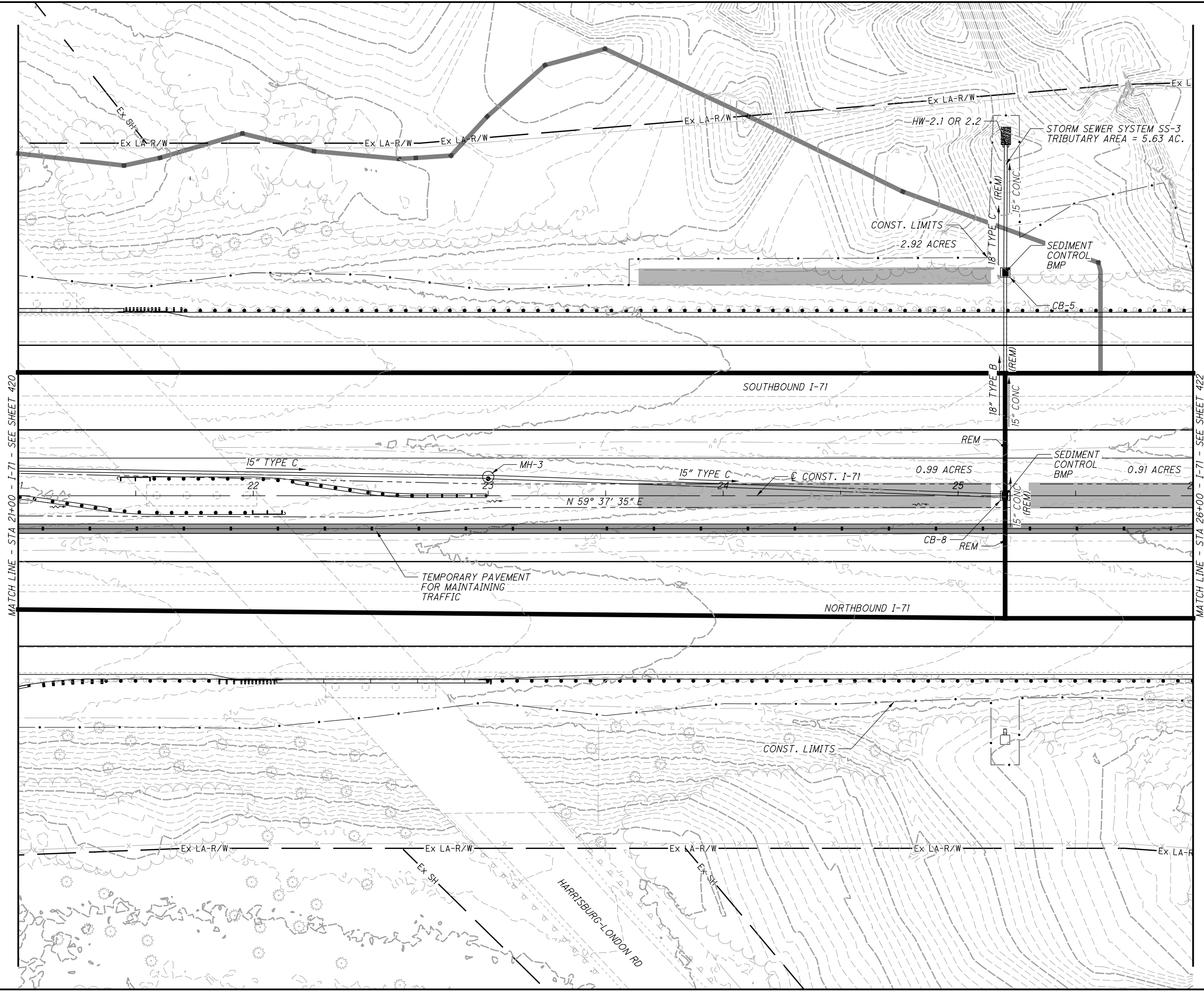
CALCULATED	CTW
CHECKED	MAH

STORM WATER SITE PLAN
STA 16+00 TO STA 21+00

FRA-71-0.00

420
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO06_sw3p.dgn_Sheet 10/28/2019 11:07:40 AM 1458s.js



MATCH LINE - STA 21+00 - I-71 - SEE SHEET 420

MATCH LINE - STA 26+00 - I-71 - SEE SHEET 422

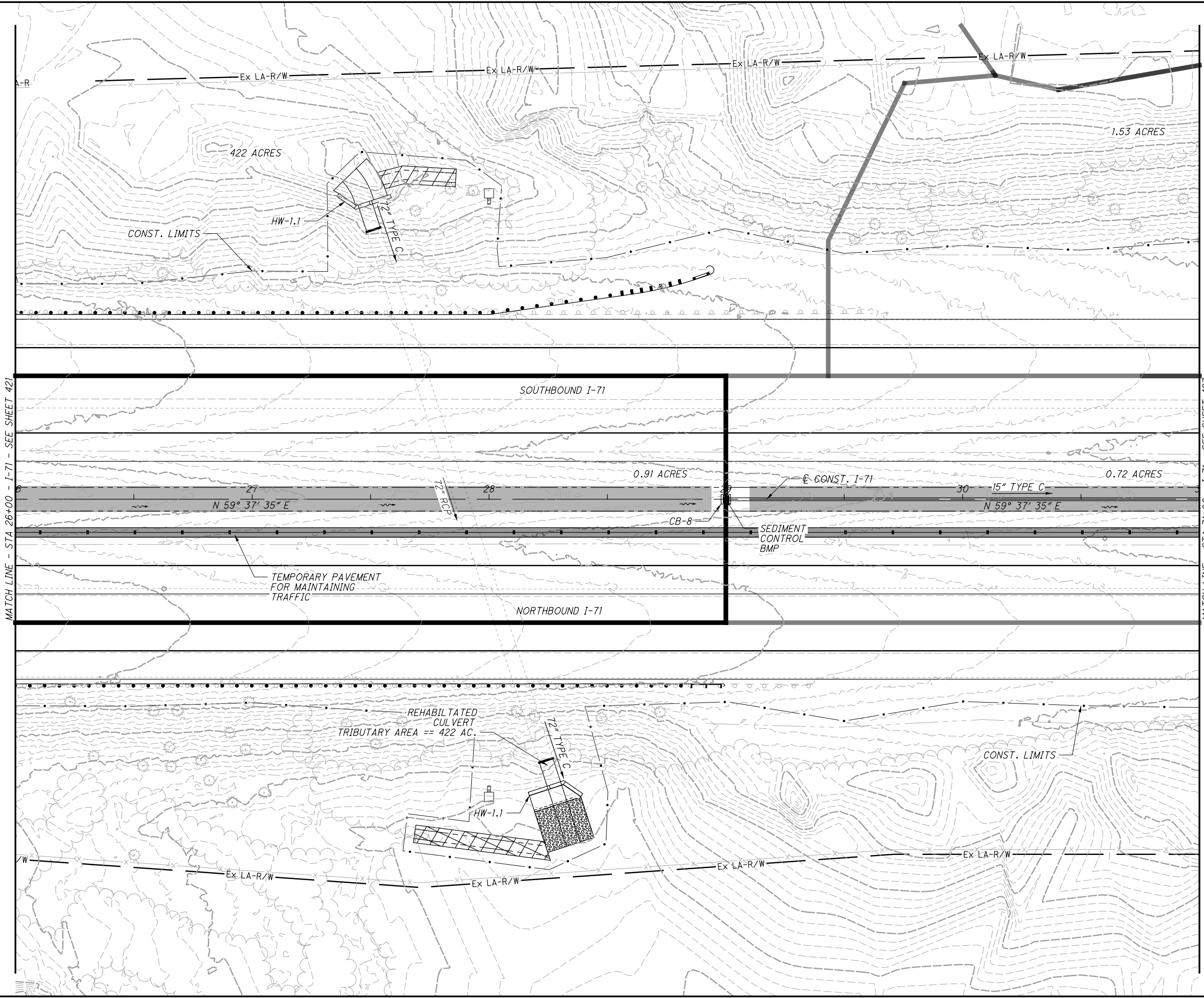
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 21+00 TO STA 26+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO07_sw3p.dgn Sheet 10/28/2019 11:07:40 AM 1458s.js



CALCULATED
CTW
CHECKED
MAH

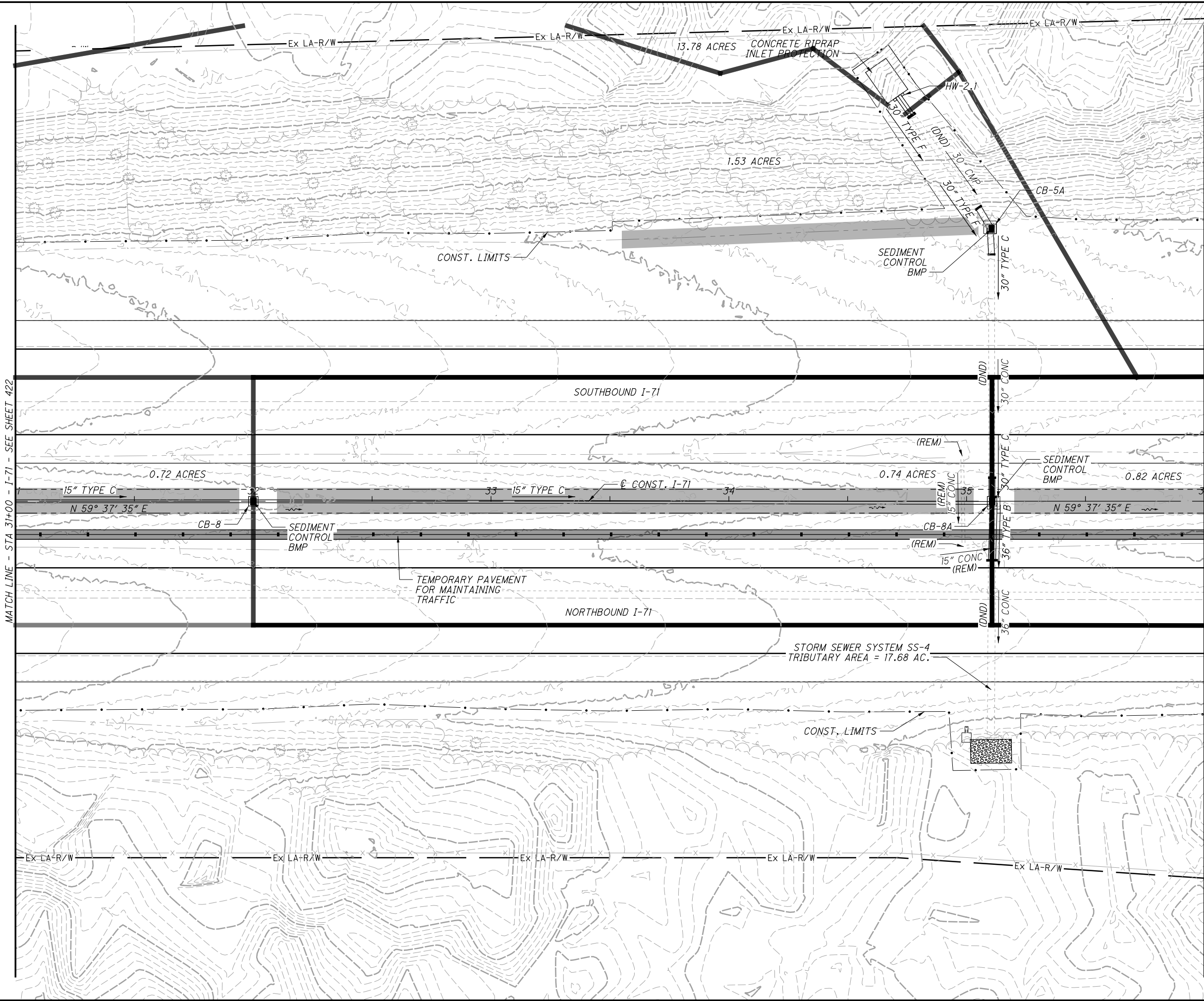
0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 26+00 TO STA 31+00

FRA-71-0.00

422
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO08_sw3p.dgn Sheet 10/28/2019 11:07:41 AM 1458s.js



MATCH LINE - STA 31+00 - I-71 - SEE SHEET 422

MATCH LINE - STA 36+00 - I-71 - SEE SHEET 424

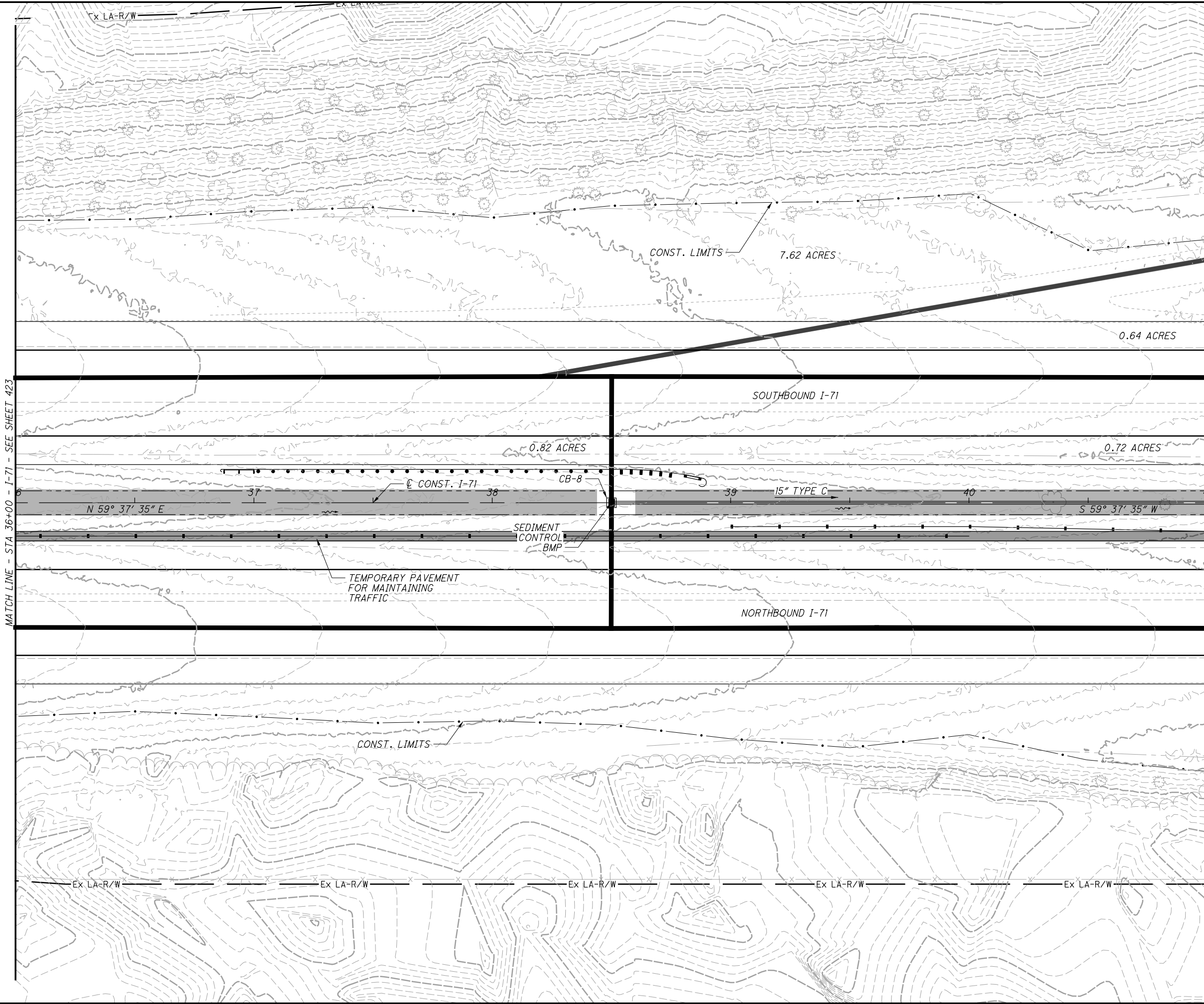
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 31+00 TO STA 36+00

FRA-71-0.00

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MATCH LINE - STA 36+00 - I-71 - SEE SHEET 423

MATCH LINE - STA 41+00 - I-71 - SEE SHEET 425

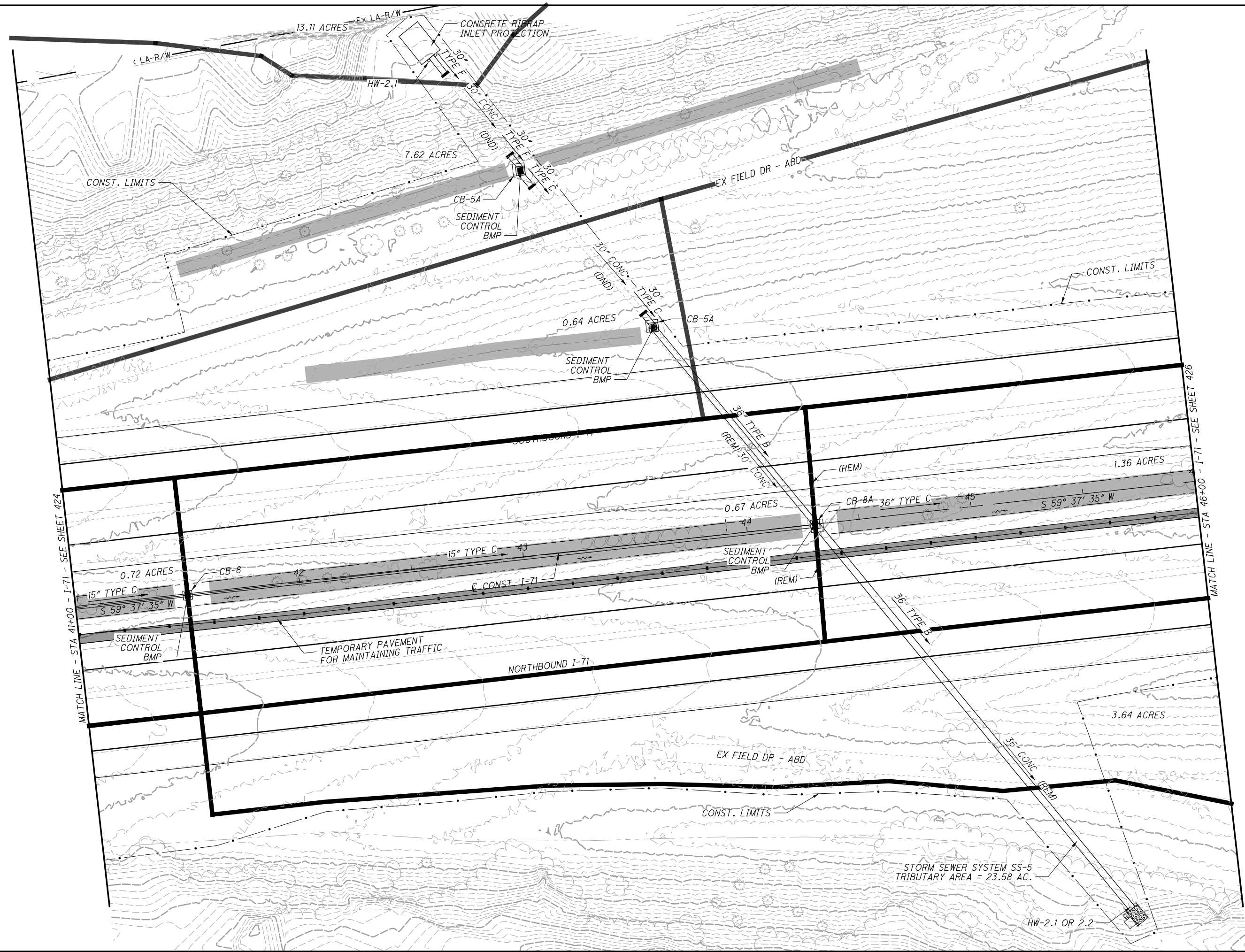
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 36+00 TO STA 41+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO10_sw3p.dgn Sheet 10/28/2019 11:07:43 AM 1458s.js

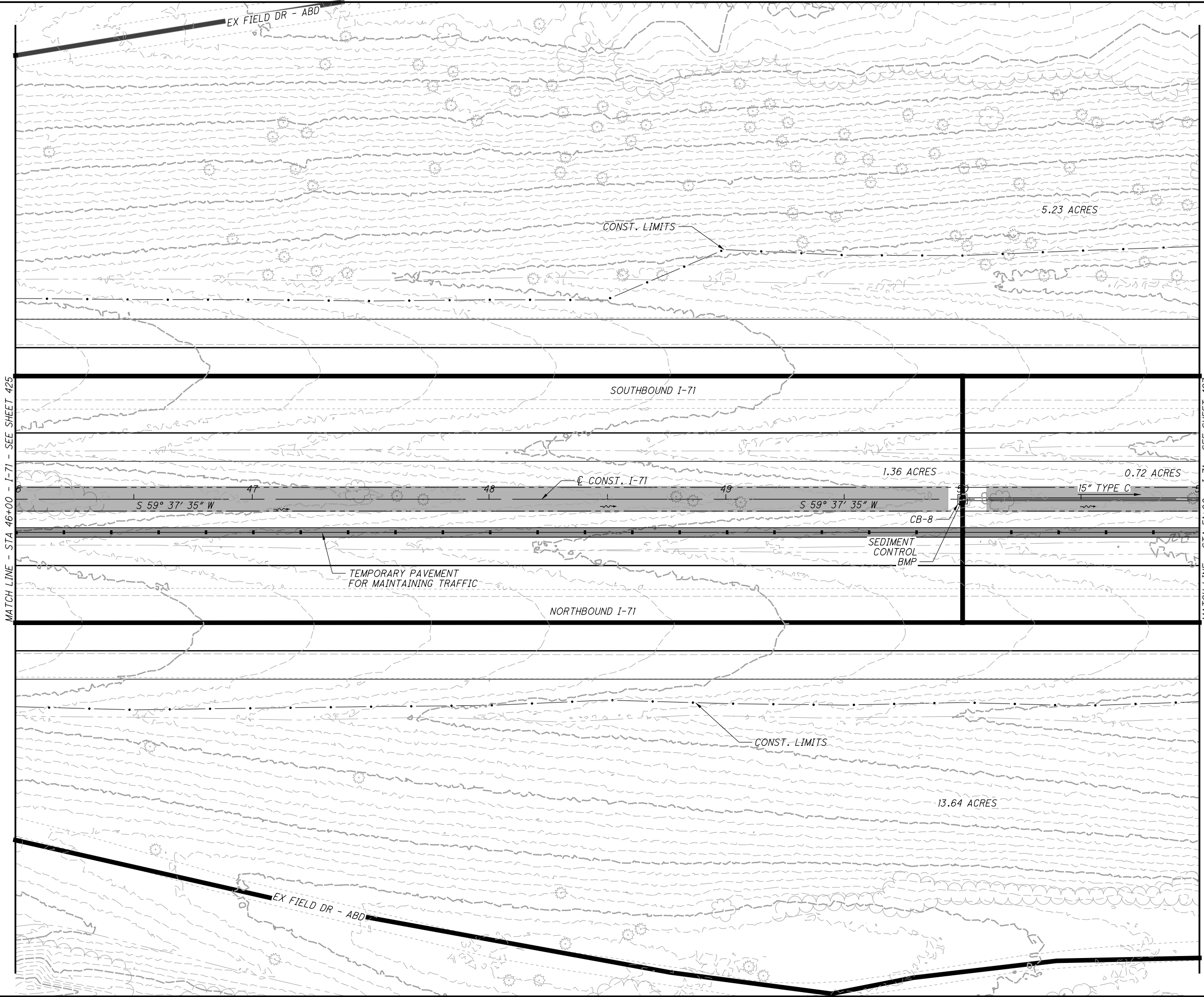


CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 41+00 TO STA 46+00

FRA-71-0.00



CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

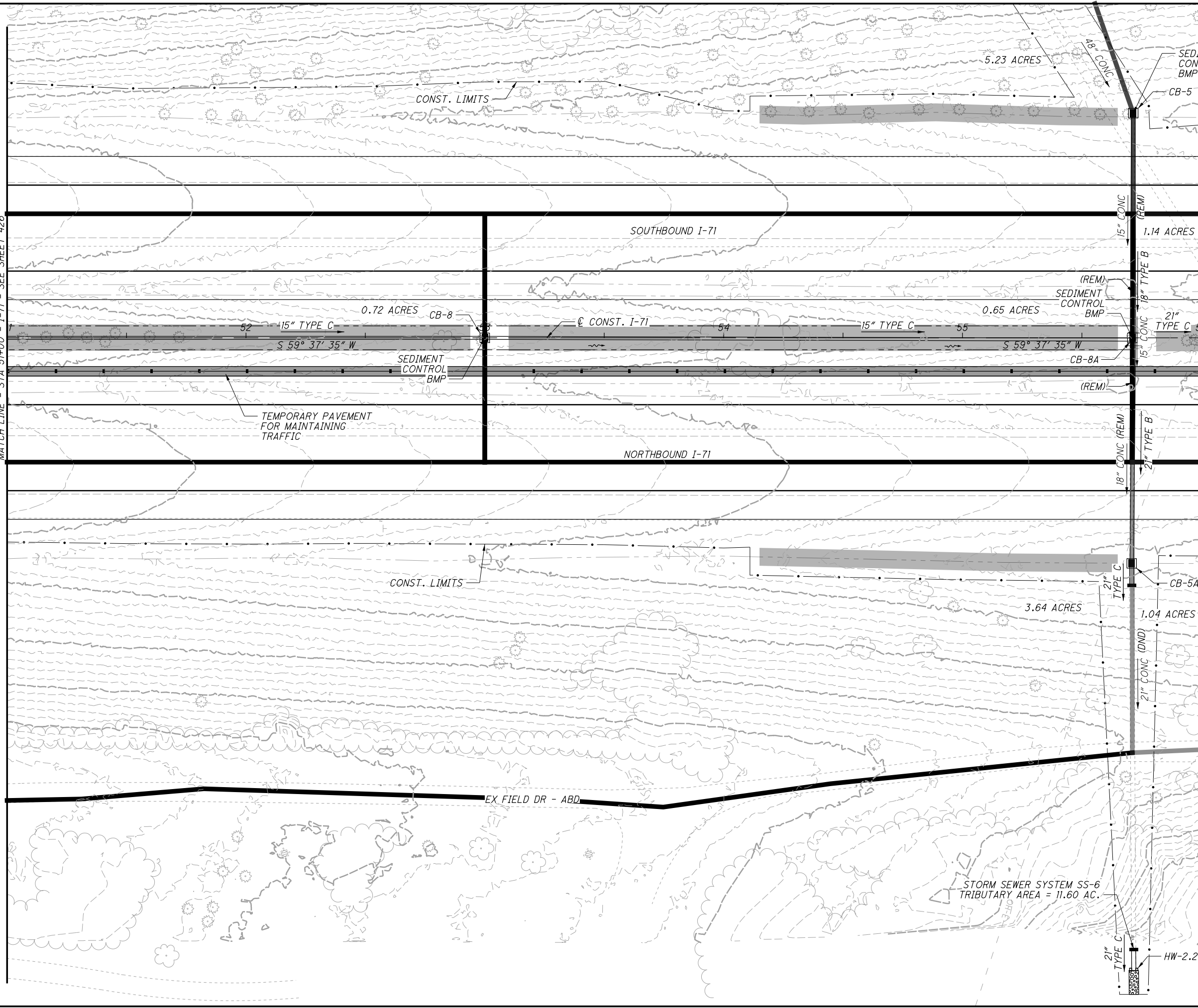
STORM WATER SITE PLAN
STA 46+00 TO STA 51+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP012_sw3p.dgn Sheet 10/28/2019 11:07:44 AM 1458sjjs

MATCH LINE - STA 51+00 - I-71 - SEE SHEET 426

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 428

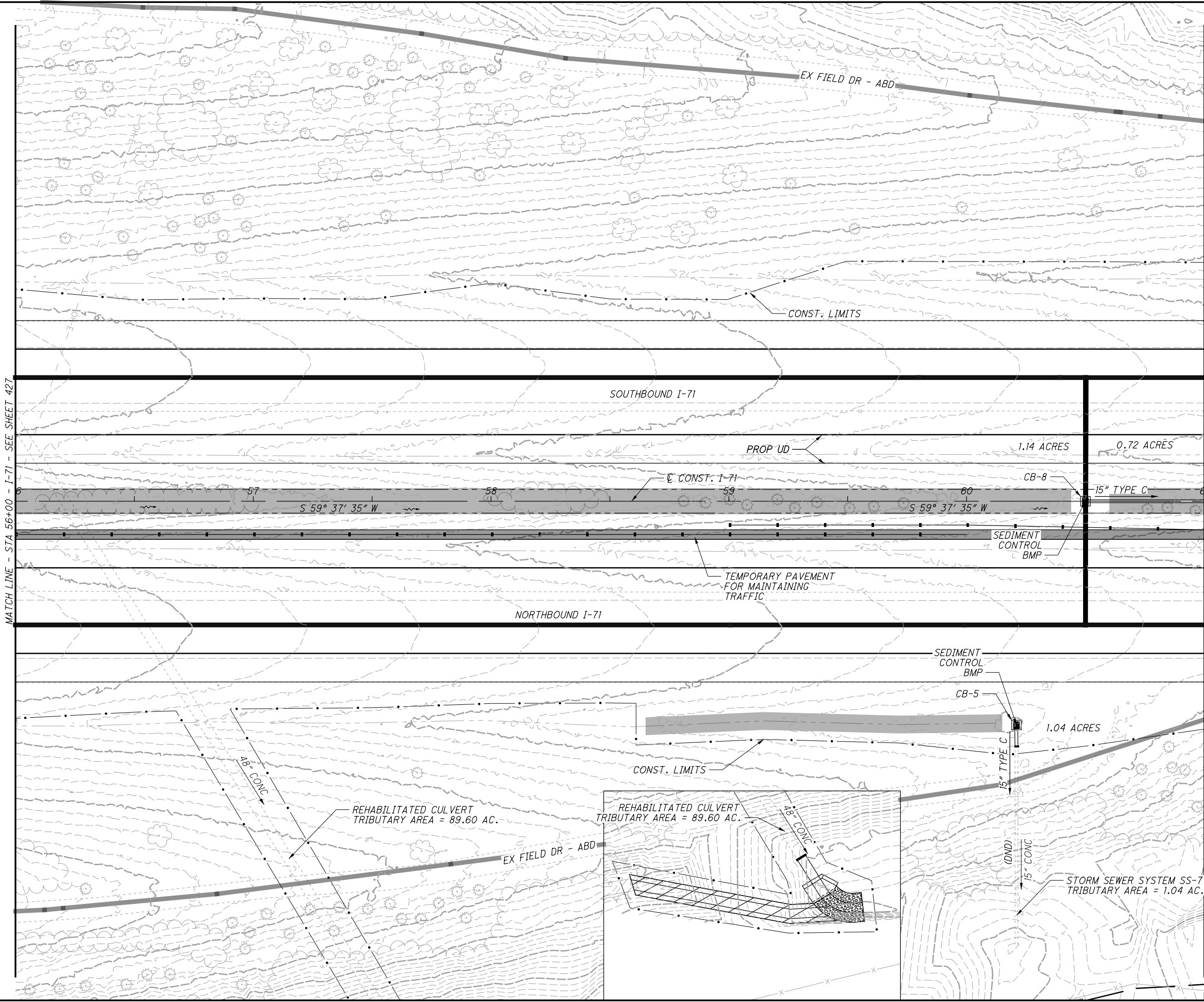


CALCULATED
 CTW
 CHECKED
 MAH

STORM WATE SITE PLAN
STA 51+00 TO STA 56+00

FRA-71-0.00
 427
 1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP013_sw3p.dgn Sheet 10/28/2019 11:07:45 AM 1458s.js



MATCH LINE - STA 56+00 - I-71 - SEE SHEET 427

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 429

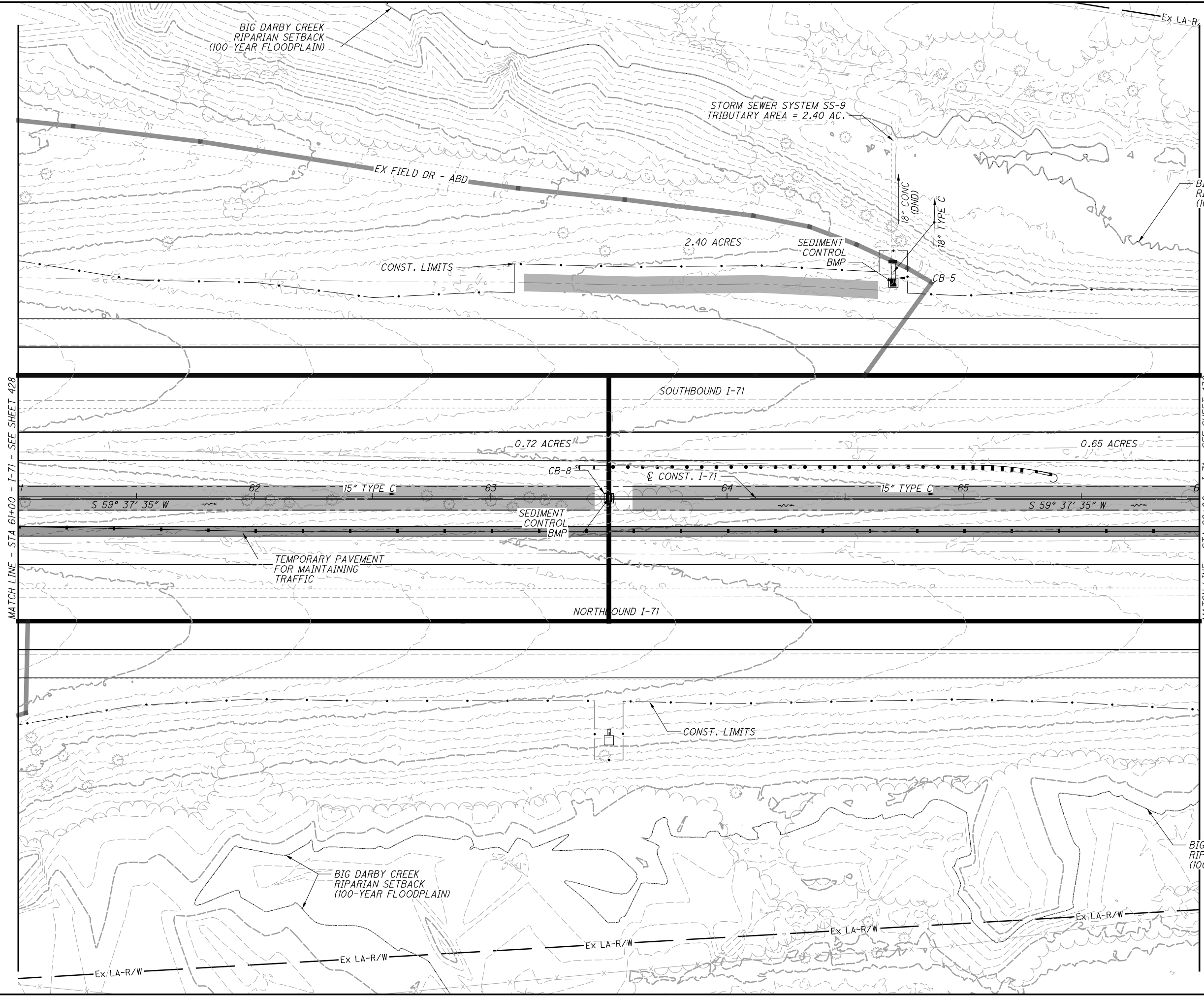
CALCULATED
CTW
CHECKED
MAH

0 20 40
10
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 56+00 TO STA 61+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP014_sw3p.dgn Sheet 10/28/2019 11:07:46 AM 1458s.js



MATCH LINE - STA 61+00 - I-71 - SEE SHEET 428

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 430

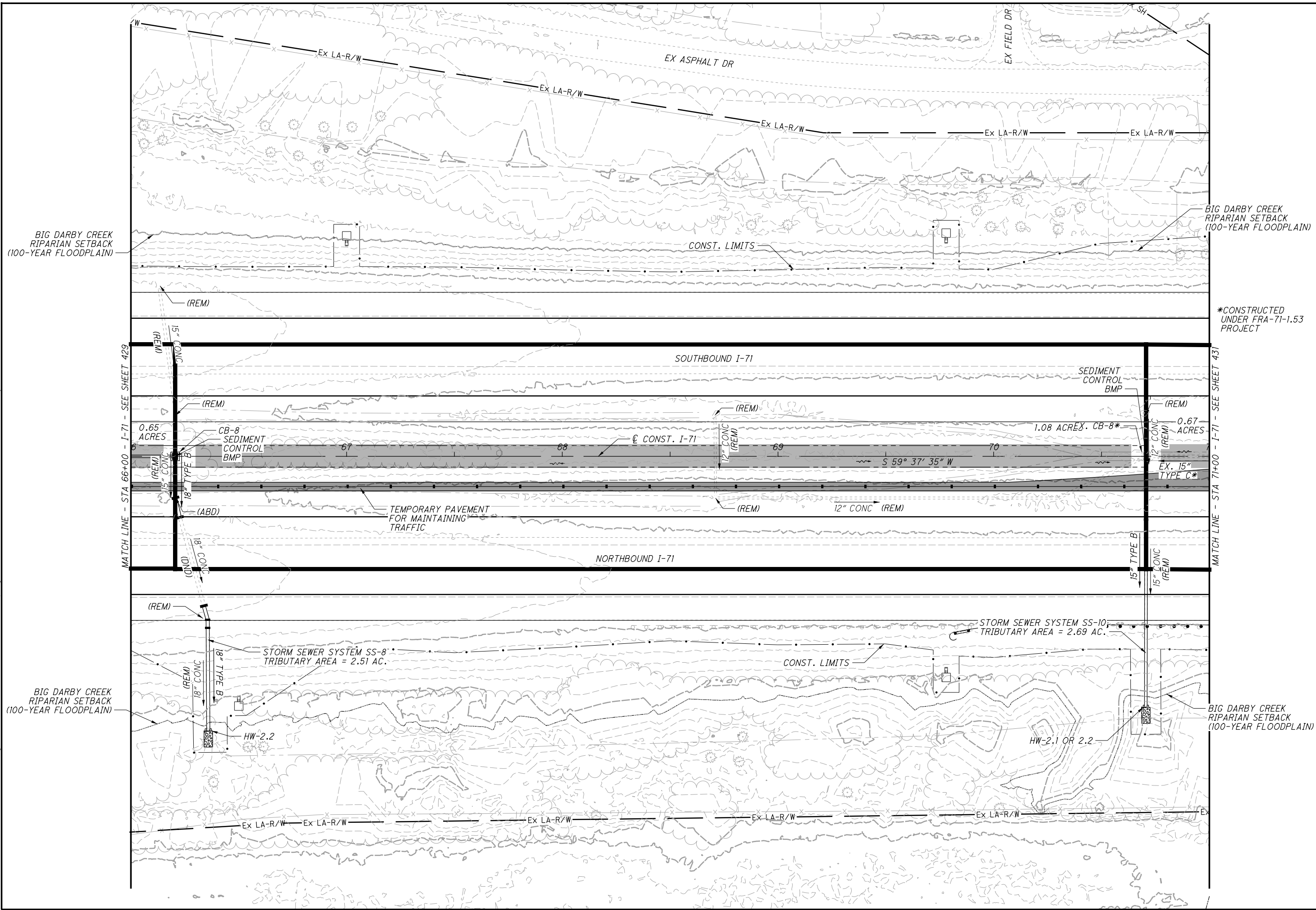
CALCULATED
CTW
CHECKED MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 61+00 TO STA 66+00

FRA -71-0.00

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CALCULATED	CTW	CHECKED	MAH
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STORM WATER SITE PLAN
STA 66+00 TO STA 71+00

*CONSTRUCTED UNDER FRA-71-1.53 PROJECT

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 429

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 431

FRA-71-0.00

430
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO16_sw3p.dgn Sheet 10/28/2019 11:07:47 AM 1458s.js



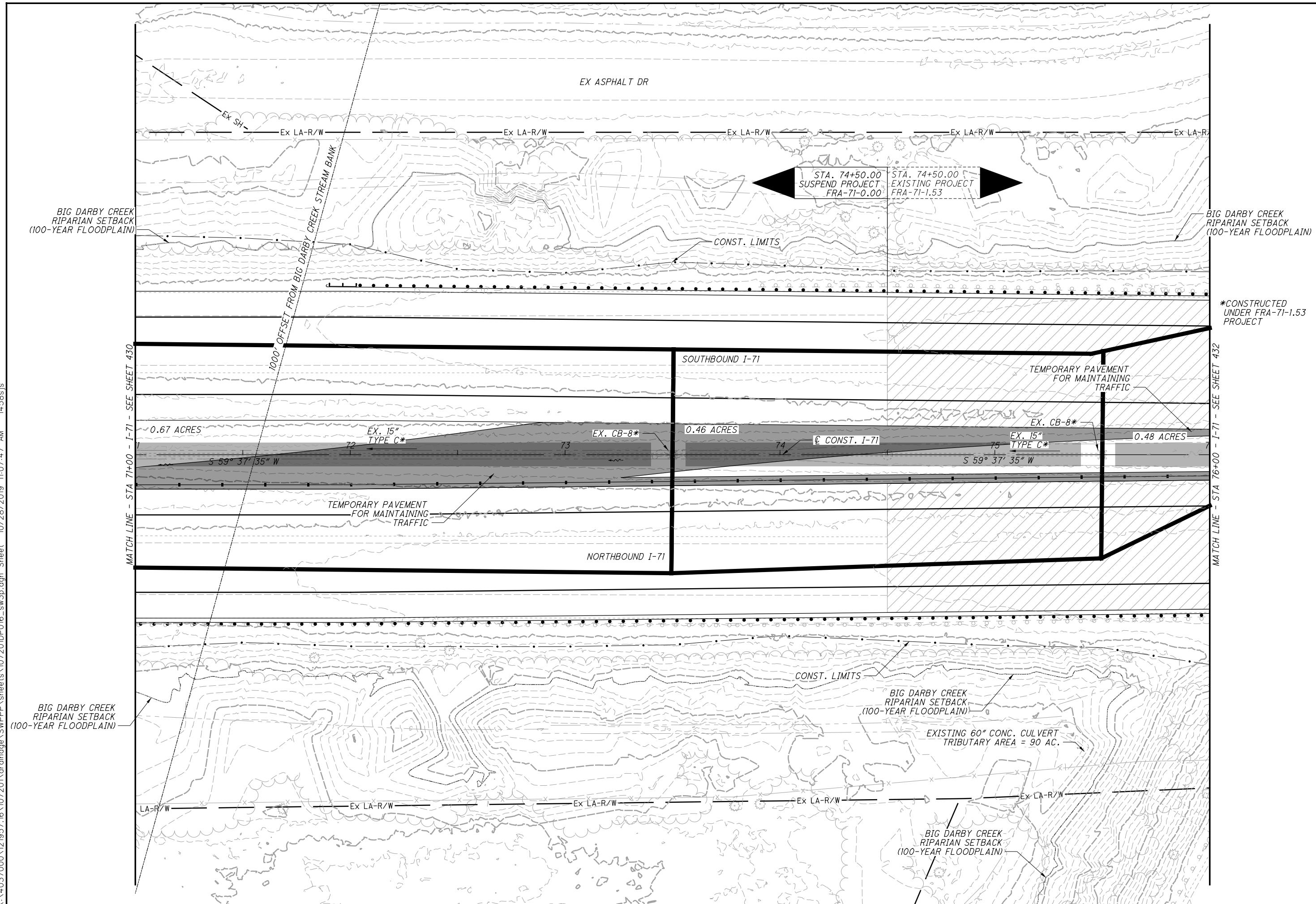
0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CTW
CHECKED
MAH

STORM WATER SITE PLAN
STA 71+00 TO STA 76+00

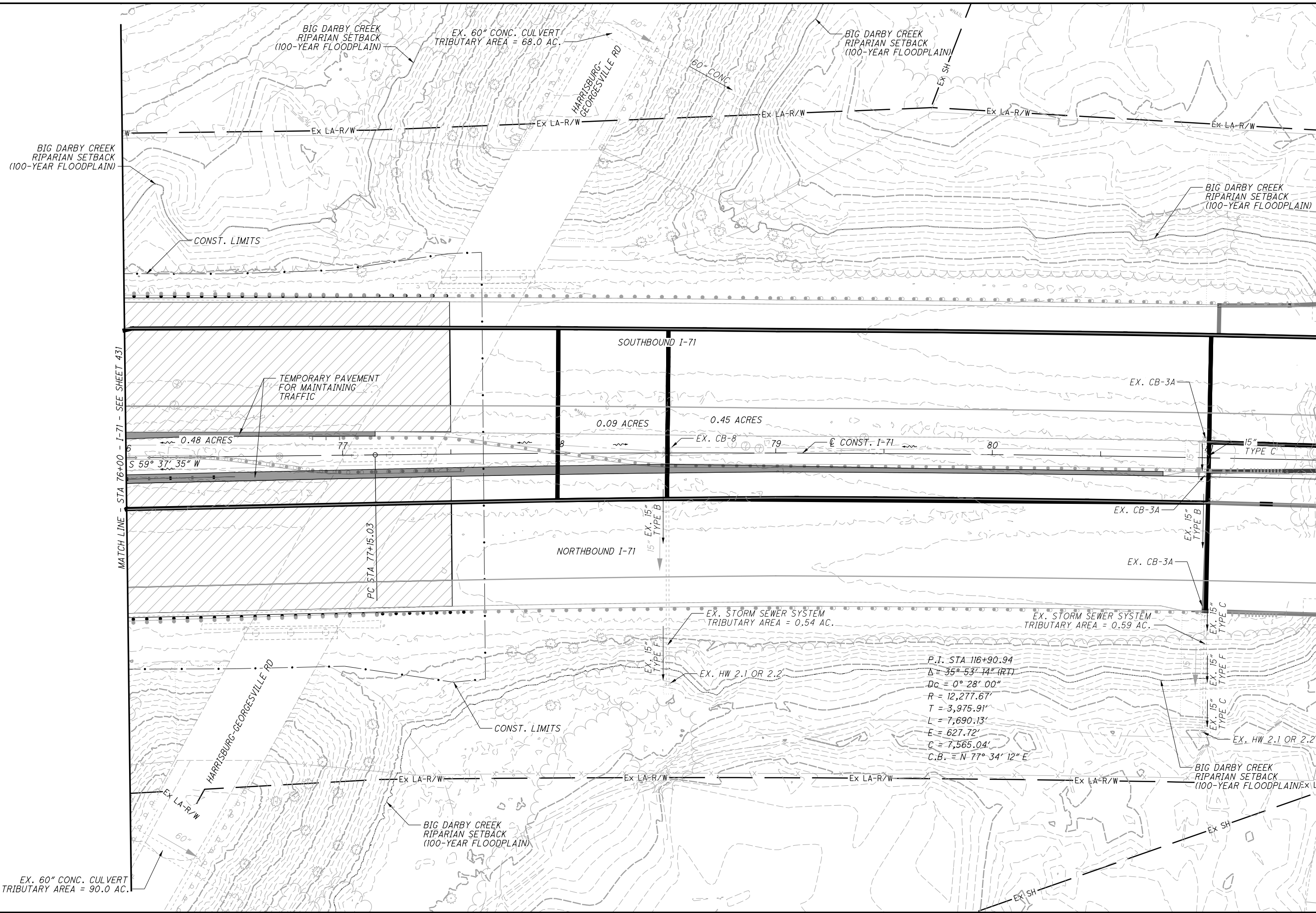
FRA-71-0.00

431
1312



*CONSTRUCTED UNDER FRA-71-1.53 PROJECT

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP017_sw3p.dgn Sheet 10/28/2019 11:07:48 AM 1458sjs



CALCULATED
 CTW
 CHECKED MAH

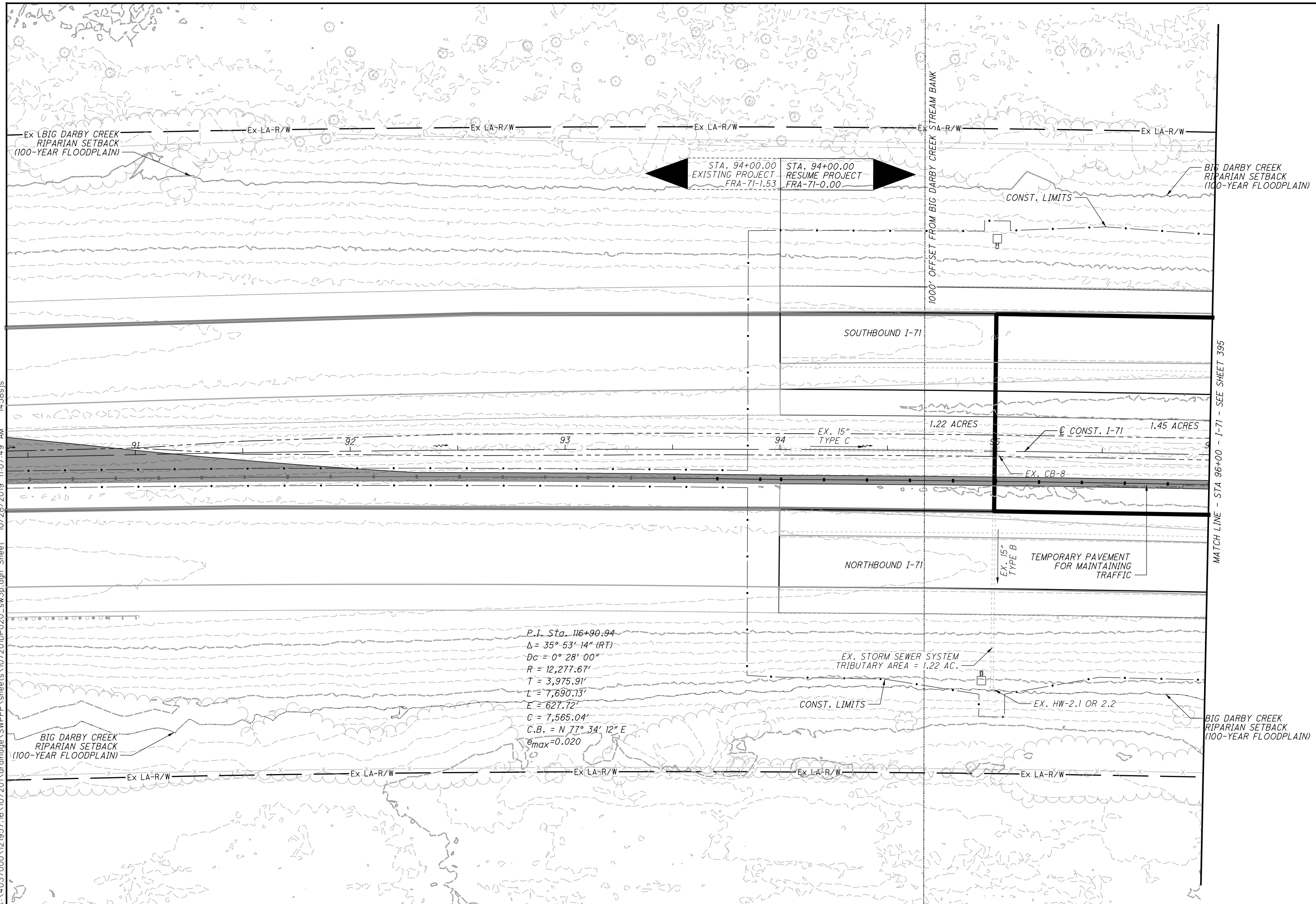
0 20 40
 HORIZONTAL
 SCALE IN FEET

STORM WATER SITE PLAN
STA 76+00 TO STA 81+00

FRA-71-0.00
 432
 1312

P.I. STA 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$

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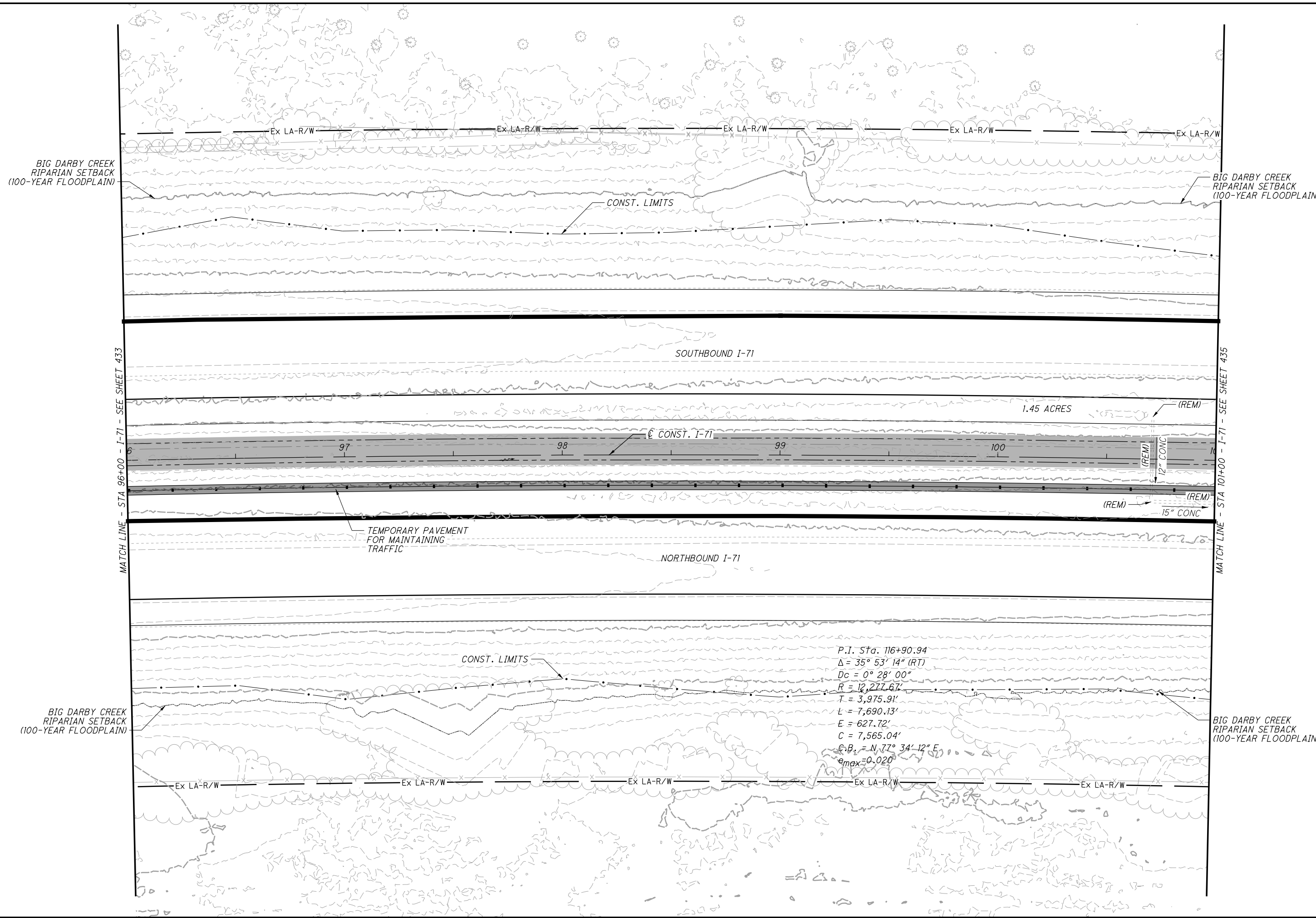
P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $\epsilon_{max} = 0.020$



STORM WATER SITE PLAN
STA 91+00 TO STA 96+00

FRA-71-0.00

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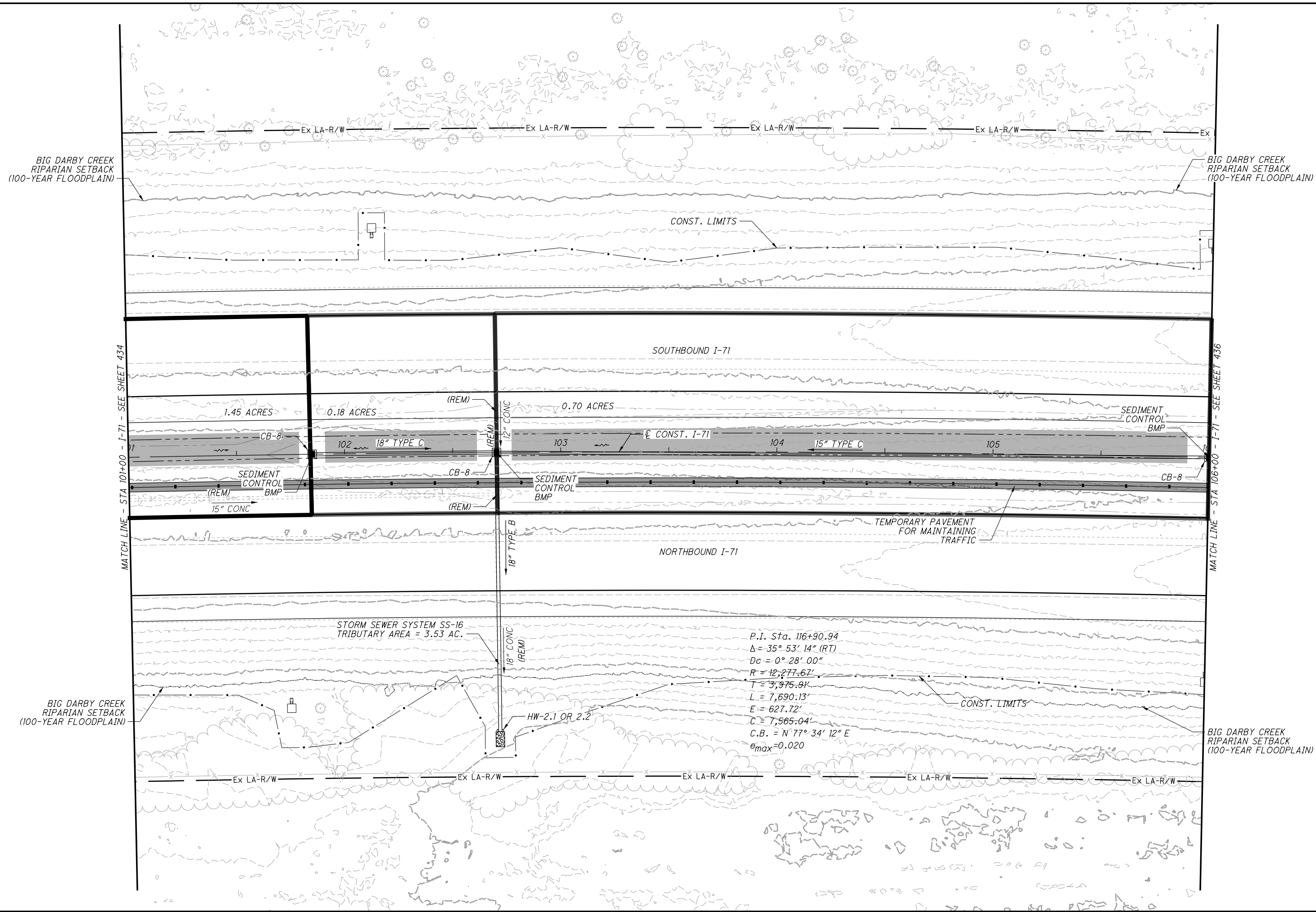


CALCULATED
CTW
CHECKED
MAH

**STORM WATER SITE PLAN
STA 96+00 TO STA 101+00**

FRA-71-0:00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO22_sw3p.dgn Sheet 10/28/2019 11:07:50 AM 1458s.js



MATCH LINE - STA 101+00 - I-71 - SEE SHEET 434

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 436

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CALCULATED
 CTW
 CHECKED MAH

0 20 40
 HORIZONTAL
 SCALE IN FEET

STORM WATER SITE PLAN
STA 101+00 TO STA 106+00

FRA-71-0.00

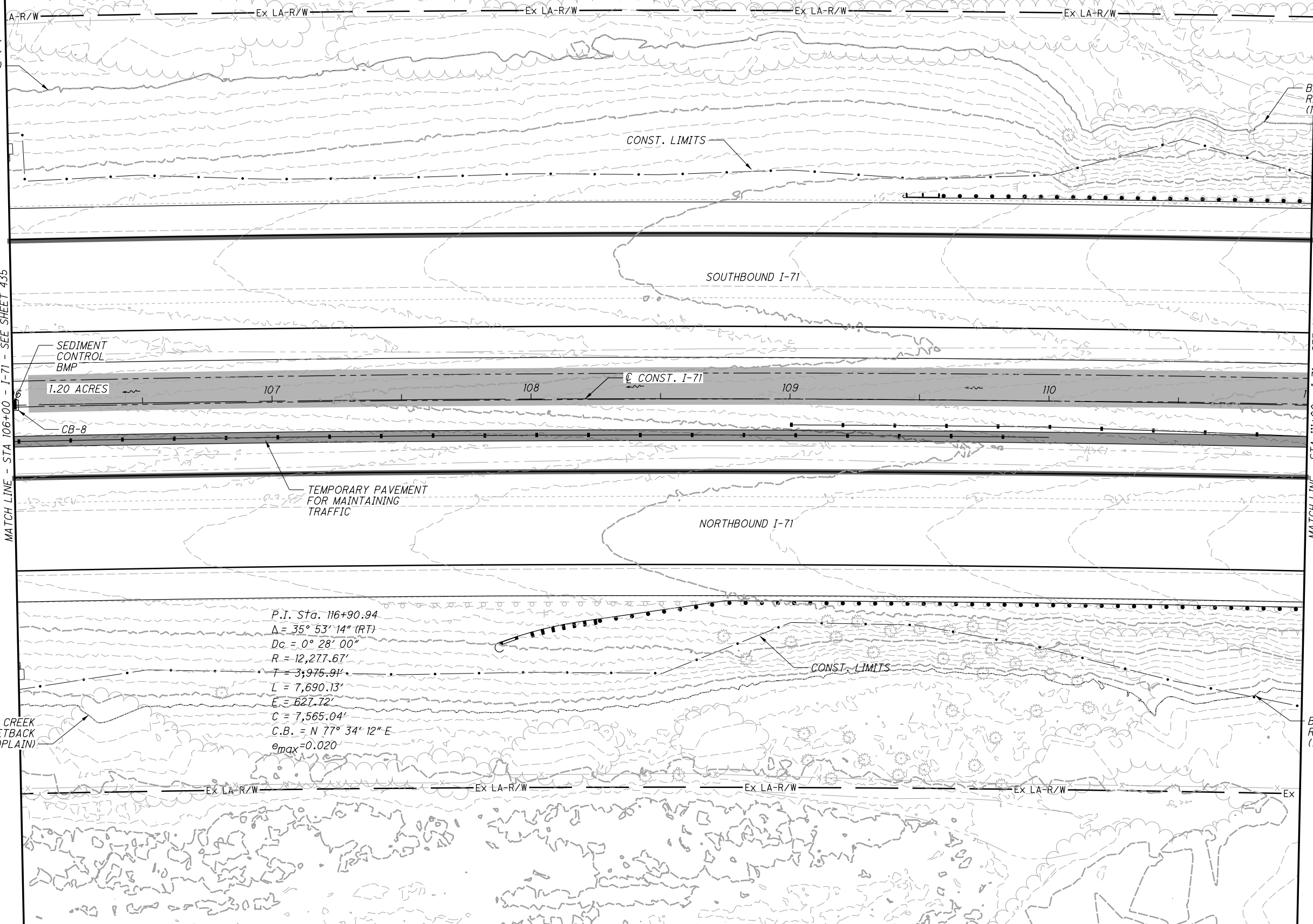
X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO23_sw3p.dgn Sheet 10/28/2019 11:07:51 AM 1458s.js

BIG DARBY CREEK
RIPARIAN SETBACK
(100-YEAR FLOODPLAIN)

BIG DARBY CREEK
RIPARIAN SETBACK
(100-YEAR FLOODPLAIN)

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 435

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 437



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$



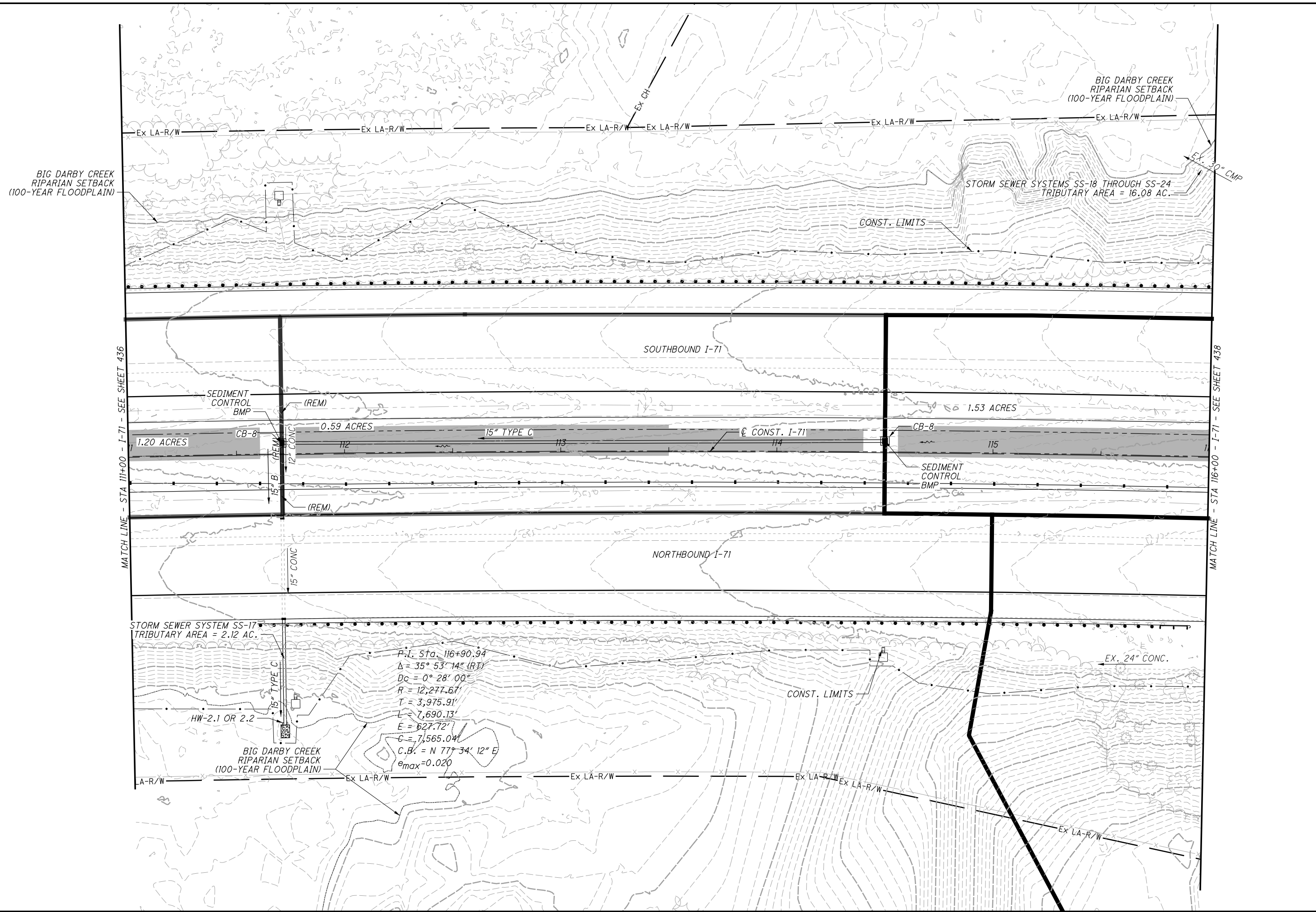
CALCULATED
 CTW
 CHECKED
 MAH

STORM WATER SITE PLAN
STA 106+00 TO STA 111+00

FRA-71-0:00

436
 1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP024_sw3p.dgn_Sheet 10/28/2019 11:07:52 AM 1458s.js



CALCULATED
 CTW
 CHECKED
 MAH

STORM WATER SITE PLAN
STA 116+00 TO STA 121+00

FRA-71-0.00

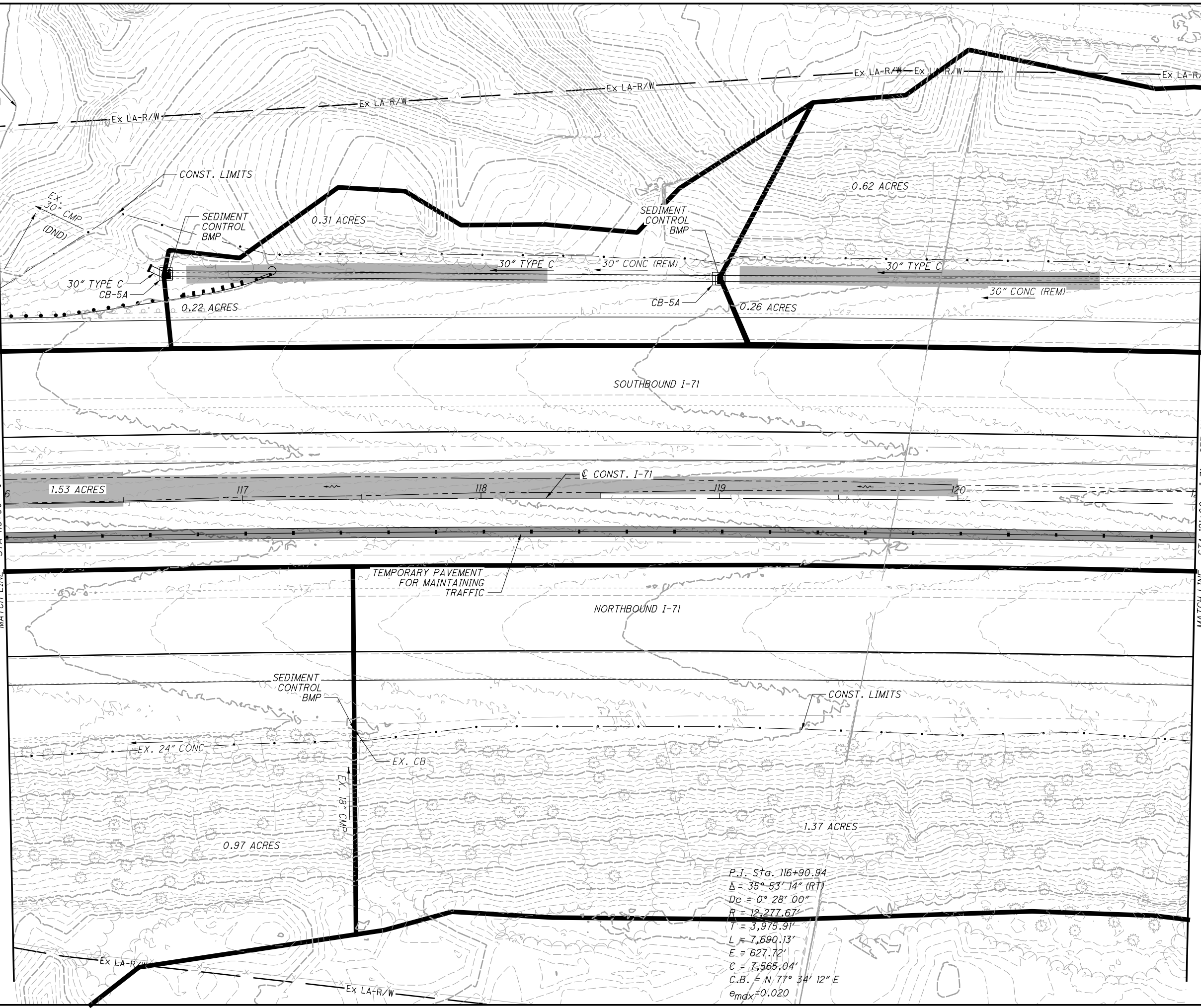
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BIG DARBY CREEK
RIPARIAN SETBACK
(100-YEAR FLOODPLAIN)

STORM SEWER SYSTEMS
SS-18 THROUGH SS-24
TRIBUTARY AREA =
16.08 AC.

MATCH LINE - STA 116+00 - I-71 - SEE SHEET 437

MATCH LINE - STA 121+00 - I-71 - SEE SHEET 439



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 1,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CALCULATED
CTW
CHECKED
MAH

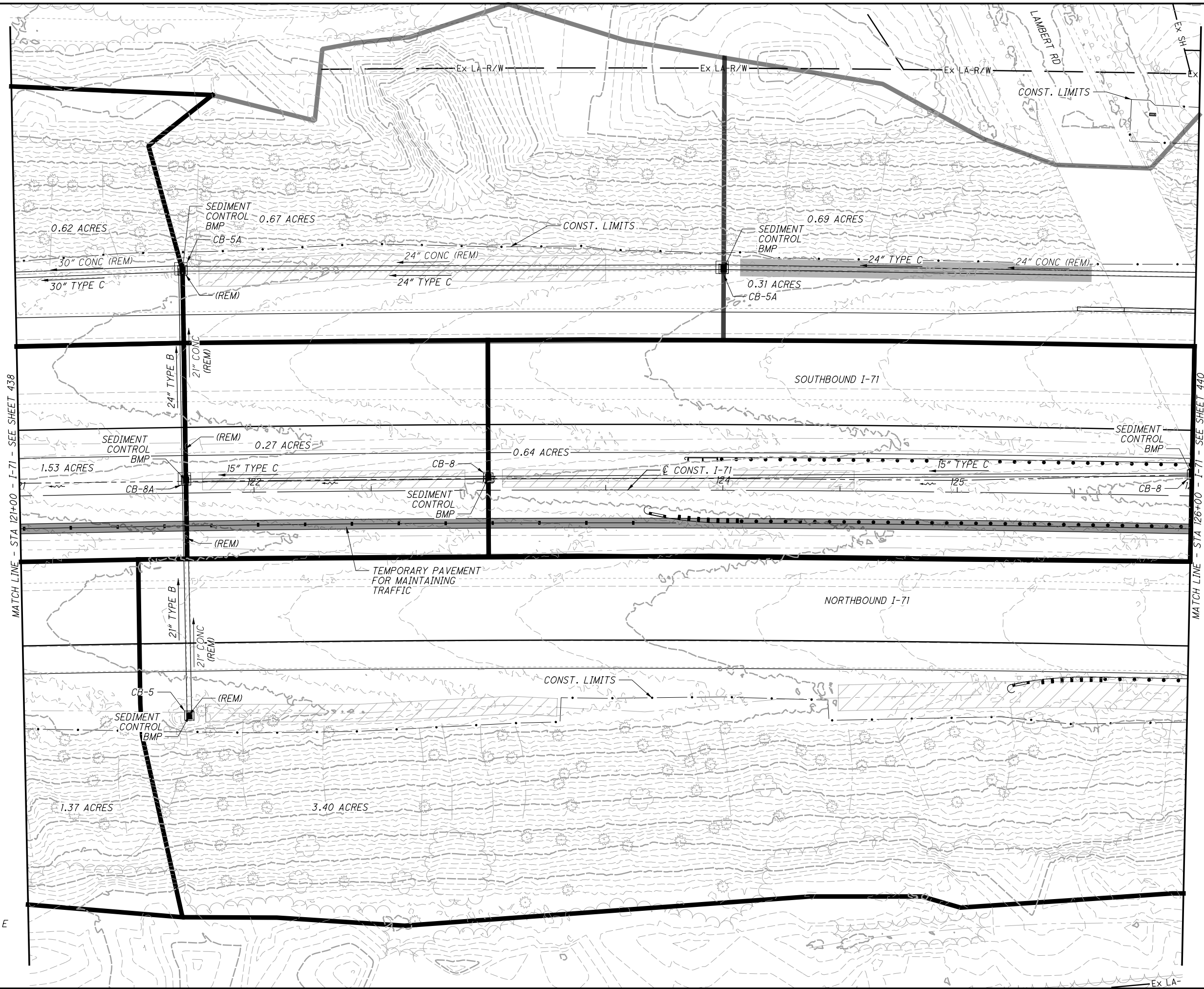
10
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 116+00 TO STA 121+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO26_sw3p.dgn_Sheet 10/28/2019 11:07:57 AM 1458sjs

P.I. Sta. 116+90.94
Δ = 35° 53' 14" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 3,975.91'
L = 7,690.13'
E = 627.72'
C = 7,565.04'
C.B. = N 77° 34' 12" E
e_{max} = 0.020



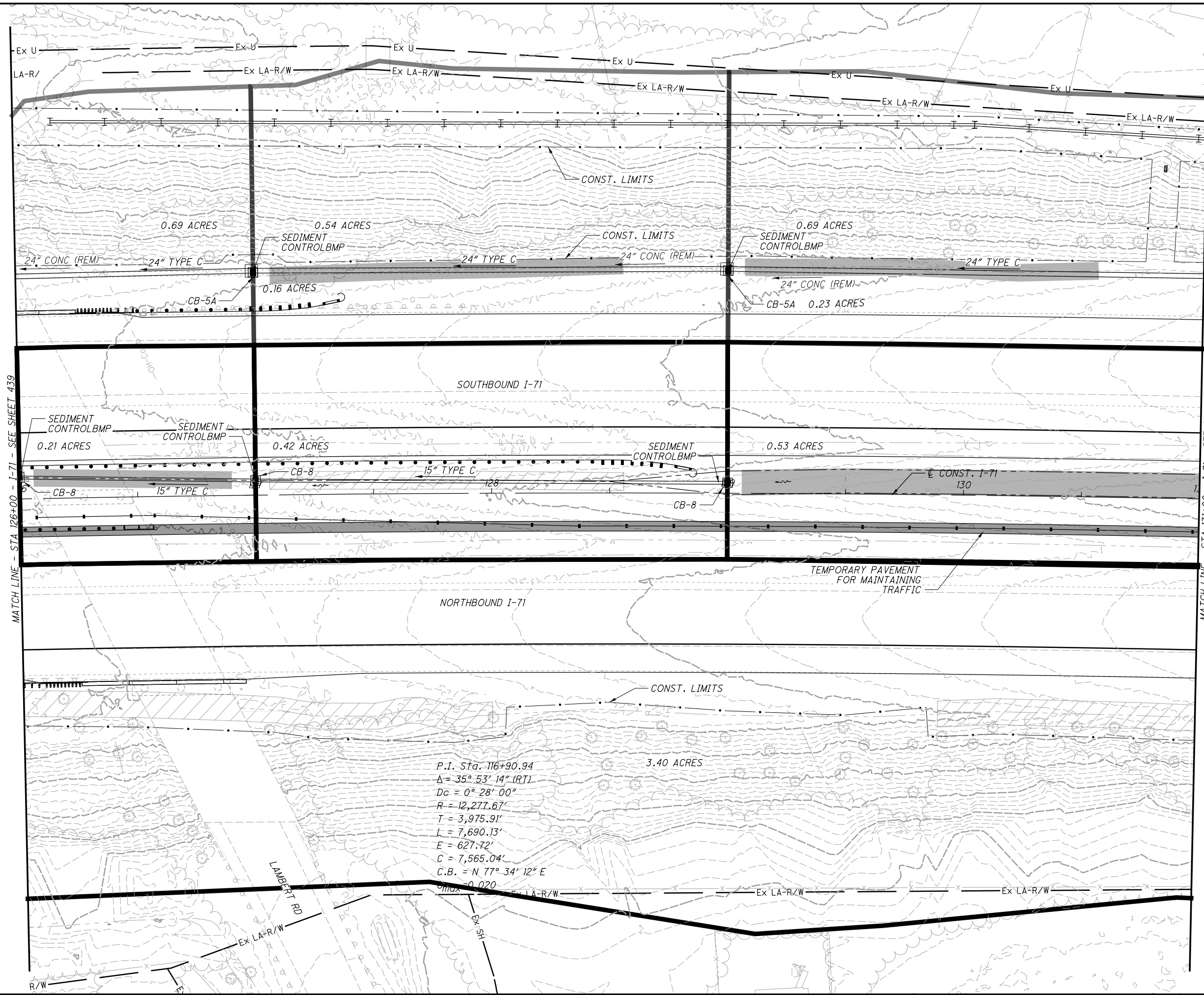
CALCULATED
CTW
CHECKED
MAH

0 20 40
10
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 121+00 TO STA 126+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP027_sw3p.dgn_Sheet 10/28/2019 11:07:58 AM 1458s.js



MATCH LINE - STA 126+00 - I-71 - SEE SHEET 439

MATCH LINE - STA 131+00 - I-71 - SEE SHEET 441

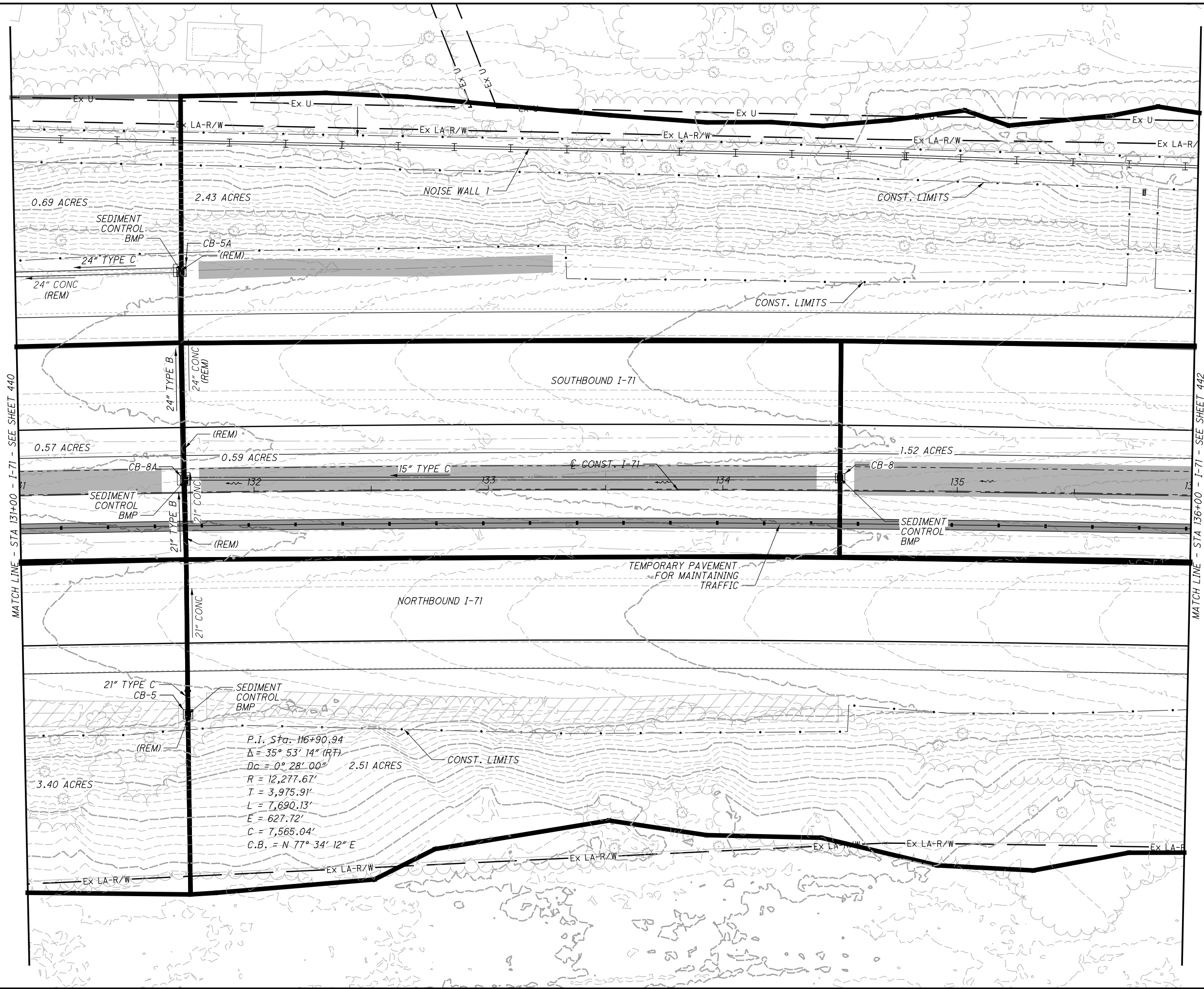
P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $DC = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $Chmax = 0.020$

CALCULATED
 CTW
 CHECKED
 MAH

STORM WATER SITE PLAN
 STA 126+00 TO STA 131+00

FRA-71-0.00
 440
 1312

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MATCH LINE - STA 131+00 - I-71 - SEE SHEET 440

MATCH LINE - STA 136+00 - I-71 - SEE SHEET 442

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$



CALCULATED
 CTW
 CHECKED
 MAH

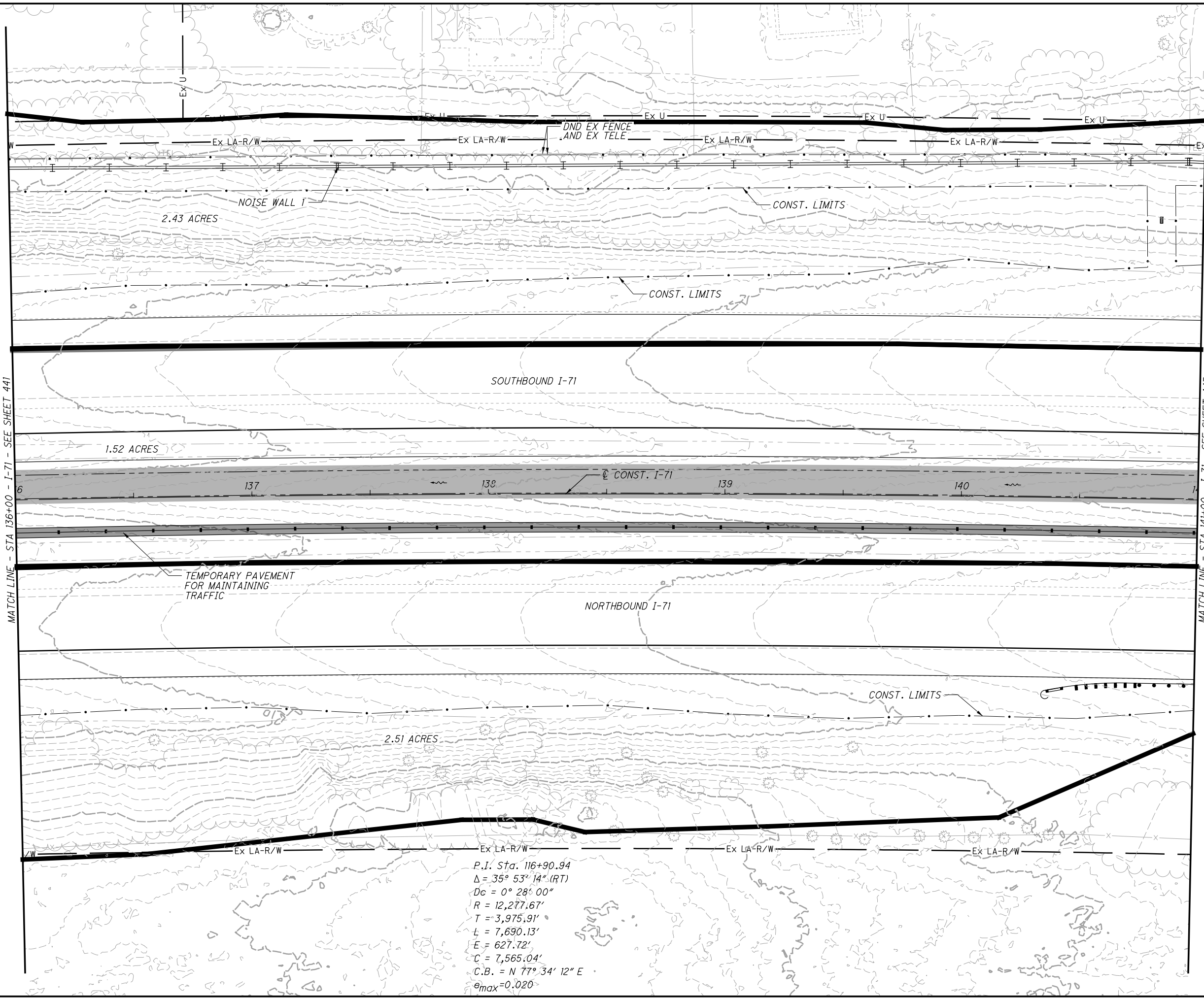
STORM WATER SITE PLAN
STA 131+00 TO STA 136+00

FRA-71-0.00

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MATCH LINE - STA 136+00 - I-71 - SEE SHEET 441

MATCH LINE - STA 141+00 - I-71 - SEE SHEET 443



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 C.B. = N $77^\circ 34' 12''$ E
 $\theta_{max} = 0.020$

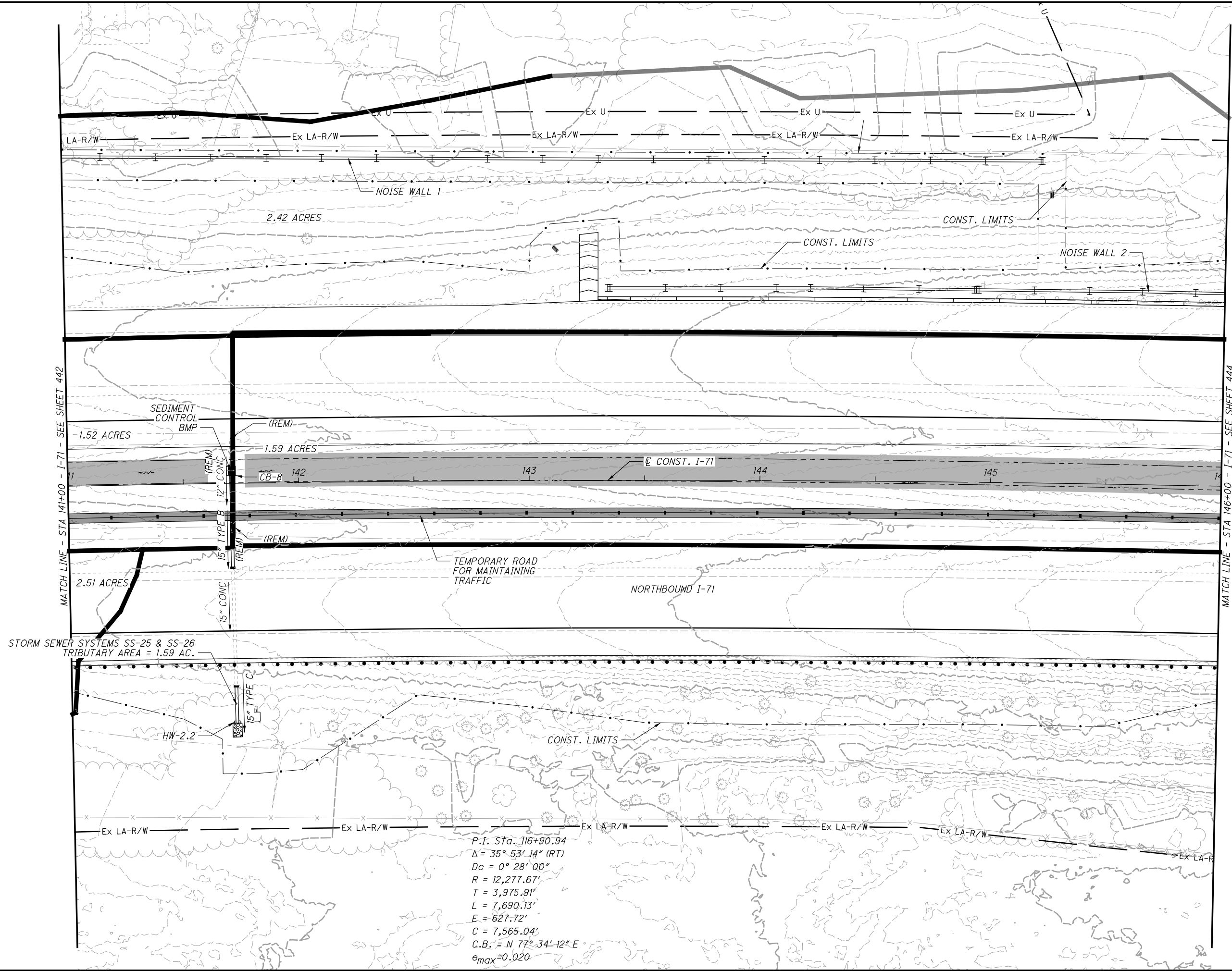
CALCULATED
 CTW
 CHECKED
 MAH

0 20 40
 HORIZONTAL
 SCALE IN FEET

STORM WATER SITE PLAN
STA 136+00 TO STA 141+00

FRA-71-0.00

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MATCH LINE - STA 141+00 - I-71 - SEE SHEET 442

MATCH LINE - STA 146+00 - I-71 - SEE SHEET 444

STORM SEWER SYSTEMS SS-25 & SS-26
TRIBUTARY AREA = 1.59 AC.

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$



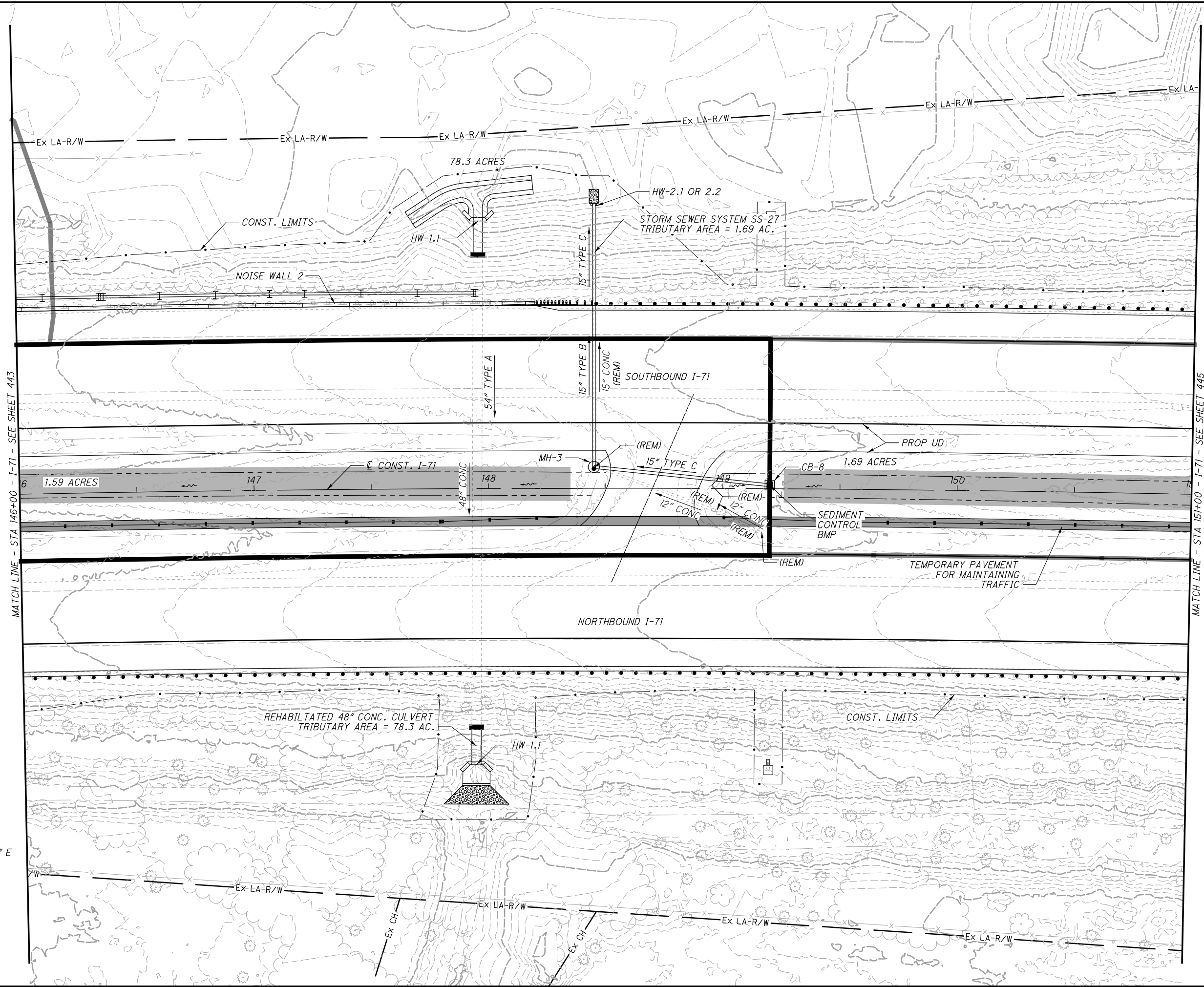
CALCULATED
 CTW
 CHECKED
 MAH

STORM WATER SITE PLAN
STA 141+00 TO STA 146+00

FRA-71-0.00

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P.I. Sta. 116+90.94
Δ = 35° 53' 14" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 3,975.91'
L = 7,690.13'
E = 627.72'
C = 7,565.04'
C.B. = N 77° 34' 12" E
θ_{max} = 0.020



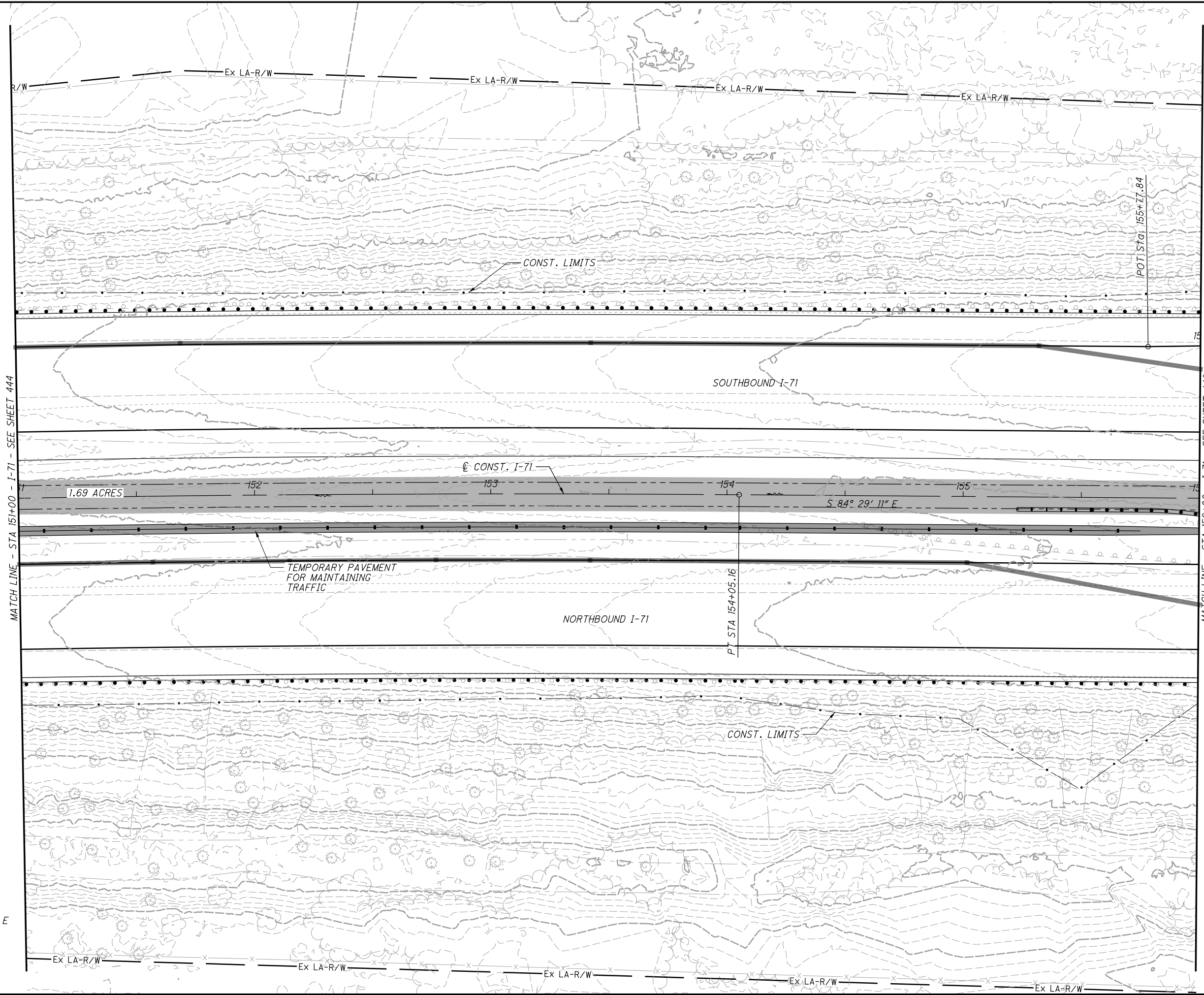
CALCULATED	CTW
CHECKED	MAH

STORM WATER SITE PLAN
STA 146+00 TO STA 151+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO32_sw3p.dgn Sheet 10/28/2019 11:08:02 AM 1458s.js

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
C.B. = N $77^\circ 34' 12''$ E
 $e_{max} = 0.020$



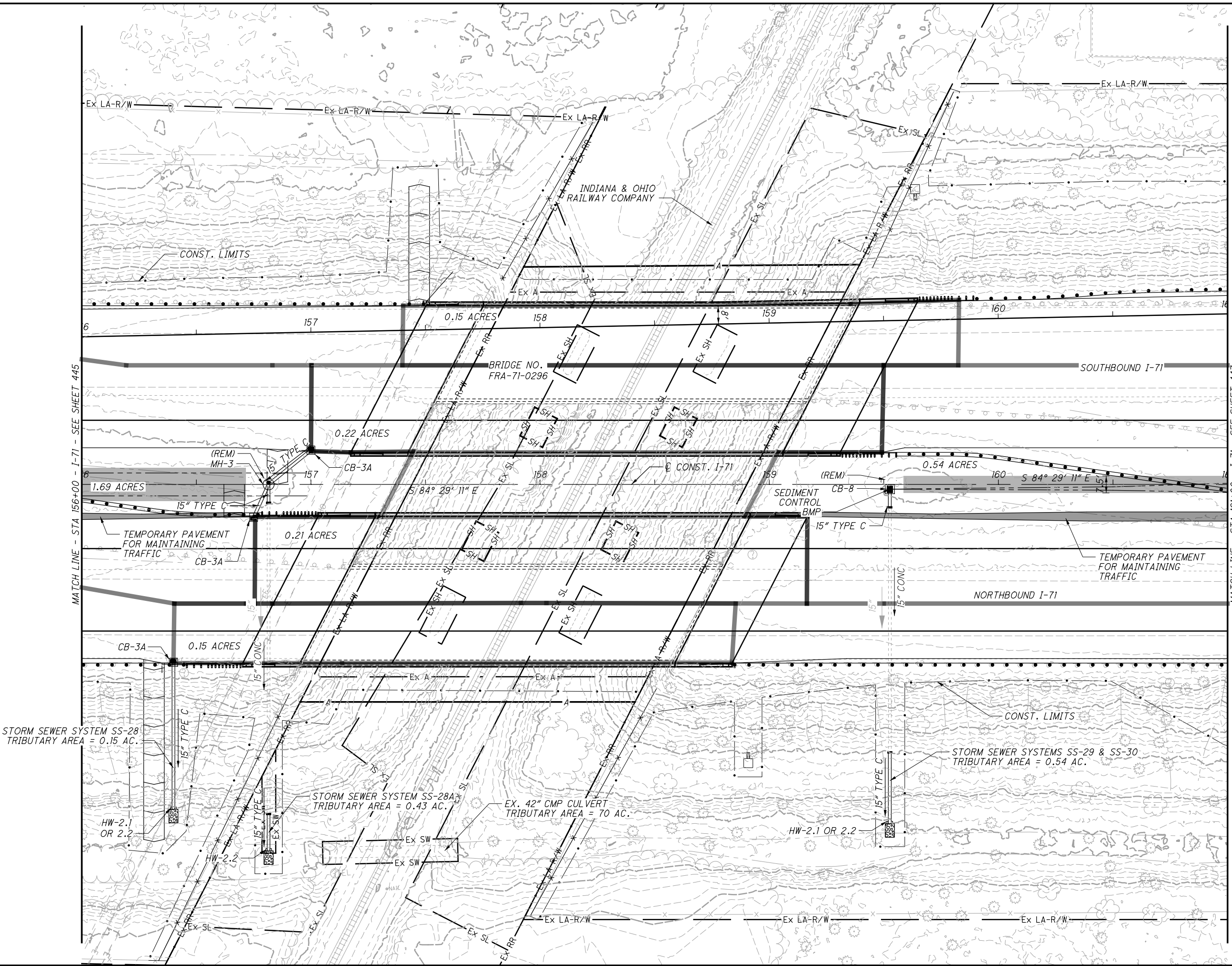
CALCULATED
CTW
CHECKED
MAH

STORM WATER SITE PLAN
STA 151+00 TO STA 156+00

FRA-71-0.00

445
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP033_sw3p.dgn Sheet 10/28/2019 11:08:03 AM 1458s.js



MATCH LINE - STA 156+00 - I-71 - SEE SHEET 445

MATCH LINE - STA 161+00 - I-71 - SEE SHEET 447

STORM SEWER SYSTEM SS-28
TRIBUTARY AREA = 0.15 AC.

STORM SEWER SYSTEM SS-28A
TRIBUTARY AREA = 0.43 AC.

EX. 42" CMP CULVERT
TRIBUTARY AREA = 70 AC.

STORM SEWER SYSTEMS SS-29 & SS-30
TRIBUTARY AREA = 0.54 AC.

CALCULATED
CTW
CHECKED MAH

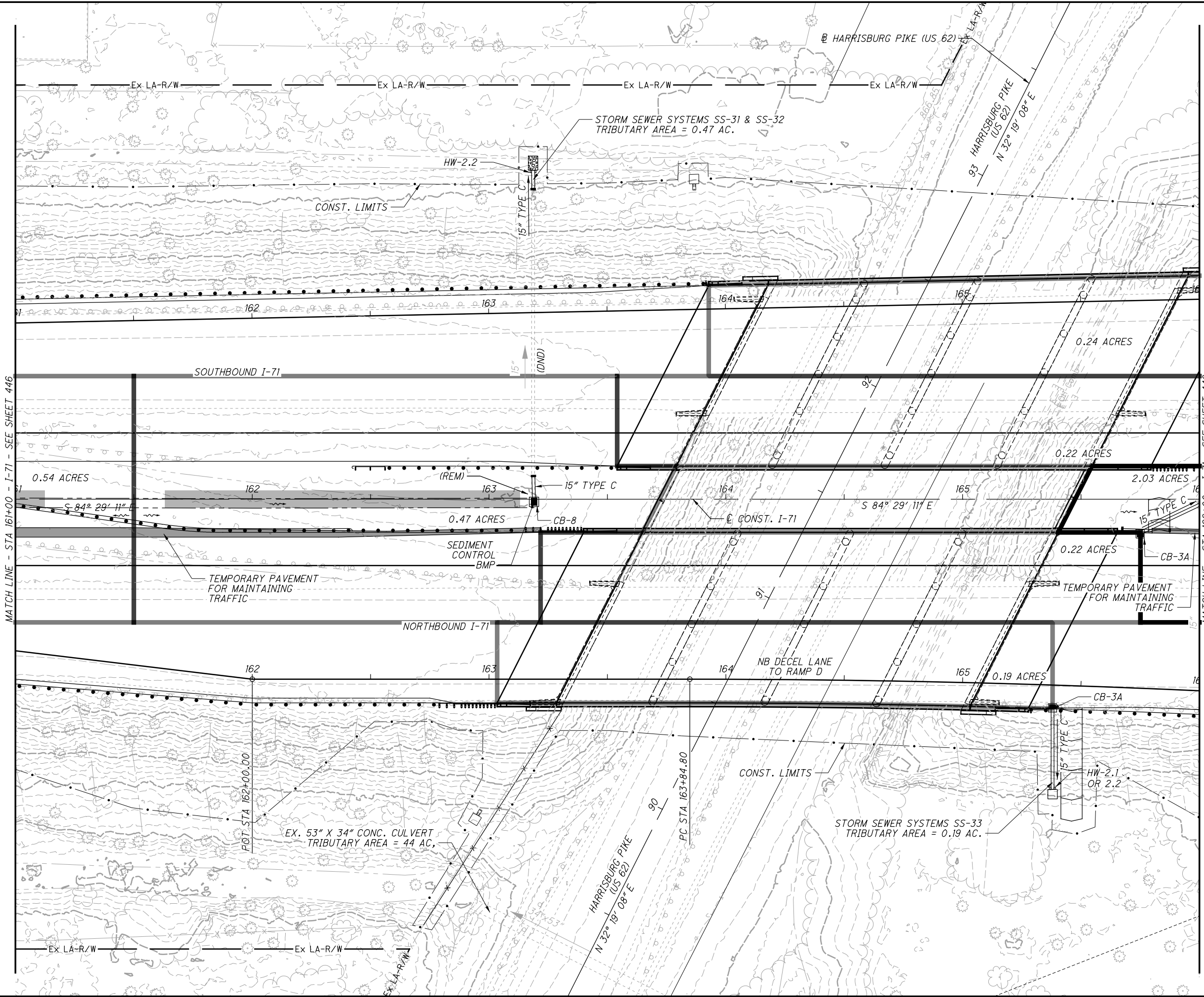
0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 156+00 TO STA 161+00

FRA-71-0.00

446
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO34_sw3p.dgn Sheet 10/28/2019 11:08:04 AM 1458s.js



MATCH LINE - STA 161+00 - I-71 - SEE SHEET 446

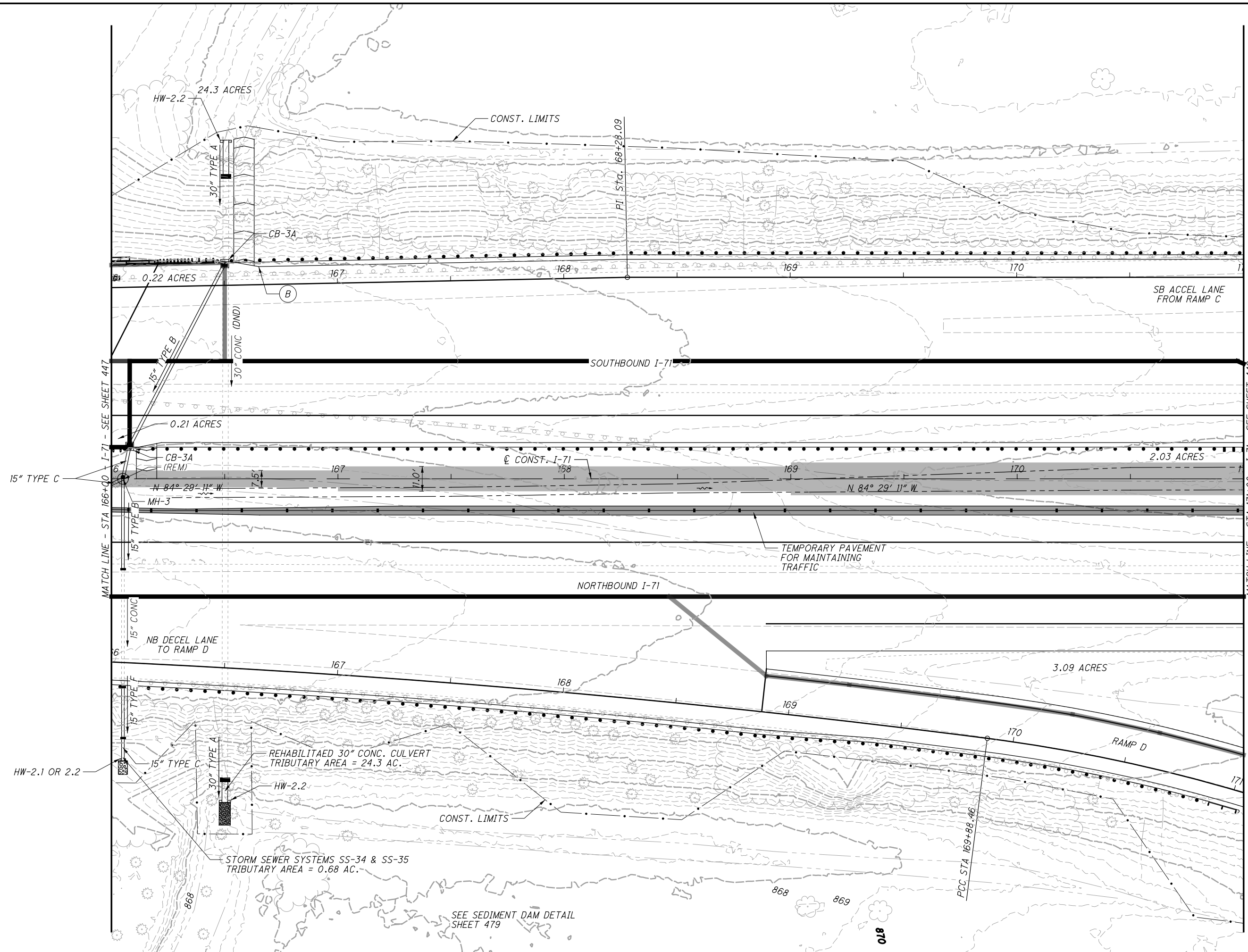
MATCH LINE - STA 166+00 - I-71 - SEE SHEET 448

CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 161+00 TO STA 166+00

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CALCULATED
CTW
CHECKED
MAH

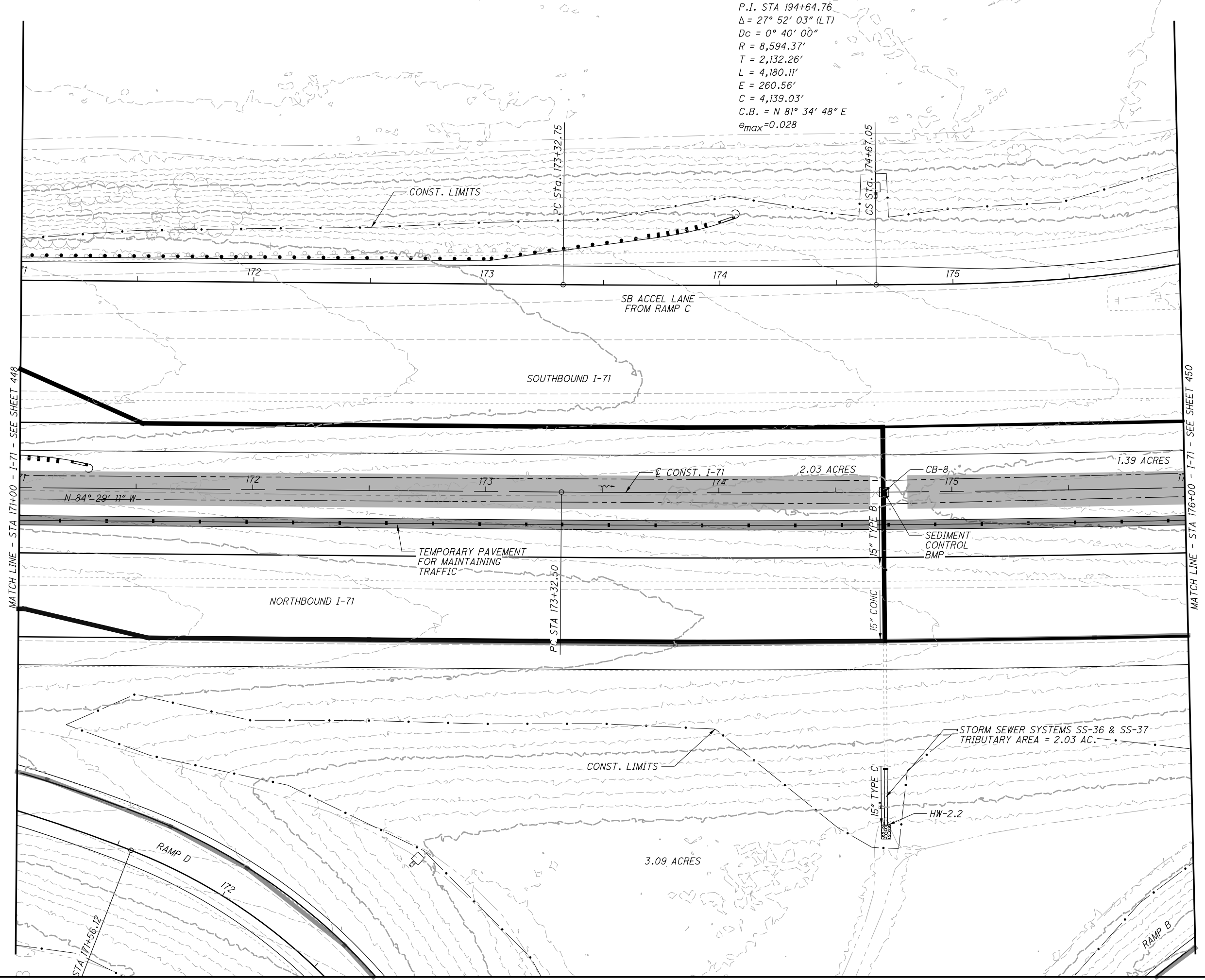
0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 166+00 TO STA 171+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP036_sw3p.dgn Sheet 10/28/2019 11:08:06 AM 1458sjs

P.I. STA 194+64.76
Δ = 27° 52' 03" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 2,132.26'
L = 4,180.11'
E = 260.56'
C = 4,139.03'
C.B. = N 81° 34' 48" E
e_{max} = 0.028



MATCH LINE - STA 171+00 - I-71 - SEE SHEET 448

MATCH LINE - STA 176+00 - I-71 - SEE SHEET 450

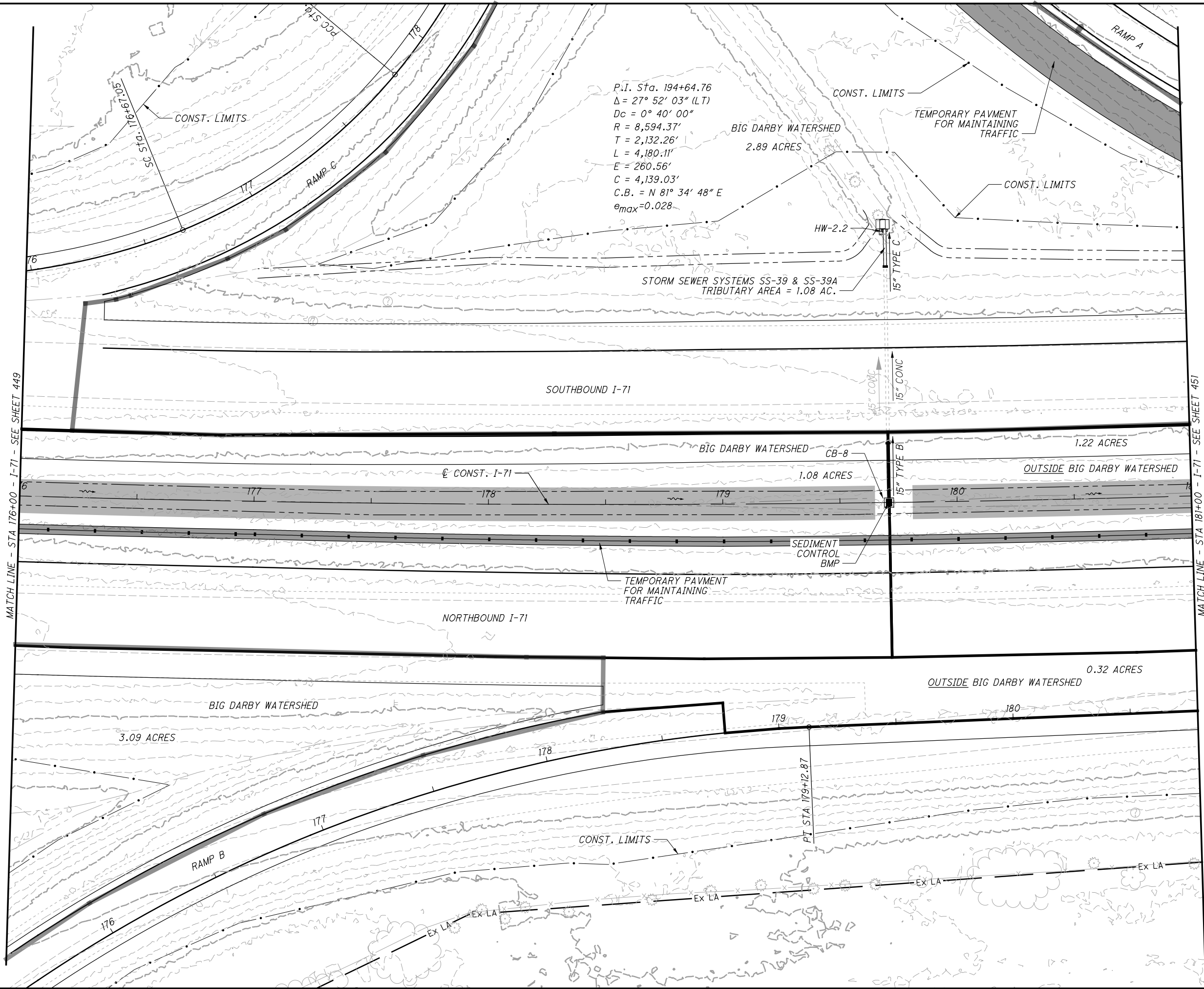
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 171+00 TO STA 176+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO37_sw3p.dgn_Sheet 10/28/2019 11:08:06 AM 1458s.js



MATCH LINE - STA 176+00 - I-71 - SEE SHEET 449

MATCH LINE - STA 181+00 - I-71 - SEE SHEET 451

CALCULATED
 CTW
 CHECKED
 MAH

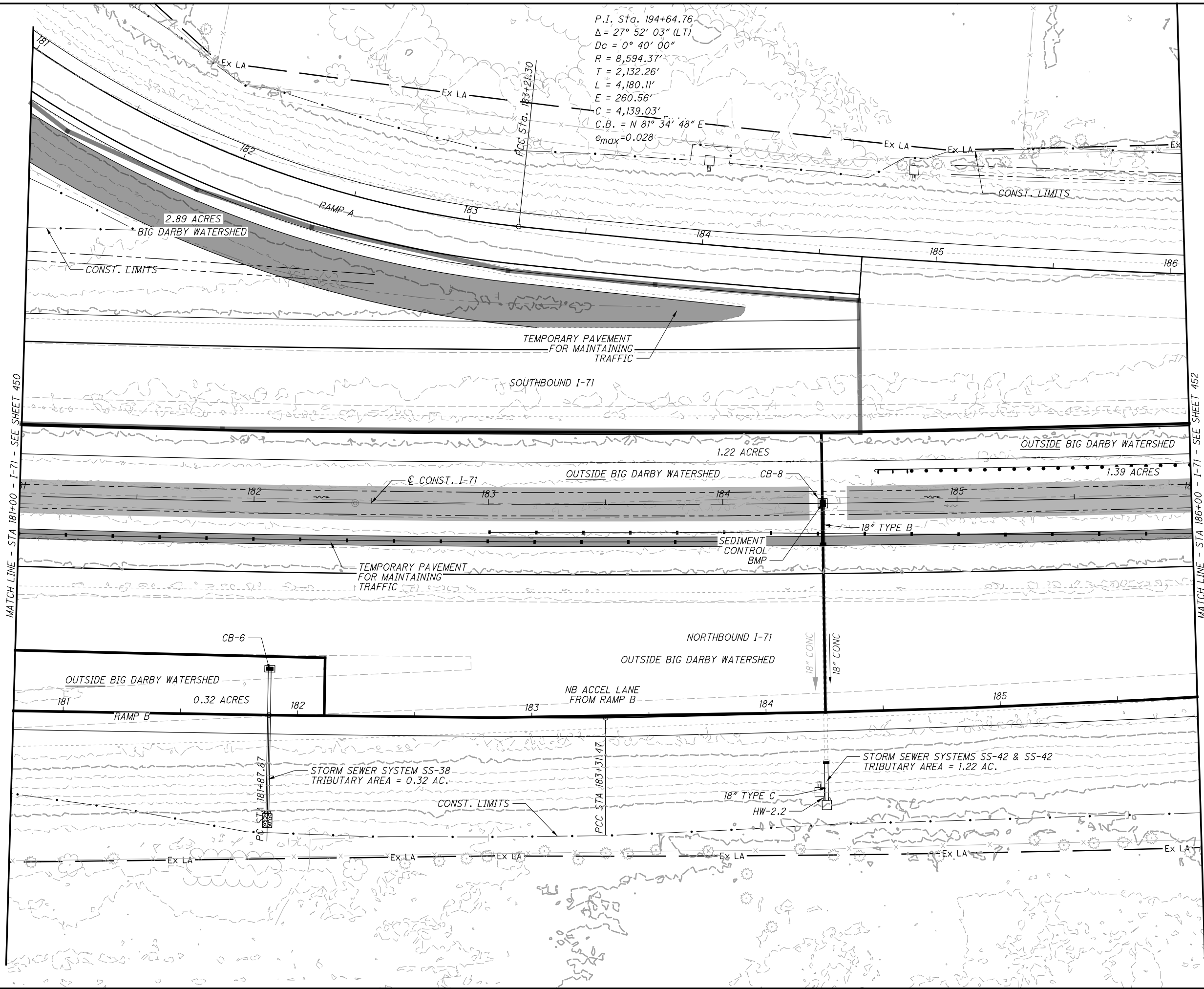
0 20 40
 HORIZONTAL
 SCALE IN FEET

STORM WATER SITE PLAN
STA 176+00 TO STA 181+00

FRA-71-0.00

450
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO38_sw3p.dgn_Sheet 10/28/2019 11:08:07 AM 1458s.js



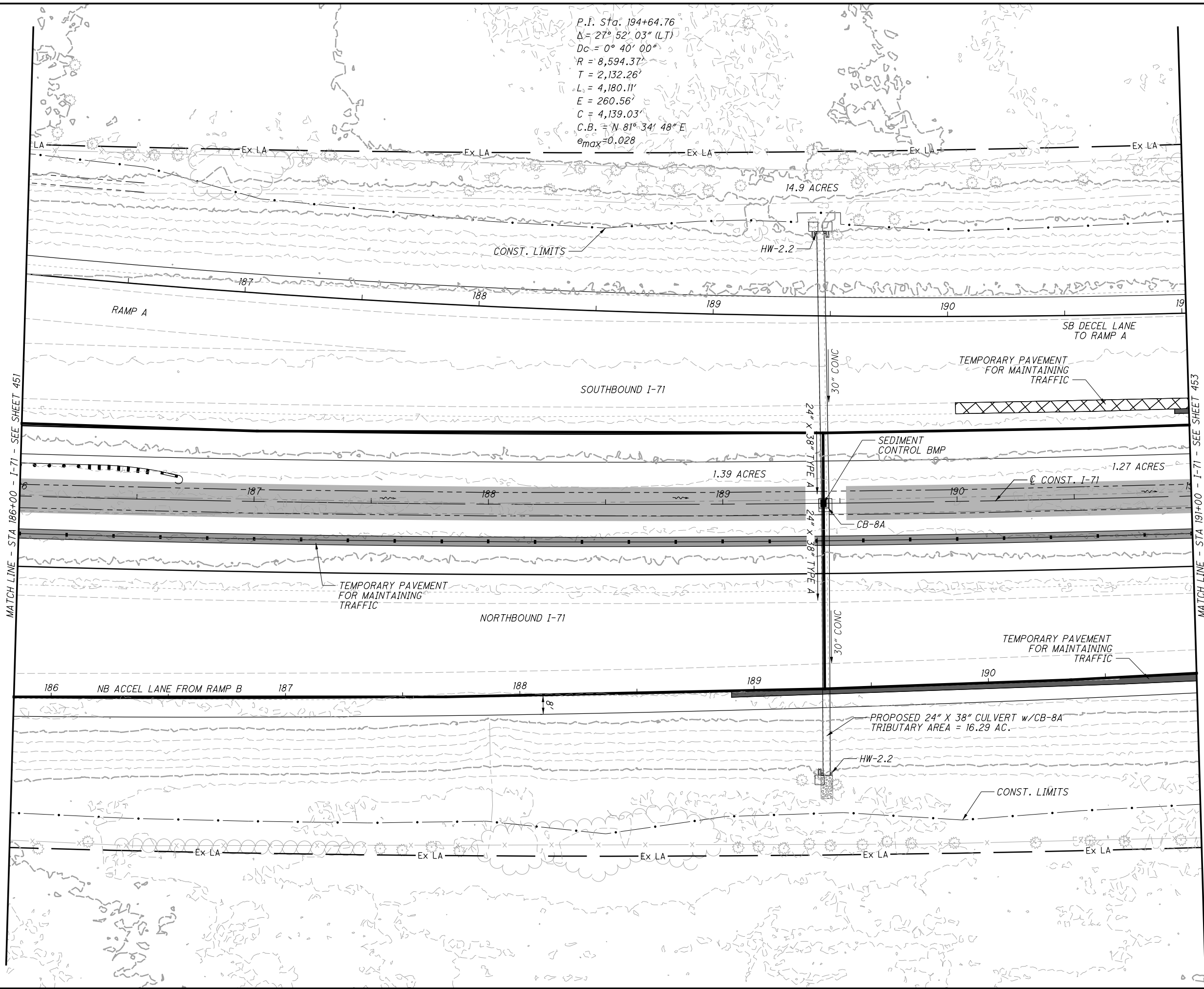
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 181+00 TO STA 186+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO39_sw3p.dgn_Sheet 10/28/2019 11:08:08 AM 1458s.js



P.I. Sta: 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LJ)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L_s = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

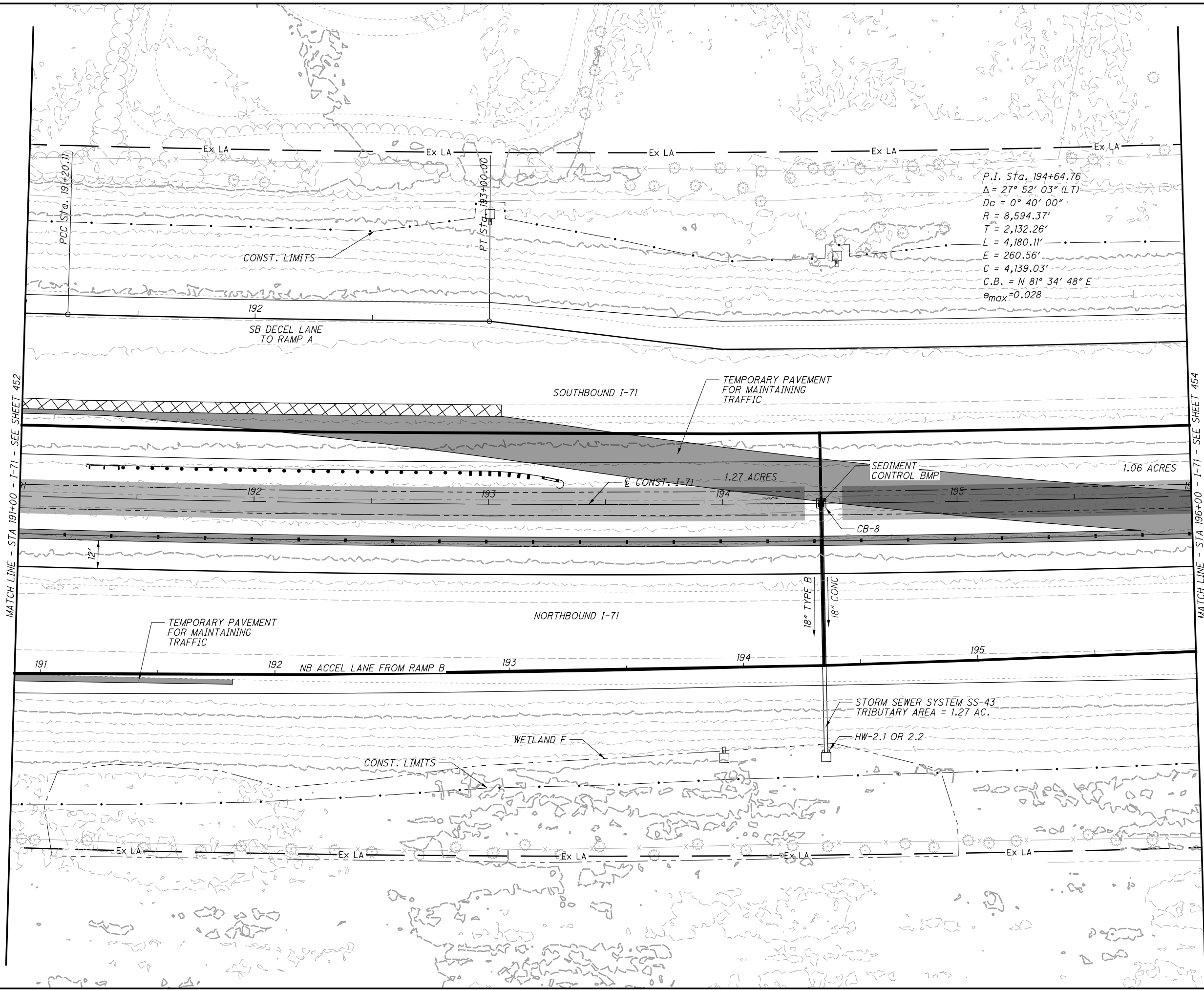
CALCULATED
 CTW
 CHECKED
 MAH

0 20 40
 HORIZONTAL
 SCALE IN FEET

STORM WATER SITE PLAN
STA 186+00 TO STA 191+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP040_sw3p.dgn_Sheet 10/28/2019 11:08:09 AM 1458s.js



P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

MATCH LINE - STA 191+00 - I-71 - SEE SHEET 452

MATCH LINE - STA 196+00 - I-71 - SEE SHEET 454



CALCULATED	0
CTW	40
CHECKED	MAH

STORM WATER SITE PLAN
STA 191+00 TO STA 196+00

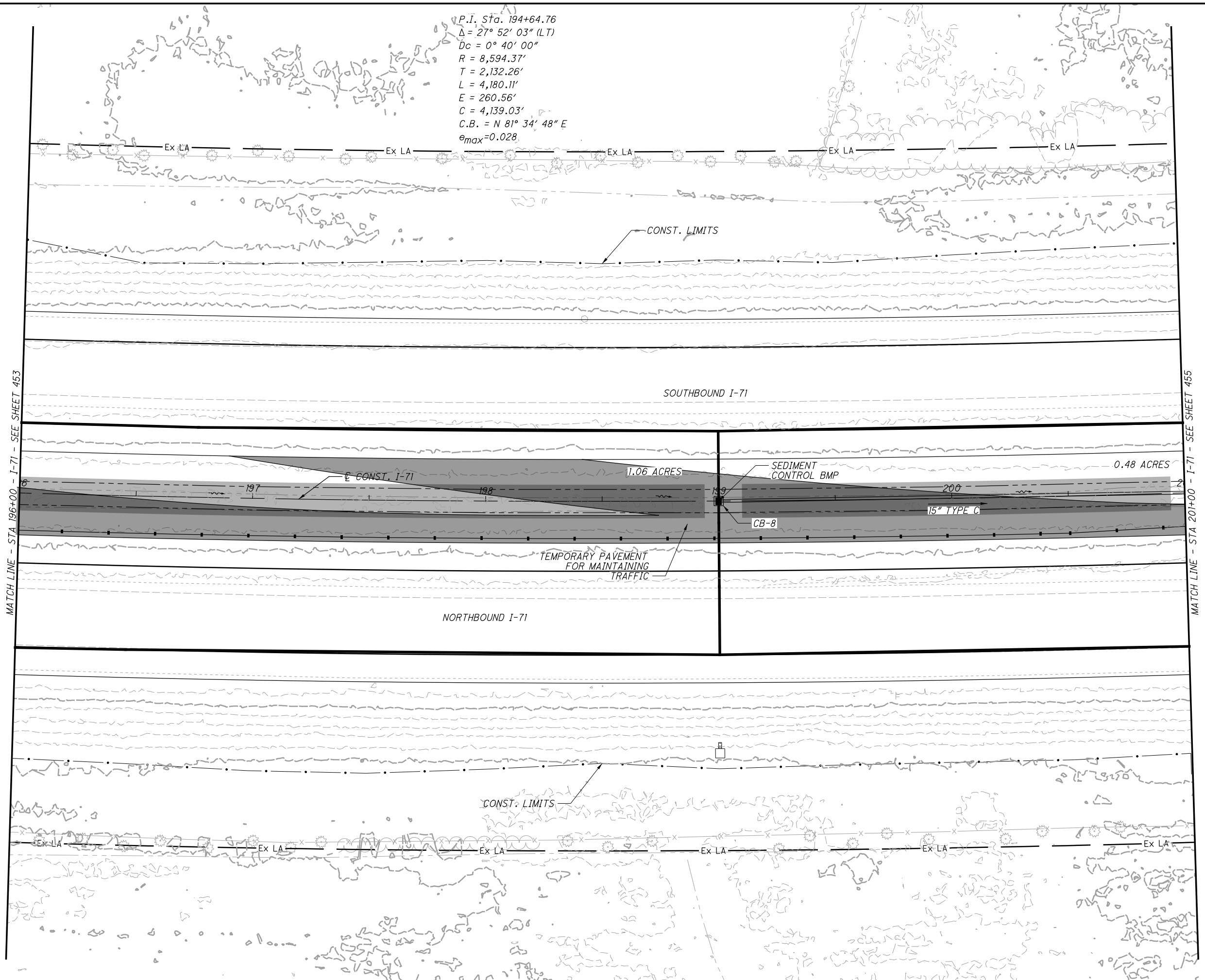
FRA-71-0.00

453
1312

P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

CALCULATED
 CTW
 CHECKED
 MAH

0 20 40
 HORIZONTAL
 SCALE IN FEET



MATCH LINE - STA 196+00 - I-71 - SEE SHEET 453

MATCH LINE - STA 201+00 - I-71 - SEE SHEET 455

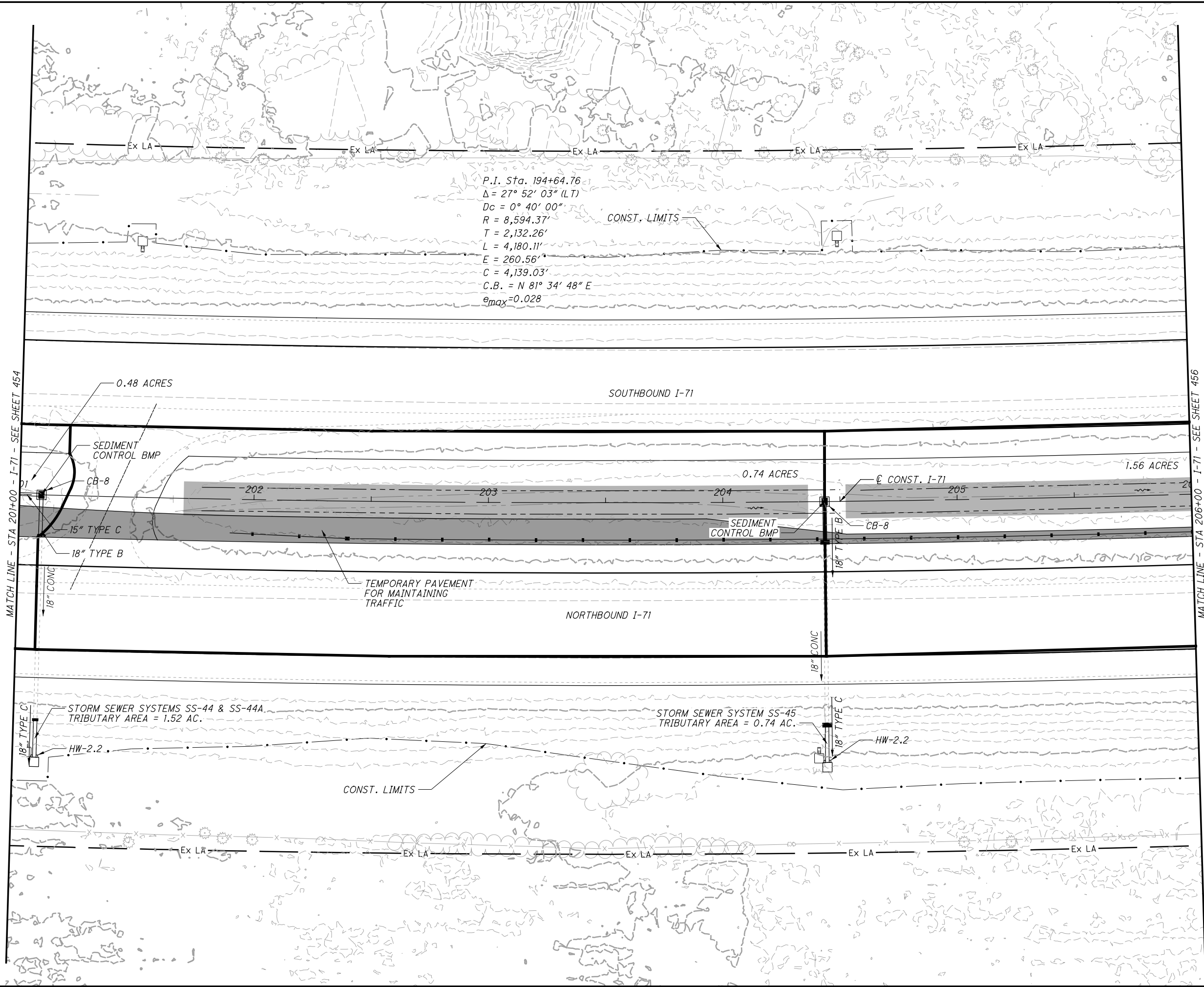
STORM WATER SITE PLAN
STA 196+00 TO STA 201+00

FRA-71-0.00

454
 1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\10720IDP041_sw3p.dgn Sheet 10/28/2019 11:08:09 AM 1458s.js

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP042_sw3p.dgn_Sheet 10/28/2019 11:08:10 AM 1458s.js



P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

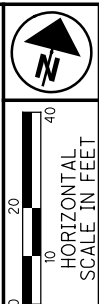
MATCH LINE - STA 201+00 - I-71 - SEE SHEET 454

MATCH LINE - STA 206+00 - I-71 - SEE SHEET 456

CALCULATED
CTW
CHECKED
MAH

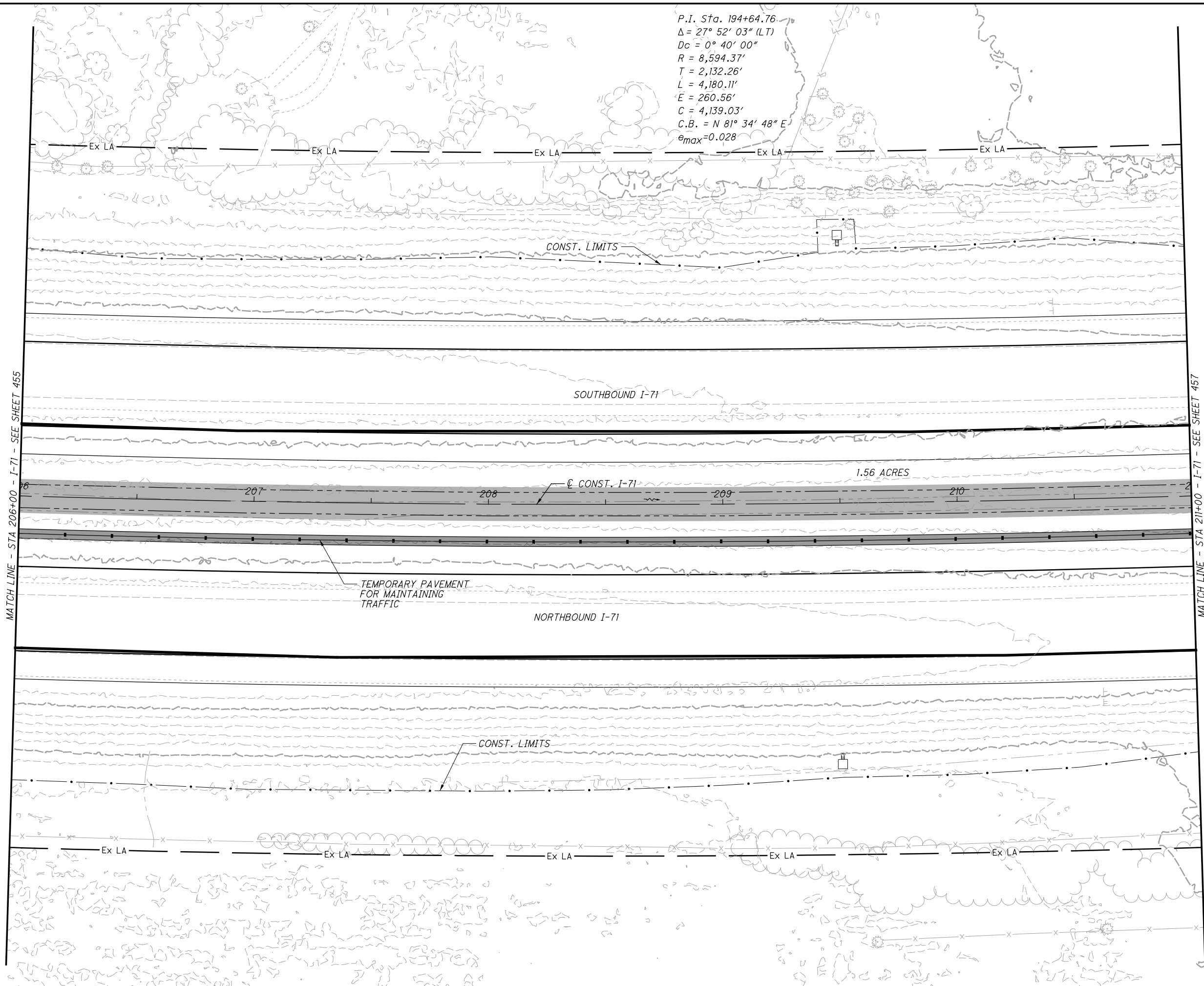
STORM WATER SITE PLAN
STA 201+00 TO STA 206+00

FRA-71-0.00



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P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N 81° 34' 48" E
 $e_{max} = -0.028$



0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CTW
CHECKED
MAH

STORM WATER SITE PLAN
STA 206+00 TO STA 211+00

FRA - 71 - 0.00

456
1312

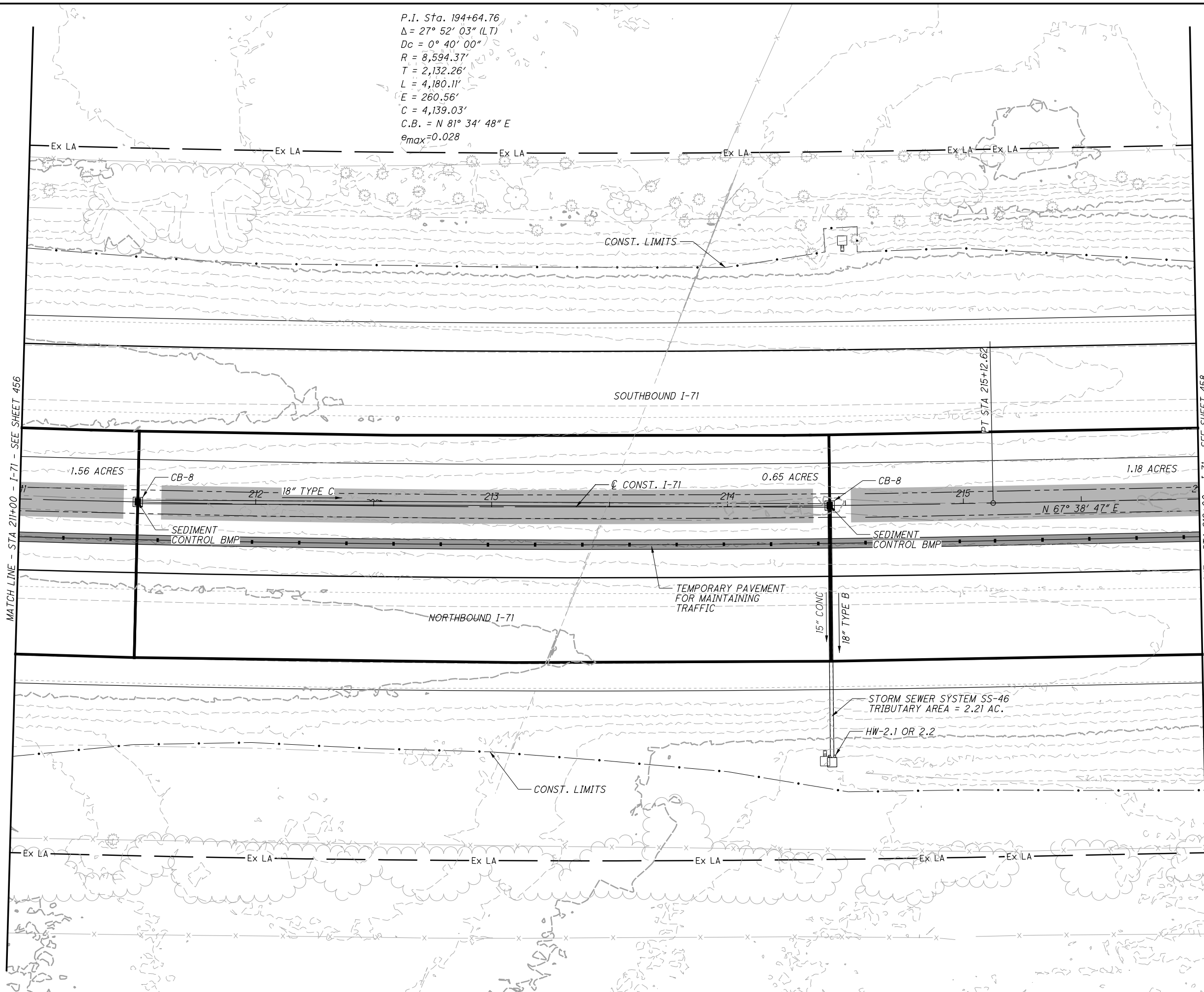
X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP044_sw3p.dgn_Sheet 10/28/2019 11:08:16 AM 1458s.js

P.I. Sta. 194+64.76
Δ = 27° 52' 03" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 2,132.26'
L = 4,180.11'
E = 260.56'
C = 4,139.03'
C.B. = N 81° 34' 48" E
@max=0.028



0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CTW
CHECKED
MAH



MATCH LINE - STA 211+00 - I-71 - SEE SHEET 456

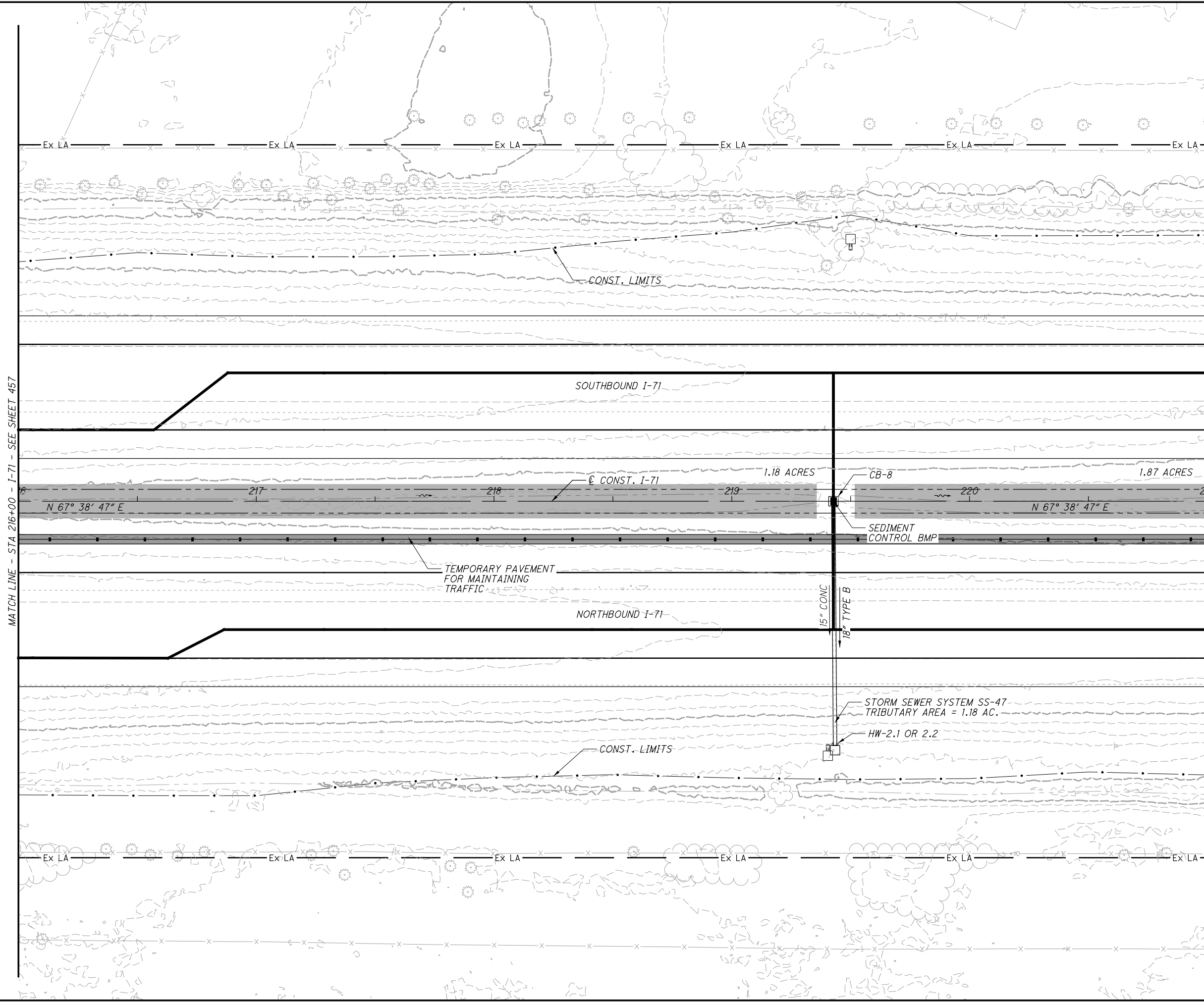
MATCH LINE - STA 216+00 - I-71 - SEE SHEET 458

STORM WATER SITE PLAN
STA 211+00 TO STA 216+00

FRA-71-0.00

457
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO45_sw3p.dgn Sheet 10/28/2019 11:08:16 AM 1458s.js



0 20 40
HORIZONTAL
SCALE IN FEET

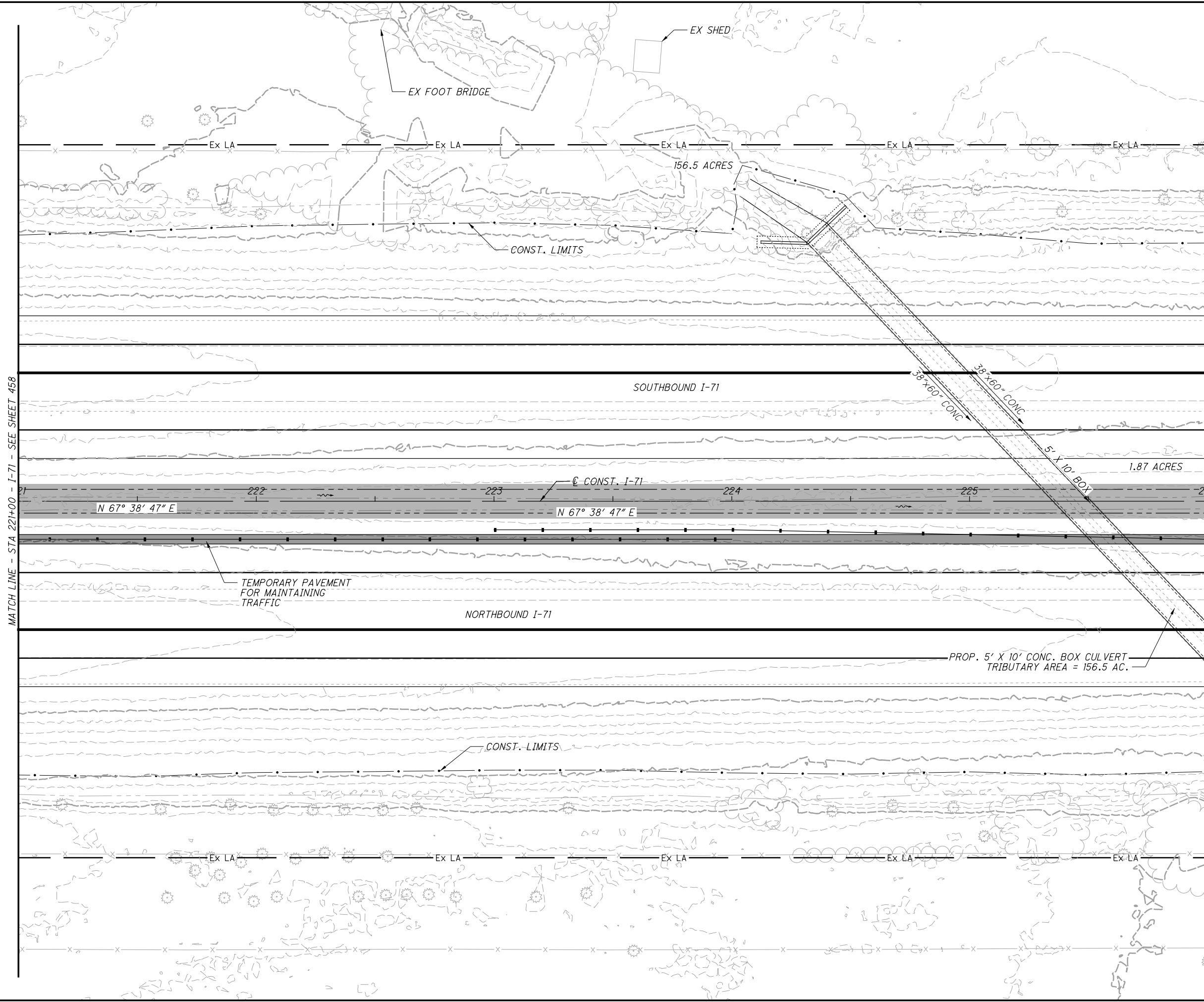
CALCULATED
CTW
CHECKED
MAH

STORM WATER SITE PLAN
STA 216+00 TO STA 221+00

FRA - 71 - 0.00

458
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP046_sw3p.dgn_Sheet 10/28/2019 11:08:17 AM 1458s.js



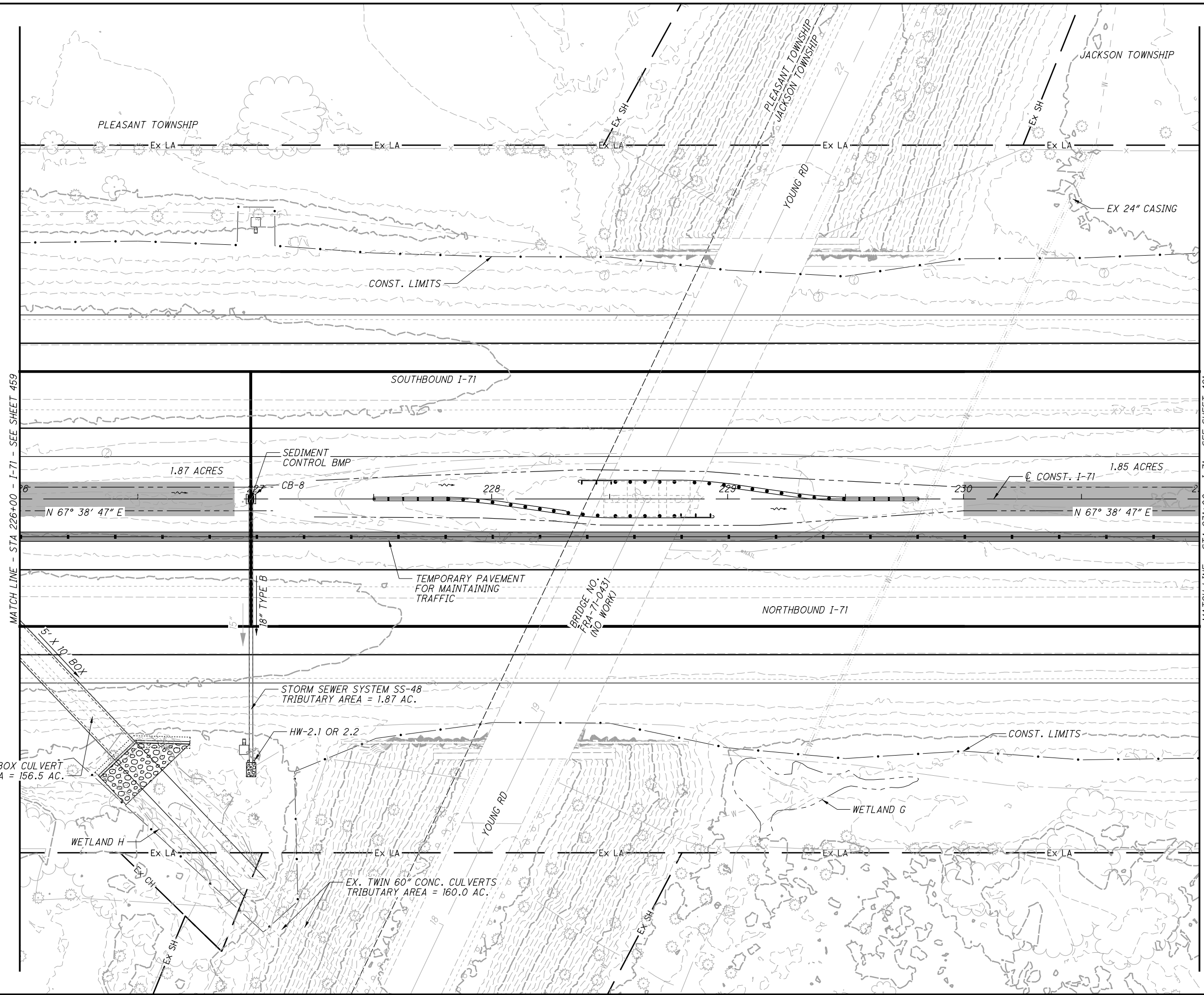
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 221+00 TO STA 226+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO47_sw3p.dgn Sheet 10/28/2019 11:08:17 AM 1458s.js



CALCULATED
CTW
CHECKED
MAH

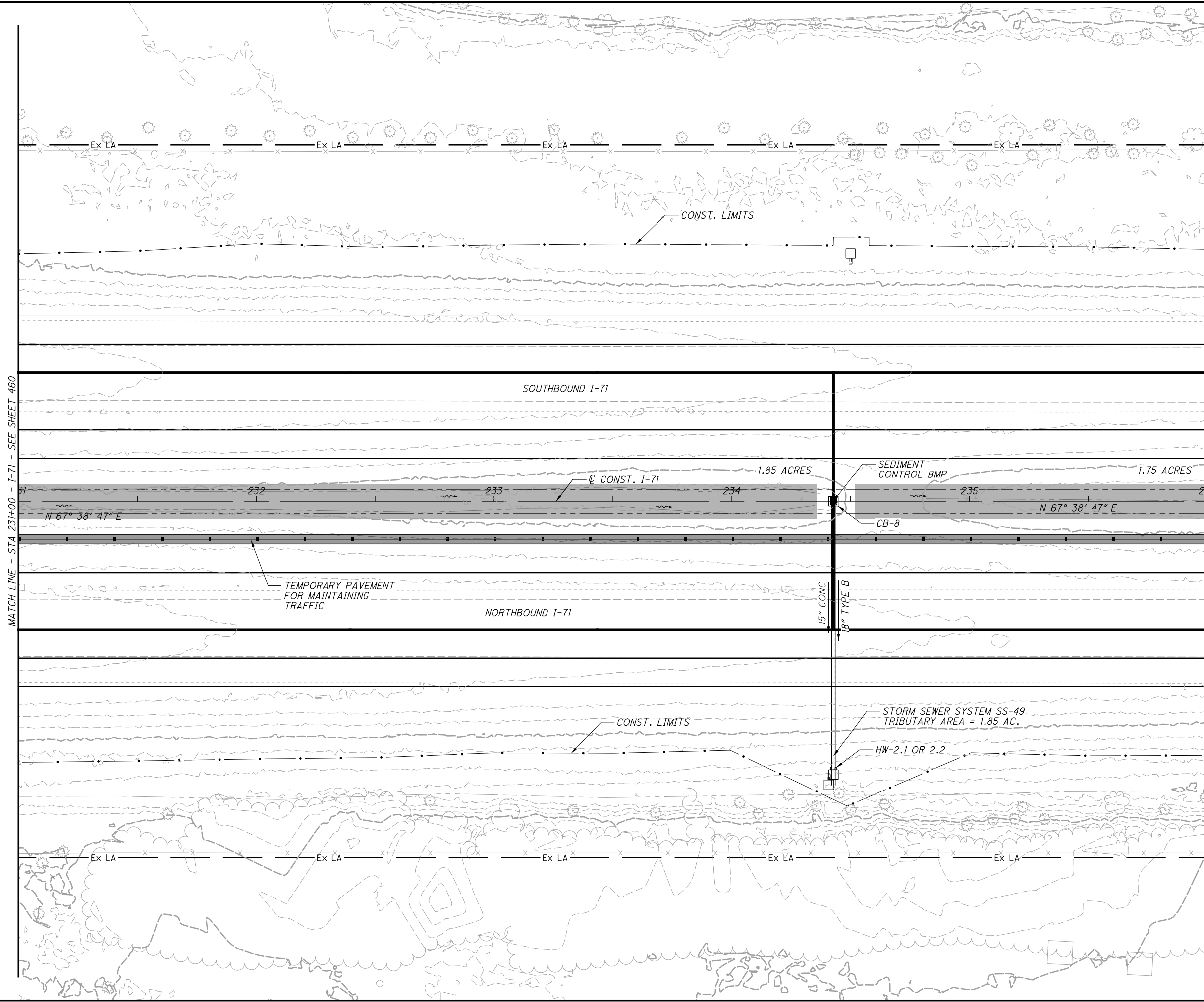
0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 226+00 TO STA 231+00

FRA-71-0.00

460
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO48_sw3p.dgn Sheet 10/28/2019 11:08:18 AM 1458s.js



MATCH LINE - STA 231+00 - I-71 - SEE SHEET 460

MATCH LINE - STA 236+00 - I-71 - SEE SHEET 462

CALCULATED
CTW
CHECKED
MAH

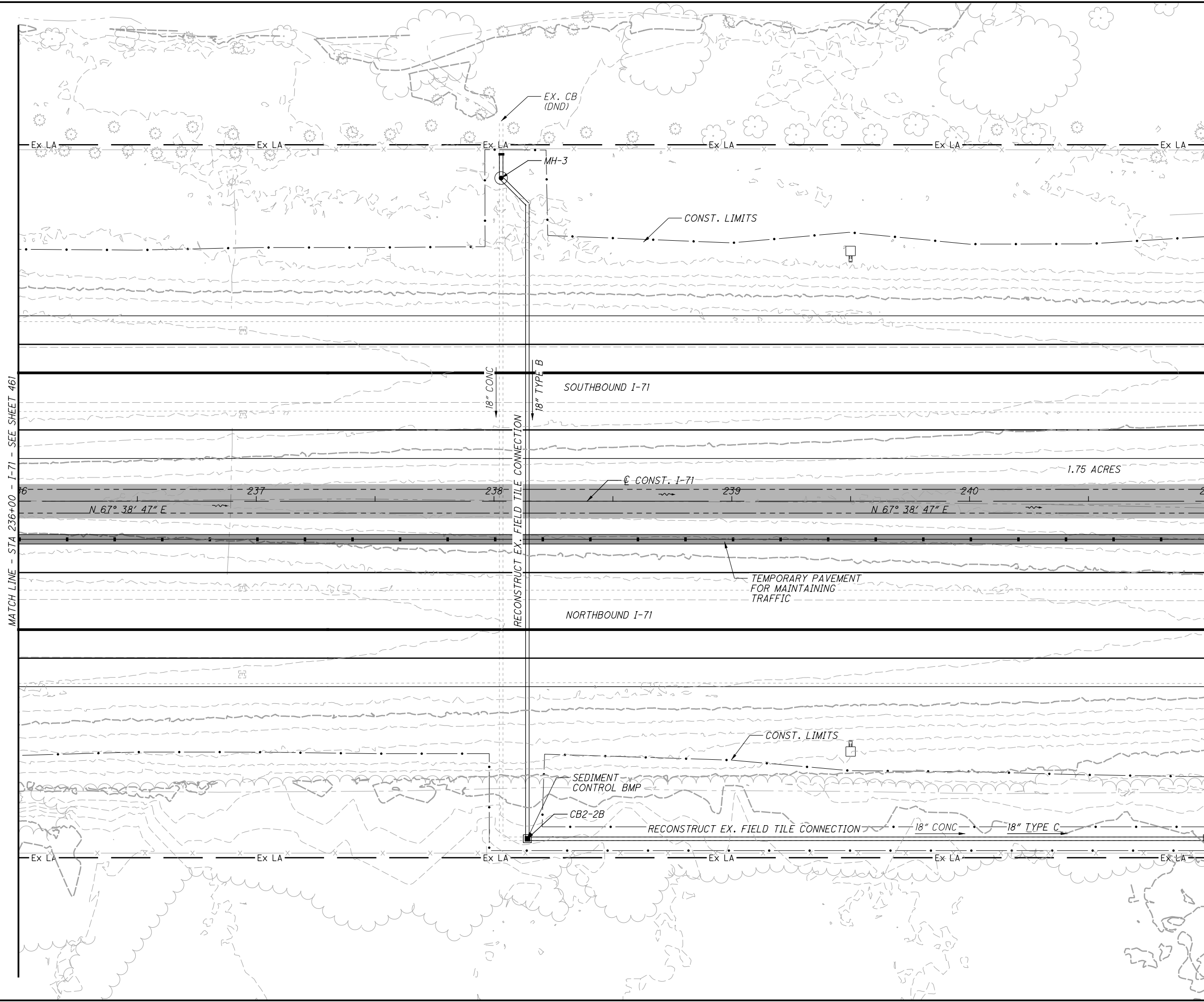
0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 231+00 TO STA 236+00

FRA-71-0.00

461
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\10720IDP049_sw3p.dgn Sheet 10/28/2019 11:08:19 AM 1458s.js



MATCH LINE - STA 236+00 - I-71 - SEE SHEET 461

MATCH LINE - STA 241+00 - I-71 - SEE SHEET 463

CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

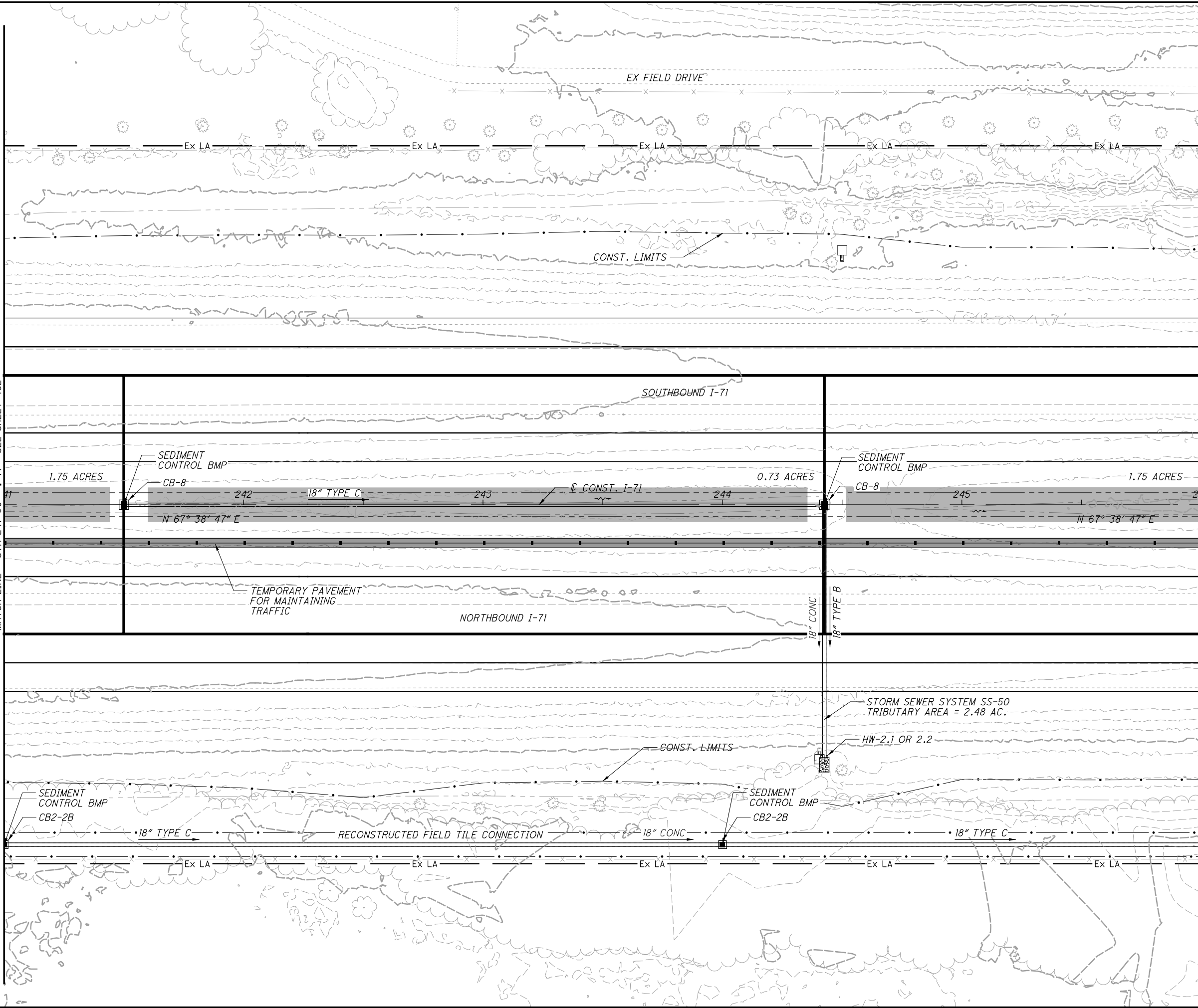
STORM WATER SITE PLAN
STA 236+00 TO STA 241+00

FRA-71-0.00

462
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP050_sw3p.dgn Sheet 10/28/2019 11:08:19 AM 14585.js

MATCH LINE - STA 241+00 - I-71 - SEE SHEET 462



MATCH LINE - STA 246+00 - I-71 - SEE SHEET 464

CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

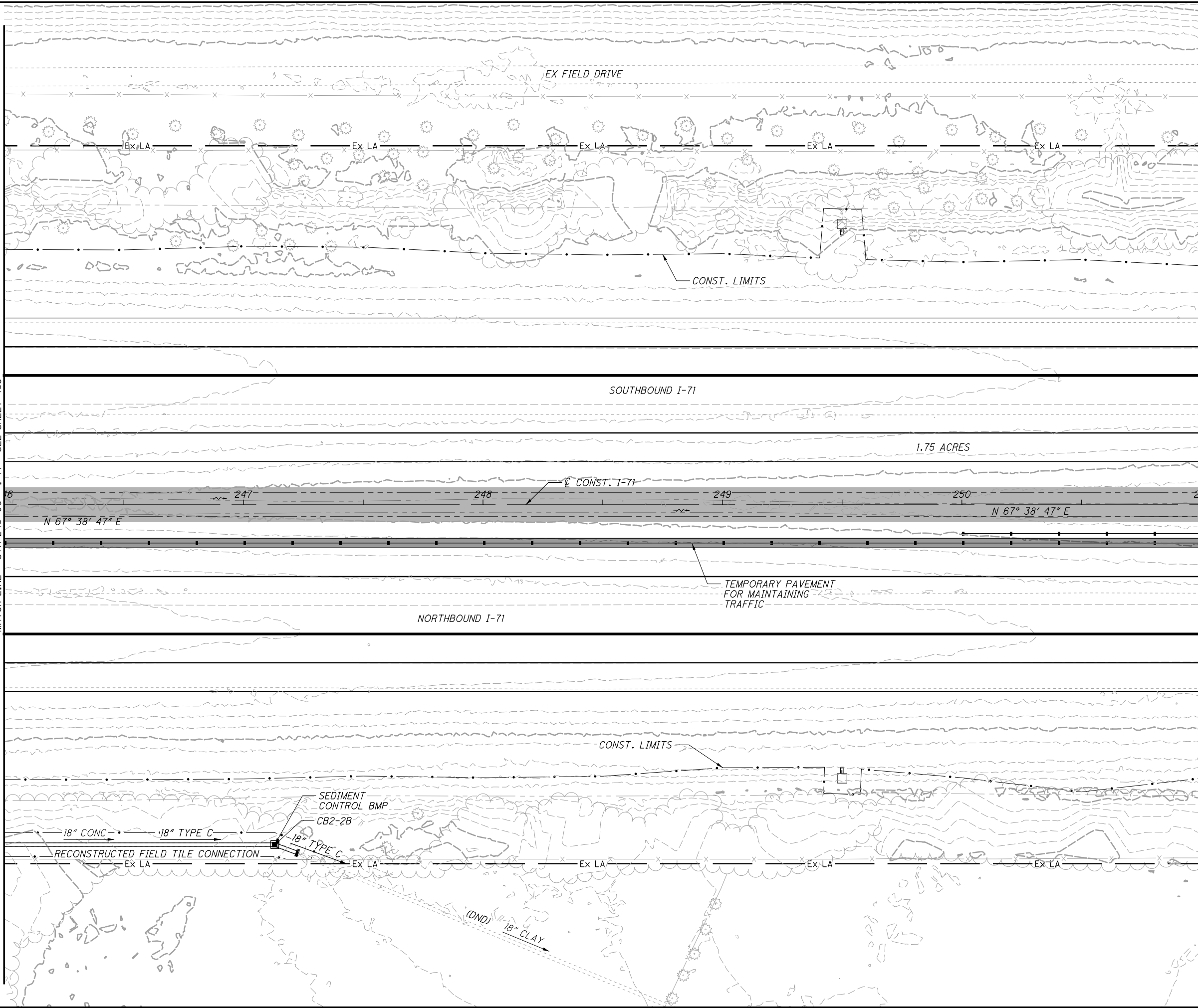
STORM WATER SITE PLAN
STA 241+00 TO STA 246+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO51_sw3p.dgn Sheet 10/28/2019 11:08:20 AM 1458s.js

MATCH LINE - STA 246+00 - I-71 - SEE SHEET 463

MATCH LINE - STA 251+00 - I-71 - SEE SHEET 465



CALCULATED
CTW
CHECKED
MAH

0 20 40
1" = 40'
HORIZONTAL
SCALE IN FEET

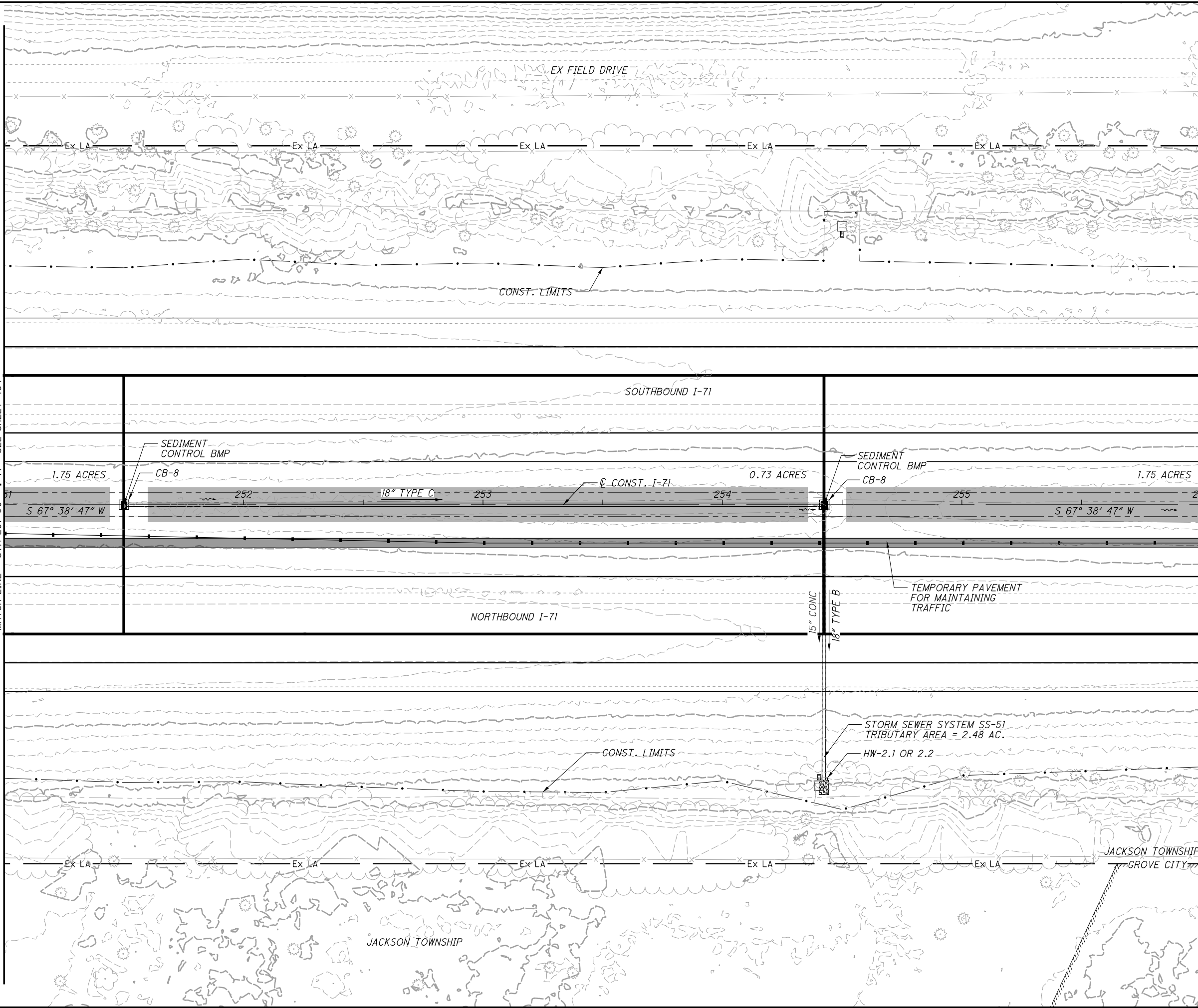
STORM WATER SITE PLAN
STA 246+00 TO STA 251+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP052_sw3p.dgn Sheet 10/28/2019 11:08:20 AM 1458s.js

MATCH LINE - STA 251+00 - I-71 - SEE SHEET 464

MATCH LINE - STA 256+00 - I-71 - SEE SHEET 466



CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 251+00 TO STA 256+00

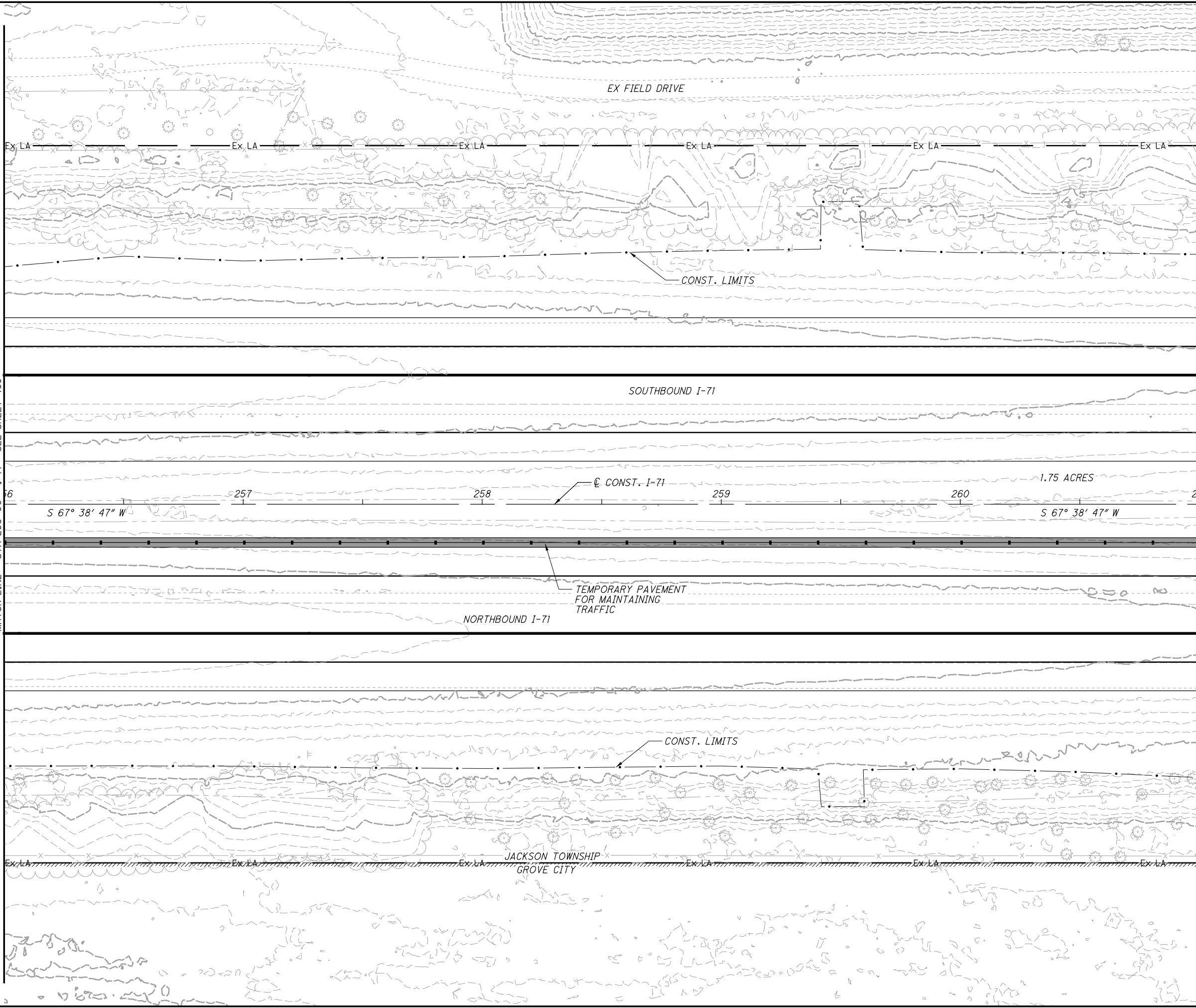
FRA-71-0.00

465
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\10720IDP053_sw3p.dgn Sheet 10/28/2019 11:08:21 AM 1458s.js

MATCH LINE - STA 256+00 - I-71 - SEE SHEET 465

MATCH LINE - STA 261+00 - I-71 - SEE SHEET 467



CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

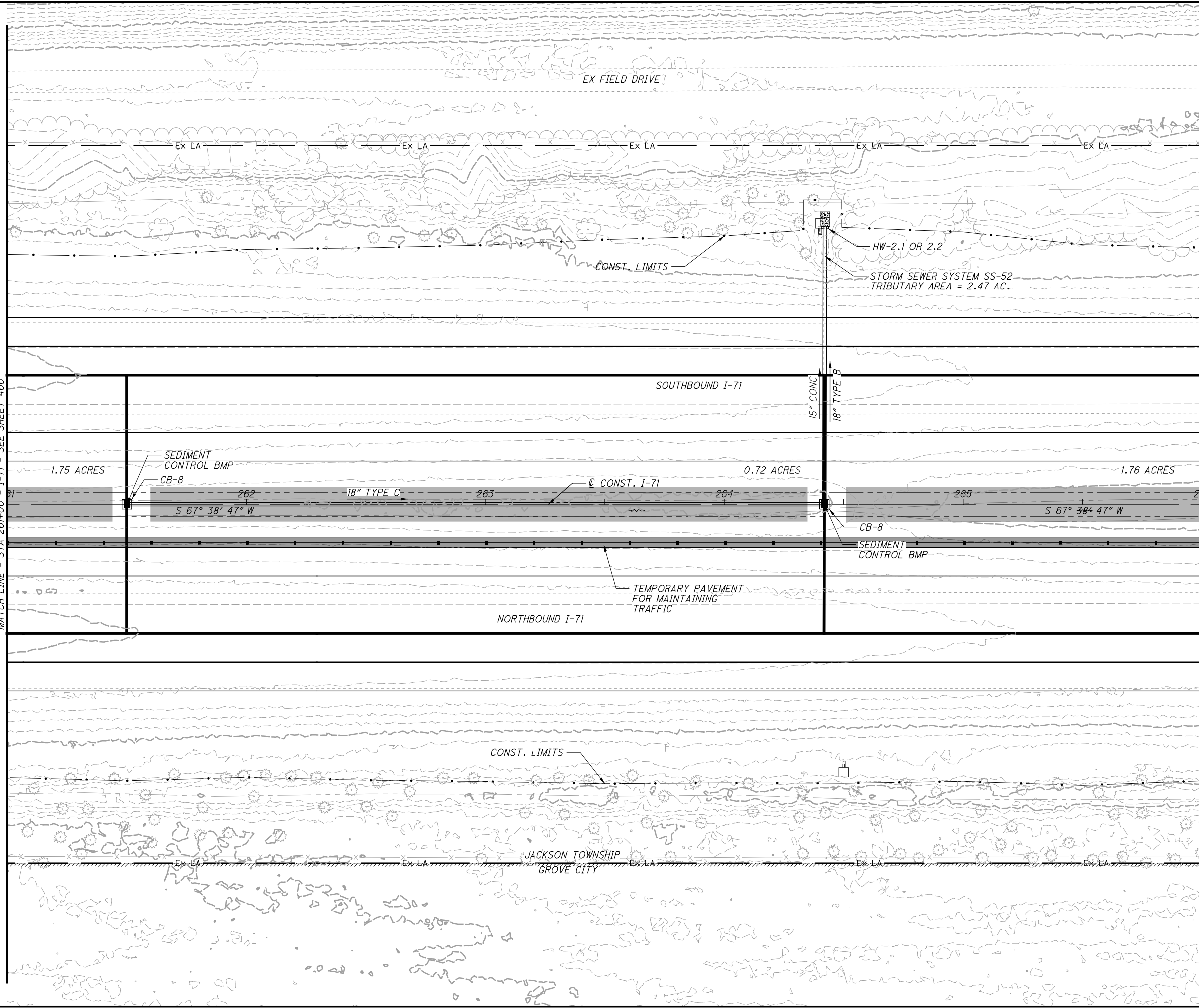
STORM WATER SITE PLAN
STA 256+00 TO STA 261+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP054_sw3p.dgn Sheet 10/28/2019 11:08:22 AM 1458s.js

MATCH LINE - STA 261+00 - I-71 - SEE SHEET 466

MATCH LINE - STA 266+00 - I-71 - SEE SHEET 468



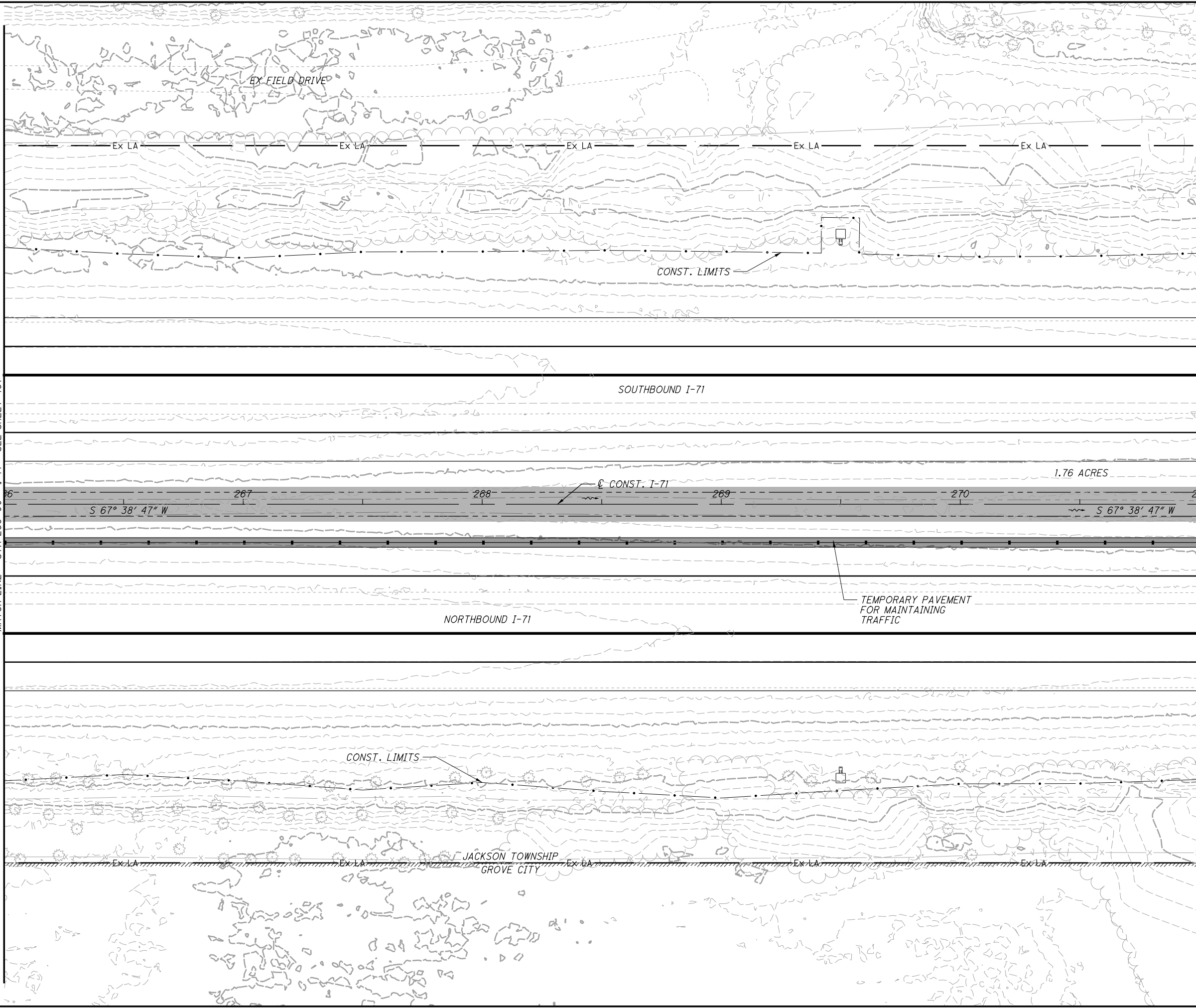
CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 261+00 TO STA 266+00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\10720IDP055_sw3p.dgn Sheet 10/28/2019 11:08:23 AM 1458s.js

MATCH LINE - STA 266+00 - I-71 - SEE SHEET 467



MATCH LINE - STA 271+00 - I-71 - SEE SHEET 469

CALCULATED
CTW
CHECKED
MAH

0 20 40
HORIZONTAL
SCALE IN FEET

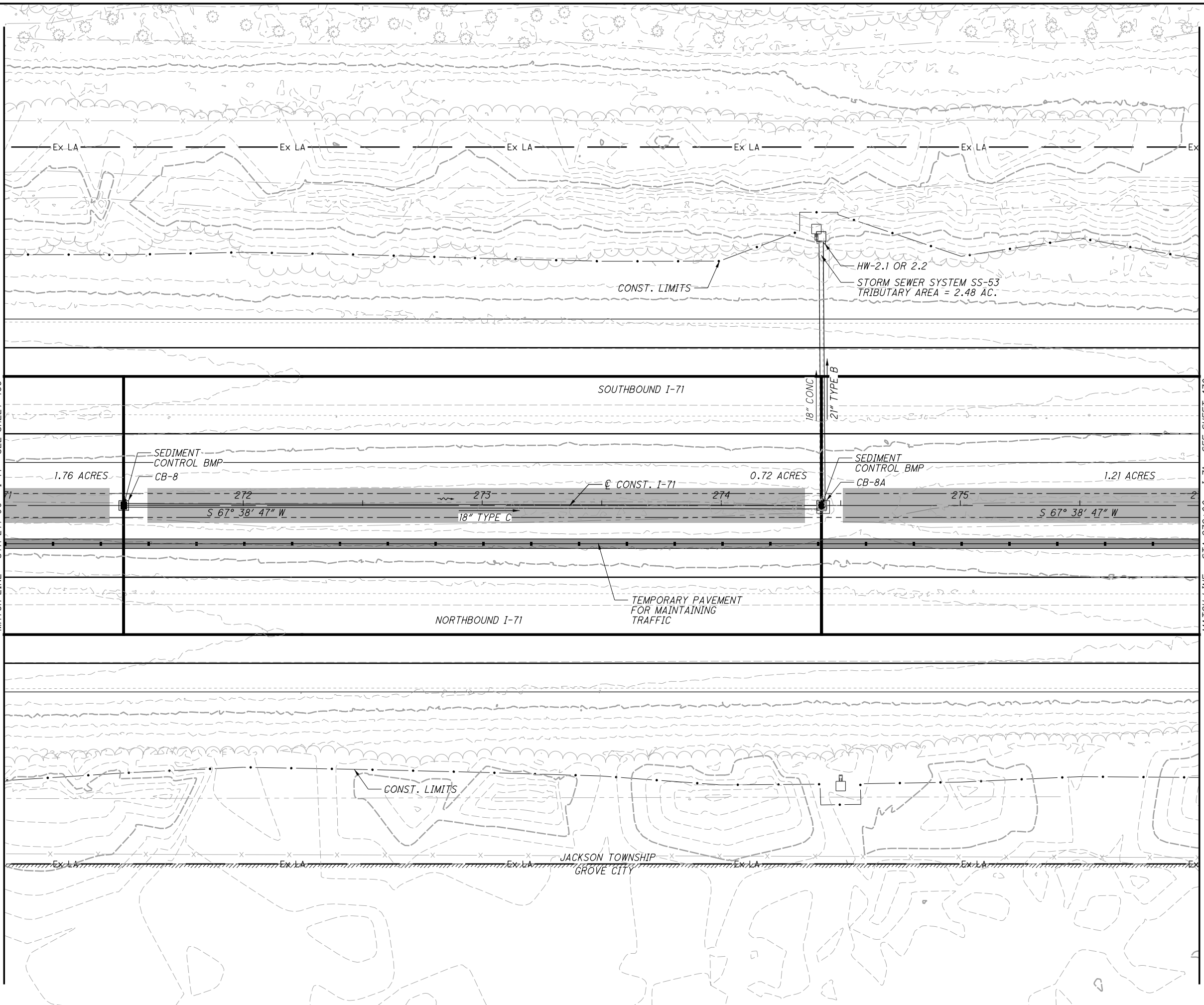
STORM WATER SITE PLAN
STA 266+00 TO STA 271+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP056_sw3p.dgn Sheet 10/28/2019 11:08:23 AM 1458s.js

MATCH LINE - STA 271+00 - I-71 - SEE SHEET 468

MATCH LINE - STA 276+00 - I-71 - SEE SHEET 470



CALCULATED
CTW
CHECKED
MAH

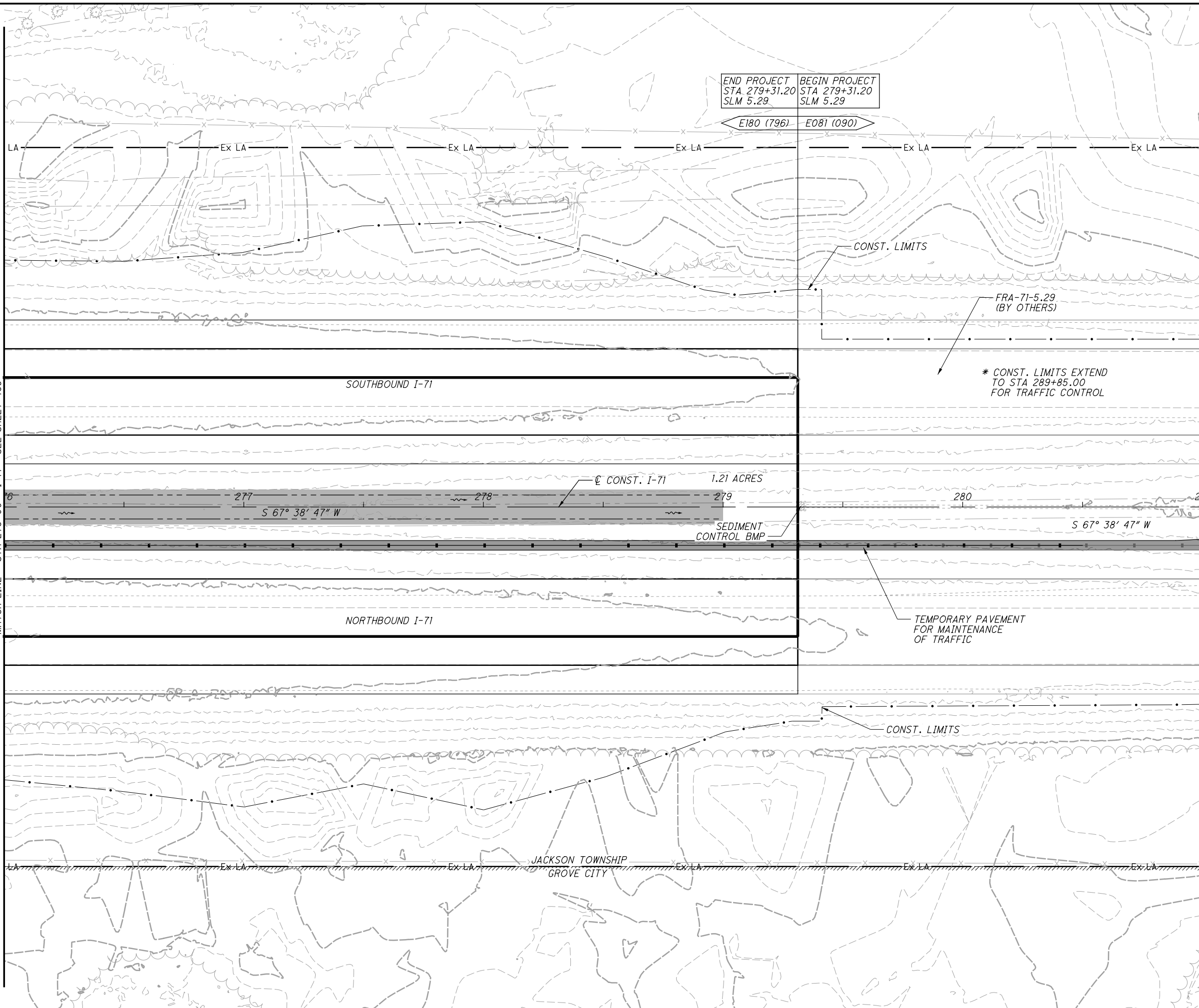
0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 271+00 TO STA 276+00

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO57_sw3p.dgn Sheet 10/28/2019 11:08:24 AM 1458s.js

MATCH LINE - STA 276+00 - I-71 - SEE SHEET 469

MATCH LINE - STA 281+00 - I-71 - SEE SHEET 471



END PROJECT STA 279+31.20 SLM 5.29	BEGIN PROJECT STA 279+31.20 SLM 5.29
--	--

E180 (796) E081 (090)

LA — Ex LA — Ex LA — Ex LA — Ex LA — Ex LA — Ex LA

CONST. LIMITS

FRA-71-5.29
(BY OTHERS)

* CONST. LIMITS EXTEND
TO STA 289+85.00
FOR TRAFFIC CONTROL

SOUTHBOUND I-71

∅ CONST. I-71

1.21 ACRES

277
S 67° 38' 47" W

278

279
SEDIMENT
CONTROL BMP

280

S 67° 38' 47" W

NORTHBOUND I-71

TEMPORARY PAVEMENT
FOR MAINTENANCE
OF TRAFFIC

CONST. LIMITS

JACKSON TOWNSHIP
GROVE CITY

LA — Ex LA — Ex LA — Ex LA — Ex LA — Ex LA — Ex LA



CALCULATED
CTW
CHECKED
MAH

STORM WATER SITE PLAN
STA 276+00 TO STA 281+00

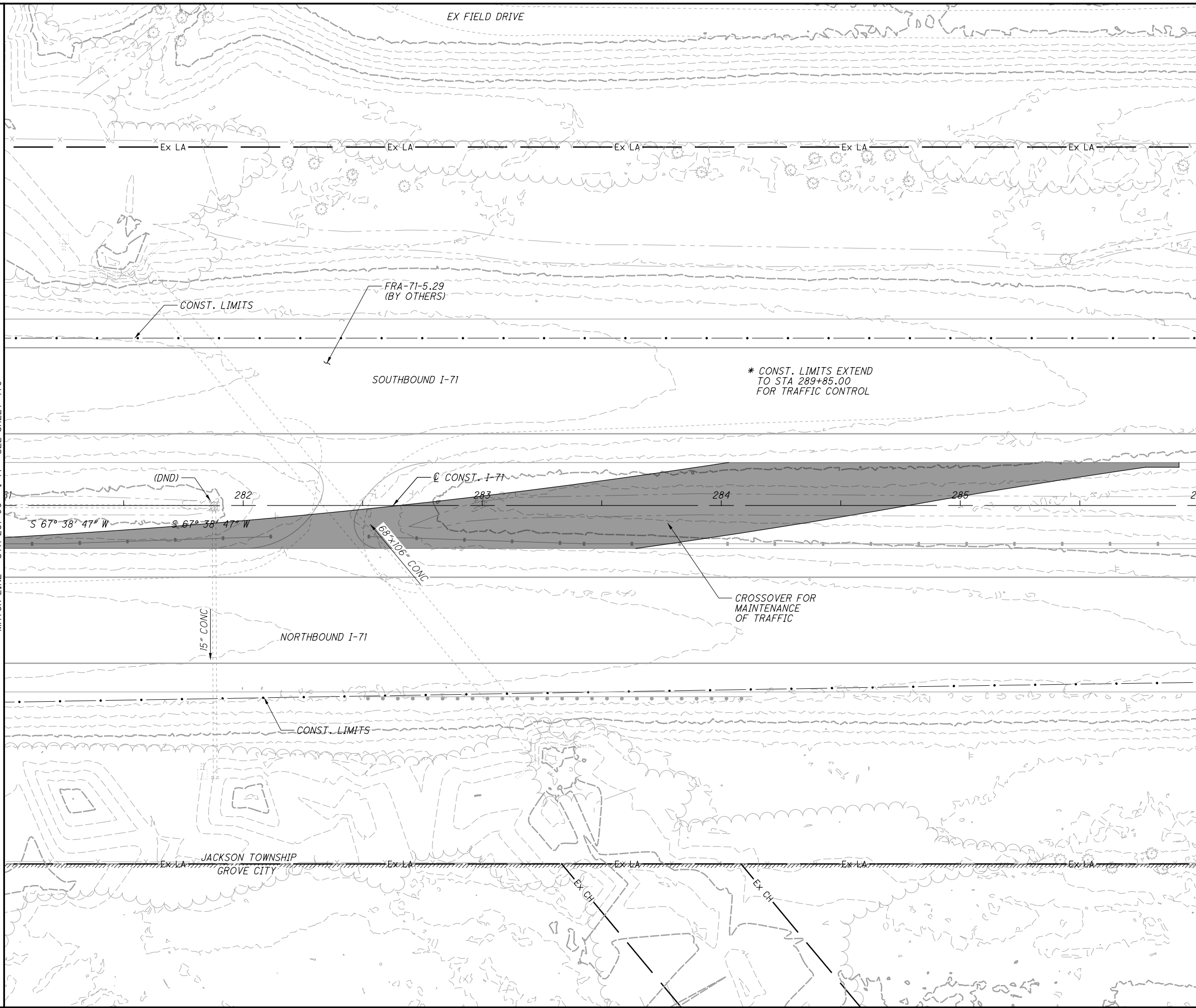
FRA-71-0.00

470
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO58a_sw3p.dgn Sheet 10/28/2019 11:08:30 AM 1458s.js

MATCH LINE - STA 281+00 - I-71 - SEE SHEET 470

MATCH LINE - STA 286+00 - I-71 - SEE SHEET 472



CALCULATED
DCB
CHECKED
JMB

0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 281+00 TO STA 286+00

FRA-71-0.00

471
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DPO58b_sw3p.dgn Sheet 10/28/2019 11:08:31 AM 14585js

MATCH LINE - STA 286+00 - I-71 - SEE SHEET 471



EX FIELD DRIVE

Ex LA

Ex LA

Ex LA

Ex LA

Ex LA

Ex LA

END WORK SB
STA 290+10.00

CONST. LIMITS

FRA-71-5.29
(BY OTHERS)

* CONST. LIMITS EXTEND
TO STA 289+85.00
FOR TRAFFIC CONTROL

SOUTHBOUND I-71

PC STA 286+24.38

S 67° 38' 47" W

S 67° 38' 47" W

CONST. I-71

287

288

289

290

291

NORTHBOUND I-71

CONST. LIMITS

END WORK NB
STA 289+90.00

JACKSON TOWNSHIP
GROVE CITY

Ex LA

Ex LA

Ex LA

Ex LA

Ex LA

Ex LA

CALCULATED
CTW
CHECKED
MAH

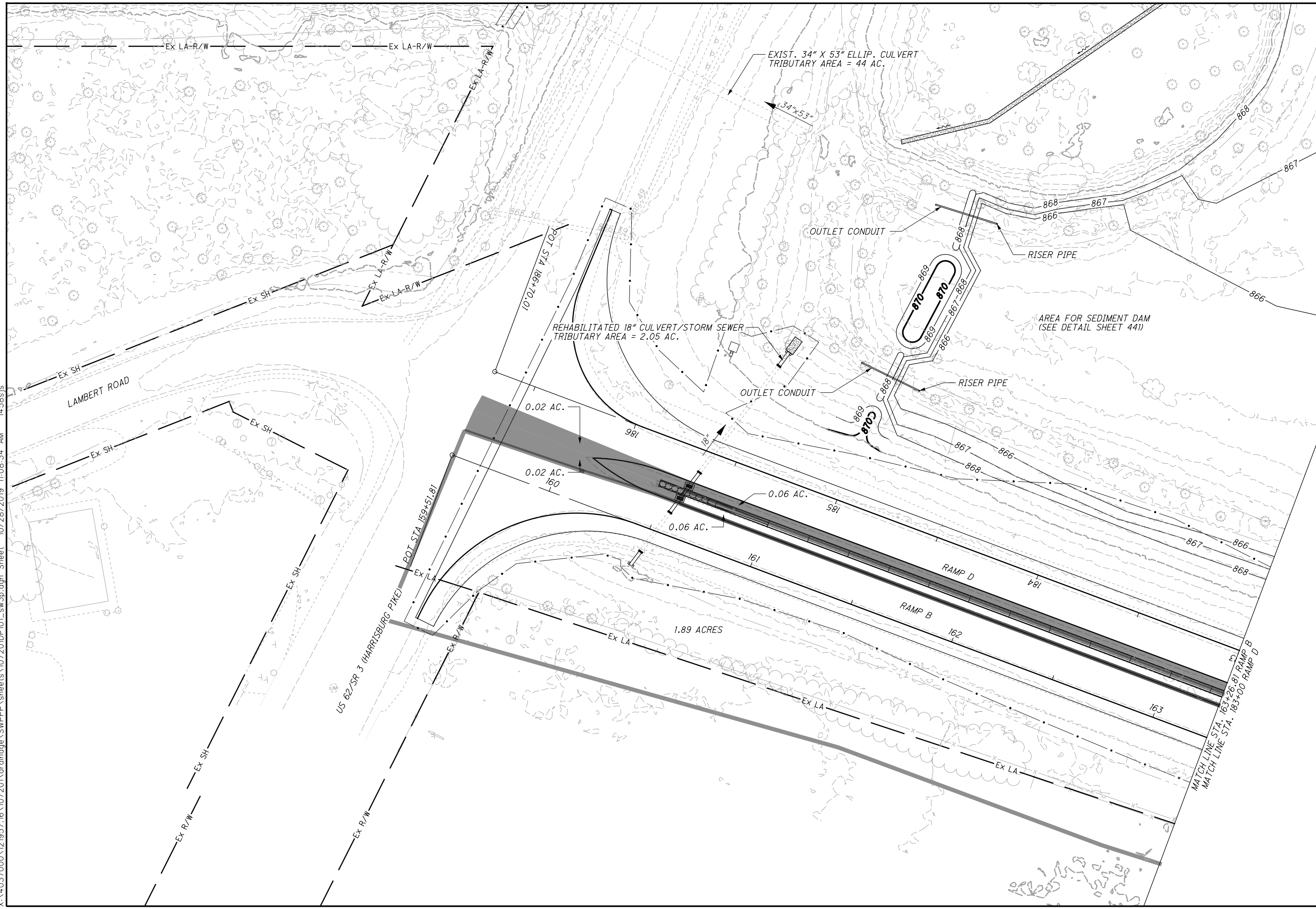
0 20 40
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
STA 286+00 TO STA 291+50

FRA-71-0.00

472
1312

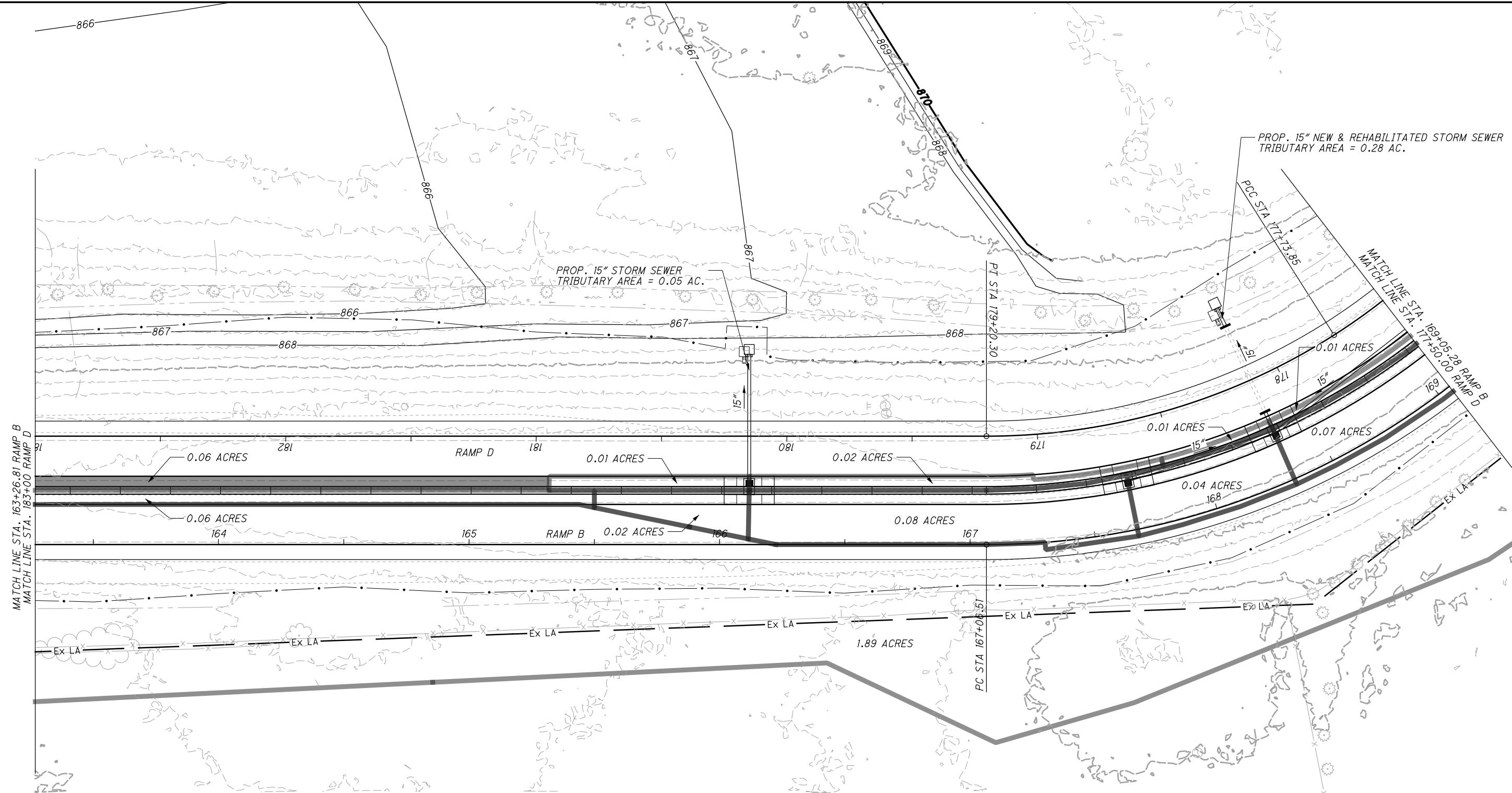
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CALCULATED MAH
 CHECKED CTW
STORM WATER SITE PLAN-RAMP B STA 159+51.81
STA 163+26.81; RAMP D STA 183+00-STA 186+70.01

FRA -71-0.00
 473
 1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP102_sw3p.dgn Sheet 10/28/2019 11:08:39 AM 1458s.js



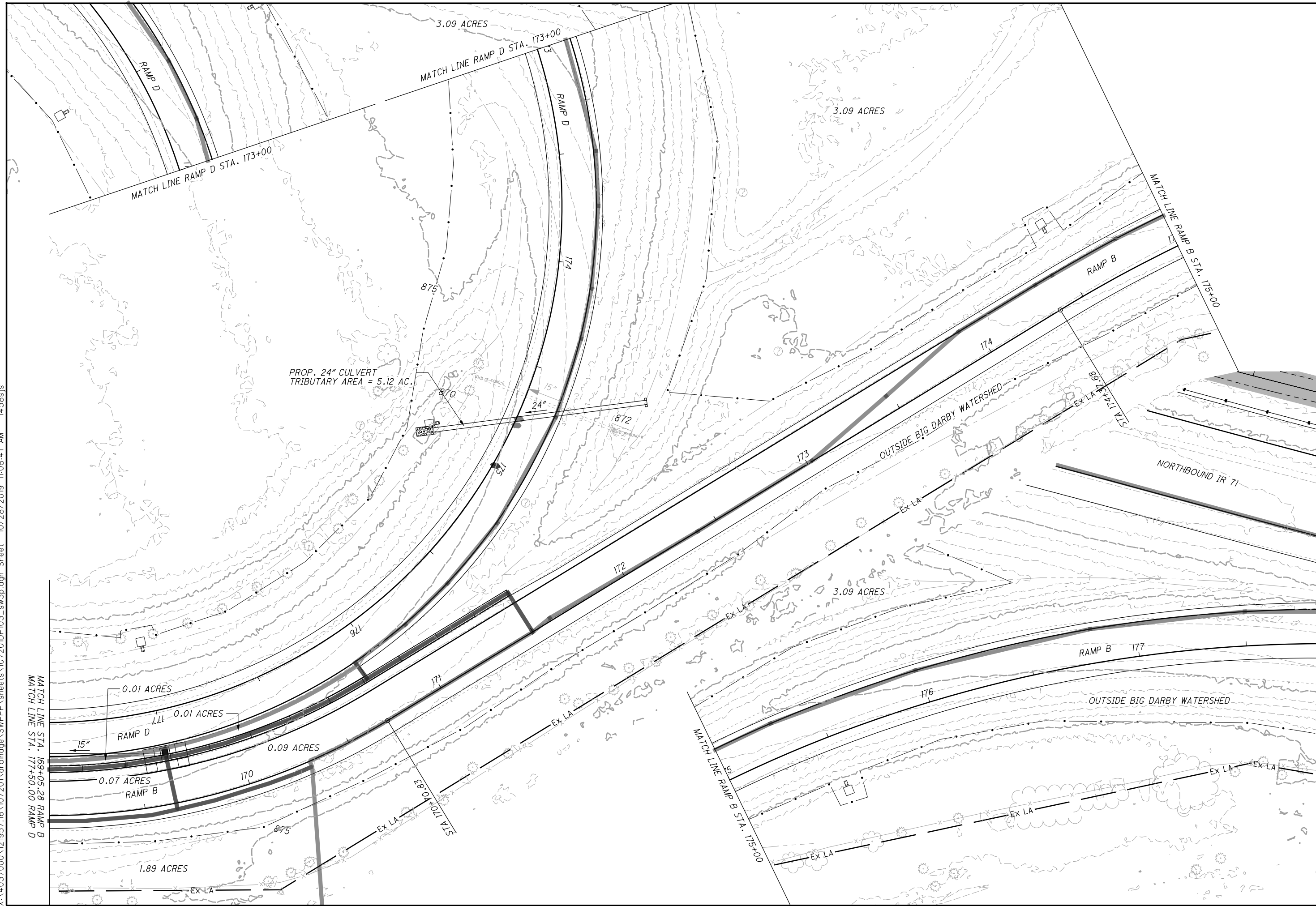
0 20 40
1" = 40'
HORIZONTAL
SCALE IN FEET





CALCULATED MAH
CHECKED CTW

**STORM WATER SITE PLAN-RAMP B STA 163+26.81-
STA 169+05.28; RAMP D STA 177+50-STA 183+50**

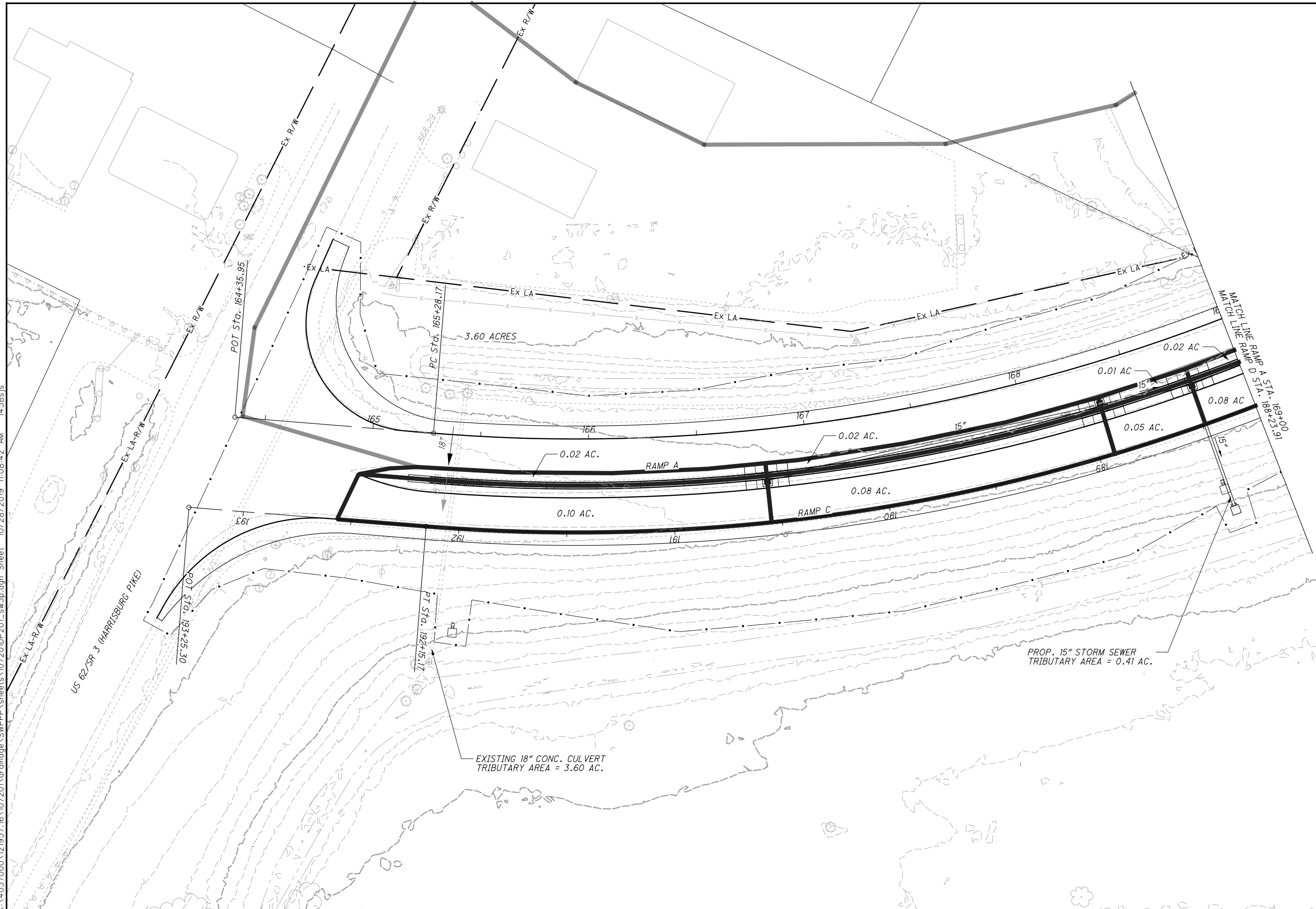
FRA -71-0.00

474
1312



  1" = 40' HORIZONTAL SCALE IN FEET	CALCULATED MAH	STA 169+05.28
	CHECKED CTW	STA 177+82.99; RAMP B STA 172+11.20-STA 177+50
FRA -71-0.00		 

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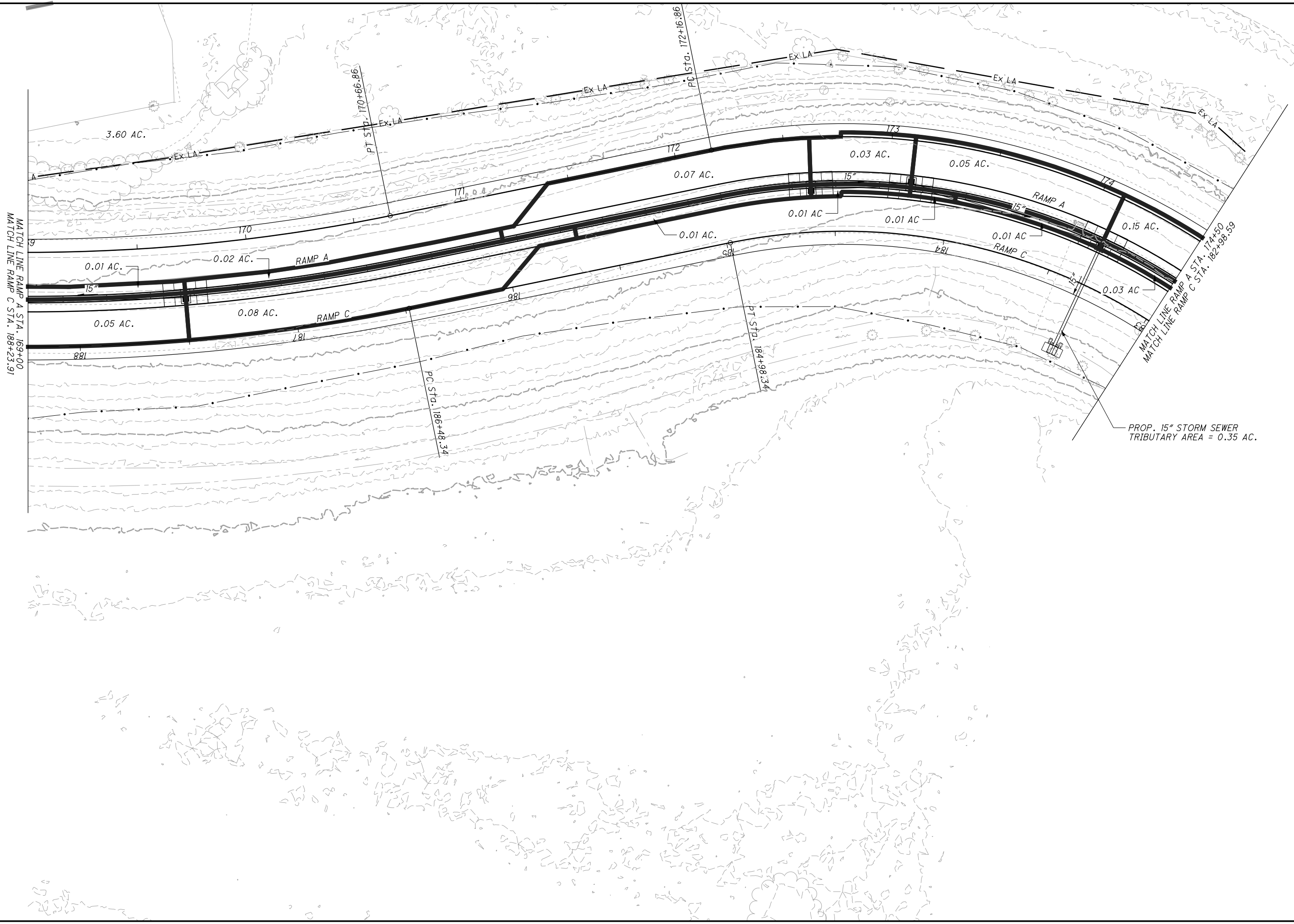


STORM WATER SITE PLAN-RAMP A STA. 164+35.95 - STA 169+00; RAMP C STA 188+23.91-STA 193+25.30

FRA-71-0.00

476
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP202_sw3p.dgn Sheet 10/28/2019 11:08:43 AM 1458s.js



CALCULATED MAH CHECKED CTW

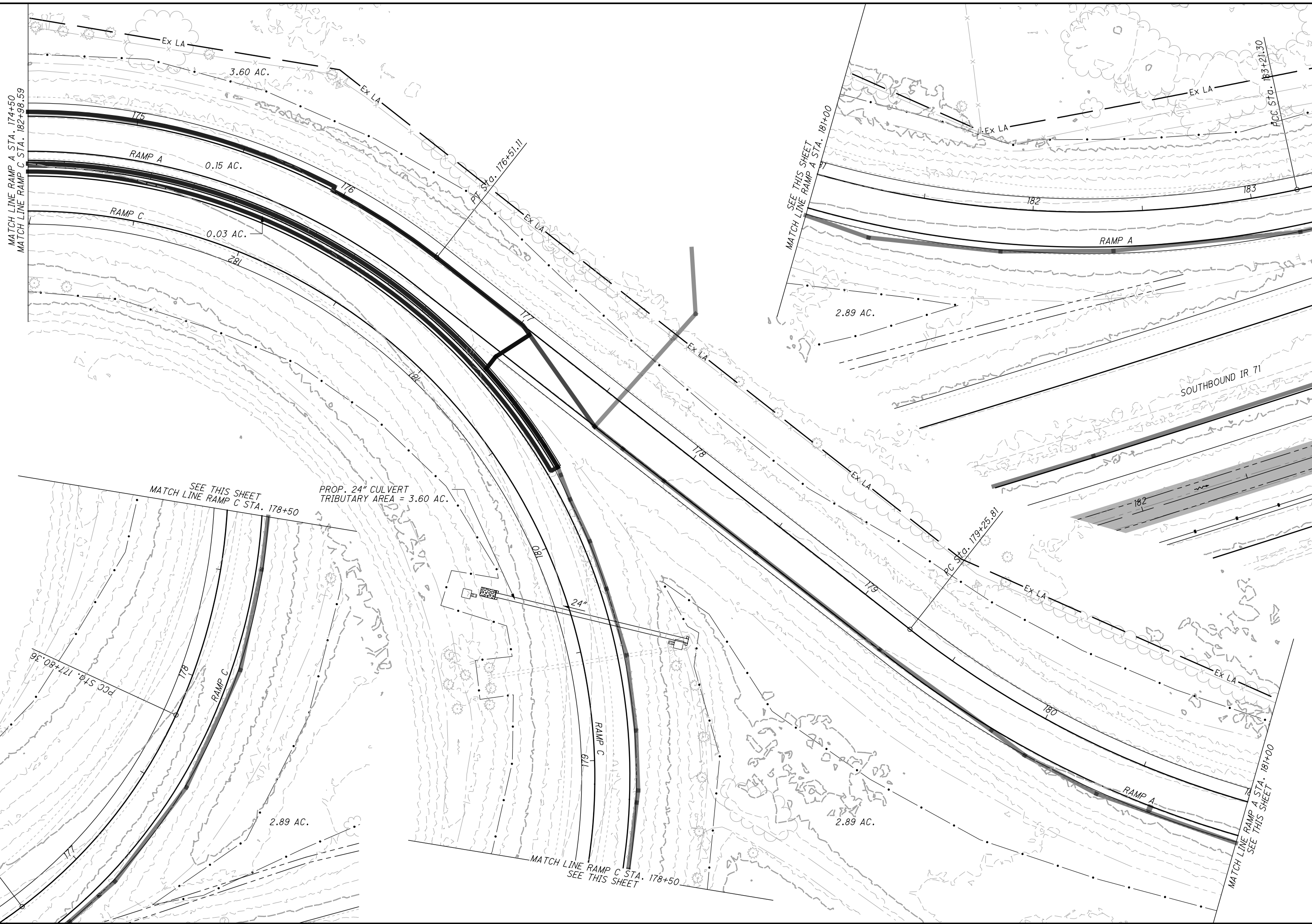
0 20 40
10
HORIZONTAL SCALE IN FEET

**STORM WATER SITE PLAN-RAMP A STA. 169+00-
STA 174+50; RAMP C STA 182+98.59-STA 188+23.91**

FRA-71-0.00

477
1312

X:\4037000\121957.16\107201\drainage\SWPPP\sheets\107201DP203_sw3p.dgn_Sheet 10/28/2019 11:08:44 AM 1458sjs

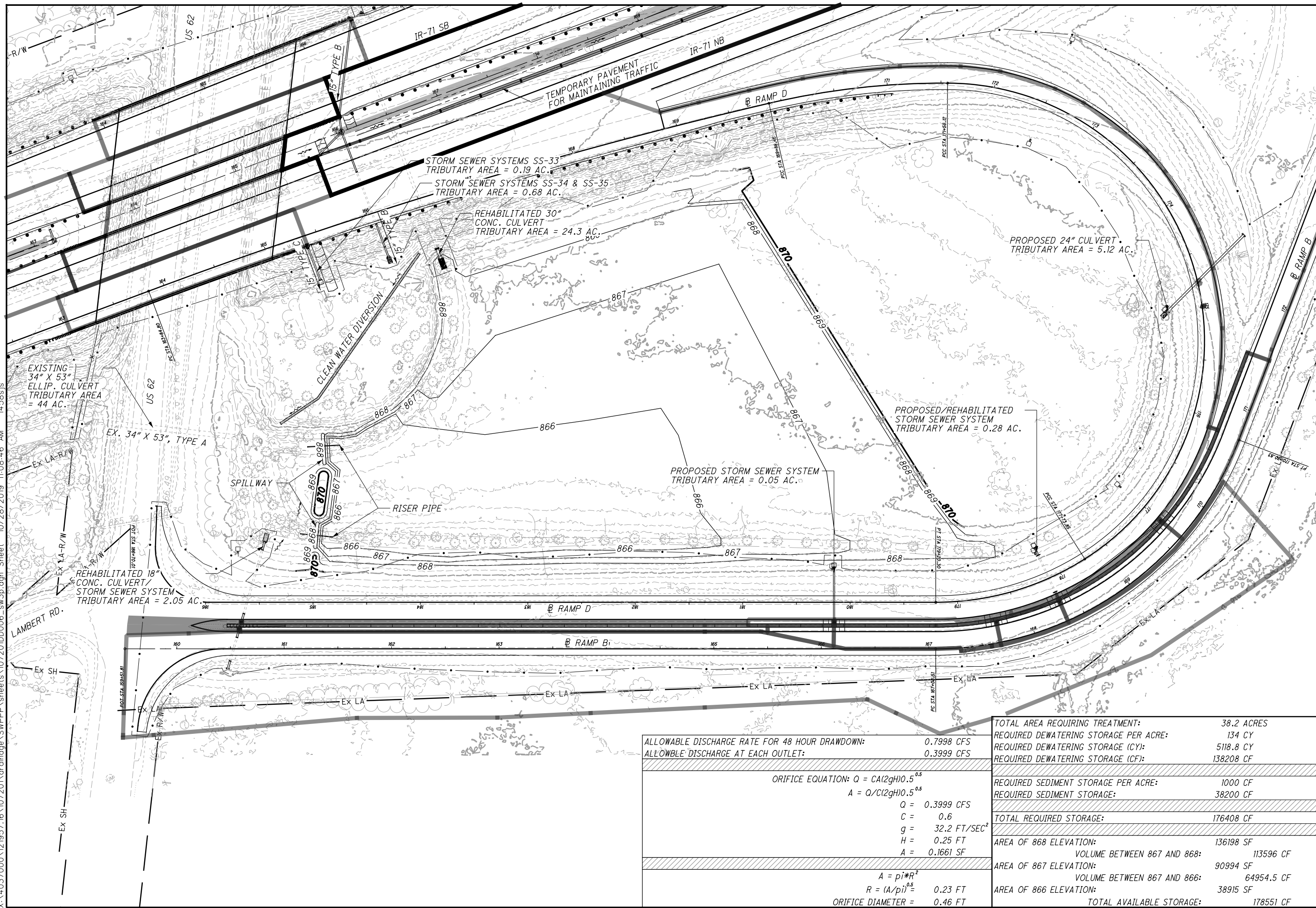


**STORM WATER SITE PLAN-RAMP A STA. 174+50-
STA 183+10.35; RAMP C STA 177+67.20-STA 182+98.59**

FRA-71-0.00

478
1312

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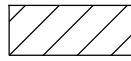
CALCULATED
CTW
CHECKED
MAH

0 40 80
20
HORIZONTAL
SCALE IN FEET

STORM WATER SITE PLAN
SEDIMENT DAM DETAIL

FRA-71-0.00

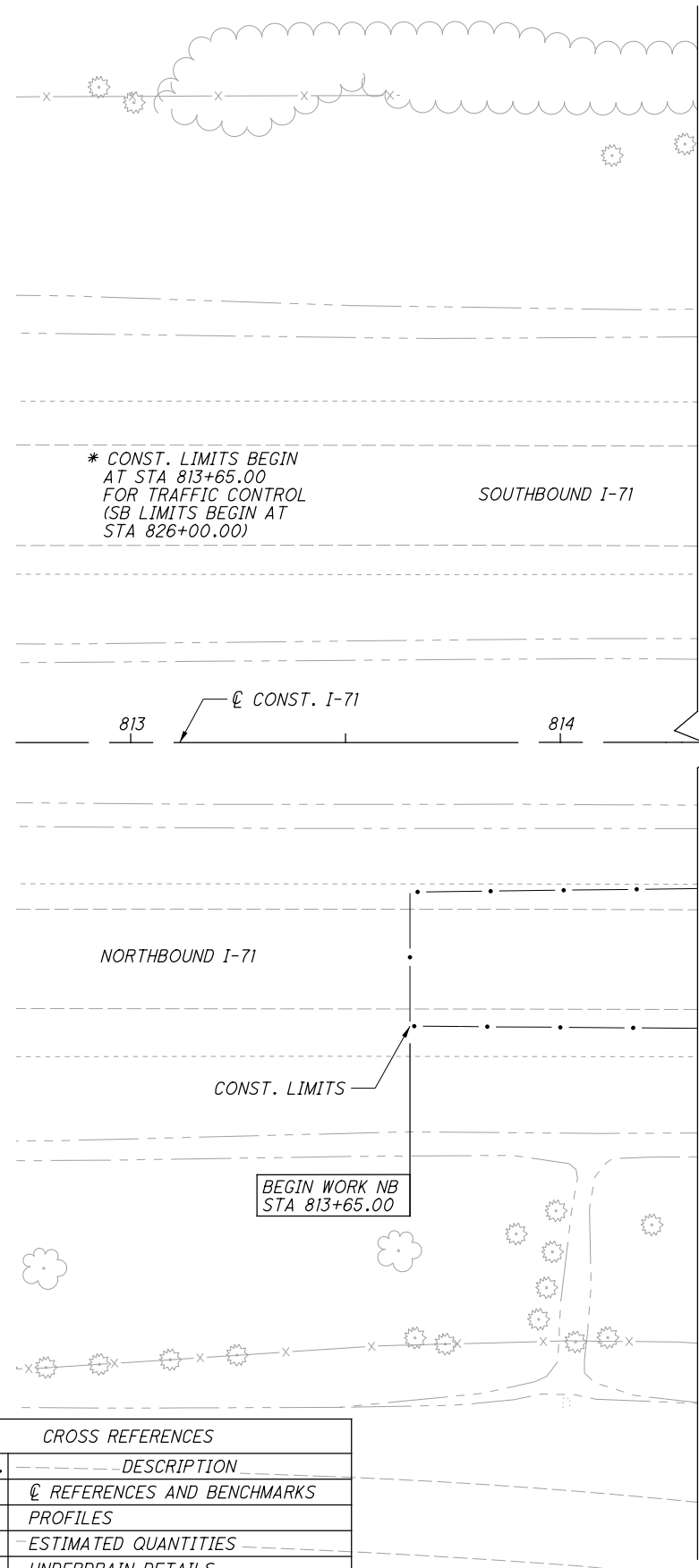
ALLOWABLE DISCHARGE RATE FOR 48 HOUR DRAWDOWN:	0.7998 CFS	TOTAL AREA REQUIRING TREATMENT:	38.2 ACRES
ALLOWABLE DISCHARGE AT EACH OUTLET:	0.3999 CFS	REQUIRED DEWATERING STORAGE PER ACRE:	134 CY
ORIFICE EQUATION: $Q = CA(2gh)^{0.5}$		REQUIRED DEWATERING STORAGE (CY):	5118.8 CY
$A = Q/C(2gh)^{0.5}$		REQUIRED DEWATERING STORAGE (CF):	138208 CF
$Q = 0.3999 \text{ CFS}$		REQUIRED SEDIMENT STORAGE PER ACRE:	1000 CF
$C = 0.6$		REQUIRED SEDIMENT STORAGE:	38200 CF
$g = 32.2 \text{ FT/SEC}^2$		TOTAL REQUIRED STORAGE:	176408 CF
$H = 0.25 \text{ FT}$		AREA OF 868 ELEVATION:	136198 SF
$A = 0.1661 \text{ SF}$		VOLUME BETWEEN 867 AND 868:	113596 CF
$A = \pi R^2$		AREA OF 867 ELEVATION:	90994 SF
$R = (A/\pi)^{0.5} = 0.23 \text{ FT}$		VOLUME BETWEEN 867 AND 866:	64954.5 CF
ORIFICE DIAMETER = 0.46 FT		AREA OF 866 ELEVATION:	38915 SF
		TOTAL AVAILABLE STORAGE:	178551 CF



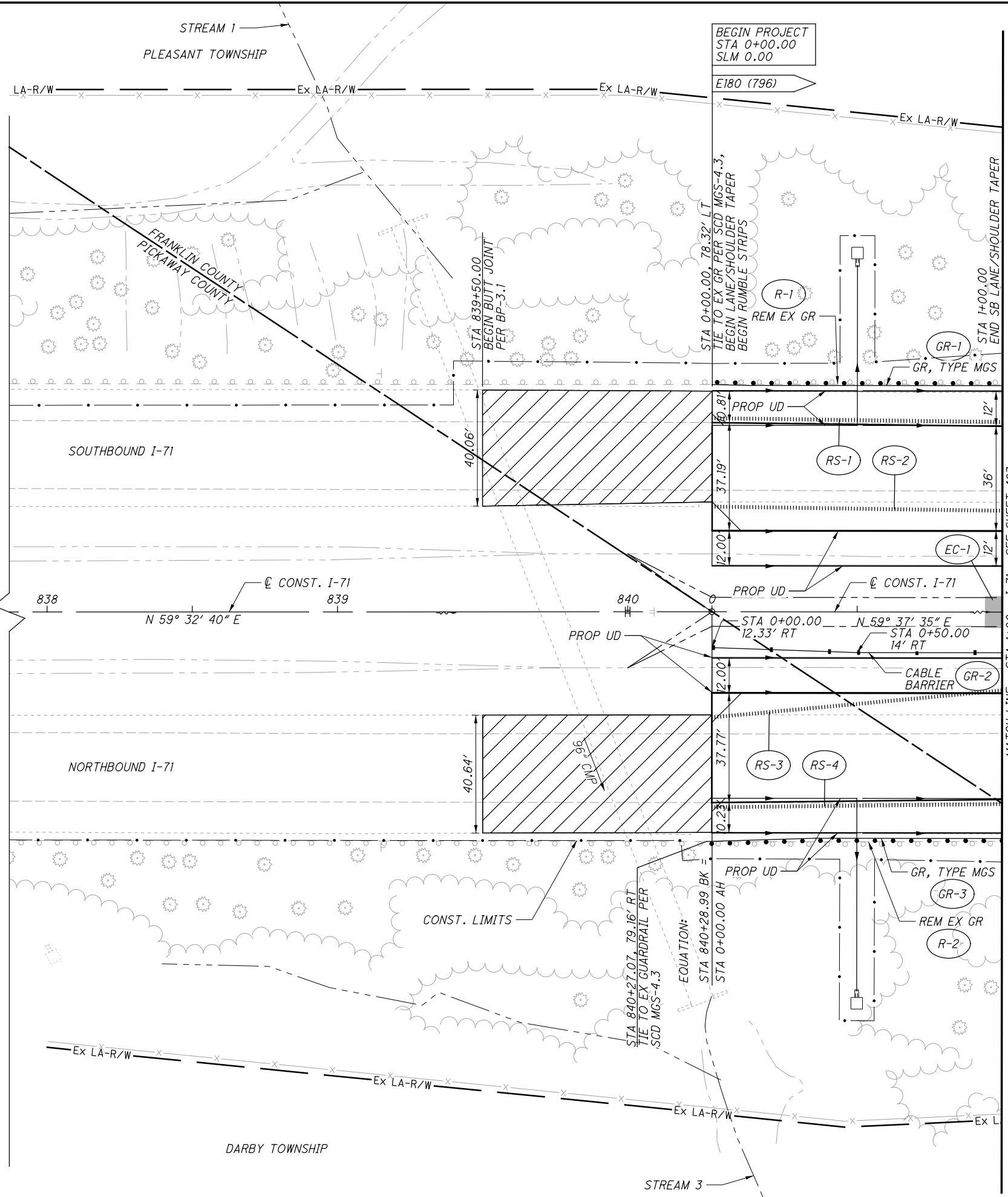
BUTT JOINT PER BP-3.1



ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	REFERENCES AND BENCHMARKS
481	PROFILES
482	ESTIMATED QUANTITIES
965	UNDERDRAIN DETAILS

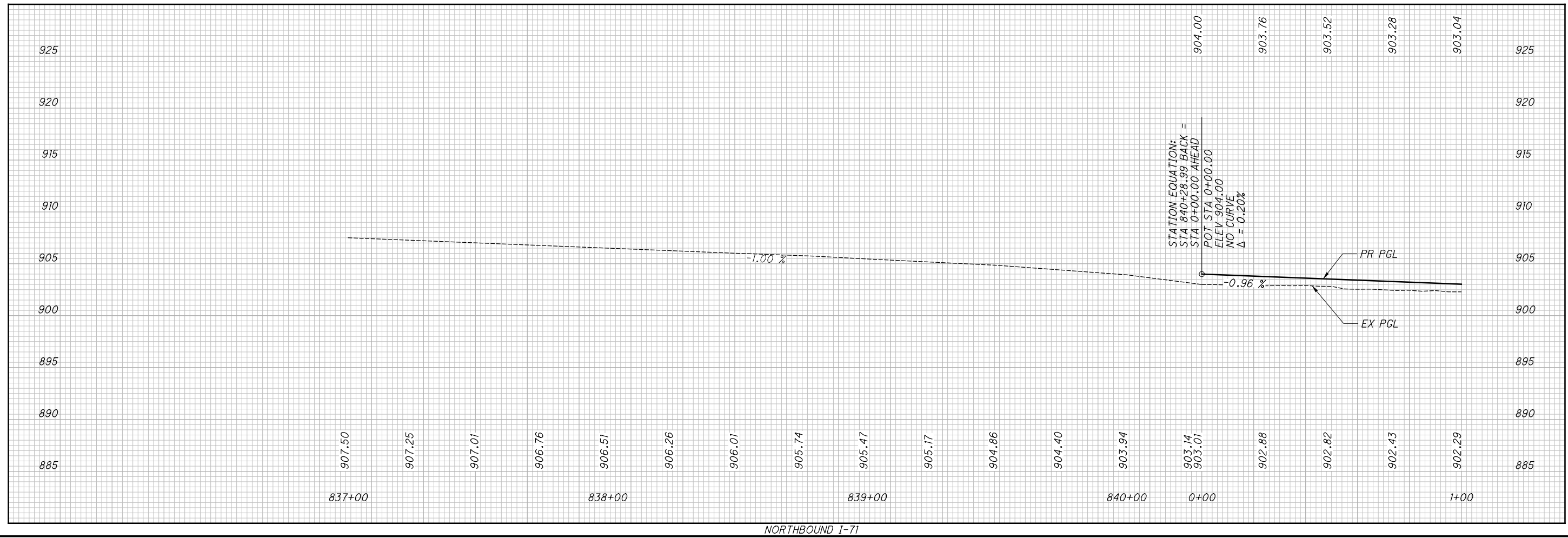
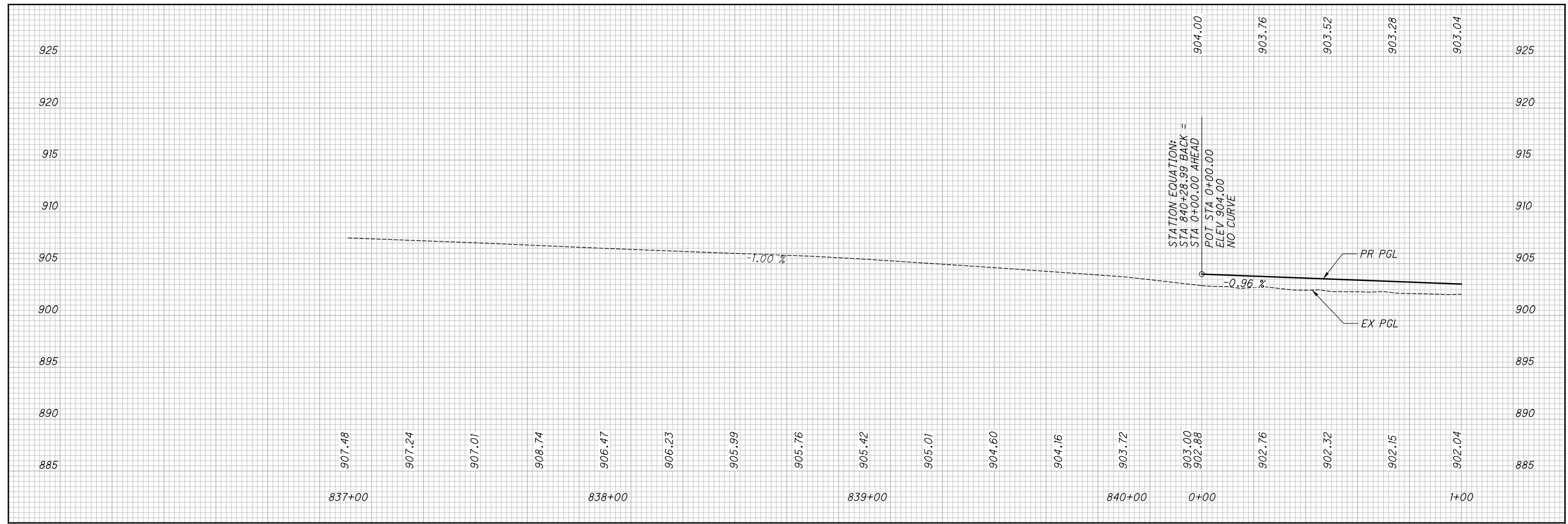


CALCULATED DCB CHECKED SJS

PLAN - I-71
STA 837+00 TO STA 1+00

FRA-71-0.00

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CALCULATED
 DCB
 CHECKED
 SJS

PROFILE - I-71
STA 837+00 TO STA 1+00

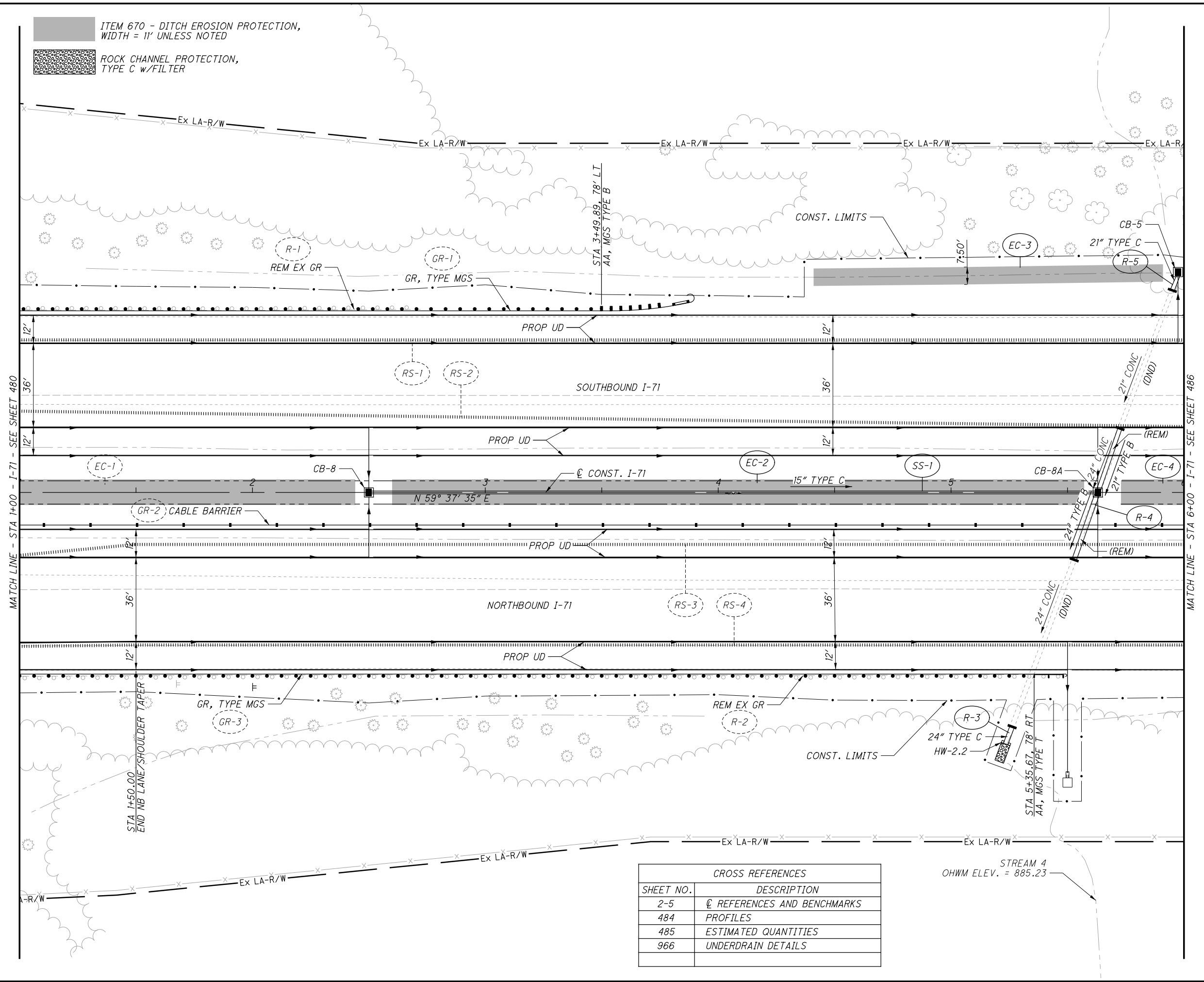
FRA - 71 - 0.00

X:\4037000\121957.16\107201\roadway\sheets\107201G0001.dgn Sheet 10/28/2019 11:08:50 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	606	606	606	606	606	618	626	670				
		FROM	TO		GUARDRAIL REMOVED FT	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED) FT	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL EACH	RUMBLE STRIPS, (ASPHALT CONCRETE) MILE	BARRIER REFLECTOR, TYPE 2, (1-WAY) EACH	DITCH EROSION PROTECTION SY				
R-1	480, 483	0+00	2+72	LT	272												
R-2	480, 483	0+00	5+48	RT	548												
EC-1	480, 483	0+93	2+43	LT/RT									183				
GR-1	480, 483	0+00	3+50	LT		350	1					5					
GR-2	480, 483, 486, 489	0+00	13+40	RT				1340	2								
GR-3	480, 483	840+27	5+36	RT		537.5		1				7					
RS-1	480-528	0+00	77+50	LT							1.47						
RS-2	480-528	0+00	77+50	LT							1.47						
RS-3	480-528	0+00	77+50	RT							1.47						
RS-4	480-528	0+00	77+50	RT							1.47						
TOTALS CARRIED TO SHEETS 395-398					820	887.5	1	1	1340	2	5.88	12	183				

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	482 1312

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ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED

ROCK CHANNEL PROTECTION, TYPE C w/FILTER

CALCULATED DCB CHECKED SJS

0 20 40
10 HORIZONTAL SCALE IN FEET

PLAN - I-71
STA 1+00 TO STA 6+00

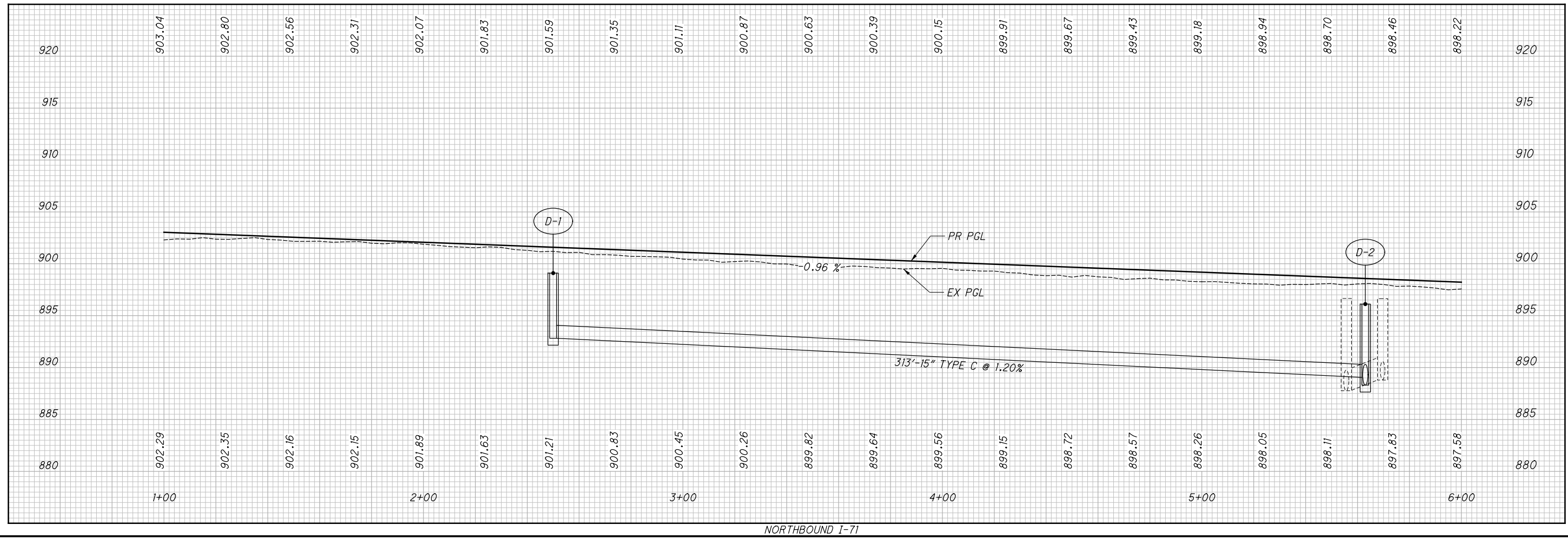
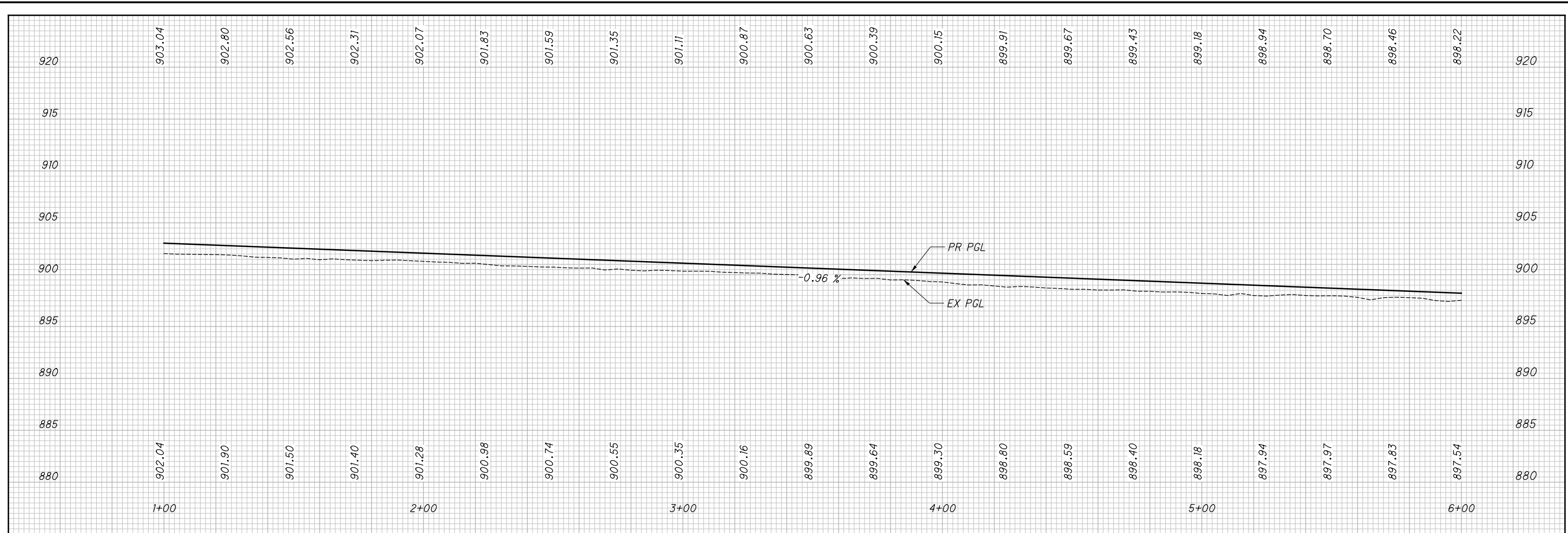
FRA-71-0.00

483
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
484	PROFILES
485	ESTIMATED QUANTITIES
966	UNDERDRAIN DETAILS

STREAM 4
OHWM ELEV. = 885.23

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 1+00 TO STA 6+00

FRA - 71 - 0.00

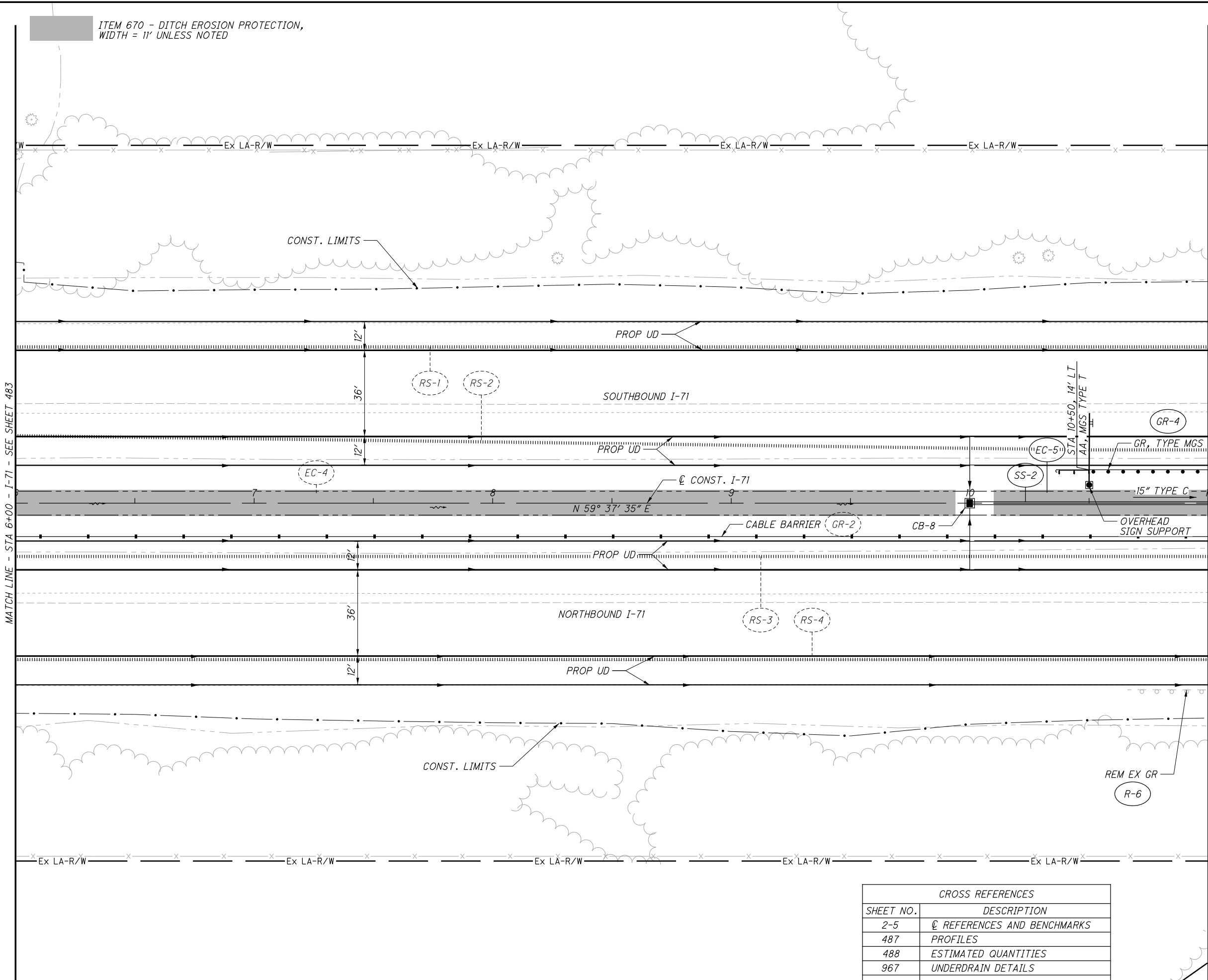
484
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0002.dgn Sheet 10/28/2019 11:08:52 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	611	611	611	611	611	611	611	670
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	15" CONDUIT, TYPE C FT	21" CONDUIT, TYPE B, 706.02 FT	21" CONDUIT, TYPE C, 706.02 FT	24" CONDUIT, TYPE B, 706.02 FT	24" CONDUIT, TYPE C, 706.02 FT	CATCH BASIN, NO. 5 EACH	CATCH BASIN, NO. 8 EACH	CATCH BASIN, NO. 8A EACH	DITCH EROSION PROTECTION SY	
R-3	483	5+23	5+26	RT	9													
R-4	483	5+53	5+73	LT/RT	61	2												
R-5	483	5+95	5+97	LT	7													
EC-2	483	2+59	5+56	CL														363
EC-3	483	4+40	5+90	LT														125
EC-4	483, 486	5+72	9+93	CL														515
SS-1	483	2+50	5+97	LT/RT			1.78	0.45	313	29	8	30	8	1	1	1		
TOTALS CARRIED TO SHEETS 395-398					77	2	1.78	0.45	313	29	8	30	8	1	1	1		1003

CALCULATED	DCB	CHECKED	SJS		
ESTIMATED QUANTITIES					
FRA - 71 - 0.00					
<table border="1"> <tr> <td style="text-align: center;">485</td> </tr> <tr> <td style="text-align: center;">1312</td> </tr> </table>				485	1312
485					
1312					

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED



MATCH LINE - STA 6+00 - I-71 - SEE SHEET 483

MATCH LINE - STA 11+00 - I-71 - SEE SHEET 489

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
487	PROFILES
488	ESTIMATED QUANTITIES
967	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

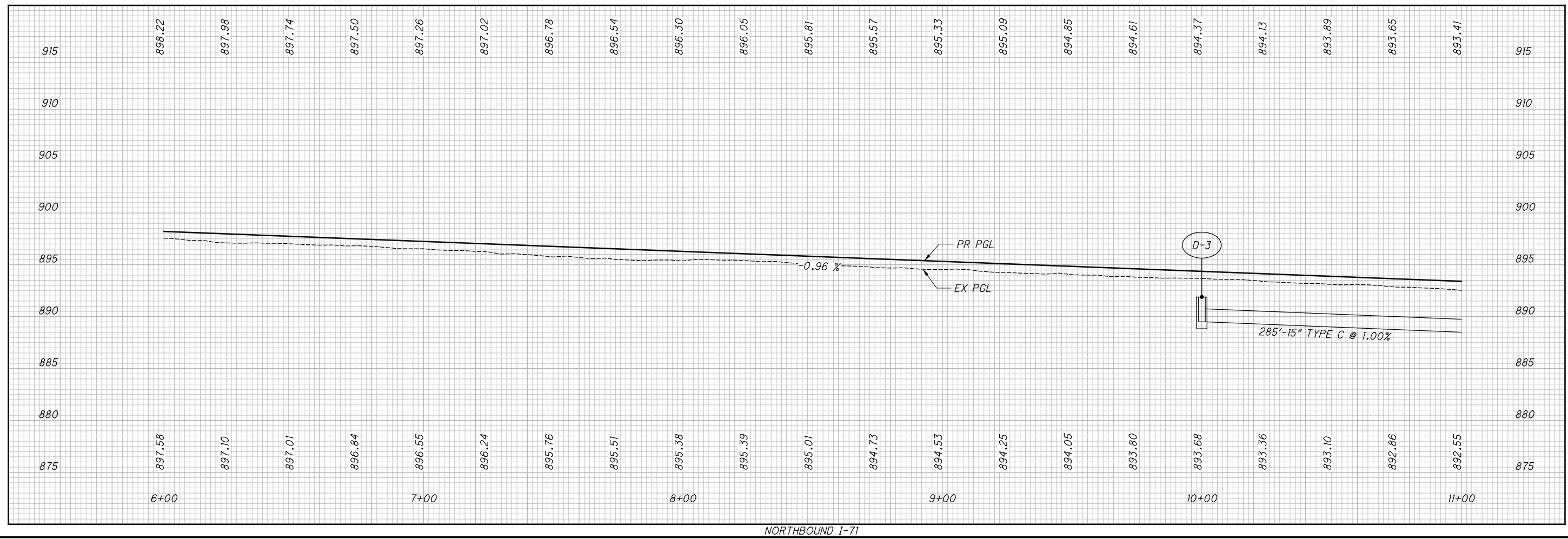
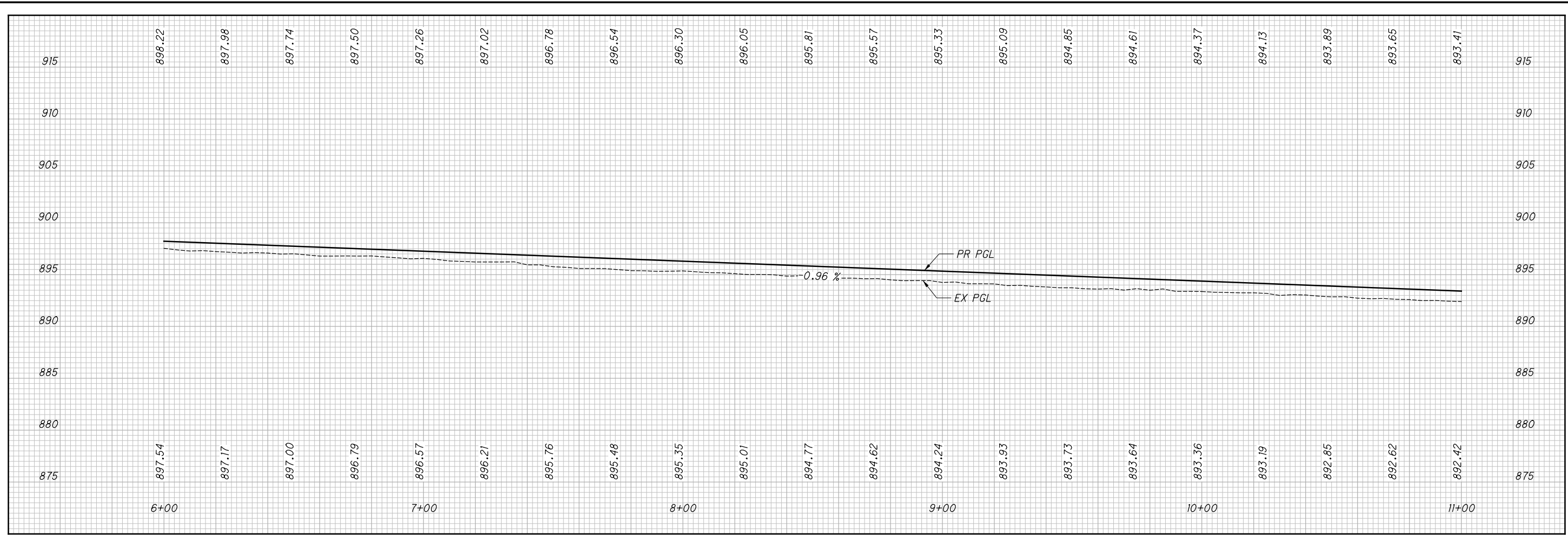
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 6+00 TO STA 11+00

FRA-71-0.00

486
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP003.dgn_Sheet 10/28/2019 11:08:52 AM 1458s.js



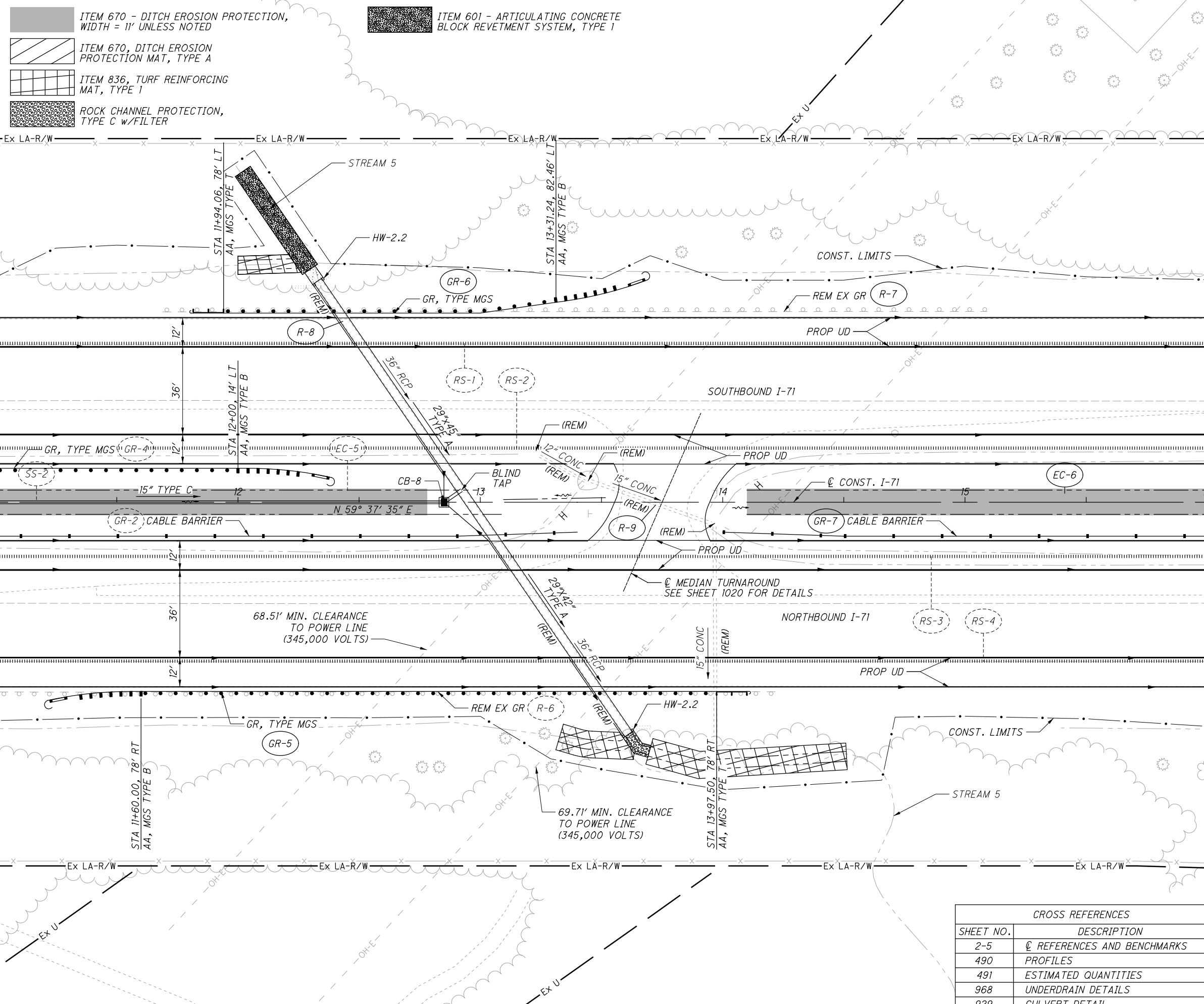
<p>PROFILE - I-71</p> <p>STA 6+00 TO STA 11+00</p>	<p>CALCULATED DCB</p> <p>CHECKED SJS</p>
<p>FRA - 71 - 0.00</p>	<p>487 1312</p>





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REF. NO.	SHEET NO.	STATION		SIDE	202		606	606	606		611	611	626	670							
		FROM	TO		GUARDRAIL REMOVED		GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE T		15" CONDUIT, TYPE C	CATCH BASIN, NO. 8	BARRIER REFLECTOR, TYPE 2 (1-WAY)	DITCH EROSION PROTECTION							
					FT		FT	EACH	EACH		FT	EACH	EACH	SY							
R-6	486, 489	10+66	14+22	RT	355																
EC-5	486, 489	10+09	12+78	CL										329							
GR-4	486, 489	10+50	12+00	LT			150	1	1				3								
SS-2	486, 489	10+00	12+95	CL						294	2										
TOTALS CARRIED TO SHEETS 395-398					355		150	1	1		294	2	3	329							

<table border="1"> <tr> <td>CALCULATED</td> <td>DCB</td> <td>CHECKED</td> <td>SJS</td> </tr> </table>	CALCULATED	DCB	CHECKED	SJS	ESTIMATED QUANTITIES	FRA - 71 - 0:00	<table border="1"> <tr> <td>488</td> </tr> <tr> <td>1312</td> </tr> </table>	488	1312
CALCULATED	DCB	CHECKED	SJS						
488									
1312									

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-  ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED
-  ITEM 670, DITCH EROSION PROTECTION MAT, TYPE A
-  ITEM 836, TURF REINFORCING MAT, TYPE 1
-  ROCK CHANNEL PROTECTION, TYPE C w/FILTER

 ITEM 601 - ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1

CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL SCALE IN FEET

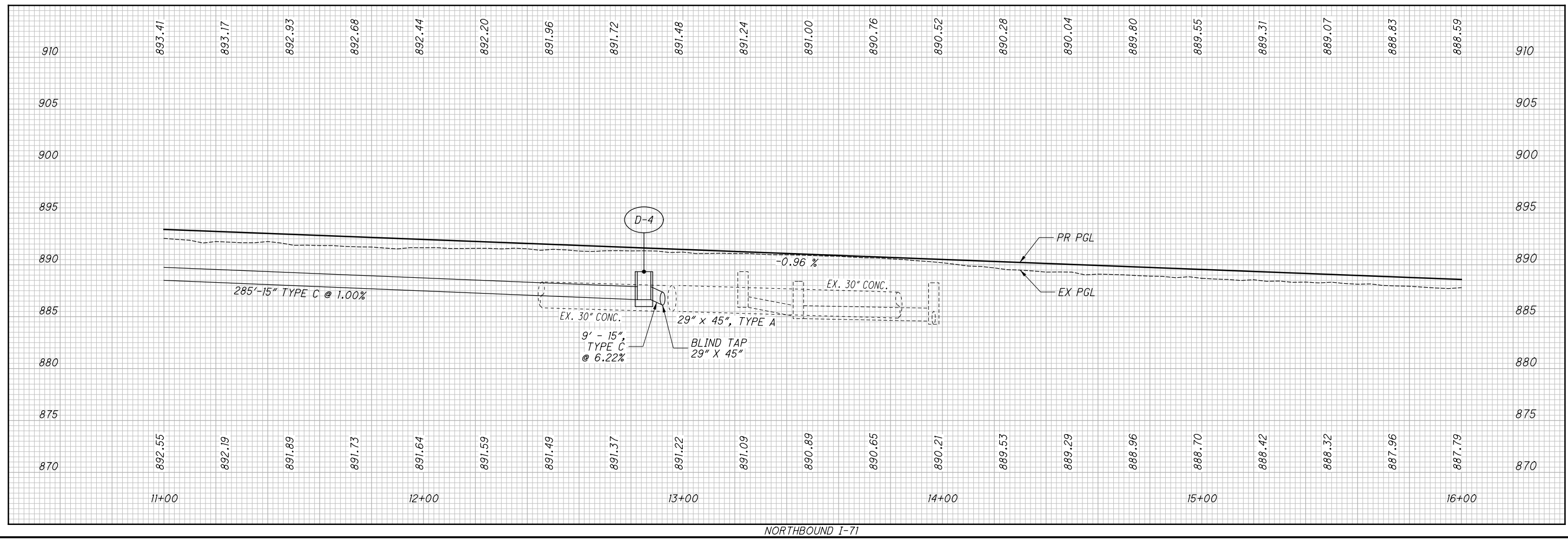
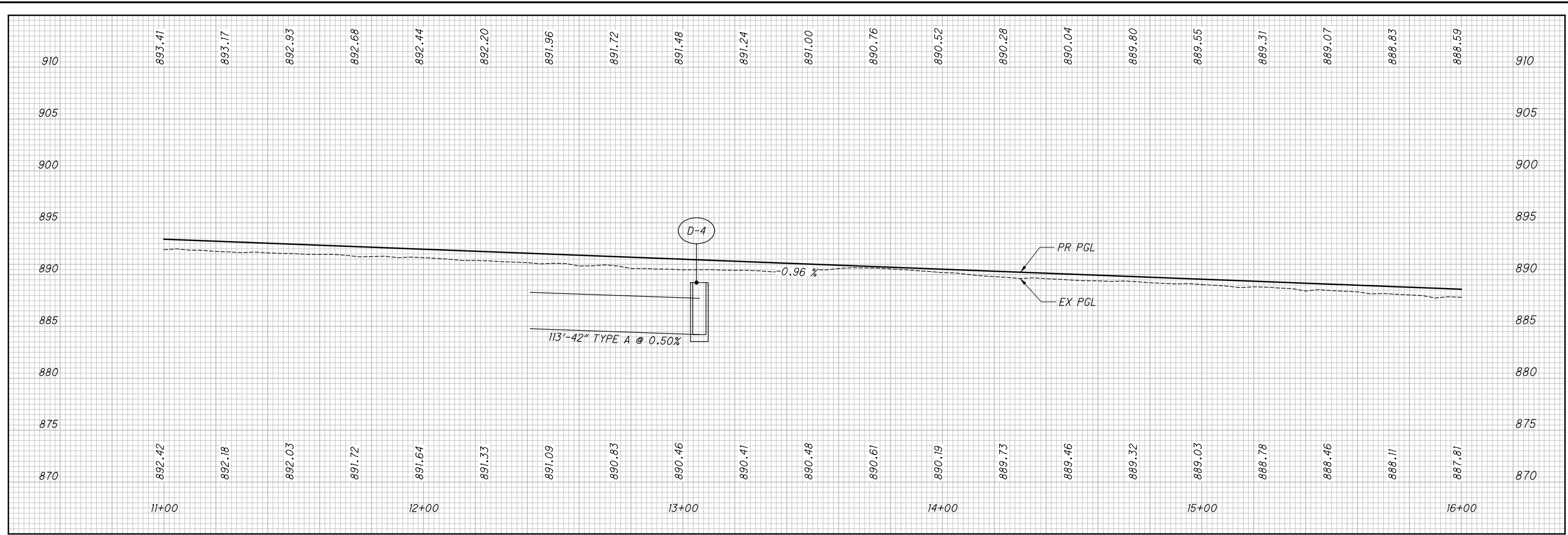
PLAN - I-71
STA 11+00 TO STA 16+00

FRA-71-0.00

489
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
490	PROFILES
491	ESTIMATED QUANTITIES
968	UNDERDRAIN DETAILS
929	CULVERT DETAIL

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 11+00 TO STA 16+00

FRA - 71 - 0.00

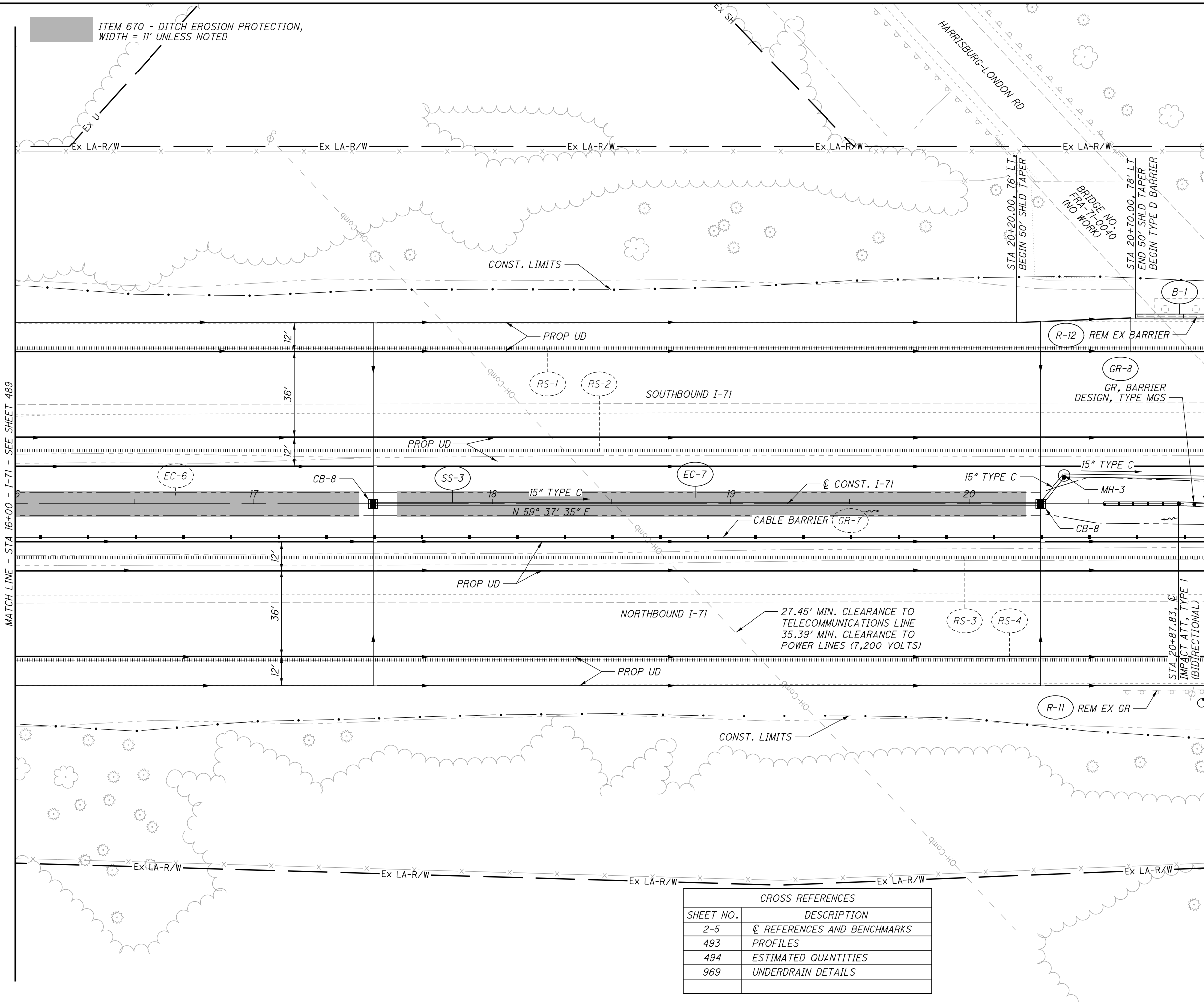
490
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0004.dgn Sheet 10/28/2019 11:08:55 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	202		606	606	606	606	606	626	670		
		FROM	TO		HEADWALL REMOVED EACH	PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH		GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED) FT	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY		
R-7	489	11+69	15+09	LT				340											
R-8	489	12+24	13+90	LT/RT	2		227												
R-9	489	13+23	13+97	LT/RT		171			3										
EC-6	489, 492	14+10	17+43	CL													407		
GR-5	489	11+60	13+98	RT						237.5	1	1				4			
GR-6	489	11+94	13+31	LT						137.5	1	1				3			
GR-7	489, 492, 495, 498, 501, 504	14+00	40+00	RT									2600	2					
TOTALS CARRIED TO SHEETS 395-398					2	171	227	340	3		375	2	2	2600	2	7	407		

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	
491 1312	

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ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED

MATCH LINE - STA 16+00 - I-71 - SEE SHEET 489

MATCH LINE - STA 21+00 - I-71 - SEE SHEET 495

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
493	PROFILES
494	ESTIMATED QUANTITIES
969	UNDERDRAIN DETAILS

0 20 40

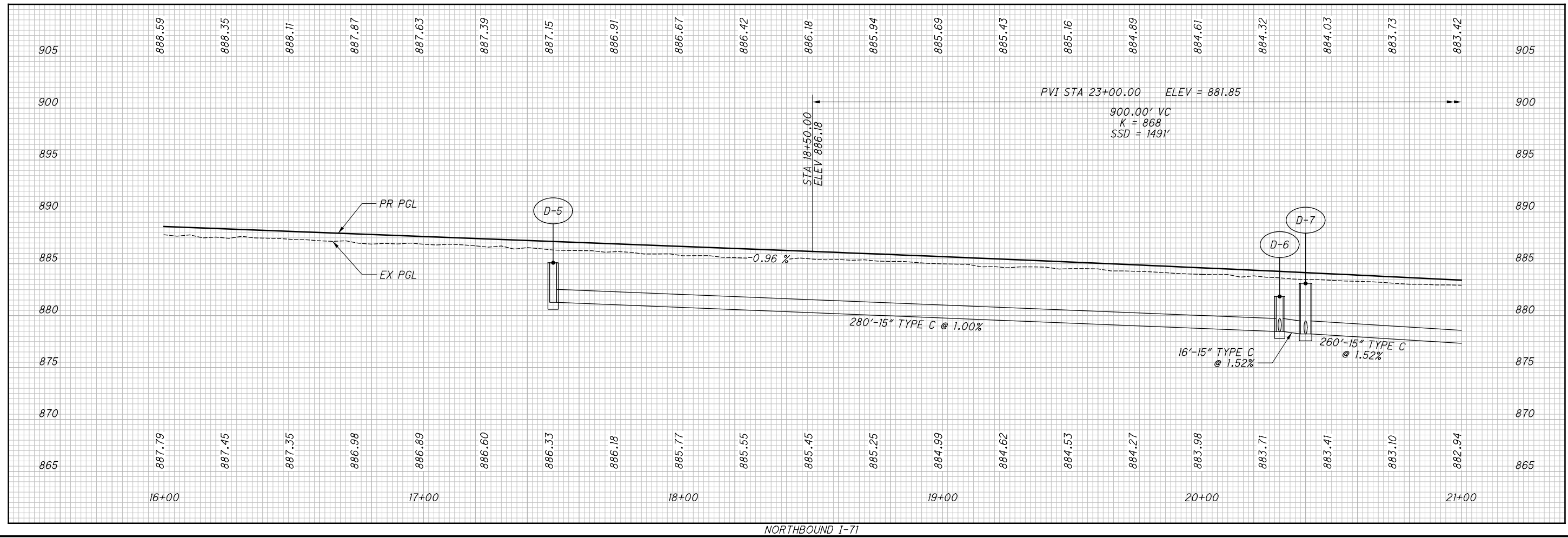
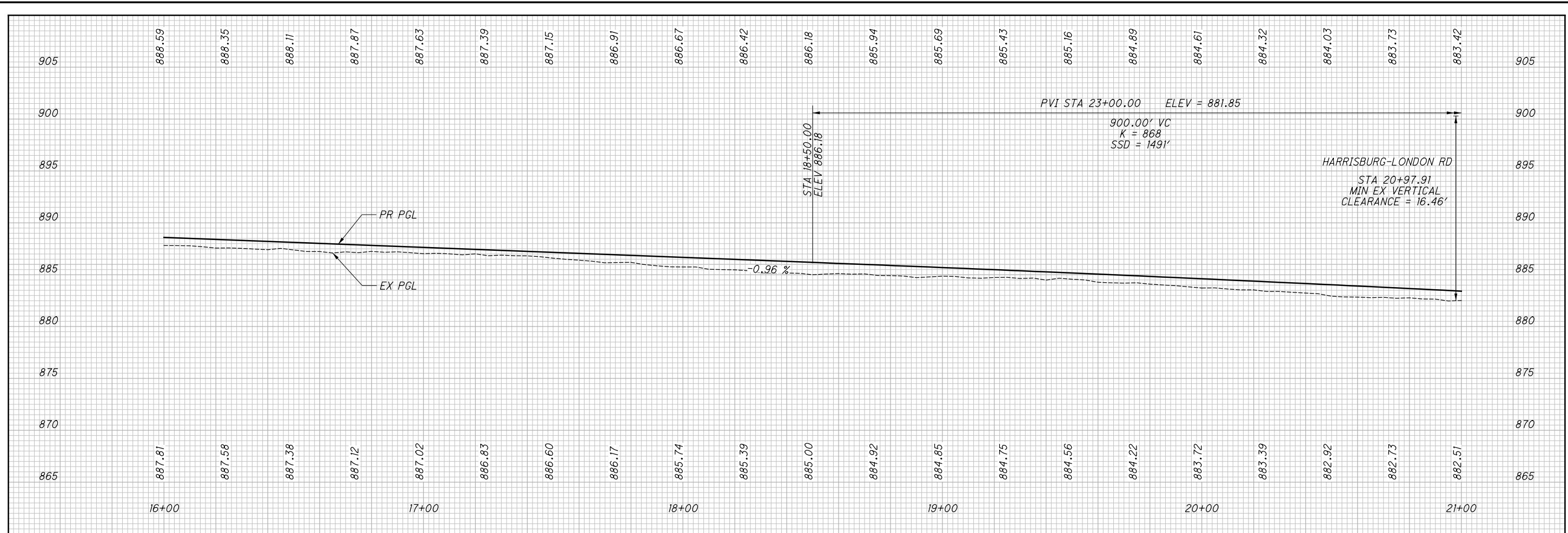
 HORIZONTAL SCALE IN FEET

 CALCULATED DCB CHECKED SJS

PLAN - I-71
STA 16+00 TO STA 21+00

FRA-71-0.00

492
1312



X:\4037000\121957.16\107201\roadway\sheets\107201G0005.dgn Sheet 10/28/2019 11:08:57 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	606	606	611	611	611	611	611	622	622	622	626	670
		FROM	TO		CONCRETE BARRIER REMOVED FT	GUARDRAIL REMOVED FT	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	GUARDRAIL - BARRIER DESIGN, TYPE MGS FT	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL) EACH	15" CONDUIT, TYPE B FT	15" CONDUIT, TYPE C FT	CATCH BASIN, NO. 5 EACH	CATCH BASIN, NO. 8 EACH	MANHOLE, NO. 3 EACH	CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	CONCRETE BARRIER END SECTION, TYPE D EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY) EACH	DITCH EROSION PROTECTION SY
R-11	492, 495	20+65	22+11	RT		146														
R-12	492, 495	20+71	21+46	LT	75															
B-1	492, 495	20+70	21+45	LT												46	1	1	3	
EC-7	492	17+59	20+23	CL																323
GR-8	492, 495	20+88	21+38	CL/RT					50	1										
SS-3	492, 495	17+50	25+20	CL/LT			1.67	0.27			95	830	1	3	2					
TOTALS CARRIED TO SHEETS 395-398					75	146	1.67	0.27	50	1	95	830	1	3	2	46	1	1	3	323

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CALCULATED	DCB				
CHECKED	SJS				
FRA - 71 - 0.00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">494</td> </tr> <tr> <td style="text-align: center;">1312</td> </tr> </table>	494	1312		
494					
1312					

X:\4037000\121957.16\107201\roadway\sheets\107201GP006.dgn_Sheet 10/28/2019 11:08:58 AM 1458sjs

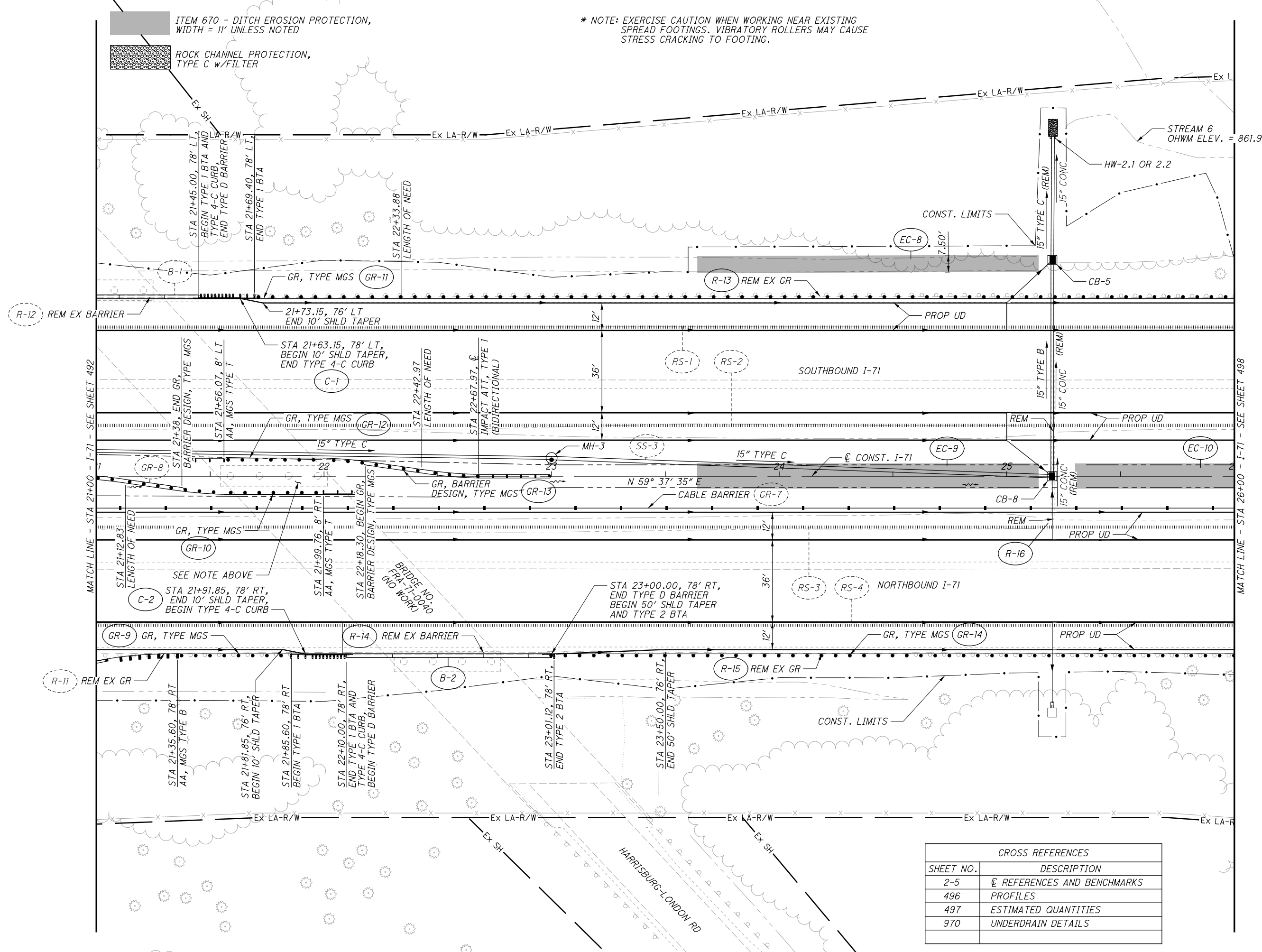
ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

* NOTE: EXERCISE CAUTION WHEN WORKING NEAR EXISTING
SPREAD FOOTINGS. VIBRATORY ROLLERS MAY CAUSE
STRESS CRACKING TO FOOTING.

CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET



MATCH LINE - STA 21+00 - I-71 - SEE SHEET 492

MATCH LINE - STA 26+00 - I-71 - SEE SHEET 498

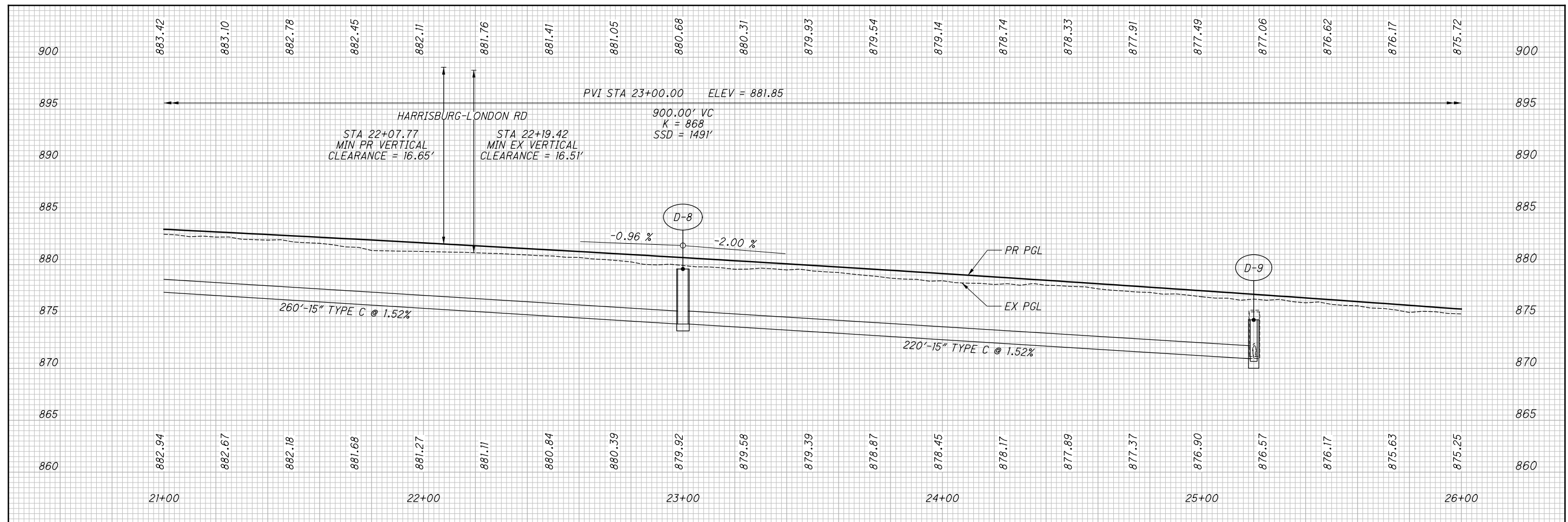
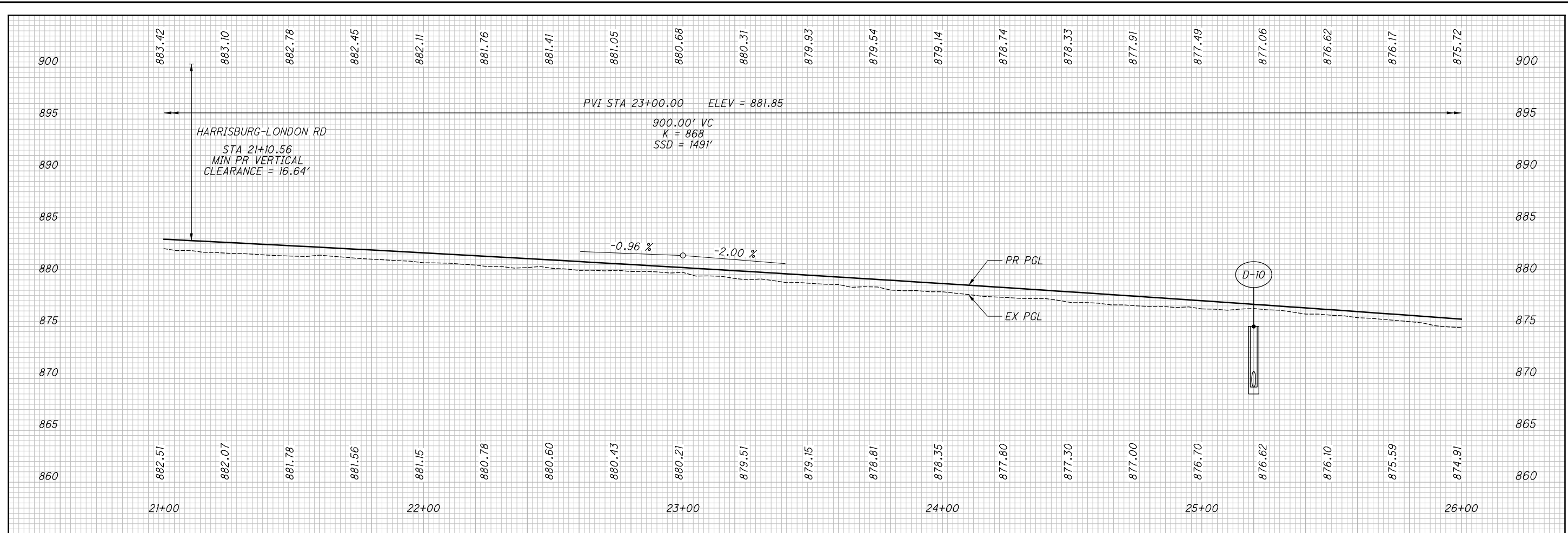
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
496	PROFILES
497	ESTIMATED QUANTITIES
970	UNDERDRAIN DETAILS

PLAN - I-71
STA 21+00 TO STA 26+00

FRA-71-0.00

495
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF006.dgn_Sheet 10/28/2019 11:08:58 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 21+00 TO STA 26+00

FRA - 71 - 0.00

496
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0006.dgn Sheet 10/28/2019 11:08:59 AM 1458s.js

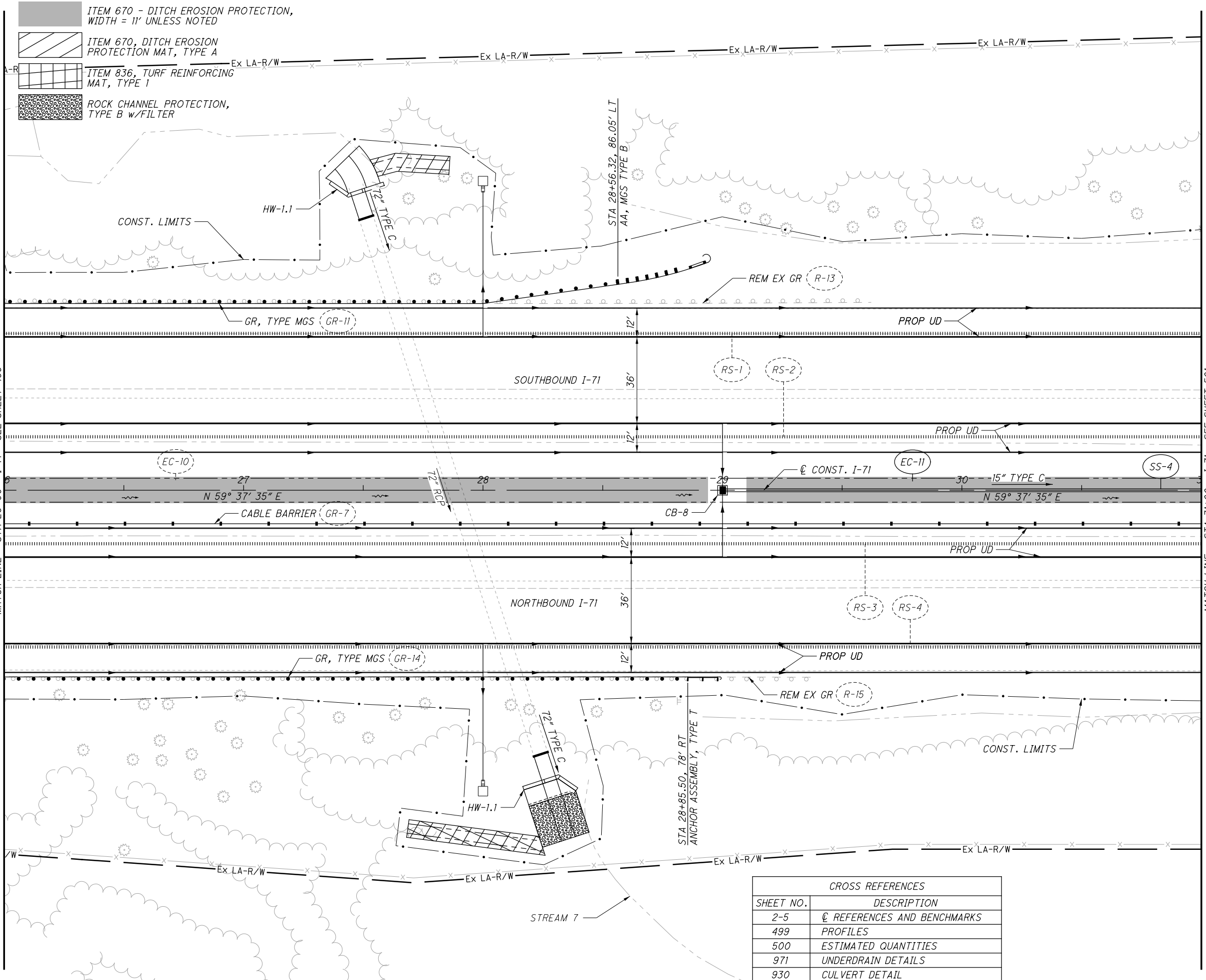
REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202		606	606	606	606	606	606	606	609	622	622	626	626	670	
		FROM	TO		CONCRETE BARRIER REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH		GUARDRAIL, TYPE MGS FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL) EACH		CURB, TYPE 4-C FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	CONCRETE BARRIER END SECTION, TYPE D EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY) EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY
R-13	495, 498	21+46	29+62	LT			818																
R-14	495	22+09	22+99	RT	90																		
R-15	495, 498	22+99	29+37	RT			638																
R-16	495	25+20		LT/RT		161		3															
B-2	495	22+10	23+00	RT														62	2	2			
C-1	495	21+45	21+63	LT													18						
C-2	495	21+92	22+10	RT													18						
EC-8	495	23+63	25+13	LT																			183
EC-9	495	23+63	25+13	CL																			125
EC-10	495, 498	25+29	28+93	CL																			445
GR-9	495	21+36	22+10	RT					50		1		1										2
GR-10	495	21+38	22+00	RT					62.5			1											2
GR-11	495, 498	21+45	28+56	LT					687.5		1		1										8
GR-12	495	21+56	22+18	LT					62.5			1											2
GR-13	495	22+18	22+68	LT/CL						50					1								2
GR-14	495, 498	23+00	28+86	RT					587.5			1		1									7
TOTALS CARRIED TO SHEETS 395-398					90	161	1456	3		1450	50	2	3	2	1	1		36	62	2	2	23	753



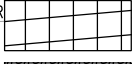
CALCULATED DCB CHECKED SJS	ESTIMATED QUANTITIES	FRA - 71 - 0.00	497 1312
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X:\4037000\121957.16\107201\roadway\sheets\107201GP007.dgn_Sheet 10/28/2019 11:09:00 AM 1458sjs

MATCH LINE - STA 26+00 - I-71 - SEE SHEET 495

MATCH LINE - STA 31+00 - I-71 - SEE SHEET 501



-  ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED
-  ITEM 836, TURF REINFORCING MAT, TYPE 1
-  ROCK CHANNEL PROTECTION, TYPE B w/FILTER

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
499	PROFILES
500	ESTIMATED QUANTITIES
971	UNDERDRAIN DETAILS
930	CULVERT DETAIL

CALCULATED DCB CHECKED SJS



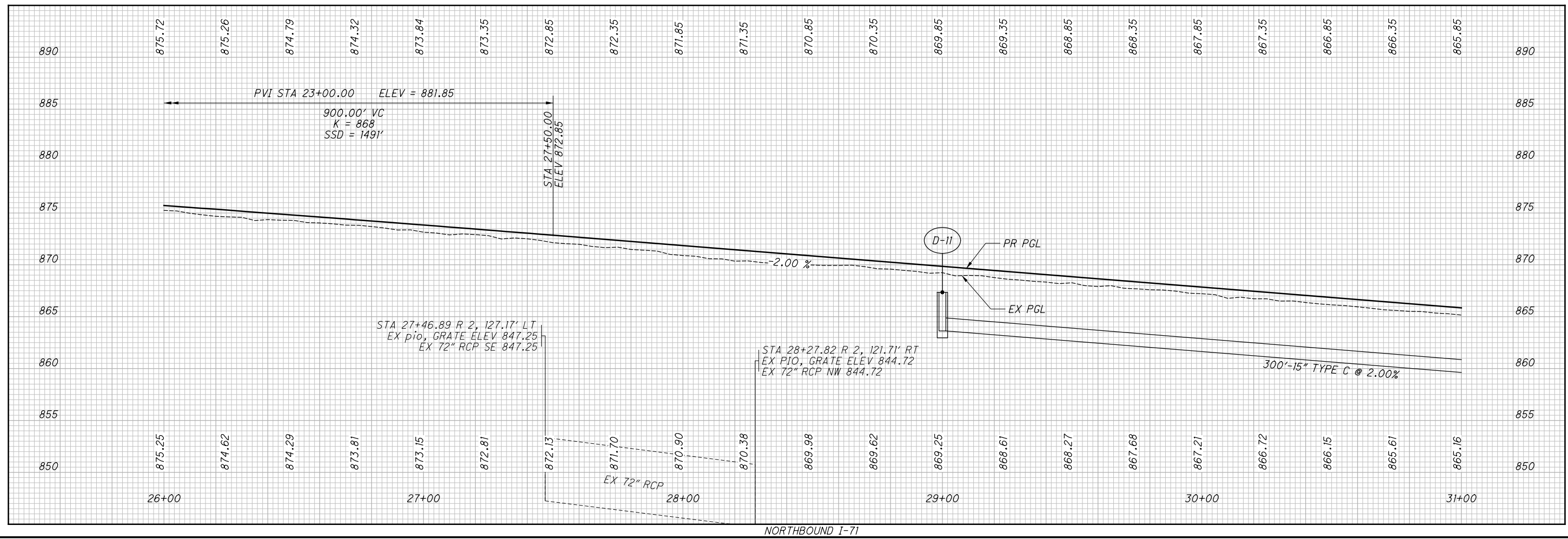
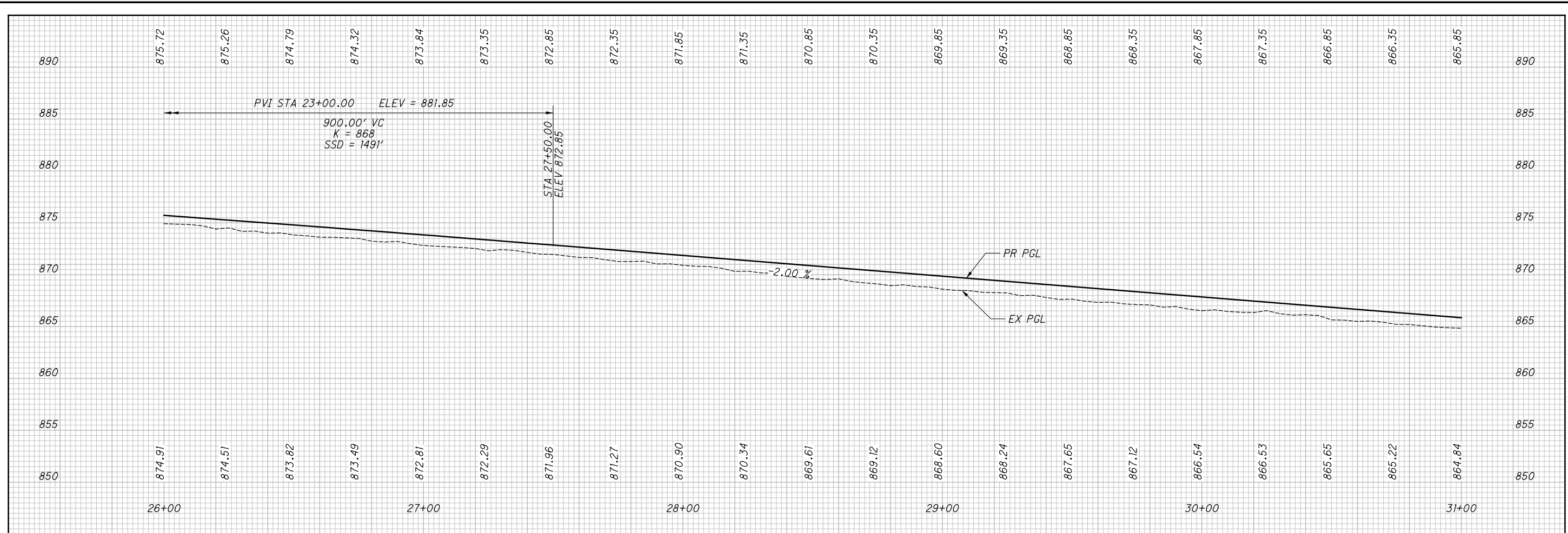
0 20 40
HORIZONTAL SCALE IN FEET

PLAN - I-71
STA 26+00 TO STA 31+00

FRA-71-0.00

498
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF007.dgn Sheet 10/28/2019 11:09:00 AM 1458sjs



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 26+00 TO STA 31+00

FRA - 71 - 0.00

499
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0007.dgn Sheet 10/28/2019 11:09:01 AM 1458s.js

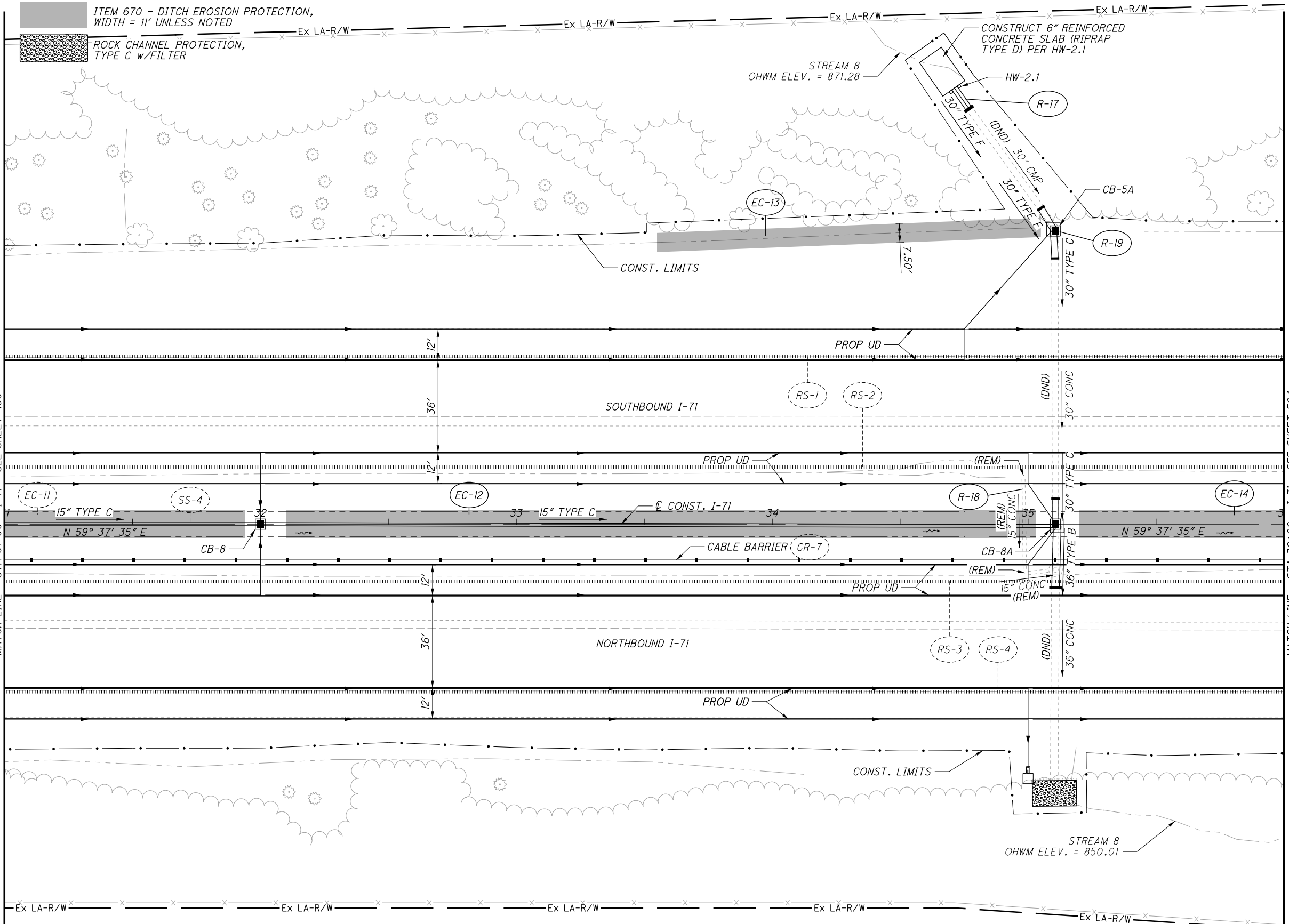
REF. NO.	SHEET NO.	STATION		SIDE	601	601	602	611	611	611	611	611	611	611	670
		FROM	TO		RIPRAP, TYPE D	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	15" CONDUIT, TYPE C	30" CONDUIT, TYPE C, 706.02	30" CONDUIT, TYPE F, 707.05	36" CONDUIT, TYPE B, 706.02	CATCH BASIN, NO. 5A	CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A	DITCH EROSION PROTECTION
					SY	CY	CY	FT	FT	FT	FT	EACH	EACH	EACH	SY
EC-11	498, 501	29+09	31+93	CL											347
SS-4	498, 501	29+00	35+11	LT/RT	19	9.6	0.6	610	18	16	24	1	2	1	
TOTALS CARRIED TO SHEETS 395-398					19	9.6	0.6	610	18	16	24	1	2	1	347

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	500 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP008.dgn_Sheet 10/28/2019 11:09:02 AM 1458sjjs

MATCH LINE - STA 31+00 - I-71 - SEE SHEET 498

MATCH LINE - STA 36+00 - I-71 - SEE SHEET 504



ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED

ROCK CHANNEL PROTECTION, TYPE C w/FILTER

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
502	PROFILES
503	ESTIMATED QUANTITIES
972	UNDERDRAIN DETAILS

CALCULATED DCB CHECKED SJS

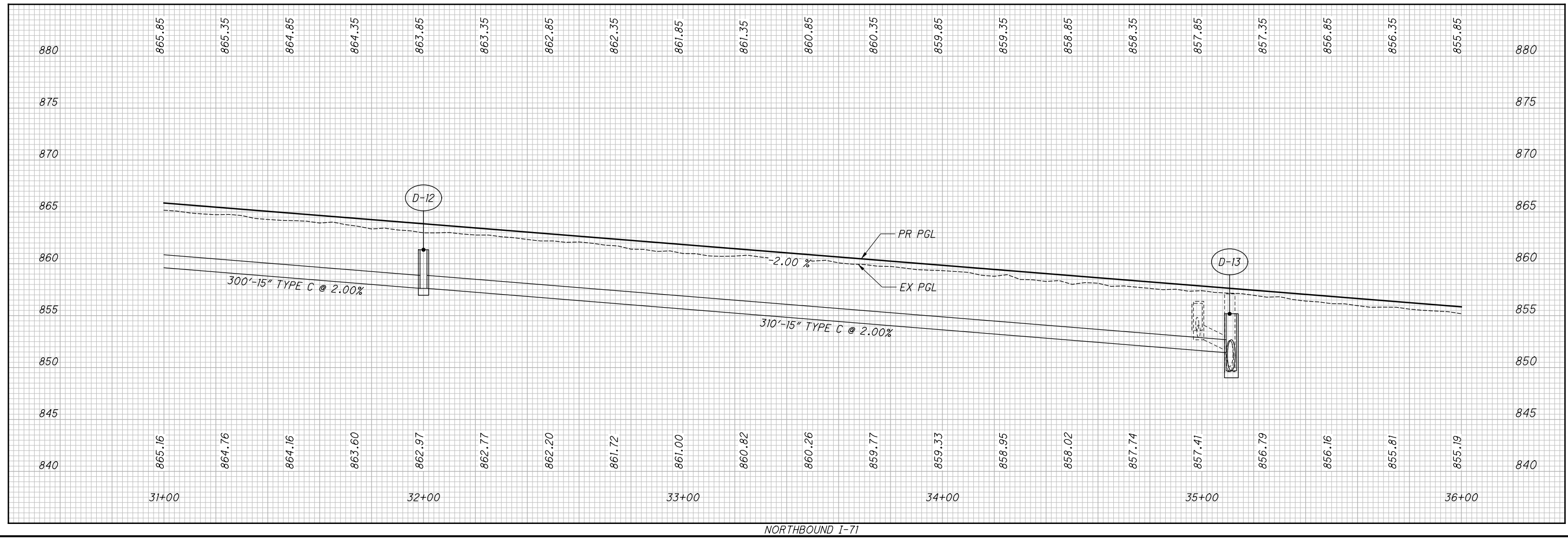
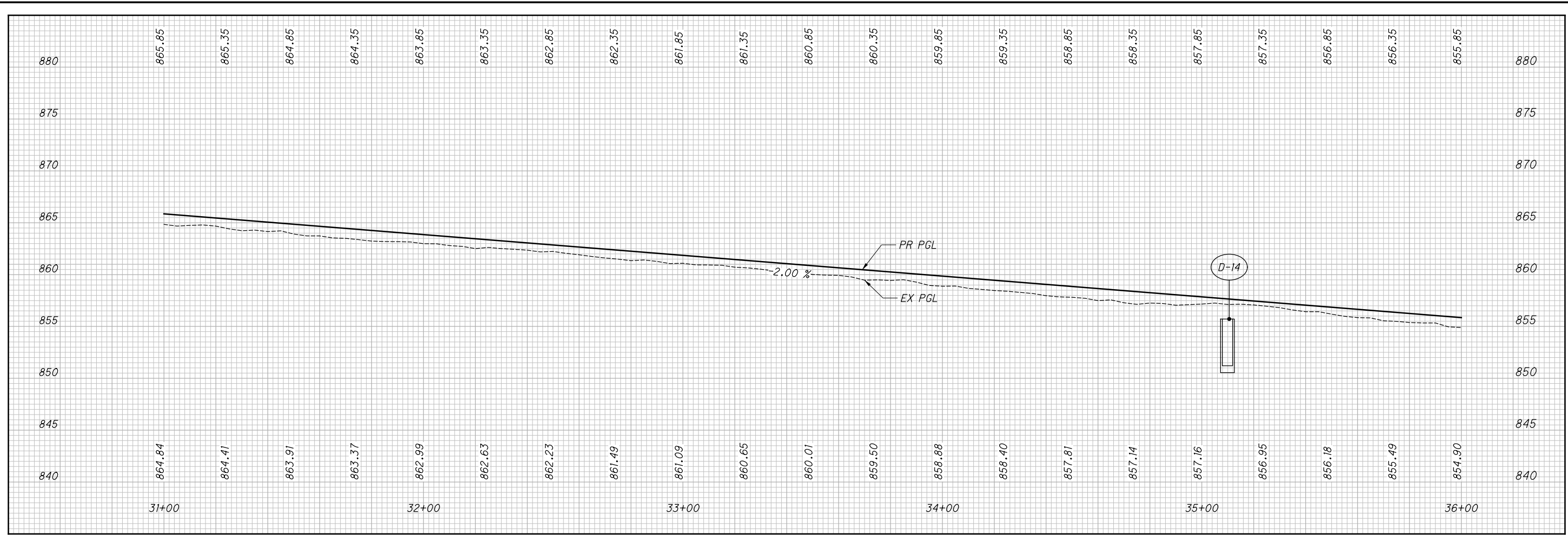
0 20 40
10
HORIZONTAL SCALE IN FEET

PLAN - I-71
STA 31+00 TO STA 36+00

FRA-71-0.00

501
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF008.dgn_Sheet 10/28/2019 11:09:02 AM 1458sjs



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 31+00 TO STA 36+00

FRA - 71 - 0.00

502
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0008.dgn Sheet 10/28/2019 11:09:03 AM 1458s.js

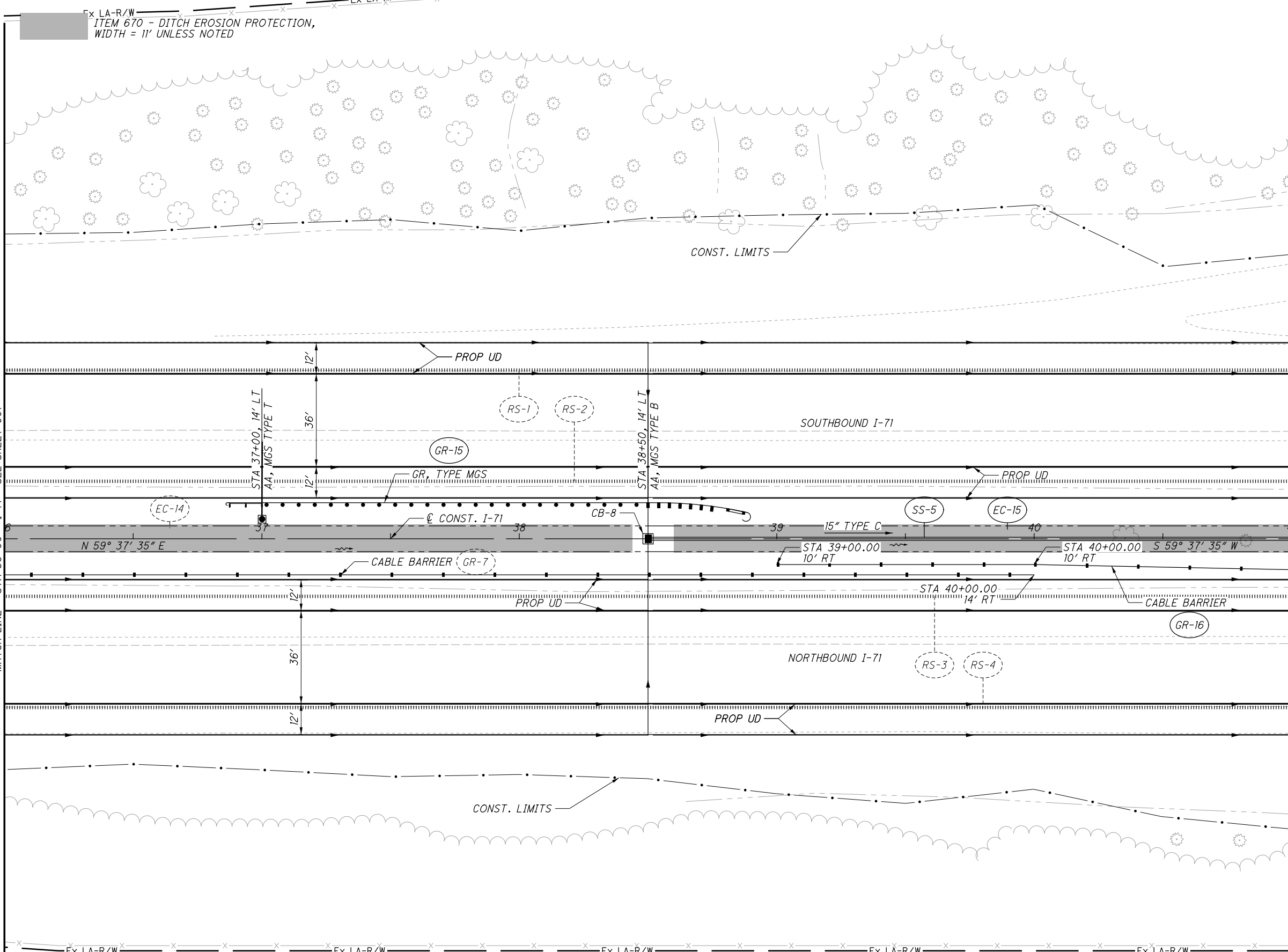
REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	670										
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	MANHOLE REMOVED EACH	CATCH BASIN REMOVED EACH	DITCH EROSION PROTECTION SY										
R-17	501	34+71	34+77	LT		11													
R-18	501	34+98	35+11	LT/RT	44	29	1	2											
R-19	501	35+05	35+11	LT		20		1											
EC-12	501	32+09	35+04	CL					361										
EC-13	501	33+54	35+04	LT					125										
EC-14	501, 504	35+20	38+43	CL					395										
TOTALS CARRIED TO SHEETS 395-398					44	60	1	3	881										

CALCULATED DCB CHECKED SJS	ESTIMATED QUANTITIES	FRA - 71 - 0:00	503 1312
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X:\4037000\121957.16\107201\roadway\sheets\107201GP009.dgn_Sheet 10/28/2019 11:09:03 AM 1458sjs

MATCH LINE - STA 36+00 - I-71 - SEE SHEET 501

MATCH LINE - STA 41+00 - I-71 - SEE SHEET 507



Ex LA-R/W
ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

CONST. LIMITS

CONST. LIMITS

Ex LA-R/W

Ex LA-R/W

Ex LA-R/W

Ex LA-R/W

Ex LA-R/W

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
505	PROFILES
506	ESTIMATED QUANTITIES
973	UNDERDRAIN DETAILS

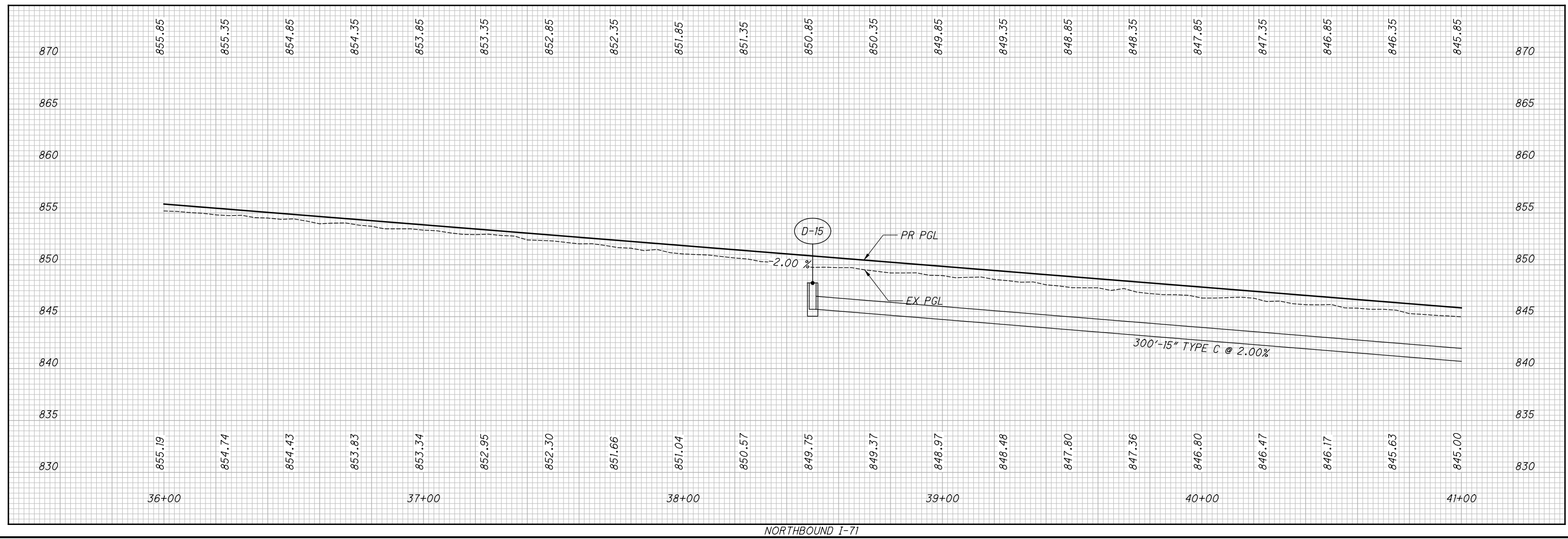
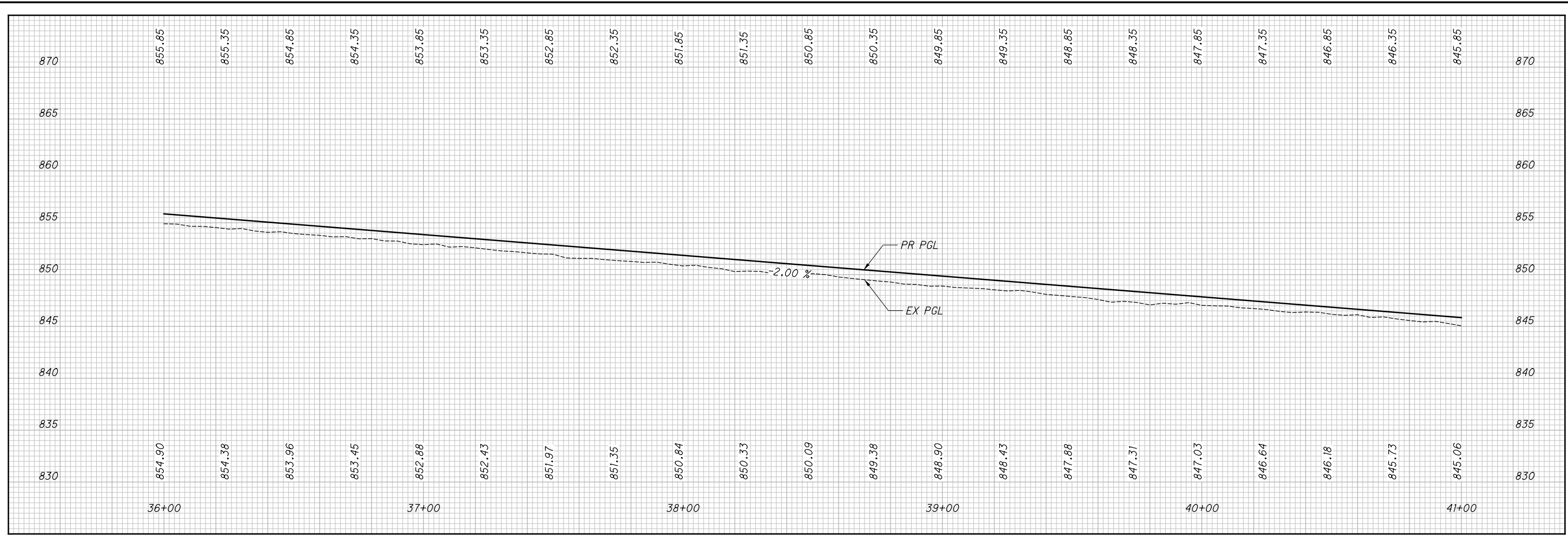
CALCULATED
DCB
CHECKED
SJS

HORIZONTAL SCALE IN FEET

PLAN - I-71
STA 36+00 TO STA 41+00

FRA-71-0.00

504
1312



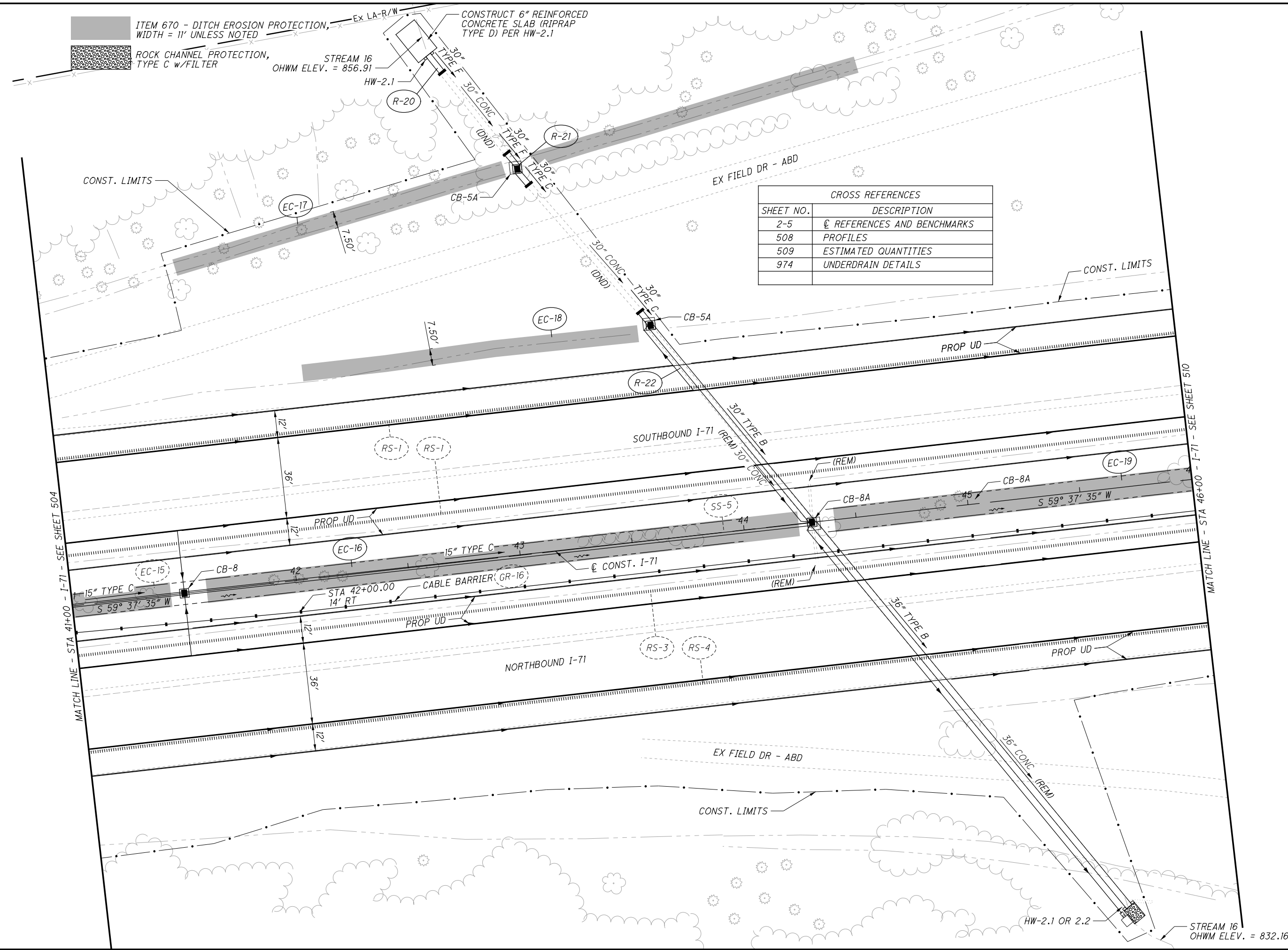
<p>FRA - 71 - 0.00</p>	<p>PROFILE - I-71 STA 36+00 TO STA 41+00</p>
<p>505 1312</p>	<p>CALCULATED DCB CHECKED SJS</p>

X:\4037000\121957.16\107201\roadway\sheets\107201G0009.dgn Sheet 10/28/2019 11:09:04 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	601	601	602	606	606	606	606	606	611	611	611	611	611	611	611	611	626	670
		FROM	TO		SY	CY	CY	FT	EACH	EACH	FT	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH
EC-15	504, 507	38+59	41+43	CL																		347
GR-15	504	37+00	38+50	LT				150	1	1												3
GR-16	504, 507, 510, 513, 516	39+00	60+00	RT							2100	2										
SS-5	504, 507	38+50	45+57	LT/RT	19	2	1.36						580	113	16	16	221	2	2	1		
TOTALS CARRIED TO SHEETS 395-398					19	2	1.36	150	1	1	2100	2	580	113	16	16	221	2	2	1	3	347

ESTIMATED QUANTITIES	CALCULATED
	DCB
CHECKED	
SJS	
FRA - 71 - 0.00	
506 1312	

X:\4037000\121957.16\107201\roadway\sheets\107201GP010.dgn Sheet 10/28/2019 11:09:05 AM 1458s.js



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

CONSTRUCT 6" REINFORCED
CONCRETE SLAB (RIPRAP
TYPE D) PER HW-2.1

STREAM 16
OHWM ELEV. = 856.91

STREAM 16
OHWM ELEV. = 832.16

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
508	PROFILES
509	ESTIMATED QUANTITIES
974	UNDERDRAIN DETAILS

0 20 40
HORIZONTAL
SCALE IN FEET

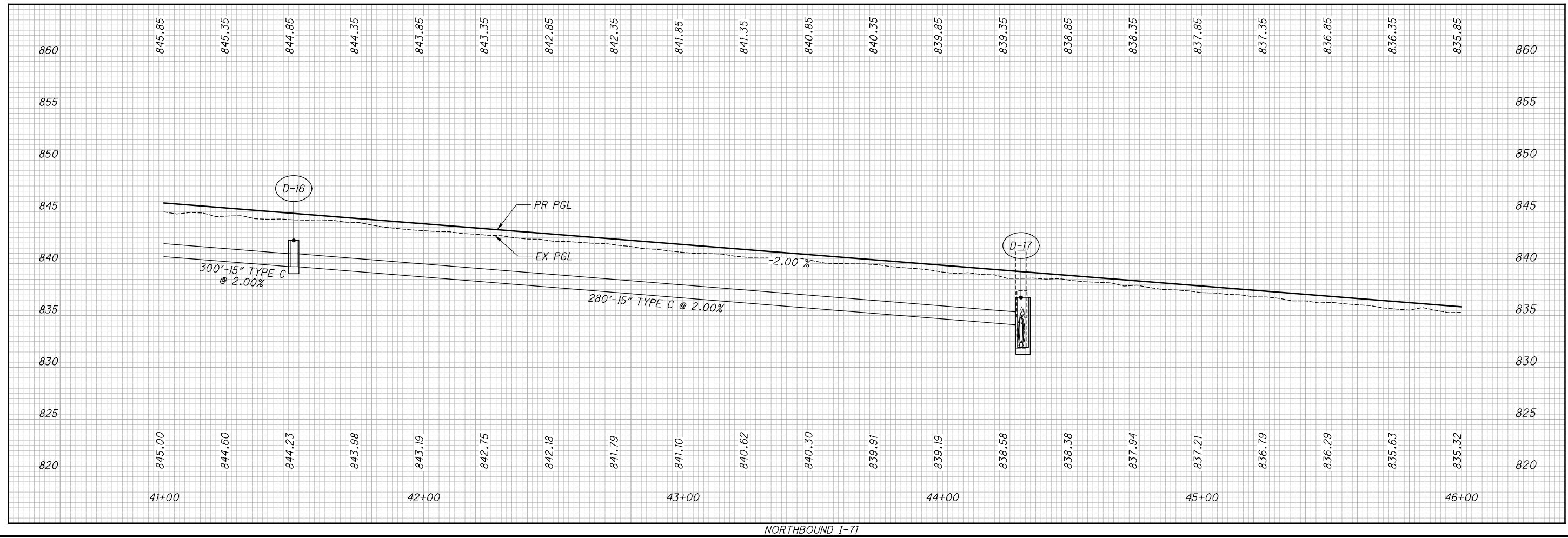
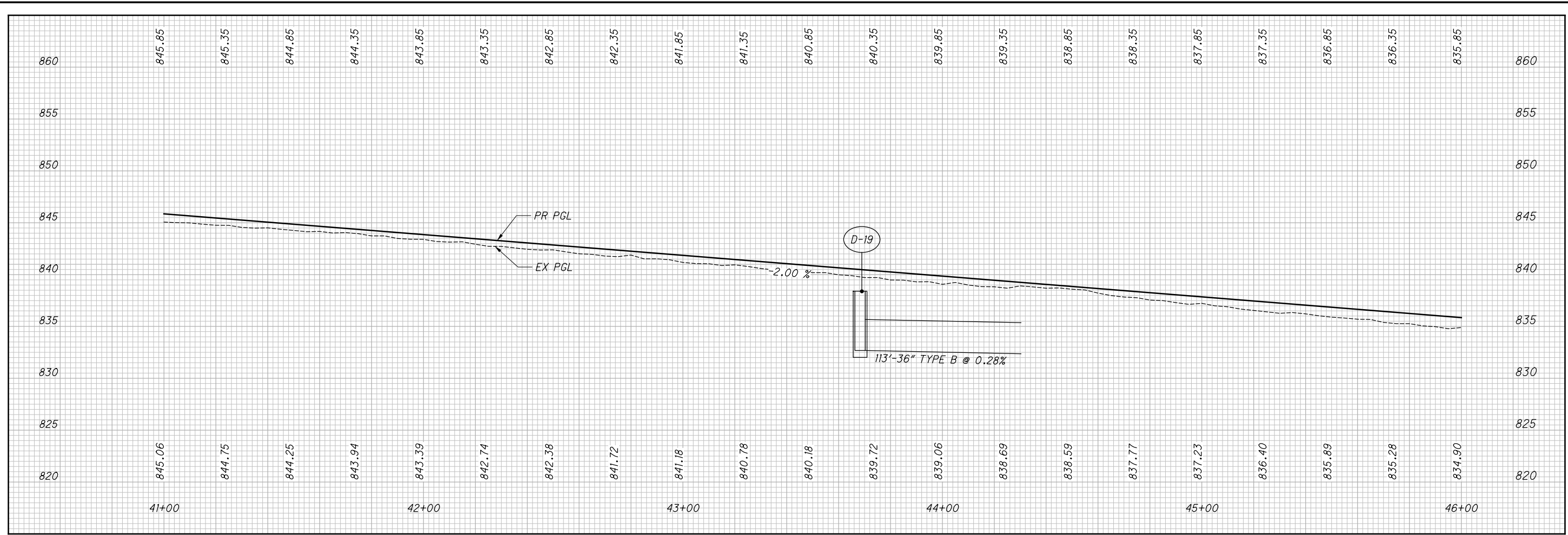
CALCULATED
DCB
CHECKED
SJS

PLAN - I-71
STA 41+00 TO STA 46+00

FRA-71-0.00

507
1312

X:\4037000\121957.16\107201\roadway\sheets\1072010F010.dgn Sheet 10/28/2019 11:09:06 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 41+00 TO STA 46+00

FRA - 71 - 0.00

508
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0010.dgn Sheet 10/28/2019 11:09:06 AM 1458s.js

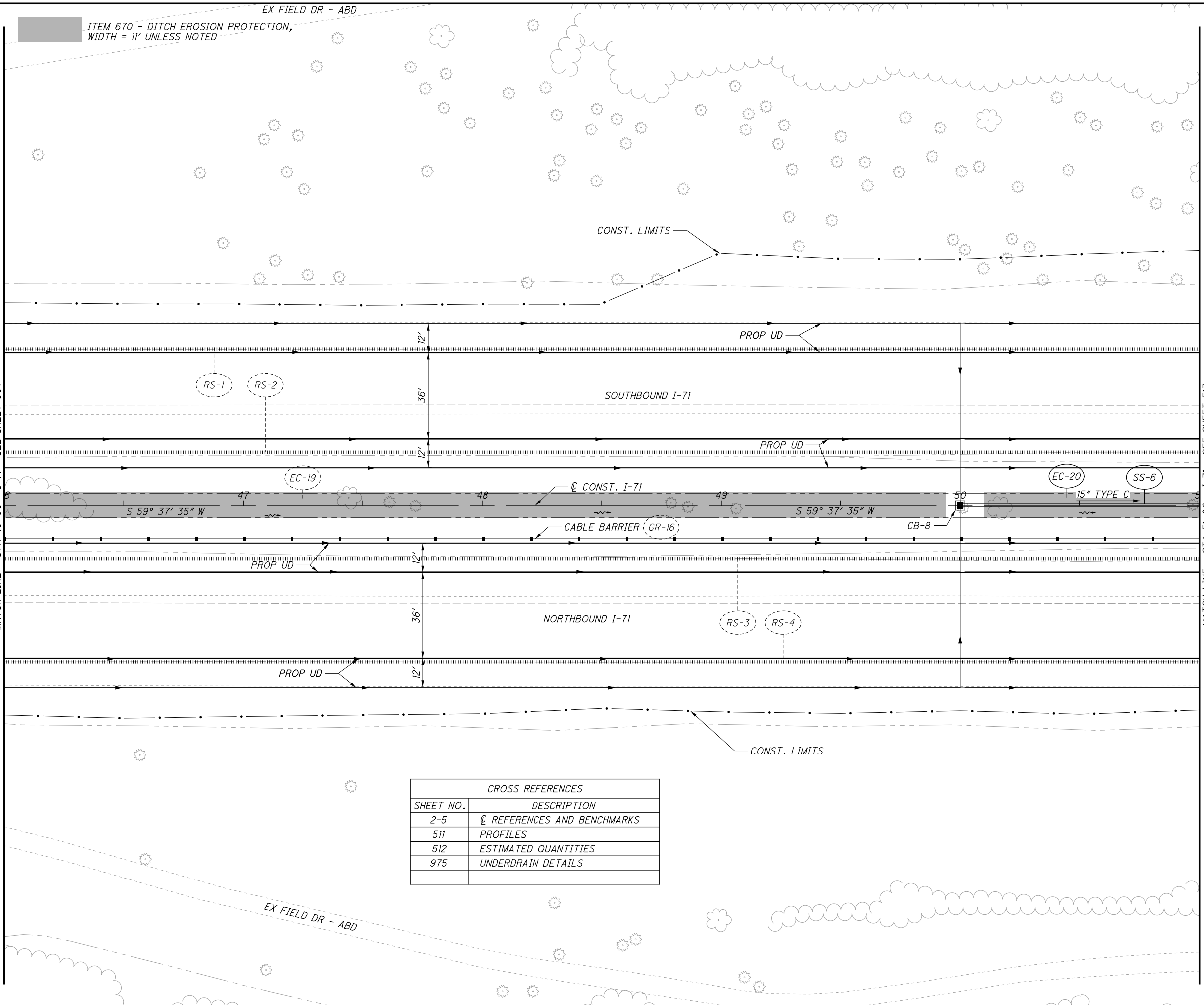
REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	202	670									
		FROM	TO		HEADWALL REMOVED EACH	PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	MANHOLE REMOVED EACH	CATCH BASIN REMOVED EACH	DITCH EROSION PROTECTION SY									
R-20	507	42+84	42+90	LT			10												
R-21	507	43+14	43+22	LT			16		1										
R-22	507	43+65	45+62	LT/RT	1	31	329	1	3										
EC-16	507	41+59	44+23	CL						323									
EC-17	507	41+62	44+73	LT						258									
EC-18	507	42+12	43+62	LT						125									
EC-19	507, 510	44+39	49+93	CL						677									
TOTALS CARRIED TO SHEETS 395-398					1	31	355	1	4	1383									

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0:00	509 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP011.dgn Sheet 10/28/2019 11:09:07 AM 1458s.js

MATCH LINE - STA 46+00 - I-71 - SEE SHEET 507

MATCH LINE - STA 51+00 - I-71 - SEE SHEET 513



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
511	PROFILES
512	ESTIMATED QUANTITIES
975	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

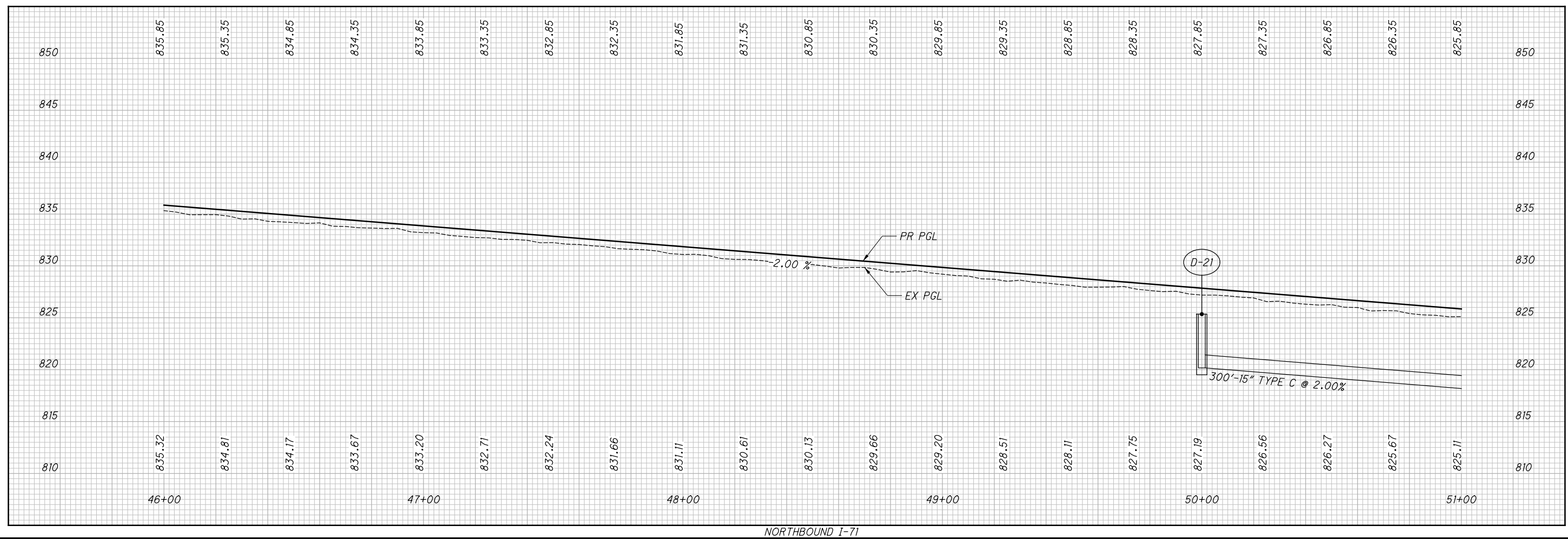
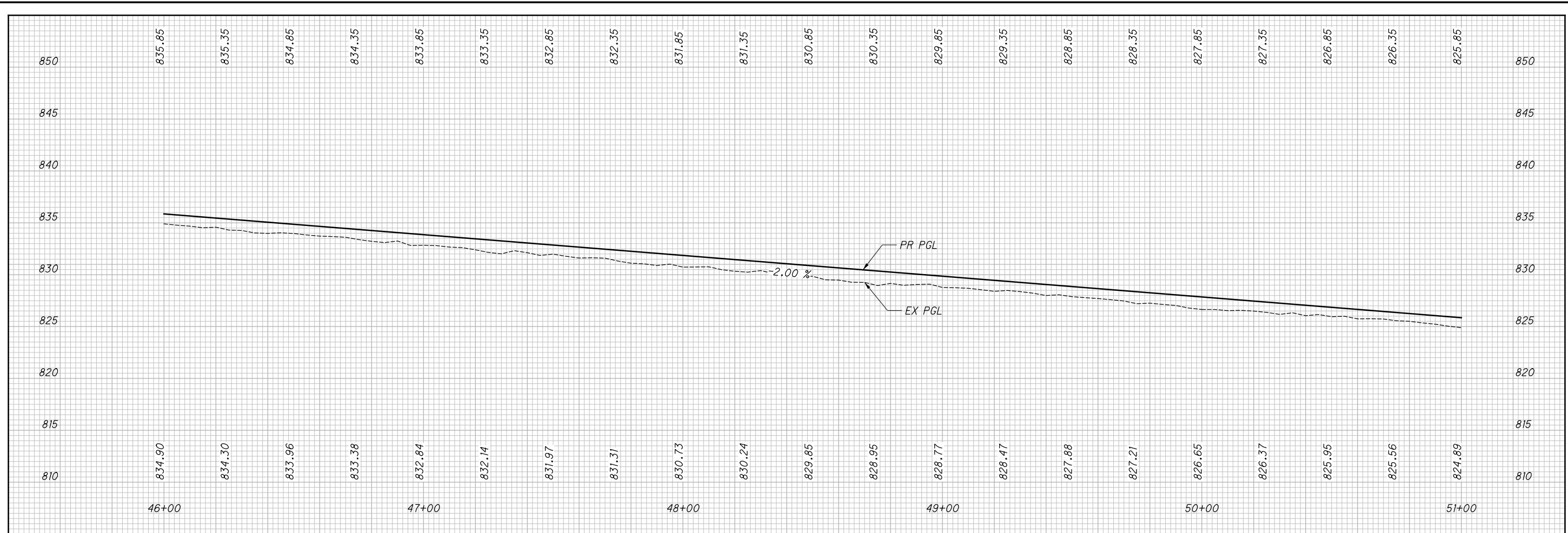
0 20 40
10
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 46+00 TO STA 51+00

FRA-71-0.00

510
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF011.dgn Sheet 10/28/2019 11:09:07 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 46+00 TO STA 51+00

FRA - 71 - 0.00

511
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0011.dgn Sheet 10/28/2019 11:09:08 AM 1458sjs

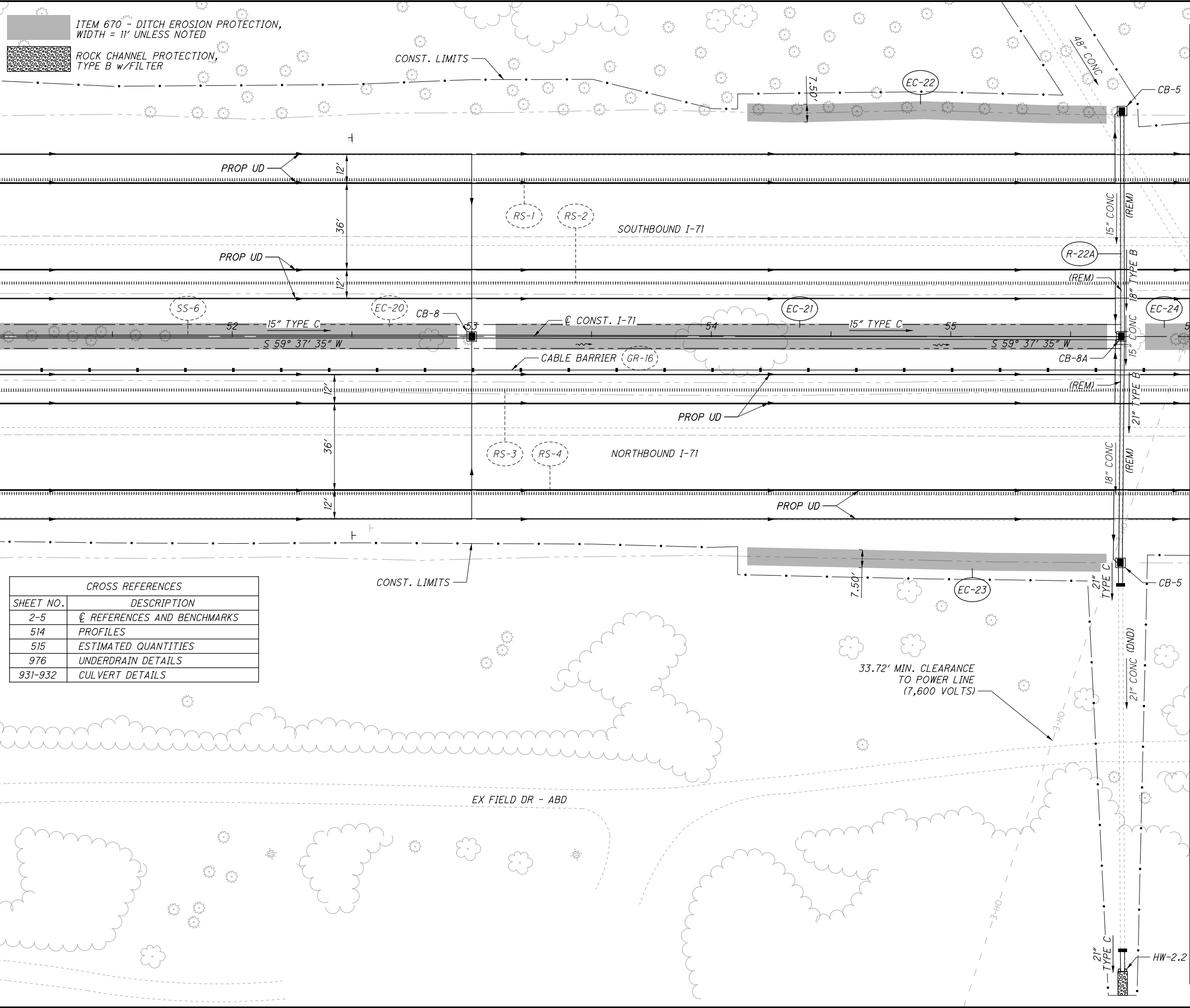
REF. NO.	SHEET NO.	STATION		SIDE	601	602		611	611	611	611	611	611	611	670				
		FROM	TO		ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	CONCRETE MASONRY		15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	21" CONDUIT, TYPE B	21" CONDUIT, TYPE C, 706.02	CATCH BASIN, NO. 5	CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A		DITCH EROSION PROTECTION			
					CY	CY		FT	FT	FT	FT	EACH	EACH	EACH	SY				
EC-20	510, 513	50+09	52+93	CL											347				
SS-6	510, 513	50+00	55+72	LT/RT	3.7	0.37		571	94	94	16	2	2	1					
TOTALS CARRIED TO SHEETS 395-398					3.7	0.37		571	94	94	16	2	2	1	347				

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	512 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP012.dgn Sheet 10/28/2019 11:09:09 AM 1458s.js

MATCH LINE - STA 51+00 - I-71 - SEE SHEET 510

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 516



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
514	PROFILES
515	ESTIMATED QUANTITIES
976	UNDERDRAIN DETAILS
931-932	CULVERT DETAILS

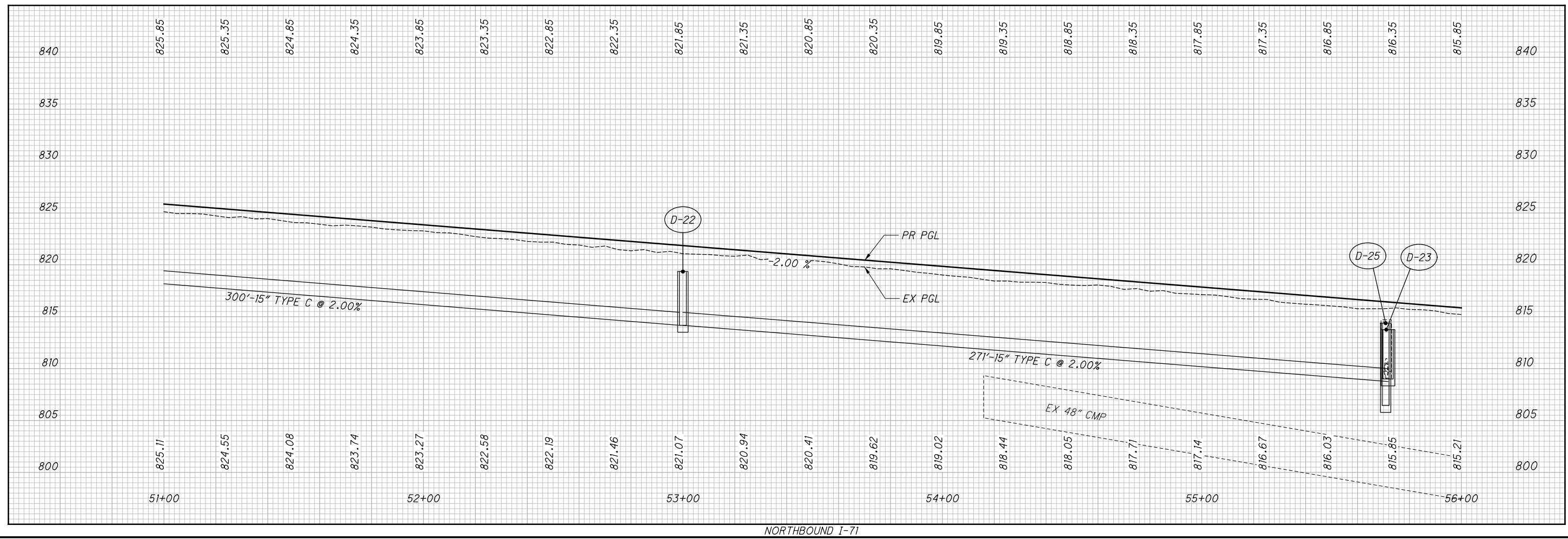
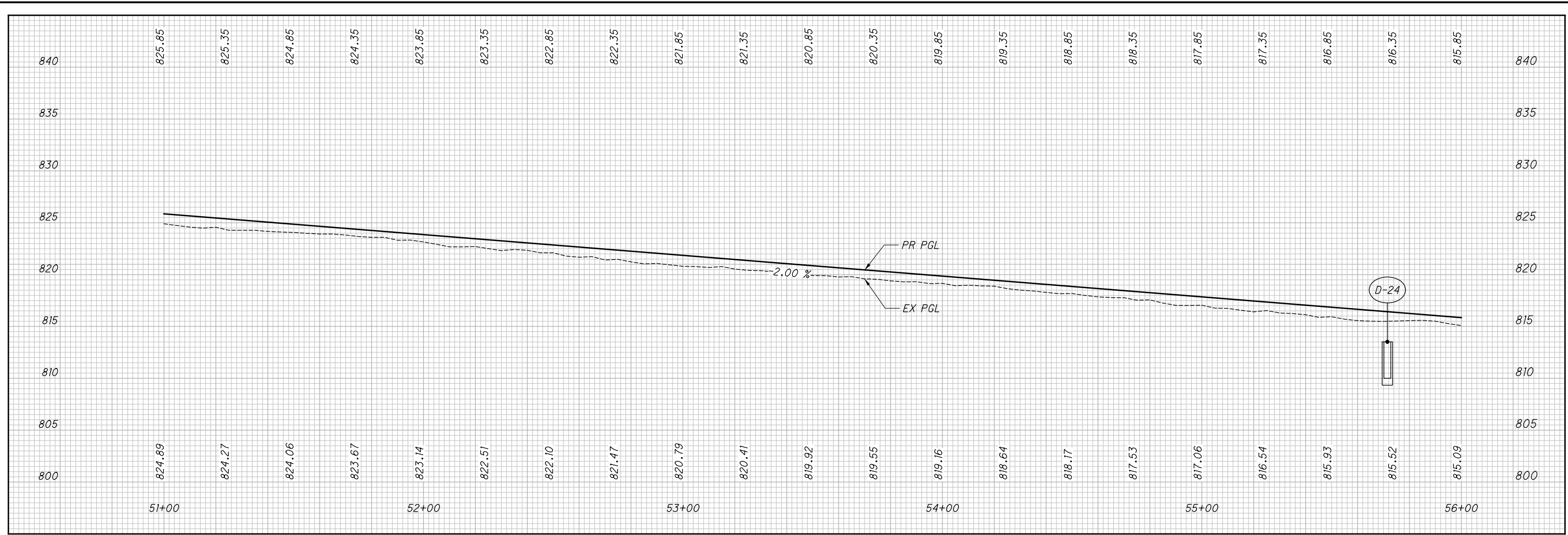


PLAN - I-71
STA 51+00 TO STA 56+00

FRA-71-0.00

513
1312

X:\4037000\121957.16\107201\roadway\sheets\10720101G\F012.dgn Sheet 10/28/2019 11:09:09 AM 14585.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 51+00 TO STA 56+00

FRA - 71 - 0.00

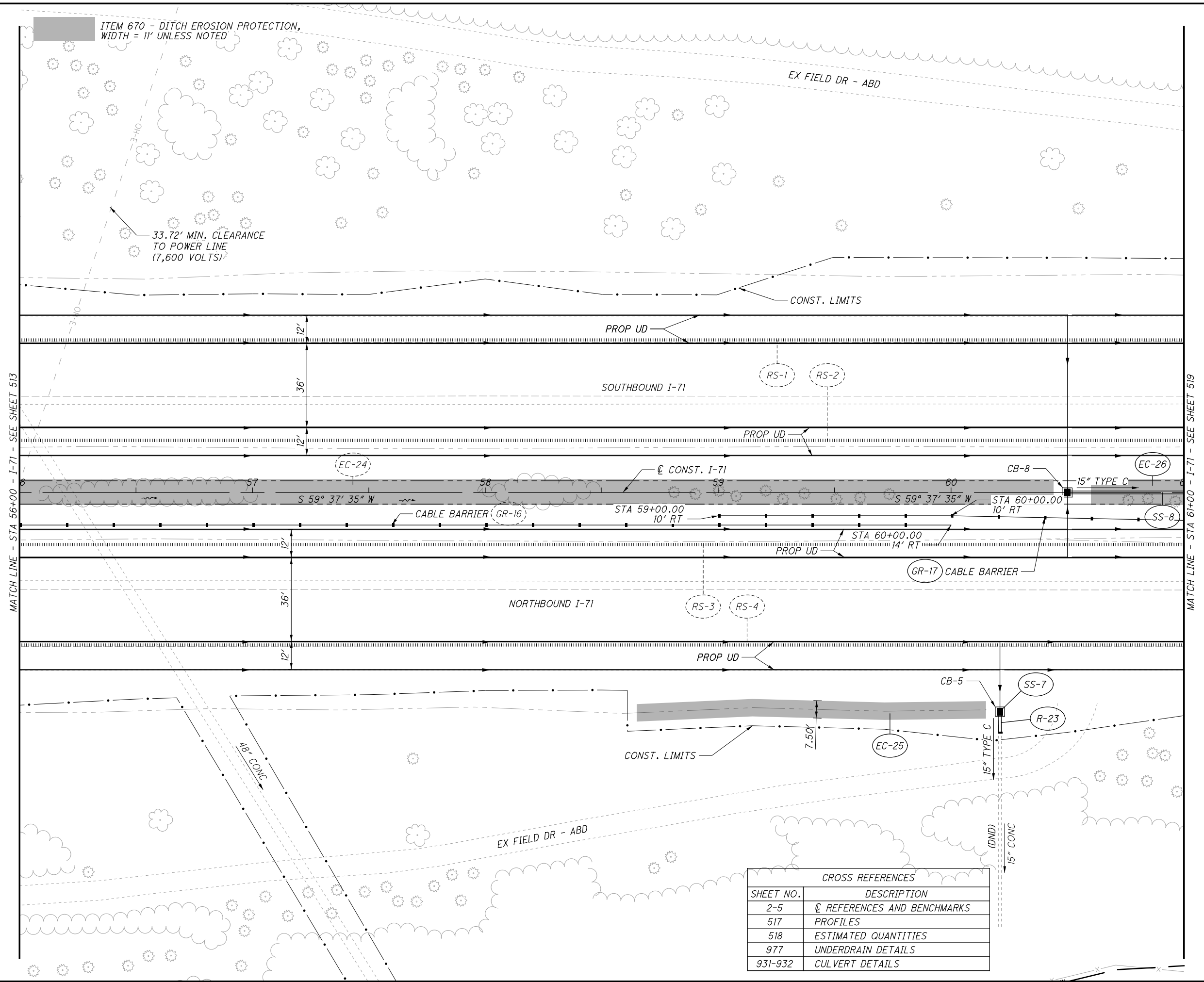
514
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0012.dgn Sheet 10/28/2019 11:09:10 AM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	202	202	670													
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	DITCH EROSION PROTECTION SY													
R-22A	513	55+72	55+72	LT/RT	194	2														
EC-21	513	53+09	55+65	CL			312													
EC-22	513	54+15	55+65	LT			125													
EC-23	513	54+15	55+65	RT			125													
EC-24	513, 516	55+74	60+43	CL			574													
TOTALS CARRIED TO SHEETS 395-398					194	2	1136													

CALCULATED DCB CHECKED SJS	ESTIMATED QUANTITIES	FRA - 71 - 0.00	515 1312
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X:\4037000\121957.16\107201\roadway\sheets\107201GP013.dgn Sheet 10/28/2019 11:09:10 AM 1458s.js



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

33.72' MIN. CLEARANCE
TO POWER LINE
(7,600 VOLTS)

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 513

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 519

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
517	PROFILES
518	ESTIMATED QUANTITIES
977	UNDERDRAIN DETAILS
931-932	CULVERT DETAILS

CALCULATED
DCB
CHECKED
SJS

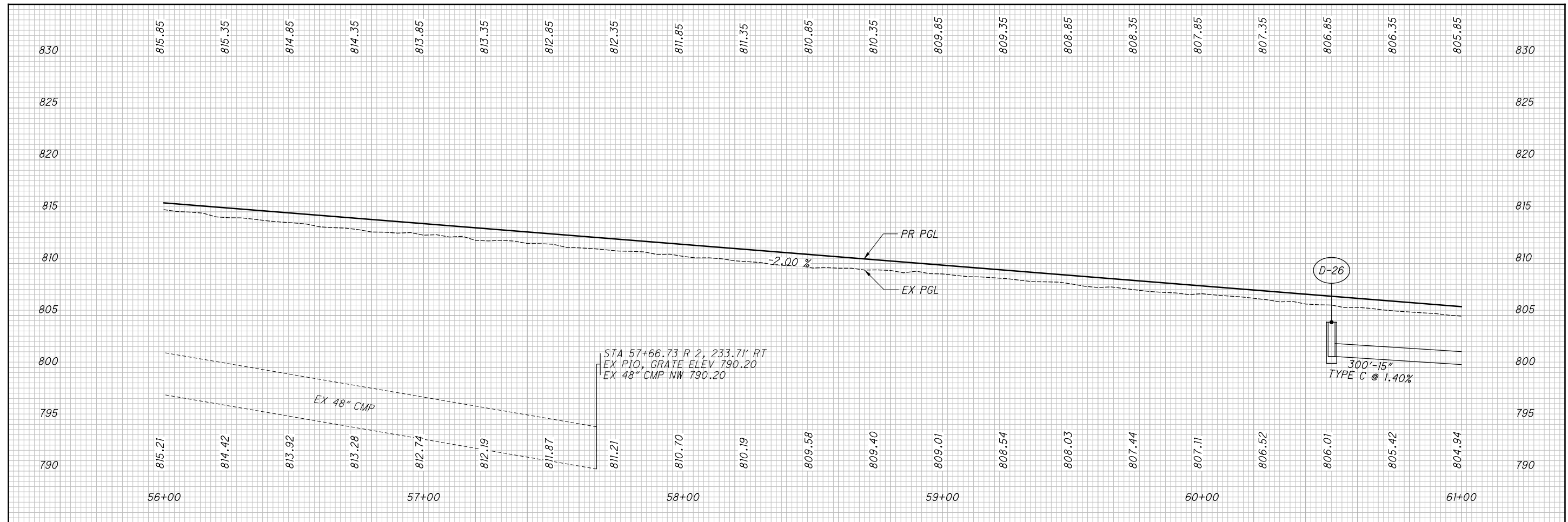
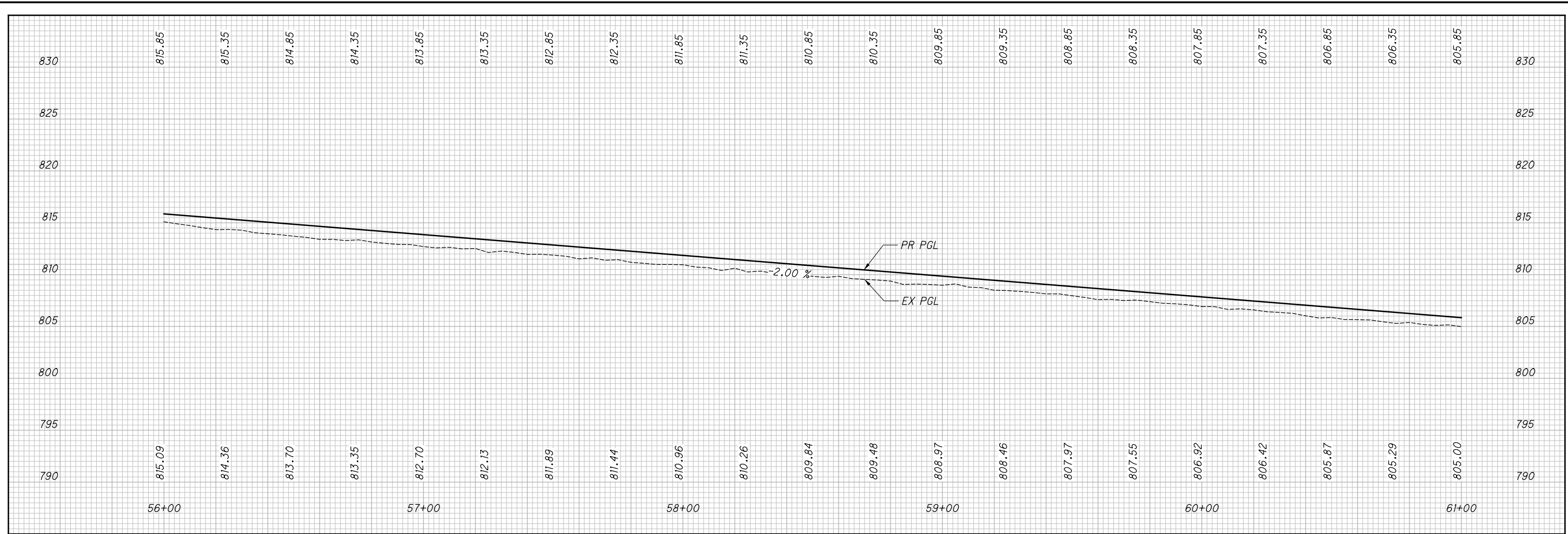
HORIZONTAL SCALE IN FEET

PLAN - I-71
STA 56+00 TO STA 61+00

FRA-71-0.00

516
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF013.dgn Sheet 10/28/2019 11:09:11 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 56+00 TO STA 61+00

FRA - 71 - 0.00

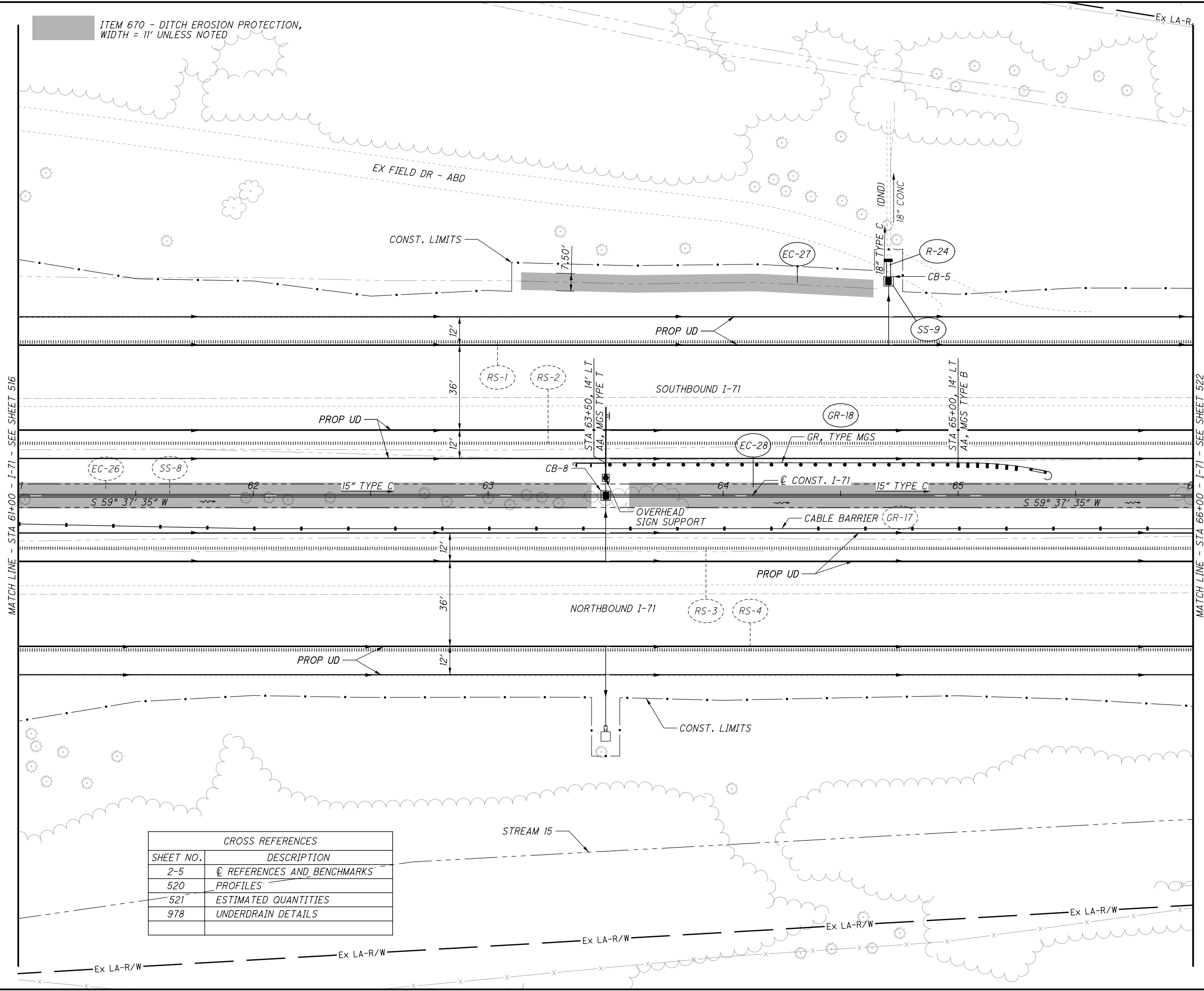
517
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0013.dgn Sheet 10/28/2019 11:09:11 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	606	606	611	611	611	611	611	611	670
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED) FT	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL EACH	15" CONDUIT, TYPE C FT	15" CONDUIT, TYPE C, 706.02 FT	18" CONDUIT, TYPE B, 706.02 FT	18" CONDUIT, TYPE F, 707.05, TYPE C OR 707.21 FT	CATCH BASIN, NO. 5 EACH	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY
R-23	516	60+21	60+21	RT	8	1											
EC-25	516	58+64	60+14	RT													125
EC-26	516, 519	60+59	63+43	CL													347
GR-17	516, 519, 522, 525, 528	59+00	76+50	RT					1750	2							
SS-7	516	60+21		RT								8				1	
SS-8	516, 519, 522	60+50	66+38	CL/RT			1.67	0.33			570		35	50		3	
TOTALS CARRIED TO SHEETS 395-398					8	1	1.67	0.33	1750	2	570	8	35	50	1	3	472

CALCULATED	DCB		
	CHECKED		
SJS			
ESTIMATED QUANTITIES			
FRA - 71 - 0.00			
<table border="1"> <tr> <td>518</td> </tr> <tr> <td>1312</td> </tr> </table>		518	1312
518			
1312			

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
520	PROFILES
521	ESTIMATED QUANTITIES
978	UNDERDRAIN DETAILS

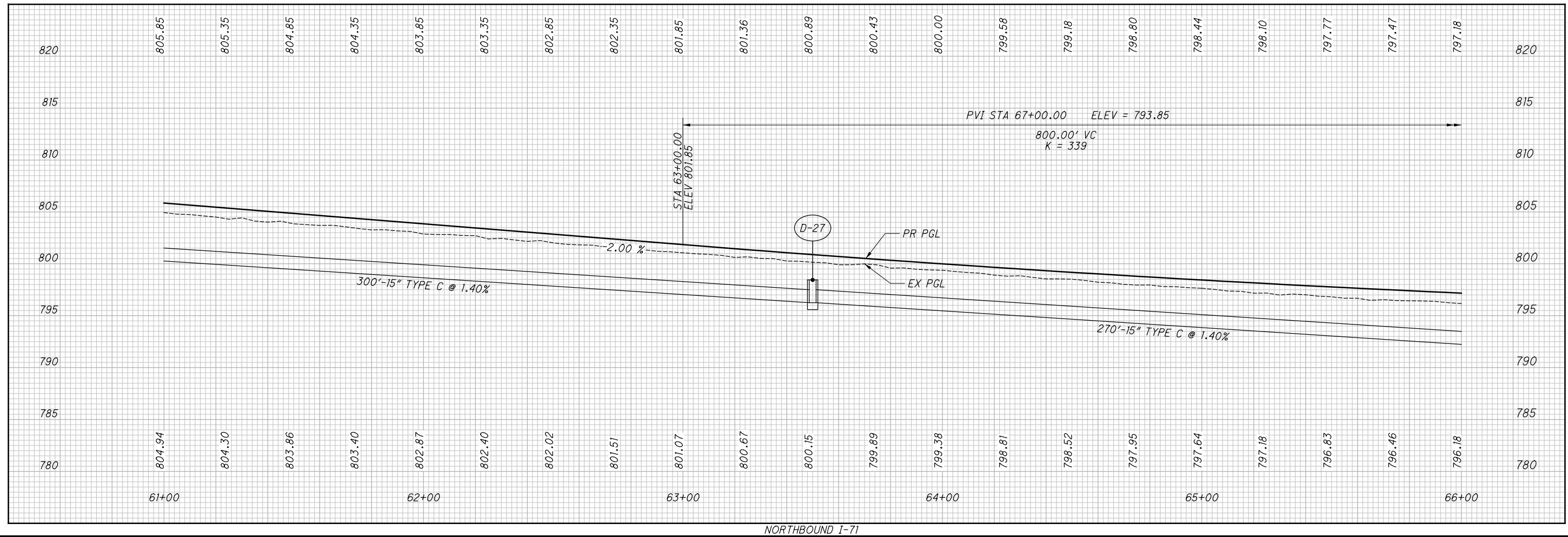
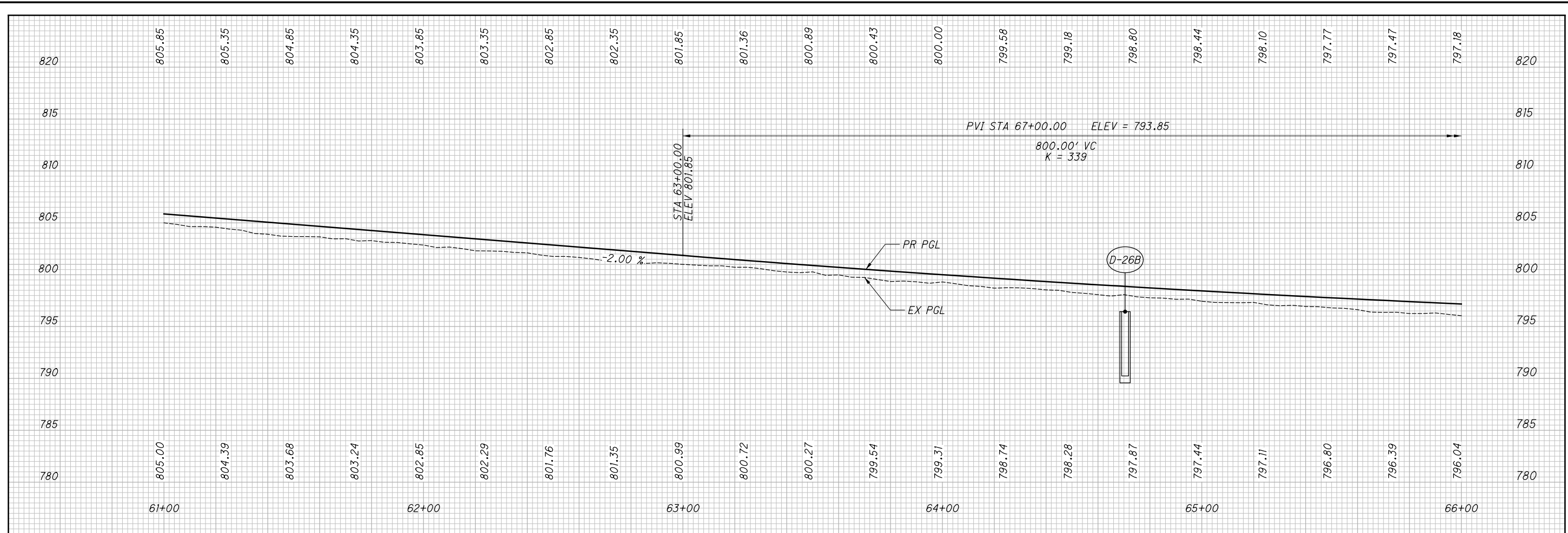
CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 61+00 TO STA 66+00

FRA-71-0.00

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 61+00 TO STA 66+00

FRA - 71 - 0.00

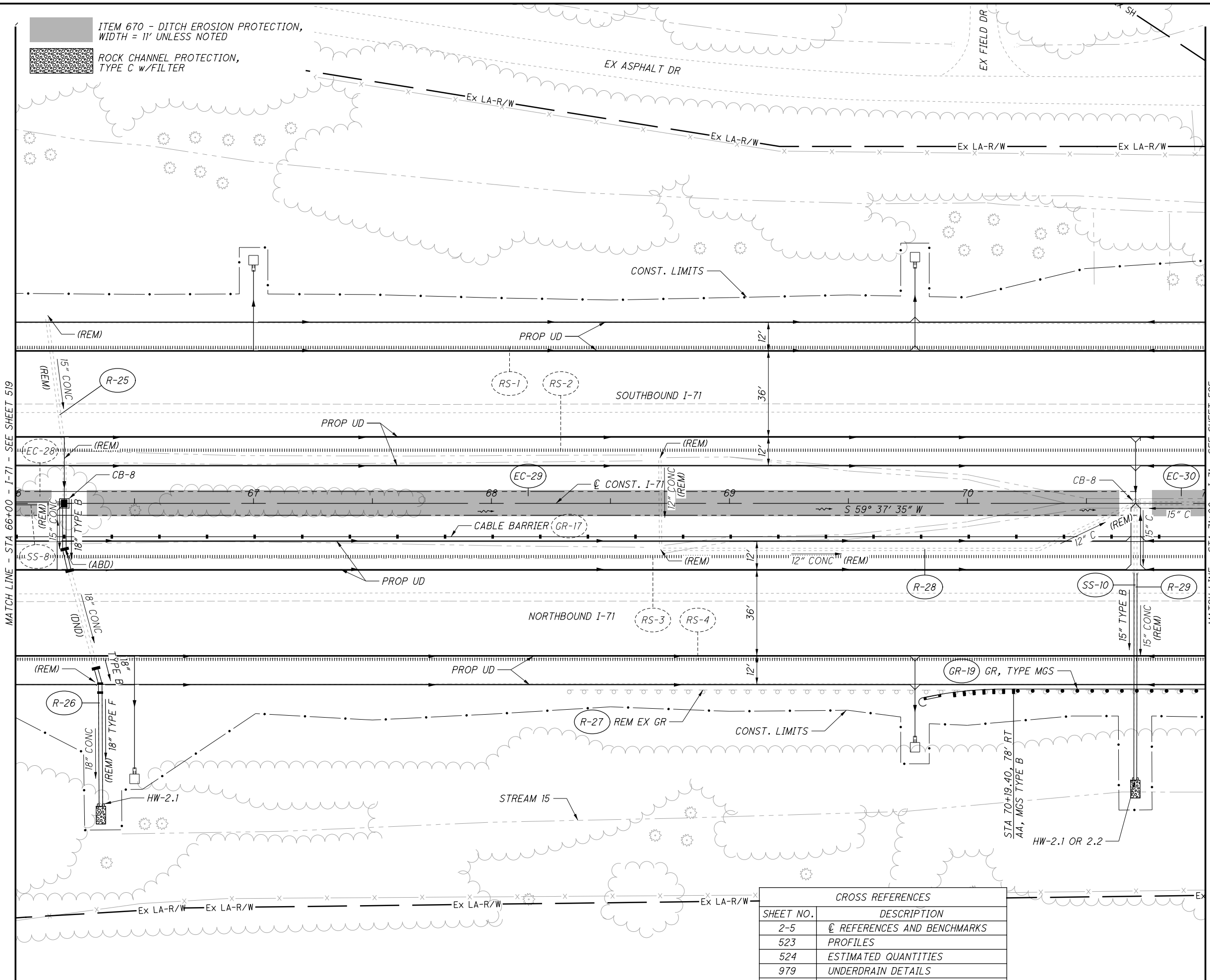
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1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0014.dgn Sheet 10/28/2019 11:09:13 AM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	202	202	606	606	606	611	611	626	670				
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	18" CONDUIT, TYPE C, 706.02 FT	CATCH BASIN, NO. 5 EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY				
R-24	519	64+70		LT	9	1											
EC-27	519	63+13	64+63	LT									125				
EC-28	519, 522	63+59	66+14	CL									312				
GR-18	519	63+50	65+00	LT			150	1	1			3					
SS-9	519	64+70		LT						8	1						
TOTALS CARRIED TO SHEETS 395-398					9	1	150	1	1	8	1	3	437				

	ESTIMATED QUANTITIES				
FRA - 71 - 0.00	<table style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px;">CALCULATED</td> <td style="padding: 2px;">DCB</td> </tr> <tr> <td style="padding: 2px;">CHECKED</td> <td style="padding: 2px;">SJS</td> </tr> </table>	CALCULATED	DCB	CHECKED	SJS
CALCULATED	DCB				
CHECKED	SJS				

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MATCH LINE - STA 71+00 - I-71 - SEE SHEET 525

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
523	PROFILES
524	ESTIMATED QUANTITIES
979	UNDERDRAIN DETAILS

0 20 40

 HORIZONTAL SCALE IN FEET

 CALCULATED DCB CHECKED SJS

PLAN - I-71

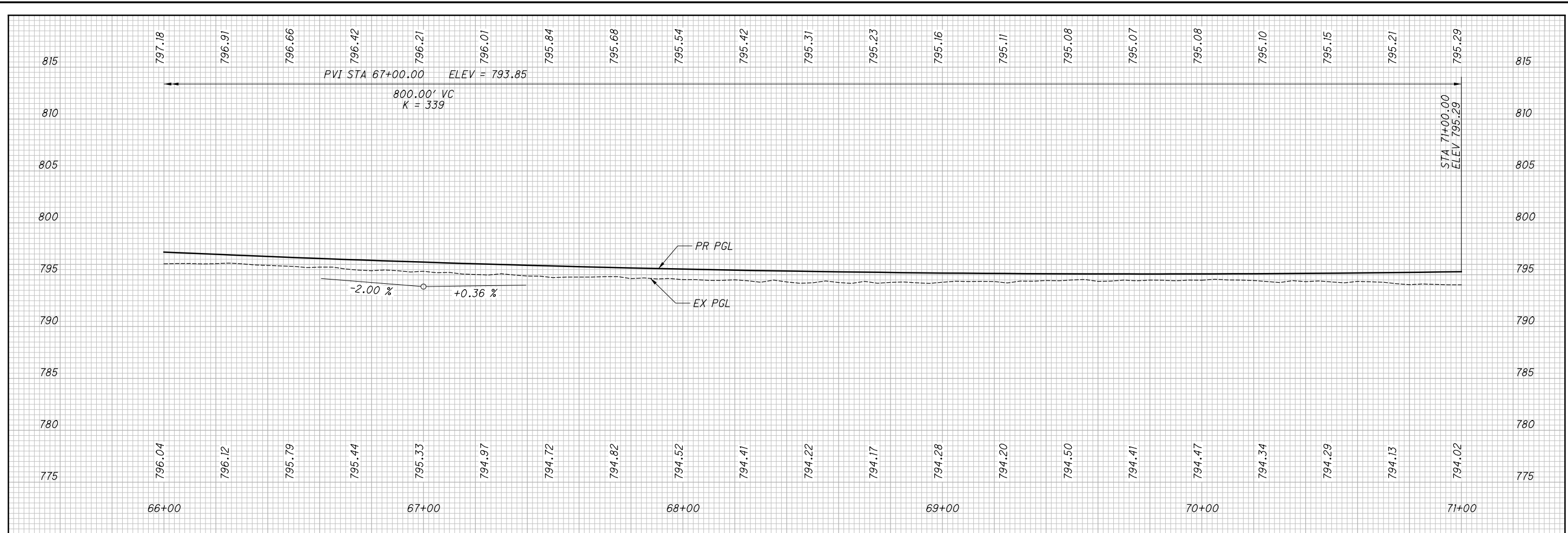
 STA 66+00 TO STA 71+00

FRA-71-0.00

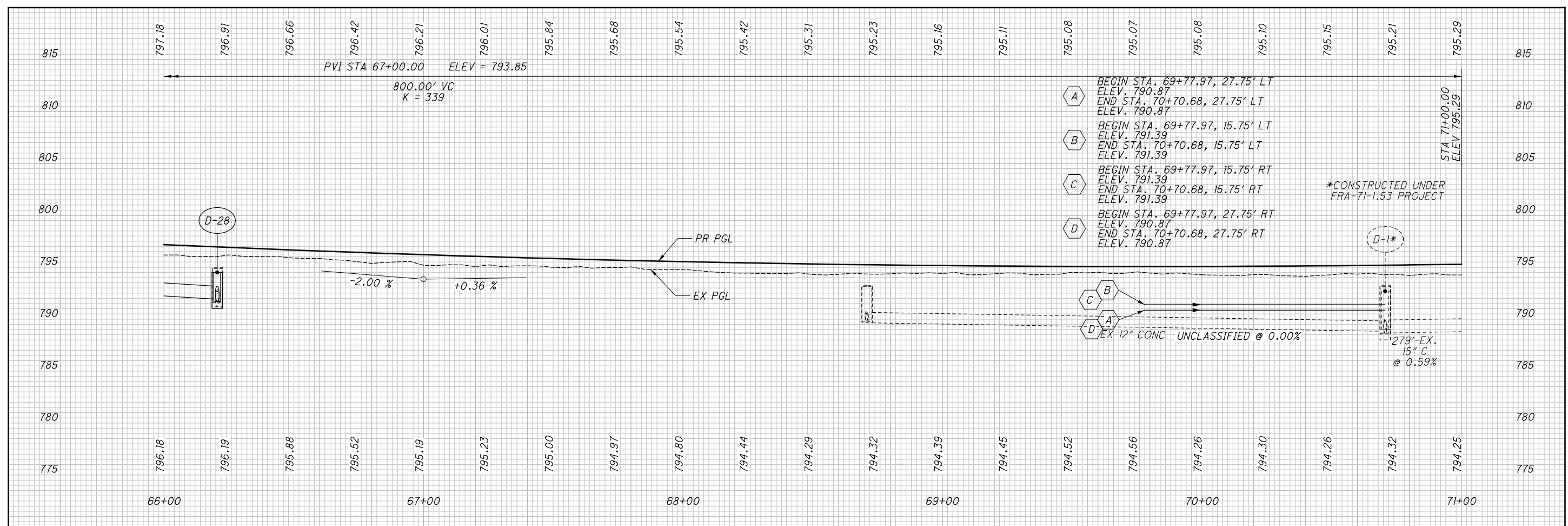
 522

 1312

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SOUTHBOUND I-71



NORTHBOUND I-71

CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 66+00 TO STA 71+00

FRA-71-0.00

523
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0015.dgn Sheet 10/28/2019 11:09:15 AM 1458sjs

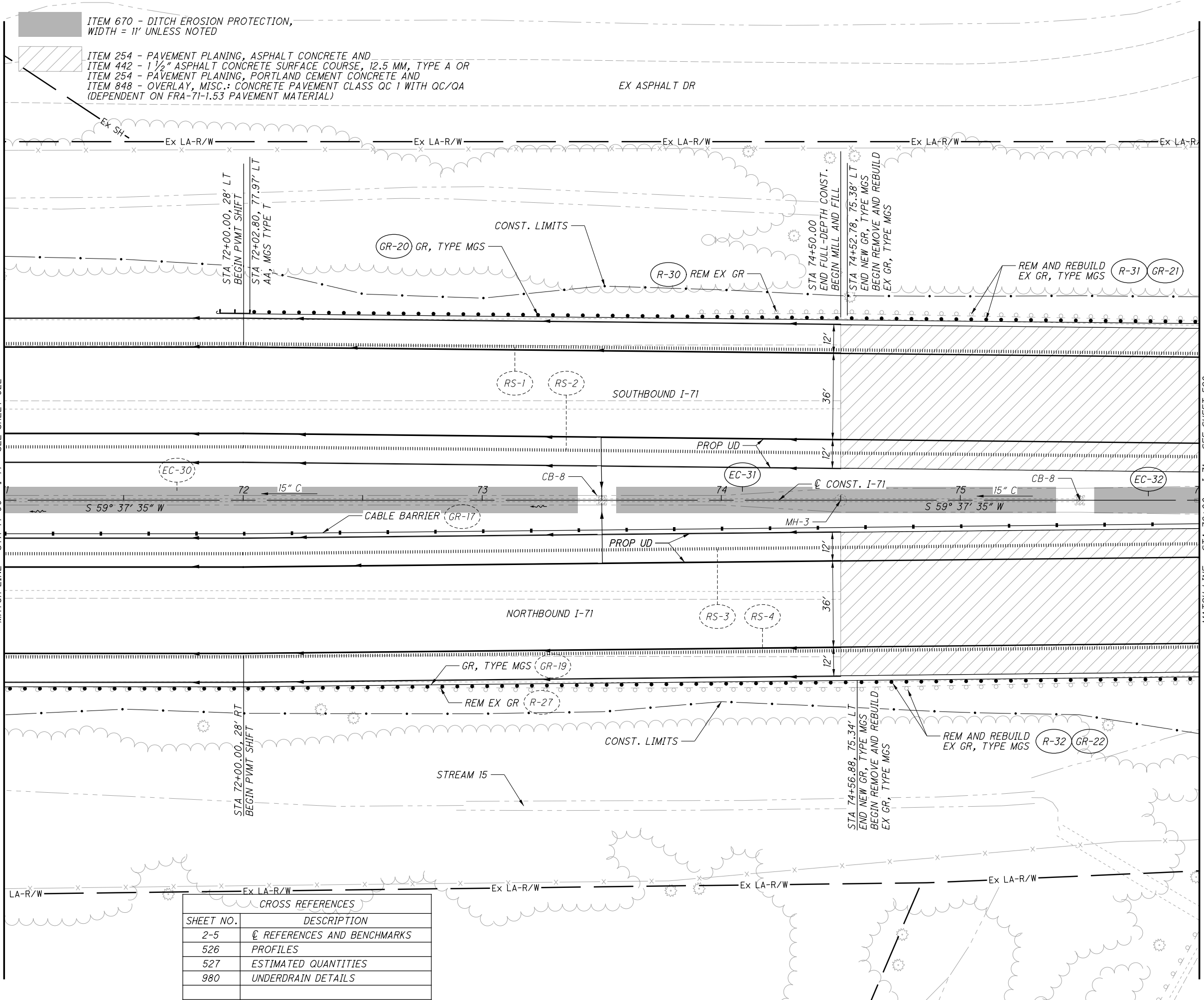
REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	601	602	606	606	611	626	670
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH	CATCH BASIN ABANDONED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	15" CONDUIT, TYPE B, 706-02 FT	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY
R-25	522	66+13	66+21	LT/RT	107		2	1							
R-26	522	66+34	66+36	RT	57		1								
R-27	522, 525	68+32	74+57	RT		625									
R-28	522	68+71	70+71	LT/RT	240		2								
R-29	522	70+71	70+71	RT	87										
EC-29	522	66+30	70+64	CL											531
EC-30	522, 525	70+78	73+40	CL											321
GR-19	522, 525	70+19	74+57	RT							437.5	1		6	
SS-10	522	70+71	70+71	RT					1.67	0.27			87		
TOTALS CARRIED TO SHEETS 395-398					491	625	5	1	1.67	0.27	437.5	1	87	6	852

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	524 1312

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MATCH LINE - STA 71+00 - I-71 - SEE SHEET 522

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 528



ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE AND
 ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A OR
 ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE AND
 ITEM 848 - OVERLAY, MISC.: CONCRETE PAVEMENT CLASS QC 1 WITH QC/QA
 (DEPENDENT ON FRA-71-1.53 PAVEMENT MATERIAL)

EX ASPHALT DR

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
526	PROFILES
527	ESTIMATED QUANTITIES
980	UNDERDRAIN DETAILS

CALCULATED DCB CHECKED SJS

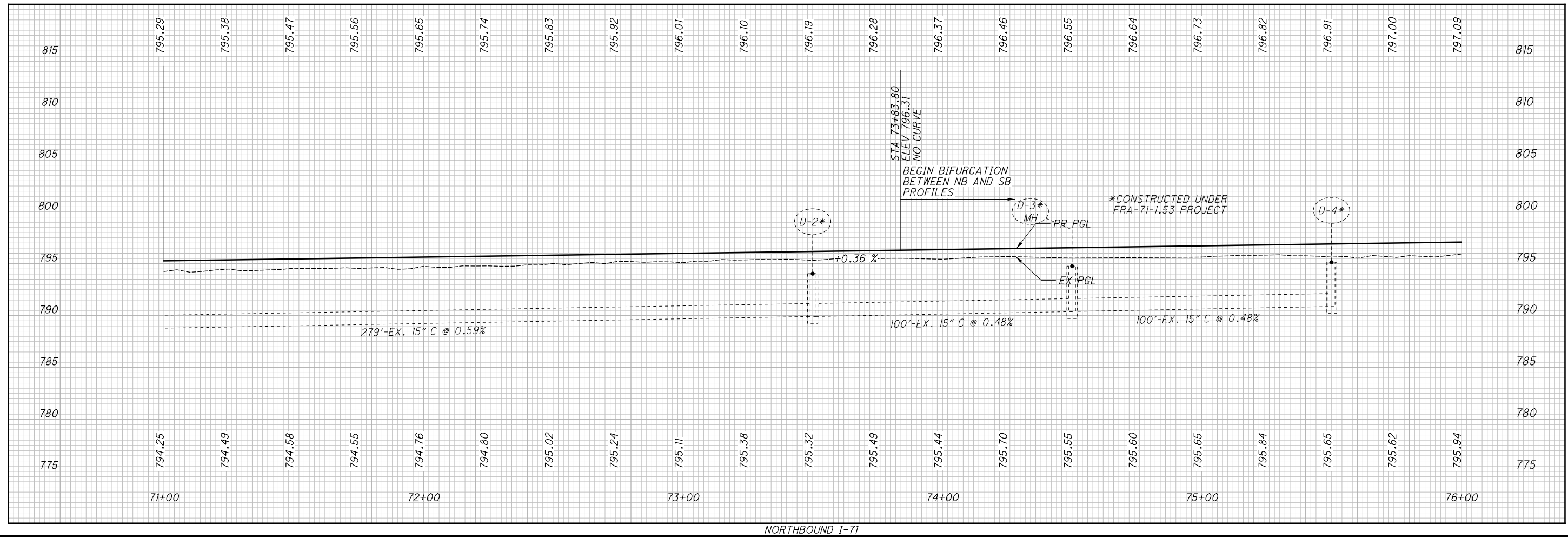
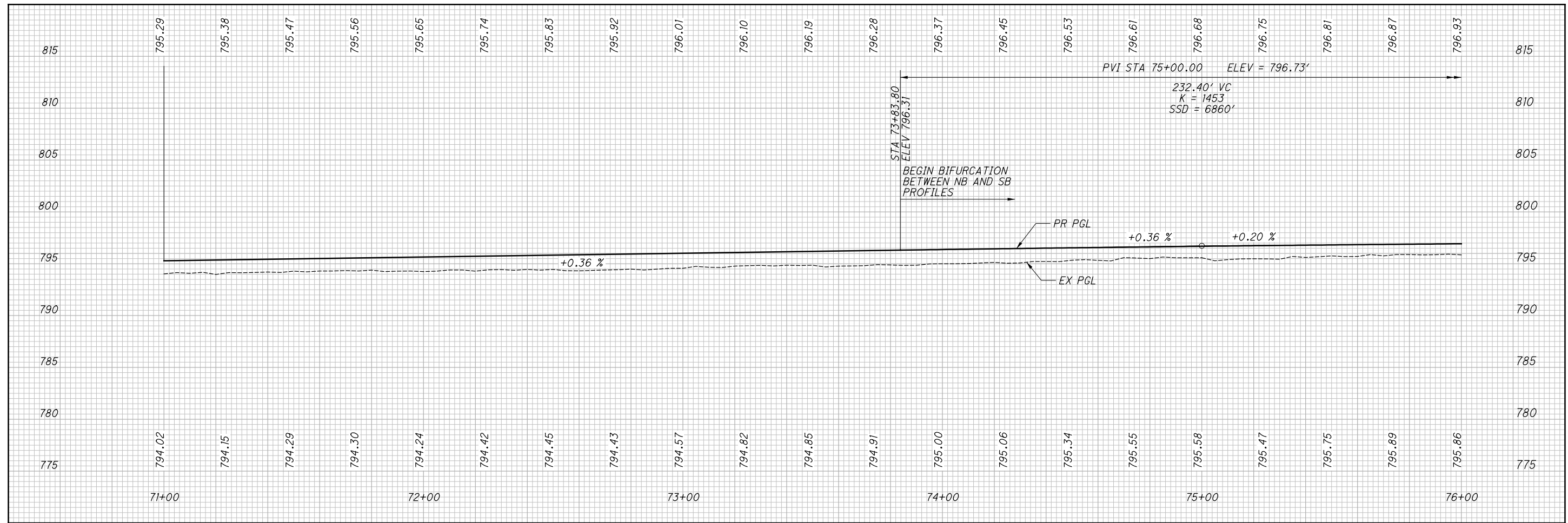
HORIZONTAL SCALE IN FEET

PLAN - I-71
 STA 71+00 TO STA 76+00

FRA-71-0.00

525
 1312

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 71+00 TO STA 76+00

FRA-71-0.00

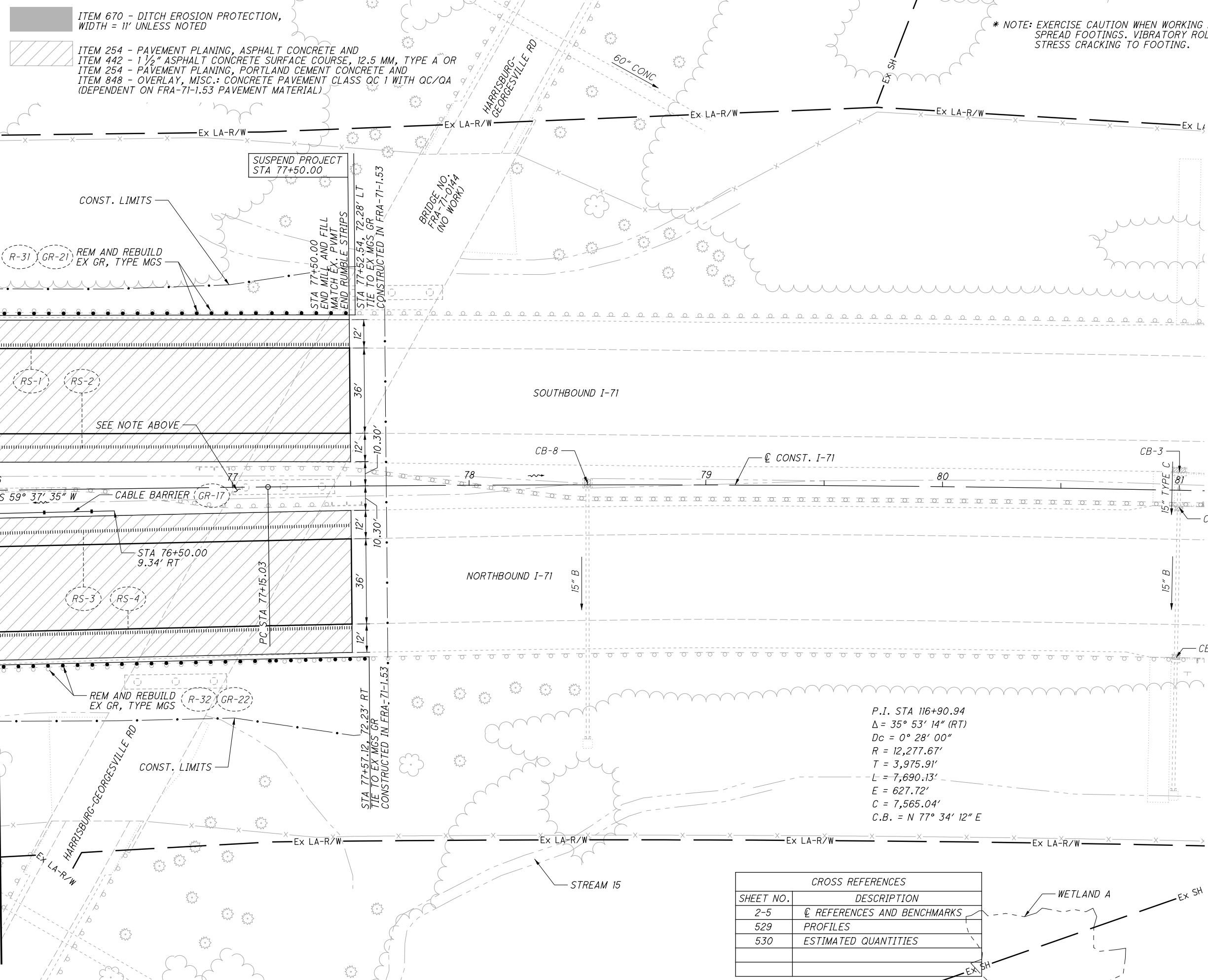
526
1312

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	606	606	606	626	670							
		FROM	TO		GUARDRAIL REMOVED FT	GUARDRAIL REMOVED FOR REUSE FT	GUARDRAIL, TYPE MGS FT	GUARDRAIL REBUILT, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE T EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY							
R-30	525	73+90	74+53	LT	63													
R-31	525, 528	74+53	77+53	LT		300												
R-32	525, 528	74+57	77+57	RT		300												
EC-31	525	73+59	75+43	CL							225							
EC-32	525	75+59	76+00	CL							54							
GR-20	525	72+03	74+53	LT			250		1	4								
GR-21	525, 528	74+53	77+53	LT				300		4								
GR-22	525, 528	74+57	77+57	RT				300		4								
TOTALS CARRIED TO SHEETS 395-398					63	600	250	600	1	12	279							

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0:00	527 1312

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- ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED
- ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE AND ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A OR ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE AND ITEM 848 - OVERLAY, MISC.: CONCRETE PAVEMENT CLASS QC 1 WITH QC/QA (DEPENDENT ON FRA-71-1.53 PAVEMENT MATERIAL)

* NOTE: EXERCISE CAUTION WHEN WORKING NEAR EXISTING SPREAD FOOTINGS. VIBRATORY ROLLERS MAY CAUSE STRESS CRACKING TO FOOTING.

CALCULATED DCB CHECKED SJS

0 20 40
10 HORIZONTAL SCALE IN FEET

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 525

P.I. STA 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$

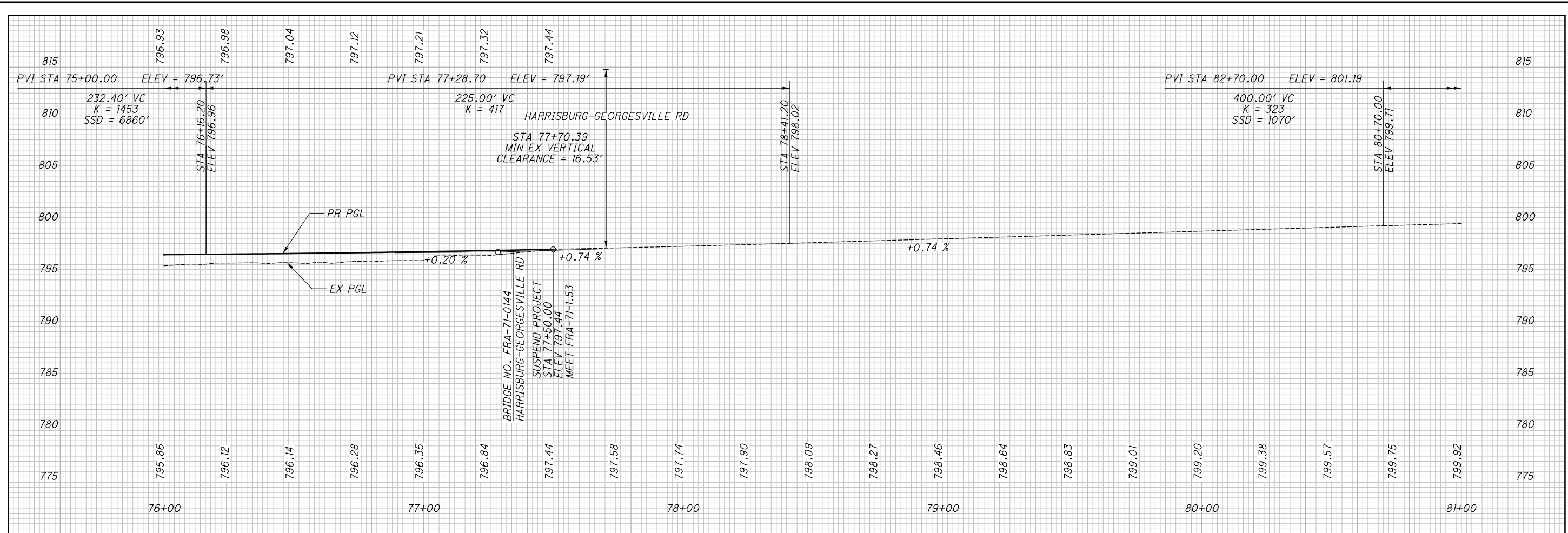
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
529	PROFILES
530	ESTIMATED QUANTITIES

PLAN - I-71
STA 76+00 TO STA 81+00

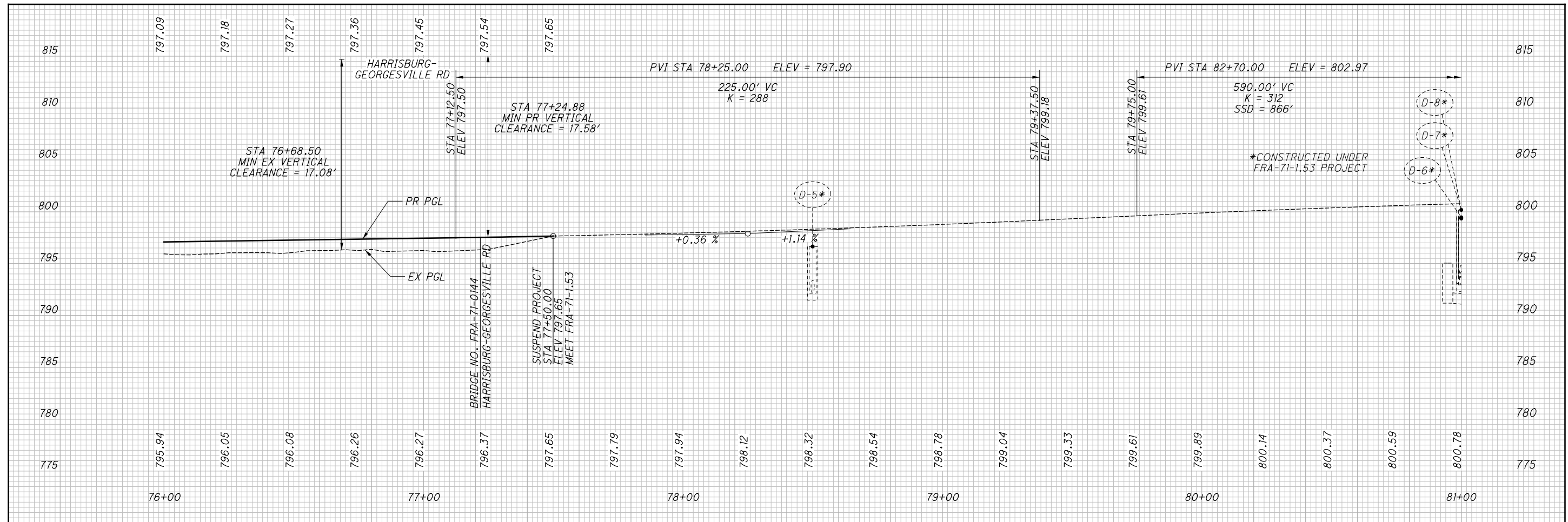
FRA-71-0.00

528
1312

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SOUTHBOUND I-71



NORTHBOUND I-71

CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 76+00 TO STA 81+00

FRA-71-0.00

529
1312

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REF. NO.	SHEET NO.	STATION		SIDE																	
		FROM	TO																		
THERE ARE NO QUANTITIES ON SHEET 528																					
TOTALS CARRIED TO SHEETS 395-398																					

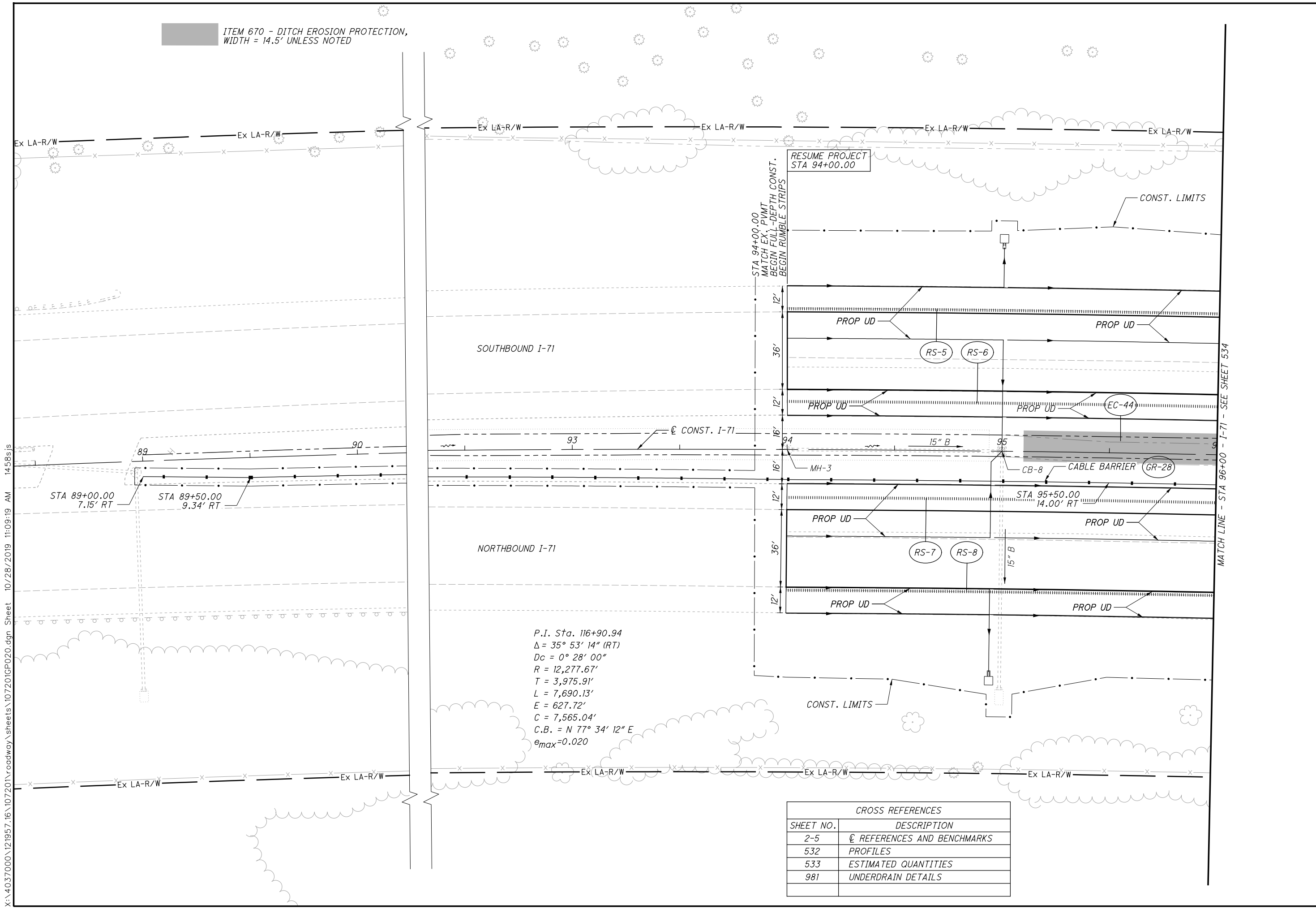
CALCULATED
DCB
CHECKED
SJS

ESTIMATED QUANTITIES

FRA - 71-0:00

530
1312

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $\theta_{max} = 0.020$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
532	PROFILES
533	ESTIMATED QUANTITIES
981	UNDERDRAIN DETAILS

CALCULATED DCB CHECKED SJS
 0 20 40
 HORIZONTAL SCALE IN FEET

PLAN - I-71
 STA 89+00 TO STA 96+00

FRA-71-0.00

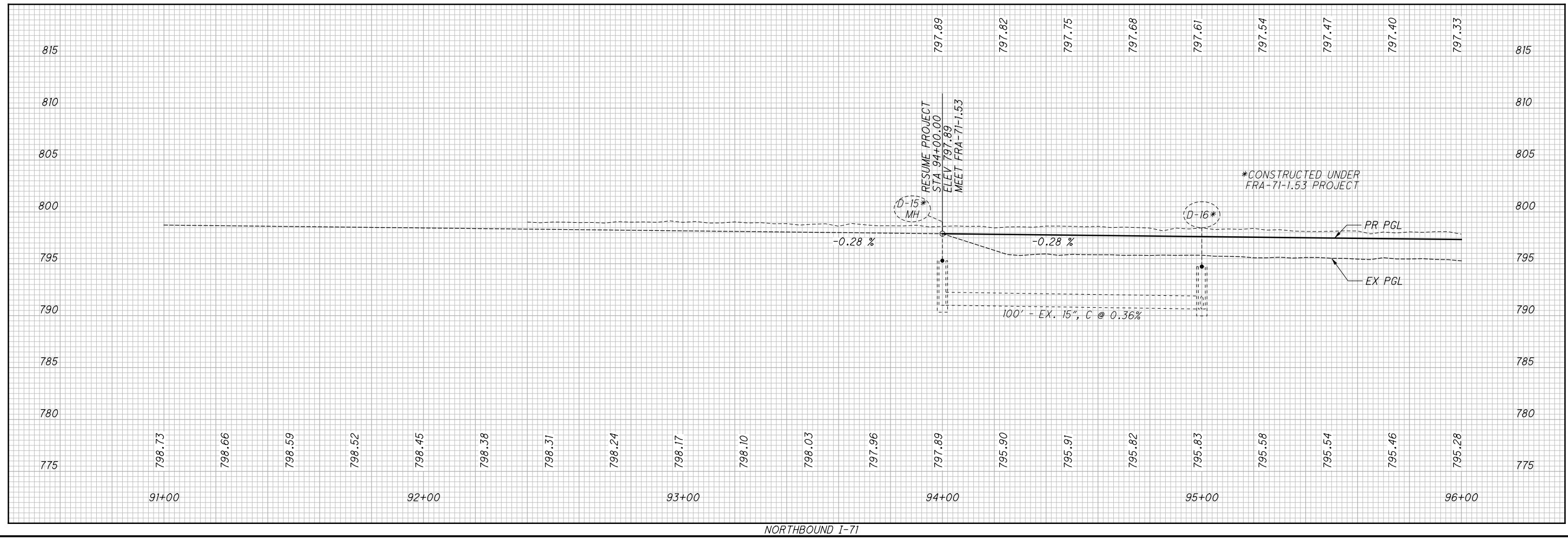
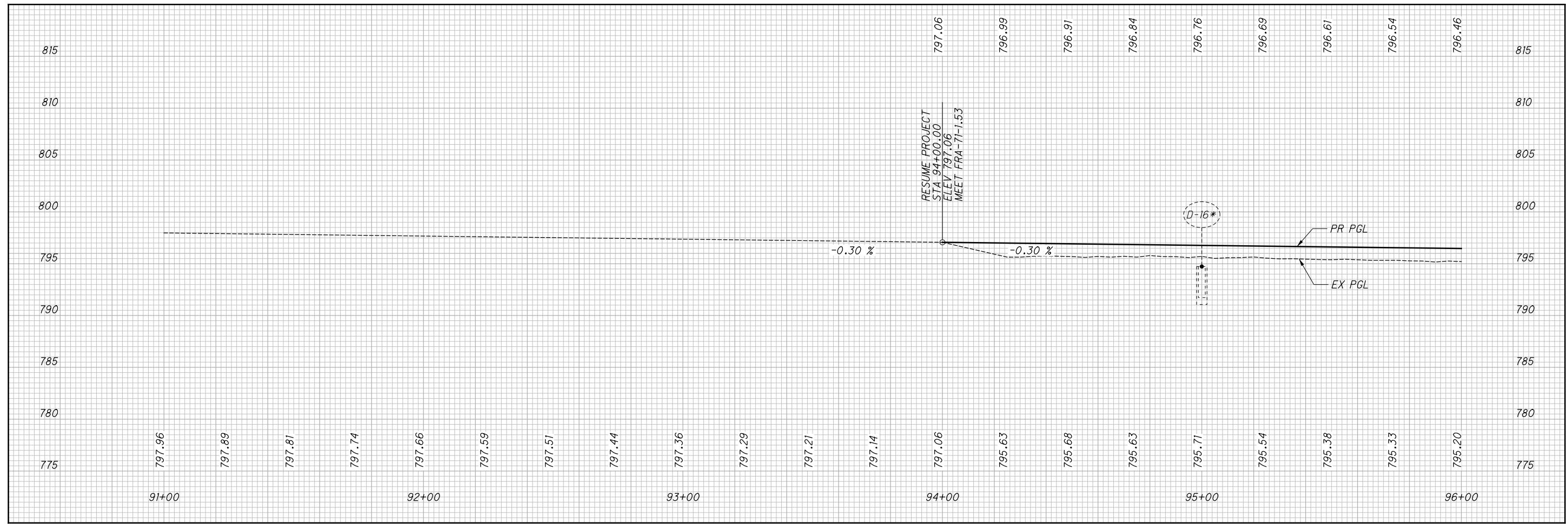
531
 1312

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MATCH LINE - STA 96+00 - I-71 - SEE SHEET 534

STA 94+00.00
 MATCH EX. PVMT
 BEGIN FULL-DEPTH CONST.
 BEGIN RUMBLE STRIPS

RESUME PROJECT
 STA 94+00.00



CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 91+00 TO STA 96+00**

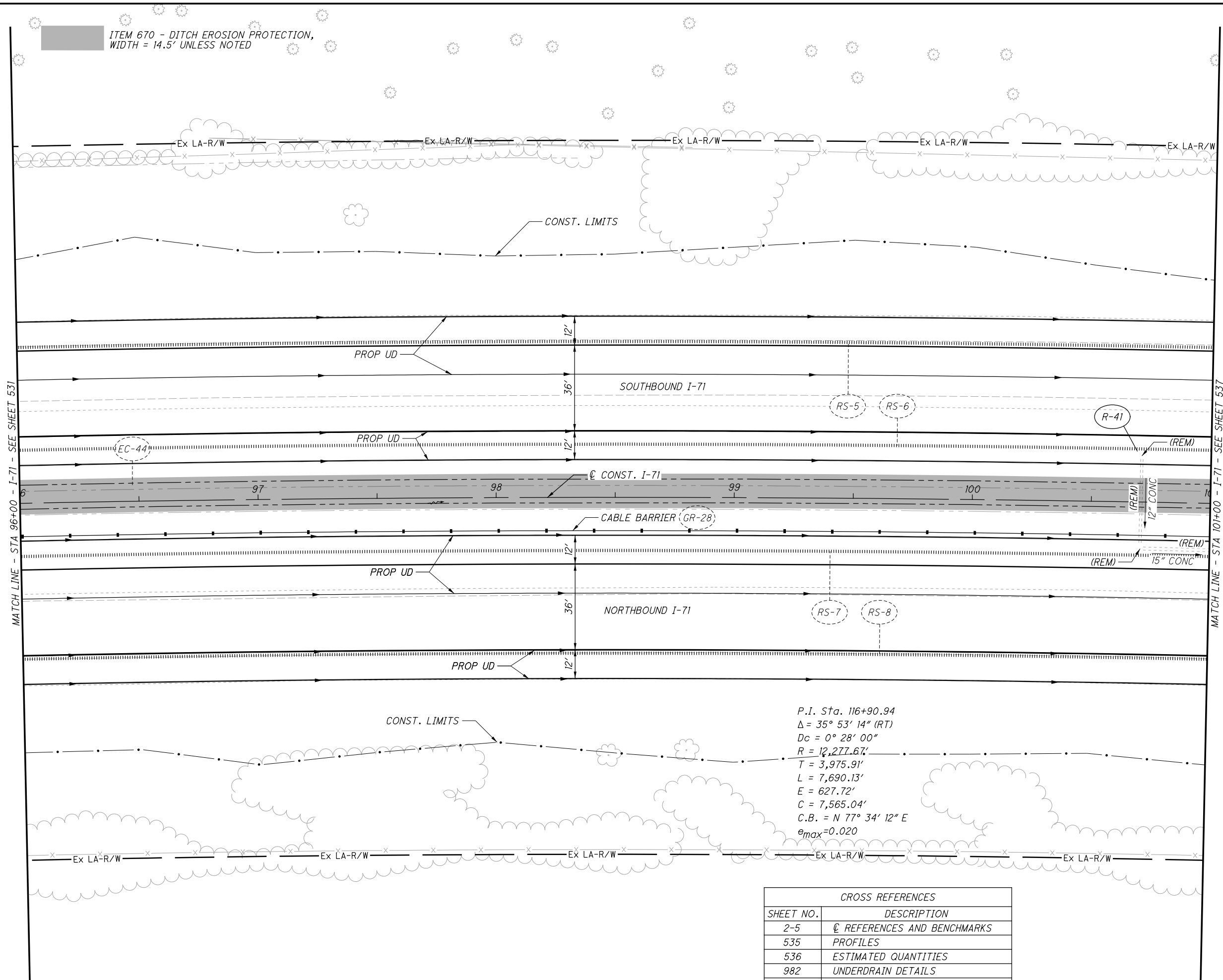
FRA-71-0.00

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REF. NO.	SHEET NO.	STATION		SIDE	606	606	618				670							
		FROM	TO		GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED)	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL	RUMBLE STRIPS, (ASPHALT CONCRETE)	DITCH EROSION PROTECTION	FT	EACH	MILE	SY						
EC-44	531, 534, 537	95+09	101+78	CL							1079							
GR-28	531-540	89+00	110+00	RT	2100	2												
RS-5	531-562	94+00	157+46	LT			1.20											
RS-6	531-562	94+00	157+22	LT			1.20											
RS-7	531-562	94+00	156+99	RT			1.19											
RS-8	531-562	94+00	156+77	RT			1.19											
TOTALS CARRIED TO SHEETS 395-398					2100	2	4.78				1079							

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0:00	533 1312

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ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

MATCH LINE - STA 96+00 - I-71 - SEE SHEET 531

MATCH LINE - STA 101+00 - I-71 - SEE SHEET 537

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

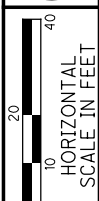
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
535	PROFILES
536	ESTIMATED QUANTITIES
982	UNDERDRAIN DETAILS

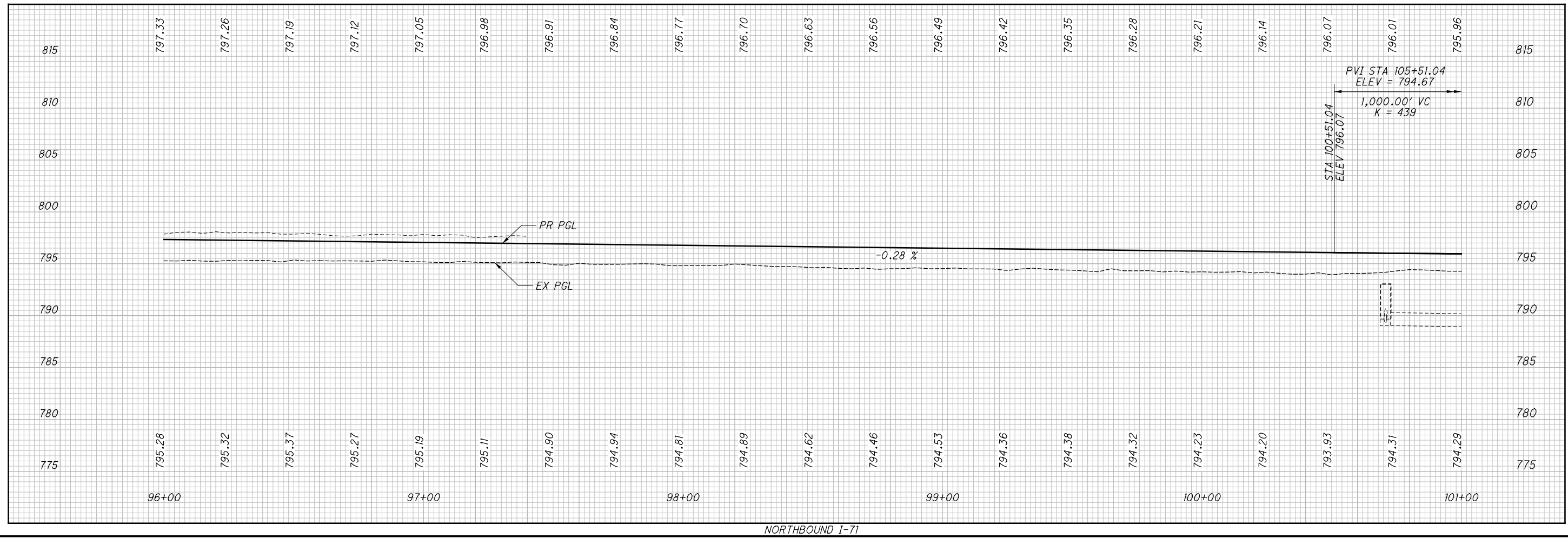
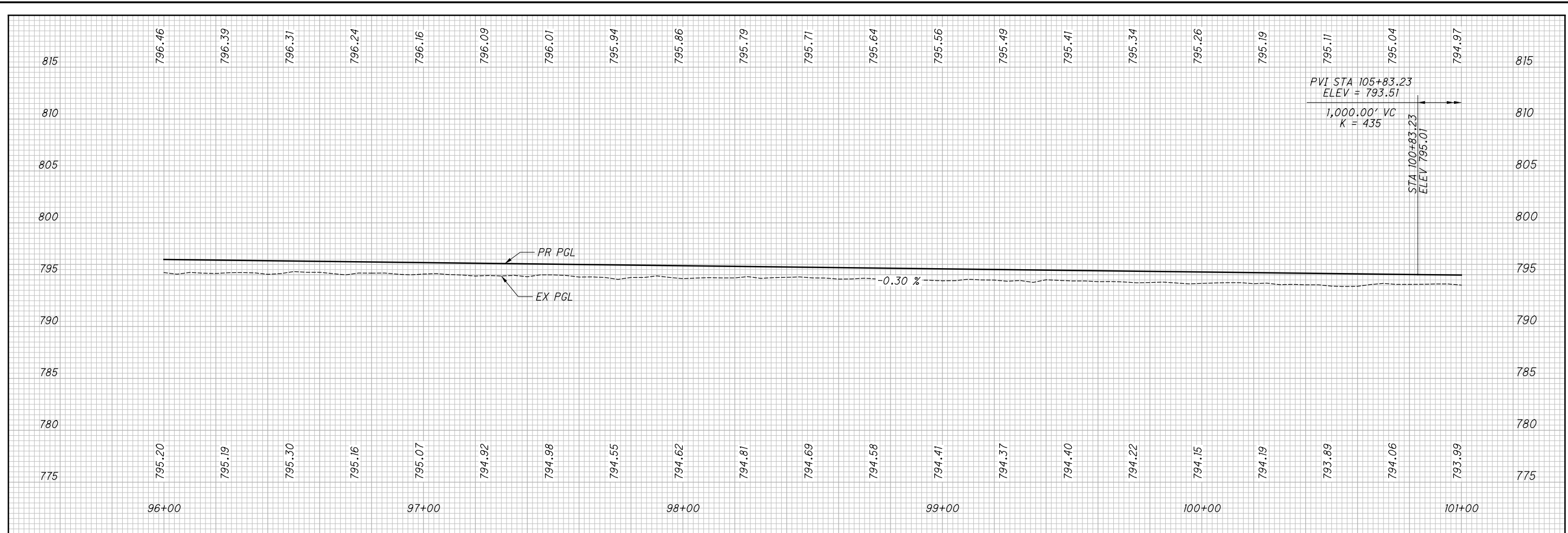
CALCULATED
 DCB
 CHECKED
 SJS

PLAN - I-71
 STA 96+00 TO STA 101+00

FRA-71-0.00

534
 1312





CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 96+00 TO STA 101+00**

FRA - 71 - 0.00

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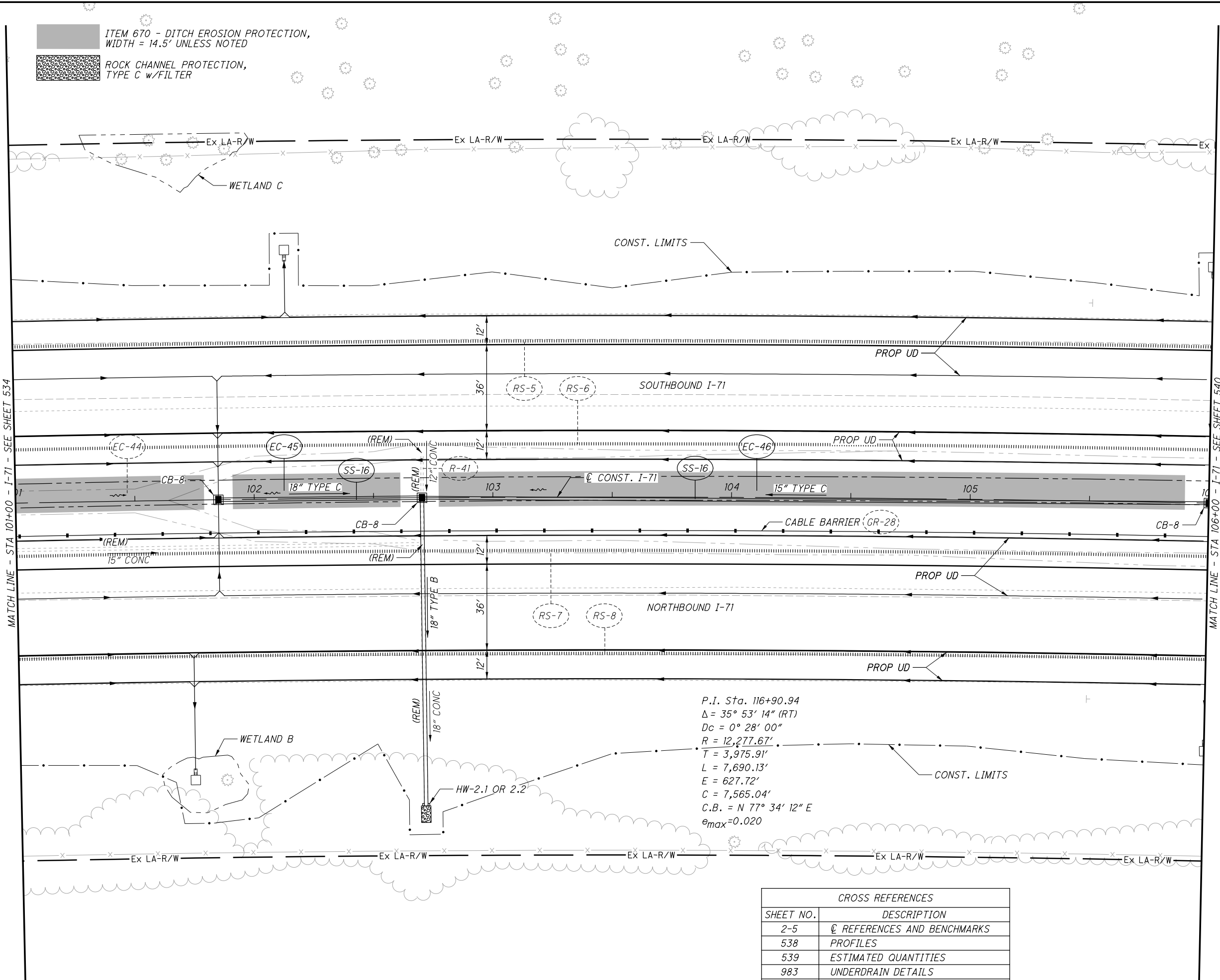
REF. NO.	SHEET NO.	STATION		SIDE	202	202														
		FROM	TO		PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	FT	EACH												
R-41	534, 537	100+70	102+70	LT/RT	386	4														
TOTALS CARRIED TO SHEETS 395-398					386	4														

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	536 1312

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ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
538	PROFILES
539	ESTIMATED QUANTITIES
983	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

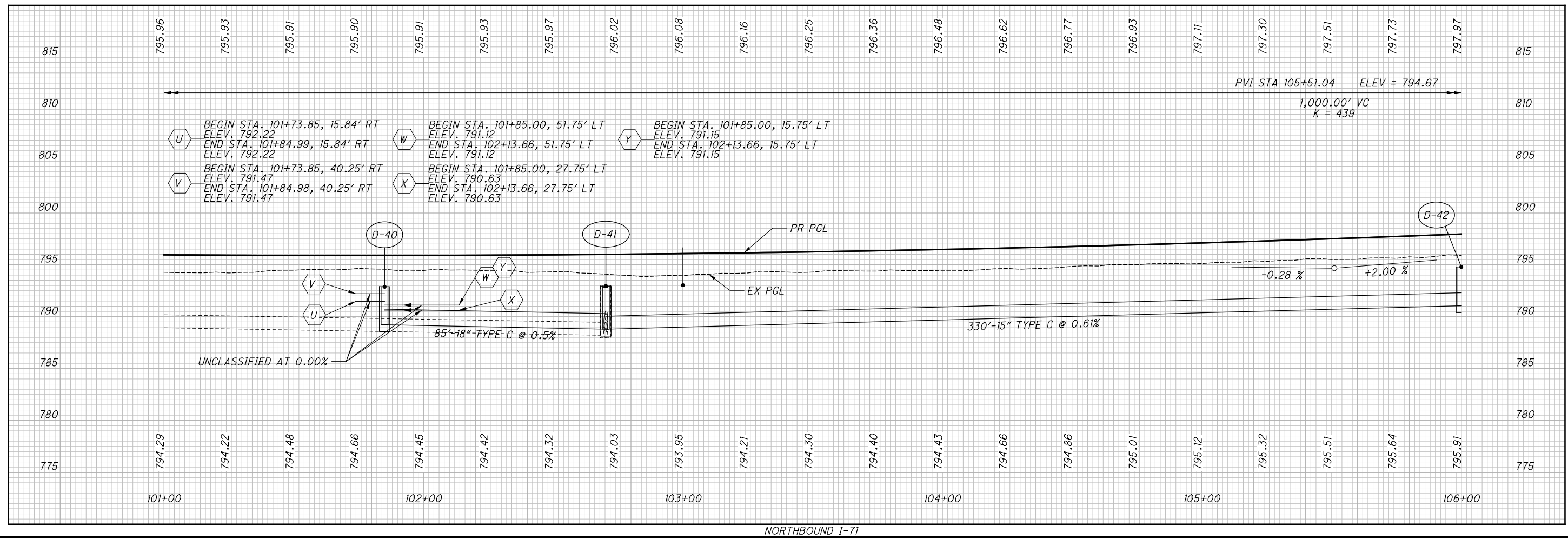
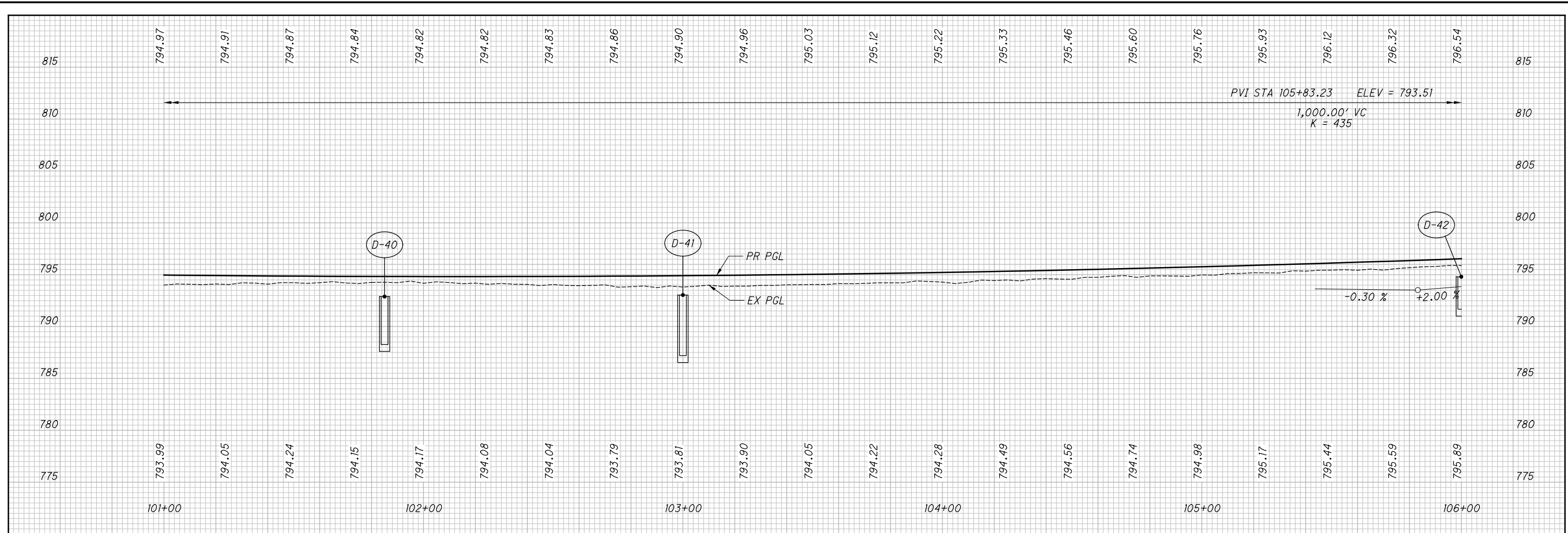
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 101+00 TO STA 106+00

FRA-71-0.00

537
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF022.dgn Sheet 10/28/2019 11:09:23 AM 14:58sjs



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 101+00 TO STA 106+00

FRA - 71 - 0.00

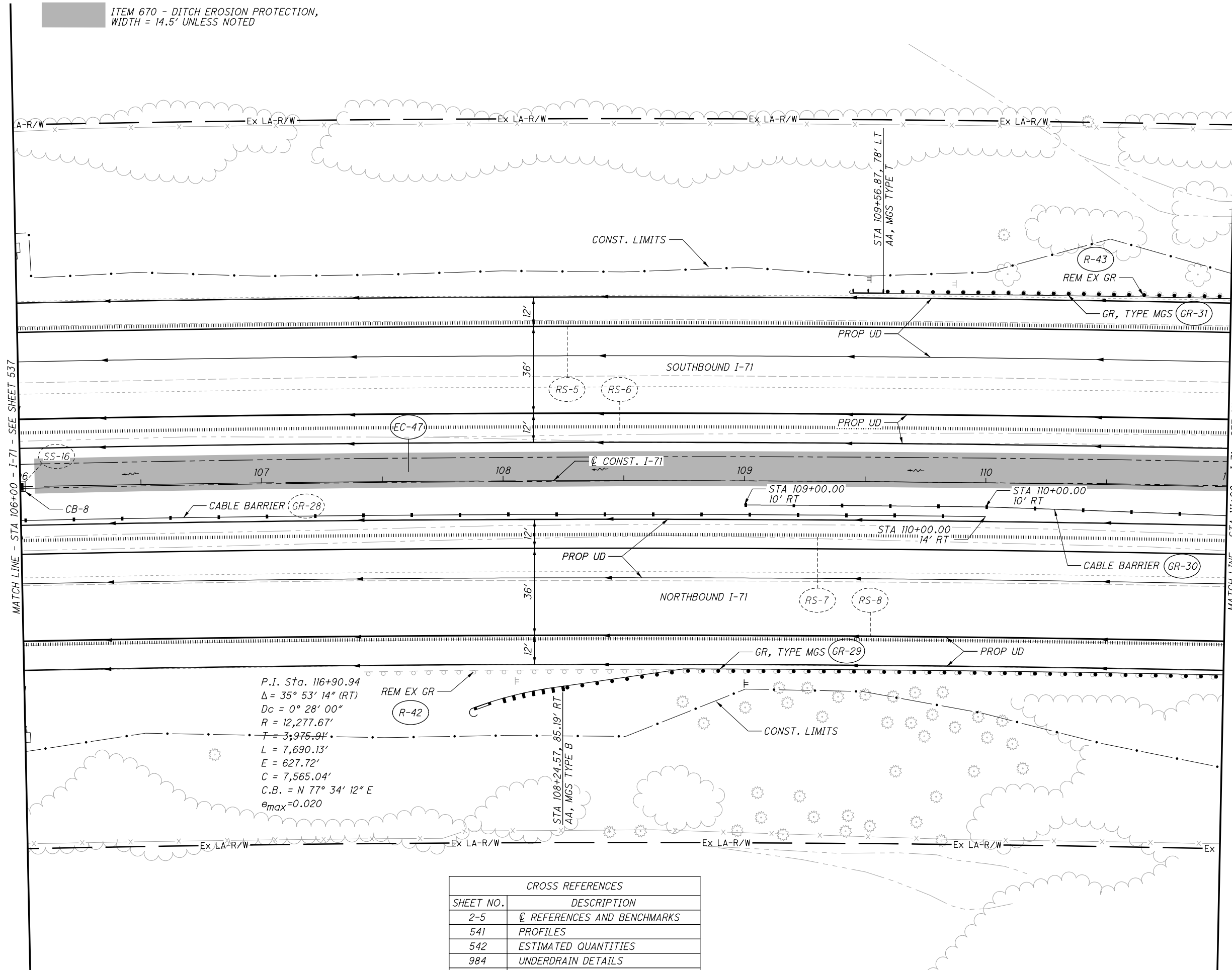
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1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0022.dgn Sheet 10/28/2019 11:09:24 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	601	602	611	611	611	611	670						
		FROM	TO		ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	CATCH BASIN, NO. 8	DITCH EROSION PROTECTION						
					CY	CY	FT	FT	FT	EACH	SY						
EC-45	537	101+92	102+61	CL							112						
EC-46	537	102+79	105+93	CL							506						
SS-16	537	101+85	106+00	CL/RT	1.33	0.33	330	129	85	3							
TOTALS CARRIED TO SHEETS 395-398					1.33	0.33	330	129	85	3	618						

CALCULATED DCB CHECKED SJS	ESTIMATED QUANTITIES	FRA - 71 - 0.00	539 1312
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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
541	PROFILES
542	ESTIMATED QUANTITIES
984	UNDERDRAIN DETAILS

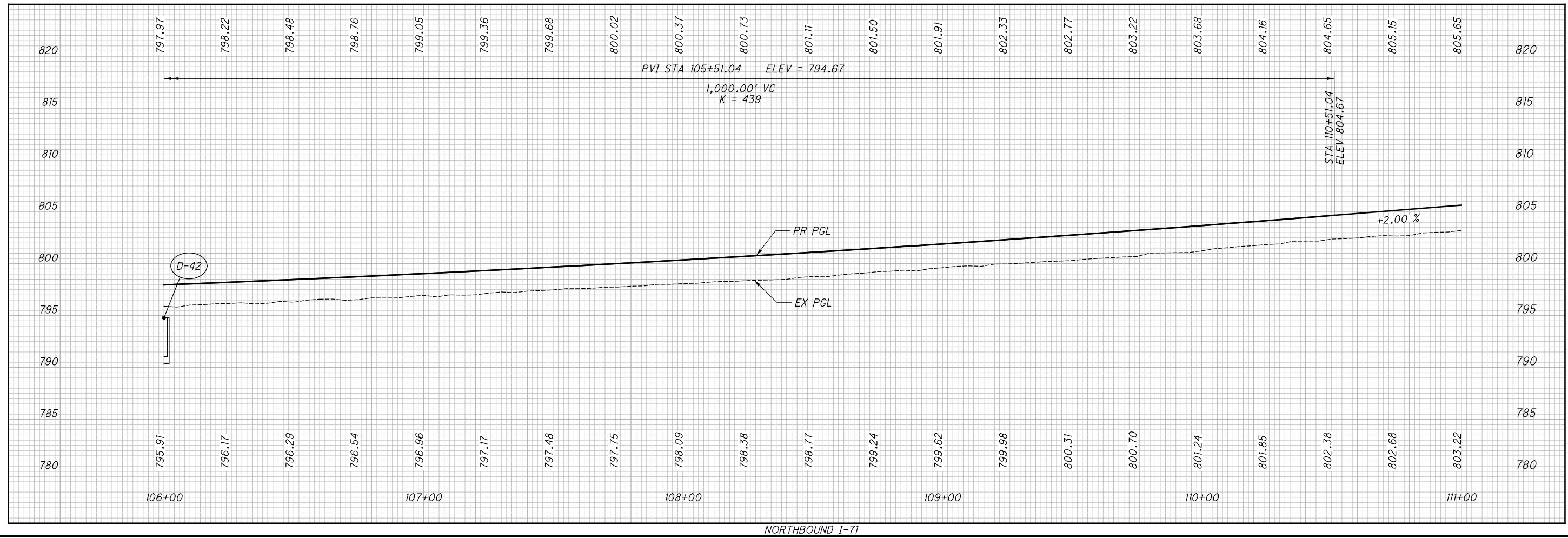
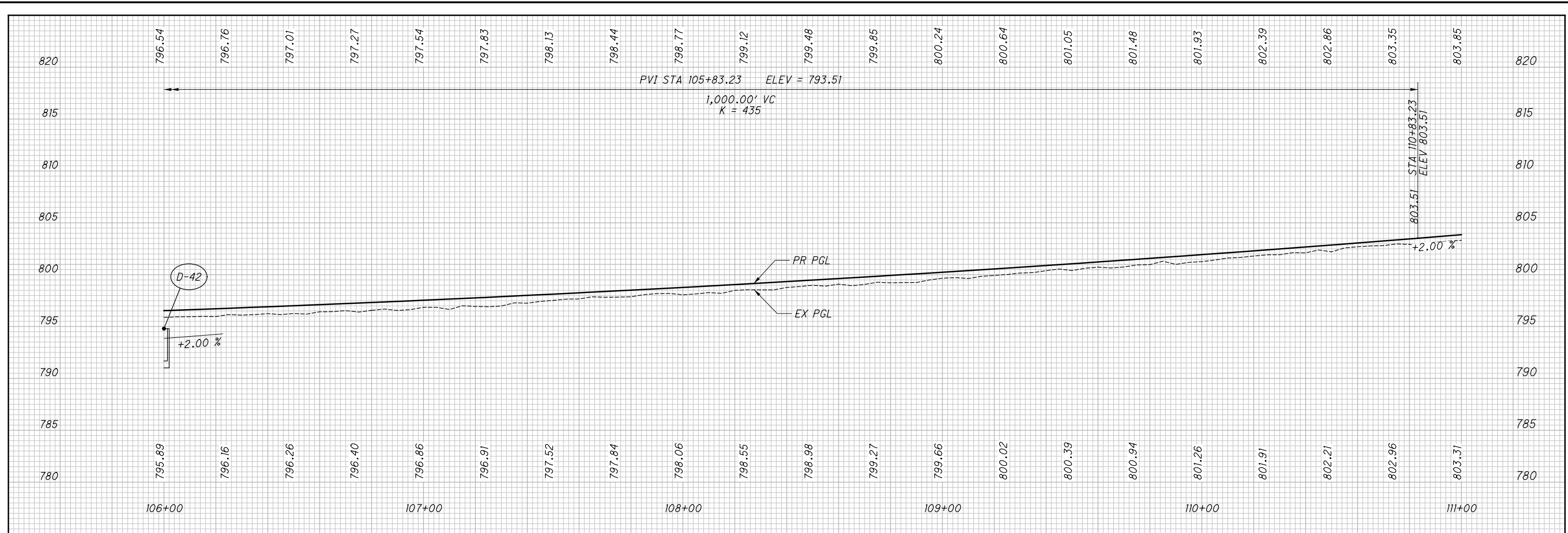
CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 106+00 TO STA 111+00

FRA-71-0.00

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 106+00 TO STA 111+00

FRA - 71 - 0.00

541
1312

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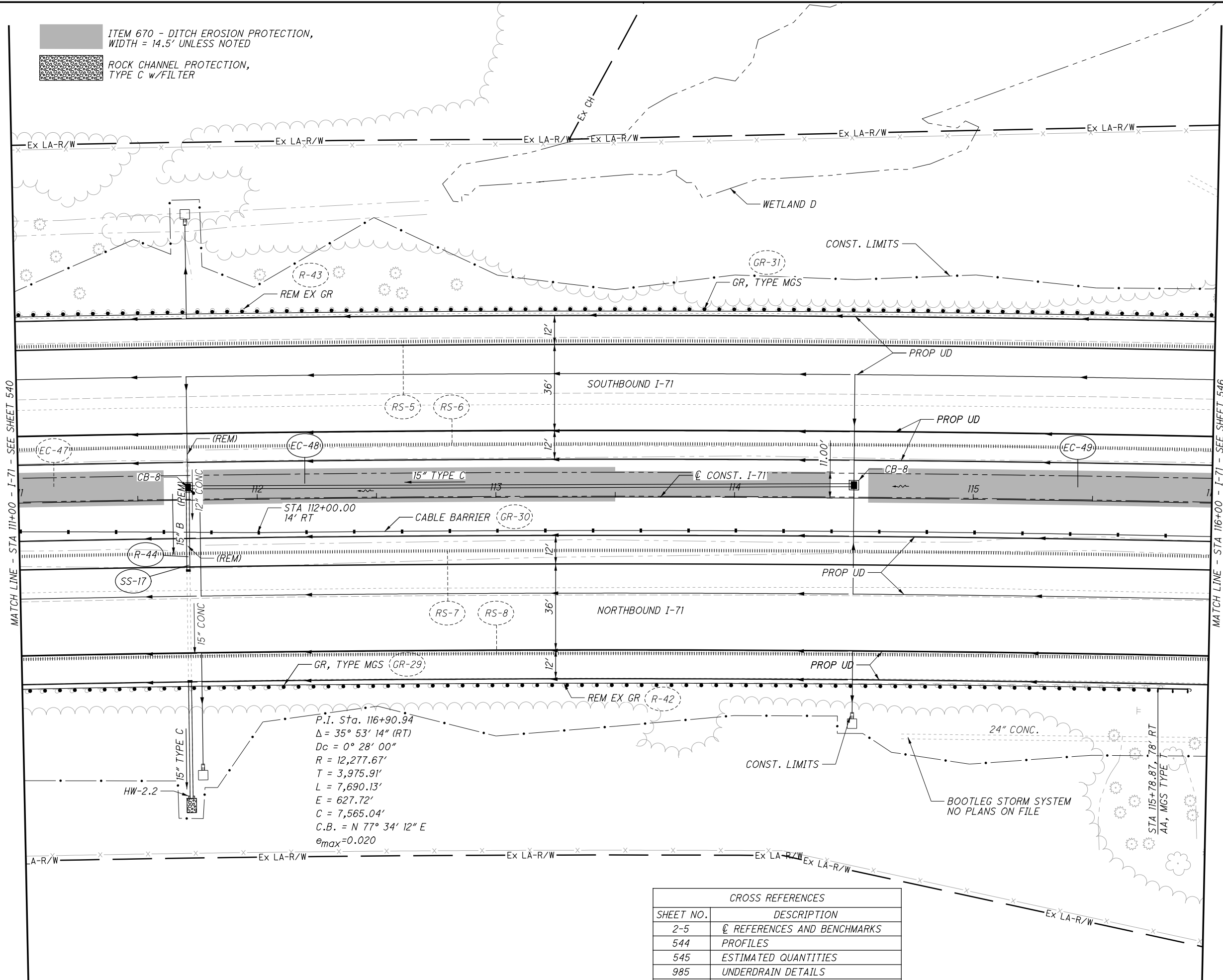
REF. NO.	SHEET NO.	STATION		SIDE	202	606	606	606	606	606	626	670							
		FROM	TO		GUARDRAIL REMOVED	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE T	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED)	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL	BARRIER REFLECTOR, TYPE 2, (1-WAY)	DITCH EROSION PROTECTION							
					FT	FT	EACH	EACH	FT	EACH	EACH	SY							
R-42	540, 543	107+40	115+82	RT	837														
R-43	540, 543, 546	109+82	116+94	LT	716														
EC-47	540, 543	106+07	111+62	CL								895							
GR-29	540, 543	108+25	115+79	RT		750	1	1			9								
GR-30	540, 543, 546, 549	109+00	123+80	RT					1479	2									
GR-31	540, 543, 546	109+57	116+77	LT		725	1	1			9								
TOTALS CARRIED TO SHEETS 395-398					1553	1475	2	2	1479	2	18	895							

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	542 1312

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ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
544	PROFILES
545	ESTIMATED QUANTITIES
985	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

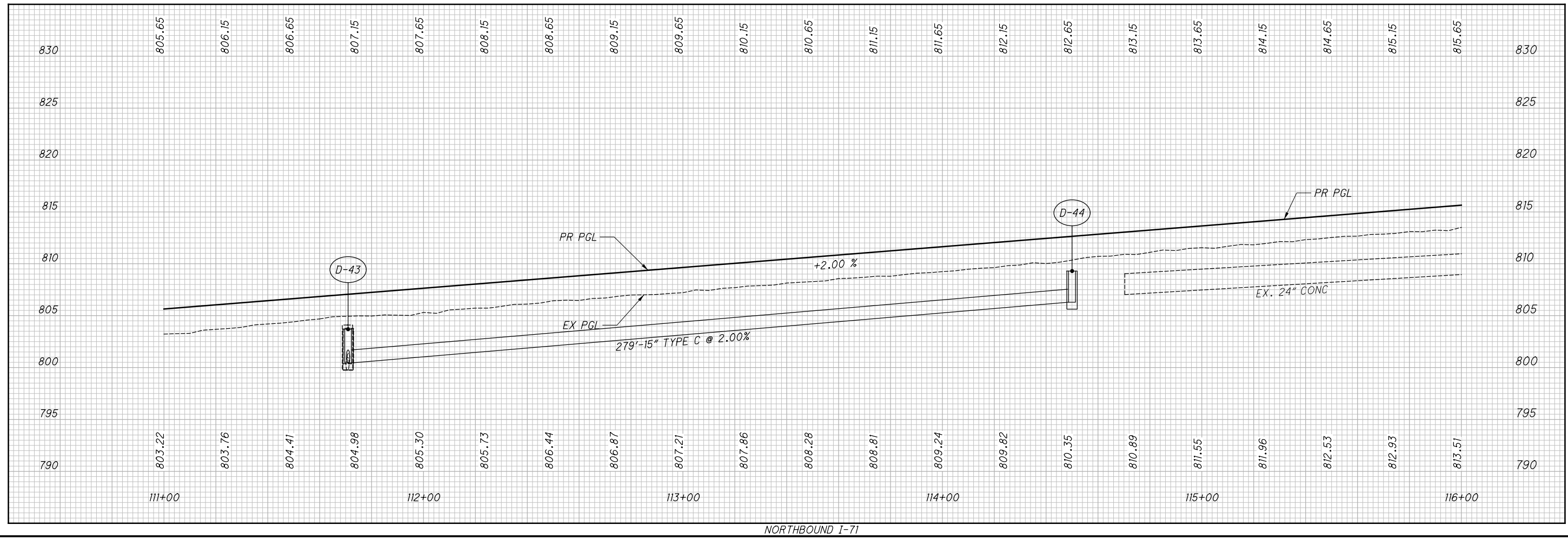
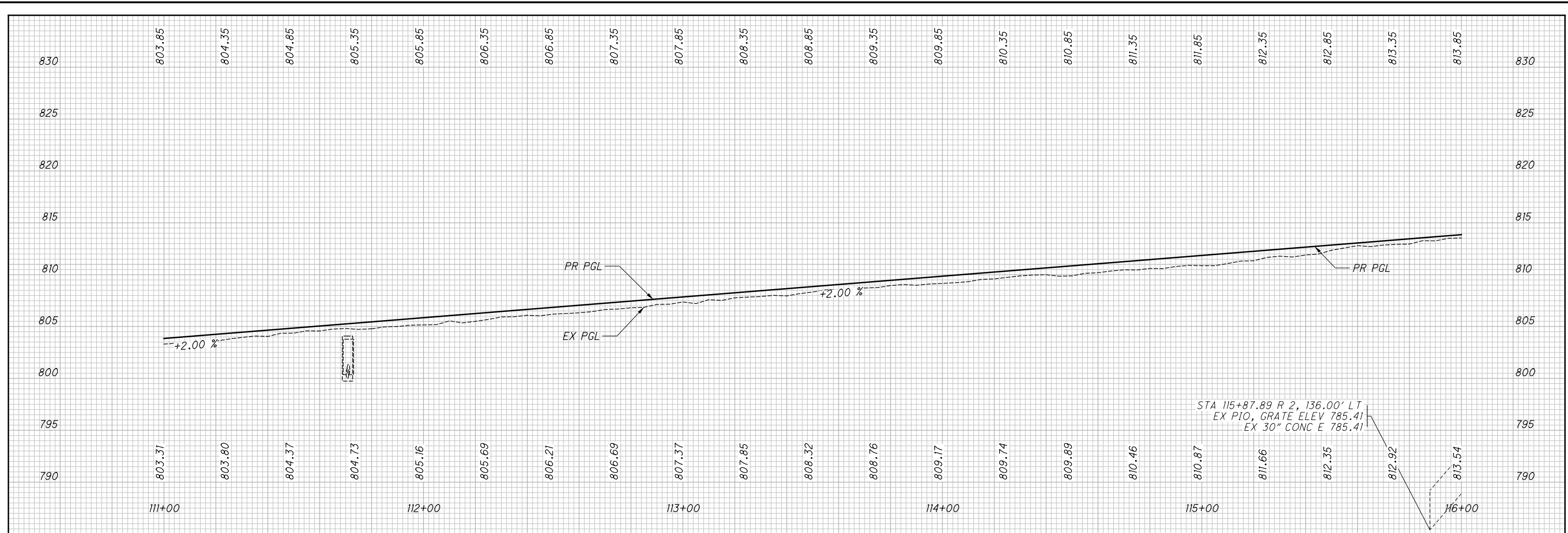
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 111+00 TO STA 116+00

FRA-71-0.00

543
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF024.dgn Sheet 10/28/2019 11:09:27 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 111+00 TO STA 116+00

FRA - 71 - 0.00

544
1312

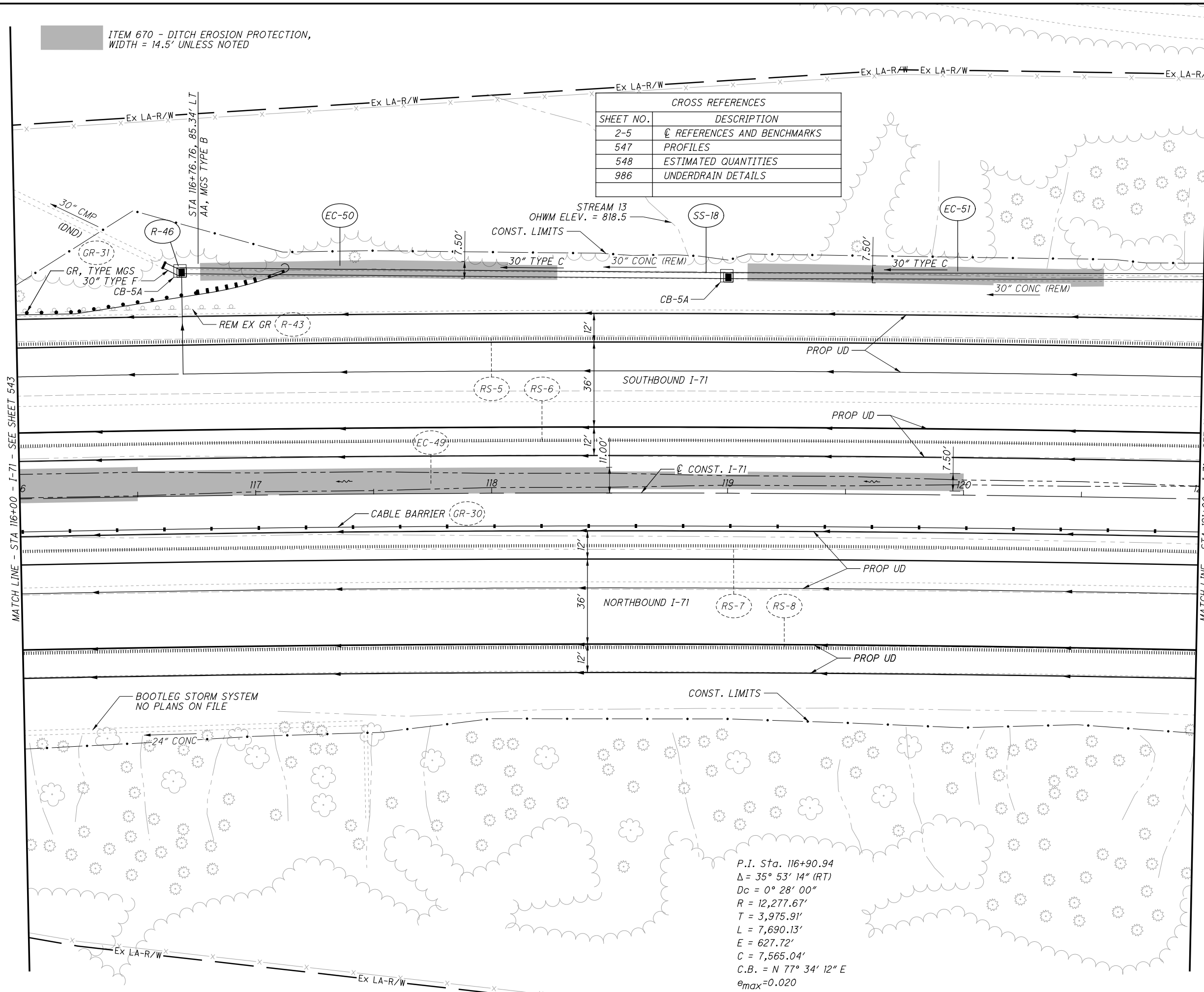
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REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	611	611	670				
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	15" CONDUIT, TYPE B, 706.02 FT	15" CONDUIT, TYPE C FT	15" CONDUIT, TYPE F, 707.05, TYPE C OR 707.21 FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY				
R-44	543	111+71		LT/RT	98	2											
R-45	NOT USED																
SS-17	543	111+71	114+50	LT/RT			1.33	0.27	35	279	52	2					
EC-48	543	111+78	114+41	CL									388				
EC-49	543, 546	114+57	120+00	CL									680				
TOTALS CARRIED TO SHEETS 395-398					98	2	1.33	0.27	35	279	52	2	1068				

CALCULATED	DCB	CHECKED	SJS
ESTIMATED QUANTITIES			
FRA - 71 - 0.00			
545		1312	

X:\4037000\121957.16\107201\roadway\sheets\107201GP025.dgn_Sheet 10/28/2019 11:09:29 AM 1458sjs

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
547	PROFILES
548	ESTIMATED QUANTITIES
986	UNDERDRAIN DETAILS



 0 20 40
 HORIZONTAL SCALE IN FEET
 CALCULATED DCB CHECKED SJS

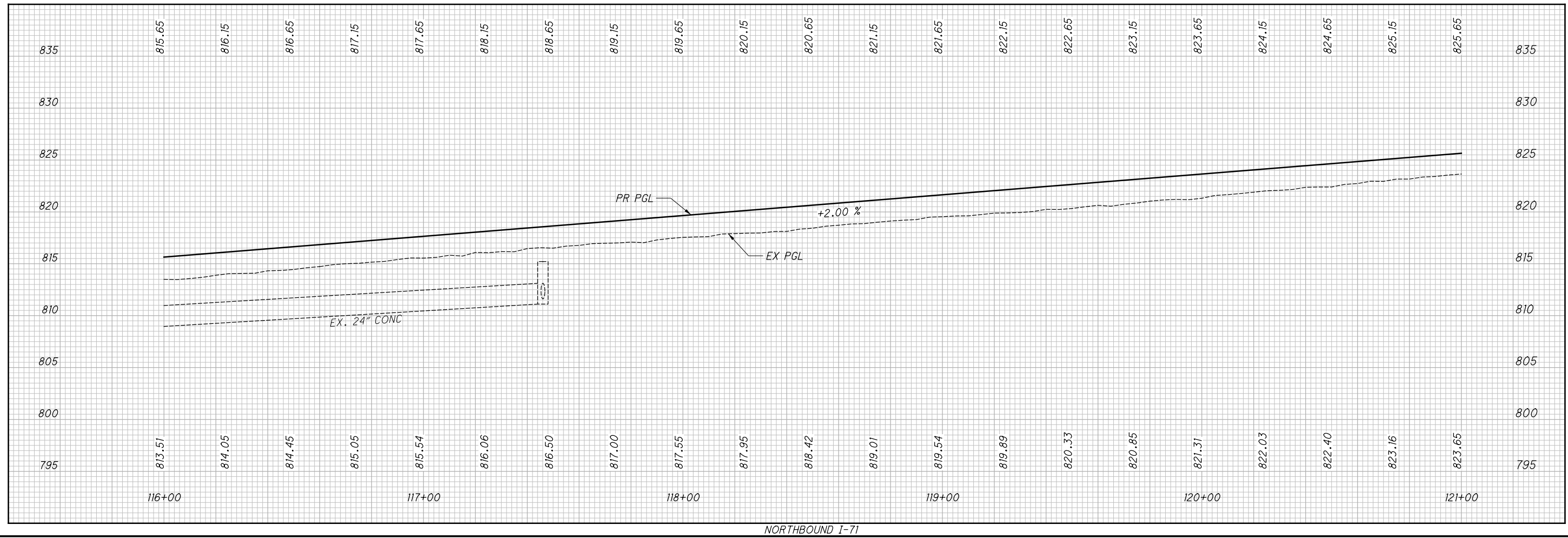
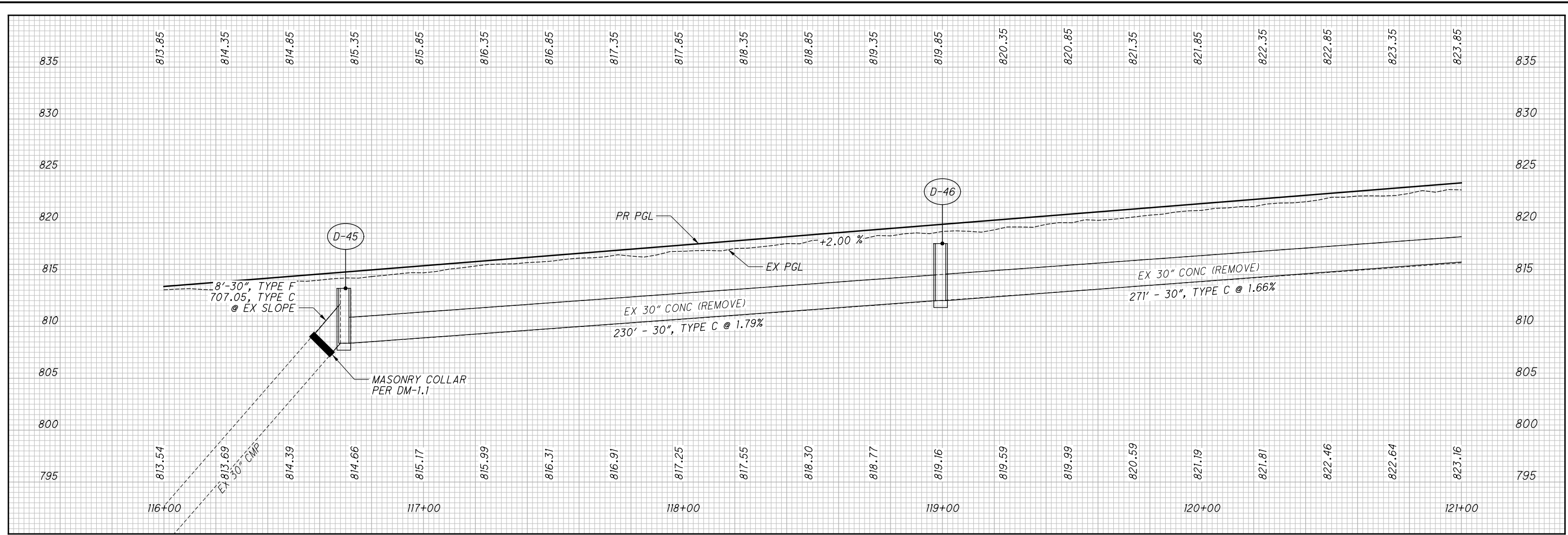
PLAN - I-71
 STA 116+00 TO STA 121+00

FRA-71-0.00

546
1312

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 116+00 TO STA 121+00

FRA - 71 - 0.00

547
1312




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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	611	611	611	611	670							
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	CATCH BASIN REMOVED EACH	24" CONDUIT, TYPE C FT	30" CONDUIT, TYPE C FT	30" CONDUIT, TYPE F, 707.05 FT	CATCH BASIN, NO. 5A EACH	DITCH EROSION PROTECTION SY							
R-46	546, 549, 552, 555	116+63	131+70	LT	1008	513	7												
SS-18	546, 549, 552, 555	116+63	131+70	LT				999	501	8	7								
EC-50	546	116+77	118+28	LT								126							
EC-51	546	119+07	120+58	LT								126							
TOTALS CARRIED TO SHEETS 395-398					1008	513	7	999	501	8	7	252							

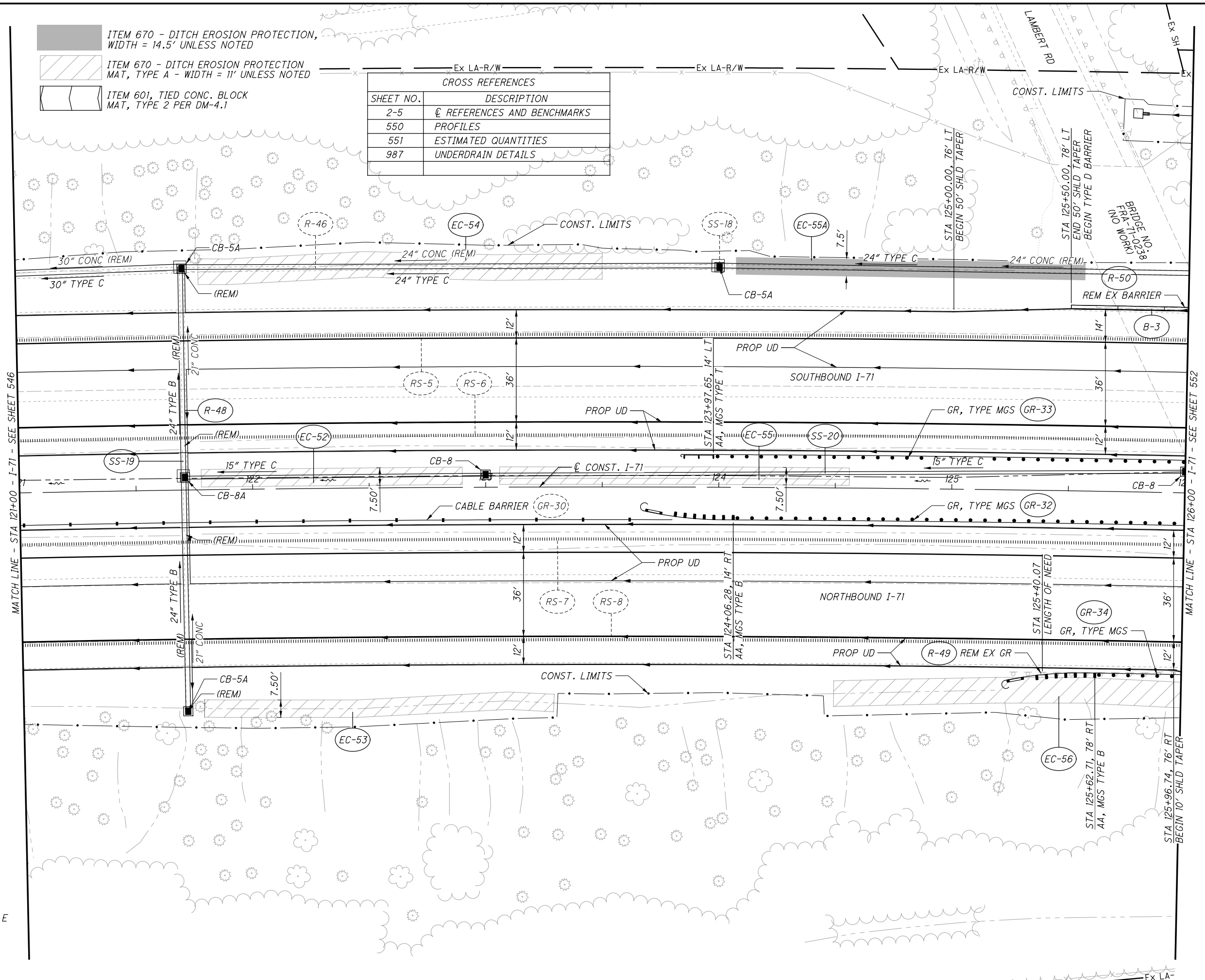
CALCULATED DCB CHECKED SJS	ESTIMATED QUANTITIES	FRA - 71 - 0.00	548 1312
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X:\4037000\121957.16\107201\roadway\sheets\107201GP026.dgn_Sheet 10/28/2019 11:09:31 AM 1458sj

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

-  ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED
-  ITEM 670 - DITCH EROSION PROTECTION MAT, TYPE A - WIDTH = 11' UNLESS NOTED
-  ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
550	PROFILES
551	ESTIMATED QUANTITIES
987	UNDERDRAIN DETAILS





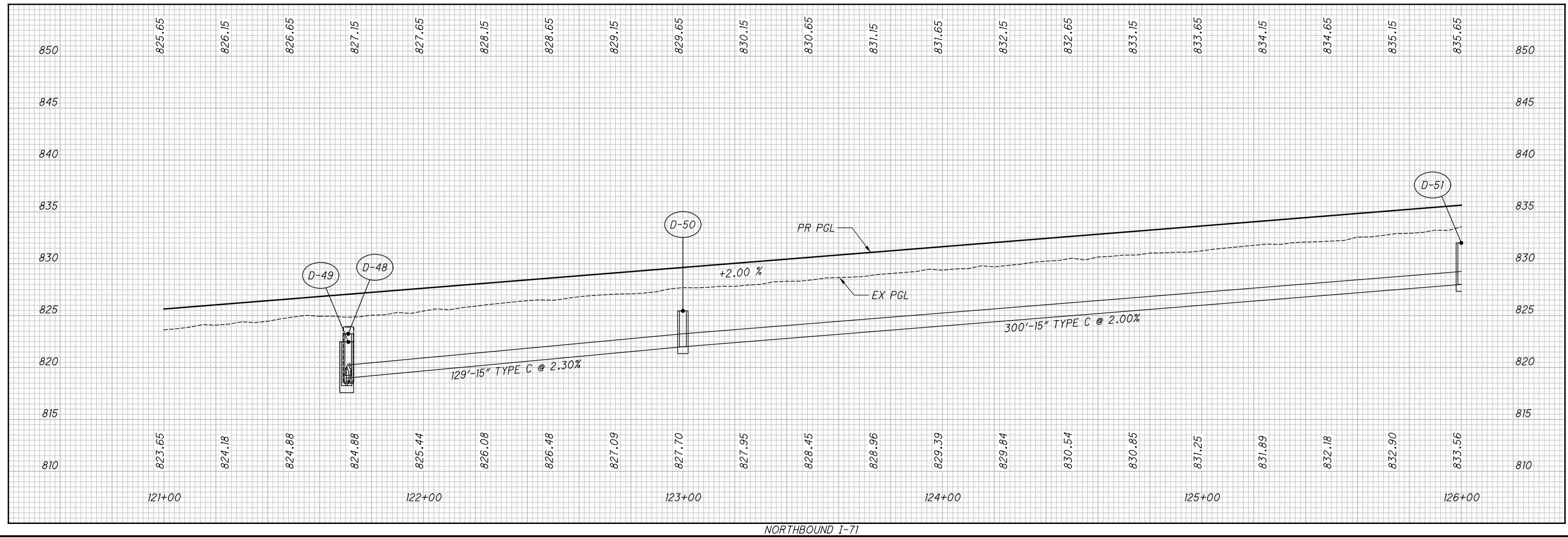
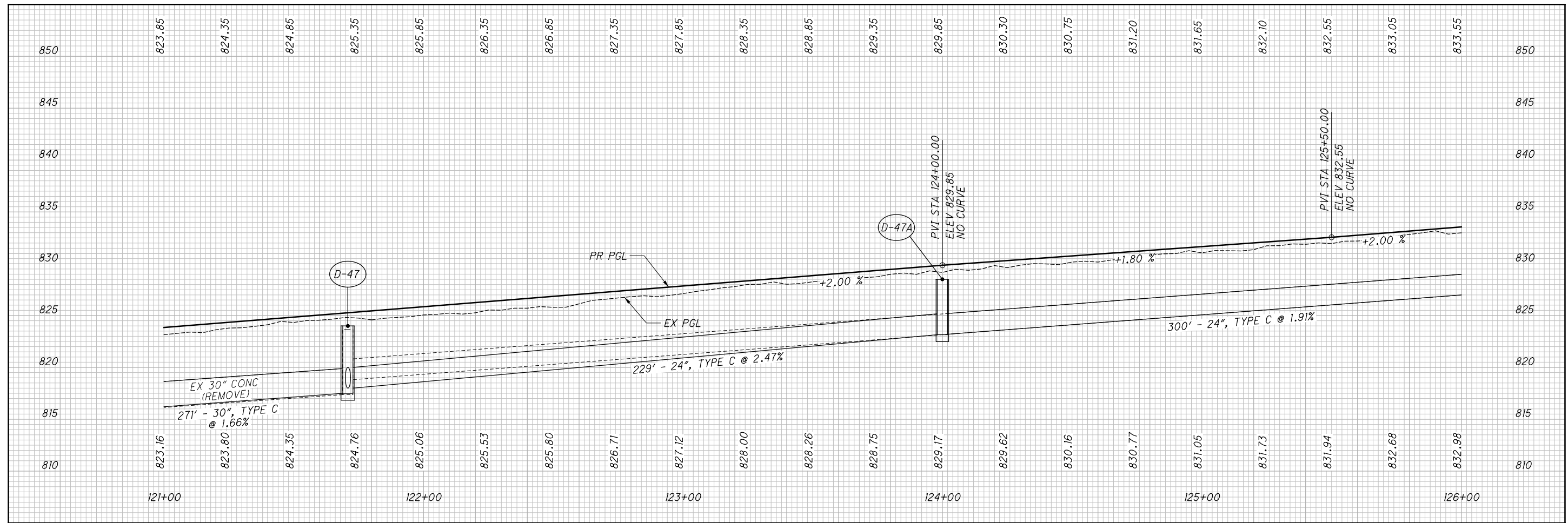
 HORIZONTAL SCALE IN FEET
 CALCULATED DCB CHECKED SJS

PLAN - I-71
 STA 121+00 TO STA 126+00

FRA-71-0.00

549
 1312

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 121+00 TO STA 126+00

FRA - 71 - 0.00

550
1312

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	606	606	606	606	611	611	611	611	611	622	622	622	626	626	670	670
		FROM	TO		CONCRETE BARRIER REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	16" CONDUIT, TYPE C FT	24" CONDUIT, TYPE B FT	CATCH BASIN, NO. 5A EACH	CATCH BASIN, NO. 8 EACH	CATCH BASIN, NO. 8A EACH	CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	CONCRETE BARRIER END SECTION, TYPE D EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY) EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY	DITCH EROSION PROTECTION MAT, TYPE A SY
R-48	549	121+71		LT/RT		190		3																
R-49	549, 552	125+26	126+26	RT																				
R-50	549, 552	125+61	126+28	LT	68		100																	
B-3	549, 552	125+50	126+25	LT														46	1	1	3			
EC-52	549	121+77	122+91	CL																				95
EC-53	549	121+77	123+30	RT																				128
EC-54	549	121+77	123+50	LT																				211
EC-55	549	123+07	124+56	CL																				125
EC-55A	549	124+07	125+56	LT																			125	
EC-56	549, 552	124+50	128+00	RT																				428
GR-32	549, 552	124+06	126+44	RT					237.5	1	1													
GR-33	549, 552	123+98	128+47	LT					450.0	1	1													
GR-34	549, 552	125+63	126+25	RT					37.5	1		1												
SS-19	523	121+71	121+71	LT/RT																				
SS-20	549, 552	121+70	129+00	CL									729	184	1	4	1							
TOTALS CARRIED TO SHEETS 395-398					68	190	100	3	725	3	2	1	729	184	1	4	1	46	1	1	3	13	125	987

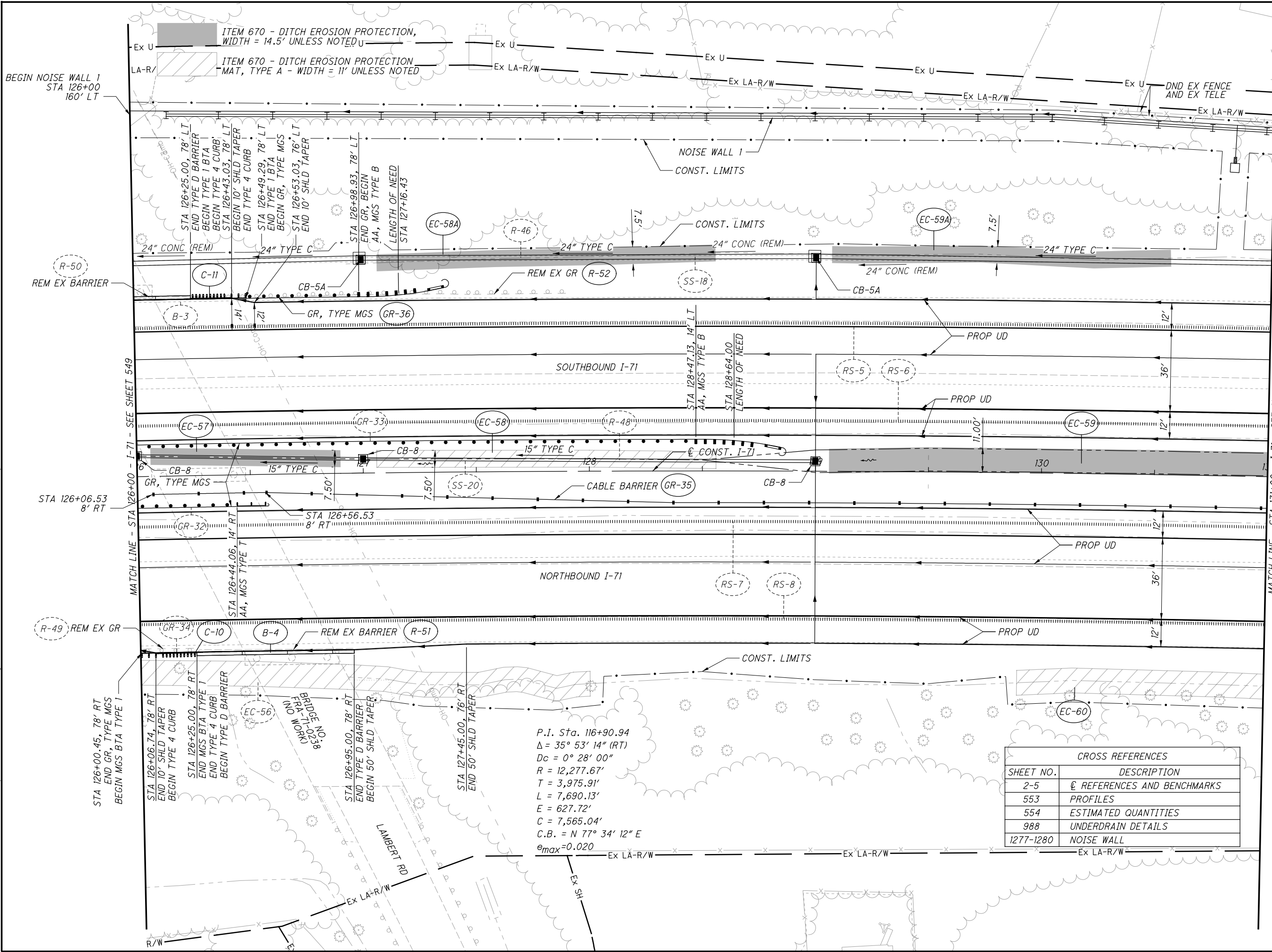
ESTIMATED QUANTITIES

FRA - 71 - 0.00

CALCULATED
DCB
CHECKED
SJS

551
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP027.dgn Sheet 10/28/2019 11:09:32 AM 1458sjs



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ITEM 670 - DITCH EROSION PROTECTION
MAT, TYPE A - WIDTH = 11' UNLESS NOTED

BEGIN NOISE WALL 1
STA 126+00
160' LT

DND EX FENCE
AND EX TELE

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	REFERENCES AND BENCHMARKS
553	PROFILES
554	ESTIMATED QUANTITIES
988	UNDERDRAIN DETAILS
1277-1280	NOISE WALL



PLAN - I-71
STA 126+00 TO STA 131+00

FRA-71-0.00

552
1312

CALCULATED
DCB
CHECKED
SJS

MATCH LINE - STA 126+00 - I-71 - SEE SHEET 549

MATCH LINE - STA 131+00 - I-71 - SEE SHEET 555

STA 126+00.45, 78' RT
END GR, TYPE MGS
BEGIN MGS BTA TYPE 1

STA 126+06.74, 78' RT
END 10' SHLD TAPER
BEGIN TYPE 4 CURB

STA 126+25.00, 78' RT
END MGS BTA TYPE 1
BEGIN TYPE 4 CURB

STA 126+43.03, 78' LT
BEGIN 10' SHLD TAPER
END TYPE 4 CURB

STA 126+49.29, 78' LT
END TYPE 1 BTA
BEGIN GR, TYPE MGS

STA 126+53.03, 76' LT
END 10' SHLD TAPER

STA 126+98.93, 78' LT
END GR, BEGIN
AA, MGS TYPE B

STA 127+16.43
LENGTH OF NEED

STA 127+45.00, 76' RT
END 50' SHLD TAPER

BRIDGE NO. 038
FRA-71-0038
NO
LAMBERT RD

R/W

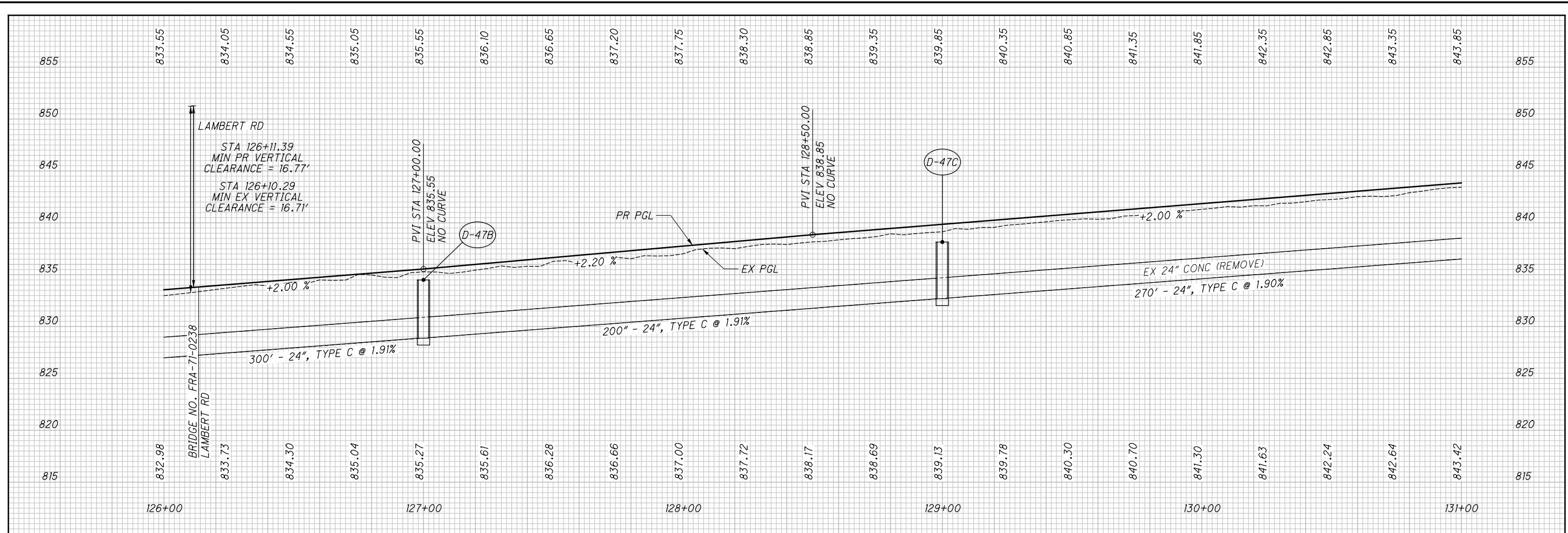
Ex SH

Ex LA-R/W

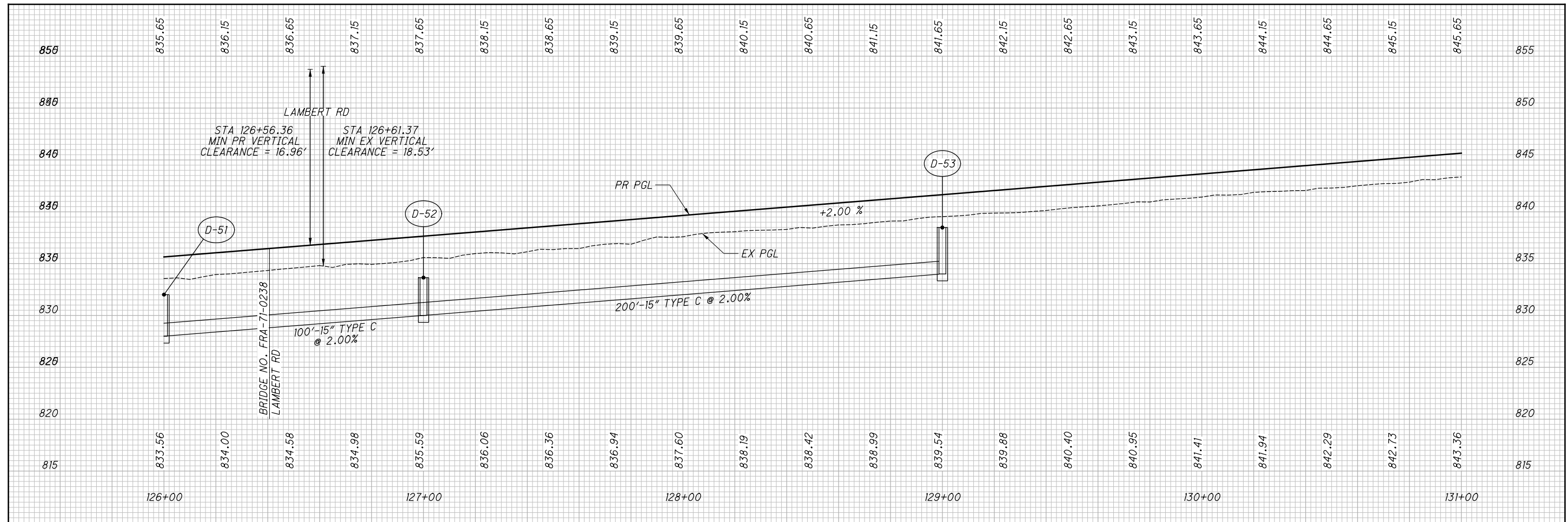
Ex LA-R/W

Ex LA-R/W

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SOUTHBOUND I-71



NORTHBOUND I-71

CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 126+00 TO STA 131+00

FRA-71-0.00

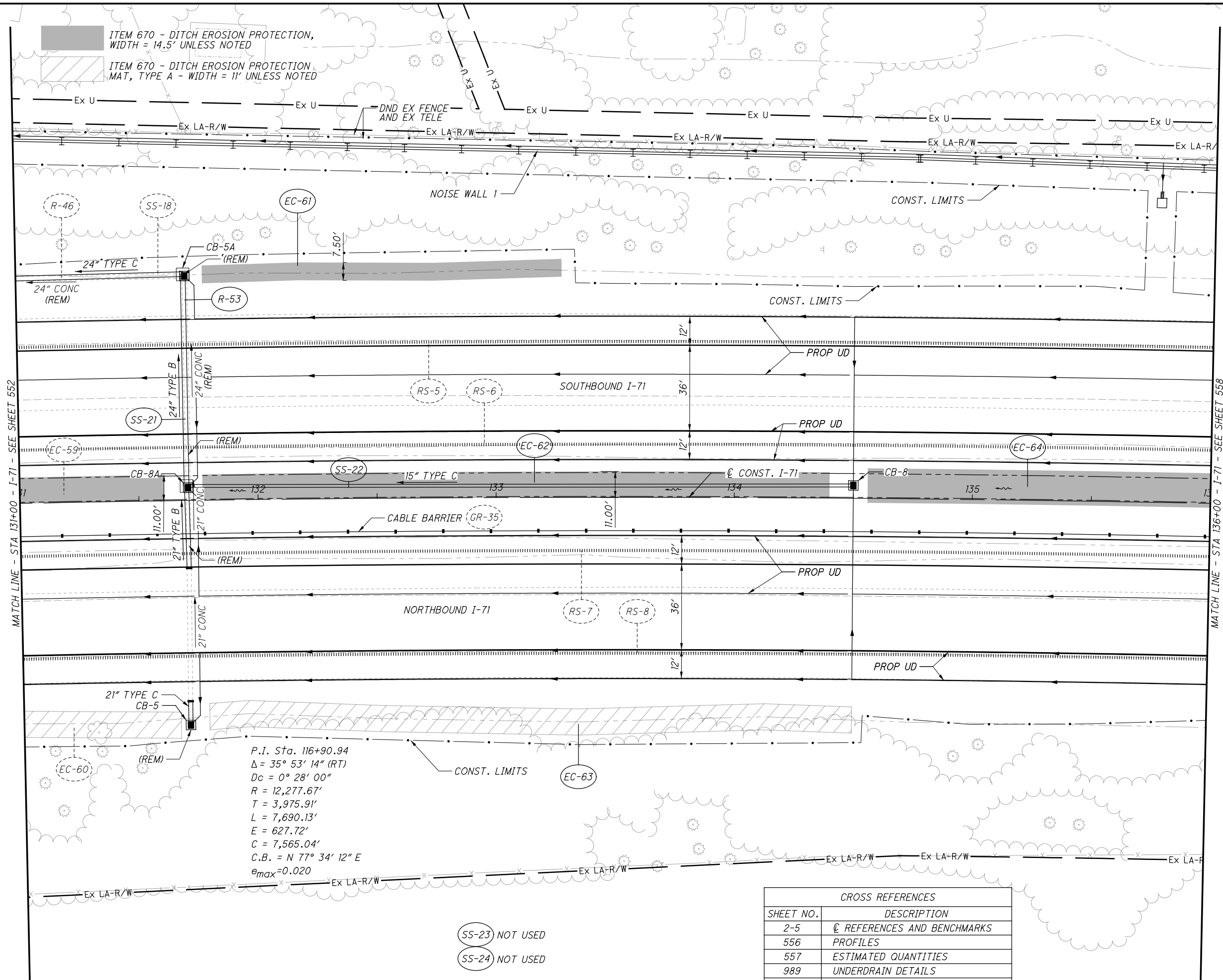
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1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0027.dgn Sheet 10/28/2019 11:09:34 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	606	606	606	606	606	609	622	622	622	626	626	670	670
		FROM	TO		CONCRETE BARRIER REMOVED FT	GUARDRAIL REMOVED FT	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED) FT	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL EACH	CURB, TYPE 4-C FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	CONCRETE BARRIER END SECTION, TYPE D EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY) EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY	DITCH EROSION PROTECTION MAT, TYPE A SY
R-51	552	126+26	126+95	RT	69														
R-52	552	126+28	127+91	LT		164													
B-4	552	126+25	126+95	RT									41	1	1	2			
C-10	552	126+07	126+25	RT							18								
C-11	552	126+25	126+43	LT							18								
GR-35	552, 555, 558, 561, 564	126+07	148+30	RT						2222	2								
GR-36	552	126+25	126+99	LT			50	1	1							2			
EC-57	552	126+07	126+91	LT													70		
EC-58	552	127+07	128+56	LT														125	
EC-58A	552	127+07	128+56	LT														125	
EC-59	552, 555	129+07	131+62	CL														312	
EC-59A	552	129+07	130+56	LT														125	
EC-60	552, 555	129+90	131+62	RT															210
TOTALS CARRIED TO SHEETS 395-398					69	164	50	1	1	2222	2	36	41	1	1	2	2	632	335

ESTIMATED QUANTITIES	FRA - 71 - 0.00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">CALCULATED</td> <td style="text-align: center;">DCB</td> <td style="text-align: center;">CHECKED</td> <td style="text-align: center;">SJS</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>	CALCULATED	DCB	CHECKED	SJS				
CALCULATED	DCB	CHECKED	SJS							
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">554</td> <td style="text-align: center;">1312</td> </tr> </table>		554	1312					
554	1312									

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MATCH LINE - STA 131+00 - I-71 - SEE SHEET 552

MATCH LINE - STA 136+00 - I-71 - SEE SHEET 558

ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED
 ITEM 670 - DITCH EROSION PROTECTION MAT, TYPE A - WIDTH = 11' UNLESS NOTED

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

(SS-23) NOT USED
 (SS-24) NOT USED

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
556	PROFILES
557	ESTIMATED QUANTITIES
989	UNDERDRAIN DETAILS
1277-1280	NOISE WALL

CALCULATED DCB CHECKED SJS

0 20 40
 10 HORIZONTAL SCALE IN FEET

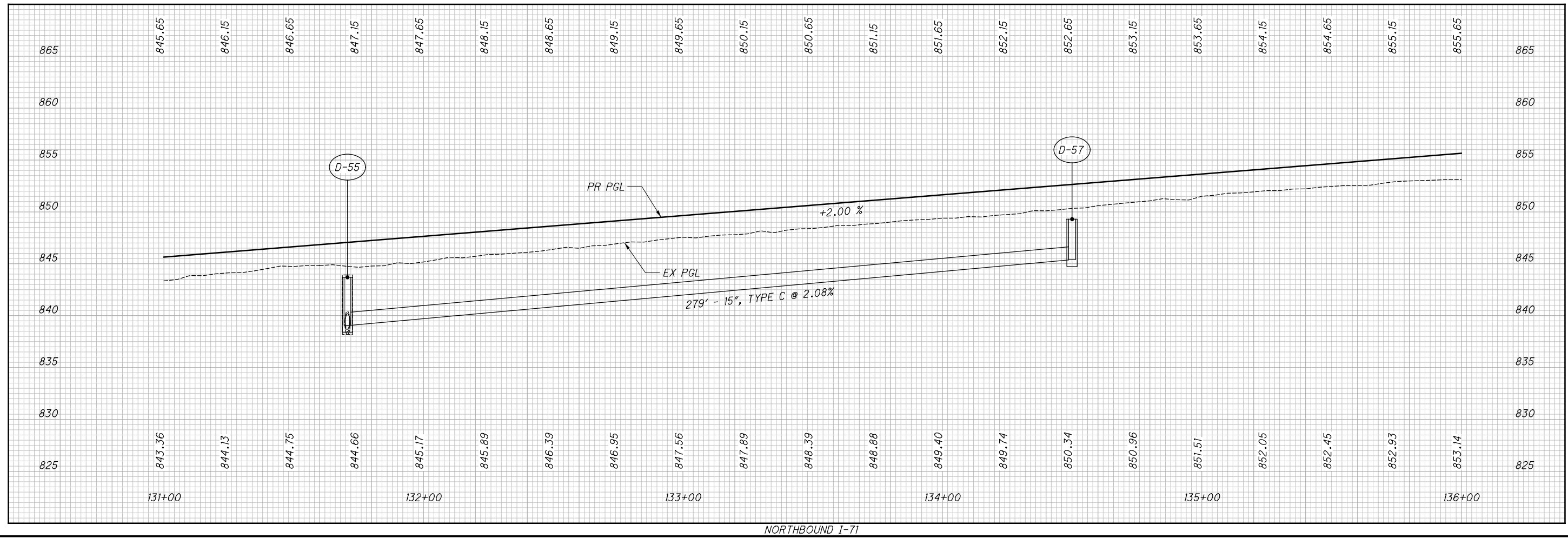
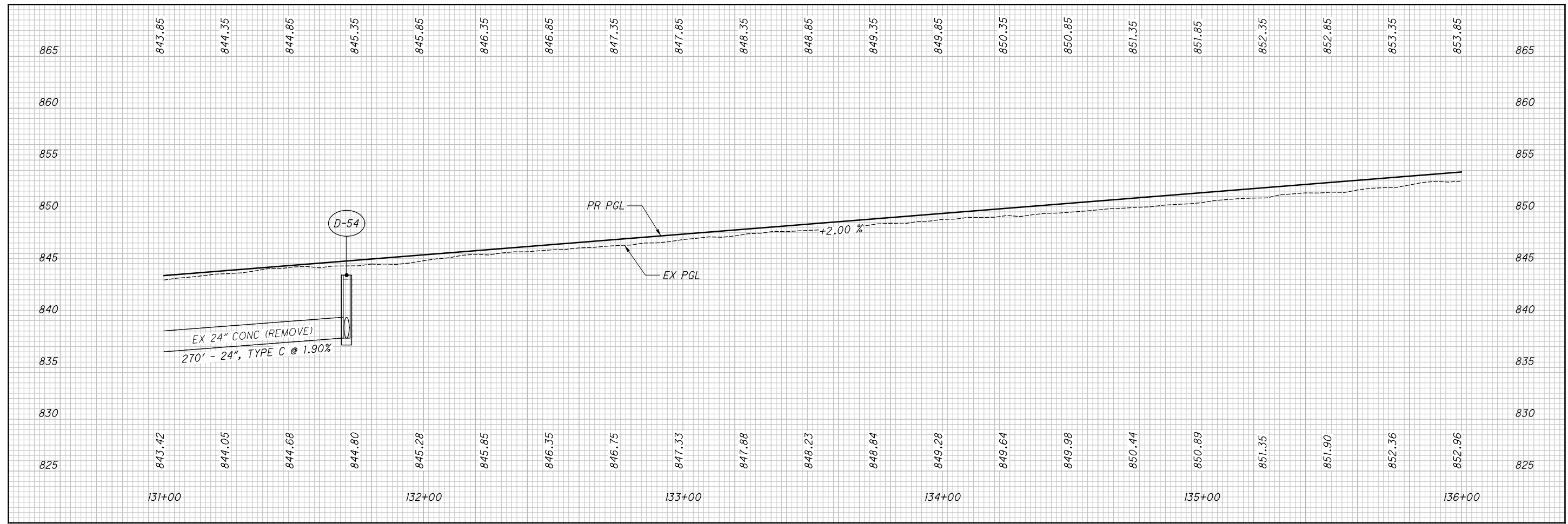
▲ N

PLAN - I-71
 STA 131+00 TO STA 136+00

FRA-71-0.00

555
 1312

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 131+00 TO STA 136+00

FRA - 71 - 0.00

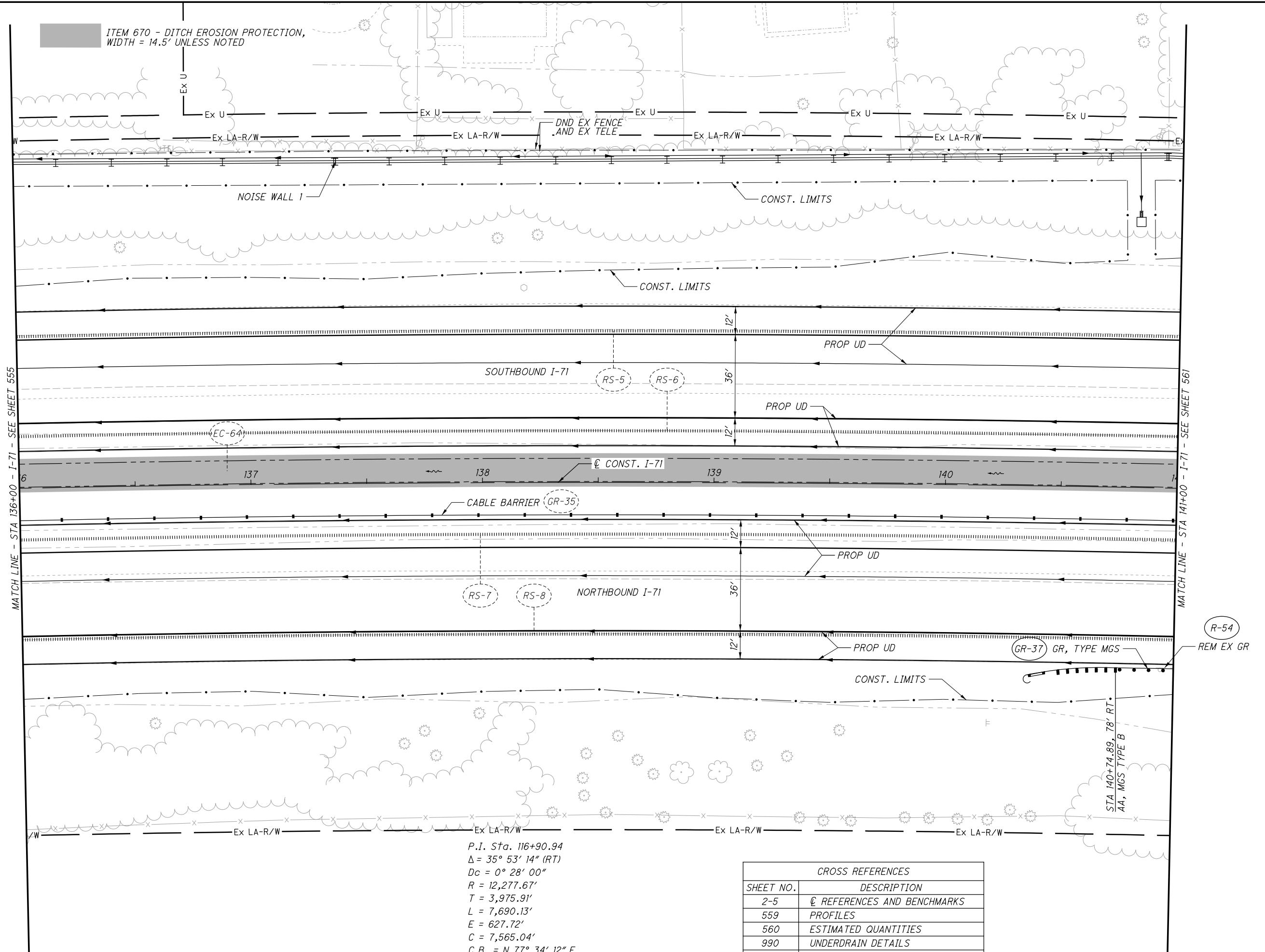
556
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0028.dgn Sheet 10/28/2019 11:09:36 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	611	611	611	611	611	611	611	670	670				
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	15" CONDUIT, TYPE C FT	21" CONDUIT, TYPE B, 706.02 FT	21" CONDUIT, TYPE C, 706.02 FT	24" CONDUIT, TYPE B, 706.02 FT	CATCH BASIN, NO. 5 EACH	CATCH BASIN, NO. 8 EACH	CATCH BASIN, NO. 8A EACH	DITCH EROSION PROTECTION SY	DITCH EROSION PROTECTION MAT, TYPE A SY				
R-53	555	131+71		LT/RT	190	3													
EC-61	555	131+78	133+28	LT										125					
EC-62	555	131+78	134+41	CL										321					
EC-63	555	131+78	134+50	RT											333				
EC-64	555, 558, 561	134+57	141+62	CL										1136					
SS-21	529	131+70	131+71	LT/RT			279	35	10	89	1		1						
SS-22	555	131+70	134+50	CL									1						
TOTALS CARRIED TO SHEETS 395-398					190	3	279	35	10	89	1	1	1	1582	333				

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	557 1312

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P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $\theta_{max} = 0.020$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	REFERENCES AND BENCHMARKS
559	PROFILES
560	ESTIMATED QUANTITIES
990	UNDERDRAIN DETAILS
1277-1280	NOISE WALL

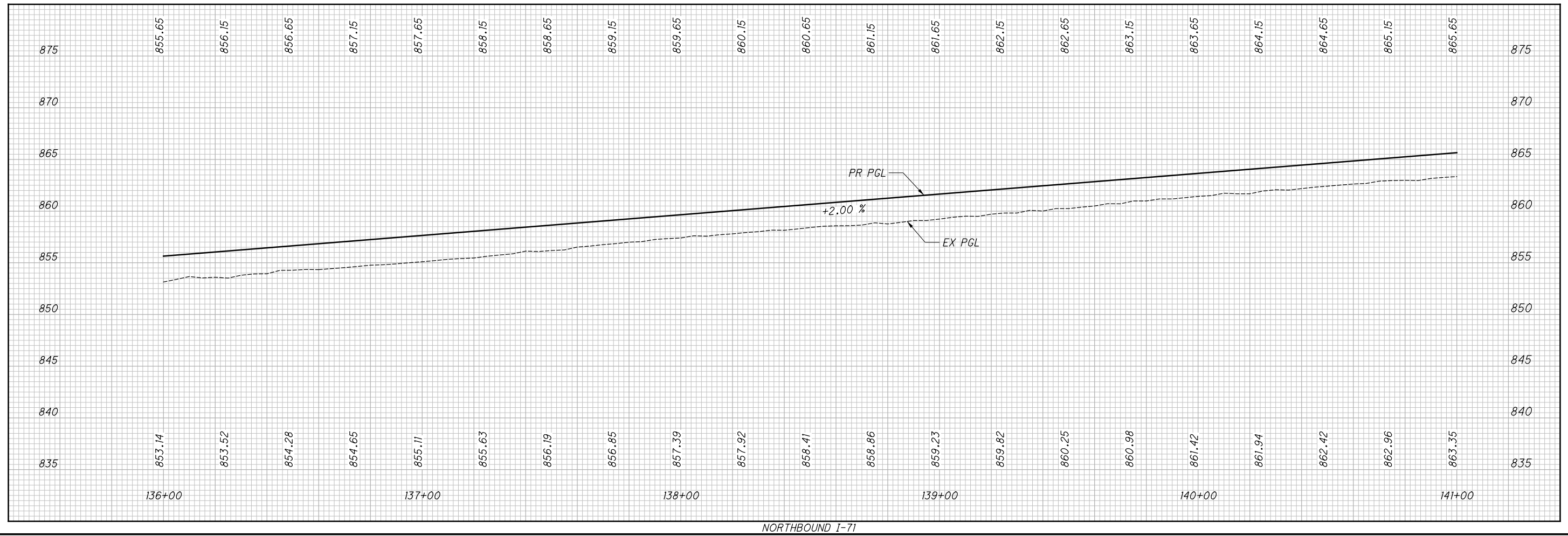
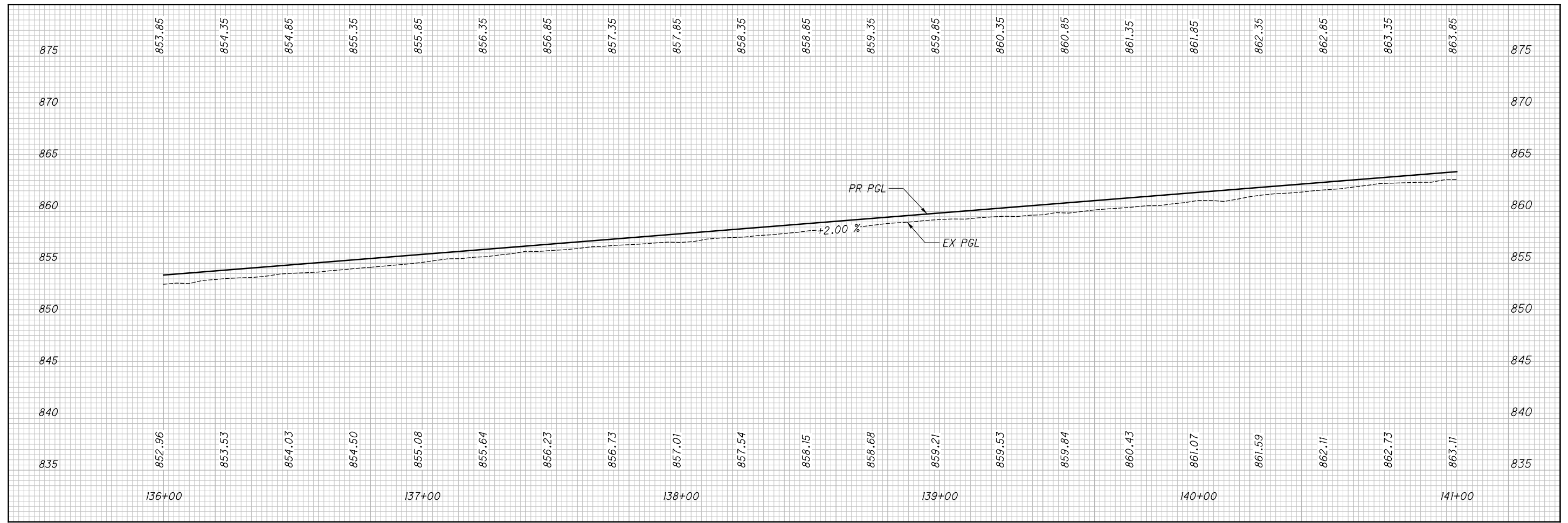
CALCULATED DCB CHECKED SJS

10 HORIZONTAL SCALE IN FEET

PLAN - I-71
 STA 136+00 TO STA 141+00

FRA-71-0.00

558
 1312



CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 136+00 TO STA 141+00**

FRA - 71 - 0.00

559
1312




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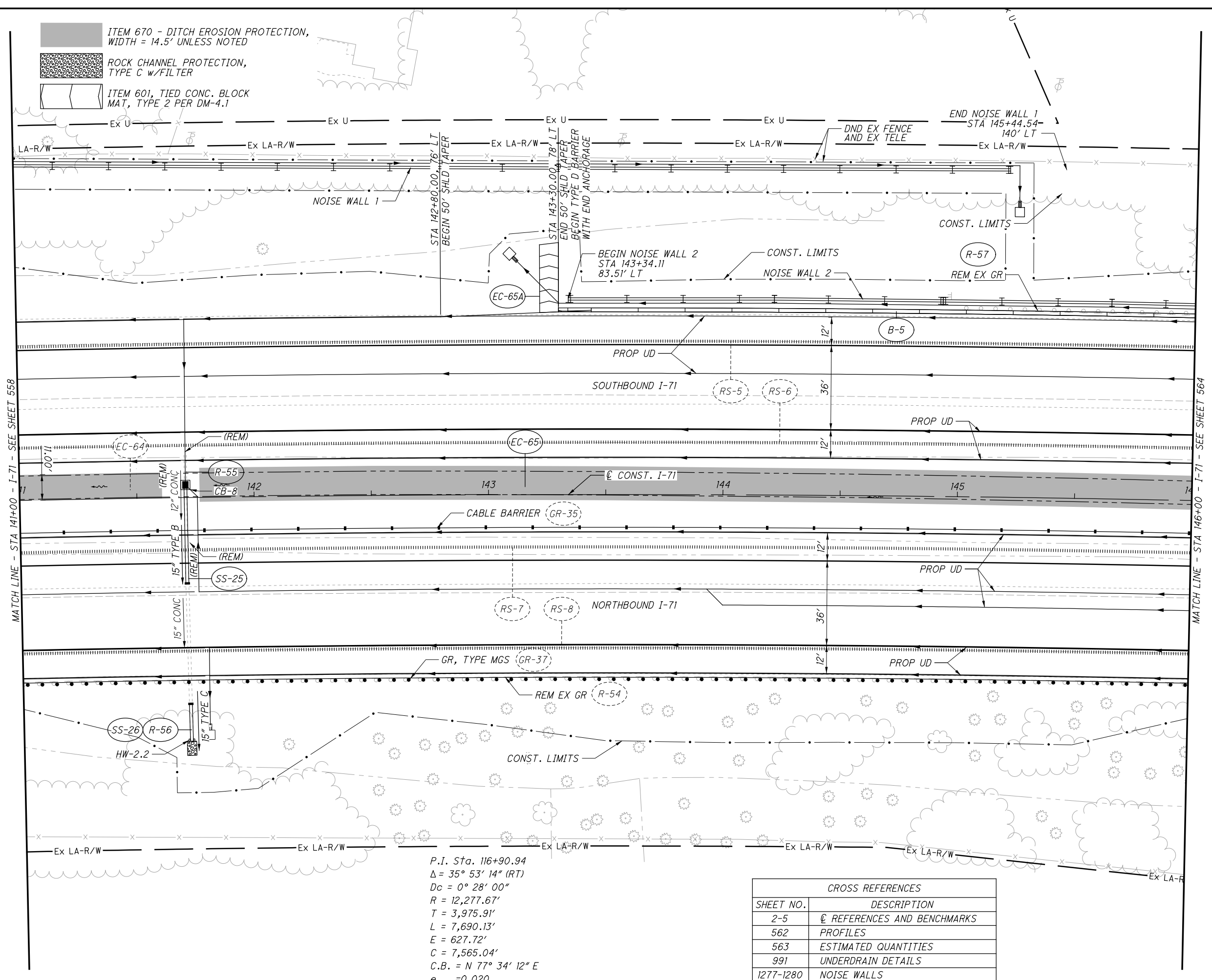
REF. NO.	SHEET NO.	STATION		SIDE	202	606	606	606														
		FROM	TO		GUARDRAIL REMOVED	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	MGS BRIDGE TERMINAL ASSEMBLY, TYPE I														
					FT	FT	EACH	EACH														
R-54	558, 561, 564, 567, 570	140+90	156+97	RT	1600																	
GR-37	558, 561, 564, 567, 570	140+75	156+70	RT		1562.5	1	1														
TOTALS CARRIED TO SHEETS 395-398					1600	1562.5	1	1														

ESTIMATED QUANTITIES	FRA - 71 - 0:00	CALCULATED DCB CHECKED SJS
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560
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP030.dgn_Sheet 10/28/2019 11:09:38 AM 1458sjs

-  ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED
-  ROCK CHANNEL PROTECTION, TYPE C w/FILTER
-  ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
562	PROFILES
563	ESTIMATED QUANTITIES
991	UNDERDRAIN DETAILS
1277-1280	NOISE WALLS

CALCULATED
 DCB
 CHECKED
 SJS

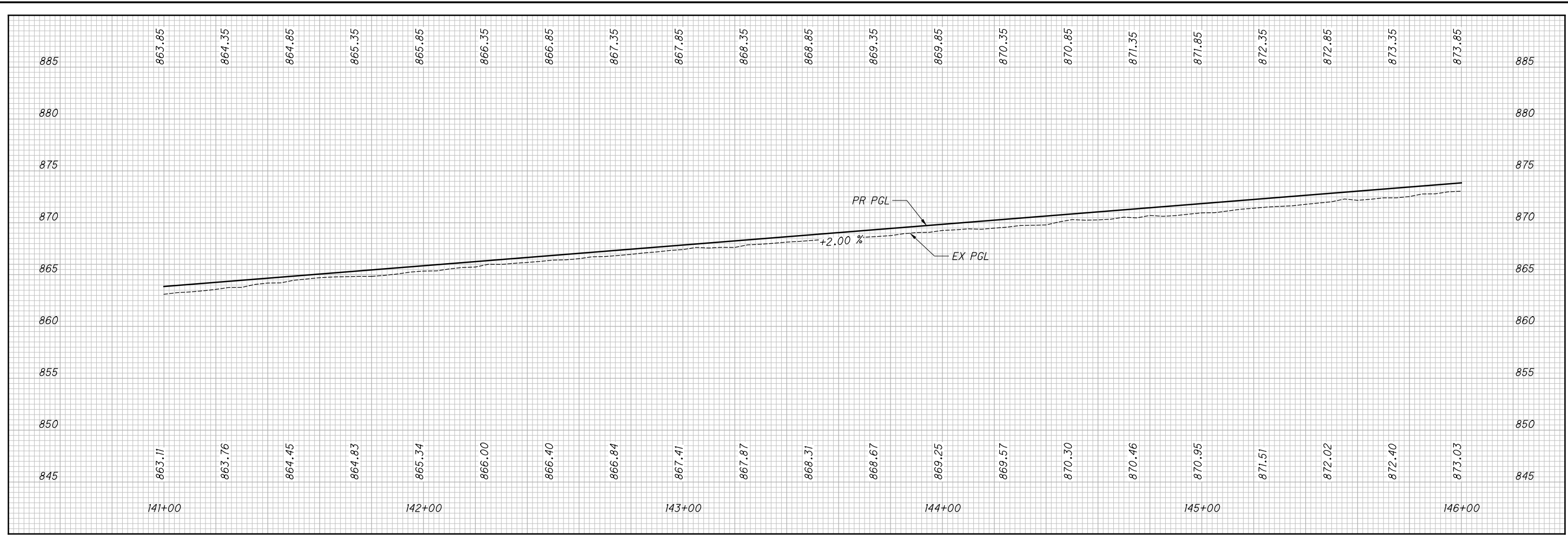
0 20 40
 HORIZONTAL
 SCALE IN FEET

PLAN - I-71
 STA 141+00 TO STA 146+00

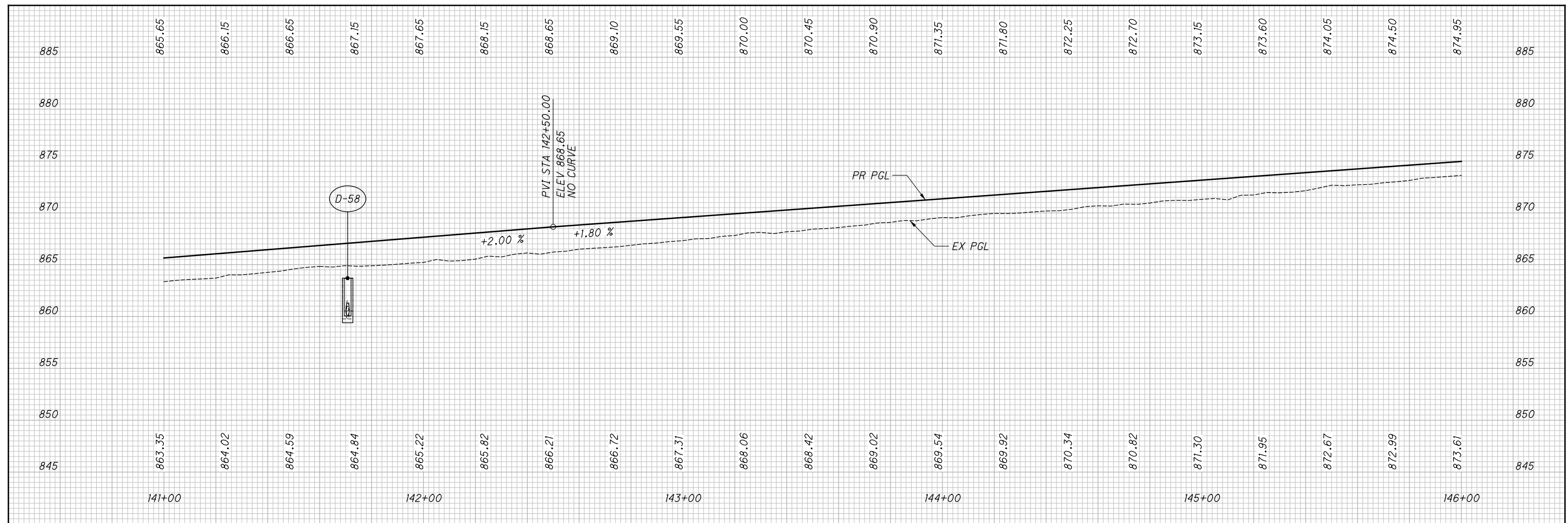
FRA-71-0.00

561
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF030.dgn Sheet 10/28/2019 11:09:39 AM 1458sjs



SOUTHBOUND I-71



NORTHBOUND I-71

CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 141+00 TO STA 146+00

FRA - 71 - 0.00

562
1312

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	601	601	602		611	611	611		622	622	622	626	670
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH	SPECIAL - PIPE CLEANOUT, 24" AND UNDER FT	TIED CONCRETE BLOCK MAT, TYPE 2 SY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY		15" CONDUIT, TYPE B, 706.02 FT	15" CONDUIT, TYPE C, 706.02 FT	CATCH BASIN, NO. 8 EACH		CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	CONCRETE BARRIER END SECTION, TYPE D EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY) EACH	DITCH EROSION PROTECTION SY
R-55	561	141+71		LT/RT	57		2														
R-56	561	141+72		RT	16																
R-57	561, 564, 567, 570	145+01	157+77	LT/RT		1287															
B-5	561, 564	143+30	148+20	LT													459	1	1	6	
EC-65	561, 564	141+78	148+36	CL																	1060
EC-65A	561	143+22	143+30	LT				27													
SS-23 & SS-24 NOT USED																					
SS-25	561	141+71		LT/RT				51					42		1						
SS-26	561	141+72		RT					1.33	0.25				16							
					73	1287	2	51	27	1.33	0.25		42	16	1		459	1	1	6	1060

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">CALCULATED</td> <td style="text-align: center;">DCB</td> </tr> <tr> <td style="text-align: center;">CHECKED</td> <td style="text-align: center;">SJS</td> </tr> </table>	CALCULATED	DCB	CHECKED	SJS	ESTIMATED QUANTITIES	FRA - 71 - 0.00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">563</td> </tr> <tr> <td style="text-align: center;">1312</td> </tr> </table>	563	1312
CALCULATED	DCB								
CHECKED	SJS								
563									
1312									

X:\4037000\121957.16\107201\roadway\sheets\107201GP031.dgn Sheet 10/28/2019 11:09:40 AM 14585.js

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE A OR B w/FILTER

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
565	PROFILES
566	ESTIMATED QUANTITIES
992	UNDERDRAIN DETAILS
933	CULVERT DETAILS

CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 146+00 TO STA 151+00

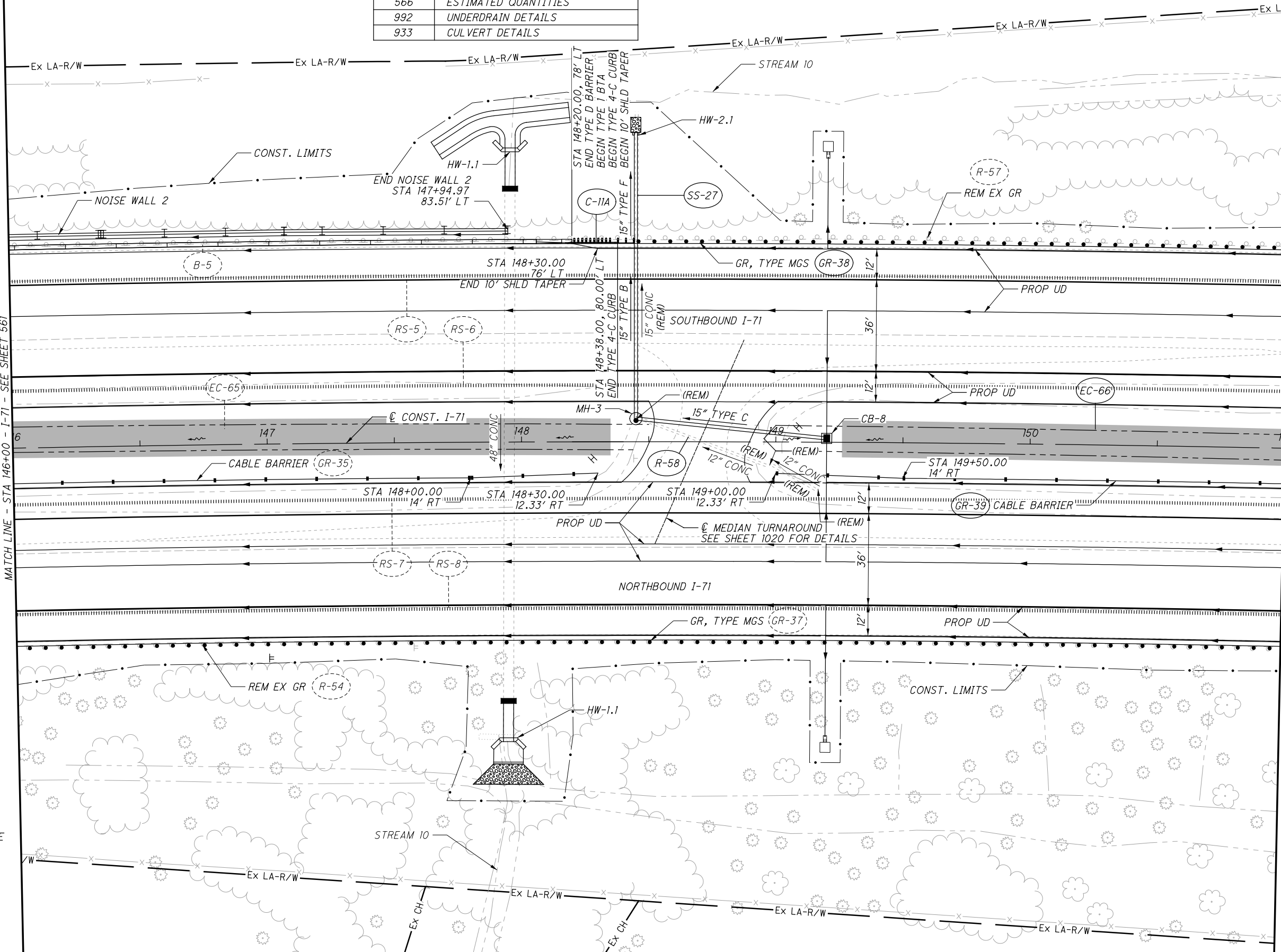
FRA-71-0.00

564
1312

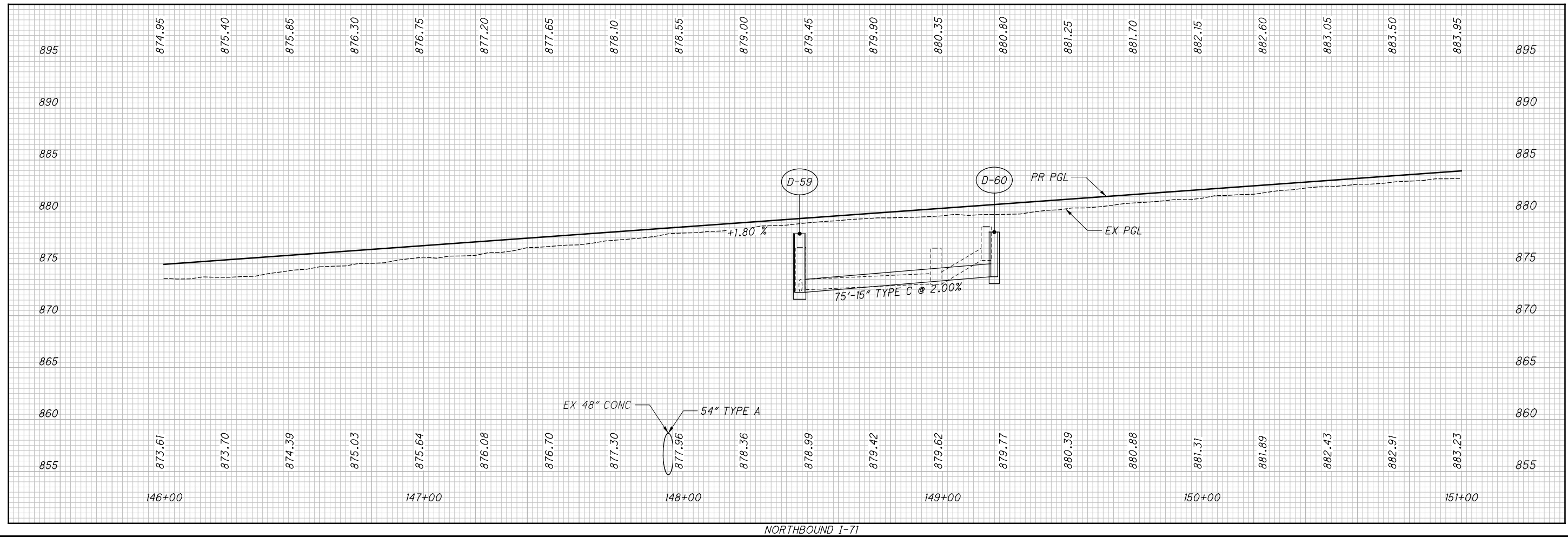
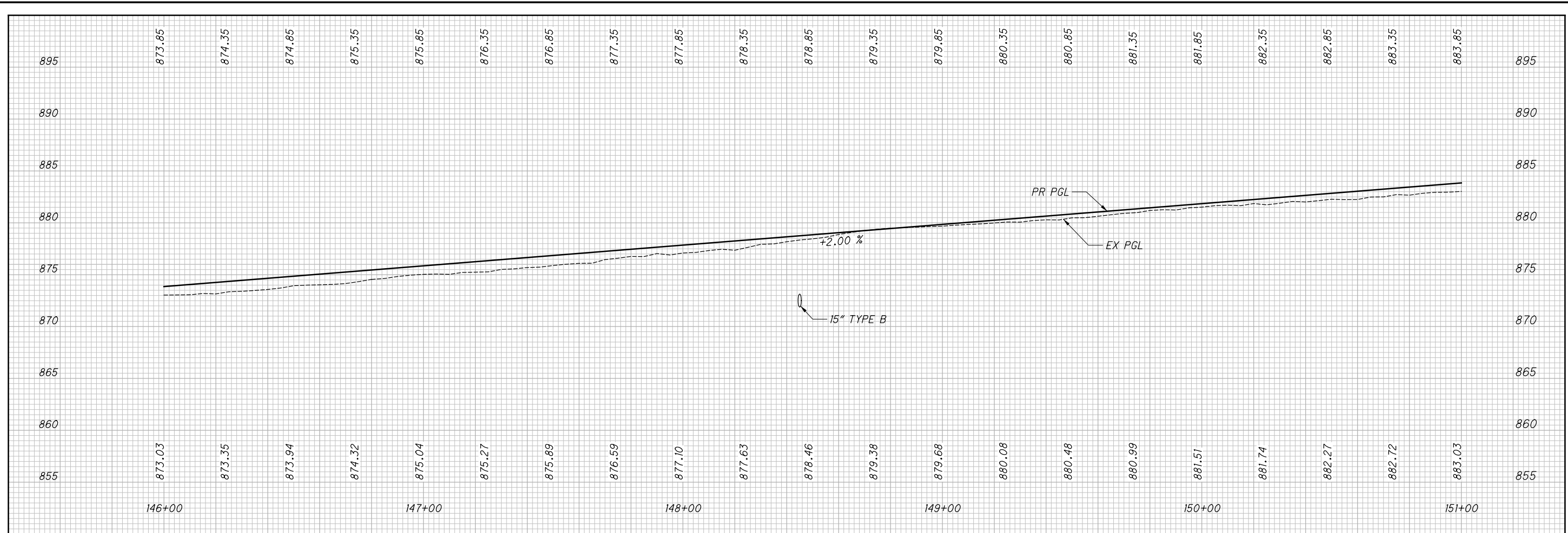
P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14" (RT)$
 $D_c = 0^\circ 28' 00"$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12" E$
 $\theta_{max} = 0.020$

MATCH LINE - STA 146+00 - I-71 - SEE SHEET 561

MATCH LINE - STA 151+00 - I-71 - SEE SHEET 567



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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 146+00 TO STA 151+00

FRA - 71 - 0.00

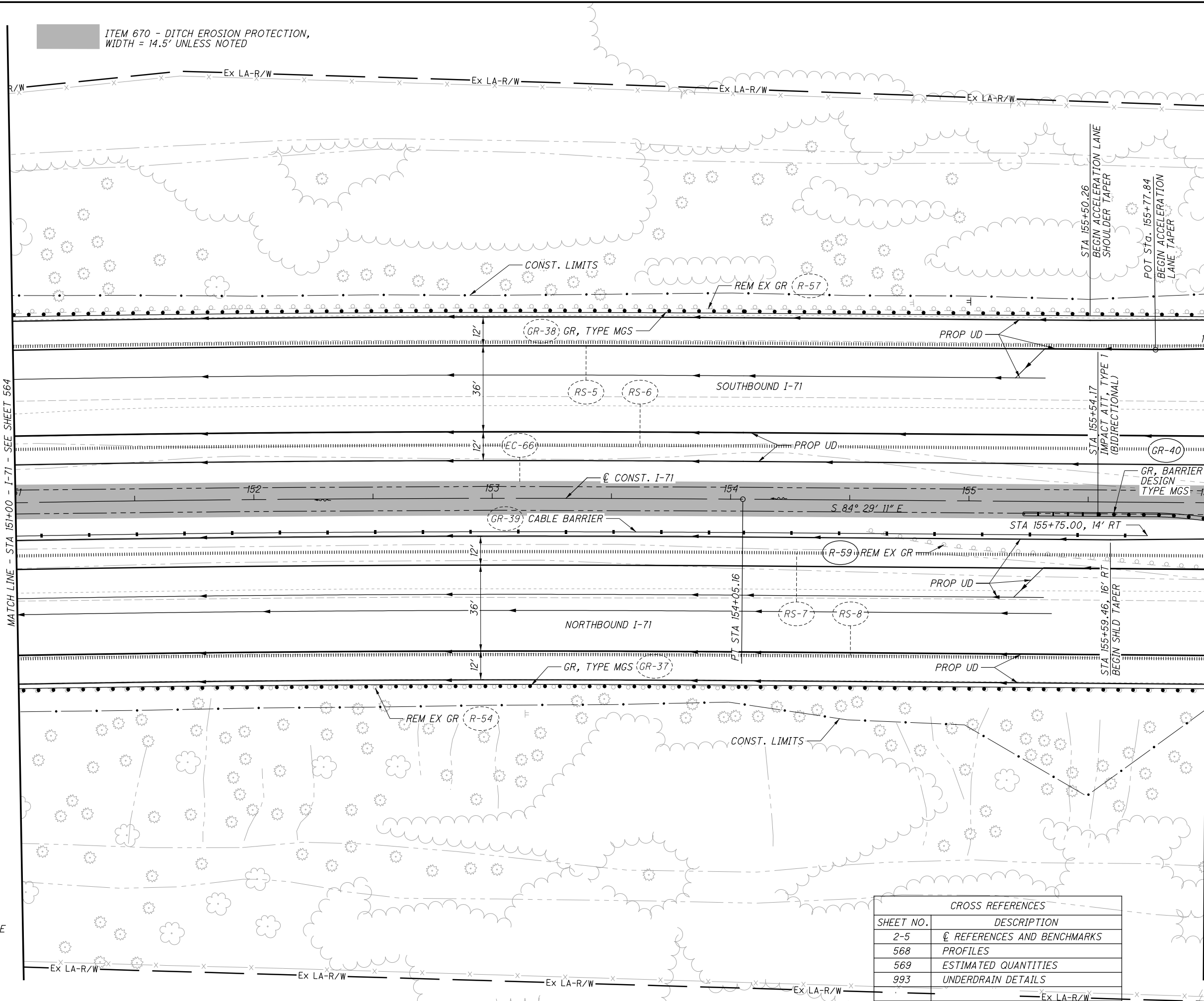
565
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0031.dgn Sheet 10/28/2019 11:09:41 AM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	606	606	606	606	606	609	611	611	611	611	611	670	
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	GUARDRAIL, TYPE MGS FT	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED) FT	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL EACH	CURB, TYPE 4-C FT	15" CONDUIT, TYPE B FT	15" CONDUIT, TYPE C FT	15" CONDUIT, TYPE F, 707.05, TYPE C OR 707.21 FT	CATCH BASIN, NO. 8 EACH	MANHOLE, NO. 3 EACH		DITCH EROSION PROTECTION SY
R-58	564	148+45	149+17	LT/RT	200	3															
C-11A	564	148+20	148+38	LT										18							
EC-66	564, 567, 570	149+27	156+73	CL																	1201
GR-38	564, 567, 570	148+20	157+52	LT					912.5	1	1										
GR-39	564, 567	149+00	155+75	RT								675	2								
SS-27	564	148+45	149+20	LT			1.33	0.27							75	75	41	1	1		
TOTALS CARRIED TO SHEETS 395-398					200	3	1.33	0.27	912.5	1	1	675	2	18	75	75	41	1	1		1201

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	566 1312

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
568	PROFILES
569	ESTIMATED QUANTITIES
993	UNDERDRAIN DETAILS

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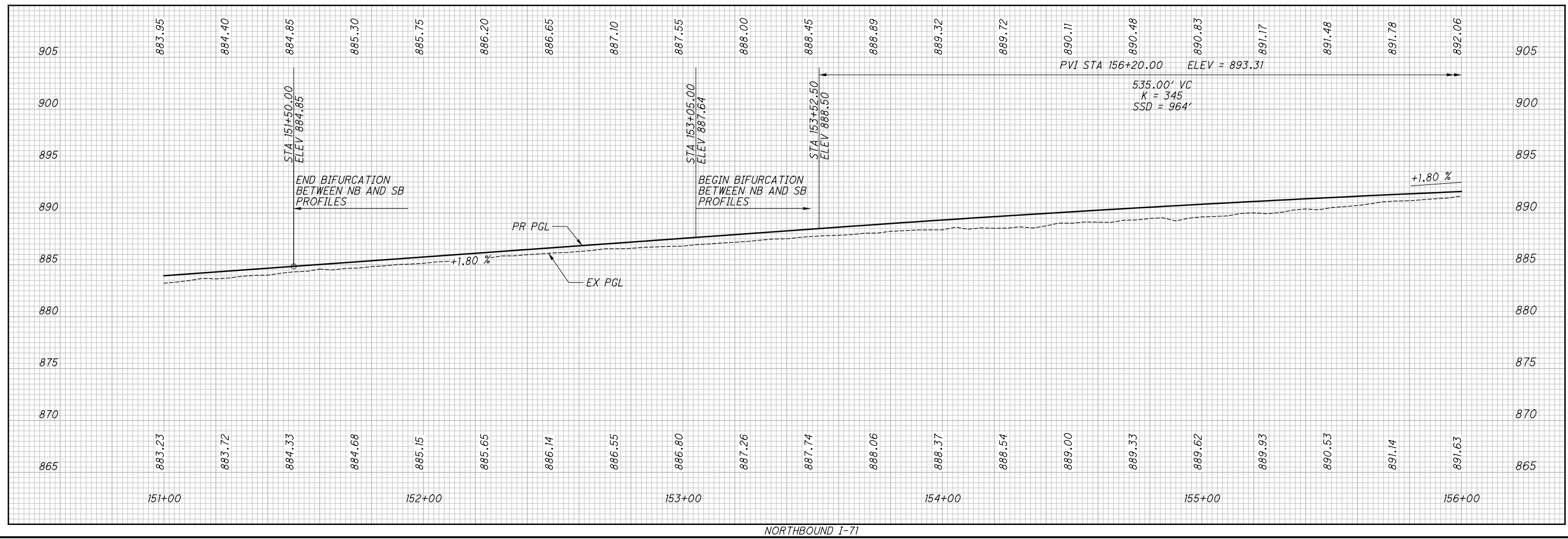
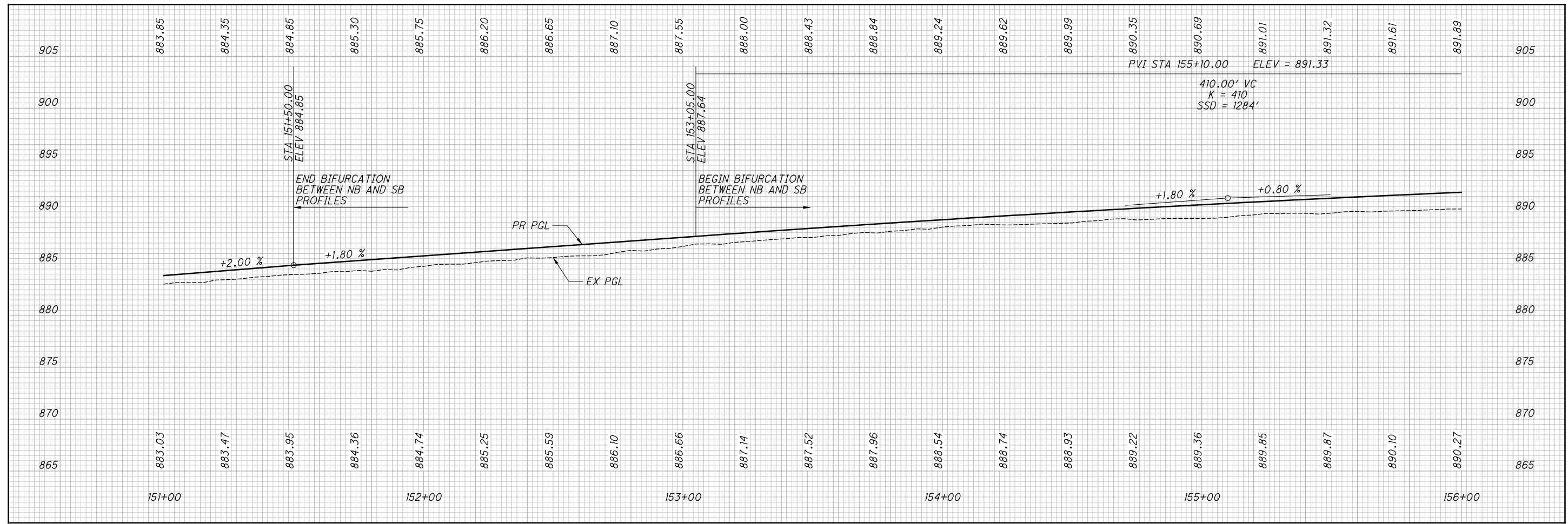
MATCH LINE - STA 151+00 - I-71 - SEE SHEET 564

MATCH LINE - STA 156+00 - I-71 - SEE SHEET 570

CALCULATED
 DCB
 CHECKED
 SJS

10' HORIZONTAL SCALE IN FEET

PLAN - I-71
STA 151+00 TO STA 156+00



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 151+00 TO STA 156+00



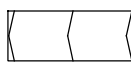
FRA - 71 - 0.00

568
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0032.dgn Sheet 10/28/2019 11:09:43 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	606	606	606	626										
		FROM	TO		GUARDRAIL REMOVED	GUARDRAIL, BARRIER DESIGN, TYPE MGS	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 2 (1-WAY)	FT	FT	EACH	EACH	EACH					
R-59	567, 570	154+57	157+17	RT	262														
GR-40	567, 570	155+54	157+03	RT		125	1	1	6										
TOTALS CARRIED TO SHEETS 395-398					262	125	1	1	6										

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	569 1312

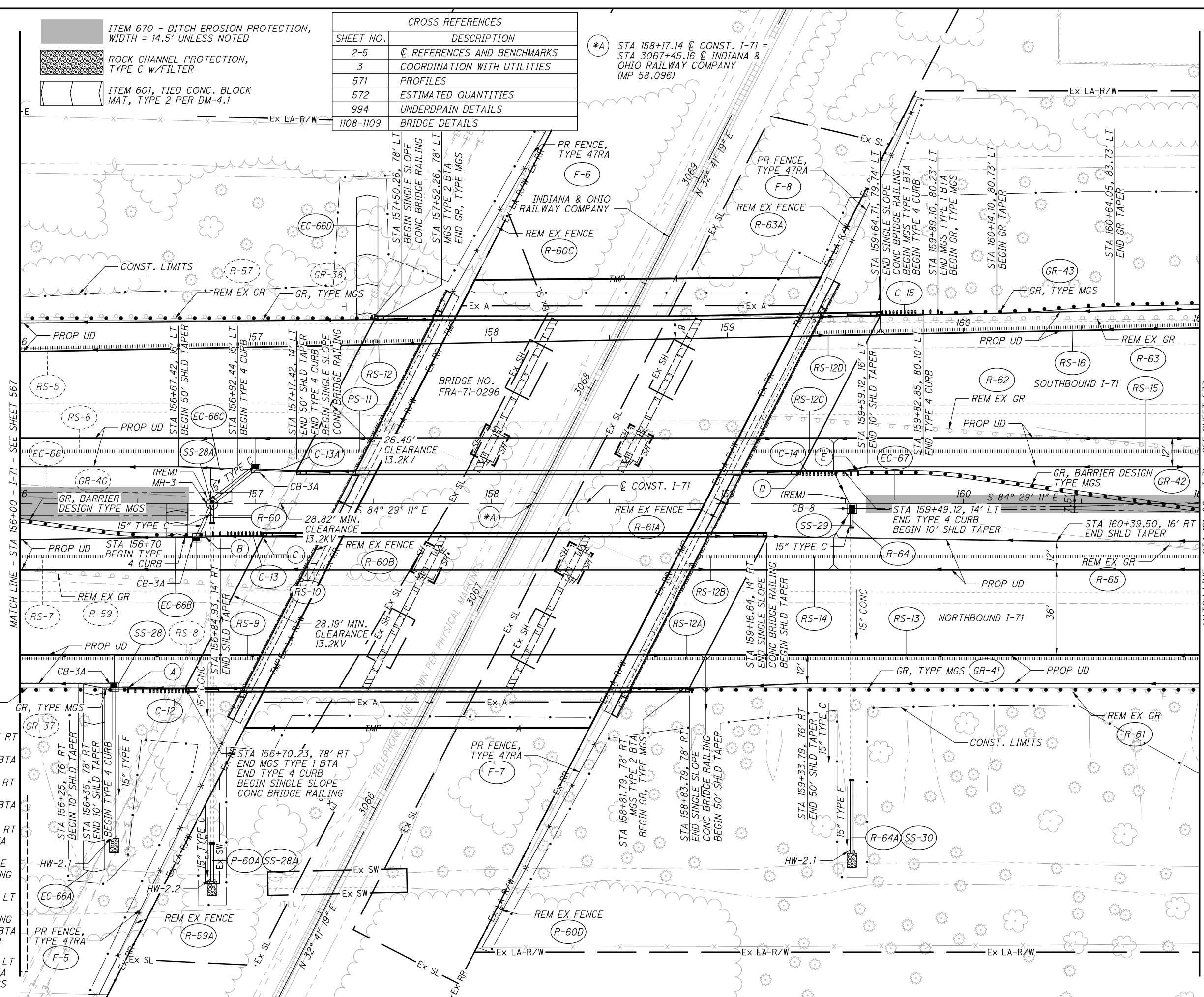
-  ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED
-  ROCK CHANNEL PROTECTION, TYPE C W/FILTER
-  ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
3	☉ COORDINATION WITH UTILITIES
571	PROFILES
572	ESTIMATED QUANTITIES
994	UNDERDRAIN DETAILS
1108-1109	BRIDGE DETAILS

*A STA 158+17.14 @ CONST. I-71 = STA 3067+45.16 @ INDIANA & OHIO RAILWAY COMPANY (MP 58.096)

CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET



MATCH LINE - STA 156+00 - I-71 - SEE SHEET 567

MATCH LINE - STA 161+00 - I-71 - SEE SHEET 573

X:\4037000\121957.16\107201\roadway\sheet\107201GPO33.dgn Sheet 10/28/2019 11:09:44 AM 1458sjs

- (A) STA 156+45.84, 78' RT
END GR, TYPE MGS
BEGIN MGS TYPE 1 BTA
- (B) STA 156+78.68, 14' RT
END GR, TYPE MGS
BEGIN MGS TYPE 1 BTA
- (C) STA 157+03.08, 14' RT
END MGS TYPE 1 BTA
END TYPE 4 CURB
BEGIN SINGLE SLOPE
CONC BRIDGE RAILING
- (D) STA 159+30.98, 14' LT
END SINGLE SLOPE
CONC BRIDGE RAILING
BEGIN MGS TYPE 1 BTA
BEGIN TYPE 4 CURB
- (E) STA 159+55.37, 14' LT
END MGS TYPE 1 BTA
BEGIN GR, TYPE MGS

PLAN - I-71
STA 156+00 TO STA 161+00

FRA-71-0.00

X:\4037000\121957.16\107201\Roadway\Sheets\107201G0033.dgn Sheet 10/28/2019 11:09:49 AM 14:58:51

REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	601	601	602	606	606	606	606	607	609	611	611	611	611	611	611	618	618	626	670	
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH	FENCE REMOVED FT	TIED CONCRETE BLOCK MAT, TYPE 2 SY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	GUARDRAIL, TYPE MGS FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS FT	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	FENCE, TYPE 47RA FT	CURB, TYPE 4-C FT	15" CONDUIT, TYPE C FT	15" CONDUIT, TYPE C, 706.02 FT	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21 FT	15" CONDUIT, TYPE F, 707.05 TYPE C FT	CATCH BASIN, NO. 3A EACH	CATCH BASIN, NO. 8 EACH	MANHOLE, NO. 3 EACH	RUMBLE STRIPS, (CONCRETE) FT	RUMBLE STRIPS, (ASPHALT CONCRETE) MILE	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY
R-59A	570	156+34	156+90	RT				68																				
R-60	570	156+82		LT/RT	9		1																					
R-60A	570	156+82		RT	16																							
R-60B	570	157+23	157+49	RT/LT				58																				
R-60C	570	158+23	157+87	LT				79																				
R-60D	570	157+96	158+48	RT				113																				
R-61	570, 573	158+57	163+17	RT		460																						
R-61A	570	158+85	159+12	RT/LT				59																				
R-62	570, 573	159+15	161+77	LT		263																						
R-63	570, 573	159+36	164+03	LT		467																						
R-63A	570	159+42	159+80	LT				85																				
R-64	570	159+53		LT/RT	11		1																					
R-64A	570	159+53		RT	33																							
R-65	570, 573	160+78	163+42	RT		264																						
C-12	570	156+35	156+70	RT																								
C-13	570	156+70	157+03	RT																								
C-13A	570	156+92	157+17	LT																								
C-14	570	159+31	159+49	LT																								
C-15	570	159+65	159+83	LT																								
EC-66A	570	156+27	156+36	RT				79																				
EC-66B	570	156+62	156+71	RT				14																				
EC-66C	570	156+81	156+90	LT				15																				
EC-66D	570	157+43	157+52	LT				53																				
EC-67	570, 573	159+60	161+13	CL																								128
F-5	570	156+34	156+91	RT																								
F-6	570	157+83	158+23	LT																								
F-7	570	157+96	158+51	RT																								
F-8	570	159+45	159+80	LT																								
GR-41	570, 573	158+84	163+03	RT							400		1	1													5	
GR-42	570, 573	159+31	162+41	LT/RT								287.5	1														8	
GR-43	570, 573	159+65	163+93	LT							412.5		1	1													5	
RS-9	570	156+77	157+02	RT																					25			
RS-10	570	156+99	157+24	RT																					25			
RS-11	570	157+22	157+47	LT																					25			
RS-12	570	157+46	157+71	LT																					25			
RS-12A	570	158+65	158+90	RT																					25			
RS-12B	570	158+87	159+12	RT																					25			
RS-12C	570	159+10	159+35	LT																					25			
RS-12D	570	159+36	159+61	LT																					25			
RS-13	570, 573	158+90	163+08	RT																								
RS-14	570, 573	159+12	163+36	RT																								
RS-15	570, 573	159+35	163+58	LT																								
RS-16	570, 573	159+61	163+88	LT																								
SS-28	570	156+40		RT					1.33	0.27																		
SS-28A	570	156+75	157+00	LT/RT					1.33	0.27																		
SS-29	570	159+53		RT																								
SS-30	570	159+53		RT					1.33	0.27																		
TOTALS CARRIED TO SHEETS 395-398					69	1454	2	462	161	3.99	0.81	812.5	287.5	3	2	408	129	39	16	76	48	3	1	1	200	0.32	18	128




ESTIMATED QUANTITIES

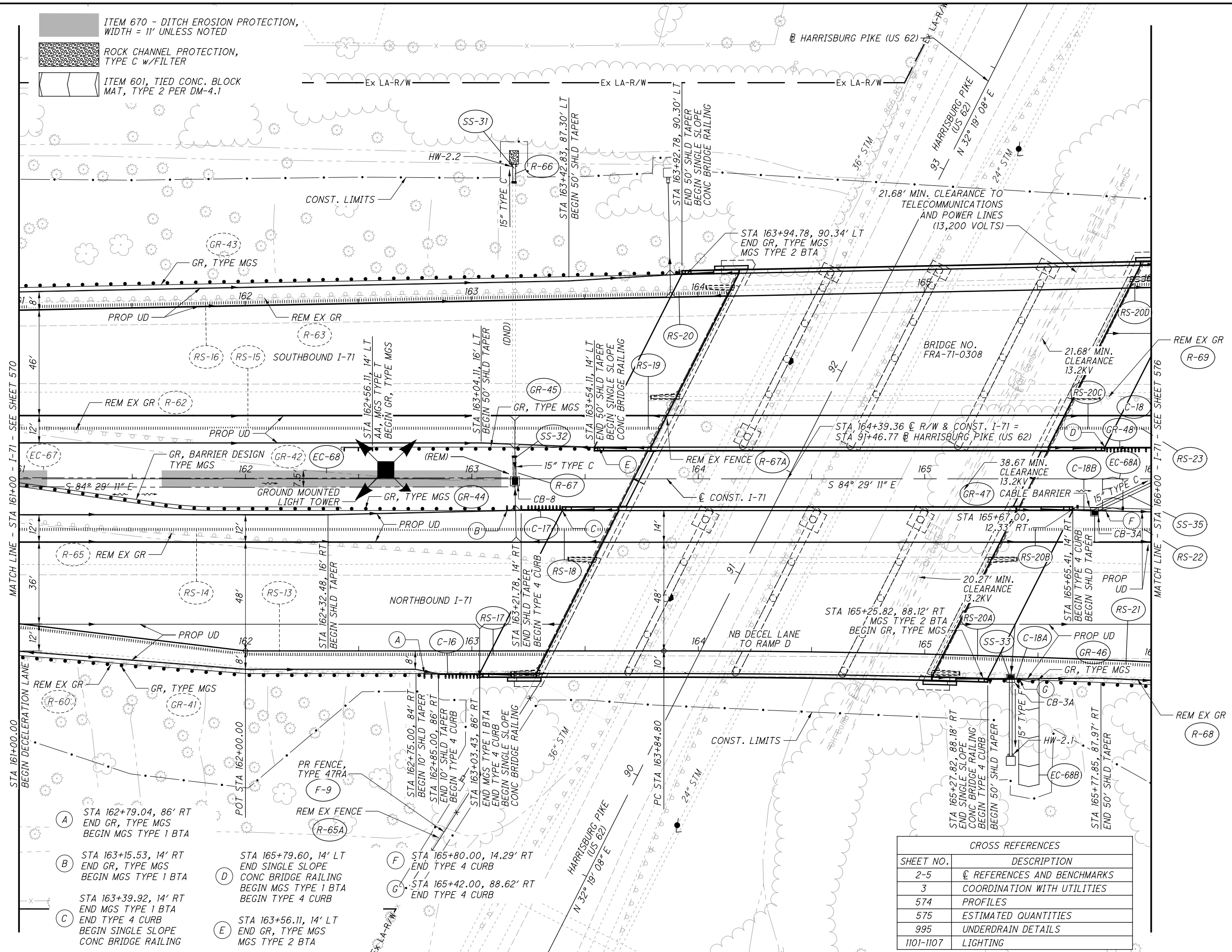
FRA - 71 - 0.00

CALCULATED
DCB
CHECKED
SJS

572
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP034.dgn Sheet 10/28/2019 11:09:50 AM 1458sjs

-  ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED
-  ROCK CHANNEL PROTECTION, TYPE C w/FILTER
-  ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1



MATCH LINE - STA 161+00 - I-71 - SEE SHEET 570

MATCH LINE - STA 166+00 - I-71 - SEE SHEET 576

- (A) STA 162+79.04, 86' RT
END GR, TYPE MGS
BEGIN MGS TYPE 1 BTA
- (B) STA 163+15.53, 14' RT
END GR, TYPE MGS
BEGIN MGS TYPE 1 BTA
- (C) STA 163+39.92, 14' RT
END MGS TYPE 1 BTA
END TYPE 4 CURB
BEGIN SINGLE SLOPE
CONC BRIDGE RAILING

- (D) STA 165+79.60, 14' LT
END SINGLE SLOPE
CONC BRIDGE RAILING
BEGIN MGS TYPE 1 BTA
BEGIN TYPE 4 CURB
- (E) STA 163+56.11, 14' LT
END GR, TYPE MGS
MGS TYPE 2 BTA

- (F) STA 165+80.00, 14.29' RT
END TYPE 4 CURB
- (G) STA 165+42.00, 88.62' RT
END TYPE 4 CURB

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
3	COORDINATION WITH UTILITIES
574	PROFILES
575	ESTIMATED QUANTITIES
995	UNDERDRAIN DETAILS
1101-1107	LIGHTING

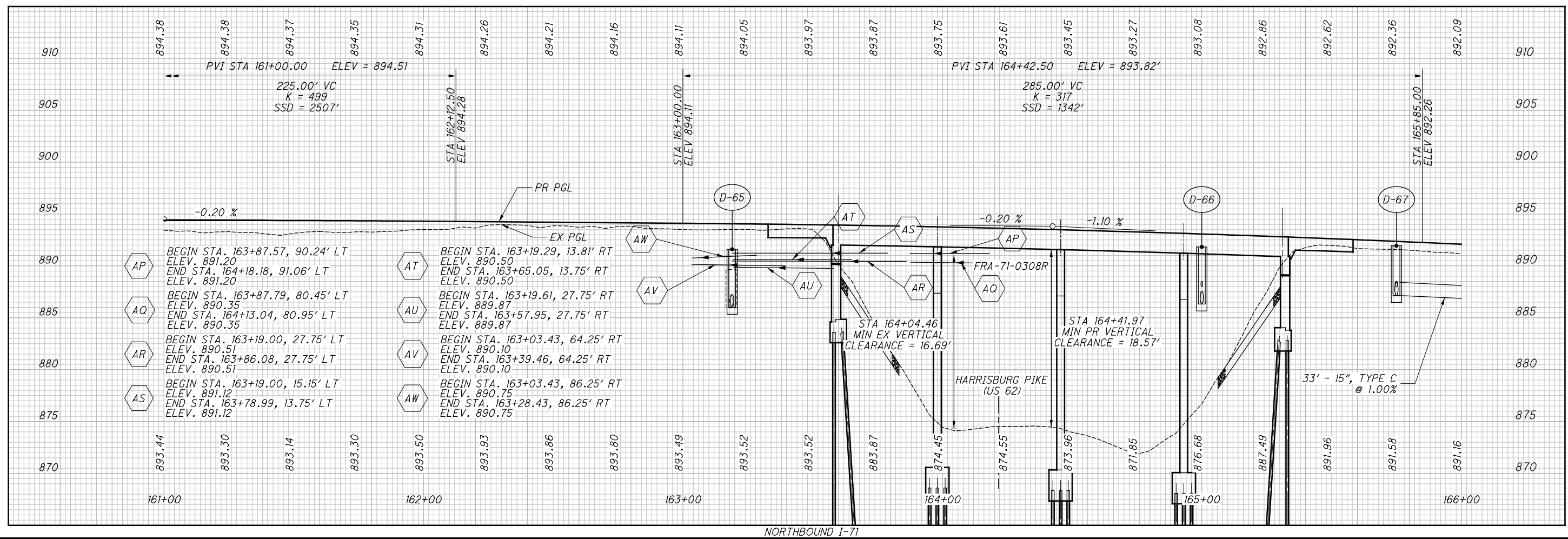
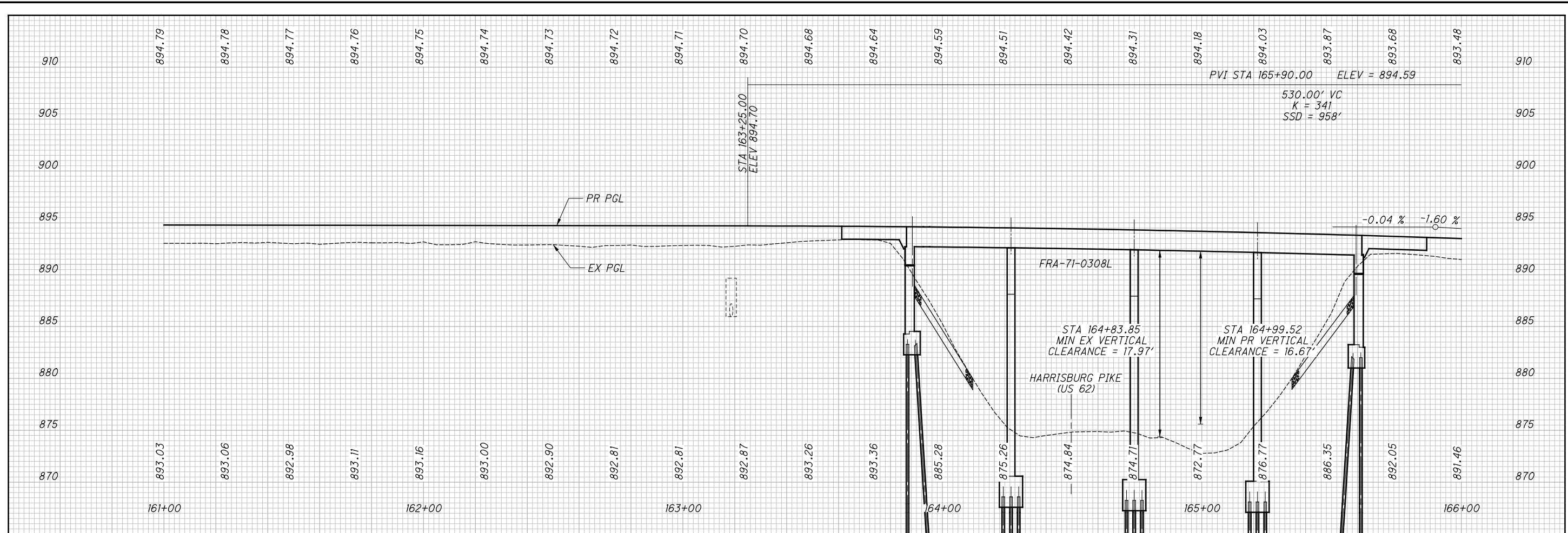


PLAN - I-71
STA 161+00 TO STA 166+00

FRA-71-0.00

573
1312

X:\4037000\121957.16\107201\roadway\sheets\1072010F034.dgn Sheet 10/28/2019 11:09:51 AM 1458s.js



AP	BEGIN STA. 163+87.57, 90.24' LT ELEV. 891.20 END STA. 164+18.18, 91.06' LT ELEV. 891.20	AT	BEGIN STA. 163+19.29, 13.81' RT ELEV. 890.50 END STA. 163+65.05, 13.75' RT ELEV. 890.50
AQ	BEGIN STA. 163+87.79, 80.45' LT ELEV. 890.35 END STA. 164+13.04, 80.95' LT ELEV. 890.35	AU	BEGIN STA. 163+19.61, 27.75' RT ELEV. 889.87 END STA. 163+57.95, 27.75' RT ELEV. 889.87
AR	BEGIN STA. 163+19.00, 27.75' LT ELEV. 890.51 END STA. 163+86.08, 27.75' LT ELEV. 890.51	AV	BEGIN STA. 163+03.43, 64.25' RT ELEV. 890.10 END STA. 163+39.46, 64.25' RT ELEV. 890.10
AS	BEGIN STA. 163+19.00, 15.15' LT ELEV. 891.12 END STA. 163+78.99, 13.75' LT ELEV. 891.12	AW	BEGIN STA. 163+03.43, 86.25' RT ELEV. 890.75 END STA. 163+28.43, 86.25' RT ELEV. 890.75

CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 161+00 TO STA 166+00

FRA-71-0.00

574
1312

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	601	601	601	602	606	606	606	606	606	606	606	607	609	611	611	611	611	611	618	618	626	670	
		FROM	TO		PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	CATCH BASIN REMOVED	FENCE REMOVED	TIED CONCRETE BLOCK MAT, TYPE 1	TIED CONCRETE BLOCK MAT, TYPE 2	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	GUARDRAIL, TYPE MGS	GUARDRAIL - BARRIER DESIGN, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED)	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL	FENCE, TYPE 4TRA	CURB, TYPE 4-C	15" CONDUIT, TYPE C, 706.02	15" CONDUIT, TYPE F, 705.07, TYPE C OR 707.21	15" CONDUIT, TYPE F, 705.07, TYPE C	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 8	RUMBLE STRIPS, (CONCRETE)	RUMBLE STRIPS, (ASPHALT CONCRETE)	BARRIER REFLECTOR, TYPE 2 (I-WAY)	DITCH EROSION PROTECTION
					FT	FT	EACH	FT	SY	SY	CY	CY	FT	FT	EACH	EACH	EACH	EACH	FT	EACH	FT	SY	FT	FT	FT	EACH	EACH	FT	MILE	EACH	SY
R-65A	573	162+72	163+28	RT				95																							
R-66	573	163+19		LT	8																										
R-67	573	163+19		LT	10		1																								
R-67A	573	163+55	163+90	RT/LT				78																							
R-68	573, 576	165+13	170+85	RT		575																									
R-69	573, 576	165+74	168+38	LT		265																									
C-16	573	162+85	163+03	RT																		18									
C-17	573	163+22	163+40	RT																		18									
C-18	573, 576	165+80	166+12	LT																		32									
C-18A	573	165+28	165+42	RT																		14									
C-18B	573	165+65	165+80	RT																		15									
EC-68	573	161+63	163+12	CL																										125	
EC-68A	573	165+79	165+88	RT					14																						
EC-68B	573	165+42	165+51	RT					48																						
F-9	573	162+72	163+30	RT																	90										
GR-44	573	162+41	163+40	RT										75		1															
GR-45	573	162+56	163+54	LT									100			1		1													
GR-46	573, 576	165+26	170+85	RT									562.5			1		1													
GR-47	573, 576, 579, 582, 585	165+67	184+00	RT														1835	2											12	
GR-48	573, 576, 579	165+80	170+91	LT									487.5		1		1													10	
RS-17	573	163+08	163+33	RT																										25	
RS-18	573	163+36	163+61	RT																										25	
RS-19	573	163+58	163+83	LT																										25	
RS-20	573	163+88	164+13	LT																										25	
RS-20A	573	165+07	165+32	RT																										25	
RS-20B	573	165+36	165+61	RT																										25	
RS-20C	573	165+59	165+84	LT																										25	
RS-20D	573, 576	165+91	166+16	LT																										25	
RS-21	573, 576	165+32	167+90	LT																										0.05	
RS-22	573, 642	165+61	279+31	LT																										2.15	
RS-23	573, 642	165+84	279+31	RT																										2.15	
SS-31	573	163+19		LT							1.33	0.25												8							
SS-32	573	163+19		LT/RT																		10					1				
SS-33	573	165+38		RT				1.78				0.27											41			1					
TOTALS CARRIED TO SHEETS 395-398					18	840	1	173	1.78	62	1.33	0.52	1150.0	75	1	2	2	2	1835	2	90	97	10	41	8	1	1	200	4.35	22	125

ESTIMATED QUANTITIES

FRA - 71 - 0.00

CALCULATED
DCB
CHECKED
SJS

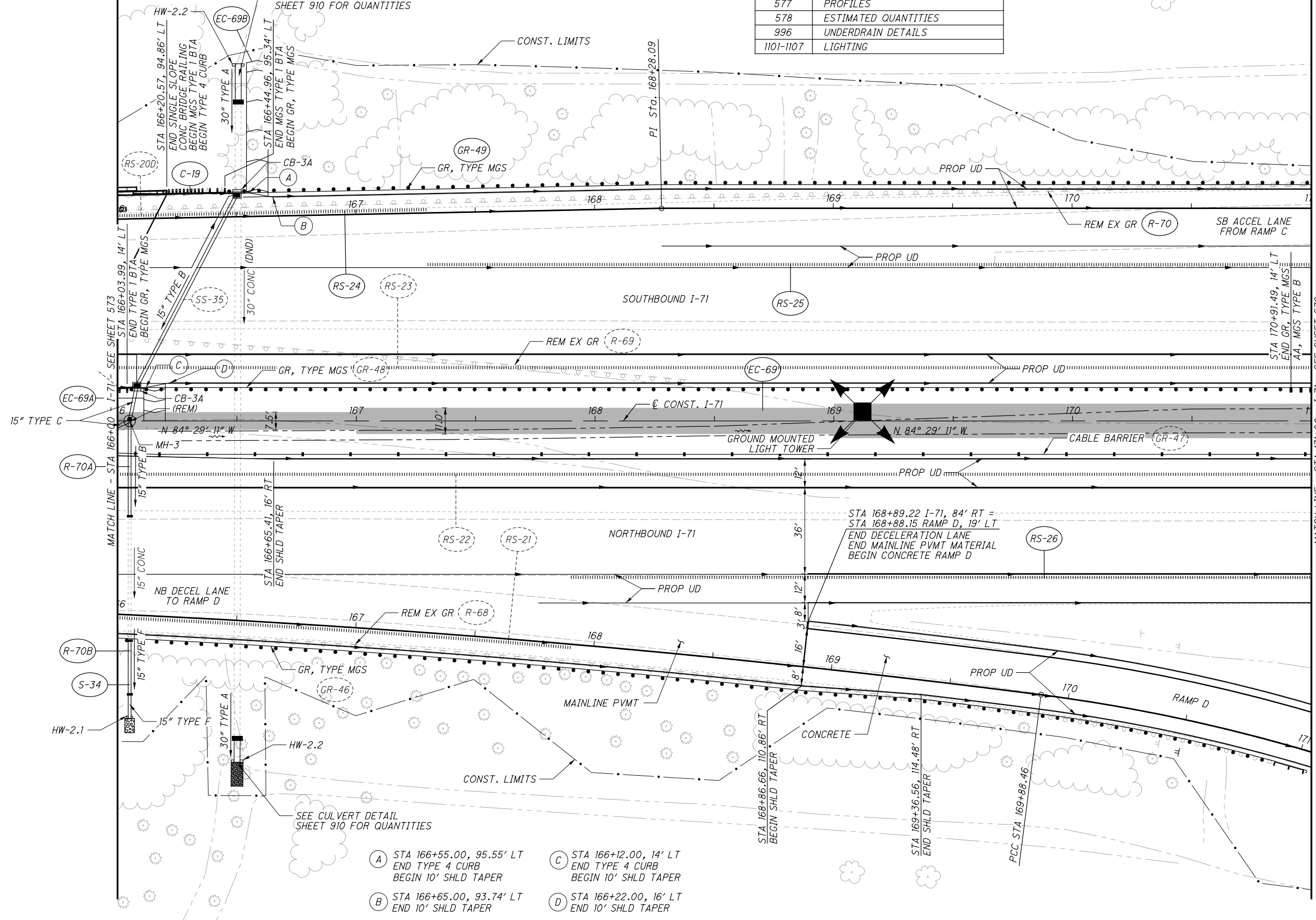
575
1312

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ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED
ROCK CHANNEL PROTECTION, TYPE C w/FILTER
SEE CULVERT DETAIL SHEET 910 FOR QUANTITIES

ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
577	PROFILES
578	ESTIMATED QUANTITIES
996	UNDERDRAIN DETAILS
1101-1107	LIGHTING



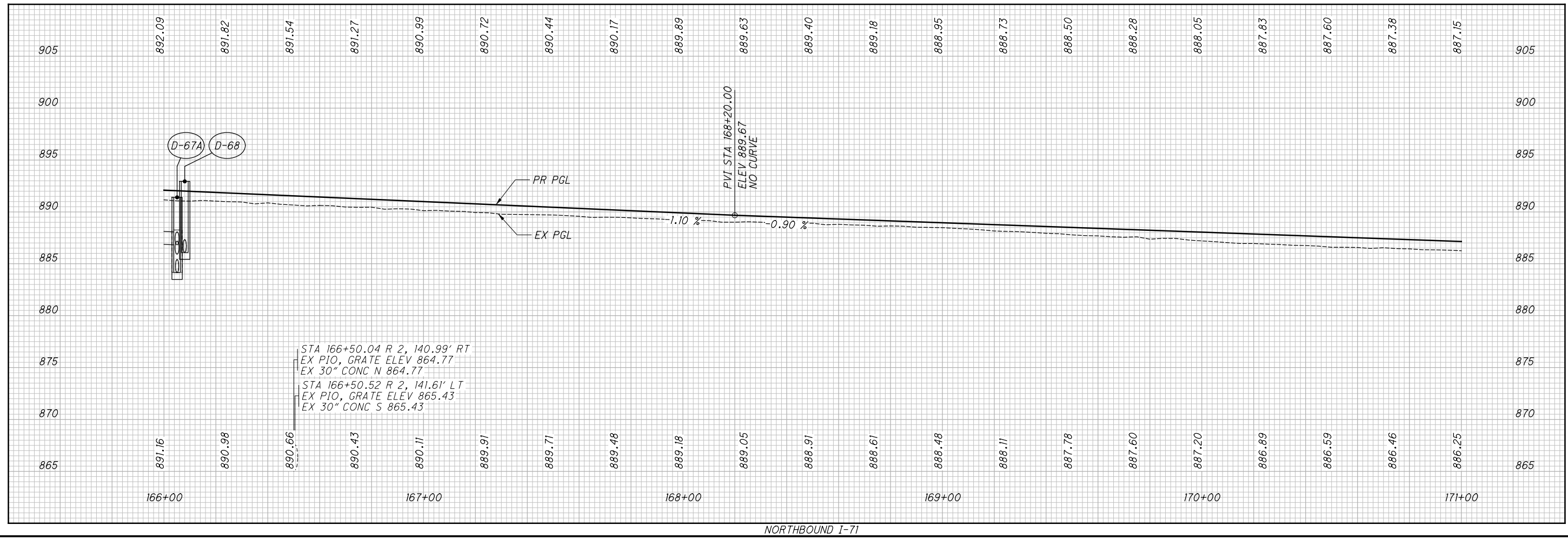
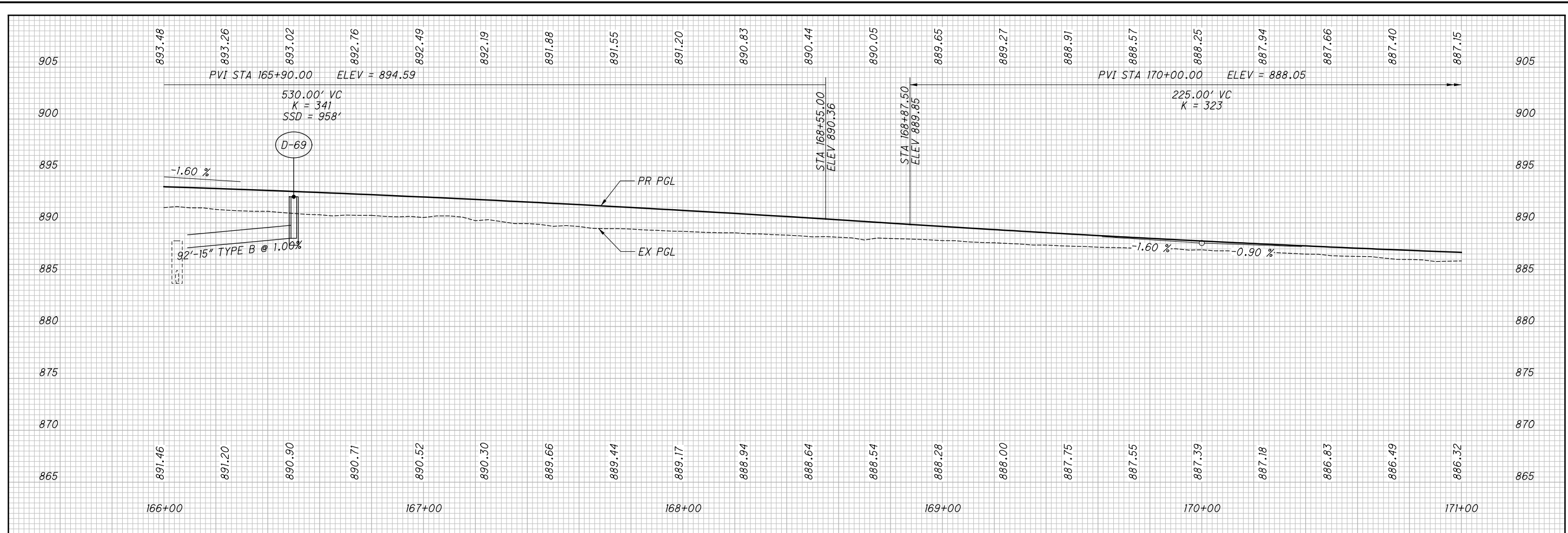
- (A) STA 166+55.00, 95.55' LT
END TYPE 4 CURB
BEGIN 10' SHLD TAPER
- (B) STA 166+65.00, 93.74' LT
END 10' SHLD TAPER
- (C) STA 166+12.00, 14' LT
END TYPE 4 CURB
BEGIN 10' SHLD TAPER
- (D) STA 166+22.00, 16' LT
END 10' SHLD TAPER

CALCULATED 0
DCB
CHECKED SJS

0 20 40
10
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 166+00 TO STA 171+00

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CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 166+00 TO STA 171+00**

FRA - 71 - 0.00

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	202	202	601	601	602	606	606	606	609	611	611	611	611	611	618	626	670	
		FROM	TO		HEADWALL REMOVED EACH	PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH	SPECIAL - PIPE CLEANOUT, 24" AND UNDER FT	TIED CONCRETE BLOCK MAT, TYPE 2 SY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	CURB, TYPE 4-C SY	15" CONDUIT, TYPE B FT	15" CONDUIT, TYPE B, 706.02 FT	15" CONDUIT, TYPE C FT	15" CONDUIT, TYPE F, 707.05, TYPE C FT	CATCH BASIN, NO. 3A EACH	MANHOLE, NO. 3 EACH	RUMBLE STRIPS, (ASPHALT CONCRETE) MILE	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY
R-70	576, 579	166+01	173+39	LT				738																		
R-70A	576	166+05		RT		41		1																		
R-70B	576	166+05		RT	1	39	9																			
C-19	576	166+21	166+65	LT												34										
EC-69	576, 579	166+00	174+64	CL																					1236	
EC-69A	576	166+11	166+20	LT					15																	
EC-69B	576	166+54	166+63	LT					56																	
GR-49	576, 579	166+21	173+70										725	1	1									8		
RS-24	576	166+16	167+30	LT																			0.02			
RS-25	576, 579, 582, 585	167+30	185+60	LT																			0.35			
RS-26	576, 579, 582, 585	167+90	184+50	RT																			0.31			
SS-34	576	166+05		RT					52		1.33	0.27									32					
SS-35	573, 576	165+75	166+50	LT/RT												92	40	49				3	1			
TOTALS CARRIED TO SHEETS 395-398					1	80	9	738	1	52	71	1.33	0.27	725	1	1	34	92	40	49	32	3	1	0.68	8	1236

ESTIMATED QUANTITIES

FRA - 71 - 0.00

CALCULATED
DCB
CHECKED
SJS

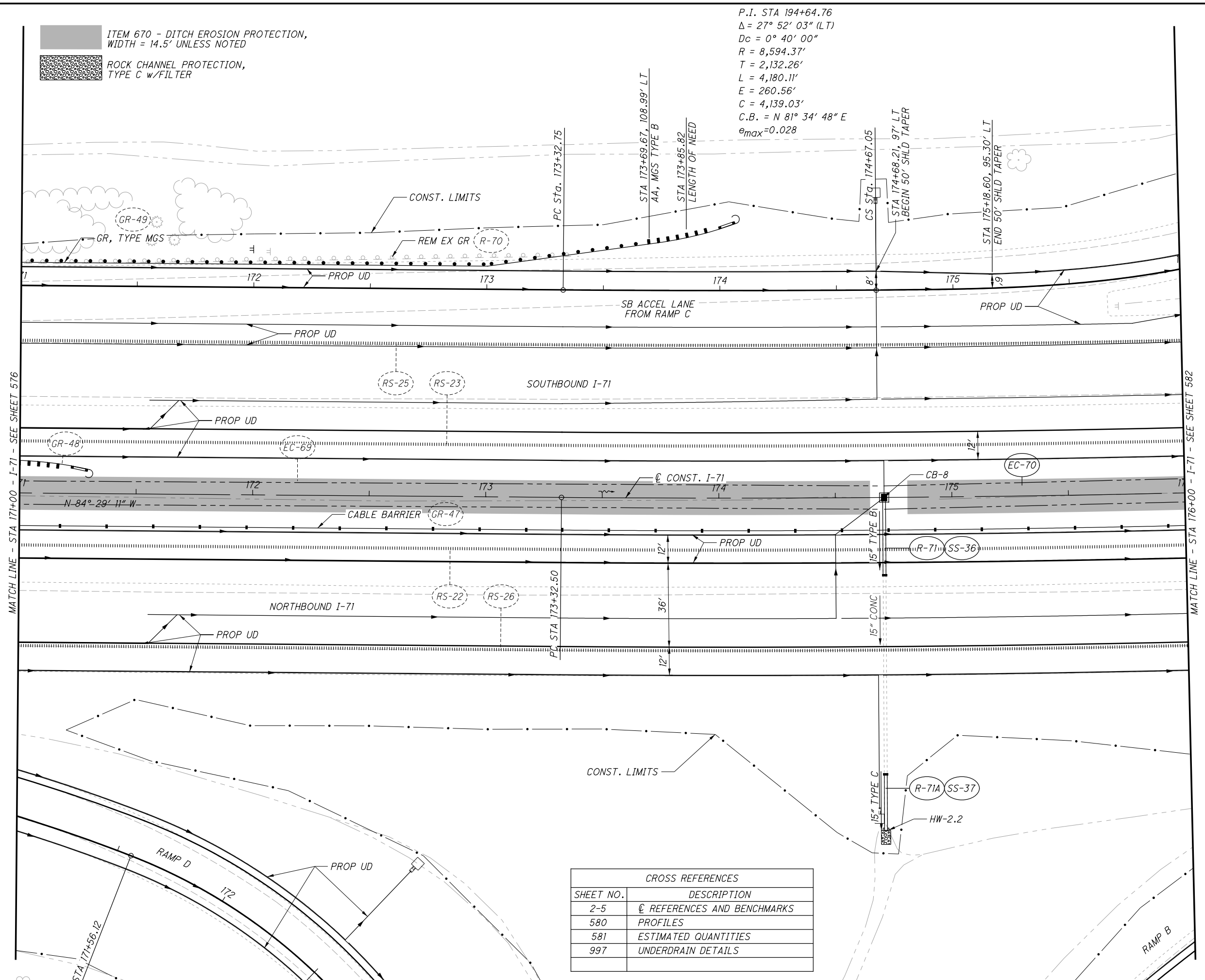
578
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP036.dgn_Sheet 10/28/2019 11:09:54 AM 1458sjs

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$



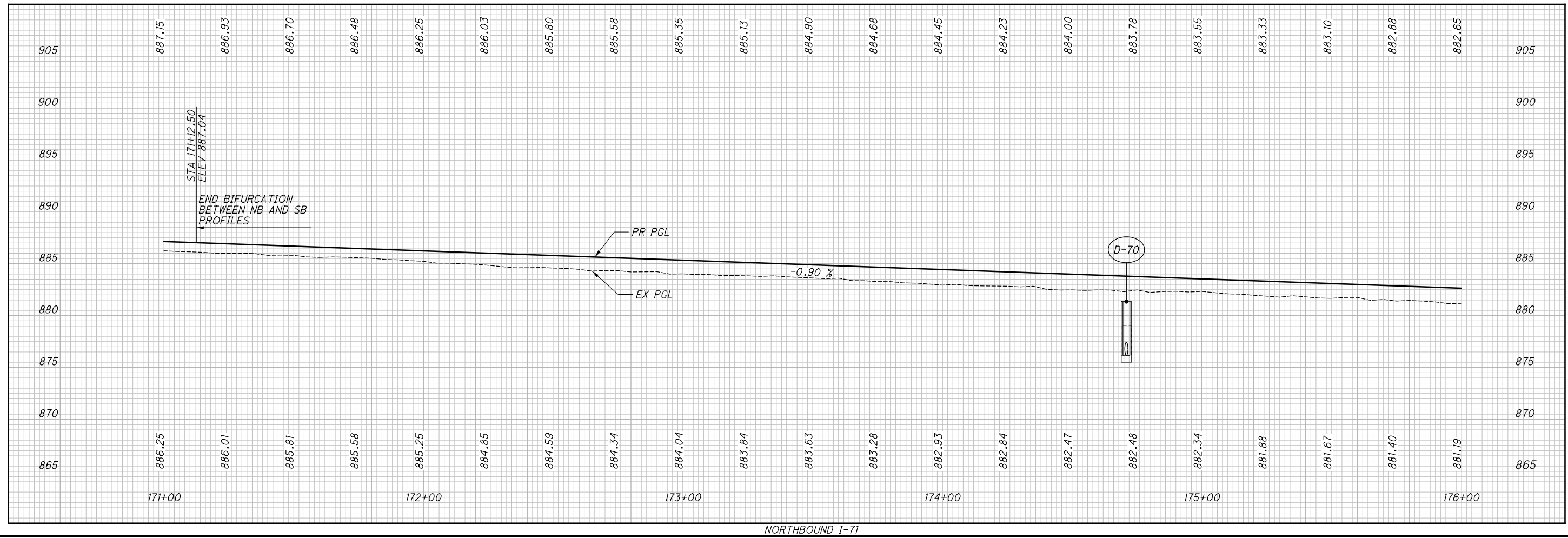
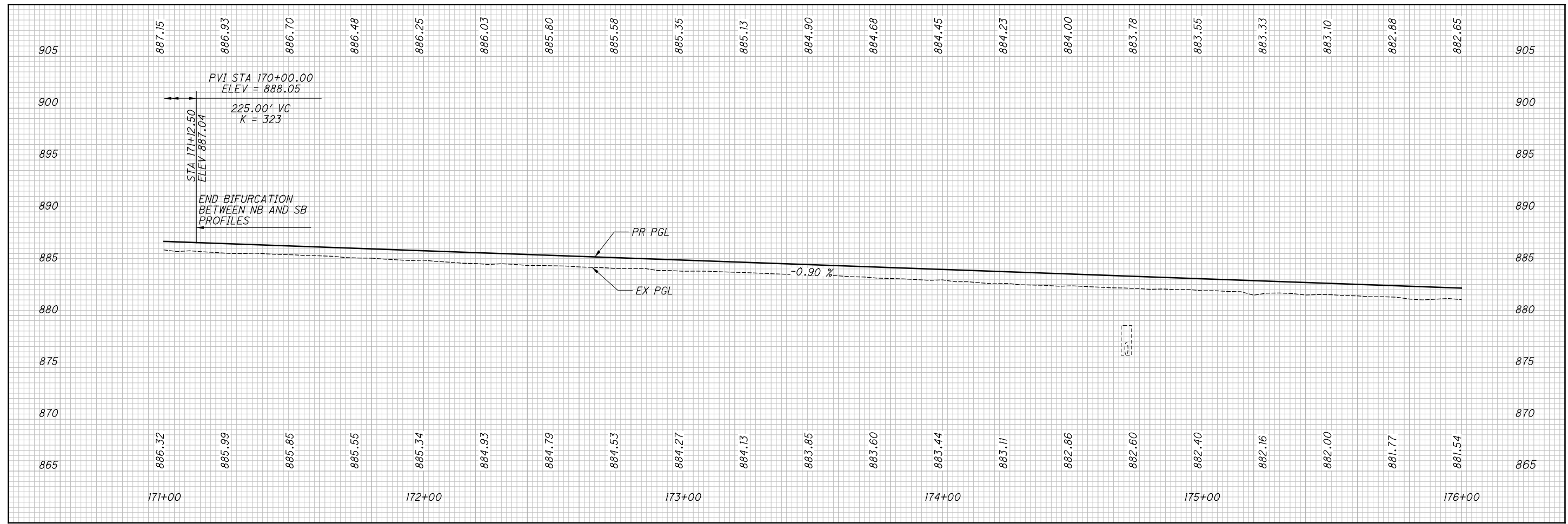
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
580	PROFILES
581	ESTIMATED QUANTITIES
997	UNDERDRAIN DETAILS

CALCULATED
 DCB
 CHECKED
 SJS

0 20 40
 HORIZONTAL
 SCALE IN FEET

PLAN - I-71
 STA 171+00 TO STA 176+00

FRA-71-0.00



CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 171+00 TO STA 176+00**

FRA - 71 - 0.00

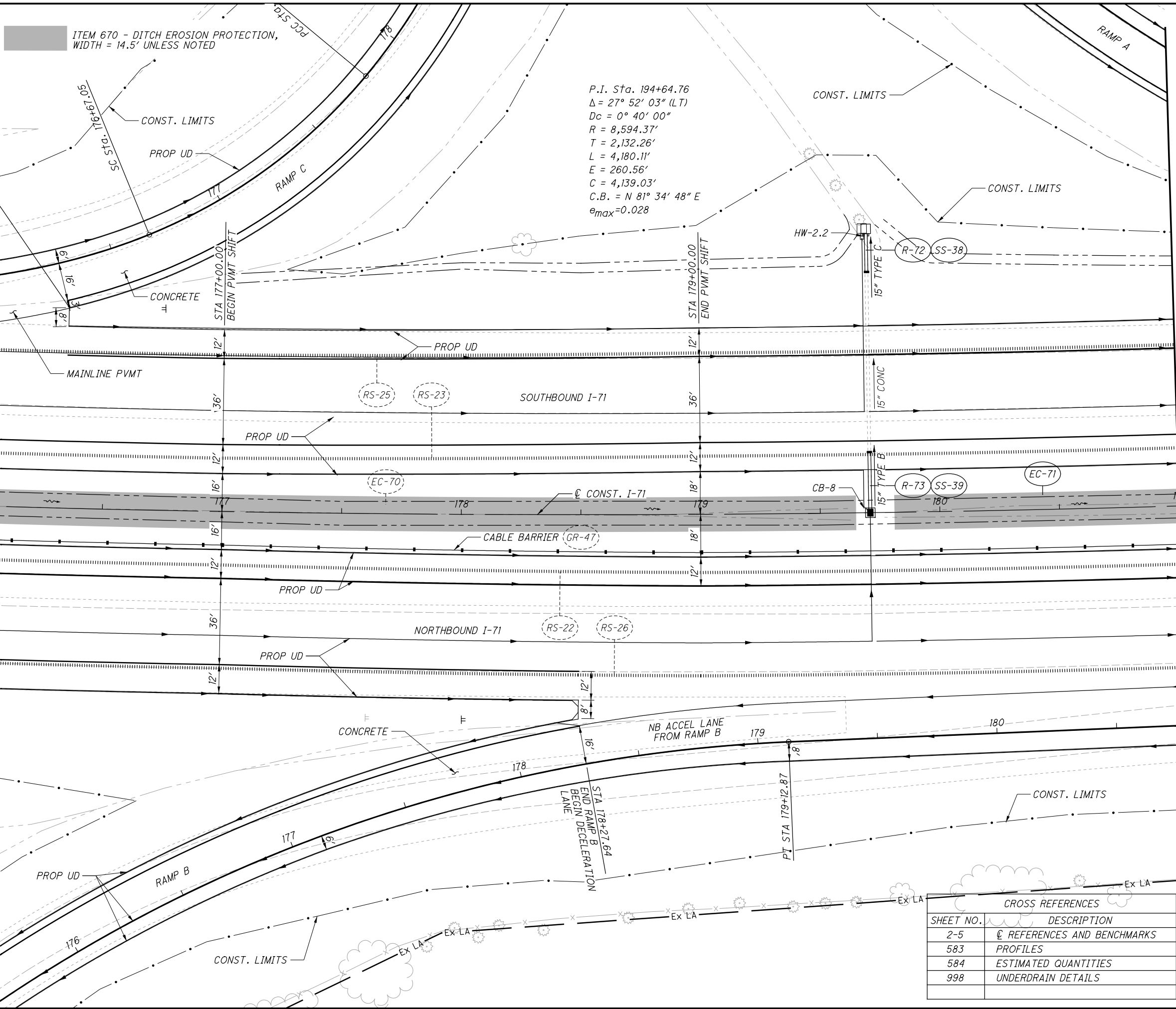
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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	601	602	611	611	611	670				
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	SPECIAL - PIPE CLEANOUT, 24" AND UNDER FT	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	15" CONDUIT, TYPE B, 706.02 FT	15" CONDUIT, TYPE C, 706.02 FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY				
R-71	579	174+71		RT	34	1											
R-71A	579	174+71		RT	24												
EC-70	579, 582	174+78	179+62	CL									780				
SS-36	579	174+71		RT			110			32		1					
SS-37	579	174+71		RT				1.33	0.25		24						
TOTALS CARRIED TO SHEETS 395-398					58	1	110	1.33	0.25	32	24	1	780				

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	581 1312

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STA 176+34.15 I-71, 84' LT =
 STA 176+27.38 RAMP C, 19' RT
 END ACCELERATION LANE
 END MAINLINE PVMT MATERIAL
 BEGIN CONCRETE RAMP C



P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $\theta_{max} = 0.028$

MATCH LINE - STA 176+00 - I-71 - SEE SHEET 579

MATCH LINE - STA 181+00 - I-71 - SEE SHEET 585

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
583	PROFILES
584	ESTIMATED QUANTITIES
998	UNDERDRAIN DETAILS

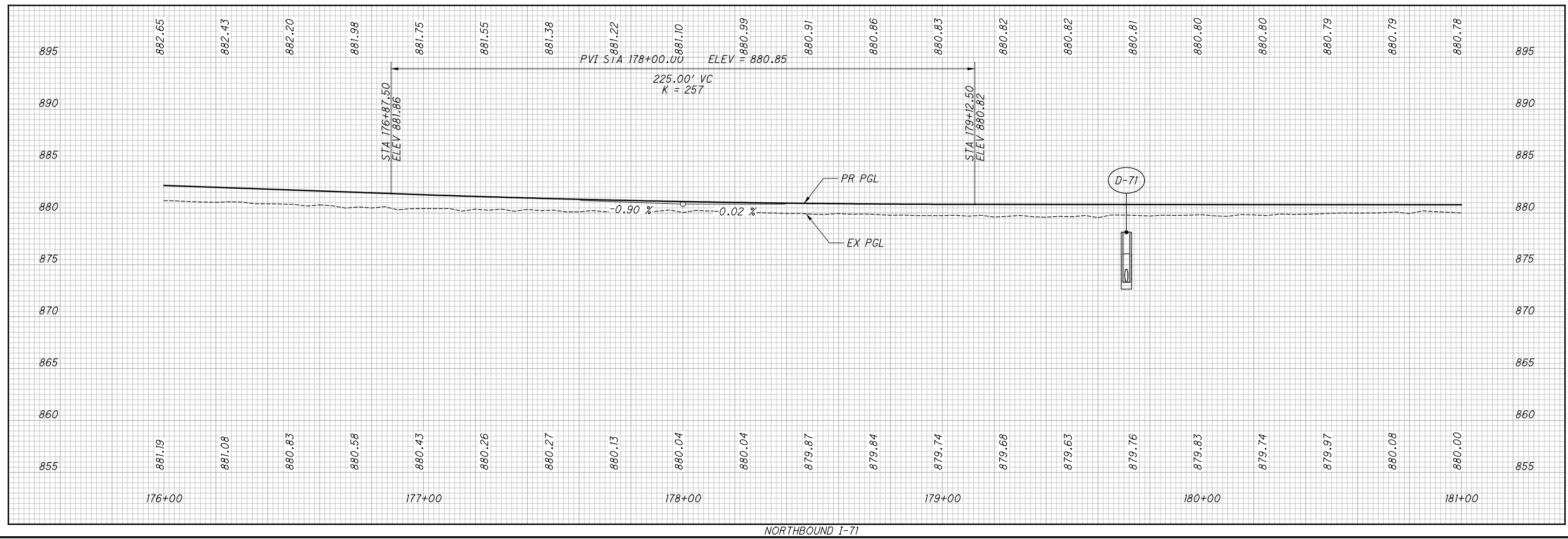
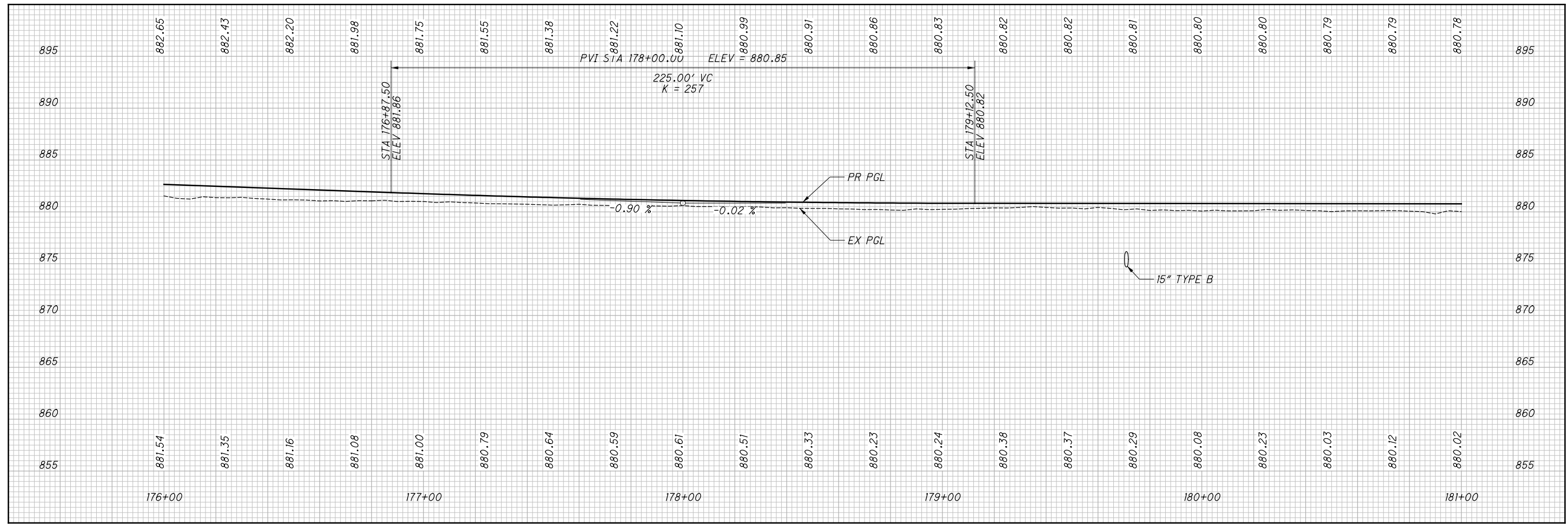


CALCULATED DCB CHECKED SJS

PLAN - I-71
STA 176+00 TO STA 181+00

FRA-71-0.00

582
 1312



CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 176+00 TO STA 181+00**

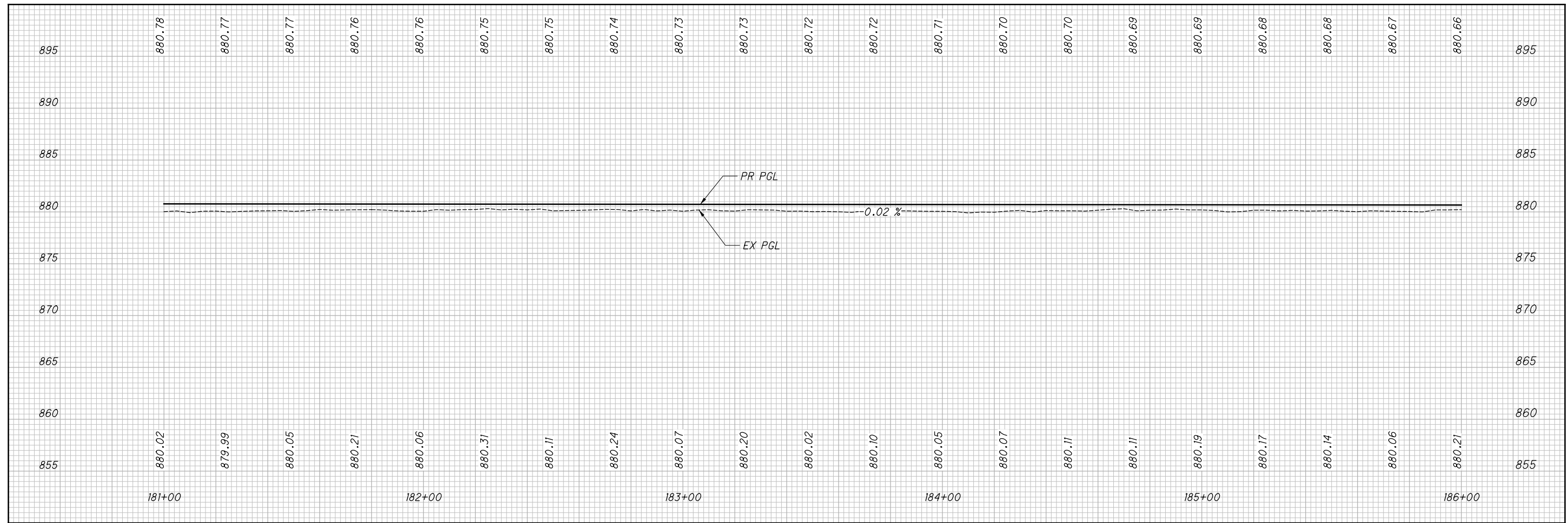
FRA - 71 - 0.00

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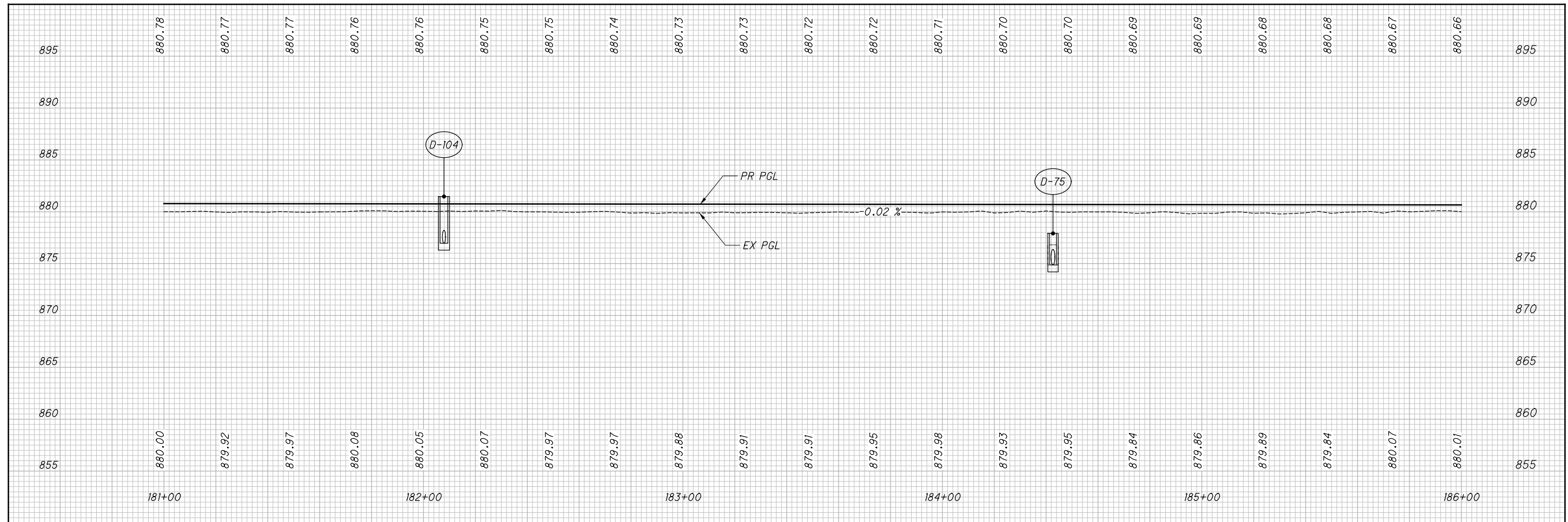
REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	601	602	611	611	611	670				
		FROM	TO		PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	SPECIAL - PIPE CLEANOUT, 24" AND UNDER	TIED CONCRETE BLOCK MAT, TYPE 1	CONCRETE MASONRY	15" CONDUIT, TYPE B, 706.02	15" CONDUIT, TYPE C, 706.02	CATCH BASIN, NO. 8	DITCH EROSION PROTECTION				
					FT	EACH	FT	SY	CY	FT	FT	EACH	SY				
R-72	582	179+71		LT	16												
R-73	582	179+71		LT	24	1											
EC-71	582, 585	179+80	184+36	CL			75							735			
SS-38	582	179+71		LT				1.78	0.25		16						
SS-39	582	179+71		LT						24		1					
TOTALS CARRIED TO SHEETS 395-398					40	1	75	1.78	0.25	24	16	1	735				

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	584 1312

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SOUTHBOUND I-71



NORTHBOUND I-71

CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 181+00 TO STA 186+00

FRA - 71 - 0.00

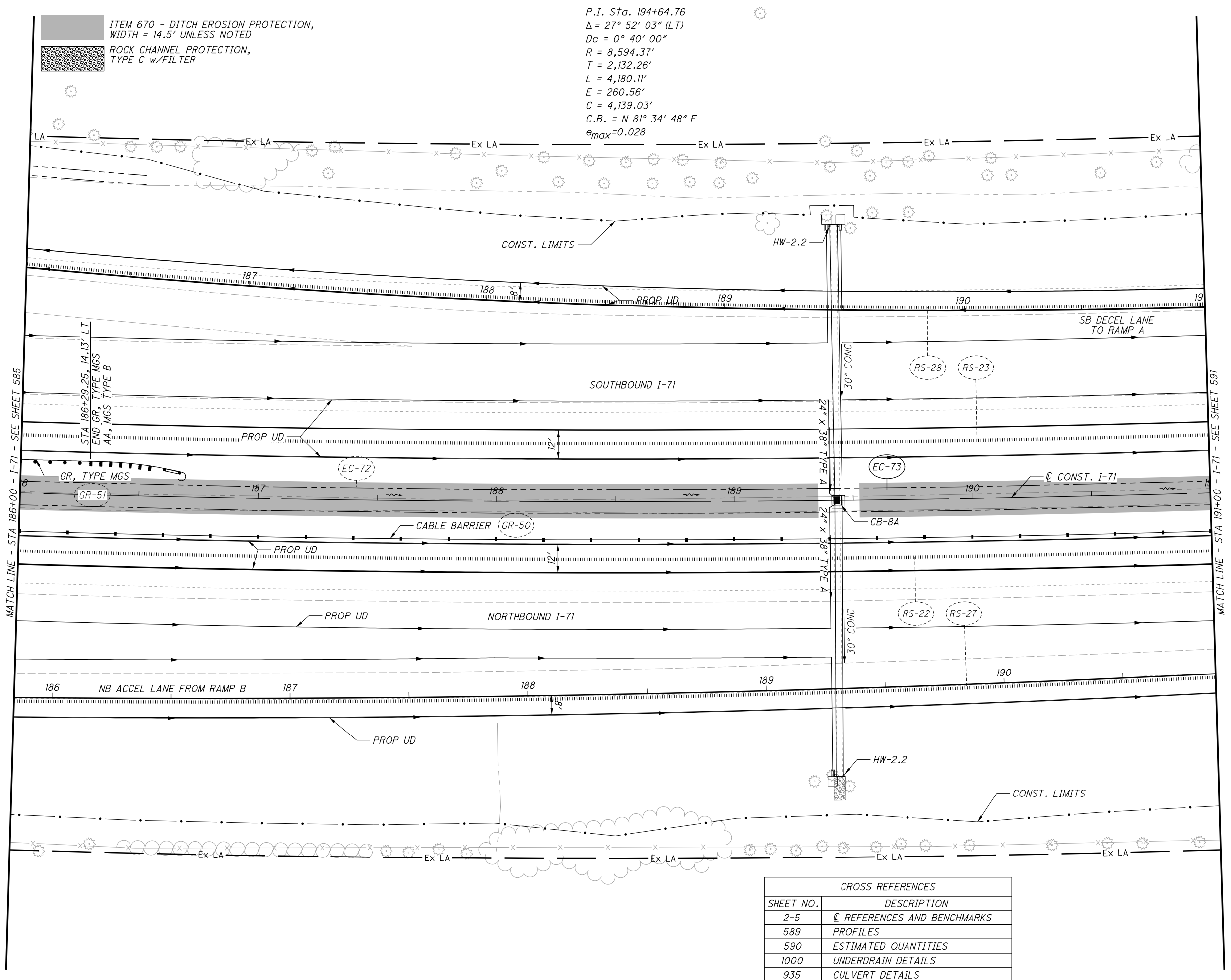
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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	601	601	602	606	606	606	606	606	611	611	611	611	611	618	626	670
					PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	SPECIAL - PIPE CLEANOUT, 24" AND UNDER	TIED CONCRETE BLOCK MAT, TYPE 1	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE T	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED)	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B, 706.02	18" CONDUIT, TYPE C, 706.02	CATCH BASIN, NO. 6	CATCH BASIN, NO. 8	RUMBLE STRIPS, (ASPHALT CONCRETE)	BARRIER REFLECTOR, TYPE 2 (1-WAY)	DITCH EROSION PROTECTION
					FT	EACH	FT	SY	CY	CY	FT	EACH	EACH	FT	EACH	FT	FT	FT	EACH	EACH	MILE	EACH	SY
R-74	585	184+43		RT	16	1																	
R-74A	585	184+43		RT	16																		
EC-72	585, 588	184+54	189+36	CL																			776
GR-50	585, 588, 591, 594	183+00	201+00	RT									1803	2									
GR-51	585, 588	184+79	186+29	LT						150	1	1										3	
SS-40	585	182+08		RT				1.33	0.27						61				1				
SS-41	585	184+43		RT			93									16				1			
SS-42	585	184+43		RT			1.78		0.31								16						
RS-27	585, 588, 591, 594	184+50	279+31	RT																	1.80		
RS-28		185+60	279+31	LT																	1.77		
TOTALS CARRIED TO SHEETS 395-398					32	1	93	1.78	1.33	0.58	150	1	1	1803	2	61	16	16	1	1	3.57	3	776

CALCULATED	DCB	CHECKED	SJS		
ESTIMATED QUANTITIES					
FRA - 71 - 0.00					
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587					
1312					

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ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $\theta_{max} = 0.028$

CALCULATED
DCB
CHECKED
SJS

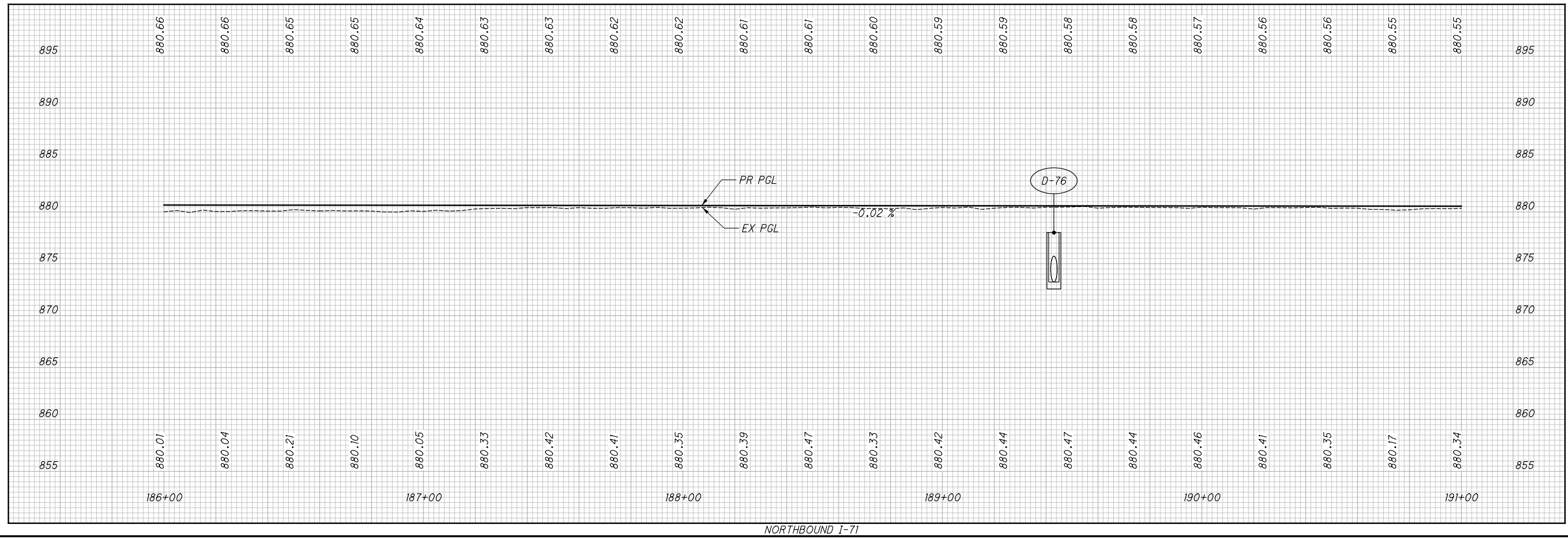
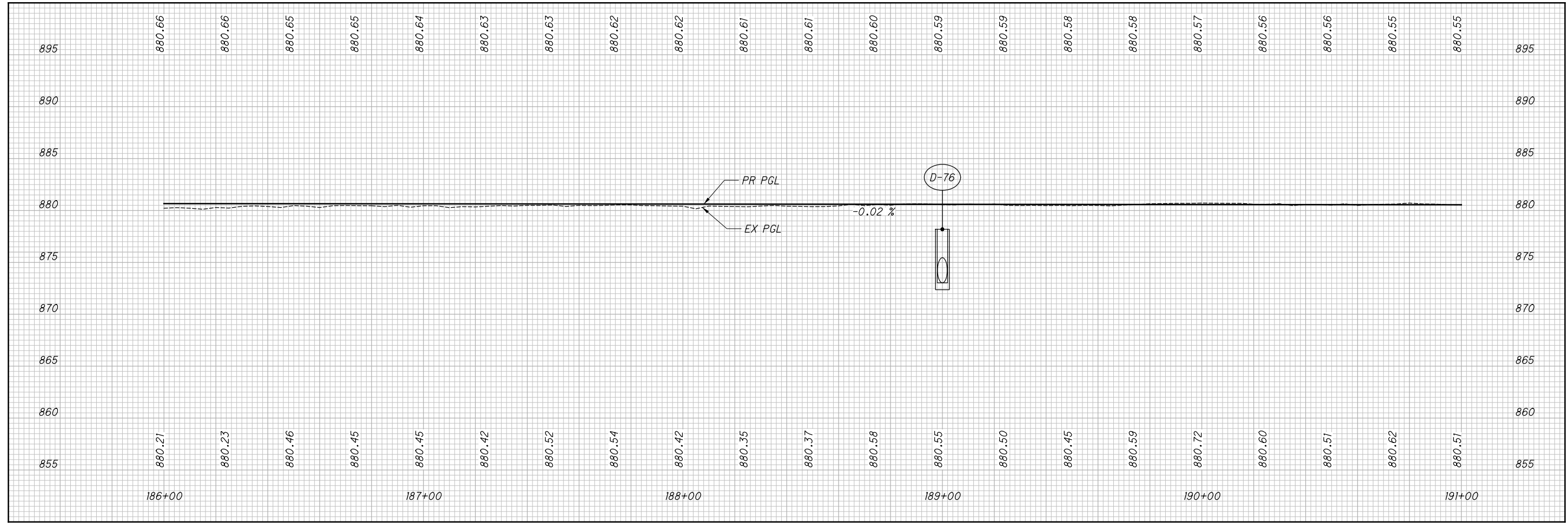
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 186+00 TO STA 191+00

FRA-71-0.00

588
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
589	PROFILES
590	ESTIMATED QUANTITIES
1000	UNDERDRAIN DETAILS
935	CULVERT DETAILS



CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 186+00 TO STA 191+00**

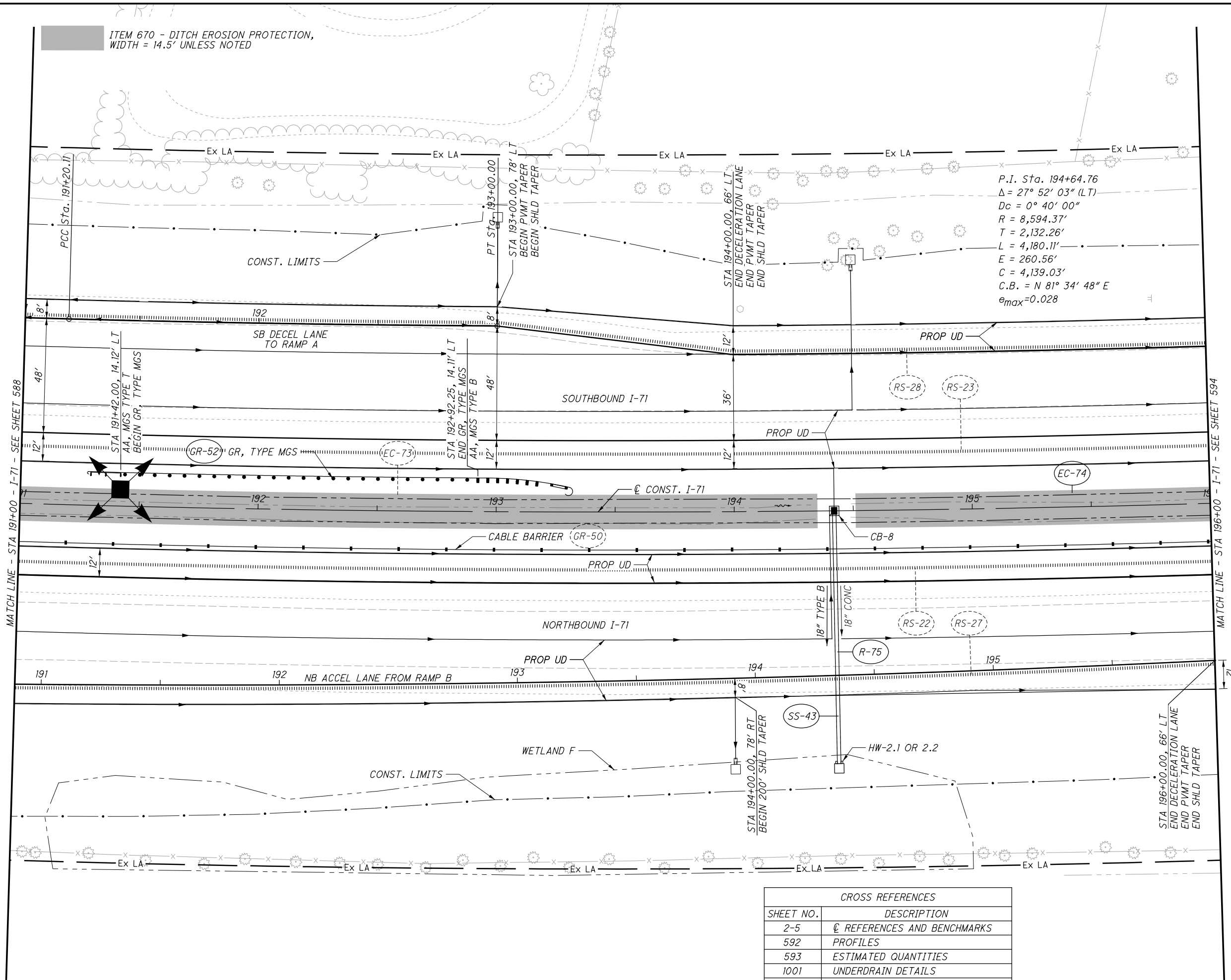
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REF. NO.	SHEET NO.	STATION		SIDE	670																
		FROM	TO		DITCH EROSION PROTECTION																
					SY																
EC-73	588, 591	189+52	194+36	CL	780																
TOTALS CARRIED TO SHEETS 395-398					780																

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	590 1312

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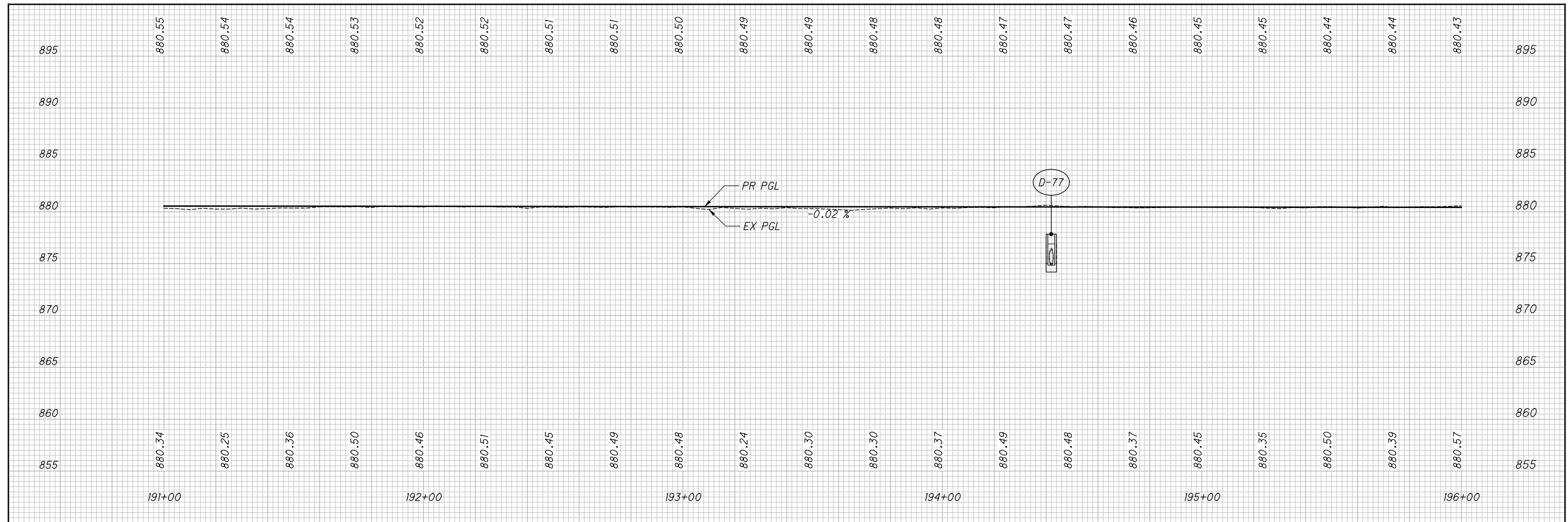
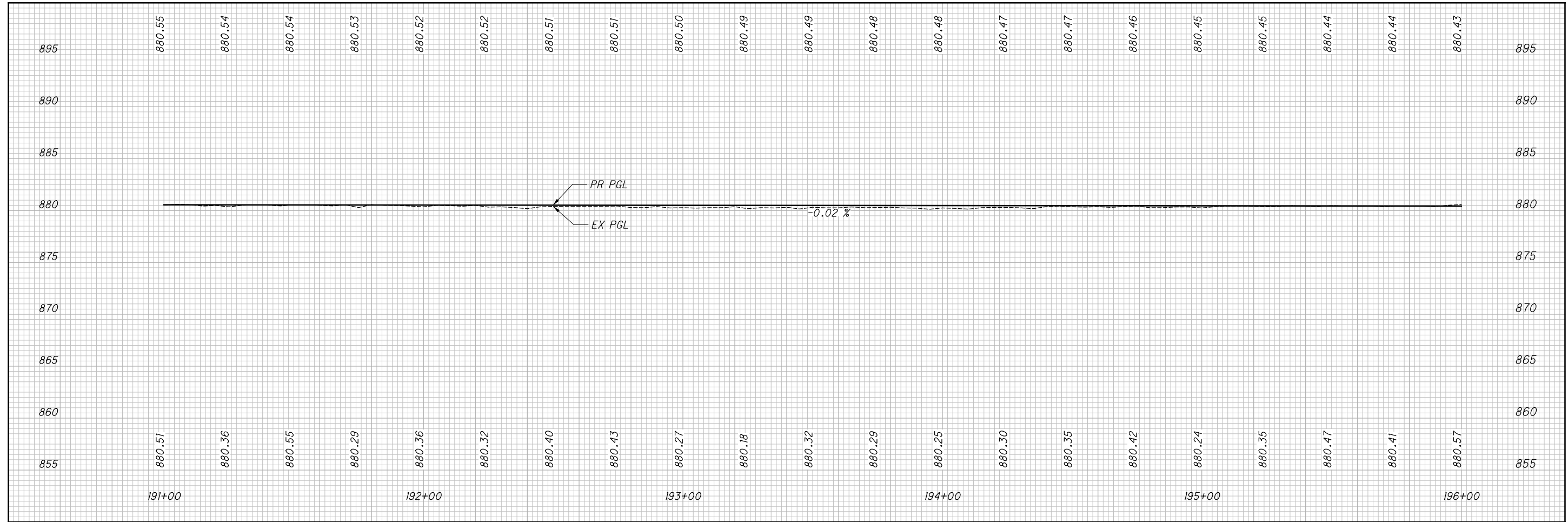
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	REFERENCES AND BENCHMARKS
592	PROFILES
593	ESTIMATED QUANTITIES
1001	UNDERDRAIN DETAILS
1105-1085	LIGHTING



PLAN - I-71
STA 191+00 TO STA 196+00

FRA-71-0.00

591
1312



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 191+00 TO STA 196+00

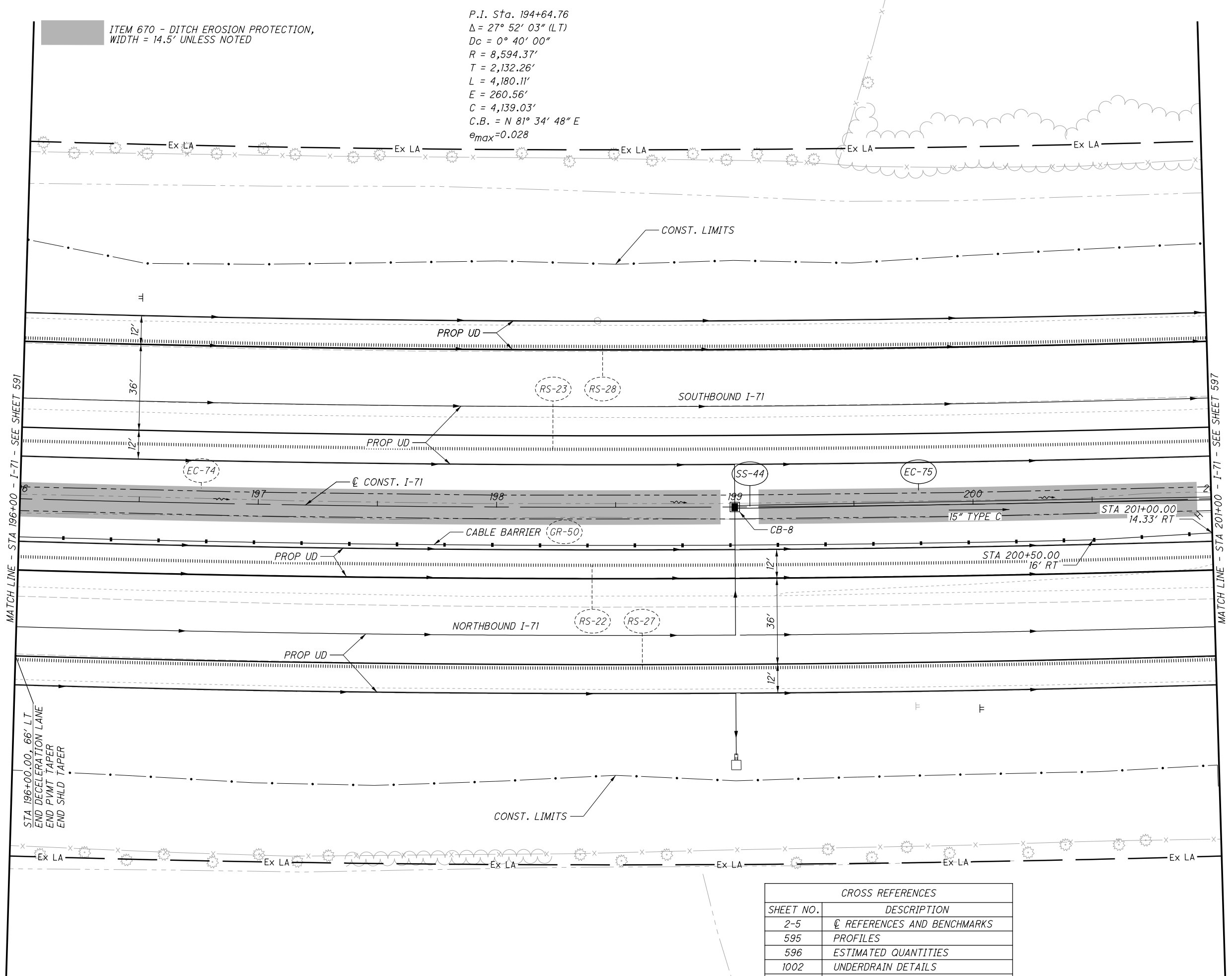
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REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	606	606	606	611	611	618	670
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	18" CONDUIT, TYPE B FT	CATCH BASIN, NO. 8 EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY) EACH	DITCH EROSION PROTECTION SY
R-75	591	194+42		RT	106	1									
EC-74	591, 594	194+51	198+91	CL											709
GR-52	591	191+42	192+92	LT					150	1	1			3	
SS-43	591	194+42	194+43	RT			1.78	0.33				106	1		
TOTALS CARRIED TO SHEETS 395-398					106	1	1.78	0.33	150	1	1	106	1	3	709

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	593 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP041.dgn Sheet 10/28/2019 11:10:03 AM 1458sjs



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

CALCULATED
 DCB
 CHECKED
 SJS

0 20 40
 HORIZONTAL
 SCALE IN FEET

PLAN - I-71
 STA 196+00 TO STA 201+00

FRA-71-0.00

594
 1312

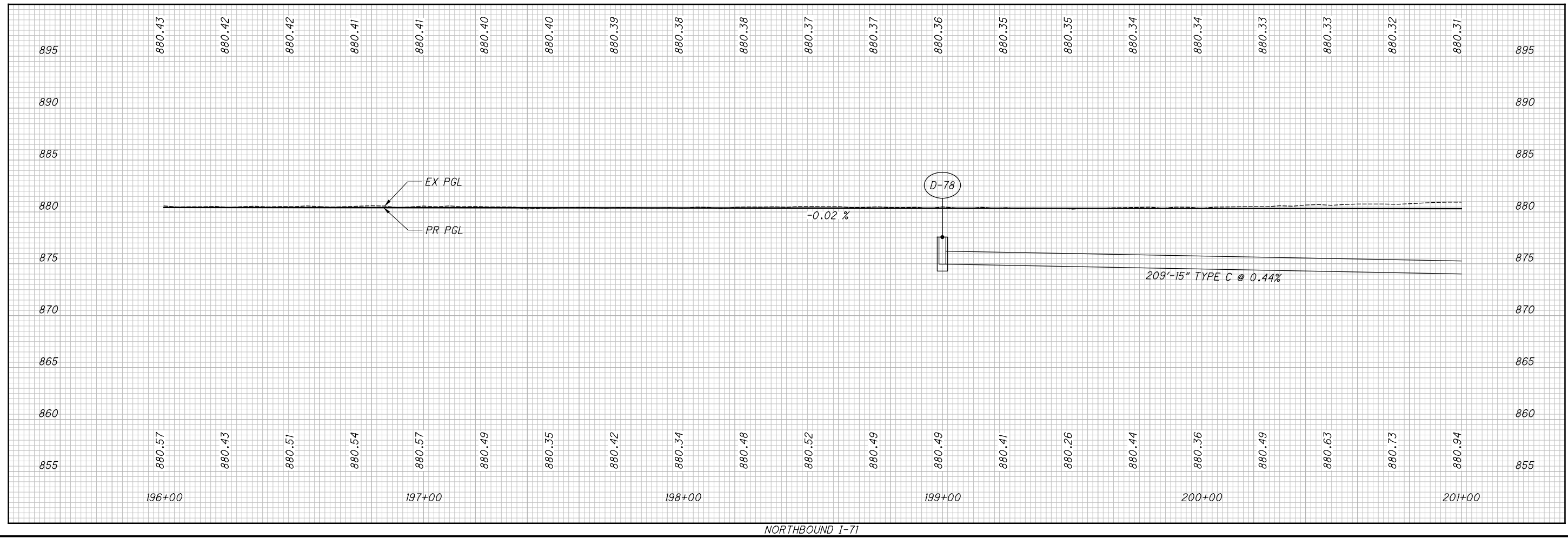
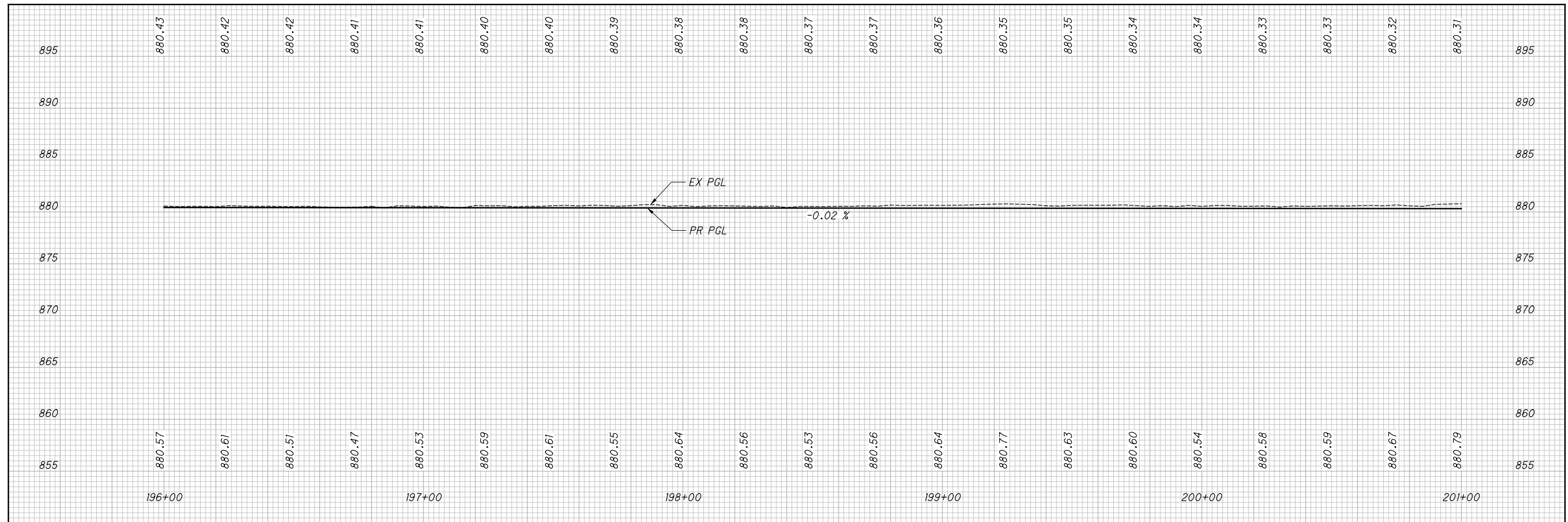
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
595	PROFILES
596	ESTIMATED QUANTITIES
1002	UNDERDRAIN DETAILS

STA 196+00.00, 66' LT
 END DECELERATION LANE
 END PVMT TAPER
 END SHLD TAPER

MATCH LINE - STA 196+00 - I-71 - SEE SHEET 591

MATCH LINE - STA 201+00 - I-71 - SEE SHEET 597

X:\4037000\121957.16\107201\roadway\sheets\107201GF041.dgn Sheet 10/28/2019 11:10:03 AM 14585.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 196+00 TO STA 201+00

FRA - 71 - 0.00

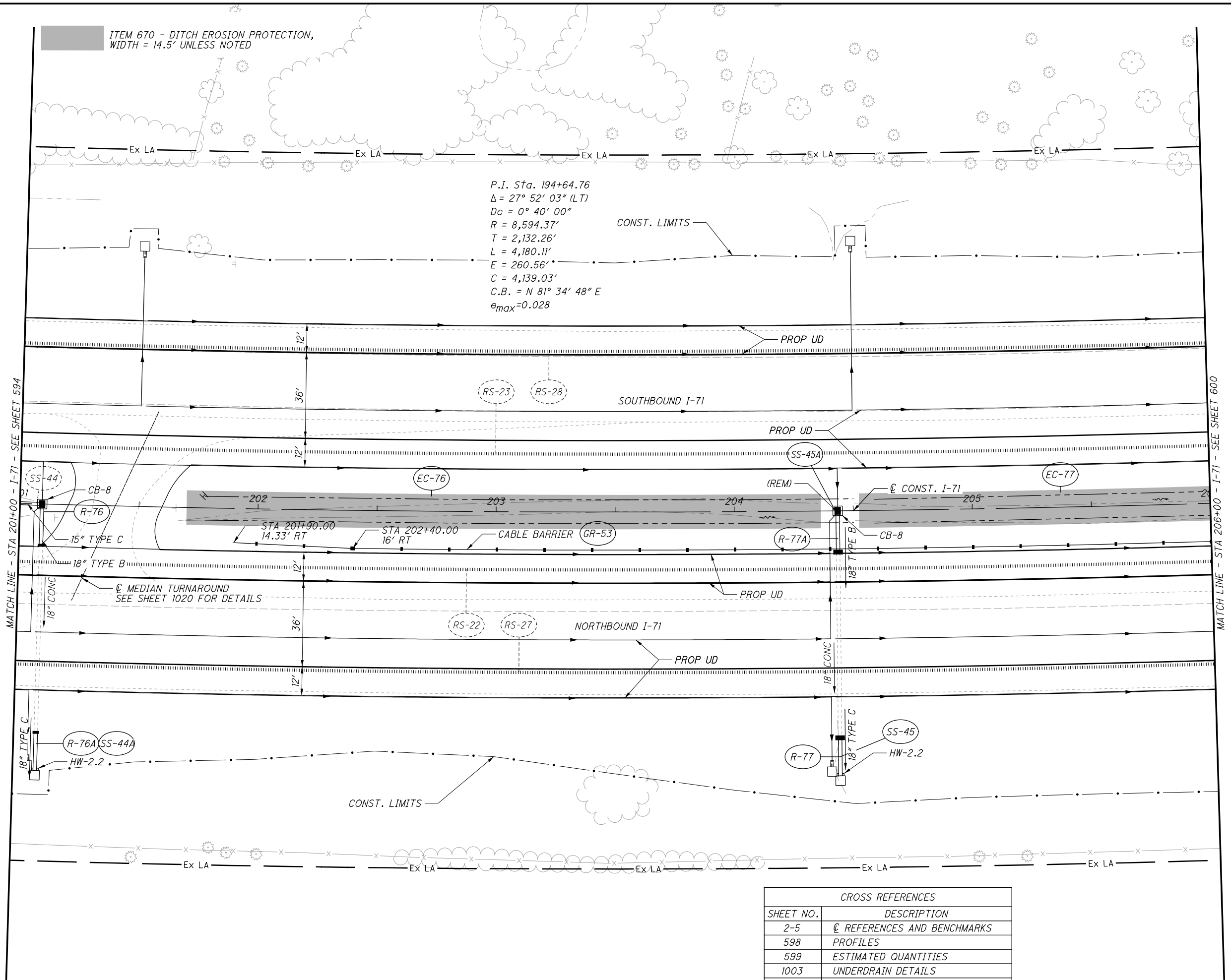
595
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0041.dgn Sheet 10/28/2019 11:10:04 AM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	611	611	611	670															
		FROM	TO		15" CONDUIT, TYPE C	18" CONDUIT, TYPE B, 706.02	CATCH BASIN, NO. 8	DITCH EROSION PROTECTION															
					FT	FT	EACH	SY															
EC-75	594	199+09	200+94	CL				299															
SS-44	594, 597	199+00	201+09	CL/RT	209	16	2																
TOTALS CARRIED TO SHEETS 395-398					209	16	2	299															

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	596 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GPO42.dgn_Sheet 10/28/2019 11:10:04 AM 1458sjs



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
598	PROFILES
599	ESTIMATED QUANTITIES
1003	UNDERDRAIN DETAILS

CALCULATED DCB CHECKED SJS

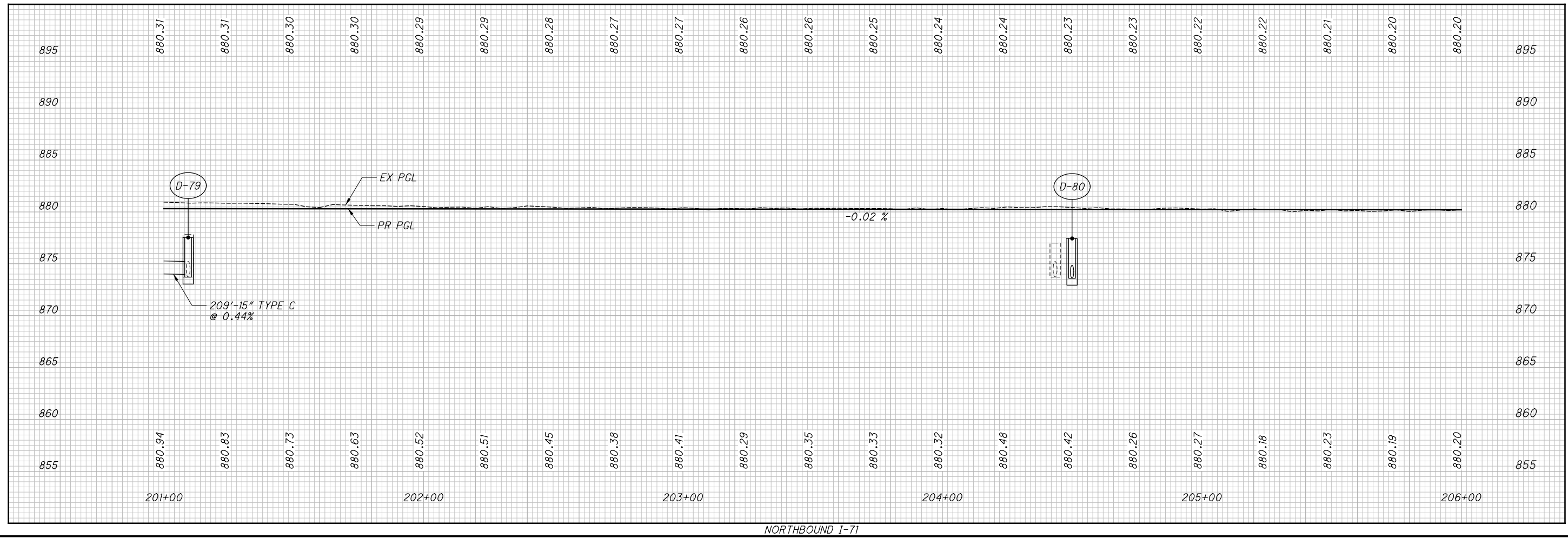
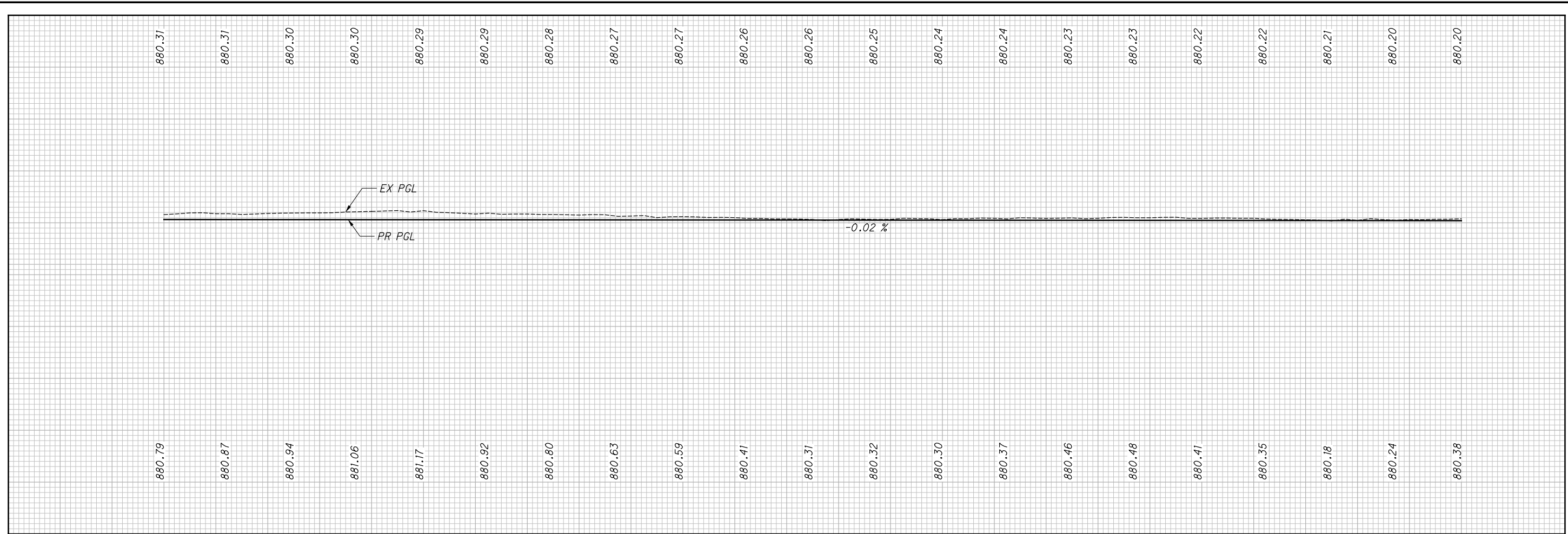
10' HORIZONTAL SCALE IN FEET

PLAN - I-71
 STA 201+00 TO STA 206+00

FRA-71-0.00

597
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF042.dgn Sheet 10/28/2019 11:10:05 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 201+00 TO STA 206+00

FRA - 71 - 0.00

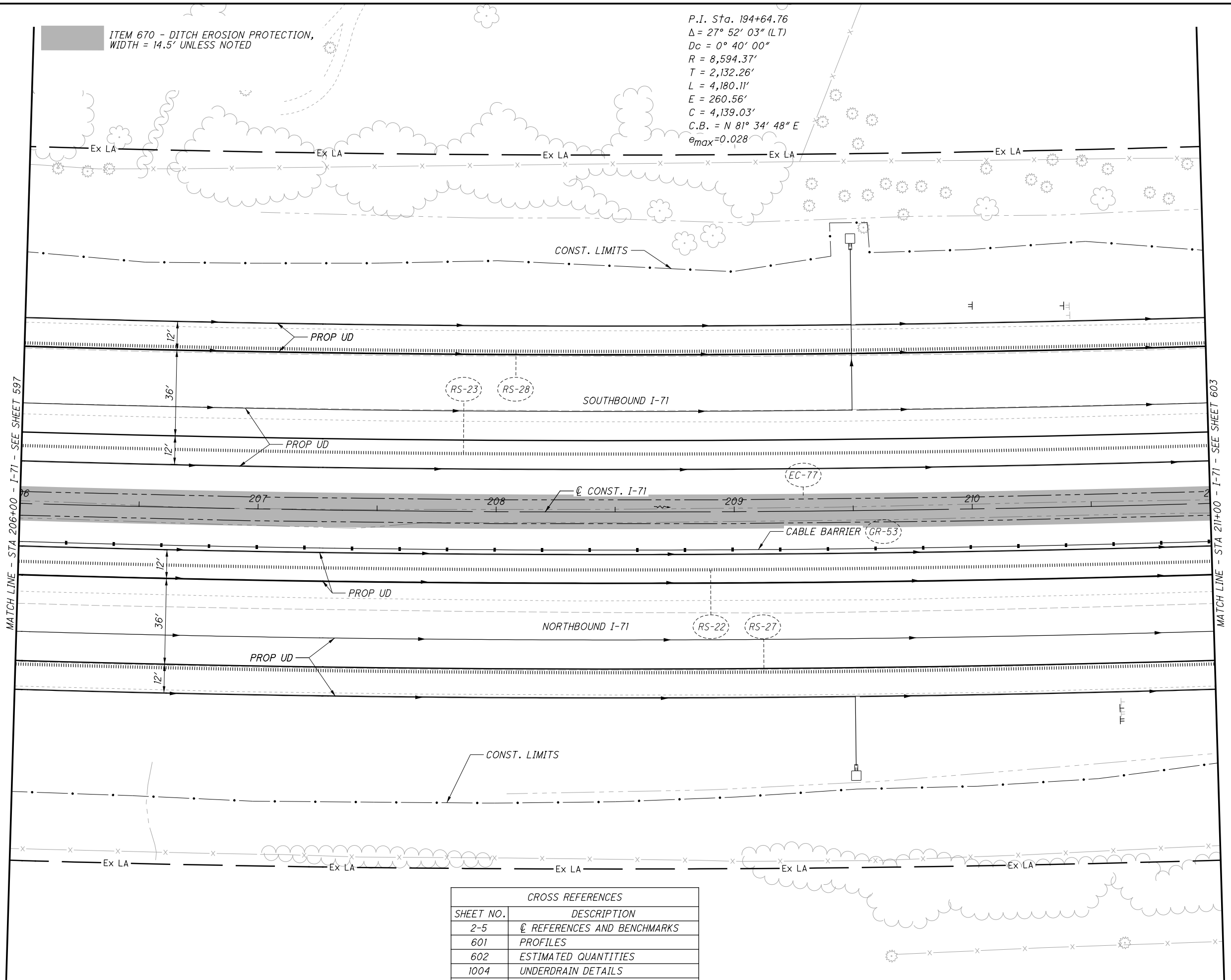
598
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0042.dgn Sheet 10/28/2019 11:10:05 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	601	602	606	606	611	611	611	670
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	SPECIAL - PIPE CLEANOUT, 24" AND UNDER FT	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED) FT	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL EACH	18" CONDUIT, TYPE B, 706.02 FT	18" CONDUIT, TYPE C, 706.02 FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY
R-76	597	201+09		RT	16	1									
R-76A	597	201+09		RT	16										
R-77	597	204+43		RT	16										
R-77A	597	204+43		RT	18	1									
EC-76	597	201+70	204+36	CL											442
EC-77	597, 600, 603	204+52	211+41	CL											1110
GR-53	597, 600, 603, 606, 609	201+90	224+00	RT						2212	2				
SS-44A	597	201+09		RT			79	1.78	0.31				16		
SS-45	597	204+43		RT				1.78	0.31				16		
SS-45A	597	204+43		RT			78					16		1	
TOTALS CARRIED TO SHEETS 395-398					66	2	157	3.56	0.62	2212	2	16	32	1	1552

ESTIMATED QUANTITIES	CALCULATED
	DCB
FRA - 71 - 0.00	CHECKED
	SJS
	599 1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP04.3.dgn_Sheet 10/28/2019 11:10:06 AM 1458s.js



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = -0.028$

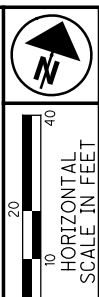
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
601	PROFILES
602	ESTIMATED QUANTITIES
1004	UNDERDRAIN DETAILS

CALCULATED
 DCB
 CHECKED
 SJS

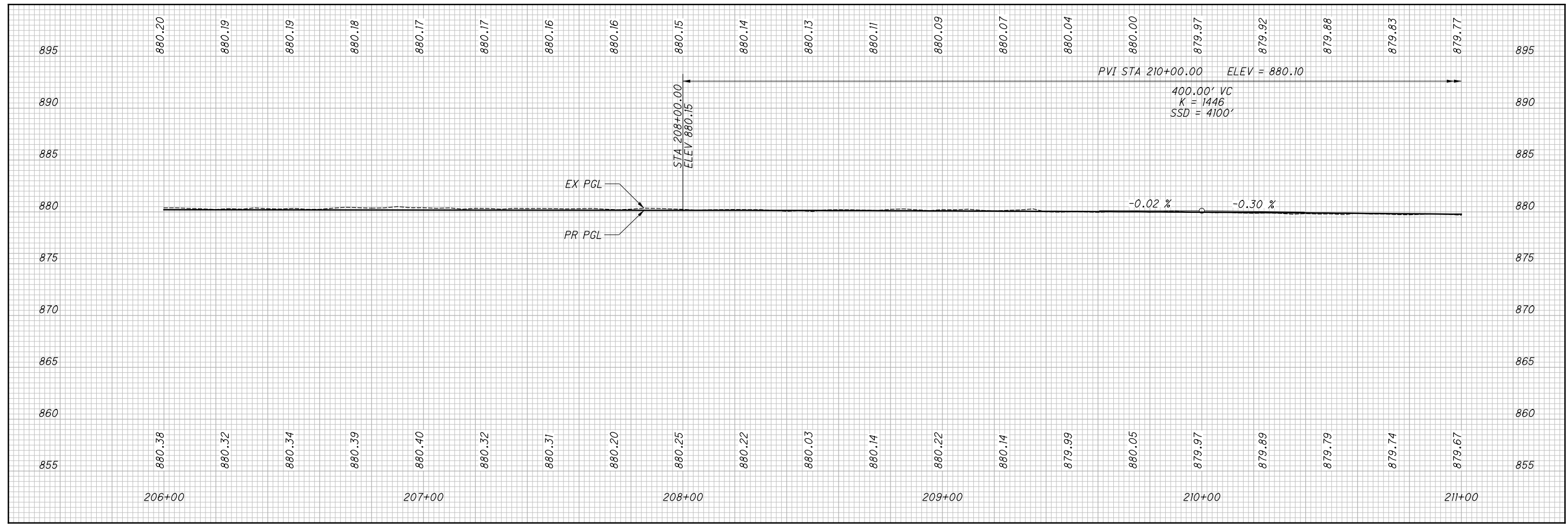
PLAN - I-71
 STA 206+00 TO STA 211+00

FRA - 71 - 0.00

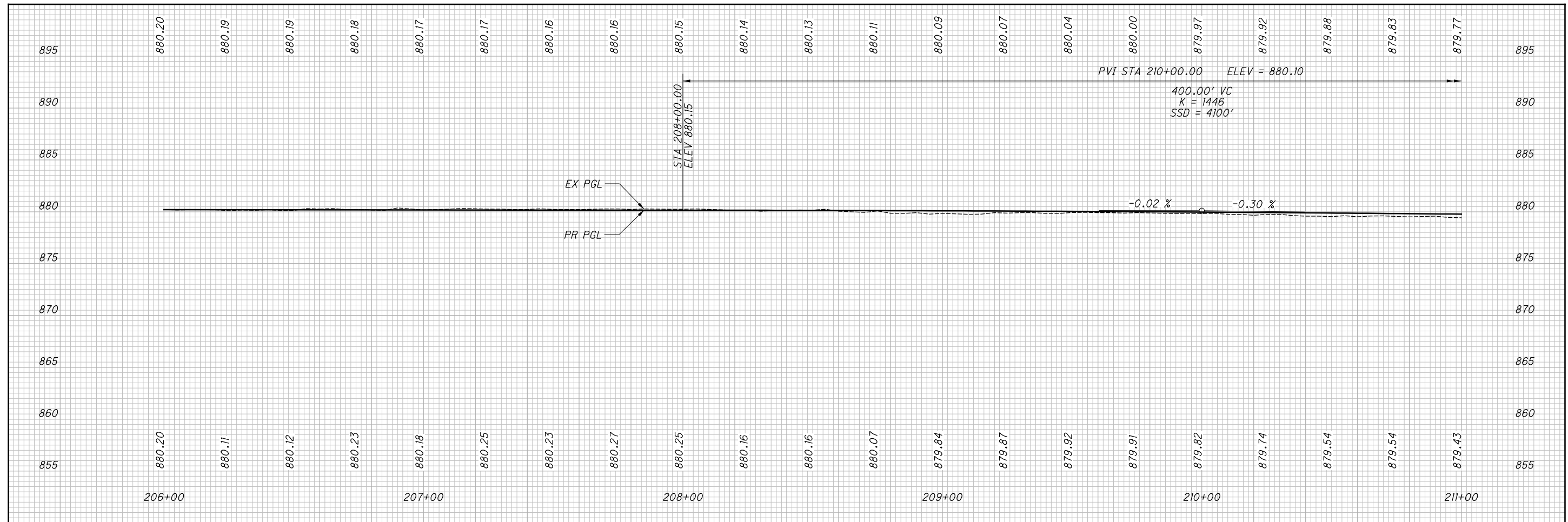
600
 1312



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SOUTHBOUND I-71



NORTHBOUND I-71

CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 206+00 TO STA 211+00

FRA - 71 - 0.00

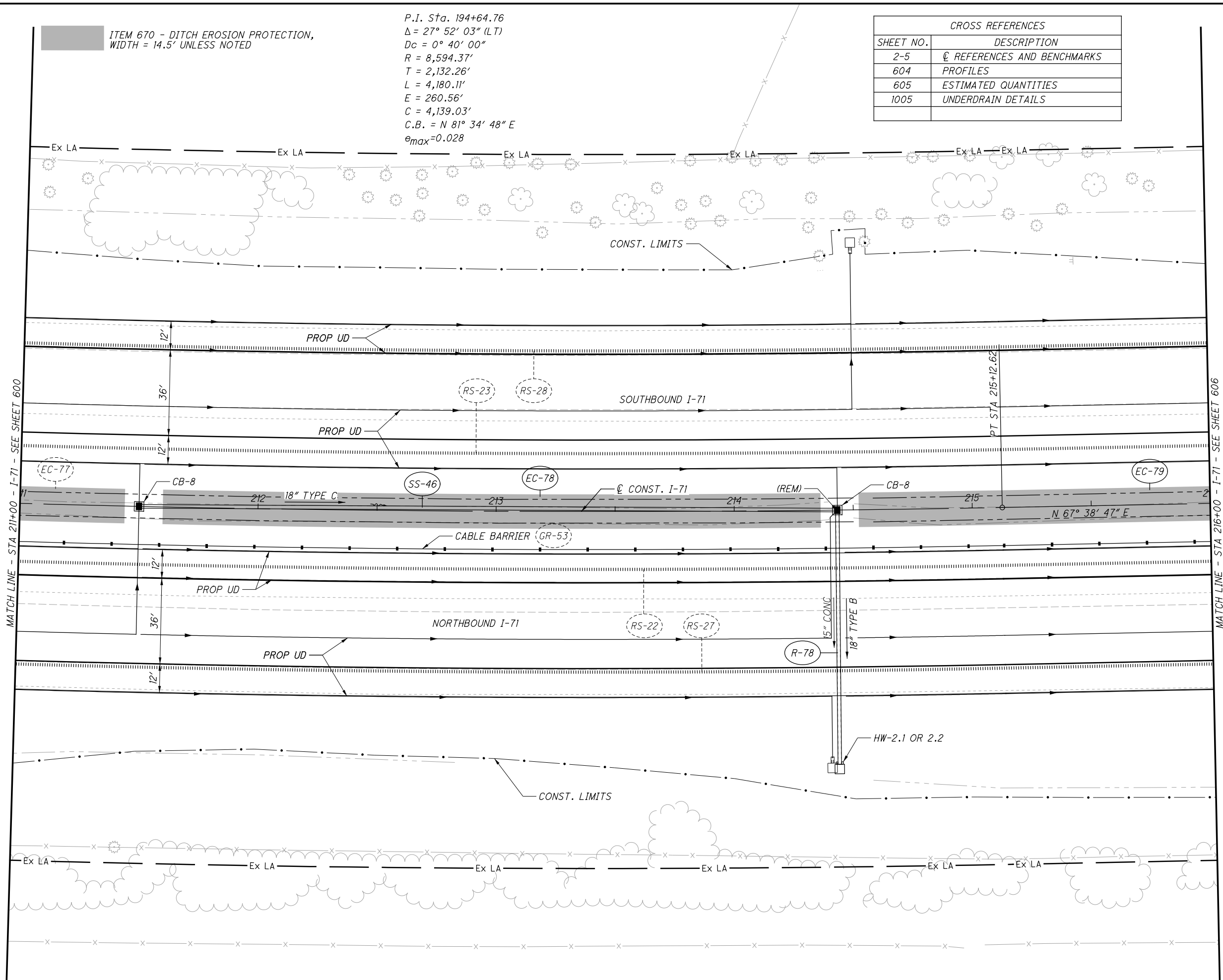
601
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP044.dgn_Sheet 10/28/2019 11:10:08 AM 1458sjs

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
604	PROFILES
605	ESTIMATED QUANTITIES
1005	UNDERDRAIN DETAILS



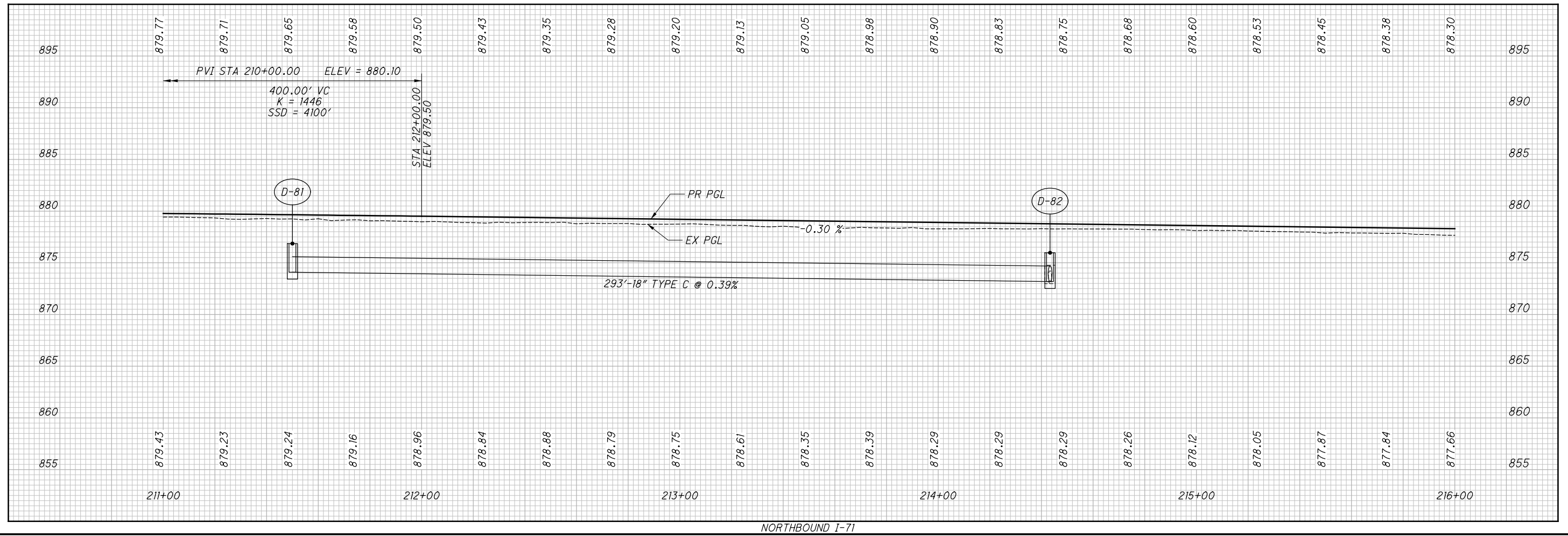
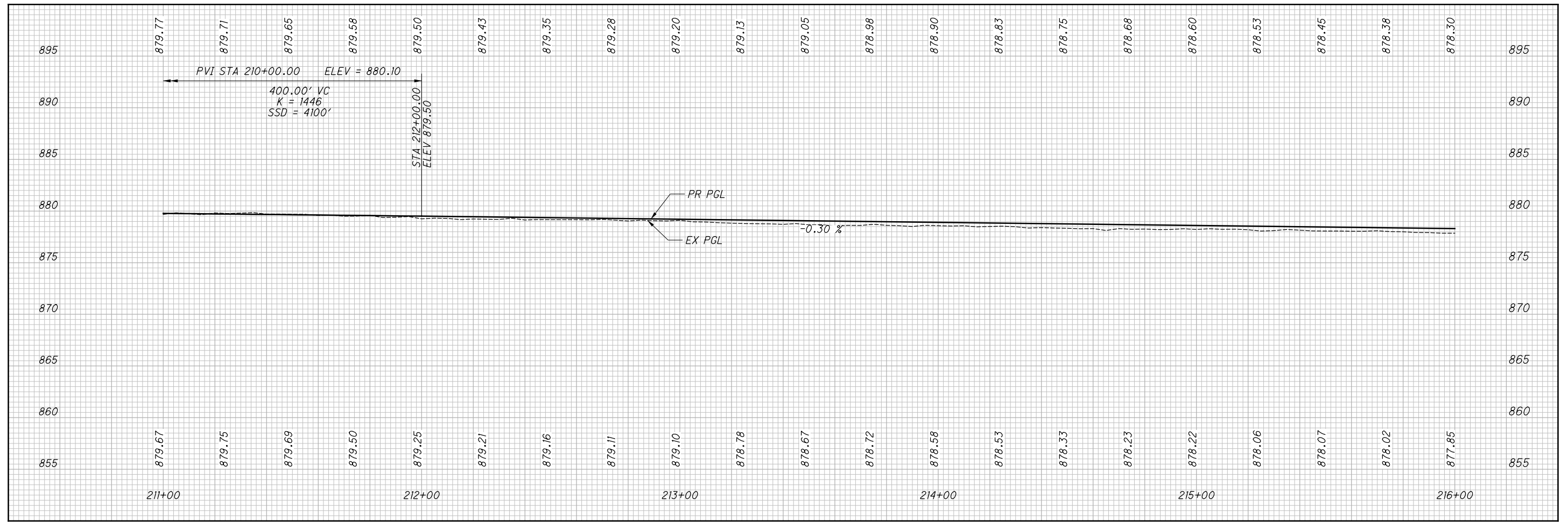
CALCULATED
 DCB
 CHECKED
 SJS

0 20 40
 10
 HORIZONTAL
 SCALE IN FEET

PLAN - I-71
 STA 211+00 TO STA 216+00

FRA-71-0.00

603
 1312



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 211+00 TO STA 216+00

FRA - 71 - 0.00

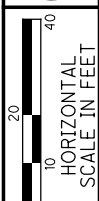
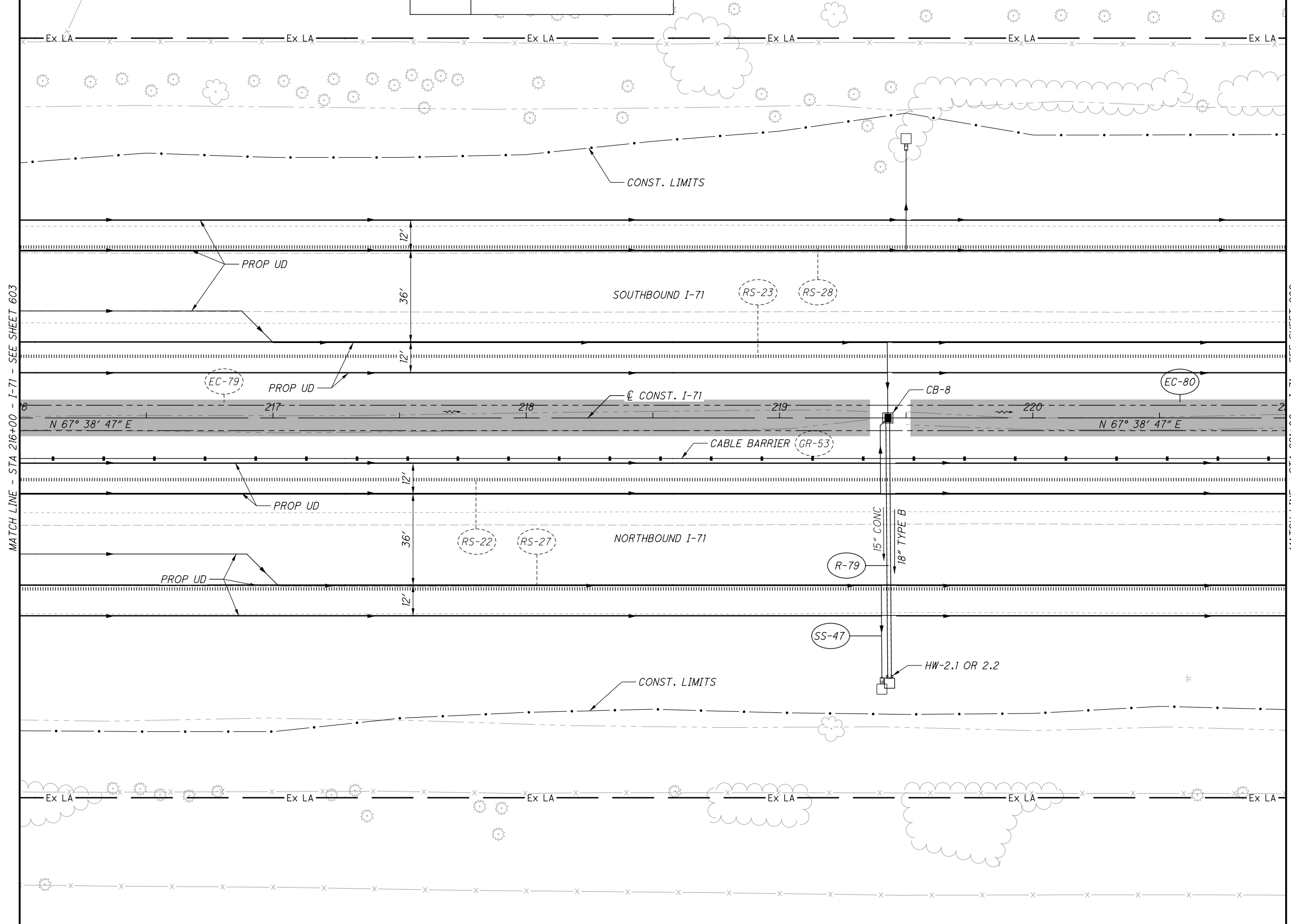
REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	611	670						
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	18" CONDUIT, TYPE B, 706.02 FT	18" CONDUIT, TYPE C FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY						
R-78	603	214+43		RT	104	1												
EC-78	603	211+59	214+36	CL									447					
EC-79	603, 606	214+52	219+36	CL									780					
SS-46	603	211+50	214+43	CL/RT			1.78	0.33	104	293	2							
TOTALS CARRIED TO SHEETS 395-398					104	1	1.78	0.33	104	293	2	1227						

CALCULATED DCB CHECKED SJS	ESTIMATED QUANTITIES	FRA - 71 - 0:00	605 1312
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ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
607	PROFILES
608	ESTIMATED QUANTITIES
1006	UNDERDRAIN DETAILS

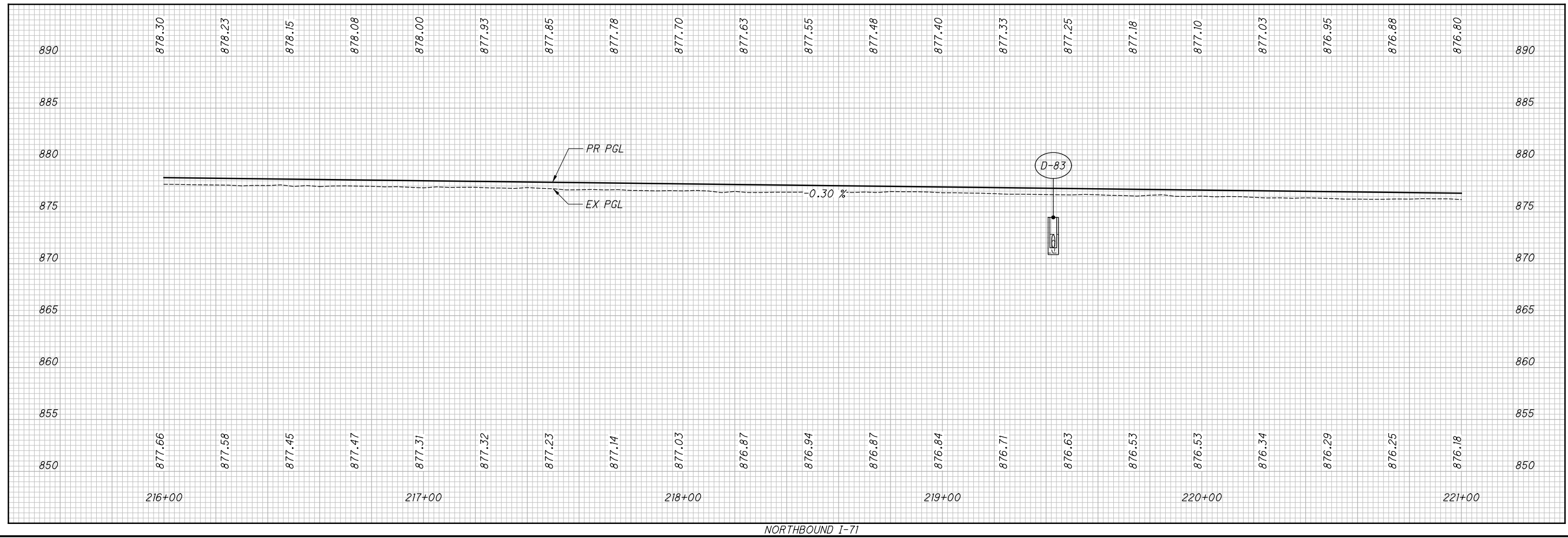
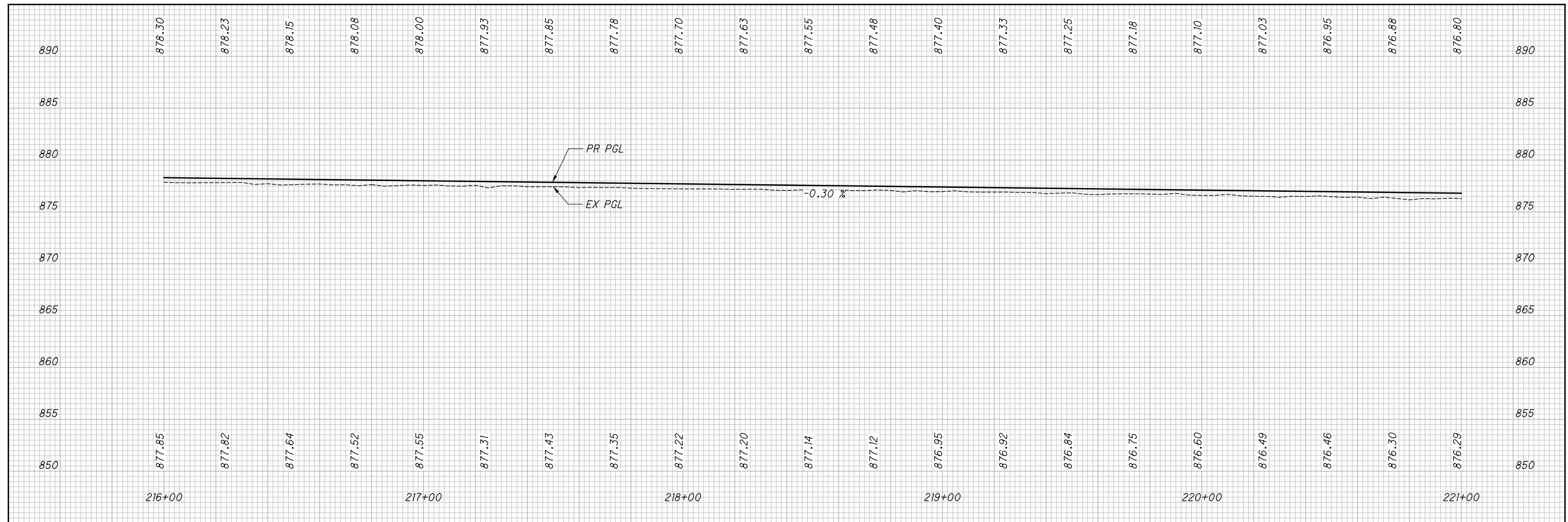


CALCULATED
DCB
CHECKED
SJS

PLAN - I-71
STA 216+00 TO STA 221+00

FRA-71-0.00

606
1312



CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 216+00 TO STA 221+00**

FRA - 71 - 0.00

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	670						
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	18" CONDUIT, TYPE B FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY						
R-79	606	219+43		RT	103	1											
EC-80	606, 609, 612	219+52	226+91	CL							1191						
SS-47	606	219+43		RT			1.78	0.33	103	1							
TOTALS CARRIED TO SHEETS 395-398					103	1	1.78	0.33	103	1	1191						

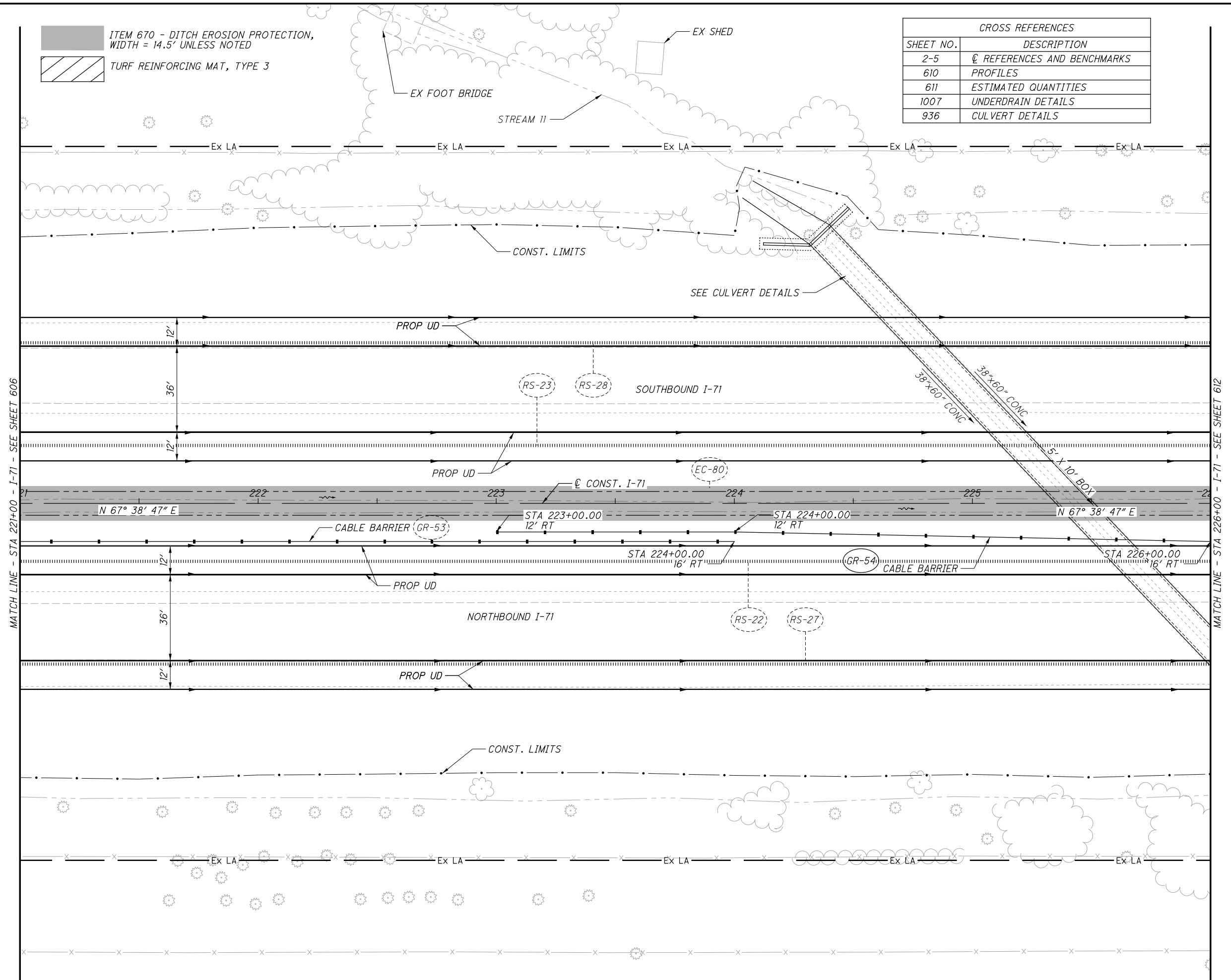
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CALCULATED									
DCB									
CHECKED									
SJS									
608									
1312									

X:\4037000\121957.16\107201\roadway\sheets\107201GP046.dgn_Sheet 10/28/2019 11:10:11 AM 1458sjs

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

TURF REINFORCING MAT, TYPE 3

GROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
610	PROFILES
611	ESTIMATED QUANTITIES
1007	UNDERDRAIN DETAILS
936	CULVERT DETAILS



CALCULATED
DCB
CHECKED
SJS

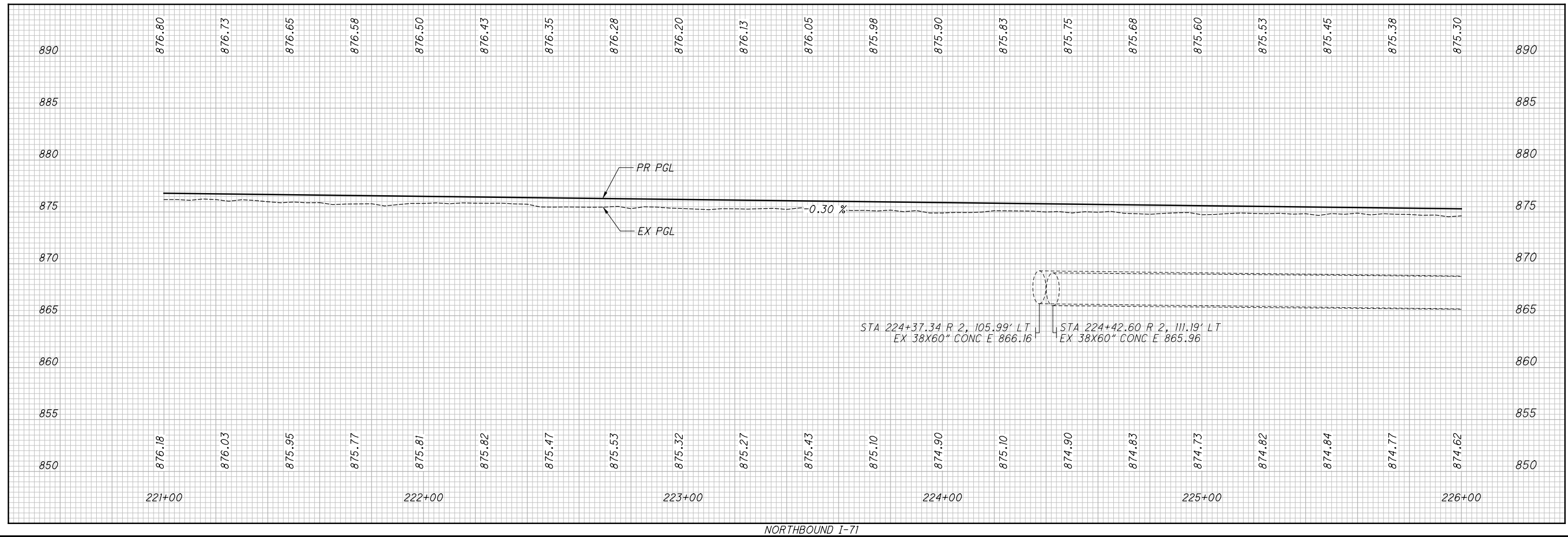
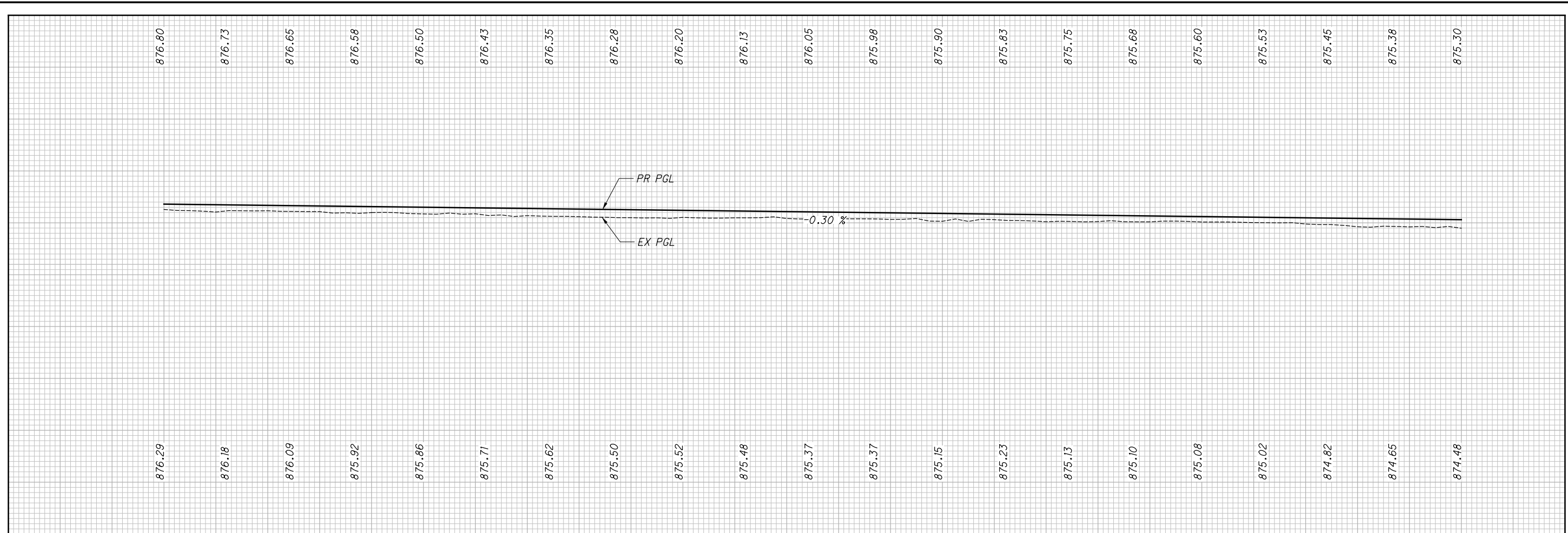
0 20 40
10
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 221+00 TO STA 226+00

FRA-71-0.00

609
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF046.dgn Sheet 10/28/2019 11:10:12 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 221+00 TO STA 226+00

FRA - 71 - 0.00

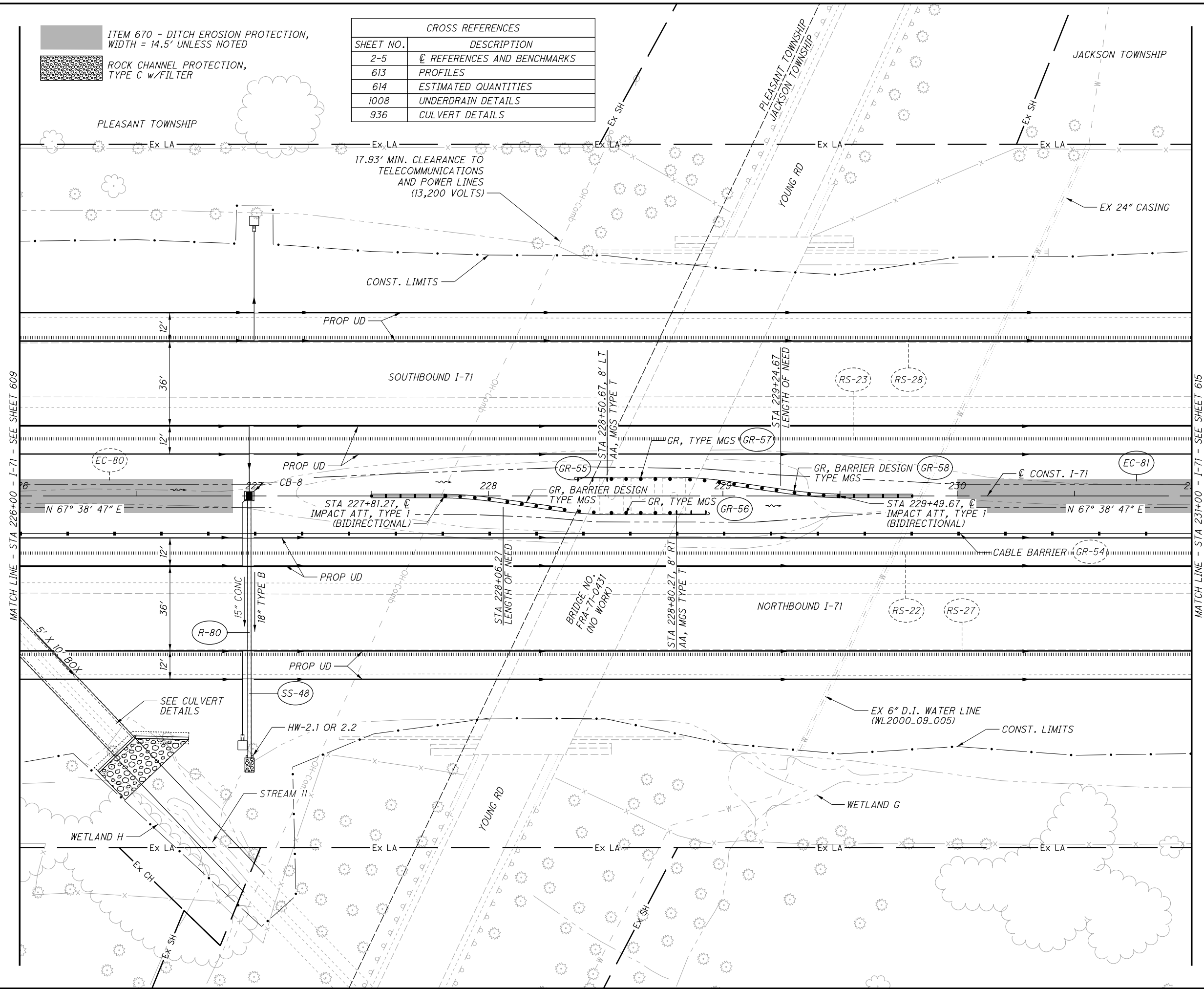
610
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP047.dgn_Sheet 10/28/2019 11:10:13 AM 1458sjs

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
613	PROFILES
614	ESTIMATED QUANTITIES
1008	UNDERDRAIN DETAILS
936	CULVERT DETAILS



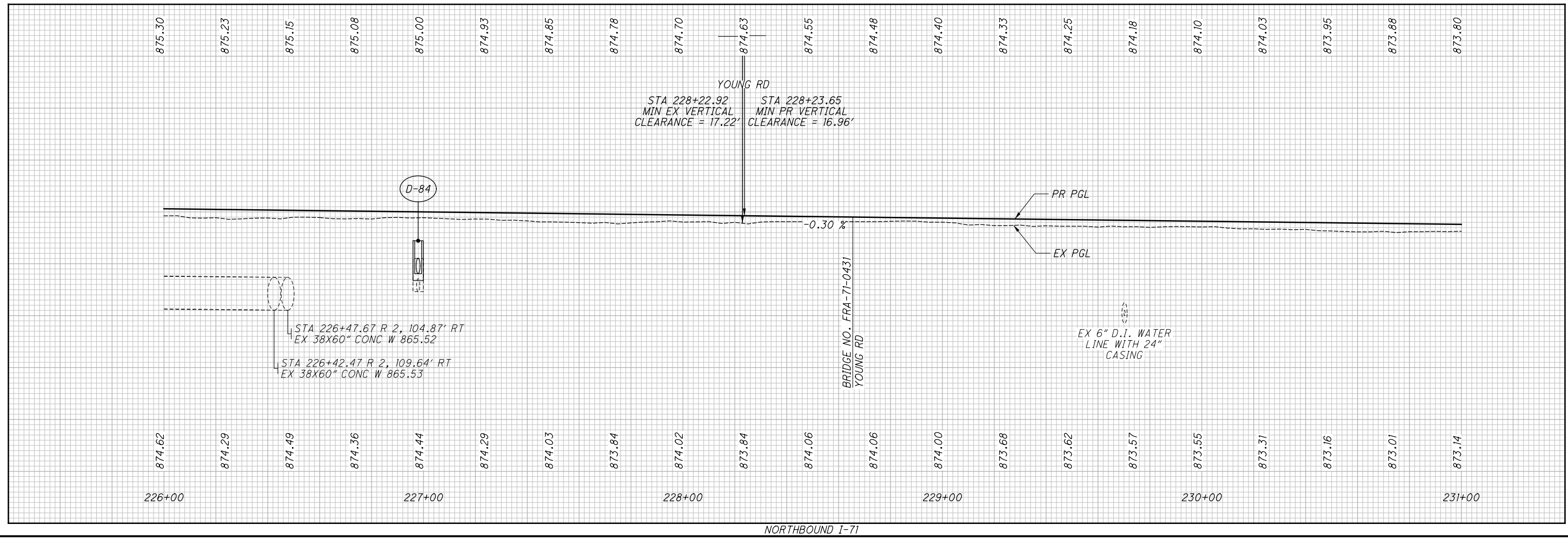
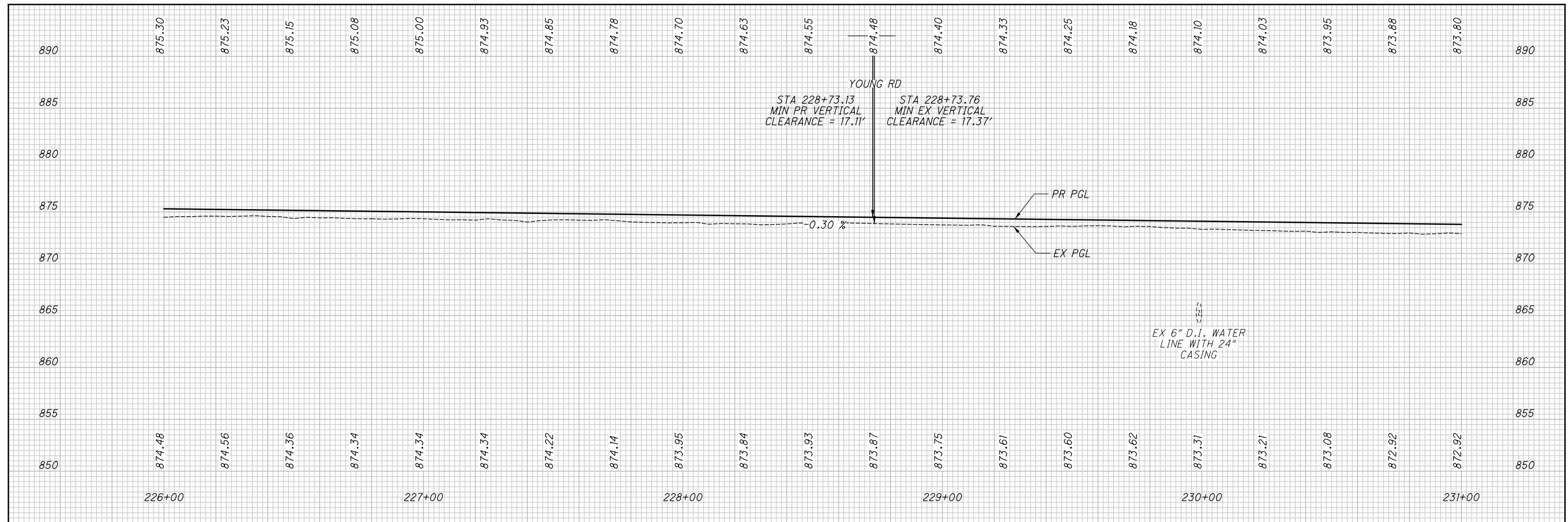
CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 226+00 TO STA 231+00

FRA-71-0.00
612
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF047.dgn Sheet 10/28/2019 11:10:14 AM 1458sjs



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 226+00 TO STA 231+00

FRA - 71 - 0.00

613
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0047.dgn Sheet 10/28/2019 11:10:14 AM 1458sj

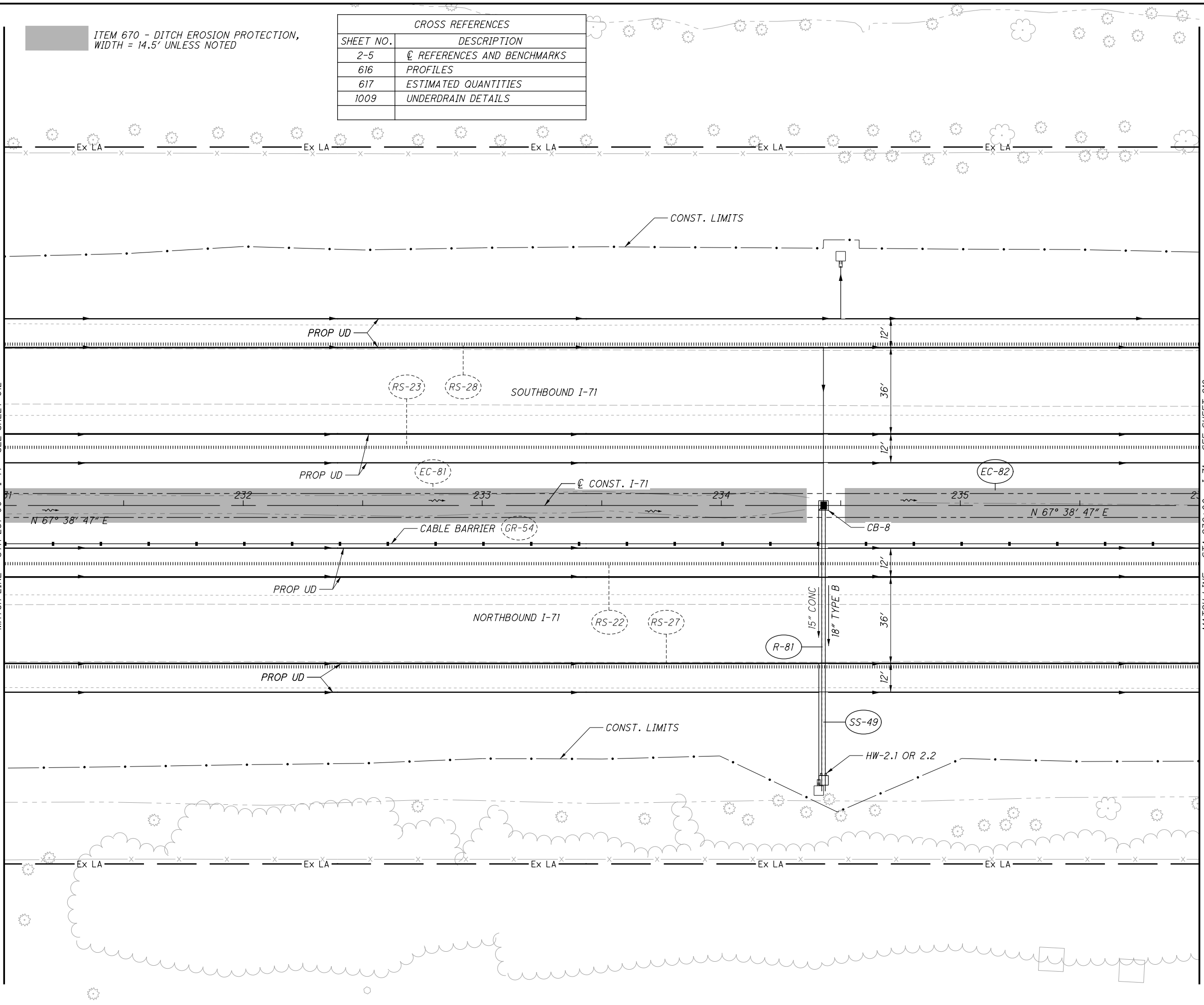
REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	606	606	606	606	611	611	670
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	GUARDRAIL, TYPE MGS FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE T EACH	IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL) EACH	18" CONDUIT, TYPE B FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY
R-80	612	226+98		RT	113	1									
EC-81	612, 615	230+00	234+36	CL											703
GR-55	612	227+81	228+26	RT						50	50	1	1		
GR-56	612	228+26	228+80	RT					50		1				
GR-57	612	228+51	229+01	LT					50		1				
GR-58	612	229+01	229+50	LT						50		1			
SS-48	612	226+98		RT			1.33	0.33					111	1	
TOTALS CARRIED TO SHEETS 395-398					113	1	1.33	0.33	100	100	2	2	111	1	703

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	(614 / 1312)

X:\4037000\121957.16\107201\roadway\sheets\107201GP048.dgn_Sheet 10/28/2019 11:10:15 AM 1458sjs

MATCH LINE - STA 231+00 - I-71 - SEE SHEET 612

MATCH LINE - STA 236+00 - I-71 - SEE SHEET 618



ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED

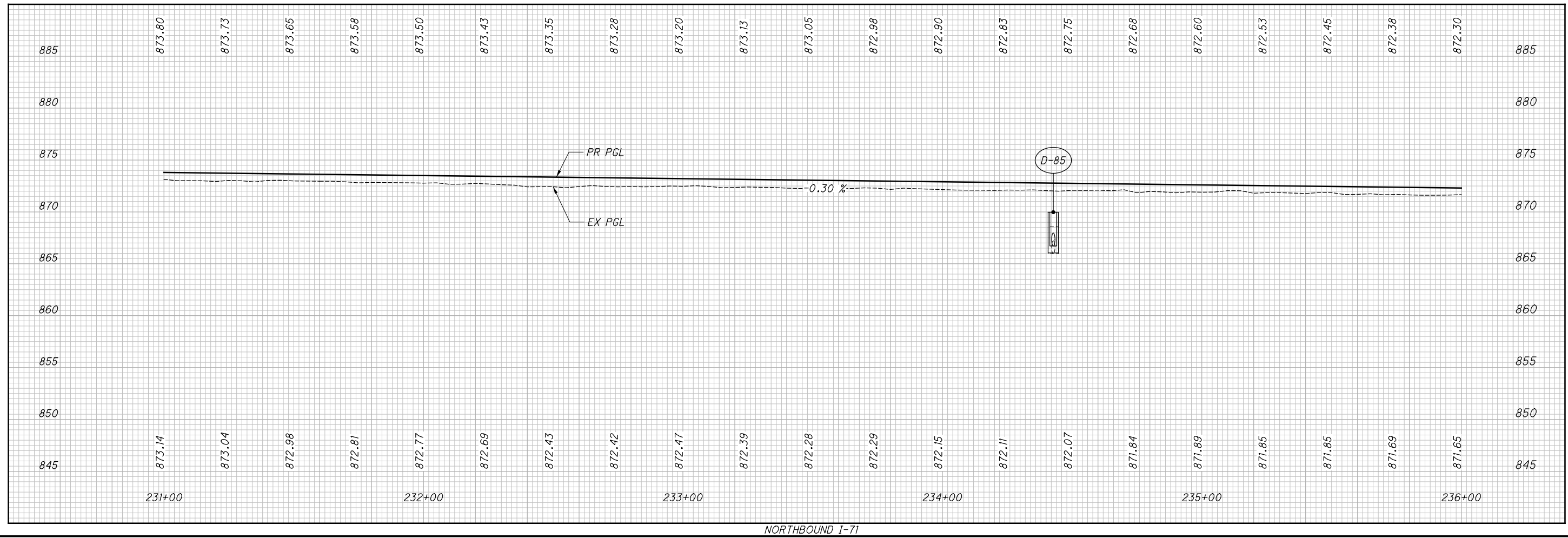
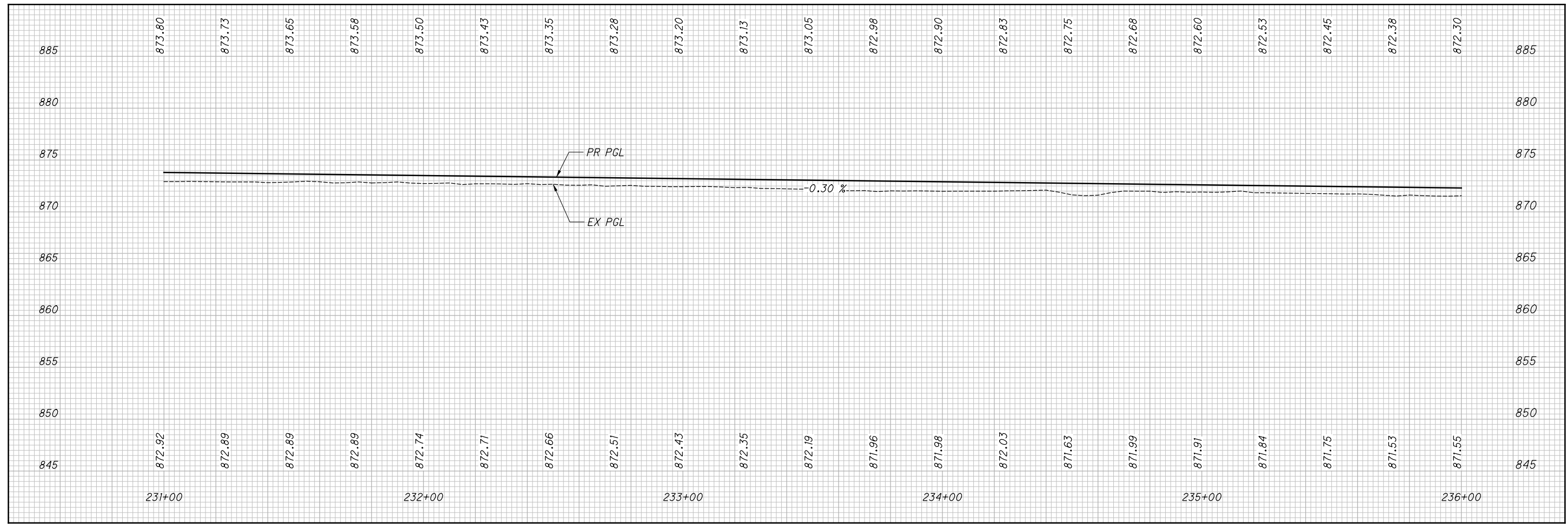
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
616	PROFILES
617	ESTIMATED QUANTITIES
1009	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

0 20 40
10
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 231+00 TO STA 236+00

FRA - 71 - 0.00
615
1312



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 231+00 TO STA 236+00

FRA - 71 - 0.00

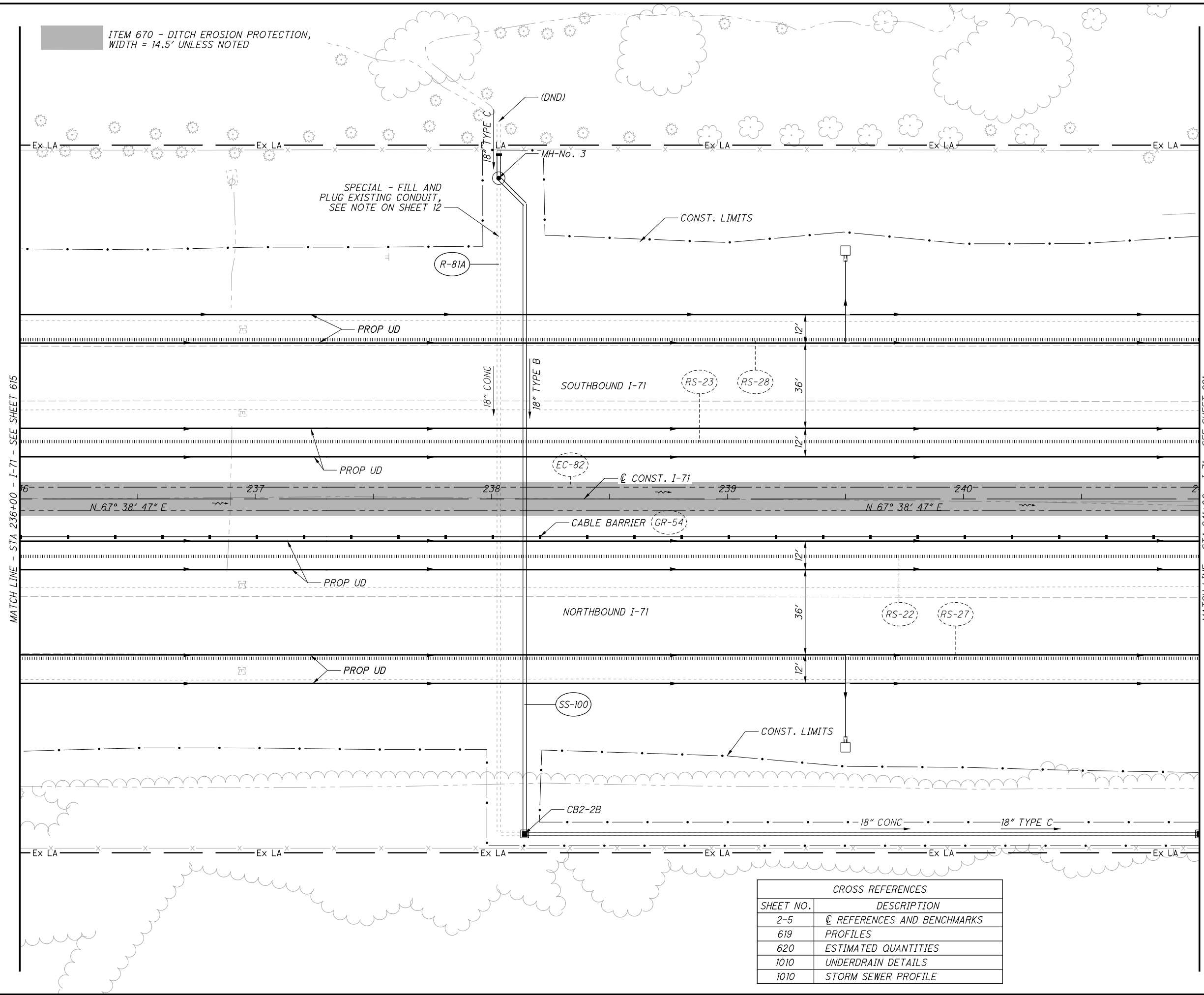
616
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G004B.dgn Sheet 10/28/2019 11:10:16 AM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	670						
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	18" CONDUIT, TYPE B FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY						
R-81	615	234+43		RT	120	1											
EC-82	615, 618, 621	234+52	241+43	CL							1114						
SS-49	615	234+43		RT			1.78	0.33	119	1							
TOTALS CARRIED TO SHEETS 395-398					120	1	1.78	0.33	119	1	1114						

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CALCULATED									
DCB									
CHECKED									
SJS									
617									
1312									

X:\4037000\121957.16\107201\Roadway\Sheets\107201GP049.dgn_Sheet 10/28/2019 11:01:17 AM 1458sj



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

SPECIAL - FILL AND
PLUG EXISTING CONDUIT,
SEE NOTE ON SHEET 12

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
619	PROFILES
620	ESTIMATED QUANTITIES
1010	UNDERDRAIN DETAILS
1010	STORM SEWER PROFILE

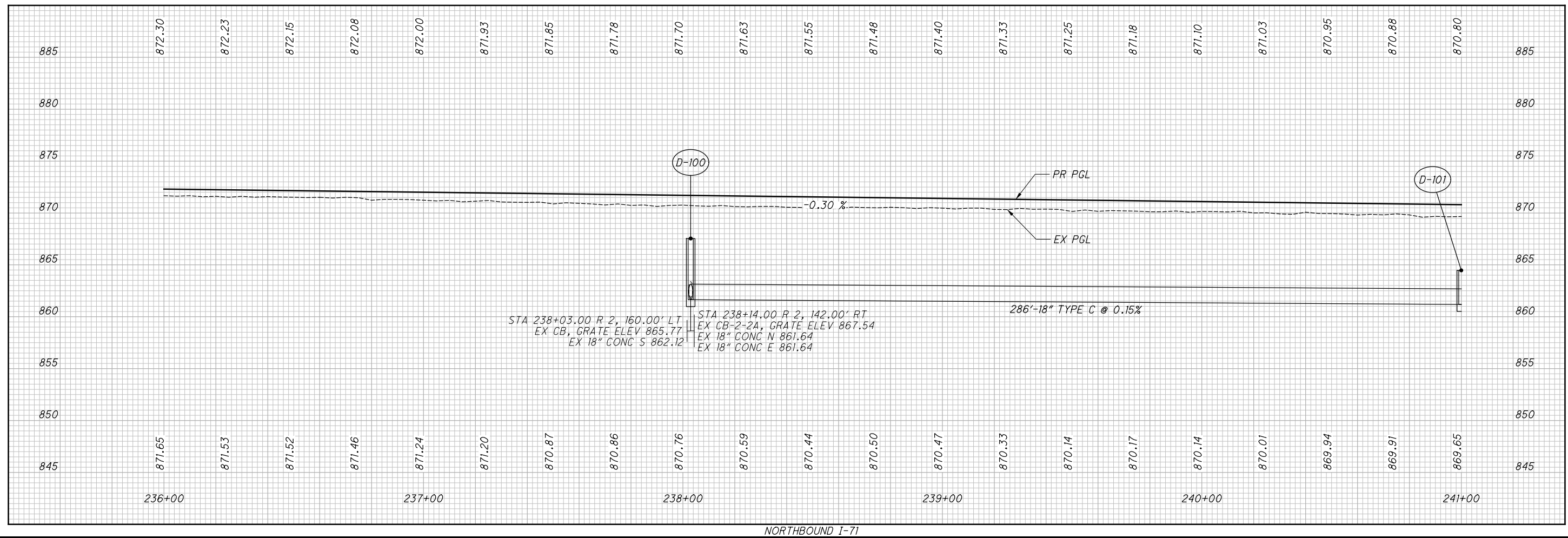
CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 236+00 TO STA 241+00

FRA-71-0.00

X:\4037000\121957.16\107201\roadway\sheets\107201GF049.dgn Sheet 10/28/2019 11:10:17 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 236+00 TO STA 241+00

FRA - 71 - 0.00

619
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0049.dgn Sheet 10/28/2019 11:10:18 AM 1458sjs

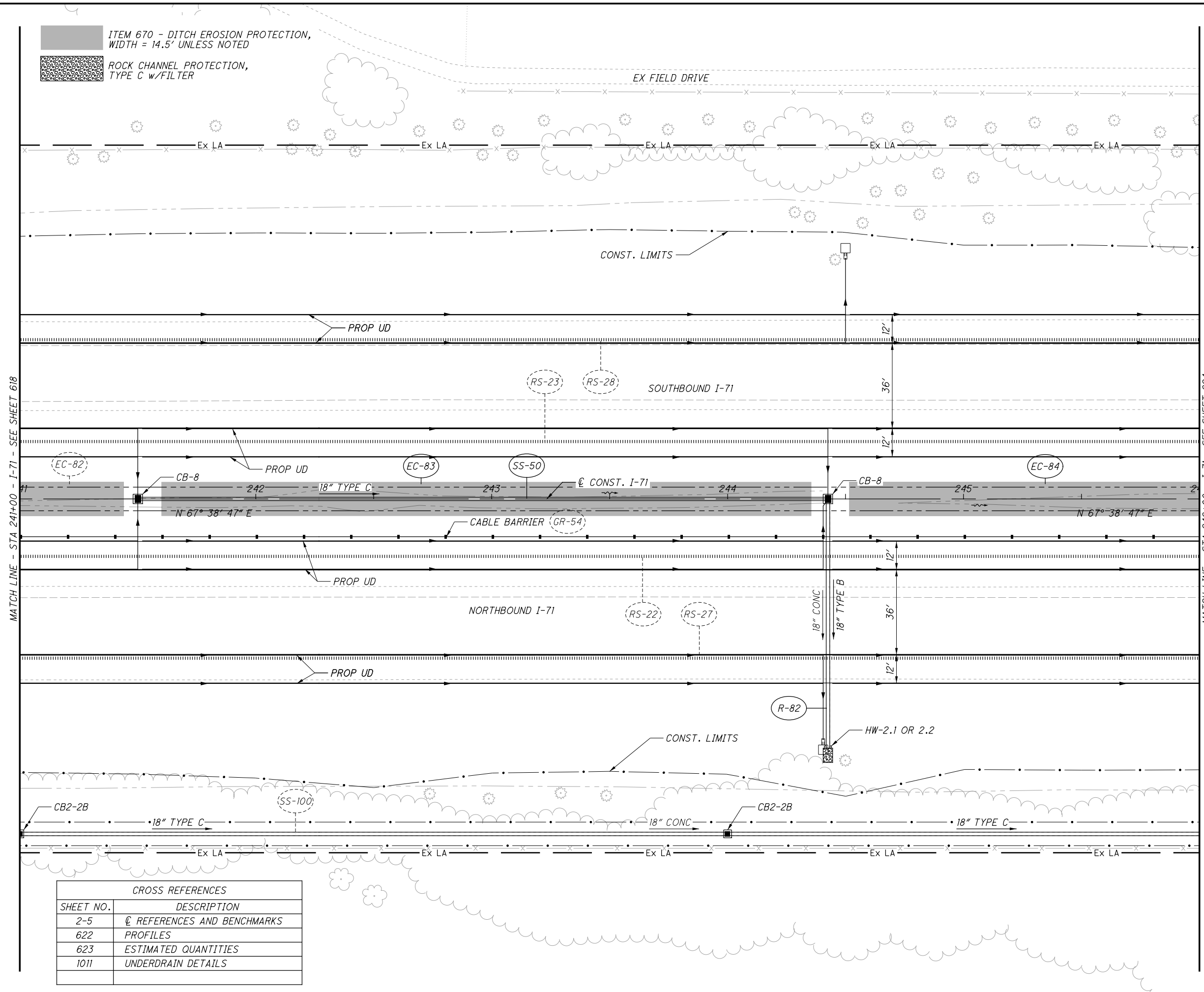
REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	611	611	611	611	611	611	611					
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	SPECIAL - FILL AND PLUG EXISTING CONDUIT FT	18" CONDUIT, TYPE B FT	18" CONDUIT, TYPE C FT	18" CONDUIT, TYPE C, 706.08 FT	CONDUIT, BORED OR JACKED, 18", TYPE B FT	CATCH BASIN, NO. 2-2B EACH	MANHOLE, NO. 3 EACH						
R-81A	618	238+03	238+14	LT/RT	96	1	192												
SS-100	618	238+03	247+43	LT/RT				91	899	20	192		4	1					
TOTALS CARRIED TO SHEETS 395-398					96	1	192	91	899	20	192		4	1					

ESTIMATED QUANTITIES	FRA - 71 - 0:00						
<table border="1" style="font-size: small;"> <tr> <td>CALCULATED</td> <td>DCB</td> </tr> <tr> <td>CHECKED</td> <td>SJS</td> </tr> </table>	CALCULATED	DCB	CHECKED	SJS	<table border="1" style="font-size: small;"> <tr> <td>620</td> </tr> <tr> <td>1312</td> </tr> </table>	620	1312
CALCULATED	DCB						
CHECKED	SJS						
620							
1312							

X:\4037000\121957.16\107201\roadway\sheets\107201GP050.dgn_Sheet 10/28/2019 11:01:18 AM 14585.js

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
622	PROFILES
623	ESTIMATED QUANTITIES
1011	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

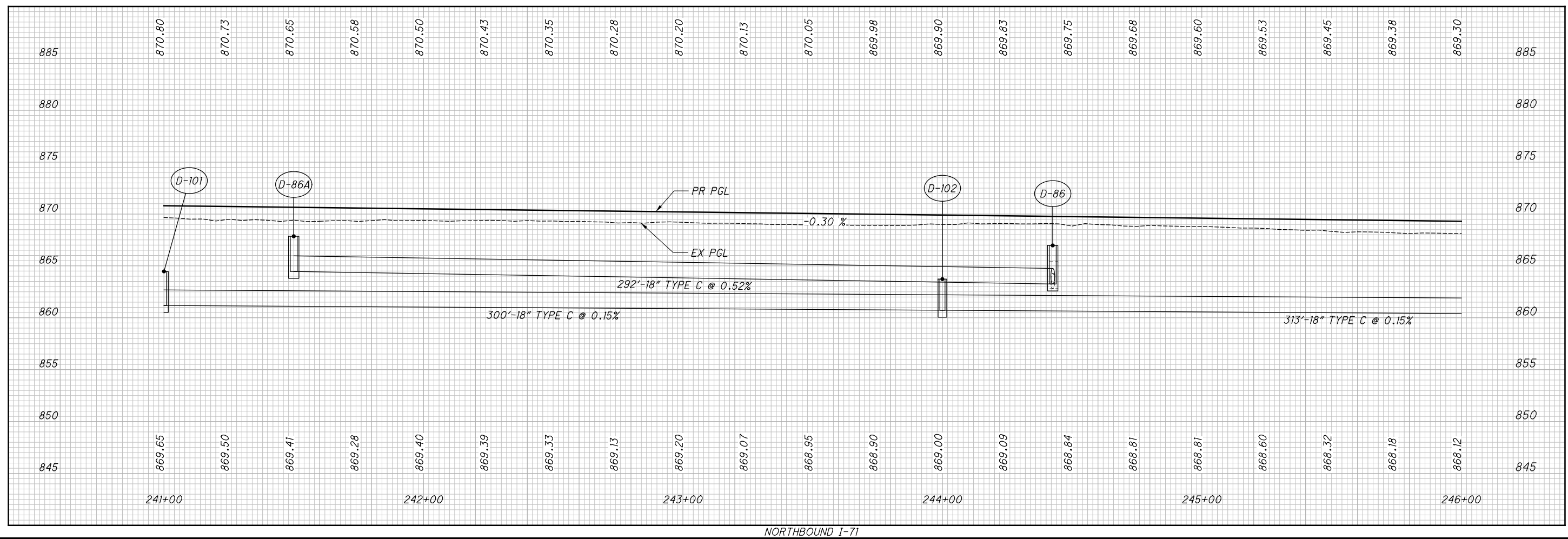
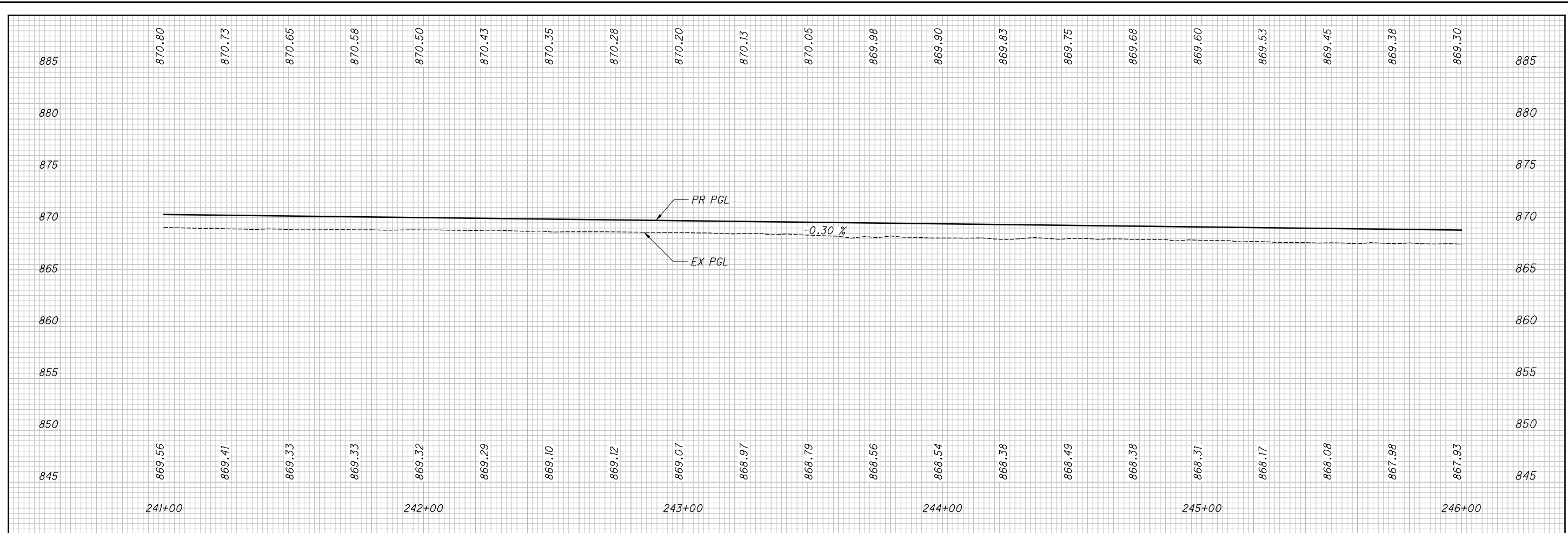
0 20 40
10
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 241+00 TO STA 246+00

FRA-71-0:00

621
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF050.dgn Sheet 10/28/2019 11:10:19 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 241+00 TO STA 246+00

FRA - 71 - 0.00

622
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0050.dgn Sheet 10/28/2019 11:10:19 AM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	611	670							
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	18" CONDUIT, TYPE B FT	18" CONDUIT, TYPE C FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY							
R-82	621	244+43		RT	108	1													
EC-83	621	241+59	244+36	CL									447						
EC-84	621, 624, 627	244+52	251+43	CL									1114						
SS-50	621	241+50	244+43	CL/RT			1.33	0.33	106	292	2								
TOTALS CARRIED TO SHEETS 395-398					108	1	1.33	0.33	106	292	2	1561							

CALCULATED
DCB
CHECKED
SJS

ESTIMATED QUANTITIES

FRA - 71 - 0.00

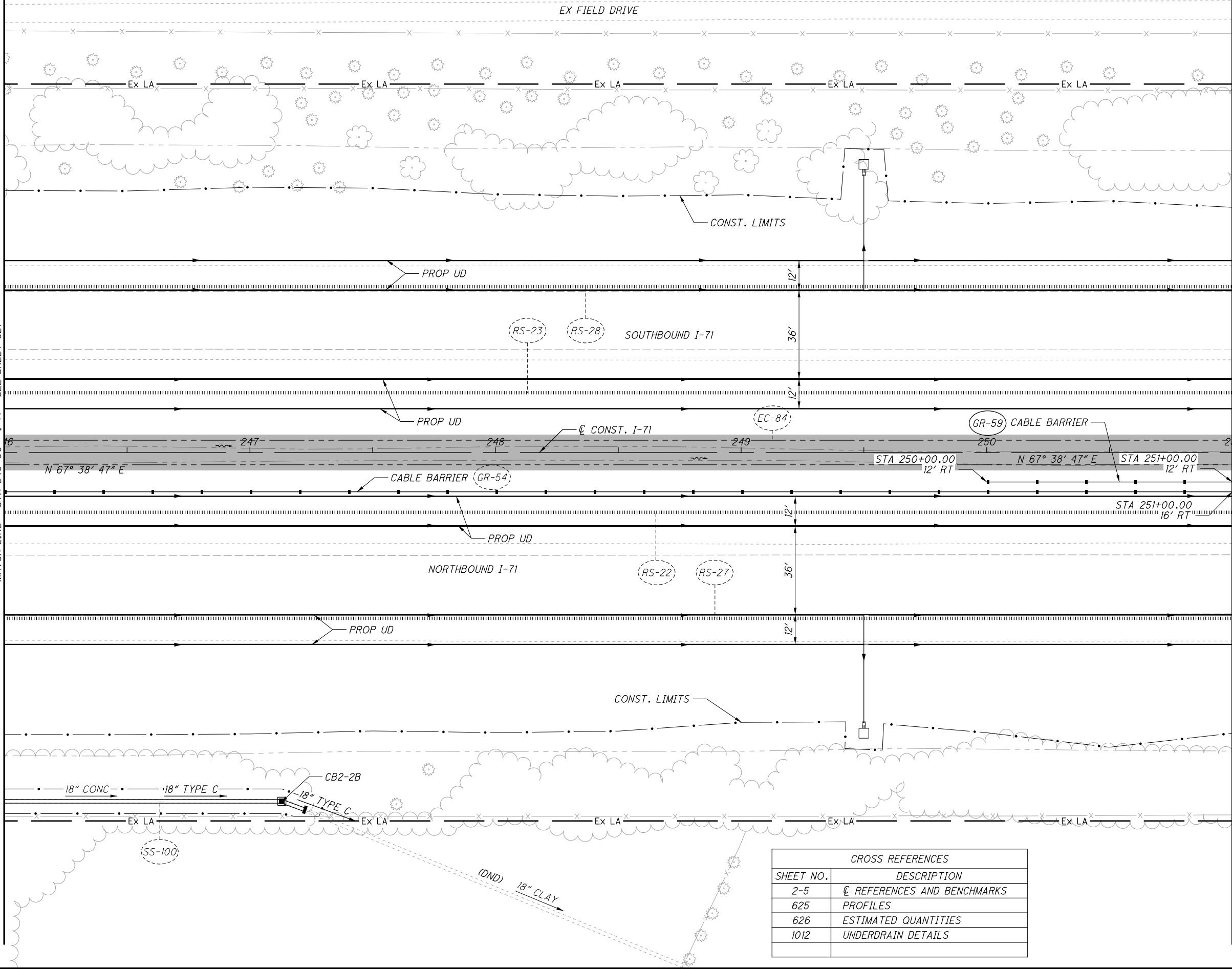
623
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP051.dgn Sheet 10/28/2019 11:10:20 AM 14585.js

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

MATCH LINE - STA 246+00 - I-71 - SEE SHEET 621

MATCH LINE - STA 251+00 - I-71 - SEE SHEET 627



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
625	PROFILES
626	ESTIMATED QUANTITIES
1012	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

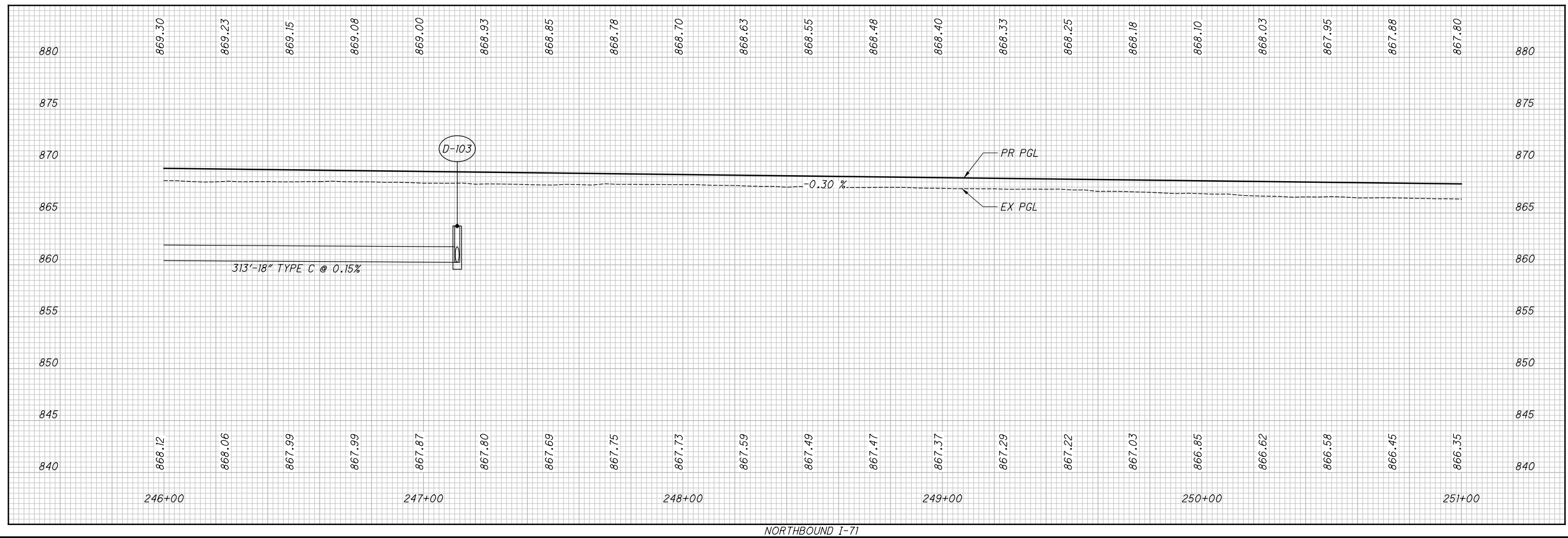
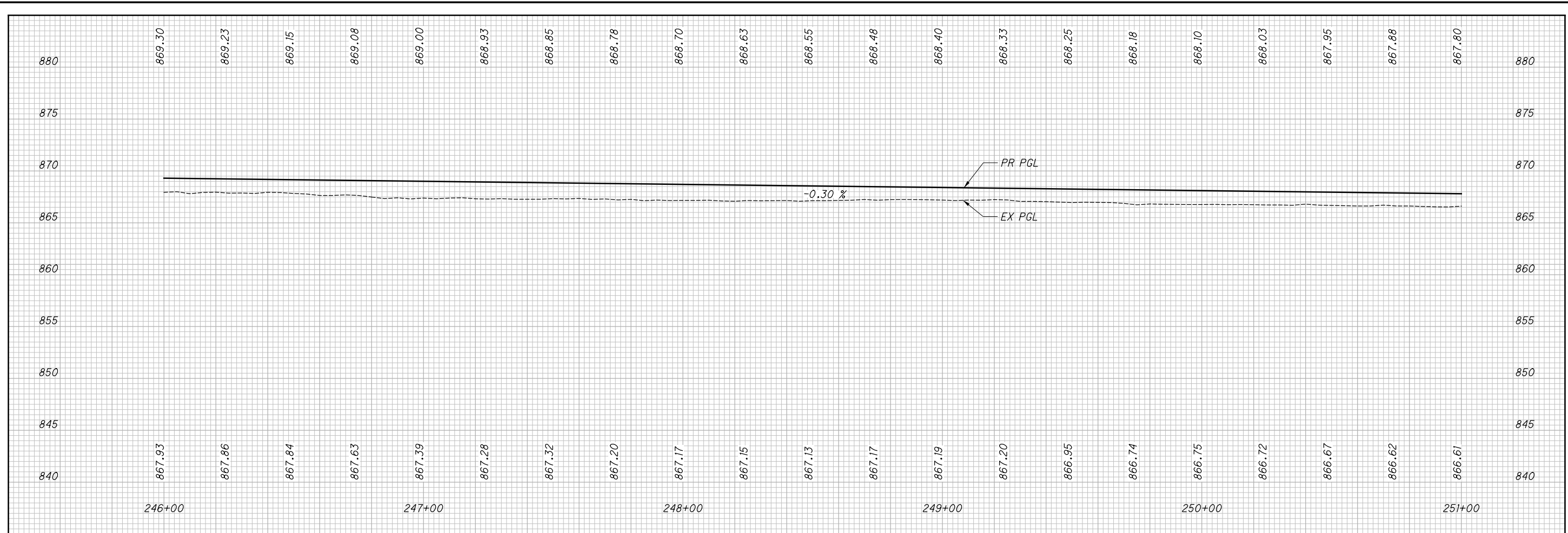
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 246+00 TO STA 251+00

FRA-71-0.00

624
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF051.dgn Sheet 10/28/2019 11:10:21 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 246+00 TO STA 251+00

FRA - 71 - 0.00

625
1312

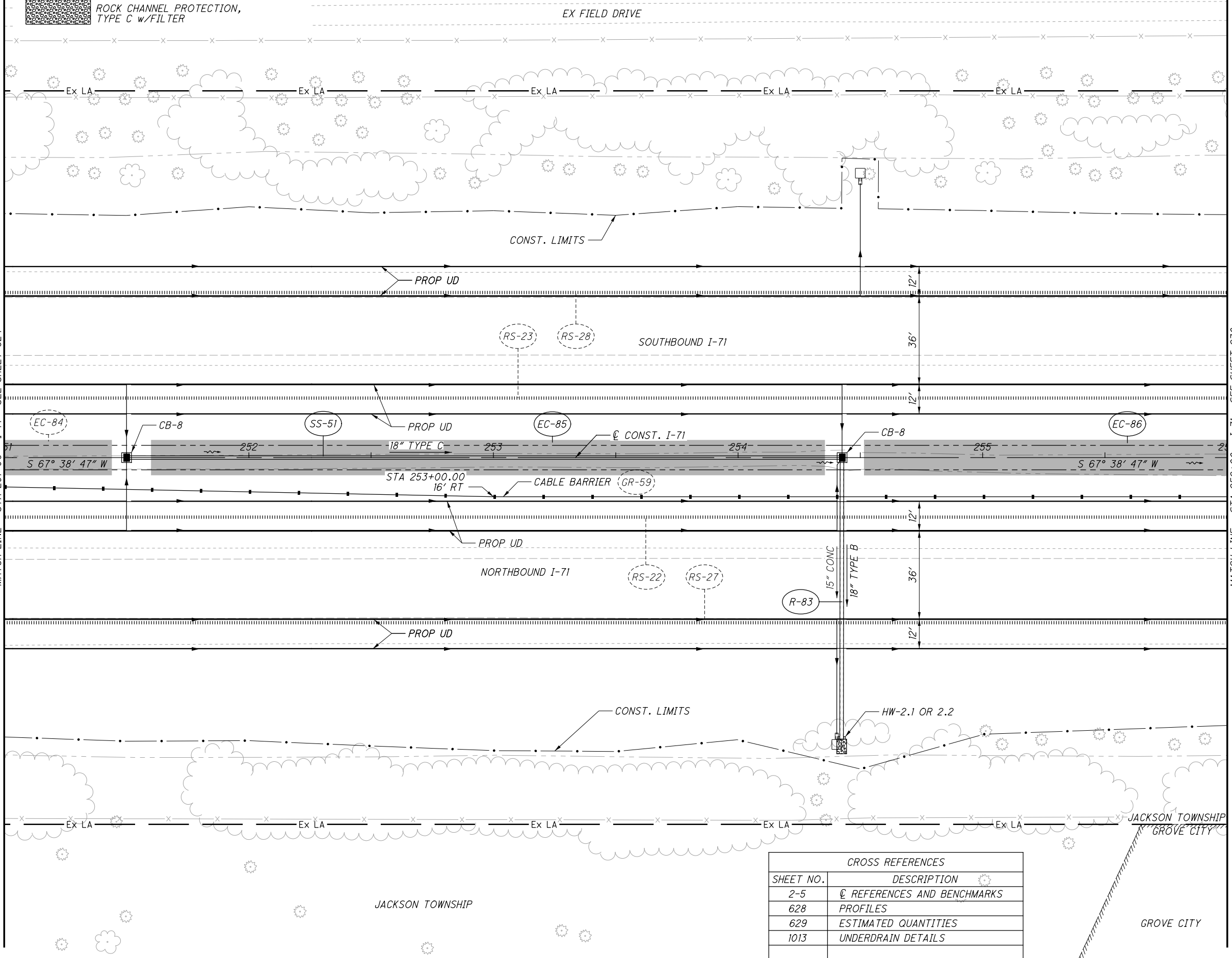
X:\4037000\121957.16\107201\roadway\sheets\107201GP052.dgn_Sheet 10/28/2019 11:10:22 AM 1458s.js

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

MATCH LINE - STA 251+00 - I-71 - SEE SHEET 624

MATCH LINE - STA 256+00 - I-71 - SEE SHEET 630



CALCULATED
DCB
CHECKED
SJS

0 20 40
1" = 40'
HORIZONTAL
SCALE IN FEET

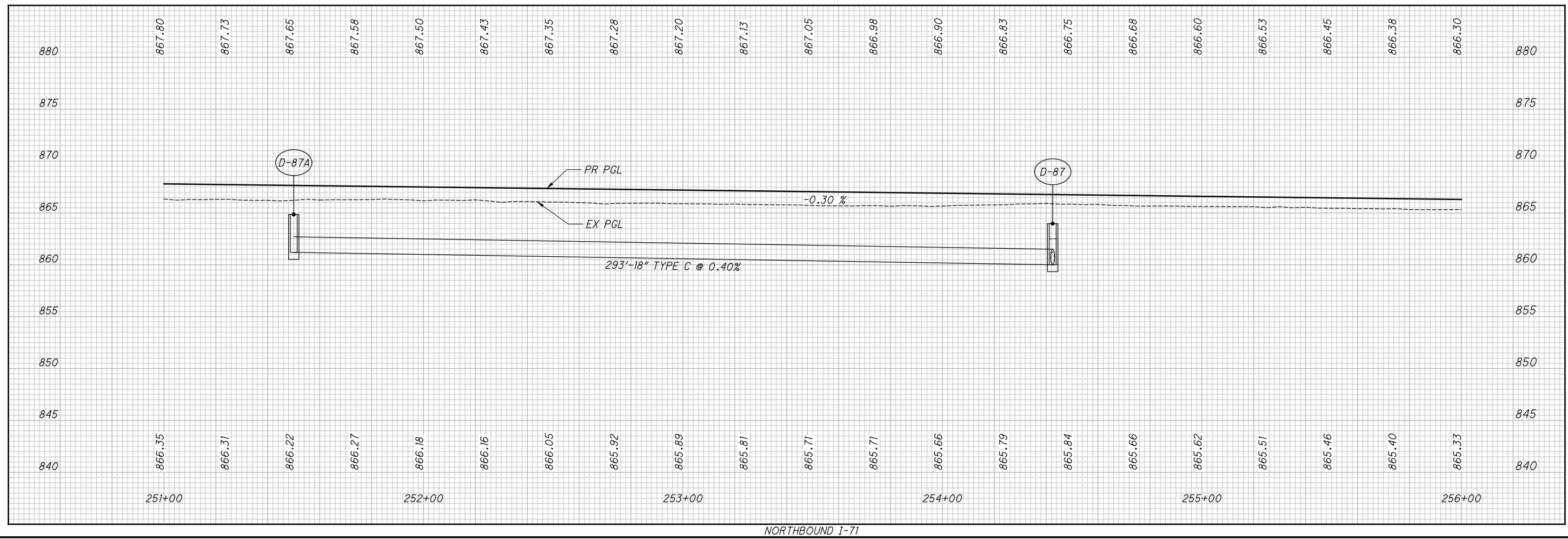
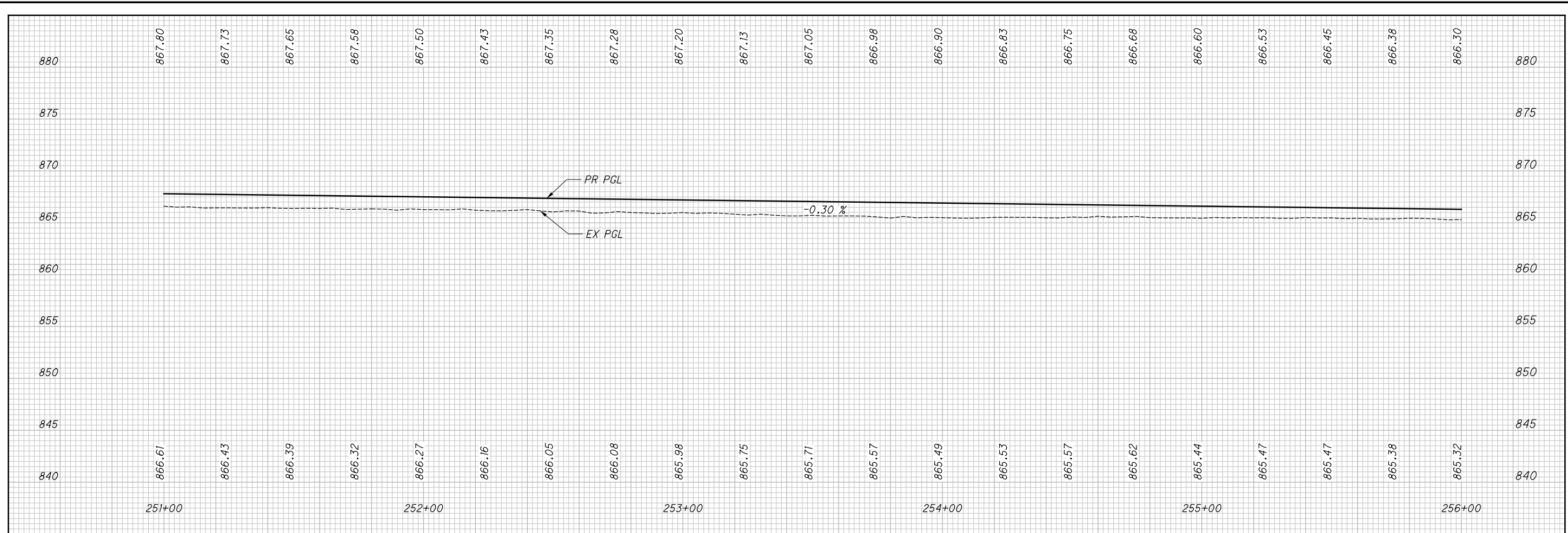
PLAN - I-71
STA 251+00 TO STA 256+00

FRA-71-0.00

627
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
628	PROFILES
629	ESTIMATED QUANTITIES
1013	UNDERDRAIN DETAILS

X:\4037000\121957.16\107201\roadway\sheets\107201GF052.dgn Sheet 10/28/2019 11:10:22 AM 14585.js



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 251+00 TO STA 256+00

FRA - 71 - 0.00

628
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0052.dgn Sheet 10/28/2019 11:10:23 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	611	670							
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	18" CONDUIT, TYPE B FT	18" CONDUIT, TYPE C FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY							
R-83	627	254+43		RT	115	1													
EC-85	627	251+59	254+36	CL									447						
EC-86	627, 630, 633	254+52	261+43	CL									1114						
SS-51	627	251+50	254+43	CL/RT			1.33	0.33	115	293	2								
TOTALS CARRIED TO SHEETS 399-402					115	1	1.33	0.33	115	293	2	1561							

CALCULATED
DCB
CHECKED
SJS

ESTIMATED QUANTITIES

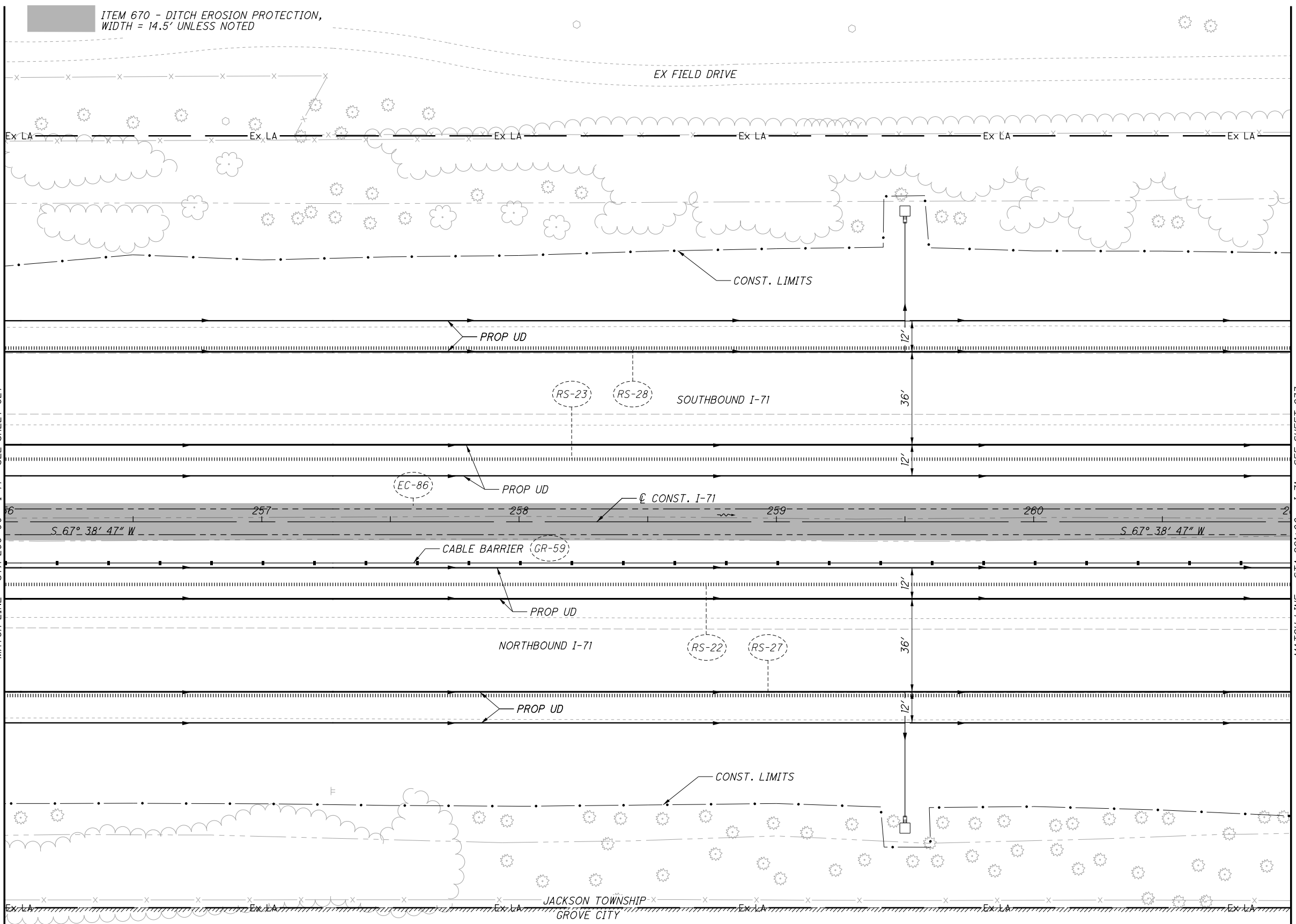
FRA - 71 - 0.00

629
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP053.dgn_Sheet 10/28/2019 11:02:24 AM 1458sjs

MATCH LINE - STA 256+00 - I-71 - SEE SHEET 627

MATCH LINE - STA 261+00 - I-71 - SEE SHEET 633



ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED



0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
DCB
CHECKED
SJS

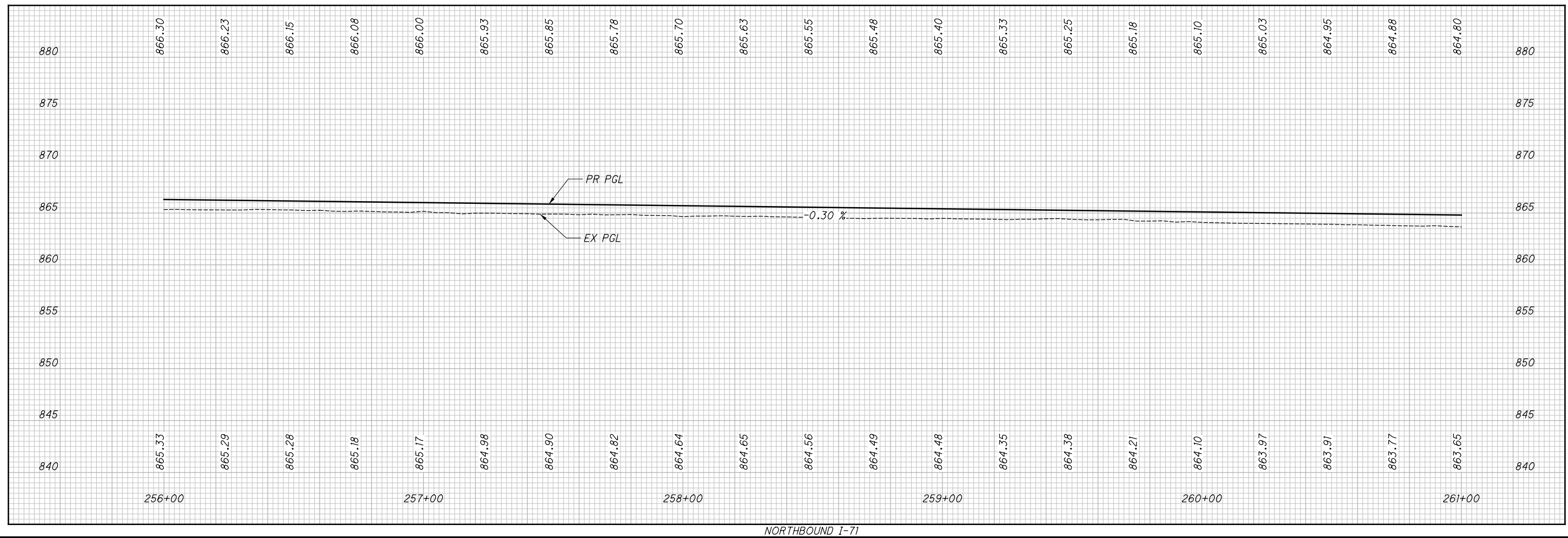
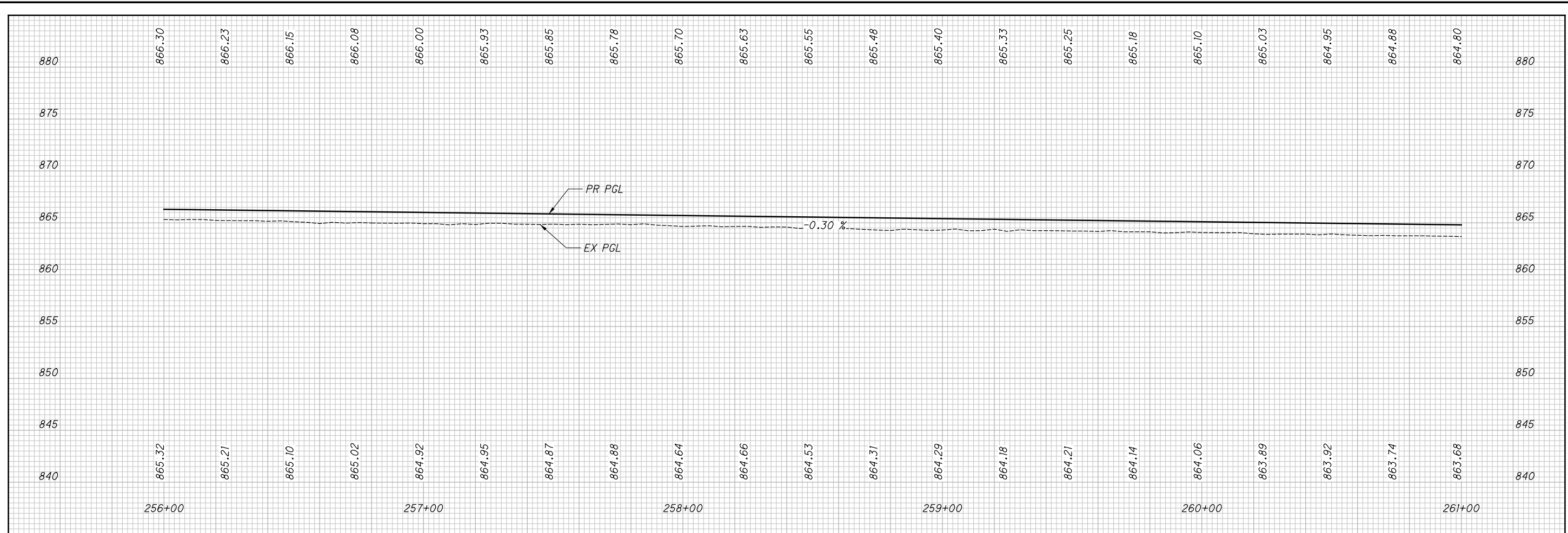
PLAN - I-71
STA 256+00 TO STA 261+00

FRA-71-0.00

630
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
631	PROFILES
632	ESTIMATED QUANTITIES
1014	UNDERDRAIN DETAILS

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CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 256+00 TO STA 261+00

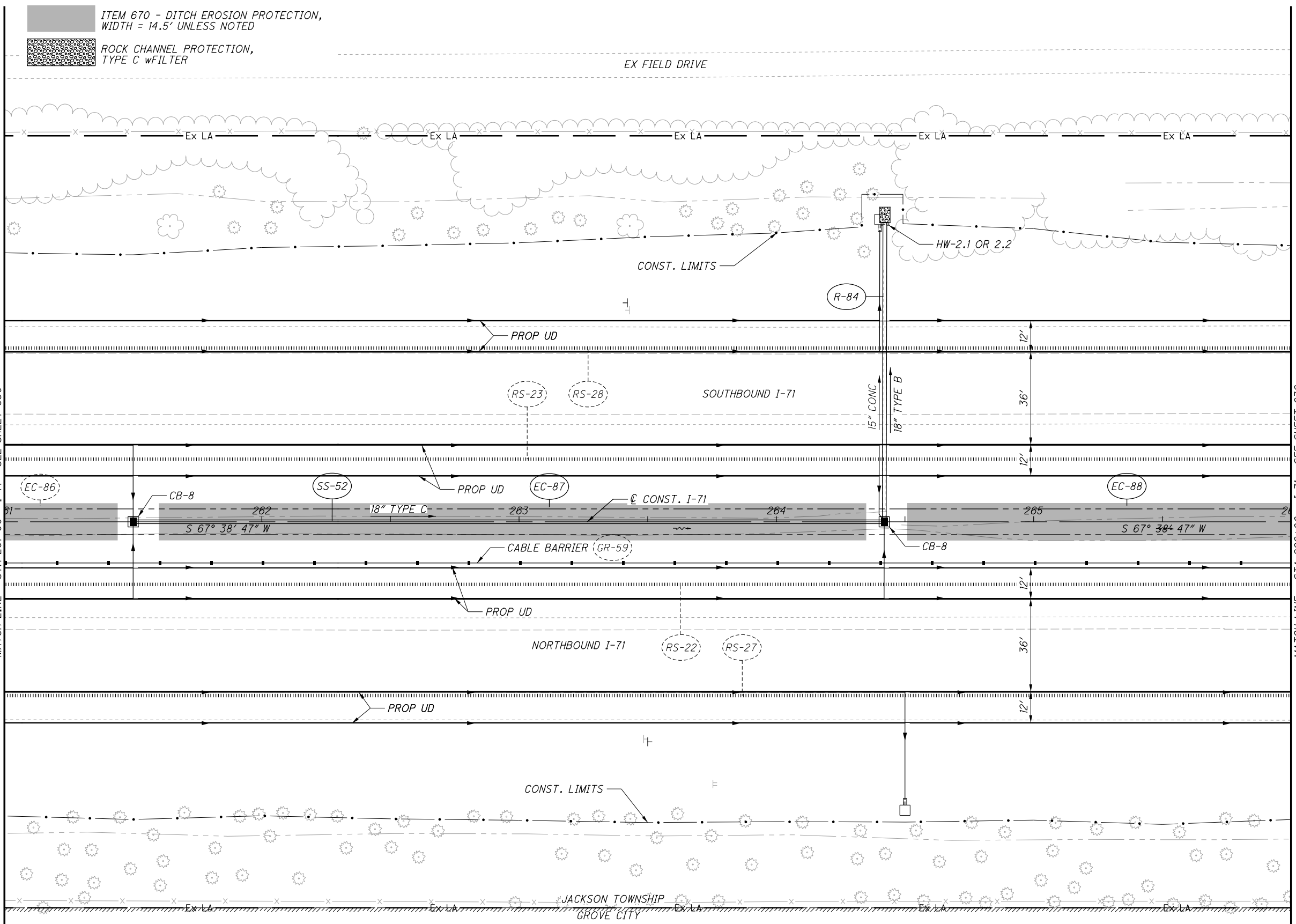
FRA - 71 - 0.00

631
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP054.dgn_Sheet 10/28/2019 11:10:25 AM 1458sjs

MATCH LINE - STA 261+00 - I-71 - SEE SHEET 630

MATCH LINE - STA 266+00 - I-71 - SEE SHEET 636



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

EX FIELD DRIVE

CONST. LIMITS

SOUTHBOUND I-71

NORTHBOUND I-71

CONST. LIMITS

JACKSON TOWNSHIP
GROVE CITY

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
634	PROFILES
635	ESTIMATED QUANTITIES
1015	UNDERDRAIN DETAILS

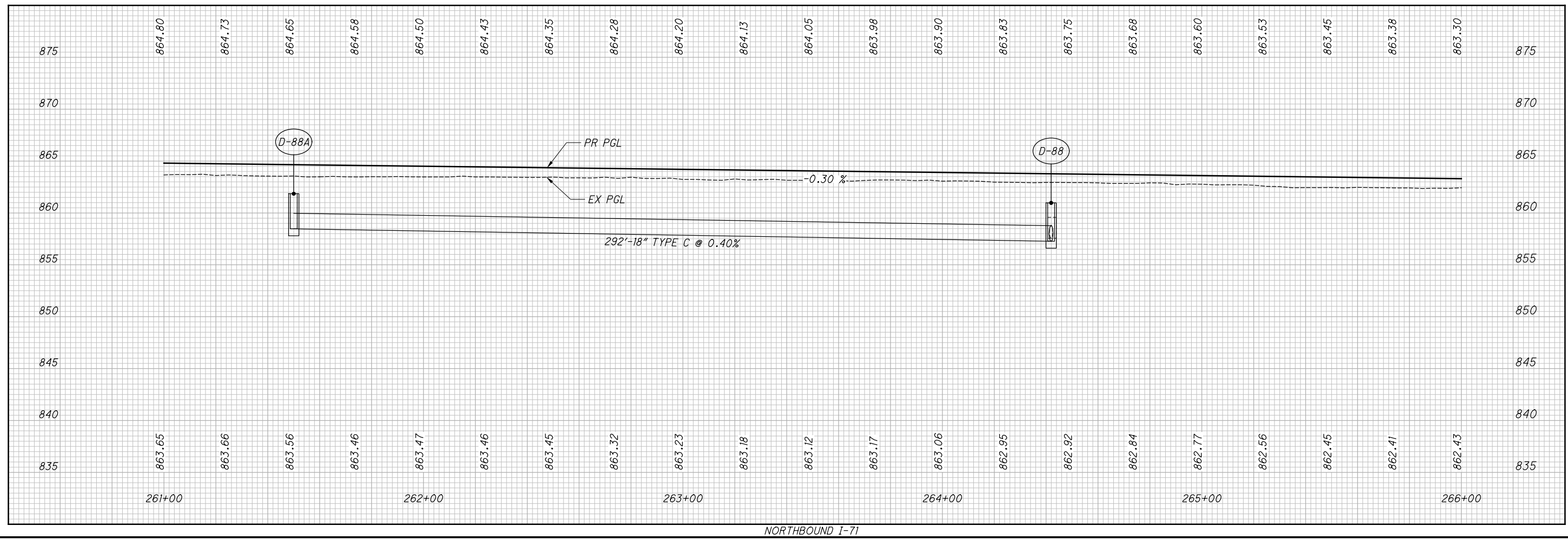
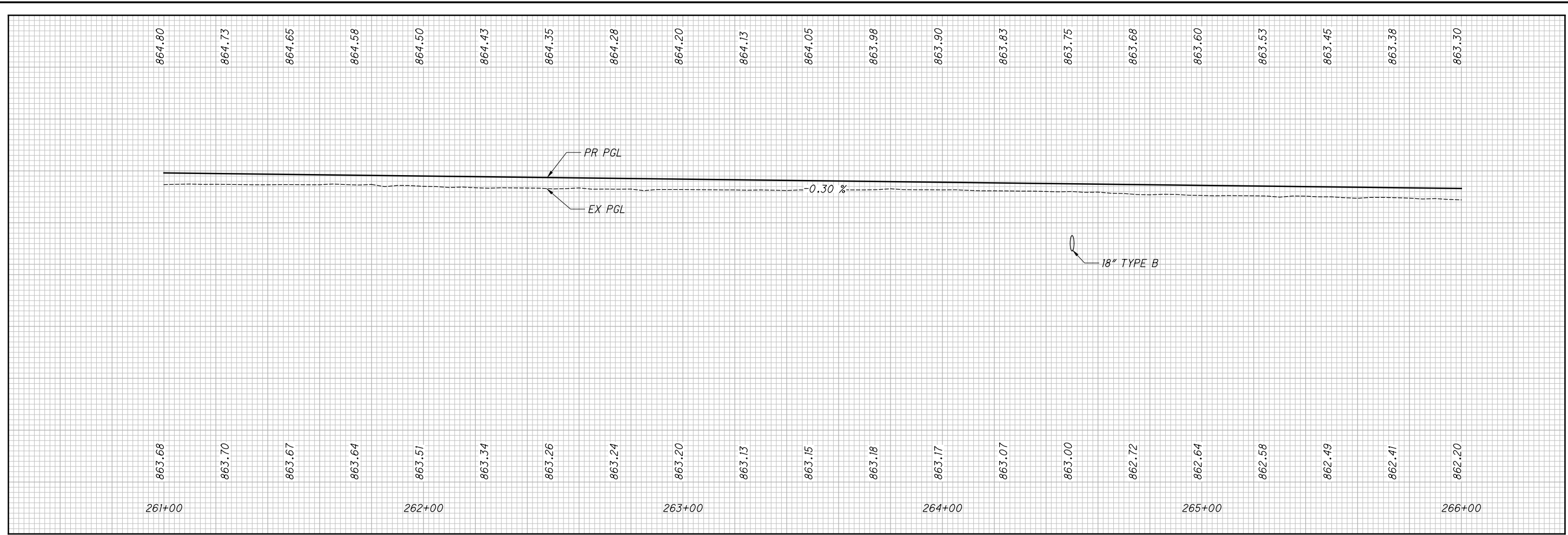
CALCULATED
DCB
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 261+00 TO STA 266+00

FRA-71-0.00

633
1312



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 261+00 TO STA 266+00

FRA - 71 - 0.00

634
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0054.dgn Sheet 10/28/2019 11:10:26 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	611	670							
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	18" CONDUIT, TYPE B FT	18" CONDUIT, TYPE C FT	CATCH BASIN, NO. 8 EACH	DITCH EROSION PROTECTION SY							
R-84	633	264+42		LT	98	1													
EC-87	633	261+59	264+35	CL									445						
EC-88	633, 636, 639	264+51	271+43	CL									1115						
SS-52	633	261+50	264+42	CL/LT			1.33	0.33	116	292	2								
TOTALS CARRIED TO SHEETS 399-402					98	1	1.33	0.33	116	292	2	1560							

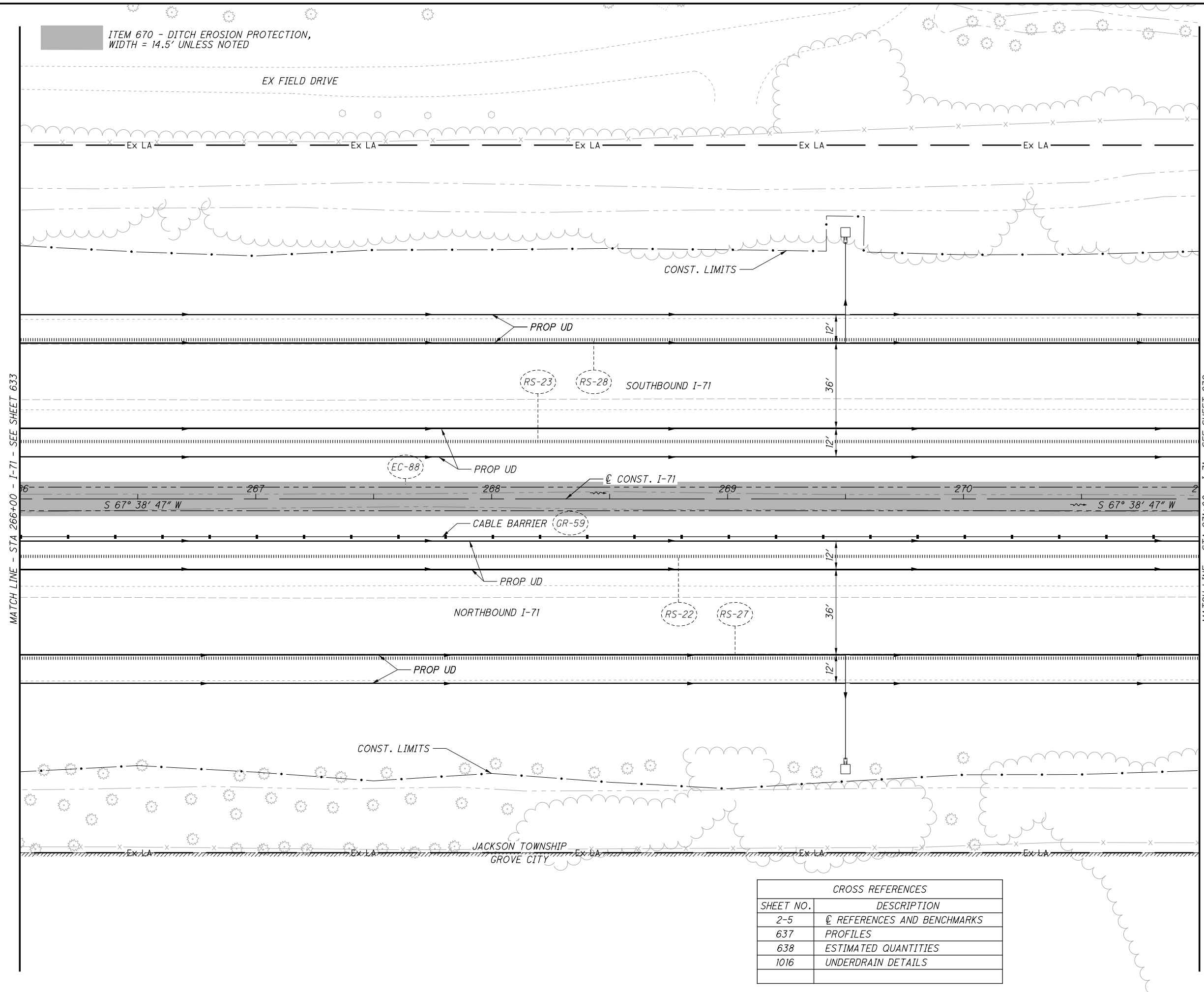
CALCULATED
DCB
CHECKED
SJS

ESTIMATED QUANTITIES

FRA - 71 - 0.00

635
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP055.dgn_Sheet 10/28/2019 11:10:27 AM 1458sjs



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

EX FIELD DRIVE

CONST. LIMITS

PROP UD

SOUTHBOUND I-71

PROP UD

CONST. I-71

CABLE BARRIER (GR-59)

PROP UD

NORTHBOUND I-71

PROP UD

CONST. LIMITS

JACKSON TOWNSHIP
GROVE CITY

MATCH LINE - STA 266+00 - I-71 - SEE SHEET 633

MATCH LINE - STA 271+00 - I-71 - SEE SHEET 639

S 67° 38' 47" W

S 67° 38' 47" W

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
637	PROFILES
638	ESTIMATED QUANTITIES
1016	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

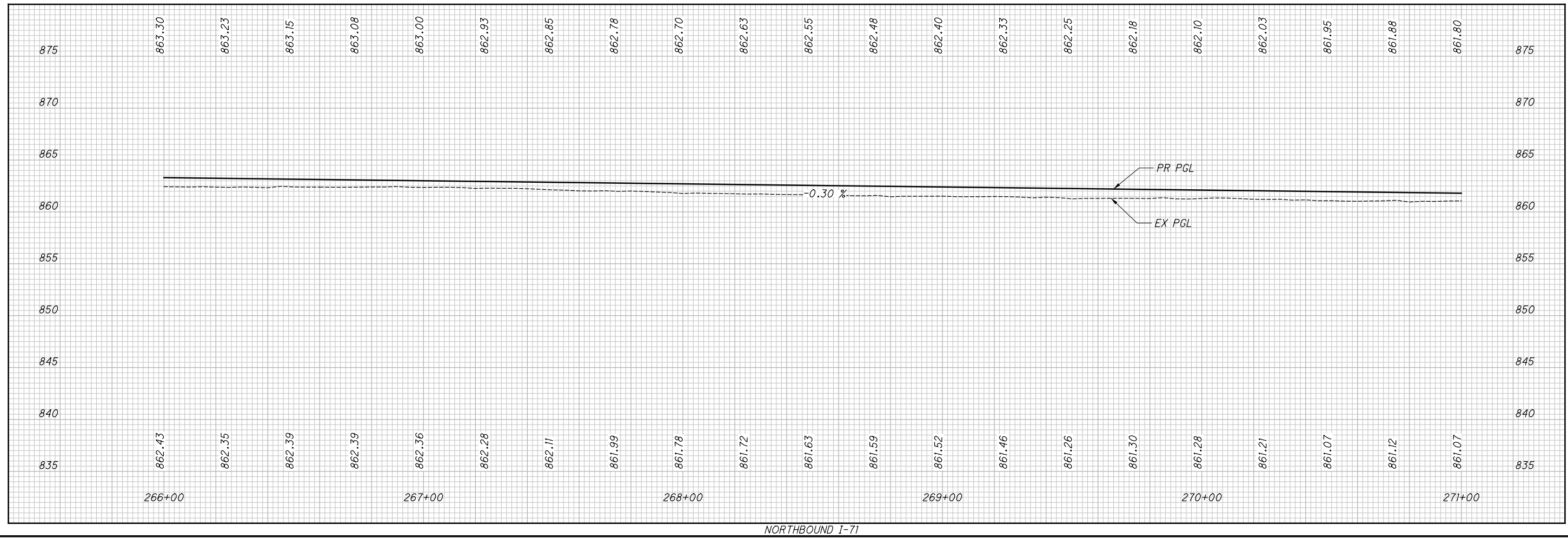
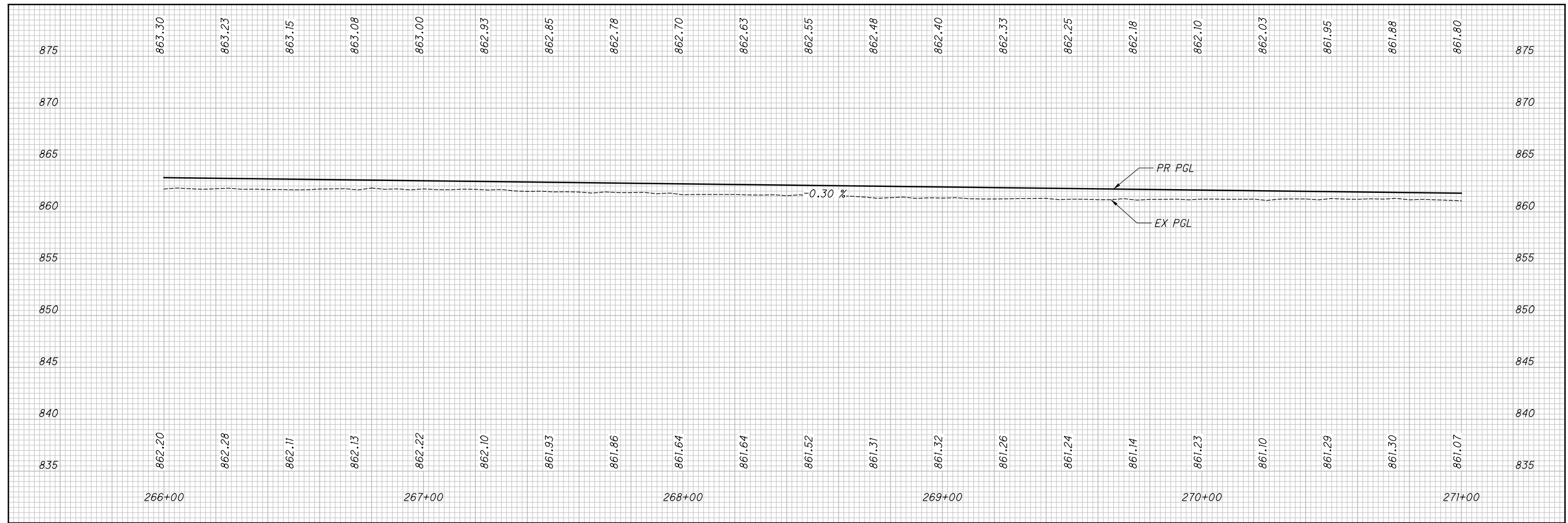
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 266+00 TO STA 271+00

FRA-71-0.00

636
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GF055.dgn Sheet 10/28/2019 11:10:28 AM 14585.js



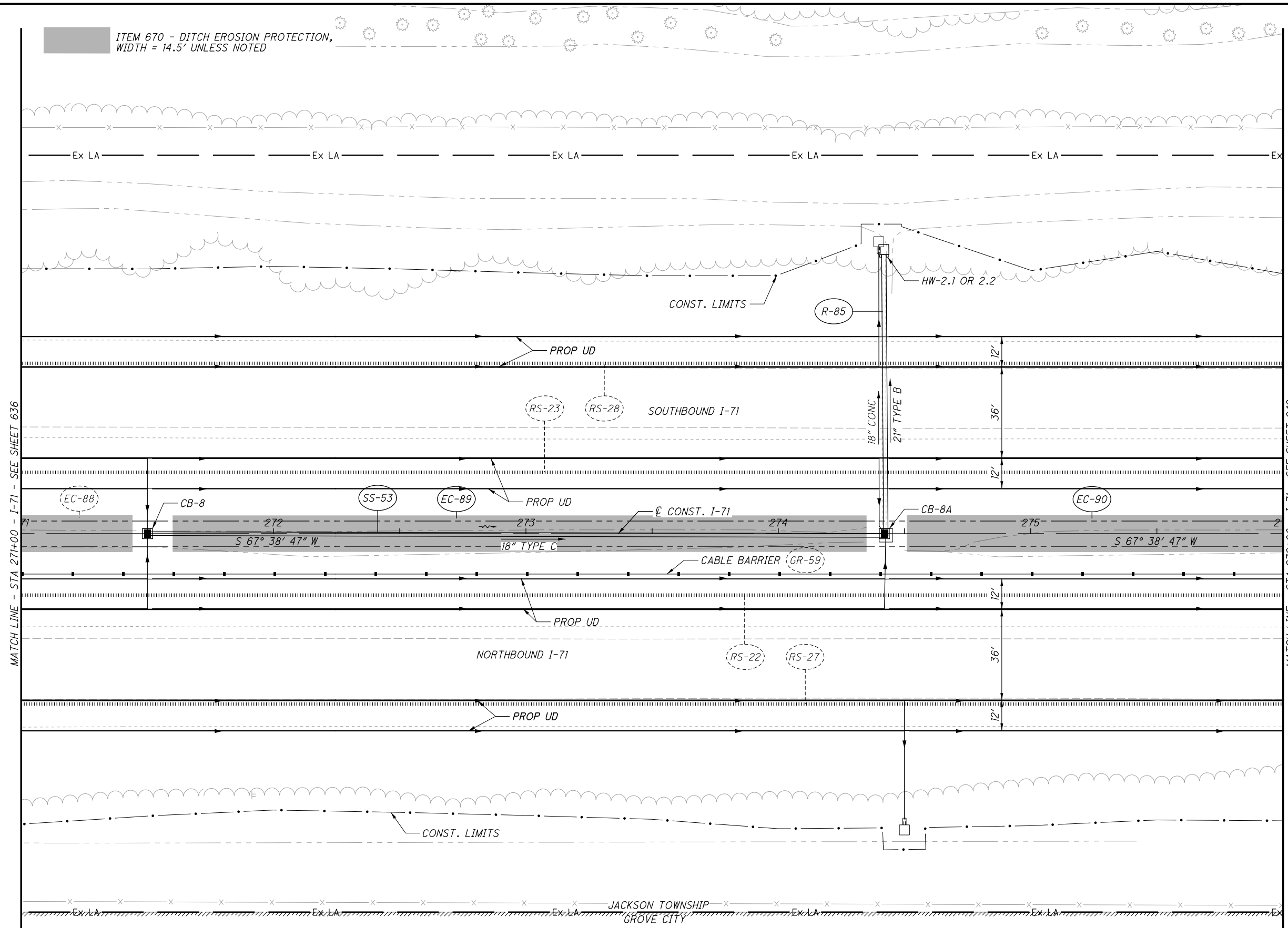
CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 266+00 TO STA 271+00

FRA - 71 - 0.00

637
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP056.dgn_Sheet 10/28/2019 11:10:29 AM 1458sjs



ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED

CALCULATED DCB CHECKED SJS

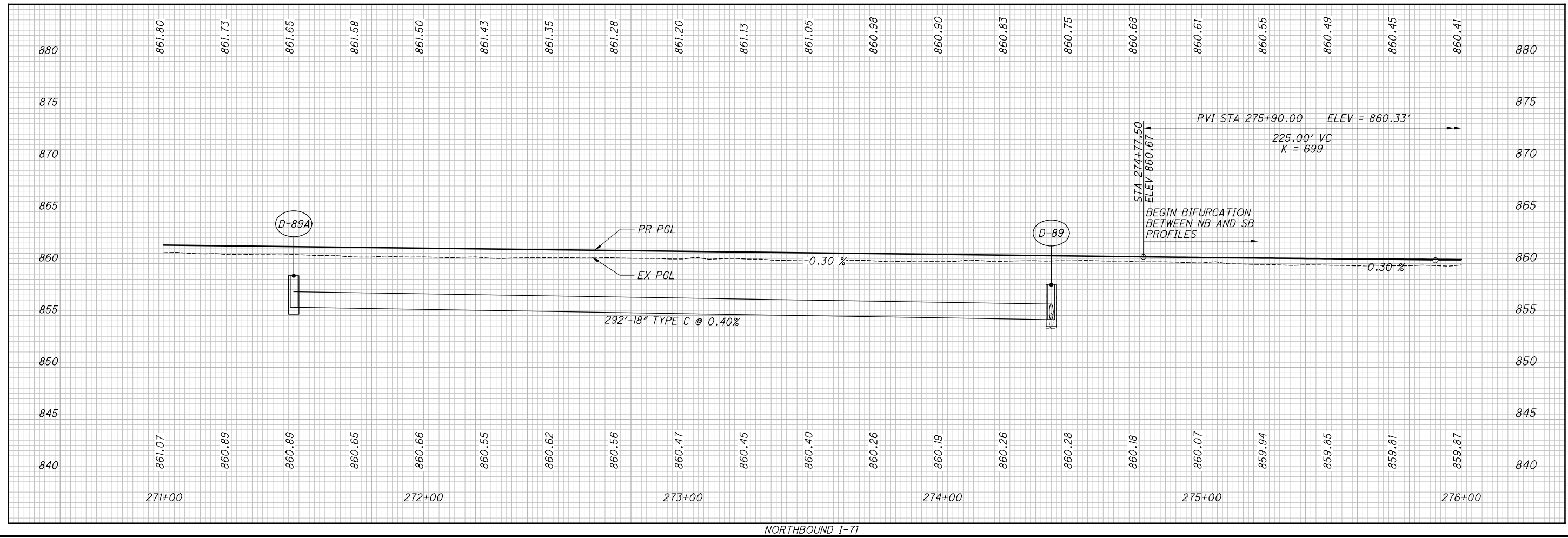
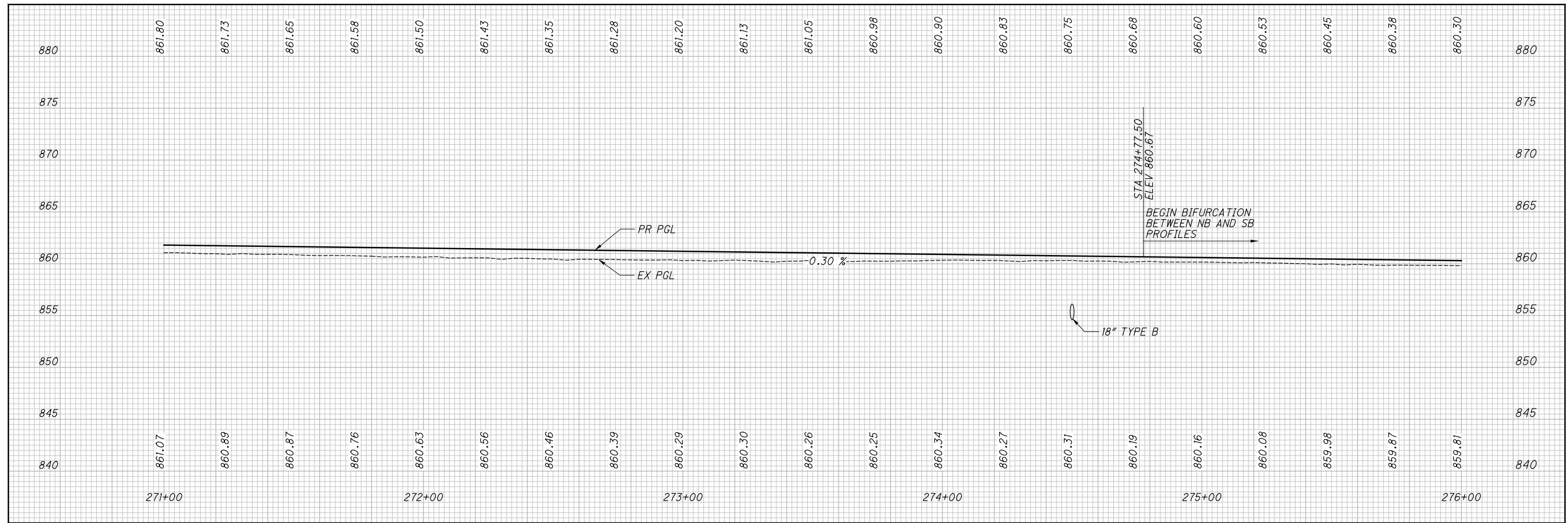
0 20 40
10 HORIZONTAL SCALE IN FEET

PLAN - I-71
STA 271+00 TO STA 276+00

FRA-71-0.00

639
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	REFERENCES AND BENCHMARKS
640	PROFILES
641	ESTIMATED QUANTITIES
1017	UNDERDRAIN DETAILS



CALCULATED
DCB
CHECKED
SJS

PROFILE - I-71
STA 271+00 TO STA 276+00

FRA - 71 - 0.00

640
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0056.dgn Sheet 10/28/2019 11:10:30 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	601	602	611	611	611	611	670						
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	18" CONDUIT, TYPE C FT	21" CONDUIT, TYPE B FT	CATCH BASIN, NO. 8 EACH	CATCH BASIN, NO. 8A EACH	DITCH EROSION PROTECTION SY						
R-85	639	274+42		LT	III	1													
EC-89	639	271+59	274+36	CL										447					
EC-90	639, 642	274+52	279+00	CL										722					
SS-53	639	271+50	274+43	CL/LT			1.78	0.39	292	III	1	1							
TOTALS CARRIED TO SHEETS 399-402					III	1	1.78	0.39	292	III	1	1	1169						

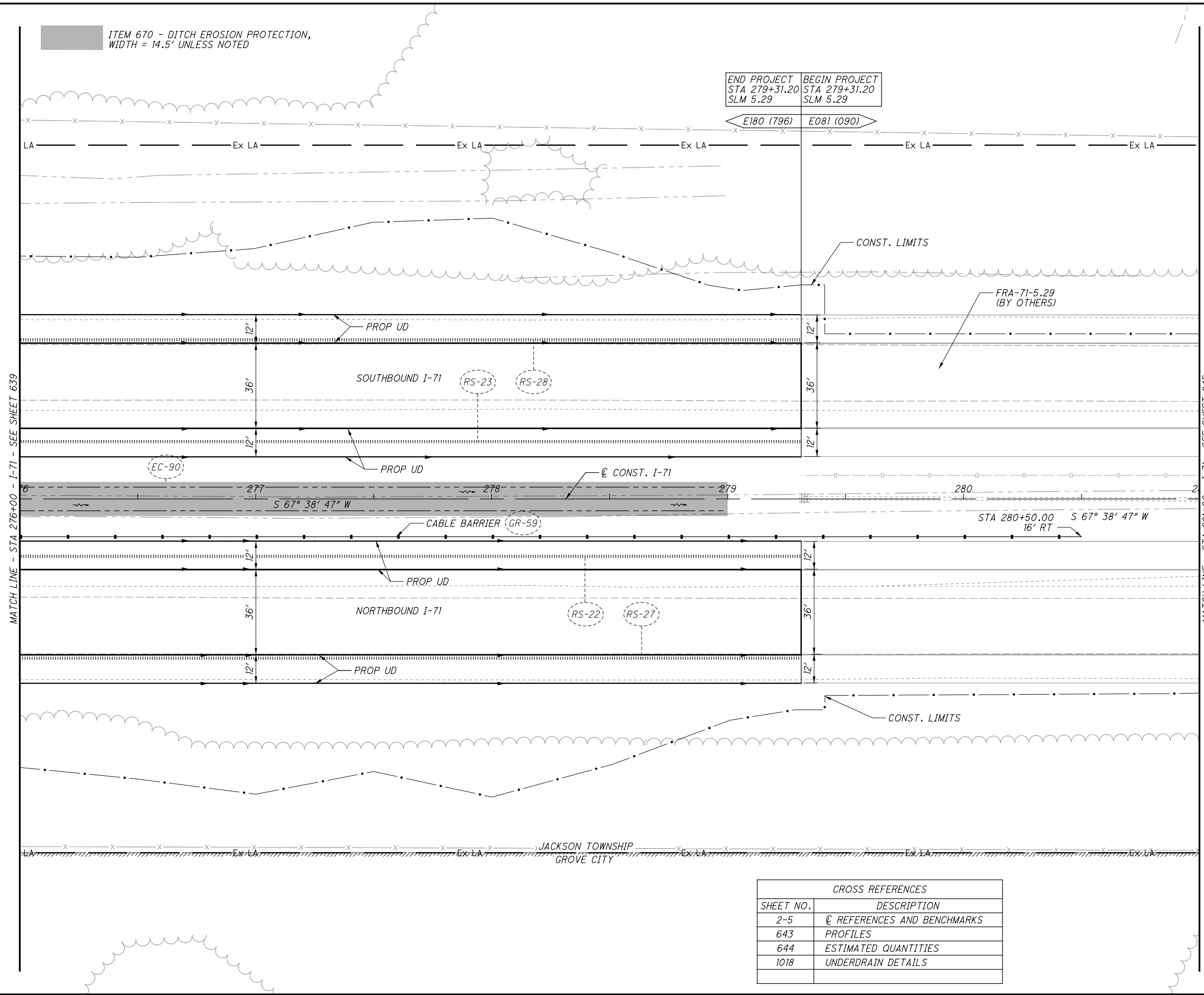
CALCULATED
DCB
CHECKED
SJS

ESTIMATED QUANTITIES

FRA - 71 - 0.00

641
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP057.dgn_Sheet 10/28/2019 11:10:31 AM 14585js



ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 14.5' UNLESS NOTED

END PROJECT STA 279+31.20 SLM 5.29	BEGIN PROJECT STA 279+31.20 SLM 5.29
--	--

E180 (796) E081 (090)

MATCH LINE - STA 276+00 - I-71 - SEE SHEET 639

MATCH LINE - STA 281+00 - I-71 - SEE SHEET 645

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
643	PROFILES
644	ESTIMATED QUANTITIES
1018	UNDERDRAIN DETAILS

CALCULATED
DCB
CHECKED
SJS

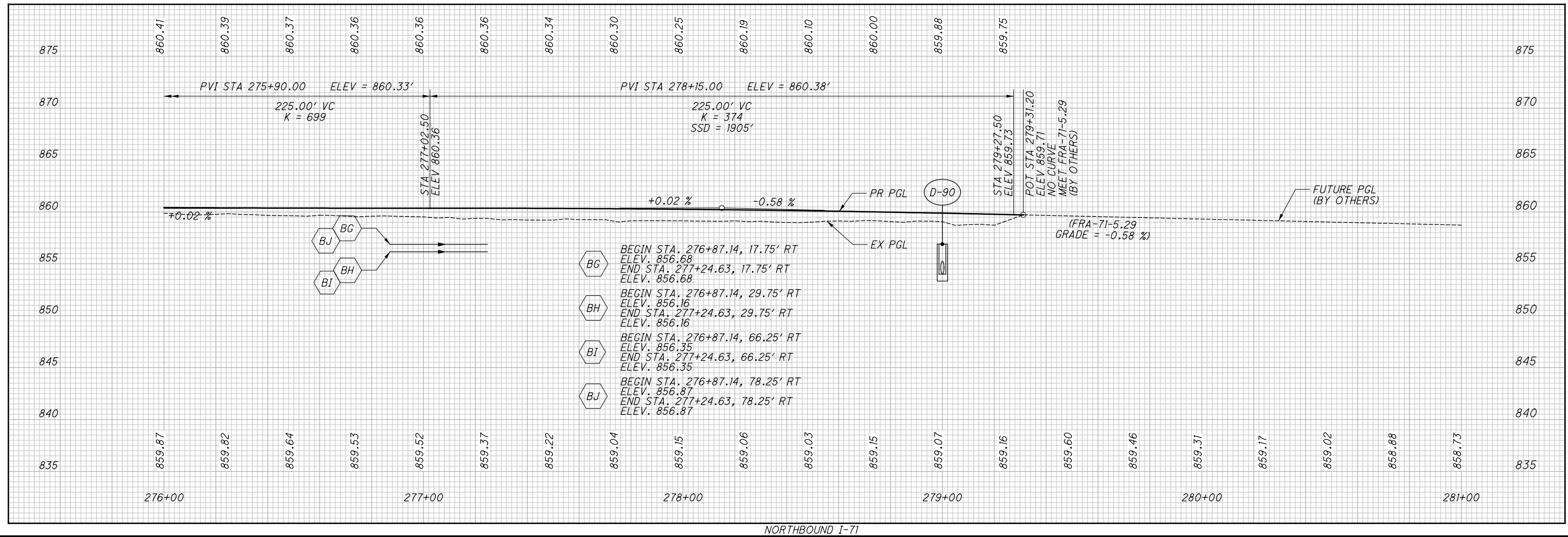
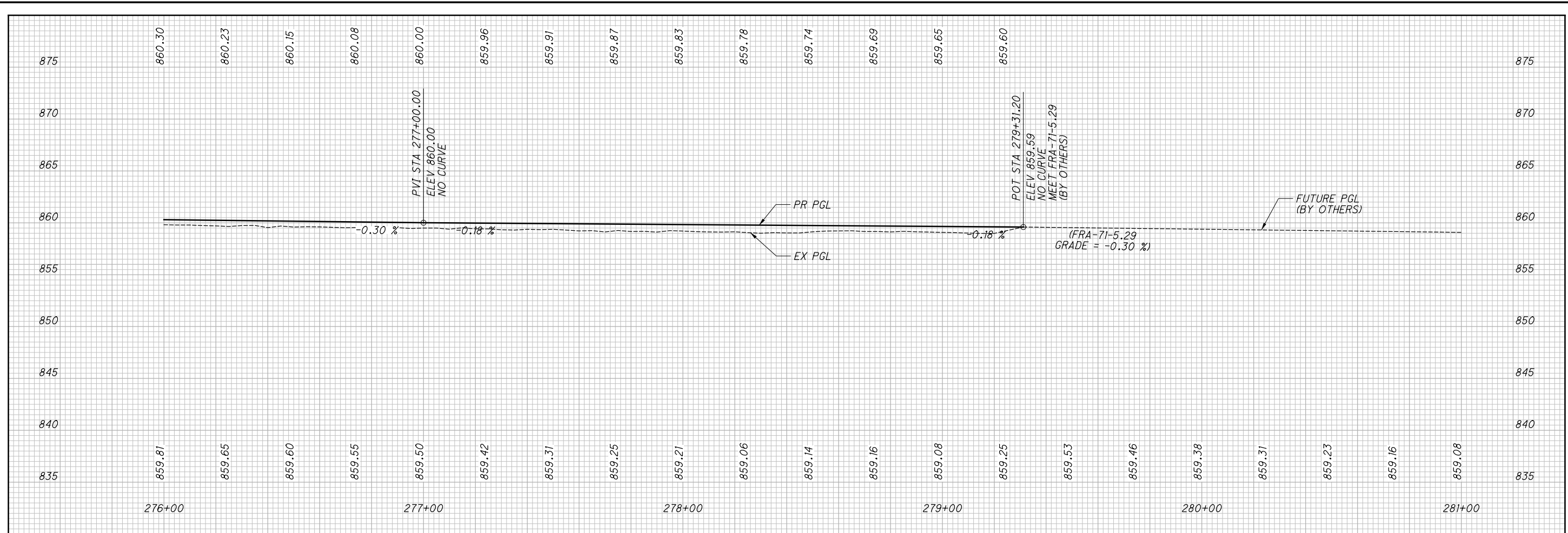
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN - I-71
STA 276+00 TO STA 281+00

FRA-71-0.00

642
1312

X:\4037000\121957.16\107201\roadway\sheets\1072010\F057.dgn Sheet 10/28/2019 11:10:31 AM 1458s.js



CALCULATED
DCB
CHECKED
SJS

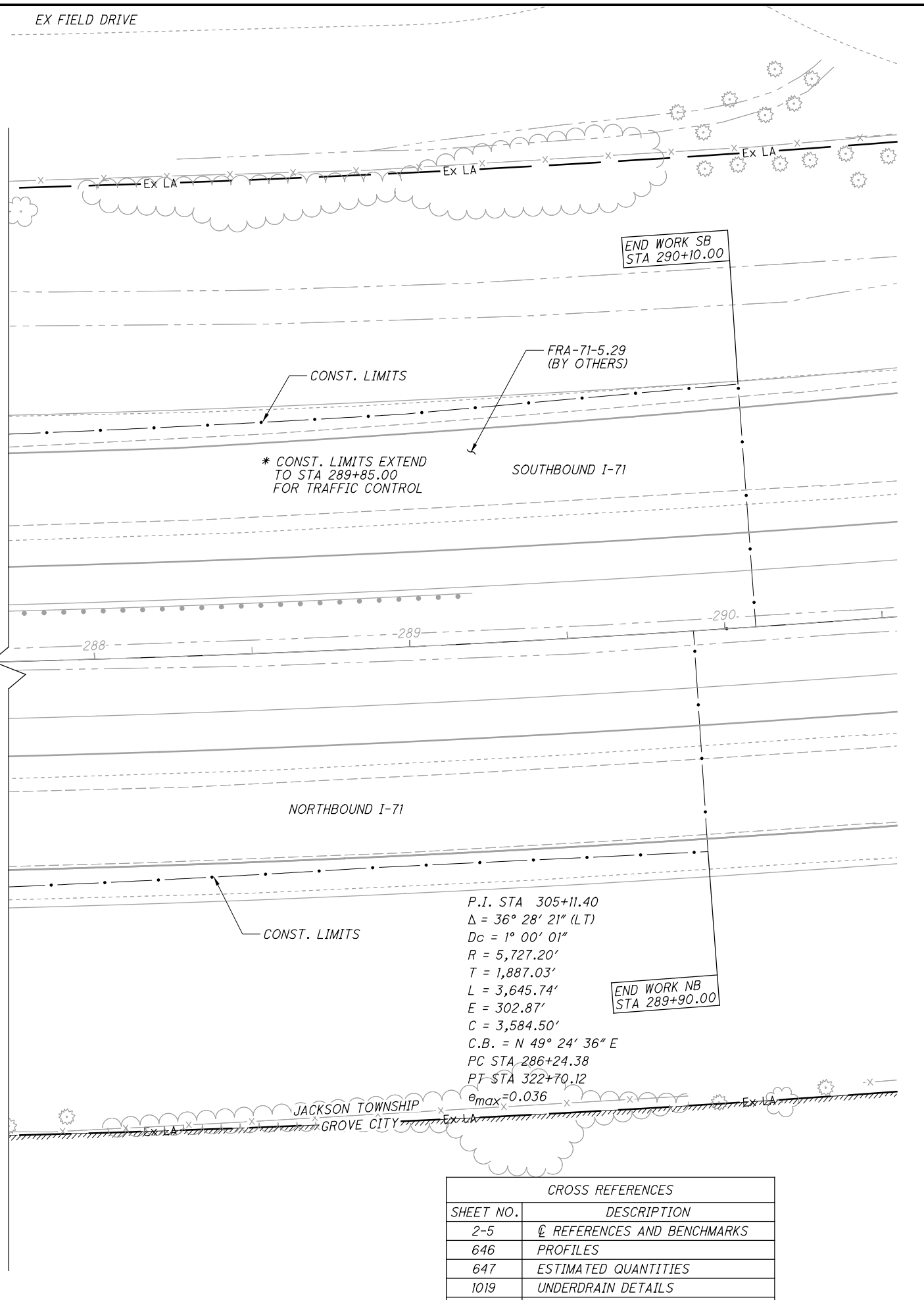
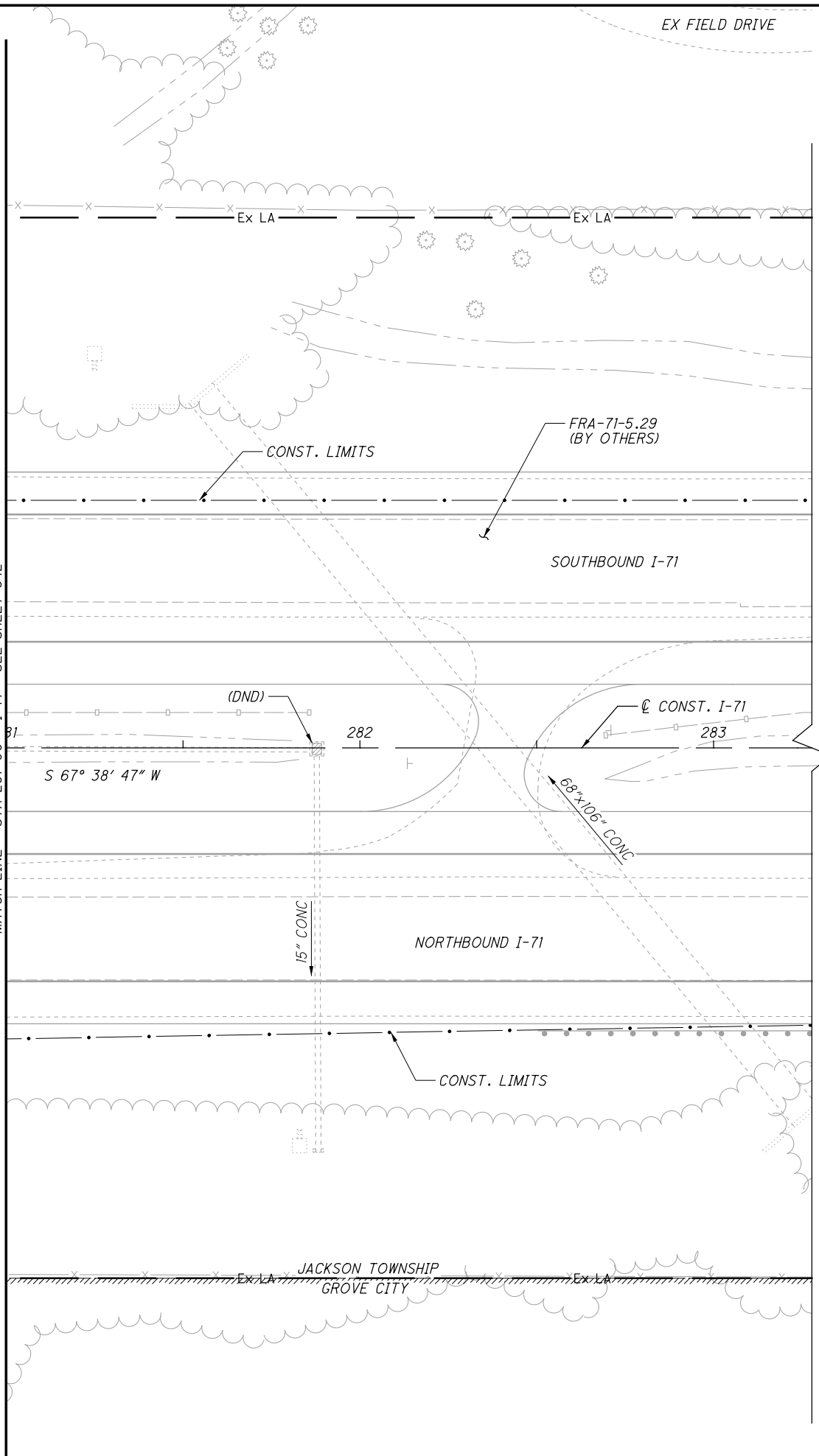
PROFILE - I-71
STA 276+00 TO STA 281+00

FRA-71-0.00

643
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP058.dgn_Sheet 10/28/2019 11:10:33 AM 1458s.js

MATCH LINE - STA 281+00 - I-71 - SEE SHEET 642



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
646	PROFILES
647	ESTIMATED QUANTITIES
1019	UNDERDRAIN DETAILS

0 20 40
 HORIZONTAL
 SCALE IN FEET

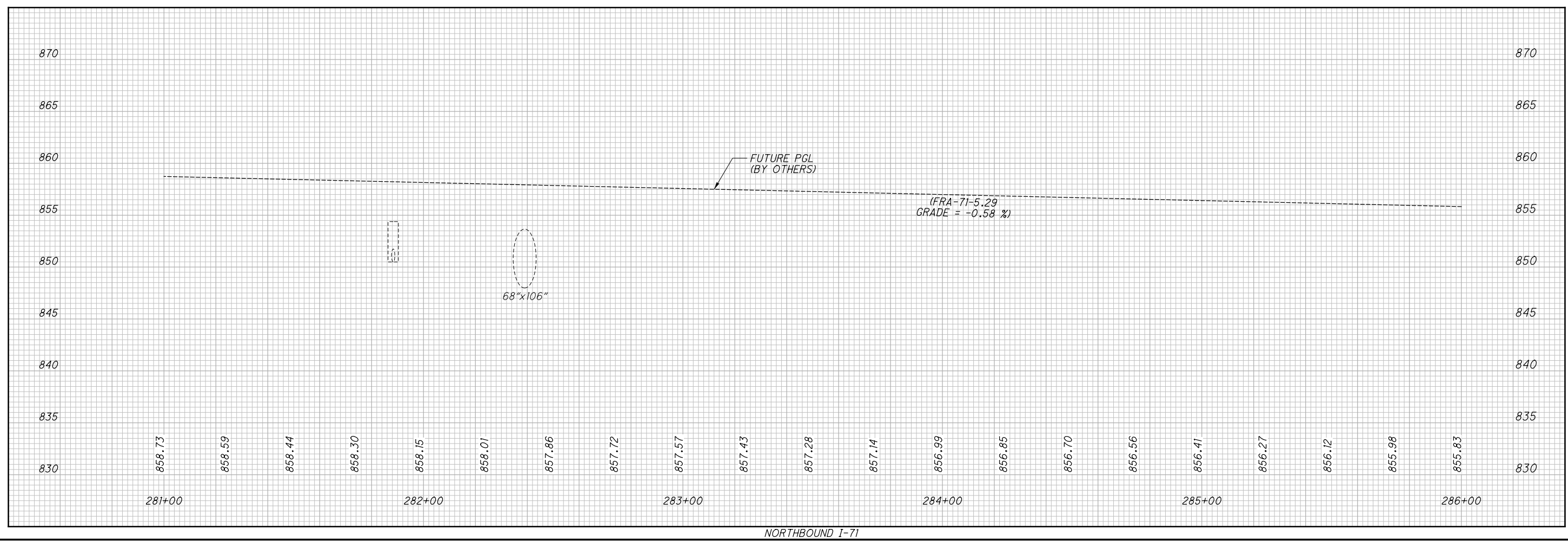
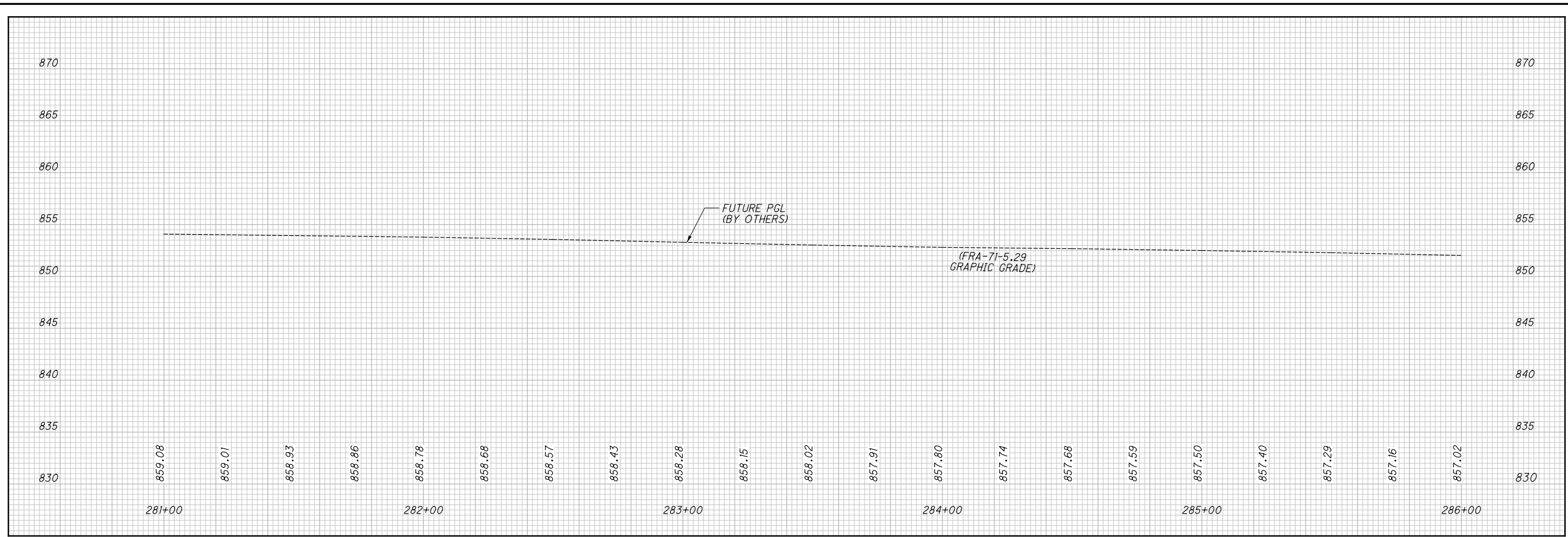
CALCULATED
 DCB
 CHECKED
 SJS

PLAN - I-71
 STA 281+00 TO STA 290+10

FRA-71-0.00

645
 1312

645
 1312



CALCULATED
DCB
CHECKED
SJS

**PROFILE - I-71
STA 281+00 TO STA 286+00**

FRA-71-0.00

x:\4037000\121957.16\107201\roadway\sheets\107201G0058.dgn Sheet 10/28/2019 11:10:34 AM 1458sjjs

REF. NO.	SHEET NO.	STATION		SIDE															
		FROM	TO																
THERE ARE NO QUANTITIES ON SHEET 645																			
TOTALS CARRIED TO SHEETS 399-402																			

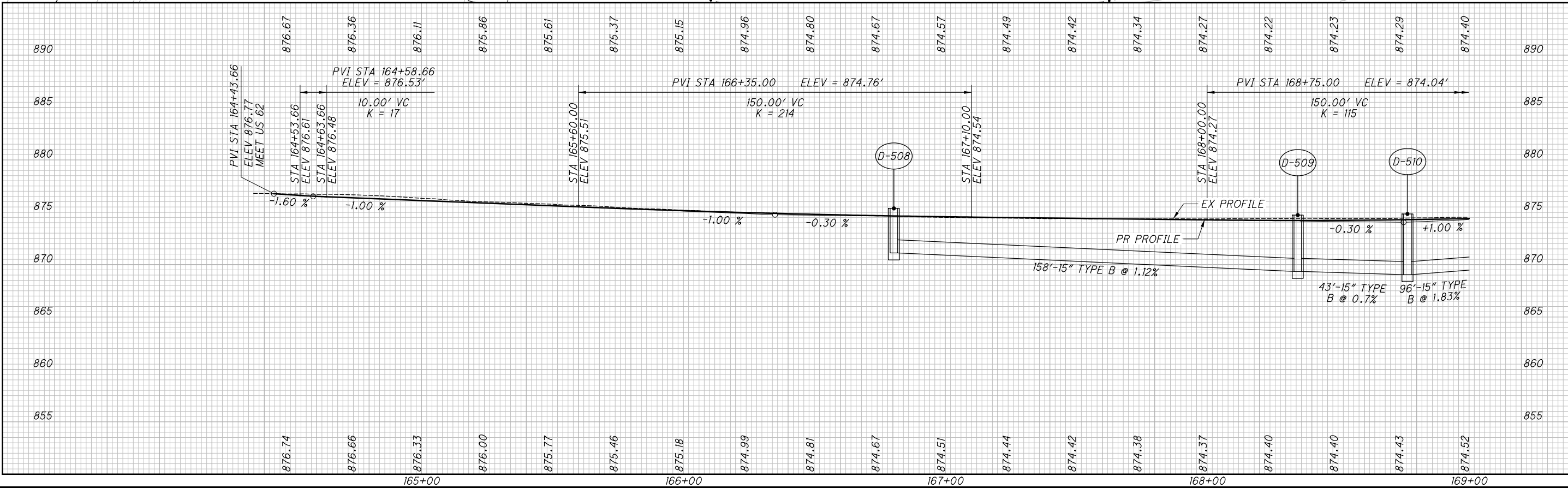
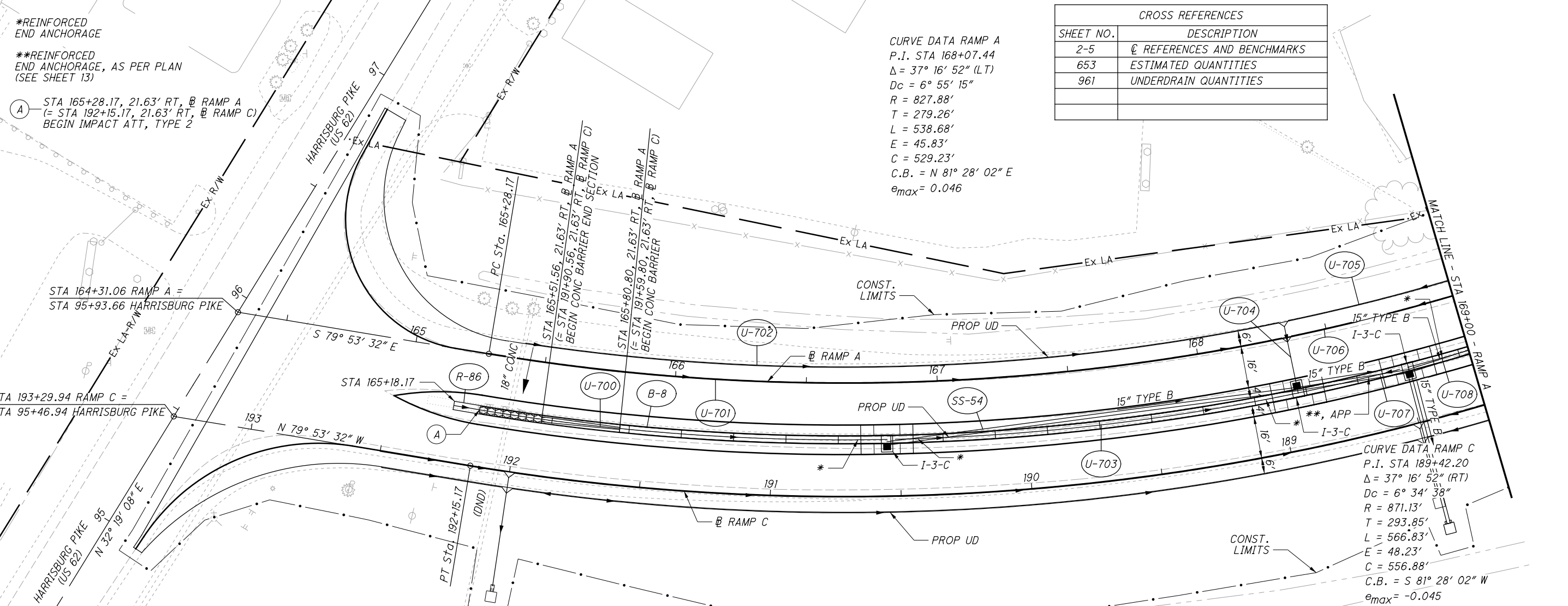
CALCULATED
 DCB
 CHECKED
 SJS

ESTIMATED QUANTITIES

FRA - 71 - 0:00

647
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP501.dgn Sheet 10/28/2019 11:10:34 AM 1458sjs



PLAN AND PROFILE - RAMP A
STA 164+00 TO STA 169+00

FRA-71-0.00

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
653	ESTIMATED QUANTITIES
961	UNDERDRAIN QUANTITIES

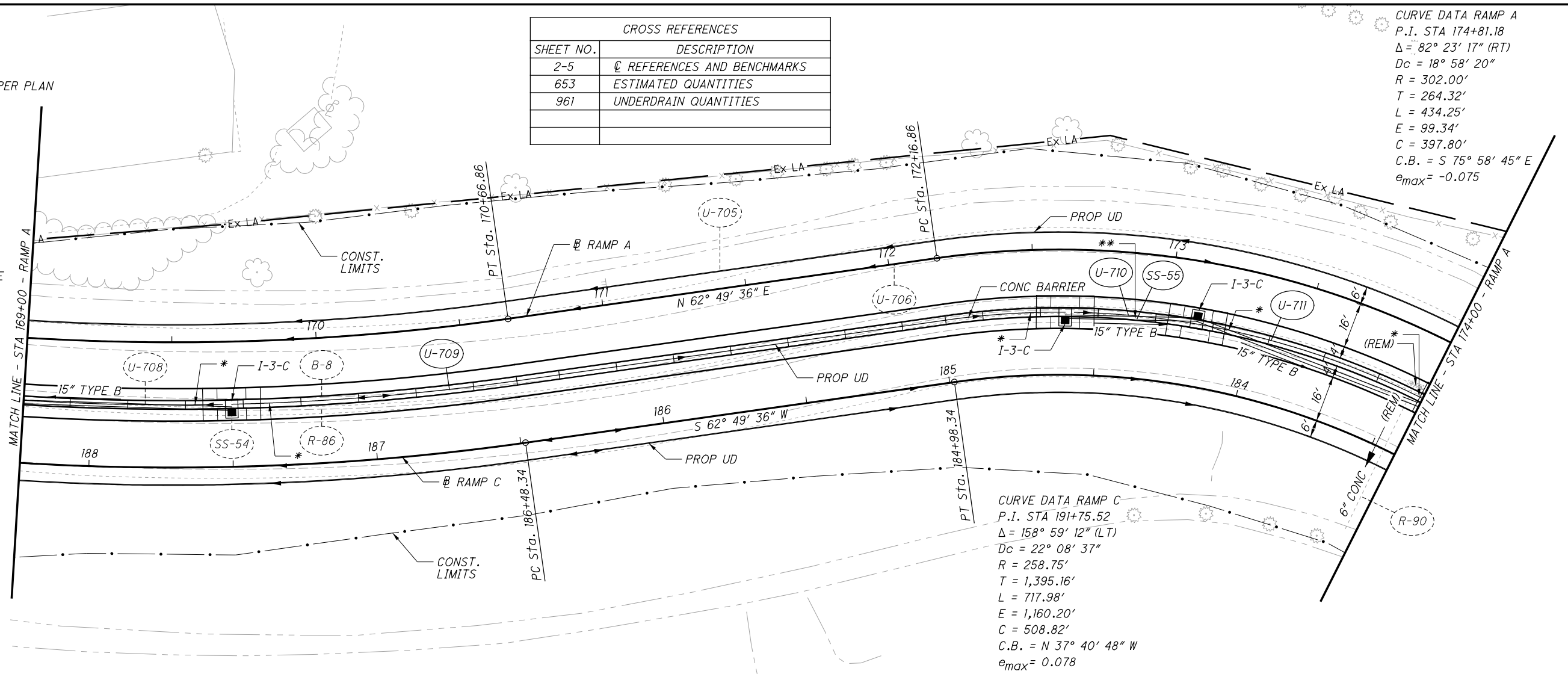
CURVE DATA RAMP A
P.I. STA 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$
C.B. = S 75° 58' 45" E
 $e_{max} = -0.075$



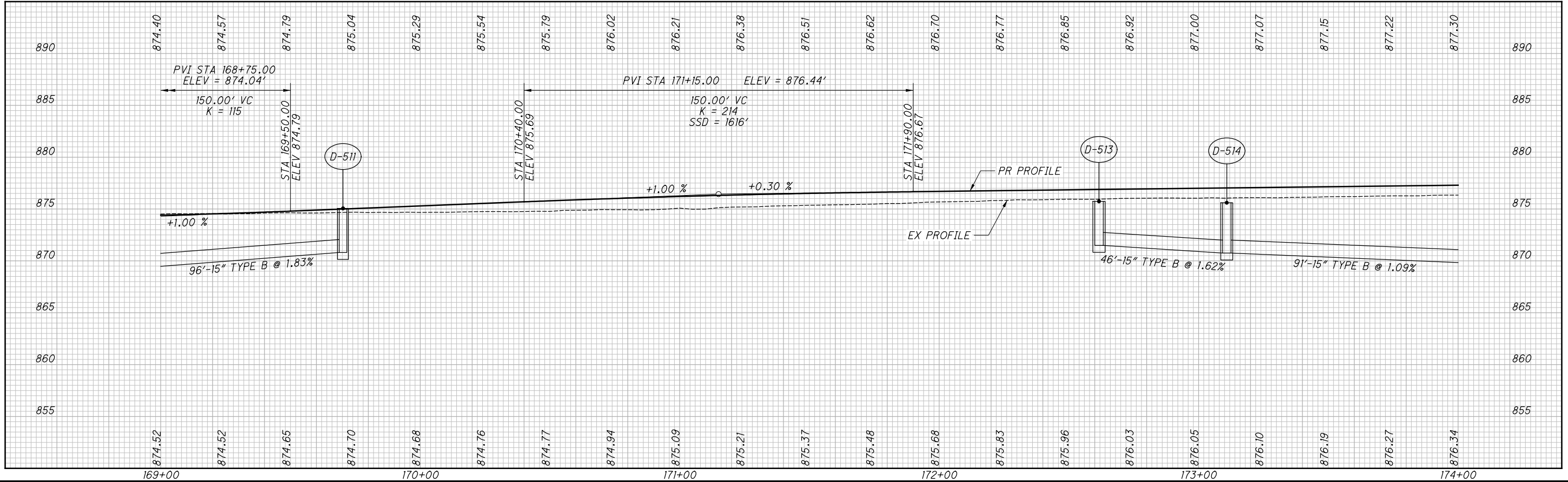
*REINFORCED END ANCHORAGE
**REINFORCED END ANCHORAGE, AS PER PLAN (SEE SHEET 13)

CURVE DATA RAMP A
P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
C.B. = N 81° 28' 02" E
 $e_{max} = 0.046$

CURVE DATA RAMP C
P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $D_c = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$
C.B. = S 81° 28' 02" W
 $e_{max} = -0.045$



CURVE DATA RAMP C
P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
C.B. = N 37° 40' 48" W
 $e_{max} = 0.078$



PLAN AND PROFILE - RAMP A
STA 169+00 TO STA 174+00

FRA-71-0.00



0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
ANN
CHECKED
SJS

**PLAN AND PROFILE - RAMP A
STA 174+00 TO STA 179+00**

FRA-71-0.00

650
1312

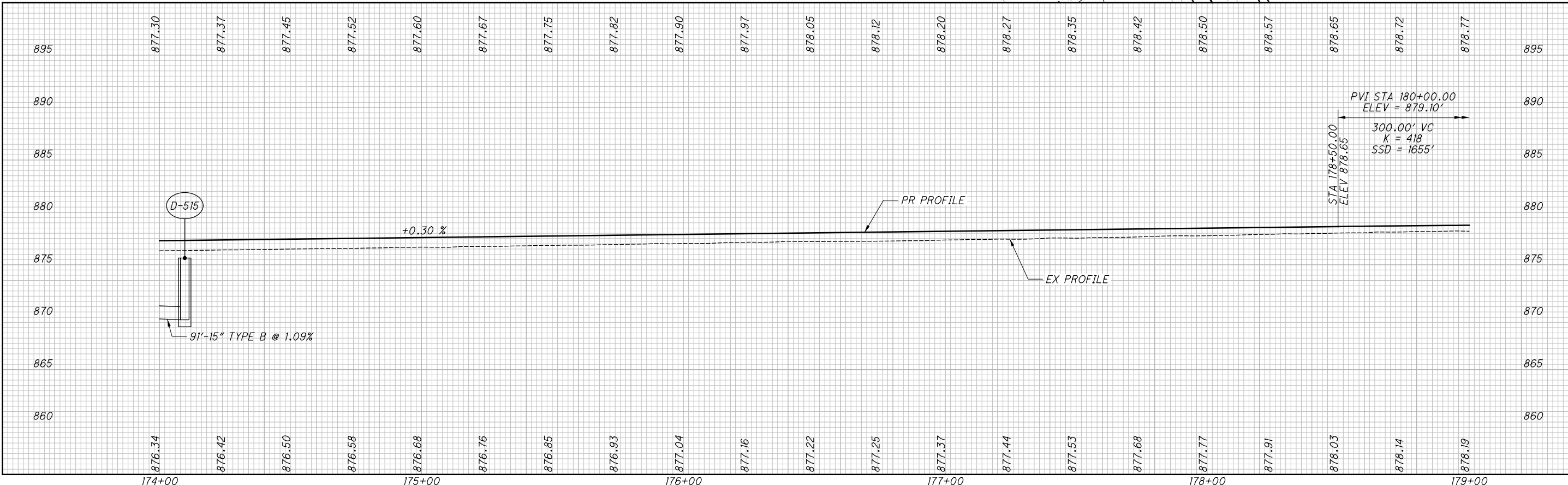
ROCK CHANNEL PROTECTION, TYPE C w/FILTER

*REINFORCED END ANCHORAGE

CURVE DATA RAMP A
P.I. STA 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$
C.B. = $S 75^\circ 58' 45'' E$
 $e_{max} = -0.075$

CURVE DATA RAMP C
P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
C.B. = $N 37^\circ 40' 48'' W$
 $e_{max} = 0.078$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	REFERENCES AND BENCHMARKS
653	ESTIMATED QUANTITIES
961	UNDERDRAIN QUANTITIES



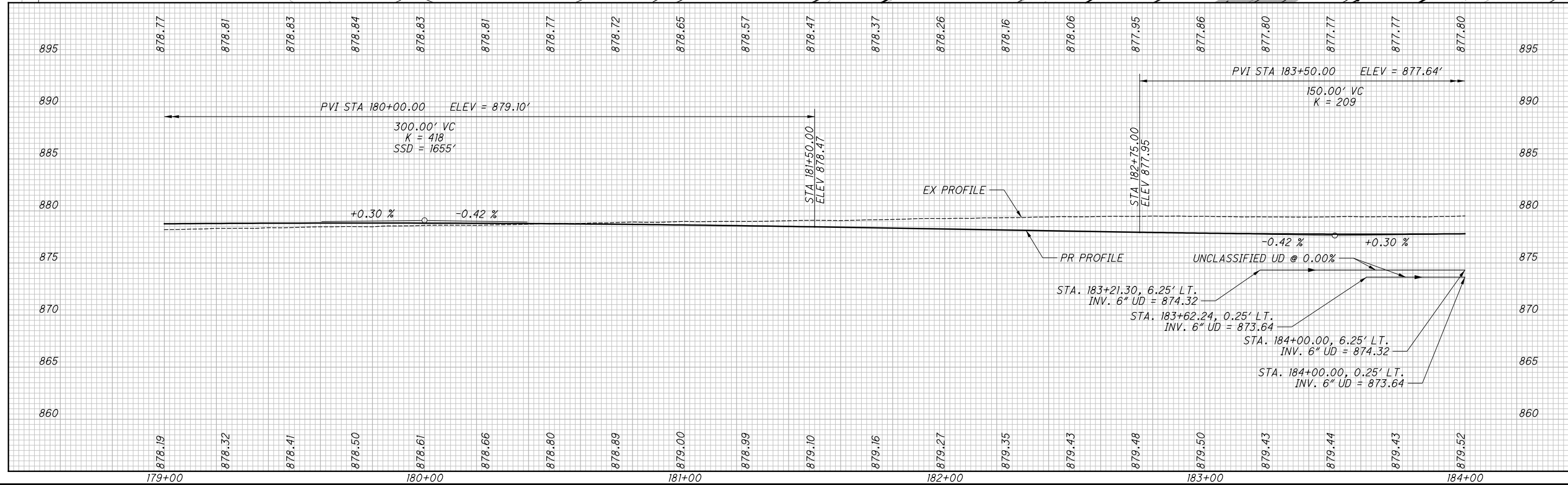
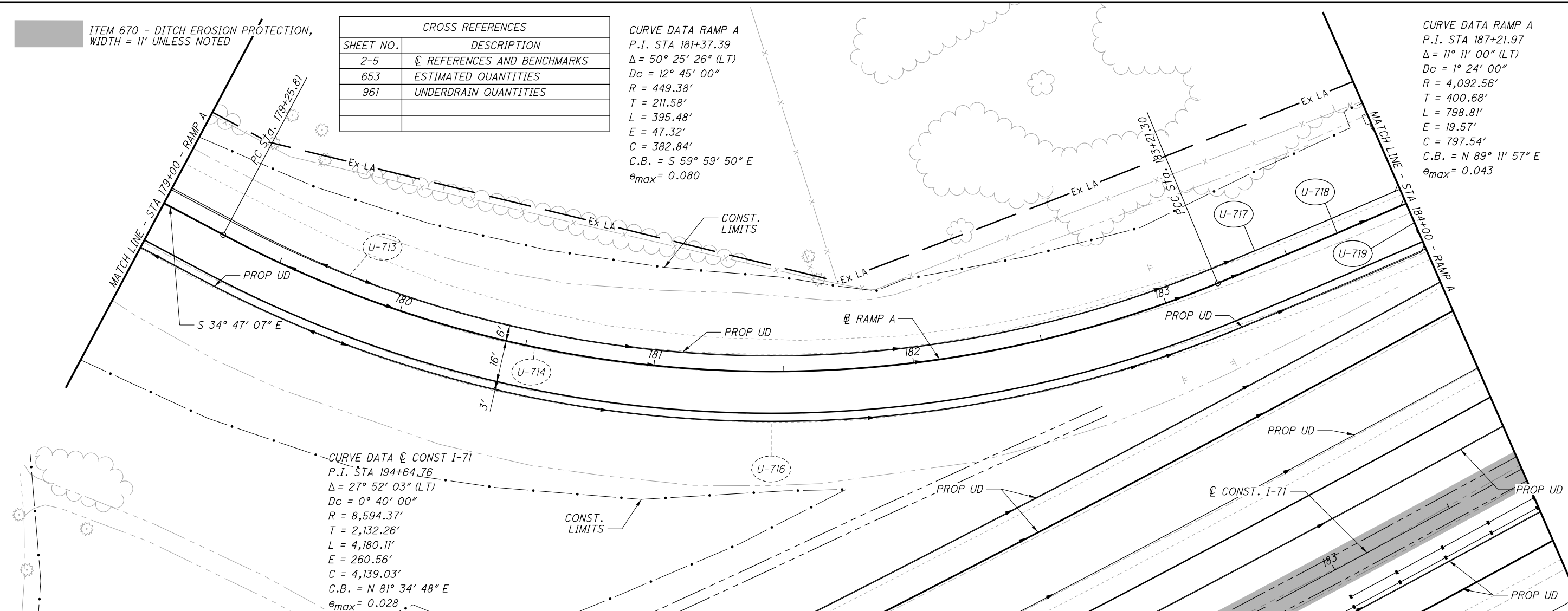
X:\4037000\121957.16\107201\roadway\sheet\107201GP503.dgn Sheet 10/28/2019 11:10:35 AM 1458sjs

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
653	ESTIMATED QUANTITIES
961	UNDERDRAIN QUANTITIES

CURVE DATA RAMP A
P.I. STA 181+37.39
 $\Delta = 50^\circ 25' 26''$ (LT)
 $Dc = 12^\circ 45' 00''$
 $R = 449.38'$
 $T = 211.58'$
 $L = 395.48'$
 $E = 47.32'$
 $C = 382.84'$
C.B. = S $59^\circ 59' 50''$ E
 $e_{max} = 0.080$

CURVE DATA RAMP A
P.I. STA 187+21.97
 $\Delta = 11^\circ 11' 00''$ (LT)
 $Dc = 1^\circ 24' 00''$
 $R = 4,092.56'$
 $T = 400.68'$
 $L = 798.81'$
 $E = 19.57'$
 $C = 797.54'$
C.B. = N $89^\circ 11' 57''$ E
 $e_{max} = 0.043$



PLAN AND PROFILE - RAMP A
 STA 179+00 TO STA 184+00

FRA-71-0.00

651
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP504.dgn_Sheet 10/28/2019 11:10:36 AM 1458s.js

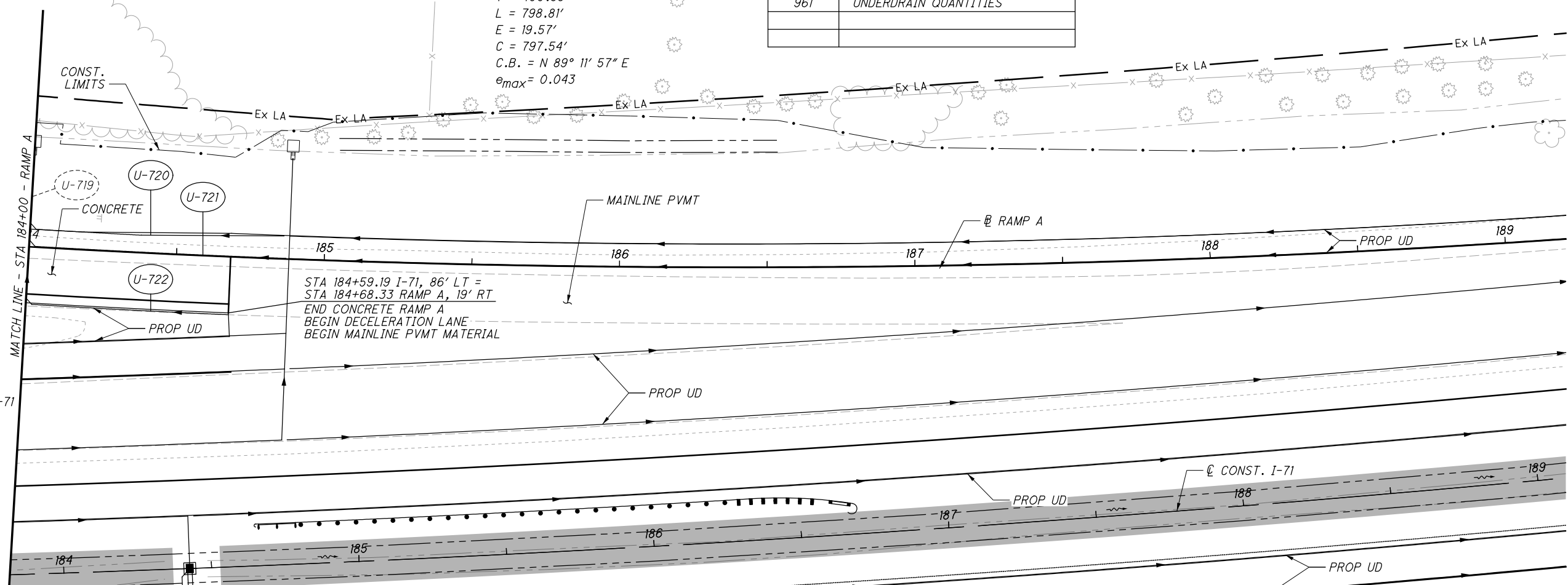
ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

CURVE DATA RAMP A
P.I. STA 187+21.97
 $\Delta = 11^\circ 11' 00''$ (LT)
 $Dc = 1^\circ 24' 00''$
 $R = 4,092.56'$
 $T = 400.68'$
 $L = 798.81'$
 $E = 19.57'$
 $C = 797.54'$
C.B. = N 89° 11' 57" E
 $\theta_{max} = 0.043$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
653	ESTIMATED QUANTITIES
961	UNDERDRAIN QUANTITIES



CURVE DATA @ CONST. I-71
P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N 81° 34' 48" E
 $\theta_{max} = 0.028$



STA 184+59.19 I-71, 86' LT =
STA 184+68.33 RAMP A, 19' RT
END CONCRETE RAMP A
BEGIN DECELERATION LANE
BEGIN MAINLINE PVMT MATERIAL



PLAN AND PROFILE - RAMP A
STA 184+00 TO STA 184+68.33

FRA - 71 - 0.00

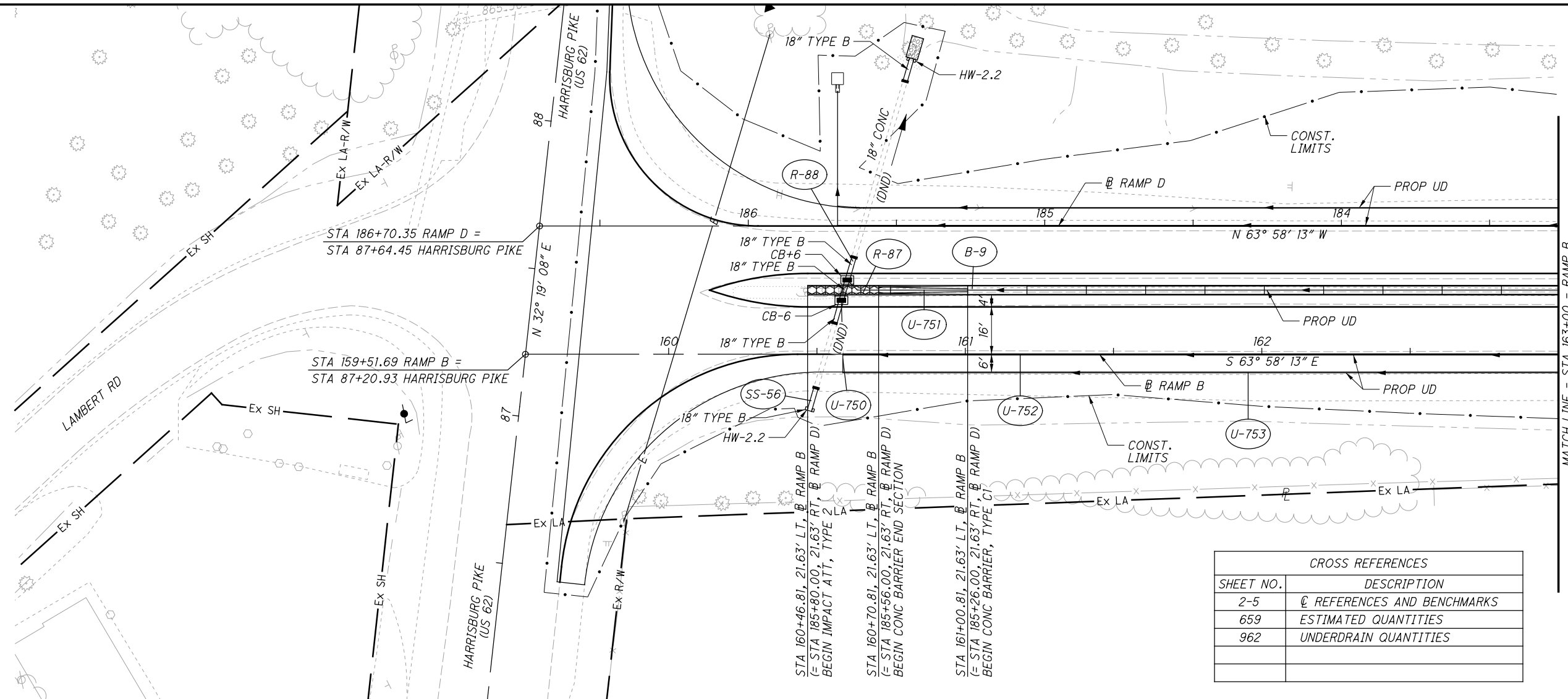
652
1312

X:\4037000\121957.16\107201\roadway\sheet\107201GP505.dgn Sheet 10/28/2019 11:10:36 AM 14585js

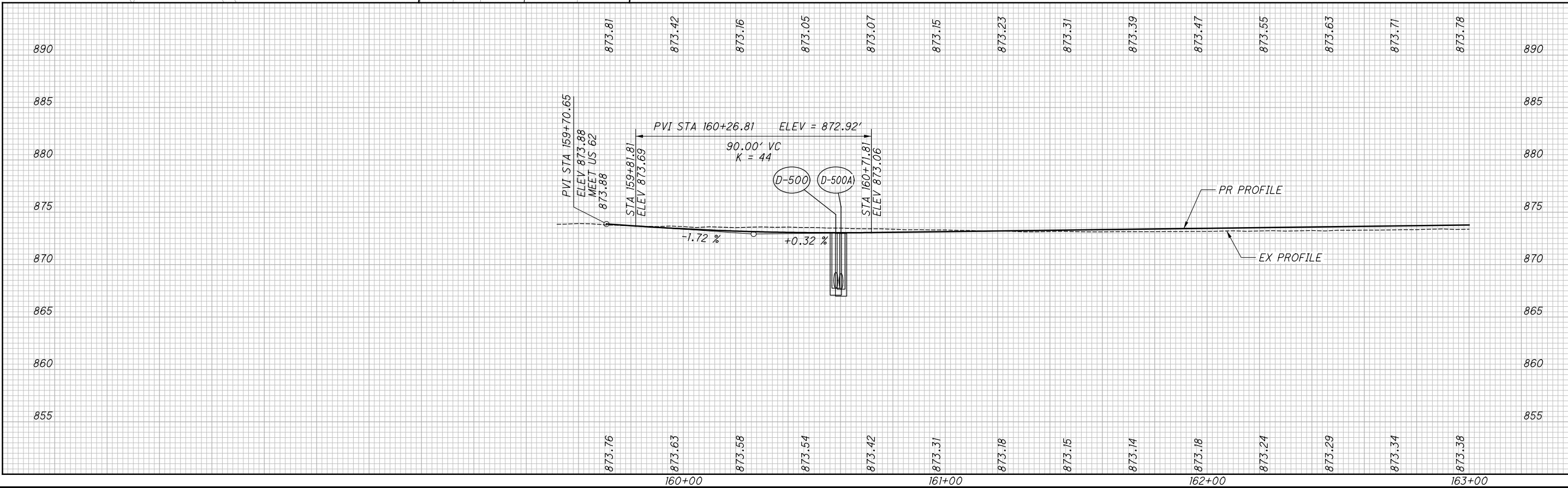
X:\4037000\121957.16\107201\roadway\sheets\107201G0500.dgn Sheet 10/28/2019 11:10:37 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202		202		202		601		602		606		611		611		622		622		622		622		626	
		FROM	TO		CONCRETE MEDIAN REMOVED SY	CONCRETE BARRIER REMOVED FT	IMPACT ATTENUATOR REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 35 MPH, 36" EACH	15" CONDUIT, TYPE B FT	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EACH	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1 FT	CONCRETE BARRIER END SECTION, TYPE C1 EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1 EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN EACH	BARRIER REFLECTOR, TYPE 1, TWO WAY EACH													
R-86	648-650	165+08	177+92	RT	10	1217																								
B-8	648-650	165+28	177+53	RT											1						808	1		11		2		25		
SS-54	648-649	166+80	169+70	RT							1.78	0.27					357	4												
SS-55	649-650	172+61	174+09	RT							1.78	0.27					188	3												
TOTALS CARRIED TO SHEETS 399-402					10	1217			1		3.56	0.54			1		545	7			808	1		11		2		25		

ESTIMATED QUANTITIES	FRA - 71 - 0.00	CALCULATED DCB CHECKED SJS
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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	⊕ REFERENCES AND BENCHMARKS
659	ESTIMATED QUANTITIES
962	UNDERDRAIN QUANTITIES

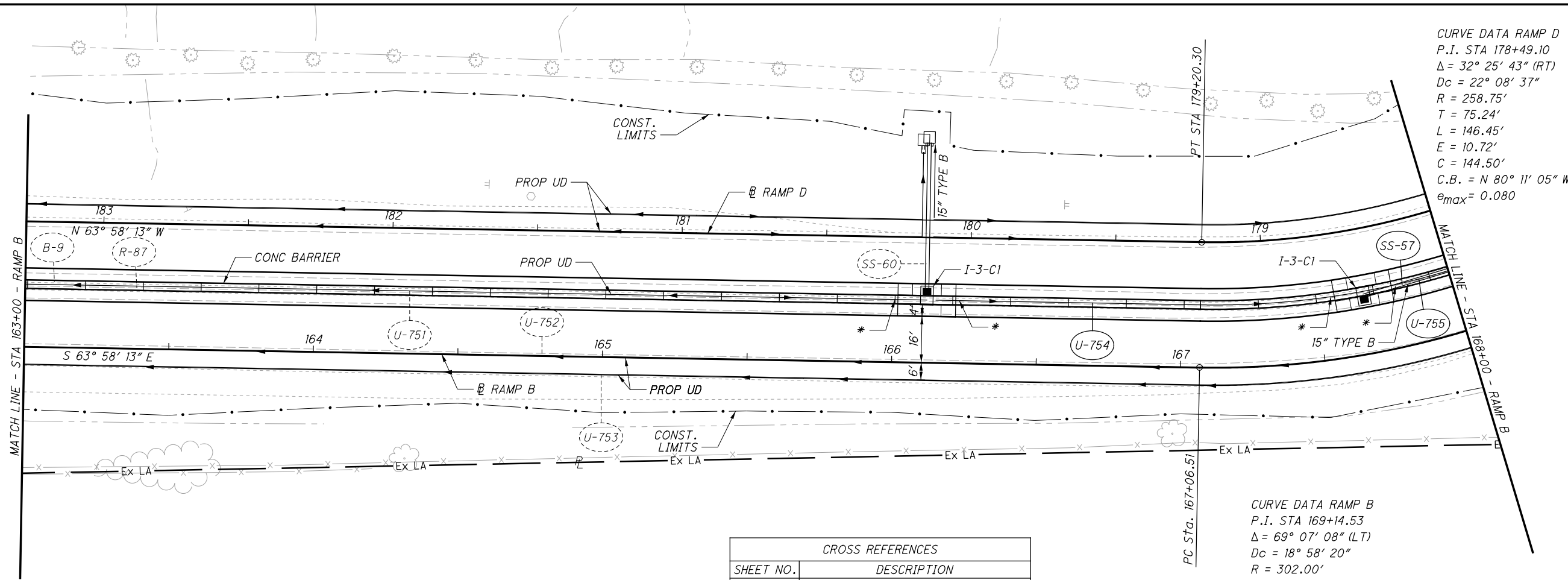


CALCULATED
 ANM
 CHECKED
 SJS

PLAN AND PROFILE - RAMP B
STA 159+72.25 TO STA 163+00

FRA-71-0.00

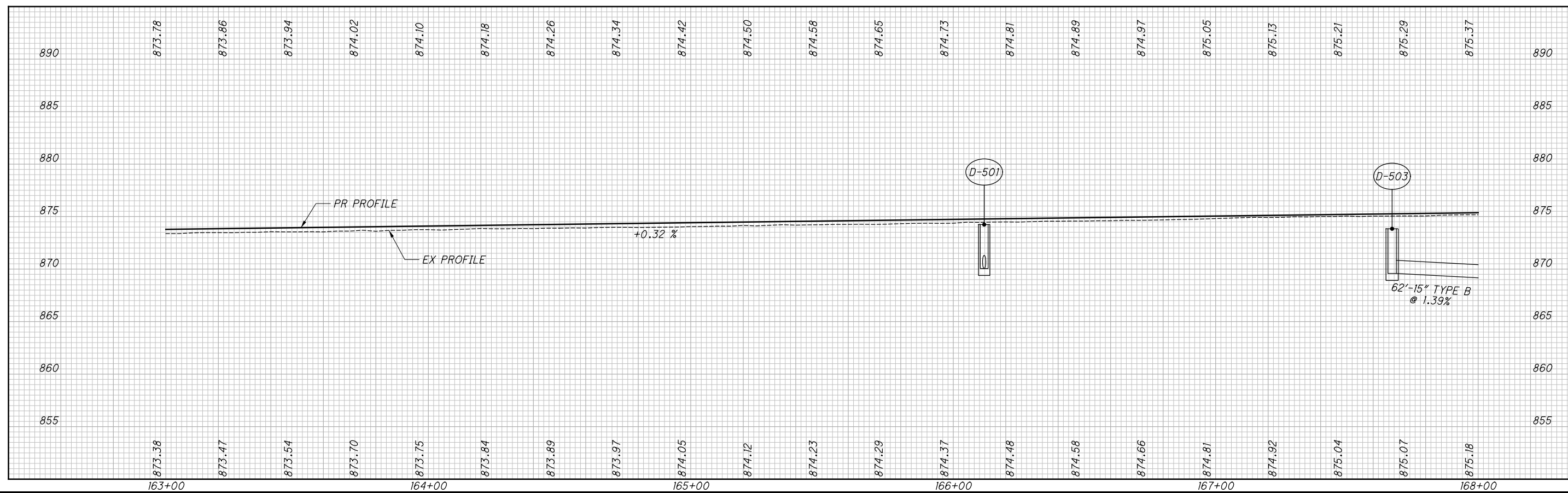
*REINFORCED
END ANCHORAGE



CURVE DATA RAMP D
P.I. STA 178+49.10
 $\Delta = 32^\circ 25' 43''$ (RT)
Dc = 22° 08' 37"
R = 258.75'
T = 75.24'
L = 146.45'
E = 10.72'
C = 144.50'
C.B. = N 80° 11' 05" W
 $e_{max} = 0.080$

CURVE DATA RAMP B
P.I. STA 169+14.53
 $\Delta = 69^\circ 07' 08''$ (LT)
Dc = 18° 58' 20"
R = 302.00'
T = 208.02'
L = 364.31'
E = 64.71'
C = 342.62'
C.B. = N 81° 28' 13" E
 $e_{max} = -0.075$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
659	ESTIMATED QUANTITIES
962	UNDERDRAIN QUANTITIES



PLAN AND PROFILE - RAMP B
STA 163+00 TO STA 168+00

FRA - 71 - 0.00

655
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GP302.dgn Sheet 10/28/2019 11:10:38 AM 1458s.js

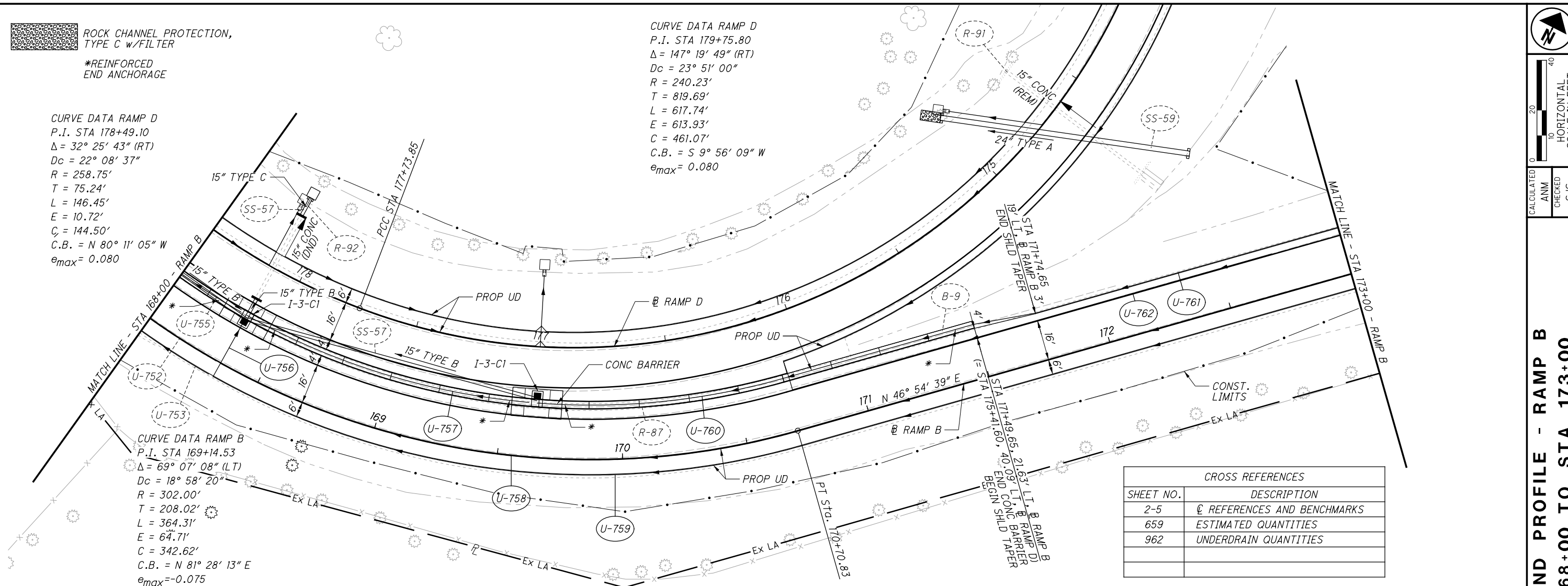
ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

*REINFORCED
END ANCHORAGE

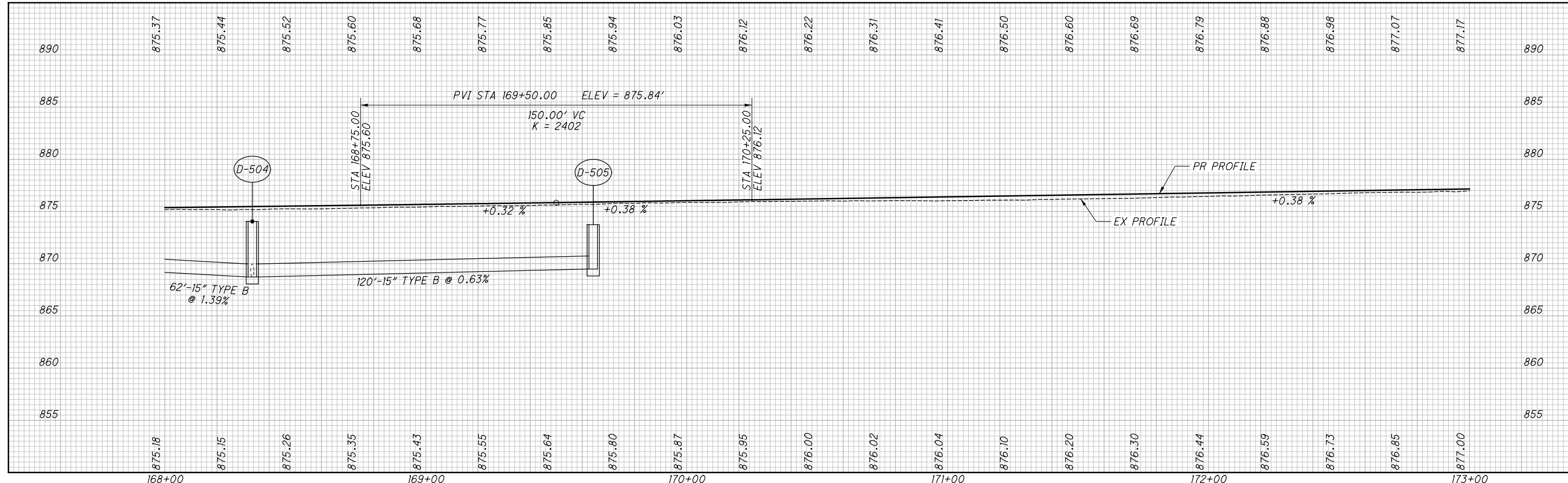
CURVE DATA RAMP D
P.I. STA 178+49.10
 $\Delta = 32^\circ 25' 43''$ (RT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 75.24'$
 $L = 146.45'$
 $E = 10.72'$
 $C = 144.50'$
C.B. = N 80° 11' 05" W
 $e_{max} = 0.080$

CURVE DATA RAMP D
P.I. STA 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $D_c = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
C.B. = S 9° 56' 09" W
 $e_{max} = 0.080$

CURVE DATA RAMP B
P.I. STA 169+14.53
 $\Delta = 69^\circ 07' 08''$ (LT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 208.02'$
 $L = 364.31'$
 $E = 64.71'$
 $C = 342.62'$
C.B. = N 81° 28' 13" E
 $e_{max} = -0.075$



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
659	ESTIMATED QUANTITIES
962	UNDERDRAIN QUANTITIES



CALCULATED
ANN
CHECKED
SJS

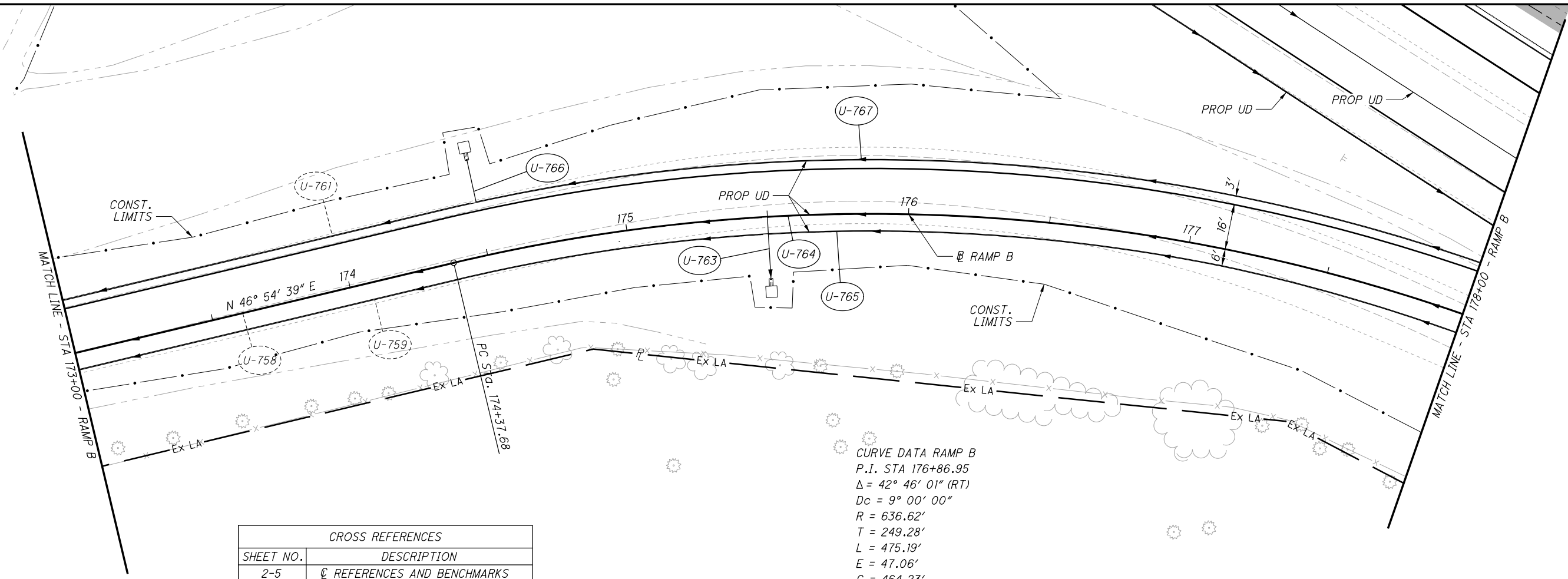
0 20 40
HORIZONTAL
SCALE IN FEET

PLAN AND PROFILE - RAMP B
STA 168+00 TO STA 173+00

FRA-71-0.00

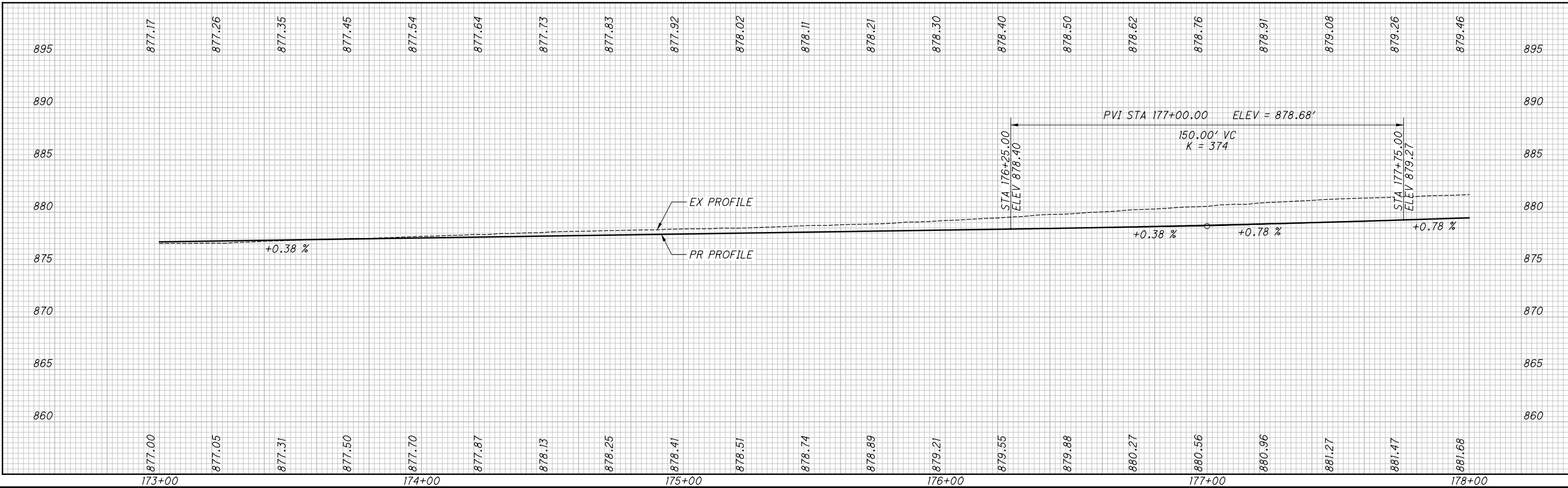
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X:\4037000\121957.16\107201\roadway\sheets\107201GP304.dgn Sheet 10/28/2019 11:10:39 AM 1458s.js



GROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
659	ESTIMATED QUANTITIES
962	UNDERDRAIN QUANTITIES

CURVE DATA RAMP B
P.I. STA 176+86.95
 $\Delta = 42^\circ 46' 01''$ (RT)
 $D_c = 9^\circ 00' 00''$
 $R = 636.62'$
 $T = 249.28'$
 $L = 475.19'$
 $E = 47.06'$
 $C = 464.23'$
C.B. = N 68° 17' 39" E
 $e_{max} = 0.080$



CALCULATED
ANN
CHECKED
SJS

PLAN AND PROFILE - RAMP B
STA 173+00 TO STA 178+00

FRA - 71 - 0.00

657
1312



0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
ANN
CHECKED
SJS

PLAN AND PROFILE - RAMP B
STA 178+00 TO STA 178+27.64

FRA - 71 - 0.00

658
1312

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

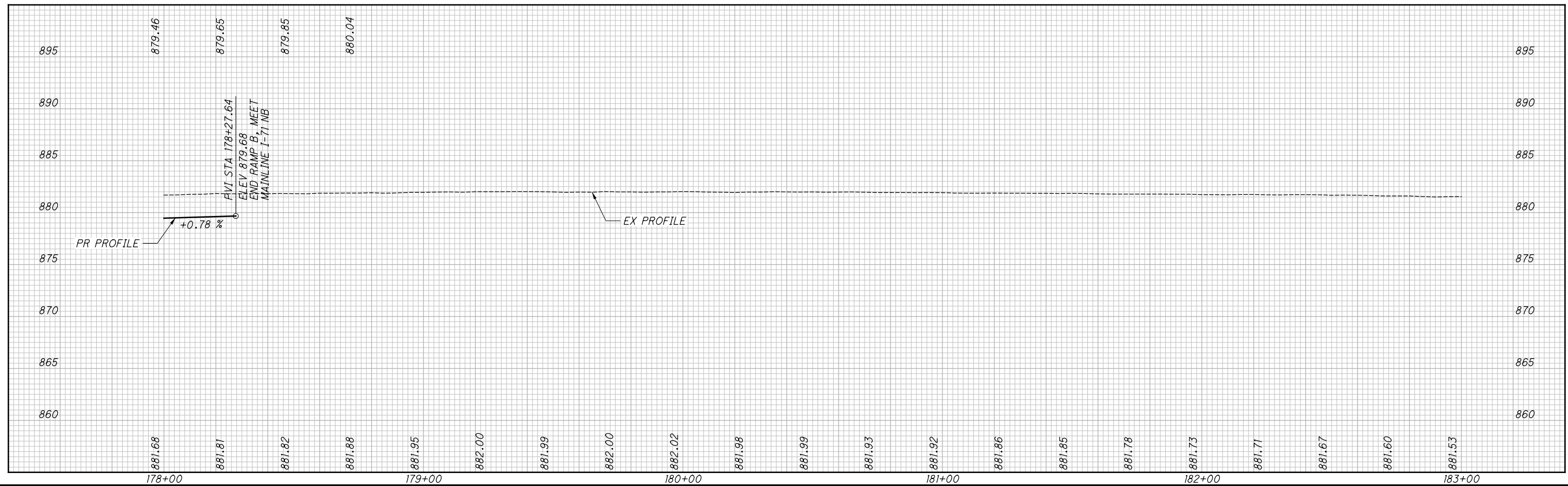
CURVE DATA @ CONST. I-71
P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N 81° 34' 48" E
 $e_{max} = 0.028$

CURVE DATA RAMP B
P.I. STA 176+86.95
 $\Delta = 42^\circ 46' 01''$ (RT)
 $D_c = 9^\circ 00' 00''$
 $R = 636.62'$
 $T = 249.28'$
 $L = 475.19'$
 $E = 47.06'$
 $C = 464.23'$
C.B. = N 68° 17' 39" E
 $e_{max} = 0.080$

CURVE DATA RAMP B
P.I. STA 182+59.67
 $\Delta = 0^\circ 56' 50''$ (LT)
 $D_c = 0^\circ 39' 35''$
 $R = 8,685.37'$
 $T = 71.80'$
 $L = 143.60'$
 $E = 0.30'$
 $C = 143.60'$
C.B. = N 89° 12' 15" E
 $e_{max} = 0.028$ (MATCH I-71)

CURVE DATA RAMP B
P.I. STA 189+63.41
 $\Delta = 8^\circ 20' 00''$ (LT)
 $D_c = 0^\circ 39' 38''$
 $R = 8,674.56'$
 $T = 631.95'$
 $L = 1,261.66'$
 $E = 22.99'$
 $C = 1,260.55'$
C.B. = N 83° 25' 49" E
 $e_{max} = 0.028$ (MATCH I-71)

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	@ REFERENCES AND BENCHMARKS
659	ESTIMATED QUANTITIES
962	UNDERDRAIN QUANTITIES



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REF. NO.	SHEET NO.	STATION		SIDE	202		202		202		202		601		601		602		606		611		611		611		611		622		622		622		626	
		FROM	TO		SY	FT	FT	EACH	SY	CY	CY	EACH	FT	FT	FT	EACH	EACH	FT	EACH	EACH	FT	EACH	EACH	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH					
R-87	654-656	160+22	172+08	LT	18	1153				1																										
R-88	654	160+47	160+82																																	
B-9	654-656	160+47	171+50	LT																1							808	1	9	23						
SS-56	654	160+47	160+82	LT/RT											1.67	0.66								39	2											
SS-57	655-656	167+67	169+64	LT						1.78						0.27				182	20					3										
TOTALS CARRIED TO SHEETS 399-402					18	1153	39	1	1.78	1.67	0.93	1	182	20	39	2	3	808	1	9	23															

ESTIMATED QUANTITIES
 FRA - 71 - 0.00
 CALCULATED DCB CHECKED SJS

659
1312

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

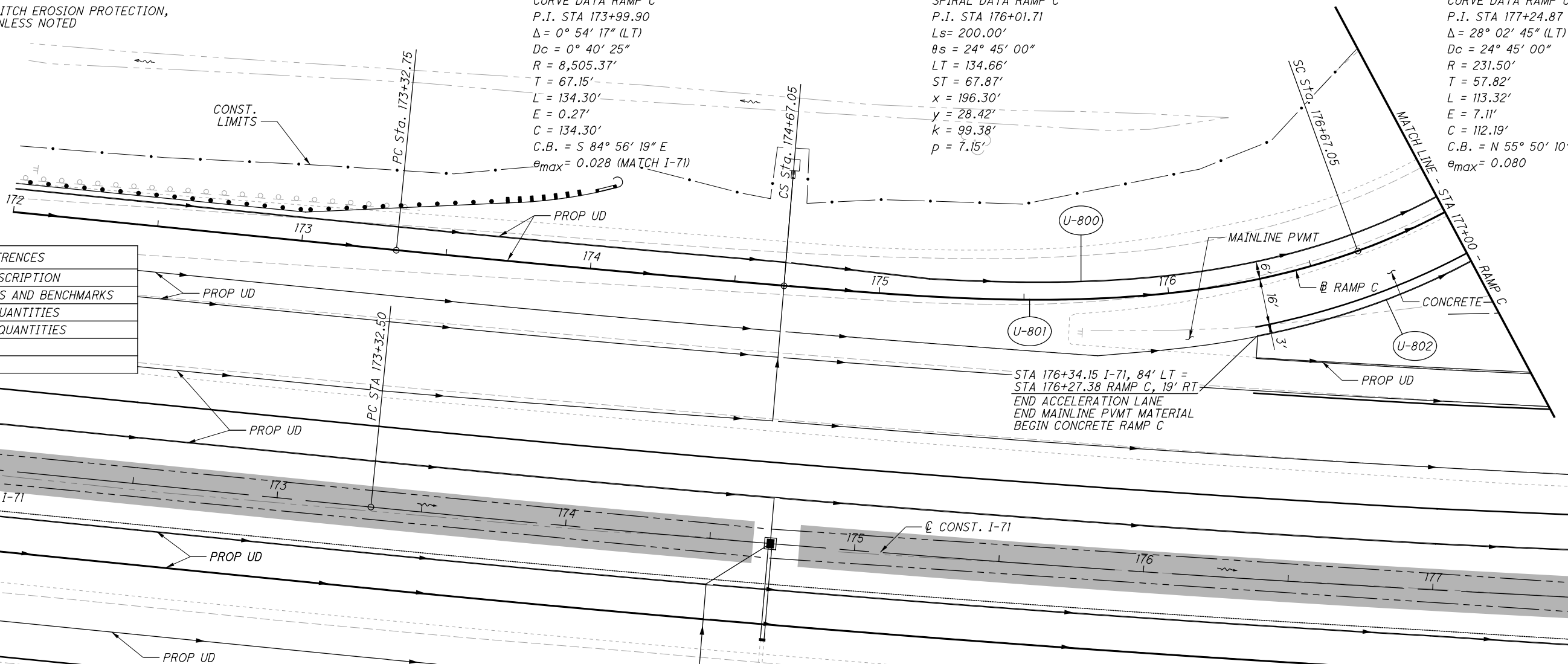
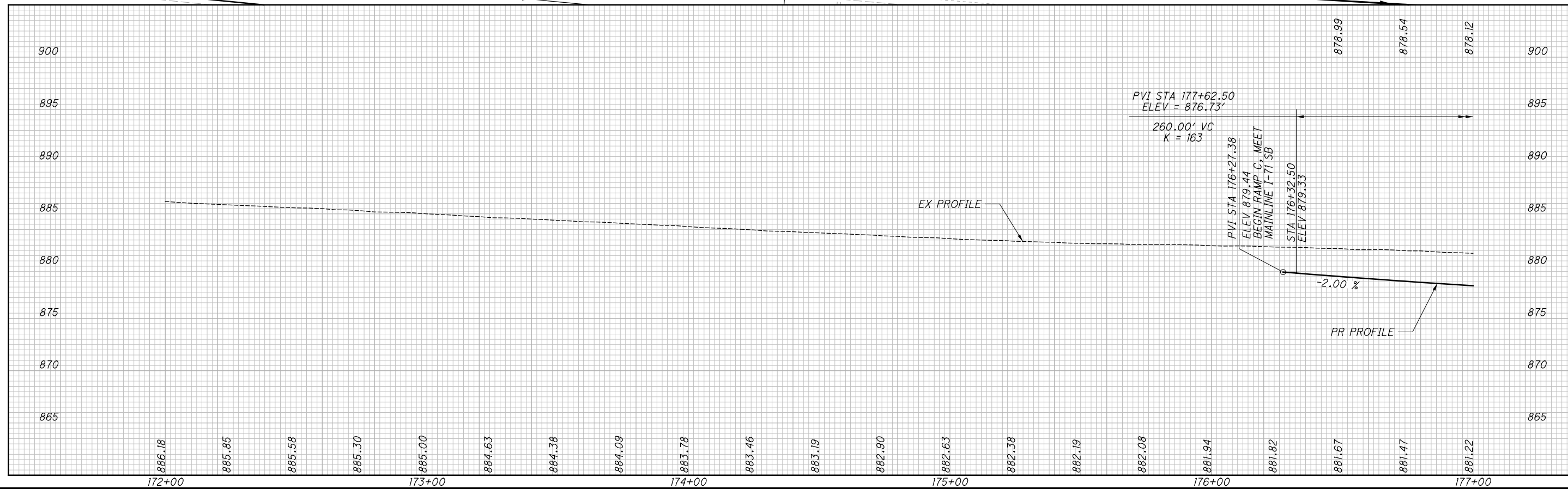
CURVE DATA RAMP C
P.I. STA 173+99.90
 $\Delta = 0^\circ 54' 17''$ (LT)
 $Dc = 0^\circ 40' 25''$
 $R = 8,505.37'$
 $T = 67.15'$
 $L = 134.30'$
 $E = 0.27'$
 $C = 134.30'$
C.B. = S $84^\circ 56' 19''$ E
 $e_{max} = 0.028$ (MATCH I-71)

SPIRAL DATA RAMP C
P.I. STA 176+01.71
 $Ls = 200.00'$
 $\theta_s = 24^\circ 45' 00''$
 $LT = 134.66'$
 $ST = 67.87'$
 $x = 196.30'$
 $y = 28.42'$
 $k = 99.38'$
 $p = 7.15'$

CURVE DATA RAMP C
P.I. STA 177+24.87
 $\Delta = 28^\circ 02' 45''$ (LT)
 $Dc = 24^\circ 45' 00''$
 $R = 231.50'$
 $T = 57.82'$
 $L = 113.32'$
 $E = 7.11'$
 $C = 112.19'$
C.B. = N $55^\circ 50' 10''$ E
 $e_{max} = 0.080$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
665	ESTIMATED QUANTITIES
963	UNDERDRAIN QUANTITIES

CURVE DATA ☉ CONST. I-71
P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N $81^\circ 34' 48''$ E

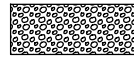




 0 20 40
 HORIZONTAL SCALE IN FEET
 CALCULATED ANM CHECKED SJS

PLAN AND PROFILE - RAMP C
 STA 176+23.18 TO STA 177+00

FRA - 71 - 0.00
 660
 1312



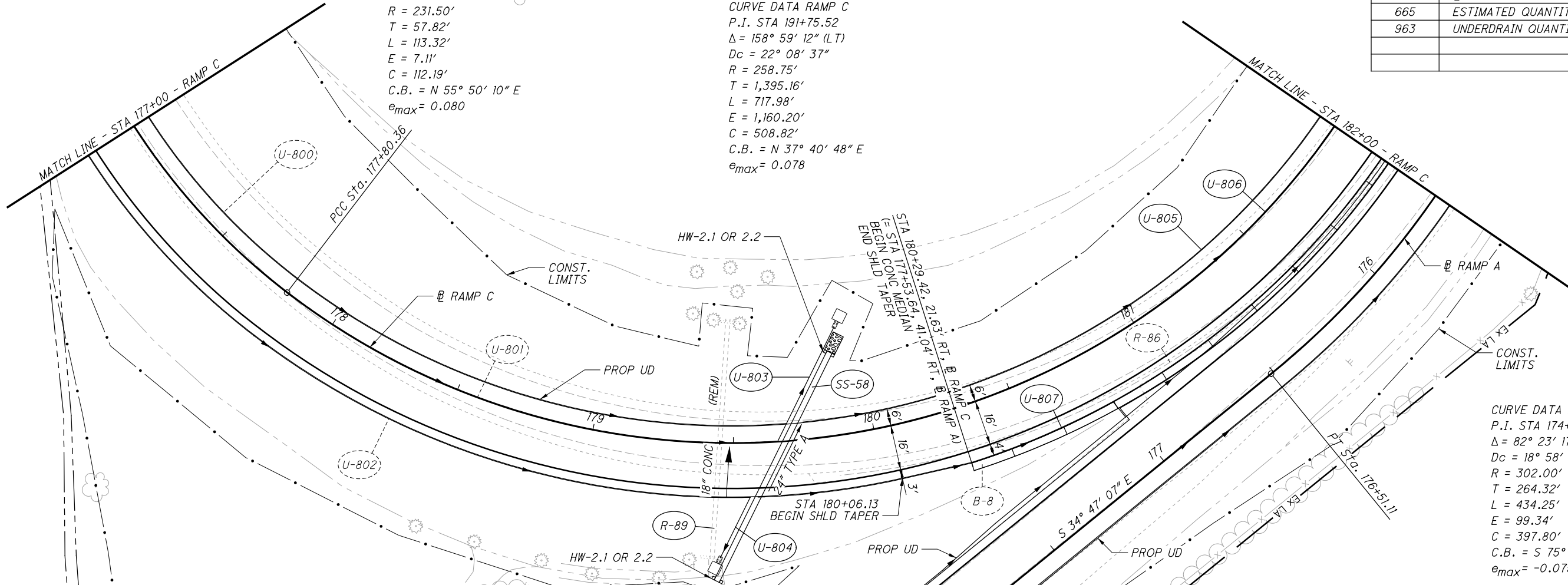
ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

CURVE DATA RAMP C
P.I. STA 177+24.87
 $\Delta = 28^\circ 02' 45''$ (LT)
 $D_c = 24^\circ 45' 00''$
 $R = 231.50'$
 $T = 57.82'$
 $L = 113.32'$
 $E = 7.11'$
 $C = 112.19'$
C.B. = N $55^\circ 50' 10''$ E
 $e_{max} = 0.080$

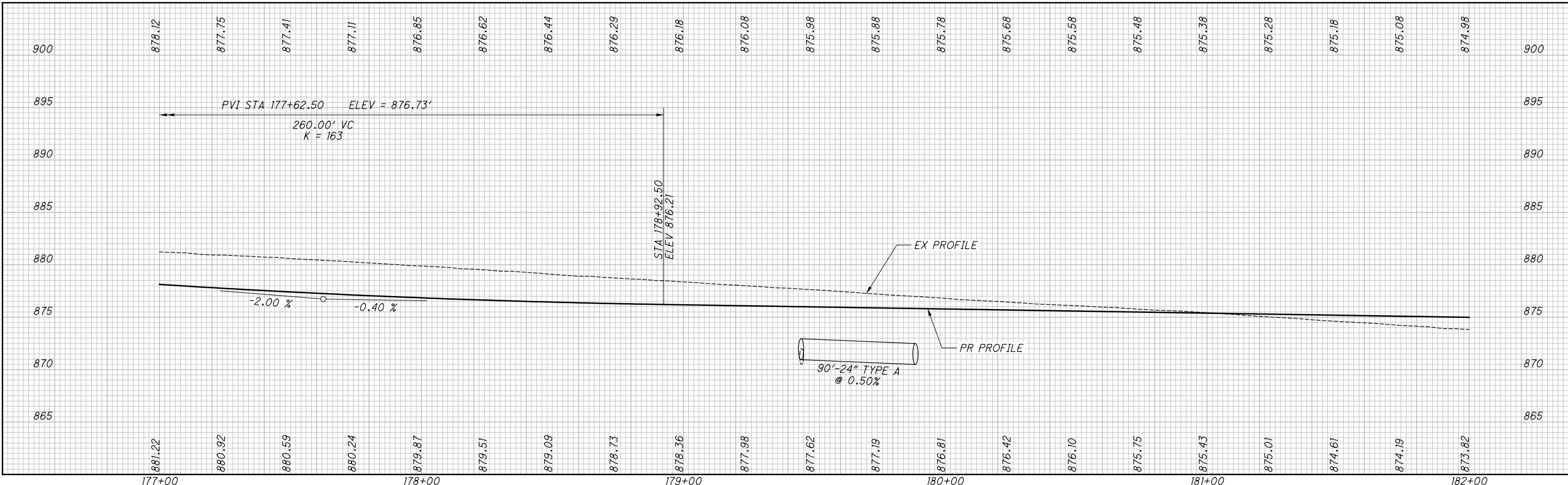
CURVE DATA RAMP C
P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
C.B. = N $37^\circ 40' 48''$ E
 $e_{max} = 0.078$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☑ REFERENCES AND BENCHMARKS
665	ESTIMATED QUANTITIES
963	UNDERDRAIN QUANTITIES

0 20 40
 HORIZONTAL
 SCALE IN FEET
 CALCULATED
 ANM
 CHECKED
 SJS



CURVE DATA RAMP A
P.I. STA 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$
C.B. = S $75^\circ 58' 45''$ E
 $e_{max} = -0.075$



PLAN AND PROFILE - RAMP C
STA 177+00 TO STA 182+00

FRA - 71 - 0.00

x:\4037000\121957.16\107201\roadway\sheet\107201GP602.dgn Sheet 10/28/2019 11:10:41 AM 1458sjs

X:\4037000\121957.16\107201\roadway\sheet\107201GP603.dgn Sheet 10/28/2019 11:10:41 AM 14585js

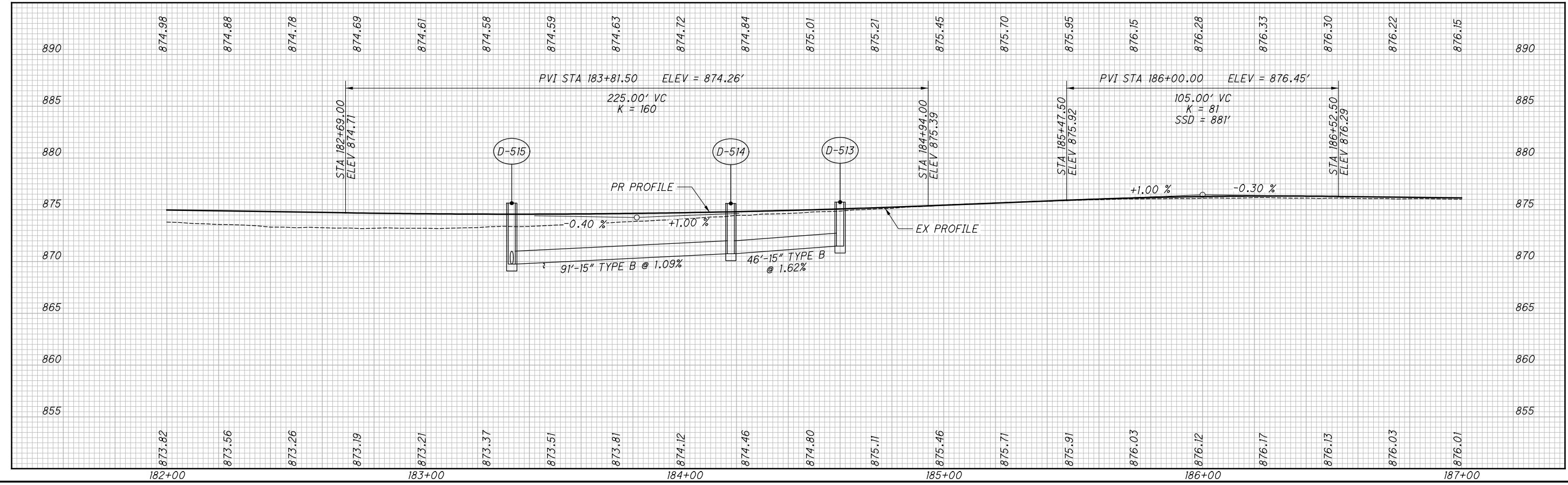
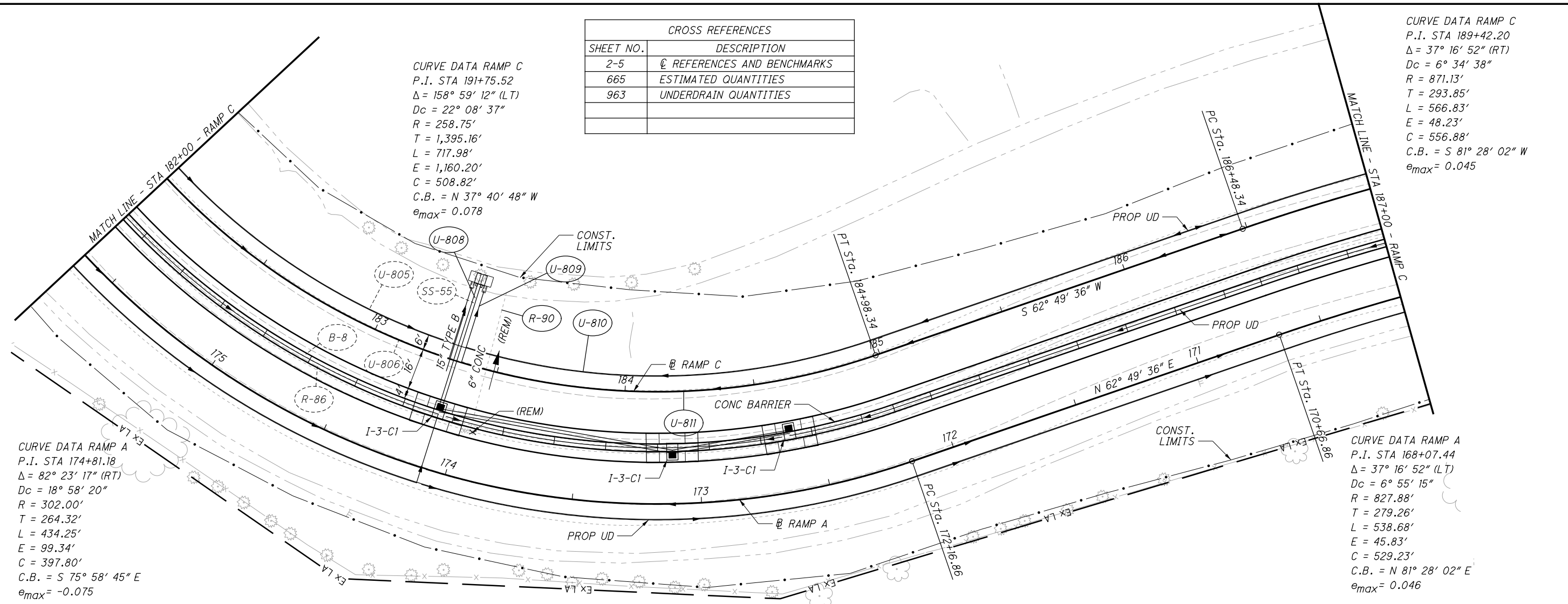
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
665	ESTIMATED QUANTITIES
963	UNDERDRAIN QUANTITIES

CURVE DATA RAMP C
 P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
 C.B. = N $37^\circ 40' 48''$ W
 $e_{max} = 0.078$

CURVE DATA RAMP C
 P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $D_c = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$
 C.B. = S $81^\circ 28' 02''$ W
 $e_{max} = 0.045$

CURVE DATA RAMP A
 P.I. STA 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$
 C.B. = S $75^\circ 58' 45''$ E
 $e_{max} = -0.075$

CURVE DATA RAMP A
 P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
 C.B. = N $81^\circ 28' 02''$ E
 $e_{max} = 0.046$



PLAN AND PROFILE - RAMP C
STA 182+00 TO STA 187+00

FRA - 71 - 0.00

662
1312



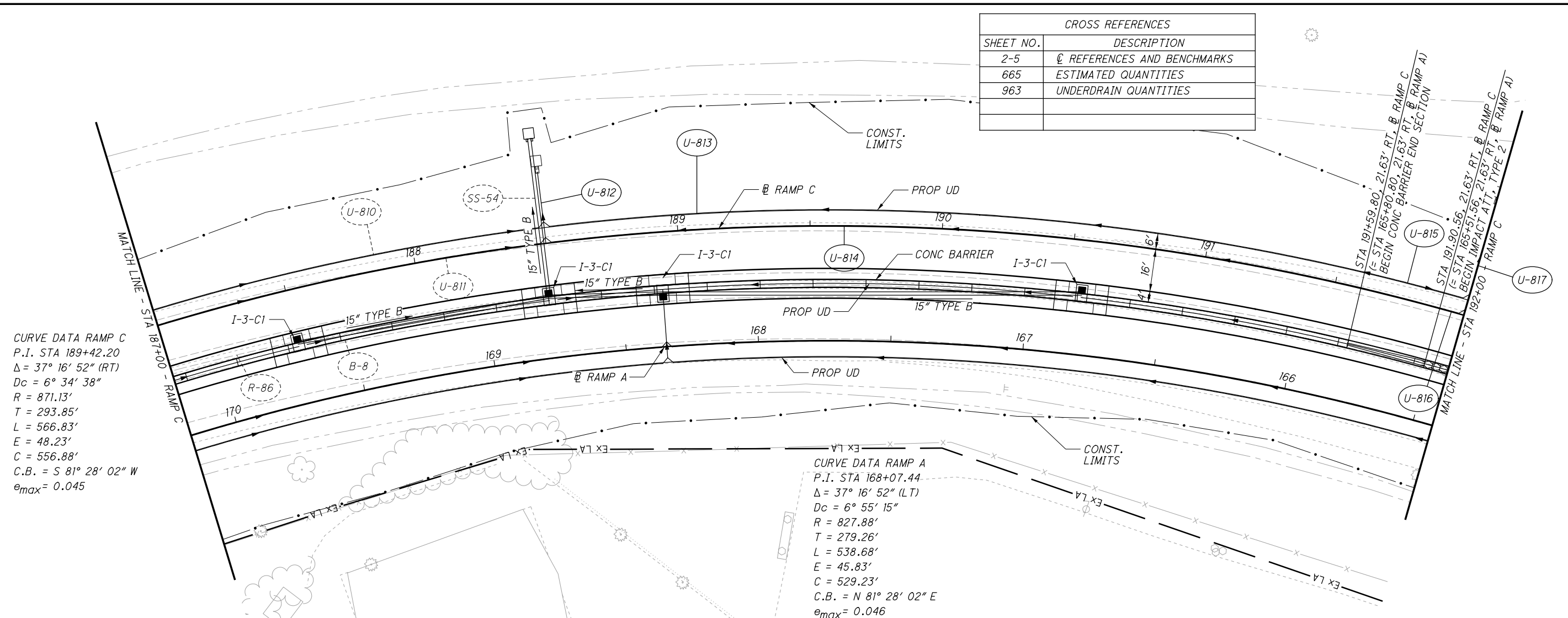
CALCULATED
ANN
CHECKED
SJS

**PLAN AND PROFILE - RAMP C
STA 187+00 TO STA 192+00**

FRA-71-0.00

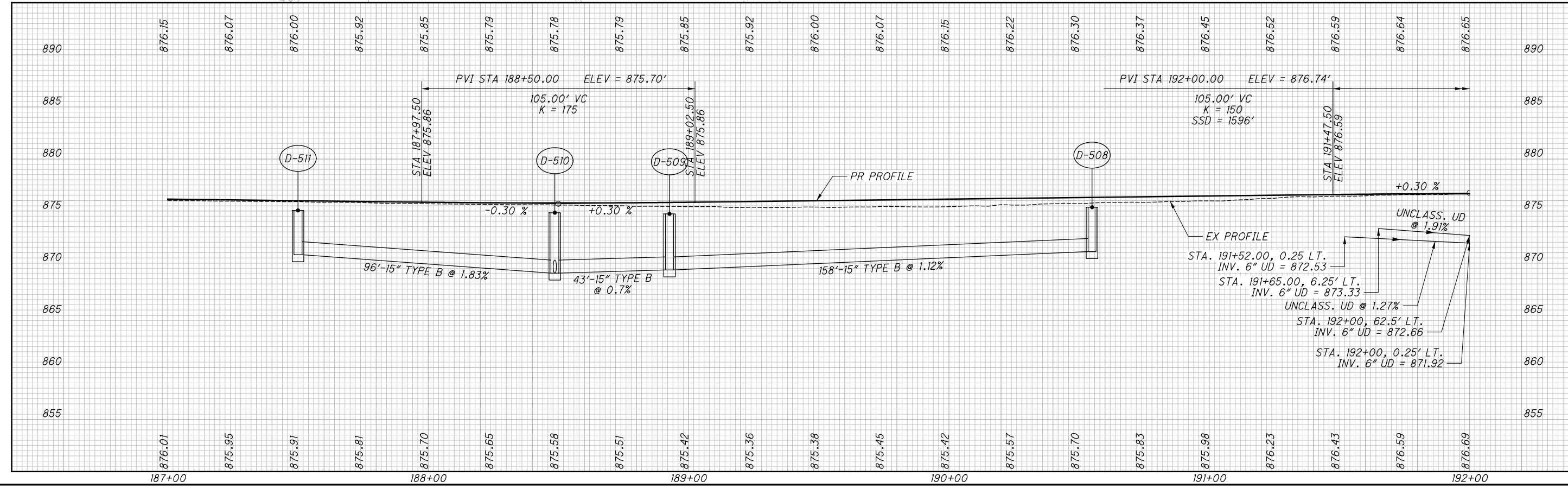
663
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☑ REFERENCES AND BENCHMARKS
665	ESTIMATED QUANTITIES
963	UNDERDRAIN QUANTITIES



CURVE DATA RAMP C
 P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $D_c = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$
 C.B. = S $81^\circ 28' 02''$ W
 $\theta_{max} = 0.045$

CURVE DATA RAMP A
 P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
 C.B. = N $81^\circ 28' 02''$ E
 $\theta_{max} = 0.046$



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CURVE DATA RAMP C
P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $D_c = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$

$e_{max} = 0.045$

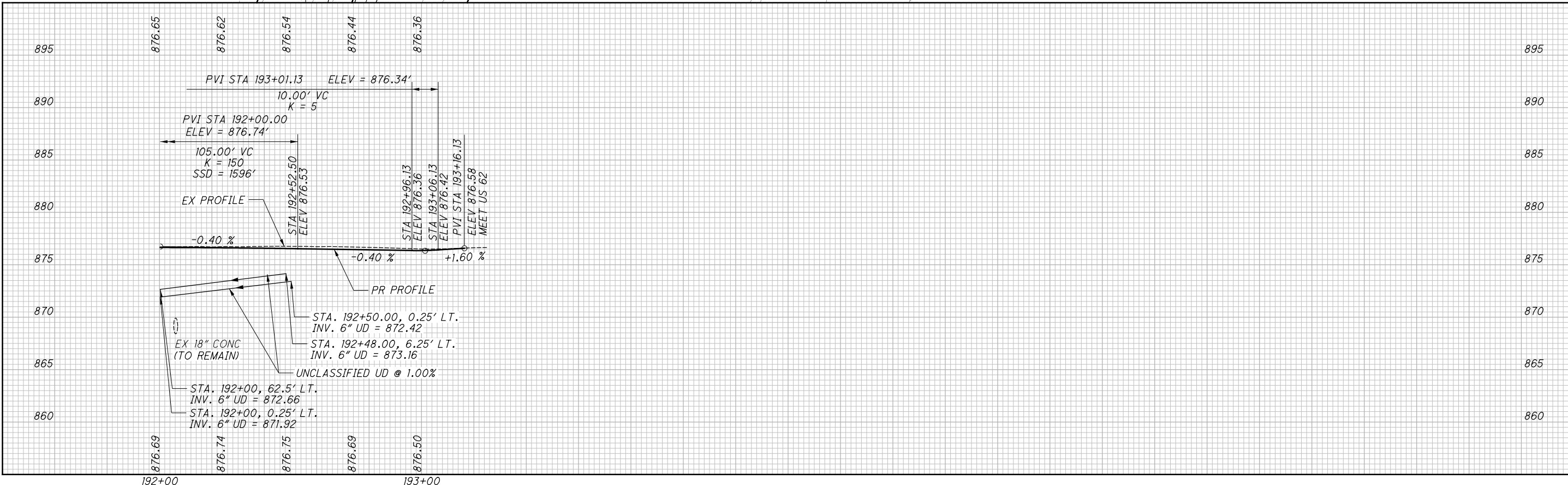
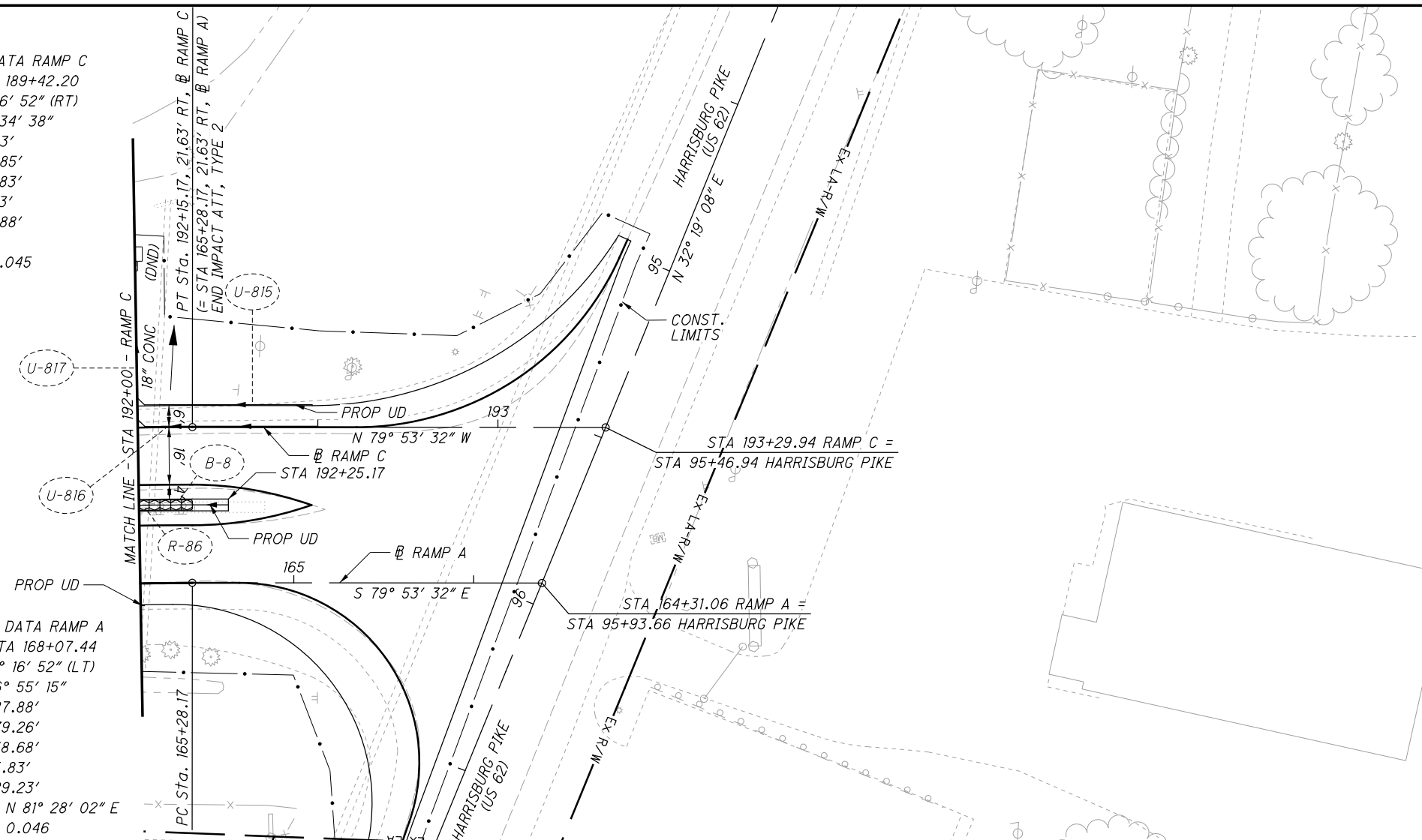
CURVE DATA RAMP A
P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
C.B. = $N 81^\circ 28' 02'' E$
 $e_{max} = 0.046$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
665	ESTIMATED QUANTITIES
963	UNDERDRAIN QUANTITIES



**PLAN AND PROFILE - RAMP C
STA 192+00 TO STA 193+26.19**

FRA - 71 - 0.00



X:\4037000\121957.16\107201\roadway\sheets\107201GP605.dgn Sheet 10/28/2019 11:10:42 AM 1458sjs

X:\4037000\121957.16\107201\roadway\sheets\107201G0600.dgn Sheet 10/28/2019 11:10:42 AM 1458s.js

REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	601	602	611							
		FROM	TO		HEADWALL REMOVED EACH	GUTTER REMOVED SY	PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	24" CONDUIT, TYPE A FT							
R-89	661	179+43	179+48	LT/RT	2	39	86											
R-90	662	183+46		LT/RT			57	2										
SS-58	661	179+49	179+89	LT/RT					1.56	0.92	90							
TOTALS CARRIED TO SHEETS 399-402					2	39	143	2	1.56	0.92	90							

ESTIMATED QUANTITIES	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0.00	665 1312



CALCULATED
ANN
CHECKED
SJS

**PLAN AND PROFILE - RAMP D
STA 168+88.15 TO STA 172+00**

FRA - 71 - 0.00

ITEM 670 - DITCH EROSION PROTECTION,
WIDTH = 11' UNLESS NOTED

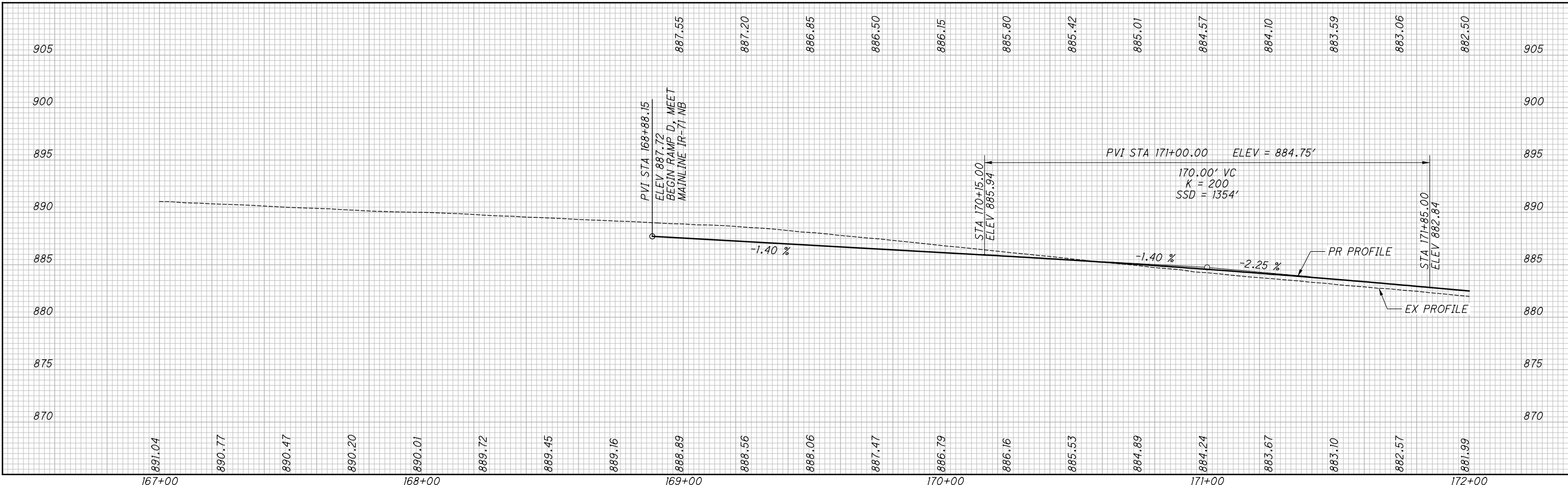
STA 168+89.22 I-71, 84' RT =
STA 168+88.15 RAMP D, 19' LT
END DECELERATION LANE
END MAINLINE PVMT MATERIAL
BEGIN CONCRETE RAMP D

CURVE DATA RAMP D
P.I. STA 166+87.05
 $\Delta = 7^\circ 20' 40''$ (RT)
 $D_c = 1^\circ 13' 00''$
 $R = 4,709.24'$
 $T = 302.24'$
 $L = 603.66'$
 $E = 9.69'$
 $C = 603.24'$
C.B. = S $80^\circ 48' 50''$ E
 $e_{max} = 0.038$

CURVE DATA RAMP D
P.I. STA 170+72.67
 $\Delta = 13^\circ 24' 44''$ (RT)
 $D_c = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 84.21'$
 $L = 167.65'$
 $E = 4.93'$
 $C = 167.27'$
C.B. = S $70^\circ 26' 08''$ E
 $e_{max} = 0.080$

CURVE DATA RAMP D
P.I. STA 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $D_c = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
C.B. = S $9^\circ 56' 09''$ W
 $e_{max} = 0.080$

GROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
670	ESTIMATED QUANTITIES
964	UNDERDRAIN QUANTITIES



X:\4037000\121957.16\107201\roadway\sheets\107201GP401.dgn Sheet 10/28/2019 11:10:43 AM 1458sjs

ROCK CHANNEL PROTECTION, TYPE C w/FILTER

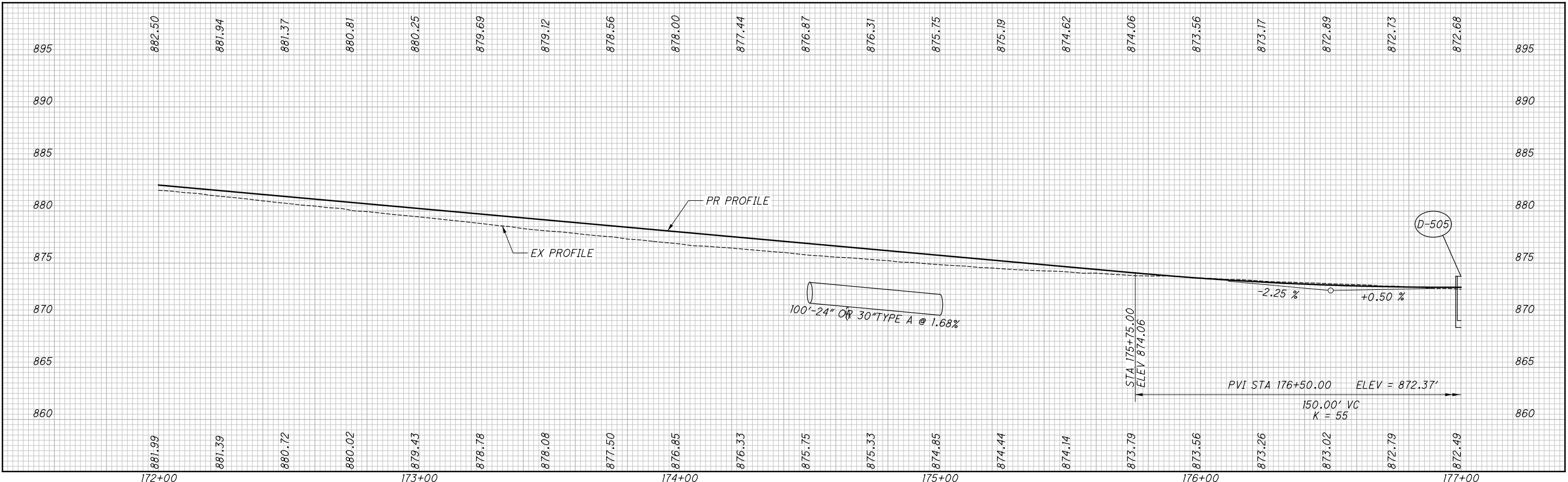
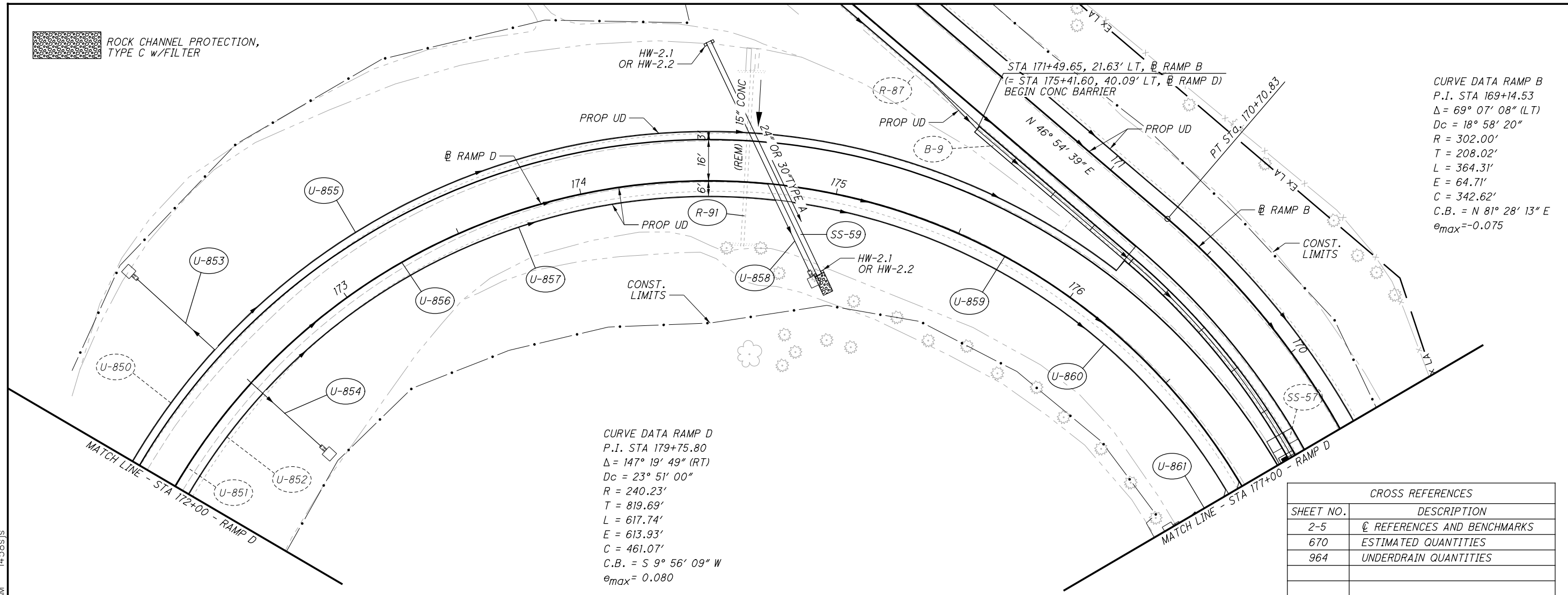


0 20 40
HORIZONTAL SCALE IN FEET
CALCULATED ANM CHECKED SJS

CURVE DATA RAMP B
P.I. STA 169+14.53
 $\Delta = 69^\circ 07' 08''$ (LT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 208.02'$
 $L = 364.31'$
 $E = 64.71'$
 $C = 342.62'$
C.B. = $N 81^\circ 28' 13'' E$
 $\theta_{max} = -0.075$

CURVE DATA RAMP D
P.I. STA 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $D_c = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
C.B. = $S 9^\circ 56' 09'' W$
 $\theta_{max} = 0.080$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
670	ESTIMATED QUANTITIES
964	UNDERDRAIN QUANTITIES



PLAN AND PROFILE - RAMP D
STA 172+00 TO STA 177+00

FRA - 71 - 0.00

667
1312

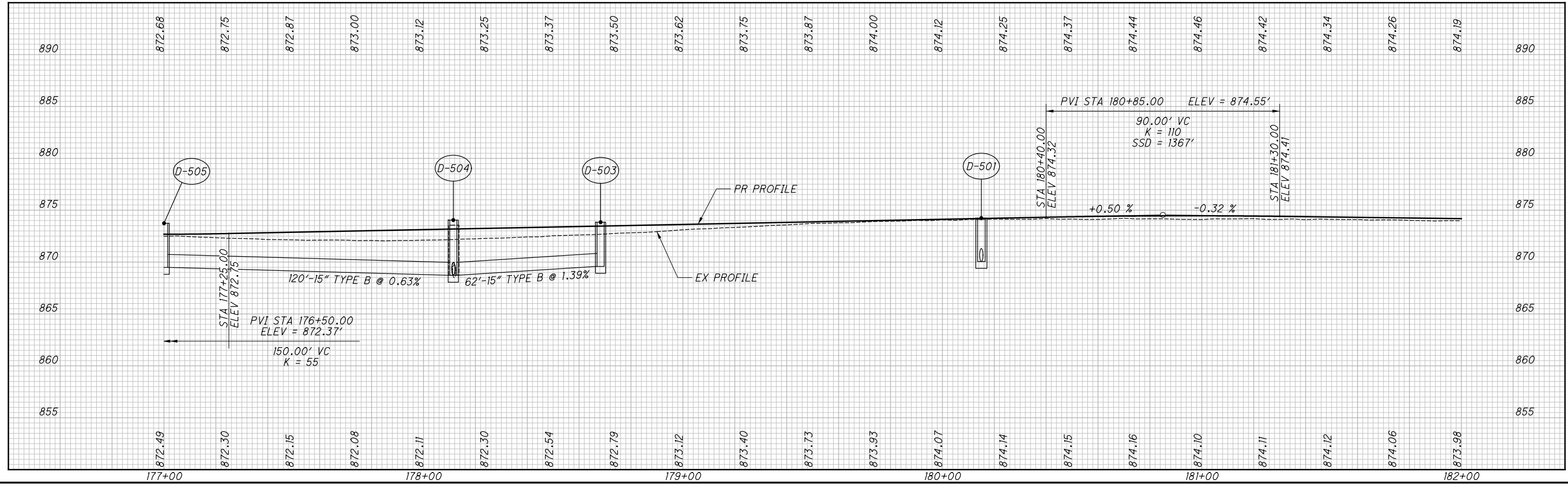
X:\4037000\121957.16\107201\roadway\sheets\107201GP402.dgn Sheet 10/28/2019 11:10:43 AM 1458sjs

CURVE DATA RAMP B
 P.I. STA 169+14.53
 $\Delta = 69^\circ 07' 08''$ (LT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 208.02'$
 $L = 364.31'$
 $E = 64.71'$
 $C = 342.62'$
 $C.B. = N 81^\circ 28' 13'' E$
 $e_{max} = -0.075$

CURVE DATA RAMP D
 P.I. STA 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $D_c = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
 $C.B. = S 9^\circ 56' 09'' W$
 $e_{max} = 0.080$

CURVE DATA RAMP D
 P.I. STA 178+49.10
 $\Delta = 32^\circ 25' 43''$ (RT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 75.24'$
 $L = 146.45'$
 $E = 10.72'$
 $C = 144.50'$
 $C.B. = N 80^\circ 11' 05'' W$
 $e_{max} = 0.080$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
670	ESTIMATED QUANTITIES
964	UNDERDRAIN QUANTITIES

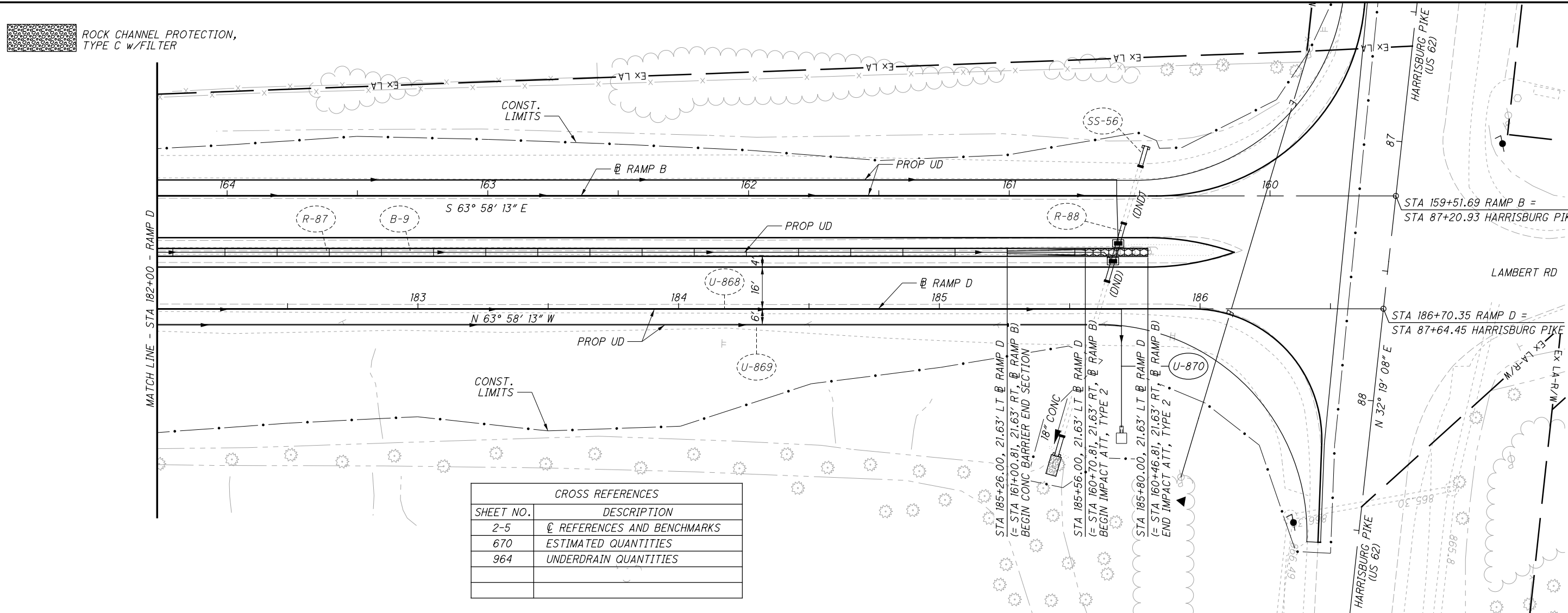


PLAN AND PROFILE - RAMP D
 STA 177+00 TO STA 182+00

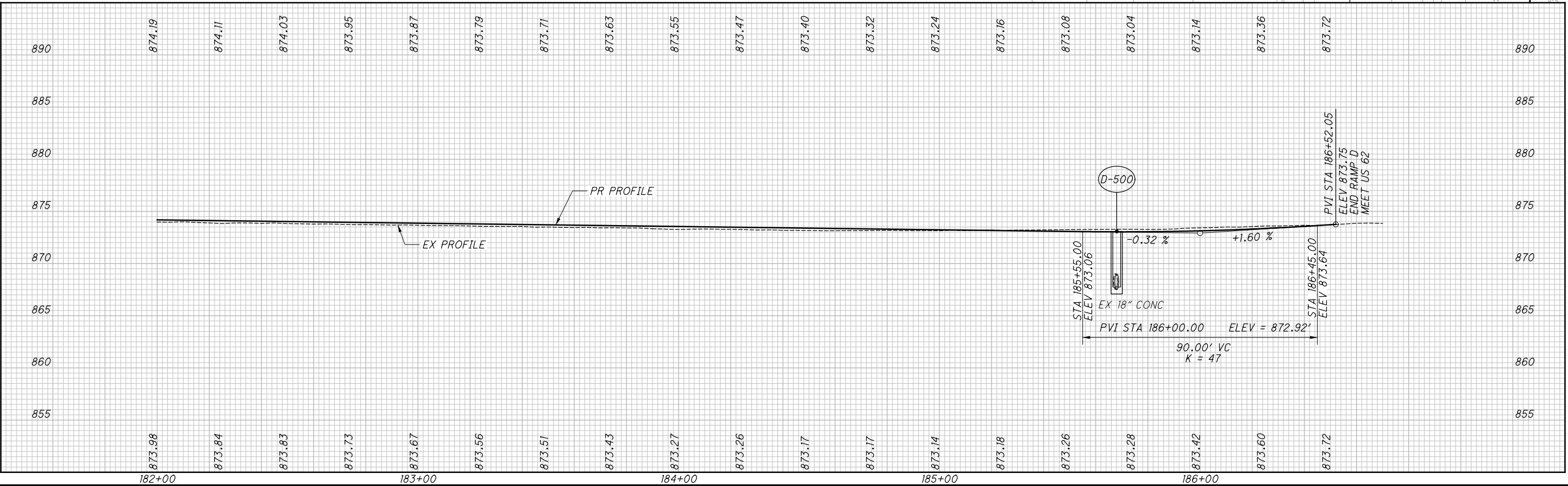
FRA-71-0.00

X:\4037000\121957.16\107201\roadway\sheets\107201GP403.dgn Sheet 10/28/2019 11:10:44 AM 1458sjs

X:\4037000\121957.16\107201\roadway\sheets\107201GP404.dgn Sheet 10/28/2019 11:10:45 AM 1458sjs



GROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
670	ESTIMATED QUANTITIES
964	UNDERDRAIN QUANTITIES



PLAN AND PROFILE - RAMP D
STA 182+00 TO STA 187+00

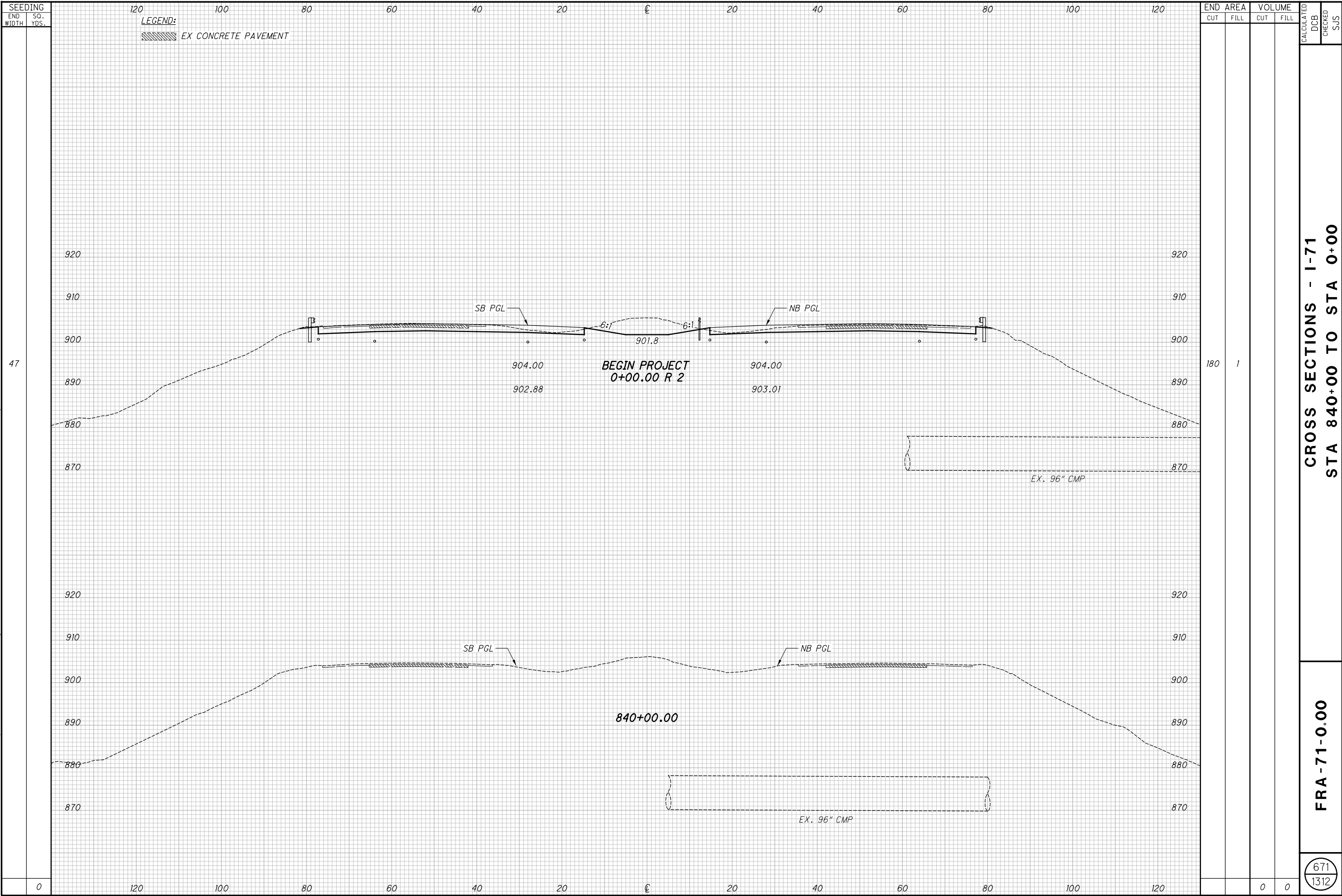
FRA-71-0.00
669
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G0400.dgn Sheet 10/28/2019 11:10:45 AM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202		601	601		602		611	611	611	611				
		FROM	TO		HEADWALL REMOVED	GUTTER REMOVED	PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	TIED CONCRETE BLOCK MAT, TYPE 1	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	15" CONDUIT, TYPE B	24" CONDUIT, TYPE A, 706.02	30" CONDUIT, TYPE A, GALVANIZED 707.01 AND 707.02 (0.188), ALUMINIZED 707.01 AND 707.02(0.064), 707.04(0.064), 707.05(0.064), 707.07(0.064) OR 707.21	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1							
					EACH	SY	FT	EACH		SY	CY		CY		FT		FT					
R-91	667	174+64	174+64	LT/RT	2	5	69															
R-92	668	178+12		RT			11	1														
SS-59	667	174+50	175+00	LT/RT							2.08		1.2				100					
SS-60	668	180+15		LT/RT						1.78			0.27		53						1	
TOTALS CARRIED TO SHEETS 399-402					2	5	80	1		1.78	2.08		1.47		53		100				1	

FRA - 71 - 0.00	ESTIMATED QUANTITIES
CALCULATED DCB CHECKED SJS	670 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS101.dgn XS_SHEET_001 10/28/2019 11:10:50 AM 1458s.js

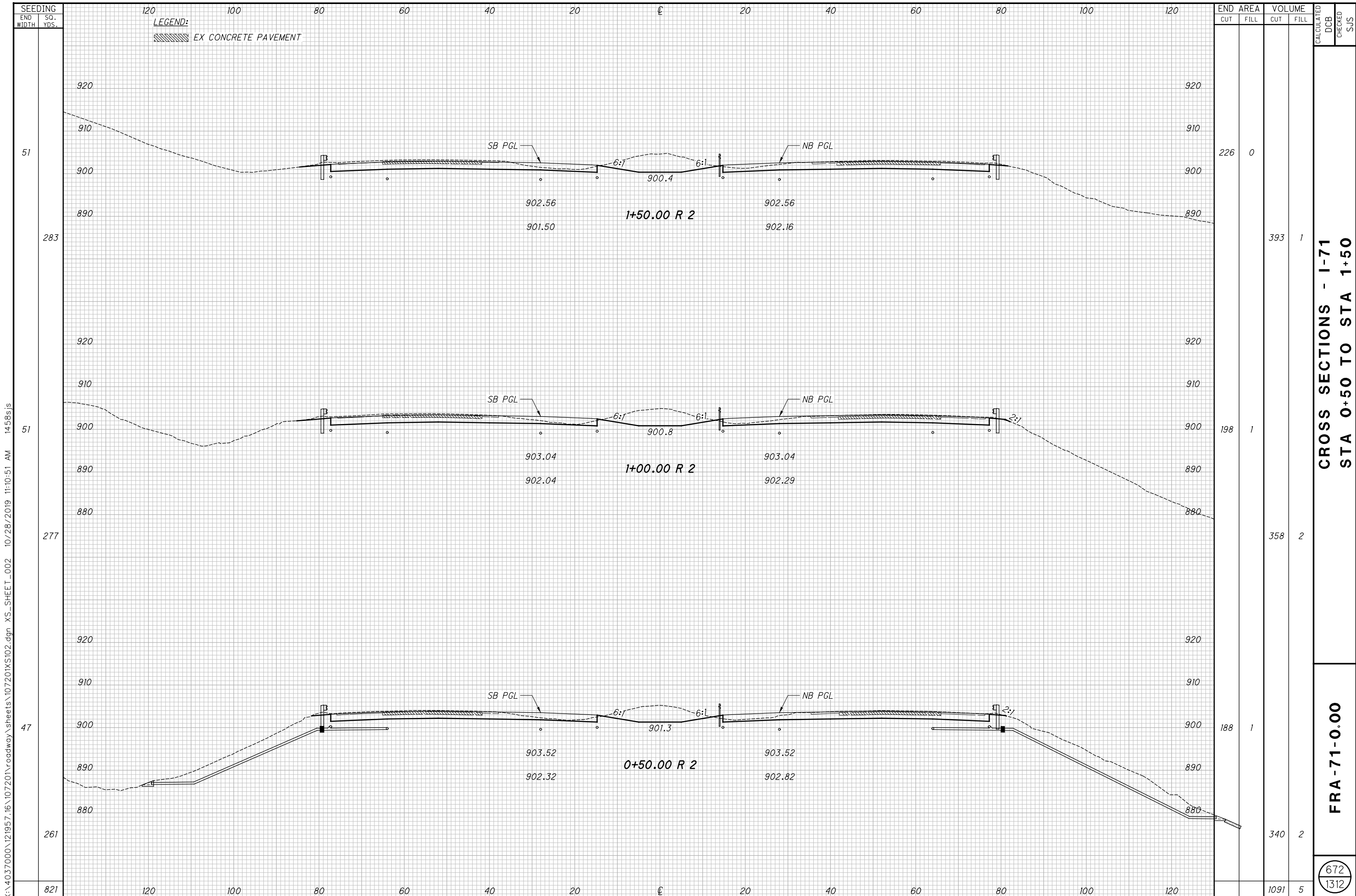


SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	DCB	SJS
0				0	0		
120		180	1				

CROSS SECTIONS - I-71
STA 840+00 TO STA 0+00

FRA - 71 - 0.00

671
1312



X:\4037000\121957.16\107201\roadway\sheets\107201XS102.dgn XS_SHEET_002 10/28/2019 11:0:51 AM 14585.js

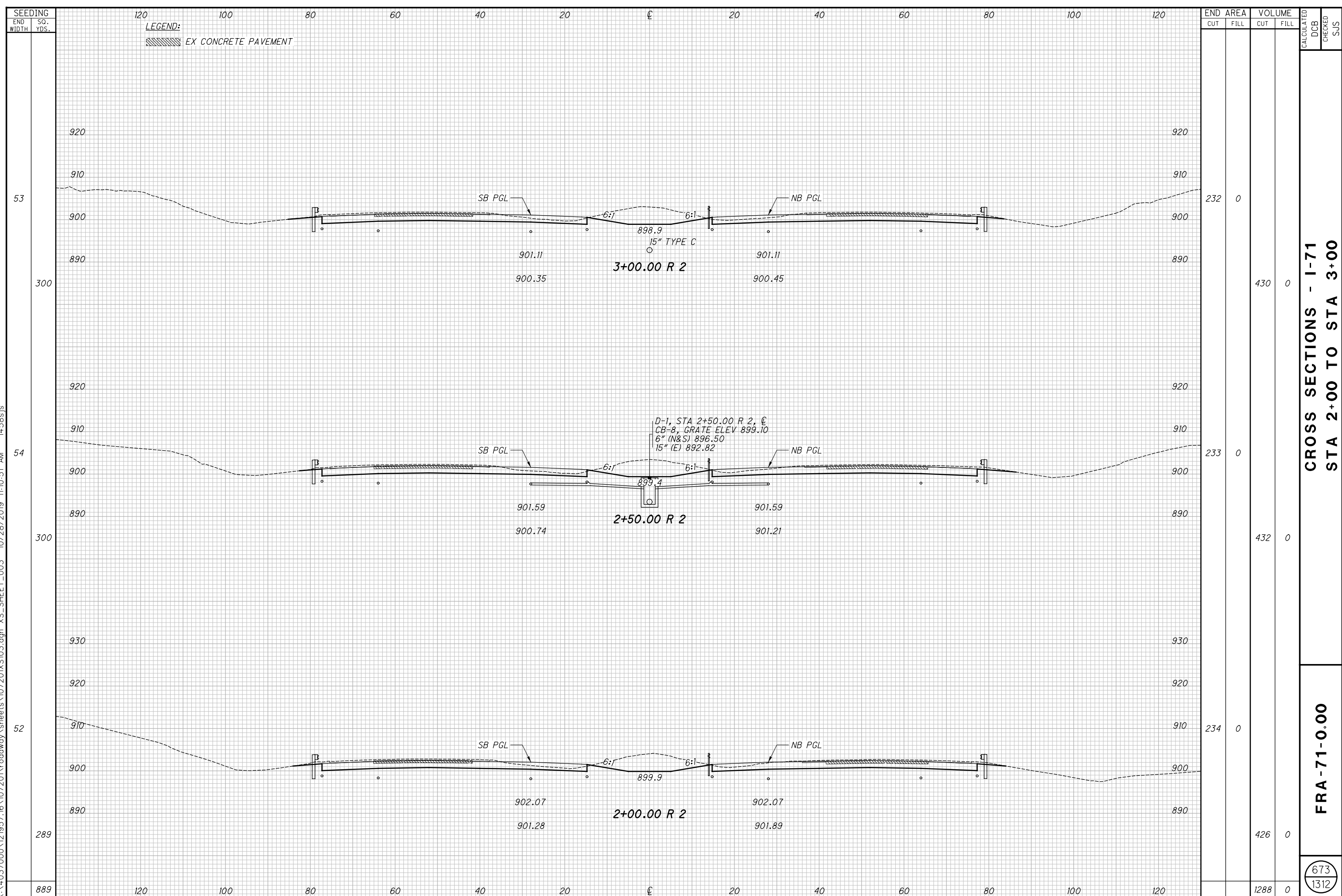
SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
		CUT	FILL	CUT	FILL		
51		226	0				
283				393	1		
51		198	1				
277				358	2		
47		188	1				
261				340	2		
821				1091	5		

**CROSS SECTIONS - I-71
STA 0+50 TO STA 1+50**

FRA - 71 - 0.00

672
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS103.dgn XS_SHEET_003 10/28/2019 11:05:51 AM 14585.js



LEGEND:
 EX CONCRETE PAVEMENT

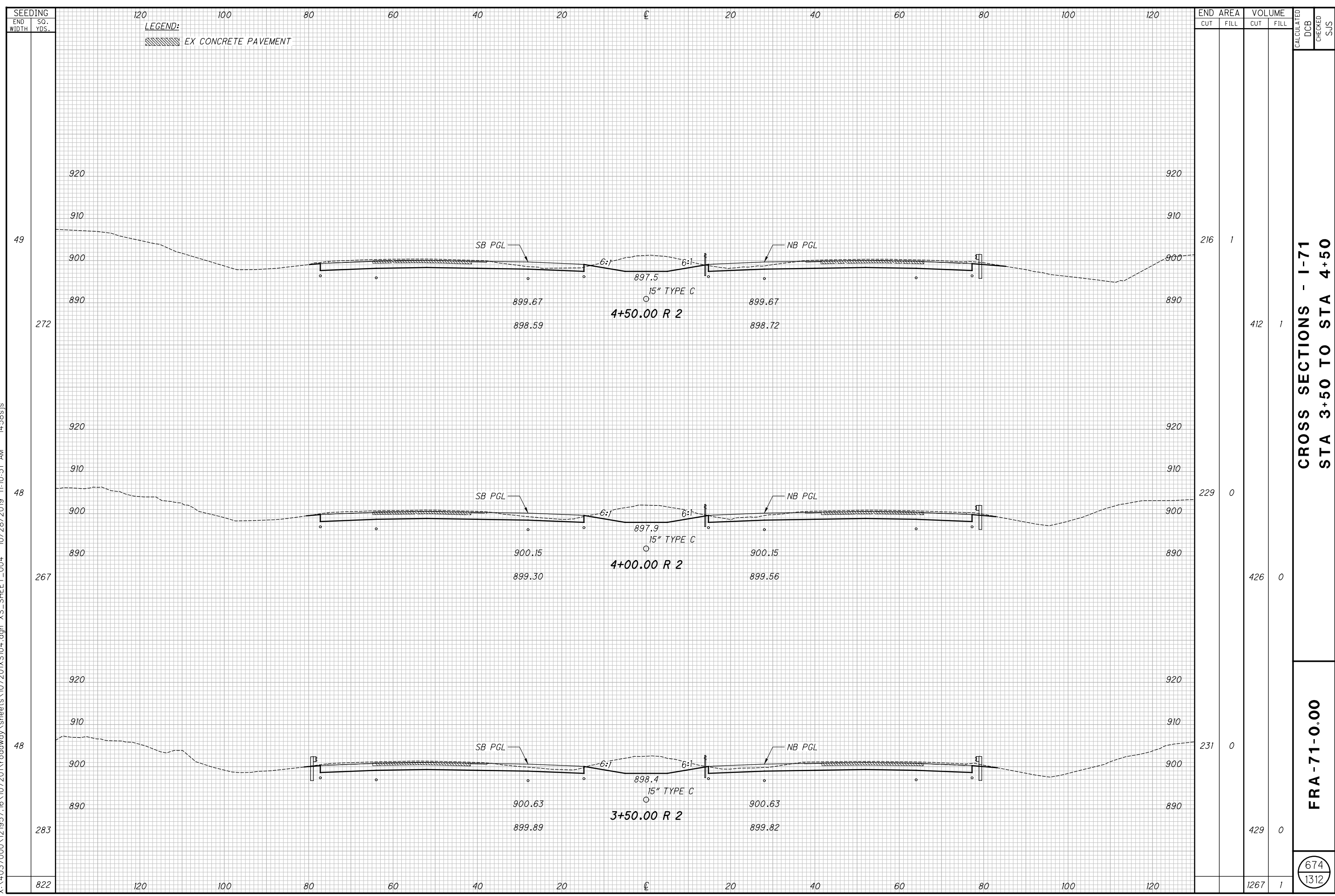
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
232	0				
233	0				
234	0				
1288	0				

CROSS SECTIONS - I-71
 STA 2+00 TO STA 3+00

FRA - 71 - 0.00

673
 1312

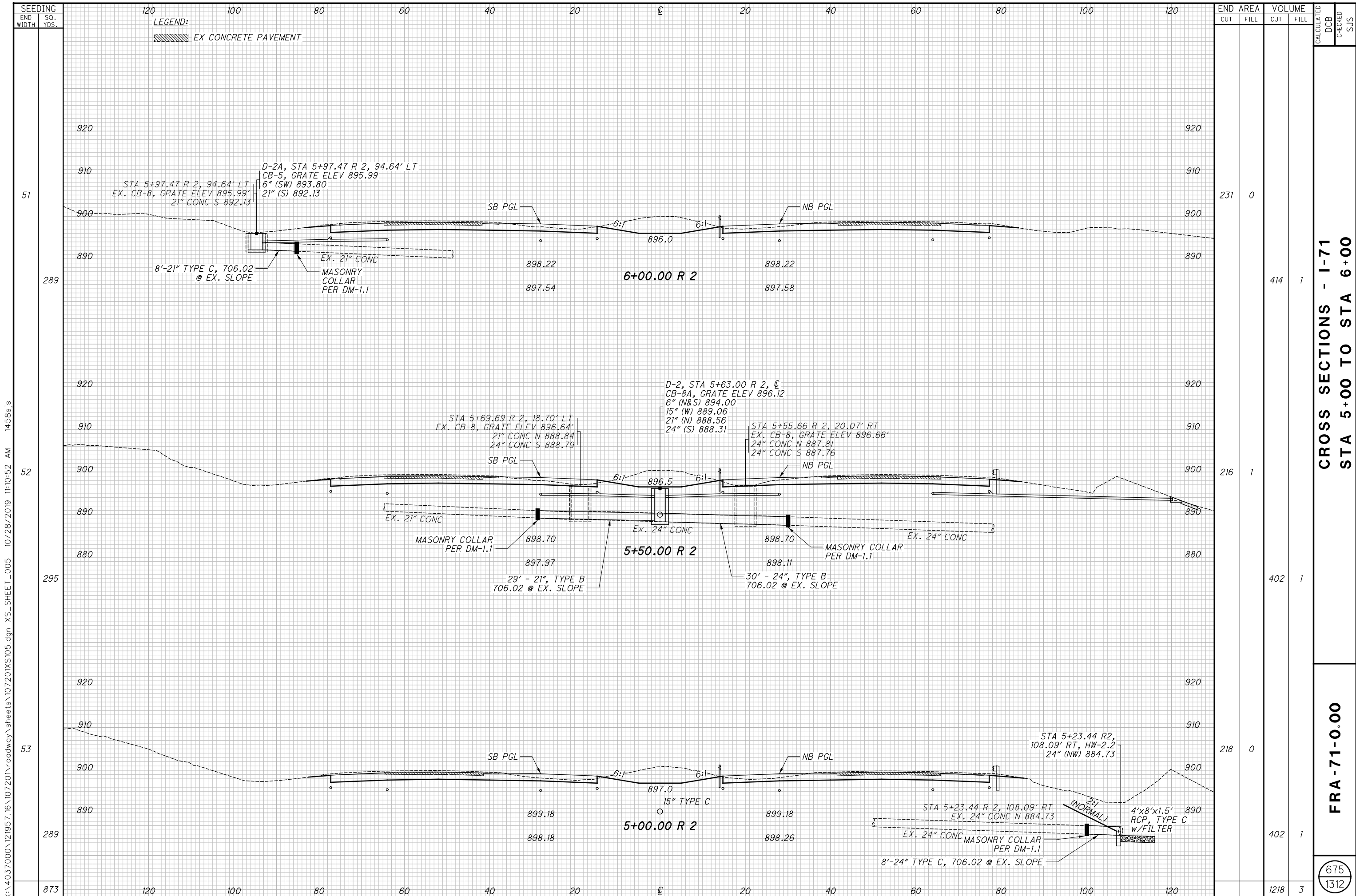
X:\4037000\121957.16\107201\roadway\sheets\107201XS104.dgn XS_SHEET_004 10/28/2019 11:00:51 AM 1458s.js



**CROSS SECTIONS - I-71
 STA 3+50 TO STA 4+50**

FRA - 71 - 0:00

674
 1312



END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
231	0				
414	1				
216	1				
402	1				
218	0				
402	1				
	1218	3			

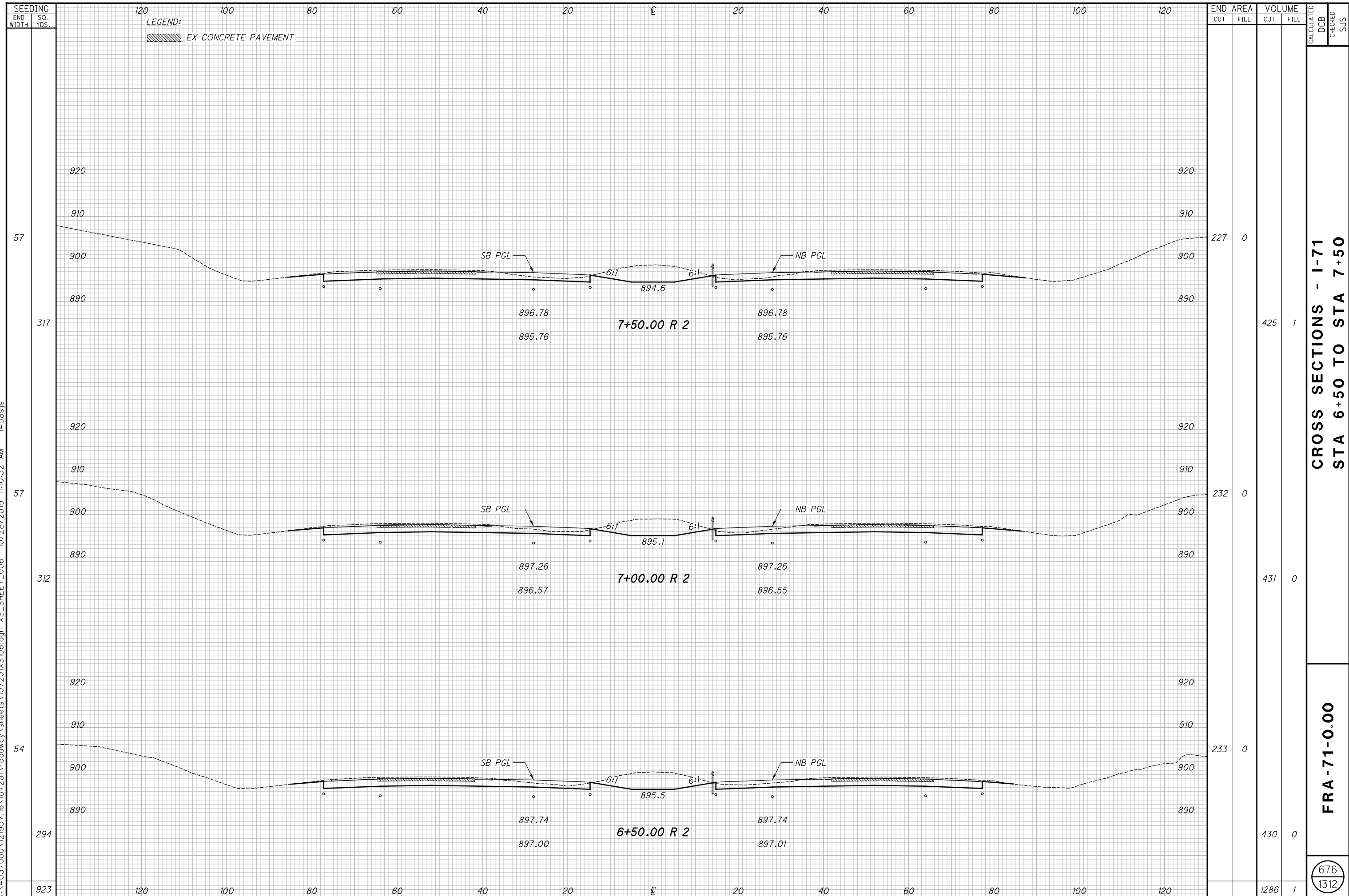
CROSS SECTIONS - I-71
STA 5+00 TO STA 6+00

FRA - 71 - 0.00

675
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS105.dgn XS_SHEET_005 10/28/2019 11:0:52 AM 1458sjs

X:\4037000\121957.16\107201\roadway\sheets\107201\XS106.dgn XS_SHEET_006 10/28/2019 11:10:52 AM 14:58sjs

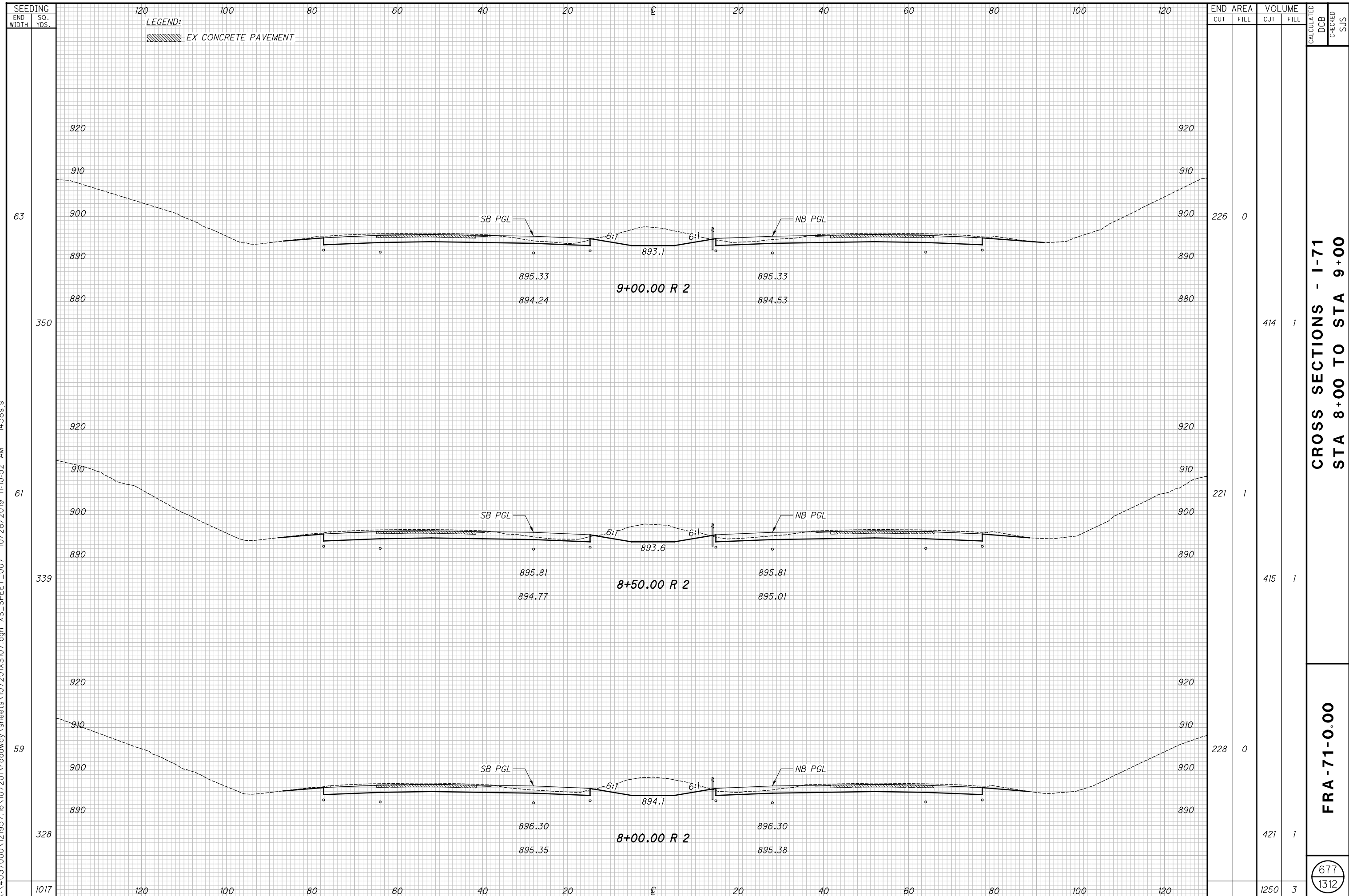


**CROSS SECTIONS - I-71
 STA 6+50 TO STA 7+50**

FRA - 71 - 0.00

676
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS107.dgn XS_SHEET_007 10/28/2019 11:0:52 AM 1458sjs



LEGEND:
 EX CONCRETE PAVEMENT

SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
		CUT	FILL	CUT	FILL		
63		226	0				
350				414	1		
61		221	1				
339				415	1		
59		228	0				
328				421	1		
1017				1250	3		

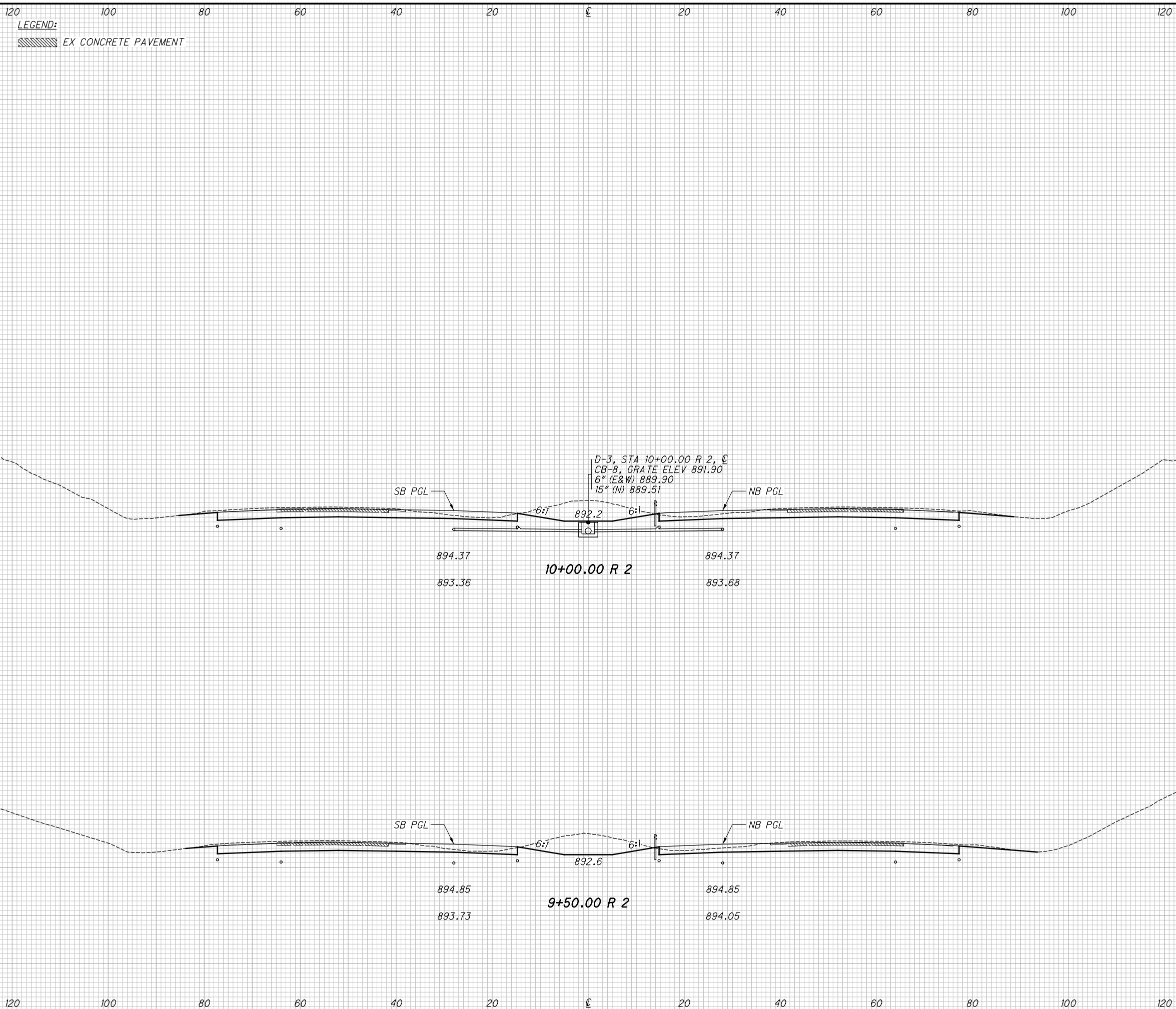
CROSS SECTIONS - I-71
 STA 8+00 TO STA 9+00

FRA - 71 - 0.00

677
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS108.dgn XS_SHEET_008 10/28/2019 11:05:53 AM 1458sjs

SEEDING	
END WIDTH	SO. YDS.
689	
350	
62	
339	
58	



END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
CUT	FILL	CUT	FILL				
		231	0				
			424	0			
		228	0				
			420	0			
		844	0				

CROSS SECTIONS - I-71
STA 9+50 TO STA 10+00

FRA - 71 - 0:00

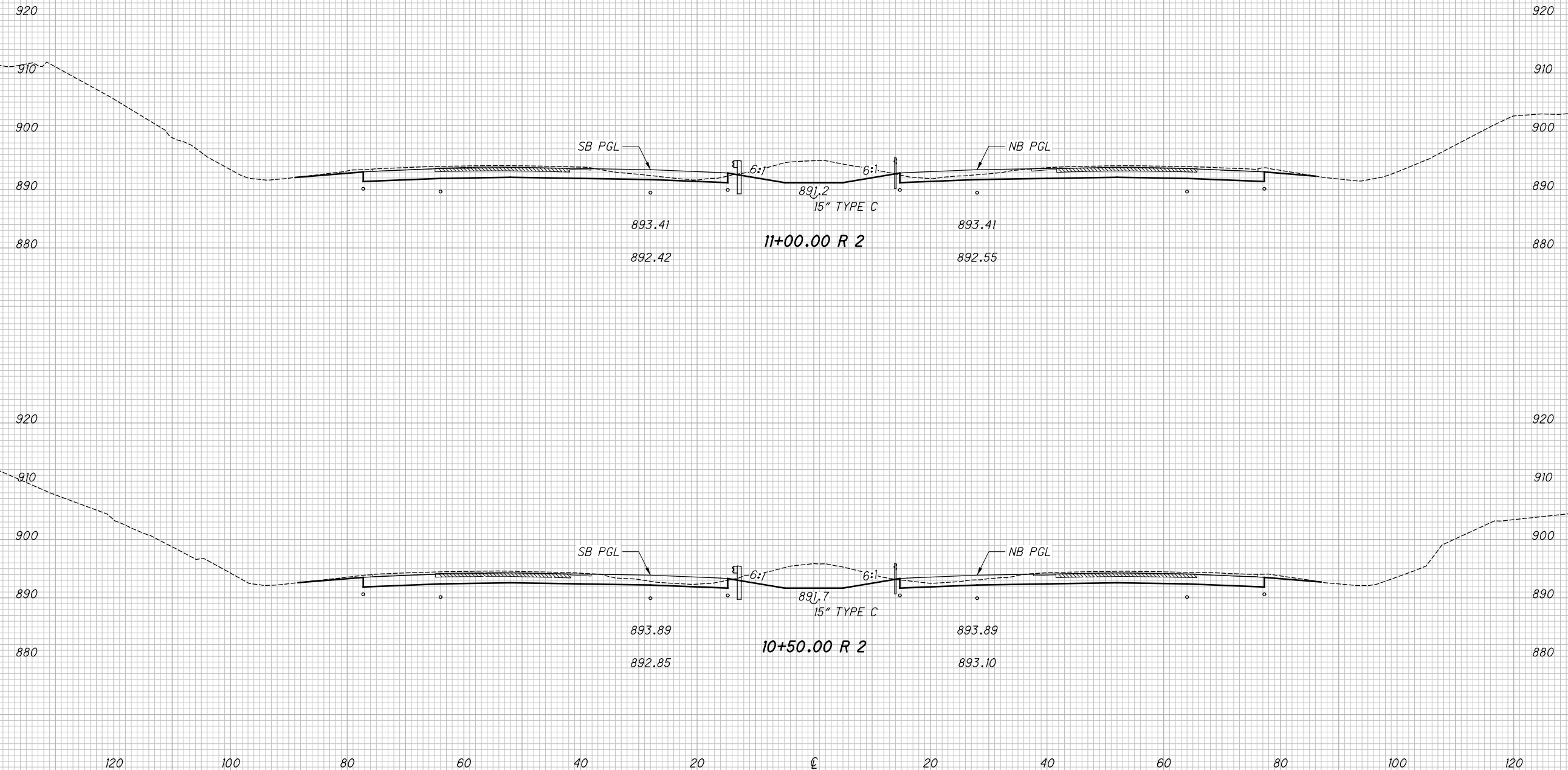
678
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS109.dgn XS_SHEET_009 10/28/2019 11:10:53 AM 14:58sjs

SEEDING	END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
	CUT	FILL	CUT	FILL				
SO. YDS.								
END WIDTH								

120 100 80 60 40 20 0 20 40 60 80 100 120

LEGEND:
 EX CONCRETE PAVEMENT



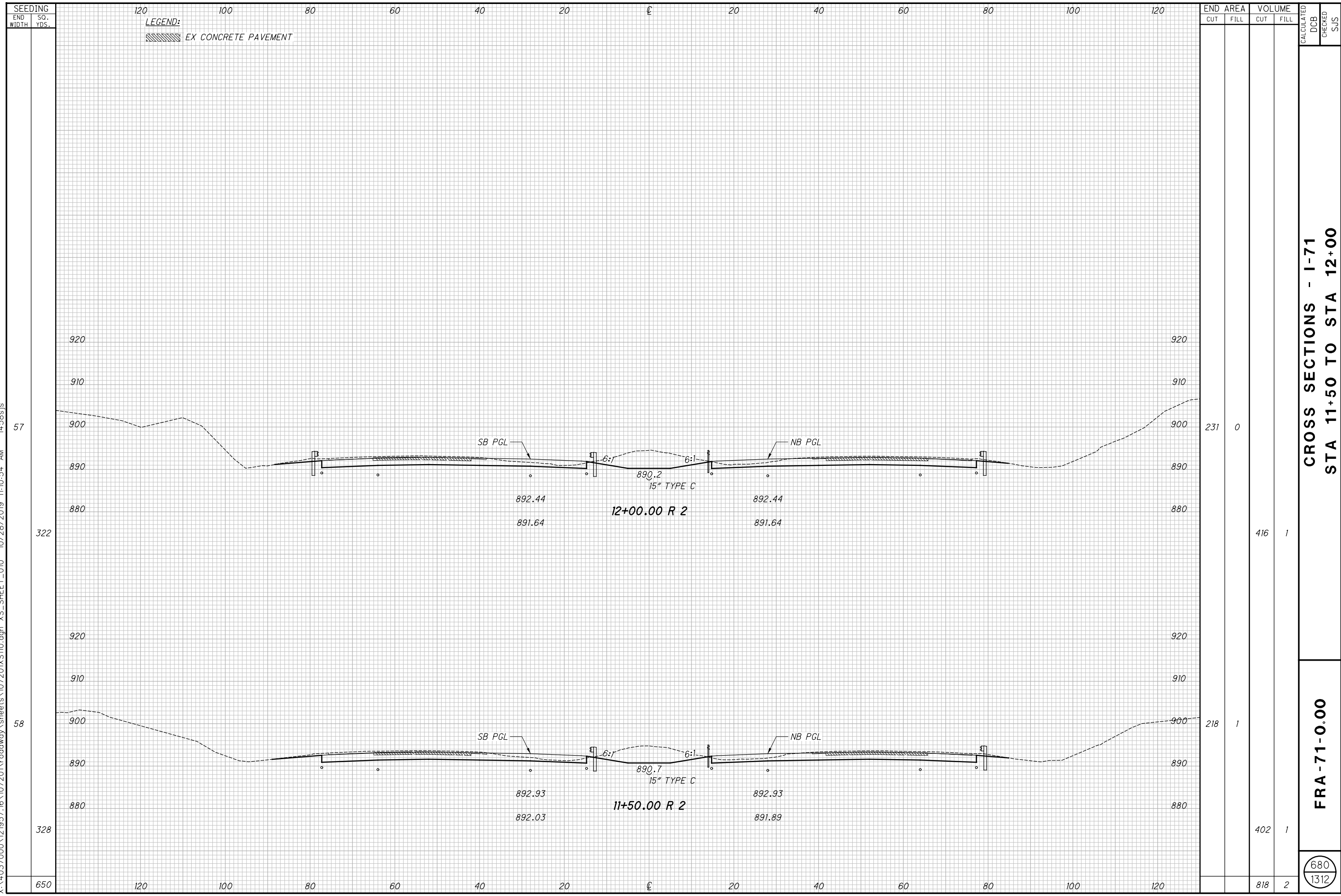
END AREA	VOLUME		CALCULATED	DCB	CHECKED	SJS
	CUT	FILL				
216	0					
		408	1			
225	0					
		422	0			
		830	1			

CROSS SECTIONS - I-71
 STA 10+50 TO STA 11+00

FRA - 71 - 0.00

679
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS110.dgn XS_SHEET_010 10/28/2019 11:10:54 AM 1458s.js

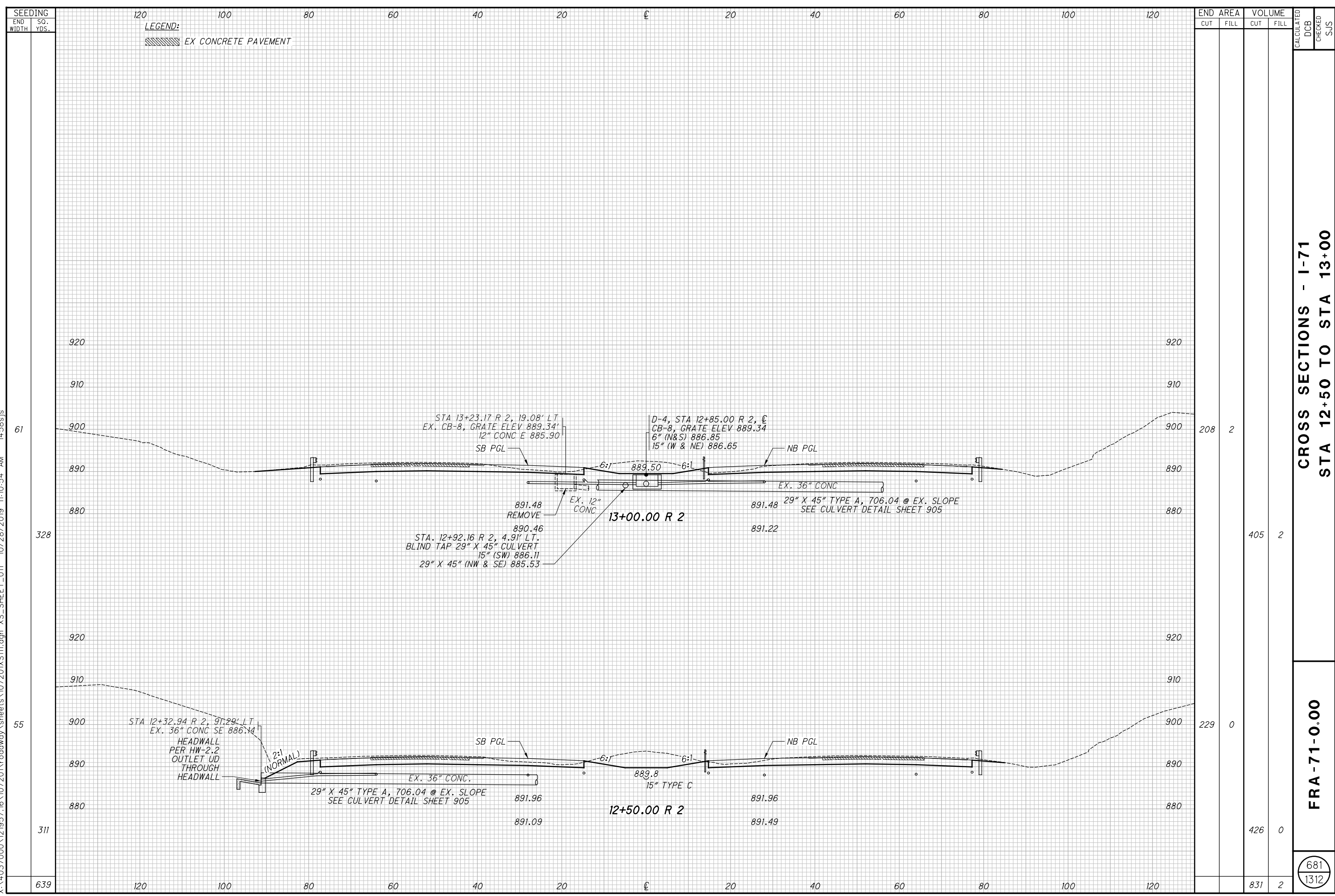


**CROSS SECTIONS - I-71
 STA 11+50 TO STA 12+00**

FRA - 71 - 0.00

680
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS111.dgn XS_SHEET_01 10/28/2019 11:10:54 AM 1458s.js



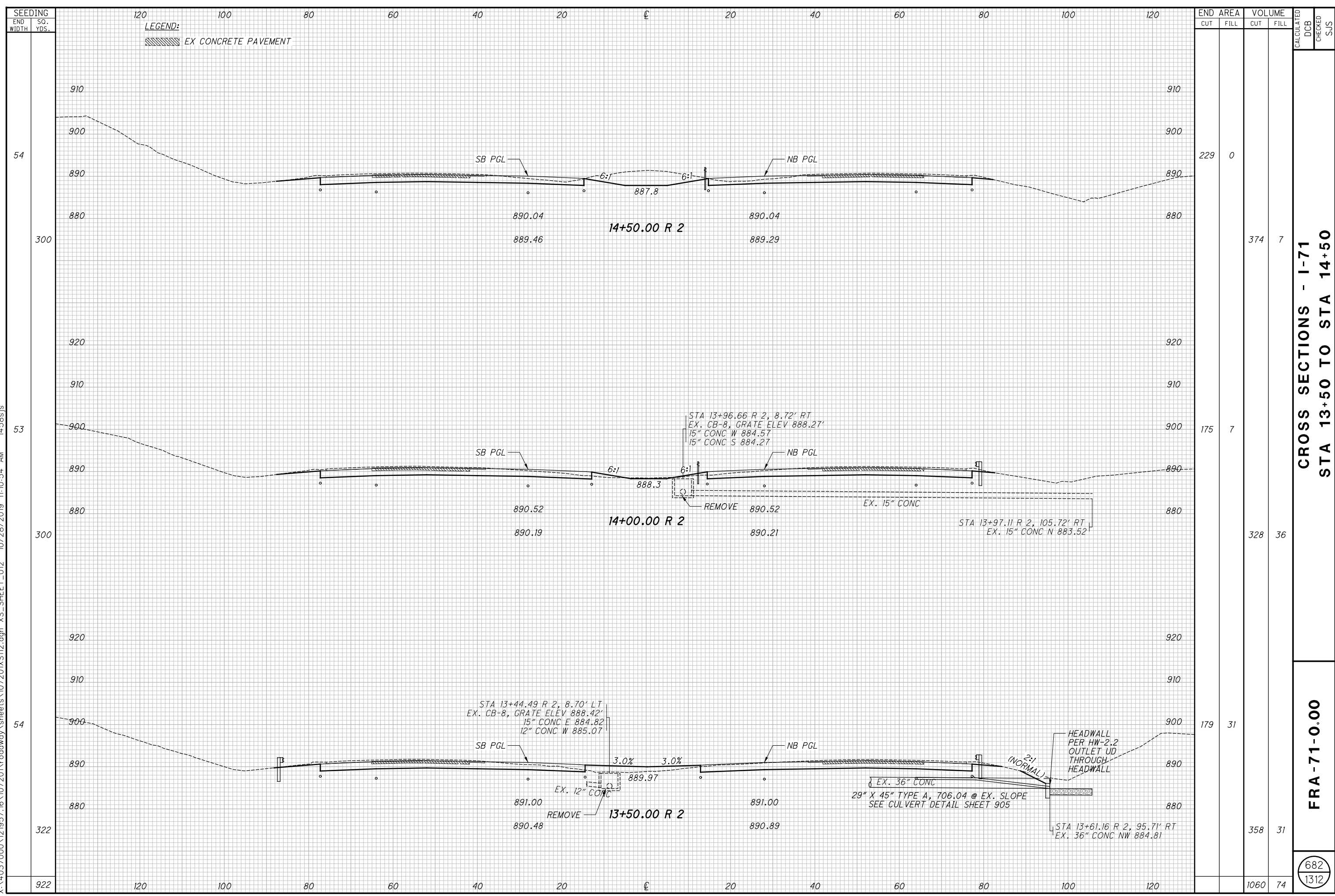
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
208	2				
405	2				
229	0				
831	2				

CROSS SECTIONS - I-71
STA 12+50 TO STA 13+00

FRA - 71 - 0:00

681
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS112.dgn XS_SHEET_012 10/28/2019 11:10:54 AM 1458s.js



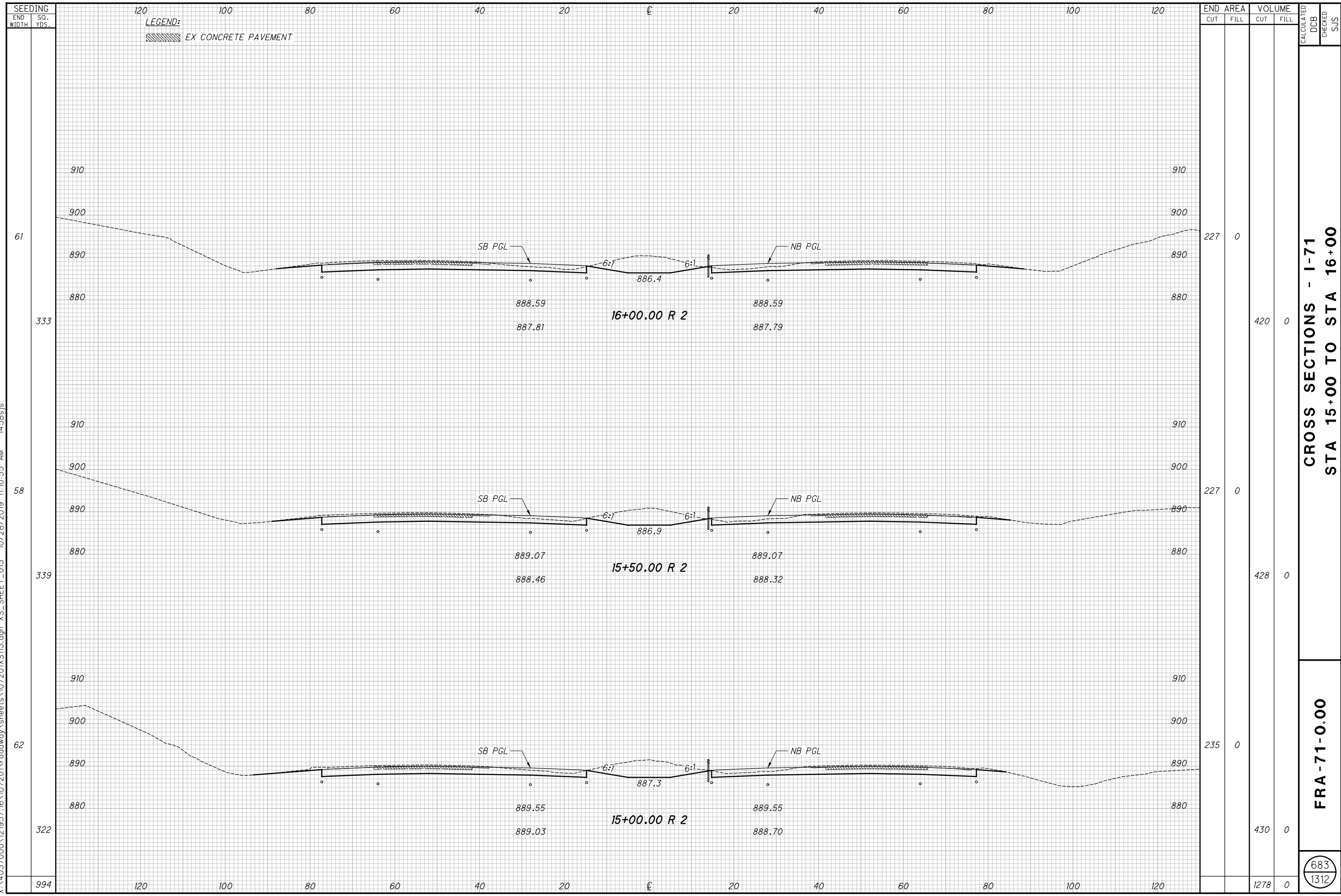
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
229	0				
175	7				
179	31				
		1060	74		

CROSS SECTIONS - I-71
STA 13+50 TO STA 14+50

FRA - 71-0:00

682
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS113.dgn XS_SHEET_013 10/28/2019 11:10:55 AM 1458s.js

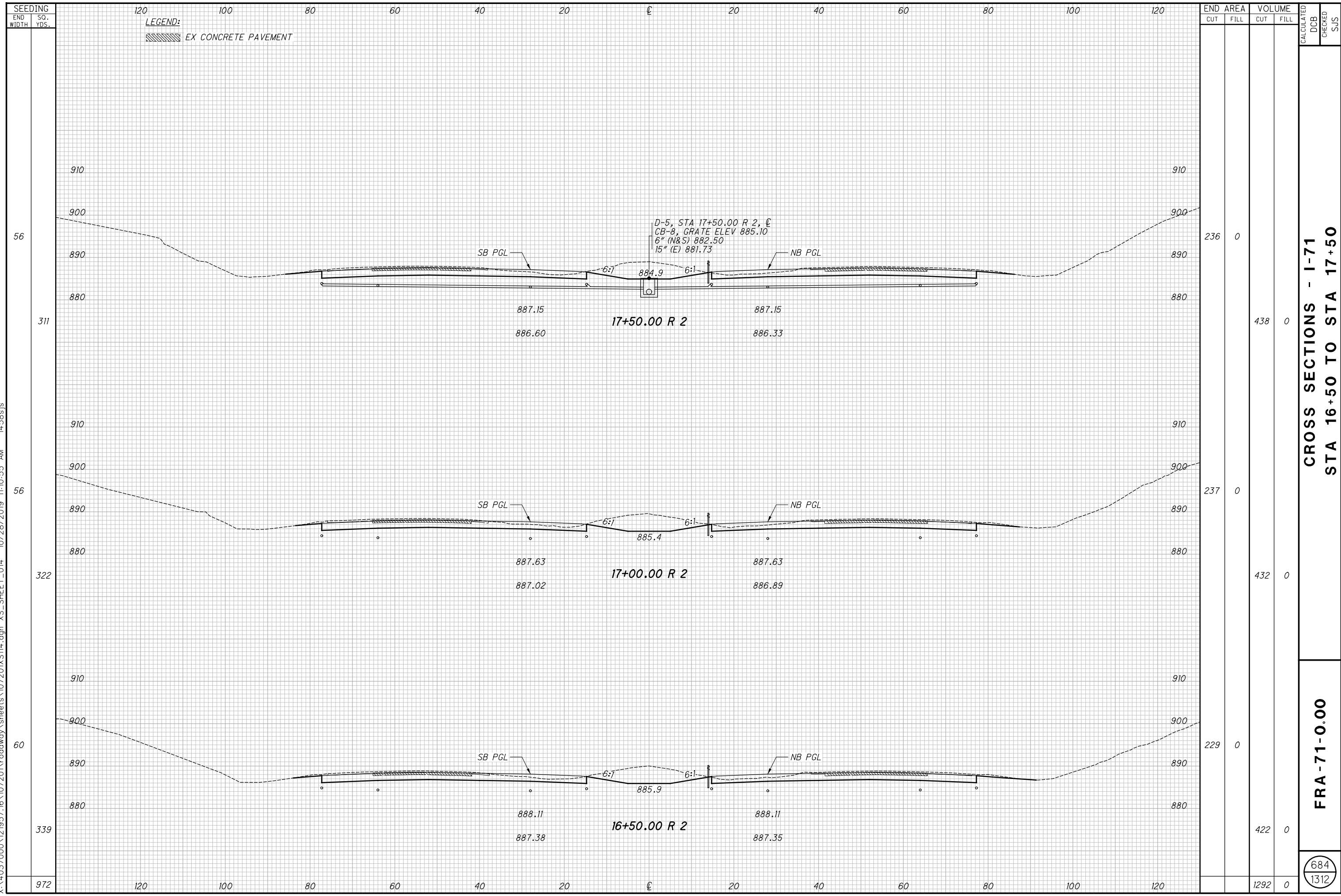


**CROSS SECTIONS - I-71
 STA 15+00 TO STA 16+00**

FRA - 71 - 0.00

683
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS114.dgn XS_SHEET_014 10/28/2019 11:10:55 AM 1458s.js

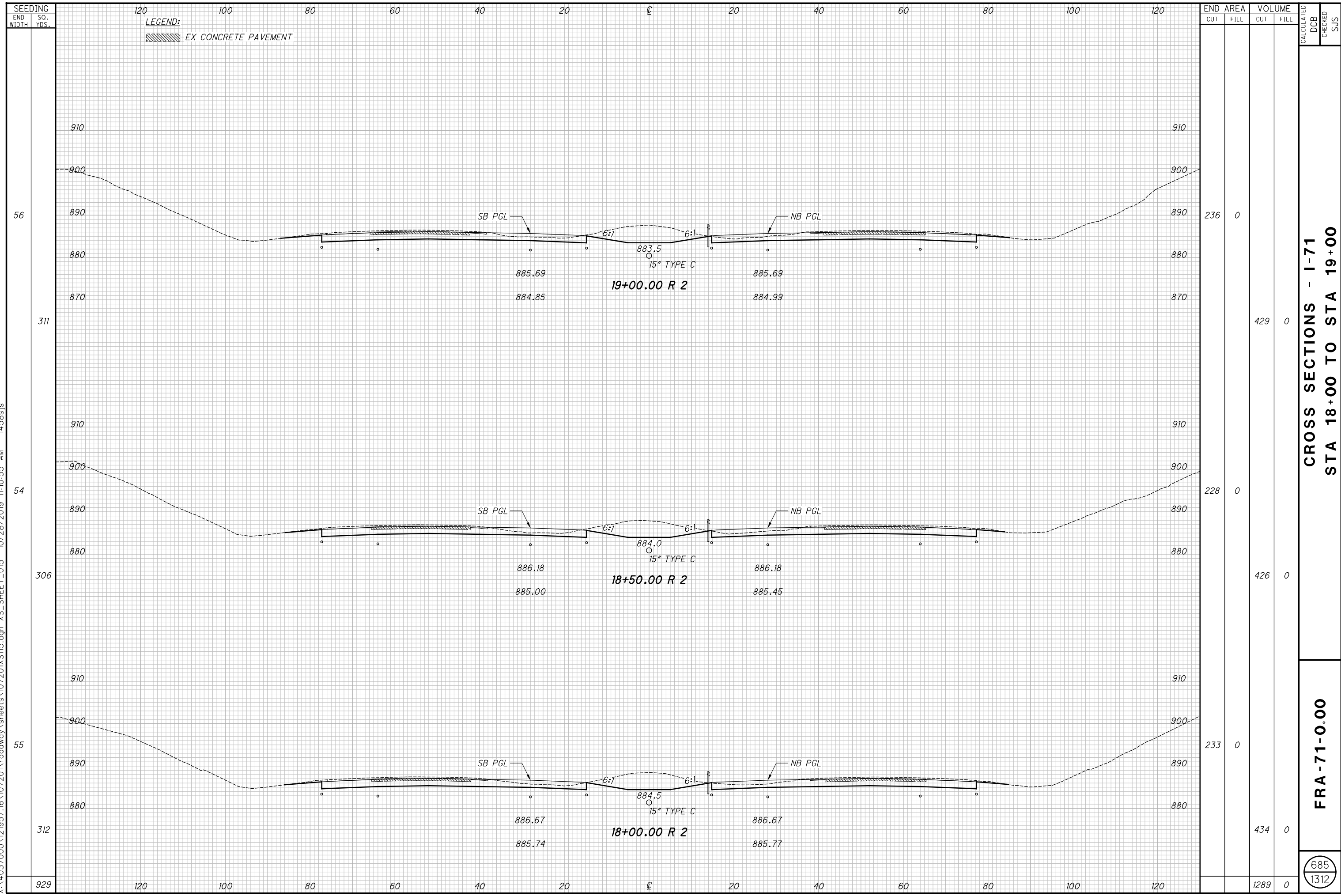


**CROSS SECTIONS - I-71
 STA 16+50 TO STA 17+50**

FRA-71-0.00

684
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS115.dgn XS_SHEET_015 10/28/2019 11:10:55 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT

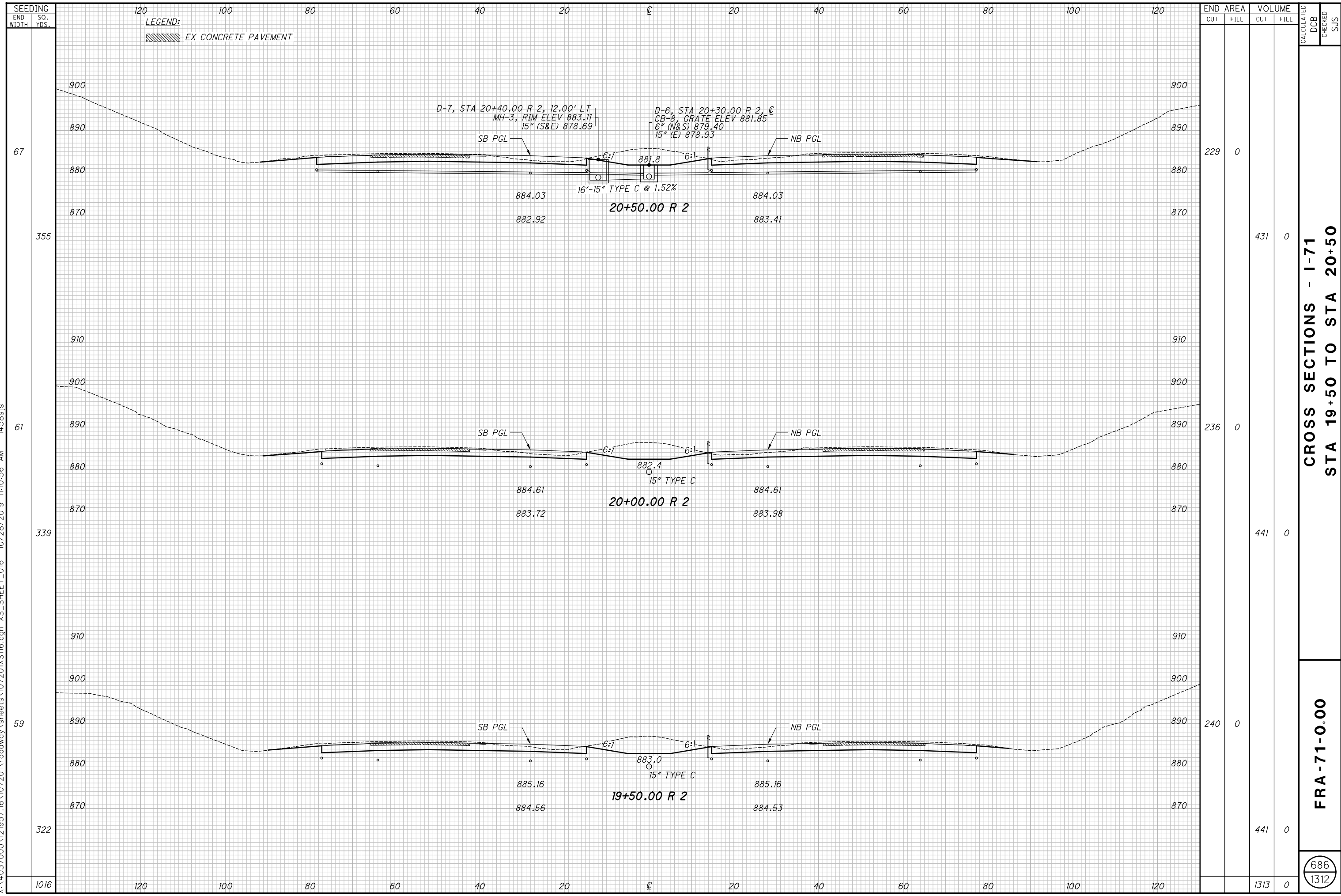
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
236	0				
429	0				
228	0				
426	0				
233	0				
434	0				
1289	0				

CROSS SECTIONS - I-71
 STA 18+00 TO STA 19+00

FRA-71-0:00

685
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS116.dgn XS_SHEET_016 10/28/2019 11:10:56 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT

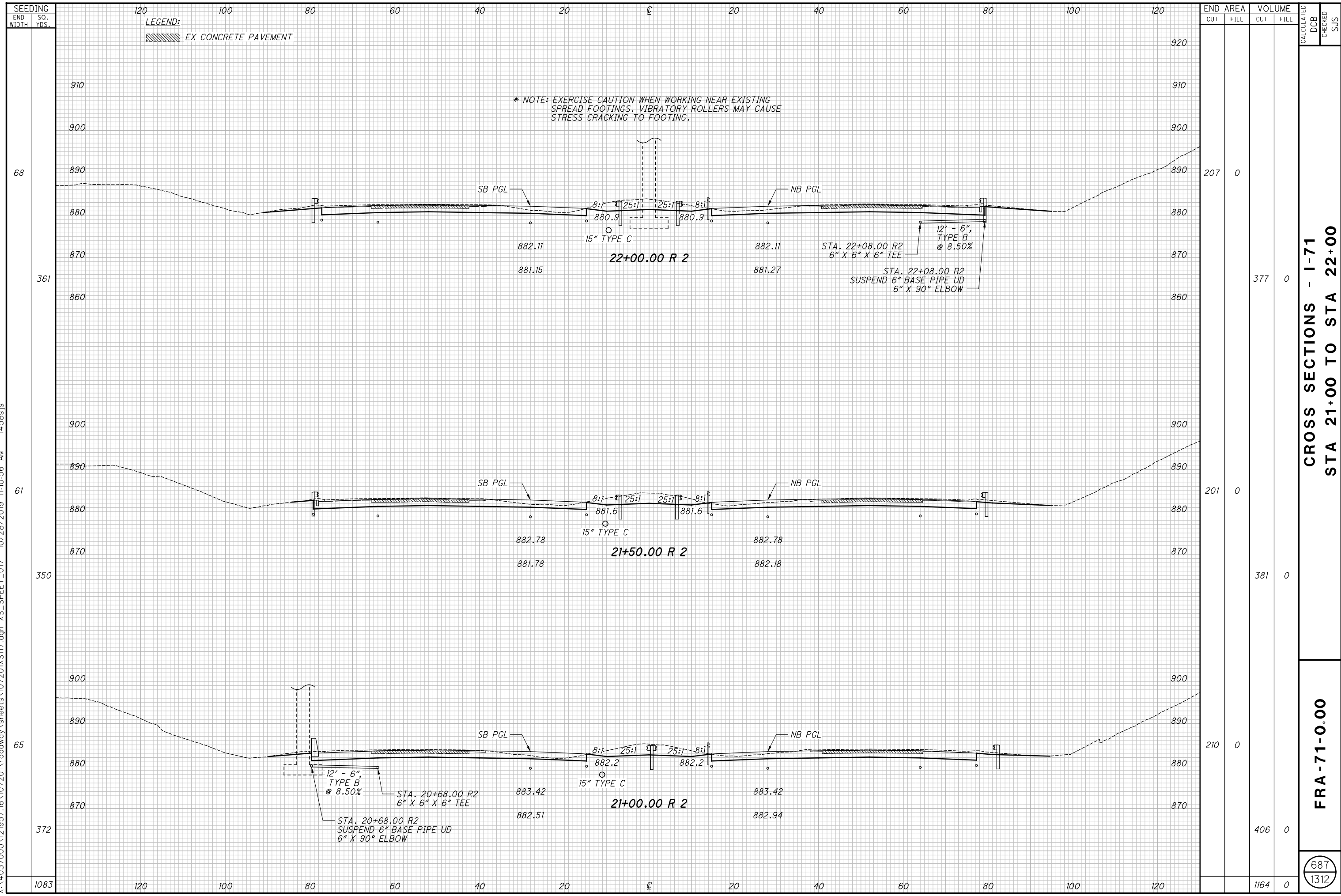
SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
		CUT	FILL	CUT	FILL		
67		229	0	431	0		
355							
61		236	0	441	0		
339							
59		240	0	441	0		
322							
1016				1313	0		

CROSS SECTIONS - I-71
 STA 19+50 TO STA 20+50

FRA - 71 - 0:00

686
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS117.dgn XS_SHEET_017 10/28/2019 11:10:56 AM 1458s.js



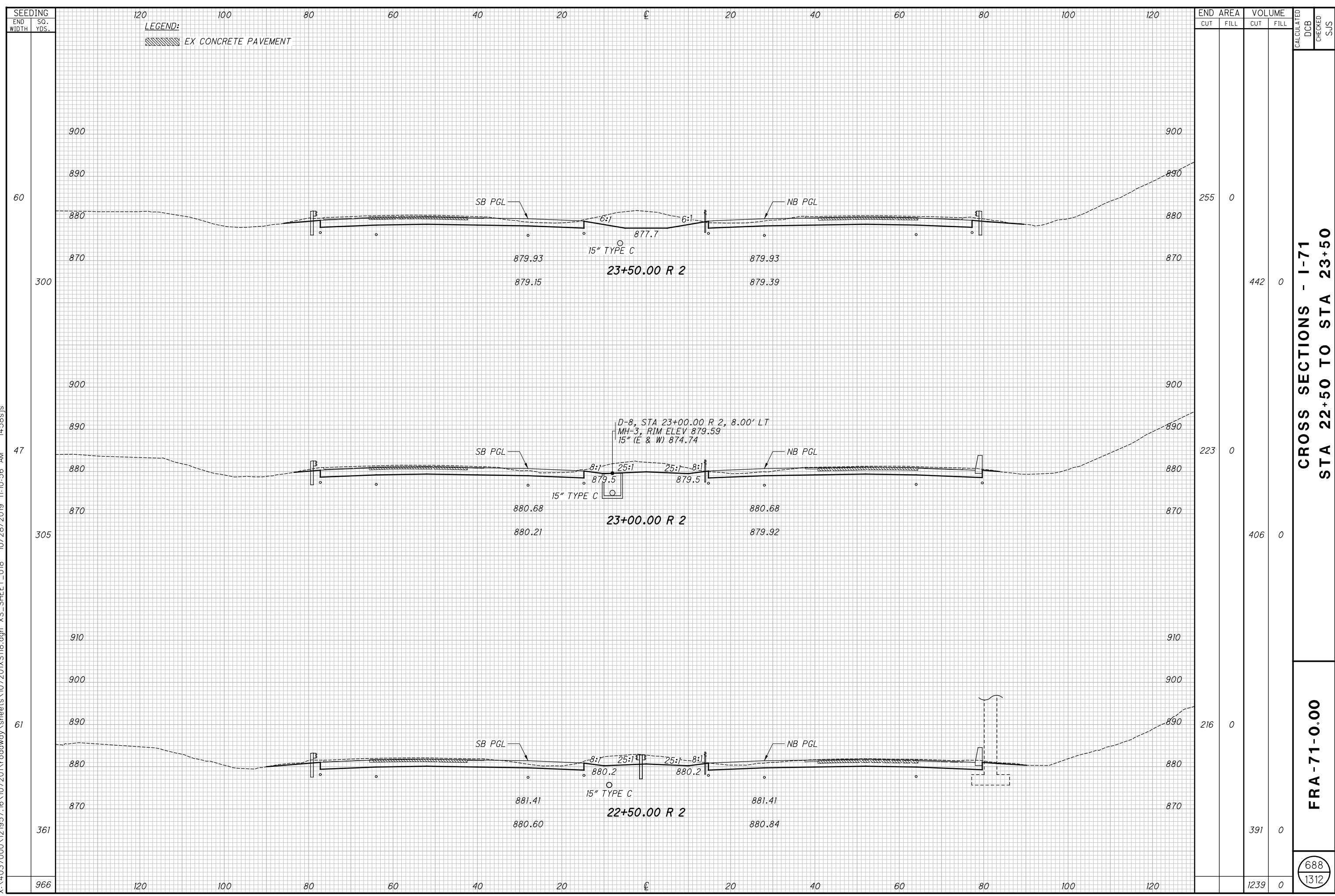
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
207	0				
377	0				
201	0				
381	0				
210	0				
406	0				
1164	0				

CROSS SECTIONS - I-71
 STA 21+00 TO STA 22+00

FRA - 71 - 0.00

687
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS118.dgn XS_SHEET_018 10/28/2019 11:10:56 AM 1458s.js



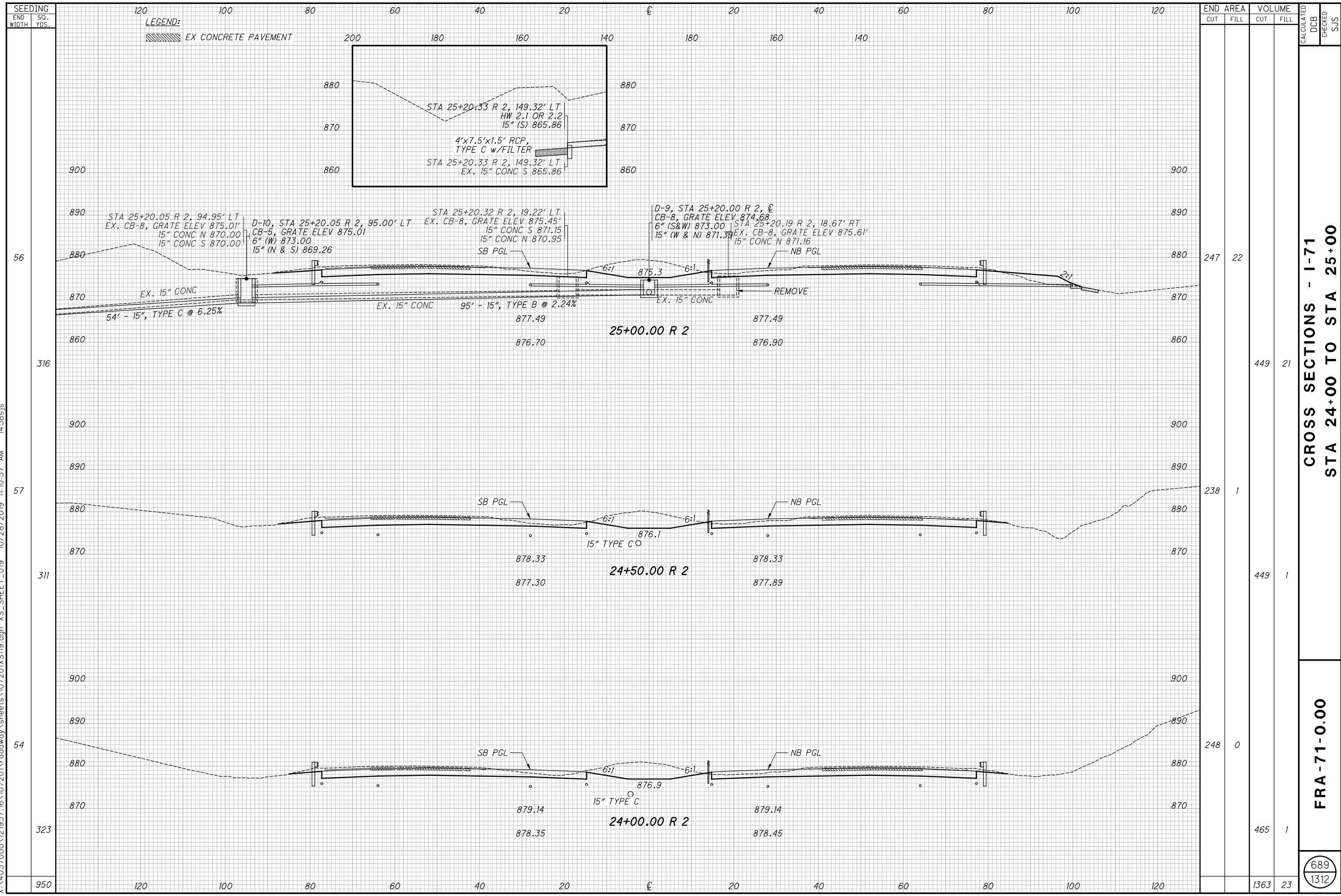
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
255	0					
223	0					
216	0					
		1239	0			

CROSS SECTIONS - I-71
STA 22+50 TO STA 23+50

FRA - 71-0.00

688
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS119.dgn XS_SHEET_019 10/28/2019 11:10:57 AM 1458s.js

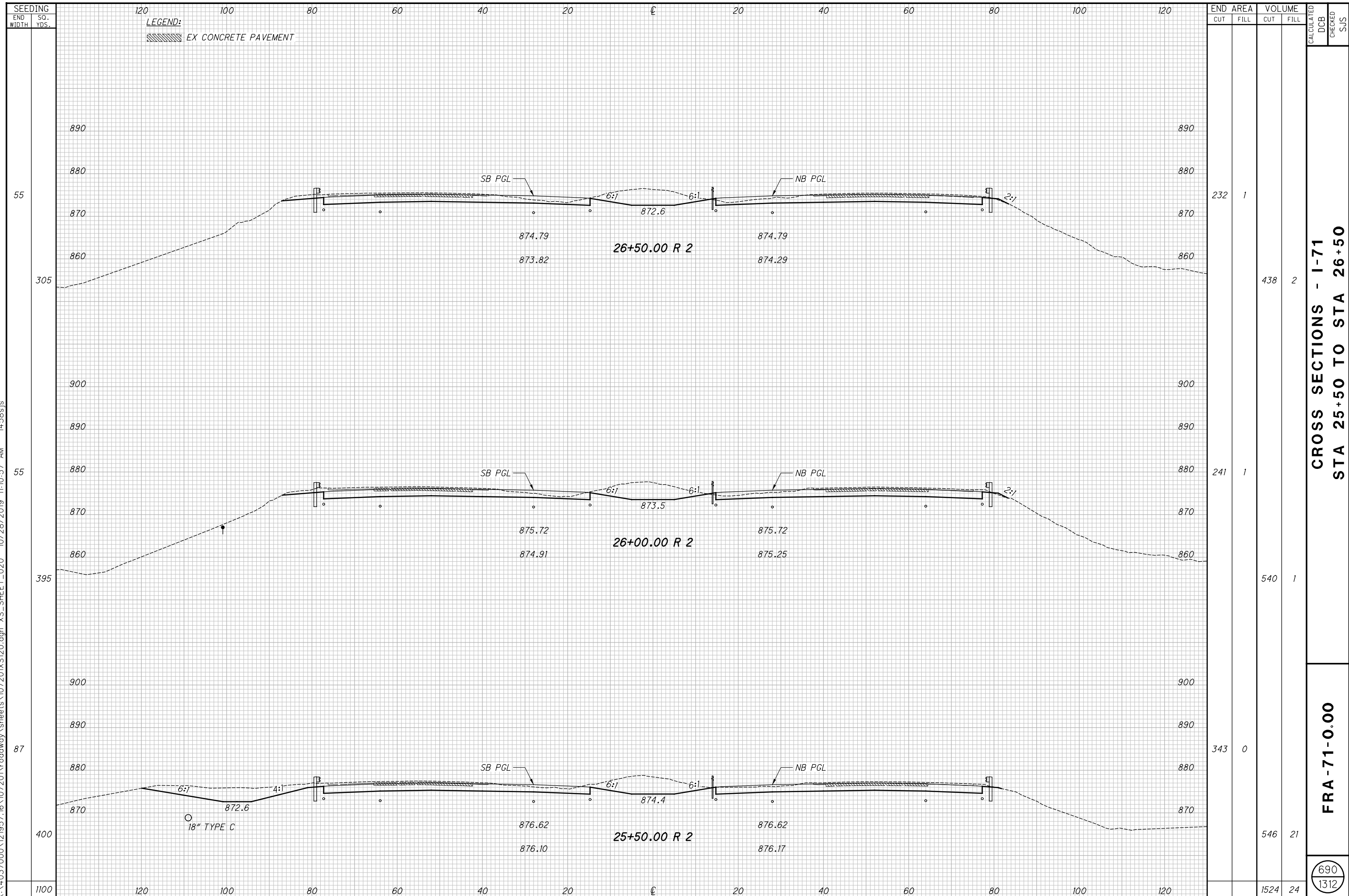


CROSS SECTIONS - I-71
 STA 24+00 TO STA 25+00

FRA - 71 - 0.00

689
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\120.dgn XS_SHEET_020 10/28/2019 11:05:57 AM 1458sjs

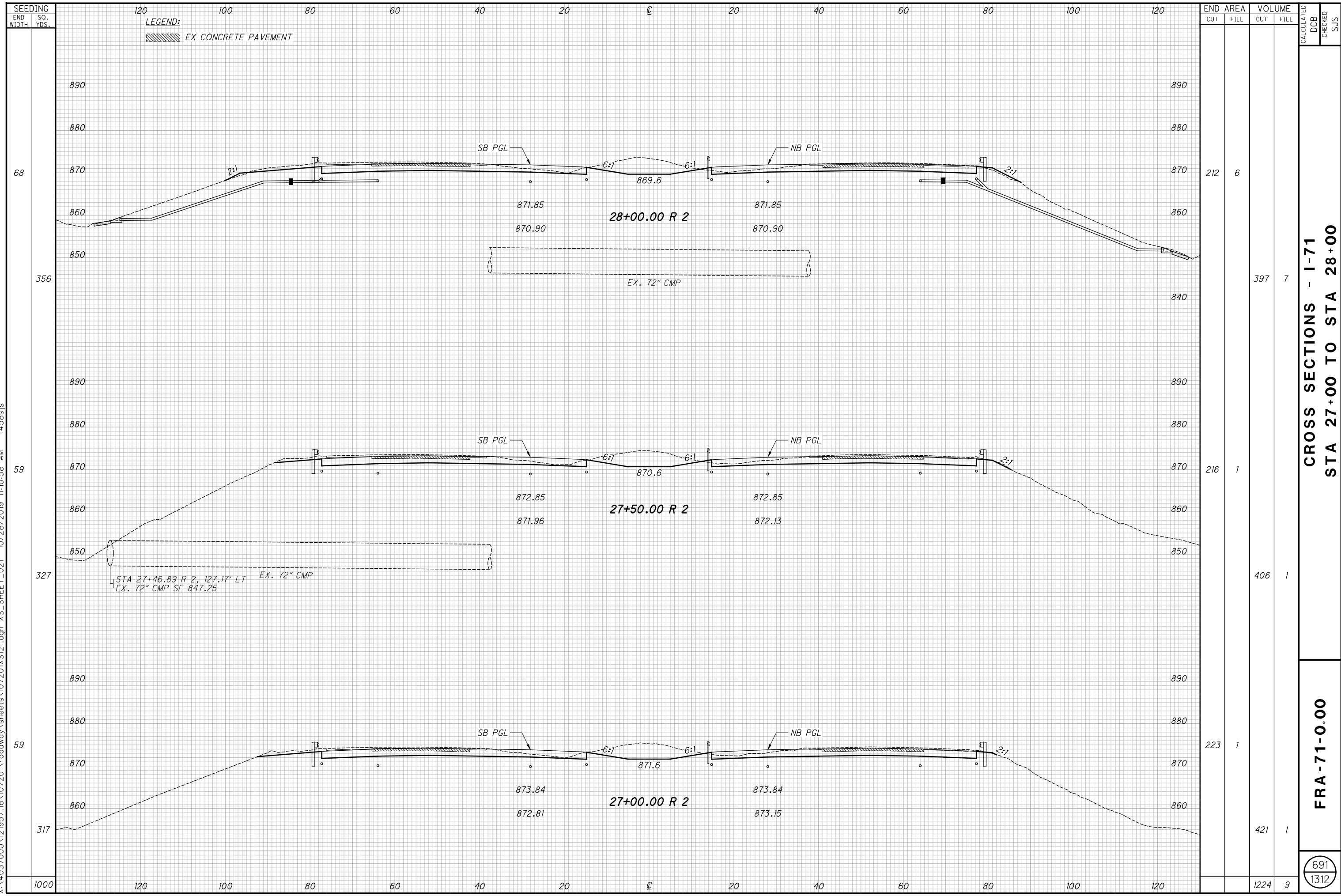


**CROSS SECTIONS - I-71
 STA 25+50 TO STA 26+50**

FRA - 71 - 0.00

690
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS121.dgn XS_SHEET_021 10/28/2019 11:10:58 AM 1458s.js

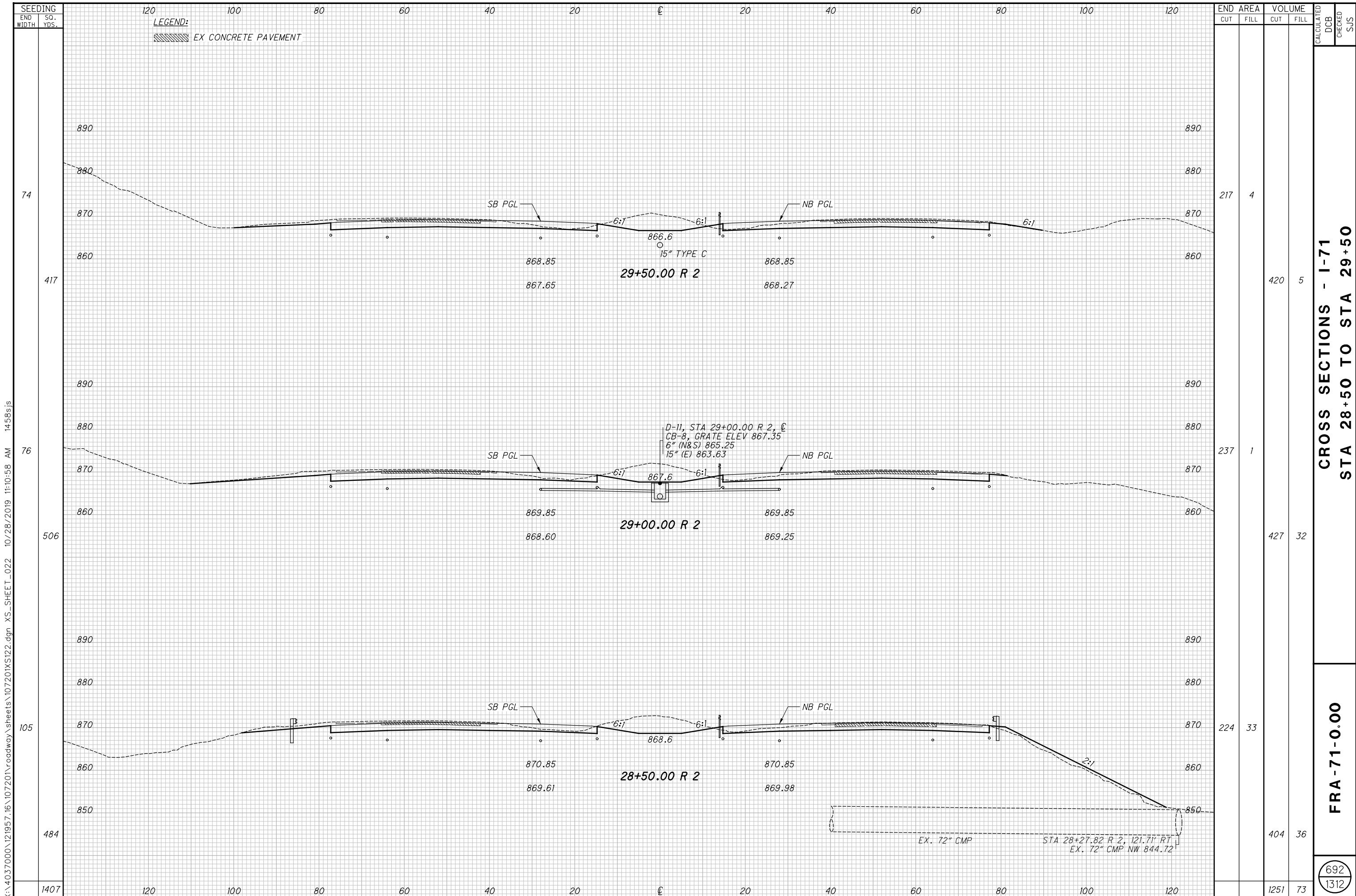


END STA	AREA		VOLUME		CALCULATED DCB	CHECKED SUS
	CUT	FILL	CUT	FILL		
28+00	212	6	397	7		
27+50	216	1	406	1		
27+00	223	1	421	1		
TOTAL	651	8	1224	9		

**CROSS SECTIONS - I-71
STA 27+00 TO STA 28+00**

FRA - 71-0.00

691
1312



X:\4037000\121957.16\107201\roadway\sheets\107201\XS122.dgn XS_SHEET_022 10/28/2019 11:0:58 AM 1458sjs

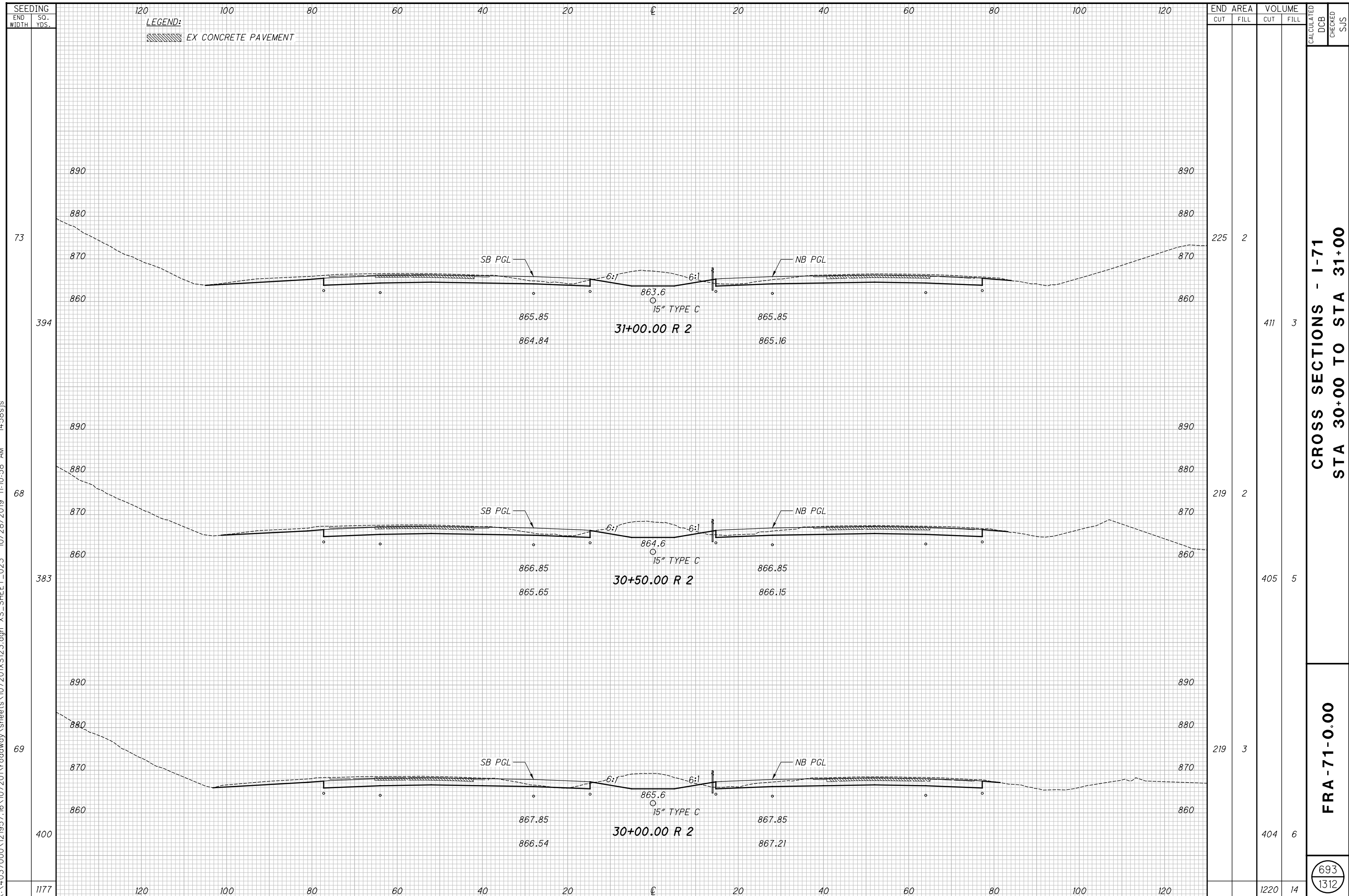
SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
		CUT	FILL	CUT	FILL		
74		217	4				
417				420	5		
76		237	1				
506				427	32		
105		224	33				
484				404	36		
1407				1251	73		

**CROSS SECTIONS - I-71
 STA 28+50 TO STA 29+50**

FRA-71-0.00

692
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS123.dgn XS_SHEET_023 10/28/2019 11:0:58 AM 1458sjs

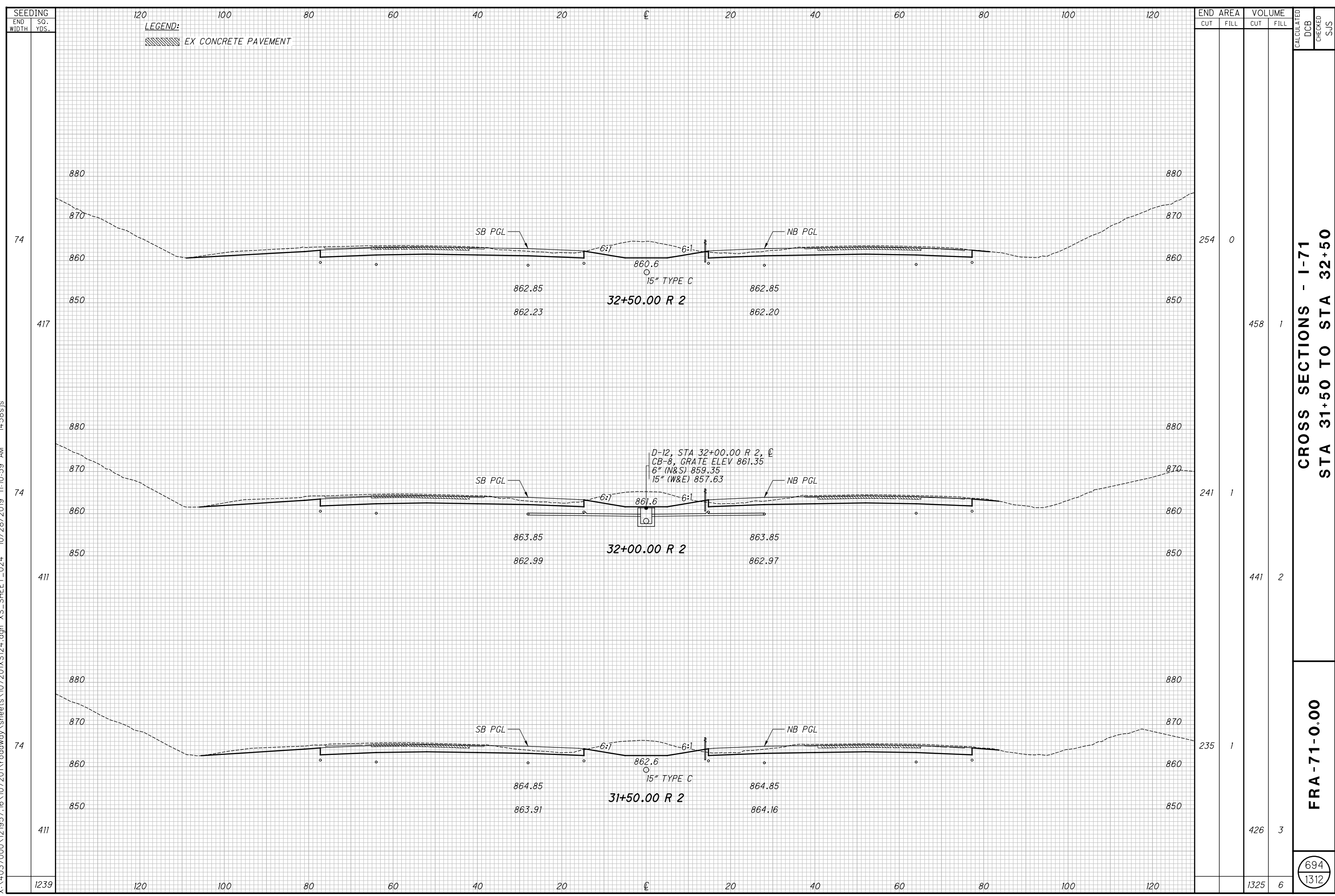


**CROSS SECTIONS - I-71
 STA 30+00 TO STA 31+00**

FRA - 71-0.00

693
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS124.dgn XS_SHEET_024 10/28/2019 11:0:59 AM 1458sjs



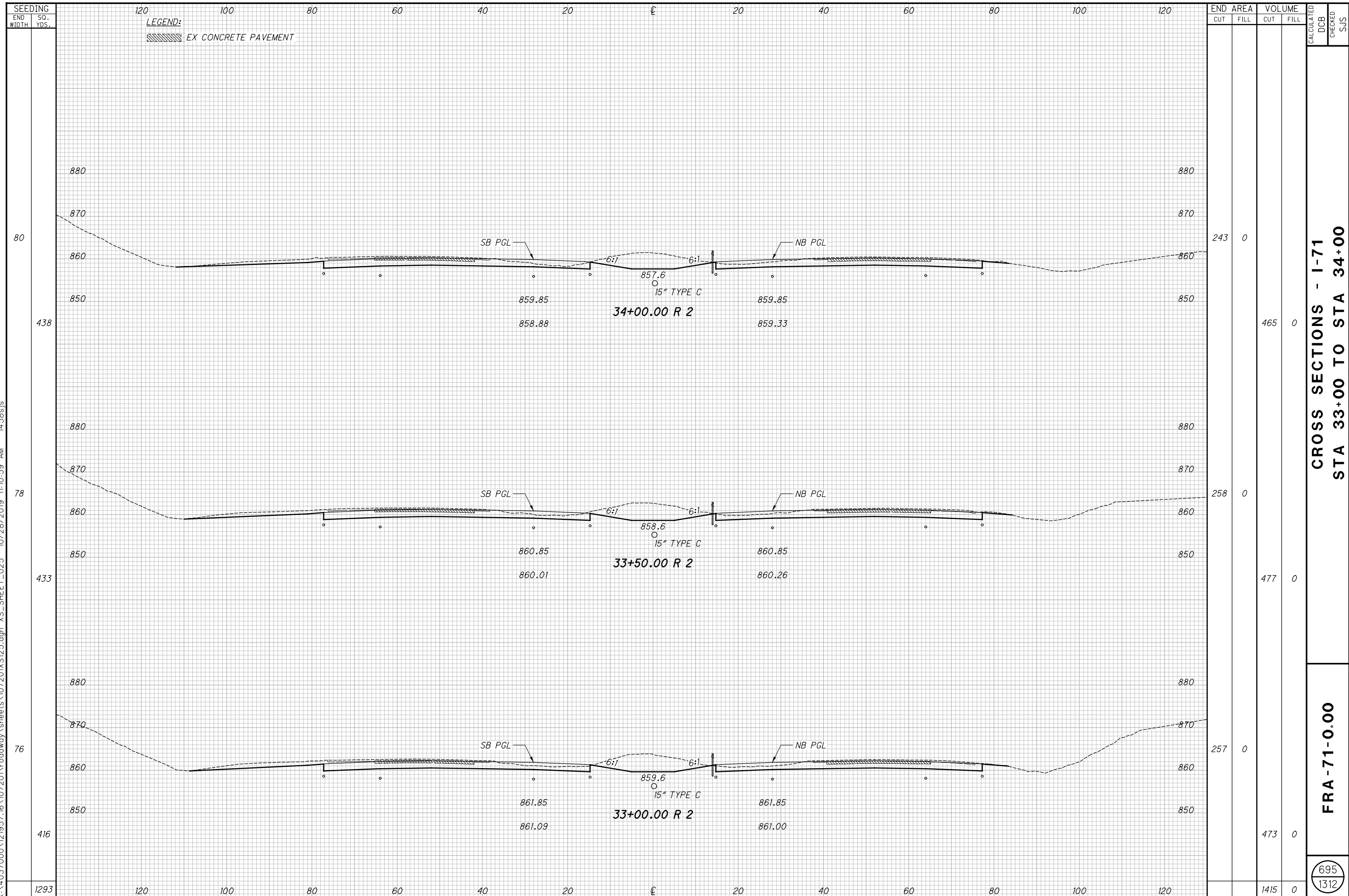
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
254	0				
417	458	1			
74	241	1			
411	441	2			
74	235	1			
411	426	3			
1239	1325	6			

CROSS SECTIONS - I-71
STA 31+50 TO STA 32+50

FRA - 71 - 0.00

694
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X125.dgn XS_SHEET_025 10/28/2019 11:0:59 AM 1458sjs

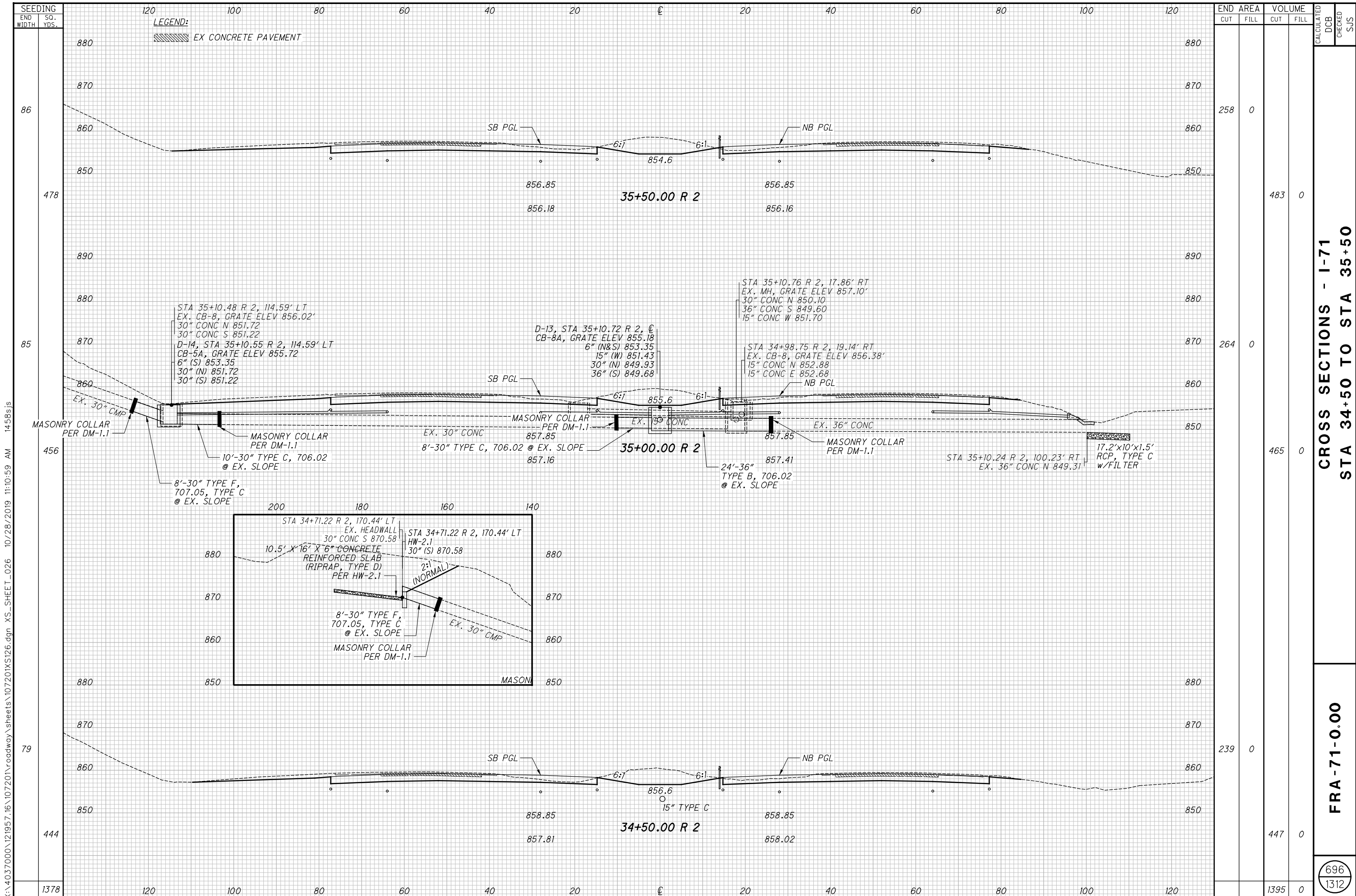


END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
243	0					
	465	0				
258	0					
	477	0				
257	0					
	473	0				
	1415	0				

CROSS SECTIONS - I-71
STA 33+00 TO STA 34+00

FRA - 71 - 0.00

695
1312



END STA	AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
	CUT	FILL	CUT	FILL				
86	258	0						
478			483	0				
85	264	0						
456			465	0				
79	239	0						
444			447	0				
1378			1395	0				

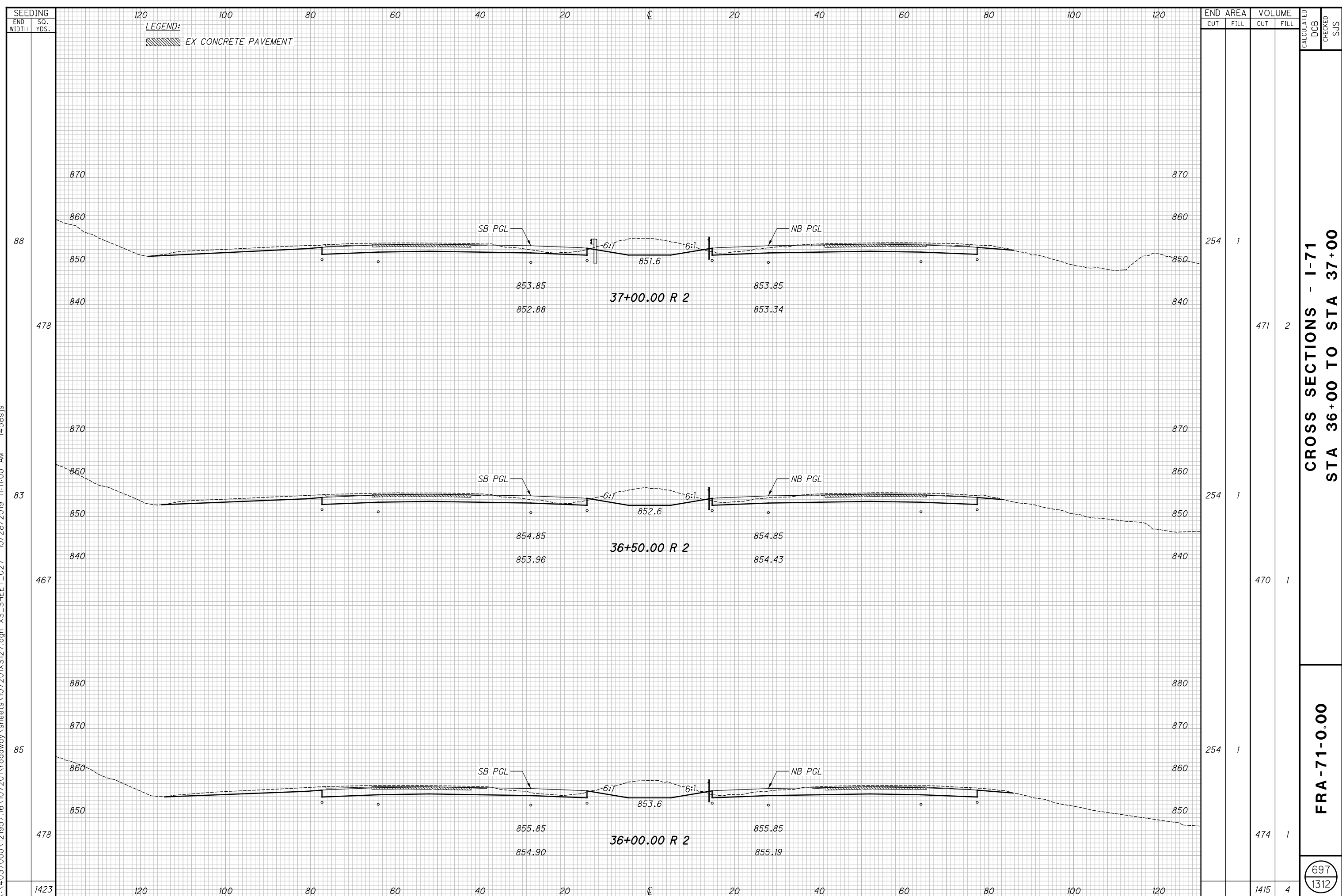
CROSS SECTIONS - I-71
STA 34+50 TO STA 35+50

FRA - 71-0.00

696
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\15126.dgn XS_SHEET_026 10/28/2019 11:10:59 AM 1458sjs

X:\4037000\121957.16\107201\roadway\sheets\107201XS127.dgn XS_SHEET_027 10/28/2019 11:11:00 AM 14585.js



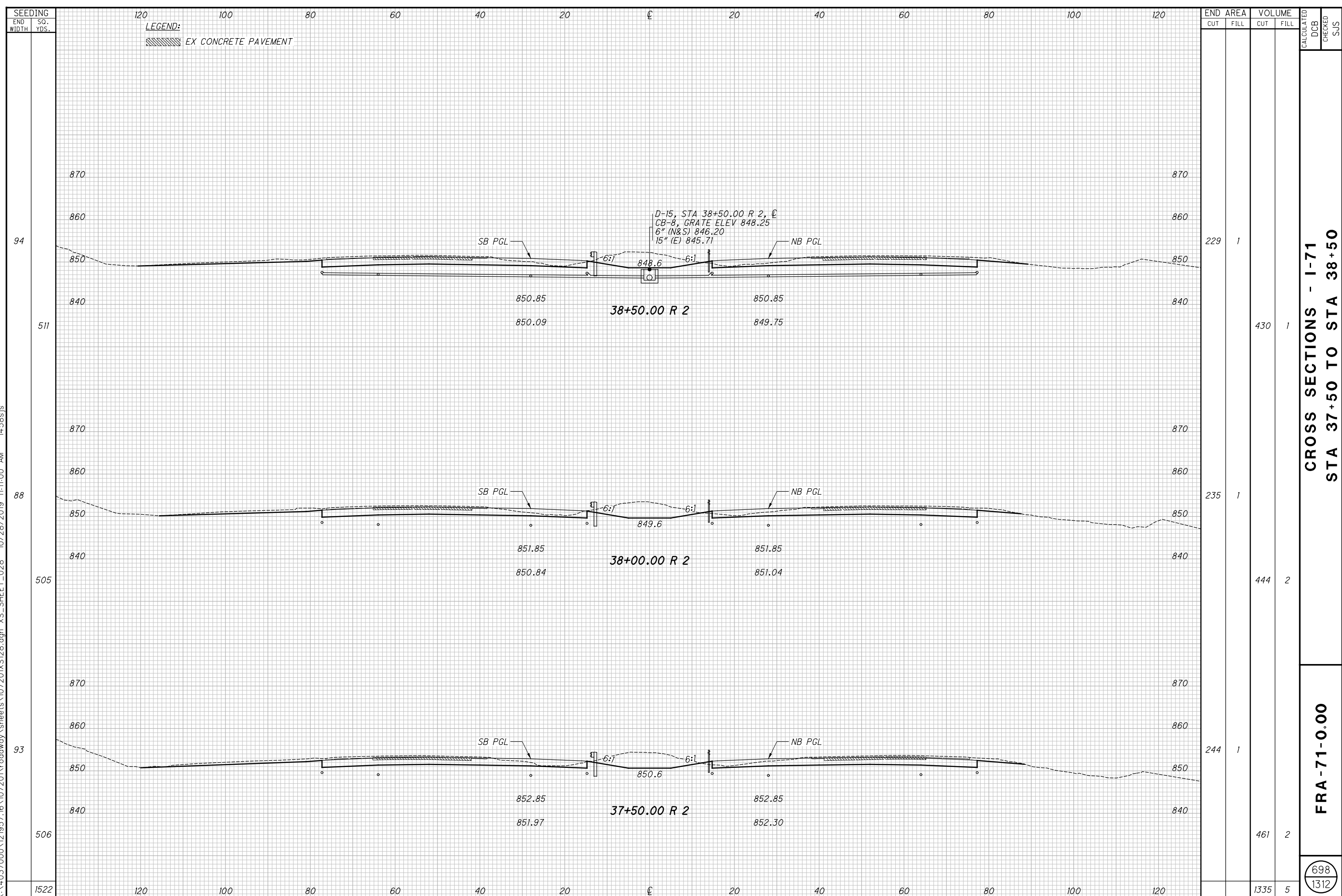
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
254	1				
478	2				
254	1				
470	1				
254	1				
474	1				
1423	4				

**CROSS SECTIONS - I-71
 STA 36+00 TO STA 37+00**

FRA - 71 - 0.00

697
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X128.dgn XS_SHEET_028 10/28/2019 11:11:00 AM 1458s.js



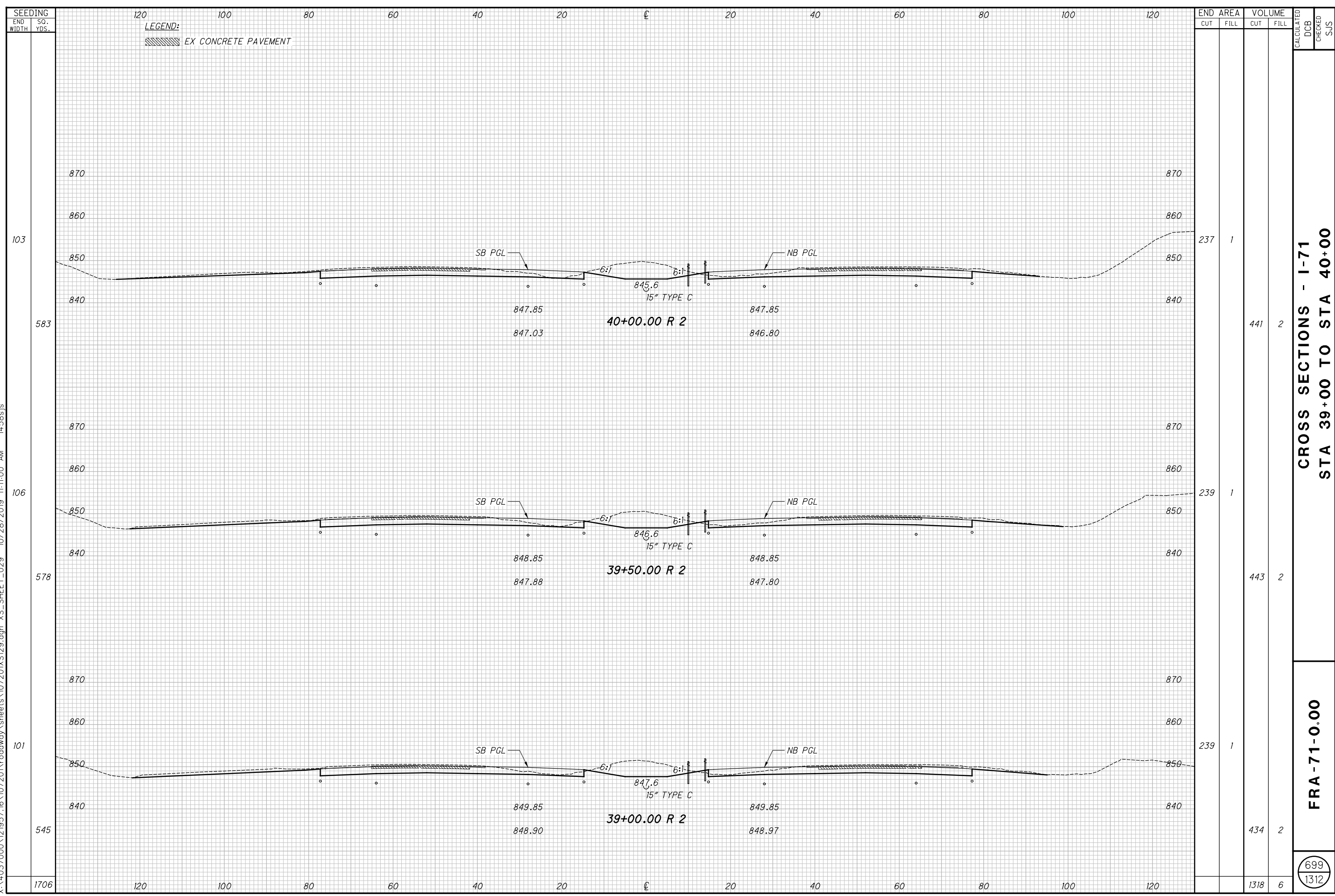
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
229	1				
430	1				
235	1				
444	2				
244	1				
461	2				
1335	5				

**CROSS SECTIONS - I-71
 STA 37+50 TO STA 38+50**

FRA - 71 - 0.00

698
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS129.dgn XS_SHEET_029 10/28/2019 11:11:00 AM 14585.js

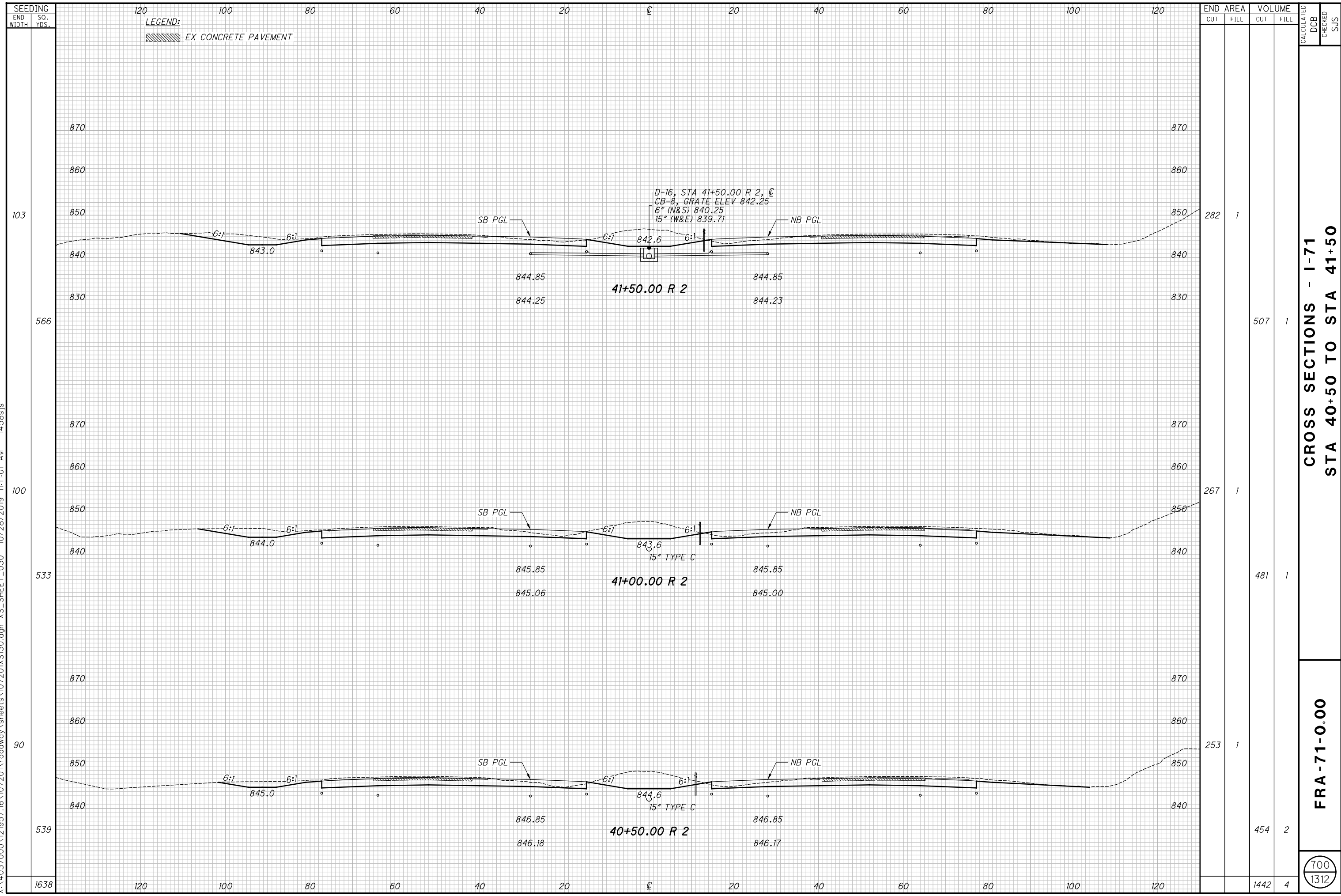


**CROSS SECTIONS - I-71
 STA 39+00 TO STA 40+00**

FRA - 71-0.00

699
 1312

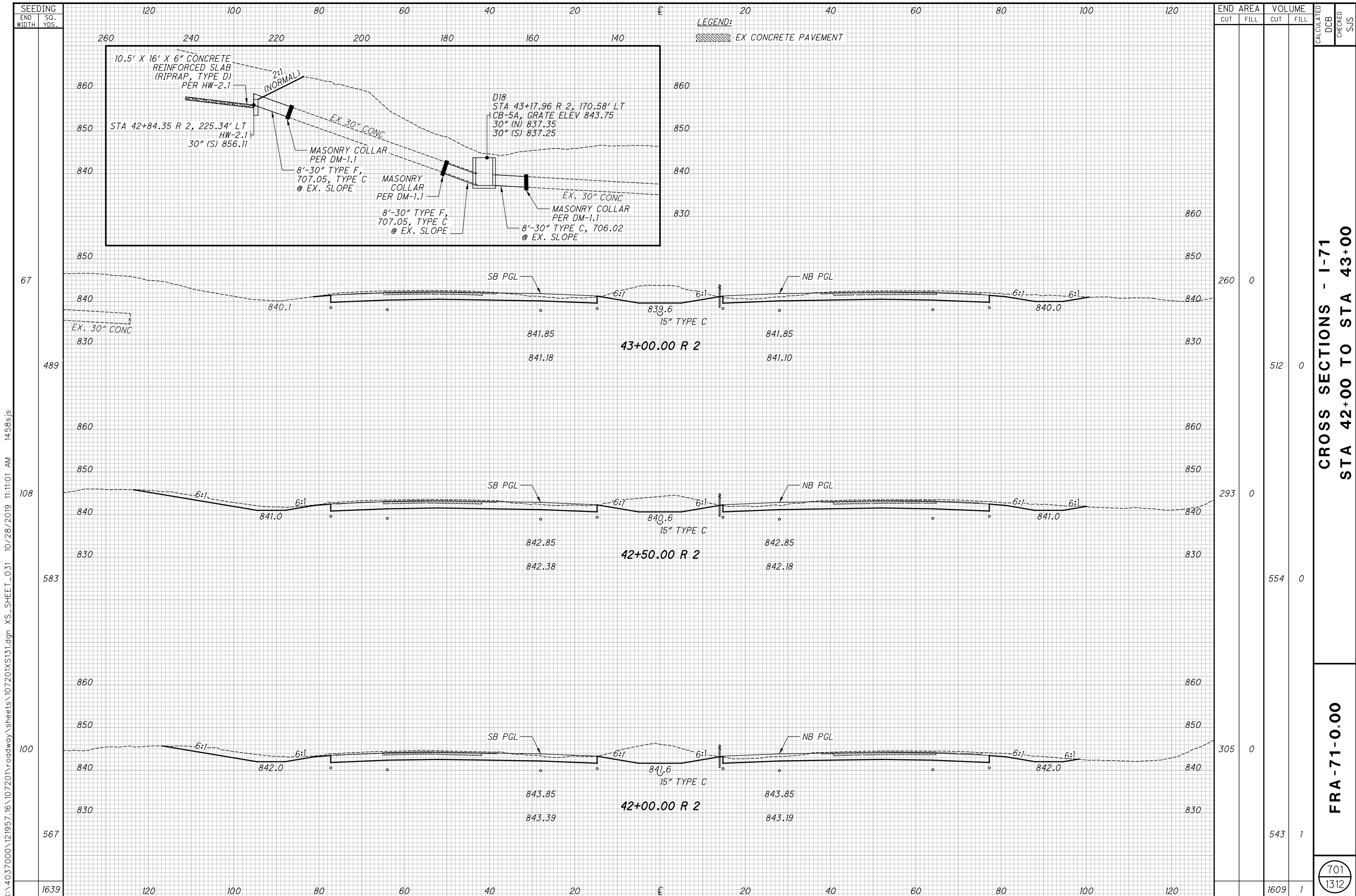
X:\4037000\121957.16\107201\roadway\sheets\107201XS130.dgn XS_SHEET_030 10/28/2019 11:11:01 AM 1458s.js



**CROSS SECTIONS - I-71
STA 40+50 TO STA 41+50**

FRA - 71 - 0.00

700
1312



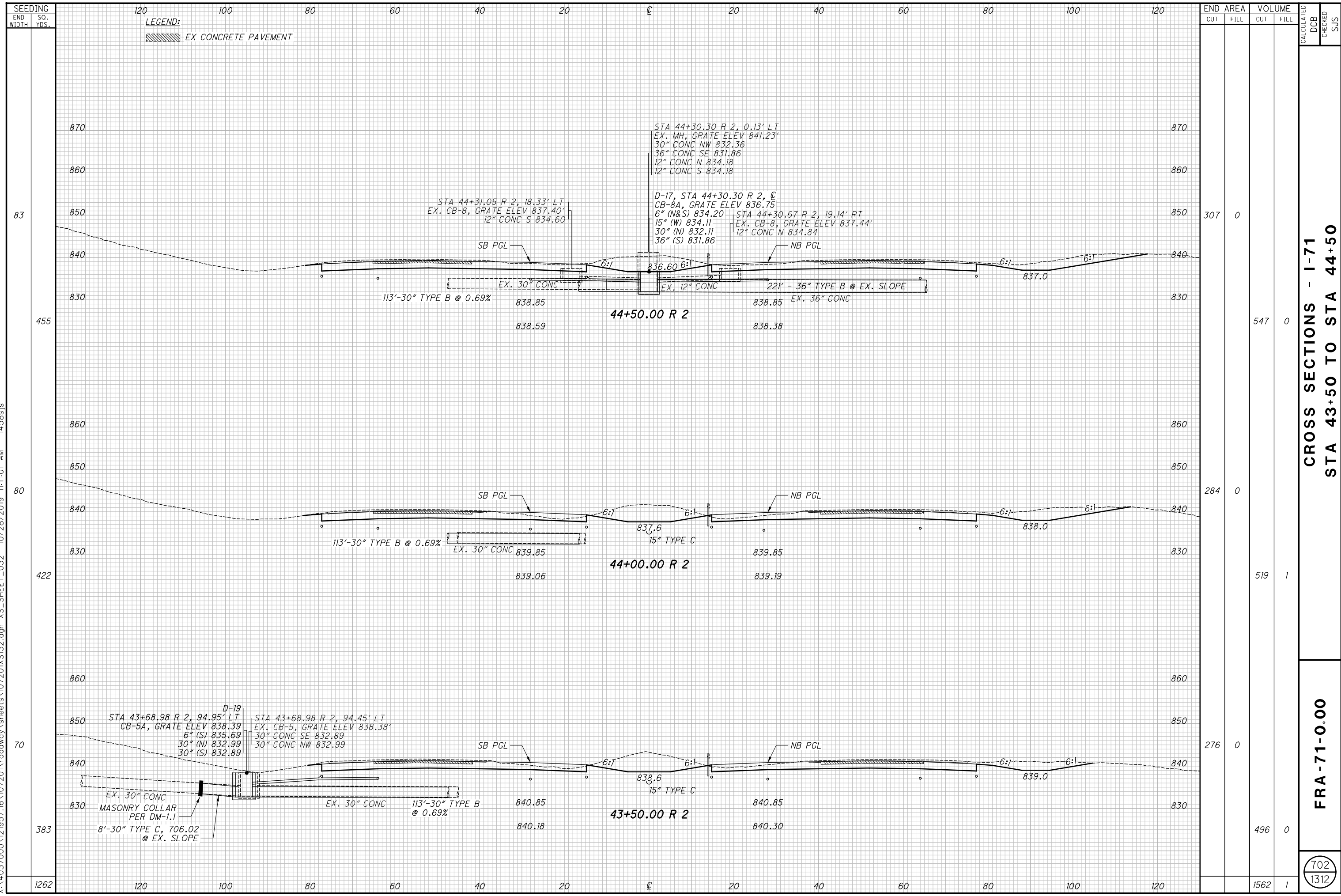
CROSS SECTIONS - I-71
STA 42+00 TO STA 43+00

FRA - 71 - 0.00

701
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS131.dgn XS_SHEET_031 10/28/2019 11:11:01 AM 1458s.js

X:\4037000\121957.16\107201\roadway\sheets\107201\XS132.dgn XS_SHEET_032 10/28/2019 11:11:01 AM 1458s.js

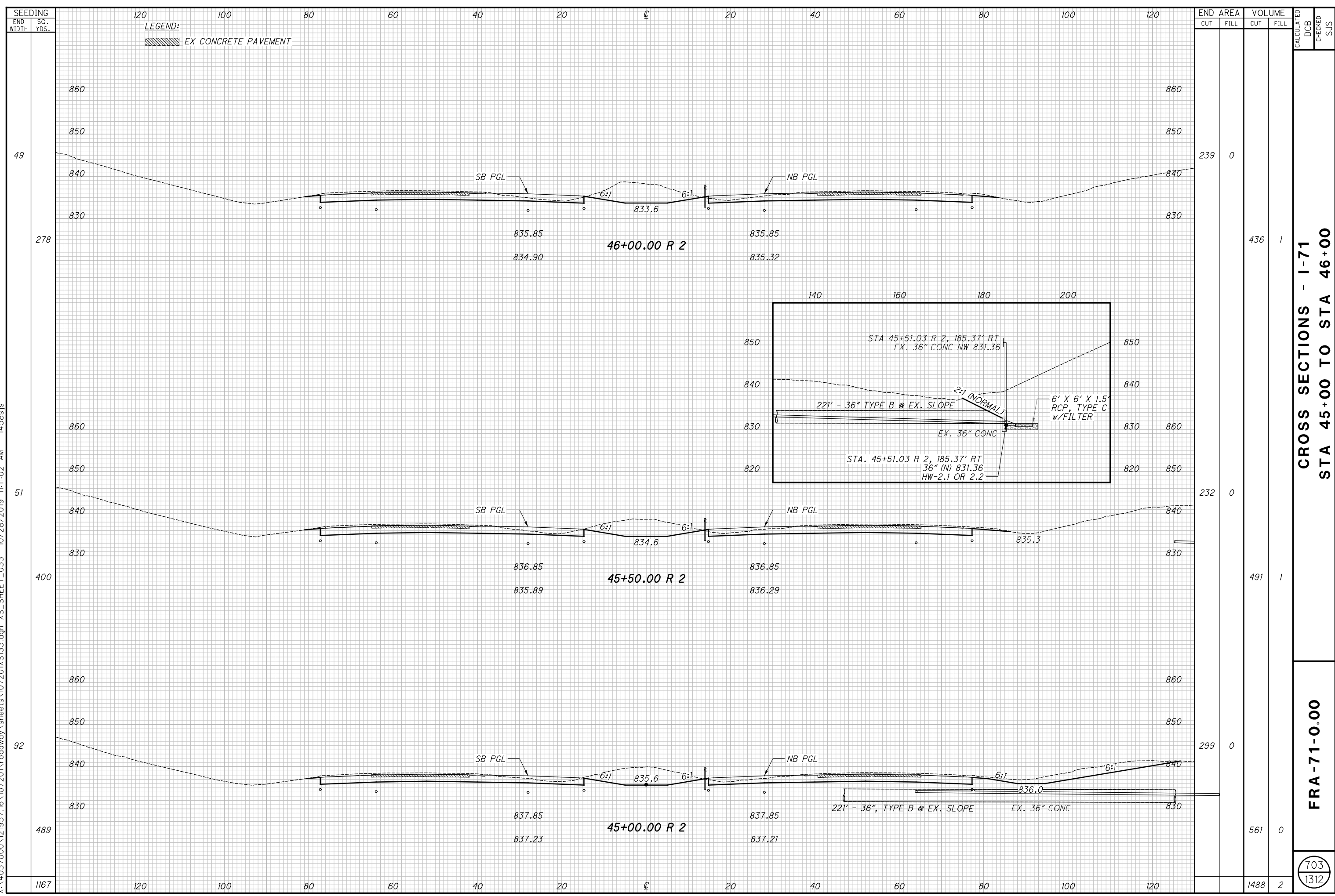


CROSS SECTIONS - I-71
 STA 43+50 TO STA 44+50

FRA-71-0.00

702
 1312

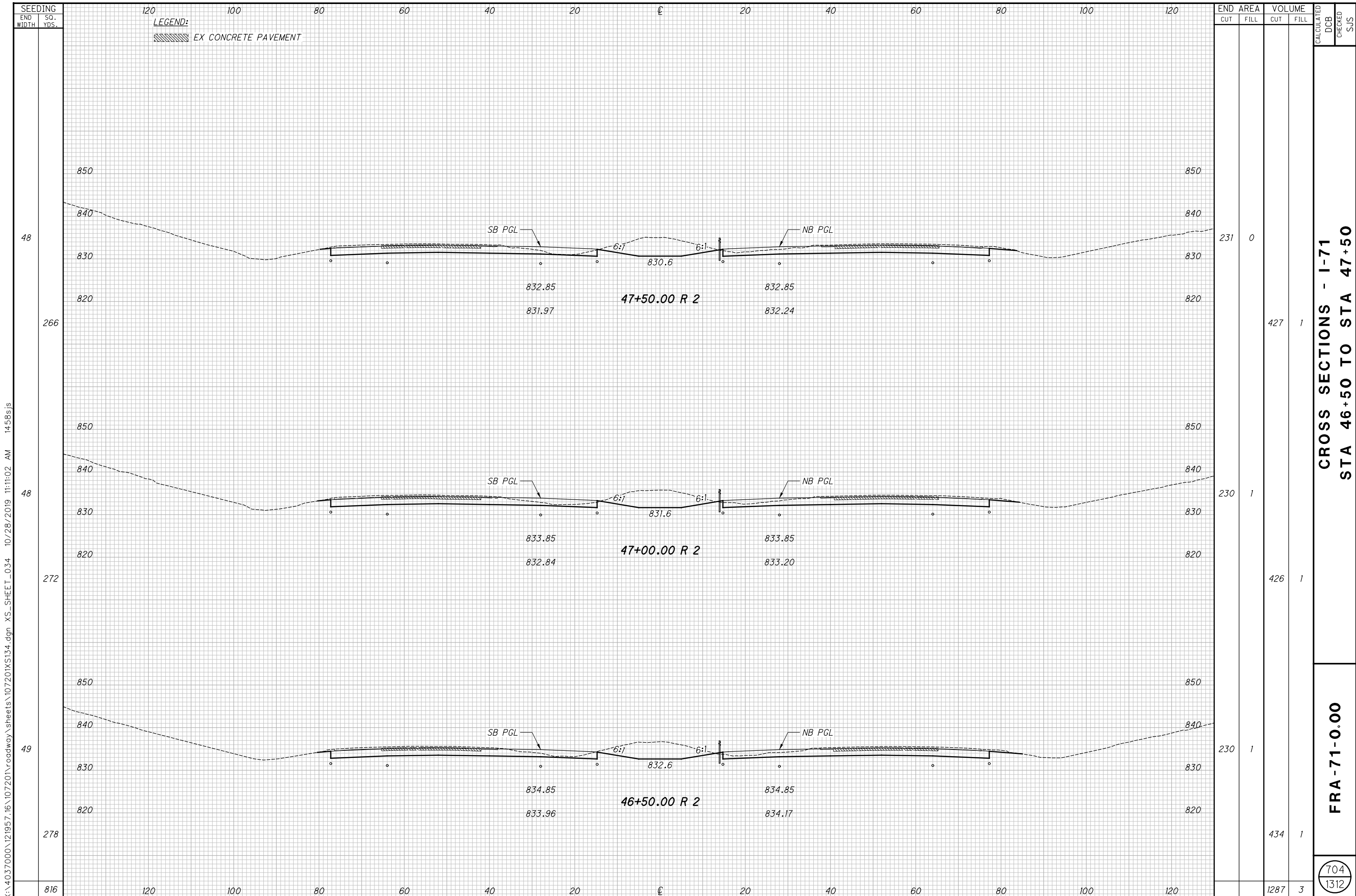
X:\4037000\121957.16\107201\roadway\sheets\107201XS133.dgn XS_SHEET_033 10/28/2019 11:11:02 AM 14585.js



**CROSS SECTIONS - I-71
STA 45+00 TO STA 46+00**

FRA - 71 - 0.00

703
1312



X:\4037000\121957.16\107201\roadway\sheets\107201\XS134.dgn XS_SHEET_034 10/28/2019 11:11:02 AM 1458s.js

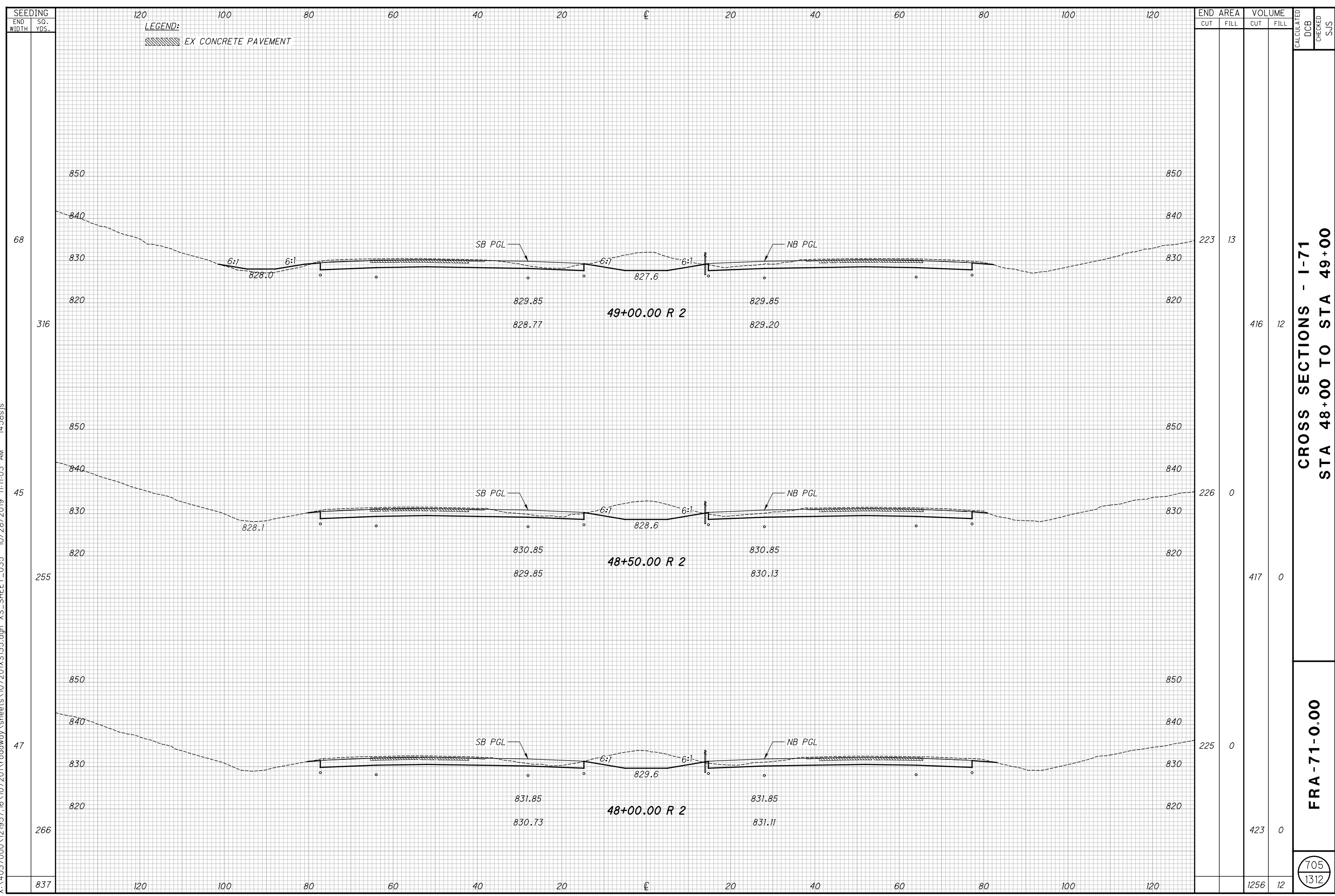
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
231	0					
230	1	427	1			
230	1	426	1			
230	1	434	1			
		1287	3			

CROSS SECTIONS - I-71
STA 46+50 TO STA 47+50

FRA - 71 - 0.00

704
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS135.dgn XS_SHEET_035 10/28/2019 11:11:03 AM 14585.js



SEEDING	
END WIDTH	SO. YDS.
68	
316	
45	
255	
47	
266	
837	

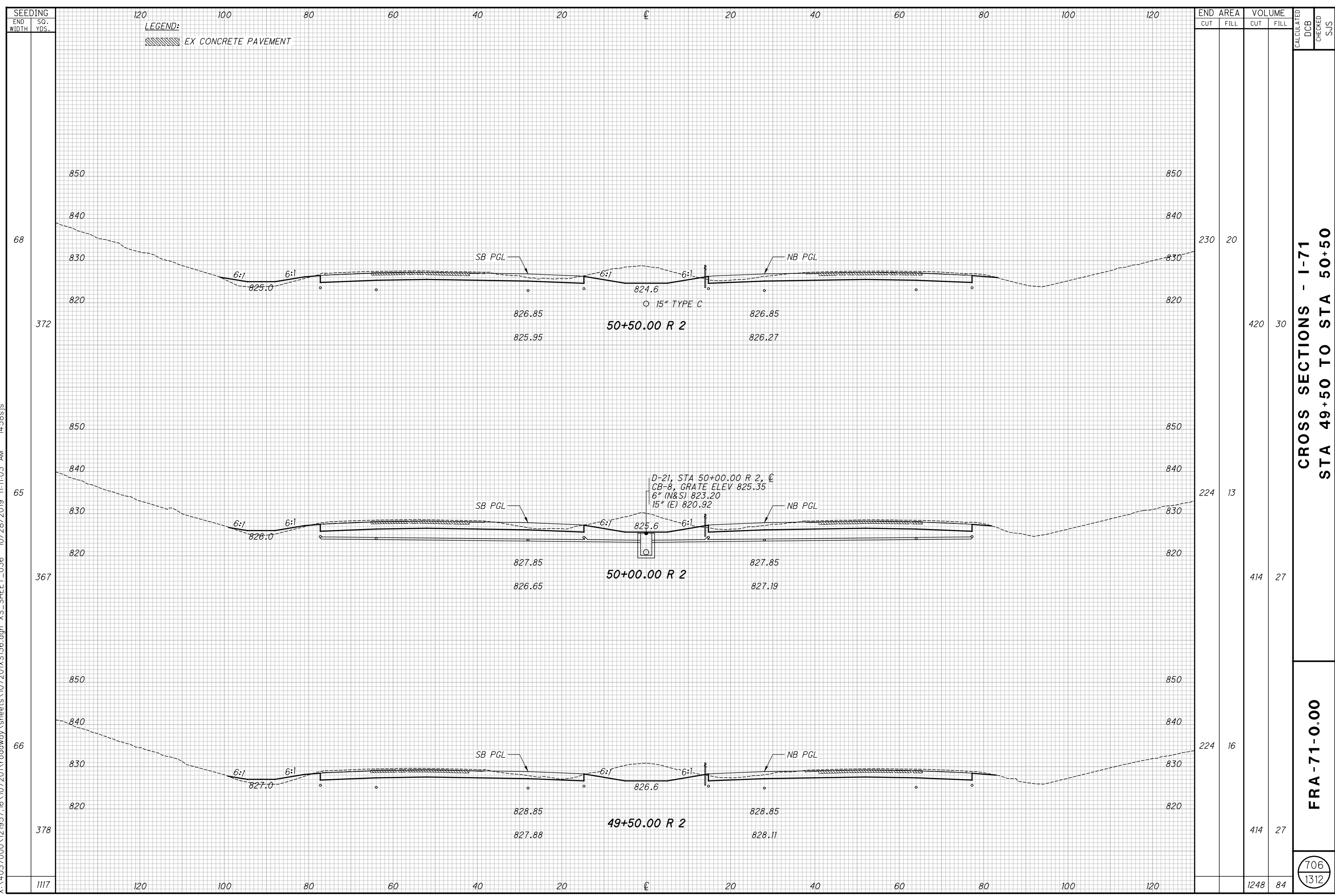
END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
CUT	FILL	CUT	FILL		
223	13	416	12		
226	0	417	0		
225	0	423	0		
		1256	12		

CROSS SECTIONS - I-71
STA 48+00 TO STA 49+00

FRA - 71-0.00

705
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS136.dgn XS_SHEET_036 10/28/2019 11:11:03 AM 1458s.js



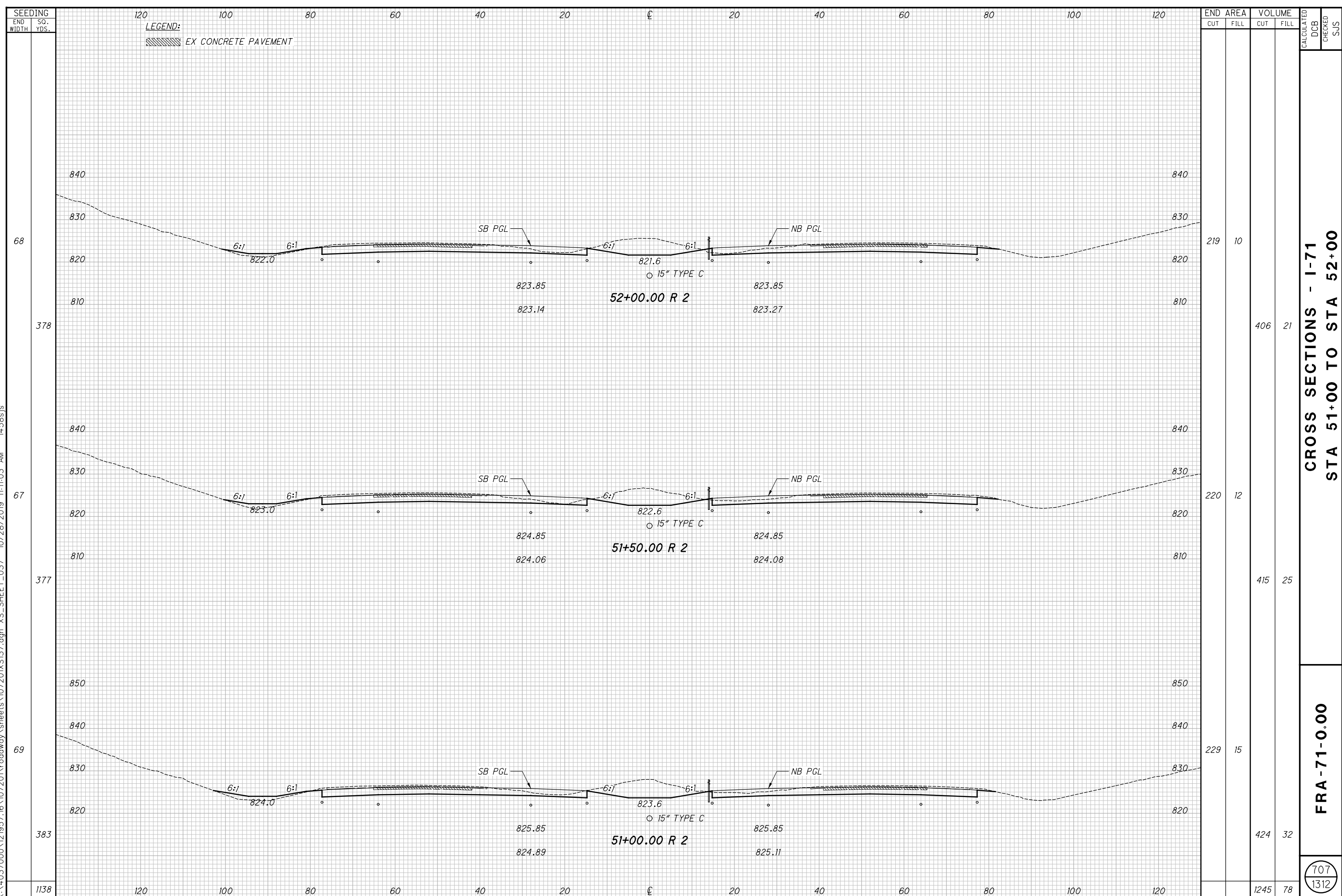
CROSS SECTIONS - I-71
STA 49+50 TO STA 50+50

FRA-71-0.00

706
1312

CALCULATED
DCB
CHECKED
SJS

X:\4037000\121957.16\107201\roadway\sheets\107201\XS137.dgn XS_SHEET_037 10/28/2019 11:11:03 AM 14585.js



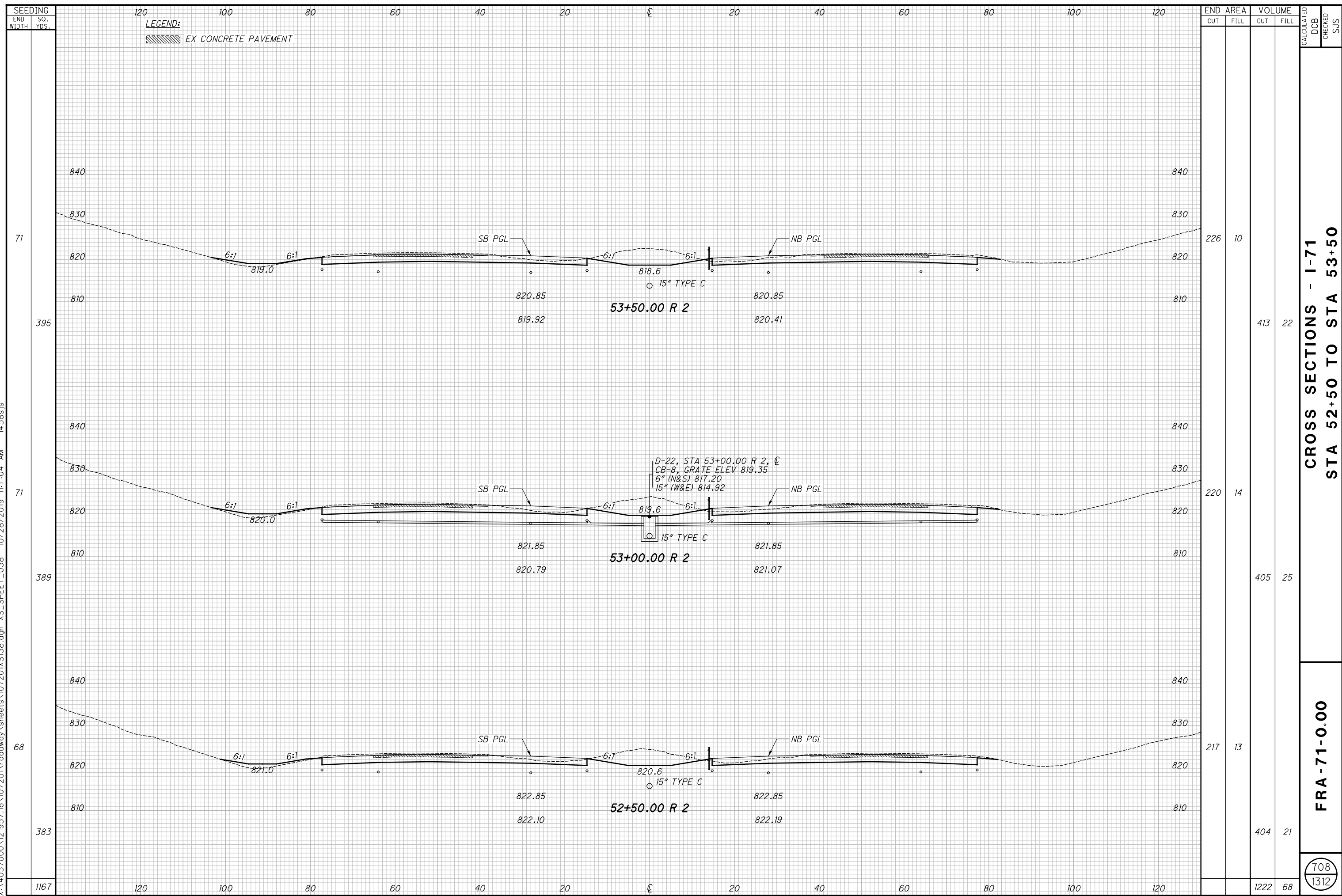
SEEDING	END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
	END WIDTH	SO. YDS.	CUT	FILL				
68	120	10	219	10				
378	100	21	406	21				
67	120	12	220	12				
377	100	25	415	25				
69	120	15	229	15				
383	100	32	424	32				
1138	120	78	1245	78				

**CROSS SECTIONS - I-71
 STA 51+00 TO STA 52+00**

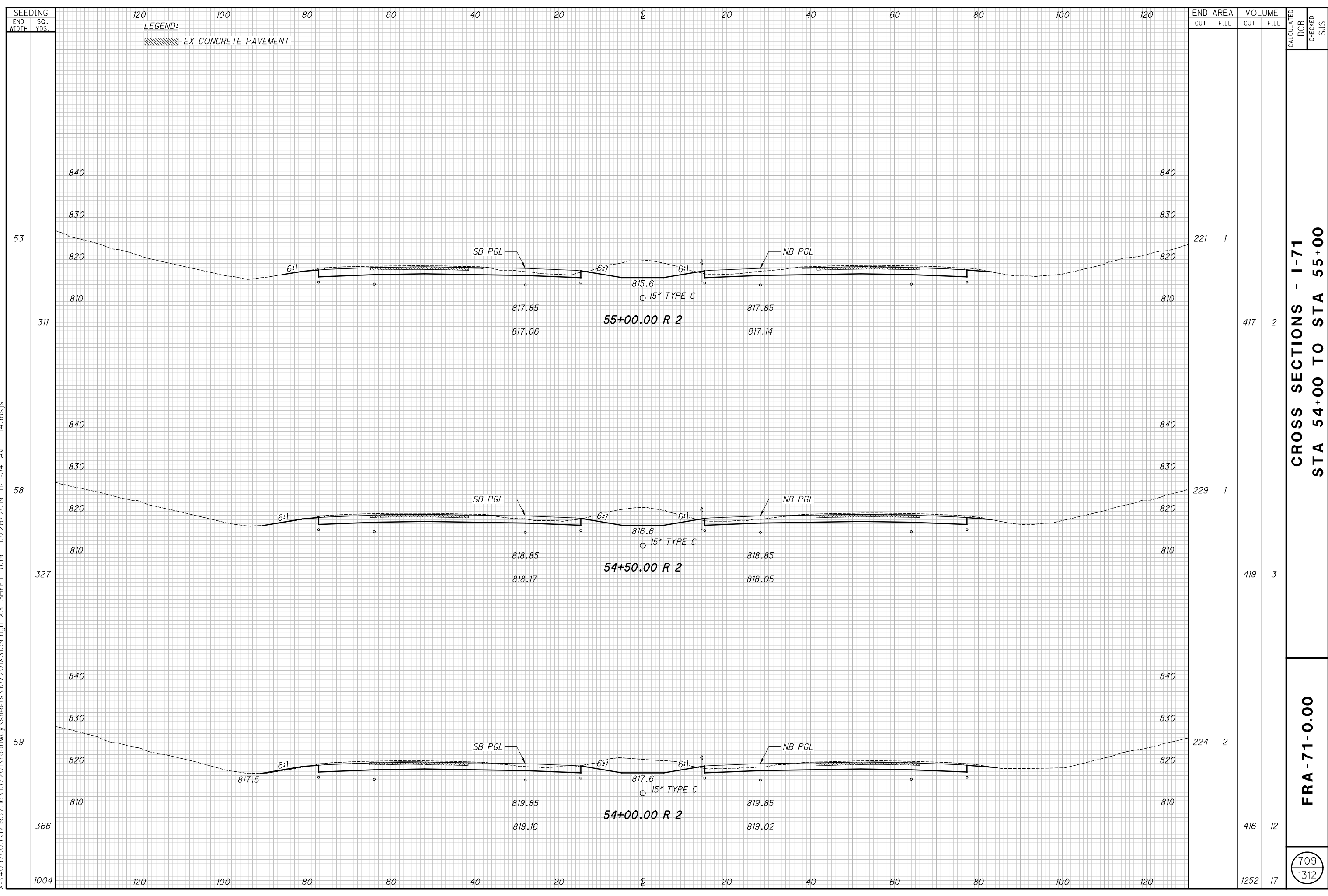
FRA - 71 - 0.00

707
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS138.dgn XS_SHEET_038 10/28/2019 11:11:04 AM 1458s.js



X:\4037000\121957.16\107201\roadway\sheets\107201\XS139.dgn XS_SHEET_039 10/28/2019 11:11:04 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT

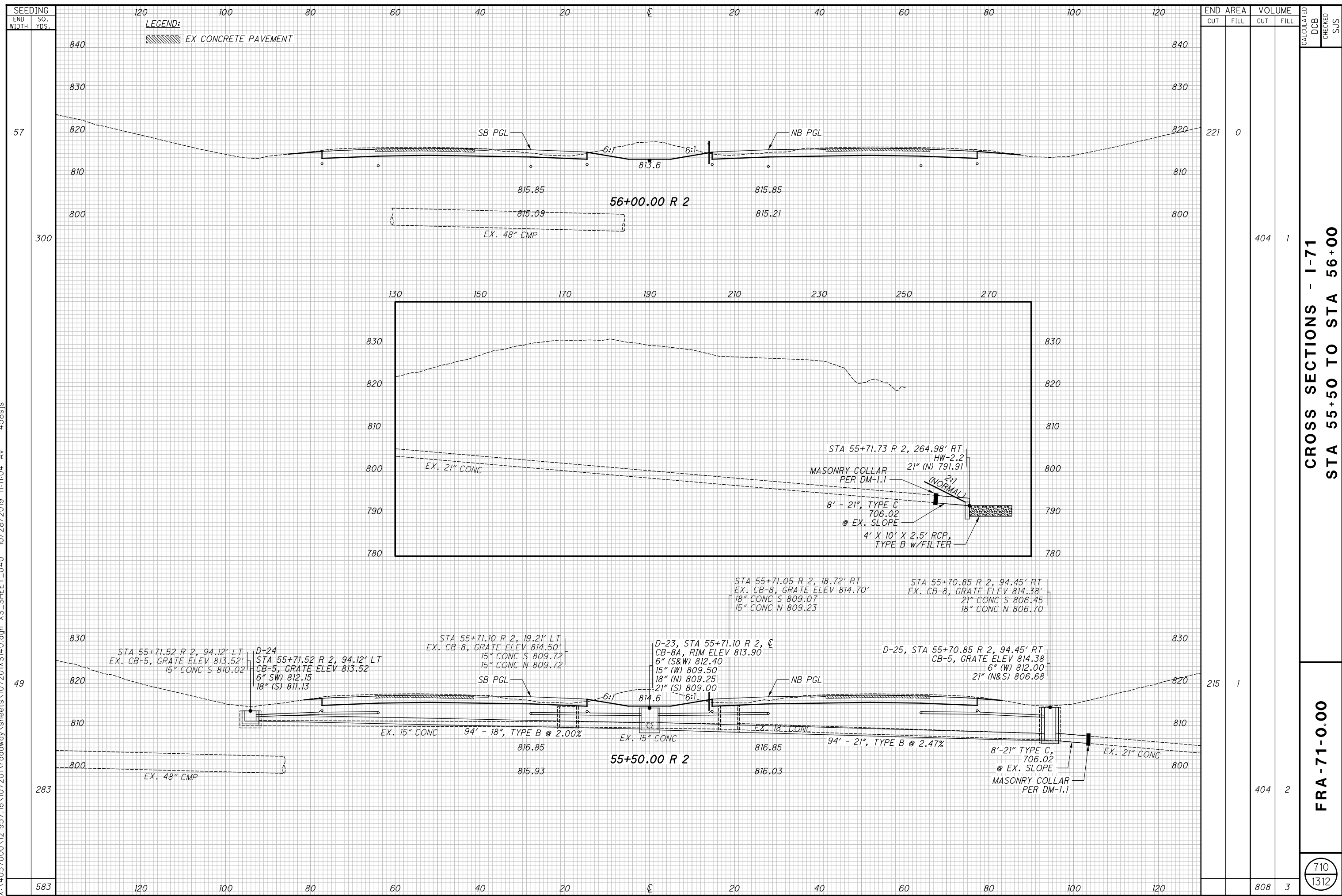
SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
		CUT	FILL	CUT	FILL		
53	311	221	1	417	2		
58	327	229	1	419	3		
59	366	224	2	416	12		
1004				1252	17		

CROSS SECTIONS - I-71
 STA 54+00 TO STA 55+00

FRA - 71 - 0.00

709
 1312

X:\4037000\121957.16\107201\roadway\sheet\107201XS140.dgn XS_SHEET_040 10/28/2019 11:11:04 AM 1458s.js

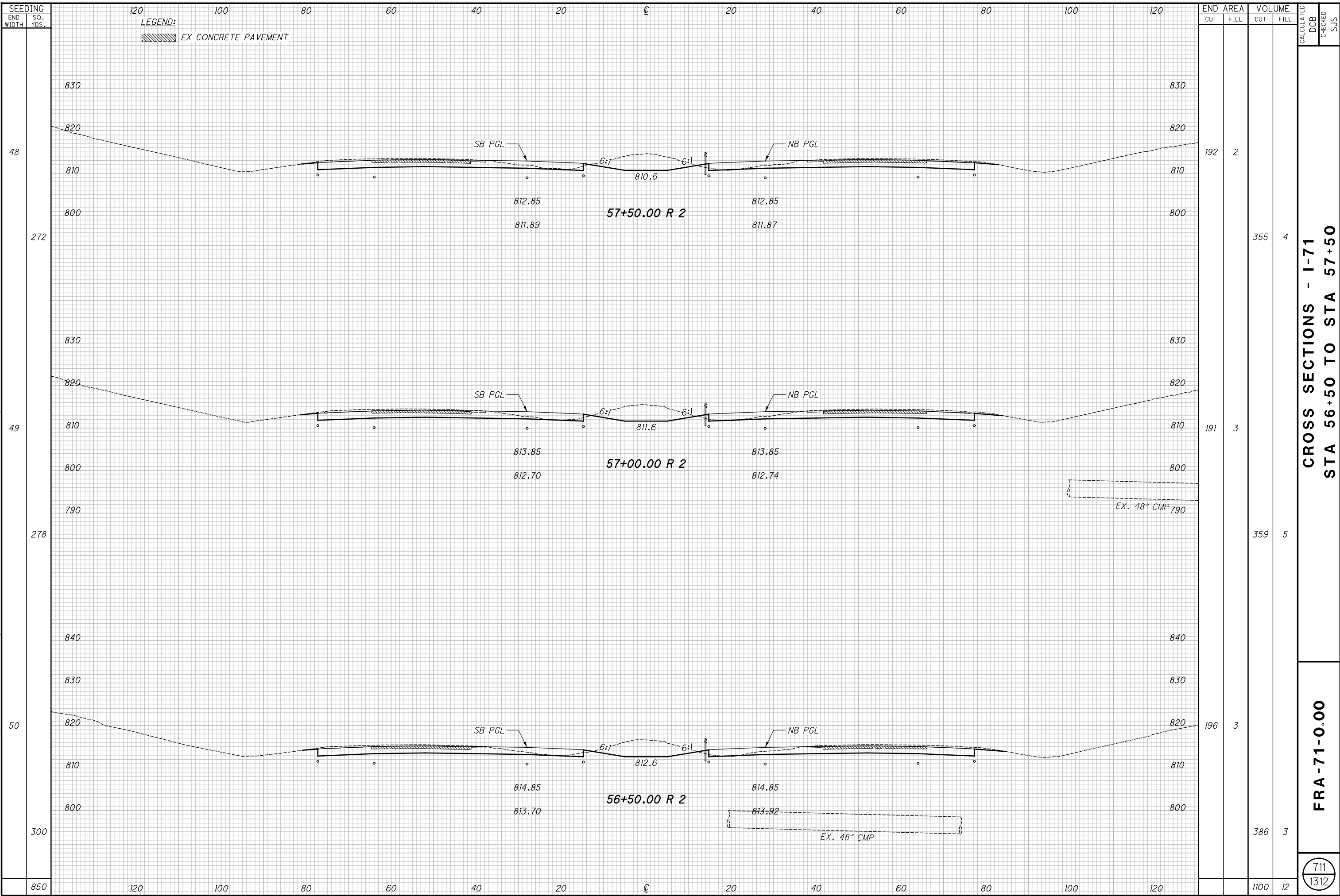


CROSS SECTIONS - I-71
STA 55+50 TO STA 56+00

FRA - 71 - 0.00

710
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X141.dgn XS_SHEET_041 10/28/2019 11:11:05 AM 14.58s.js

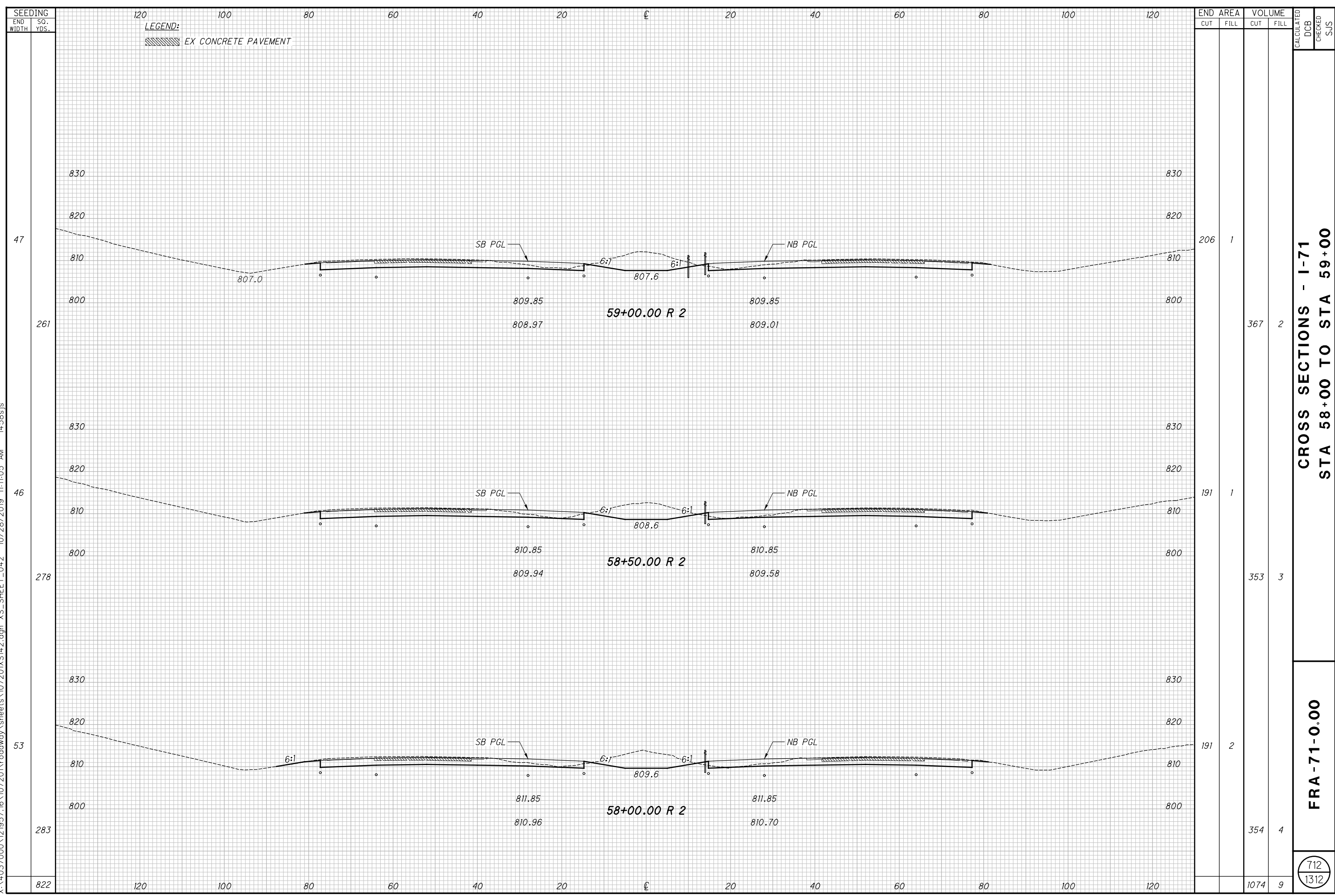


CROSS SECTIONS - I-71
STA 56+50 TO STA 57+50

FRA - 71 - 0:00

711
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X5142.dgn XS_SHEET_042 10/28/2019 11:11:05 AM 1458s.js

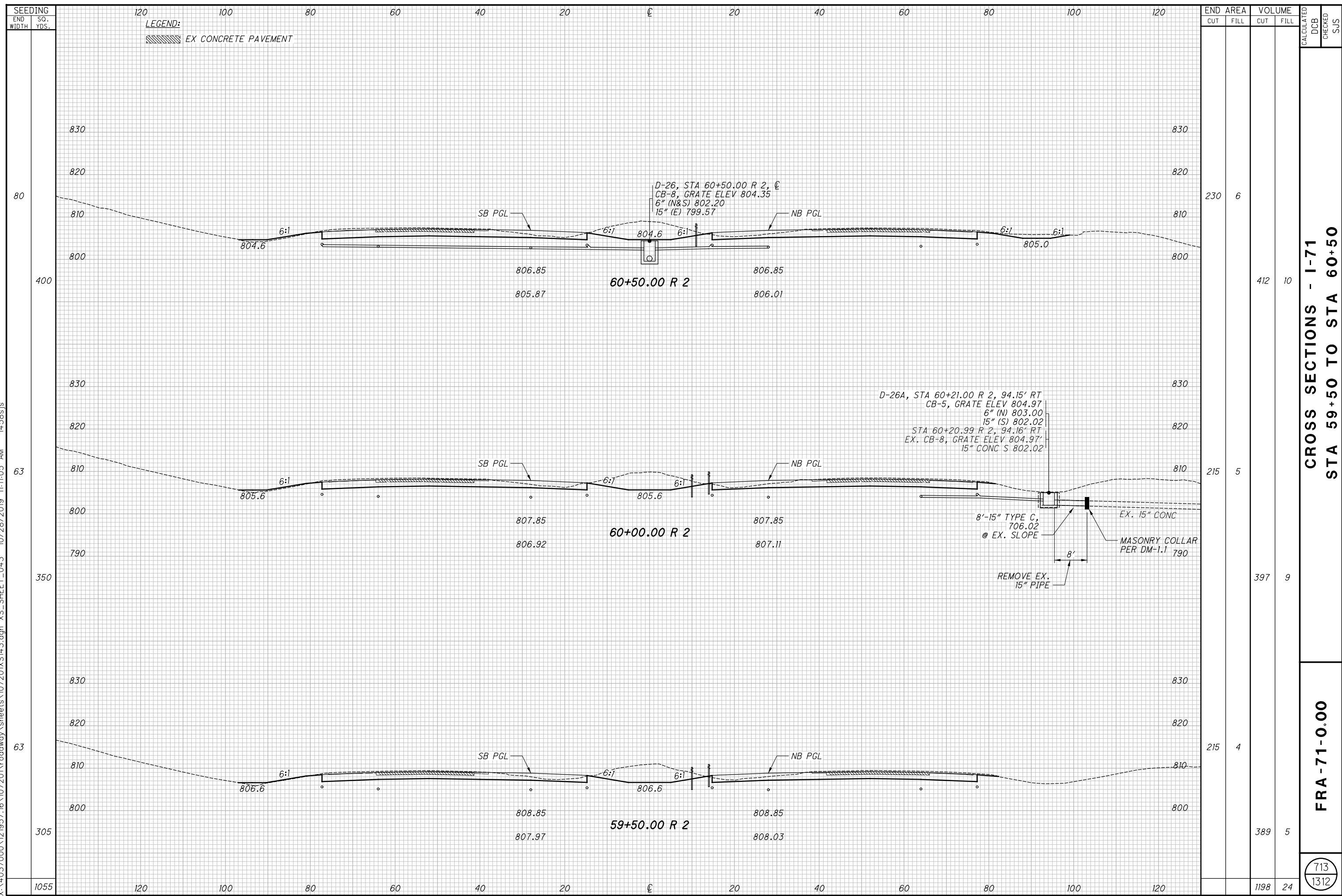


**CROSS SECTIONS - I-71
 STA 58+00 TO STA 59+00**

FRA - 71-0.00

712
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X143.dgn XS_SHEET_043 10/28/2019 11:11:05 AM 14585.js

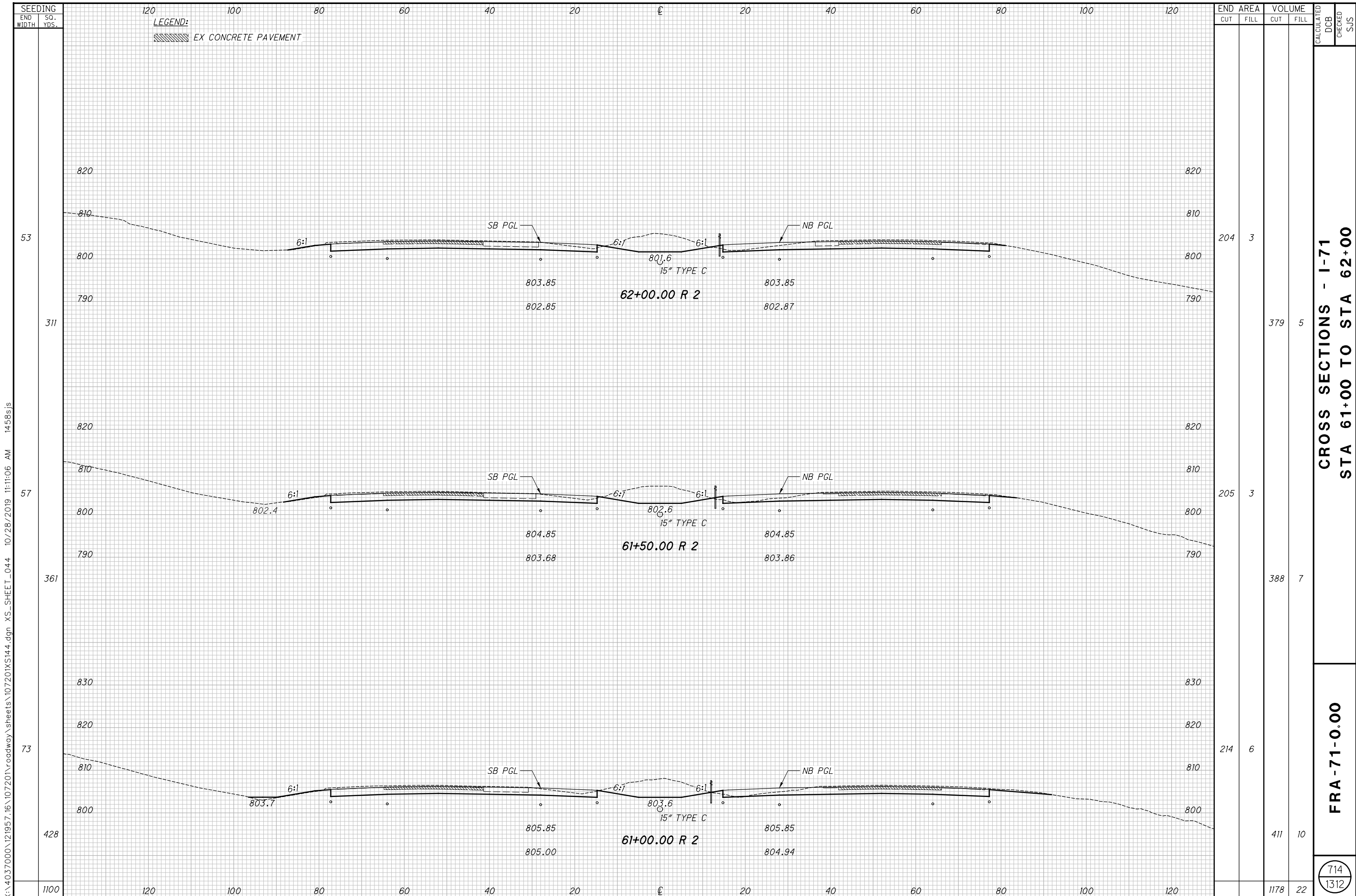


END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
230	6				
412	10				
215	5				
397	9				
215	4				
389	5				
1198	24				

**CROSS SECTIONS - I-71
 STA 59+50 TO STA 60+50**

FRA-71-0.00

713
 1312



END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
204	3				
205	3				
214	6				
1178	22				

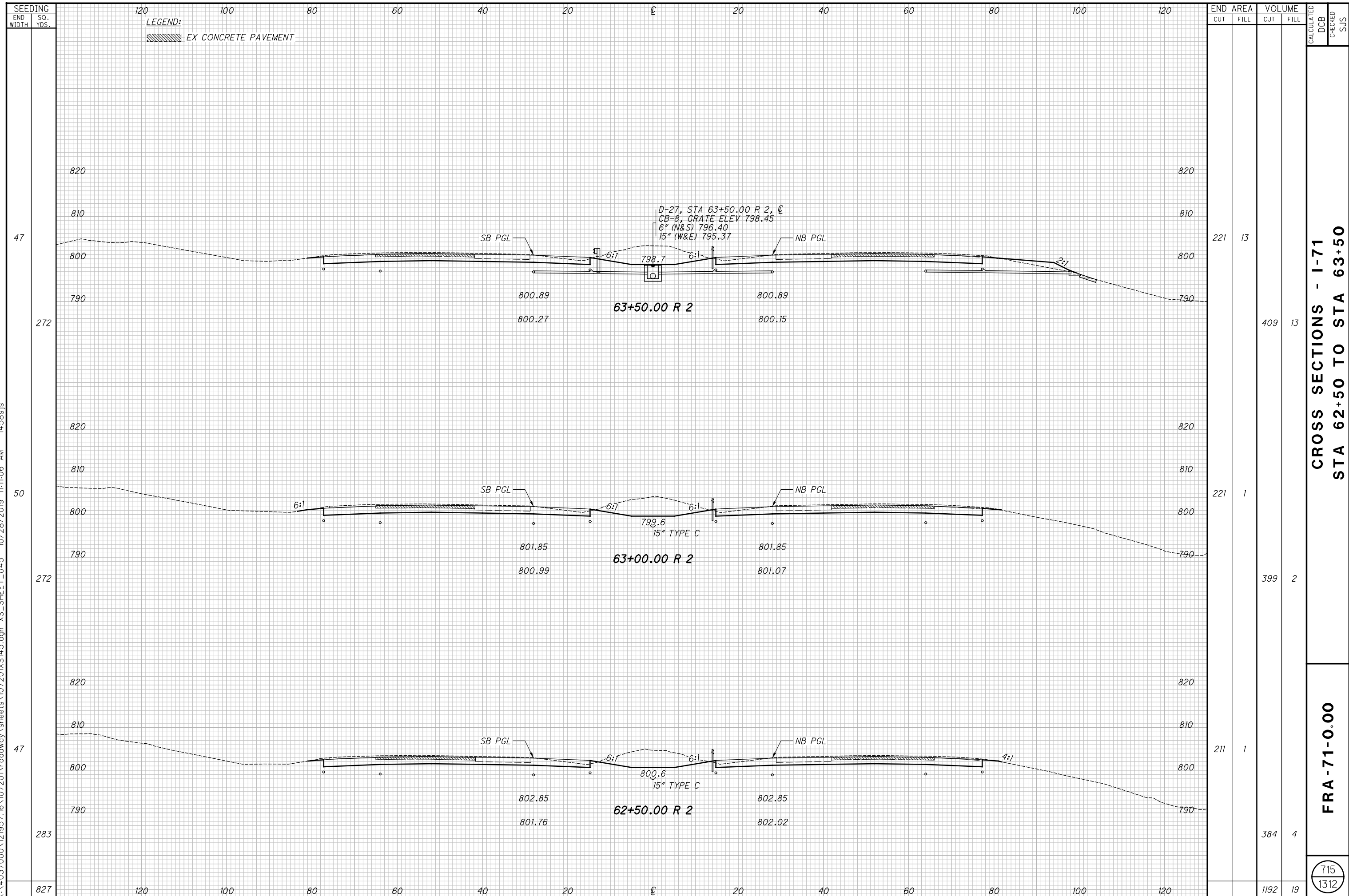
**CROSS SECTIONS - I-71
STA 61+00 TO STA 62+00**

FRA - 71 - 0.00

714
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X144.dgn XS_SHEET_044 10/28/2019 11:11:06 AM 1458s.js

X:\4037000\121957.16\107201\roadway\sheets\107201\X145.dgn XS_SHEET_045 10/28/2019 11:11:06 AM 1458s.js



SEEDING	120		100		80		60		40		20		0	20		40		60		80		100		120	
	END WIDTH	SO. YDS.																							
47																									
272																									
50																									
272																									
47																									
283																									
827																									

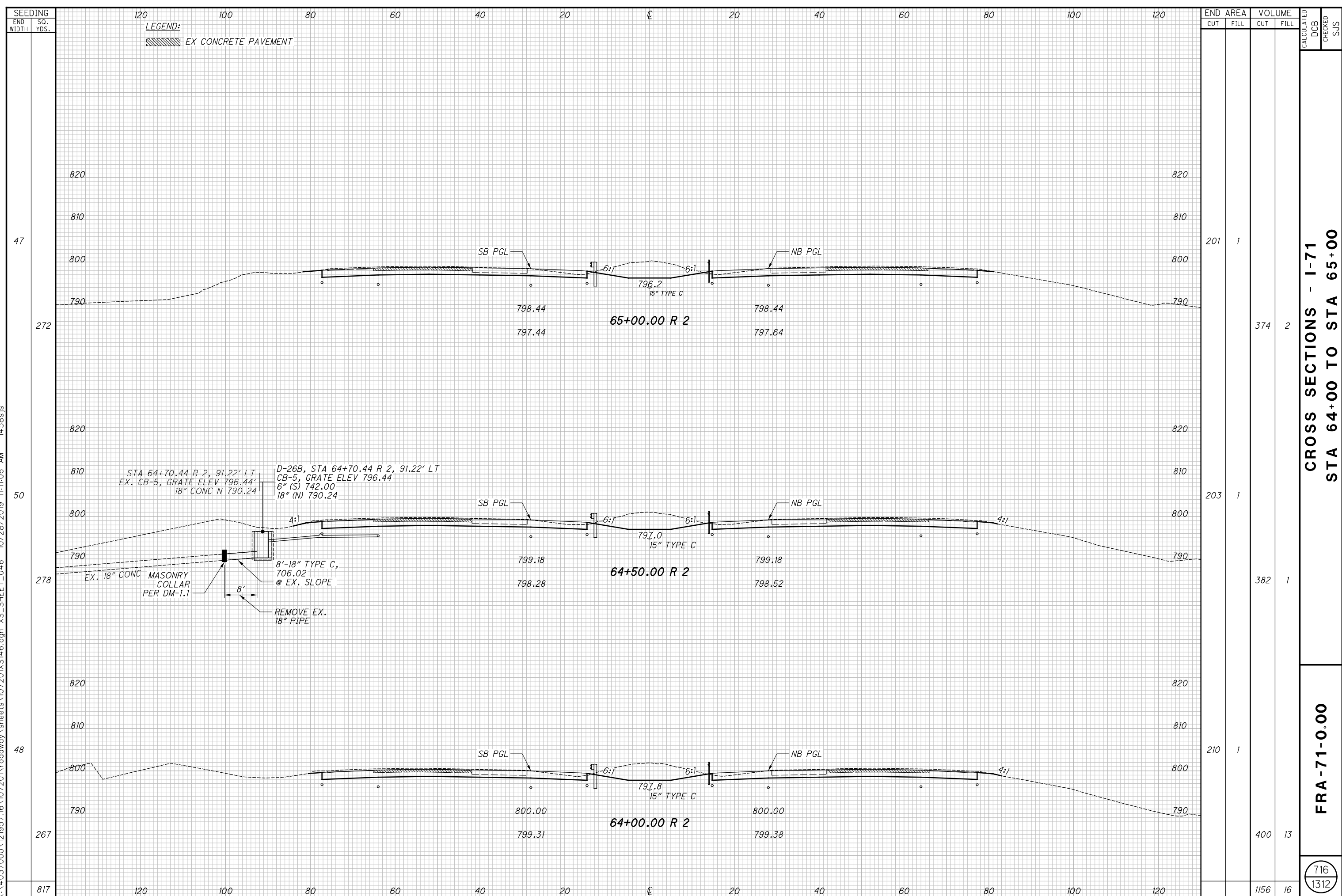
END AREA	VOLUME		CALCULATED	DCB	CHECKED	SJS
	CUT	FILL				
221	13					
221	1					
211	1					
		1192	19			

CROSS SECTIONS - I-71
STA 62+50 TO STA 63+50

FRA - 71-0.00

715
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X146.dgn XS_SHEET_046 10/28/2019 11:11:06 AM 14585.js



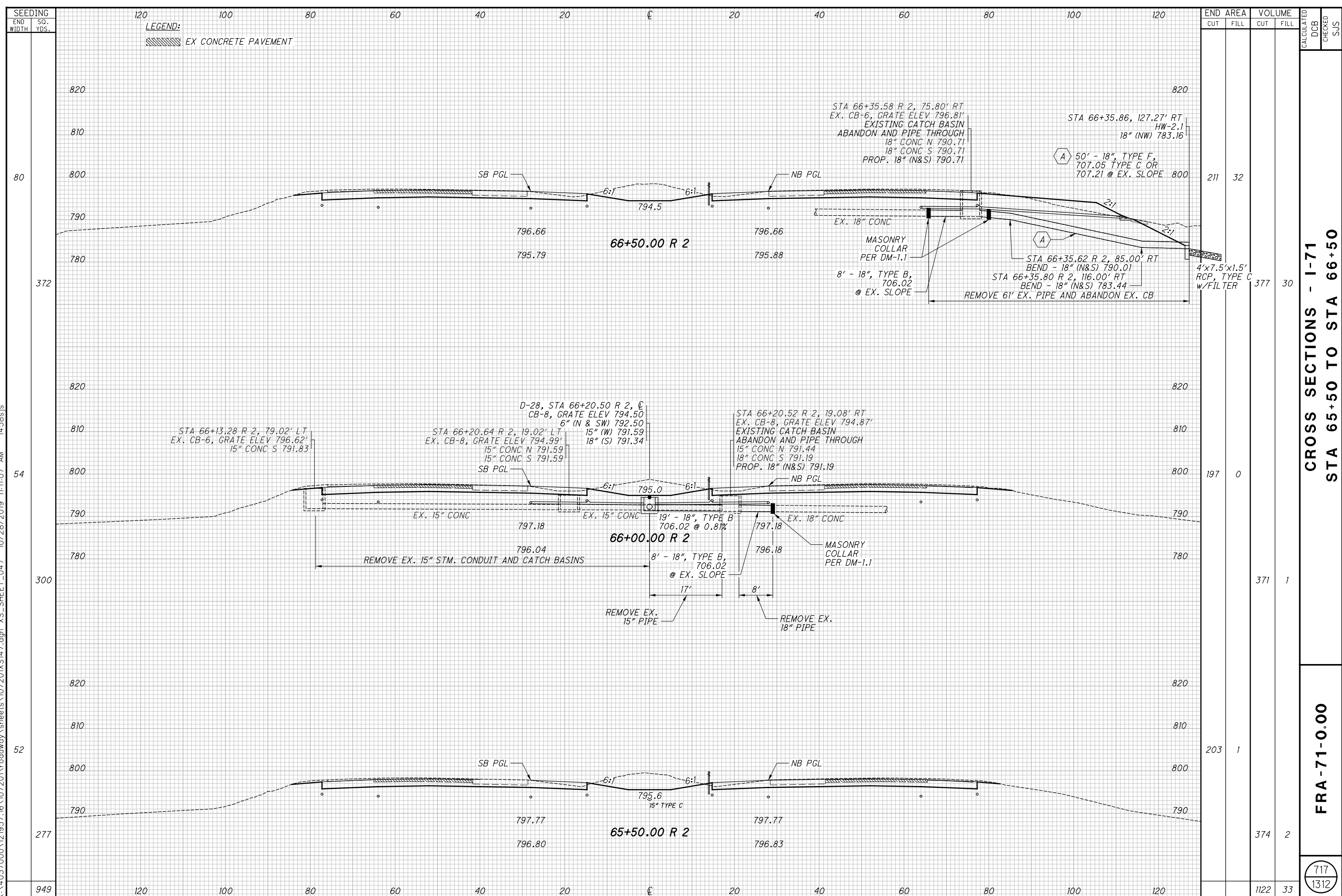
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
201	1				
203	1				
210	1				
		1156	16		

CROSS SECTIONS - I-71
STA 64+00 TO STA 65+00

FRA-71-0.00

716
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS147.dgn XS_SHEET_047 10/28/2019 11:11:07 AM 14585.js

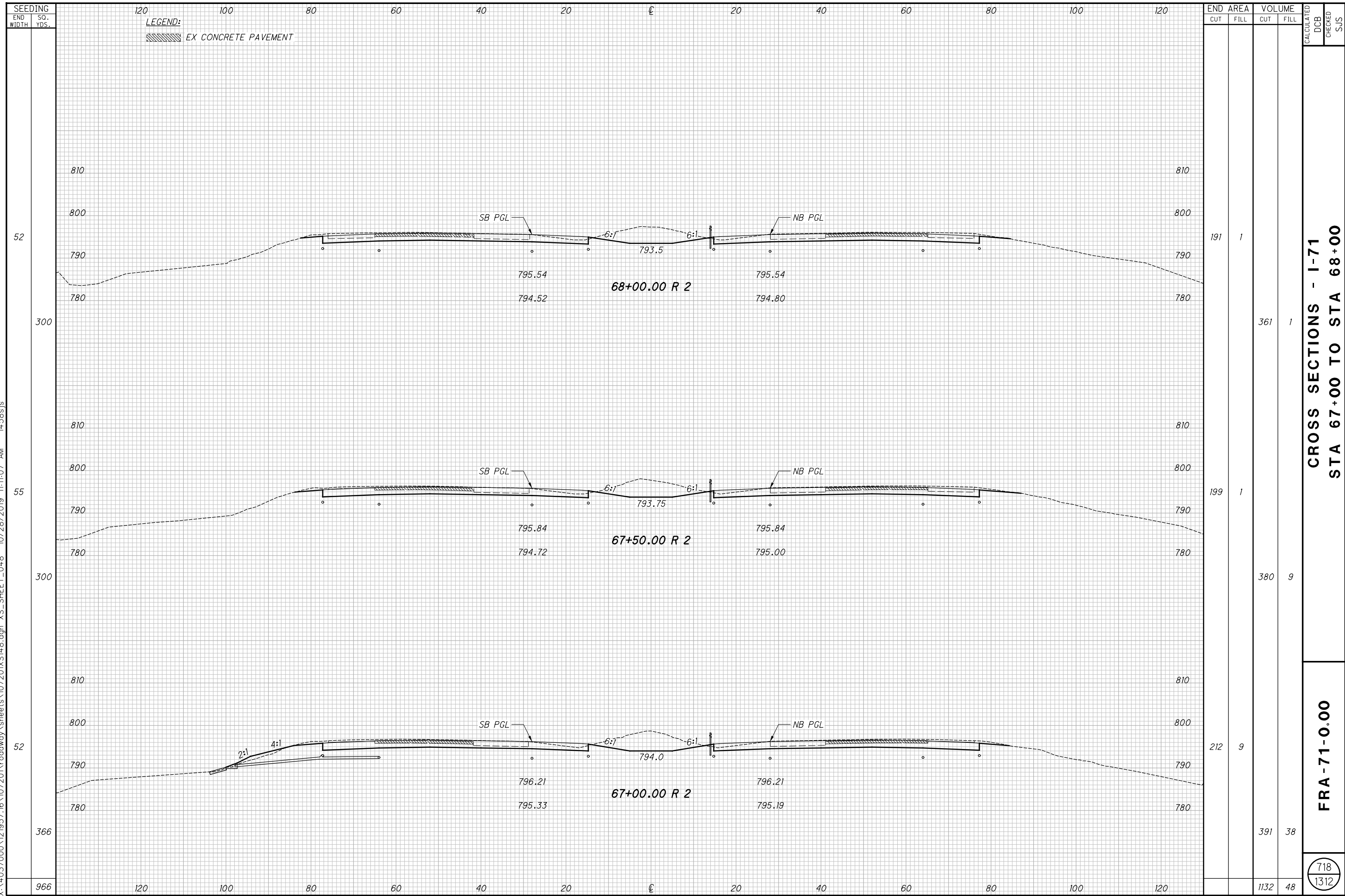


CROSS SECTIONS - I-71
 STA 65+50 TO STA 66+50

FRA - 71-0.00

717
 1312

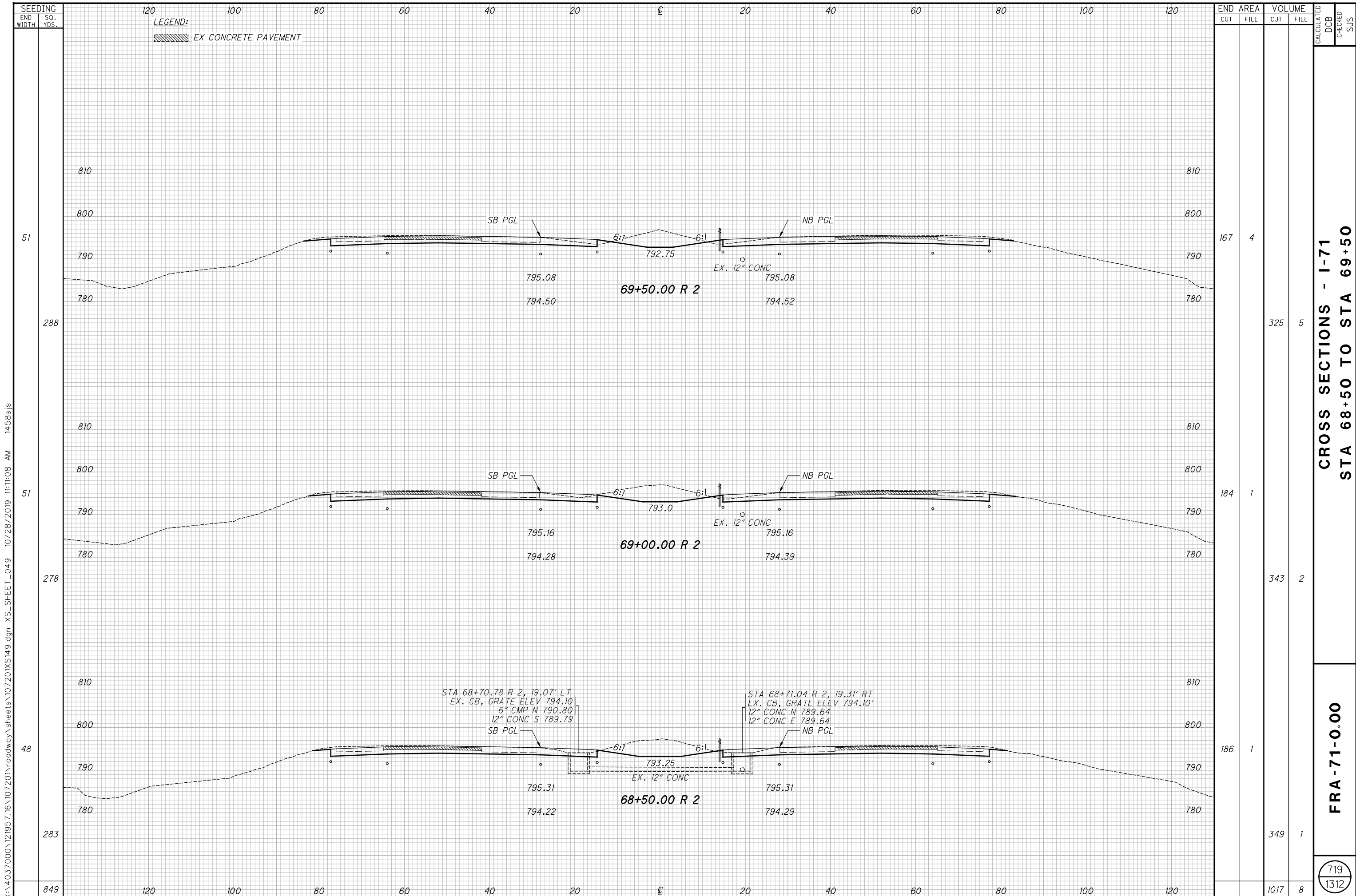
X:\4037000\121957.16\107201\roadway\sheets\107201\X148.dgn XS_SHEET_048 10/28/2019 11:11:07 AM 1458s.js



**CROSS SECTIONS - I-71
 STA 67+00 TO STA 68+00**

FRA - 71 - 0.00

718
 1312



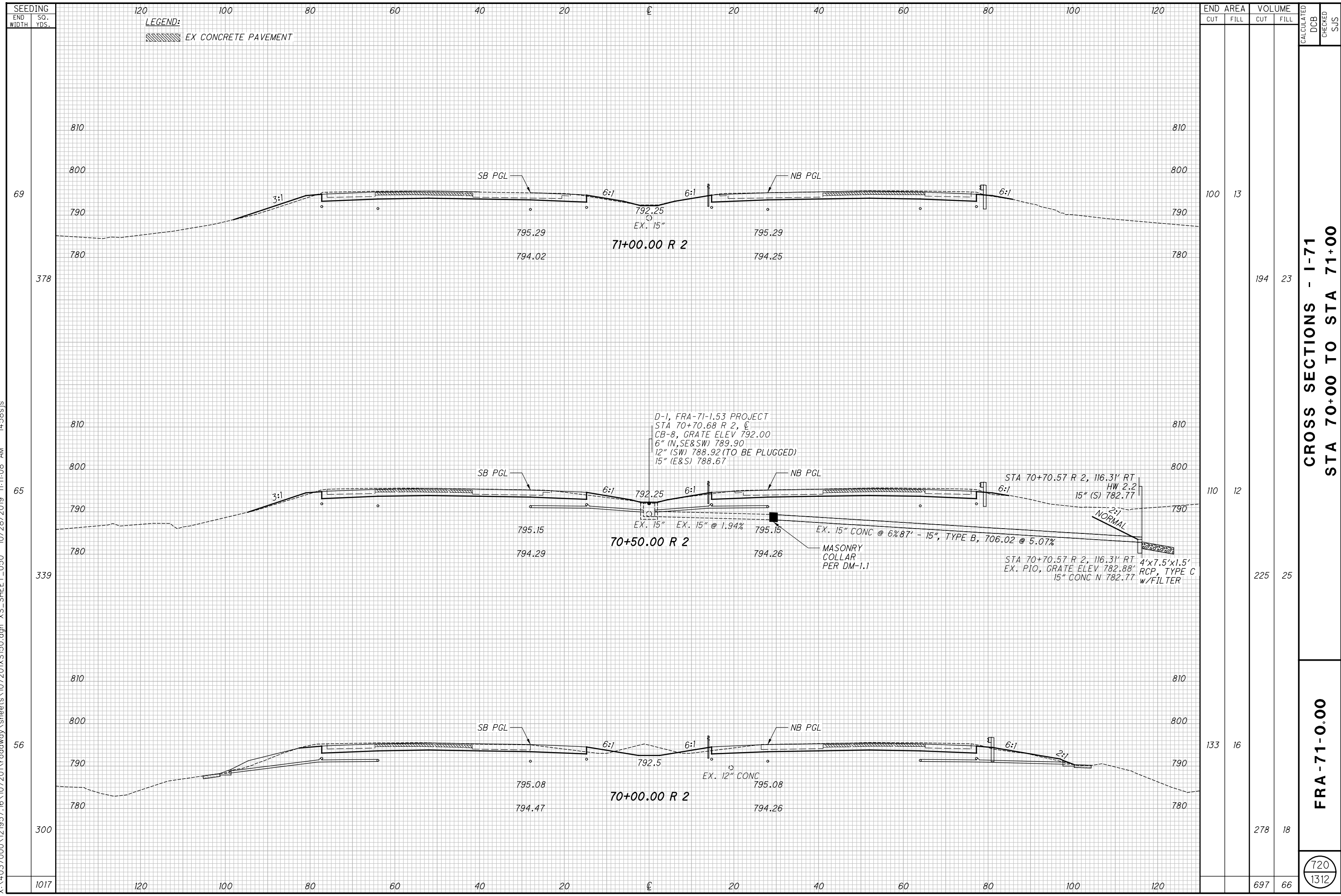
**CROSS SECTIONS - I-71
STA 68+50 TO STA 69+50**

FRA - 71 - 0.00

719
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X5149.dgn XS_SHEET_049 10/28/2019 11:11:08 AM 14585.js

X:\4037000\121957.16\107201\roadway\sheets\107201XS150.dgn XS_SHEET_050 10/28/2019 11:11:08 AM 14585.js



D-1, FRA-71-1.53 PROJECT
 STA 70+70.68 R 2, C
 CB-8, GRATE ELEV 792.00
 6" (N, SE&SW) 789.90
 12" (SW) 788.92 (TO BE PLUGGED)
 15" (E&S) 788.67

STA 70+70.57 R 2, 116.31' RT
 HW 2.2
 15" (S) 782.77

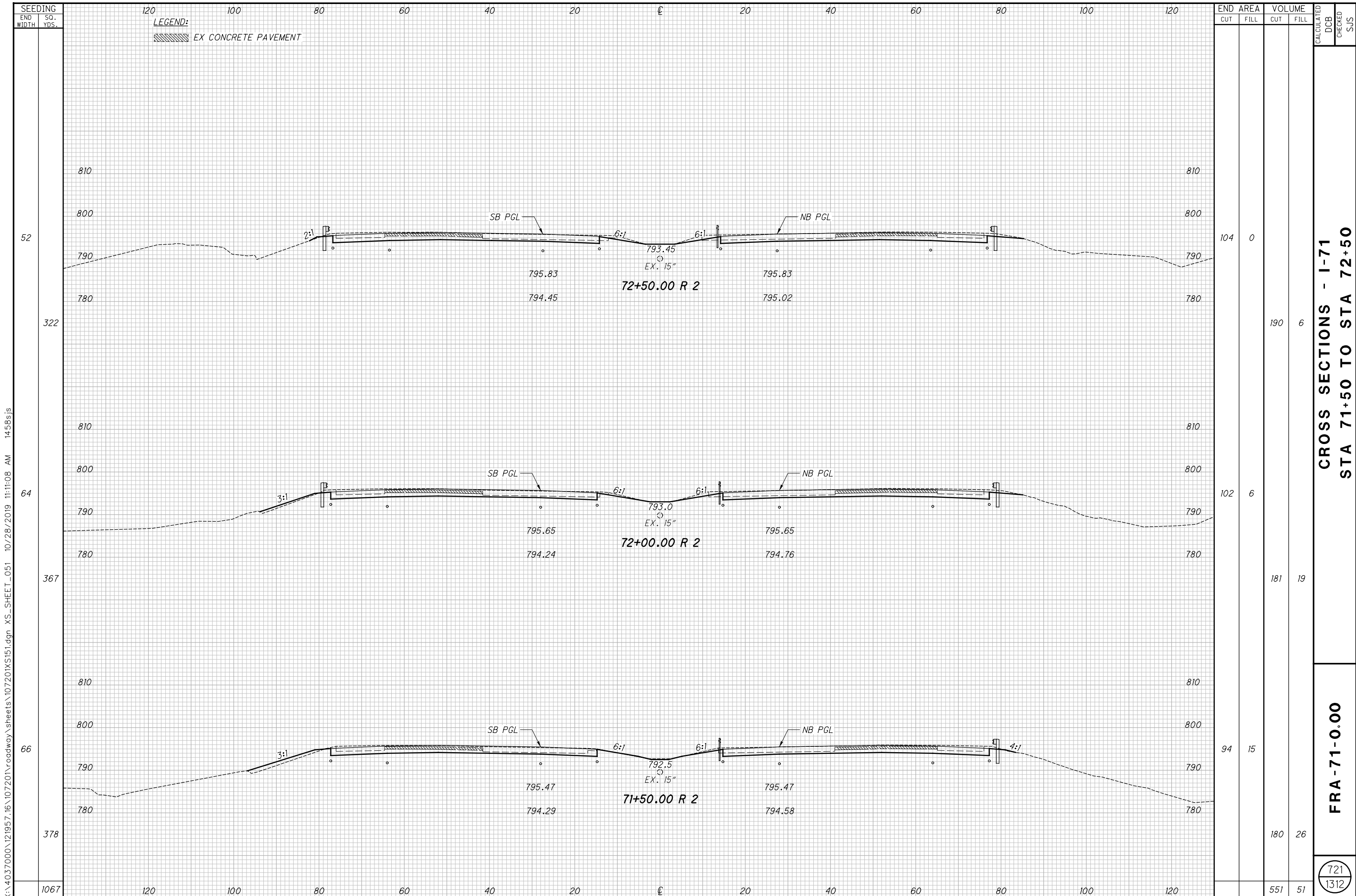
STA 70+70.57 R 2, 116.31' RT
 EX. P10, GRATE ELEV 782.88' RCP, TYPE C
 15" CONC N 782.77 w/FILTER

END AREA	VOLUME	CALCULATED	
		DCB	SJS
CUT	FILL	CUT	FILL
100	13		
194	23		
110	12		
225	25		
133	16		
278	18		
697	66		

CROSS SECTIONS - I-71
 STA 70+00 TO STA 71+00

FRA-71-0.00

720
 1312

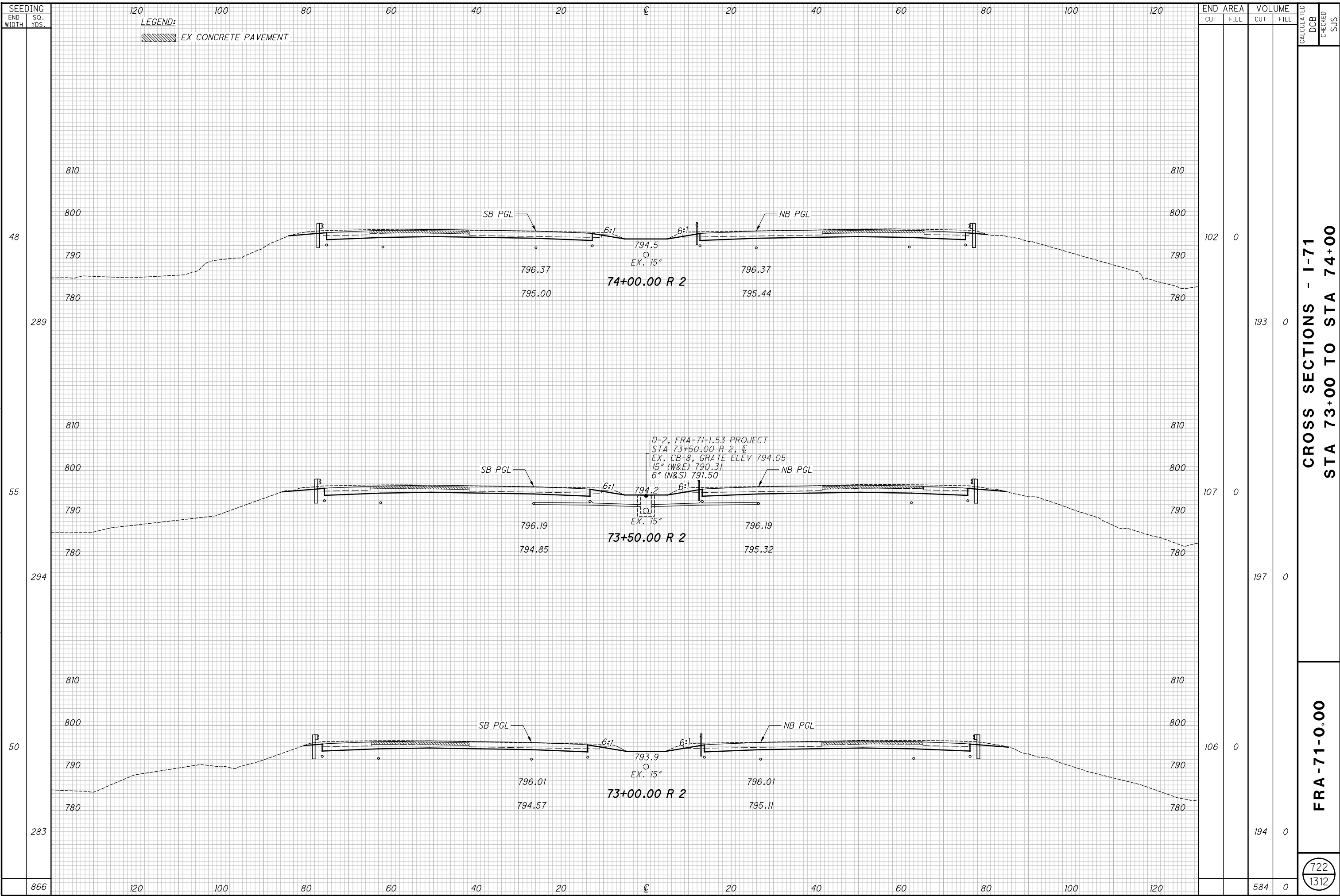


X:\4037000\121957.16\107201\roadway\sheets\107201XS151.dgn XS_SHEET_051 10/28/2019 11:11:08 AM 1458s.js

52	322	64	367	66	378	1067
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120	100	80	60	40	20	0	20	40	60	80	100	120	104	0	190	6	102	6	181	19	94	15	180	26	551	51
-----	-----	----	----	----	----	---	----	----	----	----	-----	-----	-----	---	-----	---	-----	---	-----	----	----	----	-----	----	-----	----

X:\4037000\121957.16\107201\roadway\sheets\107201XS152.dgn XS_SHEET_052 10/28/2019 11:11:09 AM 1458s.js



LEGEND:
 [Hatched Box] EX CONCRETE PAVEMENT

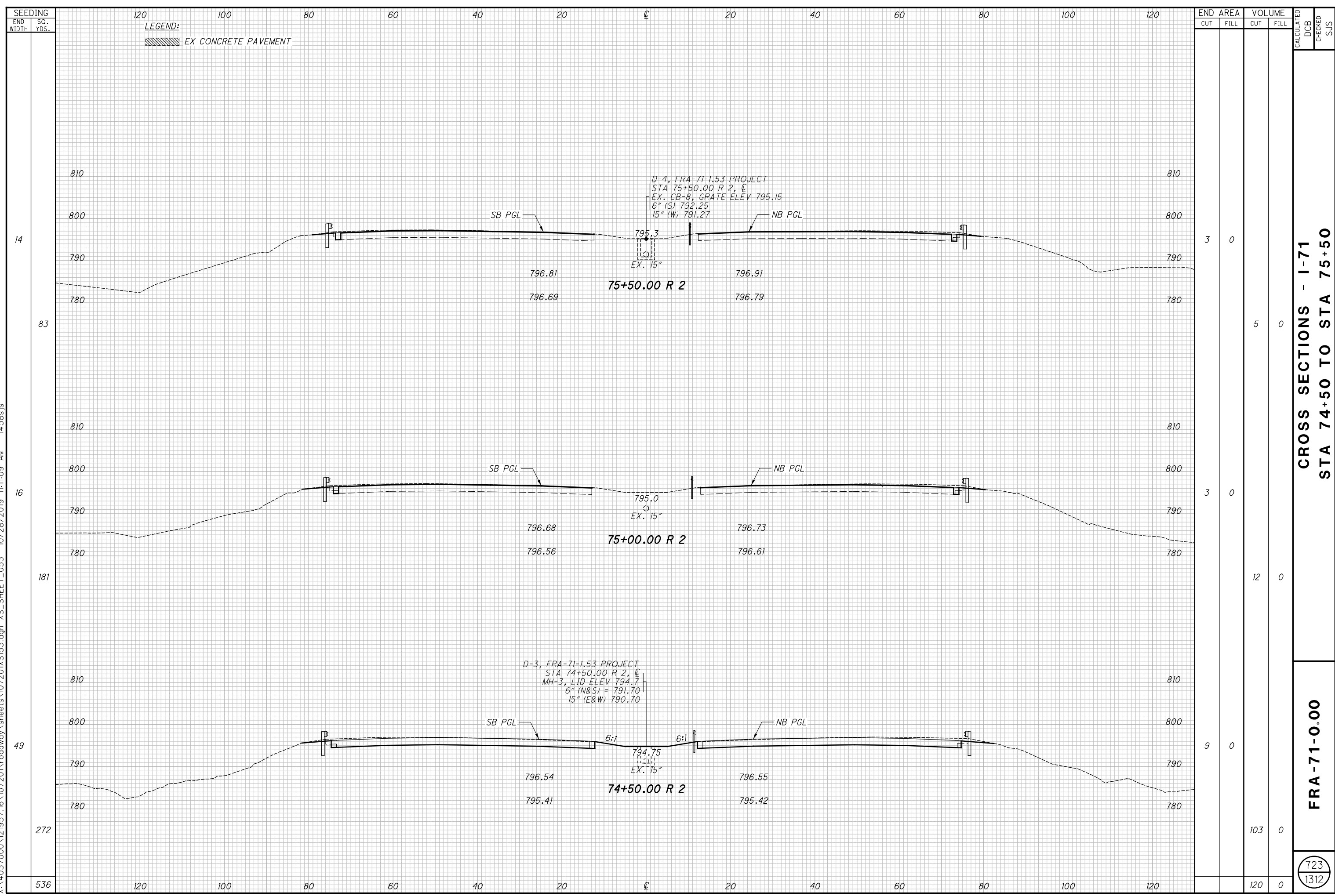
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
102	0					
107	0					
106	0					
194	0					
584	0					

CROSS SECTIONS - I-71
 STA 73+00 TO STA 74+00

FRA-71-0.00

722
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS153.dgn XS_SHEET_053 10/28/2019 11:11:09 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT

D-4, FRA-71-1.53 PROJECT
 STA 75+50.00 R 2, ϕ
 EX. CB-8, GRATE ELEV 795.15
 6" (S) 792.25
 15" (W) 791.27

75+50.00 R 2

75+00.00 R 2

74+50.00 R 2

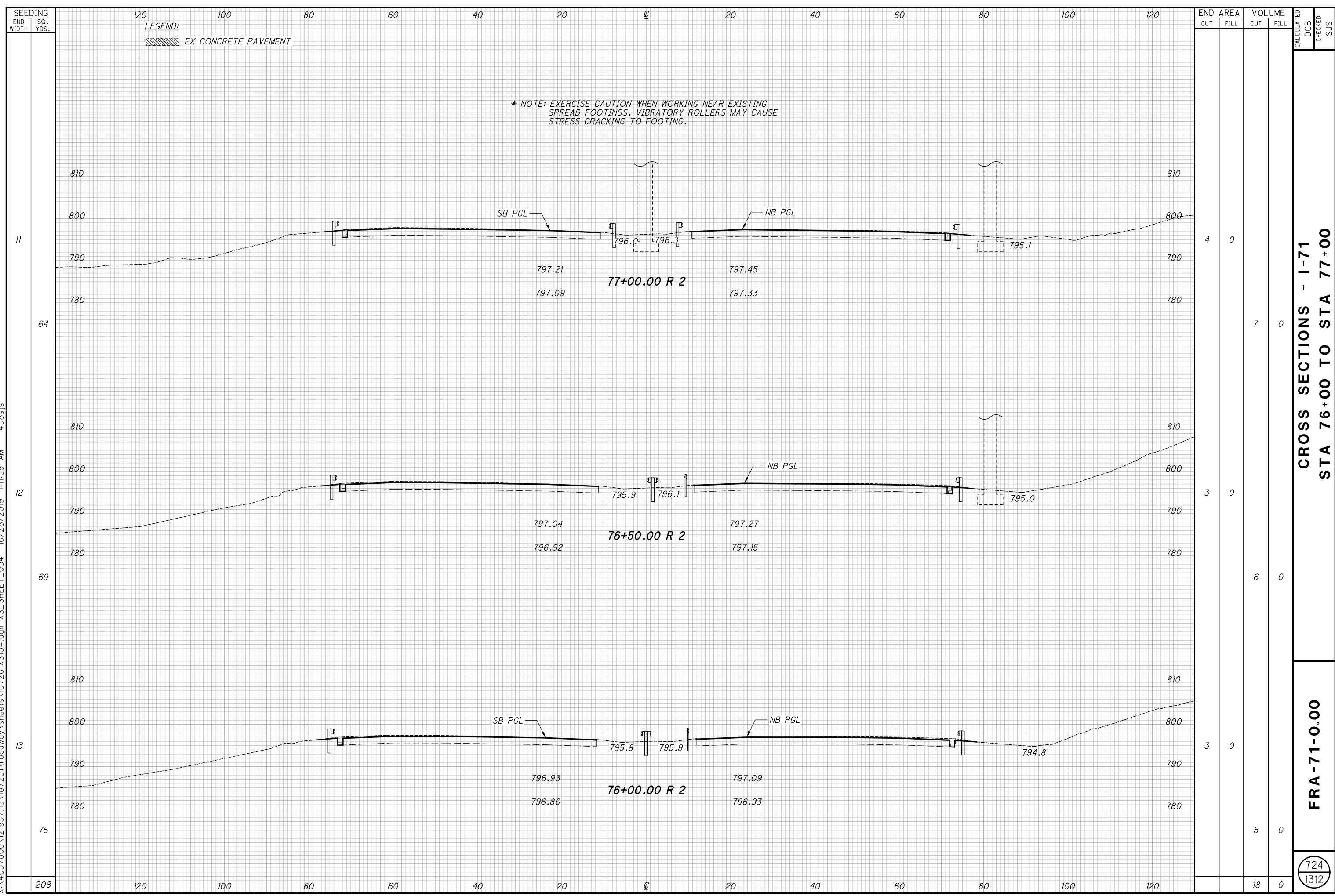
D-3, FRA-71-1.53 PROJECT
 STA 74+50.00 R 2, ϕ
 MH-3, LID ELEV 794.7
 6" (N&S) = 791.70
 15" (E&W) 790.70

CROSS SECTIONS - I-71
 STA 74+50 TO STA 75+50

FRA-71-0.00

723
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS154.dgn XS_SHEET_054 10/28/2019 11:11:09 AM 1458s.js

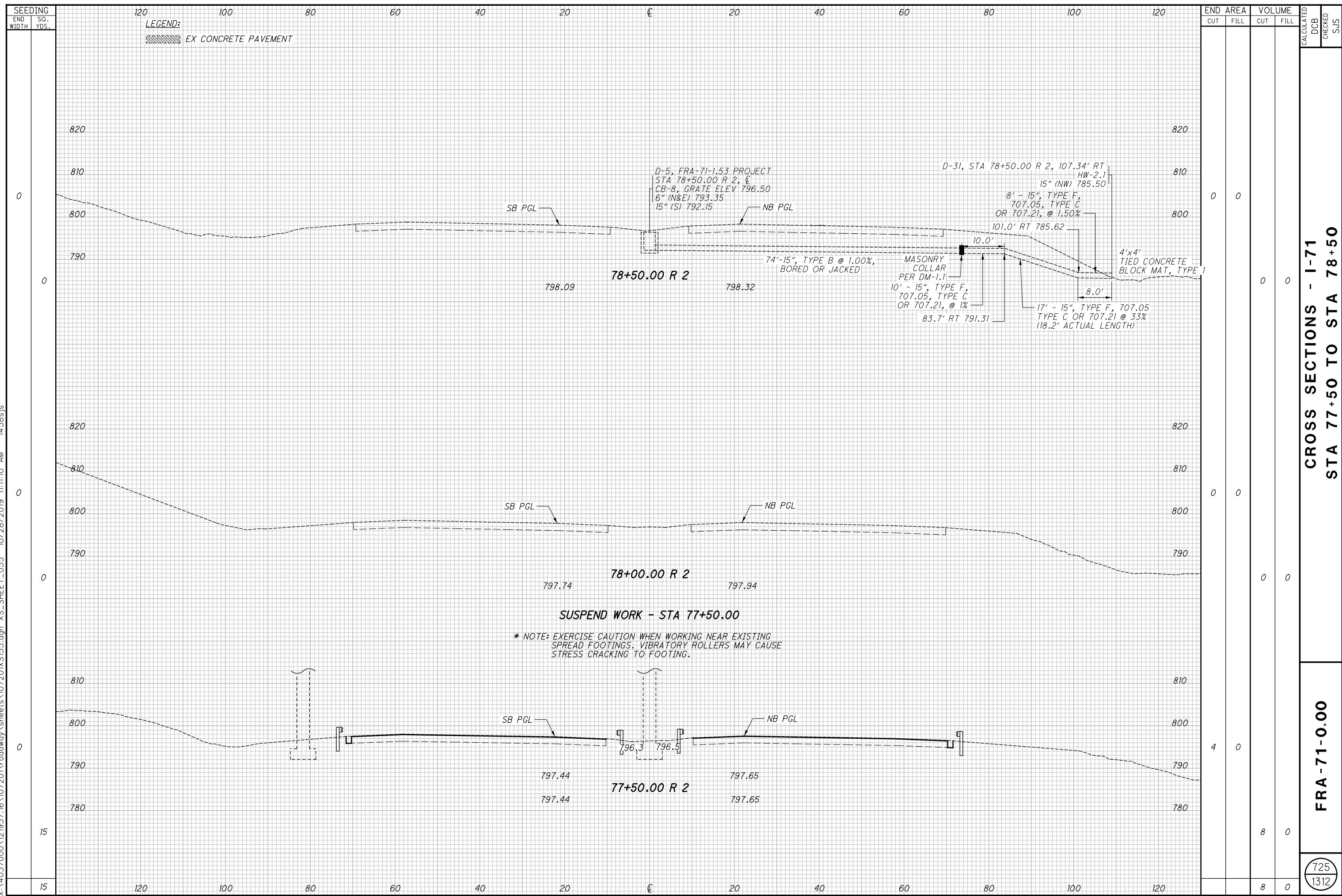


**CROSS SECTIONS - I-71
 STA 76+00 TO STA 77+00**

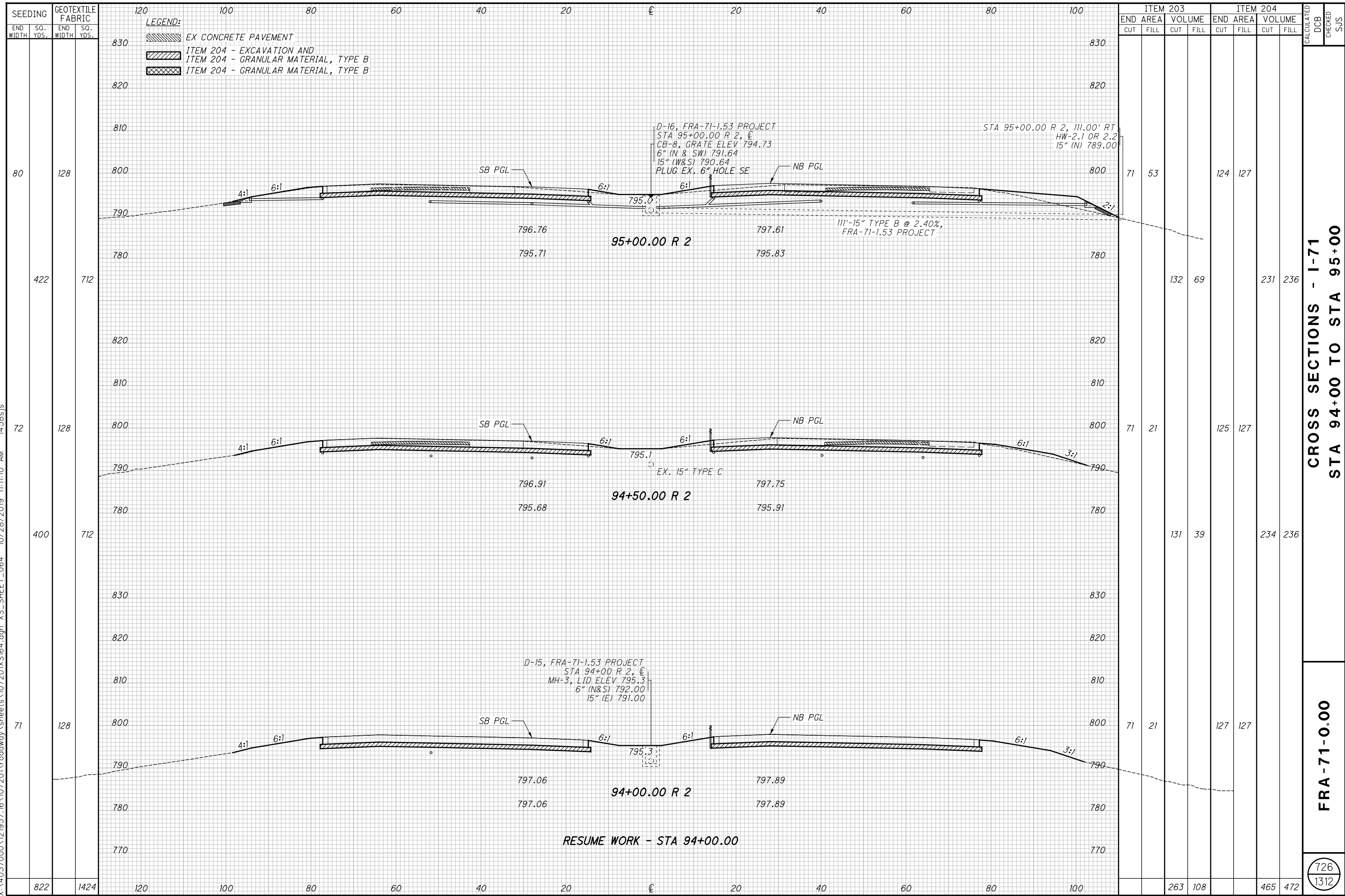
FRA - 71 - 0.00

724
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS155.dgn XS_SHEET_055 10/28/2019 11:11:10 AM 1458s.js



X:\4037000\121957.16\107201\roadway\sheet\107201\XS164.dgn XS_SHEET_064 10/28/2019 11:11:10 AM 1458s.js



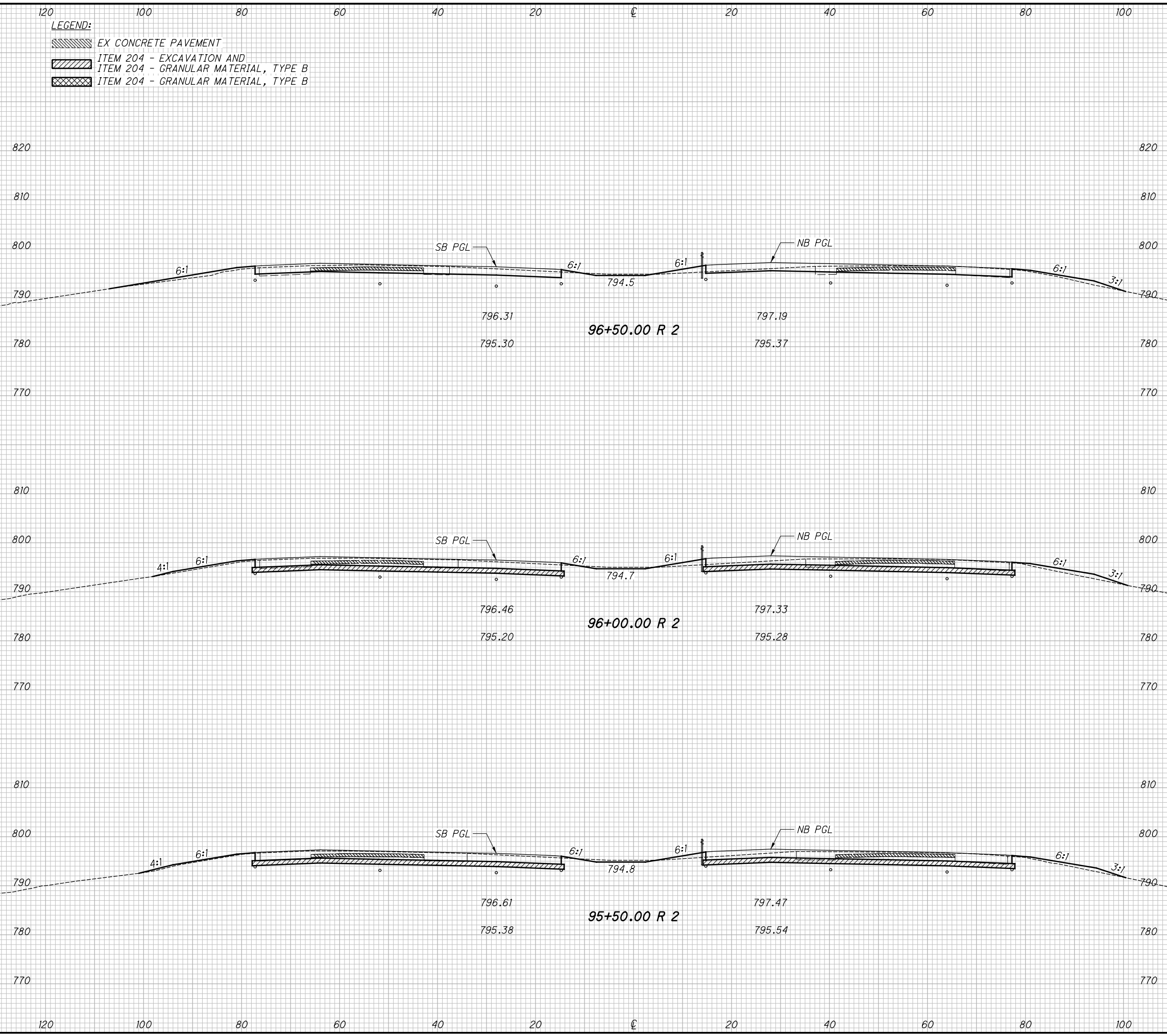
CROSS SECTIONS - I-71
 STA 94+00 TO STA 95+00

FRA-71-0:00

726
 1312

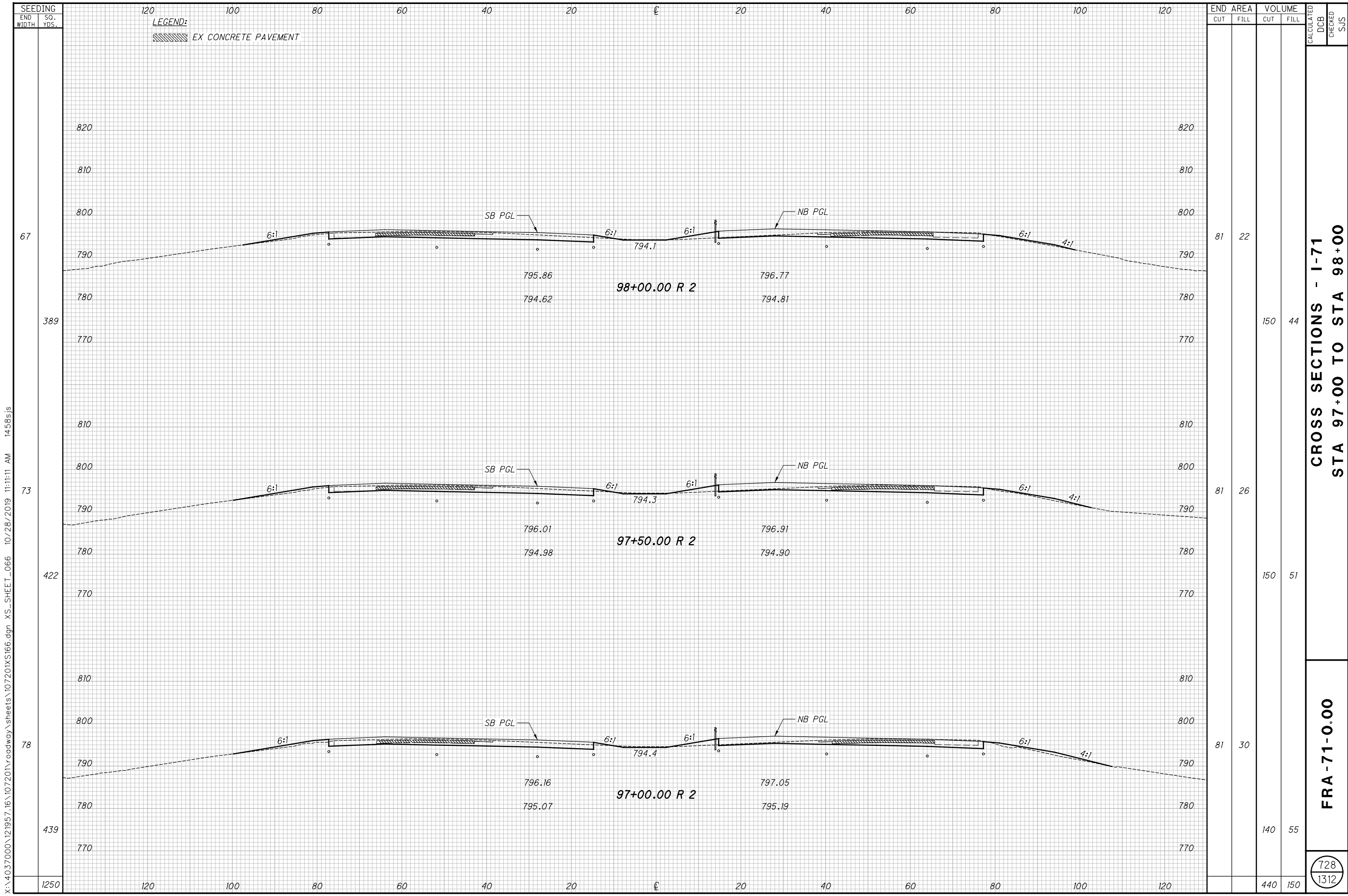
X:\4037000\121957.16\107201\roadway\sheets\107201\X165.dgn XS_SHEET_065 10/28/2019 11:11:11 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
79			
417			
70		128	
400		712	
73		128	
427		712	
1244		1424	



ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
71	29						
		133	51				
72	26			120	127		
		136	44			223	236
74	21			121	127		
		135	69			227	236
		404	164			450	472

CROSS SECTIONS - I-71
 STA 95+50 TO STA 96+50
 FRA - 71 - 0:00
 727
 1312



X:\4037000\121957.16\107201\roadway\sheets\107201\XSt66.dgn XS_SHEET_066 10/28/2019 11:11:11 AM 1458sjs

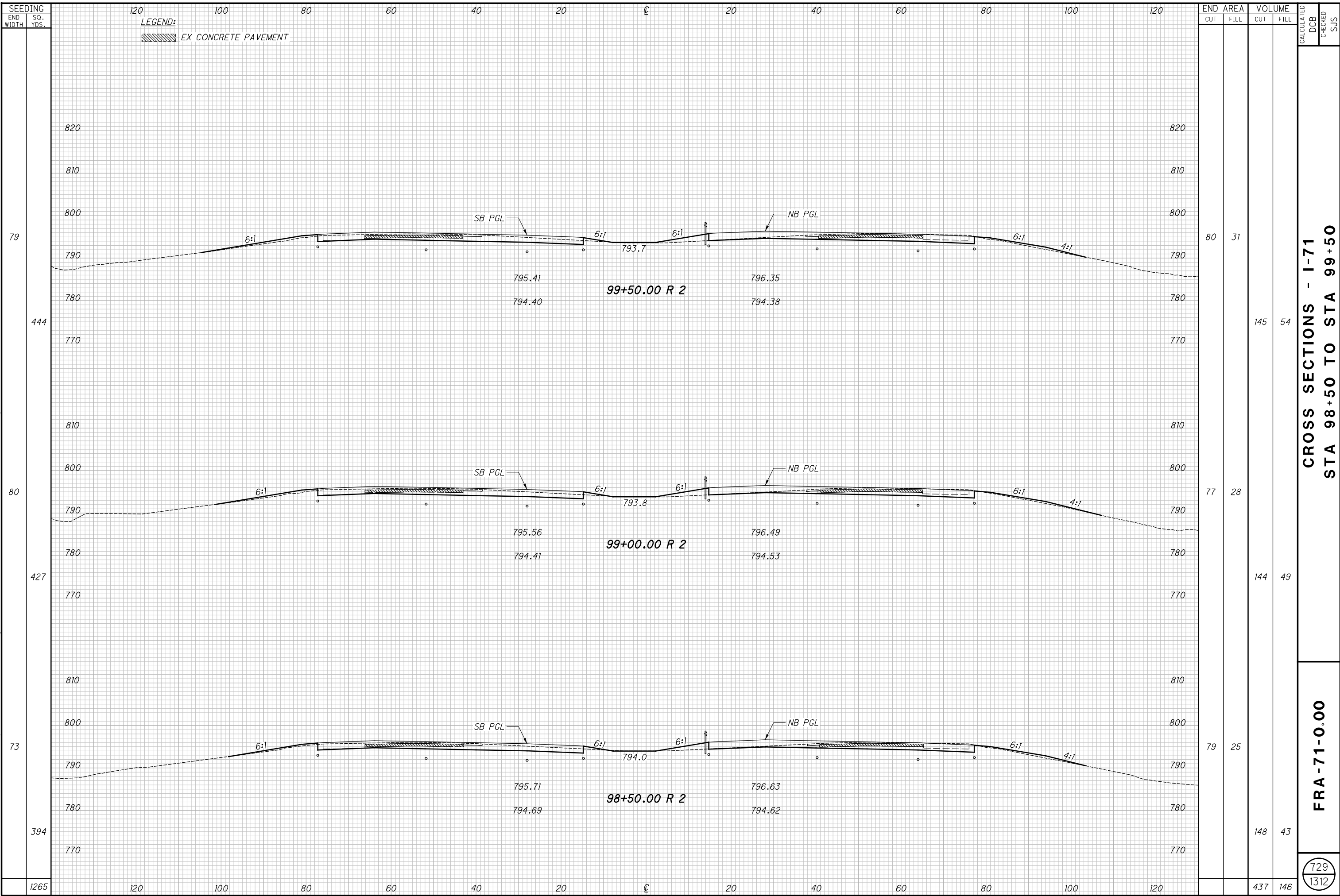
SEEDING	END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
	END WIDTH	SO. YDS.	CUT	FILL				
67	120		81	22				
389					150	44		
73	120		81	26				
422					150	51		
78	120		81	30				
439					140	55		
1250					440	150		

**CROSS SECTIONS - I-71
 STA 97+00 TO STA 98+00**

FRA - 71 - 0.00

728
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X167.dgn XS_SHEET_067 10/28/2019 11:11:11 AM 1458sjs

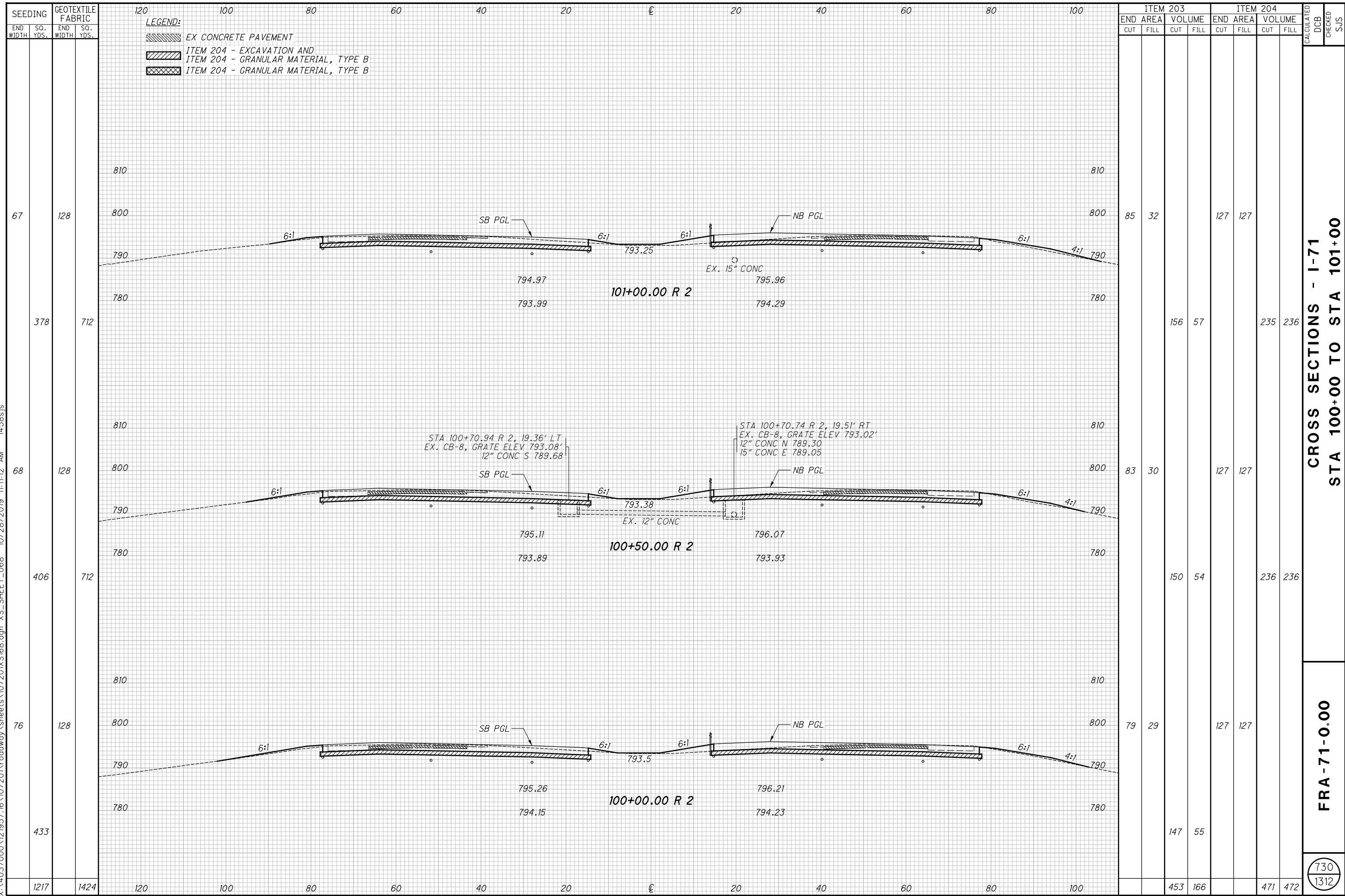


**CROSS SECTIONS - I-71
 STA 98+50 TO STA 99+50**

FRA - 71 - 0.00

729
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS168.dgn XS_SHEET_068 10/28/2019 11:11:12 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
67	128	128	128
378	712	712	712
68	128	128	128
406	712	712	712
76	128	128	128
433	1424	1424	1424
1217	1424	1424	1424

ITEM 203				ITEM 204				CALCULATED DCB	CHECKED SUS
END AREA		VOLUME		END AREA		VOLUME			
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL		
85	32			127	127				
		156	57	235	236				
83	30			127	127				
		150	54	236	236				
79	29			127	127				
		147	55						
		453	166	471	472				




CROSS SECTIONS - I-71
 STA 100+00 TO STA 101+00

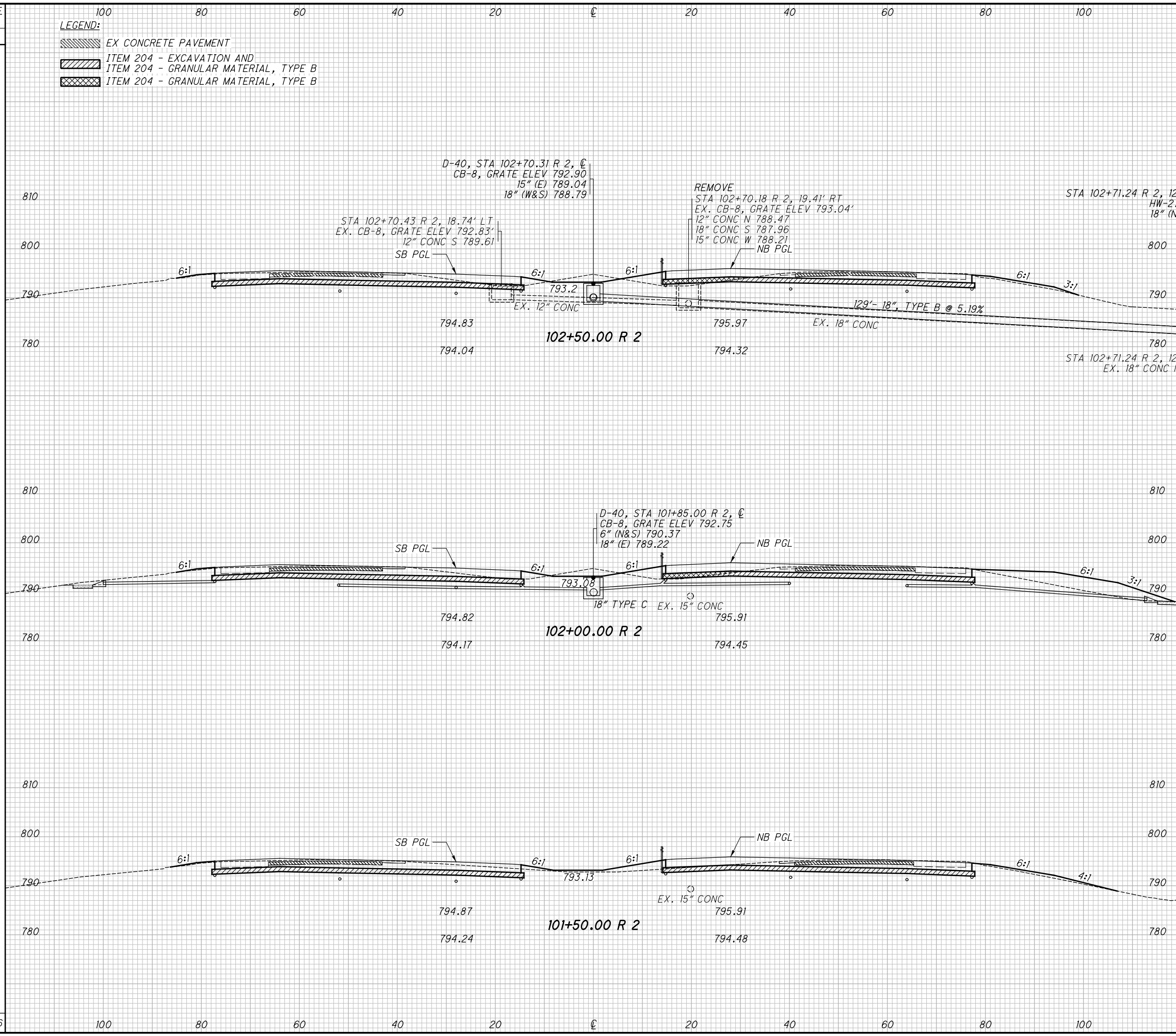
FRA - 71 - 0.00

730
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS169.dgn XS_SHEET_069 10/28/2019 11:11:12 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
55	128	128	712
394	712	712	1424
86	128	128	712
422	712	712	1424
64	128	128	712
367	712	712	1424
1183	2136	2136	4272

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B

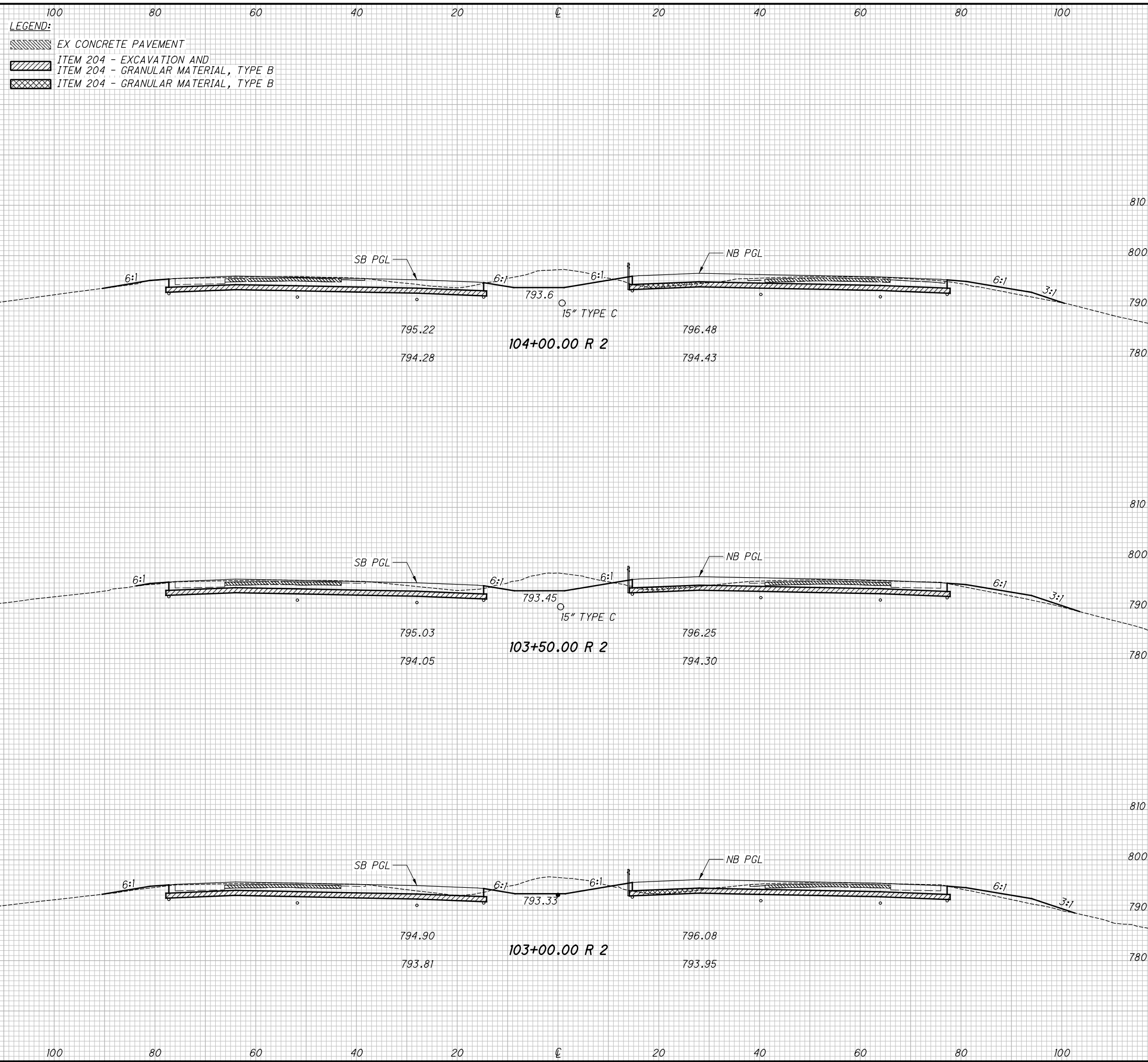


ITEM 203		ITEM 204		ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME	END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
77	32	110	127	148	119	208	236
83	97	115	127	153	121	223	236
82	34	126	127	155	61	234	236
				456	301	665	708

CROSS SECTIONS - I-71
 STA 101+50 TO STA 102+50
 FRA-71-0.00
 731
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS170.dgn XS_SHEET_070 10/28/2019 11:11:12 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
62	128	128	712
339	712	712	345
64	128	128	712
333	712	712	1017
			2136



ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
138	19	120	127
	248		34
		223	236
130	18	121	127
	232		37
		222	236
120	22	119	127
	183		49
		212	236
	663	657	708

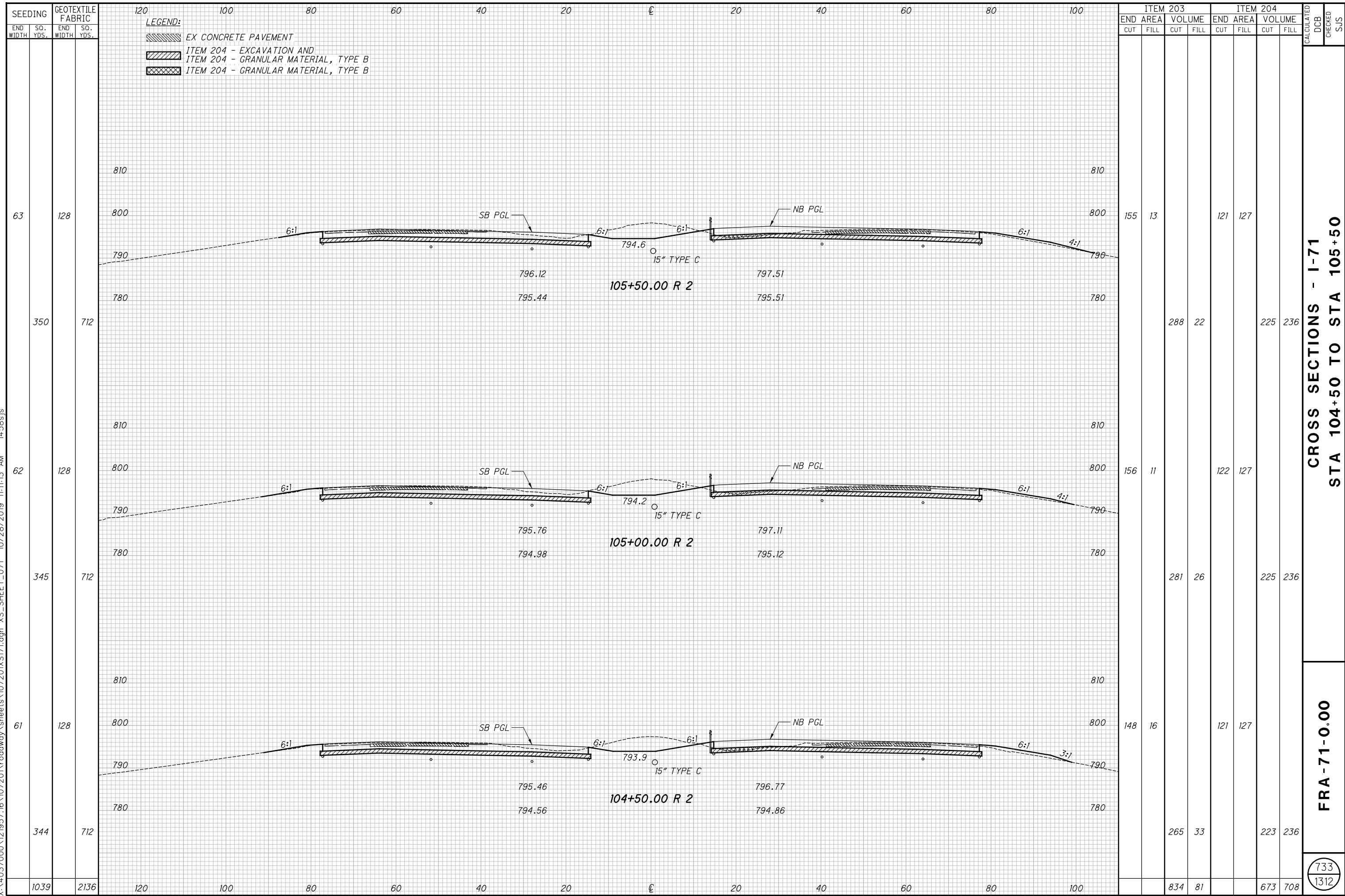
CALCULATED	DCB	CHECKED	SJS

**CROSS SECTIONS - I-71
 STA 103+00 TO STA 104+00**

FRA-71-0:00

732
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS171.dgn XS_SHEET_071 10/28/2019 11:11:13 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
63	128	62	128
350	712	345	712
61	128	61	128
344	712	344	712
1039	2136	1039	2136

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B

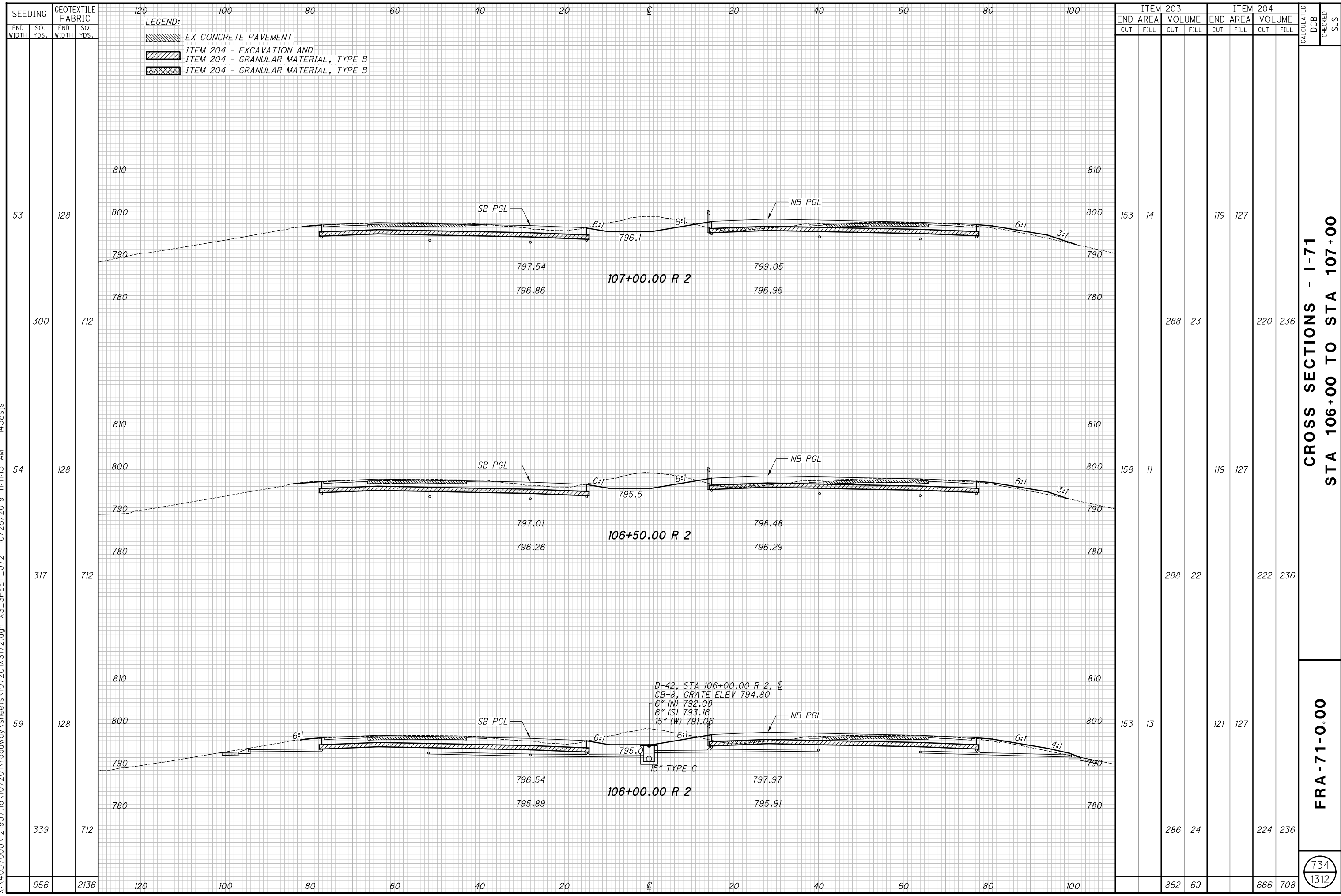
ITEM 203				ITEM 204				CALCULATED		
END AREA		VOLUME		END AREA		VOLUME		DCB	CHECKED	SJS
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL			
155	13			121	127					
		288	22			225	236			
156	11			122	127					
		281	26			225	236			
148	16			121	127					
		265	33			223	236			
		834	81			673	708			

**CROSS SECTIONS - I-71
 STA 104+50 TO STA 105+50**

FRA - 71 - 0:00

733
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS172.dgn XS_SHEET_072 10/28/2019 11:11:13 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
53	128	128	712
54	128	128	712
59	128	128	712
956	2136	120	100

ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
153	14			119	127		
		288	23			220	236
158	11			119	127		
		288	22			222	236
153	13			121	127		
		286	24			224	236
		862	69			666	708

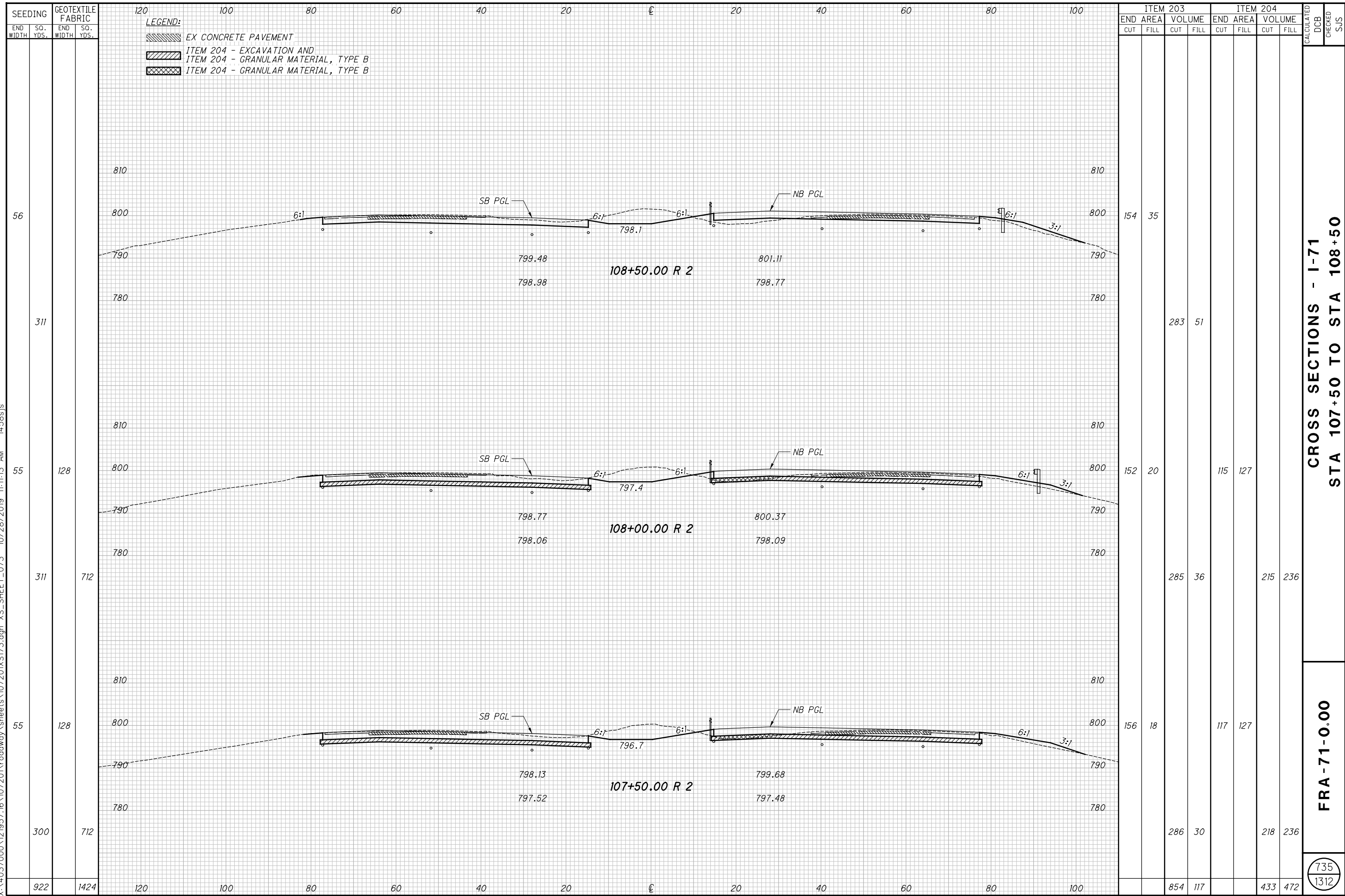
CALCULATED DCB CHECKED SJS

**CROSS SECTIONS - I-71
 STA 106+00 TO STA 107+00**

FRA - 71 - 0:00

734
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS173.dgn XS_SHEET_073 10/28/2019 11:11:13 AM 1458s.js

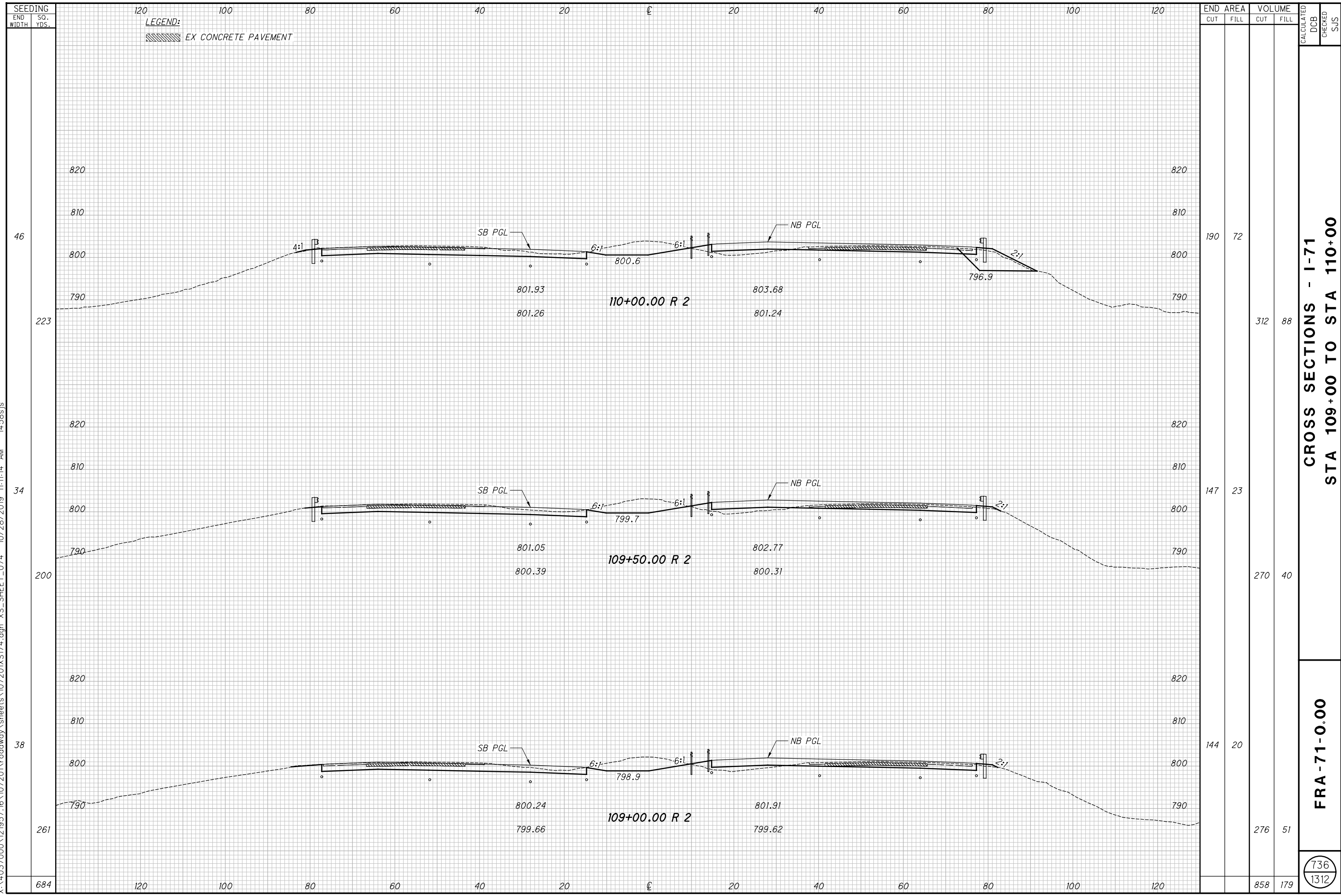


CROSS SECTIONS - I-71
STA 107+50 TO STA 108+50

FRA-71-0:00

735
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS174.dgn XS_SHEET_074 10/28/2019 11:11:14 AM 1458sjs

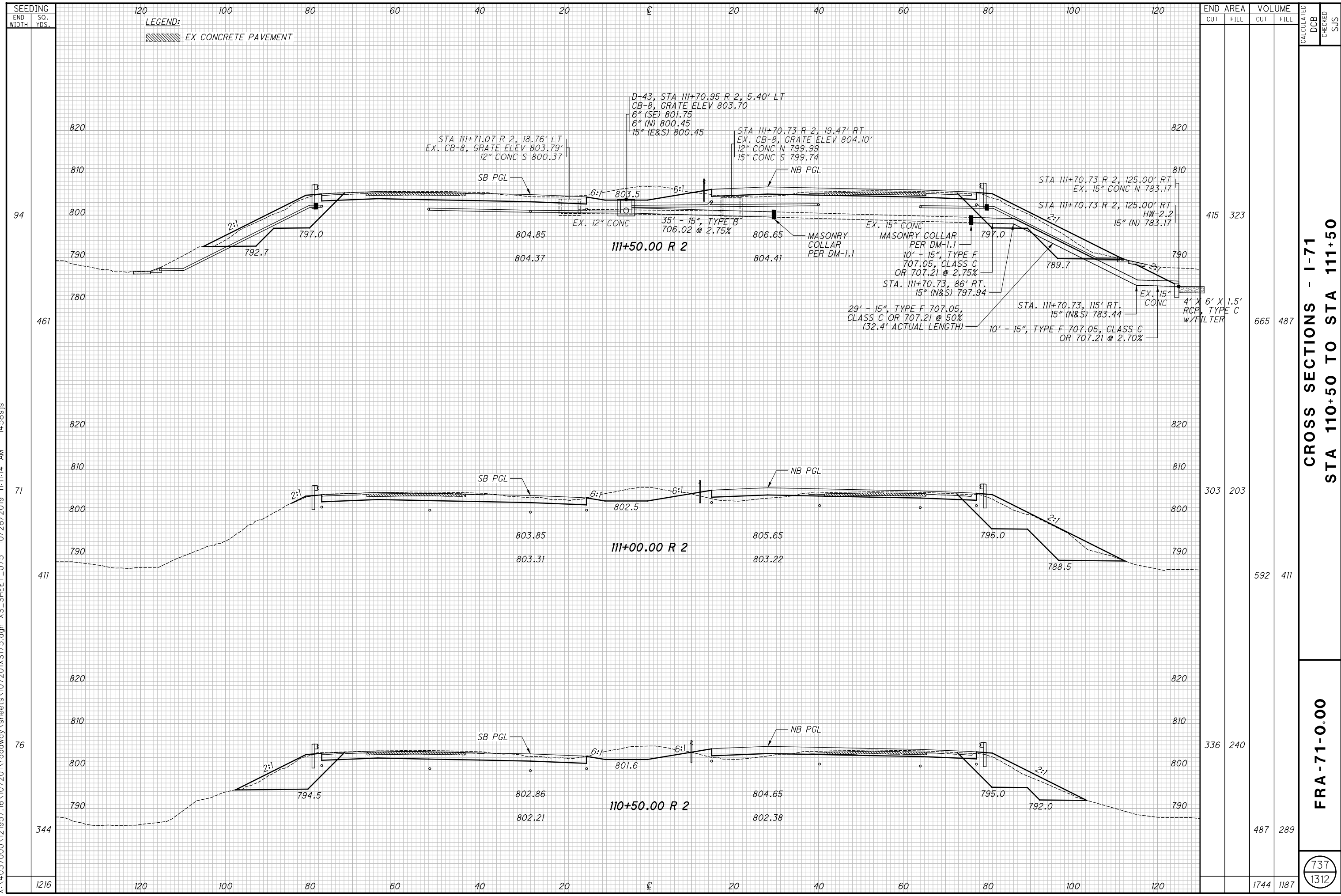


**CROSS SECTIONS - I-71
 STA 109+00 TO STA 110+00**

FRA - 71 - 0.00

736
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS175.dgn XS_SHEET_075 10/28/2019 11:11:14 AM 1458s.js



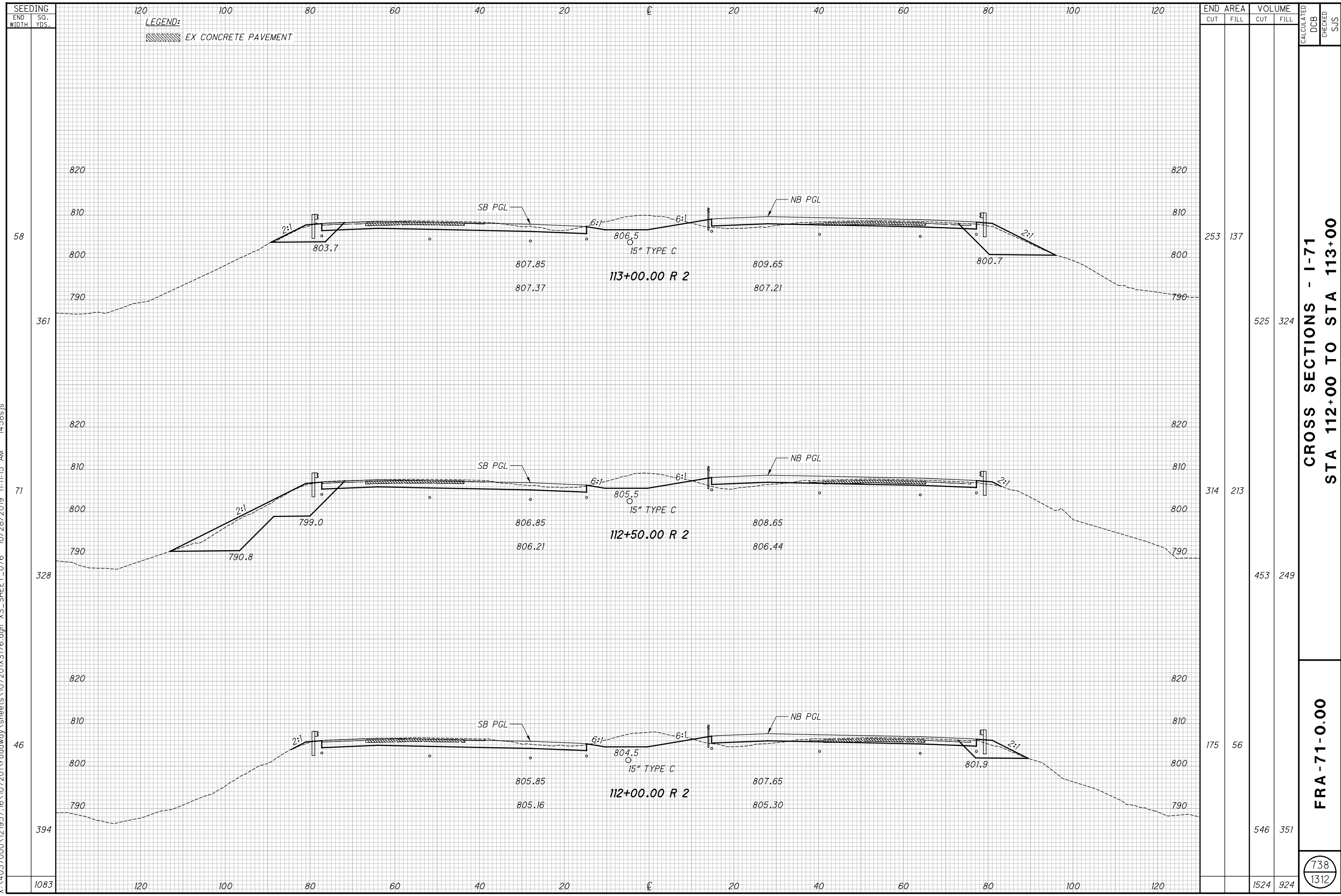
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SUS
415	323				
303	203				
336	240				
487	289				
1744	1187				

CROSS SECTIONS - I-71
 STA 110+50 TO STA 111+50

FRA-71-0.00

737
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS176.dgn XS_SHEET_076 10/28/2019 11:11:15 AM 1458s.js

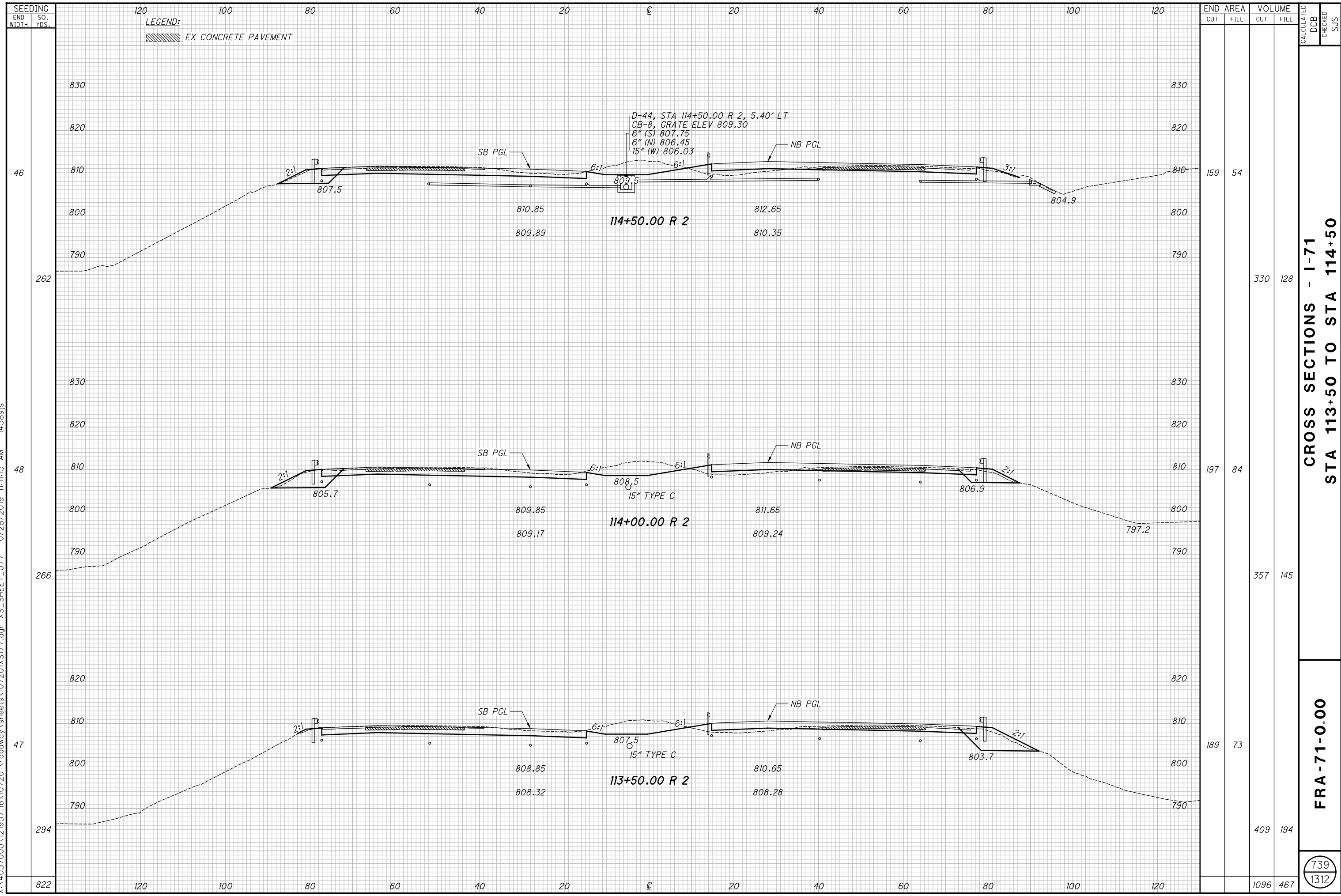


**CROSS SECTIONS - I-71
 STA 112+00 TO STA 113+00**

FRA - 71 - 0.00

738
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS177.dgn XS_SHEET_077 10/28/2019 11:11:15 AM 1458s.js

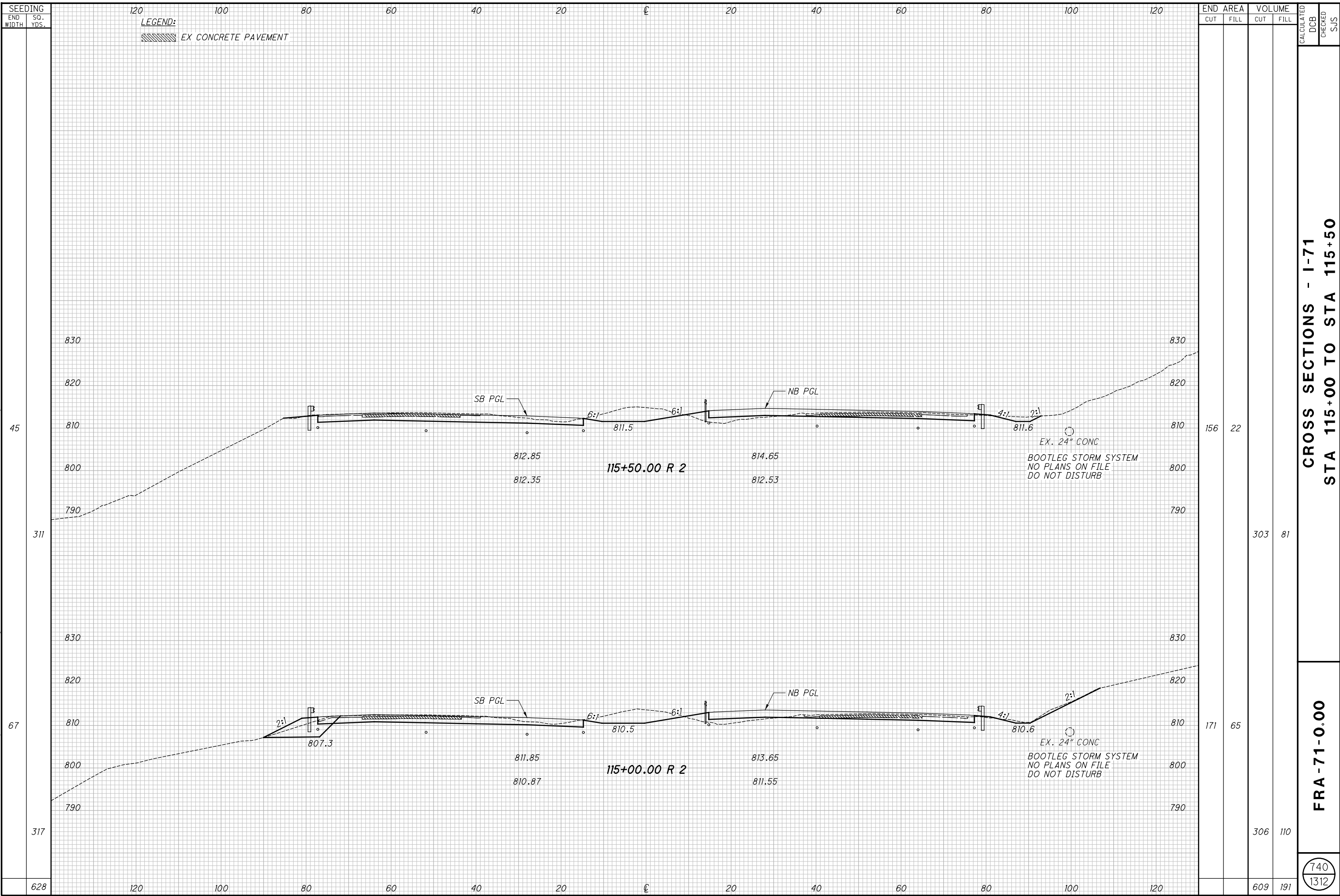


CROSS SECTIONS - I-71
 STA 113+50 TO STA 114+50

FRA - 71 - 0.00

739
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS178.dgn XS_SHEET_078 10/28/2019 11:11:15 AM 1458s.js

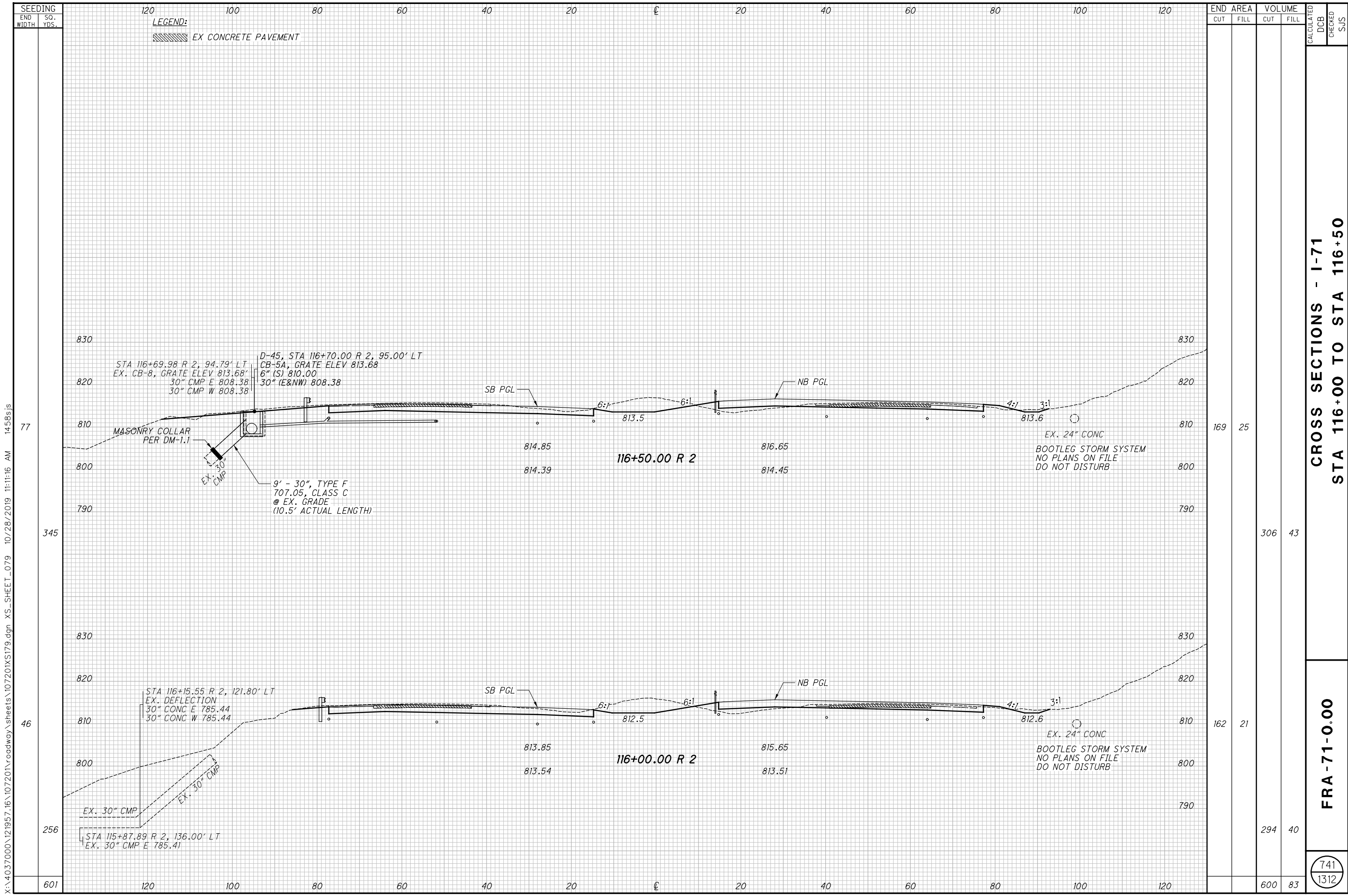


END AREA	VOLUME	CALCULATED	
		CUT	FILL
156	22	303	81
171	65	306	110
		609	191

**CROSS SECTIONS - I-71
 STA 115+00 TO STA 115+50**

FRA - 71 - 0.00

740
 1312



LEGEND:
 EX CONCRETE PAVEMENT

END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
169	25					
306	43					
162	21					
294	40					
600	83					

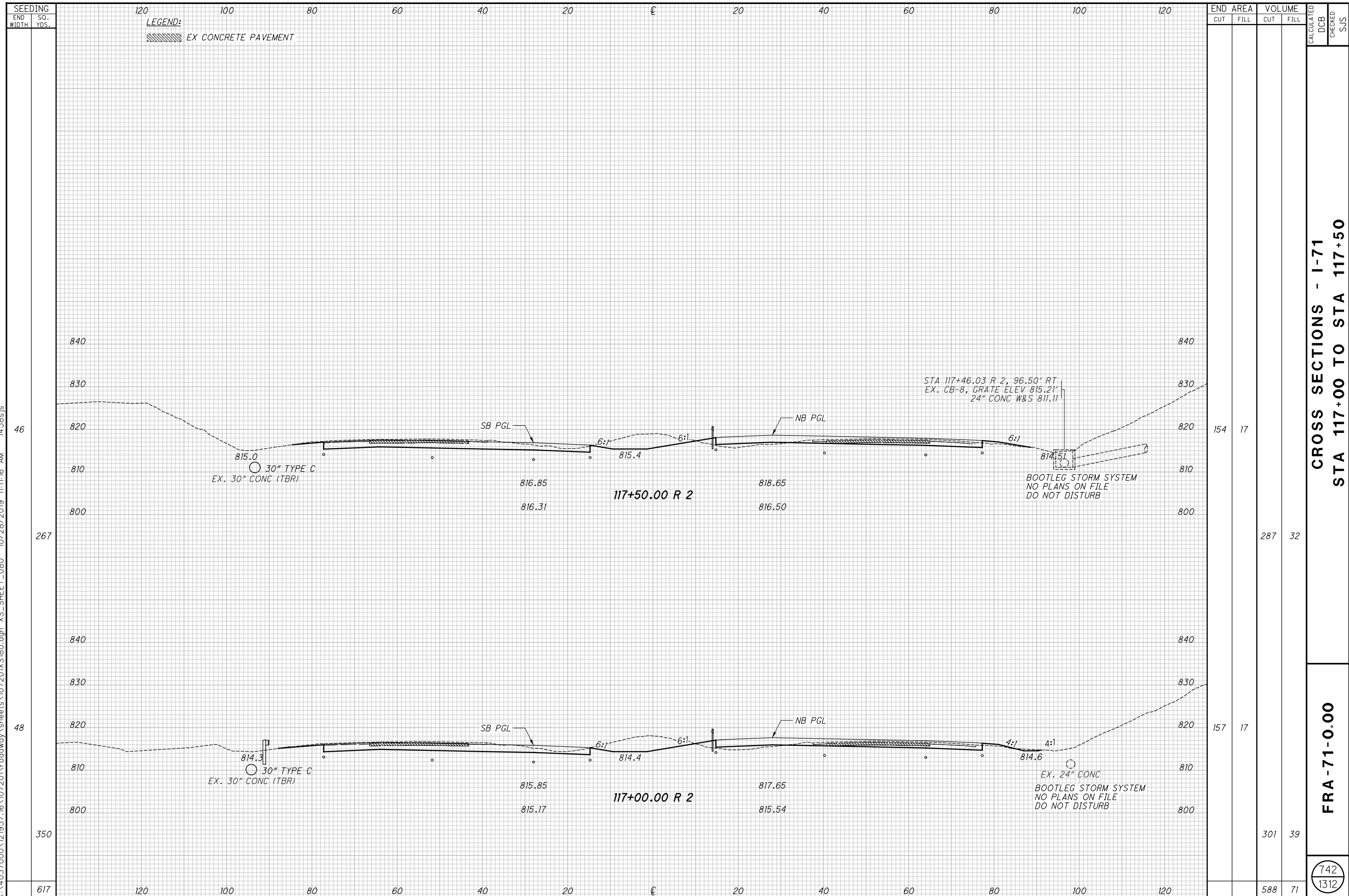
CROSS SECTIONS - I-71
 STA 116+00 TO STA 116+50

FRA-71-0.00

741
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS179.dgn XS_SHEET_079 10/28/2019 11:11:16 AM 1458s.js

X:\4037000\121957.16\107201\roadway\sheets\107201\X180.dgn XS_SHEET_080 10/28/2019 11:11:16 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT

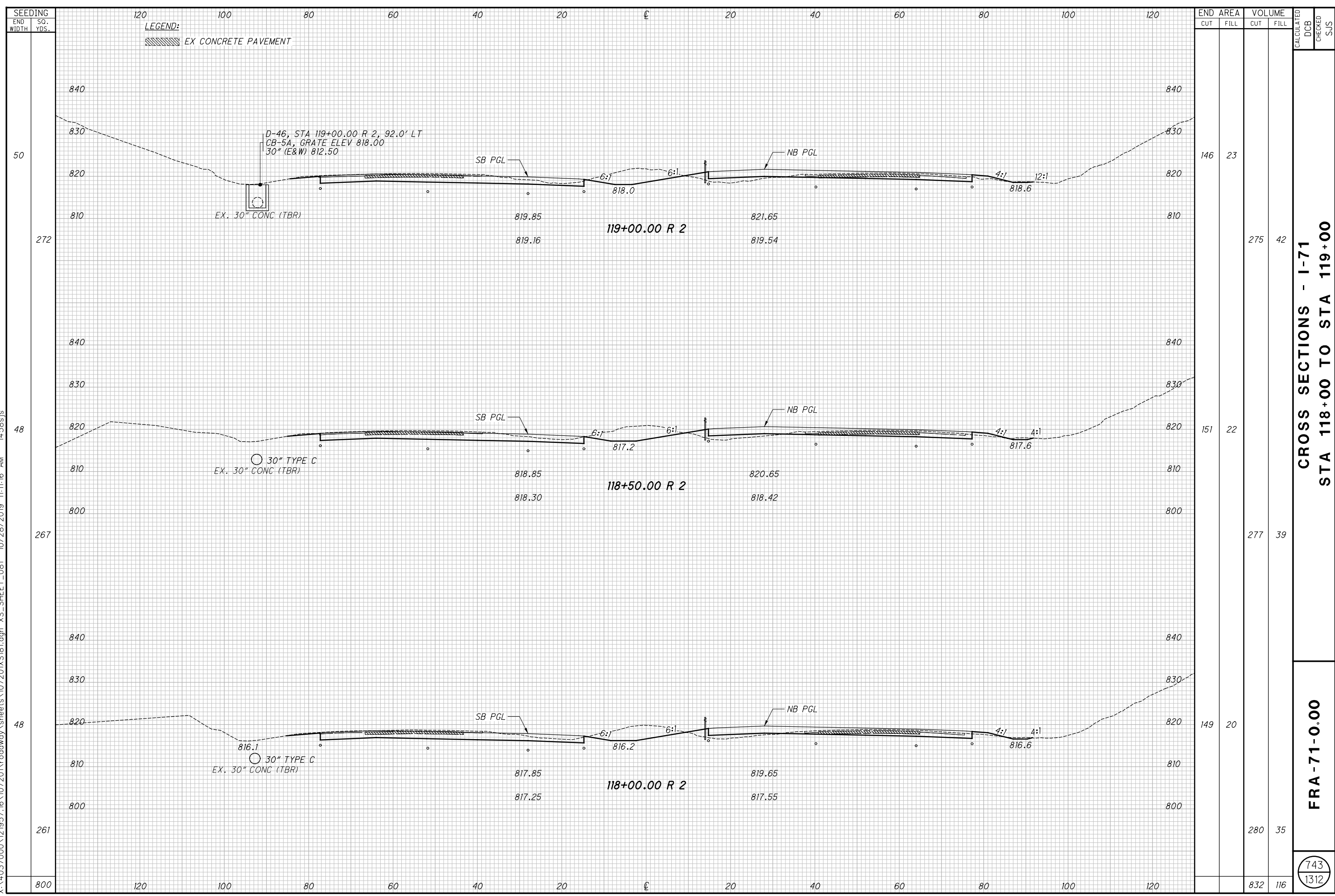
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
154	17					
157	17					
		301	39			
		588	71			

CROSS SECTIONS - I-71
 STA 117+00 TO STA 117+50

FRA -71-0.00

742
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\181.dgn XS_SHEET_081 10/28/2019 11:11:16 AM 14585.js



LEGEND:
 EX CONCRETE PAVEMENT

D-46, STA 119+00.00 R 2, 92.0' LT
 CB-5A, GRATE ELEV 818.00
 30" (E&W) 812.50

EX. 30" CONC (TBR)

30" TYPE C
 EX. 30" CONC (TBR)

30" TYPE C
 EX. 30" CONC (TBR)

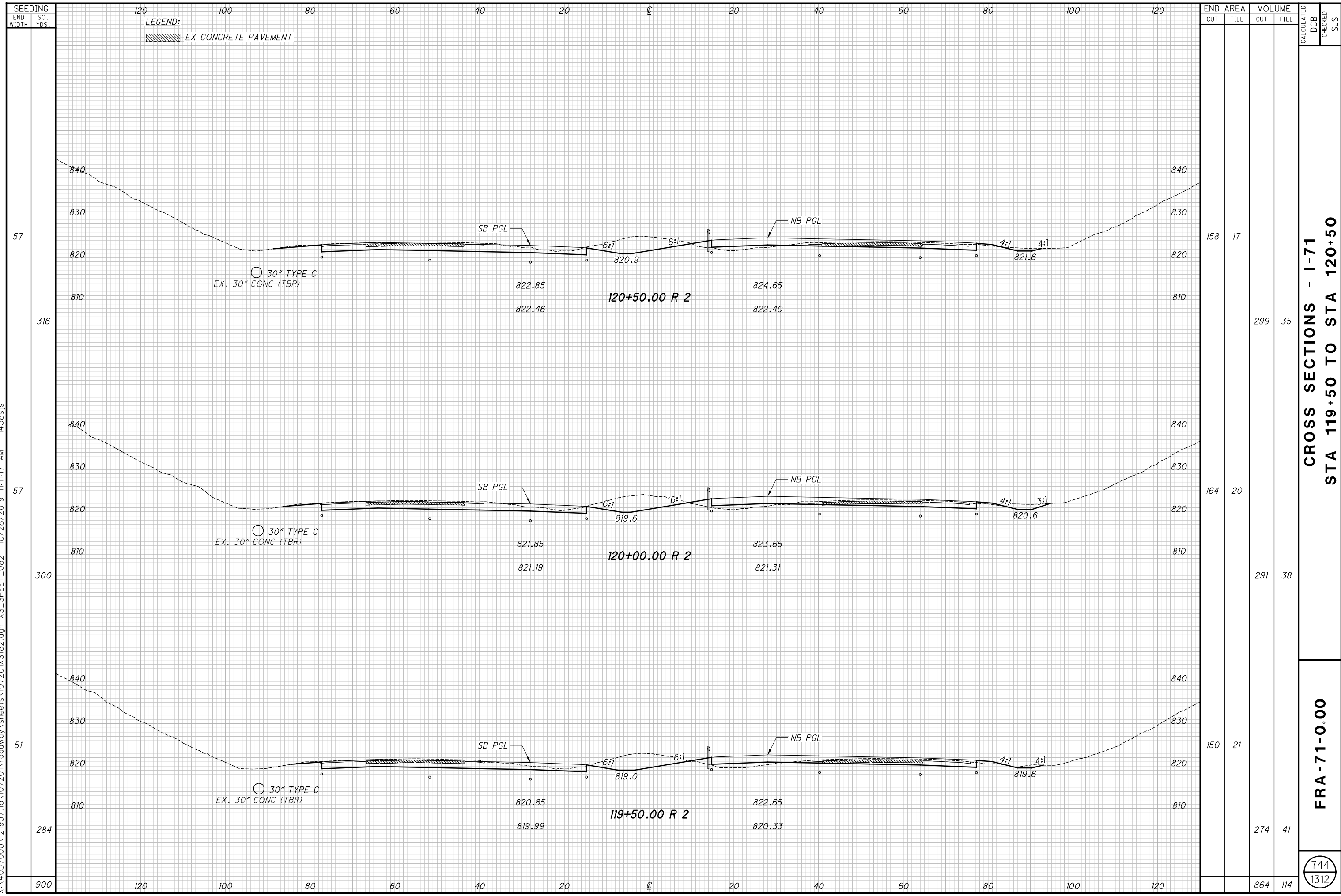
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
146	23				
272	275				42
48	151				22
267	277				39
48	149				20
261	280				35
800	832				116

CROSS SECTIONS - I-71
 STA 118+00 TO STA 119+00

FRA - 71 - 0.00

743
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X182.dgn XS_SHEET_082 10/28/2019 11:11:17 AM 1458s.js

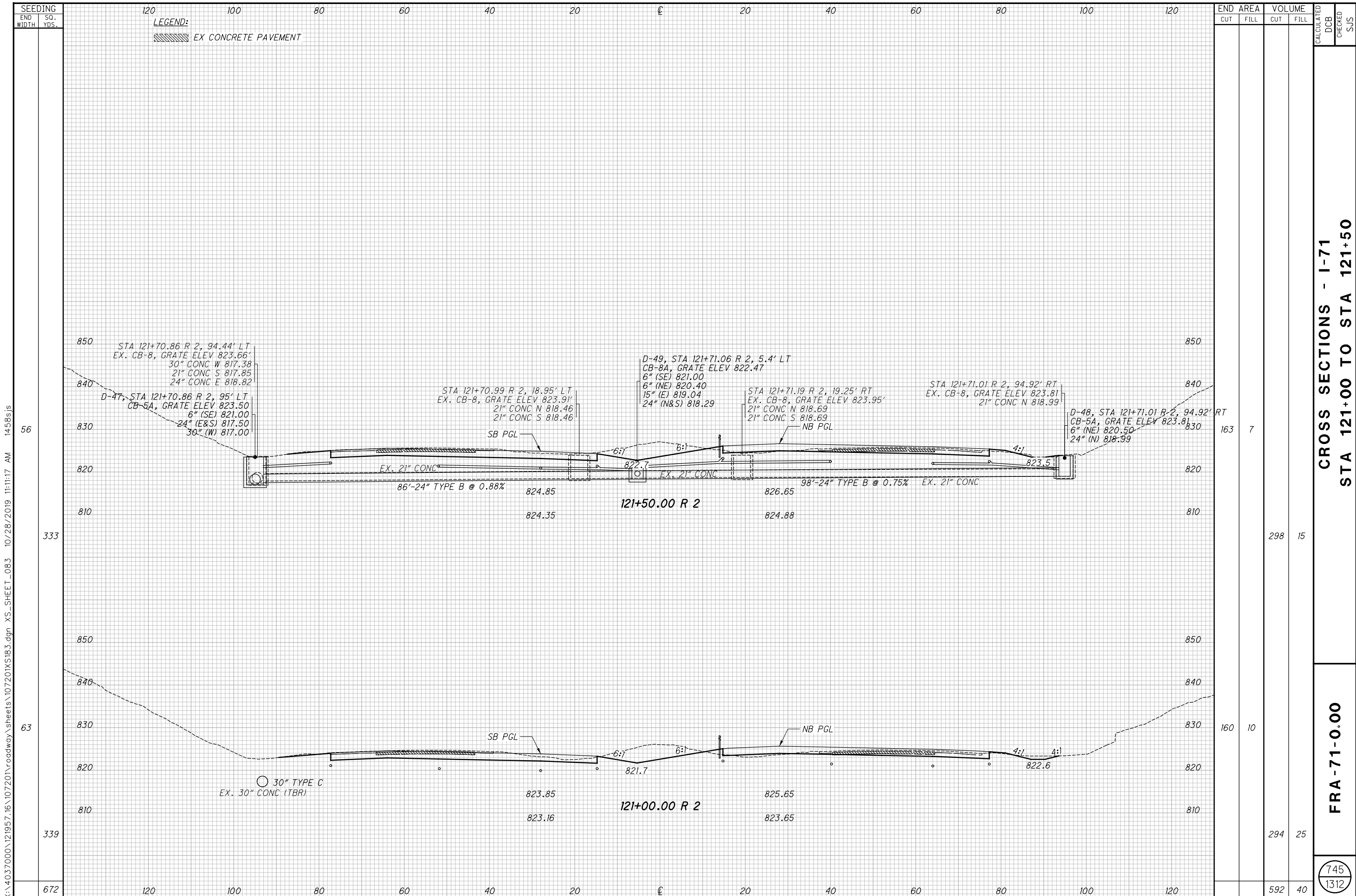


END AREA	VOLUME	CALCULATED	
		CUT	FILL
158	17	299	35
164	20	291	38
150	21	274	41
		864	114

CROSS SECTIONS - I-71
STA 119+50 TO STA 120+50

FRA-71-0.00

744
1312



X:\4037000\121957.16\107201\roadway\sheets\107201\183.dgn XS_SHEET_083 10/28/2019 11:11:17 AM 1458s.js

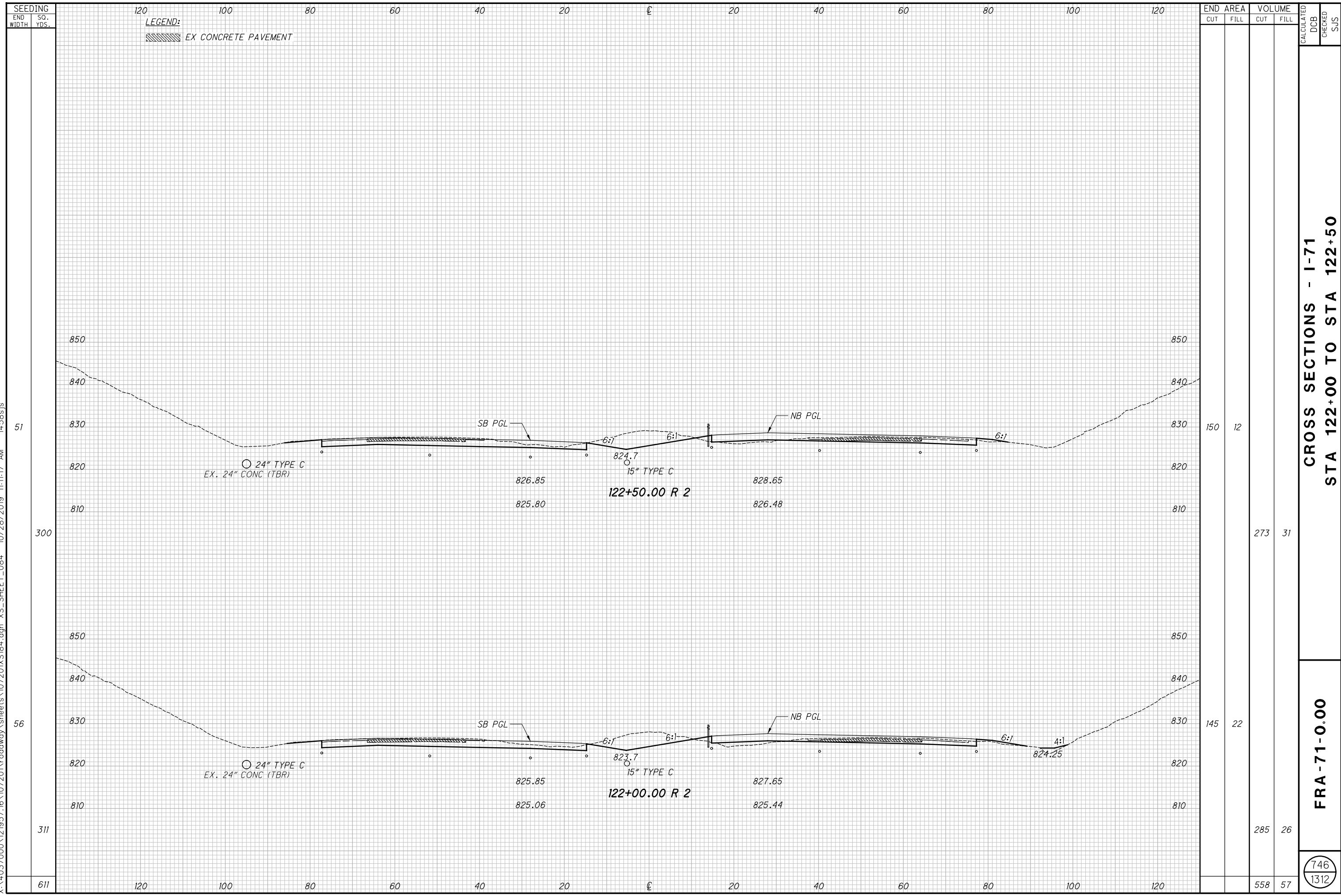
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
163	7				
160	10				
163	7				
298	15				
294	25				
592	40				

CROSS SECTIONS - I-71
STA 121+00 TO STA 121+50

FRA - 71 - 0.00

745
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X184.dgn XS_SHEET_084 10/28/2019 11:11:17 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT

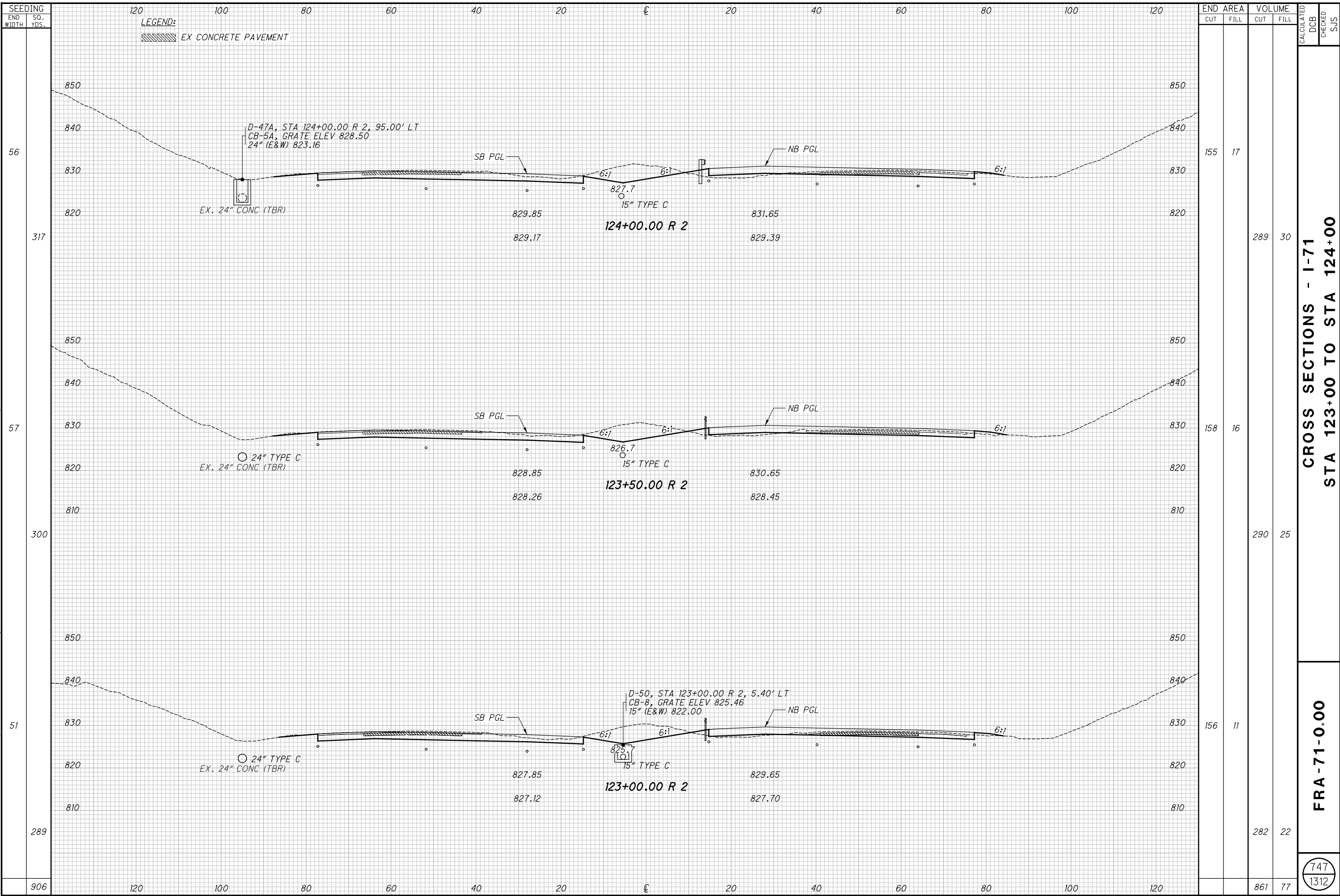
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
150	12				
		273	31		
145	22				
		285	26		
		558	57		

CROSS SECTIONS - I-71
 STA 122+00 TO STA 122+50

FRA-71-0.00

746
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X185.dgn XS_SHEET_085 10/28/2019 11:11:18 AM 1458s.js



SEEDING
END WIDTH SO. YDS.
LEGEND:
EX CONCRETE PAVEMENT

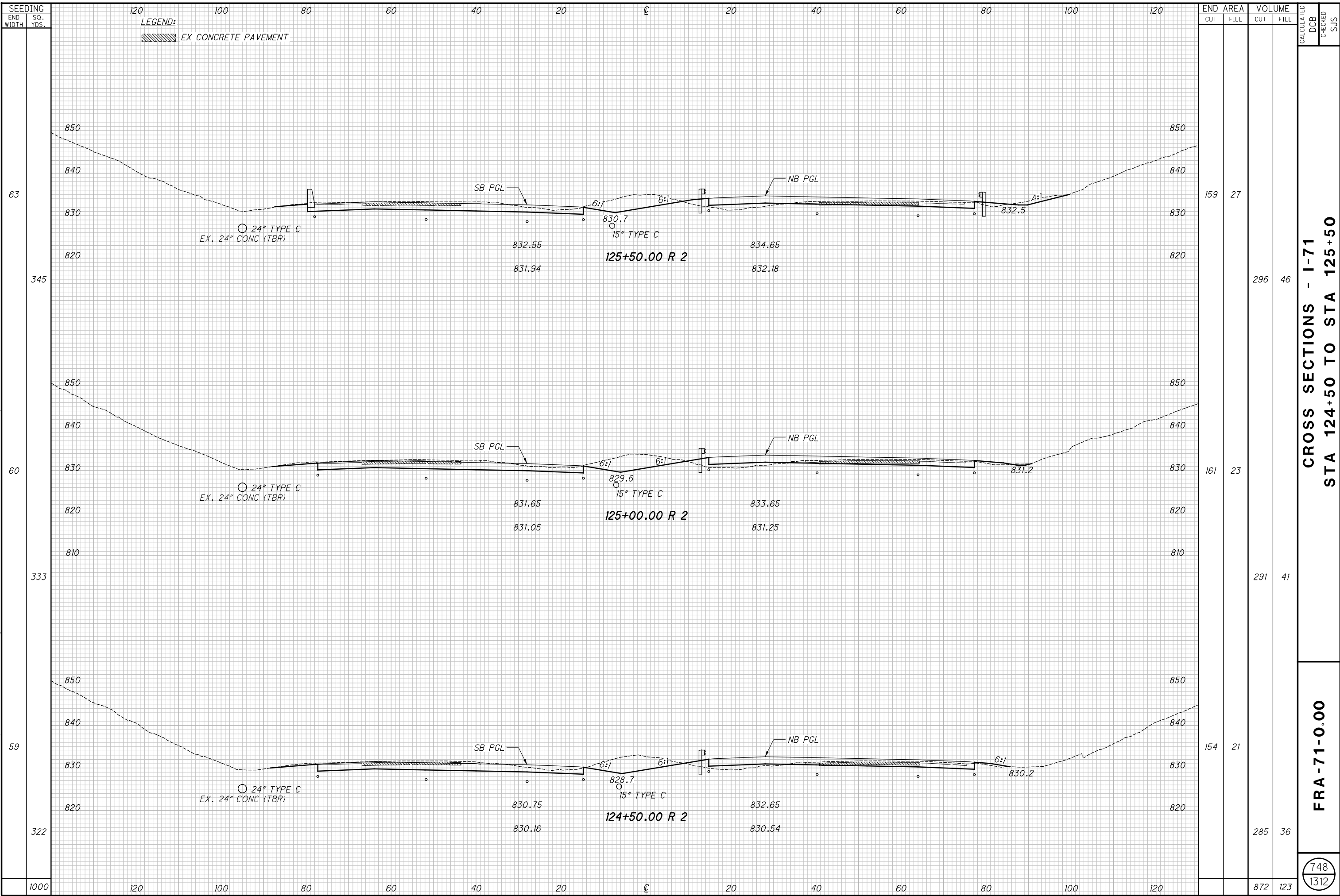
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
155	17					
158	16					
156	11					
		861	77			

CROSS SECTIONS - I-71
STA 123+00 TO STA 124+00

FRA - 71 - 0.00

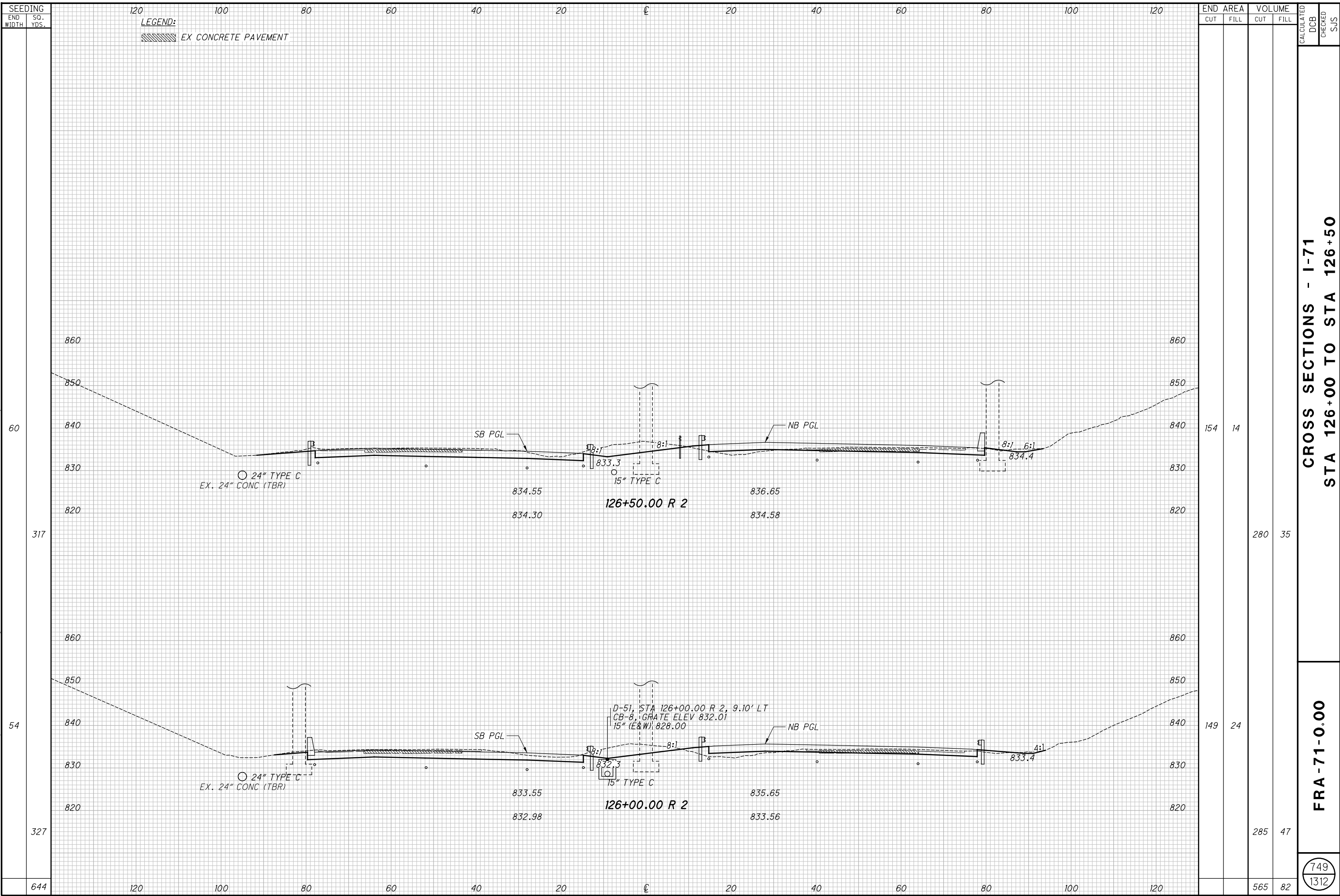
747
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X186.dgn XS_SHEET_086 10/28/2019 11:11:18 AM 1458s.js



STATION	SEEDING		END AREA		VOLUME	
	END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL
125+50.00 R 2	63	345	159	27	296	46
125+00.00 R 2	60	333	161	23	291	41
124+50.00 R 2	59	322	154	21	285	36
TOTAL	1000				872	123

X:\4037000\121957.16\107201\roadway\sheets\107201\XS187.dgn XS_SHEET_087 10/28/2019 11:11:19 AM 1458s.js



120 100 80 60 40 20 0 20 40 60 80 100 120

LEGEND:
 EX CONCRETE PAVEMENT

END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
154	14				
280	35				
149	24				
285	47				
565	82				

CROSS SECTIONS - I-71
 STA 126+00 TO STA 126+50

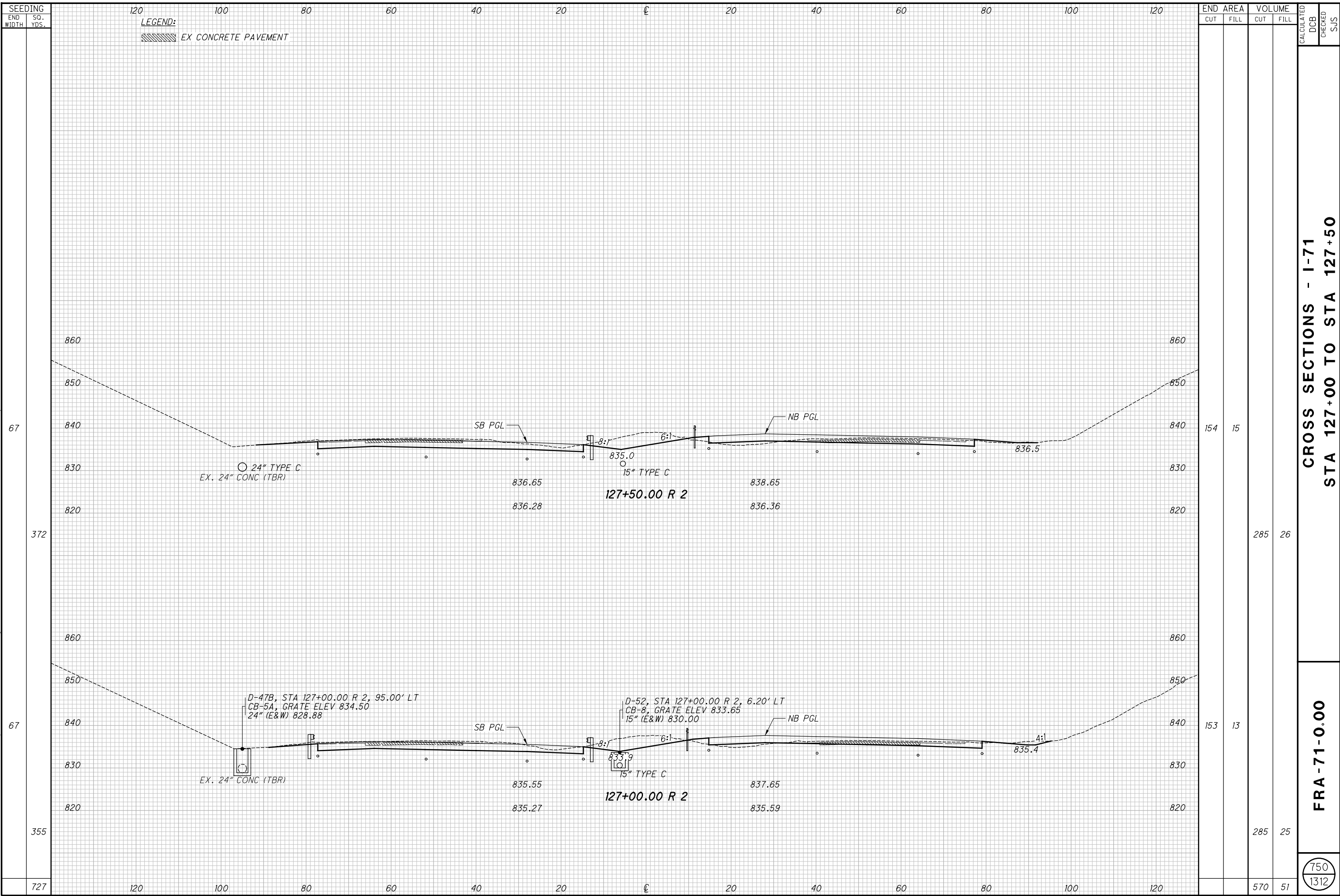
FRA-71-0.00

749
 1312

644

120 100 80 60 40 20 0 20 40 60 80 100 120

X:\4037000\121957.16\107201\roadway\sheets\107201\X188.dgn XS_SHEET_088 10/28/2019 11:11:19 AM 1458s.js



SEEDING	
END WIDTH	SO. YDS.
727	
355	
67	
372	
67	

120		100		80		60		40		20		0	20		40		60		80		100		120	
-----	--	-----	--	----	--	----	--	----	--	----	--	---	----	--	----	--	----	--	----	--	-----	--	-----	--

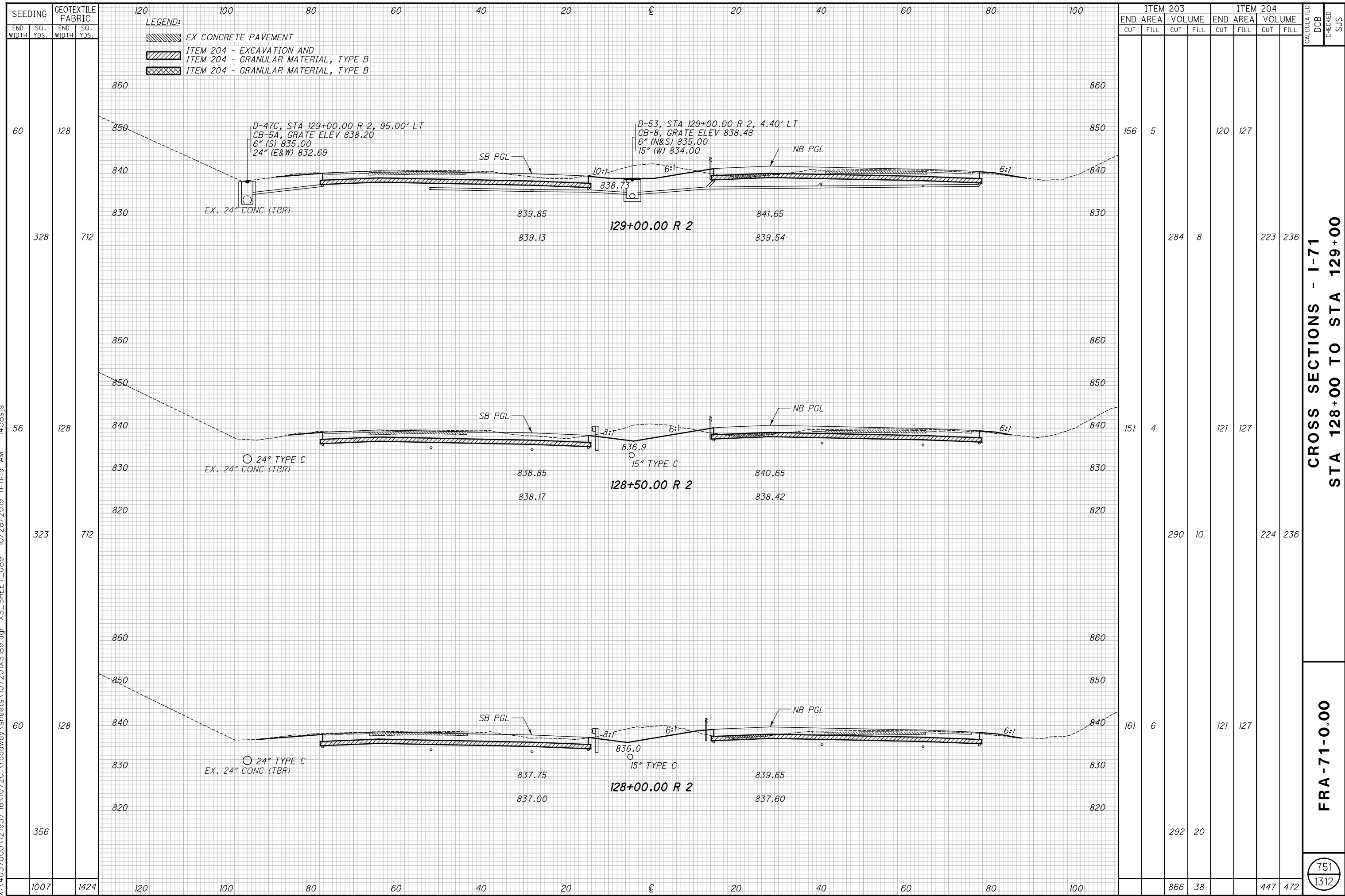
END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	DCB	SJS
154	15	285	26		
153	13	285	25		
		570	51		

**CROSS SECTIONS - I-71
 STA 127+00 TO STA 127+50**

FRA - 71 - 0.00

750
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS189.dgn XS_SHEET_089 10/28/2019 11:11:19 AM 1458s.js



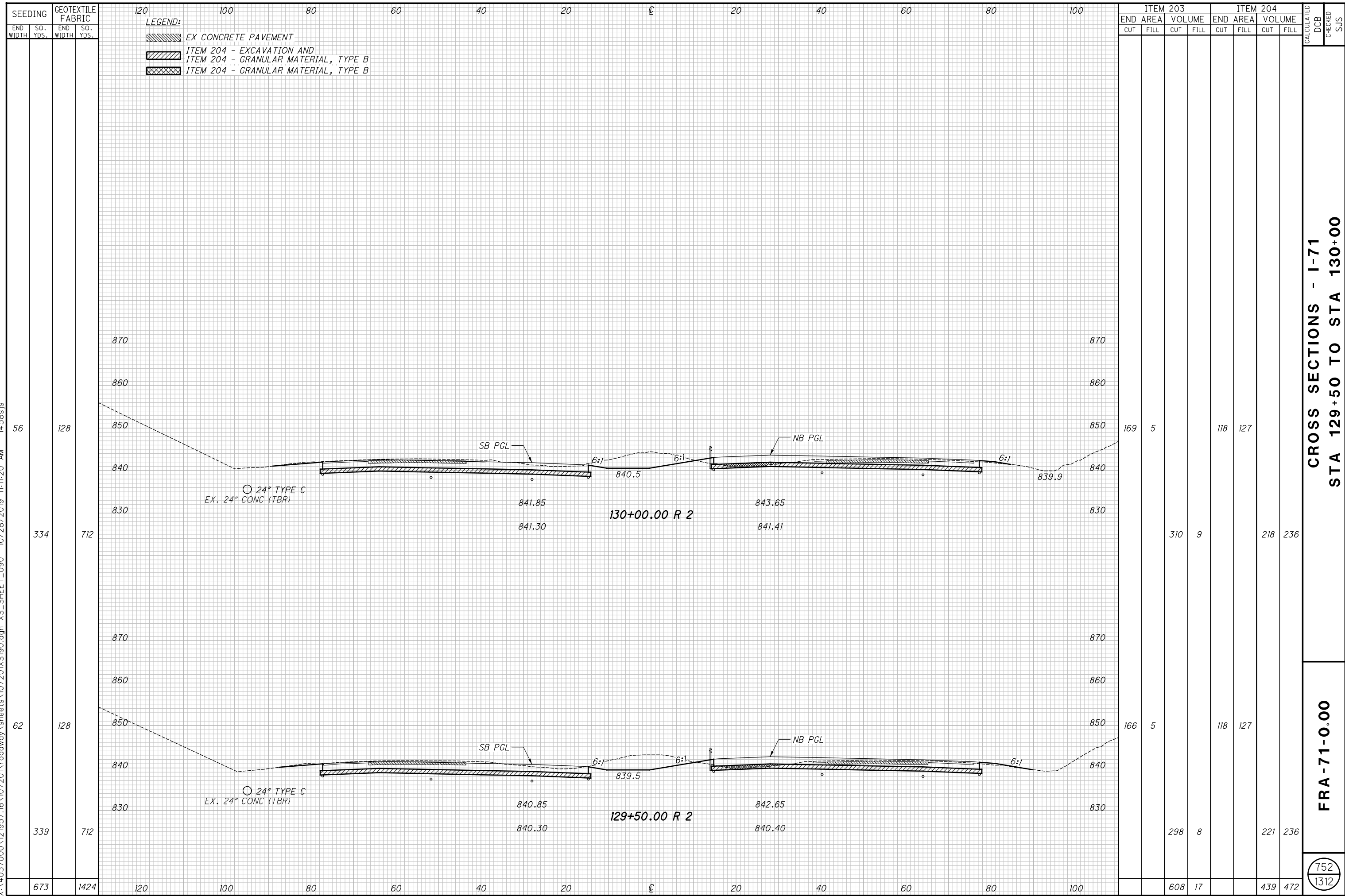
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END CUT	AREA CUT	VOLUME CUT	END FILL	AREA FILL	VOLUME FILL	END CUT	AREA CUT					VOLUME CUT
60	128	128	712	156	5		120	127								
328	712				284	8				223	236					
56	128	128	712	151	4		121	127								
323	712				290	10				224	236					
60	128	128	712	161	6		121	127								
356	712				292	20				447	472					
1007	1424	120	100	80	60	40	20	20	40	60	80	100	866	38	447	472

CROSS SECTIONS - I-71
STA 128+00 TO STA 129+00

FRA-71-0:00

751
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X190.dgn XS_SHEET_090 10/28/2019 11:11:20 AM 14585.js



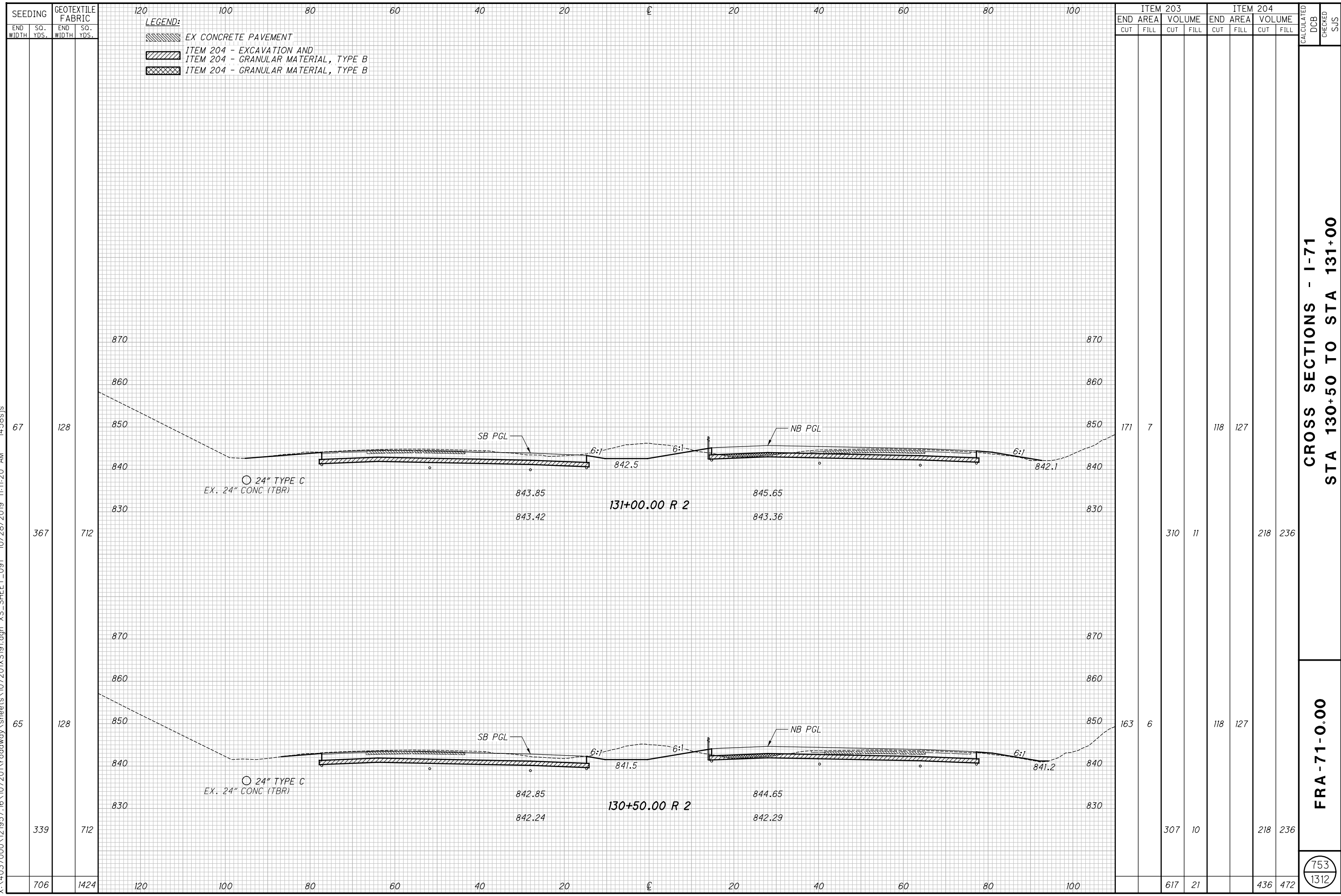
CROSS SECTIONS - I-71
 STA 129+50 TO STA 130+00

FRA - 71 - 0:00

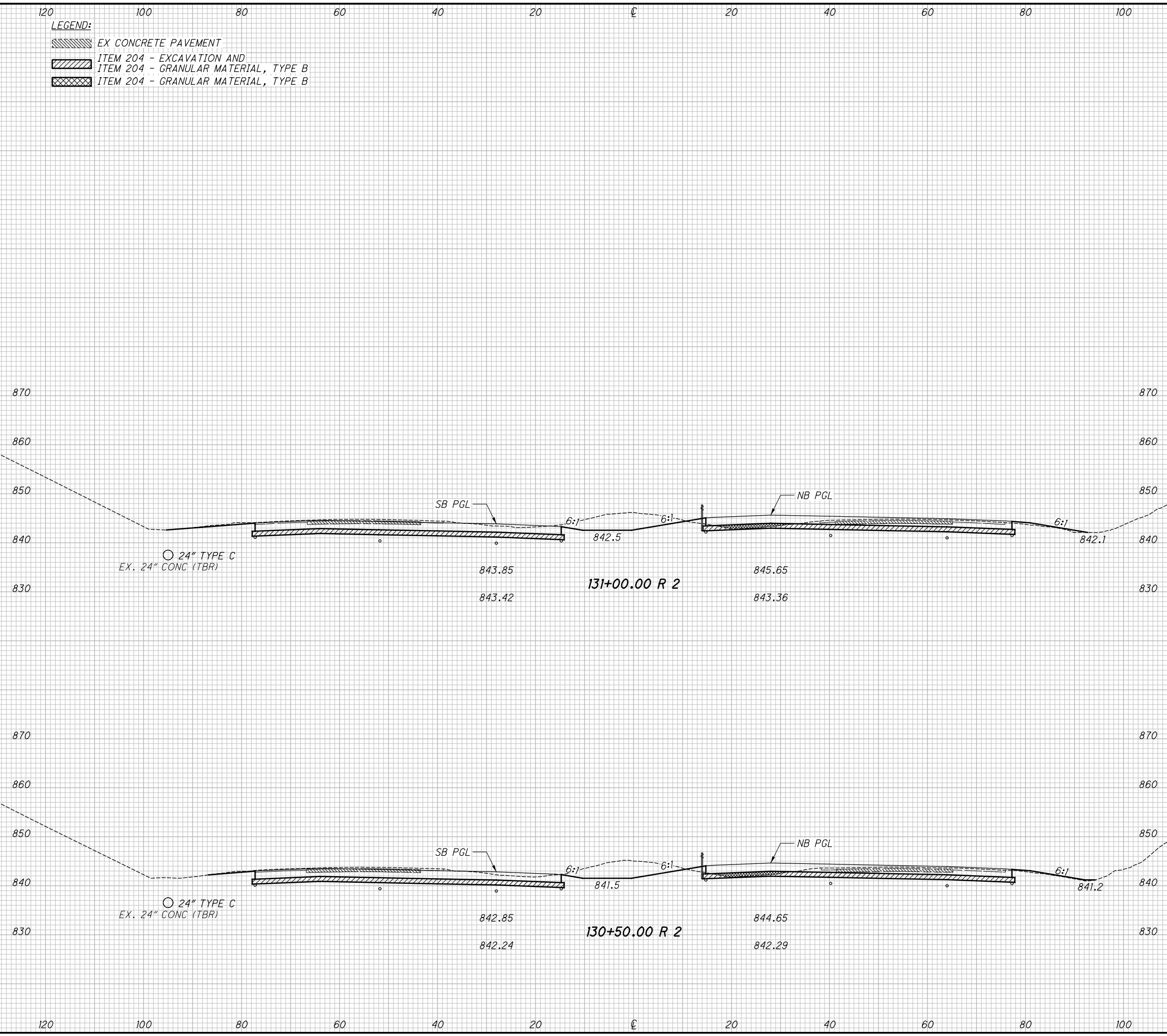
752
 1312

CALCULATED
 DCB
 CHECKED
 SJS

X:\4037000\121957.16\107201\roadway\sheets\107201\XS191.dgn XS_SHEET_091 10/28/2019 11:11:20 AM 1458sjs

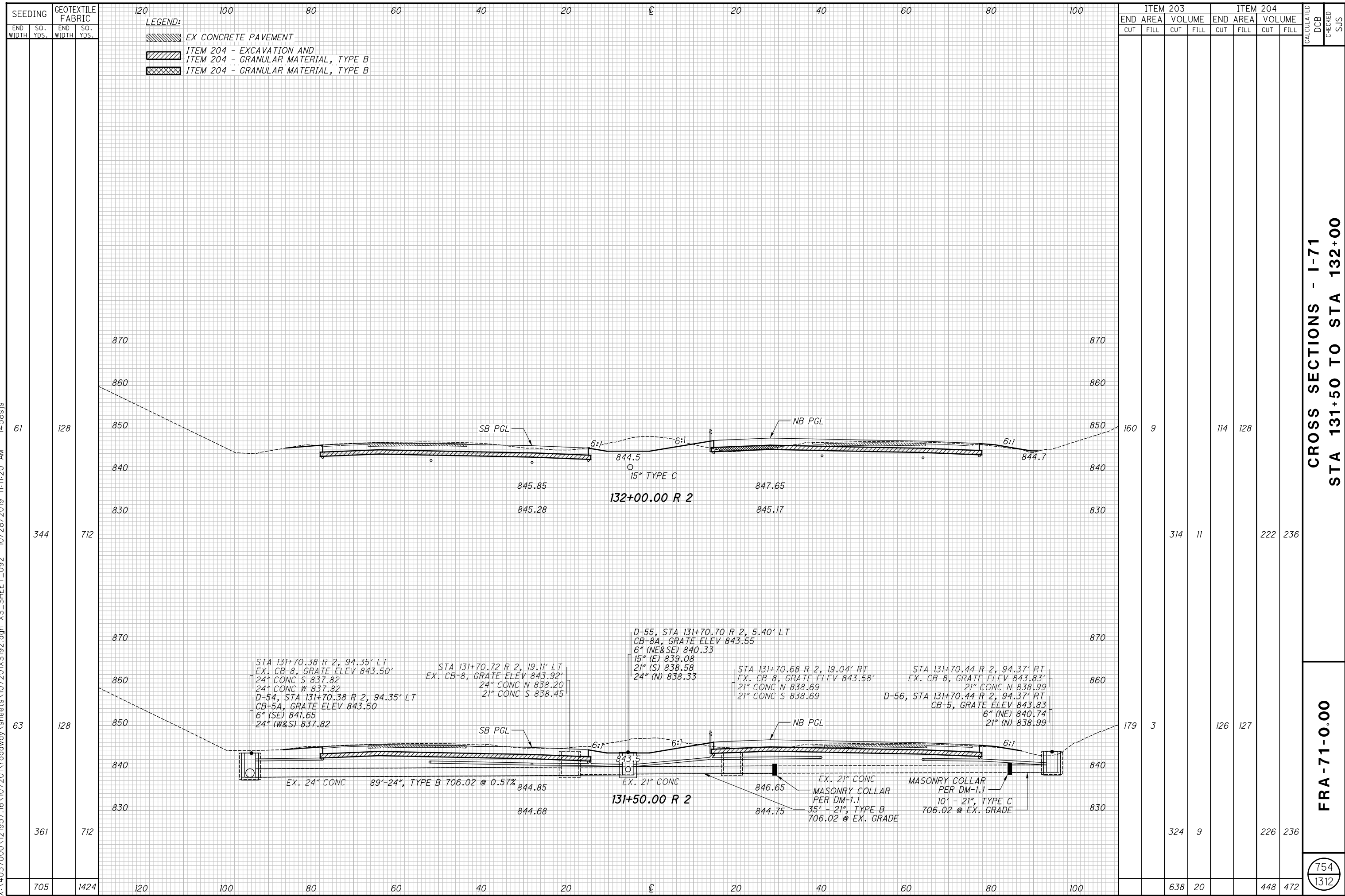


SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
67	128	67	128
367	712	367	712
65	128	65	128
339	712	339	712
706	1424	706	1424



ITEM 203		ITEM 204		TOTAL	
END AREA	VOLUME	END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL	CUT	FILL
171	7	118	127	289	134
310	11	218	236	528	247
163	6	118	127	281	133
307	10	218	236	525	249
617	21	436	472	1053	721

X:\4037000\121957.16\107201\roadway\sheets\107201XS192.dgn XS_SHEET_092 10/28/2019 11:11:20 AM 1458sjs



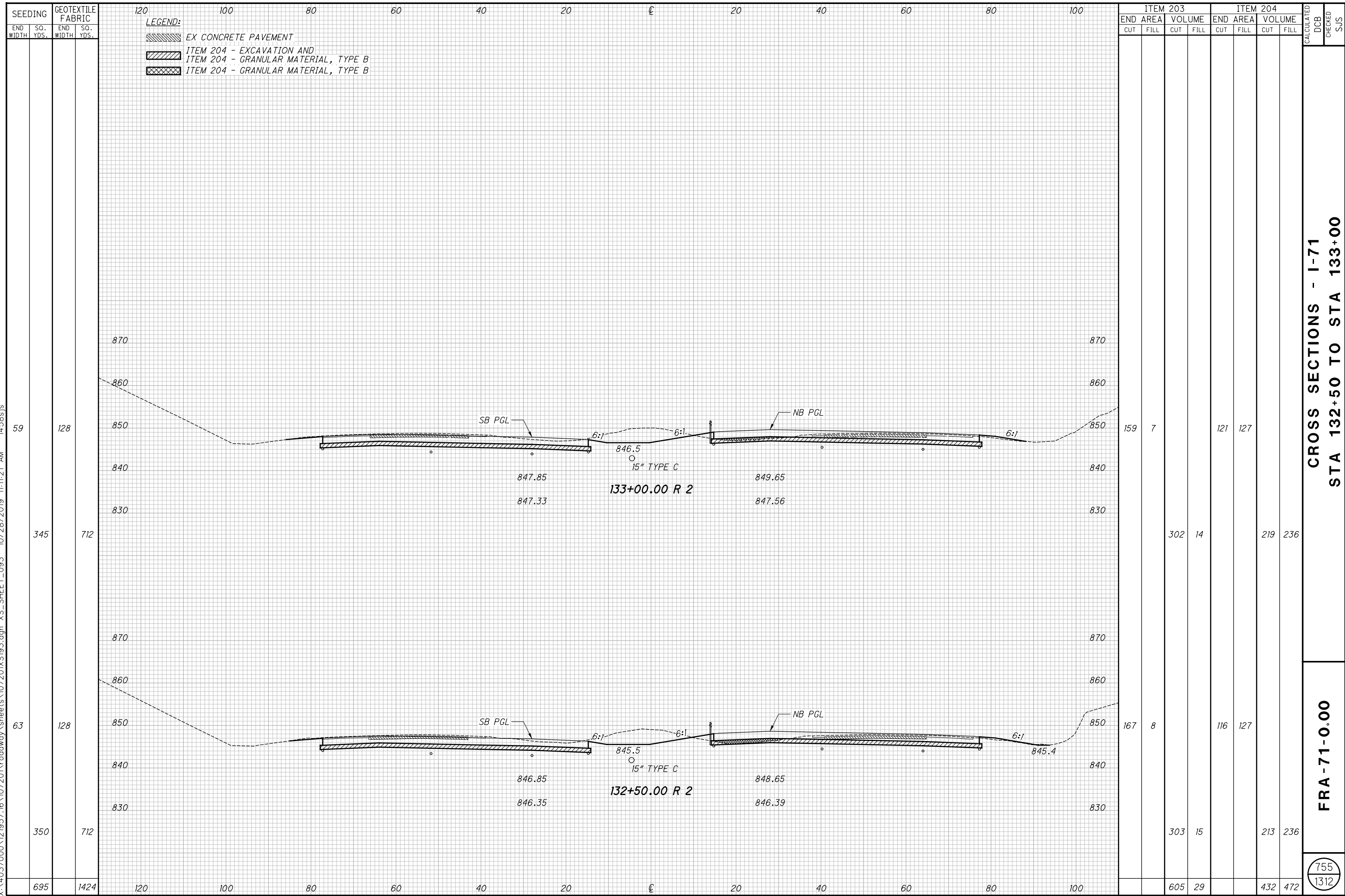
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED				
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL	DCB	CHECKED	SJS
61		128				160	9			114	128					
344		712				314	11			222	236					
63		128				179	3			126	127					
361		712				324	9			226	236					
705		1424				638	20			448	472					

CROSS SECTIONS - I-71
STA 131+50 TO STA 132+00

FRA-71-0:00

754
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS193.dgn XS_SHEET_093 10/28/2019 11:11:21 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
695	1424	120	100
350	712	128	712
59	128	345	712

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B

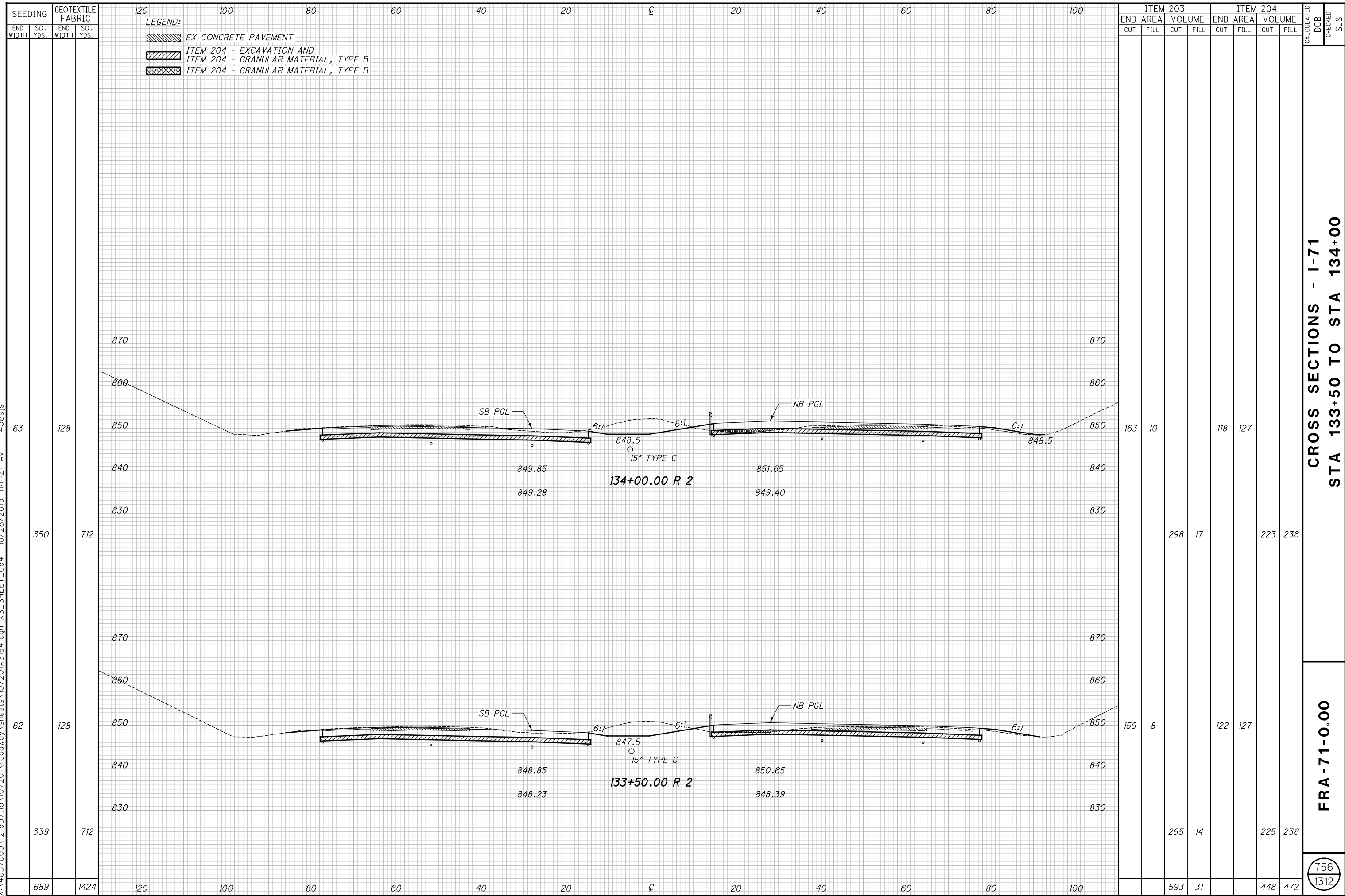
ITEM 203				ITEM 204				CALCULATED		
END AREA		VOLUME		END AREA		VOLUME		DCB	CHECKED	SJS
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL			
159	7	121	127							
302	14	219	236							
167	8	116	127							
303	15	213	236							
605	29	432	472							

**CROSS SECTIONS - I-71
 STA 132+50 TO STA 133+00**

FRA - 71 - 0:00

755
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS194.dgn XS_SHEET_094 10/28/2019 11:11:21 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
63	128	128	712
62	128	128	712
689	1424	120	100

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B

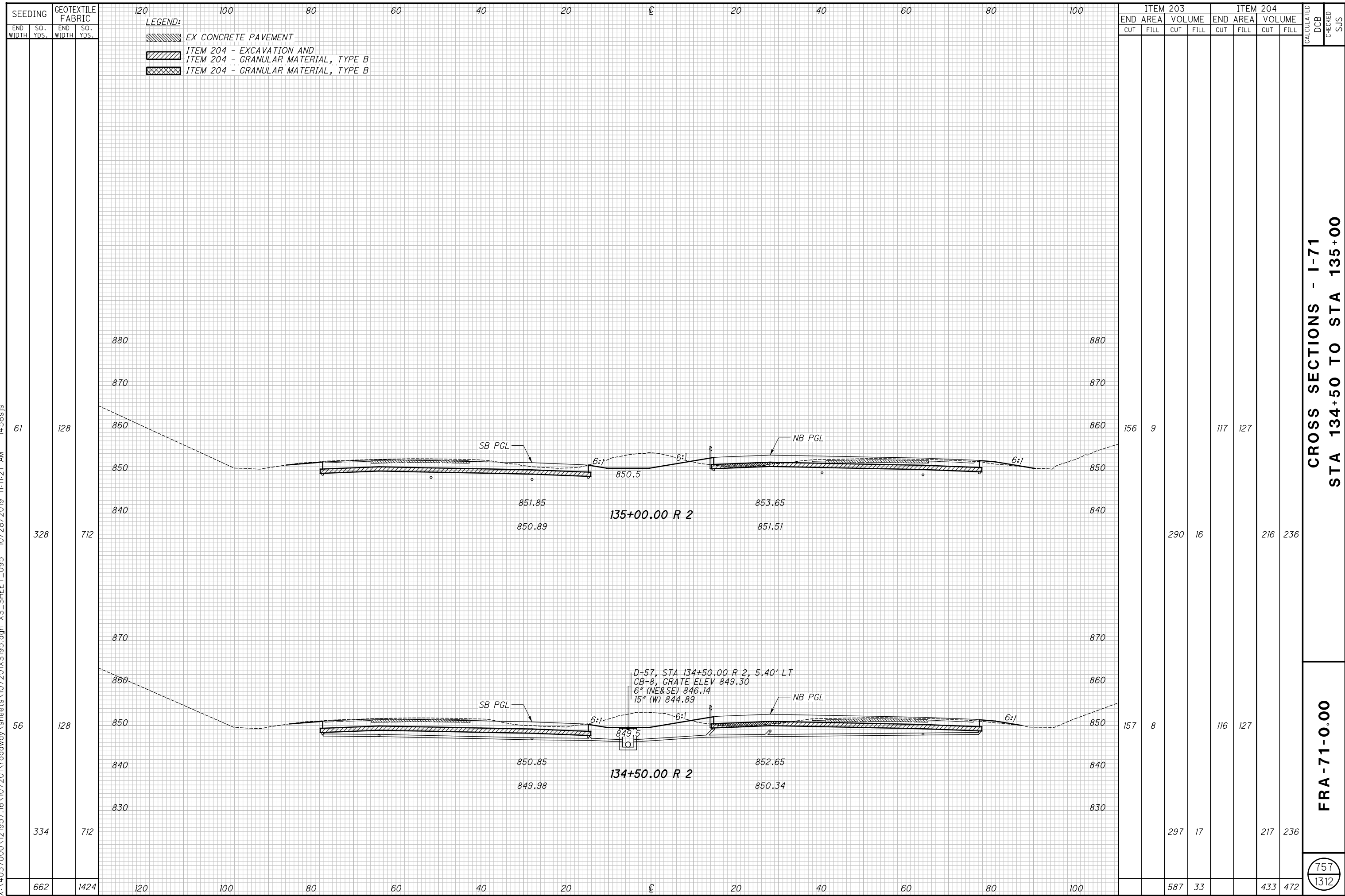
ITEM 203				ITEM 204				CALCULATED DCB	CHECKED SUS
END AREA		VOLUME		END AREA		VOLUME			
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL		
163	10	118	127	159	8	122	127		
		298	17			223	236		
		295	14			225	236		
		593	31			448	472		

**CROSS SECTIONS - I-71
 STA 133+50 TO STA 134+00**

FRA - 71 - 0.00

756
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS195.dgn XS_SHEET_095 10/28/2019 11:11:21 AM 1458s.js



LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
61	128	61	128
328	712	328	712
56	128	56	128
334	712	334	712
662	1424	662	1424

ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS
END AREA		VOLUME		END AREA		VOLUME				
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL			
156	9			117	127					
		290	16			216	236			
157	8			116	127					
		297	17			217	236			
		587	33			433	472			

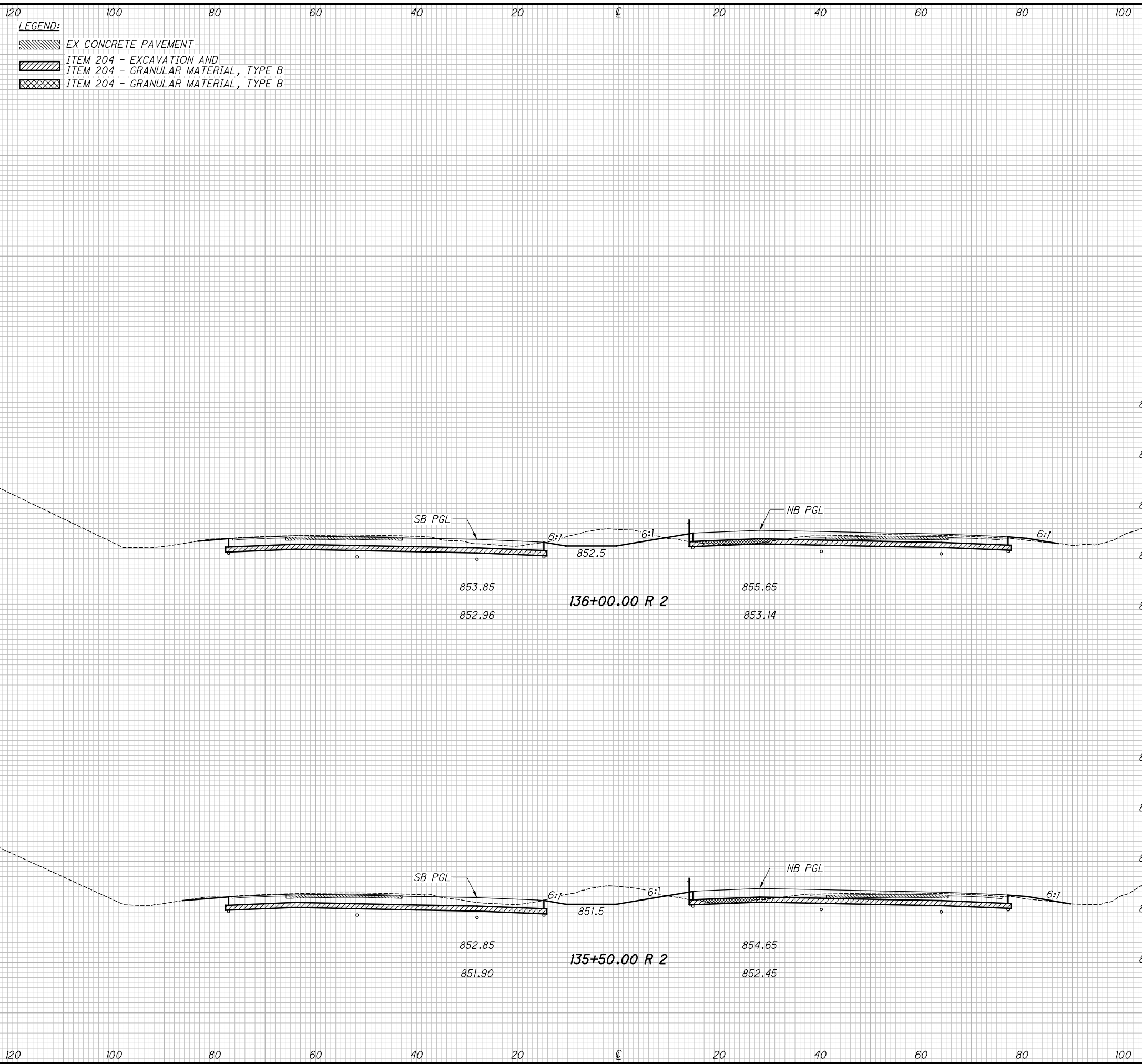
**CROSS SECTIONS - I-71
 STA 134+50 TO STA 135+00**

FRA - 71 - 0.00

757
1312

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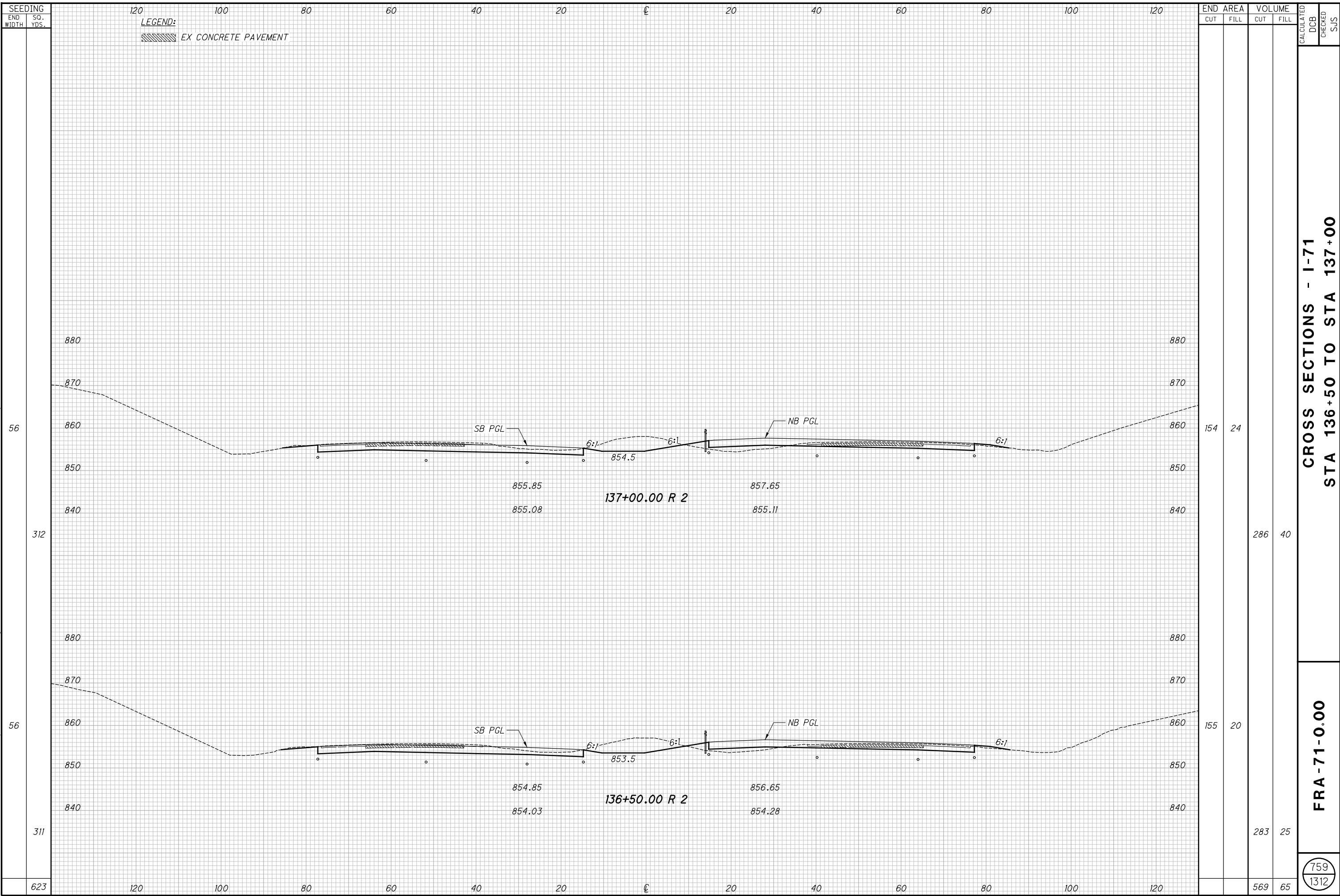
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
54	128	712	128
322	712	712	339
661	1424	120	1424



ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
150	7	116	127	156	8	117	127
284	14	216	236	289	16	217	236
573	30	433	472				

CROSS SECTIONS - I-71
 STA 135+50 TO STA 136+00
 FRA - 71-0:00
 758
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS197.dgn XS_SHEET_097 10/28/2019 11:11:22 AM 1458s.js



**CROSS SECTIONS - I-71
 STA 136+50 TO STA 137+00**

FRA - 71 - 0.00

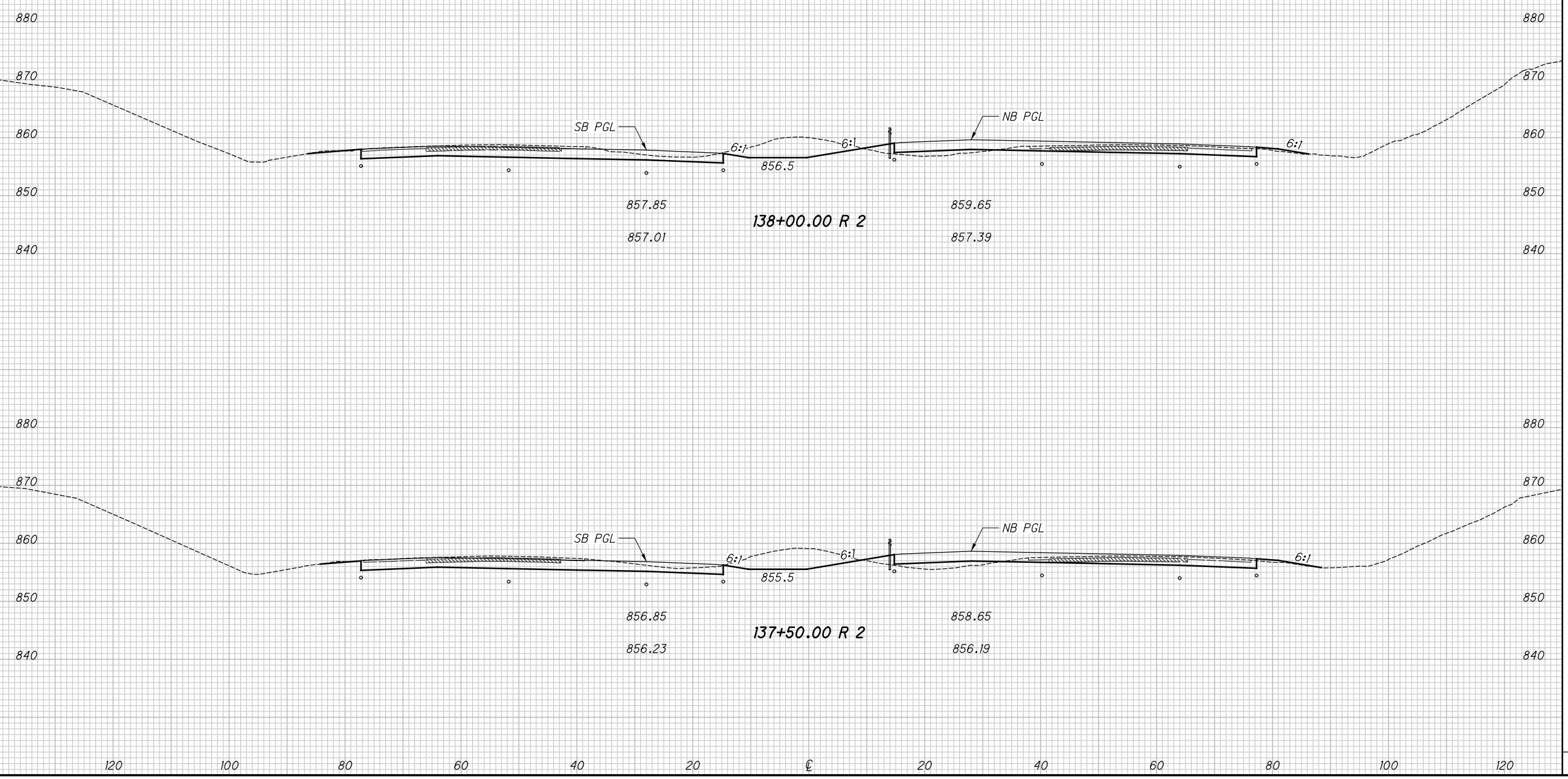
759
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X198.dgn XS_SHEET_098 10/28/2019 11:11:22 AM 1458s.js

SEEDING	
END WIDTH	SO. YDS.
634	
317	
57	

120 100 80 60 40 20 0 20 40 60 80 100 120

LEGEND:
 EX CONCRETE PAVEMENT



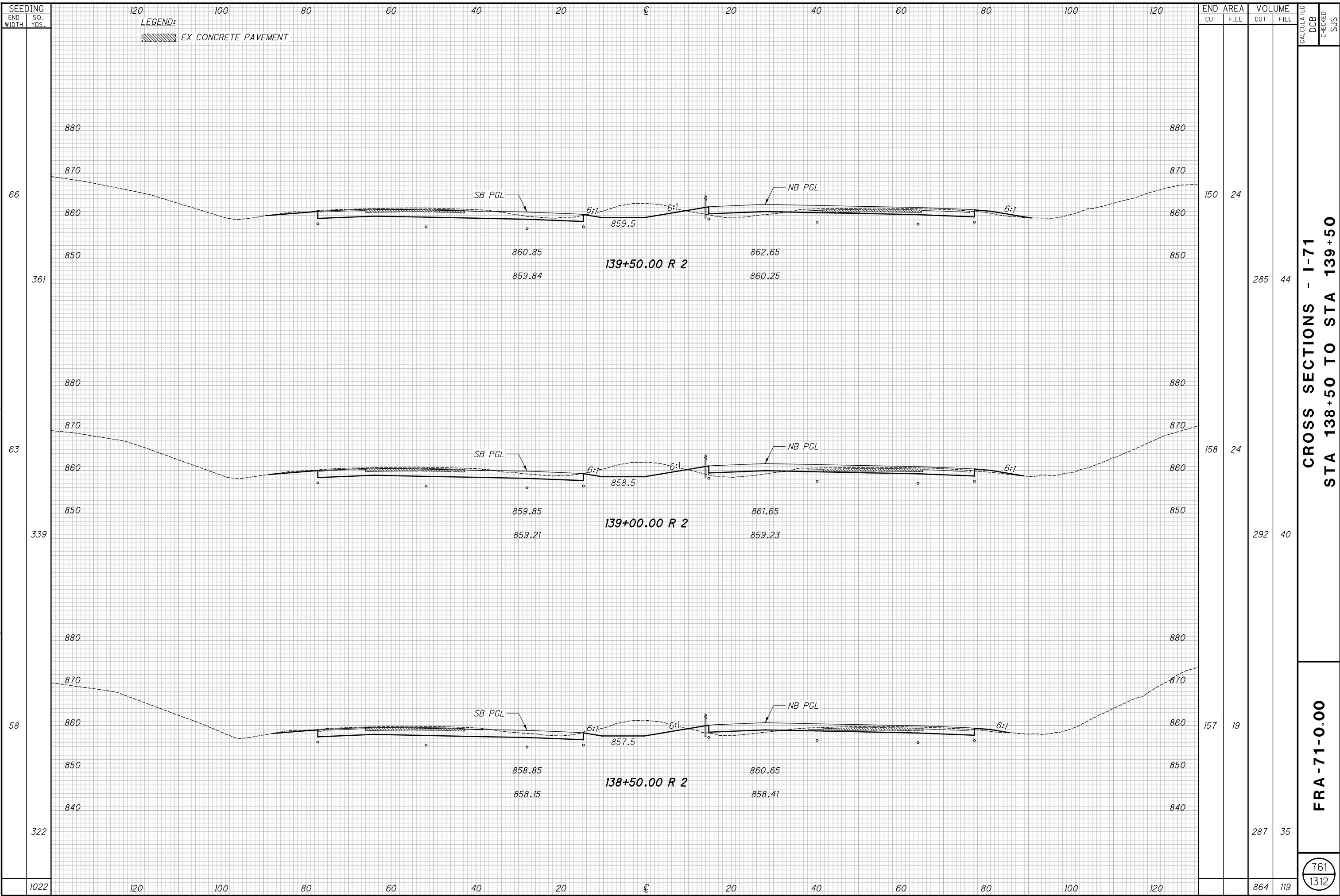
END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
CUT	FILL	CUT	FILL				
152	18	285	38				
156	22	287	42				
		572	80				

CROSS SECTIONS - I-71
STA 137+50 TO STA 138+00

FRA - 71 - 0.00

760
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS199.dgn XS_SHEET_099 10/28/2019 11:11:23 AM 1458s.js

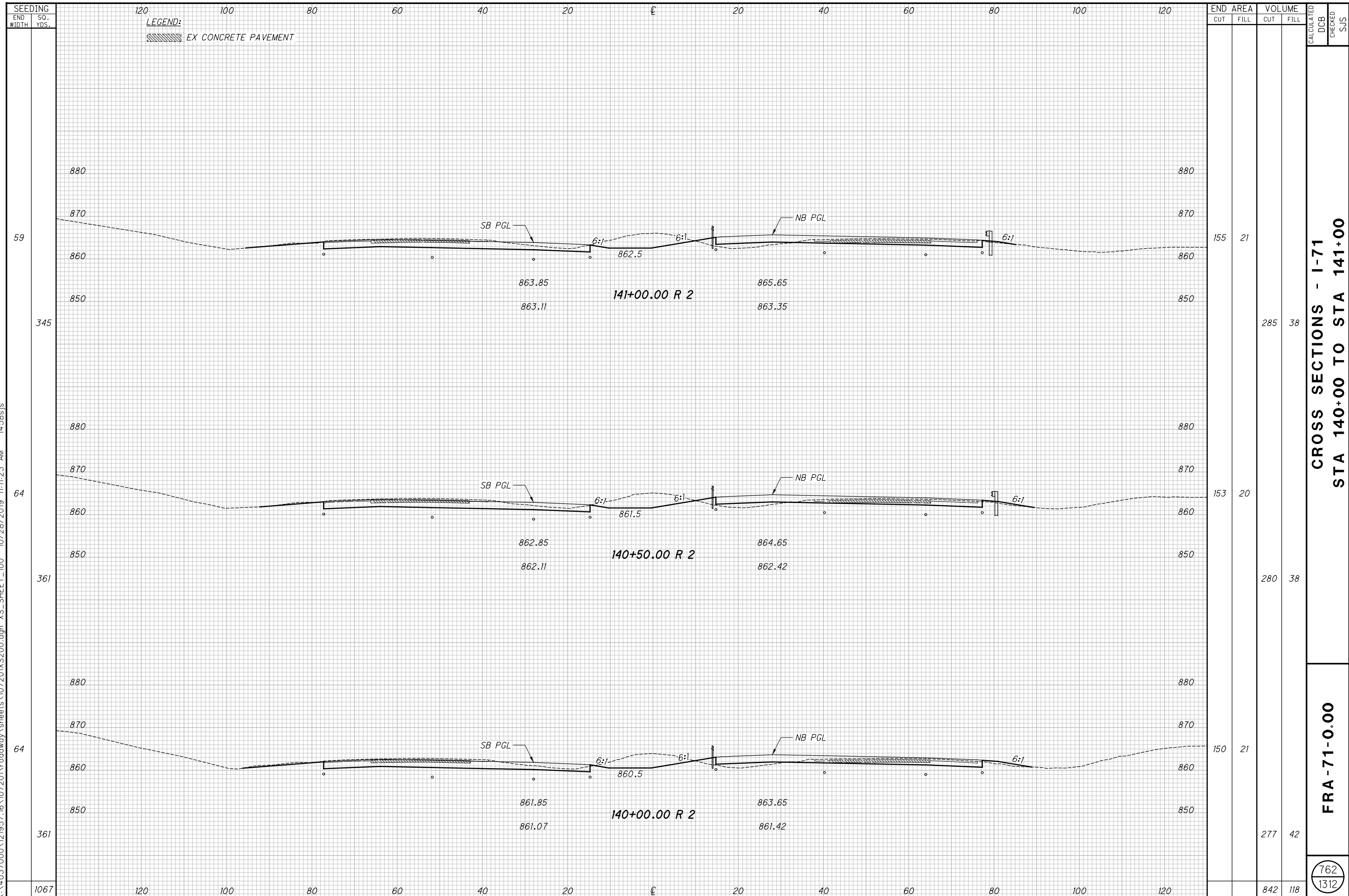


**CROSS SECTIONS - I-71
 STA 138+50 TO STA 139+50**

FRA - 71 - 0.00

761
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS200.dgn XS_SHEET_100 10/28/2019 11:11:23 AM 14585.js

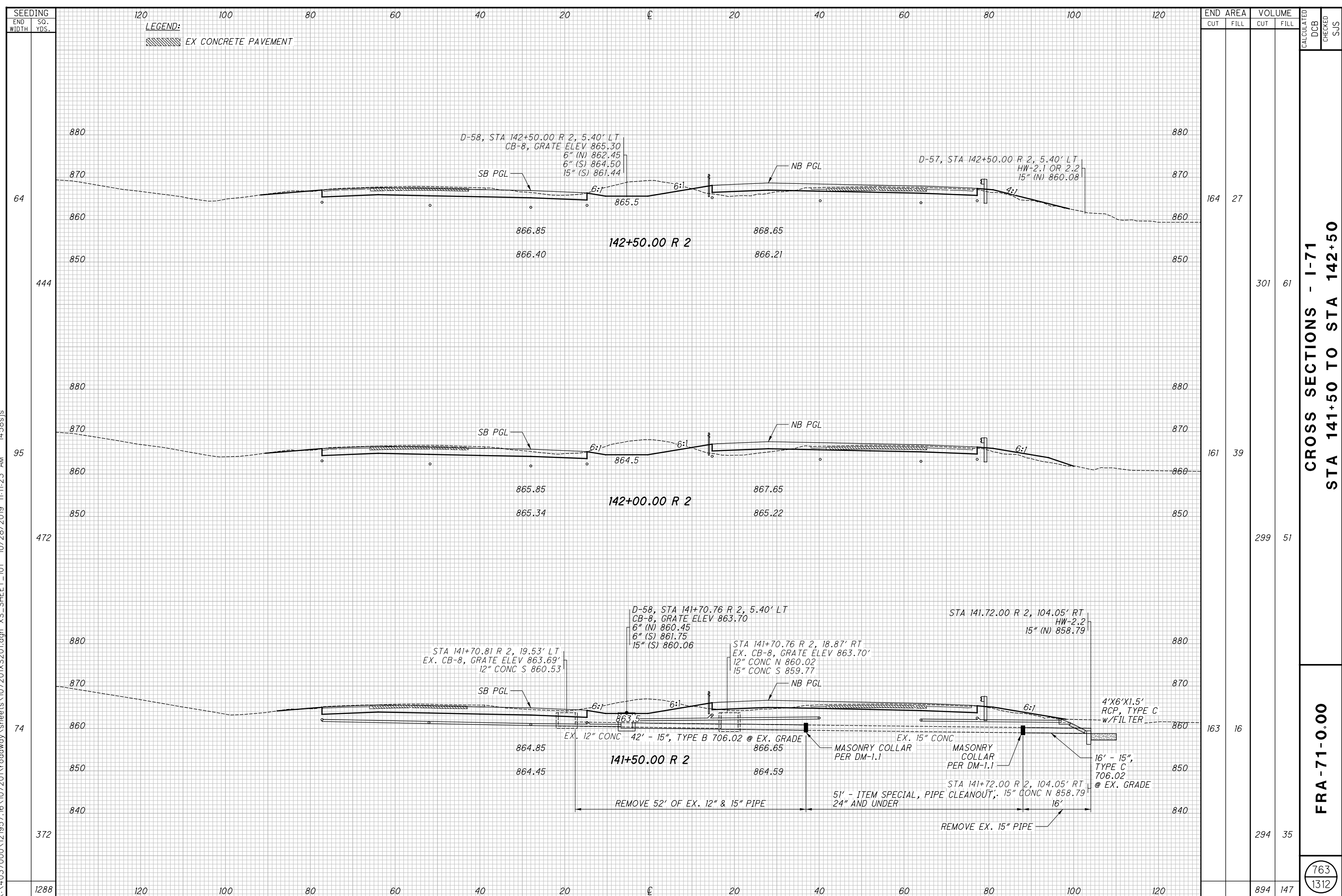


**CROSS SECTIONS - I-71
 STA 140+00 TO STA 141+00**

FRA - 71-0.00

762
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS201.dgn XS_SHEET_101 10/28/2019 11:11:23 AM 1458sjs

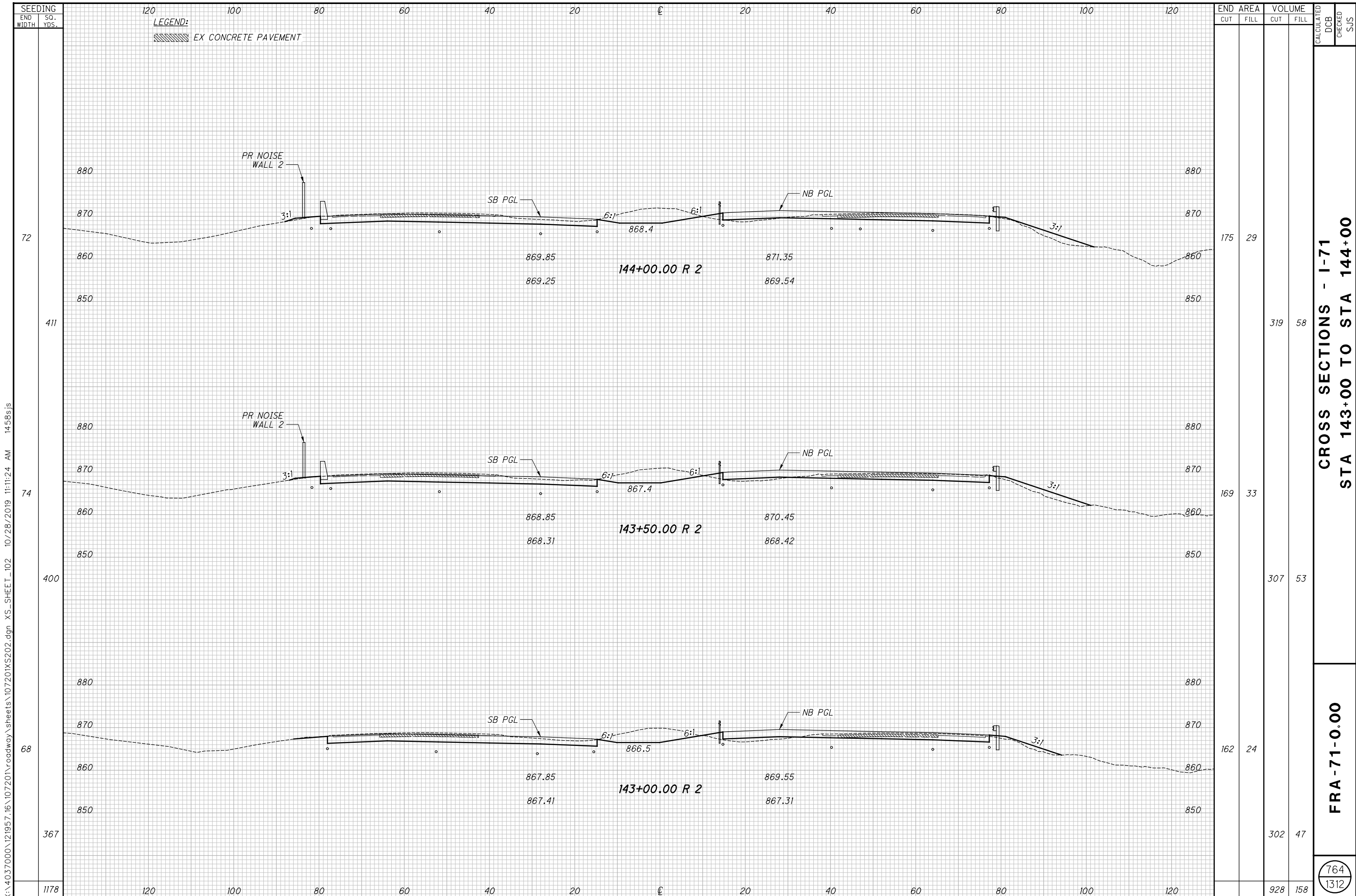


END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
164	27				
301	61				
299	51				
163	16				
294	35				
1288	894				

**CROSS SECTIONS - I-71
 STA 141+50 TO STA 142+50**

FRA-71-0.00

763
 1312

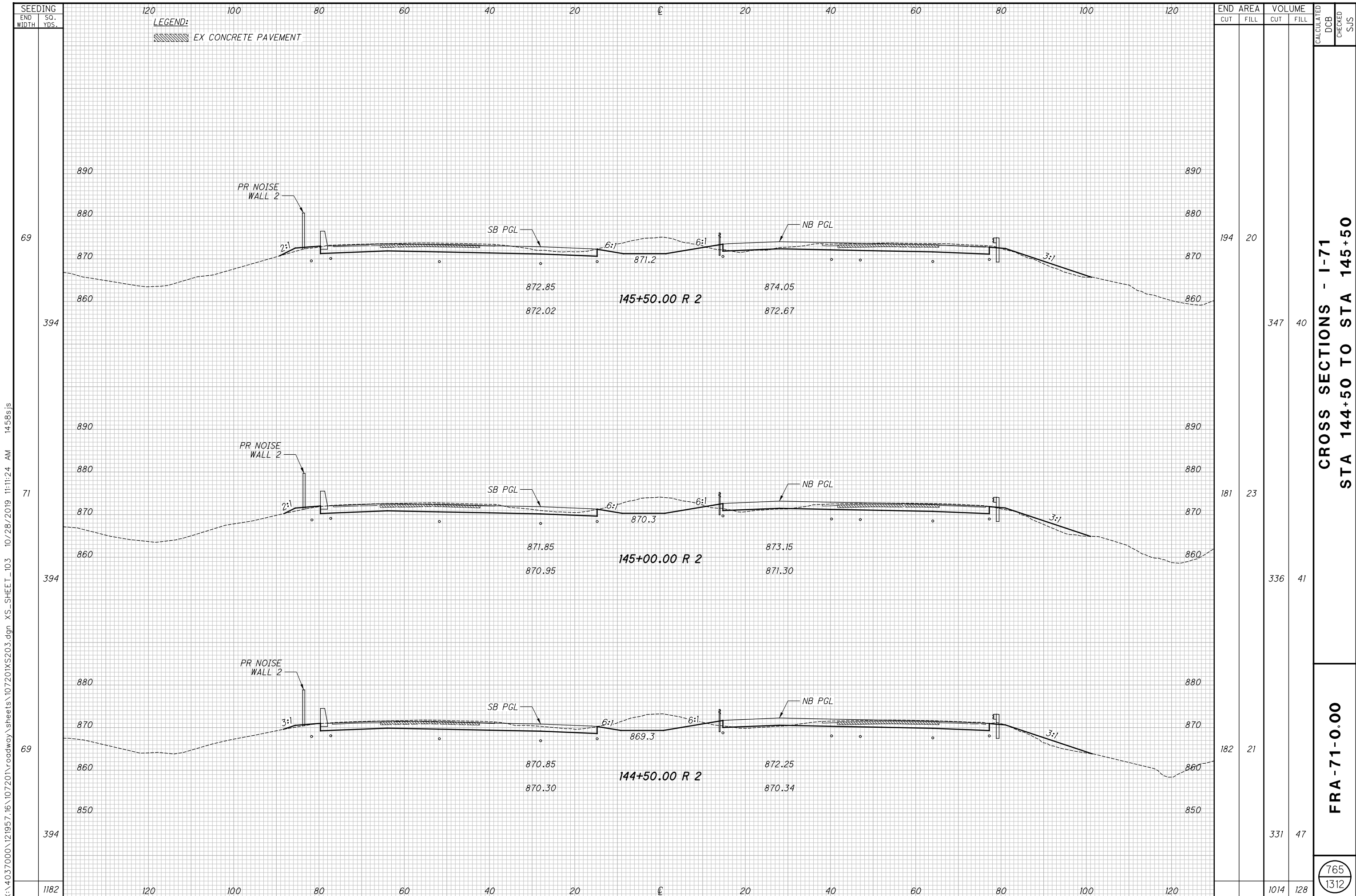


**CROSS SECTIONS - I-71
 STA 143+00 TO STA 144+00**

FRA - 71 - 0.00

764
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS202.dgn XS_SHEET_102 10/28/2019 11:11:24 AM 1458s.js

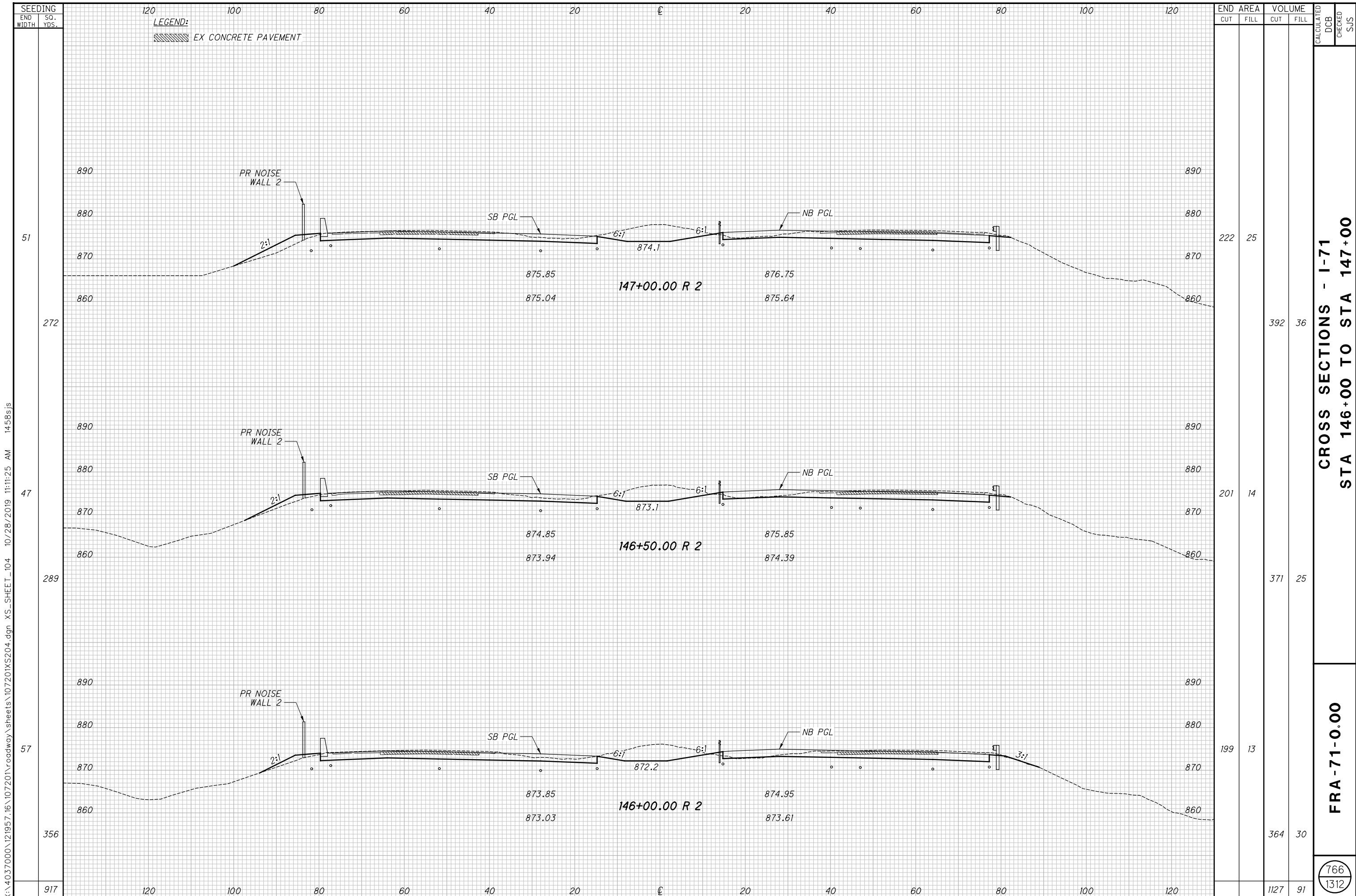


**CROSS SECTIONS - I-71
STA 144+50 TO STA 145+50**

FRA - 71 - 0.00

765
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS203.dgn XS_SHEET_103 10/28/2019 11:11:24 AM 1458s.js

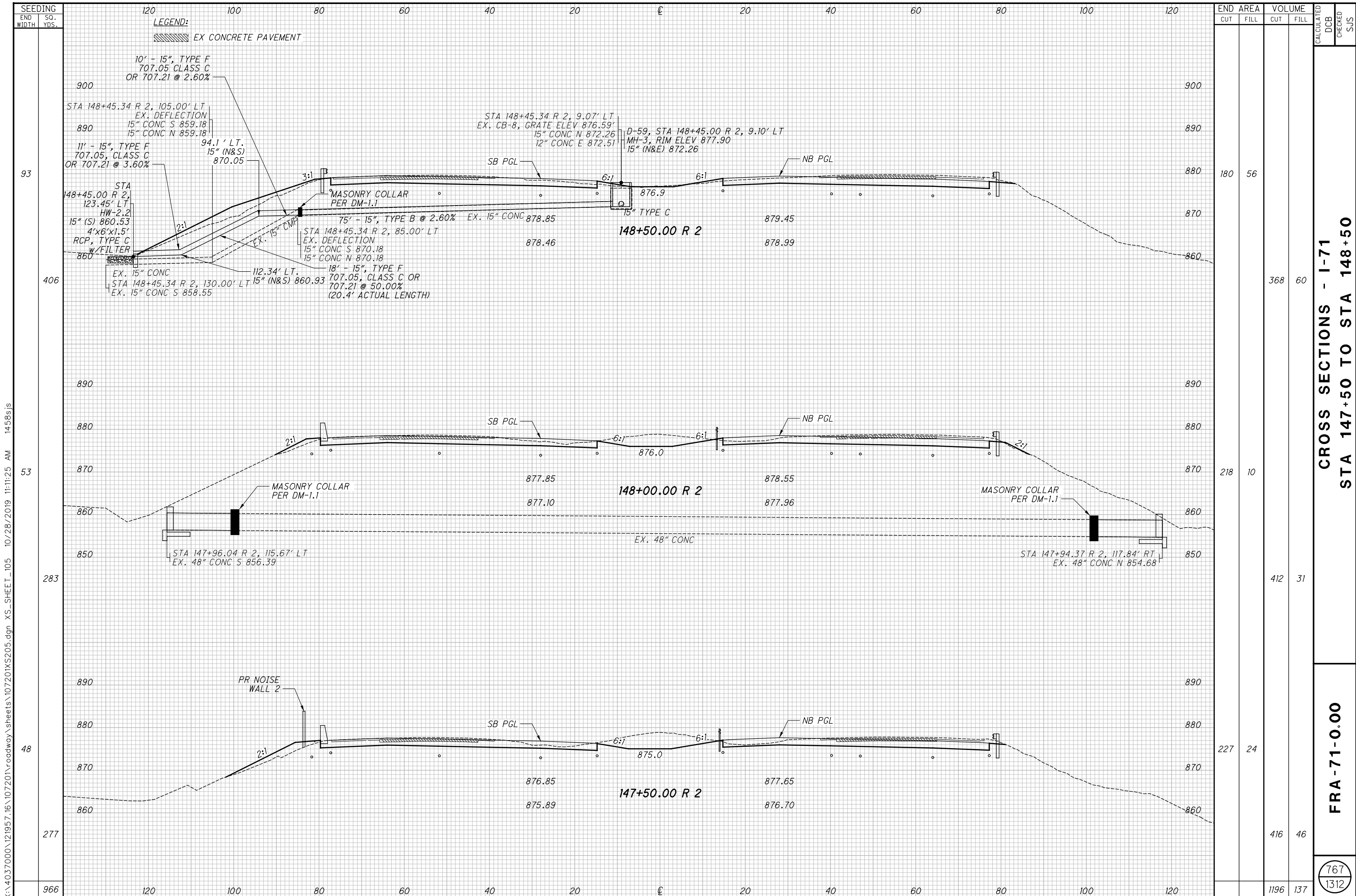


**CROSS SECTIONS - I-71
STA 146+00 TO STA 147+00**

FRA - 71 - 0.00

766
1312

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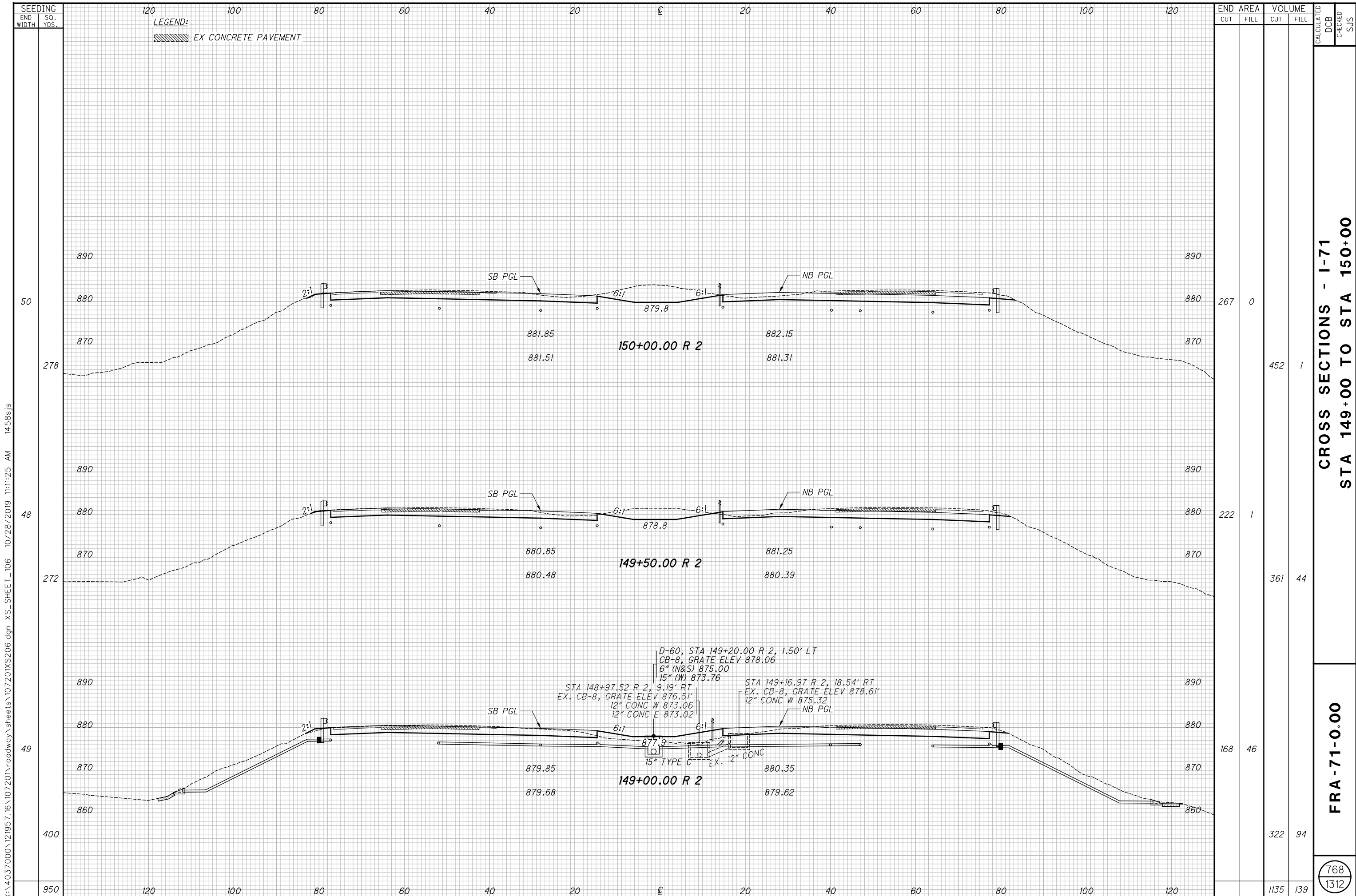
X:\4037000\121957.16\107201\roadway\sheets\107201XS205.dgn XS_SHEET_105 10/28/2019 11:11:25 AM 14585.js

END STA	AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
	CUT	FILL	CUT	FILL				
93	180	56						
406			368	60				
53	218	10						
283			412	31				
48	227	24						
277			416	46				
966			1196	137				

CROSS SECTIONS - I-71
STA 147+50 TO STA 148+50

FRA-71-0.00

767
 1312



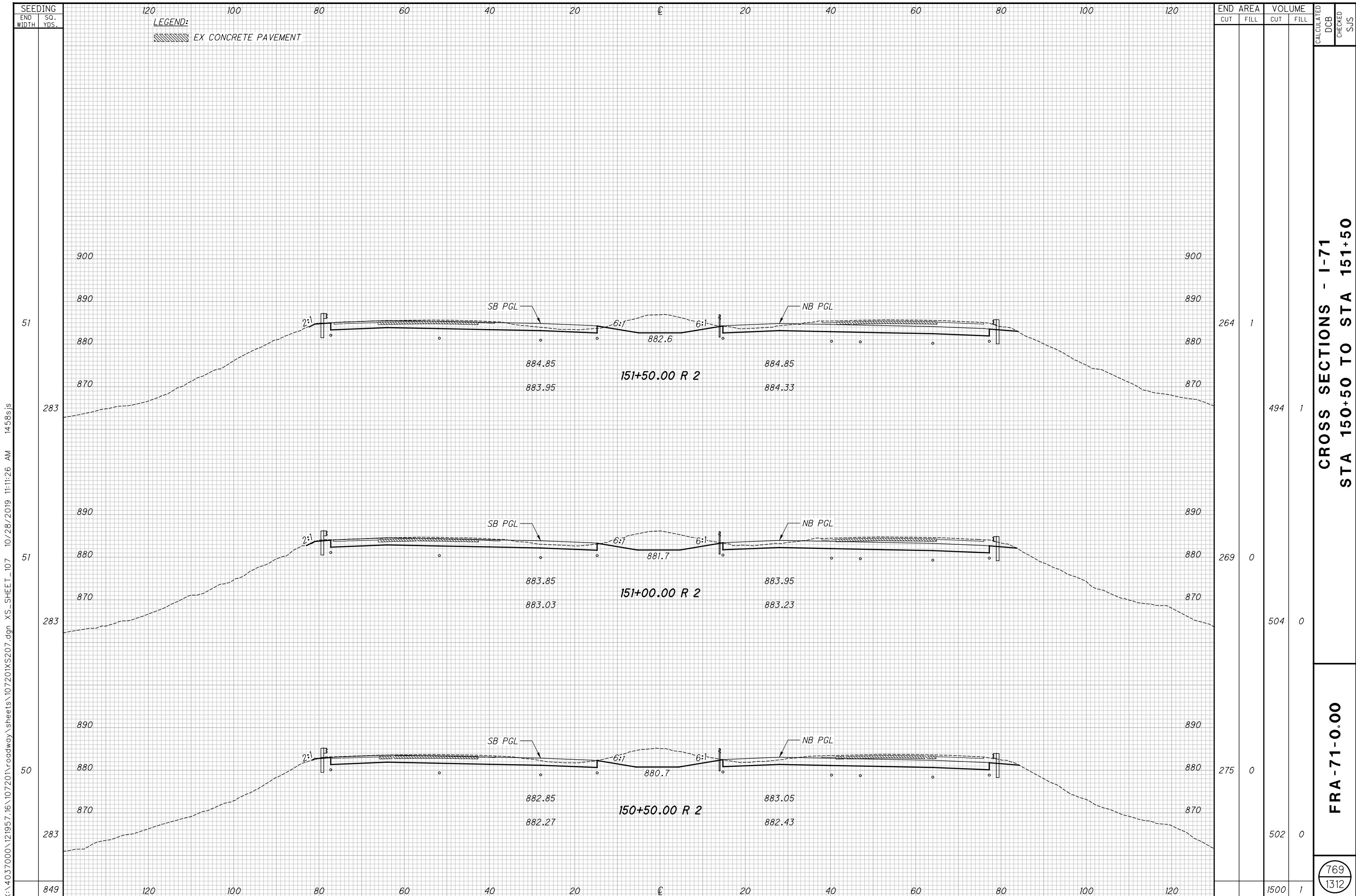
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
267	0				
222	1				
168	46				
322	94				
1135	139				

**CROSS SECTIONS - I-71
STA 149+00 TO STA 150+00**

FRA-71-0.00

768
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS206.dgn XS_SHEET_106 10/28/2019 11:11:25 AM 1458s.js



X:\4037000\121957.16\107201\roadway\sheets\107201XS207.dgn XS_SHEET_107 10/28/2019 11:11:26 AM 1458s.js

120 100 80 60 40 20 0 20 40 60 80 100 120

SEEDING
END SO.
WIDTH YDS.
LEGEND:
EX CONCRETE PAVEMENT

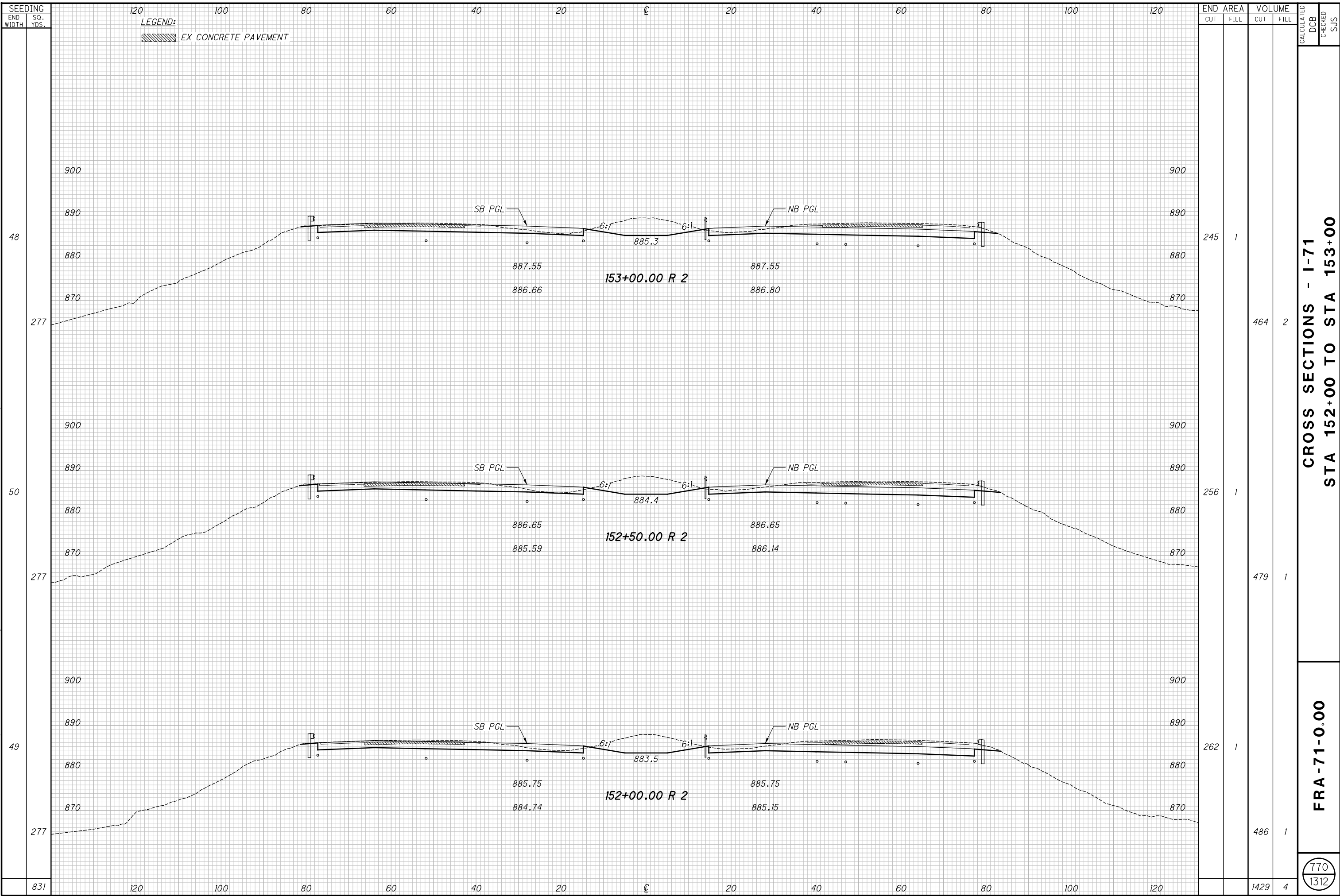
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
264	1					
269	0					
275	0					
1500	1					

CROSS SECTIONS - I-71
STA 150+50 TO STA 151+50

FRA - 71 - 0.00

769
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS208.dgn XS_SHEET_108 10/28/2019 11:11:26 AM 1458s.js

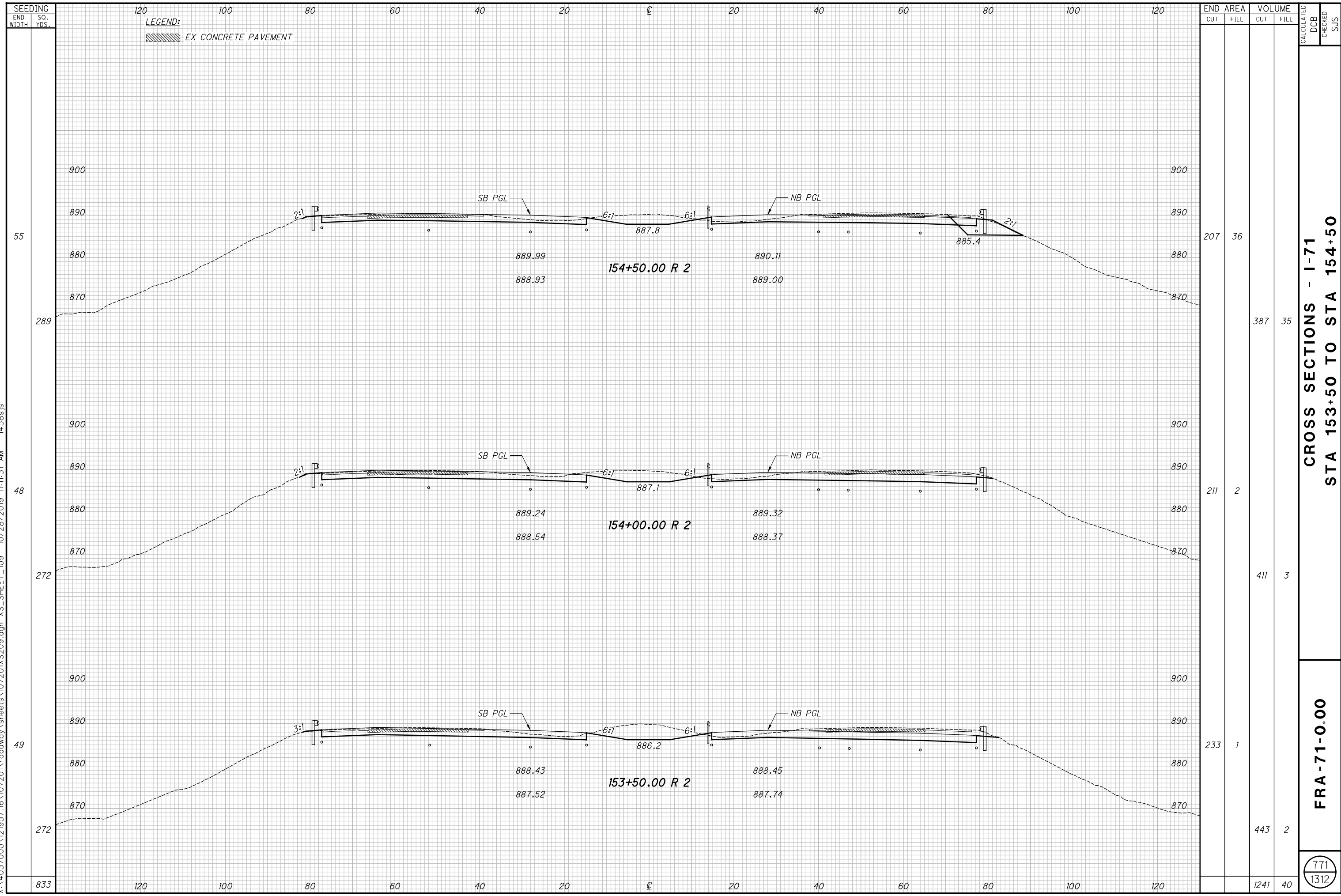


CROSS SECTIONS - I-71
STA 152+00 TO STA 153+00

FRA - 71 - 0.00

770
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS209.dgn XS_SHEET_109 10/28/2019 11:11:31 AM 1458s.js

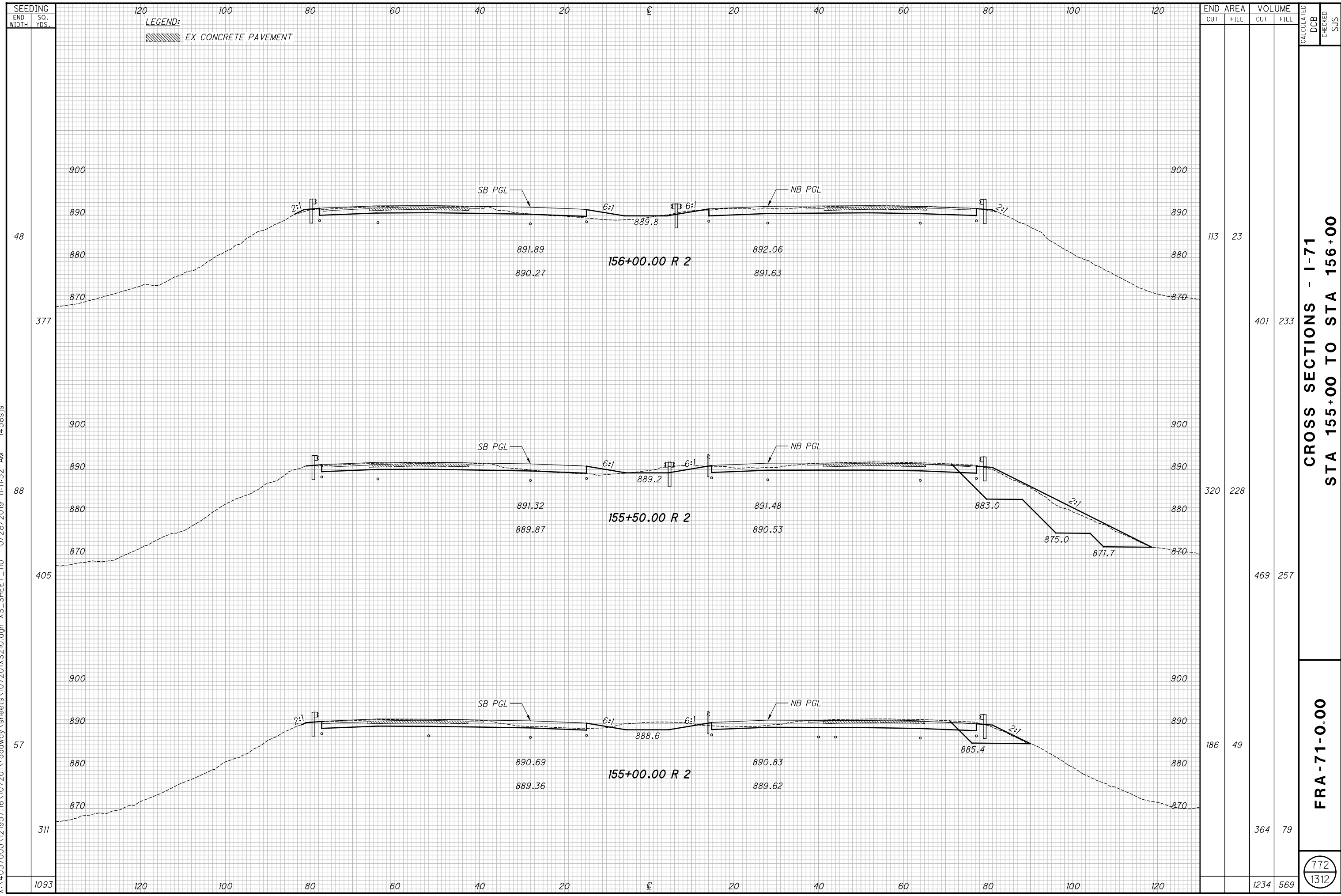


**CROSS SECTIONS - I-71
 STA 153+50 TO STA 154+50**

FRA - 71 - 0.00

771
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X210.dgn XS_SHEET_110 10/28/2019 11:11:32 AM 14:58s.js



LEGEND:
 EX CONCRETE PAVEMENT

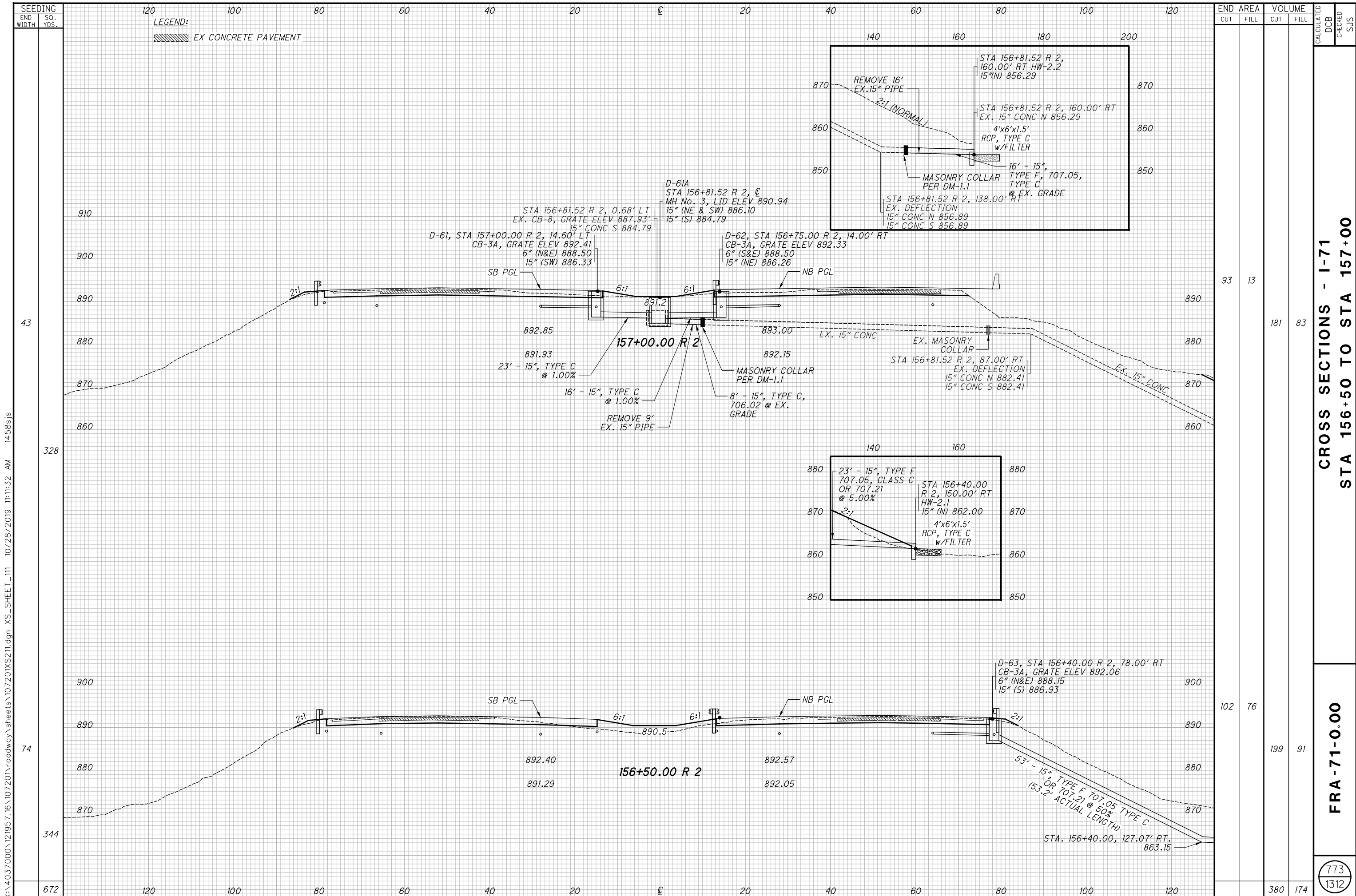
SEEDING	
END WIDTH	SO. YDS.
48	377
88	405
57	311
1093	

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	DCB	SJS
113	23	401	233		
320	228	469	257		
186	49	364	79		
		1234	569		

CROSS SECTIONS - I-71
 STA 155+00 TO STA 156+00

FRA-71-0.00

772
 1312



END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
93	13				
181	83				
102	76				
199	91				
380	174				

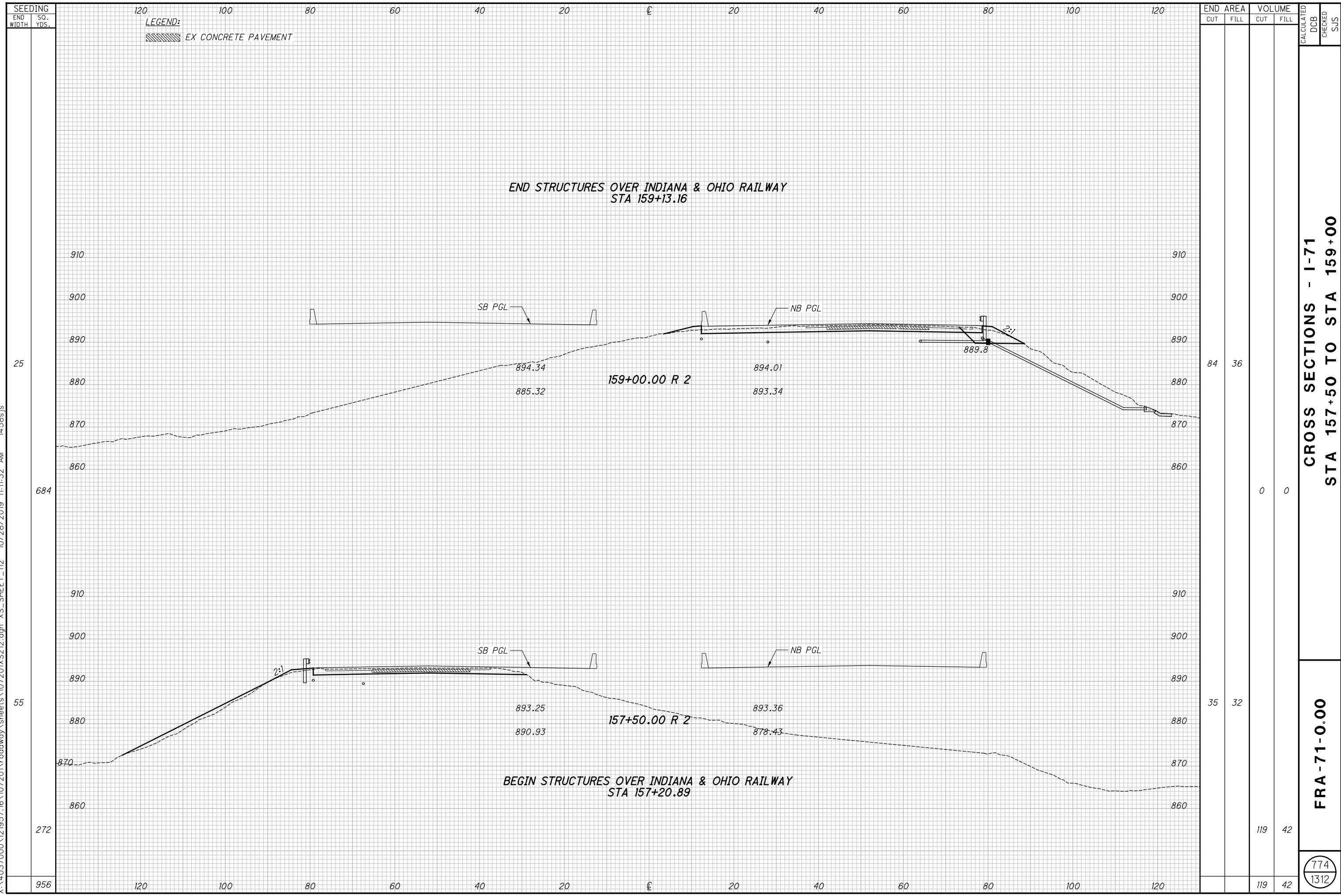
CROSS SECTIONS - I-71
STA 156+50 TO STA 157+00

FRA - 71 - 0.00

773
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS211.dgn XS_SHEET_111 10/28/2019 11:11:32 AM 1458s.js

X:\4037000\121957.16\107201\roadway\sheets\107201XS212.dgn XS_SHEET_112 10/28/2019 11:11:32 AM 1458s.js



SEEDING
END SO.
WIDTH YDS.
LEGEND:
EX CONCRETE PAVEMENT

END STRUCTURES OVER INDIANA & OHIO RAILWAY
STA 159+13.16

BEGIN STRUCTURES OVER INDIANA & OHIO RAILWAY
STA 157+20.89

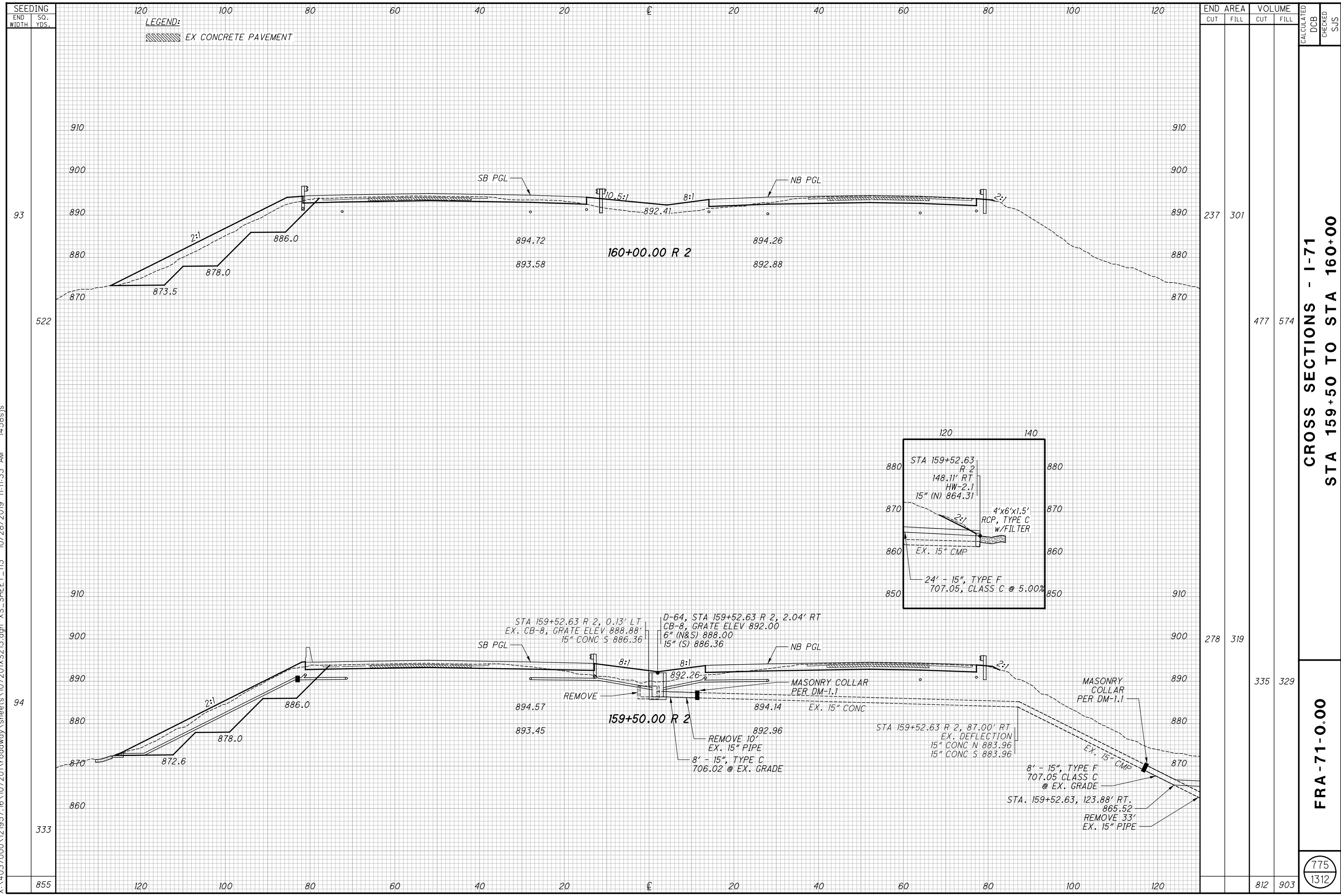
END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
CUT	FILL	CUT	FILL		
84	36	0	0		
35	32	119	42		
		119	42		

CROSS SECTIONS - I-71
STA 157+50 TO STA 159+00

FRA - 71 - 0.00

774
1312

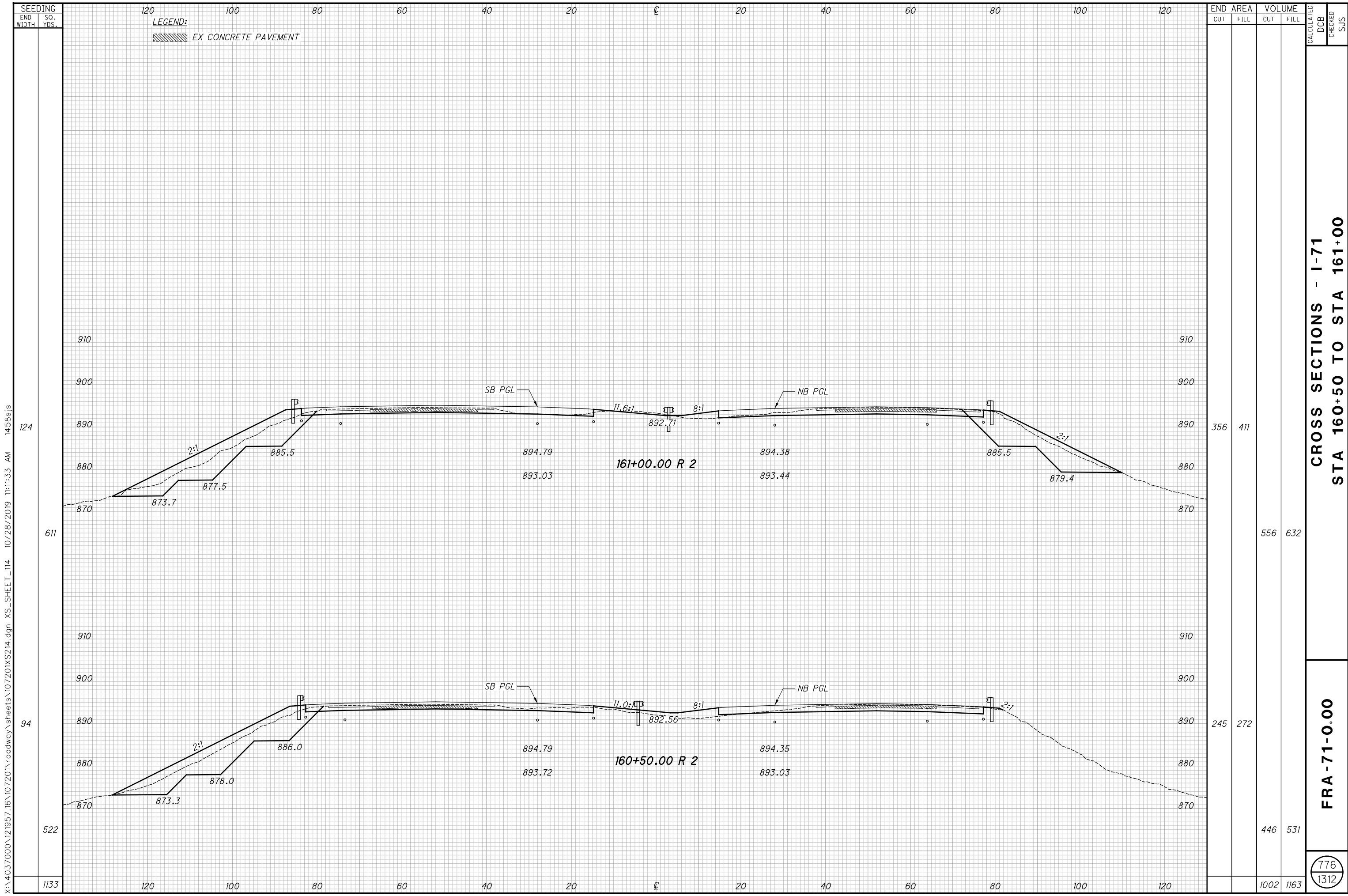
X:\4037000\121957.16\107201\roadway\sheets\107201\X5213.dgn XS_SHEET_113 10/28/2019 11:11:33 AM 1458s.js



CROSS SECTIONS - I-71
 STA 159+50 TO STA 160+00

FRA-71-0.00

775
 1312



END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
CUT	FILL	CUT	FILL				
356	411	556	632				
245	272	446	531				
		1002	1163				

**CROSS SECTIONS - I-71
STA 160+50 TO STA 161+00**

FRA - 71 - 0.00

776
1312

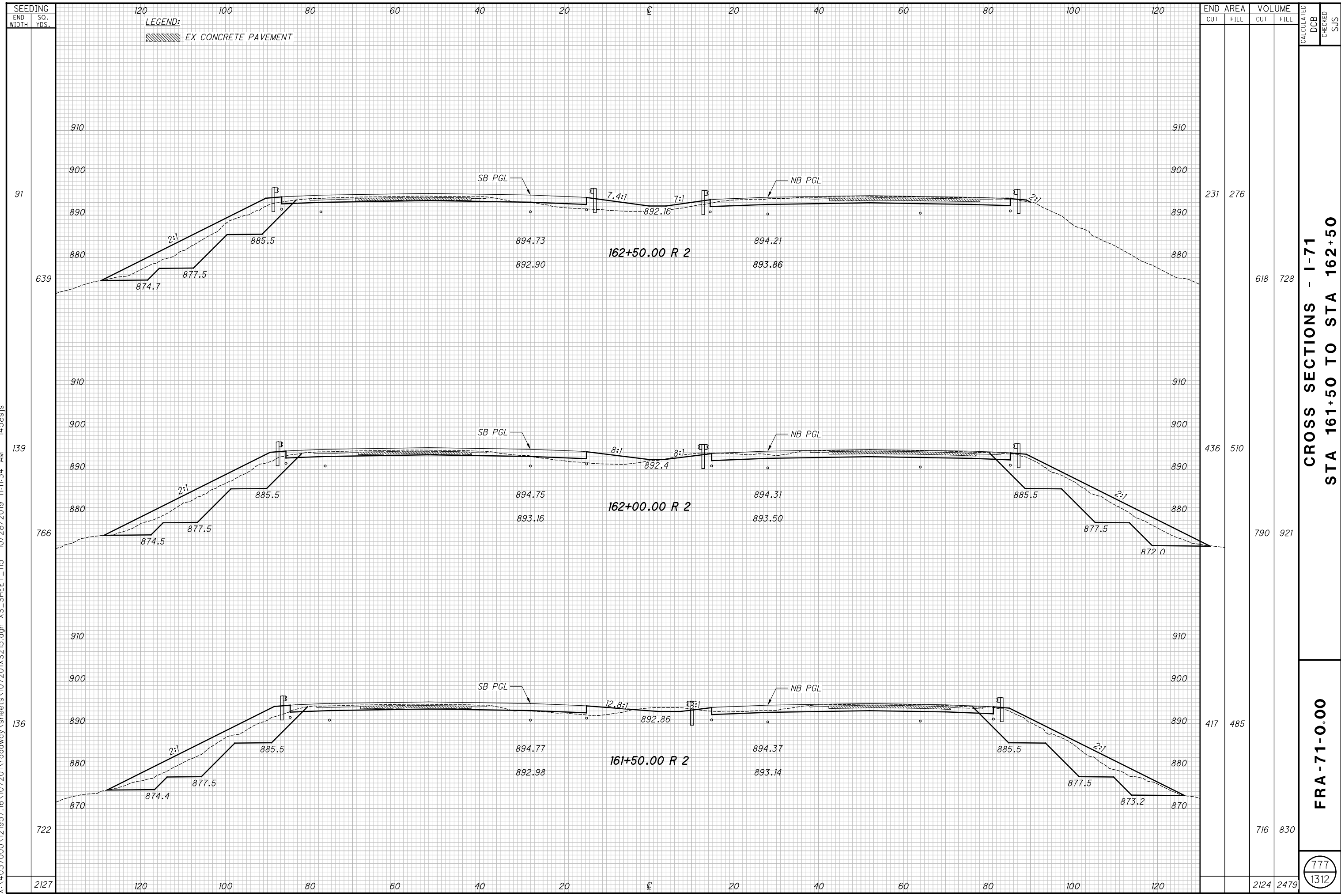
X:\4037000\121957.16\107201\roadway\sheets\107201XS214.dgn XS_SHEET_114 10/28/2019 11:11:33 AM 1458s.js

124
611
94
522
1133

120 100 80 60 40 20 0 20 40 60 80 100 120

120 100 80 60 40 20 0 20 40 60 80 100 120

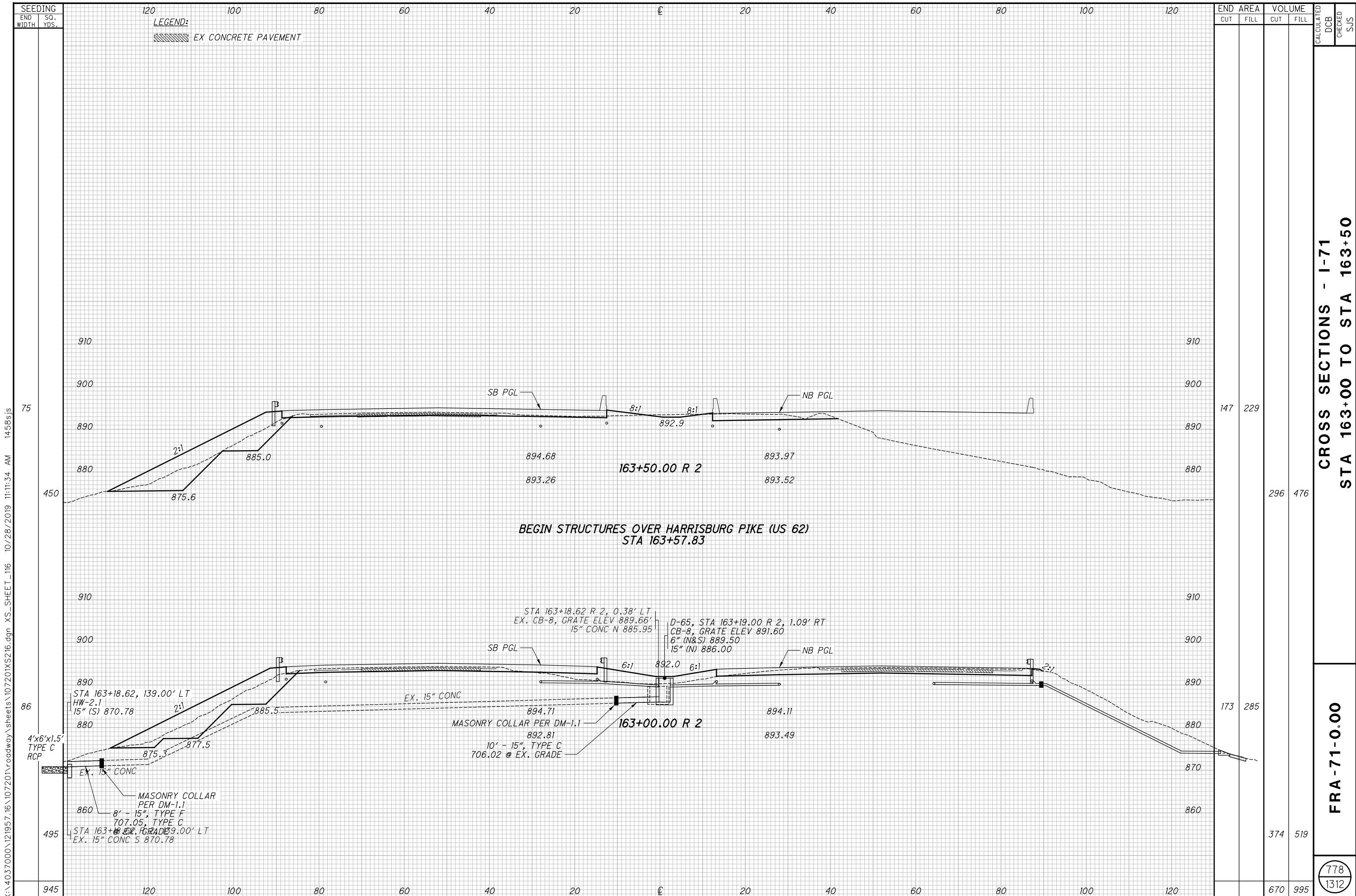
X:\4037000\121957.16\107201\roadway\sheets\107201\X215.dgn XS_SHEET_115 10/28/2019 11:11:34 AM 1458sjs



**CROSS SECTIONS - I-71
 STA 161+50 TO STA 162+50**

FRA - 71 - 0.00

777
 1312

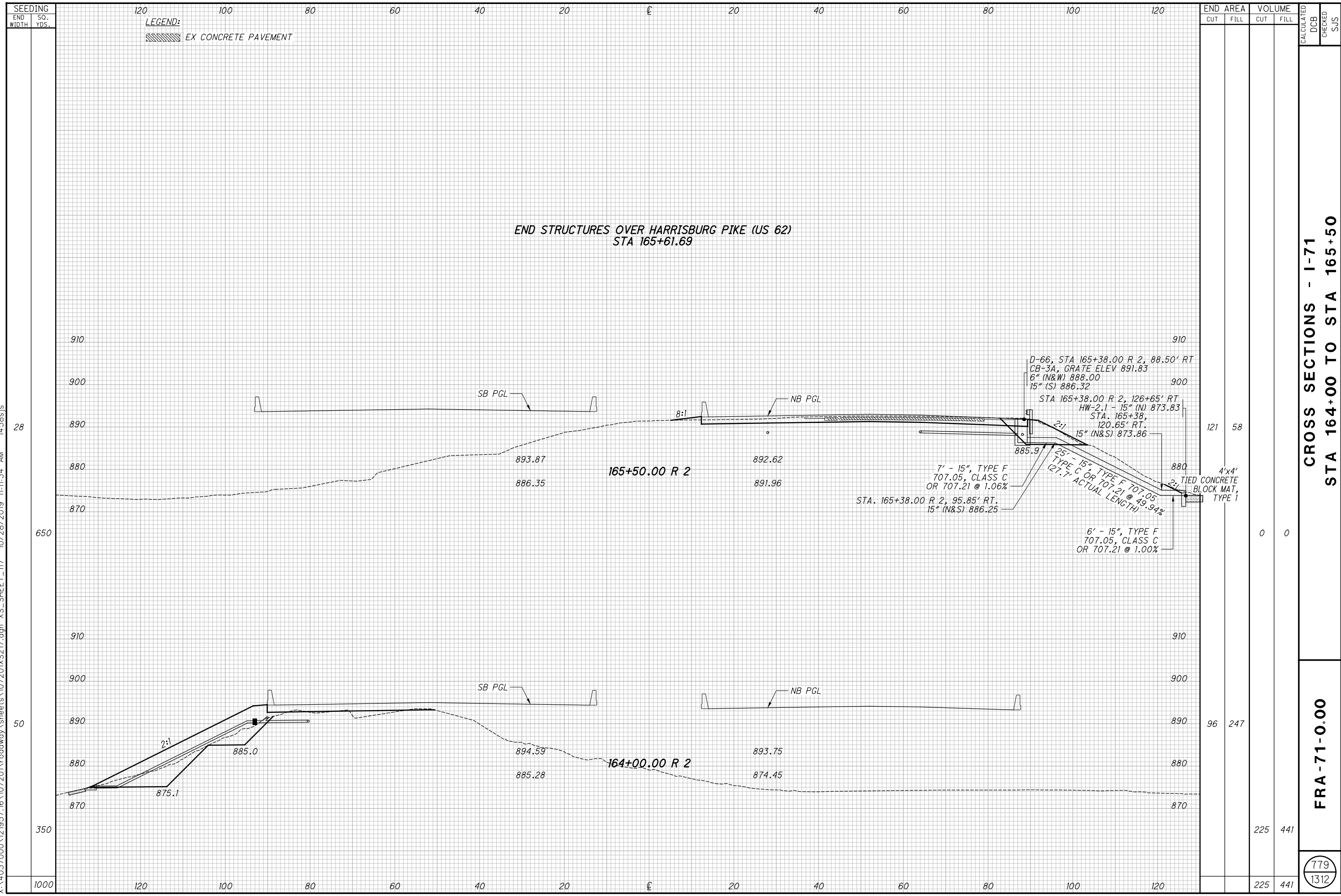


X:\4037000\121957.16\107201\roadway\sheets\107201X5216.dgn XS_SHEET_116 10/28/2019 11:11:34 AM 1458sjs

END AREA	VOLUME	CALCULATED	
		CUT	FILL
147	229	296	476
173	285	374	519
		670	995

CROSS SECTIONS - I-71 STA 163+00 TO STA 163+50
FRA - 71 - 0.00
778 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS217.dgn XS_SHEET_117 10/28/2019 11:11:34 AM 14:58s.js



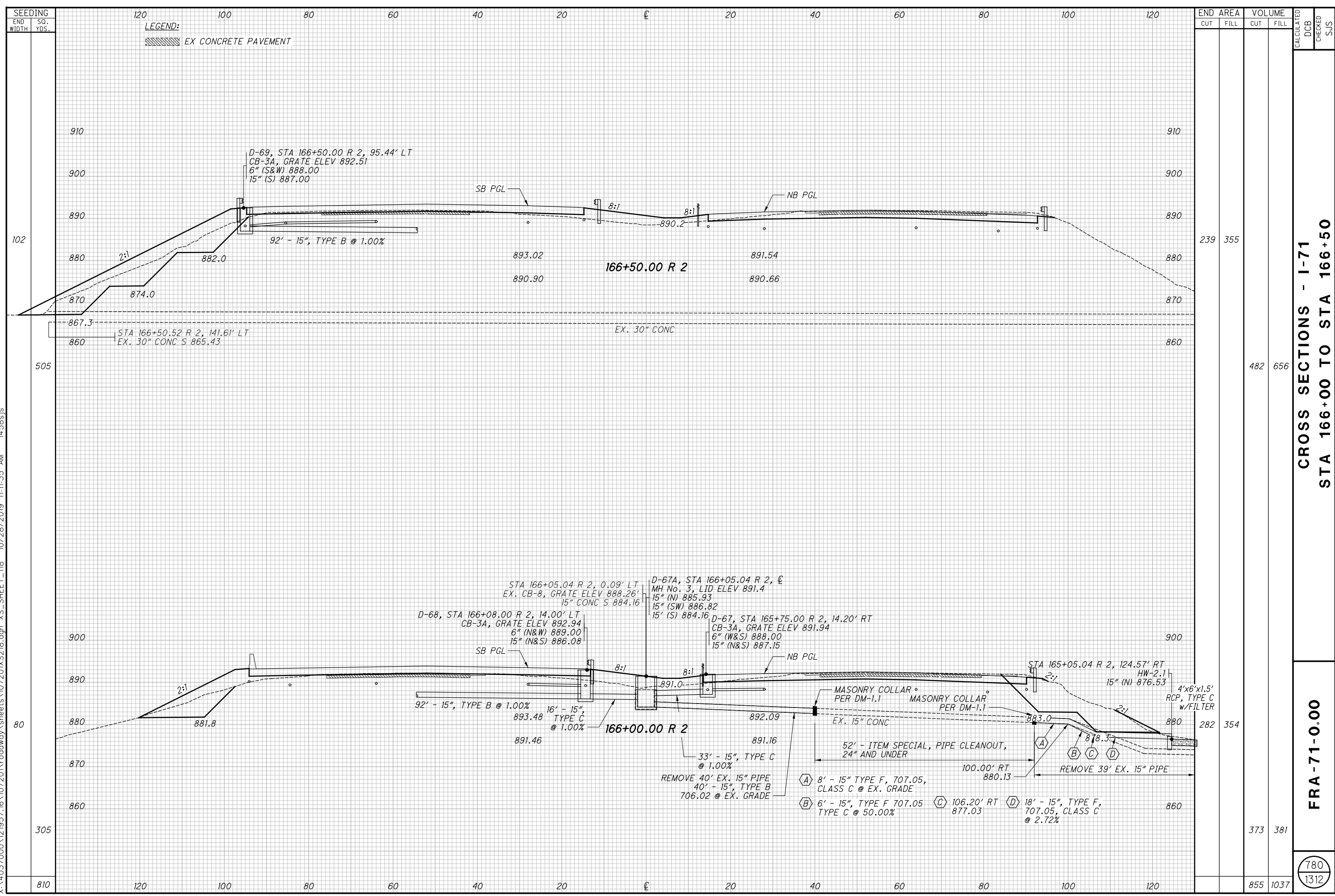
SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	DCB	SJS
1000				225	441		
120							
100							
80							
60							
40							
20							
0							
20							
40							
60							
80							
100							
120							
		121	58				
		96	247				
				0	0		
				225	441		

**CROSS SECTIONS - I-71
 STA 164+00 TO STA 165+50**

FRA-71-0.00

779
 1312

X:\4037000\121957.16\107201\roadway\sheet\107201XS218.dgn XS_SHEET_118 10/28/2019 11:11:35 AM 14:58sjs



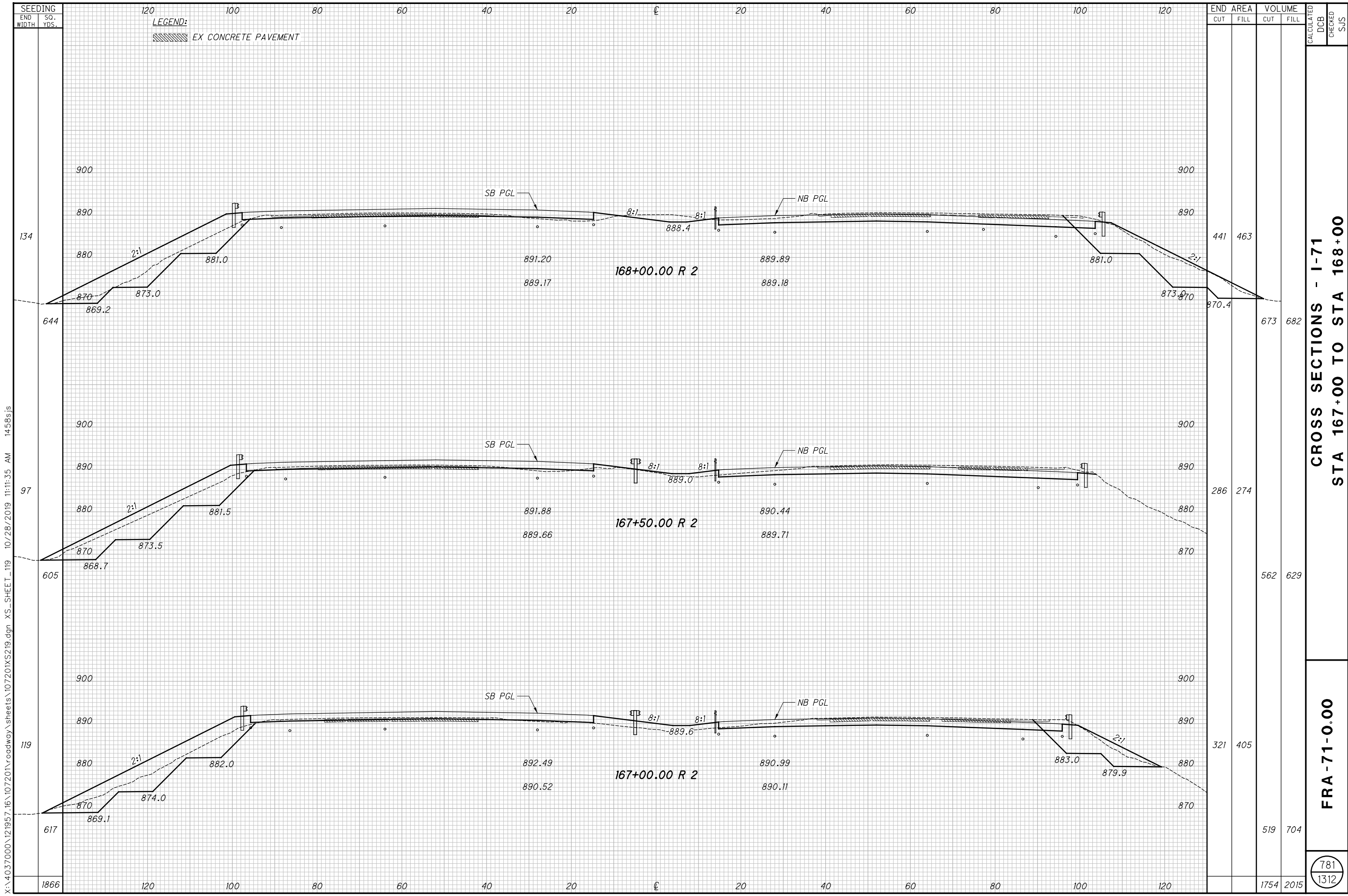
LEGEND:
 EX CONCRETE PAVEMENT

END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
239	355					
482	656					
282	354					
373	381					
855	1037					

CROSS SECTIONS - I-71
 STA 166+00 TO STA 166+50

FRA - 71 - 0.00

780
 1312



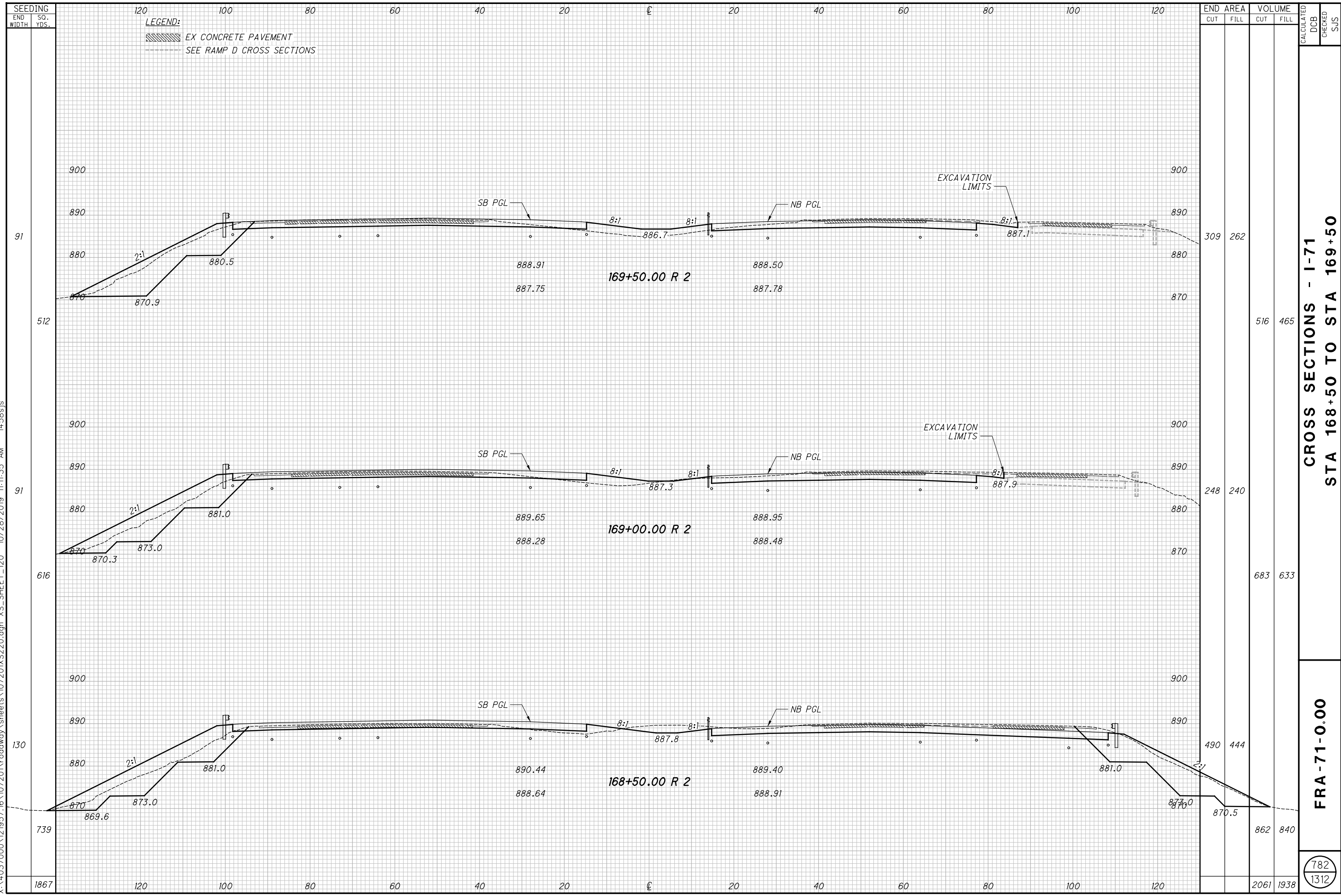
**CROSS SECTIONS - I-71
 STA 167+00 TO STA 168+00**

FRA-71-0.00

781
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X5219.dgn XS_SHEET_119 10/28/2019 11:11:35 AM 1458sjs

X:\4037000\121957.16\107201\roadway\sheets\107201XS220.dgn XS_SHEET_120 10/28/2019 11:11:35 AM 14585.js



SEEDING
END WIDTH SO. YDS.
LEGEND:
EX CONCRETE PAVEMENT
SEE RAMP D CROSS SECTIONS

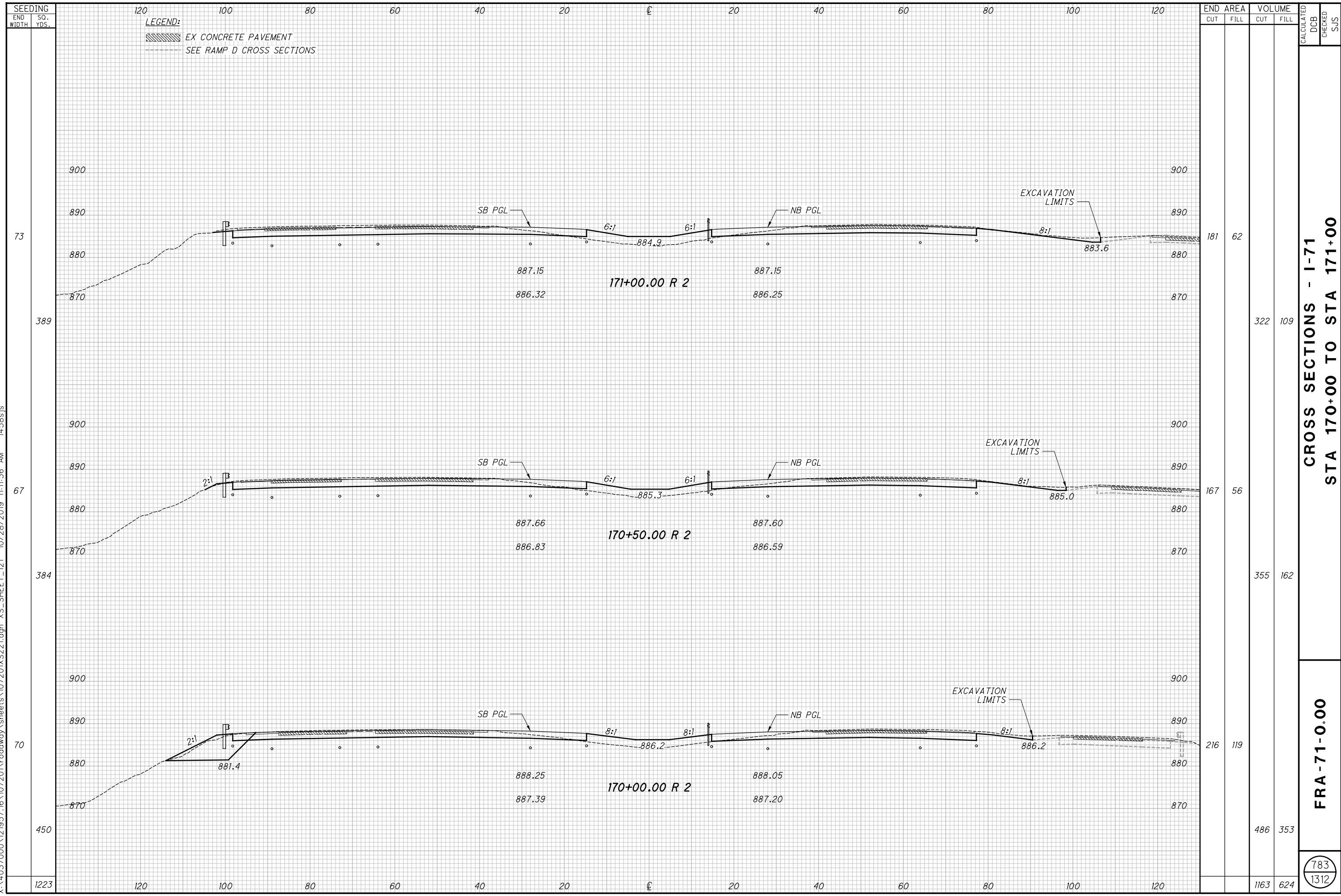
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
309	262				
516	465				
248	240				
616	633				
683	633				
130	444				
490	444				
739	840				
862	840				
1867	1938				
2061	1938				

CROSS SECTIONS - I-71
STA 168+50 TO STA 169+50

FRA - 71 - 0.00

782
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS221.dgn XS_SHEET_121 10/28/2019 11:11:36 AM 1458sjs

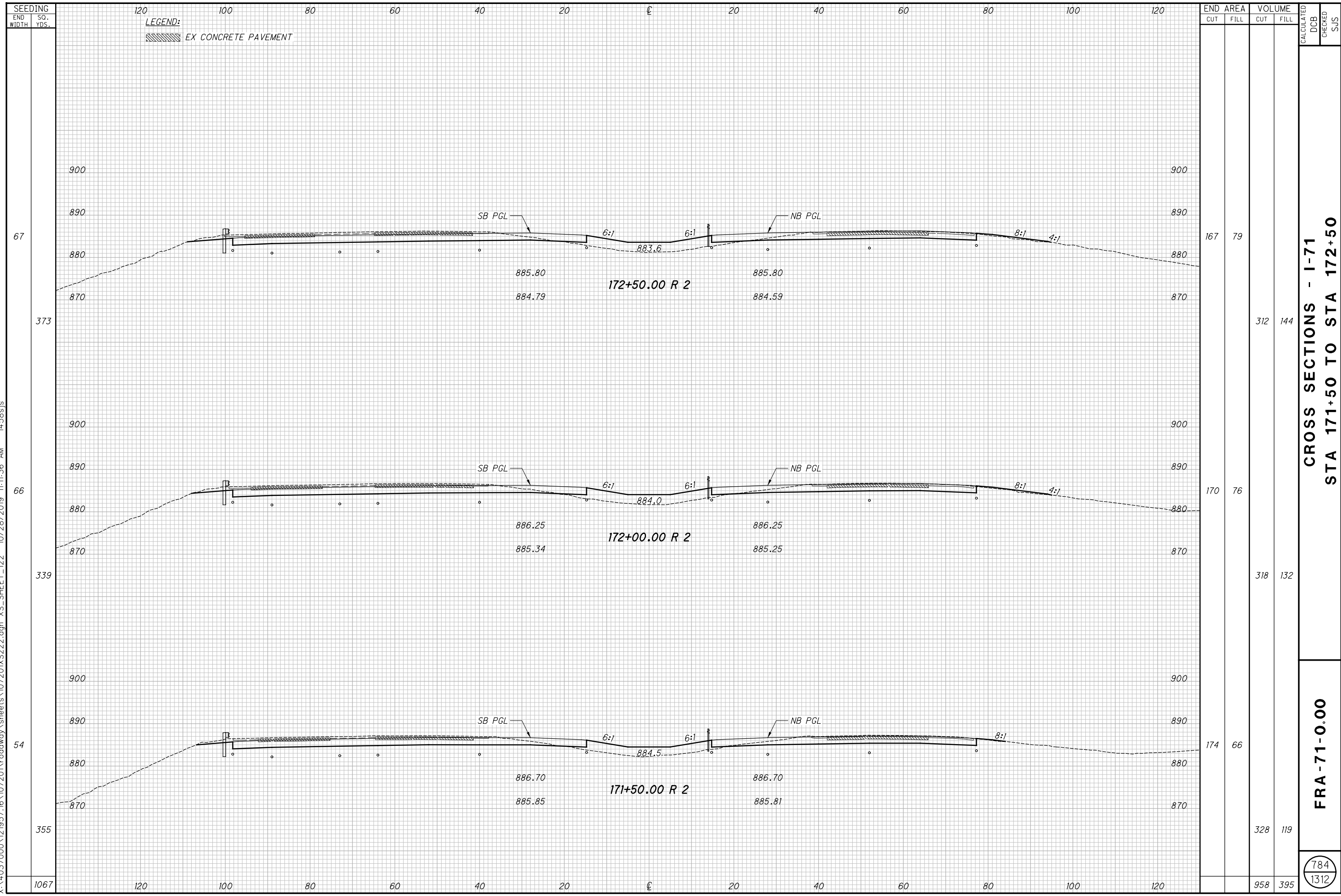


**CROSS SECTIONS - I-71
 STA 170+00 TO STA 171+00**

FRA - 71 - 0.00

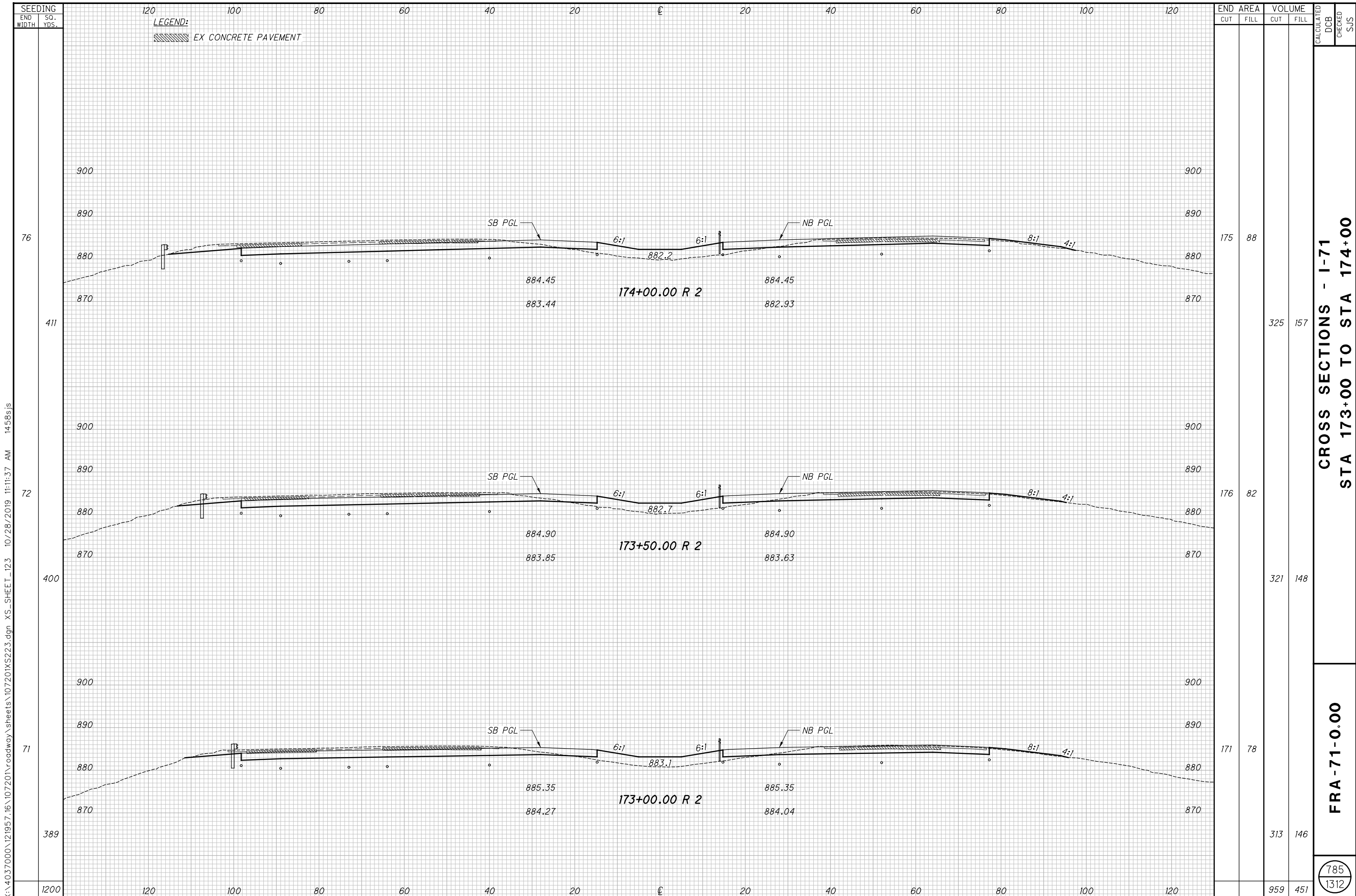
783
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS222.dgn XS_SHEET_122 10/28/2019 11:11:36 AM 1458s.js



**CROSS SECTIONS - I-71
 STA 171+50 TO STA 172+50**

FRA - 71 - 0.00

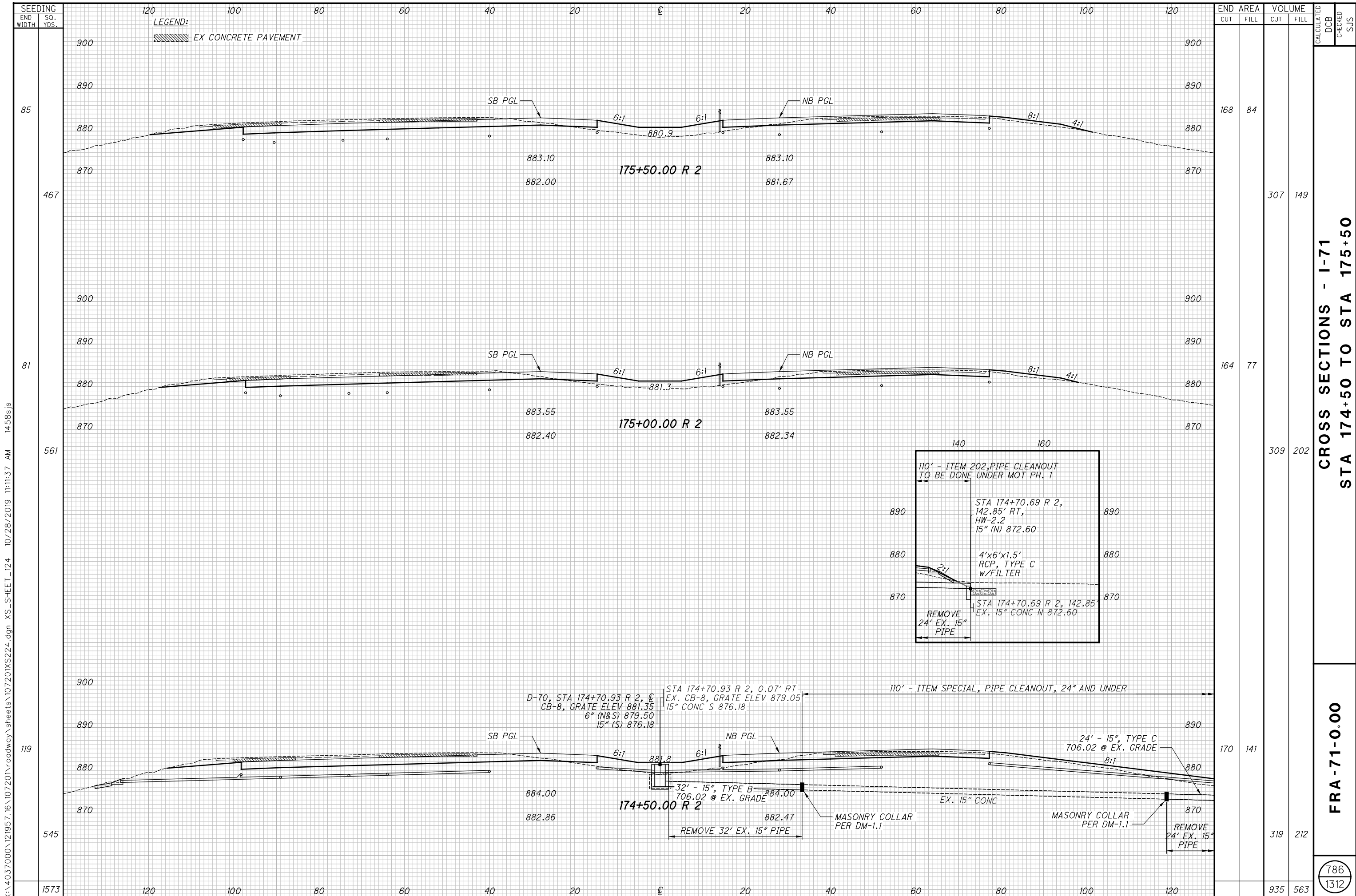


CROSS SECTIONS - I-71
STA 173+00 TO STA 174+00

FRA - 71 - 0.00

785
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS223.dgn XS_SHEET_123 10/28/2019 11:11:37 AM 14585.js



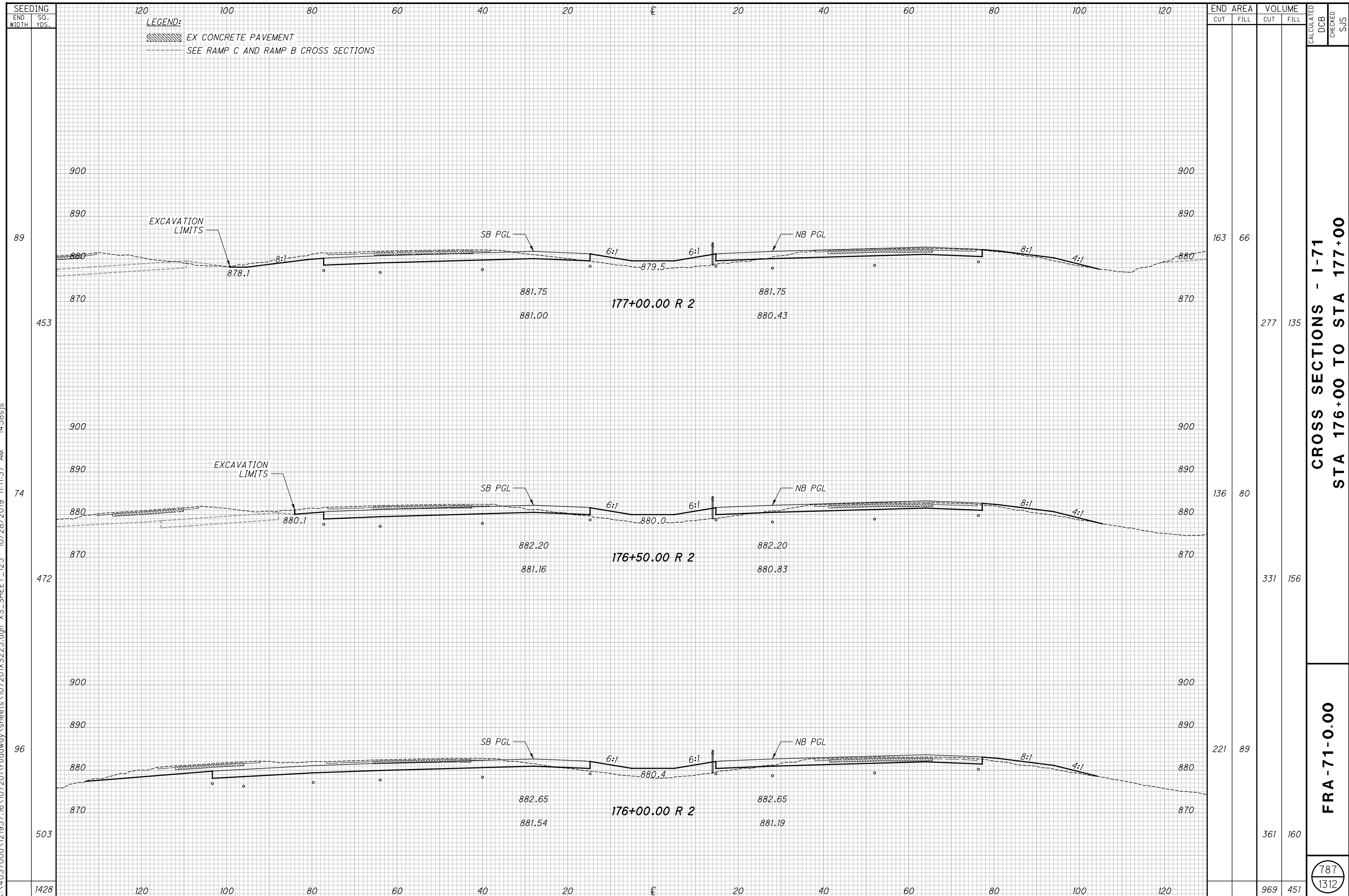
**CROSS SECTIONS - I-71
STA 174+50 TO STA 175+50**

FRA - 71 - 0.00

786
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS224.dgn XS_SHEET_124 10/28/2019 11:11:37 AM 1458s.js

X:\4037000\121957.16\107201\roadway\sheets\107201XS225.dgn XS_SHEET_125 10/28/2019 11:11:37 AM 14585.js

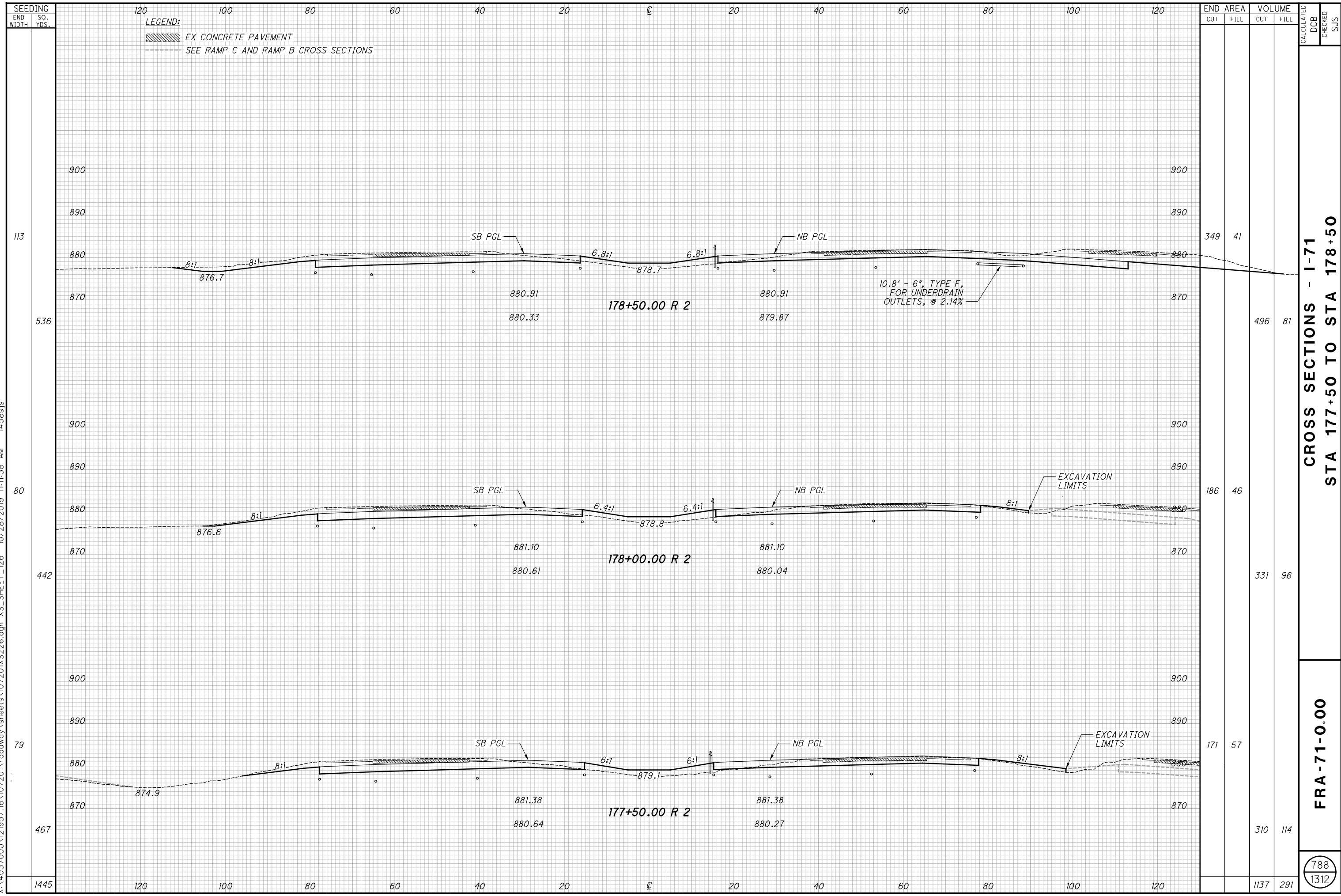


**CROSS SECTIONS - I-71
 STA 176+00 TO STA 177+00**

FRA - 71 - 0.00

787
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS226.dgn XS_SHEET_126 10/28/2019 11:11:38 AM 1458sjs



SEEDING	
END WIDTH	SO. YDS.
113	
536	
80	
442	
79	
467	
1445	

LEGEND:												
	EX CONCRETE PAVEMENT											
	SEE RAMP C AND RAMP B CROSS SECTIONS											
120	100	80	60	40	20	0	20	40	60	80	100	120

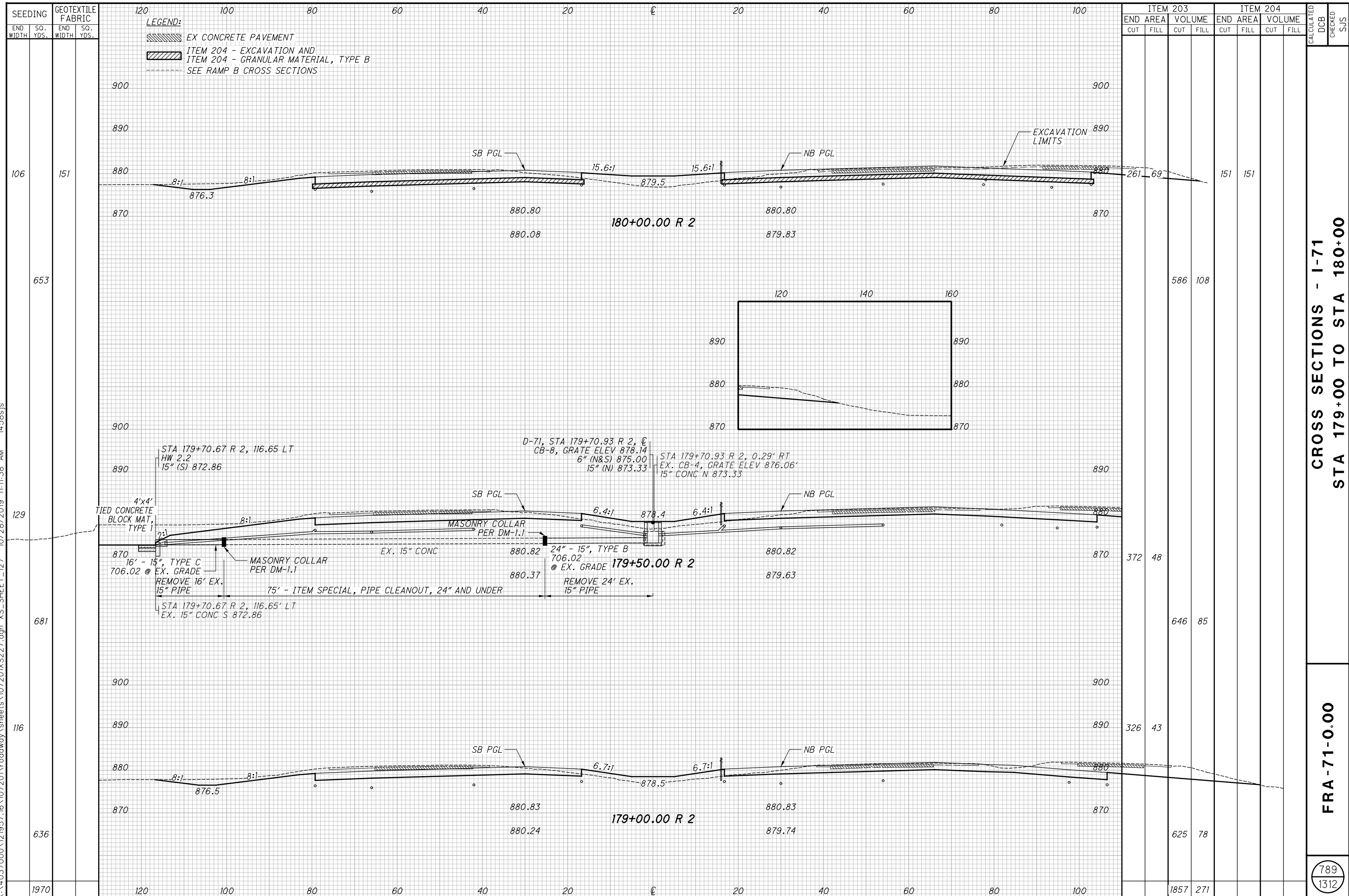
END AREA		VOLUME		CALCULATED DCB	CHECKED SUS
CUT	FILL	CUT	FILL		
349	41	496	81		
186	46	331	96		
171	57	310	114		
		1137	291		

CROSS SECTIONS - I-71
STA 177+50 TO STA 178+50

FRA - 71 - 0.00

788
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS227.dgn XS_SHEET_127 10/28/2019 11:11:38 AM 14585.js

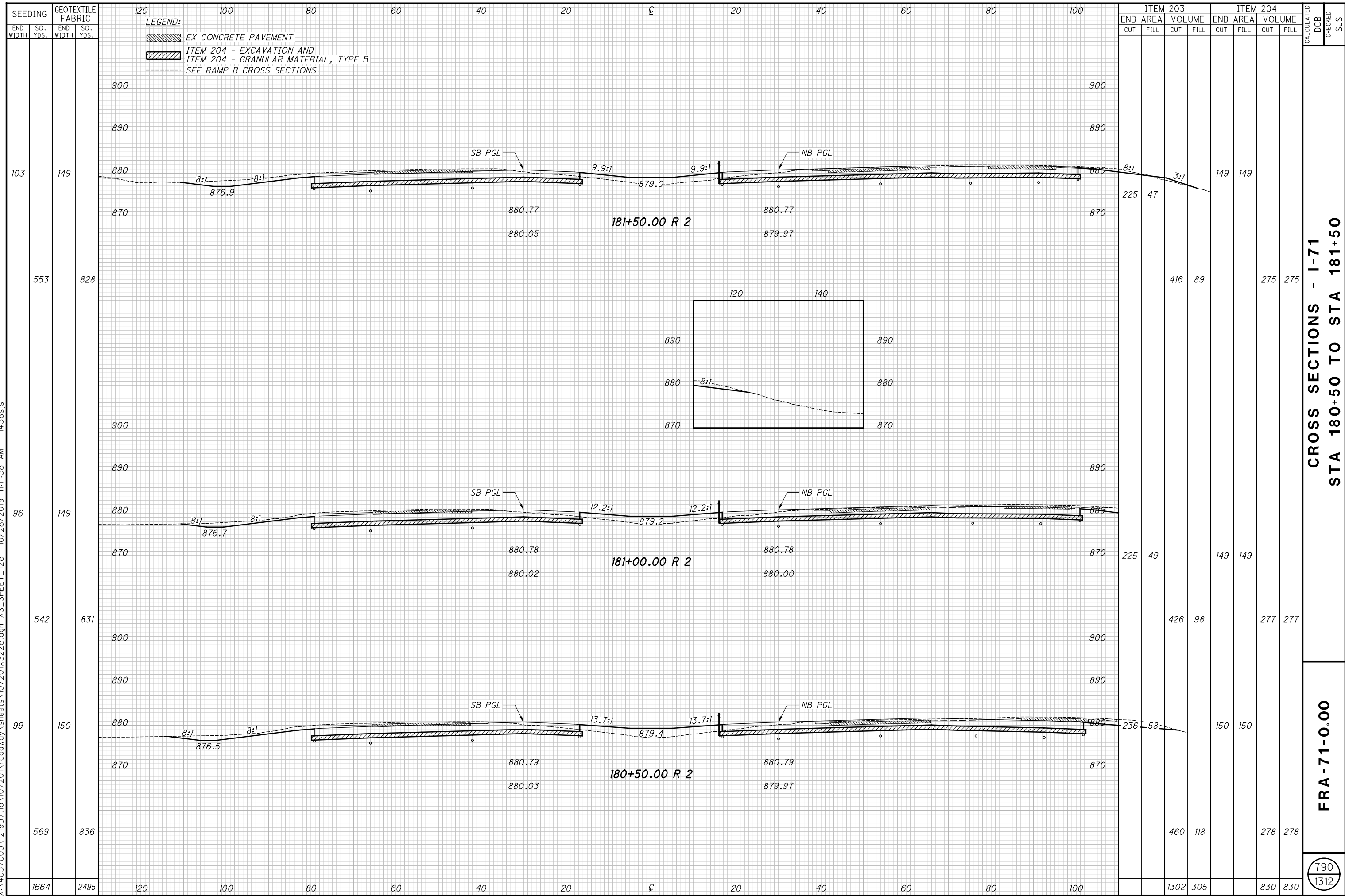


CROSS SECTIONS - I-71
 STA 179+00 TO STA 180+00

FRA-71-0.00

789
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS228.dgn XS_SHEET_128 10/28/2019 11:11:38 AM 14585.js



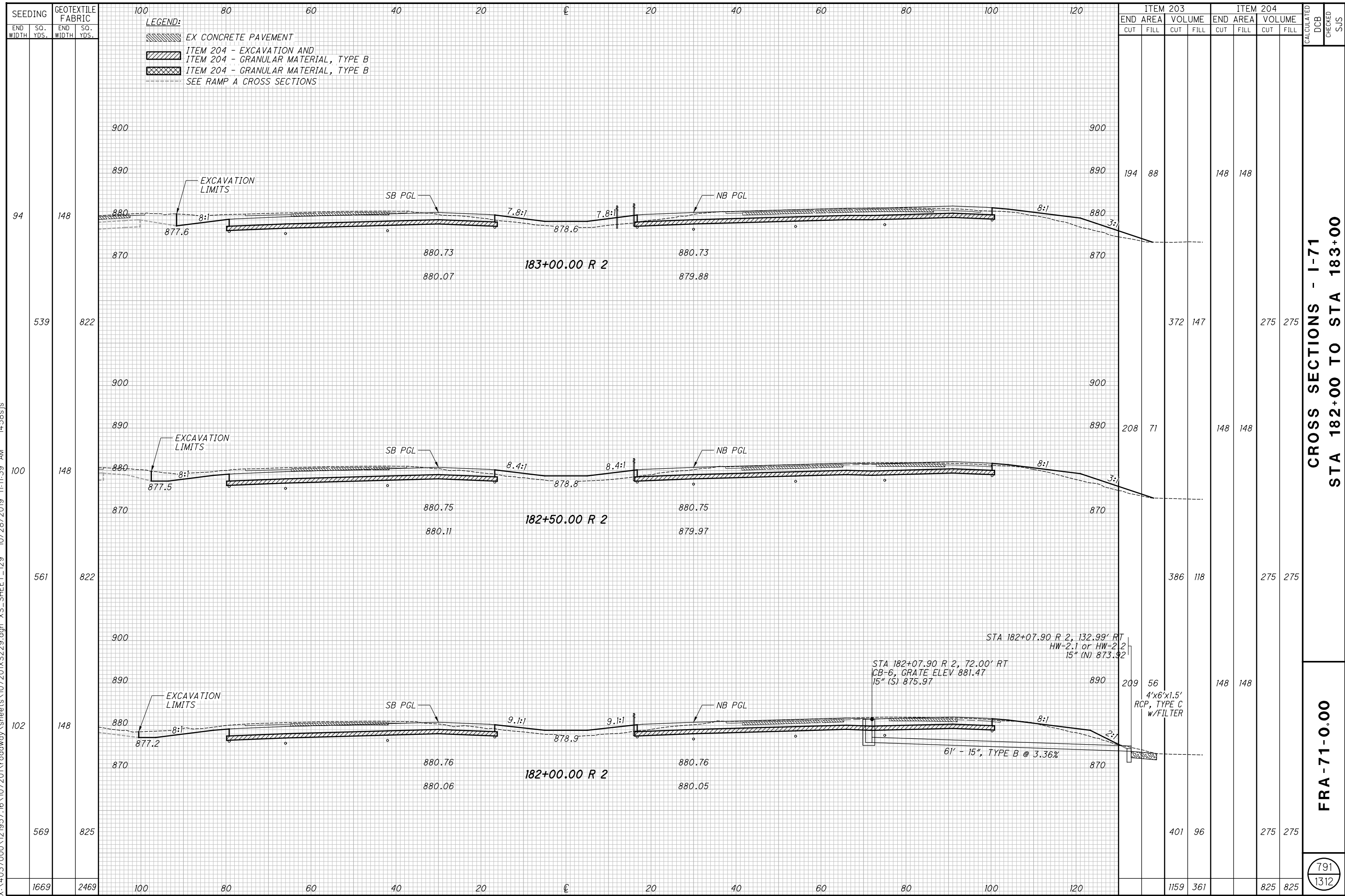
SEEDING	GEOTEXTILE FABRIC	ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS							
		END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL										
103	149	120	100	80	60	40	20	20	40	60	80	100	225	47	149	149			
553	828												416	89		275	275		
96	149	120	100	80	60	40	20	20	40	60	80	100	225	49	149	149			
542	831												426	98		277	277		
99	150	120	100	80	60	40	20	20	40	60	80	100	236	58	150	150			
569	836												460	118		278	278		
1664	2495	120	100	80	60	40	20	20	40	60	80	100	1302	305		830	830		

CROSS SECTIONS - I-71
 STA 180+50 TO STA 181+50

FRA - 71 - 0.00

790
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS2229.dgn XS_SHEET_129 10/28/2019 11:11:39 AM 1458s.js



CROSS SECTIONS - I-71
STA 182+00 TO STA 183+00

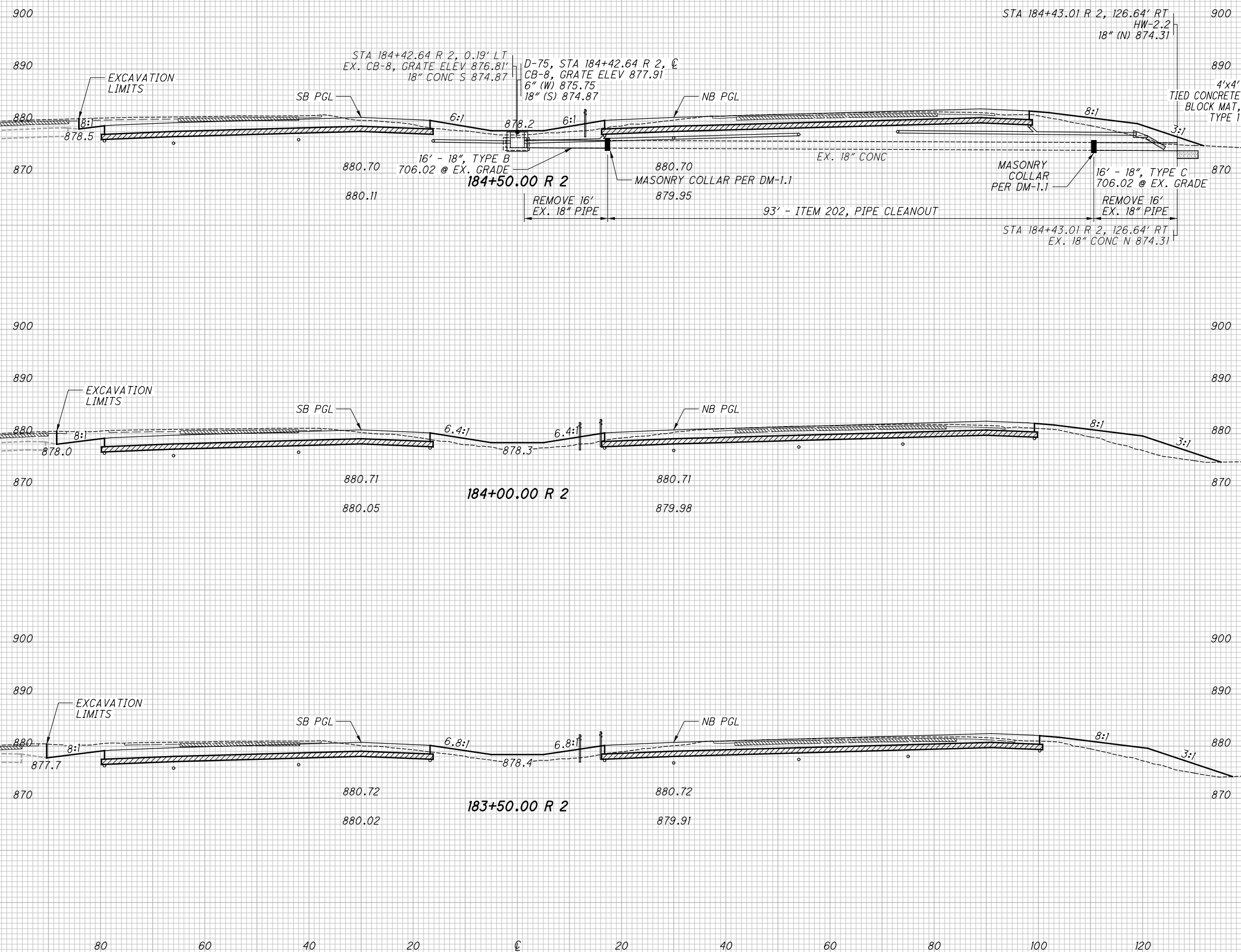
FRA-71-0.00

791
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS230.dgn XS_SHEET_130 10/28/2019 11:11:39 AM 14585js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
82	146	82	146
475	814	475	814
89	147	89	147
503	819	503	819
92	148	92	148
517	822	517	822
1495	2455	1495	2455

- LEGEND:**
- EX CONCRETE PAVEMENT
 - ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 - ITEM 204 - GRANULAR MATERIAL, TYPE B
 - SEE RAMP A CROSS SECTIONS



ITEM 203		ITEM 204		CALCULATED	DCB	CHECKED	SJS
END AREA	VOLUME	END AREA	VOLUME				
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
183	83	146	146				
	346	170	272				
191	100	147	147				
	350	191	274				
187	106	148	148				
	353	180	275				
	1049	541	821				




CROSS SECTIONS - I-71
STA 183+50 TO STA 184+50

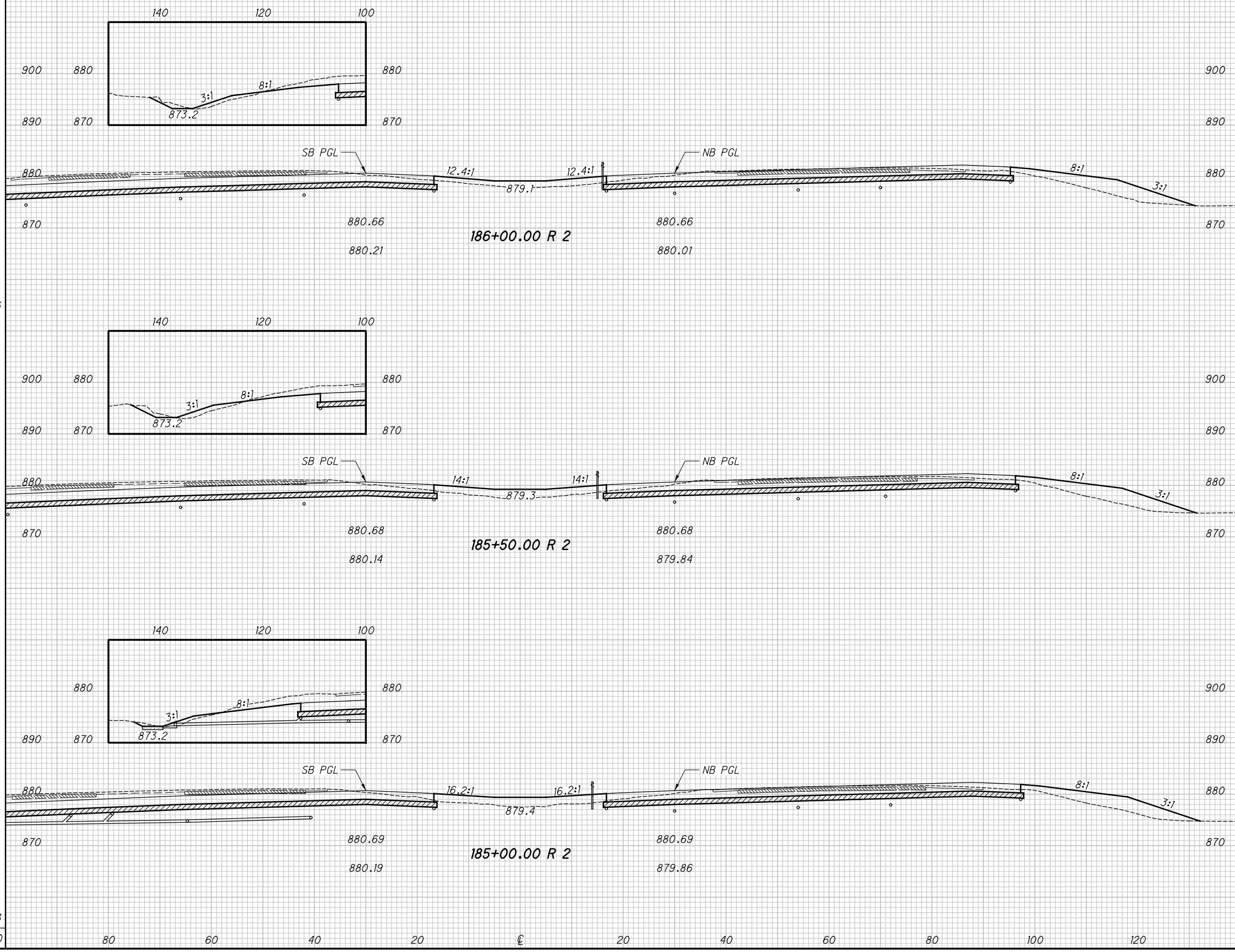
FRA-71-0:00

792
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS231.dgn XS_SHEET_131 10/28/2019 11:11:40 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
117	170	170	170
647	956	174	174
631	981	179	179
536	903		
1814	2840		

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B






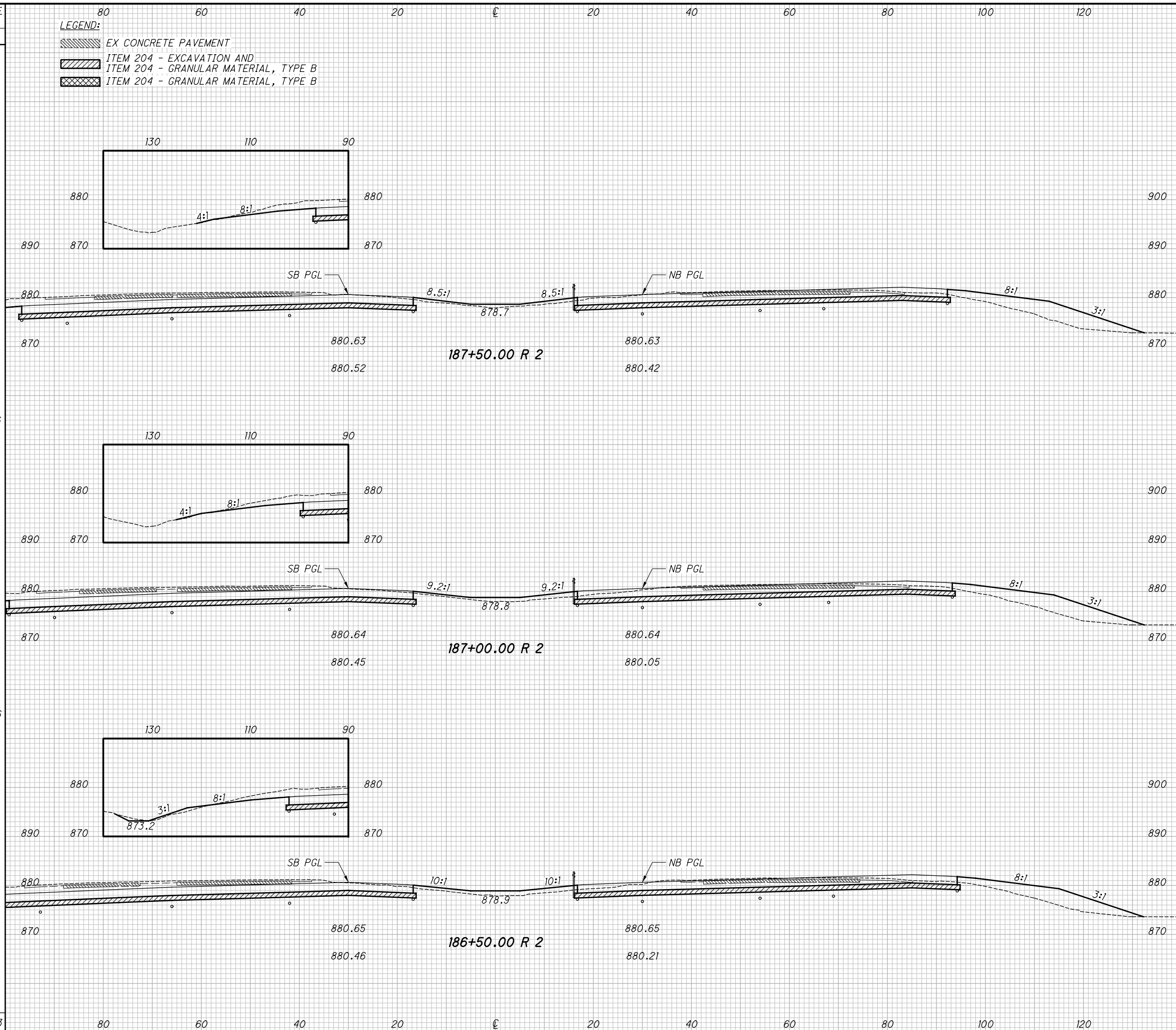
ITEM 203		ITEM 204		CALCULATED DCB	CHECKED SJS
END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL		
275	114	169	169		
	510		224	318	318
275	128	174	174		
	514		231	326	326
279	122	179	179		
	428		190	301	301
	1452		645	945	945

CROSS SECTIONS - I-71
STA 185+00 TO STA 186+00
FRA - 71-0.00
 793
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS232.dgn XS_SHEET_132 10/28/2019 11:11:40 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
109	158	109	161
606		631	
118	165		
653	931		
1890	2723		

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B






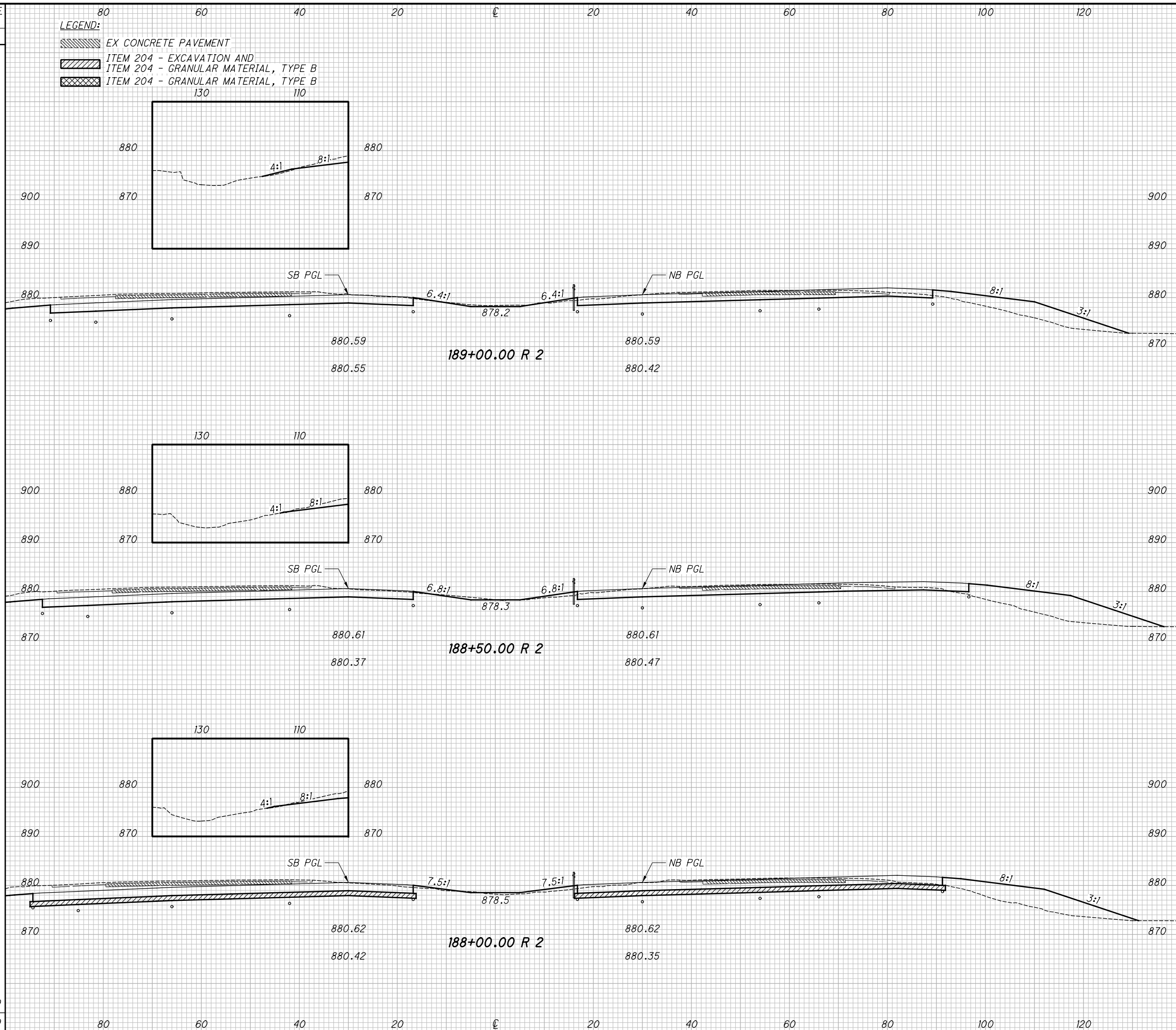
ITEM 203		ITEM 204		CALCULATED DCB	CHECKED	SJS
END AREA CUT	VOLUME FILL	END AREA CUT	VOLUME FILL			
265	110	158	158			
492	204	295	295			
267	111	161	161			
496	204	302	302			
268	110	165	165			
503	207	310	310			
1491	615	907	907			

CROSS SECTIONS - I-71
STA 186+50 TO STA 187+50
FRA - 71-0.00
 794
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS233.dgn XS_SHEET_133 10/28/2019 11:11:40 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
600	869	869	
1789	869		

- LEGEND:**
-  EX CONCRETE PAVEMENT
 -  ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 -  ITEM 204 - GRANULAR MATERIAL, TYPE B



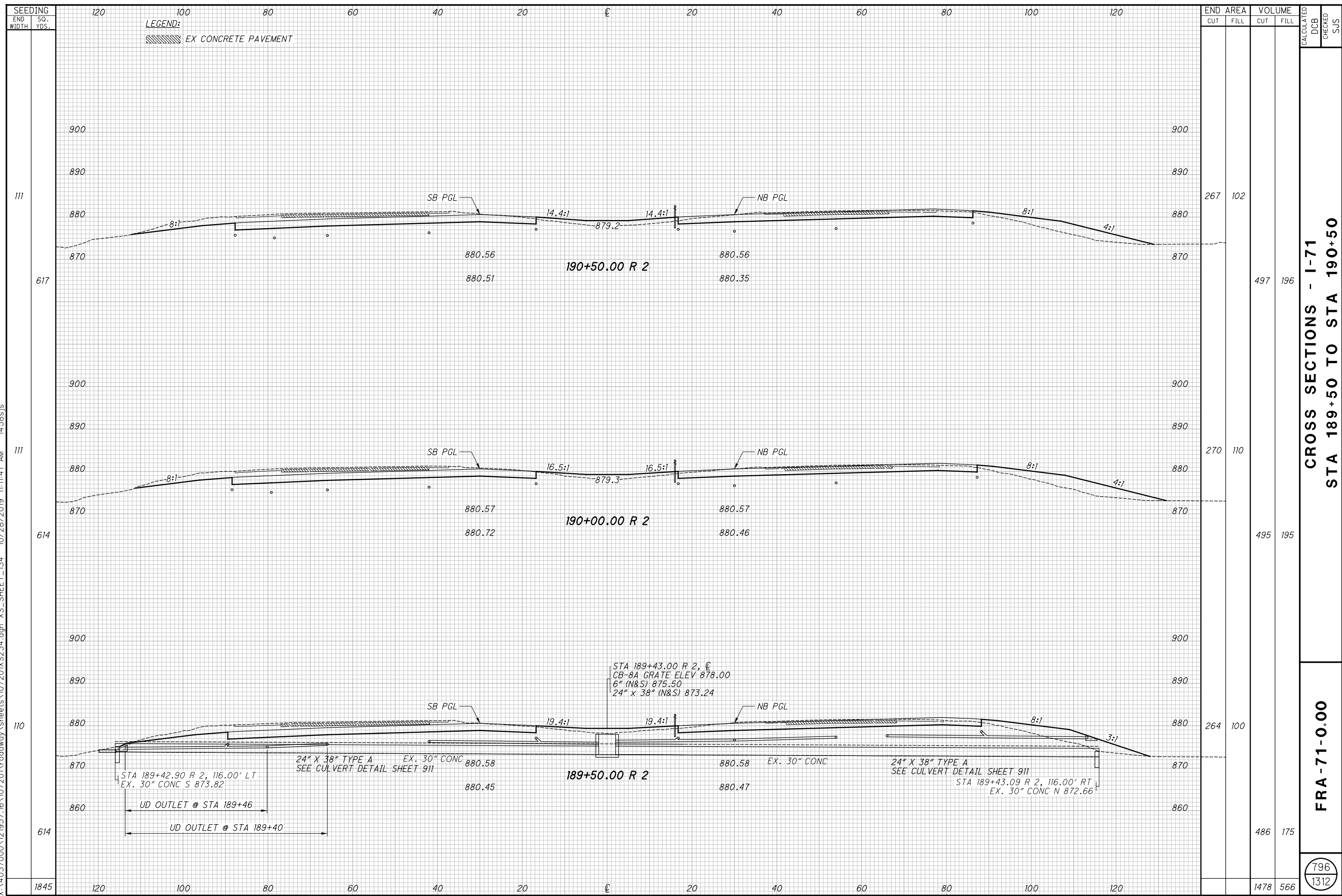
ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS
END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL			
261	89	483	213							
261	141	474	242							
251	120	154	155							
		477	213	289	289					
		1434	668	289	289					

CROSS SECTIONS - I-71
STA 188+00 TO STA 189+00

FRA-71-0.00

795
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS234.dgn XS_SHEET_134 10/28/2019 11:11:41 AM 1458sjs



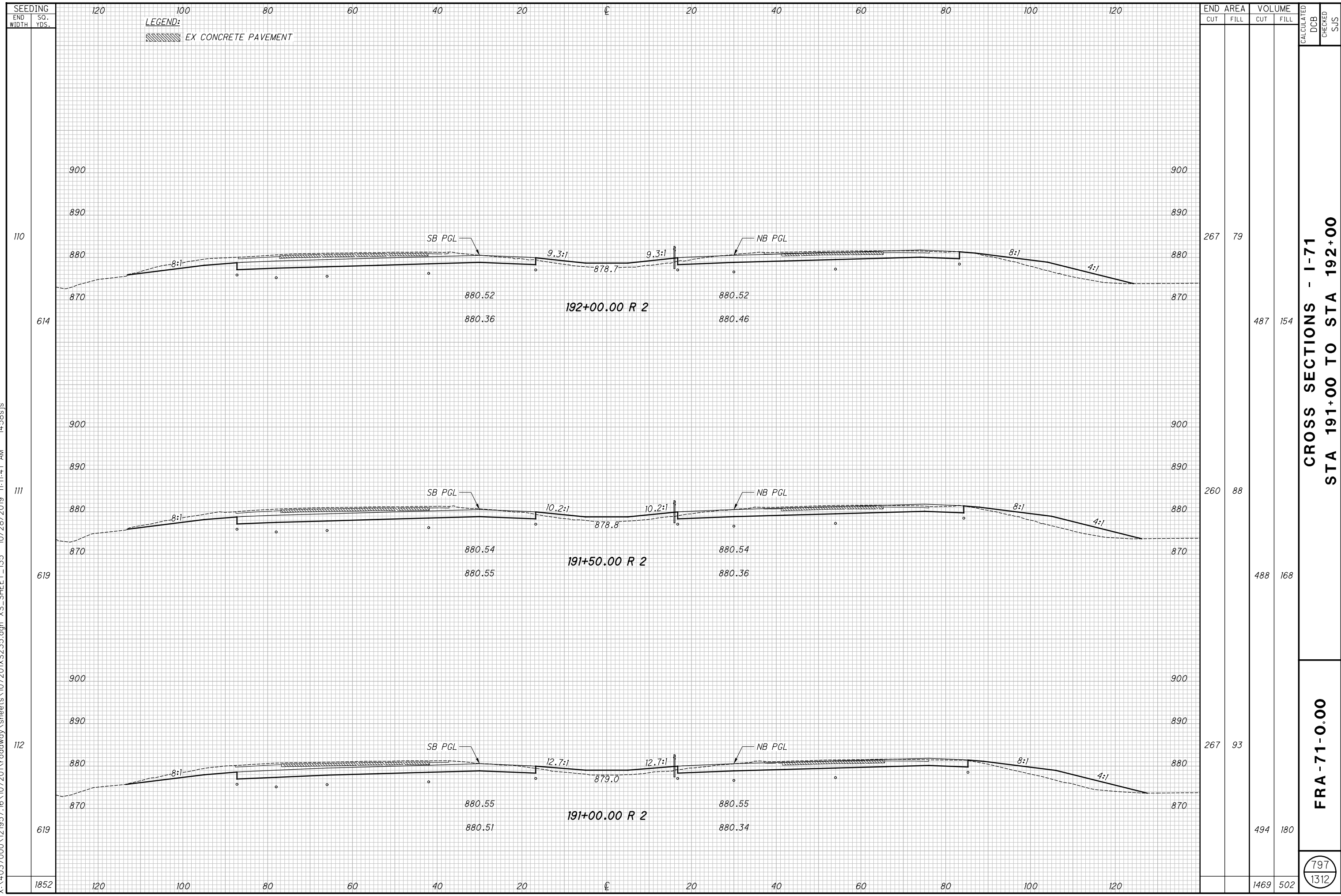
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
267	102					
497	196					
270	110					
495	195					
264	100					
486	175					
1478	566					

**CROSS SECTIONS - I-71
STA 189+50 TO STA 190+50**

FRA-71-0.00

796
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS235.dgn XS_SHEET_135 10/28/2019 11:11:41 AM 1458s.js



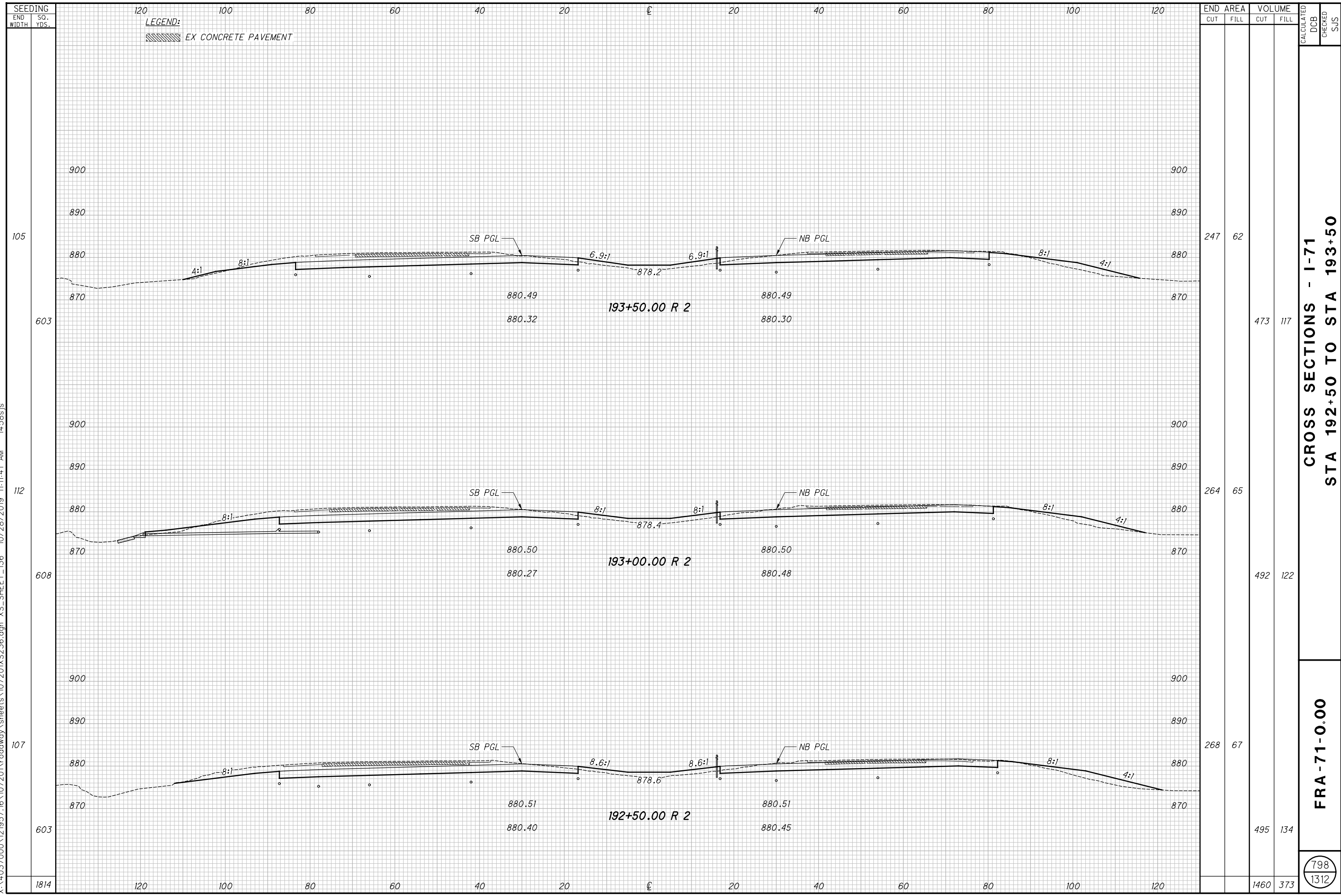
SEEDING	END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
	END WIDTH	SO. YDS.	CUT	FILL				
110	120	100	267	79				
614	120	100	487	154				
111	120	100	260	88				
619	120	100	488	168				
112	120	100	267	93				
619	120	100	494	180				
1852	120	100	1469	502				

CROSS SECTIONS - I-71
STA 191+00 TO STA 192+00

FRA - 71 - 0.00

797
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS236.dgn XS_SHEET_136 10/28/2019 11:11:41 AM 1458s.js



SEEDING	
END WIDTH	SO. YDS.
105	
603	
112	
608	
107	
603	
1814	

120 100 80 60 40 20 0 20 40 60 80 100 120

LEGEND:
 EX CONCRETE PAVEMENT

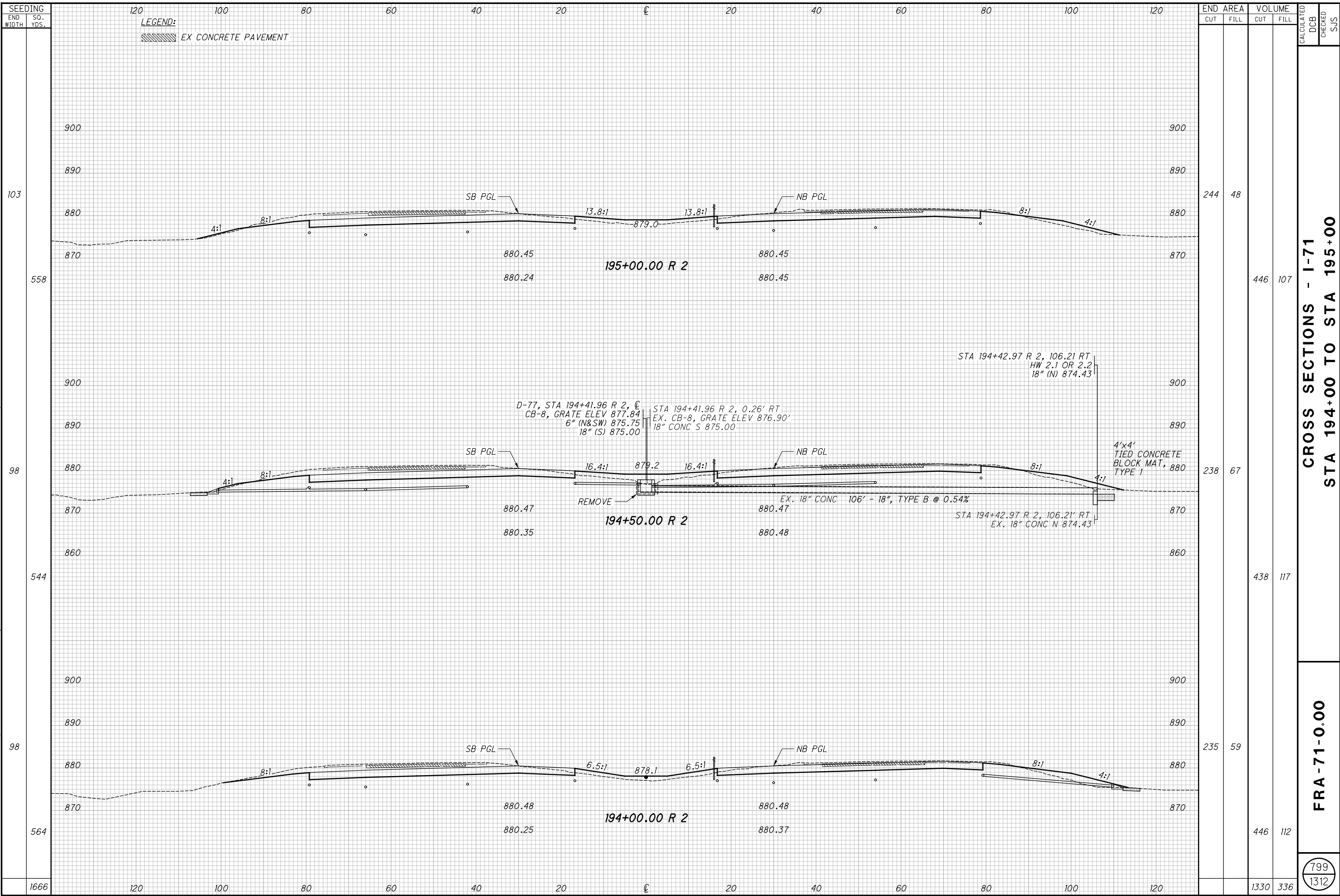
END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	DCB	SJS
247	62	473	117		
264	65	492	122		
268	67	495	134		
		1460	373		

CROSS SECTIONS - I-71
 STA 192+50 TO STA 193+50

FRA - 71 - 0.00

798
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS237.dgn XS_SHEET_137 10/28/2019 11:11:42 AM 1458s.js



LEGEND:
 [Hatched Box] EX CONCRETE PAVEMENT

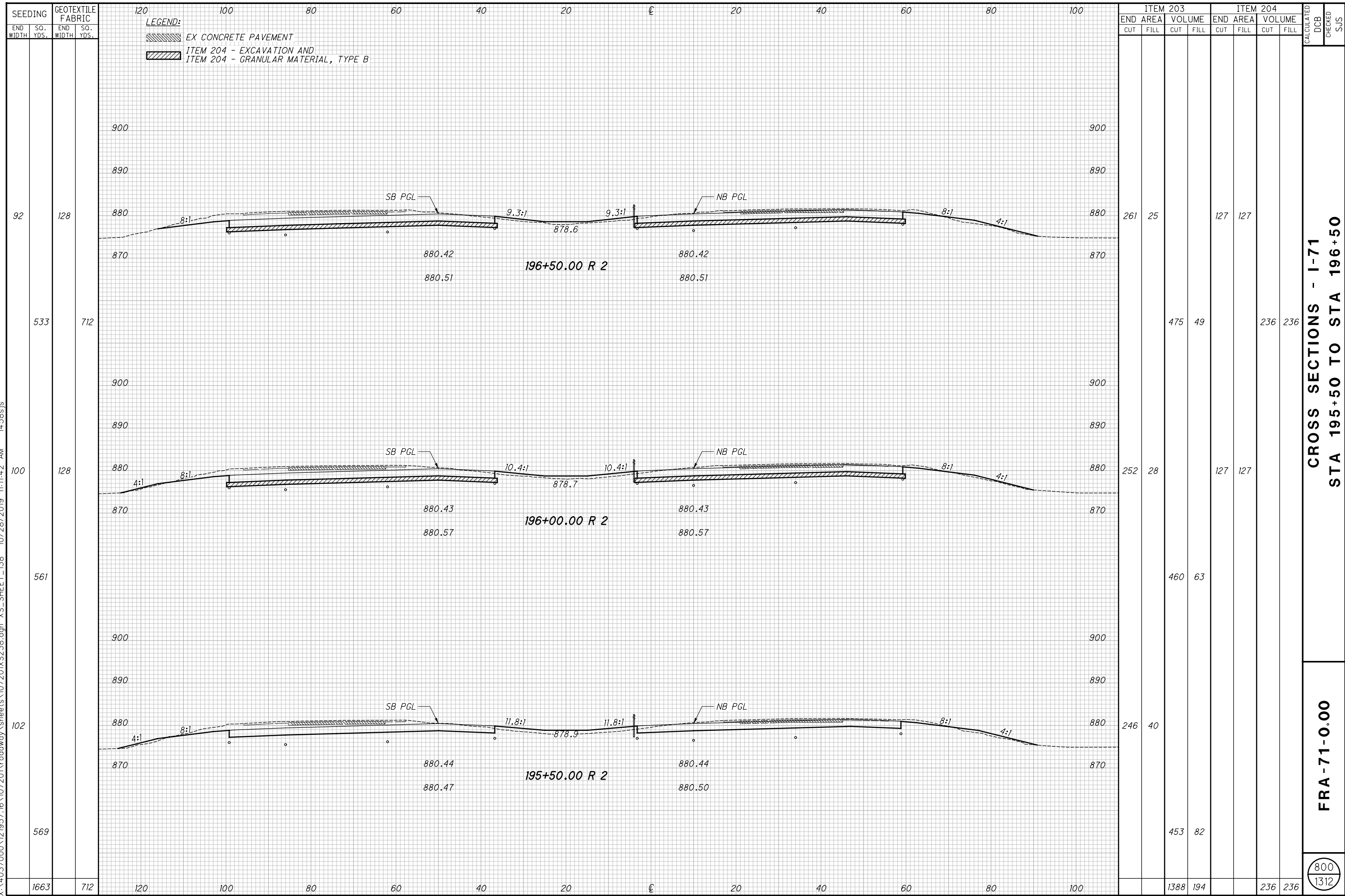
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
244	48				
238	67				
235	59				
1330	336				

CROSS SECTIONS - I-71
 STA 194+00 TO STA 195+00

FRA - 71 - 0.00

799
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS238.dgn XS_SHEET_138 10/28/2019 11:11:42 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
92		128	
533		712	
100		128	
561			
102			
569			
1663		712	

120		100		80		60		40		20		CL	20		40		60		80		100	
<p>LEGEND:</p> <p> EX CONCRETE PAVEMENT</p> <p> ITEM 204 - EXCAVATION AND</p> <p> ITEM 204 - GRANULAR MATERIAL, TYPE B</p>																						
<p>SB PGL</p> <p>NB PGL</p> <p>8:1</p> <p>9.3:1</p> <p>9.3:1</p> <p>8:1</p> <p>4:1</p> <p>878.6</p> <p>880.42</p> <p>880.51</p> <p>196+50.00 R 2</p> <p>880.42</p> <p>880.51</p>																						
<p>SB PGL</p> <p>NB PGL</p> <p>4:1</p> <p>8:1</p> <p>10.4:1</p> <p>10.4:1</p> <p>8:1</p> <p>4:1</p> <p>878.7</p> <p>880.43</p> <p>880.57</p> <p>196+00.00 R 2</p> <p>880.43</p> <p>880.57</p>																						
<p>SB PGL</p> <p>NB PGL</p> <p>4:1</p> <p>8:1</p> <p>11.8:1</p> <p>11.8:1</p> <p>8:1</p> <p>4:1</p> <p>878.9</p> <p>880.44</p> <p>880.47</p> <p>195+50.00 R 2</p> <p>880.44</p> <p>880.50</p>																						

ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
261	25			127	127		
		475	49			236	236
252	28			127	127		
		460	63				
246	40						
		453	82				
		1388	194			236	236

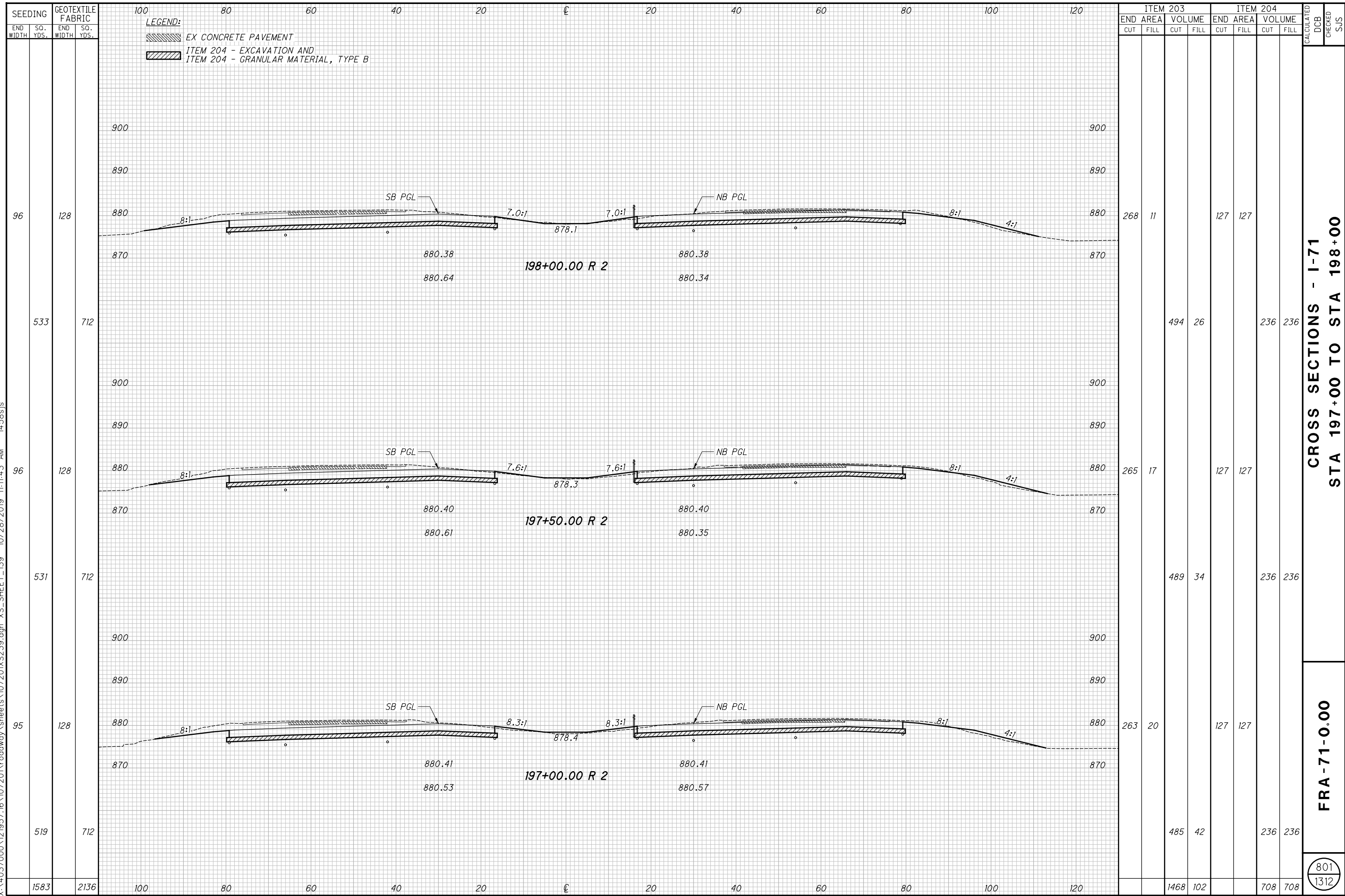
CALCULATED	DCB	CHECKED	SJS

CROSS SECTIONS - I-71
STA 195+50 TO STA 196+50

FRA-71-0.00

800
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS239.dgn XS_SHEET_139 10/28/2019 11:11:43 AM 1458s.js



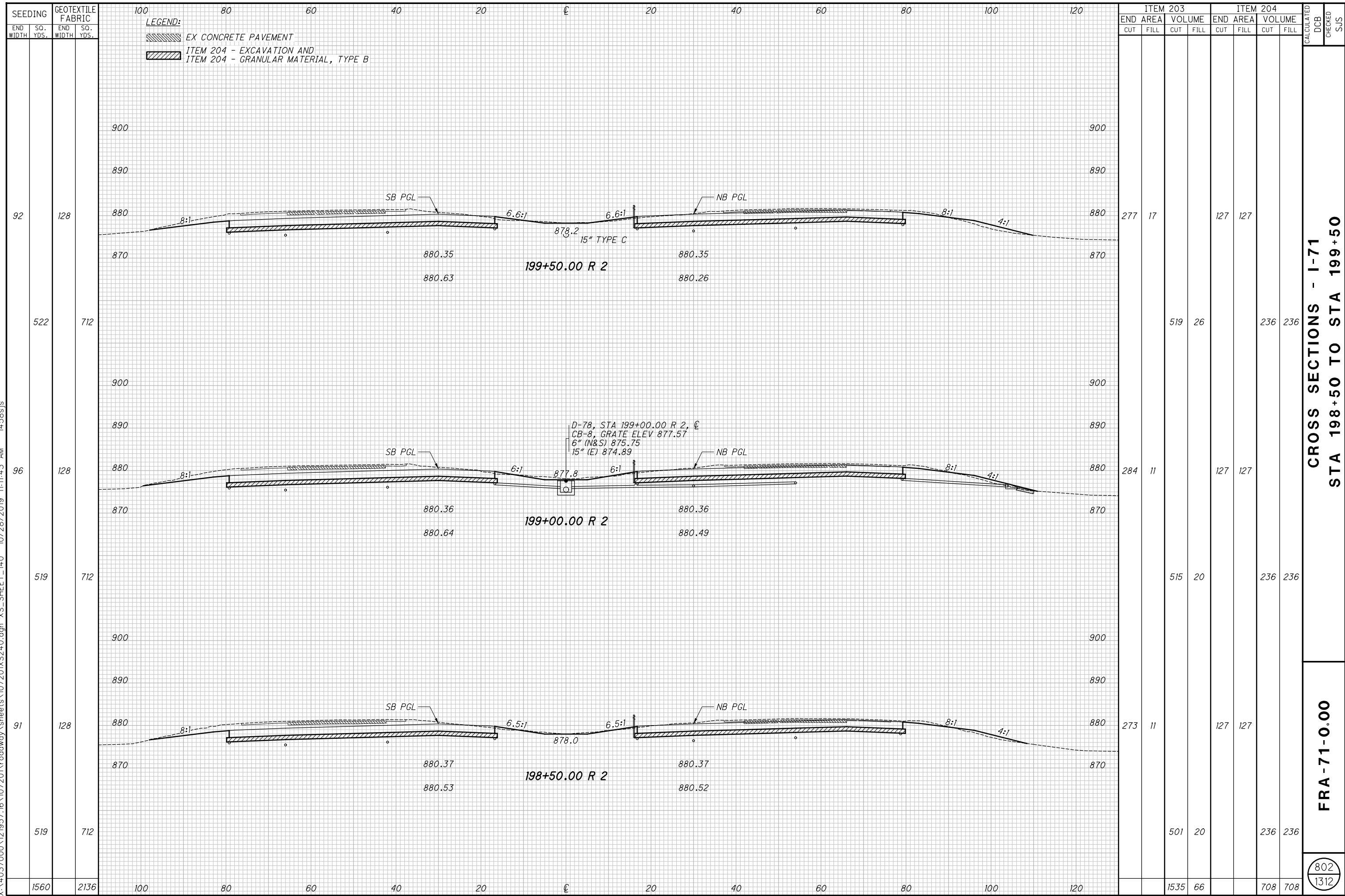
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
96	128	96	128
533	712	531	712
519	712		
1583	2136		

100		80		60		40		20		0	20		40		60		80		100		120	
880	880.38	880.64	880.38	880.34	880.38	880.34	880.38	880.34	880.38	880.34	880.38	880.34	880.38	880.34	880.38	880.34	880.38	880.34	880.38	880.34	880.38	
870																						

ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END CUT	AREA CUT	VOLUME CUT	FILL	END CUT	AREA CUT	VOLUME CUT	FILL				
268	11			127	127						
		494	26			236	236				
265	17			127	127						
		489	34			236	236				
263	20			127	127						
		485	42			236	236				
		1468	102			708	708				

CROSS SECTIONS - I-71
STA 197+00 TO STA 198+00
FRA - 71-0.00
 801
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS240.dgn XS_SHEET_140 10/28/2019 11:11:43 AM 1458s.js

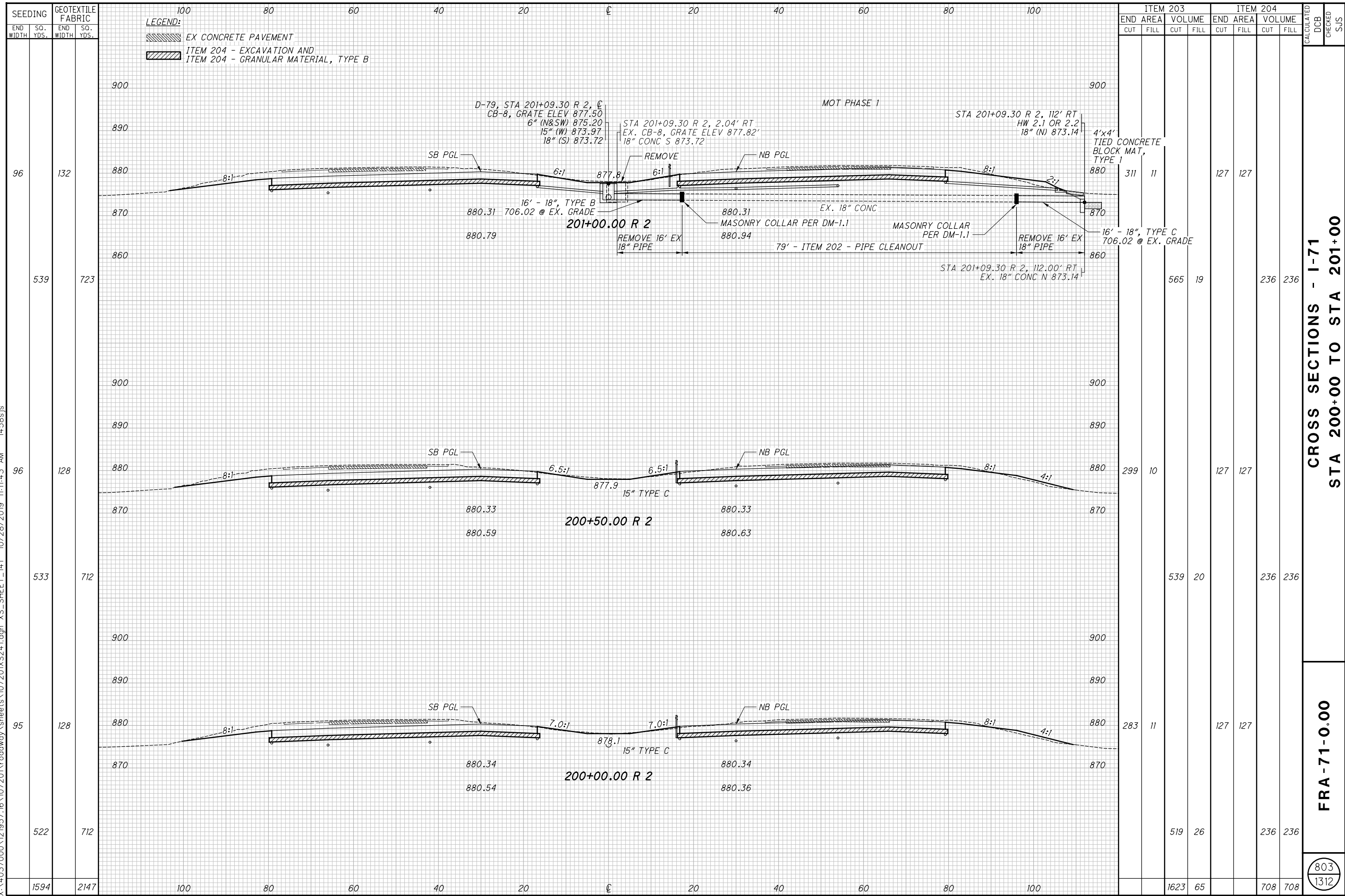


CROSS SECTIONS - I-71
 STA 198+50 TO STA 199+50

FRA-71-0:00

802
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS241.dgn XS_SHEET_141 10/28/2019 11:11:43 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL				
96	132	96	132	311	11			127	127						
539	723	539	723			565	19			236	236				
96	128	96	128	299	10			127	127						
533	712	533	712			539	20			236	236				
95	128	95	128	283	11			127	127						
522	712	522	712			519	26			236	236				
1594	2147	1594	2147			1623	65			708	708				

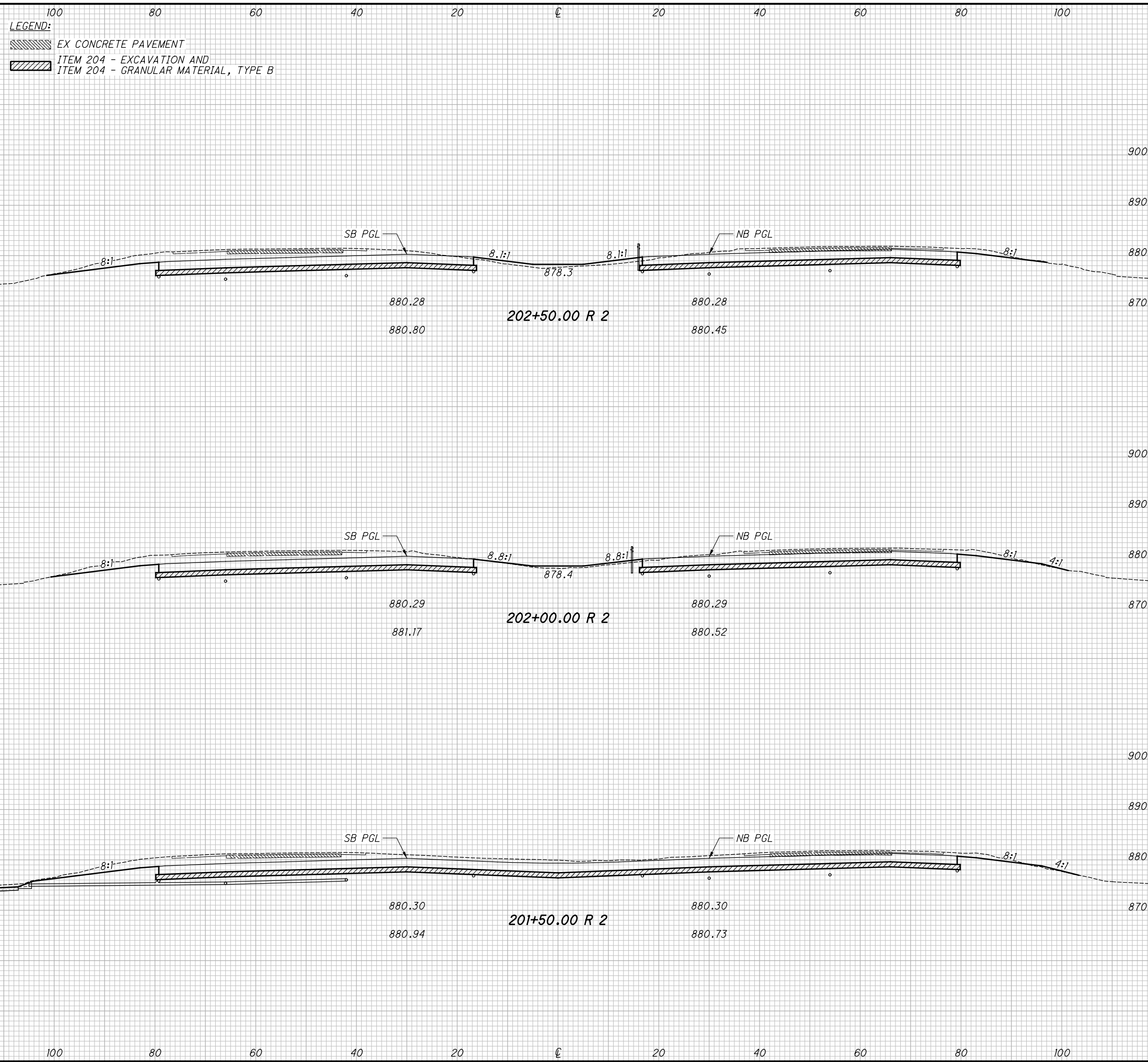
CROSS SECTIONS - I-71
STA 200+00 TO STA 201+00

FRA-71-0:00

803
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS242.dgn XS_SHEET_142 10/28/2019 11:11:44 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
83	128	83	128
477	712	477	712
87	128	87	128
400	800	400	800
57	160	57	160
428	811	428	811
1305	2323	1305	2323

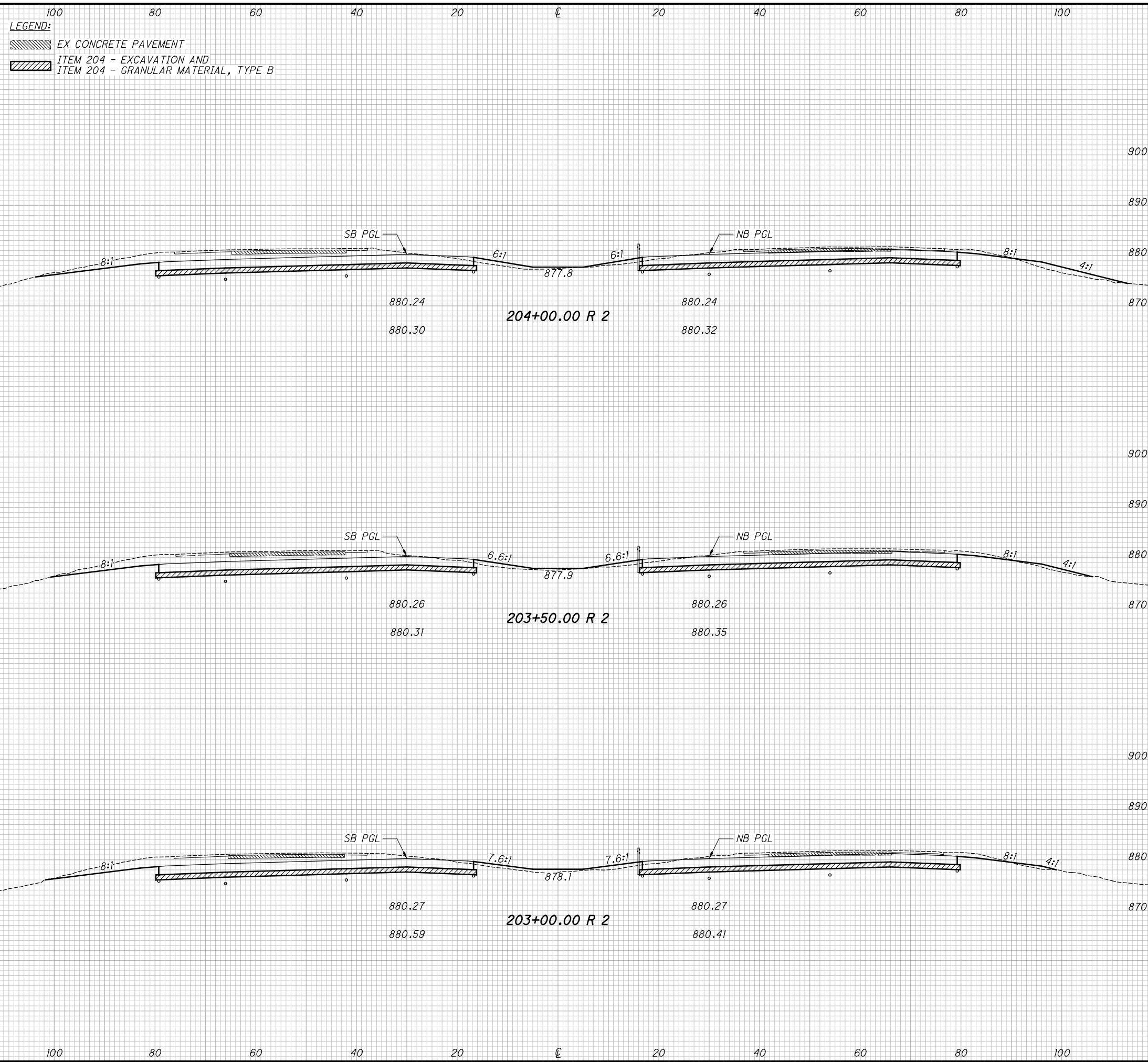


ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
307	19			127	127		
		575	26			236	236
313	10			127	127		
		660	10			266	266
400	2			160	160		
		658	11			266	266
		1893	47			768	768

CROSS SECTIONS - I-71
 STA 201+50 TO STA 202+50
 FRA-71-0:00
 804
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS24.3.dgn XS_SHEET_14.3 10/28/2019 11:11:44 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
102	128	128	712
544	712	712	712
92	128	128	712
494	712	712	712
85	128	128	712
466	712	712	712
1504	2136	2136	712



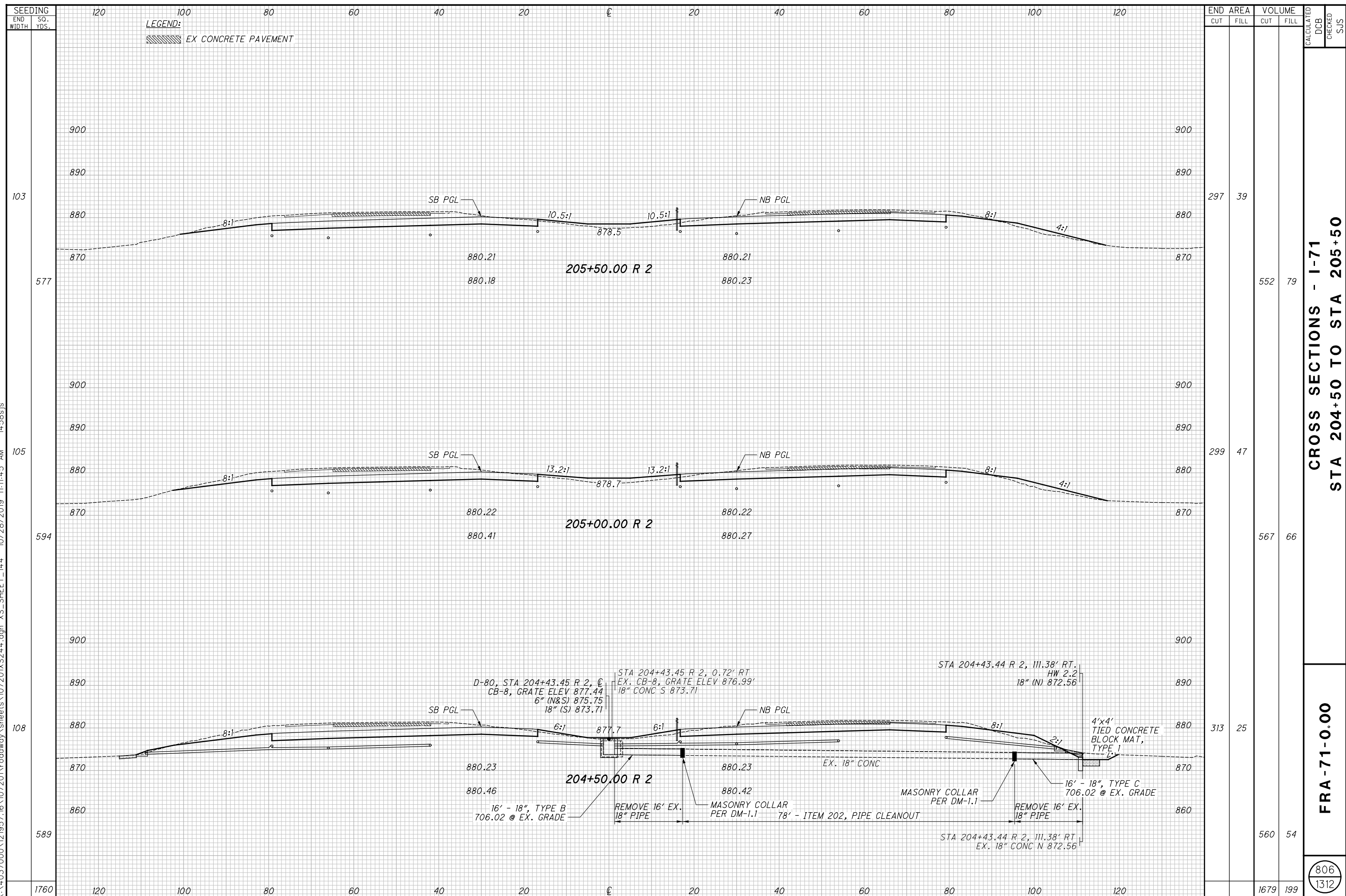
ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL				
293	34			127	127						
		543	52			236	236				
293	22			127	127						
		550	42			236	236				
300	23			127	127						
		563	39			236	236				
		1656	133			708	708				

CROSS SECTIONS - I-71
 STA 203+00 TO STA 204+00

FRA-71-0.00

805
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS244.dgn XS_SHEET_144 10/28/2019 11:11:45 AM 1458sjs



103

577

105

594

108

589

1760

297

552

299

567

313

560

1679

39

79

47

66

25

54

199

205+50.00 R 2

205+00.00 R 2

204+50.00 R 2

D-80, STA 204+43.45 R 2, C
 EX. CB-8, GRATE ELEV 877.44
 6" (N&S) 875.75
 18" (S) 873.71

STA 204+43.45 R 2, 0.72' RT
 EX. CB-8, GRATE ELEV 876.99'
 18" CONC S 873.71

STA 204+43.44 R 2, 111.38' RT.
 HW 2.2
 18" (N) 872.56

16' - 18", TYPE B
 706.02 @ EX. GRADE

REMOVE 16' EX.
 18" PIPE

MASONRY COLLAR
 PER DM-1.1

78' - ITEM 202, PIPE CLEANOUT

MASONRY COLLAR
 PER DM-1.1

REMOVE 16' EX.
 18" PIPE

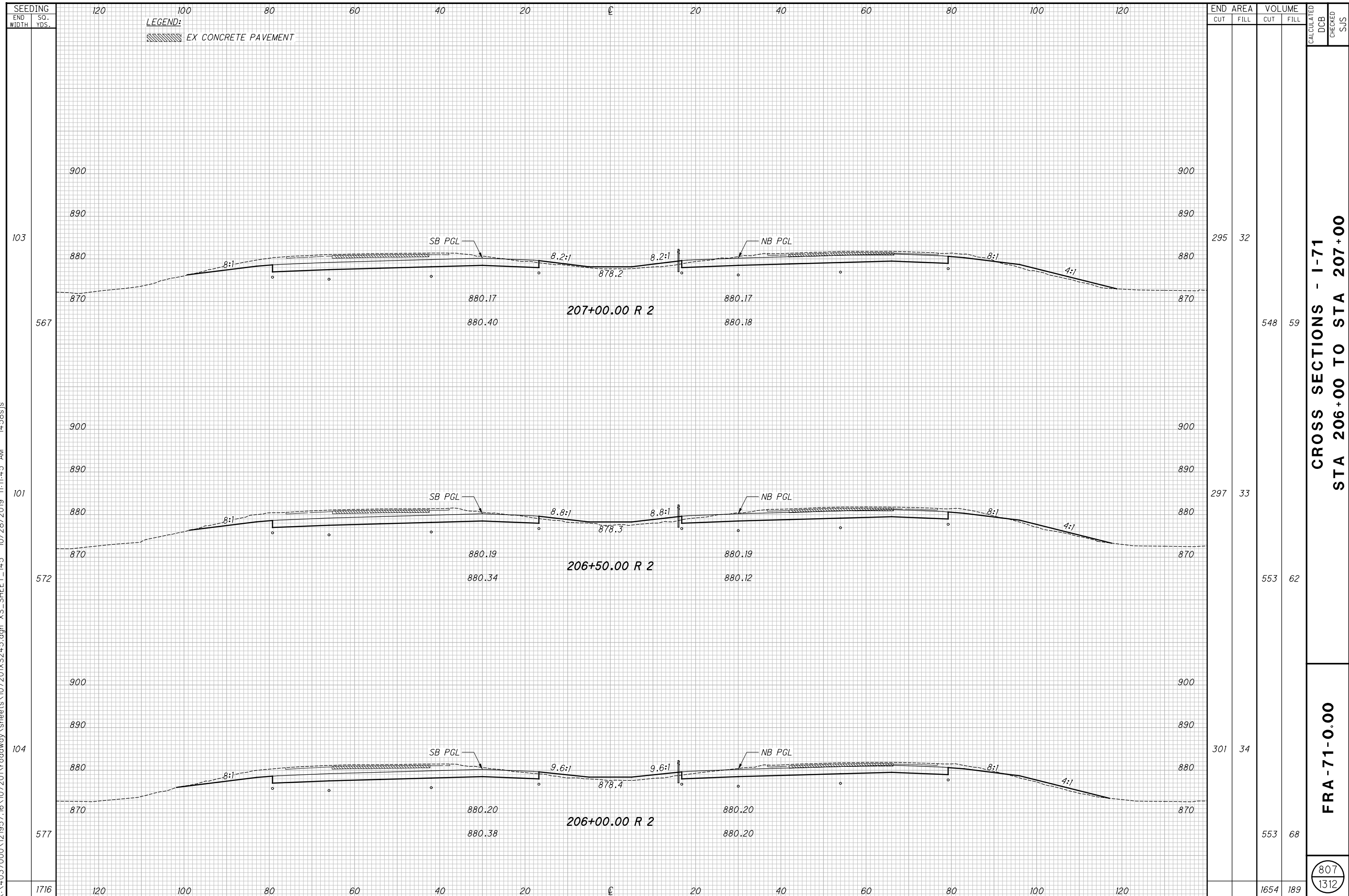
16' - 18", TYPE C
 706.02 @ EX. GRADE

4'x4'
 TIED CONCRETE
 BLOCK MAT,
 TYPE 1

STA 204+43.44 R 2, 111.38' RT
 EX. 18" CONC N 872.56

EX. 18" CONC

X:\4037000\121957.16\107201\roadway\sheets\107201XS245.dgn XS_SHEET_145 10/28/2019 11:11:45 AM 1458s.js



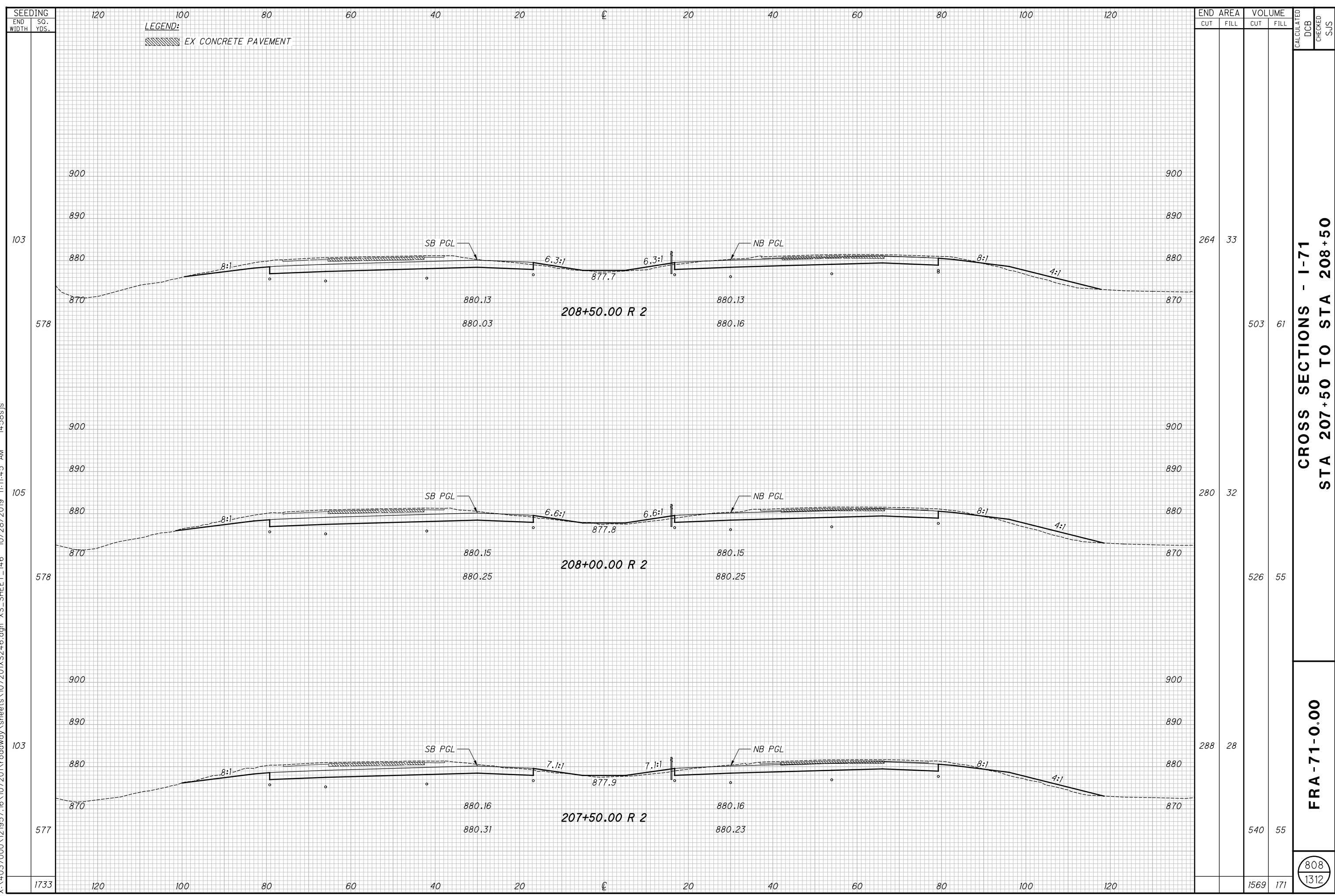
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
295	32					
	548	59				
297	33					
	553	62				
301	34					
	553	68				
	1654	189				

**CROSS SECTIONS - I-71
 STA 206+00 TO STA 207+00**

FRA - 71-0.00

807
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS246.dgn XS_SHEET_146 10/28/2019 11:11:45 AM 1458s.js



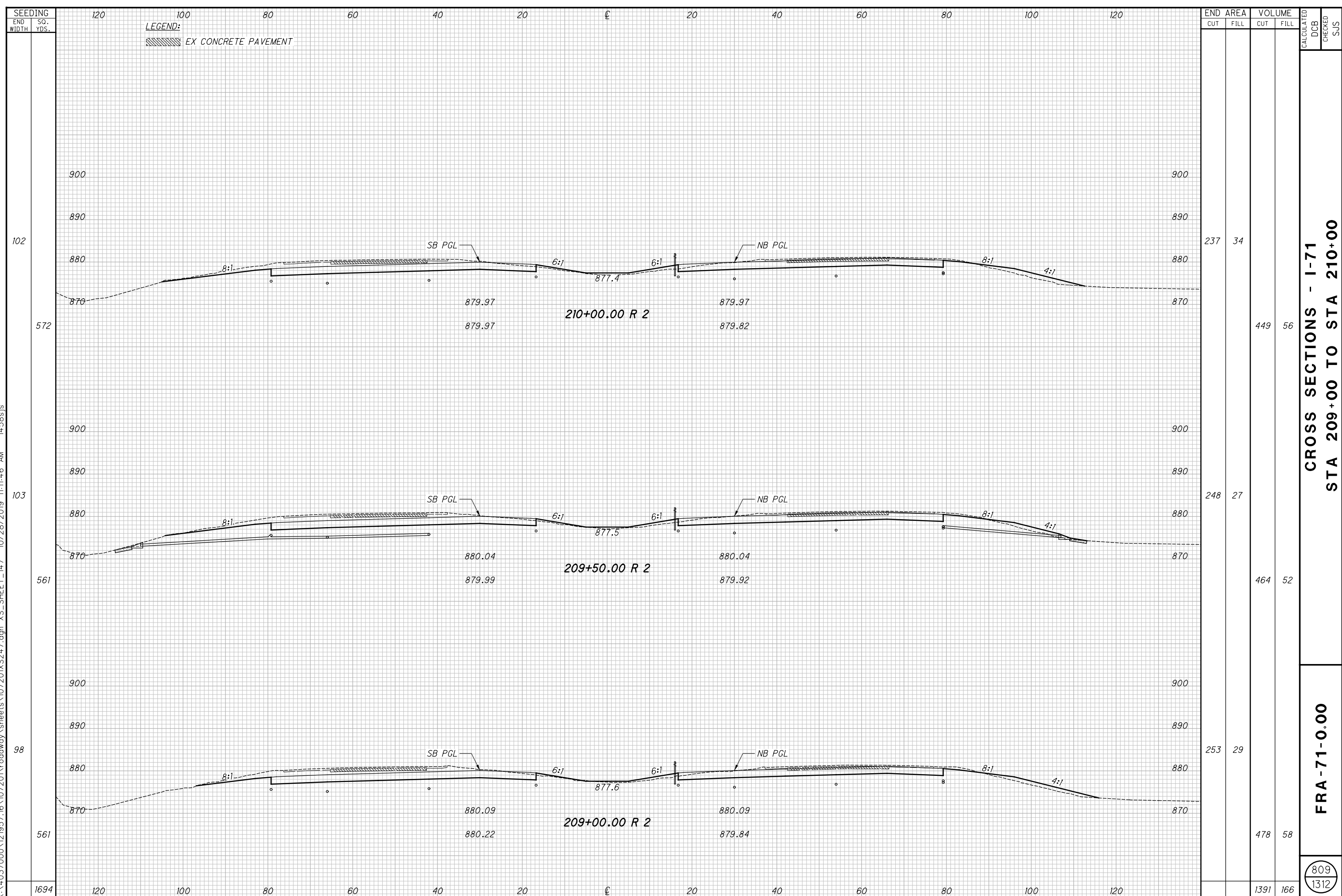
END AREA	VOLUME	CALCULATED	
		DCB	SJS
CUT	FILL	CUT	FILL
264	33	503	61
280	32	526	55
288	28	540	55
		1569	171

**CROSS SECTIONS - I-71
 STA 207+50 TO STA 208+50**

FRA-71-0.00

808
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS247.dgn XS_SHEET_147 10/28/2019 11:11:46 AM 1458s.js



SEEDING	120		100		80		60		40		20		CL	20		40		60		80		100		120	
	END WIDTH	SO. YDS.																							
102																									
572																									
103																									
561																									
98																									
561																									
1694																									

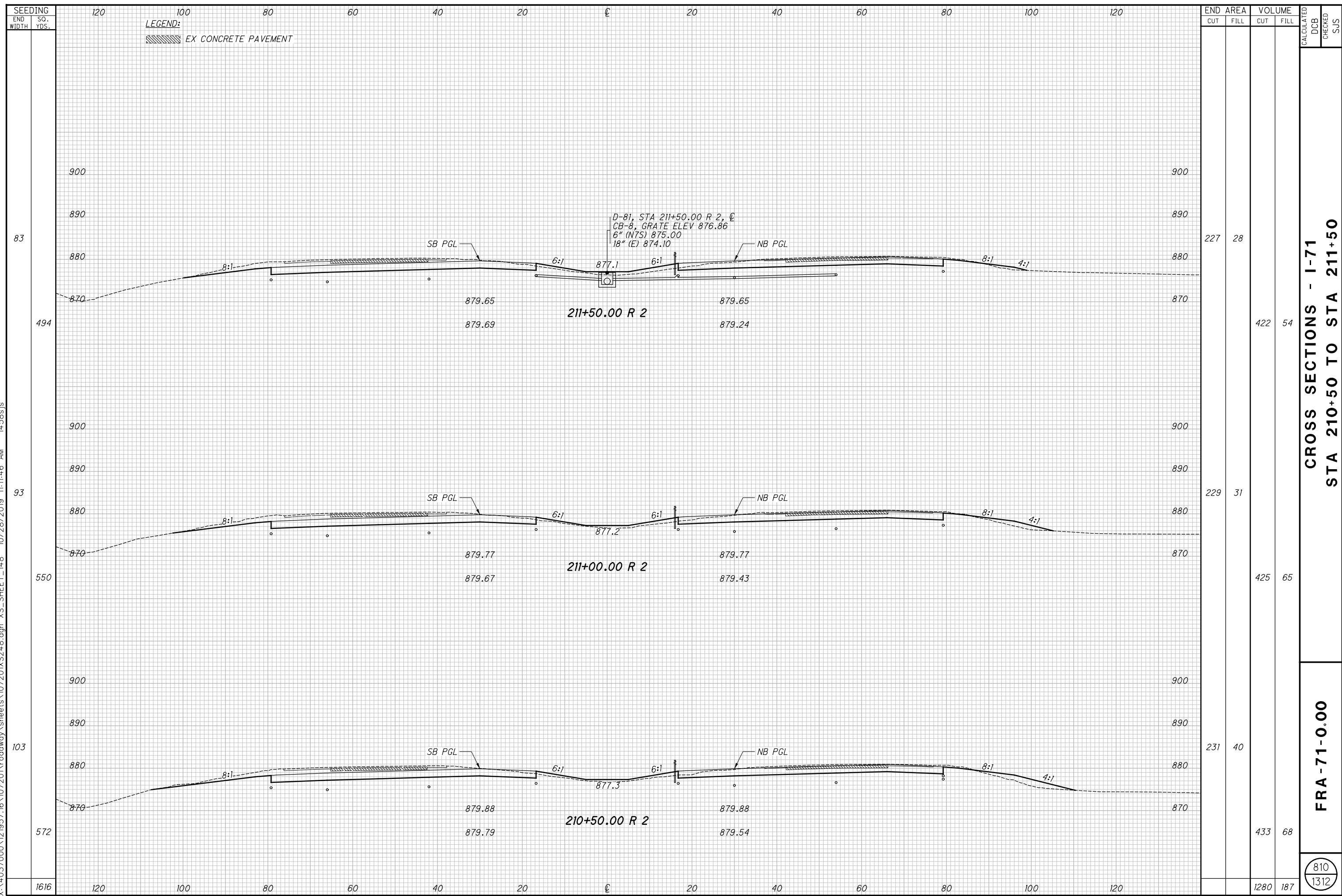
END AREA	VOLUME		CALCULATED	DCB	CHECKED	SJS
	CUT	FILL				
237	34					
248	27					
253	29					
		1391	166			

CROSS SECTIONS - I-71
STA 209+00 TO STA 210+00

FRA-71-0.00

809
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS248.dgn XS_SHEET_148 10/28/2019 11:11:46 AM 1458s.js

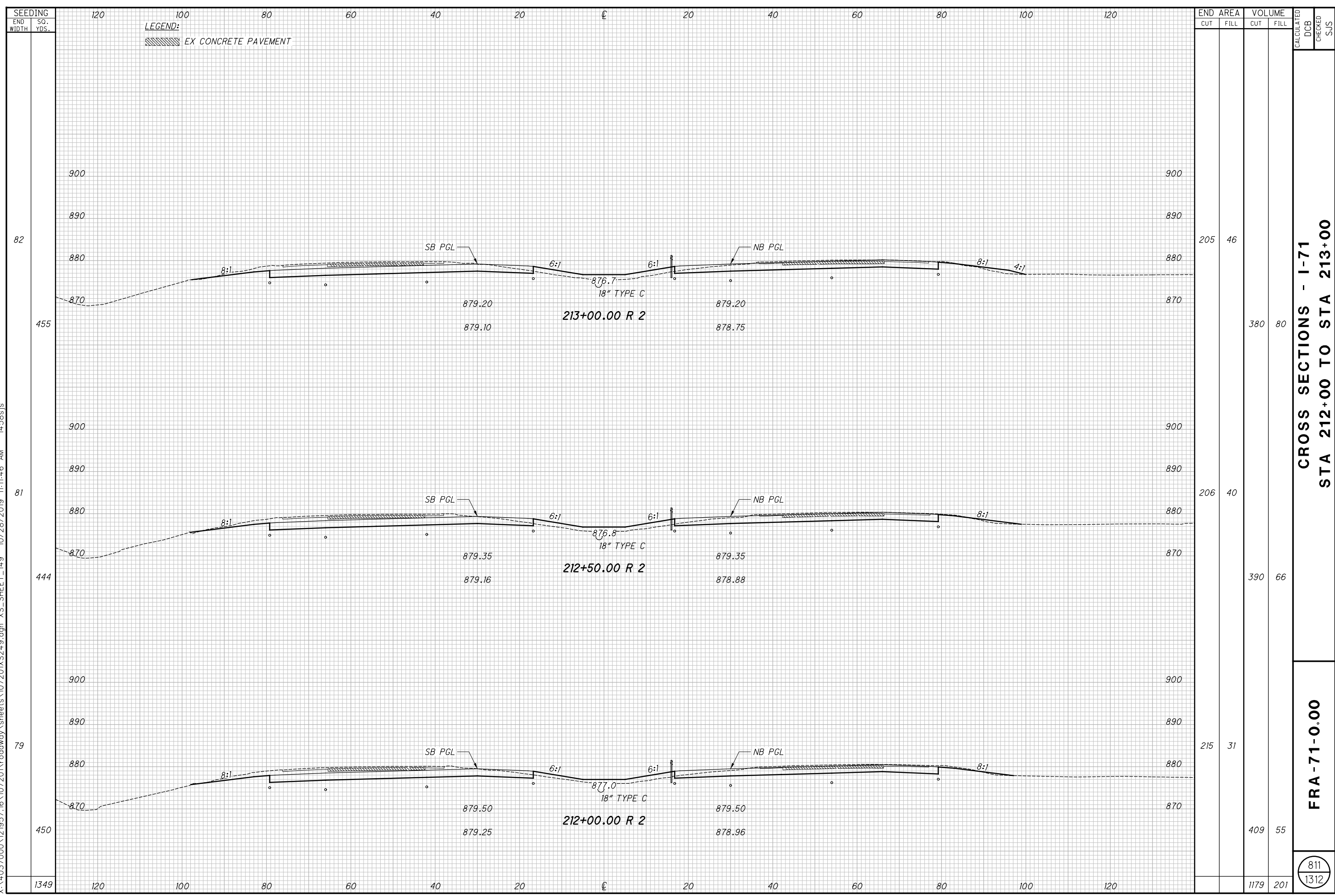


**CROSS SECTIONS - I-71
 STA 210+50 TO STA 211+50**

FRA-71-0.00

810
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS249.dgn XS_SHEET_149 10/28/2019 11:11:46 AM 14585.js



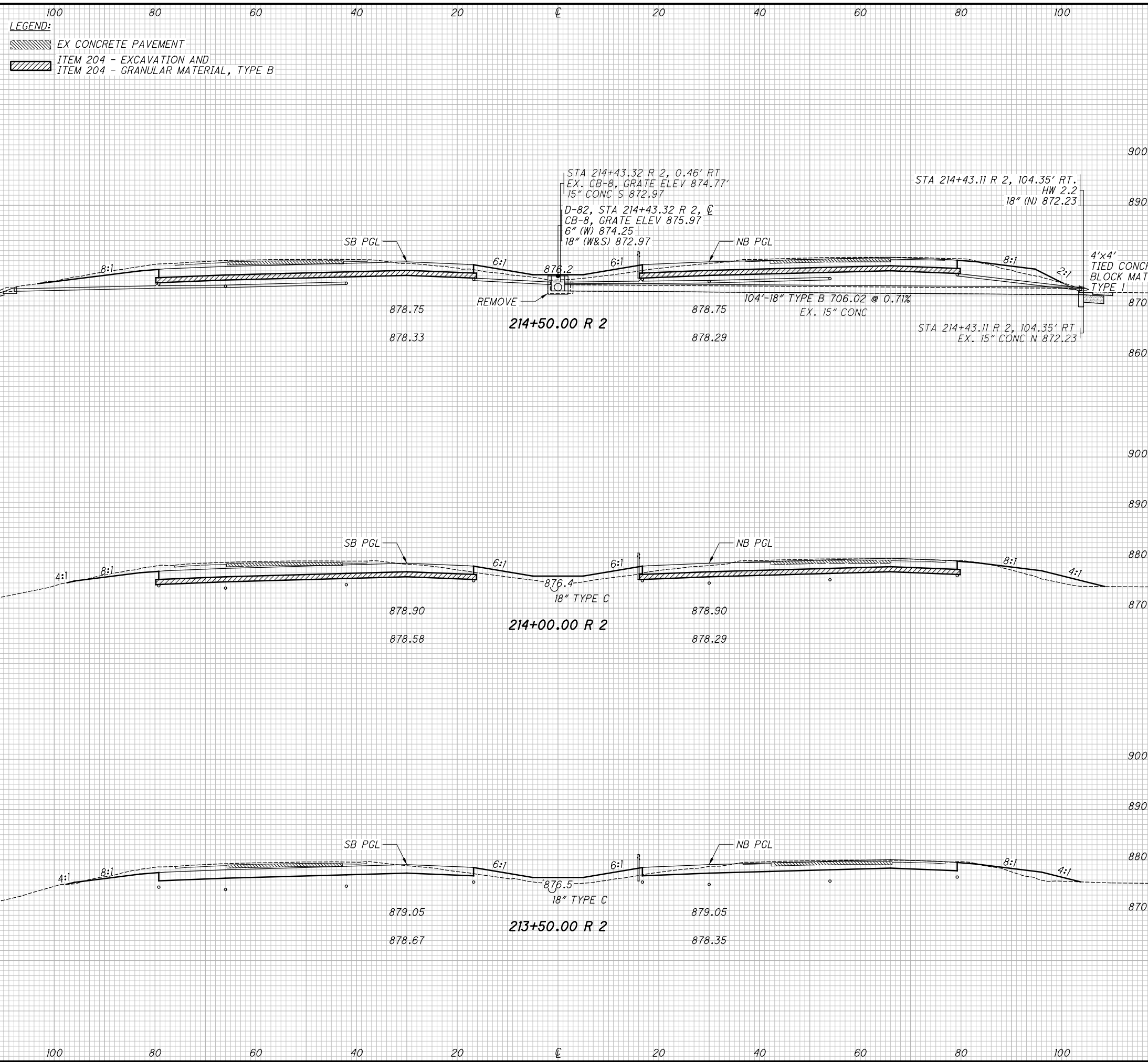
**CROSS SECTIONS - I-71
 STA 212+00 TO STA 213+00**

FRA - 71 - 0.00

811
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS250.dgn XS_SHEET_150 10/28/2019 11:11:47 AM 1458s.js

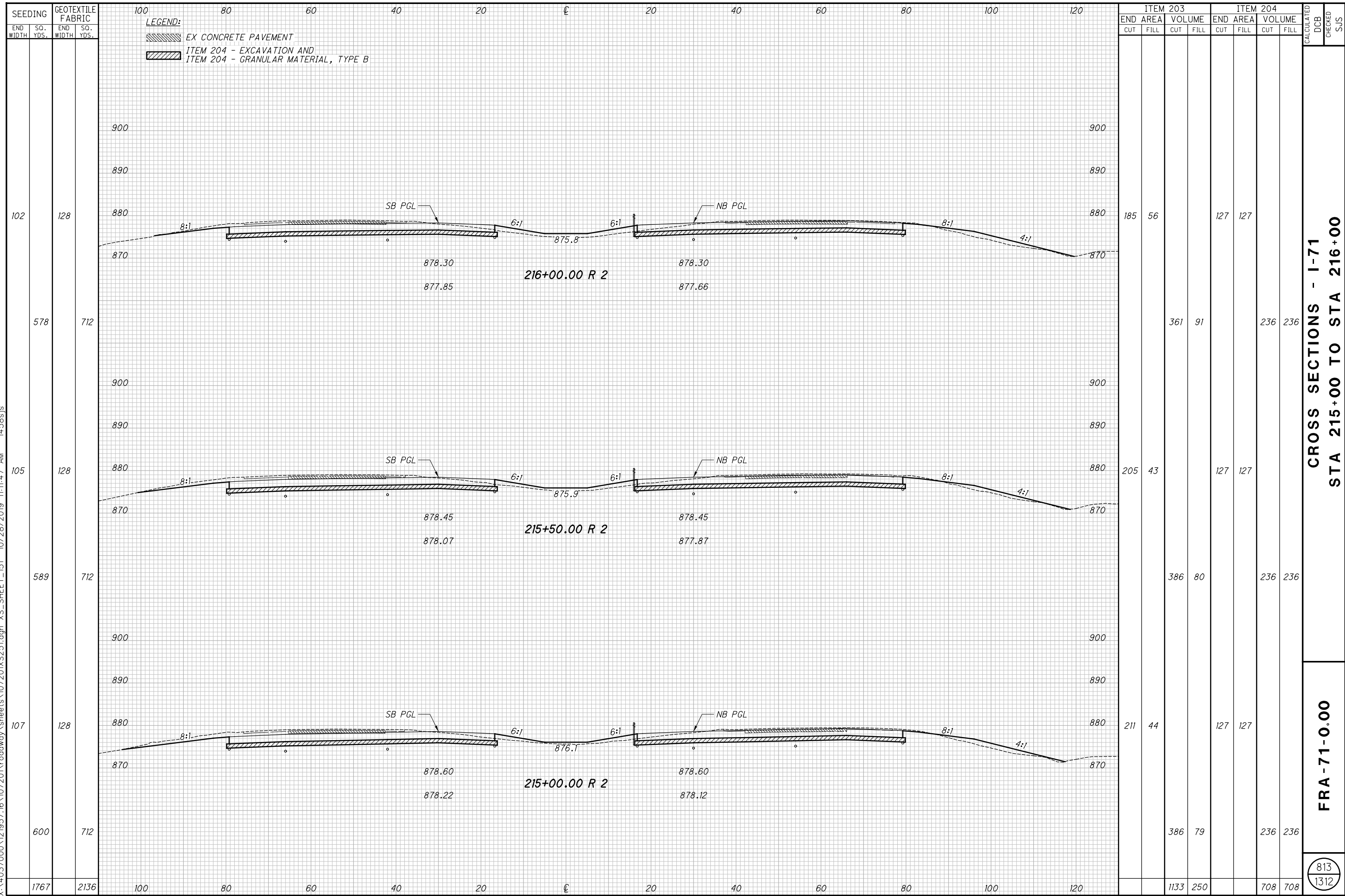
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
107	128	107	128
550	712	550	712
91	128	91	128
494		494	
86		86	
466		466	
1510	712	1510	712



ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END AREA		VOLUME		END AREA		VOLUME					
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL				
		206	42	127	127						
		373	95	236	236						
		197	61	127	127						
		365	108								
		198	55								
		373	94								
		1111	297	236	236						

CROSS SECTIONS - I-71
STA 213+50 TO STA 214+50
FRA - 71 - 0.00
 812
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS251.dgn XS_SHEET_151 10/28/2019 11:11:47 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
102	128	102	128
105	578	105	712
107	589	107	712
600	712	600	712
1767	2136	1767	2136

100		80		60		40		20		0	20		40		60		80		100		120	
-----	--	----	--	----	--	----	--	----	--	---	----	--	----	--	----	--	----	--	-----	--	-----	--

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B

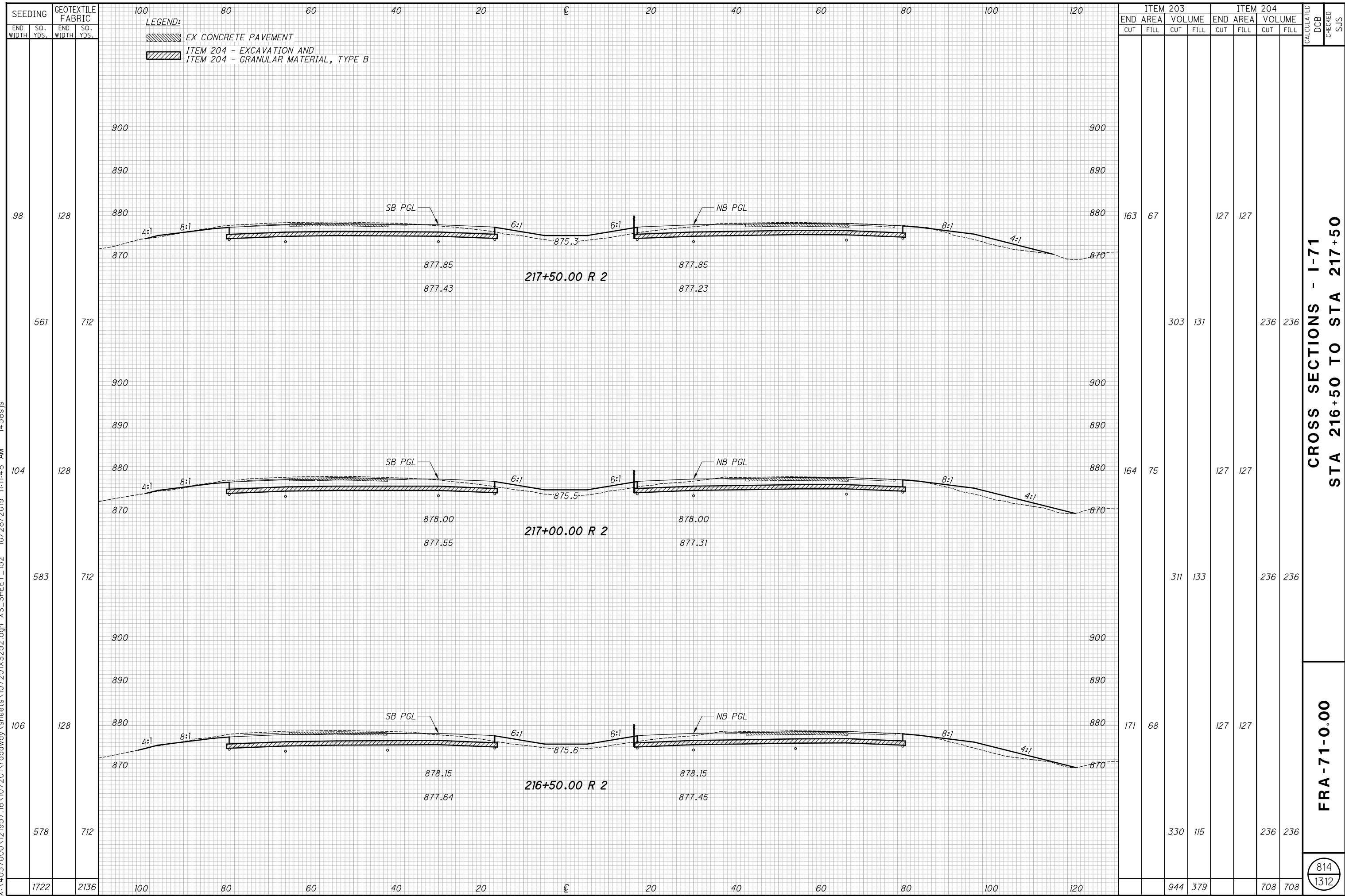
ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END AREA		VOLUME		END AREA		VOLUME					
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL				
185	56			127	127						
		361	91			236	236				
205	43			127	127						
		386	80			236	236				
211	44			127	127						
		386	79			236	236				
		1133	250			708	708				

CROSS SECTIONS - I-71
 STA 215+00 TO STA 216+00

FRA-71-0:00

813
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS252.dgn XS_SHEET_152 10/28/2019 11:11:48 AM 1458s.js

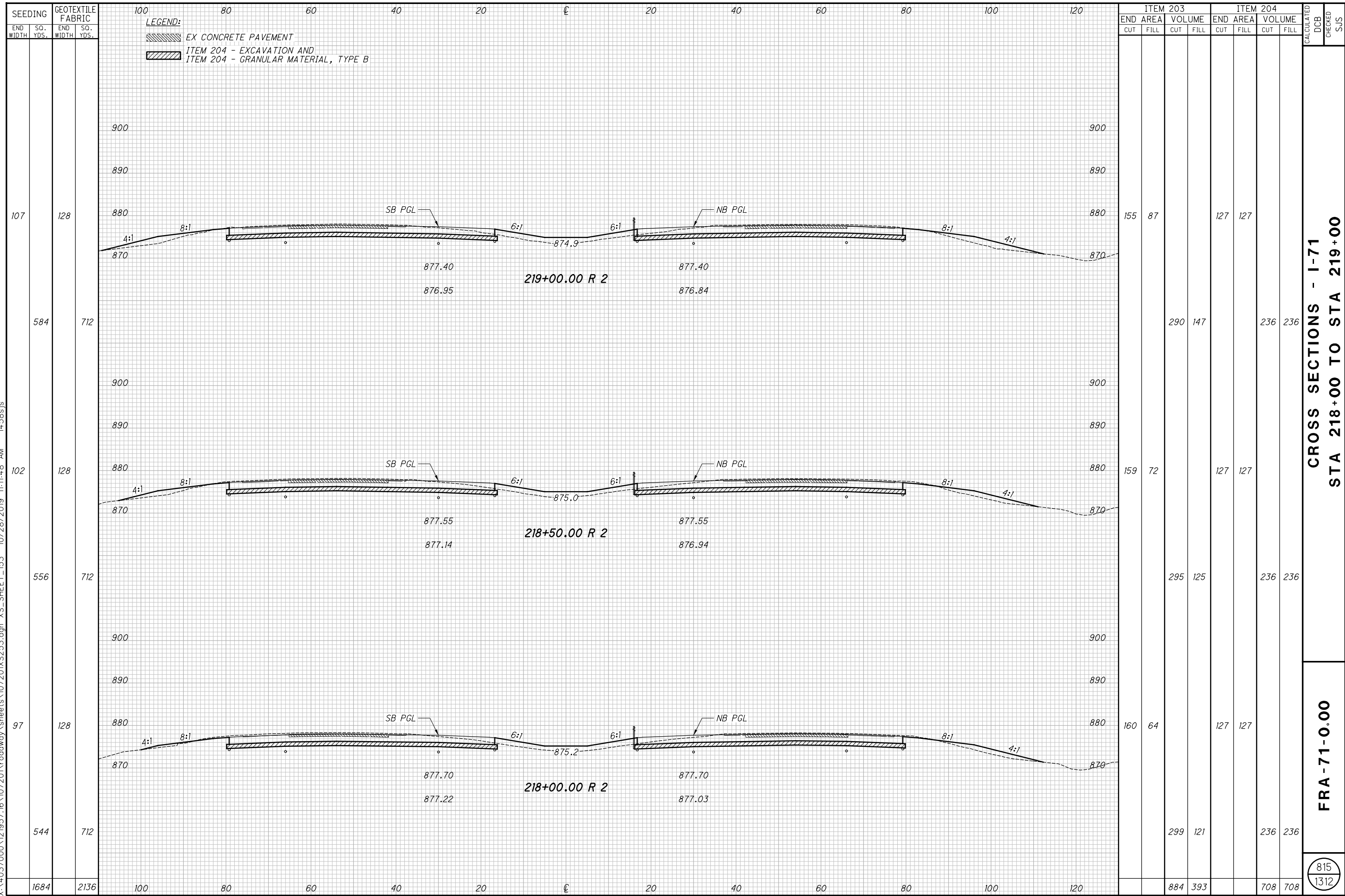


CROSS SECTIONS - I-71
 STA 216+50 TO STA 217+50

FRA-71-0:00

814
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS253.dgn XS_SHEET_153 10/28/2019 11:11:48 AM 1458s.js



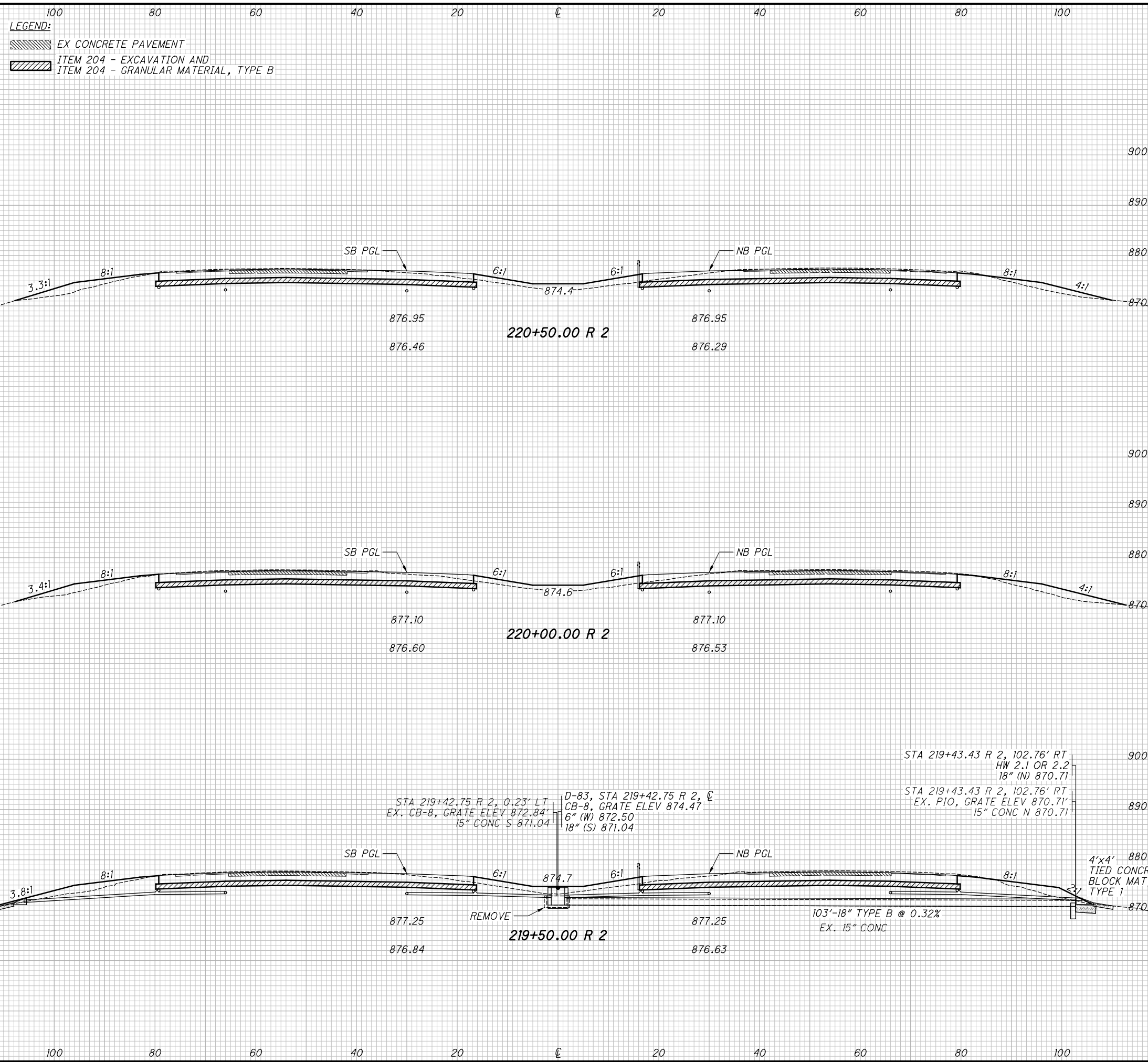
**CROSS SECTIONS - I-71
 STA 218+00 TO STA 219+00**

FRA-71-0:00

815
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS254.dgn XS_SHEET_154 10/28/2019 11:11:48 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
104	128	128	712
105	128	128	712
115	128	128	712
622	712		
1822	2136		



ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
149	82	127	127
	276	236	236
149	88	127	127
	281	236	236
154	87	127	127
	286	236	236
	843	479	
		708	708

CALCULATED	DCB	CHECKED	SJS

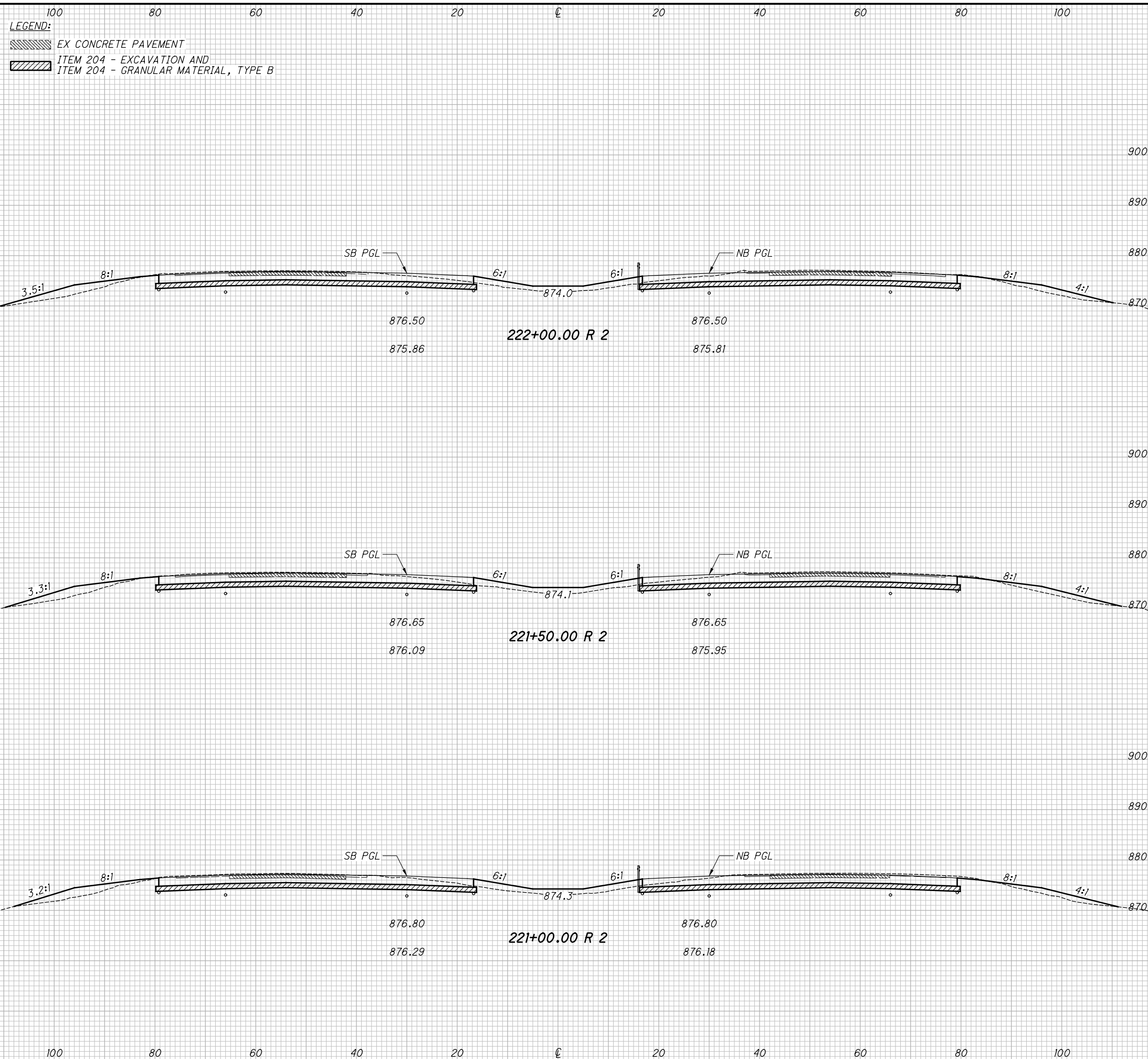
CROSS SECTIONS - I-71
STA 219+50 TO STA 220+50

FRA-71-0:00

816
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS255.5.dgn XS_SHEET_155 10/28/2019 11:11:49 AM 14585.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
108	128	108	128
600	712	600	712
108	128	108	128
595	712	595	712
105	128	105	128
583	712	583	712
1778	2136	1778	2136



ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
146	85	127	127
	272	236	236
148	84	127	127
	277	236	236
152	86	127	127
	279	236	236
	828	708	708

CALCULATED	DCB	CHECKED	SJS

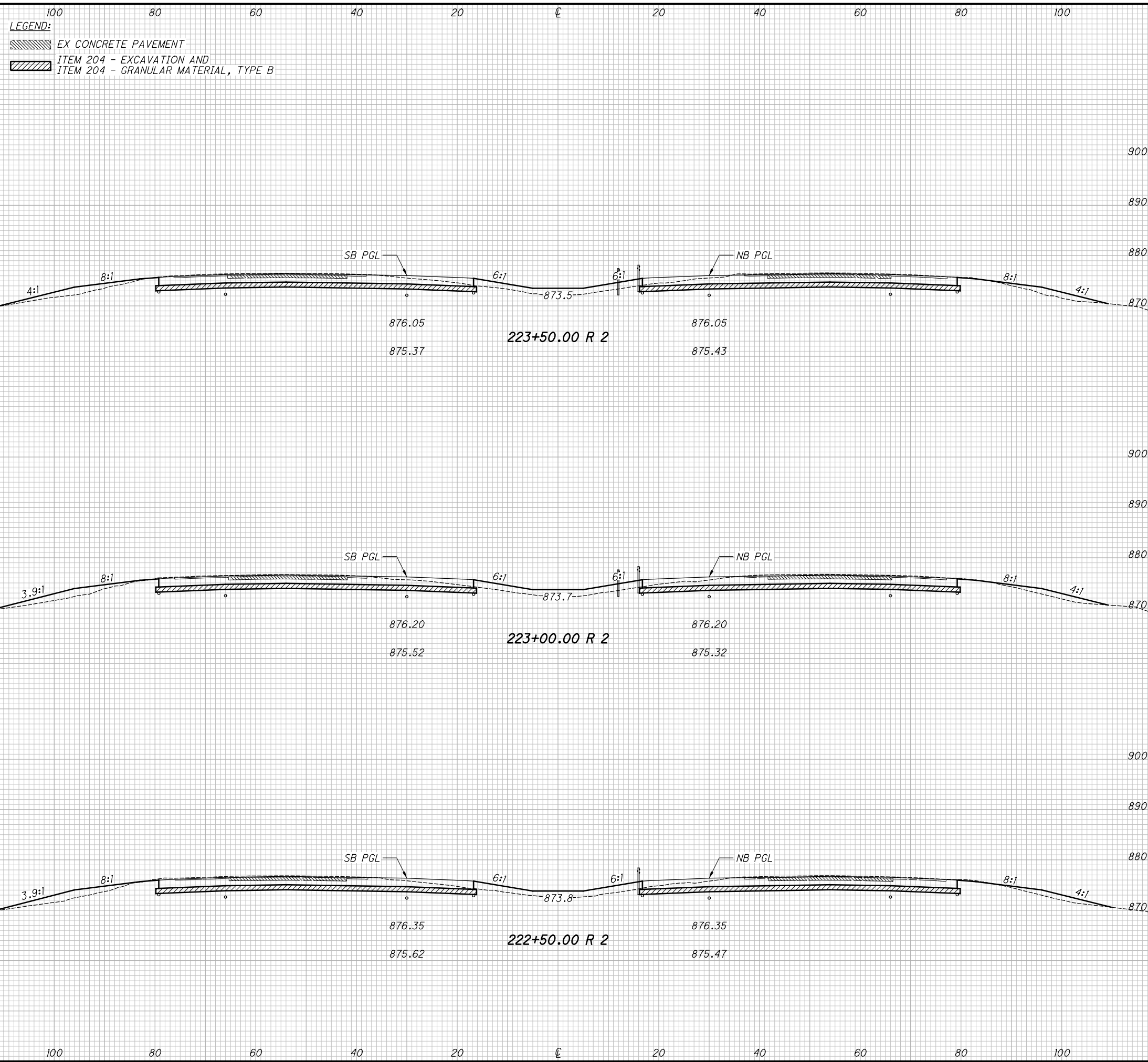
CROSS SECTIONS - I-71
STA 221+00 TO STA 222+00

FRA-71-0:00

817
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS256.dgn XS_SHEET_156 10/28/2019 11:11:49 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
107	128	107	128
600	712	600	712
108	128	108	128
600	712	600	712
107	128	107	128
600	712	600	712
1800	2136	1800	2136



ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
139	81	127	127
	257	236	236
138	85	127	127
	259	236	236
141	84	127	127
	266	236	236
	782	708	708

CALCULATED	DCB	CHECKED	SJS

**CROSS SECTIONS - I-71
 STA 222+50 TO STA 223+50**

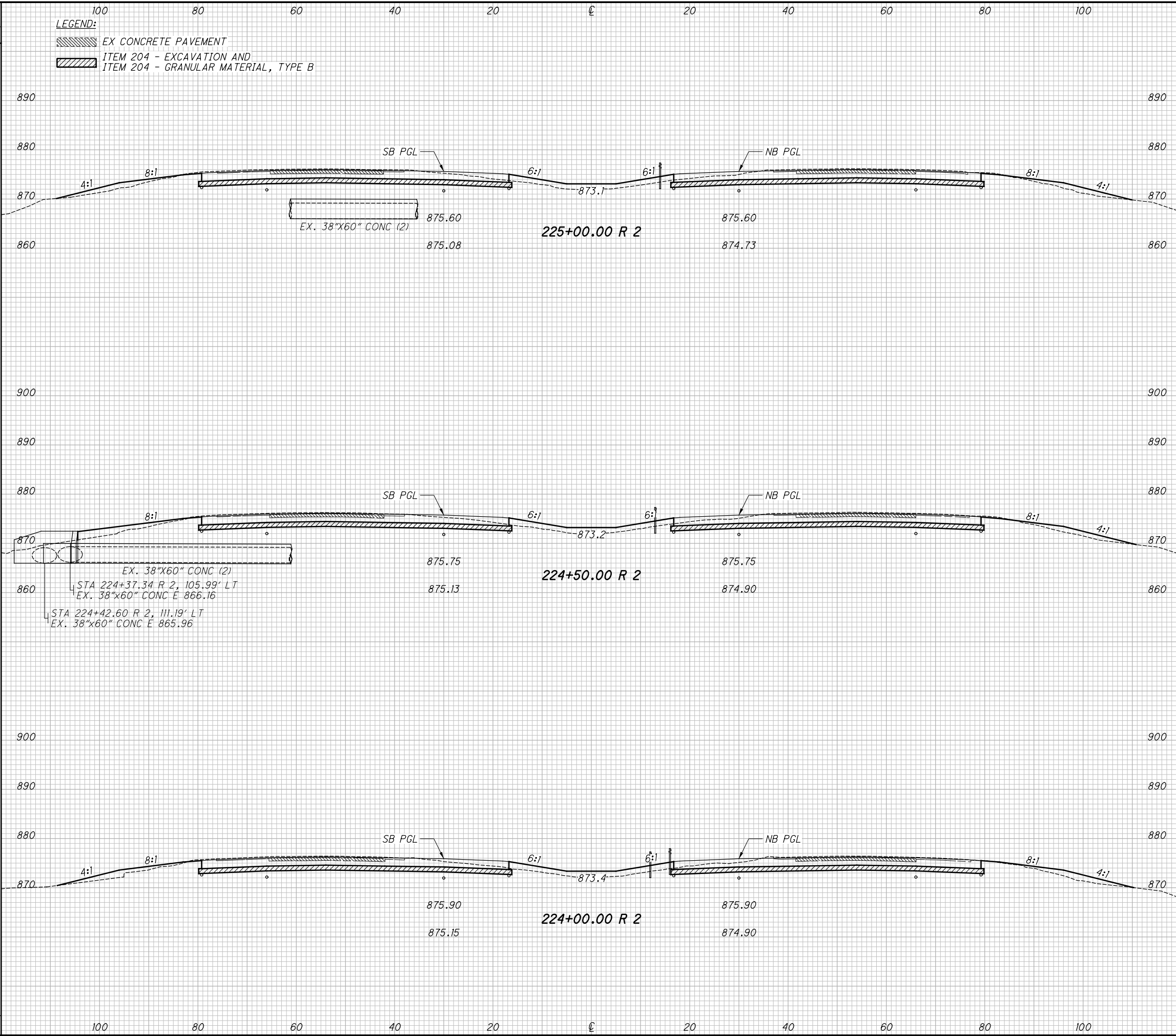
FRA-71-0:00

818
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS257.dgn XS_SHEET_157 10/28/2019 11:11:49 AM 14585.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
104	128		
594	712		
108	128		
594	712		
104	128		
588	712		
1776	2136		

- LEGEND:**
- EX CONCRETE PAVEMENT
 - ITEM 204 - EXCAVATION AND
 - ITEM 204 - GRANULAR MATERIAL, TYPE B



ITEM 203		ITEM 204		CALCULATED DCB	CHECKED	SJS
END CUT	AREA FILL	END CUT	AREA FILL			
149	69	127	127			
	274	133	236			
147	74	127	127			
	266	139	236			
141	76	127	127			
	259	145	236			
	799	417	708			

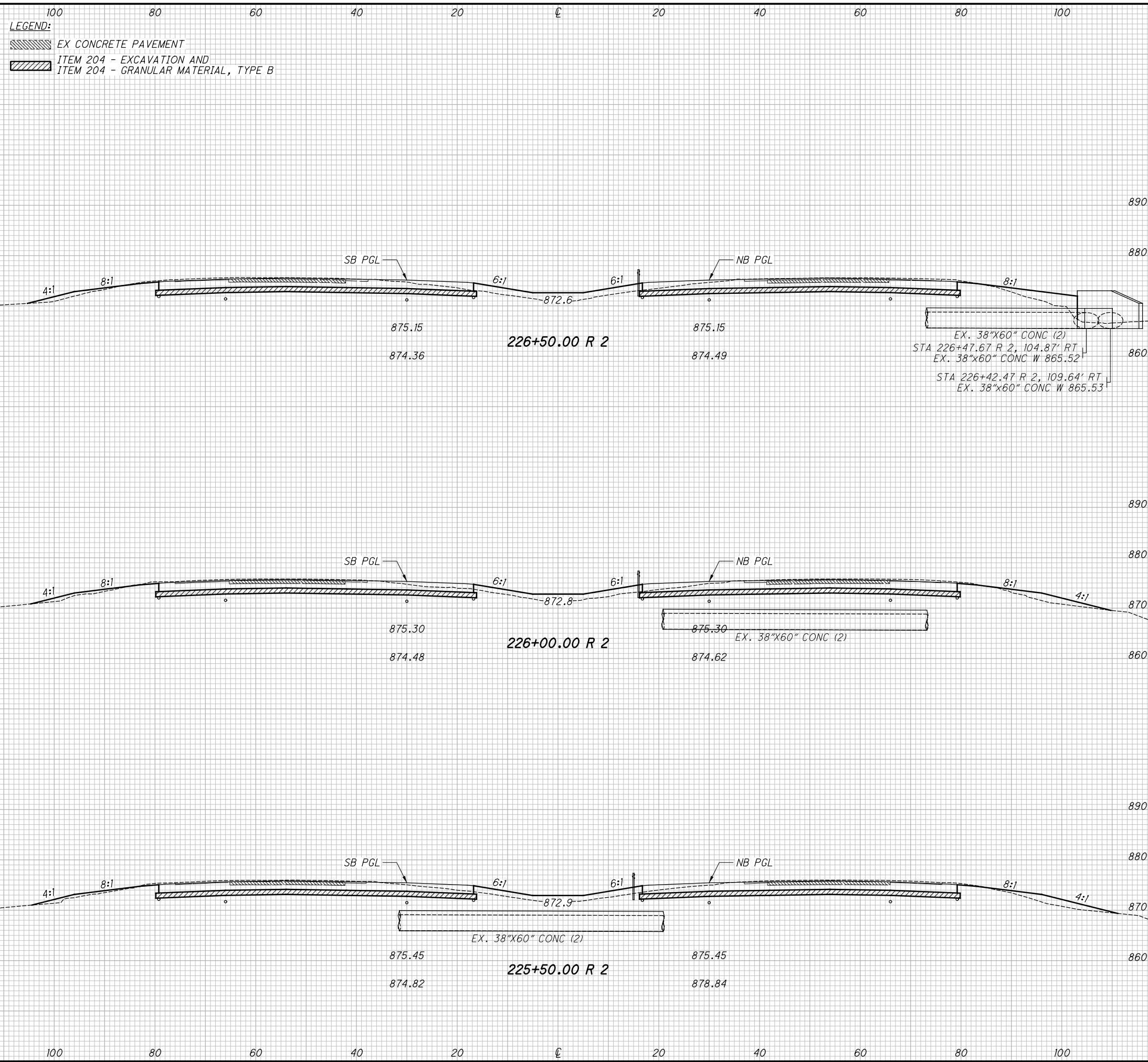
CROSS SECTIONS - I-71
STA 224+00 TO STA 225+00

FRA - 71-0:00

819
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS258.dgn XS_SHEET_158 10/28/2019 11:11:50 AM 14585.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
92	128	92	128
534	712	534	712
99	128	99	128
555	712	555	712
101	128	101	128
572	712	572	712
1661	2136	1661	2136



ITEM 203		ITEM 204		CALCULATED DCB	CHECKED	SJS
END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL			
145	85	127	127			
269	140	236	236			
146	66	127	127			
276	125	236	236			
152	68	127	127			
279	127	236	236			
824	392	708	708			

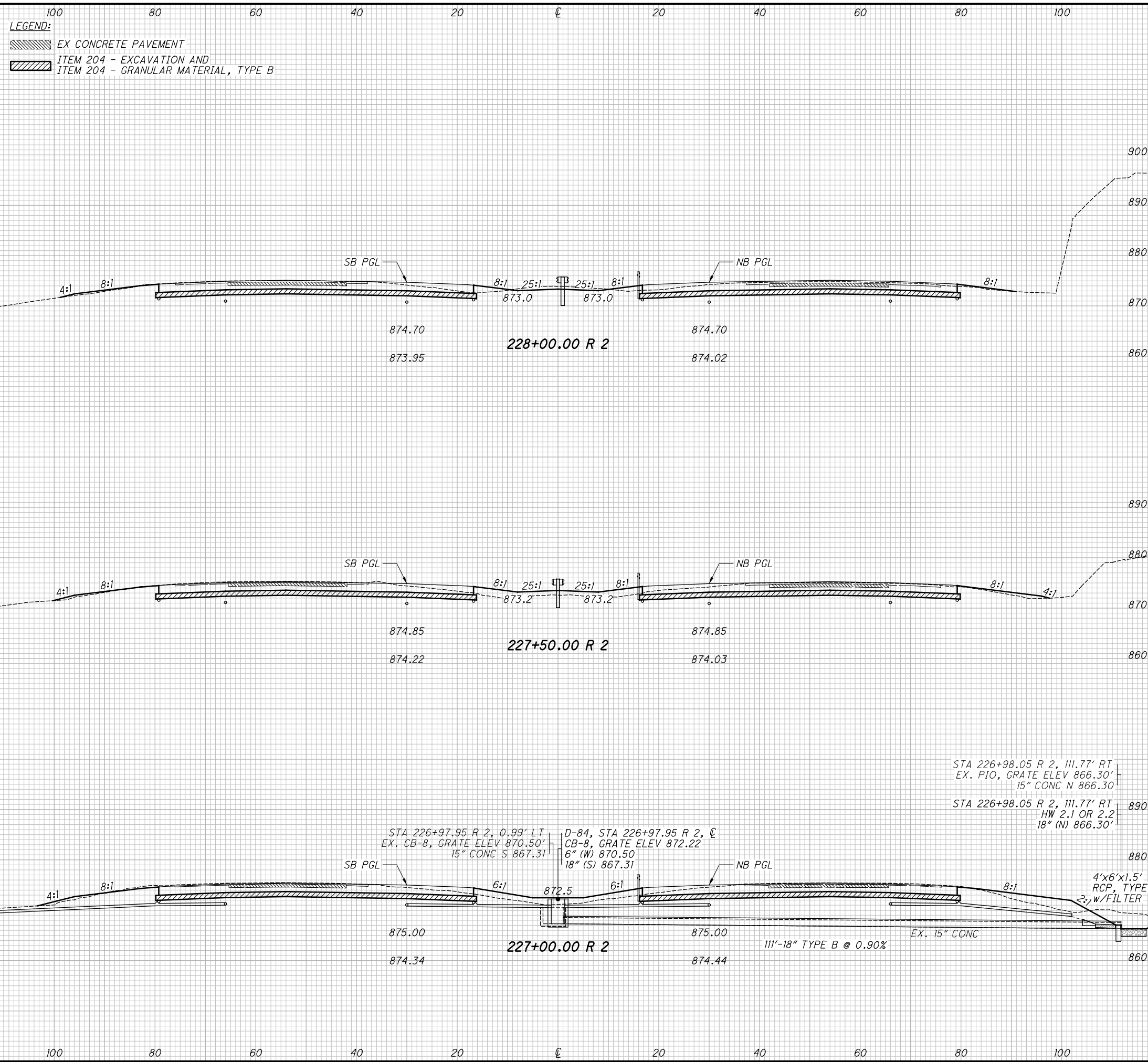
CROSS SECTIONS - I-71
STA 225+50 TO STA 226+50

FRA-71-0:00

820
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS259.dgn XS_SHEET_159 10/28/2019 11:11:50 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
74	128	128	712
439	712	712	533
83	128	128	712
533	712	712	108
108	128	128	555
555	712	712	1527
1527	2136	2136	

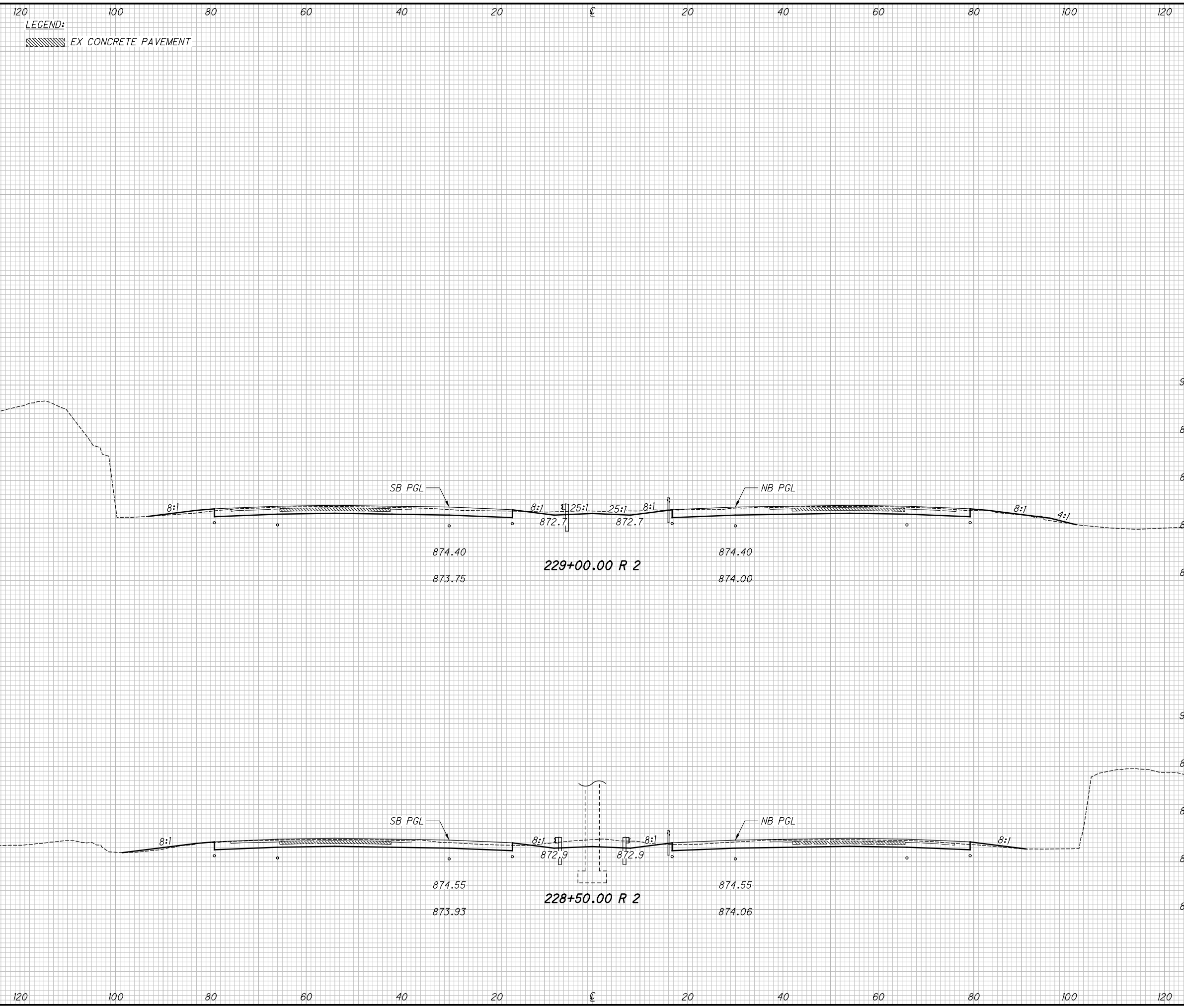


ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END AREA		VOLUME		END AREA		VOLUME					
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL				
129	16			127	127						
		242	60			236	236				
132	49			127	127						
		288	112			236	236				
179	72			127	127						
		300	146			236	236				
		830	318			708	708				

CROSS SECTIONS - I-71
STA 227+00 TO STA 228+00
FRA-71-0:00
 821
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS260.dgn XS_SHEET_160 10/28/2019 11:11:50 AM 14585.js

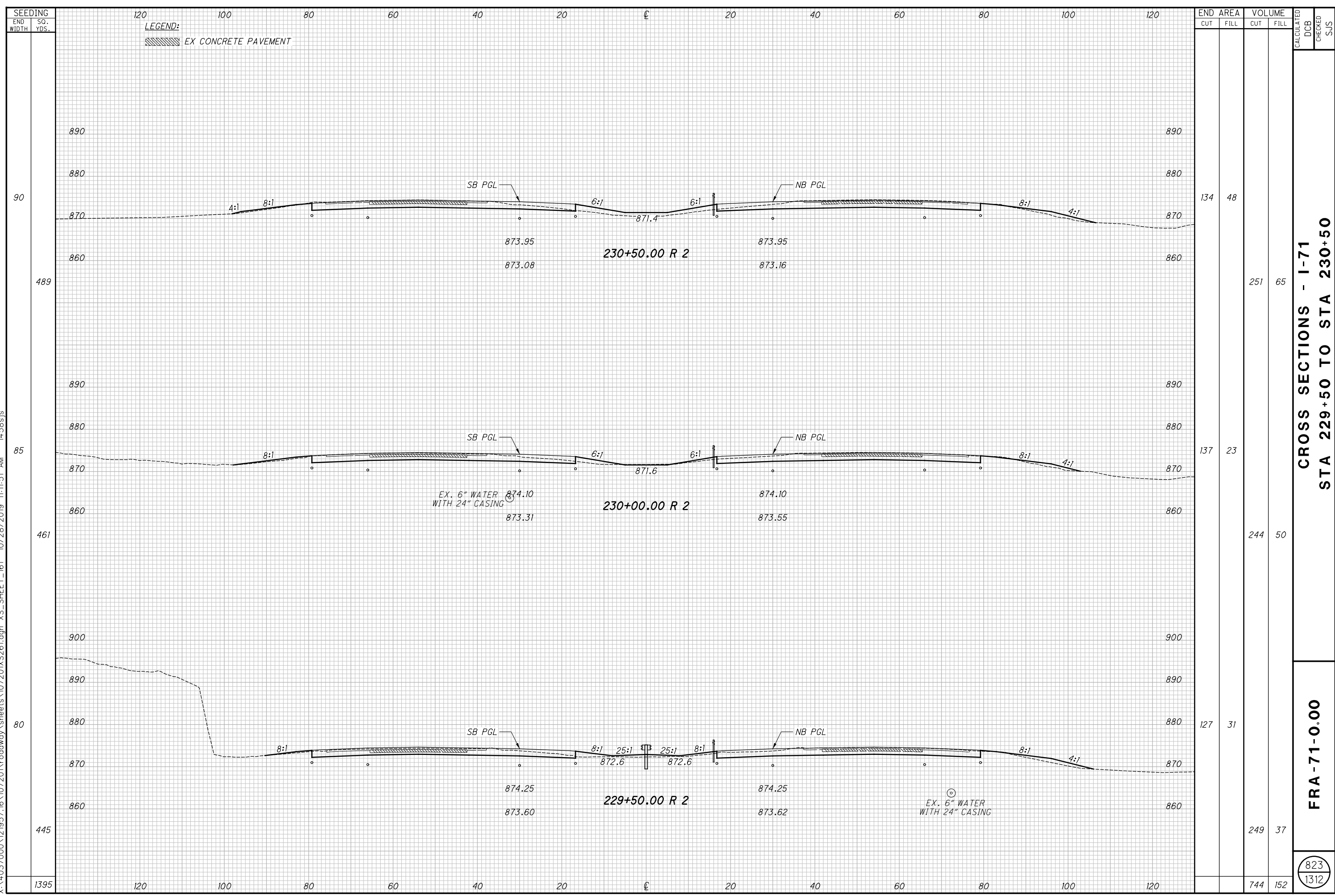
SEEDING	
END WIDTH	SO. YDS.
79	428
74	411
839	



END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
142	9				
	271	16			
151	8				
	259	22			
	530	38			

CROSS SECTIONS - I-71
STA 228+50 TO STA 229+00
FRA - 71 - 0.00
 822
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS261.dgn XS_SHEET_161 10/28/2019 11:11:51 AM 1458s.js



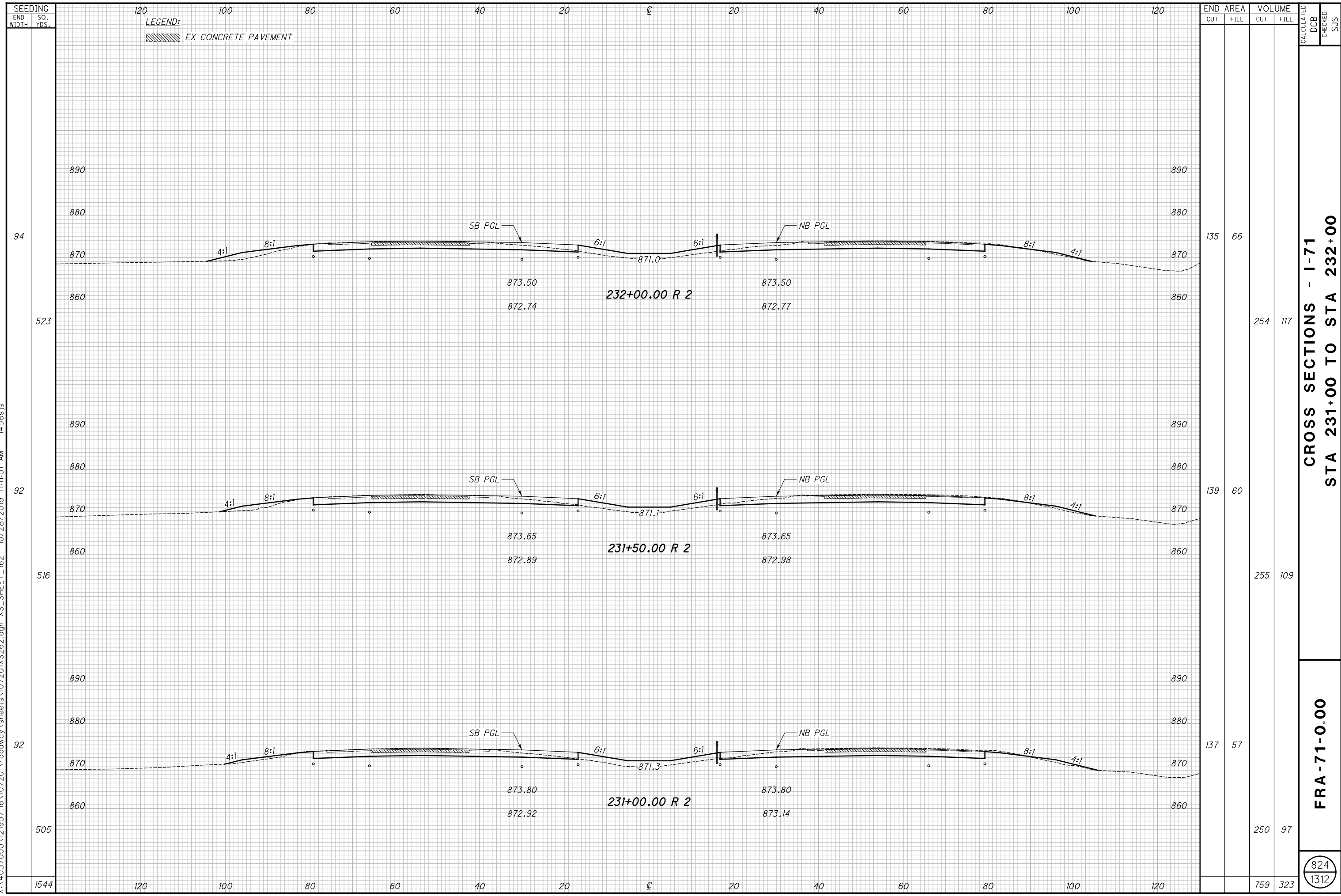
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
134	48					
137	23					
127	31					
489	251	65				
461	244	50				
445	249	37				
1395	744	152				

**CROSS SECTIONS - I-71
 STA 229+50 TO STA 230+50**

FRA - 71 - 0.00

823
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS262.dgn XS_SHEET_162 10/28/2019 11:11:51 AM 1458s.js



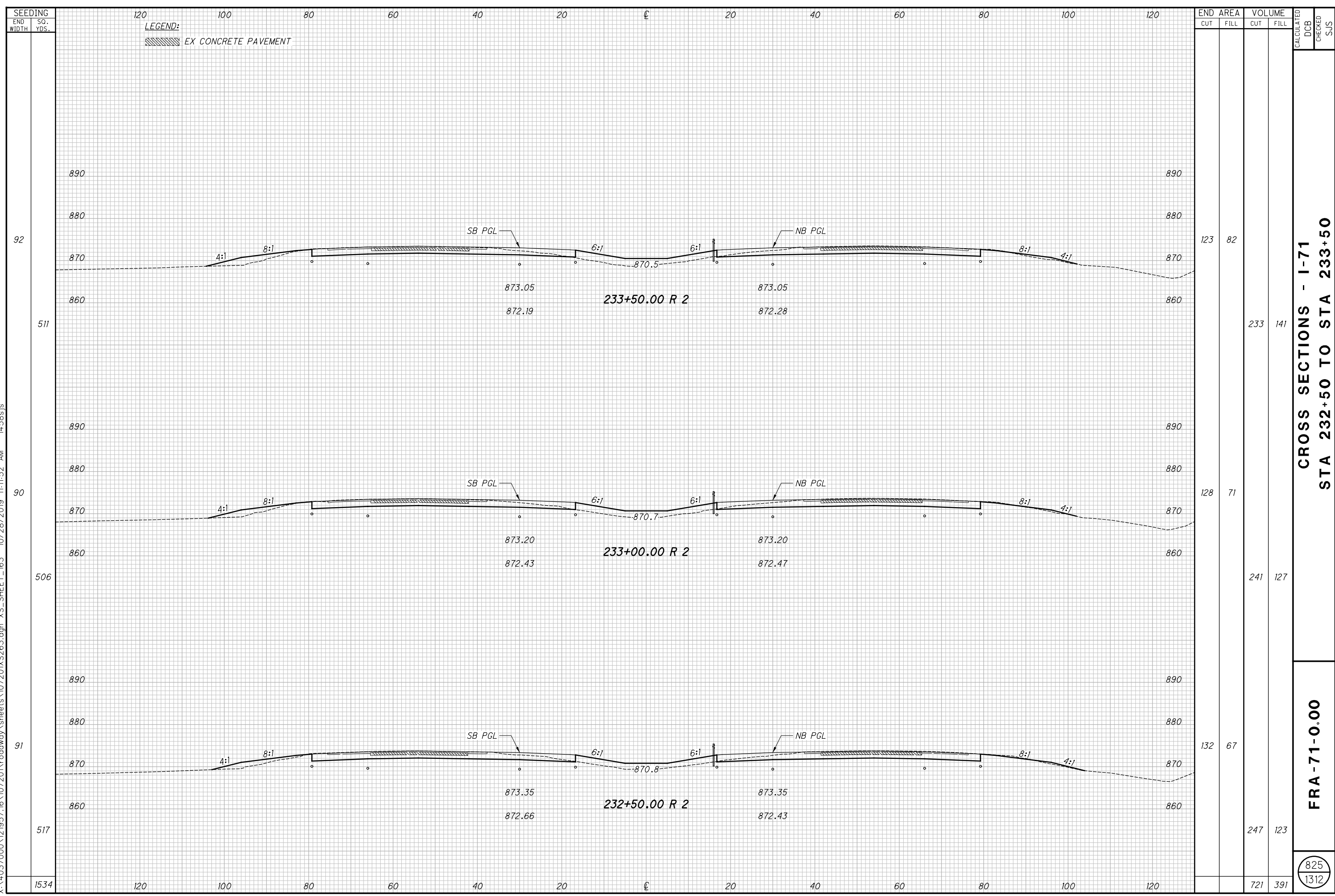
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
135	66					
	254	117				
139	60					
	255	109				
137	57					
	250	97				
	759	323				

**CROSS SECTIONS - I-71
 STA 231+00 TO STA 232+00**

FRA - 71-0.00

824
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS263.dgn XS_SHEET_163 10/28/2019 11:11:52 AM 1458s.js

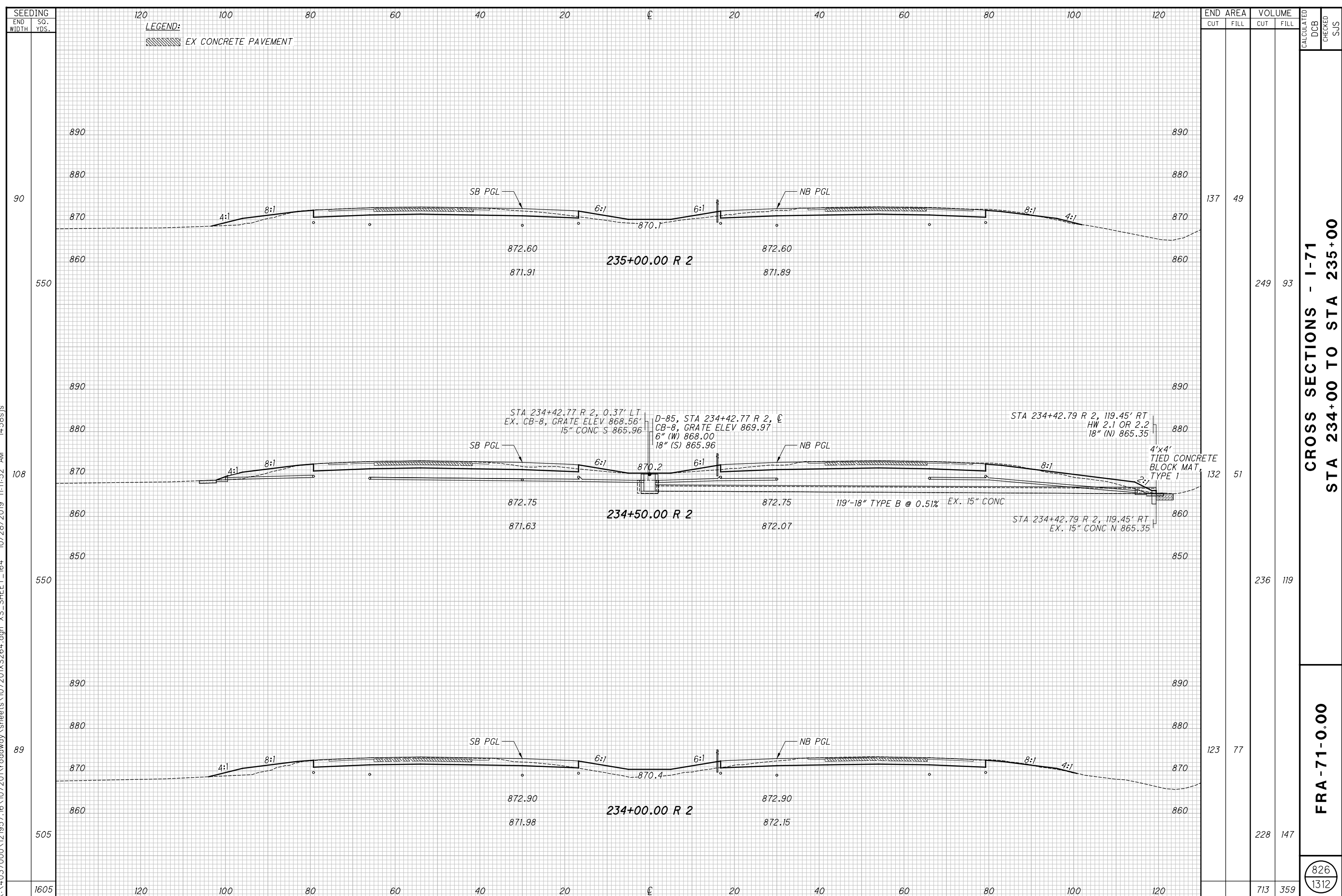


**CROSS SECTIONS - I-71
 STA 232+50 TO STA 233+50**

FRA - 71-0.00

825
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS264.dgn XS_SHEET_164 10/28/2019 11:11:52 AM 14585.js



SEEDING
END WIDTH SO. YDS.
LEGEND:
EX CONCRETE PAVEMENT

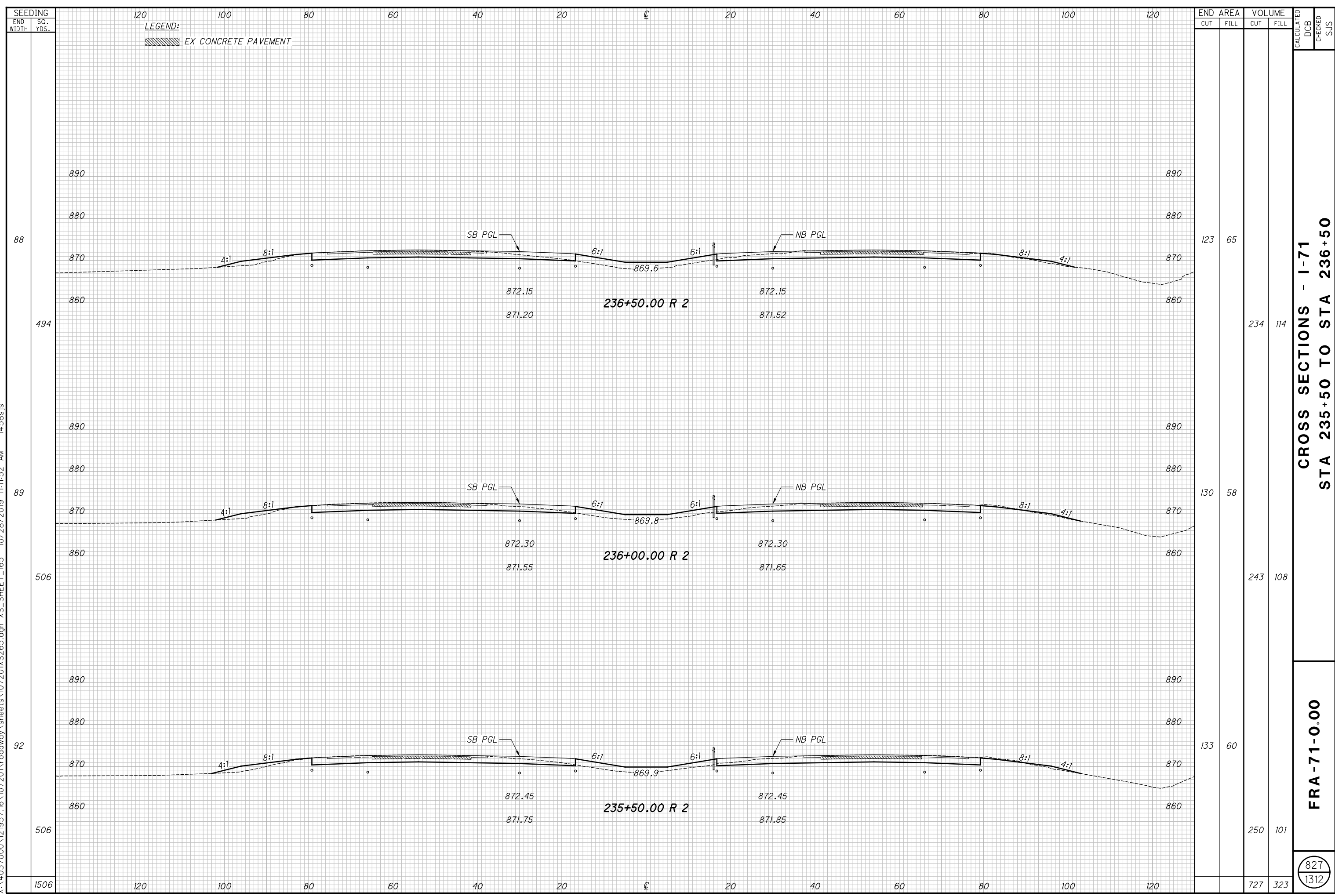
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
137	49					
249	93					
132	51					
236	119					
123	77					
228	147					
713	359					

CROSS SECTIONS - I-71
STA 234+00 TO STA 235+00

FRA-71-0.00

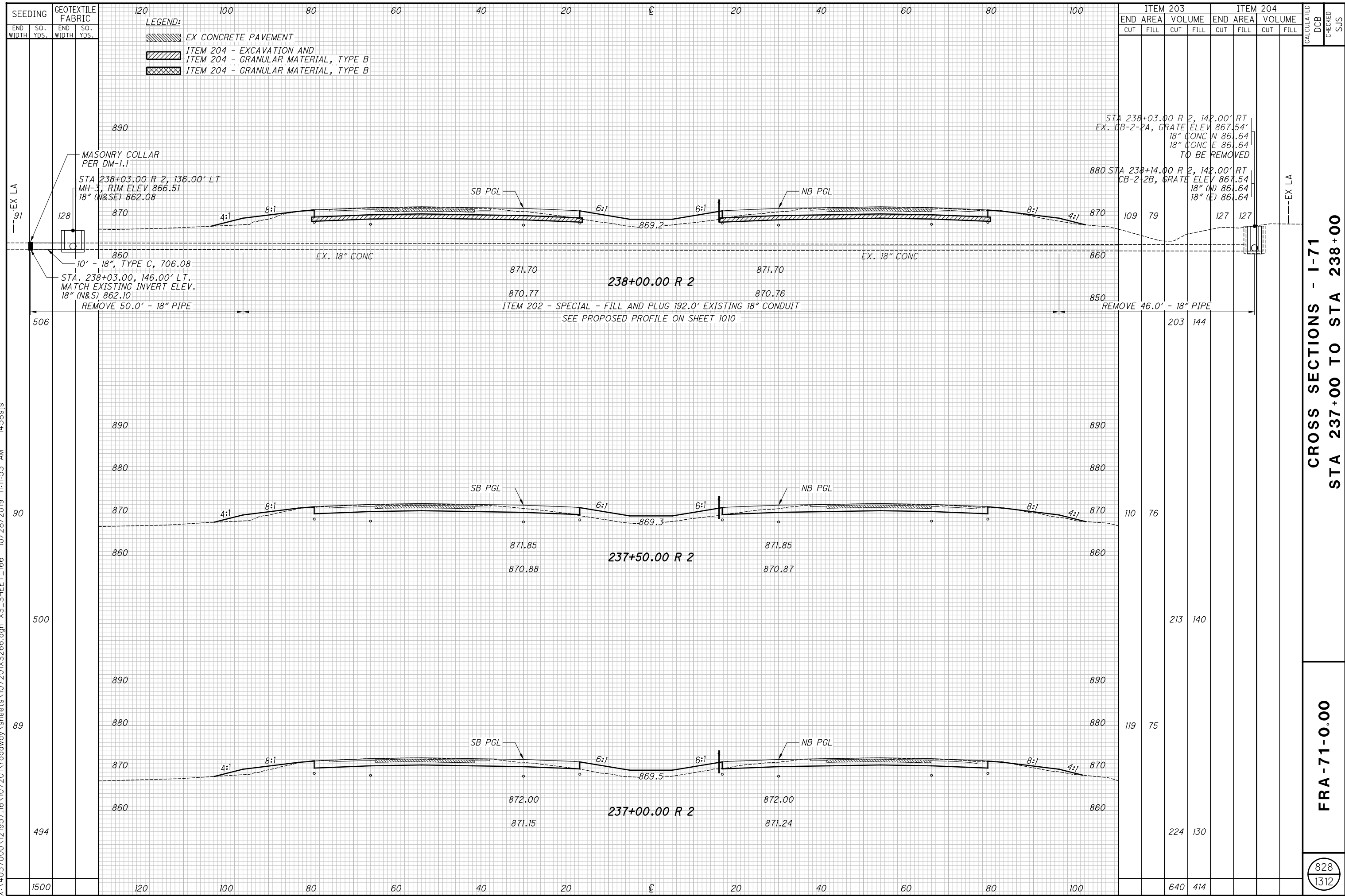
826
1312

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827
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS266.dgn XS_SHEET_166 10/28/2019 11:11:53 AM 1458sjs

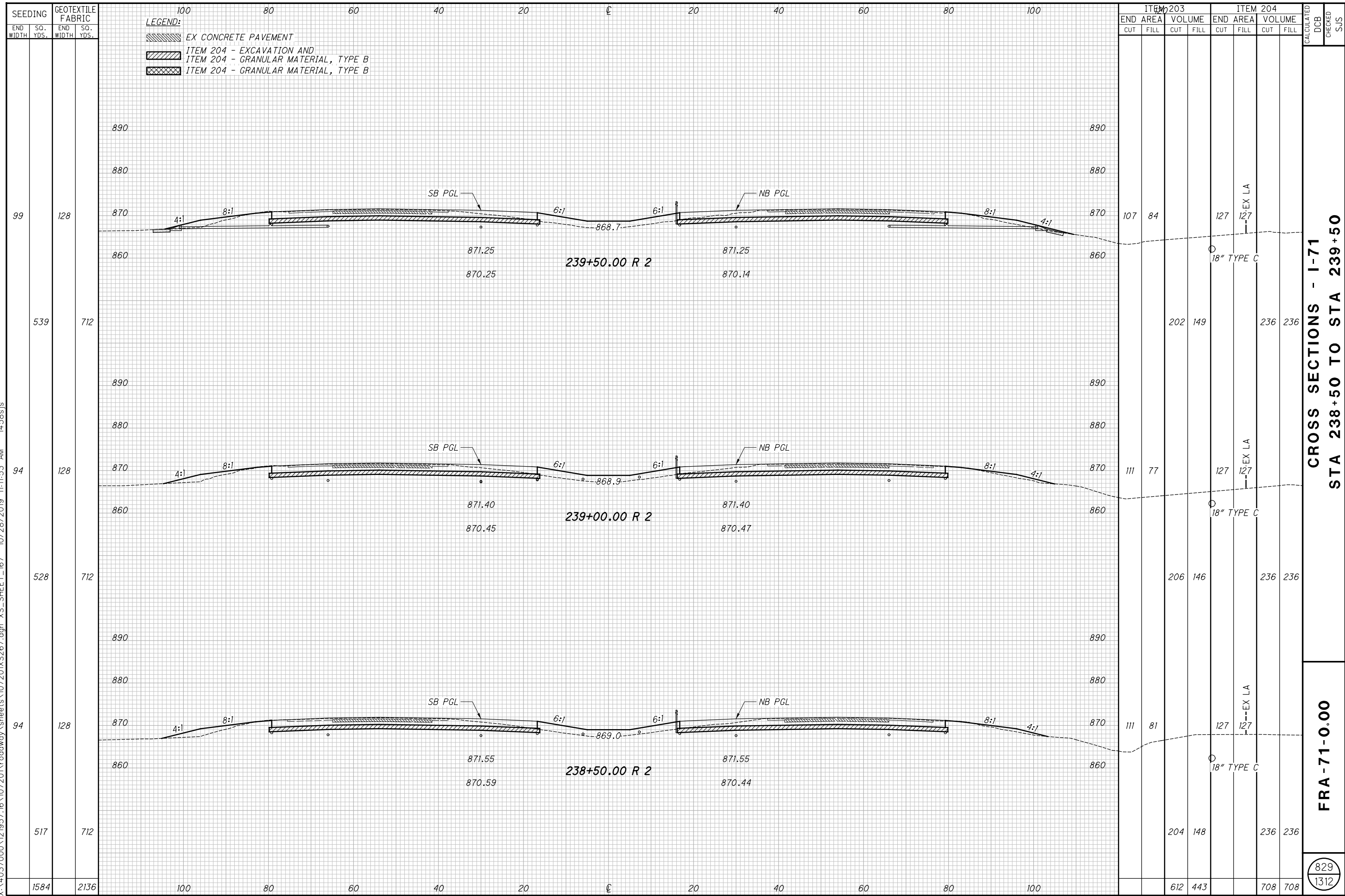


CROSS SECTIONS - I-71
 STA 237+00 TO STA 238+00

FRA-71-0.00

828
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS267.dgn XS_SHEET_167 10/28/2019 11:11:53 AM 1458s.js



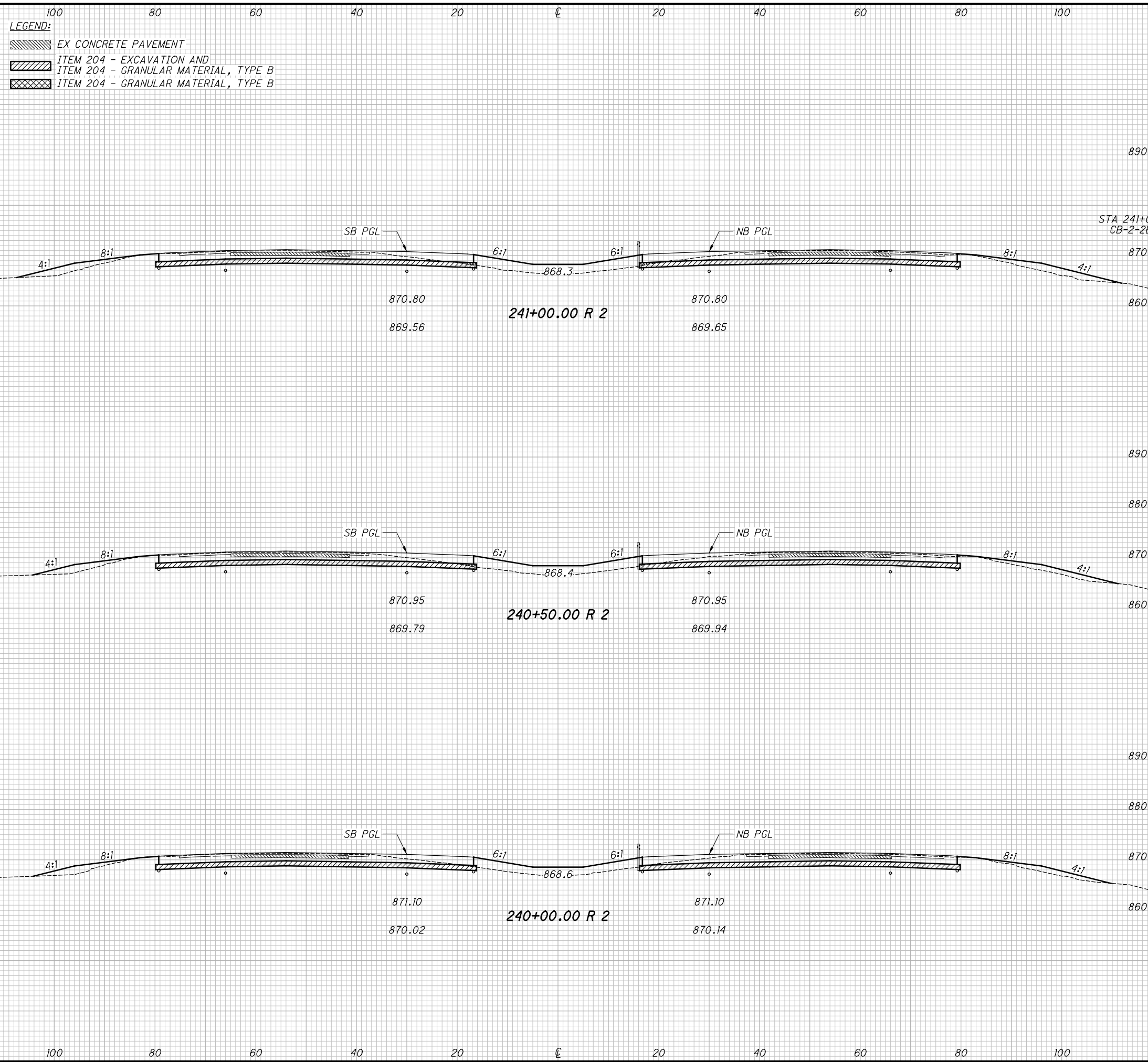
CROSS SECTIONS - I-71
STA 238+50 TO STA 239+50

FRA - 71 - 0.00

829
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS268.dgn XS_SHEET_168 10/28/2019 11:11:53 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
105	128	101	128
578	712	555	712
99	128	99	128
550	712	550	712
1683	2136	1683	2136

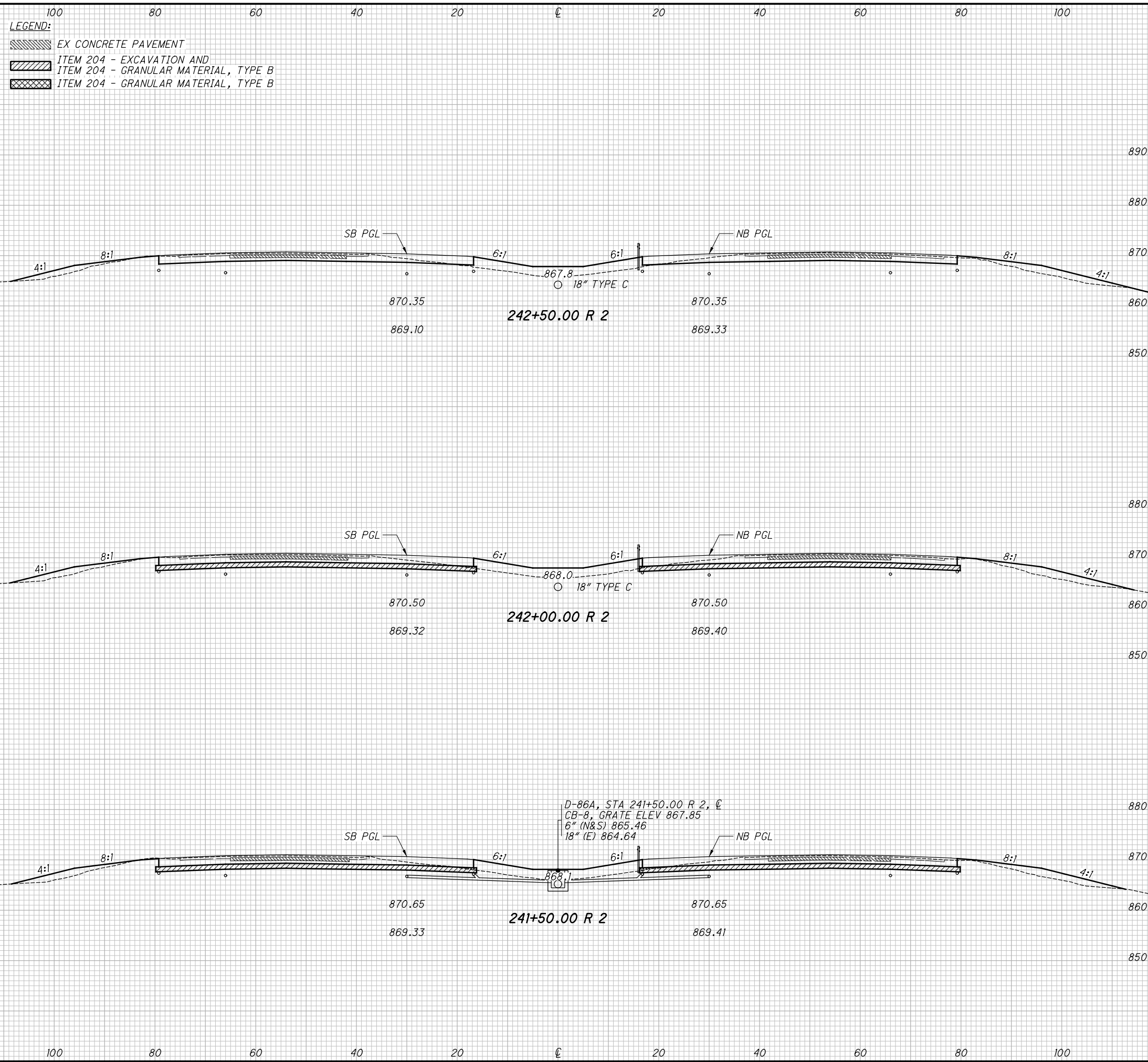


ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END AREA		VOLUME		END AREA		VOLUME					
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL				
92	112			125	127						
		175	194			232	236				
97	98			126	127						
		185	174			234	236				
103	90			127	127						
		194	161			236	236				
		554	529			702	708				

CROSS SECTIONS - I-71
STA 240+00 TO STA 241+00
FRA - 71-0.00
 830
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS269.dgn XS_SHEET_169 10/28/2019 11:11:54 AM 1458s.js

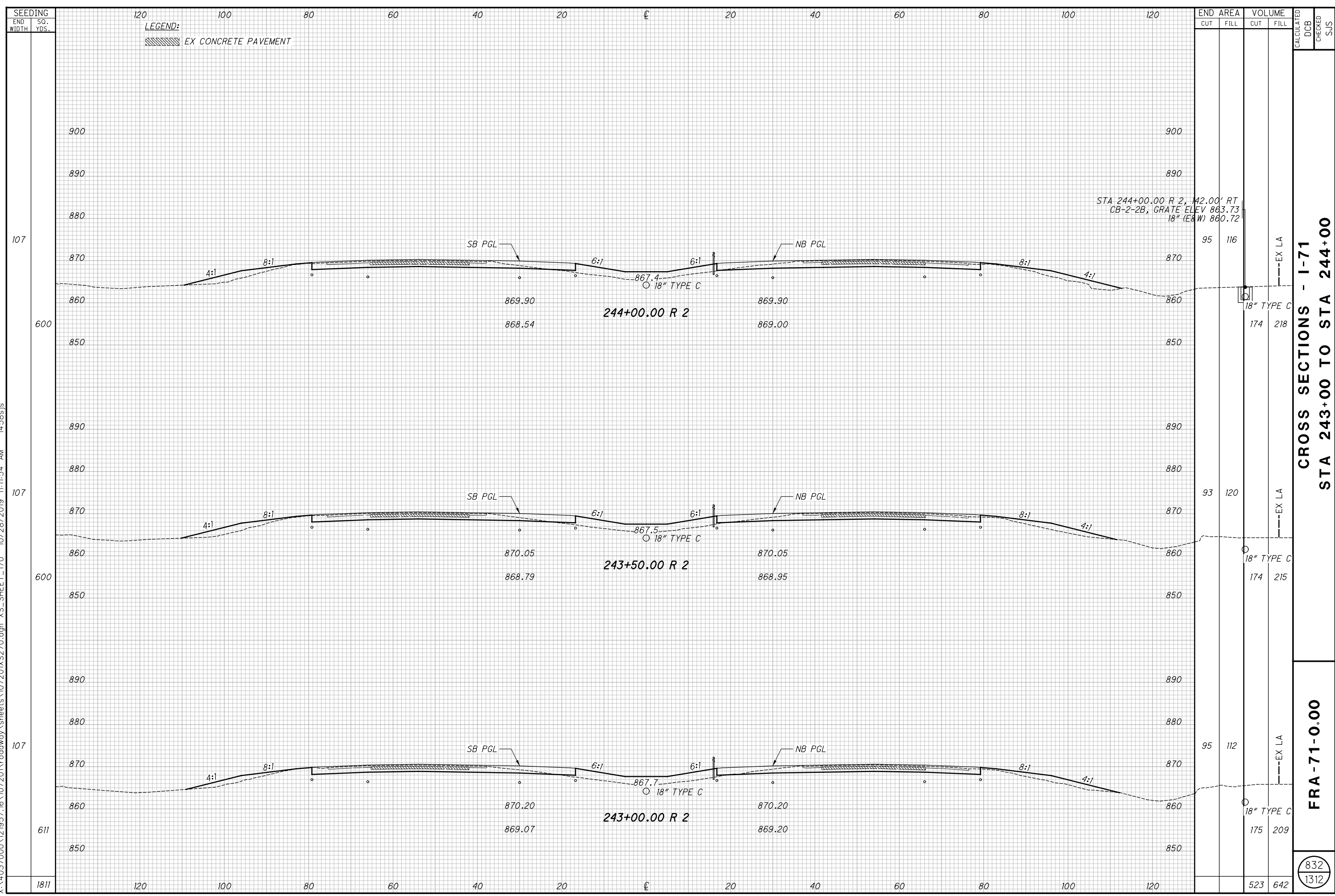
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
112			
611			
108			
594			
106			
589			
1794		1424	



ITEM 203		ITEM 204		CALCULATED	DCB	CHECKED	SJS
END AREA CUT	VOLUME CUT	END AREA CUT	VOLUME CUT				
95	113						
		173	210				
92	114						
		168	213				
89	116						
		168	211				
		509	634				
		463	472				

CROSS SECTIONS - I-71
STA 241+50 TO STA 242+50
FRA - 71 - 0.00
 831
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS270.dgn XS_SHEET_170 10/28/2019 11:11:54 AM 1458s.js



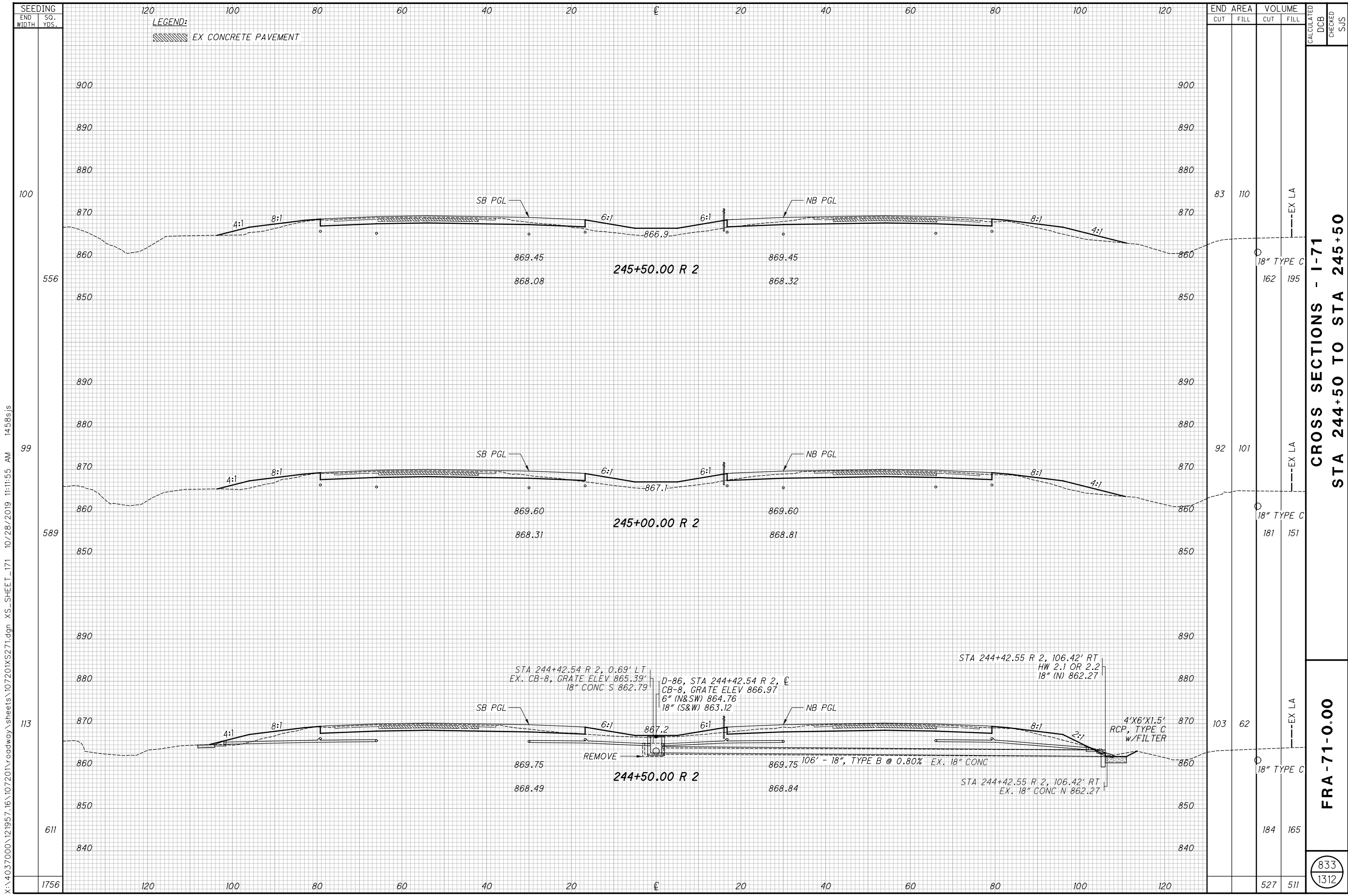
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
95	116				
93	120				
95	112				
		523	642		

CROSS SECTIONS - I-71
STA 243+00 TO STA 244+00

FRA-71-0.00

832
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS271.dgn XS_SHEET_171 10/28/2019 11:11:55 AM 1458s.js

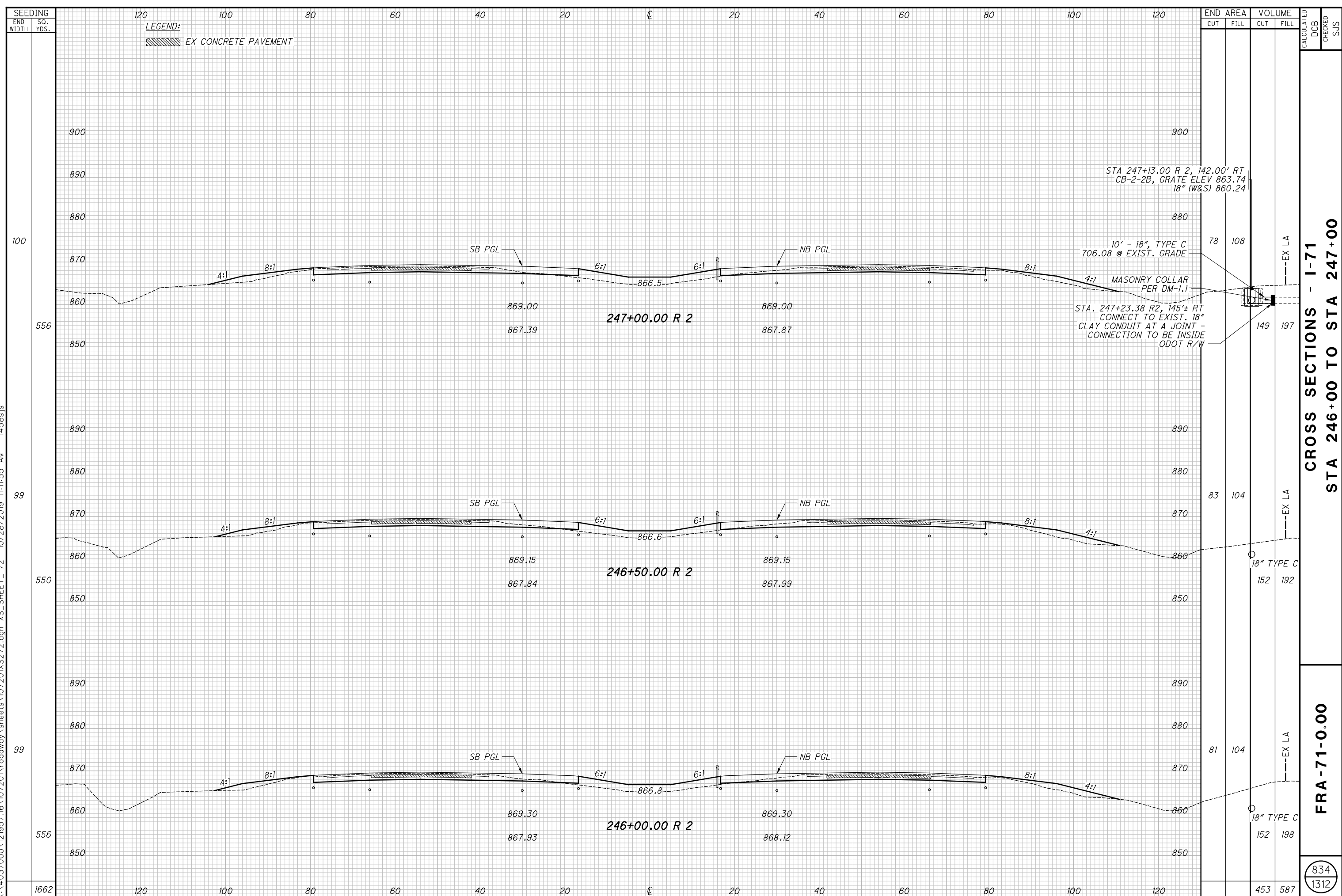


CROSS SECTIONS - I-71
STA 244+50 TO STA 245+50

FRA - 71 - 0.00

833
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS272.dgn XS_SHEET_172 10/28/2019 11:11:55 AM 1458s.js



END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
78	108				
83	104				
81	104				
		453	587		

STA 247+13.00 R 2, 142.00' RT
CB-2-2B, GRATE ELEV 863.74
18" (W&S) 860.24

10' - 18" TYPE C
706.08 @ EXIST. GRADE

4:1 MASONRY COLLAR
PER DM-1.1

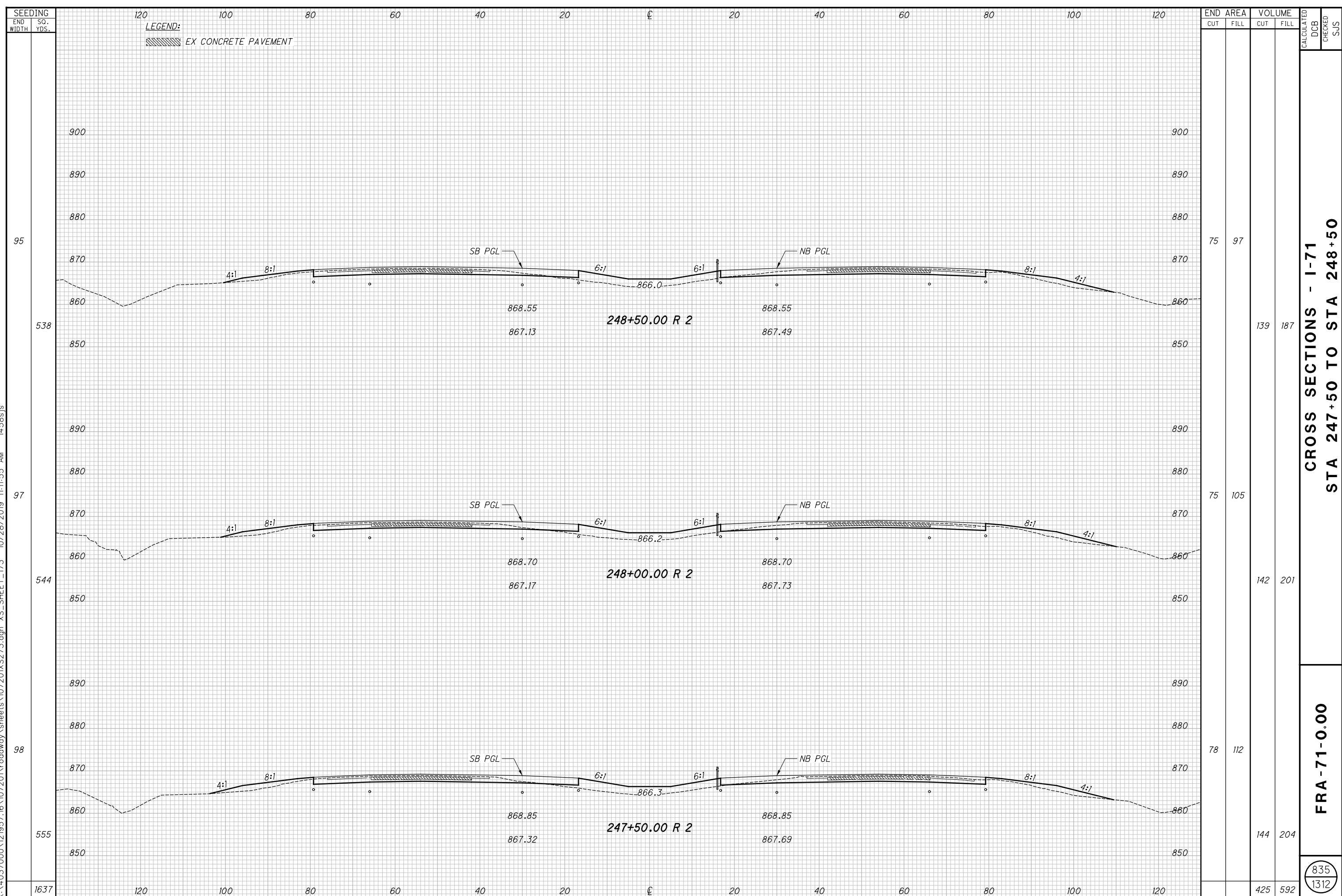
STA. 247+23.38 R2, 145'± RT
CONNECT TO EXIST. 18"
CLAY CONDUIT AT A JOINT -
CONNECTION TO BE INSIDE
ODOT R/W

CROSS SECTIONS - I-71
STA 246+00 TO STA 247+00

FRA-71-0.00

834
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS273.dgn XS_SHEET_173 10/28/2019 11:11:55 AM 14585.js

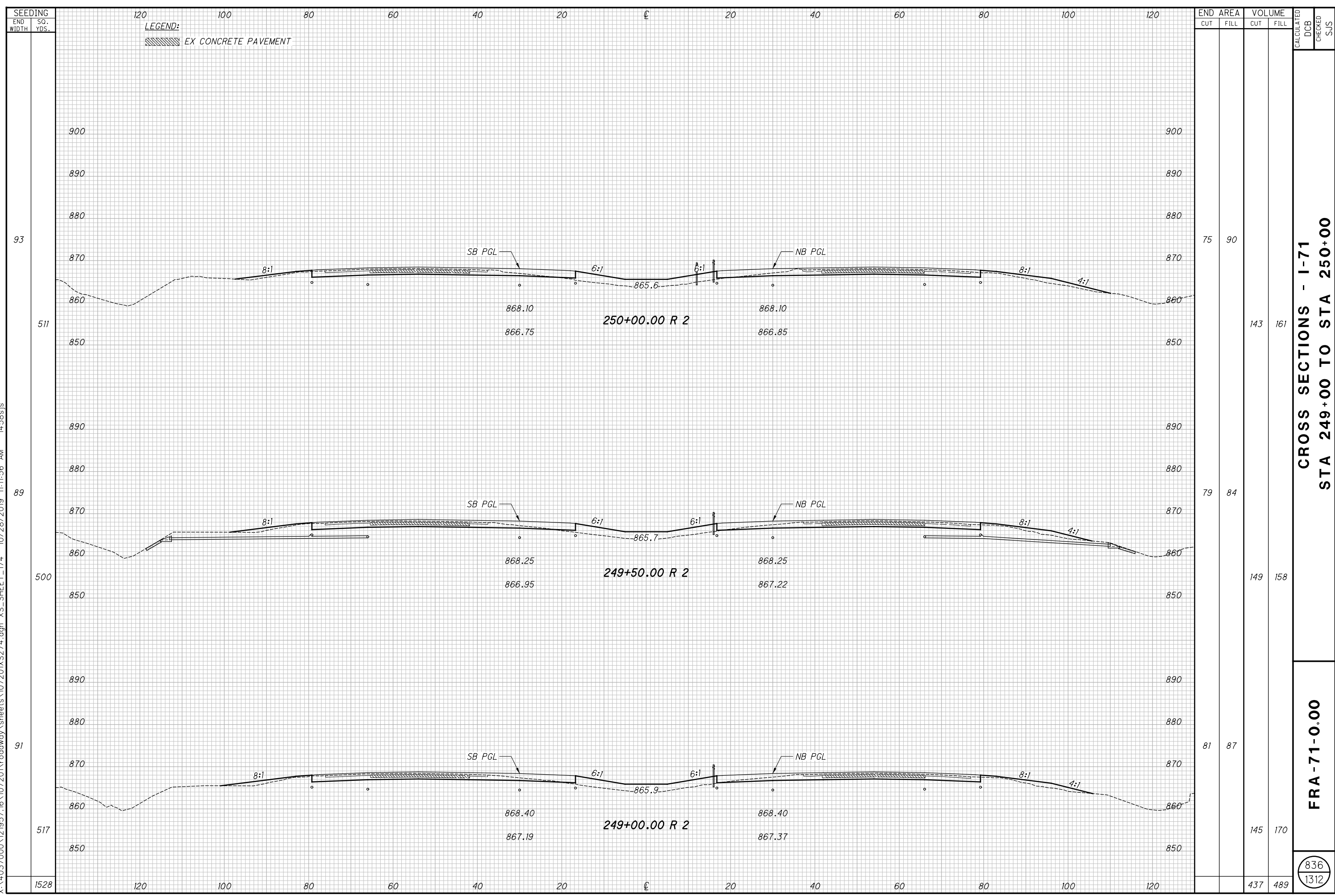


**CROSS SECTIONS - I-71
 STA 247+50 TO STA 248+50**

FRA-71-0.00

835
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS274.dgn XS_SHEET_174 10/28/2019 11:11:56 AM 1458s.js

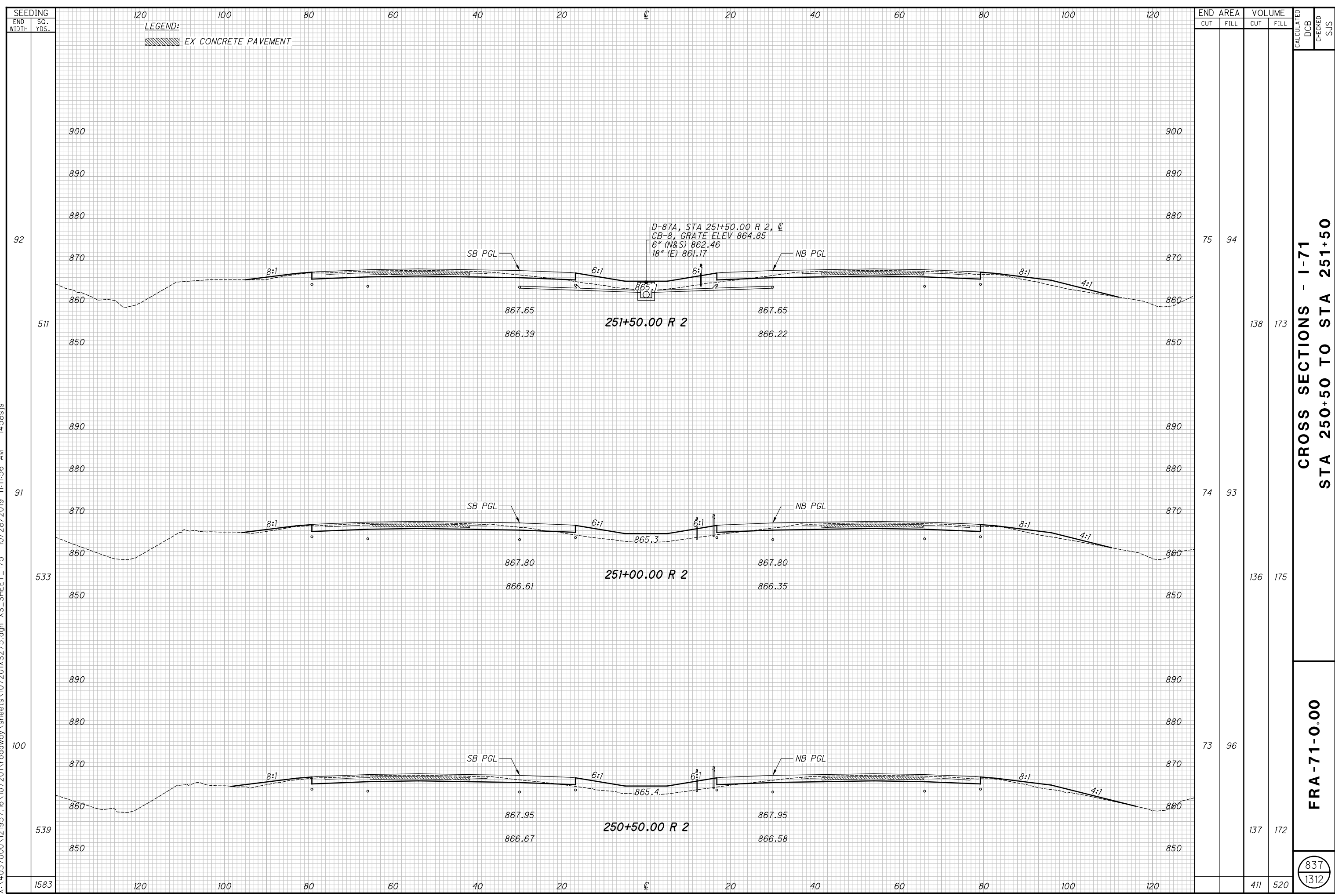


**CROSS SECTIONS - I-71
 STA 249+00 TO STA 250+00**

FRA - 71 - 0.00

836
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS275.dgn XS_SHEET_175 10/28/2019 11:11:56 AM 14585.js



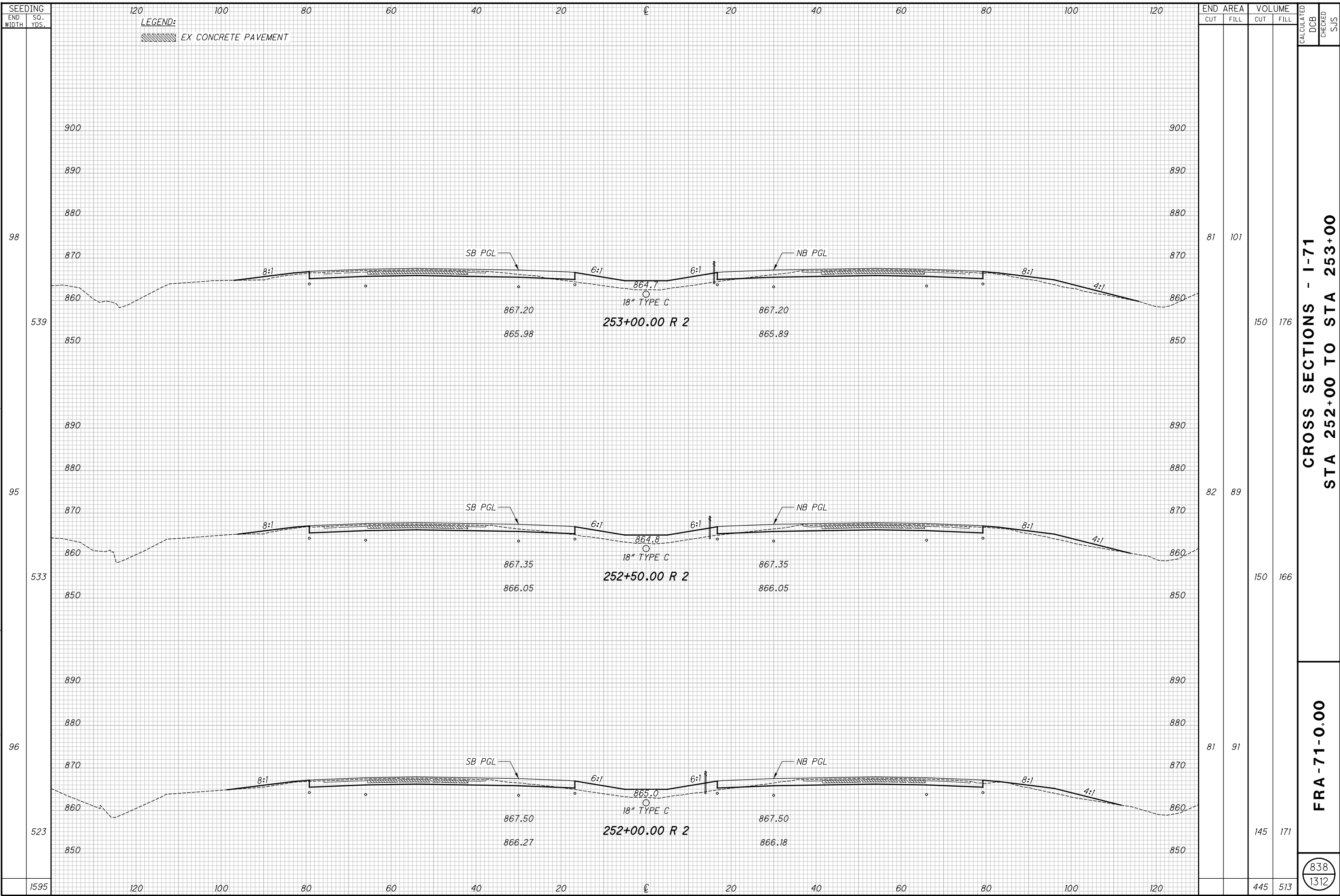
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
75	94					
		138	173			
74	93					
		136	175			
73	96					
		137	172			
		411	520			

**CROSS SECTIONS - I-71
 STA 250+50 TO STA 251+50**

FRA - 71 - 0.00

837
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS276.dgn XS_SHEET_176 10/28/2019 11:11:56 AM 1458s.js

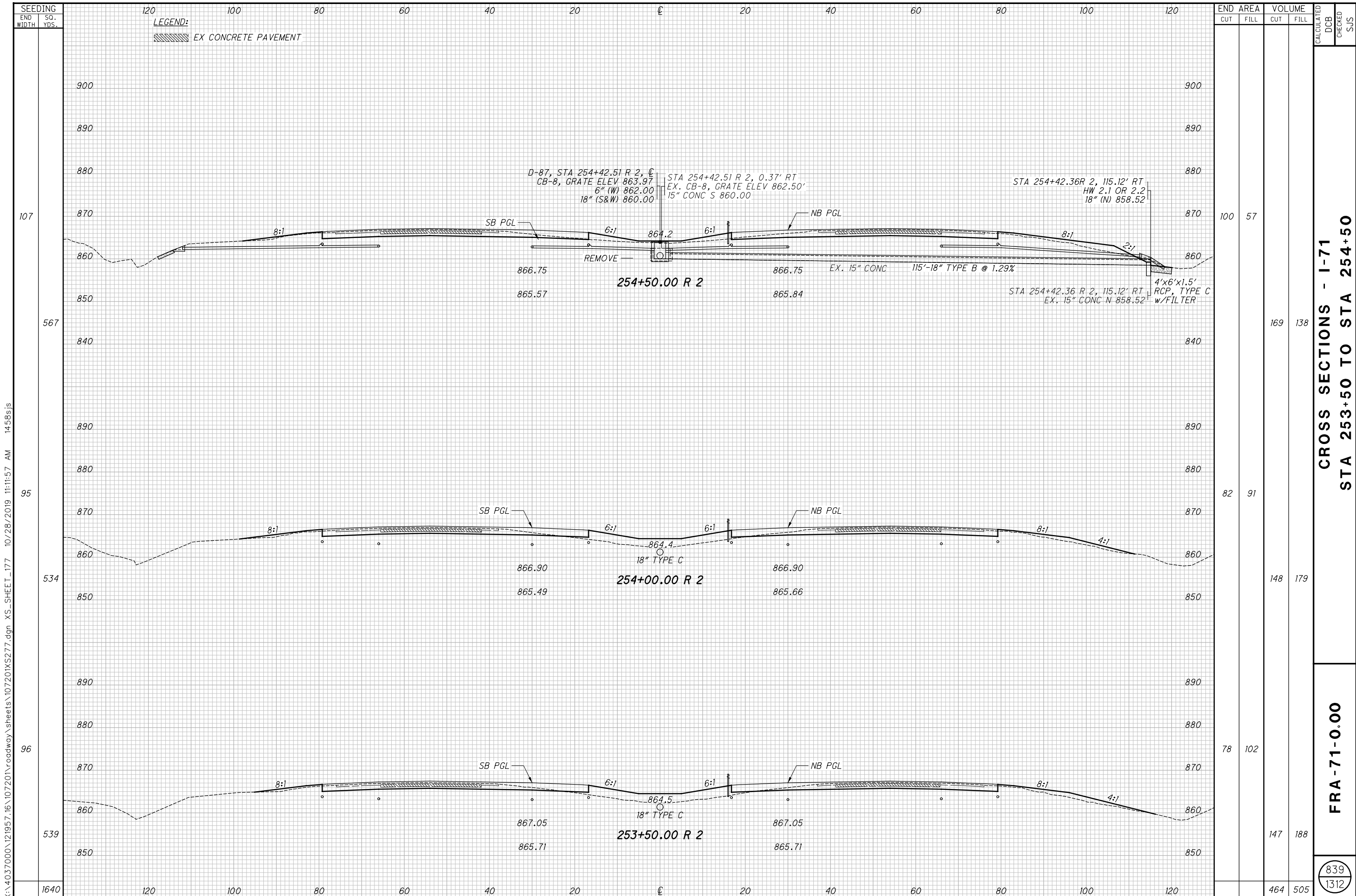


END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
81	101				
82	89				
81	91				
	150	176			
	150	166			
	145	171			
	445	513			

CROSS SECTIONS - I-71
STA 252+00 TO STA 253+00

FRA - 71 - 0.00

838
1312



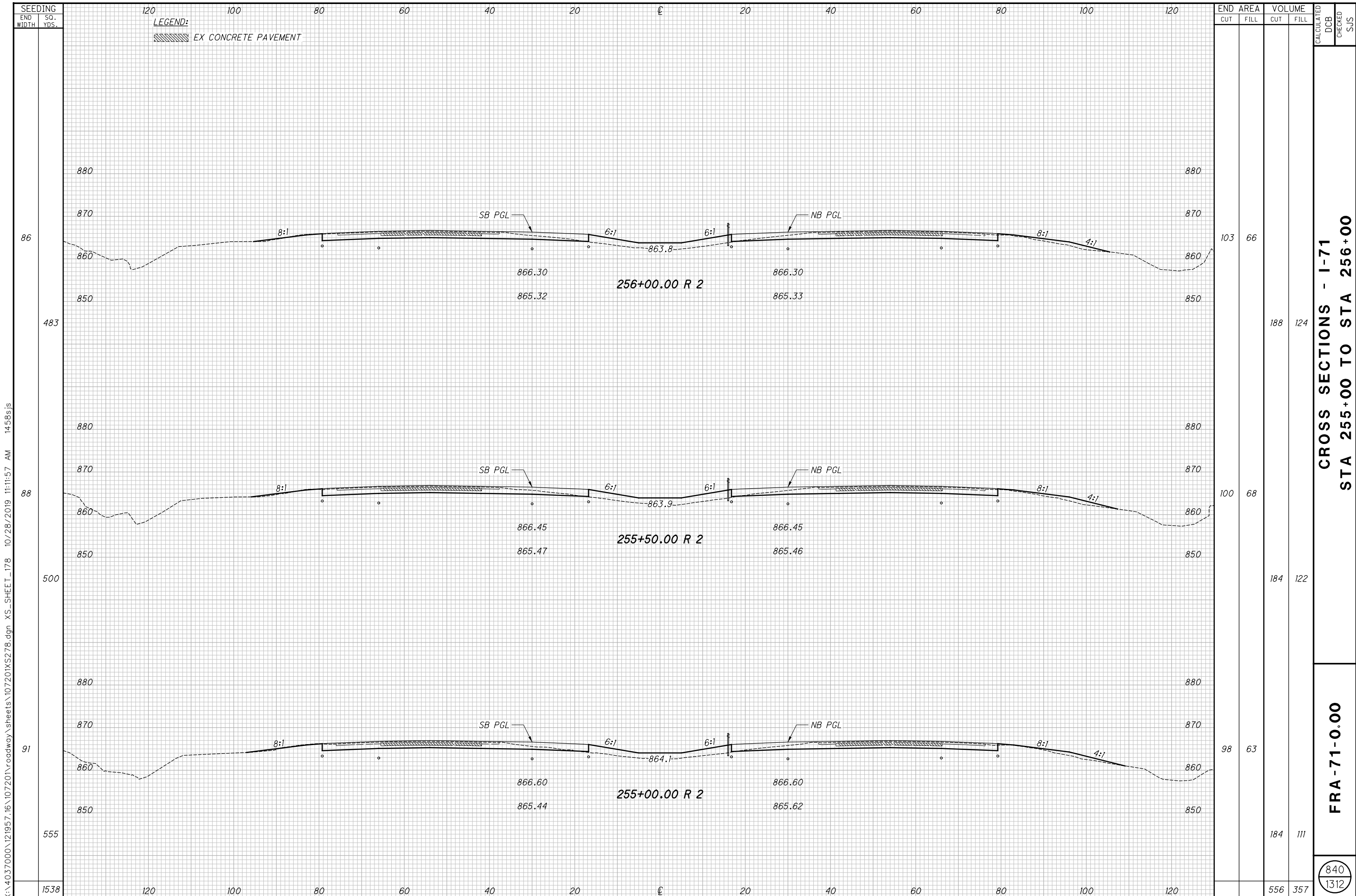
X:\4037000\121957.16\107201\roadway\sheets\107201XS277.dgn XS_SHEET_177 10/28/2019 11:11:57 AM 1458s.js

SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DCB	CHECKED SJS
		CUT	FILL	CUT	FILL		
107		100	57				
567		169	138				
95		82	91				
534		148	179				
96		78	102				
539		147	188				
1640		464	505				

**CROSS SECTIONS - I-71
STA 253+50 TO STA 254+50**

FRA - 71 - 0.00

839
1312



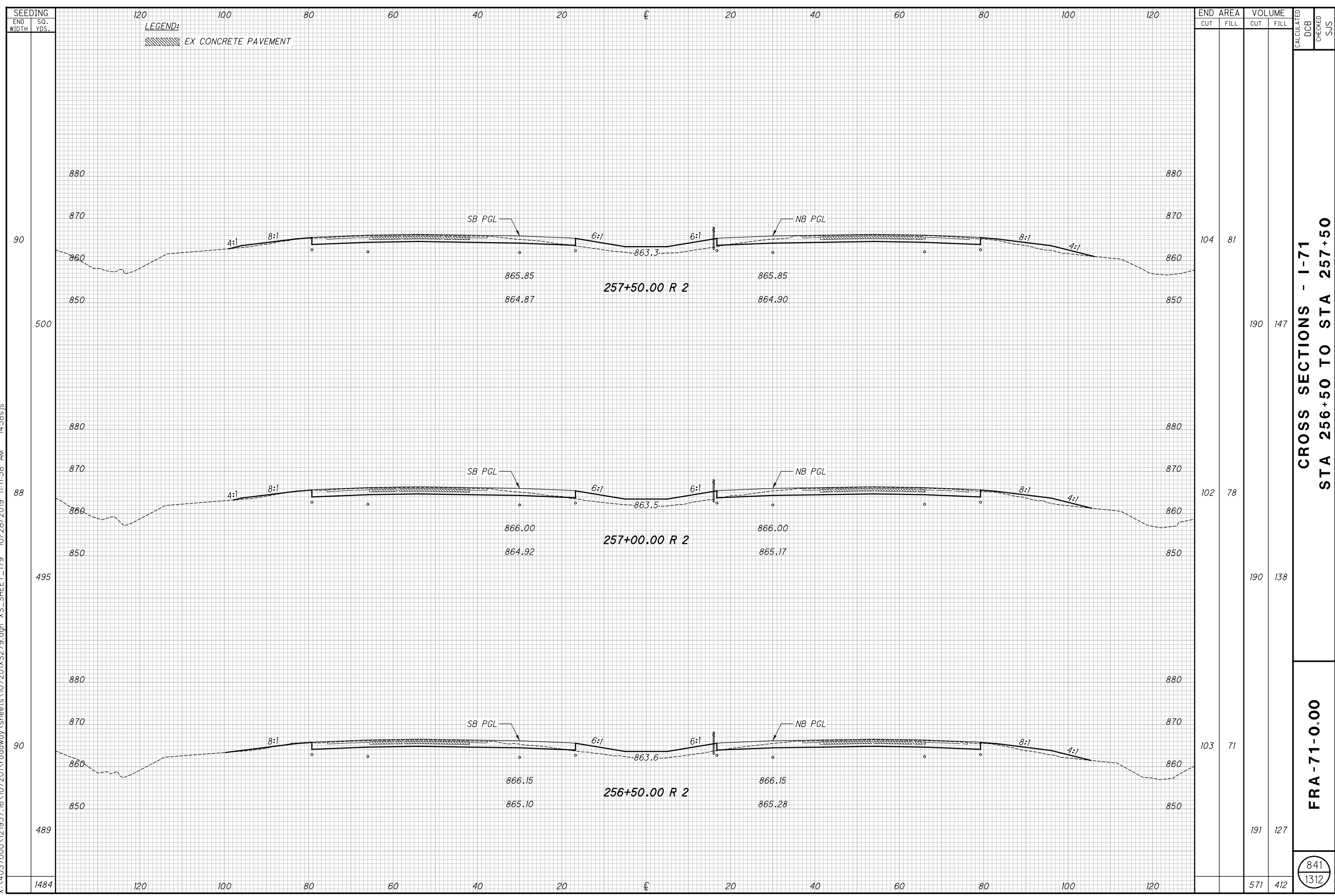
**CROSS SECTIONS - I-71
 STA 255+00 TO STA 256+00**

FRA - 71 - 0.00

840
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS278.dgn XS_SHEET_178 10/28/2019 11:11:57 AM 1458s.js

X:\4037000\121957.16\107201\roadway\sheets\107201XS279.dgn XS_SHEET_179 10/28/2019 11:11:58 AM 1458s.js

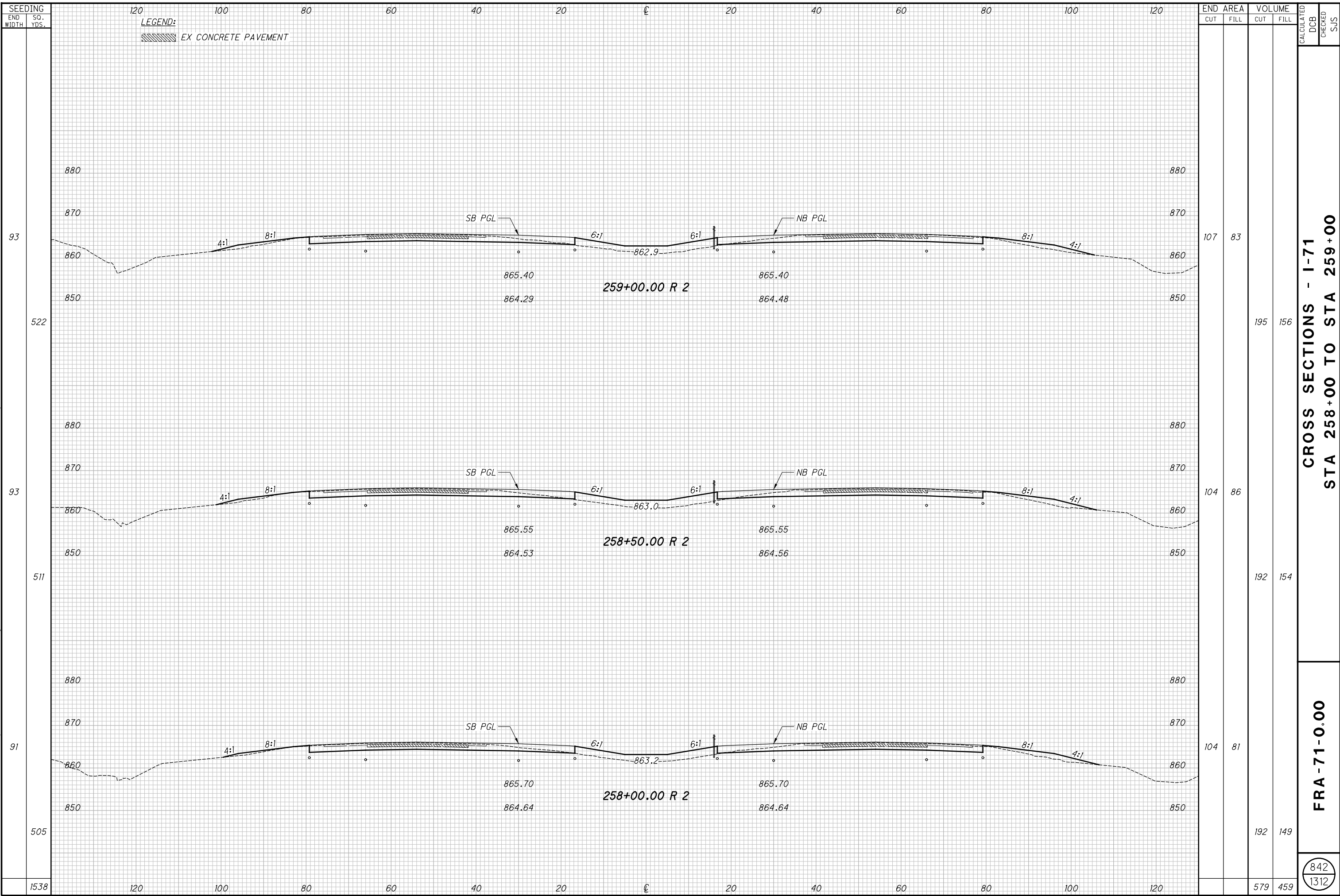


**CROSS SECTIONS - I-71
 STA 256+50 TO STA 257+50**

FRA - 71 - 0.00

841
 1312

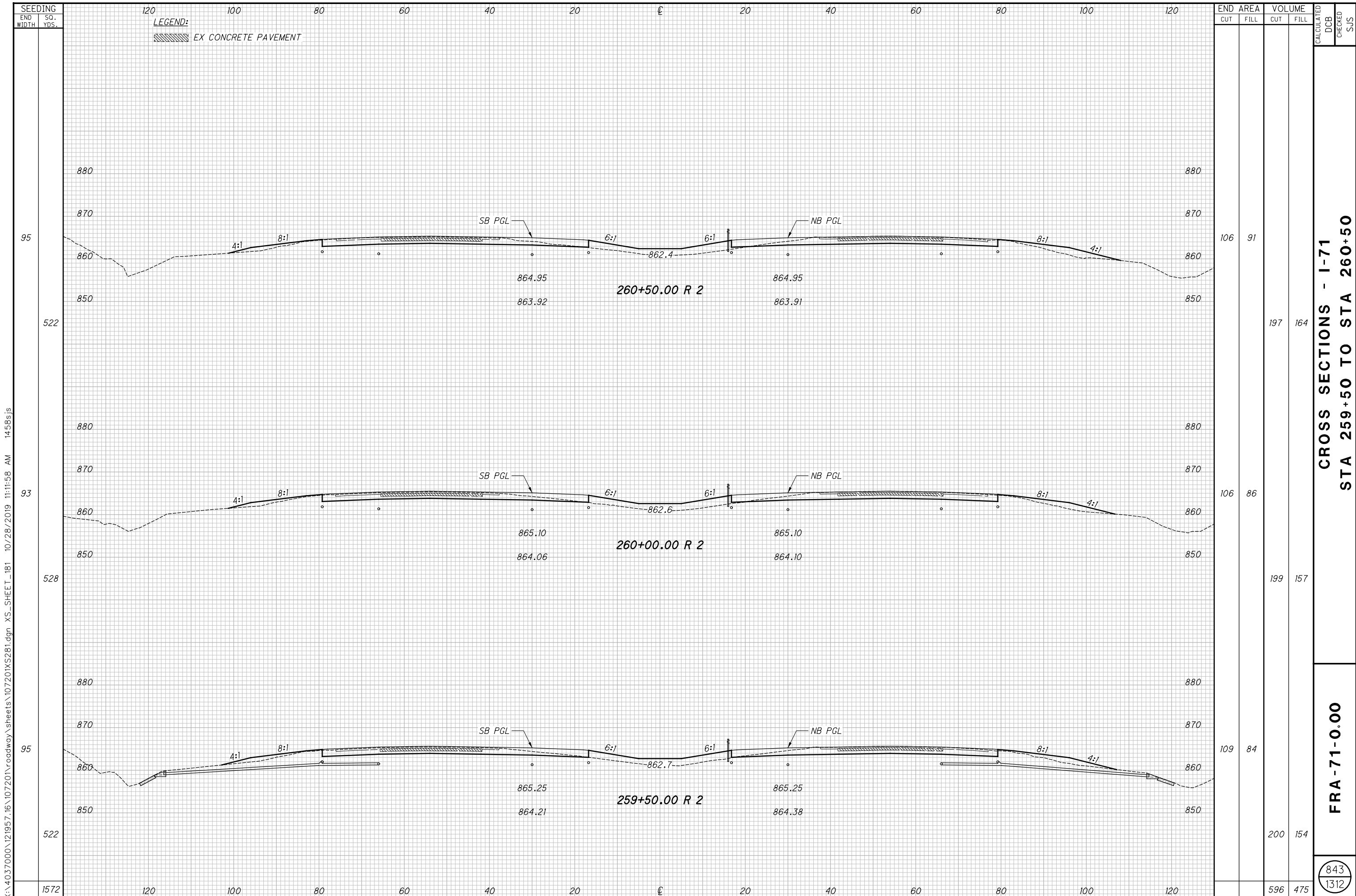
X:\4037000\121957.16\107201\roadway\sheets\107201\XS280.dgn XS_SHEET_180 10/28/2019 11:11:58 AM 14585.js



**CROSS SECTIONS - I-71
 STA 258+00 TO STA 259+00**

FRA - 71 - 0.00

842
 1312



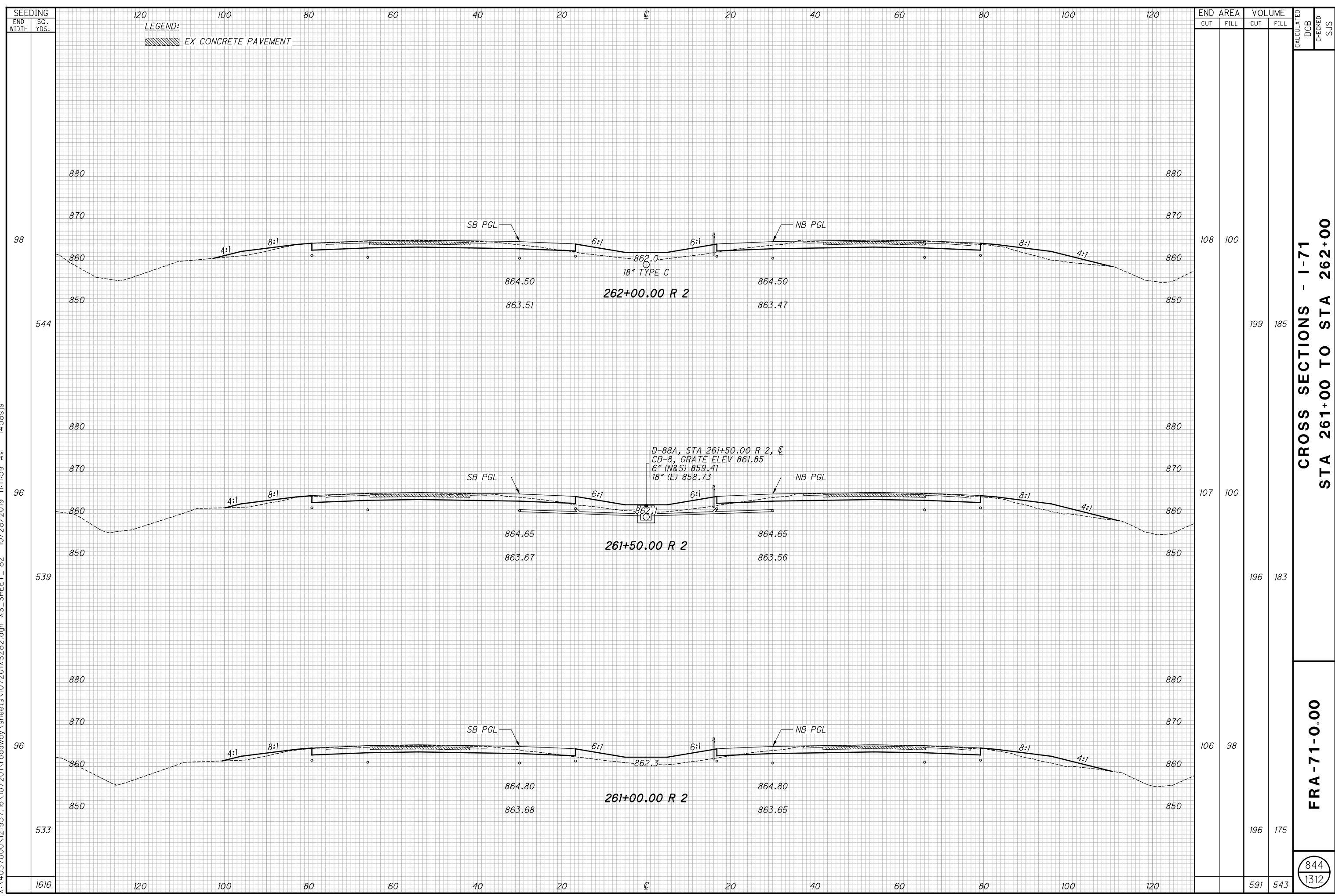
**CROSS SECTIONS - I-71
STA 259+50 TO STA 260+50**

FRA-71-0.00

843
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X5281.dgn XS_SHEET_181 10/28/2019 11:11:58 AM 14:58s.js

X:\4037000\121957.16\107201\roadway\sheets\107201\XS282.dgn XS_SHEET_182 10/28/2019 11:11:59 AM 1458s.js

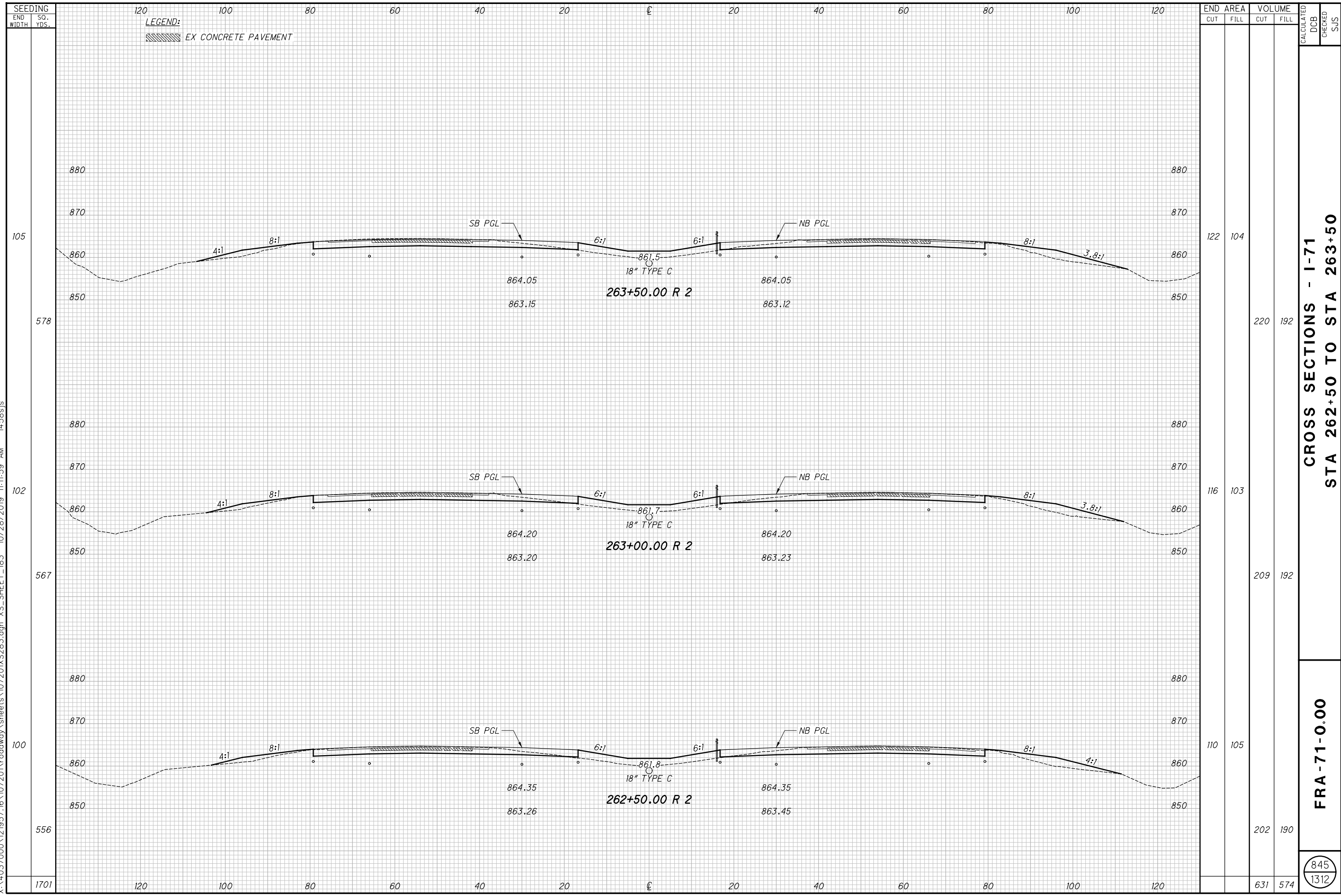


**CROSS SECTIONS - I-71
 STA 261+00 TO STA 262+00**

FRA-71-0.00

844
1312

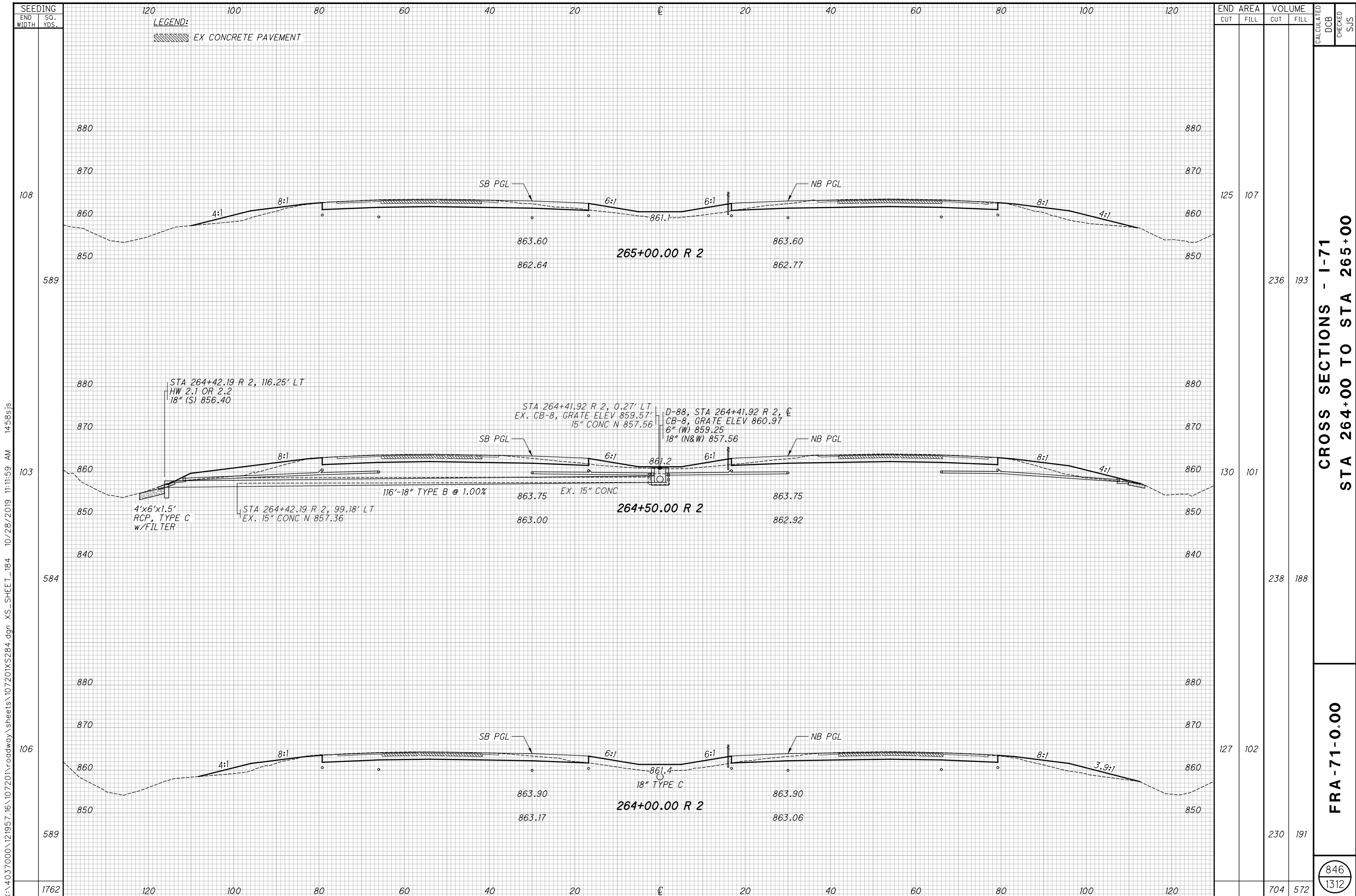
X:\4037000\121957.16\107201\roadway\sheets\107201\XS283.dgn XS_SHEET_183 10/28/2019 11:11:59 AM 1458s.js



**CROSS SECTIONS - I-71
 STA 262+50 TO STA 263+50**

FRA - 71-0.00

845
 1312



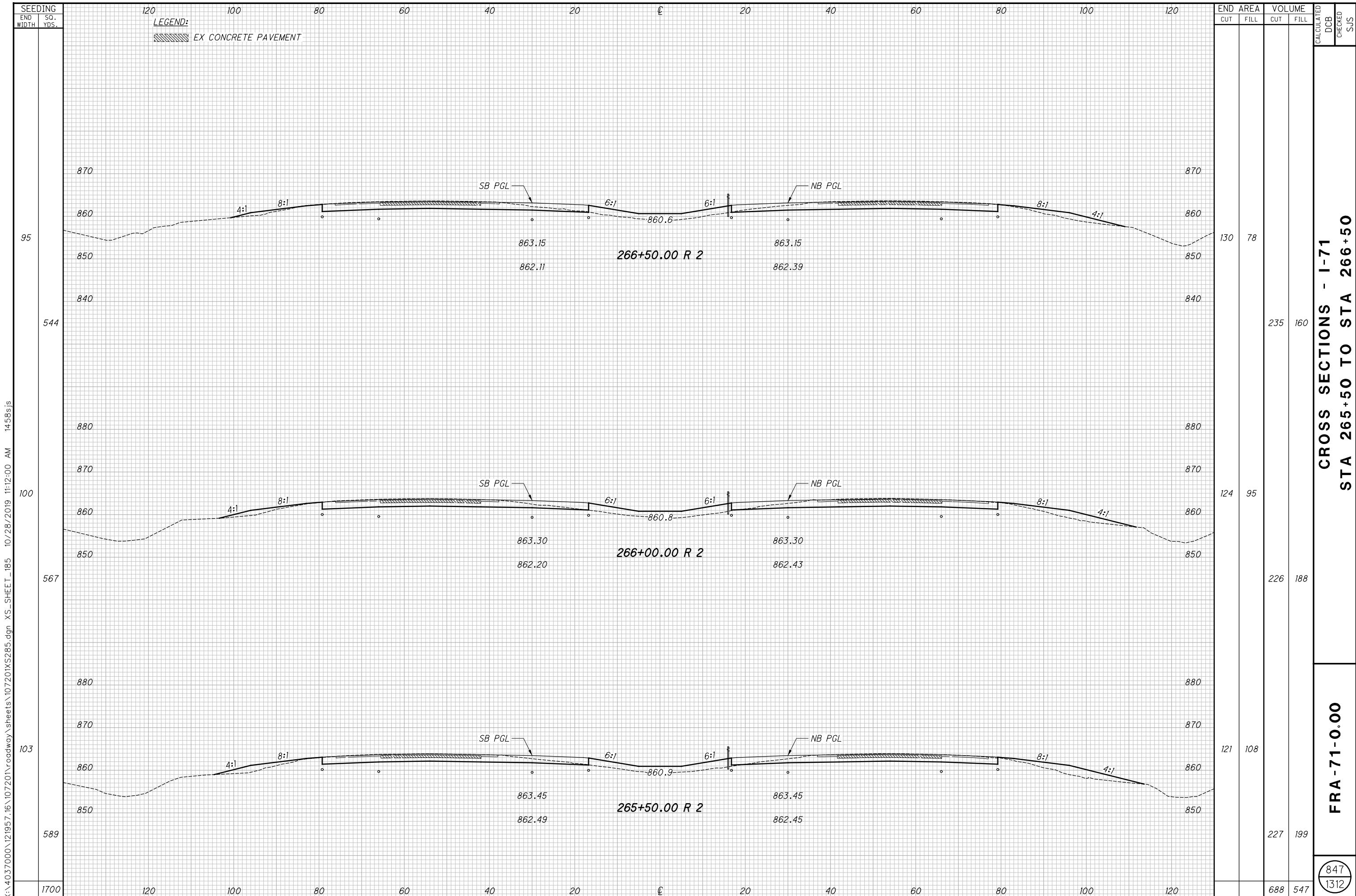
X:\4037000\121957.16\107201\roadway\sheets\107201XS284.dgn XS_SHEET_184 10/28/2019 11:11:59 AM 1458s.js

SEEDING	END AREA		VOLUME		CALCULATED	DCB	CHECKED	SJS
	CUT	FILL	CUT	FILL				
108	125	107						
589			236	193				
103	130	101						
584			238	188				
106	127	102						
589			230	191				
1762			704	572				

CROSS SECTIONS - I-71
STA 264+00 TO STA 265+00

FRA - 71 - 0.00

846
 1312



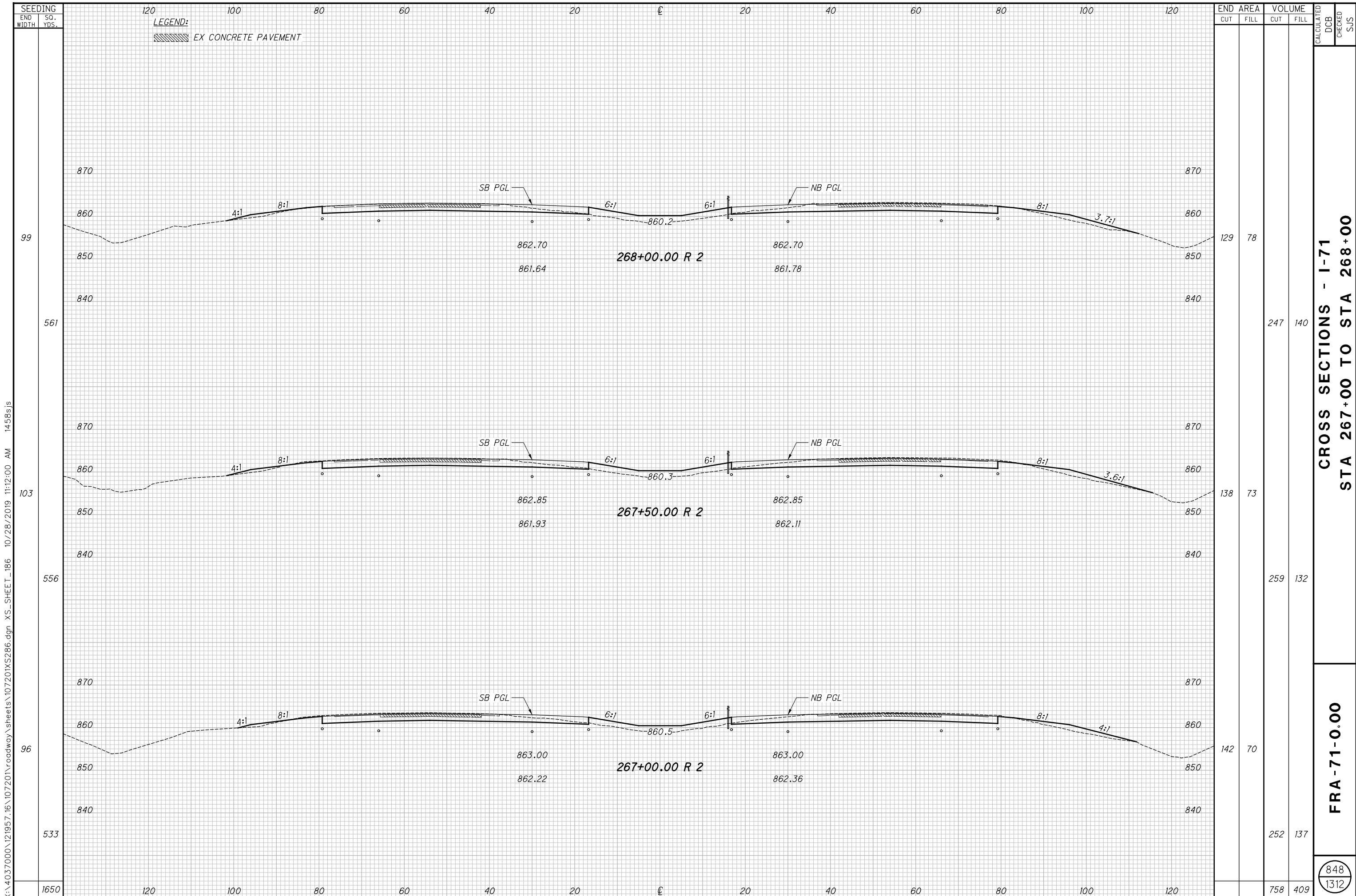
END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
130	78				
124	95				
121	108				
235	160				
226	188				
227	199				
688	547				

**CROSS SECTIONS - I-71
STA 265+50 TO STA 266+50**

FRA - 71-0.00

847
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS285.dgn XS_SHEET_185 10/28/2019 11:12:00 AM 1458sjs



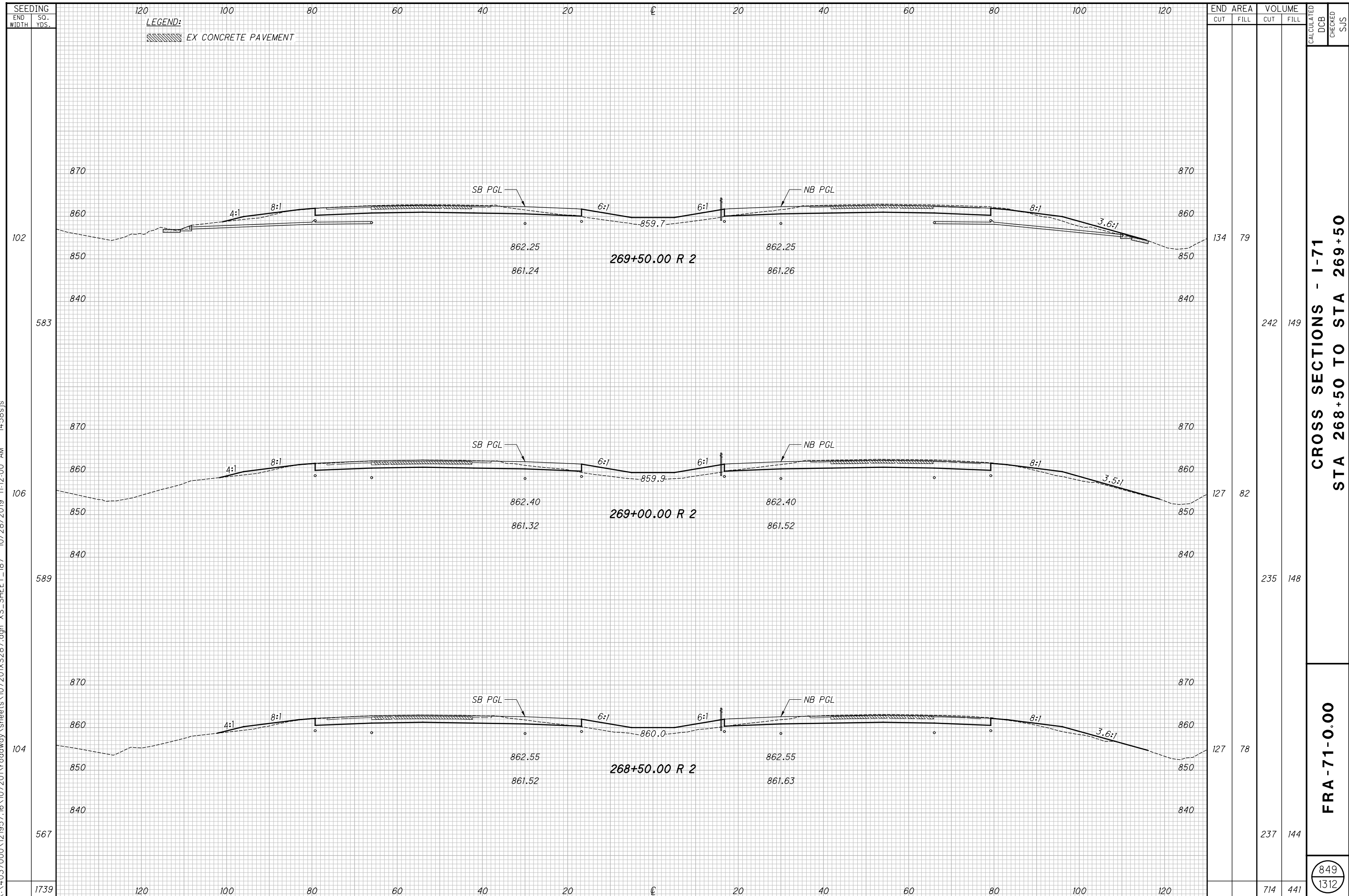
**CROSS SECTIONS - I-71
STA 267+00 TO STA 268+00**

FRA-71-0.00

848
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS286.dgn XS_SHEET_186 10/28/2019 11:12:00 AM 14:58:51sjs

X:\4037000\121957.16\107201\roadway\sheets\107201\XS287.dgn XS_SHEET_187 10/28/2019 11:12:00 AM 1458sjs



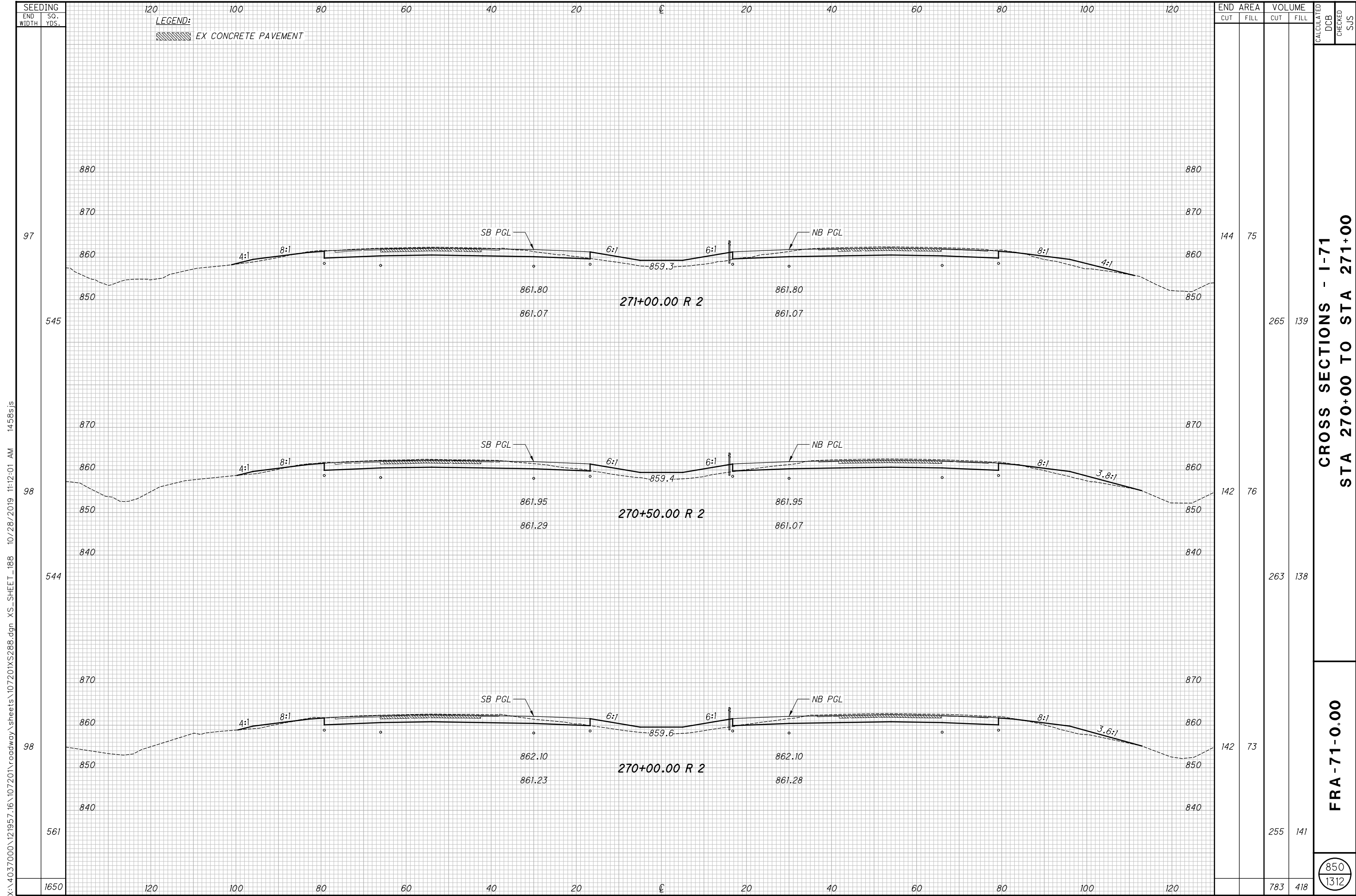
END AREA	VOLUME	CALCULATED		DCB	CHECKED	SJS
		CUT	FILL			
134	79					
242	149					
127	82					
235	148					
127	78					
237	144					
	714	441				

**CROSS SECTIONS - I-71
STA 268+50 TO STA 269+50**

FRA - 71 - 0.00

849
1312

1739



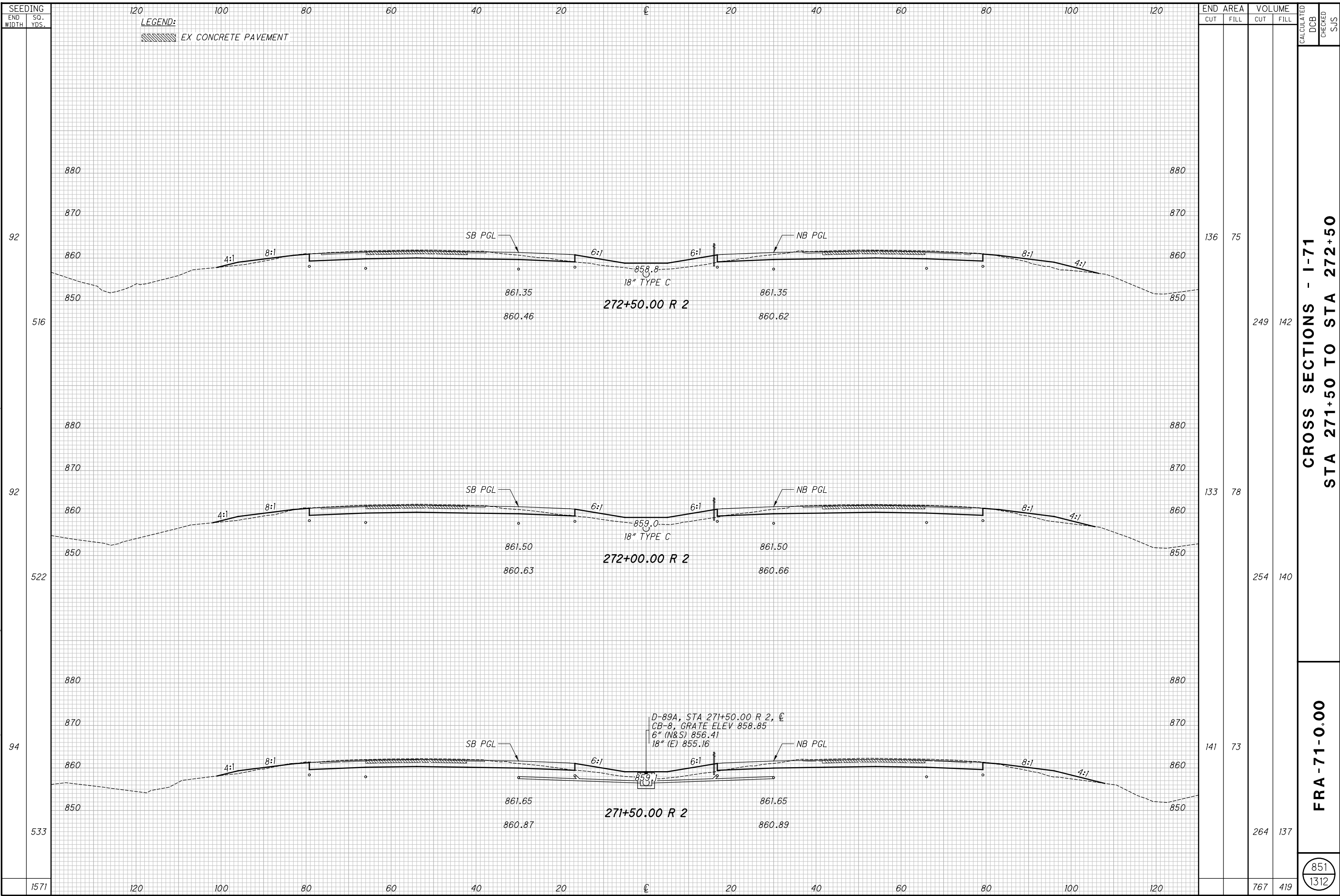
**CROSS SECTIONS - I-71
STA 270+00 TO STA 271+00**

FRA - 71 - 0.00

850
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS288.dgn XS_SHEET_188 10/28/2019 11:12:01 AM 14585.js

X:\4037000\121957.16\107201\roadway\sheets\107201\XS289.dgn XS_SHEET_189 10/28/2019 11:12:01 AM 1458s.js

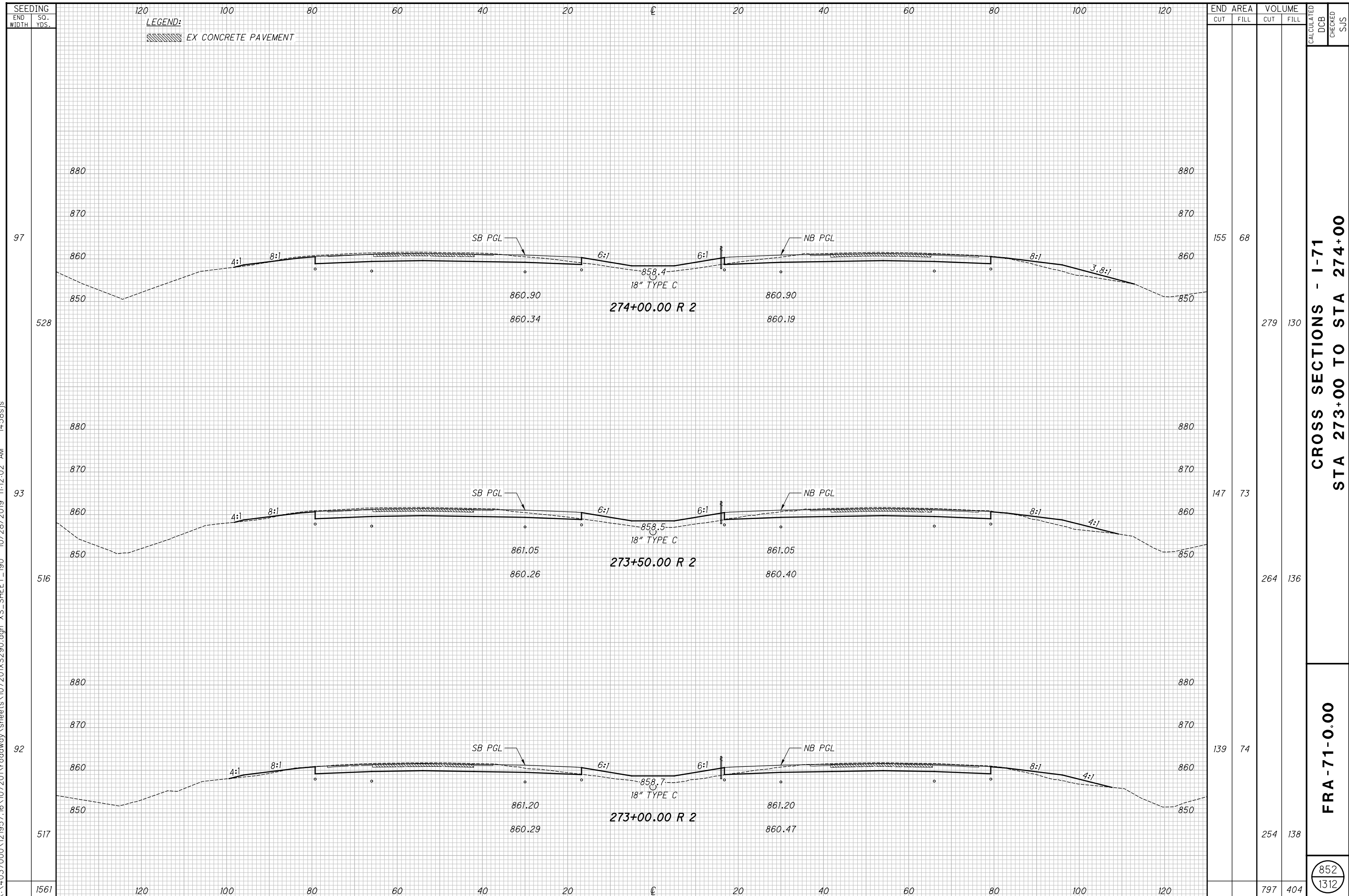


END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
136	75				
133	78				
141	73				
767	419	851	1312		

**CROSS SECTIONS - I-71
 STA 271+50 TO STA 272+50**

FRA-71-0.00

X:\4037000\121957.16\107201\roadway\sheets\107201\XS290.dgn XS_SHEET_190 10/28/2019 11:12:02 AM 14:58sjs



END AREA	VOLUME	CALCULATED	DCB	CHECKED	SJS
155	68				
147	73				
139	74				
		279	130		
		264	136		
		254	138		
		797	404		

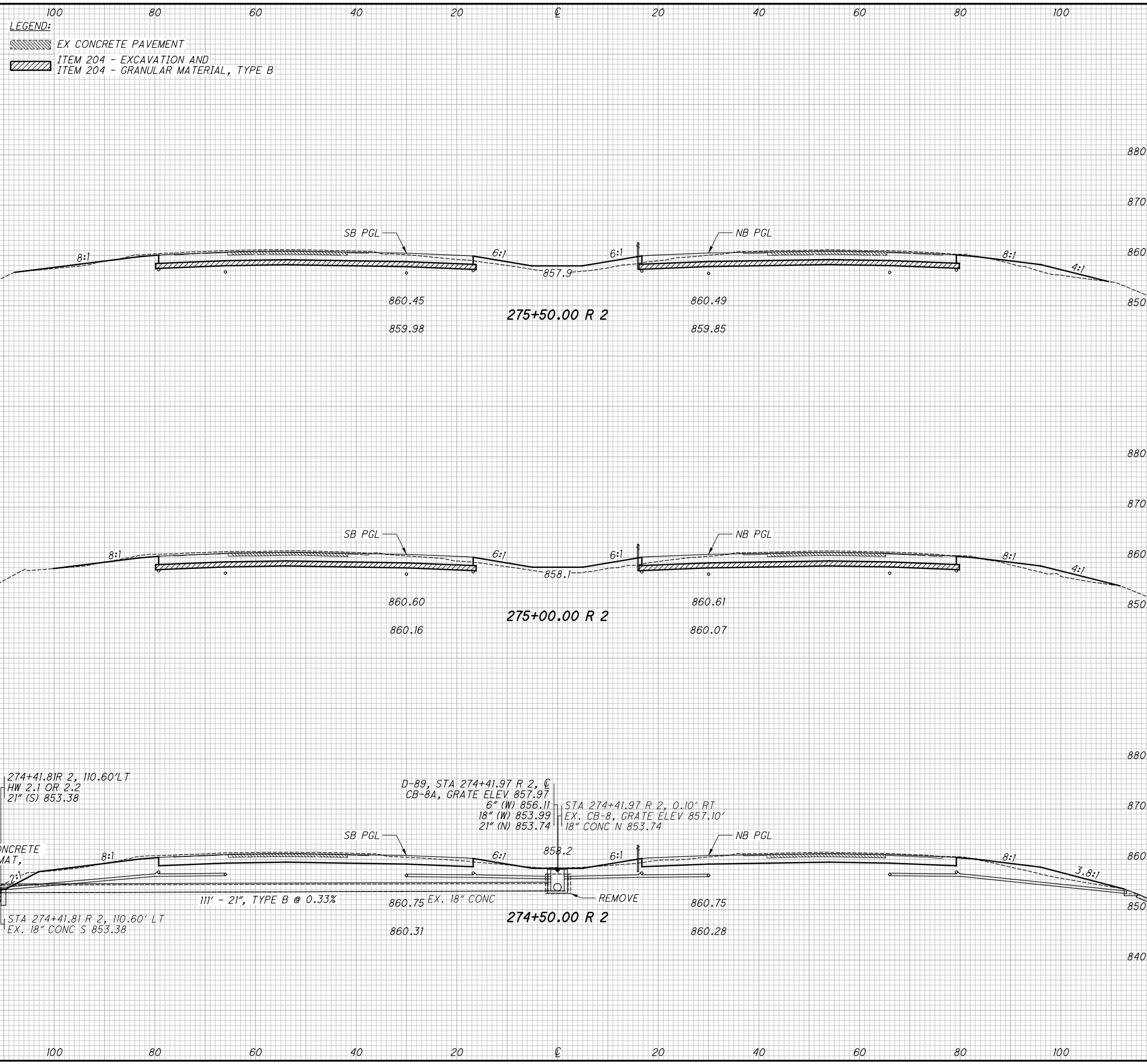
**CROSS SECTIONS - I-71
 STA 273+00 TO STA 274+00**

FRA-71-0.00

852
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS291.dgn XS_SHEET_191 10/28/2019 11:12:02 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
102	128	128	712
97	128	128	712
117	600	712	712
1751	712	712	712



ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
160	56	127	127
302	101	236	236
166	53	127	127
323	77		
183	31		
313	92		
938	270	236	236

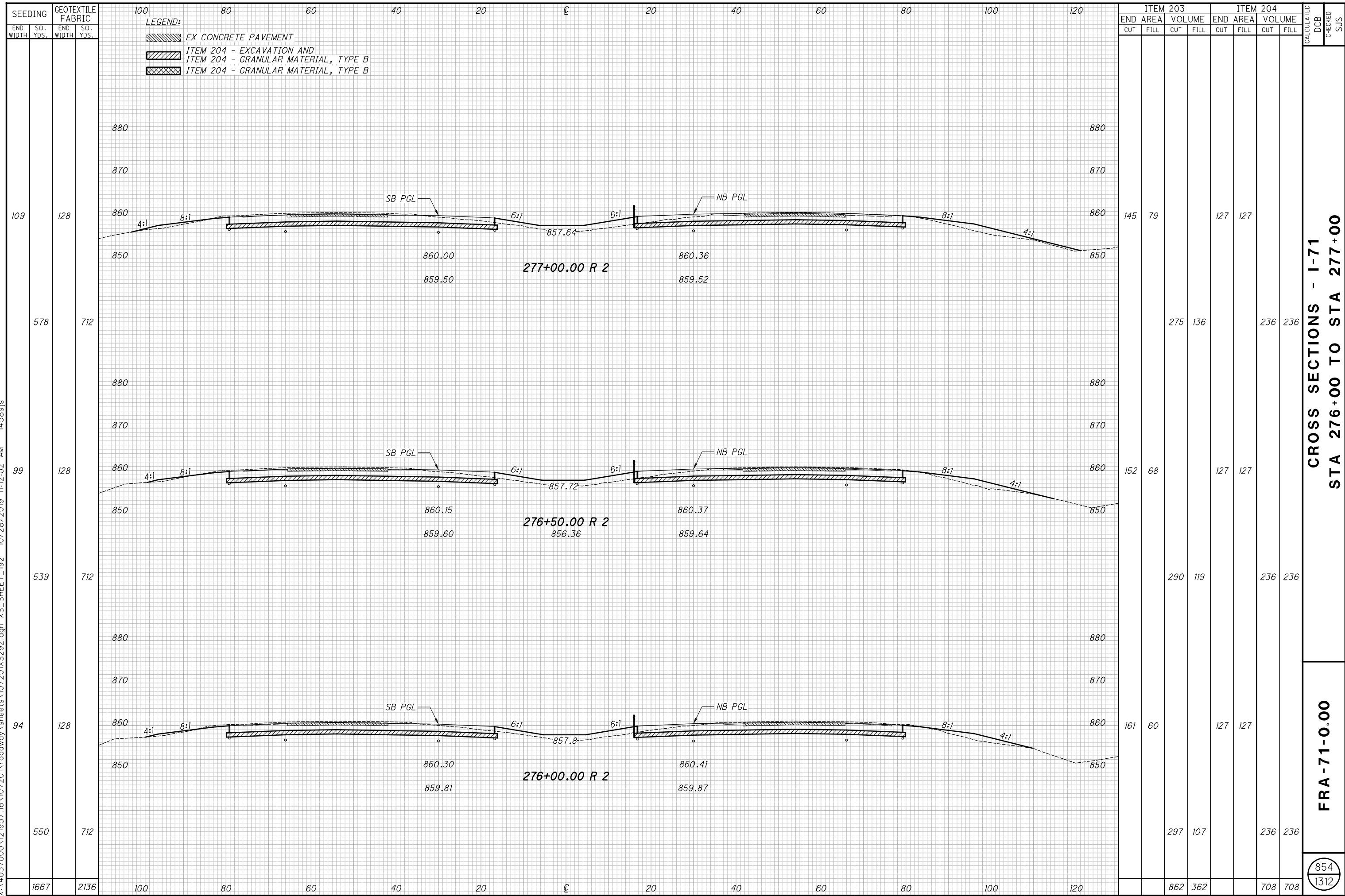
CALCULATED DCB CHECKED SUS

**CROSS SECTIONS - I-71
 STA 274+50 TO STA 275+50**

FRA-71-0.00

853
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS292.dgn XS_SHEET_192 10/28/2019 11:12:02 AM 1458sjs



LEGEND:
 [Hatched Pattern] EX CONCRETE PAVEMENT
 [Diagonal Hatching] ITEM 204 - EXCAVATION AND
 [Diagonal Hatching] ITEM 204 - GRANULAR MATERIAL, TYPE B
 [Cross-hatching] ITEM 204 - GRANULAR MATERIAL, TYPE B

SEEDING	GEOTEXTILE FABRIC		ITEM 203		ITEM 204		CALCULATED	DCB	CHECKED	SJS
	END WIDTH	SO. YDS.	END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL				
109	128		145	79	127	127				
578	712			275	136	236	236			
99	128		152	68	127	127				
539	712			290	119	236	236			
94	128		161	60	127	127				
550	712			297	107	236	236			
1667	2136			862	362	708	708			




**CROSS SECTIONS - I-71
 STA 276+00 TO STA 277+00**

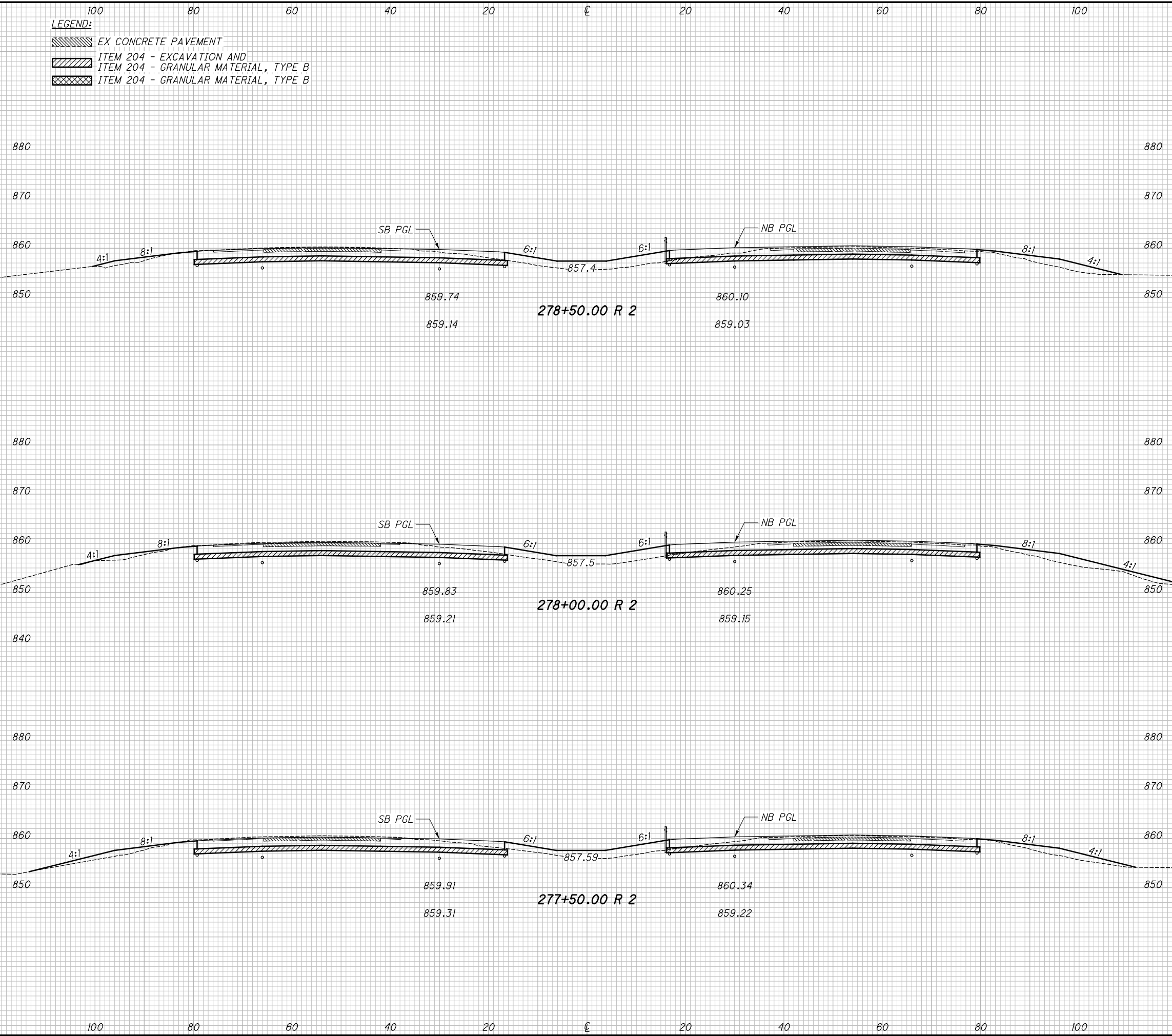
FRA-71-0:00

854
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS293.dgn XS_SHEET_193 10/28/2019 11:12:03 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
94	128	128	712
605	712	712	712
123	128	128	712
650	712	712	712
110	128	128	712
611	712	712	712
1866	2136	2136	712

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B

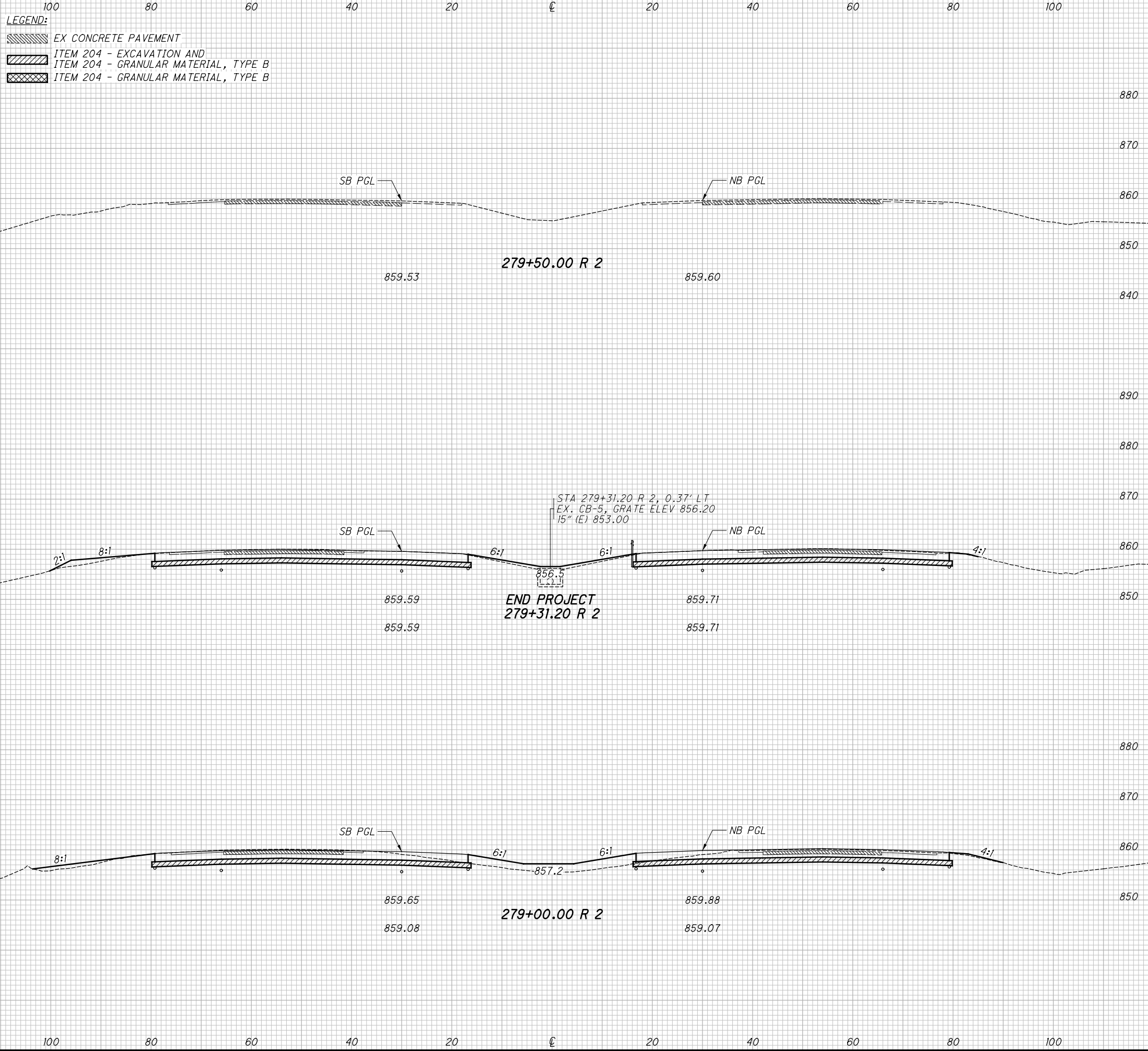


ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
112	97	126	127
214	189	234	236
119	107	126	127
227	188	234	236
126	96	126	127
251	162	235	236
692	539	703	708

CROSS SECTIONS - I-71
 STA 277+50 TO STA 278+50
 CALCULATED DCB
 CHECKED
 SJS
 FRA-71-0:00
 855
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS294.dgn XS_SHEET_194 10/28/2019 11:12:03 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
628		1424	



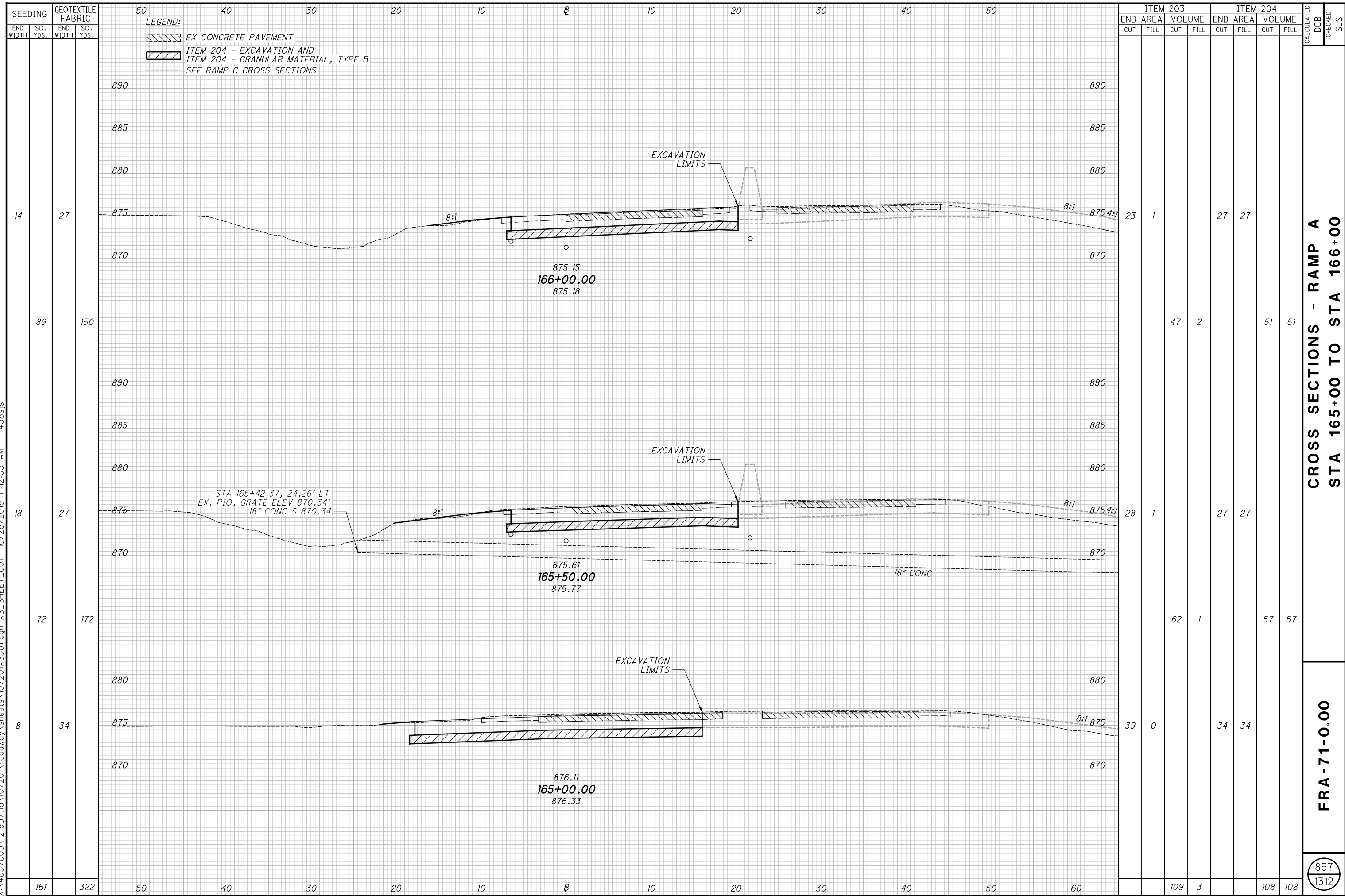
ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END AREA		VOLUME		END AREA		VOLUME					
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL				
155	26			127	127						
		157	54			147	147				
116	68			127	127						
		211	153			234	236				
		368	207			381	383				

CROSS SECTIONS - I-71
STA 279+00 TO STA 279+50

FRA - 71-0:00

856
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\5501.dgn XS_SHEET_001 10/28/2019 11:12:03 AM 14585.js

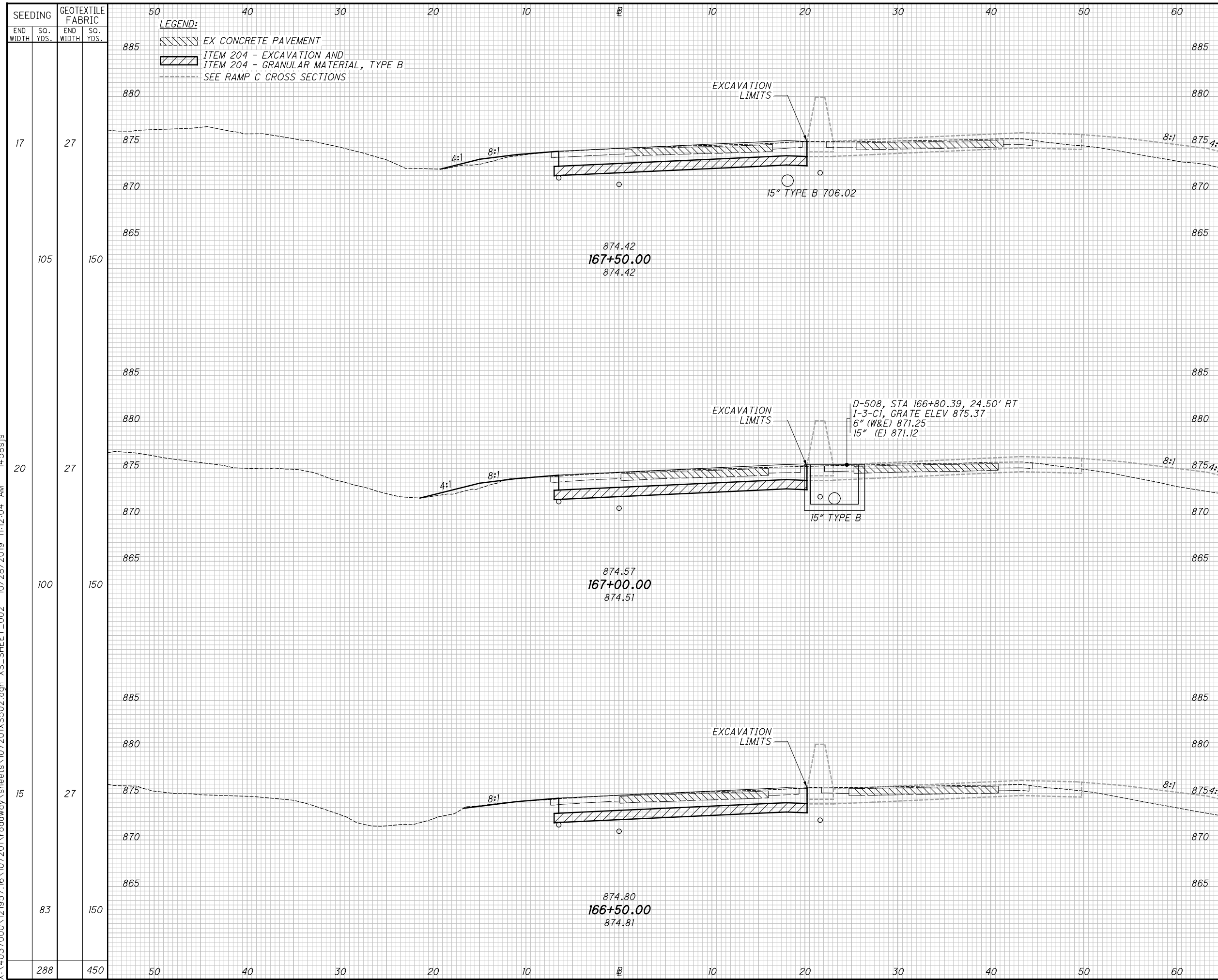


**CROSS SECTIONS - RAMP A
 STA 165+00 TO STA 166+00**

FRA - 71 - 0.00

857
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS502.dgn XS_SHEET_002 10/28/2019 11:12:04 AM 1458s.js



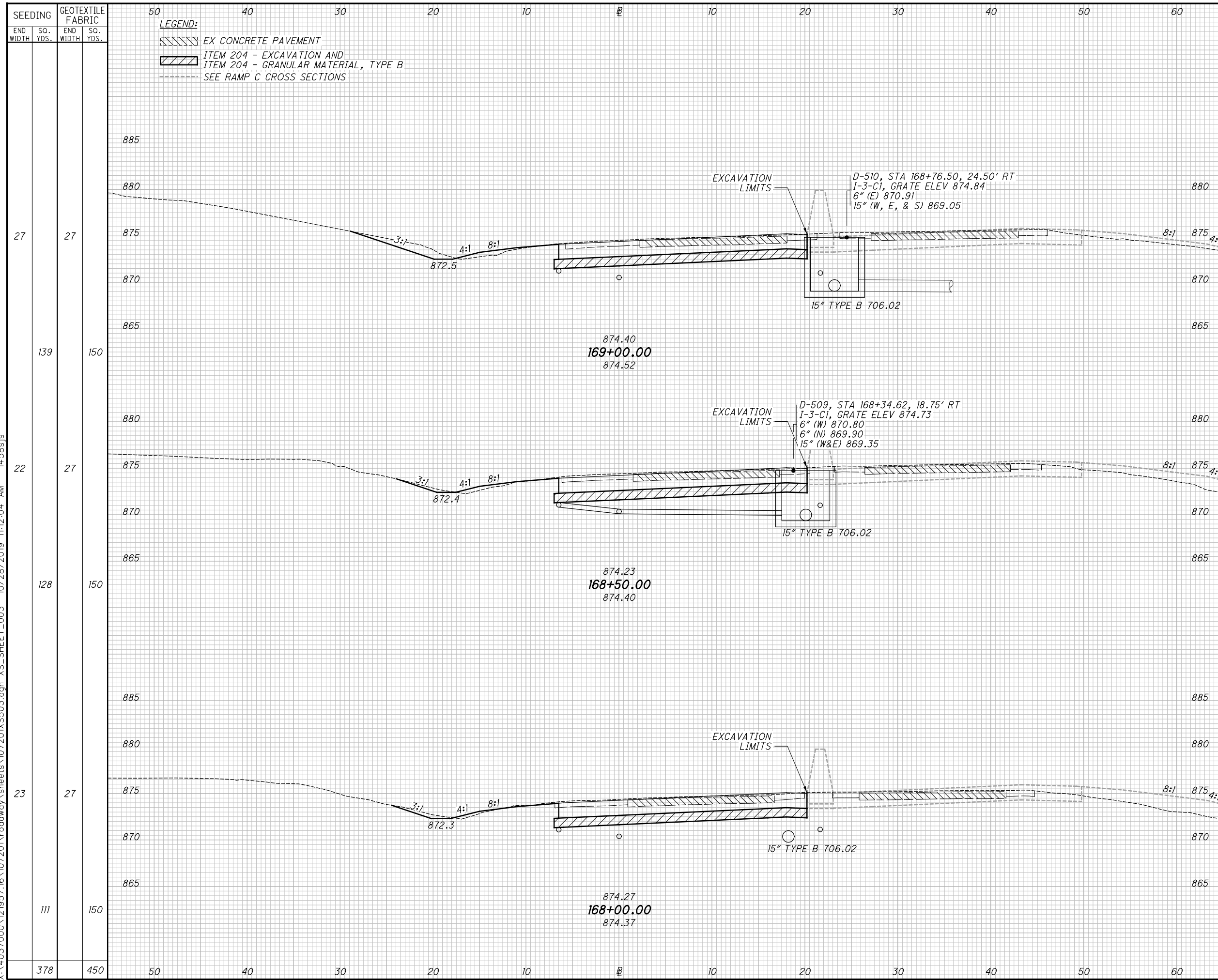
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL			
17	27	21	2	28	28									
105	150	38	5	51	51									
20	27	20	3	28	28									
100	150	39	3	51	51									
15	27	22	0	28	28									
83	150	42	1	51	51									
288	450	119	9	153	153									

CROSS SECTIONS - RAMP A
STA 166+50 TO STA 167+50

FRA - 71 - 0.00

858
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS503.dgn XS_SHEET_003 10/28/2019 11:12:04 AM 1458s.js



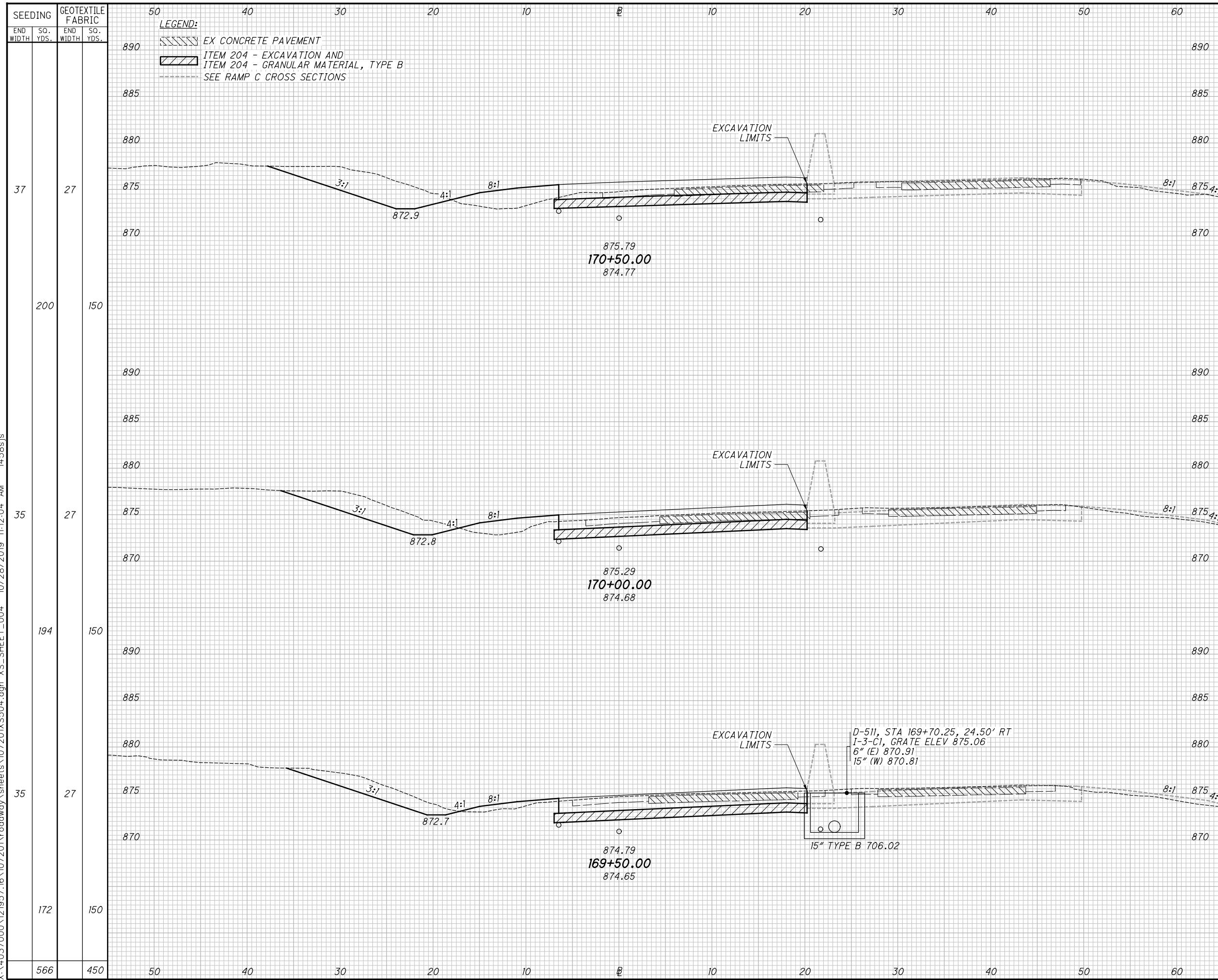
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	ITEM 203		ITEM 204		CALCULATED DCB	CHECKED	SJS
				CUT	FILL	CUT	FILL			
27	27	27	27	31	3	27	27			
139	150	150	150		53	4	50	50		
22	27	27	27	26	2	27	27			
128	150	150	150		48	3	51	51		
23	27	27	27	26	1	27	27			
111	150	150	150		44	3	51	51		
378	450	50	60		145	10	152	152		

**CROSS SECTIONS - RAMP A
 STA 168+00 TO STA 169+00**

FRA-71-0:00

859
 1312

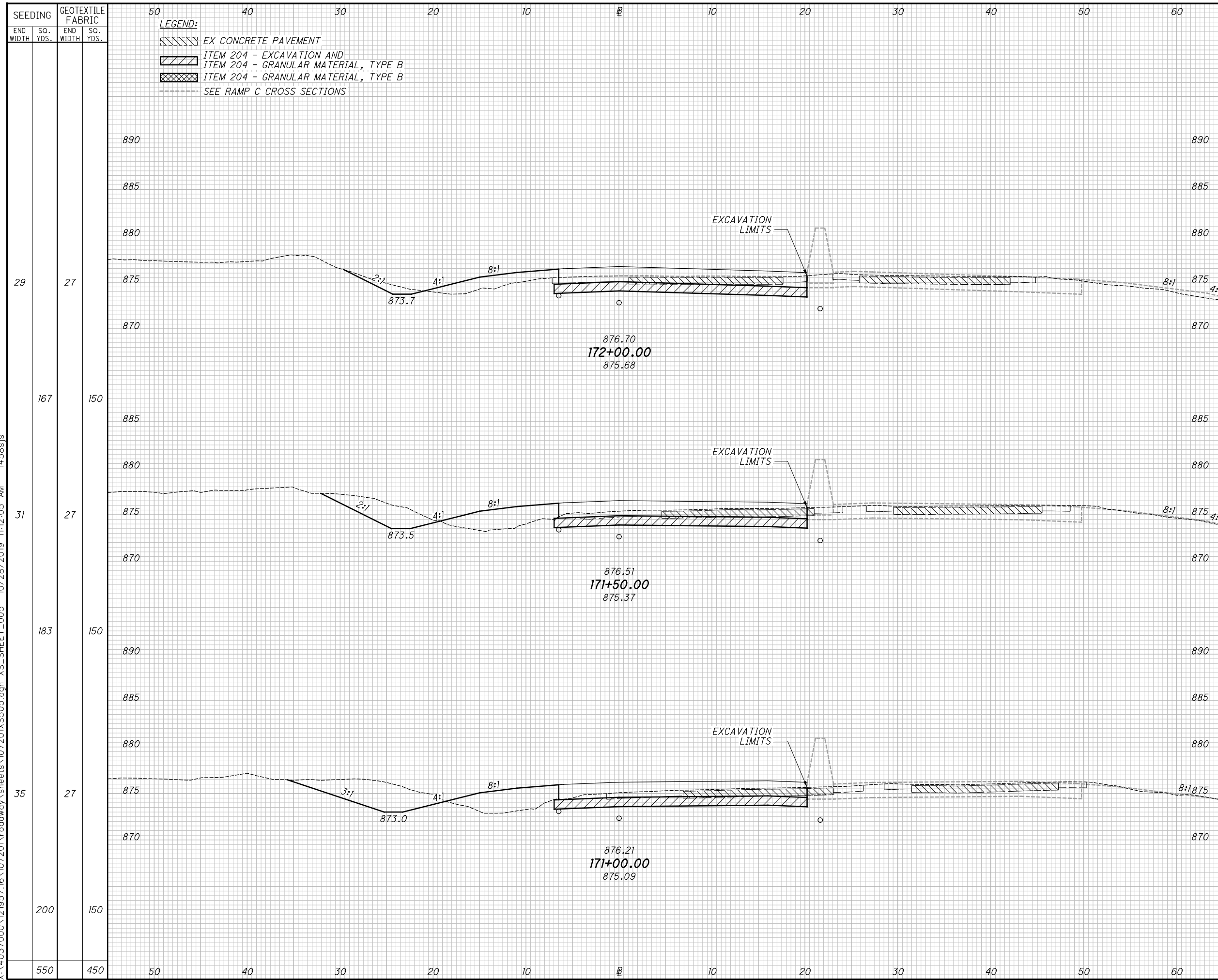
X:\4037000\121957.16\107201\roadway\sheets\107201XS504.dgn XS_SHEET_004 10/28/2019 11:12:04 AM 1458s.js



ITEM 203	ITEM 203		ITEM 204		ITEM 204
	END AREA	VOLUME	END AREA	VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL
40	18		27	27	
		71	27		50
37	11		27	27	
		70	15		50
39	5		27	27	
		65	7		50
		206	49		150

CROSS SECTIONS - RAMP A
 STA 169+50 TO STA 170+50
 FRA - 71 - 0.00
 860
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS505.dgn XS_SHEET_005 10/28/2019 11:12:05 AM 1458s.js



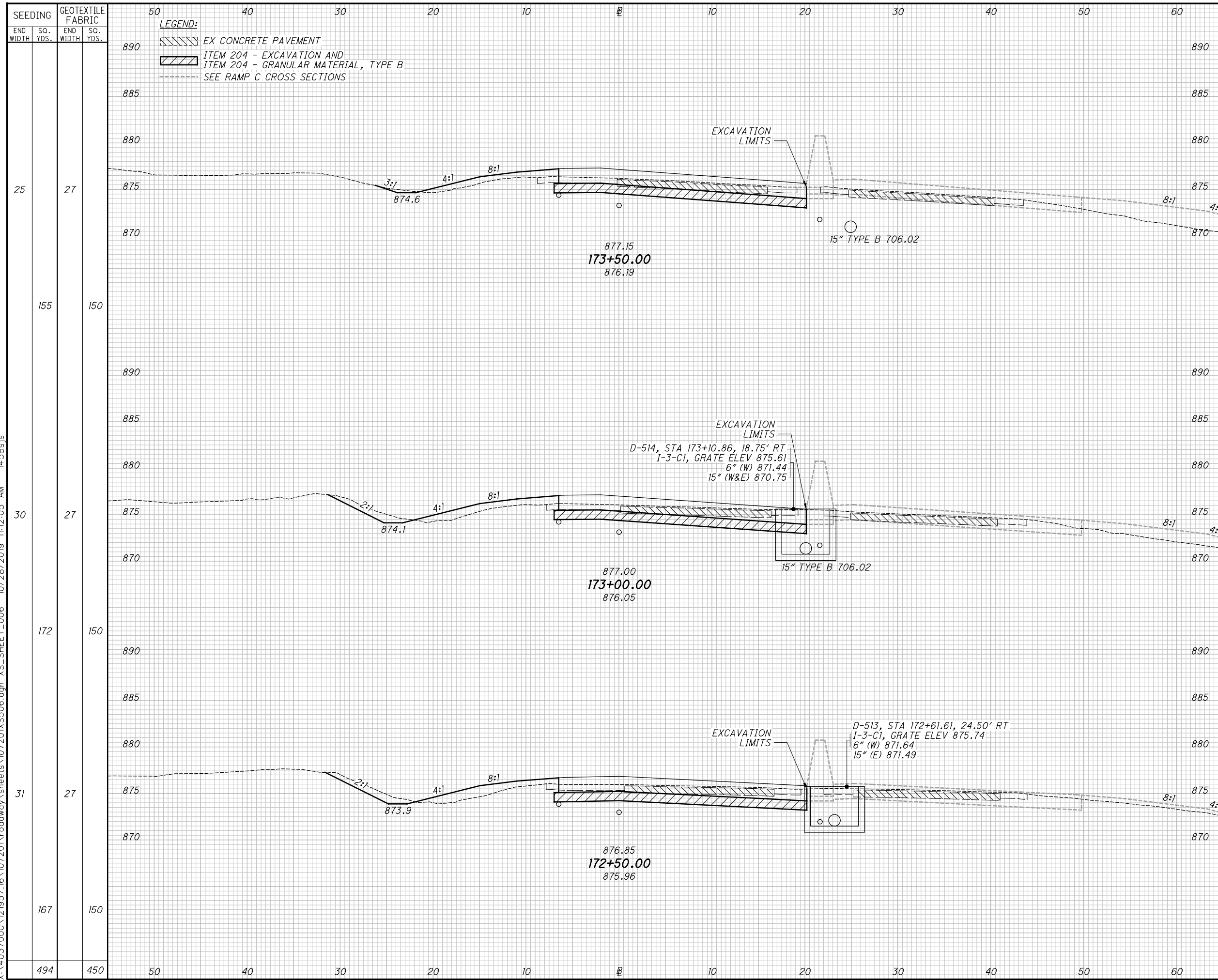
ITEM 203	ITEM 203		ITEM 204		ITEM 204	
	END CUT	AREA FILL	END CUT	VOLUME FILL	END CUT	VOLUME FILL
7	15		27	28		
26	34		49	51		
21	22		26	27		
50	41		49	50		
33	22		26	27		
68	37		49	50		
144	112		147	151		

CROSS SECTIONS - RAMP A
 STA 171+00 TO STA 172+00

FRA - 71 - 0.00

861
 1312

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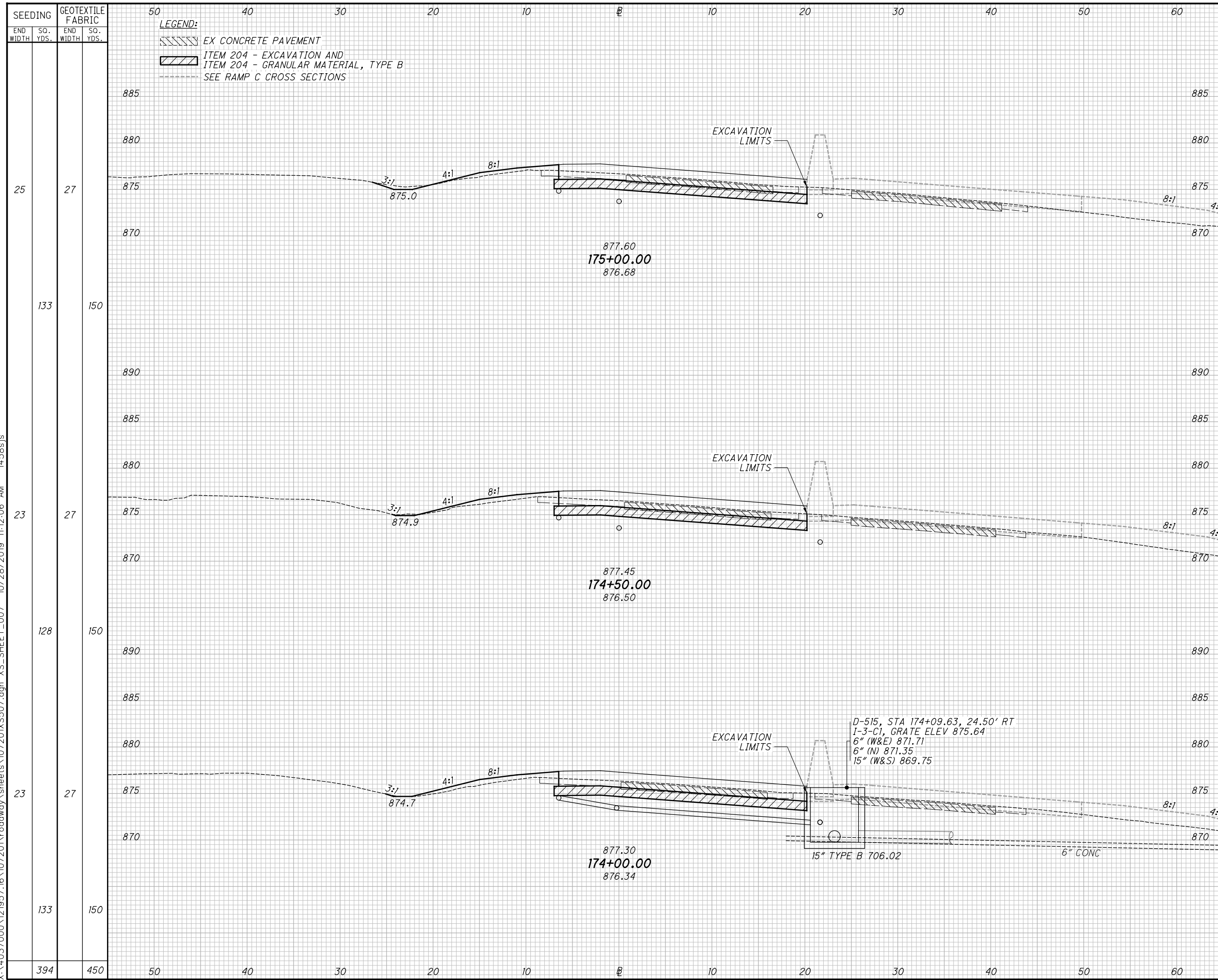
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED SUS
END WIDTH	SO. WIDTH	END WIDTH	SO. WIDTH	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL		
25	27	27	27	4	9			26	27				
155	150	150	150			15	19			49	50		
30	27	27	27	12	12			27	27				
172	150	150	150			22	22			50	50		
31	27	27	27	12	12			27	27				
167	150	150	150			18	25			50	51		
494	450	450	450			55	66			149	151		

**CROSS SECTIONS - RAMP A
 STA 172+50 TO STA 173+50**

FRA - 71 - 0.00

862
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS507.dgn XS_SHEET_007 10/28/2019 11:12:06 AM 1458sjs



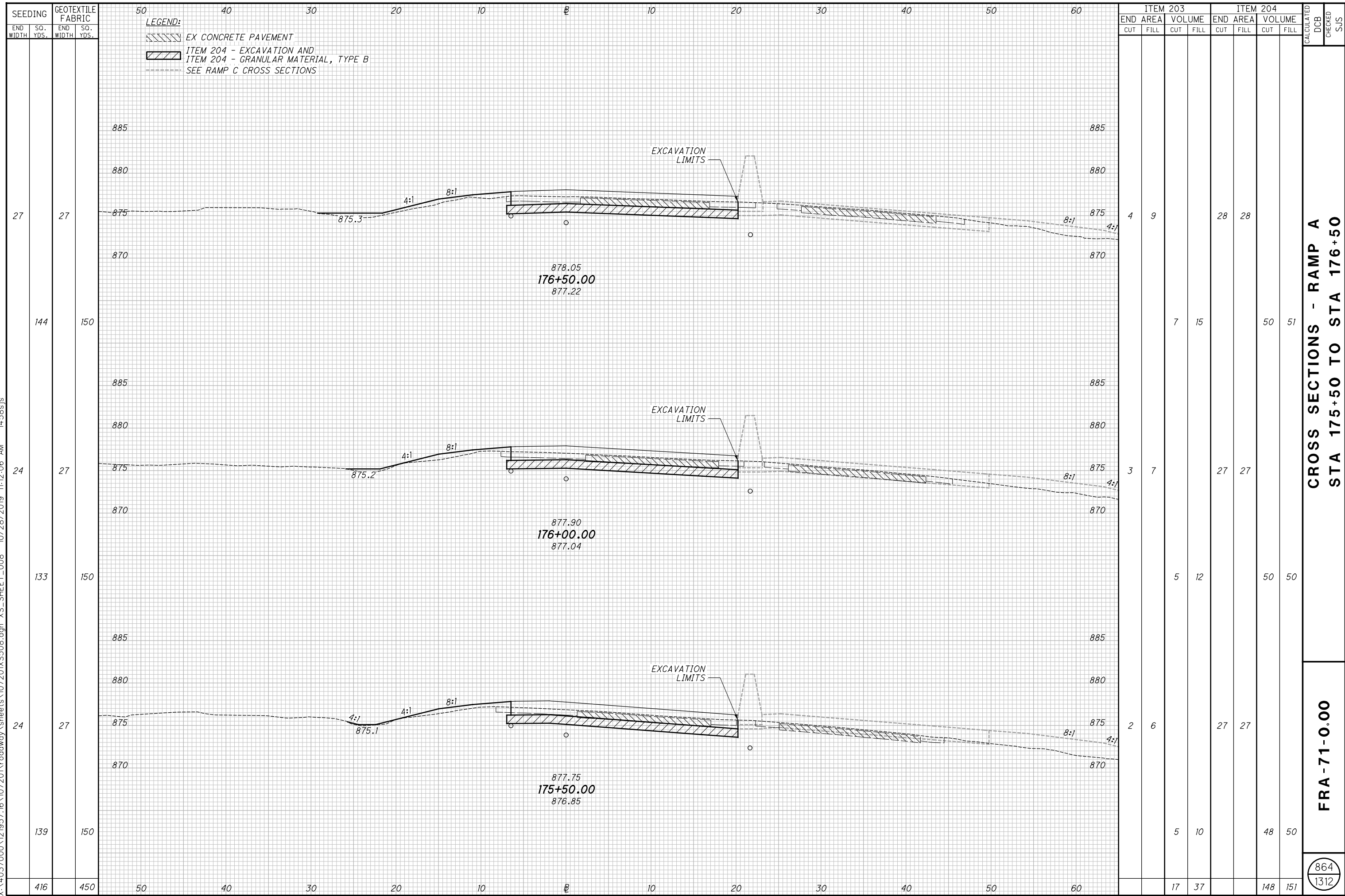
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL			
25	27	27	150	3	5			25	27					
133	150					5	10	45	50					
23	27	27	150	2	6			24	27					
128	150					4	12	46	50					
23	27	27	150	2	7			25	27					
133	150					6	15	48	50					
394	450					15	37			139	150			

CROSS SECTIONS - RAMP A
STA 174+00 TO STA 175+00

FRA - 71 - 0.00

863
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS508.dgn XS_SHEET_008 10/28/2019 11:12:06 AM 1458s.js



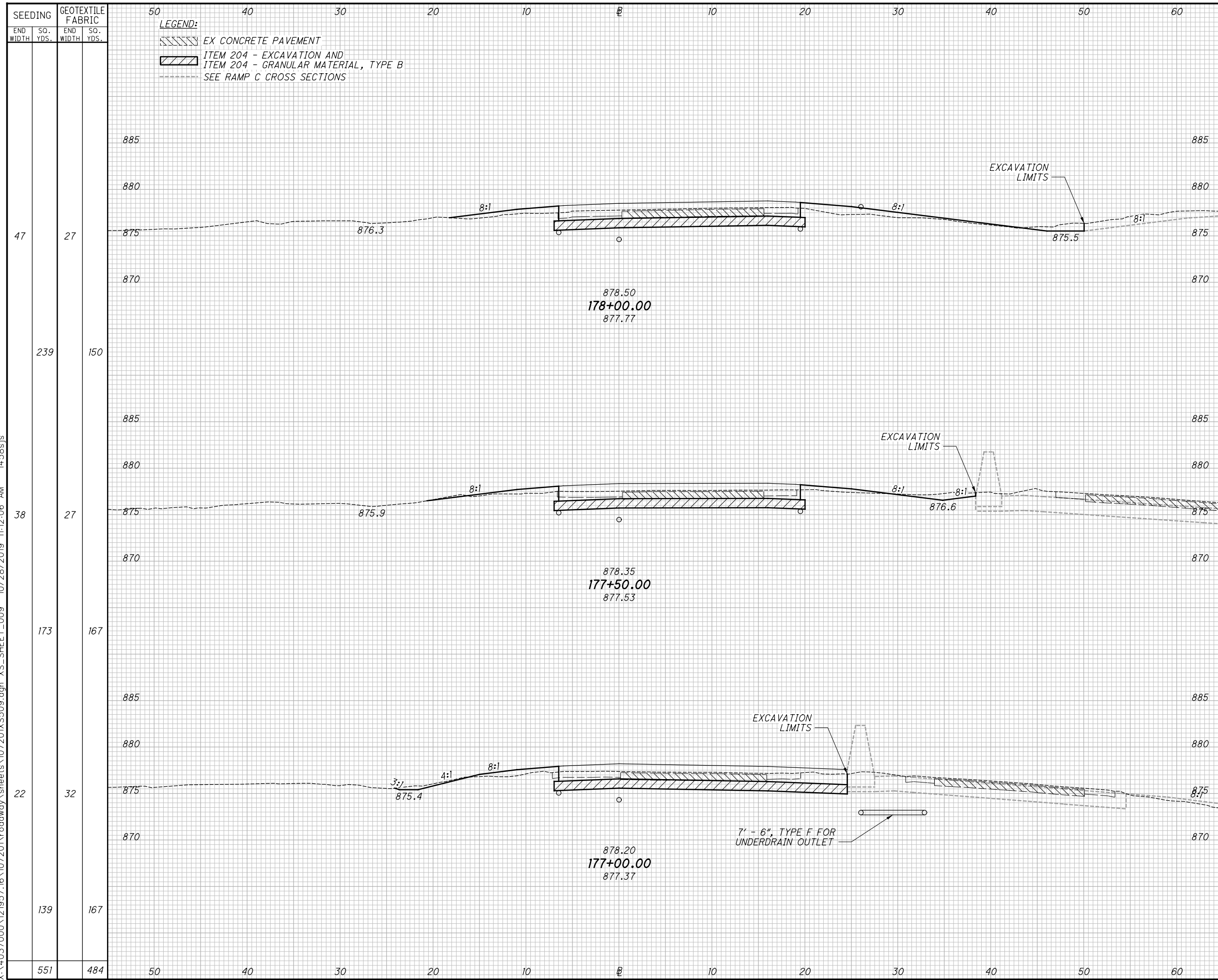
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
27	27	27	27
144	150	144	150
133	150	133	150
139	150	139	150
416	450	416	450

50		40		30		20		10		0		10		20		30		40		50		60	
885	885	880	880	875	875.3	875	875	870	870	875	878.05	875	875	870	870	875	875	870	870	875	875	870	870
885	885	880	880	875	875.2	875	875	870	870	875	877.90	875	875	870	870	875	875	870	870	875	875	870	870
885	885	880	880	875	875.1	875	875	870	870	875	877.75	875	875	870	870	875	875	870	870	875	875	870	870
875	875	870	870	865	865.1	865	865	860	860	865	867.75	865	865	860	860	865	865	860	860	865	865	860	860

ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
4	9	28	28	28	28	50	51
3	7	27	27	27	27	50	50
2	6	27	27	27	27	48	50
17	37	148	151				

CROSS SECTIONS - RAMP A
 STA 175+50 TO STA 176+50
 FRA - 71 - 0.00
 864
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS509.dgn XS_SHEET_009 10/28/2019 11:12:06 AM 1458s.js



SEEDING		GEOTEXTILE FABRIC		ITEM 203		ITEM 204		CALCULATED DCB	CHECKED	SUS
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL			
47	27	27	150	8	16	27	27			
239	150				15	21	50	50		
38	27	27	167	8	7	27	27			
173	167				18	11	54	55		
22	32	32	167	11	4	31	32			
139	167				14	13	55	55		
551	484	50	40	47	45	159	160			

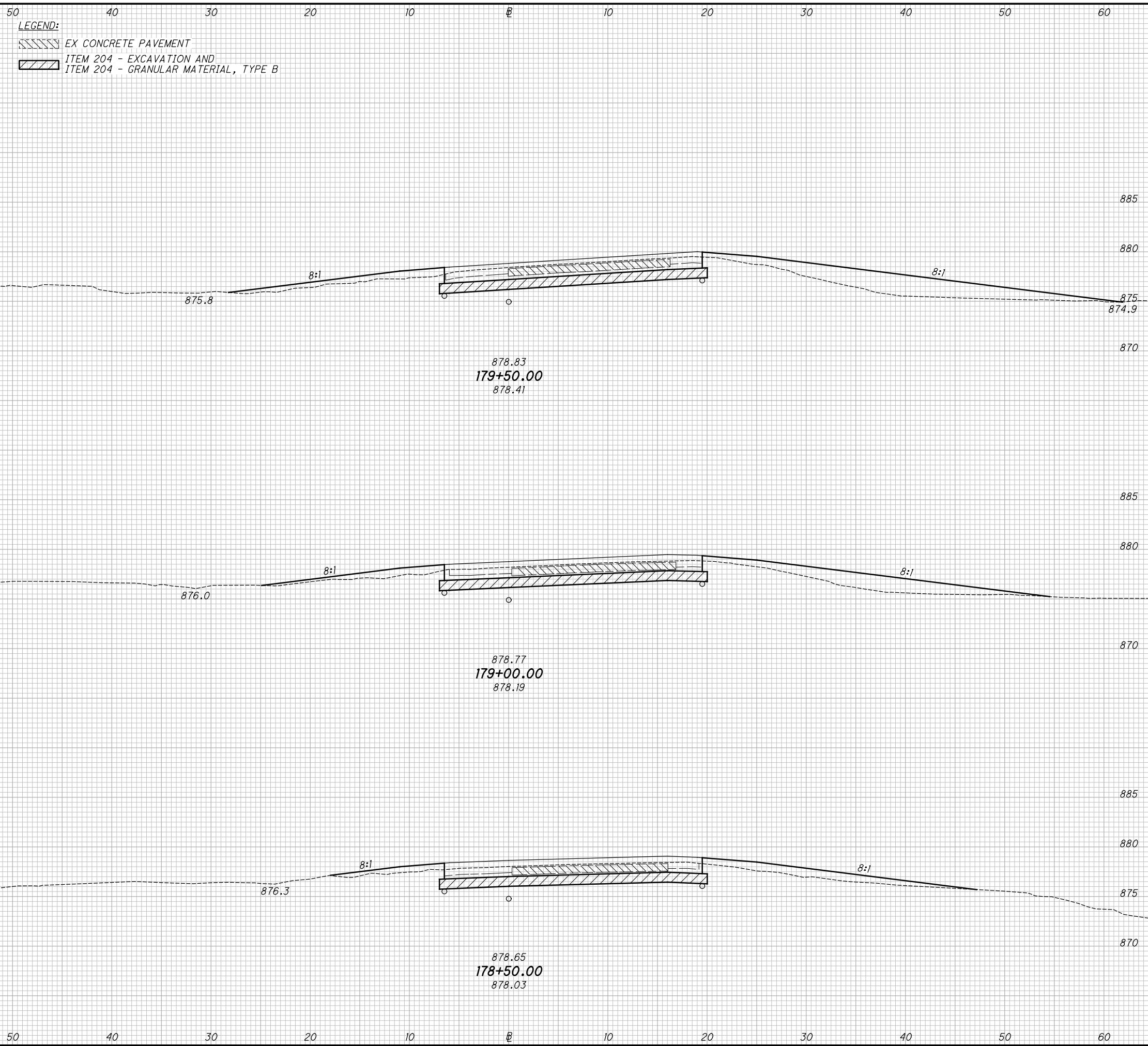
**CROSS SECTIONS - RAMP A
 STA 177+00 TO STA 178+00**

FRA-71-0.00

865
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS510.dgn XS_SHEET_010 10/28/2019 11:12:07 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
69	27	27	27
389	150	150	150
69	27	27	27
317	150	150	150
44	27	27	27
256	150	150	150
962	450	450	450



ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
18	63	23	96	27	27	50	50
7	41	13	59	27	27	50	50
7	23	14	35	27	27	50	50
		50	190			150	150

CALCULATED	DCB	CHECKED	SJS

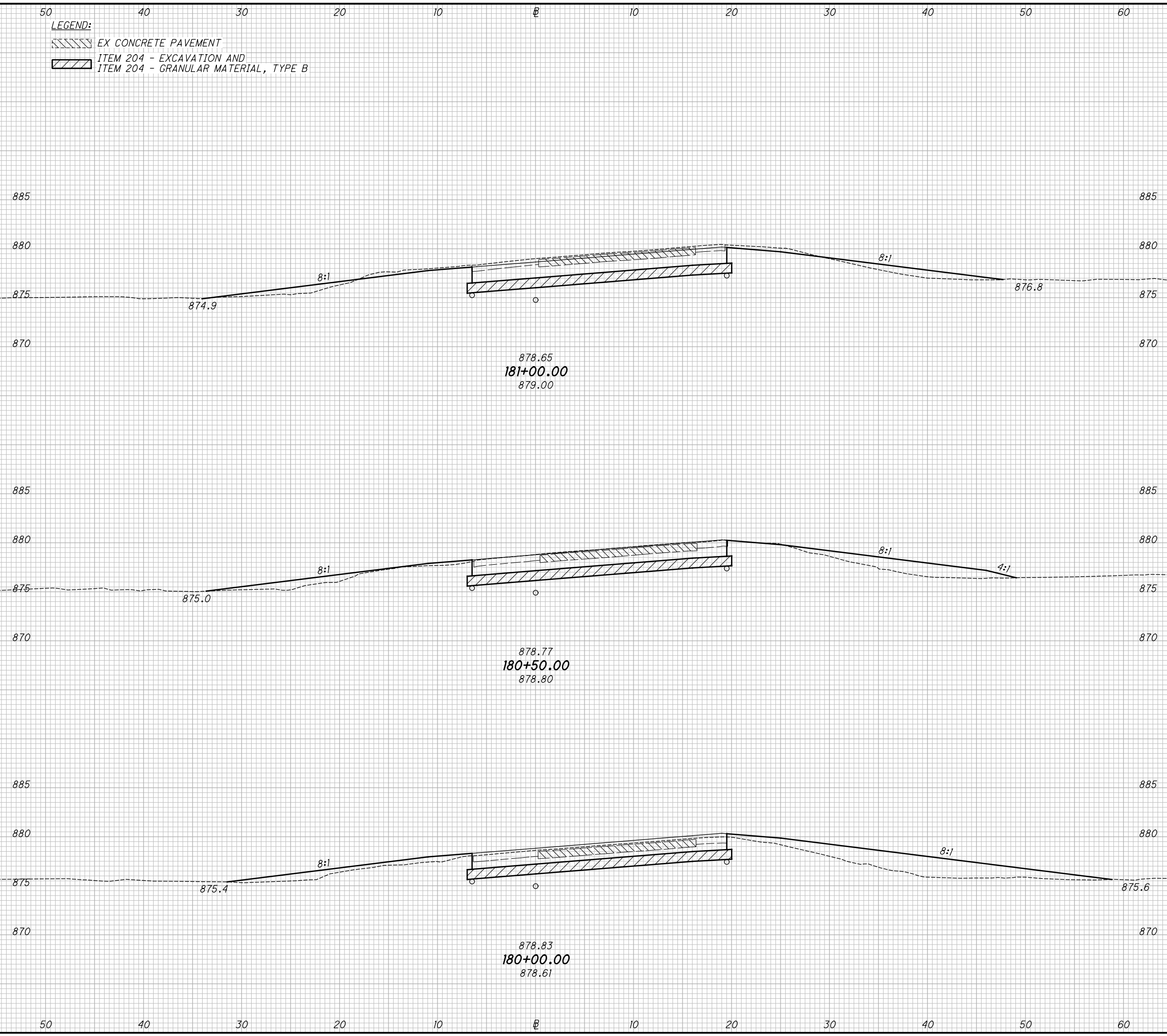
**CROSS SECTIONS - RAMP A
 STA 178+50 TO STA 179+50**

FRA - 71 - 0.00

866
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS511.dgn XS_SHEET_011 10/28/2019 11:12:07 AM 14:58s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
61	27	27	27
65	27	27	27
70	27	27	27
1116	450	450	450



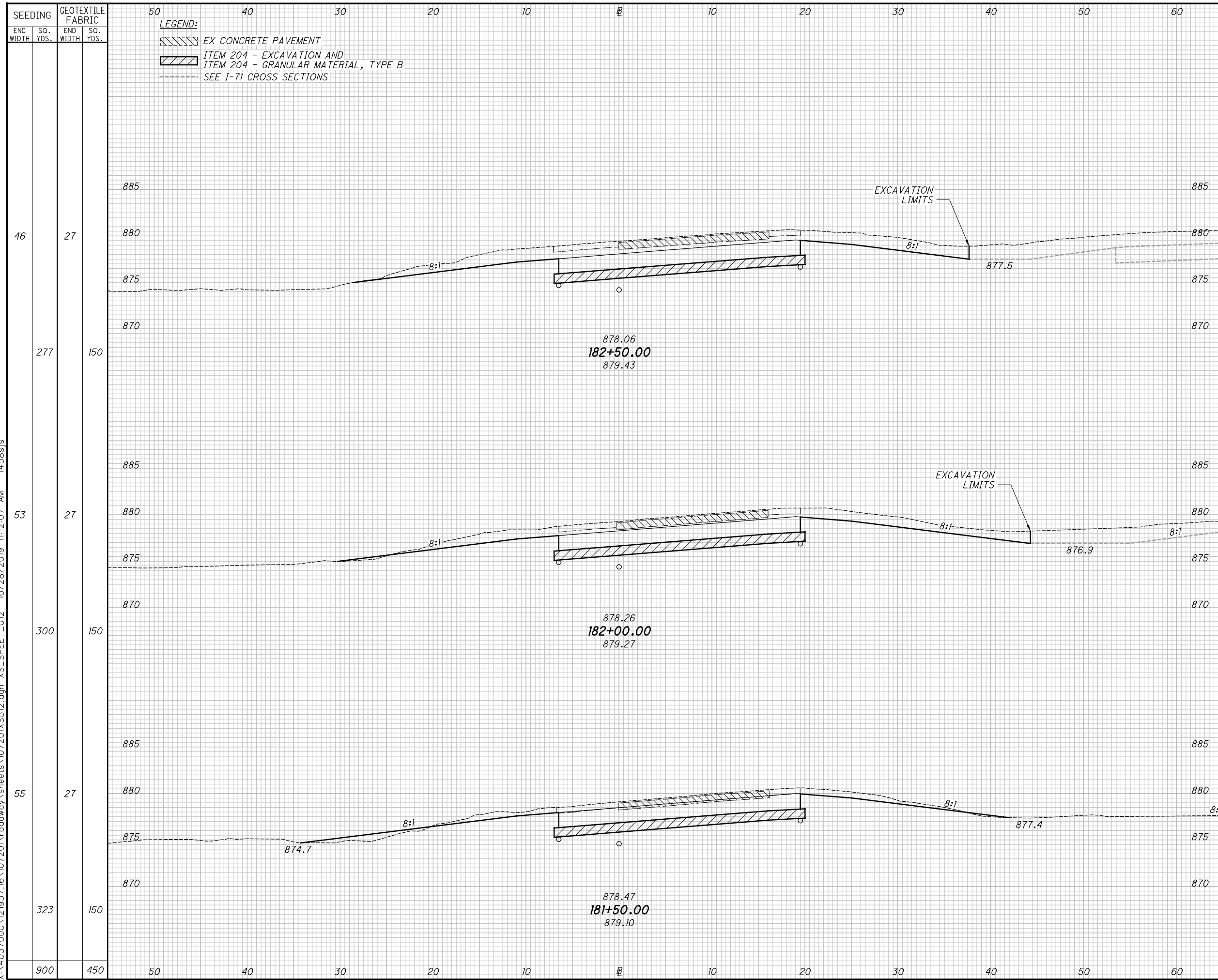
ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL				
36	15			27	27						
		55	42			50	50				
23	31			27	27						
		35	81			50	50				
15	57			27	27						
		31	111			50	50				
		121	234			150	150				

**CROSS SECTIONS - RAMP A
 STA 180+00 TO STA 181+00**

FRA - 71 - 0.00

867
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS512.dgn XS_SHEET_012 10/28/2019 11:12:07 AM 14585.js



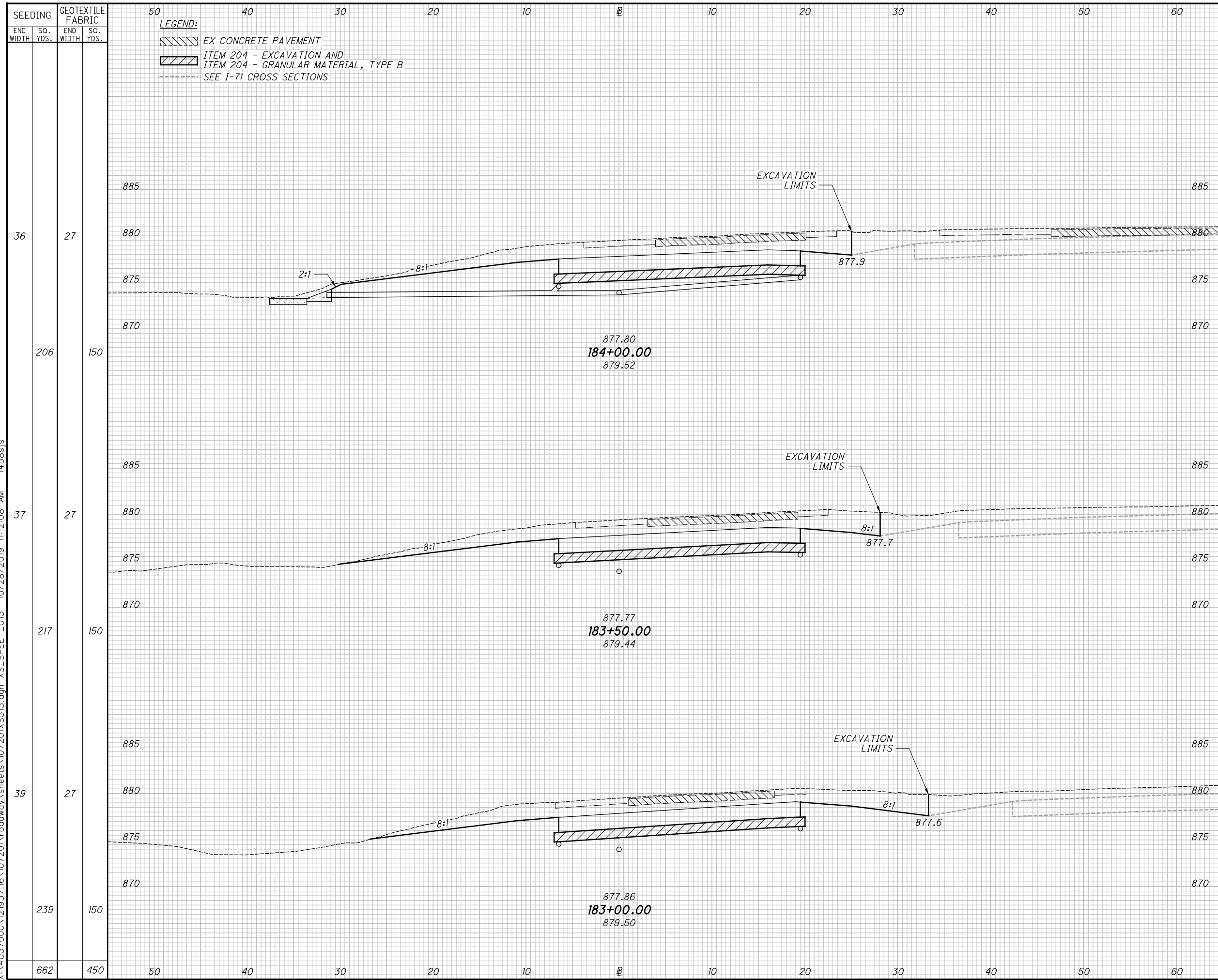
SEEDING	GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SUS	
	END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL	END AREA CUT	VOLUME CUT					END AREA FILL
46	27	27	27	150	99	0	27	27							
277	150	150	150	150		171	1	50	50						
53	27	27	27	150	86	1	27	27							
300	150	150	150	150		129	6	50	50						
55	27	27	27	150	53	6	27	27							
323	150	150	150	150		82	19	50	50						
900	450	450	450	450		382	26	150	150						

**CROSS SECTIONS - RAMP A
 STA 181+50 TO STA 182+50**

FRA - 71 - 0.00

868
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS513.dgn XS_SHEET_013 10/28/2019 11:12:08 AM 14585.js



SEEDING	GEOTEXTILE FABRIC	ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SUS
		END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL			
36	27	50	40	30	20	102	0	27	27			
206	150	50	40	30	20		192	0	50	50		
37	27	50	40	30	20	105	0	27	27			
217	150	50	40	30	20		199	0	50	50		
39	27	50	40	30	20	110	0	27	27			
239	150	50	40	30	20		194	0	50	50		
662	450	50	40	30	20		585	0	150	150		

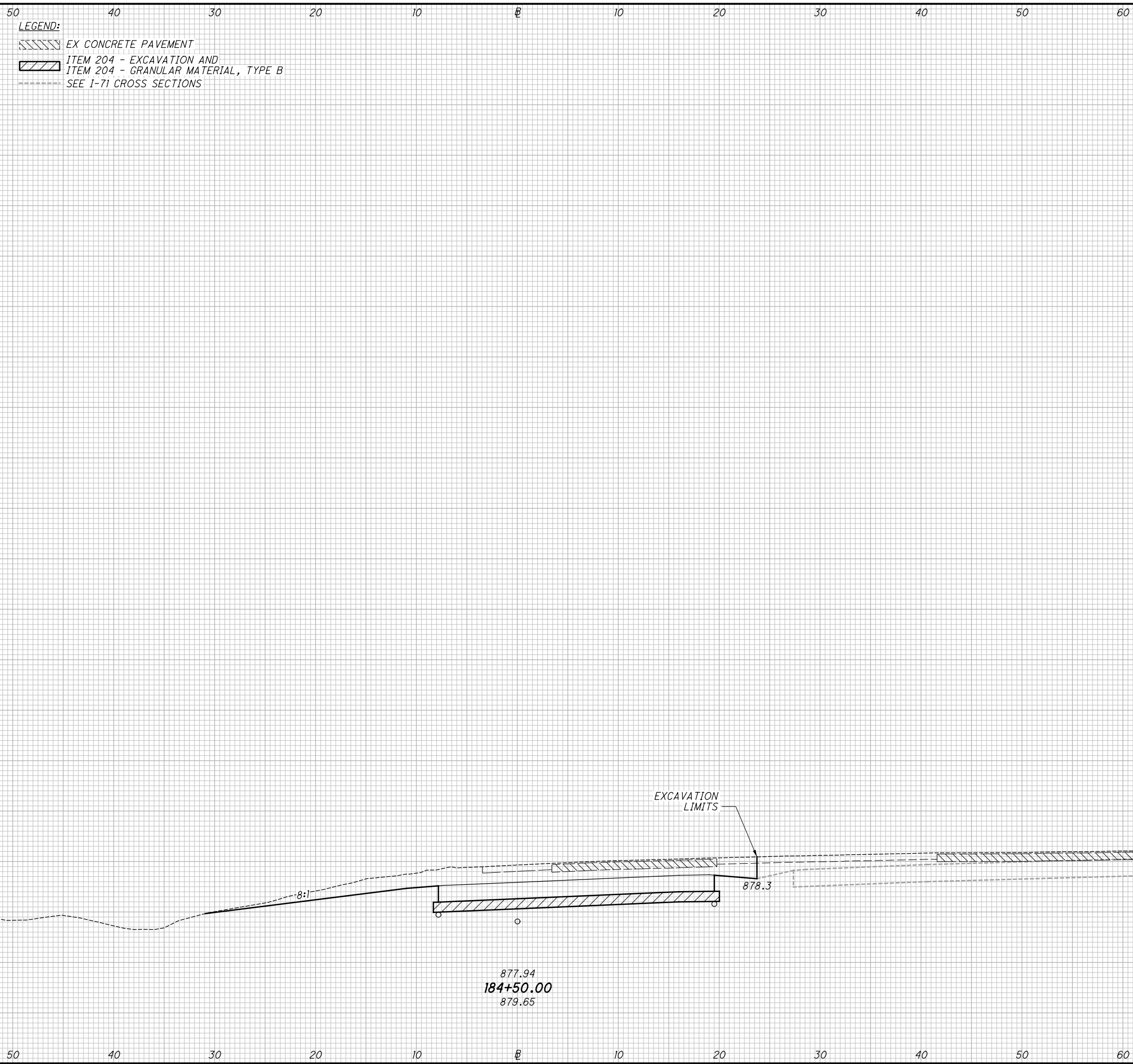
**CROSS SECTIONS - RAMP A
 STA 183+00 TO STA 184+00**

FRA - 71 - 0.00

869
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS514.dgn XS_SHEET_014 10/28/2019 11:12:08 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
33		28	
194		155	
194		155	



ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SUS
END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL			
98	0			28	28					
		185	0			51	51			
		185	0			51	51			

CROSS SECTIONS - RAMP A
STA 184+50

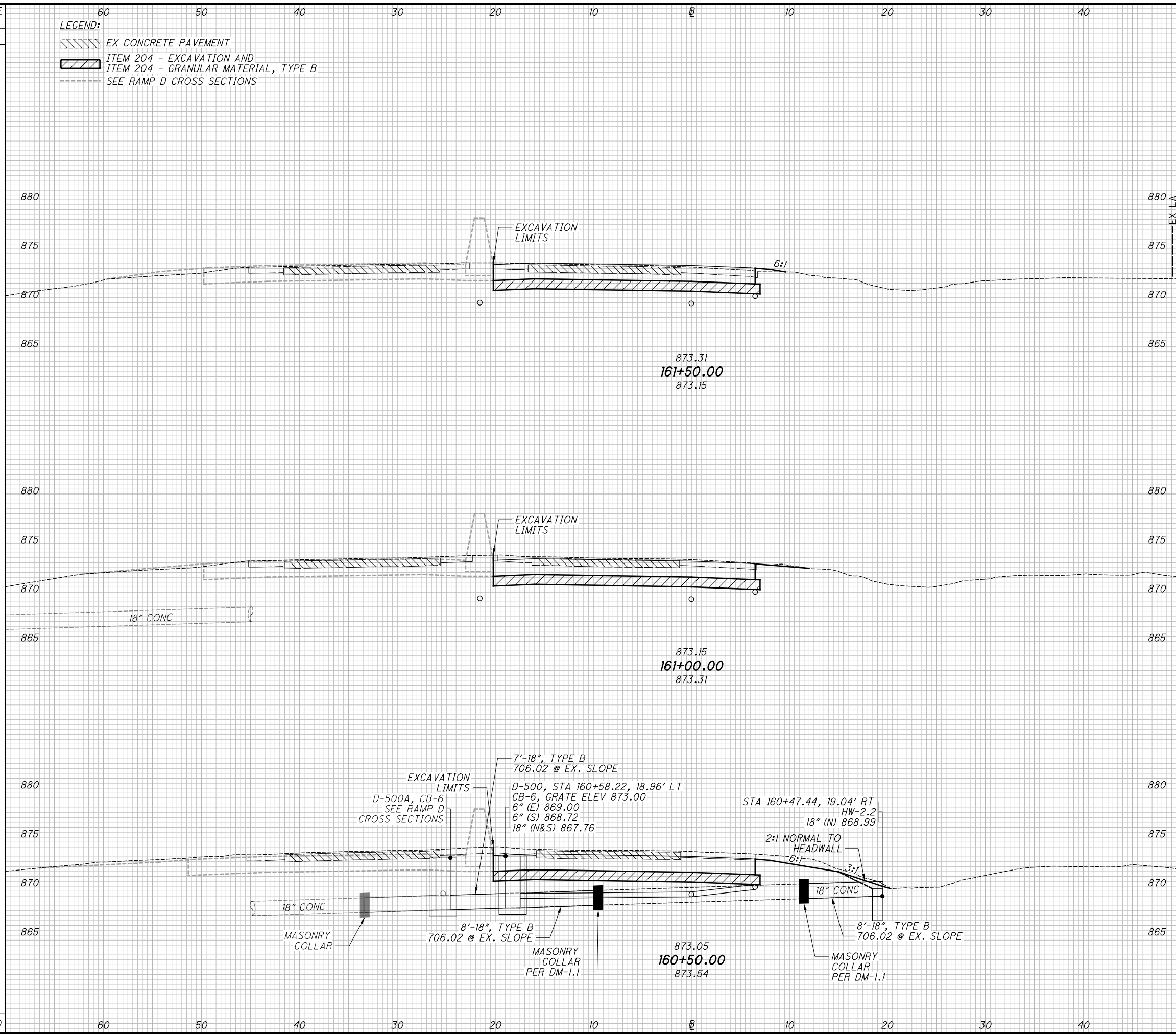
FRA - 71 - 0:00

870
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS301.dgn XS_SHEET_301 10/28/2019 11:12:12 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
11	27	27	27
61	150	150	150
10	27	27	27
61	150	150	150
12	27	27	27
122	300	300	300

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 --- SEE RAMP D CROSS SECTIONS



ITEM 203				ITEM 204				CALCULATED DCB	CHECKED SJS
END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL		
20		1		27		27			
		45	1	51		51			
29		0		27		27			
		66	0	50		50			
44		0		27		27			
		111	1	101		101			

**CROSS SECTIONS - RAMP B
 STA 160+50 TO STA 161+50**

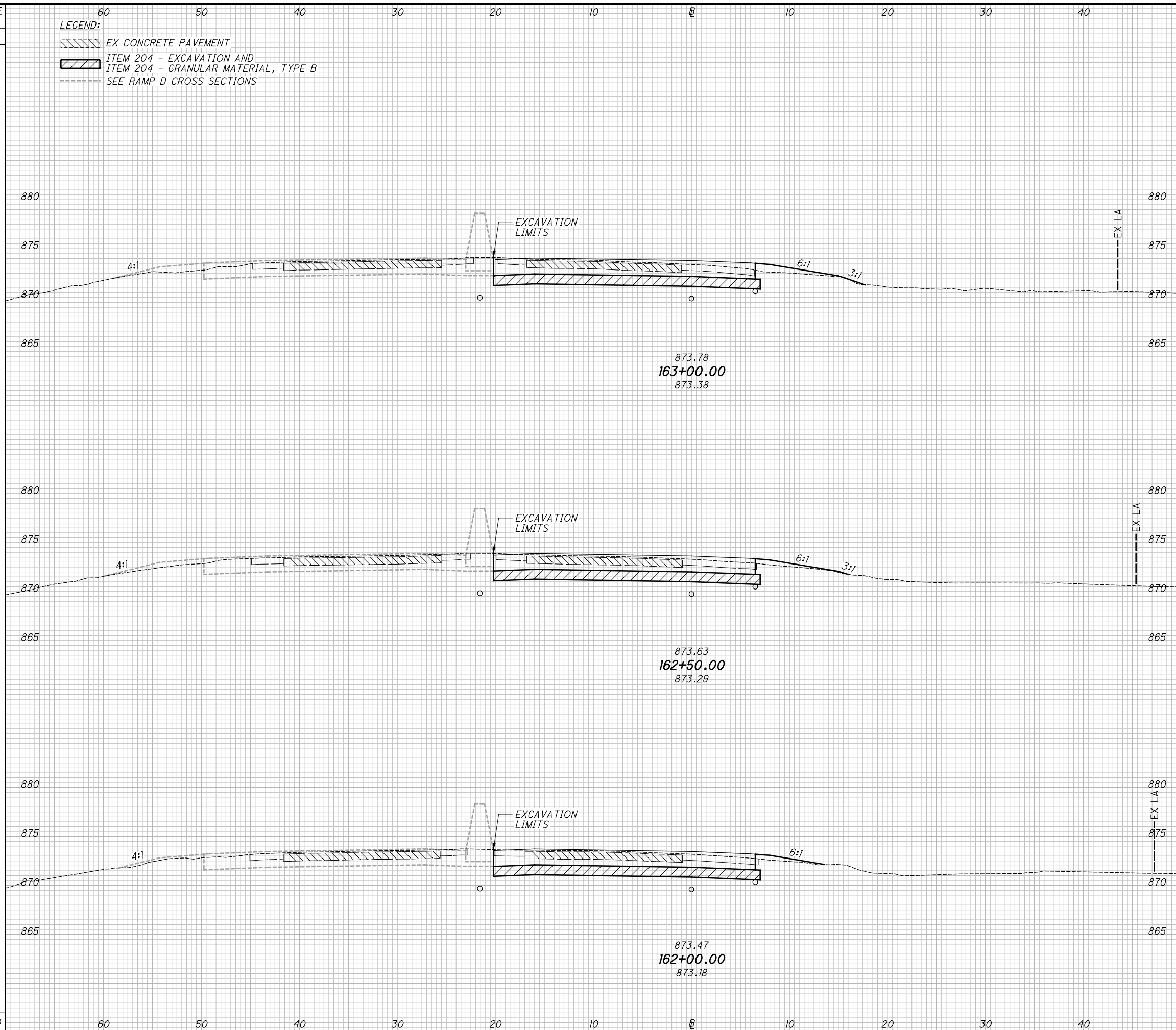
FRA - 71 - 0.00

871
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS302.dgn XS_SHEET_302 10/28/2019 11:12:13 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
17	27	17	27
89	150	72	150
14	27	12	27
67	150	67	150
228	450	228	450

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 --- SEE RAMP D CROSS SECTIONS



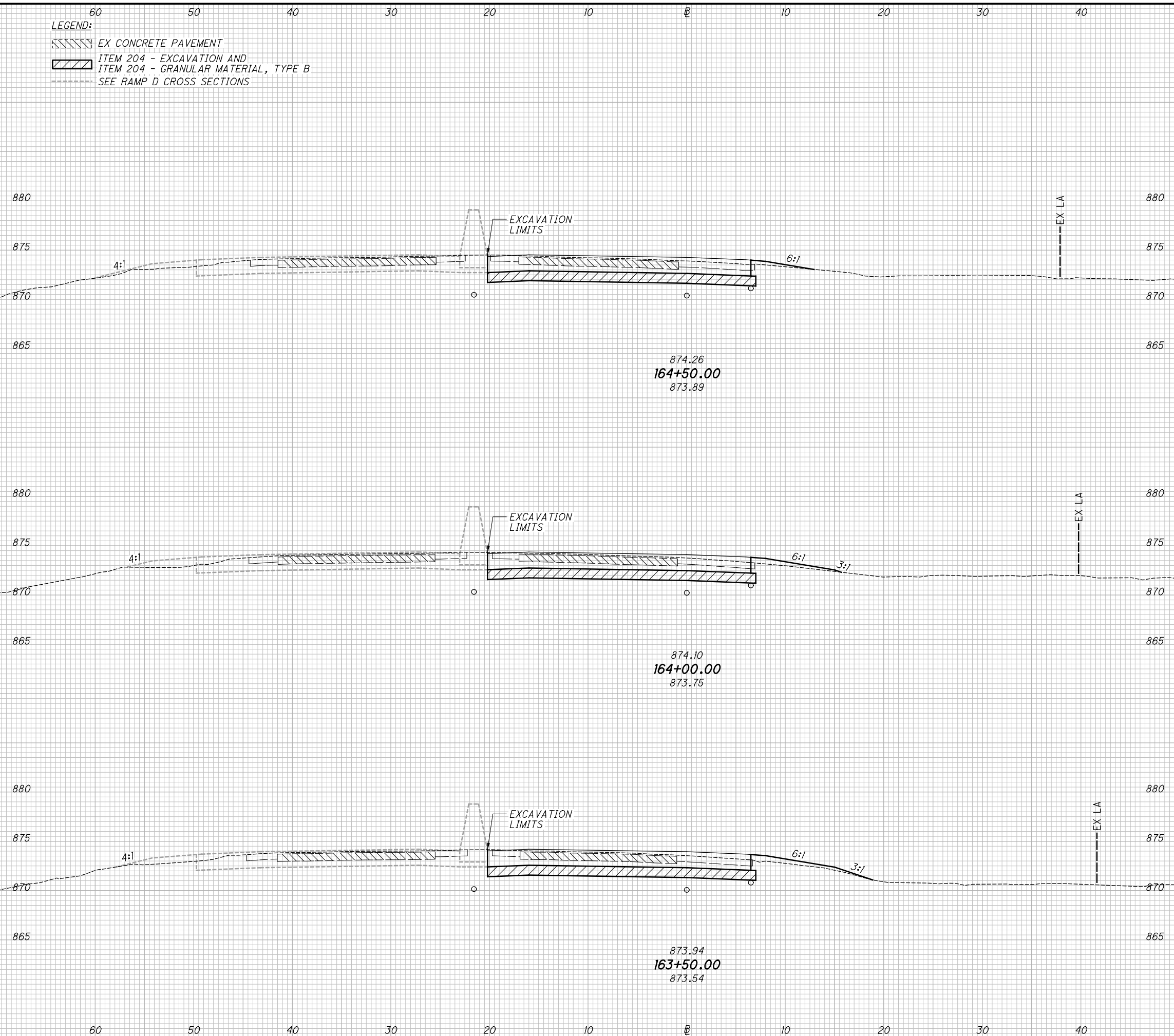
ITEM 203	ITEM 203		ITEM 204		ITEM 204
	END AREA	VOLUME	END AREA	VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL
17	5		27	27	
		32	8	50	50
17	3		27	27	
		32	6	51	51
18	3		27	27	
		35	4	51	51
	99	18		152	152

CALCULATED DCB CHECKED SJS
CROSS SECTIONS - RAMP B
STA 162+00 TO STA 163+00
FRA - 71 - 0.00
 872
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS303.dgn XS_SHEET_303 10/28/2019 11:12:13 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
12	27	27	27
72	150	150	150
14	27	27	27
94	150	150	150
19	27	27	27
100	150	150	150
266	450	450	450

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 --- SEE RAMP D CROSS SECTIONS






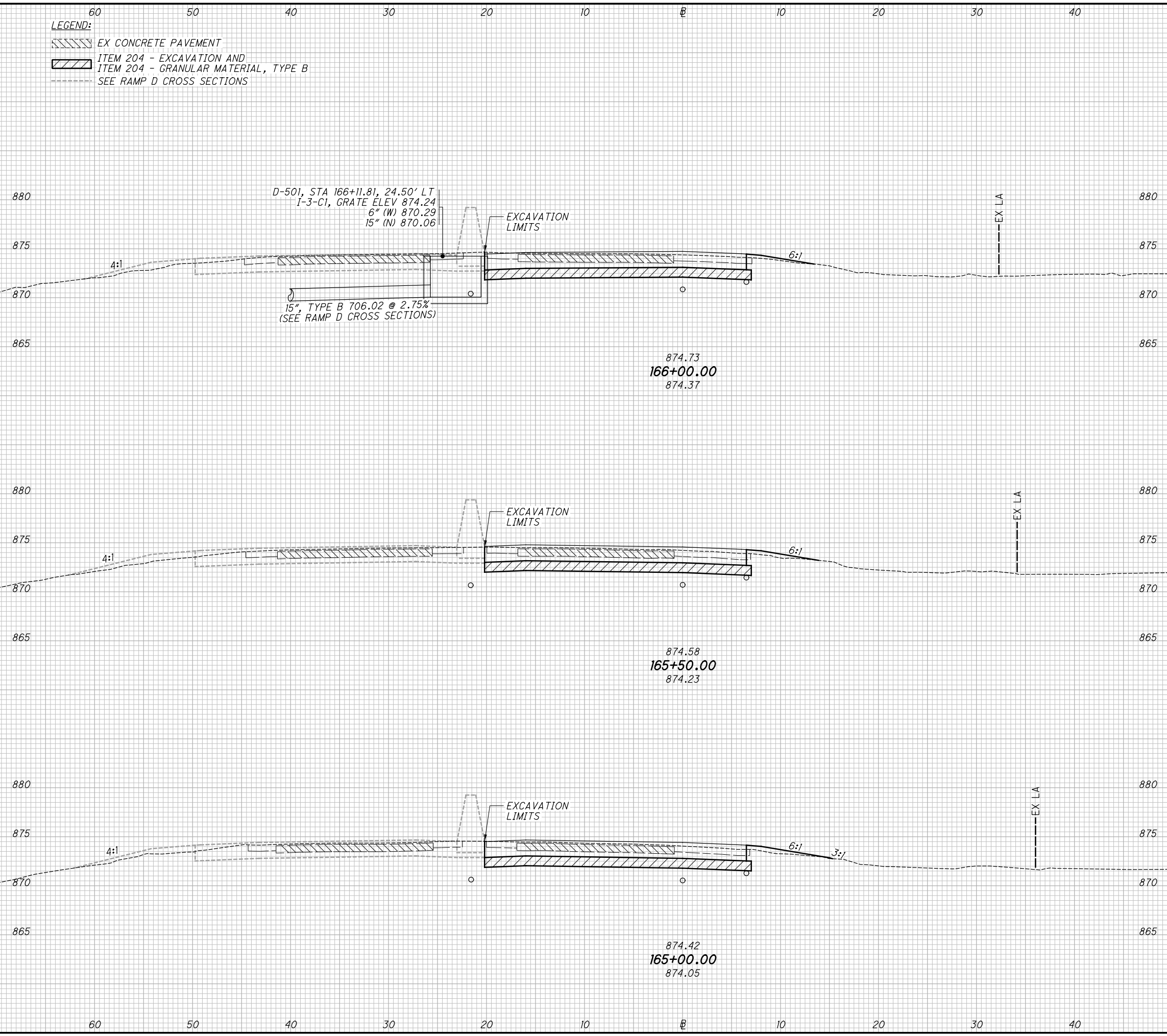
ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
17	2			27	28		
		32	6			51	51
17	4			28	28		
		31	9			51	51
16	6			27	27		
		31	10			50	50
		94	25			152	152

CALCULATED DCB CHECKED SJS
CROSS SECTIONS - RAMP B
STA 163+50 TO STA 164+50
FRA - 71 - 0.00
 873
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS304.dgn XS_SHEET_304 10/28/2019 11:12:13 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
12	27	27	27
67	150	150	150
12	27	27	27
72	150	150	150
13	27	27	27
72	150	150	150
211	450	450	450

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 --- SEE RAMP D CROSS SECTIONS



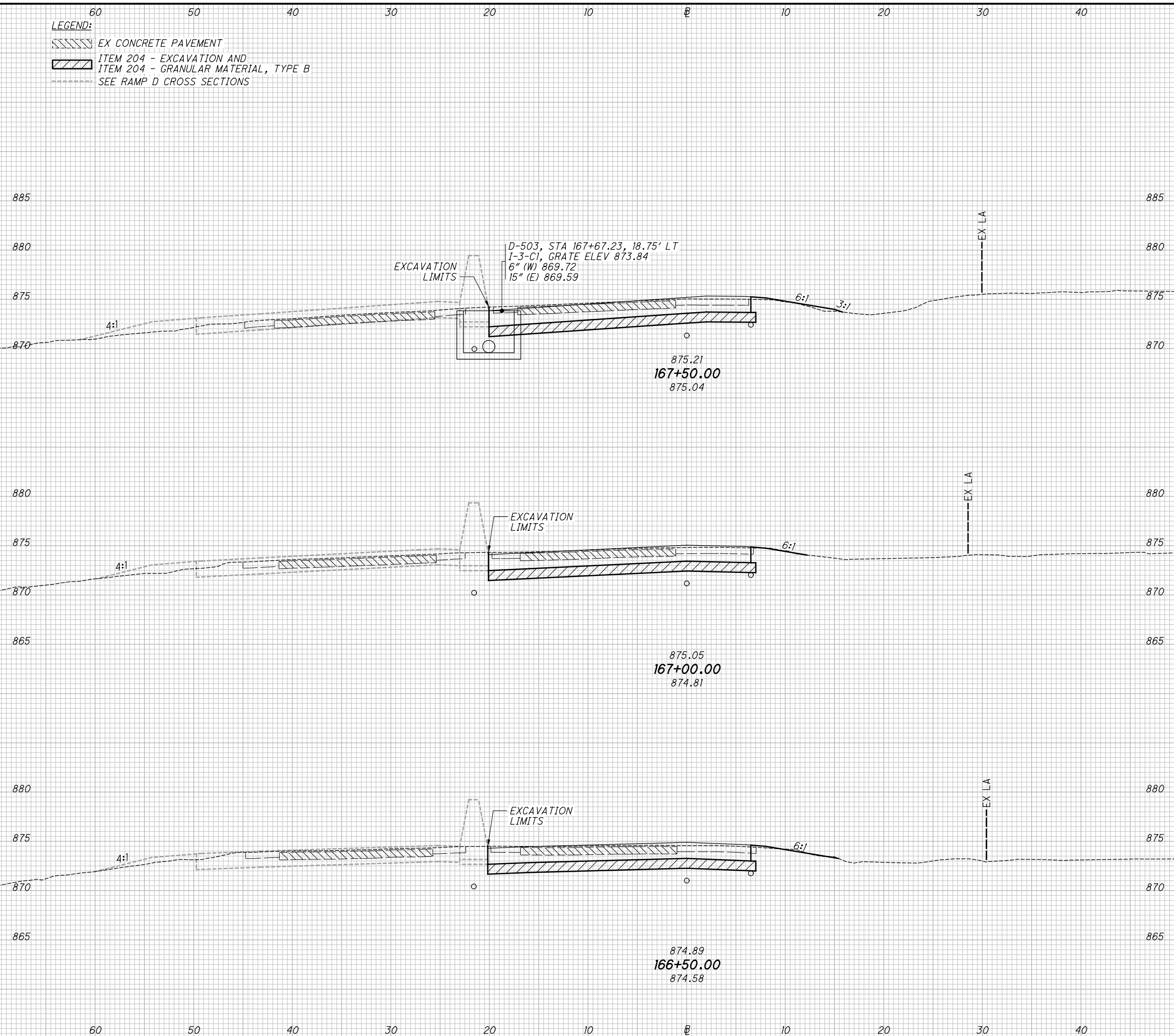
ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL			
18	2			28	28					
		31	5			51	51			
15	3			28	28					
		29	6			51	51			
16	3			27	27					
		31	5			51	51			
		91	16			153	153			

CROSS SECTIONS - RAMP B
STA 165+00 TO STA 166+00
FRA - 71 - 0.00
 874
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS305.dgn XS_SHEET_305 10/28/2019 11:12:14 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
14	27	27	150
11	27	27	150
15	27	27	150
78	150	222	450

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 --- SEE RAMP D CROSS SECTIONS



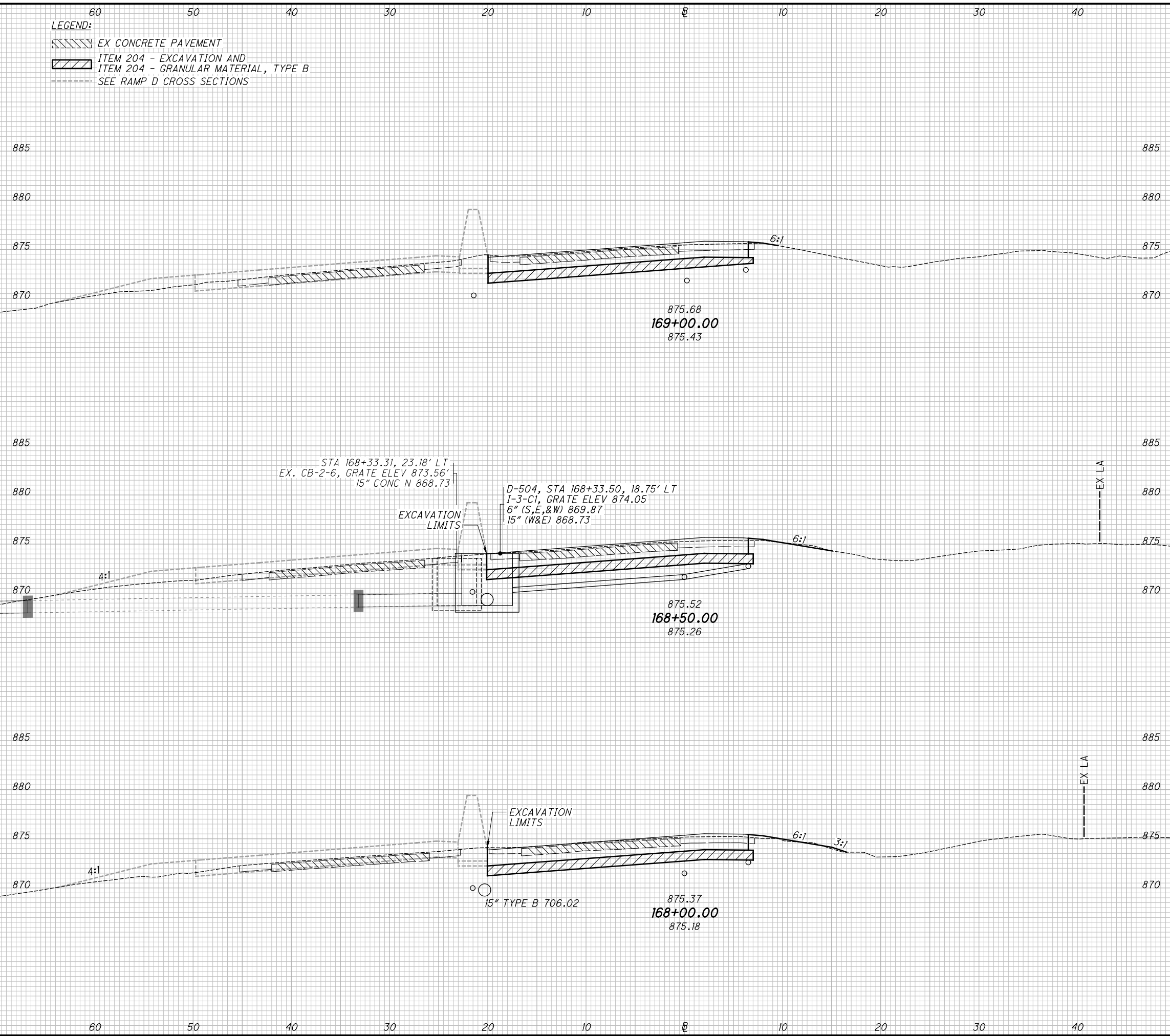
ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
23	2	27	27
	42		50
	3		50
22	1	27	27
	39		51
	2		51
20	1	28	28
	35		51
	3		51
	116		152
	8		152

CALCULATED DCB CHECKED SJS
CROSS SECTIONS - RAMP B
STA 166+50 TO STA 167+50
FRA - 71 - 0.00
 875
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS306.dgn XS_SHEET_306 10/28/2019 11:12:14 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
8	27	27	150
13	27	27	150
15	27	27	150
81	150	150	450
217	450	450	1350

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 --- SEE RAMP D CROSS SECTIONS



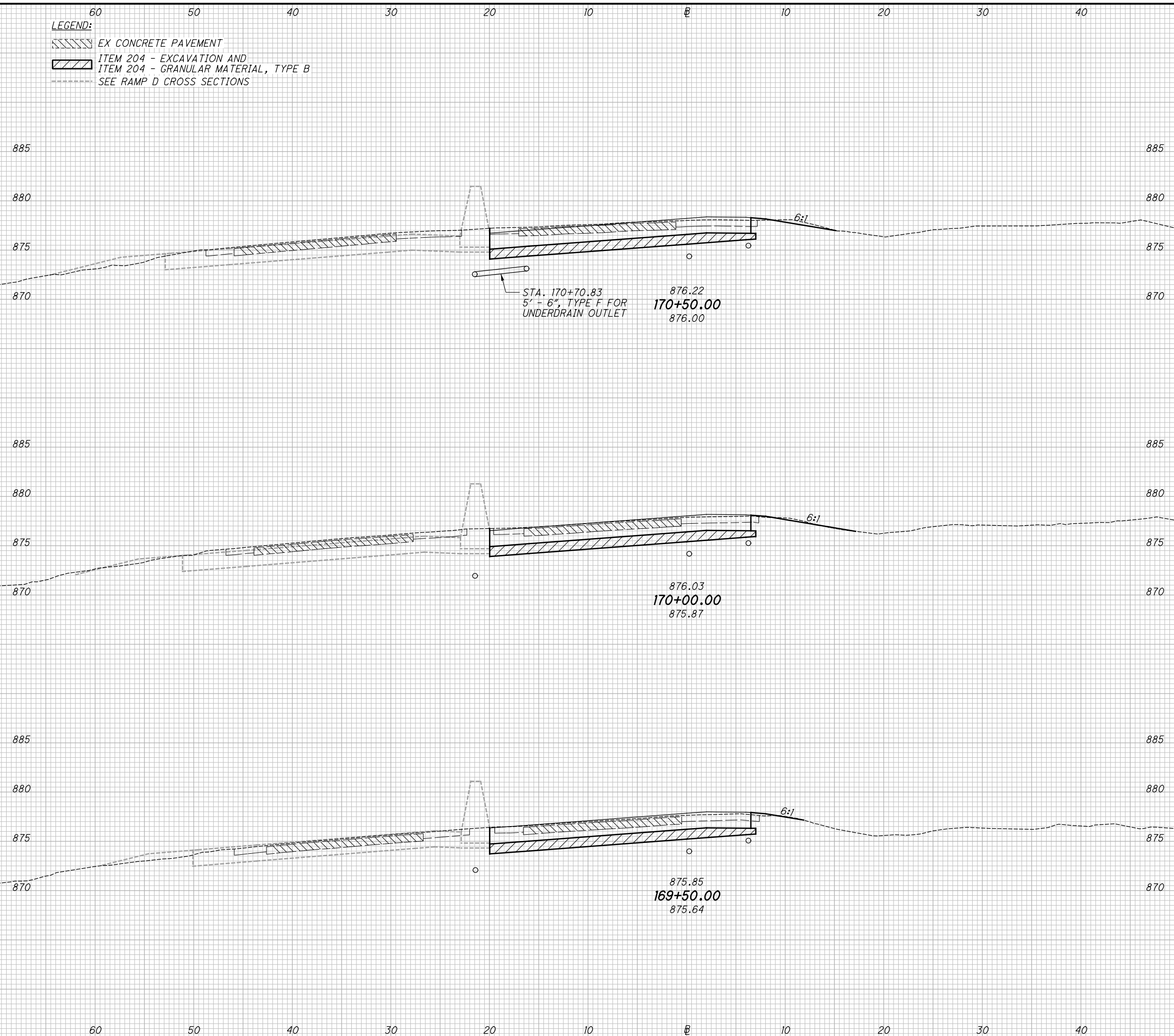
ITEM 203	ITEM 203		ITEM 204		ITEM 204
	END AREA	VOLUME	END AREA	VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL
19	1		26	26	
		34	2	50	50
18	1		28	28	
		36	2	52	52
21	1		28	28	
		41	3	51	51
		111	7	153	153

CALCULATED DCB CHECKED SJS
CROSS SECTIONS - RAMP B
STA 168+00 TO STA 169+00
FRA - 71 - 0.00
 876
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS307.dgn XS_SHEET_307 10/28/2019 11:12:14 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
13	27	27	27
78	150	150	150
15	27	27	27
83	150	150	150
15	27	27	27
64	150	150	150
225	450	450	450

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 SEE RAMP D CROSS SECTIONS



ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL				
25	1			26	26						
		44	2			49	49				
22	1			27	27						
		38	2			50	50				
19	1			27	27						
		35	2			49	49				
		117	6			148	148				

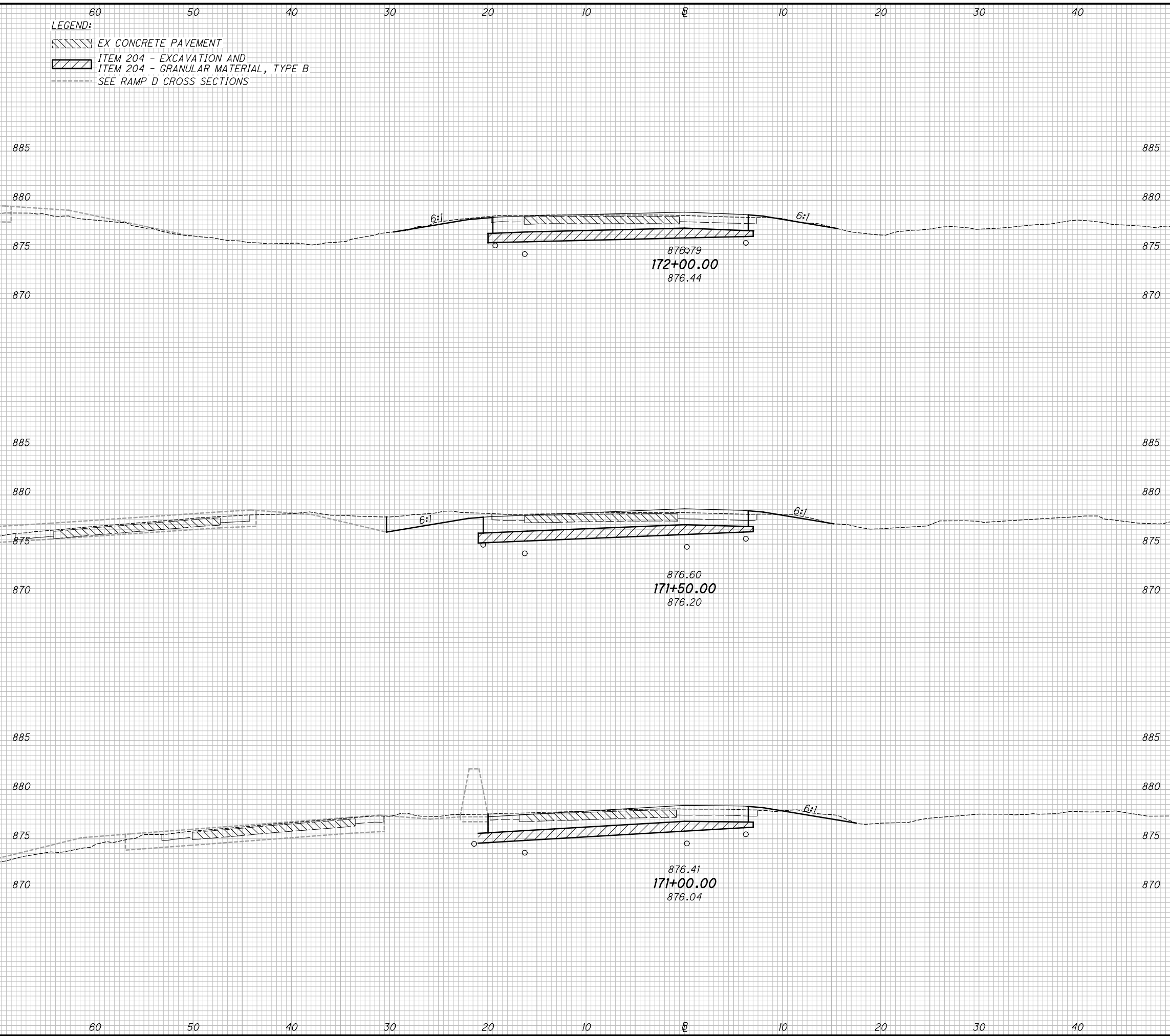
**CROSS SECTIONS - RAMP B
 STA 169+50 TO STA 170+50**

FRA - 71 - 0.00

877
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS308.dgn XS_SHEET_308 10/28/2019 11:12:15 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
25	27	27	27
24	28	28	28
16	27	27	27
81	150	150	150
328	462	462	462

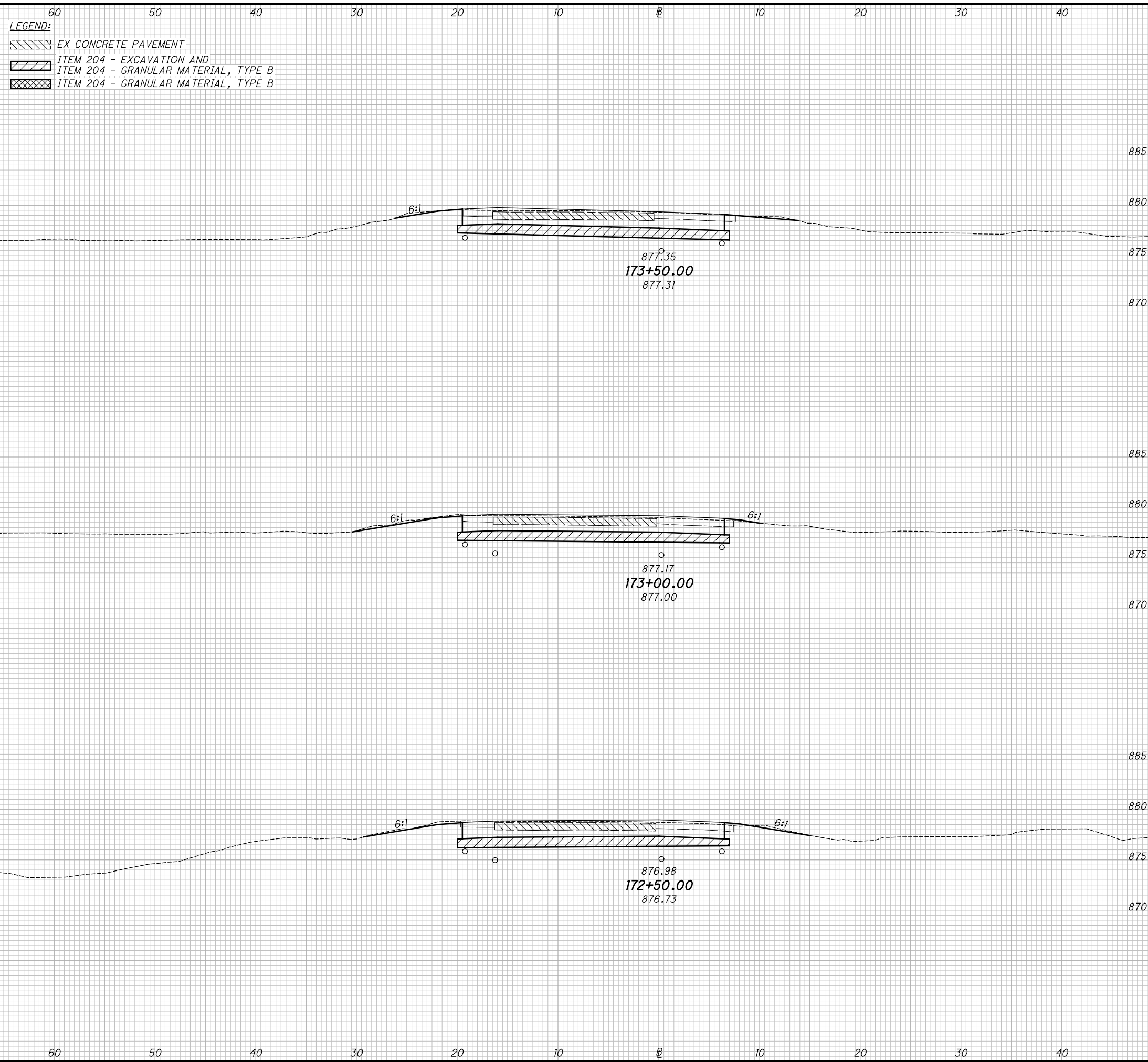


ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
19	1	26	26				
		47	2	49	49		
32	1	26	26				
		50	2	49	49		
22	1	26	26				
		44	2	49	49		
		141	6	147	147		

CALCULATED DCB CHECKED SUS
CROSS SECTIONS - RAMP B
STA 171+00 TO STA 172+00
FRA - 71 - 0.00
 878
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS309.dgn XS_SHEET_309 10/28/2019 11:12:15 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
19	27	27	27
117	150	150	150
23	27	27	27
128	150	150	150
23	27	27	27
133	150	150	150
378	450	450	450



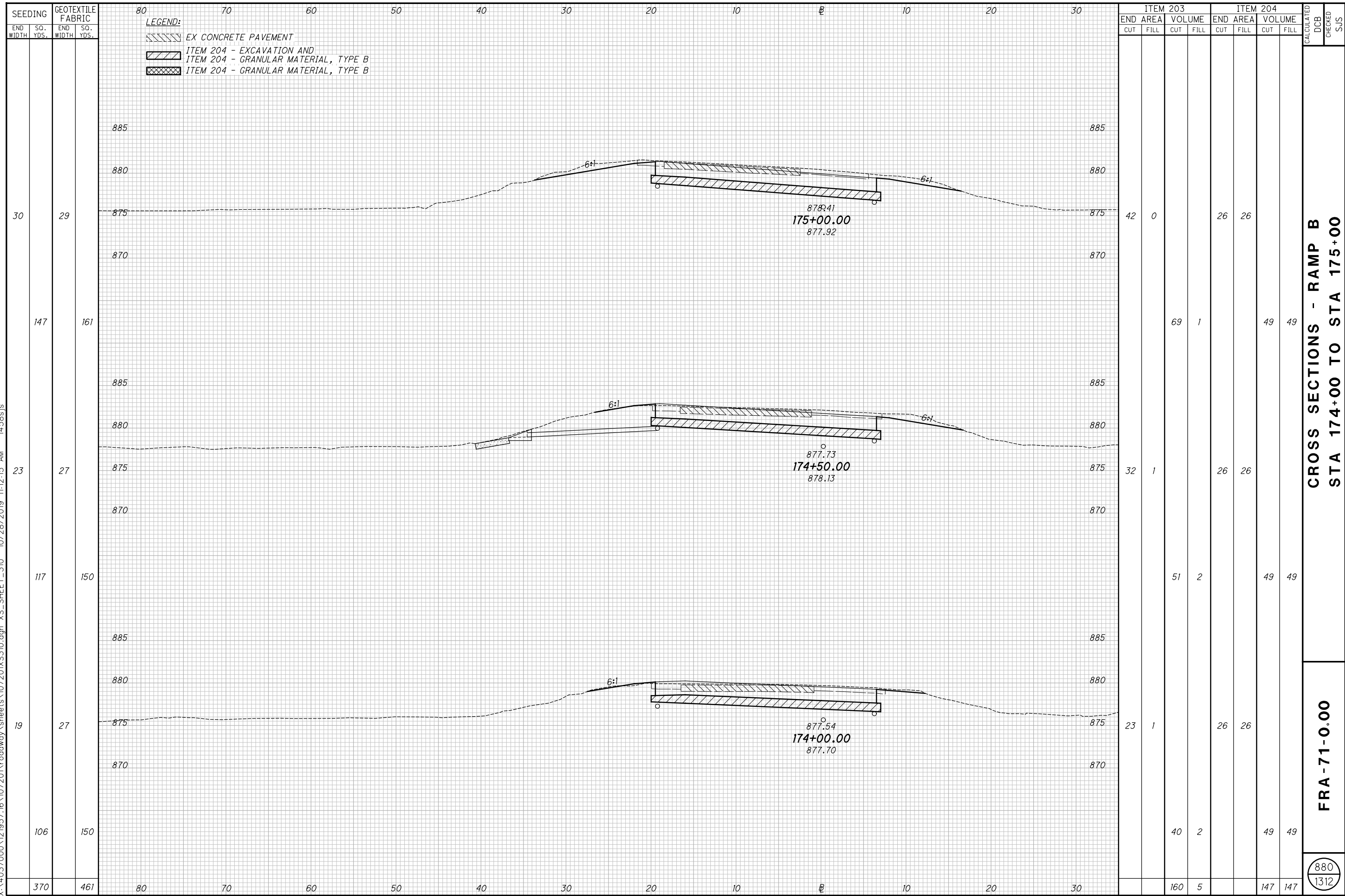
ITEM 203		ITEM 204	
END AREA	VOLUME	END AREA	VOLUME
CUT	FILL	CUT	FILL
20	1	26	26
	37	2	49
20	1	26	26
	38	2	49
21	1	26	26
	37	2	49
	112	6	147
			147

CROSS SECTIONS - RAMP B
STA 172+50 TO STA 173+50

FRA - 71 - 0.00

879
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS310.dgn XS_SHEET_310 10/28/2019 11:12:15 AM 1458s.js



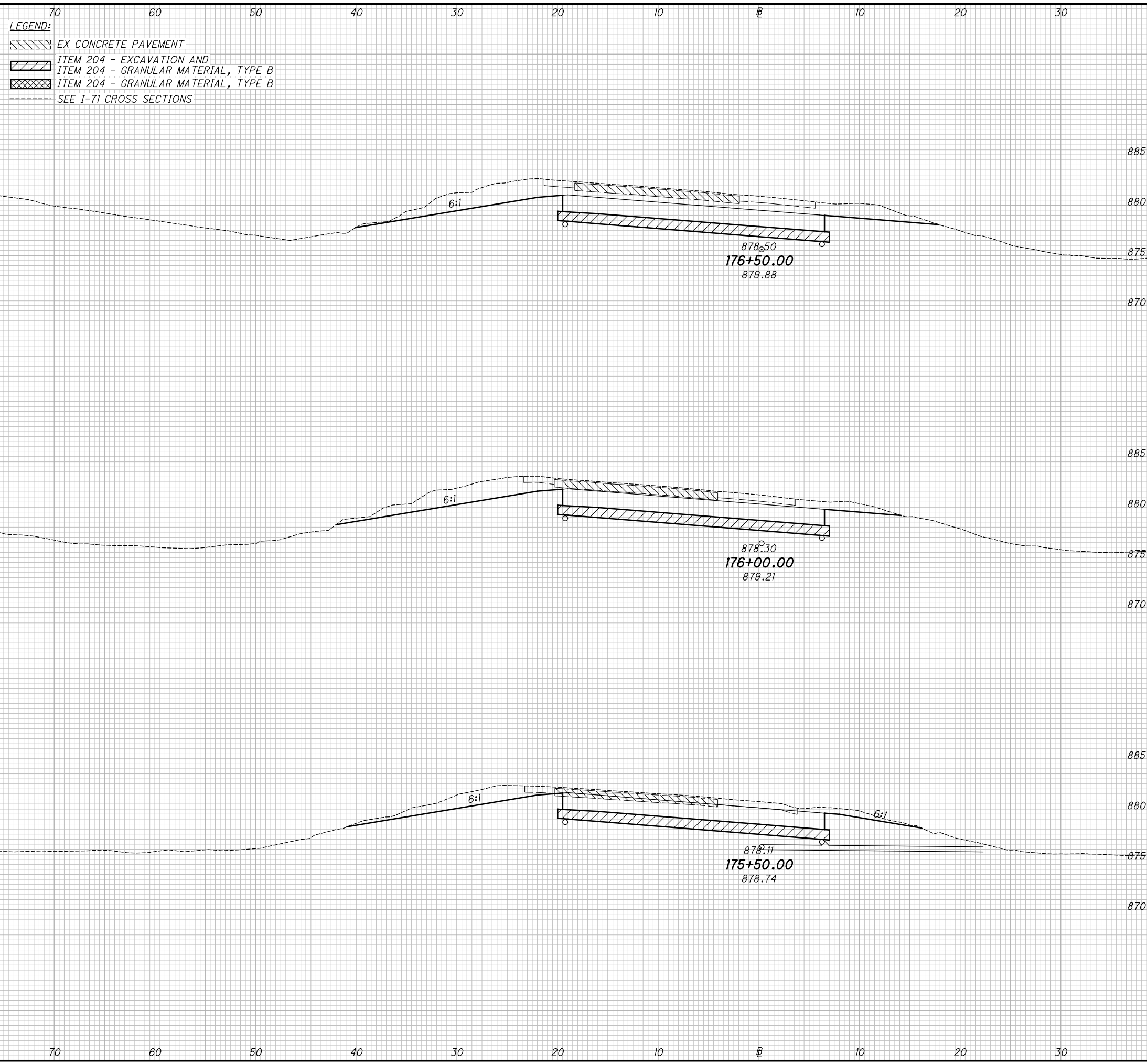
**CROSS SECTIONS - RAMP B
STA 174+00 TO STA 175+00**

FRA - 71 - 0.00

880
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS311.dgn XS_SHEET_311 10/28/2019 11:12:16 AM 14585.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
37	27	27	150
200		150	
35	27	27	161
197		161	
36	29	29	161
183		161	
580		472	



ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
96	0			26	26		
		162	0			49	49
79	0			26	26		
		129	0			49	49
60	0			26	26		
		94	0			49	49
		385	0			147	147




CROSS SECTIONS - RAMP B
STA 175+50 TO STA 176+50

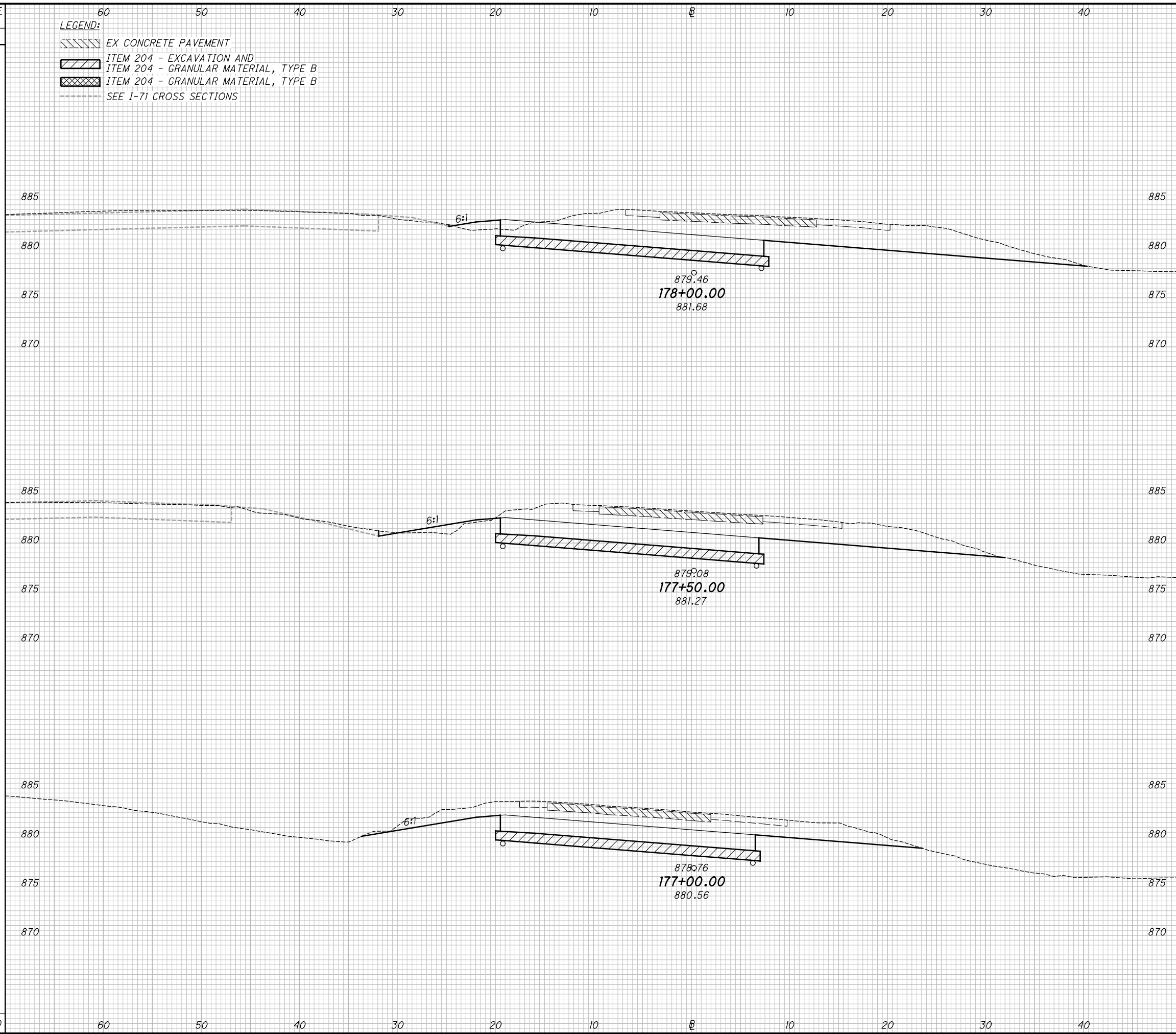
FRA - 71 - 0.00

881
1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS312.dgn XS_SHEET_312 10/28/2019 11:12:16 AM 1458s.js

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
44	22	22	22
242	122	122	122
43	22	22	22
225	133	133	133
38	25	25	25
208	145	145	145
675	400	400	400

LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 --- SEE I-71 CROSS SECTIONS



ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
130	3			26	26		
		230	7			49	49
118	4			26	26		
		204	4			49	49
102	0			26	26		
		183	0			49	49
		617	11			147	147

CALCULATED
 DCB
 CHECKED
 SJS

CROSS SECTIONS - RAMP B
STA 177+00 TO STA 178+00

FRA - 71 - 0.00

882
1312

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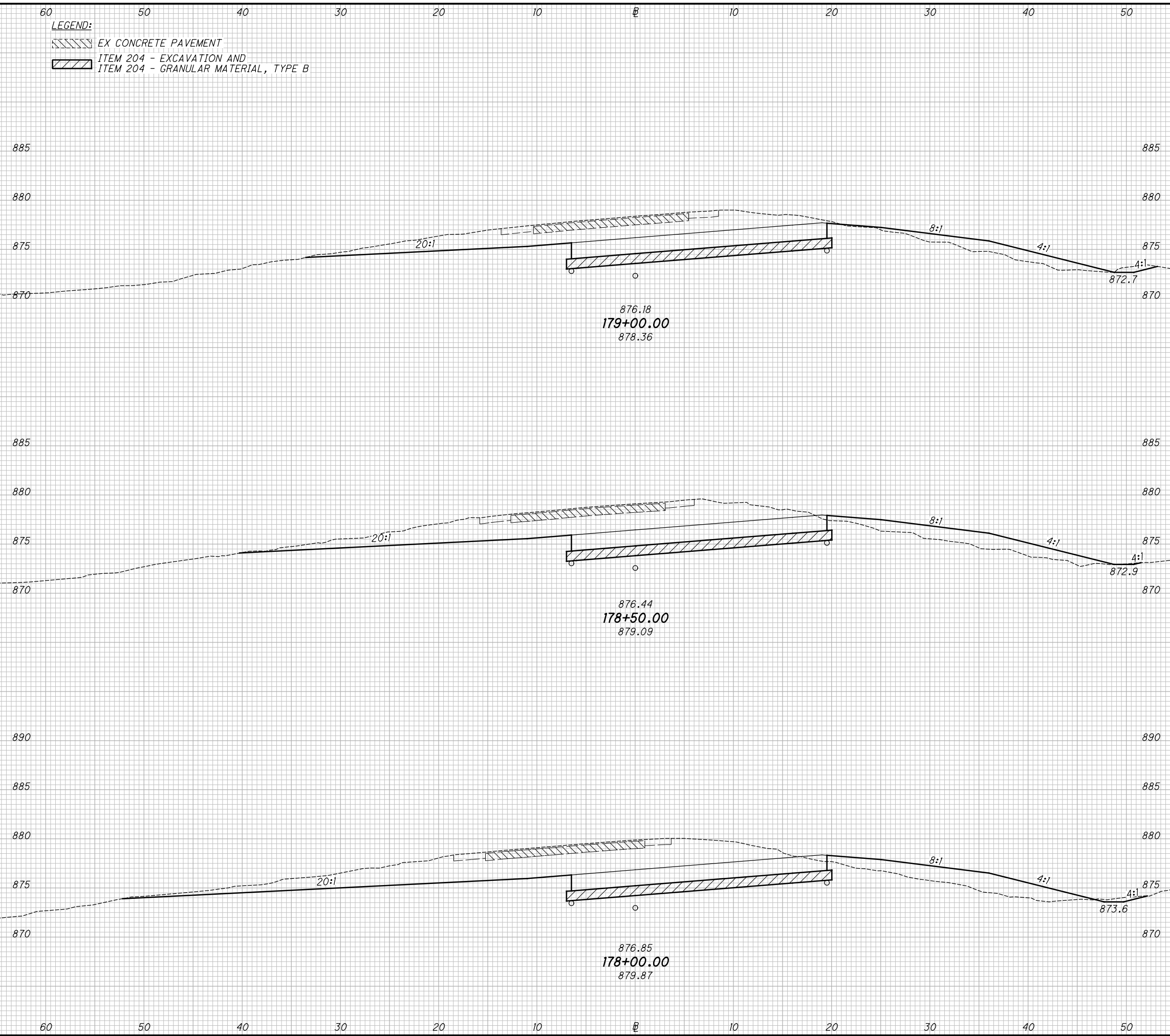
**CROSS SECTIONS - RAMP C
 STA 176+50 TO STA 177+50**

FRA - 71 - 0.00

883
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X5602.dgn XS_SHEET_002 10/28/2019 11:12:17 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. WIDTH	END WIDTH	SO. WIDTH
67	27	27	27
71	27	27	27
84	27	27	27
1299	450	450	450



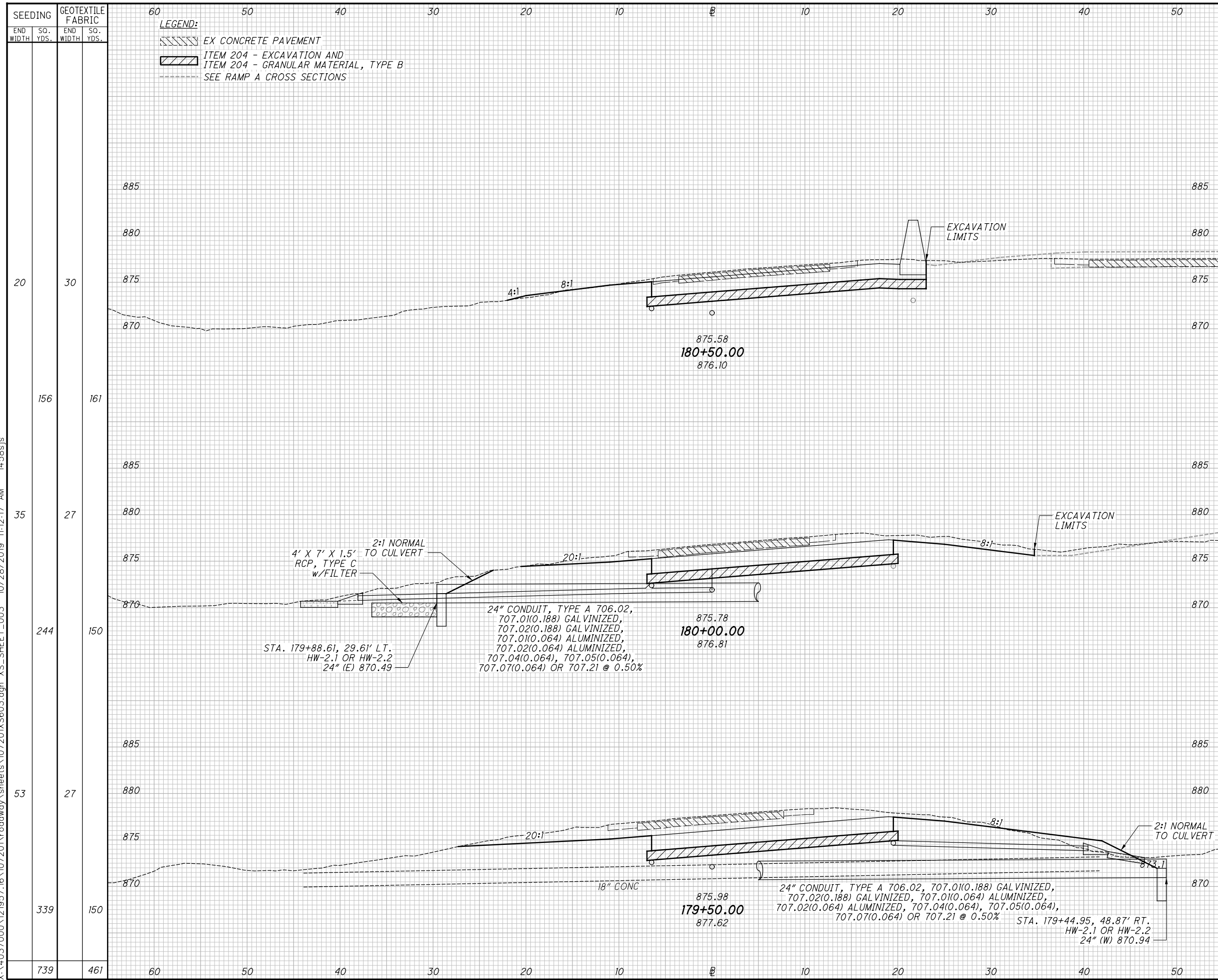
ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
109	19			27	27		
		219	45			50	50
127	30			27	27		
		259	60			50	50
153	35			27	27		
		293	71			50	50
		771	176			150	150

CROSS SECTIONS - RAMP C
 STA 178+00 TO STA 179+00

FRA - 71 - 0.00

884
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201X5603.dgn XS_SHEET_003 10/28/2019 11:12:17 AM 1458sjs



SEEDING	GEOTEXTILE FABRIC	ITEM 203		ITEM 204		CALCULATED	DCB	CHECKED	SJS
		END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL				
20	30	45	1	30	30				
156	161		104	1	53	53			
35	27	67	0	27	27				
244	150		144	8	50	50			
53	27	88	9	27	27				
339	150		182	26	50	50			
739	461		430	35	153	153			

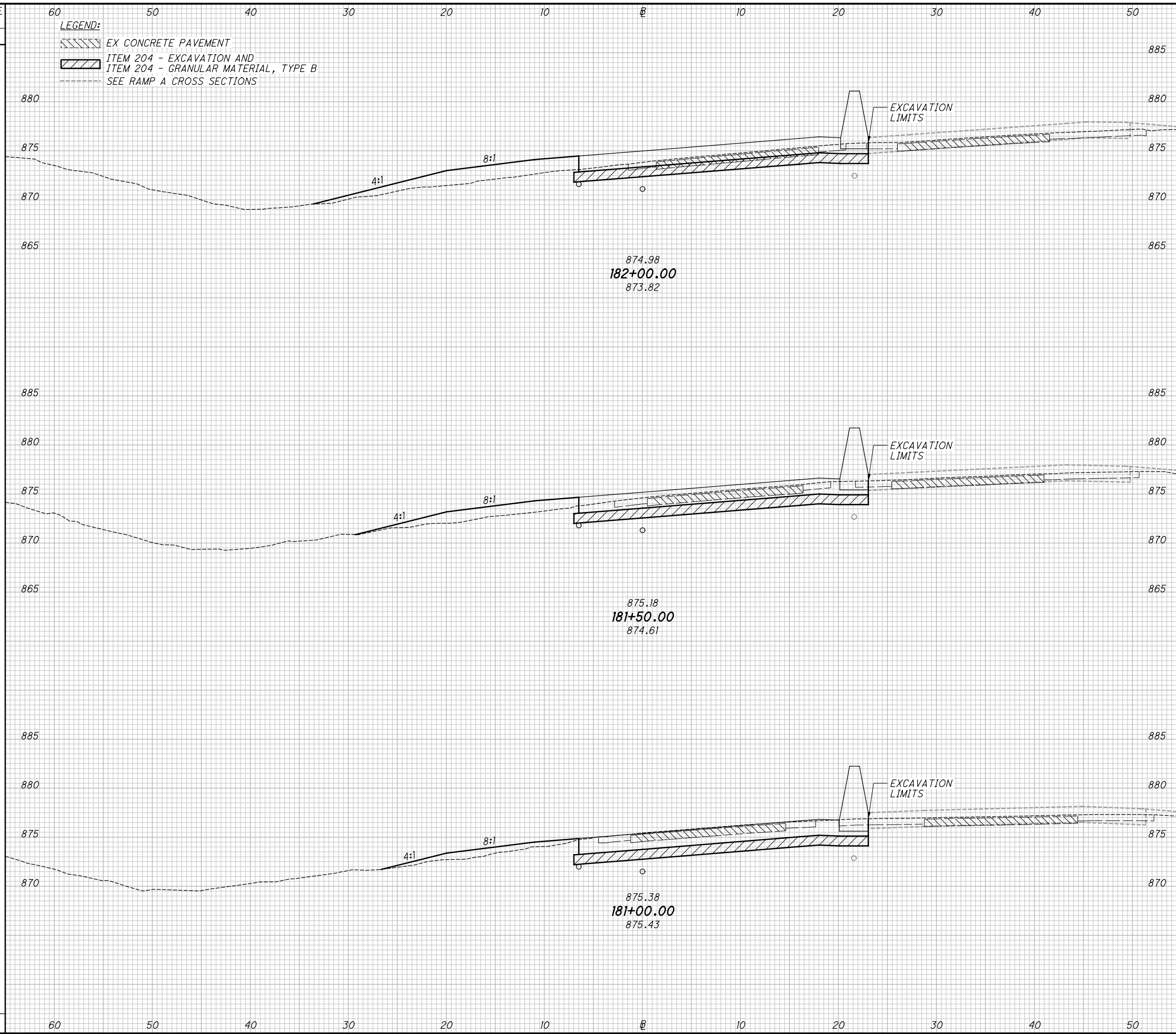
CROSS SECTIONS - RAMP C
 STA 179+50 TO STA 180+50

FRA - 71 - 0.00

885
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS604.dgn XS_SHEET_004 10/28/2019 11:12:18 AM 1458sjs

SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
32	30	30	30
167	167	167	167
28	30	30	30
150	167	167	167
25	30	30	30
128	167	167	167
445	501	501	501



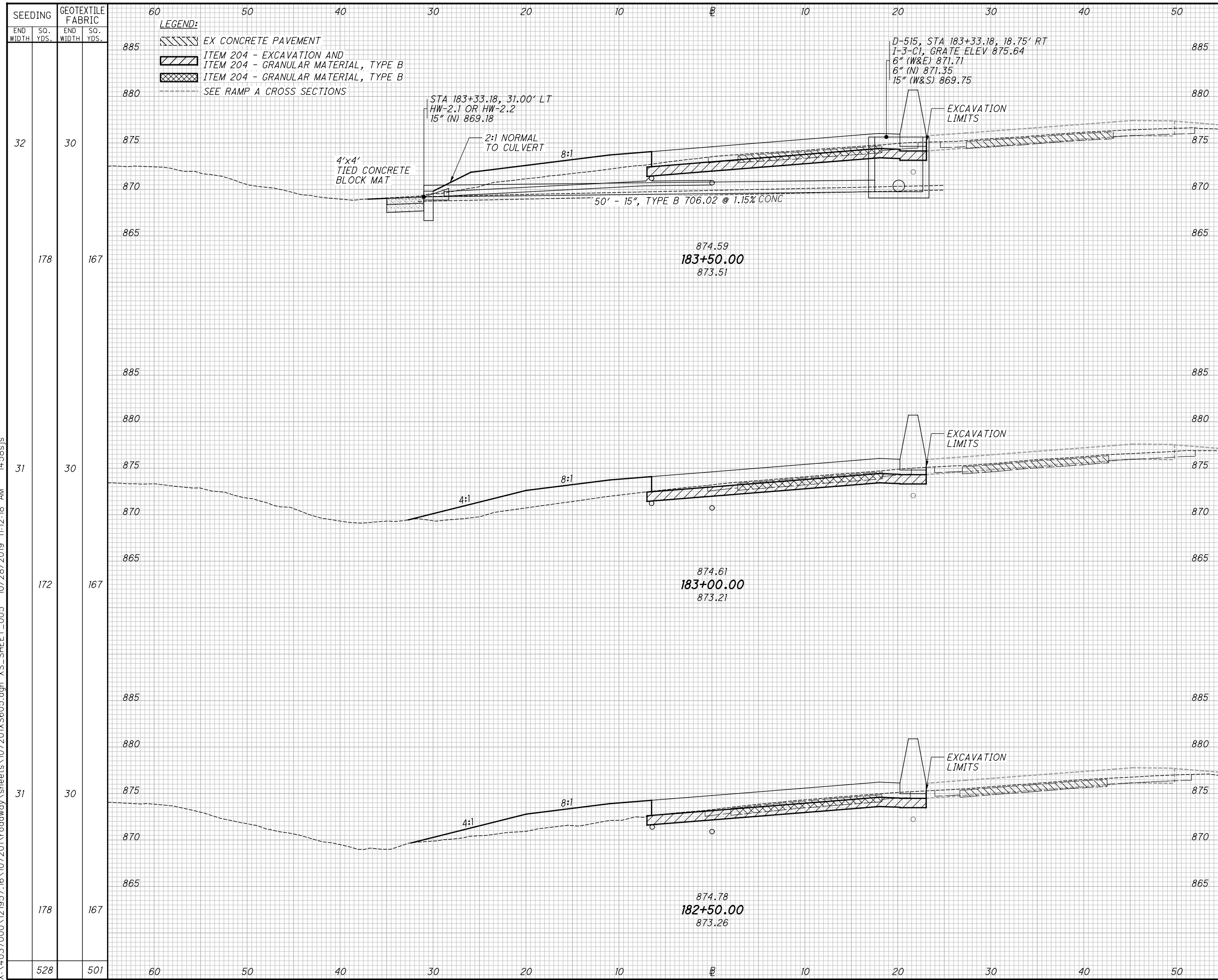
ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
5	30			26	30		
		18	45			52	56
14	19			30	30		
		40	27			56	56
29	10			30	30		
		69	10			56	56
		127	82			164	168

CROSS SECTIONS - RAMP C
 STA 181+00 TO STA 182+00

FRA - 71 - 0.00

886
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS605.dgn XS_SHEET_005 10/28/2019 11:12:18 AM 14:58:51



LEGEND:
 EX CONCRETE PAVEMENT
 ITEM 204 - EXCAVATION AND GRANULAR MATERIAL, TYPE B
 ITEM 204 - GRANULAR MATERIAL, TYPE B
 SEE RAMP A CROSS SECTIONS

D-515, STA 183+33.18, 18.75' RT
 I-3-G1, GRATE ELEV 875.64
 6" (W&E) 871.71
 6" (N) 871.35
 15" (W&S) 869.75

STA 183+33.18, 31.00' LT
 HW-2.1 OR HW-2.2
 15" (N) 869.18

4'x4'
 TIED CONCRETE
 BLOCK MAT

2:1 NORMAL
 TO CULVERT

8:1

50' - 15", TYPE B 706.02 @ 1.15% CONC

EXCAVATION
 LIMITS

874.59
 183+50.00
 873.51

874.61
 183+00.00
 873.21

874.78
 182+50.00
 873.26

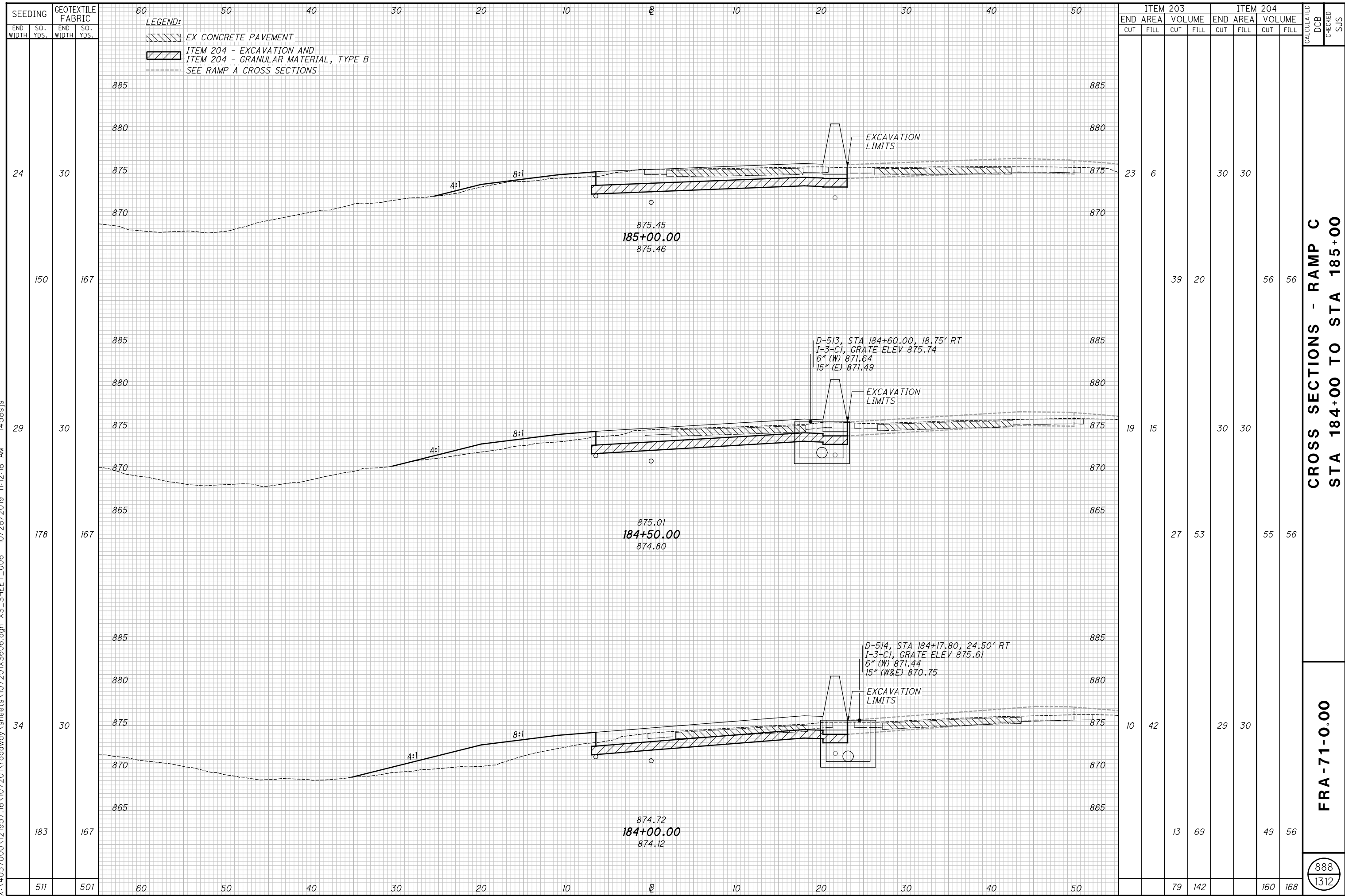
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SUS
END WIDTH	SO. WIDTH	END WIDTH	SO. WIDTH	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL			
32	30	30	30	4	33			24	30					
178	167	167	167		6	67			41	56				
31	30	30	30	2	39			21	30					
172	167	167	167		4	69			39	56				
31	30	30	30	2	36			21	30					
178	167	167	167		6	61			44	56				
528	501	60	50		16	197			124	168				

CROSS SECTIONS - RAMP C
 STA 182+50 TO STA 183+50

FRA - 71 - 0.00

887
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201X5606.dgn XS_SHEET_006 10/28/2019 11:12:18 AM 1458sjs

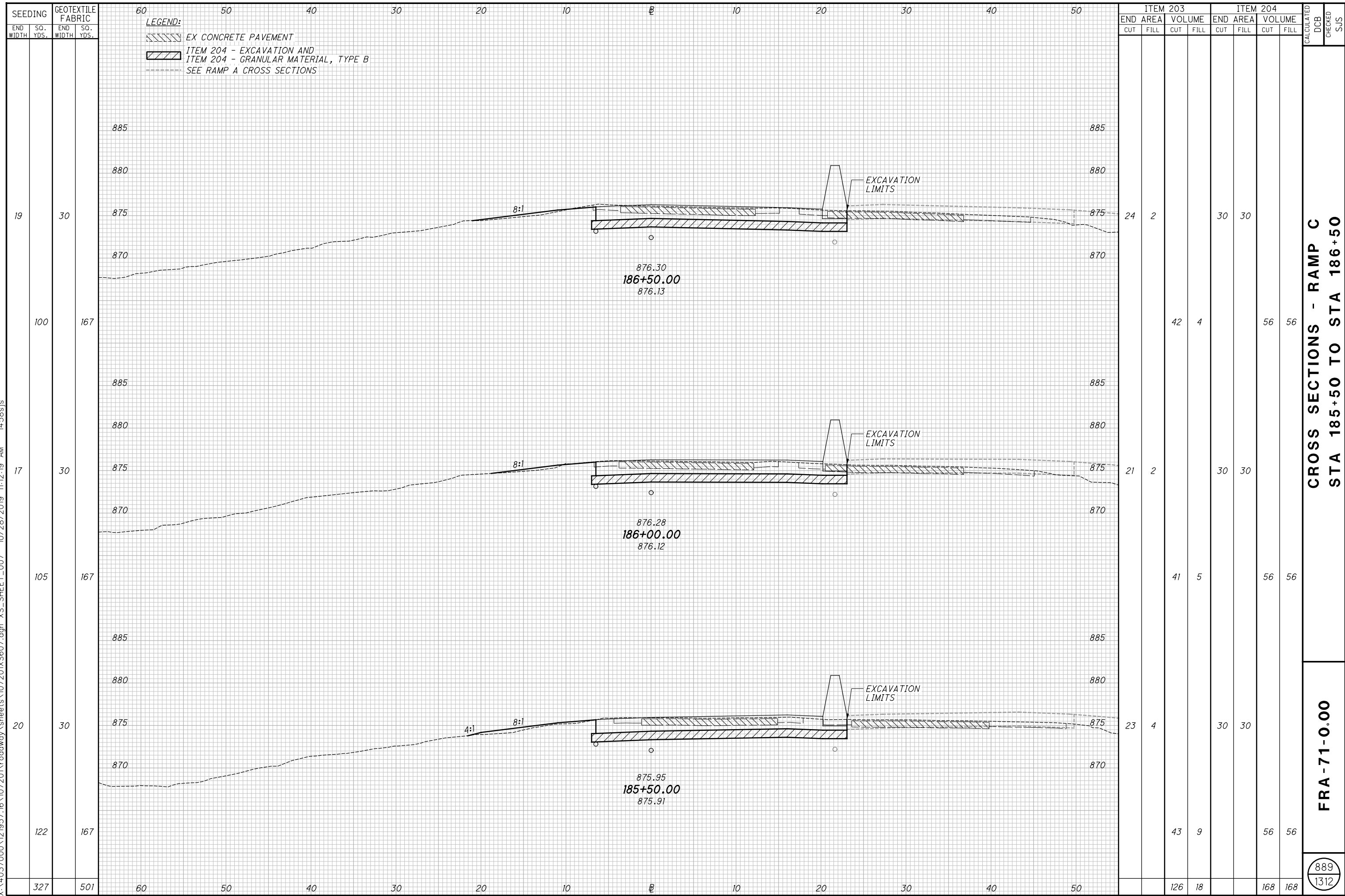


CROSS SECTIONS - RAMP C
 STA 184+00 TO STA 185+00

FRA - 71 - 0.00

888
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS607.dgn XS_SHEET_007 10/28/2019 11:12:19 AM 1458sjs



SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
19	30	30	167
17	30	30	167
20	30	30	167
122	167	167	167
327	501	501	501

60		50		40		30		20		10		0		10		20		30		40		50	
----	--	----	--	----	--	----	--	----	--	----	--	---	--	----	--	----	--	----	--	----	--	----	--

LEGEND:
 [Hatched Box] EX CONCRETE PAVEMENT
 [Diagonal Lines Box] ITEM 204 - EXCAVATION AND
 [Diagonal Lines Box] ITEM 204 - GRANULAR MATERIAL, TYPE B
 [Dashed Line] SEE RAMP A CROSS SECTIONS

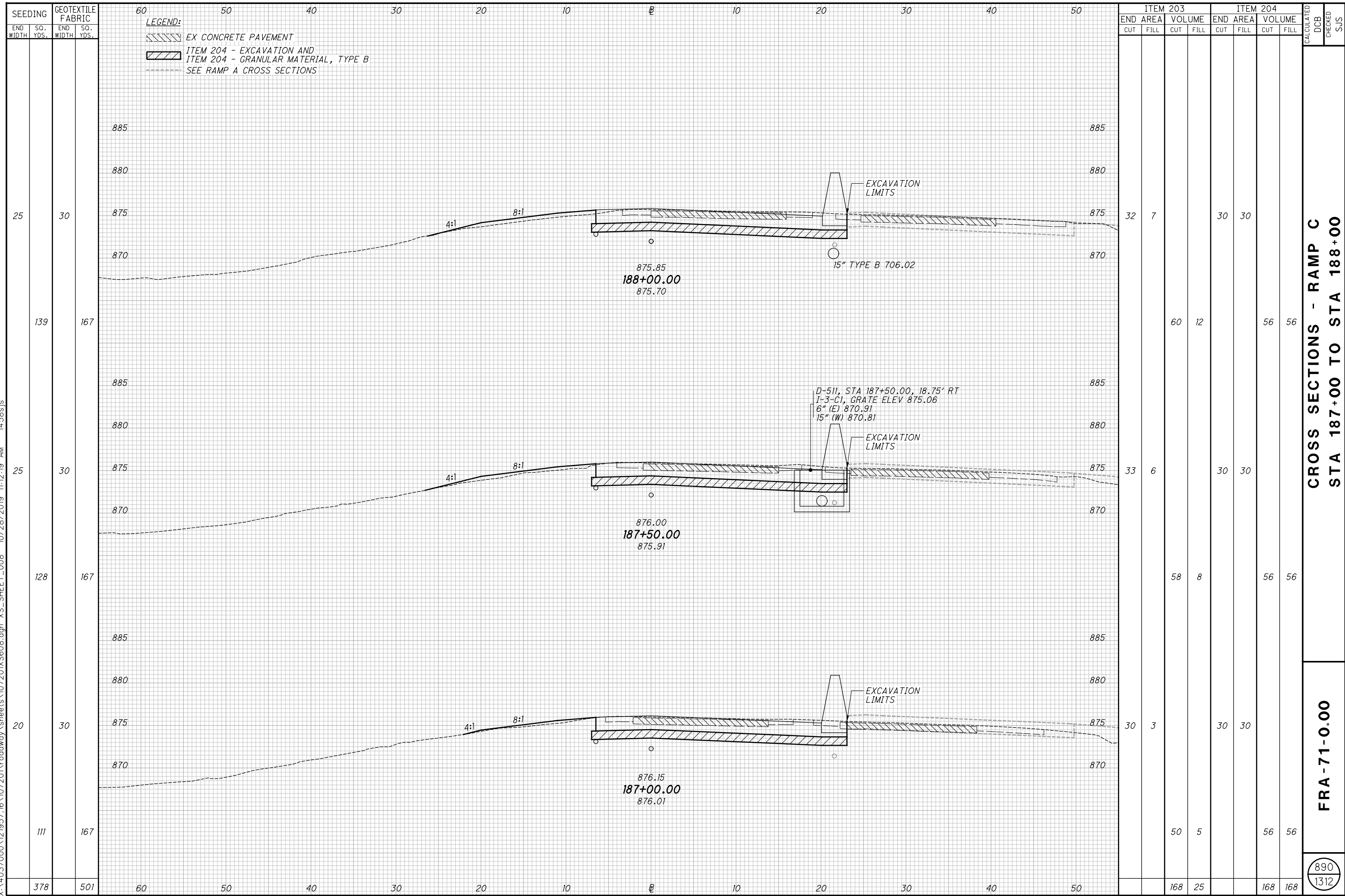
ITEM 203				ITEM 204				CALCULATED	DCB	CHECKED	SJS
END AREA		VOLUME		END AREA		VOLUME					
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL				
24	2	30	30								
		42	4	56	56						
21	2	30	30								
		41	5	56	56						
23	4	30	30								
		43	9	56	56						
		126	18	168	168						

**CROSS SECTIONS - RAMP C
 STA 185+50 TO STA 186+50**

FRA - 71 - 0.00

889
1312

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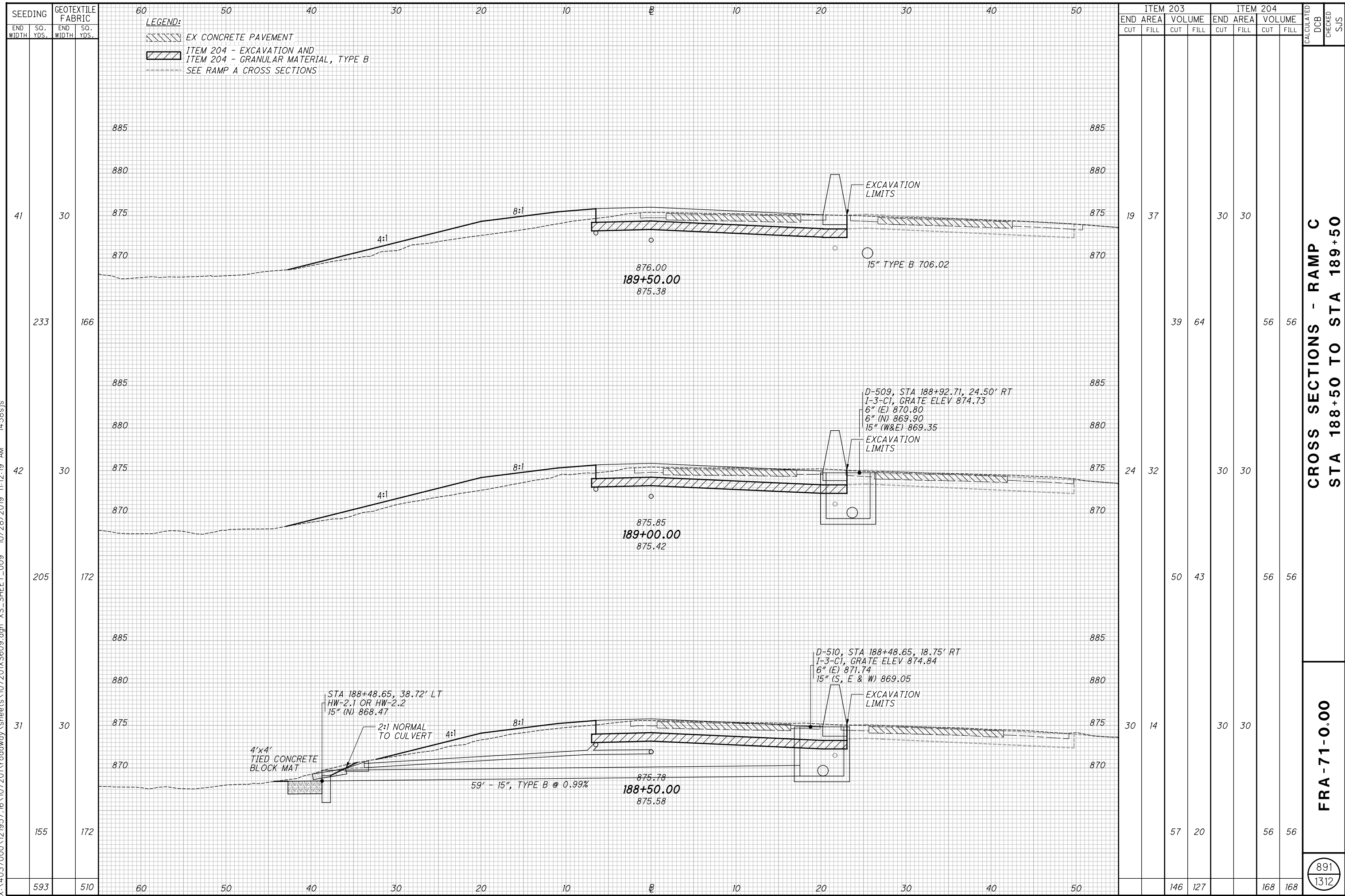


CROSS SECTIONS - RAMP C
STA 187+00 TO STA 188+00

FRA - 71 - 0.00

890
1312

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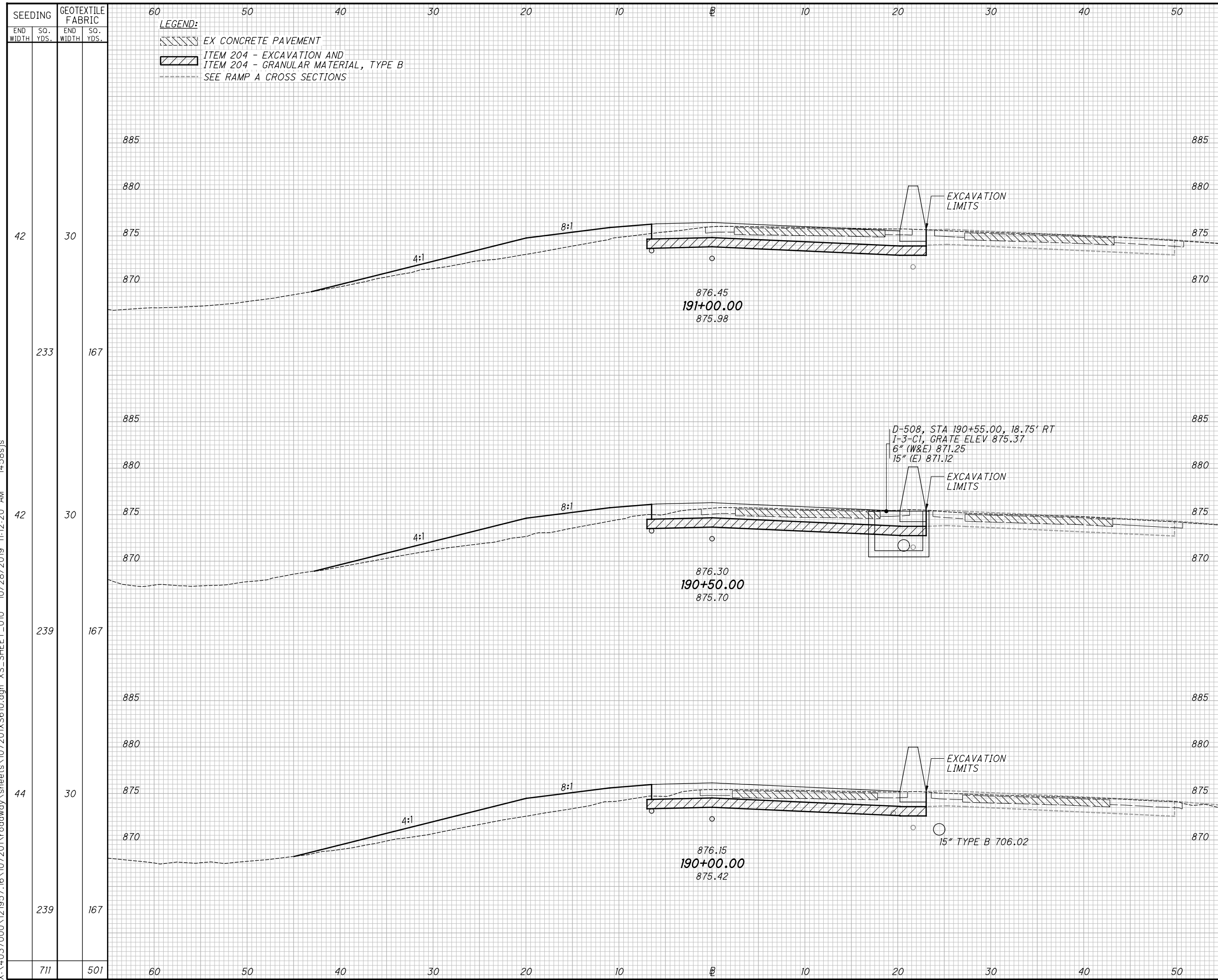
SEEDING		GEOTEXTILE FABRIC		ITEM 203		ITEM 204		CALCULATED	DCB	CHECKED	SJS
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL				
41	30	30	30	19	37	30	30				
233	166				39	64	56	56			
42	30	30	30	24	32	30	30				
205	172				50	43	56	56			
31	30	30	30	30	14	30	30				
155	172				57	20	56	56			
593	510	60	50		146	127		168	168		

CROSS SECTIONS - RAMP C
STA 188+50 TO STA 189+50

FRA - 71 - 0.00

891
1312

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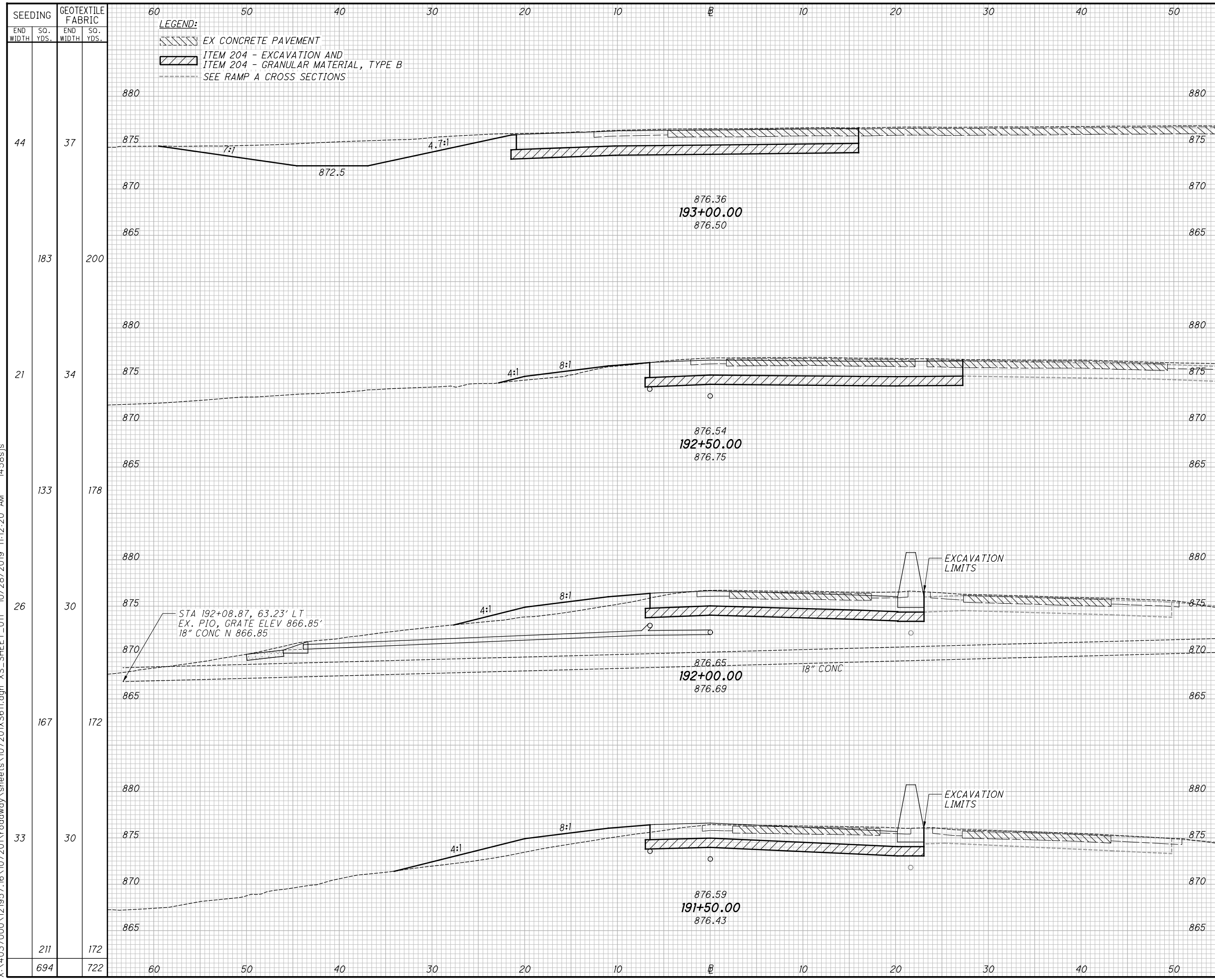
SEEDING		GEOTEXTILE FABRIC		ITEM 203		ITEM 204		CALCULATED	DCB	CHECKED	SJS
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END AREA CUT	VOLUME CUT	END AREA FILL	VOLUME FILL				
42	30	30	167	24	36	30	30				
233	167				41	72	56	56			
42	30	30	167	20	42	30	30				
239	167				33	82	56	56			
44	30	30	167	16	47	30	30				
239	167				32	78	56	56			
711	501	60	50		106	232		168	168		

**CROSS SECTIONS - RAMP C
 STA 190+00 TO STA 191+00**

FRA - 71 - 0.00

892
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\X5611.dgn XS_SHEET_011 10/28/2019 11:2:20 AM 14:58sjs



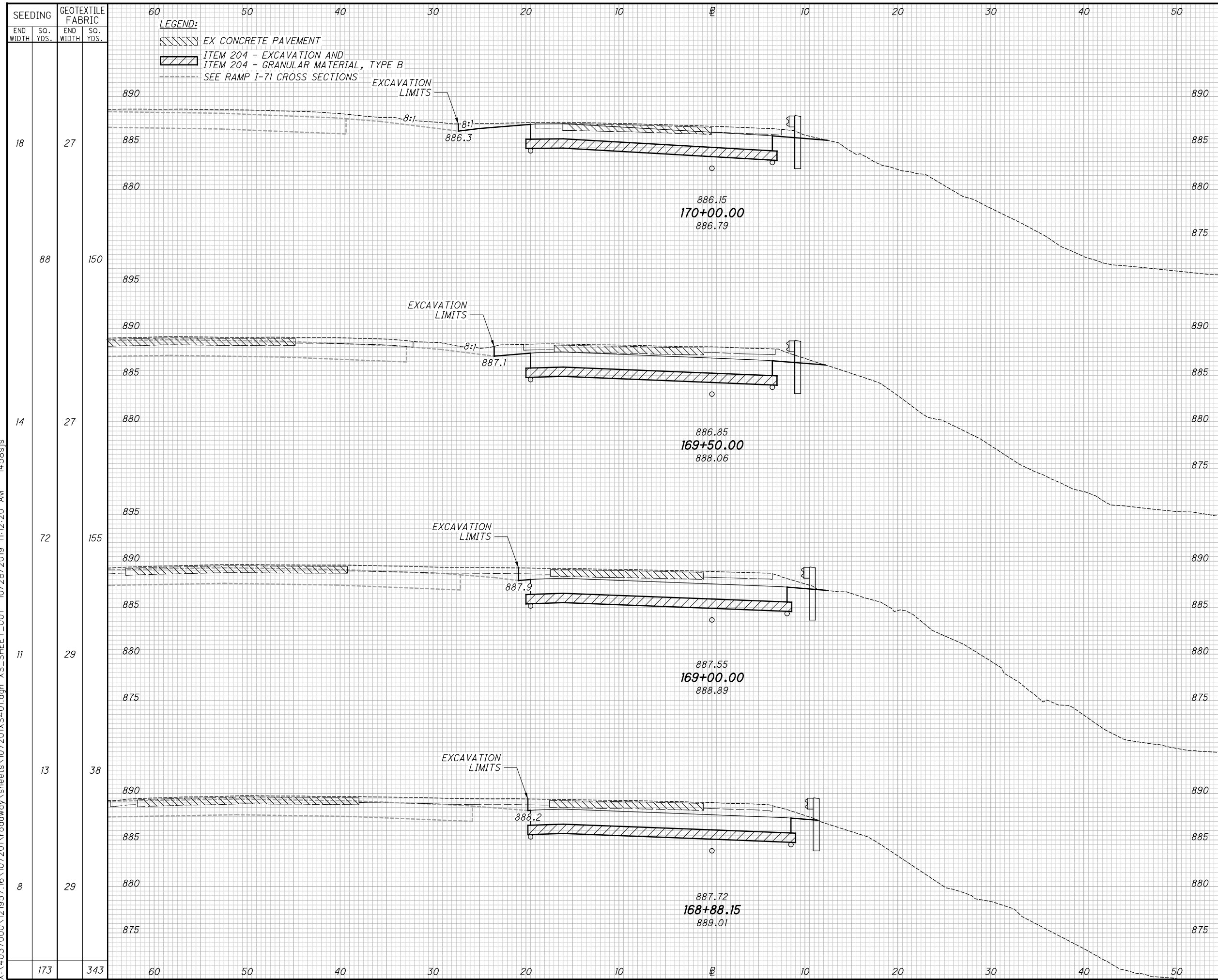
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED SUS
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL	END CUT	AREA FILL	VOLUME CUT	VOLUME FILL		
44	37	183	200	99	0			38	38				
21	34	133	178	41	4	130	4	34	34	66	66		
26	30	167	172	36	18	71	20	30	30	60	60		
33	30			31	27	62	41	30	30	56	56		
211	172					51	58			56	56		
694	722					314	123			238	238		

**CROSS SECTIONS - RAMP C
 STA 191+50 TO STA 193+00**

FRA - 71 - 0.00

893
1312

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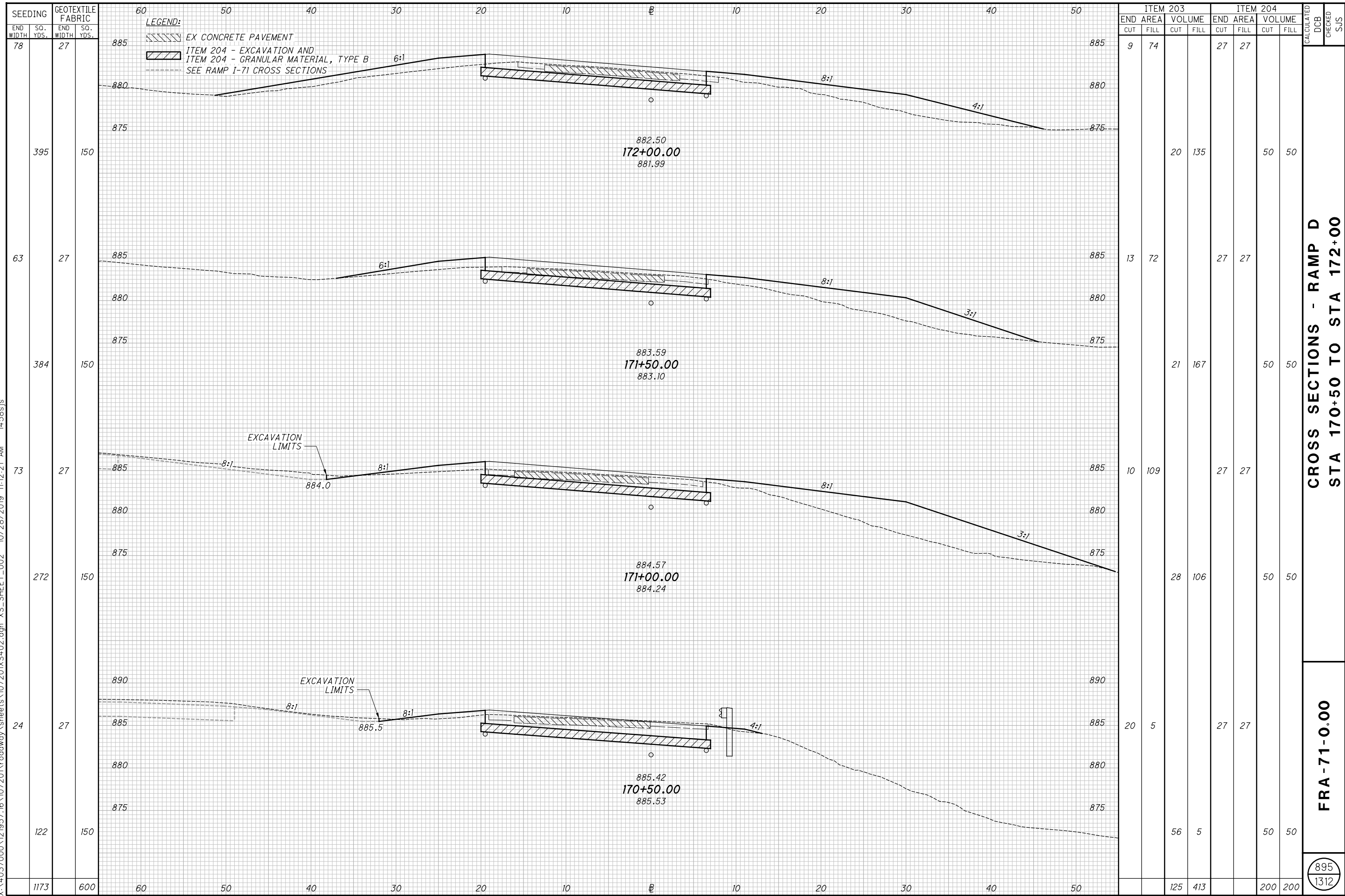
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SUS	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END CUT	AREA CUT	VOLUME CUT	END FILL	AREA FILL	VOLUME FILL	END CUT	AREA CUT				VOLUME CUT
18	27	885	890	40	0		27	27							
88	150	885	895			90	0			50	50				
14	27	880	890	57	0		27	27							
72	155	880	895			109	0			51	51				
11	29	875	890	61	0		29	29							
13	38	885	890			27	0			13	13				
8	29	880	890	60	0		29	29							
173	343	875	890			226	0			114	114				

**CROSS SECTIONS - RAMP D
 STA 168+88.15 TO STA 170+00**

FRA - 71 - 0.00

894
1312

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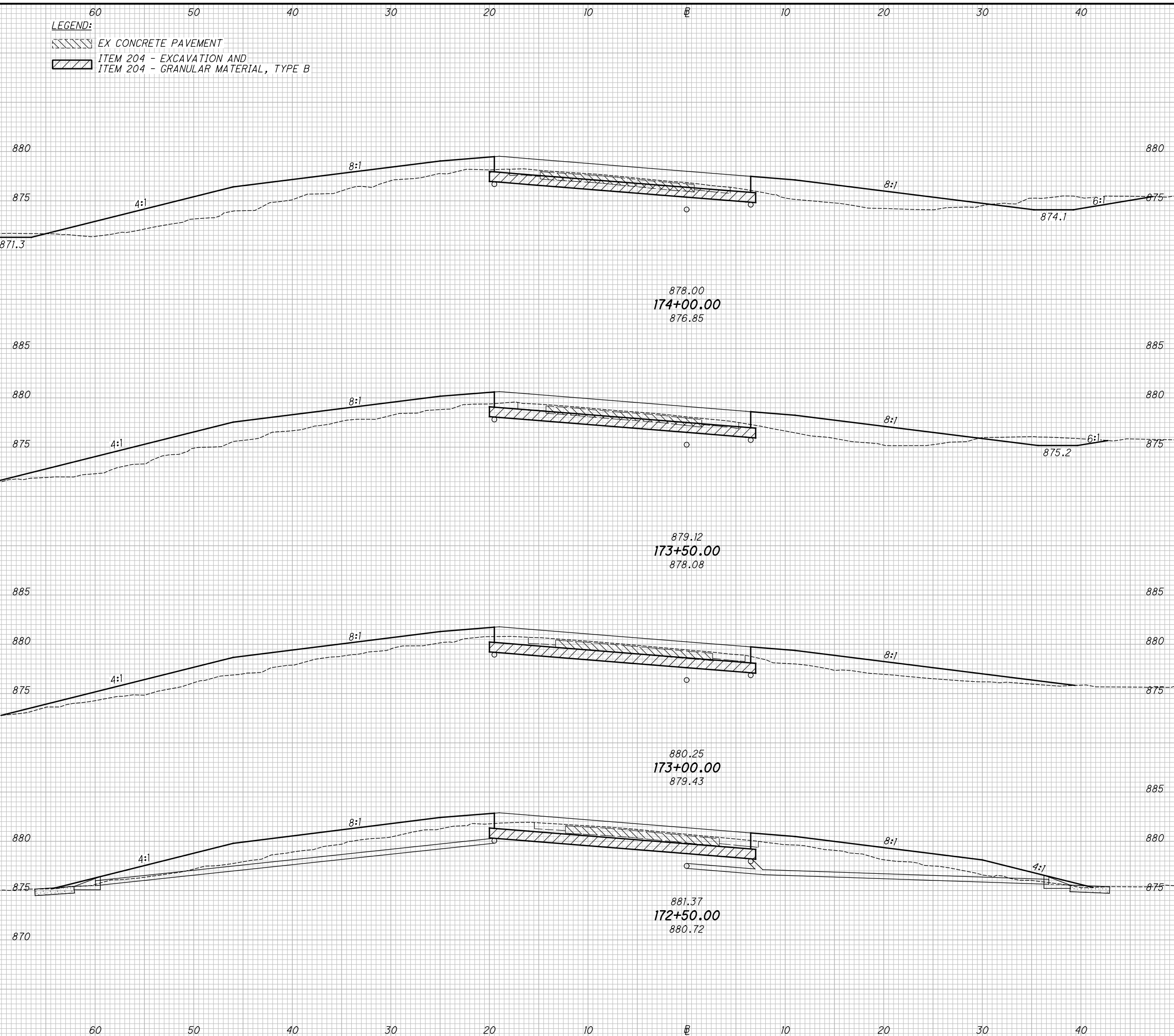
CROSS SECTIONS - RAMP D
 STA 170+50 TO STA 172+00

FRA - 71 - 0.00

895
 1312

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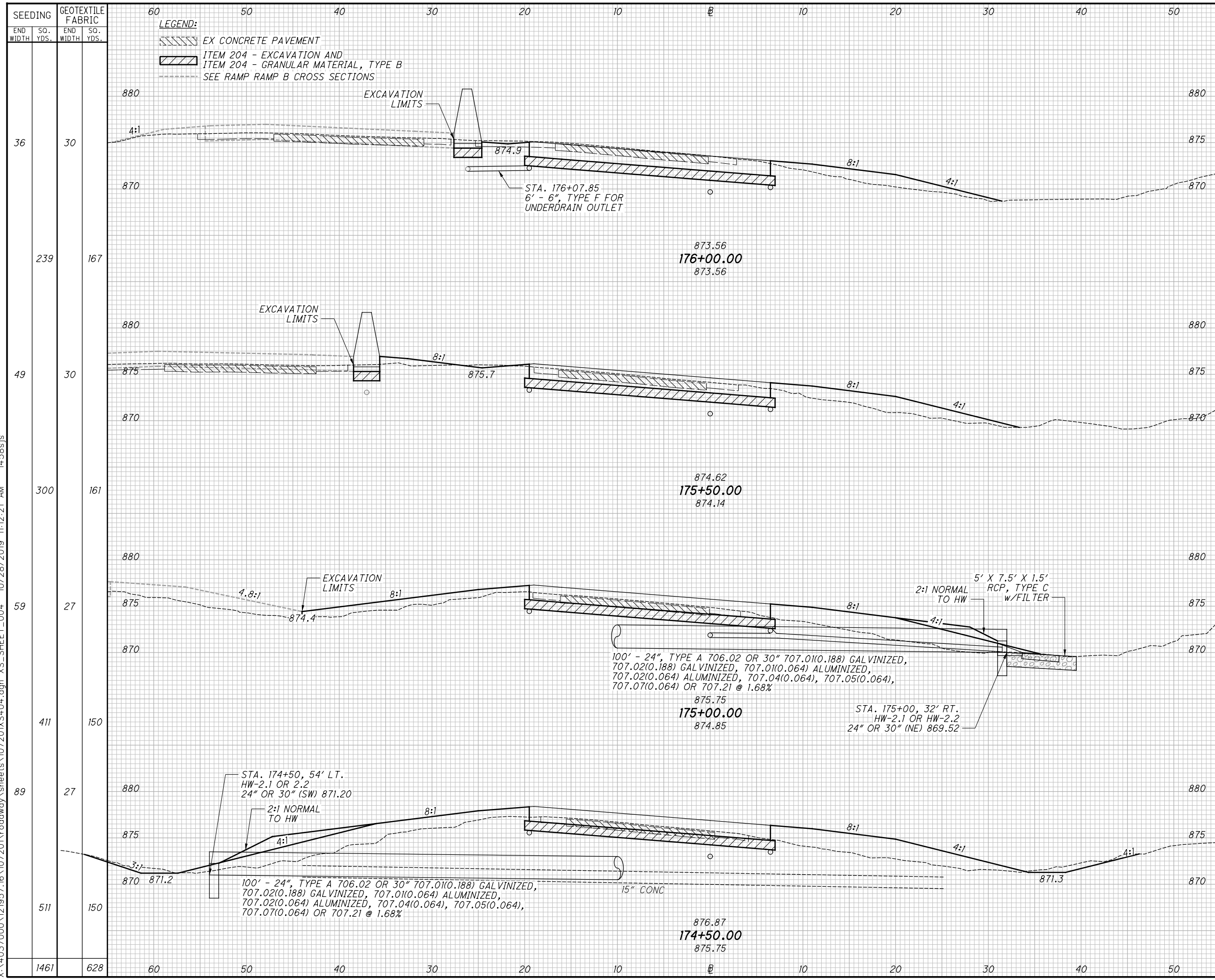
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
95	27	27	150
96	27	27	150
89	27	27	150
489	150		
86	27	27	150
461	150		
2000	600		



ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
16	114			22	27		
		25	206			42	50
11	108			24	27		
		14	184			46	50
4	91			27	27		
		10	169			50	50
7	91			28	28		
		15	153			50	50
		64	712			188	200

CALCULATED DCB
 CHECKED SUS
CROSS SECTIONS - RAMP D
STA 172+50 TO STA 174+00
FRA - 71 - 0.00
 896
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201XS404.dgn XS_SHEET_004 10/28/2019 11:12:21 AM 1458sjs



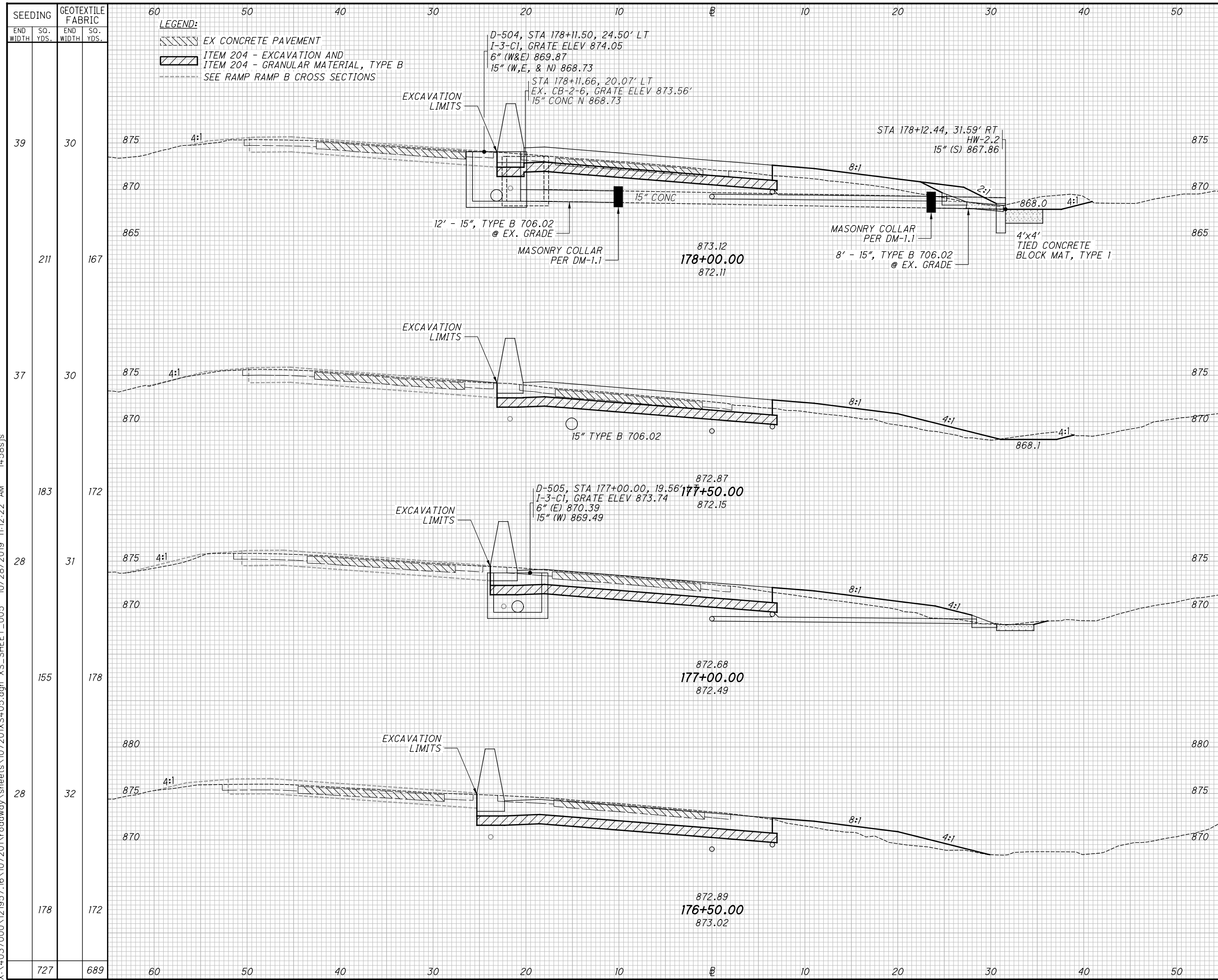
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED SUS		
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END CUT	AREA CUT	VOLUME CUT	END FILL	AREA FILL	VOLUME FILL	END CUT	AREA CUT			VOLUME CUT	END FILL
36	30	30	30	27	21		30	30							
239	167					40	51			55	55				
49	30	30	30	16	34		30	30							
300	161					17	95			52	53				
59	27	27	27	2	68		26	27							
411	150					9	149			45	50				
89	27	27	27	8	93		23	27							
511	150					22	192			41	50				
1461	628	60	50	88	487		193	208							

CROSS SECTIONS - RAMP D
 STA 174+50 TO STA 176+00

FRA - 71 - 0.00

897
 1312

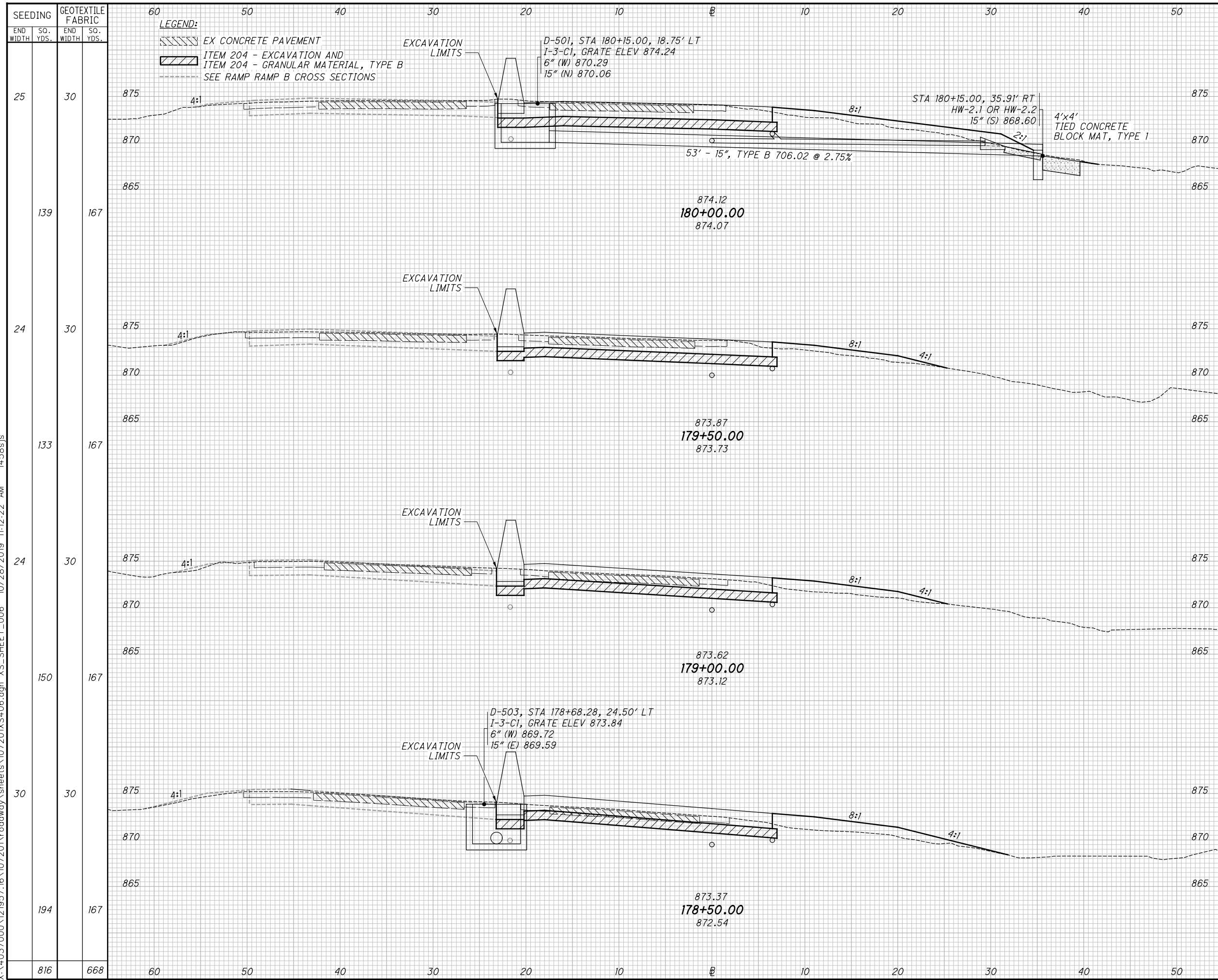
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ITEM 203	ITEM 203		ITEM 204		ITEM 204
	END AREA	VOLUME	END AREA	VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL
18	22		27	30	
		31	41	53	56
15	22		30	30	
		40	38	56	56
28	19		31	31	
		62	32	58	58
39	16		32	32	
		61	34	58	58
		194	145	225	228

CALCULATED DCB CHECKED SUS
CROSS SECTIONS - RAMP D
STA 176+50 TO STA 178+00
FRA - 71 - 0.00
 898
 1312

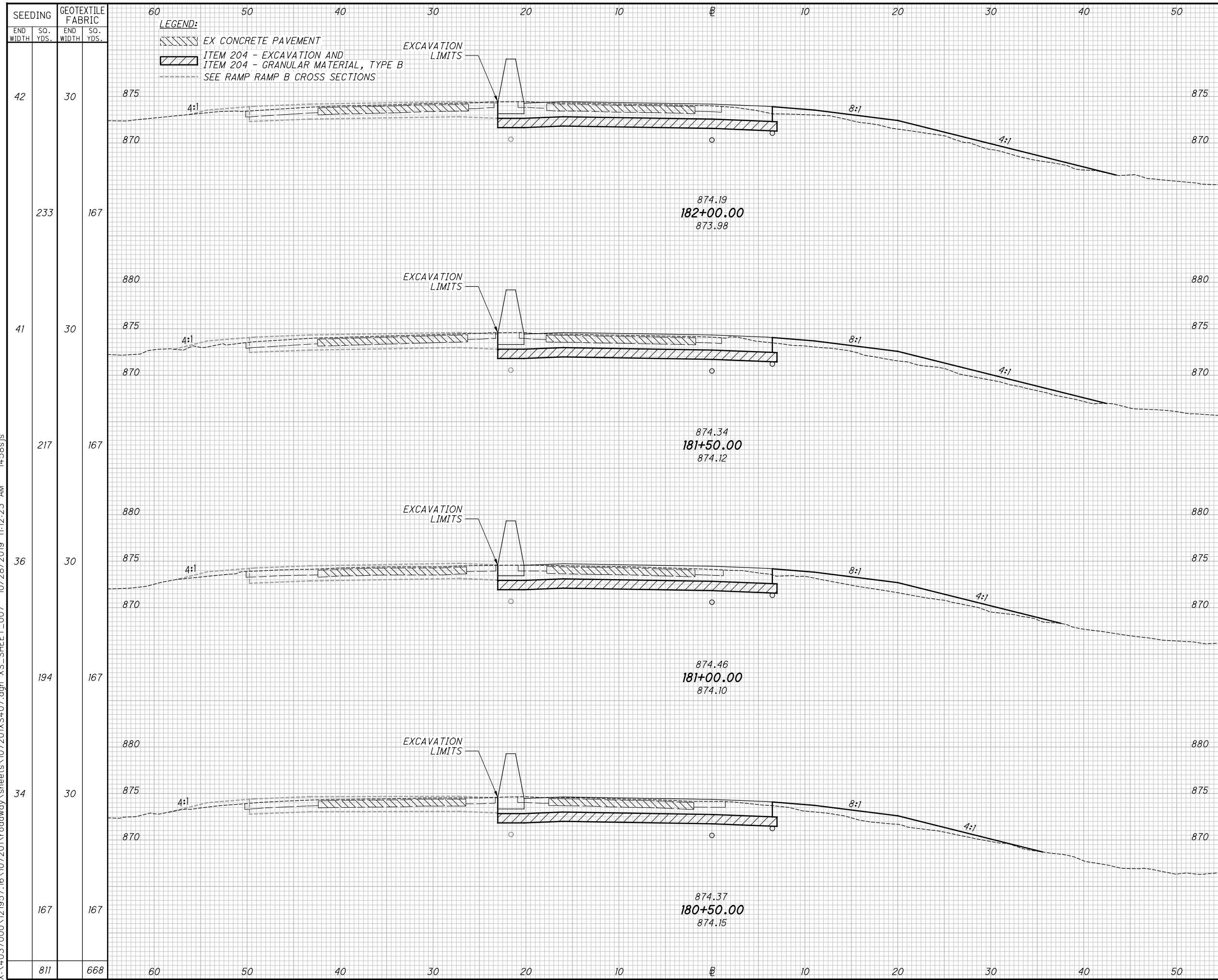
X:\4037000\121957.16\107201\roadway\sheets\107201\XS406.dgn XS_SHEET_006 10/28/2019 11:12:22 AM 1458s.js



ITEM 203	ITEM 203		ITEM 204		ITEM 204	ITEM 204	ITEM 204	ITEM 204	ITEM 204	ITEM 204
	END AREA	VOLUME	END AREA	VOLUME						
29	22		30	30						
		48	30		56	56				
23	10		30	30						
		34	23		56	56				
14	15		30	30						
		21	34		53	56				
9	22		27	30						
		25	41		50	56				
		128	128		215	224				

CALCULATED DCB CHECKED SUS
CROSS SECTIONS - RAMP D
STA 178+50 TO STA 180+00
FRA - 71 - 0.00
 899
 1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS407.dgn XS_SHEET_007 10/28/2019 11:12:23 AM 1458s.js



SEEDING END WIDTH SO. YDS.	GEOTEXTILE FABRIC END WIDTH SO. YDS.	ITEM 203				ITEM 204				CALCULATED DCB	CHECKED SJS
		END CUT	AREA CUT	VOLUME CUT	FILL	END CUT	AREA CUT	VOLUME CUT	FILL		
42	30	26	20			30	30				
233	167			47	40			56	56		
41	30	25	23			30	30				
217	167			44	41			56	56		
36	30	23	21			30	30				
194	167			46	35			56	56		
34	30	27	17			30	30				
167	167			52	36			56	56		
811	668			189	152			224	224		

CROSS SECTIONS - RAMP D
STA 180+50 TO STA 182+00

FRA - 71 - 0.00

900
1312

X:\4037000\121957.16\107201\roadway\sheets\107201\XS408.dgn XS_SHEET_008 10/28/2019 11:12:23 AM 1458s.js



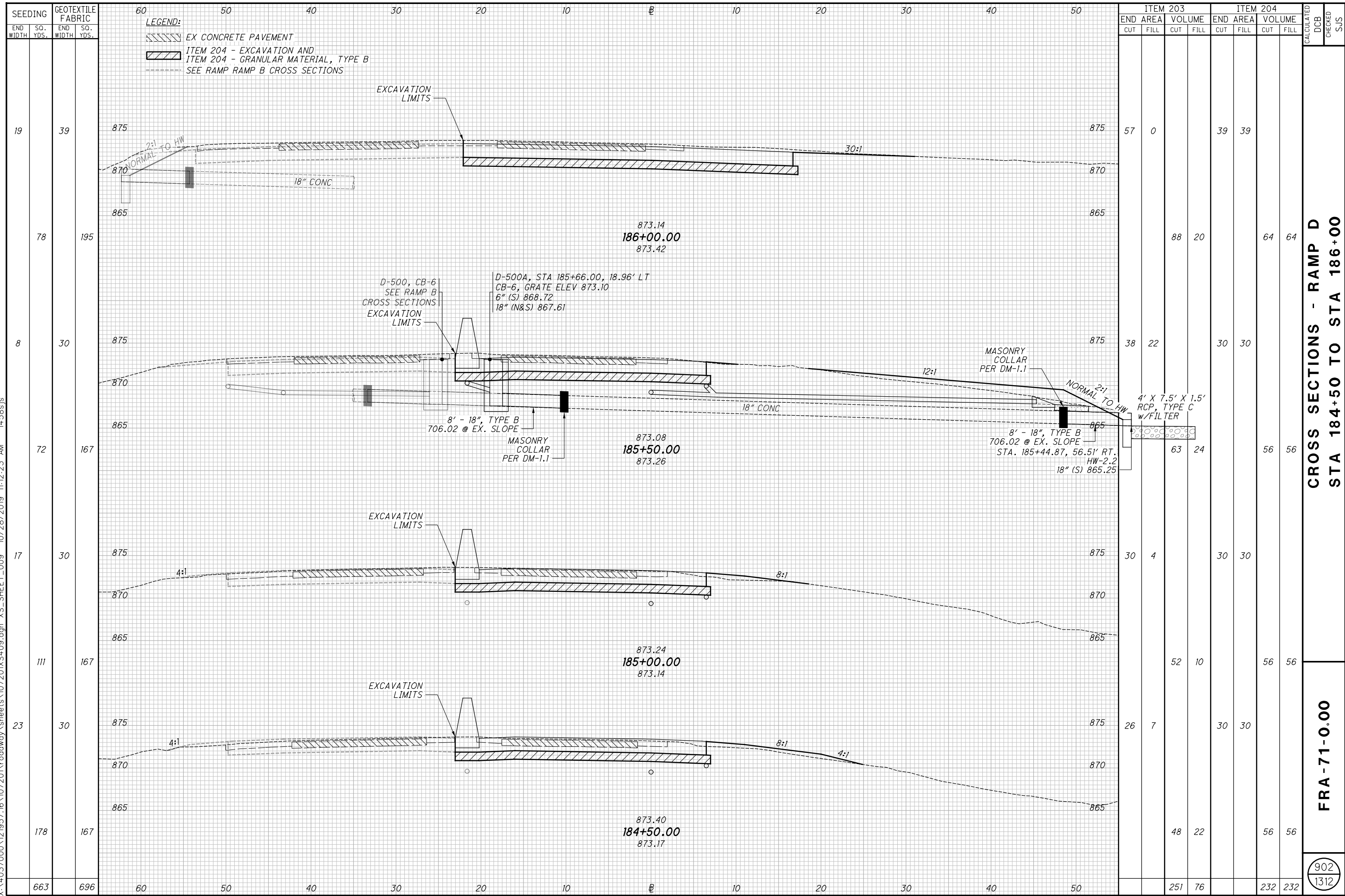
SEEDING		GEOTEXTILE FABRIC		ITEM 203				ITEM 204				CALCULATED DCB	CHECKED	SJS		
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	END CUT	AREA CUT	VOLUME CUT	END FILL	AREA FILL	VOLUME FILL	END CUT	AREA CUT				VOLUME CUT	END FILL
40	30	228	167	26	17		30	30								
42	30	217	167	26	17	48	31		56	56						
36	30	211	167	26	17	48	32		56	56						
39	30	228	167	26	17	48	31		56	56						
884	668	60	50	24	192	128			224	224						

**CROSS SECTIONS - RAMP D
 STA 182+50 TO STA 184+00**

FRA - 71 - 0.00

901
1312

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**CROSS SECTIONS - RAMP D
STA 184+50 TO STA 186+00**

FRA - 71 - 0.00

902
1312

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SUPERELEVATION TABLE

P.I. STA. 181+37.39

$D_c = 12^\circ 45' 00''$

LEFT SIDE						BASELINE CONTROL			RIGHT SIDE						REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH		STATION	PROFILE GRADE		WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION		
						178+21.47	878.56		16	0.016	0.26	173:1	878.82	LEVEL	
						178+25.00	878.57		16	0.017	0.27	173:1	878.85		
						178+50.00	878.65		16	0.026	0.42	173:1	879.07		
						178+75.00	878.72		16	0.035	0.56	173:1	879.28		
						179+00.00	878.77		16	0.044	0.71	173:1	879.48		
						179+25.00	878.81		16	0.053	0.85	173:1	879.66		
						179+25.81	878.81		16	0.054	0.86	173:1	879.67	PC	
						179+50.00	878.83		16	0.062	0.99	173:1	879.82		
						179+75.00	878.84		16	0.071	1.14	173:1	879.98		
						179+99.07	878.83		16	0.080	1.28	173:1	880.11	FULL SUPER	
						180+00.00	878.83		16	0.080	1.28		880.11		
						180+25.00	878.81		16	0.080	1.28		880.09		
						180+50.00	878.77		16	0.080	1.28		880.05		
						180+75.00	878.72		16	0.080	1.28		880.00		
						181+00.00	878.65		16	0.080	1.28		879.93		
						181+25.00	878.57		16	0.080	1.28		879.85		
						181+50.00	878.47		16	0.080	1.28		879.75		
						181+75.00	878.37		16	0.080	1.28		879.65		
						182+00.00	878.26		16	0.080	1.28		879.54		
						182+25.00	878.16		16	0.080	1.28		879.44		
						182+46.78	878.07		16	0.080	1.28	236:1	879.35	FULL SUPER	
						182+50.00	878.06		16	0.079	1.27	236:1	879.32		
						182+75.00	877.95		16	0.073	1.16	236:1	879.11		
						183+00.00	877.86		16	0.066	1.05	236:1	878.92		
						183+21.30	877.81		16	0.060	0.96	236:1	878.78	PCC	

SUPERELEVATION TABLE

P.I. STA. 187+21.97

$D_c = 1^\circ 24' 00''$

LEFT SIDE						BASELINE CONTROL			RIGHT SIDE						REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH		STATION	PROFILE GRADE		WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION		
						183+21.30	877.81		16	0.060	0.96	236:1	878.78	PCC	
						183+25.00	877.80		16	0.059	0.95	236:1	878.75		
						183+50.00	877.77		16	0.053	0.84	236:1	878.62		
						183+75.00	877.77		16	0.046	0.74	236:1	878.51		
						183+86.78	877.78		16	0.043	0.69	236:1	878.47	FULL SUPER	
						184+00.00	877.80		16	0.043	0.69		878.49		
						184+25.00	877.86		16	0.043	0.69		878.55		
						184+50.00	877.94		16	0.043	0.69		878.63		
						184+68.33	877.99		16	0.043	0.69		878.68	MEET I-71	
SEE SHEET 899 FOR RAMP A TERMINAL DETAILS															

CALCULATED DCB
 CHECKED JMB
 SUPERELEVATION TABLE
 RAMP A - STA 177+67.44 TO STA 184+87.58
 FRA - 71 - 0:00
 914
 1312



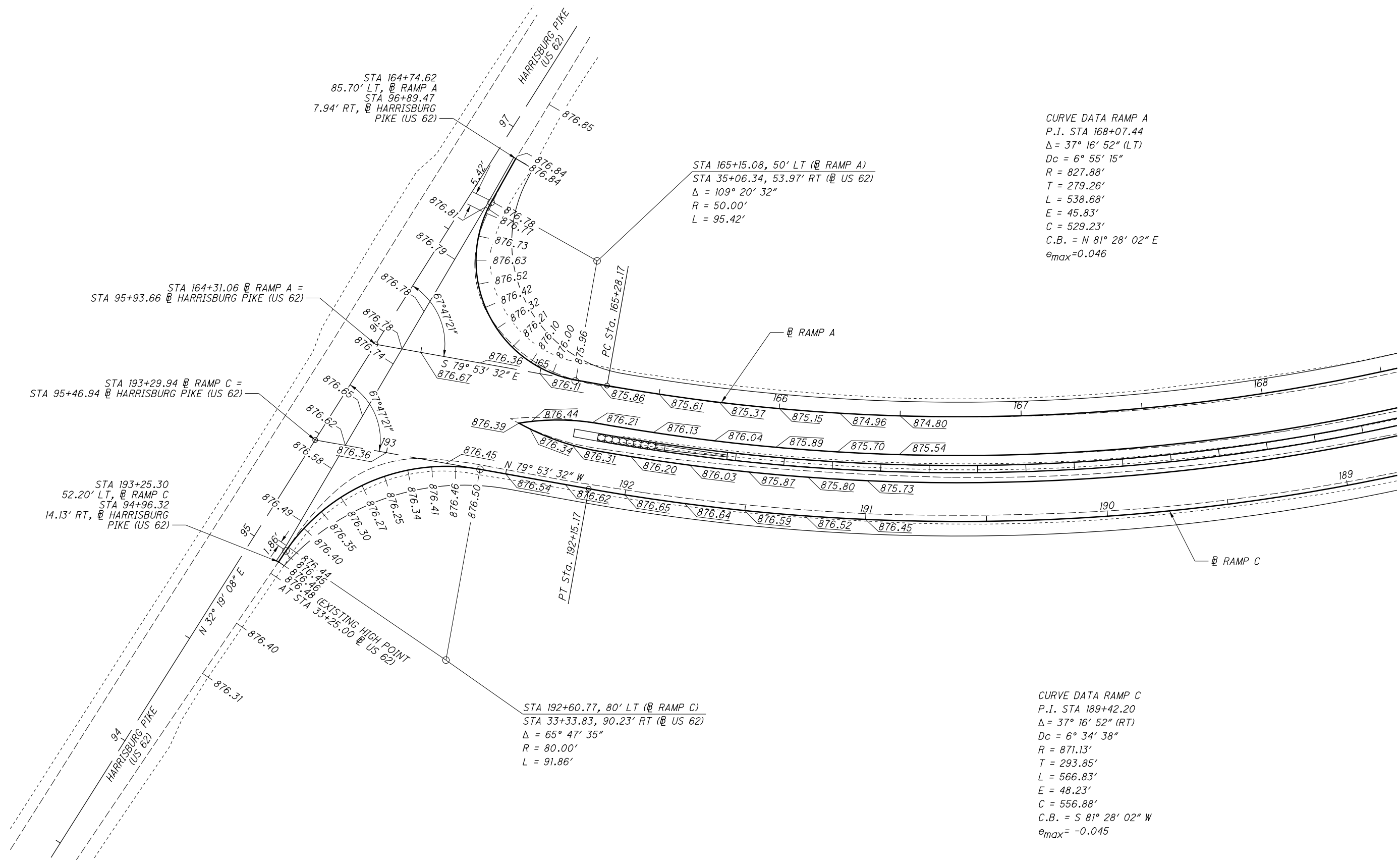
CALCULATED
DCB
CHECKED
JMB

**INTERSECTION DETAIL
RAMPS A & C & US 62**

FRA-71-0.00

918
1312

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STA 164+74.62
85.70' LT, @ RAMP A
STA 96+89.47
7.94' RT, @ HARRISBURG
PIKE (US 62)

STA 165+15.08, 50' LT (@ RAMP A)
STA 35+06.34, 53.97' RT (@ US 62)
 $\Delta = 109^\circ 20' 32''$
 $R = 50.00'$
 $L = 95.42'$

CURVE DATA RAMP A
P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
C.B. = N $81^\circ 28' 02''$ E
 $e_{max} = -0.046$

STA 164+31.06 @ RAMP A =
STA 95+93.66 @ HARRISBURG PIKE (US 62)

STA 193+29.94 @ RAMP C =
STA 95+46.94 @ HARRISBURG PIKE (US 62)

STA 193+25.30
52.20' LT, @ RAMP C
STA 94+96.32
14.13' RT, @ HARRISBURG
PIKE (US 62)

STA 192+60.77, 80' LT (@ RAMP C)
STA 33+33.83, 90.23' RT (@ US 62)
 $\Delta = 65^\circ 47' 35''$
 $R = 80.00'$
 $L = 91.86'$

CURVE DATA RAMP C
P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $D_c = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$
C.B. = S $81^\circ 28' 02''$ W
 $e_{max} = -0.045$

AT STA 33+25.00 @ US 62
EXISTING HIGH POINT

N $32^\circ 19' 08''$ E

N $79^\circ 53' 32''$ W

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

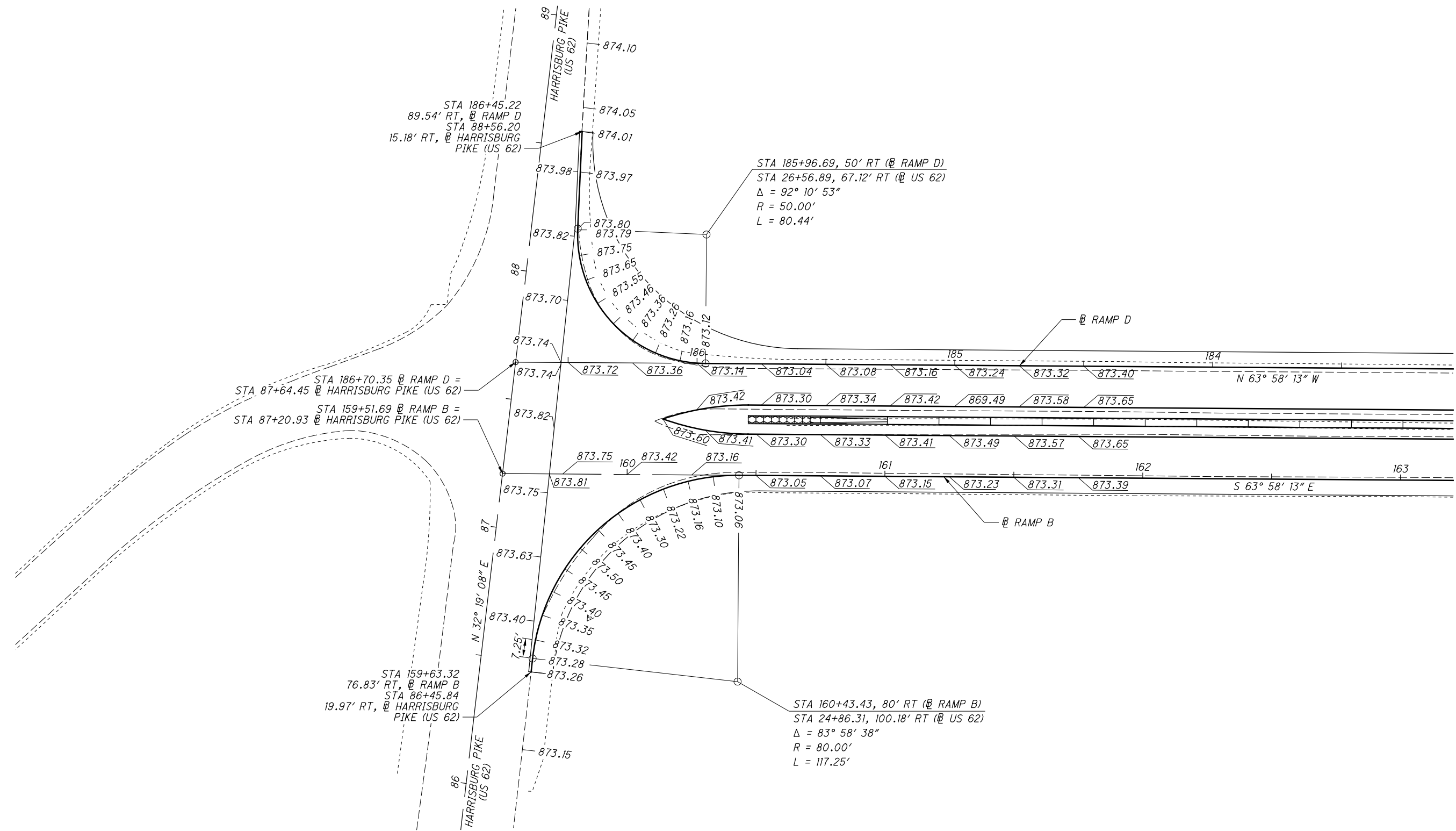
S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

S $79^\circ 53' 32''$ E

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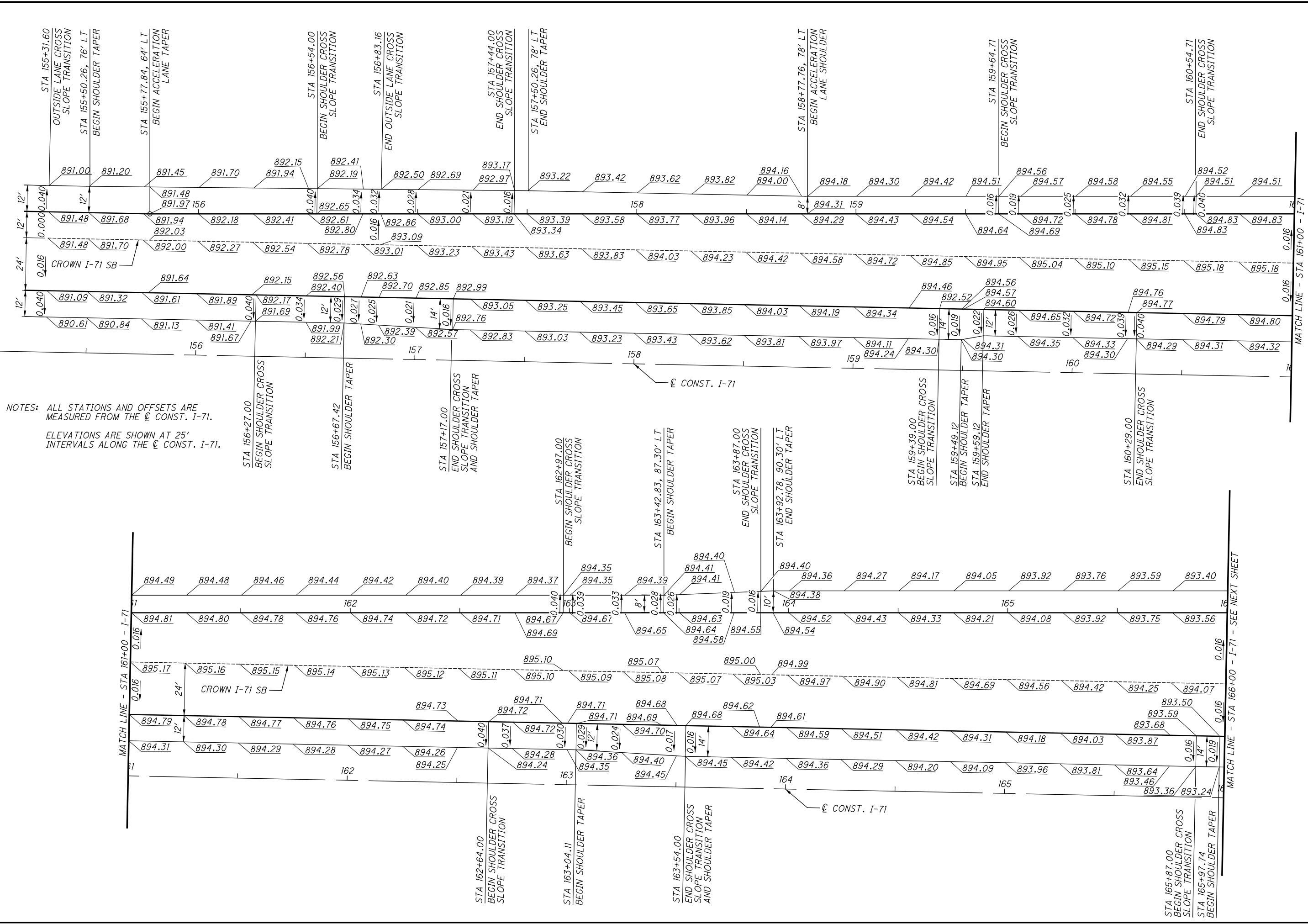


CALCULATED
DCB
CHECKED
JMB

0 20 40
HORIZONTAL
SCALE IN FEET

**PAVEMENT DETAILS
RAMPS B & D & US 62**

FRA-71-0.00



NOTES: ALL STATIONS AND OFFSETS ARE MEASURED FROM THE $\text{\textcircled{C}}$ CONST. I-71.
ELEVATIONS ARE SHOWN AT 25' INTERVALS ALONG THE $\text{\textcircled{C}}$ CONST. I-71.

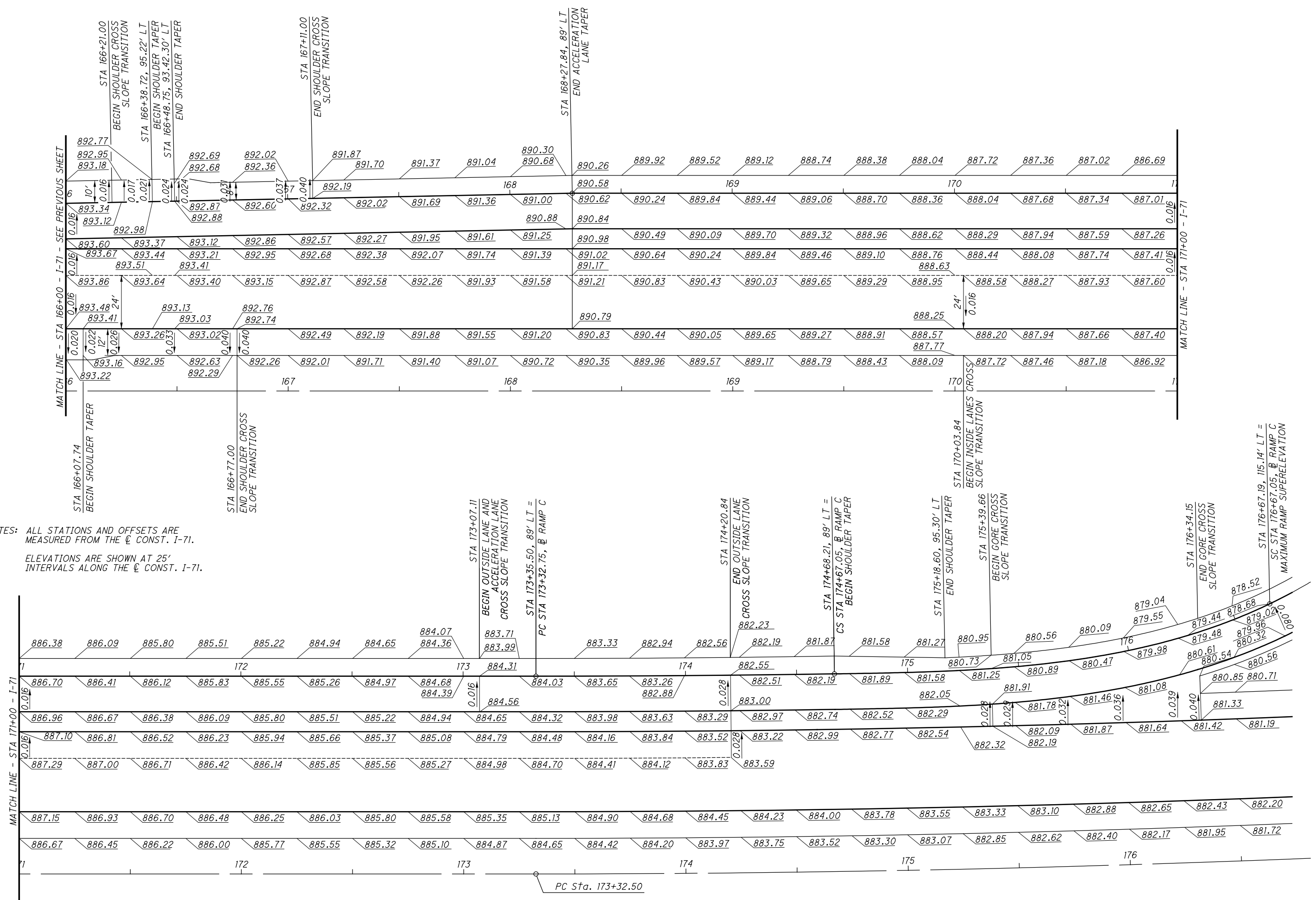
CALCULATED: JMB
 ANM
 CHECKED: JMB

0 20 40
 HORIZONTAL SCALE IN FEET

RAMP C TERMINAL DETAILS
STA 155+00 TO STA 166+00

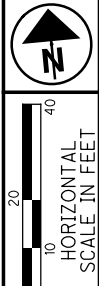
FRA - 71 - 0.00

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NOTES: ALL STATIONS AND OFFSETS ARE MEASURED FROM THE \varnothing CONST. I-71.
 ELEVATIONS ARE SHOWN AT 25' INTERVALS ALONG THE \varnothing CONST. I-71.

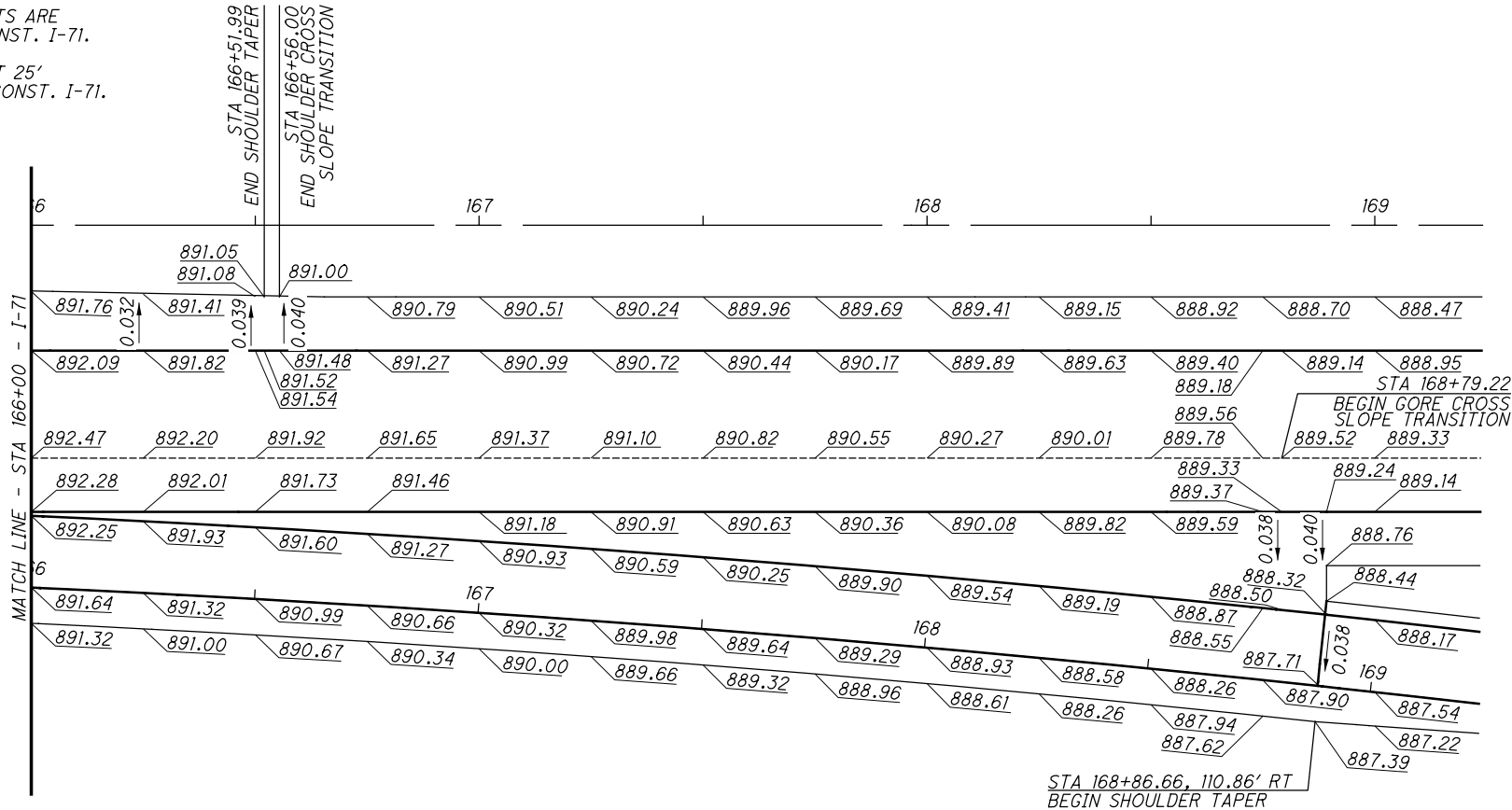
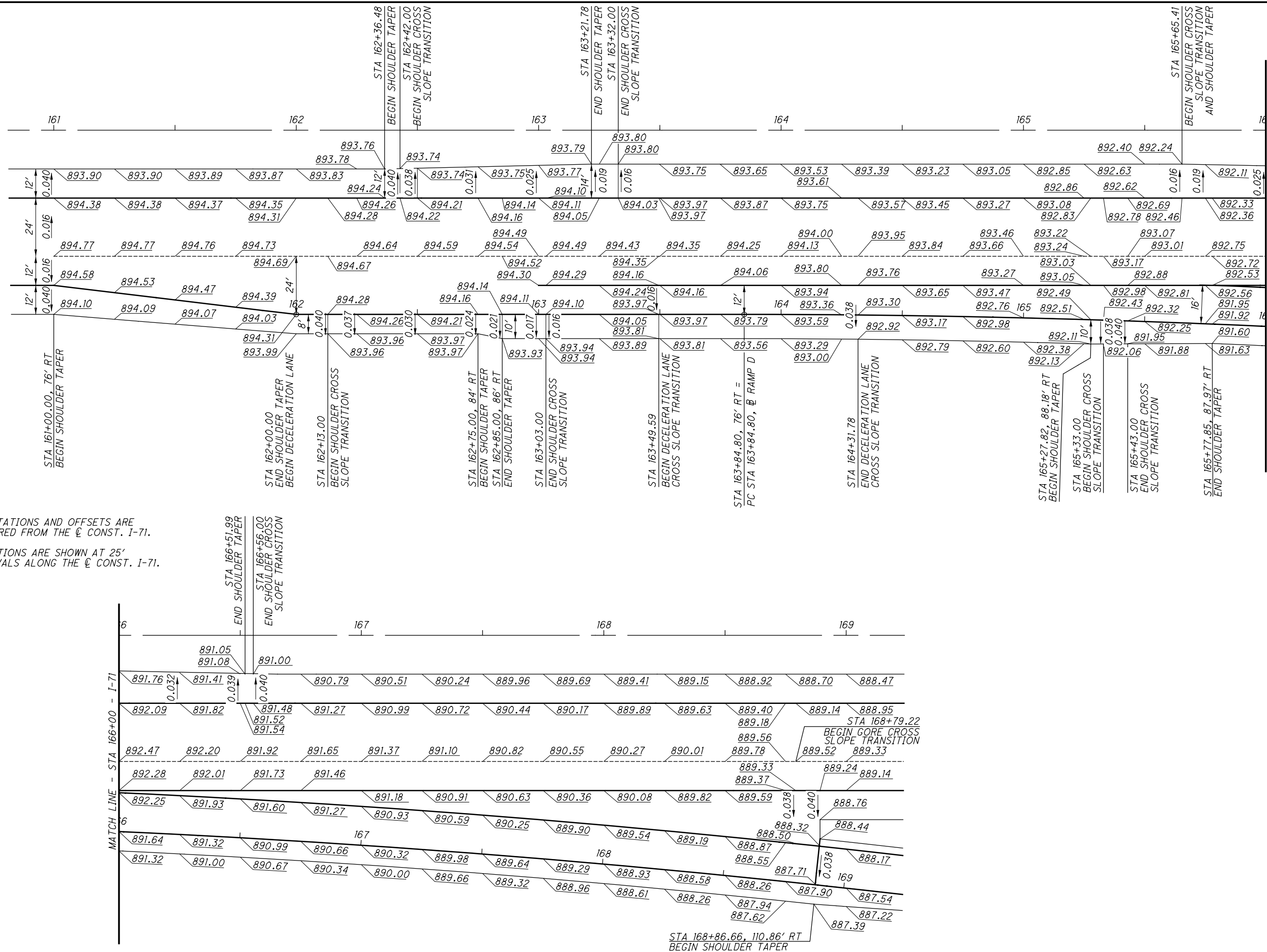
CALCULATED
 ANN
 CHECKED
 JMB



RAMP C TERMINAL DETAILS
STA 166+00 TO STA 176+27.38

FRA - 71-0.00

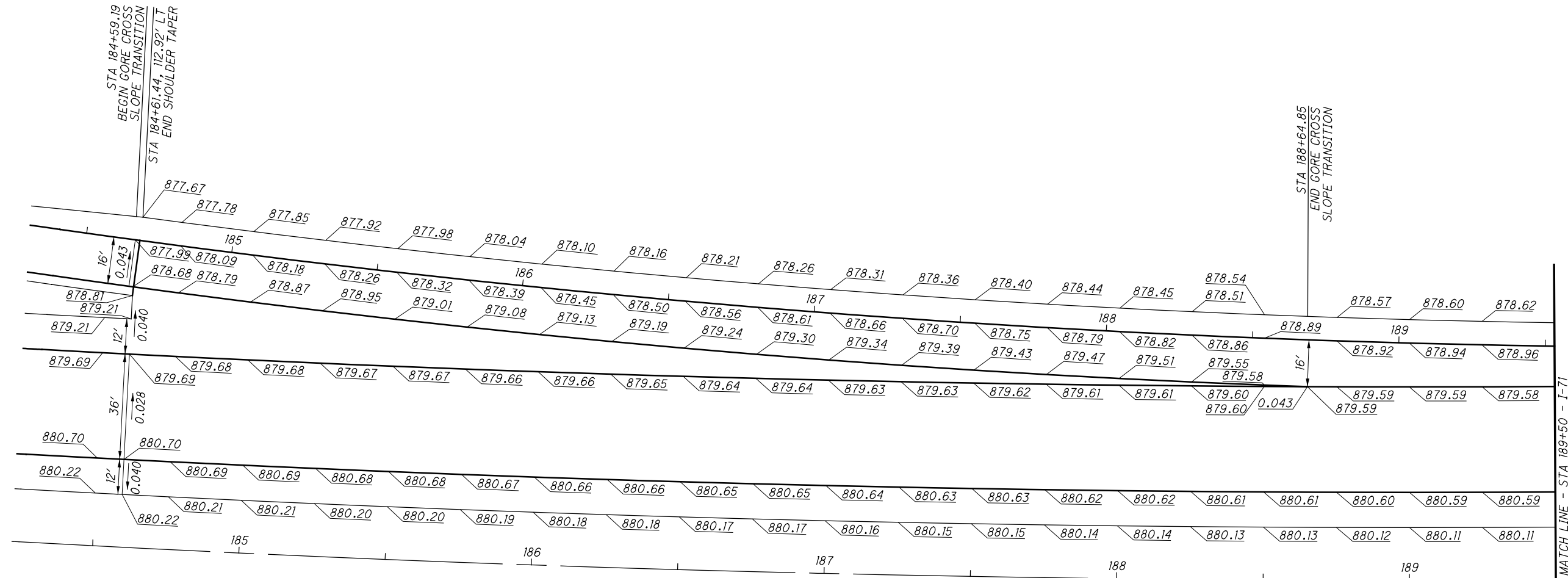
NOTES: ALL STATIONS AND OFFSETS ARE MEASURED FROM THE C CONST. I-71.
ELEVATIONS ARE SHOWN AT 25' INTERVALS ALONG THE C CONST. I-71.



RAMP D TERMINAL DETAILS
STA 162+00 TO STA 168+88.15

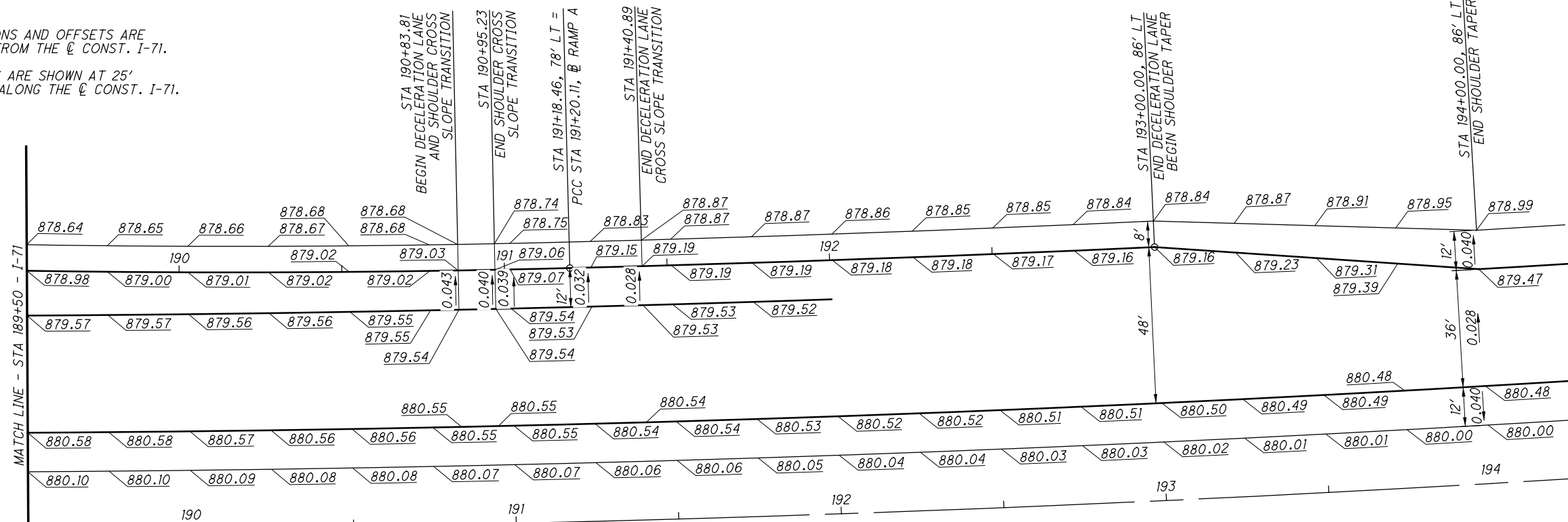
FRA-71-0.00

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NOTES: ALL STATIONS AND OFFSETS ARE MEASURED FROM THE \bar{C} CONST. I-71.

ELEVATIONS ARE SHOWN AT 25' INTERVALS ALONG THE \bar{C} CONST. I-71.



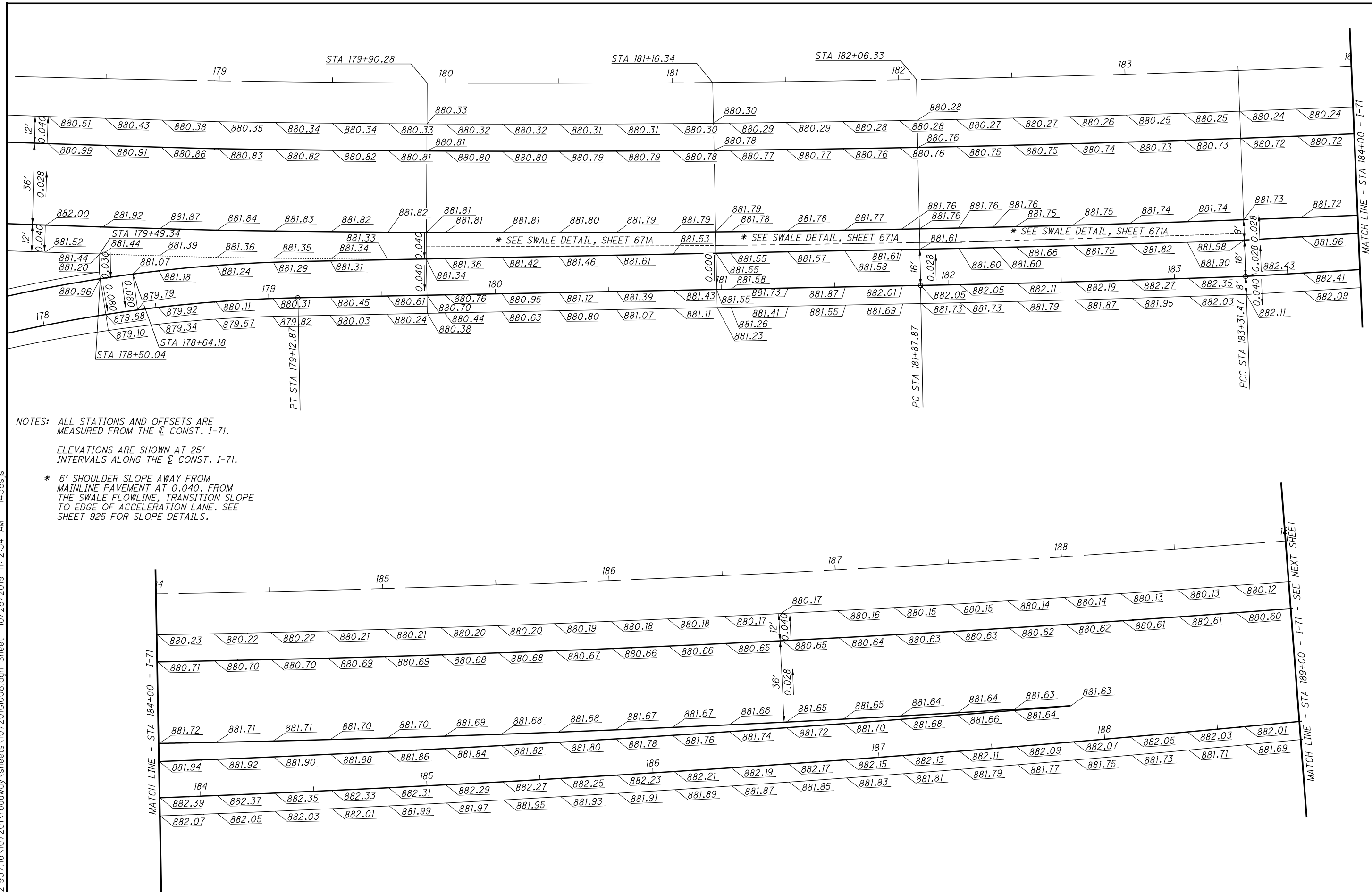
CALCULATED
ANN
CHECKED
JMB

HORIZONTAL SCALE IN FEET

RAMP A TERMINAL DETAILS
STA 184+50 TO STA 193+00

FRA-71-0.00

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NOTES: ALL STATIONS AND OFFSETS ARE MEASURED FROM THE \varnothing CONST. I-71.
 ELEVATIONS ARE SHOWN AT 25' INTERVALS ALONG THE \varnothing CONST. I-71.
 * 6' SHOULDER SLOPE AWAY FROM MAINLINE PAVEMENT AT 0.040. FROM THE SWALE FLOWLINE, TRANSITION SLOPE TO EDGE OF ACCELERATION LANE. SEE SHEET 925 FOR SLOPE DETAILS.

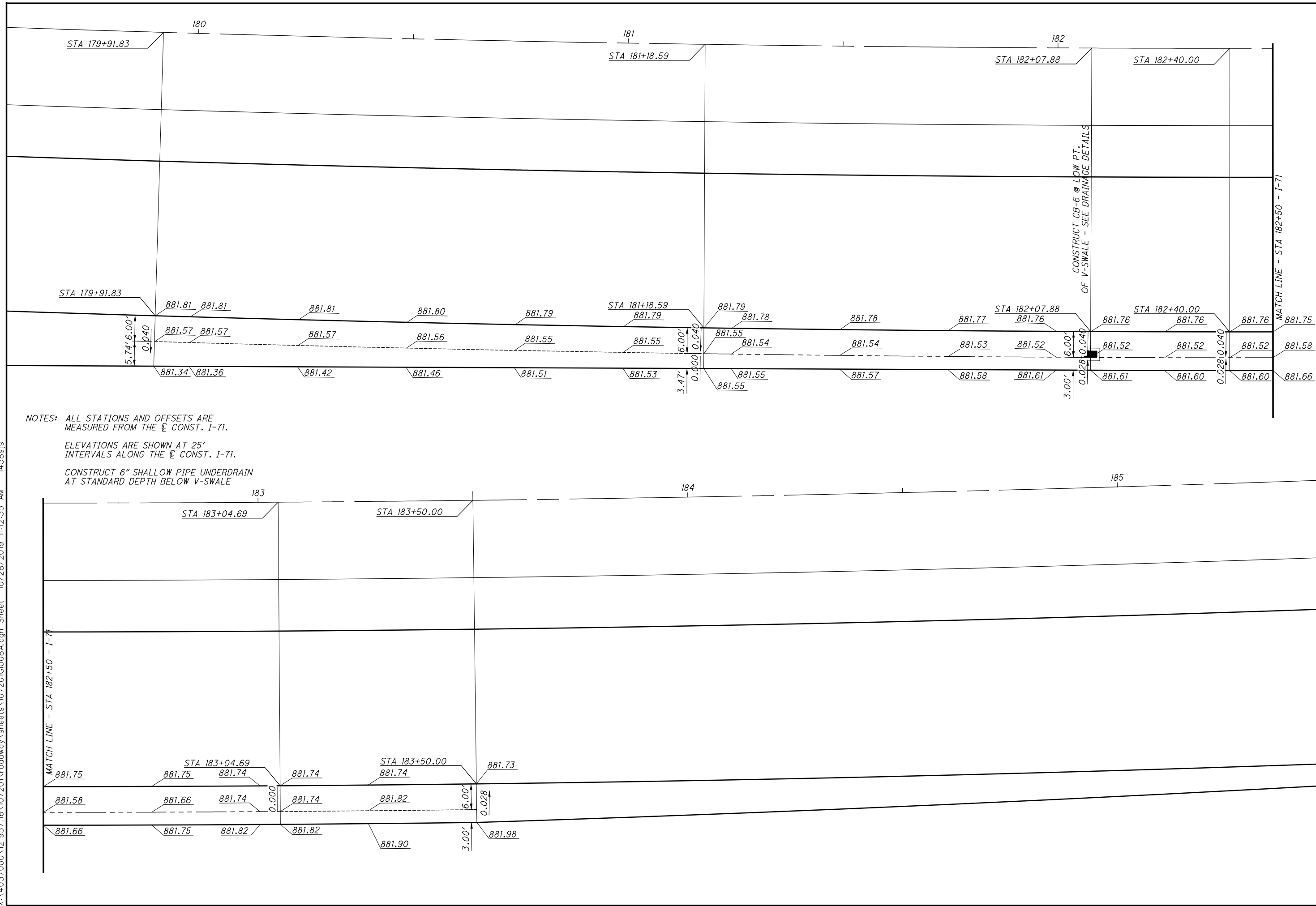


RAMP B TERMINAL DETAILS
STA 181+50 TO STA 189+00

FRA-71-0.00

924
1312

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CALCULATED
DCB
CHECKED
JMB

0 5 10 20
HORIZONTAL
SCALE IN FEET

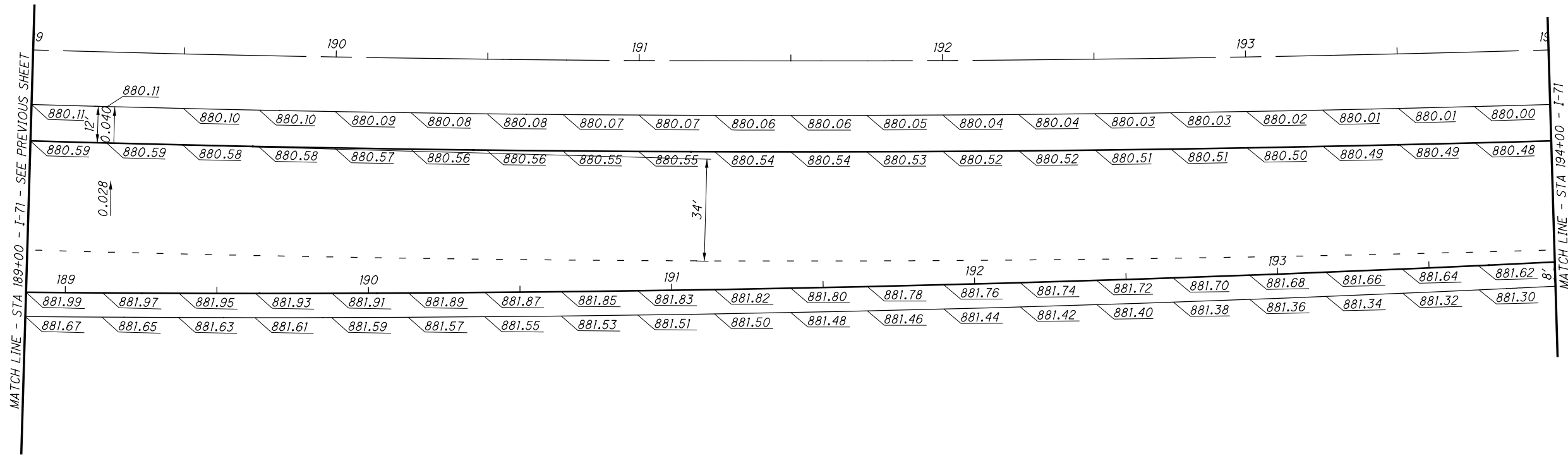
18
N

RAMP B TERMINAL DETAILS
SWALE DETAILS

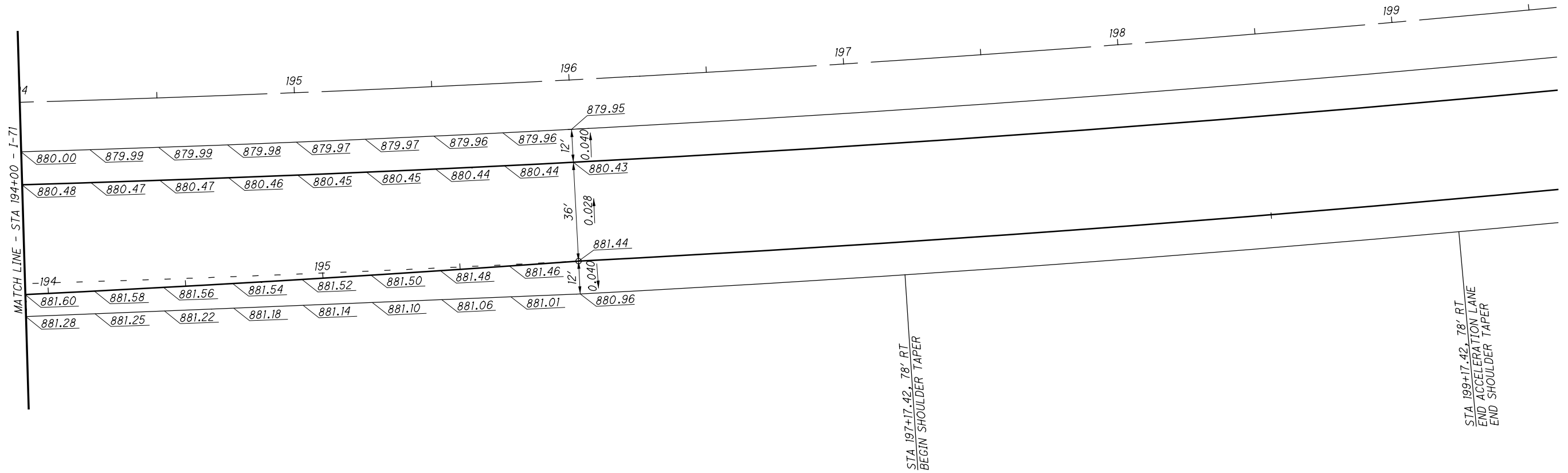
FRA - 71 - 0.00

925
1312

X:\4037000\121957.16\107201\roadway\sheets\107201G009.dgn Sheet 10/28/2019 11:12:35 AM 1458sjs



NOTES: ALL STATIONS AND OFFSETS ARE MEASURED FROM THE \hat{C} CONST. I-71.
 ELEVATIONS ARE SHOWN AT 25' INTERVALS ALONG THE \hat{C} CONST. I-71.



CALCULATED
 MAH
 CHECKED
 JMB

0 20 40
 HORIZONTAL SCALE IN FEET

**RAMP B TERMINAL DETAILS
 STA 189+00 TO STA 199+25**

FRA - 71 - 0.00

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	SPECIAL	209	503	503	509	511	511			512	512	512		516	518		601	601	601
		FROM	TO		EACH	FT	FT	FT				LB	SY	CY			SY	SY	SY		SF			SY	SY
929		12+33	13+61	LT&RT																			3.3	40.8	
930		27+48	28+28	LT&RT	2	24																	41.2		42
931		54+16	57+67	LT&RT	2	24																	65.9		23
933		147+96	147+94	LT&RT	2	32	202																66.4		
934		166+51	166+51	LT&RT	2	16	260	320																	
935		189+43	189+43	LT&RT	2	232																			
937		224+40	226+45	LT&RT	2	598			LUMP	LUMP	3669	49	35			51	173	181		33	LUMP				
TOTALS CARRIED TO GENERAL SUMMARY					12	926	462	320	LUMP	LUMP	3669	49	35			51	173	181		33	LUMP		176.8	40.8	65

CULVERT SUBSUMMARY

FRA - 71 - 0.00

CALCULATED
MAH
CHECKED
CTW

927
1312

REF. NO.	SHEET NO.	STATION		SIDE	601		602		611		611		611		611		670		833		836		837		837		841			
		FROM	TO		ROCK CHANNEL PROTECTION, TYPE B WITH FILTER CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	MASONRY, MISC.:PATCHING EXISTING CONCRETE CONDUIT W/ PORTLAND CEMENT MORTAR FT	30" CONDUIT, TYPE A, 706.02 FT	48" CONDUIT, TYPE A, 706.02 FT	48" CONDUIT, TYPE A, 707.07 FT	72" CONDUIT, TYPE A, 707.07 FT	24" X 38" CONDUIT, TYPE A, 706.04 FT	29" X 45" CONDUIT, TYPE A, 706.04 FT	10' X 5' CONDUIT, TYPE A, 706.05, AS PER PLAN FT	CATCH BASIN, NO. 8A EACH	DRAINAGE STRUCTURE, MISC.:DETAIL AND CONSTRUCTION BLIND TAP EACH	DITCH EROSION PROTECTION MAT, TYPE A SY	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT 72" DIAMETER (ALTERNATE 1A) FT	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 SY	LINER PIPE 42" ID 707.12, .18, .19, .20, .33, .35, .42, .43, 748.06(42" OD), SS938, 707.75 (ALTERNATE 2B) FT	LINER PIPE 66" ID 707.12, .18, .19, .20, .24, .35, 748.06(66" OD), SS938, 707.75 (ALTERNATE 1B) FT	BACKFILL FOR LINER PIPE (ALTERNATE 1B AND 2B) FT	SPIRAL WOUND RENEWAL SYSTEM, ROUND CONDUIT, 48" DIAMETER (ALTERNATE 2A) FT					
929		12+33	13+61	LT&RT		2.9	1.0					227			1					155.8										
930		27+48	28+28	LT&RT			34.6			24						25.8	260	48.3						260	260					
931		54+16	57+67	LT&RT			18.2		24							71.2							663		663	663				
933		147+96	147+94	LT&RT	14.8		18.2	202	32																					
934		166+51	166+51	LT&RT		2.8	1.1	260	26																					
935		189+43	189+43	LT&RT		3.3	0.9					232			1															
937		224+40	226+45	LT&RT		27.0									304															
TOTALS CARRIED TO GENERAL SUMMARY					14.8	36	74	462	26	32	24	24	232	227	304	1	1	97	260	48.3	203.4	663	260	923	663					

CULVERT SUBSUMMARY

CALCULATED
MAH
CHECKED
CTW

FRA - 71 - 0.00

928
1312

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601E11000	3.3	SY	RIPRAP, TYPE D
601E23000	40.8	SY	ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1
601E32200	2.9	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
602E20000	1	CY	CONCRETE MASONRY
611E52700	227	FT	29" X 45" CONDUIT, TYPE A, 706.04
611E99900	1	EACH	DRAINAGE STRUCTURE, MISC: DETAIL AND CONSTRUCT BLIND TAP
836E10000	155.8	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1

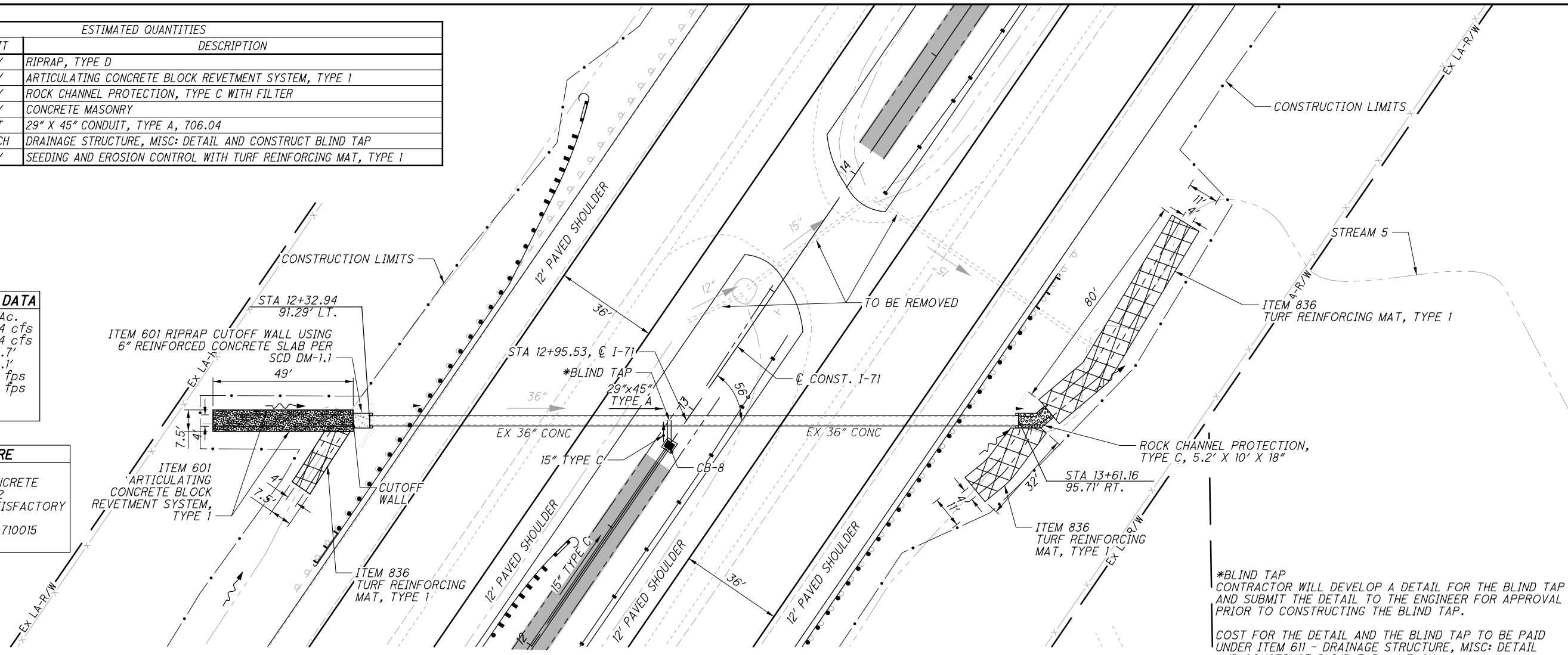
HYDRAULIC DESIGN DATA

Drainage Area = 23 Ac.
 Q_{50}^* = 36.4 cfs
 Q_{100} = 42.4 cfs
 HW_{50} = 888.7'
 HW_{100} = 889.1'
 V_{50} = 5.4 fps
 V_{100} = 5.9 fps
SERV. LIFE = 75
OHV DEPTH = 1.0'

EXISTING STRUCTURE

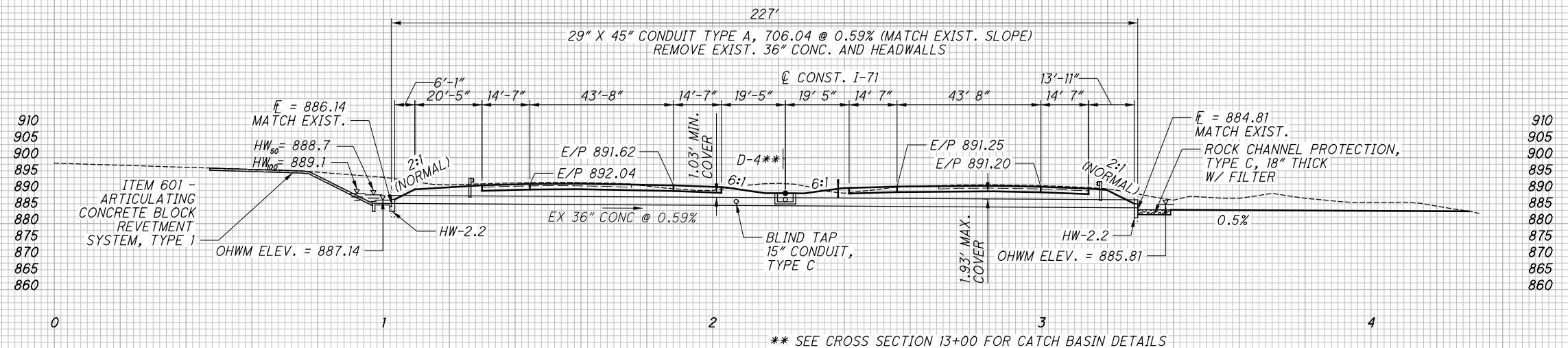
SIZE = 36"
TYPE = CONCRETE
DATE BUILT = 1962
CONDITION = SATISFACTORY
STREAM pH = 7.0
CFN = 250710015
NON-ABRASIVE

* ORIGINAL DESIGN
 Q = 38 cfs (PLAN)
AREA = 20 Ac. (PLAN)
 HW_{50} = 889.2 (CALC)
 HW_{100} = 889.6 (CALC)



*BLIND TAP
CONTRACTOR WILL DEVELOP A DETAIL FOR THE BLIND TAP AND SUBMIT THE DETAIL TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTING THE BLIND TAP.

COST FOR THE DETAIL AND THE BLIND TAP TO BE PAID UNDER ITEM 611 - DRAINAGE STRUCTURE, MISC: DETAIL AND CONSTRUCT BLIND TAP - 1 EACH.



** SEE CROSS SECTION 13+00 FOR CATCH BASIN DETAILS



CULVERT DETAIL
STA. 12+95.82

FRA -71-0.00

929
1312

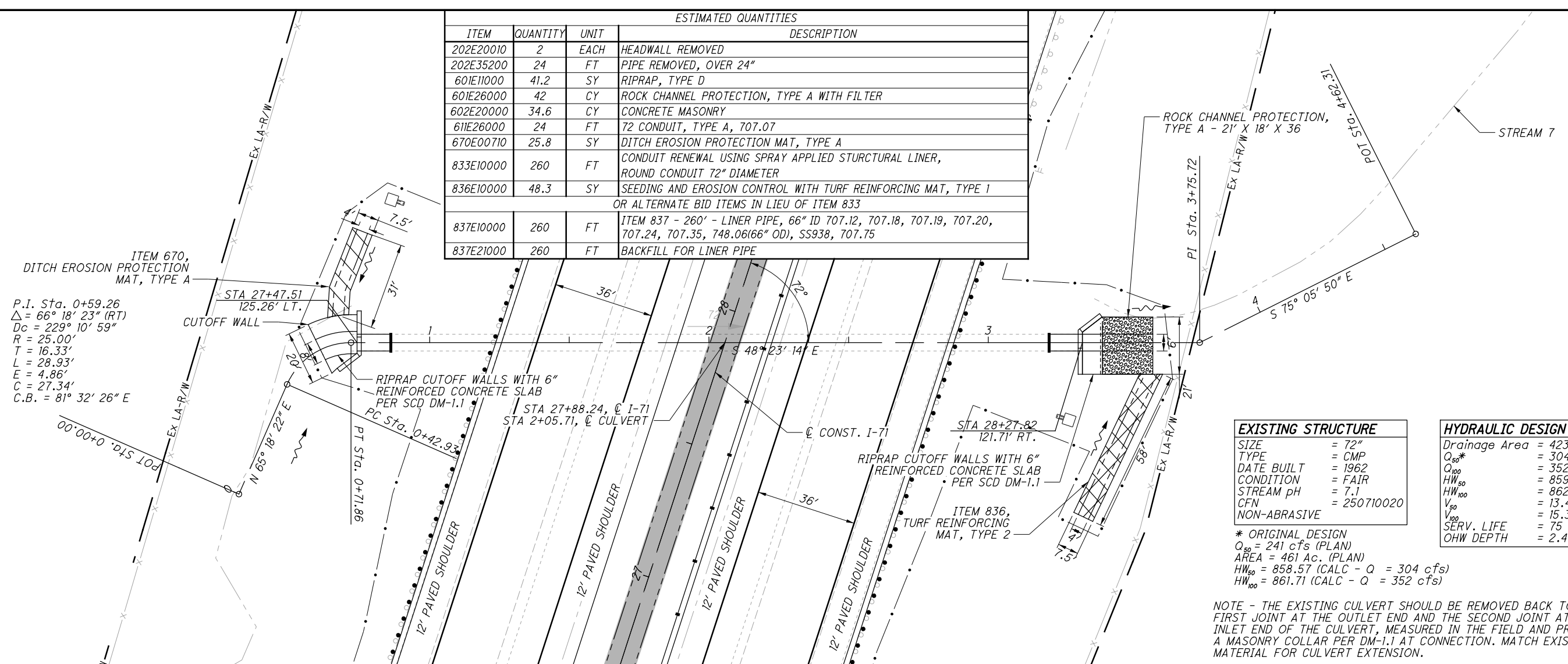
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ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
202E20010	2	EACH	HEADWALL REMOVED
202E35200	24	FT	PIPE REMOVED, OVER 24"
601E11000	41.2	SY	RIPRAP, TYPE D
601E26000	42	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
602E20000	34.6	CY	CONCRETE MASONRY
611E26000	24	FT	72 CONDUIT, TYPE A, 707.07
670E00710	25.8	SY	DITCH EROSION PROTECTION MAT, TYPE A
833E10000	260	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT 72" DIAMETER
836E10000	48.3	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 OR ALTERNATE BID ITEMS IN LIEU OF ITEM 833
837E10000	260	FT	ITEM 837 - 260' - LINER PIPE, 66" ID 707.12, 707.18, 707.19, 707.20, 707.24, 707.35, 748.06(66" OD), SS938, 707.75
837E21000	260	FT	BACKFILL FOR LINER PIPE

ITEM 670, DITCH EROSION PROTECTION MAT, TYPE A

P.I. Sta. 0+59.26
 $\Delta = 66^\circ 18' 23''$ (RT)
 $D_c = 229' 10' 59''$
 $R = 25.00'$
 $T = 16.33'$
 $L = 28.93'$
 $E = 4.86'$
 $C = 27.34'$
 $C.B. = 81^\circ 32' 26''$ E

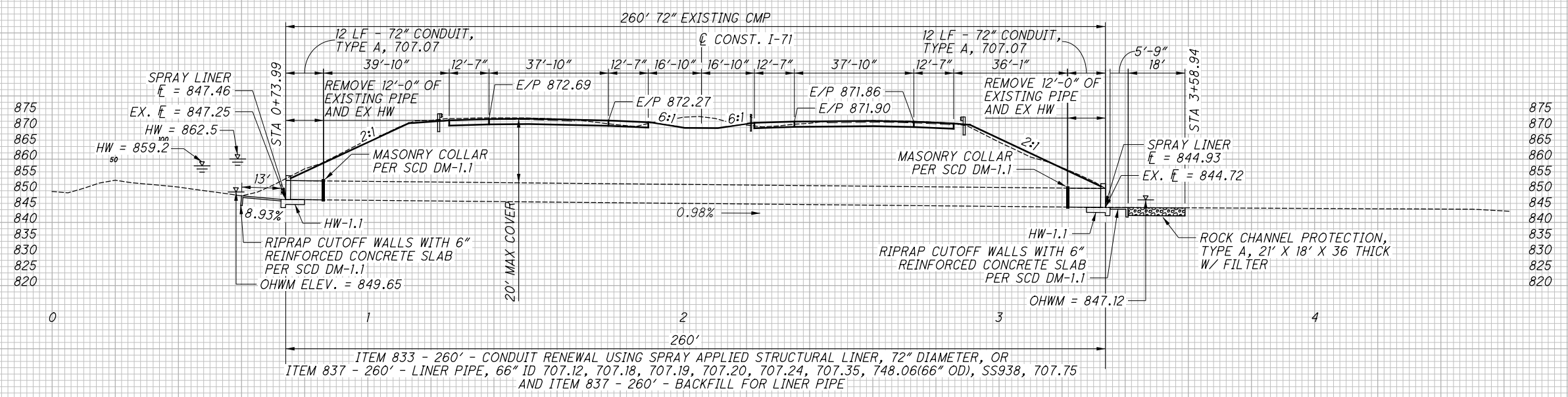


EXISTING STRUCTURE	
SIZE	= 72"
TYPE	= CMP
DATE BUILT	= 1962
CONDITION	= FAIR
STREAM pH	= 7.1
CFN	= 250710020
NON-ABRASIVE	

HYDRAULIC DESIGN DATA	
Drainage Area	= 423 Ac.
Q_{50}^*	= 304 cfs
Q_{100}	= 352 cfs
HW_{50}	= 859.2'
HW_{100}	= 862.5'
V_{50}	= 13.4 fps
V_{100}	= 15.3 fps
SERV. LIFE	= 75
OHW DEPTH	= 2.4'

* ORIGINAL DESIGN
 $Q_{50} = 241$ cfs (PLAN)
 AREA = 461 Ac. (PLAN)
 $HW_{50} = 858.57$ (CALC - $Q = 304$ cfs)
 $HW_{100} = 861.71$ (CALC - $Q = 352$ cfs)

NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION.



ITEM 833 - 260' - CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, 72" DIAMETER, OR
 ITEM 837 - 260' - LINER PIPE, 66" ID 707.12, 707.18, 707.19, 707.20, 707.24, 707.35, 748.06(66" OD), SS938, 707.75
 AND ITEM 837 - 260' - BACKFILL FOR LINER PIPE



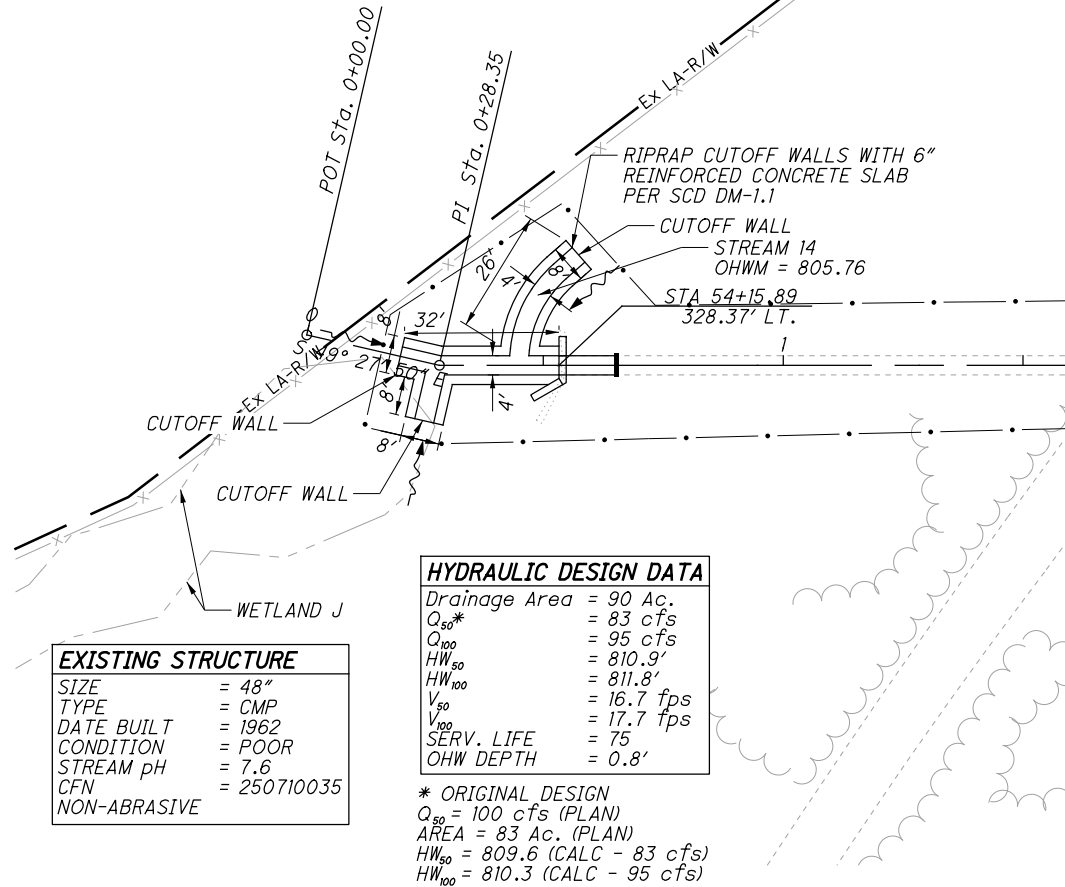
CULVERT DETAIL
 STA. 27+88.24

FRA - 71 - 0.00

930
 1312

NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION.

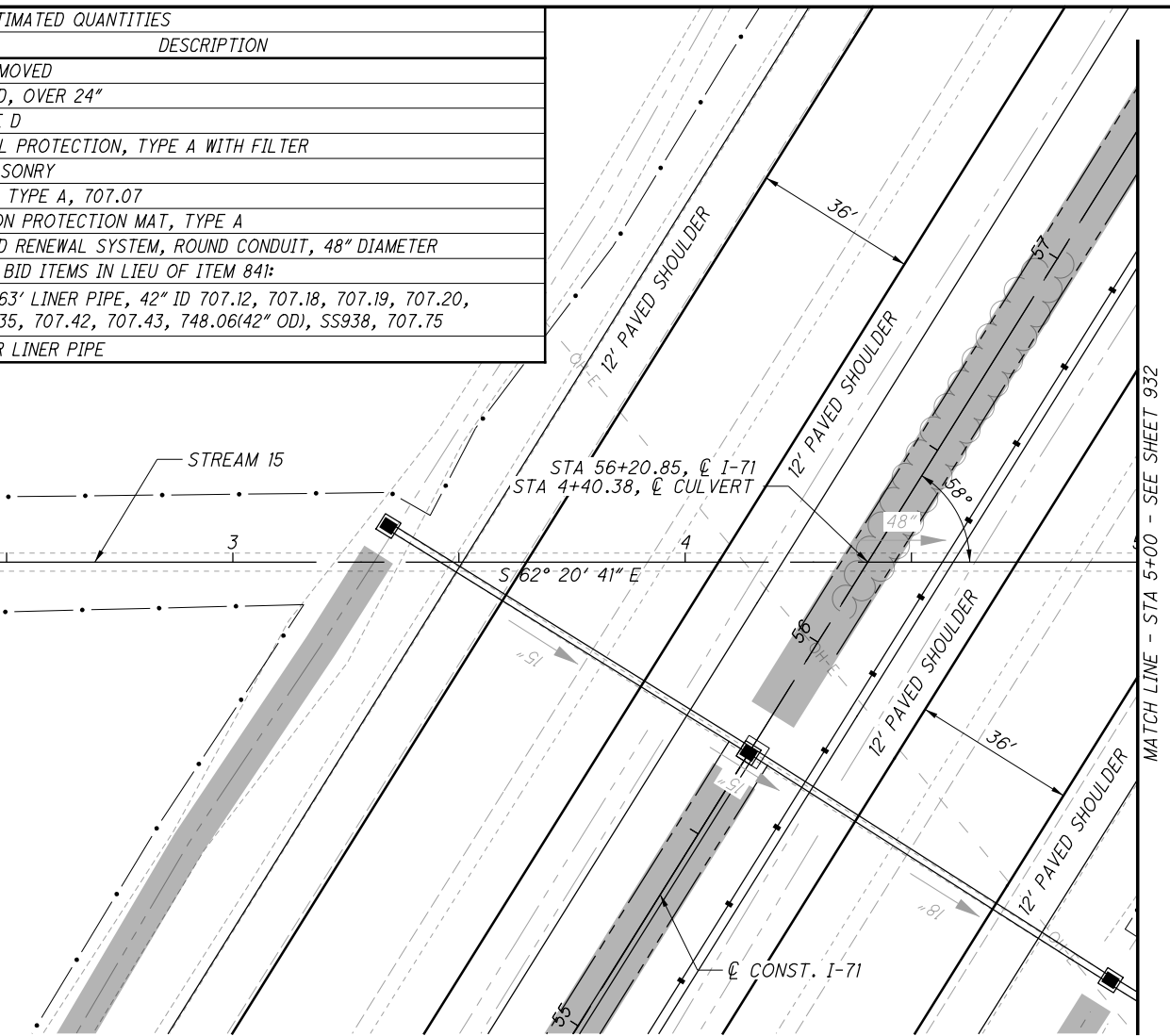
ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
202E20010	2	EACH	HEADWALL REMOVED
202E35200	24	FT	PIPE REMOVED, OVER 24"
601E11000	65.9	SY	RIPRAP, TYPE D
601E32000	23	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
602E20000	18.2	CY	CONCRETE MASONRY
611E20700	24	FT	48" CONDUIT, TYPE A, 707.07
670E00710	71.2	SY	DITCH EROSION PROTECTION MAT, TYPE A
841E10000	663	FT	SPIRAL WOUND RENEWAL SYSTEM, ROUND CONDUIT, 48" DIAMETER OR ALTERNATE BID ITEMS IN LIEU OF ITEM 841:
837E10000	663	FT	ITEM 837 - 663' LINER PIPE, 42" ID 707.12, 707.18, 707.19, 707.20, 707.33, 707.35, 707.42, 707.43, 748.06(42" OD), SS938, 707.75
837E21000	663	FT	BACKFILL FOR LINER PIPE



HYDRAULIC DESIGN DATA	
Drainage Area	= 90 Ac.
Q ₅₀ *	= 83 cfs
Q ₁₀₀	= 95 cfs
HW ₅₀	= 810.9'
HW ₁₀₀	= 811.8'
V ₅₀	= 16.7 fps
V ₁₀₀	= 17.7 fps
SERV. LIFE	= 75
OHWM DEPTH	= 0.8'

* ORIGINAL DESIGN
 Q₅₀ = 100 cfs (PLAN)
 AREA = 83 Ac. (PLAN)
 HW₅₀ = 809.6 (CALC - 83 cfs)
 HW₁₀₀ = 810.3 (CALC - 95 cfs)

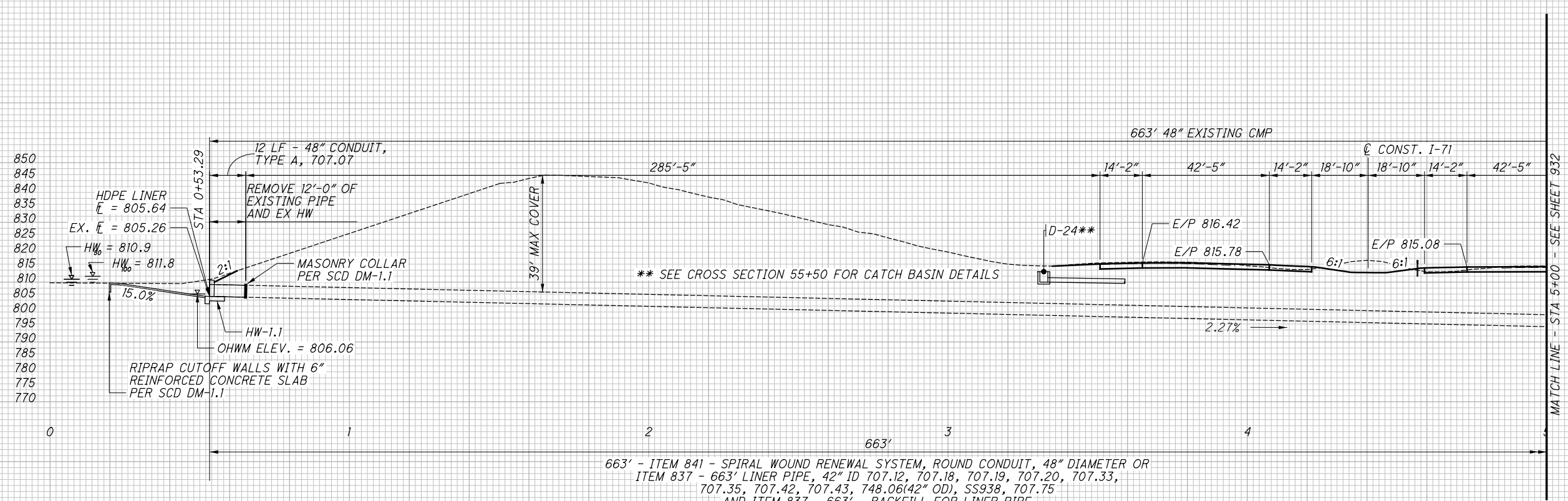
EXISTING STRUCTURE	
SIZE	= 48"
TYPE	= CMP
DATE BUILT	= 1962
CONDITION	= POOR
STREAM pH	= 7.6
CFN	= 250710035
NON-ABRASIVE	



CALCULATED
MLP
CHECKED
CTW

1" = 40' HORIZONTAL SCALE IN FEET

CULVERT DETAIL
STA. 56+20.85

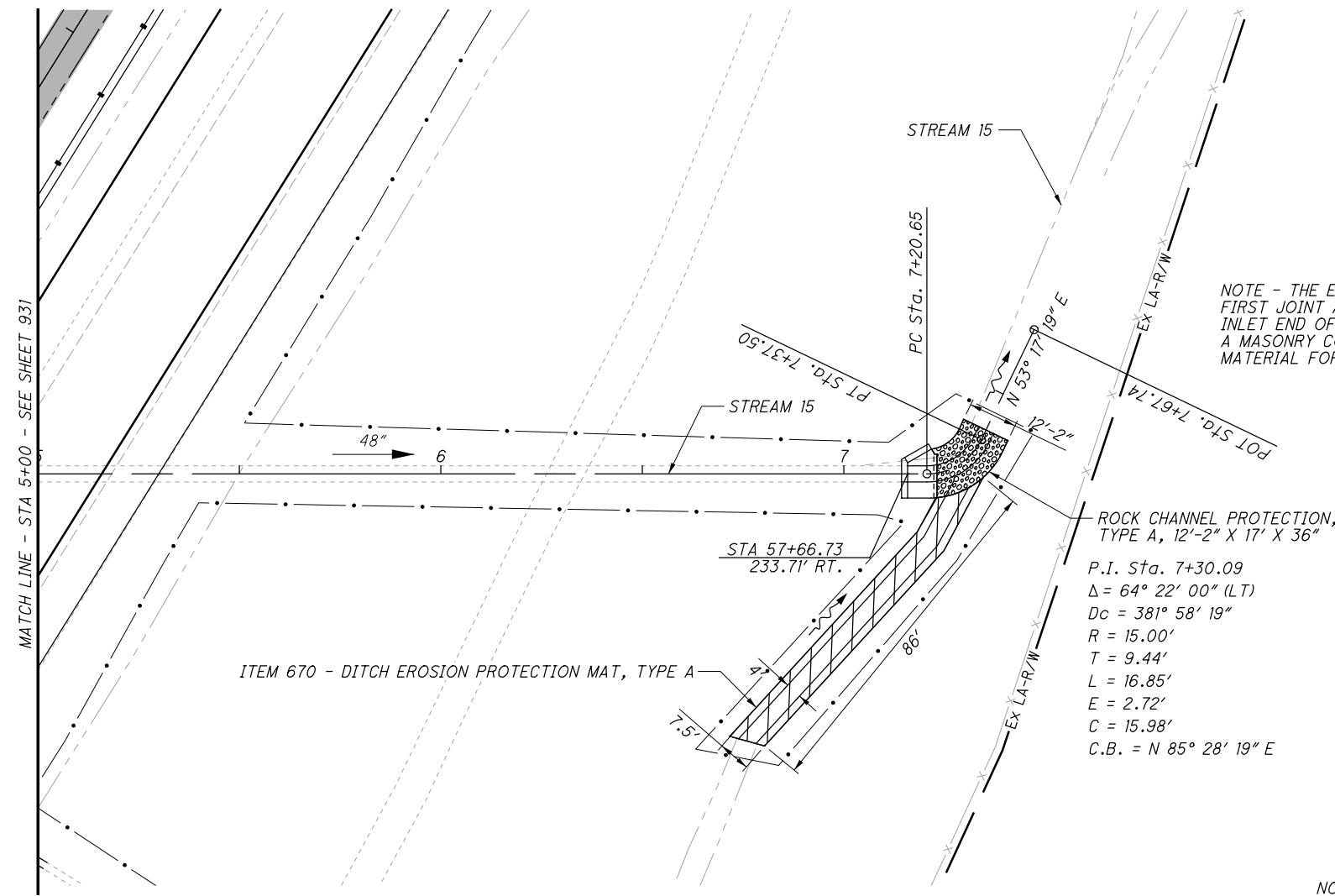


663' - ITEM 841 - SPIRAL WOUND RENEWAL SYSTEM, ROUND CONDUIT, 48" DIAMETER OR
 ITEM 837 - 663' LINER PIPE, 42" ID 707.12, 707.18, 707.19, 707.20, 707.33,
 707.35, 707.42, 707.43, 748.06(42" OD), SS938, 707.75
 AND ITEM 837 - 663' - BACKFILL FOR LINER PIPE

FRA -71-0.00
931
1312

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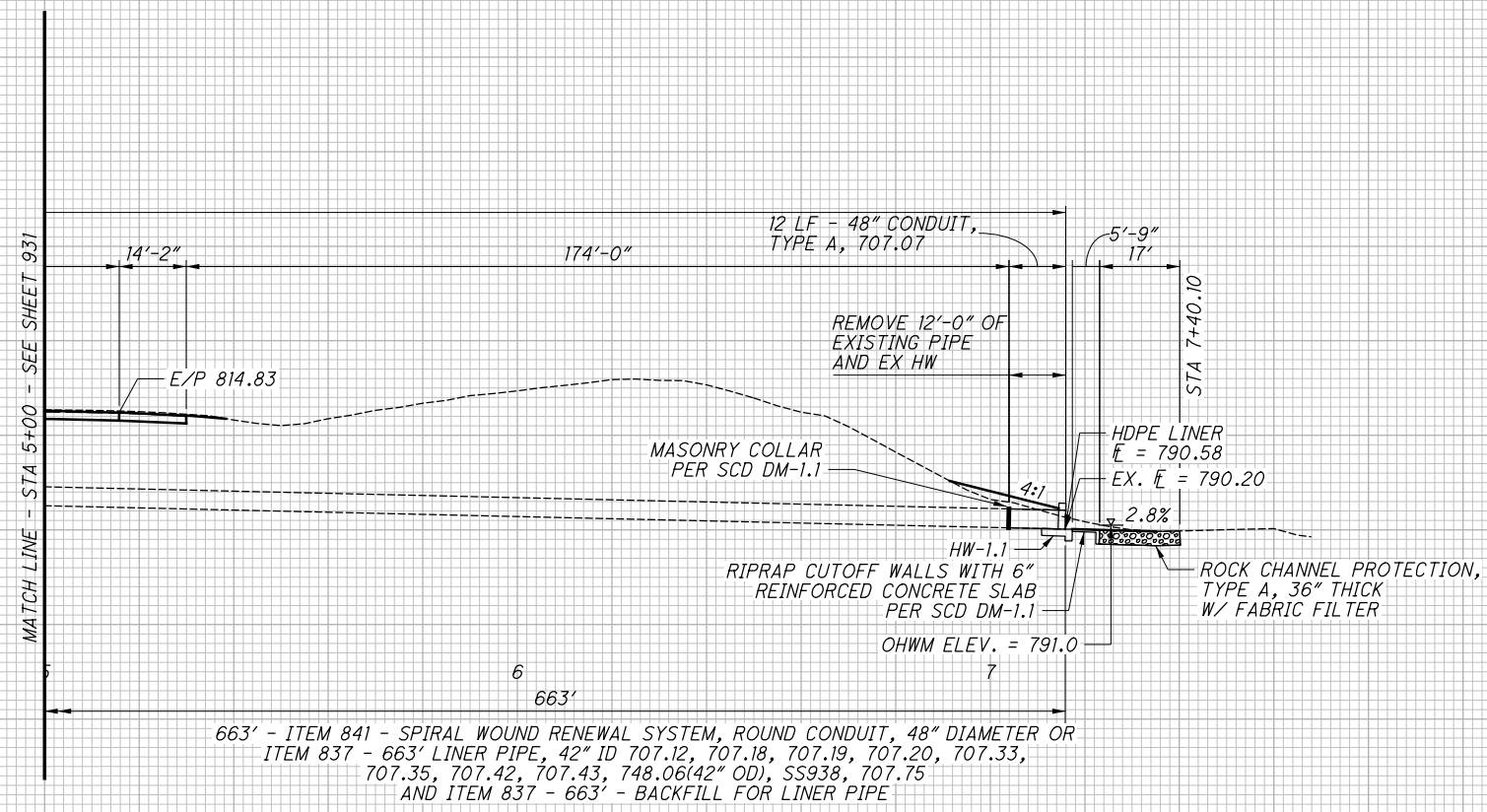
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NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION.

ROCK CHANNEL PROTECTION, TYPE A, 12'-2" X 17' X 36"
 P.I. Sta. 7+30.09
 $\Delta = 64^\circ 22' 00''$ (LT)
 $D_c = 381^\circ 58' 19''$
 $R = 15.00'$
 $T = 9.44'$
 $L = 16.85'$
 $E = 2.72'$
 $C = 15.98'$
 $C.B. = N 85^\circ 28' 19'' E$

NOTE: FOR QUANTITIES, SEE PREVIOUS SHEET.



663' - ITEM 841 - SPIRAL WOUND RENEWAL SYSTEM, ROUND CONDUIT, 48" DIAMETER OR
 ITEM 837 - 663' LINER PIPE, 42" ID 707.12, 707.18, 707.19, 707.20, 707.33,
 707.35, 707.42, 707.43, 748.06(42" OD), SS938, 707.75
 AND ITEM 837 - 663' - BACKFILL FOR LINER PIPE

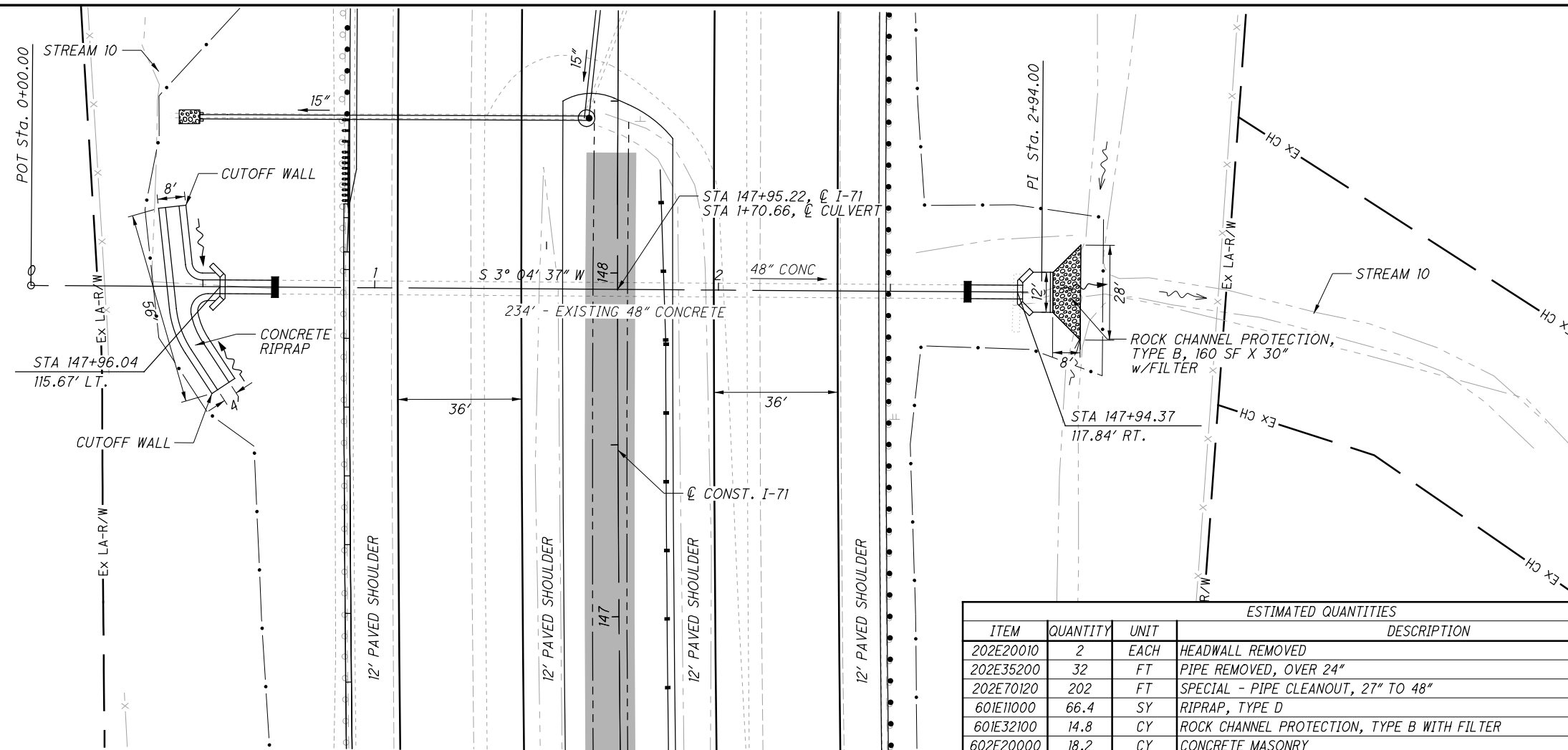


CALCULATED
 MLP
 CHECKED
 CTW

CULVERT DETAIL
 STA. 56+20.85

FRA -71-0.00

932
 1312



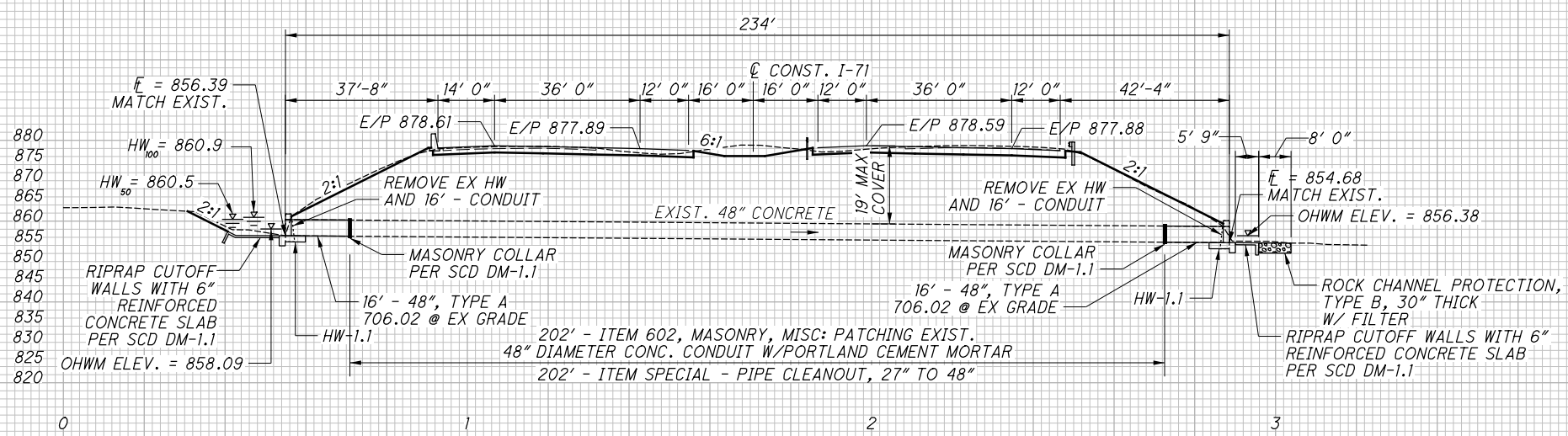
EXISTING STRUCTURE	
SIZE	= 48"
TYPE	= RCP
DATE BUILT	= 1962
CONDITION	= SATISFACTORY
STREAM pH	= 7.6
CFN	= 25071050

HYDRAULIC DESIGN DATA	
Drainage Area	= 78 Ac.
Q ₅₀ *	= 74 cfs
Q ₁₀₀	= 86 cfs
HW ₅₀	= 860.5'
HW ₁₀₀	= 860.9'
V ₅₀	= 3.1 fps
V ₁₀₀	= 3.2 fps
SERV. LIFE	= 75
OHW DEPTH	= 1.7'

* ORIGINAL DESIGN
Q₅₀ = 113 cfs (PLAN)
AREA = 135 Ac. (PLAN)

ESTIMATED QUANTITIES				
ITEM	QUANTITY	UNIT	DESCRIPTION	
202E20010	2	EACH	HEADWALL REMOVED	
202E35200	32	FT	PIPE REMOVED, OVER 24"	
202E70120	202	FT	SPECIAL - PIPE CLEANOUT, 27" TO 48"	
601E11000	66.4	SY	RIPRAP, TYPE D	
601E32100	14.8	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
602E20000	18.2	CY	CONCRETE MASONRY	
602E98100	202	FT	MASONRY, MISC.: PATCHING EXISTING CONCRETE CONDUIT W/PORLAND CEMENT MORTAR	
611E20700	32	FT	48" CONDUIT, TYPE A, 706.02	

NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER SCD DM-1.1 AT THE CONNECTIONS. MATCH EXISTING CONDUIT MATERIAL FOR THE CULVERT EXTENSIONS.



X:\4037000\121957.16\107201\drainage\sheets\107201DC006.dgn Sheet 10/28/2019 11:12:39 AM 14585js

EXISTING STRUCTURE
 SIZE = 30"
 TYPE = RCP
 DATE BUILT = 1962
 CONDITION = NOT RATED
 STREAM pH = 7.3
 CFN = 250710055
 NON-ABRASIVE

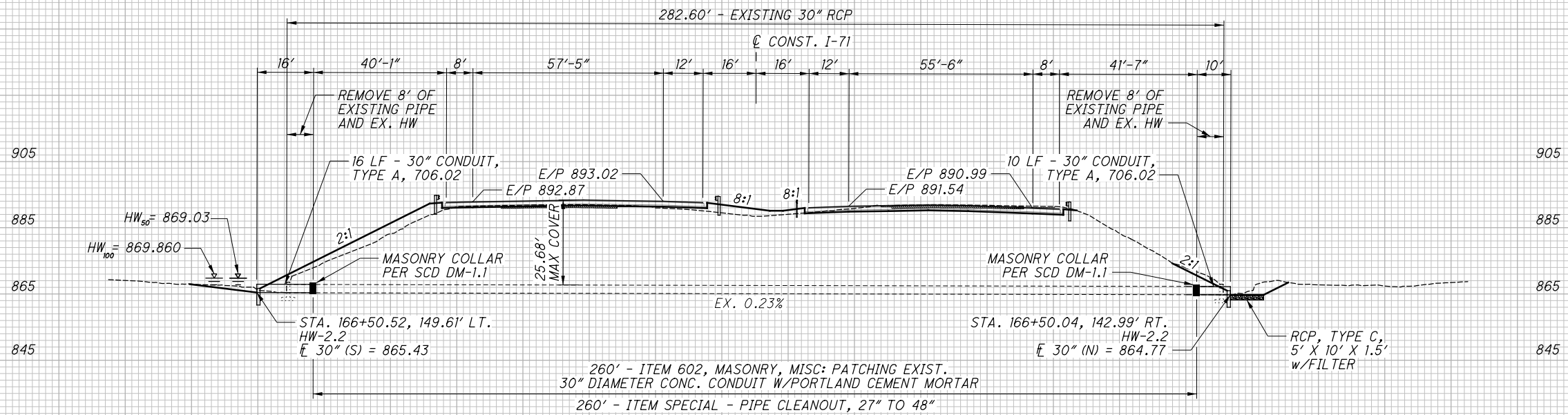
HYDRAULIC DESIGN DATA
 Drainage Area = 24.3 Ac.
 Q₅₀* = 29.3 cfs
 Q₁₀₀ = 34.1 cfs
 HW₅₀ = 869.03'
 HW₁₀₀ = 869.86'
 V₅₀ = 6.2 fps
 V₁₀₀ = 7.0 fps
 SERV. LIFE = 75
 OHW MARK = 866.2'

* ORIGINAL DESIGN
 Q₅₀ = 39 cfs (PLAN)
 AREA = 22 Ac. (PLAN)
 HW₅₀ = 868.98 (CALC - 29.3 cfs)
 HW₁₀₀ = 869.80 (CALC - 34.1 cfs)

NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION.



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
202E20010	2	EACH	HEADWALL REMOVED
202E35200	16	FT	PIPE REMOVED, OVER 24"
202E70120	260	FT	SPECIAL - PIPE CLEANOUT, 27" TO 48"
209E10000	320	FT	DITCH CLEANOUT
601E32200	2.8	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
602E20000	1.1	CY	CONCRETE MASONRY
602E98100	260	FT	MASONRY, MISC.: PATCHING EXISTING CONCRETE CONDUIT W/PORTLAND CEMENT MORTAR
611E13200	26	FT	30" CONDUIT, TYPE A, 706.02



CULVERT DETAIL
 STA. 166+50

FRA -71-0.00

934
 1312



CALCULATED
CTW
CHECKED
MLP

CULVERT DETAIL
STA. 189+43

FRA -71-0.00

935
1312

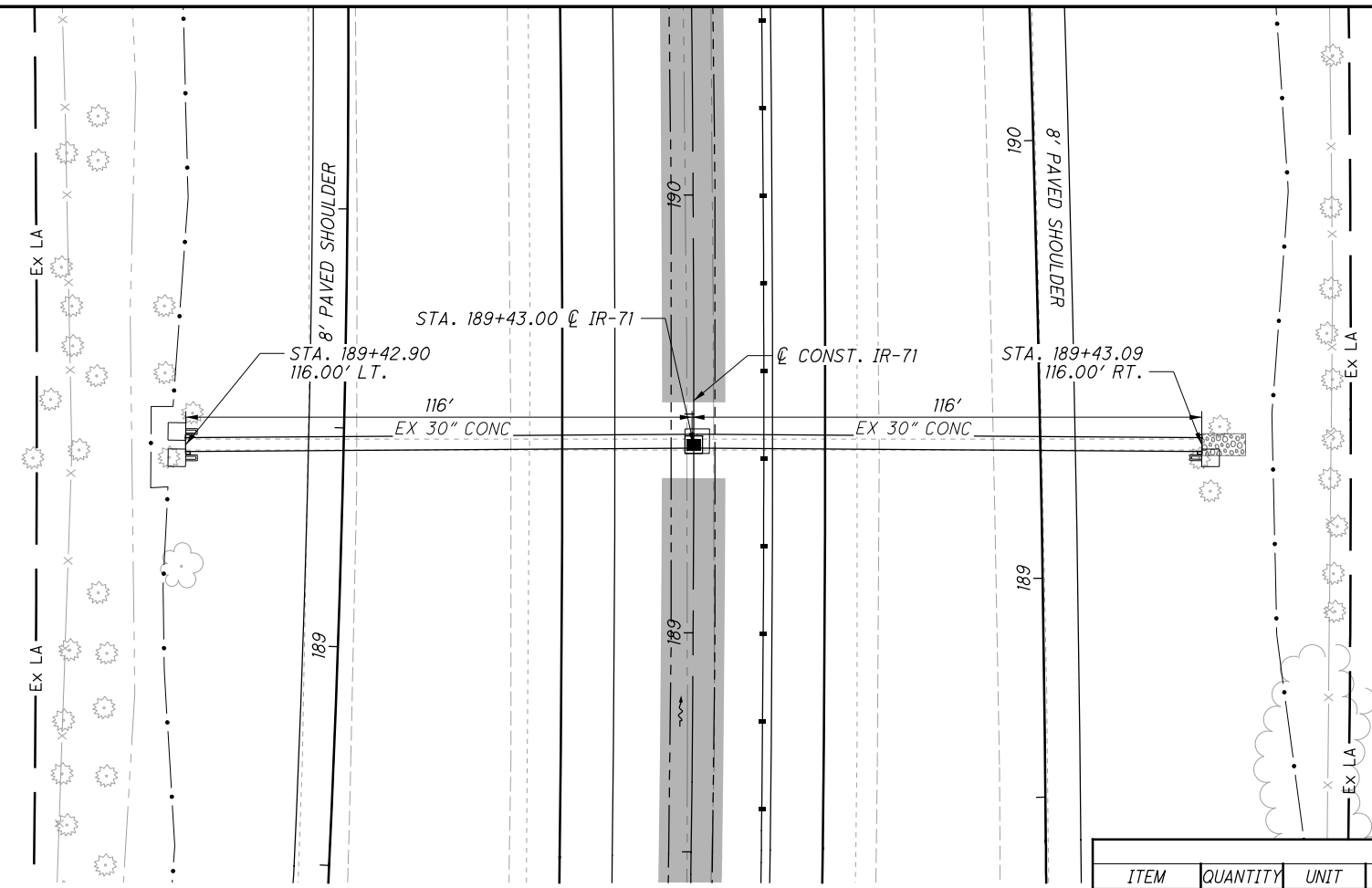
EXISTING STRUCTURE

SIZE	= 30"
TYPE	= RCP
DATE BUILT	= 1958
CONDITION	= GOOD
STREAM pH	= 7.2
CFN	= 250710060
NON-ABRASIVE	

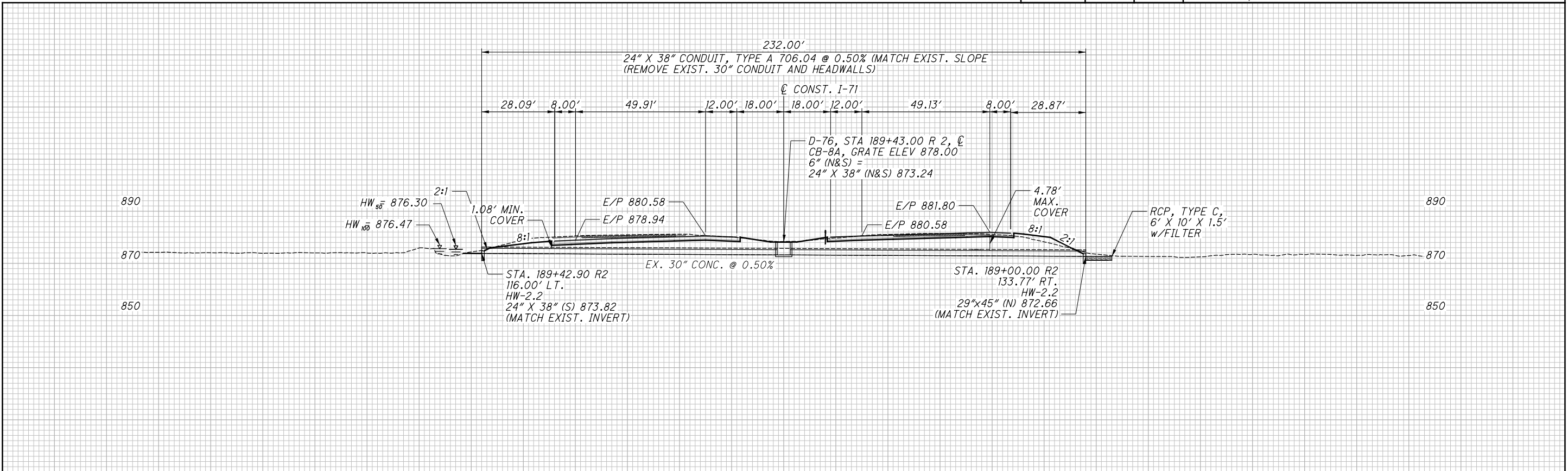
HYDRAULIC DESIGN DATA

Drainage Area	= 14.9 Ac.
Q ₅₀ *	= 27.5 cfs
Q ₁₀₀	= 29.6 cfs
HW ₅₀	= 876.3'
HW ₁₀₀	= 876.5'
V ₅₀	= 7.1 fps
V ₁₀₀	= 7.4 fps
SERV. LIFE	= 75
OHW DEPTH	= 1.7'

* ORIGINAL DESIGN
Q₅₀ = 21 cfs (PLAN)
AREA = 12 Ac. (PLAN)



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
202E20010	2	EACH	HEADWALL REMOVED
202E35200	232	FT	PIPE REMOVED, OVER 24"
601E32200	3.3	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
602E20000	0.9	CY	CONCRETE MASONRY
611E52500	232	FT	24" X 38" CONDUIT, TYPE A, 706.04
611E98434	1	EACH	CATCH BASIN, NO 8A



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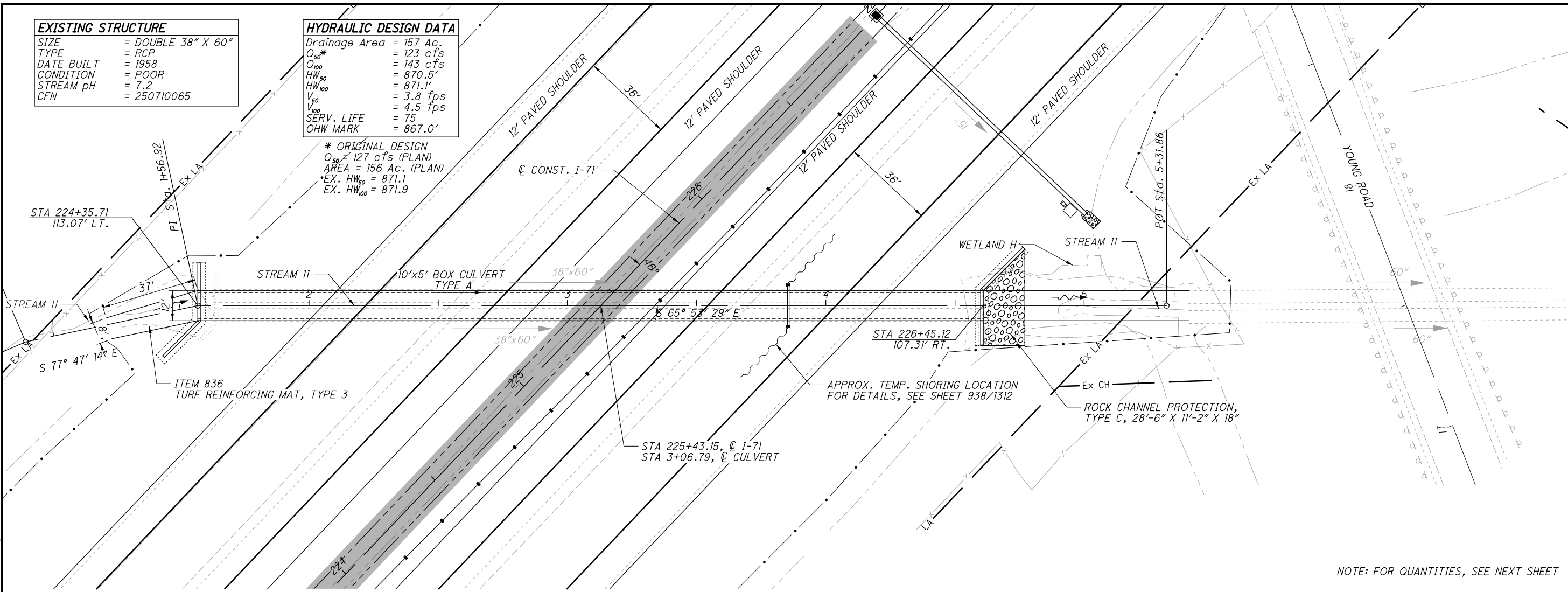
EXISTING STRUCTURE

SIZE	= DOUBLE 38" X 60"
TYPE	= RCP
DATE BUILT	= 1958
CONDITION	= POOR
STREAM PH	= 7.2
CFN	= 250710065

HYDRAULIC DESIGN DATA

Drainage Area	= 157 Ac.
Q_{50} *	= 123 cfs
Q_{100}	= 143 cfs
HW_{50}	= 870.5'
HW_{100}	= 871.1'
V_{50}	= 3.8 fps
V_{100}	= 4.5 fps
SERV. LIFE	= 75
OHW MARK	= 867.0'

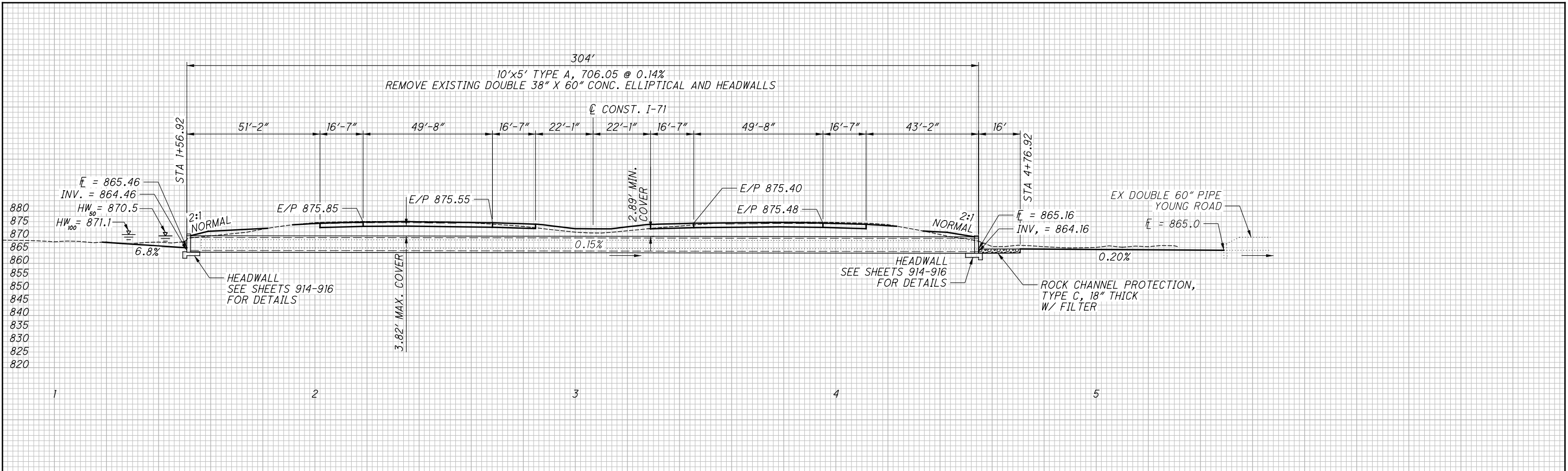
* ORIGINAL DESIGN
 Q_{50} = 127 cfs (PLAN)
 AREA = 156 Ac. (PLAN)
 EX. HW_{50} = 871.1
 EX. HW_{100} = 871.9



CALCULATED
 MLP
 CHECKED
 CTW

NOTE: FOR QUANTITIES, SEE NEXT SHEET

CULVERT DETAIL
STA. 225+43.15

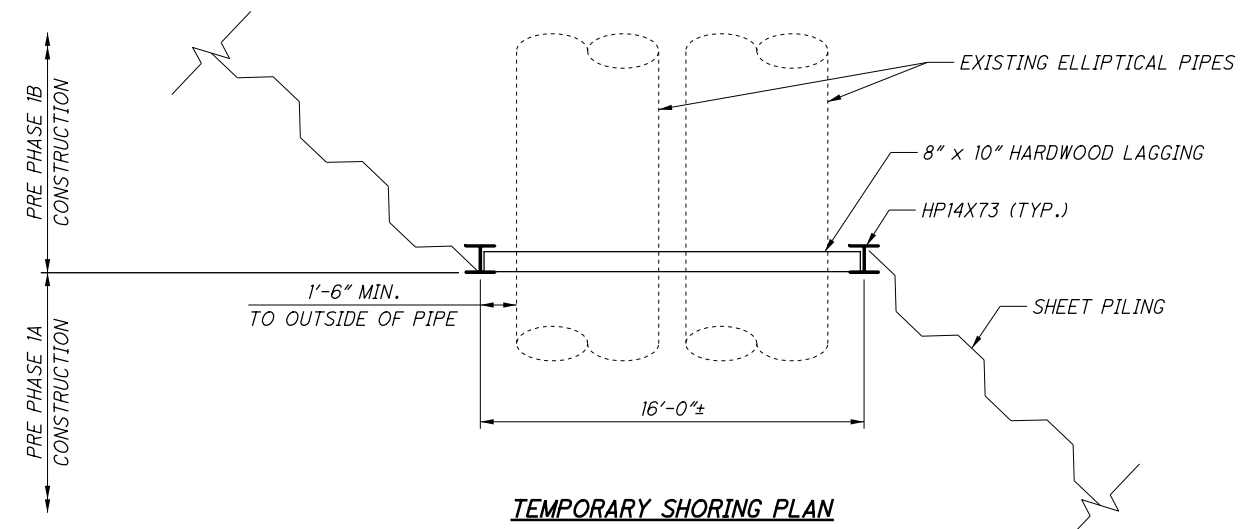


FRA -71-0.00

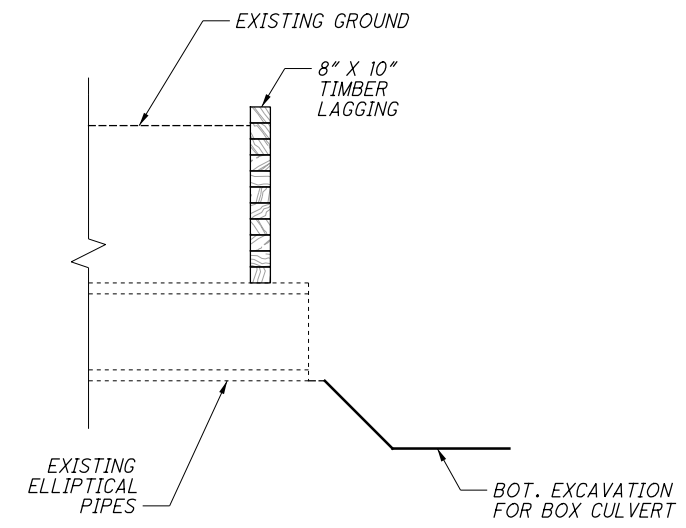
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NOTES:

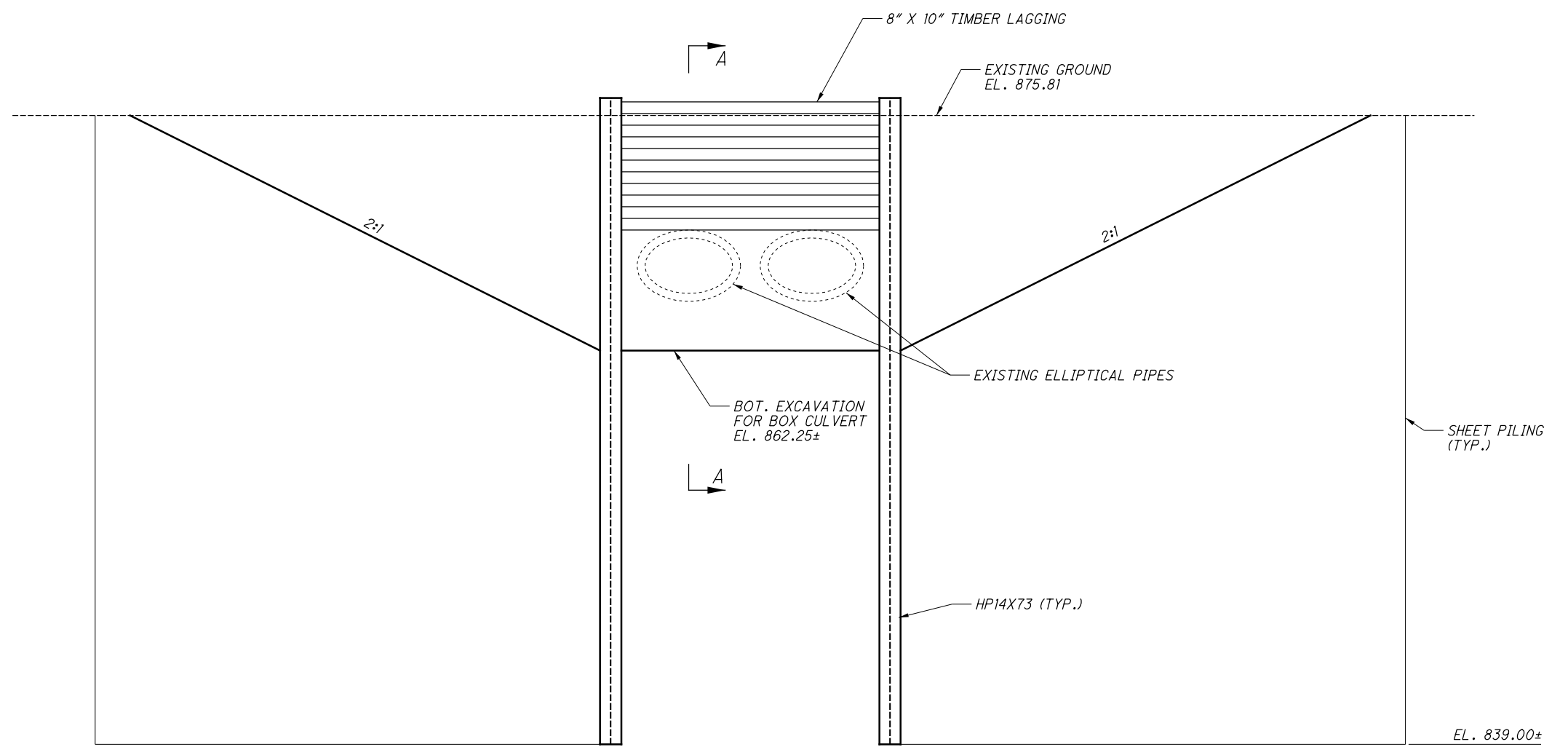
1. TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE APPROXIMATE LIMITS OF SHORING AND THE SEQUENCE OF INSTALLATION ARE SHOWN ON SHEET 936. ALL SHEET PILING SHALL HAVE A MINIMUM SECTION MODULUS OF 33.5 INCH CUBED PER LINEAR FEET OF WALL. THE TOP ELEVATION OF THE SHEETING IS 876.50 AND THE BOTTOM ELEVATION OF SHEETING SHALL BE 839.00.
2. ALL MATERIAL AND LABOR REQUIRED FOR CONSTRUCTION OF THE TEMPORARY SHORING INCLUDING STEEL PILES AND TIMBER LAGGING SHALL BE INCLUDED IN ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN FOR PAYMENT.
3. 8" x 10" TIMBER LAGGING SHALL SOUTHERN PINE NO. 2 GRADE MIN. WITH 8" BEING THE VERTICAL DIMENSION AND 10" BEING THE HORIZONTAL DIMENSION.
4. THE HP14x73 PILES SHALL BE GRADE 50 (Fy = 50 KSI) IN.
5. THE SOLDIER PILES ARE TO BE INSTALLED PRIOR TO EXCAVATION AND THE LAGGING IS TO BE INSTALLED AS THE EXCAVATION PROCEEDS DOWNWARD.



TEMPORARY SHORING PLAN



SECTION A-A
(PROPOSED BOX CULVERT AND SHEET PILING NOT SHOWN FOR CLARITY)



TEMPORARY SHORING ELEVATION
(PROPOSED BOX CULVERT NOT SHOWN FOR CLARITY)

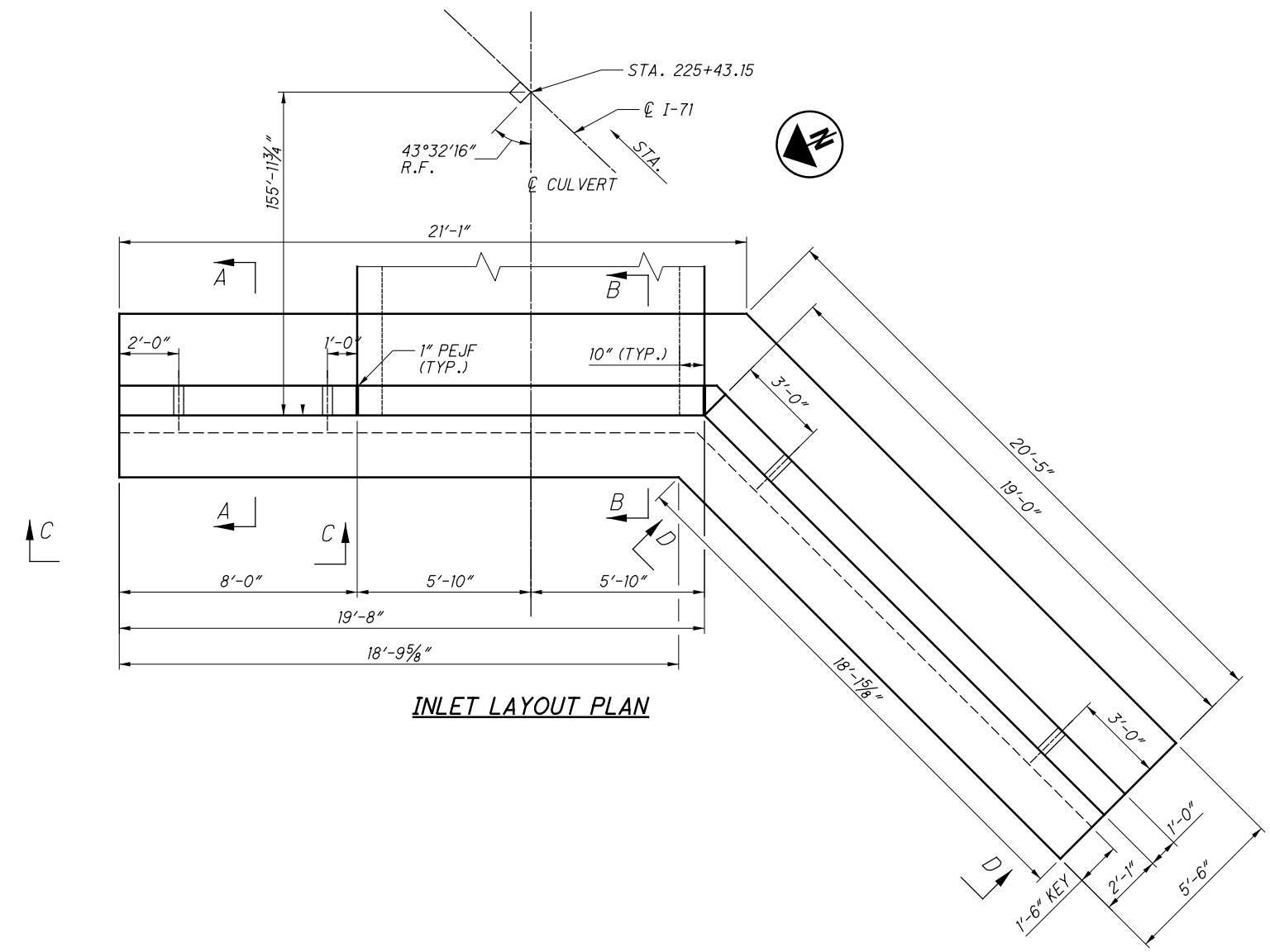
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CALCULATED
ALM
CHECKED
KVB

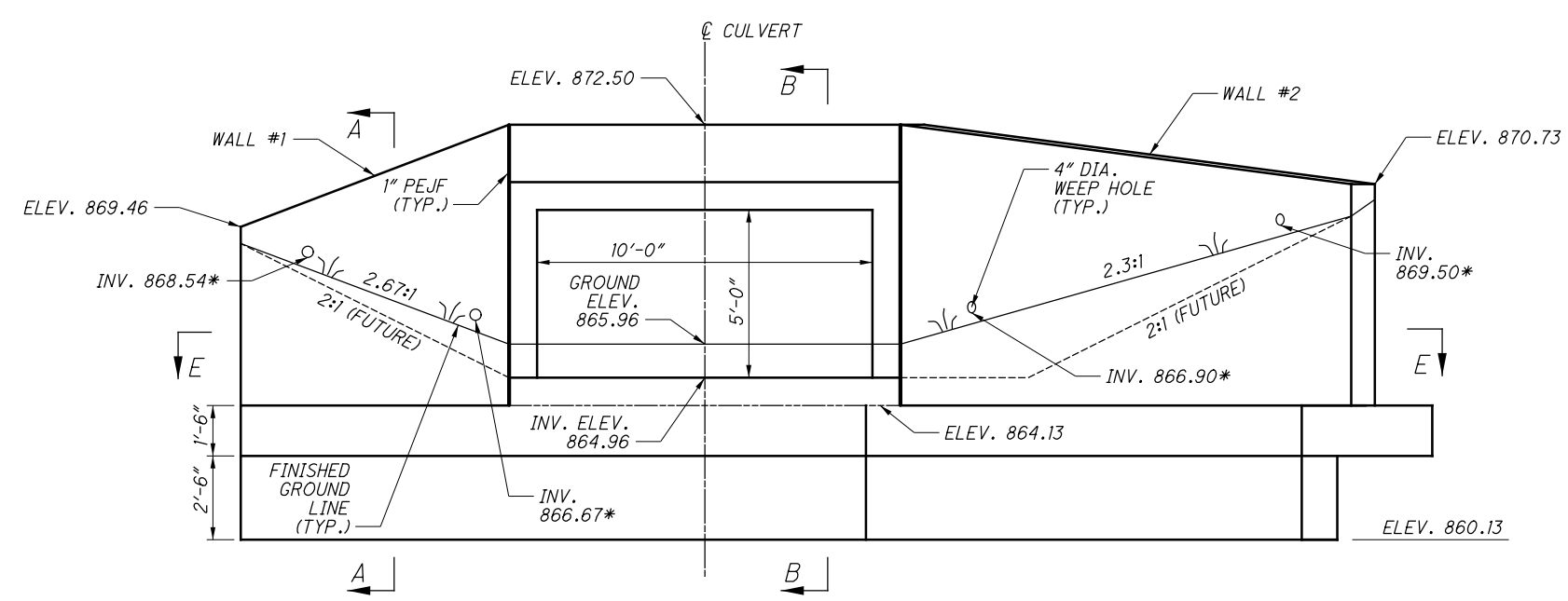
TEMPORARY SHORING ELEVATION & DETAILS

FRA -71-0.00

938
1312



INLET LAYOUT PLAN



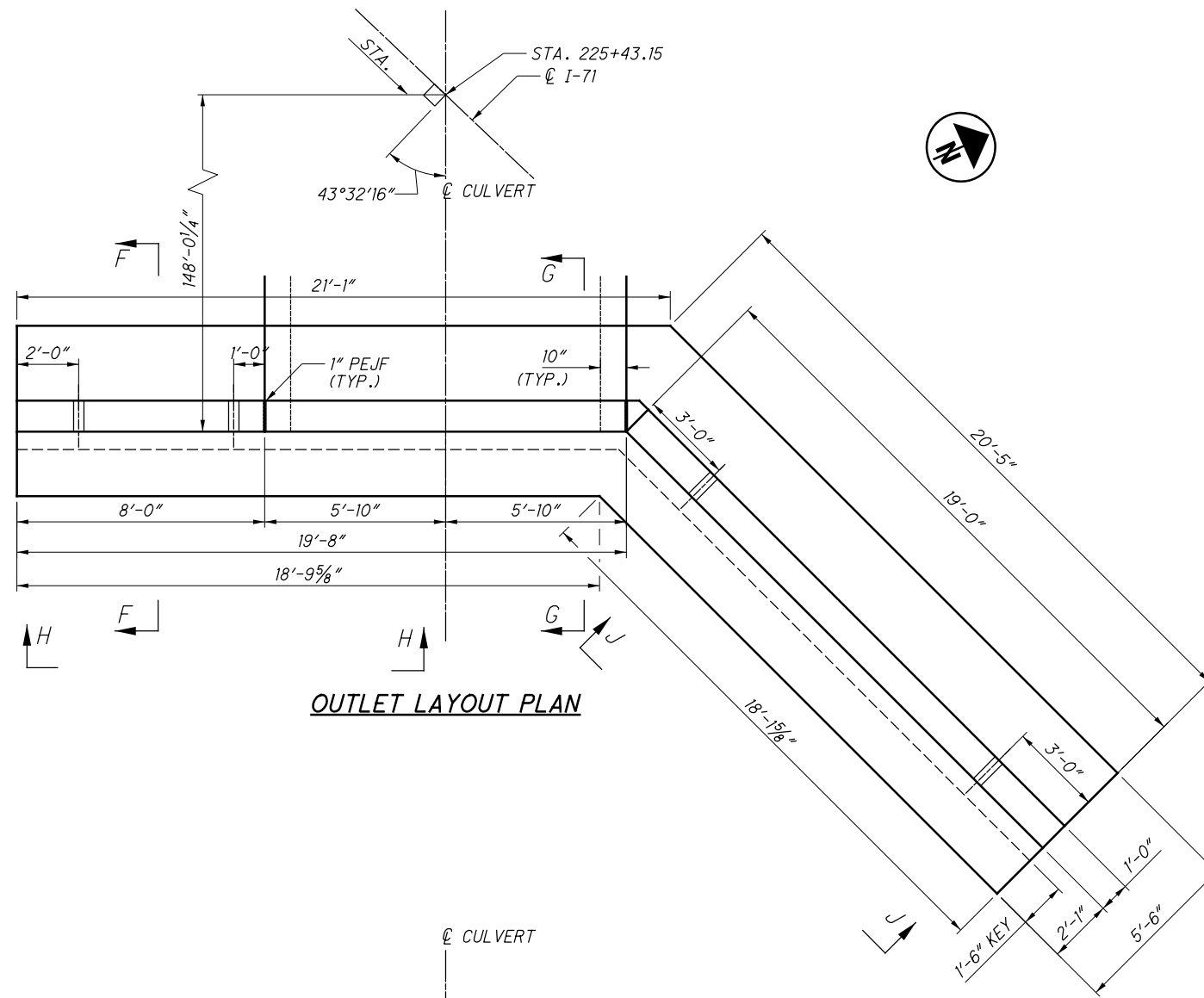
INLET ELEVATION

LEGEND:
* - ELEVATION SHOWN AT FRONT FACE OF WALL

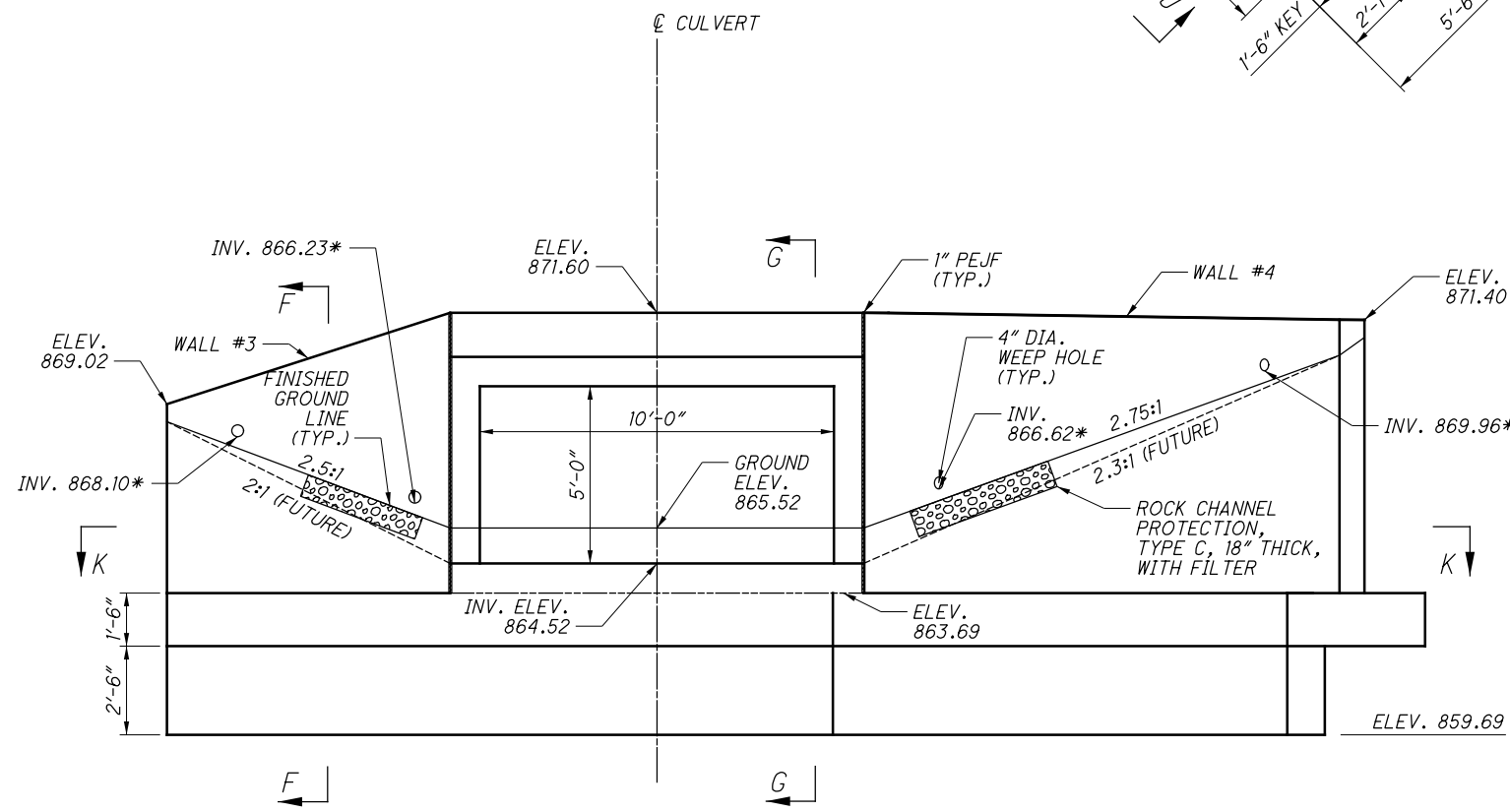
NOTES:
1. FOR SECTION CUTS, SEE SHEET 915.

X:\4037000\121957.16\107201\drainage\sheets\107201DD0003.dgn Sheet 10/28/2019 11:12:42 AM 1458sjs

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OUTLET LAYOUT PLAN



OUTLET ELEVATION

LEGEND:
 * - ELEVATION SHOWN AT FRONT FACE OF WALL

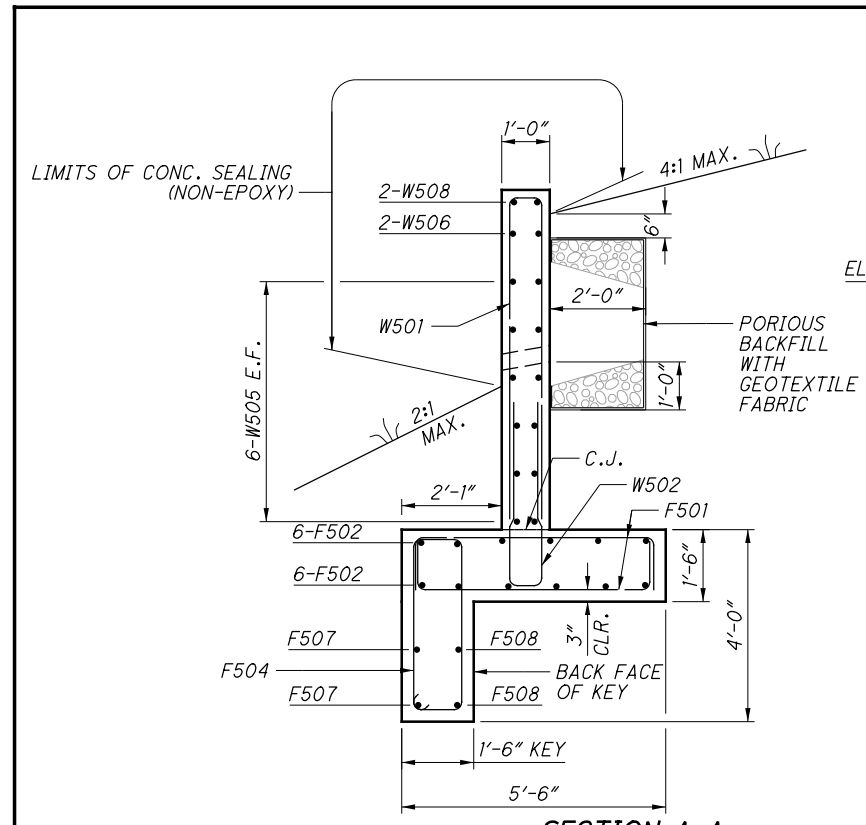
NOTES:
 1. FOR SECTION CUTS, SEE SHEET 916.

CALCULATED
 MAH
 CHECKED
 ALM

CULVERT HEADWALL PLAN AND ELEVATION DETAIL

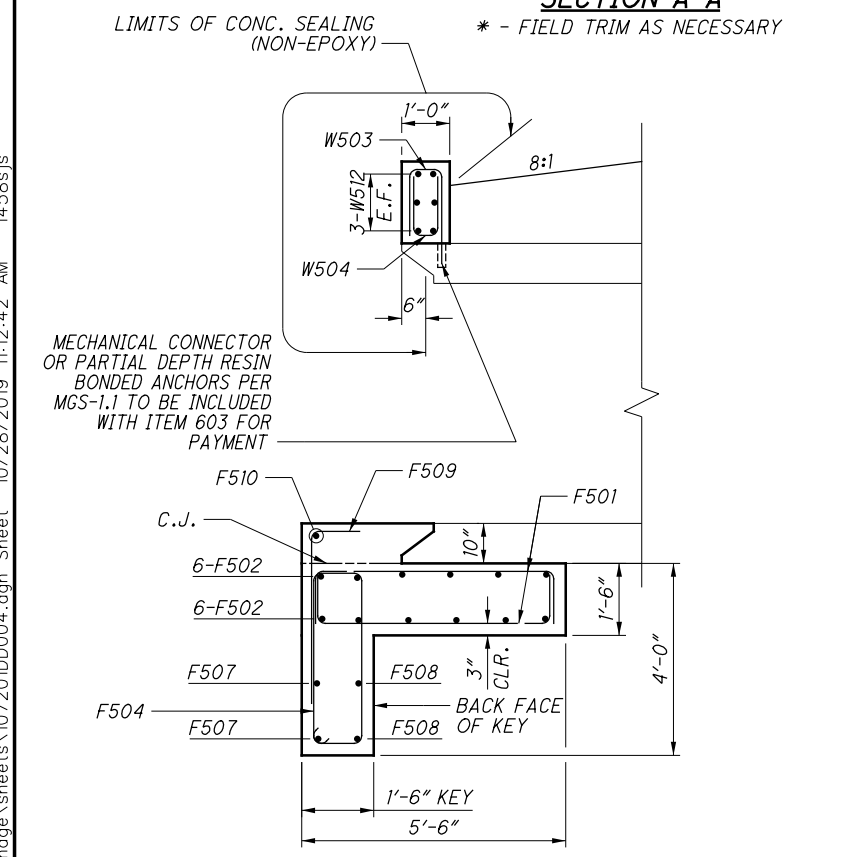
FRA -71-0.00

940
 1312



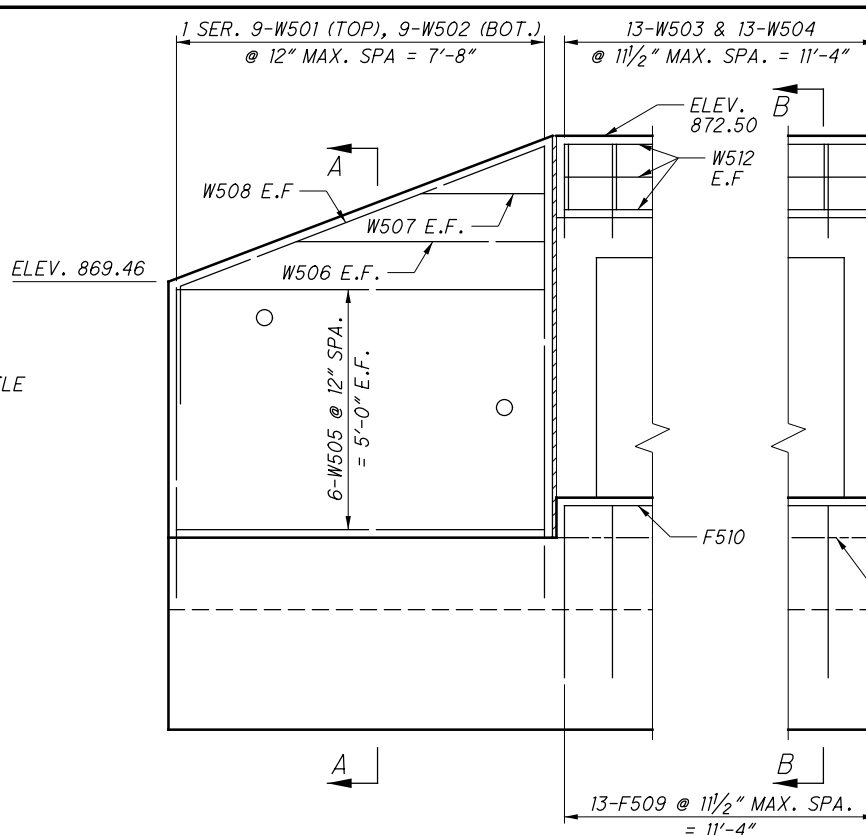
SECTION A-A

* - FIELD TRIM AS NECESSARY



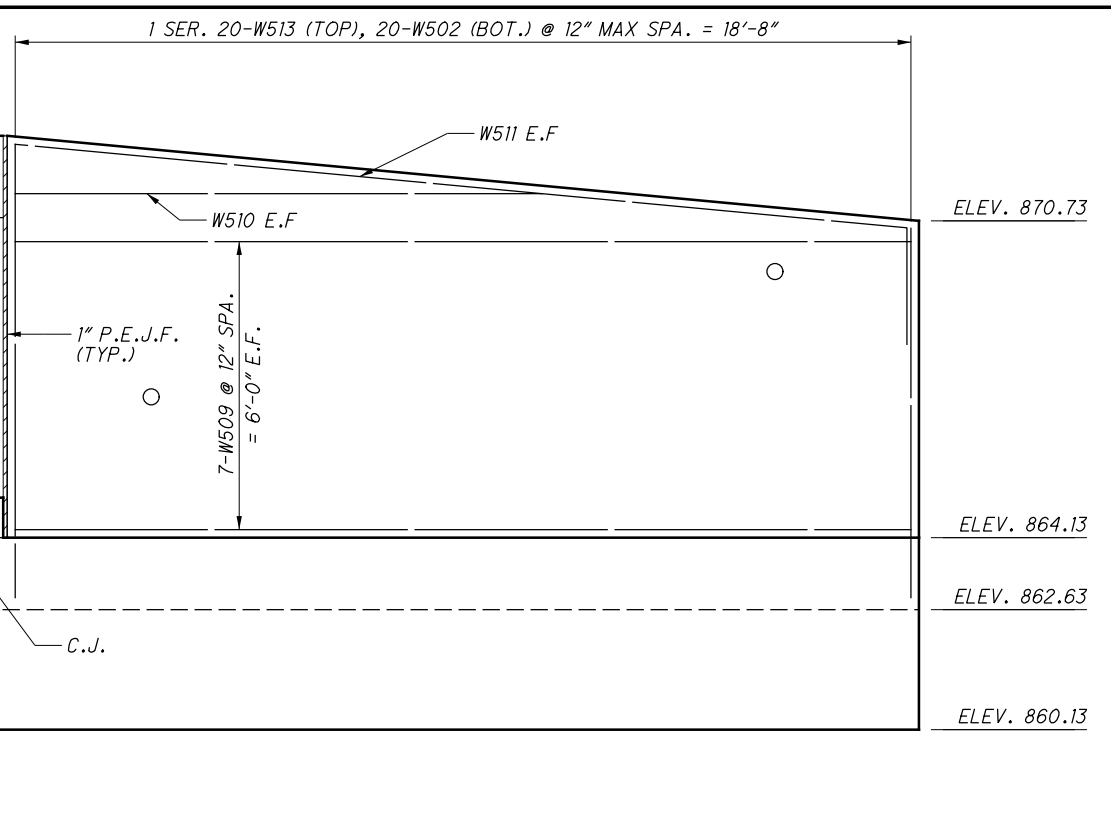
SECTION B-B

* - FIELD TRIM AS NECESSARY



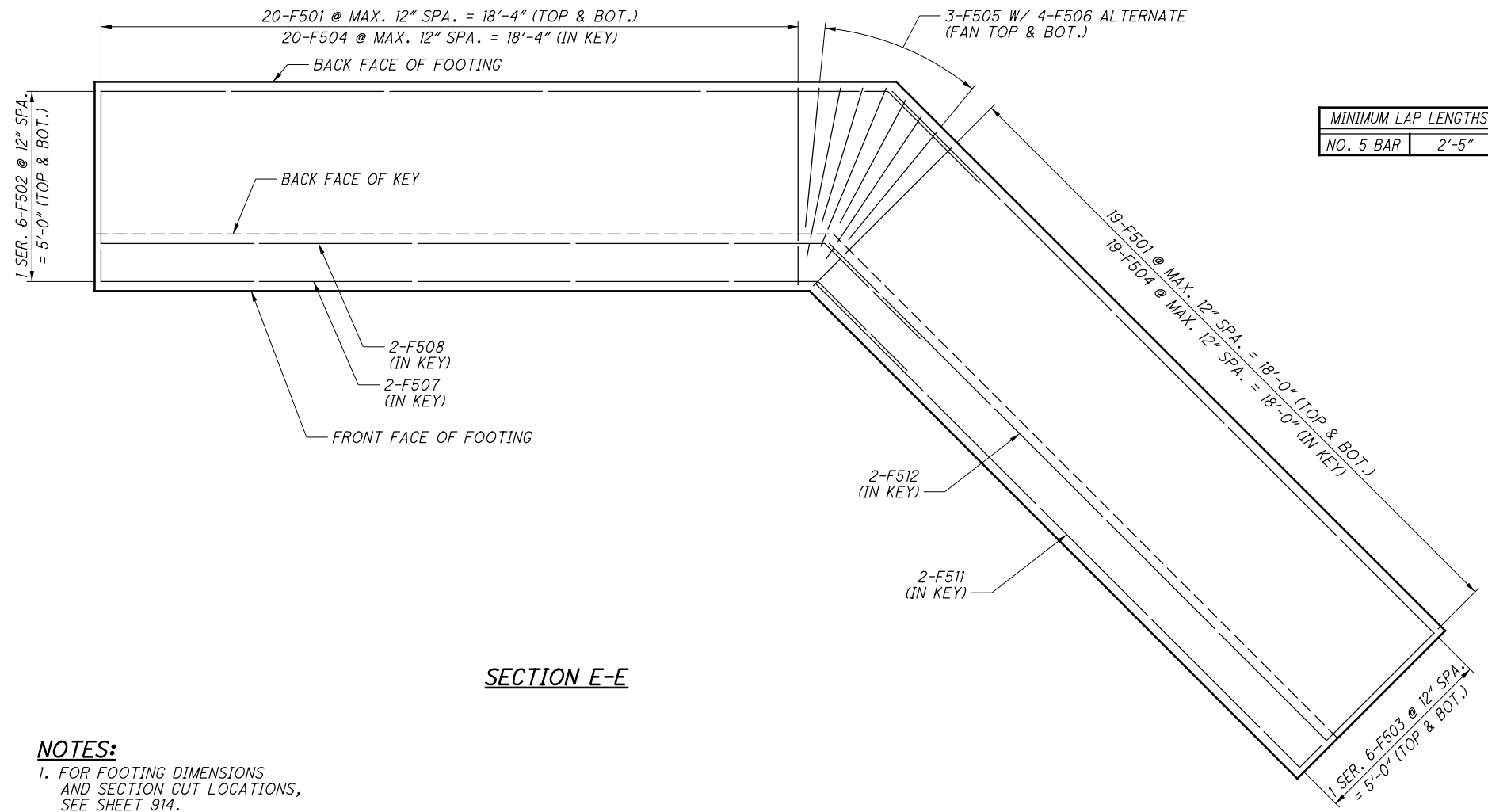
VIEW C-C

(FOOTING REINFORCING NOT SHOWN FOR CLARITY)



VIEW D-D

(FOOTING REINFORCING NOT SHOWN FOR CLARITY)

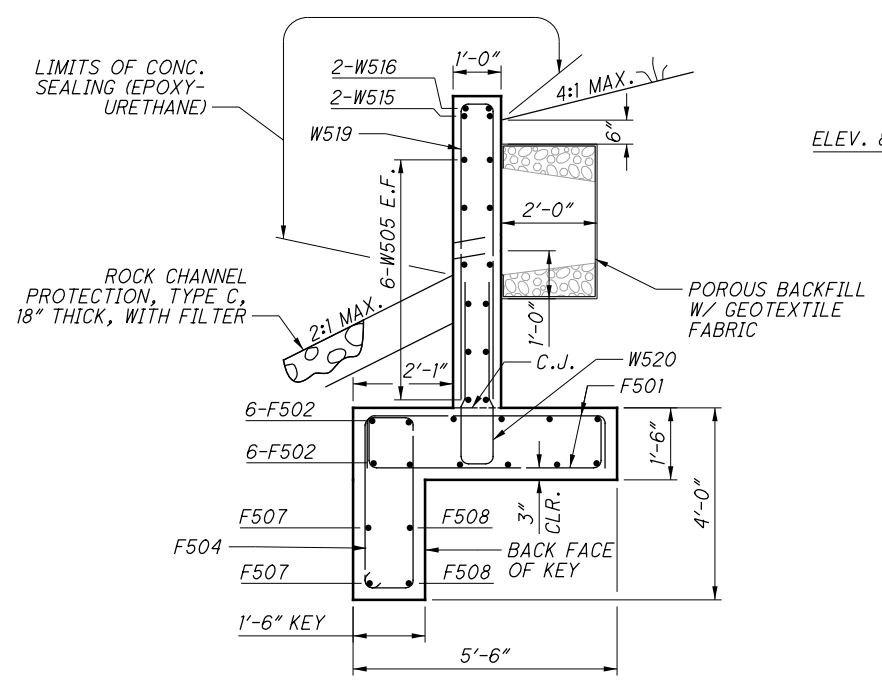


SECTION E-E

NOTES:

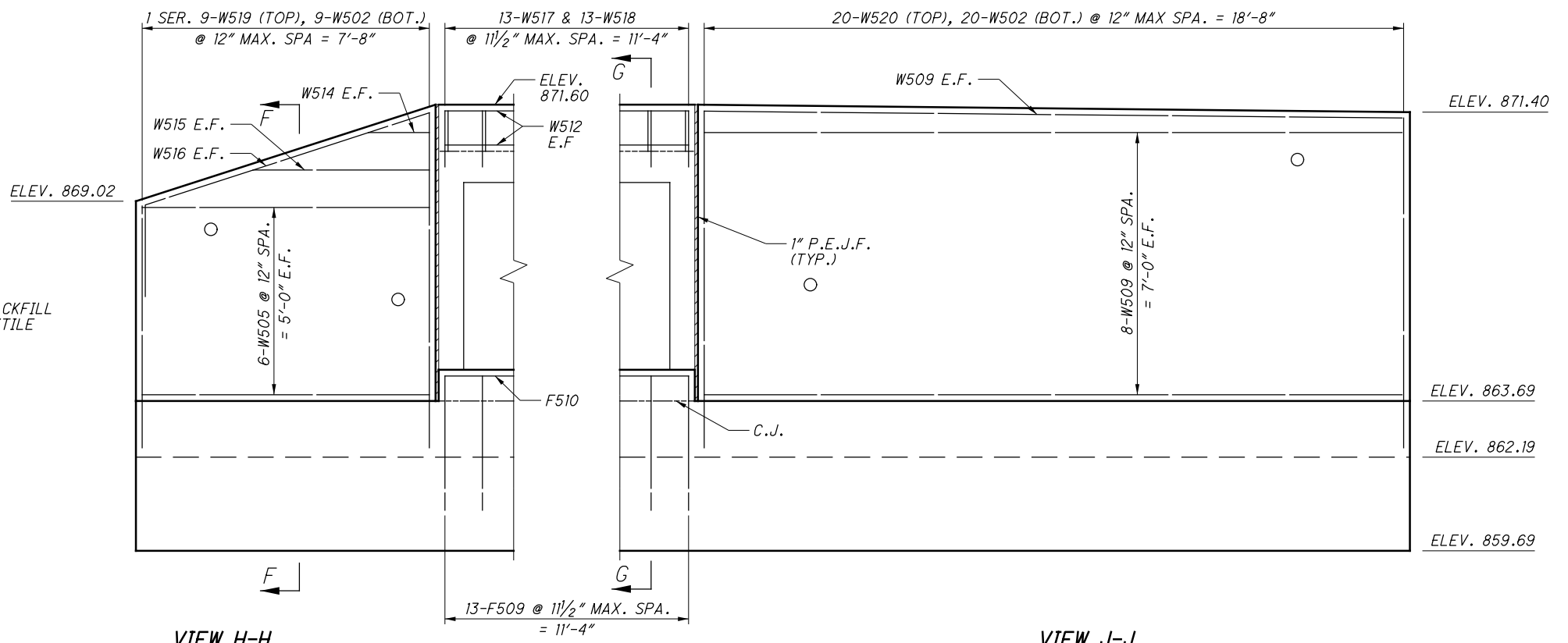
1. FOR FOOTING DIMENSIONS AND SECTION CUT LOCATIONS, SEE SHEET 914.

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SECTION F-F

* - FIELD TRIM AS NECESSARY

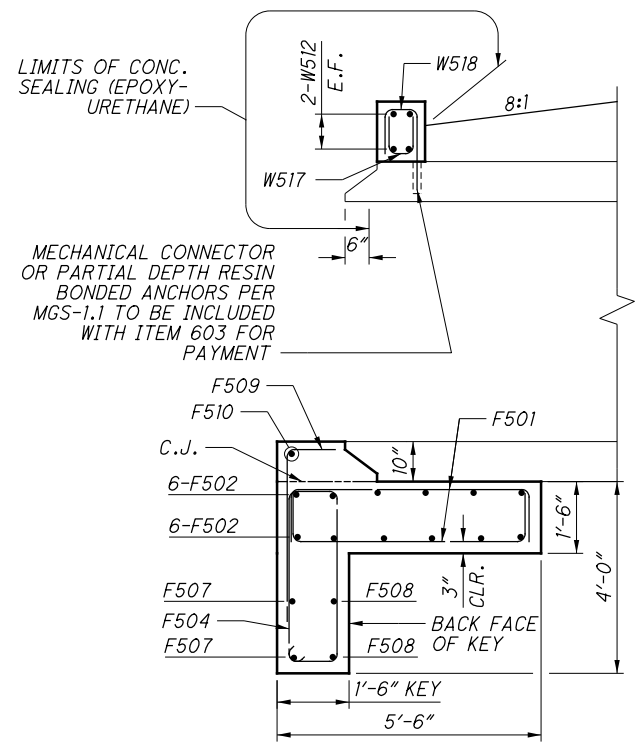


VIEW H-H

(FOOTING REINFORCING NOT SHOWN FOR CLARITY)

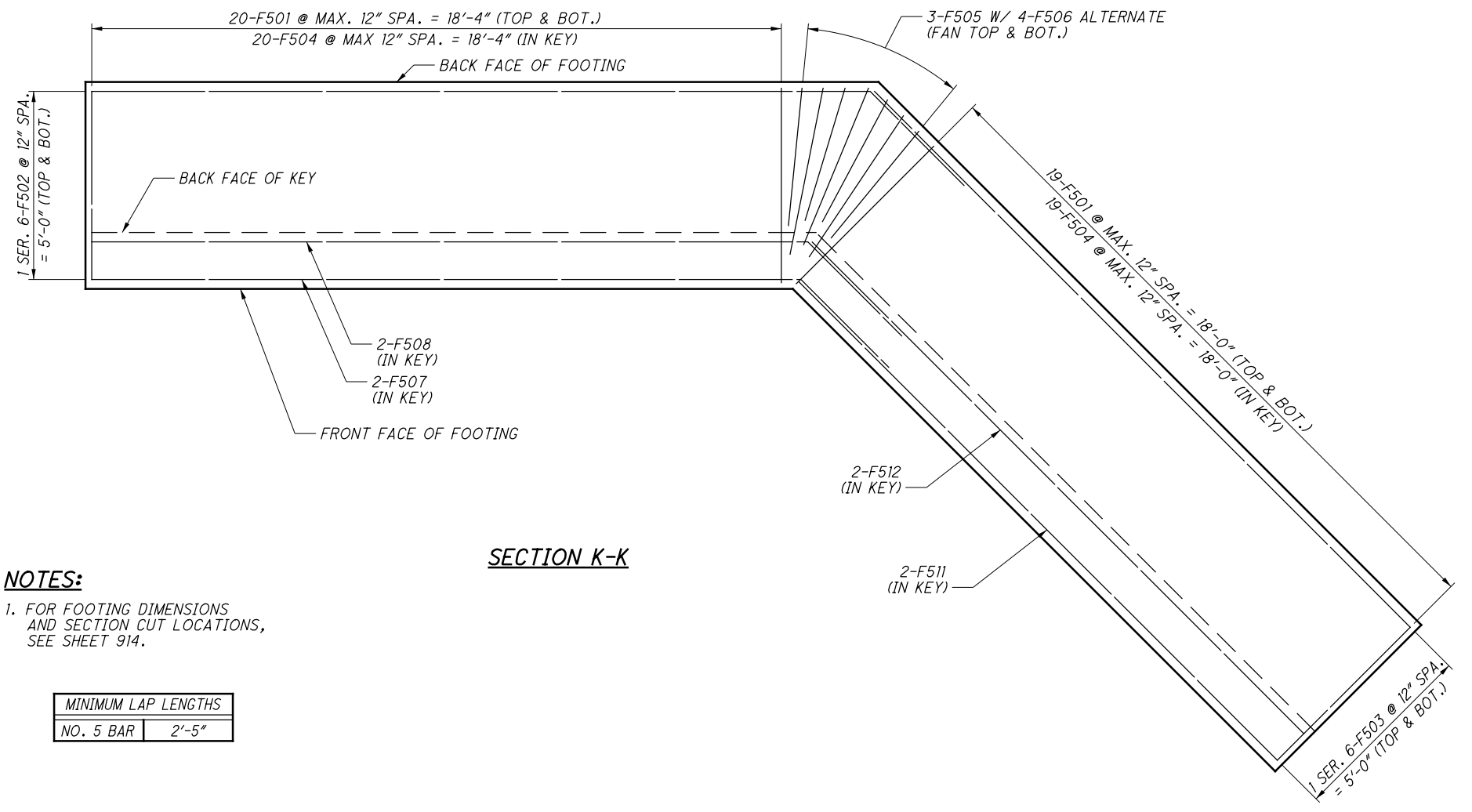
VIEW J-J

(FOOTING REINFORCING NOT SHOWN FOR CLARITY)



SECTION G-G

* - FIELD TRIM AS NECESSARY



SECTION K-K

NOTES:

1. FOR FOOTING DIMENSIONS AND SECTION CUT LOCATIONS, SEE SHEET 914.

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-5"

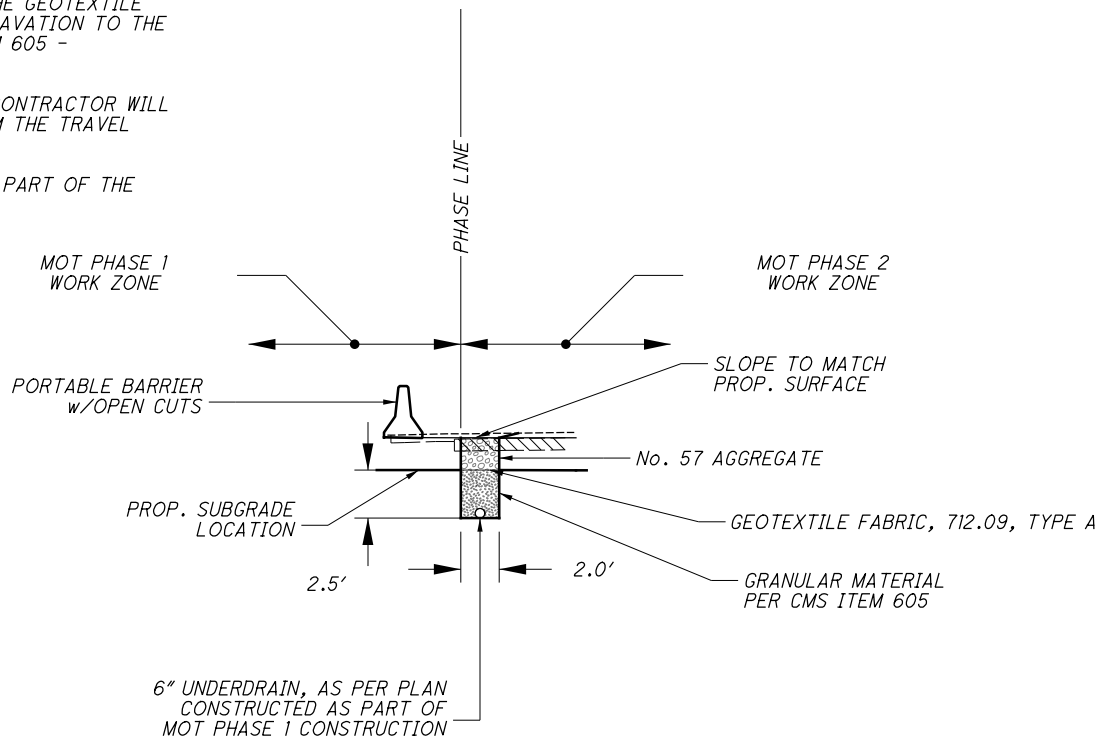
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NOTES - ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS, AS PER PLAN

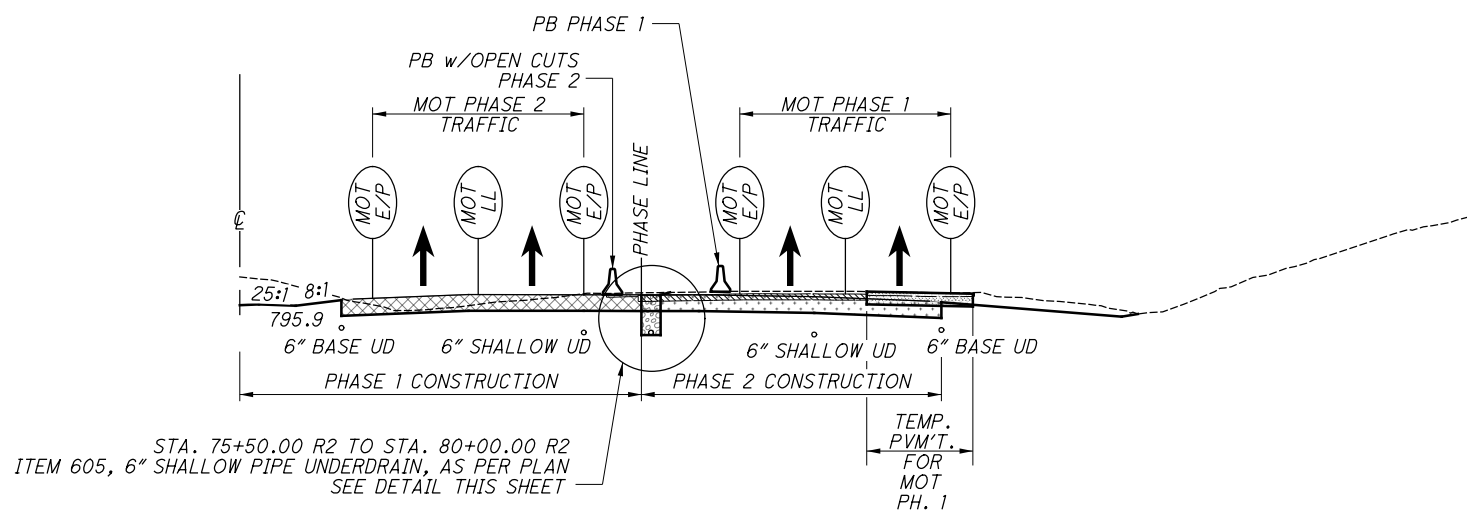
ALL COSTS ASSOCIATED WITH INSTALLATION OF THIS ITEM WILL INCLUDE THE CONDUIT, TRENCH EXCAVATION, THE GRANULAR MATERIAL PER CMS 605, THE PLACEMENT OF THE No. 57 AGGREGATE AND THE GEOTEXTILE FABRIC. THE COST TO REMOVE THE No. 57 AGGREGATE AND GEOTEXTILE FABRIC AFTER EXCAVATION TO THE SUBGRADE DURING MOT PHASE 2 CONSTRUCTION WILL BE INCLUDED WITH THE COST OF ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS, AS PER PLAN.

AFTER TRAFFIC IS SHIFTED ONTO THE PAVEMENT CONSTRUCTED UNDER PHASE 1 MOT, THE CONTRACTOR WILL GRADE FOR THE PHASE 2 MOT CONSTRUCTION TO PROMOTE POSITIVE DRAINAGE AWAY FROM THE TRAVEL LANES AS SOON AS IS POSSIBLE.

THE UNDERDRAINS WILL REMAIN IN PLACE AFTER MOT PHASE 2 CONSTRUCTION AND BECOME PART OF THE PERMANENT UNDERDRAIN SYSTEM.

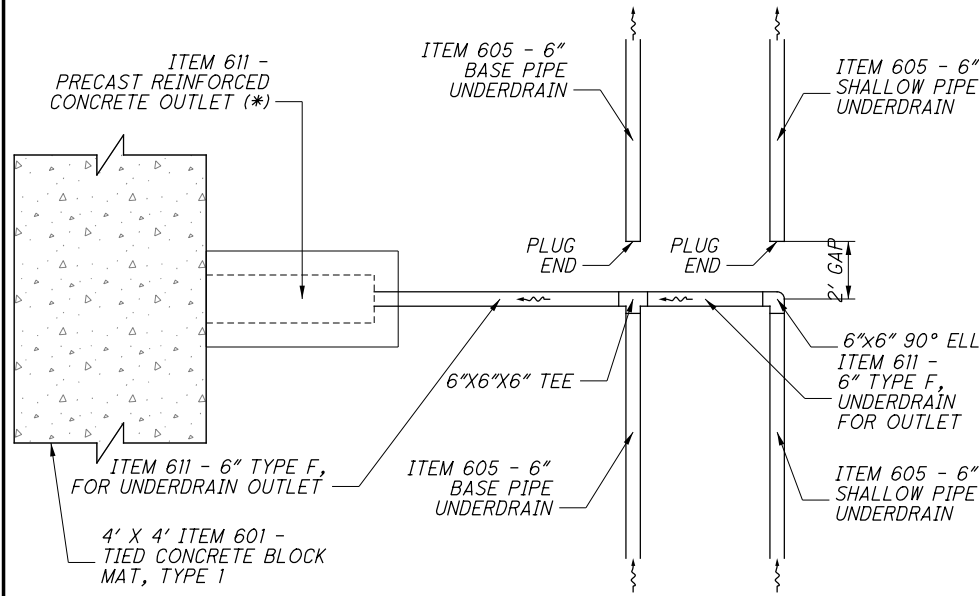


DETAIL OF ITEM 605, 6" SHALLOW PIPE UNDERDRAIN, AS PER PLAN
STA. 144+00.00 R2 TO STA. 155+35.00 R2

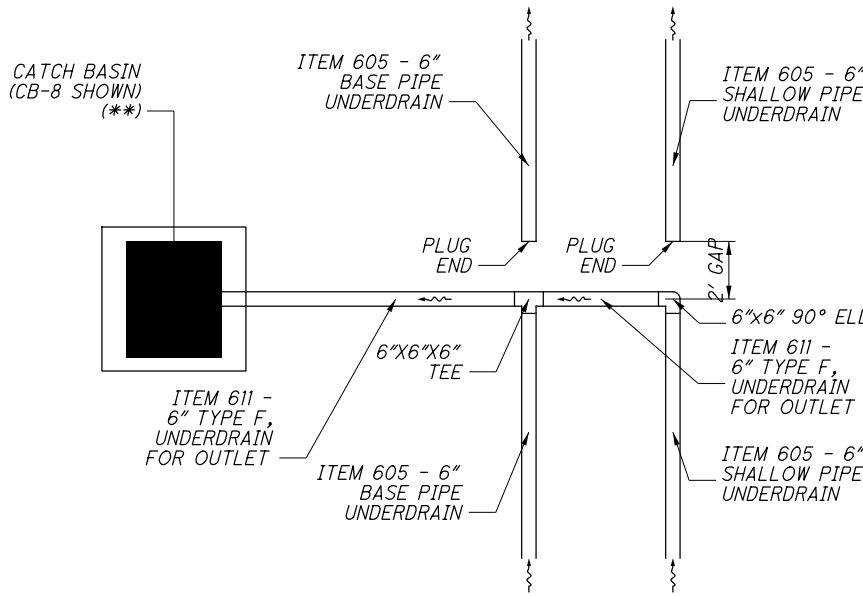


LOCATION OF ITEM 605, 6" SHALLOW PIPE UNDERDRAIN, AS PER PLAN
STA. 144+00.00 R2 TO STA. 155+35.00 R2

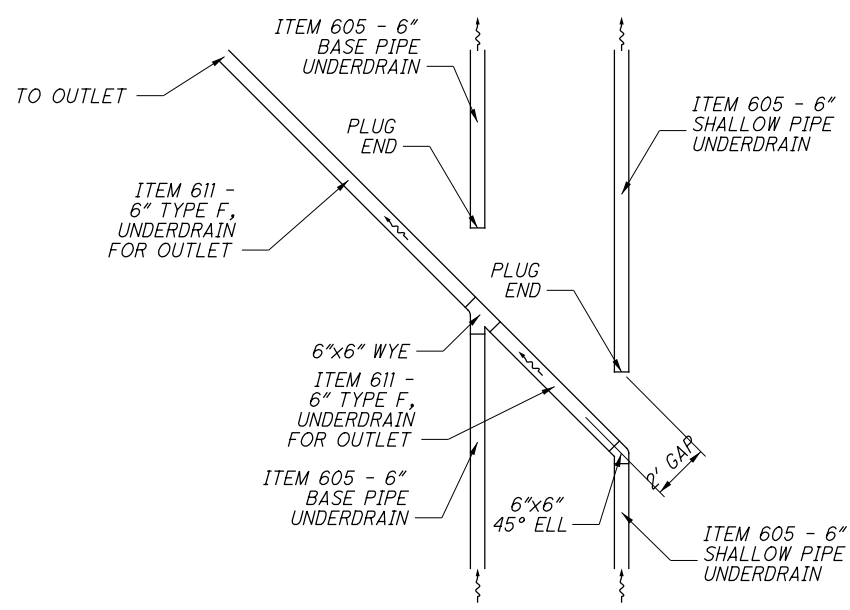
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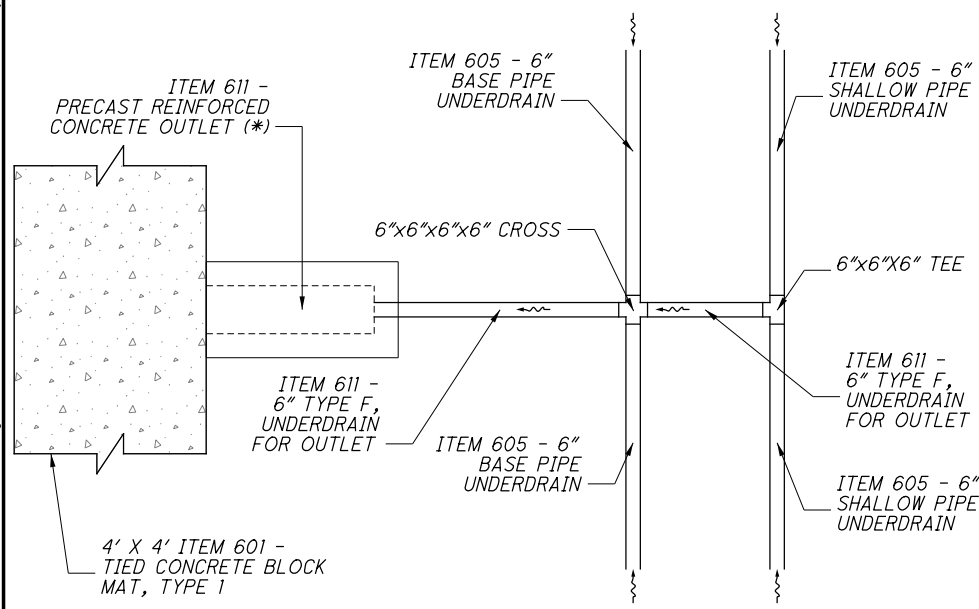
METHOD "A"



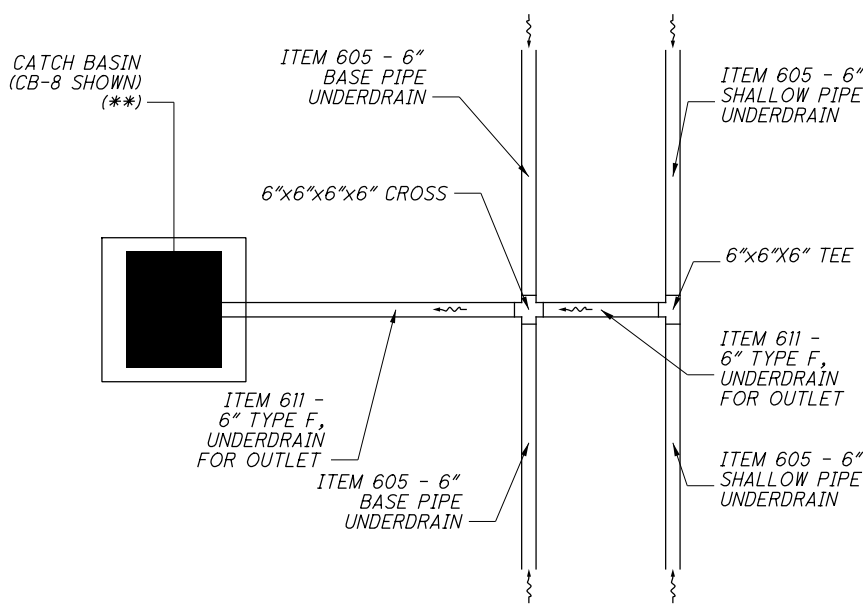
METHOD "B"



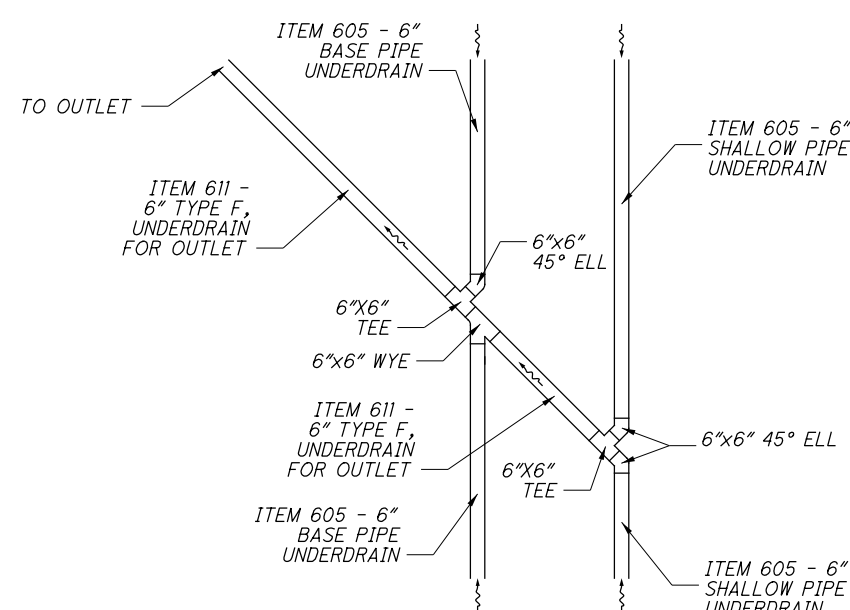
METHOD "C"



METHOD "D"



METHOD "E"



METHOD "F"

NOTES:
 1) DETAILS SHOULD BE MODIFIED AS MEDIAN AND SHAPE REQUIRE.
 2) DISTANCE FROM EDGE OF PAVEMENT SHOULD BE TAKEN FROM APPROVED TYPICAL SECTIONS.

(*) FOR DETAILS, SEE STANDARD DRAWING DM-1.1
 (**) PRECAST REINFORCED CONCRETE OUTLET AND CATCH BASINS ARE SHOWN FOR DEMONSTRATION PURPOSES ONLY.
 ACTUAL OUTLETS SHOULD BE PLACED IN ACCORDANCE WITH APPROVED PLAN.

X:\4037000\121957.16\107201\drainage\sheets\107201DD002.dgn Sheet 10/28/2019 11:12:44 AM 1458sjs

X:\4037000\121957.16\107201\drainage\sheets\107201D0004.dgn Sheet 10/28/2019 11:12:45 AM 1458515

Main data table with columns: REF. NO., SHEET NO., STATION (FROM/TO), SIDE, OFFSET, INVERT, and various material types (601, 605, 611) and bend/branch quantities.

TOTALS CARRIED TO SHEETS 399-402

Summary row: 1.8, 5741, 5741, 527, 1, 32, 11, 8, 0, 13, 4

CALCULATED
DCB
CHECKED
JMB

ESTIMATED QUANTITIES - UNDERDRAINS

FRA - 71 - 0.00

948
1312

x:\4037000\121957.16\107201\drainage\sheet\107201D0016.dgn Sheet 10/28/2019 11:12:50 AM 1458js

REF. NO.	SHEET NO.	STATION	SIDE	OFFSET	INVERT	STATION	SIDE	OFFSET	INVERT							BENDS AND BRANCHES FOR INFORMATION ONLY													
										601 TIED CONCRETE BLOCK MAT, TYPE 1		605 6" SHALLOW PIPE UNDERDRAINS		605 6" UNCLASSIFIED PIPE UNDERDRAINS		605 6" BASE PIPE UNDERDRAINS		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		611 PRECAST REINFORCED CONCRETE OUTLET		PLUG	6" X 6" TEE	6" X 6" WYE	6" X 6" CROSS	6" X 90° ELL	6" X 45° ELL		
										SQ YD	FT	FT	FT	FT	FT	EACH	NO.	NO.	NO.	NO.	NO.							NO.	
U-633	1017	271+52	RT	29.75	857.46	274+43	RT	29.75	856.56		290																		
U-634	1017	274+40	LT	66.25	856.76	274+40	LT	111.35	853.8	1.8				45	1														
U-635	1017	274+50	RT	66.25	856.76	274+50	RT	113.1	853.2	1.8				47	1			1						2					
U-636	1017-1018	274+44	LT	78.25	857.28	279+31	LT	78.25	856.11									1											
U-637	1017-1018	274+44	LT	66.25	856.76	279+31	LT	66.25	855.58		487							1											
U-638	1017-1018	274+52	RT	66.25	856.76	279+31	RT	66.25	855.7		441	38						1											
U-639	1017-1018	274+52	RT	78.25	857.28	279+31	RT	78.25	856.23			38	441					1											
U-640	1017	274+40	LT	29.75	856.56	274+43	C	0	856.25					31							1			2		1			
U-641	1017	274+43	RT	29.75	856.56	274+43	C	0	856.25					29							1			2					
U-642	1017-1018	274+44	LT	29.75	856.56	279+31	LT	29.75	855.39		487							1											
U-643	1017-1018	274+44	LT	17.75	857.08	279+31	LT	17.75	855.92				487					1											
U-644	1017-1018	274+44	RT	17.75	857.08	279+31	RT	17.75	856.04			38	449					1											
U-645	1017-1018	274+44	RT	29.75	856.56	279+31	RT	29.75	855.51		449	38						1											

TOTALS CARRIED TO SHEETS 399-402

3.6 2154 152 1864 152 2 9 0 4 0 8 1

960	CALCULATED	
1312	DCB	
	CHECKED	
	JMB	

ESTIMATED QUANTITIES - UNDERDRAINS

FRA - 71-0:00

REF. NO.	SHEET NO.	STATION	SIDE	OFFSET	INVERT	STATION	SIDE	OFFSET	INVERT	601	605	605	611	611	BENDS AND BRANCHES FOR INFORMATION ONLY						
										TIED CONCRETE BLOCK MAT, TYPE 1	6" SHALLOW PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET	PLUG	6" X 6" TEE	6" X 6" WYE	6" X 6" CROSS	6" X 90° ELL	6" X 45° ELL	
		FROM				TO				SQ YD	FT	FT	FT	EACH	NO.	NO.	NO.	NO.	NO.	NO.	
U-750	654	160+59	RT	6.25	869.6	160+59	LT	20.08	868.72				25			1			1		
U-751	654-655	160+59	LT	21.62	869.03	166+12	LT	21.62	870.29		552		10		1						
U-752	654-656	160+59	RT	0.25	868.92	168+31	RT	0.25	871.34		772				1						
U-753	654-656	160+59	RT	6.25	869.68	168+31	RT	6.25	872.44			772			1						
U-754	655	166+15	LT	21.62	870.29	167+67	LT	21.62	869.72		142		10		1						
U-755	655-656	167+67	LT	21.62	869.72	168+30	LT	21.62	869.84		53		10		1						
U-756	656	168+33	RT	6.25	872.44	168+33	LT	18.99	869.87				25			1				1	
U-757	656	168+33	LT	21.62	869.84	169+61	LT	21.62	870.39		118		10		1						
U-758	656-657	168+33	RT	0.25	871.34	175+48	RT	0.25	873.95		715				1						
U-759	656-657	168+33	RT	6.25	872.44	175.48	RT	6.25	874.48			715			1						
U-760	656	169+64	LT	21.62	870.39	170+73.22	LT	21.62	871.38		99		10				1	1			
U-761	656-657	170+73.22	LT	21.62	872.38	174+48	LT	19.25	876.72			375			1						
U-762	656	170+73.22	LT	16.25	871.62	172+71.68	LT	16.25	873.96		199		5		1					1	
U-763	657	174+50	RT	0.25	873.95	174+50	RT	22.25	873.73	1.8			22	1			1			1	
U-764	657-658	175+50	RT	0.25	873.97	178+26	RT	0.25	878.97		276										
U-765	657-658	175+50	RT	6.25	874.49	178+25	RT	8.25	879.65			275									
U-766	657	174+50	LT	19.25	876.72	174+50	LT	34.6	874.95	1.8			16	1	1						1
U-767	657-658	174+50	LT	19.25	876.72	178+28	LT	19.25	878.02			378			1		1				
TOTALS CARRIED TO SHEETS 399-402										3.6	2926	2515		143	2	11	2	3	1	5	0

ESTIMATED QUANTITIES - UNDERDRAINS

FRA - 71 - 0.00

CALCULATED
DCB
CHECKED
JMB

962
1312

X:\4037000\121957.16\107201\drainage\sheets\107201D0600.dgn Sheet 10/28/2019 11:12:51 AM 1458sjs

REF. NO.	SHEET NO.	STATION	SIDE	OFFSET	INVERT	STATION	SIDE	OFFSET	INVERT	601	605	605	605	611	611	BENDS AND BRANCHES FOR INFORMATION ONLY					
										TIED CONCRETE BLOCK MAT, TYPE 1	6" SHALLOW PIPE UNDERDRAINS	6" UNCLASSIFIED PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET	PLUG	6" X 6" TEE	6" X 6" WYE	6" X 6" CROSS	6" X 90° ELL	6" X 45° ELL
		FROM			TO			SQ YD	FT	FT	FT		FT	EACH	NO.	NO.	NO.	NO.	NO.	NO.	
U-800	860-861	174+69	LT	8.19	878.47	179+69	LT	6.25	872.28				500			1					
U-801	860-861	174+69	LT	0.25	877.78	179+66	LT	0.25	871.79		497					1					
U-802	860-861	174+69	RT	15.75	879.39	179+55	RT	26.97	874.37				486			1					
U-803	861	179+66	LT	0.25	871.79	179+92	LT	38.1	870.75	1.8				45	1			1		1	1
U-804	861	179+55	RT	19.25	874.37	179+46	RT	40.45	873.8	1.8				24	1					1	1
U-805	861-862	179+75	LT	6.25	872.28	183+31	LT	6.25	870.96				356			1					
U-806	861-862	179+72	LT	0.25	871.79	183+31	LT	0.25	870.46		359					1					
U-807	861	179+58	RT	19.25	874.37	180+80	RT	26.97	873.11				122	7		1	1			1	
U-808	862	183+31	LT	0.25	870.46	183+30	LT	28.8	869.25	1.8				29	1			1		1	
U-809	862	183+36	LT	0.25	870.46	183+36	LT	28.8	869.25	1.8				29	1			1		1	
U-810	862-863	183+36	LT	6.25	870.96	188+50	LT	6.25	872.5				514								
U-811	862-863	183+36	LT	0.25	870.46	188+50	LT	0.25	871.65		514										
U-812	863	188+50	LT	0.25	871.65	188+50	LT	33.75	870	1.8				34	1		1	1	1		
U-813	863	188+50	LT	6.25	872.5	191+65	LT	6.25	873.33				315								
U-814	863	188+50	LT	0.25	871.65	191+92	LT	0.25	872.53		342										
U-815	863-864	191+65	LT	6.25	873.33	192+48	LT	6.25	873.16			83				1					
U-816	863-864	191+52	LT	0.25	872.53	192+50	LT	0.25	872.42			98				1					
U-817	863	192+00	LT	0.25	871.92	192+00	LT	43.9	870.3	1.8				45	1		1	1	1		
TOTALS CARRIED TO SHEETS 399-402										10.8	1712	181	2293			8	3	5	2	5	2

CALCULATED	DCB	CHECKED	JMB
ESTIMATED QUANTITIES - UNDERDRAINS			
FRA - 71 - 0.00			
963 1312			

x:\4037000\121957.16\107201\drainage\sheet\107201D0400.dgn Sheet 10/28/2019 11:12:52 AM 1458s.js

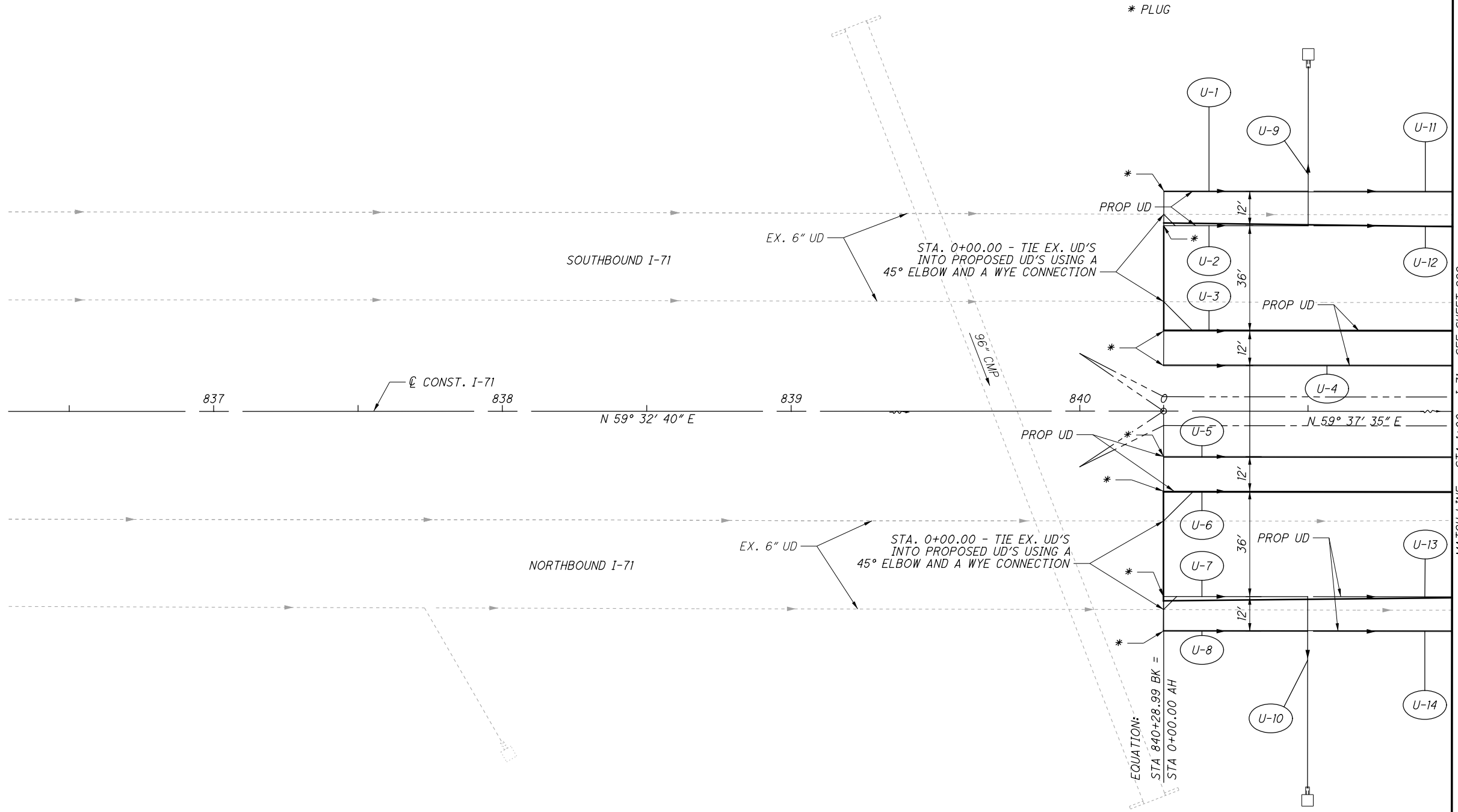
REF. NO.	SHEET NO.	STATION	SIDE	OFFSET	INVERT	STATION	SIDE	OFFSET	INVERT	BENDS AND BRANCHES FOR INFORMATION ONLY										
										TIED CONCRETE BLOCK MAT, TYPE 1	6" SHALLOW PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET	PLUG	6" X 6" TEE	6" X 6" WYE	6" X 6" CROSS	6" X 90° ELL	6" X 45° ELL
		FROM				TO				SQ YD	FT	FT	FT	EACH	NO.	NO.	NO.	NO.	NO.	NO.
U-850	666-667	168+88	LT	19.25	885.1	172+50	LT	19.25	879.81			362			1					
U-851	666-667	168+88	RT	0.25	883.59	172+50	RT	0.25	877.25		362									
U-852	666-667	168+88	RT	8.25	884.25	172+50	RT	6.25	877.73			362								
U-853	667	172+50	LT	19.25	879.81	172+50	LT	59.98	875.5	1.8			41	1					1	
U-854	667	172+50	RT	0.25	877.25	172+50	RT	36.75	875.64	1.8			37	1			1		1	
U-855	667	172+52	LT	19.25	879.81	176+08	LT	25.63	871.85			356	6		1				1	
U-856	667	172+52	RT	0.25	877.25	174+73	RT	0.25	872.16		221				1					
U-857	667	172+52	RT	6.25	877.73	174+77	RT	6.25	872.57			225			1					
U-858	667	174+73	RT	0.25	872.16	174+96	RT	31.5	870.1	1.8			38	1			1		1	1
U-859	667	174+80	RT	0.25	872.16	177+00	RT	0.25	868.55		220				1					
U-860	667	174+84	RT	6.25	872.57	177+00	RT	6.74	869.07			216			1					
U-861	667	177+00	RT	0.25	868.55	177+00	RT	28.5	868.25	1.8			29	1		1	1	1		
U-862	668	177+00	RT	0.25	868.55	178+10	RT	0.25	869.05		110				1					
U-863	668	177+00	RT	6.25	869.07	178+10	RT	6.25	869.56			110			1					
U-864	668	178+14	RT	0.25	869.05	178+14	RT	25.25	868.7	1.8			25	1			1		1	
U-865	668	178+14	RT	0.25	869.05	180+13	RT	0.25	870.65		199				1					
U-866	668	178+14	RT	6.25	869.56	180+13	RT	6.25	870.82			199			1					
U-867	668	180+17	RT	0.25	870.65	180+17	RT	29.4	869.7	1.8			30	1			1		1	
U-868	668-669	180+17	RT	0.25	870.65	185+70	RT	0.25	868.91		553									
U-869	668-669	180+17	RT	6.25	870.82	185+70	RT	6.25	869.67			553								
U-870	669	185+70	RT	0.25	868.91	185+70	RT	45.3	867.85	1.8			46	1			1		1	

TOTALS CARRIED TO SHEETS 399-402

12.6 1665 2383 252 7 10 1 6 1 7 1

CALCULATED: DCB
 CHECKED: JMB
ESTIMATED QUANTITIES - UNDERDRAINS
FRA - 71 - 0.00
 964
 1312

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CALCULATED MAH
CHECKED CTW

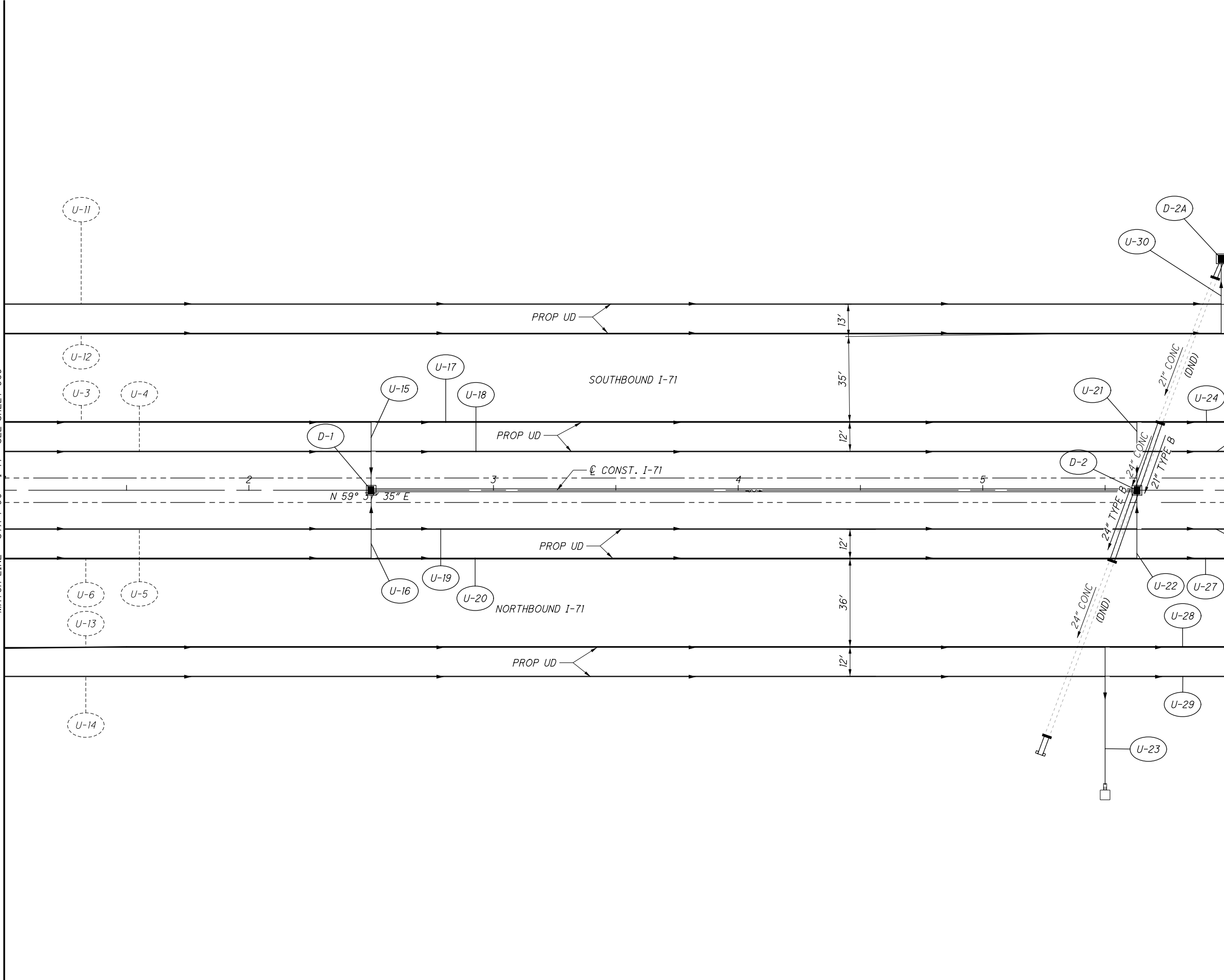
UNDERDRAIN PLAN - I-71
STA 837+00 TO STA 1+00

FRA - 71 - 0.00

965
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DP002.dgn_Sheet 10/28/2019 11:12:53 AM 1458s.js

MATCH LINE - STA 1+00 - I-71 - SEE SHEET 965



MATCH LINE - STA 6+00 - I-71 - SEE SHEET 967

CALCULATED
MAH
CHECKED
CTW

0 20 40
HORIZONTAL
SCALE IN FEET

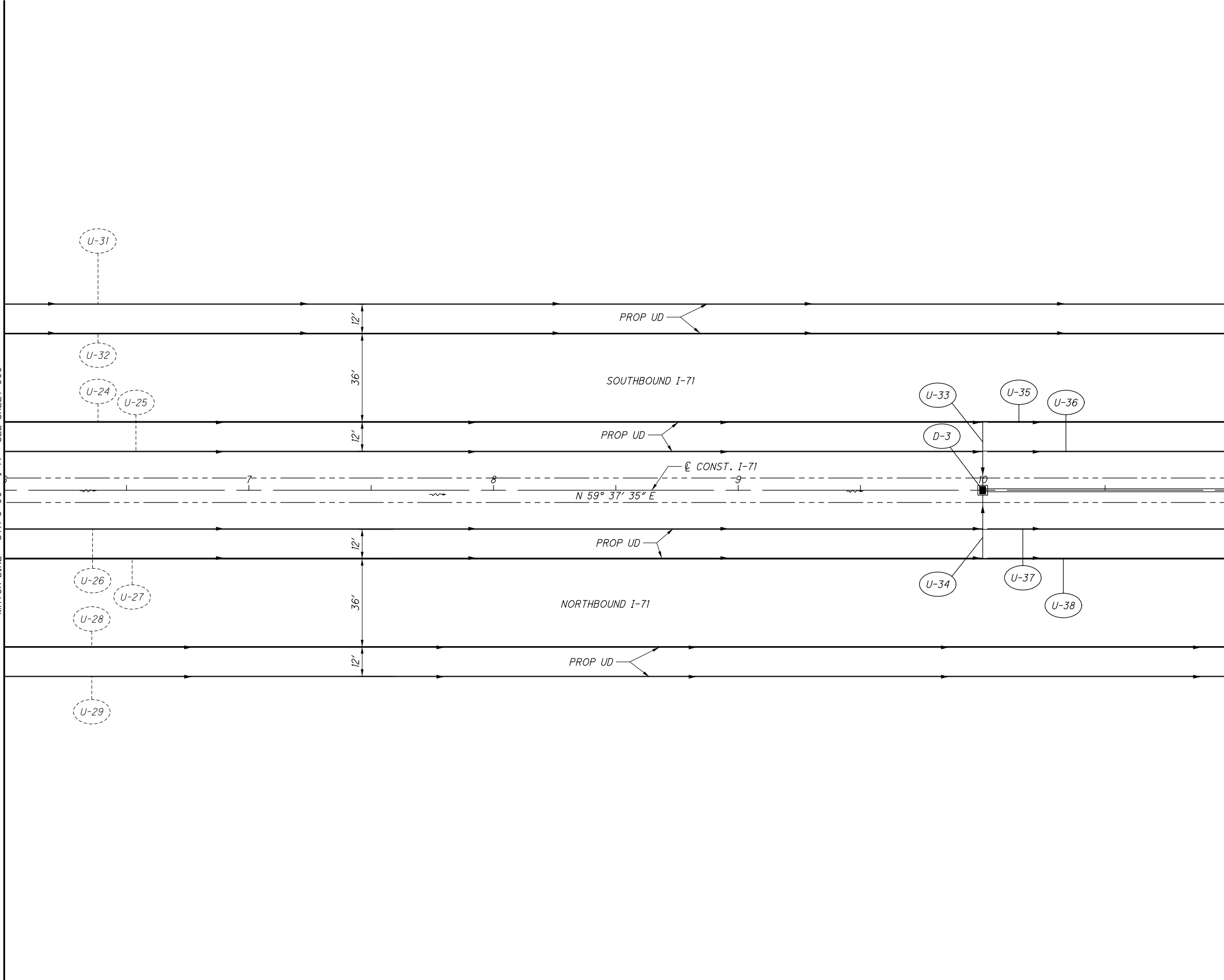
UNDERDRAIN PLAN - I-71
STA 1+00 TO STA 6+00

FRA - 71 - 0.00

966
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DP003.dgn_Sheet 10/28/2019 11:12:54 AM 1458s.js

MATCH LINE - STA 6+00 - I-71 - SEE SHEET 966



MATCH LINE - STA 11+00 - I-71 - SEE SHEET 968

CALCULATED	MAH
CHECKED	CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 6+00 TO STA 11+00

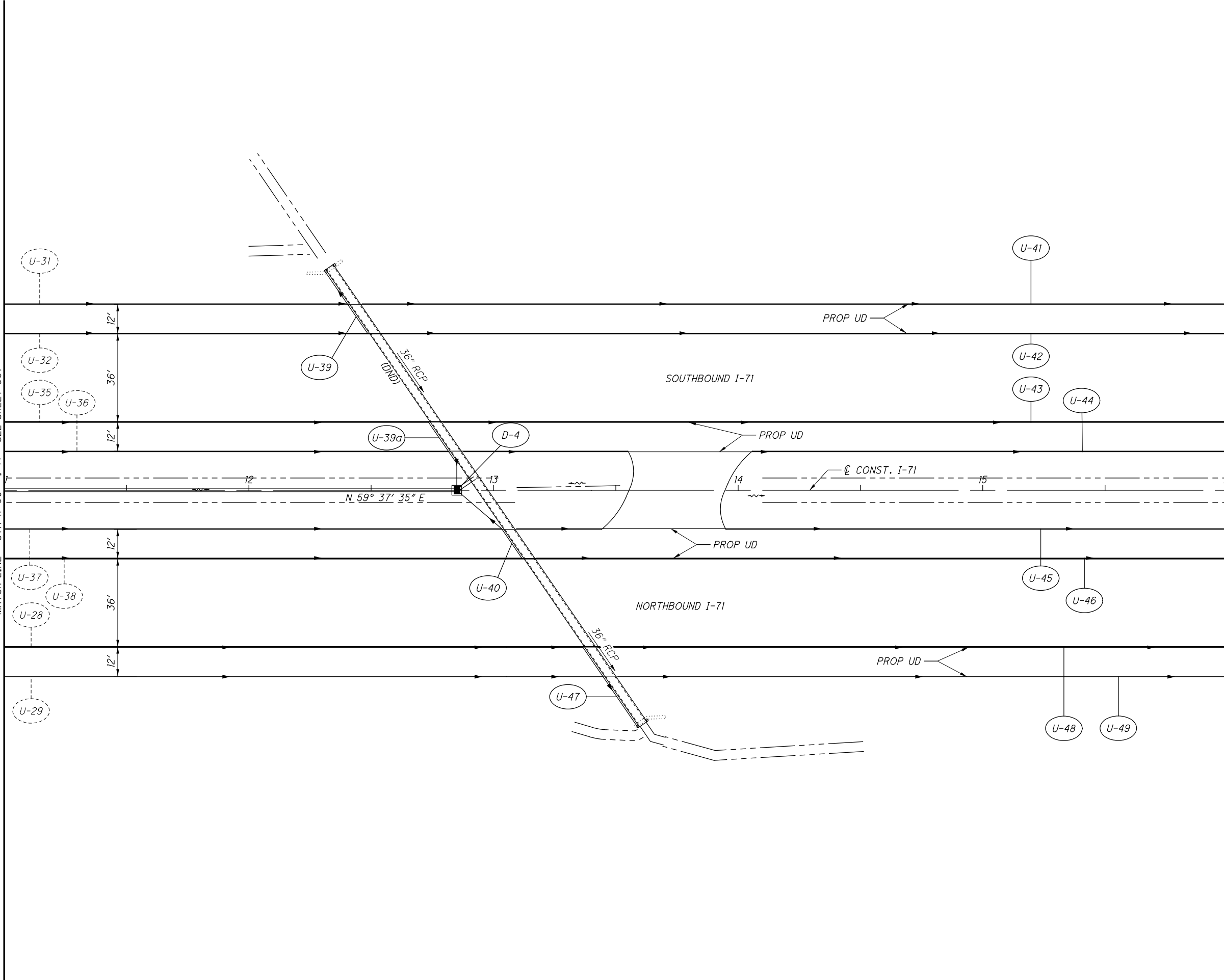
FRA - 71 - 0.00

967
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DP004.dgn_Sheet 10/28/2019 11:12:54 AM 1458s.js

MATCH LINE - STA 11+00 - I-71 - SEE SHEET 967

MATCH LINE - STA 16+00 - I-71 - SEE SHEET 969



CALCULATED	MAH
CHECKED	CTW

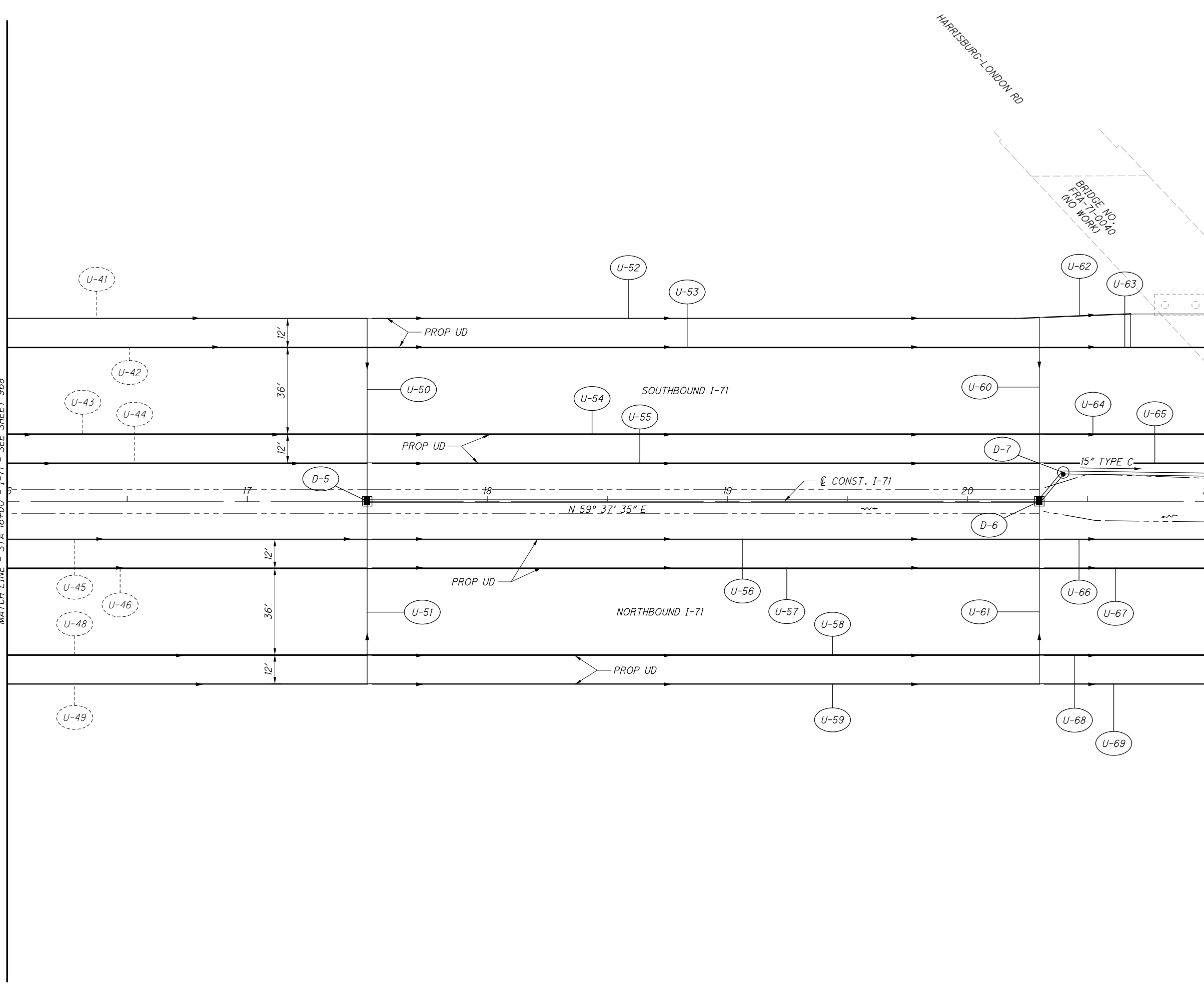
0 20 40
HORIZONTAL
SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 11+00 TO STA 16+00

FRA - 71 - 0.00

968
1312

MATCH LINE - STA 16+00 - I-71 - SEE SHEET 968



MATCH LINE - STA 21+00 - I-71 - SEE SHEET 970

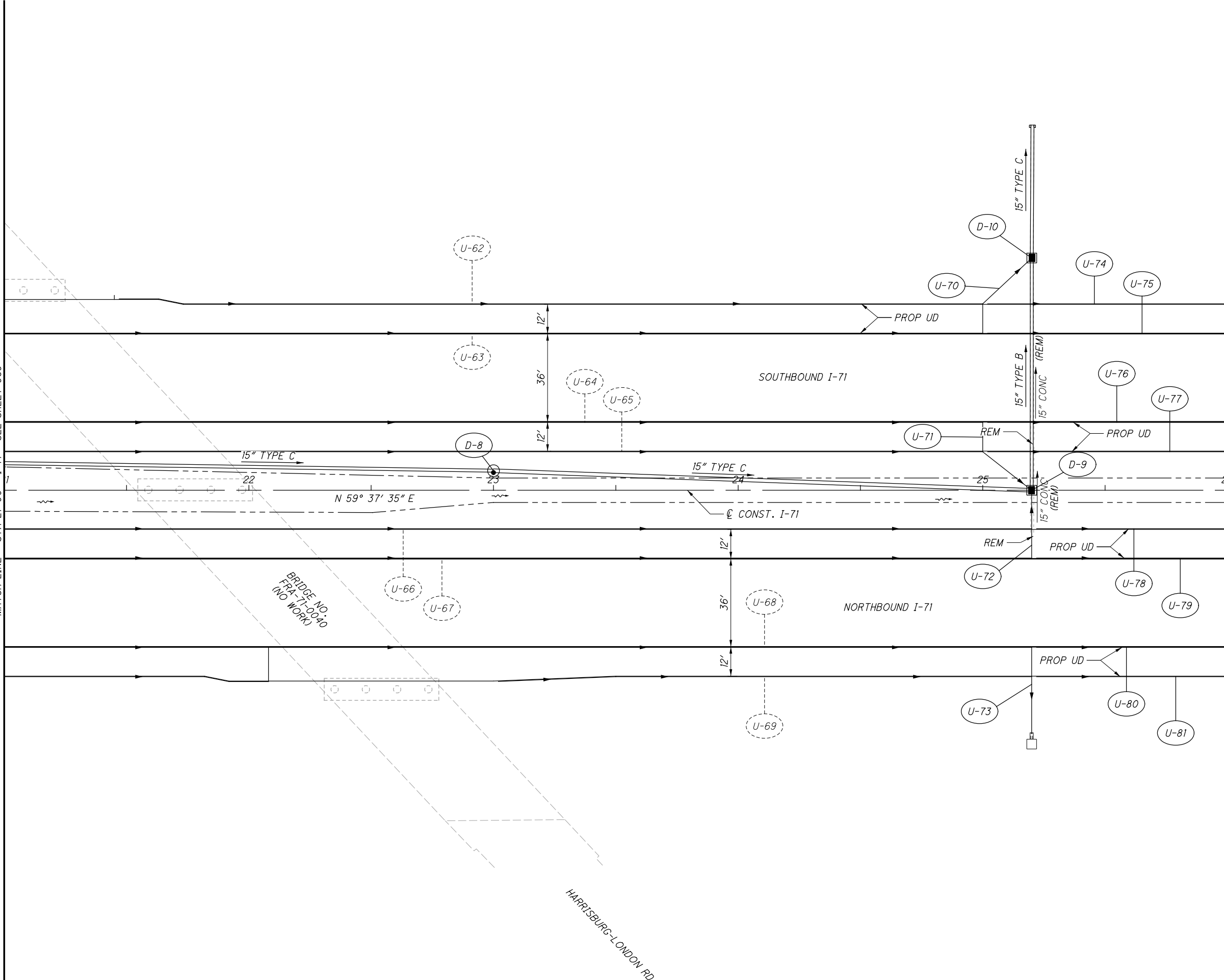
CALCULATED	MAH	CHECKED	CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 16+00 TO STA 21+00

FRA-71-0.00

MATCH LINE - STA 21+00 - I-71 - SEE SHEET 969



BRIDGE NO. 40
FRA-71-0040
(NO WORK)

HARRISBURG-LONDON RD

MATCH LINE - STA 26+00 - I-71 - SEE SHEET 971

CALCULATED	MAH
CHECKED	CTW

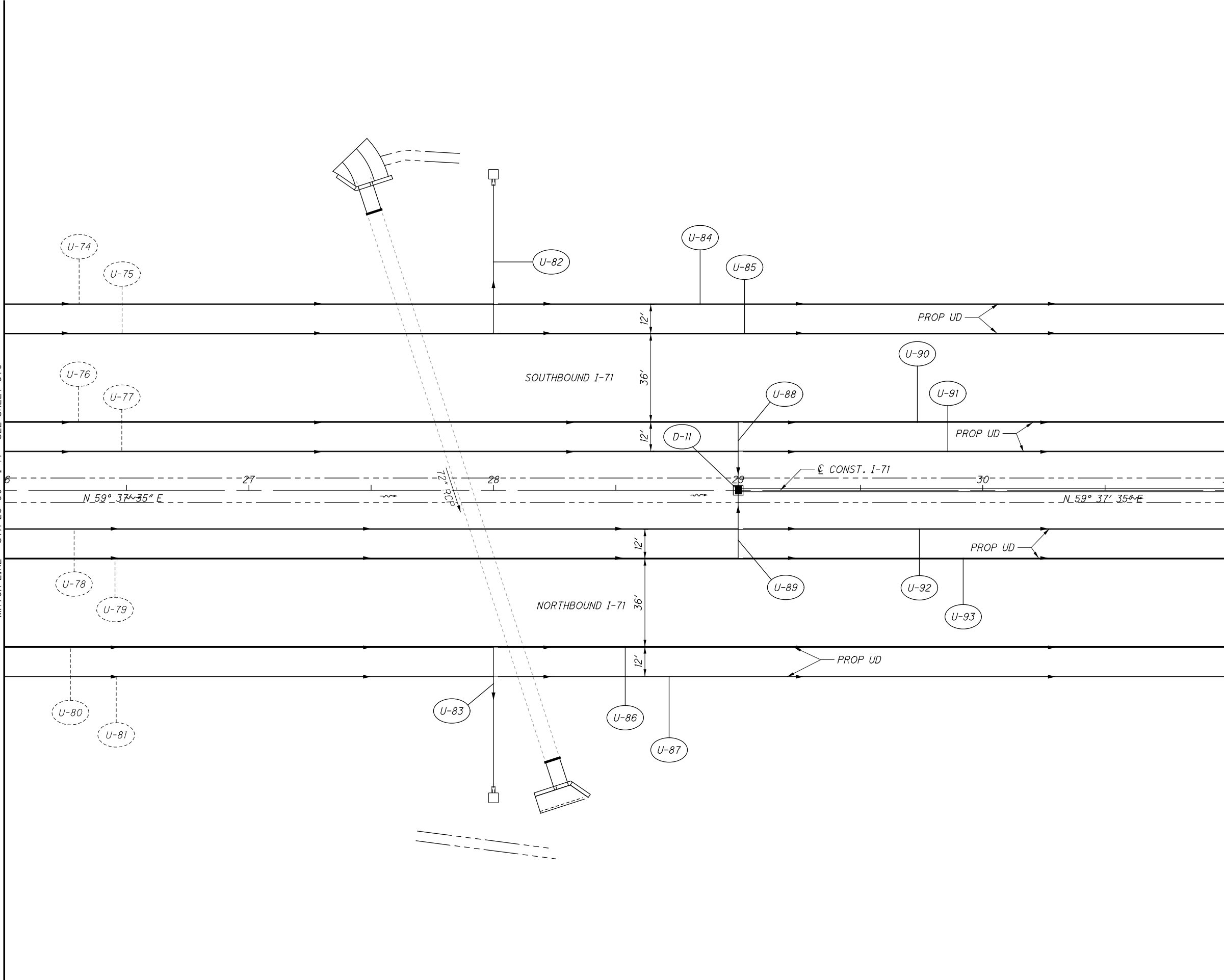
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 21+00 TO STA 26+00

FRA-71-0.00

MATCH LINE - STA 26+00 - I-71 - SEE SHEET 970

MATCH LINE - STA 31+00 - I-71 - SEE SHEET 972



CALCULATED	MAH	CHECKED	CTW

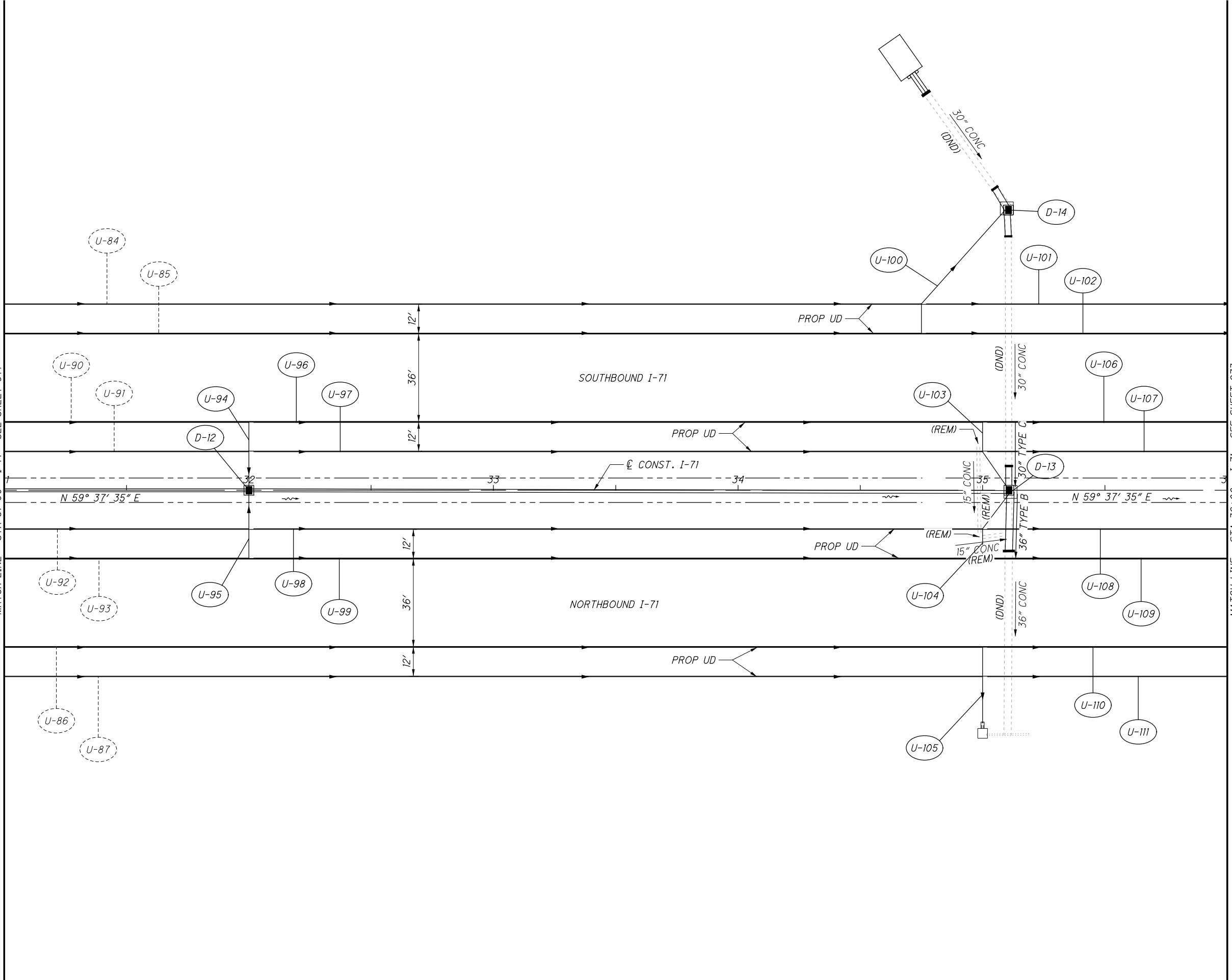
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 26+00 TO STA 31+00

FRA - 71 - 0.00

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MATCH LINE - STA 31+00 - I-71 - SEE SHEET 971



MATCH LINE - STA 36+00 - I-71 - SEE SHEET 973

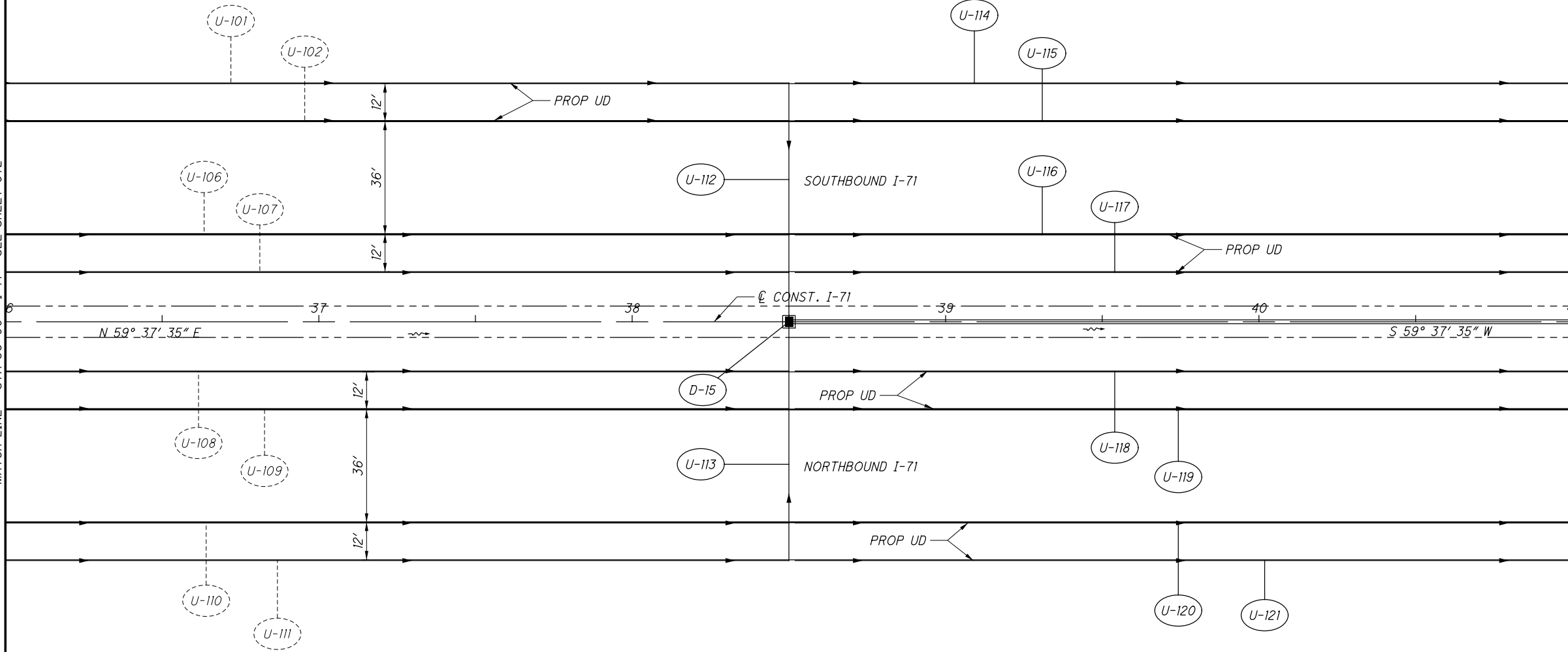
CALCULATED	MAH
CHECKED	CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 31+00 TO STA 36+00

FRA-71-0.00

MATCH LINE - STA 36+00 - I-71 - SEE SHEET 972



MATCH LINE - STA 41+00 - I-71 - SEE SHEET 974

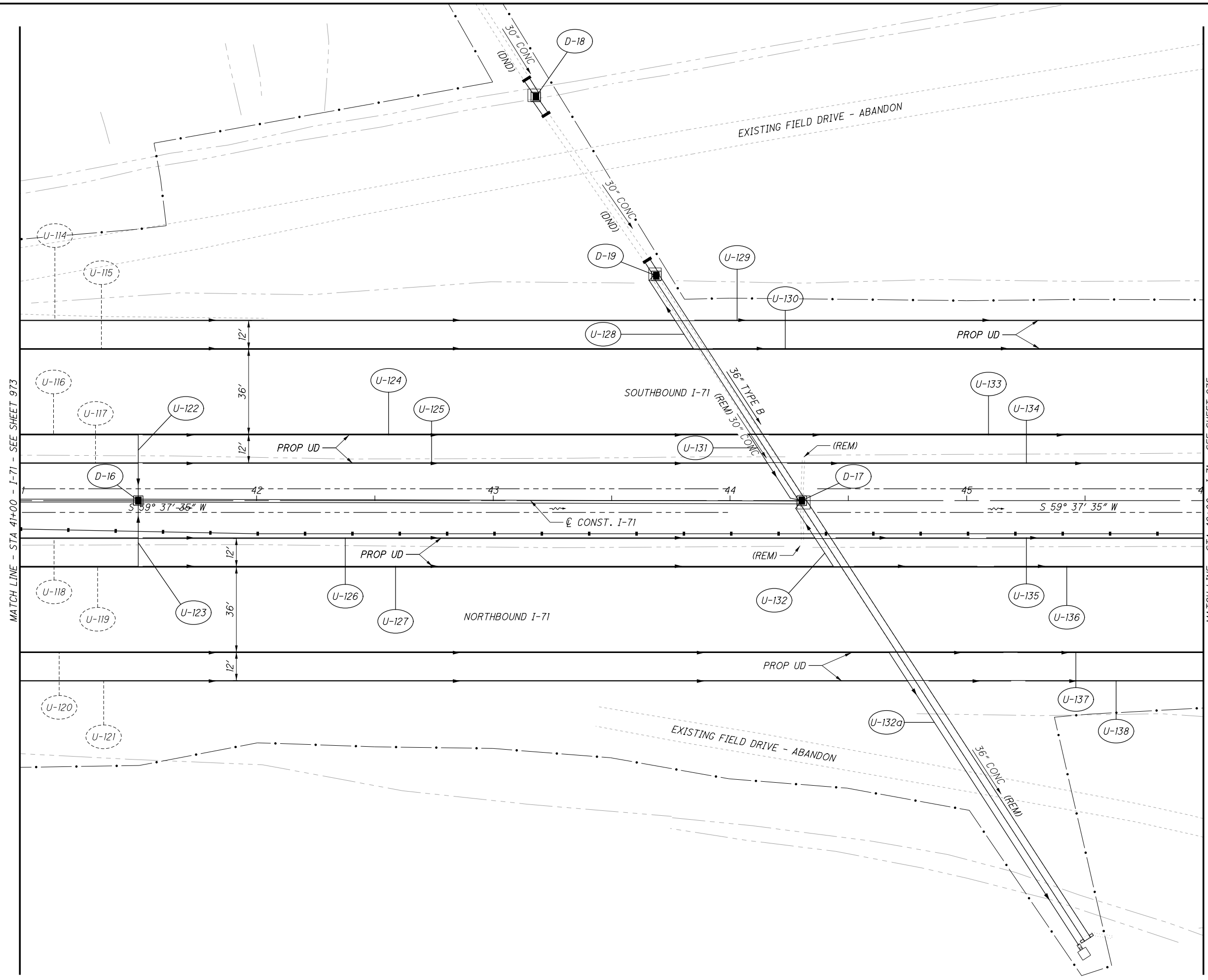
CALCULATED	MAH
CHECKED	CTW

0 20 40
HORIZONTAL
SCALE IN FEET

**UNDERDRAIN PLAN - I-71
STA 36+00 TO STA 41+00**

FRA - 71 - 0.00

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MATCH LINE - STA 41+00 - I-71 - SEE SHEET 973

MATCH LINE - STA 46+00 - I-71 - SEE SHEET 975

CALCULATED
DCB
CHECKED
JMB

0 20 40
HORIZONTAL
SCALE IN FEET

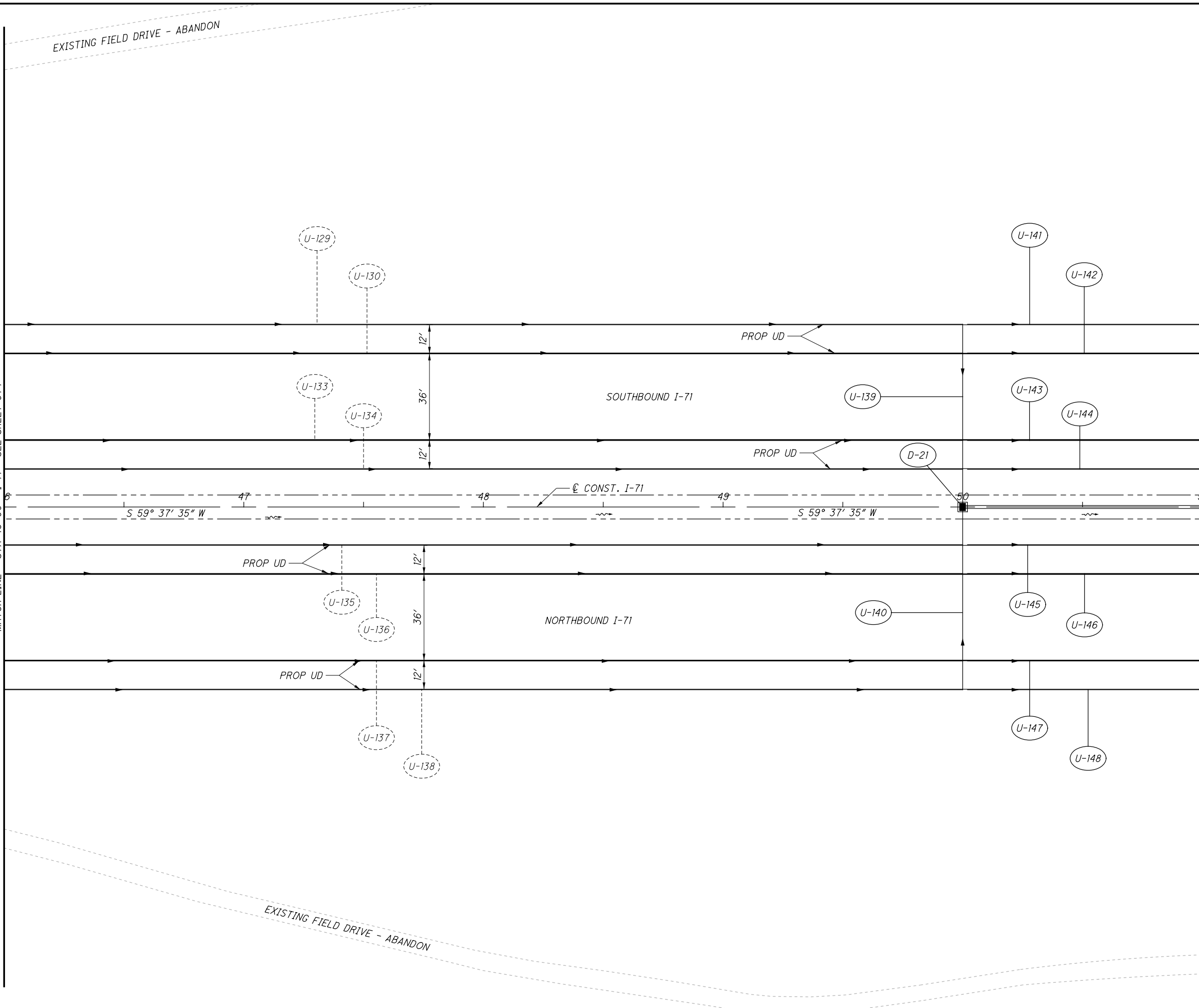
UNDERDRAIN PLAN - I-71
STA 41+00 TO STA 46+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DP011.dgn Sheet 10/28/2019 11:13:01 AM 1458s.js

MATCH LINE - STA 46+00 - I-71 - SEE SHEET 974

MATCH LINE - STA 51+00 - I-71 - SEE SHEET 976



CALCULATED MAH
CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

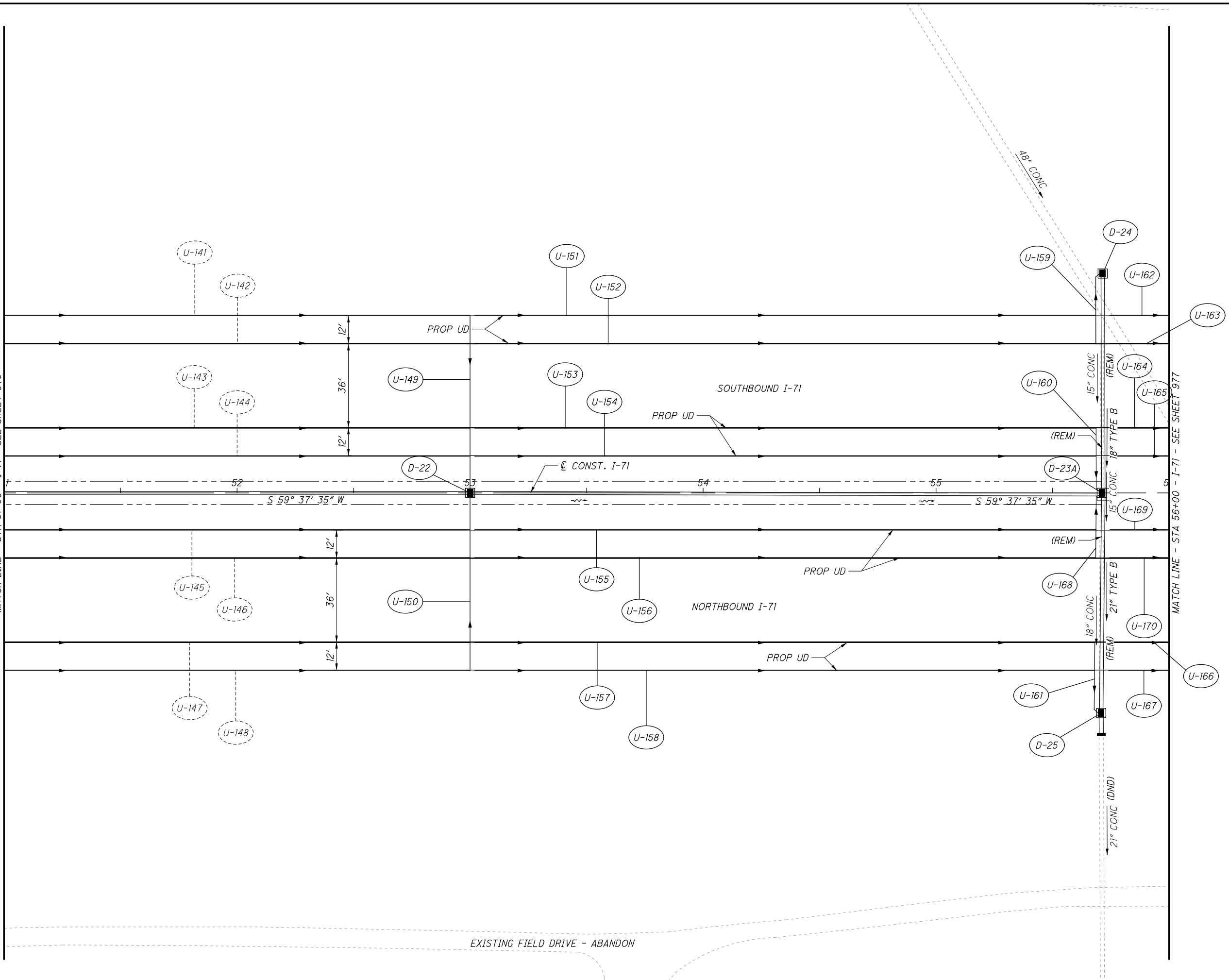
UNDERDRAIN PLAN - I-71
STA 46+00 TO STA 51+00

FRA - 71 - 0.00

975
1312

X:\4037000\121957.16\107201\drainage\sheets\107201D012.dgn Sheet 10/28/2019 11:13:01 AM 1458s.js

MATCH LINE - STA 51+00 - I-71 - SEE SHEET 975



EXISTING FIELD DRIVE - ABANDON

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 977

CALCULATED MAH CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 51+00 TO STA 56+00

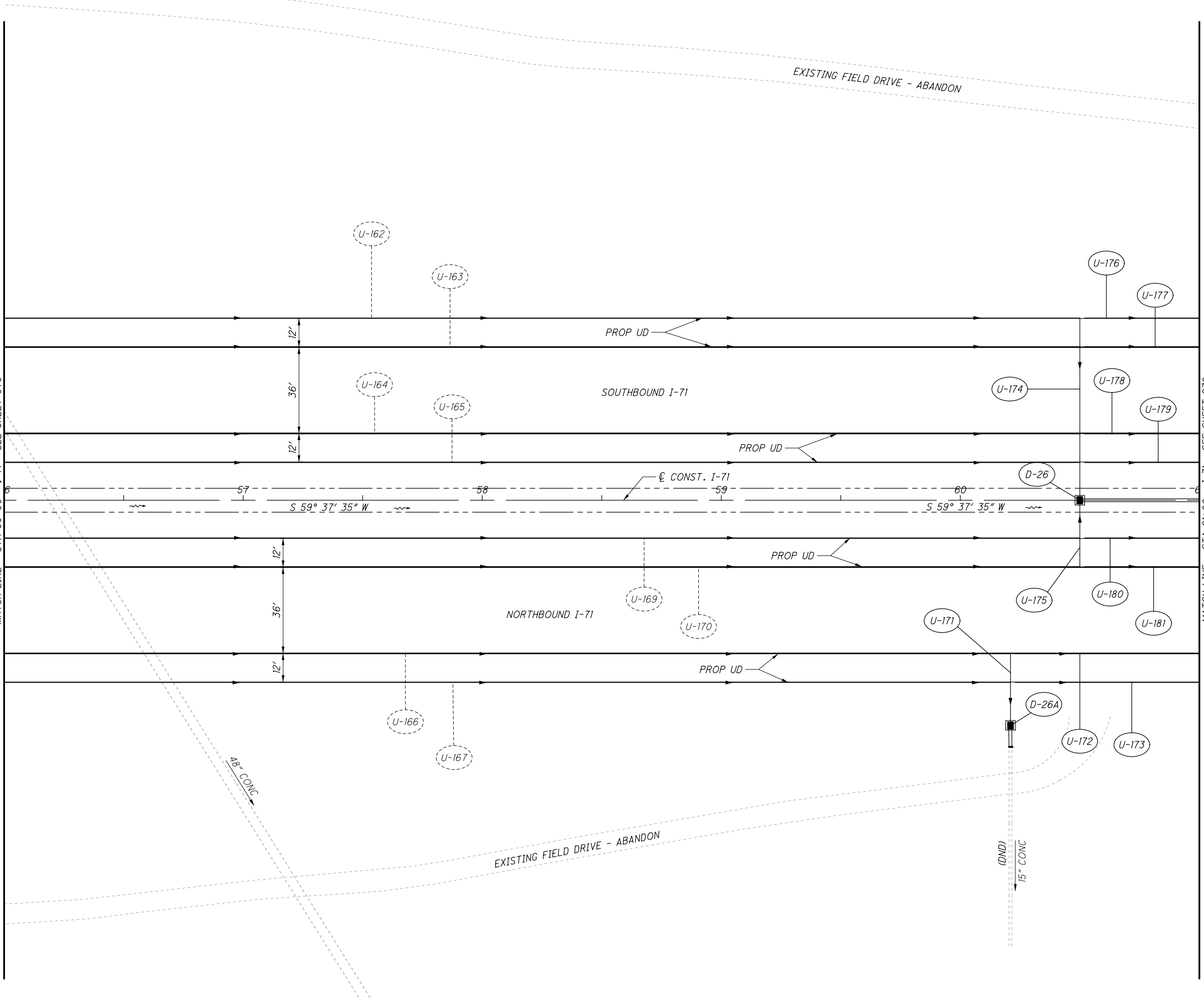
FRA - 71 - 0.00

976
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DP013.dgn Sheet 10/28/2019 11:13:02 AM 14588.js

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 976

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 978



CALCULATED MAH
CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

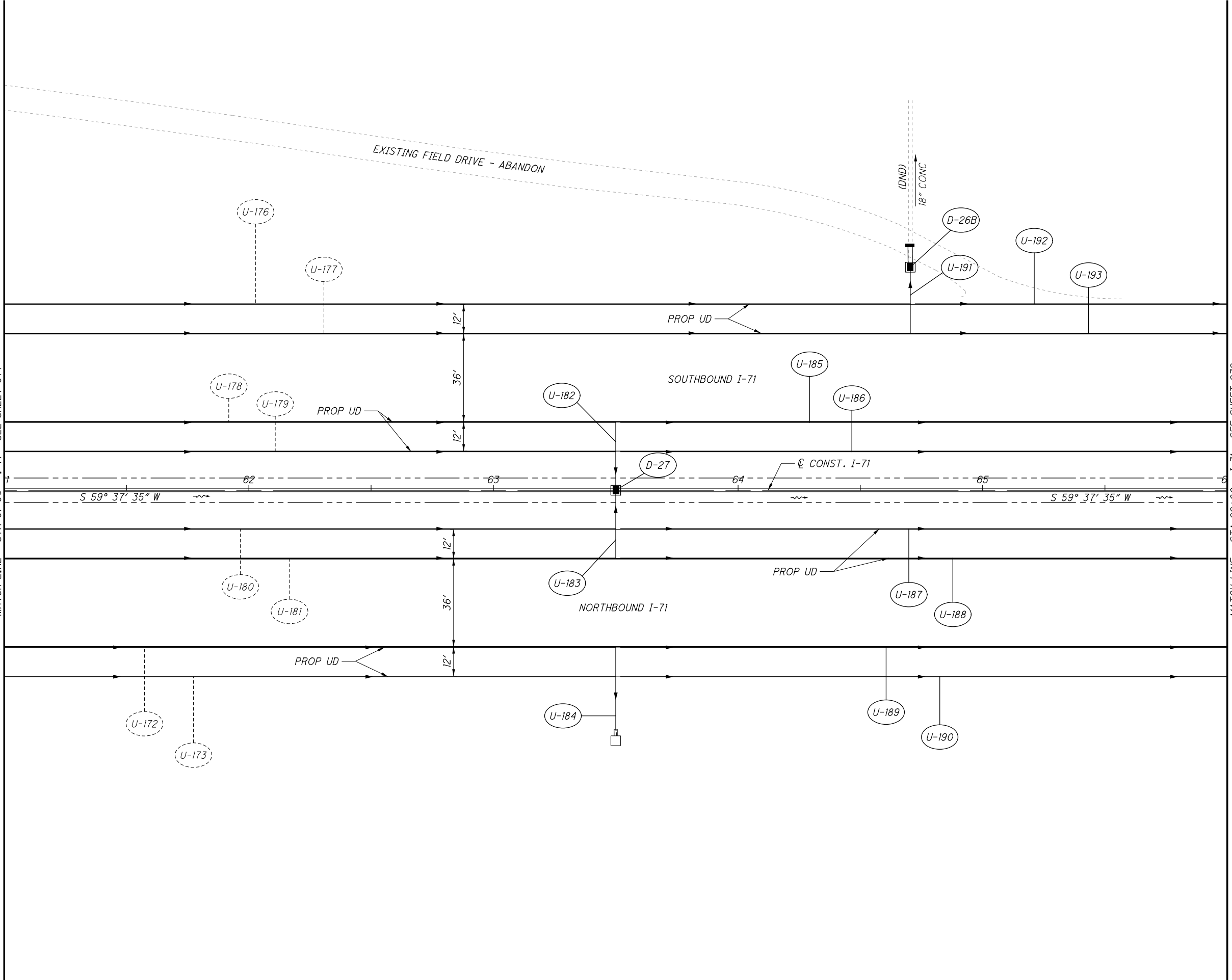
UNDERDRAIN PLAN - I-71
STA 56+00 TO STA 61+00

FRA - 71 - 0.00

977
1312

X:\4037000\121957.16\107201\drainage\sheets\107201D\014.dgn Sheet 10/28/2019 11:13:02 AM 1458sjs

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 977



MATCH LINE - STA 66+00 - I-71 - SEE SHEET 979

CALCULATED MAH
 CHECKED CTW

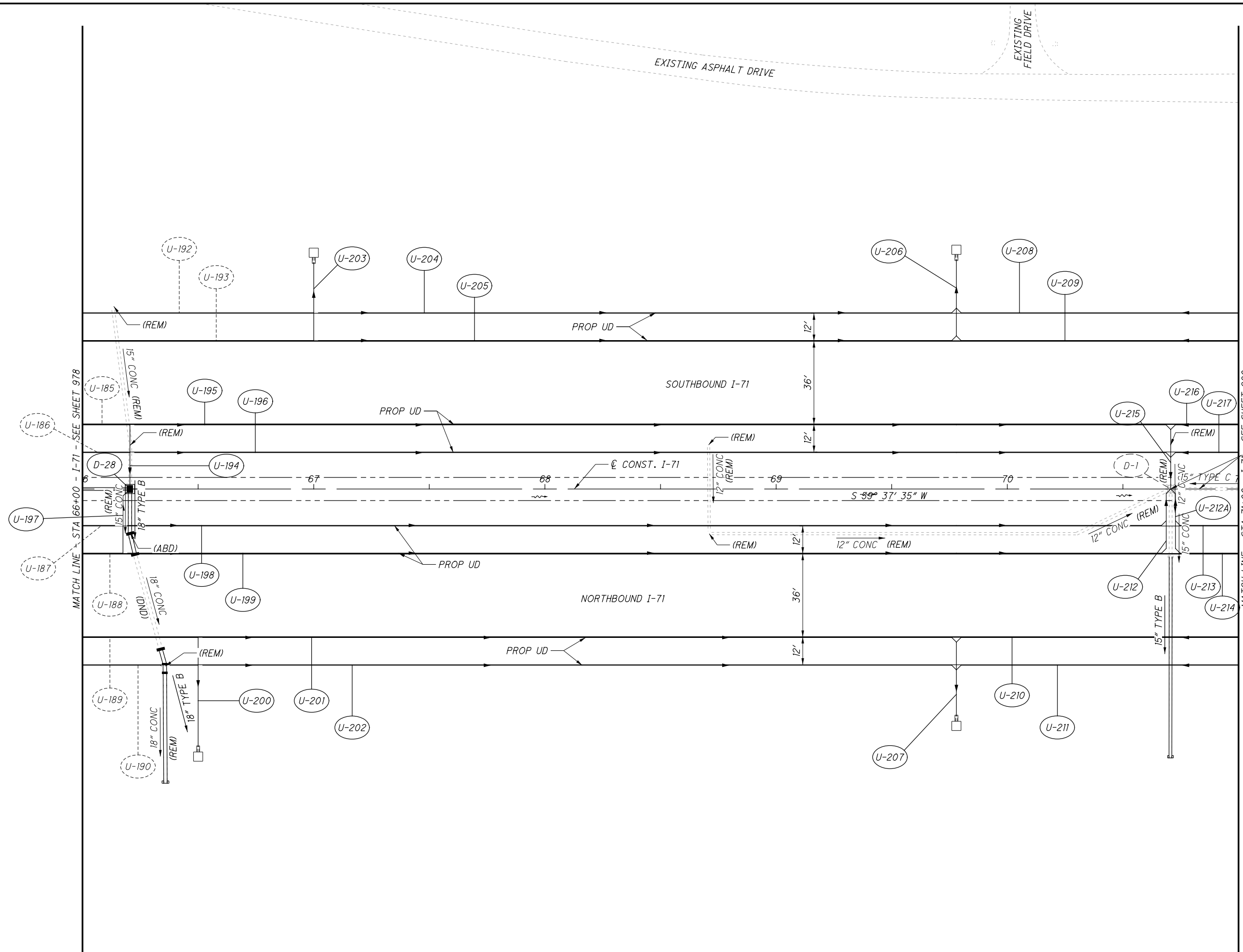
0 20 40
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 61+00 TO STA 66+00

FRA - 71 - 0.00

978
 1312

X:\4037000\121957.16\107201\drainage\sheets\107201DPO15.dgn Sheet 10/28/2019 11:13:02 AM 14585.js



CATCH BASIN AND
15" STORM PIPE
CONSTRUCTED AS
PART OF THE
FRA-71-1.53
PROJECT

CALCULATED MAH CHECKED CTW

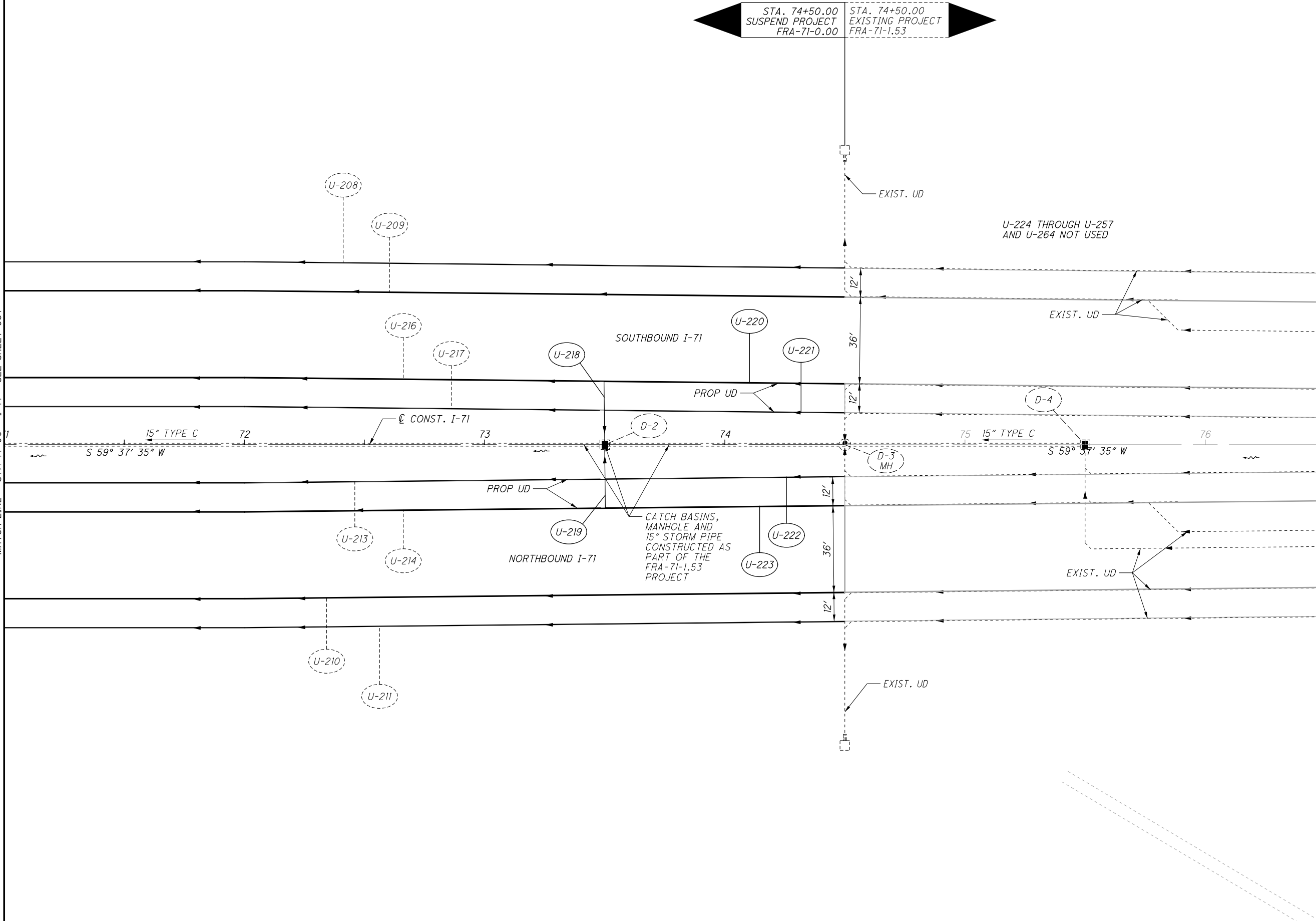
0 20 40
10
HORIZONTAL
SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 66+00 TO STA 71+00

FRA-71-0.00

979
1312

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 937



CALCULATED MAH
 CHECKED CTW

0 20 40
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
 STA 71+00 TO STA 76+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DP020.dgn Sheet 10/28/2019 11:13:03 AM 1458s1s

STA. 94+00.00
EXISTING PROJECT
FRA-71-1.53

STA. 94+00.00
RESUME PROJECT
FRA-71-0.00



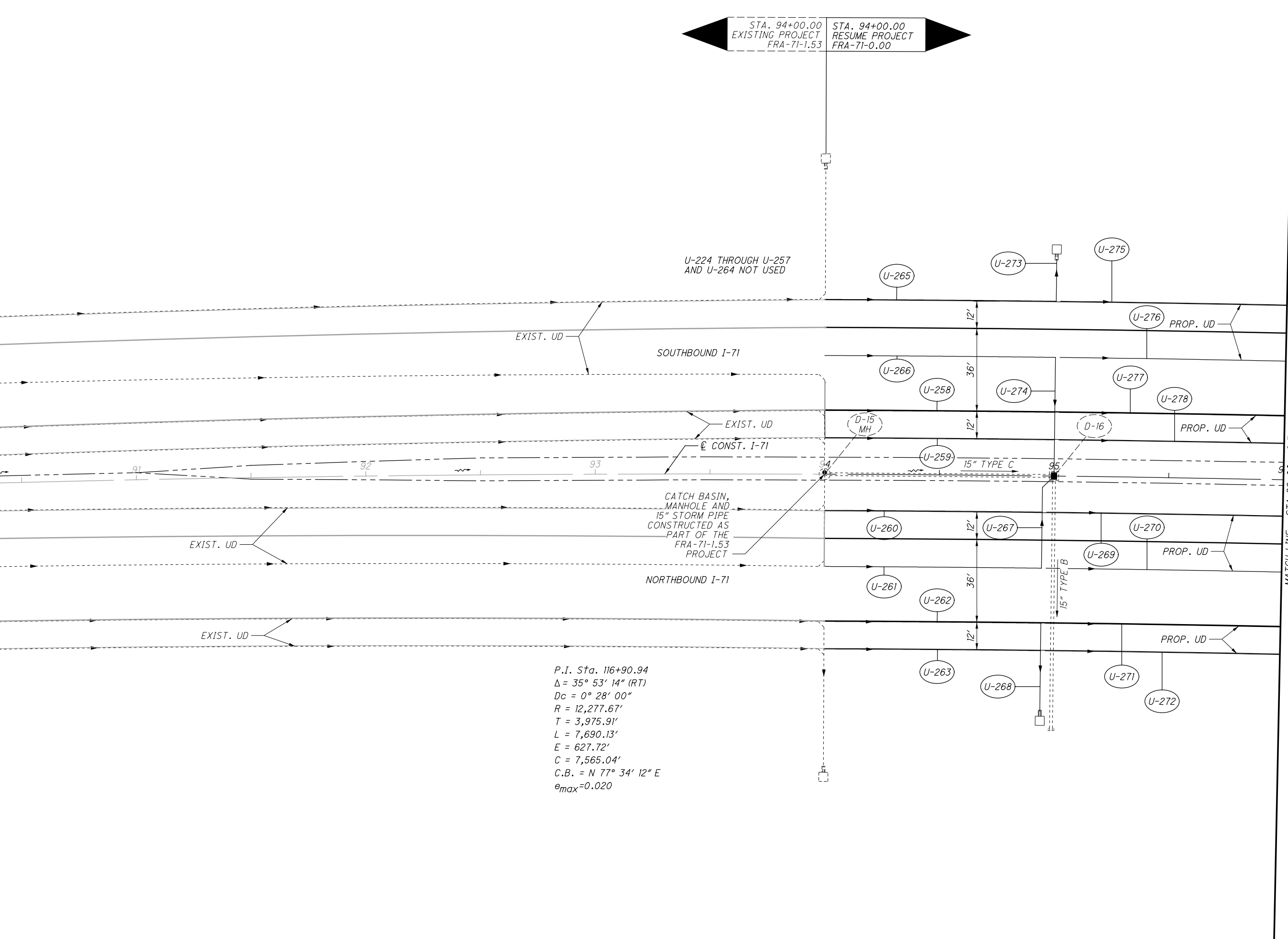
CALCULATED
MAH
CHECKED
CTW

UNDERDRAIN PLAN - I-71
STA 91+00 TO STA 96+00

FRA-71-0.00

981
1312

U-224 THROUGH U-257
AND U-264 NOT USED

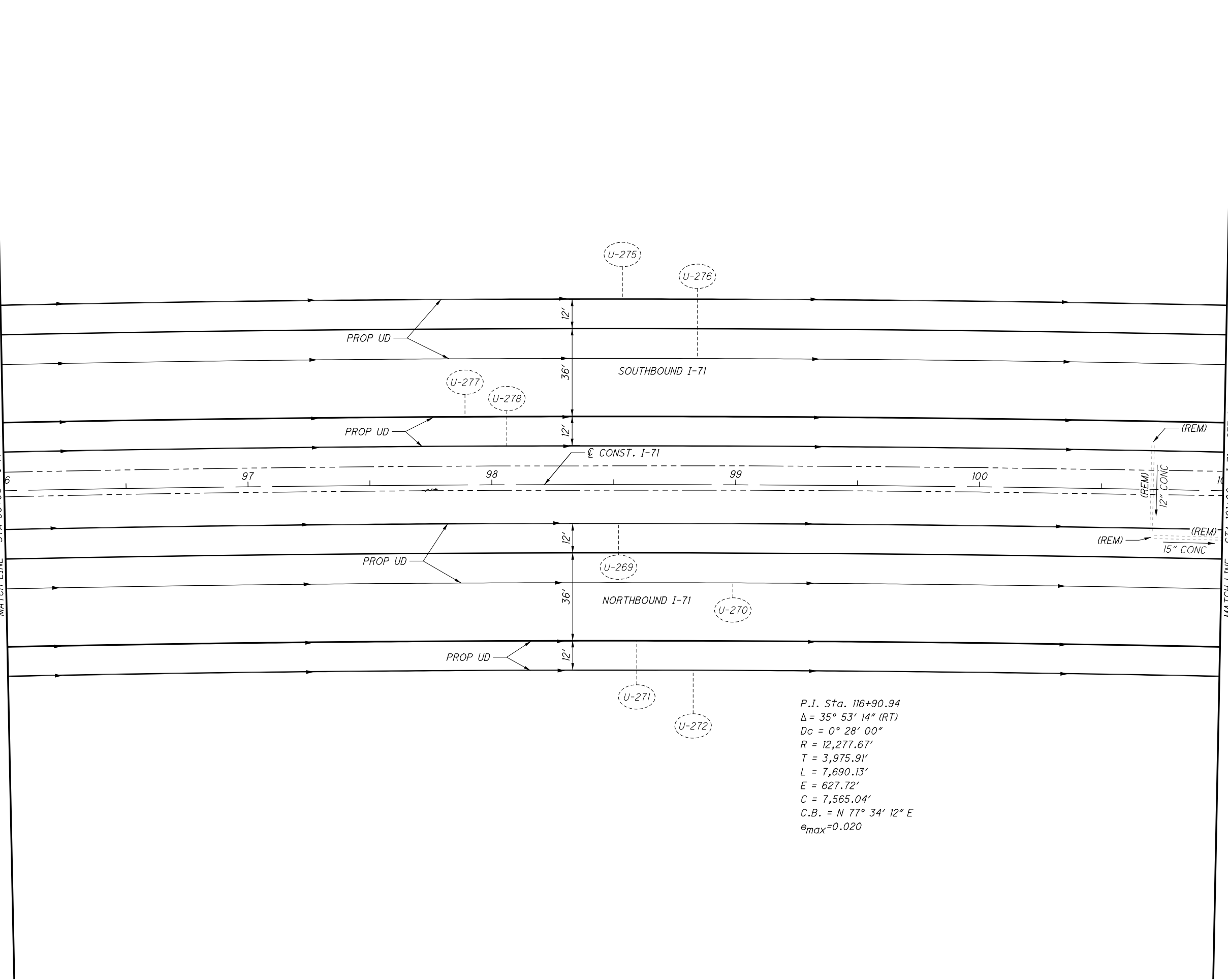


CATCH BASIN,
MANHOLE AND
15" STORM PIPE
CONSTRUCTED AS
PART OF THE
FRA-71-1.53
PROJECT

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
C.B. = N $77^\circ 34' 12''$ E
 $e_{max} = 0.020$

MATCH LINE - STA 96+00 - I-71 - SEE SHEET 941

MATCH LINE - STA 96+00 - I-71 - SEE SHEET 981



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

MATCH LINE - STA 101+00 - I-71 - SEE SHEET 983

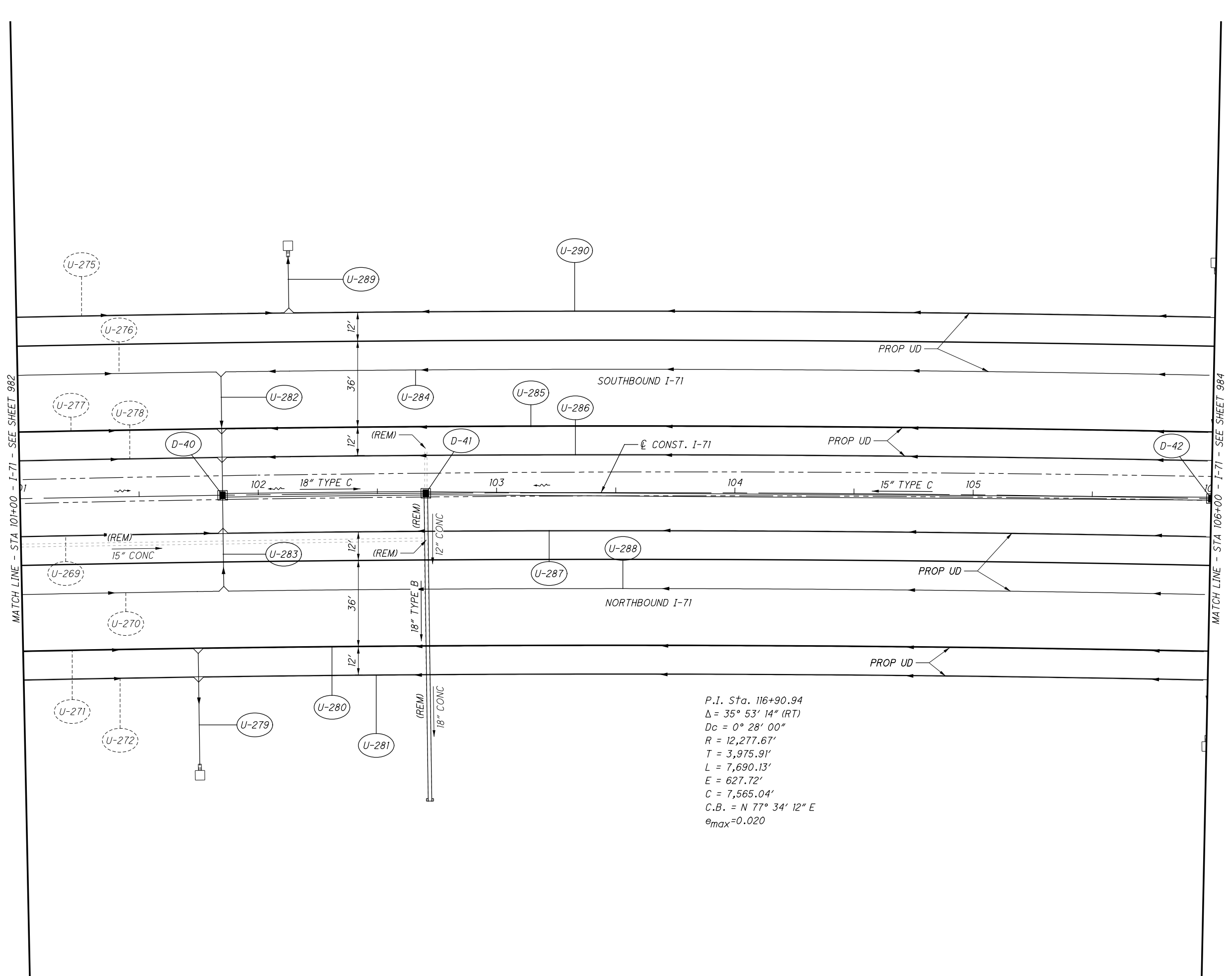
CALCULATED MAH
 CHECKED CTW

0 20 40
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 96+00 TO STA 101+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DP022.dgn_Sheet 10/28/2019 11:13:04 AM 1458s.js



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

MATCH LINE - STA 101+00 - I-71 - SEE SHEET 982

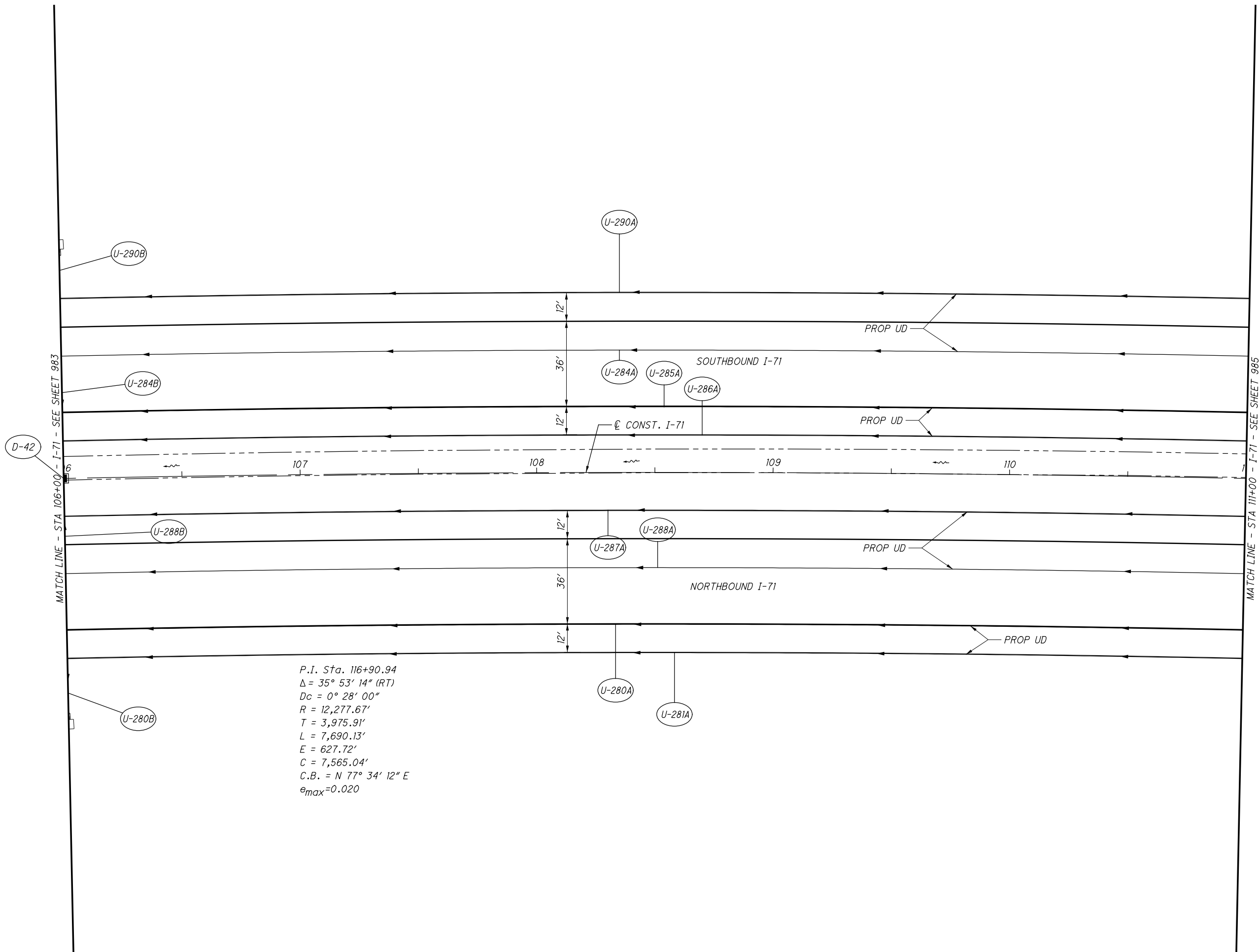
MATCH LINE - STA 106+00 - I-71 - SEE SHEET 984

CALCULATED MAH
 CHECKED CTW

0 20 40
 HORIZONTAL SCALE IN FEET

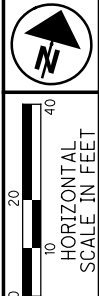
UNDERDRAIN PLAN - I-71
STA 101+00 TO STA 106+00

FRA - 71 - 0.00



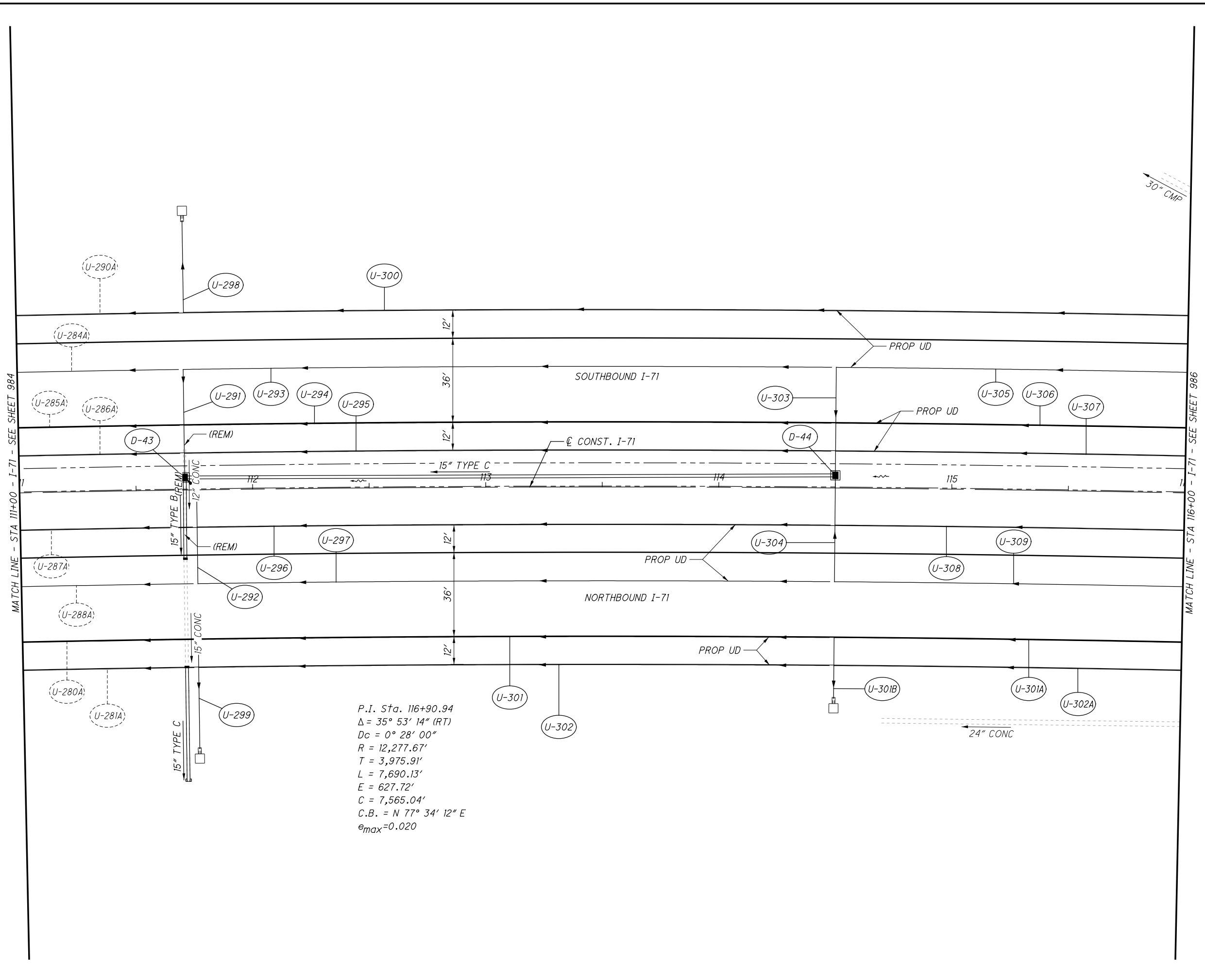
P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 C.B. = N $77^\circ 34' 12''$ E
 $e_{max} = 0.020$

CALCULATED MAH
 CHECKED CTW



UNDERDRAIN PLAN - I-71
STA 106+00 TO STA 111+00

FRA - 71 - 0.00



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

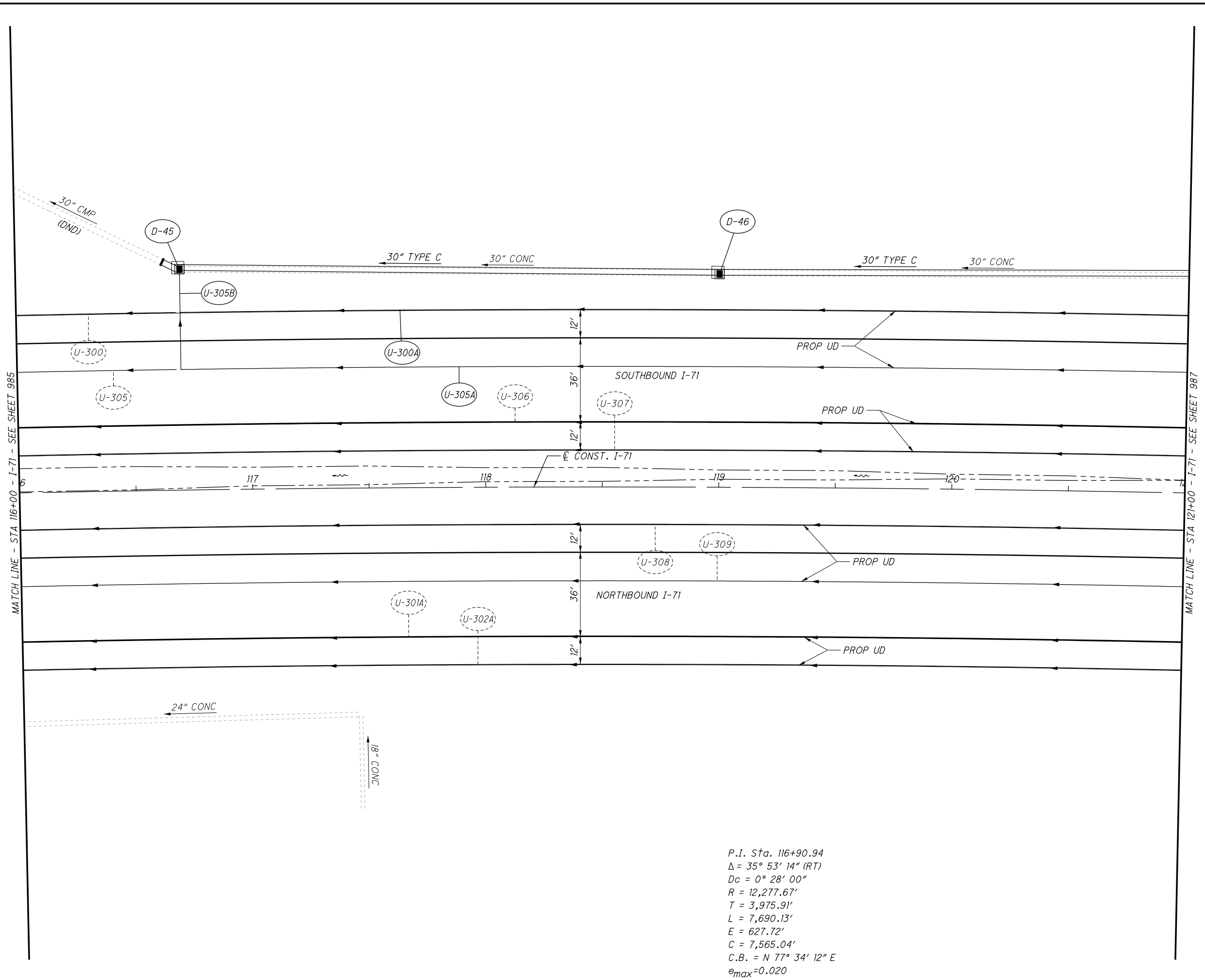
CALCULATED MAH CHECKED CTW

0 20 40
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 116+00 TO STA 121+00

FRA-71-0.00

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P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
C.B. = N $77^\circ 34' 12''$ E
 $e_{max} = 0.020$

CALCULATED MAH CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

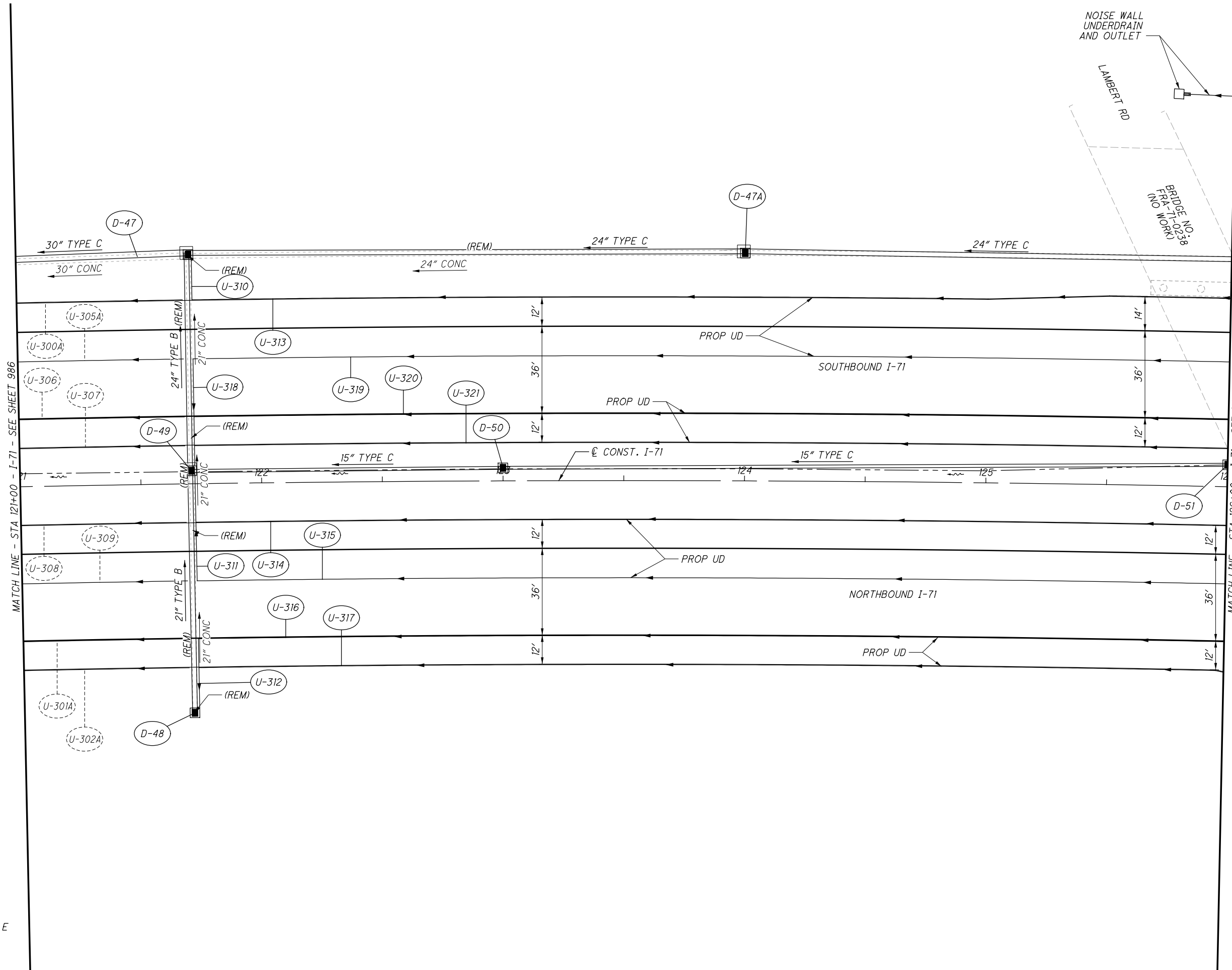
UNDERDRAIN PLAN - I-71
STA 116+00 TO STA 121+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DPO26.dgn_Sheet 10/28/2019 11:13:06 AM 1458s.js

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

MATCH LINE - STA 121+00 - I-71 - SEE SHEET 986



MATCH LINE - STA 126+00 - I-71 - SEE SHEET 988

NOISE WALL UNDERDRAIN AND OUTLET

LAMBERT RD

BRIDGE NO: 8
 FRA-71-0238
 (NO WORK)

SEE NOISE WALL PLANS FOR UD DETAILS AND QUANTITIES

CALCULATED MAH CHECKED CTW

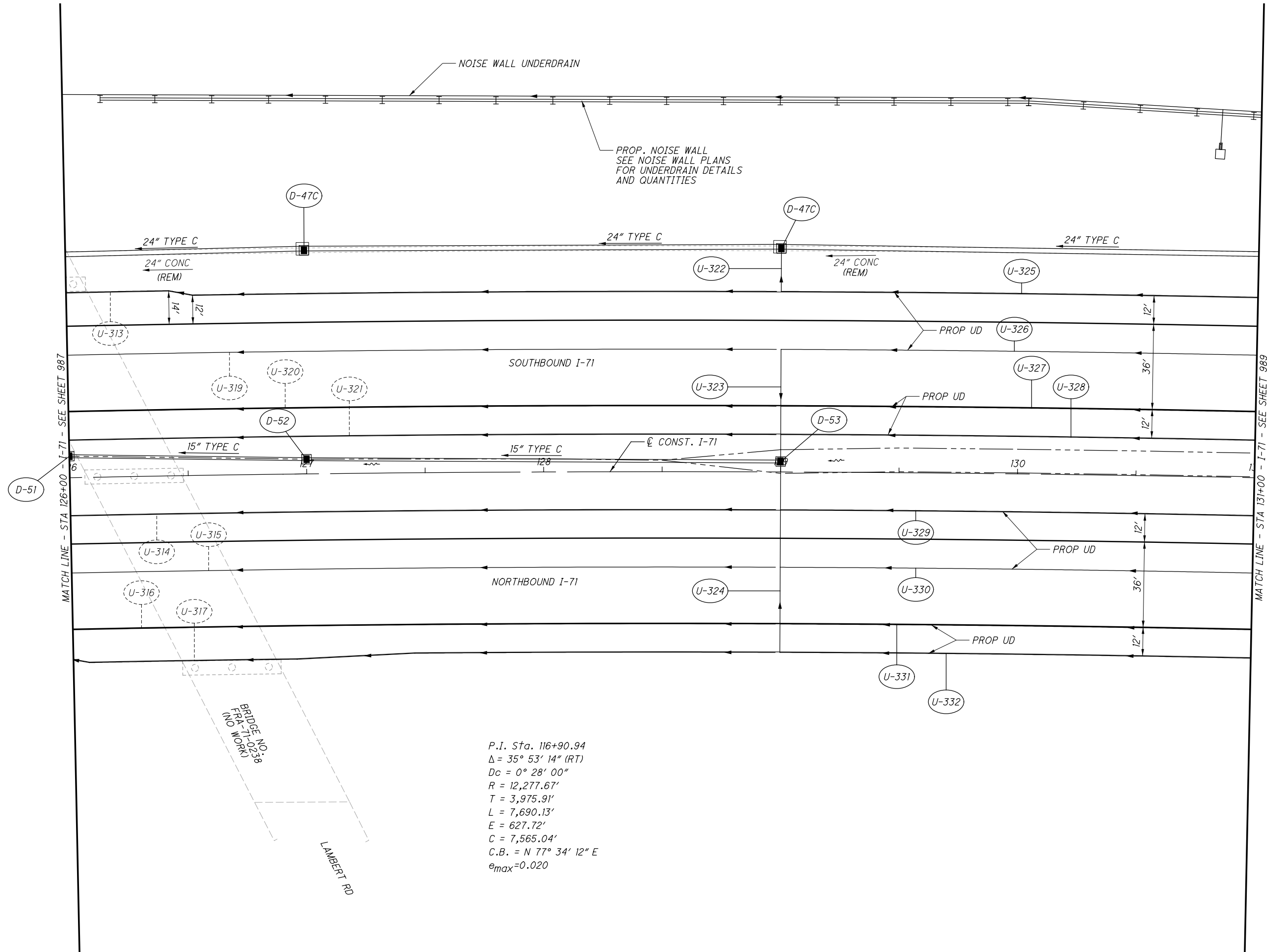
0 20 40
 10 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 121+00 TO STA 126+00

FRA-71-0.00

987
 1312

X:\4037000\121957.16\107201\drainage\sheets\107201DPO27.dgn_Sheet 10/28/2019 11:13:06 AM 1458s.js



MATCH LINE - STA 126+00 - I-71 - SEE SHEET 987

MATCH LINE - STA 131+00 - I-71 - SEE SHEET 989

BRIDGE NO. 38
FRA-71-0238
(NO WORK)

LAMBERT RD

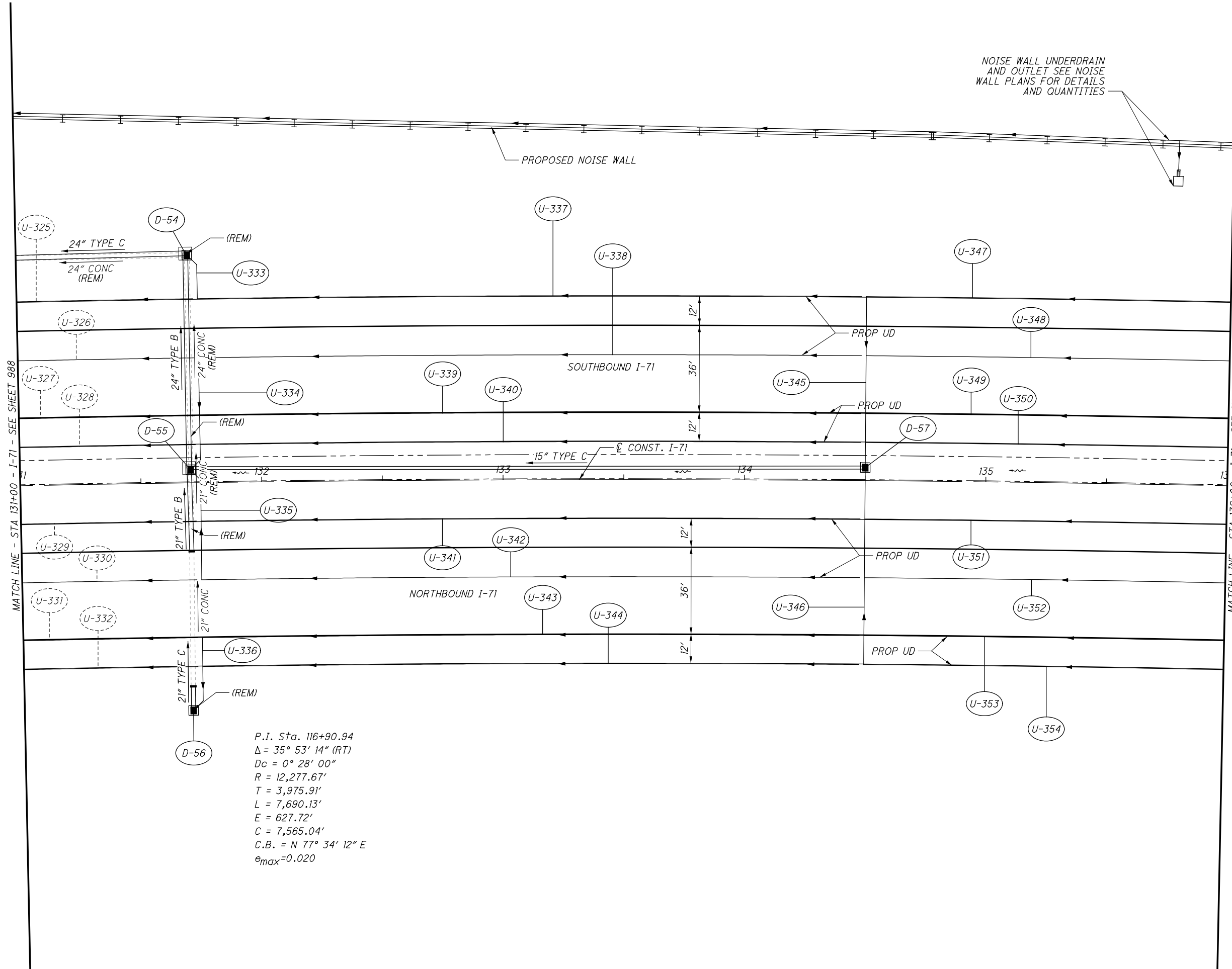
P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CALCULATED MAH CHECKED CTW

0 20 40
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 126+00 TO STA 131+00

FRA-71-0.00



NOISE WALL UNDERDRAIN
AND OUTLET SEE NOISE
WALL PLANS FOR DETAILS
AND QUANTITIES

PROPOSED NOISE WALL

MATCH LINE - STA 131+00 - I-71 - SEE SHEET 988

MATCH LINE - STA 136+00 - I-71 - SEE SHEET 990

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $\theta_{max} = 0.020$

CALCULATED
MAH
CHECKED
CTW

0 20 40
HORIZONTAL
SCALE IN FEET

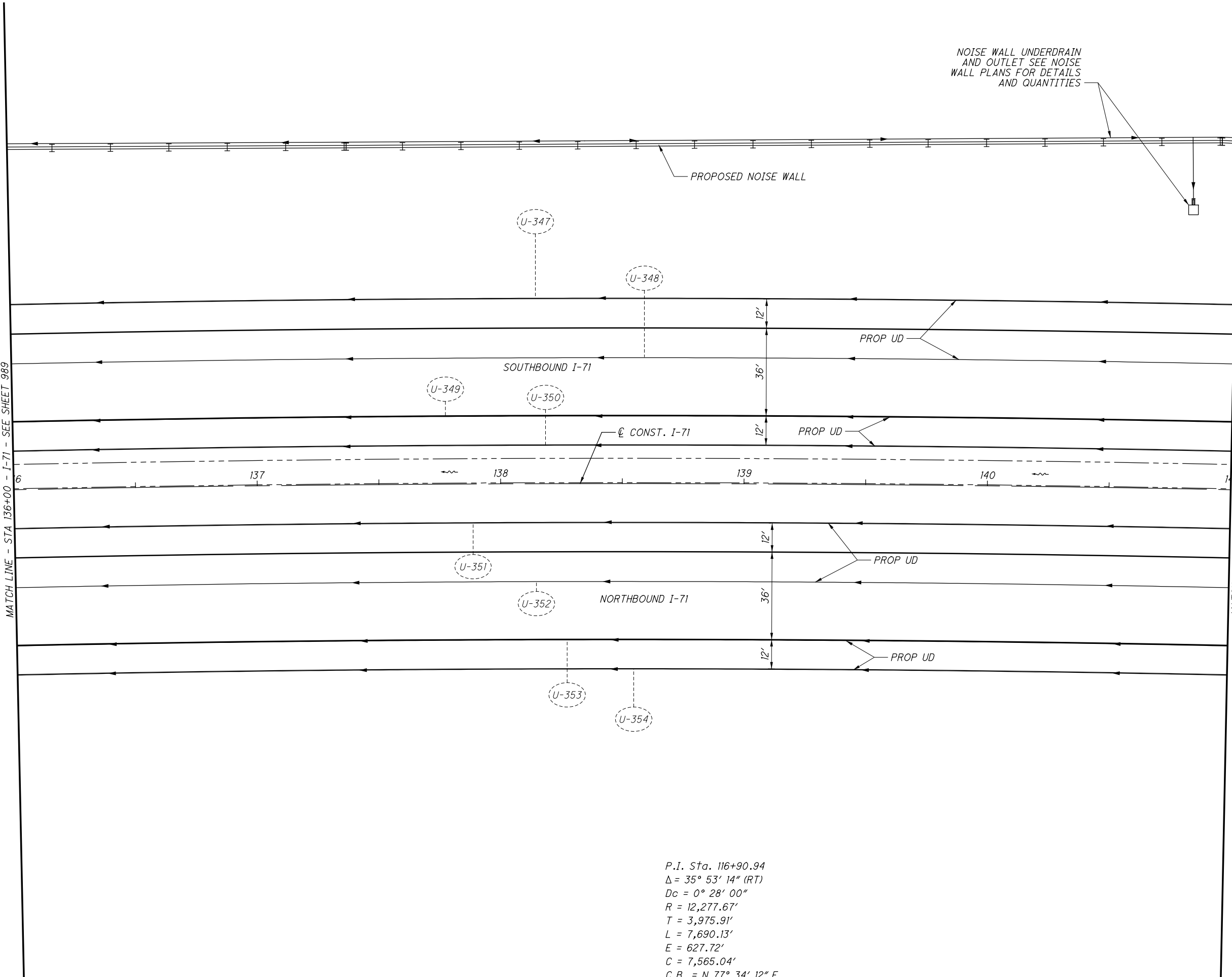
UNDERDRAIN PLAN - I-71
STA 131+00 TO STA 136+00

FRA - 71 - 0.00

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MATCH LINE - STA 136+00 - I-71 - SEE SHEET 989

MATCH LINE - STA 141+00 - I-71 - SEE SHEET 991



NOISE WALL UNDERDRAIN AND OUTLET SEE NOISE WALL PLANS FOR DETAILS AND QUANTITIES

PROPOSED NOISE WALL

SOUTHBOUND I-71

NORTHBOUND I-71

CONST. I-71

PROP UD

PROP UD

PROP UD

PROP UD

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $e_{max} = 0.020$

CALCULATED MAH CHECKED CTW

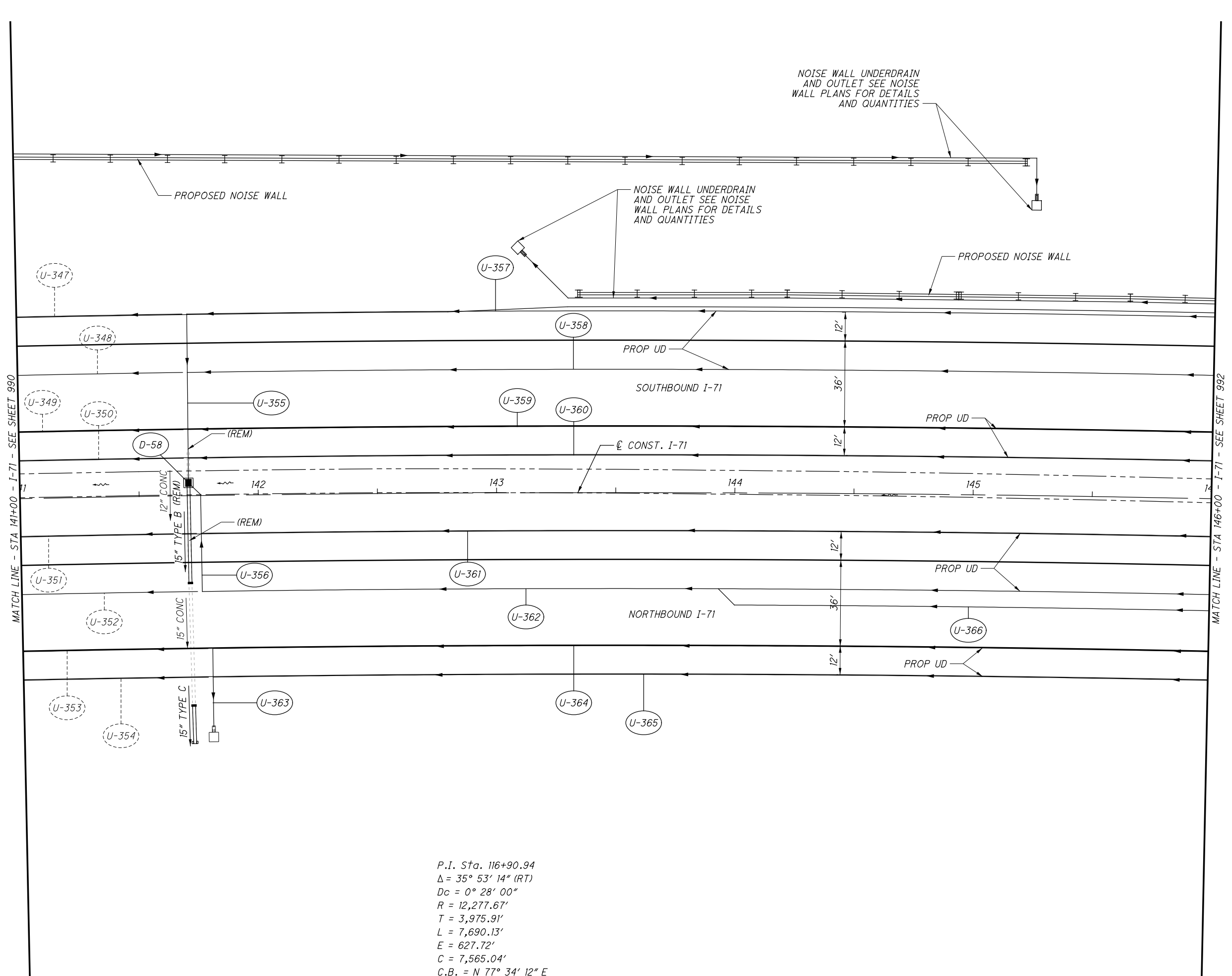
0 20 40
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 136+00 TO STA 141+00

FRA-71-0.00

990
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DPO30.dgn_Sheet 10/28/2019 11:13:08 AM 1458s.js



NOISE WALL UNDERDRAIN AND OUTLET SEE NOISE WALL PLANS FOR DETAILS AND QUANTITIES

NOISE WALL UNDERDRAIN AND OUTLET SEE NOISE WALL PLANS FOR DETAILS AND QUANTITIES

MATCH LINE - STA 141+00 - I-71 - SEE SHEET 990

MATCH LINE - STA 146+00 - I-71 - SEE SHEET 992

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 C.B. = N $77^\circ 34' 12''$ E
 $e_{max} = 0.020$

CALCULATED MAH CHECKED CTW

0 20 40
 10
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 141+00 TO STA 146+00

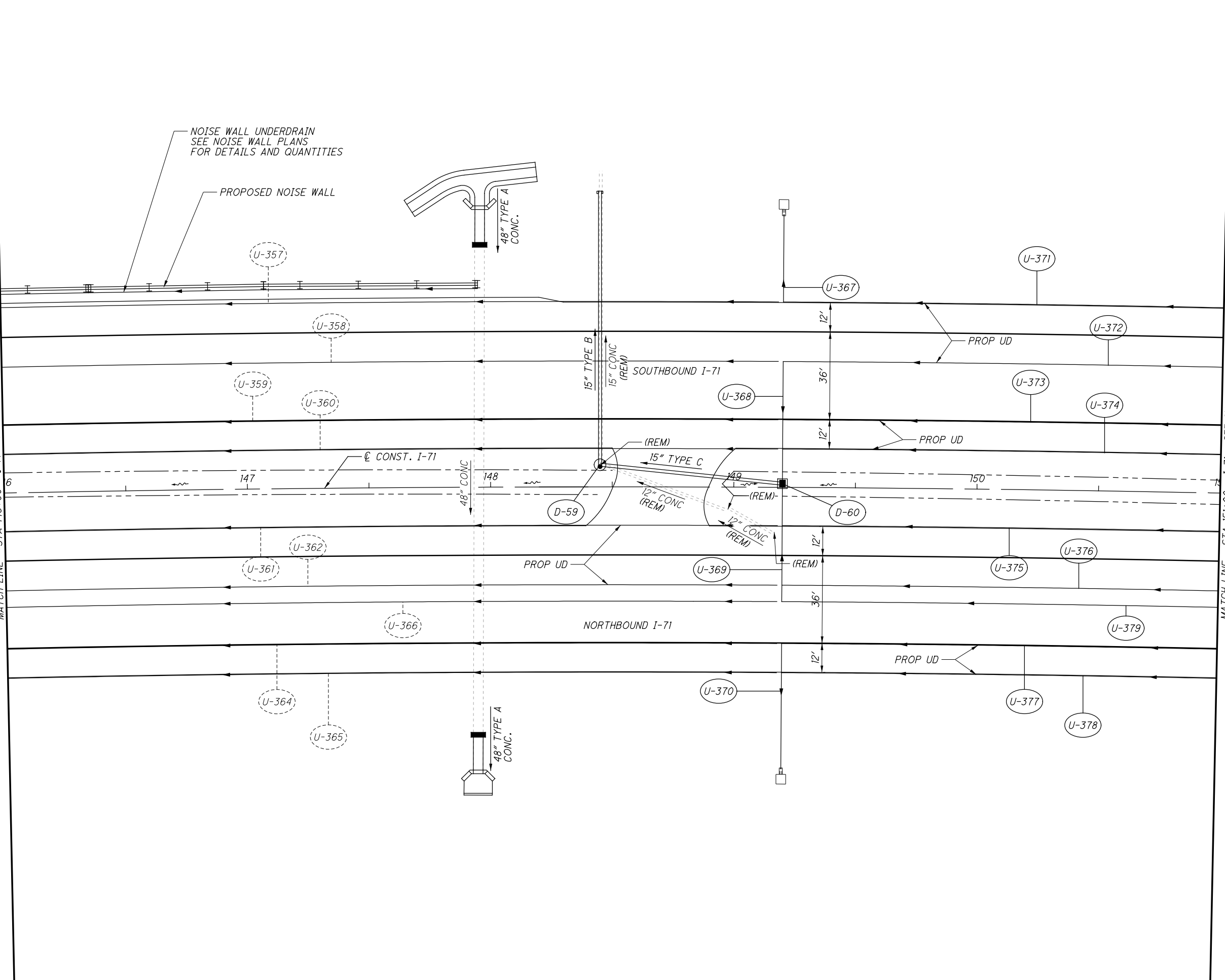
FRA - 71 - 0.00

991
 1312

X:\4037000\121957.16\107201\drainage\sheets\107201DPO31.dgn Sheet 10/28/2019 11:13:08 AM 14588.js

P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 C.B. = N $77^\circ 34' 12''$ E
 $\theta_{max} = 0.020$

MATCH LINE - STA 146+00 - I-71 - SEE SHEET 991



MATCH LINE - STA 151+00 - I-71 - SEE SHEET 993

CALCULATED MAH CHECKED CTW

0 20 40
 HORIZONTAL SCALE IN FEET

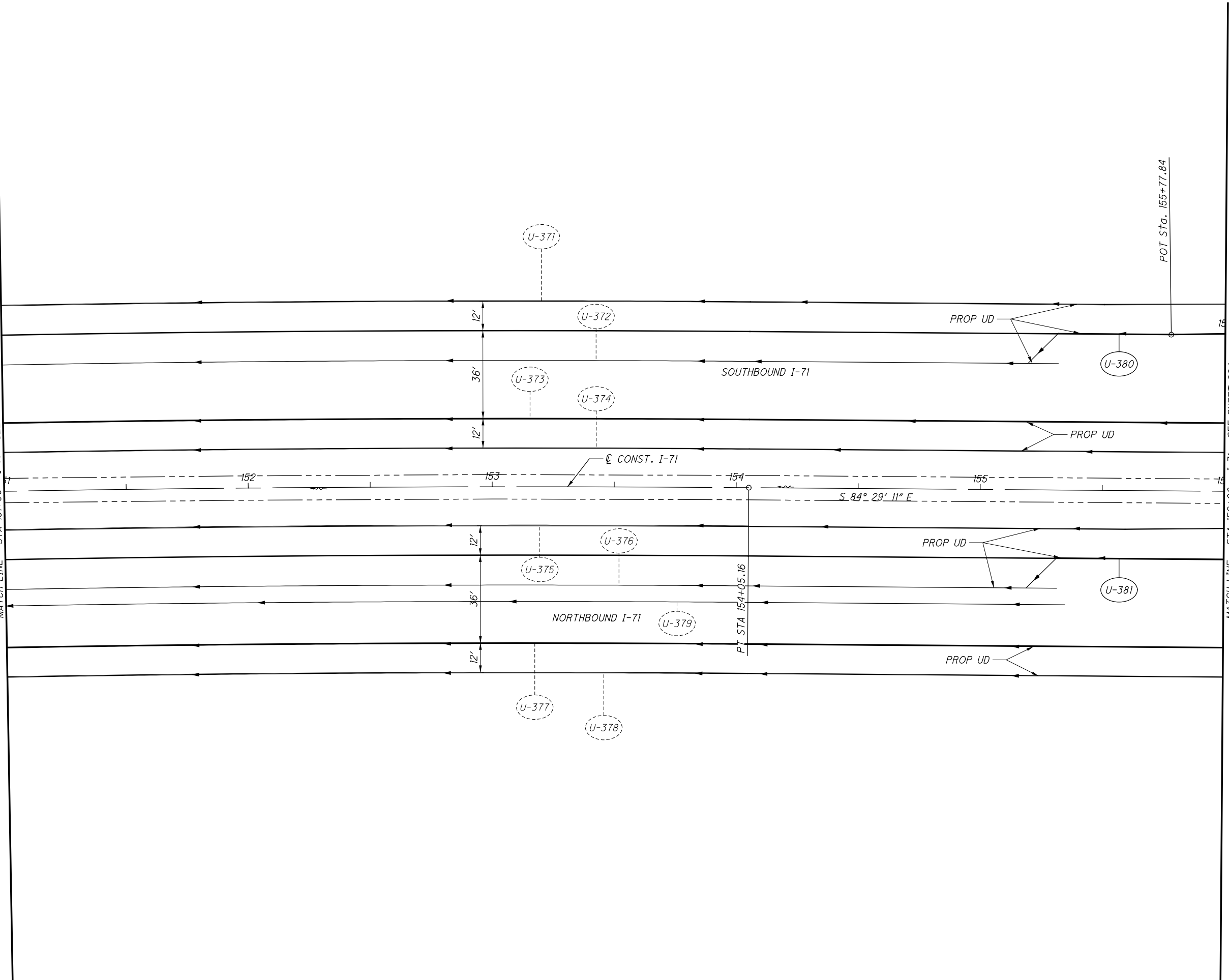
UNDERDRAIN PLAN - I-71
STA 146+00 TO STA 151+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DP032.dgn_Sheet 10/28/2019 11:13:08 AM 1458s.js

P.I. Sta. 116+90.94
Δ = 35° 53' 14" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 3,975.91'
L = 7,690.13'
E = 627.72'
C = 7,565.04'
C.B. = N 77° 34' 12" E
e_{max} = 0.020

MATCH LINE - STA 151+00 - I-71 - SEE SHEET 992



CALCULATED MAH
CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

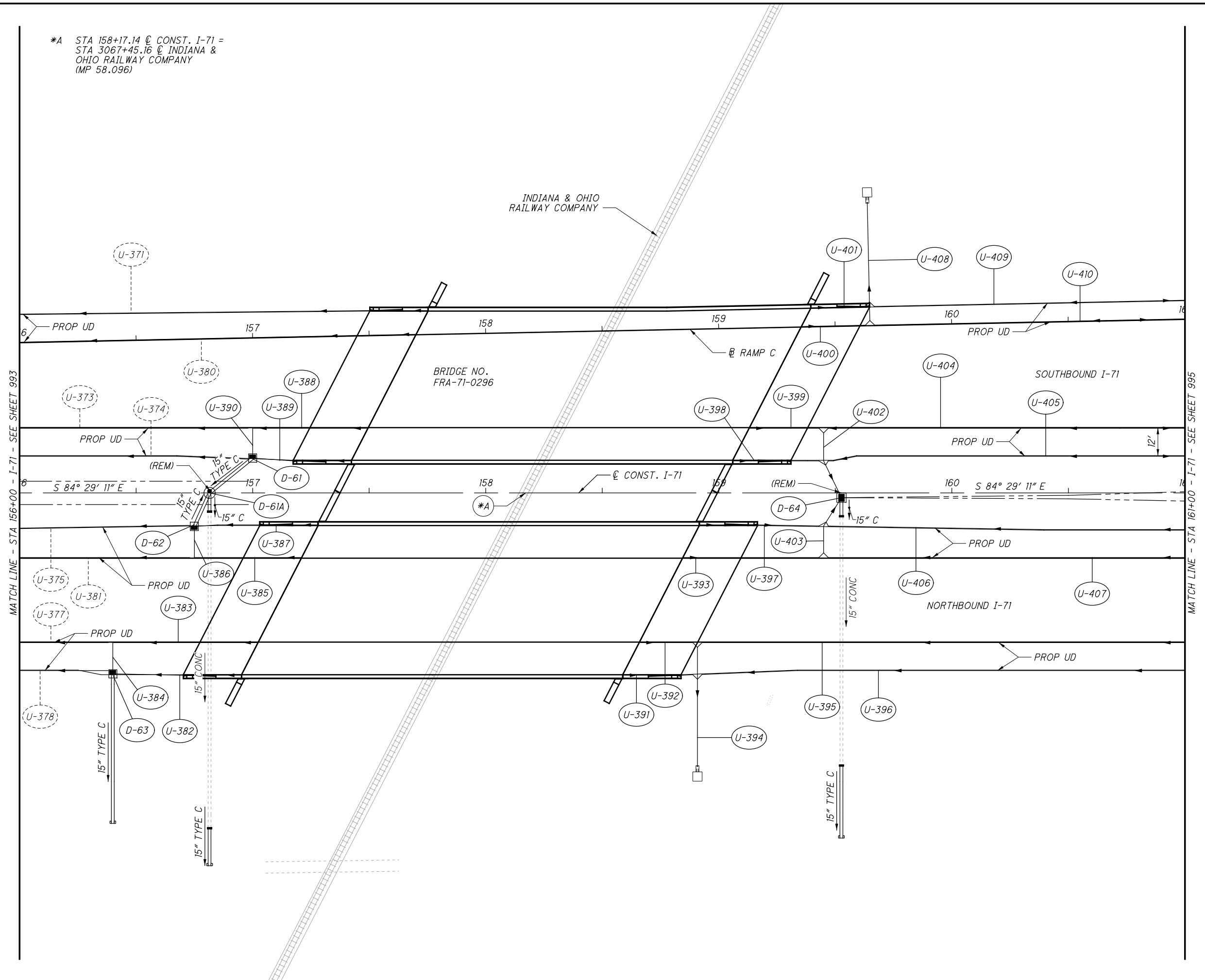
UNDERDRAIN PLAN - I-71
STA 151+00 TO STA 156+00

FRA - 71 - 0.00

993
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DPO33.dgn_Sheet 10/28/2019 11:13:09 AM 1458s.js

*A STA 158+17.14 @ CONST. I-71 =
STA 3067+45.16 @ INDIANA &
OHIO RAILWAY COMPANY
(MP 58.096)

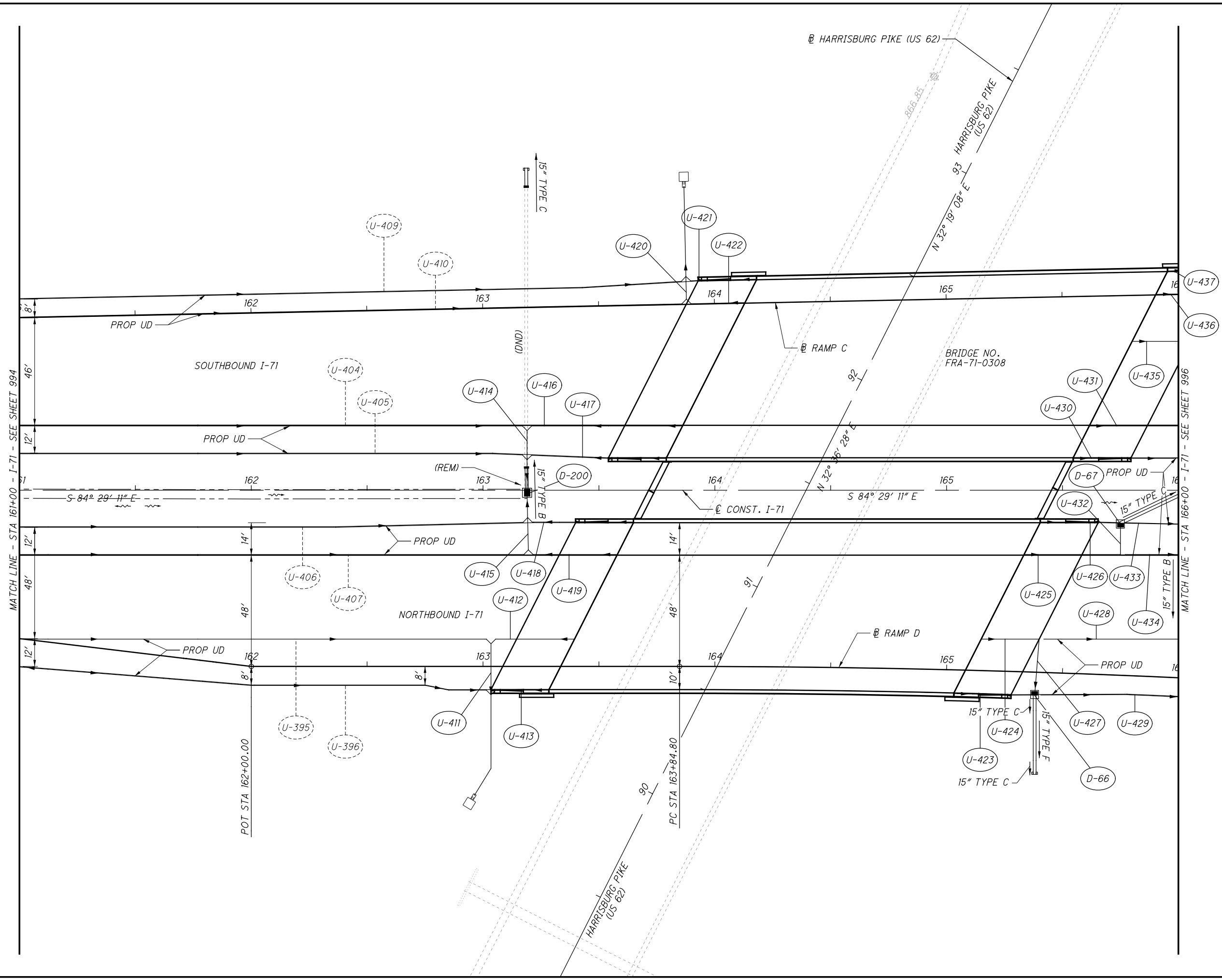


CALCULATED MAH CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 156+00 TO STA 161+00

FRA-71-0.00

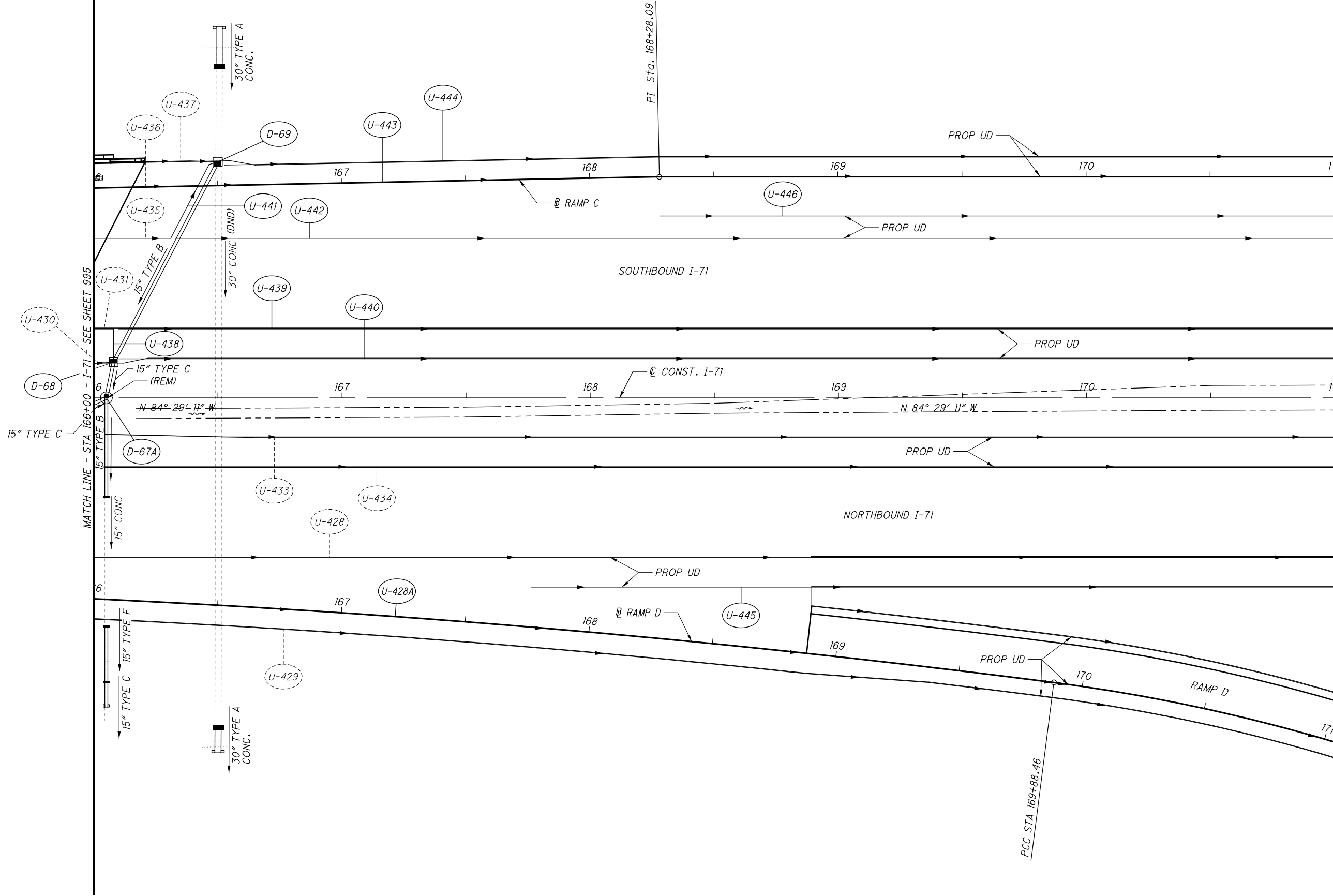


CALCULATED MAH CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 161+00 TO STA 166+00

FRA-71-0.00



CALCULATED
MAH
CHECKED
CTW

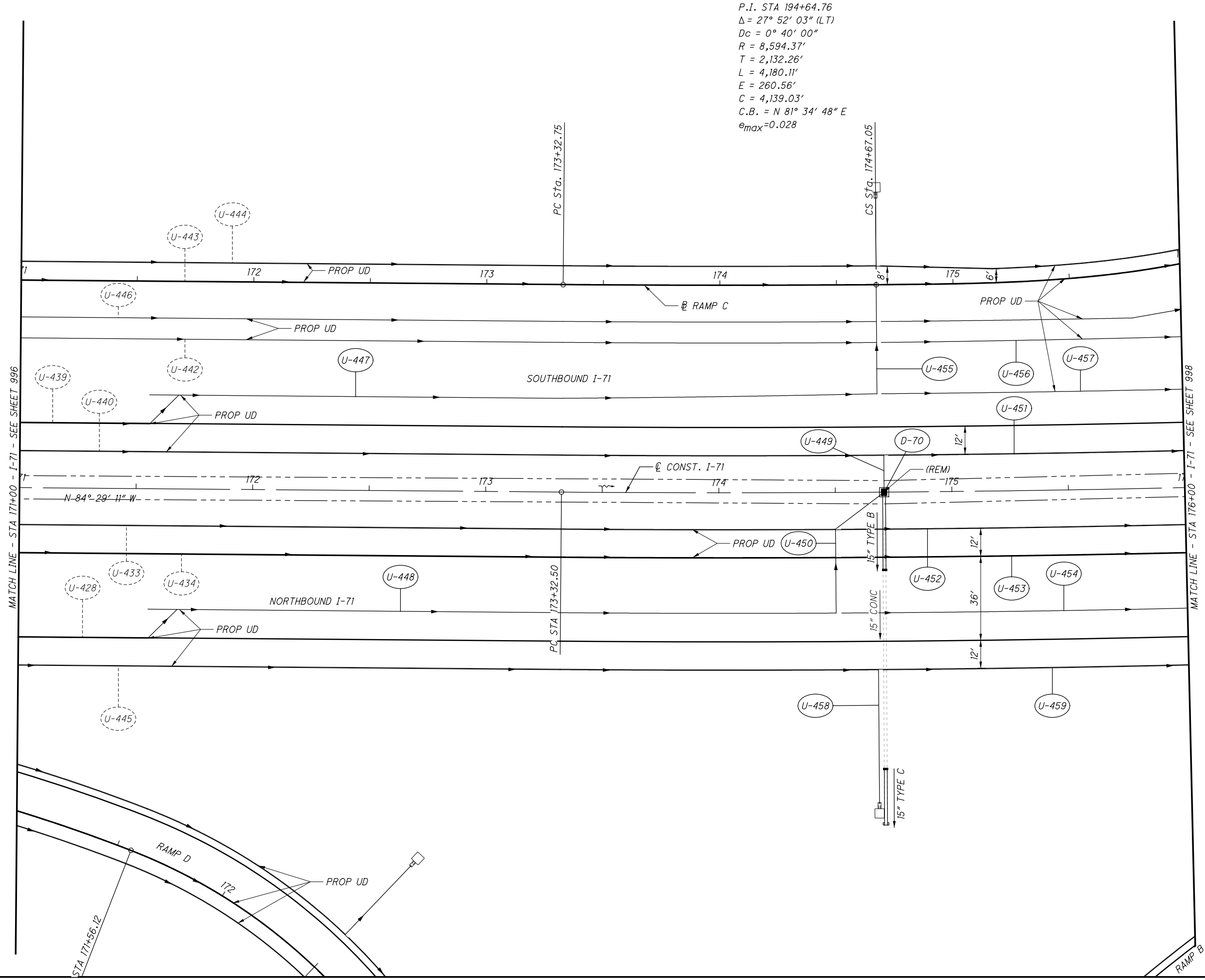
0 20 40
HORIZONTAL
SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 166+00 TO STA 171+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DPO36.dgn_Sheet 10/28/2019 11:13:10 AM 1458s.js

P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N 81° 34' 48" E
 $e_{max} = 0.028$



CALCULATED MAH CHECKED CTW

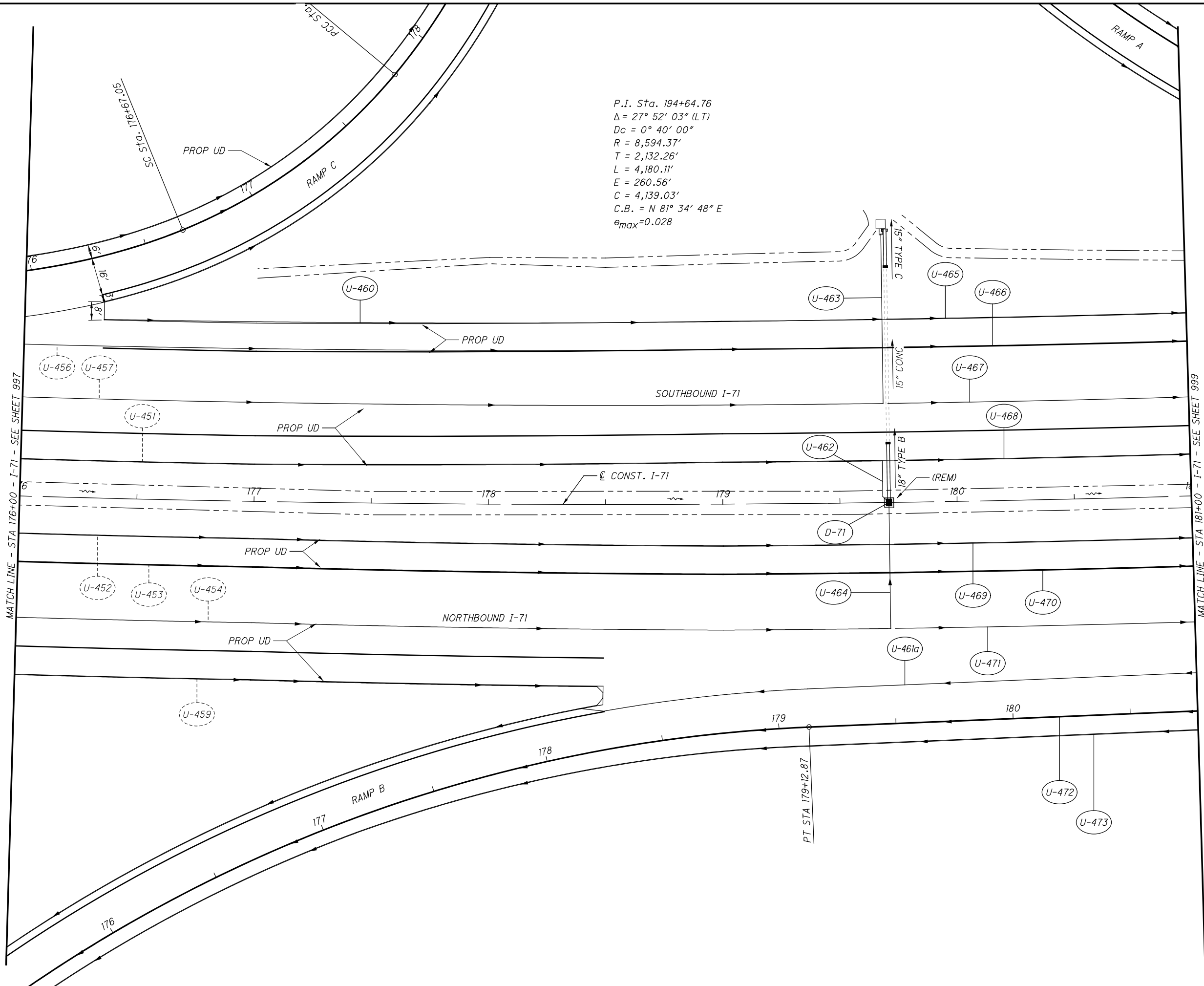
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 171+00 TO STA 176+00

FRA - 71 - 0.00

997
1312

X:\4037000\121957.16\107201\drainage\sheets\107201D\037.dgn_Sheet 10/28/2019 11:13:11 AM 1458s.js



P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $\theta_{max} = 0.028$

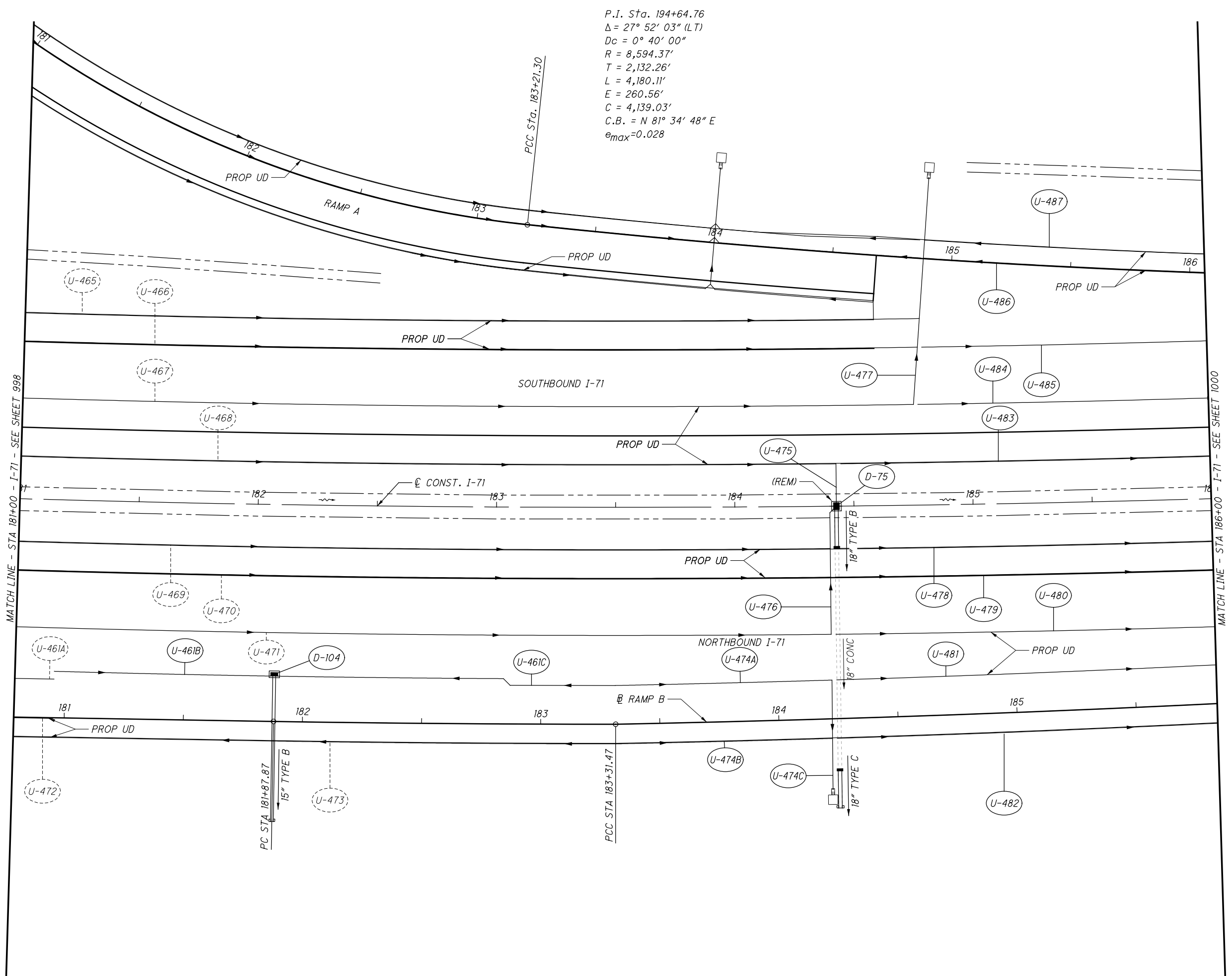
CALCULATED
 MAH
 CHECKED
 CTW

0 20 40
 HORIZONTAL
 SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 176+00 TO STA 181+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DPO38.dgn_Sheet 10/28/2019 11:13:11 AM 1458s.js

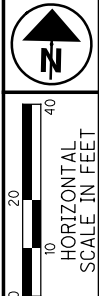


P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

MATCH LINE - STA 181+00 - I-71 - SEE SHEET 998

MATCH LINE - STA 186+00 - I-71 - SEE SHEET 1000

CALCULATED MAH
 CHECKED CTW



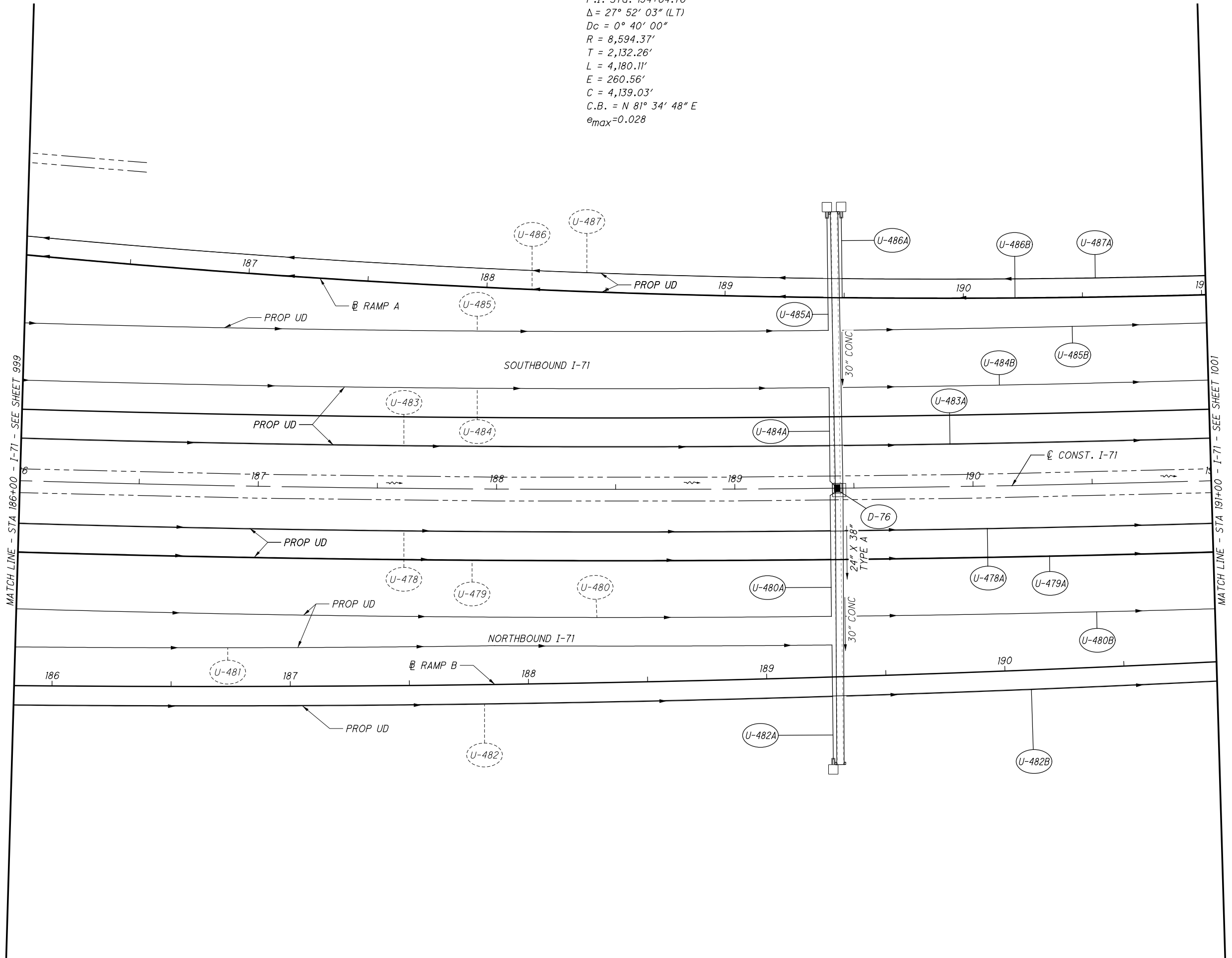
UNDERDRAIN PLAN - I-71
STA 181+00 TO STA 186+00

FRA - 71 - 0.00

999
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DPO39.dgn_Sheet 10/28/2019 11:13:11 AM 1458s.js

P.I. Sta. 194+64.76
Δ = 27° 52' 03" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 2,132.26'
L = 4,180.11'
E = 260.56'
C = 4,139.03'
C.B. = N 81° 34' 48" E
θ_{max} = 0.028



MATCH LINE - STA 186+00 - I-71 - SEE SHEET 999

MATCH LINE - STA 191+00 - I-71 - SEE SHEET 1001

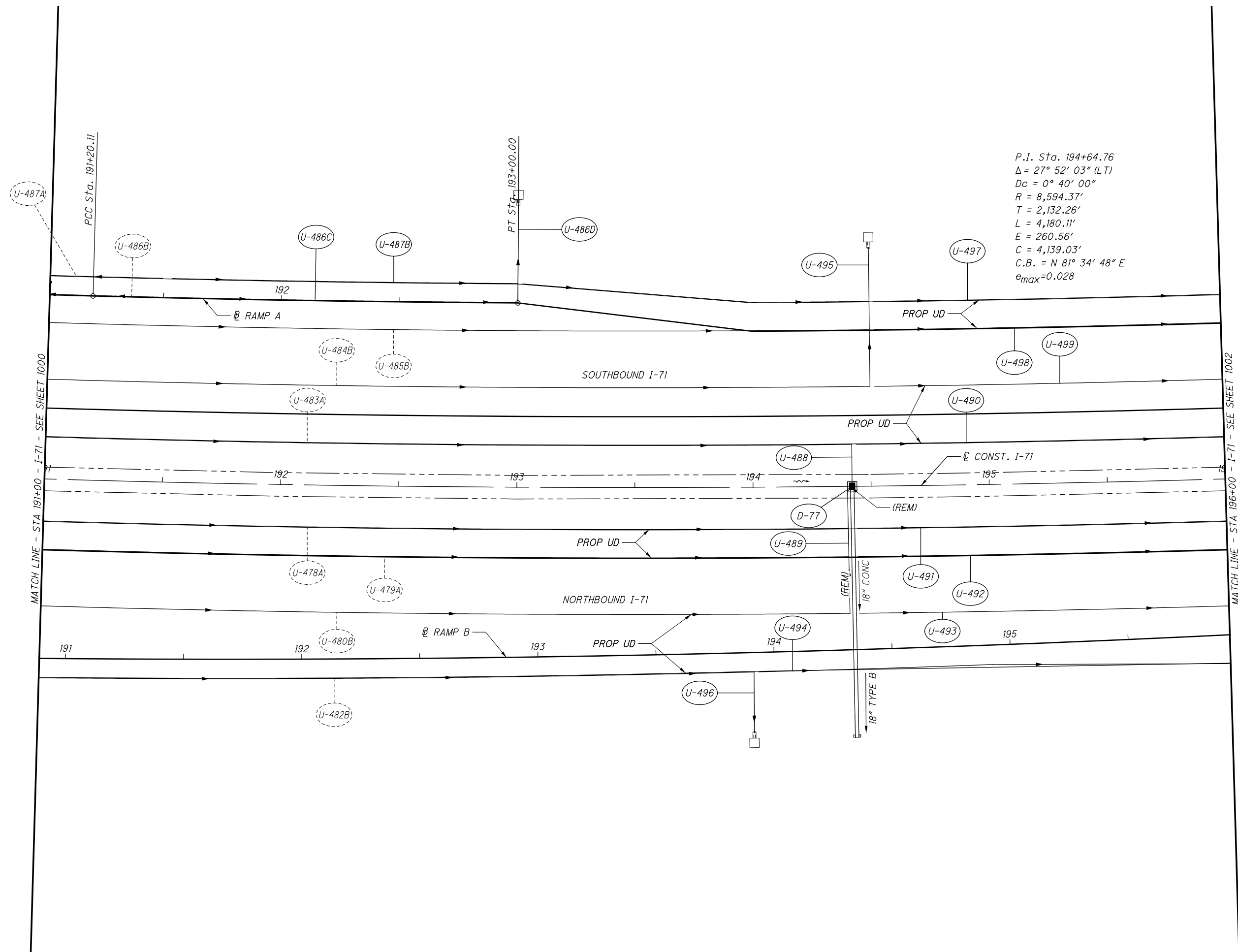
CALCULATED MAH CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 186+00 TO STA 191+00

FRA - 71 - 0.00

1000
1312



P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (L.T)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

MATCH LINE - STA 191+00 - I-71 - SEE SHEET 1000

MATCH LINE - STA 196+00 - I-71 - SEE SHEET 1002

CALCULATED MAH CHECKED CTW
 0 20 40
 10
 HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 191+00 TO STA 196+00

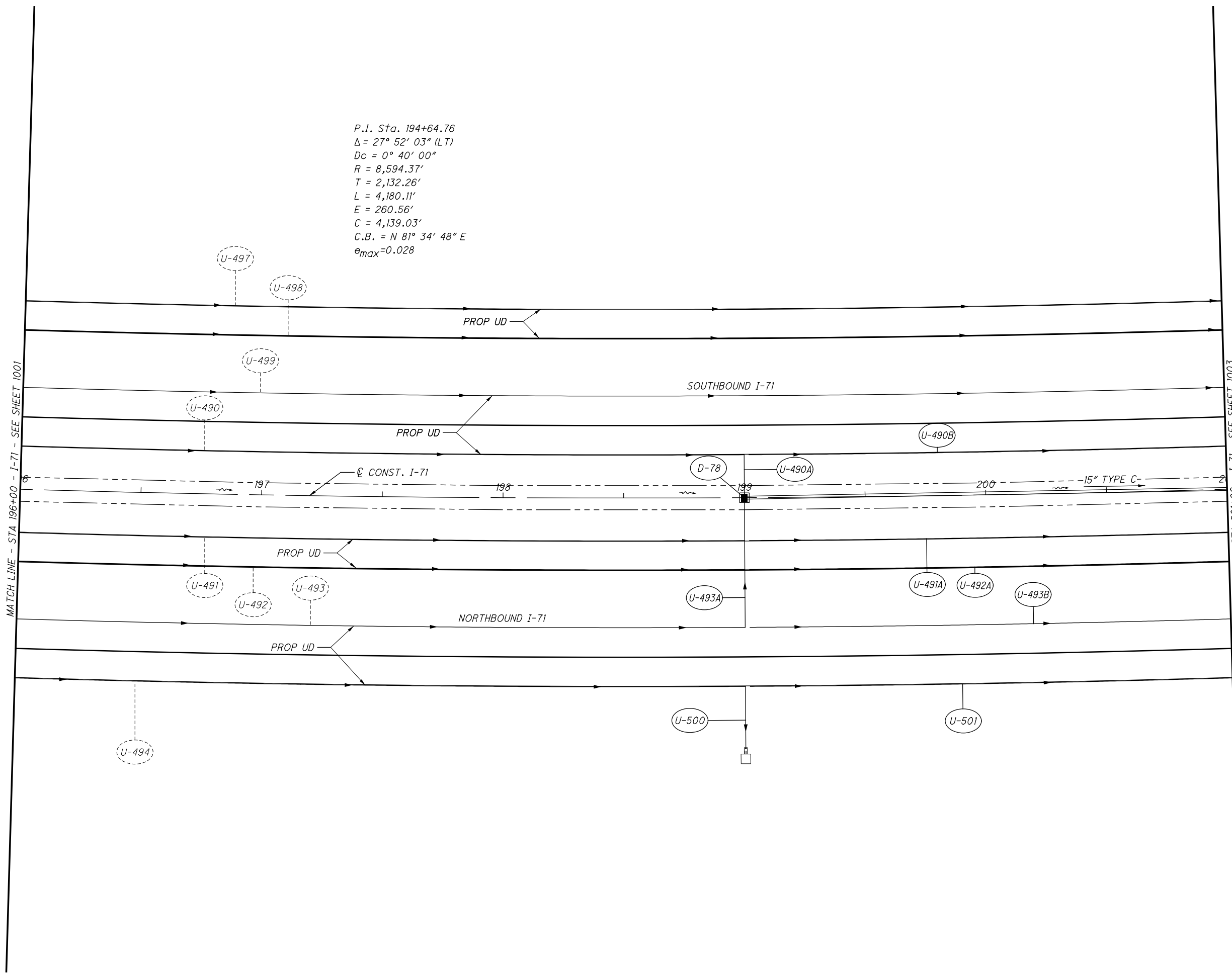
FRA-71-0.00

X:\4037000\121957.16\107201\drainage\sheets\107201D\041.dgn Sheet 10/28/2019 11:13:12 AM 1458s.js

MATCH LINE - STA 196+00 - I-71 - SEE SHEET 1001

MATCH LINE - STA 201+00 - I-71 - SEE SHEET 1003

P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$



CALCULATED MAH
CHECKED CTW

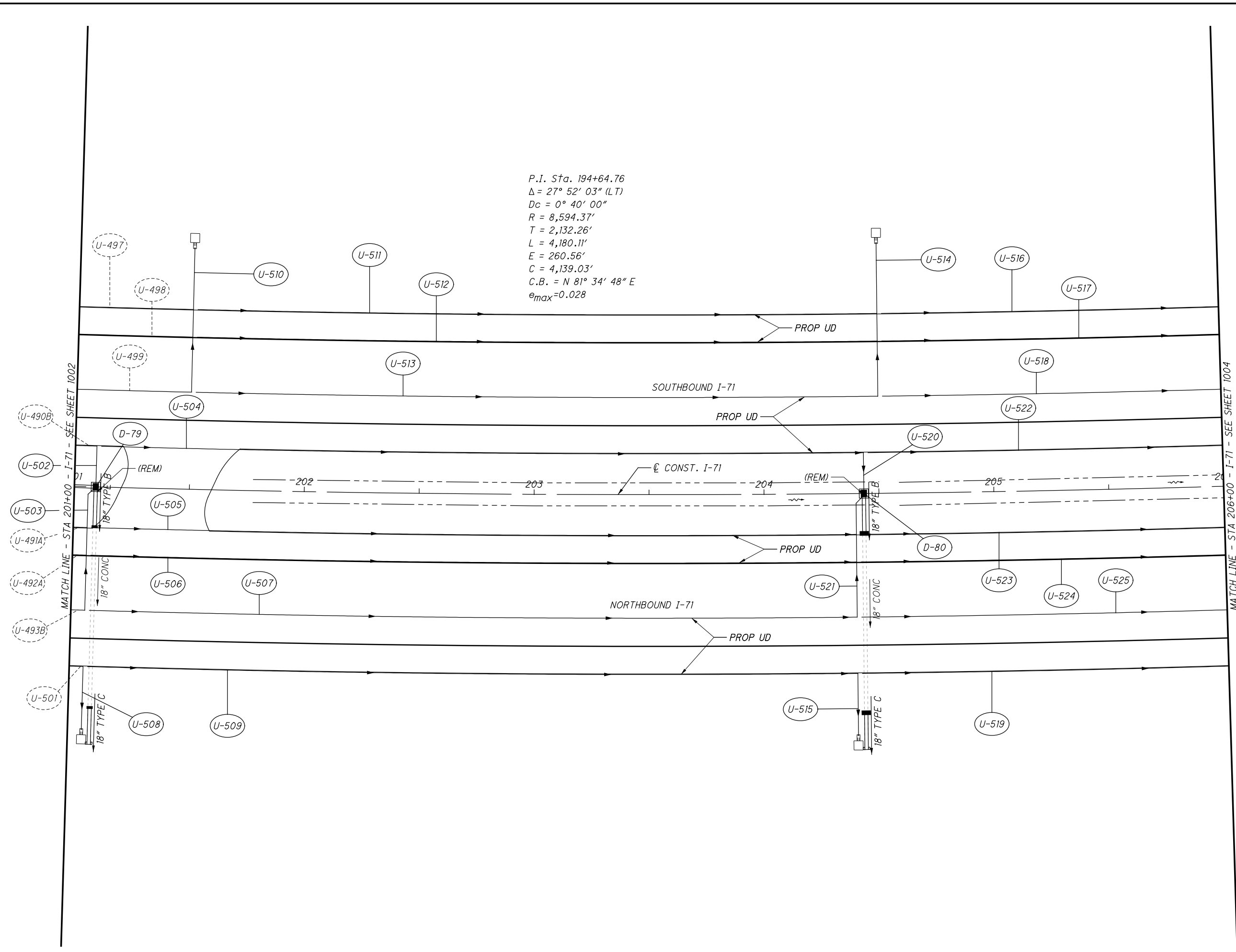
0 20 40
HORIZONTAL SCALE IN FEET

**UNDERDRAIN PLAN - I-71
STA 196+00 TO STA 201+00**

FRA - 71 - 0.00

1002
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DPO42.dgn Sheet 10/28/2019 11:13:13 AM 1458sjs



P.I. Sta. 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
 $C.B. = N 81^\circ 34' 48'' E$
 $e_{max} = 0.028$

CALCULATED MAH
 CHECKED CTW

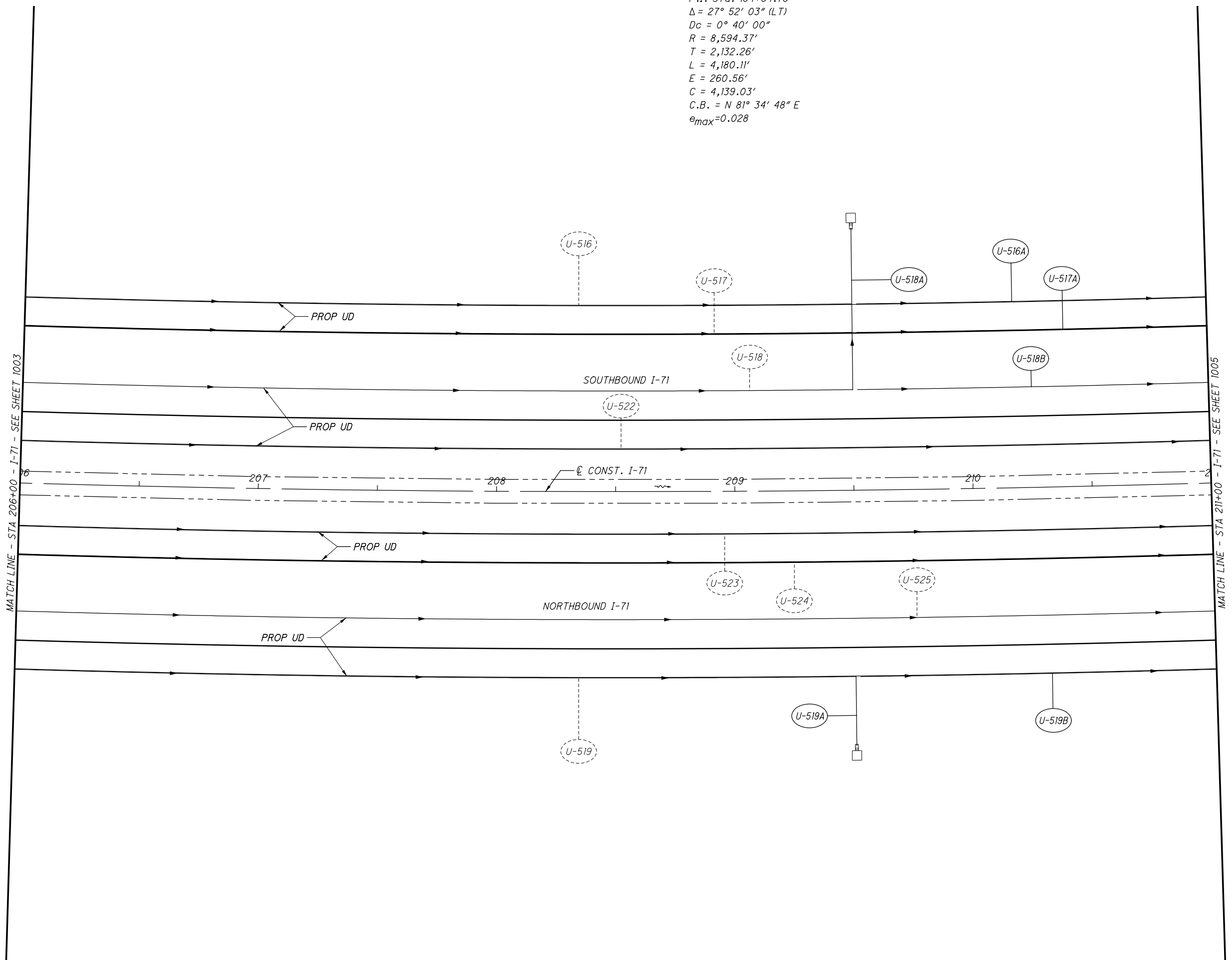
10
 HORIZONTAL
 SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 201+00 TO STA 206+00

FRA-71-0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DP04.3.dgn Sheet 10/28/2019 11:13:13 AM 1458sjs

P.I. Sta. 194+64.76
Δ = 27° 52' 03" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 2,132.26'
L = 4,180.11'
E = 260.56'
C.B. = N 81° 34' 48" E
e_{max} = 0.028



CALCULATED MAH
CHECKED CTW

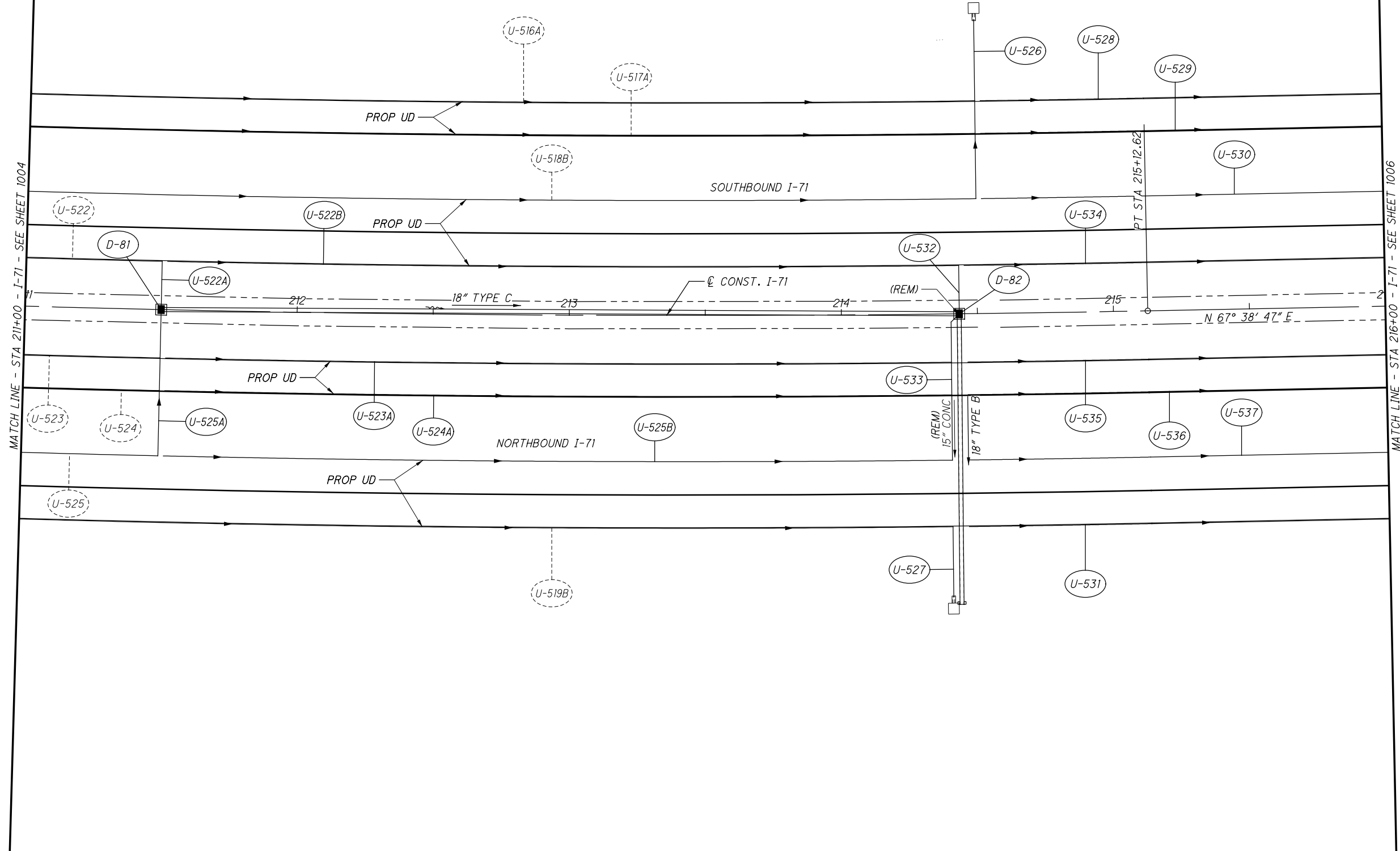
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 206+00 TO STA 211+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DP044.dgn Sheet 10/28/2019 11:13:13 AM 1458sj

P.I. Sta. 194+64.76
Δ = 27° 52' 03" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 2,132.26'
L = 4,180.11'
E = 260.56'
C = 4,139.03'
C.B. = N 81° 34' 48" E
e_{max} = 0.028



CALCULATED MAH
CHECKED CTW

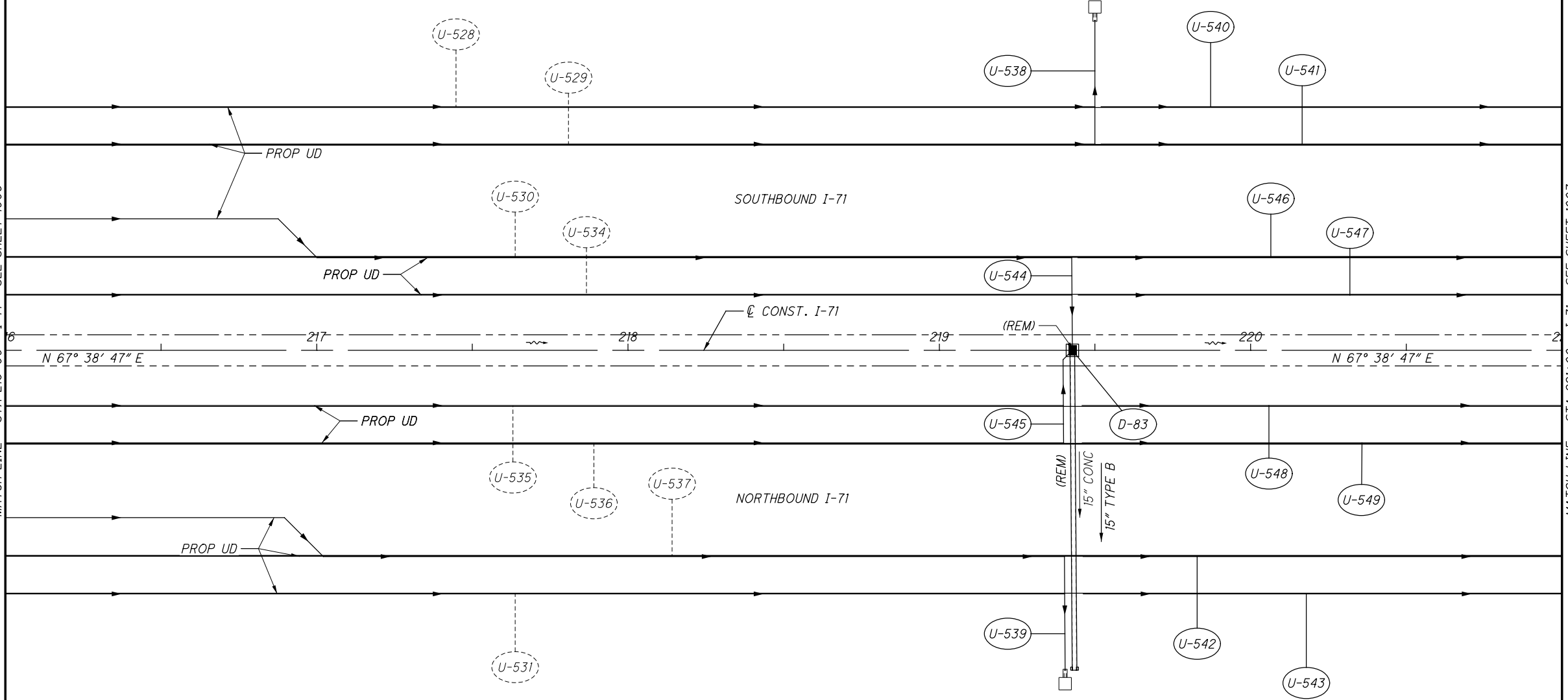
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 211+00 TO STA 216+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DPO45.dgn Sheet 10/28/2019 11:13:14 AM 1458sjs

MATCH LINE - STA 216+00 - I-71 - SEE SHEET 1005



MATCH LINE - STA 221+00 - I-71 - SEE SHEET 1007

CALCULATED MAH
CHECKED CTW

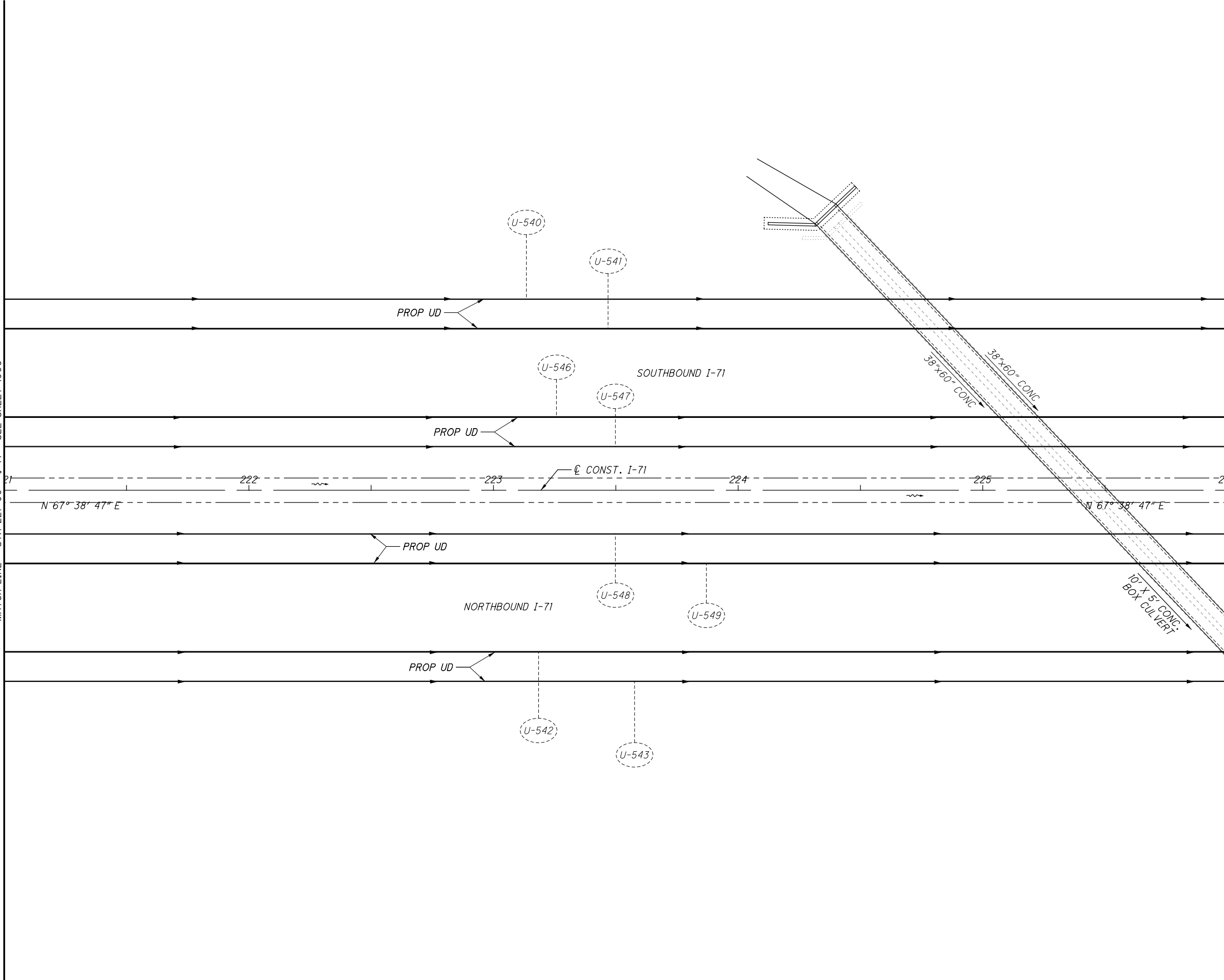
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 216+00 TO STA 221+00

FRA - 71 - 0.00

1006
1312

MATCH LINE - STA 221+00 - I-71 - SEE SHEET 1006



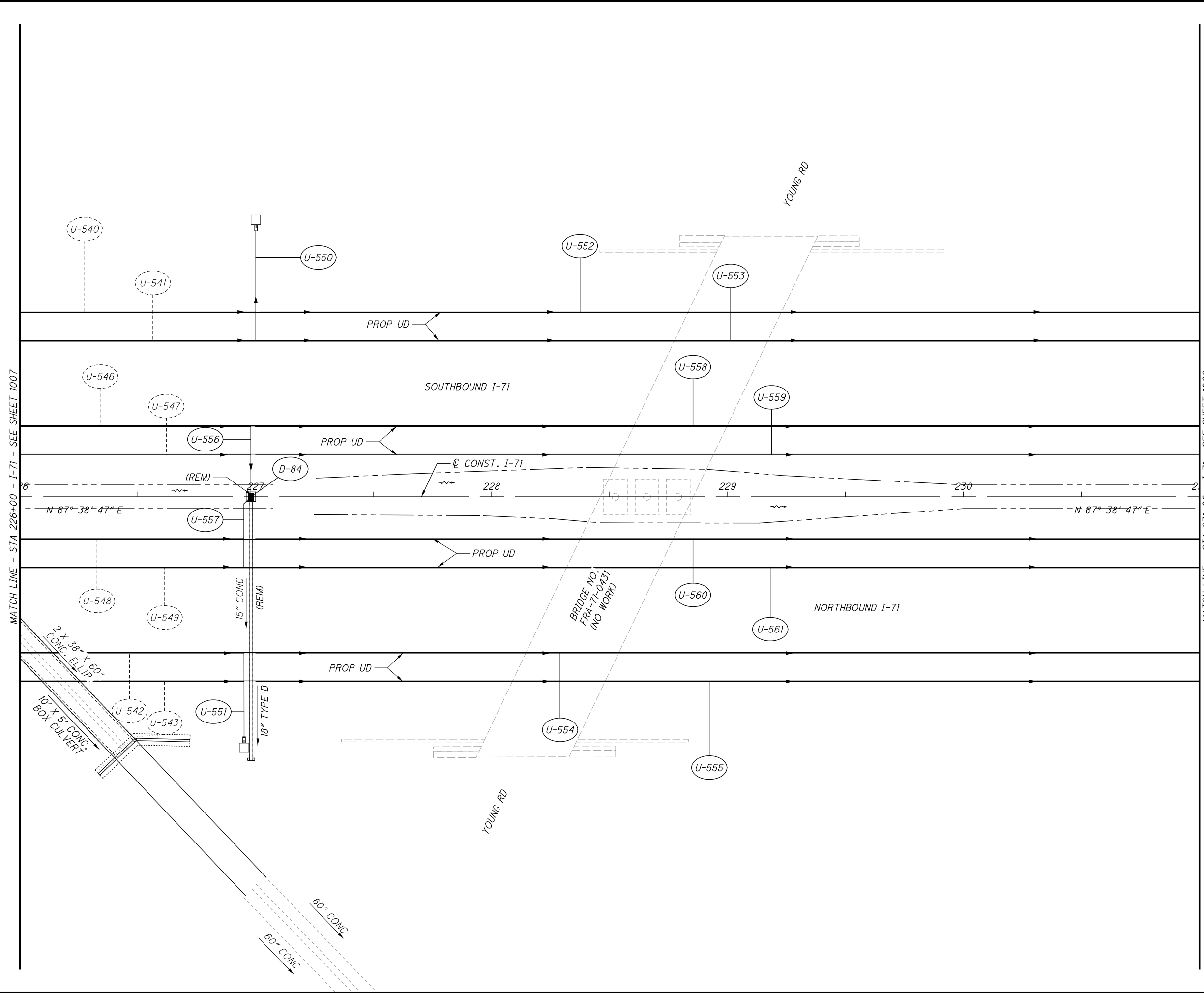
MATCH LINE - STA 226+00 - I-71 - SEE SHEET 1008

CALCULATED	MAH	CHECKED	CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 221+00 TO STA 226+00

FRA - 71 - 0.00



CALCULATED MAH CHECKED CTW

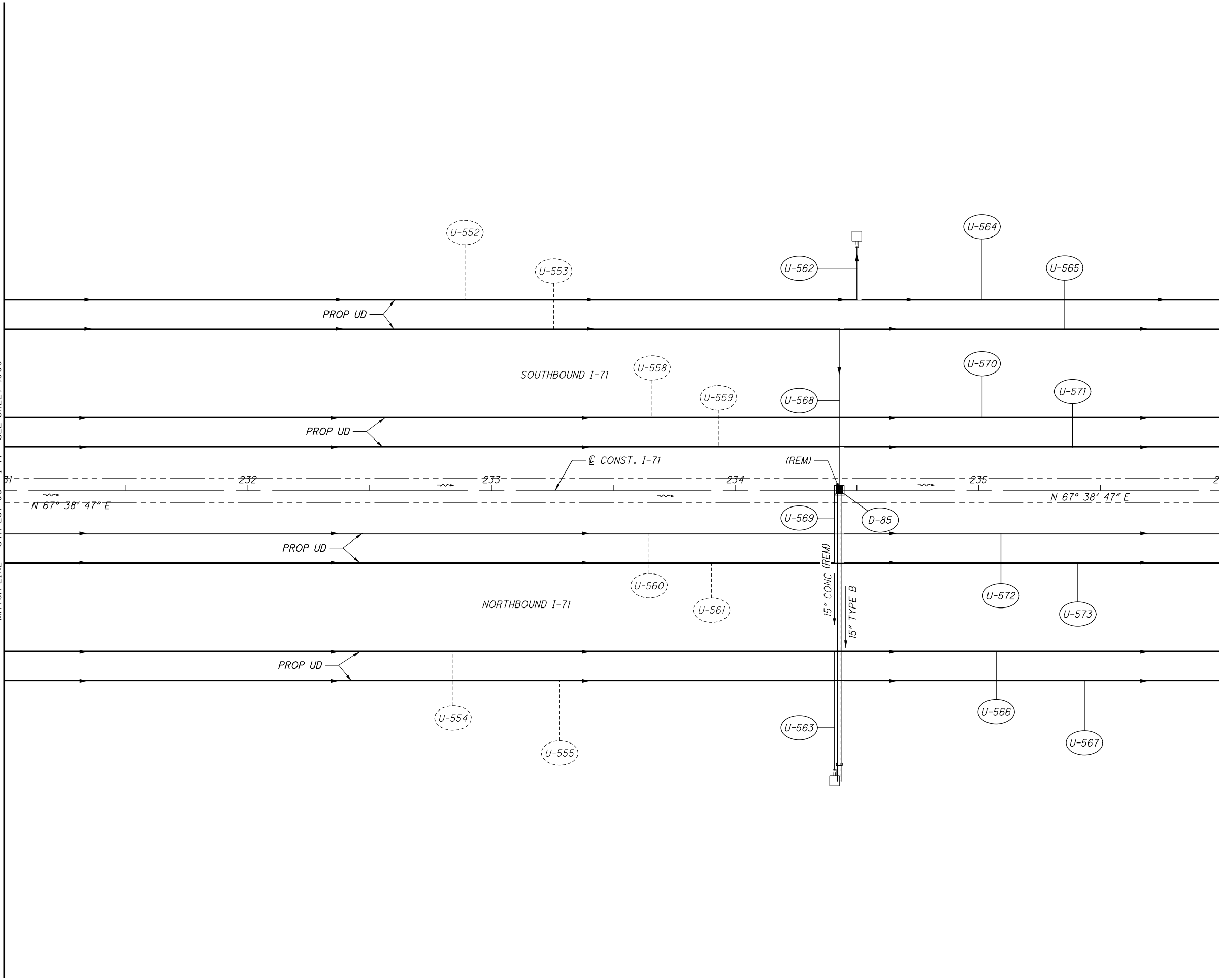
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 226+00 TO STA 231+00

FRA-71-0.00

1008
1312

MATCH LINE - STA 231+00 - I-71 - SEE SHEET 1008



MATCH LINE - STA 236+00 - I-71 - SEE SHEET 1010

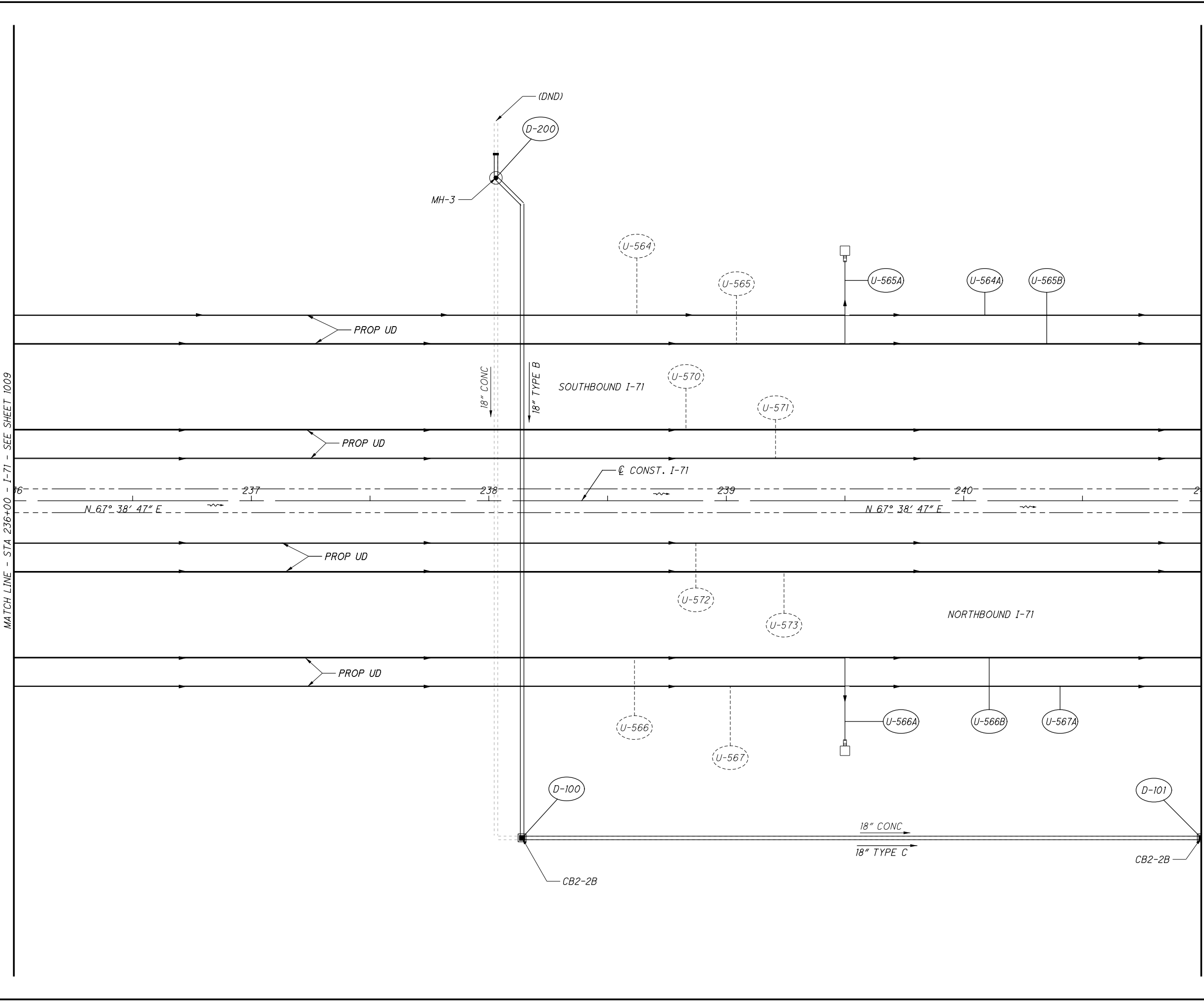
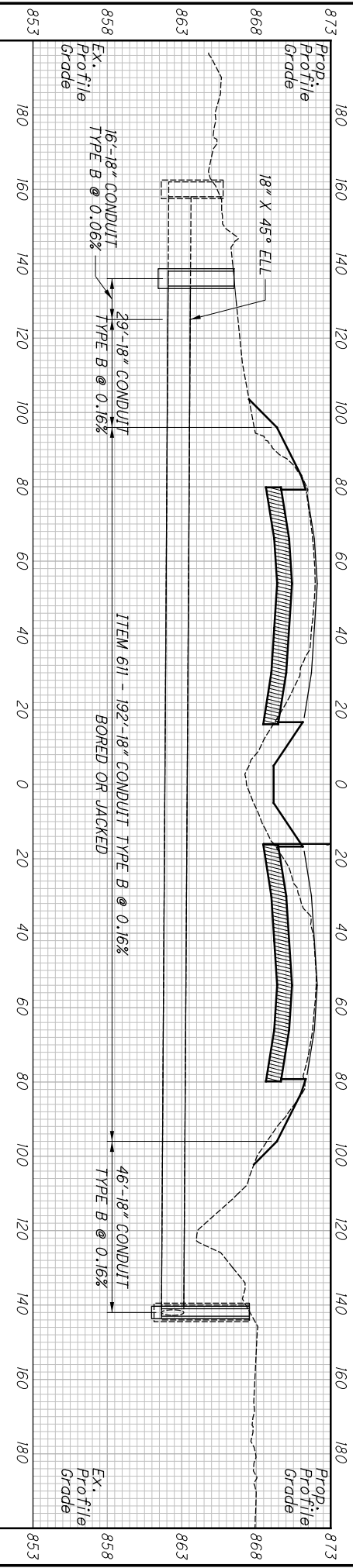
CALCULATED MAH
CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 231+00 TO STA 236+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201DPO49.dgn Sheet 10/28/2019 11:13:15 AM 14588sjs



1010
1312

FRA - 71 - 0.00

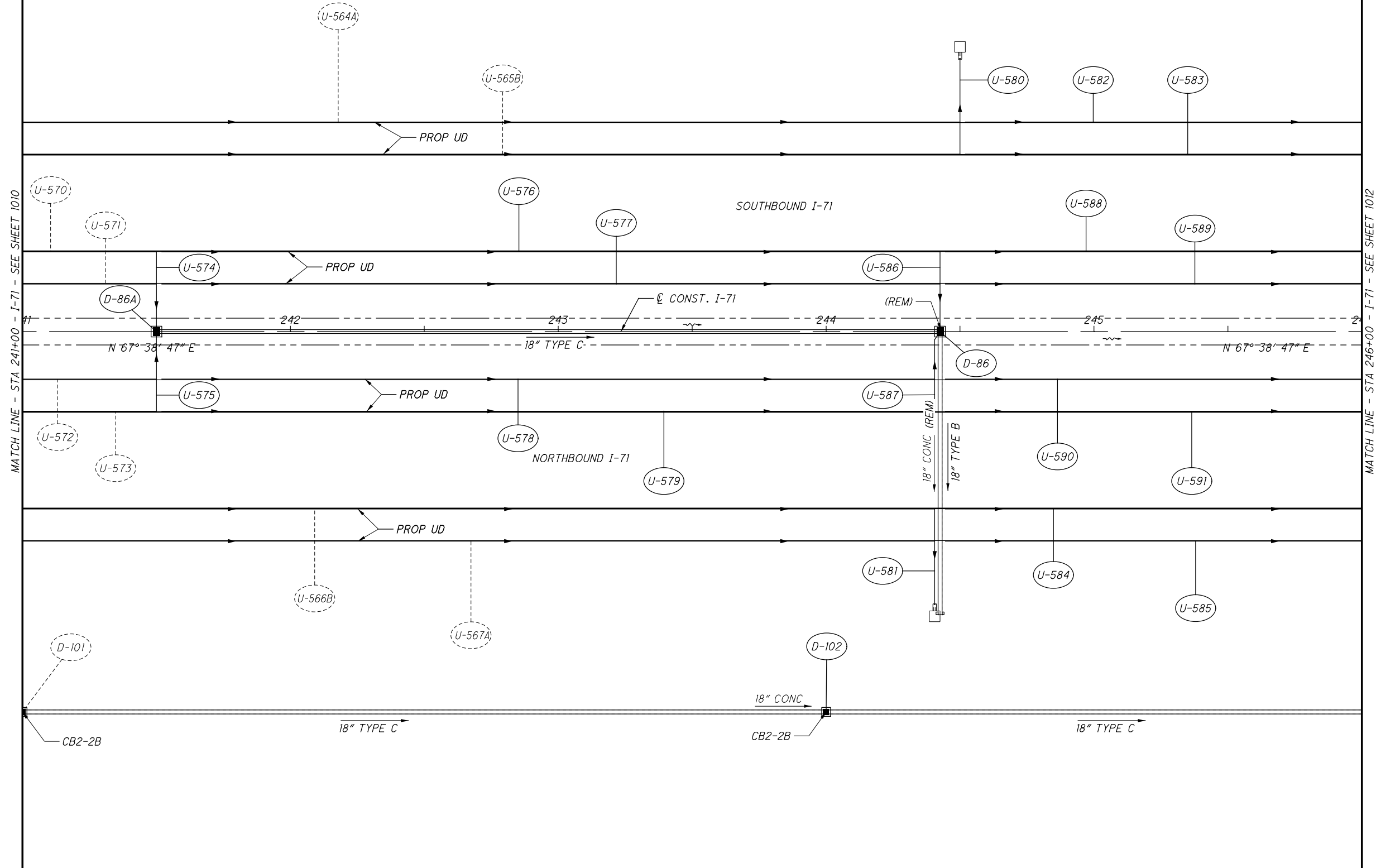
UNDERDRAIN PLAN - I-71
STA 236+00 TO STA 241+00

CALCULATED MAH
CHECKED CTW

10
20
40
HORIZONTAL SCALE IN FEET

MATCH LINE - STA 241+00 - I-71 - SEE SHEET 1011

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CALCULATED
MAH
CHECKED
CTW

0 20 40
HORIZONTAL
SCALE IN FEET

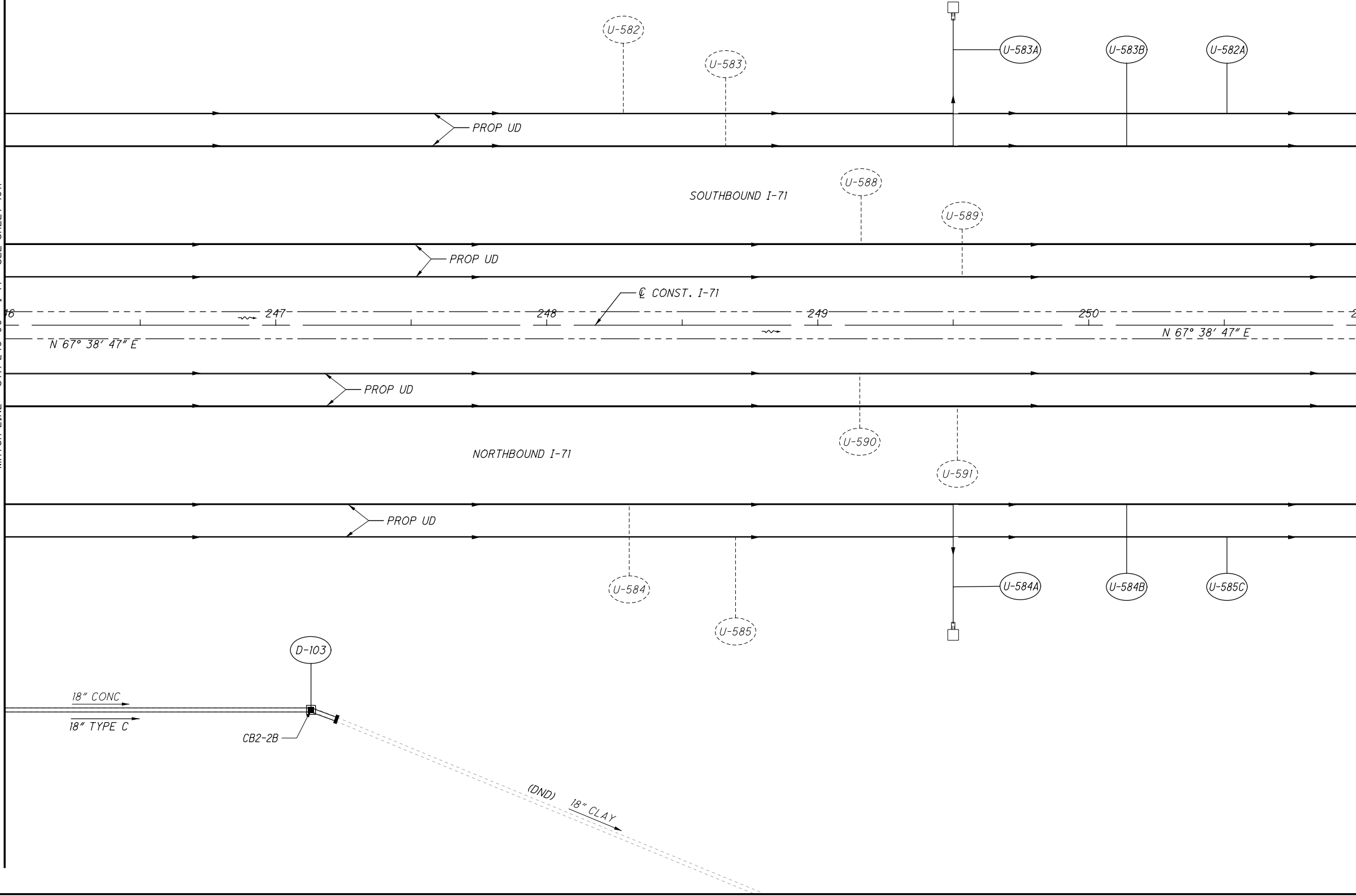
UNDERDRAIN PLAN - I-71
STA 241+00 TO STA 246+00

FRA - 71 - 0.00

X:\4037000\121957.16\107201\drainage\sheets\107201D\051.dgn Sheet 10/28/2019 11:13:16 AM 1458s.js

MATCH LINE - STA 246+00 - I-71 - SEE SHEET 1011

MATCH LINE - STA 251+00 - I-71 - SEE SHEET 1013



CALCULATED MAH CHECKED CTW

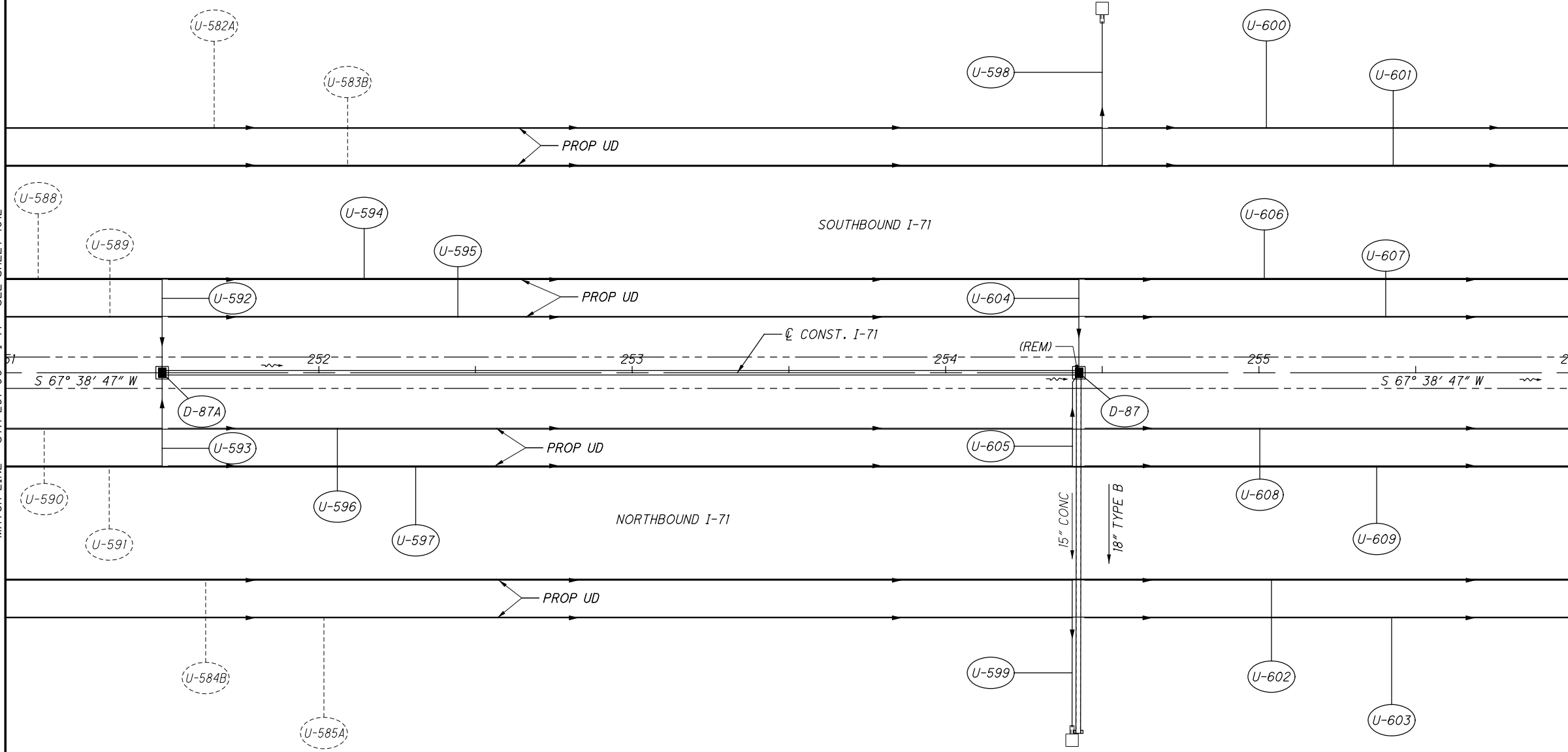
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 246+00 TO STA 251+00

FRA - 71 - 0.00

1012
1312

MATCH LINE - STA 251+00 - I-71 - SEE SHEET 1012



MATCH LINE - STA 256+00 - I-71 - SEE SHEET 1014

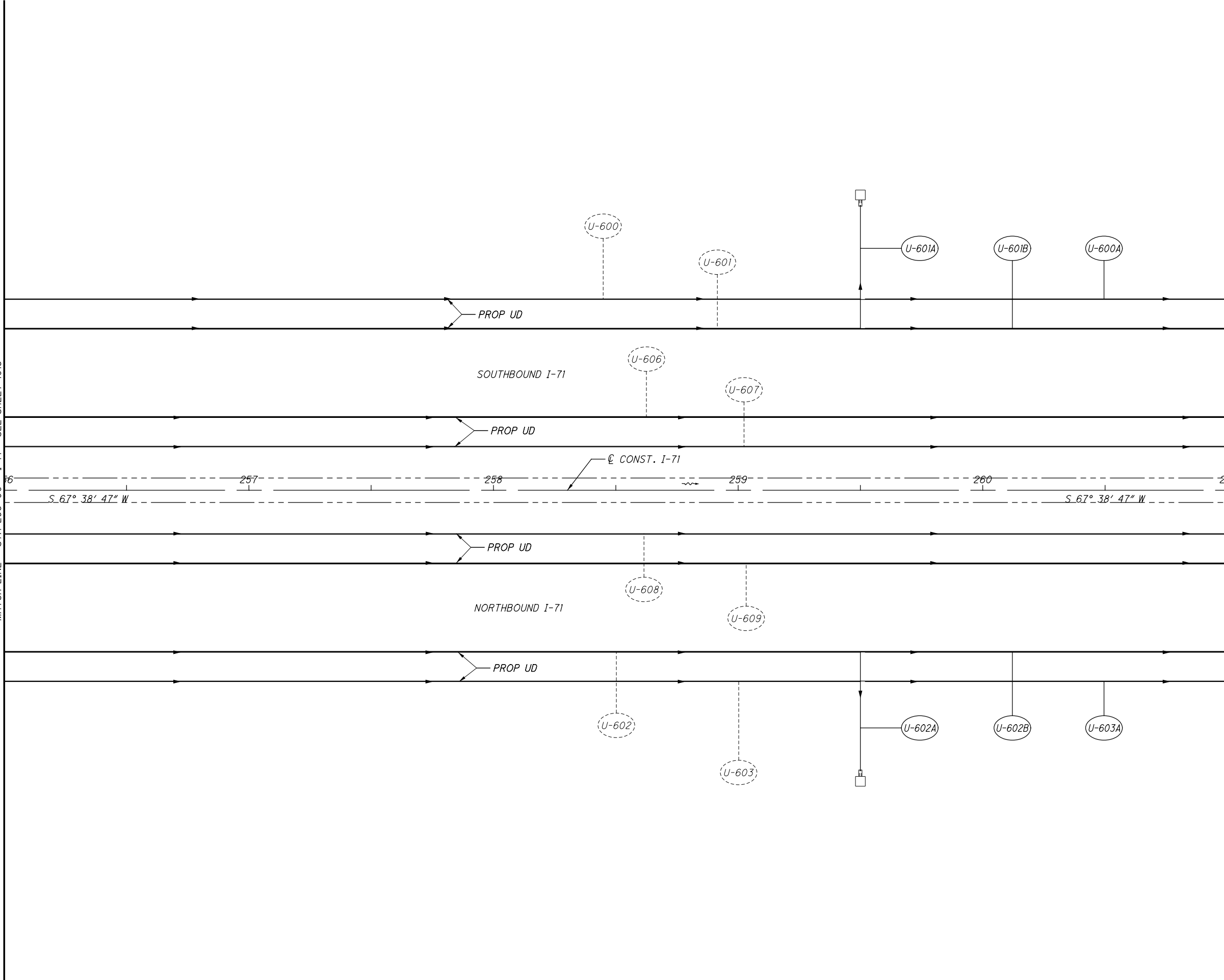
CALCULATED MAH CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 251+00 TO STA 256+00

FRA - 71 - 0.00

MATCH LINE - STA 256+00 - I-71 - SEE SHEET 1013



MATCH LINE - STA 261+00 - I-71 - SEE SHEET 1015

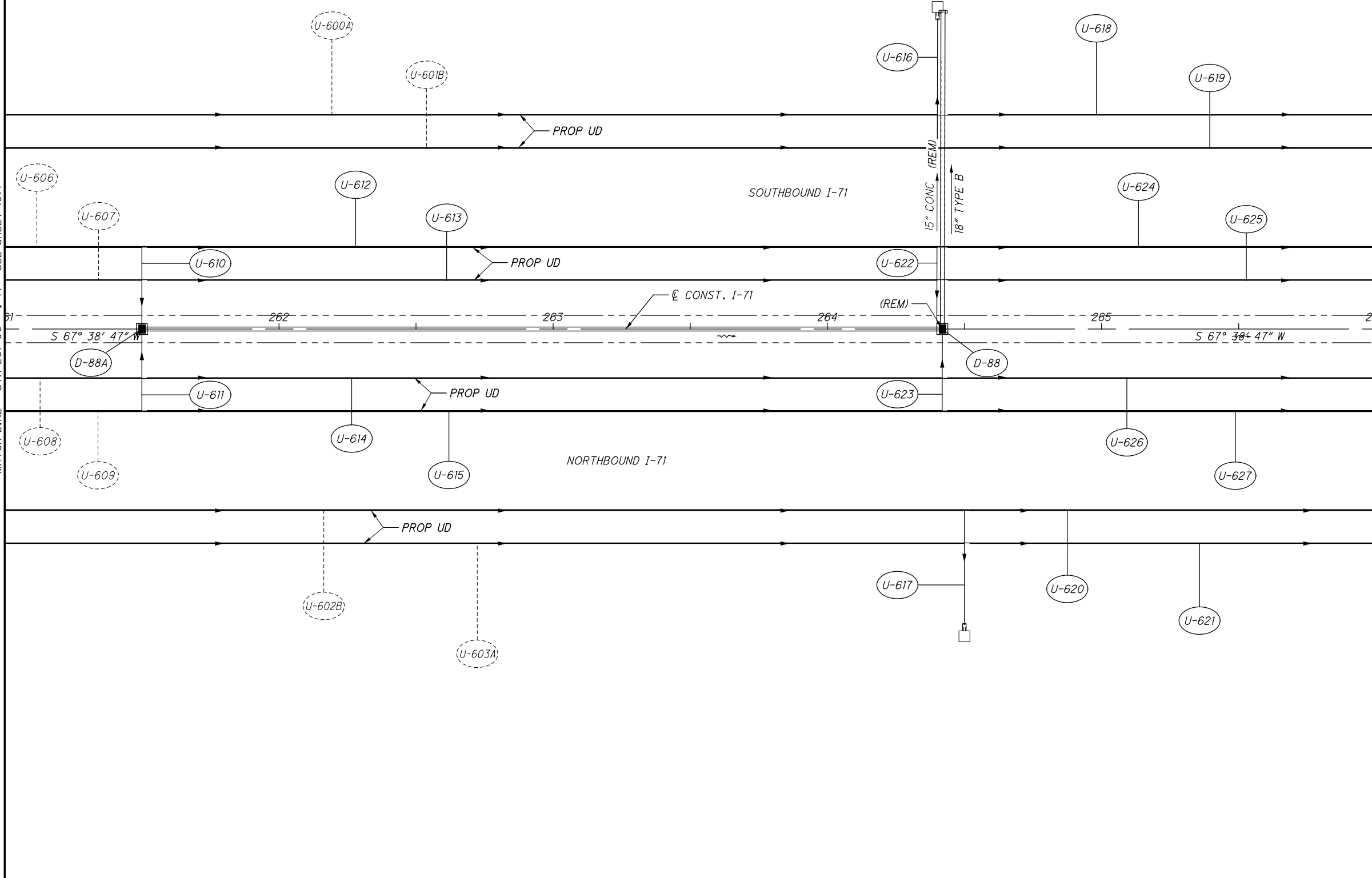
CALCULATED MAH
CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 256+00 TO STA 261+00

FRA - 71 - 0.00

MATCH LINE - STA 261+00 - I-71 - SEE SHEET 1014



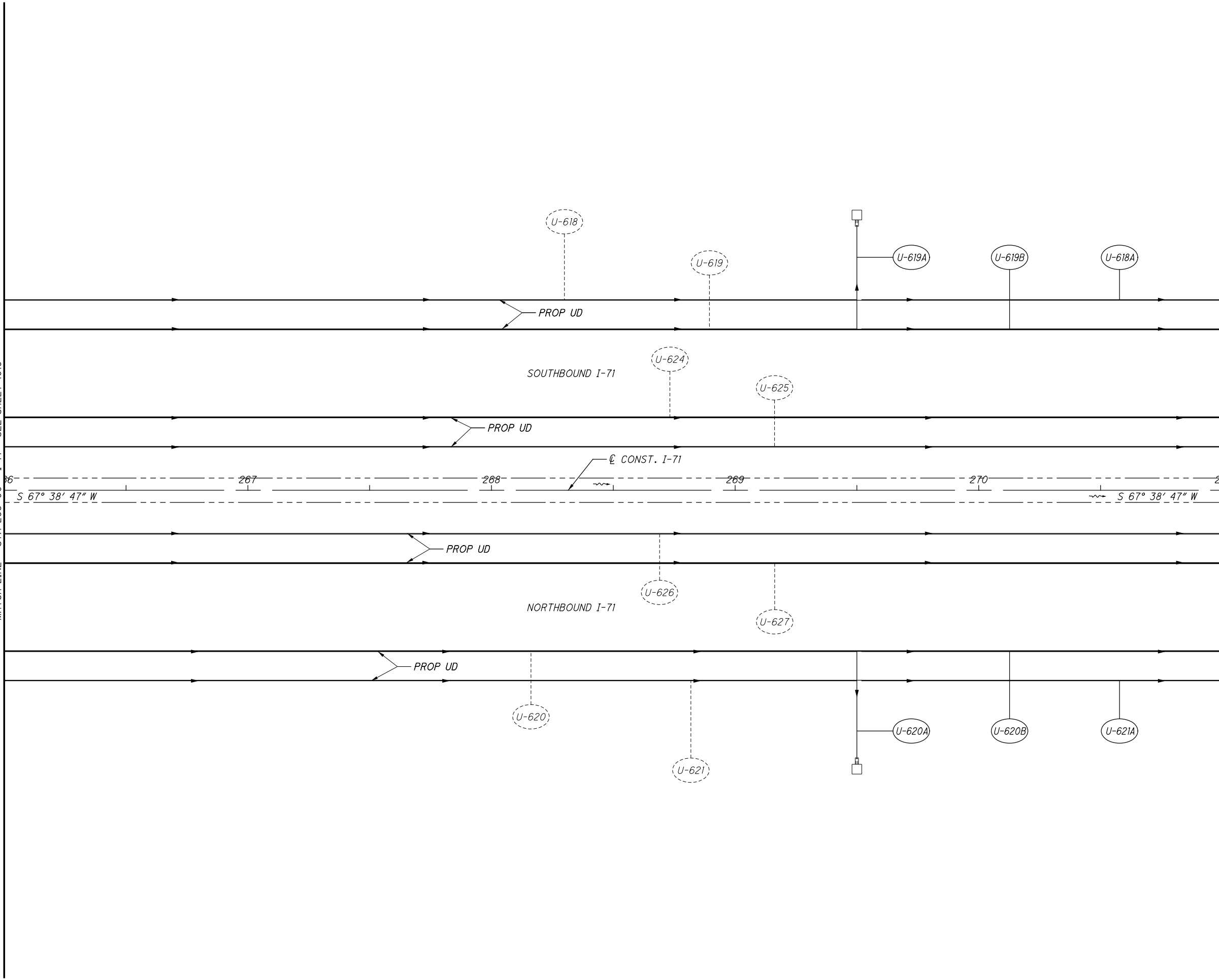
MATCH LINE - STA 266+00 - I-71 - SEE SHEET 1016

CALCULATED MAH
CHECKED CTW

0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 261+00 TO STA 266+00

MATCH LINE - STA 266+00 - I-71 - SEE SHEET 1015



MATCH LINE - STA 271+00 - I-71 - SEE SHEET 1017

CALCULATED
MAH
CHECKED
CTW

0 20 40
HORIZONTAL
SCALE IN FEET

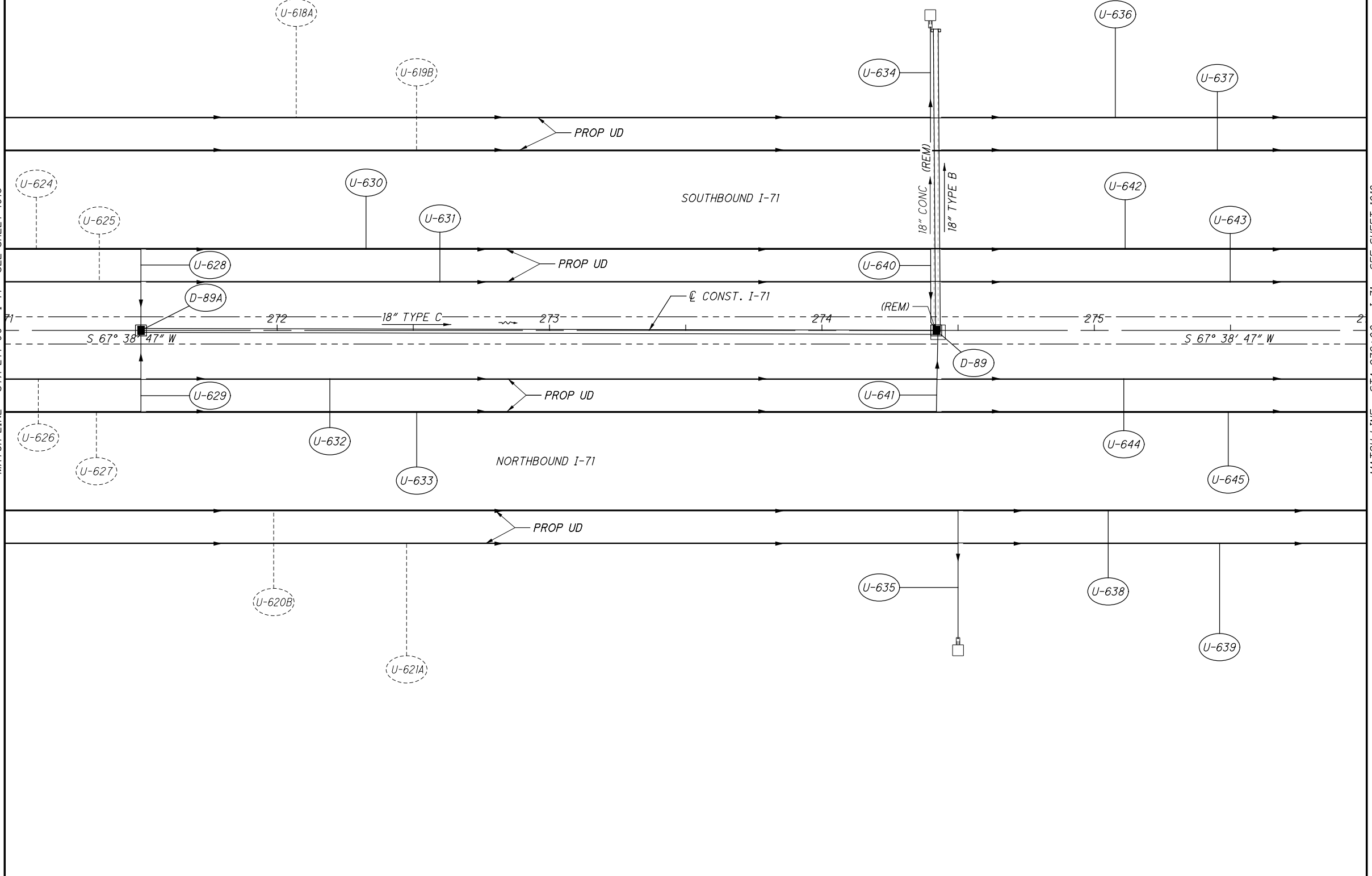
UNDERDRAIN PLAN - I-71
STA 266+00 TO STA 271+00

FRA - 71 - 0.00

1016
1312

X:\4037000\121957.16\107201\drainage\sheets\107201DP056.dgn_Sheet 10/28/2019 11:13:18 AM 1458s.js

MATCH LINE - STA 271+00 - I-71 - SEE SHEET 1016



MATCH LINE - STA 276+00 - I-71 - SEE SHEET 1018

CALCULATED	MAH
CHECKED	CTW

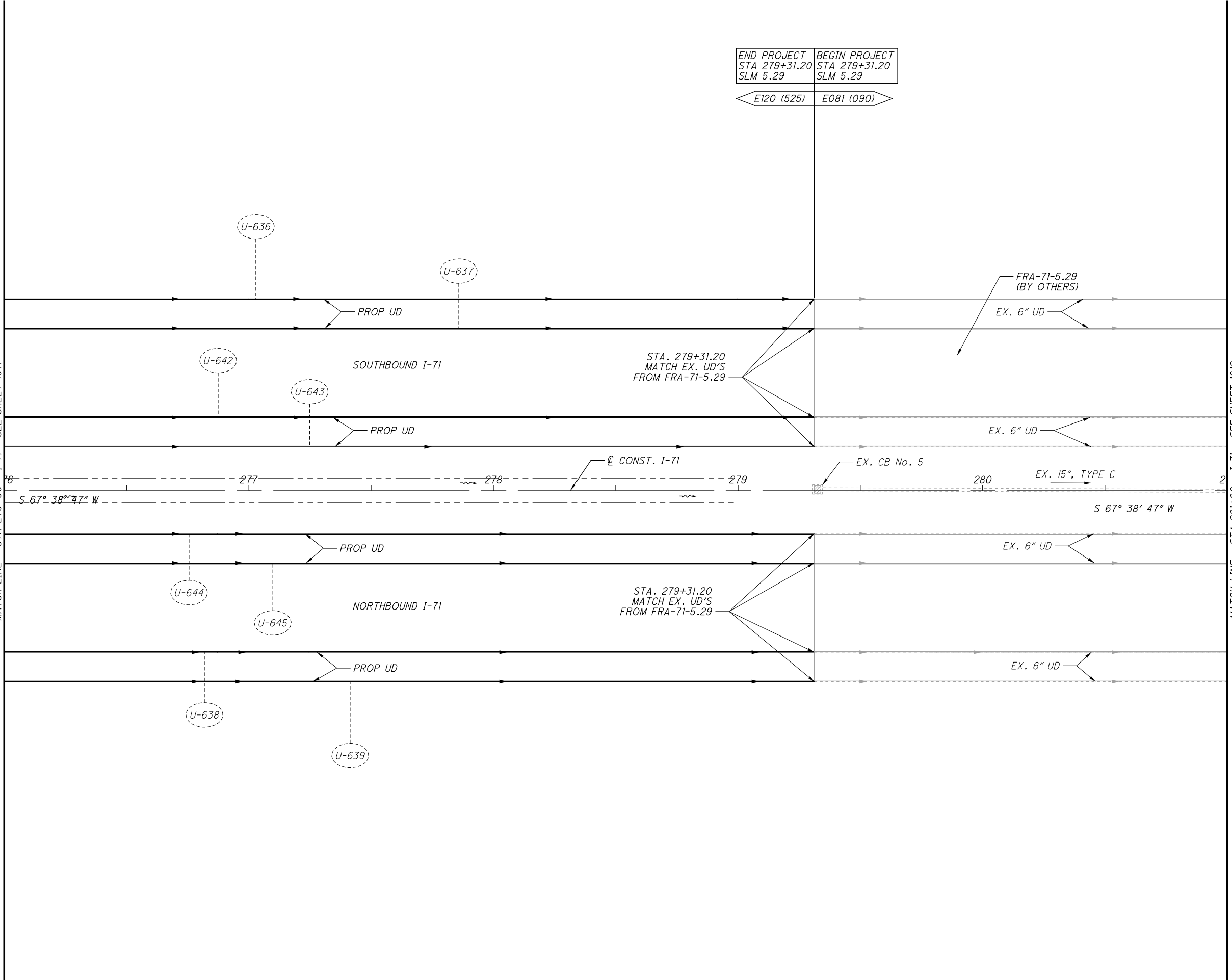
0 20 40
HORIZONTAL
SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 271+00 TO STA 276+00

FRA-71-0.00

1017
1312

MATCH LINE - STA 276+00 - I-71 - SEE SHEET 1017



END PROJECT STA 279+31.20 SLM 5.29	BEGIN PROJECT STA 279+31.20 SLM 5.29
← E120 (525)	E081 (090) →

CALCULATED MAH
CHECKED CTW

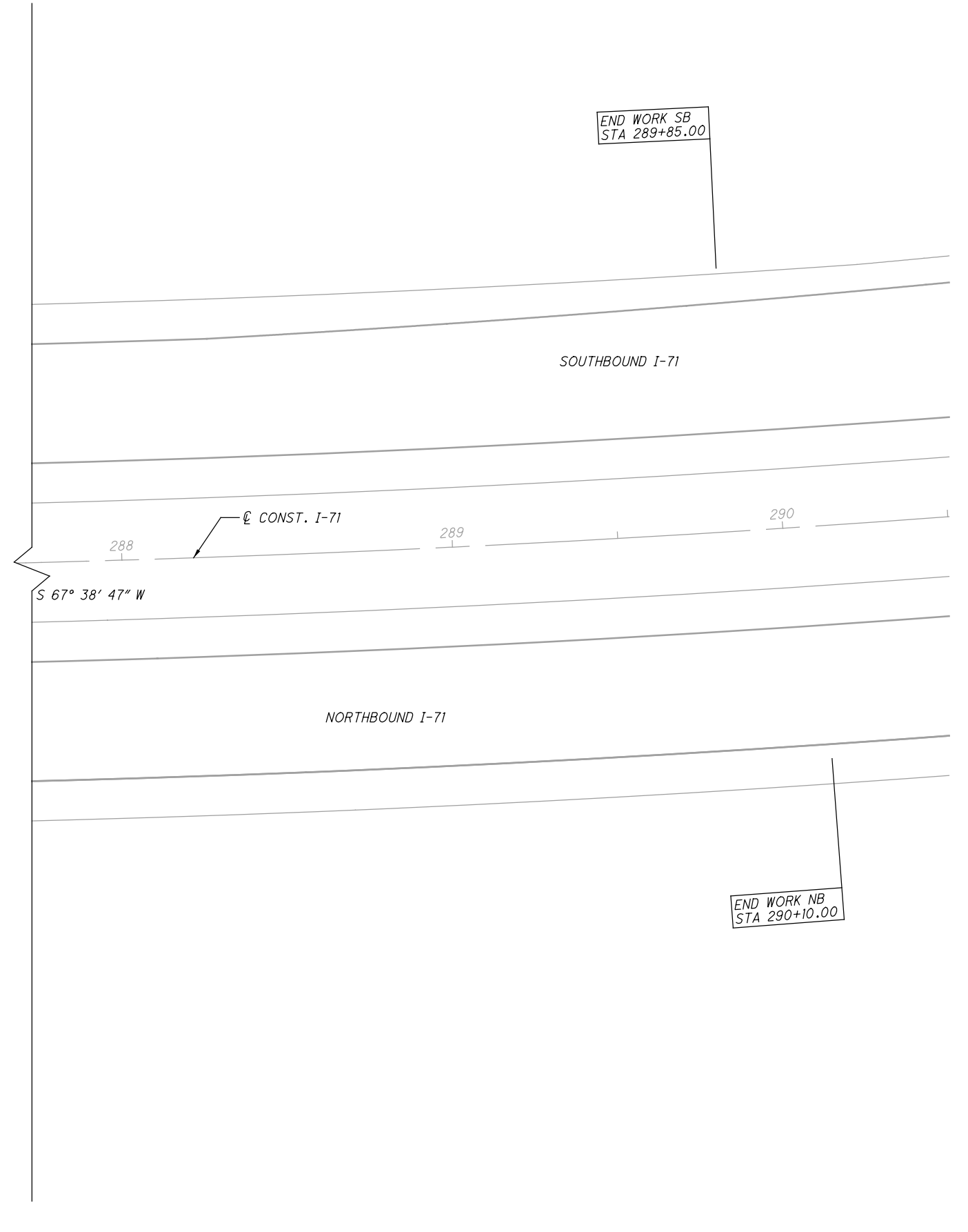
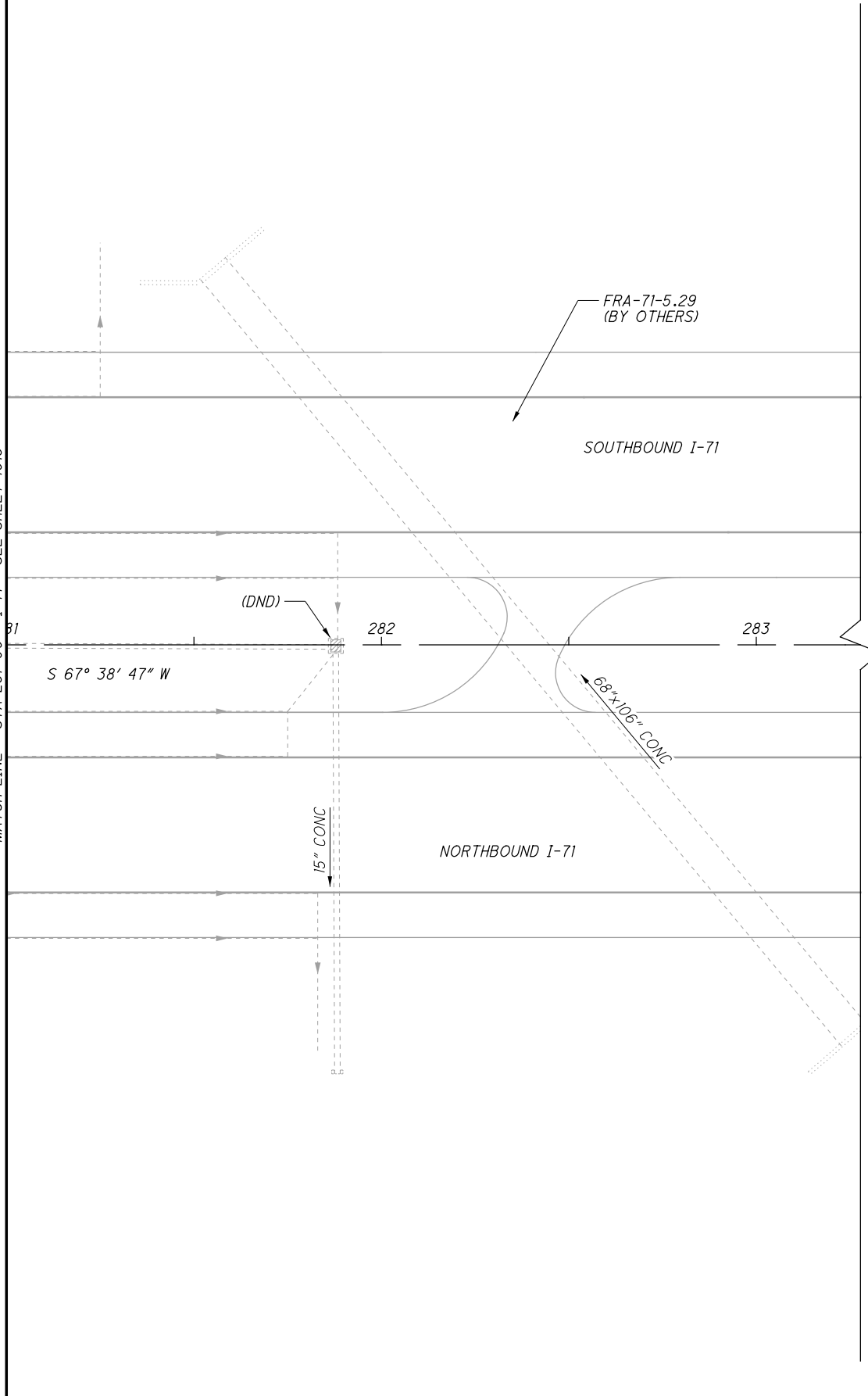
0 20 40
HORIZONTAL SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 276+00 TO STA 281+00

FRA-71-0.00

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MATCH LINE - STA 281+00 - I-71 - SEE SHEET 1018



END WORK SB
STA 289+85.00

END WORK NB
STA 290+10.00

CALCULATED
MAH
CHECKED
CTW

0 20 40
HORIZONTAL
SCALE IN FEET

UNDERDRAIN PLAN - I-71
STA 281+00 TO STA 289+00

FRA-71-0.00

1019
1312

BARRIER TAPER LOCATIONS			
BEGIN TAPER		END TAPER	
12+90	14.00'	13+40	12.33'
14+00	12.33'	14+50	14.00'
147+80	14.00'	148+30	12.33'
149+00	12.33'	149+50	14.00'
200+50	16.00'	201+00	14.33'
201+90	14.33'	202+40	16.00'

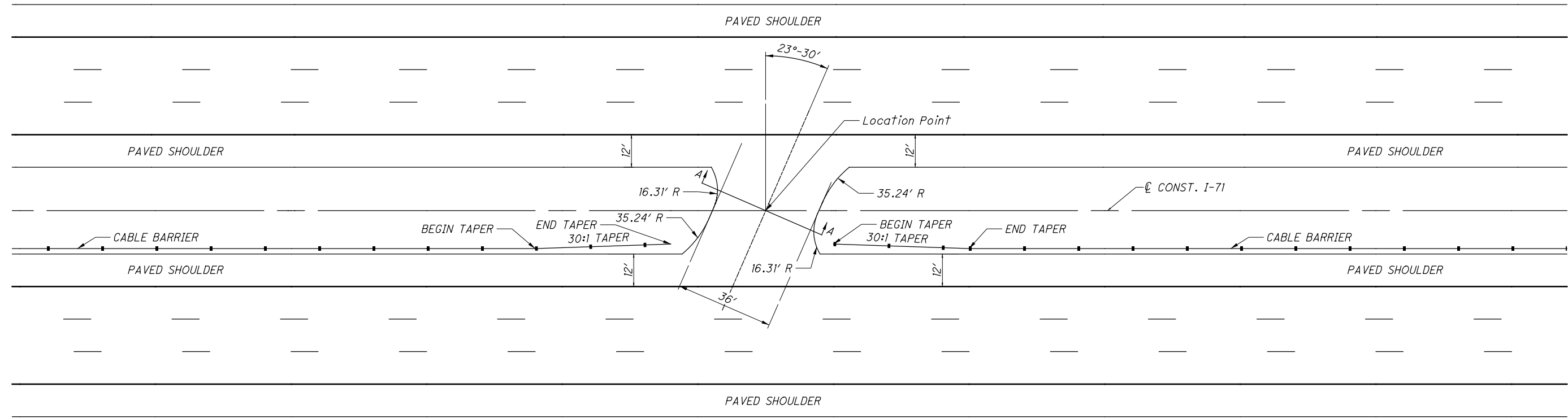


CALCULATED
MAH
CHECKED
JMB

MEDIAN CROSSOVER DETAILS
STA 13+75, 148+70 AND 201+40

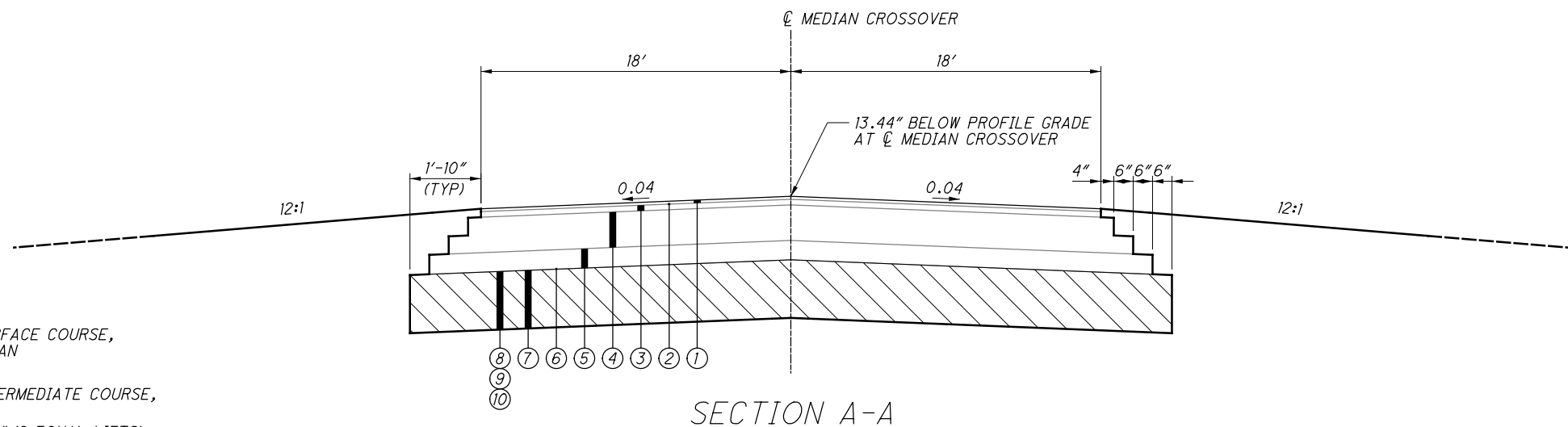
FRA - 71 - 0.00

1020
1312



TYPICAL MEDIAN CROSSOVER DETAIL
APPLIES: STA 13+75, 148+70 AND 201+40

NOTES:
1. SEE SHEET 7 FOR STATION RANGE OF WHEN EXCAVATION OF SUBGRADE WITH GEOTEXTILE FABRIC AND GRANULAR MATERIAL, TYPE B ARE USED INSTEAD OF CEMENT STABILIZED SUBGRADE.



SECTION A-A

LEGEND

- ① ITEM 806 - 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, AS PER PLAN
- ② ITEM 407 - NON-TRACKING TACK COAT
- ③ ITEM 442 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A, (446)
- ④ ITEM 302 - ASPHALT CONCRETE BASE, 11" (2 EQUAL LIFTS)
- ⑤ ITEM 304 - 6" AGGREGATE BASE
- ⑥ ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
- ⑦ ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP
- ⑧ ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP
- ⑨ ITEM 204 - GEOTEXTILE FABRIC
- ⑩ ITEM 204 - 12" GRANULAR MATERIAL, TYPE B

X:\4037000\121957.16\107201\roadway\sheets\107201G10.dgn Sheet 10/28/2019 11:13:19 AM 14585js

STA 164+74.62
85.70' LT, @ RAMP A
STA 96+89.47
7.94' RT, @ HARRISBURG
PIKE (US 62)

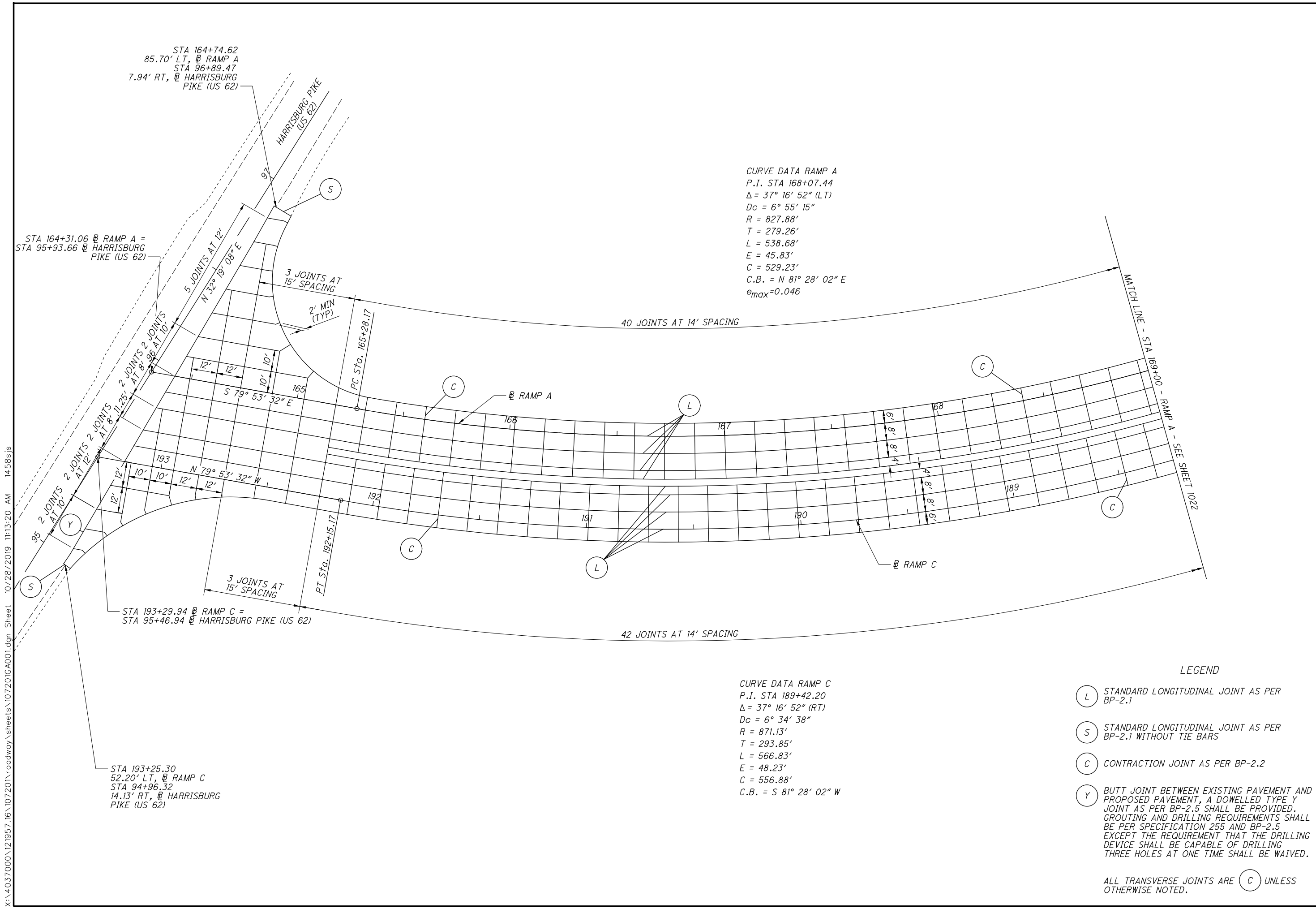
CURVE DATA RAMP A
P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
C.B. = $N 81^\circ 28' 02'' E$
 $e_{max} = 0.046$

STA 164+31.06 @ RAMP A =
STA 95+93.66 @ HARRISBURG
PIKE (US 62)

STA 193+29.94 @ RAMP C =
STA 95+46.94 @ HARRISBURG PIKE (US 62)

STA 193+25.30
52.20' LT, @ RAMP C
STA 94+96.32
14.13' RT, @ HARRISBURG
PIKE (US 62)

X:\4037000\121957.16\107201\roadway\sheets\107201GA001.dgn Sheet 10/28/2019 11:13:20 AM 1458s.js



LEGEND

- (L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1
- (S) STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS
- (C) CONTRACTION JOINT AS PER BP-2.2
- (Y) BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENT, A DOWELLED TYPE Y JOINT AS PER BP-2.5 SHALL BE PROVIDED. GROUTING AND DRILLING REQUIREMENTS SHALL BE PER SPECIFICATION 255 AND BP-2.5 EXCEPT THE REQUIREMENT THAT THE DRILLING DEVICE SHALL BE CAPABLE OF DRILLING THREE HOLES AT ONE TIME SHALL BE WAIVED.

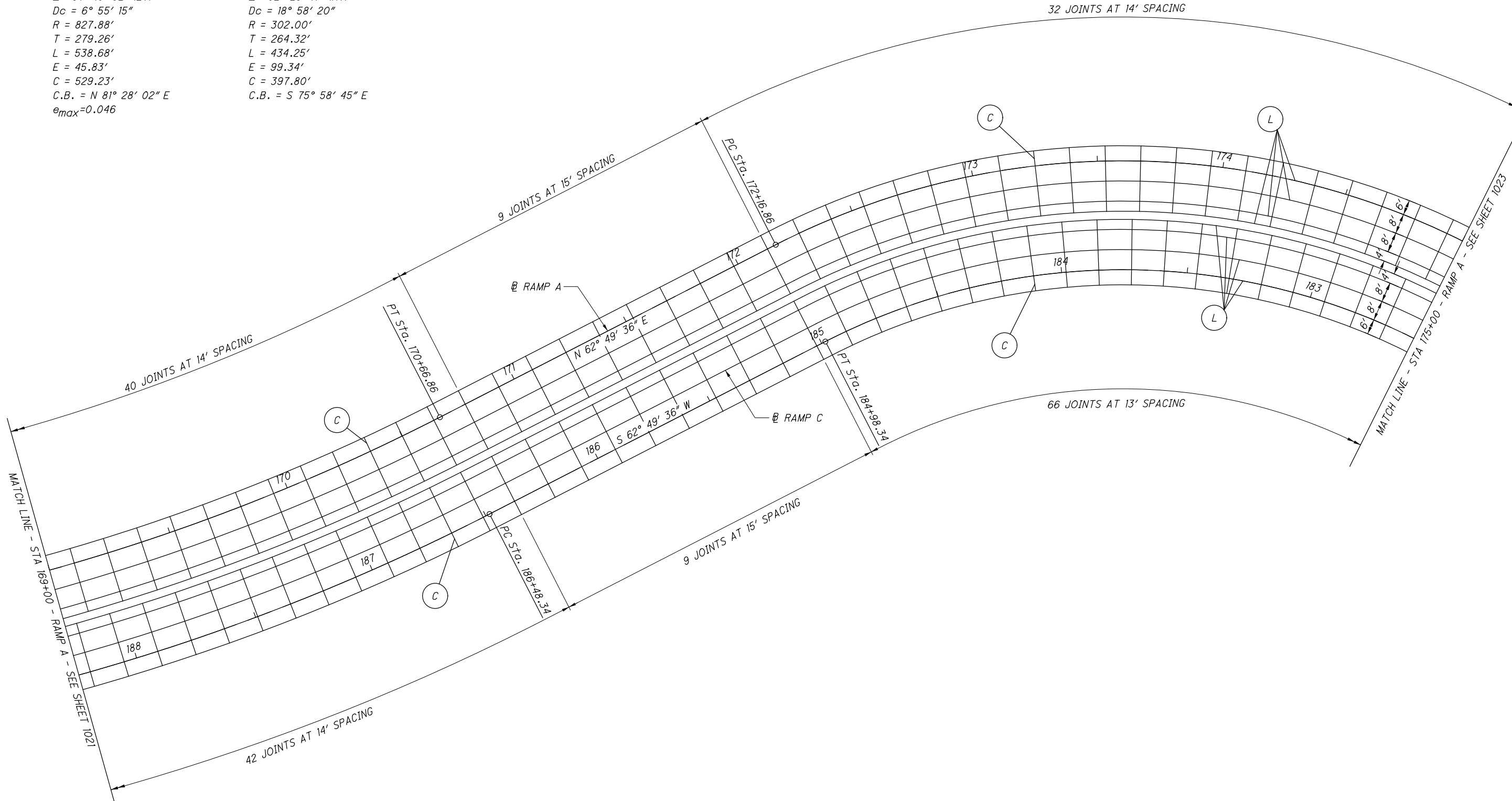
ALL TRANSVERSE JOINTS ARE (C) UNLESS OTHERWISE NOTED.

CURVE DATA RAMP A
 P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $Dc = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
 C.B. = N $81^\circ 28' 02''$ E
 $e_{max} = 0.046$

CURVE DATA RAMP A
 P.I. Sta. 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $Dc = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$
 C.B. = S $75^\circ 58' 45''$ E

CURVE DATA RAMP C
 P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $Dc = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$
 C.B. = S $81^\circ 28' 02''$ W

CURVE DATA RAMP C
 P.I. Sta. 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $Dc = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
 C.B. = N $37^\circ 40' 48''$ W



CALCULATED
 DCB
 CHECKED
 JMB

0 20 40
 HORIZONTAL
 SCALE IN FEET

PAVEMENT JOINT DETAIL
 RAMPS A & C

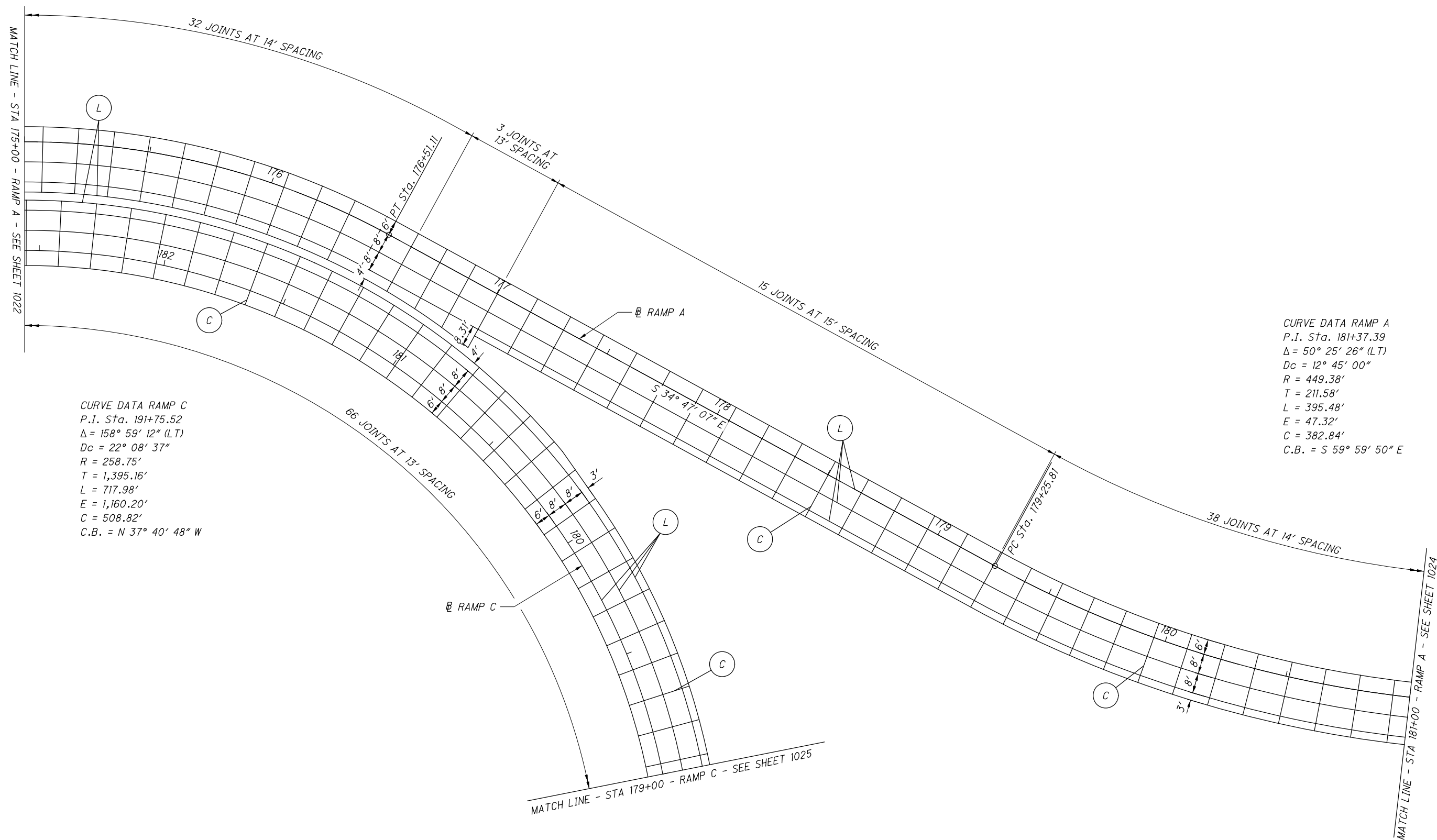
FRA - 71 - 0.00

1022
 1312

SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND

X:\4037000\121957.16\107201\roadway\sheets\107201GA002.dgn Sheet 10/28/2019 11:13:20 AM 1458s.js

CURVE DATA RAMP A
 P.I. Sta. 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$



CURVE DATA RAMP C
 P.I. Sta. 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
 C.B. = N 37° 40' 48" W

CURVE DATA RAMP A
 P.I. Sta. 181+37.39
 $\Delta = 50^\circ 25' 26''$ (LT)
 $D_c = 12^\circ 45' 00''$
 $R = 449.38'$
 $T = 211.58'$
 $L = 395.48'$
 $E = 47.32'$
 $C = 382.84'$
 C.B. = S 59° 59' 50" E

0 20 40
 HORIZONTAL SCALE IN FEET

CALCULATED DCB CHECKED JMB

PAVEMENT JOINT DETAIL
 RAMPS A & C

FRA-71-0.00

1023
 1312

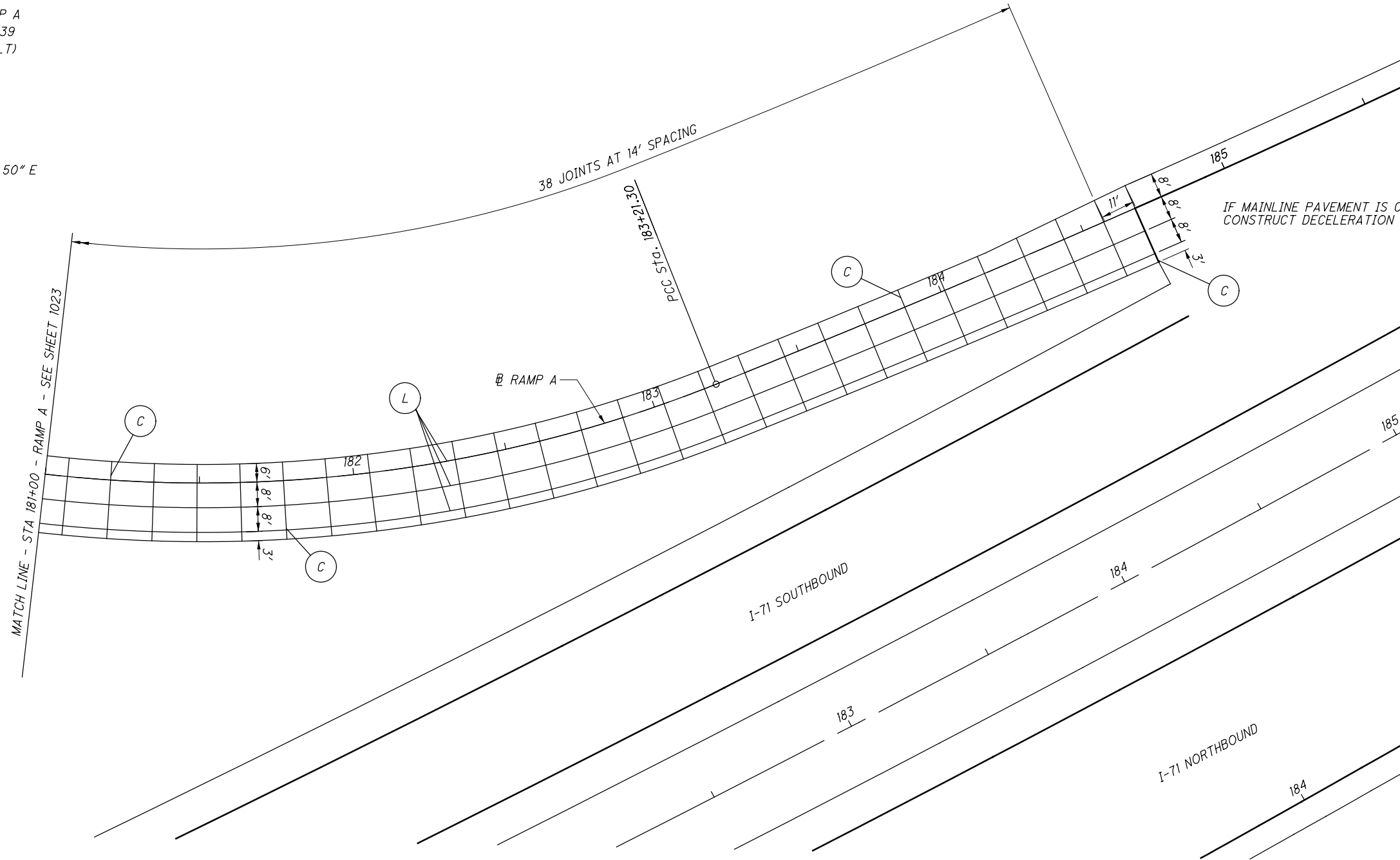
SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND

X:\4037000\121957.16\107201\roadway\sheets\107201GA003.dgn_Sheet 10/28/2019 11:13:21 AM 1458s.js

X:\4037000\121957.16\107201\roadway\sheets\107201GA004.dgn Sheet 10/28/2019 11:13:21 AM 1458s.js

CURVE DATA RAMP A
P.I. Sta. 181+37.39
 $\Delta = 50^\circ 25' 26''$ (LT)
 $Dc = 12^\circ 45' 00''$
 $R = 449.38'$
 $T = 211.58'$
 $L = 395.48'$
 $E = 47.32'$
 $C = 382.84'$
C.B. = S $59^\circ 59' 50''$ E

CURVE DATA RAMP A
P.I. Sta. 187+21.97
 $\Delta = 11^\circ 11' 00''$ (LT)
 $Dc = 1^\circ 24' 00''$
 $R = 4,092.56'$
 $T = 400.68'$
 $L = 798.81'$
 $E = 19.57'$
 $C = 797.54'$
C.B. = N $89^\circ 11' 57''$ E



CALCULATED
DCB
CHECKED
JMB

0 20 40
HORIZONTAL
SCALE IN FEET

PAVEMENT JOINT DETAIL
RAMP A

FRA-71-0:00

1024
1312

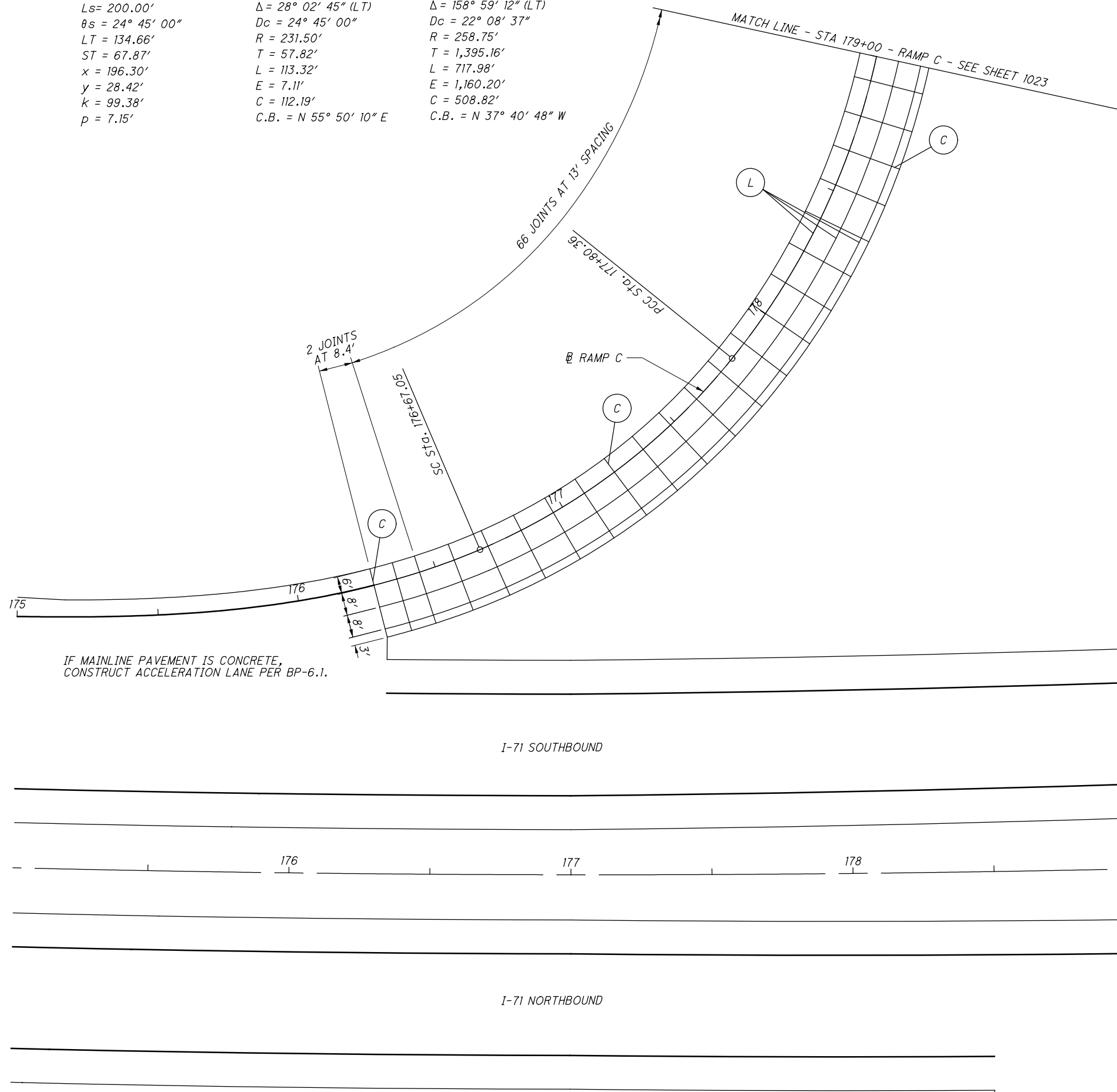
SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND

X:\4037000\121957.16\107201\roadway\sheets\107201GA010.dgn Sheet 10/28/2019 11:13:21 AM 1458s.js

SPIRAL DATA RAMP C
P.I. STA. 176+01.71
Ls = 200.00'
 $\theta_s = 24^\circ 45' 00''$
LT = 134.66'
ST = 67.87'
x = 196.30'
y = 28.42'
k = 99.38'
p = 7.15'

CURVE DATA RAMP C
P.I. Sta. 177+24.87
 $\Delta = 28^\circ 02' 45''$ (LT)
Dc = 24' 45" 00"
R = 231.50'
T = 57.82'
L = 113.32'
E = 7.11'
C = 112.19'
C.B. = N 55° 50' 10" E

CURVE DATA RAMP C
P.I. Sta. 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
Dc = 22' 08' 37"
R = 258.75'
T = 1,395.16'
L = 717.98'
E = 1,160.20'
C = 508.82'
C.B. = N 37° 40' 48" W



CALCULATED
DCB
CHECKED
JMB

0 20 40
HORIZONTAL
SCALE IN FEET

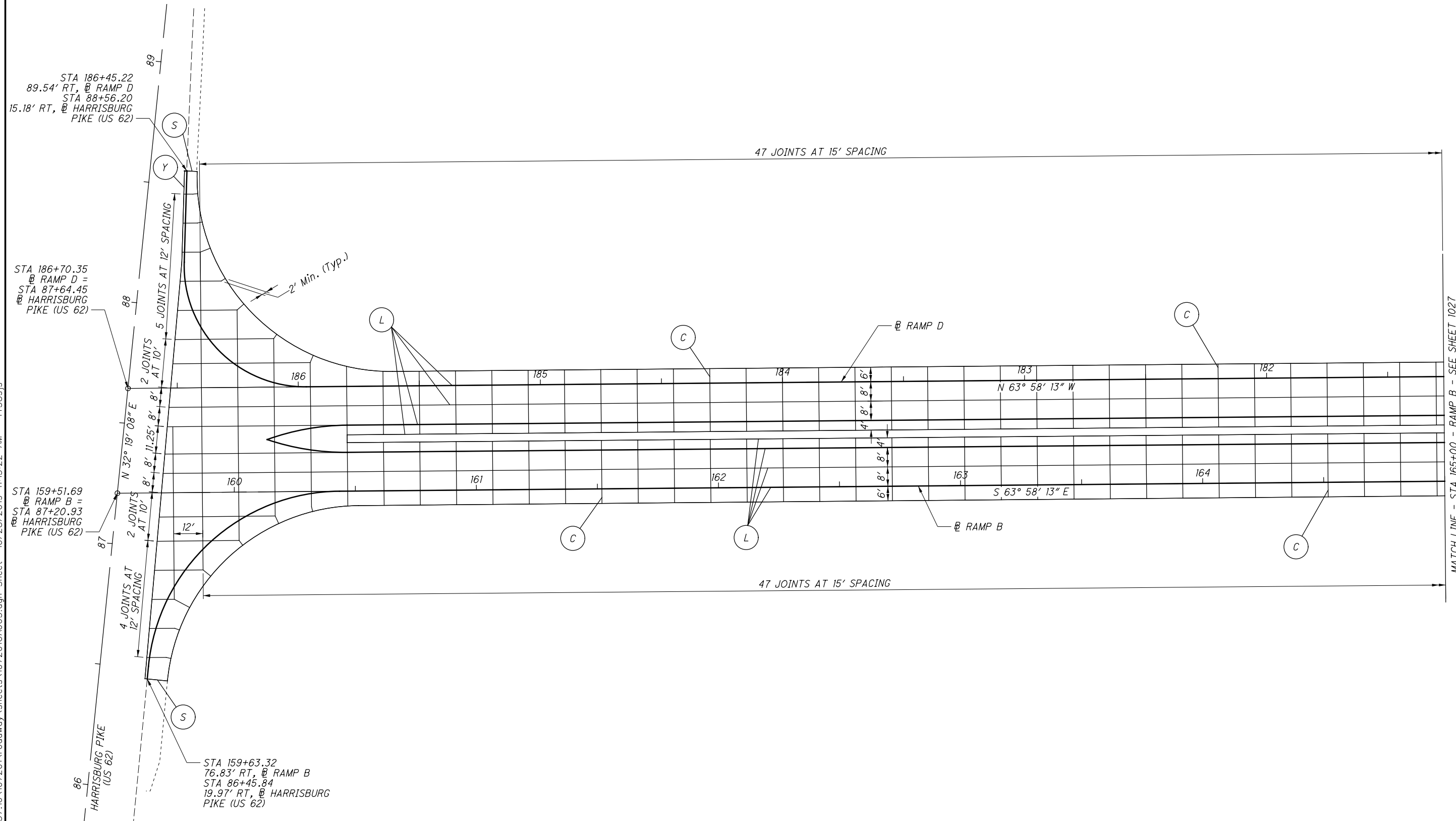
PAVEMENT JOINT DETAIL
RAMP C

FRA - 71 - 0.00

1025
1312

SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND

X:\4037000\121957.16\107201\roadway\sheets\107201GA005.dgn_Sheet 10/28/2019 11:13:22 AM 14585.js



STA 186+45.22
 89.54' RT, @ RAMP D
 STA 88+56.20
 15.18' RT, @ HARRISBURG
 PIKE (US 62)

STA 186+70.35
 @ RAMP D =
 STA 87+64.45
 @ HARRISBURG
 PIKE (US 62)

STA 159+51.69
 @ RAMP B =
 STA 87+20.93
 @ HARRISBURG
 PIKE (US 62)

STA 159+63.32
 76.83' RT, @ RAMP B
 STA 86+45.84
 19.97' RT, @ HARRISBURG
 PIKE (US 62)

47 JOINTS AT 15' SPACING

47 JOINTS AT 15' SPACING

MATCH LINE - STA 165+00 - RAMP B - SEE SHEET 1027

CALCULATED
 DCB
 CHECKED
 JMB

0 20 40
 HORIZONTAL
 SCALE IN FEET

PAVEMENT JOINT DETAIL
RAMPS B & D

FRA-71-0.00

1026
 1312

SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND



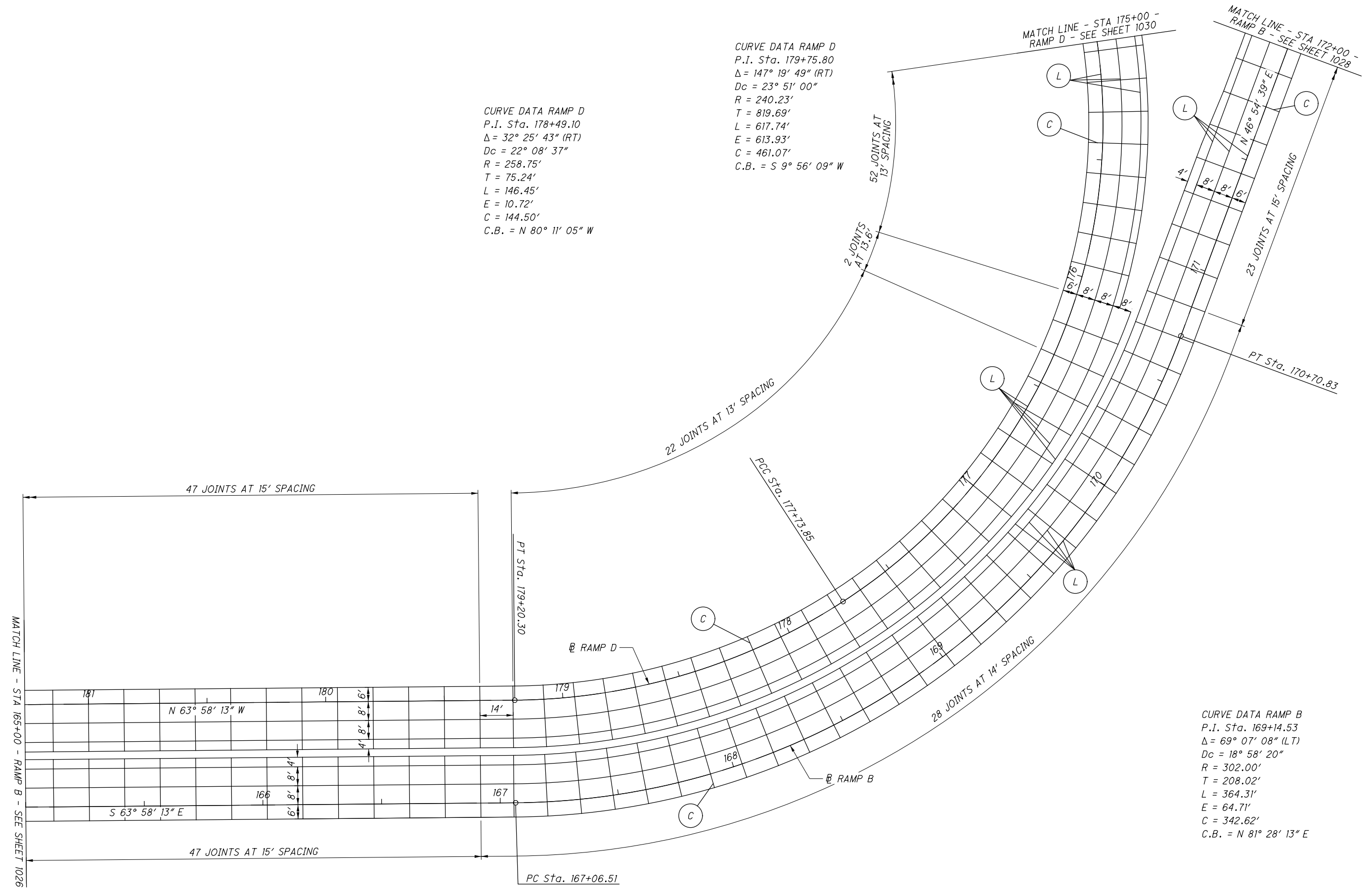
CALCULATED
DCB
CHECKED
JMB

**PAVEMENT JOINT DETAIL
RAMPS B & D**

FRA-71-0.00

1027
1312

X:\4037000\121957.16\107201\roadway\sheets\107201GA006.dgn_Sheet 10/28/2019 11:13:22 AM 1458sjs

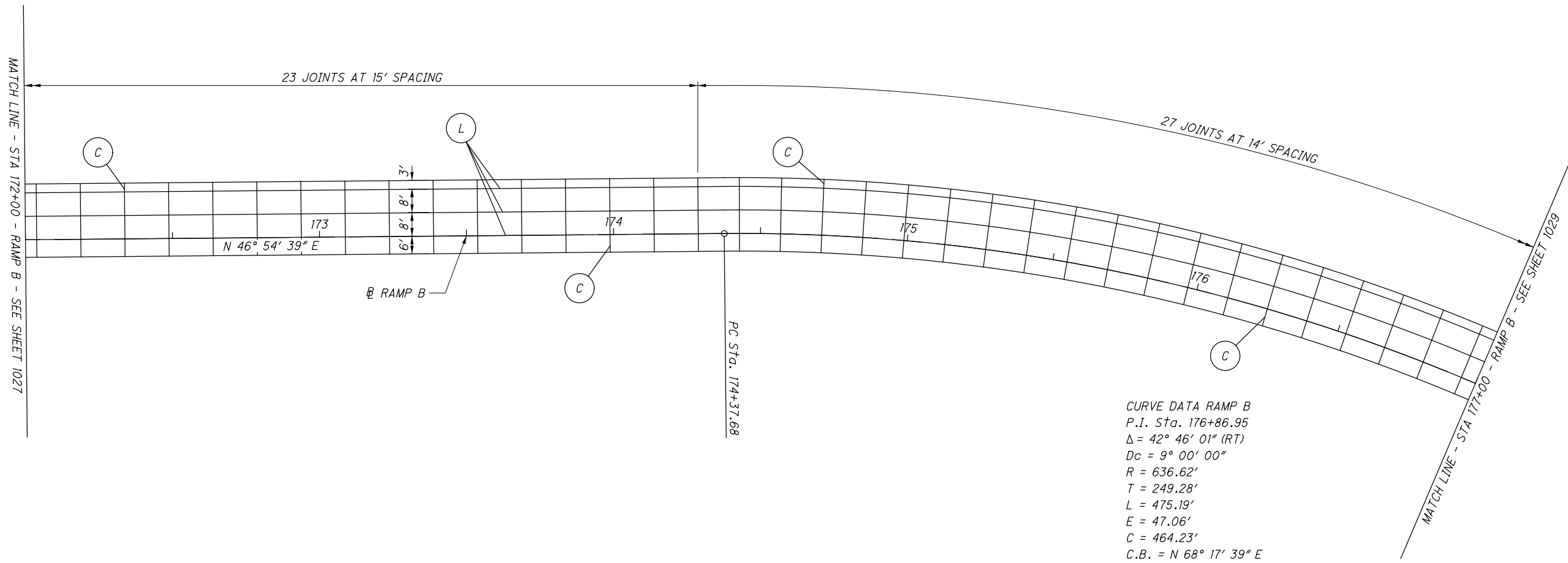


CURVE DATA RAMP D
 P.I. Sta. 178+49.10
 $\Delta = 32^\circ 25' 43''$ (RT)
 $Dc = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 75.24'$
 $L = 146.45'$
 $E = 10.72'$
 $C = 144.50'$
 C.B. = N $80^\circ 11' 05''$ W

CURVE DATA RAMP D
 P.I. Sta. 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $Dc = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
 C.B. = S $9^\circ 56' 09''$ W

CURVE DATA RAMP B
 P.I. Sta. 169+14.53
 $\Delta = 69^\circ 07' 08''$ (LT)
 $Dc = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 208.02'$
 $L = 364.31'$
 $E = 64.71'$
 $C = 342.62'$
 C.B. = N $81^\circ 28' 13''$ E

SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND



CURVE DATA RAMP B
 P.I. Sta. 176+86.95
 $\Delta = 42^\circ 46' 01''$ (RT)
 $Dc = 9^\circ 00' 00''$
 $R = 636.62'$
 $T = 249.28'$
 $L = 475.19'$
 $E = 47.06'$
 $C = 464.23'$
 $C.B. = N 68^\circ 17' 39'' E$

CALCULATED	DCB	CHECKED	JMB

0 20 40
 HORIZONTAL SCALE IN FEET

PAVEMENT JOINT DETAIL
 RAMP B

FRA - 71 - 0.00

1028
 1312

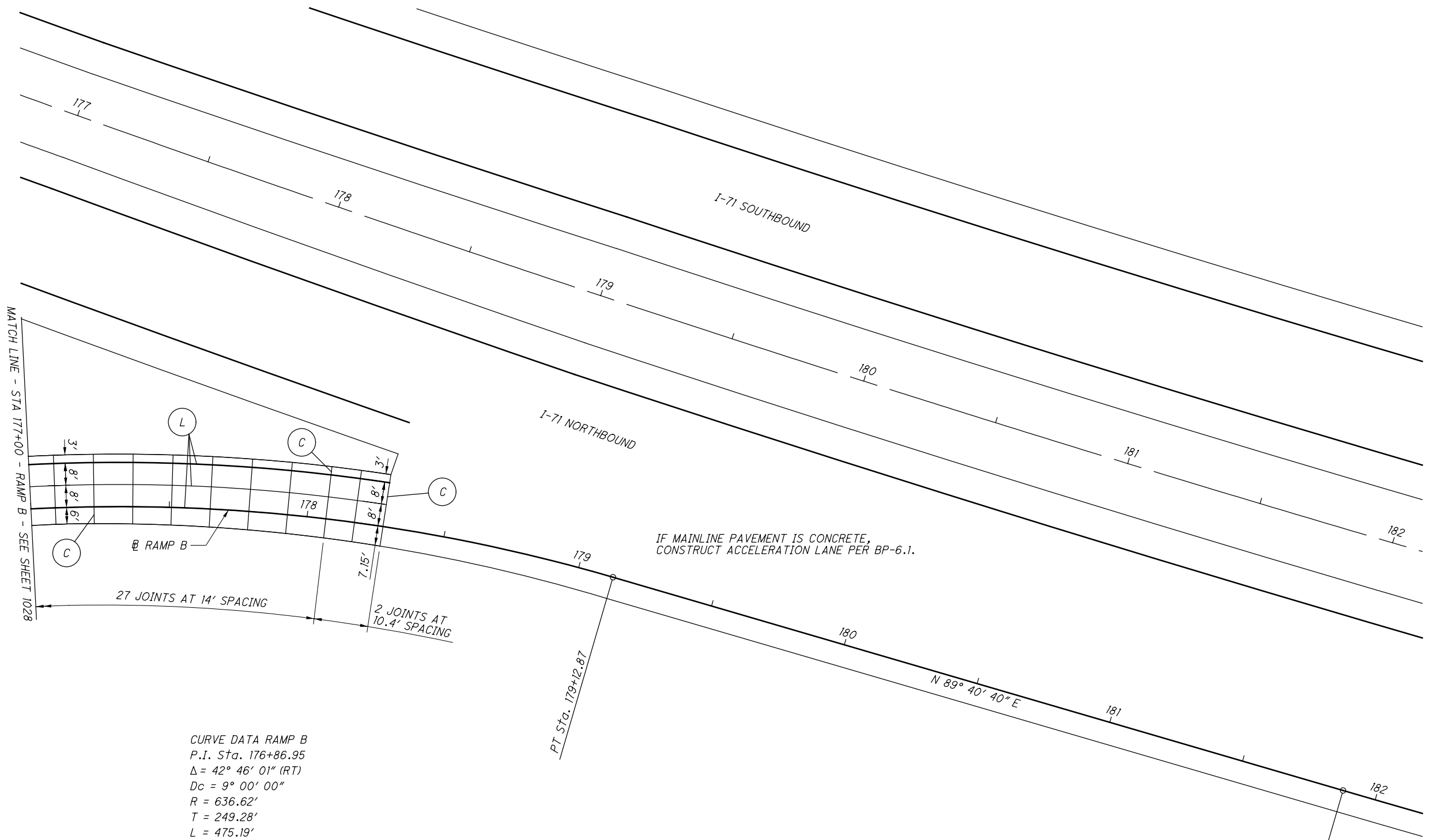


CALCULATED
DCB
CHECKED
JMB

**PAVEMENT JOINT DETAIL
RAMP B**

FRA - 71 - 0.00

1029
1312



CURVE DATA RAMP B
 P.I. Sta. 176+86.95
 $\Delta = 42^\circ 46' 01''$ (RT)
 $Dc = 9^\circ 00' 00''$
 $R = 636.62'$
 $T = 249.28'$
 $L = 475.19'$
 $E = 47.06'$
 $C = 464.23'$
 C.B. = N 68° 17' 39" E

CURVE DATA RAMP B
 P.I. Sta. 182+59.67
 $\Delta = 0^\circ 56' 50''$ (LT)
 $Dc = 0^\circ 39' 35''$
 $R = 8,685.37'$
 $T = 71.80'$
 $L = 143.60'$
 $E = 0.30'$
 $C = 143.60'$
 C.B. = N 89° 12' 15" E

SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND

X:\4037000\121957.16\107201\roadway\sheets\107201GA008.dgn_Sheet 10/28/2019 11:13:23 AM 14585.js



CALCULATED
DCB
CHECKED
JMB

PAVEMENT JOINT DETAIL
RAMP D

FRA - 71 - 0.00

1030
1312

I-71 SOUTHBOUND

I-71 NORTHBOUND

IF MAINLINE PAVEMENT IS CONCRETE, CONSTRUCT DECELERATION LANE PER BP-6.1.

PCC Sta. 169+88.46

PCC Sta. 171+56.12

52 JOINTS AT 13' SPACING

3 JOINTS AT 10.22'

CURVE DATA RAMP D
P.I. Sta. 166+87.05
 $\Delta = 7^\circ 20' 40''$ (RT)
 $Dc = 1^\circ 13' 00''$
 $R = 4,709.24'$
 $T = 302.24'$
 $L = 603.66'$
 $E = 9.69'$
 $C = 603.24'$
C.B. = S $80^\circ 48' 50''$ E

CURVE DATA RAMP D
P.I. Sta. 170+72.67
 $\Delta = 13^\circ 24' 44''$ (RT)
 $Dc = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 84.21'$
 $L = 167.65'$
 $E = 4.93'$
 $C = 167.27'$
C.B. = S $70^\circ 26' 08''$ E

CURVE DATA RAMP D
P.I. Sta. 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $Dc = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
C.B. = S $9^\circ 56' 09''$ W

MATCH LINE - STA 175+00 -
RAMP D - SEE SHEET 1027

X:\4037000\121957.16\107201\roadway\sheets\107201GA011.dgn Sheet 10/28/2019 11:13:23 AM 1458sjs

SEE SHEET 1021 FOR PAVEMENT JOINT DETAIL LEGEND

X:\4037000\121957.16\107201\traffic\sheets\107201T5002.dgn_Sheet 10/28/2019 11:13:24 AM 14585.js

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	LENGTH	620	621	621	644	644	644	644	644	SPECIAL	646	646	646	646	646	646	646	
			DELINEATOR, POST GROUND MOUNTED, TYPE C	RPM (WHITE/RED)			RPM (YELLOW/RED)	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	CHANNELIZING LINE, 12"	DOTTED LINE, 6" (WHITE)	REMOVAL OF PAVEMENT MARKING	AIR SPEED ZONE MARKING	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	STOP LINE	TRANSVERSE/DIAGONAL LINE	DOTTED LINE, 6" (WHITE)	WRONG WAY ARROW		
			FROM	TO			EACH	EACH	EACH	MILE	MILE	MILE	FT	FT	FT	EACH	MILE	MILE	MILE	FT	FT	FT	EACH
1073	- 1093	EW-8	RAMP A	164+74.62	184+68.33	LT/BL	2068.95	23								0.39							
1073	- 1093	EY-6	RAMP A	164+75.00	184+68.33	RT	1995.39			26							0.38						
	1093	TR-1	RAMP A	164+75.00	165+99.60	RT														64			
	1093	SL-1	RAMP A	164+75.00		RT/LT	36.00													36			
	1093	WW-1	RAMP A	165+05.00		RT																1	
	1093	WW-2	RAMP A	167+50.00		RT																1	
1072	- 1096	EW-7	RAMP B	159+63.32	178+27.46	BL	1906.53	20								0.36							
1072	- 1096	EY-5	RAMP B	160+01.81	178+27.46	RT	1825.65			24							0.35						
1072	1093	EW-3	RAMP C	176+27.38	193+36.00	BL	1730.75	25								0.33							
1072	1095	EY-4	RAMP C	176+27.38	192+75.00	RT	1684.47			22							0.32						
	1096	SL-2	RAMP D	186+25.00		LT	25.00													25			
1070	1096	EW-4	RAMP D	168+88.47	186+45.22	BL	1826.65	27								0.35							
1070	1096	EY-3	RAMP D	168+88.47	186+25.00	LT	1790.81			23							0.34						
	1096	WW-4	RAMP D	183+60.00		LT																1	
	1096	TR-2	RAMP D	185+77.80	186+25.00	LT														64			
	1096	WW-3	RAMP D	185+95.00		LT																1	
TOTALS FROM THIS SHEET								95		95						1.43	1.39		61	128		4	
TOTALS FROM SHEET 1031								142	1039		10.85	11.45	21.28	4051	4048	20,607	2	0.16	0.30	0.48		666	
TOTALS CARRIED TO GENERAL SUMMARY								237	1,134		22.30	21.28	4051	4048	20,607	2	3.28	0.48	61	128	666	4	

SUBSUMMARY - TRAFFIC CONTROL	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">CALCULATED</td> <td style="width: 50%; text-align: center;">EGD</td> </tr> <tr> <td style="width: 50%; text-align: center;">CHECKED</td> <td style="width: 50%; text-align: center;">DLW</td> </tr> </table>	CALCULATED	EGD	CHECKED	DLW
CALCULATED	EGD				
CHECKED	DLW				
FRA - 71 - 0.00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">1032</td> <td style="width: 50%; text-align: center;">1312</td> </tr> </table>	1032	1312		
1032	1312				

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	
							GROUND ROD	GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	GROUND MOUNTED SUPPORT, NO. 4 POST	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, 54x7.7	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10x12	SIGN POST REFLECTOR	BREAKAWAY STRUCTURAL BEAM CONNECTION	OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 6	SIGN, FLAT SHEET	SIGN, GROUND MOUNTED EXTRUSHEET	SIGN OVERHEAD EXTRUSHEET	CONCRETE MEDIAN BARRIER SIGN BRACKET	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
							EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	SF	SF	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1093	S-36	RAMP C	191+55	RT	R4-7c-18	18x30		4.8					1			3.8										
1094	S-37	RAMP A	171+00	LT	W3-3-48	48x48			15.9/16.3				2			16.0										
1096	S-38	RAMP B	159+85	RT	M3-1-30	30x15				17.6/17.6						3.1										
					M1-1-2-36	36x36										9.0										
					M6-1-21	21x15										2.2										
					D1-H4a-72	72x12										6.0										
1096	S-39	RAMP D	186+10	RT	R1-1-48	48x48			17.3/15.9				4			16.0										
					R6-1R-54	54x18										6.8										
					R6-1L-54	54x18										6.8										
					R5-1-48	48x48										16.0										
1096	S-40	RAMP B	161+05	LT	R4-7c-18	18x30		4.8					1			3.8										
1096	S-41	RAMP D	185+50	LT	R7-1-12	12x18		12.7								1.5			1							
1096	S-42	RAMP D	185+00	LT	R7-1-12	12x18		12.7								1.5										
1096	S-43	RAMP D	184+50	LT	R7-1-12	12x18		12.7								1.5										
1096	S-44	RAMP D	184+00	LT	R5-1a-42	42x30			13.9/14.1				2			8.8										
					R5-1a-42	42x30										8.8										
1096	S-45	RAMP D	183+00	LT	R7-1-12	12x18		12.7								1.5										
1096	S-46	RAMP D	181+50	LT	M1-4-2-36	36x36			10.9/10.9					2		9.0					2					
					M6-4-30	30x21										4.4										
					M1-5-2-36	36x36										9.0										
					M6-4-30	30x21										4.4										
					D1-H7a-120	120x72																				
1097	S-47	RAMP D	180+00	LT	R5-1a-42	42x30			13.9/14.1				2			8.8		60.0								
					R5-1a-42	42x30										8.8										
TOTALS CARRIED TO SHEET 1035								60.4	143.2	35.2		40.4	12	2		157.5	60.0		2	2						

CALCULATED EGD CHECKED DLW

SUBSUMMARY - TRAFFIC CONTROL

FRA - 71 - 0:00

1034
1312

AIR SPEED ZONE MARKING

AIR SPEED ZONE MARKINGS SHALL BE WHITE AND 24 INCHES WIDE MEASURED IN THE DIRECTION OF TRAVEL AND 4 FEET IN LENGTH. ON TWO-LANE ROADWAYS WITH PAVED SHOULDERS LESS THAN 4 FEET IN WIDTH, THE AIR SPEED ZONE MARKINGS SHALL BE PLACED WITH 2 FEET ON EACH SIDE OF THE CENTER LINE OR EDGE LINE MARKINGS. WHEN PAVED SHOULDERS OF SUFFICIENT WIDTH ARE AVAILABLE, THE AIR SPEED ZONE MARKINGS SHALL BE PLACED ON THE SHOULDERS.

PLACE THE MARKINGS AT 0.25 MILE INTERVALS OVER A 1.5 MILE LENGTH OF ROADWAY.

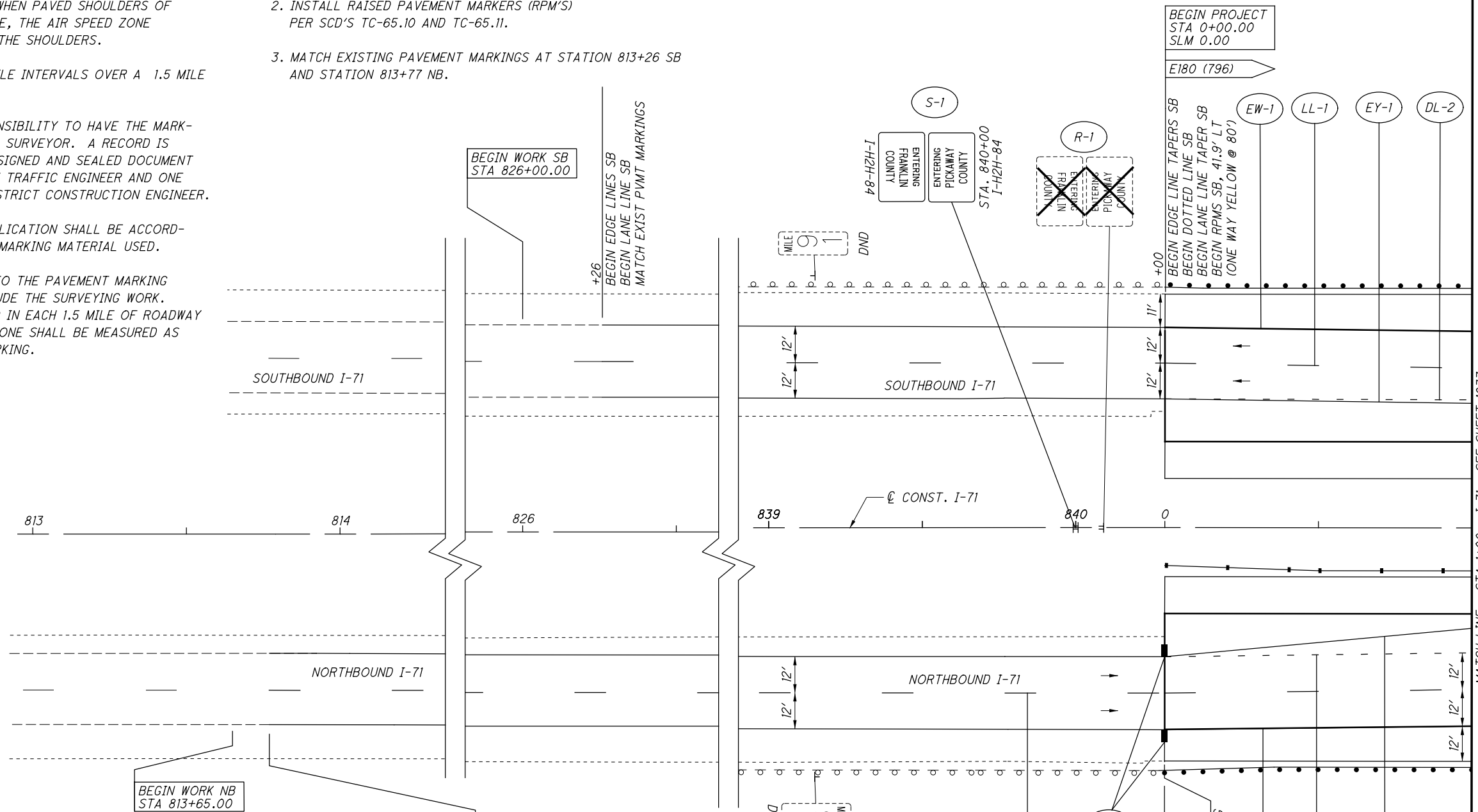
IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE MARKINGS LAID OUT BY A REGISTERED SURVEYOR. A RECORD IS TO BE KEPT AND ONE ORIGINAL SIGNED AND SEALED DOCUMENT IS TO BE SENT TO THE DISTRICT TRAFFIC ENGINEER AND ONE COPY IS TO BE SENT TO THE DISTRICT CONSTRUCTION ENGINEER.

MATERIALS, EQUIPMENT AND APPLICATION SHALL BE ACCORDING TO THE TYPE OF PAVEMENT MARKING MATERIAL USED.

PAYMENT SHALL BE ACCORDING TO THE PAVEMENT MARKING MATERIAL USED AND SHALL INCLUDE THE SURVEYING WORK. THE FOURTEEN MARKINGS PLACED IN EACH 1.5 MILE OF ROADWAY SHALL EQUAL ONE ZONE. ONE ZONE SHALL BE MEASURED AS 1 EACH FOR AIR SPEED ZONE MARKING.

NOTE

1. PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, ITEM 644, EXCEPT EPOXY PAVEMENT MARKINGS, ITEM 646, SHALL BE USED ON CONCRETE SURFACES SUCH AS APPROACH SLABS, BRIDGE SURFACES AND THE PROPOSED RAMPS.
2. INSTALL RAISED PAVEMENT MARKERS (RPM'S) PER SCD'S TC-65.10 AND TC-65.11.
3. MATCH EXISTING PAVEMENT MARKINGS AT STATION 813+26 SB AND STATION 813+77 NB.



LEGEND

(EW-1)	EDGE LINE, 6" (WHITE)	(SL-1)	STOP LINE		EXISTING SIGN
(EY-1)	EDGE LINE, 6" (YELLOW)	(TR-1)	TRANSVERSE/DIAGONAL LINE		EXISTING SIGN TO BE REMOVED
(LL-1)	LANE LINE, 6"	(ASZ-1)	AIR SPEED ZONE MARKING		PROPOSED SIGN
(CH-1)	CHANNELIZING LINE, 12"	(WW-1)	WRONG WAY ARROW	DND - DO NOT DISTURB	
(DL-1)	DOTTED LINE, 6" (WHITE)				
PROPOSED		EXISTING			
+	+	ONE POST SIGN, GROUND MOUNTED			
≡	≡	TWO POST SIGN, GROUND MOUNTED			
≡≡	≡≡	THREE POST SIGN, GROUND MOUNTED			
H	H	SINGLE POST SIGN, BACK TO BACK, GROUND MOUNTED			

NOTE

PAVEMENT MARKINGS SHALL BEGIN AT STATION 813+77 NB AND STATION 826+26 SB. THE PROPOSED MARKINGS SHALL MATCH THE EXISTING MARKINGS AT THE STATIONS NOTED. THE EXISTING PAVEMENT MARKINGS SHALL BE REMOVED FROM STATION 813+77 TO STATION 0+00 NB AND STATION 826+26 TO 0+00 SB.

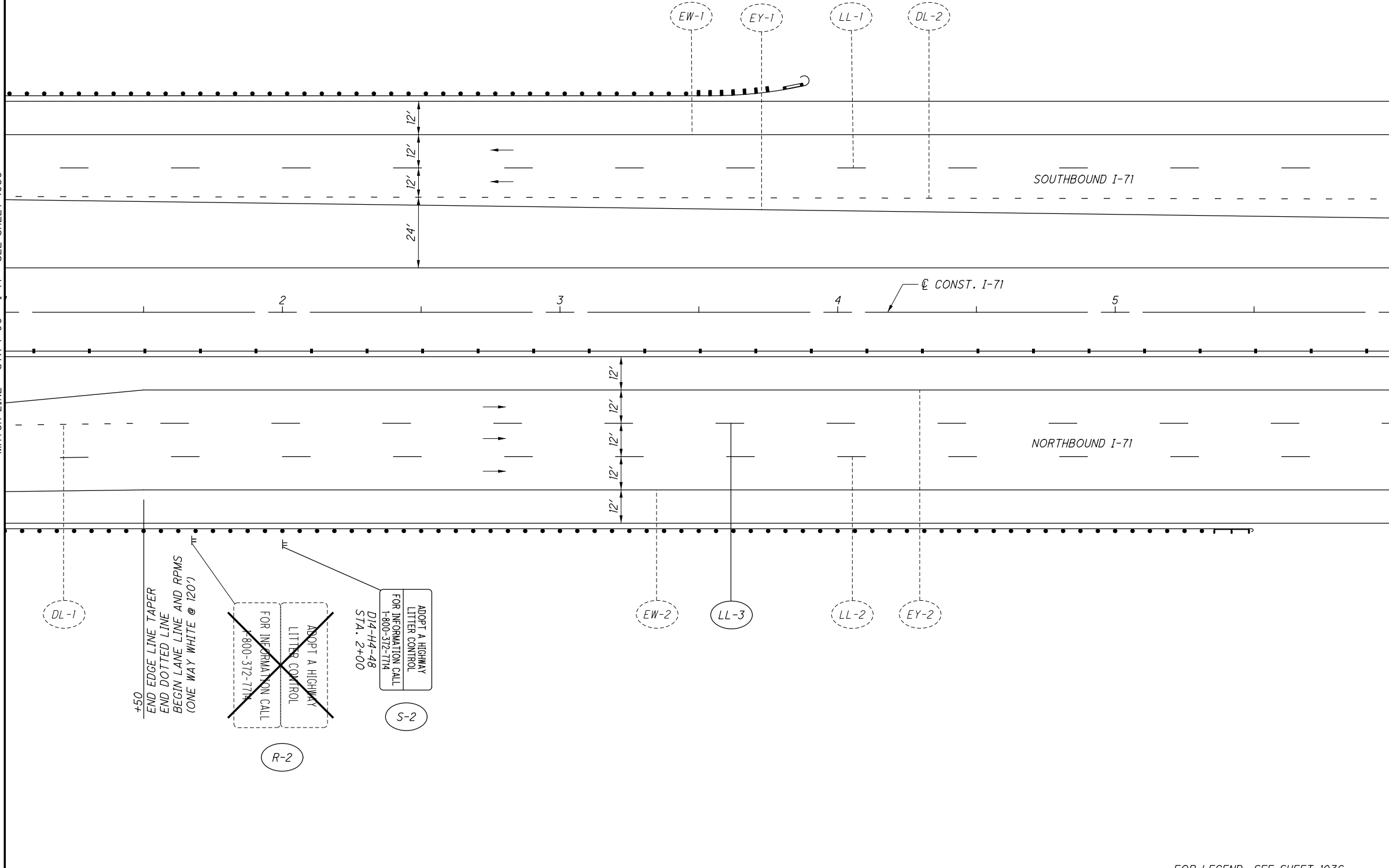
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TRAFFIC CONTROL PLAN - I-71
STA 837+00 TO STA 1+00

FRA-71-0.00

1036
1312

MATCH LINE - STA 1+00 - I-71 - SEE SHEET 1036



+50
 END EDGE LINE TAPER
 END DOTTED LINE
 BEGIN LANE LINE AND RPMS
 (ONE WAY WHITE @ 120')

~~ADOPT A HIGHWAY
 LITTER CONTROL
 FOR INFORMATION CALL
 1-800-372-7774~~

~~ADOPT A HIGHWAY
 LITTER CONTROL
 FOR INFORMATION CALL
 1-800-372-7774~~

D14-H4-48
 STA. 2+00

ADOPT A HIGHWAY
 LITTER CONTROL
 FOR INFORMATION CALL
 1-800-372-7774

R-2

S-2

FOR LEGEND, SEE SHEET 1036

CALCULATED
 DLW
 CHECKED
 EGD

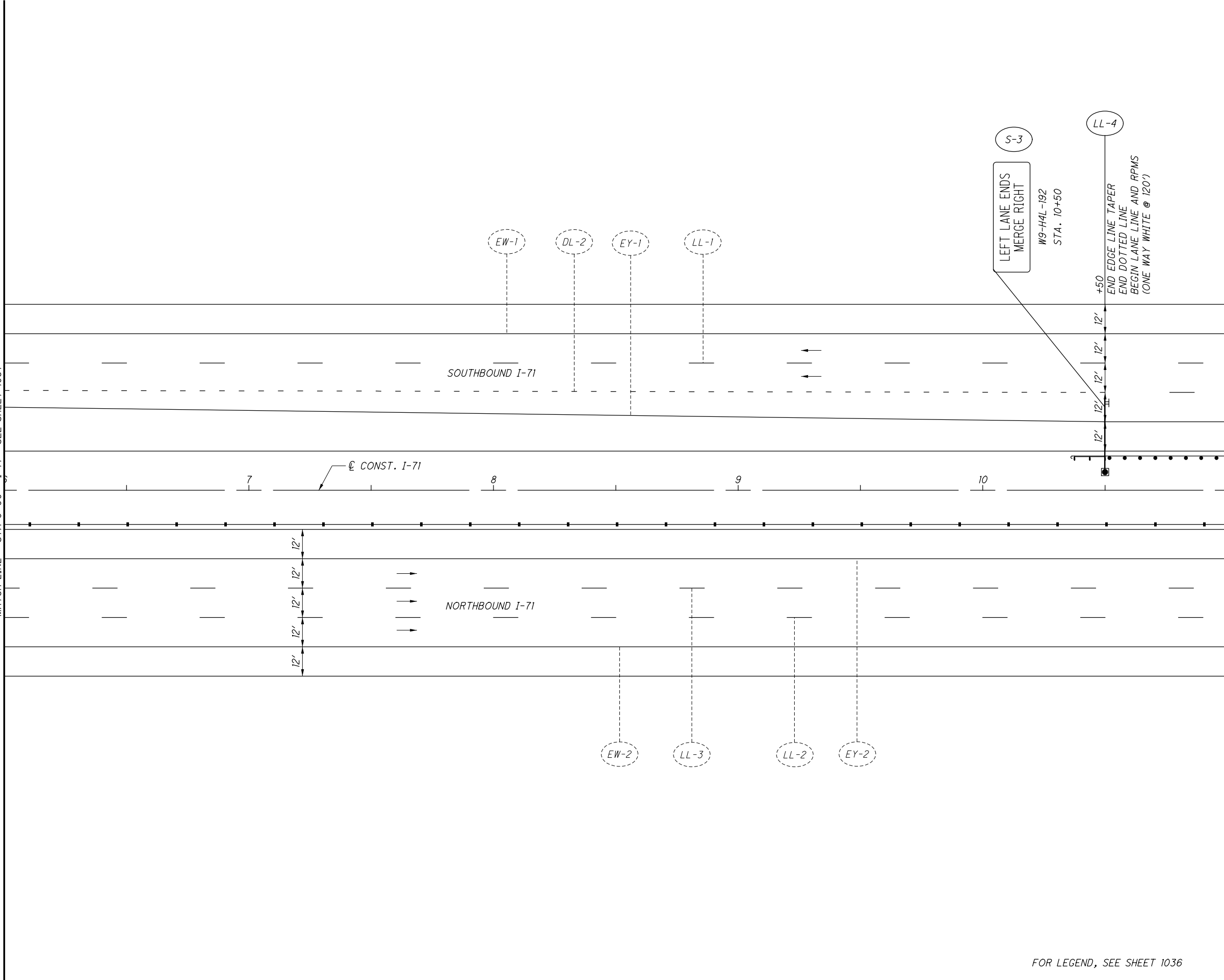
0 20 40
 HORIZONTAL
 SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 1+00 TO STA 6+00

FRA-71-0.00

1037
1312

MATCH LINE - STA 6+00 - I-71 - SEE SHEET 1037



MATCH LINE - STA 11+00 - I-71 - SEE SHEET 1039

FOR LEGEND, SEE SHEET 1036

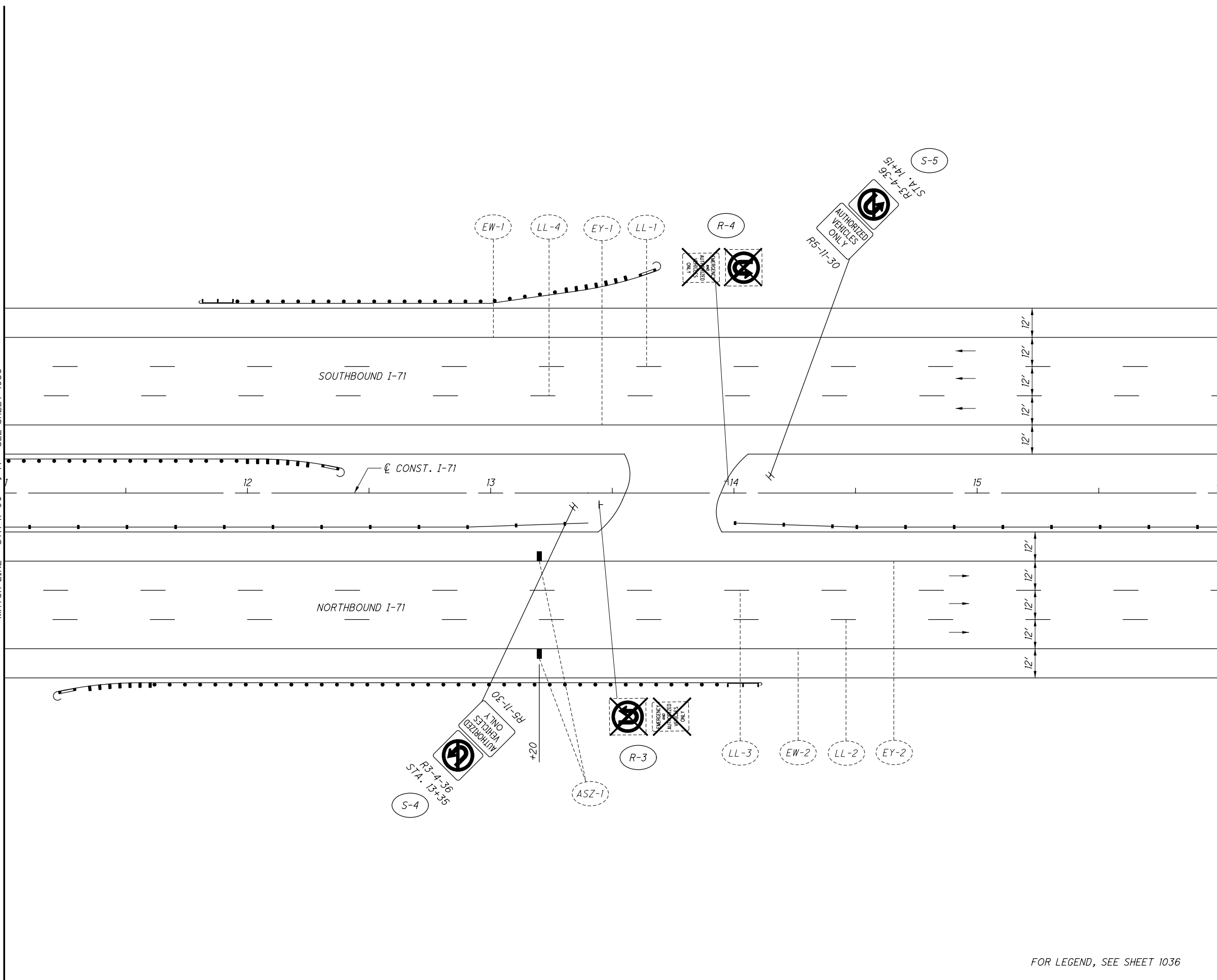
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 6+00 TO STA 11+00

FRA-71-0.00

MATCH LINE - STA 11+00 - I-71 - SEE SHEET 1038



FOR LEGEND, SEE SHEET 1036

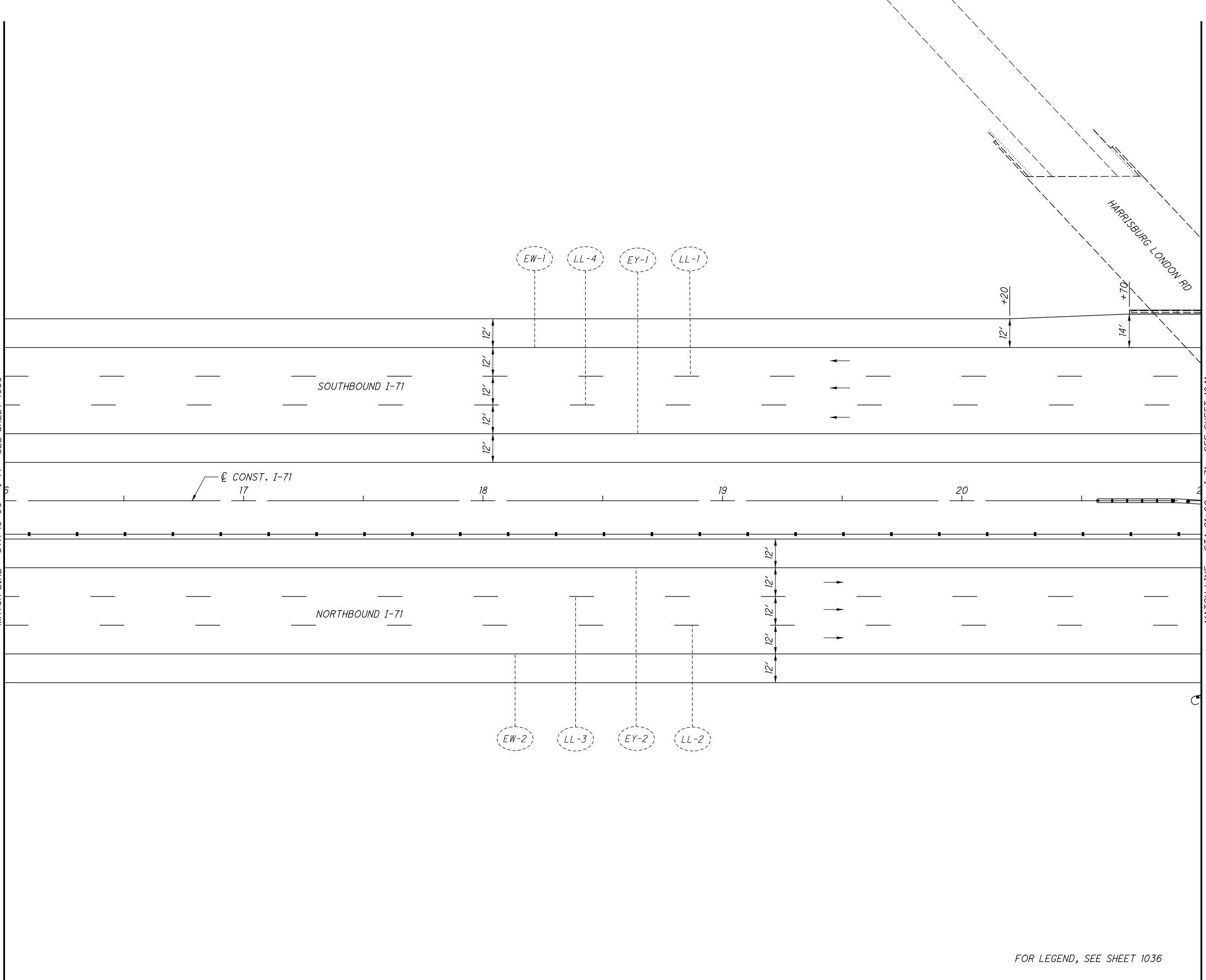
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 11+00 TO STA 16+00

FRA-71-0.00

MATCH LINE - STA 16+00 - I-71 - SEE SHEET 1039



FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

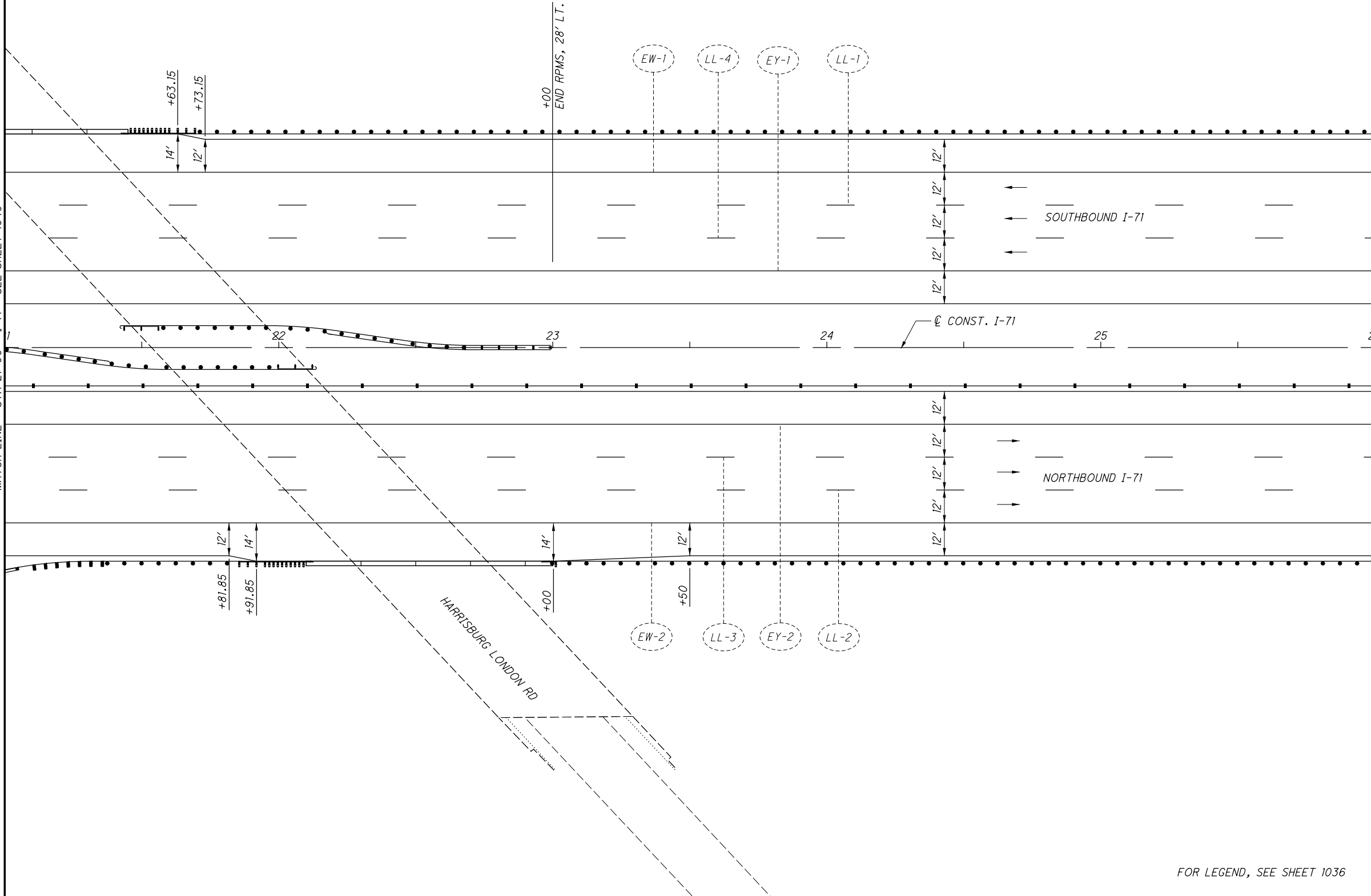
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 16+00 TO STA 21+00

FRA-71-0.00

1040
1312

MATCH LINE - STA 21+00 - I-71 - SEE SHEET 1040



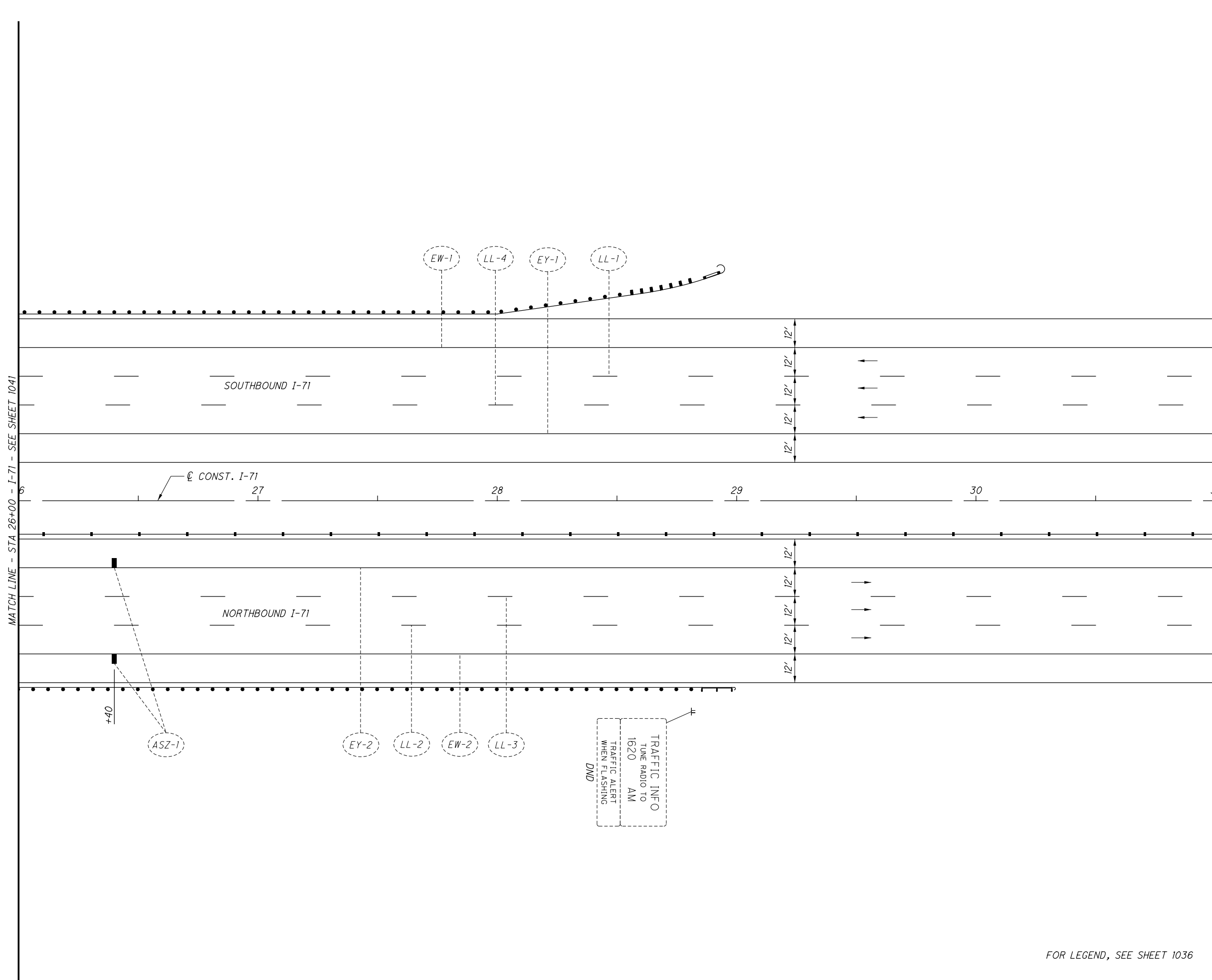
FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 21+00 TO STA 26+00

FRA-71-0.00



FOR LEGEND, SEE SHEET 1036

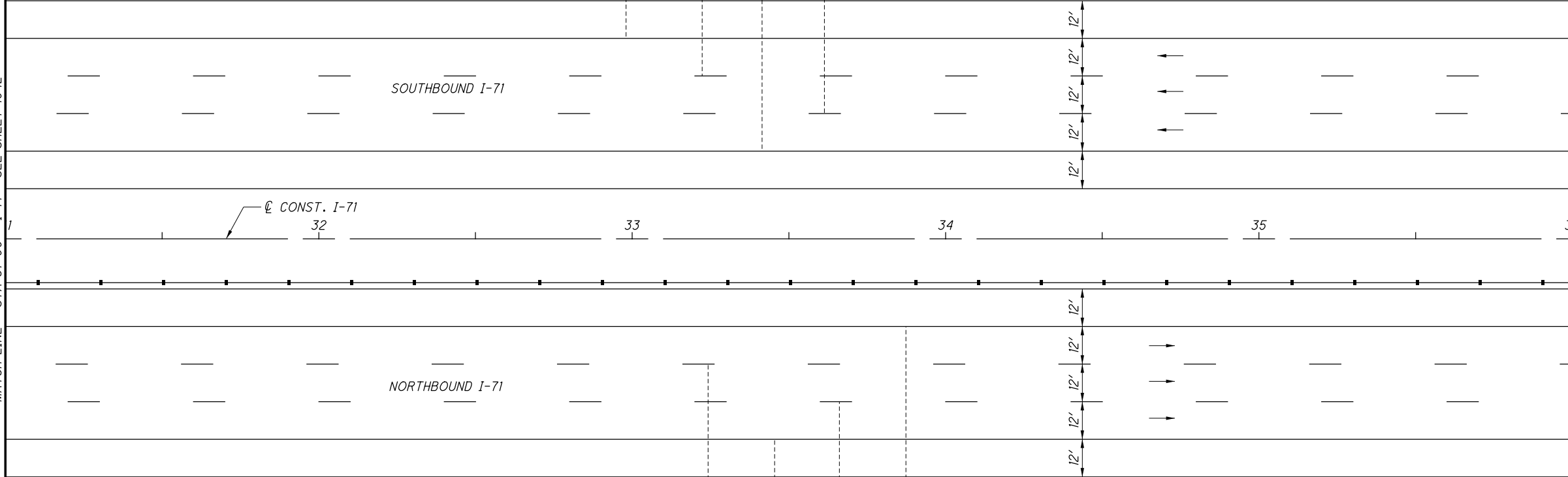
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 26+00 TO STA 31+00

FRA-71-0.00

MATCH LINE - STA 31+00 - I-71 - SEE SHEET 1042



CONST. I-71

SOUTHBOUND I-71

NORTHBOUND I-71

MATCH LINE - STA 36+00 - I-71 - SEE SHEET 1044

FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW
CHECKED	EGD

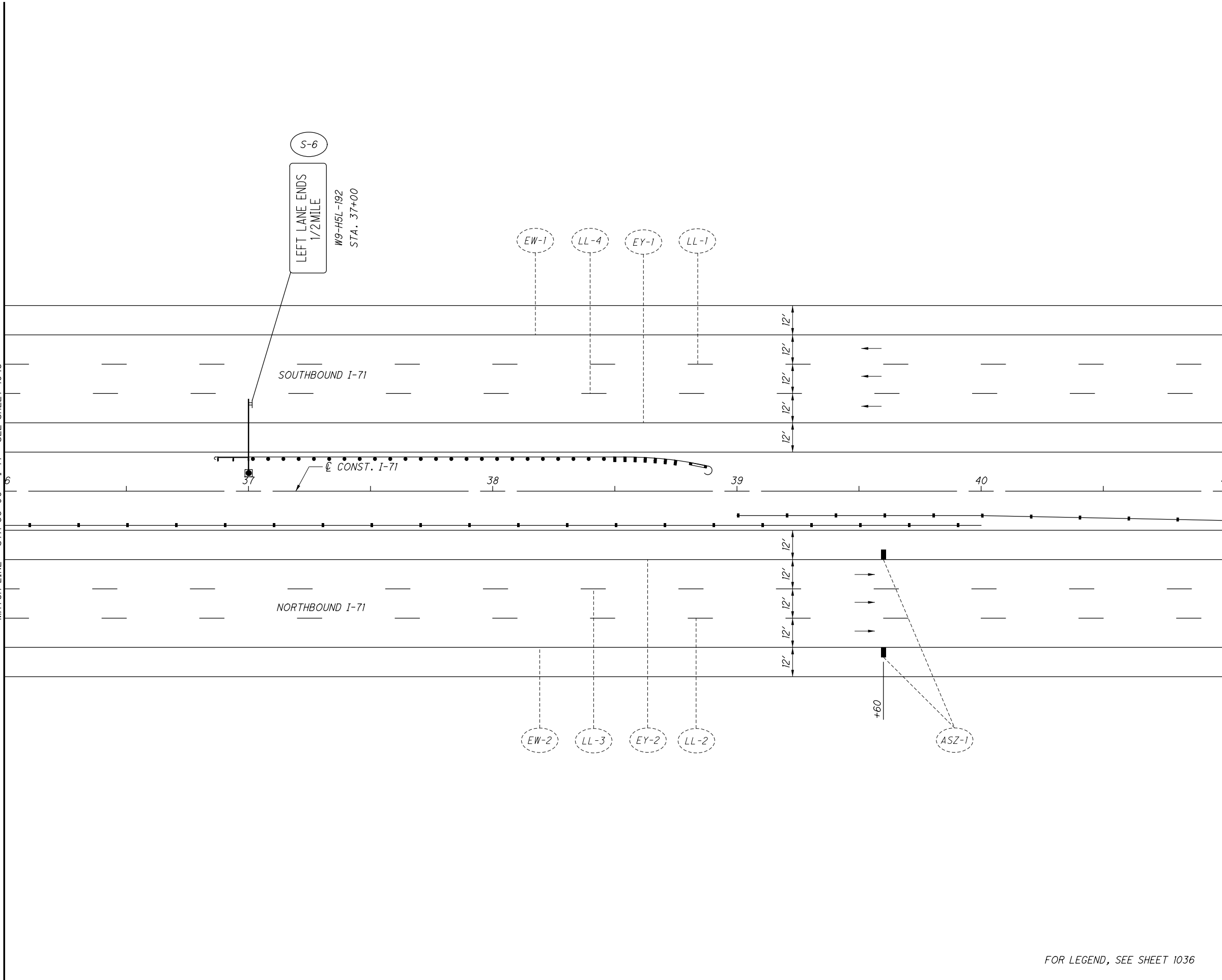
0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 31+00 TO STA 36+00

FRA-71-0.00

1043
1312

MATCH LINE - STA 36+00 - I-71 - SEE SHEET 1043



FOR LEGEND, SEE SHEET 1036

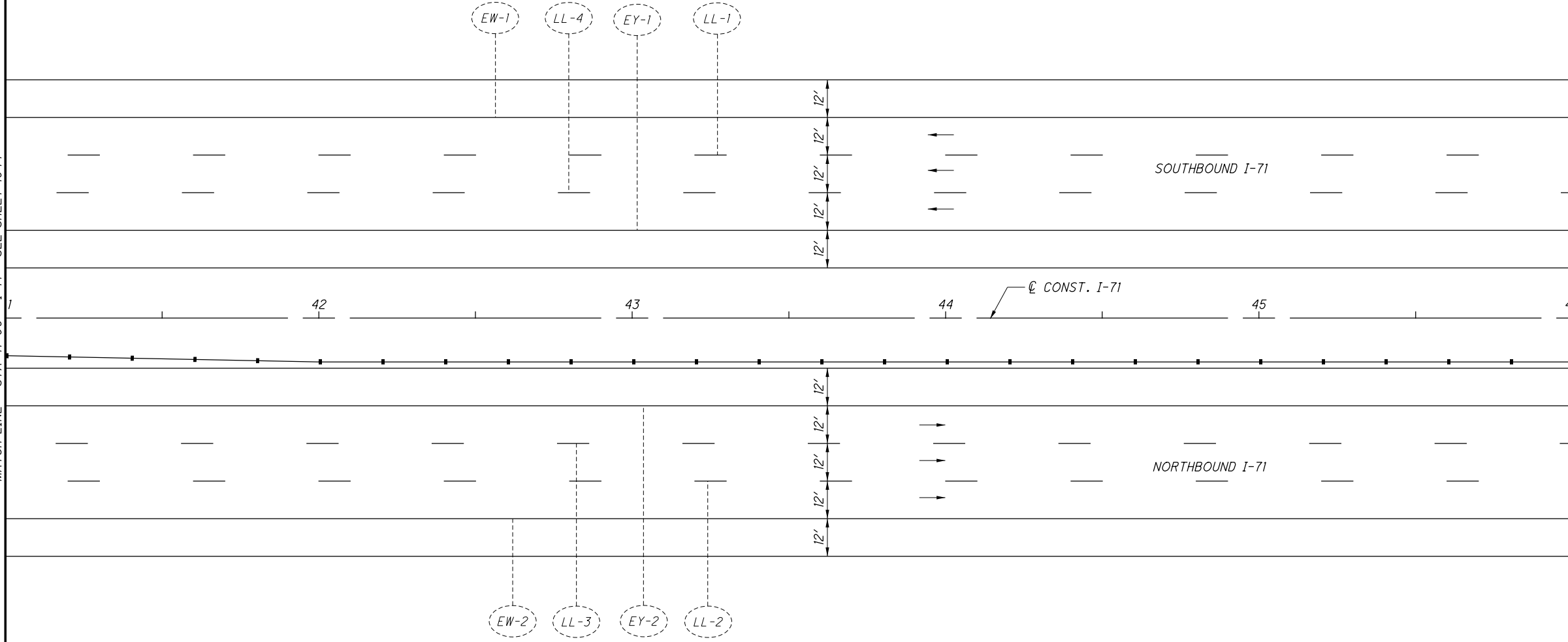
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CHECKED	EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 36+00 TO STA 41+00

FRA-71-0.00

MATCH LINE - STA 41+00 - I-71 - SEE SHEET 1044



MATCH LINE - STA 46+00 - I-71 - SEE SHEET 1046

FOR LEGEND, SEE SHEET 1036

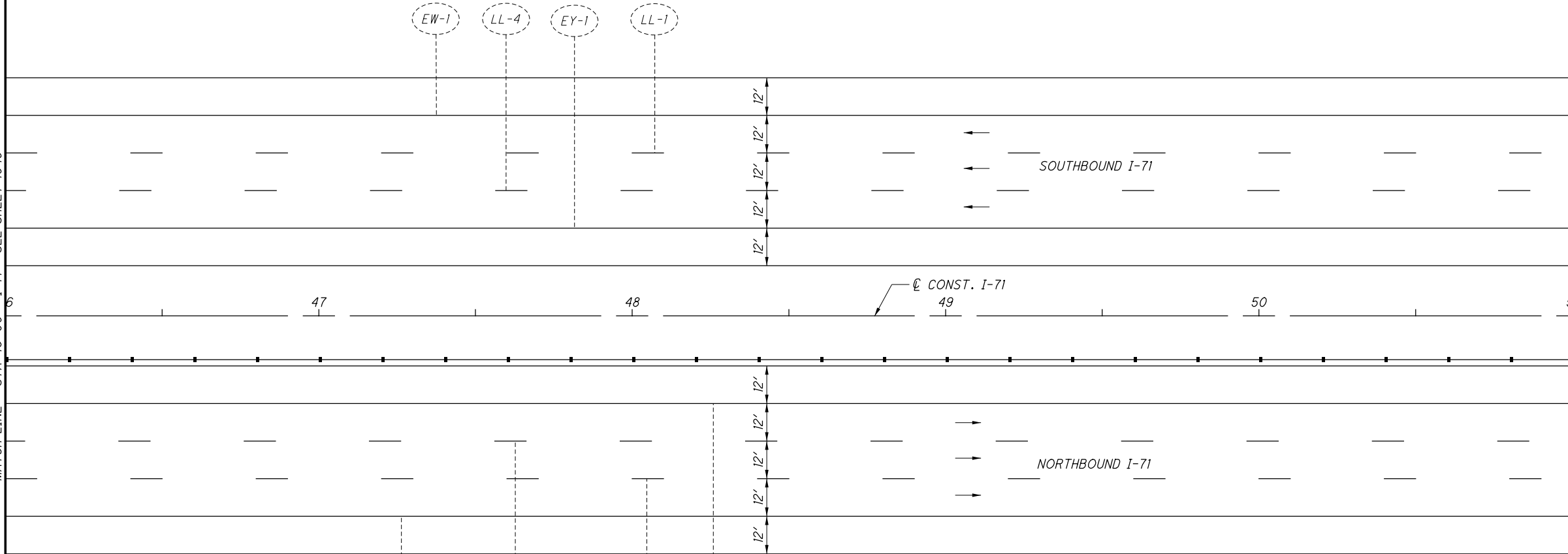
CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 41+00 TO STA 46+00

FRA-71-0.00

MATCH LINE - STA 46+00 - I-71 - SEE SHEET 1045



FOR LEGEND, SEE SHEET 1036

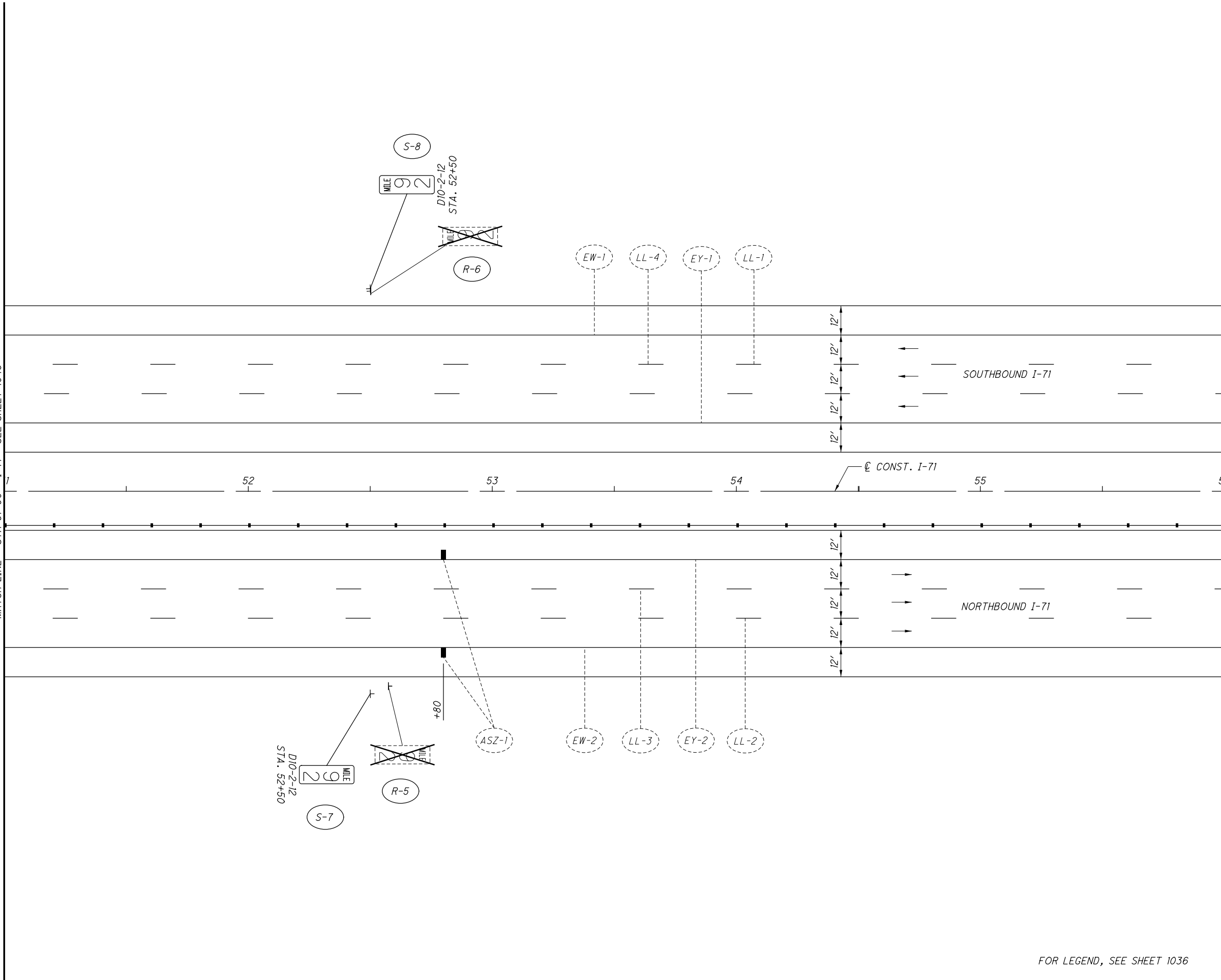
CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 46+00 TO STA 51+00

FRA-71-0.00

MATCH LINE - STA 51+00 - I-71 - SEE SHEET 1046



FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW
CHECKED	EGD

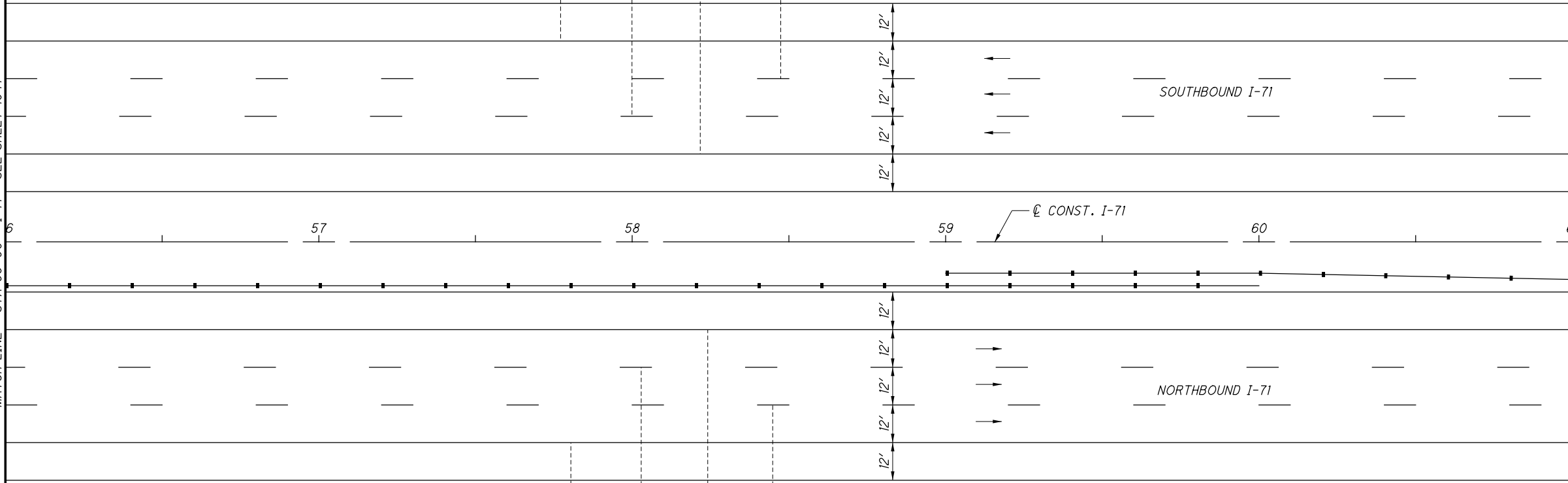
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 51+00 TO STA 56+00

FRA-71-0.00

X:\4037000\121957.16\107201\traffic\sheets\107201TP013.dgn Sheet 10/28/2019 11:13:31 AM 1458sjs

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 1047



MATCH LINE - STA 61+00 - I-71 - SEE SHEET 1049

CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

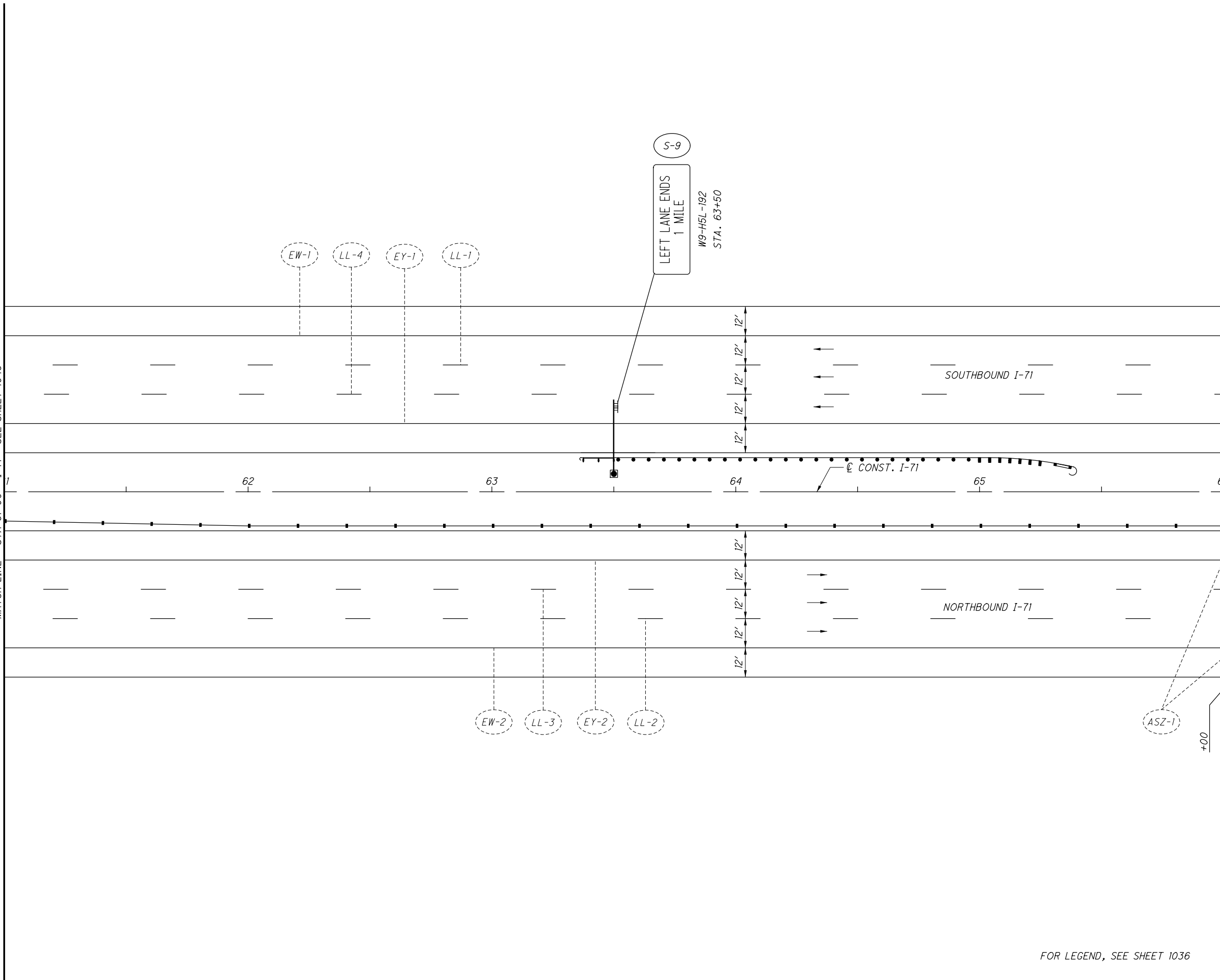
TRAFFIC CONTROL PLAN - I-71
STA 56+00 TO STA 61+00

FRA - 71 - 0.00

1048
1312

FOR LEGEND, SEE SHEET 1036

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 1048



FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

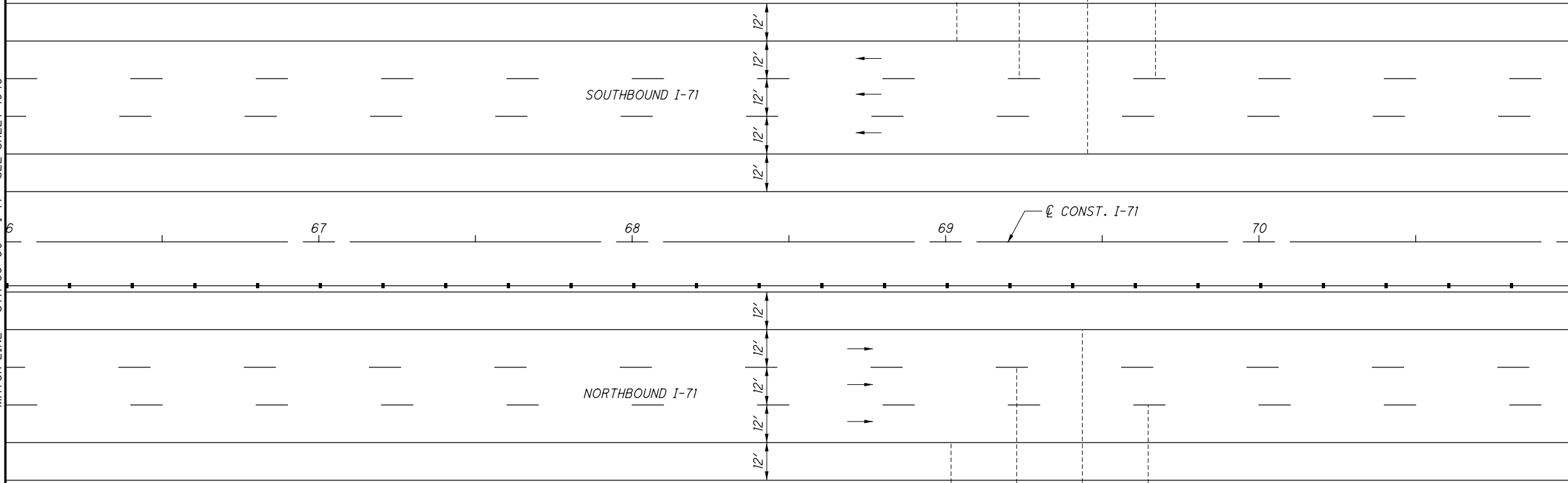
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 61+00 TO STA 66+00

FRA-71-0.00

X:\4037000\121957.16\107201\traffic\sheets\107201TP015.dgn Sheet 10/28/2019 11:13:32 AM 1458s.js

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 1049



FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

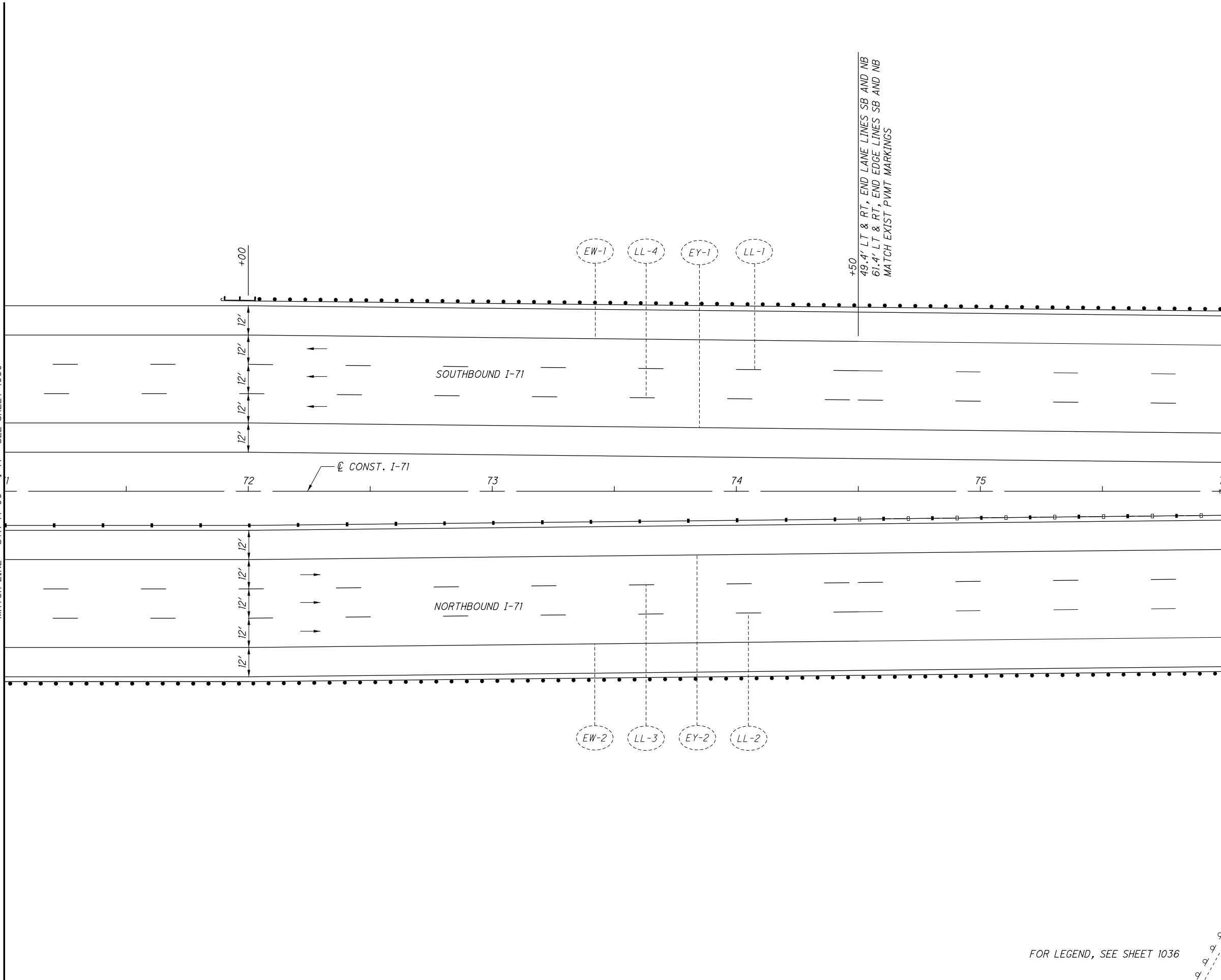
TRAFFIC CONTROL PLAN - I-71
STA 66+00 TO STA 71+00

FRA-71-0.00

1050
1312

X:\4037000\121957.16\107201\traffic\sheets\107201TP016.dgn Sheet 10/28/2019 11:13:32 AM 1458s.js

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 1050



FOR LEGEND, SEE SHEET 1036

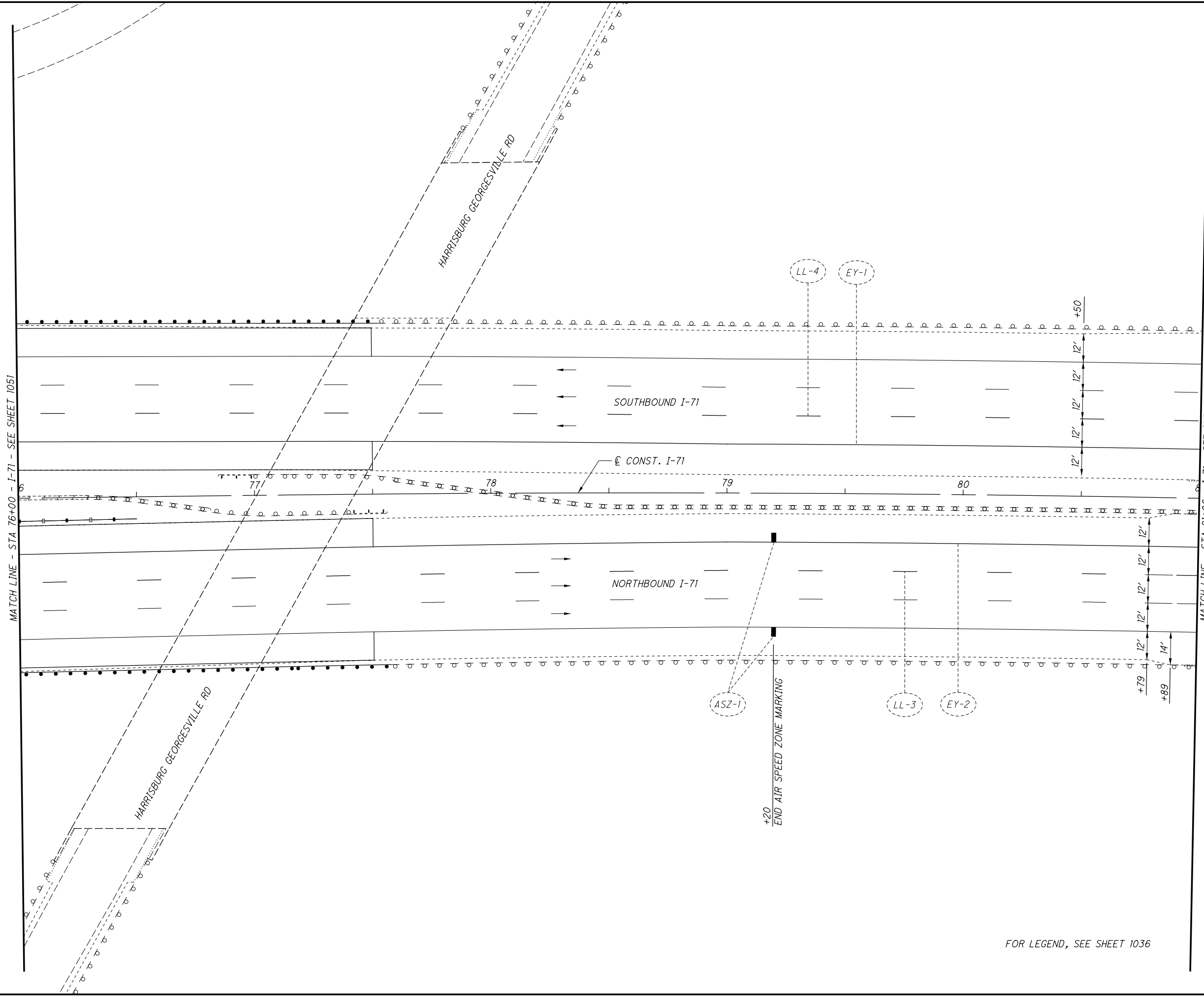
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 71+00 TO STA 76+00

FRA-71-0.00

1051
1312



FOR LEGEND, SEE SHEET 1036

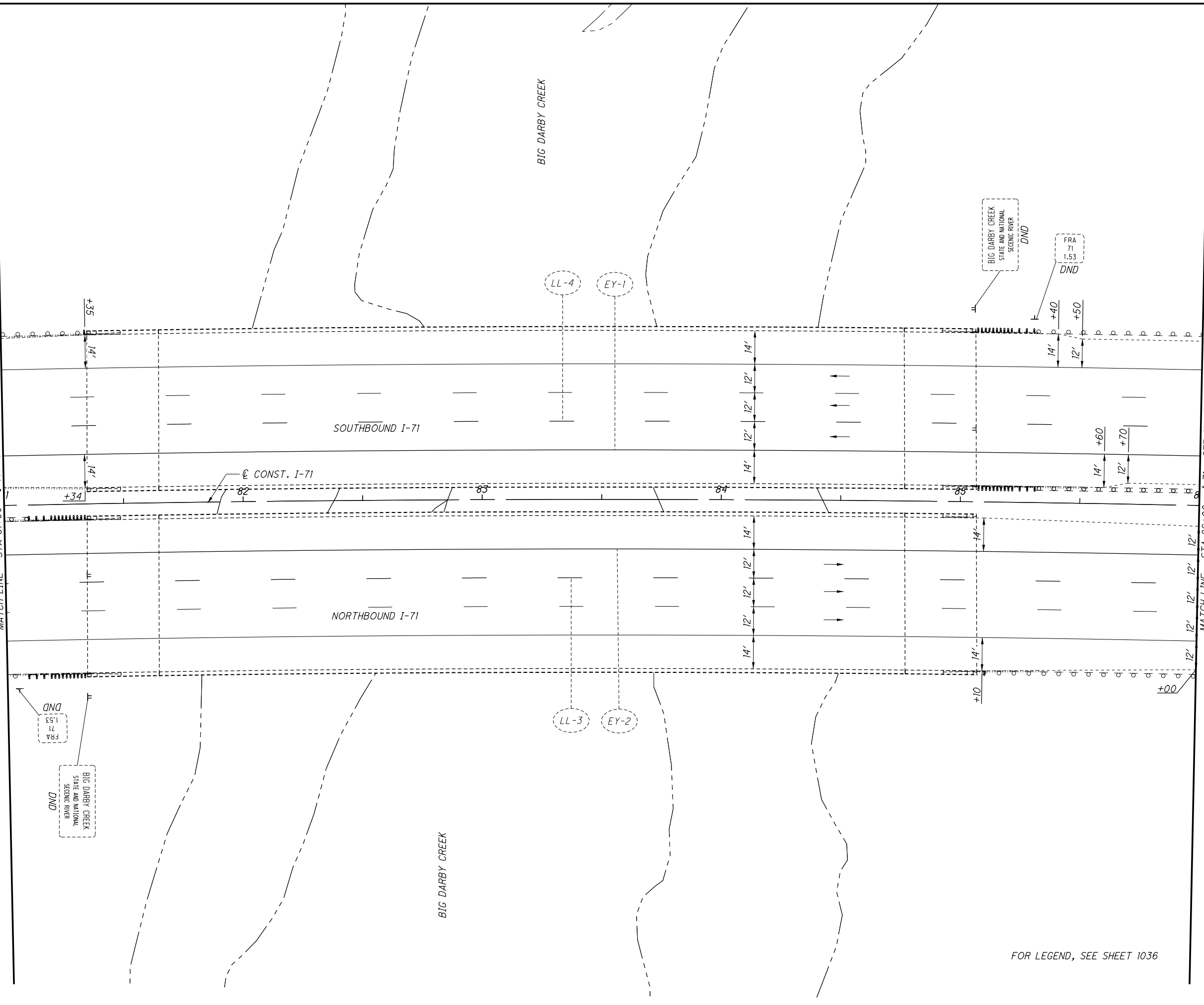
CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 76+00 TO STA 81+00

FRA-71-0.00

MATCH LINE - STA 81+00 - I-71 - SEE SHEET 1052



FOR LEGEND, SEE SHEET 1036

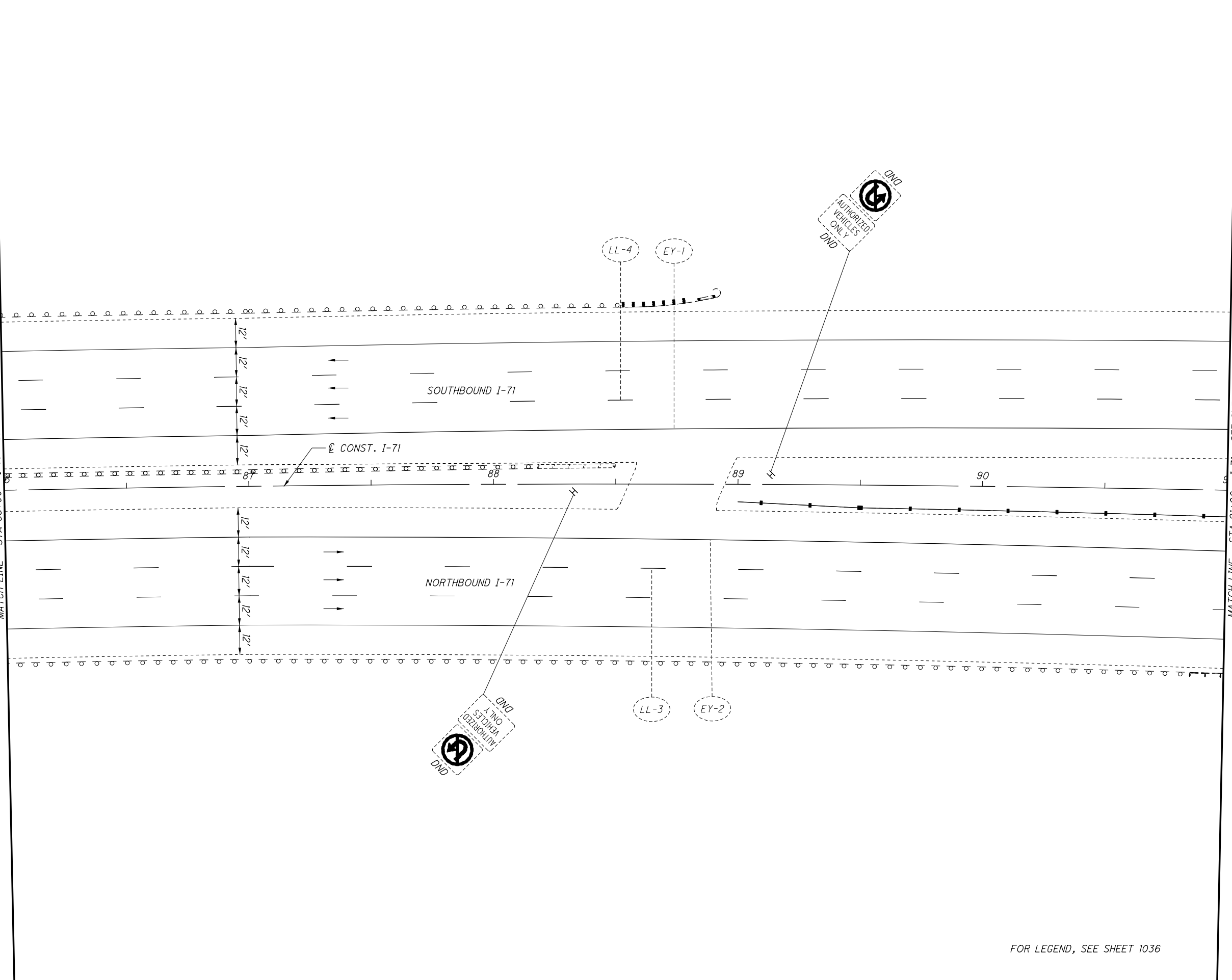
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 81+00 TO STA 86+00

FRA-71-0.00

MATCH LINE - STA 86+00 - I-71 - SEE SHEET 1053



FOR LEGEND, SEE SHEET 1036

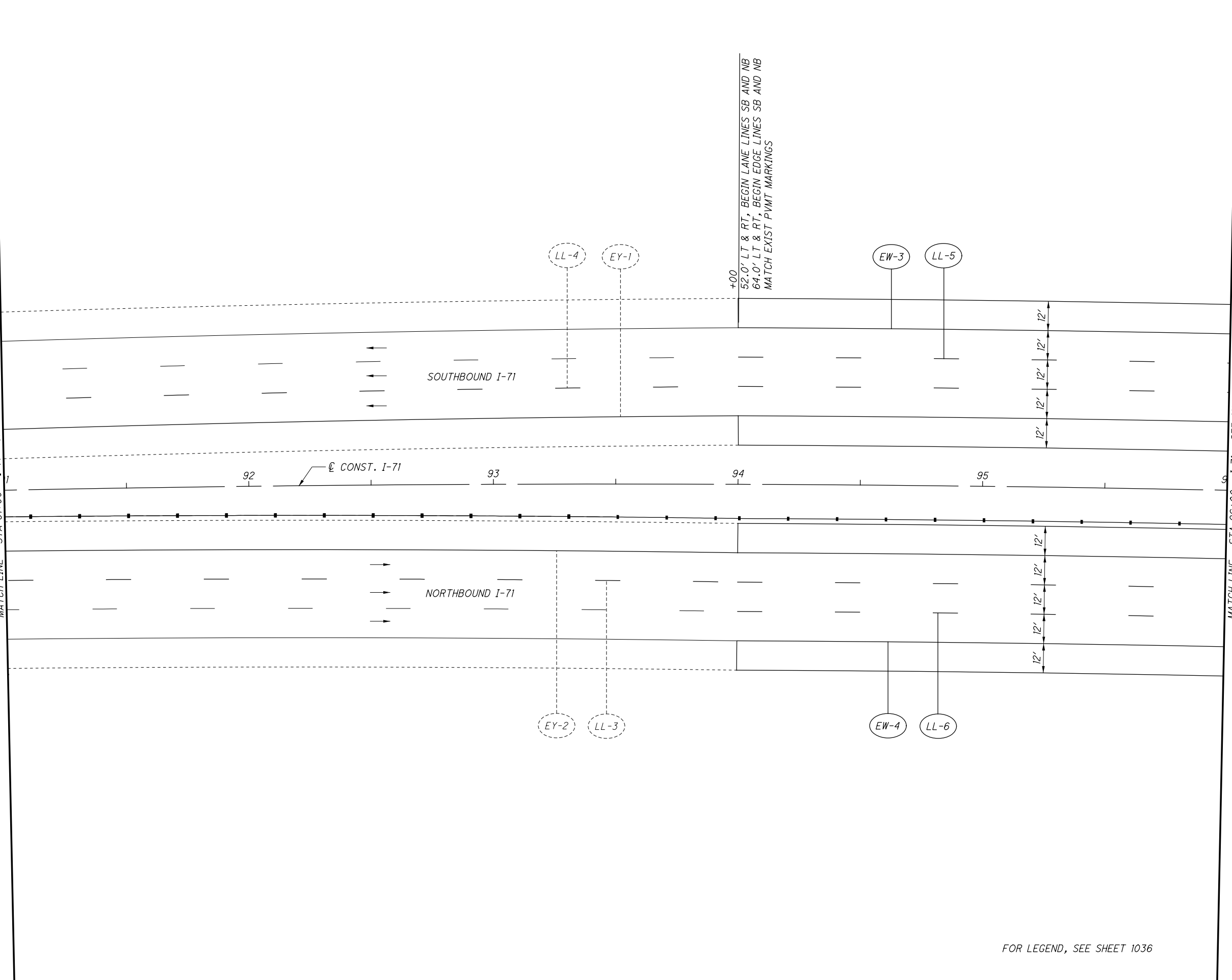
CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 86+00 TO STA 91+00

FRA-71-0.00

MATCH LINE - STA 91+00 - I-71 - SEE SHEET 1054



MATCH LINE - STA 96+00 - I-71 - SEE SHEET 1056

FOR LEGEND, SEE SHEET 1036

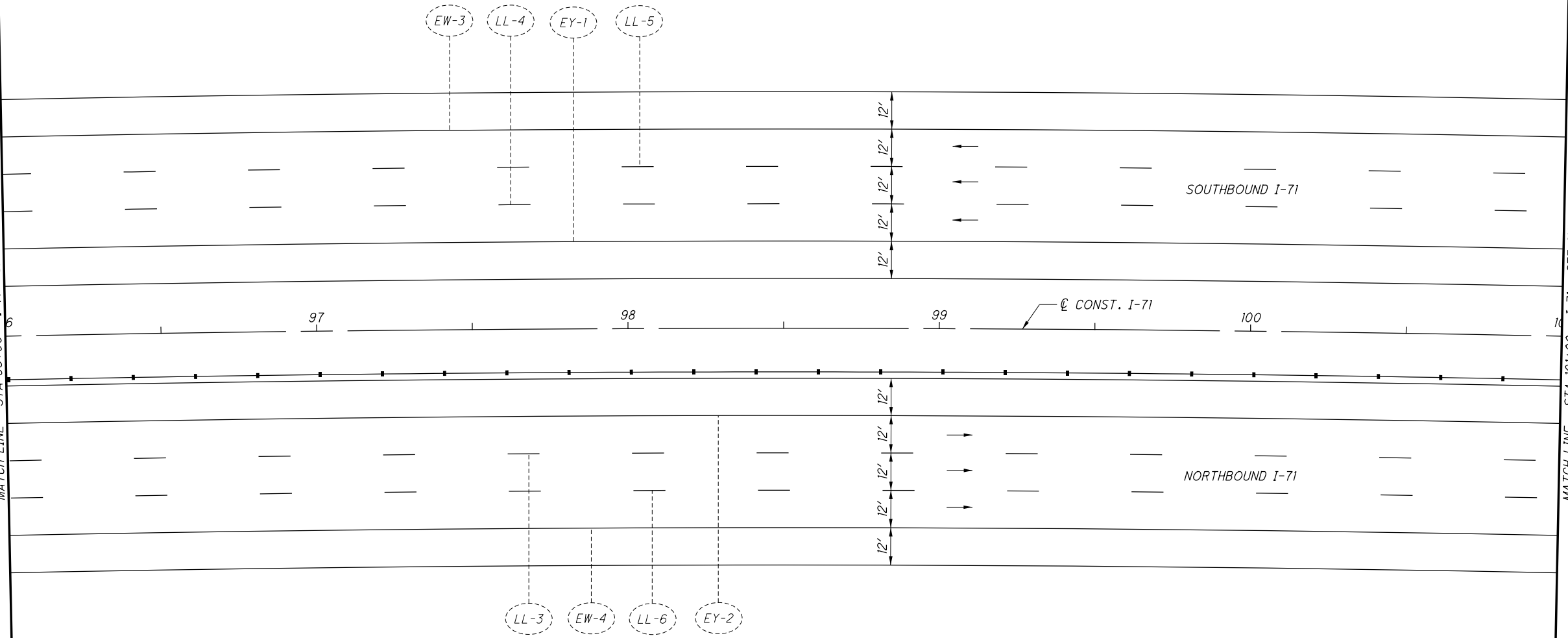
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 91+00 TO STA 96+00

FRA - 71 - 0.00

MATCH LINE - STA 96+00 - I-71 - SEE SHEET 1055



MATCH LINE - STA 101+00 - I-71 - SEE SHEET 1057

FOR LEGEND, SEE SHEET 1036

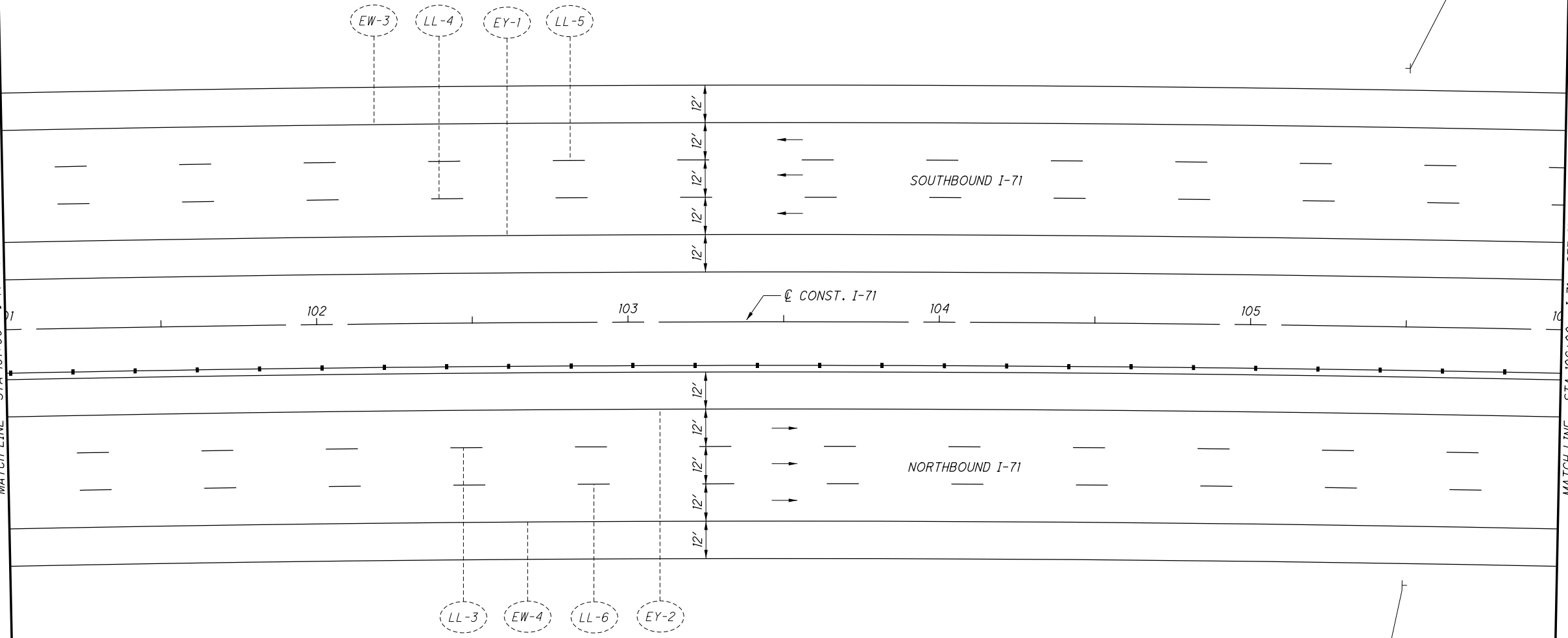
CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 96+00 TO STA 101+00

FRA-71-0:00

MATCH LINE - STA 101+00 - I-71 - SEE SHEET 1056



MILE 03 DND

MILE 03 DND

FOR LEGEND, SEE SHEET 1036

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 1058

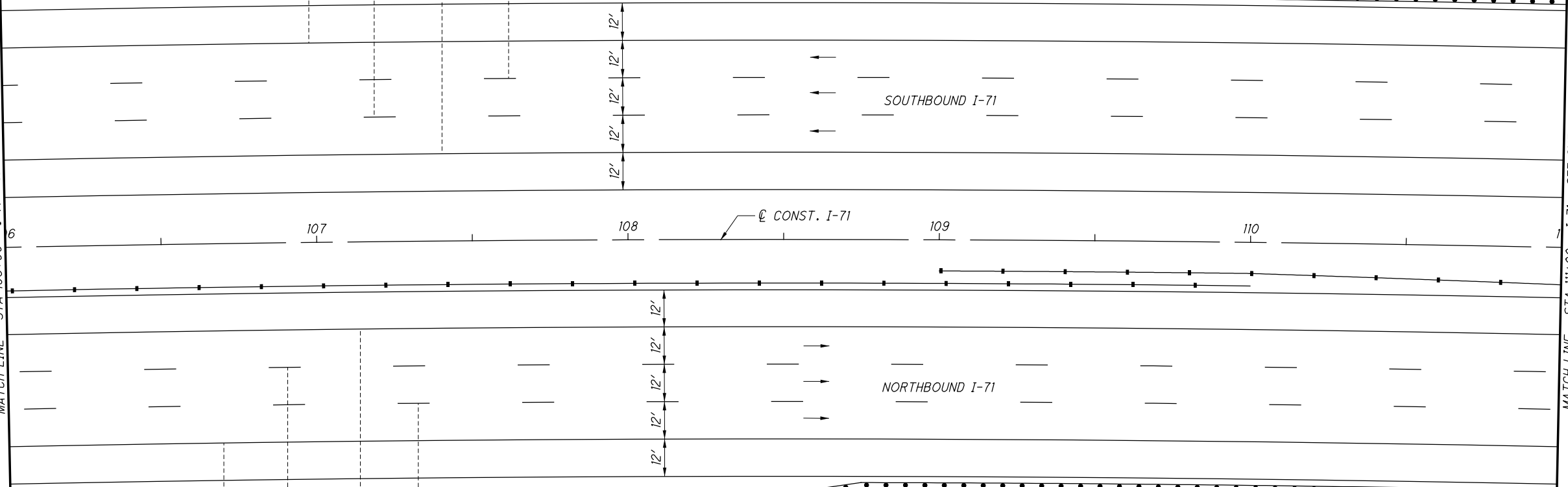
CALCULATED
DLW
CHECKED
EGD

0 10 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 101+00 TO STA 106+00

FRA-71-0.00

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 1057



MATCH LINE - STA 111+00 - I-71 - SEE SHEET 1059

FOR LEGEND, SEE SHEET 1036

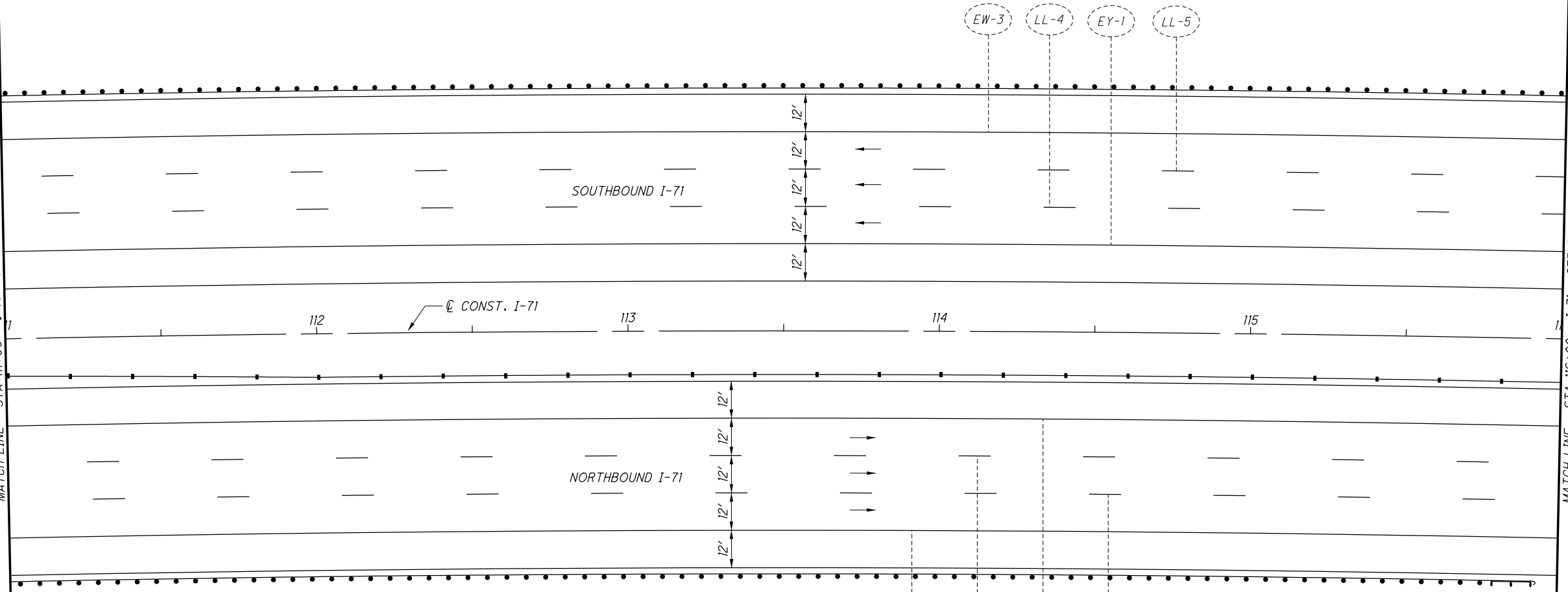
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

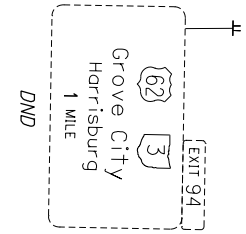
TRAFFIC CONTROL PLAN - I-71
STA 106+00 TO STA 111+00

FRA - 71 - 0.00

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 1058



FOR LEGEND, SEE SHEET 1036



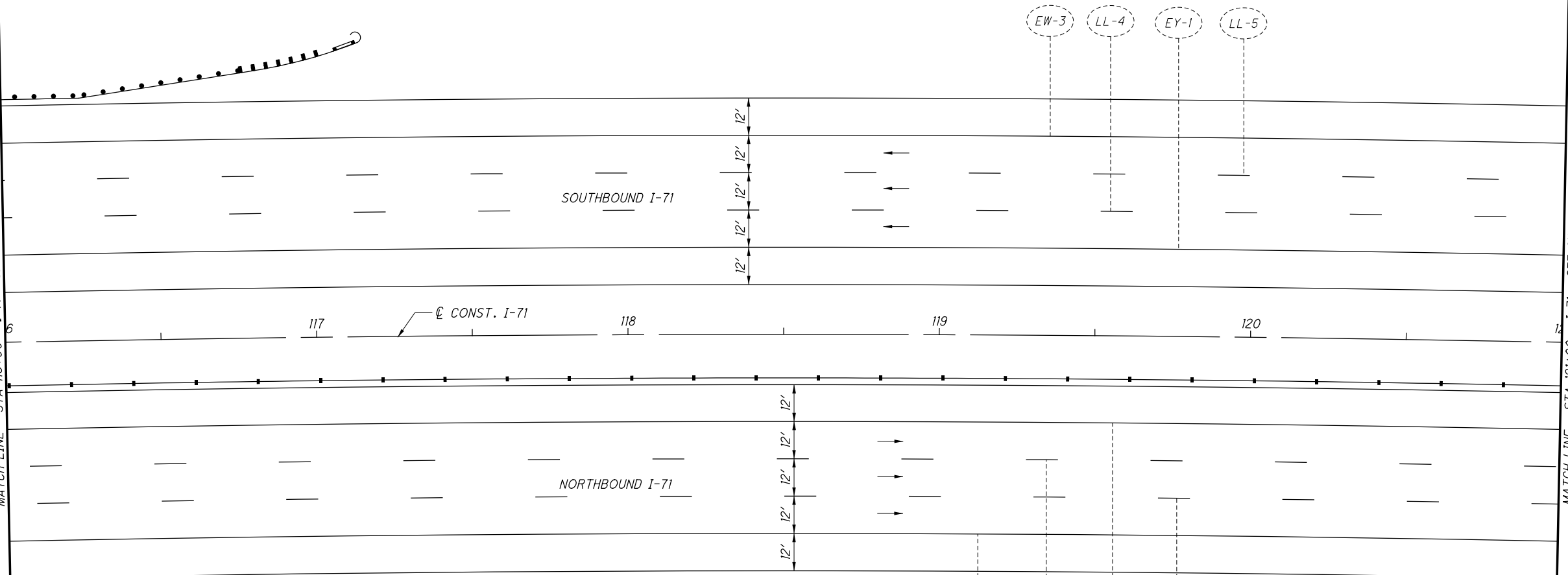
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 111+00 TO STA 116+00

FRA-71-0:00

MATCH LINE - STA 116+00 - I-71 - SEE SHEET 1059



MATCH LINE - STA 121+00 - I-71 - SEE SHEET 1061

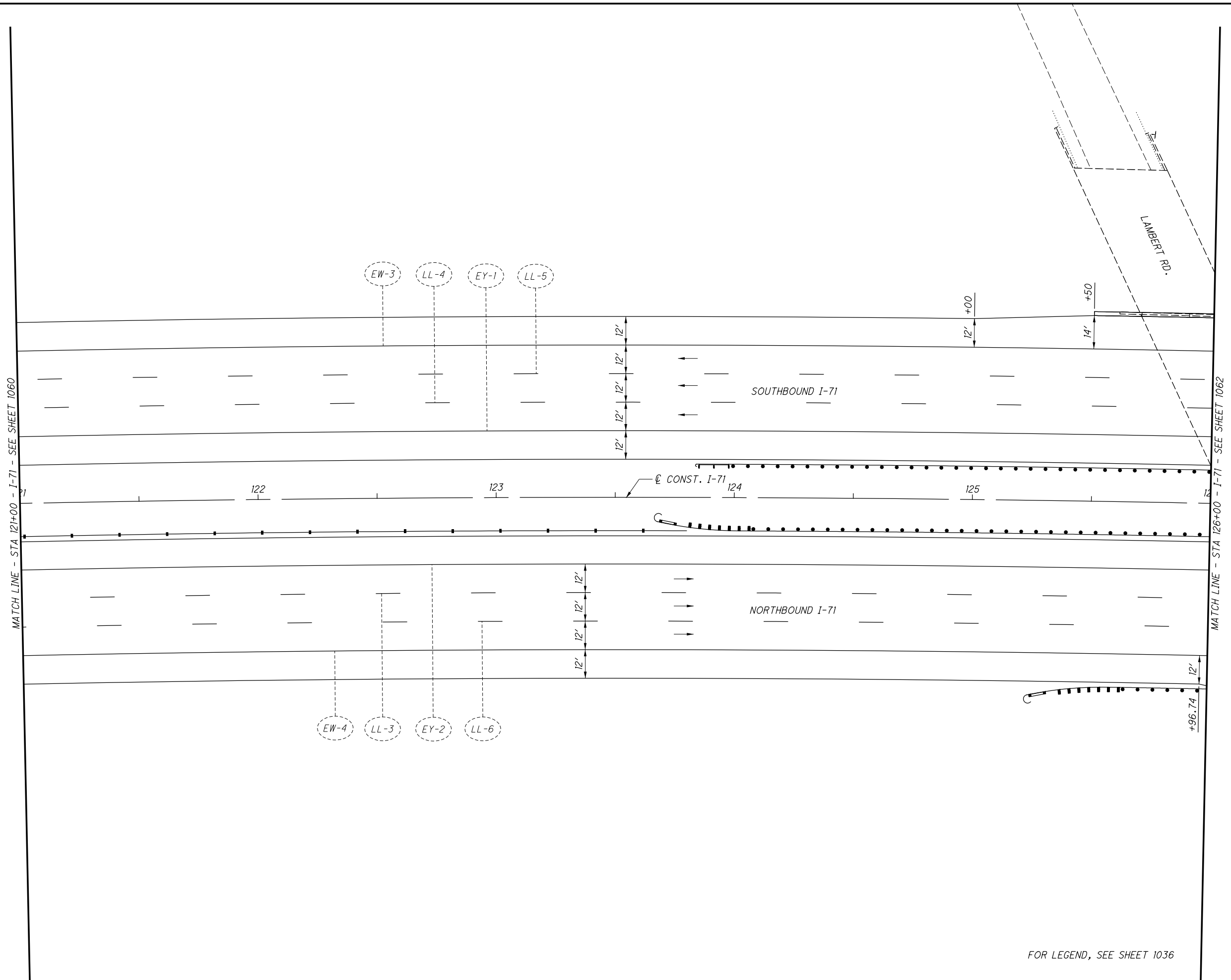
FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW
CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 116+00 TO STA 121+00

FRA-71-0.00



FOR LEGEND, SEE SHEET 1036

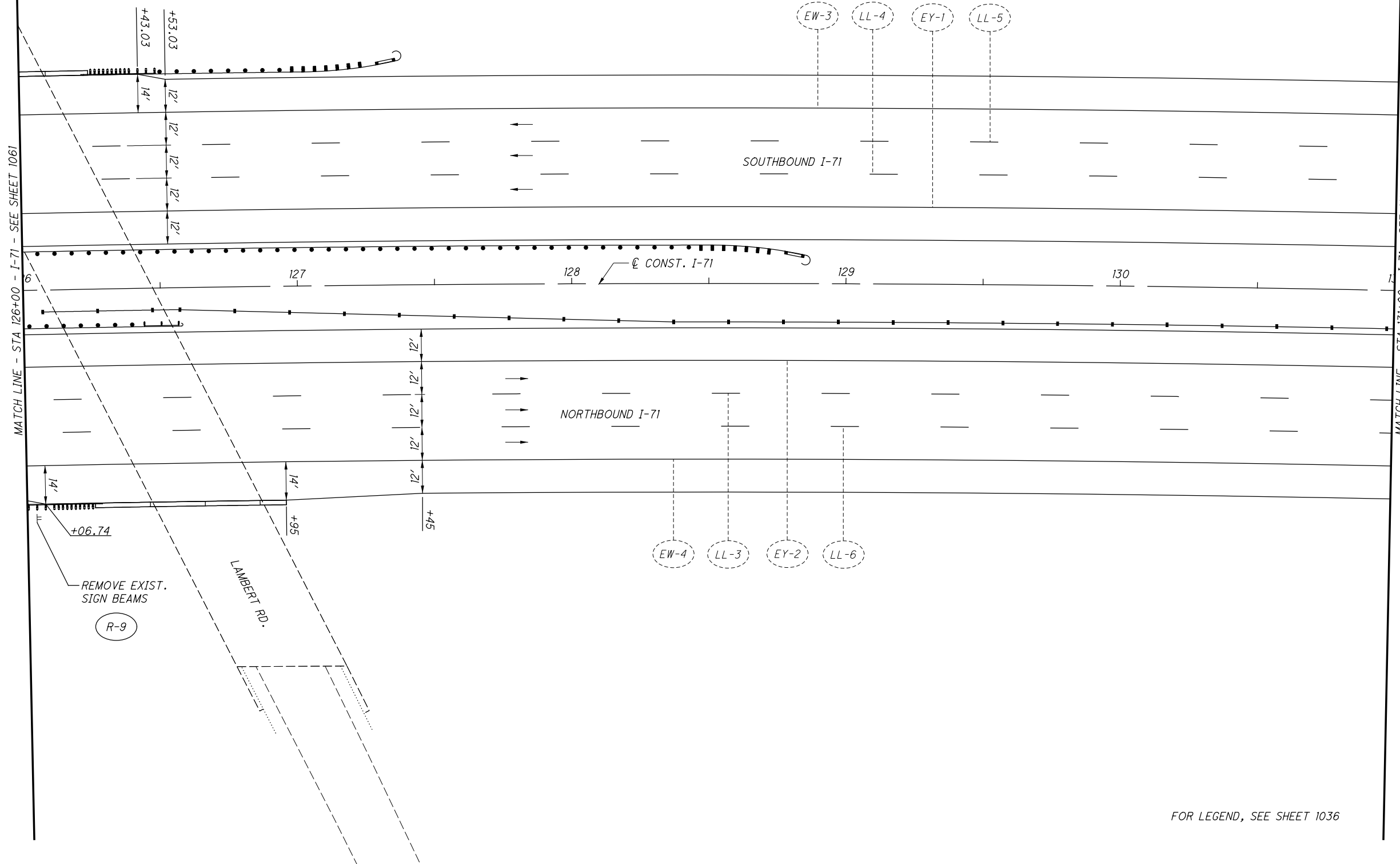
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 121+00 TO STA 126+00

FRA-71-0.00

X:\4037000\121957.16\107201\traffic\sheets\107201TP027.dgn Sheet 10/28/2019 11:13:37 AM 1458s.js



FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

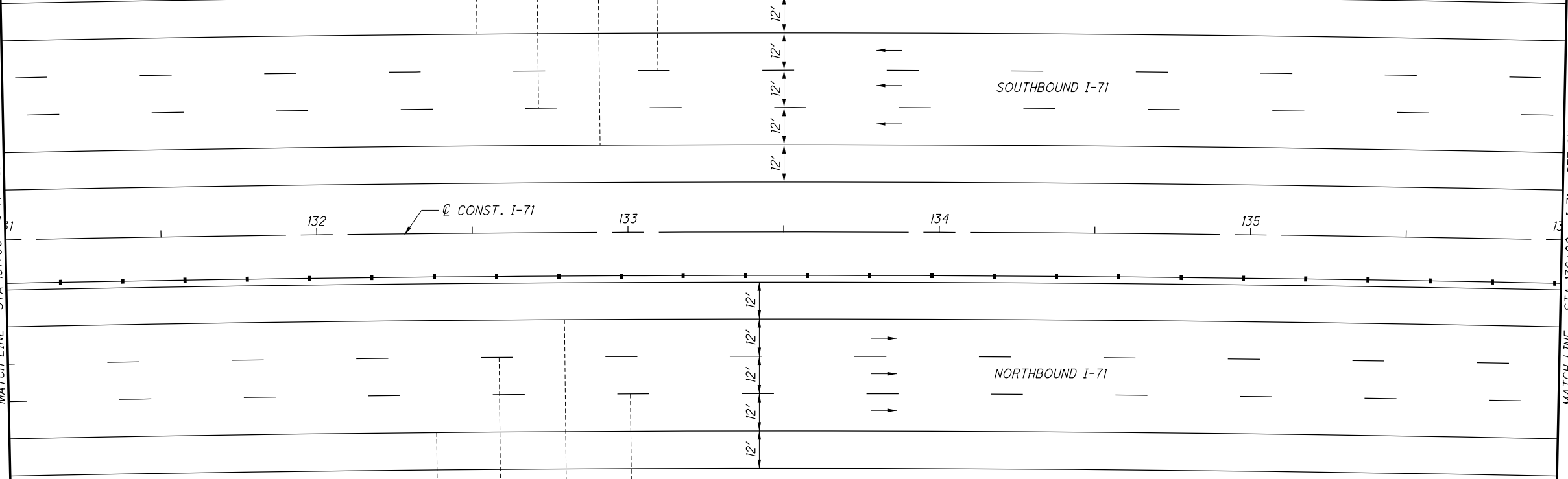
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 126+00 TO STA 131+00

FRA-71-0.00

1062
1312

MATCH LINE - STA 131+00 - I-71 - SEE SHEET 1062



MATCH LINE - STA 136+00 - I-71 - SEE SHEET 1064

FOR LEGEND, SEE SHEET 1036

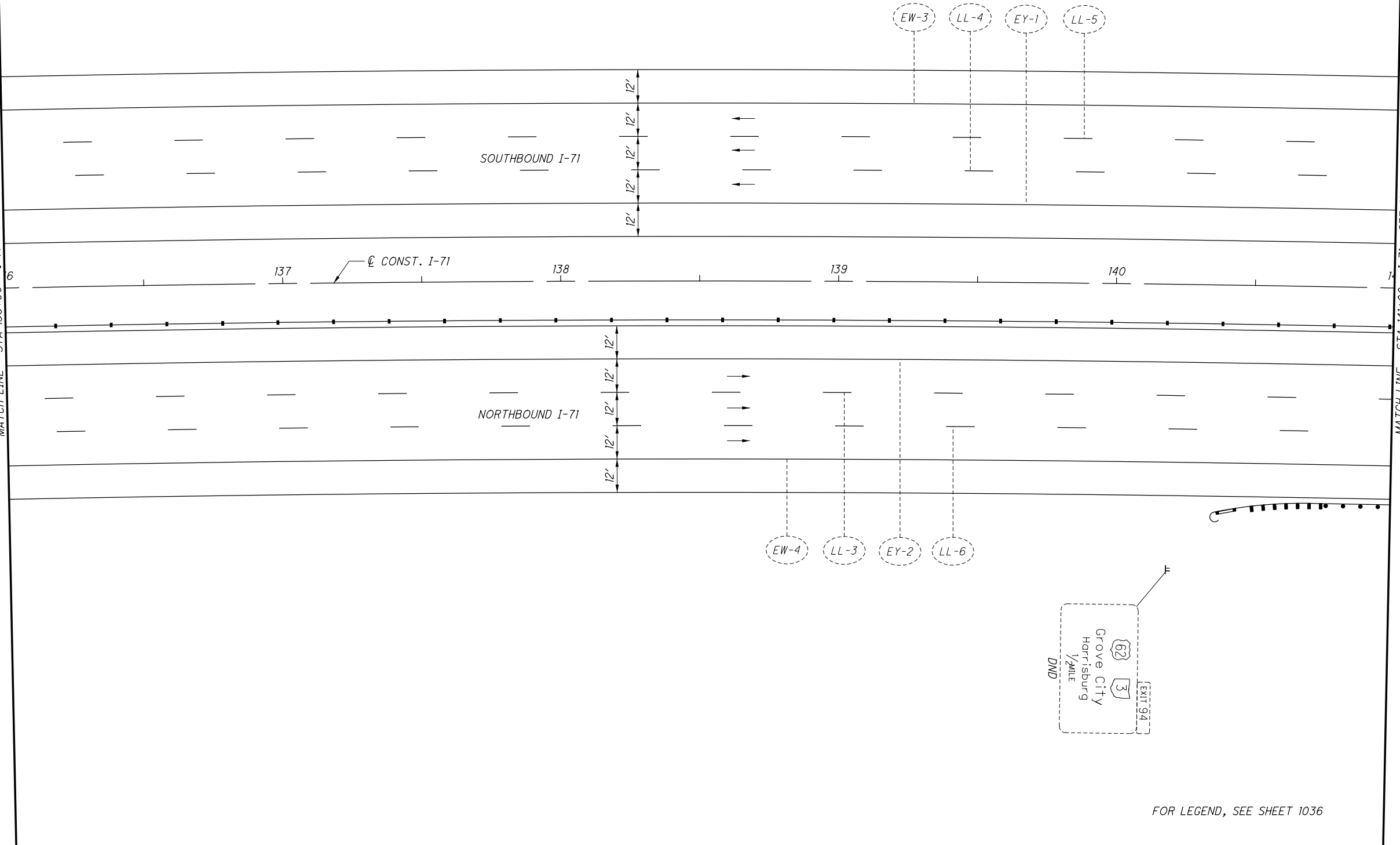
CALCULATED	DLW
CHECKED	EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 131+00 TO STA 136+00

FRA-71-0.00

MATCH LINE - STA 136+00 - I-71 - SEE SHEET 1063



FOR LEGEND, SEE SHEET 1036

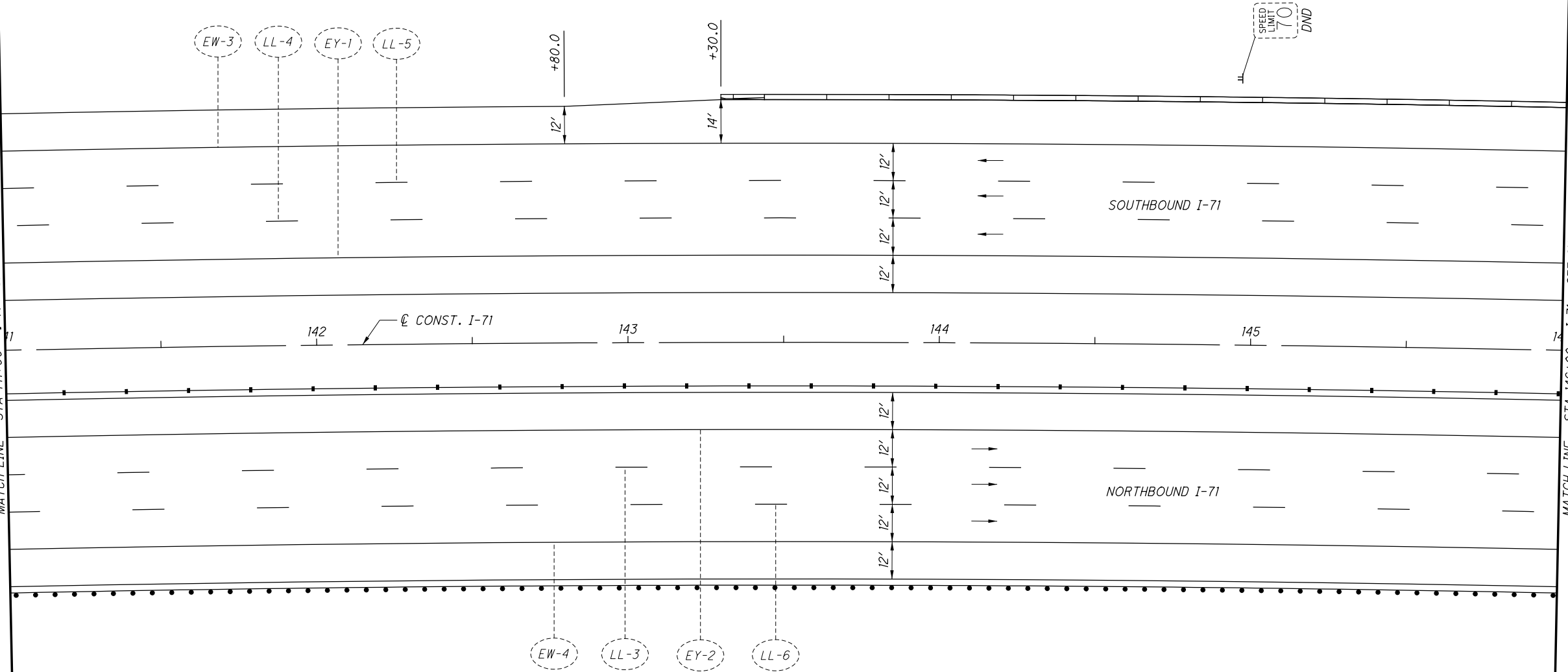
CALCULATED	DLW	CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 136+00 TO STA 141+00

FRA - 71 - 0.00

MATCH LINE - STA 141+00 - I-71 - SEE SHEET 1064



MATCH LINE - STA 146+00 - I-71 - SEE SHEET 1066

FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW
CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

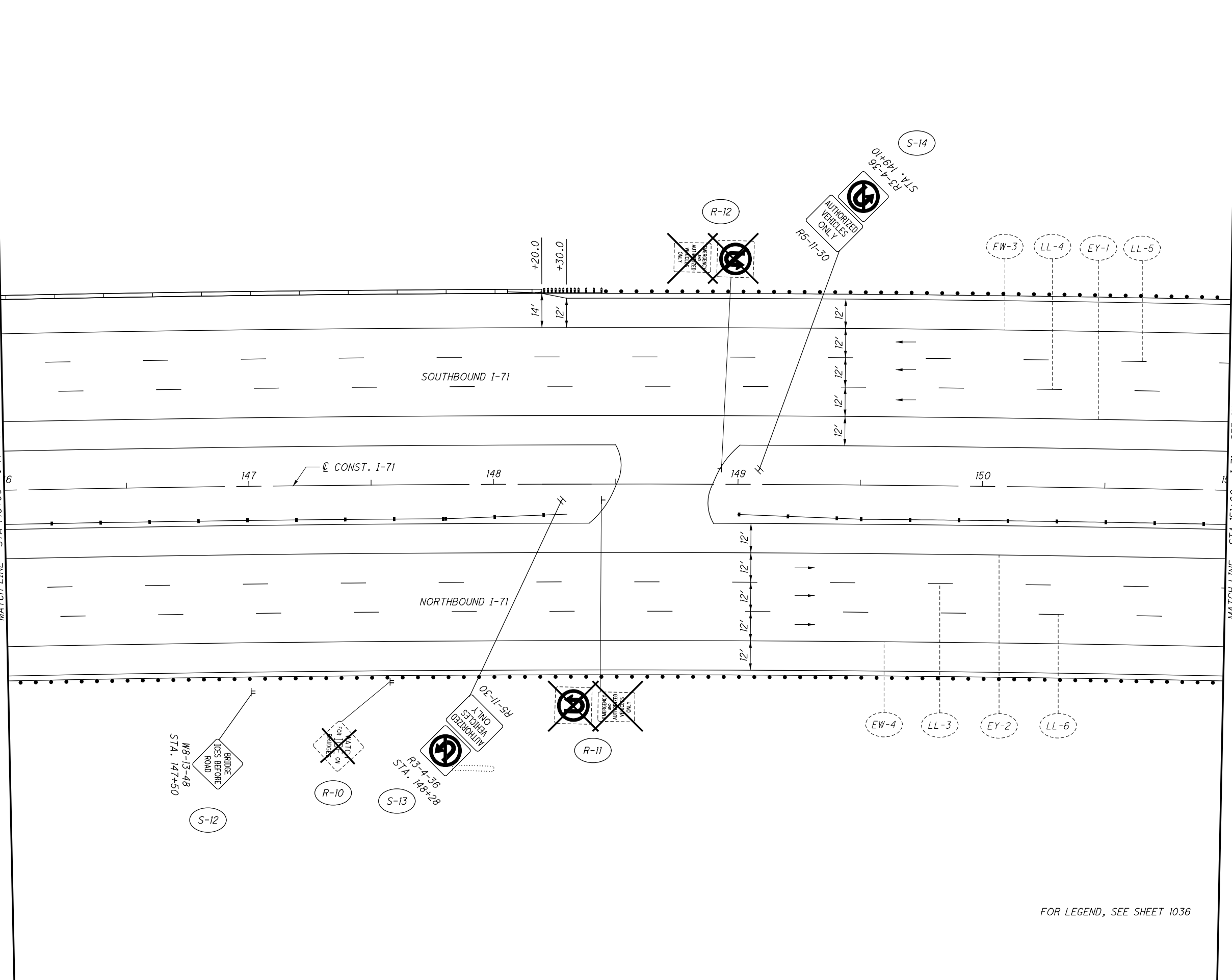
TRAFFIC CONTROL PLAN - I-71
STA 141+00 TO STA 146+00

FRA-71-0.00

X:\4037000\121957.16\107201\traffic\sheets\107201TP031.dgn Sheet 10/28/2019 11:13:38 AM 1458s.js

MATCH LINE - STA 146+00 - I-71 - SEE SHEET 1065

MATCH LINE - STA 151+00 - I-71 - SEE SHEET 1067



FOR LEGEND, SEE SHEET 1036

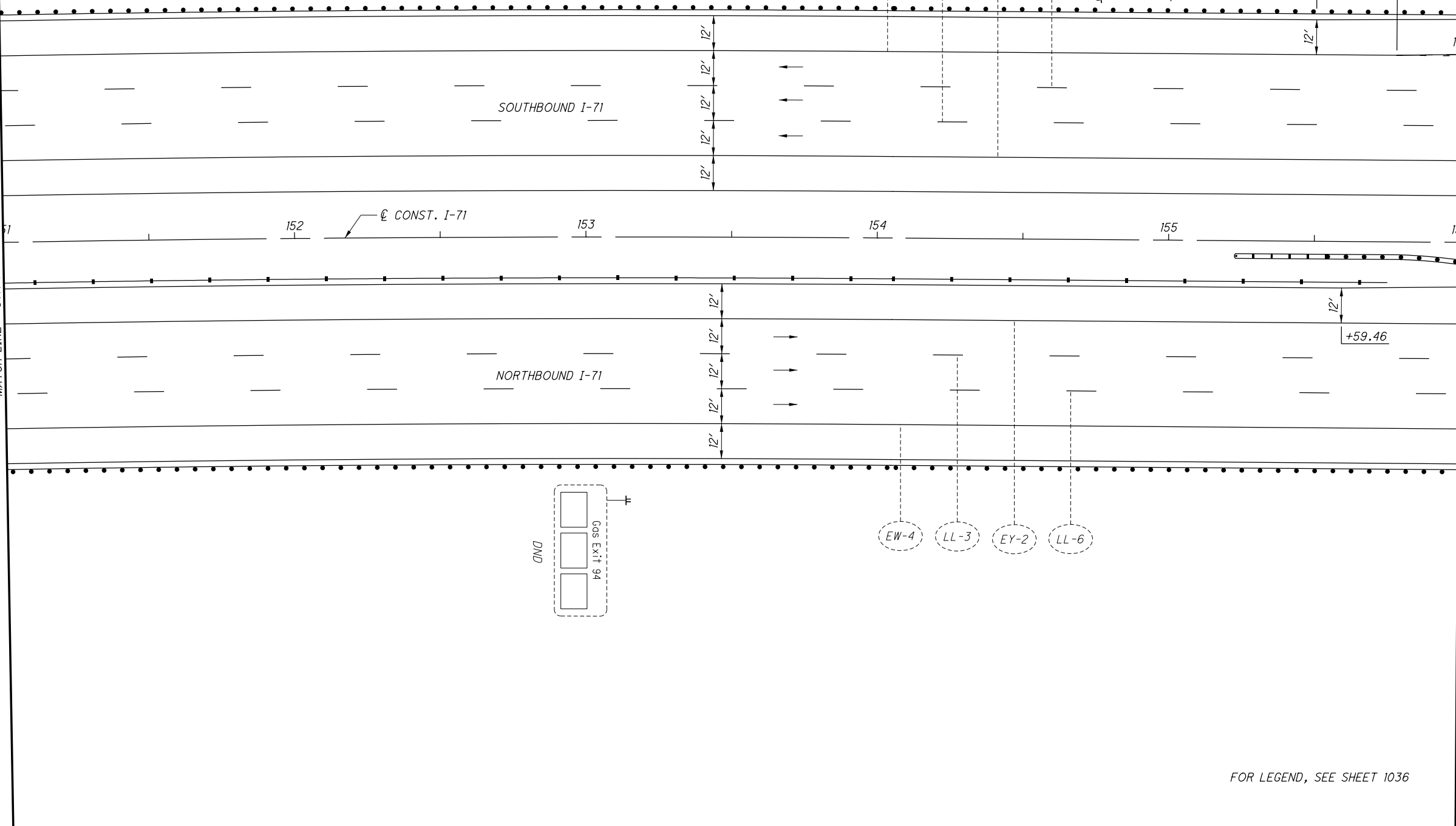
CALCULATED	DLW
CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

**TRAFFIC CONTROL PLAN - I-71
STA 146+00 TO STA 151+00**

FRA - 71 - 0.00

MATCH LINE - STA 151+00 - I-71 - SEE SHEET 1066



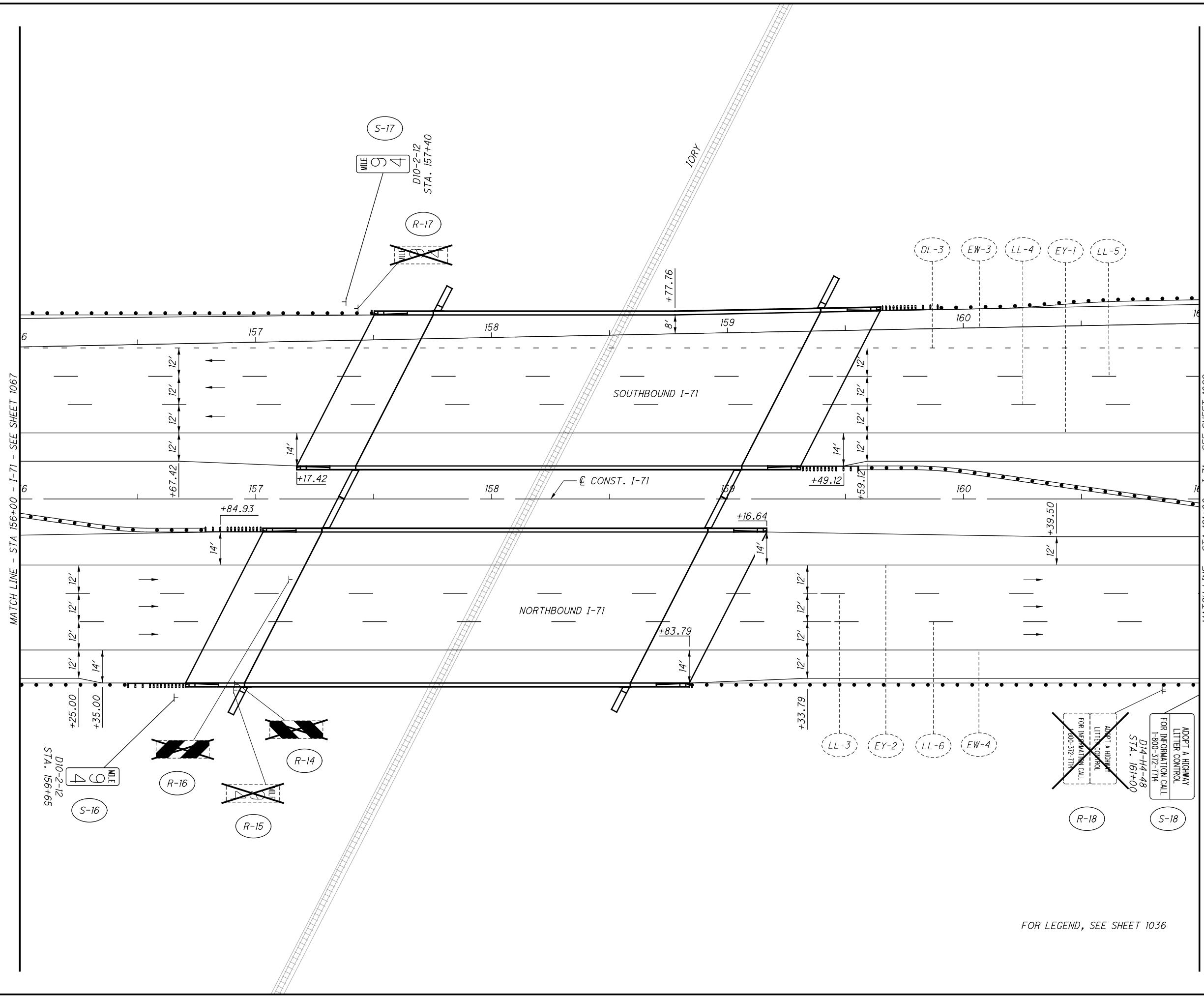
FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 151+00 TO STA 156+00

FRA-71-0.00



CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

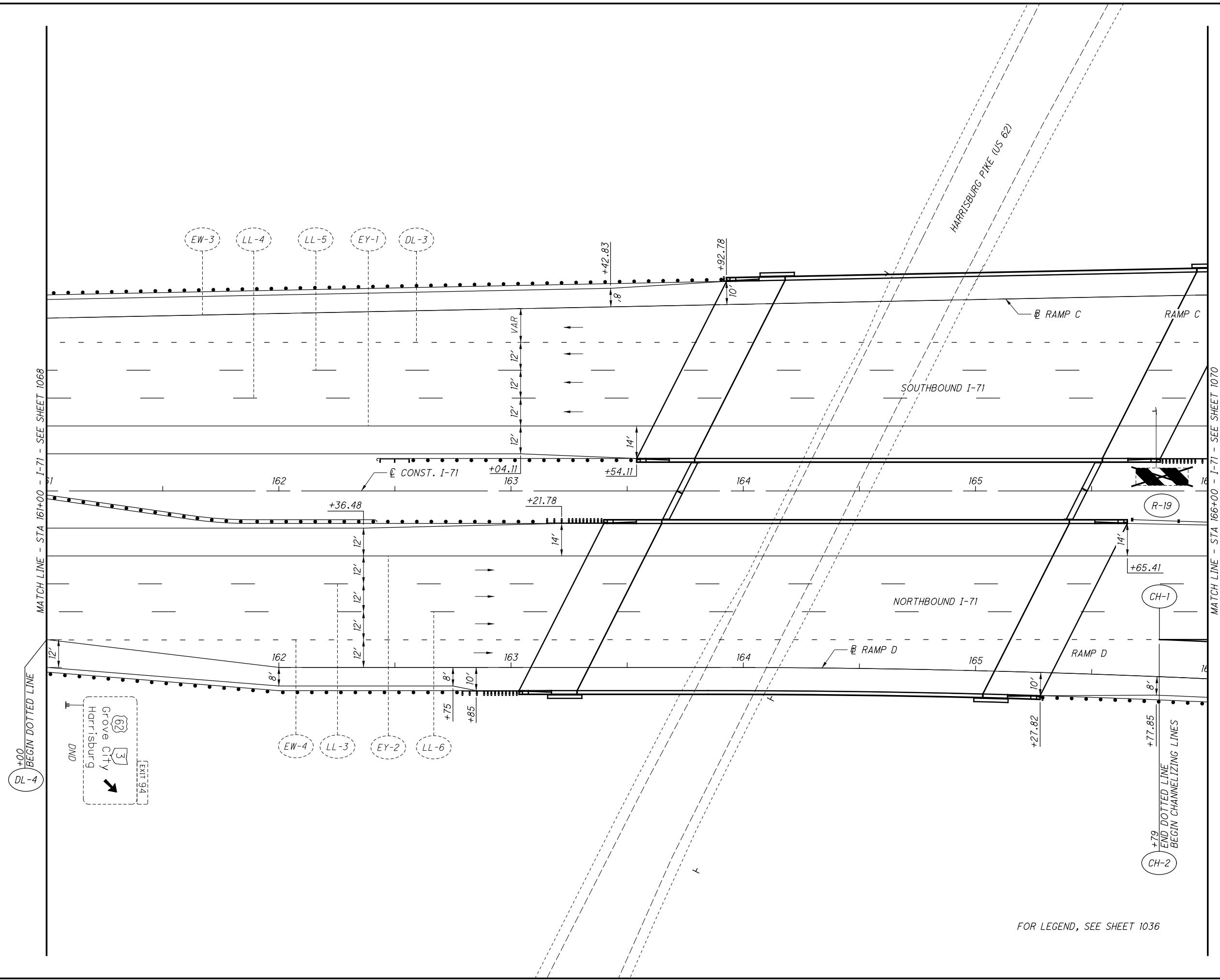
TRAFFIC CONTROL PLAN - I-71
STA 156+00 TO STA 161+00

FRA - 71 - 0.00

1068
1312

FOR LEGEND, SEE SHEET 1036

X:\4037000\121957.16\107201\traffic\sheets\107201TP034.dgn Sheet 10/28/2019 11:13:40 AM 1458s.js



FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

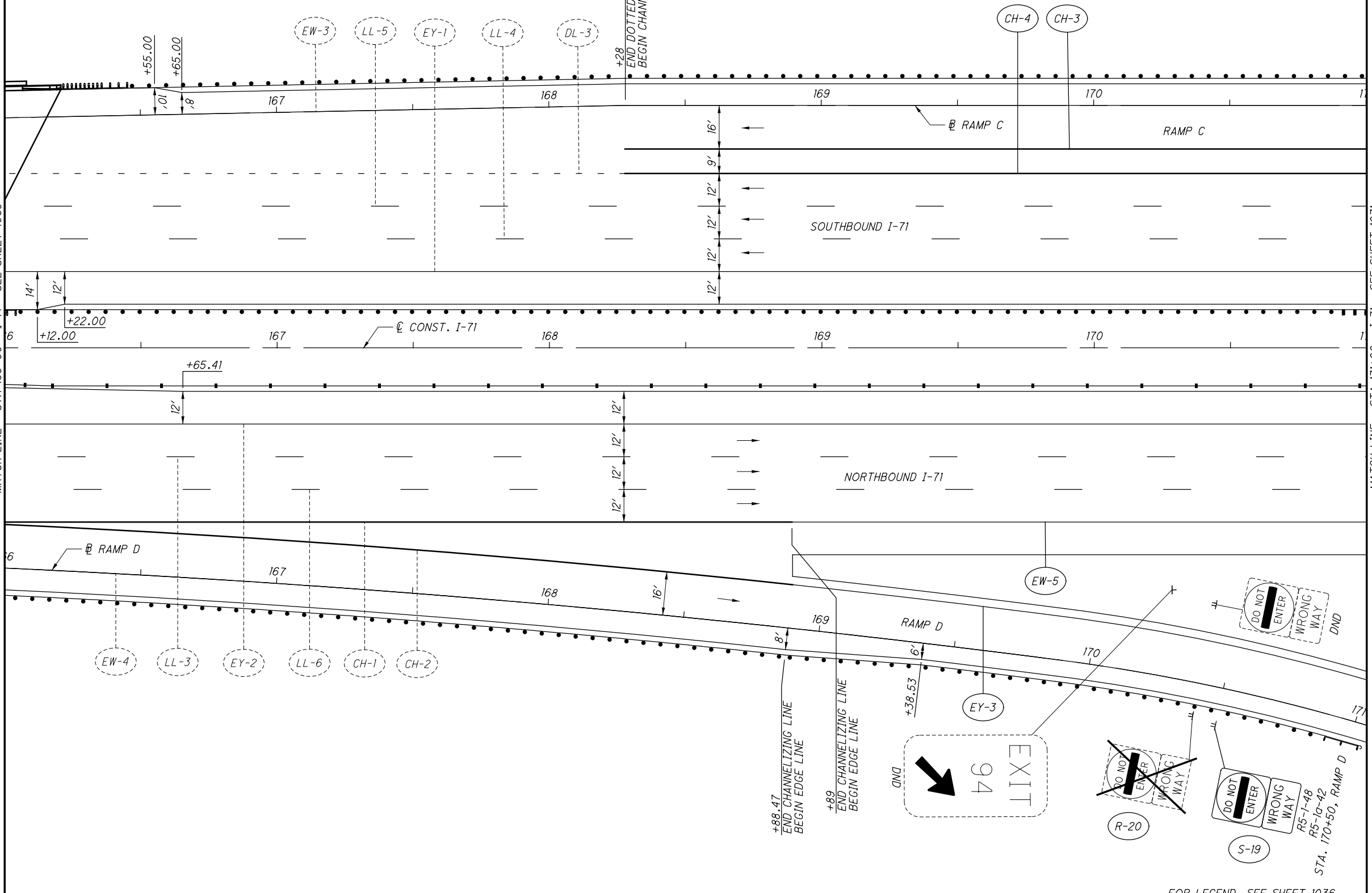
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 161+00 TO STA 166+00

FRA-71-0.00

MATCH LINE - STA 166+00 - I-71 - SEE SHEET 1069

MATCH LINE - STA 171+00 - I-71 - SEE SHEET 1071



CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 166+00 TO STA 171+00

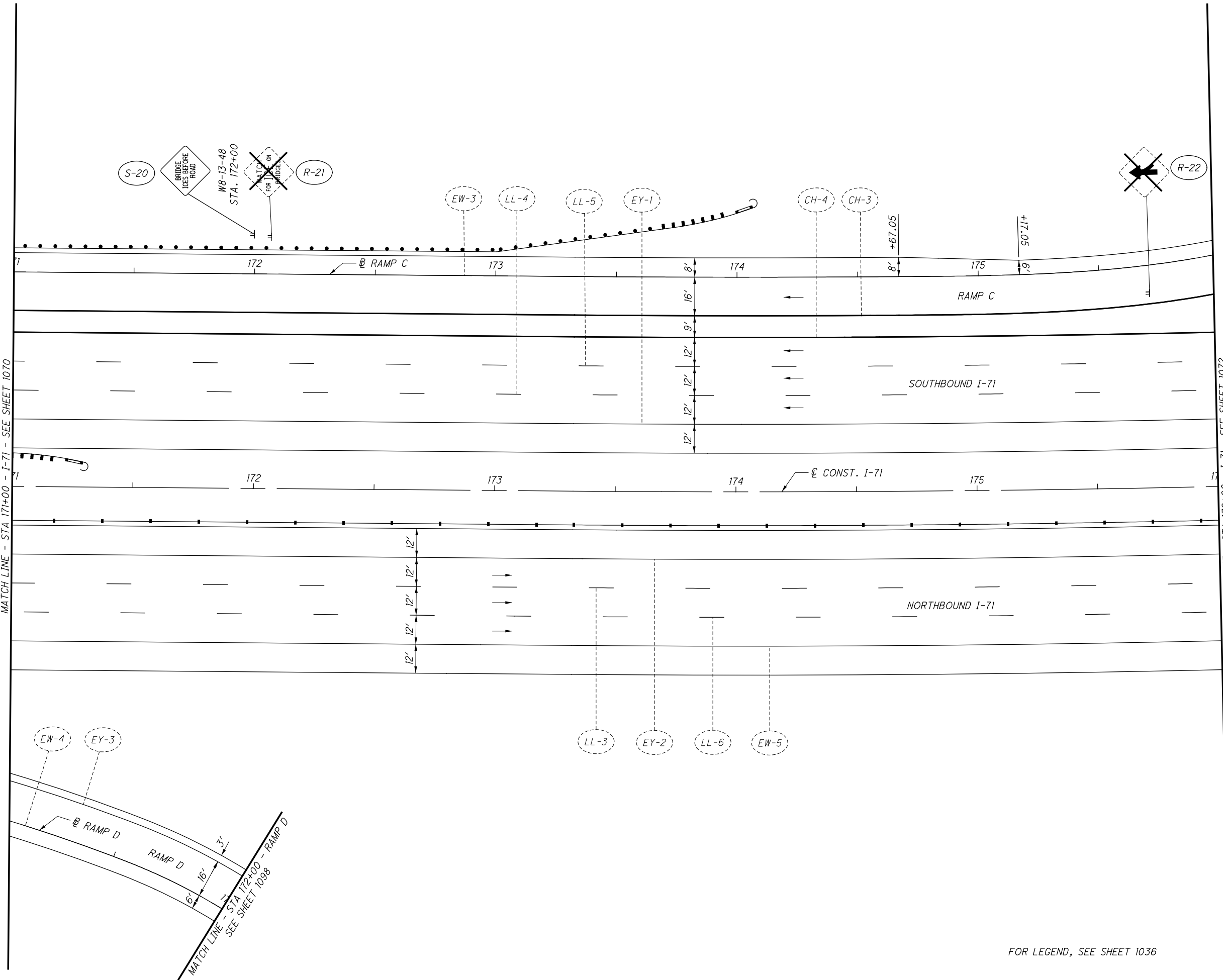
FRA-71-0.00

1070
1312

FOR LEGEND, SEE SHEET 1036

X:\4037000\121957.16\107201\traffic\sheets\107201TP036.dgn Sheet 10/28/2019 11:13:45 AM 1458s.js

MATCH LINE - STA 171+00 - I-71 - SEE SHEET 1070



FOR LEGEND, SEE SHEET 1036

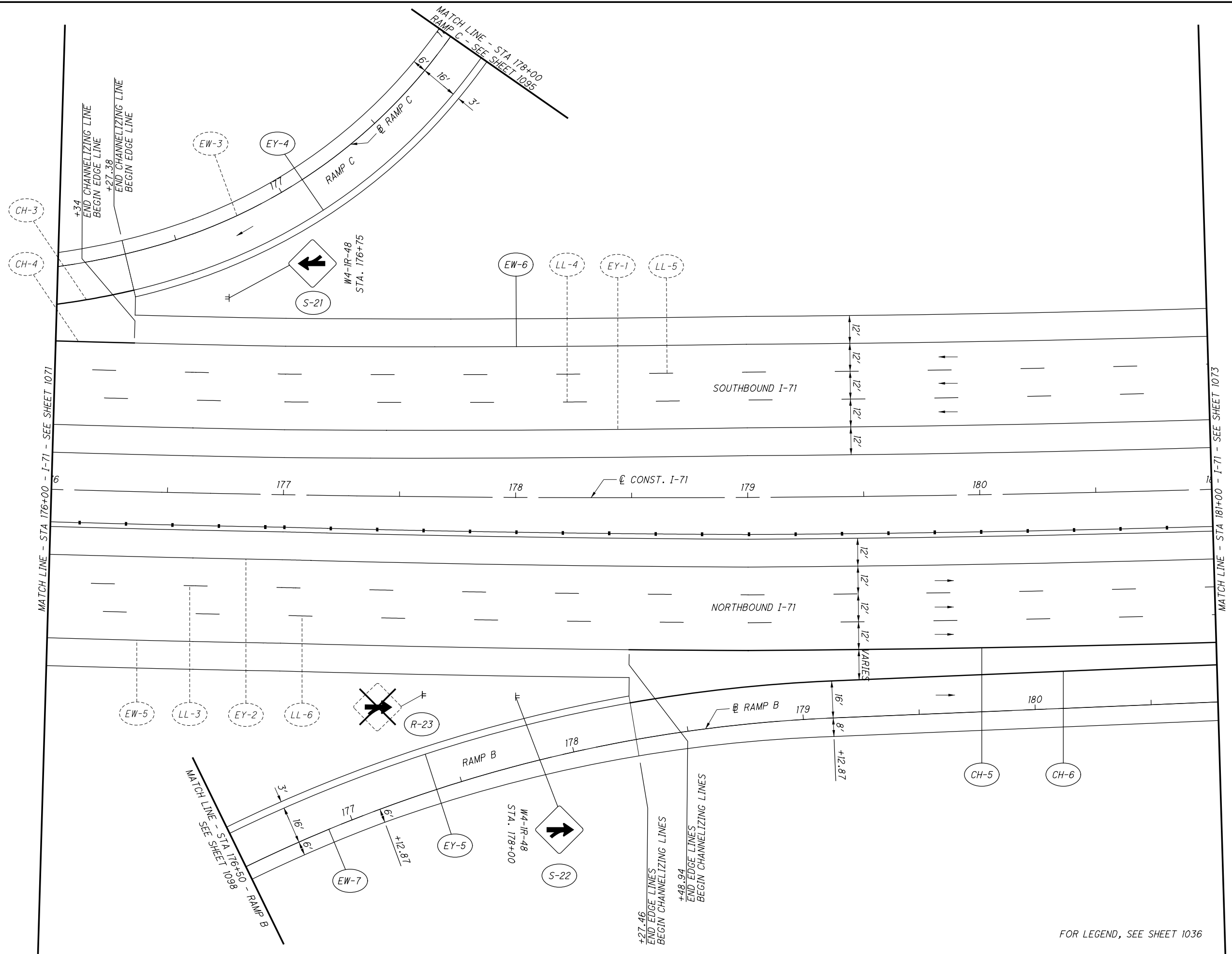
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 171+00 TO STA 176+00

FRA-71-0.00

1071
1312



CALCULATED
DLW
CHECKED
EGD

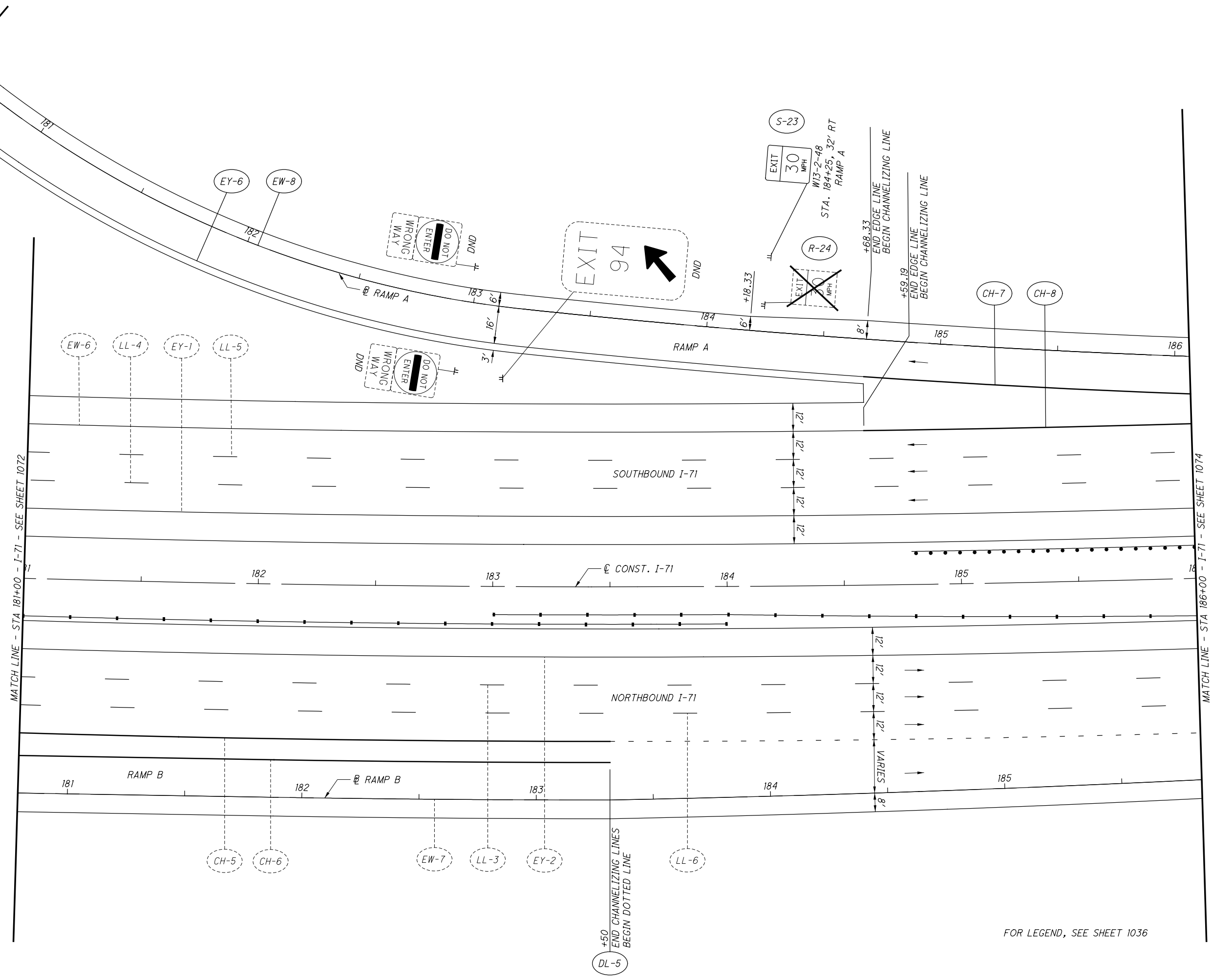
TRAFFIC CONTROL PLAN - I-71
STA 176+00 TO STA 181+00

FRA-71-0.00

FOR LEGEND, SEE SHEET 1036

X:\4037000\121957.16\107201\traffic\sheets\107201TP038.dgn_Sheet 10/28/2019 11:13:46 AM 1458s.js

MATCH LINE - STA 180+50 - RAMP A
SEE SHEET 1095



MATCH LINE - STA 181+00 - I-71 - SEE SHEET 1072

MATCH LINE - STA 186+00 - I-71 - SEE SHEET 1074

+50
DL-5
END CHANNELIZING LINES
BEGIN DOTTED LINE

FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 181+00 TO STA 186+00

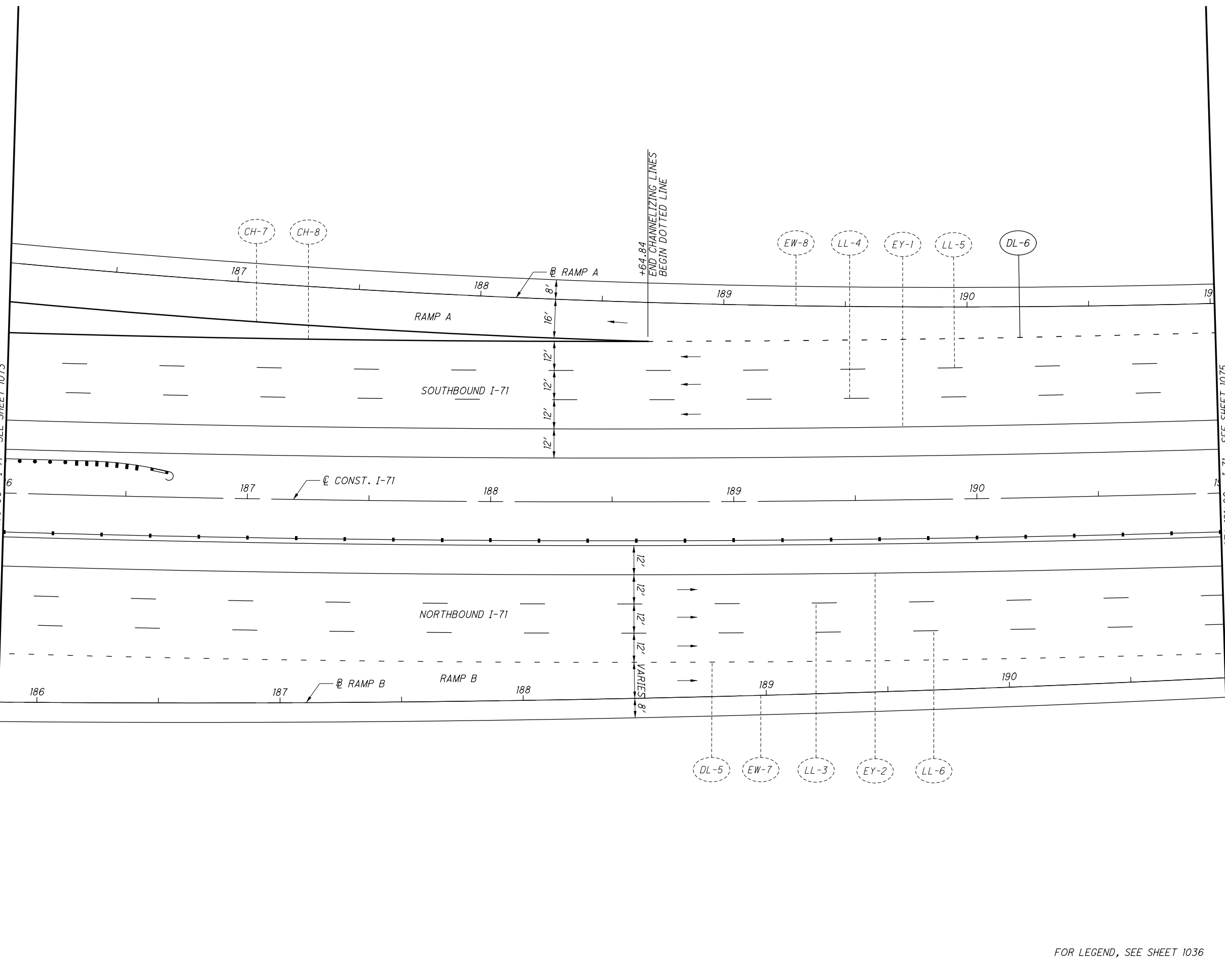
FRA-71-0.00

1073
1312

X:\4037000\121957.16\107201\traffic\sheets\107201TP039.dgn Sheet 10/28/2019 11:13:46 AM 1458sjs

MATCH LINE - STA 186+00 - I-71 - SEE SHEET 1073

MATCH LINE - STA 191+00 - I-71 - SEE SHEET 1075



FOR LEGEND, SEE SHEET 1036

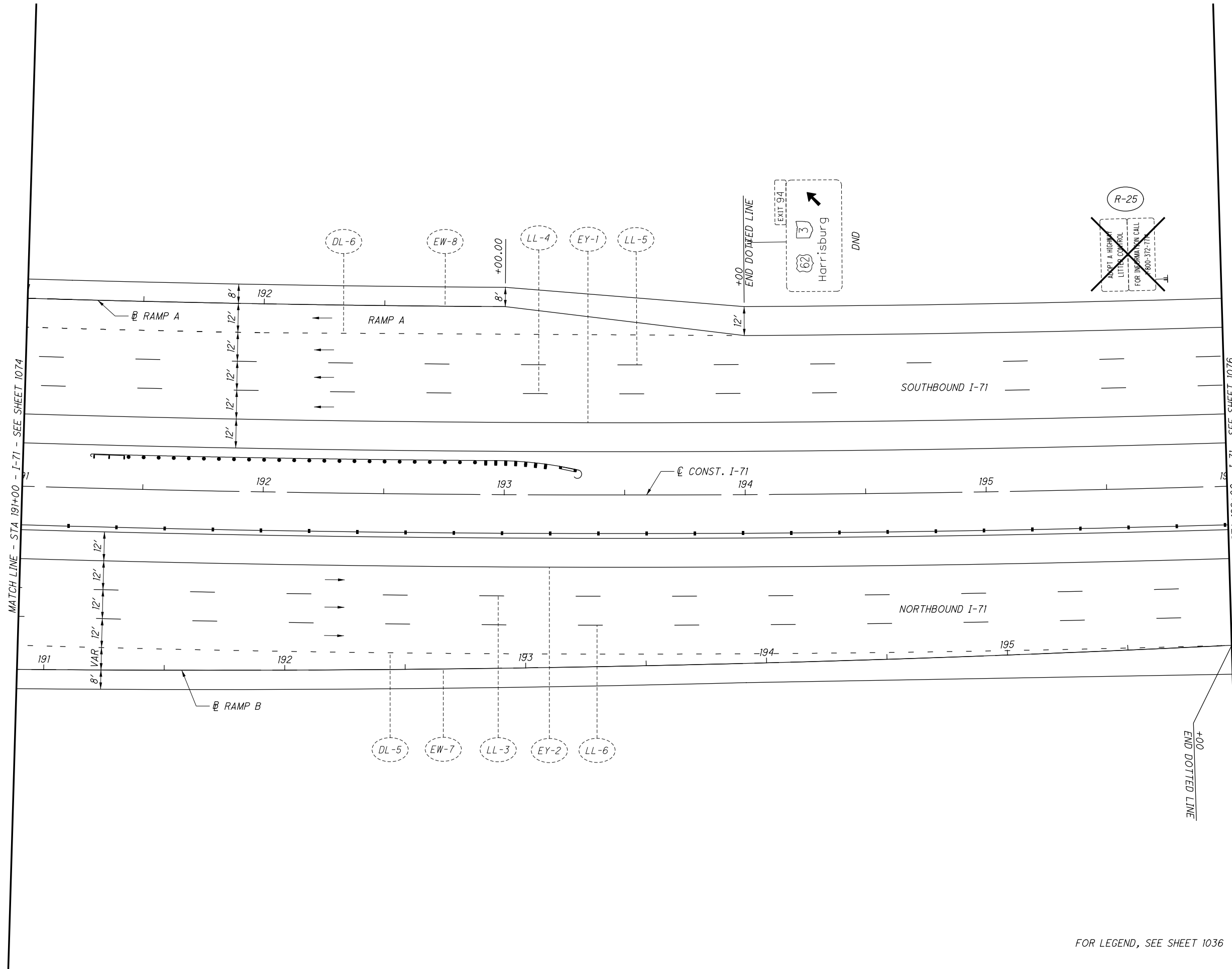
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 186+00 TO STA 191+00

FRA-71-0.00

MATCH LINE - STA 191+00 - I-71 - SEE SHEET 1074



+00
END DOTTED LINE

FOR LEGEND, SEE SHEET 1036

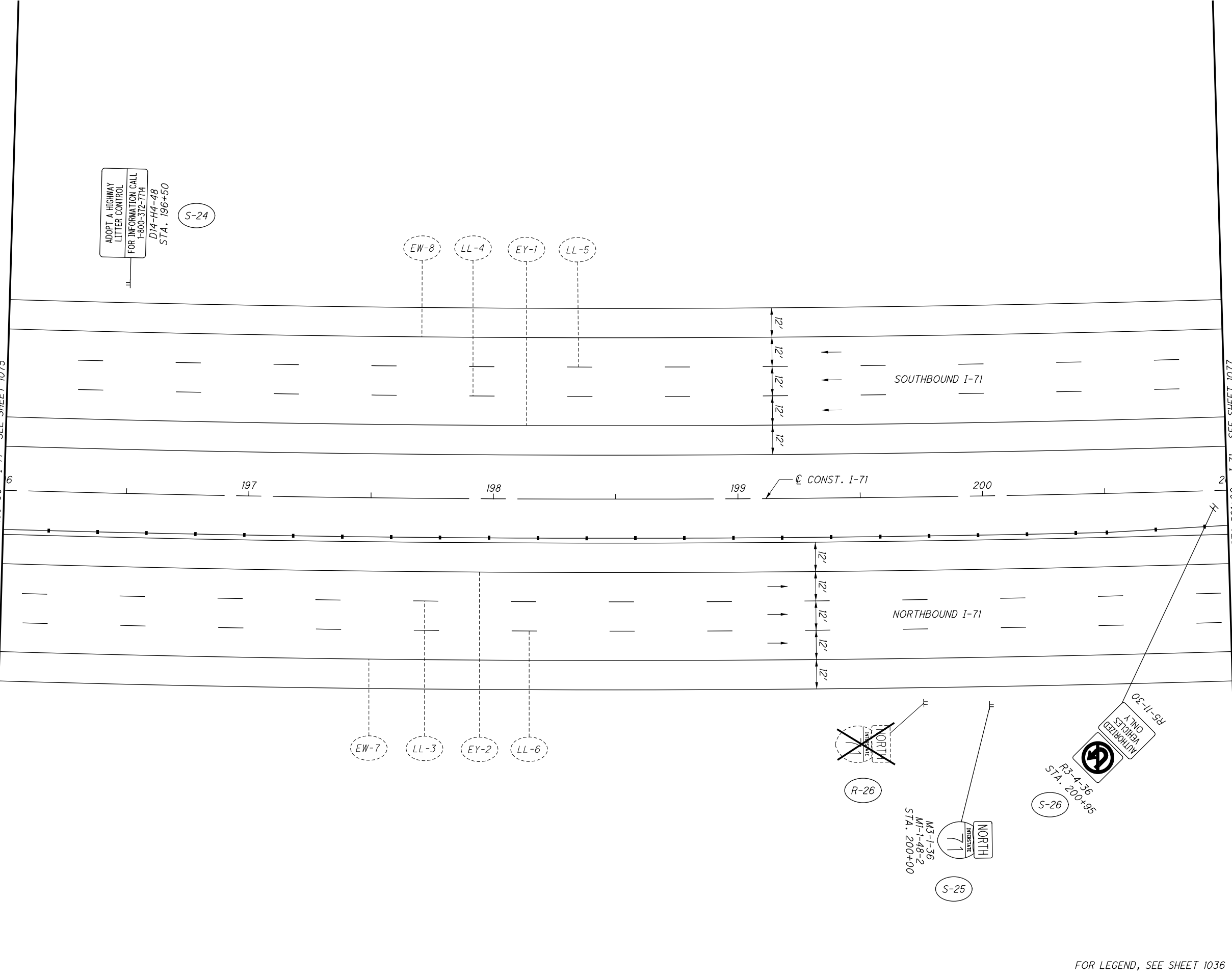
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 191+00 TO STA 196+00

FRA-71-0.00

MATCH LINE - STA 196+00 - I-71 - SEE SHEET 1075



FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW
CHECKED	EGD

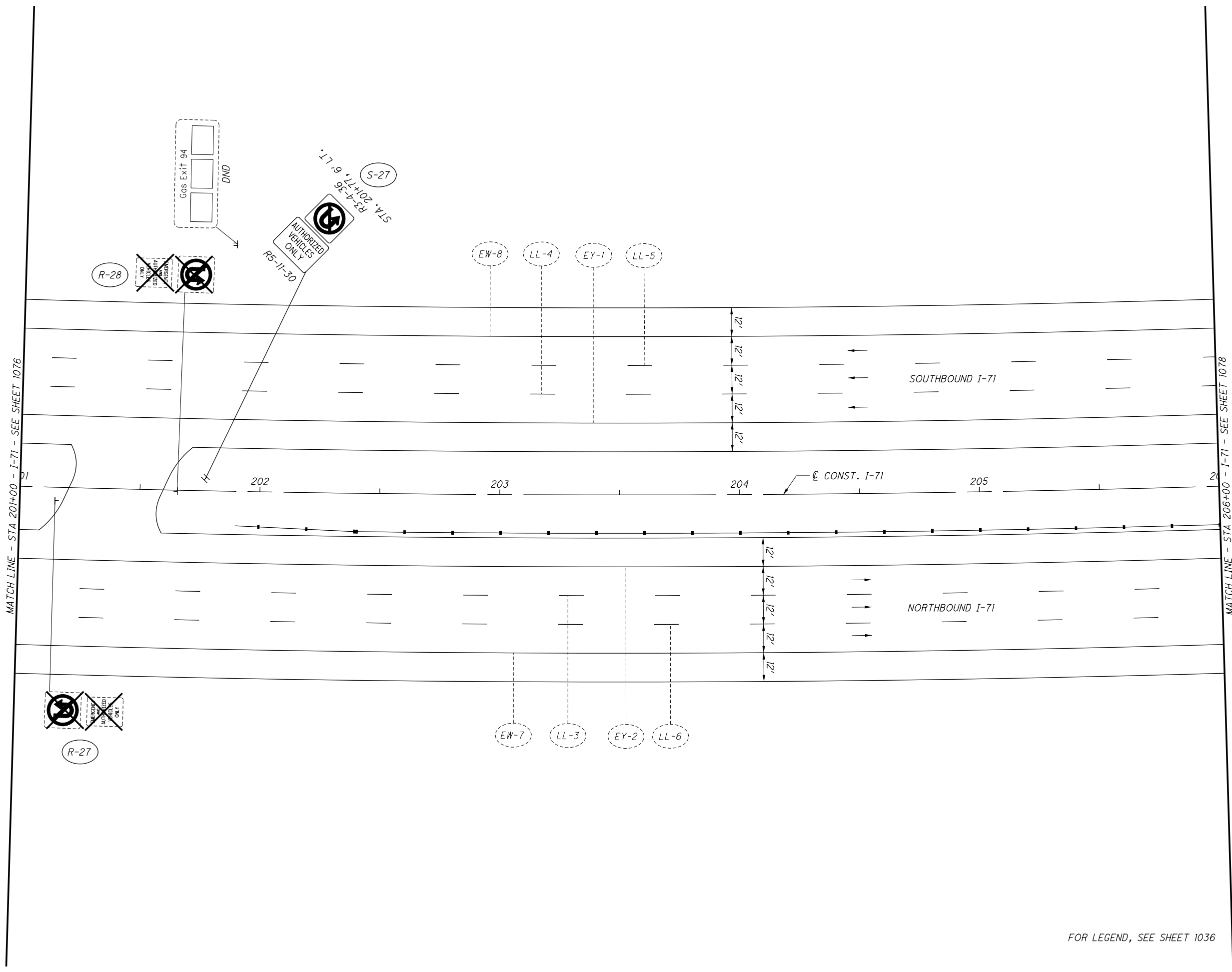
0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 196+00 TO STA 201+00

FRA-71-0.00

MATCH LINE - STA 201+00 - I-71 - SEE SHEET 1076

MATCH LINE - STA 206+00 - I-71 - SEE SHEET 1078



R-27

R-28

NO TRUCKS
NO TRAILERS
NO OVERSIZED
VEHICLES
ONLY

AUTHORIZED
VEHICLES
ONLY

R5-4-36
R5-11-30

STA. 201+17, 6' L.T.

Gas Exit 94
DND

EW-7 LL-3 EY-2 LL-6

EW-8 LL-4 EY-1 LL-5

NORTHBOUND I-71

SOUTHBOUND I-71

CONST. I-71

202

203

204

205

12' 12' 12' 12'

12' 12' 12' 12'

FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW	CHECKED	EGD

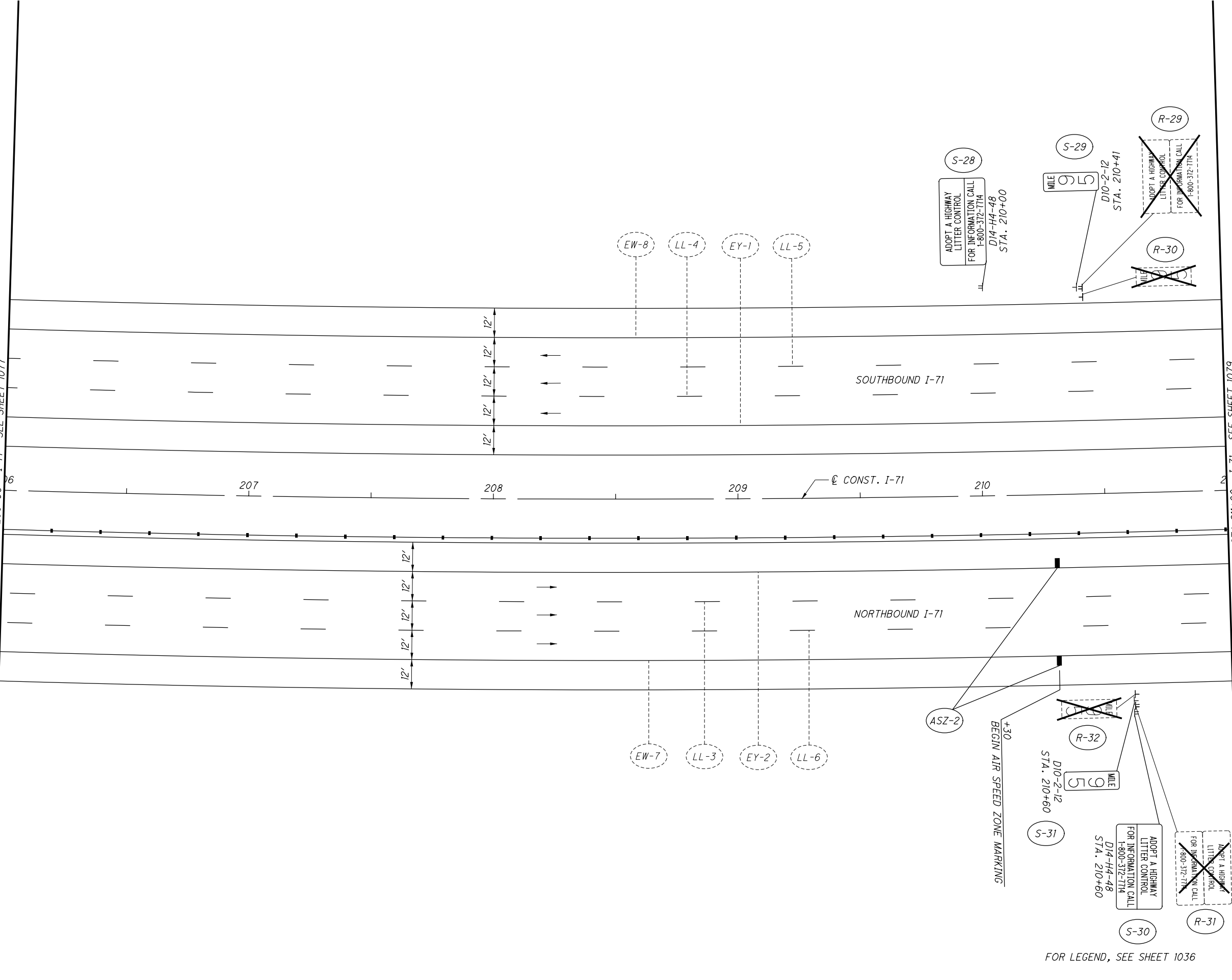
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 201+00 TO STA 206+00

FRA-71-0.00

1077
1312

MATCH LINE - STA 206+00 - I-71 - SEE SHEET 1077



MATCH LINE - STA 211+00 - I-71 - SEE SHEET 1079

FOR LEGEND, SEE SHEET 1036

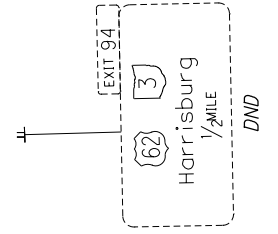
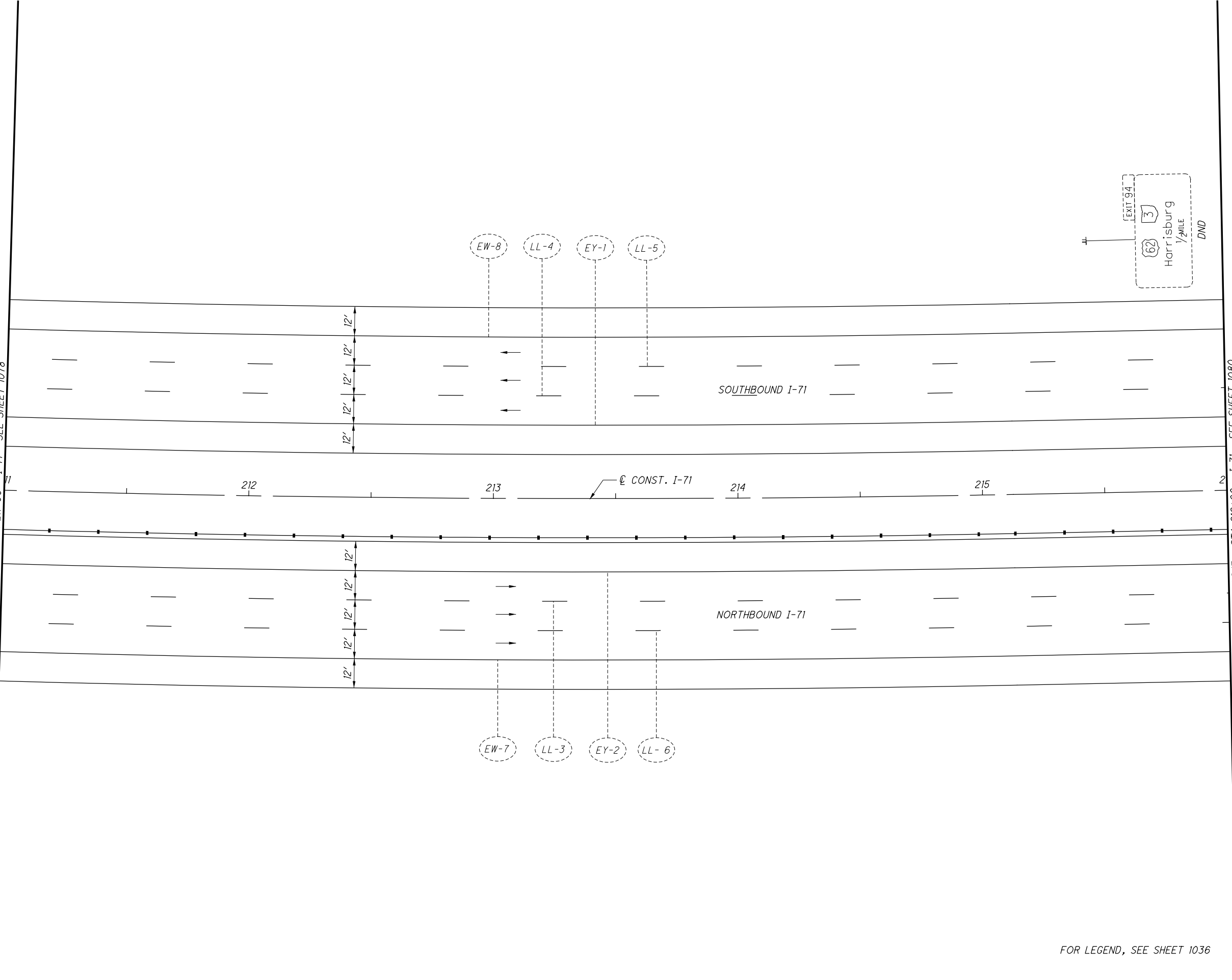
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 206+00 TO STA 211+00

FRA - 71 - 0.00

MATCH LINE - STA 211+00 - I-71 - SEE SHEET 1078



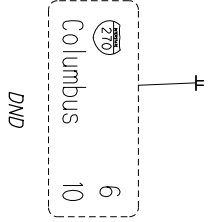
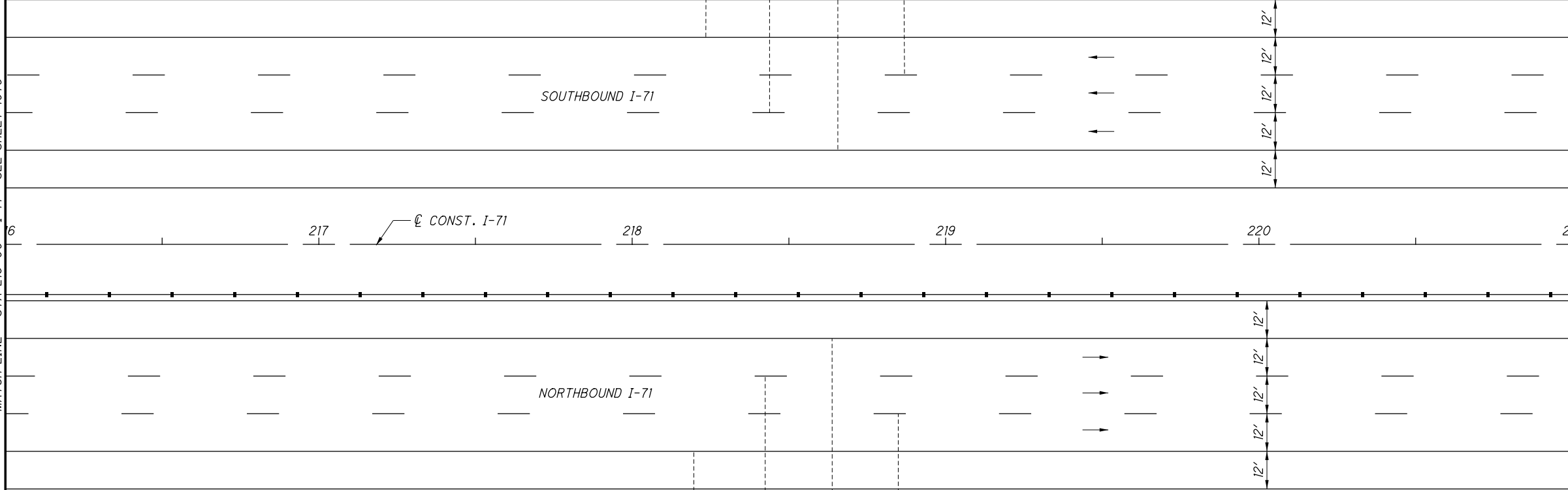
CALCULATED
DLW
CHECKED
EGD

0 10 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 211+00 TO STA 216+00

FRA - 71 - 0.00

MATCH LINE - STA 216+00 - I-71 - SEE SHEET 1079



FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

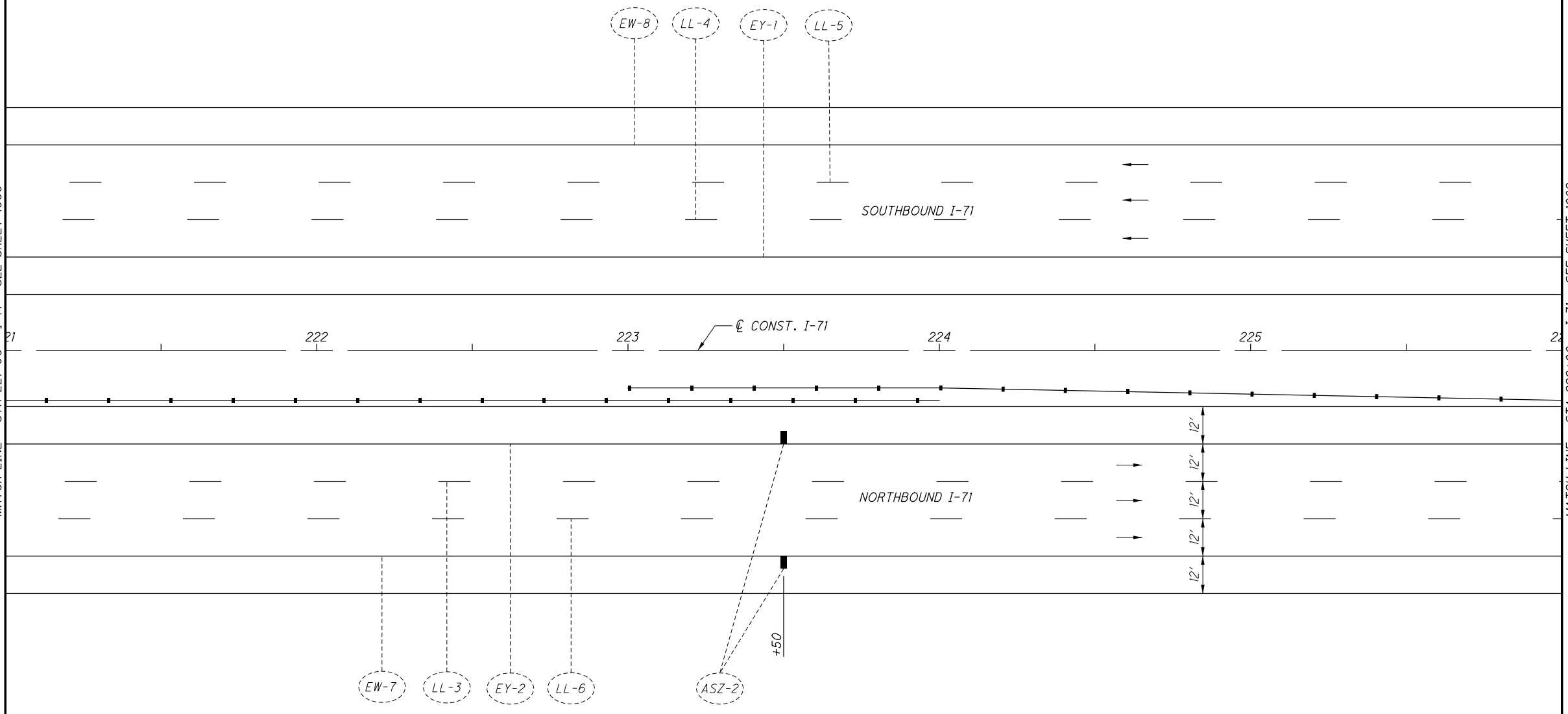
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 216+00 TO STA 221+00

FRA - 71 - 0.00

1080
1312

MATCH LINE - STA 221+00 - I-71 - SEE SHEET 1080



FOR LEGEND, SEE SHEET 1036

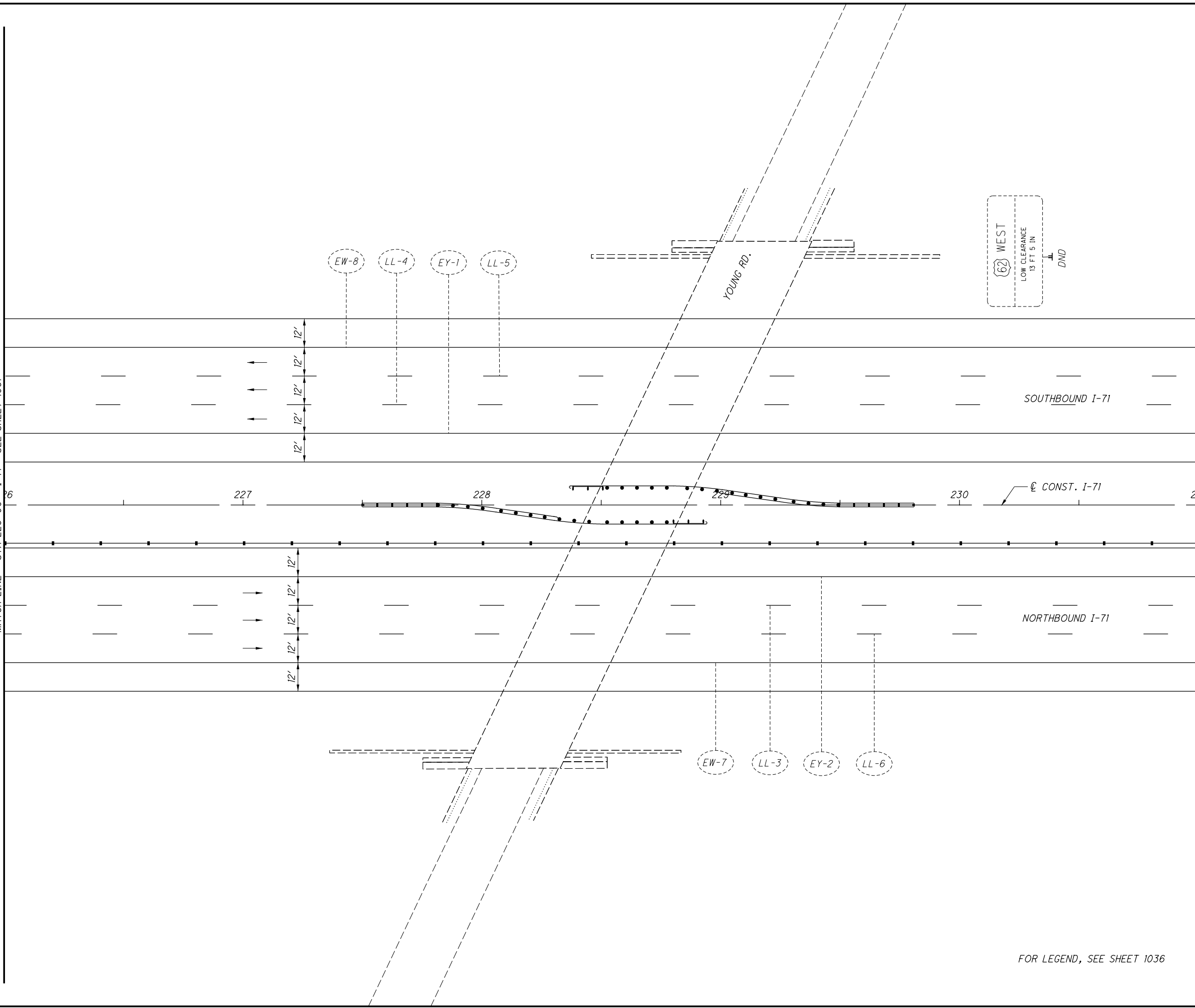
CALCULATED
DLW
CHECKED
EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 221+00 TO STA 226+00

FRA-71-0.00

MATCH LINE - STA 226+00 - I-71 - SEE SHEET 1081



FOR LEGEND, SEE SHEET 1036

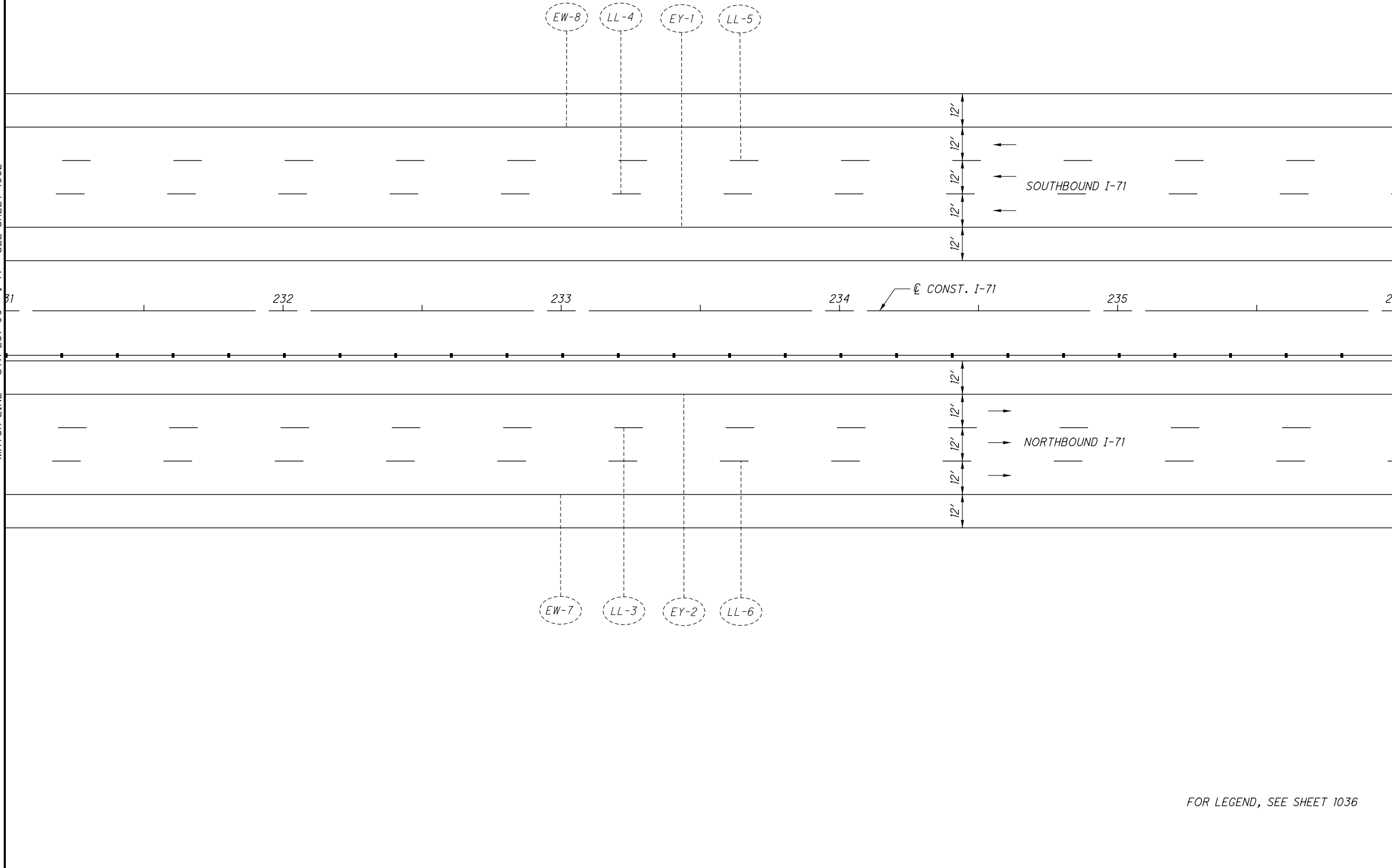
CALCULATED	DLW
CHECKED	EGD

0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 226+00 TO STA 231+00

FRA-71-0.00

MATCH LINE - STA 231+00 - I-71 - SEE SHEET 1082



FOR LEGEND, SEE SHEET 1036

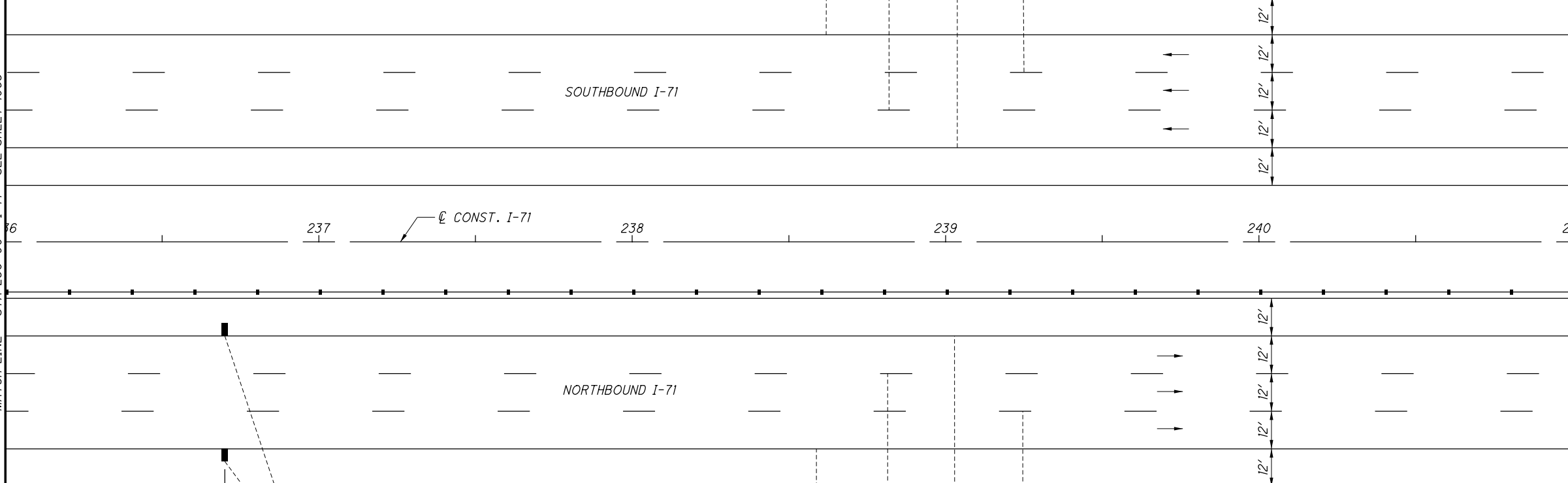
CALCULATED	DLW
CHECKED	EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 231+00 TO STA 236+00

FRA-71-0.00

MATCH LINE - STA 236+00 - I-71 - SEE SHEET 1083



MATCH LINE - STA 241+00 - I-71 - SEE SHEET 1085

+70

ASZ-2

EXIT 94
 3
 Harrisburg
 1/2 MILE
 DND

SOUTHBOUND I-71

NORTHBOUND I-71

CONST. I-71

EW-7 LL-3 EY-2 LL-6

EW-8 LL-4 EY-1 LL-5

FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW	CHECKED	EGD

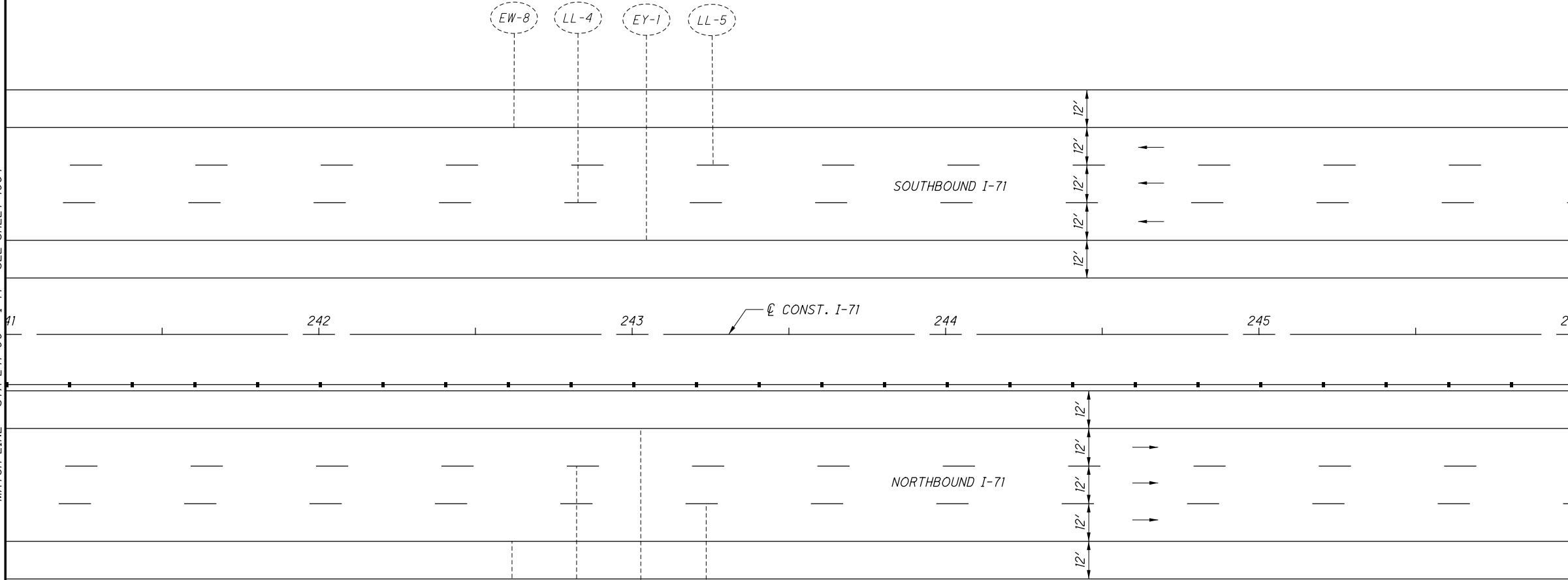
0 20 40
 HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 236+00 TO STA 241+00

FRA-71-0.00

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MATCH LINE - STA 241+00 - I-71 - SEE SHEET 1084



MATCH LINE - STA 246+00 - I-71 - SEE SHEET 1086

FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

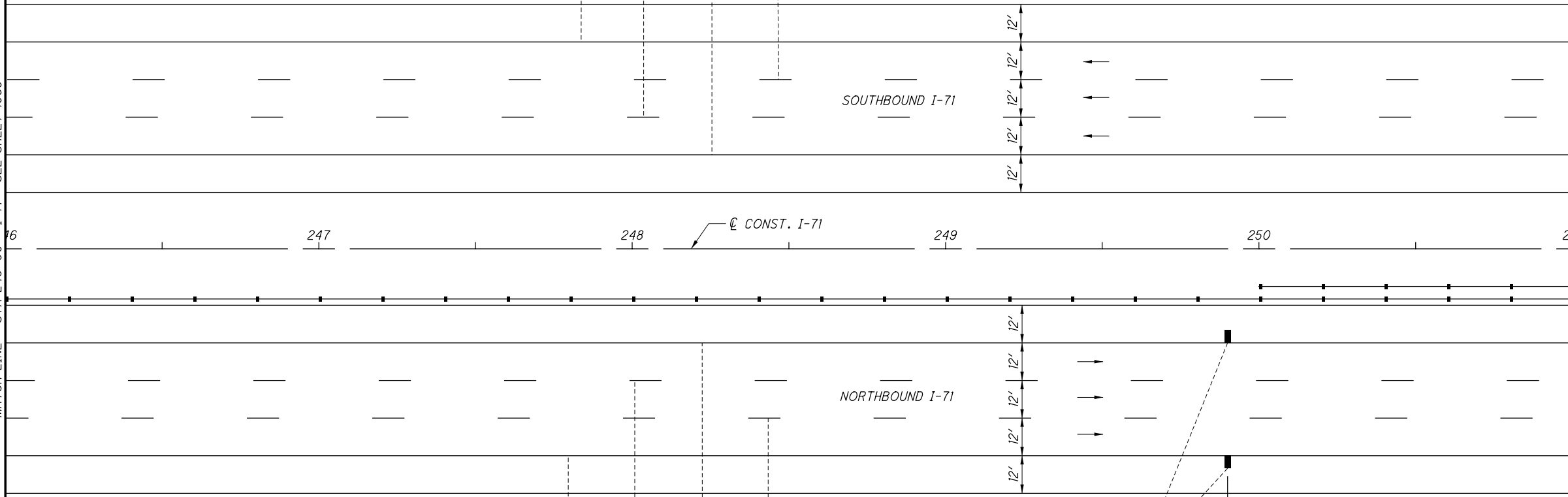
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 241+00 TO STA 246+00

FRA-71-0.00

1085
1312

MATCH LINE - STA 246+00 - I-71 - SEE SHEET 1085



FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW
CHECKED	EGD

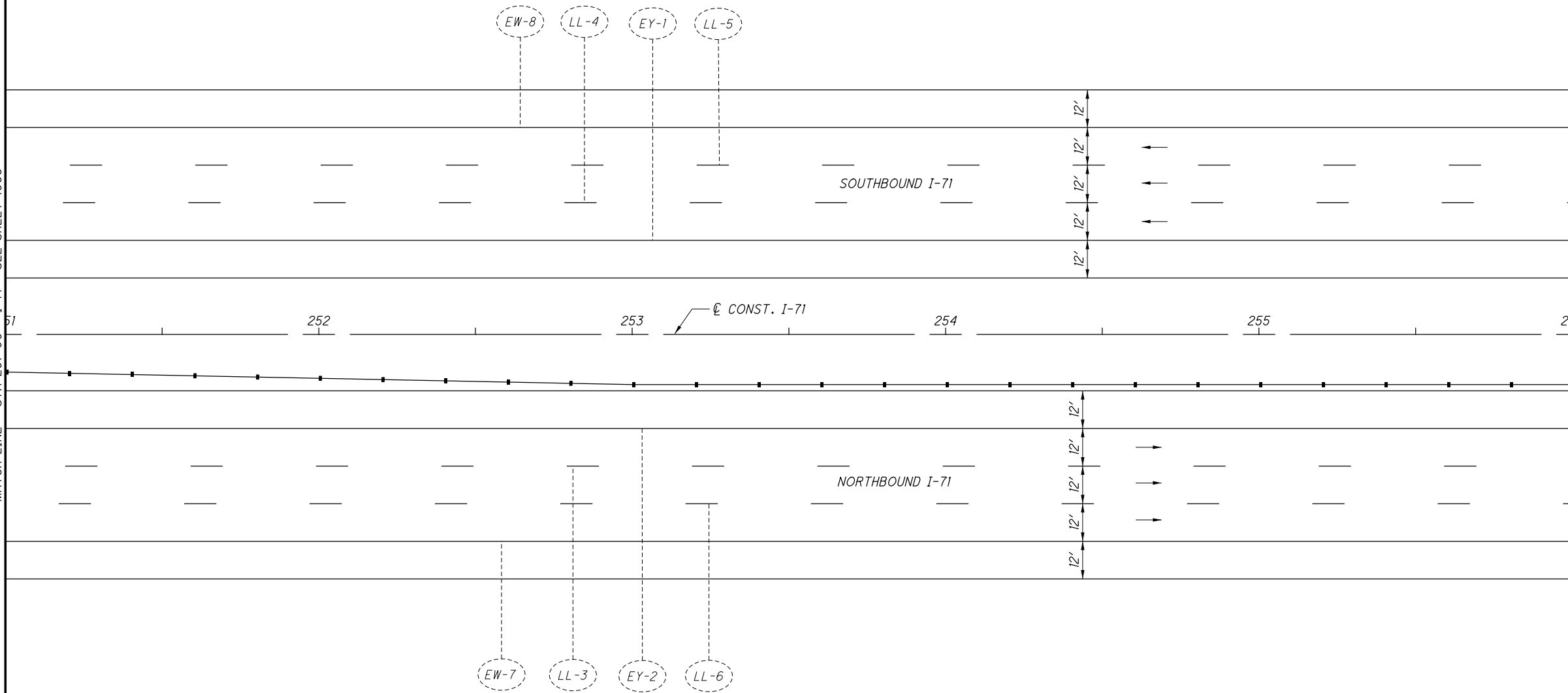
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HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 246+00 TO STA 251+00

FRA-71-0.00

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MATCH LINE - STA 251+00 - I-71 - SEE SHEET 1086



MATCH LINE - STA 256+00 - I-71 - SEE SHEET 1088

FOR LEGEND, SEE SHEET 1036

CALCULATED	DLW
CHECKED	EGD

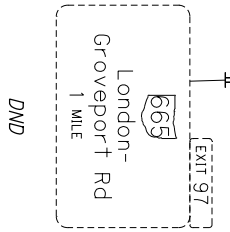
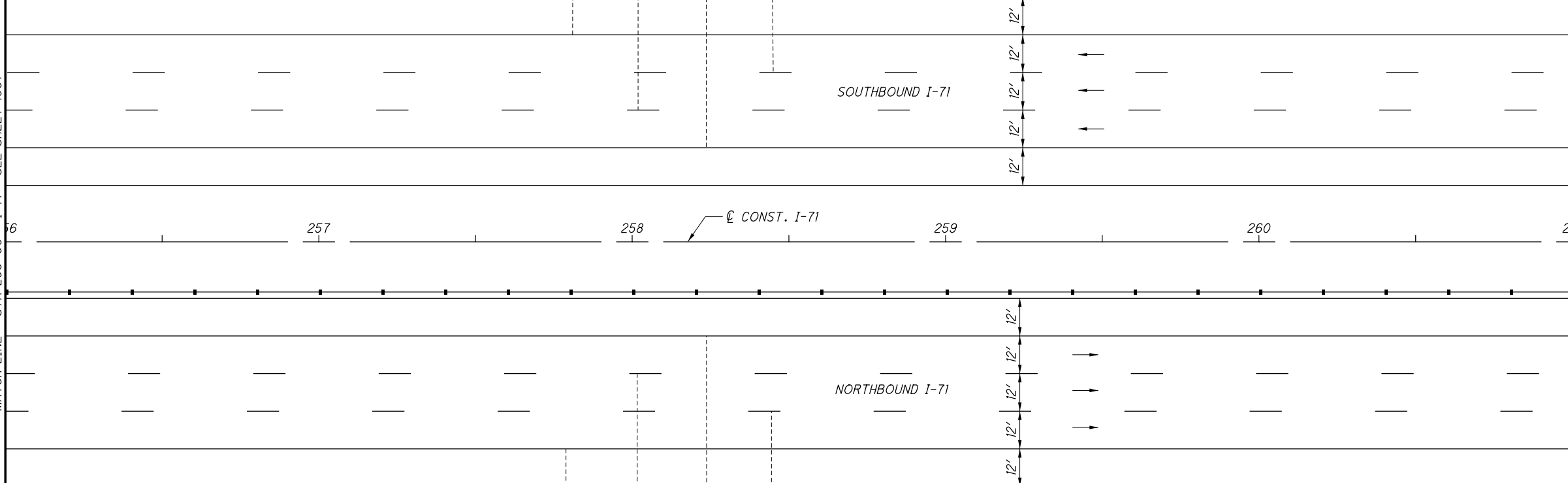
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HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 251+00 TO STA 256+00

FRA-71-0.00

1087
1312

MATCH LINE - STA 256+00 - I-71 - SEE SHEET 1087



FOR LEGEND, SEE SHEET 1036

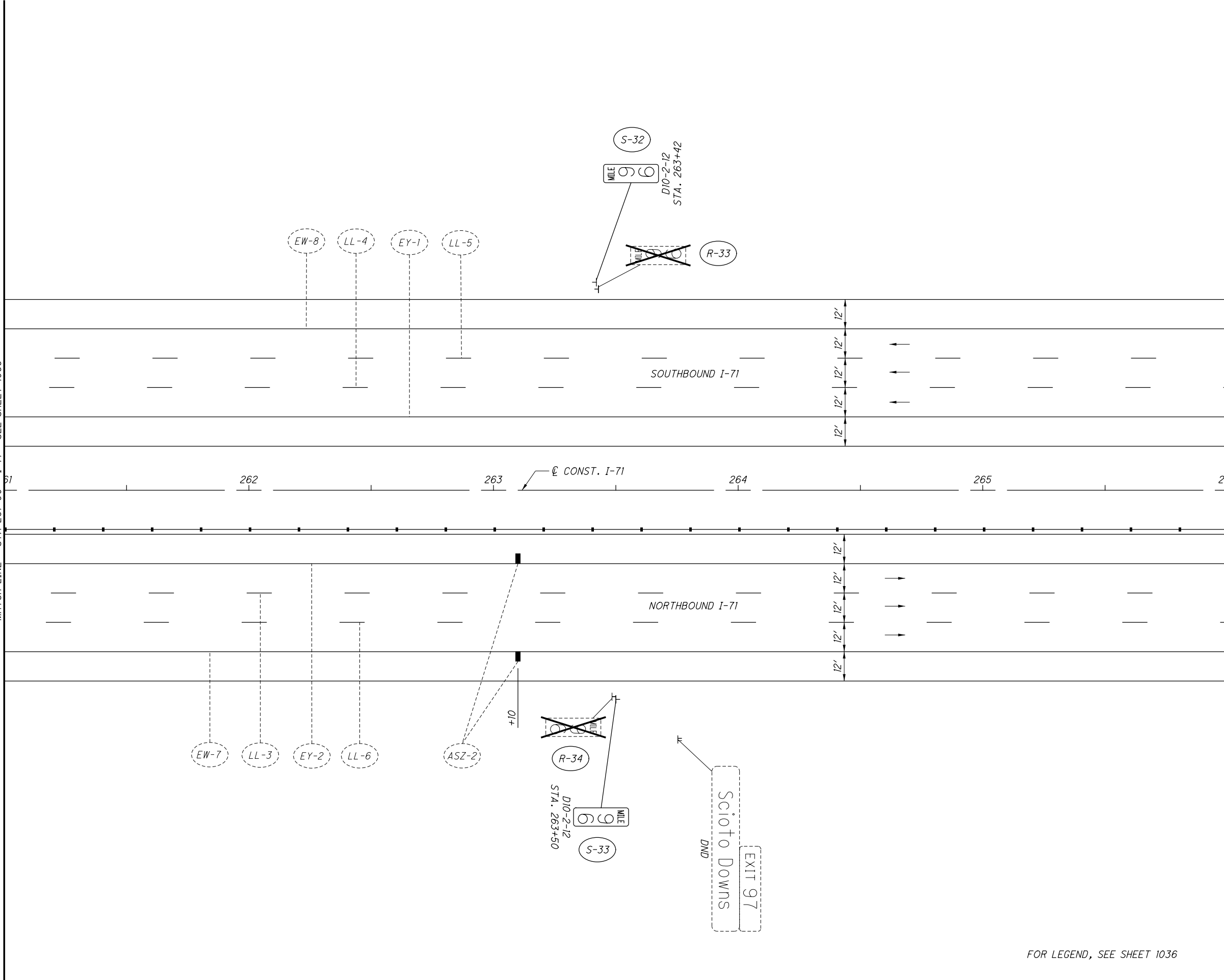
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EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 256+00 TO STA 261+00

FRA - 71 - 0.00

MATCH LINE - STA 261+00 - I-71 - SEE SHEET 1088



FOR LEGEND, SEE SHEET 1036

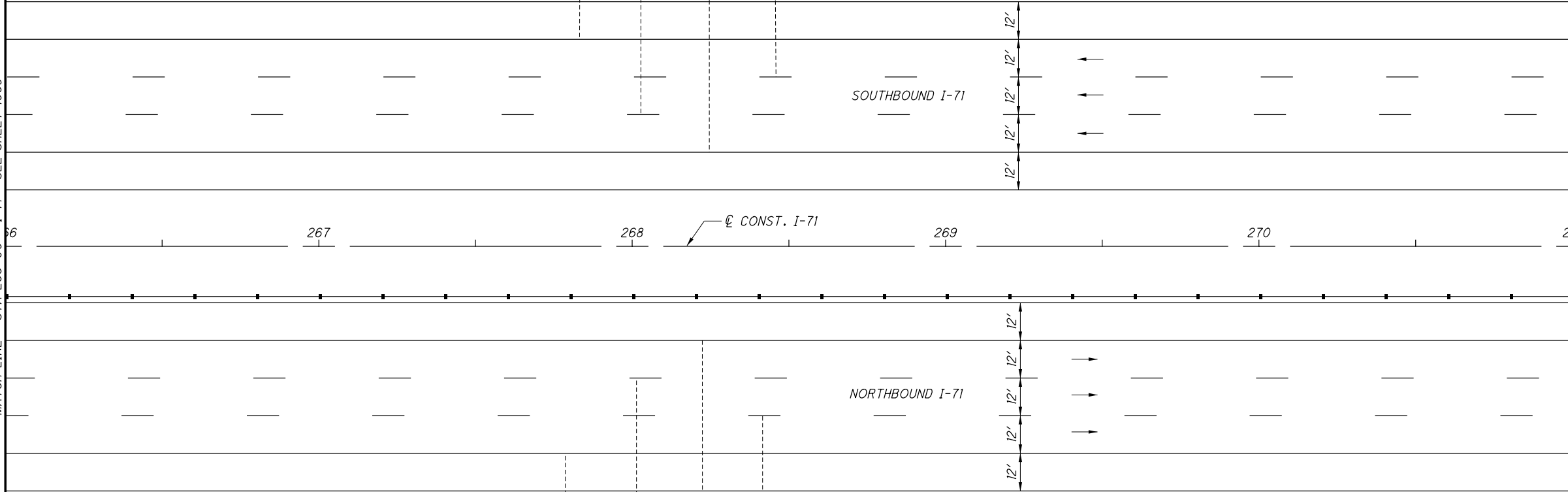
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0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 261+00 TO STA 266+00

FRA - 71 - 0.00

MATCH LINE - STA 266+00 - I-71 - SEE SHEET 1089



MATCH LINE - STA 271+00 - I-71 - SEE SHEET 1091

FOR LEGEND, SEE SHEET 1036

CALCULATED
DLW
CHECKED
EGD

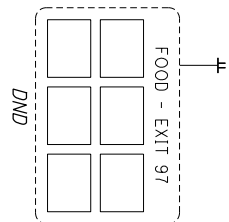
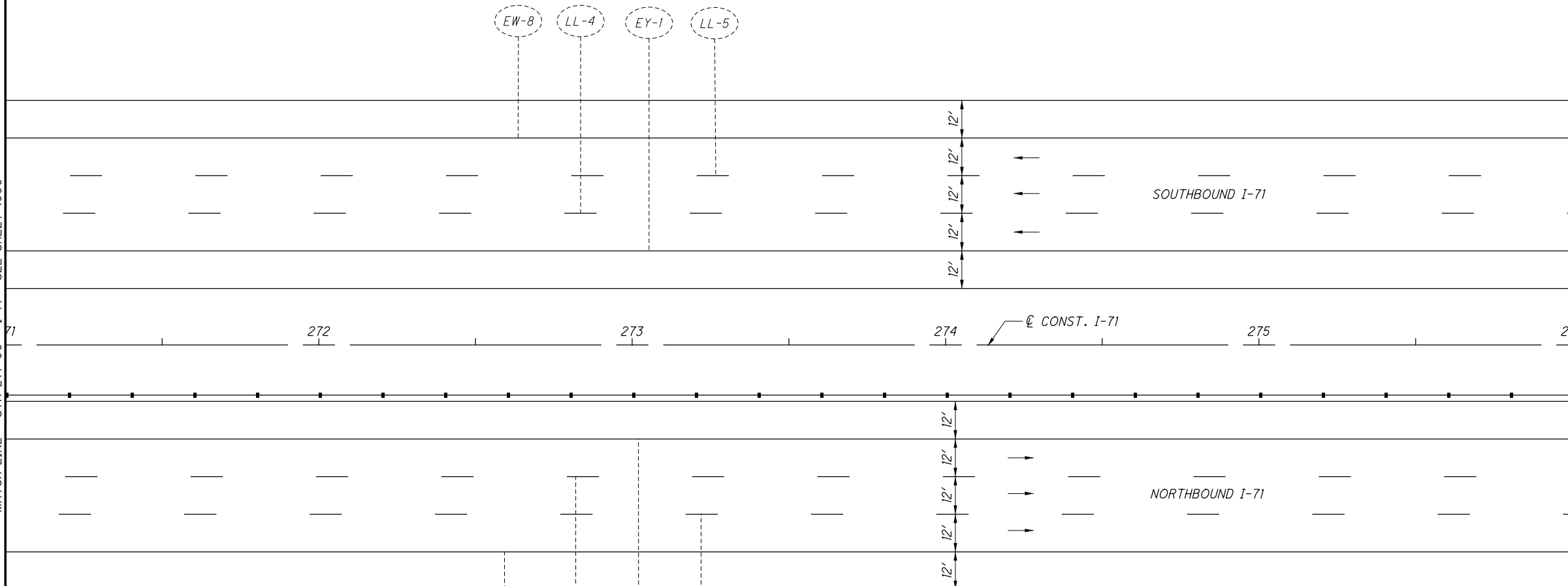
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HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 266+00 TO STA 271+00

FRA-71-0.00

1090
1312

MATCH LINE - STA 271+00 - I-71 - SEE SHEET 1090



FOR LEGEND, SEE SHEET 1036

CALCULATED
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CHECKED
EGD

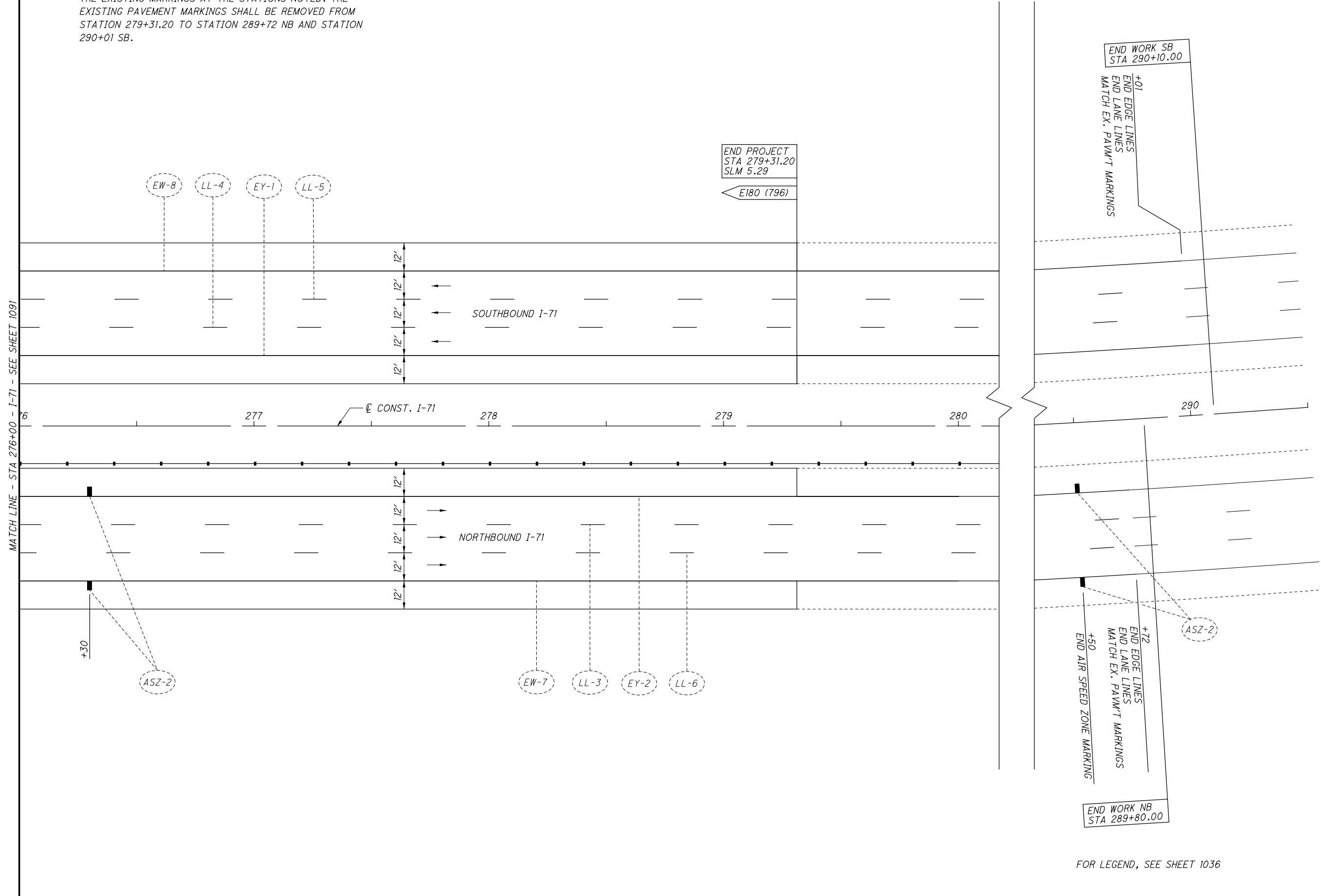
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HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 271+00 TO STA 276+00

FRA - 71 - 0.00

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NOTE
PAVEMENT MARKINGS SHALL END AT STATION 289+72 NB AND STATION 290+01 SB. THE PROPOSED MARKINGS SHALL MATCH THE EXISTING MARKINGS AT THE STATIONS NOTED. THE EXISTING PAVEMENT MARKINGS SHALL BE REMOVED FROM STATION 279+31.20 TO STATION 289+72 NB AND STATION 290+01 SB.



FOR LEGEND, SEE SHEET 1036

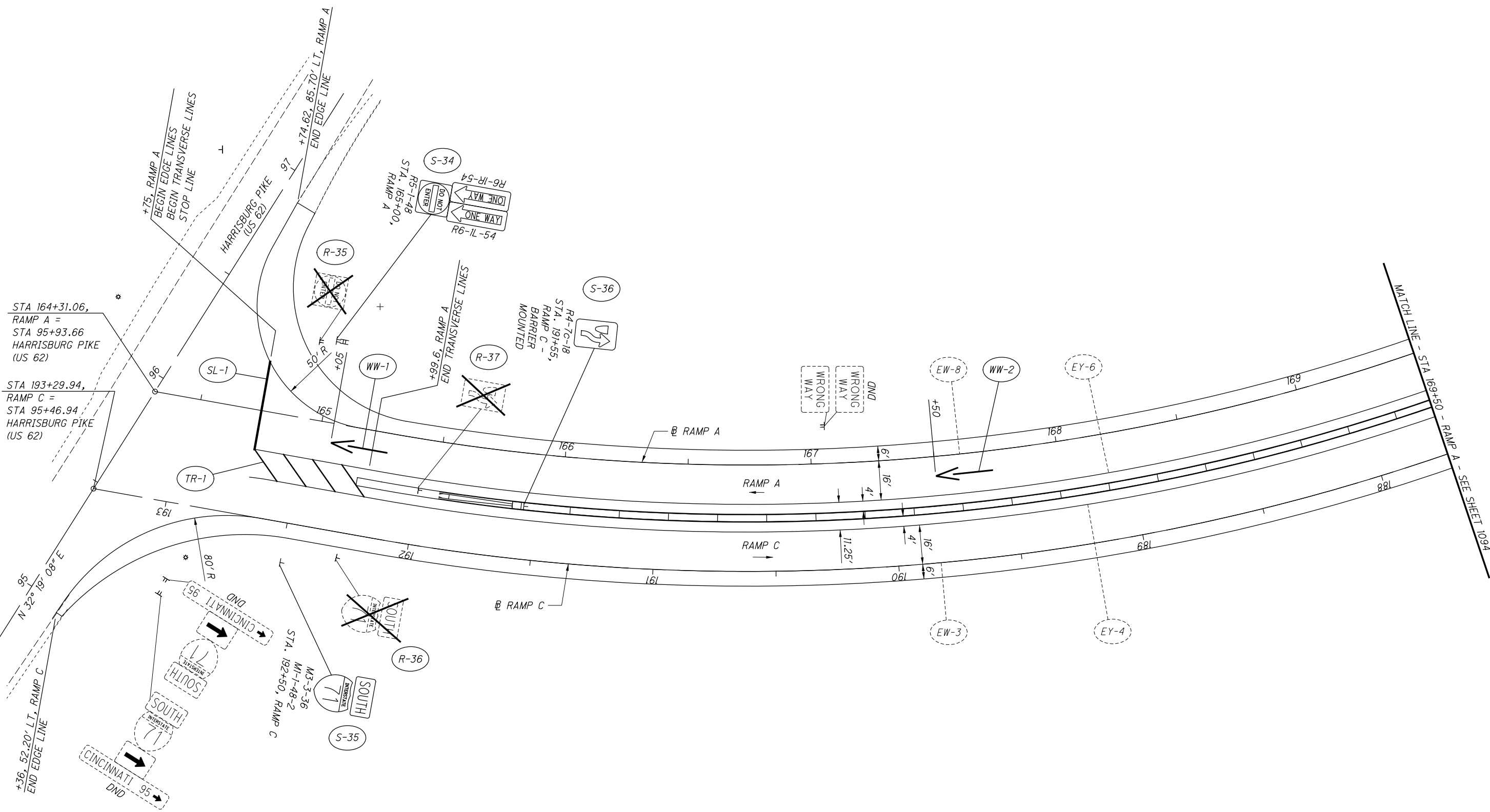
CALCULATED
DLW
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EGD

0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLAN - I-71
STA 276+00 TO STA 290+50

FRA-71-0.00

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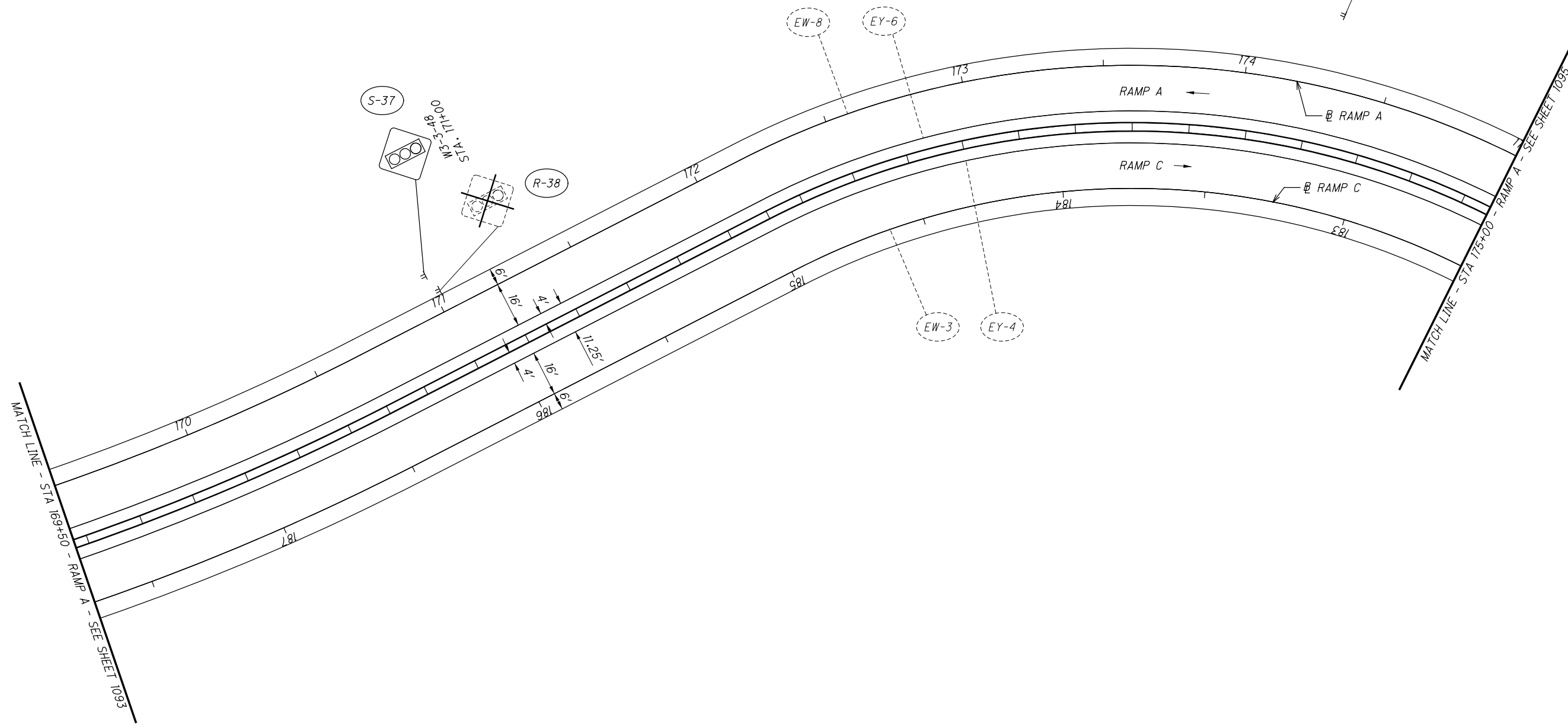

 CALCULATED
 DLW
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 EDG
 0 20 40
 HORIZONTAL
 SCALE IN FEET

**TRAFFIC CONTROL PLAN - RAMPS A & C
STA. 164+50 TO 169+50 - RAMP A**

FRA-71-0.00

FOR LEGEND, SEE SHEET 1036

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FOR LEGEND, SEE SHEET 1036

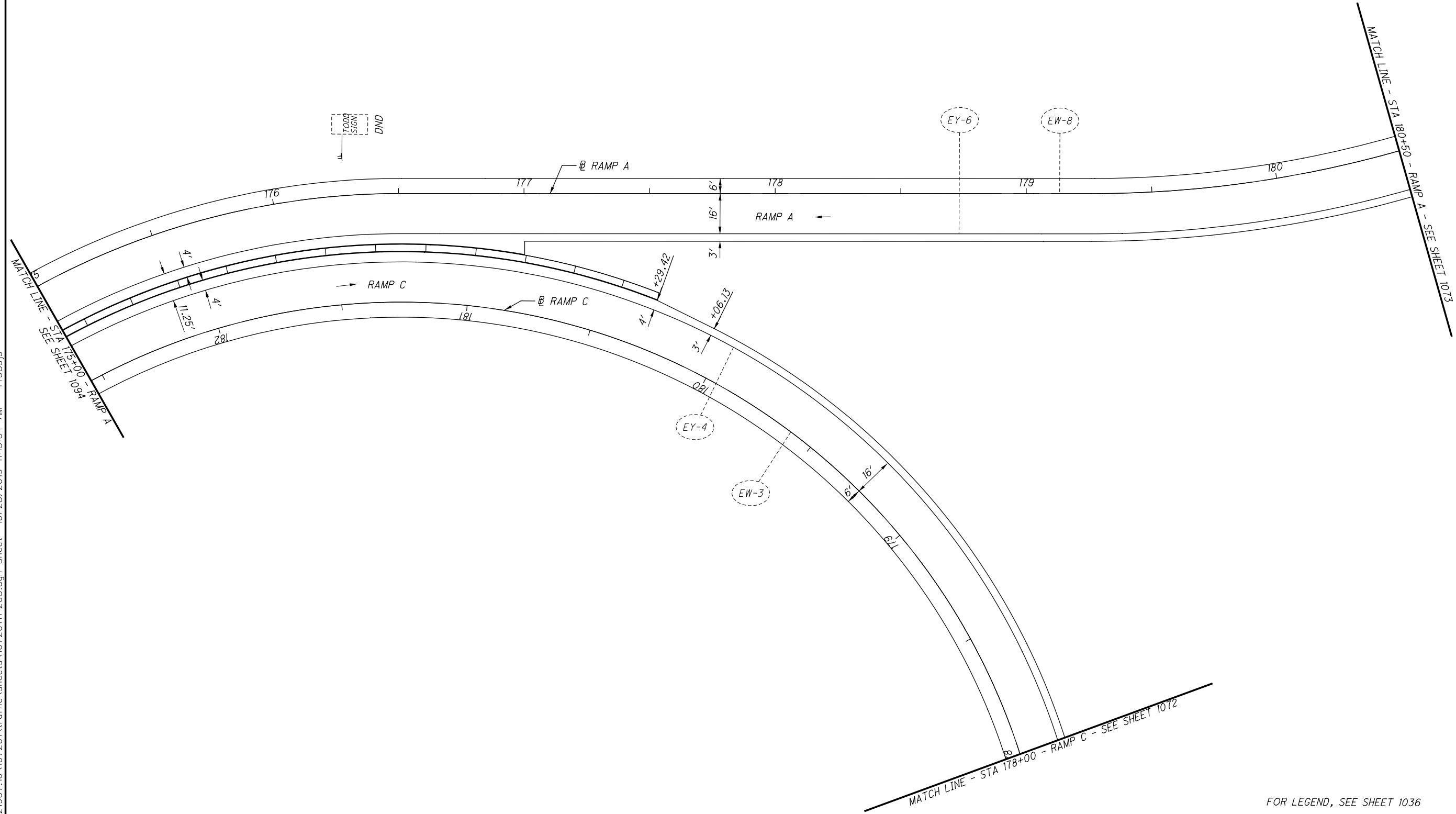
CALCULATED	DLW
CHECKED	EDG

TRAFFIC CONTROL PLAN - RAMP A & C
STA. 169+50 TO STA. 175+00 - RAMP A

FRA-71-0.00

1094
1312

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CALCULATED	DLW	CHECKED	EDG

0 20 40
HORIZONTAL SCALE IN FEET

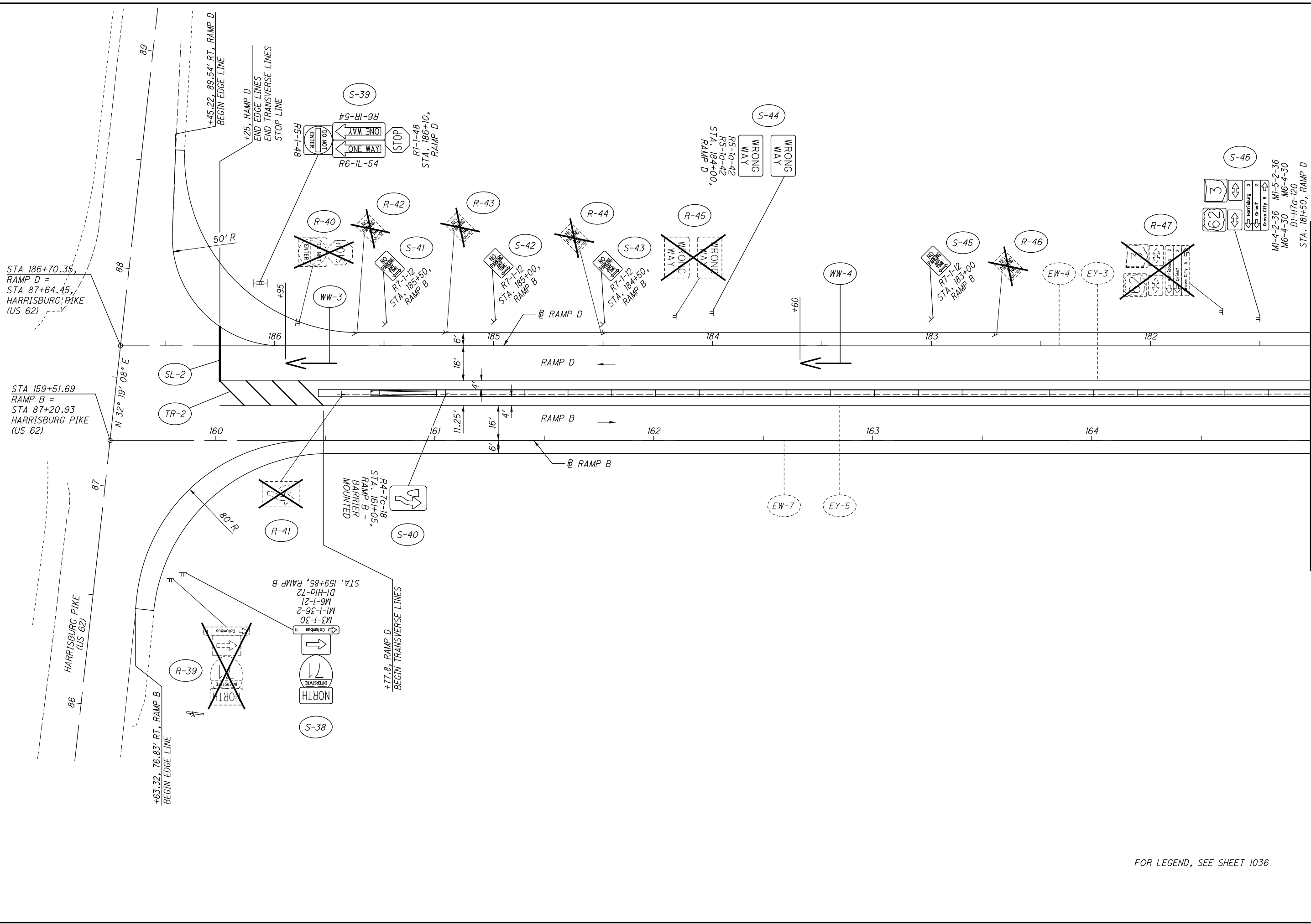
TRAFFIC CONTROL PLAN - RAMP A & C
STA. 175+00 TO STA. 180+50 - RAMP A

FRA-71-0.00

1095
1312

FOR LEGEND, SEE SHEET 1036

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MATCH LINE - STA 165+00 - RAMP B - SEE SHEET 1097

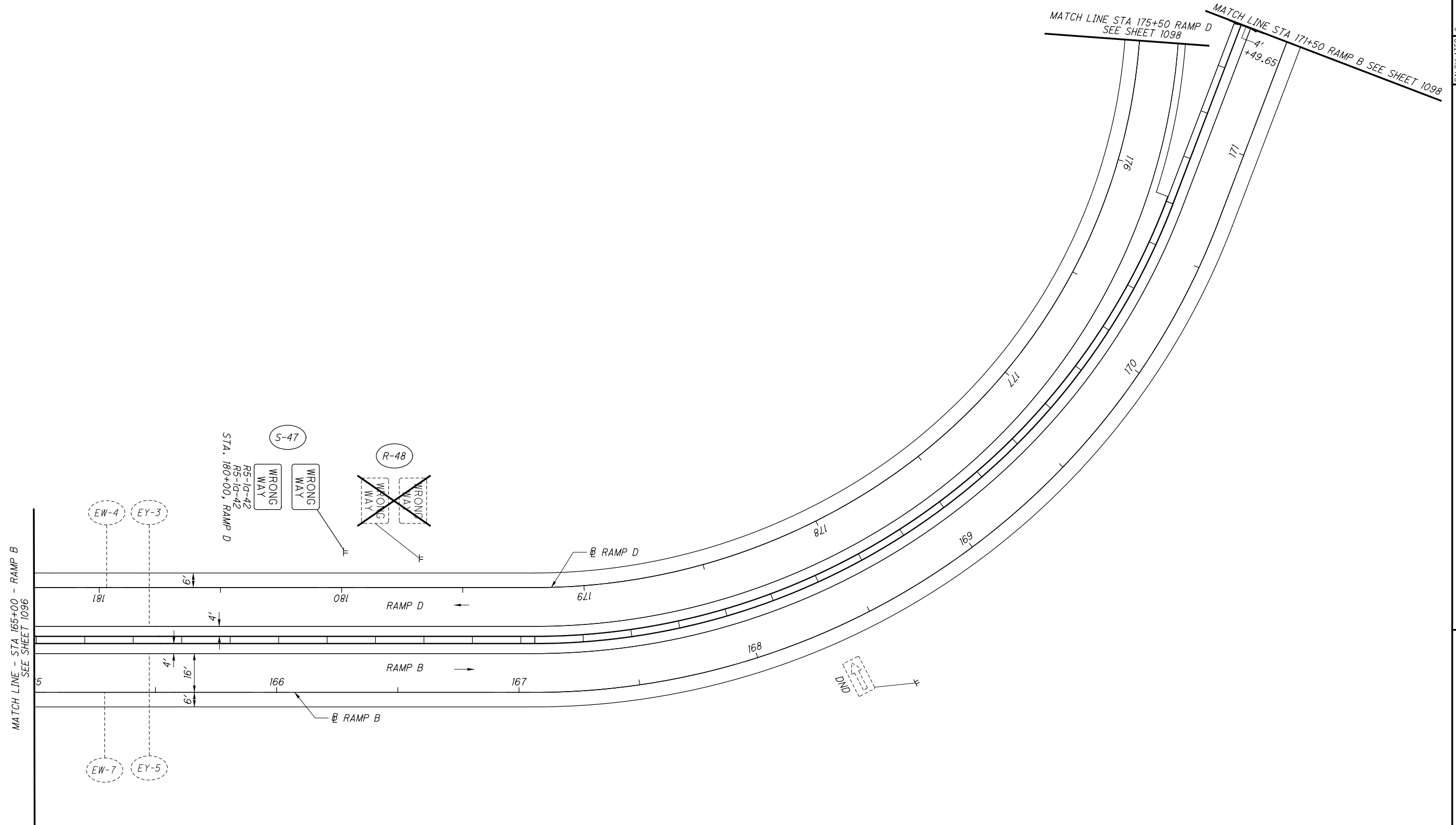
<p>FRA - 71 - 0.00</p>	<p>TRAFFIC CONTROL PLAN - RAMPS B & D STA. 159+50 TO STA. 165+00 - RAMP B</p>
<p>1096 1312</p>	<p>CALCULATED DLW CHECKED EDG</p>

HORIZONTAL SCALE IN FEET

0 20 40

FOR LEGEND, SEE SHEET 1036

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CHECKED
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0 20 40
HORIZONTAL
SCALE IN FEET

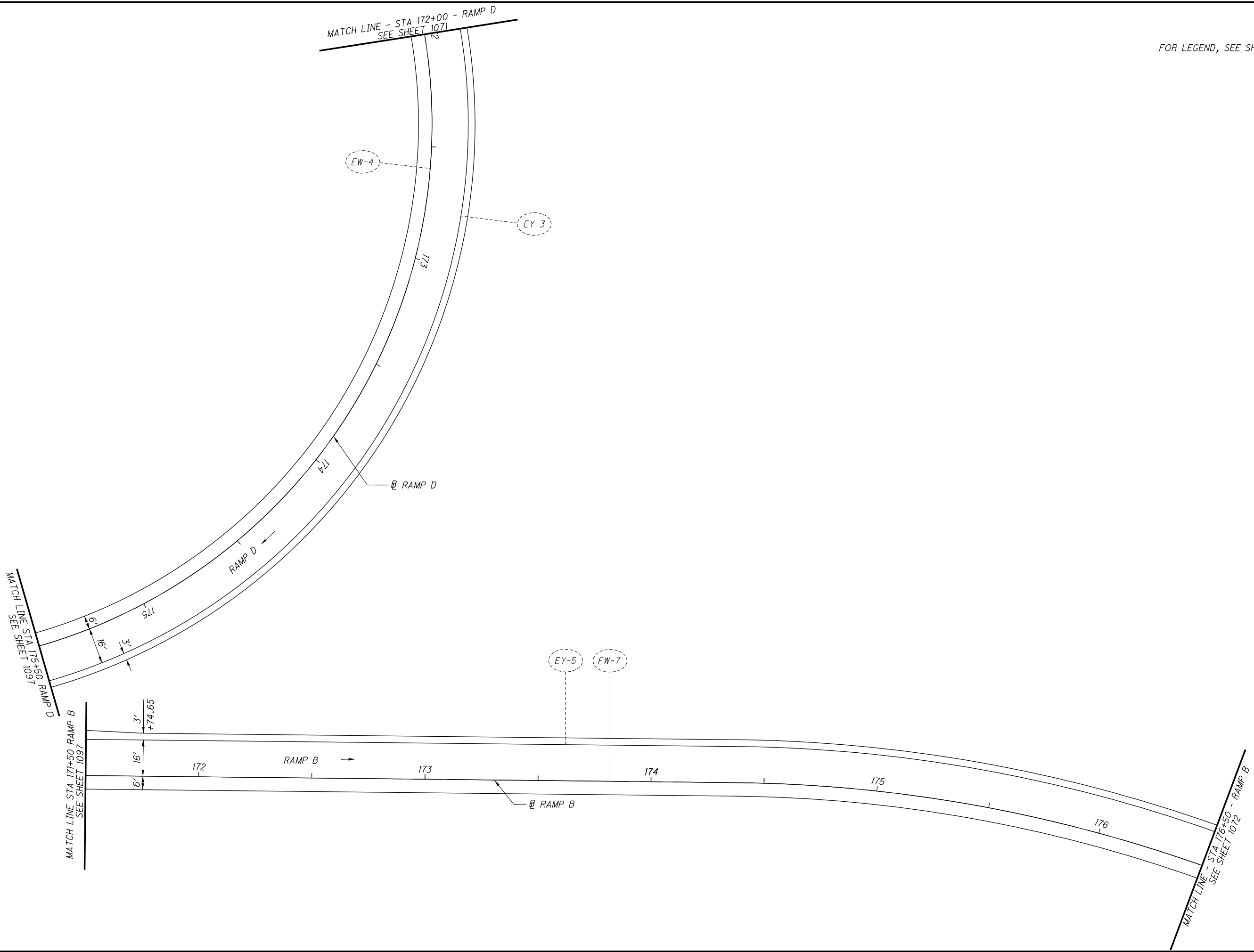
TRAFFIC CONTROL PLAN - RAMPS B & D
STA. 165+00 TO STA. 171+50 - RAMP B

FRA - 71 - 0.00

1097
1312

FOR LEGEND, SEE SHEET 1036

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FOR LEGEND, SEE SHEET 1036

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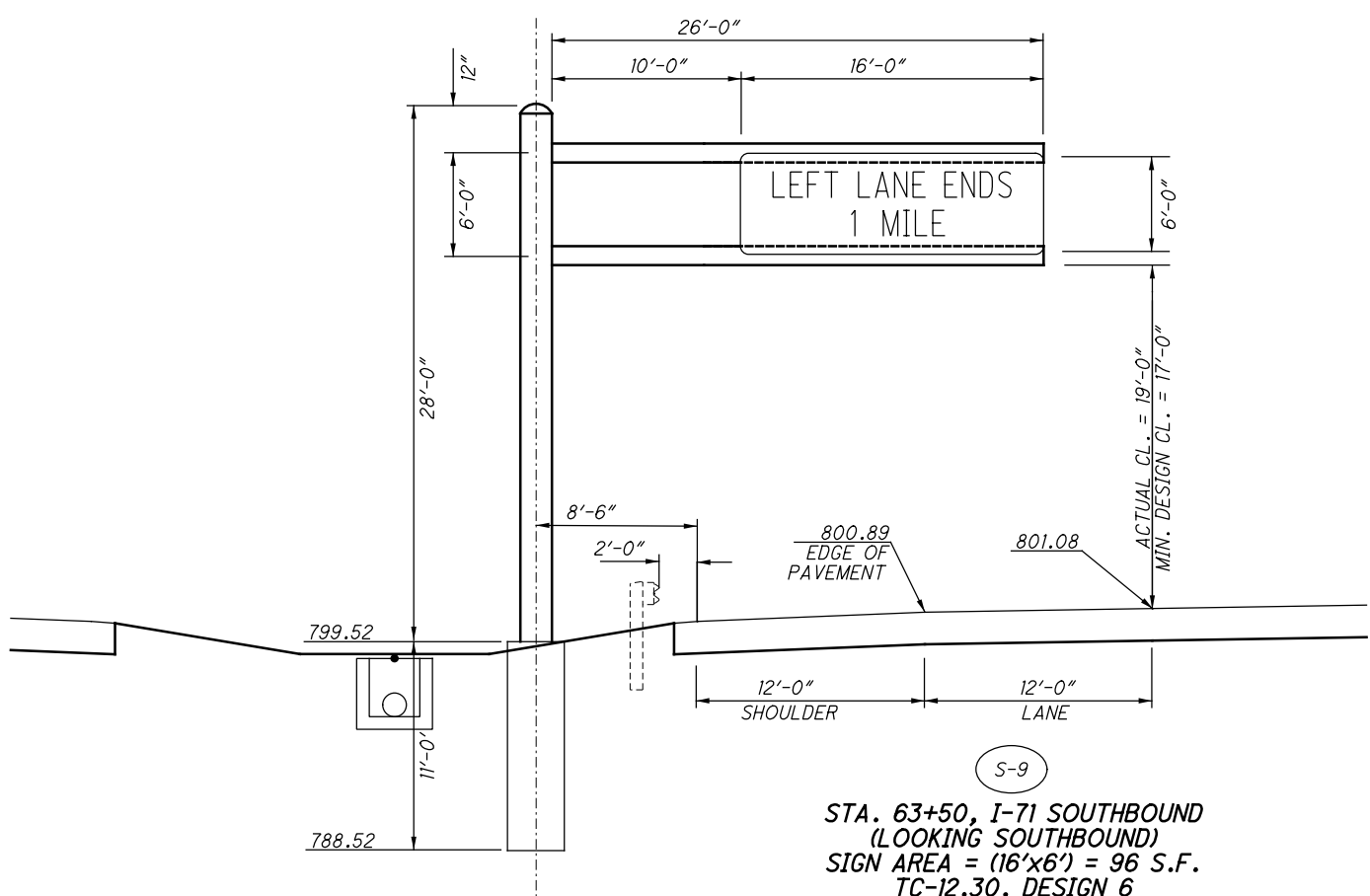
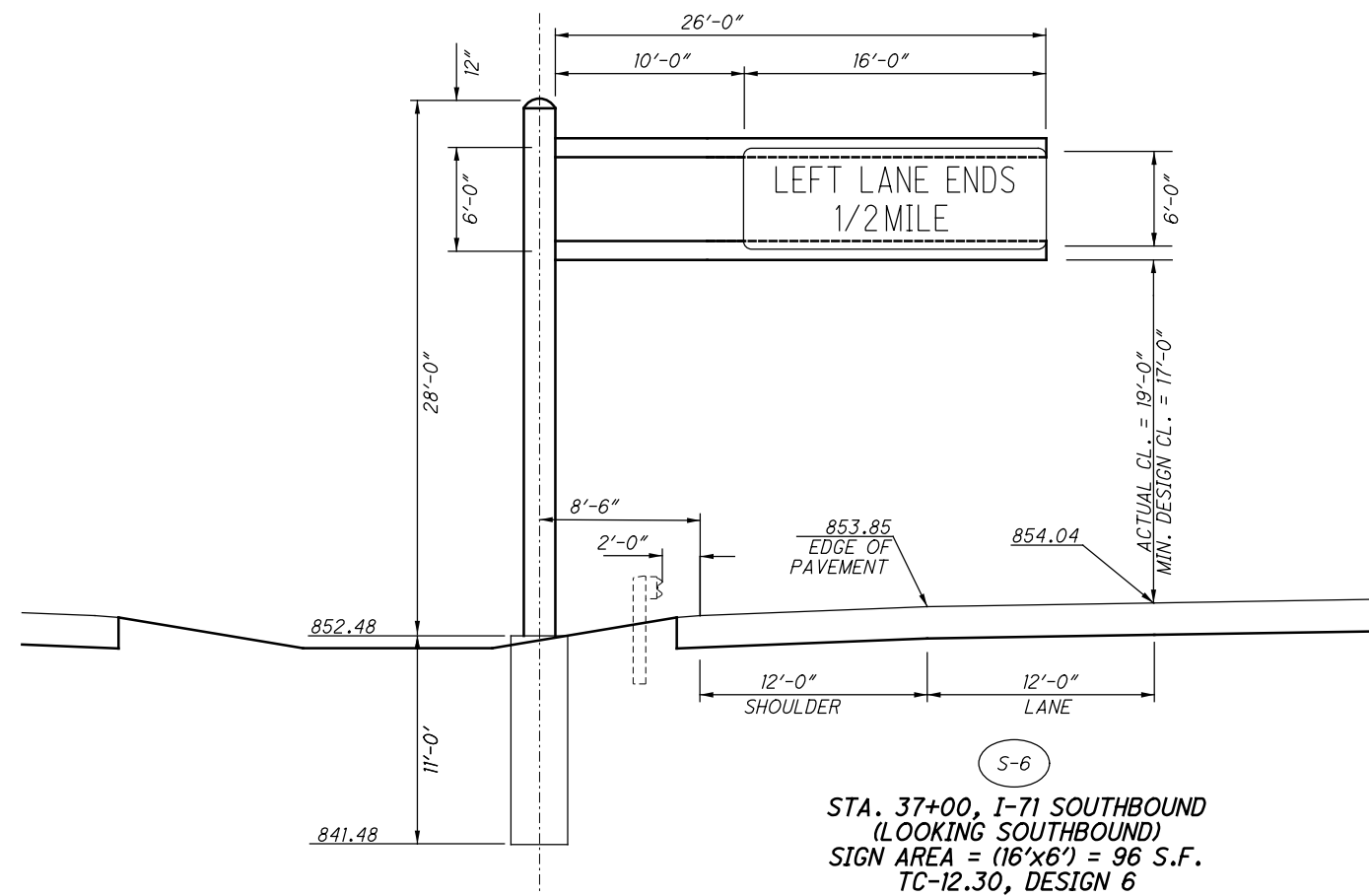
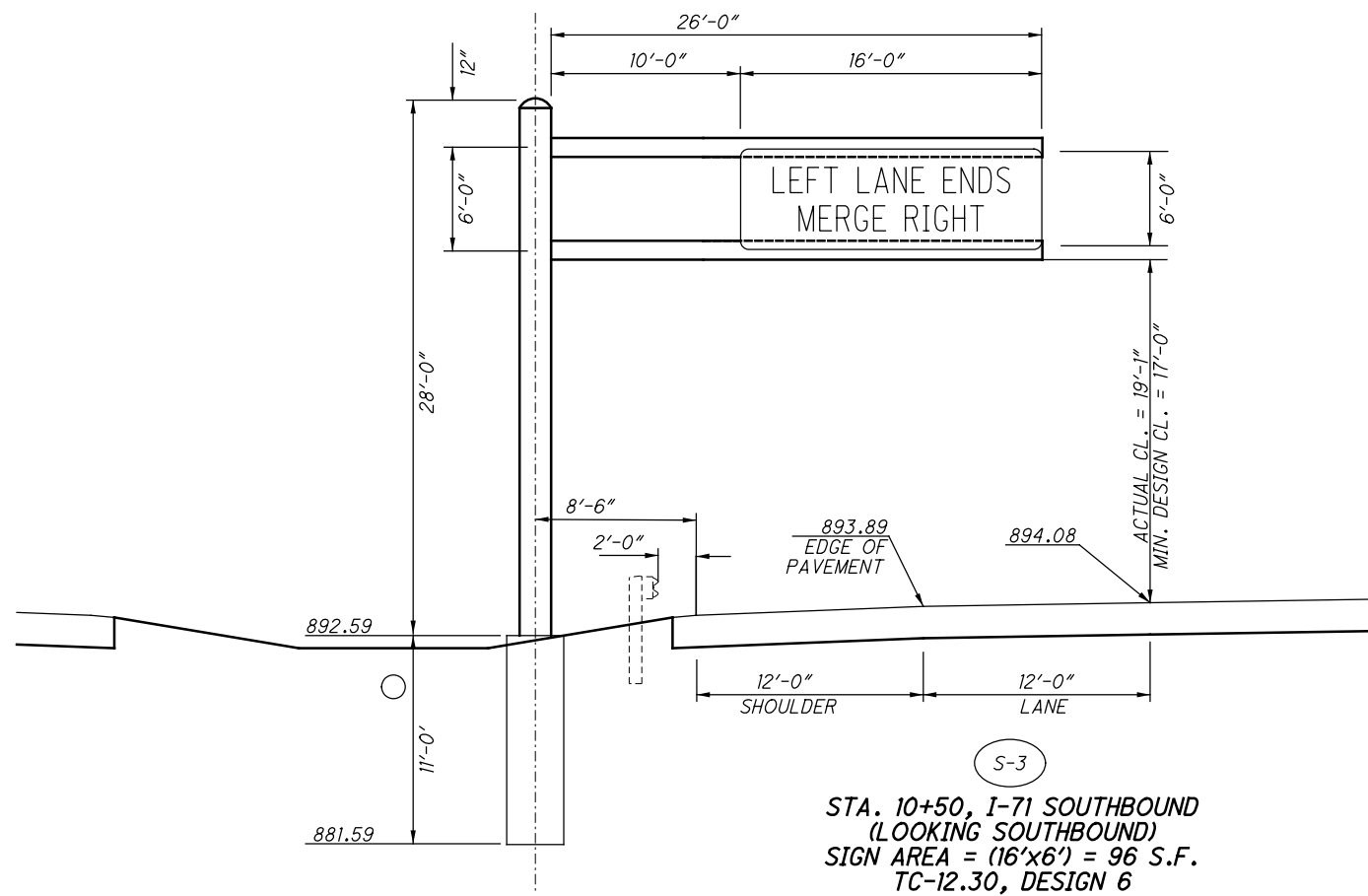
0 20 40
HORIZONTAL
SCALE IN FEET

TRAFFIC CONTROL PLANS - RAMPS B & D
STA. 171+50 TO STA. 176+50

FRA - 71 - 0.00

1098
1312

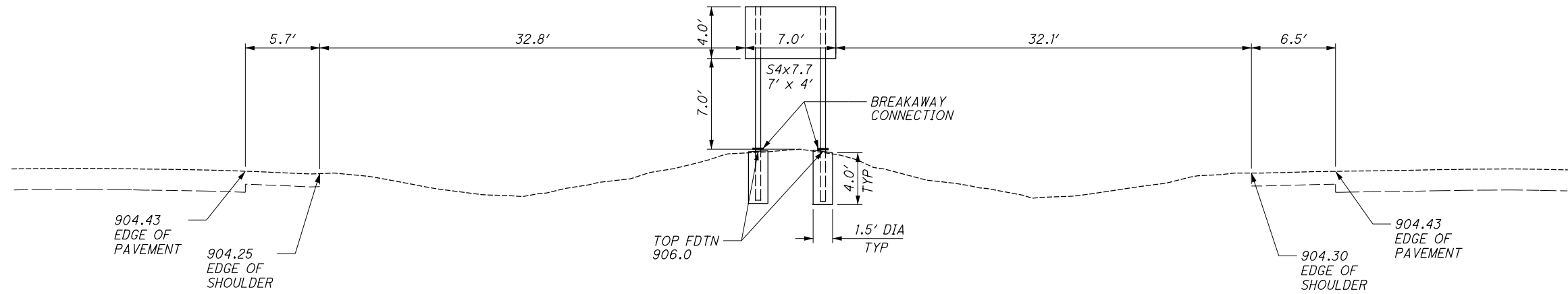
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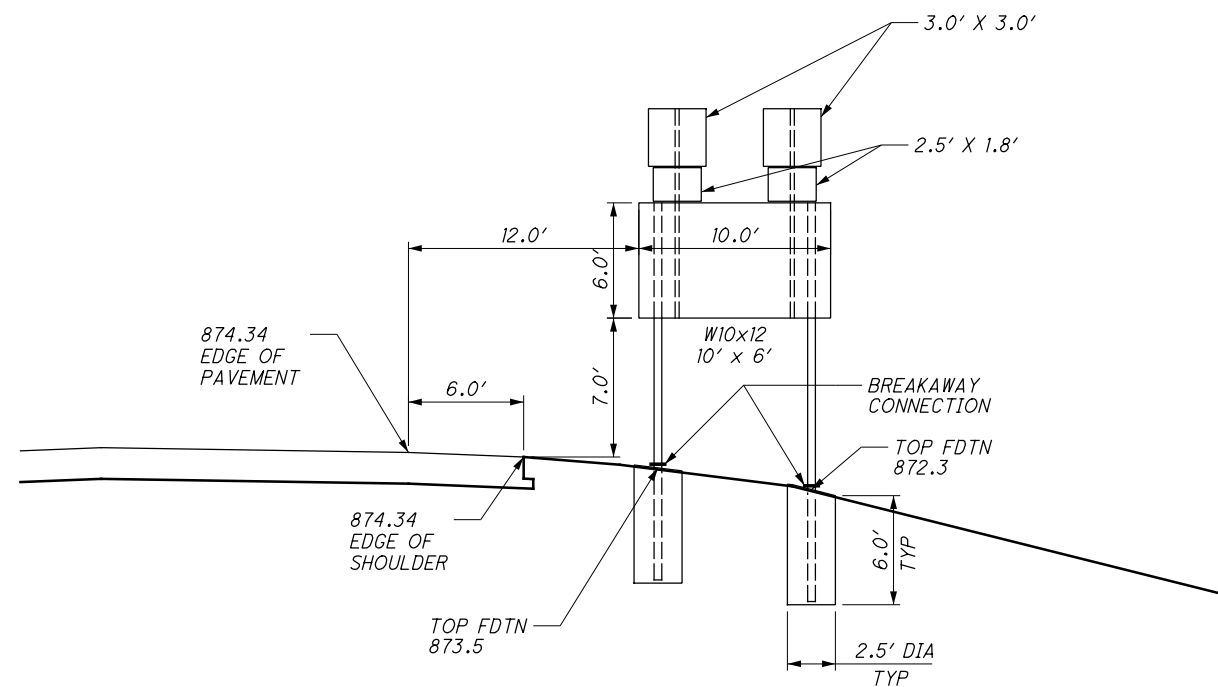
TRAFFIC CONTROL - SIGN ELEVATIONS

FRA-71-0.00

1099
1312



(S-1)
 STA. 840+00, I-71
 SIGN AREA = (7'x4') = 28 S.F.



(S-46)
 STA. 181+50, RAMP D
 SIGN AREA = (3'x3') + (2.5'x1.8') + (3'x3') + (2.5'x1.8') + (10'x6') = 87 S.F.

CALCULATED
 DLW
 CHECKED
 EDG

TRAFFIC CONTROL - SIGN ELEVATIONS

FRA - 71 - 0.00

1100
 1312

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ODOT LIGHTING NOTES

THE HIGHWAY LIGHTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. THIS DOCUMENT SHALL GOVERN ALL MATERIALS AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESE PLANS, EXCEPT AS SUCH SPECIFICATIONS ARE MODIFIED BY THE FOLLOWING SPECIFICATIONS OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

ITEM 625, LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN CMS 725.11 ARE HEREBY WAIVED. INSTEAD, THE LUMINAIRES FOR HIGH-MAST LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS:

LUMINAIRES FOR HIGH-MAST LIGHTING UNITS SHALL BE 480 VOLT, HOLOPHANE "HMLD-II", HMLD3-PK2-30K-HVOLT-G-AW, OR EQUAL AS APPROVED BY THE ENGINEER.

OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE 480 VOLT, COOPER "NAVION", NAV-AF-02-E-480-T2R-10K-7030, AEL "AUTOBAHN ATBM", ATBM-P20-480-R2-4B-3K, LEOTEK "E-COBRA", EC4-15M2-HV-WW-2-GY-700-WL, OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 625, THE FOLLOWING SHALL APPLY:

LUMINAIRES FOR UNDERPASS LIGHTING UNITS SHALL BE 480 VOLT, 3000K, HOLOPHANE "TUNNELPASS", TNLED-3-3K-7-AH-WCR-DGRA-F1, GE EVOLVE "N-SERIES", EWN-B-H-C4-7-30-1-NGRAY-F-R-001, ELECTROMATIC "AR SERIES B2E MOUNT", LE3T4S084EB2E0X20H, OR EQUAL AS APPROVED BY ENGINEER.

LUMINAIRES FOR UNDERPASS LIGHTING UNITS WHICH ARE WALL MOUNTED SHALL BE FURNISHED WITH AN INTEGRAL FUSE HOLDER AND 10-AMPERE FUSES.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL BE INCLUDED IN THIS ITEM OF WORK:

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS: AMERICAN ELECTRIC POWER COMPANY
850 TECH CENTER DRIVE
GAHANNA, OHIO, 43230
1-800-672-2231

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE OHIO DEPARTMENT OF TRANSPORTATION. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

THE NEW SERVICE SHALL BE A METERED POWER SERVICE. THE METER WILL BE PROVIDED BY THE POWER COMPANY AND SHALL BE INSTALLED BY THE CONTRACTOR.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, POWER SERVICE, AS PER PLAN WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, CONDUIT, 2", 725.04, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONDUIT, 2", 725.04, AS PER PLAN SHALL INCLUDE ALL EXPANSION FITTINGS AS INCIDENTAL TO THIS ITEM OF WORK.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR FEET FOR CMS ITEM 625, CONDUIT, 2", 725.04, AS PER PLAN WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, STRUCTURE JUNCTION BOX, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF HL-20.14 AND ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, STRUCTURE JUNCTION BOX, AS PER PLAN SHALL BE AS FOLLOWS:

THE JUNCTION BOX SHALL HAVE AN EMBOSSMENT IN THE BACK OF THE BOX THAT SHALL BE DRILLED AND TAPPED FOR A 1/4"-20 CAP SCREW FOR CONNECTION OF GROUNDS.

WHEN ENCASED IN CONCRETE, THE JUNCTION BOX SHALL HAVE INWARD FLANGED COVERS AND MAY HAVE IN LIEU OF BOSSSED DRILLED AND TAPPED CONNECTIONS, SLIP HOLES FIELD DRILLED TO ACCOMMODATE THE CONDUITS ENTERING THE BOX SO LONG AS EACH METALLIC CONDUIT IS EQUIPPED WITH A GROUNDING BUSHING JUMPED TO THE BOX ITSELF.

WHEN SURFACE MOUNTED, THE JUNCTION BOX MAY HAVE IN LIEU OF BOSSSED DRILLED AND TAPPED CONNECTIONS, FIELD INSTALLED HUBS TO ACCOMMODATE THE CONDUITS ENTERING THE BOX.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, STRUCTURE JUNCTION BOX, AS PER PLAN WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL POWER, EXCEPT FOR LUMINAIRES, STRUCTURE JUNCTION BOXES, AND STRUCTURE GROUNDING, FOR UNDERPASS LIGHTING SYSTEMS. THE INSTALLATION WORK SHALL INCLUDE DISCONNECT SWITCH, CONDUITS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, CABLES AND ALL INCIDENTALS NECESSARY TO COMPLETE, READY FOR USE, THE SERVICE AS DETAILED ON THE PLANS.

THE PRICE BID FOR ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN, SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED, COMPONENT PARTS NOT SPECIFICALLY MENTIONED, BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM, SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE HL AND TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.

- PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
- WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
- METAL PULL BOX LIDS SHALL BE BONDED BY ATTACHMENT OF THE EQUIPMENT GROUNDING CONDUCTOR TO THE FRAME DIAGONAL AS PROVIDED ON HL-30.11.
- IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

2. CONDUITS.

- ANY 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
 - ANY 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
 - BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
 - METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
3. WIRE FOR GROUNDING AND BONDING.

- USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
 - USE SAME SIZE EQUIPMENT GROUNDING CONDUCTOR AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF #4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE #4 AWG.
 - THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR #4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

GROUNDING AND BONDING (CONTINUED)

4. GROUND ROD.

- A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
- THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE #4 AWG, INSULATED, COPPER.

5. POWER SERVICE AND DISCONNECT SWITCH.

- AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
- THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
 - IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

6. STRUCTURE GROUNDING

HL-50.21 SHOWS A 1/0 AWG STRANDED COPPER CABLE USED FOR STRUCTURE GROUNDING. ADDITIONALLY, THIS SAME CABLE SHALL BE INSULATED AND ANY CONNECTIONS AND BARE COPPER STRANDS EXPOSED TO CONCRETE SHALL BE COVERED WITH MASTIC TO PREVENT CONTACT WITH THE CONCRETE.

7. PAYMENT

ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY THE CONTRACT.

LIGHT TOWER DECALS

NEW LIGHT TOWER DECALS SHALL BE PLACED ON ALL PROPOSED LIGHT TOWERS TO MATCH THE ALPHA NUMERIC IDENTIFIER AS DETAILED WITHIN THE PLANS TO CONFORM WITH THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

CONDUIT EXPANSION AND DEFLECTION

EXPANSION FITTINGS SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XJG, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL PROVIDE EITHER 4 OR 8 INCHES TOTAL MOVEMENT AS SPECIFIED BY THE PLAN DETAILS AND SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

DEFLECTION COUPLINGS SHALL BE OZ TYPE DX, CROUSE HINDS TYPE XD, OR EQUAL APPROVED BY THE ENGINEER. EACH DEFLECTION COUPLING SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS. MINIMUM DEFLECTION CAPABILITY: 25°.

EXPANSION AND DEFLECTION FITTINGS FULLY OR PARTIALLY EMBEDDED IN CONCRETE, SOIL, OR SIMILAR MATERIAL SHALL BE COMPLETELY WRAPPED IN A NEOPRENE SLEEVE OR SHEET OF 1/2-INCH MINIMUM THICKNESS. SECURE NEOPRENE WRAP WITH TIE-WRAP PAST THE BONDING OF THE FITTING.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYPED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

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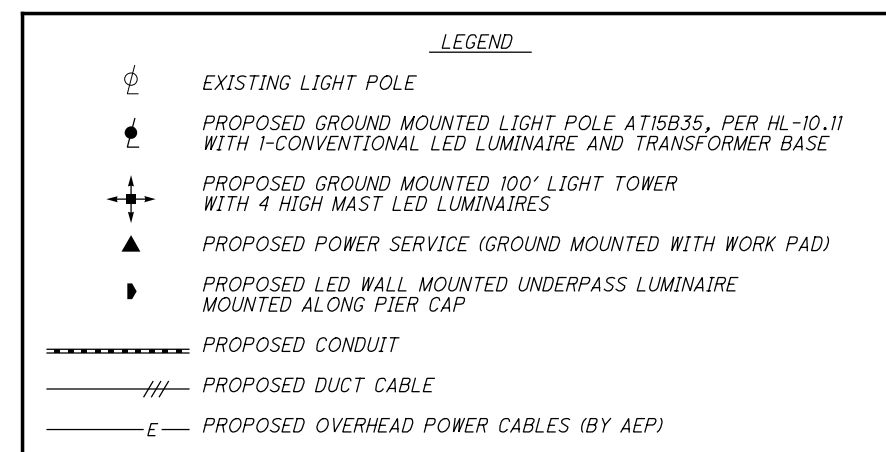
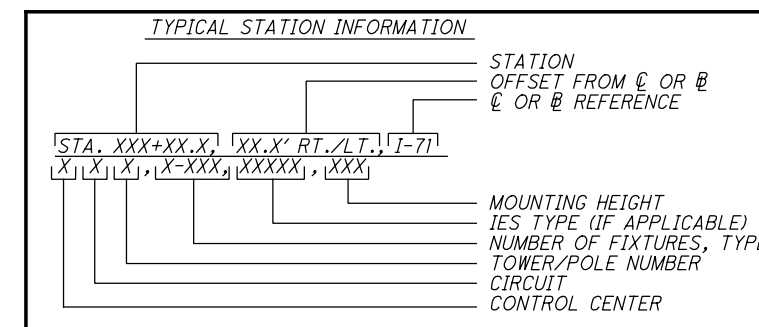
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LIGHTING NOTES

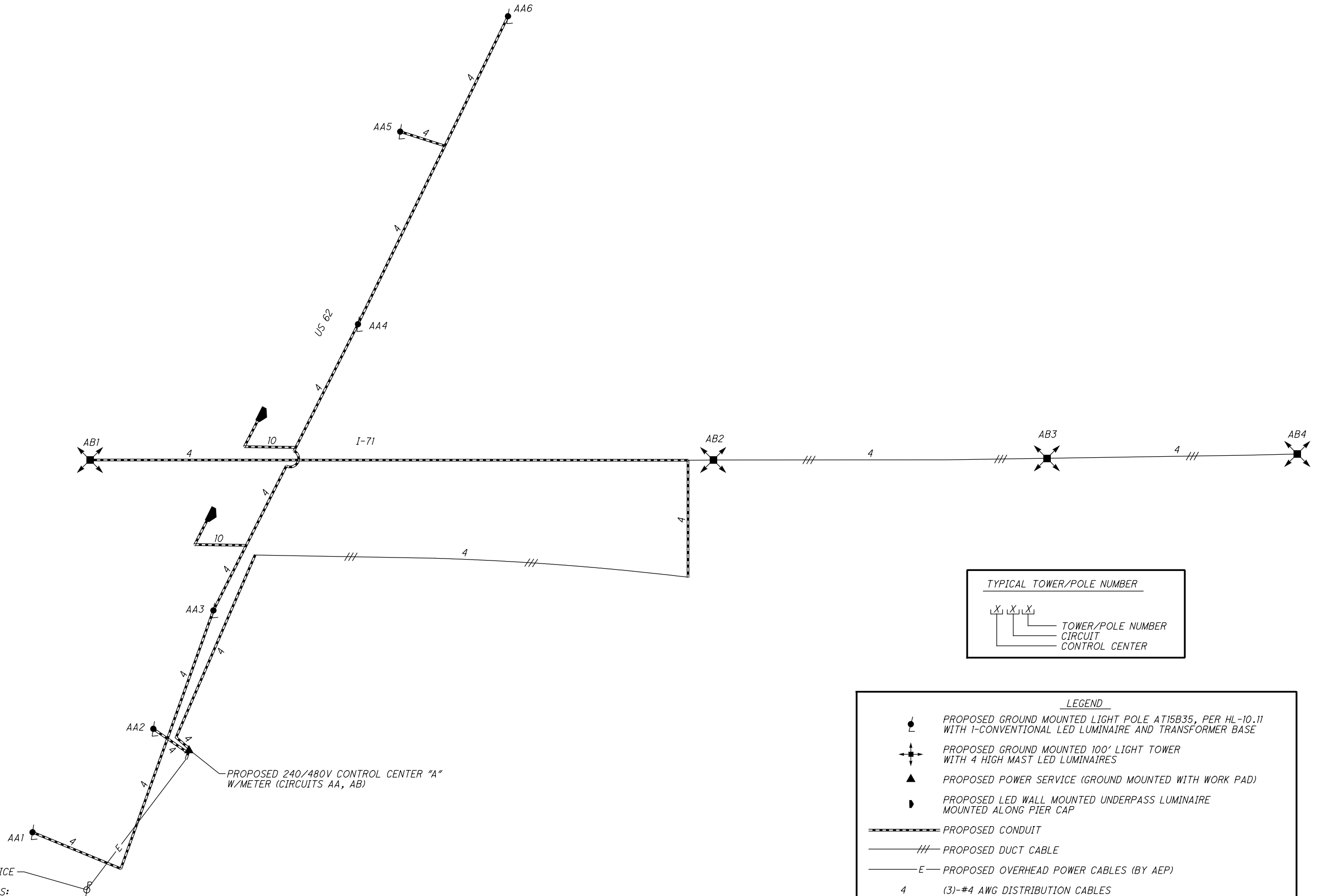
FRA - 71 - 0.00

1101
1312

POWER SERVICE DATA								
POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
PS-A	480	6.8	60	A	1.3	60	4	ODOT
				B	12.8	60	4	

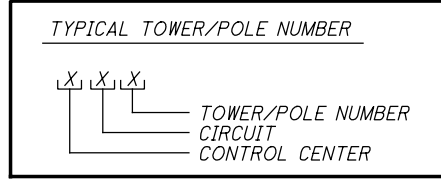


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PROPOSED POWER SERVICE
 POWER SERVICE ADDRESS:
 7118 HARRISBURG PIKE
 ORIENT, OH 43146

PROPOSED 240/480V CONTROL CENTER "A"
 W/METER (CIRCUITS AA, AB)



LEGEND

	PROPOSED GROUND MOUNTED LIGHT POLE AT15B35, PER HL-10.11 WITH 1-CONVENTIONAL LED LUMINAIRE AND TRANSFORMER BASE
	PROPOSED GROUND MOUNTED 100' LIGHT TOWER WITH 4 HIGH MAST LED LUMINAIRES
	PROPOSED POWER SERVICE (GROUND MOUNTED WITH WORK PAD)
	PROPOSED LED WALL MOUNTED UNDERPASS LUMINAIRE MOUNTED ALONG PIER CAP
	PROPOSED CONDUIT
	PROPOSED DUCT CABLE
	PROPOSED OVERHEAD POWER CABLES (BY AEP)
4	(3)-#4 AWG DISTRIBUTION CABLES
10	(3)-#10 AWG DISTRIBUTION CABLES

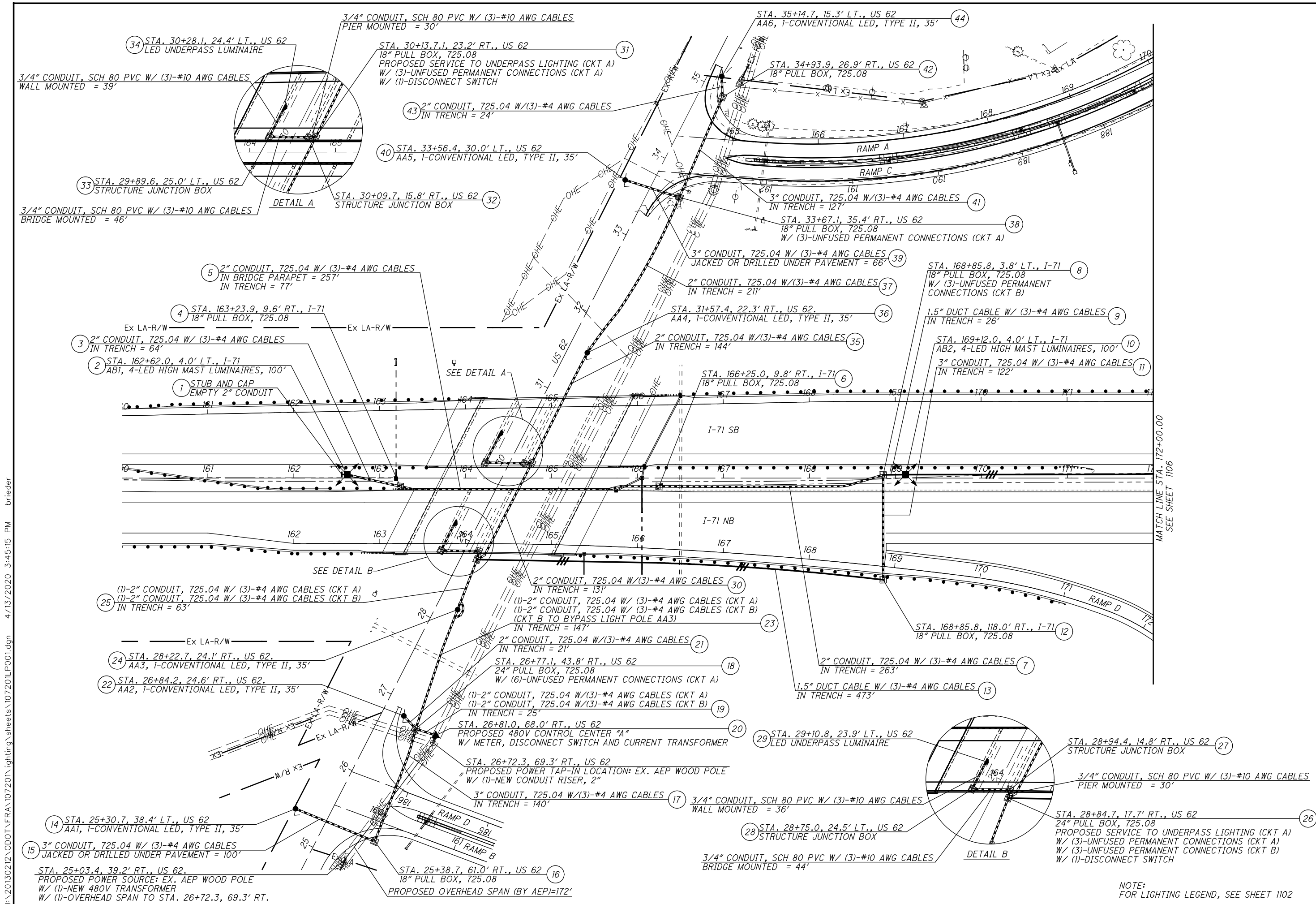
CALCULATED
 DRM
 CHECKED
 JDS

0 25 50 100
 HORIZONTAL
 SCALE IN FEET

I-71 CIRCUIT SCHEMATIC

FRA-71-0.00

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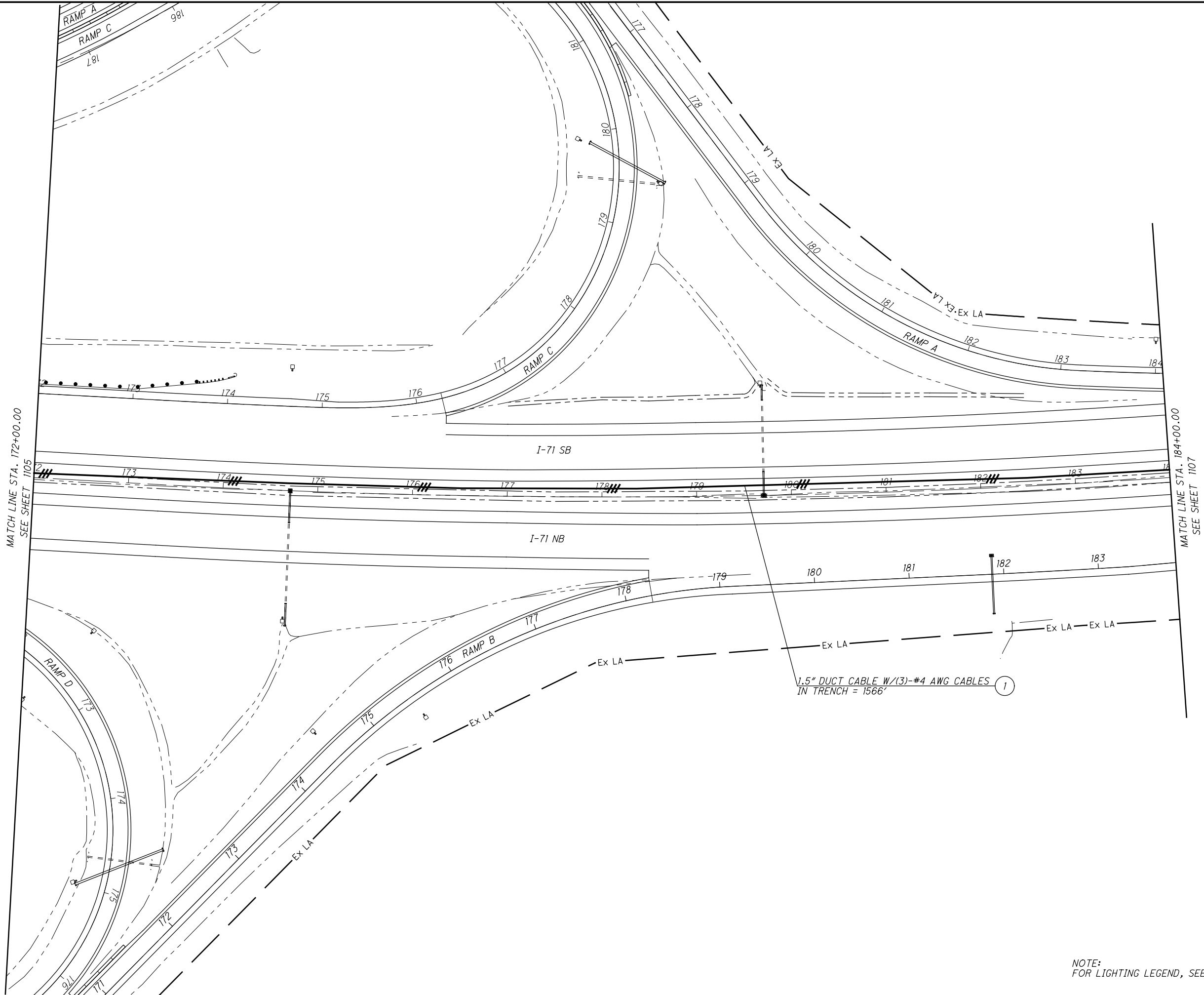
CALCULATED
 DRM
 CHECKED
 JDS

LIGHTING PLAN - I-71
STA. 160+00.00 TO STA. 172+00.00

FRA-71-0.00
 1105
 1312

NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1102

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MATCH LINE STA. 172+00.00
SEE SHEET 1105

MATCH LINE STA. 184+00.00
SEE SHEET 1107

CALCULATED	DRM	CHECKED	JDS
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0 50 100
25
HORIZONTAL
SCALE IN FEET

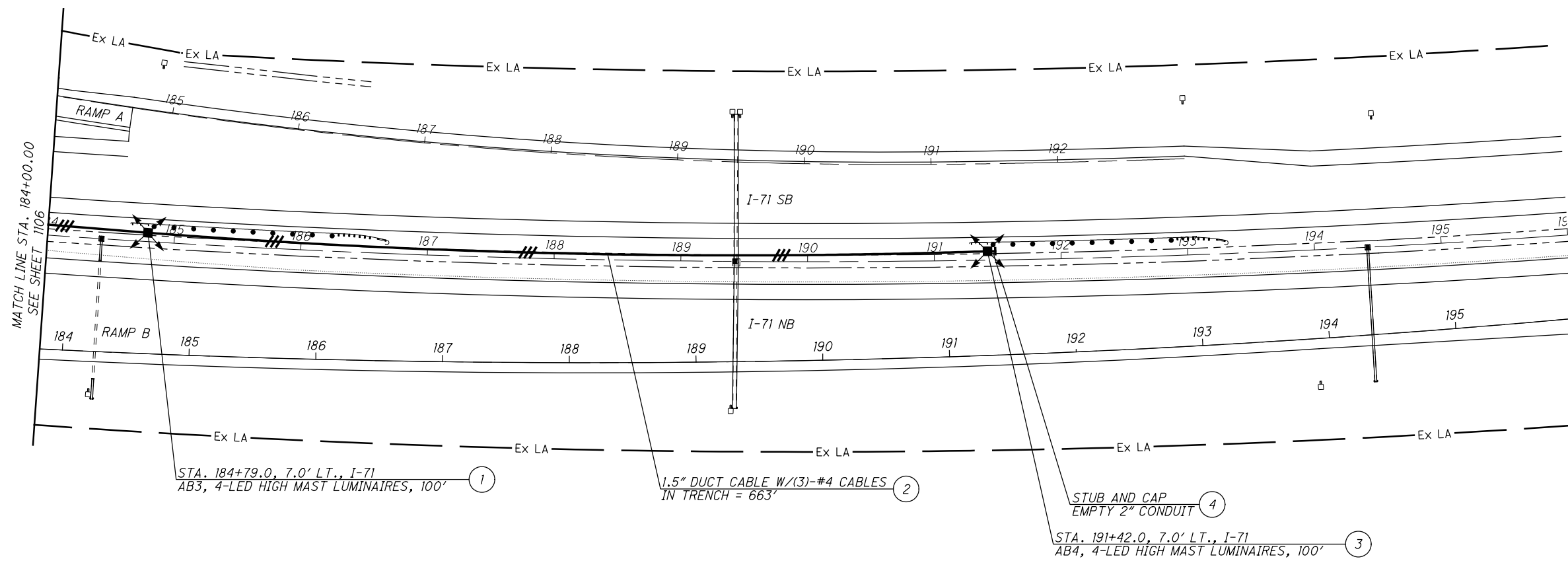
LIGHTING PLAN - I-71
STA. 172+00.00 TO STA. 184+00.00

FRA-71-0.00

1106
1312

NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1102

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STA. 184+79.0, 7.0' LT., I-71
AB3, 4-LED HIGH MAST LUMINAIRES, 100' (1)

1.5" DUCT CABLE W/(3)-#4 CABLES
IN TRENCH = 663' (2)

STUB AND CAP
EMPTY 2" CONDUIT (4)

STA. 191+42.0, 7.0' LT., I-71
AB4, 4-LED HIGH MAST LUMINAIRES, 100' (3)

CALCULATED
DRM
CHECKED
JDS

0 50 100
HORIZONTAL
SCALE IN FEET

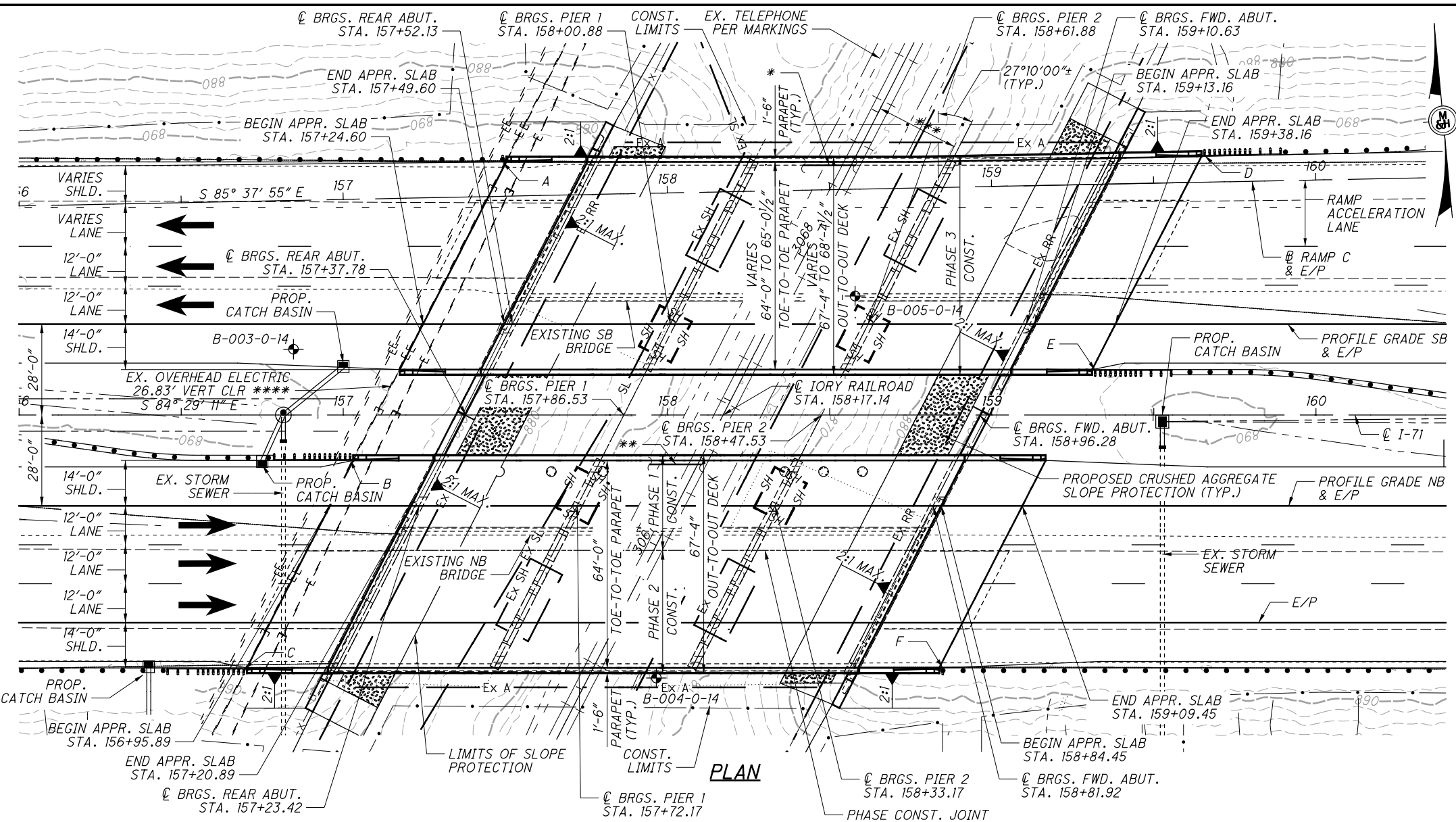
LIGHTING PLAN - I-71
STA. 184+00.00 TO STA. 196+00.00

FRA - 71 - 0.00

1107
1312

NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1102

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BENCHMARK DATA	
BM #1 STA. 144+70.84, EL. 873.71, 0.22' LT., CONC. MONUMENT	
BM #2 STA. 154+09.79, EL. 889.71, 0.27' LT., CONC. MONUMENT	
BM #3 STA. 165+70.88, EL. 890.64, 0.08' LT., CONC. MONUMENT	
BM #4 STA. 173+31.13, EL. 879.92, 0.05' RT., CONC. MONUMENT	

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 5 OF 1369.

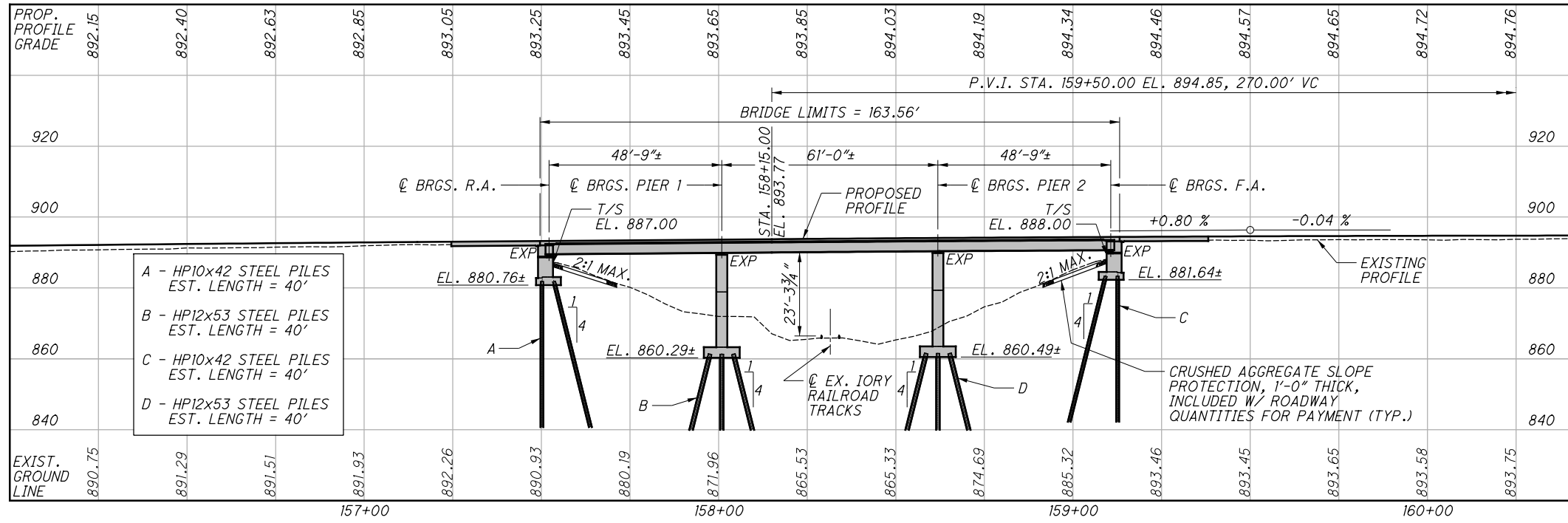
NOTES
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
 FOR GUARDRAIL POST STATIONS, SEE SHEET 2/86.

DESIGN TRAFFIC:
 2017 ADT = 44,670 2017 ADTT = 13,401
 2037 ADT = 64,070 2037 ADTT = 19,221
 DIRECTIONAL DISTRIBUTION = 55%

- LEGEND:**
- ⊕ BORING LOCATION
 - ▨ LIMITS OF CRUSHED AGGREGATE SLOPE PROTECTION
 - * 22'-9 1/2" ACTUAL MIN. EXISTING VERTICAL CLEARANCE
 - ** 23'-0" REQUIRED MIN. VERTICAL CLEARANCE
23'-3 3/4" ACTUAL MIN. VERTICAL CLEARANCE
 - *** 25'-0" REQUIRED MIN. HORIZONTAL CLEARANCE
25'-7 3/8" ACTUAL MIN. HORIZONTAL CLEARANCE
 - **** SEE UTILITY COORDINATION NOTE ON SHEET 3 OF 1312.

EXISTING STRUCTURE	
TYPE:	CONTINUOUS WELDED STEEL BEAM WITH CONCRETE DECK AND SUBSTRUCTURE
SPANS:	48'-9" ± - 61'-0" ± - 48'-9" ± C/C BRGS.
ROADWAY:	39'-8" ± F/F CURB
LOADING:	CF-2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING
SKEW:	27°-10' ± LF
APPROACH SLABS:	AS-1-54 (25'-0" ±)
ALIGNMENT:	TANGENT
CROWN:	0.016 ± FT/FT NORMAL CROWN
WEARING SURFACE:	3" ± BITUMINOUS ASPHALT CONCRETE
STRUCTURAL FILE NUMBER:	2506904L/2506939R
DATE BUILT:	1964
DISPOSITION:	REPLACE SUPERSTRUCTURE & WIDEN SUBSTRUCTURE

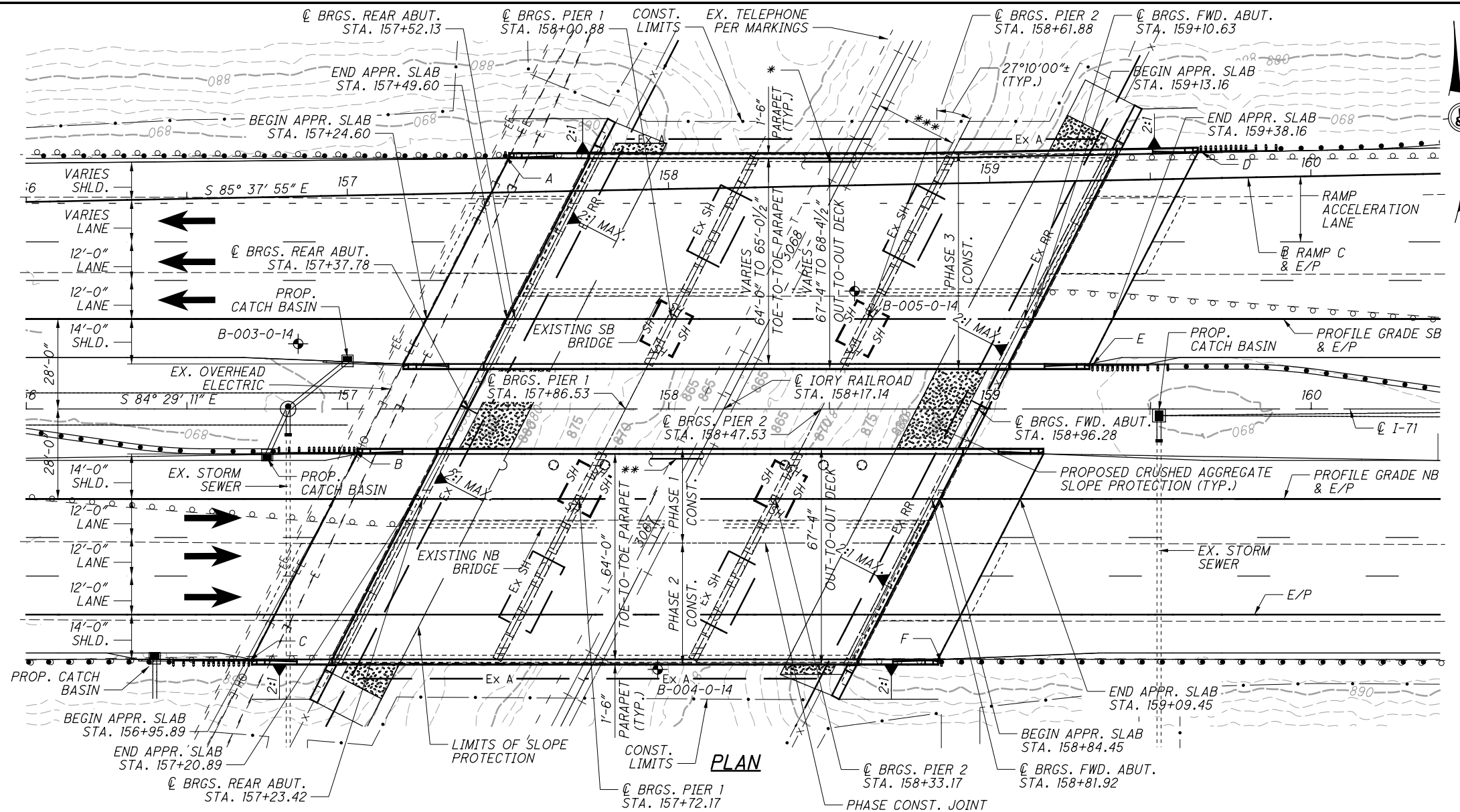
PROPOSED STRUCTURE	
TYPE:	THREE-SPAN CONTINUOUS A709-50W STEEL BEAM WITH COMPOSITE REINFORCED CONCRETE DECK ON WIDENED SEMI-INTEGRAL ABUTMENTS AND REINFORCED CONCRETE T-TYPE PIERS.
SPANS:	48'-9" ± - 61'-0" ± - 48'-9" ± C/C BRGS.
ROADWAY:	64'-0" T/T PARAPET NB & 64'-0" TO 65'-0 1/2" T/T PARAPET SB
LOADING:	HS20-44 CASE I, ALTERNATE MILITARY, 60 PSF FWS
SKEW:	27°-10' ± LF
APPROACH SLABS:	25'-0" LONG (AS-1-81)
ALIGNMENT:	TANGENT
CROWN:	0.016 FT/FT
WEARING SURFACE:	1" MONOLITHIC CONCRETE
COORDINATES:	LATITUDE 39°49'30" N LONGITUDE 83°08'37" W



- A - HP10x42 STEEL PILES EST. LENGTH = 40'
- B - HP12x53 STEEL PILES EST. LENGTH = 40'
- C - HP10x42 STEEL PILES EST. LENGTH = 40'
- D - HP12x53 STEEL PILES EST. LENGTH = 40'

DESIGN AGENCY: Mead & Hunt
 DATE: 8/8/2016
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: LYH
 CHECKED: CMH
 FRANKLIN: STA. 157+49.60
 STA. 159+13.16
 SITE PLAN: FRA-71-0.00
 BRIDGE NO.: FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY
 PID No. 107201
 1/86
 1108
 1312

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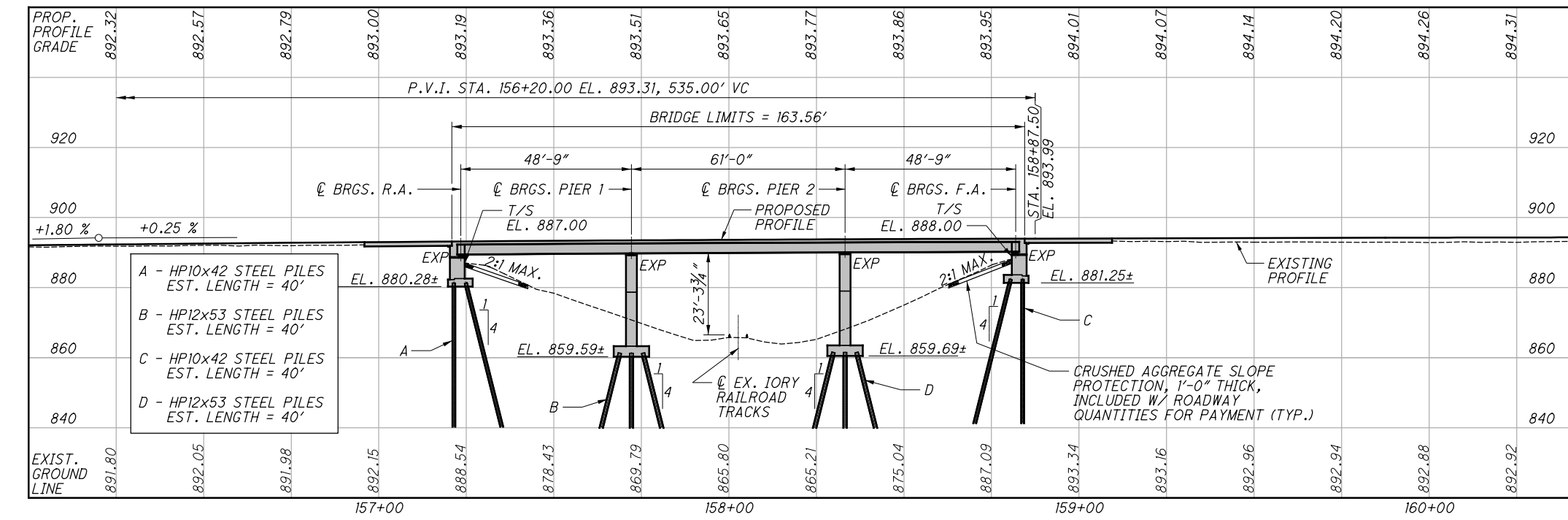


PROPOSED WORK

1. WIDEN ABUTMENTS AND PIERS
2. RETROFIT PIER STEM
3. REMOVE SUPERSTRUCTURE REPLACE WITH NEW ROLLED BEAMS AND COMPOSITE DECK
4. CONVERT ABUTMENTS TO SEMI-INTEGRAL
5. REPLACE ABUTMENT AND PIER BEARINGS
6. REPLACE APPROACH SLAB
7. SEAL CONCRETE SURFACES
8. PAINT STEEL BEAMS

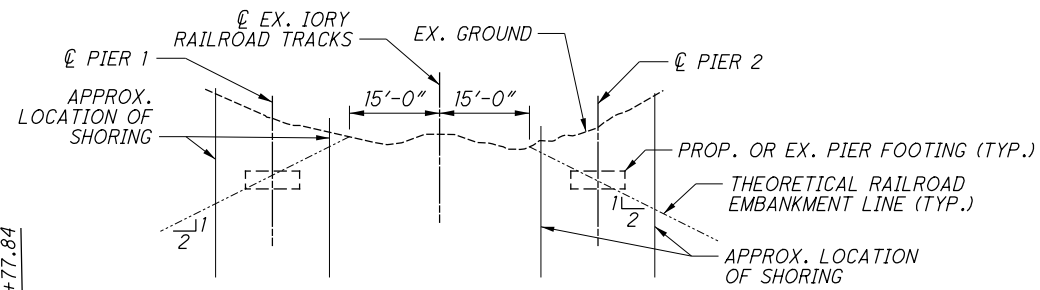
GUARDRAIL POST STATIONING

- | | |
|--------------|--------------|
| A: 157+49.14 | D: 159+65.65 |
| B: 157+02.12 | E: 159+31.93 |
| C: 156+69.28 | F: 158+84.92 |

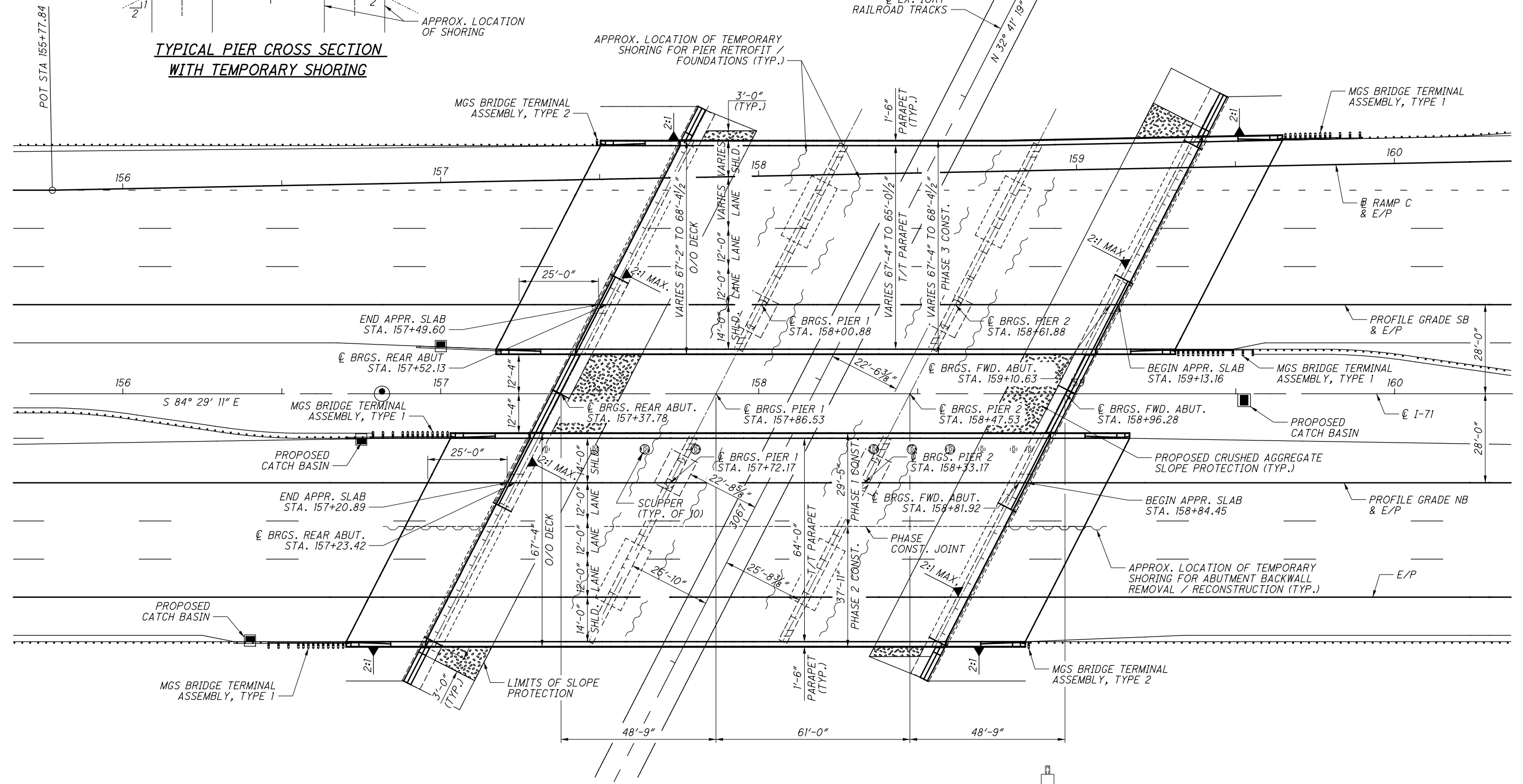


PROFILE ALONG PROFILE GRADE LINE NB

<p>Mead & Hunt</p> <p>DESIGN AGENCY</p> <p>4700 LAURELST. CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE</p>	<p>DATE: 8/8/2016</p> <p>REVIEWED: KVB</p> <p>DRAWN: DJC</p> <p>DESIGNED: LYH</p> <p>FRANKLIN</p>	<p>BRIDGE NO. FRA-71-0298 L/R</p> <p>OVER INDIANA & OHIO RAILWAY COMPANY</p> <p>STA. 157+20.89</p> <p>STA. 158+84.45</p>	<p>FRA-71-0.00</p> <p>PID No. 107201</p>	<p>2 / 86</p> <p>1109 1312</p>
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TYPICAL PIER CROSS SECTION WITH TEMPORARY SHORING



NOTE:

1. FOR VANDAL PROTECTION FENCE POST SPACING, SEE SHEETS 60/86, 61/86 & 69/86.
2. FOR ALL SCUPPERS OUTSIDE THE LIMITS OF THE CRUSHED AGGREGATE SLOPE PROTECTION, PROVIDE 1 SQUARE YARD OF CRUSHED AGGREGATE SLOPE PROTECTION DIRECTLY BELOW THE SCUPPER. INCLUDE COST FOR ADDITIONAL CRUSHED AGGREGATE SLOPE PROTECTION UNDER ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

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DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DESIGNED	DJC	CHECKED	CMH
DRAWN	DJC	REVISED	
REVIEWED	KVB	DATE	8/8/2016
STRUCTURE FILE NUMBER	2506904L/2506939R		

GENERAL PLAN
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

3 / 86

1110
1312

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II. ERECTION PROCEDURE:

THE CONTRACTOR SHALL SUBMIT A DETAILED PROCEDURE FOR ERECTING THE SPANS OVER RAILROAD TRACKS. THE PROCEDURE SHALL INDICATE THE CAPACITY OF CRANES, LOCATION OF CRANES WITH RESPECT TO THE TRACKS AND ESTIMATED LIFTING LOADS. THE ERECTION PROCEDURE MUST BE APPROVED BY THE RAILROAD IN WRITING PRIOR TO STARTING DEMOLITION WORK OVER THE RR ROW.

III. TEMPORARY CONSTRUCTION CLEARANCE:

TEMPORARY MINIMUM CONSTRUCTION CLEARANCE OF 22'-9 1/2" VERTICAL ABOVE TOP OF RAIL SHALL BE MAINTAINED AT ALL TIMES.

A HORIZONTAL CLEARANCE OF 10 FT. TO FORMWORK, FALSEWORK, ETC. AS MEASURED FROM THE CENTERLINE OF THE NEAREST TRACK SHALL BE MAINTAINED DURING THE WIDENING OF PIERS. FOR ALL OTHER WORK, A TEMPORARY HORIZONTAL CLEARANCE OF 13 FT. MUST BE MAINTAINED FOR ANY FORMWORK, FALSEWORK, OR TEMPORARY OBSTRUCTION.

RAILROAD MAINTENANCE DRIVES MUST BE KEPT IN SERVICE AT ALL TIMES.

IV. OTHER RAILROAD REQUIREMENTS:

SEE SPECIAL CLAUSES IN THE PROPOSAL

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

REPAIR EXISTING CRUSHED AGGREGATE SLOPE PROTECTION IN FRONT OF EXISTING PORTIONS OF ABUTMENTS. PLACE PROPOSED CRUSHED AGGREGATE SLOPE PROTECTION IN FRONT OF WIDENED PORTIONS OF ABUTMENTS. THIS WORK INCLUDES ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO PERFORM THE WORK. THIS ITEM IS PAID FOR UNDER ROADWAY QUANTITIES.

ITEM 503. COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

RAILROAD COORDINATION

THE DESIGNATED RAILROAD REPRESENTATIVE SHALL BE STEVEN SAMS, P.E., ssams@bensch.com, 608-234-7400.

ALL MOVEMENTS OF EQUIPMENT WITHIN RAILROAD RIGHT-OF-WAY MUST BE COORDINATED WITH THE RAILROAD FLAGGER.

THE CONTRACTOR, SHALL COORDINATE WITH THE RAILROAD WHENEVER THE CONTRACTOR'S WORK ACTIVITIES ARE LOCATED OVER, UNDER, OR WITHIN THE RAILROAD RIGHT-OF-WAY. TO SCHEDULE A RAILROAD FLAGGER OR TO COORDINATE ALL RAILROAD ACTIVITIES, CONTACT THE DESIGNATED RAILROAD REPRESENTATIVE. NO WORK SHALL BE DONE ON THE RAILROAD RIGHT-OF-WAY WITHOUT THE RAILROAD'S DESIGNATED FLAGGER BEING PRESENT AND HAS PROVIDED APPROVAL TO PROCEED WITH WORK OVER/ALONGSIDE THE RAILROAD TRACK.

DURING TRAIN MOVEMENTS THROUGH THE PROJECT LOCATION, VEHICLES, EQUIPMENT, AND PERSONNEL WILL NOT BE ALLOWED TO OPERATE WITHIN 25 FEET OF THE CENTERLINE OF TRACK.

ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE TRACK OR RAILROAD PROPERTY WILL REQUIRE REPAIR IMMEDIATELY UPON NOTIFICATION FROM THE RAILROAD OR THEIR DESIGNATED REPRESENTATIVE. IF THE DAMAGE AFFECTS THE TRACK, TRACK STRUCTURE, RAILROAD FACILITIES, OR TRAIN OPERATIONS AS DETERMINED BY THE RAILROAD, THE REPAIRS WILL BE PERFORMED BY THE RAILROAD AT THE CONTRACTORS EXPENSE INCLUDING ALL ASSOCIATED COSTS OF DELAYS OF THE RAILROAD.

ALL WORK PERFORMED ON, ABOVE OR ADJACENT TO RAILROAD PROPERTY SHALL BE IN ACCORDANCE WITH THE ENGINEERING SERVICES PUBLIC PROJECT MANUAL, APRIL 2019 EDITION. WORK PLANS SHALL BE SUBMITTED FOR REVIEW TO THE RAILROAD FOR ALL WORK THAT PRESENTS THE POTENTIAL TO AFFECT RAILROAD PROPERTY OR OPERATIONS, INCLUDING HOISTING, DEMOLITION INCLUDING DEBRIS SHIELD AND BALLAST PROTECTION, ERECTION, EXCAVATION AND SHORING, TRACK MONITORING, AND OTHER REQUIREMENTS AS LISTED IN THE PUBLIC PROJECTS MANUAL. ALL WORK PLANS SHALL BE PREPARED AND SUBMITTED TO THE RAILROAD IN ADHERENCE WITH THE ENGINEERING SERVICES PUBLIC PROJECT MANUAL, SECTION 1.11 CONSTRUCTION SUBMISSION CRITERIA.

ALL TRACK MONITORING SYSTEMS SHALL COMPLY WITH G&W SPECIAL PROVISIONS FOR TRACK MONITORING.

CONTRACTOR TO NOTIFY G&W PUBLIC PROJECTS DEPARTMENT 30 DAYS PRIOR TO STARTING CONSTRUCTION.

G&W FLAGGING SERVICES WILL BE REQUIRED FOR ALL WORK WITHIN G&W RIGHT-OF-WAY OR ANY WORK THAT HAS A "POTENTIAL TO FOUL".

THE CONTRACTOR MUST NOT USE THE RAILROAD RIGHT OF WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION. THE RAILROAD RIGHT OF WAY MUST REMAIN CLEAR AT ALL TIMES. THE CONTRACTOR MUST PLAN AND PERFORM THE WORK IN A MANNER SUCH THAT THE RAILROAD TRACKS AT THE PROJECT LOCATION REMAIN FULLY CAPABLE OF OPERATING RAIL TRAFFIC THROUGHOUT THE WORK PERIOD AND RAIL TRAFFIC IS NOT DELAYED OR OTHERWISE IMPACTED DUE TO THE WORK BEING PERFORMED.

THE CONTRACTOR SHALL CONTACT G&W REAL ESTATE FOR A ROE APPLICATION AND AGREEMENT FOR WORK TO TAKE PLACE ON THE G&W RIGHT OF WAY. ROE INFORMATION CAN BE FOUND AT https://www.gwrr.com/real_estate/accessing_property

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

- ABUT. - ABUTMENT
- ADT - AVERAGE DAILY TRAFFIC
- ADTT - AVERAGE DAILY TRUCK TRAFFIC
- APPROX. - APPROXIMATE
- ASTM - AMERICAN SOCIETY OF TESTING AND MATERIALS
- B.F. - BACK FACE
- BOT. - BOTTOM
- BRGS. - BEARINGS
- ☉ - CENTERLINE
- C/C - CENTER TO CENTER
- CIP - CAST-IN-PLACE
- C.J. - CONSTRUCTION JOINT
- CLR. - CLEARANCE
- CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
- CONST. - CONSTRUCTION
- DIA./φ - DIAMETER
- DWG. - DRAWING
- E.F. - EACH FACE
- E/P - EDGE OF PAVEMENT
- E/S - EDGE OF SHOULDER
- EL. - ELEVATION
- EQ. - EQUAL
- EX./EXIST. - EXISTING
- F.A. - FORWARD ABUTMENT
- F.F. - FRONT FACE
- F/F - FACE TO FACE
- FTG. - FOOTING
- FT/FT - FOOT PER FOOT
- FWD. - FORWARD
- I - INTERSTATE ROUTE
- JT. - JOINT
- LT. - LEFT
- MAX. - MAXIMUM
- MIN. - MINIMUM
- MOT - MAINTENANCE OF TRAFFIC
- NB - NORTHBOUND
- N.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
- O/O - OUT TO OUT
- P.C.P.P - PERFORATED CORRUGATED PLASTIC PIPE
- P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
- R.A. - REAR ABUTMENT
- RT. - RIGHT
- SB - SOUTHBOUND
- SPA. - SPACES OR SPACING
- STA. - STATION
- STD. - STANDARD
- STR. - STRAIGHT
- TEMP. - TEMPORARY
- T/S - TOP OF SLOPE
- T/T - TOE TO TOE
- TYP. - TYPICAL
- VERT. - VERTICAL

DESIGN AGENCY		4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 792-5900 PHONE	
Mead & Hunt			
REVIEWED	DATE	STRUCTURE FILE NUMBER	
KVB	8/8/2016	2506904L/2506939R	
DRAWN	DJC	CHECKED	
DJC	REVISED	LYH/MAB	
GENERAL NOTES			
BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY			
FRA-71-0.00		PID No. 107201	
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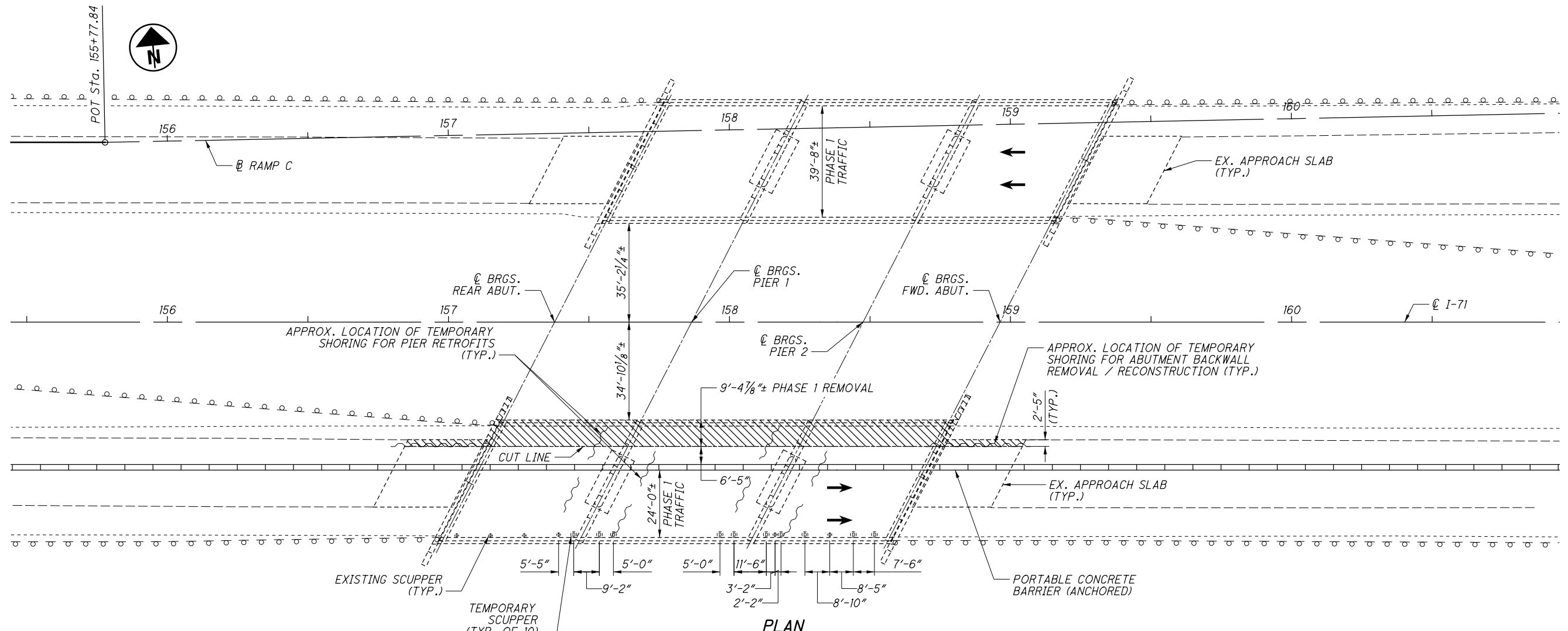
ESTIMATED QUANTITIES

ITEM	EXTENSION	SOUTHBOUND	NORTHBOUND	UNIT	DESCRIPTION	SOUTHBOUND				NORTHBOUND				SHEET #
						ABUT.	PIERS	SUPER.	GEN.	ABUT.	PIERS	SUPER.	GEN.	
202	11203	LS	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS				LS				4,13
202	22900	150	150	SY	APPROACH SLAB REMOVED				150				150	
202	23500	721	721	SY	WEARING COURSE REMOVED			721				721		
503	11101	LS	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN		LS			LS	LS			5, 13
503	21300	LS	LS	LS	UNCLASSIFIED EXCAVATION	LS	LS			LS	LS			
505	11100	LS	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION	LS	LS			LS	LS			
507	00100	1,440	1,440	FT	STEEL PILES HP10X42, FURNISHED	1,440				1,440				
507	00150	1,280	1,280	FT	STEEL PILES HP10X42, DRIVEN	1,280				1,280				
507	00200	720	720	FT	STEEL PILES HP12X53, FURNISHED		720				720			
507	00250	640	640	FT	STEEL PILES HP12X53, DRIVEN		640				640			
507	93300	48	48	EACH	STEEL POINTS OR SHOES	32	16			32	16			
509	10001	124,430	123,297	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	12,441	19,162	92,827		12,113	19,231	91,953		4
509	20001	500	500	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN			500				500		4
510	10000	564	556	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	220	344			208	348			
511	21522	459	458	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE			459				458		
511	33500	2	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2				2				
511	42012	92	81	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		92				81			
511	43512	168	166	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	168				166				
511	46510	28	28	CY	CLASS QC1 CONCRETE, FOOTING		28				28			
512	10050	962	950	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	72	461	429		66	456	428		
512	33000	41	41	SY	TYPE 2 WATERPROOFING	41				41				
513	10260	192,896	192,896	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			192,896				192,896		
513	20000	6,156	6,156	EACH	WELDED STUD SHEAR CONNECTORS			6,156				6,156		
516	13600	17	17	SF	1" PREFORMED EXPANSION JOINT FILLER			17				17		
516	13900	253	254	SF	2" PREFORMED EXPANSION JOINT FILLER	253				254				
516	14020	179	178	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	179				178				
516	44100	18	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11" x 18" x 2.05" WITH 12" x 19" x 2.0" LOAD PLATE)		18				18			
516	44101	18	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (10" x 14" x 2.95" WITH 11" x 15" x 1.5" LOAD PLATE), AS PER PLAN	18				18				49
518	12301	0	10	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN							10		75, 76
518	21200	139	140	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	139				140				
518	40000	205	204	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	205				204				
518	40011	40	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	40				40				24
523	20000	2	2	EACH	DYNAMIC LOAD TESTING	1	1			1	1			
526	25011	379	375	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				379			375		77-80
526	90030	146	144	FT	TYPE C INSTALLATION				146			144		
SPECIAL	53000400	48	48	EACH	STRUCTURE, MISC.: CAPSULE ADHESIVE ANCHORS		48				48			48
* 601	20001	62	62	SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN	62				62				5
607	39900	325	325	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			325				325		
846	00110	61	60	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				61			60		

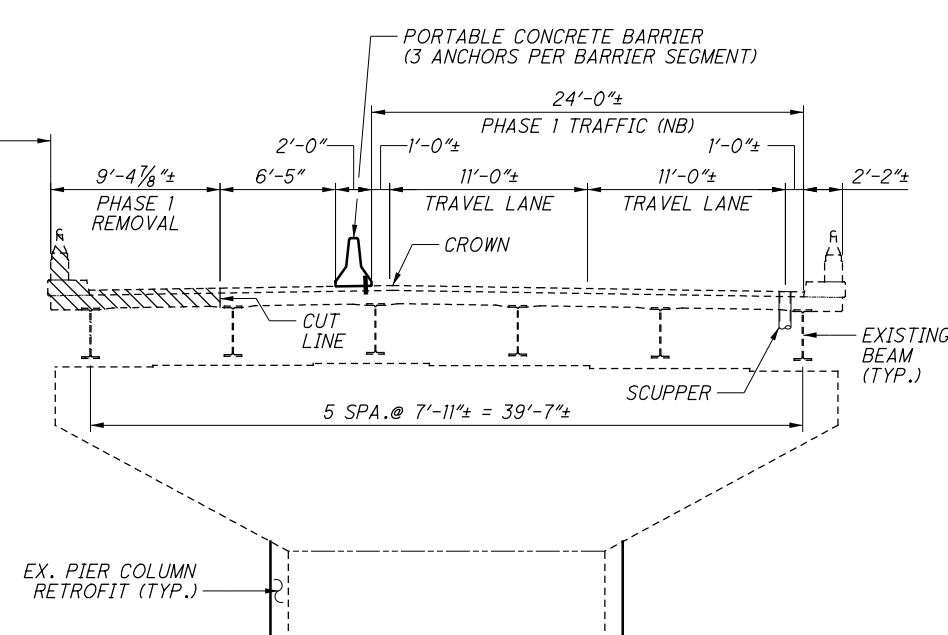
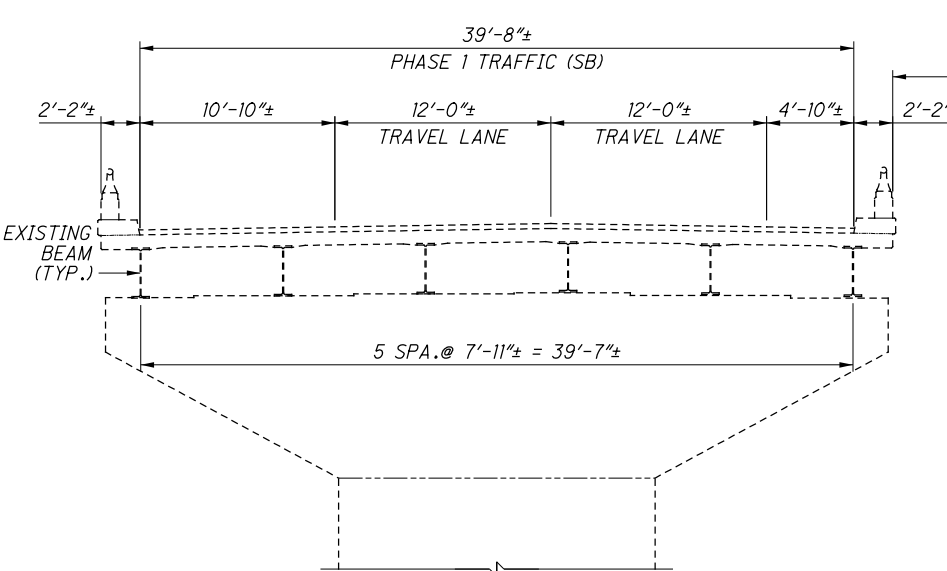
* - FOR INFORMATION ONLY. PAID FOR UNDER ROADWAY QUANTITIES.

DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016
 (614) 782-5900 PHONE
 DATE: 8/8/2016
 REVISION: KVB
 DRAWN: DJC
 CHECKED: LYH/MAB
 STRUCTURE FILE NUMBER: 2506904L/2506939R
ESTIMATED QUANTITIES
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY
FRA-71-0.00
 PID No. 107201
 6/86
 1113
 1312

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PLAN



PHASE 1 TRAFFIC & REMOVAL

LEGEND:

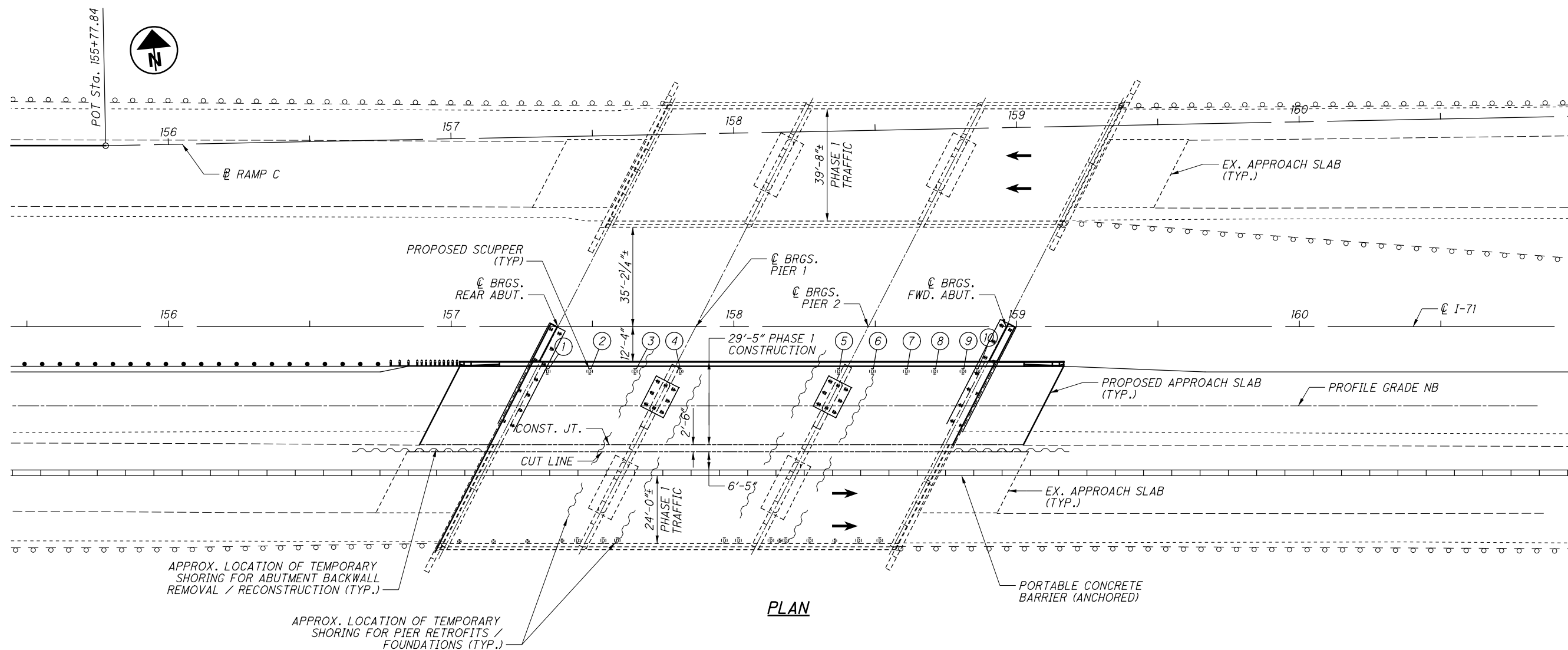
- PORTION OF STRUCTURE TO BE REMOVED

NOTES:

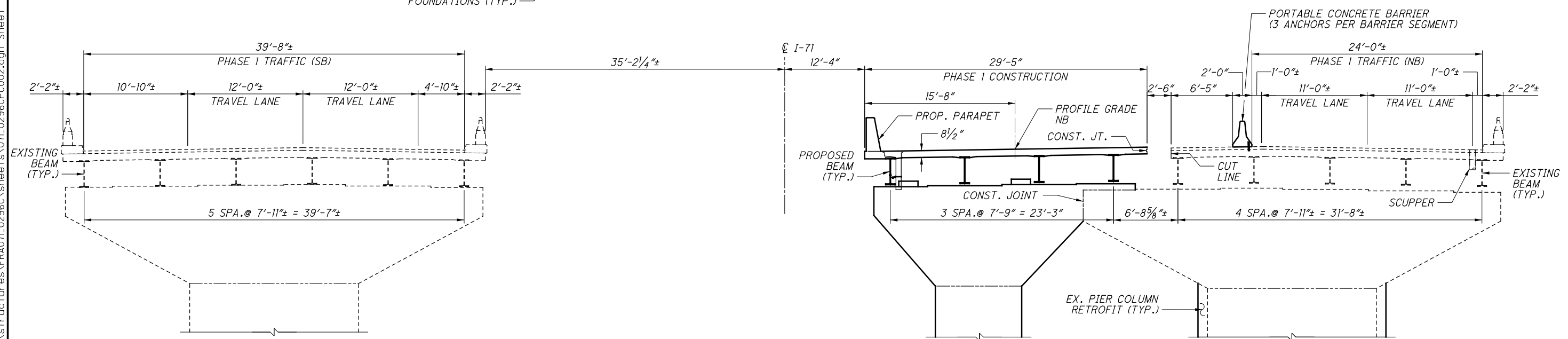
1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 13/86.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 IS SIMILAR.
3. FOR TEMPORARY SCUPPER DETAIL, SEE SHEET 13/86.

<p>Mead & Hunt</p>	<p>DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE</p>	<p>DATE 8/8/2016</p>	<p>REVIEWED KVB</p>	<p>STRUCTURE FILE NUMBER 2506904L/2506939R</p>
<p>DRAWN DJC</p>	<p>CHECKED LYH/MAB</p>	<p>DESIGNED RLC</p>	<p>REVISED</p>	<p>BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY</p>
<p>PHASE CONSTRUCTION DETAILS</p>		<p>FRA-71-0.00 PID No. 107201</p>		
<p>7/86</p>		<p>1114 1312</p>		

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PLAN

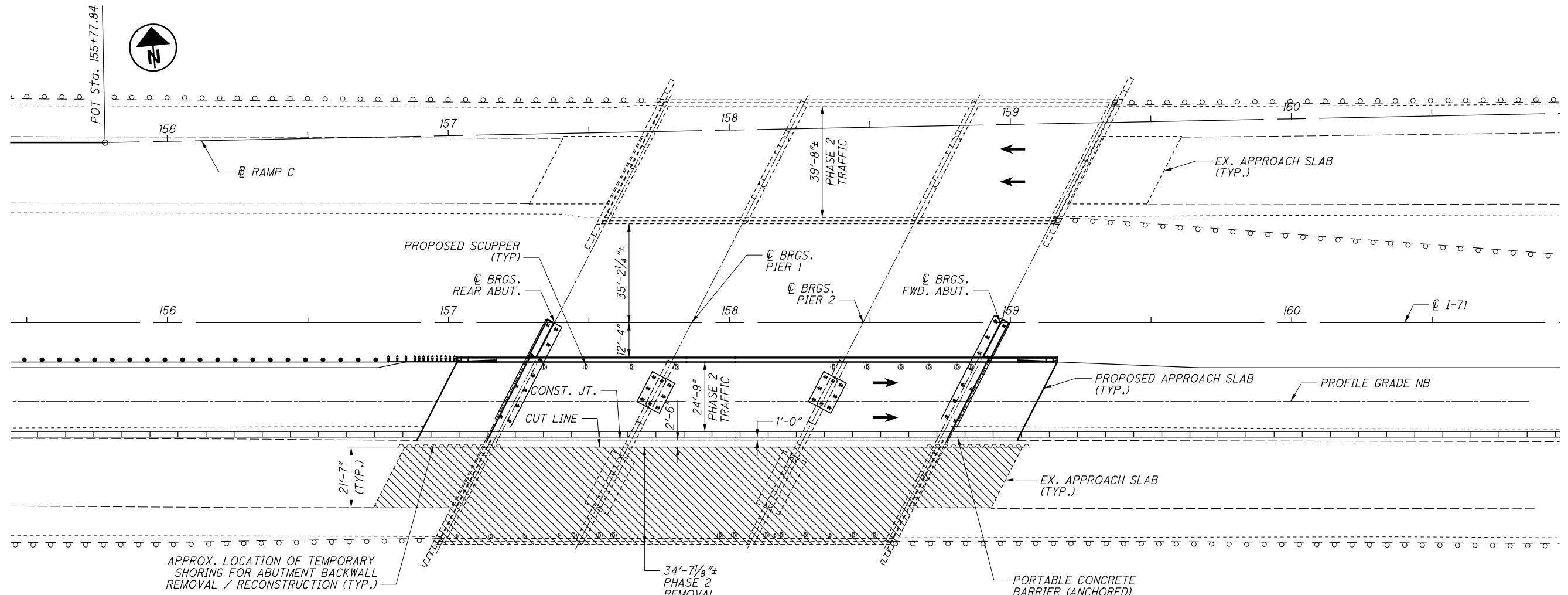


PHASE 1 TRAFFIC & CONSTRUCTION

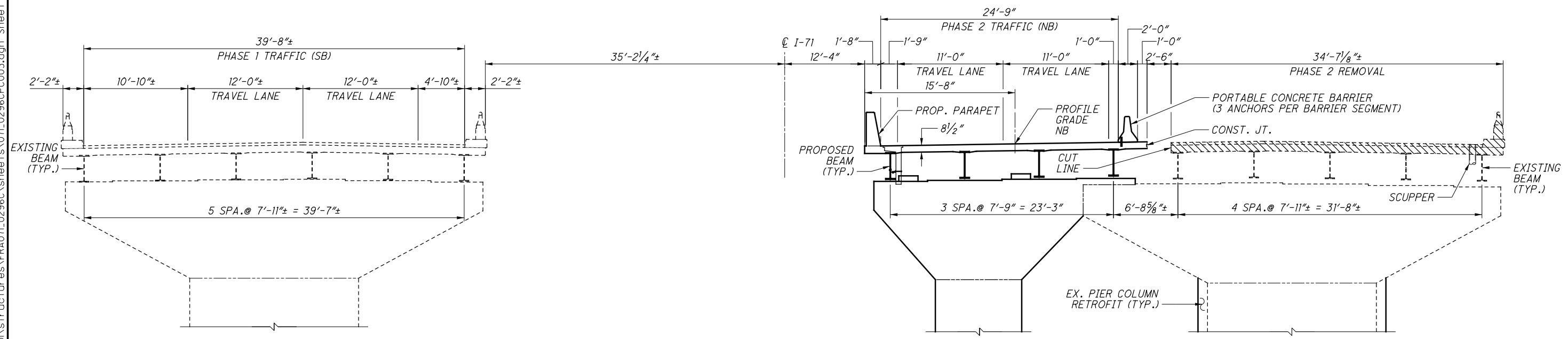
- NOTES:**
1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 13/86.
 2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 IS SIMILAR.
 3. FOR TEMPORARY SCUPPER DETAIL, SEE SHEET 13/86.
 4. FOR PROPOSED SCUPPER DETAILS, SEE SHEETS 75/86 & 76/86.
 5. FOR SCUPPER LOCATIONS, SEE SHEET 13/86.

<p>Mead & Hunt</p>	<p>DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE</p>	<p>DATE 8/8/2016</p>	<p>REVIEWED KVB</p>	<p>STRUCTURE FILE NUMBER 2506904L/2506939R</p>
<p>DRAWN DJC</p>	<p>CHECKED LYH/MAB</p>	<p>REVISIONS</p>	<p>BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY</p>	<p>PHASE CONSTRUCTION DETAILS</p>
<p>1115</p>	<p>1312</p>	<p>8 / 86</p>	<p>FRA-71-0.00 PID No. 107201</p>	<p>BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY</p>

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PLAN



PHASE 2 TRAFFIC & REMOVAL

LEGEND:

▨ - PORTION OF STRUCTURE TO BE REMOVED

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 13/86.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 IS SIMILAR.
3. FOR PROPOSED SCUPPER DETAILS, SEE SHEETS 75/86 & 76/86.

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE
 8/8/2016

REVIEWED
 KVB

STRUCTURE FILE NUMBER
 2506904L/2506939R

DRAWN
 DJC

CHECKED
 LYH/MAB

DESIGNED
 RLC

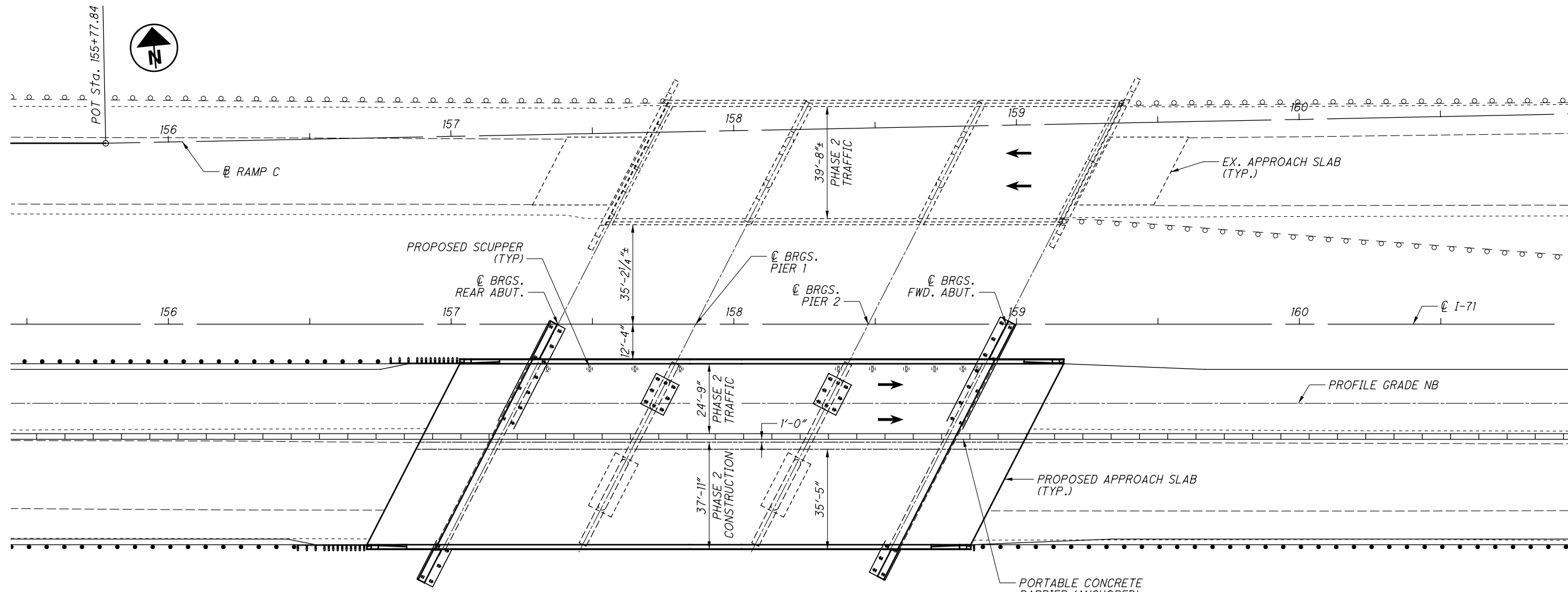
PHASE CONSTRUCTION DETAILS
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

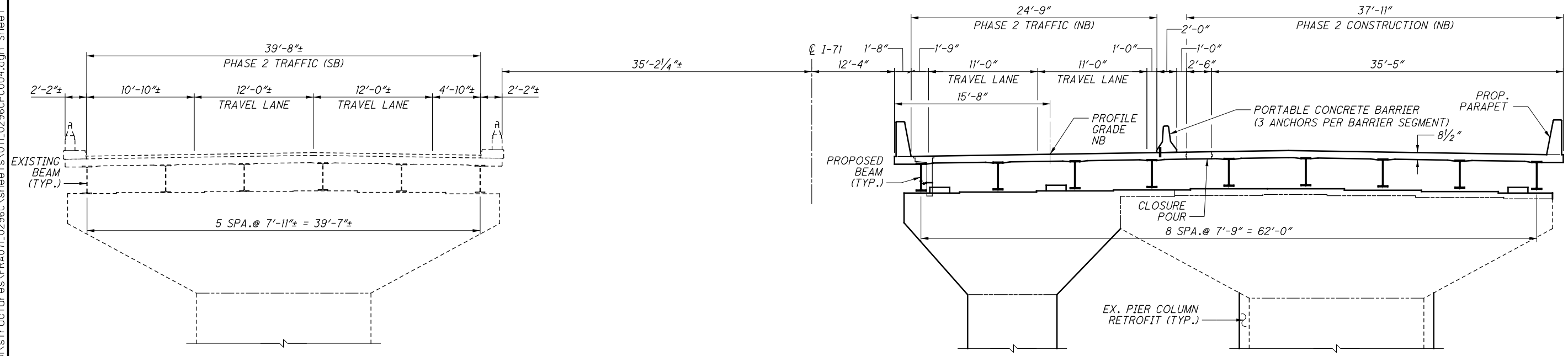
9/86

1116
 1312

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PLAN



PHASE 2 TRAFFIC & CONSTRUCTION

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 13/86.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 IS SIMILAR.

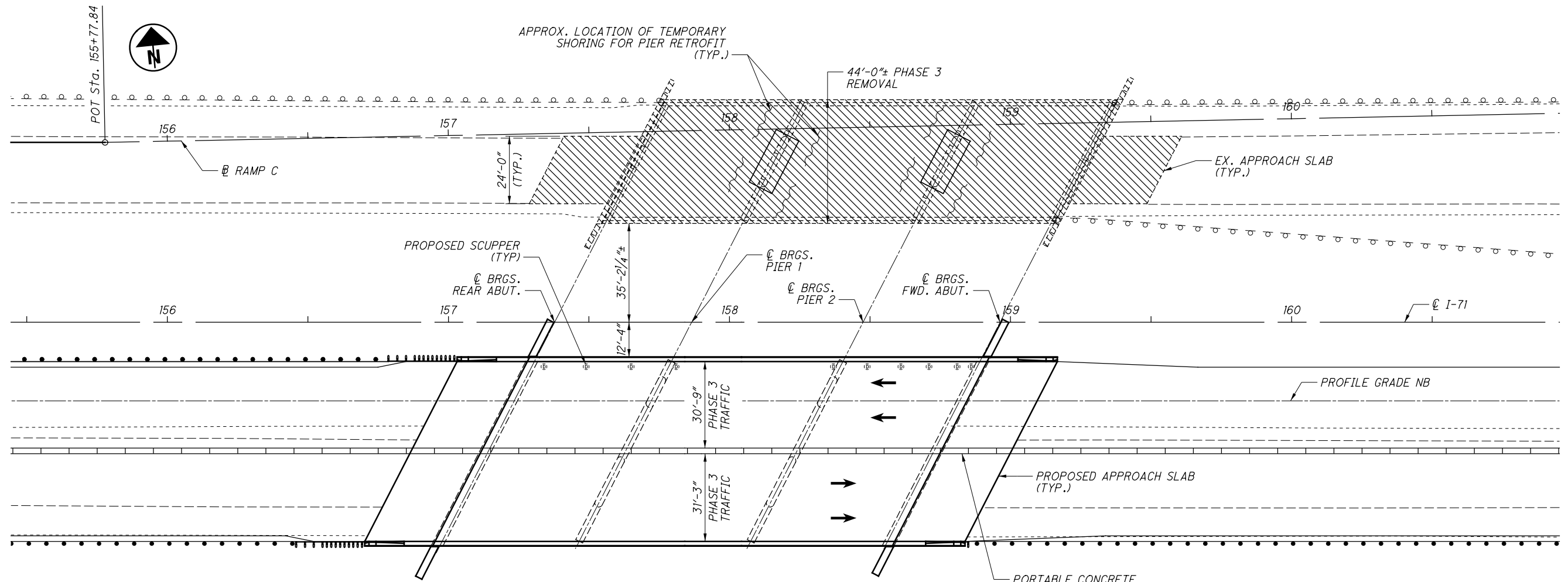
DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE 8/8/2016
 REVIEWED KVB
 DRAWN DJC
 DESIGNED RLC
 CHECKED LYH/MAB
 STRUCTURE FILE NUMBER 2506904L/2506939R

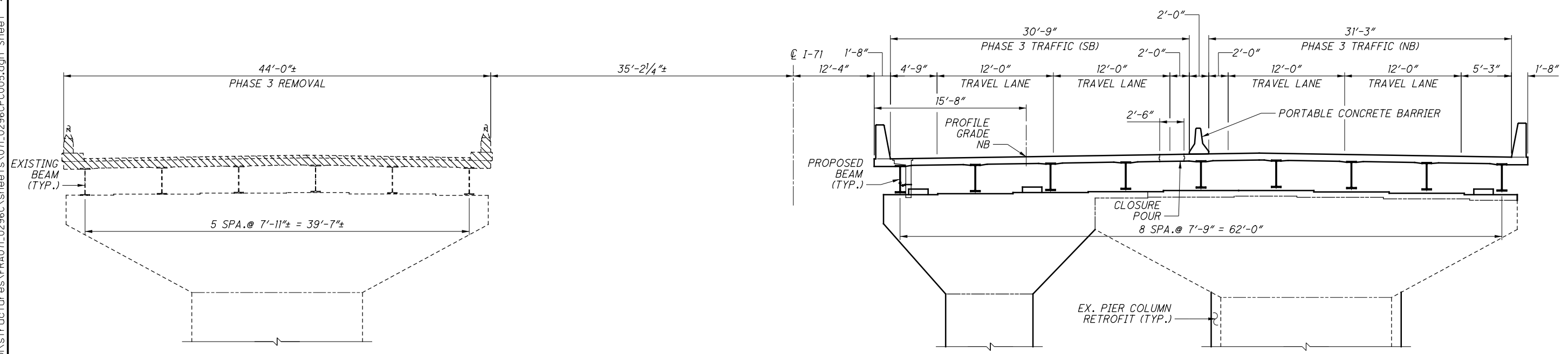
PHASE CONSTRUCTION DETAILS
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

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PLAN



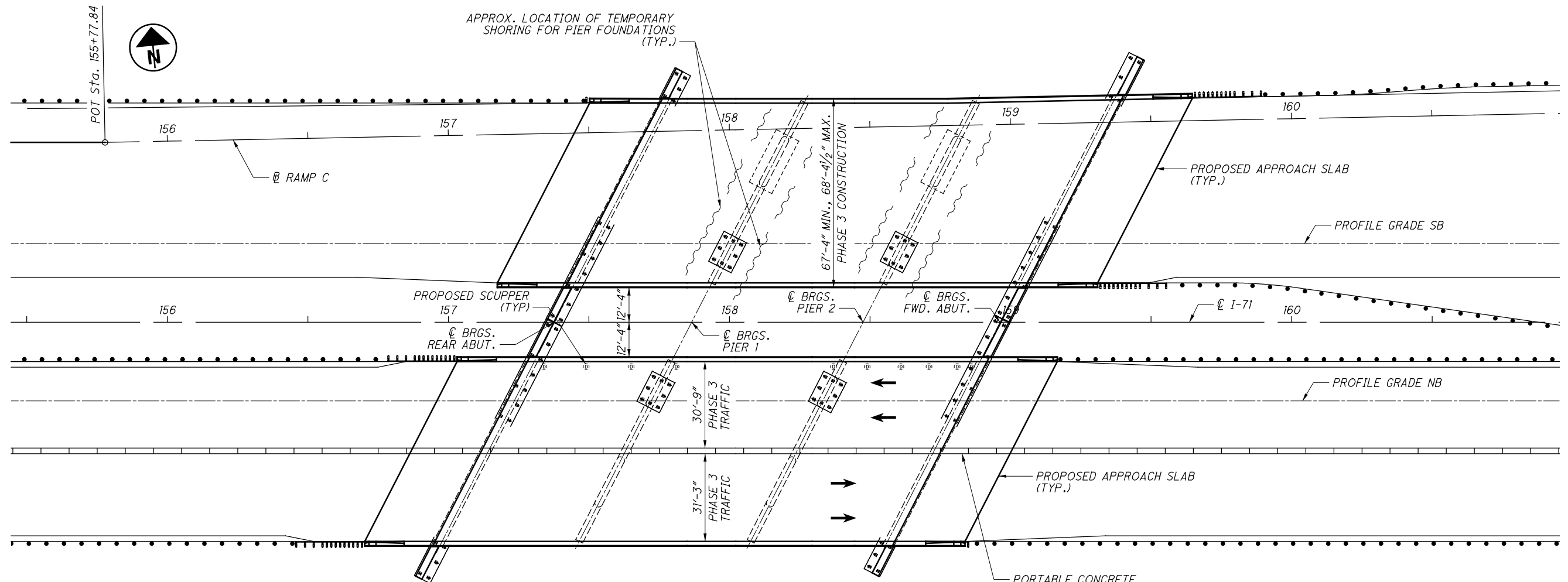
PHASE 3 TRAFFIC & REMOVAL

LEGEND:
 - PORTION OF STRUCTURE TO BE REMOVED

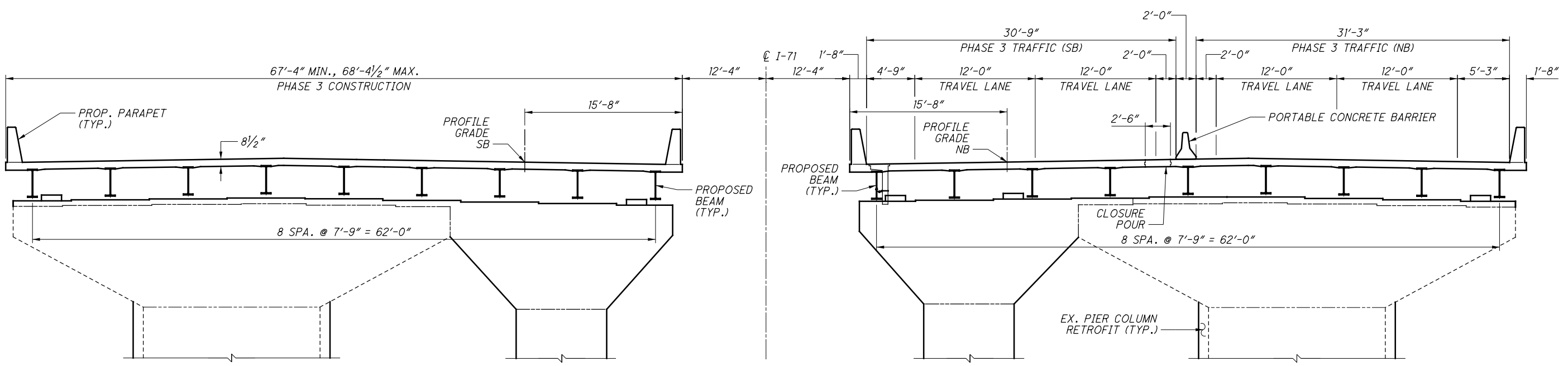
NOTES:
 1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 13/86.
 2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 IS SIMILAR.

DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	DATE 8/8/2016
	REVIEWED KVB STRUCTURE FILE NUMBER 2506904L/2506939R
DRAWN DJC REVISED	DESIGNED RLC CHECKED LYH/MAB
PHASE CONSTRUCTION DETAILS BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	
FRA-71-0.00 PID No. 107201	
11/86 1118 1312	

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PLAN



PHASE 3 TRAFFIC & CONSTRUCTION

- NOTES:**
1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 13/86.
 2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 IS SIMILAR.

<p>DESIGN AGENCY</p> <p>Mead & Hunt</p> <p>4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-9900 PHONE</p>	<p>DATE</p> <p>6/30/2015</p>
	<p>REVIEWED</p> <p>KVB</p>
<p>DESIGNED</p> <p>RLC</p> <p>CHECKED</p> <p>LYH/MAB</p>	<p>STRUCTURE FILE NUMBER</p> <p>2506904L/2506939R</p>
	<p>DRAWN</p> <p>DJC</p> <p>REVISED</p>
<p>PHASE CONSTRUCTION DETAILS</p> <p>BRIDGE NO. FRA-71-0298 L/R</p> <p>OVER INDIANA & OHIO RAILWAY COMPANY</p>	
<p>FRA-71-0.00</p> <p>PID No. 107201</p>	
<p>12/86</p>	
<p>1119</p> <p>1312</p>	

CONSTRUCTION SEQUENCE

PHASE 1 EXISTING PIER RETROFIT, TRAFFIC & REMOVAL:

1. RETROFIT BOTH PIERS 1 AND 2 FOR THE NORTHBOUND BRIDGE PER DETAILS ON SHEET 48/86.
2. INSTALL PORTABLE CONCRETE BARRIERS, CLEAN EXISTING SCUPPER SYSTEMS. INSTALL TEMPORARY SCUPPERS (AS SHOWN ON SHEET 7/86) AND MAINTAIN TRAFFIC AS SHOWN ON NORTHBOUND BRIDGE. CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING RUNOFF FROM THE BRIDGE ONTO THE RAILWAY FROM STA. 157+62.29 TO STA. 158+26.38. INSTALLATION OF TEMPORARY SCUPPERS AND CLEANING OF EXISTING SCUPPER SYSTEMS SHALL BE DONE PRIOR TO SHIFTING TRAFFIC.
3. MAINTAIN TRAFFIC ON THE SOUTHBOUND BRIDGE AS SHOWN.
4. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB ON THE LEFT PORTION OF THE NORTHBOUND BRIDGE AS SHOWN.
5. REMOVE THE EXTERIOR BEAM AND BEARING ASSEMBLIES OF THE NORTHBOUND BRIDGE.
6. REMOVE PORTIONS OF THE WINGWALLS AND ABUTMENTS ON THE LEFT PORTION OF THE NORTHBOUND BRIDGE (SEE ABUTMENT SHEETS 16/86 AND 17/86).

PHASE 1 TRAFFIC & CONSTRUCTION:

1. CONSTRUCT LEFT PORTION OF THE FORWARD AND REAR ABUTMENT SEAT EXTENSIONS, BACKWALLS, AND WINGWALLS OF NORTHBOUND BRIDGE.
2. INSTALL PILES, CONSTRUCT PIER FOOTING, T-TYPE PIER WIDENING, AND PIER CAP EXTENSIONS ON BOTH PIERS 1 AND 2 OF THE NORTHBOUND BRIDGE.
3. INSTALL BEARING ASSEMBLIES FOR BEAMS 10, 11, 12 AND 13 OF THE NORTHBOUND BRIDGE.
4. ERECT BEAMS 10, 11, 12 AND 13 AND INSTALL SHEAR CONNECTORS.
5. CONSTRUCT DECK SLAB (INCLUDING INSTALLATION OF PROPOSED SCUPPERS), PARAPET, AND APPROACH SLAB OF THE LEFT PORTION OF THE NORTHBOUND BRIDGE.

PHASE 2 TRAFFIC & REMOVAL:

1. RELOCATE PORTABLE CONCRETE BARRIERS AS SHOWN AND MAINTAIN TRAFFIC ON NORTHBOUND BRIDGE.
2. MAINTAIN TRAFFIC ON THE SOUTHBOUND BRIDGE AS SHOWN.
3. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB ON THE RIGHT PORTION OF THE NORTHBOUND BRIDGE AS SHOWN.
4. REMOVE REMAINING EXISTING BEAMS AND BEARING ASSEMBLIES ON THE RIGHT PORTION OF THE NORTHBOUND BRIDGE.
5. REMOVE PORTIONS OF THE WINGWALLS AND ABUTMENTS ON THE RIGHT NORTHBOUND PORTION OF THE NORTHBOUND BRIDGE (SEE ABUTMENT SHEETS 16/86 AND 17/86).

PHASE 2 TRAFFIC & CONSTRUCTION:

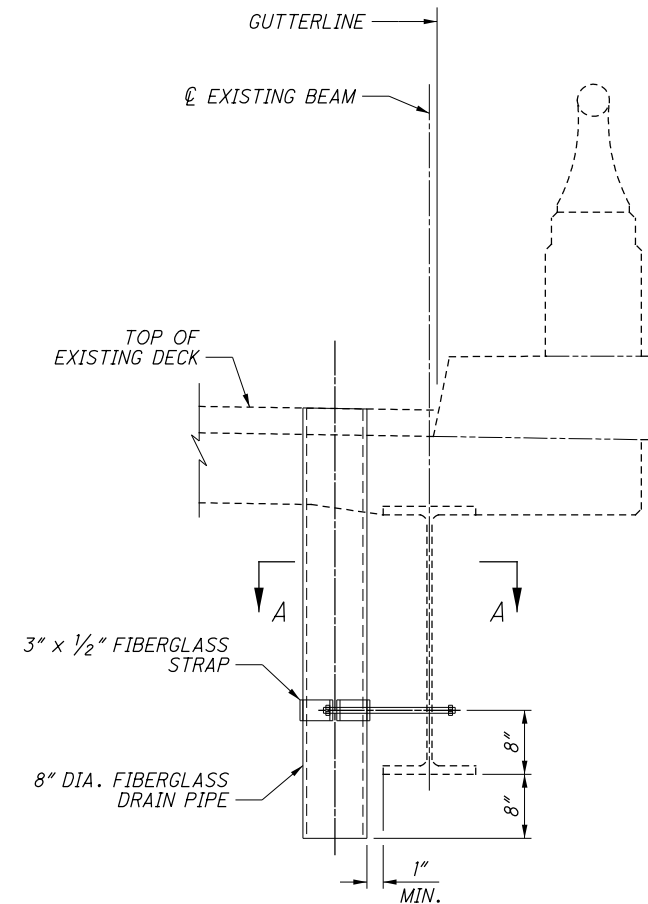
1. CONSTRUCT RIGHT PORTION OF THE FORWARD AND REAR ABUTMENT SEAT EXTENSIONS, BACKWALLS, AND WINGWALLS.
2. CONSTRUCT PIER CAP VERTICAL EXTENSIONS ON BOTH PIERS 1 AND 2 OF THE NORTHBOUND BRIDGE.
3. INSTALL BEARING ASSEMBLIES FOR BEAMS 14, 15, 16, 17, AND 18 OF THE NORTHBOUND BRIDGE.
4. ERECT BEAMS 14, 15, 16, 17, AND 18 AND INSTALL SHEAR CONNECTORS.
5. CONSTRUCT DECK SLAB, PARAPET, AND APPROACH SLAB OF THE RIGHT PORTION OF THE NORTHBOUND BRIDGE.
6. COMPLETE SLOPE PROTECTION OF THE NORTHBOUND BRIDGE.

PHASE 3 TRAFFIC & REMOVAL:

1. RELOCATE PCB AS SHOWN AND MAINTAIN BOTH SOUTHBOUND AND AND NORTHBOUND TRAFFIC ON NORTHBOUND BRIDGE.
2. AFTER REMOVING PCB FROM PHASE 2 NEW DECK, REPAIR ANCHOR HOLES WITH GROUT PER CMS 705.20. PAYMENT SHALL BE INCLUDED WITH ITEM 614, MAINTENANCE OF TRAFFIC.
3. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB OF THE SOUTHBOUND BRIDGE.
4. REMOVE EXISTING BEAMS AND BEARING ASSEMBLIES OF THE SOUTHBOUND BRIDGE.
5. REMOVE PORTIONS OF THE WINGWALLS AND ABUTMENTS OF THE SOUTHBOUND BRIDGE (SEE ABUTMENT SHEETS 14/86 AND 15/86).

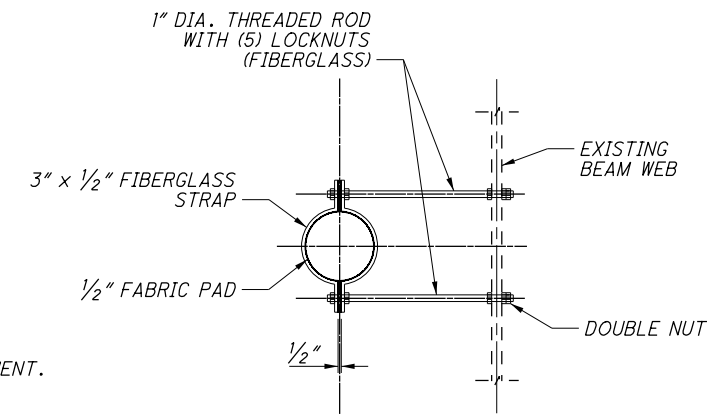
PHASE 3 TRAFFIC & CONSTRUCTION:

1. CONSTRUCT THE SOUTHBOUND BRIDGE FORWARD AND REAR ABUTMENT SEAT EXTENSIONS, AND WINGWALLS.
2. INSTALL PILES, CONSTRUCT PIER FOOTING, T-TYPE PIER WIDENING, EXISTING PIER RETROFIT AND PIER CAP EXTENSIONS FOR BOTH PIERS 1 AND 2 OF THE SOUTHBOUND BRIDGE.
3. INSTALL BEARING ASSEMBLIES FOR BEAMS 1 THROUGH 9 OF THE SOUTHBOUND BRIDGE.
4. ERECT BEAMS 1 THROUGH 9 AND INSTALL SHEAR CONNECTORS.
5. CONSTRUCT DECK SLAB, PARAPET, AND APPROACH SLAB OF THE SOUTHBOUND BRIDGE.
6. COMPLETE SLOPE PROTECTION OF THE SOUTHBOUND BRIDGE.



TEMPORARY SCUPPER DETAIL

PHASE 1 SCUPPER TABLE	
NO.	STATION
1	157+34.00
2	157+49.00
3	157+65.00
4	157+81.00
5	158+37.00
6	158+49.00
7	158+61.00
8	158+71.00
9	158+81.00
10	158+86.00



SECTION A-A

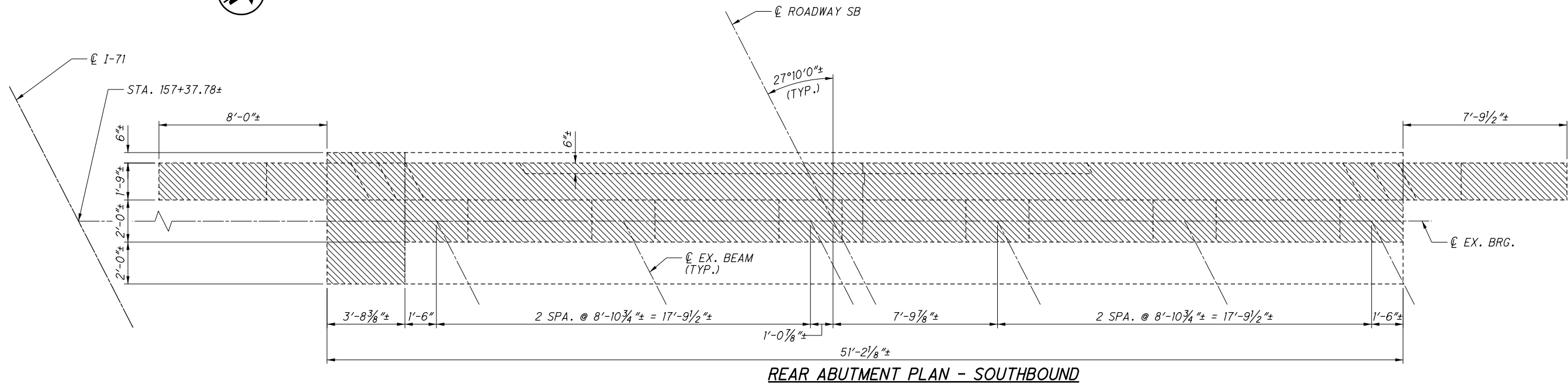
NOTES:

1. PORTABLE CONCRETE BARRIER IS CARRIED IN THE ROADWAY PLANS FOR PAYMENT.
2. FOR MAINTENANCE OF TRAFFIC DETAILS, SEE ROADWAY PLANS.
3. FOR ADDITIONAL PORTABLE CONCRETE BARRIER DETAILS, SEE STANDARD DRAWING PCB-1-91.
4. FOR ABUTMENT REMOVAL DETAILS, SEE SHEETS 14/86 TO 17/86.
5. TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE APPROXIMATE LIMITS OF SHORING AND THE SEQUENCE OF INSTALLATION ARE SHOWN ON SHEET 6/86. ALL SHEET PILING FOR ABUTMENT REMOVAL SHALL HAVE A MINIMUM SECTION MODULUS OF 24.2 INCH CUBED PER LINEAR FEET OF WALL. THE TOP ELEVATION OF THE SHEETING IS 893.50 AND THE BOTTOM ELEVATION OF SHEETING SHALL BE 863.00. IN ADDITION, TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED PEIR RETROFITS AND PIER FOUNDATIONS. THE APPROXIMATE LIMITS OF TEMPORARY SHORING ARE SHOWN ON SHEETS 7/86 TO 12/86. ALL SHEET PILING FOR PIER RETROFITS AND FOUNDATION CONSTRUCTION SHALL HAVE A MINIMUM SECTION MODULUS OF 33.5 INCH CUBED PER LINEAR FEET OF WALL. THE TEMPORARY SHORING SHALL BE PLACED SO THAT IT DOES NOT INTERFERE WITH THE BATTERED PILES IN THE PIER FOOTING. THE TOP ELEVATION OF THE SHEETING SHALL BE 877.00 AND THE BOTTOM ELEVATION SHALL BE 839.50.
6. INCLUDE COST FOR FABRICATION, INSTALLATION AND REMOVAL OF TEMPORARY SCUPPERS WITH ITEM 202, STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN.
7. FOR PROPOSED SCUPPER DETAILS, SEE SHEETS 75/86 & 76/86.

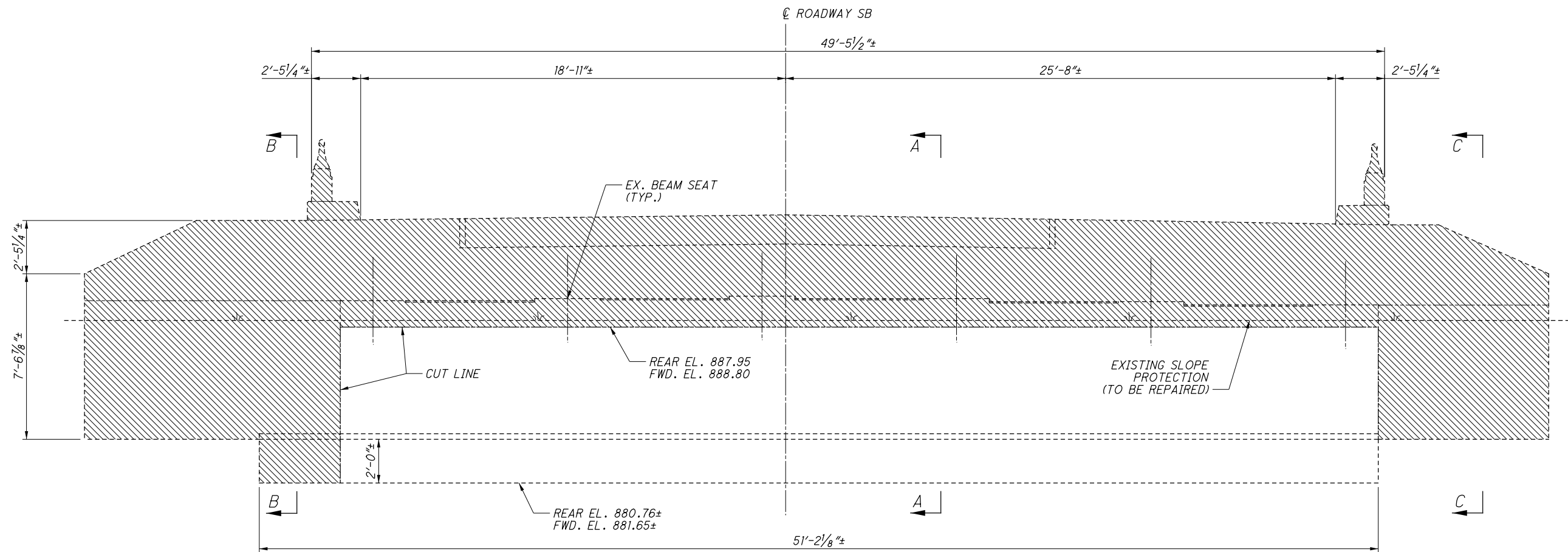
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Mead & Hunt DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-9900 PHONE	DATE 8/8/2016	REVIEWED KVB	DRAWN DJC	DESIGNED RLC	CHECKED LYH/MAB	STRUCTURE FILE NUMBER 2506904L/2506939R
PHASE CONSTRUCTION DETAILS BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY						
FRA-71-0.00 PID No. 107201						
13 / 86						
1120 1312						

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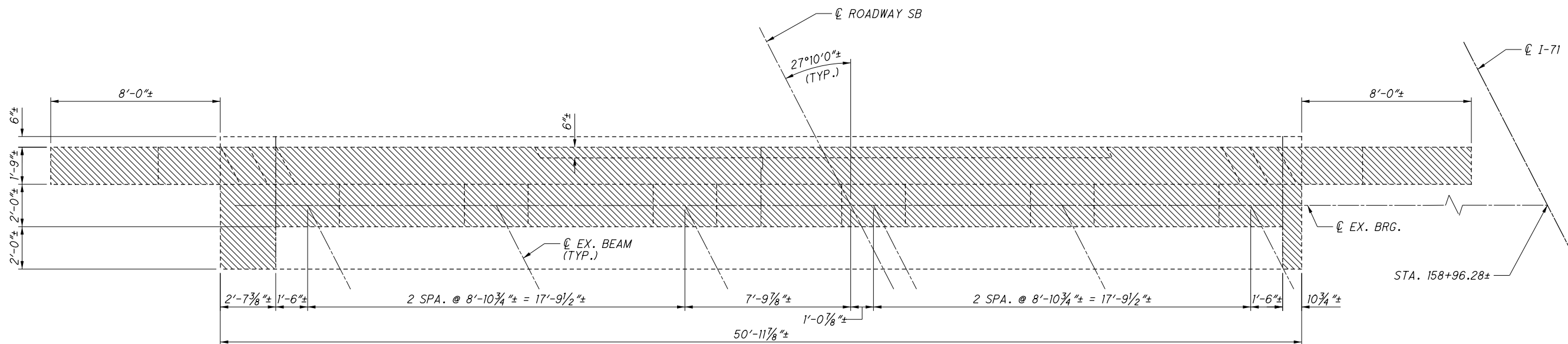
NOTE:
1. FOR SECTIONS, SEE SHEET 18/86.



LEGEND:

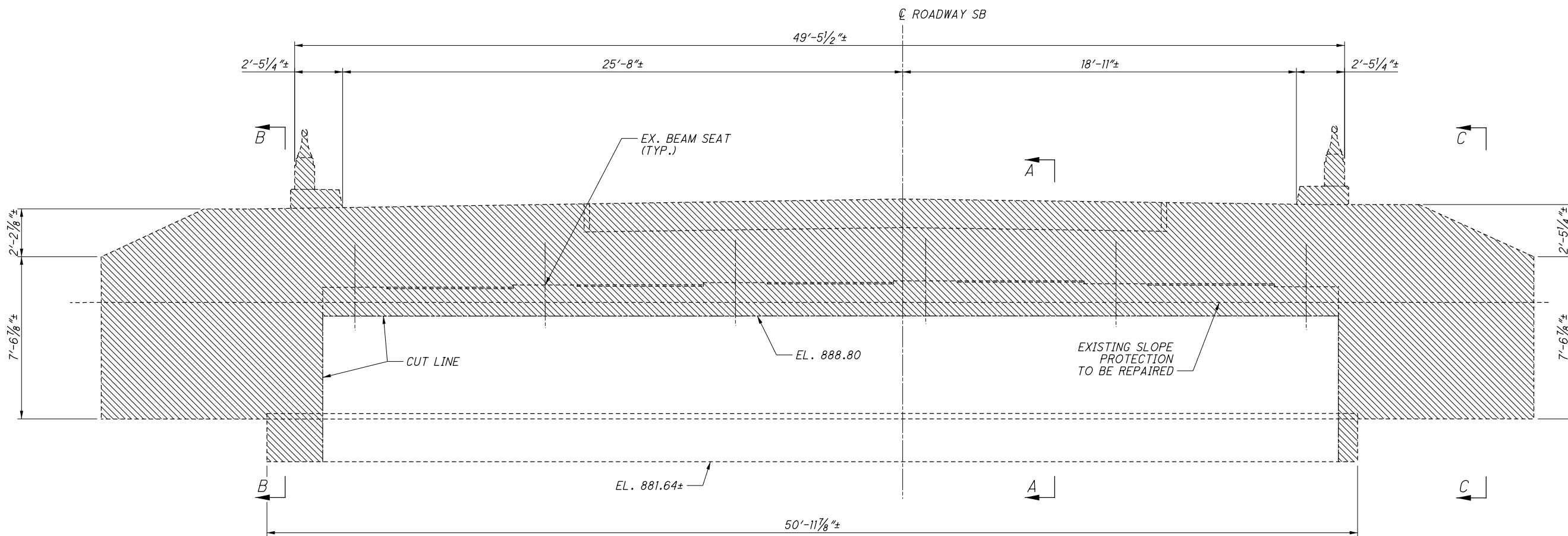
 - PORTIONS TO BE REMOVED IN PHASE 3

MEAD & HUNT DESIGN AGENCY 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
DATE 8/8/2016	REVIEWED KVB
STRUCTURE FILE NUMBER 2506904L/2506939R	DRAWN DJC REVISIONS
DESIGNED LYH	CHECKED MAB
FRA-71-0.00 BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	
REAR ABUTMENT REMOVAL DETAILS - SOUTHBOUND BRIDGE	
PID No. 107201	
14 / 86	
1121 1312	



FORWARD ABUTMENT PLAN - SOUTHBOUND

NOTE:
1. FOR SECTIONS, SEE SHEET 18/86.



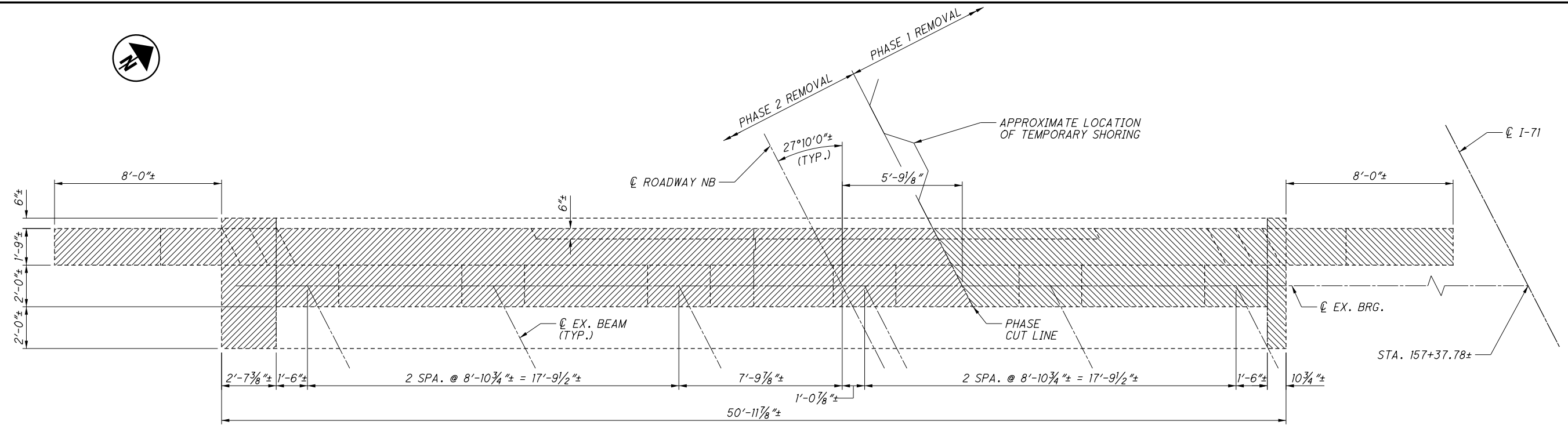
FORWARD ABUTMENT ELEVATION - SOUTHBOUND

LEGEND:

- PORTIONS TO BE REMOVED IN PHASE 3

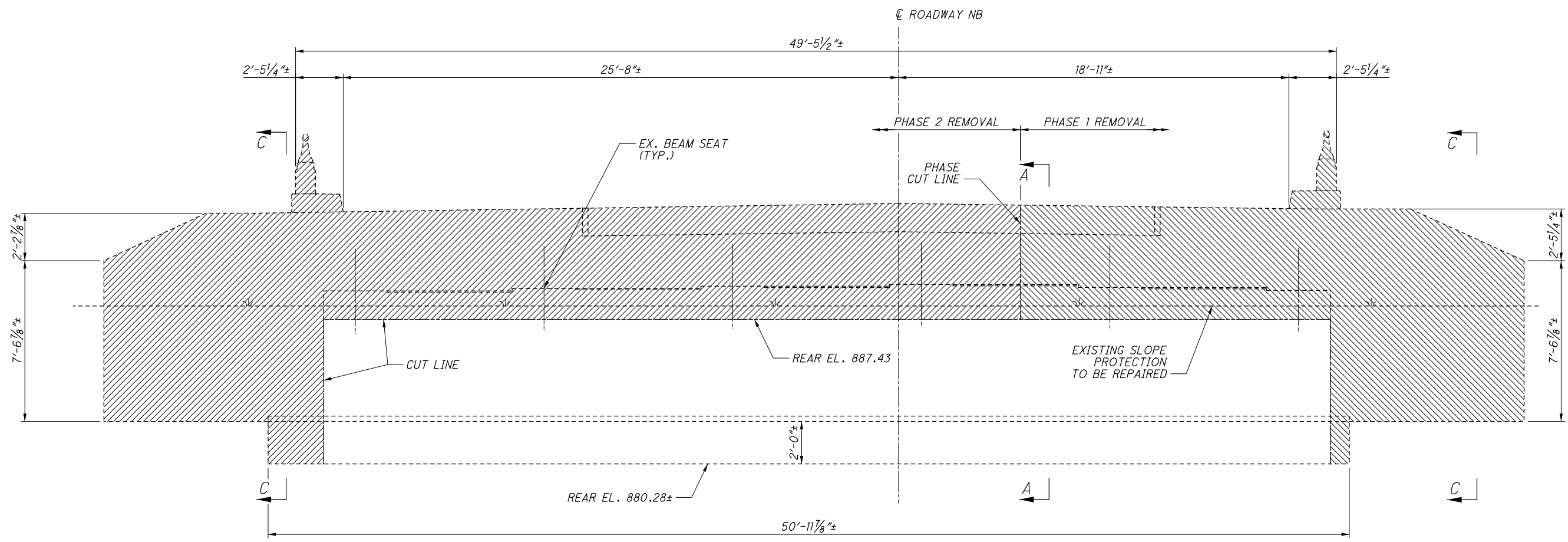
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FRA-71-0.00	BRIDGE NO. FRA-71-0298 L/R	DESIGN AGENCY Mead & Hunt	DATE 8/8/2016	DESIGNED LYH	DRAWN DJC	REVIEWED KVB	STRUCTURE FILE NUMBER 2506904L/2506939R
PID No. 107201	OVER INDIANA & OHIO RAILWAY COMPANY			CHECKED MAB	REVISED		
15 / 86	1122 1312						



REAR ABUTMENT PLAN - NORTHBOUND

NOTE:
1. FOR SECTIONS, SEE SHEET 18/86.



REAR ABUTMENT ELEVATION - NORTHBOUND

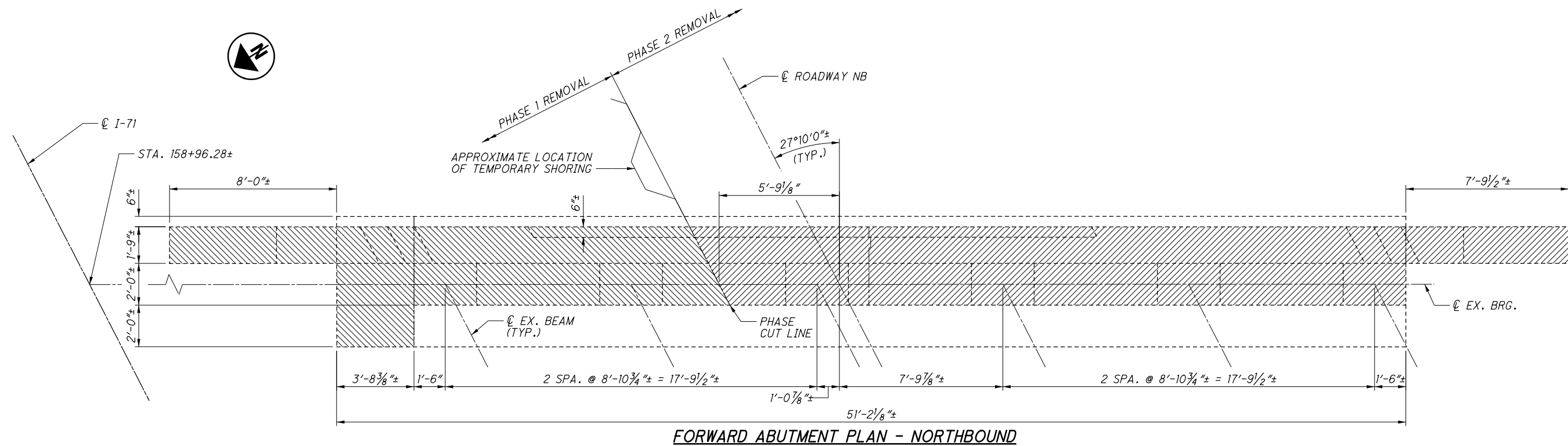
LEGEND:

- PORTIONS TO BE REMOVED IN PHASE 1
- PORTIONS TO BE REMOVED IN PHASE 2

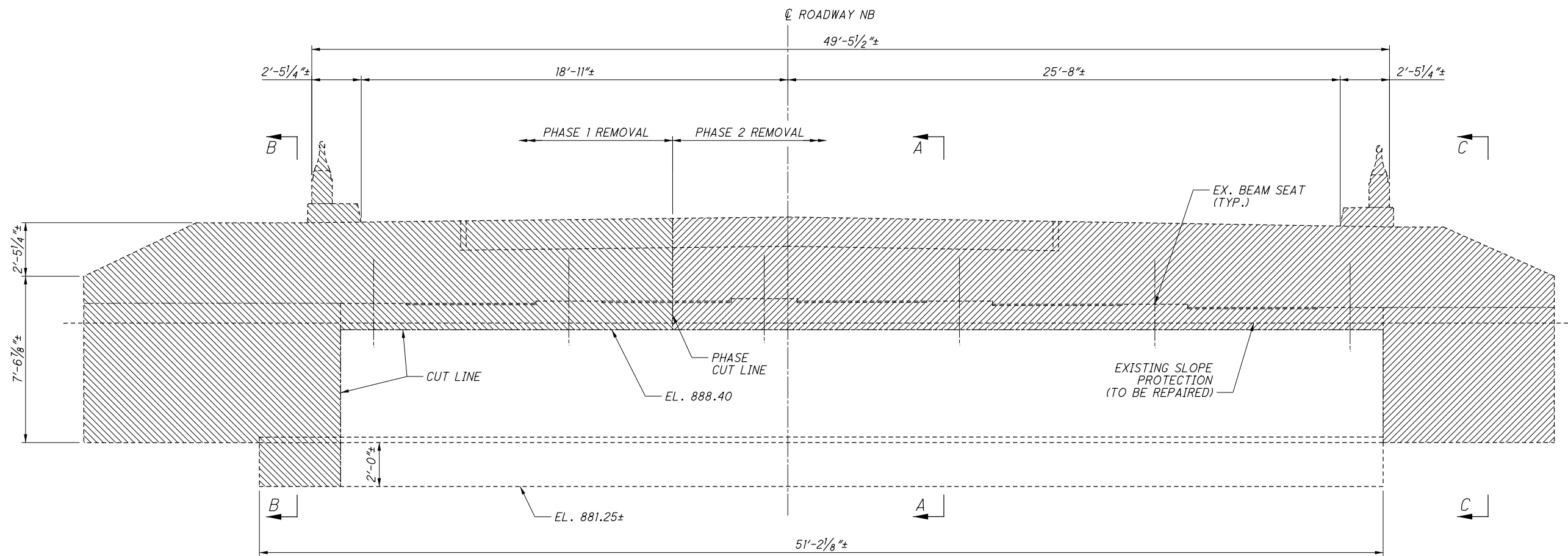
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DESIGNED LYH	DRAWN DJC	REVIEWED KVB	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt
CHECKED MAB	REVISED	STRUCTURE FILE NUMBER 2506904L/2506939R	4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016	PHONE (614) 782-5900
REAR ABUTMENT REMOVAL DETAILS - NORTHBOUND BRIDGE				
BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY				
FRA-71-0.00				
PID No. 107201				
16 / 86				
1123 1312				

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NOTE:
1. FOR SECTIONS, SEE SHEET 18/86.

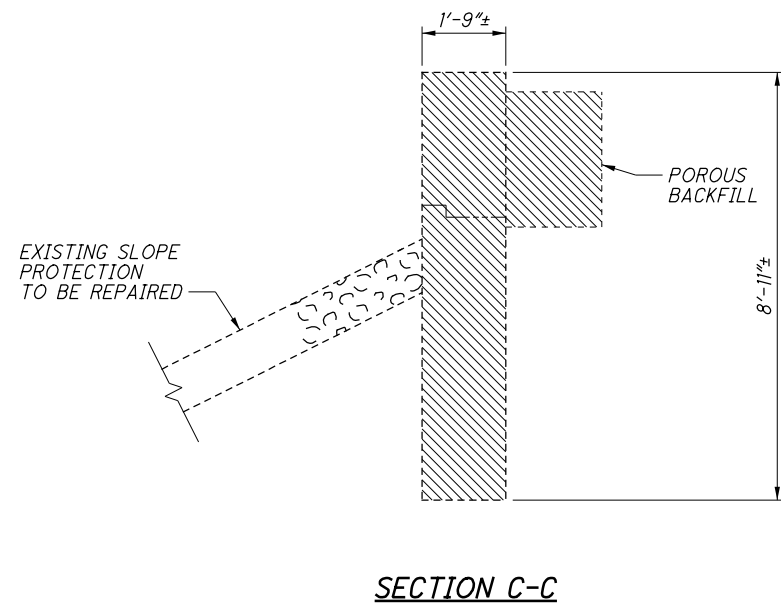
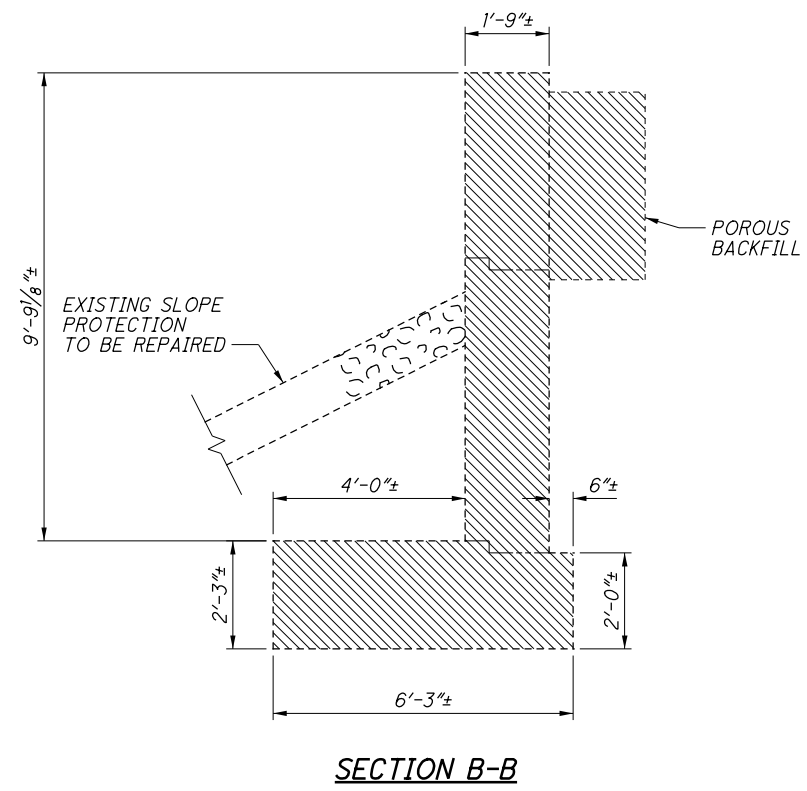
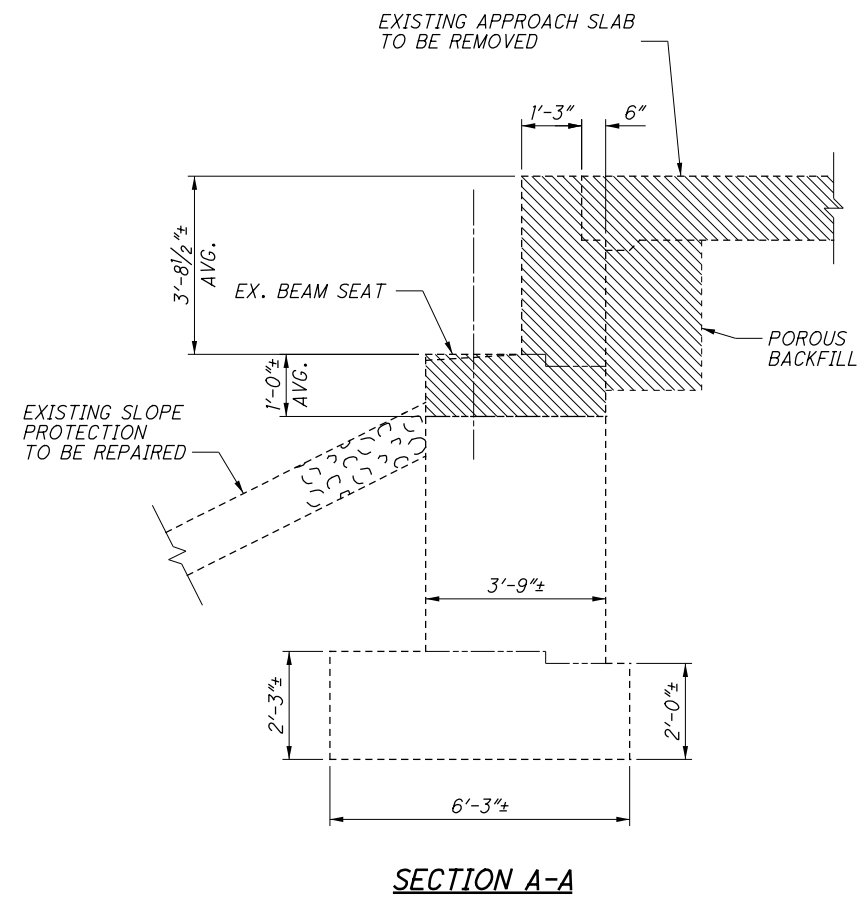


LEGEND:

- PORTIONS TO BE REMOVED IN PHASE 1
- PORTIONS TO BE REMOVED IN PHASE 2

<p>FRA-71-0.00 PID No. 107201</p>	<p>FORWARD ABUTMENT REMOVAL DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY</p>	<p>DESIGNED: LYH CHECKED: MAB</p>	<p>DRAWN: DJC REVISED:</p>	<p>REVIEWED: KVB STRUCTURE FILE NUMBER: 2506904L/2506939R</p>	<p>DATE: 8/8/2016</p>	<p>DESIGN AGENCY: Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE</p>
<p>17/86</p>	<p>1124 1312</p>					

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LEGEND:

 - PORTIONS TO BE REMOVED

FRA-71-0.00
PID No. 107201

18 / 86

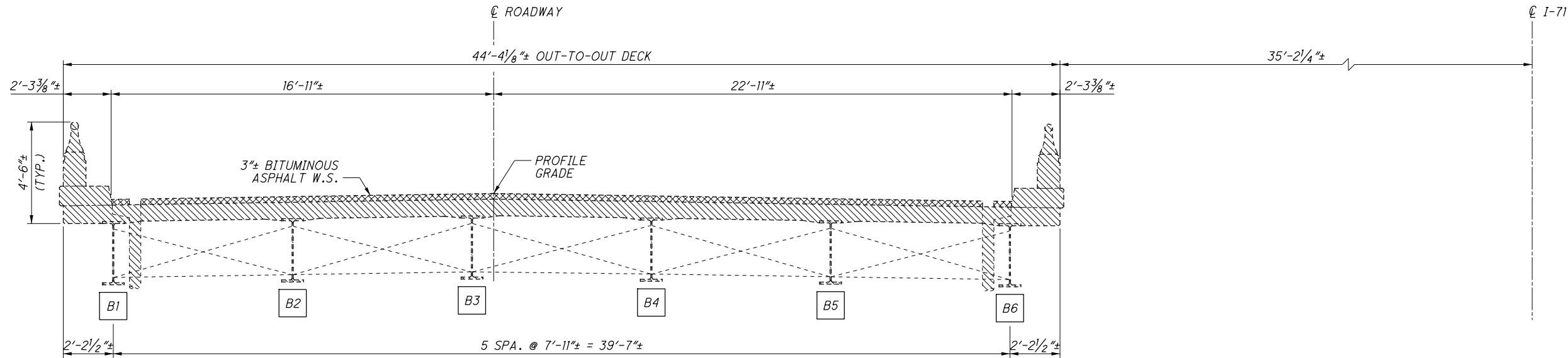
1125
1312

ABUTMENT REMOVAL DETAILS
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

DESIGNED	DRAWN	REVIEWED	DATE
LYH	DJC	KVB	6/30/2015
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAB		2506904L/2506939R	

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

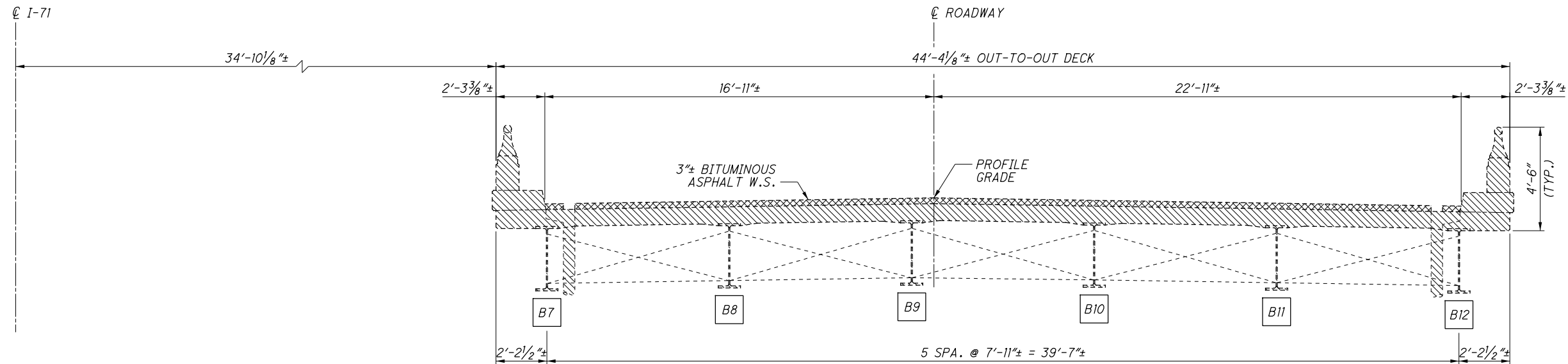
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EXISTING TRANSVERSE SECTION - SOUTHBOUND

NOTE:

1. FOR REMOVAL SEQUENCE, SEE SHEET 10/86, 12/86 AND 14/86.



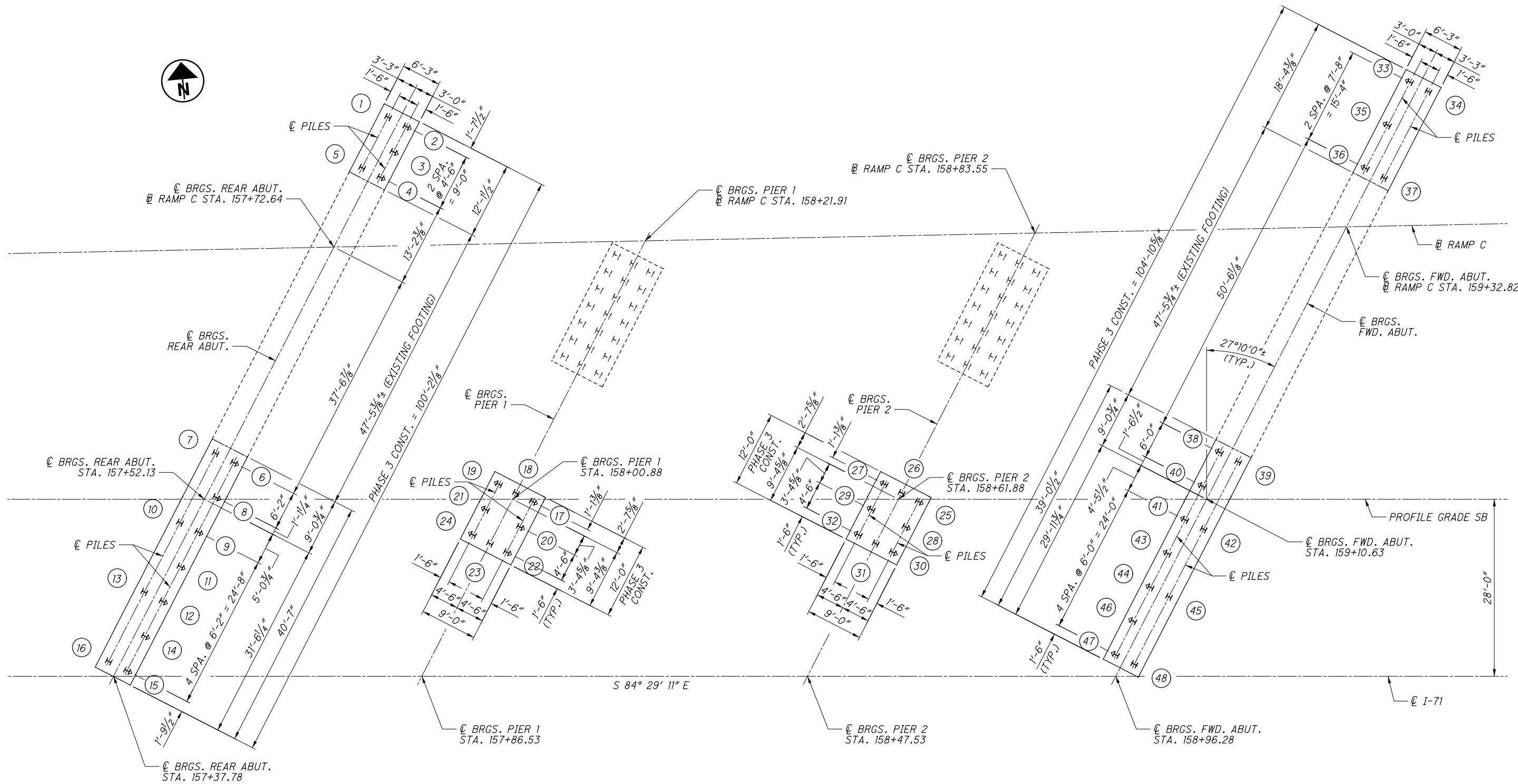
EXISTING TRANSVERSE SECTION - NORTHBOUND

LEGEND:

- B1 - EXISTING BEAM NUMBER
- PORTION OF STRUCTURE TO BE REMOVED
- BITUMINOUS ASPHALT WEARING SURFACE TO BE REMOVED (3 1/2")

DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
DATE 6/30/2015 REVIEWED KVB STRUCTURE FILE NUMBER 2506904L/2506939R
DRAWN DJC CHECKED REVISIED MAB
SUPERSTRUCTURE REMOVAL DETAILS BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY
FRA-71-0.00 PID No. 107201
19/86 <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 1126 1312 </div>

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REAR ABUTMENT - SOUTHBOUND

PIER 1 - SOUTHBOUND

PIER 2 - SOUTHBOUND

FORWARD ABUTMENT - SOUTHBOUND

REAR ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
1-16	HP10x42	881.75	40 FT.

FORWARD ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
33-48	HP10x42	882.69	40 FT.

PIER 1 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
17-24	HP12x53	861.29	40 FT.

PIER 2 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
25-32	HP12x53	861.49	40 FT.

LEGEND:

- ⊙ - PILE NUMBER
- I - HP PILE
- ⚡ - HP BATTERED PILE 4:1 (V:H)

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DATE
8/8/2016

REVIEWED
KVB

DRAWN
DJC

DESIGNED
LYH

STRUCTURE FILE NUMBER
2506904L/2506939R

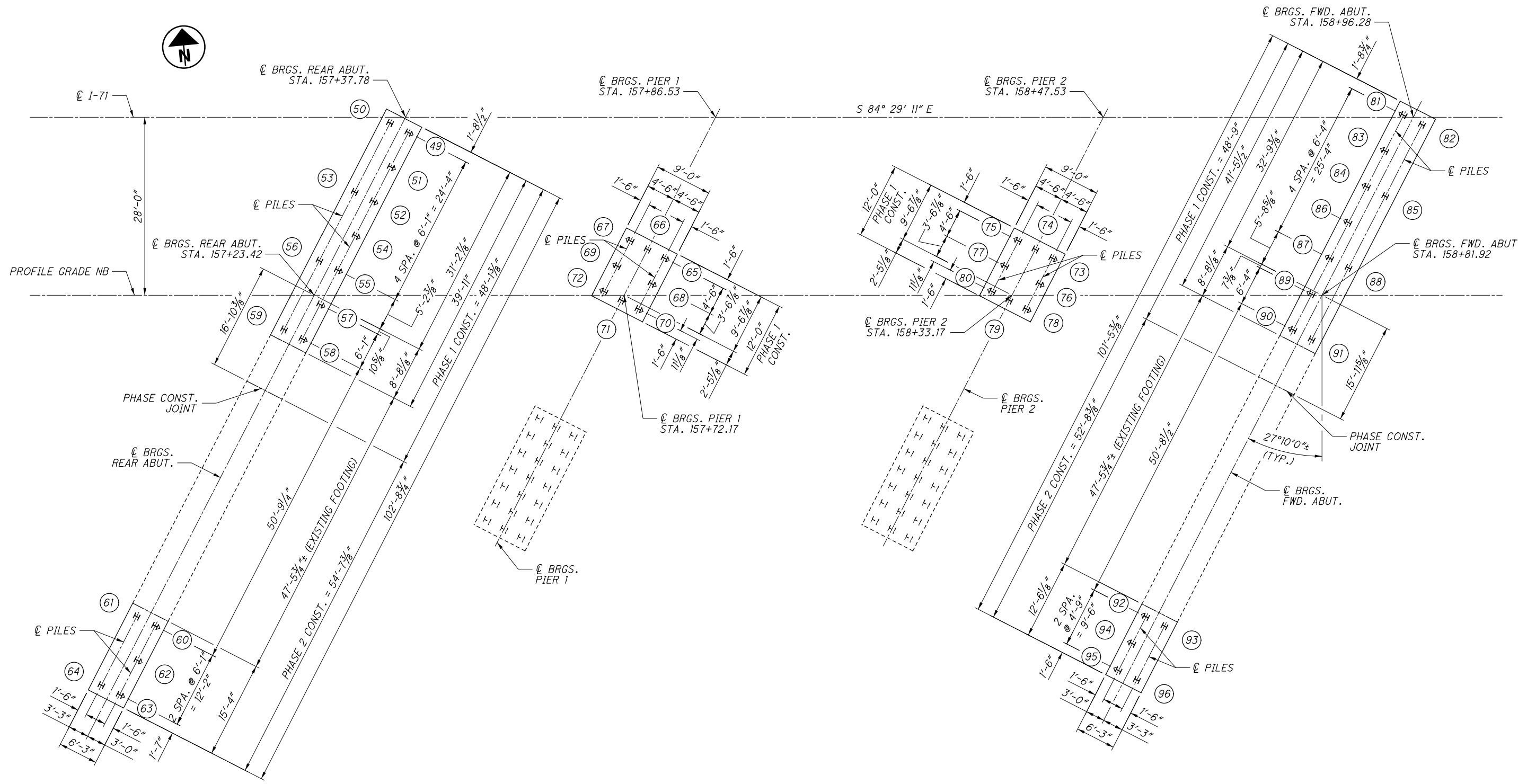
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

20/86

1127
1312

X:\4037000\21957.16\107201\structures\FRA071_0296CFP002.dgn Sheet 10/28/2019 11:42:25 AM 1458sjs



REAR ABUTMENT - NORTHBOUND

REAR ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
49-64	HP10x42	881.28	40 FT.

FORWARD ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
81-96	HP10x42	882.23	40 FT.

PIER 1 - NORTHBOUND

PIER 1 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
65-72	HP12x53	860.59	40 FT.

PIER 2 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
73-80	HP12x53	860.59	40 FT.

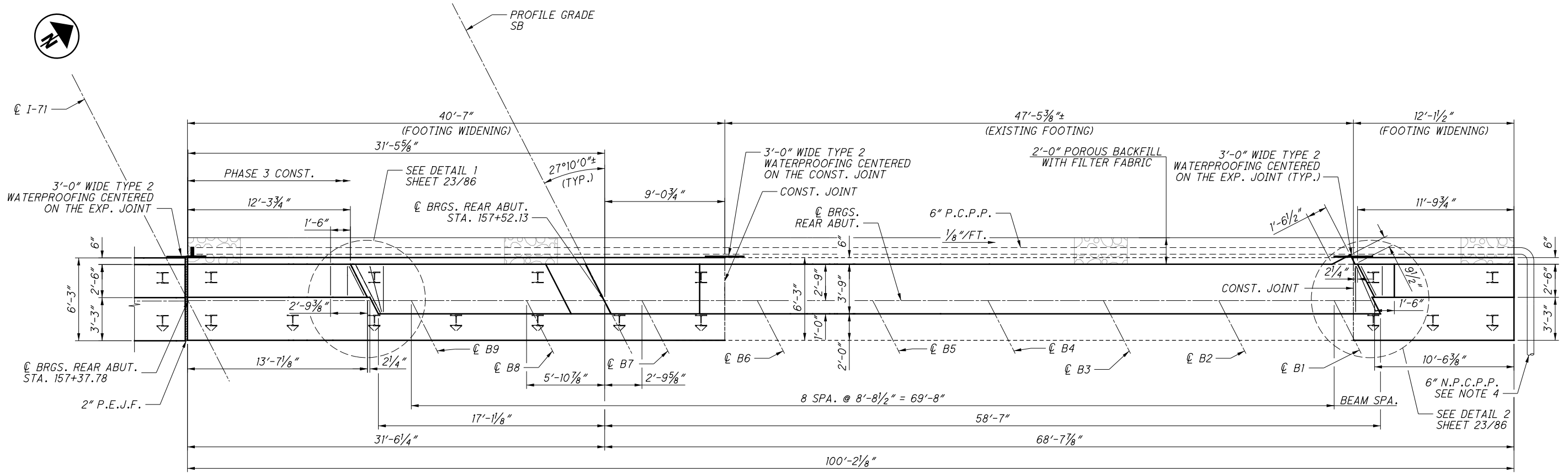
PIER 2 - NORTHBOUND

LEGEND:

- ⊙ - PILE NUMBER
- I - HP PILE
- ⚡ - HP BATTERED PILE 4:1 (V:H)

FORWARD ABUTMENT - NORTHBOUND

	DESIGN AGENCY 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
DATE 8/8/2016	REVIEWED KVB
DRAWN DJC	CHECKED CMH
FILE NUMBER 2506904L/2506939R	
PILE LAYOUT PLAN - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	
FRA-71-0.00 PID No. 107201	
21 / 86	
1128 1312	



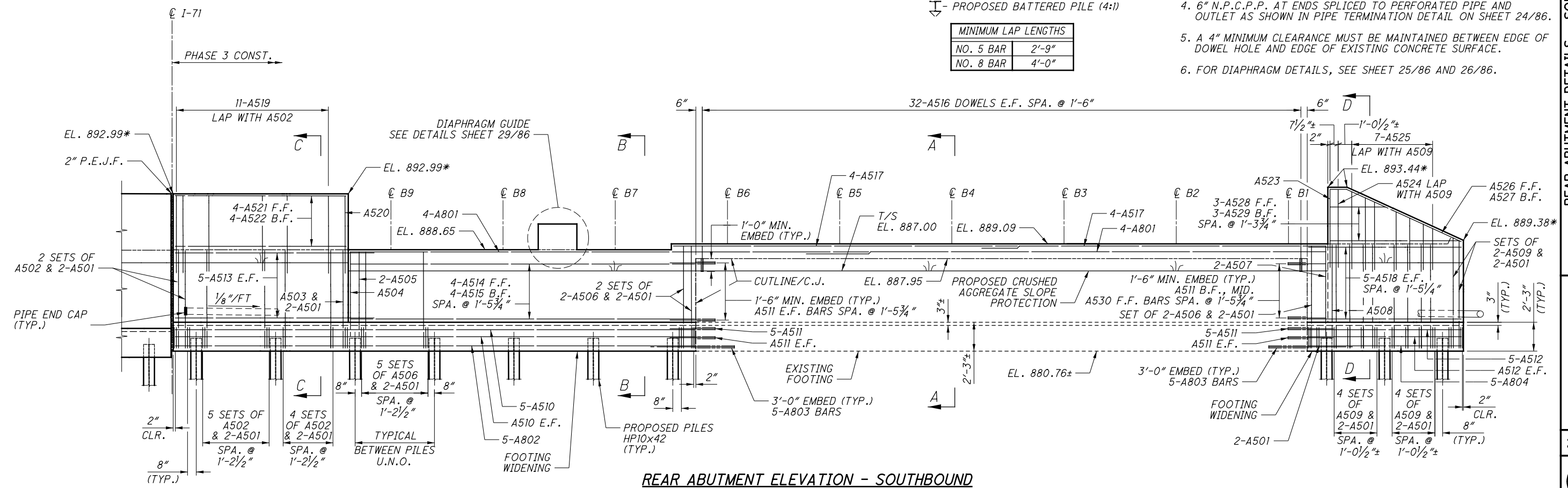
REAR ABUTMENT PLAN - SOUTHBOUND

- LEGEND:**
- * - ELEVATION GIVEN AT \odot BEARING
 - \perp - PROPOSED VERTICAL PILE
 - ∇ - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	4'-0"

NOTES:

1. FOR SECTIONS A-A THRU D-D, SEE SHEETS 23/86 AND 24/86.
2. FOR FOOTING & PILE LAYOUT, SEE SHEET 20/86.
3. FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-1-96.
4. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 24/86.
5. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.
6. FOR DIAPHRAGM DETAILS, SEE SHEET 25/86 AND 26/86.

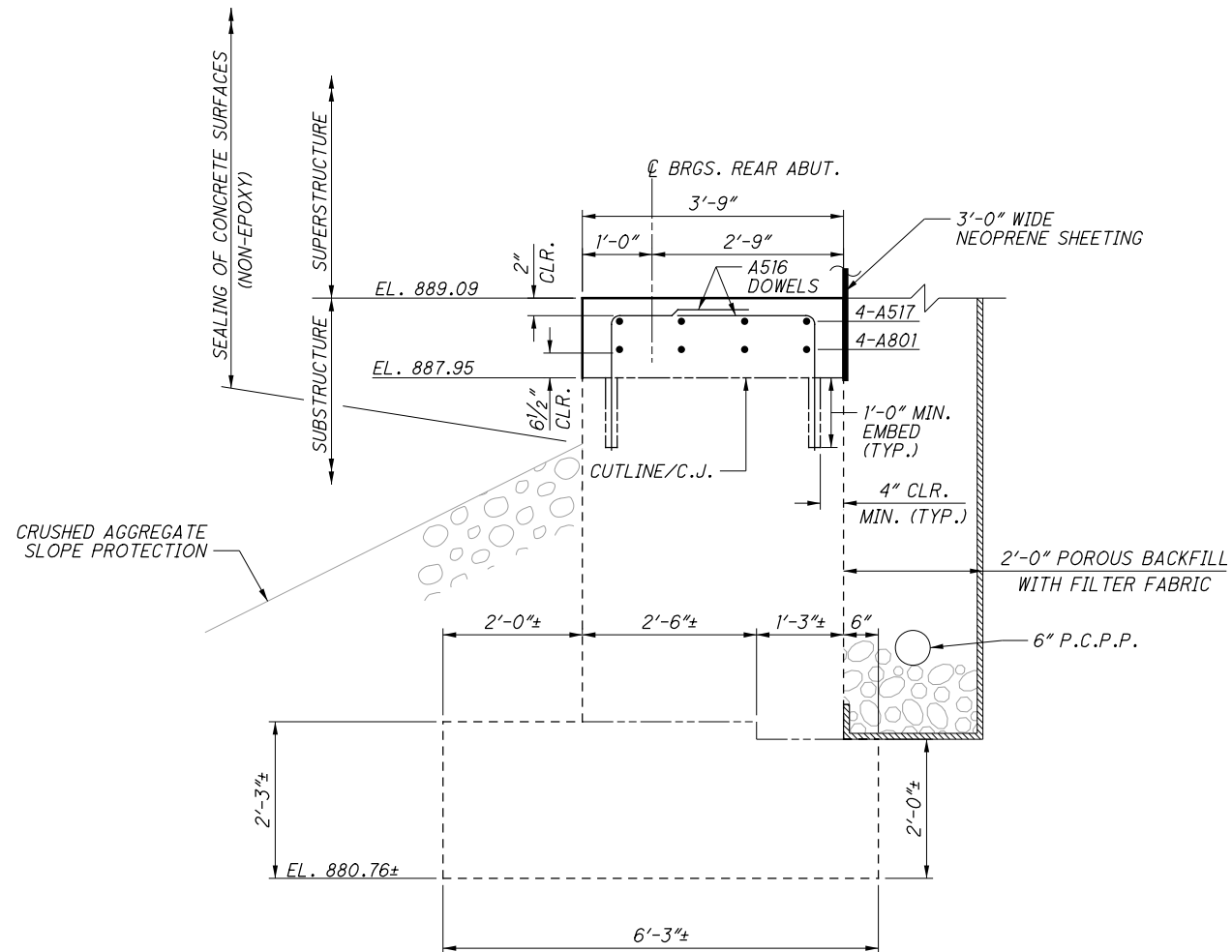


REAR ABUTMENT ELEVATION - SOUTHBOUND

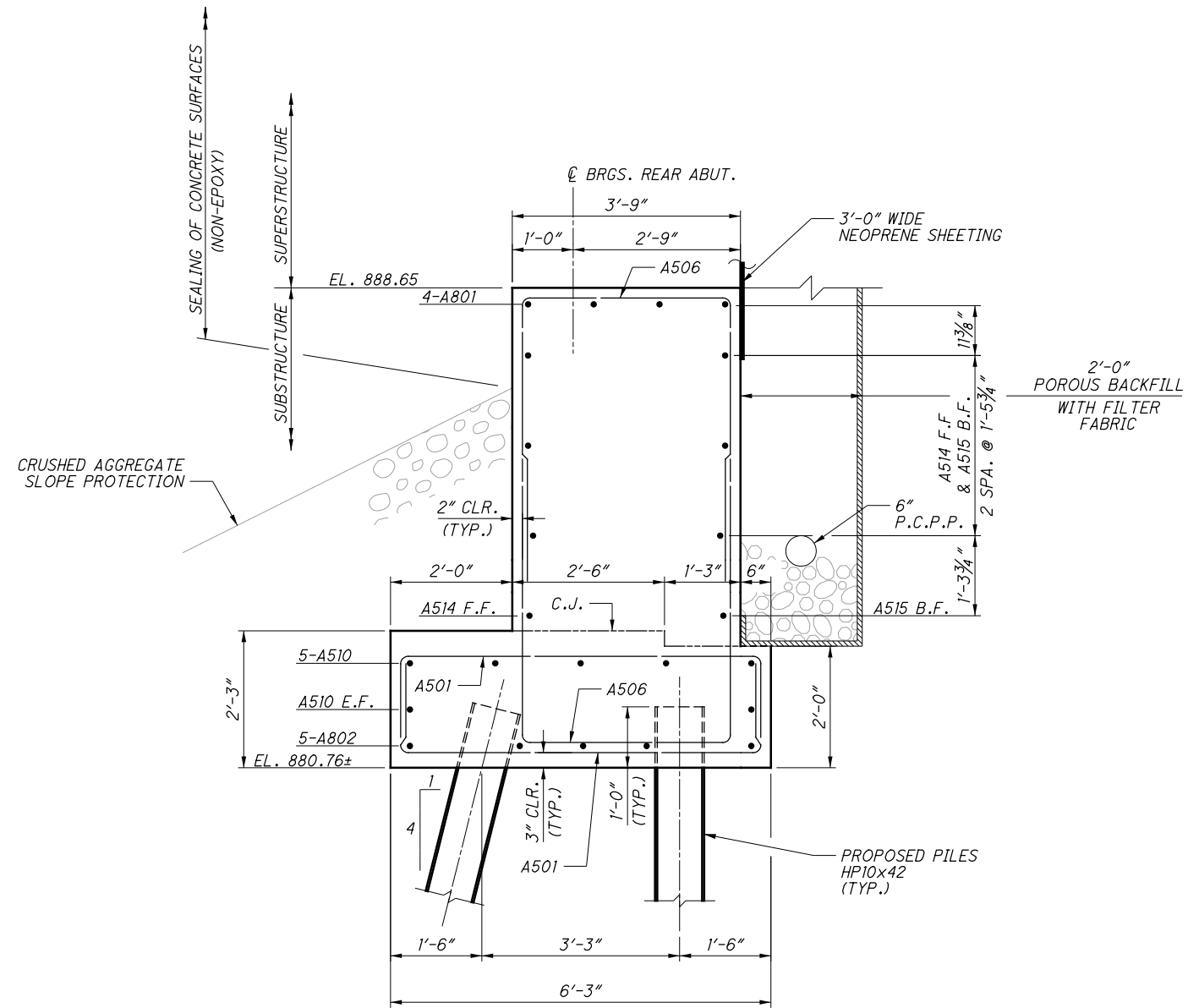
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DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 752-5900 PHONE
 DATE: 8/8/2016
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: LYH
 CHECKED: CMH
 STRUCTURE FILE NUMBER: 2506904L/2506939R
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY
FRA-71-0.00
 PID No. 107201
 22/86
 1129
 1312

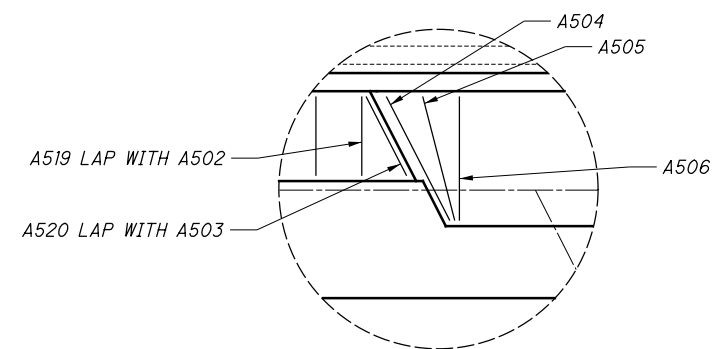
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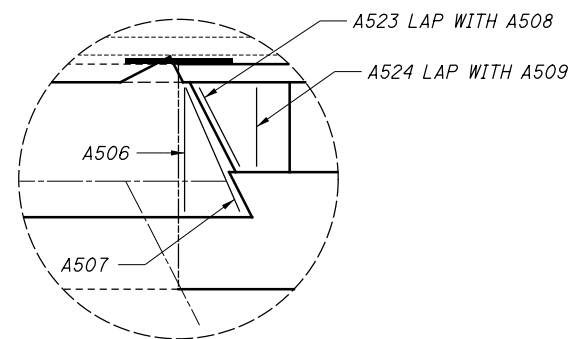
SECTION A-A



SECTION B-B



DETAIL 1



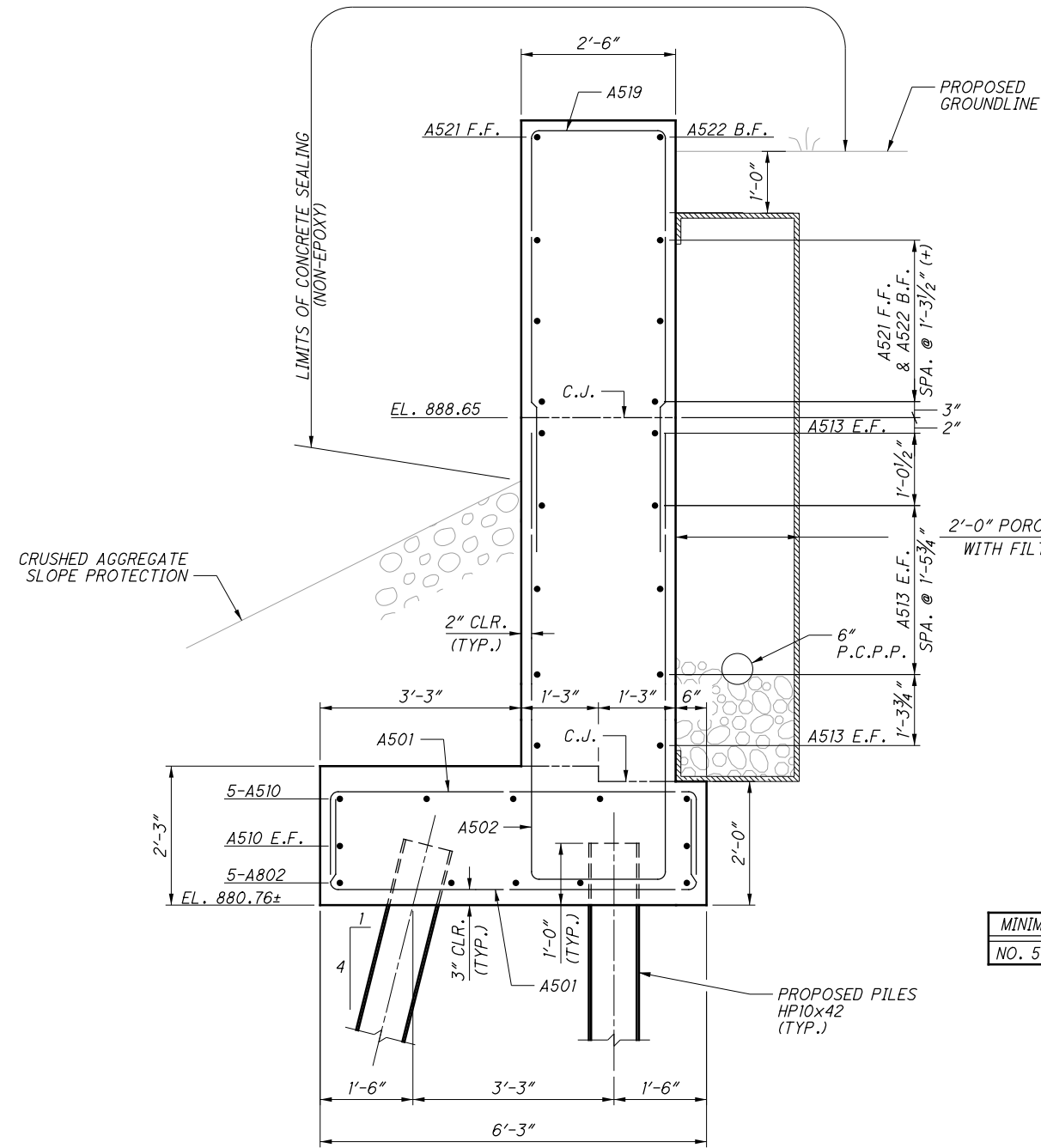
DETAIL 2

NOTES:

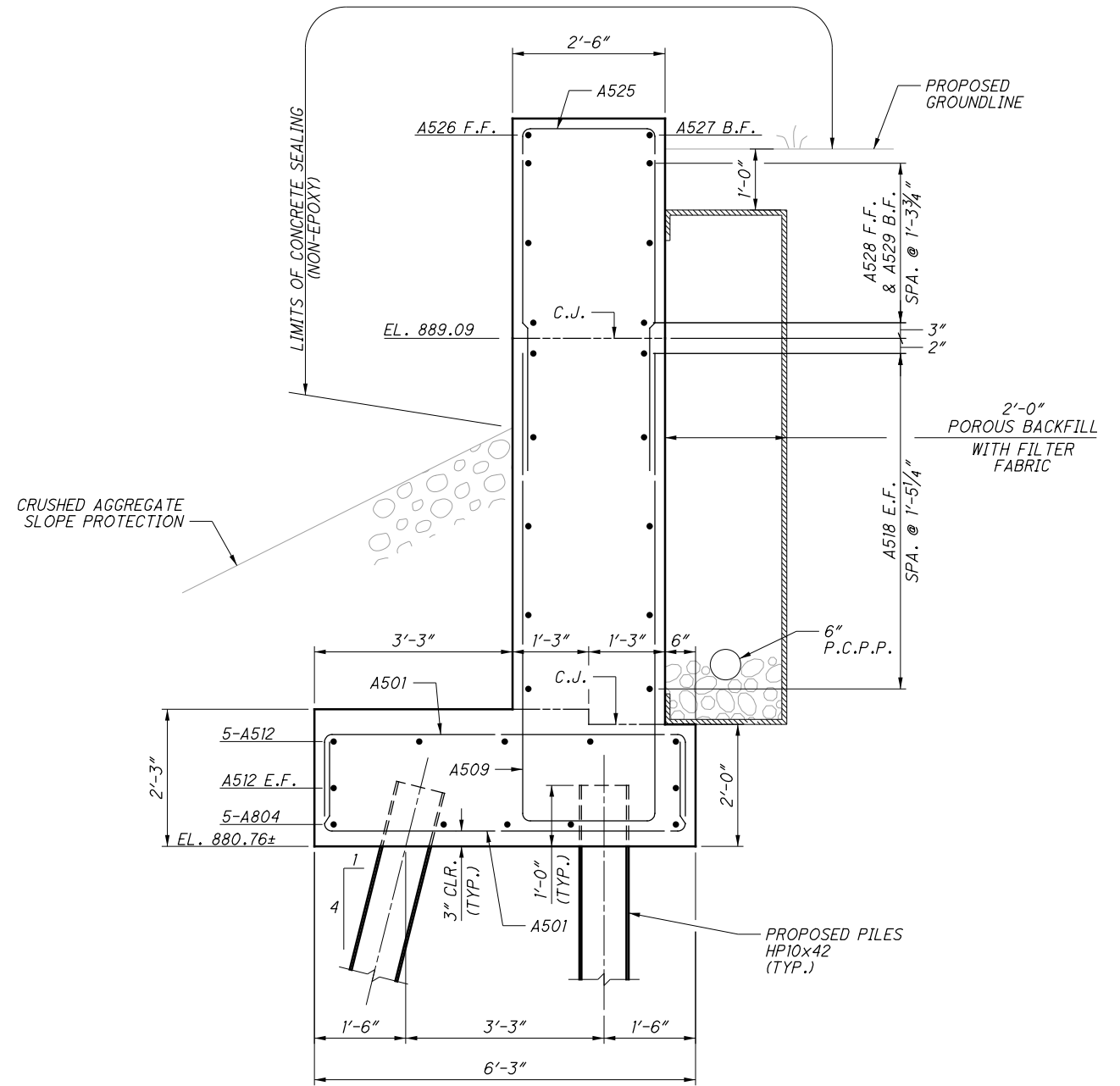
1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 22/86.
2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 26/86.

DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
DATE 8/8/2016	REVIEWED KVB
FILE NUMBER 2506904L/2506939R	STRUCTURE FILE NUMBER 2506904L/2506939R
DRAWN DJC	CHECKED CMH
DESIGNED RLC	REVISOR CMH
REAR ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	
FRA-71-0.00 PID No. 107201	
23/86	
1130 1312	

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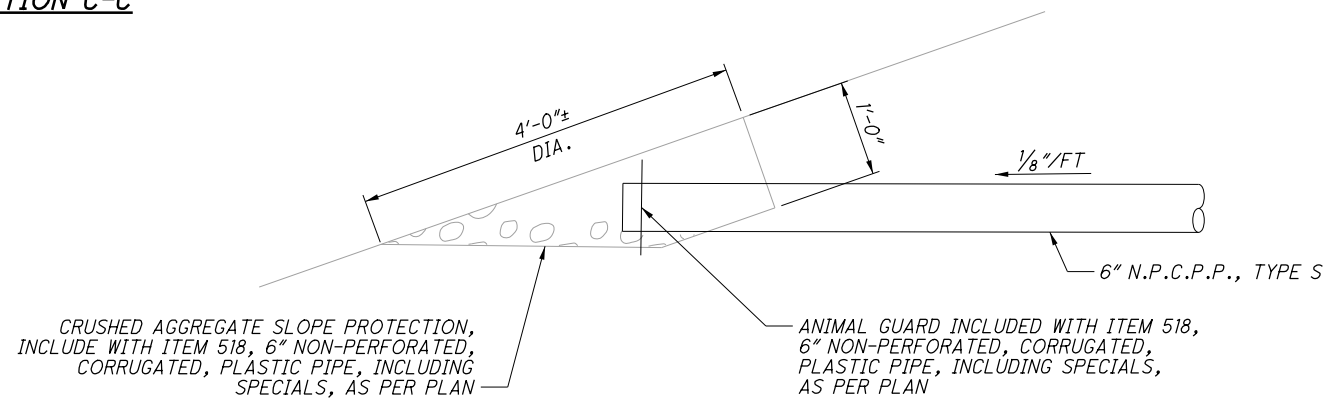


SECTION C-C



SECTION D-D

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"

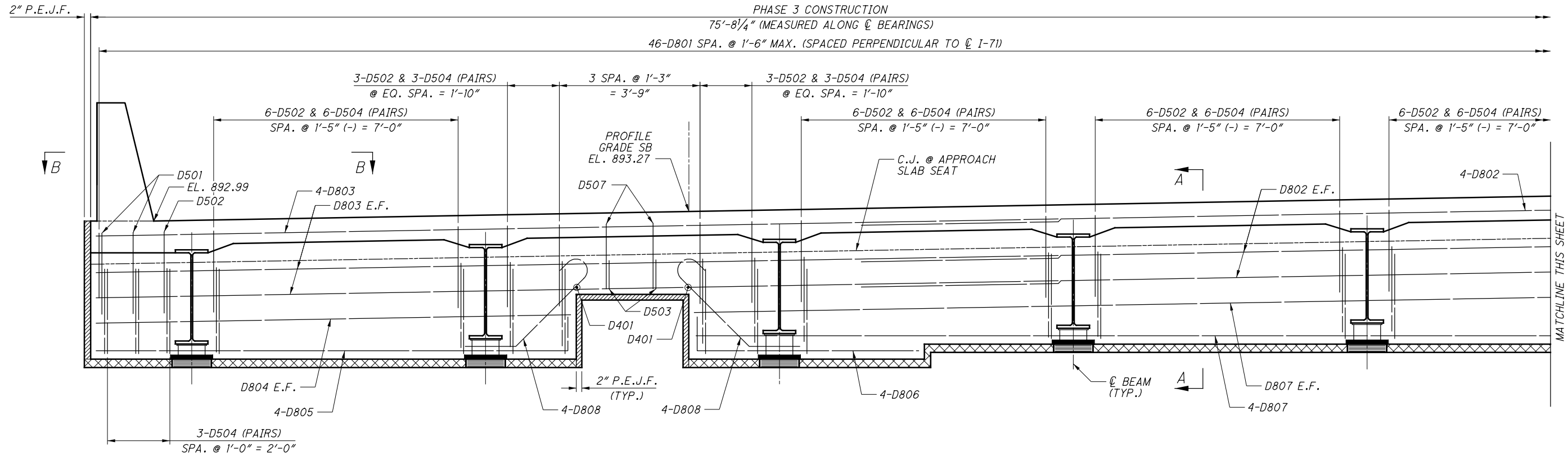


TERMINATION OF 6" N.P.C.P.P. DETAIL

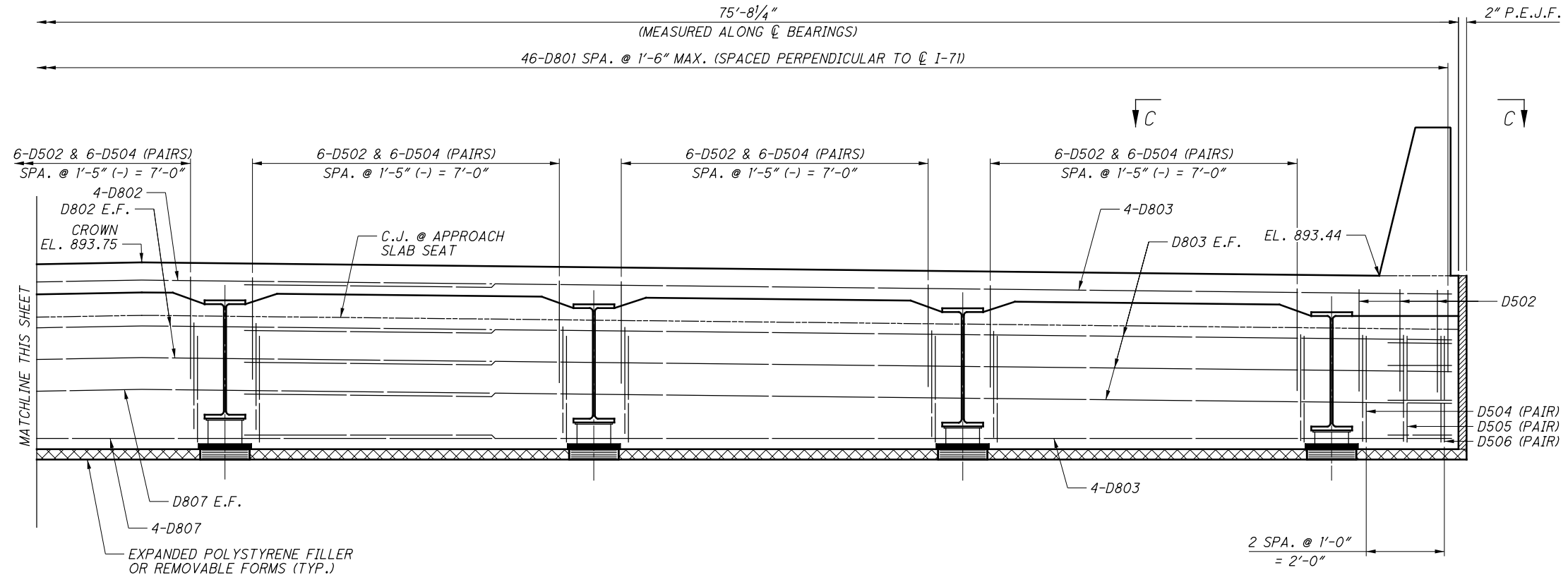
NOTE:

1. FOR NOTES, SEE SHEET 23/86.

FRA-71-0.00 PID No. 107201	REAR ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	DESIGNED RLC CMH	DRAWN DJC REVISED	REVIEWED KVB STRUCTURE FILE NUMBER 2506904L/2506939R	DATE 6/30/2015	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		24/86	1131 1312			



PART ELEVATION - SOUTHBOUND
ELEVATIONS GIVEN AT \bar{C} BEARINGS



PART ELEVATION - SOUTHBOUND
ELEVATIONS GIVEN AT \bar{C} BEARINGS

NOTES:

1. FOR SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 26/86.
2. FOR SEMI-INTEGRAL ABUTMENT GUIDE DETAILS, SEE SHEET 29/86.
3. ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-0"
NO. 8 BAR	5'-10"

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DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

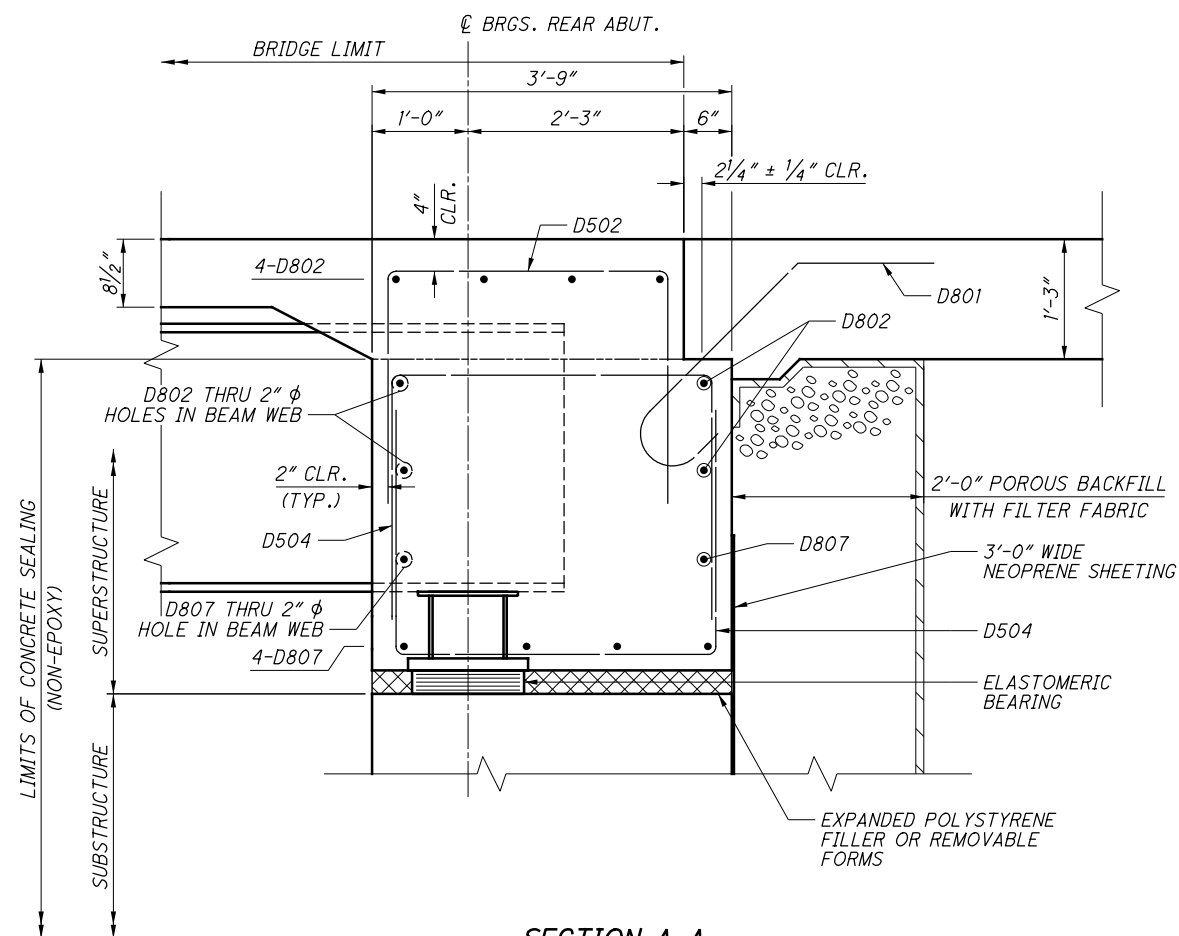
DESIGNED	ALM	CHECKED	CMH
DRAWN	ALM	REVISED	
REVIEWED	KVB	DATE	6/30/2015
STRUCTURE FILE NUMBER	2506904L/2506939R		

FRA-71-0.00
 PID No. 107201
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

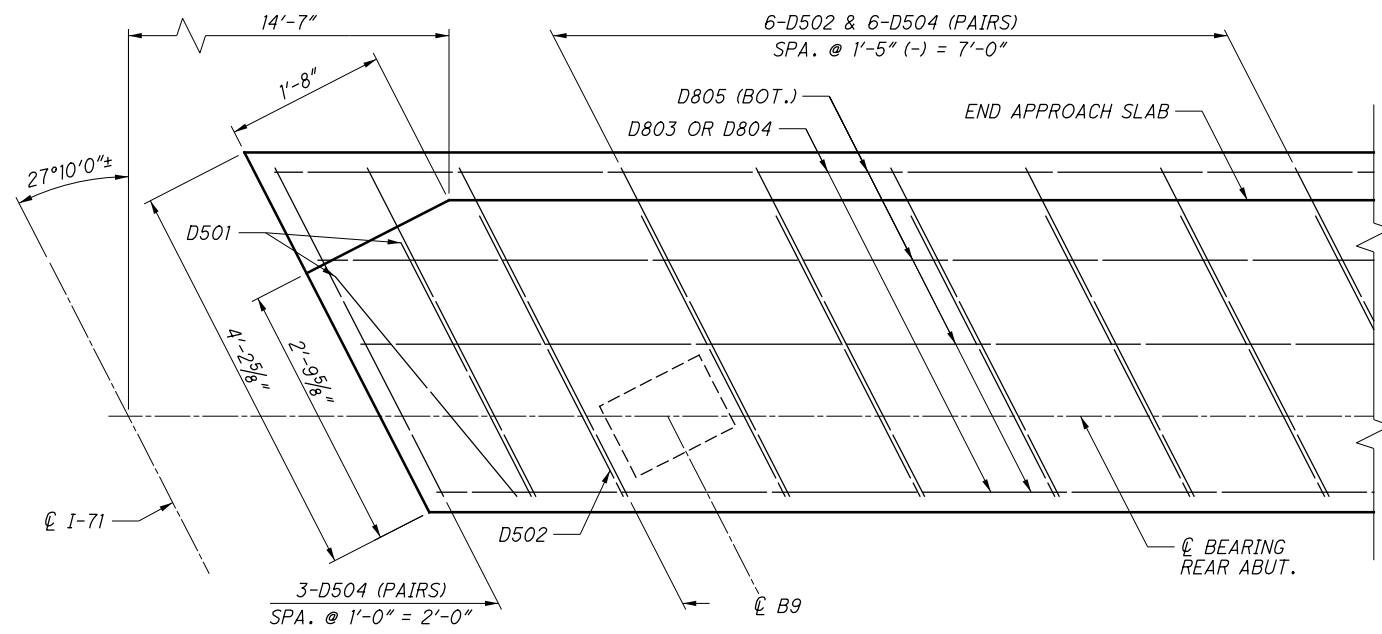
REAR ABUTMENT DIAPHRAGM DETAILS - SOUTHBOUND BRIDGE

25/86
 1132
 1312

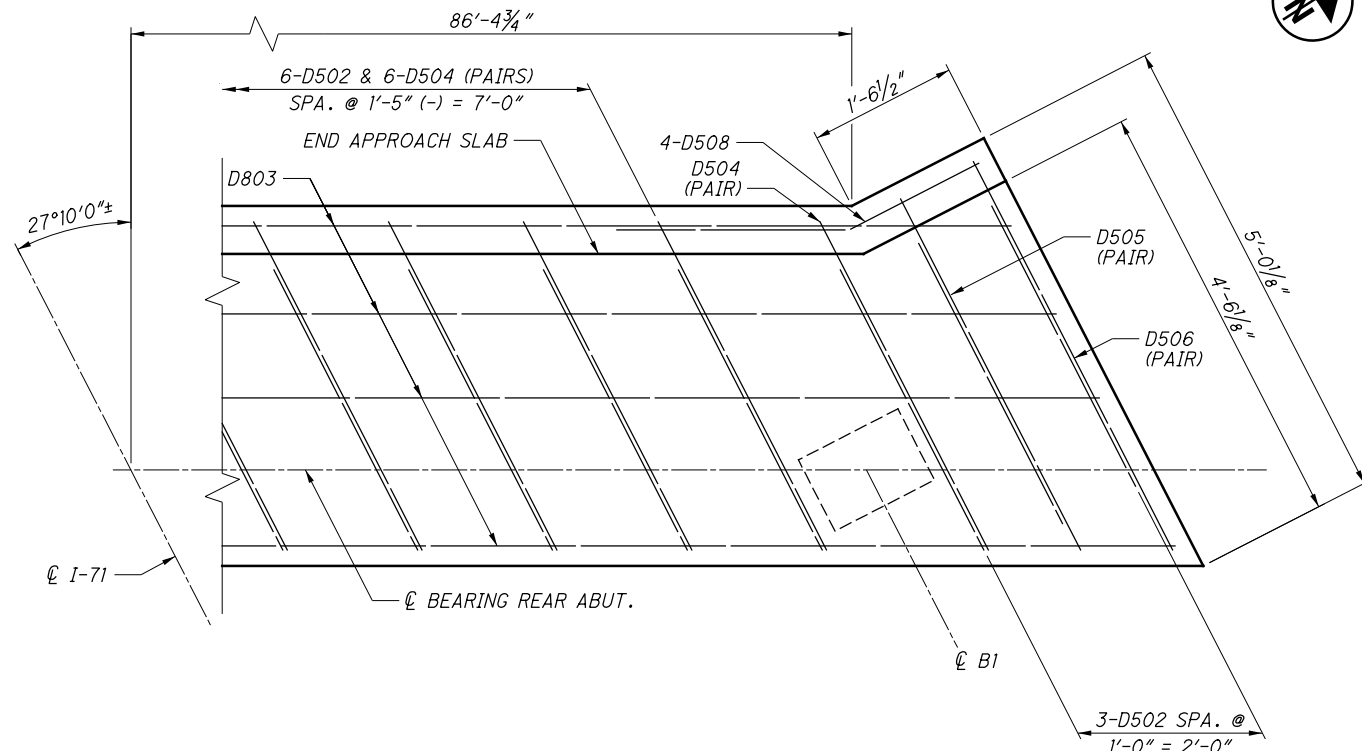
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SECTION A-A
(REBAR LABELED AT SECTION ONLY)



VIEW B-B
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)



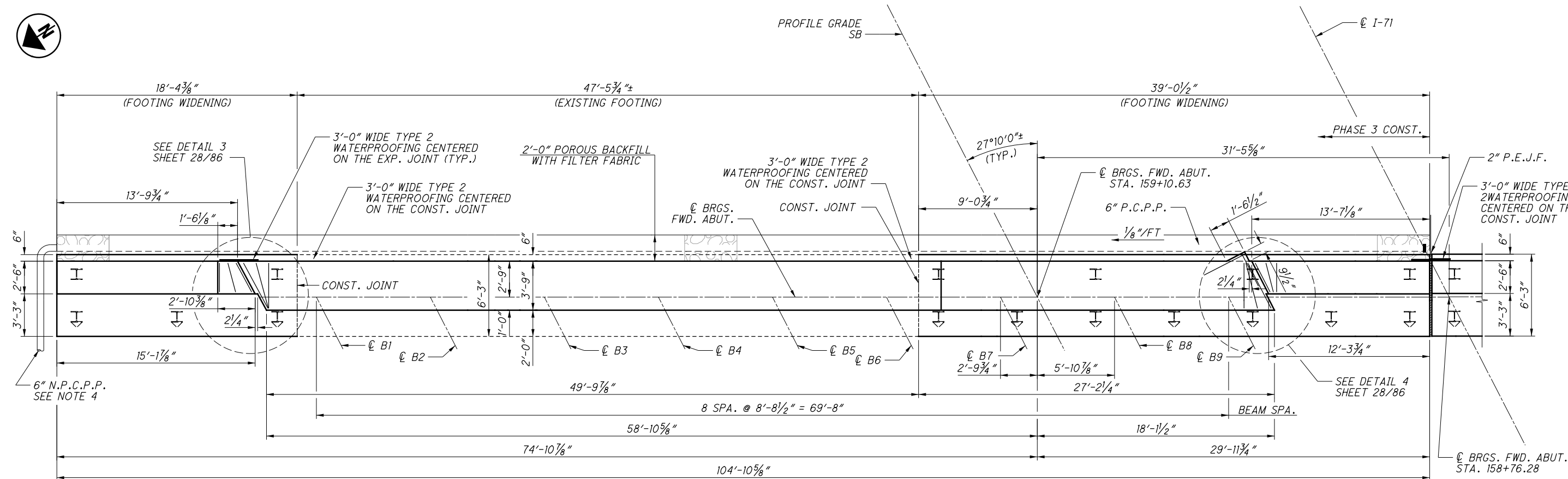
VIEW C-C
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)

NOTE:

1. FOR THE LOCATION OF SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 25/86.



FRA-71-0.00 PID No. 107201	REAR ABUTMENT DIAPHRAGM DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY		DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
	26/86 1133 1312	DATE 8/8/2016	REVIEWED KVB
DESIGNED ALM	DRAWN ALM	CHECKED CMH	REVISIONS



LEGEND:

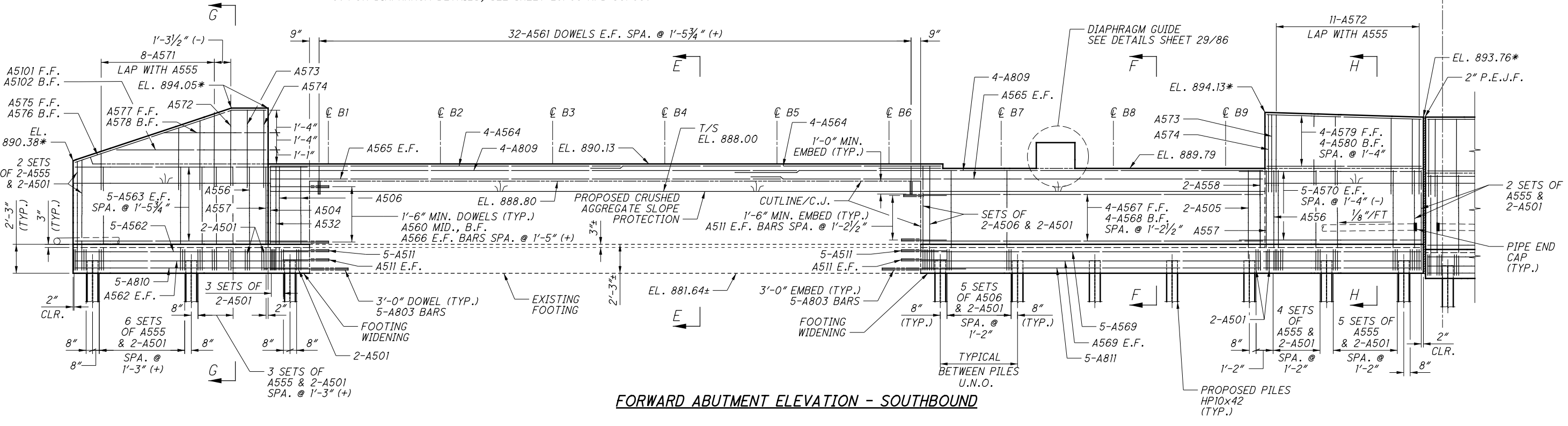
- * - ELEVATION GIVEN AT ϕ BEARING
- I - PROPOSED VERTICAL PILE
- I - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	4'-0"

NOTES:

1. FOR SECTIONS E-E THRU H-H, SEE SHEETS 28/86 AND 29/86.
2. FOR FOOTING & PILE LAYOUT, SEE SHEET 20/86.
3. FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-1-96.
4. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 24/86.
5. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.
6. FOR DIAPHRAGM DETAILS, SEE SHEET 29/86 AND 30/86.

FORWARD ABUTMENT PLAN - SOUTHBOUND

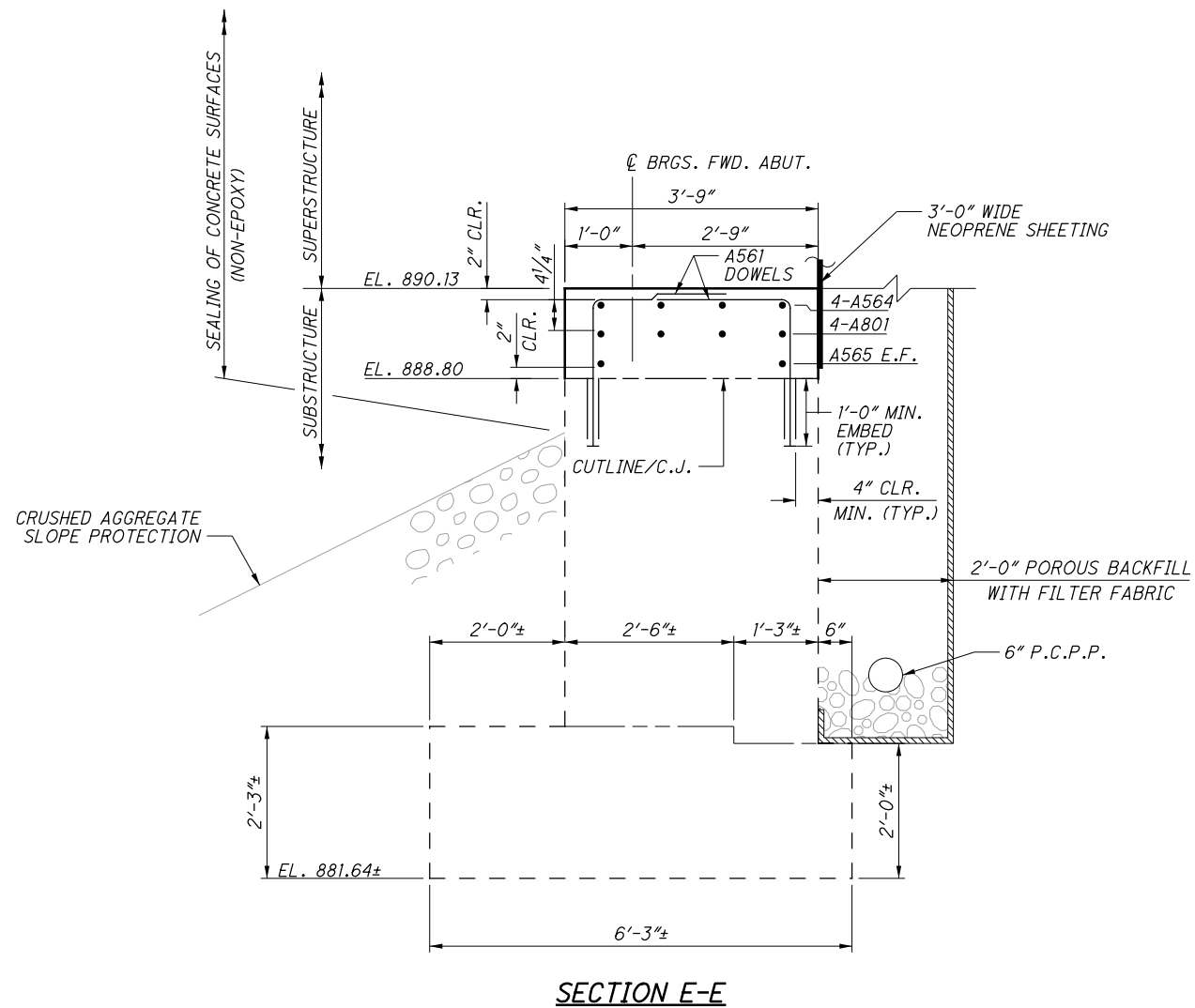


FORWARD ABUTMENT ELEVATION - SOUTHBOUND

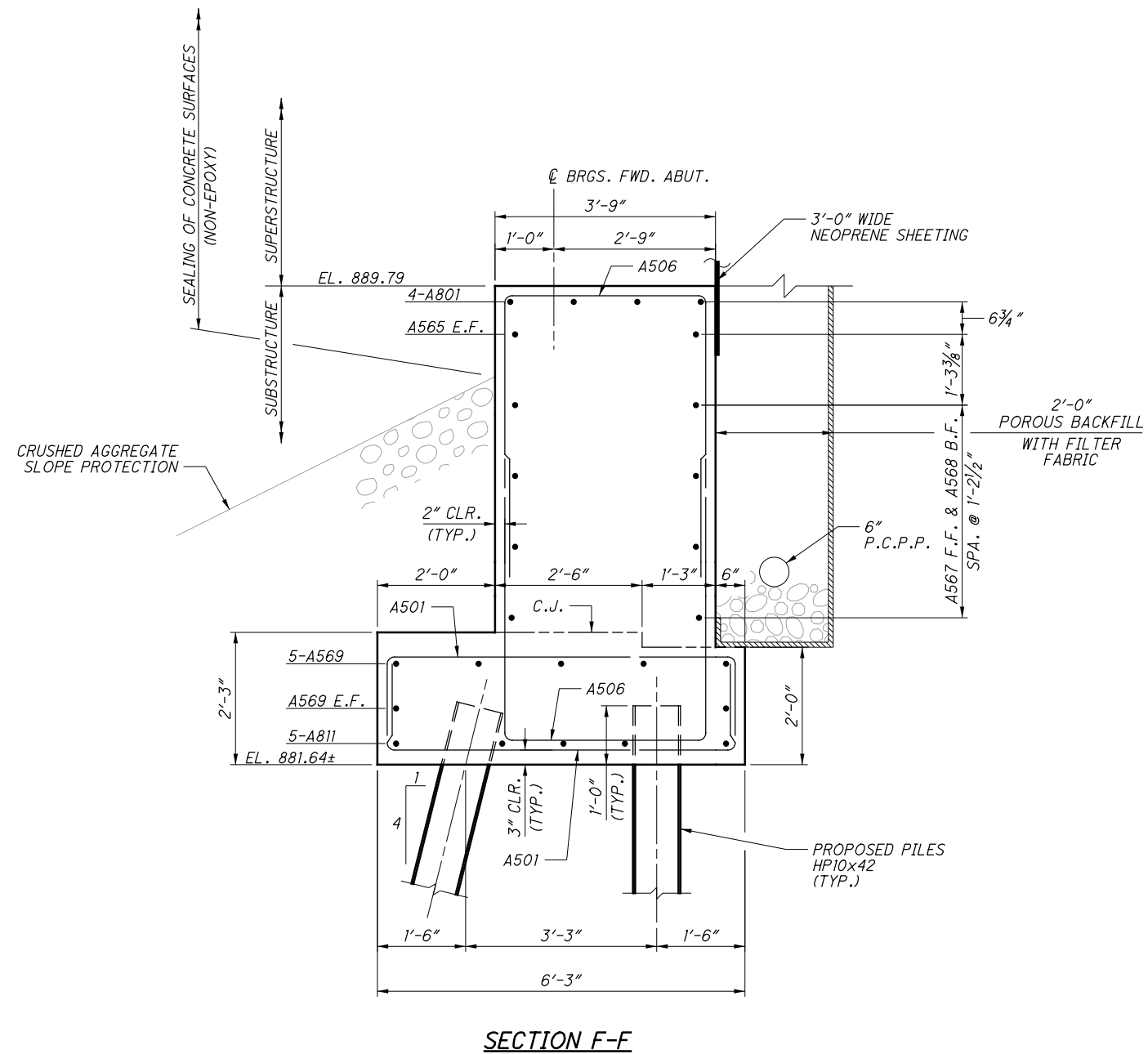
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DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT., STE 110 DUBLIN, OH 43016 (614) 792-5900 PHONE
 DATE: 8/8/2016
 REVIEWED: KVB
 DRAWN: DJC
 CHECKED: CMH
 STRUCTURE FILE NUMBER: 2506904L/2506939R
FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY
FRA-71-0.00
 PID No. 107201
 27/86
 1134
 1312

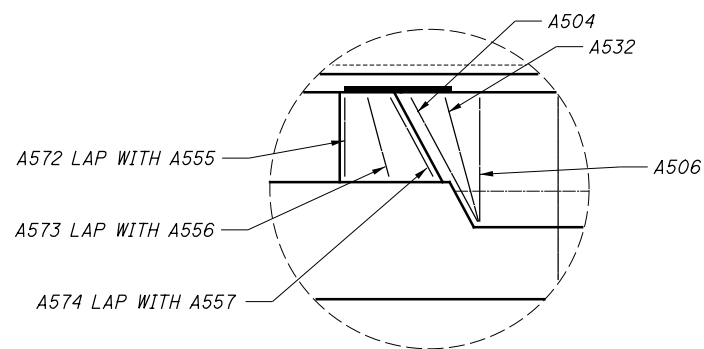
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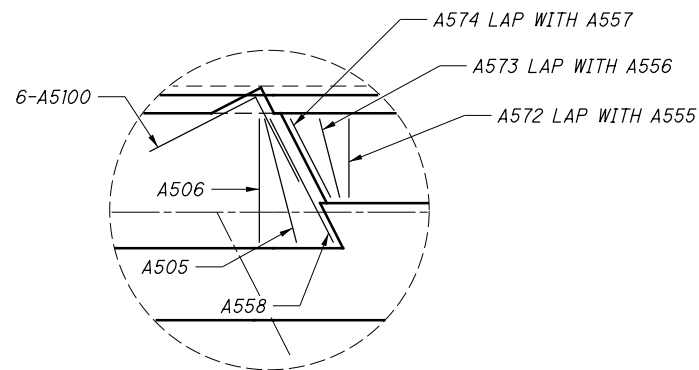
SECTION E-E



SECTION F-F



DETAIL 3



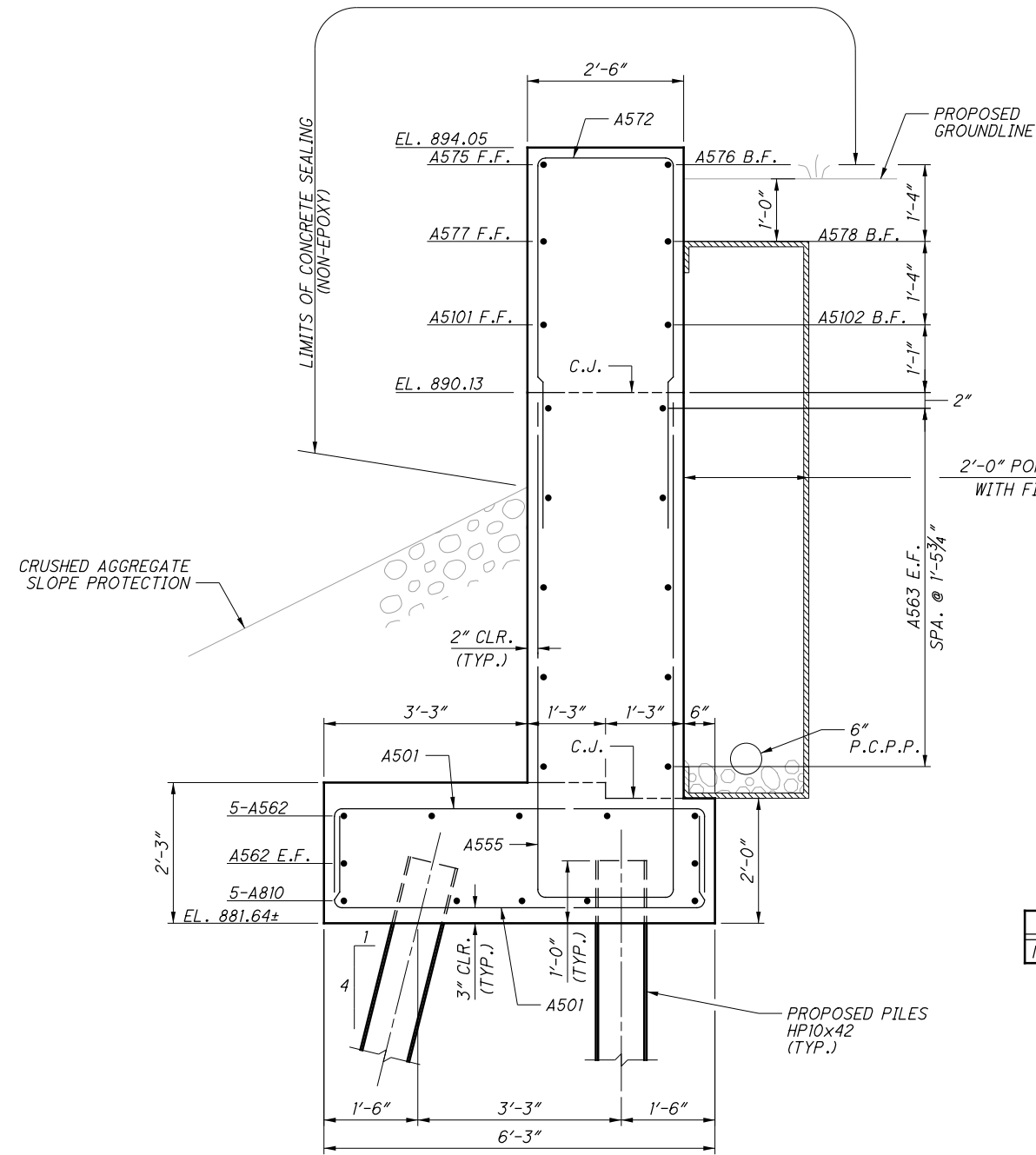
DETAIL 4

NOTES:

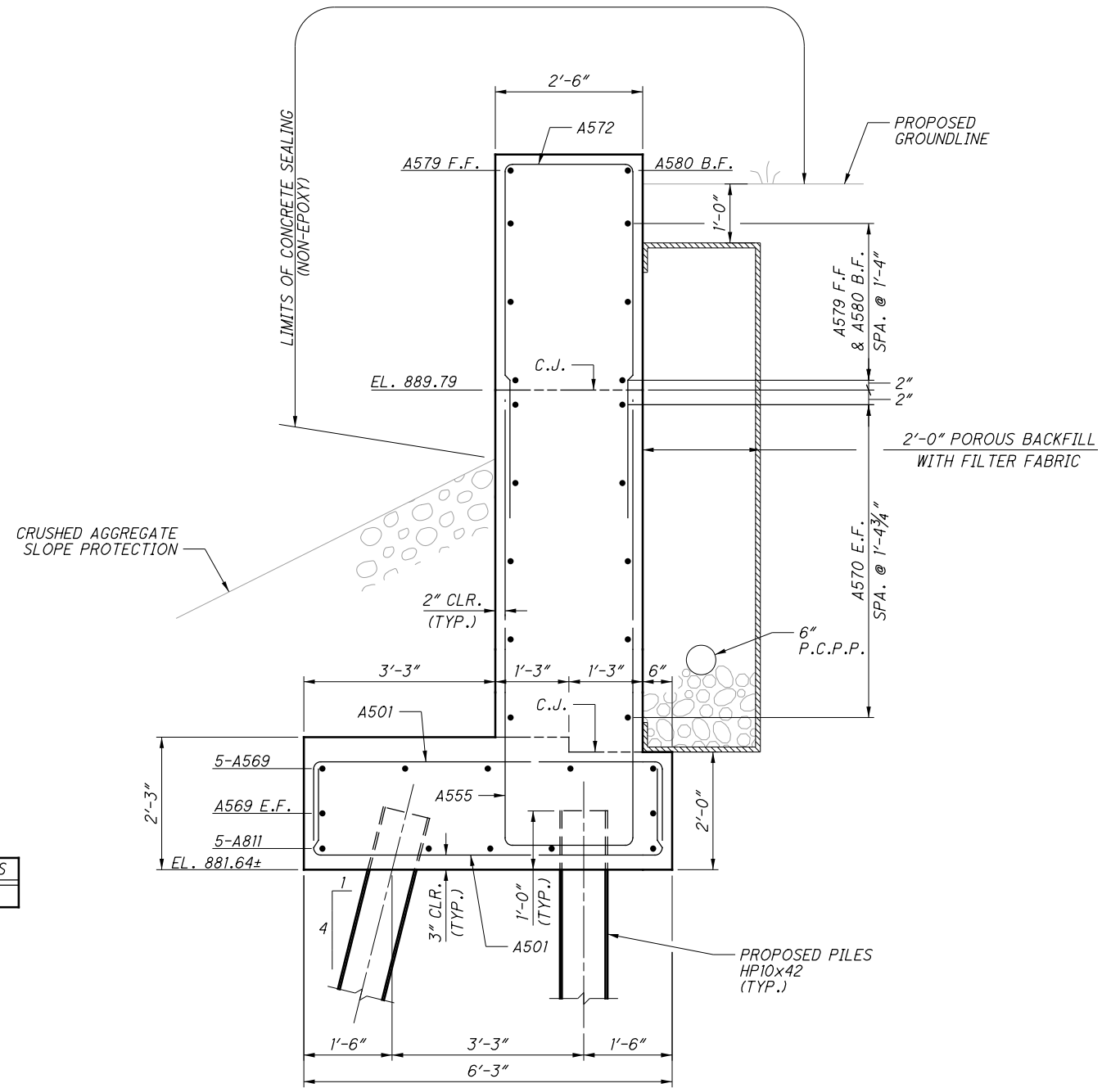
1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 27/86.
2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 31/86.

FRA-71-0.00 PID No. 107201	FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	DESIGNED LYH CMH	DRAWN DJC REVISED	REVIEWED KVB STRUCTURE FILE NUMBER 2506904L/2506939R	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		28/86	1135 1312			

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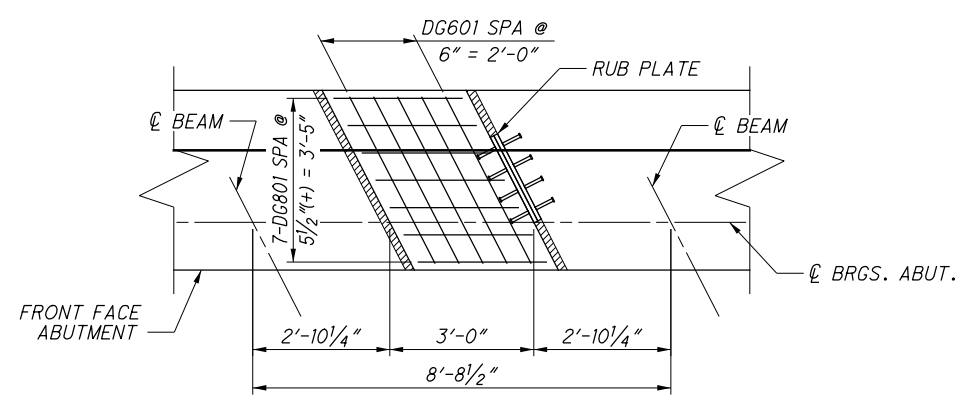


SECTION G-G

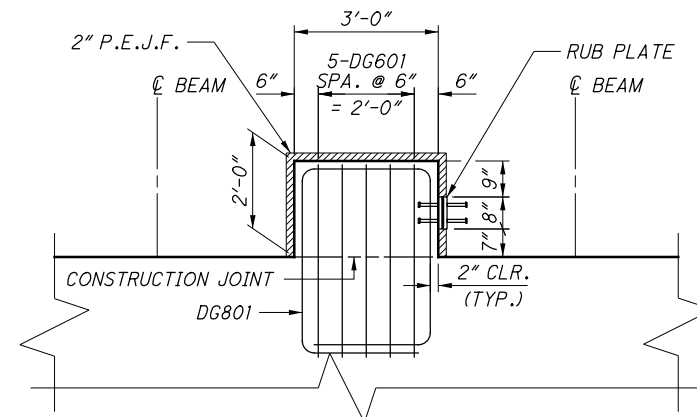


SECTION H-H

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"



DIAPHRAGM GUIDE PLAN

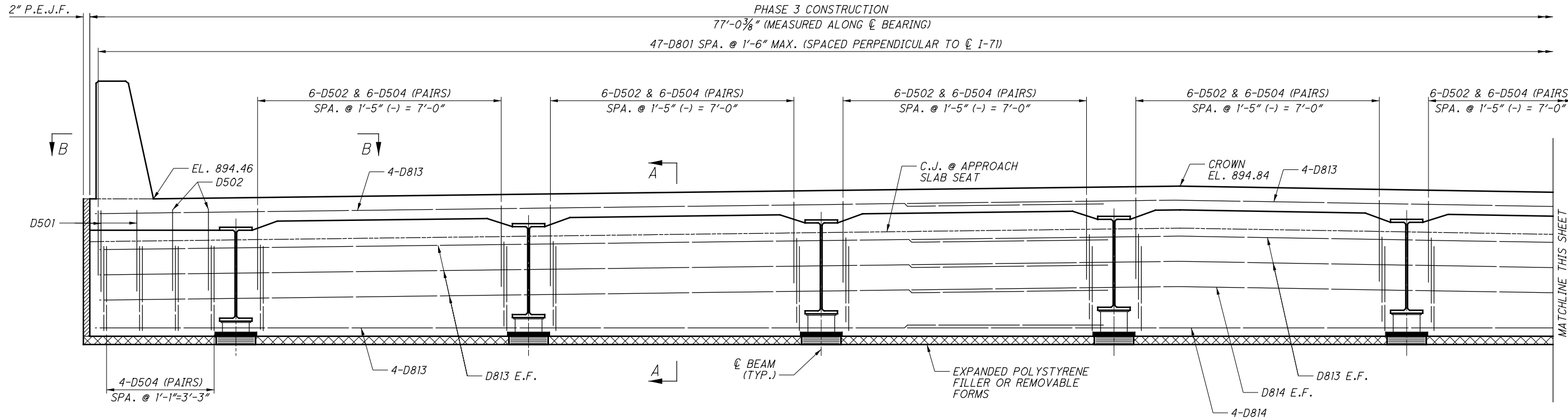


DIAPHRAGM GUIDE ELEVATION

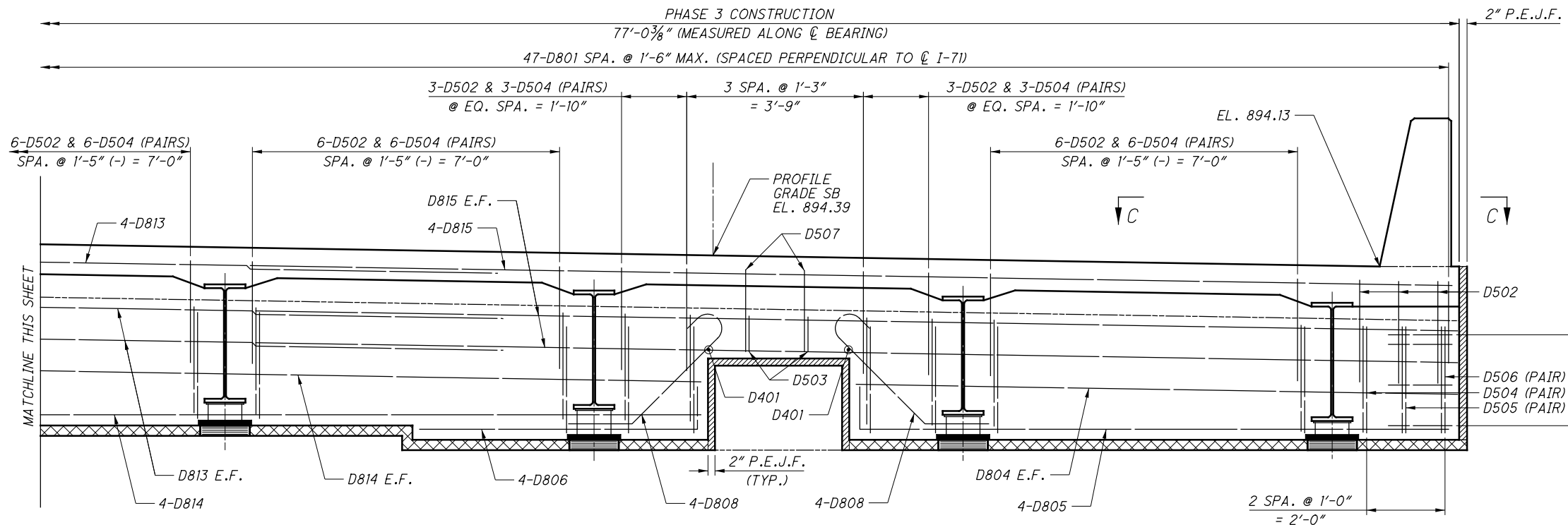
NOTES:

1. FOR NOTES, SEE SHEETS 28/86.
2. FOR ADDITIONAL DIAPHRAGM GUIDE DETAILS NOT SHOWN, SEE ODOT STD DWG. SICD-2-14.

DESIGNED LYH CHECKED CMH	DRAWN DJC REVISED	REVIEWED KVB	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		STRUCTURE FILE NUMBER 2506904L/2506939R		
FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY				
FRA-71-0.00 PID No. 107201		29/86		
1136 1312				



PART ELEVATION
ELEVATIONS GIVEN AT Q BEARING



PART ELEVATION
ELEVATIONS GIVEN AT Q BEARING

NOTES:

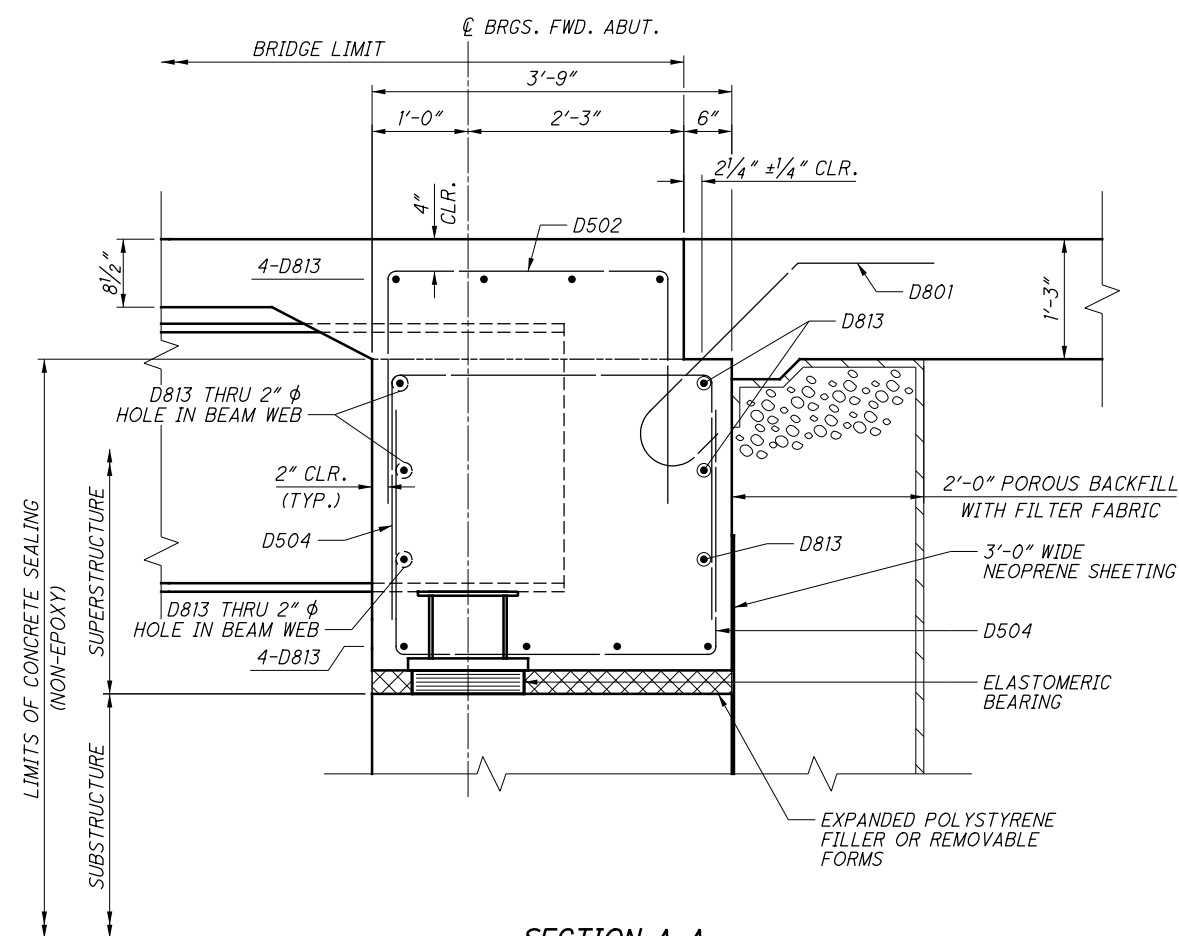
1. FOR SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 31/86.
2. FOR SEMI-INTEGRAL ABUTMENT GUIDE DETAILS, SEE SHEET 29/86.
3. ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-0"
NO. 8 BAR	5'-10"

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DESIGN AGENCY: Mead & Hunt
 DATE: 8/8/2016
 REVISIONS: KVB
 STRUCTURE FILE NUMBER: 2506904L/2506939R
 DRAWN: ALM
 CHECKED: CMH
 DESIGNED: ALM
 BRIDGE NO.: FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY
 FRA-71-0.00
 PID No. 107201
 30/86
 1137
 1312

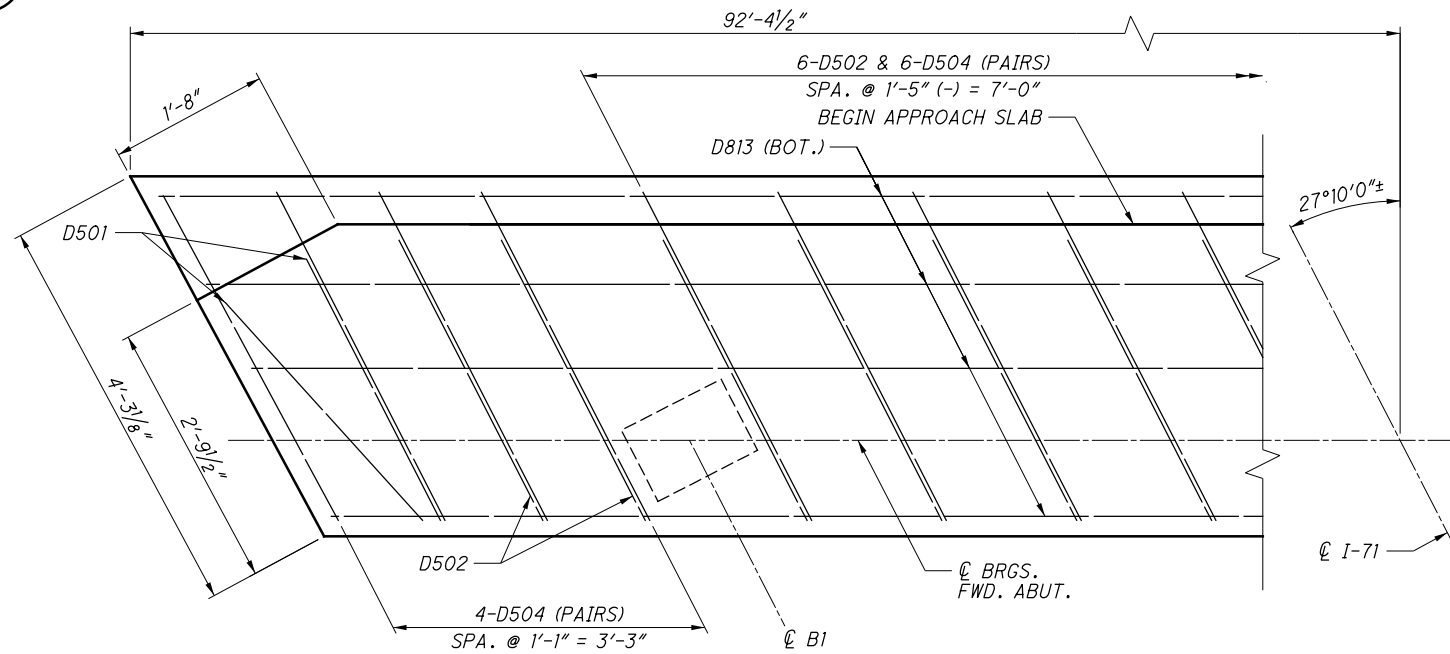
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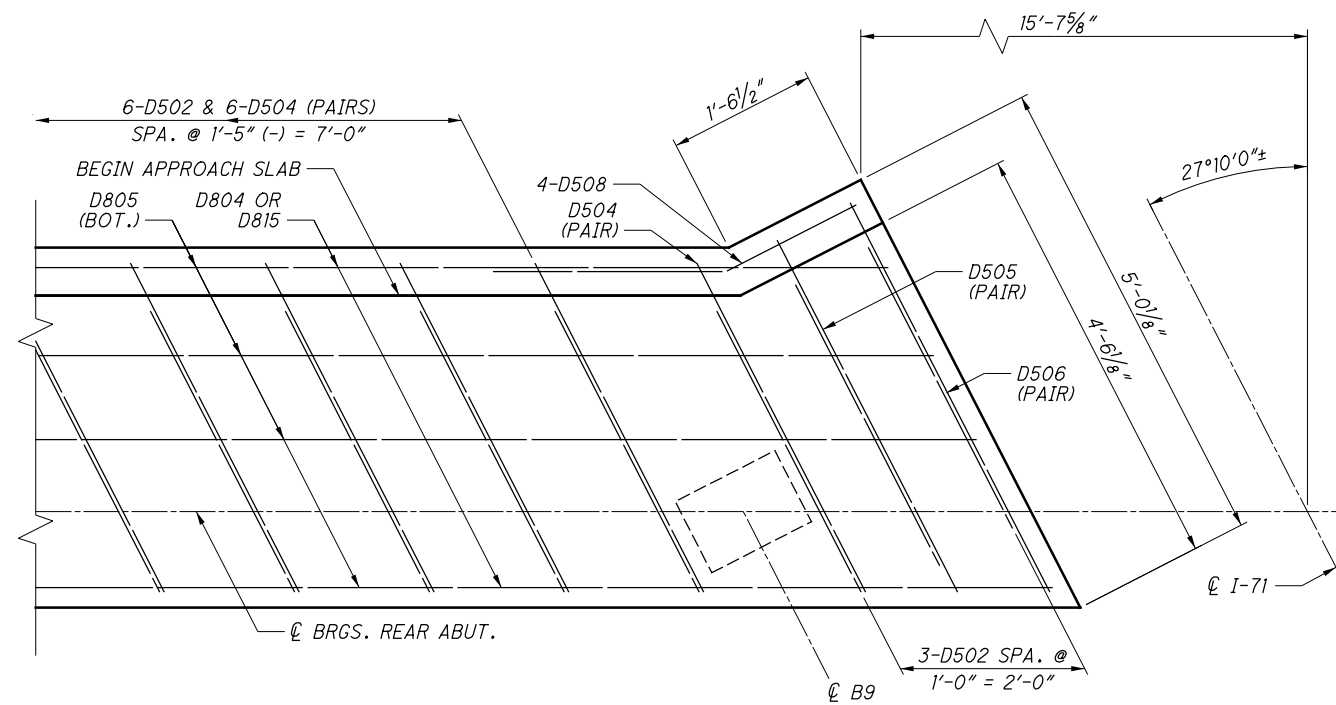
SECTION A-A
(REBAR LABELED AT SECTION ONLY)

NOTE:

1. FOR THE LOCATION OF SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 30/86.



VIEW B-B
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)

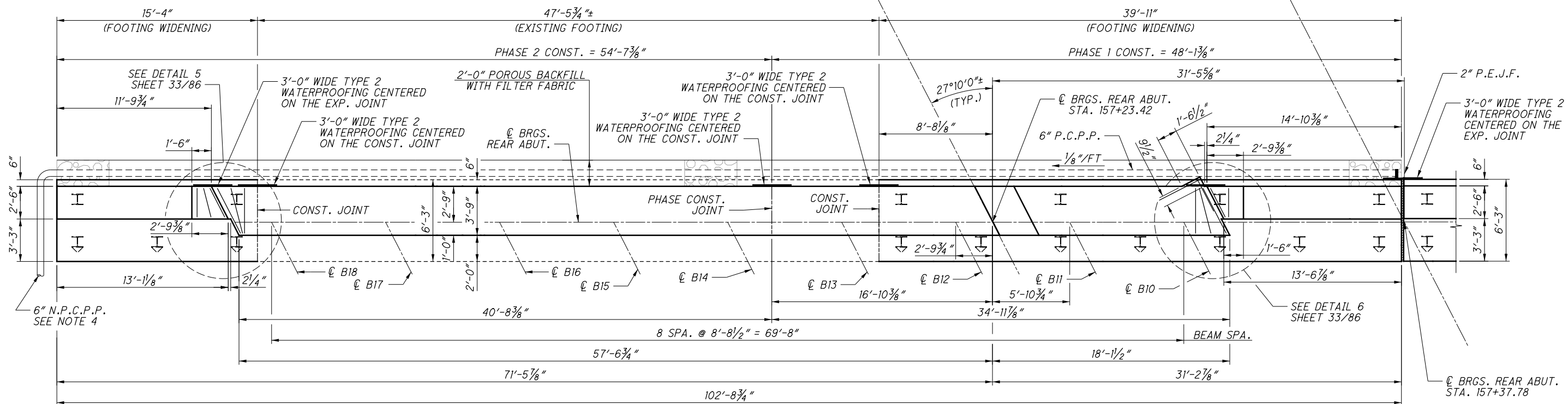


VIEW C-C
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)

FRA-71-0.00 PID No. 107201	FORWARD ABUTMENT DIAPHRAGM DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	DESIGNED ALM	CHECKED CMH	DRAWN ALM	REVISED	REVIEWED KVB	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		STRUCTURE FILE NUMBER 2506904L/2506939R	FILE NUMBER	FILE NUMBER	FILE NUMBER	FILE NUMBER	FILE NUMBER	FILE NUMBER



PROFILE GRADE
NB



REAR ABUTMENT PLAN - NORTHBOUND

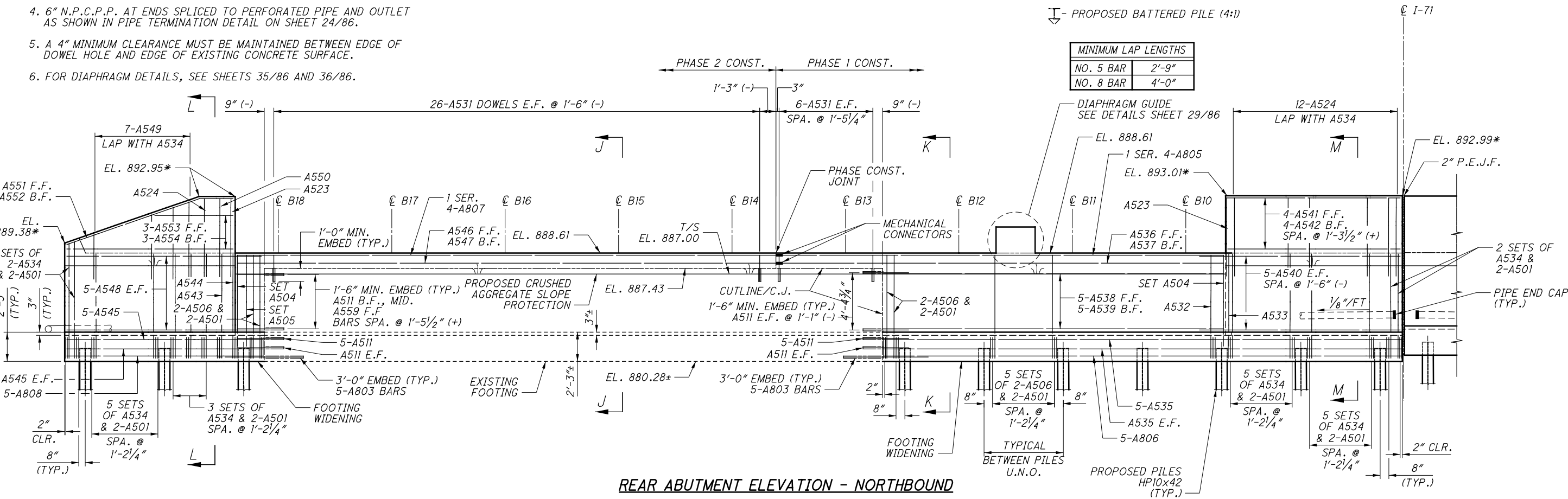
NOTES:

1. FOR SECTIONS J-J THRU M-M, SEE SHEETS 33/86 AND 34/86.
2. FOR FOOTING AND PILE LAYOUT, SEE SHEET 21/86.
3. FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-1-96.
4. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 24/86.
5. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.
6. FOR DIAPHRAGM DETAILS, SEE SHEETS 35/86 AND 36/86.

LEGEND:

- * - ELEVATION GIVEN AT \odot BEARING
- I - PROPOSED VERTICAL PILE
- ∇ - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	4'-0"



REAR ABUTMENT ELEVATION - NORTHBOUND

X:\4037000\21957.16\10720\structures\FRA071_0296C\sheets\071_0296CAR004.dgn Sheet 10/28/2019 11:43:34 AM 1458sjs

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT. STE 110
DUBLIN, OH 43068
(614) 782-5900 PHONE

DATE
8/8/2016

REVIEWED
KVB

DRAWN
DJC

DESIGNED
RLC

CHECKED
CMH

STRUCTURE FILE NUMBER
2506904L/2506939R

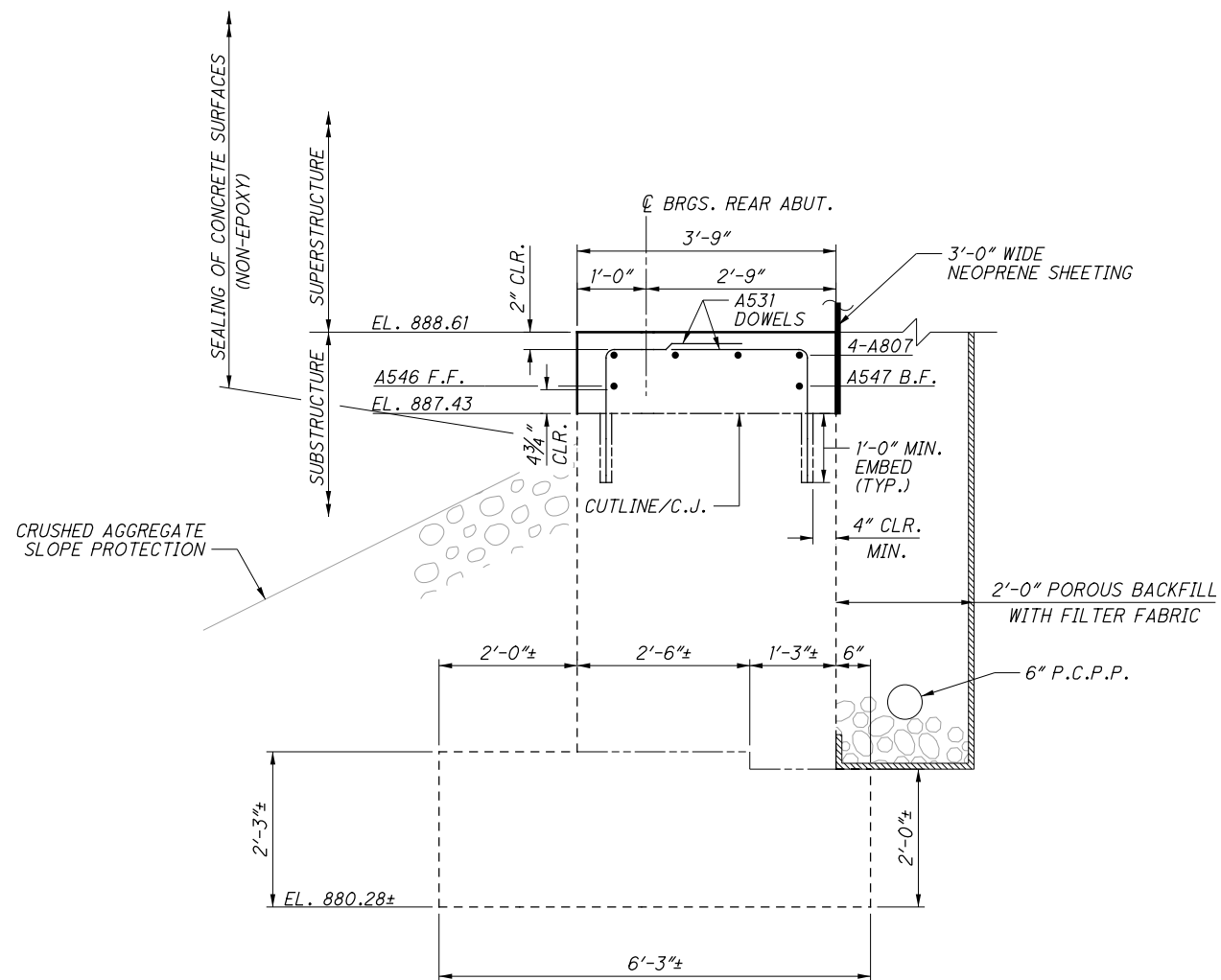
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

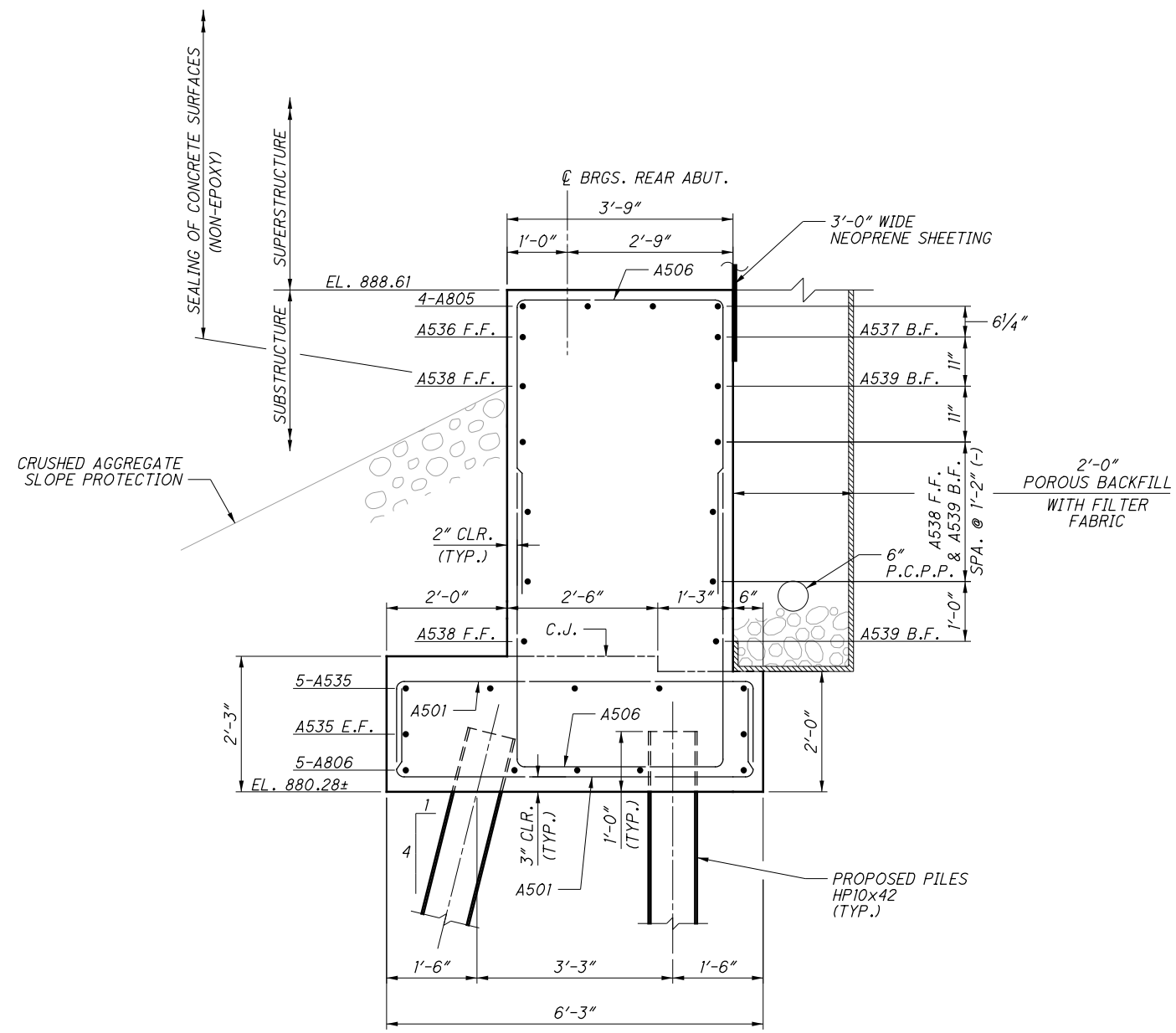
32/86

1139
1312

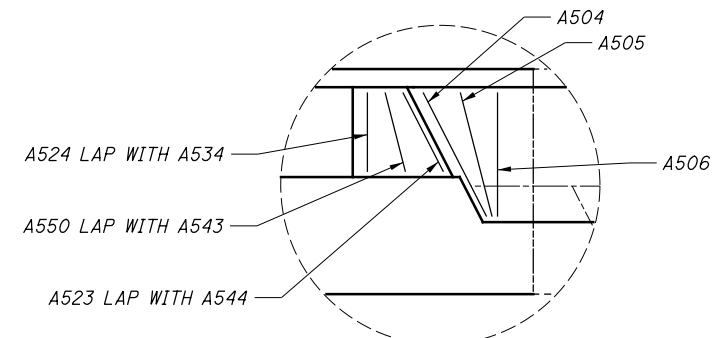
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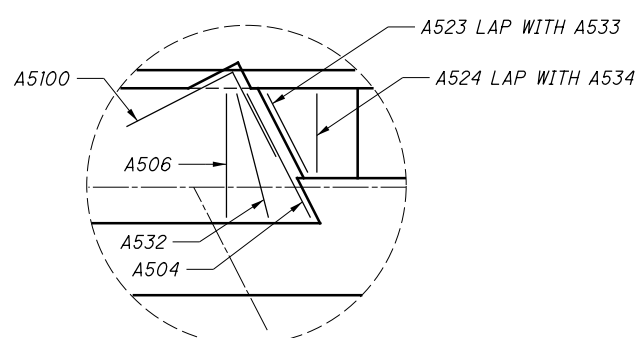
SECTION J-J



SECTION K-K



DETAIL 5

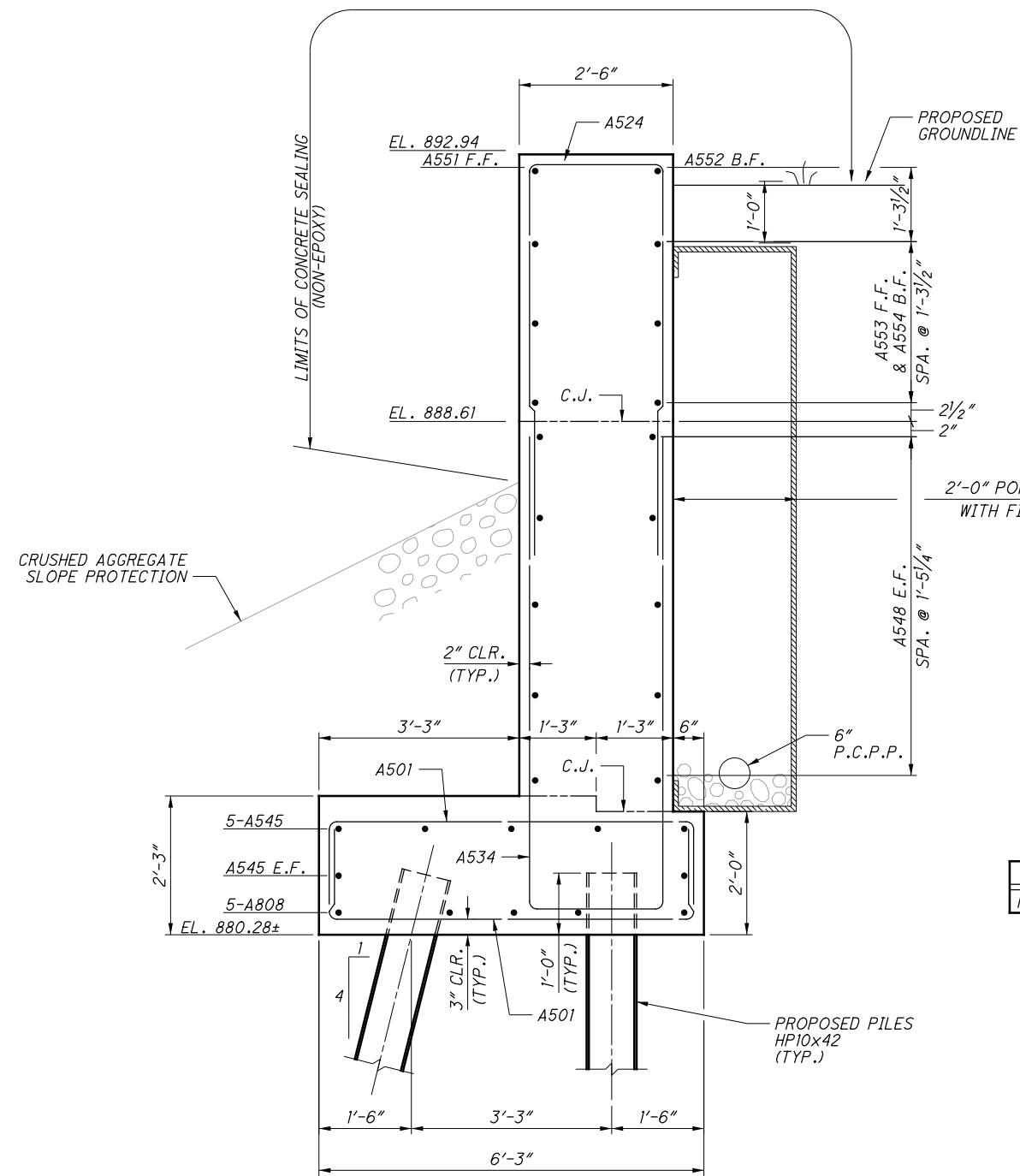


DETAIL 6

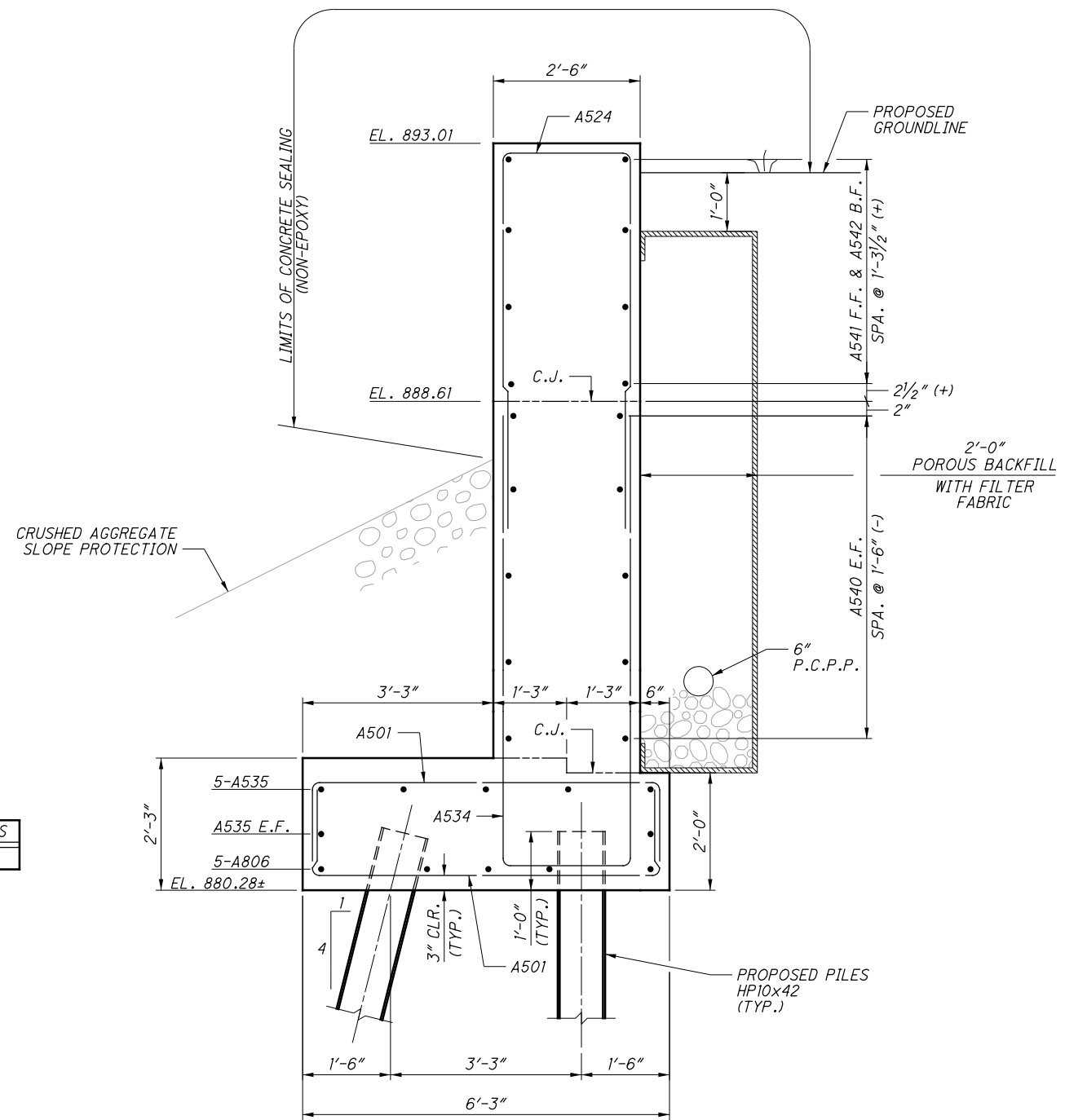
- NOTES:**
1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 32/86.
 2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 36/86.

FRA-71-0.00 PID No. 107201	REAR ABUTMENT DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY		DESIGNED RLC CHECKED CMH/KVB	DRAWN DJC REVISED	REVIEWED KVB STRUCTURE FILE NUMBER 2506904L/2506939R	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LAKELINE CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
	33/86	1140 1312					

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SECTION L-L



SECTION M-M

NOTE:

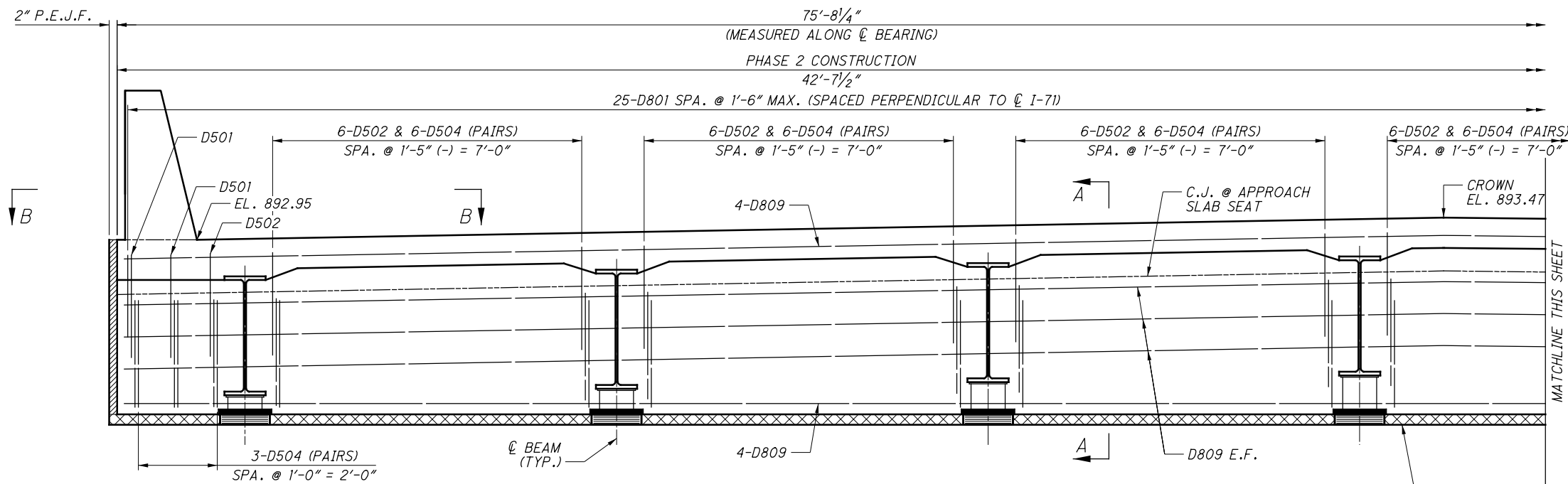
1. FOR NOTES, SEE SHEET 33/86.

FRA-71-0.00
PID No. 107201

REAR ABUTMENT DETAILS - NORTHBOUND BRIDGE
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

DESIGNED	ALM	CHECKED	CMH
DRAWN	ALM	REVISED	
REVIEWED	KVB	DATE	8/8/2016
STRUCTURE FILE NUMBER	2506904L/2506939R		

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

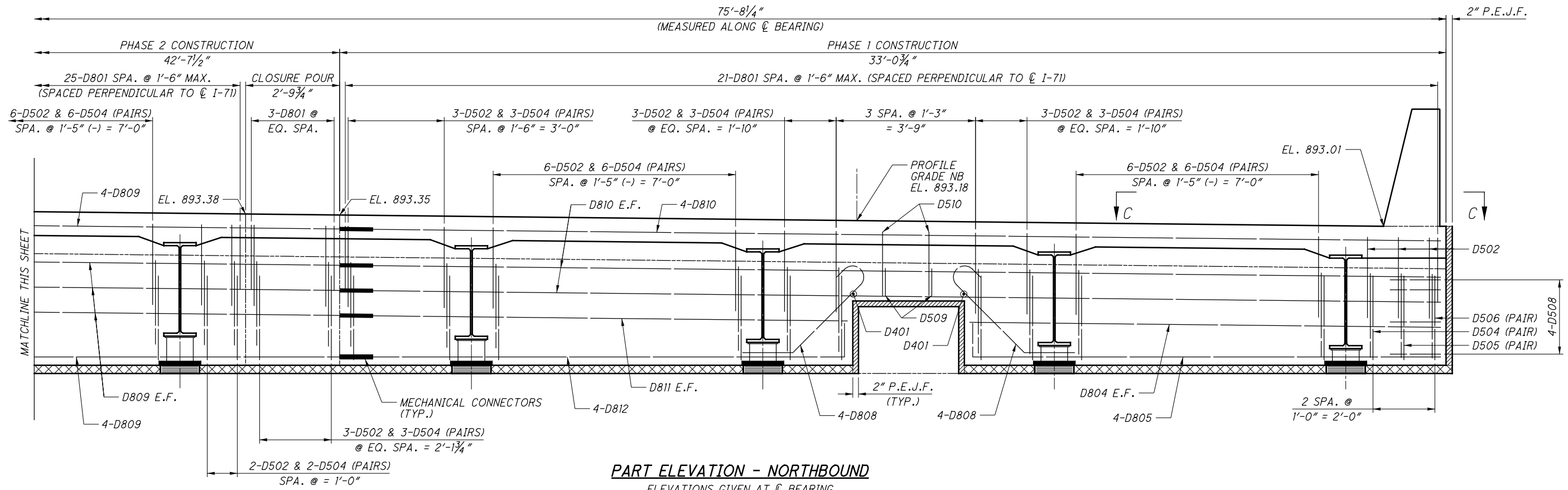


PART ELEVATION - NORTHBOUND
ELEVATIONS GIVEN AT C BEARING

NOTES:

- FOR SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 36/86.
- FOR SEMI-INTEGRAL ABUTMENT GUIDE DETAILS, SEE SHEET 29/86.
- ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER END OF AN INDIVIDUAL PHASE WITH DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-0"
NO. 8 BAR	5'-10"

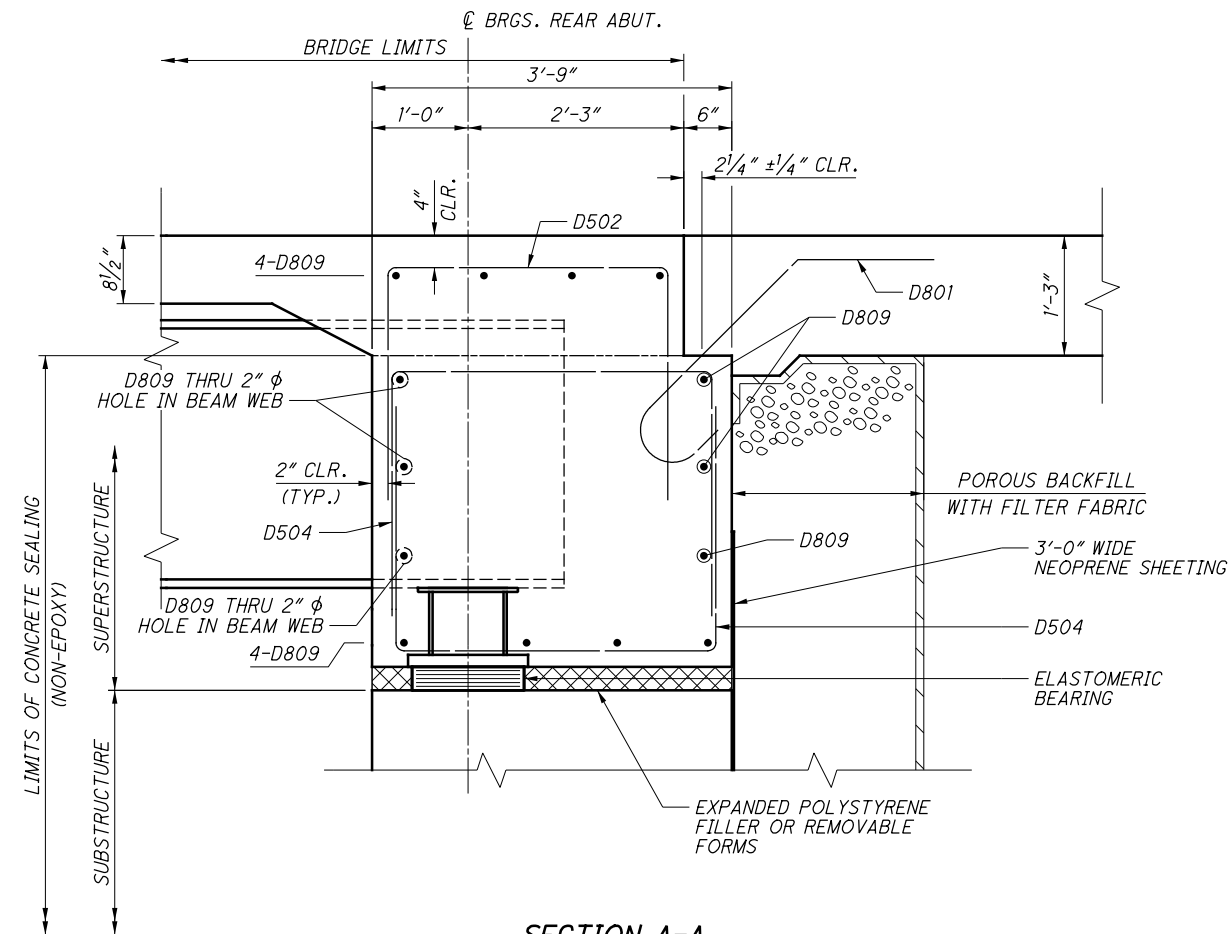


PART ELEVATION - NORTHBOUND
ELEVATIONS GIVEN AT C BEARING

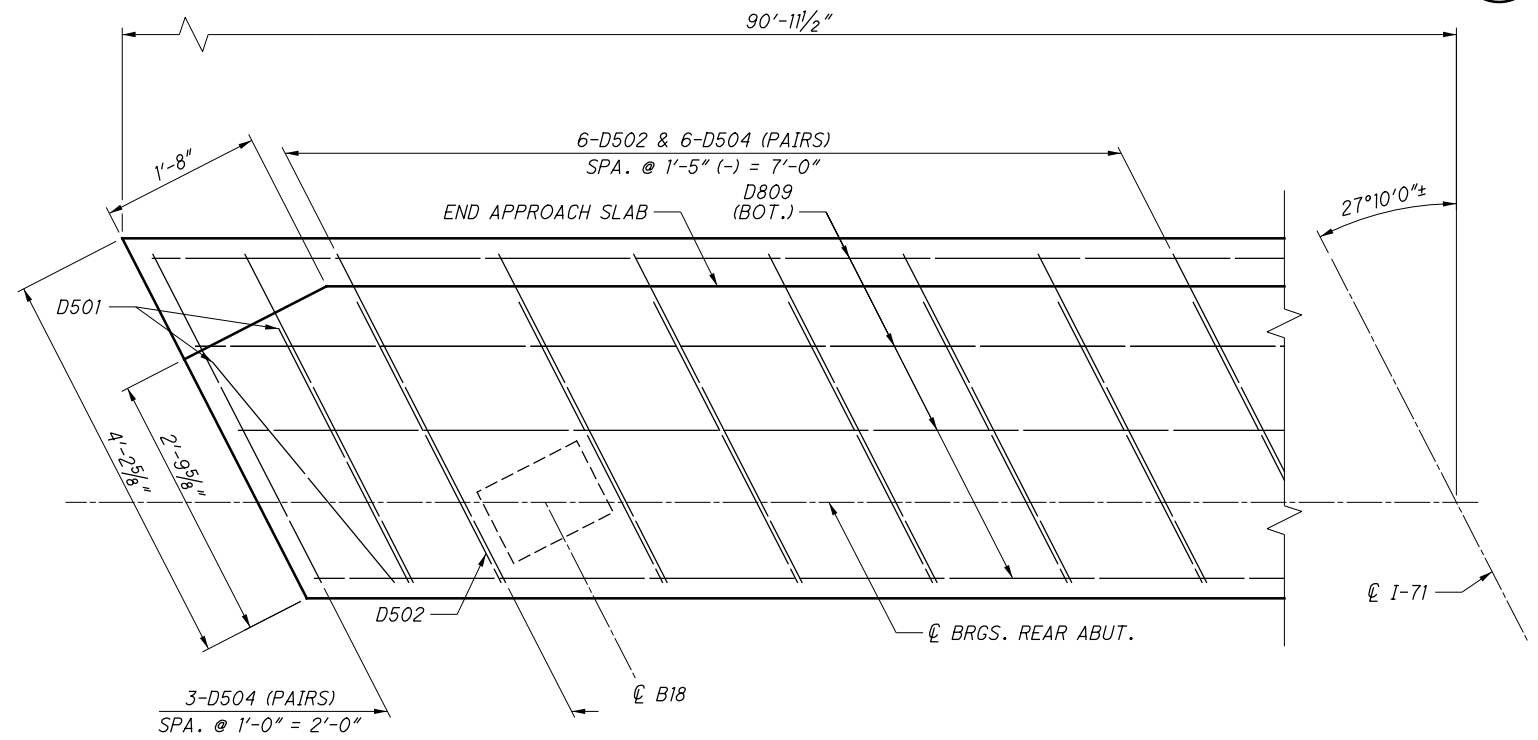
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DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
 DATE: 8/8/2016
 REVIEWED: KVB
 DRAWN: ALM
 CHECKED: CMH
 STRUCTURE FILE NUMBER: 2506904L/2506939R
FRA-71-0.00
 PID No. 107201
REAR ABUTMENT DIAPHRAGM DETAILS - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

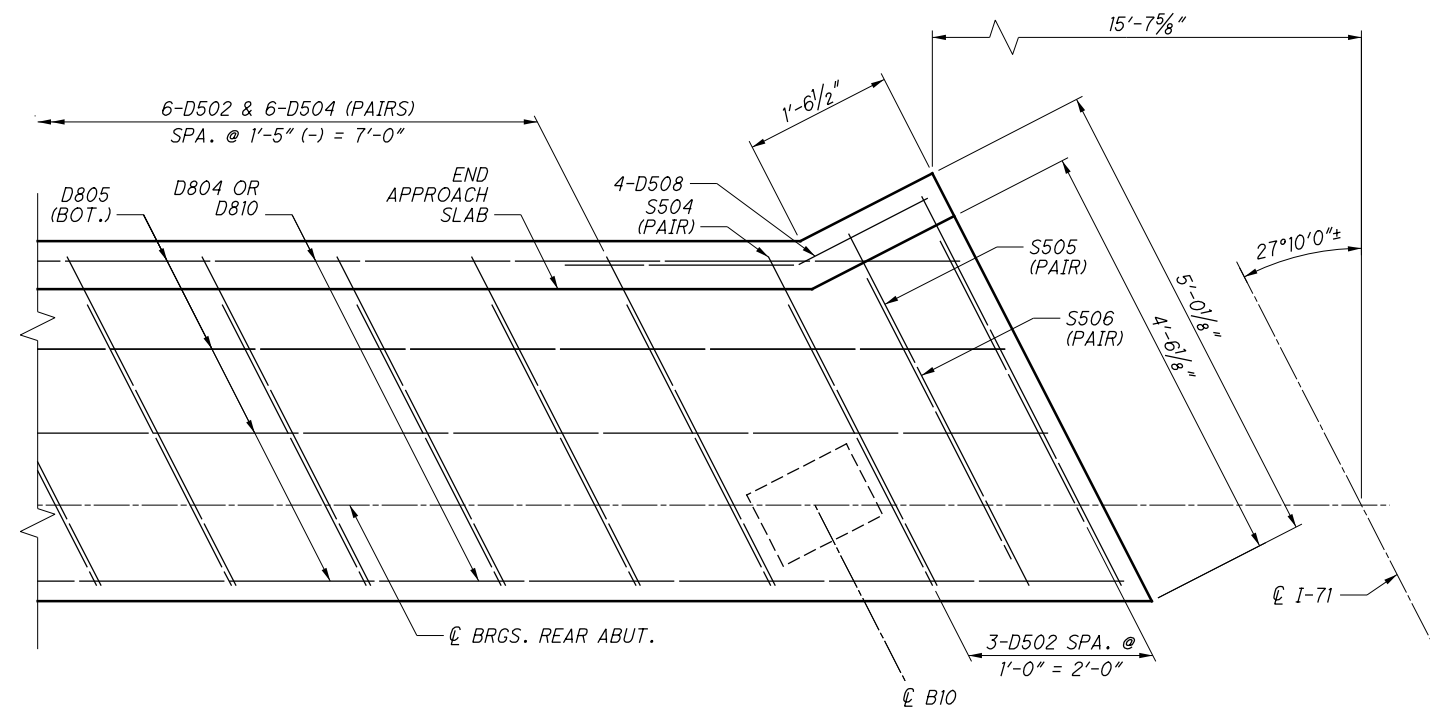
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SECTION A-A
(REBAR LABELED AT SECTION ONLY)



VIEW B-B
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)

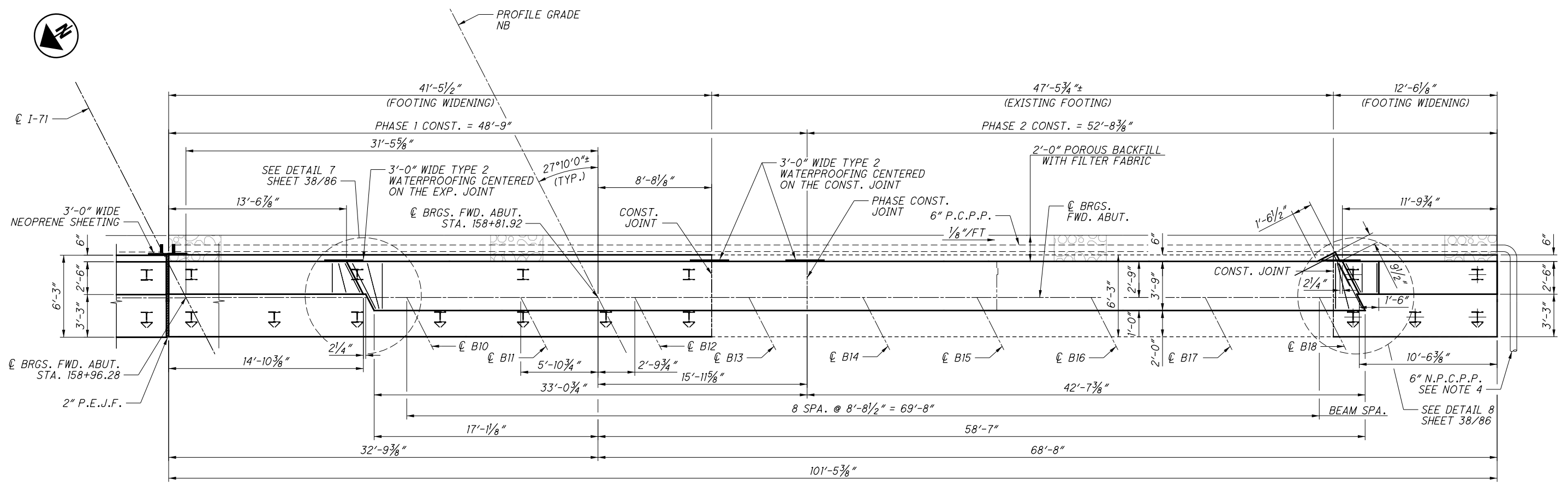


VIEW C-C
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)

NOTE:
1. FOR THE LOCATION OF SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 35/86.



DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
DESIGNED ALM CHECKED CMH	DATE 8/8/2016 REVIEWED KVB STRUCTURE FILE NUMBER 2506904L/2506939R
REAR ABUTMENT DIAPHRAGM DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	
FRA-71-0.00 PID No. 107201	
36 / 86	
1143 1312	



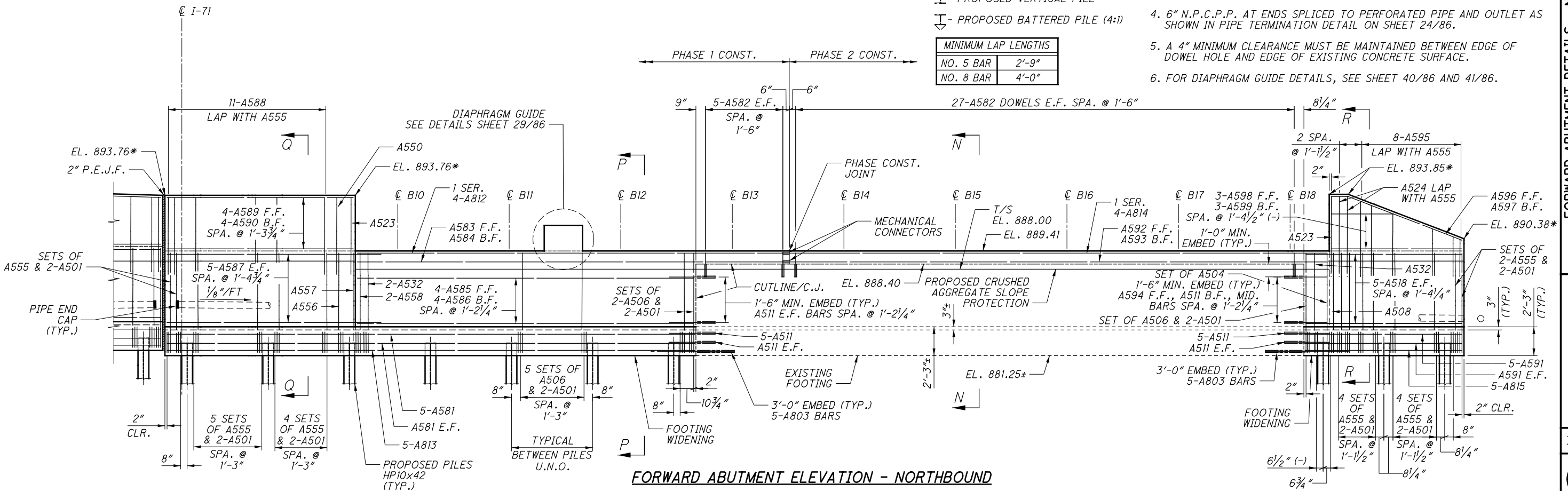
NOTES:

1. FOR SECTIONS N-N & P-P THRU R-R, SEE SHEETS 38/86 AND 39/86.
2. FOR FOOTING & PILE LAYOUT, SEE SHEET 21/86.
3. FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-1-96.
4. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 24/86.
5. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.
6. FOR DIAPHRAGM GUIDE DETAILS, SEE SHEET 40/86 AND 41/86.

LEGEND:

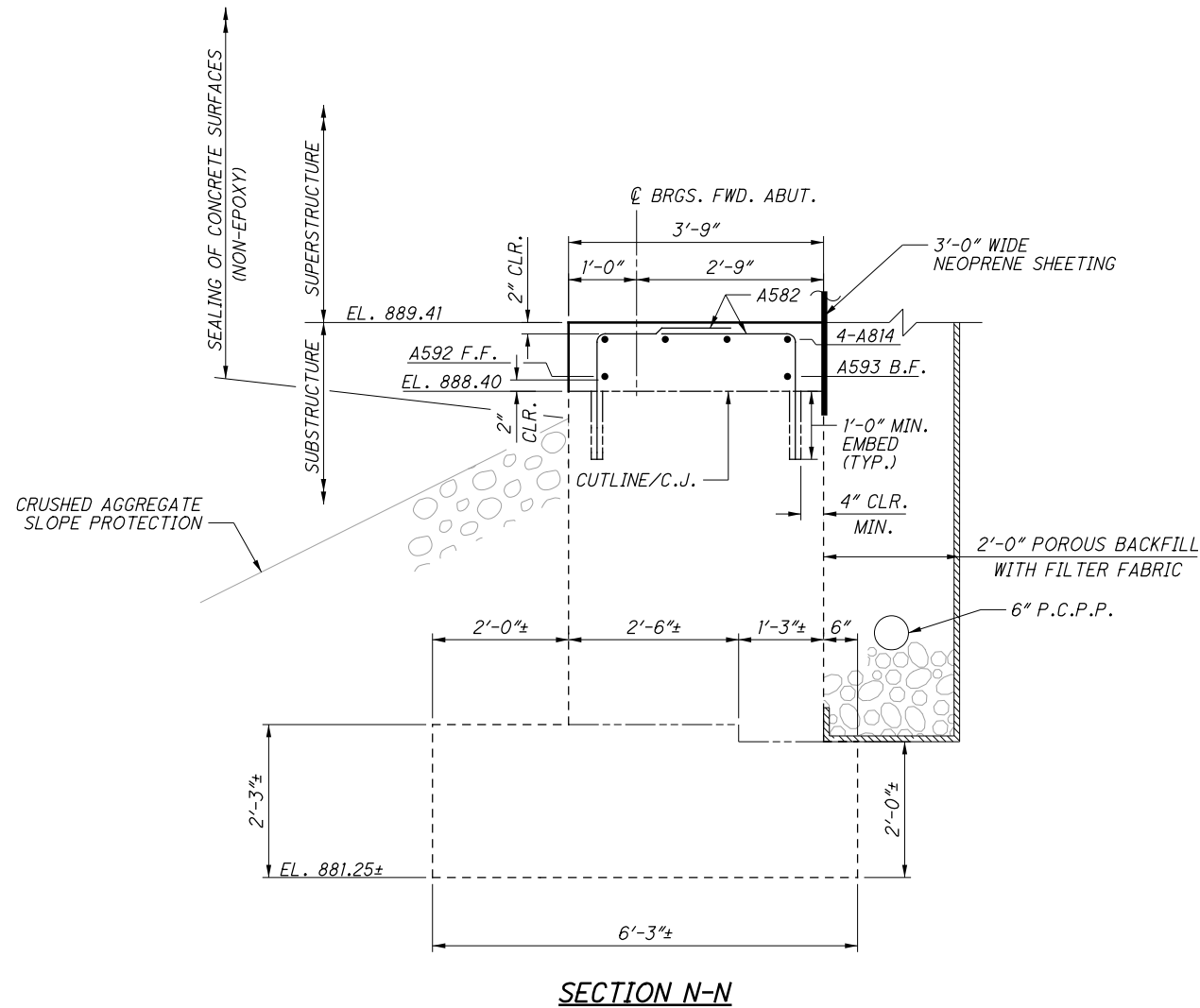
- * - ELEVATION GIVEN AT \ominus BRGS.
- I - PROPOSED VERTICAL PILE
- ∇ - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	4'-0"

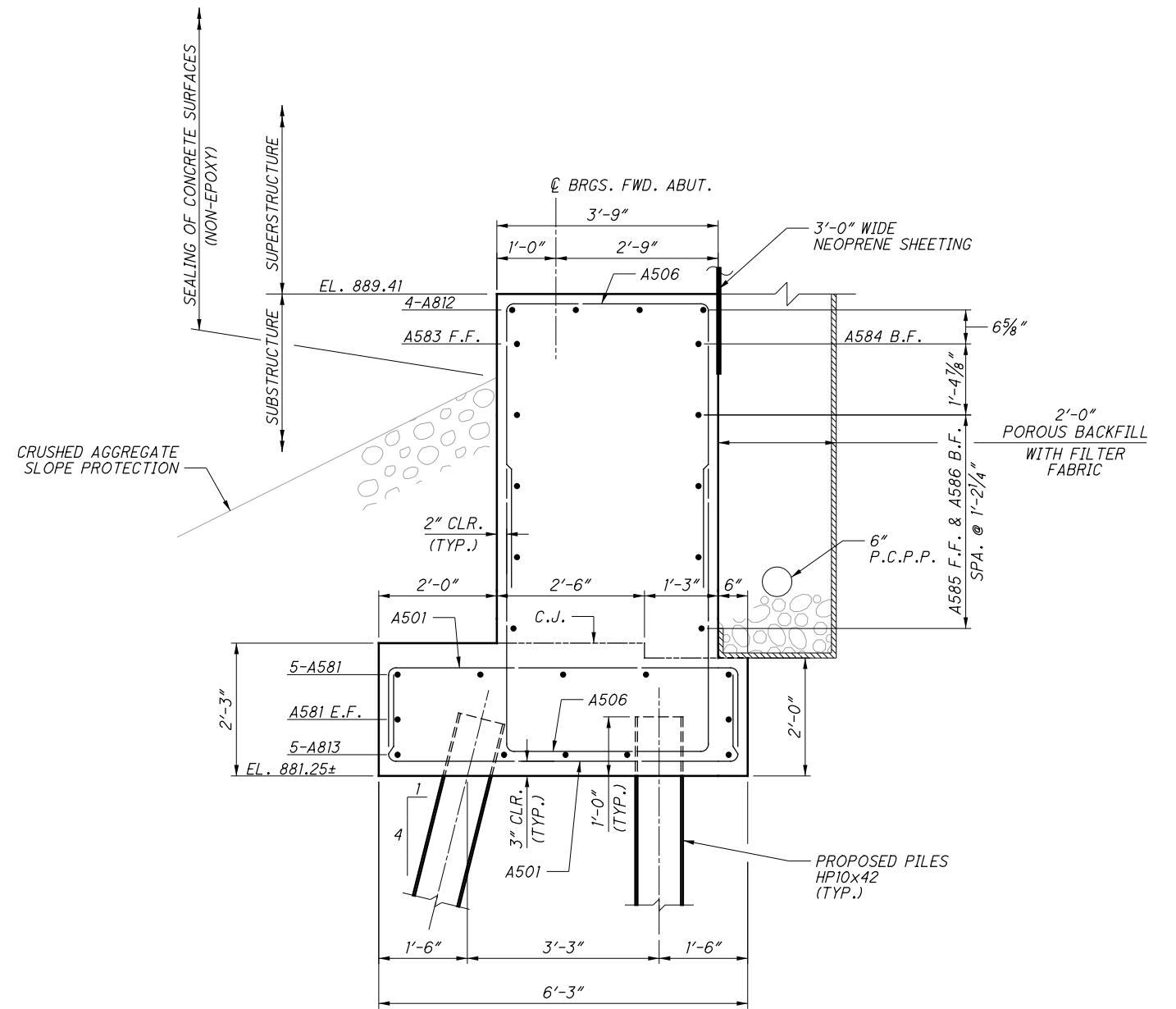


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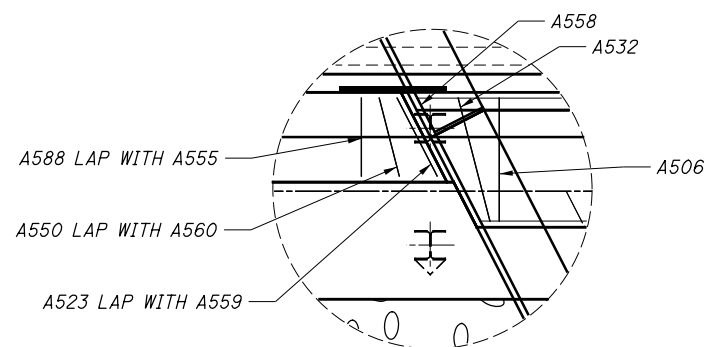
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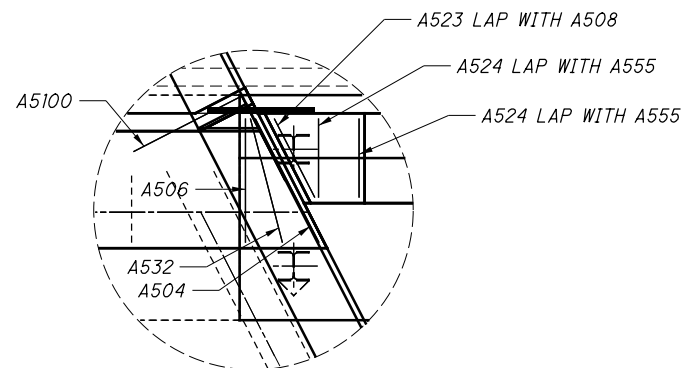
SECTION N-N



SECTION P-P



DETAIL 7



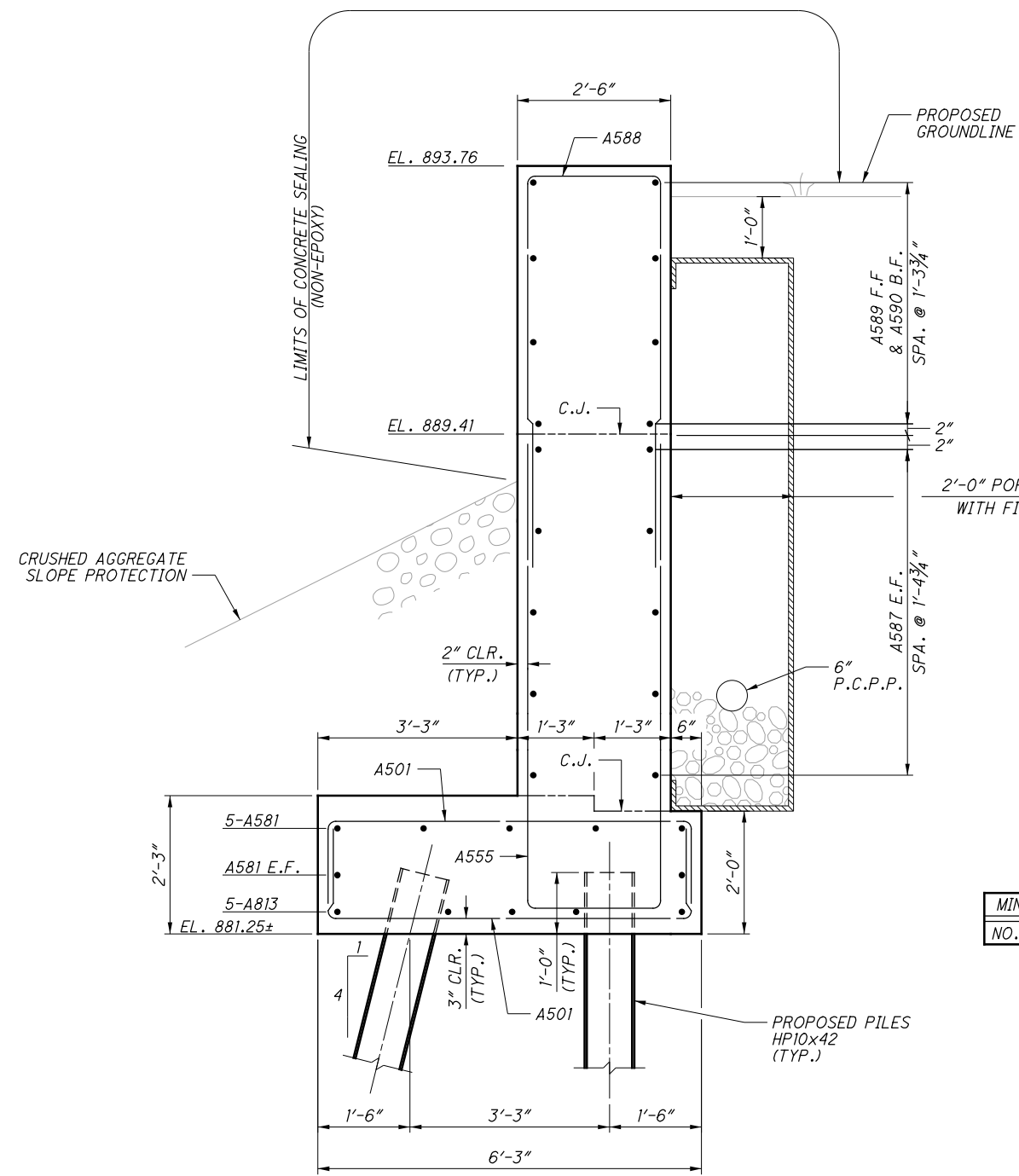
DETAIL 8

NOTES:

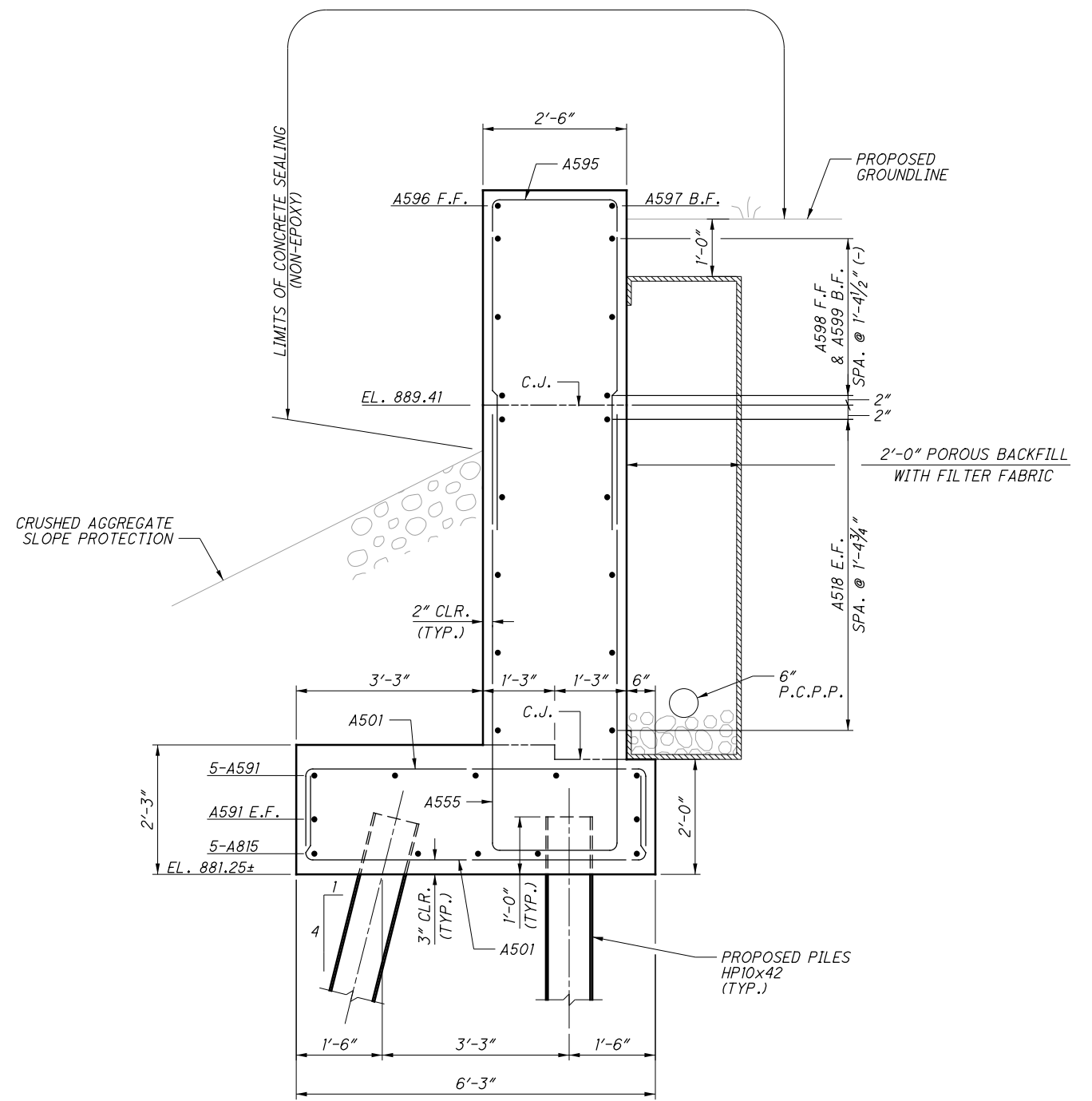
1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 37/86.
2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 41/86.

FRA-71-0.00 PID No. 107201	FORWARD ABUTMENT DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY		DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
	DATE 8/8/2016	REVIEWED KVB	STRUCTURE FILE NUMBER 2506904L/2506939R
DRAWN DJC	CHECKED CMH	DESIGNED LYH	REVISIONS REVISED
38 / 86			
1145 1312			

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SECTION Q-Q



SECTION R-R

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"

NOTE:

1. FOR NOTES, SEE SHEET 38/86.

FRA-71-0.00
PID No. 107201

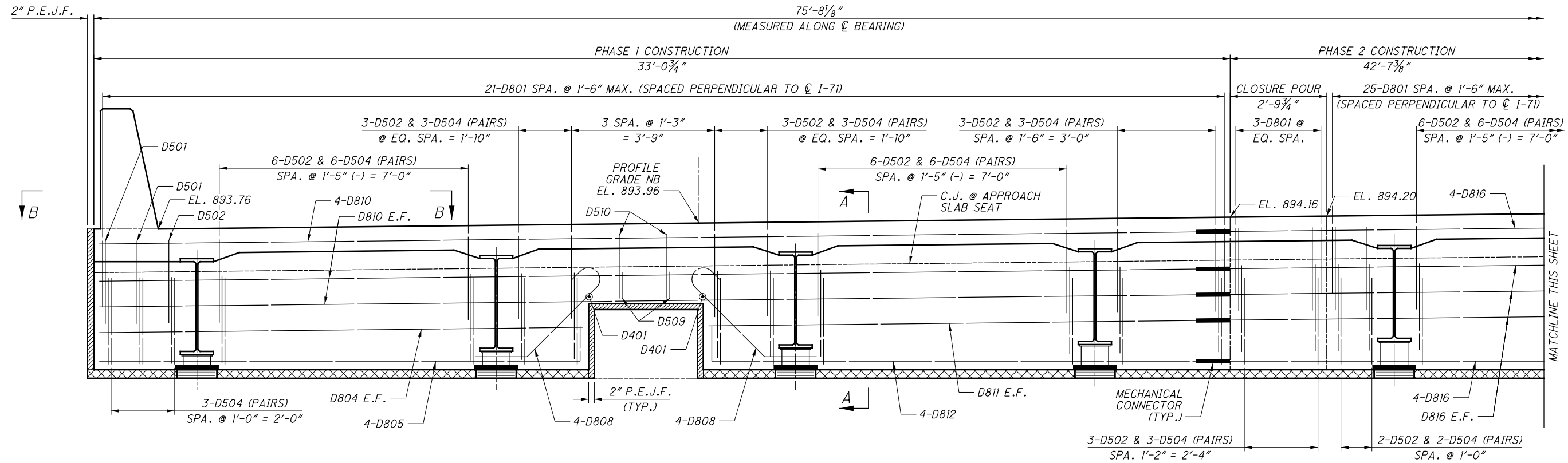
FORWARD ABUTMENT DETAILS - NORTHBOUND BRIDGE

BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

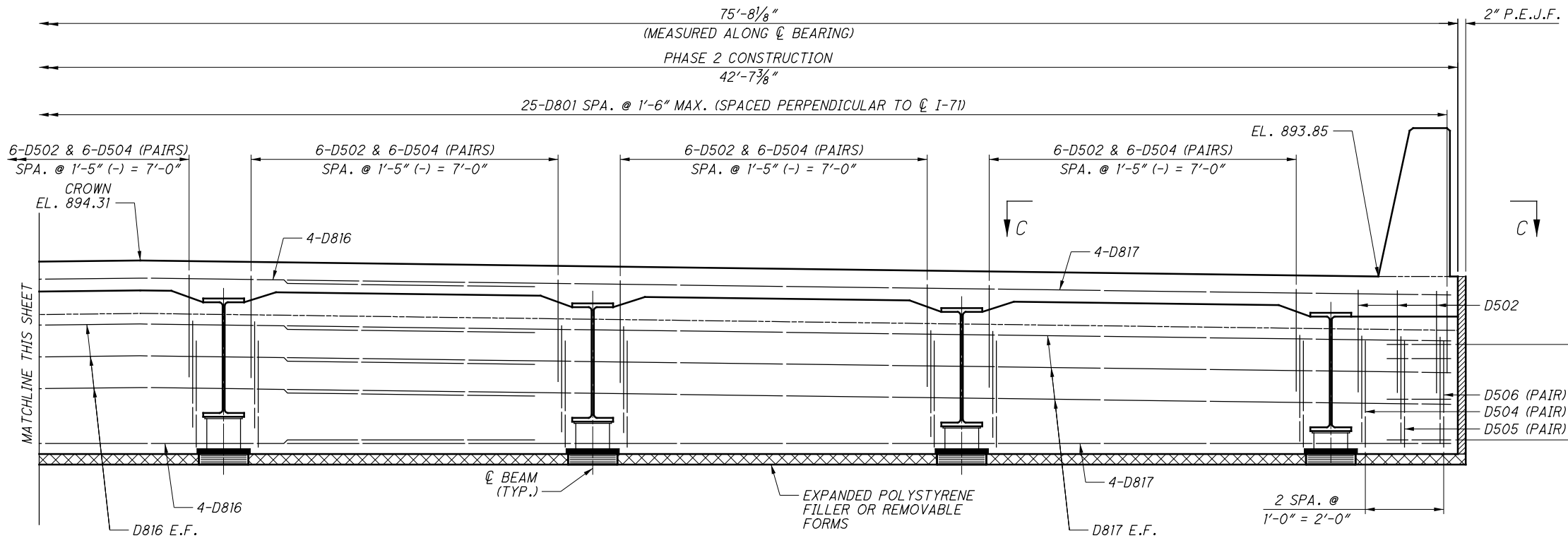
DESIGNED	DRAWN	REVIEWED	DATE
LYH	DJC	KVB	8/8/2016
CHECKED	REVISED	STRUCTURE FILE NUMBER	2506904L/2506939R
CMH			

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT. STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

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PART ELEVATION - NORTHBOUND
ELEVATIONS GIVEN AT \bar{C} BEARING



PART ELEVATION - NORTHBOUND
ELEVATIONS GIVEN AT \bar{C} BEARING

NOTES:

- FOR SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 41/86.
- FOR SEMI-INTEGRAL ABUTMENT GUIDE DETAILS, SEE SHEET 29/86.
- ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER END OF AN INDIVIDUAL PHASE WITH DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-0"
NO. 8 BAR	5'-10"

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT. STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DATE
8/8/2016

REVIEWED
KVB

STRUCTURE FILE NUMBER
2506904L/2506939R

DESIGNED
ALM

CHECKED
CMH

DRAWN
ALM

REVISED

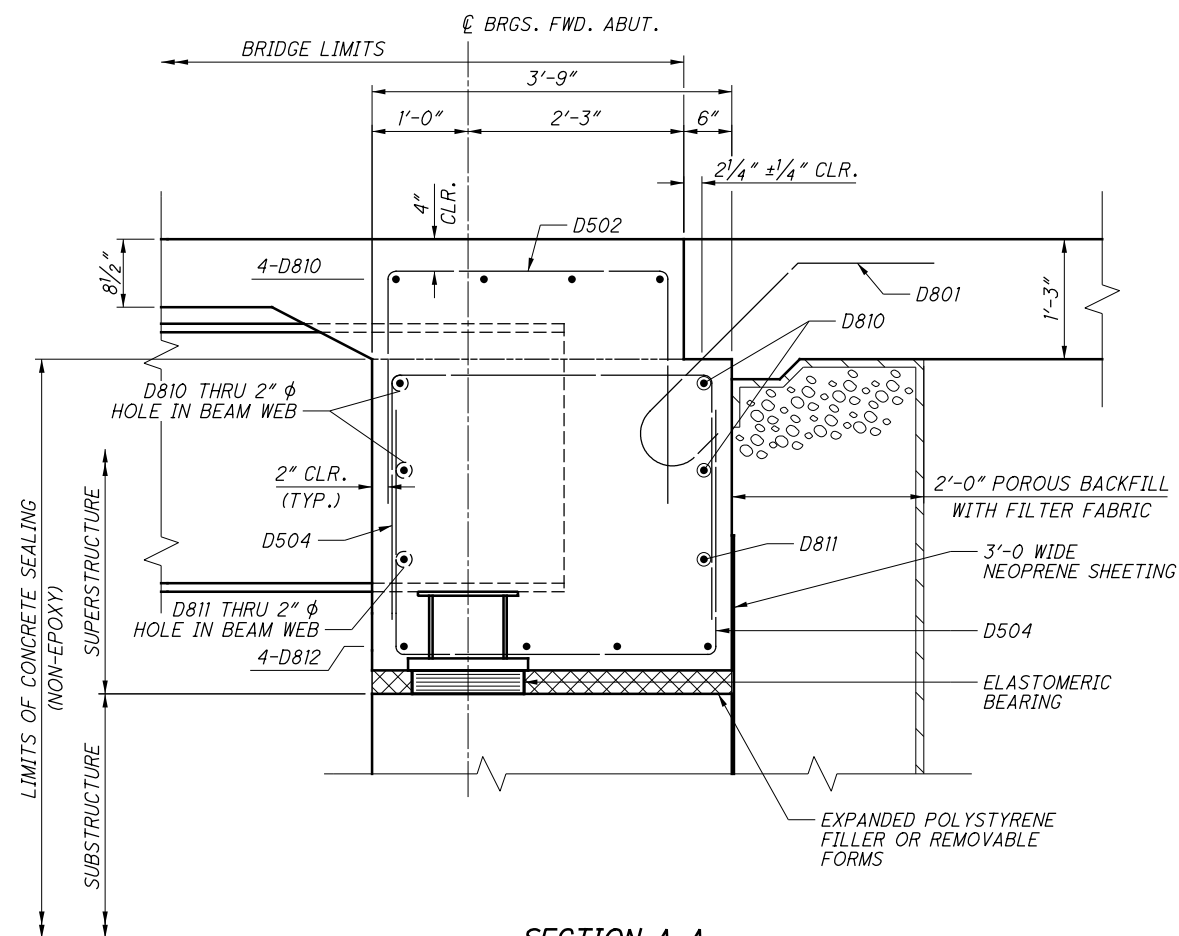
FORWARD ABUTMENT DIAPHRAGM DETAILS - NORTHBOUND BRIDGE
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

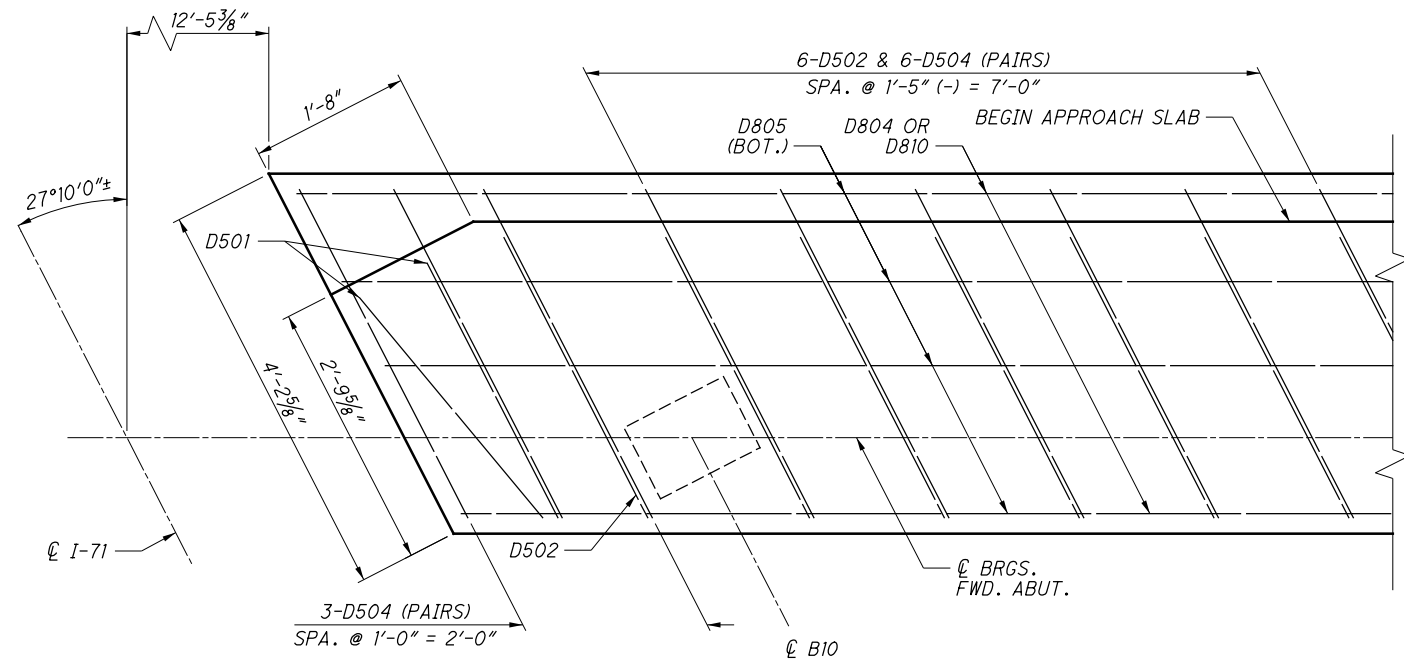
40/86

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1312

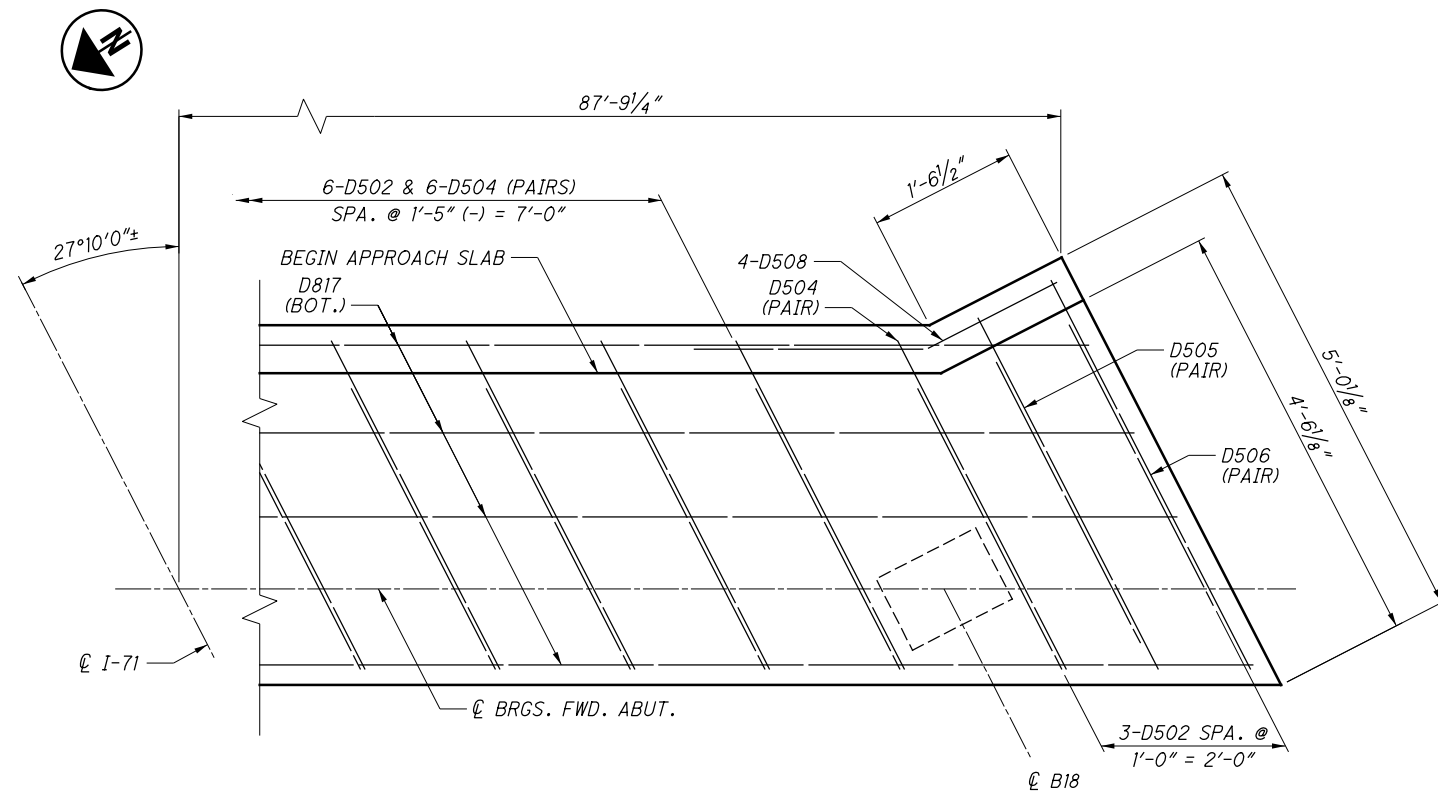
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SECTION A-A
(REBAR LABELED AT SECTION ONLY)



VIEW B-B
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)



VIEW C-C
(DECK AND PARAPET REBAR NOT SHOWN FOR CLARITY)

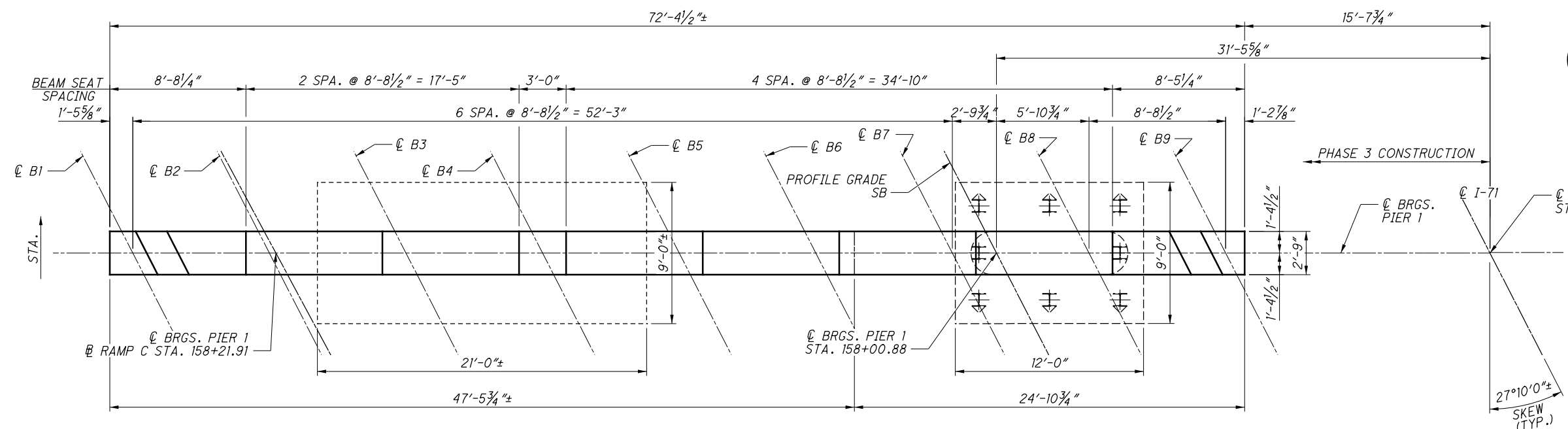
NOTE:

1. FOR THE LOCATION OF SECTION A-A AND VIEWS B-B & C-C, SEE SHEET 40/86.

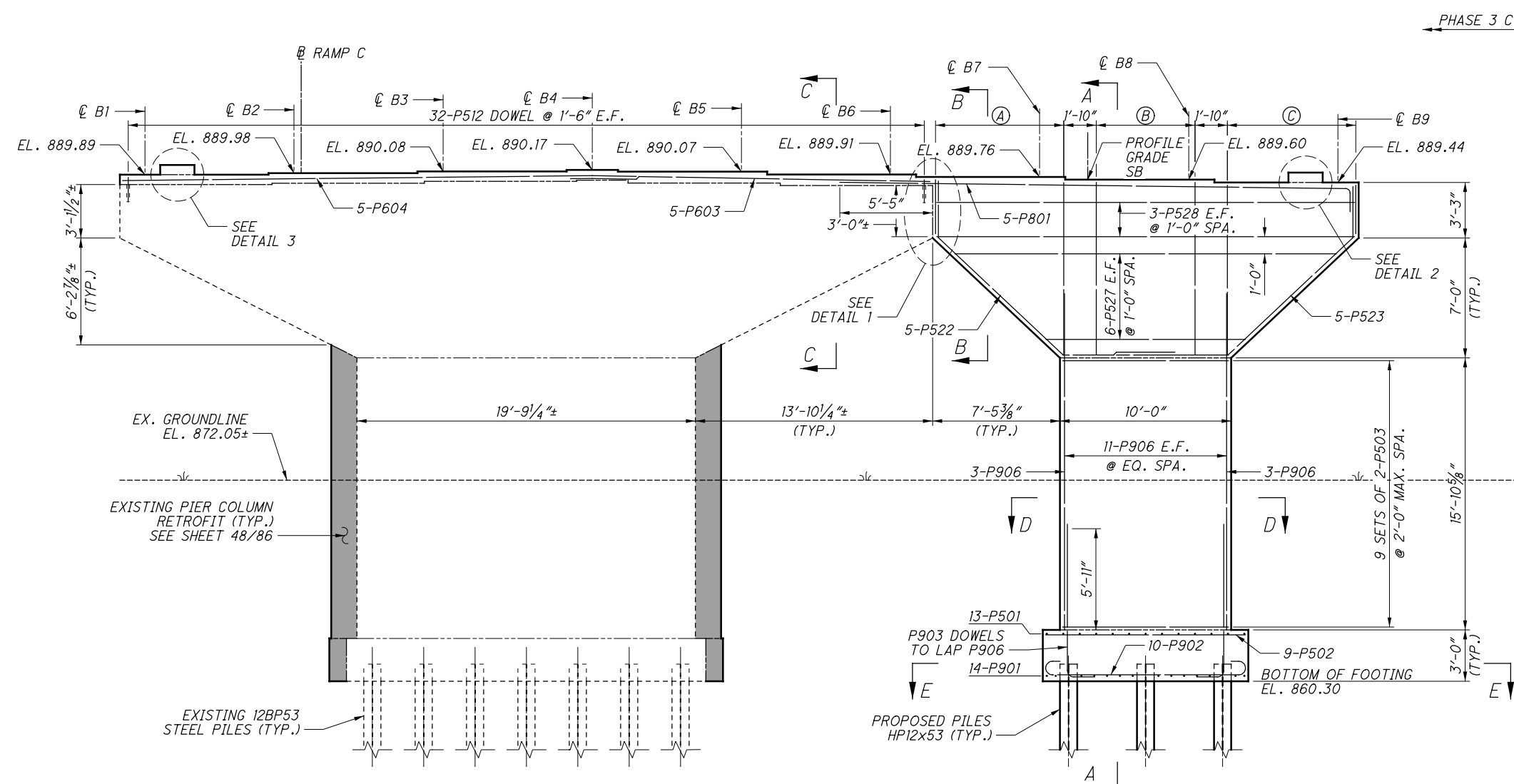


DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
DESIGNED ALM	CHECKED CMH
DRAWN ALM	REVISED
REVIEWED KVB	STRUCTURE FILE NUMBER 2506904L/2506939R
DATE 8/8/2016	
FORWARD ABUTMENT DIAPHRAGM DETAILS - NORTHBOUND BRIDGE	
BRIDGE NO. FRA-71-0298 L/R	
OVER INDIANA & OHIO RAILWAY COMPANY	
FRA-71-0.00	
PID No. 107201	
41/86	
1148	
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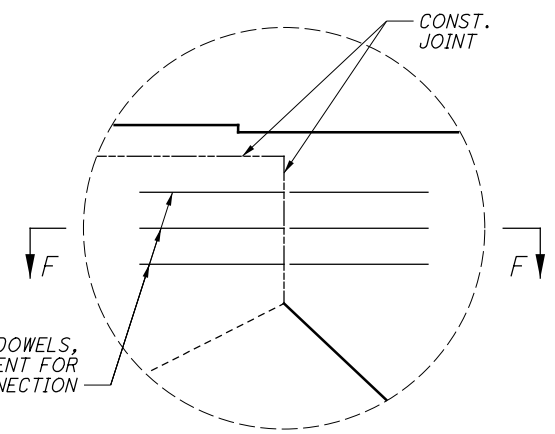
PIER 1 PLAN - SOUTHBOUND



PIER 1 ELEVATION - SOUTHBOUND

- LEGEND:**
- I - PROPOSED VERTICAL PILE
 - ⌵ - PROPOSED BATTERED PILE (4:1)
 - (A) - 2 SER. 10-P524 @ 10" SPA.
 - (B) - 2 SETS 4-P525 @ 1'-10" SPA.
 - (C) - 2 SER. 10-P526 @ 10" SPA.

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"
NO. 6 BAR	3'-10"



DETAIL 1

- NOTES:**
1. FOR SECTIONS A-A THRU F-F, SEE SHEET 44/86.
 2. SCARIFY TOP OF EXISTING PIER CAP 1/4".
 3. MAXIMUM SERVICE PILE REACTIONS IS 126.8 KIPS/PILE.
 4. FOR FOOTING & PILE LAYOUT, SEE SHEET 20/86.
 5. FOR DETAILS 2 & 3, SEE SHEET 47/86.
 6. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY EXCEPT TOP OF PIER CAP.

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT. STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE: 8/8/2016
 REVIEWED: MAB
 STRUCTURE FILE NUMBER: 2506904L/2506939R

DRAWN: CMH
 CHECKED: KVB
 DESIGNED: CMH

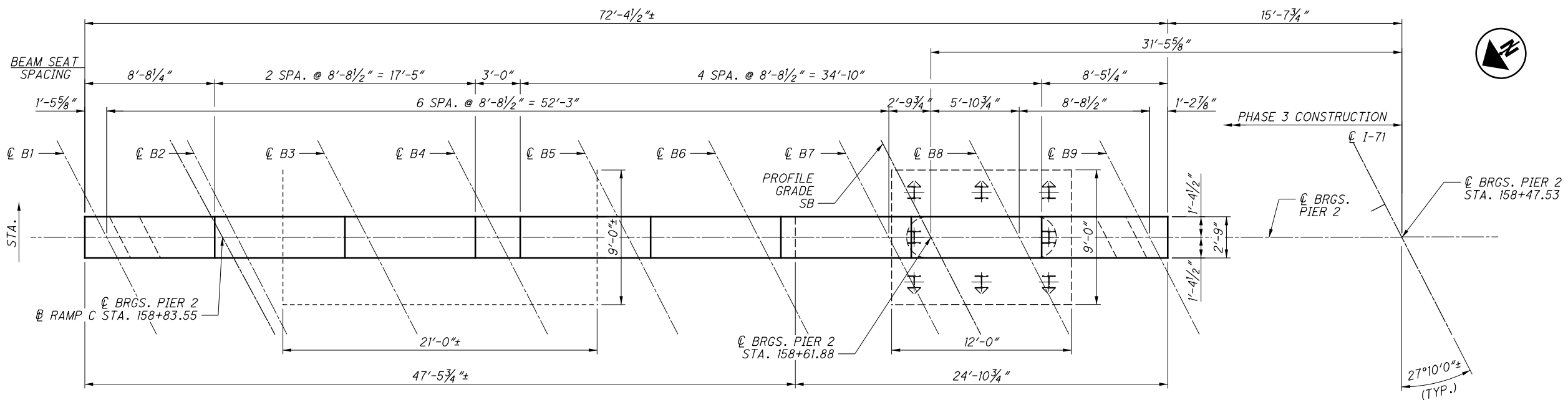
BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

PIER 1 DETAILS - SOUTHBOUND BRIDGE

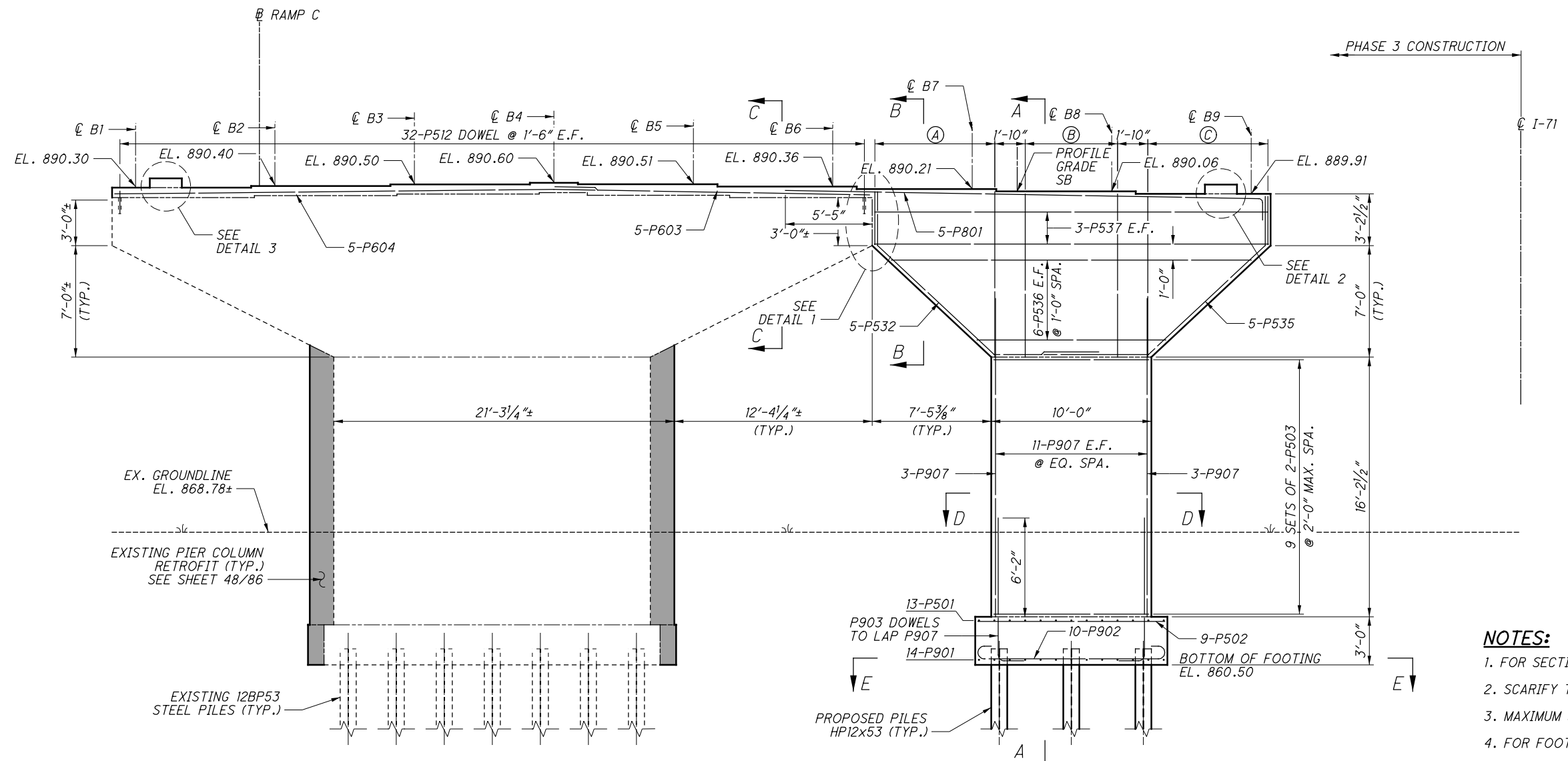
FRA-71-0.00
 PID No. 107201

42/86

1149
 1312



PIER 2 PLAN - SOUTHBOUND



PIER 2 ELEVATION - SOUTHBOUND

- LEGEND:**
- ⊥ - PROPOSED VERTICAL PILE
 - ⊥ - PROPOSED BATTERED PILE (4:1)
 - (A) - 2 SER. 10-P531 @ 10" SPA.
 - (B) - 2 SETS 4-P533 @ 1'-10" SPA.
 - (C) - 2 SER. 10-P534 @ 10" SPA.

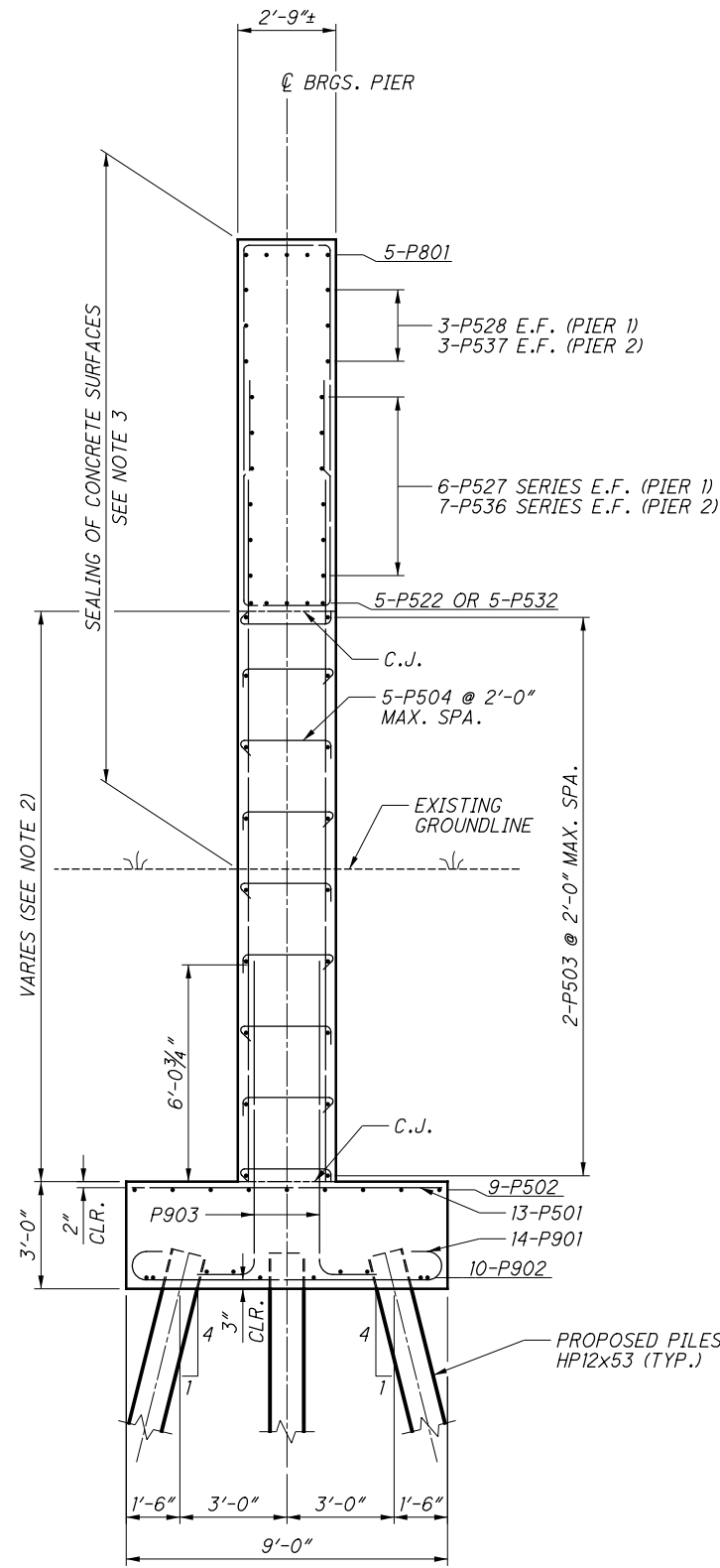
MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"
NO. 6 BAR	3'-10"

- NOTES:**
1. FOR SECTIONS A-A THRU F-F, SEE SHEET 44/86.
 2. SCARIFY TOP OF EXISTING PIER CAP 1/4".
 3. MAXIMUM SERVICE PILE REACTIONS IS 126.8 KIPS/PILE.
 4. FOR FOOTING & PILE LAYOUT, SEE SHEET 20/86.
 5. FOR DETAIL 1, SEE SHEET 42/86.
 6. FOR DETAILS 2 & 3, SEE SHEET 47/86.
 7. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY EXCEPT TOP OF PIER CAP.

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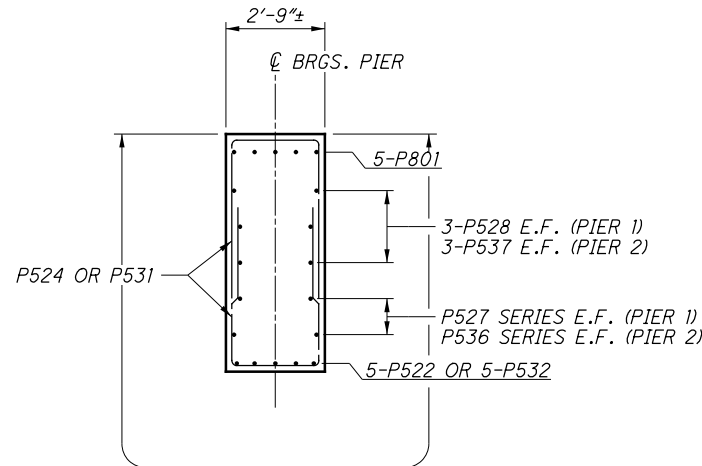
DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43068 (614) 782-5900 PHONE
 DATE: 8/8/2016
 REVIEWED: MAB
 STRUCTURE FILE NUMBER: 2506904L/2506939R
 DRAWN: CMH
 CHECKED: KVB
 DESIGNED: CMH
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY
FRA-71-0.00
 PID No. 107201
 43/86
 1150
 1312

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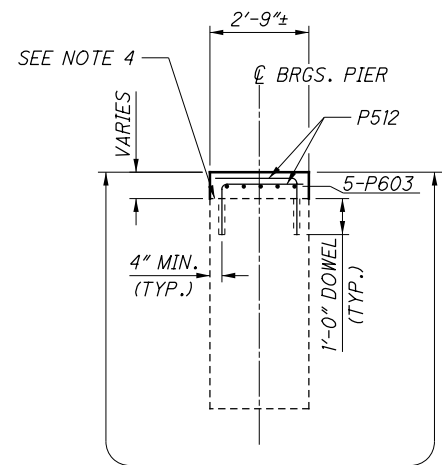
SECTION A-A

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"
NO. 6 BAR	3'-10"



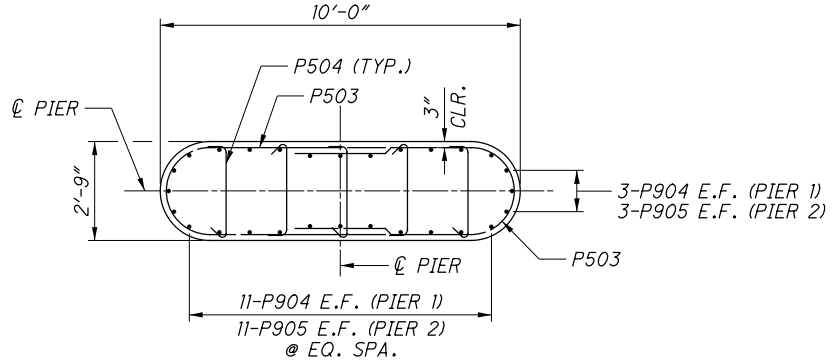
SECTION B-B

SEALING OF CONCRETE SURFACES SEE NOTE 3

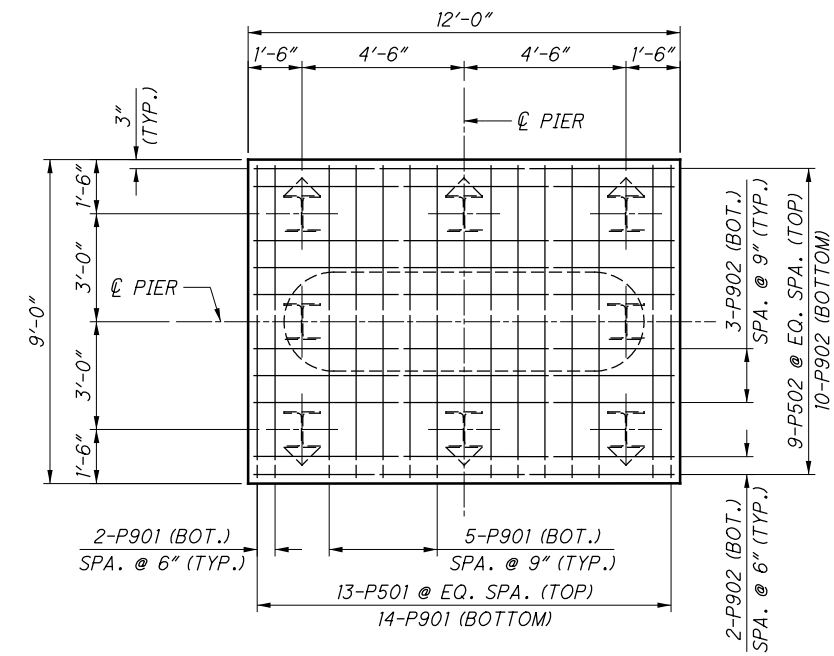


SECTION C-C

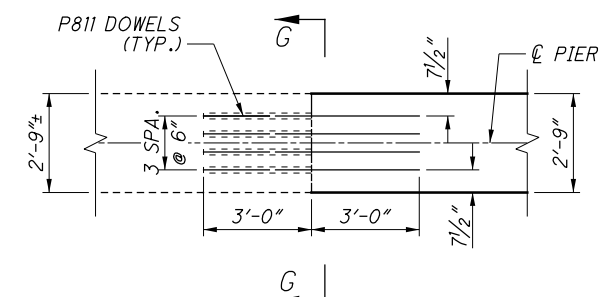
SEALING OF CONCRETE SURFACES SEE NOTE 3



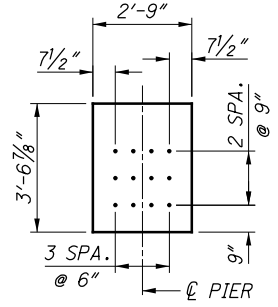
SECTION D-D



SECTION E-E



SECTION F-F



SECTION G-G

LEGEND:

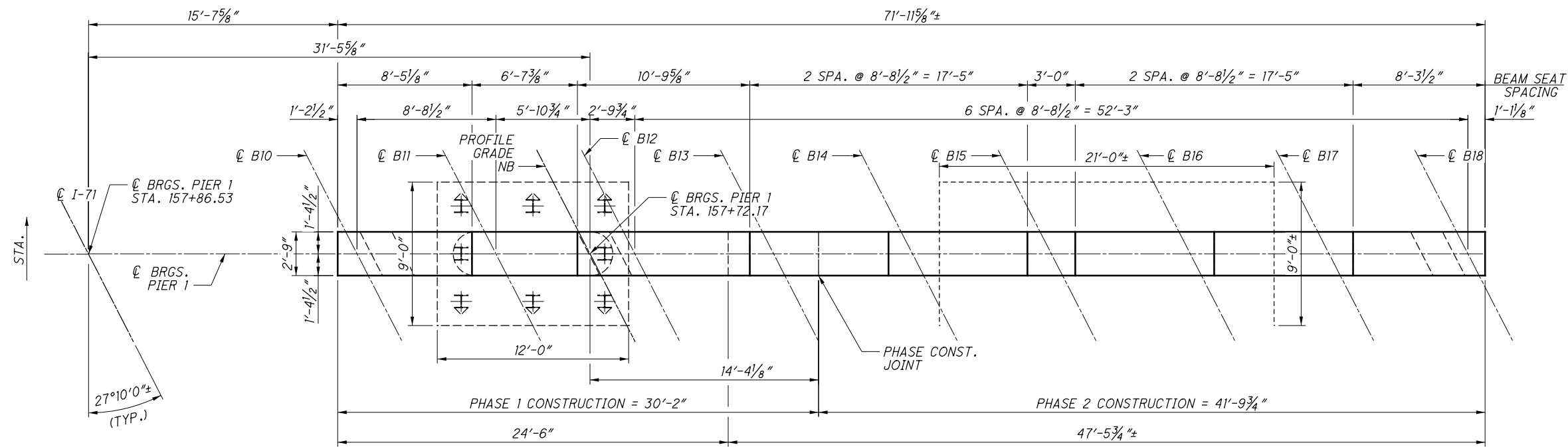
- INDICATES HP12x53 PILE BATTERED AT 4:1
- INDICATES VERTICAL HP12x53 PILE

NOTES:

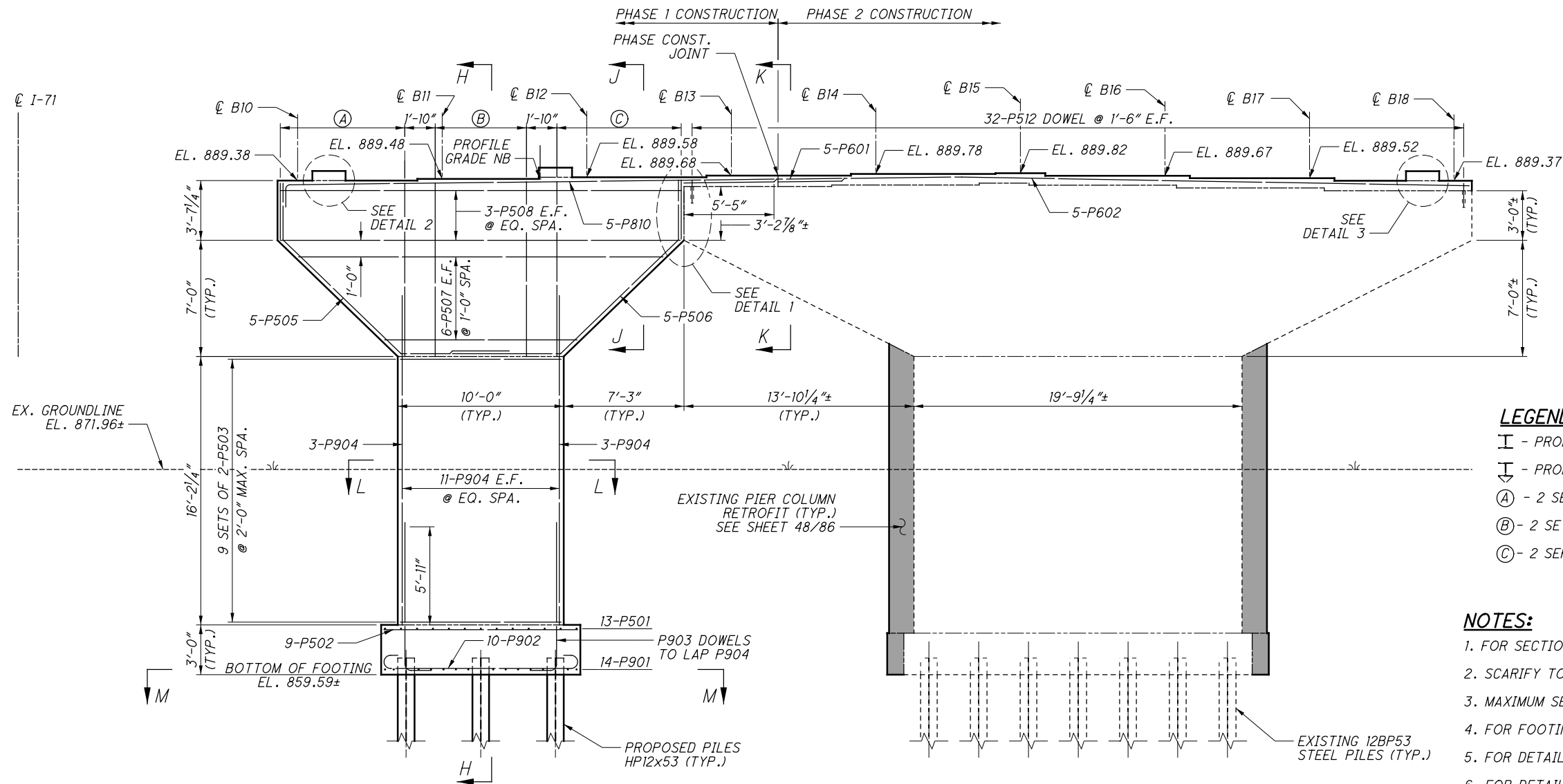
1. FOR LOCATION OF SECTIONS A-A THRU F-F, SEE SHEETS 42/86 AND 43/86.
2. FOR PIER PLAN AND ELEVATIONS, SEE SHEETS 42/86 AND 43/86.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY SEALER, EXCEPT TOP OF PIER CAP.
4. SCARIFY TOP OF EXISTING PIER CAP 1/4".
5. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY SEALER EXCEPT TOP OF PIER CAP.



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PIER 1 PLAN - NORTHBOUND



PIER 1 ELEVATION - NORTHBOUND

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"
NO. 6 BAR	3'-10"

LEGEND:

- ⌋ - PROPOSED VERTICAL PILE
- ⌋ - PROPOSED BATTERED PILE (4:1)
- (A) - 2 SER. 10-P509 @ 10" SPA.
- (B) - 2 SETS 4-P510 @ 1'-10" SPA.
- (C) - 2 SER. 10-P511 @ 10" SPA.

NOTES:

1. FOR SECTIONS H-H THRU M-M, SEE SHEET 47/86.
2. SCARIFY TOP OF EXISTING PIER CAP 1/4".
3. MAXIMUM SERVICE PILE REACTIONS IS 126.8 KIPS/PILE.
4. FOR FOOTING & PILE LAYOUT, SEE SHEET 21/86.
5. FOR DETAIL 1, SEE SHEET 42/86.
6. FOR DETAILS 2 & 3, SEE SHEET 47/86.
7. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY EXCEPT TOP OF PIER CAP.



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DESIGNED
 CMH
 KVB

DRAWN
 CMH
 REVISED

REVIEWED
 MAB
 STRUCTURE FILE NUMBER
 2506904L/2506939R

DATE
 8/8/2016

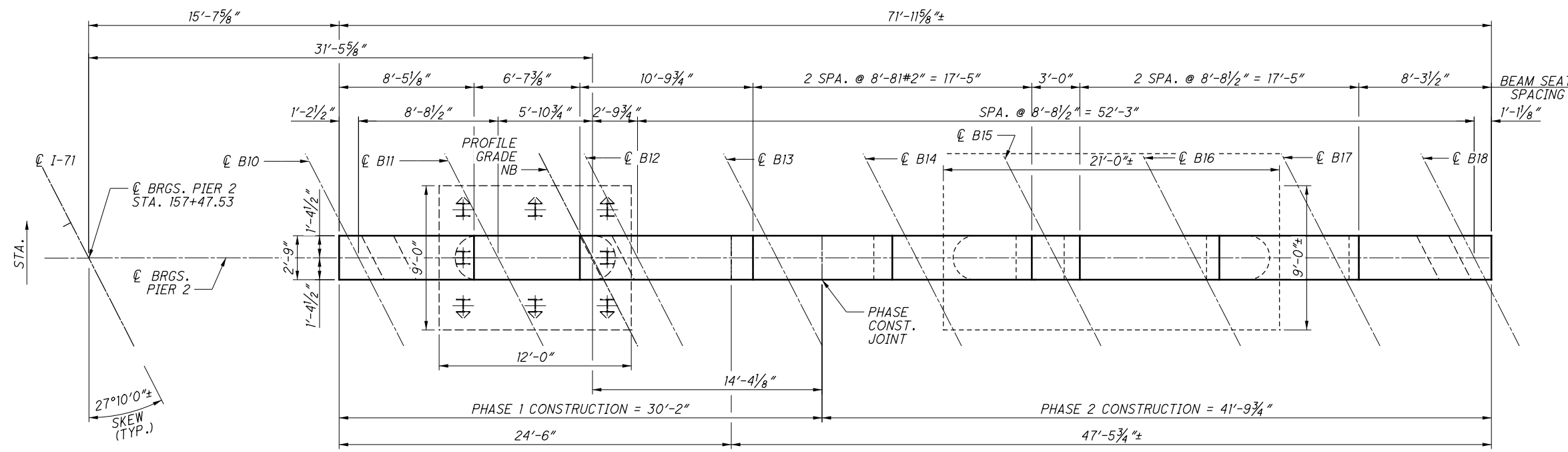
PIER 1 DETAILS - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

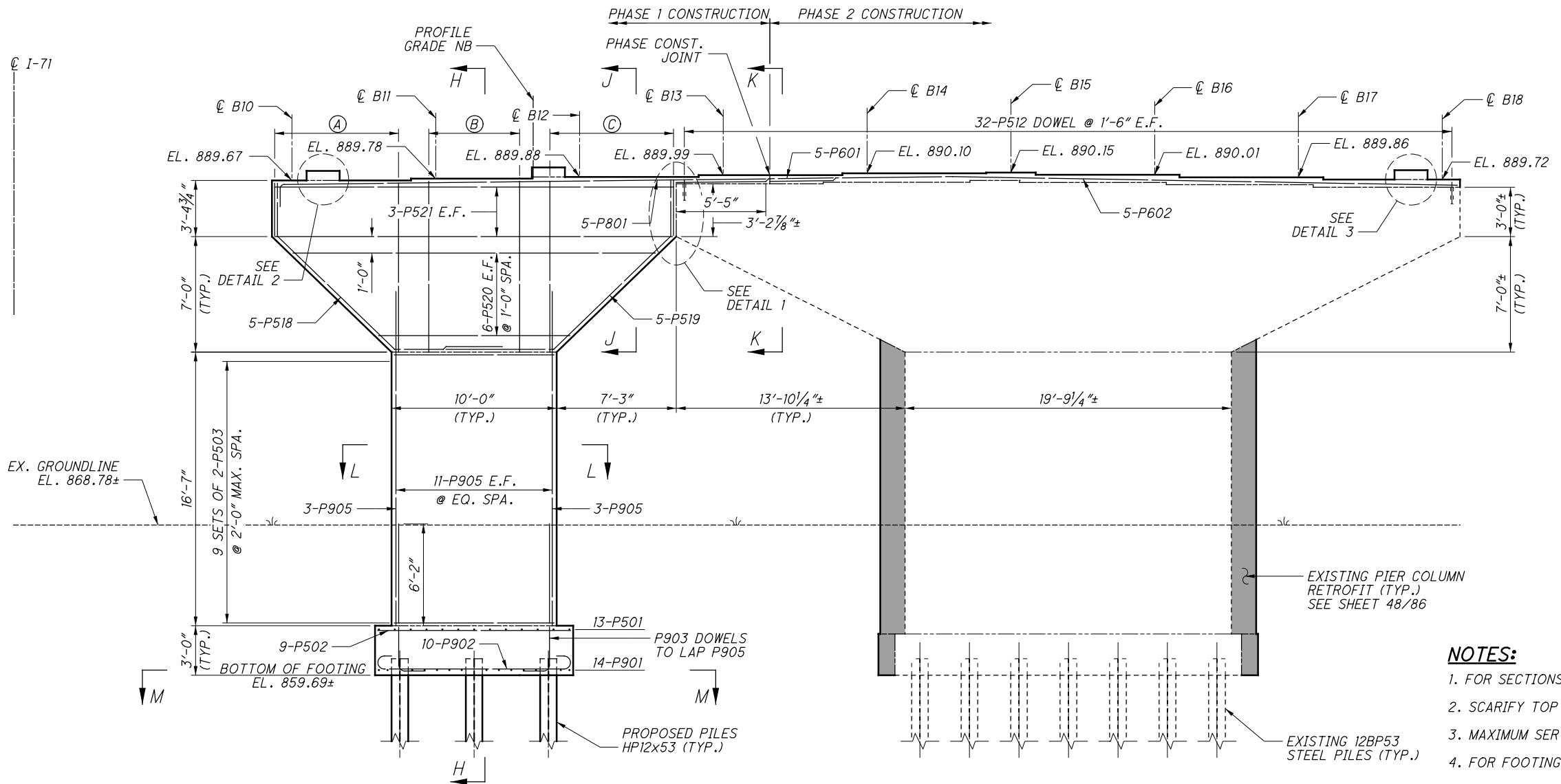
45/86

1152
 1312

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PIER 2 PLAN - NORTHBOUND



PIER 2 ELEVATION - NORTHBOUND

- LEGEND:**
- ⊥ - PROPOSED VERTICAL PILE
 - ⊥ - PROPOSED BATTERED PILE (4:1)
 - (A) - 2 SER. 10-P513 @ 10" SPA.
 - (B) - 2 SETS 4-P515 @ 1'-10" SPA.
 - (C) - 2 SER. 10-P516 @ 10" SPA.

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"
NO. 6 BAR	3'-10"

- NOTES:**
1. FOR SECTIONS H-H THRU M-M, SEE SHEET 47/86.
 2. SCARIFY TOP OF EXISTING PIER CAP 1/4".
 3. MAXIMUM SERVICE PILE REACTIONS IS 126.8 KIPS/PILE.
 4. FOR FOOTING & PILE LAYOUT, SEE SHEET 21/86.
 5. FOR DETAIL 1, SEE SHEET 42/86.
 6. FOR DETAILS 2 & 3, SEE SHEET 47/86.
 7. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY EXCEPT TOP OF PIER CAP.



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REVIEWED DATE 8/8/2016
MAB
STRUCTURE FILE NUMBER 2506904L/2506939R

DRAWN CMH
CMH
REVISED

DESIGNED CMH
CMH
CHECKED KVB

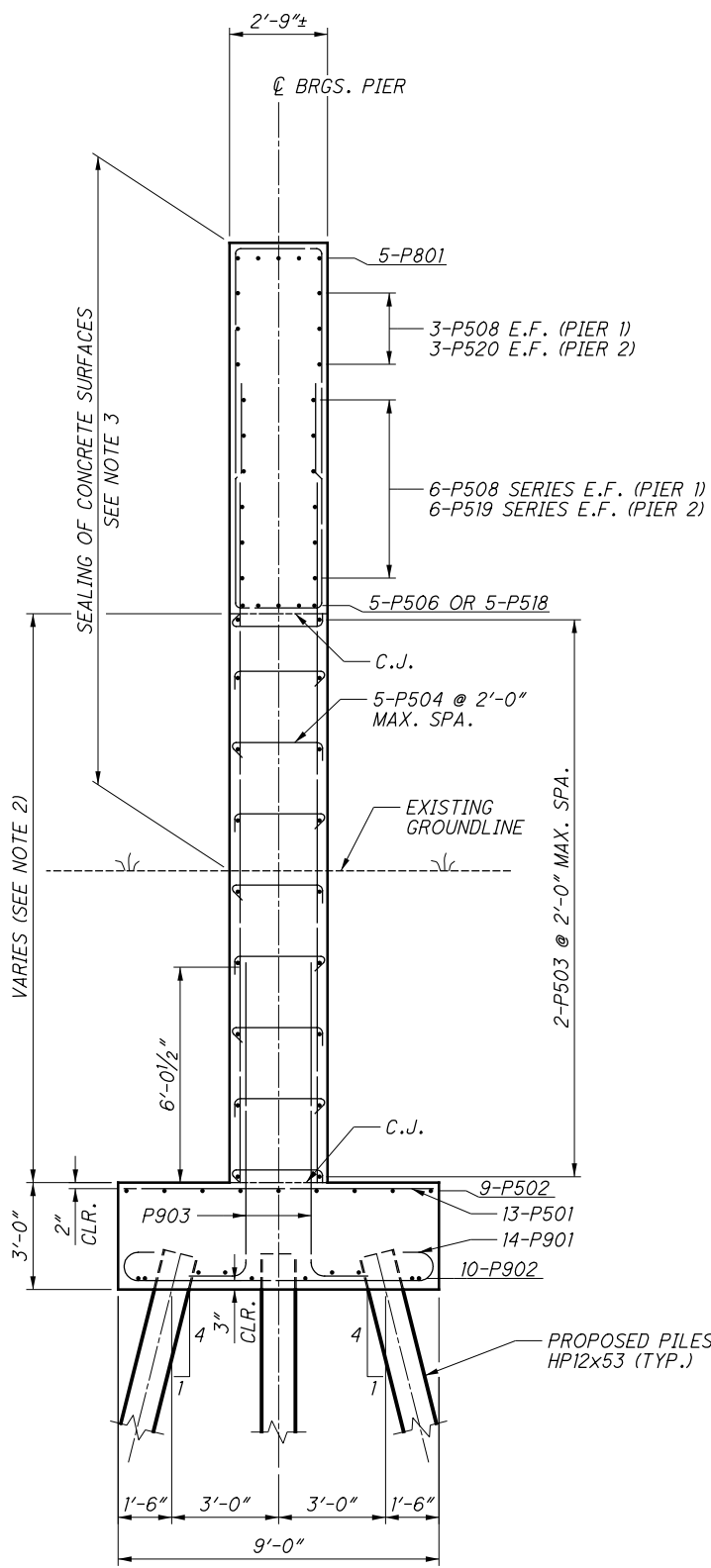
PIER 2 DETAILS - NORTHBOUND BRIDGE
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

46/86

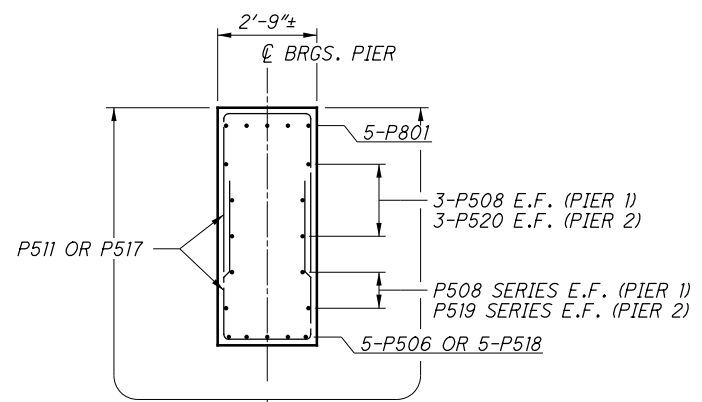
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1312

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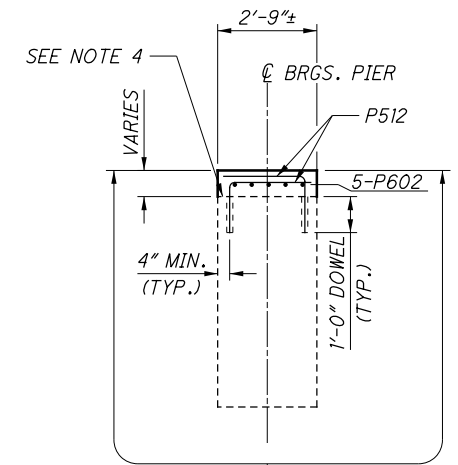


SECTION F-F

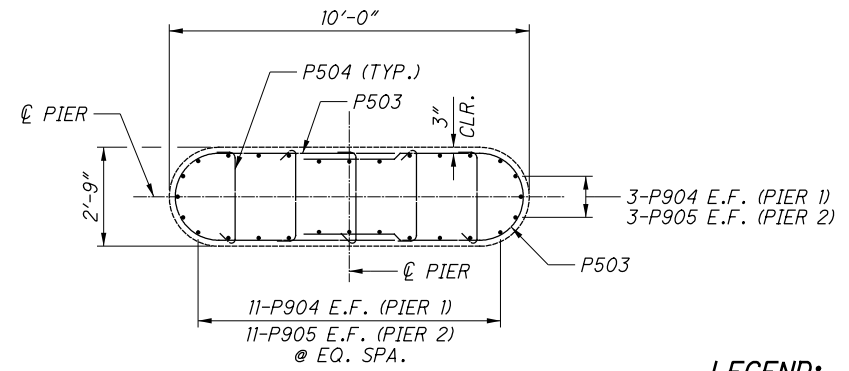
MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"
NO. 6 BAR	3'-10"



SECTION G-G



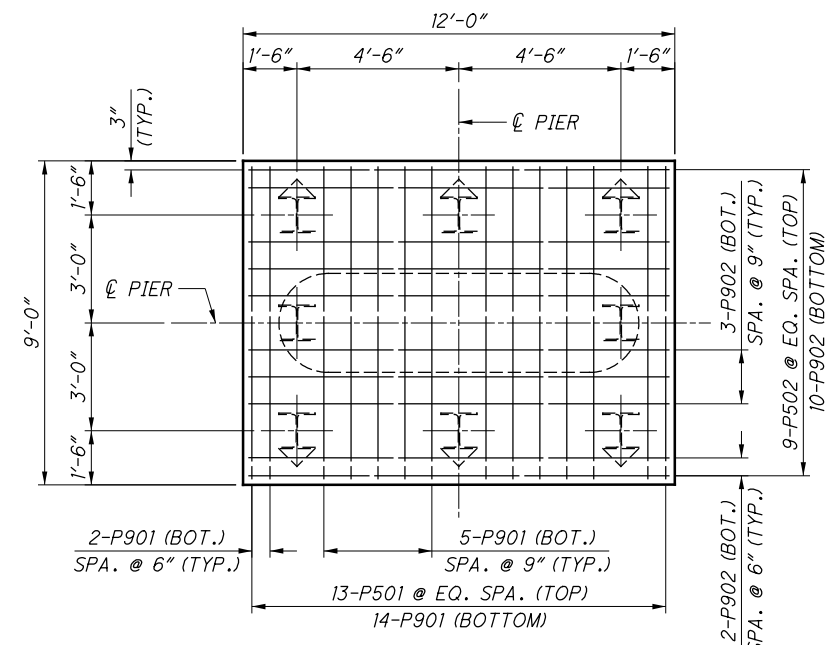
SECTION H-H



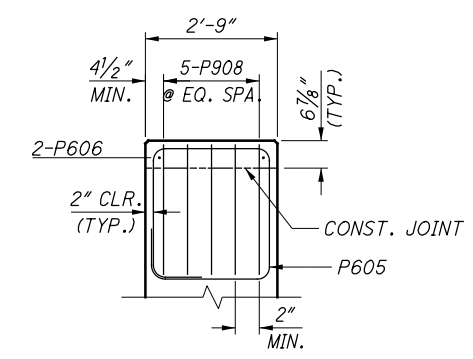
SECTION J-J

LEGEND:

- INDICATES HP12x53 PILE BATTERED AT 4:1
- INDICATES VERTICAL HP12x53 PILE

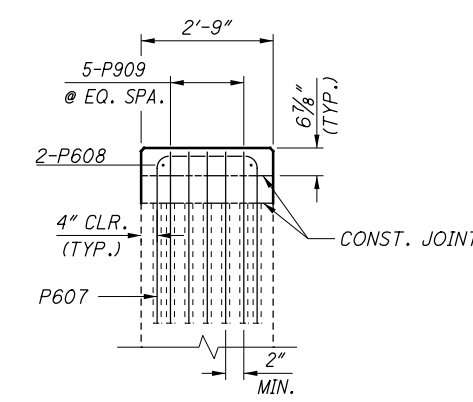


SECTION K-K



DETAIL 2

* - MEASURED ALONG &Circ; BEARINGS & PIER



DETAIL 3

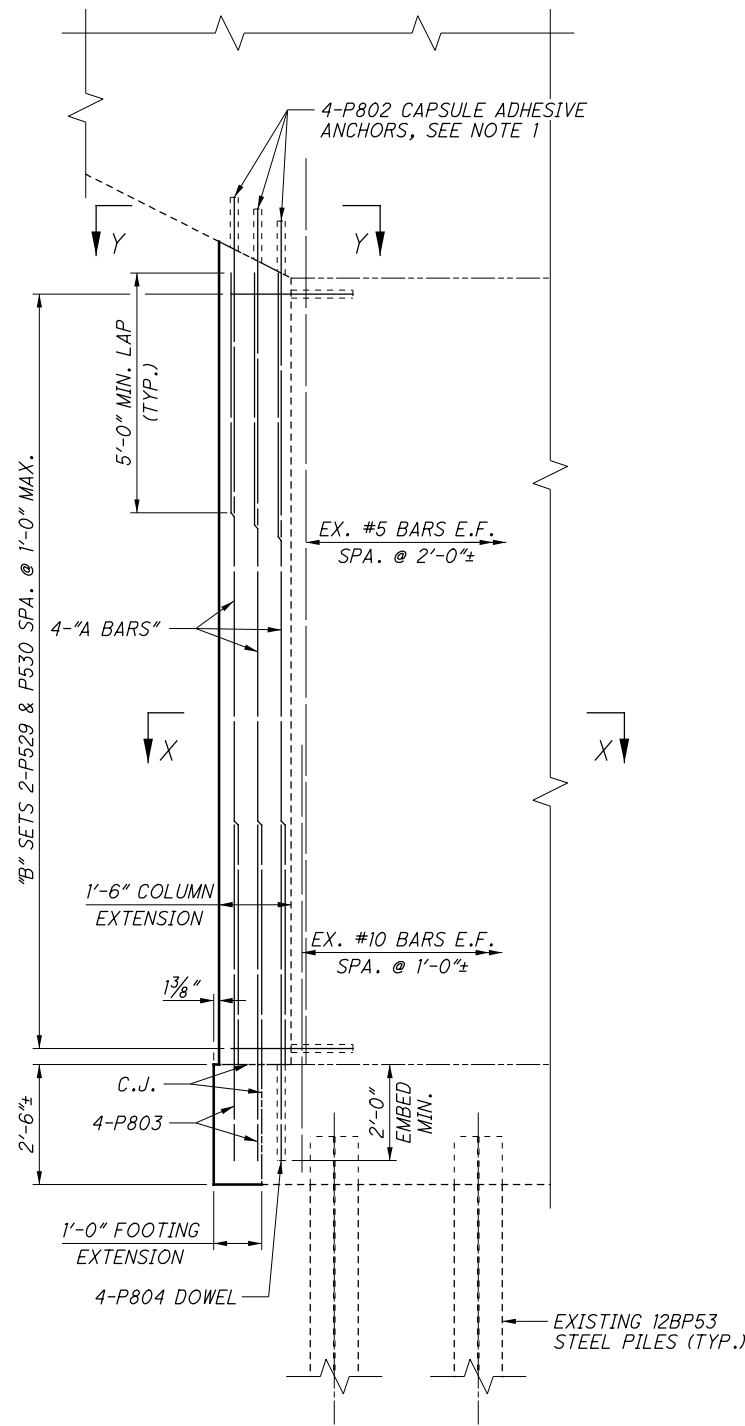
* - MEASURED ALONG &Circ; BEARINGS & PIER

NOTES:

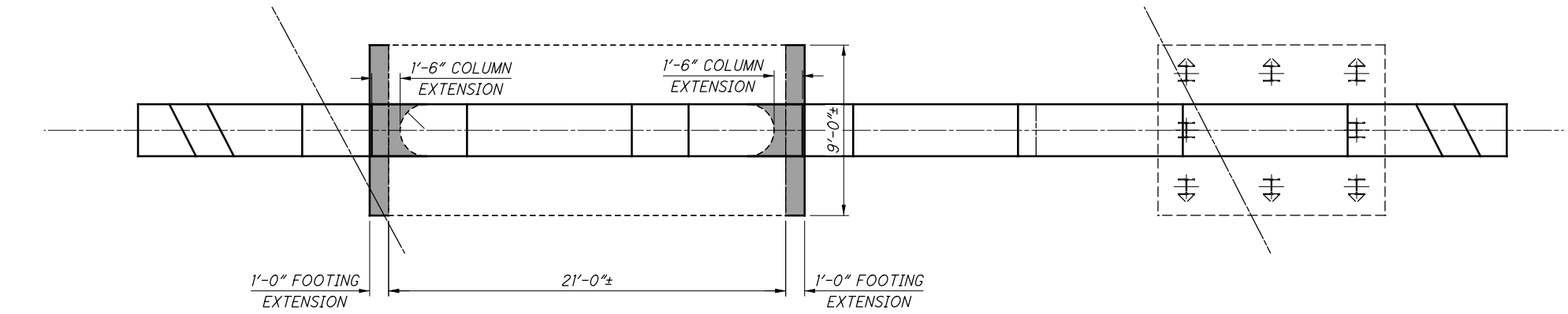
1. FOR LOCATION OF SECTIONS H-H THRU M-M, SEE SHEETS 45/86 AND 46/86.
2. FOR PIER PLAN AND ELEVATIONS, SEE SHEETS 45/86 AND 46/86.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY SEALER EXCEPT TOP OF PIER CAP.
4. SCARIFY TOP OF EXISTING PIER CAP 1/4".
5. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY SEALER EXCEPT TOP OF PIER CAP.



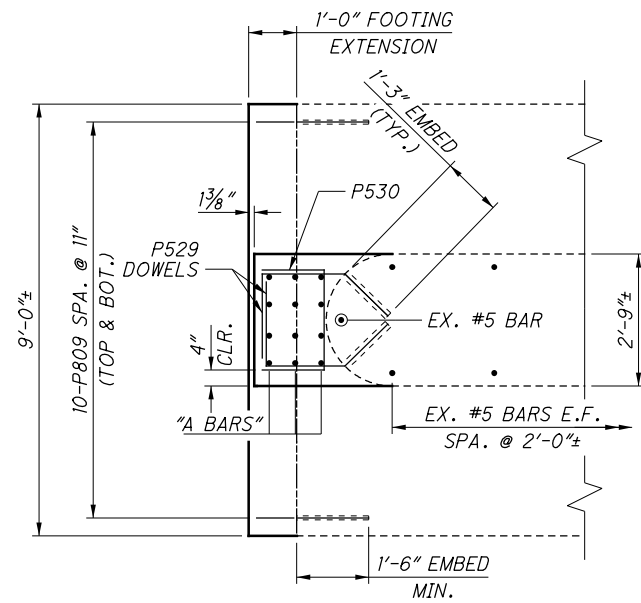
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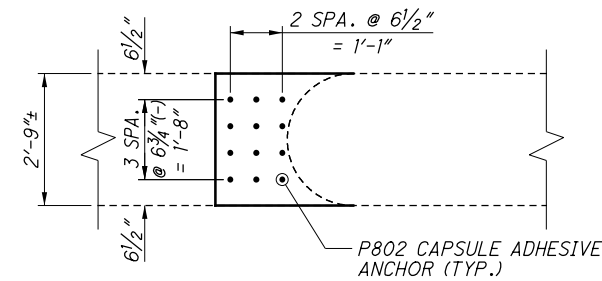
EXISTING PIER COLUMN RETROFIT DETAIL
(TYP. @ 8 LOCATIONS)



PLAN



SECTION X-X



SECTION Y-Y

PIER COLUMN RETROFIT REINFORCING TABLE				
	PIER 1 SB	PIER 2 SB	PIER 1 NB	PIER 2 NB
"A BARS"	P910	P911	P912	P913
"B" (NO.)	17	17	17	18

EXISTING PIER COLUMN RETROFIT FOR BOTH NB AND SB PIERS SHALL BE PERFORMED BEFORE PHASE 1 REMOVAL.

NOTE:

1. CAPSULE ADHESIVE DOWELS: PROVIDE 1" DIAMETER x 13" LONG (EMBED) HILTI HVU CAPSULE ADHESIVE ANCHORS WITH ASTM A615 GRADE 60 #8 REINFORCING BARS, GALVANIZED PER ASTM A153. DOWELS SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTION. ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO INSTALL THE CAPSULE ADHESIVE ANCHORS SHALL BE PAID FOR UNDER ITEM 530, SPECIAL - STRUCTURE, MISC.: CAPSULE ADHESIVE ANCHORS.

DESIGN AGENCY
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REVIEWED DATE 8/8/2016
MAB
STRUCTURE FILE NUMBER 2506904L/2506939R

DRAWN CMH
CMH
REVISOR REVISED

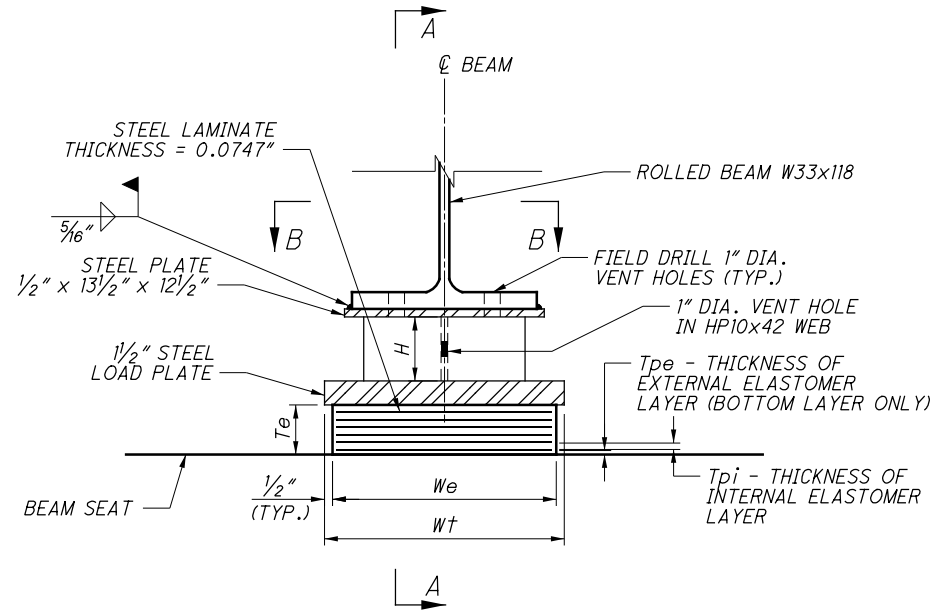
DESIGNED CMH
CMH
CHECKED KVB

EXISTING PIER COLUMN RETROFIT DETAILS
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

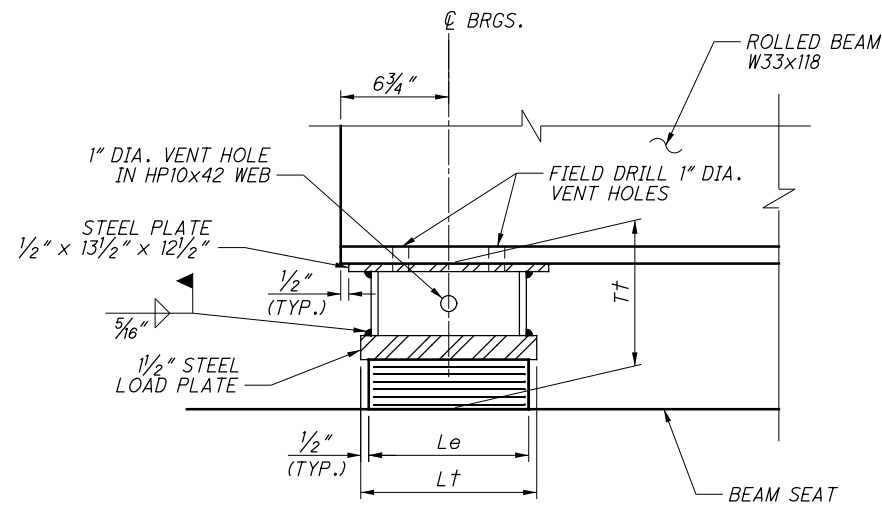
FRA-71-0.00
PID No. 107201

48/86

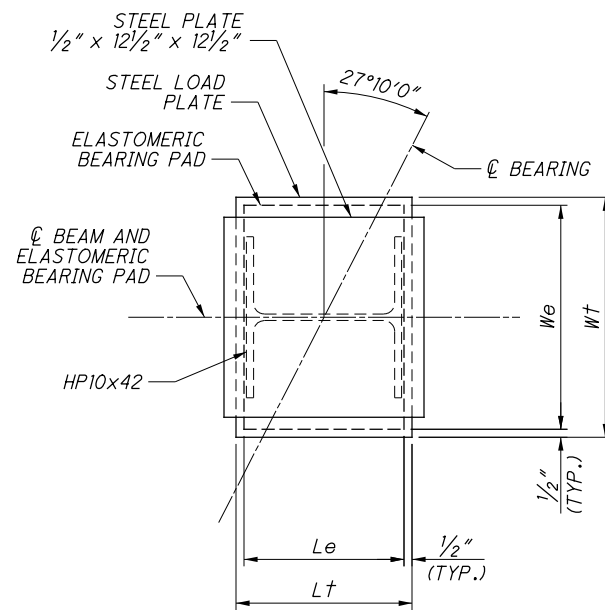
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1312



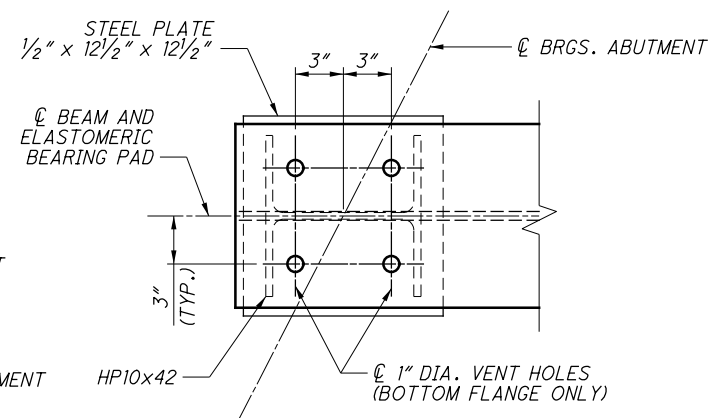
ELASTOMERIC BEARING



SECTION A-A



PLAN



SECTION B-B

ELASTOMERIC BEARINGS															
BEARING LOCATION	TYPE	NO. REQ'D	DEAD LOAD KIPS	LIVE LOAD KIPS	TOTAL LOAD (DL+LL) KIPS	Le	We	Tpi	NO. OF Tpi'S	Tpe (1'EA)	N	Te	STEEL LOAD PLATE		REMARK
													Wt	Lt	
REAR ABUTMENTS (SB & NB)	EXP	18	57	44	101	10"	14"	0.375"	6	0.25"	6	2.948"	15"	11"	H & Tt VARIES
FORWARD ABUTMENTS (SB & NB)	EXP	18	57	44	101	10"	14"	0.375"	6	0.25"	6	2.948"	15"	11"	H & Tt VARIES

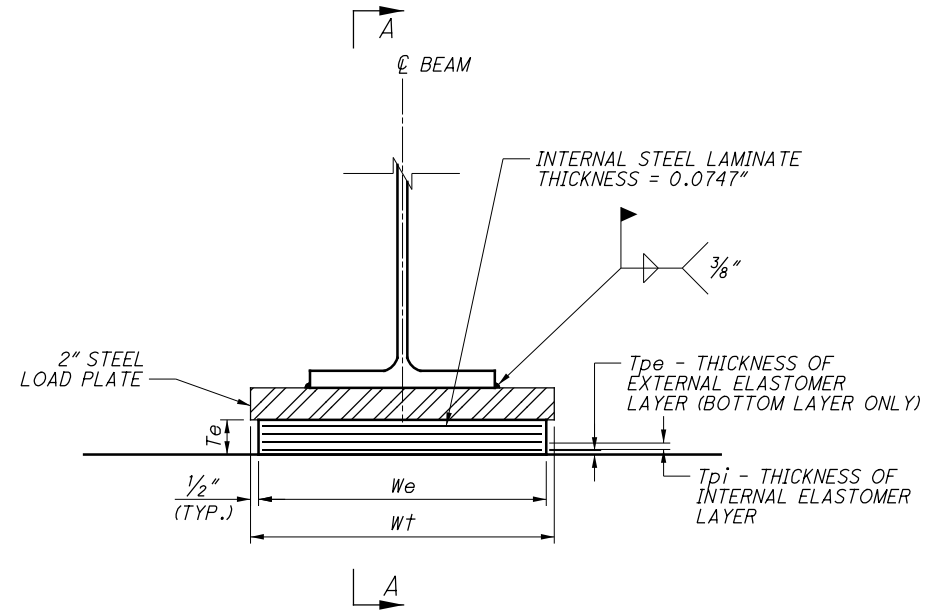
Tpi = THICKNESS OF INTERNAL ELASTOMER LAYER
 Tpe = THICKNESS OF EXTERNAL ELASTOMER LAYER
 Te = TOTAL THICKNESS OF ELASTOMERIC BEARING
 Tt = TOTAL THICKNESS OF BEARING ASSEMBLY

N = NO. OF STEEL LAMINATES
 STEEL LAMINATE THICKNESS = 0.0747"
 DUROMETER OF ELASTOMER = 50 DUROMETER

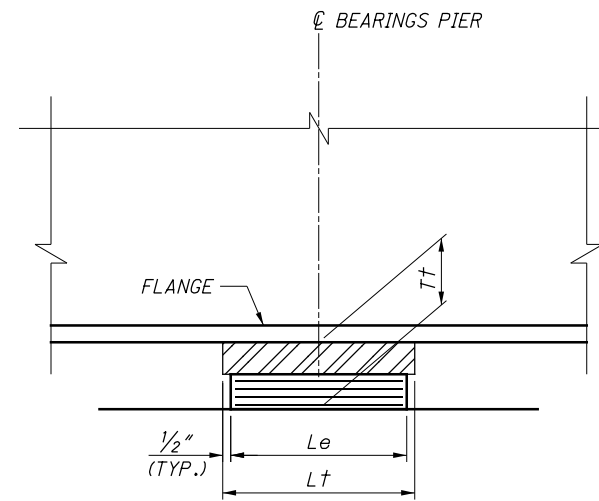
NOTES:

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- LOAD PLATES & HP10x42 BEARINGS PEDESTALS: THE STEEL LOAD PLATE SHALL MEET THE GRADE 50 REQUIREMENTS OF STRUCTURAL STEEL ASTM A709 AND SHALL BE GALVANIZED PER CMS 711.02.
- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
- TOTAL DESIGN LOAD FOR BEARINGS EQUALS THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING TABLE. IMPACT IS NOT INCLUDED. LOADS ARE UNFACTORED.
- BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE THE LOAD PLATE HP10x42 PEDESTAL, STEEL PLATE, AND ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. FOR THE ABUTMENTS, PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
- FOR ADDITIONAL INFORMATION, SEE ODOT STANDARD DRAWING SICD-1-96.

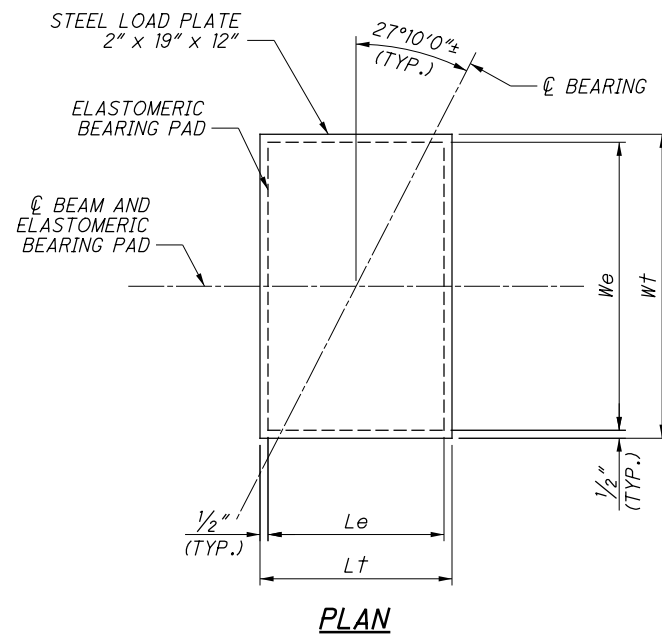
	BEAM NO.	H	Tt		BEAM NO.	H	Tt
SOUTHBOUND REAR ABUTMENT	1	4"	8 15/16"	SOUTHBOUND FORWARD ABUTMENT	1	4"	8 15/16"
	2	5 1/8"	10 1/16"		2	5 5/16"	10 1/4"
	3	6 3/16"	11 3/16"		3	6 9/16"	11 1/2"
	4	7 5/16"	12 1/4"		4	7 13/16"	12 3/4"
	5	6 1/8"	11 1/16"		5	6 13/16"	11 3/4"
	6	4 1/4"	9 3/16"		6	5 1/16"	10"
	7	7 3/4"	12 11/16"		7	7 7/16"	12 7/16"
	8	5 7/8"	10 13/16"		8	5 3/4"	10 11/16"
	9	4"	8 15/16"		9	4"	8 15/16"
NORTHBOUND REAR ABUTMENT	1	4 9/16"	9 1/2"	NORTHBOUND FORWARD ABUTMENT	1	4"	8 15/16"
	2	5 11/16"	10 11/16"		2	5 3/8"	10 5/16"
	3	6 7/8"	11 13/16"		3	6 3/4"	11 11/16"
	4	8"	12 15/16"		4	8 1/16"	13 1/16"
	5	9 1/8"	14 1/16"		5	9 7/16"	14 3/8"
	6	9 9/16"	14 1/2"		6	10 1/8"	15 1/16"
	7	7 3/4"	12 11/16"		7	8 1/2"	13 7/16"
	8	5 7/8"	10 13/16"		8	6 13/16"	11 3/4"
	9	4"	8 15/16"		9	5 3/16"	10 1/8"



LAMINATED ELASTOMERIC EXPANSION BEARING



SECTION A-A



PLAN

NOTES:

1. ELASTOMERIC BEARING: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 METHOD A OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
2. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
3. TOTAL DESIGN LOAD FOR BEARINGS EQUAL THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING SCHEDULE.
4. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
5. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. SAMPLE BEARINGS SHALL NOT BE MEASURED FOR PAYMENT.

LAMINATED ELASTOMERIC EXPANSION BEARINGS														
BEARING LOCATION	NO. REQ'D	DEAD LOAD KIPS	LIVE LOAD KIPS	TOTAL LOAD (DL+LL) KIPS	Le	We	Tpi	NO. OF Tpi'S	Tpe (1 EA)	N	Te	STEEL LOAD PLATE		
												Wt	Lt	Tt
PIERS 1 & 2 (SB & NB)	36	98	48	146	11"	18"	0.375"	4	0.25"	4	2.049"	19"	12"	4.049"

Tpi = THICKNESS OF INTERNAL ELASTOMER LAYER
 Tpe = THICKNESS OF EXTERNAL ELASTOMER LAYER
 Te = TOTAL THICKNESS OF ELASTOMERIC BEARING
 Tt = TOTAL THICKNESS OF BEARING ASSEMBLY

N = NO. OF STEEL LAMINATES
 STEEL LAMINATE THICKNESS = 0.0747"
 DUROMETER OF ELASTOMER = 50 DUROMETER

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DESIGN AGENCY: Mead & Hunt
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DATE: 8/8/2016
 REVISED: 2506904L/2506939R

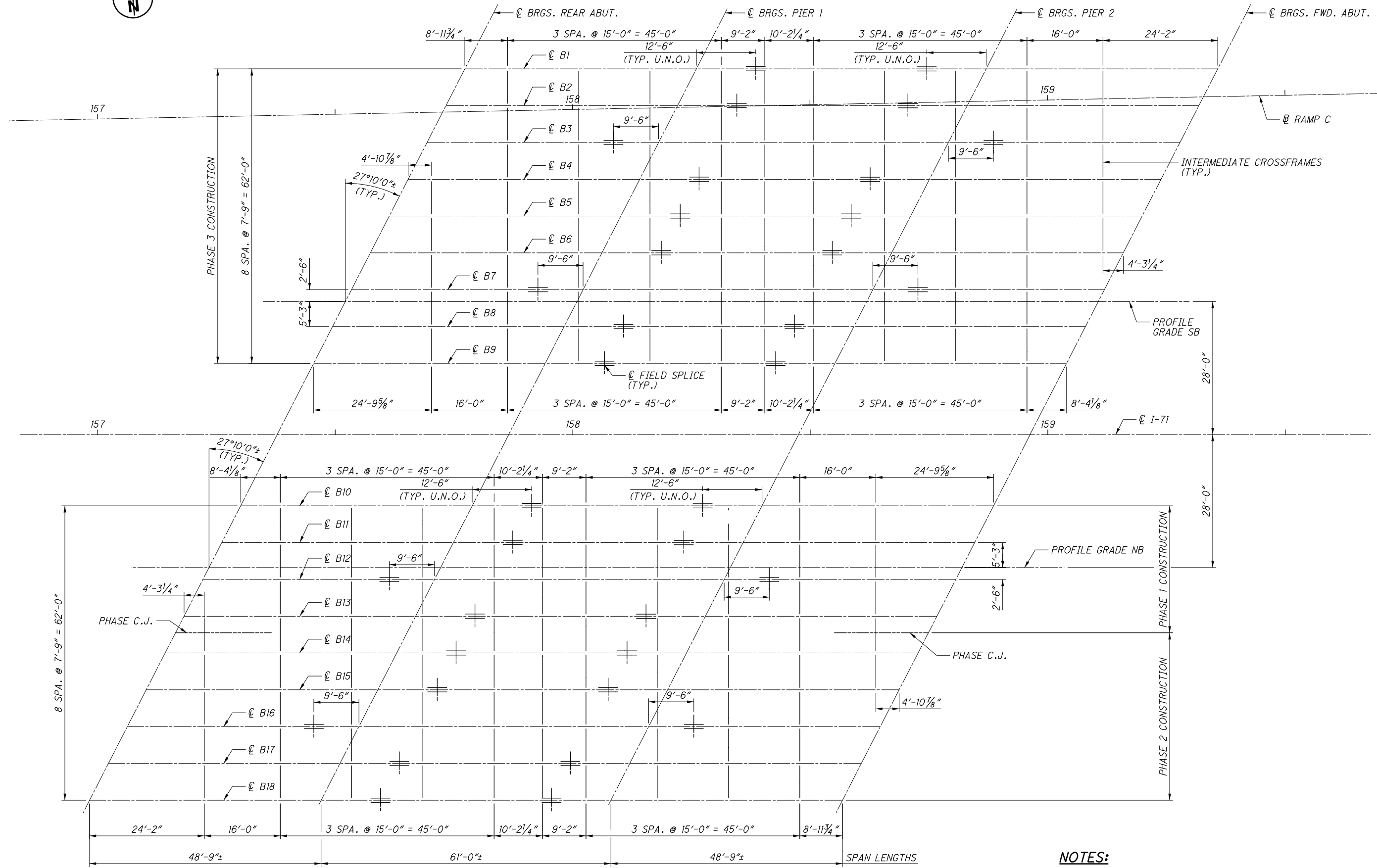
DESIGNED: CMH/RLC
 CHECKED: KVB

DRAWN: DJC
 REVISED:

PIER BEARING DETAILS
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

50/86
 1157
 1312

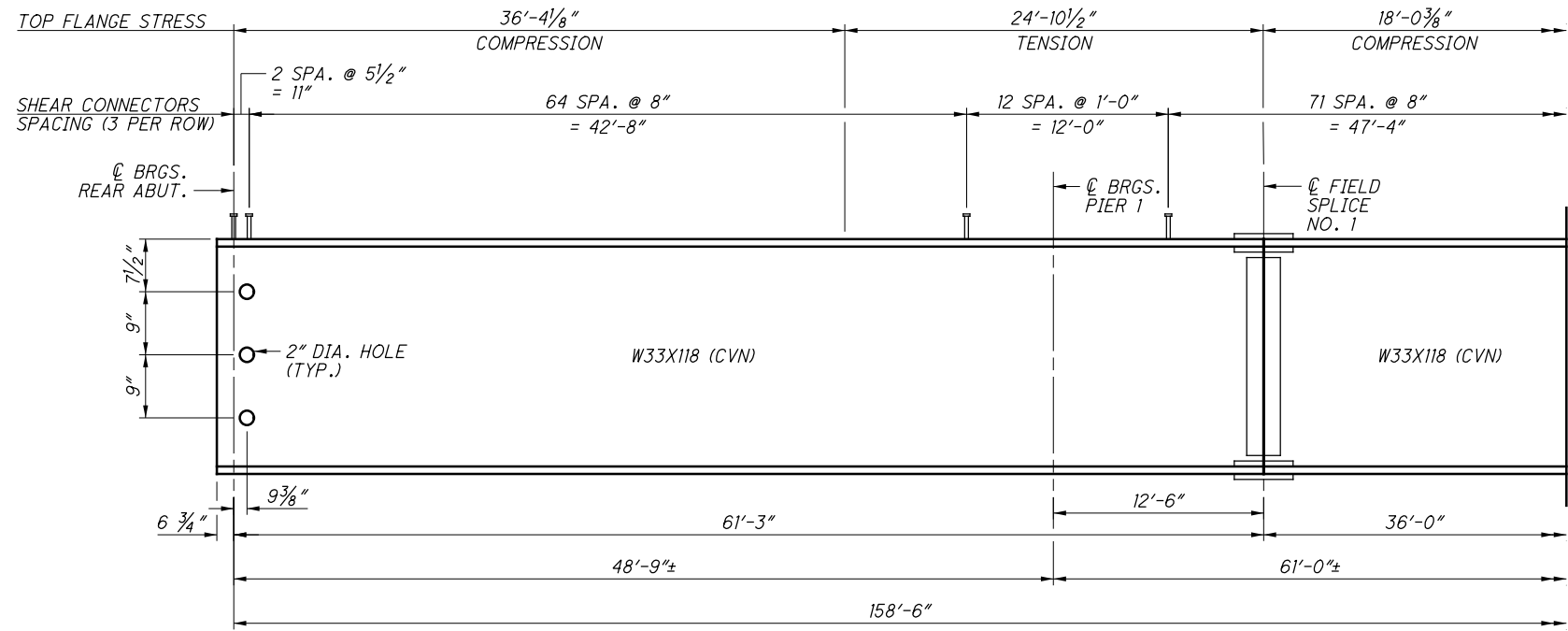


FRAMING PLAN

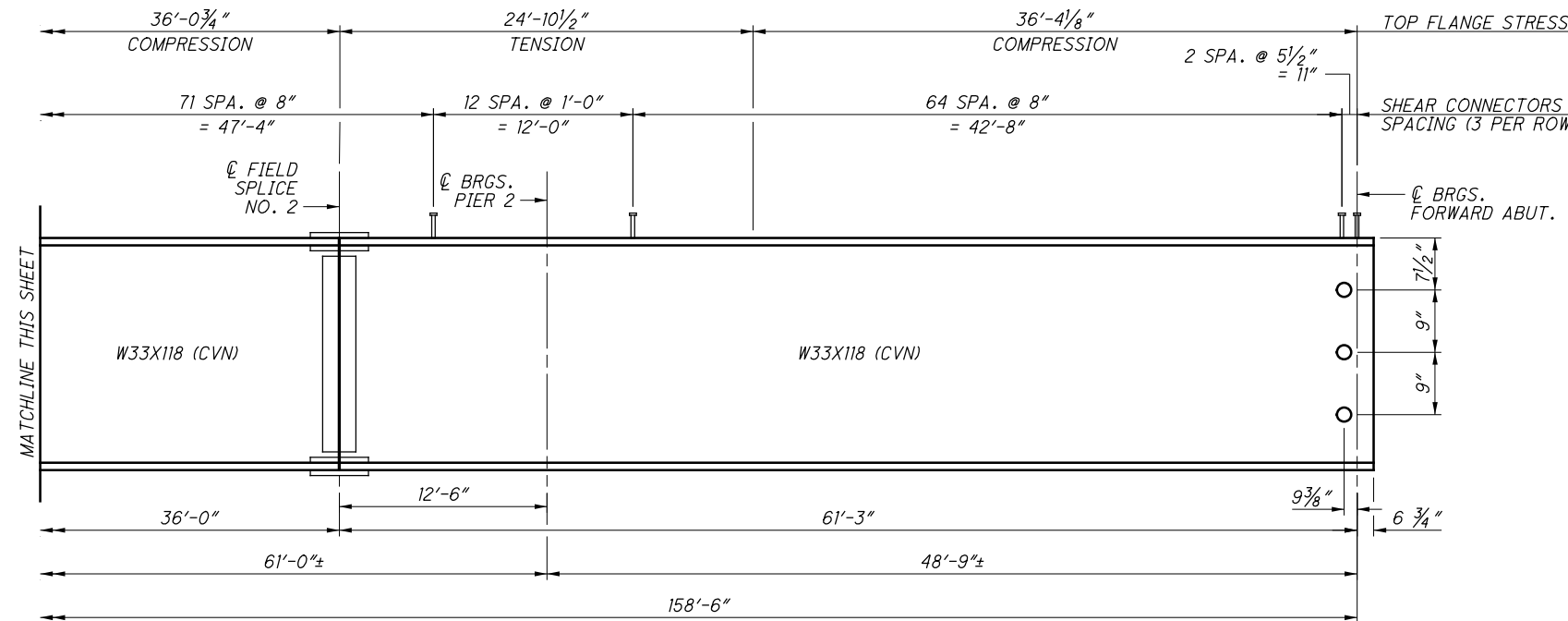
- NOTES:**
1. FOR BEAM ELEVATION, SEE SHEETS 52/86 AND 53/86.
 2. FOR FIELD SPLICE DETAILS, SEE SHEET 54/86.
 3. FOR ADDITIONAL NOTES, SEE SHEET 52/86.

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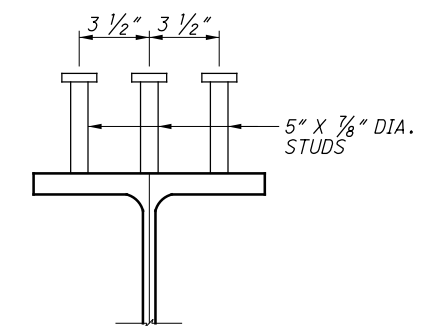
BEAMS 1, 2, 4, 5, 6, 8-11, 13-15, 17 AND 18 ELEVATION



BEAMS 1, 2, 4, 5, 6, 8-11, 13-15, 17 AND 18 ELEVATION

NOTES:

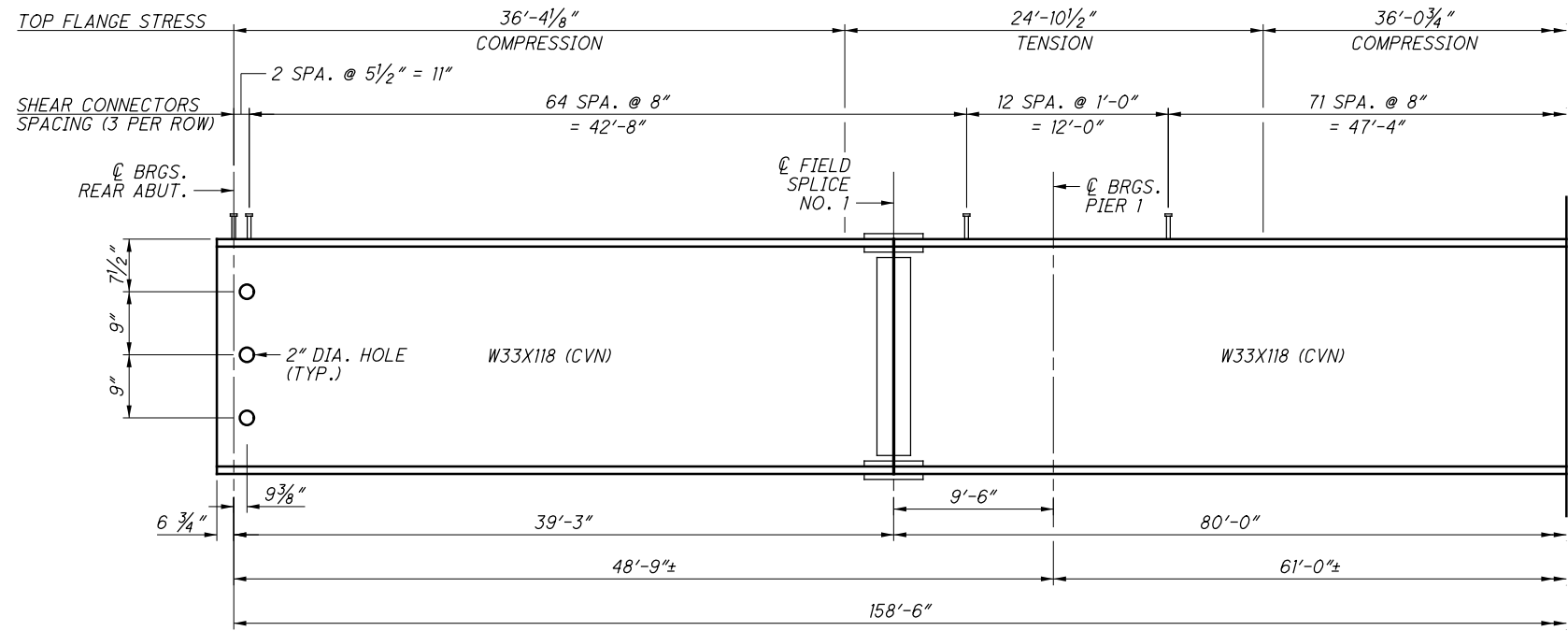
1. WELD ATTACHMENT: WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FLANGES DESIGNATED "COMPRESSION" ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF THE FLANGE, BE NOT MORE THAN 2" LONG AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.
2. CHARPY V-NOTCH TOUGHNESS REQUIREMENT: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIALS THAT MEETS MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.
3. ALL STRUCTURAL STEEL SHALL BE ASTM A709, GRADE 50W.
4. FOR FIELD SPLICE DETAIL, SEE SHEET 54/86.
5. FOR ELEVATION OF BEAMS 3, 7, 12 & 16, SEE SHEET 53/86.
6. FOR ADDITIONAL NOTES AND DETAILS, SEE STD DWG. GSD-1-96.



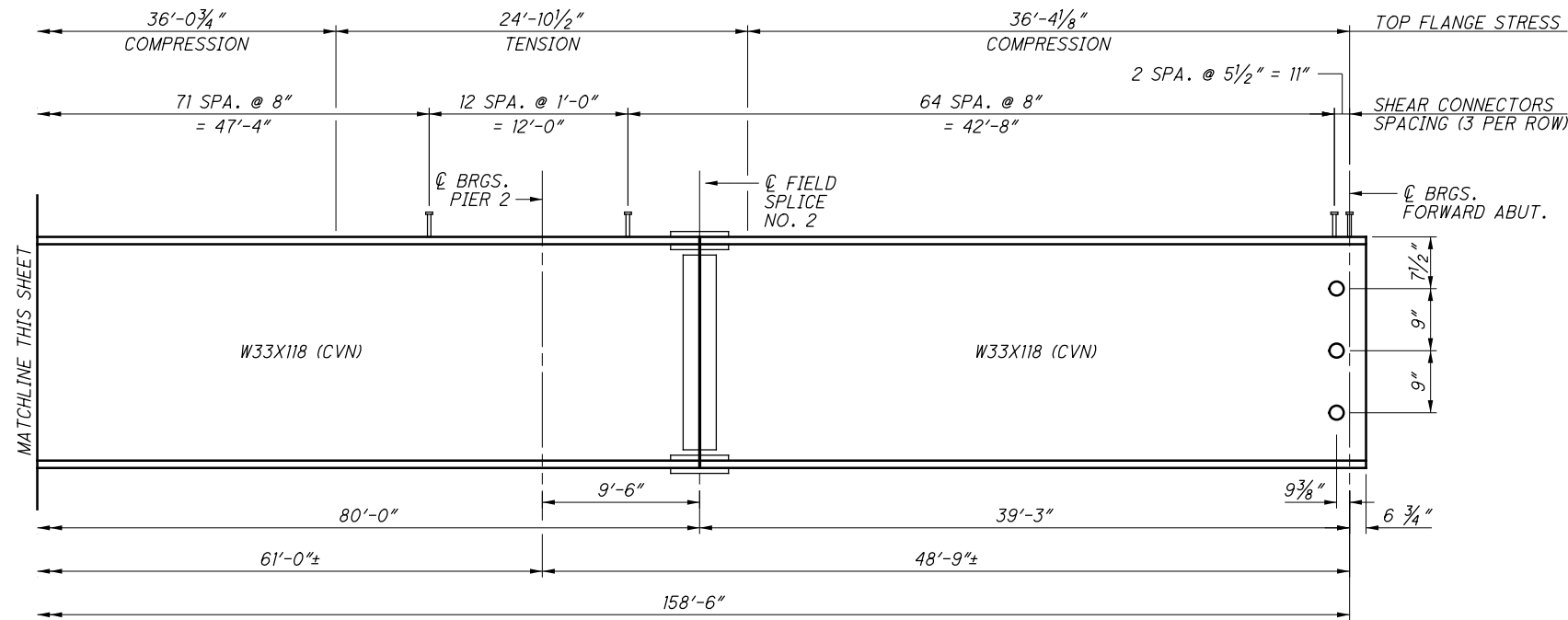
SHEAR STUD DETAIL

LATERAL AND LONGITUDINAL SPACING OF WELDED STUD SHEAR CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.

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BEAMS 3, 7, 12 & 16 ELEVATION



BEAMS 3, 7, 12 & 16 ELEVATION

NOTES:

1. FOR NOTES AND SHEAR CONNECTOR DETAILS, SEE SHEET 52/86.
2. FOR FIELD SPLICE DETAIL, SEE SHEET 54/86.

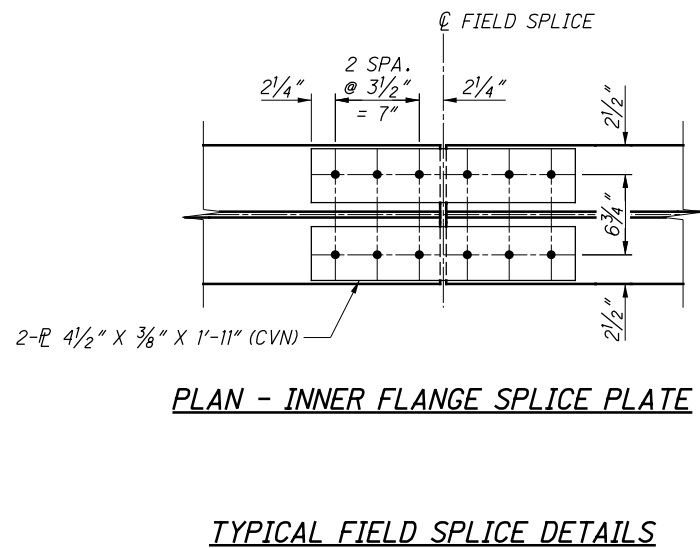
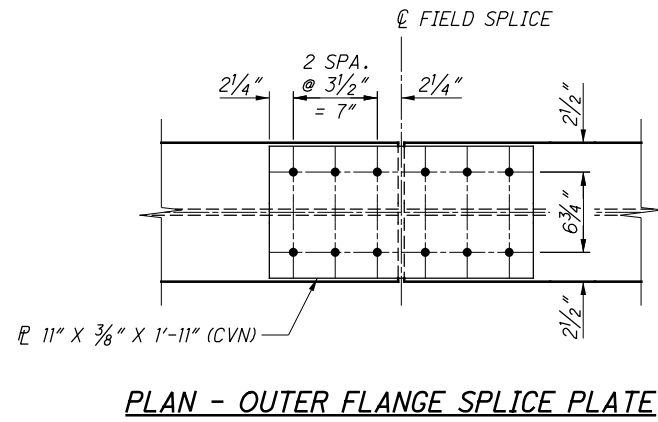
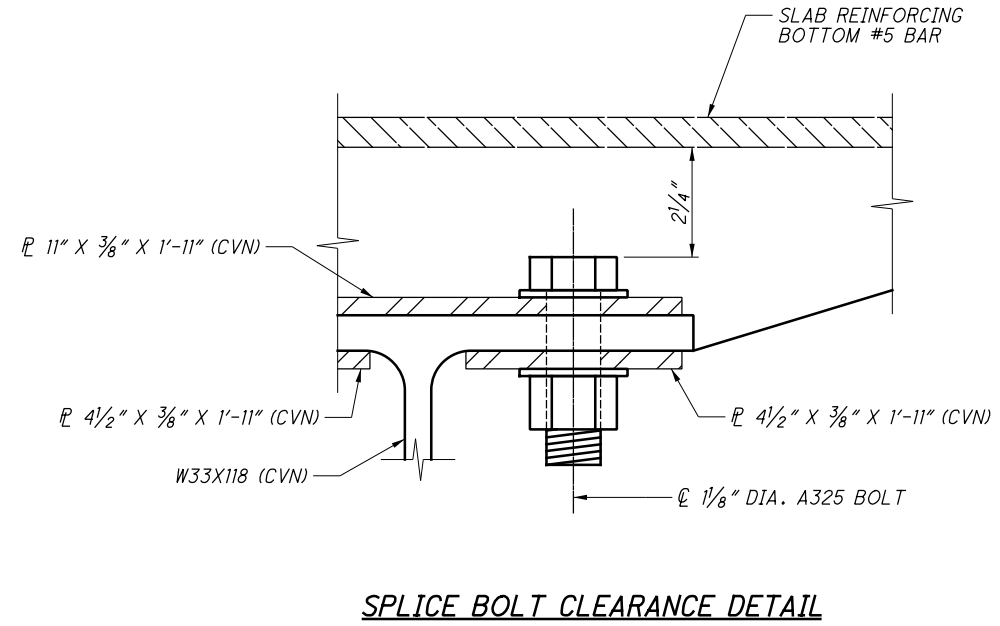
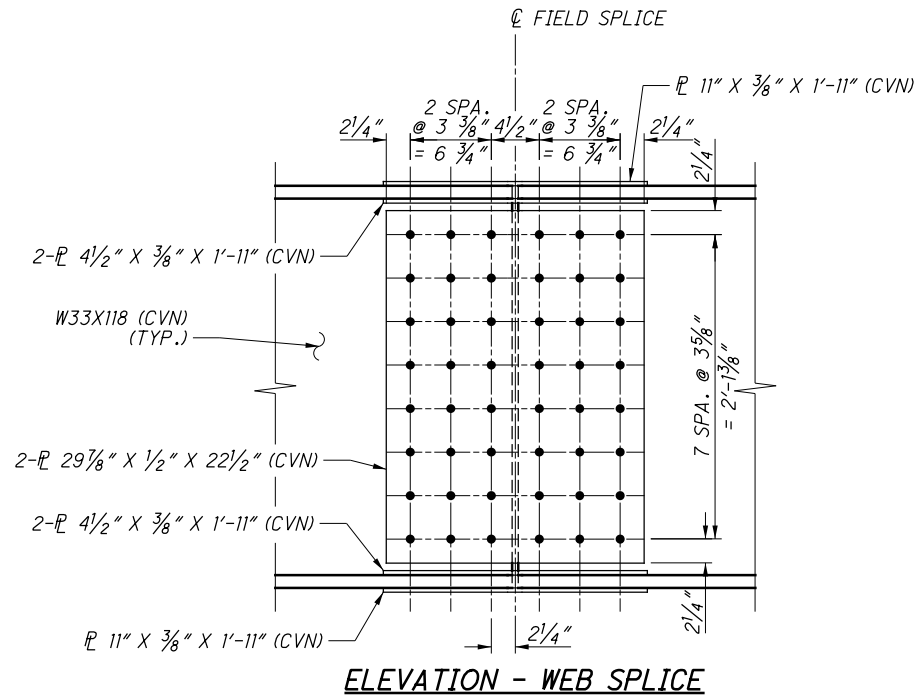
DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT. STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DESIGNED	RLC	CHECKED	KVB
DRAWN	DJC	REVISED	
REVIEWED	REP	DATE	8/8/2016
STRUCTURE FILE NUMBER	2506904L/2506939R		

BEAM ELEVATION
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

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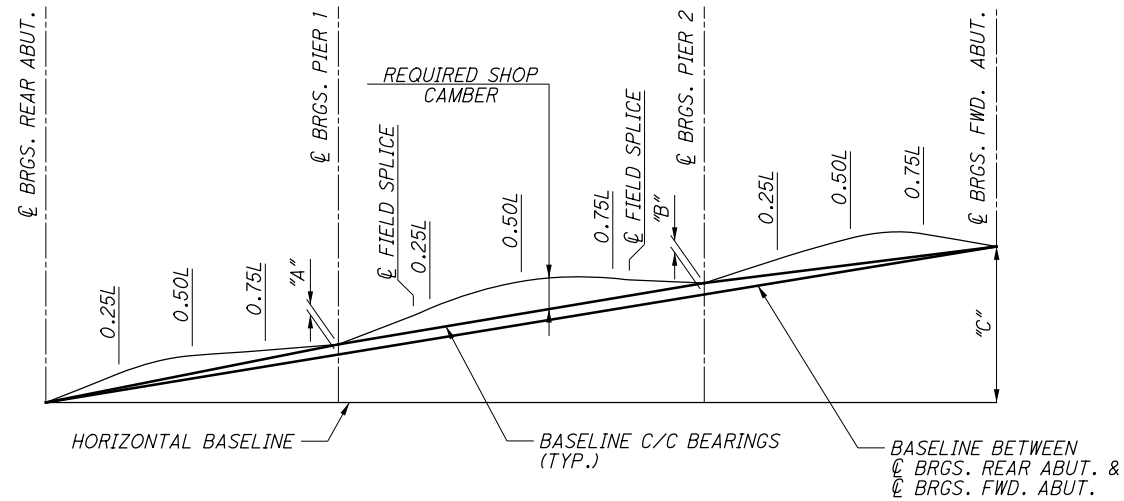


NOTES:

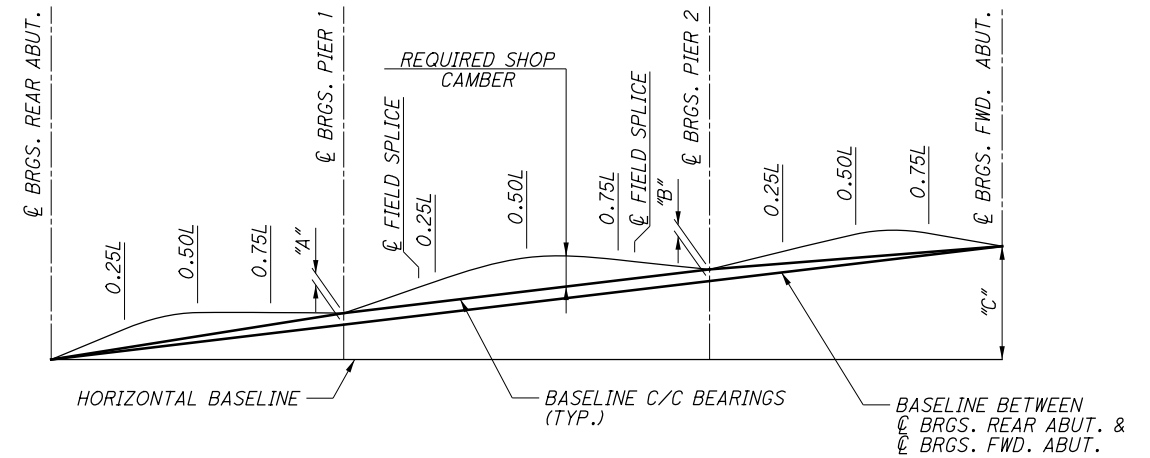
1. ALL FASTENERS IN FIELD SPLICES SHALL BE 1/8" DIA. ASTM A-325 GALVANIZED HIGH STRENGTH BOLTS.
2. CHARPY V-NOTCH TOUGHNESS REQUIREMENT: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.
3. ALL PLATES SHALL BE ASTM A709, GRADE 50W.

DESIGNED RLC		DRAWN DJC	REVIEWED REP	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
CHECKED KVB		REVISED	STRUCTURE FILE NUMBER 2506904L/2506939R		
FIELD SPLICE DETAILS					
BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY					
FRA-71-0.00		PID No. 107201		54/86	
1161 1312					

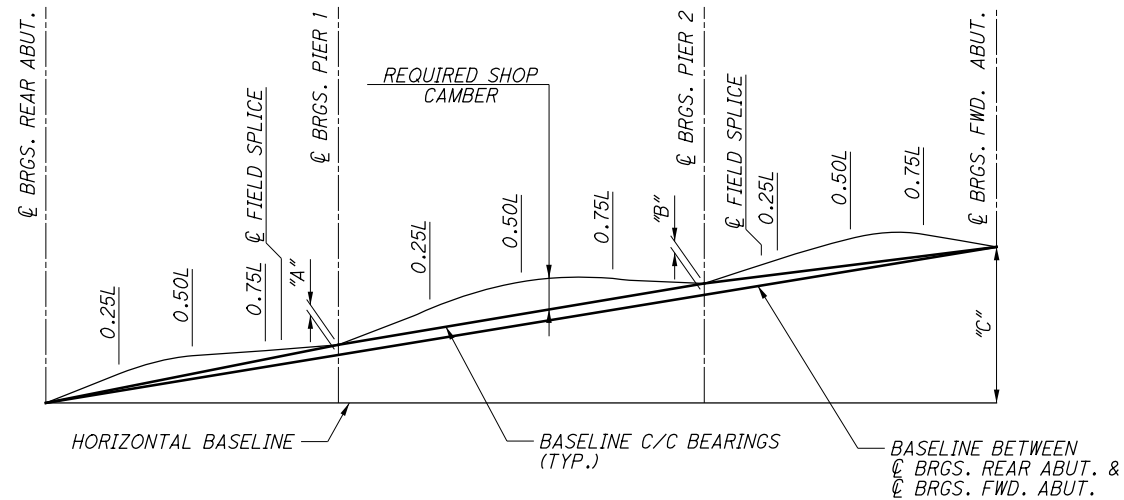
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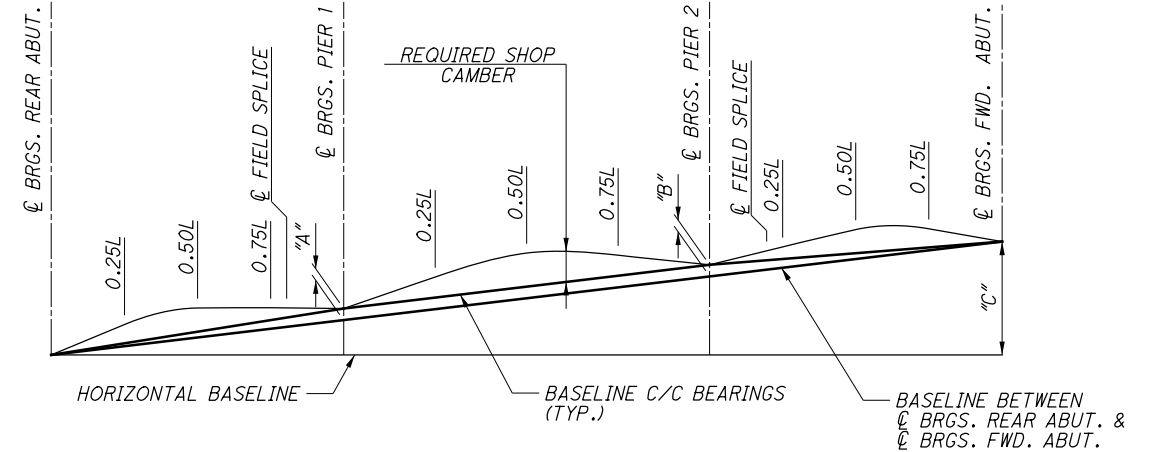
CAMBER DIAGRAM - SOUTHBOUND
BEAMS B1, B2, B4, B5, B6, B8 & B9
(NTS)



CAMBER DIAGRAM - NORTHBOUND
BEAMS B10, B11, B13, B14, B15, B17 & B18
(NTS)



CAMBER DIAGRAM - SOUTHBOUND
BEAMS B3 & B7
(NTS)



CAMBER DIAGRAM - NORTHBOUND
BEAMS B12 & B16
(NTS)

VERTICAL OFFSETS - SOUTHBOUND			
BEAM MARK	BLOCKING DIMENSION		
	"A"	"B"	"C"
B1	13/16"	15/16"	12 1/2"
B2	3/4"	7/8"	12 11/16"
B3	3/4"	7/8"	12 13/16"
B4	11/16"	7/8"	13"
B5	5/8"	13/16"	13 3/16"
B6	9/16"	13/16"	13 5/16"
B7	9/16"	3/4"	13 7/16"
B8	1/2"	3/4"	13 5/8"
B9	7/16"	3/4"	13 3/4"

VERTICAL OFFSETS - NORTHBOUND			
BEAM MARK	BLOCKING DIMENSION		
	"A"	"B"	"C"
B10	15/16"	15/16"	9 1/16"
B11	15/16"	15/16"	9 1/4"
B12	15/16"	15/16"	9 1/2"
B13	15/16"	15/16"	9 3/4"
B14	15/16"	15/16"	9 15/16"
B15	15/16"	15/16"	10 3/16"
B16	15/16"	15/16"	10 3/8"
B17	15/16"	15/16"	10 5/8"
B18	15/16"	15/16"	10 13/16"

NOTE:
1. FOR CAMBER VALUES AND LOCATIONS, SEE SHEETS 56/86 & 57/86.

DESIGNED RLC CHECKED MAB	DRAWN DJC REVISED	REVIEWED KVB	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LANEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		STRUCTURE FILE NUMBER 2506904L/2506939R		
CAMBER AND DEFLECTION TABLES				
BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY				
FRA-71-0.00				
PID No. 107201				
55/86				
1162 1312				

CAMBER AND DEFLECTION - SOUTHBOUND

BEAM MARK	LOCATION	€ BRGS. REAR ABUTMENT	SPAN 1				SPAN 2				SPAN 3				€ BRGS. FORWARD ABUTMENT			
			0.25L	0.50L	0.75L	€ FIELD SPLICE	€ BRGS. PIER 1	€ FIELD SPLICE	0.25L	0.50L	0.75L	€ FIELD SPLICE	€ BRGS. PIER 2	€ FIELD SPLICE		0.25L	0.50L	0.75L
€ B1	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	0"	1/16"	0"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	1/4"	1/8"	-	0"	1/8"	3/16"	5/16"	3/16"	1/8"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	-	0"	1/8"	1/8"	3/16"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	1/4"	5/16"	1/8"	-	0"	1/4"	5/16"	9/16"	5/16"	1/4"	0"	-	3/16"	7/16"	3/8"	0"
€ B2	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	-	0"	1/8"	1/8"	3/16"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	5/16"	1/8"	-	0"	5/16"	3/8"	5/8"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
€ B3	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	0"	0"	-	1/16"	1/16"	1/16"	-	0"	0"	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	1/16"	0"	-	3/16"	3/8"	3/16"	-	0"	1/16"	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	0"	0"	-	1/8"	3/16"	1/8"	-	0"	1/16"	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	5/16"	1/8"	1/16"	0"	-	3/8"	5/8"	3/8"	-	0"	1/8"	3/16"	7/16"	3/8"	0"
€ B4	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	-	0"	1/8"	1/8"	3/16"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	5/16"	1/8"	-	0"	5/16"	3/8"	5/8"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
€ B5	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	-	0"	1/8"	1/8"	3/16"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	5/16"	1/8"	-	0"	5/16"	3/8"	5/8"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
€ B6	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	-	0"	1/8"	1/8"	3/16"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	5/16"	1/8"	-	0"	5/16"	3/8"	5/8"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
€ B7	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	0"	0"	-	1/16"	1/16"	1/16"	-	0"	0"	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	1/16"	0"	-	3/16"	3/8"	3/16"	-	0"	1/16"	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	0"	0"	-	1/8"	1/8"	1/8"	-	0"	1/16"	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	5/16"	1/8"	1/16"	0"	-	3/8"	9/16"	3/8"	-	0"	1/8"	3/16"	7/16"	3/8"	0"
€ B8	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	-	0"	1/16"	1/8"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	5/16"	1/8"	-	0"	1/4"	3/8"	9/16"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
€ B9	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	0"	0"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	1/4"	1/8"	-	0"	1/8"	3/16"	5/16"	3/16"	1/8"	0"	-	1/8"	1/4"	3/16"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	-	0"	1/16"	1/16"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	1/4"	5/16"	1/8"	-	0"	3/16"	1/4"	1/2"	5/16"	1/4"	0"	-	3/16"	7/16"	5/16"	0"

NOTE:

1. FOR CAMBER DIAGRAM AND BLOCKING DIMENSIONS, SEE SHEET 55/86.

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DESIGNED RLC MAB	DRAWN RLC REVISED	REVIEWED KVB	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		STRUCTURE FILE NUMBER 2506904L/2506939R		
		BRIDGE NO. FRA-71-0298 L/R	OVER INDIANA & OHIO RAILWAY COMPANY	
CAMBER AND DEFLECTION TABLE - SOUTHBOUND BRIDGE				
FRA - 71 - 0.00 PID No. 107201				
56/86				
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; width: 30px; margin: 0 auto;"> 1163 1312 </div>				

CAMBER AND DEFLECTION - NORTHBOUND

BEAM MARK	LOCATION	E BRGS. REAR ABUTMENT	SPAN 1				SPAN 2				SPAN 3				E BRGS. FORWARD ABUTMENT			
			0.25L	0.50L	0.75L	E FIELD SPLICE	E BRGS. PIER 1	E FIELD SPLICE	0.25L	0.50L	0.75L	E FIELD SPLICE	E BRGS. PIER 2	E FIELD SPLICE		0.25L	0.50L	0.75L
E B10	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	0"	1/16"	0"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	1/4"	1/8"	-	0"	1/8"	3/16"	5/16"	3/16"	1/8"	0"	-	1/8"	1/4"	3/16"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	-	0"	1/8"	1/8"	3/16"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	7/16"	3/16"	-	0"	1/4"	5/16"	9/16"	5/16"	1/4"	0"	-	3/16"	7/16"	5/16"	0"
E B11	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	-	0"	1/8"	1/8"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	3/8"	7/16"	3/16"	-	0"	5/16"	3/8"	9/16"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
E B12	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	0"	0"	-	1/16"	1/16"	1/16"	-	0"	0"	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	1/16"	0"	-	3/16"	3/8"	3/16"	-	0"	1/16"	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	1/16"	0"	-	1/8"	1/8"	1/8"	-	0"	1/16"	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	3/8"	7/16"	3/16"	1/8"	0"	-	3/8"	9/16"	3/8"	-	0"	1/8"	3/16"	7/16"	3/8"	0"
E B13	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	-	0"	1/8"	1/8"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	3/8"	7/16"	3/16"	-	0"	5/16"	3/8"	9/16"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
E B14	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	-	0"	1/8"	1/8"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	3/8"	7/16"	3/16"	-	0"	5/16"	3/8"	9/16"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
E B15	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	-	0"	1/8"	1/8"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	3/8"	7/16"	3/16"	-	0"	5/16"	3/8"	9/16"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
E B16	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	0"	0"	-	1/16"	1/16"	1/16"	-	0"	0"	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	1/16"	0"	-	3/16"	3/8"	3/16"	-	0"	1/16"	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	1/16"	0"	-	1/8"	1/8"	1/8"	-	0"	1/16"	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	3/8"	7/16"	3/16"	1/8"	0"	-	3/8"	9/16"	3/8"	-	0"	1/8"	3/16"	7/16"	3/8"	0"
E B17	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	1/16"	1/16"	1/16"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/4"	1/4"	1/8"	-	0"	3/16"	3/16"	3/8"	3/16"	3/16"	0"	-	1/8"	1/4"	1/4"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	-	0"	1/8"	1/8"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	3/8"	7/16"	3/16"	-	0"	5/16"	3/8"	9/16"	3/8"	5/16"	0"	-	3/16"	7/16"	3/8"	0"
E B18	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/16"	1/16"	0"	-	0"	0"	0"	1/16"	0"	0"	0"	-	0"	1/16"	1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	1/4"	1/8"	-	0"	1/8"	3/16"	5/16"	3/16"	1/8"	0"	-	1/8"	1/4"	3/16"	0"
	ADJUSTMENT DUE TO VERTICAL CURVE	0"	1/16"	1/8"	1/16"	-	0"	1/8"	1/8"	1/8"	1/8"	1/8"	0"	-	1/16"	1/8"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	5/16"	7/16"	3/16"	-	0"	1/4"	5/16"	1/2"	5/16"	1/4"	0"	-	3/16"	7/16"	5/16"	0"

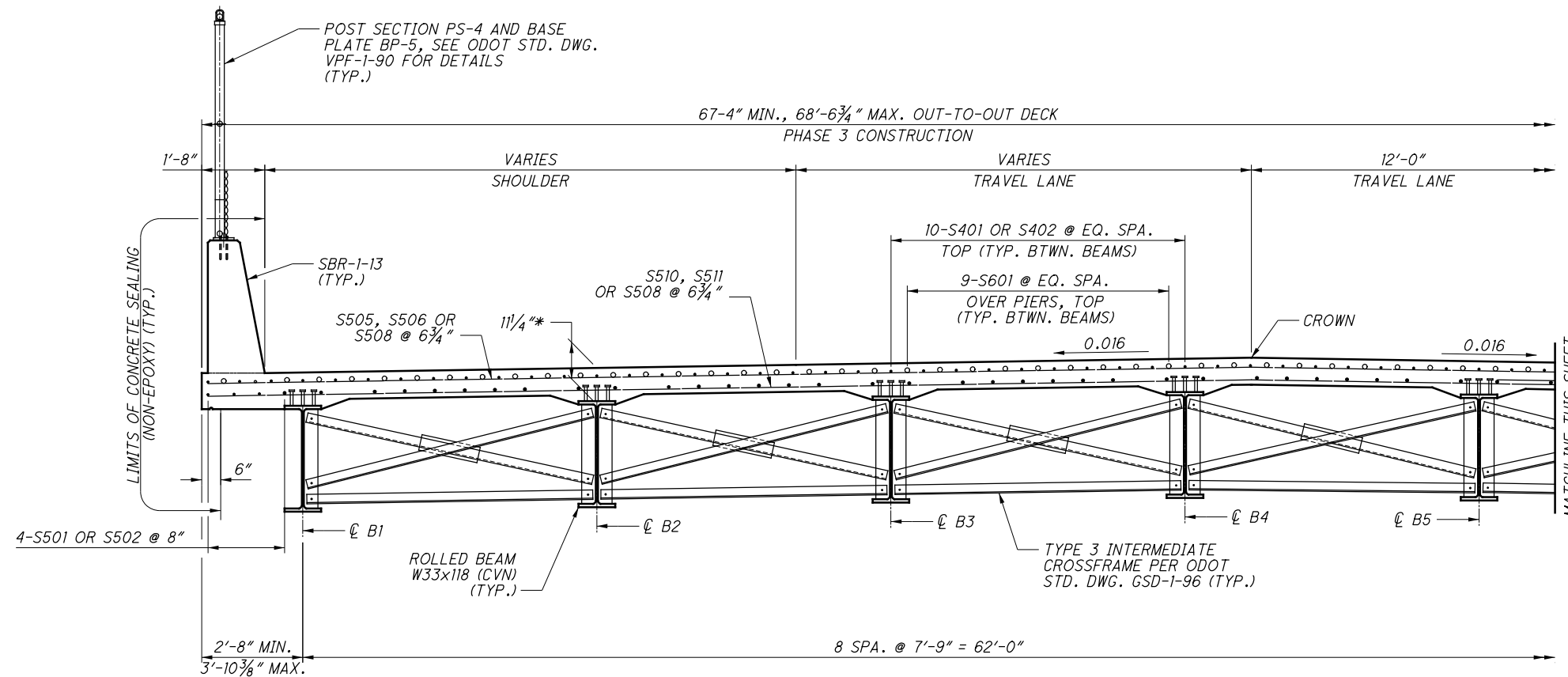
NOTE:

1. FOR CAMBER DIAGRAM AND BLOCKING DIMENSIONS, SEE SHEET 55/86

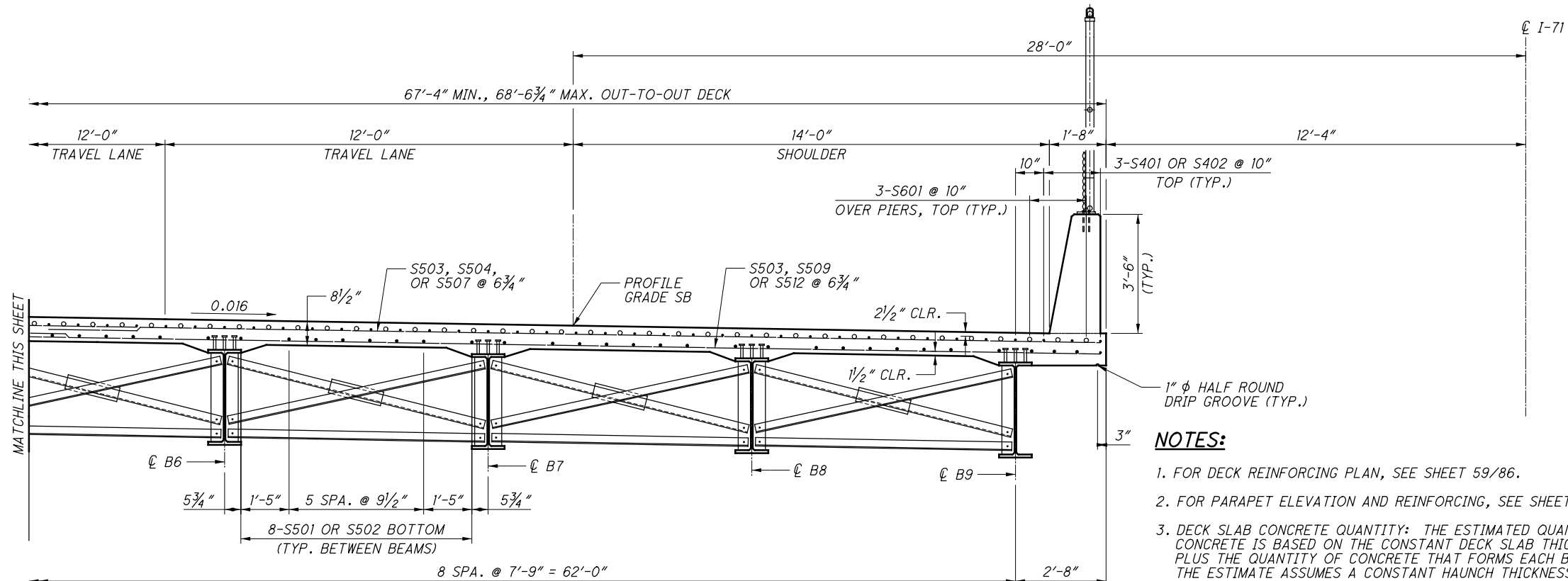
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CAMBER AND DEFLECTION TABLE - NORTHBOUND BRIDGE		DESIGNED	RLC MAB	DRAWN	RLC REVISED	REVIEWED	KVB STRUCTURE FILE NUMBER 2506904L/2506939R	DATE	8/8/2016	DESIGN AGENCY			Mead & Hunt
FRA-71-0.00	BRIDGE NO. FRA-71-0298 L/R									4700 LAKEURST. CT. STE 110 DUBLIN, OH 43068 (614) 792-9900 PHONE			
PID No. 107201													
57/86													
1164 1312													

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TRANSVERSE SECTION - SOUTHBOUND



TRANSVERSE SECTION - SOUTHBOUND

LEGEND:

* - DIMENSION MEASURED FROM TOP OF SLAB TO TOP OF WEB

MINIMUM LAP LENGTHS	
NO. 4 BAR	2'-3"
NO. 5 BAR	2'-7"
NO. 6 BAR	4'-1"

NOTES:

- FOR DECK REINFORCING PLAN, SEE SHEET 59/86.
- FOR PARAPET ELEVATION AND REINFORCING, SEE SHEETS 60/86 AND 61/86.
- DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM/GIRDER FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM/GIRDER FLANGE IS ±3 INCHES.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM/GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DATE
8/8/2016

REVIEWED
KVB

DRAWN
DJC

DESIGNED
RLC

CHECKED
MLH

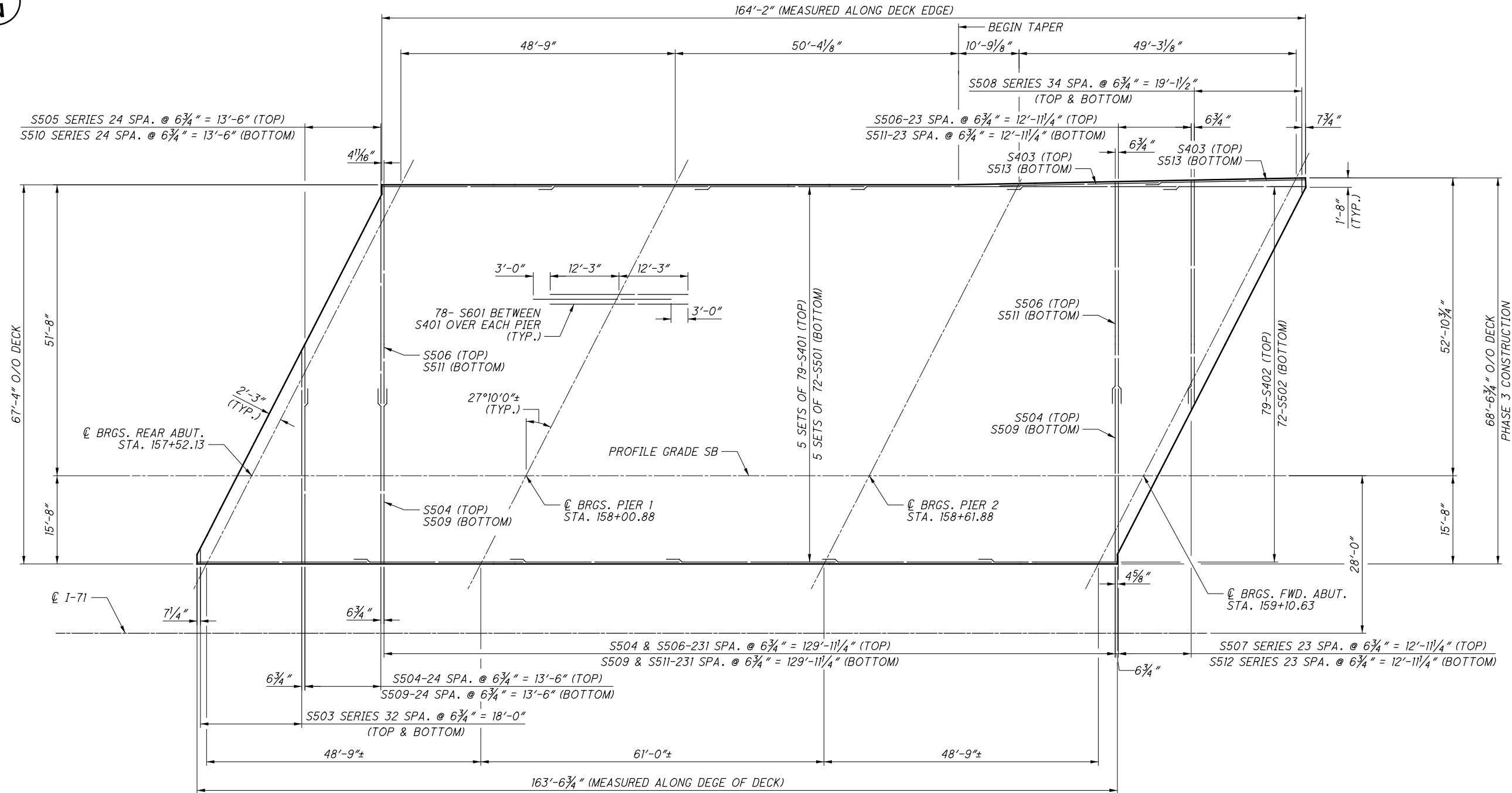
STRUCTURE FILE NUMBER
2506904L/2506939R

TRANSVERSE SECTION - SOUTHBOUND BRIDGE
BRIDGE NO. FRA-71-0296 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

58/86

1165
1312



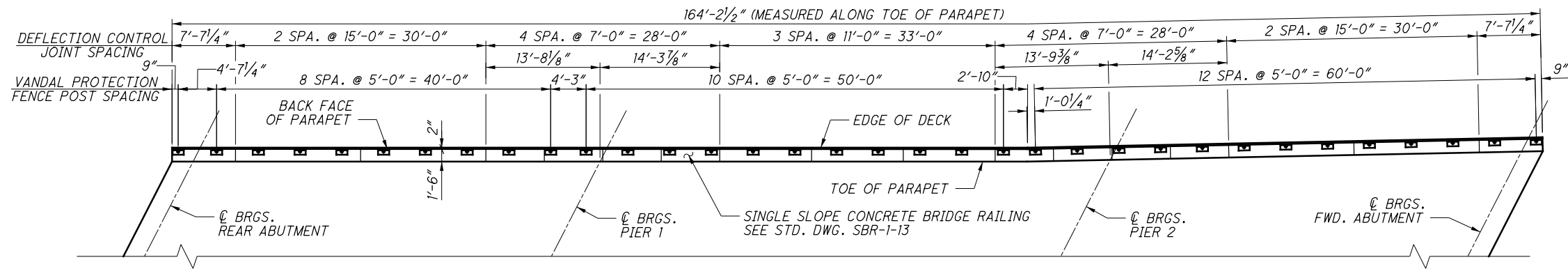
DECK REINFORCING PLAN - SOUTHBOUND

MINIMUM LAP LENGTHS	
NO. 4 BAR	2'-3"
NO. 5 BAR	2'-7"
NO. 6 BAR	4'-1"

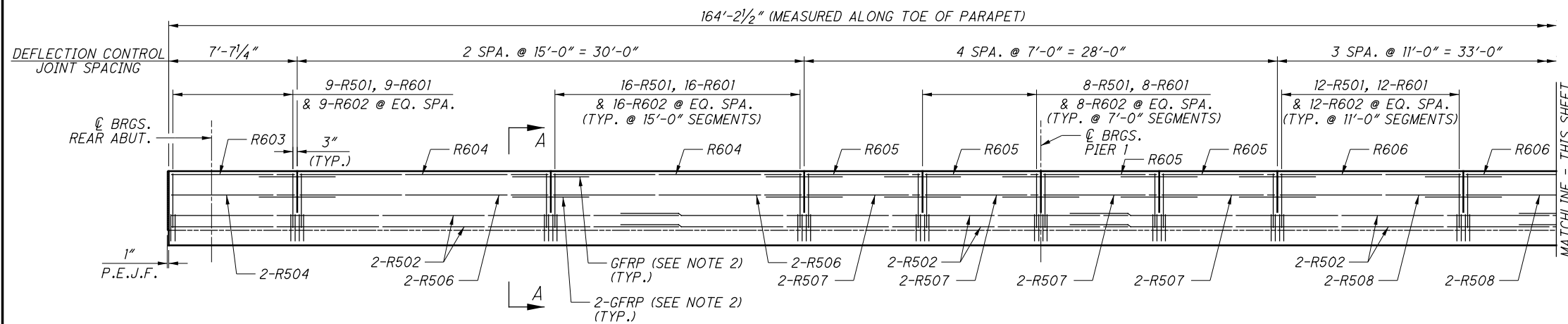
NOTE:

1. FOR TRANSVERSE SECTION, SEE SHEET 58/86.

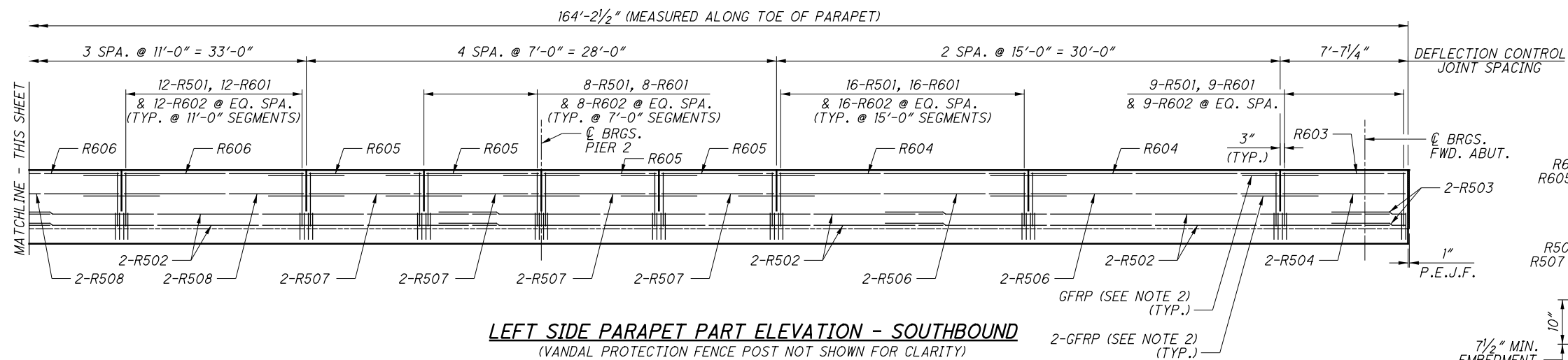
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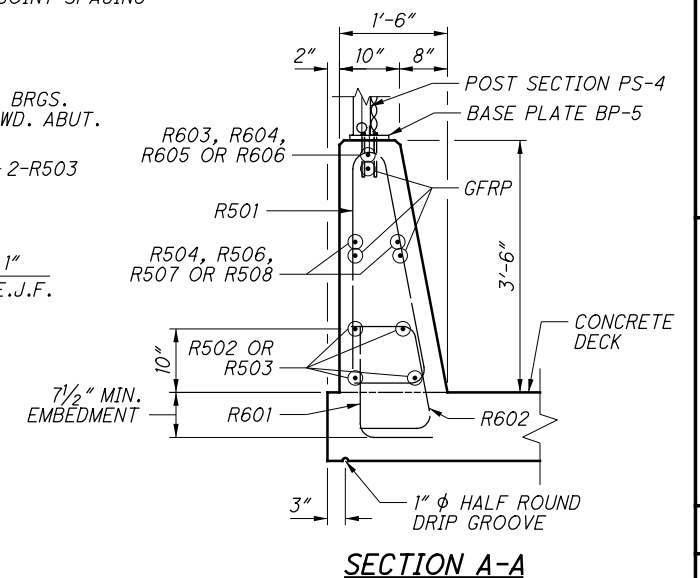
LEFT SIDE PARAPET PLAN - SOUTHBOUND



LEFT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



LEFT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



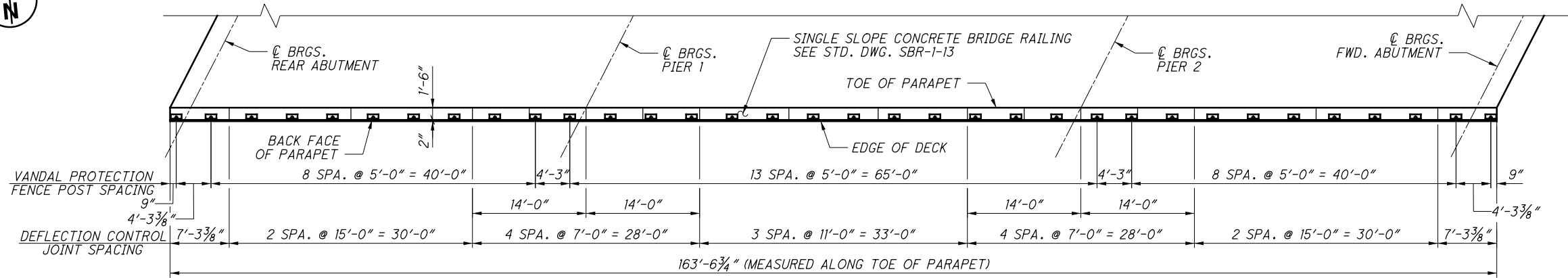
SECTION A-A

NOTES:

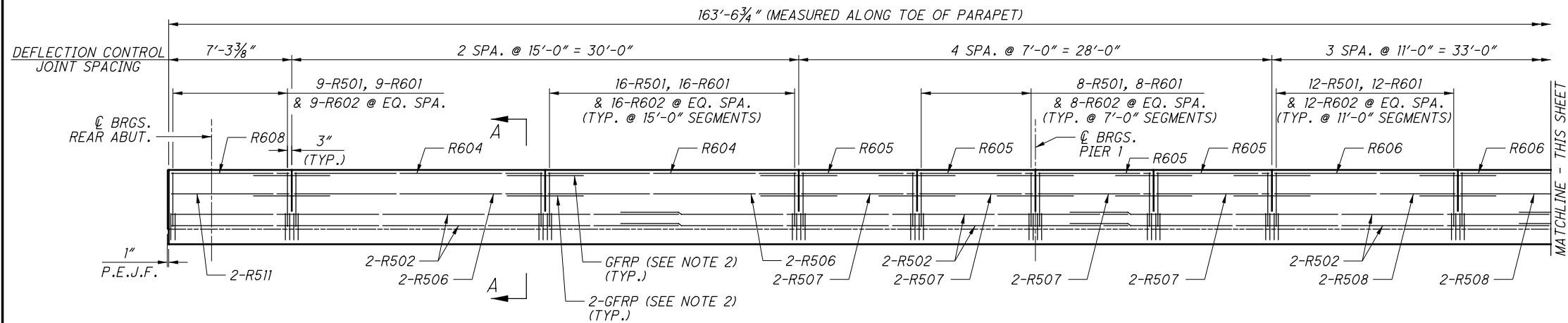
- FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE STD. DWG. SBR-1-13.
- 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT. INCLUDE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT.
- FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS & NOTES, SEE STD. DWG. VPF-1-90.

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

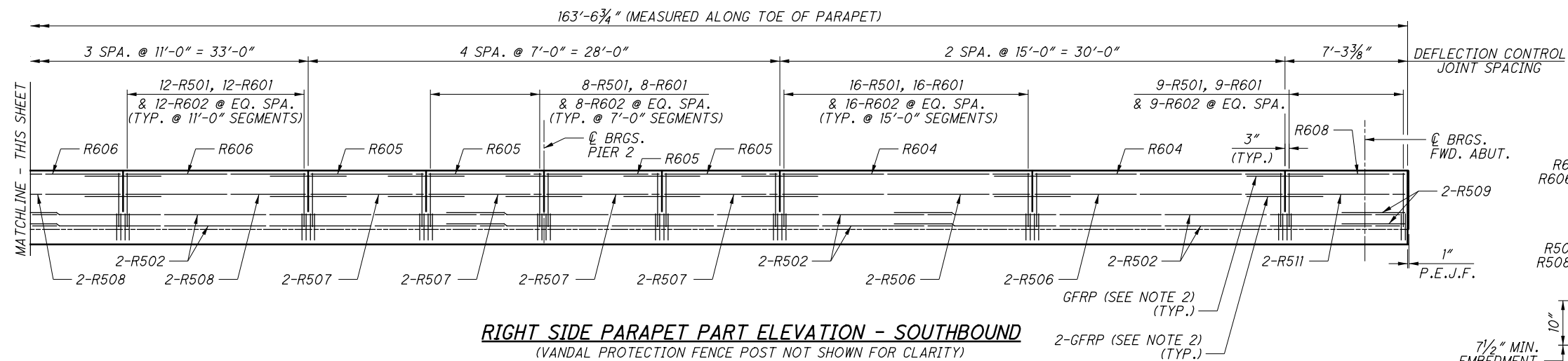
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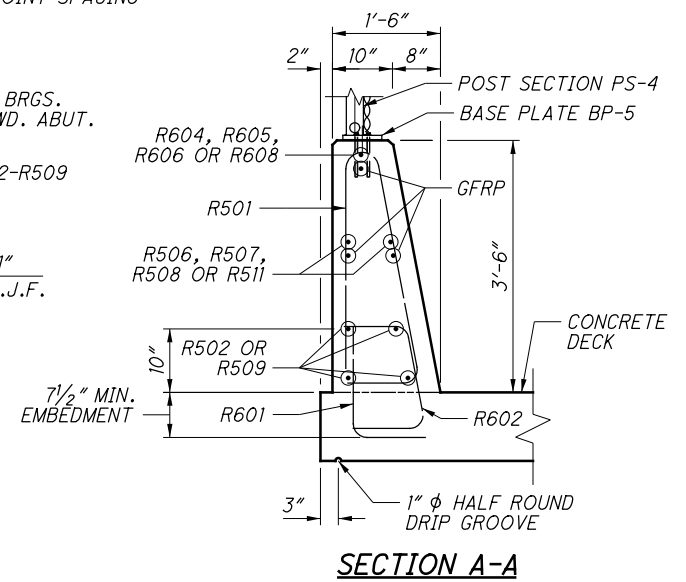
RIGHT SIDE PARAPET PART PLAN - SOUTHBOUND



RIGHT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



RIGHT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



SECTION A-A

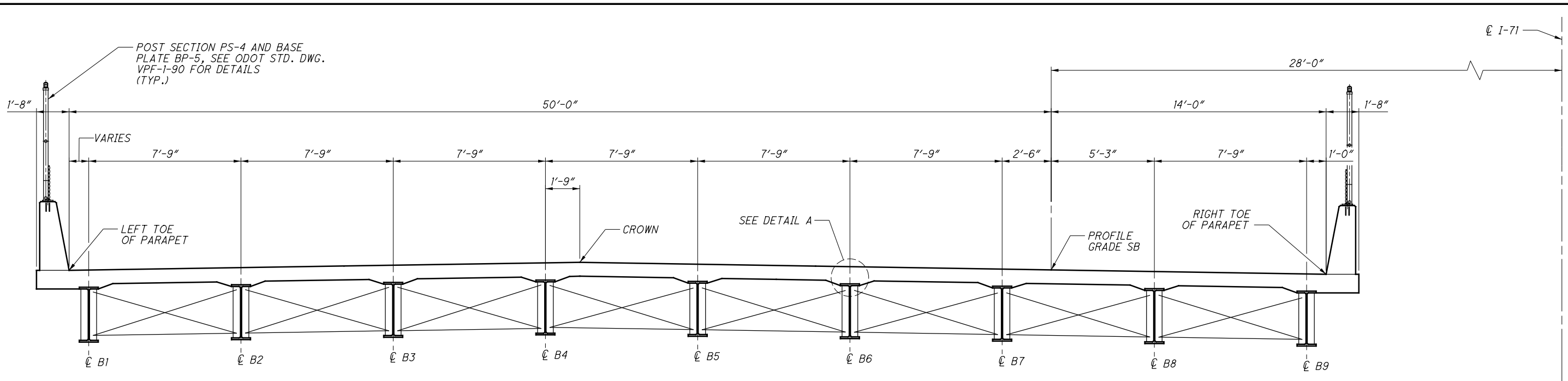
NOTES:

1. FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE STD. DWG. SBR-1-13.
2. 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT. INCLUDE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT.
3. FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS & NOTES, SEE STD. DWG. VPF-1-90.

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

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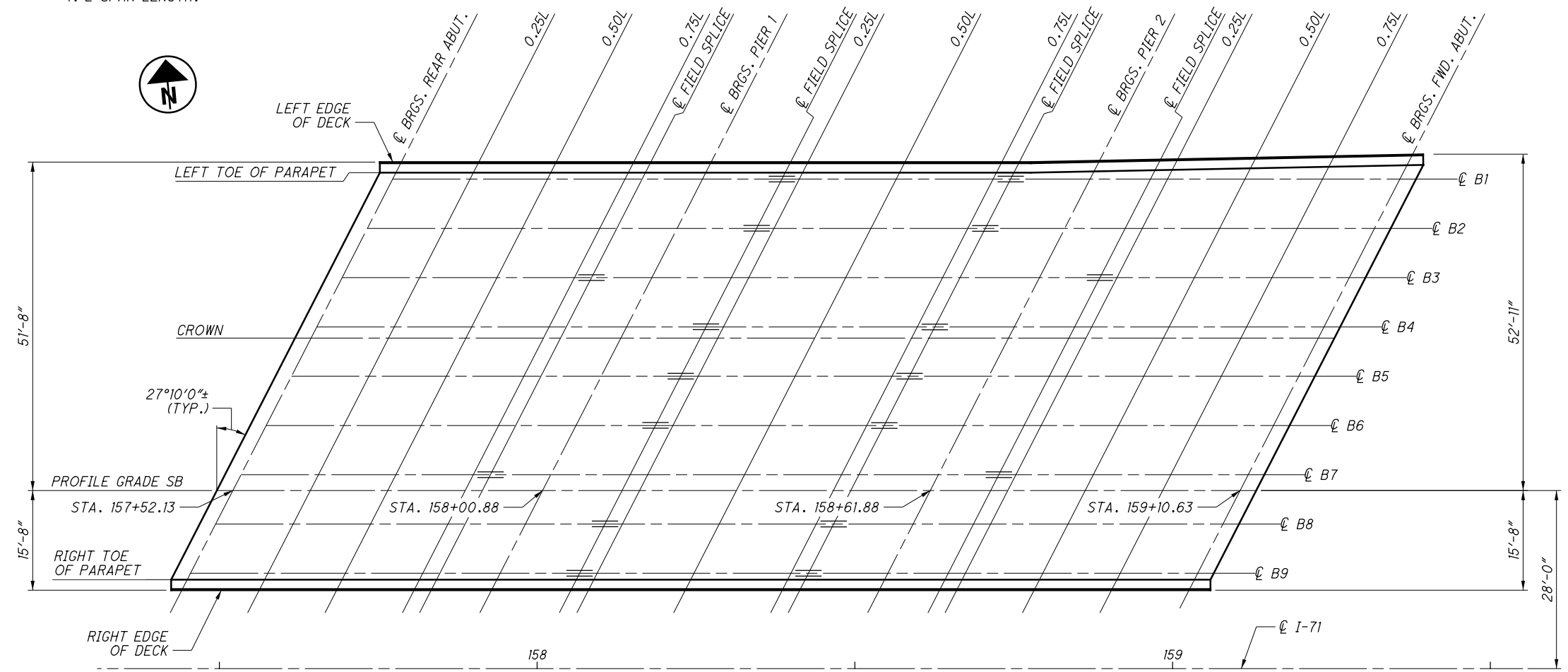
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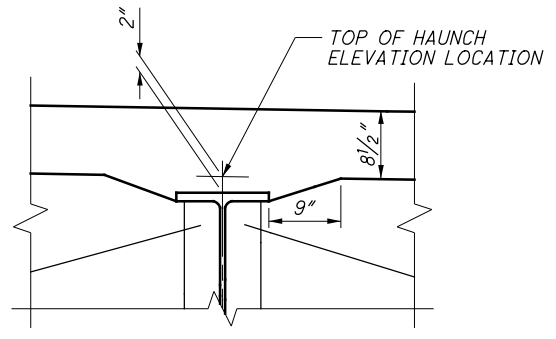
NOTES:

1. FOR SCREED ELEVATIONS, SEE SHEET 63/86.
2. FOR TOP OF HAUNCH ELEVATIONS, SEE SHEET 64/86.
3. FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEETS 65/86 AND 66/86.
4. L=SPAN LENGTH.

TOP OF HAUNCH & SCREED LOCATIONS - SOUTHBOUND



DECK ELEVATION PLAN - SOUTHBOUND



DETAIL A

DESIGNED RLC	DRAWN RLC	REVIEWED KVB	DATE 8/8/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
			STRUCTURE FILE NUMBER 2506904L/2506939R	
CHECKED MAB	REVIS	REVISED		
TOP OF HAUNCH & SCREED LOCATIONS - SOUTHBOUND BRIDGE				
BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY				
FRA-71-0.00				
PID No. 107201				
62/86				
1169 1312				

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SCREED ELEVATION TABLE - SOUTHBOUND

LOCATION	LEFT TOE OF PARAPET		CROWN		PROFILE GRADE SB		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BRGS. R.A.	157+77.79	893.44	157+64.45	893.75	157+52.13	893.27	157+44.95	892.99
0.25L	157+89.98	893.55	157+76.64	893.87	157+64.32	893.38	157+57.14	893.10
0.50L	158+02.17	893.66	157+88.83	893.97	157+76.51	893.48	157+69.32	893.20
0.75L	158+14.35	893.74	158+01.01	894.05	157+88.69	893.57	157+81.51	893.29
℄ FIELD SPLICE	-	-	-	-	157+92.66	893.60	-	-
℄ BRGS. PIER 1	158+26.54	893.83	158+13.20	894.14	158+00.88	893.66	157+93.70	893.38
℄ FIELD SPLICE	158+38.53	893.93	158+26.60	894.26	-	-	158+06.71	893.49
0.25L	158+41.79	893.96	158+28.45	894.28	158+16.13	893.80	158+08.95	893.51
0.50L	158+57.04	894.07	158+43.70	894.40	158+31.38	893.93	158+24.20	893.64
0.75L	158+72.29	894.16	158+58.95	894.49	158+46.63	894.02	158+39.45	893.75
℄ FIELD SPLICE	158+74.53	894.17	158+62.60	894.51	-	-	158+42.71	893.77
℄ BRGS. PIER 2	158+87.64	894.23	158+74.20	894.57	158+61.88	894.11	158+54.70	893.84
℄ FIELD SPLICE	-	-	-	-	158+72.66	894.19	-	-
0.25L	158+99.96	894.31	158+86.39	894.66	158+74.07	894.20	158+66.88	893.93
0.50L	159+12.27	894.38	158+98.57	894.74	158+86.26	894.28	158+79.07	894.01
0.75L	159+24.58	894.43	159+10.76	894.80	158+98.44	894.35	158+91.26	894.08
℄ BRGS. F.A.	159+36.90	894.46	159+22.95	894.84	159+10.63	894.39	159+03.45	894.13

NOTES:

1. FOR SCREED LINE LOCATIONS, SEE SHEET 62/86.
2. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. L=SPAN LENGTH.

TOP OF HAUNCH ELEVATION TABLE - SOUTHBOUND

LOCATION	☉ B1		☉ B2		☉ B3		☉ B4		☉ B5		☉ B6		☉ B7		☉ B8		☉ B9	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
☉ BRGS. R.A.	157+77.28	892.74	157+73.30	892.84	157+69.32	892.93	157+65.35	893.02	157+61.37	892.92	157+57.39	892.76	157+53.41	892.61	157+49.44	892.45	157+45.46	892.30
0.25L	157+89.47	892.86	157+85.49	892.95	157+81.51	893.04	157+77.53	893.14	157+73.56	893.04	157+69.58	892.88	157+65.60	892.73	157+61.62	892.57	157+57.65	892.41
0.50L	158+01.65	892.96	157+97.68	893.05	157+93.70	893.15	157+89.72	893.24	157+85.74	893.14	157+81.77	892.98	157+77.79	892.83	157+73.81	892.67	157+69.83	892.51
0.75L	158+13.84	893.05	158+09.86	893.14	158+05.89	893.23	158+01.91	893.32	157+97.93	893.22	157+93.95	893.07	157+89.98	892.91	157+86.00	892.76	157+82.02	892.60
☉ FIELD SPLICE	-	-	-	-	158+08.57	893.25	-	-	-	-	-	-	157+92.66	892.93	-	-	-	-
☉ BRGS. PIER 1	158+26.03	893.13	158+22.05	893.23	158+18.07	893.32	158+14.10	893.41	158+10.12	893.31	158+06.14	893.15	158+02.16	893.00	157+98.19	892.84	157+94.21	892.69
☉ FIELD SPLICE	158+38.53	893.24	158+34.55	893.33	-	-	158+26.60	893.52	158+22.62	893.42	158+18.64	893.27	-	-	158+10.69	892.96	158+06.71	892.80
0.25L	158+41.28	893.26	158+37.30	893.36	158+33.32	893.45	158+29.35	893.55	158+25.37	893.45	158+21.39	893.29	158+17.41	893.14	158+13.44	892.98	158+09.46	892.82
0.50L	158+56.53	893.38	158+52.55	893.48	158+48.57	893.57	158+44.60	893.67	158+40.62	893.57	158+36.64	893.42	158+32.66	893.27	158+28.69	893.11	158+24.71	892.96
0.75L	158+71.78	893.46	158+67.80	893.57	158+63.82	893.66	158+59.85	893.76	158+55.87	893.67	158+51.89	893.52	158+47.91	893.37	158+43.94	893.21	158+39.96	893.06
☉ FIELD SPLICE	158+74.53	893.48	158+70.55	893.58	-	-	158+62.60	893.78	158+58.62	893.68	158+54.64	893.53	-	-	158+46.69	893.23	158+42.71	893.07
☉ BRGS. PIER 2	158+87.03	893.54	158+83.05	893.64	158+79.07	893.74	158+75.10	893.84	158+71.12	893.75	158+67.14	893.60	158+63.16	893.45	158+59.19	893.30	158+55.21	893.15
☉ FIELD SPLICE	-	-	-	-	158+88.57	893.80	-	-	-	-	-	-	158+72.66	893.52	-	-	-	-
0.25L	158+99.22	893.62	158+95.24	893.72	158+91.26	893.82	158+87.28	893.92	158+83.31	893.83	158+79.33	893.69	158+75.35	893.54	158+71.37	893.39	158+67.40	893.24
0.50L	159+11.40	893.70	159+07.43	893.80	159+03.45	893.90	158+99.47	894.00	158+95.49	893.91	158+91.52	893.77	158+87.54	893.62	158+83.56	893.48	158+79.58	893.32
0.75L	159+23.59	893.75	159+19.61	893.85	159+15.64	893.96	159+11.66	894.06	159+07.68	893.98	159+03.70	893.83	158+99.73	893.69	158+95.75	893.54	158+91.77	893.39
☉ BRGS. F.A.	159+35.78	893.78	159+31.80	893.89	159+27.82	894.00	159+23.85	894.10	159+19.87	894.02	159+15.89	893.87	159+11.91	893.73	159+07.94	893.59	159+03.96	893.44

NOTES:

- FOR TOP OF HAUNCH LOCATIONS, SEE SHEET 62/86.
- TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY THE DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
- FOR HAUNCH DETAILS, SEE SHEET 62/86.
- L=SPAN LENGTH.

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DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE 8/8/2016
 REVIEWED KVB
 DRAWN RLC
 CHECKED MAB
 STRUCTURE FILE NUMBER 2506904L/2506939R

TOP OF HAUNCH TABLE - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

64/86
 1171
 1312

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FINAL DECK SURFACE ELEVATION TABLE - SOUTHBOUND

LOCATION	LEFT TOE OF PARAPET		℄ B1		℄ B2		℄ B3		℄ B4		CROWN		℄ B5	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BRGS. R.A.	157+77.79	893.44	157+77.28	893.45	157+73.30	893.54	157+69.32	893.64	157+65.35	893.73	157+64.45	893.75	157+61.37	893.63
0.25L	157+89.98	893.54	157+89.47	893.55	157+85.49	893.64	157+81.51	893.73	157+77.53	893.83	157+76.64	893.85	157+73.56	893.73
0.50L	158+02.17	893.64	158+01.65	893.65	157+97.68	893.74	157+93.70	893.83	157+89.72	893.92	157+88.83	893.94	157+85.74	893.82
0.75L	158+14.35	893.73	158+13.84	893.74	158+09.86	893.84	158+05.89	893.93	158+01.91	894.02	158+01.01	894.04	157+97.93	893.92
℄ FIELD SPLICE	-	-	-	-	-	-	158+08.57	893.95	-	-	-	-	-	-
℄ BRGS. PIER 1	158+26.54	893.83	158+26.03	893.84	158+22.05	893.93	158+18.07	894.03	158+14.10	894.12	158+13.20	894.14	158+10.12	894.02
℄ FIELD SPLICE	-	-	158+38.53	893.93	158+34.55	894.03	-	-	158+26.60	894.22	-	-	158+22.62	894.12
0.25L	158+41.79	893.94	158+41.28	893.95	158+37.30	894.05	158+33.32	894.14	158+29.35	894.24	158+28.45	894.26	158+25.37	894.14
0.50L	158+57.04	894.05	158+56.53	894.06	158+52.55	894.16	158+48.57	894.25	158+44.60	894.35	158+43.70	894.37	158+40.62	894.25
0.75L	158+72.29	894.15	158+71.78	894.16	158+67.80	894.26	158+63.82	894.36	158+59.85	894.45	158+58.95	894.48	158+55.87	894.36
℄ FIELD SPLICE	-	-	158+74.53	894.18	158+70.55	894.27	-	-	158+62.60	894.47	-	-	158+58.62	894.38
℄ BRGS. PIER 2	158+87.64	894.23	158+87.03	894.25	158+83.05	894.35	158+79.07	894.45	158+75.10	894.55	158+74.20	894.57	158+71.12	894.46
℄ FIELD SPLICE	-	-	-	-	-	-	158+88.57	894.51	-	-	-	-	-	-
0.25L	158+99.96	894.30	158+99.22	894.32	158+95.24	894.42	158+91.26	894.52	158+87.28	894.62	158+86.39	894.65	158+83.31	894.53
0.50L	159+12.27	894.36	159+11.40	894.38	159+07.43	894.48	159+03.45	894.59	158+99.47	894.69	158+98.57	894.71	158+95.49	894.60
0.75L	159+24.58	894.41	159+23.59	894.44	159+19.61	894.54	159+15.64	894.65	159+11.66	894.75	159+10.76	894.78	159+07.68	894.67
℄ BRGS. F.A.	159+36.90	894.46	159+35.78	894.49	159+31.80	894.60	159+27.82	894.71	159+23.85	894.81	159+22.95	894.84	159+19.87	894.73

NOTES:

1. FOR FINAL DECK ELEVATION LOCATIONS, SEE SHEET 62/86.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.
3. L=SPAN LENGTH.

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT. STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE
 8/8/2016
 REVIEWED
 KVB
 STRUCTURE FILE NUMBER
 2506904L/2506939R

DRAWN
 RLC
 REVISED

DESIGNED
 RLC
 CHECKED
 MAB

FINAL DECK SURFACE ELEVATIONS TABLE - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

65/86

1172
 1312

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FINAL DECK SURFACE ELEVATION TABLE - SOUTHBOUND

LOCATION	℄ B6		℄ B7		PROFILE GRADE SB		℄ B8		℄ B9		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BRGS. R.A.	157+57.39	893.47	157+53.41	893.32	157+52.13	893.27	157+49.44	893.16	157+45.46	893.01	157+44.95	892.99
0.25L	157+69.58	893.57	157+65.60	893.41	157+64.32	893.36	157+61.62	893.26	157+57.65	893.10	157+57.14	893.08
0.50L	157+81.77	893.67	157+77.79	893.51	157+76.51	893.46	157+73.81	893.36	157+69.83	893.20	157+69.32	893.18
0.75L	157+93.95	893.77	157+89.98	893.61	157+88.69	893.56	157+86.00	893.45	157+82.02	893.30	157+81.51	893.28
℄ FIELD SPLICE	-	-	157+92.66	893.63	-	-	-	-	-	-	-	-
℄ BRGS. PIER 1	158+06.14	893.86	158+02.16	893.71	158+00.88	893.66	157+98.19	893.55	157+94.21	893.40	157+93.70	893.38
℄ FIELD SPLICE	158+18.64	893.96	-	-	-	-	158+10.69	893.65	158+06.71	893.50	-	-
0.25L	158+21.39	893.98	158+17.41	893.83	158+16.13	893.78	158+13.44	893.67	158+09.46	893.52	158+08.95	893.50
0.50L	158+36.64	894.10	158+32.66	893.95	158+31.38	893.90	158+28.69	893.79	158+24.71	893.64	158+24.20	893.62
0.75L	158+51.89	894.21	158+47.91	894.06	158+46.63	894.01	158+43.94	893.90	158+39.96	893.75	158+39.45	893.73
℄ FIELD SPLICE	158+54.64	894.23	-	-	-	-	158+46.69	893.92	158+42.71	893.77	-	-
℄ BRGS. PIER 2	158+67.14	894.31	158+63.16	894.16	158+61.88	894.11	158+59.19	894.01	158+55.21	893.86	158+54.70	893.84
℄ FIELD SPLICE	-	-	158+72.66	894.22	-	-	-	-	-	-	-	-
0.25L	158+79.33	894.38	158+75.35	894.24	158+74.07	894.19	158+71.37	894.09	158+67.40	893.94	158+66.88	893.92
0.50L	158+91.52	894.46	158+87.54	894.31	158+86.26	894.26	158+83.56	894.16	158+79.58	894.01	158+79.07	893.99
0.75L	159+03.70	894.52	158+99.73	894.38	158+98.44	894.33	158+95.75	894.23	158+91.77	894.08	158+91.26	894.07
℄ BRGS. F.A.	159+15.89	894.58	159+11.91	894.44	159+10.63	894.39	159+07.94	894.30	159+03.96	894.15	159+03.45	894.13

NOTE:

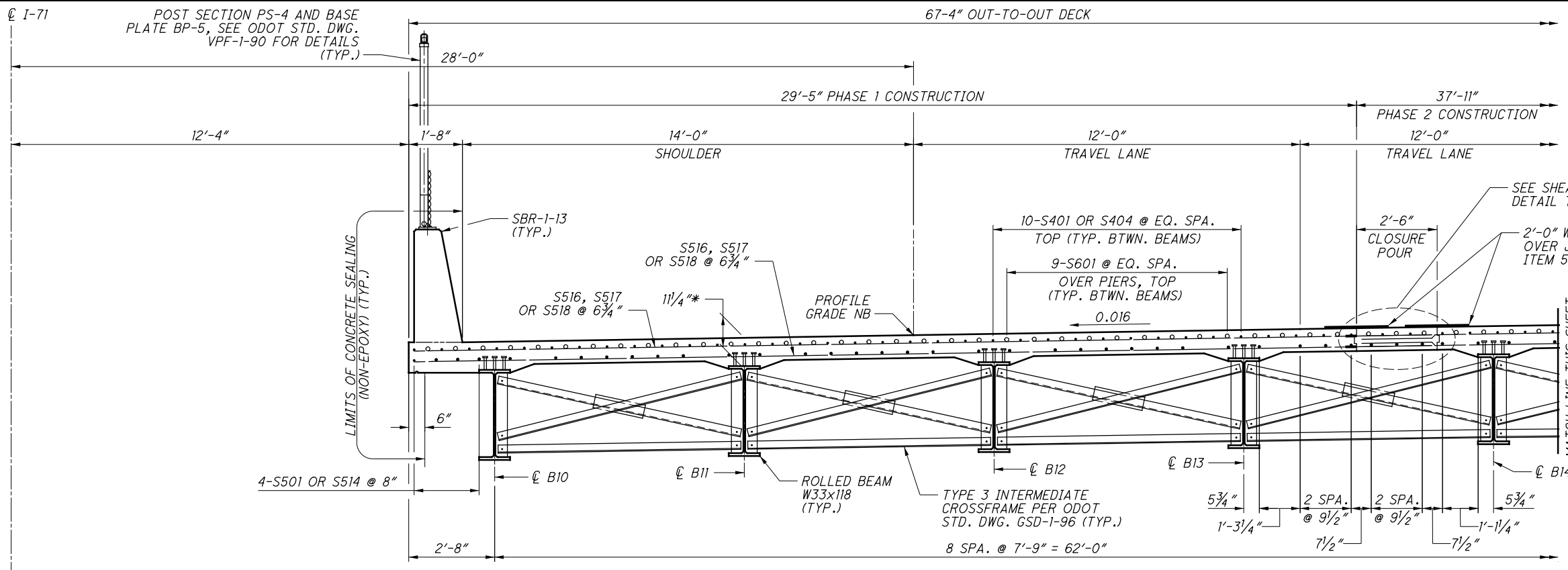
1. FOR NOTES, SEE SHEET 65/86.

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

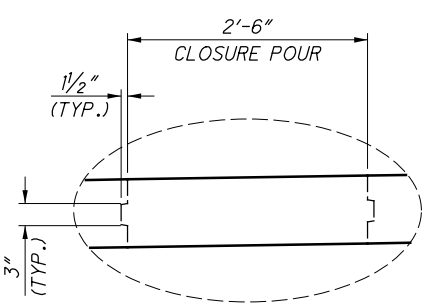
DATE 8/8/2016
 REVIEWED KVB
 DRAWN RLC
 DESIGNED RLC
 CHECKED MAB
 STRUCTURE FILE NUMBER 2506904L/2506939R

FINAL DECK SURFACE ELEVATIONS TABLE - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

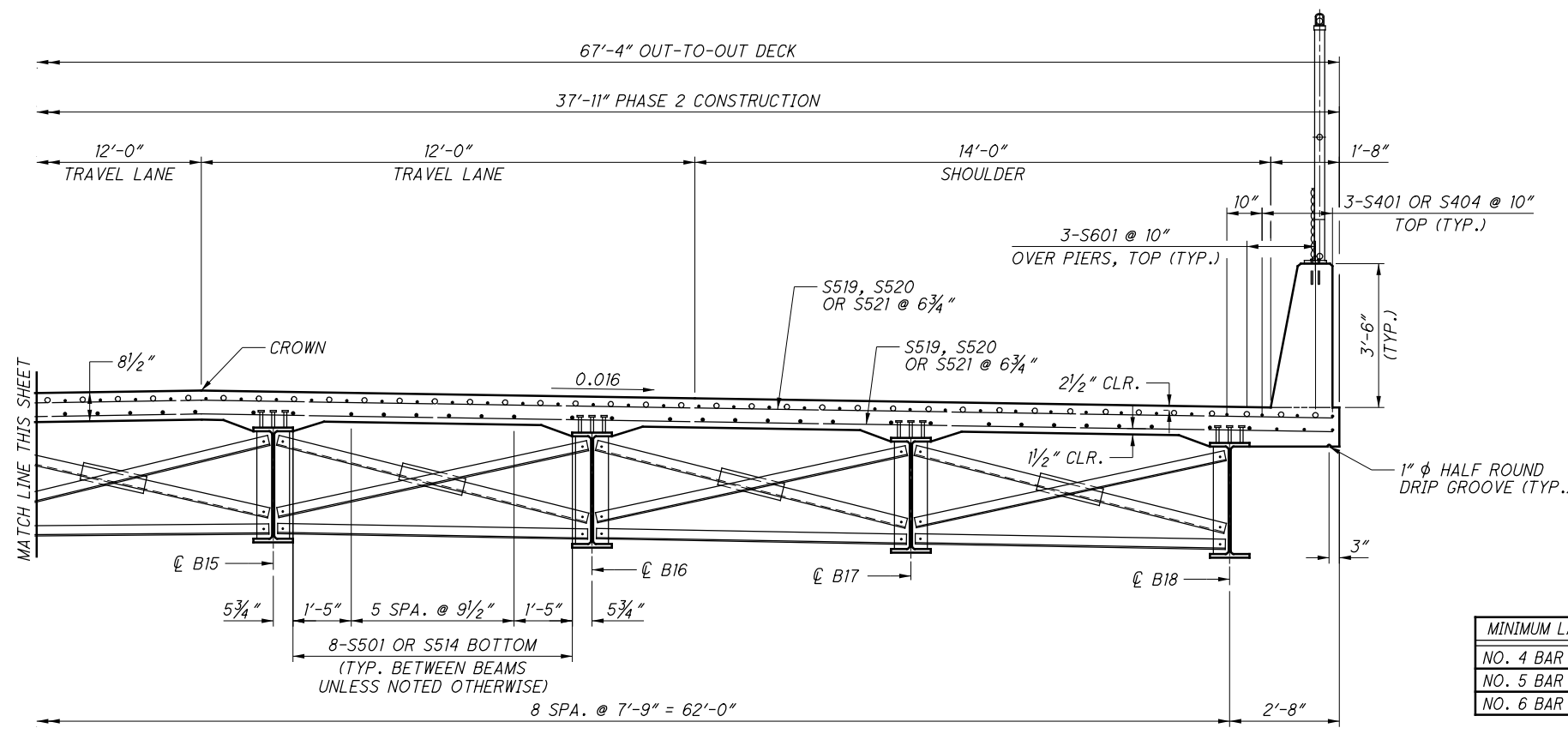
FRA-71-0.00
 PID No. 107201
 66/86
 1173
 1312



TRANSVERSE SECTION - NORTHBOUND



SHEAR KEY DETAIL



TRANSVERSE SECTION - NORTHBOUND

MINIMUM LAP LENGTHS	
NO. 4 BAR	2'-3"
NO. 5 BAR	2'-7"
NO. 6 BAR	4'-1"

NOTES:

- FOR DECK REINFORCING PLAN, SEE SHEET 68/86.
- FOR PARAPET ELEVATION AND REINFORCING, SEE SHEET 69/86.
- CROSS FRAMES IN THE BAY BETWEEN BEAMS B13 AND B14 SHALL NOT BE PERMANENTLY ATTACHED UNTIL THE CONCRETE DECKS AND PARAPETS LOCATED IN THE ADJACENT PHASES HAVE BEEN PLACED. CROSSFRAMES BETWEEN B13 AND B14 SHALL BE INSTALLED PERMANENTLY PRIOR TO THE PLACEMENT OF THE CLOSURE POUR.
- DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM/GIRDER FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM/GIRDER FLANGE IS ±3 INCHES.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM/GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.

LEGEND:

* - DIMENSION MEASURED FROM TOP OF SLAB TO TOP OF WEB

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DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE: 8/8/2016
 REVIEWED: KVB
 STRUCTURE FILE NUMBER: 2506904L/2506939R

DRAWN: DJC
 CHECKED: MLH

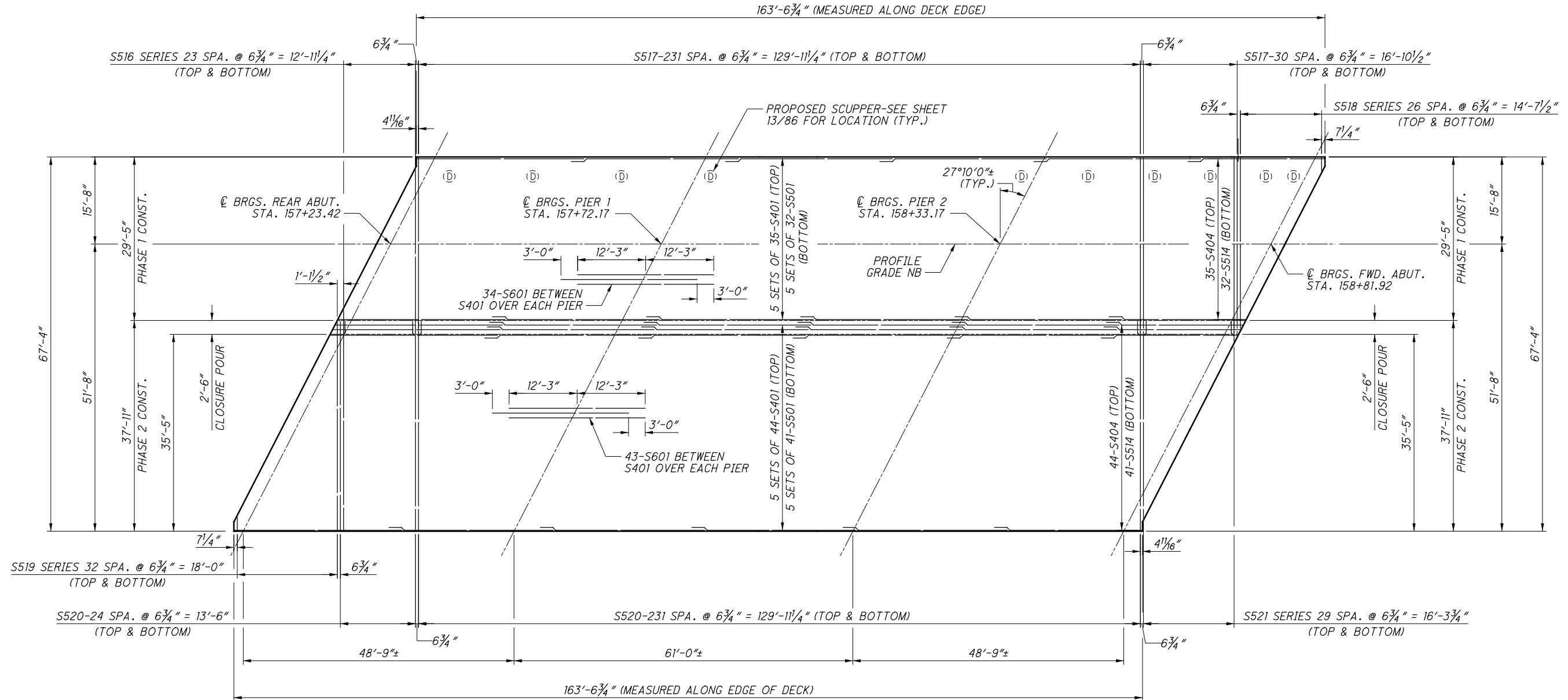
DESIGNED: RLC

TRANSVERSE SECTION - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0296 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

67/86

1174
 1312



DECK REINFORCING PLAN - NORTHBOUND

MINIMUM LAP LENGTHS	
NO. 4 BAR	2'-3"
NO. 5 BAR	2'-7"
NO. 6 BAR	4'-1"

NOTE:
1. FOR TRANSVERSE SECTION, SEE SHEET 67/86.

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DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

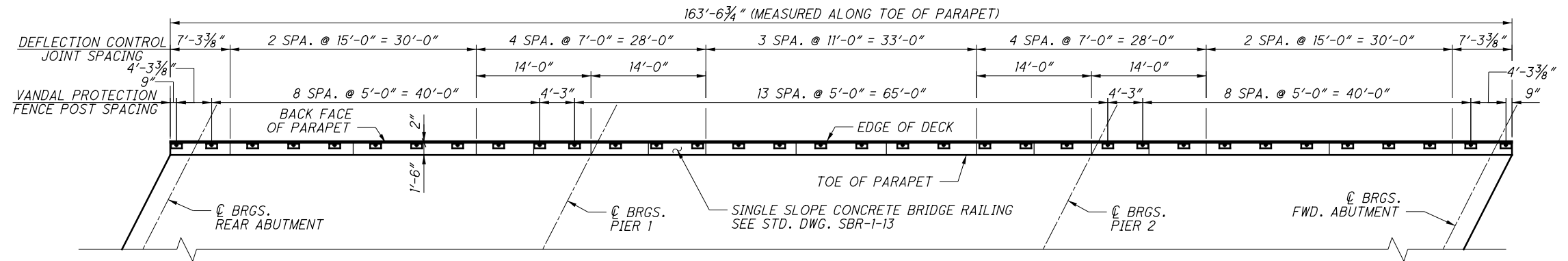
DATE 8/8/2016
REVIEWED KVB
DRAWN DJC
DESIGNED RLC
CHECKED MLH
STRUCTURE FILE NUMBER 2506904L/2506939R

DECK REINFORCING PLAN - NORTHBOUND BRIDGE
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

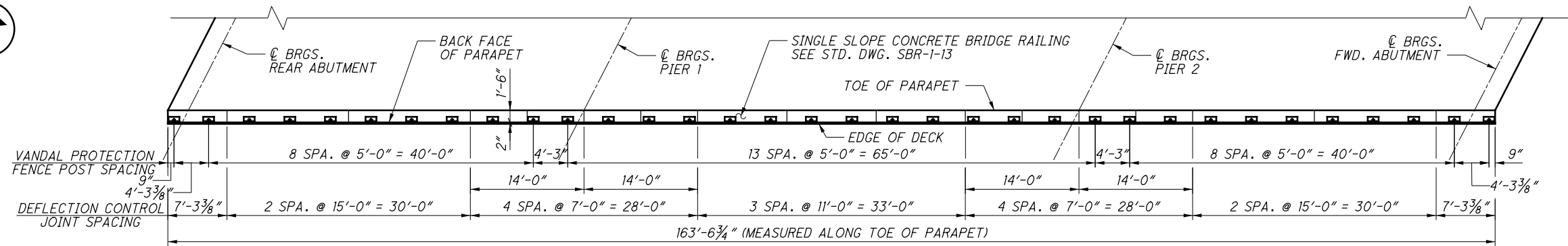
FRA-71-0.00
PID No. 107201

68/86

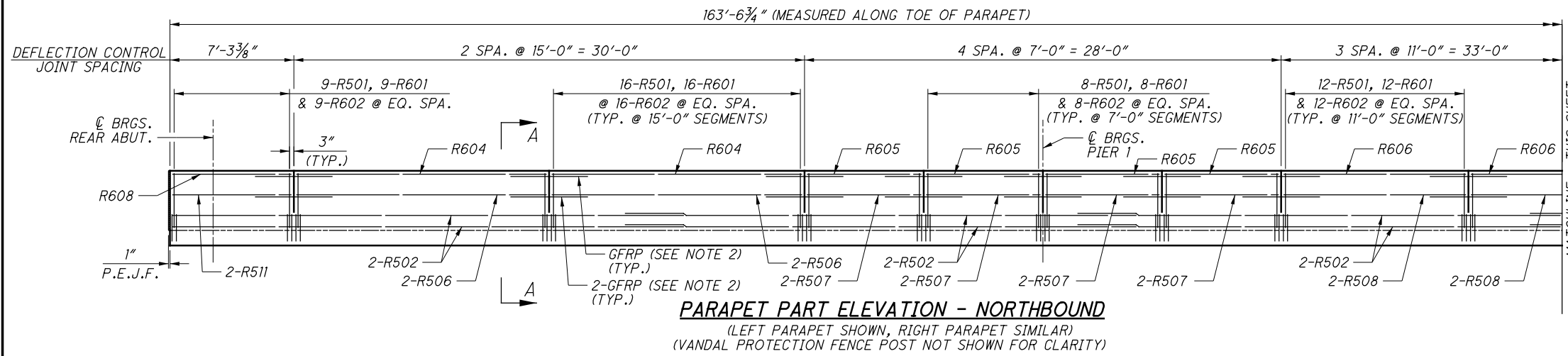
1175
1312



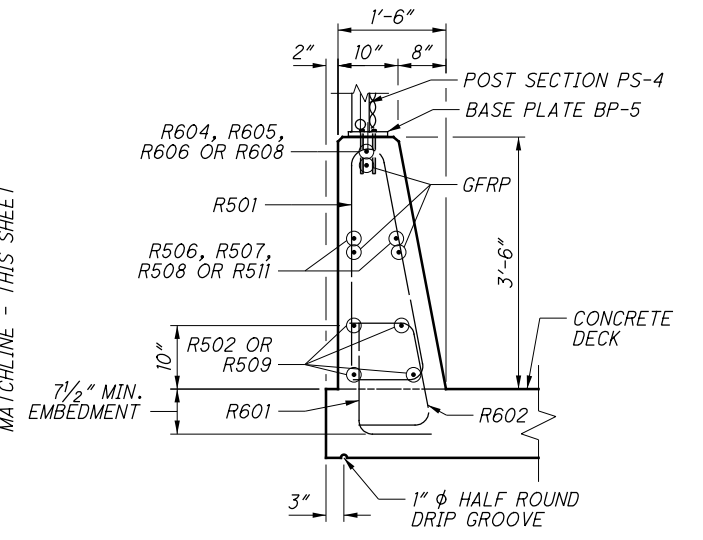
LEFT SIDE PARAPET PLAN - NORTHBOUND



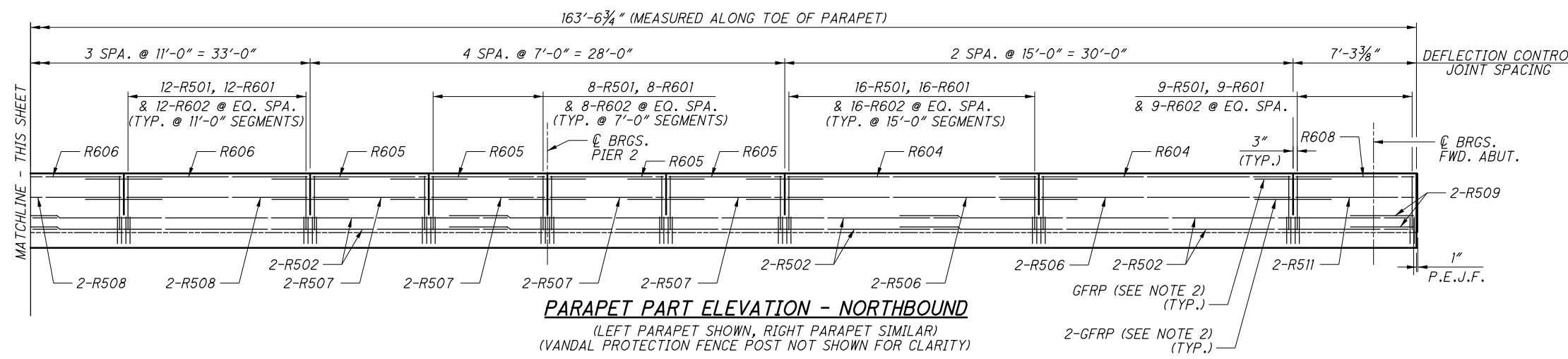
RIGHT SIDE PARAPET PLAN - NORTHBOUND



PARAPET PART ELEVATION - NORTHBOUND
(LEFT PARAPET SHOWN, RIGHT PARAPET SIMILAR)
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



SECTION A-A



PARAPET PART ELEVATION - NORTHBOUND
(LEFT PARAPET SHOWN, RIGHT PARAPET SIMILAR)
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)

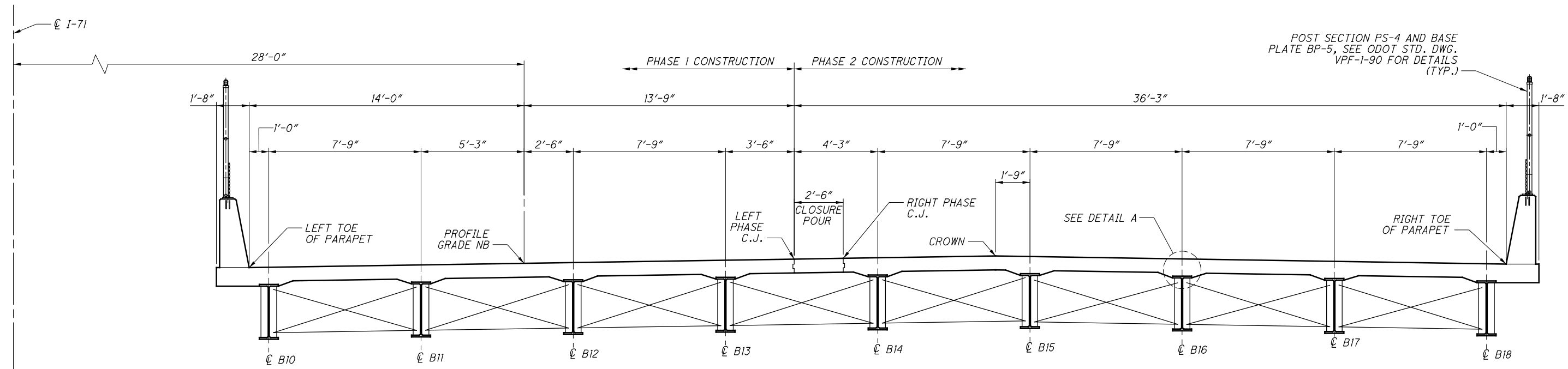
MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

- NOTES:**
- FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE STD. DWG. SBR-1-13.
 - 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT. INCLUDE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT.
 - FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS & NOTES, SEE STD. DWG. VPF-1-90.

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DESIGN AGENCY: Mead & Hunt
 4700 LANCASTER CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE
 DATE: 8/8/2016
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: RLC
 CHECKED: MLH
 STRUCTURE FILE NUMBER: 2506904L/2506939R
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY
FRA-71-0.00
 PID No. 107201
 69/86
 1176
 1312

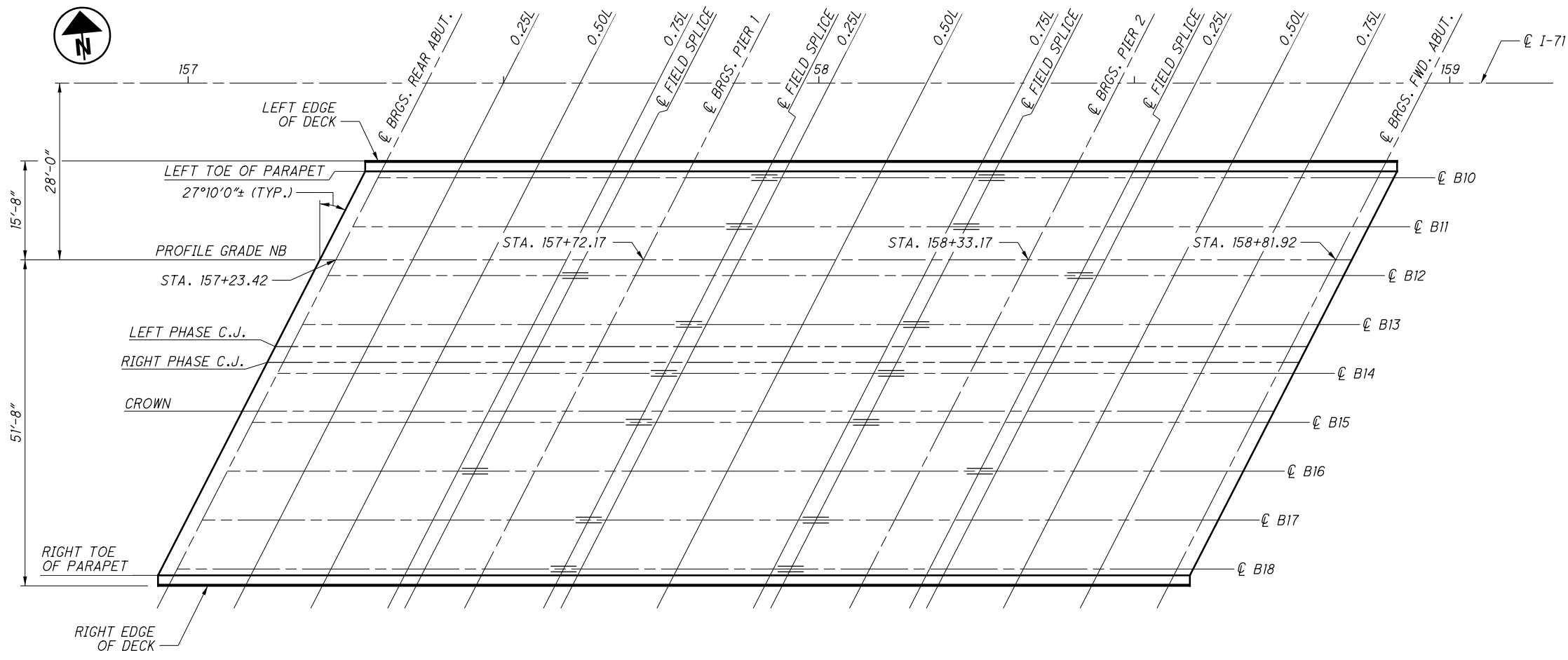
POST SECTION PS-4 AND BASE
 PLATE BP-5, SEE ODOT STD. DWG.
 VPF-1-90 FOR DETAILS
 (TYP.)



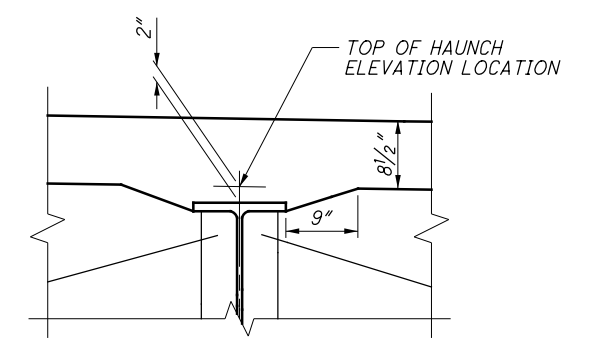
NOTES:

1. FOR SCREED ELEVATIONS, SEE SHEET 71/86.
2. FOR TOP OF HAUNCH ELEVATIONS, SEE SHEET 72/86.
3. FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEETS 73/86 AND 74/86.
4. L=SPAN LENGTH.

TOP OF HAUNCH & SCREED LOCATIONS - NORTHBOUND



DECK ELEVATION PLAN - NORTHBOUND



DETAIL A

DESIGN AGENCY Mead & Hunt	DATE 8/8/2016	DESIGNED RLC	DRAWN RLC	REVIEWED KVB	STRUCTURE FILE NUMBER 2506904L/2506939R
4700 LAKEURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	REVISIONS FILE NUMBER	CHECKED MAB	REVISED	REVISIONS	FILE NUMBER
TOP OF HAUNCH & SCREED LOCATIONS - NORTHBOUND BRIDGE					
BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY					
FRA-71-0.00					
PID No. 107201					
70/86					
1177 1312					

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SCREED ELEVATION TABLE - NORTHBOUND

LOCATION	LEFT TOE OF PARAPET		PROFILE GRADE NB		LEFT PHASE C.J.		RIGHT PHASE C.J.		CROWN		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BRGS. R.A.	157+30.58	893.01	157+23.42	893.18	157+16.37	893.35	157+15.08	893.38	157+11.11	893.47	156+97.76	892.95
0.25L	157+42.77	893.11	157+35.61	893.28	157+28.55	893.45	157+27.27	893.48	157+23.29	893.58	157+09.95	893.06
0.50L	157+54.97	893.19	157+47.80	893.37	157+40.74	893.54	157+39.46	893.57	157+35.48	893.67	157+22.14	893.16
0.75L	157+67.16	893.25	157+59.99	893.43	157+52.93	893.61	157+51.65	893.64	157+47.67	893.74	157+34.33	893.23
℄ FIELD SPLICE	-	-	157+61.39	893.44	-	-	-	-	-	-	-	-
℄ BRGS. PIER 1	157+79.36	893.31	157+72.17	893.50	157+65.12	893.68	157+63.83	893.71	157+59.86	893.81	157+46.51	893.31
℄ FIELD SPLICE	157+91.34	893.39	-	-	157+79.41	893.77	157+75.44	893.79	157+71.46	893.89	157+59.53	893.40
0.25L	157+94.61	893.41	157+87.42	893.60	157+80.37	893.78	157+79.08	893.81	157+75.11	893.92	157+61.76	893.42
0.50L	158+09.86	893.50	158+02.67	893.69	157+95.62	893.88	157+94.33	893.91	157+90.36	894.01	157+77.01	893.52
0.75L	158+25.11	893.56	158+17.92	893.75	158+10.87	893.94	158+09.58	893.97	158+05.61	894.08	157+92.26	893.59
℄ FIELD SPLICE	158+27.34	893.56	-	-	158+15.41	893.96	158+11.44	893.98	158+07.46	894.08	157+95.53	893.61
℄ BRGS. PIER 2	158+40.36	893.60	158+33.17	893.80	158+26.12	893.99	158+24.83	894.03	158+20.86	894.13	158+07.51	893.65
℄ FIELD SPLICE	-	-	158+41.39	893.84	-	-	-	-	-	-	-	-
0.25L	158+52.55	893.66	158+45.36	893.86	158+38.30	894.05	158+37.02	894.09	158+33.04	894.19	158+19.70	893.72
0.50L	158+64.73	893.71	158+57.55	893.91	158+50.49	894.11	158+49.21	894.14	158+45.23	894.25	158+31.89	893.78
0.75L	158+76.92	893.74	158+69.74	893.95	158+62.68	894.15	158+61.40	894.18	158+57.42	894.29	158+44.08	893.83
℄ BRGS. F.A.	158+89.11	893.76	158+81.92	893.96	158+74.87	894.16	158+73.58	894.20	158+69.61	894.31	158+56.26	893.85

NOTES:

1. FOR SCREED LINE LOCATIONS, SEE SHEET 70/86.
2. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. L=SPAN LENGTH.

DESIGNED		DRAWN	REVIEWED	DATE	DESIGN AGENCY	
RLC	RLC	KVB	KVB	8/8/2016	Mead & Hunt	
CHECKED	REVISED	STRUCTURE FILE NUMBER	4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE			
MAB		2506904L/2506939R				
SCREED TABLE - NORTHBOUND BRIDGE						
BRIDGE NO. FRA-71-0298 L/R						
OVER INDIANA & OHIO RAILWAY COMPANY						
FRA-71-0.00						
PID No. 107201						
71/86						
1178						
1312						

TOP OF HAUNCH ELEVATION TABLE - NORTHBOUND

LOCATION	☉ B10		☉ B11		☉ B12		☉ B13		☉ B14		☉ B15		☉ B16		☉ B17		☉ B18	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
☉ BRGS. R.A.	157+30.09	892.31	157+26.12	892.41	157+22.14	892.50	157+18.16	892.60	157+14.19	892.69	157+10.21	892.73	157+06.23	892.57	157+02.25	892.42	156+98.28	892.26
0.25L	157+42.28	892.41	157+38.30	892.51	157+34.33	892.61	157+30.35	892.70	157+26.37	892.80	157+22.40	892.84	157+18.42	892.68	157+14.44	892.53	157+10.46	892.37
0.50L	157+54.47	892.49	157+50.49	892.59	157+46.52	892.69	157+42.54	892.79	157+38.56	892.89	157+34.58	892.93	157+30.61	892.78	157+26.63	892.62	157+22.65	892.47
0.75L	157+66.66	892.56	157+62.68	892.66	157+58.70	892.76	157+54.73	892.86	157+50.75	892.96	157+46.77	893.00	157+42.79	892.85	157+38.82	892.70	157+34.84	892.54
☉ FIELD SPLICE	-	-	-	-	157+61.39	892.77	-	-	-	-	-	-	157+45.48	892.86	-	-	-	-
☉ BRGS. PIER 1	157+78.84	892.62	157+74.87	892.72	157+70.89	892.82	157+66.91	892.92	157+62.94	893.02	157+58.96	893.07	157+54.98	892.92	157+51.00	892.77	157+47.03	892.62
☉ FIELD SPLICE	157+91.34	892.70	157+87.37	892.80	-	-	157+79.41	893.01	157+75.44	893.11	157+71.46	893.15	-	-	157+63.51	892.86	157+59.53	892.71
0.25L	157+94.09	892.72	157+90.12	892.82	157+86.14	892.93	157+82.16	893.03	157+78.19	893.13	157+74.21	893.17	157+70.23	893.03	157+66.25	892.88	157+62.28	892.73
0.50L	158+09.34	892.80	158+05.37	892.91	158+01.39	893.02	157+97.41	893.12	157+93.44	893.23	157+89.46	893.27	157+85.48	893.13	157+81.50	892.98	157+77.53	892.83
0.75L	158+24.59	892.86	158+20.62	892.97	158+16.64	893.08	158+12.66	893.18	158+08.69	893.29	158+04.71	893.34	158+00.73	893.19	157+96.75	893.05	157+92.78	892.90
☉ FIELD SPLICE	158+27.34	892.87	158+23.37	892.98	-	-	158+15.41	893.19	158+11.44	893.30	158+07.46	893.35	-	-	157+99.51	893.06	157+95.53	892.91
☉ BRGS. PIER 2	158+39.84	892.91	158+35.87	893.02	158+31.89	893.13	158+27.91	893.23	158+23.94	893.34	158+19.96	893.39	158+15.98	893.25	158+12.00	893.11	158+08.03	892.96
☉ FIELD SPLICE	-	-	-	-	158+41.39	893.17	-	-	-	-	-	-	158+25.48	893.30	-	-	-	-
0.25L	158+52.03	892.96	158+48.05	893.08	158+44.08	893.18	158+40.10	893.29	158+36.12	893.40	158+32.15	893.45	158+28.17	893.31	158+24.19	893.17	158+20.21	893.03
0.50L	158+64.22	893.02	158+60.24	893.13	158+56.27	893.24	158+52.29	893.35	158+48.31	893.46	158+44.33	893.51	158+40.36	893.37	158+36.38	893.23	158+32.40	893.09
0.75L	158+76.41	893.05	158+72.43	893.16	158+68.45	893.28	158+64.48	893.39	158+60.50	893.50	158+56.52	893.55	158+52.54	893.42	158+48.57	893.28	158+44.59	893.14
☉ BRGS. F.A.	158+88.59	893.07	158+84.62	893.18	158+80.64	893.29	158+76.66	893.41	158+72.69	893.52	158+68.71	893.57	158+64.73	893.44	158+60.75	893.30	158+56.78	893.16

NOTES:

1. FOR TOP OF HAUNCH LOCATIONS, SEE SHEET 70/86.
2. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY THE DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. FOR HAUNCH DETAILS, SEE SHEET 70/86.
4. L=SPAN LENGTH.

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DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE 8/8/2016
 REVIEWED KVB
 DRAWN RLC
 CHECKED MAB
 STRUCTURE FILE NUMBER 2506904L/2506939R

TOP OF HAUNCH TABLE - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

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FINAL DECK SURFACE ELEVATION TABLE - NORTHBOUND

LOCATION	LEFT TOE OF PARAPET		C B10		C B11		PROFILE GRADE NB		C B12		C B13		LEFT PHASE C.J.		RIGHT PHASE C.J.	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
C BRGS. R.A.	157+30.58	893.01	157+30.09	893.02	157+26.12	893.11	157+23.42	893.18	157+22.14	893.21	157+18.16	893.30	157+16.37	893.35	157+15.08	893.38
0.25L	157+42.77	893.09	157+42.28	893.10	157+38.30	893.20	157+35.61	893.26	157+34.33	893.30	157+30.35	893.39	157+28.55	893.44	157+27.27	893.47
0.50L	157+54.97	893.17	157+54.47	893.18	157+50.49	893.28	157+47.80	893.35	157+46.52	893.38	157+42.54	893.48	157+40.74	893.52	157+39.46	893.55
0.75L	157+67.16	893.24	157+66.66	893.26	157+62.68	893.36	157+59.99	893.42	157+58.70	893.46	157+54.73	893.56	157+52.93	893.60	157+51.65	893.63
C FIELD SPLICE	-	-	-	-	-	-	-	-	157+61.39	893.47	-	-	-	-	-	-
C BRGS. PIER 1	157+79.36	893.31	157+78.84	893.33	157+74.87	893.43	157+72.17	893.50	157+70.89	893.53	157+66.91	893.63	157+65.12	893.68	157+63.83	893.71
C FIELD SPLICE	-	-	157+91.34	893.40	157+87.37	893.50	-	-	-	-	157+79.41	893.70	-	-	-	-
0.25L	157+94.61	893.40	157+94.09	893.41	157+90.12	893.51	157+87.42	893.58	157+86.14	893.62	157+82.16	893.72	157+80.37	893.76	157+79.08	893.80
0.50L	158+09.86	893.47	158+09.34	893.49	158+05.37	893.59	158+02.67	893.66	158+01.39	893.70	157+97.41	893.80	157+95.62	893.85	157+94.33	893.88
0.75L	158+25.11	893.54	158+24.59	893.56	158+20.62	893.66	158+17.92	893.73	158+16.64	893.77	158+12.66	893.87	158+10.87	893.92	158+09.58	893.96
C FIELD SPLICE	-	-	158+27.34	893.57	158+23.37	893.67	-	-	-	-	158+15.41	893.89	-	-	-	-
C BRGS. PIER 2	158+40.36	893.60	158+39.84	893.62	158+35.87	893.73	158+33.17	893.80	158+31.89	893.83	158+27.91	893.94	158+26.12	893.99	158+24.83	894.03
C FIELD SPLICE	-	-	-	-	-	-	-	-	158+41.39	893.87	-	-	-	-	-	-
0.25L	158+52.55	893.65	158+52.03	893.66	158+48.05	893.77	158+45.36	893.85	158+44.08	893.88	158+40.10	893.99	158+38.30	894.04	158+37.02	894.08
0.50L	158+64.73	893.69	158+64.22	893.70	158+60.24	893.82	158+57.55	893.89	158+56.27	893.93	158+52.29	894.04	158+50.49	894.09	158+49.21	894.12
0.75L	158+76.92	893.73	158+76.41	893.74	158+72.43	893.85	158+69.74	893.93	158+68.45	893.97	158+64.48	894.08	158+62.68	894.13	158+61.40	894.16
C BRGS. F.A.	158+89.11	893.76	158+88.59	893.77	158+84.62	893.89	158+81.92	893.96	158+80.64	894.00	158+76.66	894.11	158+74.87	894.16	158+73.58	894.20

NOTES:

1. FOR FINAL DECK ELEVATION LOCATIONS, SEE SHEET 70/86.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.
3. L=SPAN LENGTH.

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-9900 PHONE

DATE 8/8/2016
 REVIEWED KVB
 DRAWN RLC
 CHECKED MAB
 STRUCTURE FILE NUMBER 2506904L/2506939R

FINAL DECK SURFACE ELEVATIONS TABLE - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

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FINAL DECK SURFACE ELEVATION TABLE - NORTHBOUND

LOCATION	C B14		CROWN		C B15		C B16		C B17		C B18		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
C BRGS. R.A.	157+14.19	893.40	157+11.11	893.47	157+10.21	893.44	157+06.23	893.28	157+02.25	893.13	156+98.28	892.97	156+97.76	892.95
0.25L	157+26.37	893.49	157+23.29	893.56	157+22.40	893.53	157+18.42	893.37	157+14.44	893.22	157+10.46	893.07	157+09.95	893.05
0.50L	157+38.56	893.57	157+35.48	893.65	157+34.58	893.61	157+30.61	893.46	157+26.63	893.31	157+22.65	893.16	157+22.14	893.14
0.75L	157+50.75	893.65	157+47.67	893.73	157+46.77	893.70	157+42.79	893.55	157+38.82	893.39	157+34.84	893.24	157+34.33	893.22
C FIELD SPLICE	-	-	-	-	-	-	157+45.48	893.56	-	-	-	-	-	-
C BRGS. PIER 1	157+62.94	893.73	157+59.86	893.81	157+58.96	893.77	157+54.98	893.63	157+51.00	893.48	157+47.03	893.33	157+46.51	893.31
C FIELD SPLICE	157+75.44	893.80	-	-	157+71.46	893.85	-	-	157+63.51	893.55	157+59.53	893.41	-	-
0.25L	157+78.19	893.82	157+75.11	893.90	157+74.21	893.87	157+70.23	893.72	157+66.25	893.57	157+62.28	893.42	157+61.76	893.40
0.50L	157+93.44	893.90	157+90.36	893.98	157+89.46	893.95	157+85.48	893.80	157+81.50	893.66	157+77.53	893.51	157+77.01	893.49
0.75L	158+08.69	893.98	158+05.61	894.06	158+04.71	894.03	158+00.73	893.88	157+96.75	893.74	157+92.78	893.60	157+92.26	893.58
C FIELD SPLICE	158+11.44	893.99	-	-	158+07.46	894.04	-	-	157+99.51	893.75	157+95.53	893.61	-	-
C BRGS. PIER 2	158+23.94	894.05	158+20.86	894.13	158+19.96	894.10	158+15.98	893.96	158+12.00	893.82	158+08.03	893.67	158+07.51	893.65
C FIELD SPLICE	-	-	-	-	-	-	158+25.48	894.00	-	-	-	-	-	-
0.25L	158+36.12	894.10	158+33.04	894.18	158+32.15	894.15	158+28.17	894.01	158+24.19	893.87	158+20.21	893.73	158+19.70	893.71
0.50L	158+48.31	894.15	158+45.23	894.23	158+44.33	894.20	158+40.36	894.06	158+36.38	893.92	158+32.40	893.78	158+31.89	893.76
0.75L	158+60.50	894.19	158+57.42	894.27	158+56.52	894.24	158+52.54	894.11	158+48.57	893.97	158+44.59	893.83	158+44.08	893.81
C BRGS. F.A.	158+72.69	894.23	158+69.61	894.31	158+68.71	894.28	158+64.73	894.15	158+60.75	894.01	158+56.78	893.87	158+56.26	893.85

NOTE:

1. FOR NOTES, SEE SHEET 73/86.

DESIGN AGENCY
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 (614) 782-5900 PHONE

DATE 8/8/2016
 REVIEWED KVB
 STRUCTURE FILE NUMBER 2506904L/2506939R

DRAWN RLC
 REVISIONS

DESIGNED RLC
 CHECKED MAB

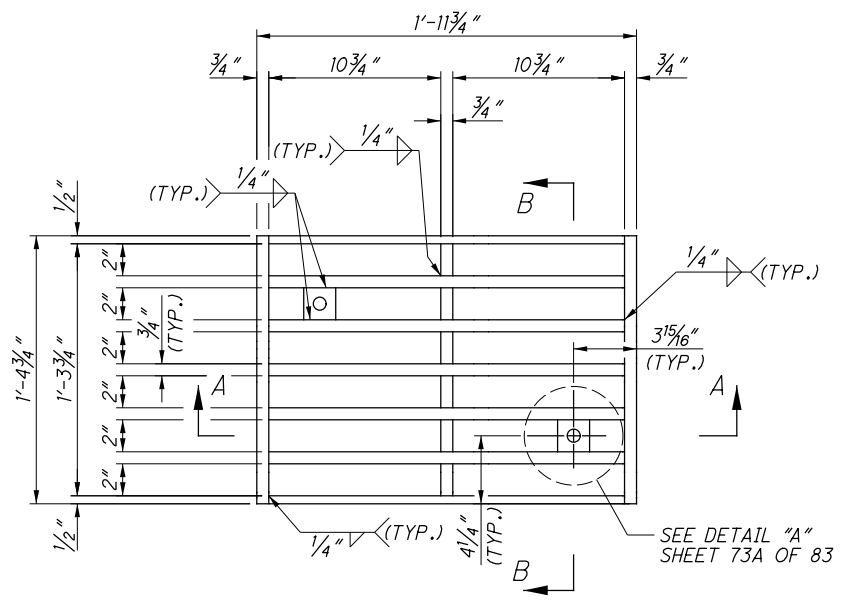
FINAL DECK SURFACE ELEVATIONS TABLE - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
 PID No. 107201

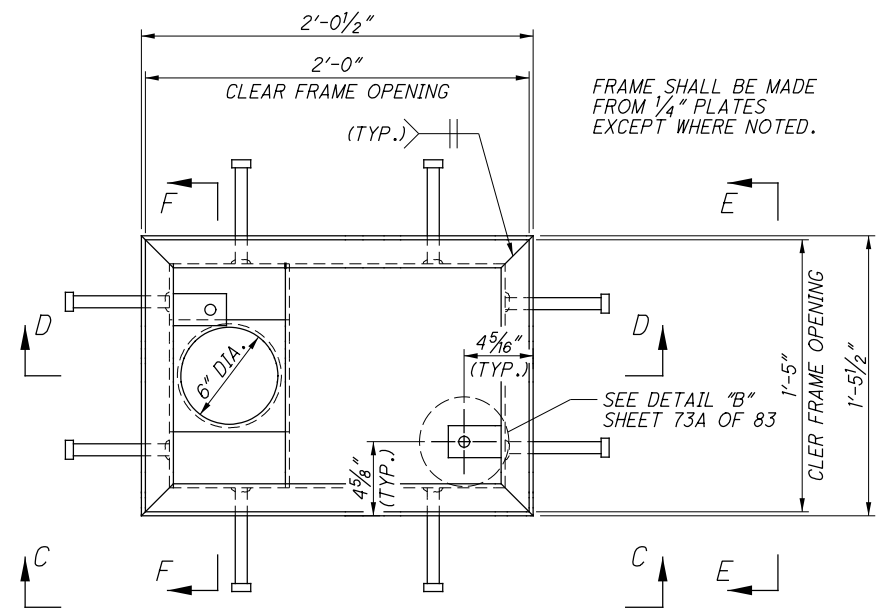
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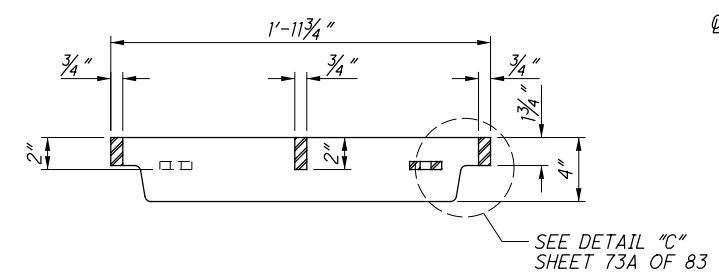
PLAN VIEW OF GRATE



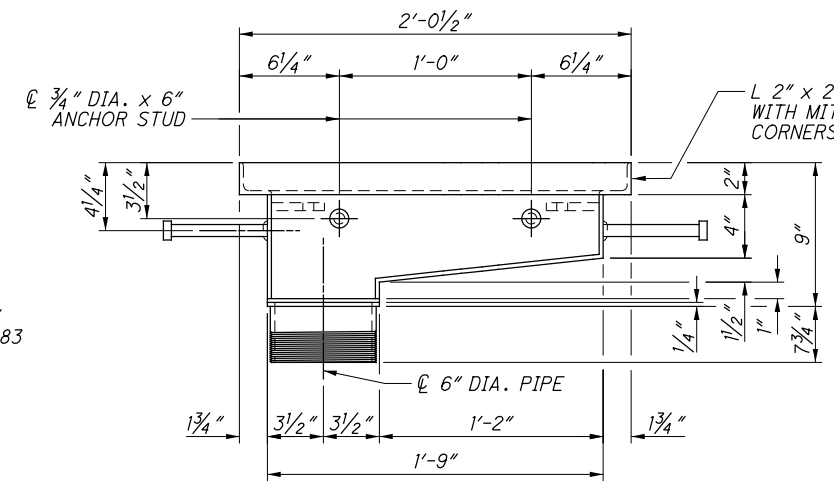
PLAN VIEW OF FRAME

NOTES:

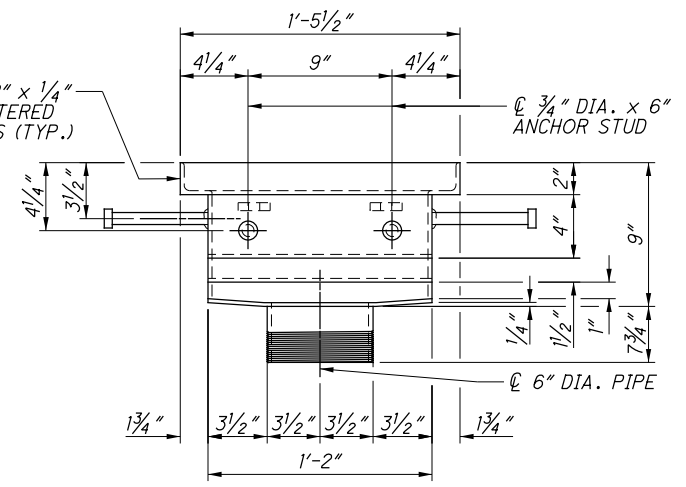
1. FRAME AND GRATE ARE DESIGNED TO WITHSTAND HS20 LOADING.
2. FRAME, GRATE, PIPE AND ALL PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 STEEL OR APPROVED EQUAL. PIPE SHALL CONFORM TO ASTM A53, TYPE S. ALL HOLD-DOWN BOLTS AND NUTS SHALL BE AASHTO M164. WASHERS SHALL CONFORM TO AASHTO M293. ALL ANCHOR STUDS SHALL CONFORM TO AASHTO M169 GRADES 1010 THRU 1020 OR APPROVED EQUAL.
3. ANCHOR STUDS SHALL BE SHOP WELDED AND ALL HOLES SHALL BE SHOP DRILLED AS SHOWN ON PLANS.
4. ANCHOR STUDS SHALL BE ELECTRIC ARC END WELDED WITH COMPLETE FUSION.
5. UPON COMPLETION OF SHOP FABRICATION, ALL STEEL PARTS, INCLUDING BOLTS AND WASHERS, SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH CMS 711.02.
6. WELDING TO BE PERFORMED IN ACCORDANCE WITH THE ANSI/AASHTO/AWS D1.5 WELDING CODE. ALL CONNECTIONS SHALL BE SEAL WELDED ALONG TOP AND BOTTOM HORIZONTAL SEAMS OF CONNECTIONS IN ADDITION TO ANY REQUIRED STRUCTURAL WELDS.
7. FRAME SHALL BE COVERED DURING THE POURING OF THE DECK CONCRETE.
8. PRIOR TO PLACING THE GRATE, ALL DEBRIS SHALL BE CLEARED FROM FRAME IN ORDER TO ALLOW FOR PROPER SEATING OF THE GRATE AND ELIMINATE POTENTIAL ROCKING HAZARDS.
9. SHEAR STUDS ON THE GIRDER MAY BE CUT AS APPROVED BY THE ENGINEER TO AVOID INTERFERENCE WITH THE BRIDGE SCUPPER.
10. REINFORCING STEEL IN THE DECK AND BARRIER RAIL MAY BE SHIFTED, FIELD BENT, OR CUT AS APPROVED BY THE ENGINEER TO AVOID INTERFERENCE WITH THE BRIDGE SCUPPER.
11. FOR LOCATION OF SCUPPERS, SEE SHEET 13/86.
12. THE COST INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS TO FURNISH AND INSTALL THE SCUPPERS AS SPECIFIED IN THE PLANS ARE INCLUDED IN ITEM 518, SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, FOR PAYMENT.



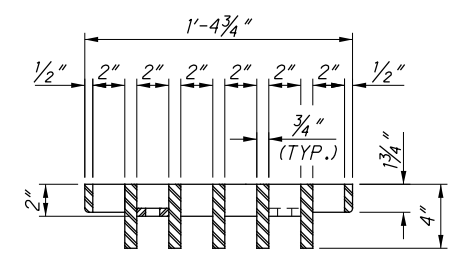
SECTION A-A



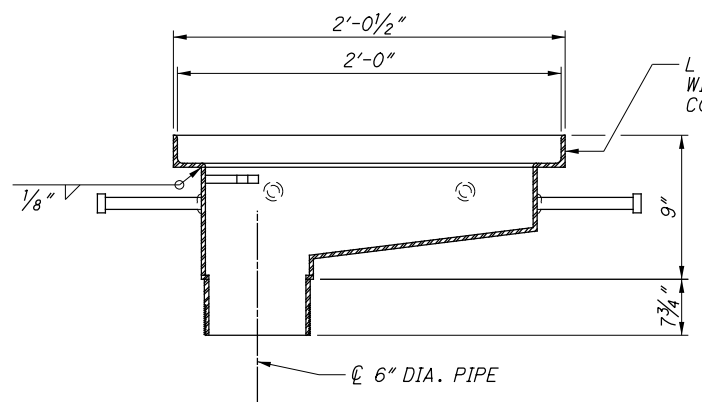
SECTION C-C



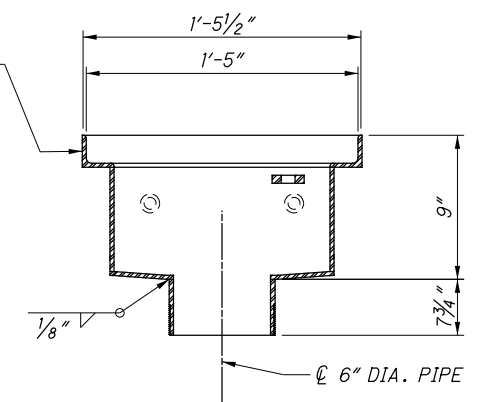
SECTION E-E



SECTION B-B

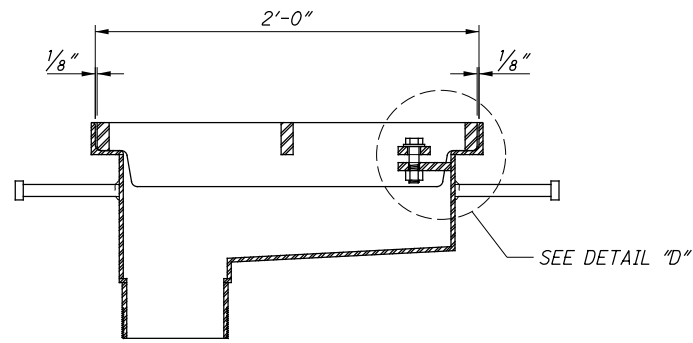


SECTION D-D

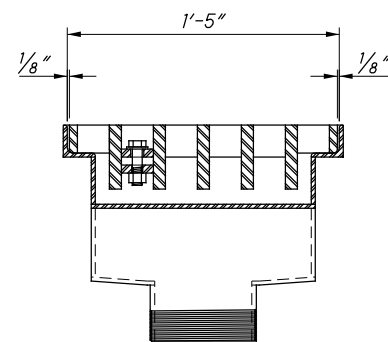


SECTION F-F

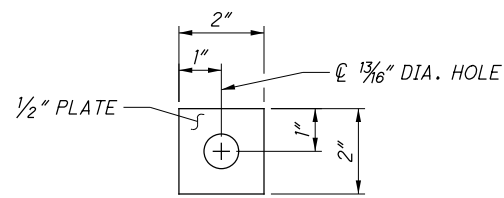
<p>FRA-71-0.00 PID No. 107201</p>	<p>DRAINAGE SCUPPER DETAILS BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY</p>	<p>DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE</p>																
<p>75 / 86</p>	<p>1182 1312</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED</td> <td>RLC</td> <td>CHECKED</td> <td>CMH</td> </tr> <tr> <td>DRAWN</td> <td>DJC</td> <td>REVISED</td> <td></td> </tr> <tr> <td>REVIEWED</td> <td>KVB</td> <td>DATE</td> <td>8/8/2016</td> </tr> <tr> <td>STRUCTURE FILE NUMBER</td> <td colspan="3">2506904L/2506939R</td> </tr> </table>	DESIGNED	RLC	CHECKED	CMH	DRAWN	DJC	REVISED		REVIEWED	KVB	DATE	8/8/2016	STRUCTURE FILE NUMBER	2506904L/2506939R		
DESIGNED	RLC	CHECKED	CMH															
DRAWN	DJC	REVISED																
REVIEWED	KVB	DATE	8/8/2016															
STRUCTURE FILE NUMBER	2506904L/2506939R																	



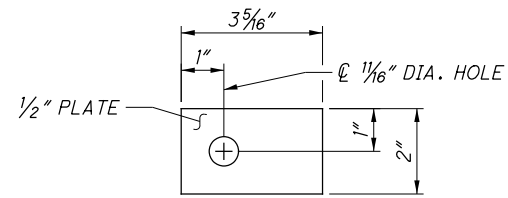
ELEVATION VIEW OF GRATE AND FRAME IN SECTION A-A



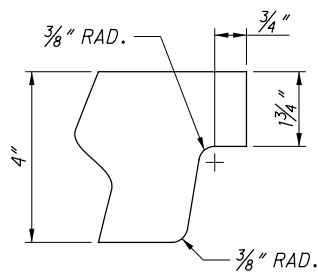
ELEVATION VIEW OF GRATE AND FRAME IN SECTION B-B



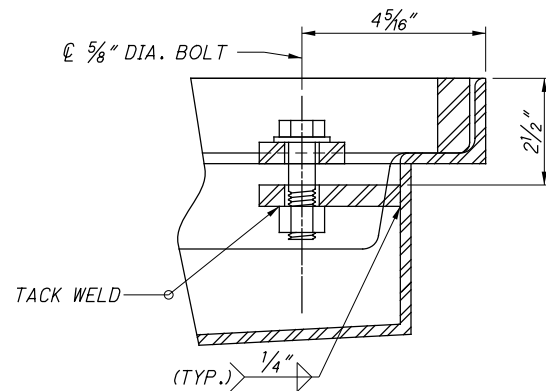
DETAIL "A"
HOLD-DOWN PLATE FOR GRATE



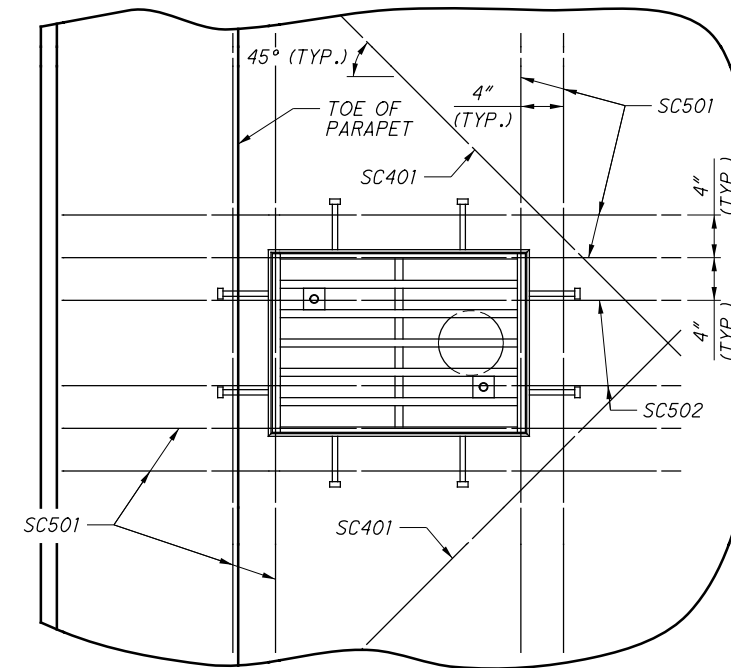
DETAIL "B"
HOLD-DOWN PLATE FOR FRAME



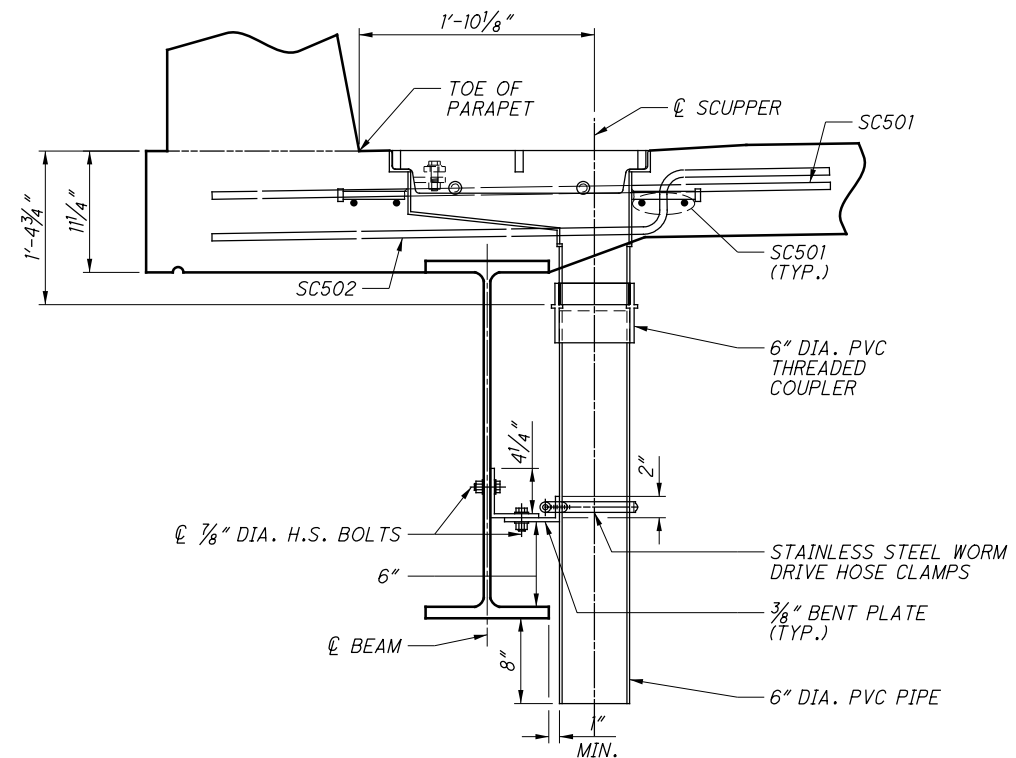
DETAIL "C"
END CUT OF 3/4" x 4" PLATE



DETAIL "D"
5/8" DIA. HOLD-DOWN BOLT



PLAN VIEW OF SLAB
SLAB REINFORCEMENT NOT SHOWN FOR CLARITY



ELEVATION VIEW OF SLAB AND SCUPPER IN SECTION G-G
SLAB REINFORCEMENT NOT SHOWN FOR CLARITY

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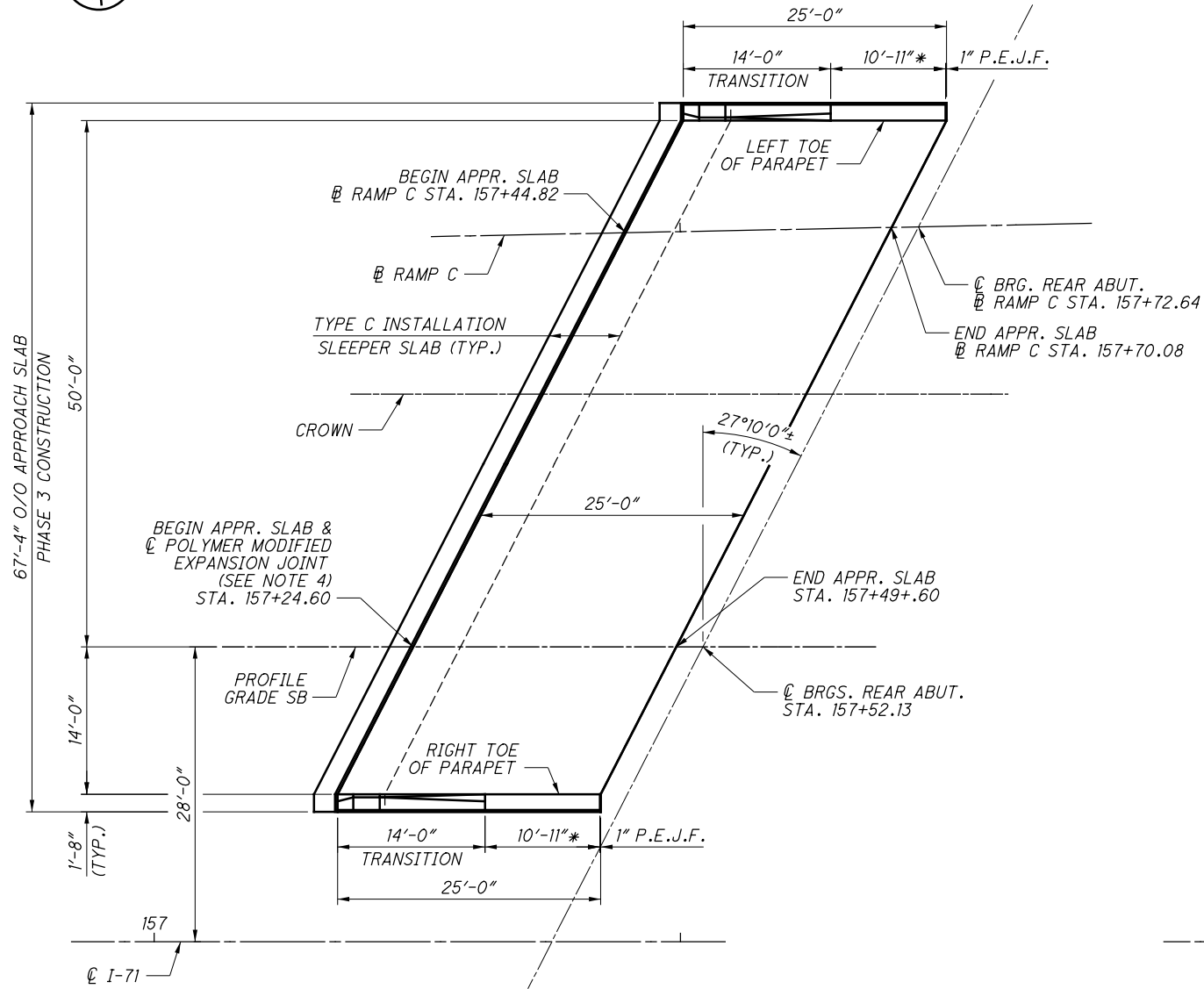
DESIGN AGENCY
Mead & Hunt
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DUBLIN, OH 43016
(614) 782-5900 PHONE

REVIEWED DATE 8/8/2016
KVB
DRAWN DJC
DLC
CHECKED CMH
DESIGNED RLC
CMH

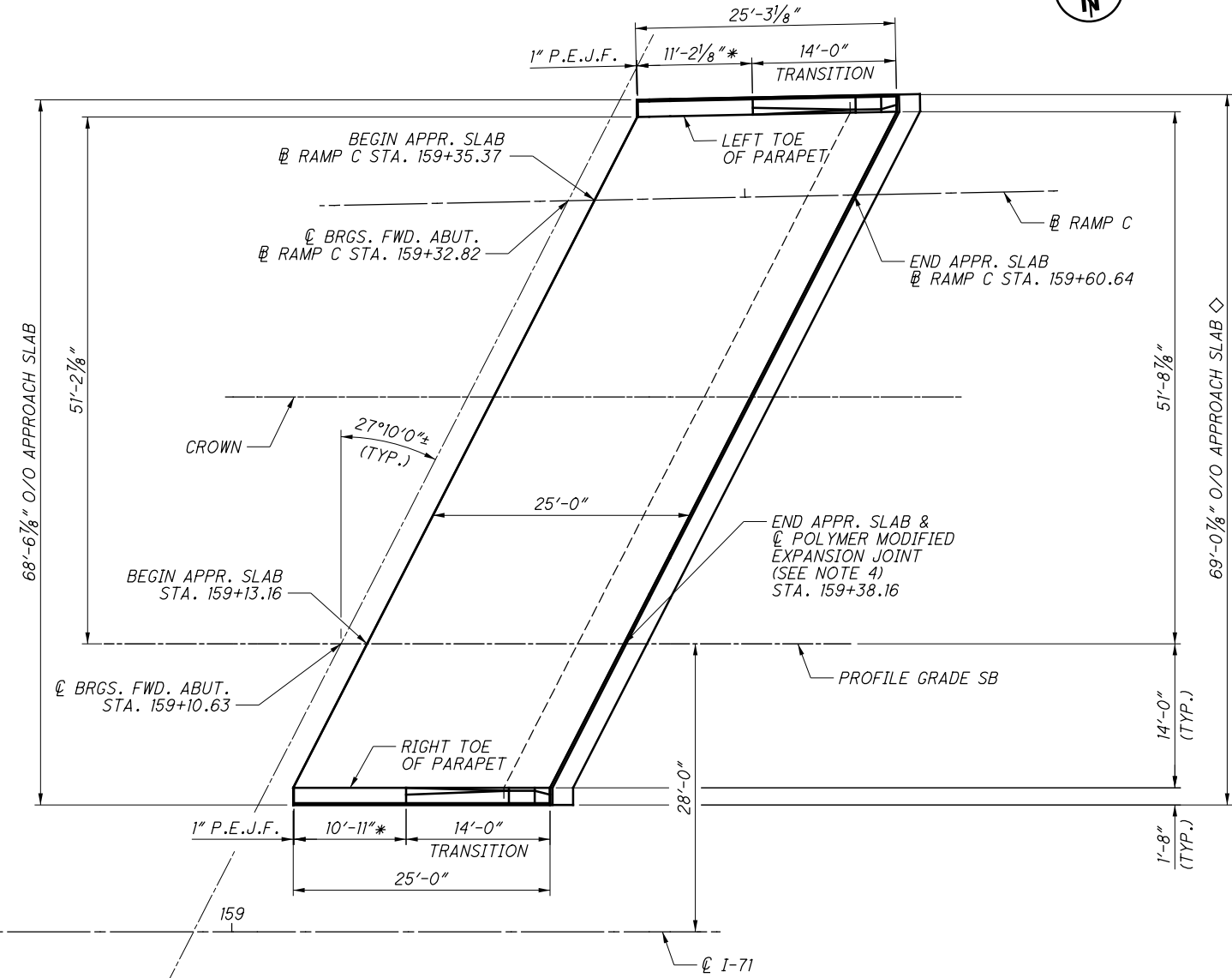
STRUCTURE FILE NUMBER
2506904L/2506939R
DRAINAGE SCUPPER DETAILS
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201
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REAR APPROACH SLAB PLAN - SOUTHBOUND



FORWARD APPROACH SLAB PLAN - SOUTHBOUND

TOP OF APPROACH SLAB ELEVATION TABLE - SOUTHBOUND

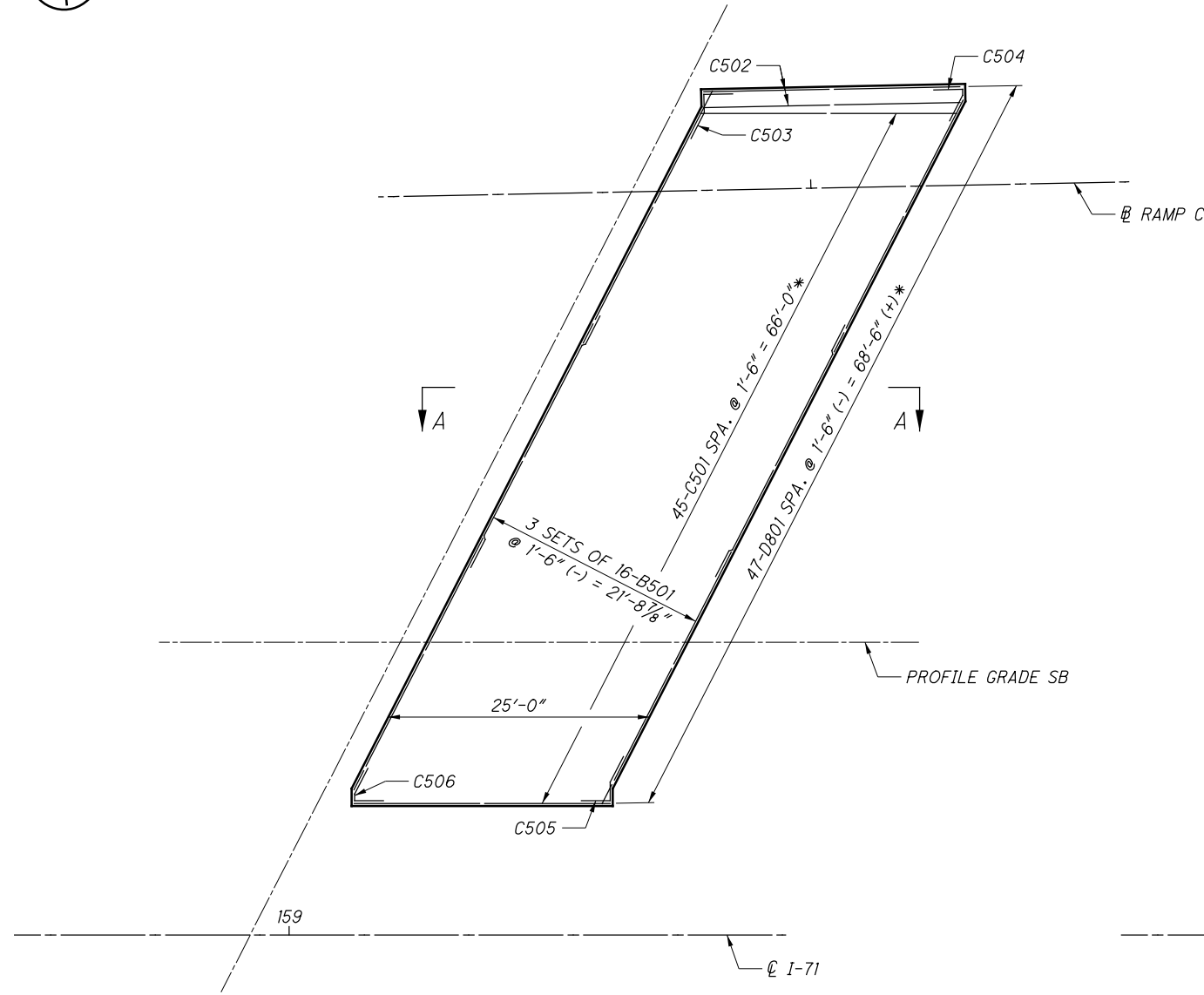
APPROACH SLAB	LOCATION	LEFT TOE OF PARAPET			CROWN			PROFILE GRADE SB			RIGHT TOE OF PARAPET		
		STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
REAR ABUT.	0.0 L	157+50.26	78.00	893.22	157+36.92	52.00	893.53	157+24.60	28.00	893.05	157+17.42	14.00	892.77
	0.5 L	157+62.76	78.00	893.32	157+49.42	52.00	893.63	157+37.10	28.00	893.15	157+29.92	14.00	892.87
	1.0 L	157+75.26	78.00	893.42	157+61.92	52.00	893.73	157+49.60	28.00	893.25	157+42.42	14.00	892.97
FORWARD ABUT.	0.0 L	159+39.45	79.23	894.47	159+25.48	52.00	894.85	159+13.16	28.00	894.41	159+05.98	14.00	894.15
	0.5 L	159+52.08	79.49	894.52	159+37.98	52.00	894.90	159+25.66	28.00	894.46	159+18.48	14.00	894.21
	1.0 L	159+64.71	79.74	894.56	159+50.48	52.00	894.95	159+38.16	28.00	894.52	159+30.98	14.00	894.26

NOTES:

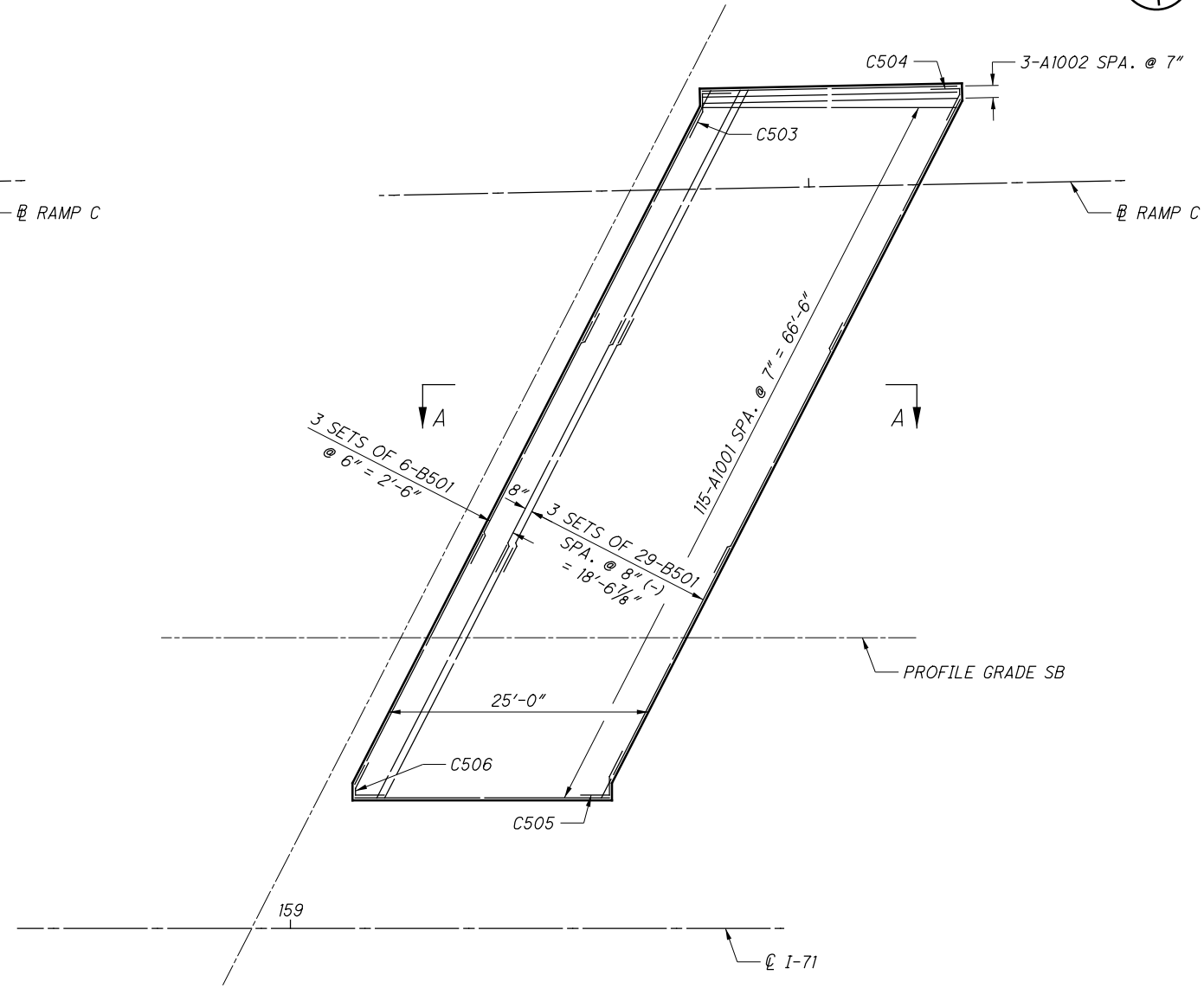
- FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STD. DWG. AS-1-15 AND AS-2-15.
- FOR DETAILS AND NOTES OF THE CONCRETE PARAPET, SEE ODOT STD. DWG. SBR-1-13.
- FOR FORWARD APPROACH SLAB REINFORCING DETAILS, SEE SHEET 78/86.

LEGEND:

- * - MEASURED ALONG BACKFACE OF PARAPET
- ◇ - DIMENSION PERPENDICULAR TO PROFILE GRADE

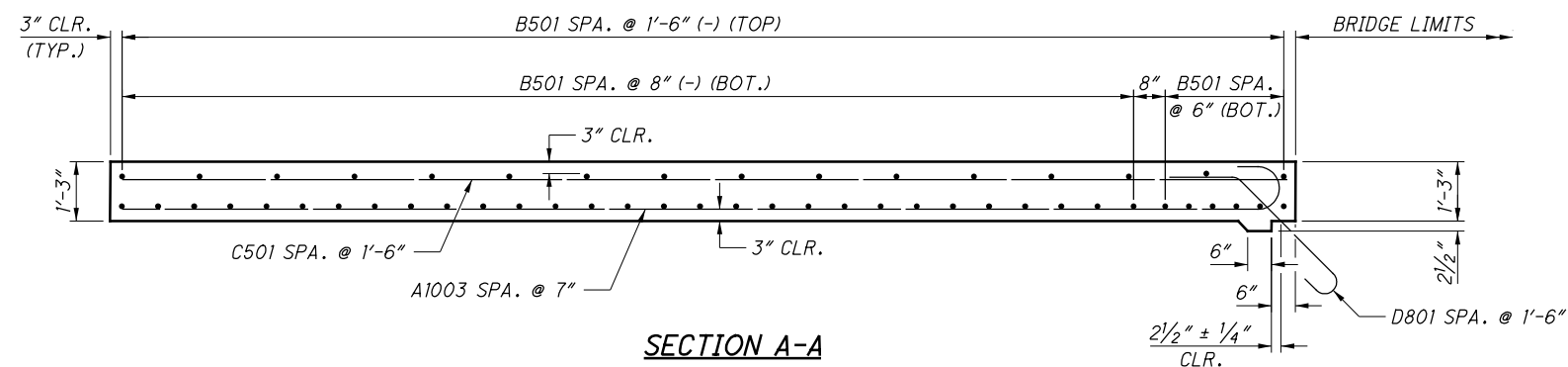


FORWARD APPROACH SLAB TOP REINFORCING PLAN - SOUTHBOUND



FORWARD APPROACH SLAB BOTTOM REINFORCING PLAN - SOUTHBOUND

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"



SECTION A-A

- NOTES:**
- FOR ADDITIONAL DETAILS, NOTES, AND SLAB REINFORCING SEE ODOT STD. DWG. AS-1-15 AND AS-2-15.
 - FOR REAR APPROACH SLAB REINFORCING, SEE ODOT STD. DWG. AS-1-15 AND AS-2-15.

LEGEND:
* - MEASURED PERPENDICULAR TO PROFILE GRADE SB.

X:\4037000\21957.16\107201\structures\FRA071_0296C\sheets\071_0296CMD002.dgn Sheet 10/28/2019 11:15:10 AM 1458sjs

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DATE
8/8/2016

REVIEWED
KVB

DRAWN
DJC

DESIGNED
RLC

CHECKED
ALM

STRUCTURE FILE NUMBER
2506904L/2506939R

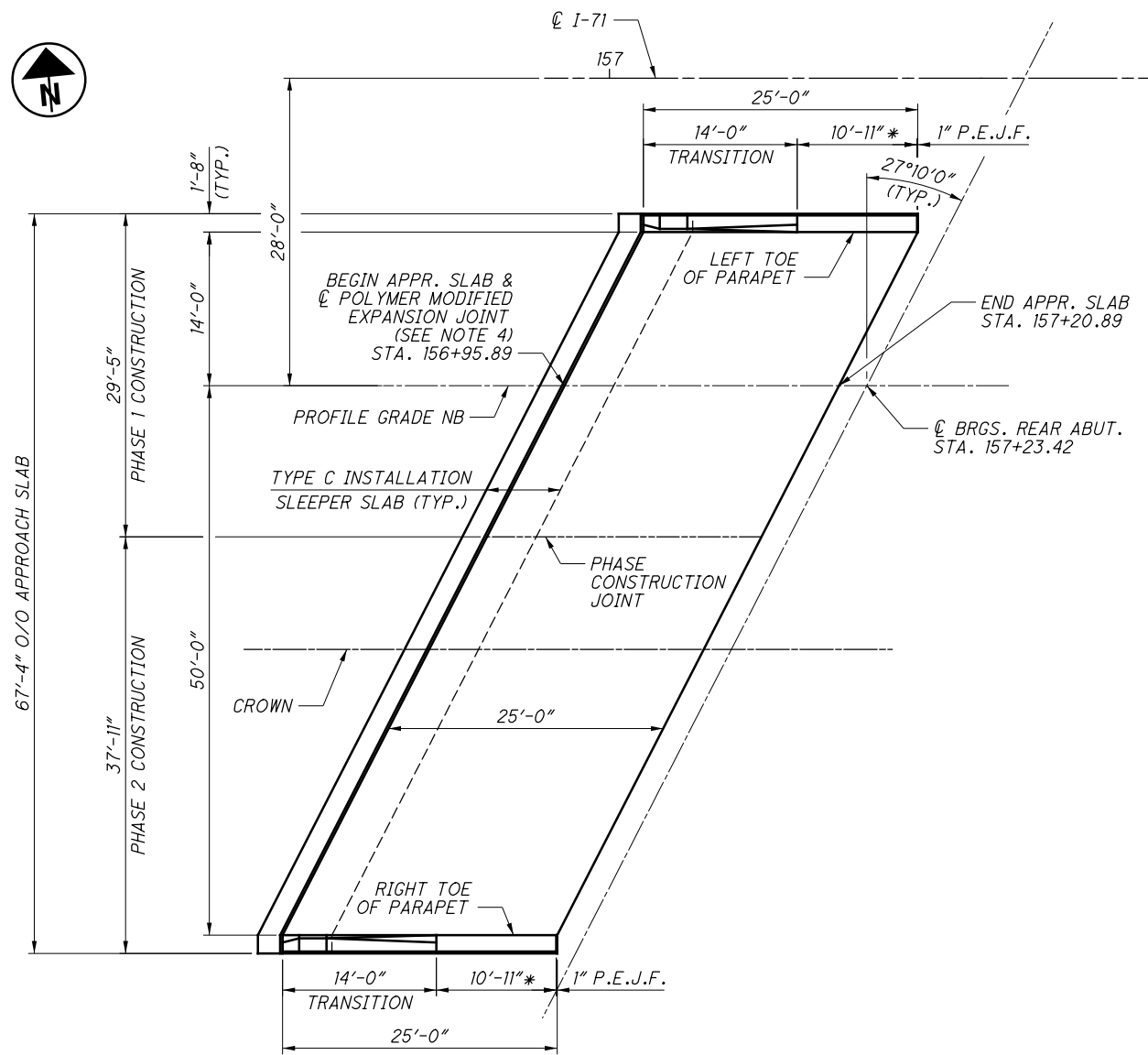
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

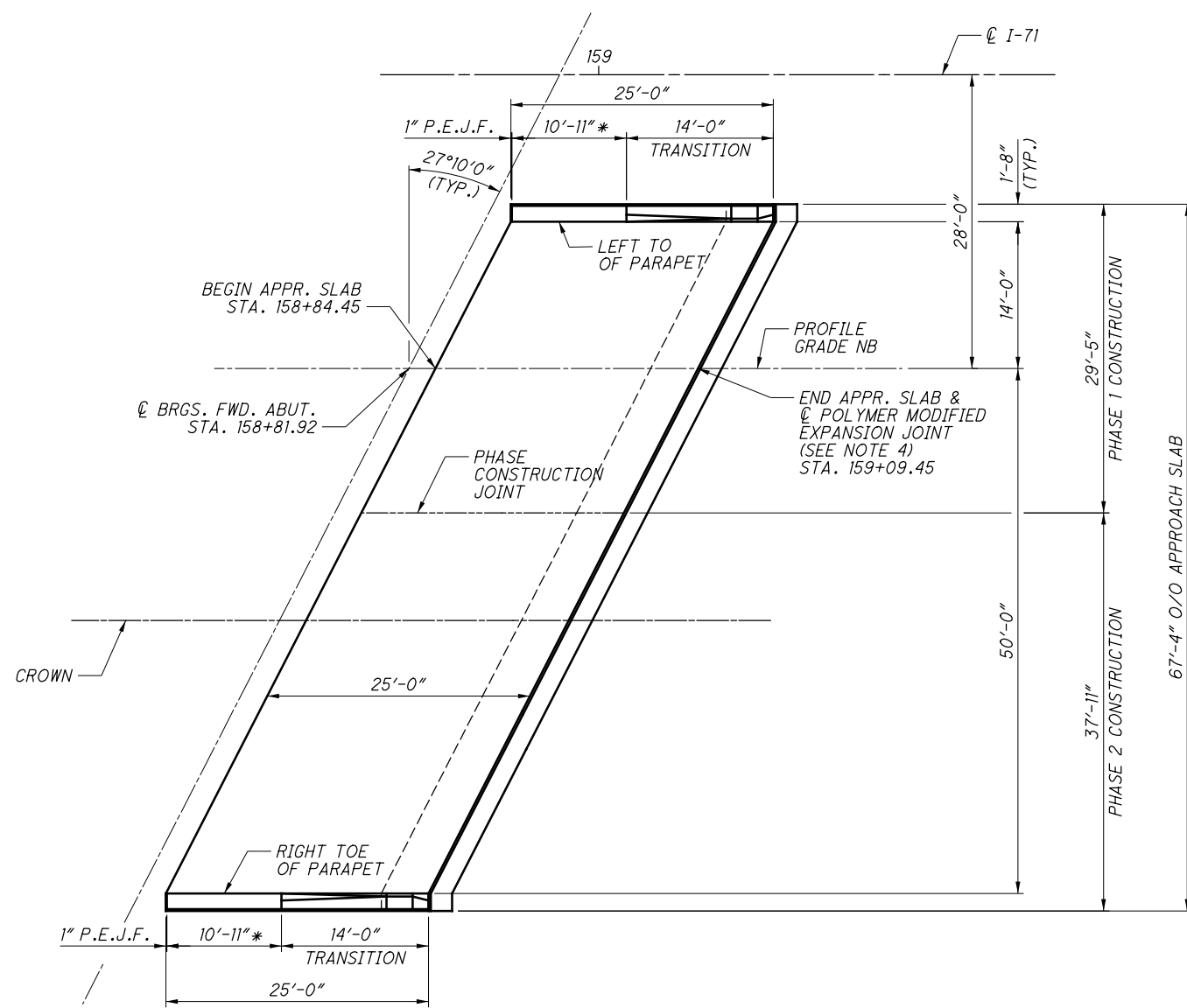
78/86

1185
1312

X:\4037000\21957.16\10720\structures\FRA071_0296C\sheets\071_0296CMD003.dgn Sheet 10/28/2019 11:15:11 AM 1458sjs



REAR APPROACH SLAB PLAN - NORTHBOUND



FORWARD APPROACH SLAB PLAN - NORTHBOUND

TOP OF APPROACH SLAB ELEVATION TABLE - NORTHBOUND

APPROACH SLAB	LOCATION	LEFT TOE OF PARAPET			PROFILE GRADE NB			PHASE CONSTRUCTION JOINT			CROWN			RIGHT TOE OF PARAPET		
		STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
REAR ABUT.	0.0 L	157+03.08	14.00	892.80	156+95.89	28.00	892.97	156+88.84	41.75	893.13	156+83.58	52.00	893.25	156+70.23	78.00	892.72
	0.5 L	157+15.58	14.00	892.90	157+08.39	28.00	893.07	157+01.34	41.75	893.23	156+96.08	52.00	893.35	156+82.73	78.00	892.83
	1.0 L	157+28.08	14.00	892.99	157+20.89	28.00	893.16	157+13.84	41.75	893.33	157+08.58	52.00	893.45	156+95.23	78.00	892.93
FORWARD ABUT.	0.0 L	158+91.64	14.00	893.77	158+84.45	28.00	893.97	158+77.40	41.75	894.17	158+72.14	52.00	894.32	158+58.79	78.00	893.86
	0.5 L	159+04.14	14.00	893.80	158+96.95	28.00	894.00	158+89.90	41.75	894.20	158+84.64	52.00	894.36	158+71.29	78.00	893.90
	1.0 L	159+16.64	14.00	893.83	159+09.45	28.00	894.03	159+02.40	41.75	894.24	158+97.14	52.00	894.39	158+83.79	78.00	893.94

NOTES:

- FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STD. DWG. AS-1-15 AND AS-2-15.
- FOR DETAILS AND NOTES OF THE CONCRETE PARAPET, SEE ODOT STD. DWG. SBR-1-13.
- FOR APPROACH SLAB REINFORCING DETAILS, SEE SHEET 80/86.

LEGEND:

* - MEASURED ALONG BACKFACE OF PARAPET

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE
 8/8/2016

REVIEWED
 KVB

DRAWN
 DJC

DESIGNED
 RLC

CHECKED
 ALM

STRUCTURE FILE NUMBER
 2506904L/2506939R

BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

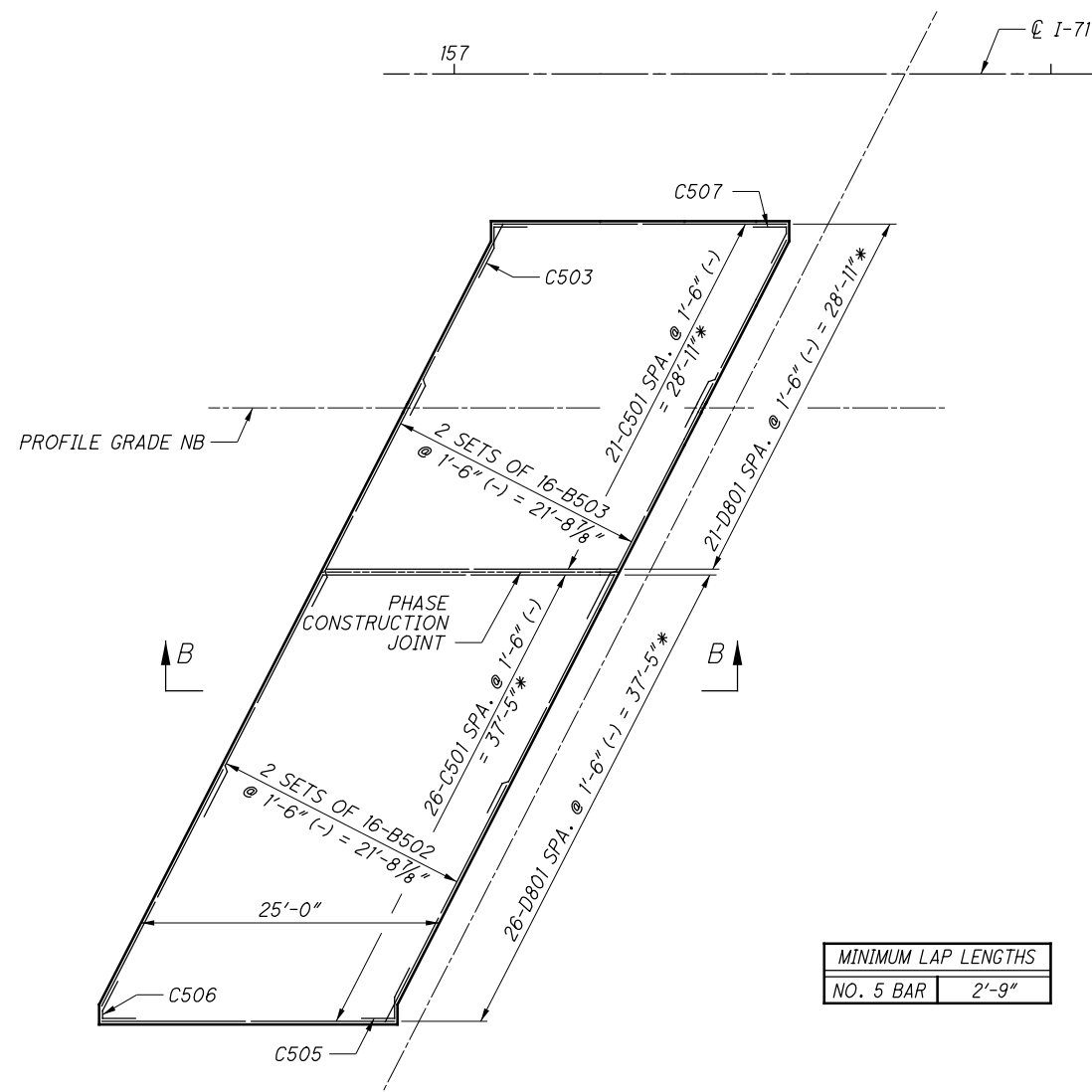
APPROACH SLAB DETAILS - NORTHBOUND BRIDGE

FRA-71-0.00
 PID No. 107201

79/86

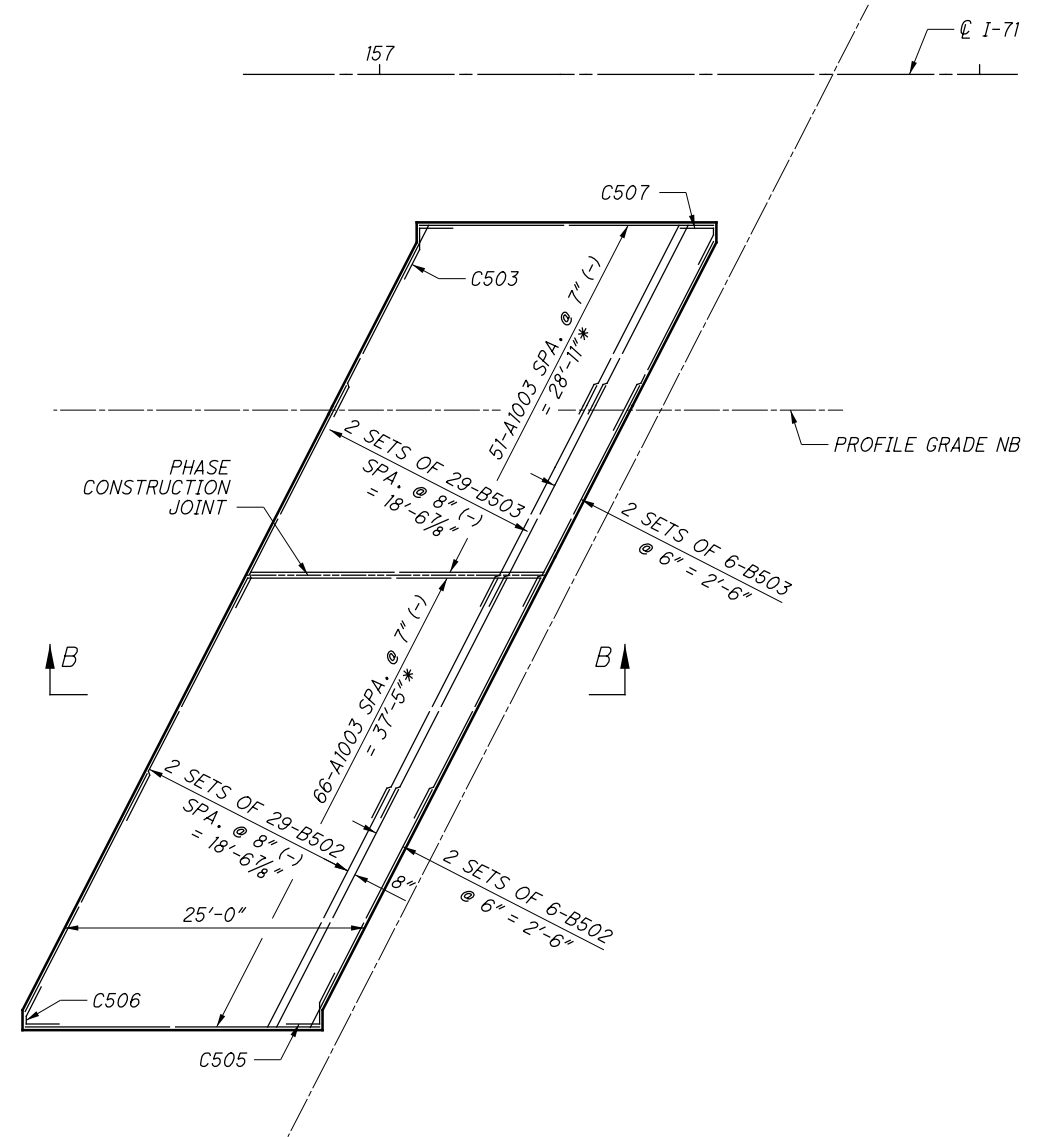
1186
 1312

X:\4037000\21957.16\107201\structures\FRA071_0296C\sheets\071_0296CMD004.dgn Sheet 10/28/2019 11:54:12 AM 1458sjs

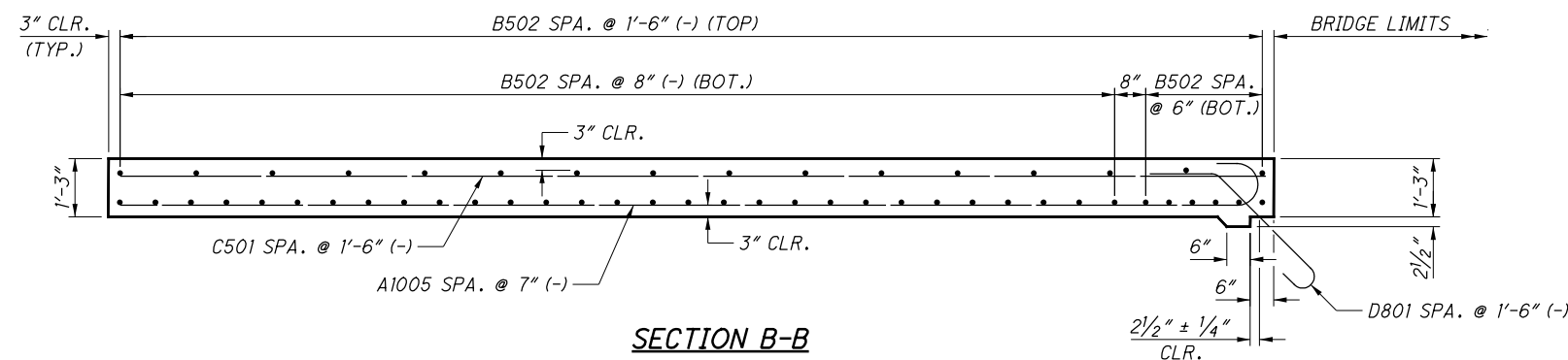


MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"

REAR APPROACH SLAB TOP REINFORCING PLAN - NORTHBOUND
(FORWARD APPROACH SLAB SIMILAR)



REAR APPROACH SLAB BOTTOM REINFORCING PLAN - NORTHBOUND
(FORWARD APPROACH SLAB SIMILAR)



SECTION B-B

NOTE:

1. FOR ADDITIONAL DETAILS, NOTES, AND SLAB REINFORCING SEE ODOT STD. DWG. AS-1-15 AND AS-2-15.

LEGEND:

* - MEASURED PERPENDICULAR TO PROFILE GRADE SB.

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DATE: 8/8/2016
REVIEWED: KVB
DRAWN: DJC
DESIGNED: RLC
CHECKED: ALM

STRUCTURE FILE NUMBER: 2506904L/2506939R

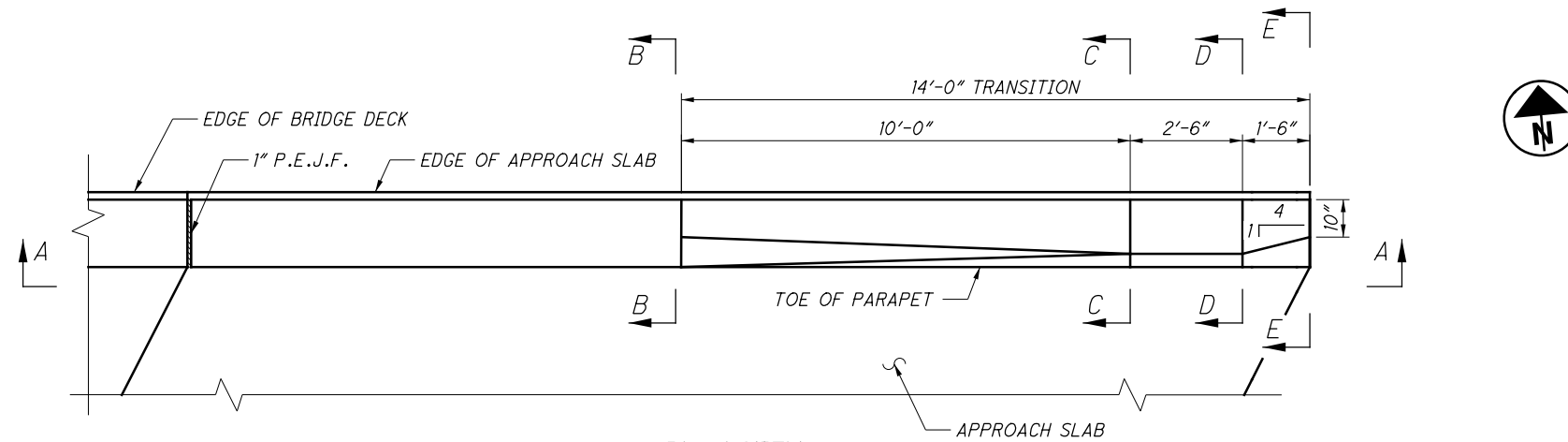
BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00
PID No. 107201

80/86

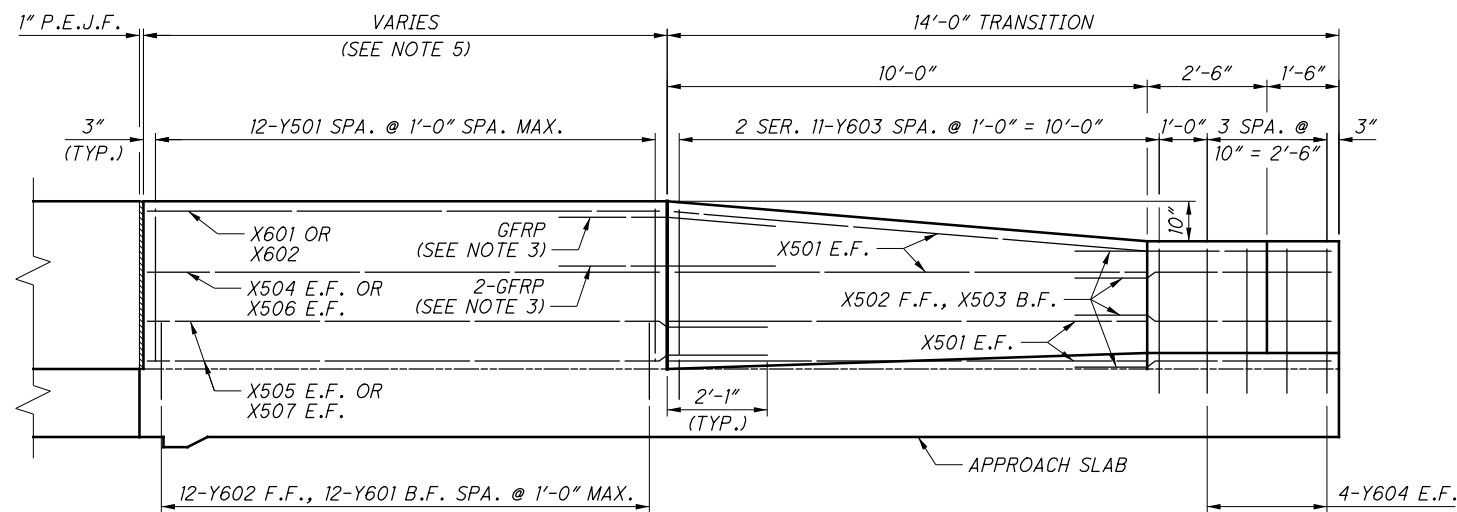
1187
1312

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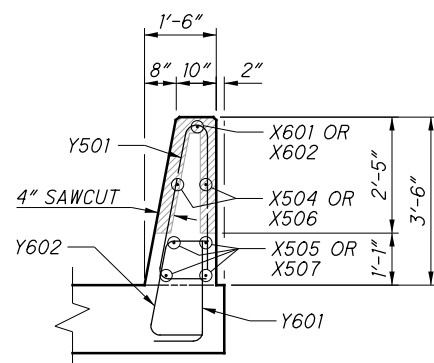


PLAN VIEW

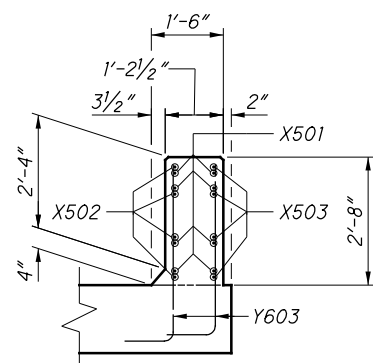
FORWARD LEFT TRANSITION SHOWN, OTHERS SIMILAR



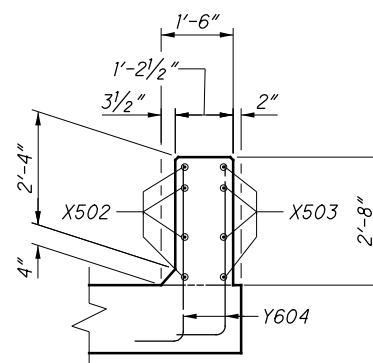
SECTION A-A



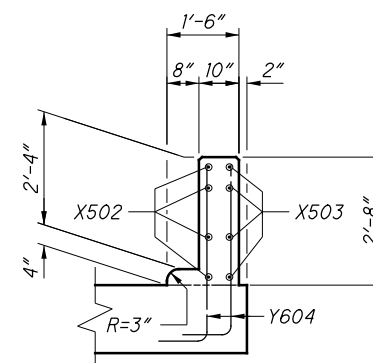
SECTION B-B
(GFRP NOT SHOWN)



SECTION C-C



SECTION D-D



SECTION E-E

NOTES:

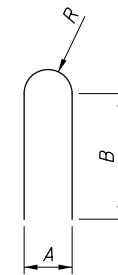
1. FOR ADDITIONAL DETAILS AND NOTES, SEE ODOT STD. DWG. SBR-1-13.
2. FOR BRIDGE PARAPET DETAILS, SEE SHEETS 60/86, 61/86, AND 69/86.
3. 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT.
4. PARAPETS AND TRANSITIONS ON THE APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN.
5. FOR CONCRETE PARAPET DIMENSIONS, SEE APPROACH SLAB DETAILS SHEETS 77/86, 79/86.

DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
REVIEWED KVB	DATE 8/8/2016
DRAWN DJC	STRUCTURE FILE NUMBER 2506904L/2506939R
DESIGNED RLC	CHECKED ALM
PARAPET TRANSITION DETAILS BRIDGE NO. FRA-71-0298 L/R OVER INDIANA & OHIO RAILWAY COMPANY	
FRA-71-0.00 PID No. 107201	
81 / 86 1188 1312	

X:\4037000\21957.16\107201\structures\FRA071_0296C\sheets\071_0296CRL002.dgn Sheet 10/28/2019 11:51:5 AM 1458sjs

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE - SOUTHBOUND											
S401	395	30'-0"	7916	STR							
S402	79	25'-2"	1328	STR							
S403	2	28'-3"	38	STR							
S501	360	30'-0"	11264	STR							
S502	72	26'-10"	2015	STR							
	2 SR	2'-4"									
S503	OF	TO	1365	STR							1'-1"
	33	37'-4"									
S504	257	30'-11"	8287	STR							
	1 SR	10'-3"									
S505	OF	TO	609	STR							1'-1"
	25	36'-6"									
S506	256	39'-6"	10547	STR							
	1 SR	3'-7"									
S507	OF	TO	405	STR							1'-1 1/4"
	24	28'-9"									
	2 SR	2'-5"									
S508	OF	TO	1521	STR							1'-1"
	35	39'-3"									
S509	257	33'-0"	8846	STR							
	1 SR	8'-1"									
S510	OF	TO	553	STR							1'-1 1/4"
	25	34'-4"									
S511	256	37'-5"	9991	STR							
	1 SR	5'-7"									
S512	OF	TO	455	STR							1'-1 1/4"
	24	30'-9"									
S513	2	28'-5"	59	STR							
S601	156	24'-6"	5741	STR							
SUB-TOTAL			70,940								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE - NORTHBOUND											
S401	395	30'-0"	7916	STR							
S404	79	24'-6"	1293	STR							
S501	365	30'-0"	11421	STR							
S514	73	26'-2"	1992	STR							
	2 SR	4'-2"									
S516	OF	TO	839	STR							1'-1 1/4"
	24	29'-4"									
S517	526	31'-7"	17327	STR							
	2 SR	2'-4"									
S518	OF	TO	932	STR							1'-1"
	27	30'-9"									
	2 SR	2'-4"									
S519	OF	TO	1365	STR							1'-1"
	33	37'-4"									
S520	514	37'-7"	20149	STR							
	2 SR	3'-7"									
S521	OF	TO	1218	STR							1'-1 1/4"
	30	35'-4"									
S601	154	24'-6"	5667	STR							
SC501	80	5'-0"	417	STR							
SC502	10	6'-1"	63	24	1'-4"	2'-0"					0'-8"
SUB-TOTAL			70,599								



TYPE-24

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE
 8/8/2016

REVIEWED
 KVB

DRAWN
 CMH

DESIGNED
 CMH

STRUCTURE FILE NUMBER
 2506904L/2506939R

REVISED

CHECKED
 ALM

REINFORCING STEEL LIST

BRIDGE NO. FRA-71-0298 L/R
 OVER INDIANA & OHIO RAILWAY COMPANY

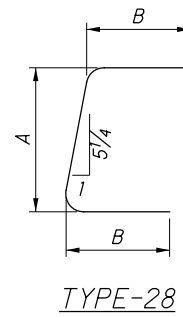
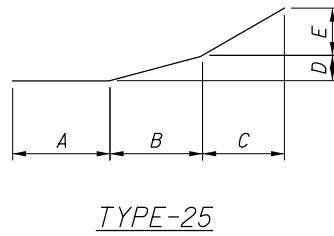
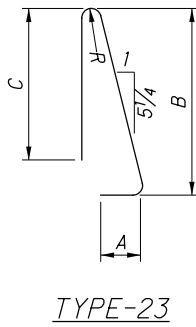
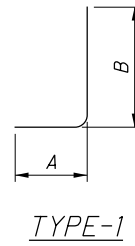
FRA-71-0.00
 PID No. 107201

85/86

1192
 1312

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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
PARAPET - SOUTHBOUND BRIDGE										
R501	364	7'-4"	2784	23	0'-11"	3'-3"	3'-0"			0'-3"
R502	48	30'-0"	1502	STR						
R503	4	4'-5"	18	STR						
R504	4	7'-3"	30	STR						
R506	16	14'-8"	245	STR						
R507	32	6'-8"	223	STR						
R508	12	10'-8"	134	STR						
R509	4	3'-9"	16	STR						
R511	4	6'-11"	29	STR						
X501	32	10'-0"	334	STR						
X502	16	5'-9"	96	25	1'-10"	2'-5"	1'-5"	0'-1 1/2"	0'-5"	
X503	16	5'-8"	95	STR						
X504	6	10'-7"	66	STR						
X505	12	12'-10"	161	STR						
X506	2	10'-10"	23	STR						
X507	4	13'-1"	55	STR						
Y501	48	7'-4"	367	23	0'-11"	3'-3"	3'-0"			0'-3"
R601	364	2'-5"	1321	1	1'-0"	1'-7"				
R602	364	3'-3"	1777	28	1'-7"	1'-0"				
R603	2	7'-3"	22	STR						
R604	8	14'-8"	176	STR						
R605	16	6'-8"	160	STR						
R606	6	10'-8"	96	STR						
R608	2	6'-11"	21	STR						
X601	3	10'-7"	48	STR						
X602	1	10'-10"	16	STR						
Y601	48	2'-5"	174	1	1'-0"	1'-7"				
Y602	48	3'-3"	234	28	1'-7"	1'-0"				
	8 SR	4'-0"				3'-2"				
Y603	OF	TO	584	1	1'-0"	TO				0'-1"
	11	4'-10"				4'-0"				
Y604	32	4'-0"	192	1	1'-0"	3'-2"				
SUB-TOTAL			10,999							



MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
PARAPET - NORTHBOUND BRIDGE										
R501	364	7'-4"	2784	23	0'-11"	3'-3"	3'-0"			0'-3"
R502	48	30'-0"	1502	STR						
R506	16	14'-8"	245	STR						
R507	32	6'-8"	223	STR						
R508	12	10'-8"	134	STR						
R509	8	3'-9"	31	STR						
R511	8	6'-11"	58	STR						
X501	32	10'-0"	334	STR						
X502	16	5'-9"	96	25	1'-10"	2'-5"	1'-5"	0'-1 1/2"	0'-5"	
X503	16	5'-8"	95	STR						
X504	8	10'-7"	88	STR						
X505	16	12'-10"	214	STR						
Y501	48	7'-4"	367	23	0'-11"	3'-3"	3'-0"			0'-3"
R601	364	2'-5"	1321	1	1'-0"	1'-7"				
R602	364	3'-3"	1777	28	1'-7"	1'-0"				
R604	8	14'-8"	176	STR						
R605	16	6'-8"	160	STR						
R606	6	10'-8"	96	STR						
R608	4	6'-11"	42	STR						
X601	4	10'-7"	64	STR						
Y601	48	2'-5"	174	1	1'-0"	1'-7"				
Y602	48	3'-3"	234	28	1'-7"	1'-0"				
	8 SR	4'-0"				3'-2"				
Y603	OF	TO	584	1	1'-0"	TO				0'-1"
	11	4'-10"				4'-0"				
Y604	32	4'-0"	192	1	1'-0"	3'-2"				
SUB-TOTAL			10,991							

REINFORCING STEEL LIST

BRIDGE NO. FRA-71-0298 L/R
OVER INDIANA & OHIO RAILWAY COMPANY

FRA-71-0.00

PID No. 107201

DESIGNED BY: DJC
CHECKED BY: RLC

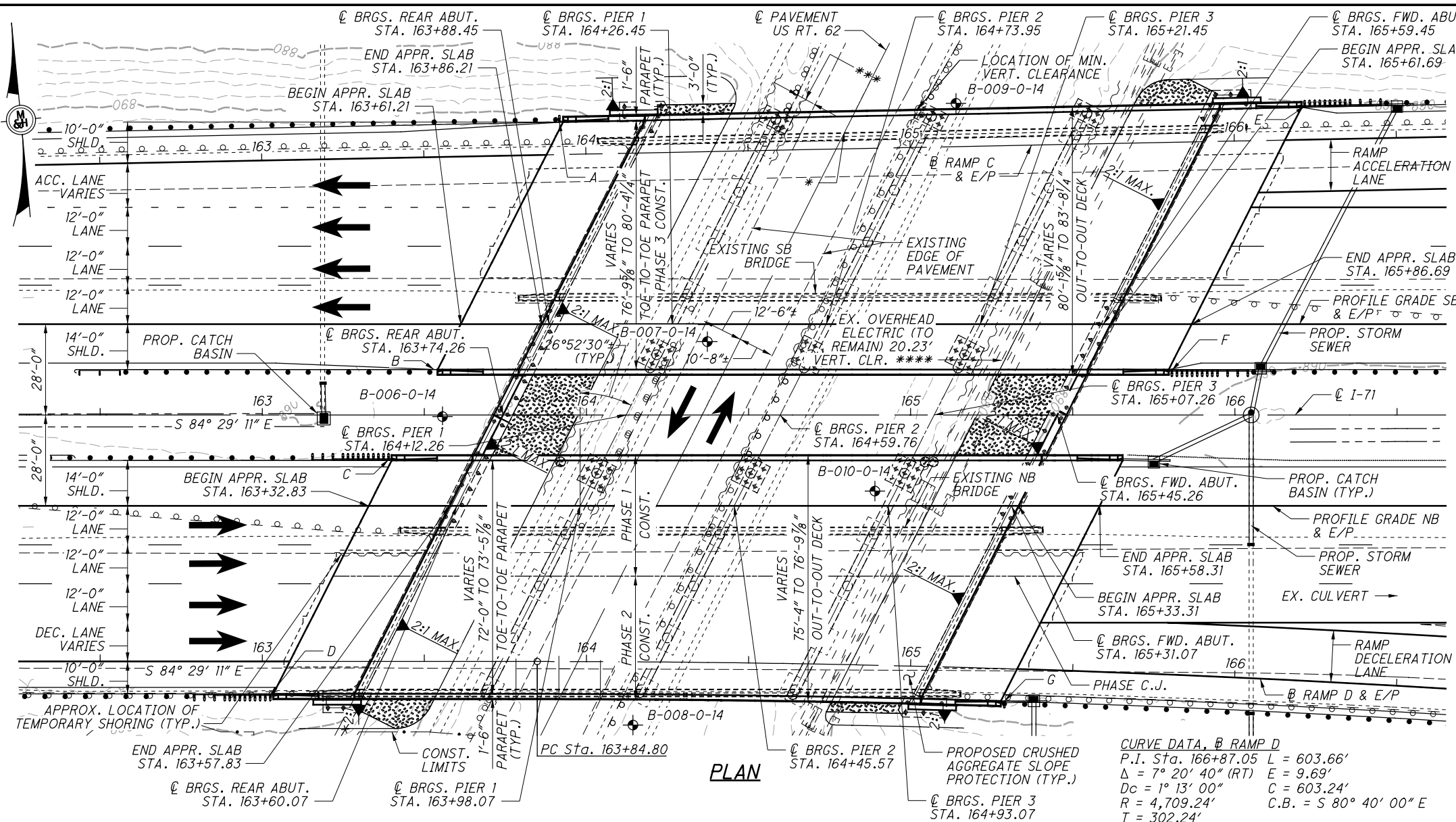
DRAWN BY: DJC
REVISED BY:

REVIEWED BY: KVB
DATE: 8/8/2016

STRUCTURE FILE NUMBER: 2506904L/2506939R

DESIGN AGENCY: Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-9900 PHONE

X:\4037000\21957.16\10720\structures\FRA071_0308C\SP001.dgn Sheet 10/28/2019 11:51:18 AM 1458sjs



PLAN

BENCHMARK DATA	
BM #1 STA. 144+70.84, EL. 873.71, 0.22' LT., CONC. MONUMENT	
BM #2 STA. 154+09.79, EL. 889.71, 0.27' LT., CONC. MONUMENT	
BM #3 STA. 165+70.88, EL. 890.64, 0.08' LT., CONC. MONUMENT	
BM #4 STA. 173+31.13, EL. 879.92, 0.05' RT., CONC. MONUMENT	

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 5 OF 1369.

NOTES
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
 2017 ADT = 44,670 2017 ADTT = 13,401
 2037 ADT = 64,070 2037 ADTT = 19,221
 DIRECTIONAL DISTRIBUTION = 55%

LEGEND:
 ◆ BORING LOCATION
 * 17'-11 1/2" ACTUAL MIN. EXISTING VERTICAL CLEARANCE
 ** 16'-6" REQUIRED MIN. VERTICAL CLEARANCE
 16'-8" ACTUAL MIN. VERTICAL CLEARANCE
 *** 12'-0" REQUIRED MIN. HORIZONTAL CLEARANCE
 7'-3" ACTUAL MIN. HORIZONTAL CLEARANCE
 **** SEE UTILITY COORDINATION NOTE ON SHEET 3 OF 1312.

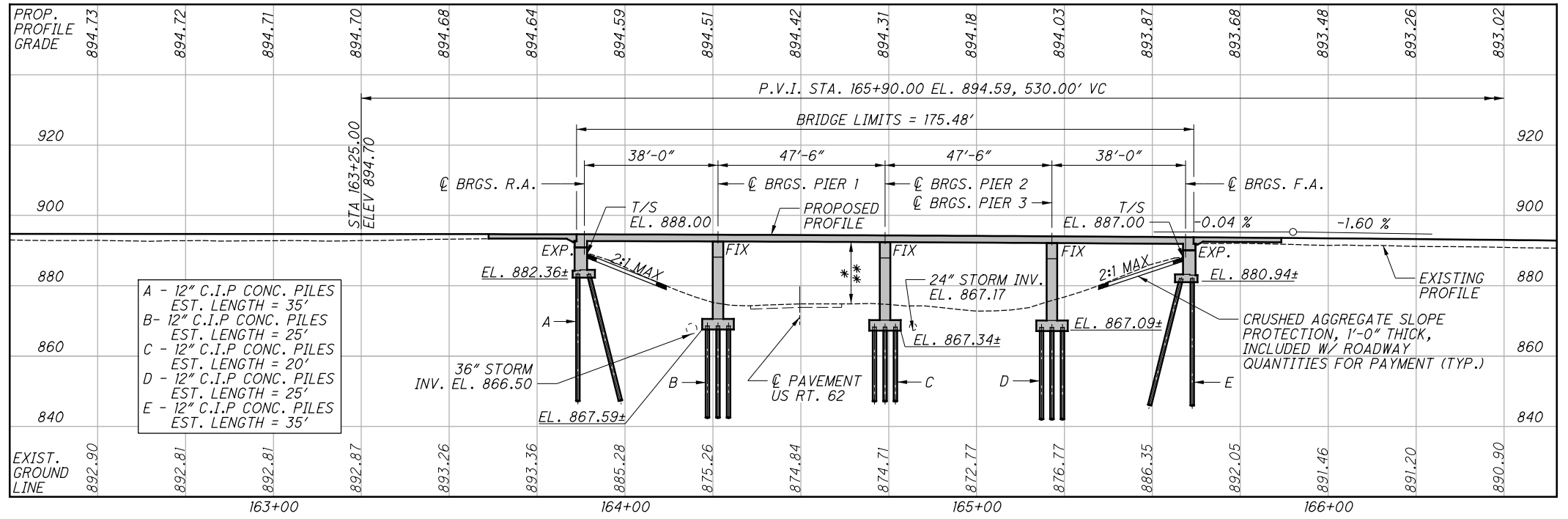
▨ LIMITS OF CRUSHED AGGREGATE SLOPE PROTECTION

EXISTING STRUCTURE

TYPE: CONTINUOUS CONCRETE SLAB WITH CONCRETE SUBSTRUCTURE
 SPANS: 38'-0" ± - 47'-6" ± - 47'-6" ± - 38'-0" ± C/C BRGS.
 ROADWAY: NORTHBOUND 47'-8" ± F/F CURB
 SOUTHBOUND VARIES 45'-10 1/2" ± TO 49'-6 1/2" ± F/F CURB
 LOADING: CF-2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING
 SKEW: 26°-52'-30" ± LF
 APPROACH SLABS: AS-1-54 (25'-0" ±) (SPECIAL)
 ALIGNMENT: TANGENT
 CROWN: 0.016 ± FT/FT NORMAL CROWN
 WEARING SURFACE: 3" ± BITUMINOUS ASPHALT CONCRETE
 STRUCTURAL FILE NUMBER: 2506963/2506998
 DATE BUILT: 1964
 DISPOSITION: SLAB REPLACEMENT AND SUBSTRUCTURE WIDENING

PROPOSED STRUCTURE

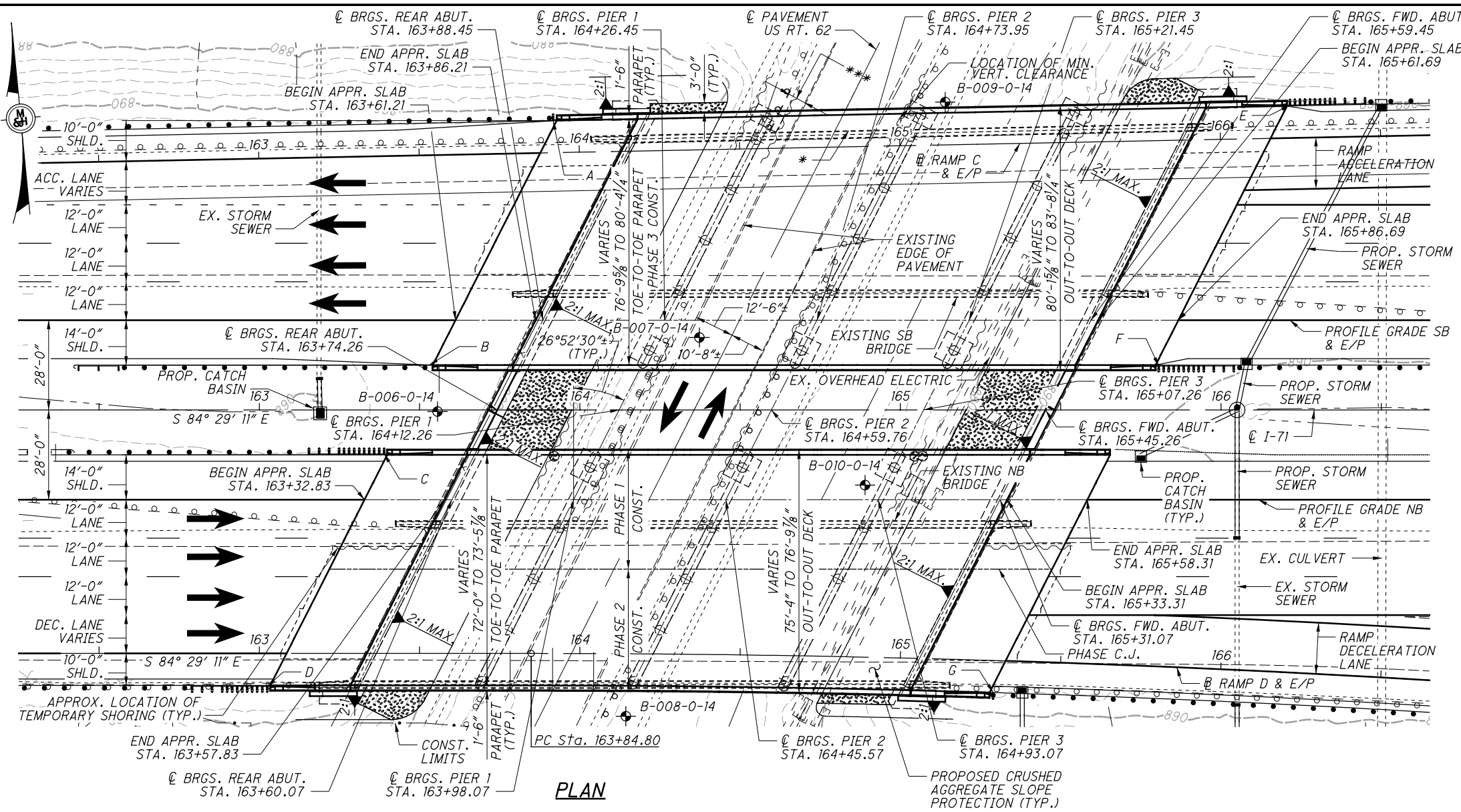
TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAP AND COLUMN PIERS AND SEMI-INTEGRAL ABUTMENTS
 SPANS: 38'-0" - 47'-6" - 47'-6" - 38'-0" C/C BRGS.
 ROADWAY: NORTHBOUND VARIES 72'-0" TO 73'-5 7/8" T/T PARAPET
 SOUTHBOUND VARIES 76'-9 5/8" TO 80'-4 1/4" T/T PARAPET
 LOADING: HS20-44, ALTERNATE MILITARY, 60 PSF FWS
 SKEW: 26°-52'-30" ± LF
 APPROACH SLABS: 25'-0" LONG (AS-1-81)
 ALIGNMENT: TANGENT
 CROWN: 0.016 FT/FT
 WEARING SURFACE: 1" MONOLITHIC CONCRETE
 COORDINATES: LATITUDE 39°49'29" N
 LONGITUDE 83°08'28" W



PROFILE ALONG PROFILE GRADE LINE SB

DESIGN AGENCY: Mead & Hunt
 DATE: 6/30/2015
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: LYH
 CHECKED: CMH
 FRANKLIN COUNTY
 STA. 163+86.21
 STA. 165+61.69
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62
 SITE PLAN
 FRA-71-0-00
 PID No. 107201
 1/80
 1194
 1312

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PROPOSED WORK

1. WIDEN ABUTMENTS AND PIERS
2. REPLACE EXISTING PIER CAPS
3. REMOVE SUPERSTRUCTURE AND REPLACE WITH CONTINUOUS REINFORCED CONCRETE SLAB
4. CONVERT ABUTMENTS TO SEMI-INTEGRAL
5. REPLACE APPROACH SLAB
6. SEAL CONCRETE SURFACES

GUARDRAIL POST STATIONING

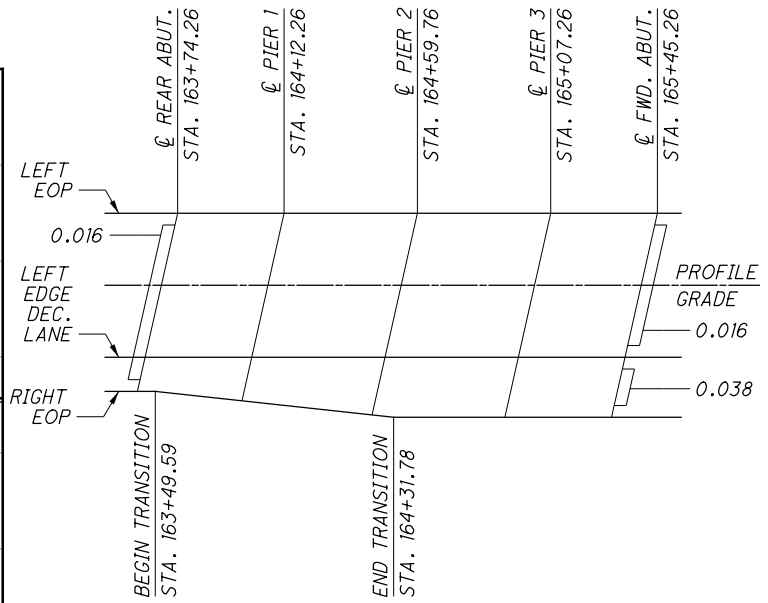
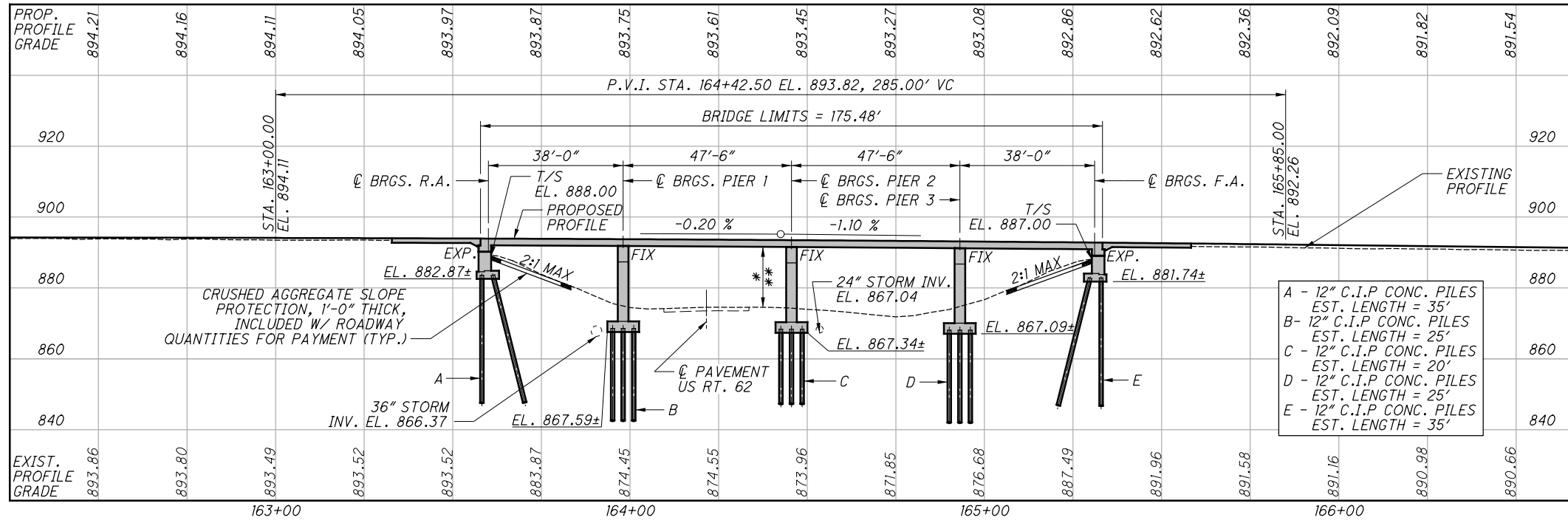
A: 163+91.64 E: 166+21.52
 B: 163+52.99 F: 165+80.56
 C: 163+38.96 G: 165+28.92
 D: 163+02.48

NOTE:

FOR LEGEND, EXISTING & PROPOSED STRUCTURE, SEE SHEET 1/80.

CURVE DATA, RAMP K

P.I. Sta. 166+87.05
 $\Delta = 7^\circ 20' 40''$ (RT)
 $D_c = 1^\circ 13' 00''$
 $R = 4,709.24'$
 $T = 302.24'$
 $L = 603.66'$
 $E = 9.69'$
 $C = 603.24'$
 C.B. = $S 80^\circ 40' 00'' E$

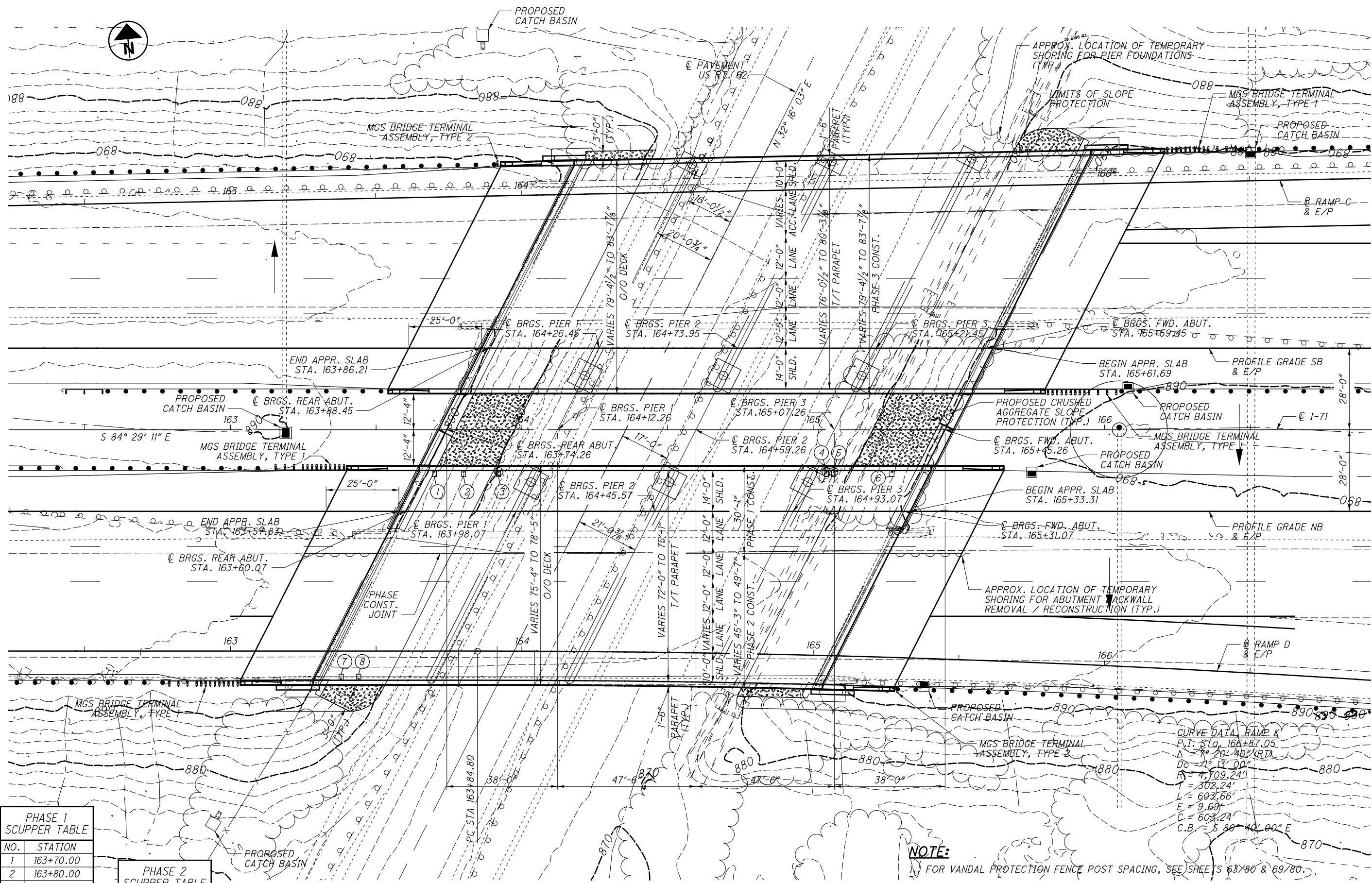


SUPERELEVATION TRANSITION DIAGRAM

NORTHBOUND BRIDGE ONLY
 ALL STATIONS GIVEN ALONG CL I-71
 SEE ROADWAY SUPERELEVATION PROFILES FOR ADDITIONAL INFORMATION

DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-9900 PHONE
 DATE: 6/30/2015
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: LYH
 CHECKED: CMH
 FRANKLIN COUNTY
 STA. 163+57.83
 STA. 165+33.31
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62
 SITE PLAN
 FRA-71-0.00
 PID No. 107201
 2 / 80
 1195
 1312

X:\4037000\21957.16\10720\structures\FRA071_0308C\sheet\071_0308CGP001.dgn Sheet 10/28/2019 11:52:22 AM 14585js



PHASE 1 SCUPPER TABLE	
NO.	STATION
1	163+70.00
2	163+80.00
3	163+92.00
4	165+04.50
5	165+07.00
6	165+27.00

PHASE 2 SCUPPER TABLE	
NO.	STATION
7	163+38.00
8	163+44.00

CURVE DATA RAMP K
 P.I. STA. 166+87.05
 $\Delta = 20^\circ 40' \text{ (RTA)}$
 $D_c = 2^\circ 13' 00''$
 $R = 4,709.24'$
 $T = 303.24'$
 $L = 603.66'$
 $E = 9.69'$
 $C = 603.24'$
 $C.B. = S 80^\circ 40' 00'' E$

- NOTE:**
- FOR VANDAL PROTECTION FENCE POST SPACING, SEE SHEETS 63780 & 69780.
 - FOR ALL SCUPPERS OUTSIDE THE LIMITS OF THE CRUSHED AGGREGATE SLOPE PROTECTION, PROVIDE 1 SQUARE YARD OF CRUSHED AGGREGATE SLOPE PROTECTION DIRECTLY BELOW THE SCUPPER. INCLUDE COST FOR ADDITIONAL CRUSHED AGGREGATE SLOPE PROTECTION UNDER ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

	DESIGN AGENCY	4700 LAKEHURST CT, STE 110 DUBLIN, OH 43068 (614) 752-5900 PHONE
	DATE	6/30/2015
	REVIEWED	KVB
	DRAWN	DJC
DESIGNED	LYH	CMB
CHECKED	CMH	
STRUCTURE FILE NUMBER	25069631/2506998R	
GENERAL PLAN	BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00	PID No. 107201	
3 / 80	<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;"> 1196 1312 </div>	

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	DATED	07-17-15
AS-2-15	DATED	07-17-15
SBR-1-13	REVISED	01-17-14
VPF-1-90	REVISED	07-17-15

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800	REVISED	7-15-16
-----	---------	---------

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION - 2002 AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

DESIGN LOADING

DESIGN LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ. FT.

DESIGN DATA

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MIN. YIELD STRENGTH 60 KSI
SPIRAL REINFORCING MAY BE PLAIN BARS, ASTM A82 OR A615

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

ITEM 202. PORTIONS OF STRUCTURE REMOVED. AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ITEM 203 EMBANKMENT. AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

CUTLINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

MAINTENANCE OF TRAFFIC

I-71 TRAFFIC WILL BE MAINTAINED AT ALL TIMES. SEE PHASE CONSTRUCTION DETAILS AND ROADWAY PLANS FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES AND DETAILS.

UTILITY LINES

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

SUBSTRUCTURE CONCRETE REMOVAL

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PILE DESIGN LOADS

THE ULTIMATE BEARING VALUE IS 140 KIPS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 140 KIPS PER PILE FOR THE PIER 2 PILES. THE ULTIMATE BEARING VALUE IS 180 KIPS PER PILE FOR THE PIER 1 AND PIER 3 PILES.

ABUTMENT PILES:

12" φ CAST-IN-PLACE PILES 40 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER 1 AND 3 PILES:

12" φ CAST-IN-PLACE PILES 30 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER 2 PILES:

12" φ CAST-IN-PLACE PILES 25 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERENCED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PROTECTION OF TRAFFIC

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR IN ACCORDANCE WITH CMS SECTION 500. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. MAINTAIN THE TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIME EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

ITEM 509 REINFORCING STEEL. REPLACEMENT OF EXISTING REINFORCING STEEL. AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT. AN ESTIMATE OF 1,000 POUNDS HAS BEEN INCLUDED IN THE QUANTITIES FOR THE ITEM ABOVE.

ITEM 509. EPOXY COATED REINFORCING STEEL. AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 519. PATCHING CONCRETE STRUCTURES. AS PER PLAN:

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH -PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

THE PATCHING QUANTITIES SHOWN IN ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 25% TO ACCOUNT FOR FUTURE DETERIORATION.

MECHANICAL CONNECTORS:

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES. MECHANICAL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS CONNECTED AND SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND REINFORCING BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATION WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. ALL EXPENSES INVOLVED IN REPAIR OR REPLACEMENT SHALL BE BORNE BY THE CONTRACTOR. THE CONNECTORS SHALL CONFORM AND BE INCLUDED WITH ITEM 509 FOR PAYMENT.

ITEM 503. COFFERDAMS AND EXCAVATION BRACING. AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION. AS PER PLAN

REPAIR EXISTING CRUSHED AGGREGATE SLOPE PROTECTION IN FRONT OF EXISTING PORTIONS OF ABUTMENTS. PLACE PROPOSED CRUSHED AGGREGATE SLOPE PROTECTION IN FRONT OF WIDENED PORTIONS OF ABUTMENTS. THIS WORK INCLUDES ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO PERFORM THE WORK. THIS ITEM IS PAID FOR UNDER ROADWAY QUANTITIES.

CONSTRUCTION CLEARANCE

THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 14'-6" VERTICAL CLEARANCE OVER US ROUTE 62 THROUGHOUT CONSTRUCTION. THE ACTUAL TEMPORARY VERTICAL CLEARANCE ROUNDED DOWN TO THE NEAREST 6" SHALL BE POSTED AS PART OF THE MOT SIGNING.

CONSTRUCTION FALSEWORK

DOWELING INTO THE NEWLY CONSTRUCTED PIER CAPS TO SUPPORT FALSEWORK IS NOT PERMITTED. IF DOWELS ARE USED IN EXTENATING CIRCUMSTANCES, APPROVAL MUST BE OBTAINED IN WRITING FROM THE ENGINEER PRIOR TO USING DOWELS. ANY DOWELS USED SHALL BE REMOVED PRIOR TO COMPLETING CONSTRUCTION AND THE HOLES SHALL BE FILLED WITH NON-SHINK, NON-METALIC GROUT.

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DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
DESIGNED CMH ALM	CHECKED ALM
DRAWN CMH REVISED	REVISED KVB
DATE 6/30/2015	STRUCTURE FILE NUMBER 2506963L/2506998R
GENERAL NOTES BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00 PID No. 107201	
4/80	
1197 1312	

ESTIMATED QUANTITIES

ITEM	EXTENSION	SOUTHBOUND	NORTHBOUND	UNIT	DESCRIPTION	SOUTHBOUND				NORTHBOUND				SHEET #
						ABUT.	PIERS	SUPER.	GEN.	ABUT.	PIERS	SUPER.	GEN.	
202	11203	LS	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS	LS	LS		LS	LS	LS		4
202	22900	220	221	SY	APPROACH SLAB REMOVED				220				221	
202	23500	931	929	SY	WEARING COURSE REMOVED			931				929		
503	11101	LS	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN		LS			LS	LS			4, 12
503	21300	LS	LS	LS	UNCLASSIFIED EXCAVATION	LS	LS			LS	LS			
505	11100	LS	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION	LS	LS			LS	LS			
507	00500	2,310	1,750	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1,260	1,050			1,120	630			
507	00550	2,715	2,045	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1,440	1,275			1,280	765			
509	10001	263,185	235,776	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	13,294	40,530	209,361		12,095	29,403	194,278		4
509	20001	500	500	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	500				500				4
510	10000	226	226	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	226				226				
511	32212	1,151	1,072	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE			1,151				1,072		
511	41012	184	120	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		184				120			
511	43512	166	130	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	166				130				
511	46510	44	27	CY	CLASS QC1 CONCRETE, FOOTING		44				27			
512	10050	1,227	1,107	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	140	588	499		116	496	495		
512	33000	51	49	SY	TYPE 2 WATERPROOFING	51				49				
516	13600	17	17	SF	1" PREFORMED EXPANSION JOINT FILLER			17				17		
516	13900	93	105	SF	2" PREFORMED EXPANSION JOINT FILLER	93				105				
516	14020	204	191	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	204				191				
516	43100	47	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (8" x 11" x 1.474")	47				46				
518	12500	0	6	EACH	SCUPPER, MISC.: CONCRETE SLAB BRIDGE SCUPPER							6		74, 75
518	21200	151	121	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	151				121				
518	40000	215	218	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	215				218				
518	40011	40	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	40				40				24
519	11101	19	88	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		19				88			4
523	20000	3	3	EACH	DYNAMIC LOAD TESTING	1	2			1	2			
526	25011	456	424	SY	REINFORCED CONCRETE APPROACH SLABSWITH QC/QA (T=15%), AS PER PLAN				456			424		67-72
526	90030	183	170	FT	TYPE C INSTALLATION				183			170		
* 601	20001	82	81	SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN		82				81			4
607	39900	341	344	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			341				344		
846	00110	77	72	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				77			72		

* - FOR INFORMATION ONLY. PAID FOR UNDER ROADWAY QUANTITIES.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

- | | | | | |
|--|---|--|---|-------------------------|
| ABUT. - ABUTMENT | I - INTERSTATE ROUTE | CIP - CAST-IN-PLACE | O/O - OUT TO OUT | EL. - ELEVATION |
| ADT - AVERAGE DAILY TRAFFIC | | C.J. - CONSTRUCTION JOINT | | EQ. - EQUAL |
| ADTT - AVERAGE DAILY TRUCK TRAFFIC | JT. - JOINT | CLR. - CLEARANCE | P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE | EXIST./EX. - EXISTING |
| APPROX. - APPROXIMATE | | CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS | P.E.J.F. - PREFORMED EXPANSION JOINT FILLER | F.A. - FORWARD ABUTMENT |
| ASTM - AMERICAN SOCIETY OF TESTING AND MATERIALS | LT. - LEFT | CONST. - CONSTRUCTION | | F.F. - FRONT FACE |
| B.F. - BACK FACE | MAX. - MAXIMUM | DIA./φ - DIAMETER | R.A. - REAR ABUTMENT | F/F - FACE TO FACE |
| BOT. - BOTTOM | MIN. - MINIMUM | DWG. - DRAWING | RT. - RIGHT | FTG. - FOOTING |
| BRGS. - BEARINGS | MOT - MAINTENANCE OF TRAFFIC | | | FT/FT - FOOT PER FOOT |
| | | | | FWD. - FORWARD |
| | NB - NORTHBOUND | E.F. - EACH FACE | SB - SOUTHBOUND | |
| Ⓢ - CENTERLINE | N.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE | E/P - EDGE OF PAVEMENT | S.O. - SERIES OF | |
| C/C - CENTER TO CENTER | | E/S - EDGE OF SHOULDER | SPA. - SPACES OR SPACING | |

- | |
|---------------------------------|
| STA. - STATION |
| STD. - STANDARD |
| STR. - STRAIGHT |
| TEMP. - TEMPORARY |
| T/T - TOE TO TOE |
| TYP. - TYPICAL |
| U.N.O. - UNLESS NOTED OTHERWISE |
| VERT. - VERTICAL |

DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DESIGNED: CMH
 CHECKED: ALM

DRAWN: CMH
 REVISED:

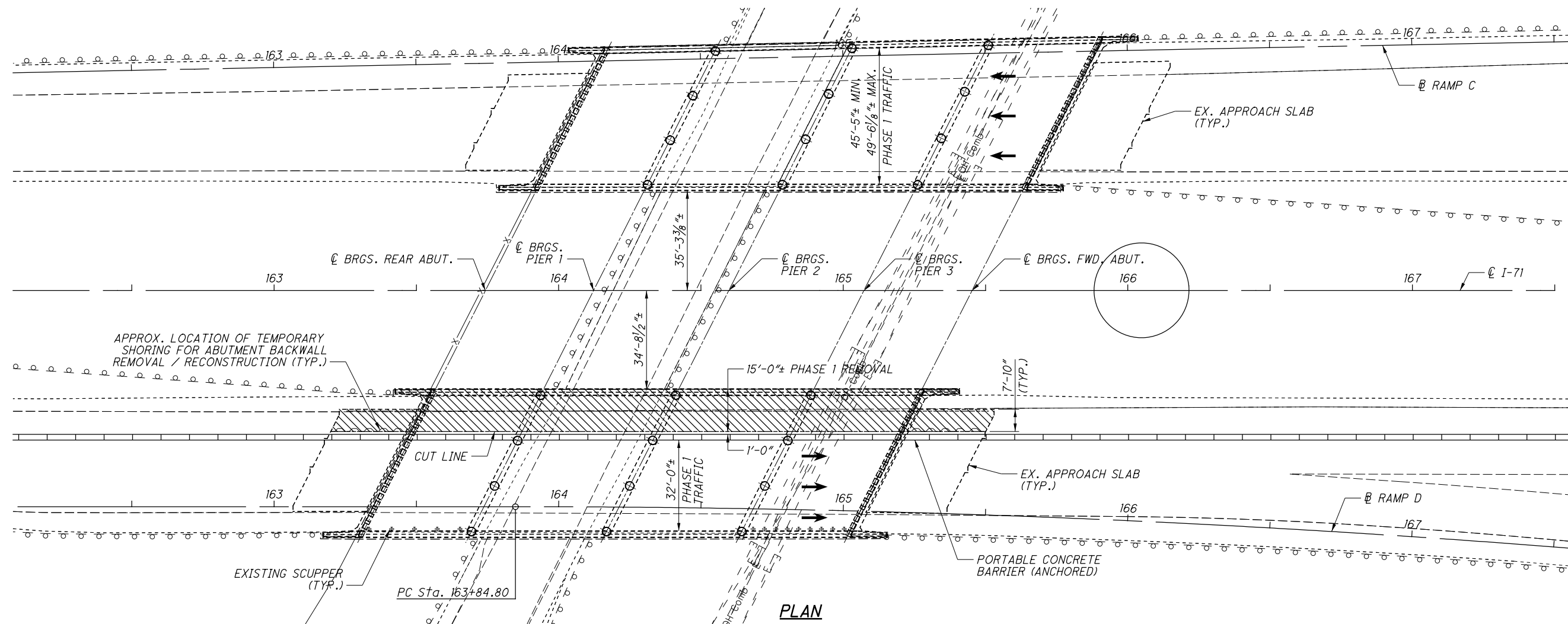
REVIEWED: KVB
 DATE: 11/18/2016
 STRUCTURE FILE NUMBER: 2506963L/2506969R

ESTIMATED QUANTITIES
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

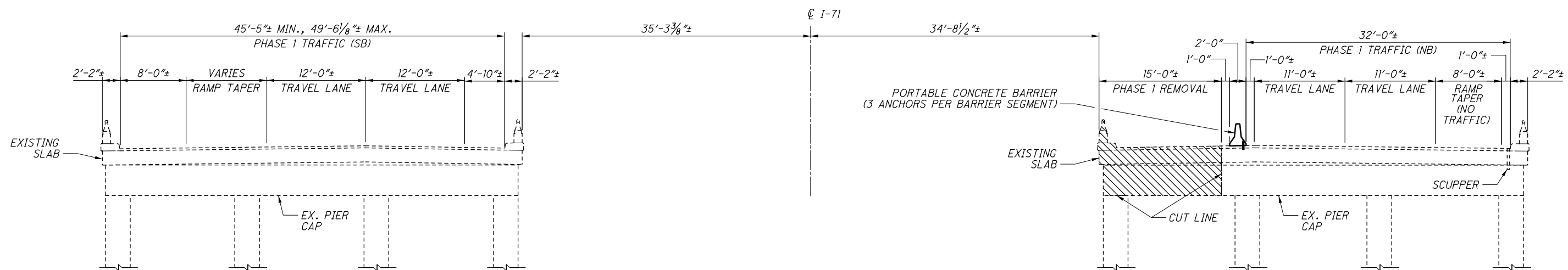
FRA-71-0.00
 PID No. 107201

5 / 80

1198
 1312



PLAN



PHASE 1 TRAFFIC & REMOVAL

NOTES:

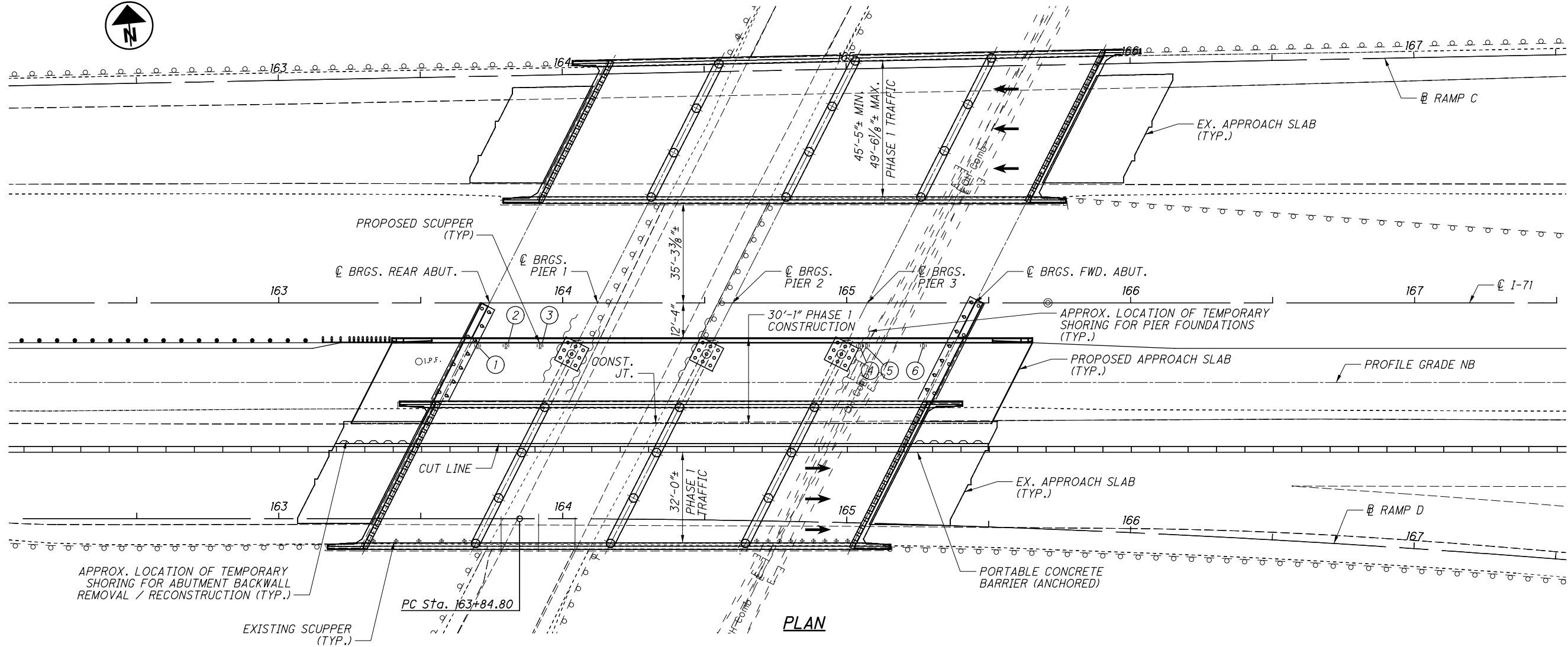
1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 12/80.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 AND PIER 3 ARE SIMILAR.

LEGEND:

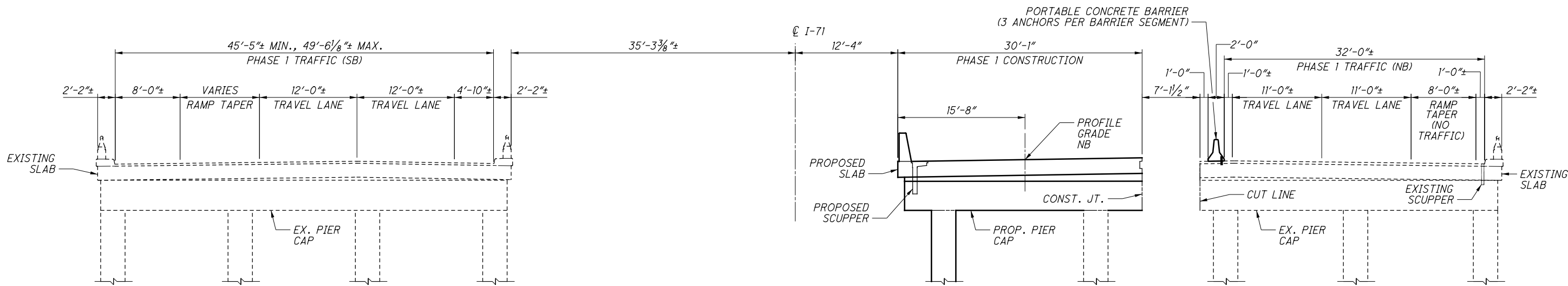
- PORTION OF STRUCTURE TO BE REMOVED

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DESIGN AGENCY Mead & Hunt	DATE 8/9/2016	DESIGNED BY RLC	PHASE CONSTRUCTION DETAILS
4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	REVIEWED BY MAB	CHECKED BY LYH/KVB	BRIDGE NO. FRA-71-0308 L/R
STRUCTURE FILE NUMBER 25069631/2506998R	DRAWN BY DJC	REVISIONS	OVER US ROUTE 62
			FRA-71-0.00
			PID No. 107201
			6/80
			1199 1312



PLAN

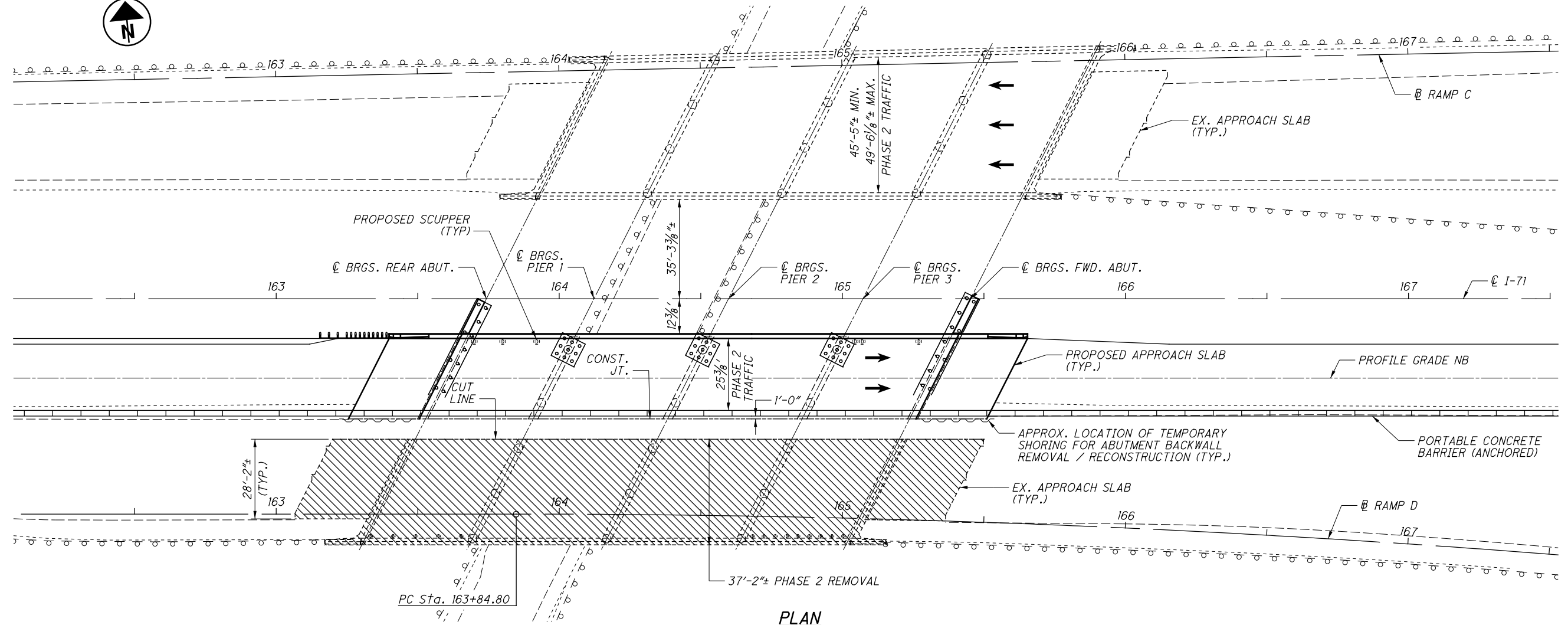


PHASE 1 TRAFFIC & CONSTRUCTION

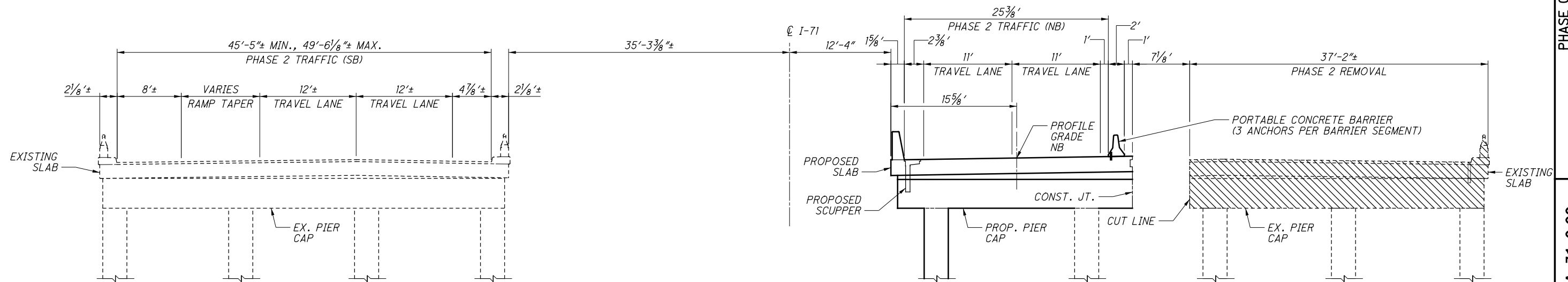
- NOTES:**
1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 12/80.
 2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 AND PIER 3 ARE SIMILAR.
 3. FOR PROPOSED SCUPPER DETAIL, SEE SHEET 74/80 AND 75/80.
 4. FOR PROPOSED SCUPPER LOCATIONS, SEE SHEET 3/80.

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DESIGNED RLC LYH/KVB	CHECKED LYH/KVB	DRAWN DJC REVISED	REVIEWED MAB STRUCTURE FILE NUMBER 25069631/2506998R	DATE 8/9/2016	DESIGN AGENCY 4700 LANEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-9900 PHONE
PHASE CONSTRUCTION DETAILS					
BRIDGE NO. FRA-71-0308 L/R					
OVER US ROUTE 62					
FRA-71-0.00					
PID No. 107201					
7 / 80					
<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 1200 1312 </div>					



PLAN



PHASE 2 TRAFFIC & REMOVAL

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 12/80.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 AND PIER 3 ARE SIMILAR.

LEGEND:

- PORTION OF STRUCTURE TO BE REMOVED

X:\4037000\21957.16\10720\structures\FRA071-0308C\sheets\071_0308CPC003.dgn Sheet 10/28/2019 11:52:29 AM 1458s.js

DESIGN AGENCY
Mead & Hunt
4700 LANEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

REVIEWED DATE 8/9/2016
MAB
STRUCTURE FILE NUMBER 2506963L/2506998R

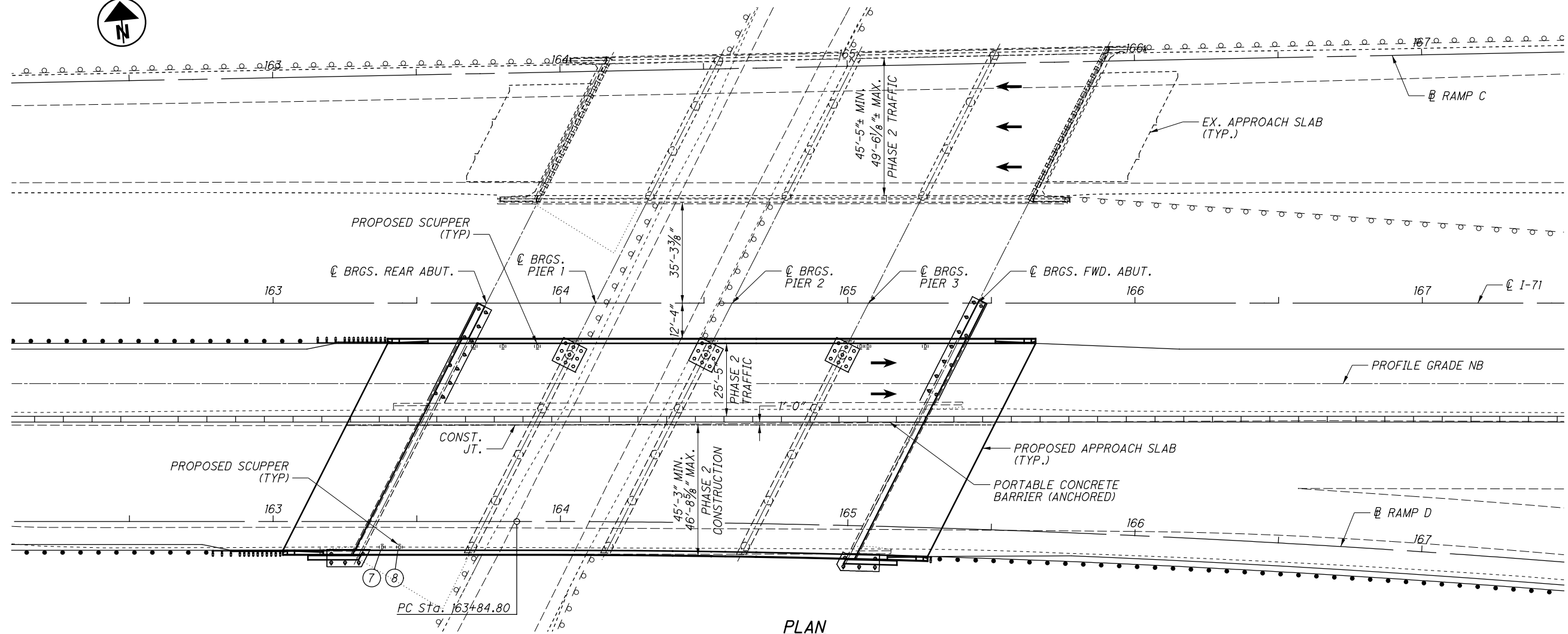
DRAWN DJC
CHECKED L Y H / K V B
REVISED

PHASE CONSTRUCTION DETAILS
BRIDGE NO. FRA-71-0308 L/R
OVER US ROUTE 62

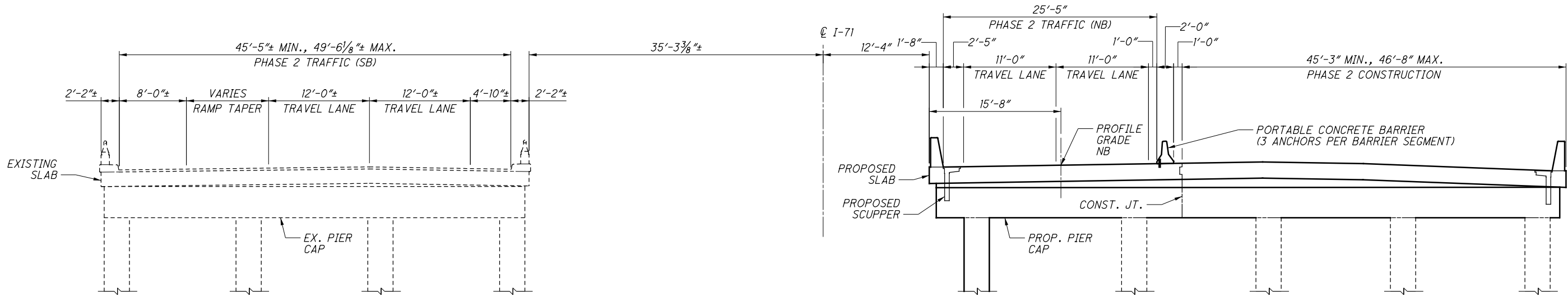
FRA-71-0.00
PID No. 107201

8 / 80

1201
1312



PLAN

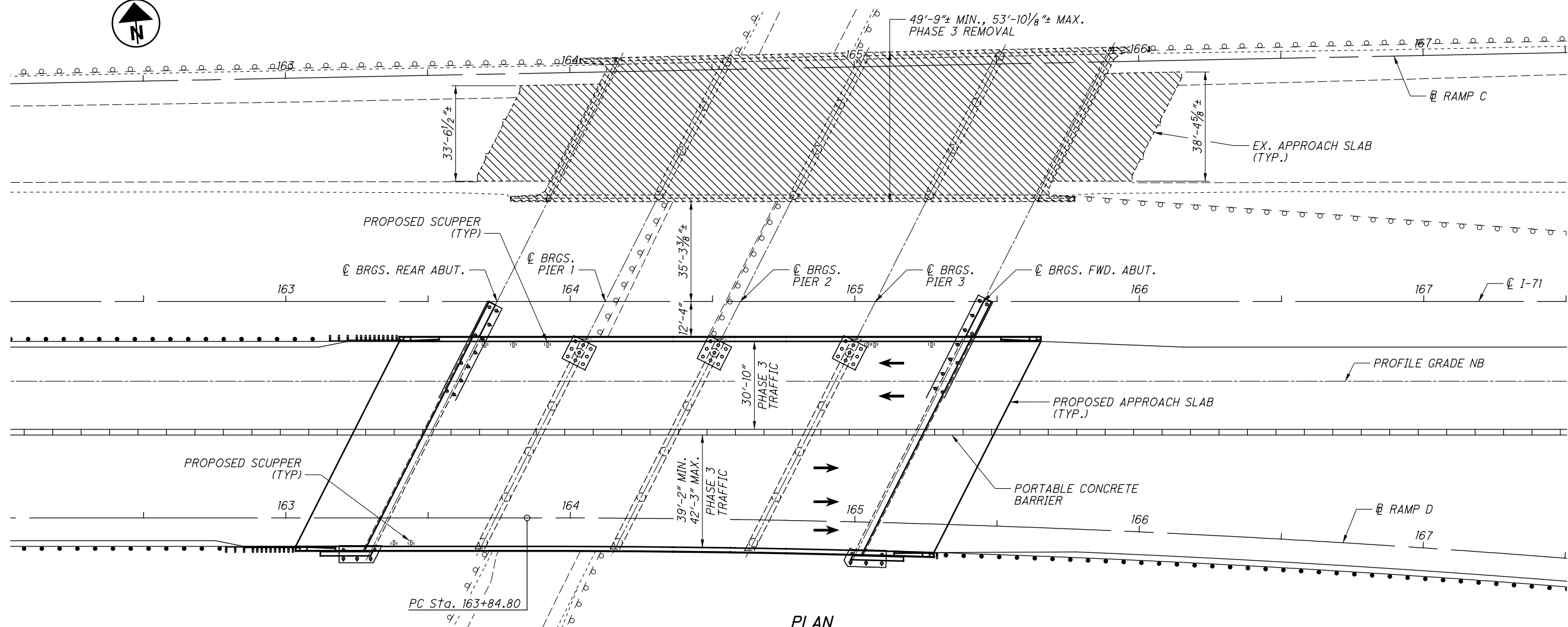


PHASE 2 TRAFFIC & CONSTRUCTION

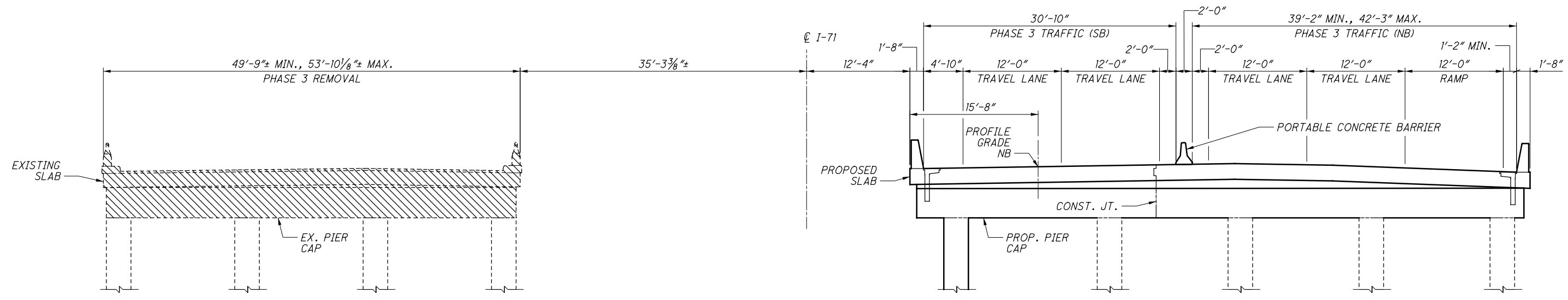
NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 12/80.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 AND PIER 3 ARE SIMILAR.
3. FOR PROPOSED SCUPPER DETAIL, SEE SHEET 74/80 AND 75/80.
4. FOR PROPOSED SCUPPER LOCATIONS, SEE SHEET 3/80.

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PLAN



PHASE 3 TRAFFIC & REMOVAL

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 12/80.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 AND PIER 3 ARE SIMILAR.

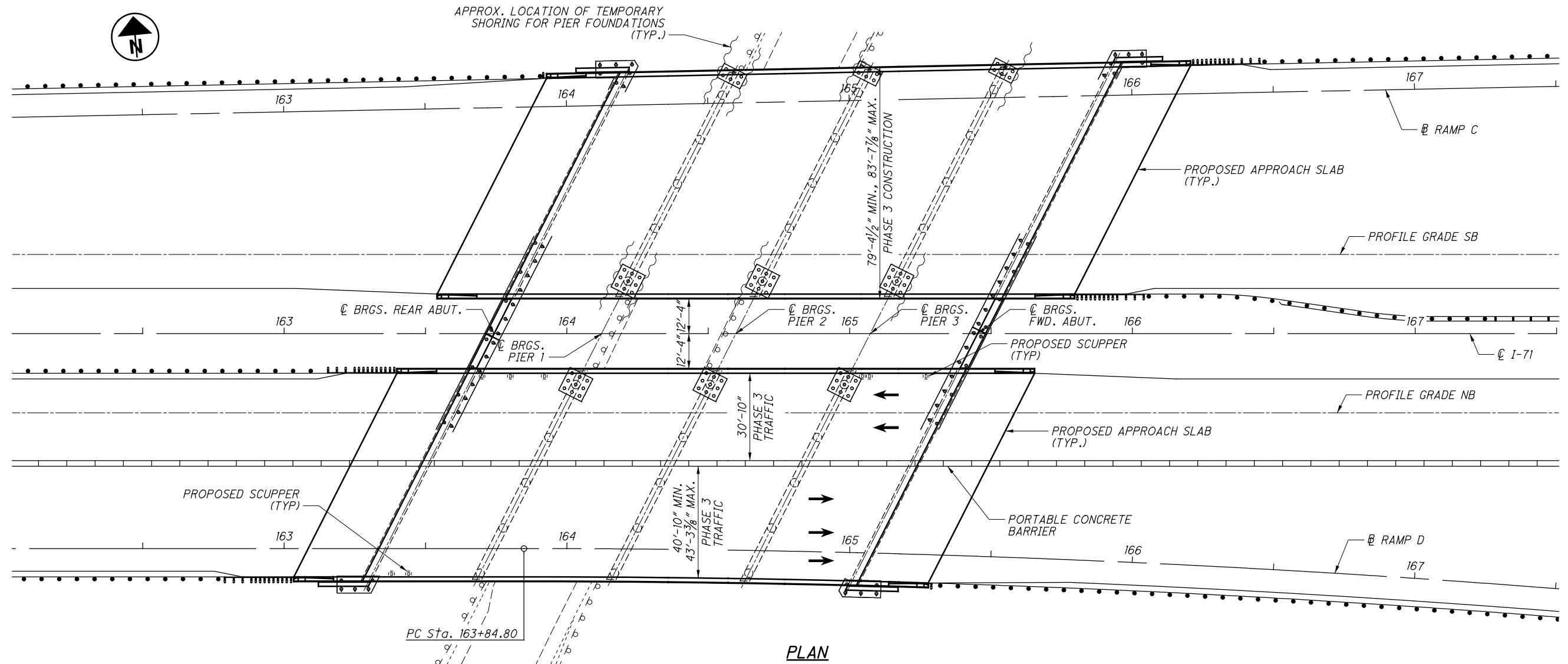
LEGEND:

- PORTION OF STRUCTURE TO BE REMOVED

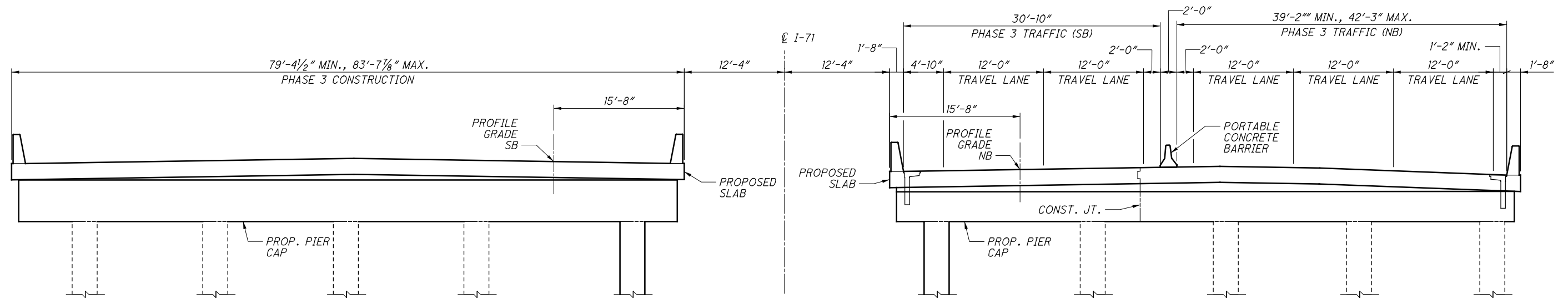
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	DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
DRAWN DJC REVISIONS	REVIEWED MAB STRUCTURE FILE NUMBER 2506963L/2506998R
DATE 8/9/2016	FILE NUMBER 2506963L/2506998R
PHASE CONSTRUCTION DETAILS BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00 PID No. 107201	
10 / 80	

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PLAN



PHASE 3 TRAFFIC & CONSTRUCTION

- NOTES:**
1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 12/80.
 2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE FOR PIER 1, PIER 2 AND PIER 3 ARE SIMILAR.

DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-9900 PHONE	DATE 8/9/2016
	REVIEWED MAB
DESIGNED RLC	STRUCTURE FILE NUMBER 25069631/2506998R
DRAWN DJC	REVISION
CHECKED LYH/KVB	OVER US ROUTE 62
PHASE CONSTRUCTION DETAILS BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00 PID No. 107201	
11 / 80	
1204 1312	

CONSTRUCTION SEQUENCE

PHASE 1 TRAFFIC & REMOVAL

1. INSTALL PORTABLE CONCRETE BARRIERS, CLEAN EXISTING SCUPPERS, AND MAINTAIN TRAFFIC ON NORTHBOUND BRIDGE AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING RUNOFF FROM THE BRIDGE ONTO US ROUTE 62
2. MAINTAIN TRAFFIC ON THE SOUTHBOUND BRIDGE AS SHOWN.
3. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB ON THE LEFT PORTION OF THE NORTHBOUND BRIDGE AS SHOWN.
4. REMOVE THE LEFT PORTION OF THE PIER CAPS OF THE NORTHBOUND BRIDGE.
5. REMOVE PORTIONS OF THE WINGWALLS AND ABUTMENTS ON THE LEFT PORTION OF THE NORTHBOUND BRIDGE (SEE ABUTMENT SHEET 14/80 & 15/80).

PHASE 1 TRAFFIC & CONSTRUCTION:

1. CONSTRUCT LEFT PORTION OF THE NORTHBOUND BRIDGE FORWARD AND REAR ABUTMENT SEAT EXTENSIONS, BACKWALLS, AND WINGWALLS.
2. INSTALL PILES, CONSTRUCT FOOTING, COLUMNS AND PIER CAP ON PIERS 1, 2, AND 3 FOR THE NORTHBOUND BRIDGE.
3. CONSTRUCT DECK SLAB (INCLUDING INSTALLATION OF PROPOSED SCUPPERS), PARAPET, AND APPROACH SLAB OF THE LEFT PORTION OF THE NORTHBOUND BRIDGE.

PHASE 2 TRAFFIC & REMOVAL:

1. RELOCATE PORTABLE CONCRETE BARRIERS AS SHOWN AND MAINTAIN TRAFFIC ON NORTHBOUND BRIDGE.
2. MAINTAIN TRAFFIC ON THE SOUTHBOUND BRIDGE AS SHOWN.
3. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB ON THE RIGHT PORTION OF THE NORTHBOUND BRIDGE AS SHOWN.
4. REMOVE PORTIONS OF THE WINGWALLS AND ABUTMENTS ON THE RIGHT OF THE NORTHBOUND BRIDGE (SEE ABUTMENT SHEETS 14/80 & 15/80).

PHASE 2 TRAFFIC & CONSTRUCTION:

1. CONSTRUCT RIGHT PORTION OF THE FORWARD AND REAR ABUTMENT SEAT EXTENSIONS, BACKWALLS, AND WINGWALLS.
2. CONSTRUCT RIGHT PORTION OF THE NORTHBOUND BRIDGE PIER CAP ON PIERS 1, 2, AND 3.
3. CONSTRUCT NORTHBOUND BRIDGE DECK SLAB (INCLUDING INSTALLATION OF PROPOSED SCUPPERS), PARAPET, AND APPROACH SLAB OF THE RIGHT PORTION OF THE NORTHBOUND BRIDGE.
4. COMPLETE SLOPE PROTECTION OF THE NORTHBOUND BRIDGE.

PHASE 3 TRAFFIC & REMOVAL:

1. RELOCATE PCB AS SHOWN AND MAINTAIN BOTH SOUTHBOUND AND AND NORTHBOUND TRAFFIC ON NORTHBOUND BRIDGE
2. AFTER REMOVING PCB FROM PHASE 2 NEW DECK, REPAIR ANCHOR HOLES WITH GROUT PER CMS 705.20. PAYMENT SHALL BE INCLUDED WITH ITEM 614, MAINTENANCE OF TRAFFIC.
3. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB OF THE SOUTHBOUND BRIDGE AS SHOWN.
4. REMOVE PORTIONS OF THE WINGWALLS AND ABUTMENTS OF THE SOUTHBOUND BRIDGE (SEE ABUTMENT SHEETS 13/80 & 15/80).

PHASE 3 TRAFFIC & CONSTRUCTION:

1. CONSTRUCT THE SOUTHBOUND BRIDGE FORWARD AND REAR ABUTMENT SEAT VERTICAL EXTENSIONS, AND WINGWALLS.
2. INSTALL PILES, CONSTRUCT PIER FOOTINGS, COLUMNS AND CAPS FOR PIERS 1, 2, AND 3.
3. CONSTRUCT DECK SLAB, PARAPET, AND APPROACH SLAB OF THE SOUTHBOUND BRIDGE.
4. COMPLETE SLOPE PROTECTION OF THE SOUTHBOUND BRIDGE.

NOTES:

1. PORTABLE CONCRETE BARRIER IS CARRIED IN THE ROADWAY PLANS FOR PAYMENT.
2. FOR MAINTENANCE OF TRAFFIC DETAILS, SEE ROADWAY PLANS.
3. FOR ADDITIONAL PORTABLE CONCRETE BARRIER DETAILS, SEE STANDARD DRAWING PCB-I-91.
4. FOR ABUTMENT REMOVAL DETAILS, SEE SHEETS 13/80 TO 15/80.
5. TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE APPROXIMATE LIMITS OF SHORING AND THE SEQUENCE OF INSTALLATION ARE SHOWN ON SHEET 6/80. ALL SHEET PILING FOR ABUTMENT REMOVAL SHALL HAVE A MINIMUM SECTION MODULUS OF 15.7 INCH CUBED PER LINEAR FEET OF WALL. THE TOP ELEVATION OF THE SHEETING IS 894.50 AND THE BOTTOM ELEVATION OF SHEETING SHALL BE 864.00. IN ADDITION, TEMPORARY SHORING SHALL BE USED TO CONSTRUCT THE PROPOSED PIER FOUNDATIONS. THE APPROXIMATE LOCATIONS OF TEMPORARY SHORING ARE SHOWN ON SHEETS 6/80 TO 10/80. ALL SHEET PILING FOR PIER FOUNDATION CONSTRUCTION SHALL HAVE A MINIMUM SECTION MODULUS OF 15.7 INCH CUBED PER LINEAR FEET OF WALL. THE TOP ELEVATION OF THE SHEETING SHALL BE 879.00 AND THE BOTTOM ELEVATION SHALL BE 850.00.
6. FOR PROPOSED SCUPPER DETAIL, SEE SHEET 74/80 AND 75/80.

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DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-9900 PHONE

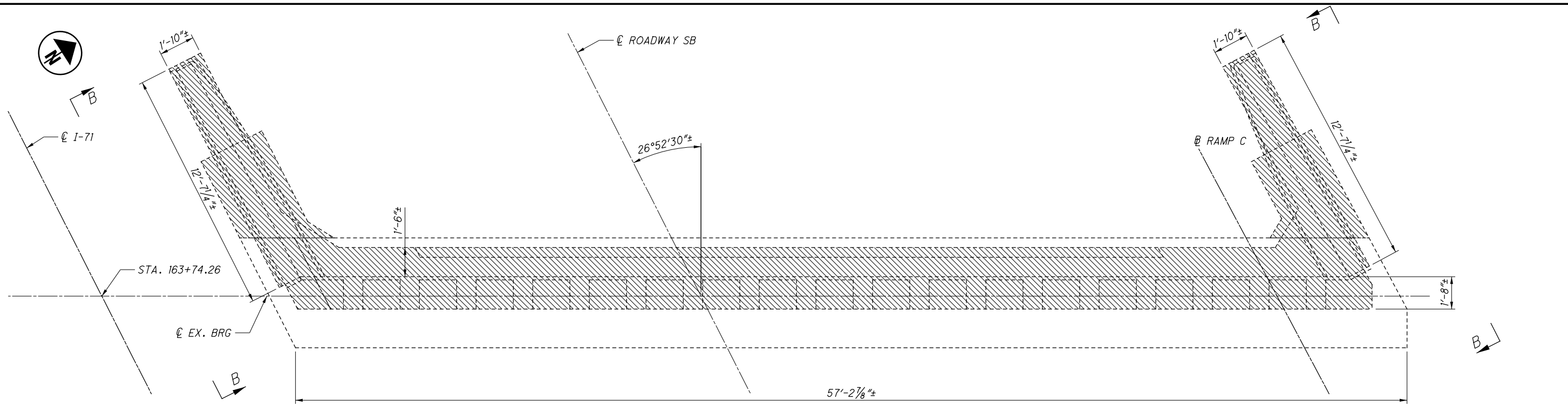
REVIEWED	DATE	STRUCTURE FILE NUMBER
MAB	8/9/2016	25069631/2506998R
DRAWN	DJC	REVISED
RLC	LYH/KVB	

PHASE CONSTRUCTION DETAILS
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

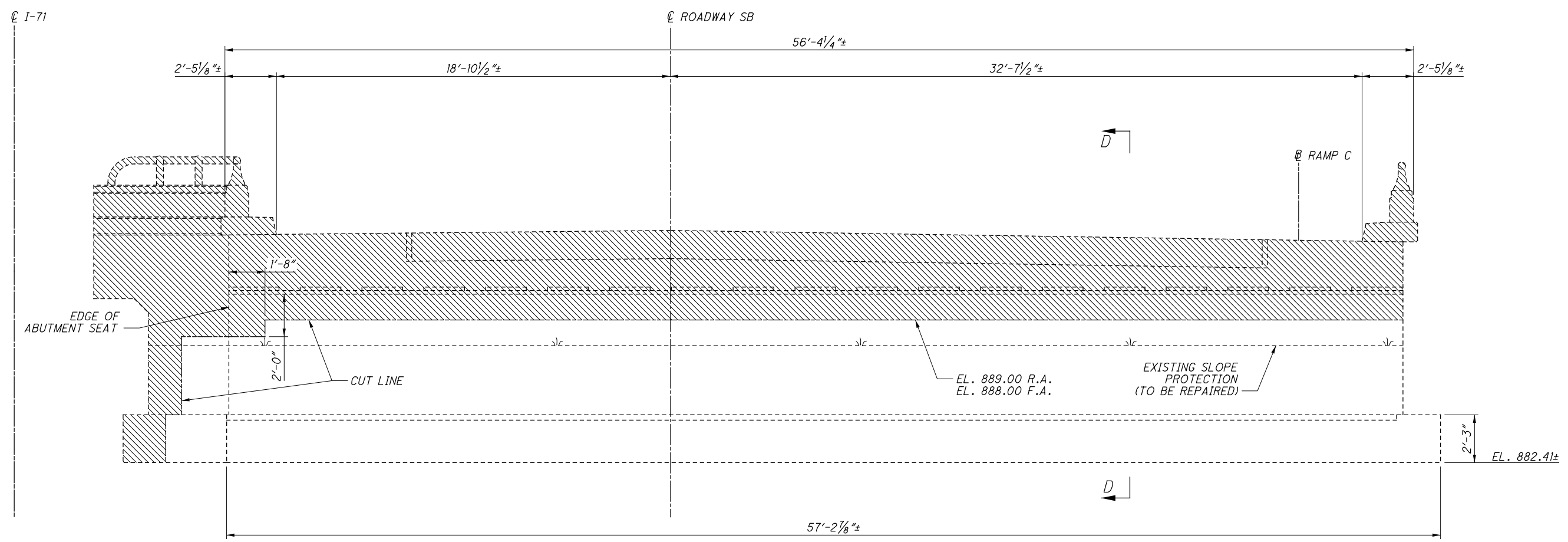
FRA-71-0.00
 PID No. 107201

12 / 80
 1205
 1312

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REAR ABUTMENT PLAN - SOUTHBOUND
(FORWARD ABUTMENT SIMILAR)



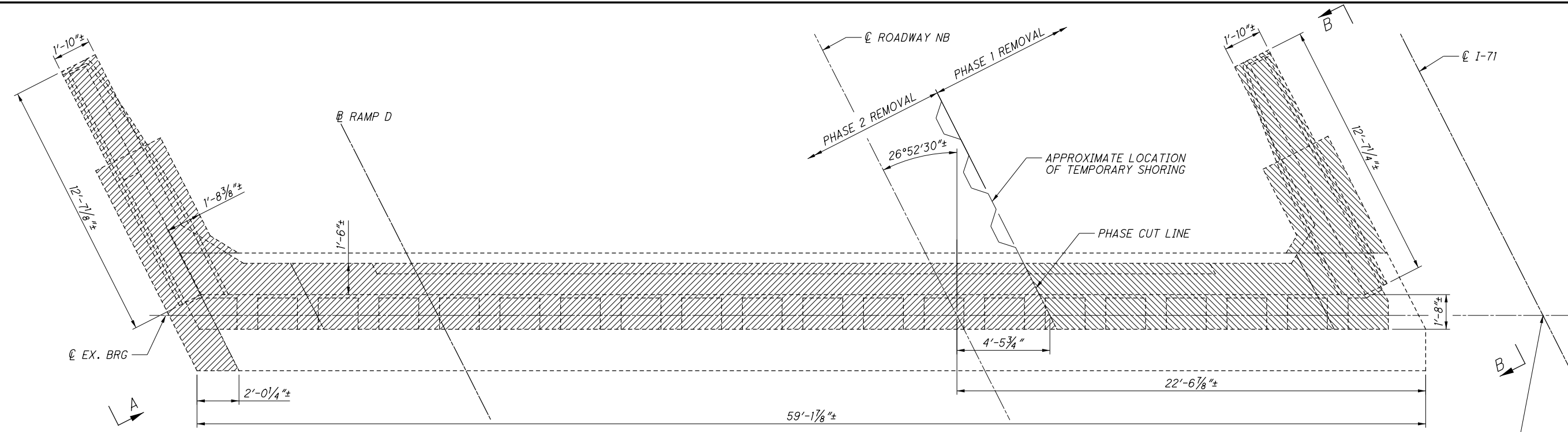
REAR ABUTMENT ELEVATION - SOUTHBOUND
(FORWARD ABUTMENT SIMILAR)

NOTE:
1. FOR SECTIONS, SEE SHEET 15/80.

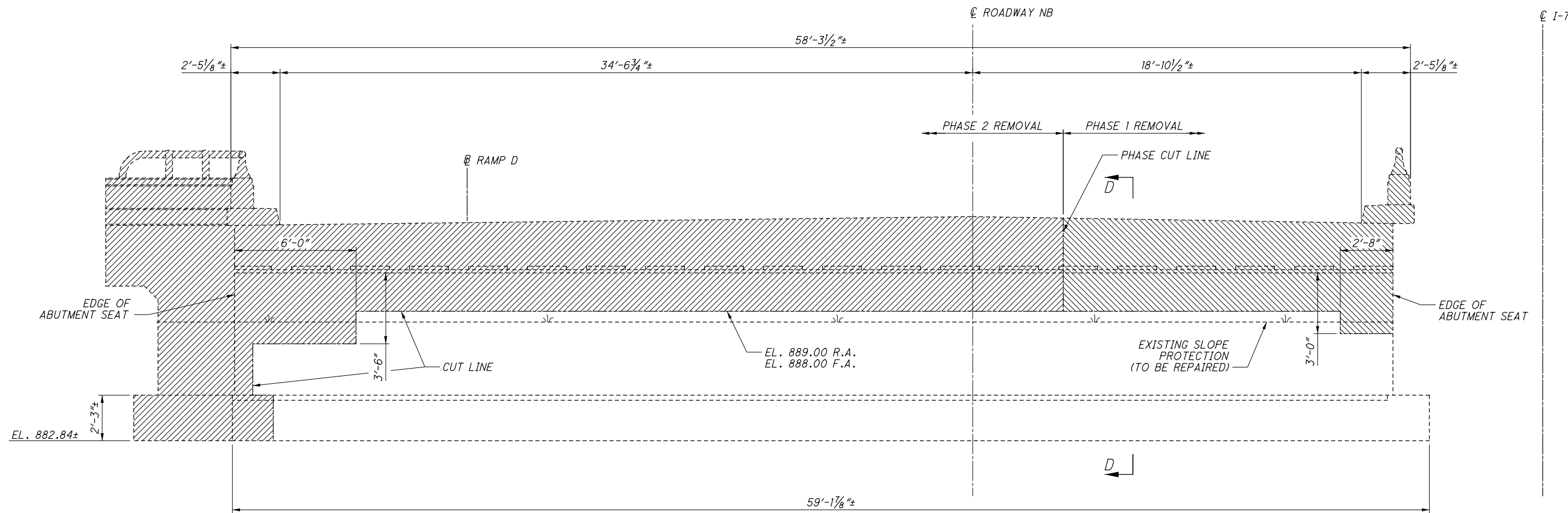
LEGEND:
 - PORTIONS TO BE REMOVED IN PHASE 3.

DESIGN AGENCY Mead & Hunt	
DESIGNED LYH	DATE 8/9/2016
DRAWN DJC	REVIEWED MAB
CHECKED KVB	STRUCTURE FILE NUMBER 25069631/2506998R
REAR ABUTMENT REMOVAL DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00 PID No. 107201	
13 / 80	
 	

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REAR ABUTMENT PLAN - NORTHBOUND
(FORWARD ABUTMENT SIMILAR)



REAR ABUTMENT ELEVATION - NORTHBOUND
(FORWARD ABUTMENT SIMILAR)

NOTE:

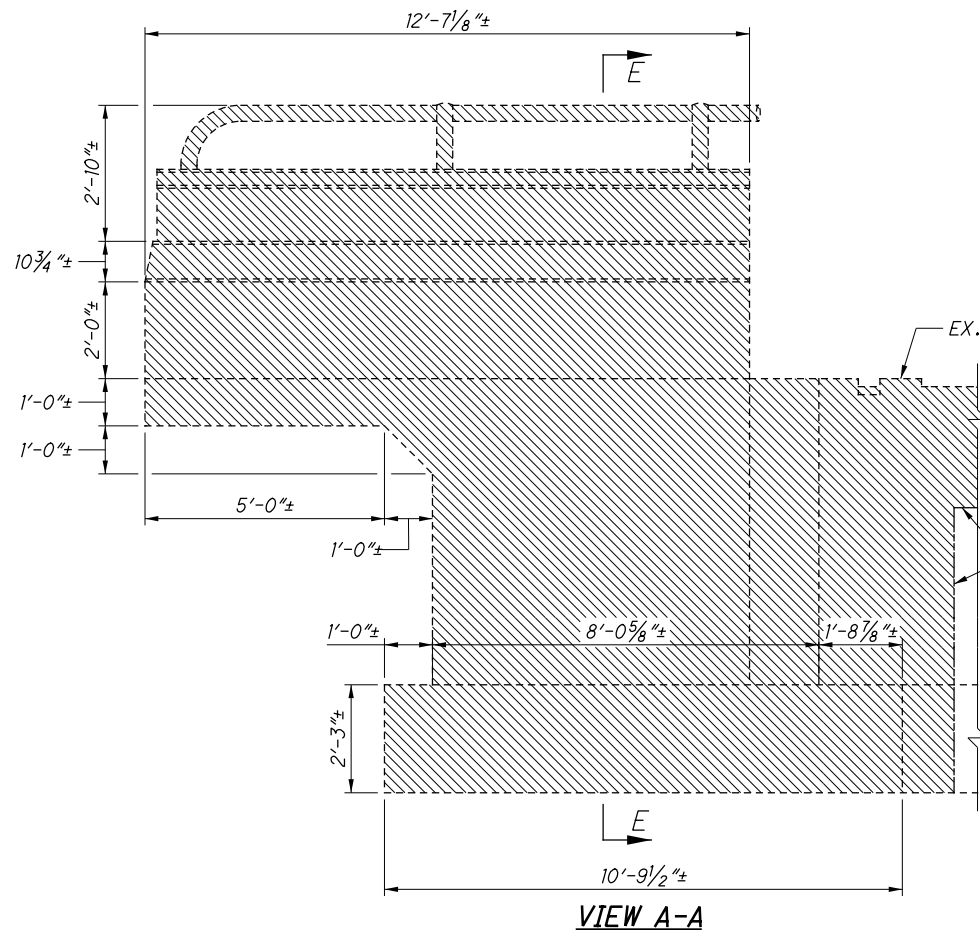
1. FOR SECTIONS, SEE SHEET 15/80.

LEGEND:

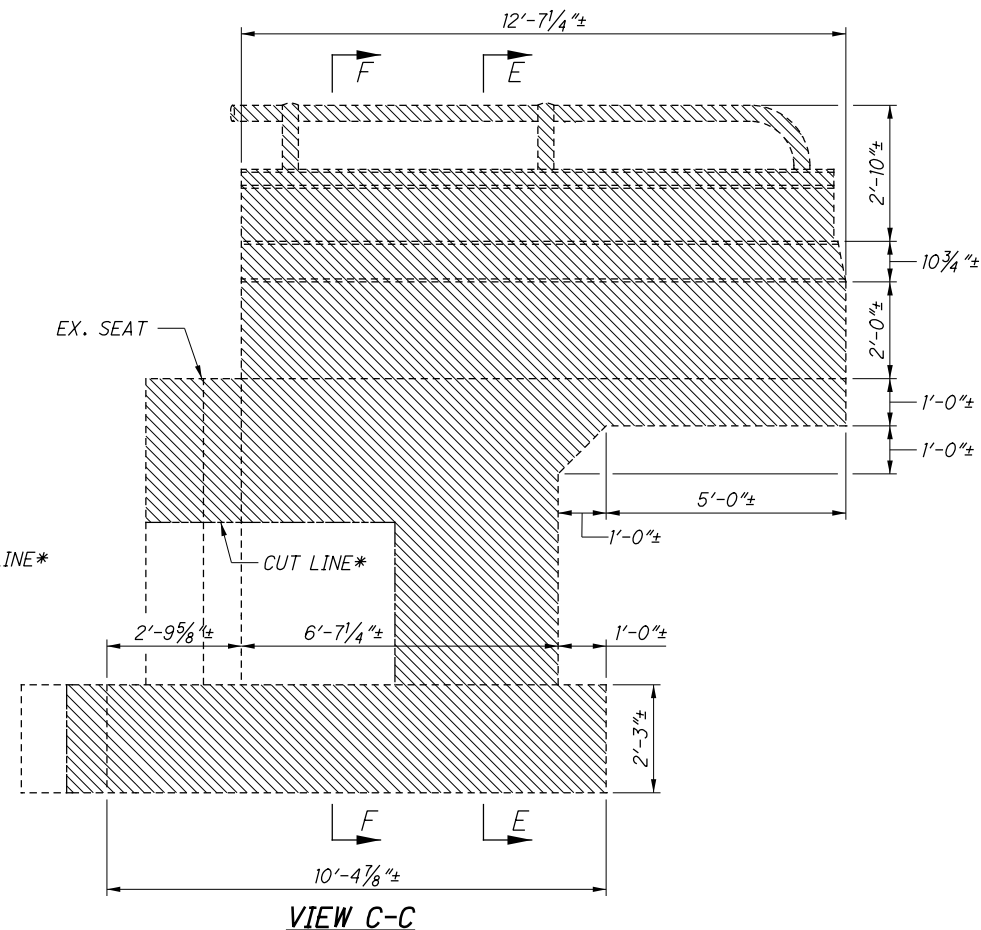
- PORTIONS TO BE REMOVED PHASE 1.
- PORTIONS TO BE REMOVED PHASE 2.

	DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
DRAWN D/JC CHECKED K/VB	REVIEWED MAB DATE 8/9/2016 STRUCTURE FILE NUMBER 25069631/2506998R
FRA-71-0.00 BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
REAR ABUTMENT REMOVAL DETAILS - NORTHBOUND BRIDGE	
14 / 80	1207 1312

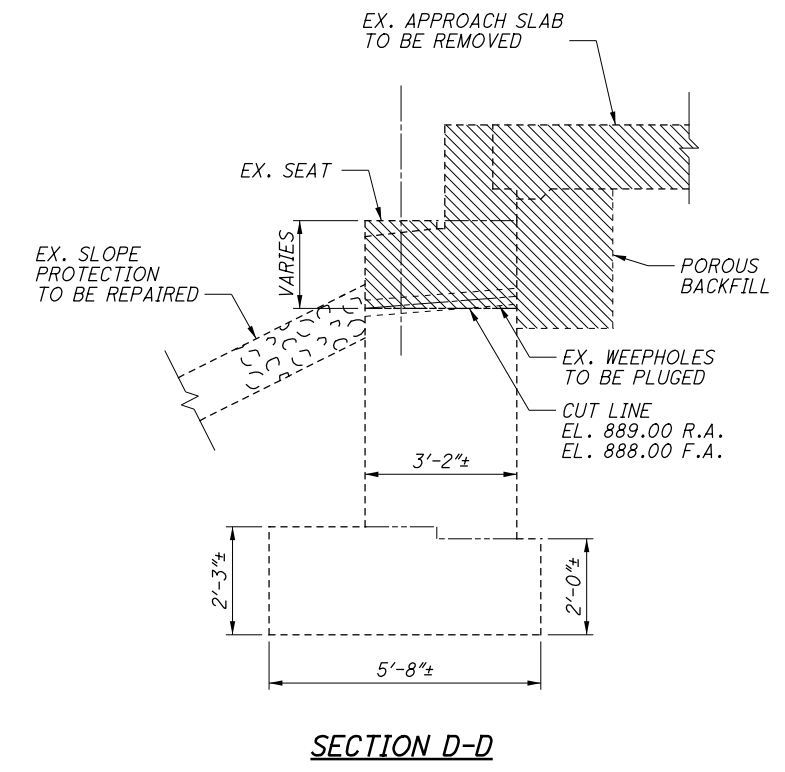
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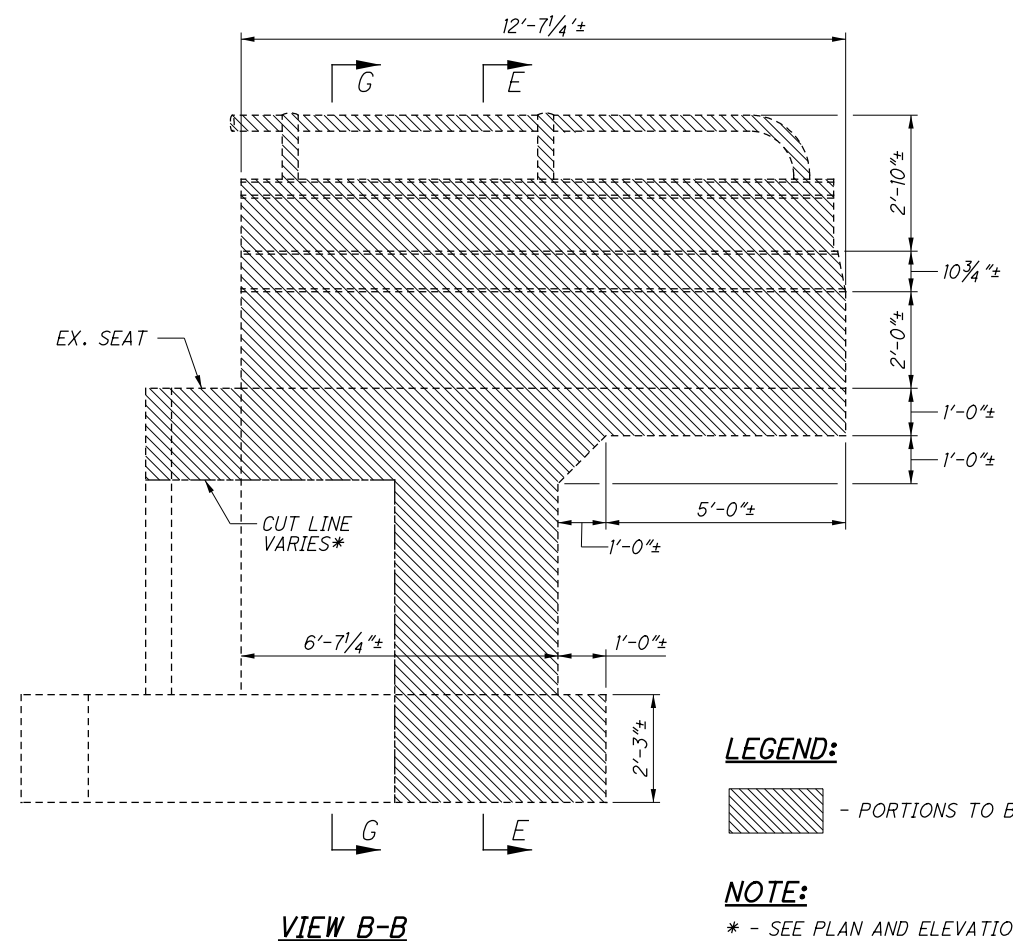
VIEW A-A



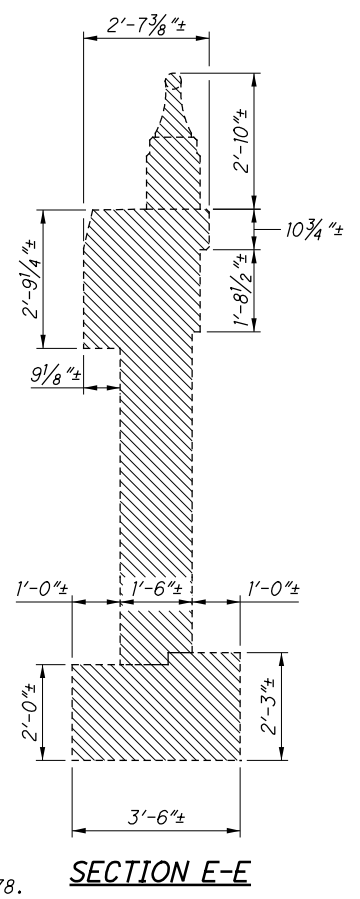
VIEW C-C



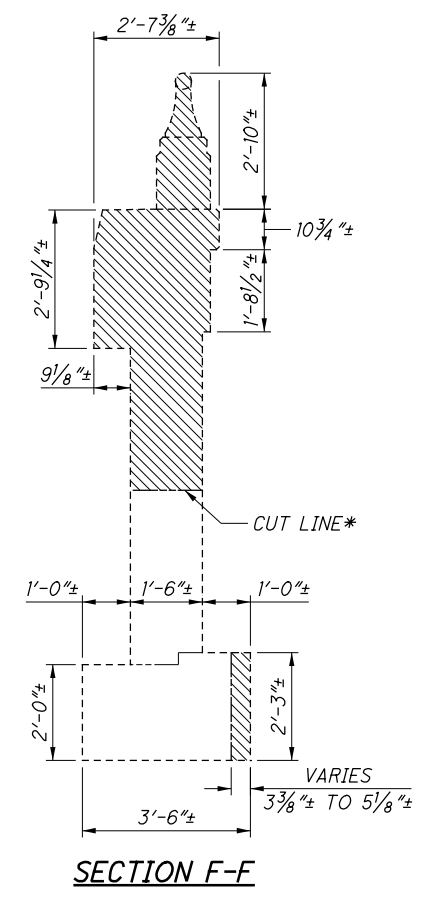
SECTION D-D



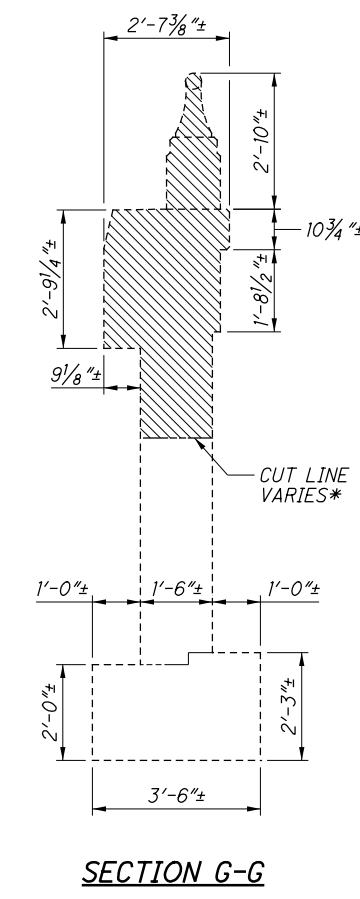
VIEW B-B



SECTION E-E



SECTION F-F

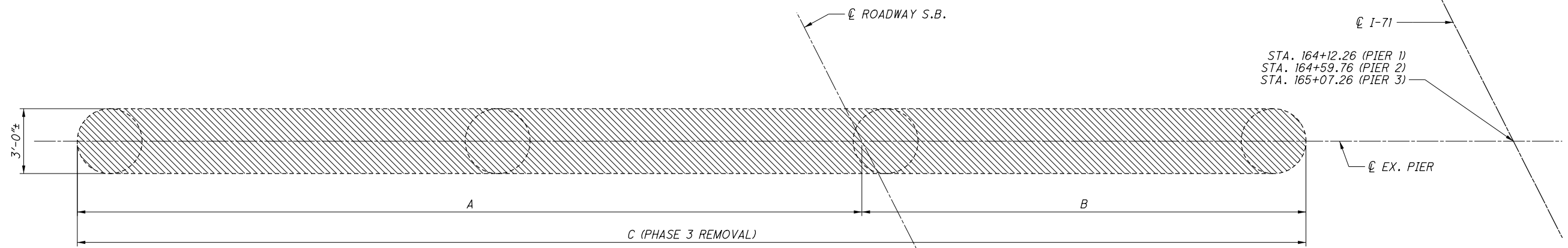


SECTION G-G

LEGEND:
 - PORTIONS TO BE REMOVED

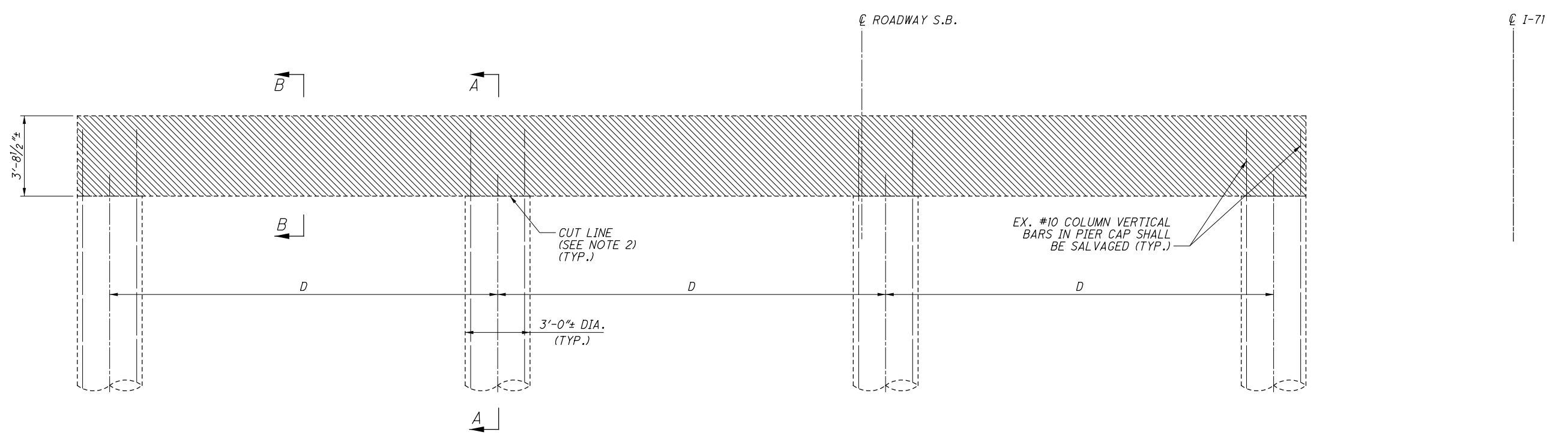
NOTE:
 * - SEE PLAN AND ELEVATION SHEETS, 13/78 AND 14/78.

Mead & Hunt		DESIGN AGENCY 4700 LANESBURT CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
DATE 8/9/2016	REVIEWED KVB	STRUCTURE FILE NUMBER 25069631/2506998R
DRAWN DJC	CHECKED MAB	DESIGNED LYH
ABUTMENT REMOVAL DETAILS		
BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62		
PID No. 107201		
15 / 80		
1208 1312		



TYPICAL PIER PLAN - SOUTHBOUND

LEGEND:
 - PORTIONS TO BE REMOVED



TYPICAL PIER ELEVATION - SOUTHBOUND

	A	B	C	D
PIER 1	35'-2 3/8"±	20'-6 5/8"±	55'-9"±	17'-7"±
PIER 2	36'-3 7/8"±	20'-6 5/8"±	56'-10 1/2"±	17'-11 1/2"±
PIER 3	37'-5 3/8"±	20'-6 5/8"±	58'-0"±	18'-4"±

- NOTES:**
- PIER CAP FOR SOUTHBOUND LANES SHALL BE REMOVED IN PHASE 3.
 - ALL VERTICAL REINFORCEMENT FROM COLUMN EXTENDING INTO THE PIER CAP SHALL BE SALVAGED.
 - FOR SECTIONS A-A AND B-B, SEE SHEET 18/80.

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DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT. STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DESIGNED LYH	DRAWN DJC	REVIEWED KVB	DATE 8/9/2016
CHECKED MAB	REVISED	STRUCTURE FILE NUMBER 2506963L/2506998R	

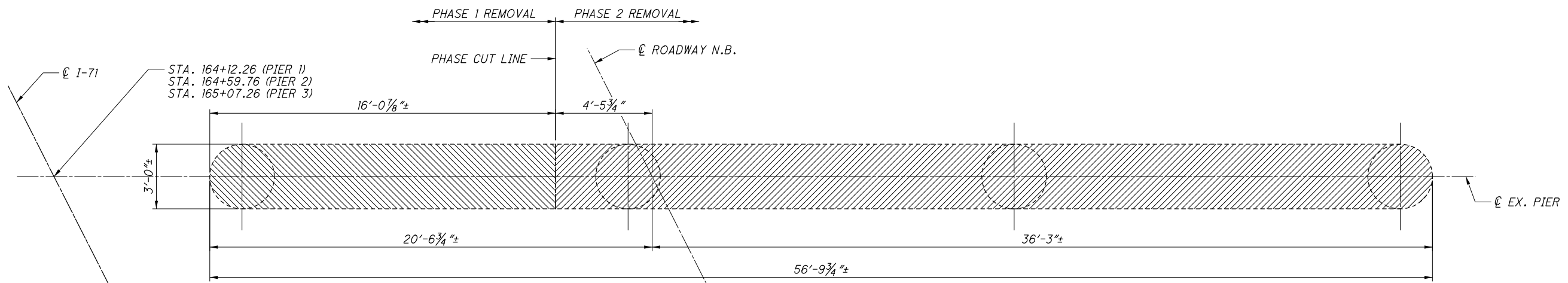
PIER REMOVAL DETAILS - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0.00
 PID No. 107201

16 / 80

1209
1312

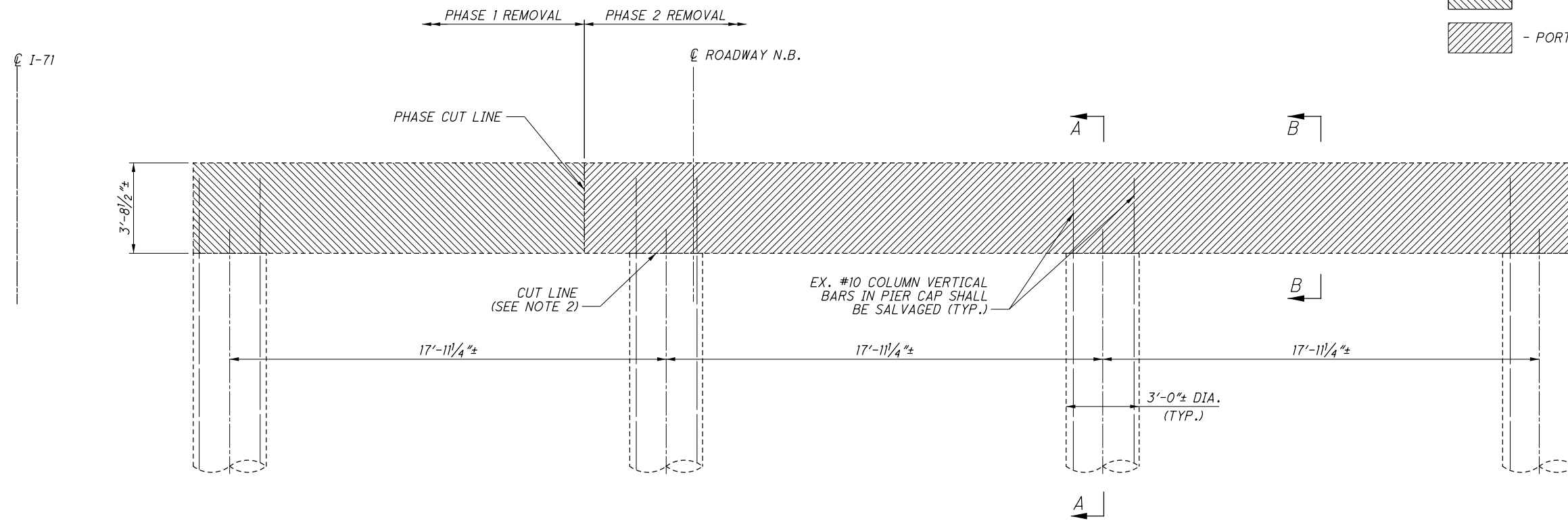
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TYPICAL PIER PLAN - NORTHBOUND

LEGEND:

- PORTIONS TO BE REMOVED IN PHASE 1
- PORTIONS TO BE REMOVED IN PHASE 2

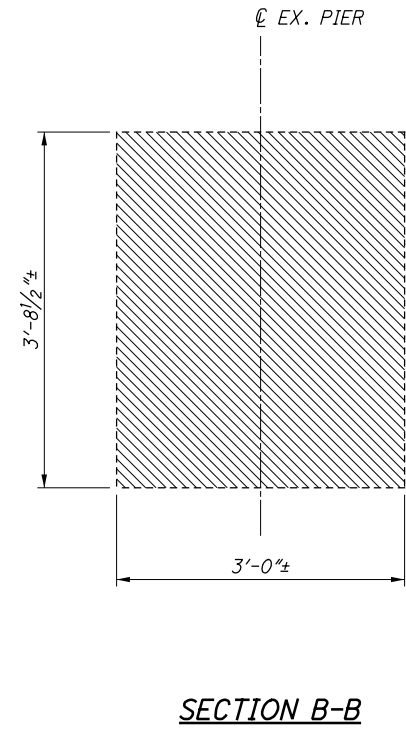
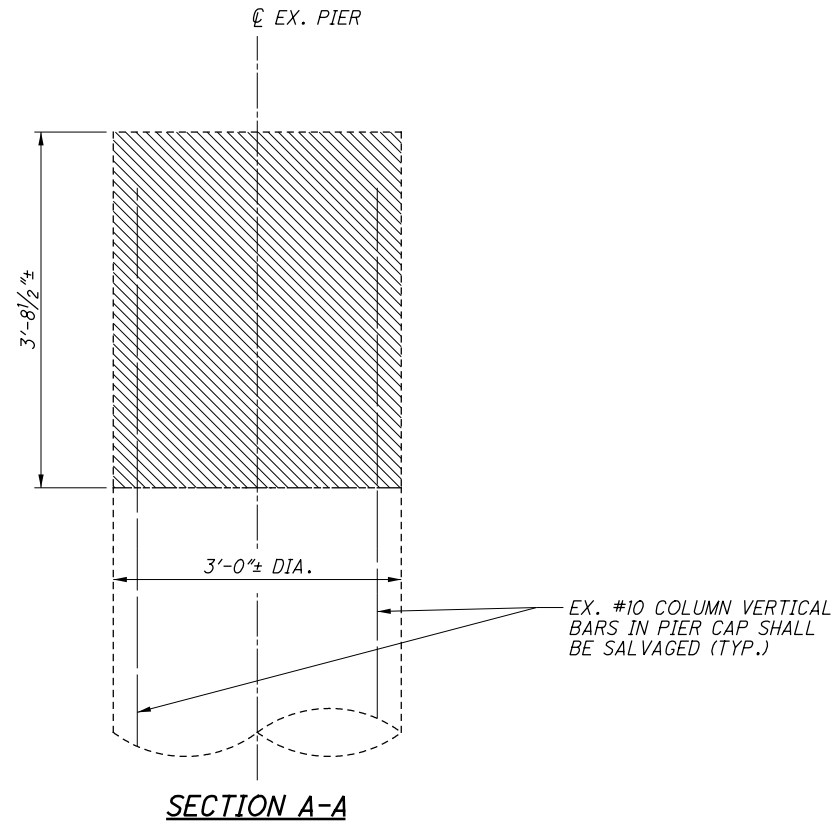


TYPICAL PIER ELEVATION - NORTHBOUND

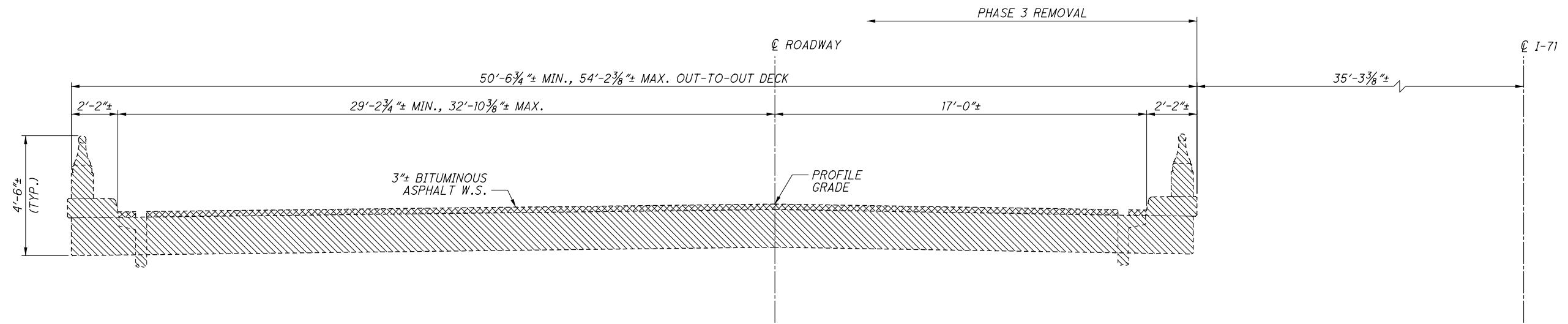
NOTES:

1. ALL VERTICAL REINFORCEMENT FROM COLUMN EXTENDING INTO THE PIER CAP SHALL BE SALVAGED.
2. FOR SECTIONS A-A AND B-B, SEE SHEET 18/80.

FRA-71-0.00 PID No. 107201	PIER REMOVAL DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	DATE 8/9/2016 REVIEWED KVB STRUCTURE FILE NUMBER 25069631/2506998R
DESIGNED LYH CHECKED MAB	DRAWN DJC REVISED	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	DATE 8/9/2016 REVIEWED KVB STRUCTURE FILE NUMBER 25069631/2506998R



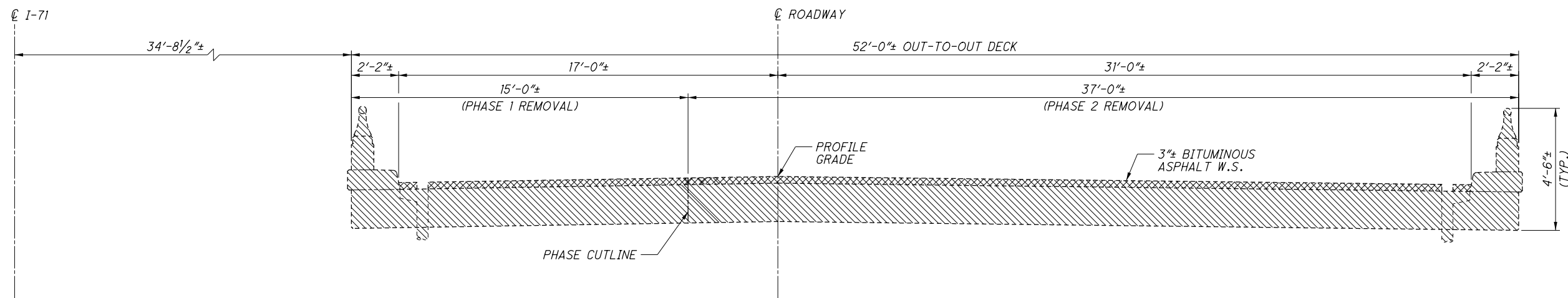
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EXISTING TRANSVERSE SECTION - SOUTHBOUND

NOTE:

1. FOR ADDITIONAL REMOVAL DETAILS, SEE PHASE CONSTRUCTION DETAILS ON SHEETS 6/80 THRU 12/80.



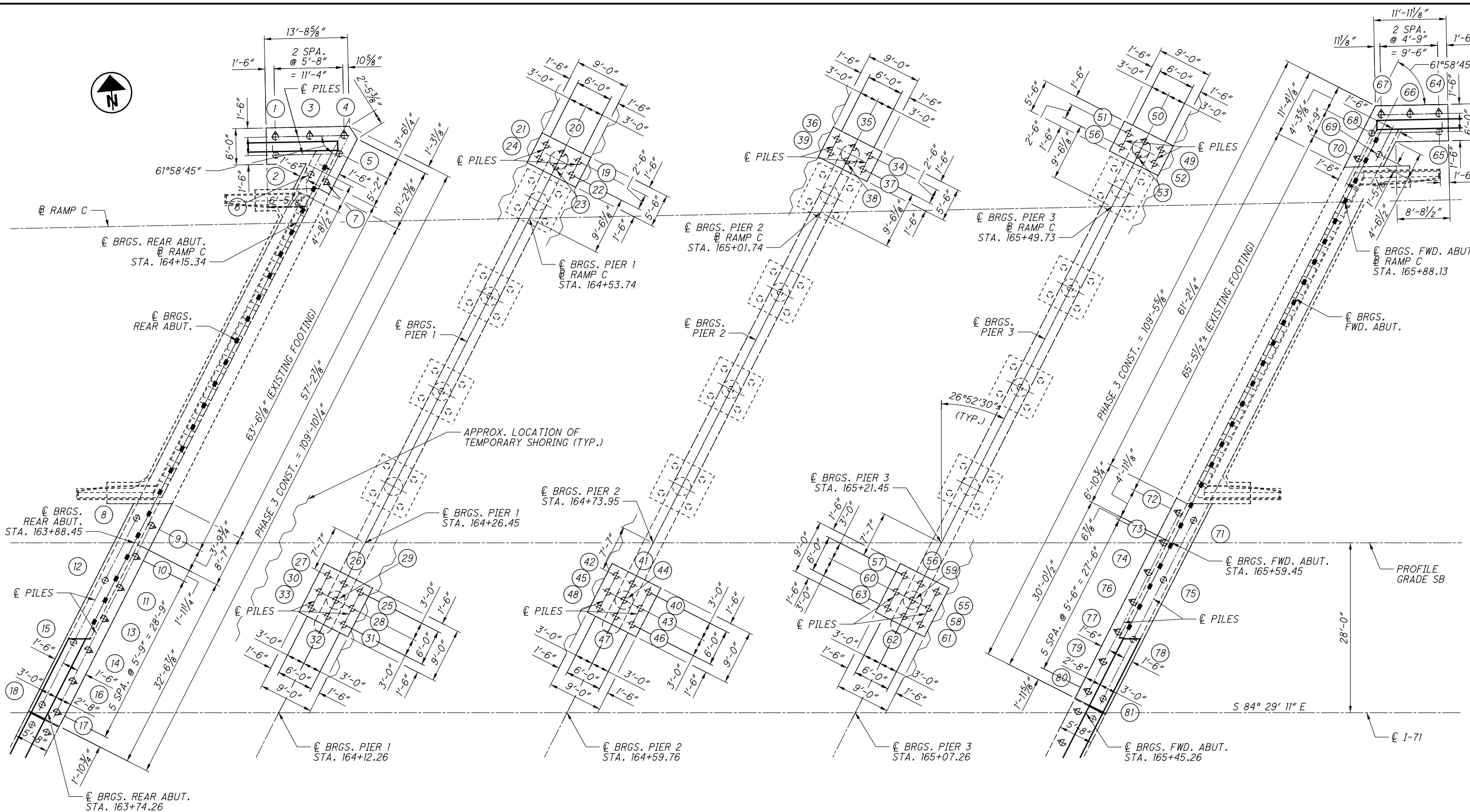
EXISTING TRANSVERSE SECTION - NORTHBOUND

LEGEND:

- PORTION OF STRUCTURE TO BE REMOVED
- BITUMINOUS ASPHALT WEARING SURFACE TO BE REMOVED (3")

FRA-71-0.00 PID No. 107201	SUPERSTRUCTURE REMOVAL DETAILS BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	DATE 8/9/2016 STRUCTURE FILE NUMBER 25069631/2506998R	REVIEWED KVB DRAWN DJC DESIGNED LYH CHECKED CMH
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REAR ABUTMENT - SOUTHBOUND

REAR ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
1-18	12" C.I.P.	883.41	35 FT.

PIER 1 - SOUTHBOUND

PIER 1 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
19-33	12" C.I.P.	868.59	25 FT.

PIER 2 - SOUTHBOUND

PIER 3 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
49-63	12" C.I.P.	868.09	25 FT.

PIER 3 - SOUTHBOUND

FORWARD ABUTMENT - SOUTHBOUND

FORWARD ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
64-81	12" C.I.P.	881.94	35 FT.

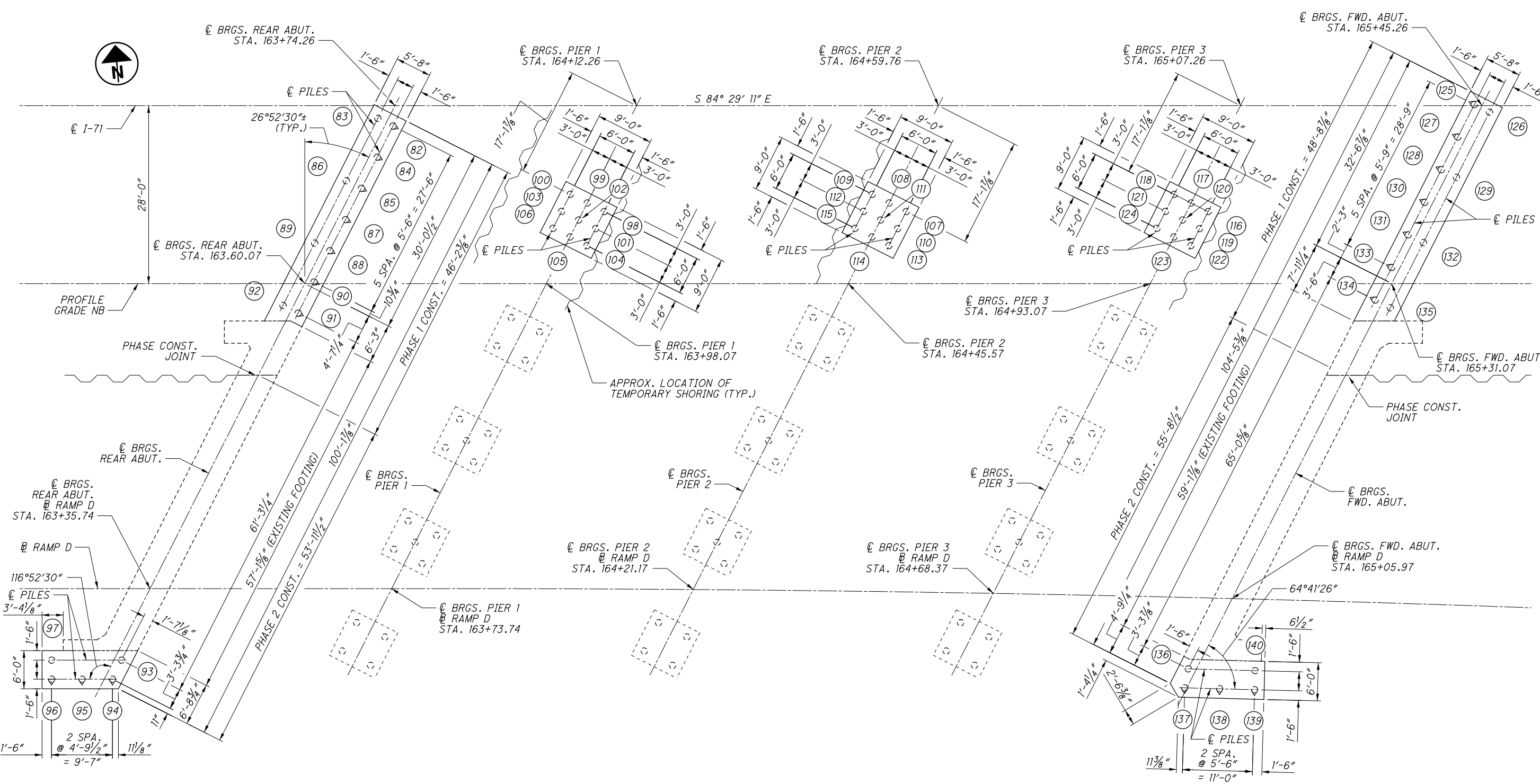
PIER 2 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
34-48	12" C.I.P.	868.34	20 FT.

LEGEND:

- # - PILE NUMBER
- - 12" C.I.P. CONC. PILE
- ◊ - 12" C.I.P. CONC. BATTERED PILE 4:1 (V:H)

DESIGNED LYH CMH	CHECKED CMH	DRAWN DJC REVISED	REVIEWED KVB	DATE 8/9/2016
PILE LAYOUT PLAN - SOUTHBOUND BRIDGE			DESIGN AGENCY Mead & Hunt	
BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62			4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
FRA-71-0.00			PID No. 107201	
20/80			1213 1312	

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REAR ABUTMENT - NORTHBOUND

PIER 1 - NORTHBOUND

PIER 2 - NORTHBOUND

PIER 3 - NORTHBOUND

FORWARD ABUTMENT - NORTHBOUND

REAR ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
82-97	12" C.I.P.	883.84	35 FT.

FORWARD ABUTMENT PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
125-140	12" C.I.P.	882.74	35 FT.

PIER 1 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
98-106	12" C.I.P.	868.59	25 FT.

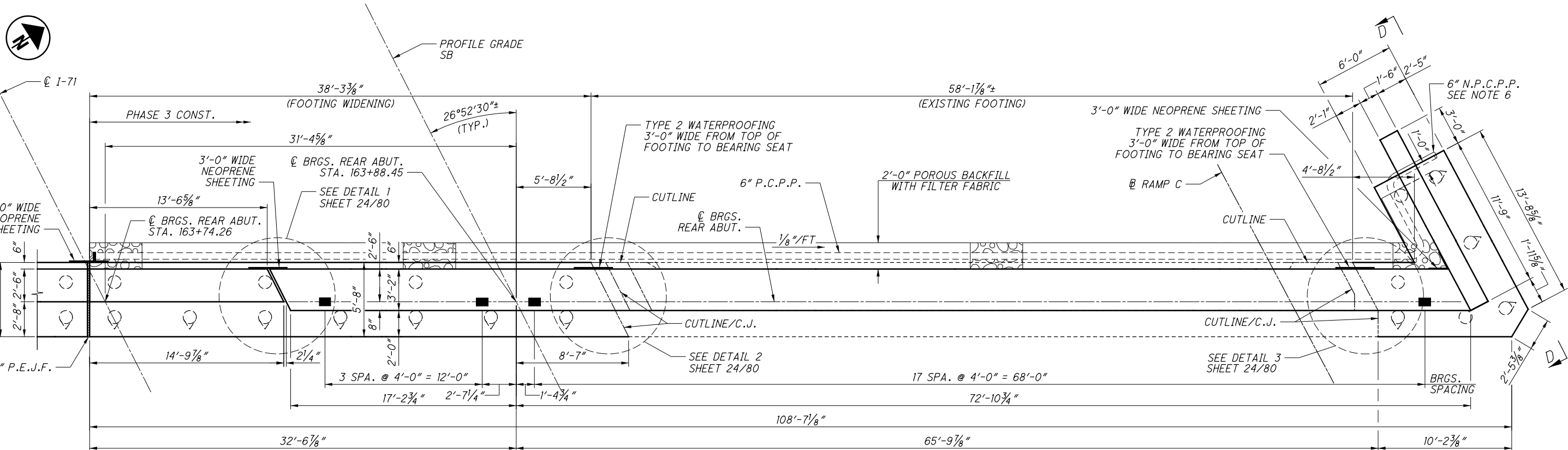
PIER 2 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
107-115	12" C.I.P.	868.34	20 FT.

PIER 3 PILING TABLE			
PILE NO.	PILE SIZE	CUT OFF ELEVATION	ESTIMATED LENGTH
116-124	12" C.I.P.	868.09	25 FT.

- LEGEND:**
- # - PILE NUMBER
 - - 12" C.I.P. CONC. PILE
 - ◊ - 12" C.I.P. CONC. BATTERED PILE 4:1 (V:H)

	DESIGN AGENCY 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
DATE: 8/9/2016 REVIEWED: KVB DRAWN: DJC CHECKED: CMH	STRUCTURE FILE NUMBER: 25069631/2506998R OVER US ROUTE 62
PILE LAYOUT PLAN - NORTHBOUND BRIDGE	
BRIDGE NO. FRA-71-0308 L/R	
FRA-71-0.00	
PID No. 107201	
21 / 80	
1214 1312	

X:\40370000\21957.16\10720\structures\FRA071_0308C\sheet\071_0308CAR005.dgn Sheet 10/28/2019 11:53:39 AM 1458sjs

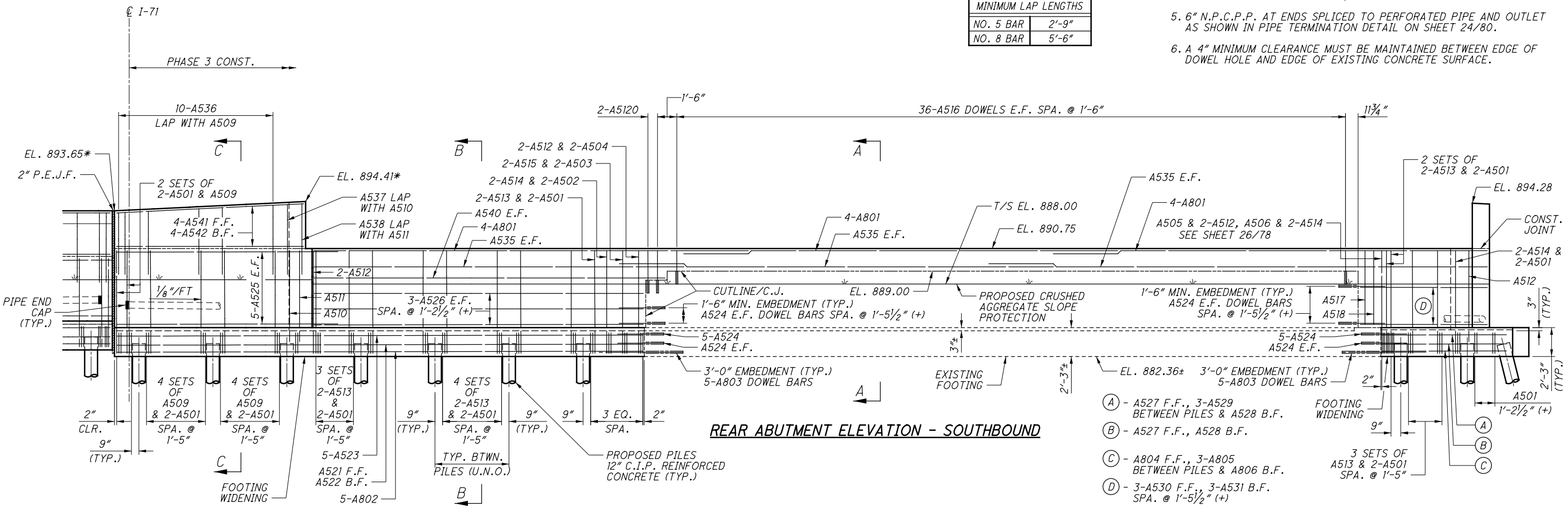


REAR ABUTMENT PLAN - SOUTHBOUND

- LEGEND:**
- * - ELEVATION GIVEN AT BACK FACE OF WINGWALL
 - - PROPOSED VERTICAL PILE
 - ⊙ - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	5'-6"

- NOTES:**
1. FOR SECTIONS A-A & B-B, SEE SHEET 23/80.
 2. FOR SECTION C-C & DETAILS, SEE SHEET 24/80.
 3. FOR VIEW D-D, SEE SHEET 25/80.
 4. FOR FOOTING & PILE LAYOUT, SEE SHEET 20/80.
 5. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 24/80.
 6. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.



REAR ABUTMENT ELEVATION - SOUTHBOUND

- (A) - A527 F.F., 3-A529 BETWEEN PILES & A528 B.F.
- (B) - A527 F.F., A528 B.F.
- (C) - A804 F.F., 3-A805 BETWEEN PILES & A806 B.F.
- (D) - 3-A530 F.F., 3-A531 B.F. SPA. @ 1'-5/2" (+)

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT. STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DATE: 8/9/2016
REVIEWED: KVB
DRAWN: DJC
DESIGNED: LYH/RLC
CHECKED: CMH

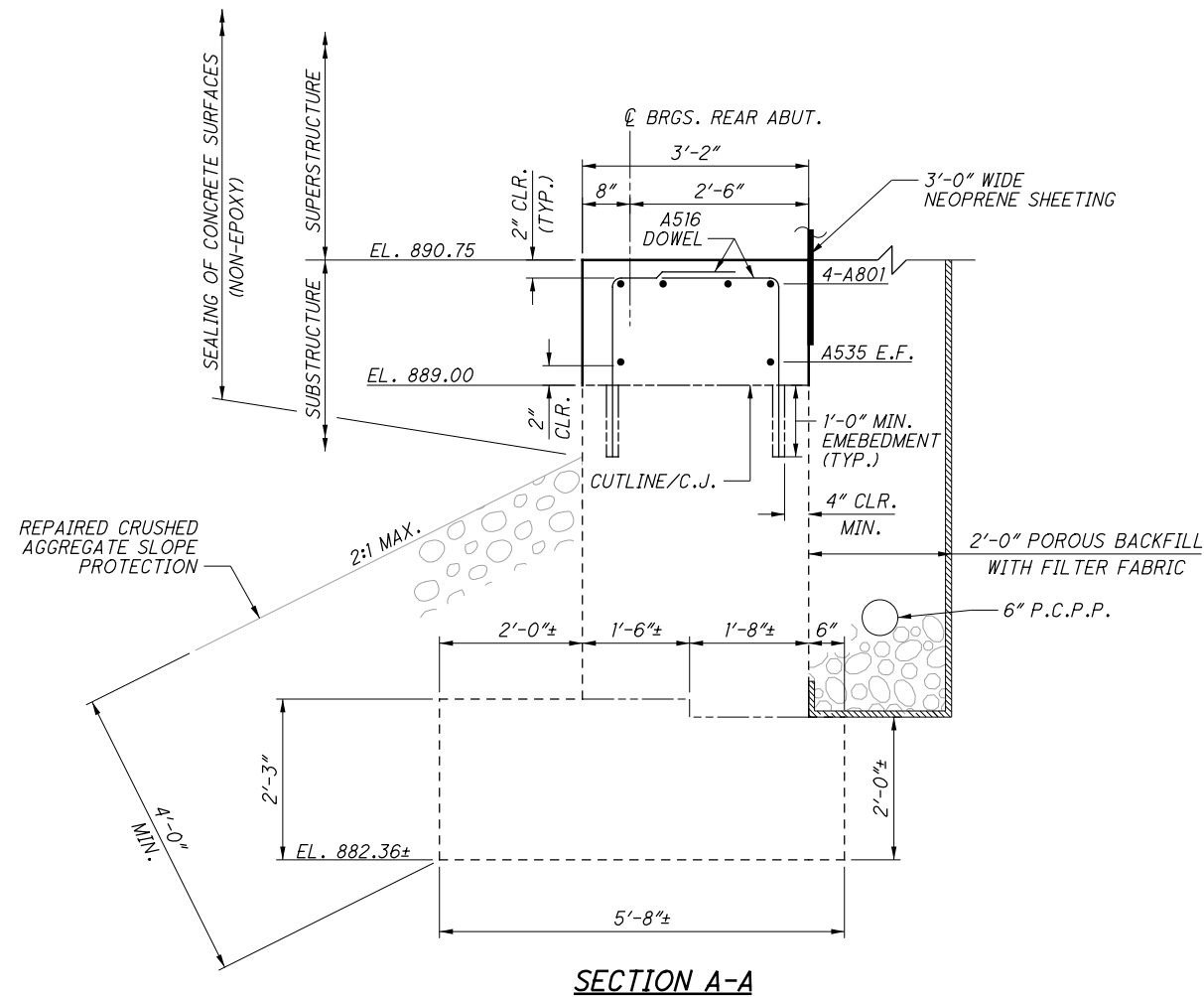
STRUCTURE FILE NUMBER: 25069631/2506998R

REAR ABUTMENT DETAILS - SOUTHBOUND BRIDGE
BRIDGE NO. FRA-71-0308 L/R
OVER US ROUTE 62

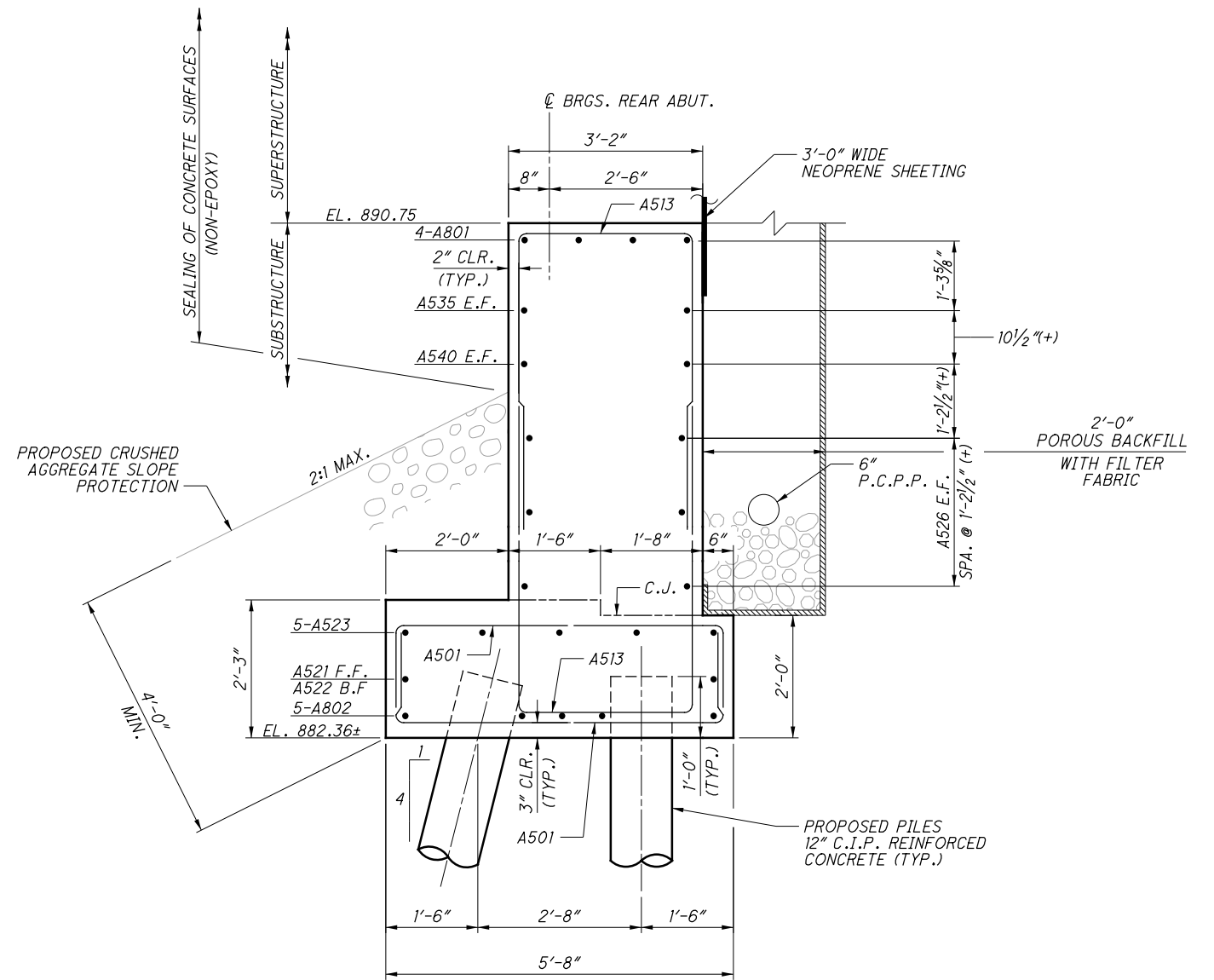
FRA-71-0.00
PID No. 107201

22/80
1215
1312

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SECTION A-A



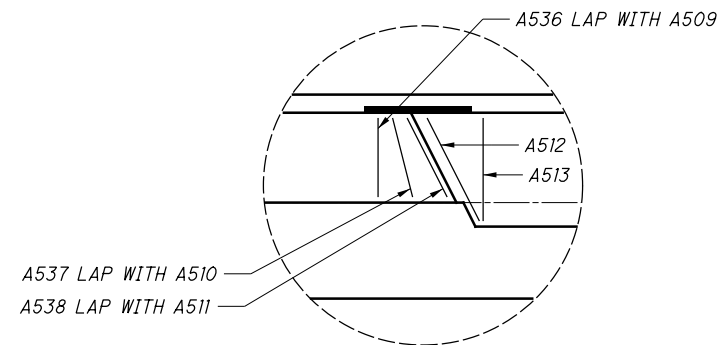
SECTION B-B

NOTES:

1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 22/80.
2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 44/80.

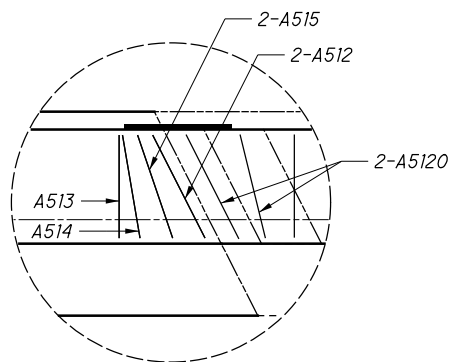
FRA-71-0.00 PID No. 107201	REAR ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62		DESIGNED L YH/R L C	CHECKED C M H	DRAWN D J C	REVISED K V B	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
	STRUCTURE FILE NUMBER 25069631/2506998R		REVISIONS		FILE NUMBER		25069631/2506998R	

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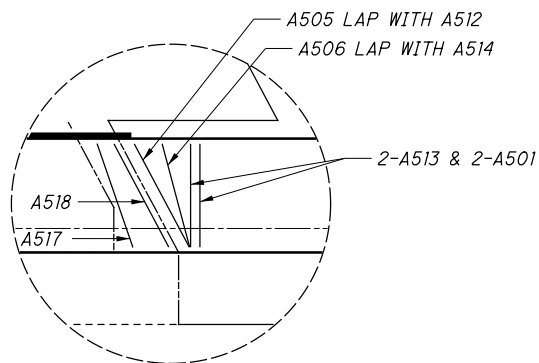


DETAIL 1

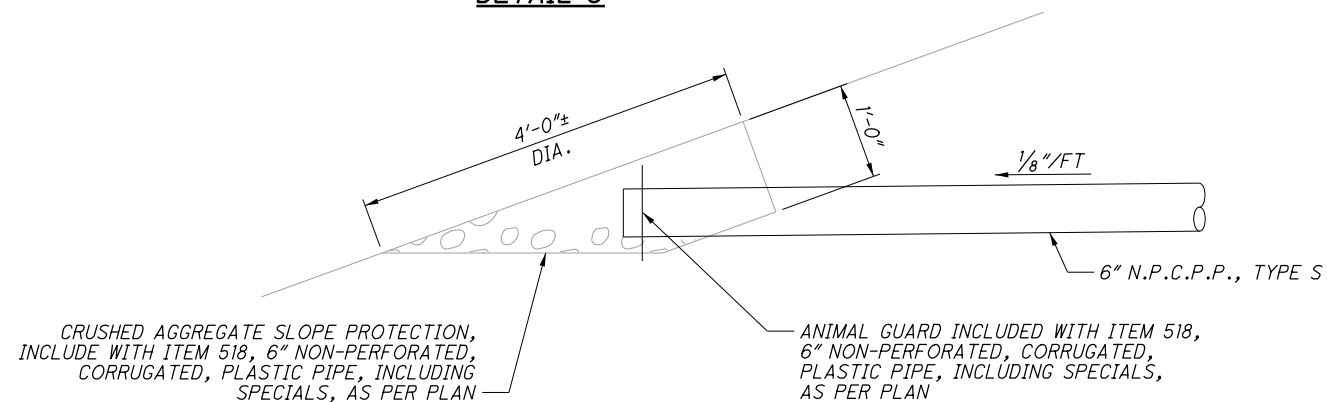
A537 LAP WITH A510
A538 LAP WITH A511



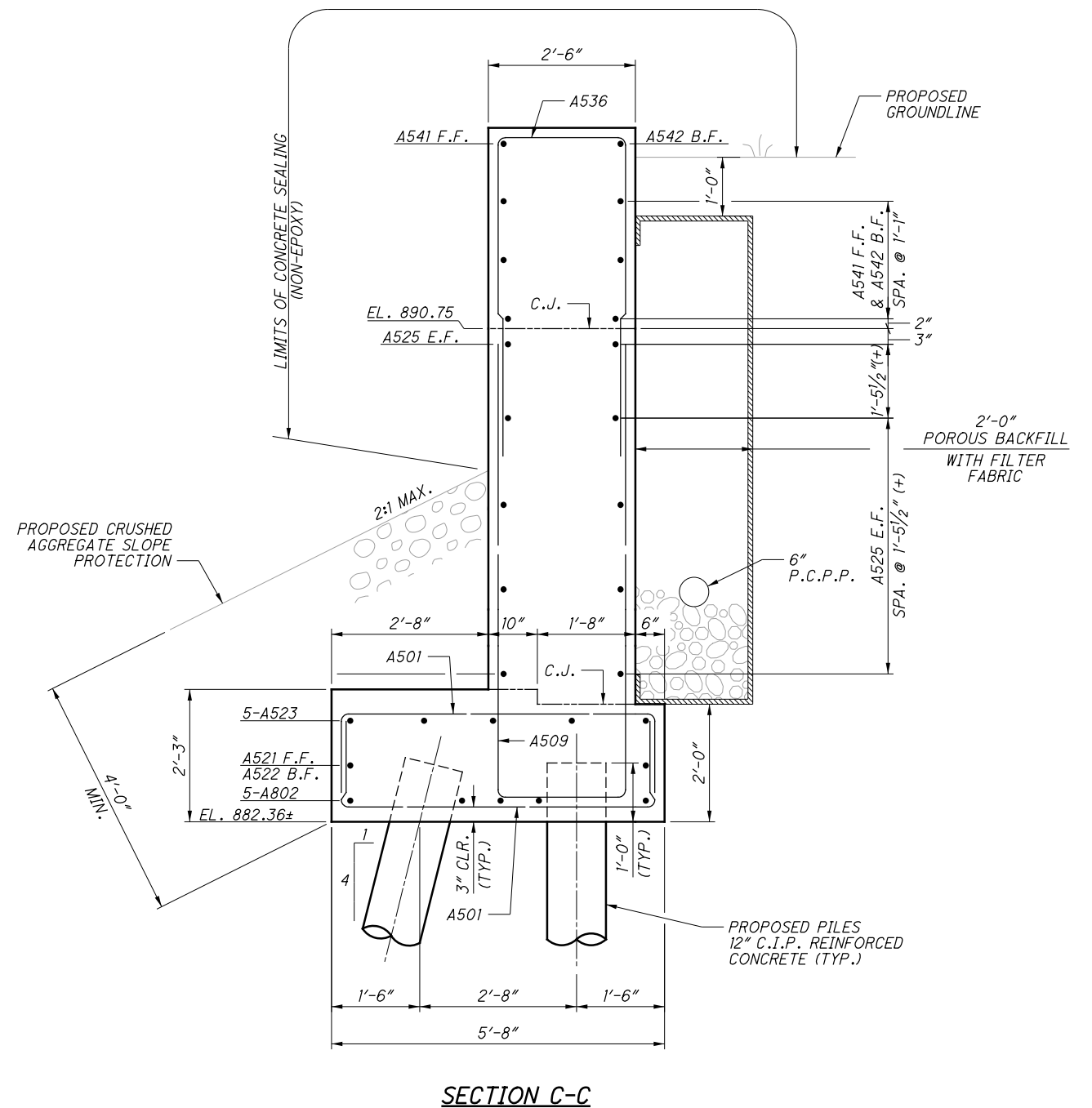
DETAIL 2



DETAIL 3



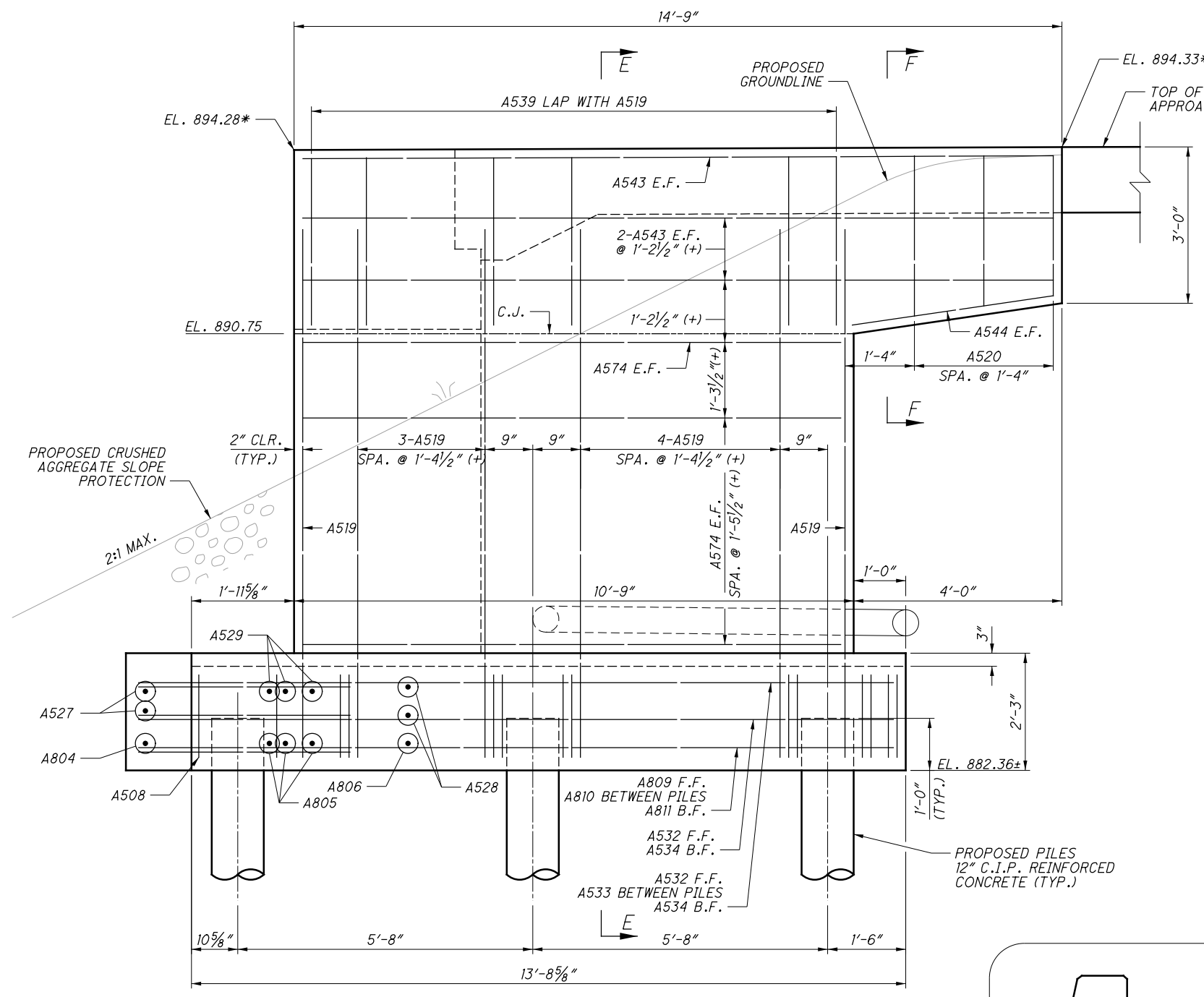
TERMINATION OF 6" N.P.C.P.P. DETAIL



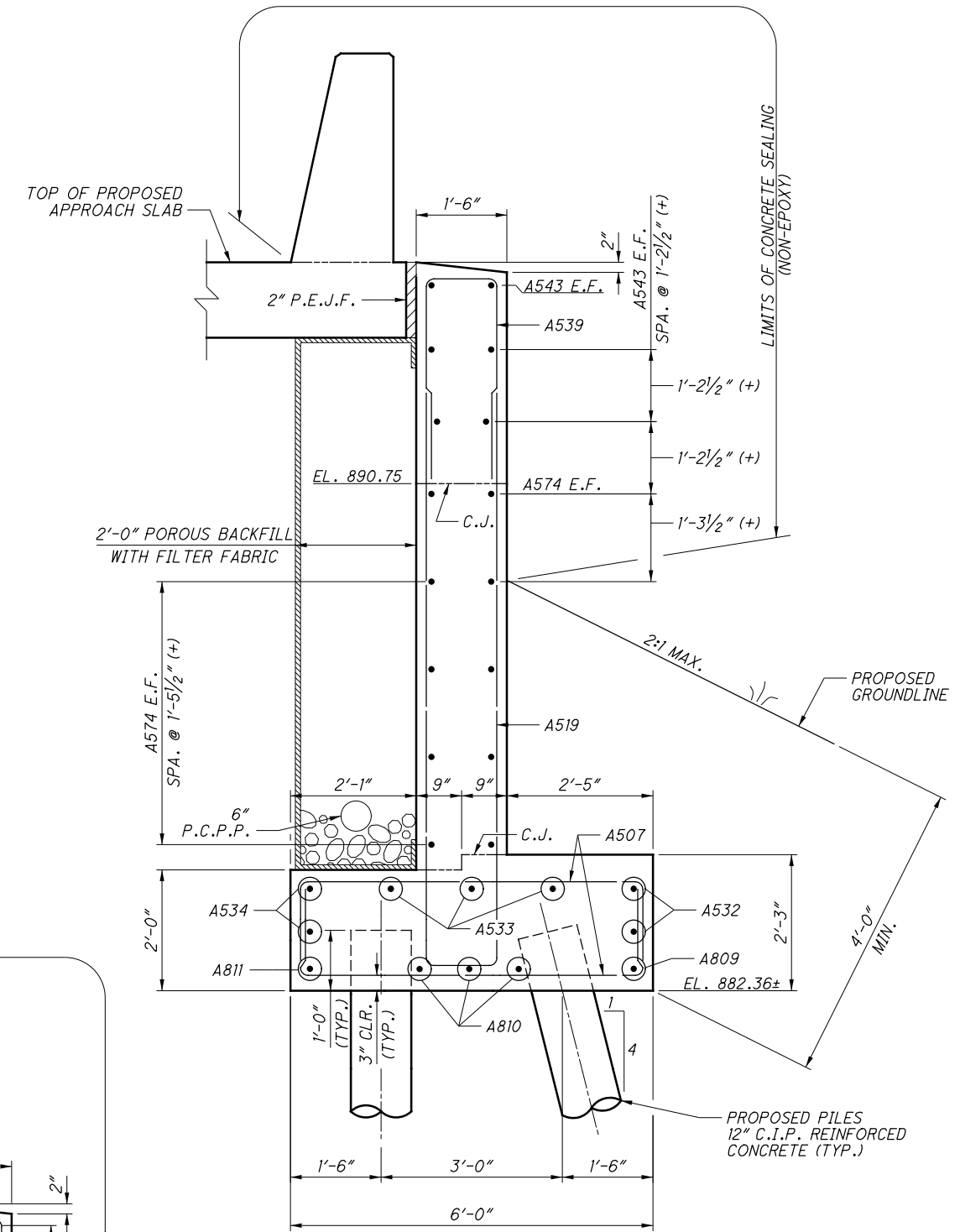
NOTE:

1. FOR NOTES, SEE SHEET 23/80.

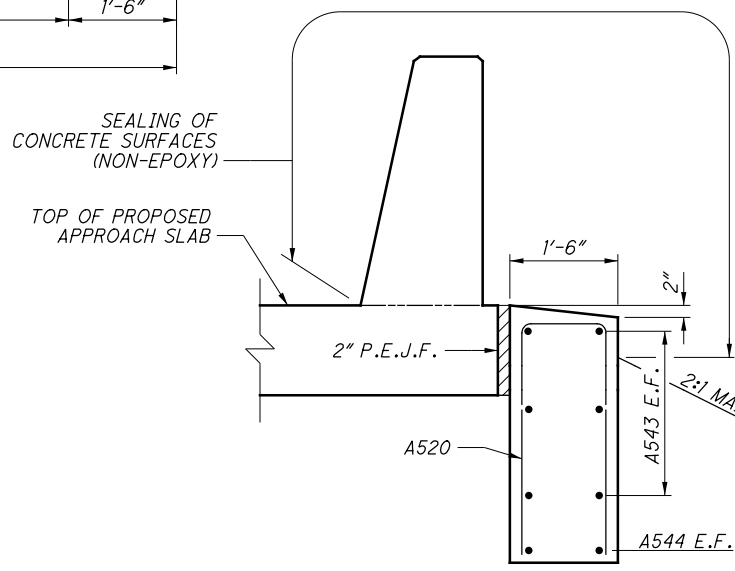
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VIEW D-D



SECTION E-E



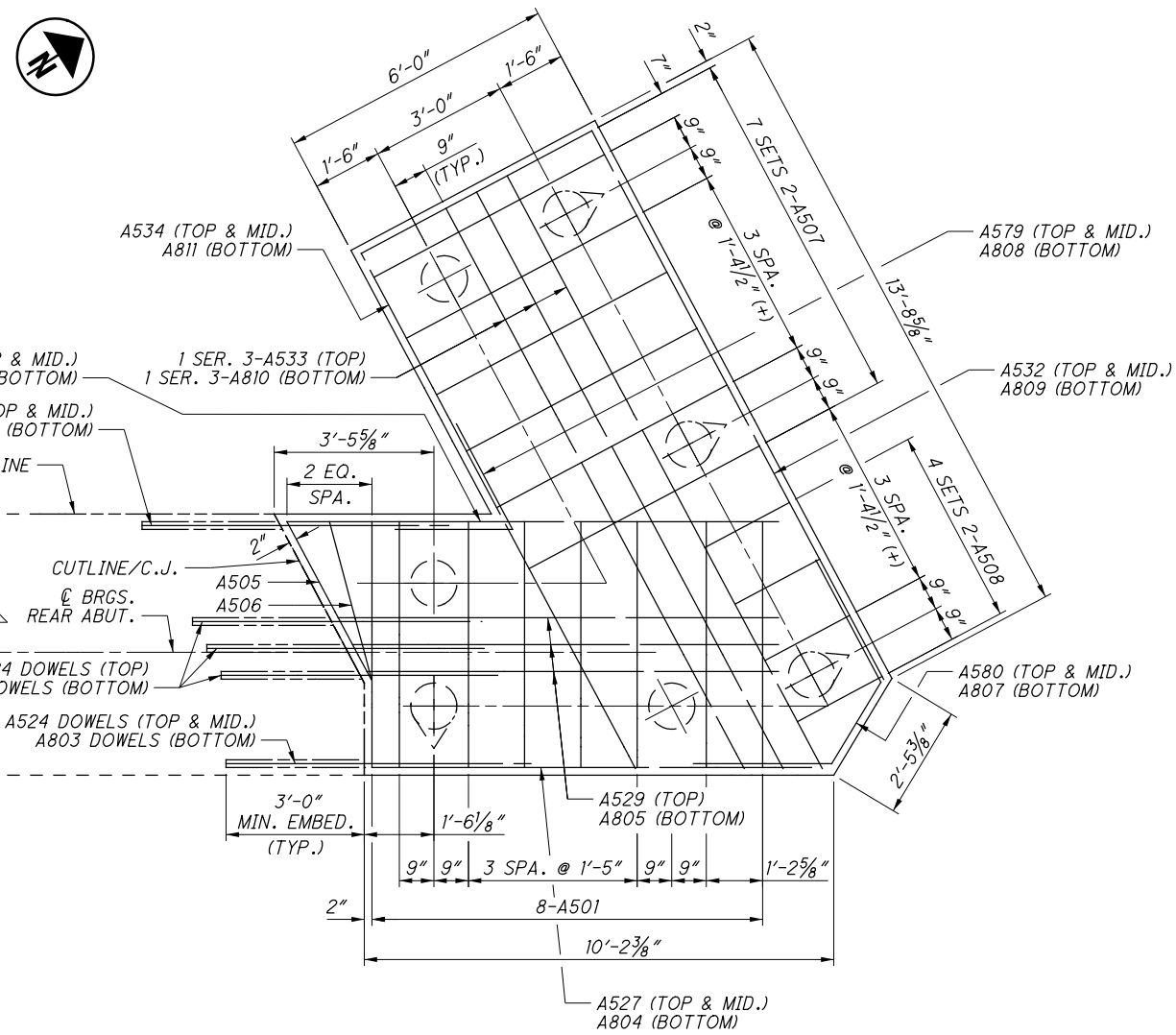
SECTION F-F

NOTE:
1. FOR NOTES, SEE SHEET 23/80.

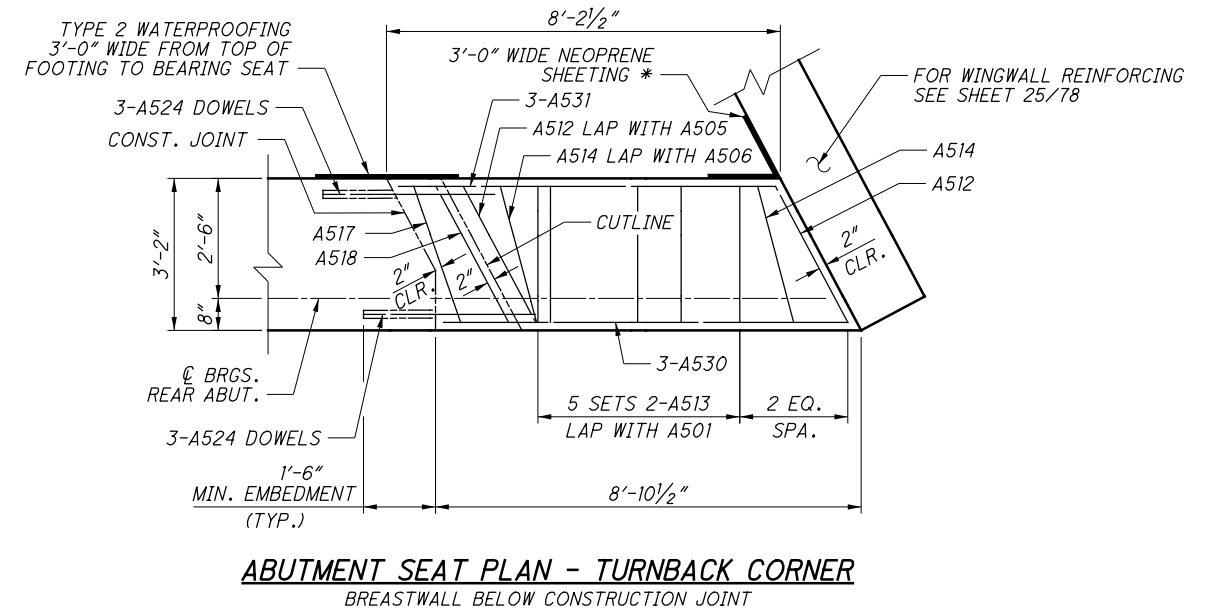
LEGEND:
* - ELEVATION GIVEN AT BACK FACE OF WINGWALL

DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
DESIGNED LYH/RLC CHECKED CMH	DRAWN DJC REVISED
REVIEWED KVB	DATE 8/9/2016
STRUCTURE FILE NUMBER 25069631/2506998R	
REAR ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00 PID No. 107201	
25 / 80	
1218 1312	

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FOOTING PLAN - TURNBACK CORNER



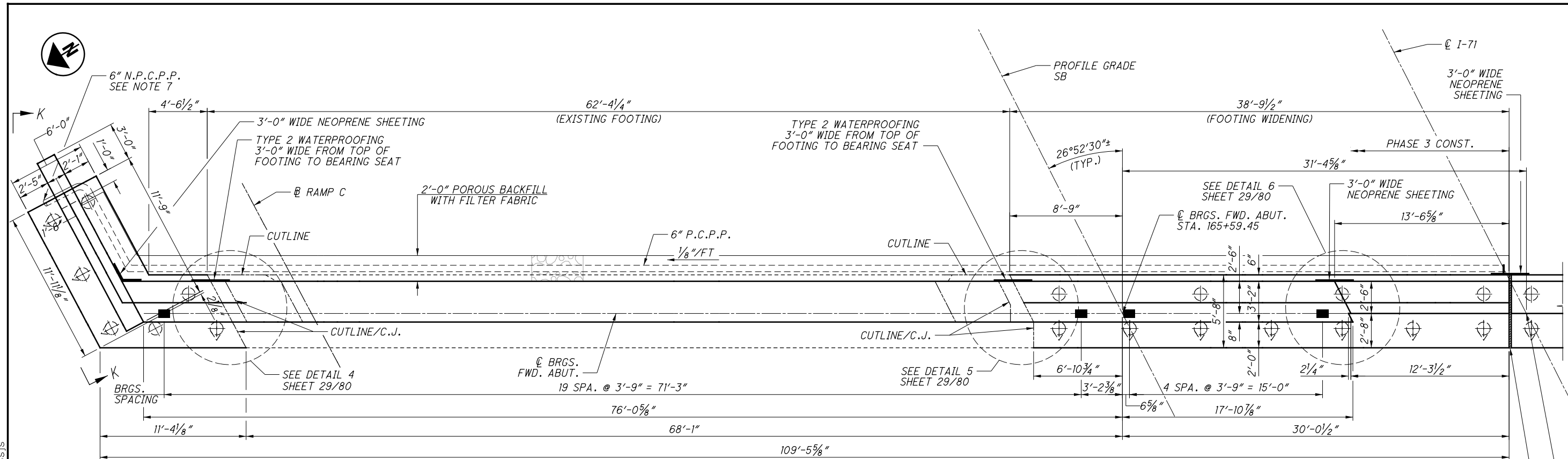
ABUTMENT SEAT PLAN - TURNBACK CORNER
BREASTWALL BELOW CONSTRUCTION JOINT

NOTE:
1. FOR NOTES, SEE SHEET 23/80.

LEGEND:
○ - PROPOSED VERTICAL PILE
◊ - PROPOSED BATTERED PILE (4:1)
* - FROM 1'-6" BELOW BEARING SEAT TO APPROACH SLAB BOTTOM.

FRA-71-0.00 PID No. 107201	26 / 80 1219 1312	REAR ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	DESIGNED L YH/R/LC CHECKED CMH	DRAWN DJC REVISED	REVIEWED KVB STRUCTURE FILE NUMBER 25069631/2506998R	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
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LEGEND:

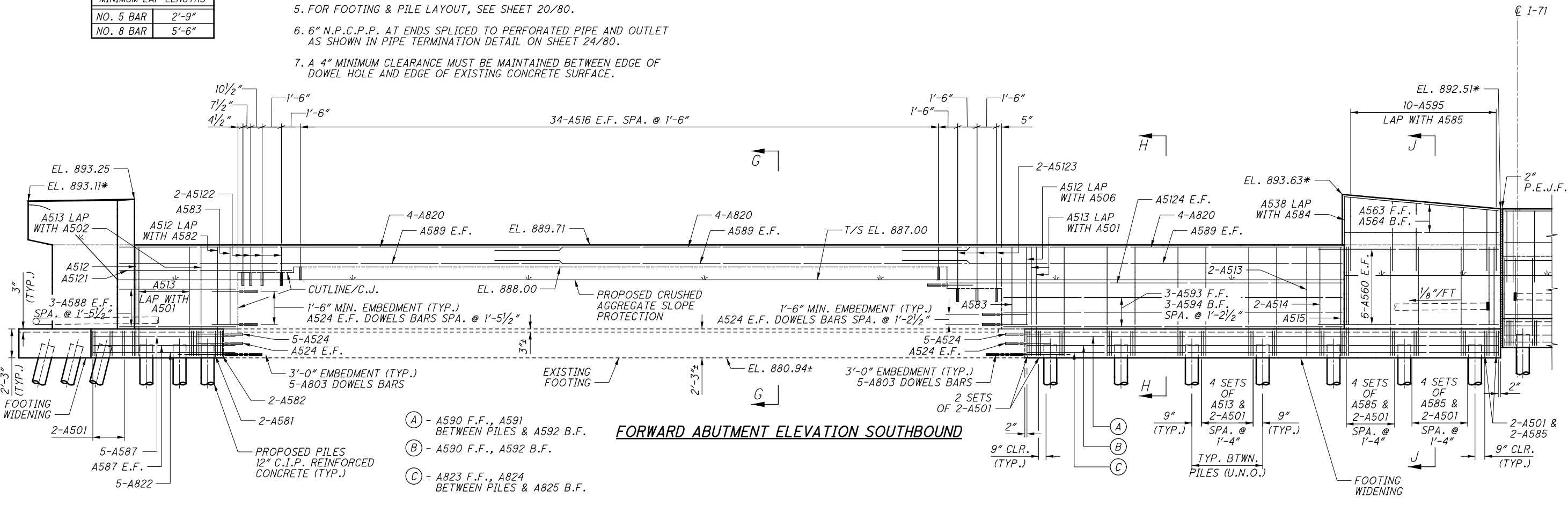
- * - ELEVATION GIVEN AT BACK FACE OF WINGWALL
- - PROPOSED VERTICAL PILE
- ⊙ - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	5'-6"

NOTES:

1. FOR SECTION G-G, SEE SHEET 29/80.
2. FOR DETAILS 4 THRU 6, SEE SHEET 29/80.
3. FOR SECTIONS H-H & J-J, SEE SHEET 28/80.
4. FOR VIEW K-K, SEE SHEET 30/80.
5. FOR FOOTING & PILE LAYOUT, SEE SHEET 20/80.
6. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 24/80.
7. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.

FORWARD ABUTMENT PLAN - SOUTHBOUND

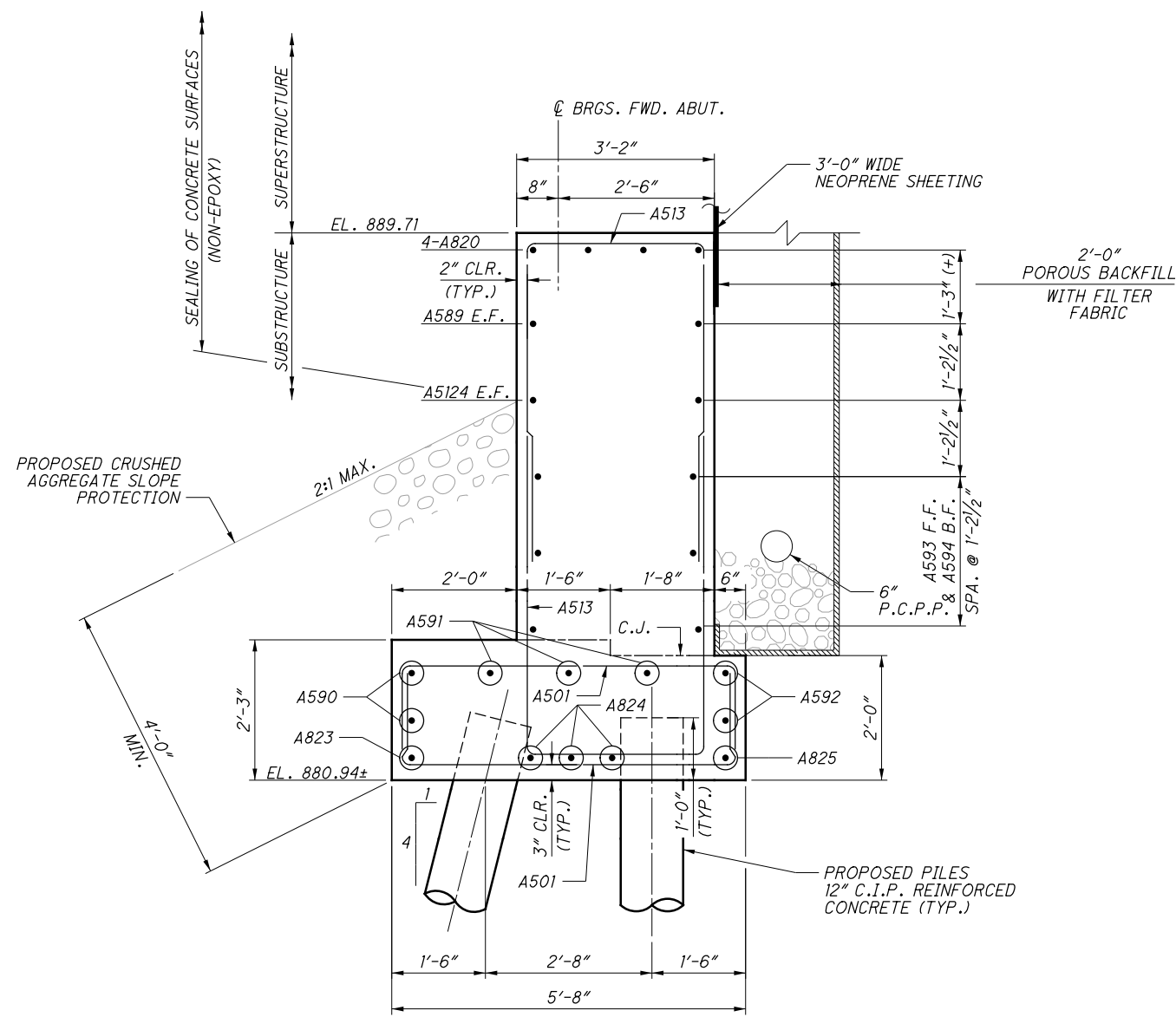


FORWARD ABUTMENT ELEVATION SOUTHBOUND

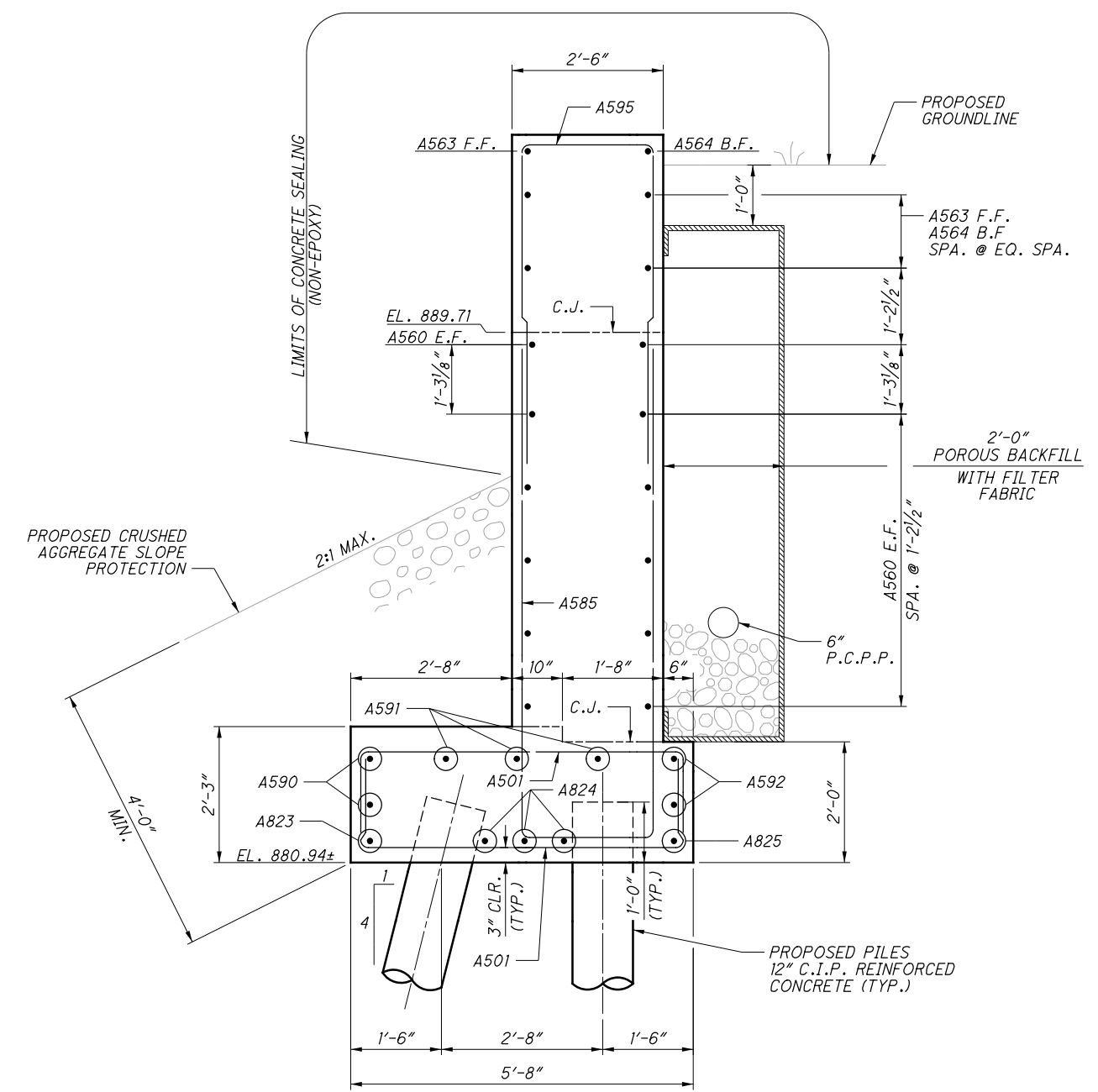
- (A) - A590 F.F., A591 BETWEEN PILES & A592 B.F.
- (B) - A590 F.F., A592 B.F.
- (C) - A823 F.F., A824 BETWEEN PILES & A825 B.F.

DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
 DATE: 8/9/2016
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: LYH/RLC
 CHECKED: CMH
 STRUCTURE FILE NUMBER: 2506963L/2506989R
FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62
FRA-71-0.00
 PID No. 107201
 27/80
 1220
 1312

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SECTION H-H



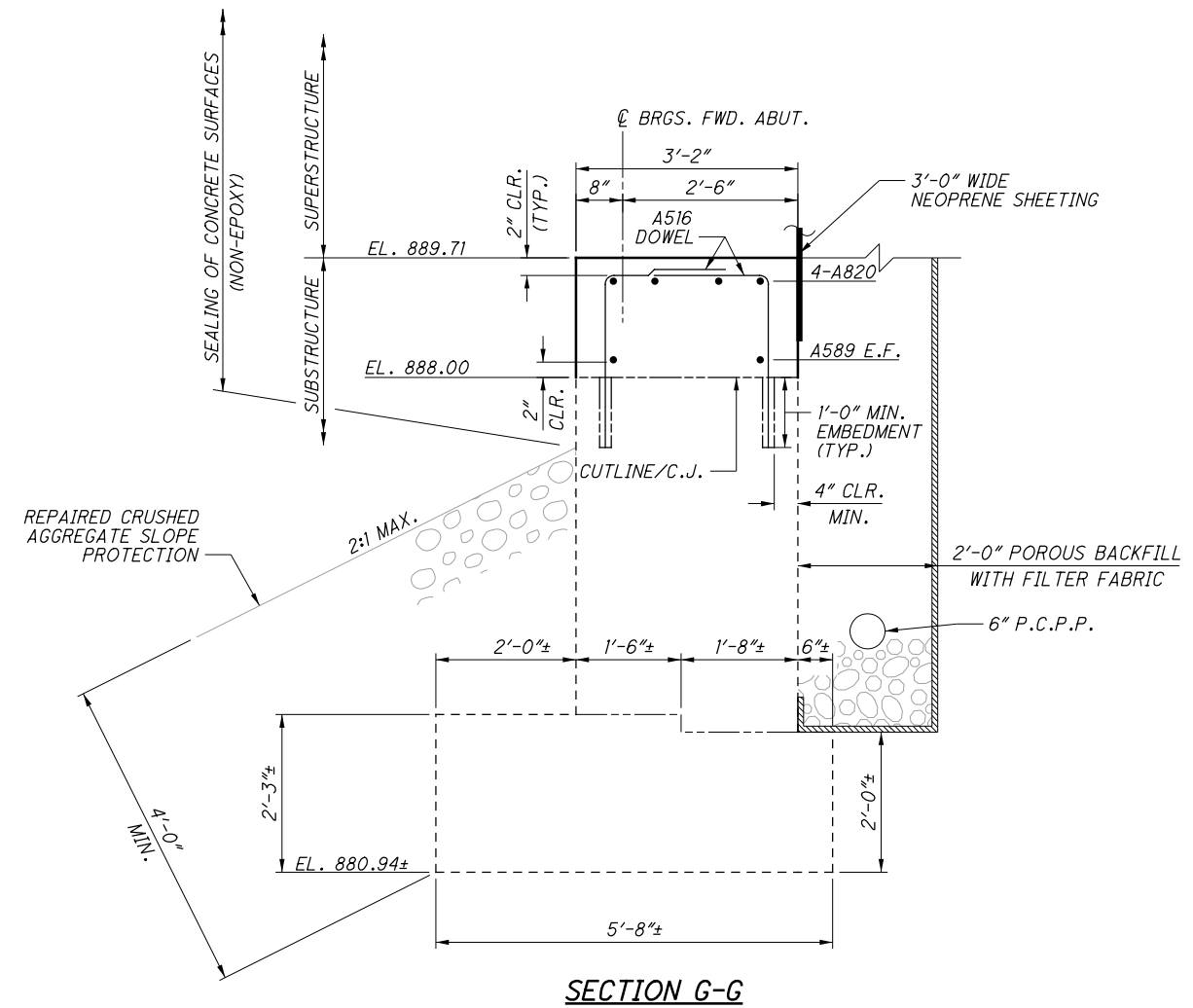
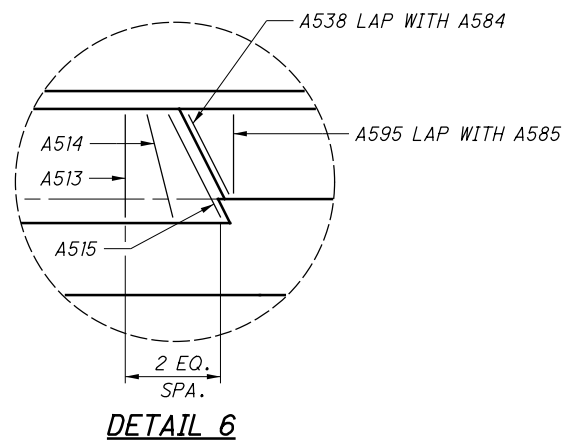
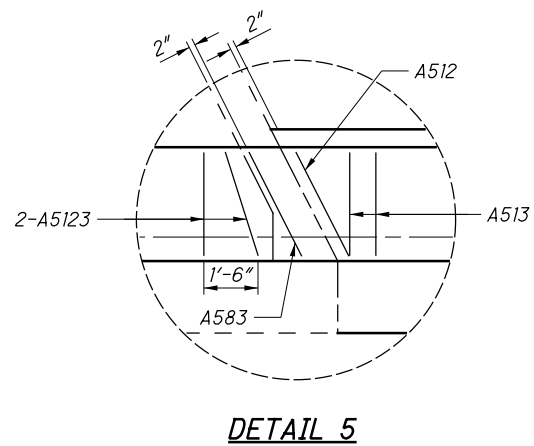
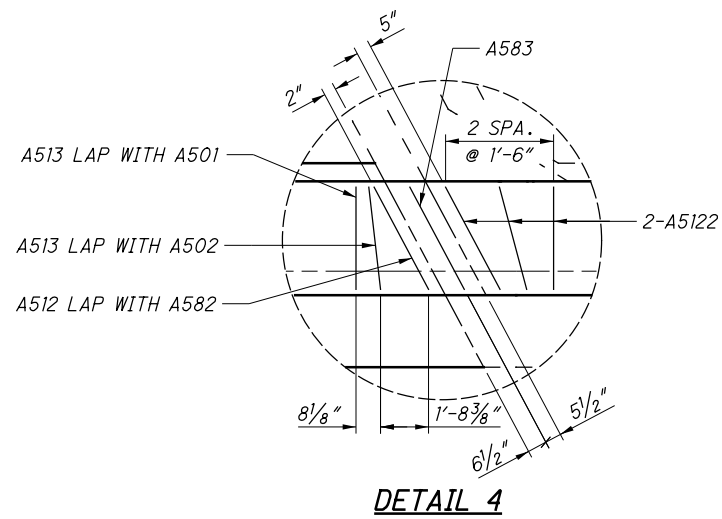
SECTION J-J

NOTES:

1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 27/80.
2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 44/80.

DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	
DATE 8/9/2016	REVIEWED KVB
FILE NUMBER 25069631/2506998R	STRUCTURE FILE NUMBER
DRAWN DJC	REVISIONS
DESIGNED LYH/RLC	CHECKED CMH
FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00 PID No. 107201	
28/80	
1221 1312	

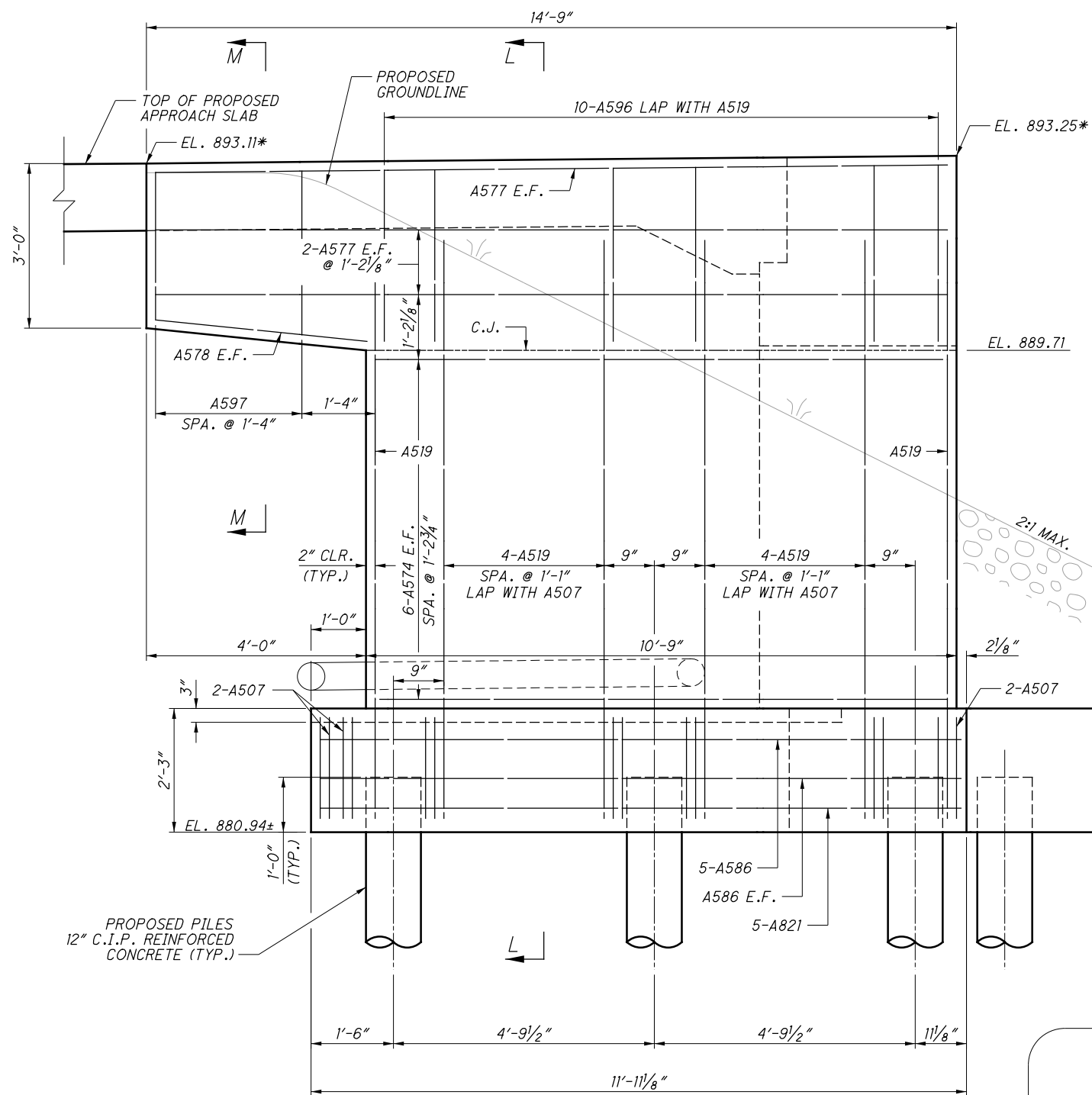
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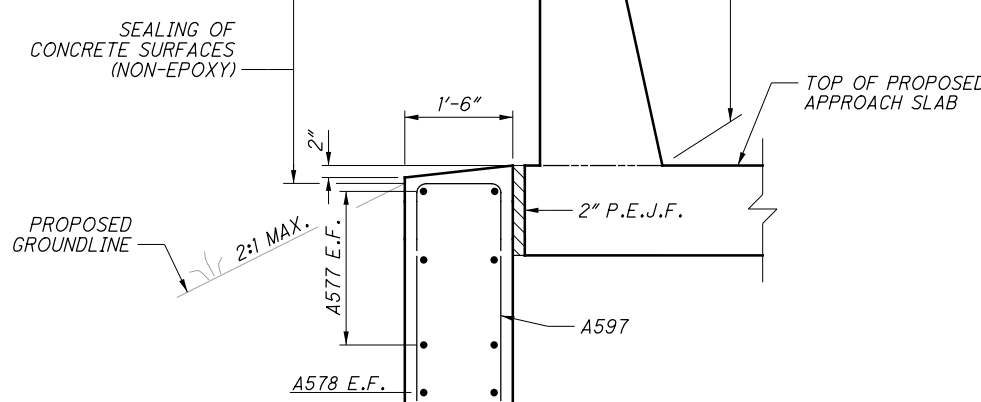
NOTE:
1. FOR NOTES, SEE SHEET 28/80.

FRA-71-0.00 PID No. 107201	FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62		DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
	29/80 1222 1312	DESIGNED L YH/RLC CHECKED CMH	DRAWN DJC REVISED
			DATE 8/9/2016

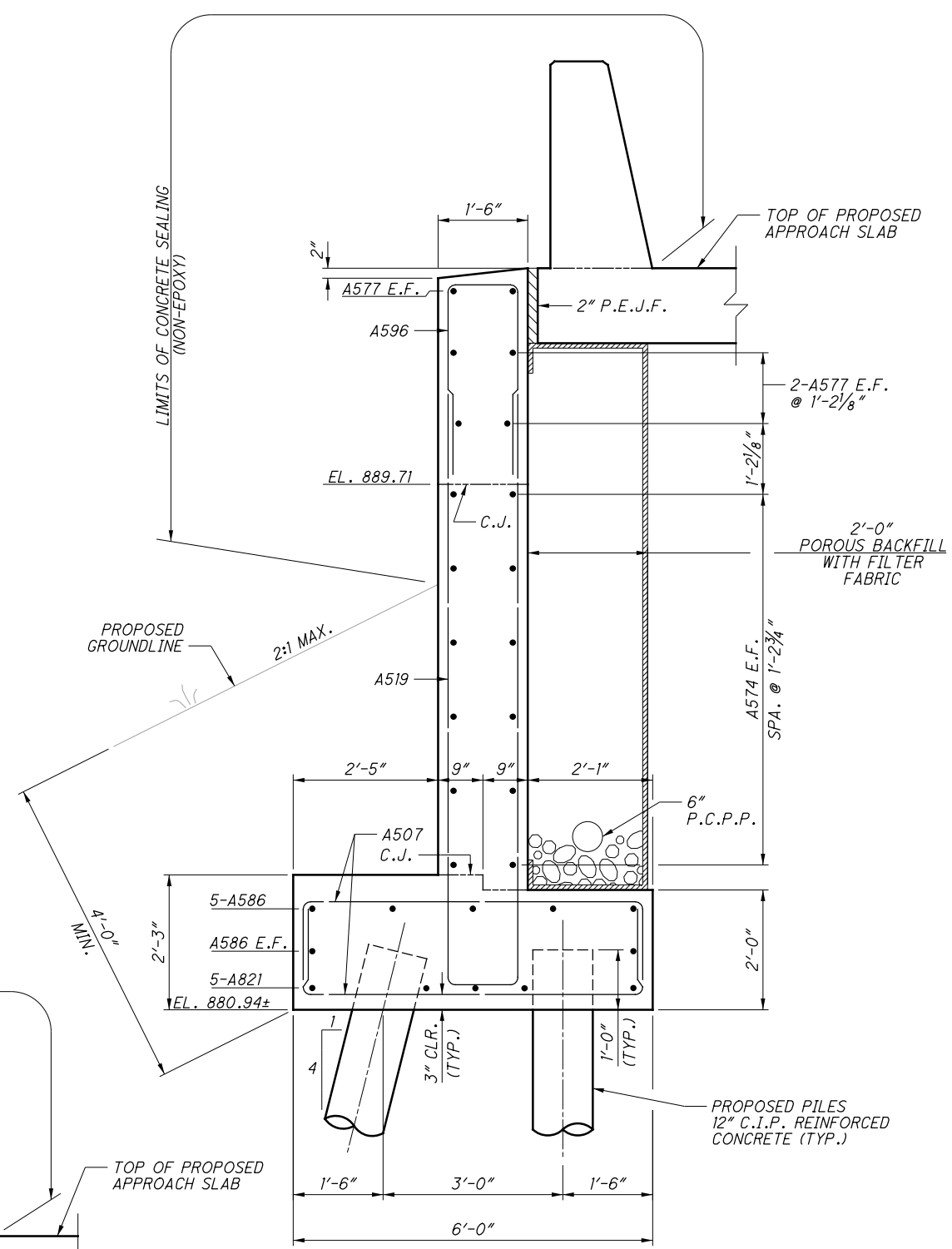
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VIEW K-K



SECTION M-M



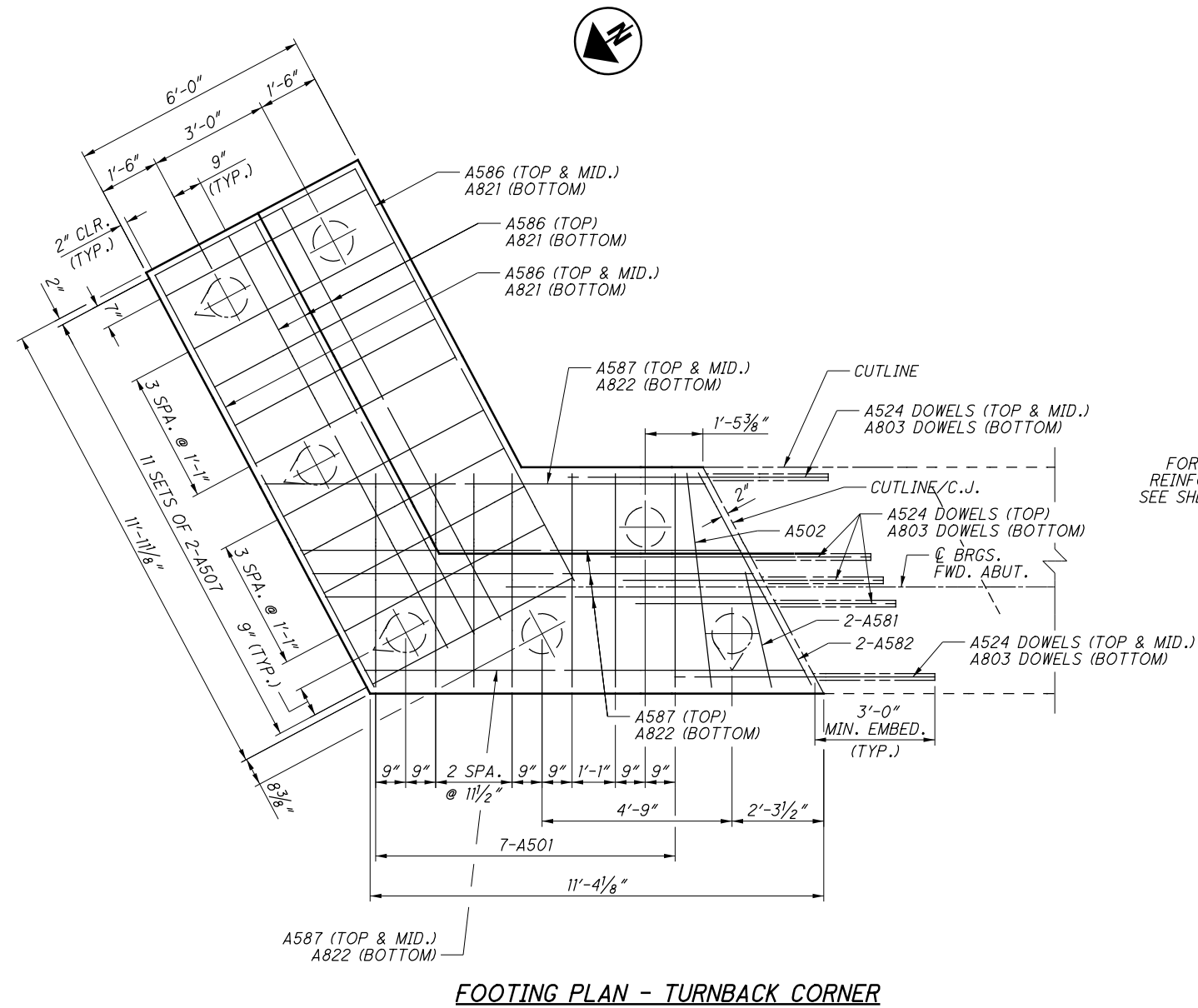
SECTION L-L

NOTE:
1. FOR NOTES, SEE SHEET 28/80.

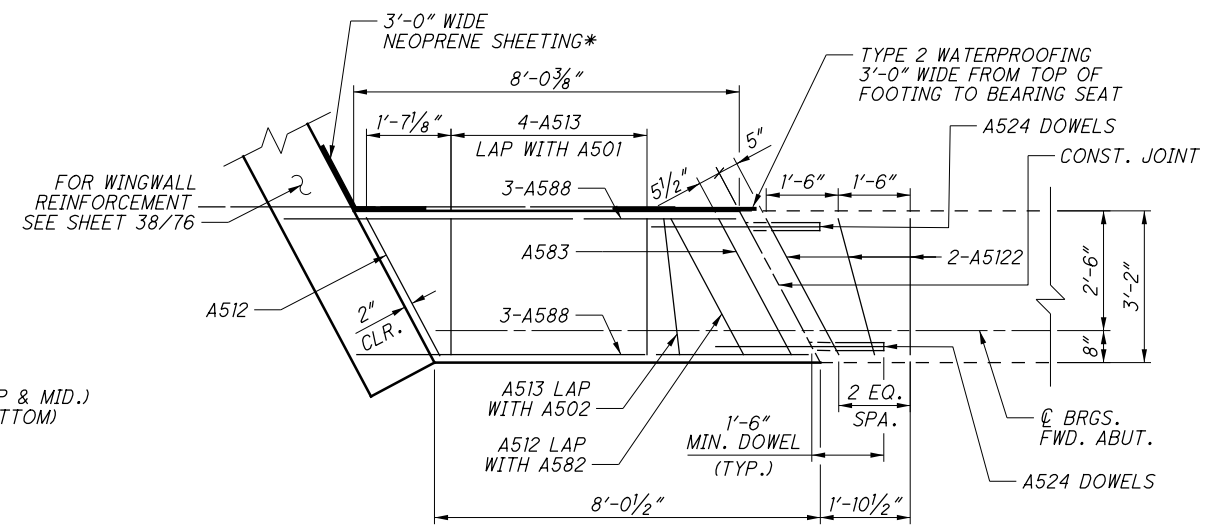
LEGEND:
* - ELEVATION GIVEN AT BACK FACE OF WINGWALL

DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	DATE 8/9/2016
	REVIEWED KVB
DRAWN DJC	STRUCTURE FILE NUMBER 25069631/2506998R
DESIGNED LYH/RLC	CHECKED CMH
FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00	PID No. 107201
30/80	1223 1312

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FOOTING PLAN - TURNBACK CORNER



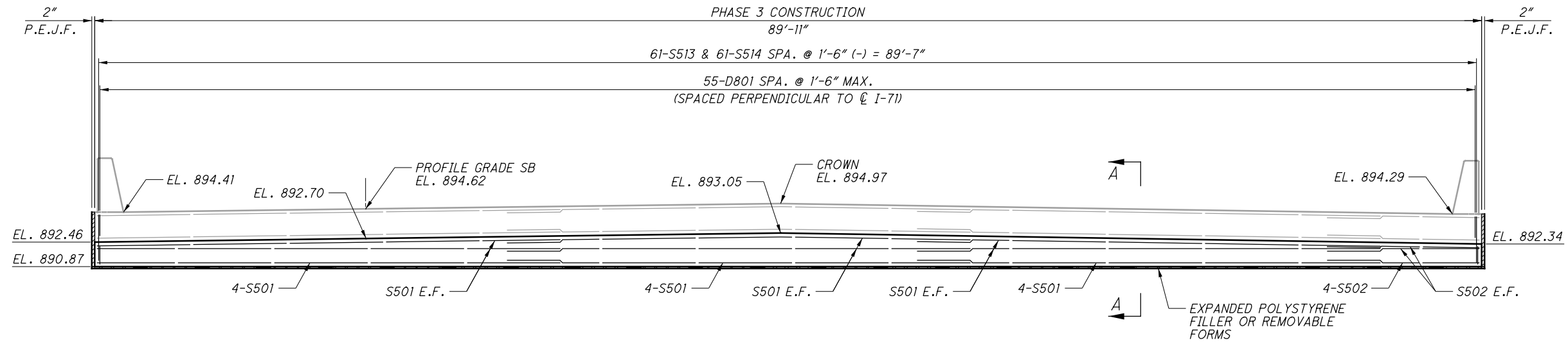
ABUTMENT SEAT PLAN - TURNBACK CORNER
BREASTWALL BELOW CONSTRUCTION JOINT

NOTE:
1. FOR NOTES, SEE SHEET 28/80.

LEGEND:
 ○ - PROPOSED VERTICAL PILE
 ◊ - PROPOSED BATTERED PILE (4:1)
 * - FROM 1'-6" BELOW BEARING SEAT TO APPROACH SLAB BOTTOM.

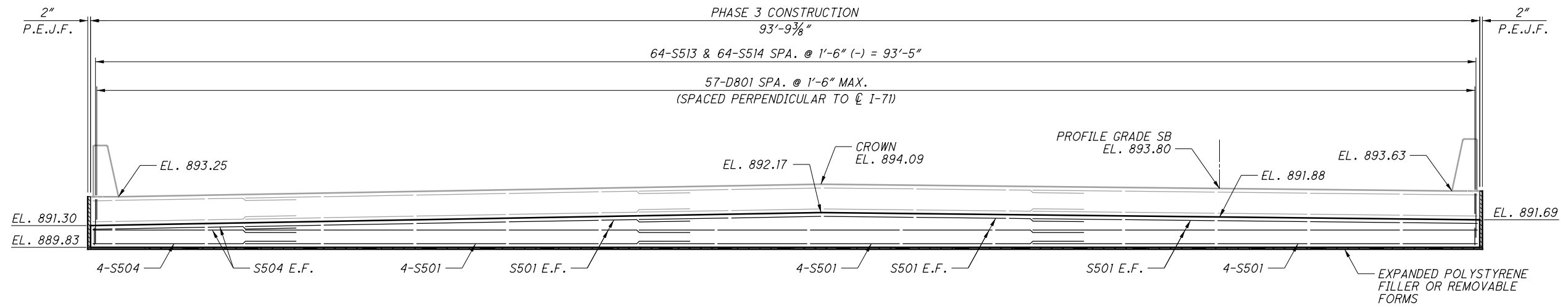
FRA-71-0.00 PID No. 107201	FORWARD ABUTMENT DETAILS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	DESIGNED LYH/RLC	DRAWN DJC	REVIEWED KVB	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		CHECKED CMH	REVISED	STRUCTURE FILE NUMBER 25069631/2506998R	FILE NUMBER 25069631/2506998R	1224 1312

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REAR ABUTMENT DIAPHRAGM ELEVATION - SOUTHBOUND

ELEVATIONS GIVEN AT \odot BEARING
DECK LONGITUDINAL REINFORCING NOT SHOWN FOR CLARITY



FORWARD ABUTMENT DIAPHRAGM ELEVATION - SOUTHBOUND

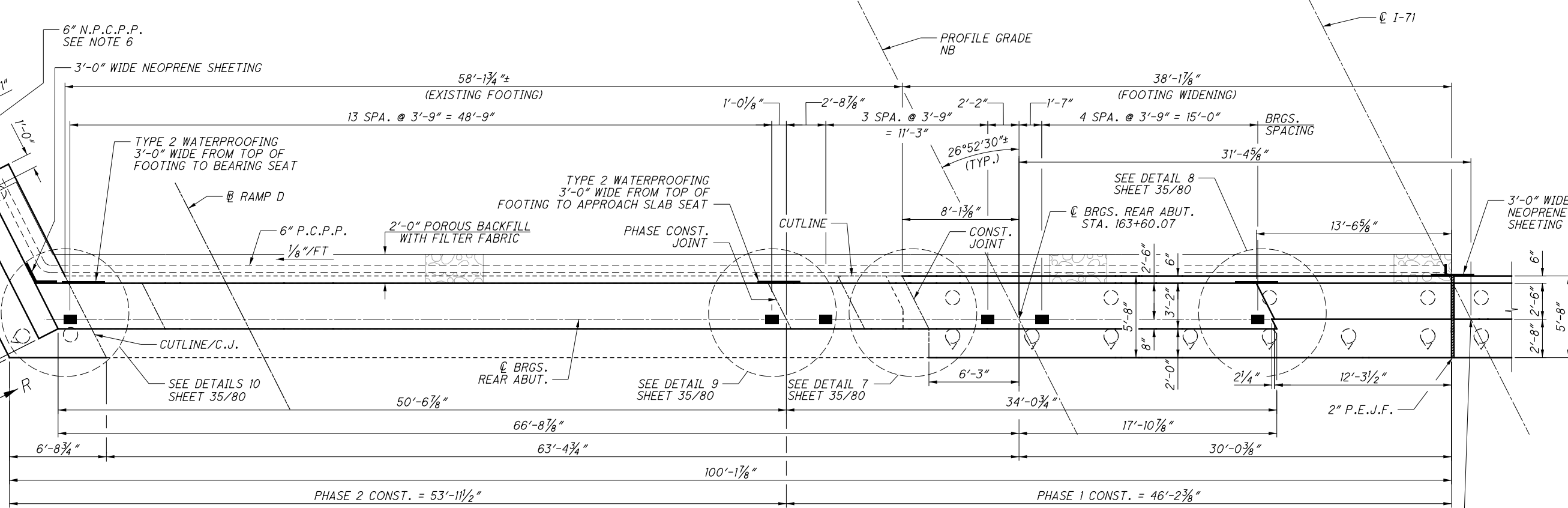
ELEVATIONS GIVEN AT \odot BEARING
DECK LONGITUDINAL REINFORCING NOT SHOWN FOR CLARITY

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

NOTES:

1. DECK REINFORCING SHOWN FOR REFERENCE PURPOSES ONLY. SEE SHEETS 53/80 THRU 57/80 FOR DECK REINFORCING INFORMATION.
2. FOR SECTION A-A, SEE SHEET 44/80.

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LEGEND:

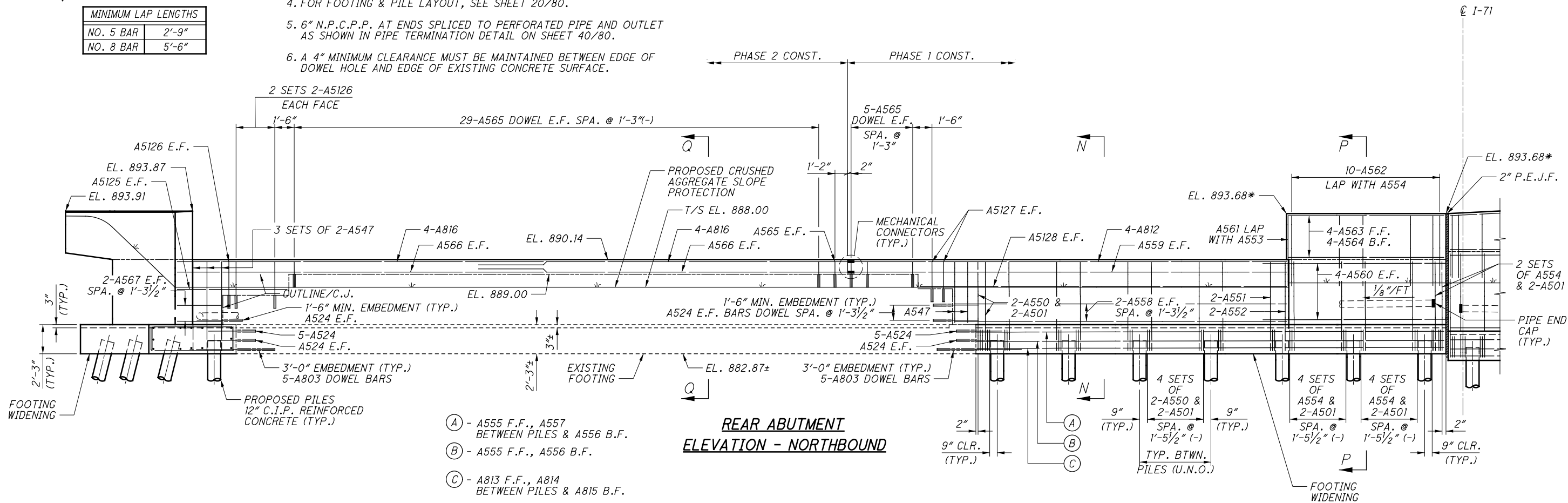
- * - ELEVATION GIVEN AT BACK FACE OF WINGWALL
- - PROPOSED VERTICAL PILE
- ◐ - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	5'-6"

NOTES:

1. FOR SECTIONS N-N & P-P, SEE SHEET 34/80.
2. FOR SECTION Q-Q & DETAILS 7 THRU 10, SEE SHEET 35/80.
3. FOR VIEW R-R, SEE SHEET 36/80.
4. FOR FOOTING & PILE LAYOUT, SEE SHEET 20/80.
5. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 40/80.
6. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.

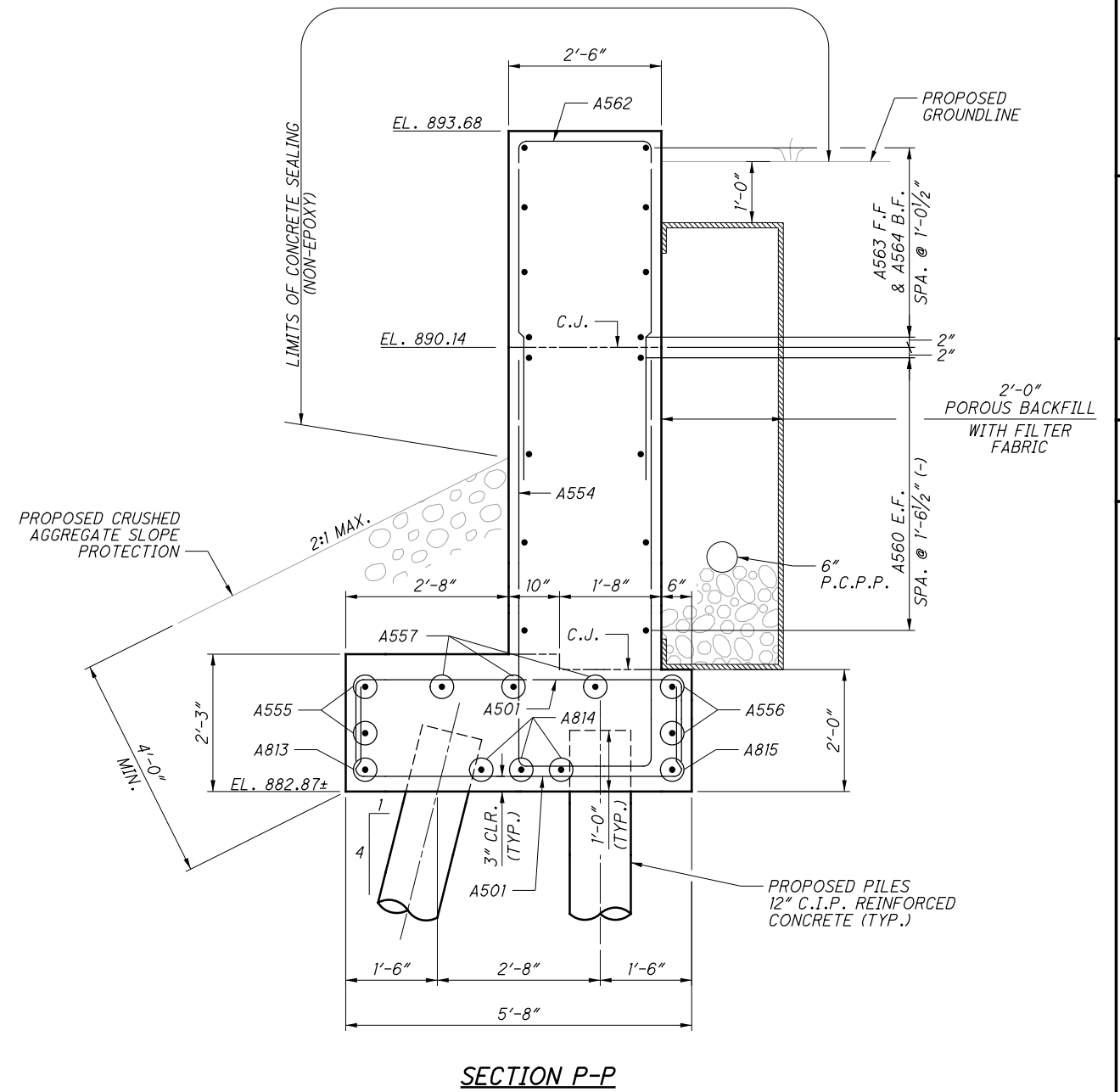
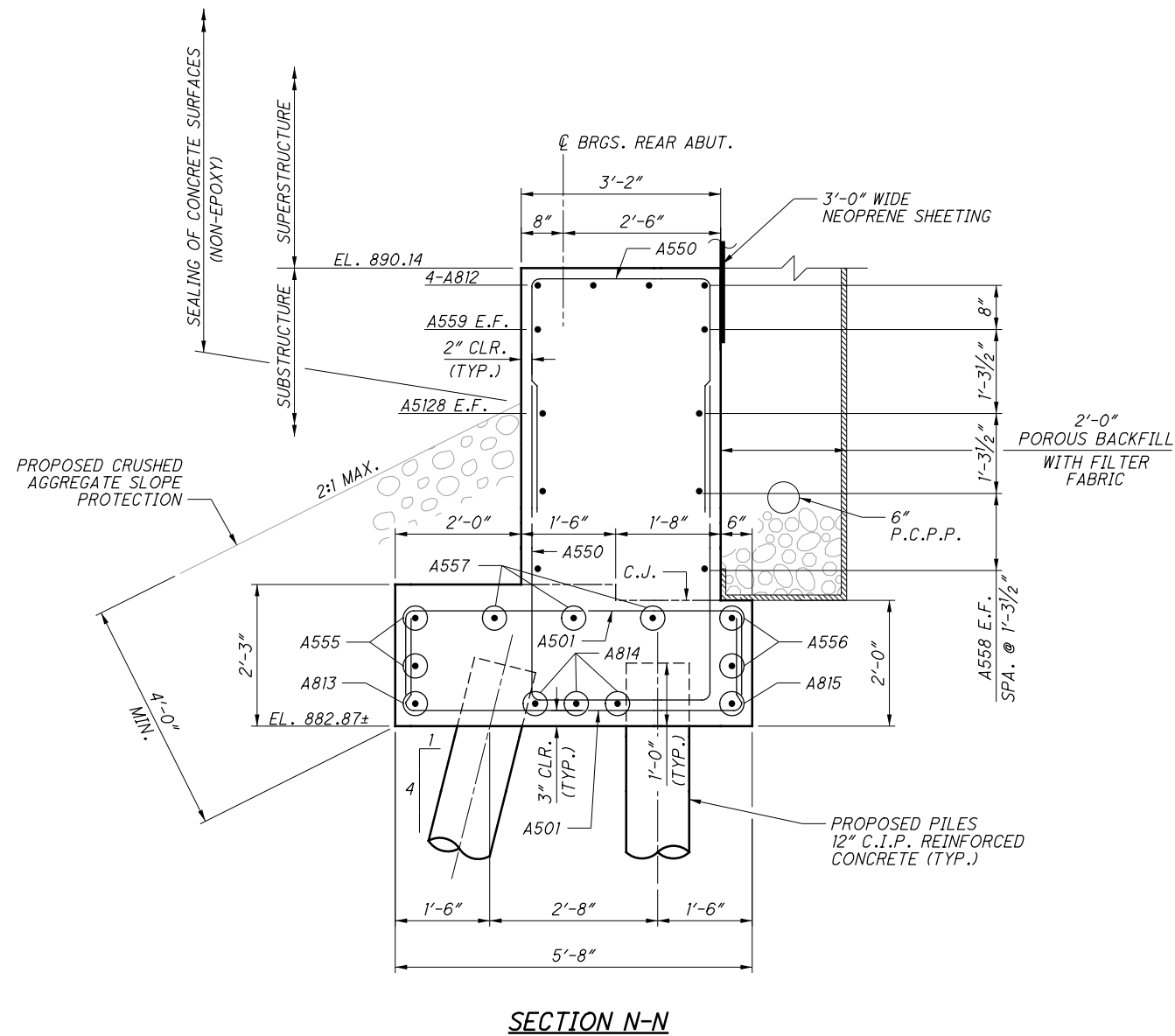
REAR ABUTMENT PLAN - NORTHBOUND



REAR ABUTMENT ELEVATION - NORTHBOUND

- (A) - A555 F.F., A557 BETWEEN PILES & A556 B.F.
- (B) - A555 F.F., A556 B.F.
- (C) - A813 F.F., A814 BETWEEN PILES & A815 B.F.

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NOTES:

1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 33/80.
2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 44/80.

FRA-71-0.00
PID No. 107201

34/80

1227
1312

REAR ABUTMENT DETAILS - NORTHBOUND BRIDGE

BRIDGE NO. FRA-71-0308 L/R
OVER US ROUTE 62

DESIGNED
LYH/RLC

DRAWN
DJC

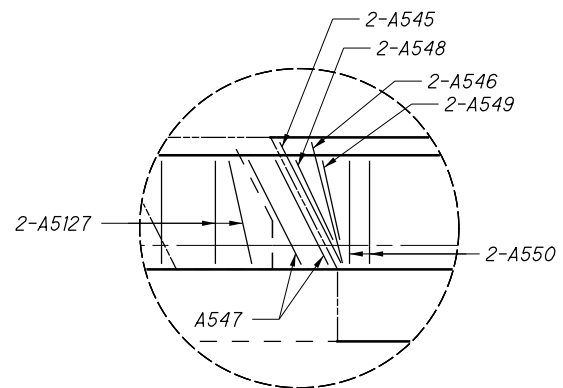
REVIEWED
KVB

DATE
8/9/2016

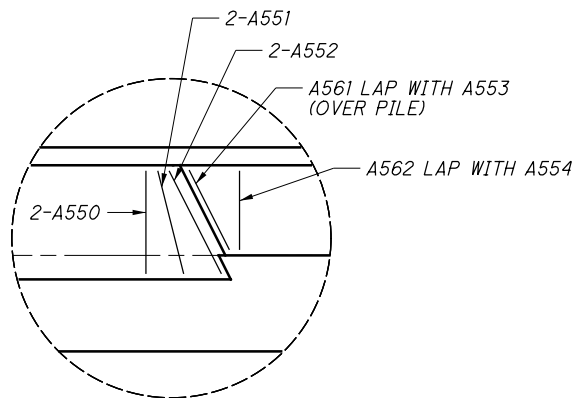
DESIGN AGENCY
Mead & Hunt

4700 LAKEHURST CT. STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

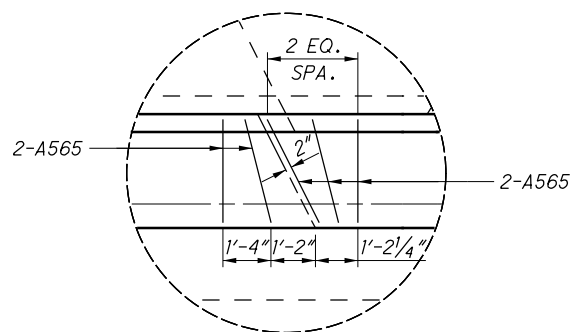
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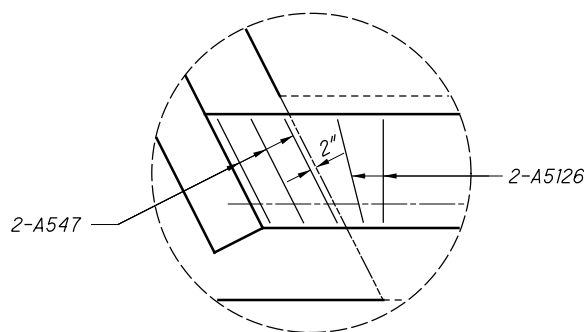
DETAIL 7



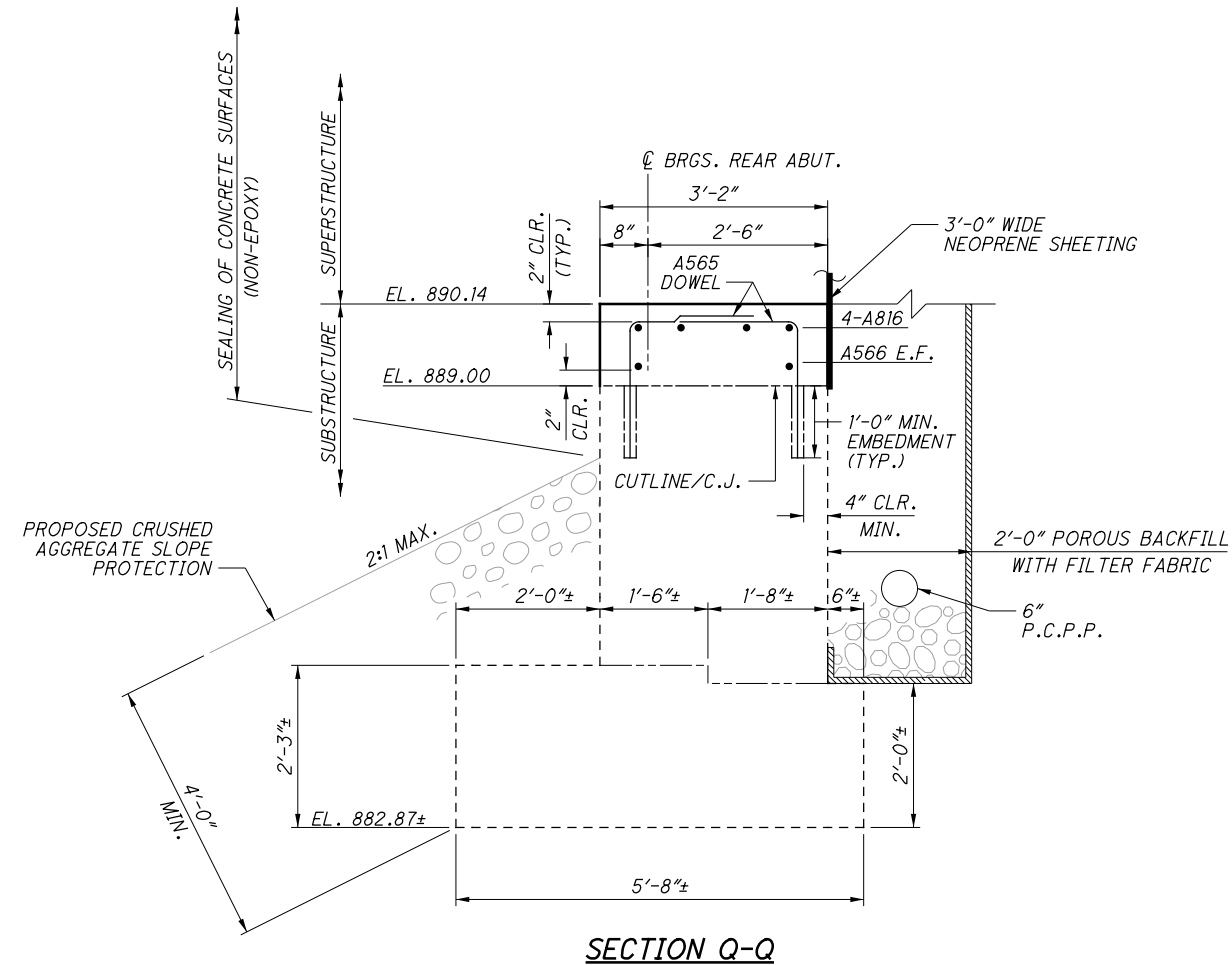
DETAIL 8



DETAIL 9



DETAIL 10



SECTION Q-Q

NOTE:

1. FOR NOTES, SEE SHEET 34/80.

FRA-71-0.00
PID No. 107201

REAR ABUTMENT DETAILS - NORTHBOUND BRIDGE

BRIDGE NO. FRA-71-0308 L/R
OVER US ROUTE 62

DESIGNED
L YH/RLC

CHECKED
CMH

DRAWN
DJC

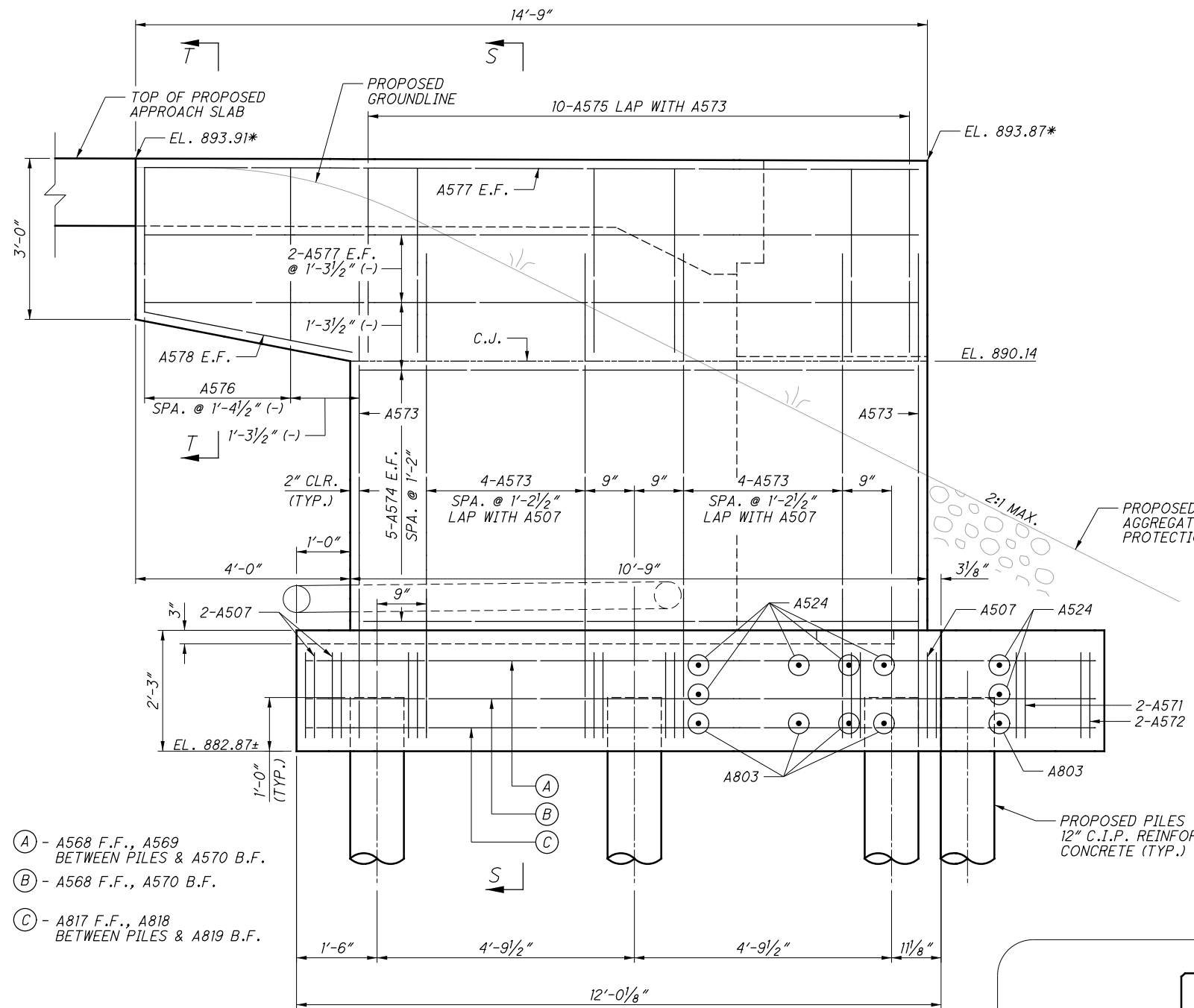
REVIEWED
KVB

DATE
8/9/2016

STRUCTURE FILE NUMBER
25069631/2506998R

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT. STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

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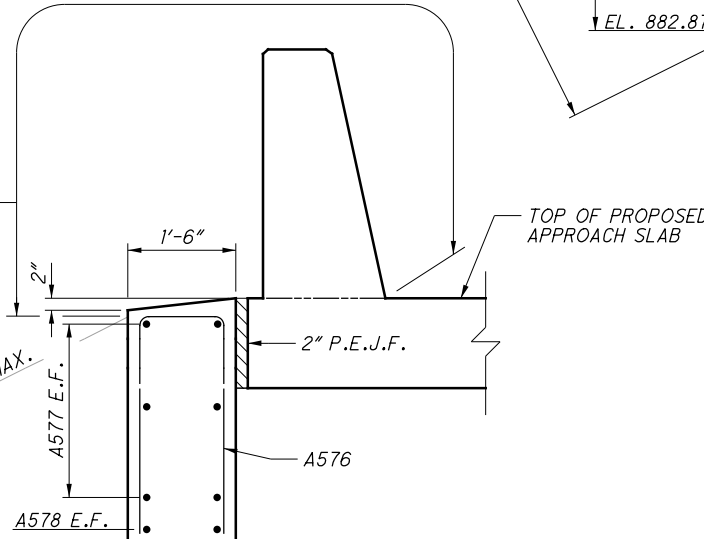


- (A) - A568 F.F., A569 BETWEEN PILES & A570 B.F.
- (B) - A568 F.F., A570 B.F.
- (C) - A817 F.F., A818 BETWEEN PILES & A819 B.F.

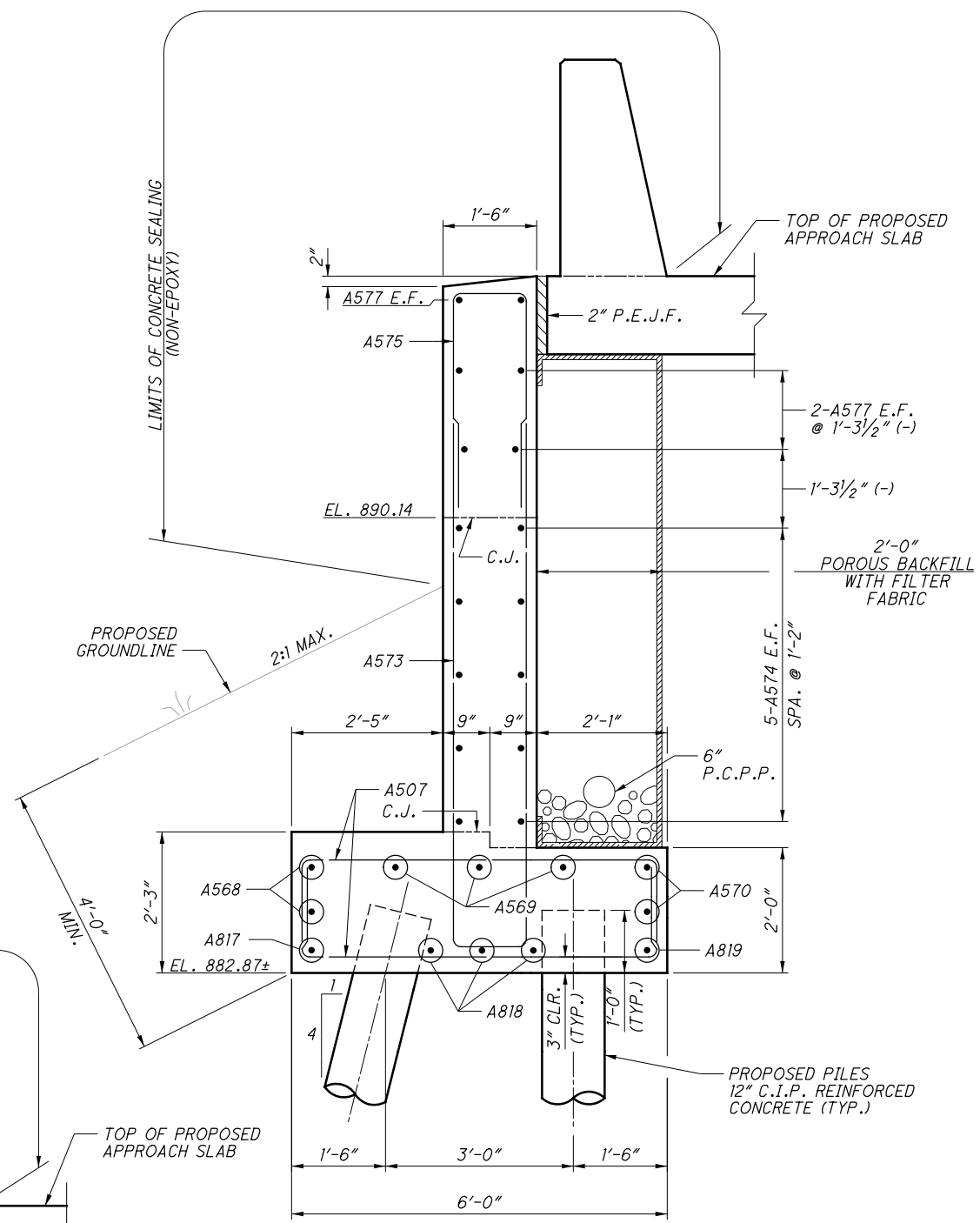
VIEW R-R

SEALING OF CONCRETE SURFACES (NON-EPOXY)

PROPOSED GROUNDLINE 2:1 MAX.



SECTION T-T



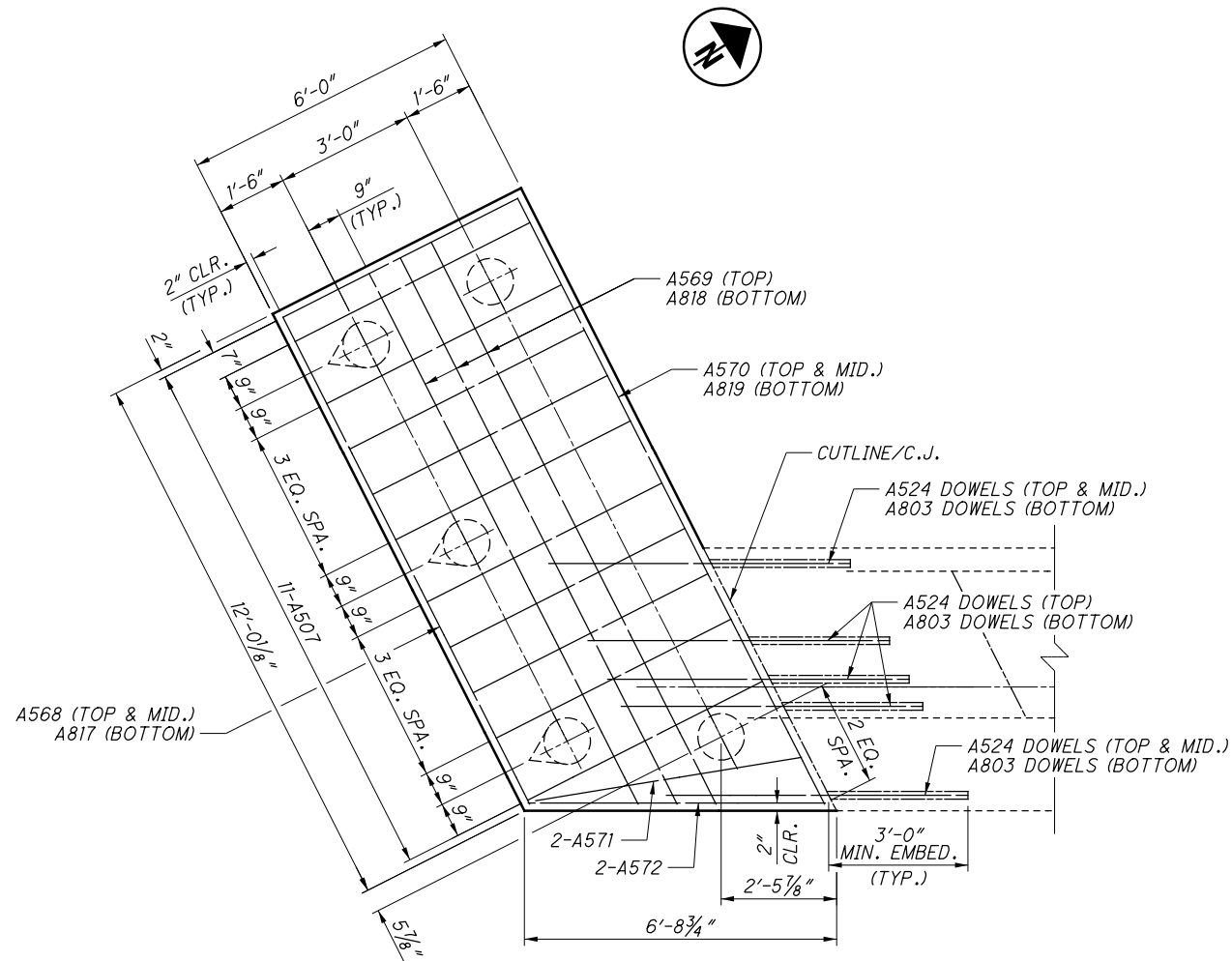
SECTION S-S

NOTE:
1. FOR NOTES, SEE SHEET 34/80.

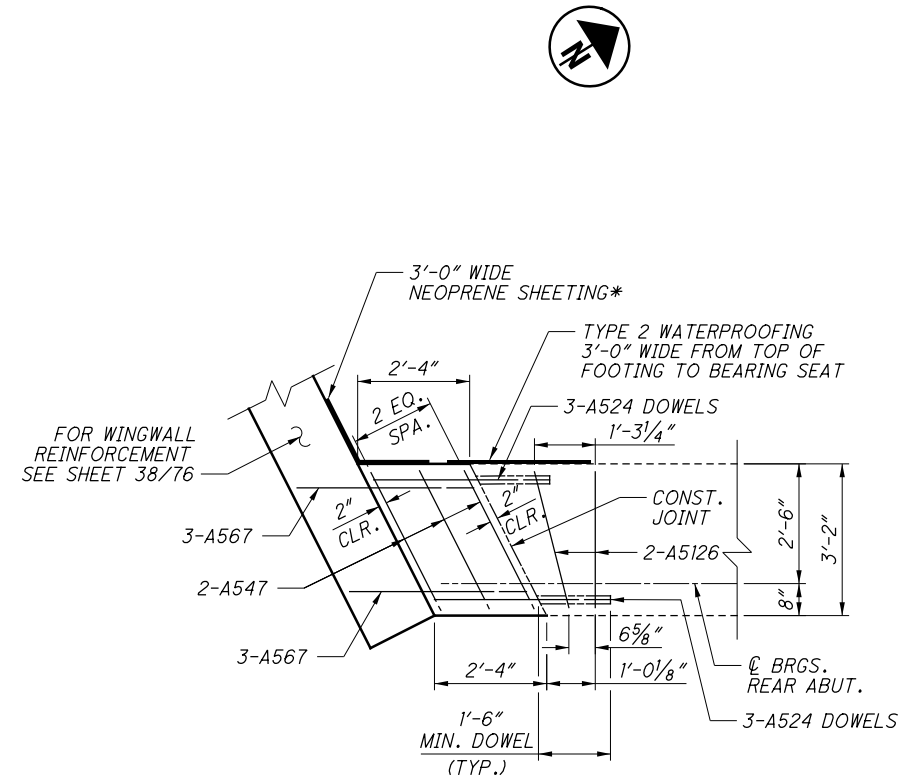
LEGEND:
* - ELEVATION GIVEN AT BACK FACE OF WINGWALL

FRA-71-0.00	BRIDGE NO. FRA-71-0308 L/R	REAR ABUTMENT DETAILS - NORTHBOUND BRIDGE	DESIGN AGENCY Mead & Hunt
PID No. 107201	OVER US ROUTE 62	DATE 8/9/2016	REVIEWED KVB
36/80	1229	DRAWN DJC	STRUCTURE FILE NUMBER 25069631/2506998R
1312	1229	CHECKED CMH	PHONE (614) 782-5900

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FOOTING PLAN - TURNBACK CORNER

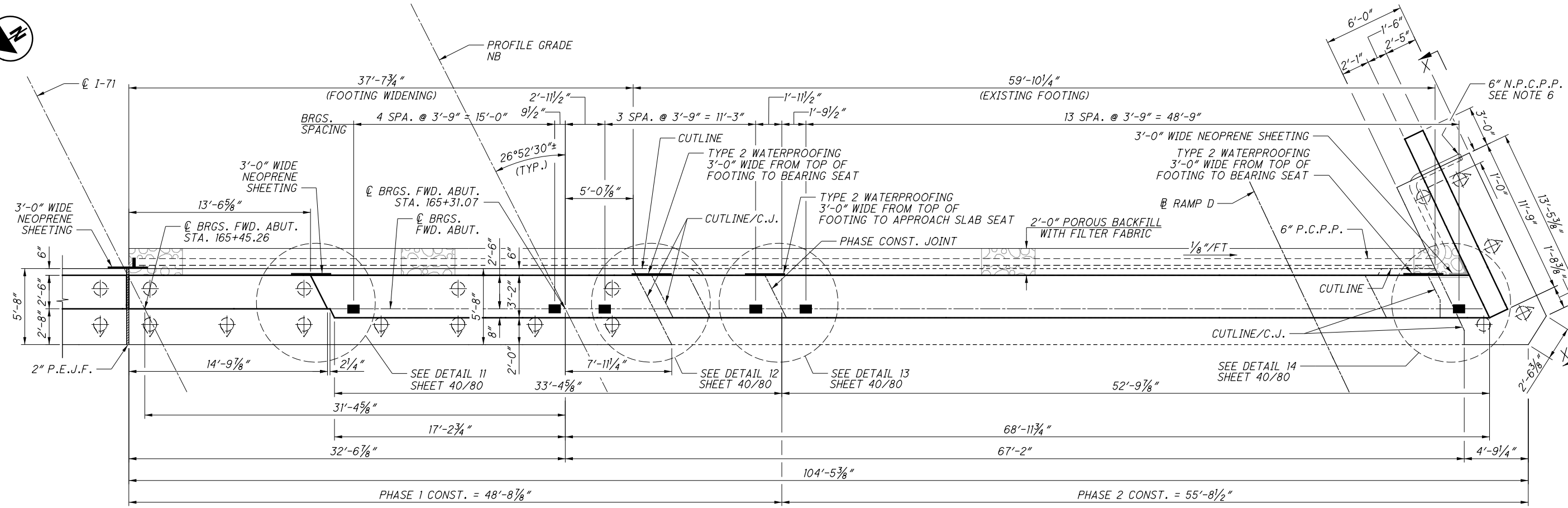


ABUTMENT SEAT PLAN - TURNBACK CORNER
BREASTWALL BELOW CONSTRUCTION JOINT

NOTE:
1. FOR NOTES, SEE SHEET 34/80.

LEGEND:
○ - PROPOSED VERTICAL PILE
◊ - PROPOSED BATTERED PILE (4:1)
* - FROM 1'-6" BELOW BEARING SEAT TO APPROACH SLAB BOTTOM.

FRA-71-0.00 PID No. 107201	REAR ABUTMENT DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	DESIGNED LYH/RLC	DRAWN DJC	REVIEWED KVB	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		CHECKED CMH	REVISED	STRUCTURE FILE NUMBER 25069631/2506998R	FILE NUMBER 25069631/2506998R	37/80 1230 1312



FORWARD ABUTMENT PLAN - NORTHBOUND

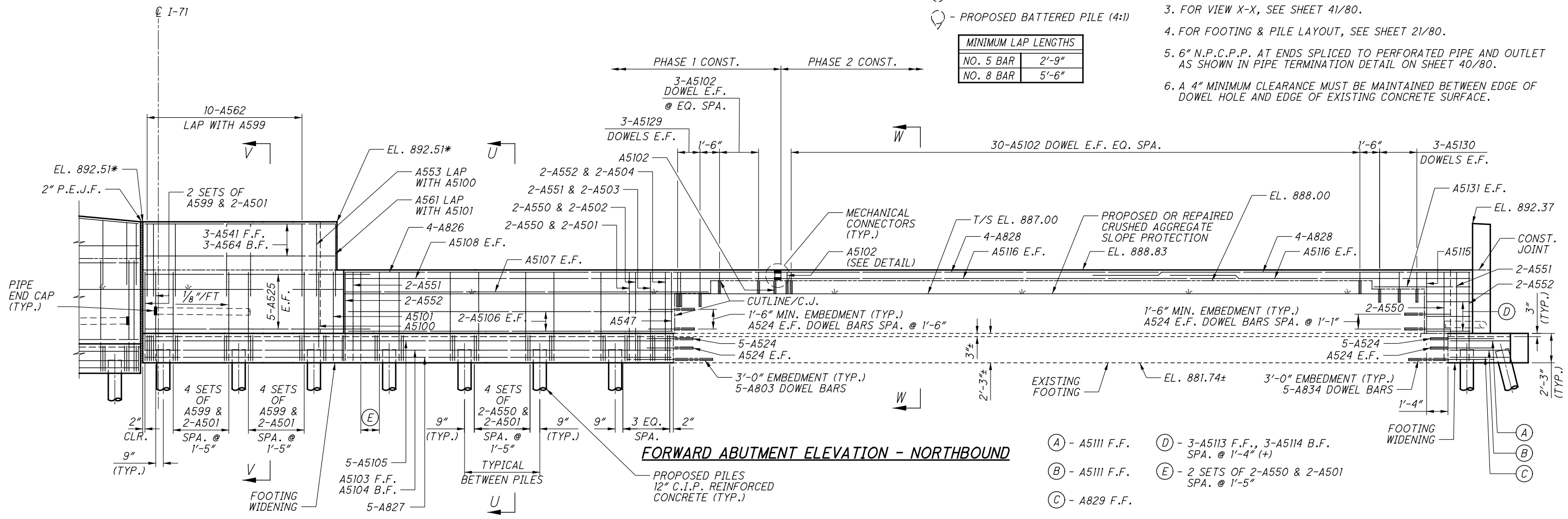
LEGEND:

- * - ELEVATION GIVEN AT BACK FACE OF WINGWALL
- - PROPOSED VERTICAL PILE
- - PROPOSED BATTERED PILE (4:1)

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 8 BAR	5'-6"

NOTES:

1. FOR SECTIONS U-U & V-V, SEE SHEET 39/80.
2. FOR SECTION W-W & DETAILS 11 THRU 14, SEE SHEET 40/80.
3. FOR VIEW X-X, SEE SHEET 41/80.
4. FOR FOOTING & PILE LAYOUT, SEE SHEET 21/80.
5. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 40/80.
6. A 4" MINIMUM CLEARANCE MUST BE MAINTAINED BETWEEN EDGE OF DOWEL HOLE AND EDGE OF EXISTING CONCRETE SURFACE.



FORWARD ABUTMENT ELEVATION - NORTHBOUND

- (A) - A5111 F.F.
- (B) - A5111 F.F.
- (C) - A829 F.F.
- (D) - 3-A5113 F.F., 3-A5114 B.F. SPA. @ 1'-4" (+)
- (E) - 2 SETS OF 2-A550 & 2-A501 SPA. @ 1'-5"

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DESIGN AGENCY

Mead & Hunt

4700 LAKEHURST CT, STE 110
DUBLIN, OH 43068

PHONE (614) 782-5900

DATE

8/9/2016

DRAWN

D.J.C.

REVIEWED

K.V.B.

DESIGNED

R.L.C.

CHECKED

C.M.H.

STRUCTURE FILE NUMBER

25069631/2506998R

BRIDGE NO. FRA-71-0308 L/R

OVER US ROUTE 62

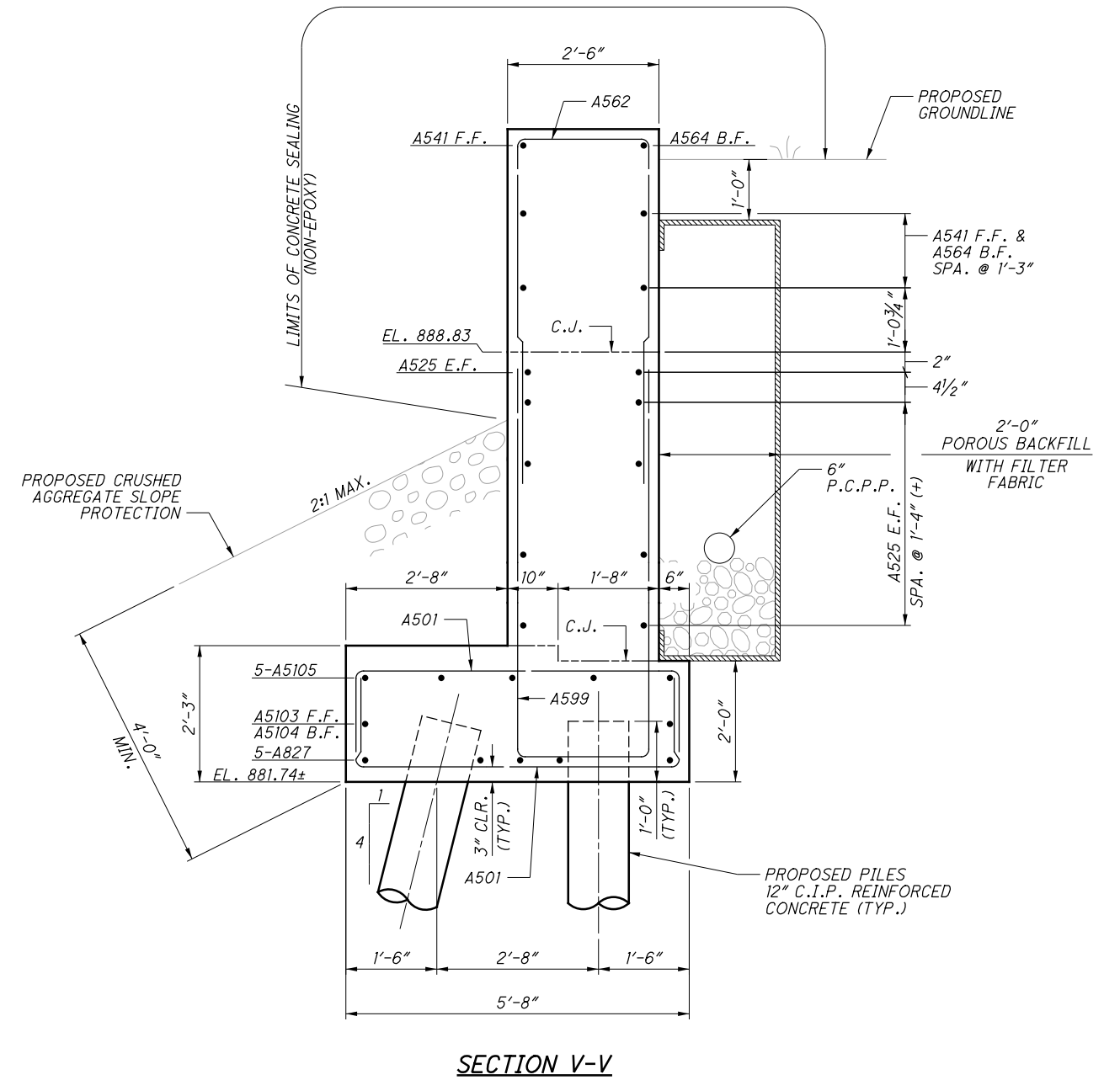
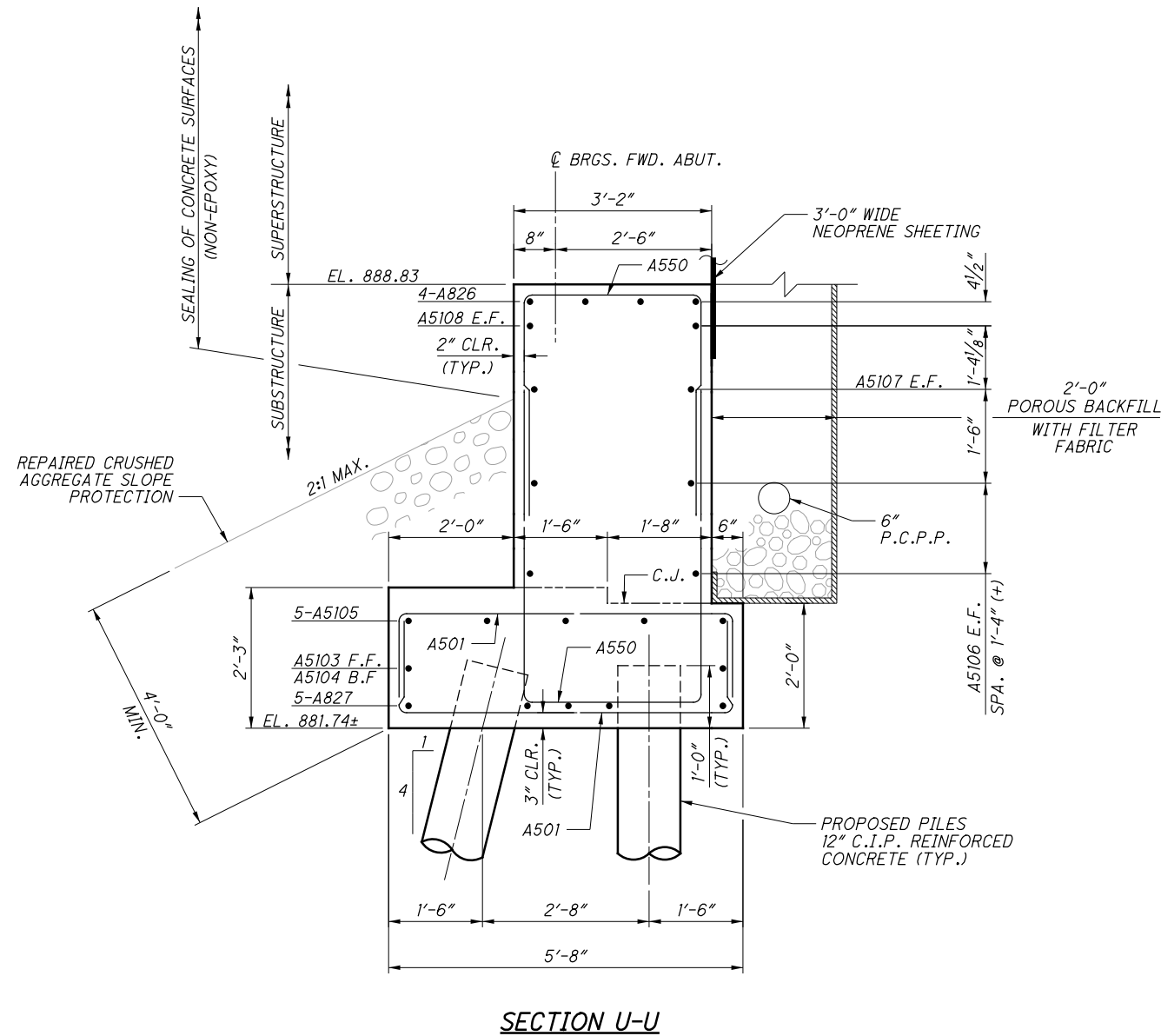
FORWARD ABUTMENT DETAILS - NORTHBOUND BRIDGE

PID No. 107201

38/80

1231
1312

X:\4037000\21957.16\107201\structures\FRA071_0308C\sheets\071_0308CAF006.dgn Sheet 10/28/2019 11:55:52 AM 1458sjs

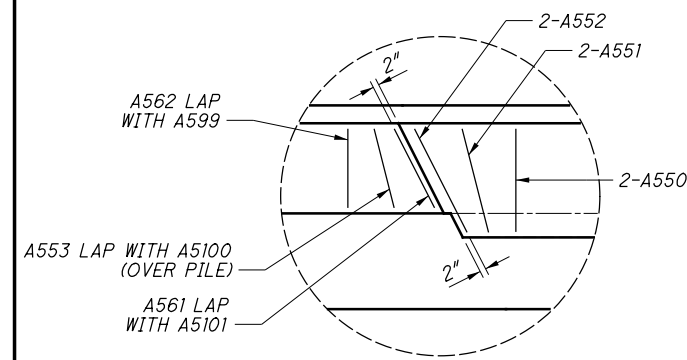


NOTES:

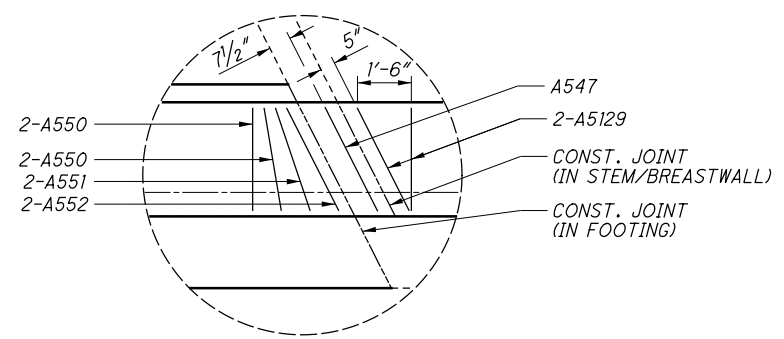
1. FOR ABUTMENT PLAN AND ELEVATIONS, SEE SHEET 38/80.
2. FOR NEOPRENE SHEETING AND DIAPHRAGM ABOVE THE ABUTMENT SECTION, SEE SHEET 44/80.

FRA-71-0.00 PID No. 107201	FORWARD ABUTMENT DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62		DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
	DESIGNED L YH/RLC	CHECKED CMH	DRAWN DJC
39 / 80	1232 1312	DATE 8/9/2016	REVIEWED KVB
		STRUCTURE FILE NUMBER 25069631/2506998R	

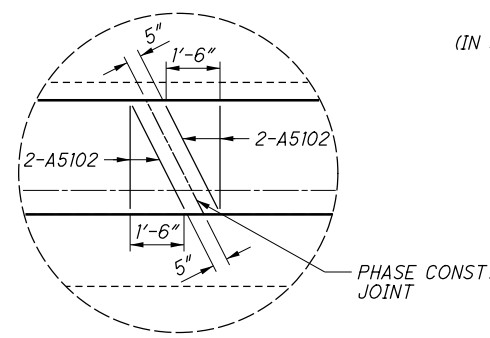
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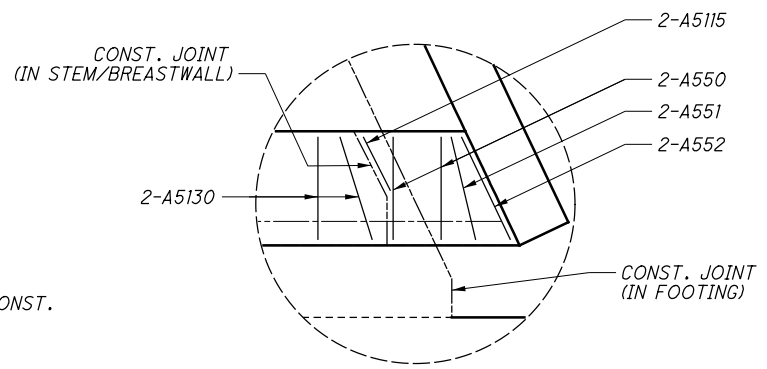
DETAIL 11



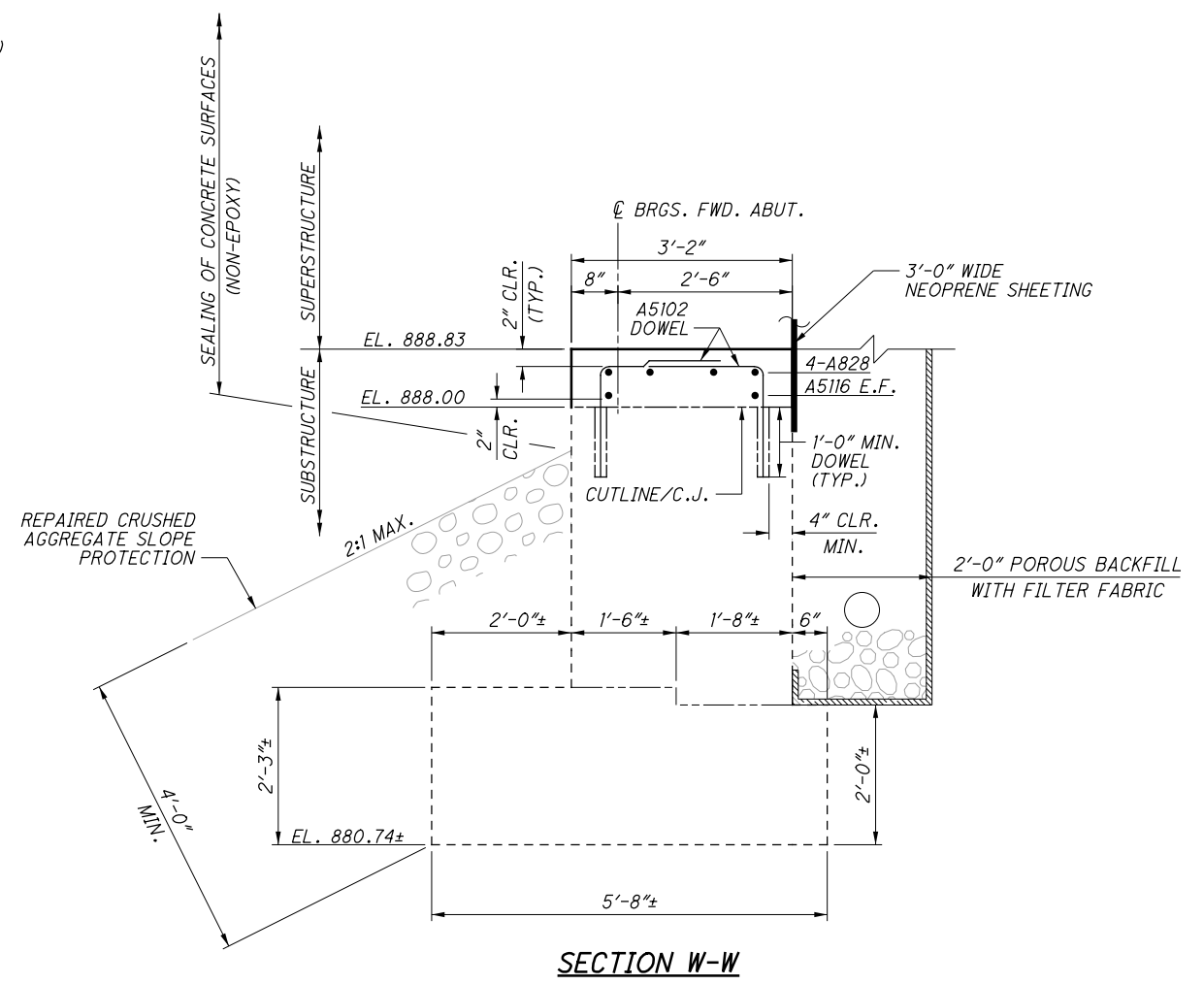
DETAIL 12



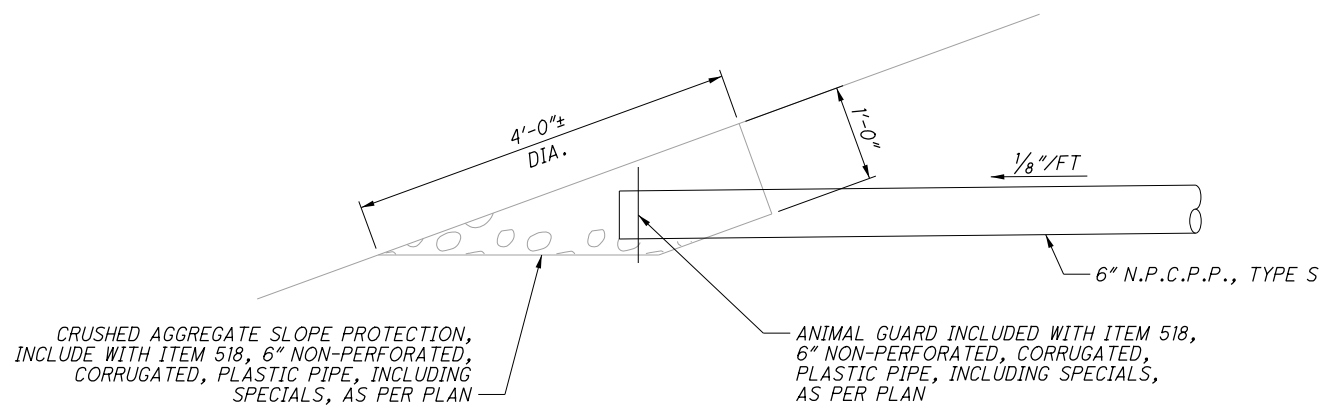
DETAIL 13



DETAIL 14



SECTION W-W

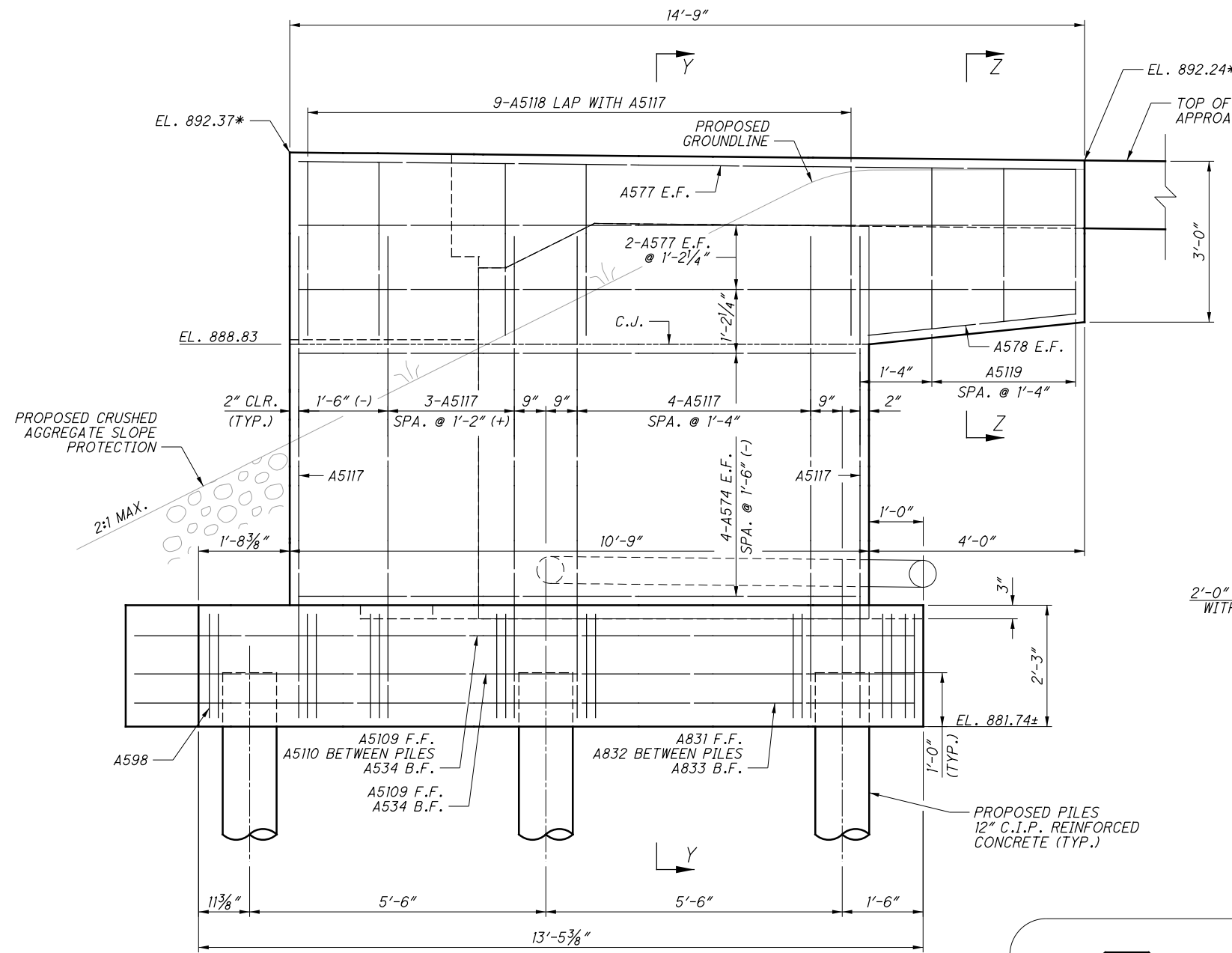


TERMINATION OF 6" N.P.C.P.P. DETAIL

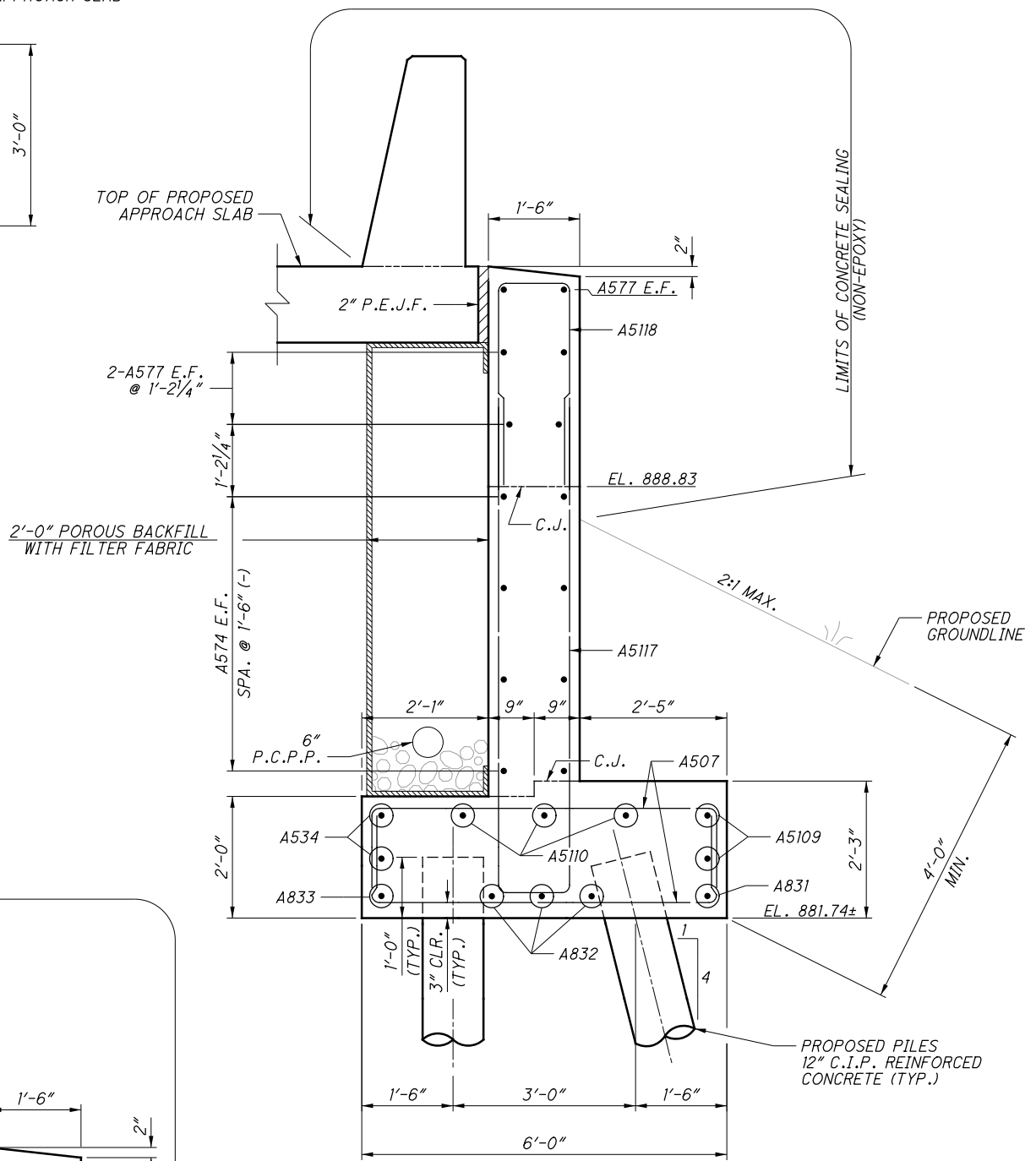
NOTE:
1. FOR NOTES, SEE SHEET 39/80.

DESIGNED L.YH./R.L.C. CHECKED C.M.H.	DRAWN D.J.C. REVISED	REVIEWED K.V.B.	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
FORWARD ABUTMENT DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62				
FRA-71-0.00 PID No. 107201				
40/80				
1233 1312				

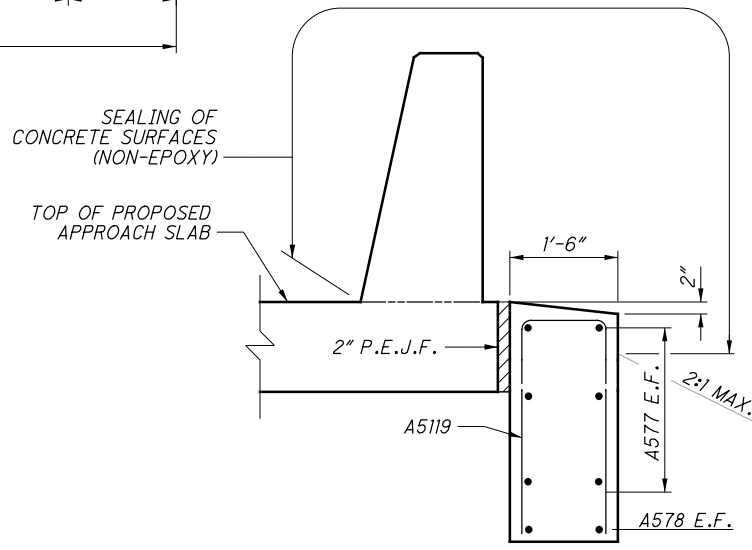
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VIEW X-X



SECTION Y-Y



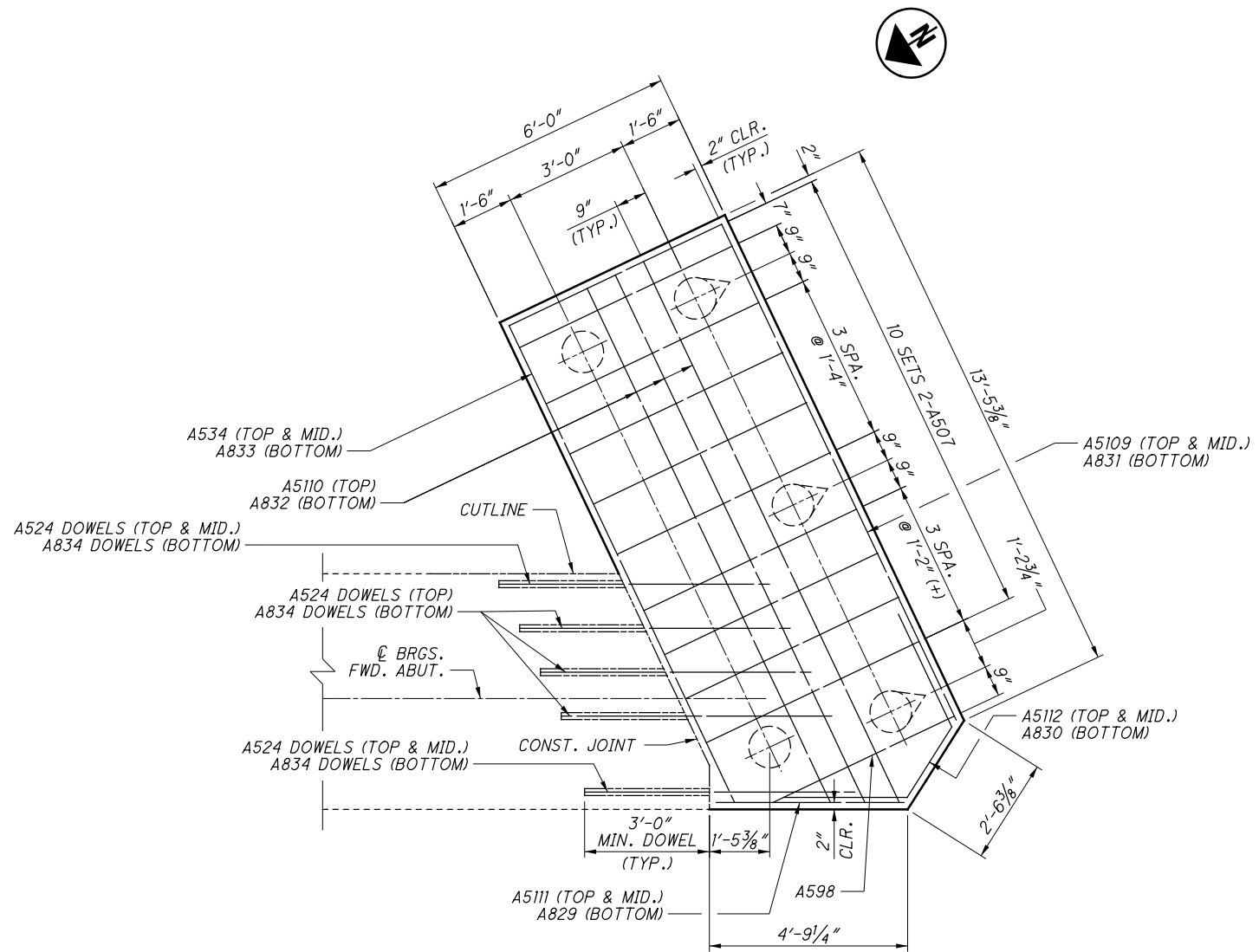
SECTION Z-Z

NOTE:
1. FOR NOTES, SEE SHEET 39/78.

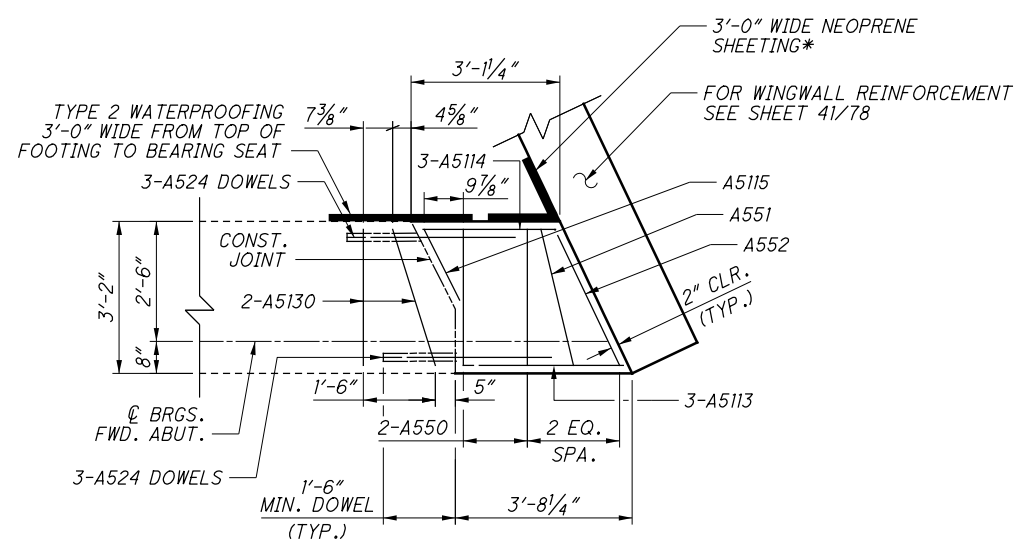
LEGEND:
* - ELEVATION GIVEN AT BACK FACE OF WINGWALL

DESIGNED LYH/RLC	CHECKED CMH	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
		REVIEWED KVB	
DRAWN DJC		BRIDGE NO. FRA-71-0308 L/R	
REVISED		OVER US ROUTE 62	
FORWARD ABUTMENT DETAILS - NORTHBOUND BRIDGE			
PID No. 107201		FRA-71-0.00	
41/80		1234 1312	

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FOOTING PLAN - TURNBACK CORNER



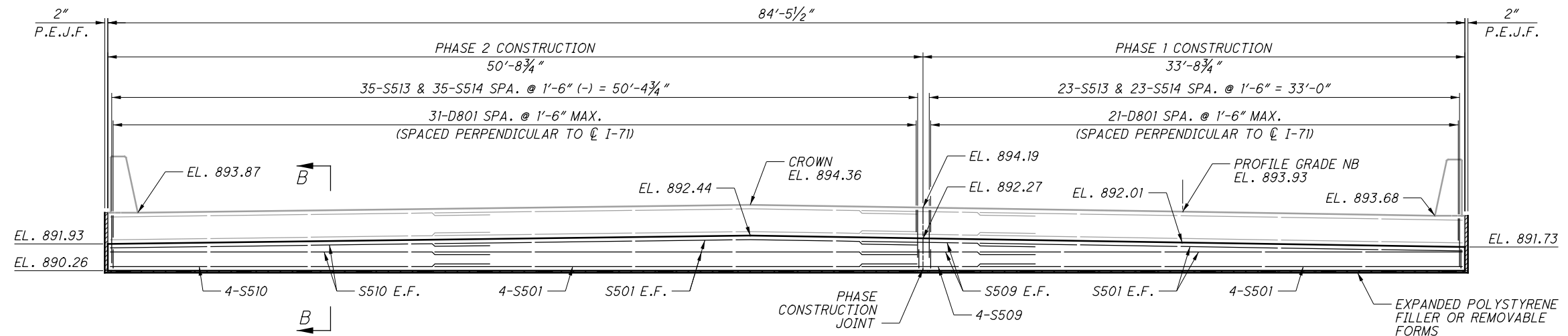
ABUTMENT SEAT PLAN - TURNBACK CORNER
BREASTWALL BELOW CONSTRUCTION JOINT

NOTE:
1. FOR NOTES, SEE SHEET 39/80.

LEGEND:
 - PROPOSED VERTICAL PILE
 - PROPOSED BATTERED PILE (4:1)
 * - FROM 1'-6" BELOW BEARING SEAT TO APPROACH SLAB BOTTOM.

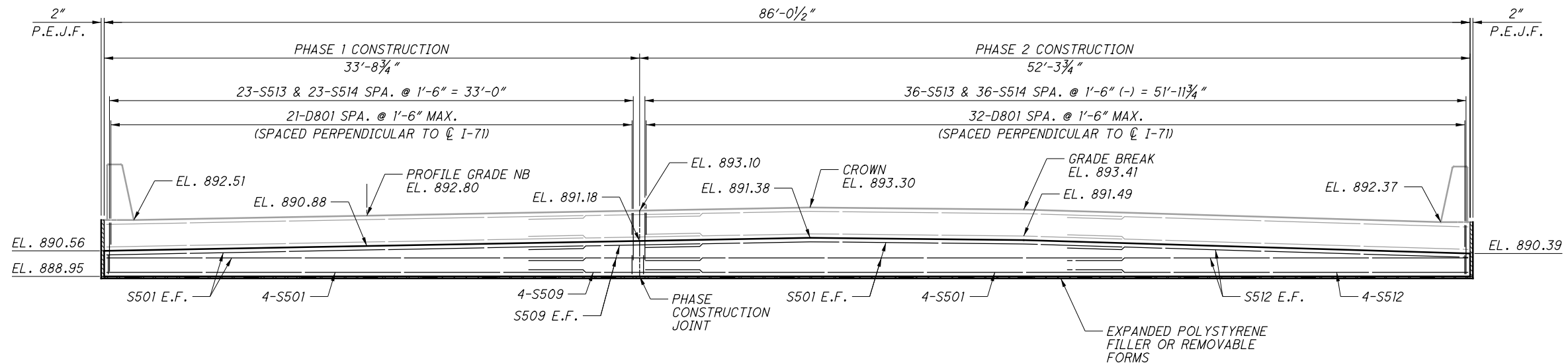
DESIGNED L.YH./R.LC CHECKED C.M.H.	DRAWN D.J.C. REVISED	REVIEWED K.V.B. STRUCTURE FILE NUMBER 25069631/2506998R	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
				FORWARD ABUTMENT DETAILS - NORTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62
FRA-71-0.00 PID No. 107201				42/80
1235 1312				

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REAR ABUTMENT DIAPHRAGM ELEVATION - NORTHBOUND

ELEVATIONS GIVEN AT C BEARING
DECK LONGITUDINAL REINFORCING NOT SHOWN FOR CLARITY



FORWARD ABUTMENT DIAPHRAGM ELEVATION - NORTHBOUND

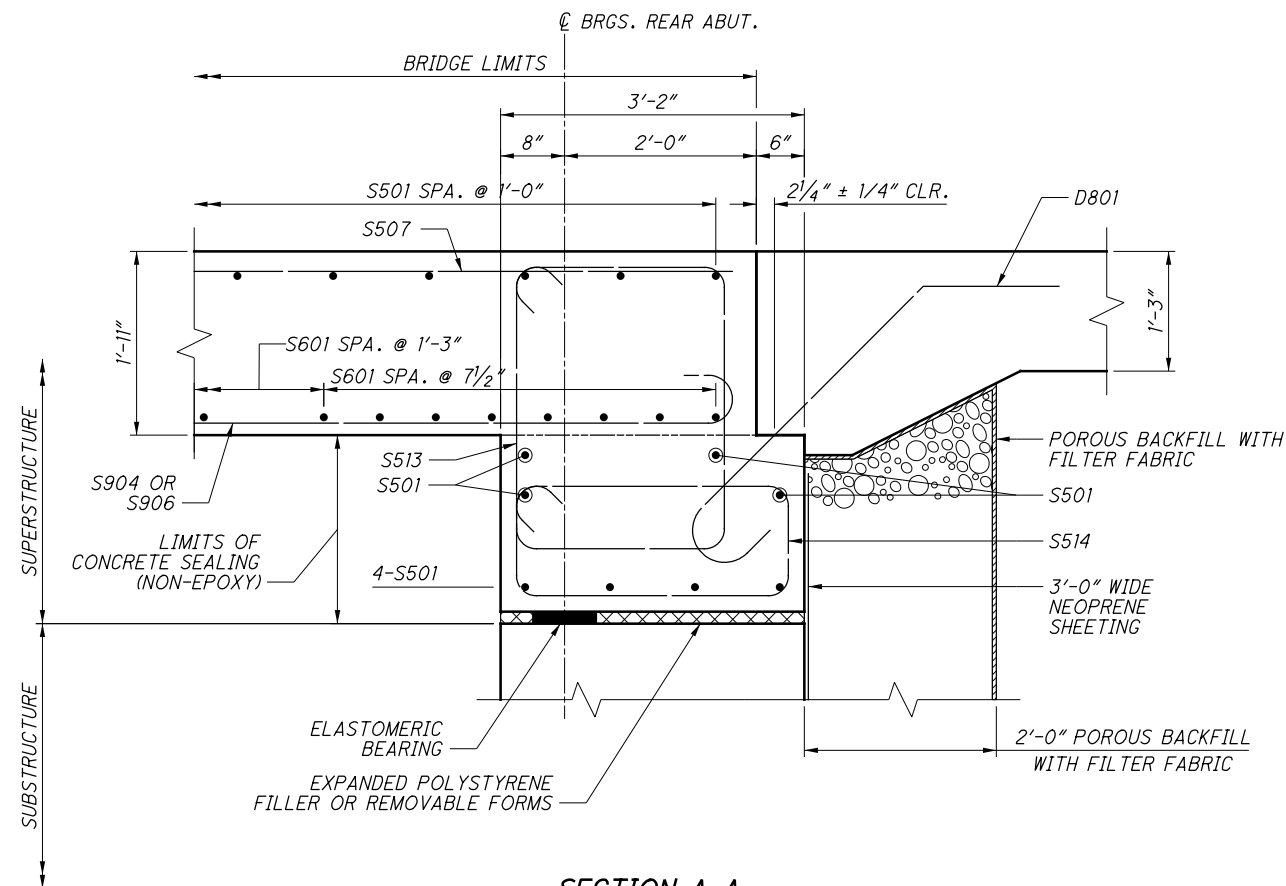
ELEVATIONS GIVEN AT C BEARING
DECK LONGITUDINAL REINFORCING NOT SHOWN FOR CLARITY

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

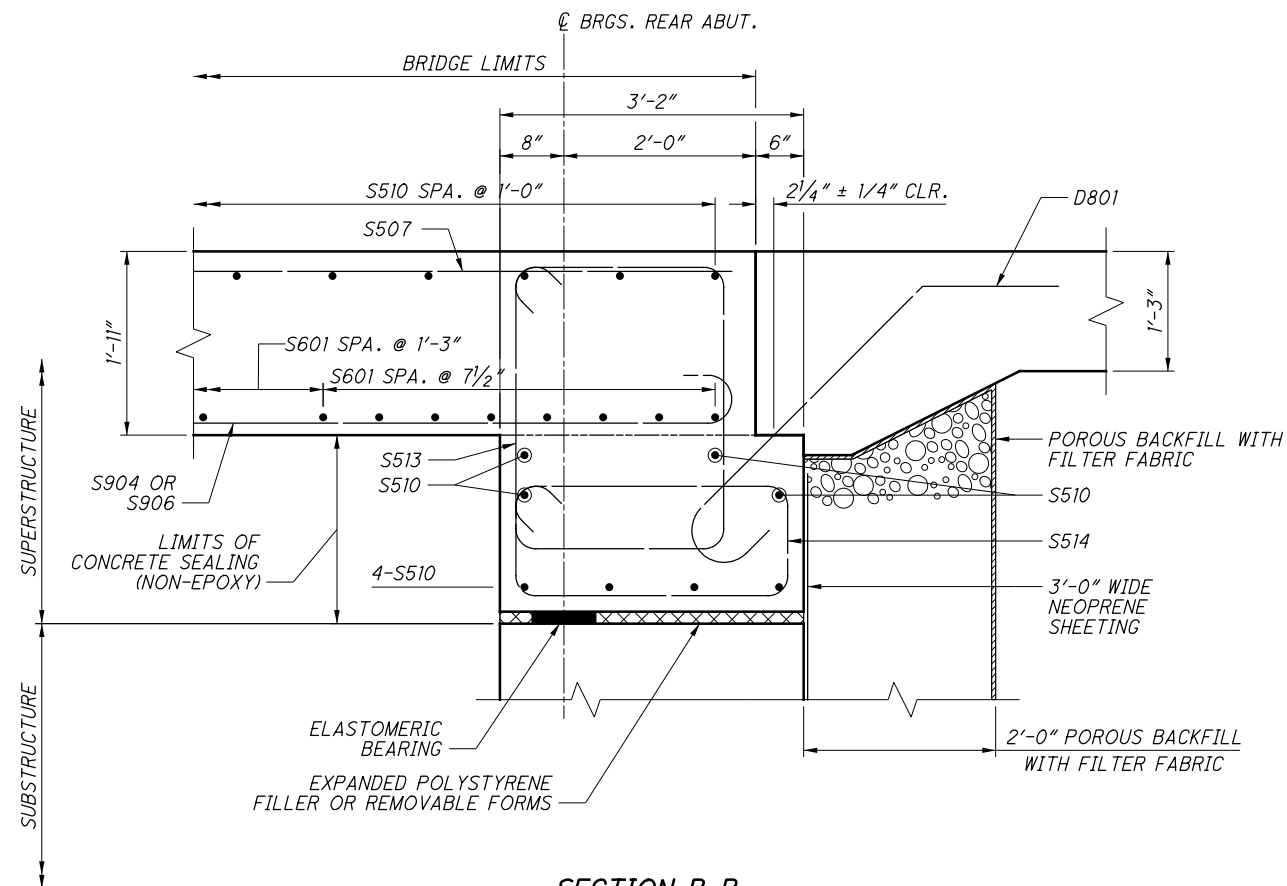
NOTES:

1. DECK REINFORCING SHOWN FOR REFERENCE PURPOSES ONLY. SEE SHEETS 60/80 THRU 64/80 FOR DECK REINFORCING INFORMATION.
2. FOR SECTION B-B, SEE SHEET 44/80.

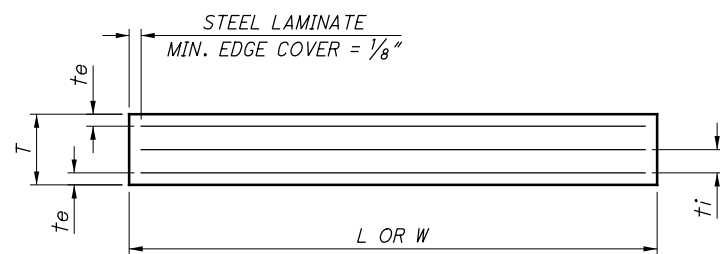
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SECTION A-A
(REBAR LABELED AT SECTION ONLY)
(FORWARD ABUTMENT SIMILAR)



SECTION B-B
(REBAR LABELED AT SECTION ONLY)
(FORWARD ABUTMENT SIMILAR)



LAMINATED ELASTOMERIC BEARING
50 DUROMETER

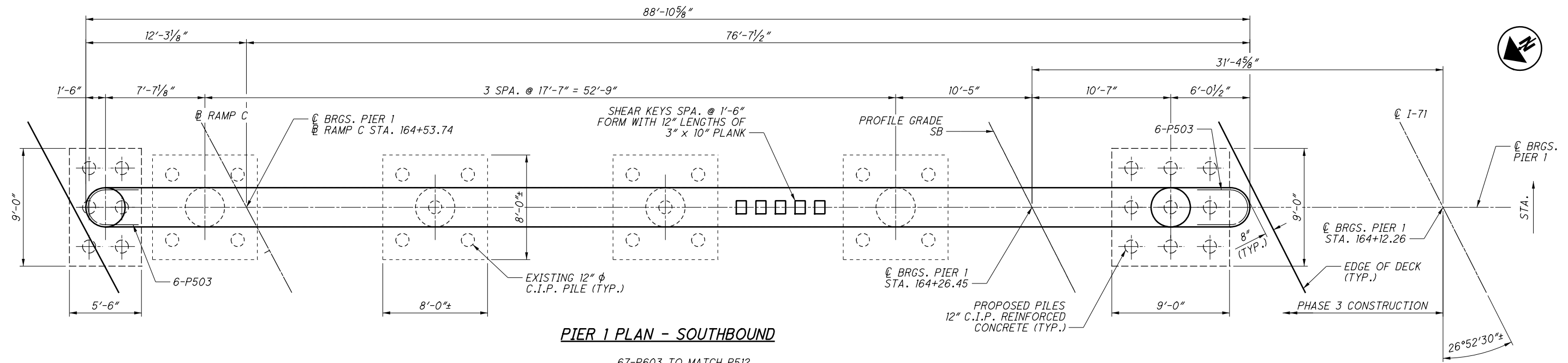
ELASTOMERIC BEARING PAD DATA										
LOCATION	BRGS. TYPE	L	W	T	N	te	ti	DESIGN LOADS (KIPS)		
								DL	LL	TOTAL
ABUTMENTS	EXPANSION	8"	11"	1.474"	3	0.25"	0.375"	22.3	25.6	47.9

ti - THICKNESS OF INTERNAL LAYER
te - THICKNESS OF EXTERNAL LAYER
T - TOTAL THICKNESS OF ELASTOMERIC BEARING
N - NO. OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.0747"

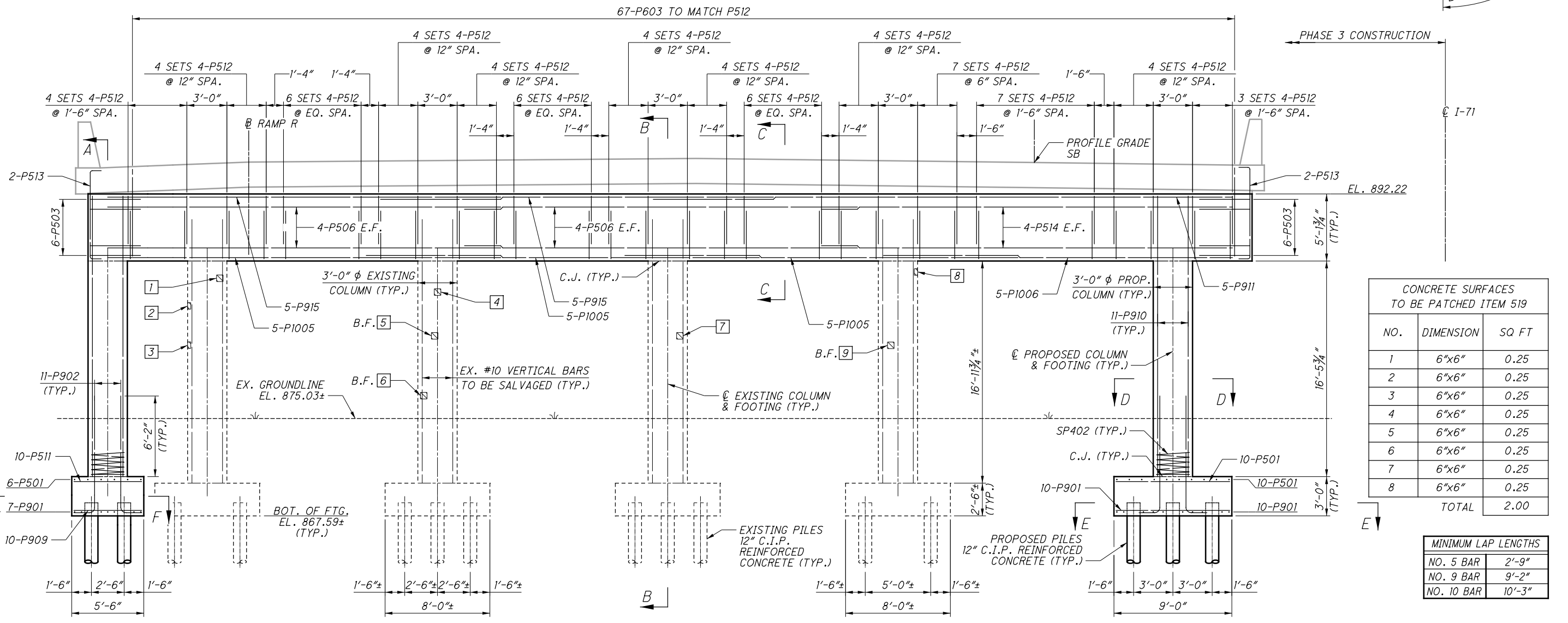
NOTES:

1. FOR SECTION A-A LOCATION, SEE SHEET 32/80.
2. FOR SECTION B-B LOCATION, SEE SHEET 43/80.
3. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

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PIER 1 PLAN - SOUTHBOUND



PIER 1 ELEVATION - SOUTHBOUND

CONCRETE SURFACES TO BE PATCHED ITEM 519		
NO.	DIMENSION	SQ FT
1	6"x6"	0.25
2	6"x6"	0.25
3	6"x6"	0.25
4	6"x6"	0.25
5	6"x6"	0.25
6	6"x6"	0.25
7	6"x6"	0.25
8	6"x6"	0.25
TOTAL		2.00

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 9 BAR	9'-2"
NO. 10 BAR	10'-3"

LEGEND:

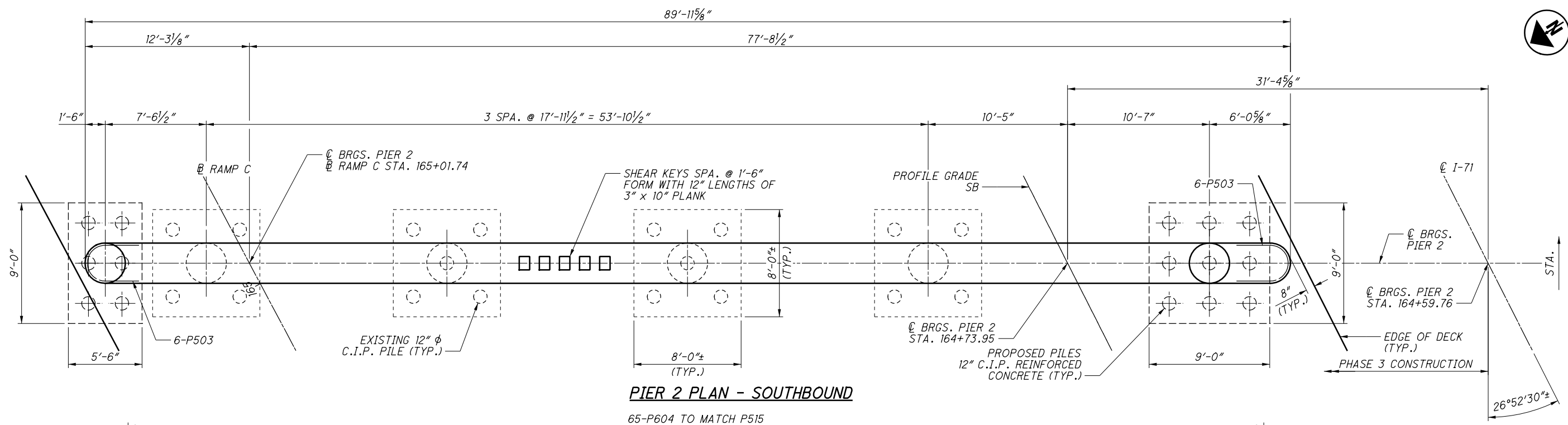
- PATCHING CONCRETE STRUCTURE PER ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

NOTE:

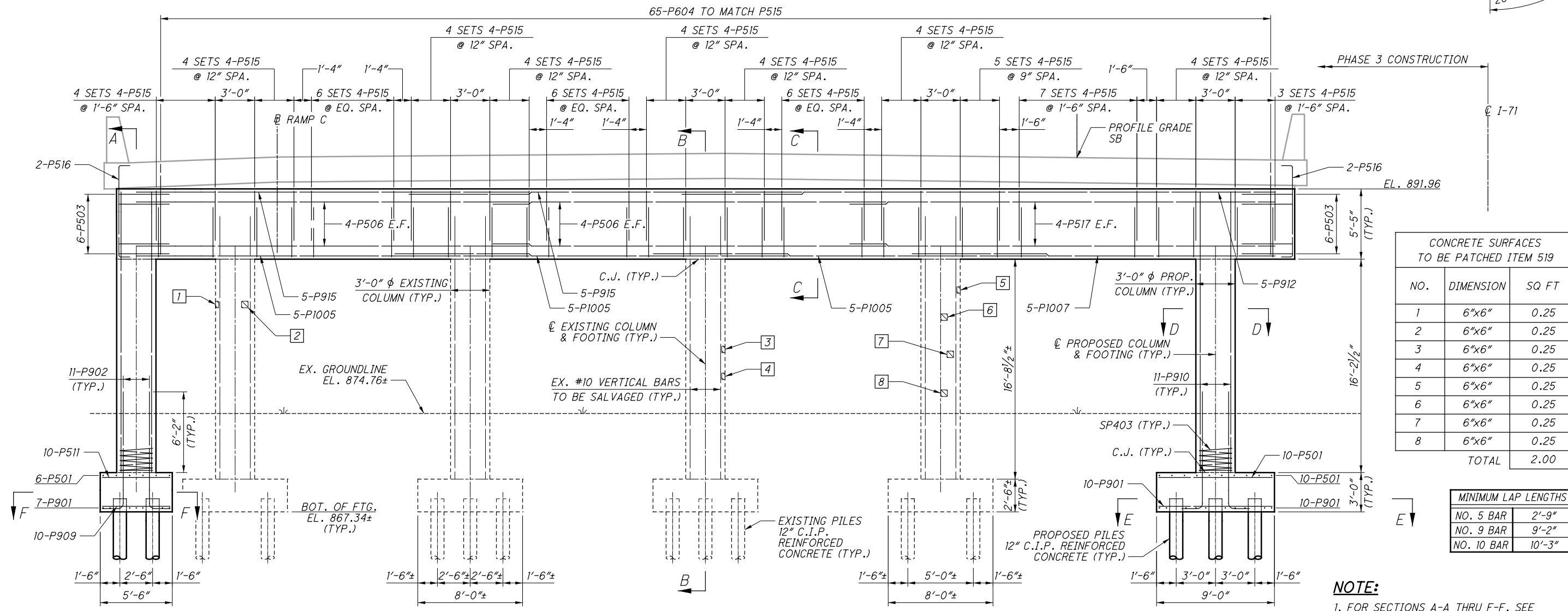
1. FOR SECTIONS A-A THRU F-F, SEE SHEET 48/80.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY SEALER EXCEPT TOP OF PIER CAP.

DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
 DATE: 8/9/2016
 REVIEWED: MAB
 DRAWN: CMH
 DESIGNED: CMH
 CHECKED: KVB
 STRUCTURE FILE NUMBER: 25069631/2506998R
PIER 1 DETAILS - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62
FRA-71-0.00
 PID No. 107201
 45/80
 1238
 1312

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PIER 2 PLAN - SOUTHBOUND



PIER 2 ELEVATION - SOUTHBOUND

CONCRETE SURFACES TO BE PATCHED ITEM 519

NO.	DIMENSION	SQ FT
1	6"x6"	0.25
2	6"x6"	0.25
3	6"x6"	0.25
4	6"x6"	0.25
5	6"x6"	0.25
6	6"x6"	0.25
7	6"x6"	0.25
8	6"x6"	0.25
TOTAL		2.00

MINIMUM LAP LENGTHS

NO. 5 BAR	2'-9"
NO. 9 BAR	9'-2"
NO. 10 BAR	10'-3"

LEGEND:

- PATCHING CONCRETE STRUCTURE PER ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

- NOTE:**
- FOR SECTIONS A-A THRU F-F, SEE SHEET 48/80.
 - SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY SEALER EXCEPT TOP OF PIER CAP.

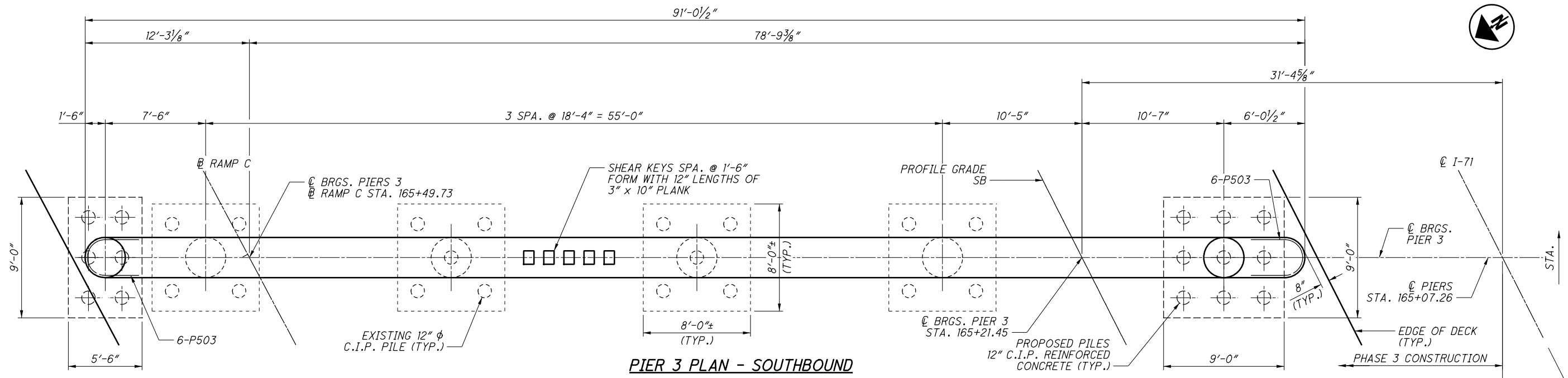
DESIGN AGENCY: Mead & Hunt
 4700 LAKELINE CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE: 8/9/2016
 REVIEWED: MAB
 DRAWN: CMH
 DESIGNED: CMH
 CHECKED: KVB

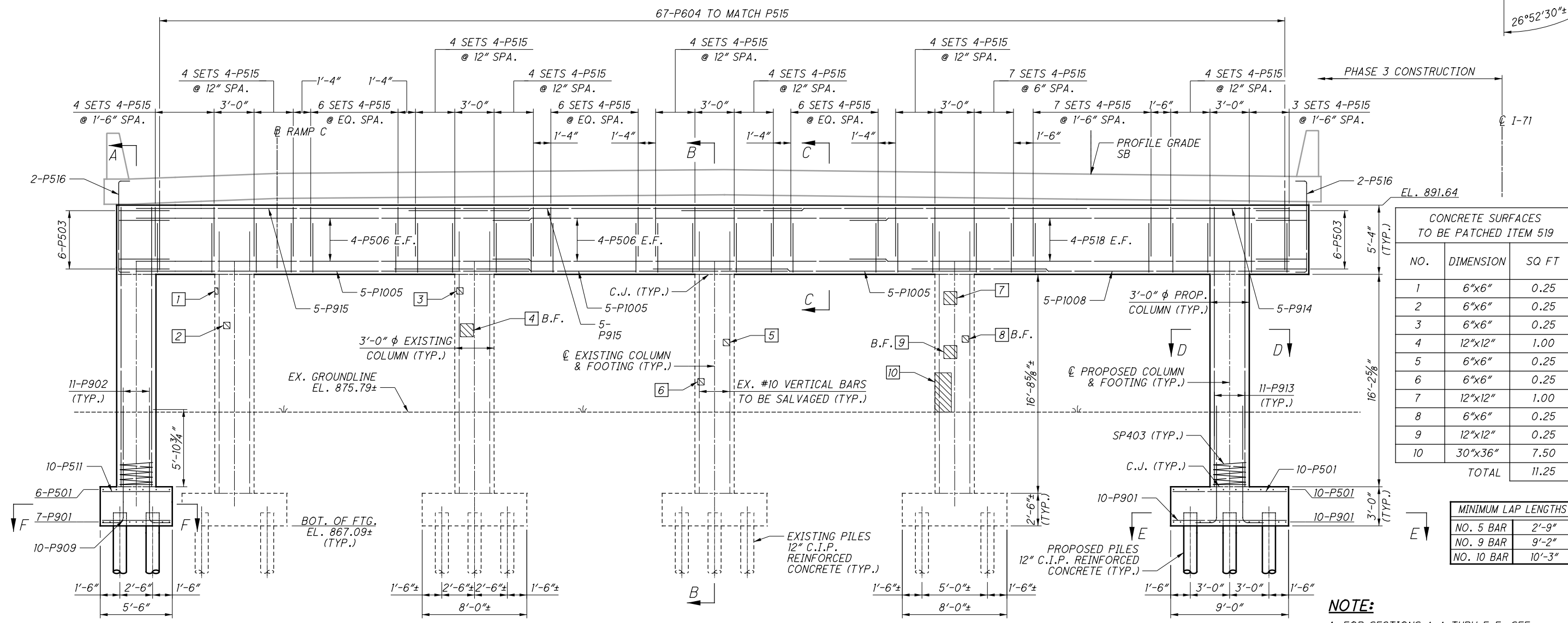
BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0.00
PIER 2 DETAILS - SOUTHBOUND BRIDGE
 PID No. 107201

46/80
 1239
 1312



PIER 3 PLAN - SOUTHBOUND



PIER 3 ELEVATION - SOUTHBOUND

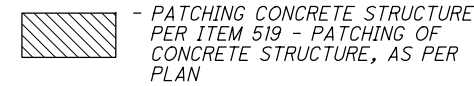
CONCRETE SURFACES TO BE PATCHED ITEM 519

NO.	DIMENSION	SQ FT
1	6"x6"	0.25
2	6"x6"	0.25
3	6"x6"	0.25
4	12"x12"	1.00
5	6"x6"	0.25
6	6"x6"	0.25
7	12"x12"	1.00
8	6"x6"	0.25
9	12"x12"	0.25
10	30"x36"	7.50
TOTAL		11.25

MINIMUM LAP LENGTHS

NO. 5 BAR	2'-9"
NO. 9 BAR	9'-2"
NO. 10 BAR	10'-3"

LEGEND:



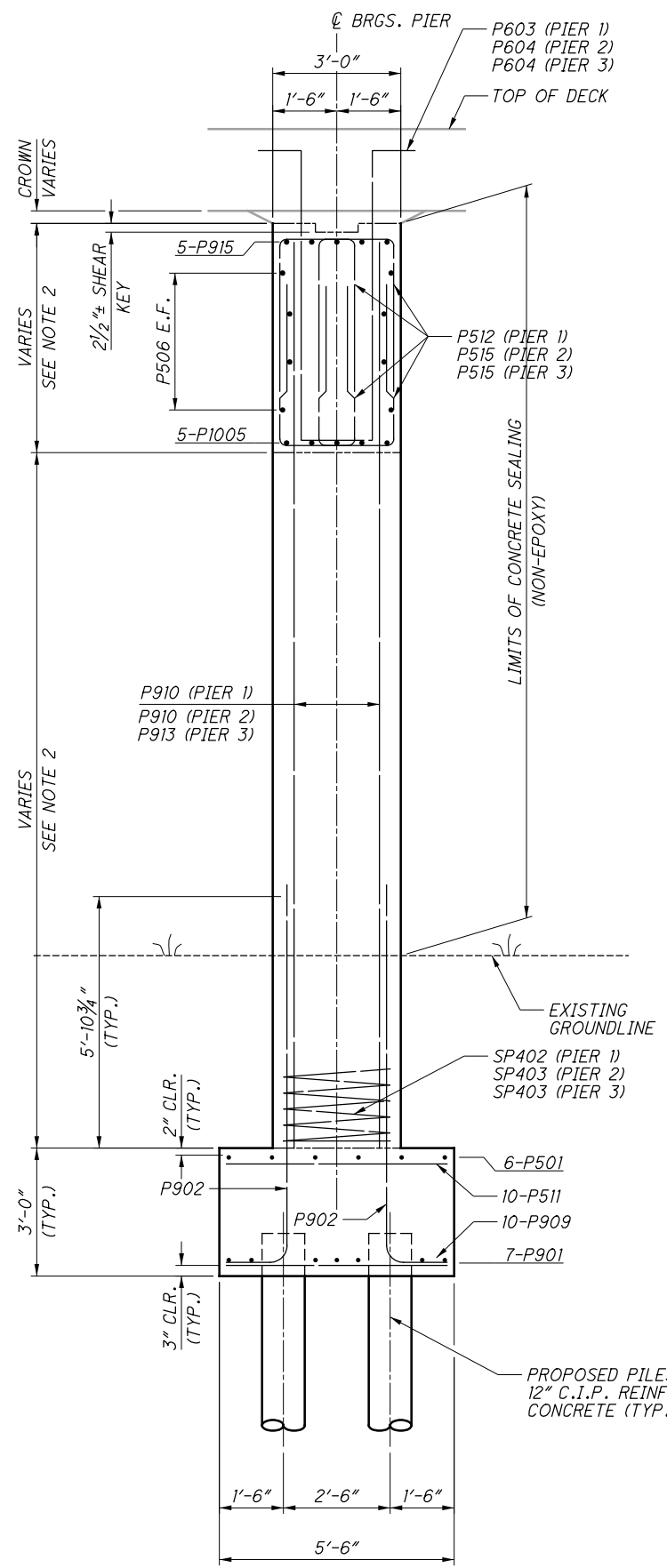
NOTE:

- FOR SECTIONS A-A THRU F-F, SEE SHEET 48/80.
- SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY SEALER EXCEPT TOP OF PIER CAP.

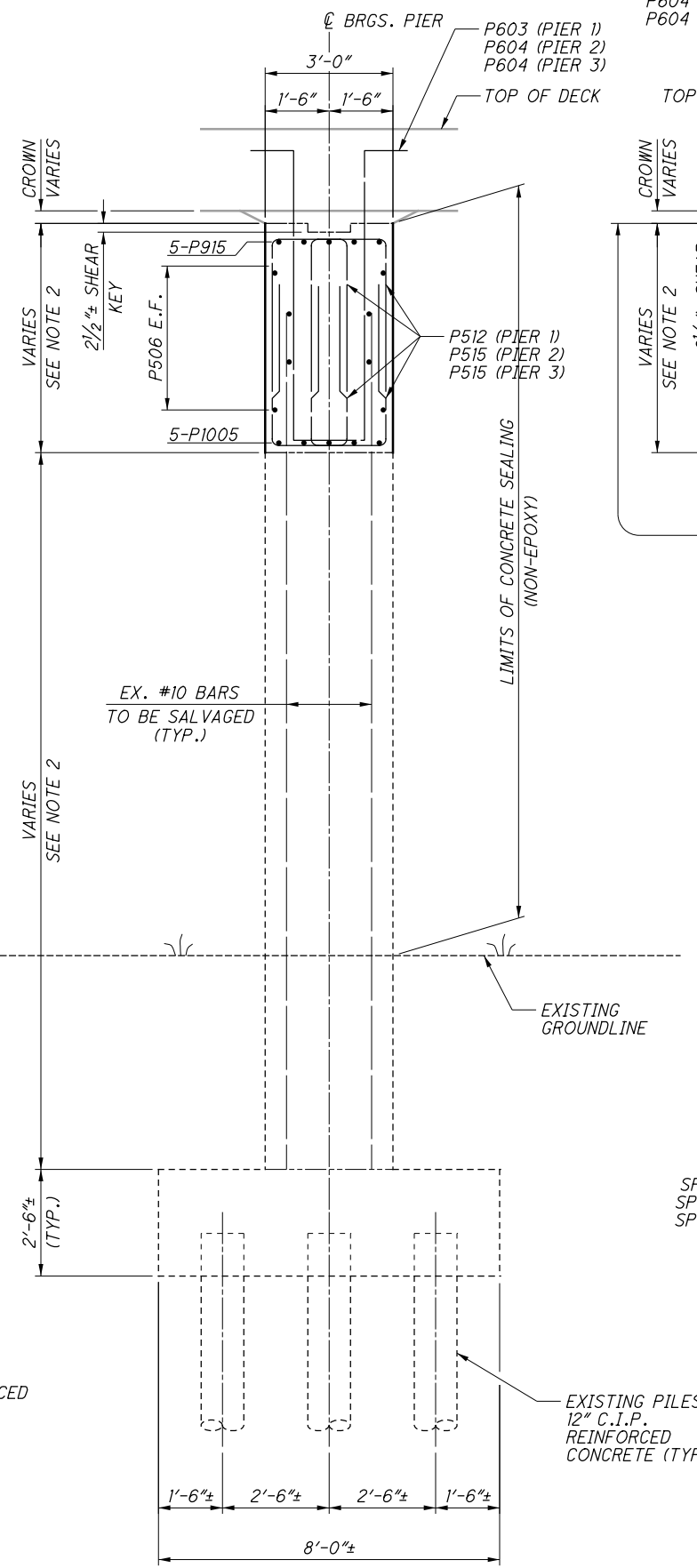
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DESIGN AGENCY: **Mead & Hunt**
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
 REVIEWED DATE: MAB 8/9/2016
 DRAWN CMH
 DESIGNED CMH
 CHECKED KVB
 STRUCTURE FILE NUMBER: 25069631/2506998R
PIER 3 DETAILS - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62
FRA-71-0.00
 PID No. 107201
 47/80
 1240
 1312

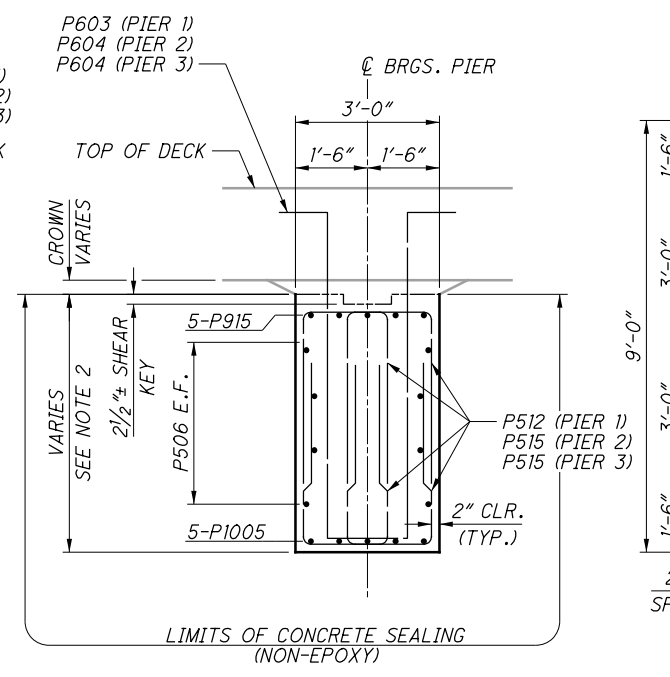
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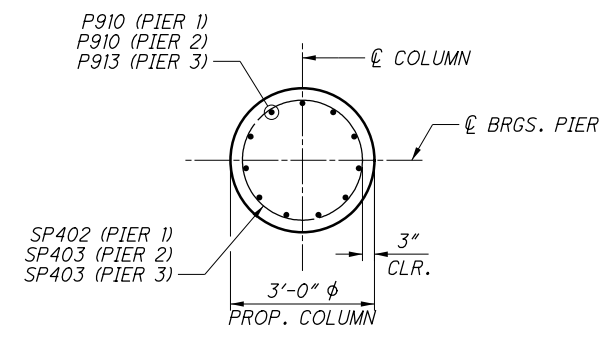
SECTION A-A



SECTION B-B



SECTION C-C

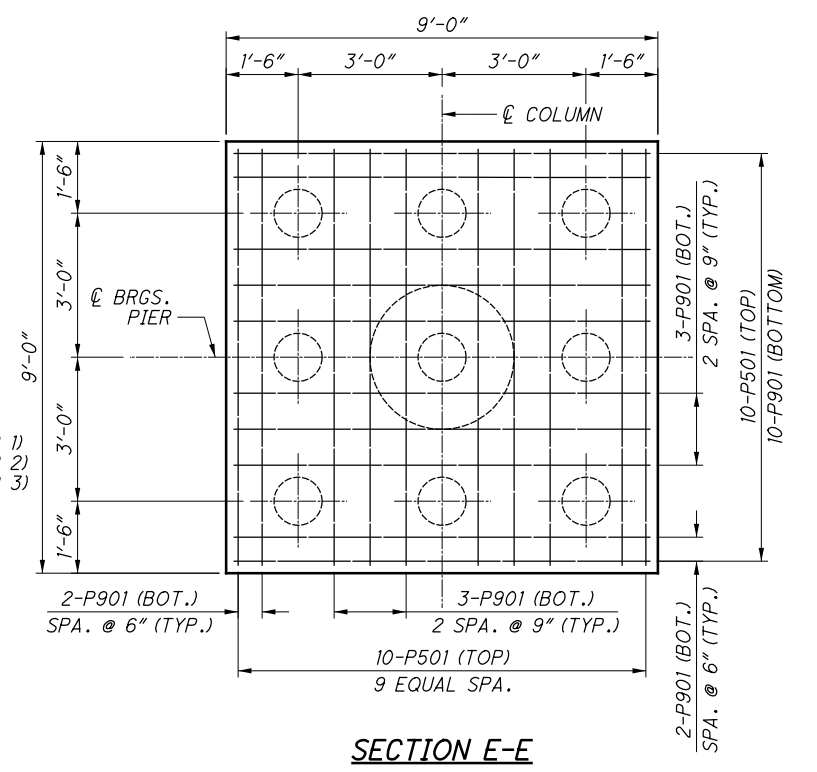


SECTION D-D

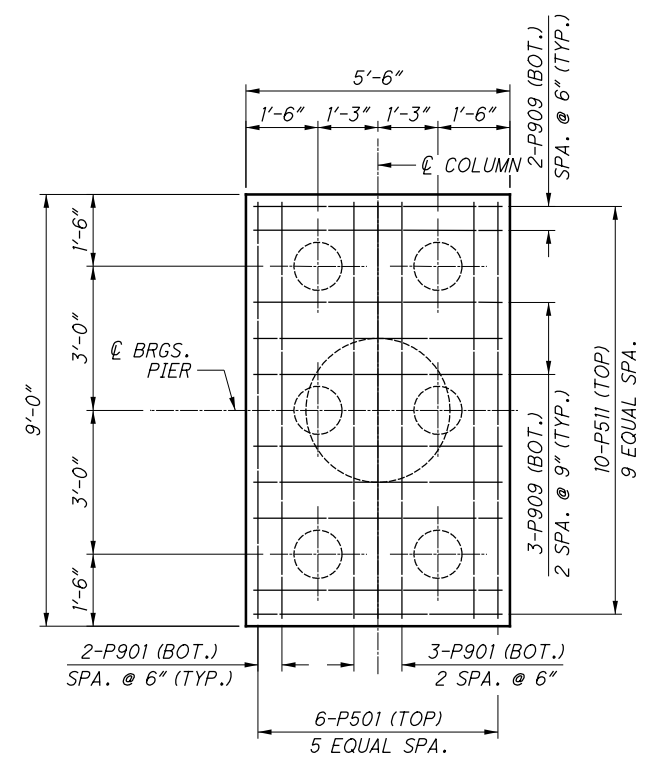
MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"

NOTES:

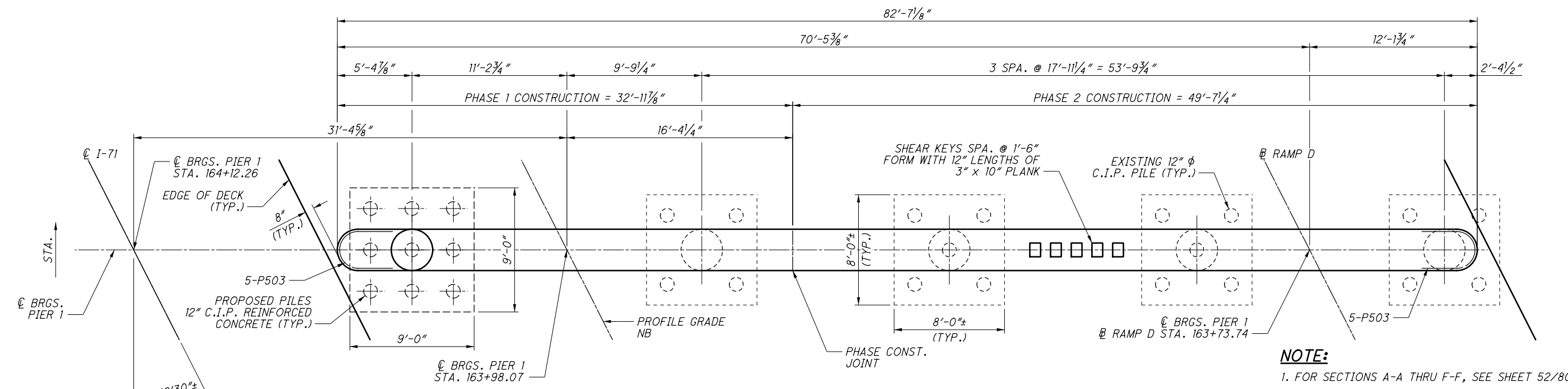
- FOR LOCATION OF SECTIONS A-A THRU F-F, SEE SHEETS 45/80 THRU 47/80.
- FOR PIER PLAN AND ELEVATIONS, SEE SHEETS 45/80 THRU 47/80.



SECTION E-E

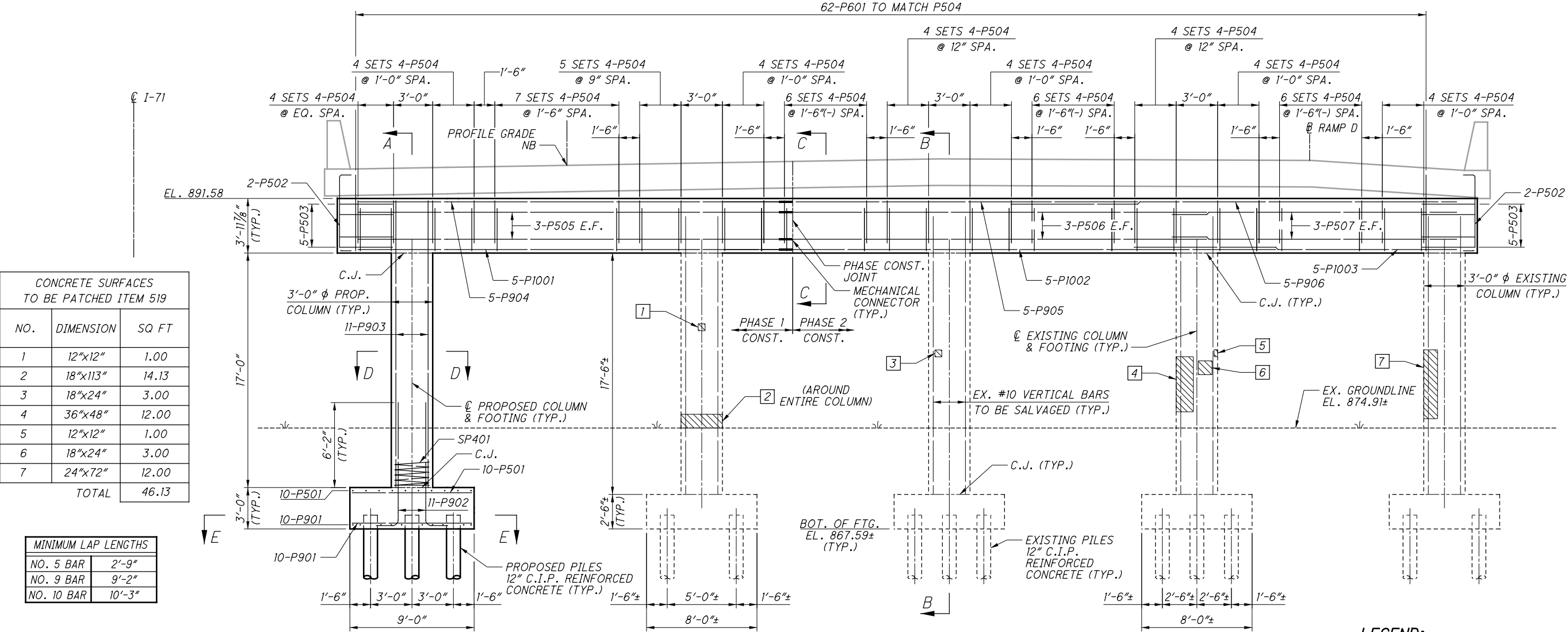


SECTION F-F



PIER 1 PLAN - NORTHBOUND

NOTE:
 1. FOR SECTIONS A-A THRU F-F, SEE SHEET 52/80.
 2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY EXCEPT TOP OF PIER CAP.



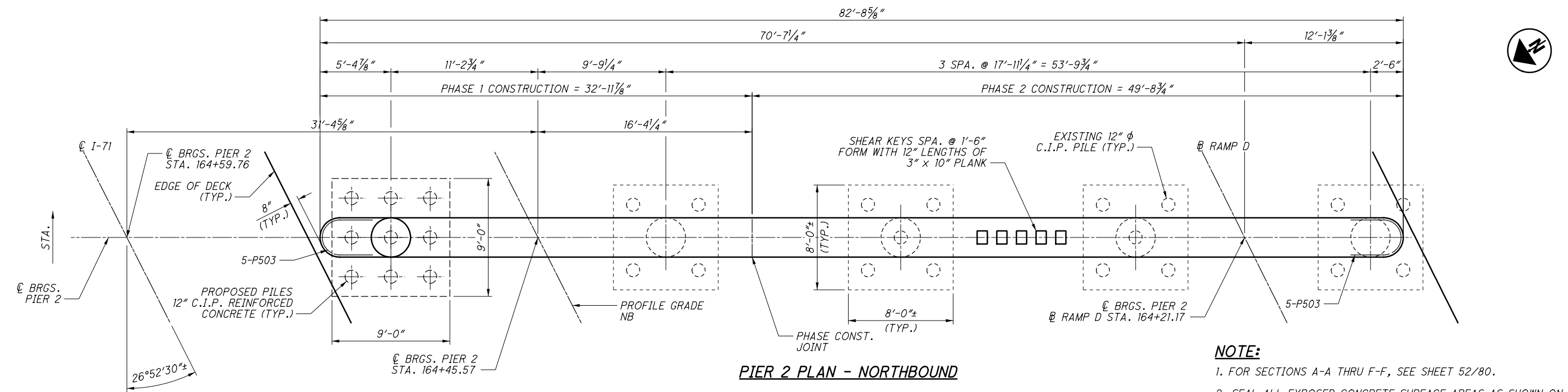
PIER 1 ELEVATION - NORTHBOUND

LEGEND:
 - PATCHING CONCRETE STRUCTURE PER ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

CONCRETE SURFACES TO BE PATCHED ITEM 519		
NO.	DIMENSION	SQ FT
1	12"x12"	1.00
2	18"x113"	14.13
3	18"x24"	3.00
4	36"x48"	12.00
5	12"x12"	1.00
6	18"x24"	3.00
7	24"x72"	12.00
TOTAL		46.13

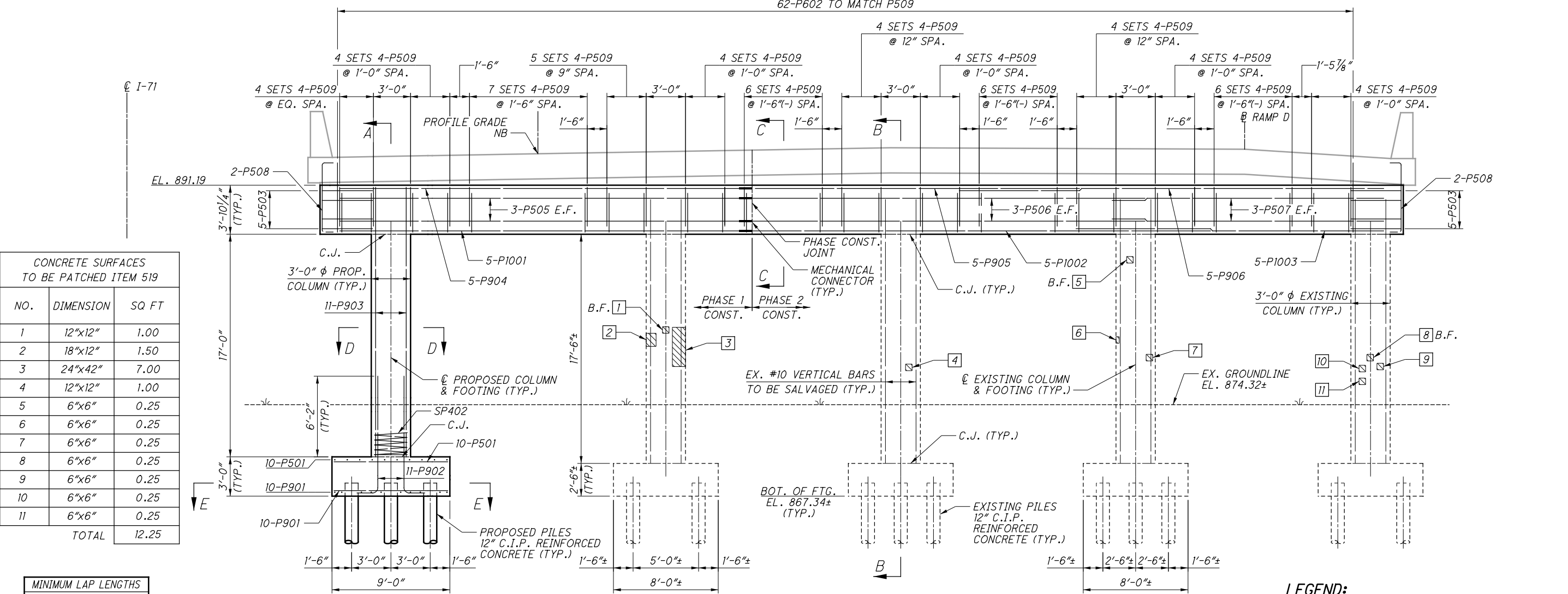
MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 9 BAR	9'-2"
NO. 10 BAR	10'-3"

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PIER 2 PLAN - NORTHBOUND

NOTE:
 1. FOR SECTIONS A-A THRU F-F, SEE SHEET 52/80.
 2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY EXCEPT TOP OF PIER CAP.



PIER 2 ELEVATION - NORTHBOUND

LEGEND:
 - PATCHING CONCRETE STRUCTURE PER ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

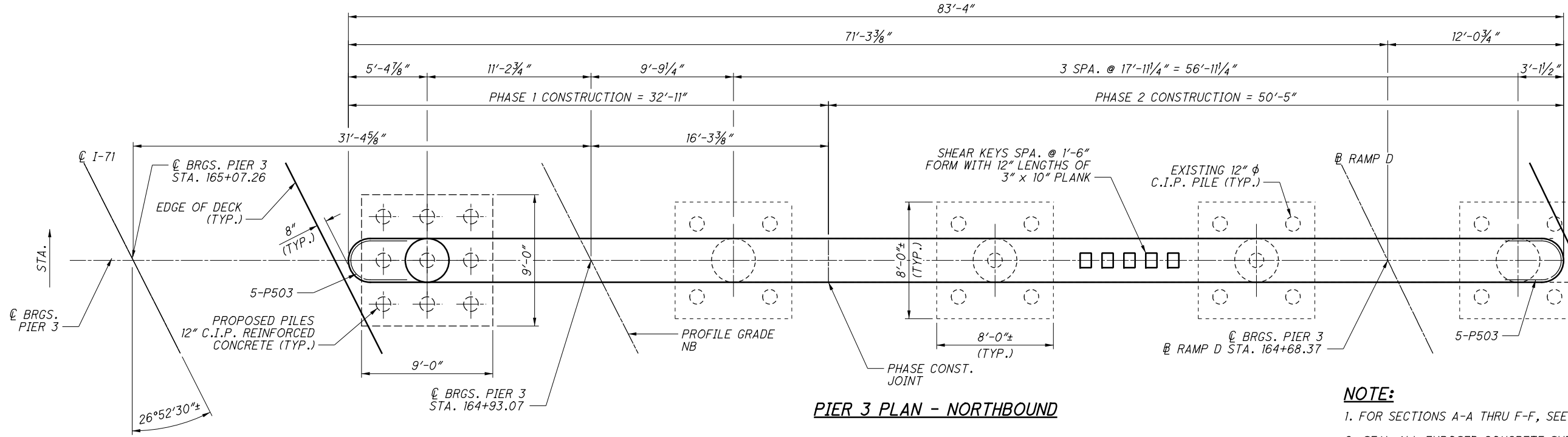
CONCRETE SURFACES TO BE PATCHED ITEM 519		
NO.	DIMENSION	SQ FT
1	12"x12"	1.00
2	18"x12"	1.50
3	24"x42"	7.00
4	12"x12"	1.00
5	6"x6"	0.25
6	6"x6"	0.25
7	6"x6"	0.25
8	6"x6"	0.25
9	6"x6"	0.25
10	6"x6"	0.25
11	6"x6"	0.25
TOTAL		12.25

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 9 BAR	9'-2"
NO. 10 BAR	10'-3"

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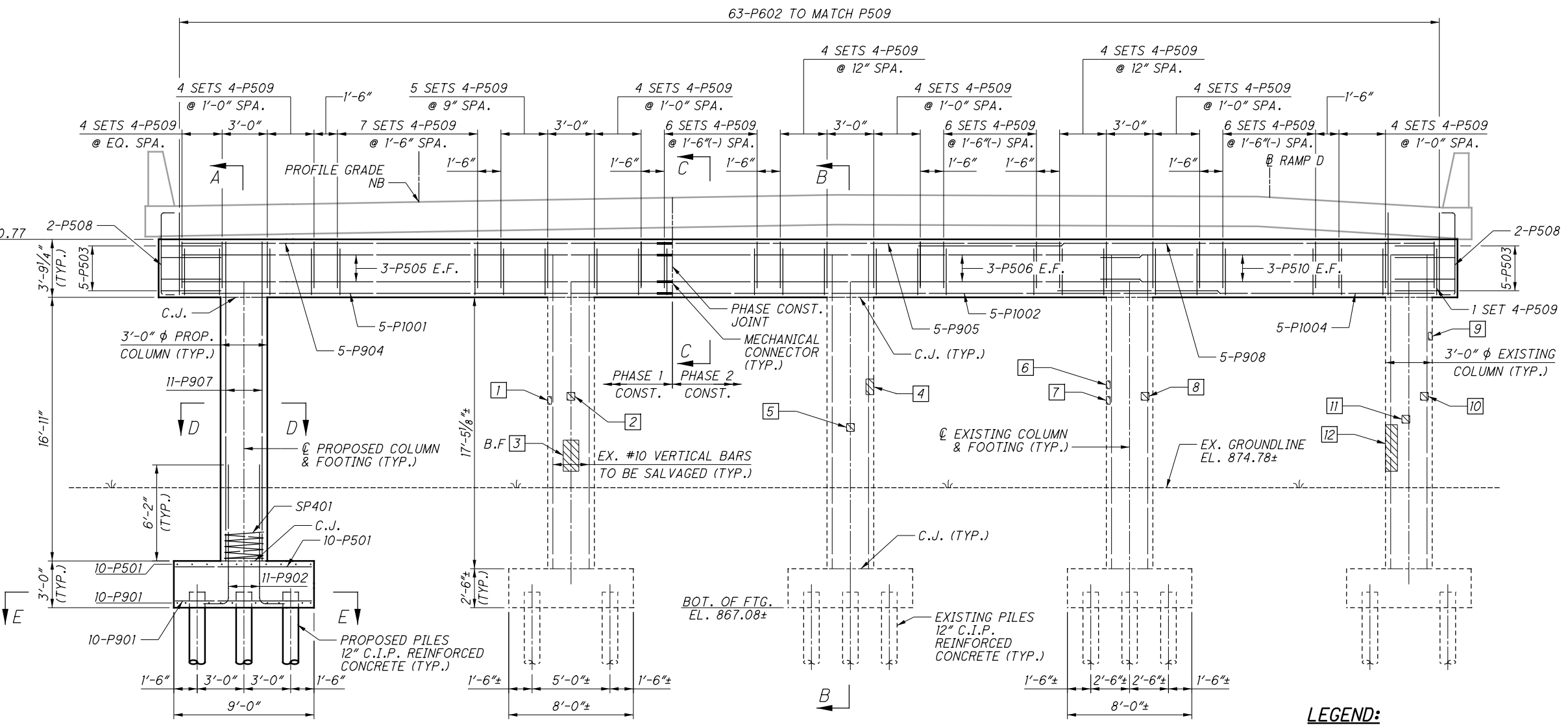
X:\40370000\2195716\107201\structures\FRA071_0308C\PIER3.dgn Sheet 10/28/2019 11:16:01AM I45B8sjs



NOTE:
1. FOR SECTIONS A-A THRU F-F, SEE SHEET 52/80.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH NON-EPOXY EXCEPT TOP OF PIER CAP.

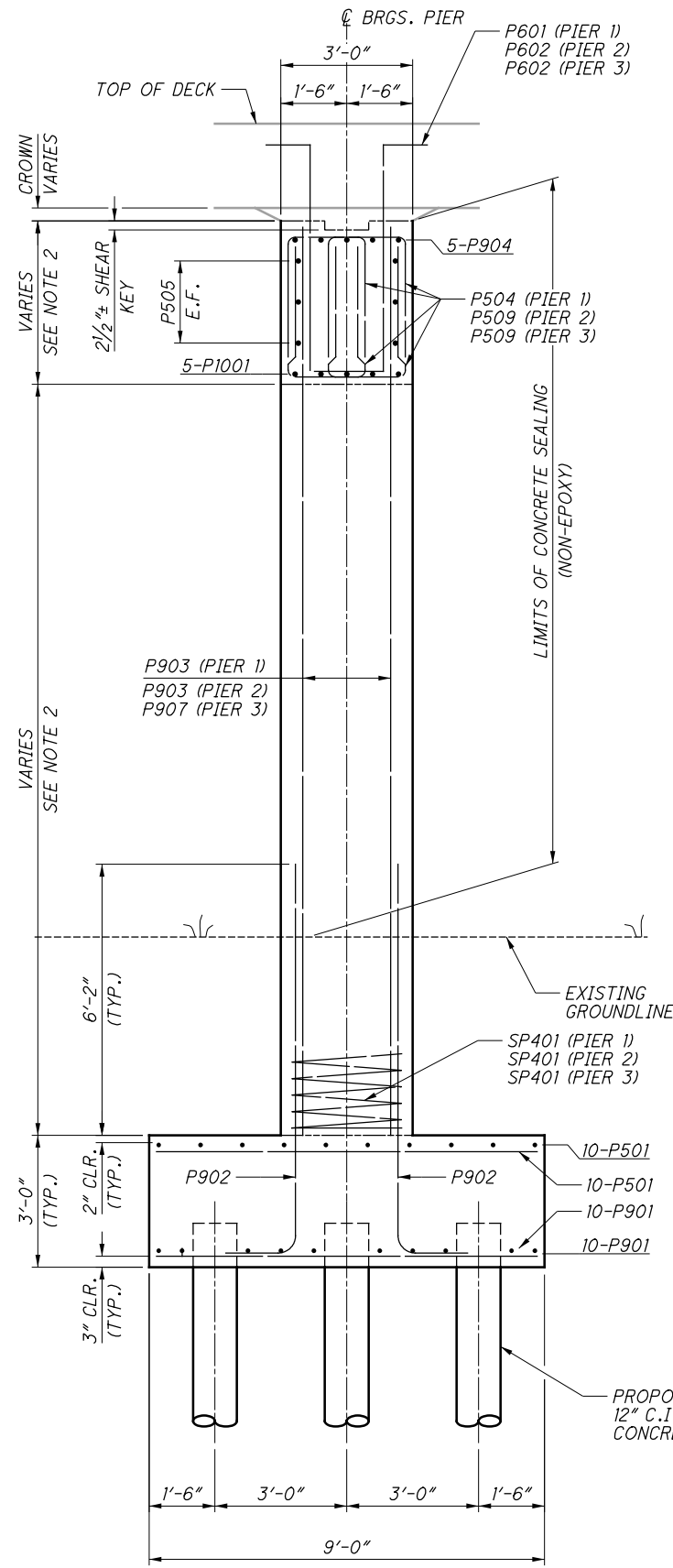
CONCRETE SURFACES TO BE PATCHED ITEM 519		
NO.	DIMENSION	SQ FT
1	6"x6"	0.25
2	6"x6"	0.25
3	12"x24"	2.00
4	12"x12"	1.00
5	6"x6"	0.25
6	6"x6"	0.25
7	6"x6"	0.25
8	6"x6"	0.25
9	6"x6"	0.25
10	12"x12"	1.00
11	6"x6"	0.25
12	24"x36"	6.00
TOTAL		12.00

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-9"
NO. 9 BAR	9'-2"
NO. 10 BAR	10'-3"

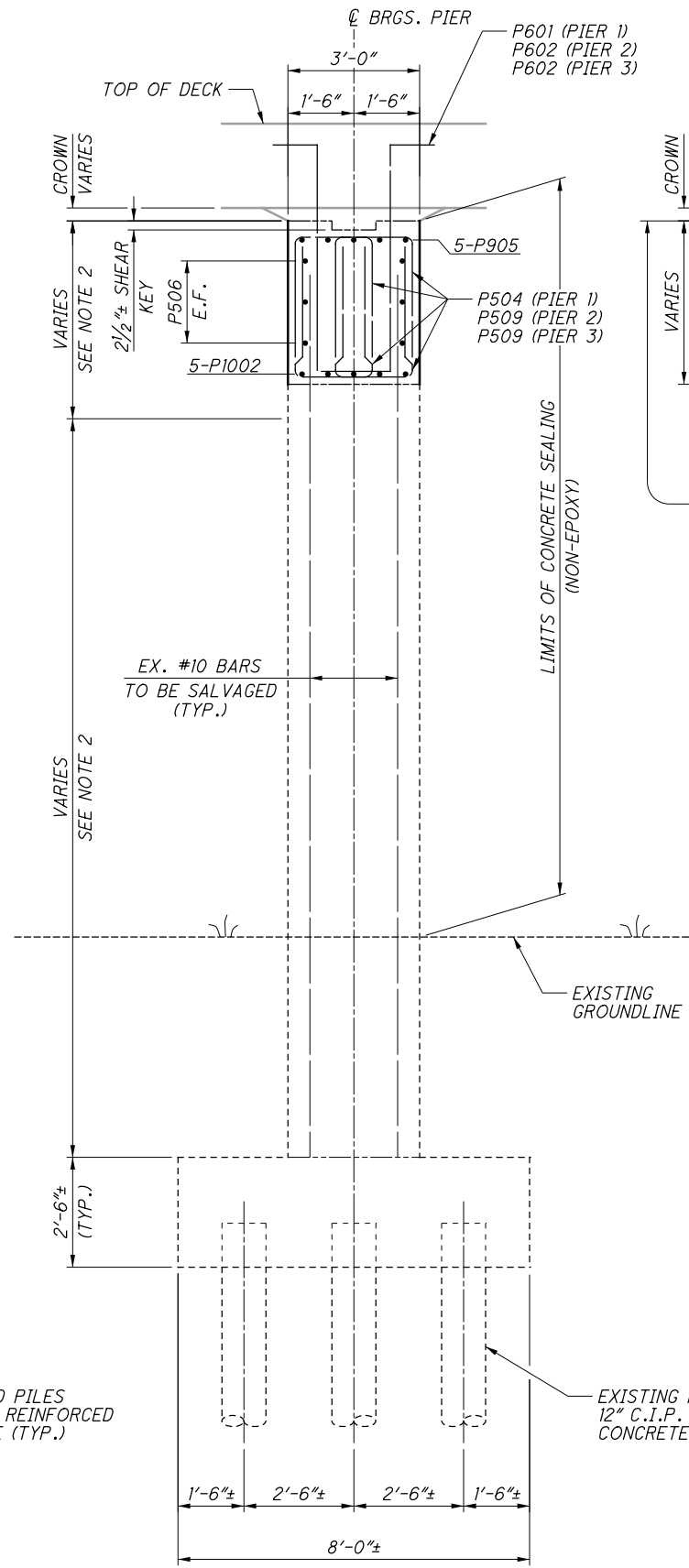


LEGEND:
[Hatched Box] - PATCHING CONCRETE STRUCTURE PER ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

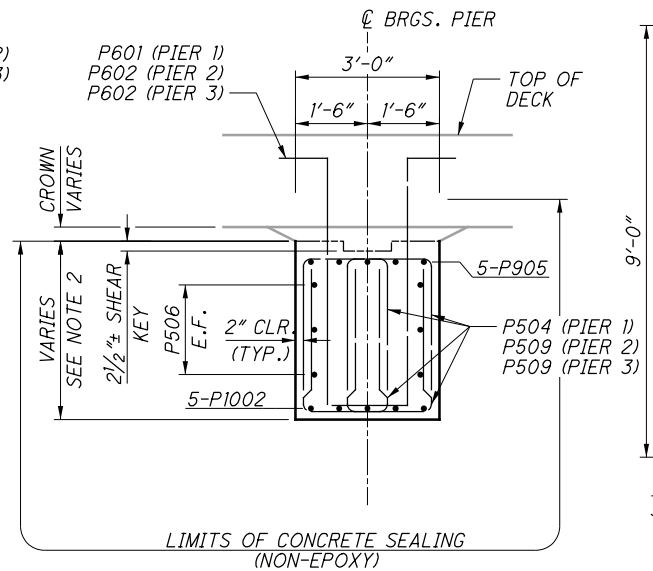
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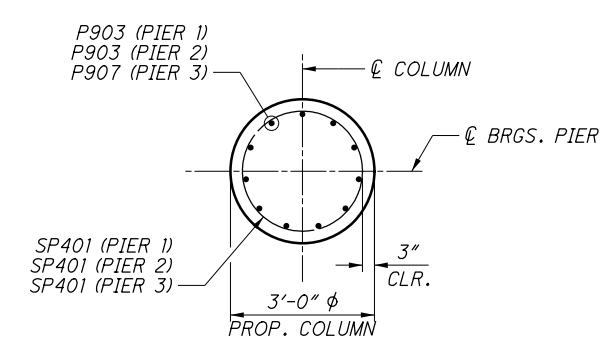
SECTION A-A



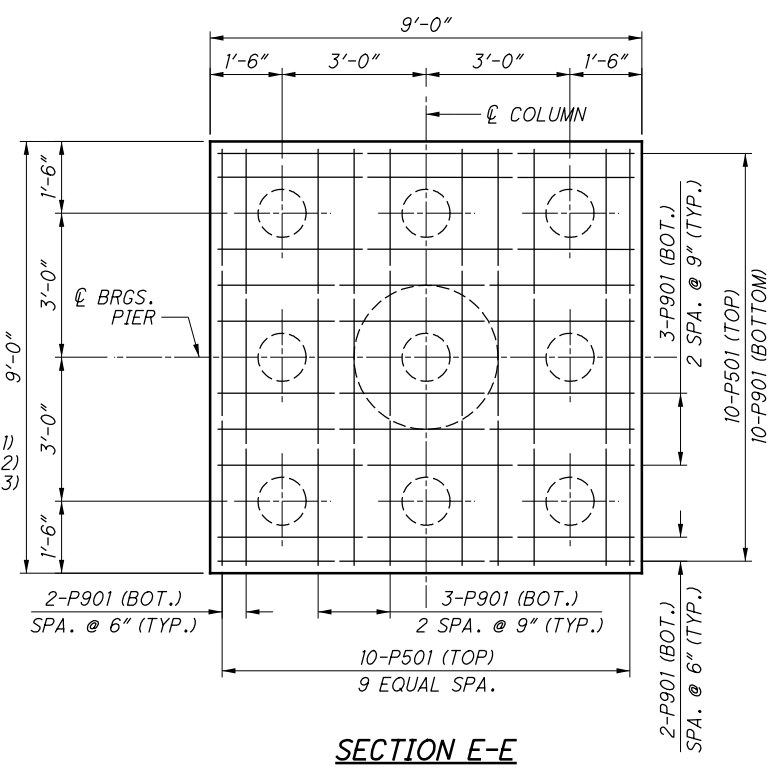
SECTION B-B



SECTION C-C



SECTION D-D



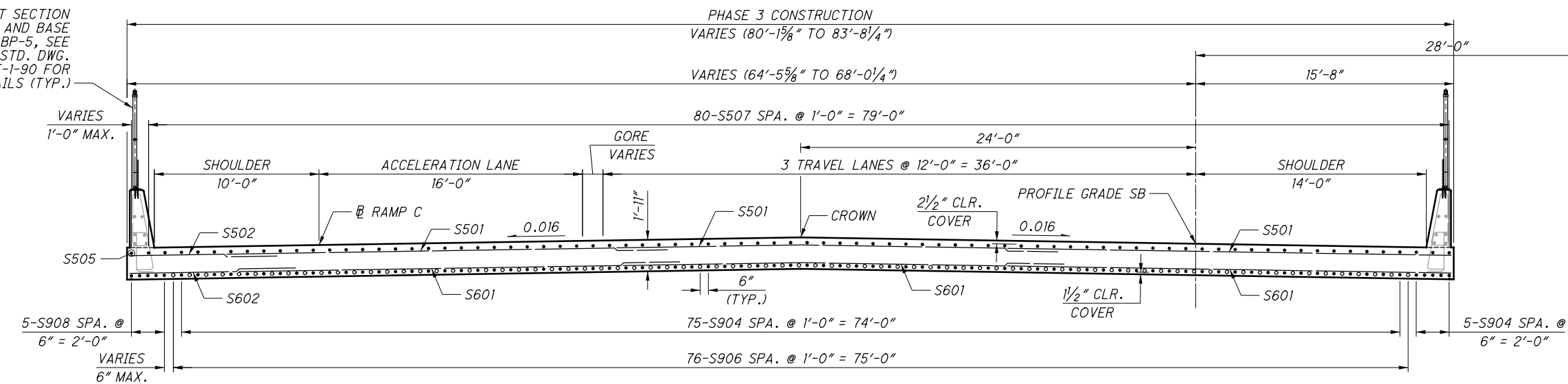
SECTION E-E

MINIMUM LAP LENGTHS	
NO. 5 BAR	2'-6"

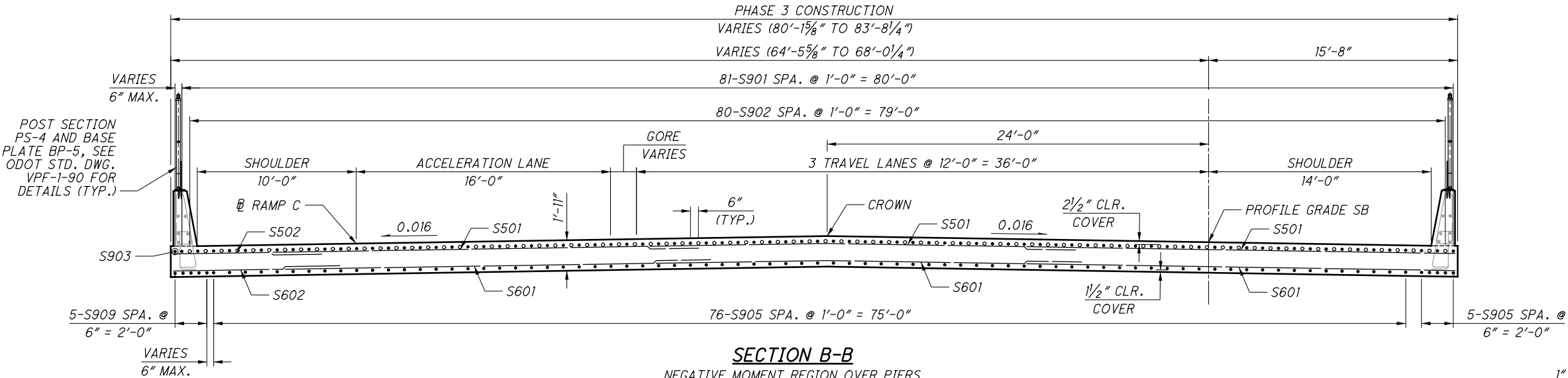
- NOTES:**
1. FOR LOCATION OF SECTIONS A-A THRU F-F, SEE SHEETS 49/80 THRU 51/80.
 2. FOR PIER PLAN AND ELEVATIONS, SEE SHEETS 49/80 THRU 51/80.

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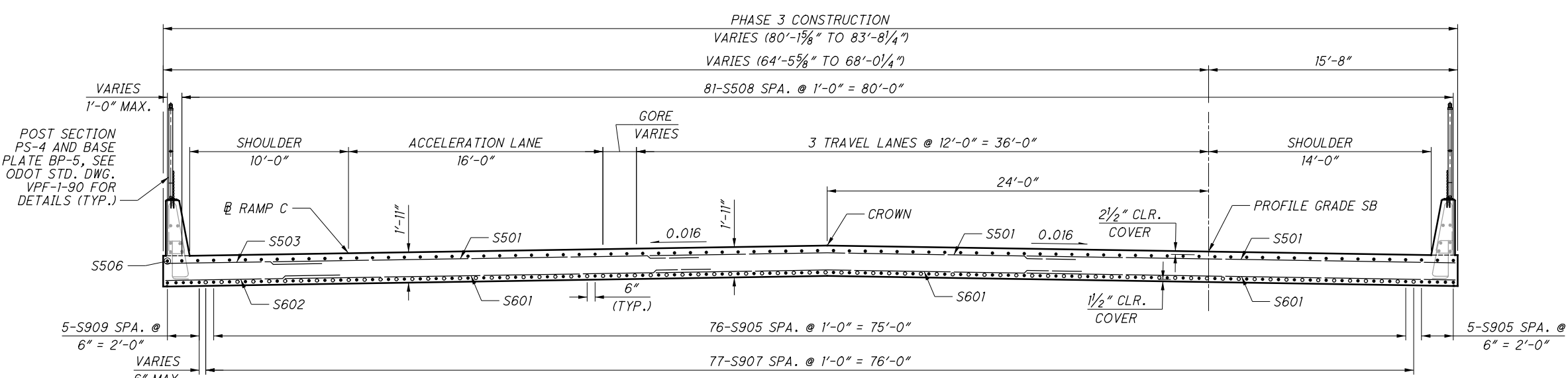
POST SECTION PS-4 AND BASE PLATE BP-5, SEE ODOT STD. DWG. VPF-1-90 FOR DETAILS (TYP.)



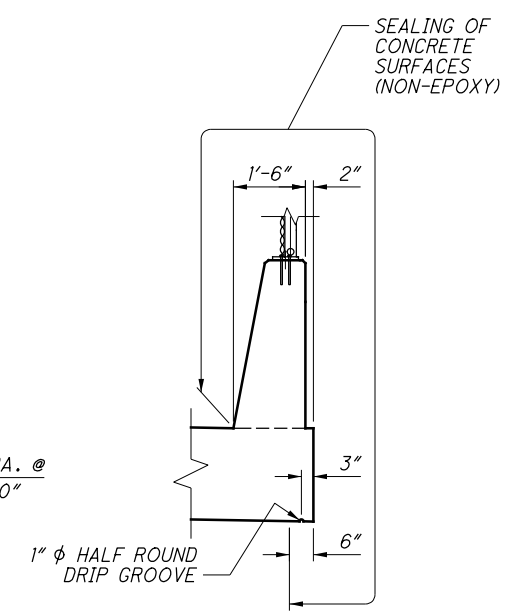
SECTION A-A
END SPANS, POSITIVE MOMENT REGION



SECTION B-B
NEGATIVE MOMENT REGION OVER PIERS



SECTION C-C
INTERIOR SPANS, POSITIVE MOMENT REGION

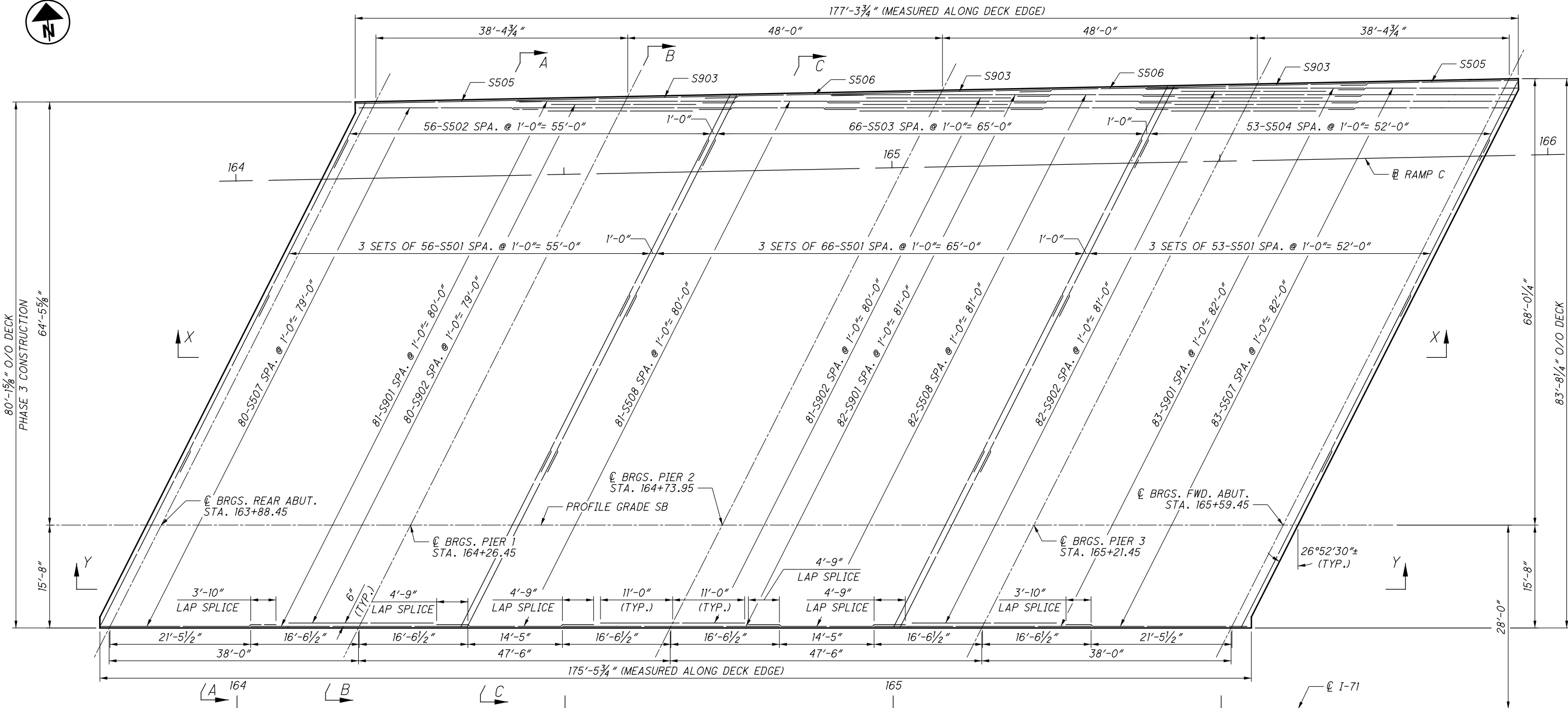


SEALING DETAIL
SBR-1-13

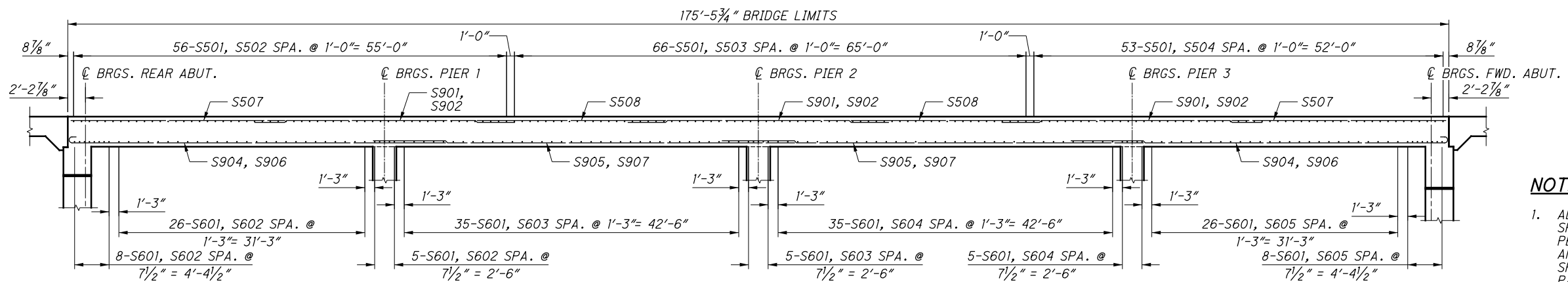
- NOTES:**
- FOR LOCATION OF SECTION A-A THRU C-C, SEE SHEETS 54/80 AND 55/80.
 - REBAR LABELED AT SECTION CUT ONLY.
 - FOR PARAPET REINFORCING DETAILS, SEE SHEET 56/80 AND 57/80.
 - FIELD BEND TRANSVERSE BARS TO FIT THE CROWN. INCLUDE COST OF FIELD BENDS WITH ITEM 511, EPOXY COATED REINFORCING STEEL, AS PER PLAN.

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"
NO. 6 BAR	3'-10"

DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
 DATE: 8/9/2016
 REVIEWED: KVB
 DRAWN: ALM
 CHECKED: CMH
 STRUCTURE FILE NUMBER: 25069631/2506998R
 TRANSVERSE SECTIONS - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62
 FRA-71-0.00
 PID No. 107201
 53/80
 1246
 1312



TOP REINFORCING PLAN - SOUTHBOUND
(PARAPET NOT SHOWN)



SECTION X-X

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

NOTES:

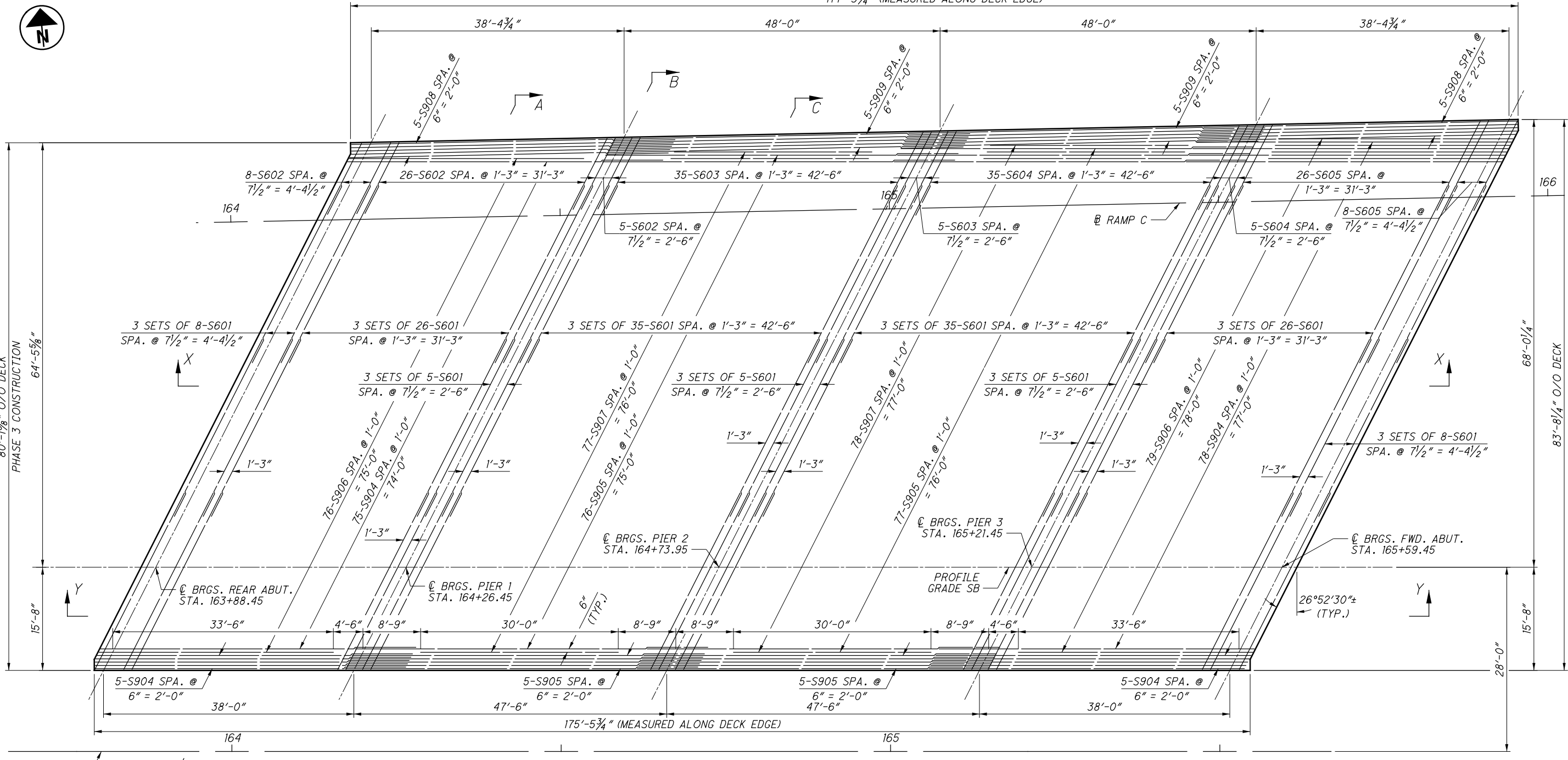
1. ALL LONGITUDINAL REBAR SPACING SHALL BE MEASURED PERPENDICULAR TO C I-71 AND ALL TRANSVERS REBAR SPACING SHALL BE MEASURED PARALLEL TO C I-71 .
2. FOR SECTION A-A THRU C-C, SEE SHEET 53/80.
3. FOR SECTION Y-Y, SEE SHEET 55/80.

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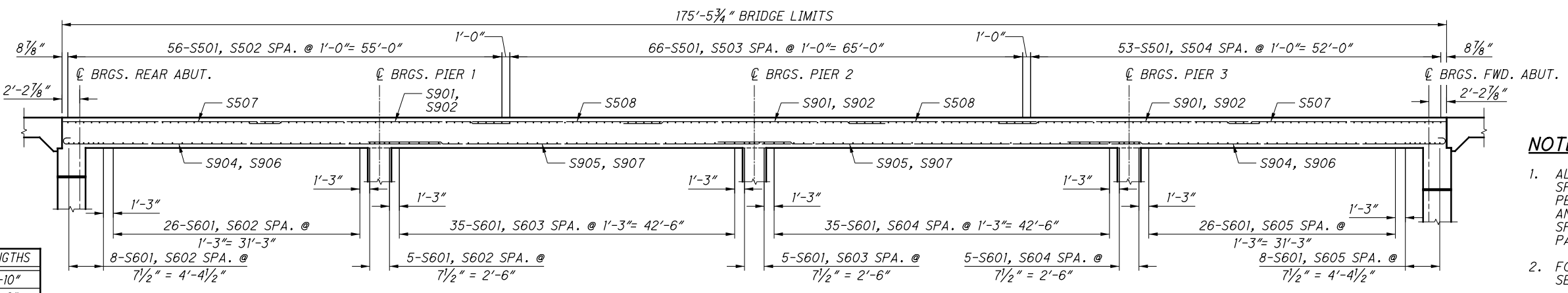
	DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE	DATE 8/9/2016	REVIEWED KVB
DRAWN DJC/ALM	STRUCTURE FILE NUMBER 25069631/2506998R	CHECKED CMH	REVISIONS
FRA-71-0.00 PID No. 107201			
TOP REINFORCING PLAN - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62			
54/80		1247 1312	



177'-3 3/4" (MEASURED ALONG DECK EDGE)



BOTTOM REINFORING PLAN - SOUTHBOUND
(PARAPET NOT SHOWN)



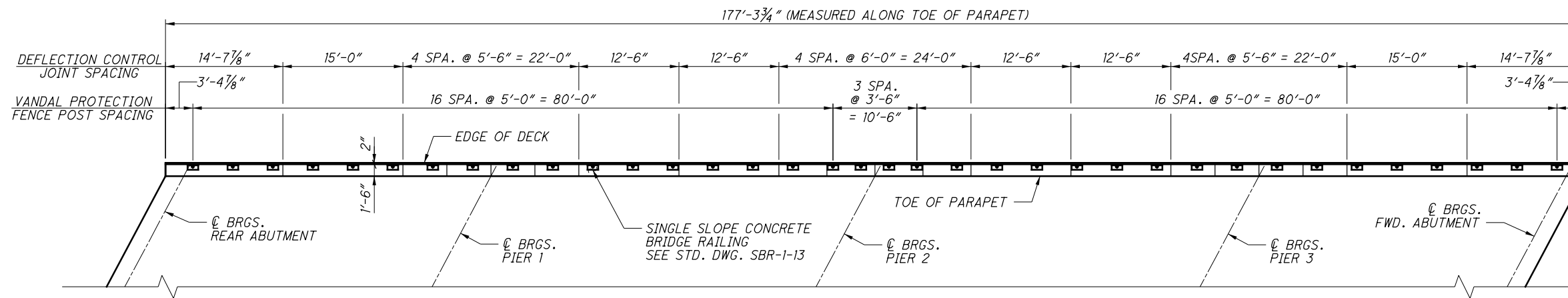
SECTION Y-Y

MINIMUM LAP LENGTHS	
NO. 6 BAR	3'-10"
NO. 9 BAR	9'-2"

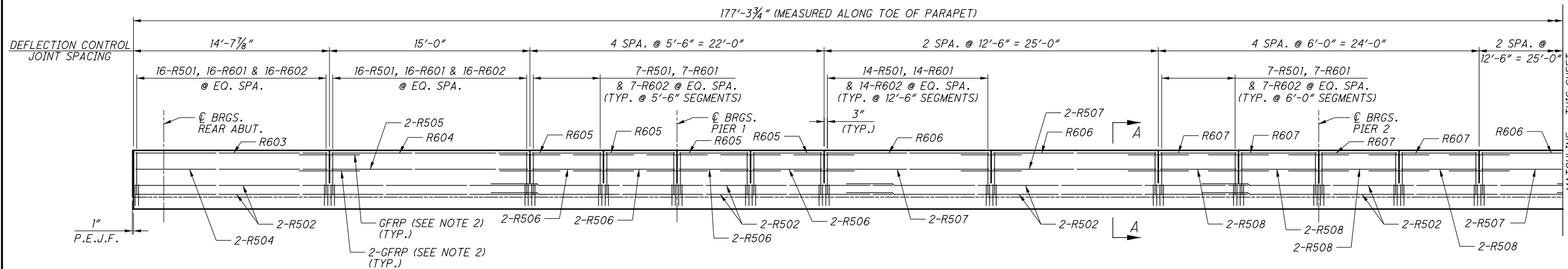
- NOTES:**
- ALL LONGITUDINAL REBAR SPACING SHALL BE MEASURED PERPENDICULAR TO CL I-71 AND ALL TRANSVERS REBAR SPACING SHALL BE MEASURED PARALLEL TO CL I-71 .
 - FOR SECTION A-A THRU C-C, SEE SHEET 53/80.
 - FOR SECTION X-X, SEE SHEET 54/80.

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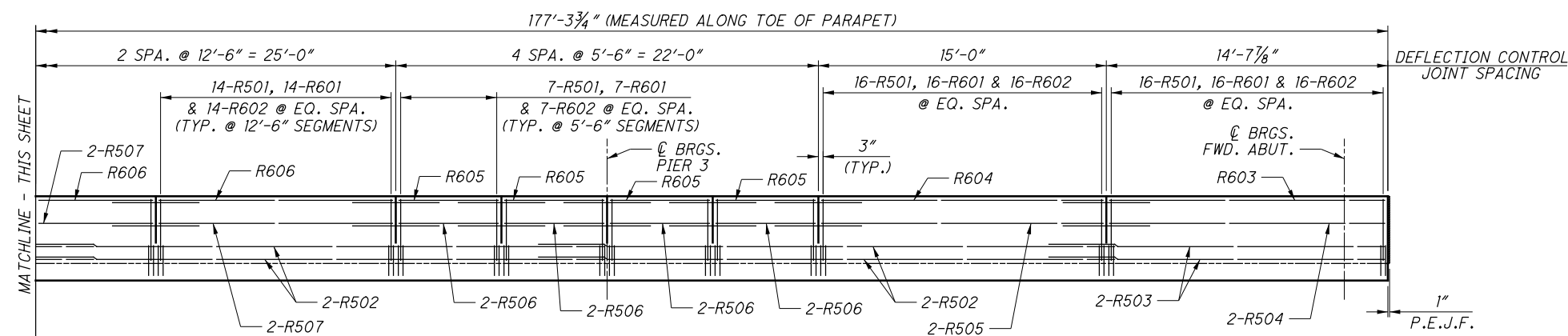
DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 752-5900 PHONE
 DATE: 8/9/2016
 REVIEWED: KVB
 DRAWN: DJC/ALM
 CHECKED: CMH
 STRUCTURE FILE NUMBER: 25069631/2506998R
BOTTOM REINFORING PLAN - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62
FRA-71-0.00
 PID No. 107201
 55/80
 1248
 1312



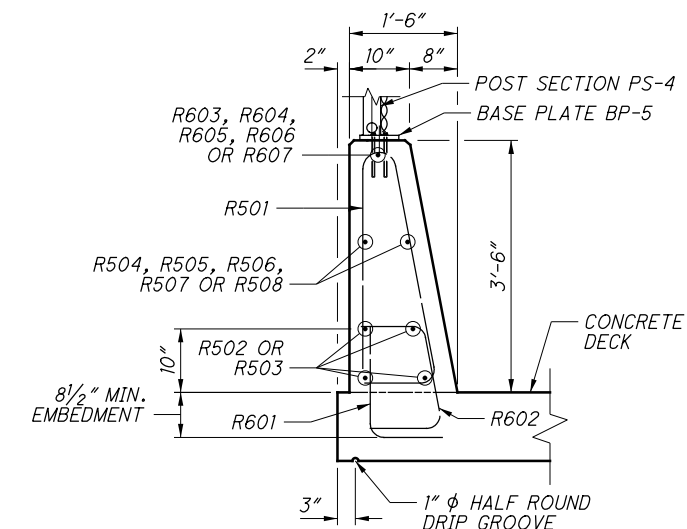
LEFT SIDE PARAPET PLAN - SOUTHBOUND



LEFT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



LEFT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



SECTION A-A

NOTES:

- FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE STD. DWG. SBR-1-13.
- 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT. INCLUDE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT.
- FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS & NOTES, SEE STD. DWG. VPF-1-90.

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

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DESIGN AGENCY: Mead & Hunt
 4700 LANEPURST CT, STE 110
 DUBLIN, OH 43068
 (614) 782-5900 PHONE

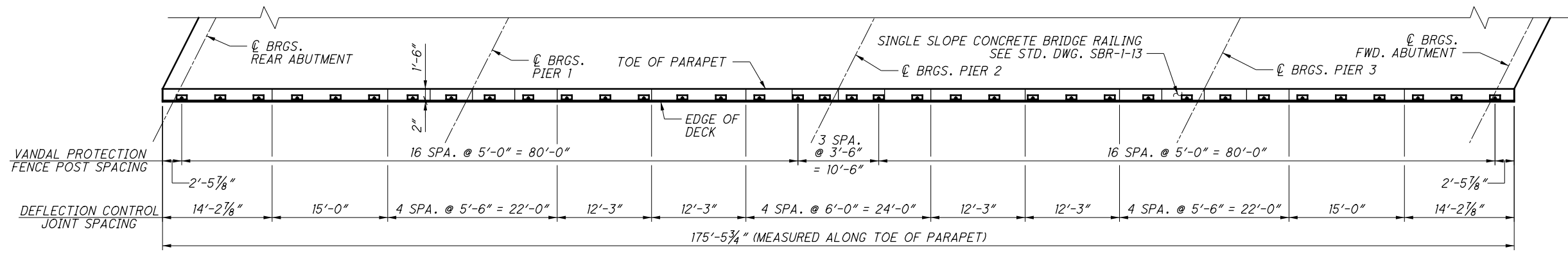
DATE: 8/9/2016
 REVIEWED: KVB
 STRUCTURE FILE NUMBER: 25069631/2506998R

DRAWN: DJC
 CHECKED: MLH
 DESIGNED: ALM

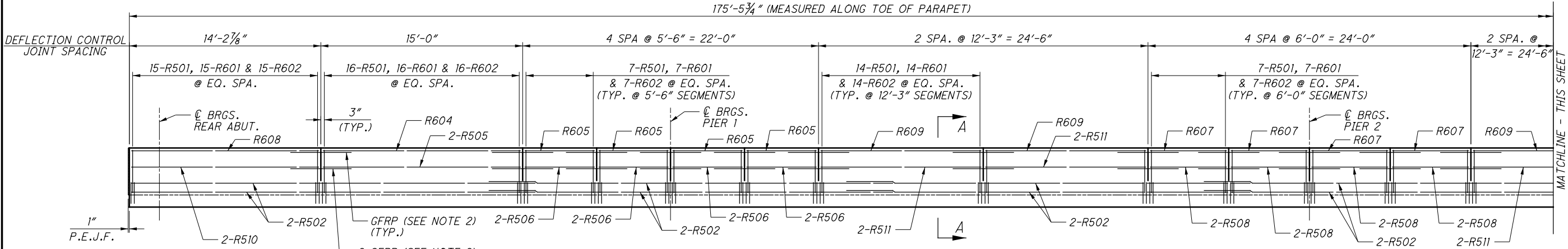
PARAPET DETAILS - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0.00
 PID No. 107201

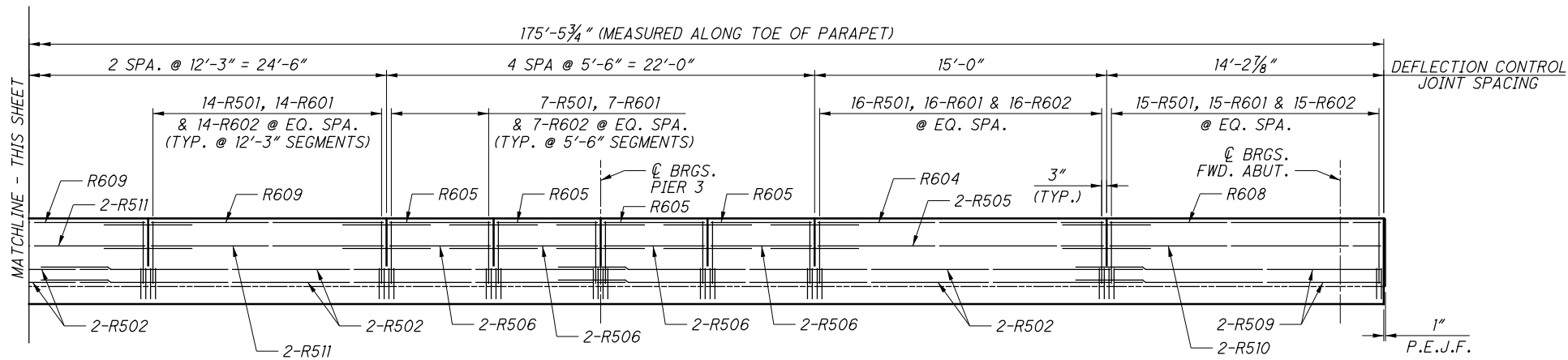
56/80
 1249
 1312



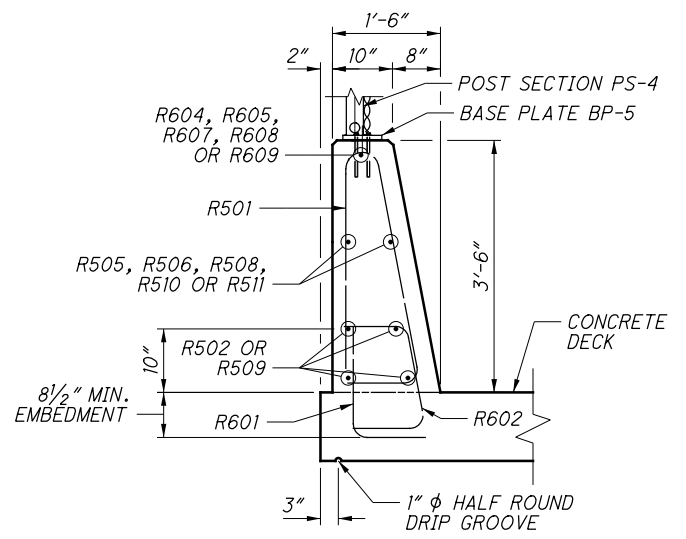
RIGHT SIDE PARAPET PLAN - SOUTHBOUND



RIGHT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



RIGHT SIDE PARAPET PART ELEVATION - SOUTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



SECTION A-A

NOTES:

1. FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE STD. DWG. SBR-1-13.
2. 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT. INCLUDE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT.
3. FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS & NOTES, SEE STD. DWG. VPF-1-90.

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

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DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DESIGNED: ALM
 CHECKED: MLH

DRAWN: DJC
 REVISED:

REVIEWED: KVB
 DATE: 8/9/2016
 STRUCTURE FILE NUMBER: 25069631/2506998R

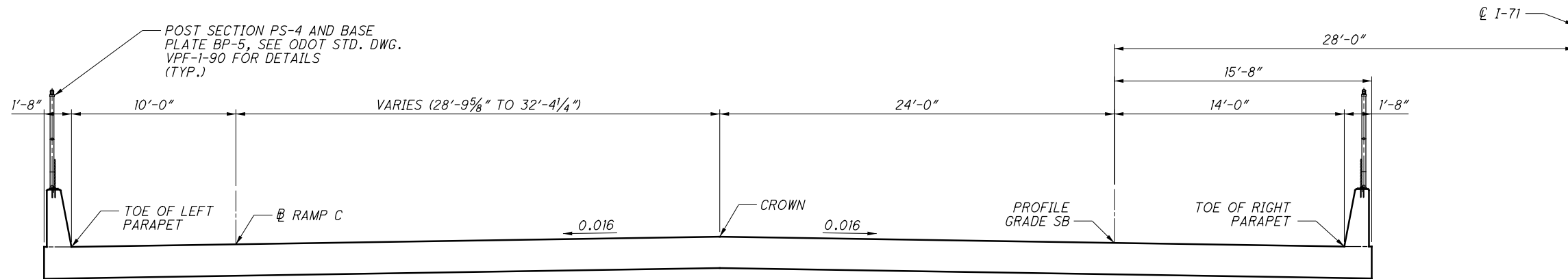
BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

PARAPET DETAILS - SOUTHBOUND BRIDGE

FRA-71-0.00
 PID No. 107201

57/80

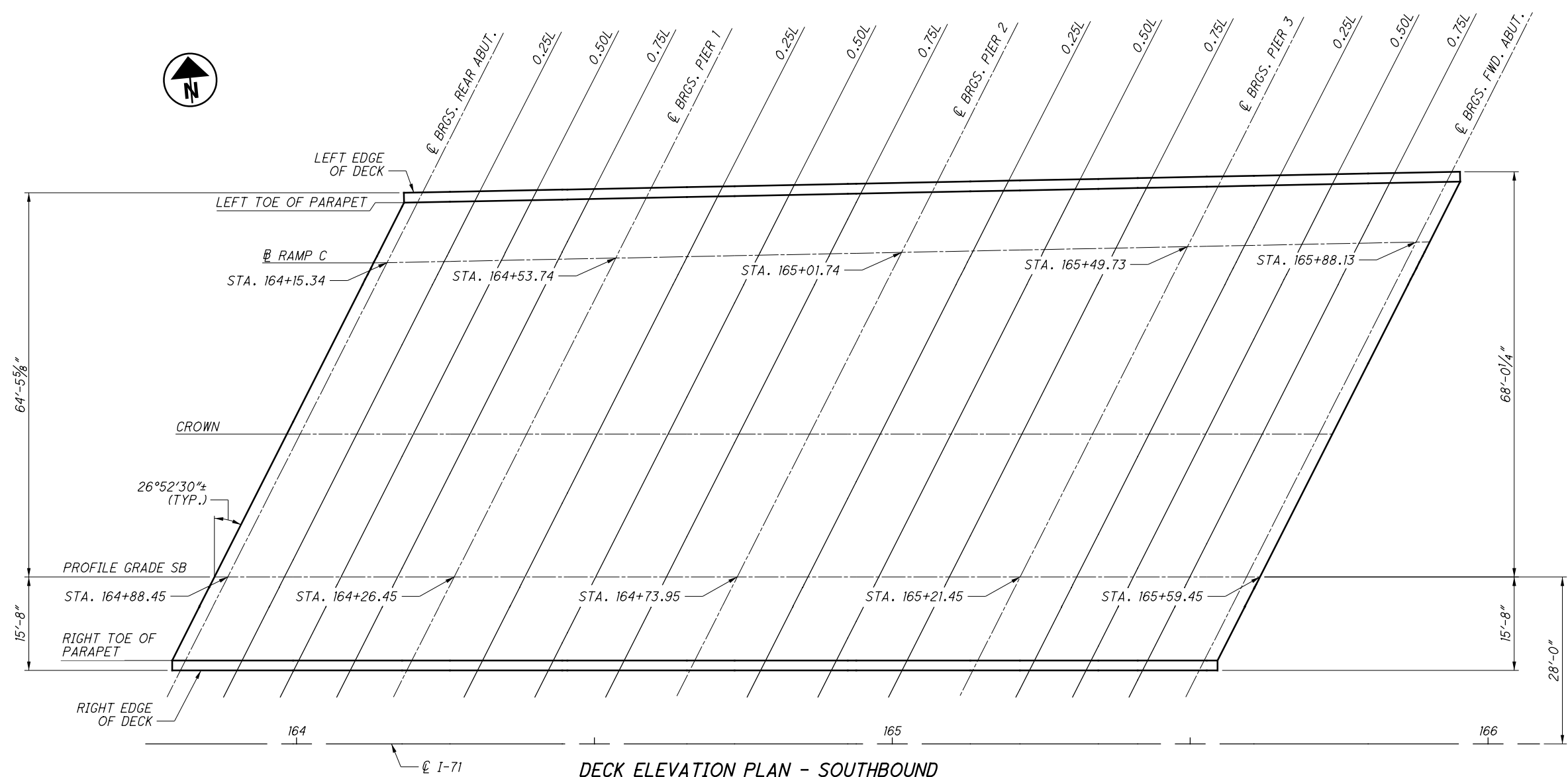
1250
 1312



NOTES:

1. FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEET 59/80.
2. L=SPAN LENGTH.
3. TO COMPENSATE FOR FALSEWORK DEFLECTION AND FOR THE DEFLECTION OF THE SLAB AFTER THE FALSEWORK IS REMOVED, BUILD CAMBER INTO THE FALSEWORK ACCORDING TO CMS 508.02.

DECK SURFACE LOCATIONS - SOUTHBOUND



DECK ELEVATION PLAN - SOUTHBOUND

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	DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
REVIEWED KVB DATE 8/9/2016 STRUCTURE FILE NUMBER 25069631/2506998R	DRAWN ALM CHECKED CMH REVISIONS
DECK SURFACE ELEVATION LOCATIONS - SOUTHBOUND BRIDGE BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	
FRA-71-0.00 PID No. 107201	
58 / 80	
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FINAL DECK SURFACE ELEVATION TABLE - SOUTHBOUND

LOCATION	LEFT TOE OF PARAPET		RAMP C		CROWN		PROFILE GRADE SB		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
BRGS. R.A.	164+20.30	894.29	164+15.18	894.47	164+00.61	894.97	163+88.45	894.62	163+81.35	894.41
0.25L	164+29.90	894.26	164+24.78	894.43	164+10.11	894.94	163+97.95	894.59	163+90.85	894.39
0.50L	164+39.50	894.22	164+34.38	894.40	164+19.61	894.91	164+07.45	894.57	164+00.35	894.36
0.75L	164+49.09	894.18	164+43.97	894.36	164+29.11	894.88	164+16.95	894.54	164+09.85	894.34
BRGS. PIER 1	164+58.69	894.13	164+53.57	894.32	164+38.61	894.85	164+26.45	894.51	164+19.35	894.31
0.25L	164+70.69	894.08	164+65.57	894.26	164+50.49	894.80	164+38.33	894.47	164+31.23	894.27
0.50L	164+82.69	894.01	164+77.57	894.20	164+62.36	894.75	164+50.20	894.42	164+43.10	894.22
0.75L	164+94.68	893.95	164+89.56	894.14	164+74.24	894.70	164+62.08	894.37	164+54.98	894.18
BRGS. PIER 2	165+06.68	893.88	165+01.56	894.07	164+86.11	894.64	164+73.95	894.31	164+66.85	894.12
0.25L	165+18.68	893.80	165+13.56	894.00	164+97.99	894.58	164+85.83	894.26	164+78.73	894.07
0.50L	165+30.67	893.72	165+25.55	893.92	165+09.86	894.51	164+97.70	894.19	164+90.60	894.01
0.75L	165+42.67	893.64	165+37.55	893.84	165+21.74	894.44	165+09.58	894.13	165+02.48	893.94
BRGS. PIER 3	165+54.66	893.55	165+49.54	893.75	165+33.61	894.36	165+21.45	894.05	165+14.35	893.87
0.25L	165+64.26	893.48	165+59.14	893.68	165+43.11	894.30	165+30.95	893.99	165+23.85	893.82
0.50L	165+73.86	893.40	165+68.74	893.61	165+52.61	894.23	165+40.45	893.93	165+33.35	893.76
0.75L	165+83.45	893.33	165+78.33	893.53	165+62.11	894.16	165+49.95	893.87	165+42.85	893.69
BRGS. F.A.	165+93.05	893.25	165+87.93	893.45	165+71.61	894.09	165+59.45	893.80	165+52.35	893.63

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

REVIEWED DATE
 KVB 8/9/2016
 STRUCTURE FILE NUMBER
 2506963L/2506998R

DRAWN ALM
 ALM
 CHECKED CMH
 REVISIED

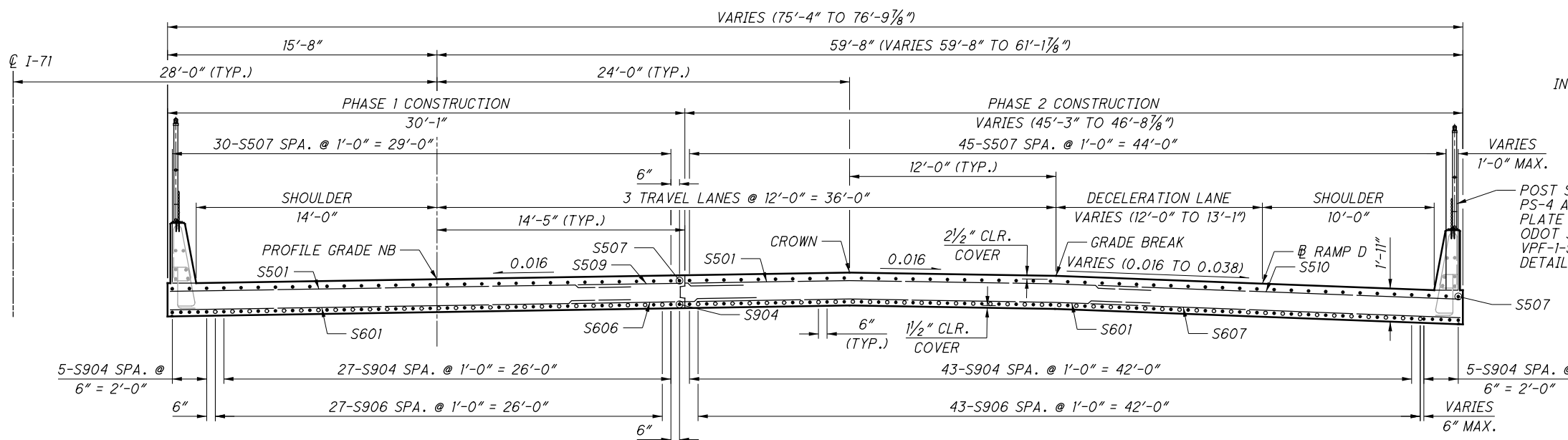
DESIGNED ALM
 CHECKED CMH
FINAL DECK SURFACE ELEVATION TABLE - SOUTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0.00
 PID No. 107201

59/80

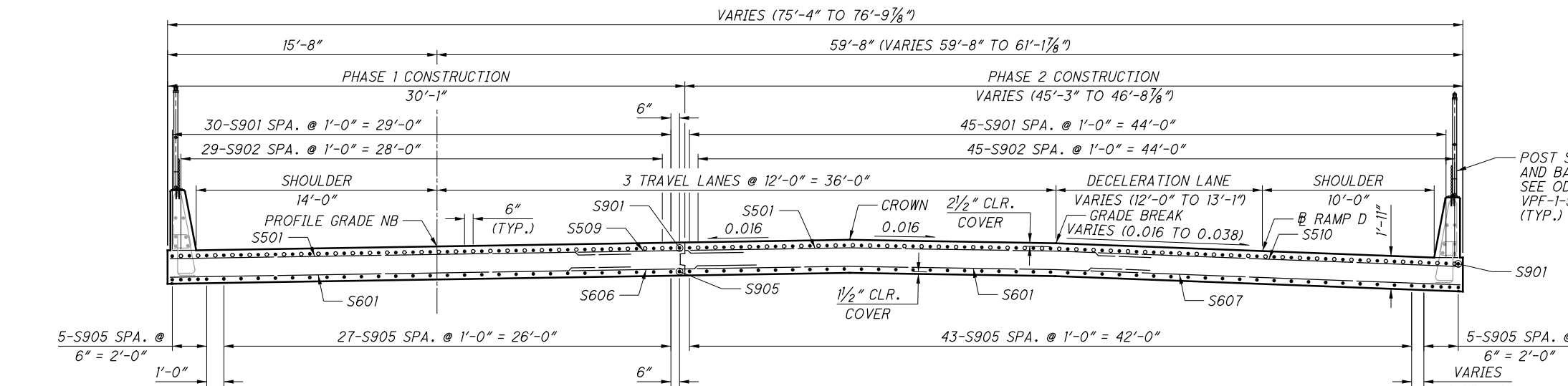
1252
 1312

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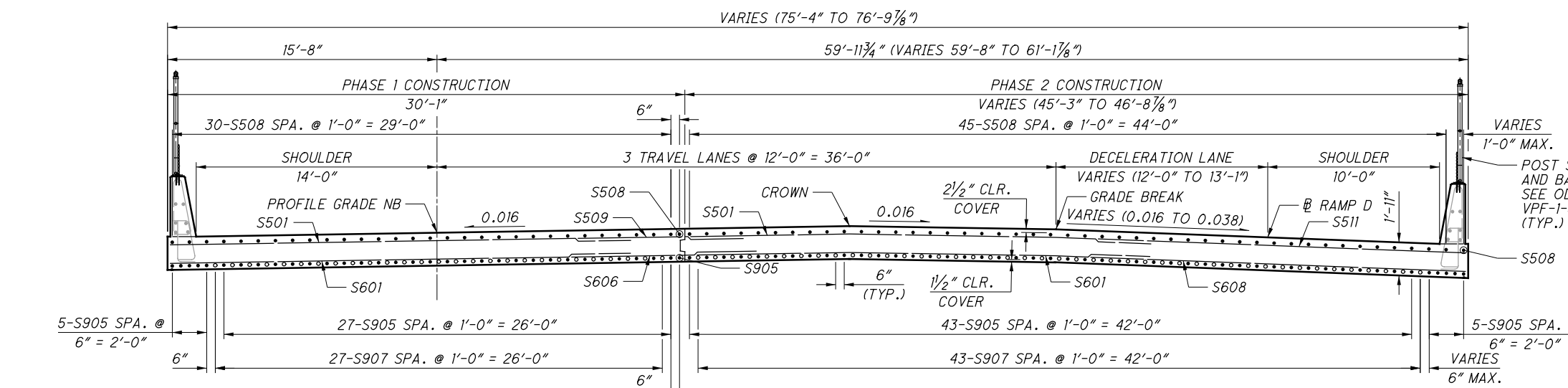
SECTION A-A

END SPANS, POSITIVE MOMENT REGION



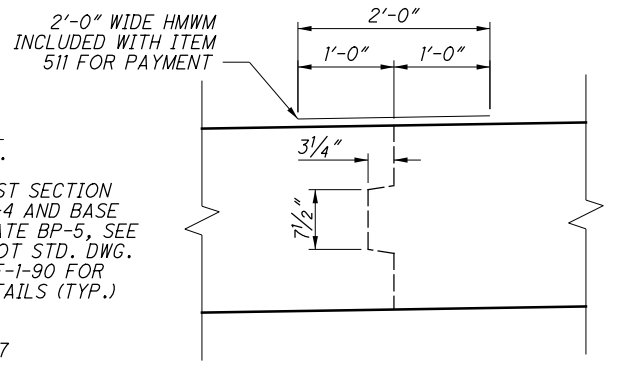
SECTION B-B

NEGATIVE MOMENT REGION OVER PIERS

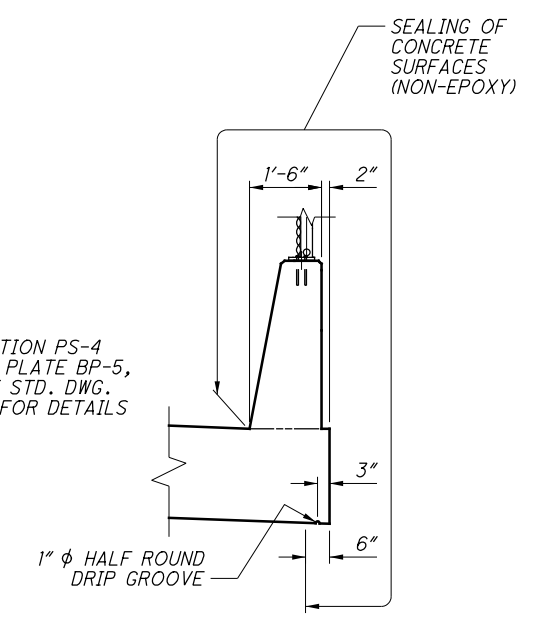


SECTION C-C

INTERIOR SPANS, POSITIVE MOMENT REGION



SHEAR KEY



SEALING DETAIL

SBR-1-13

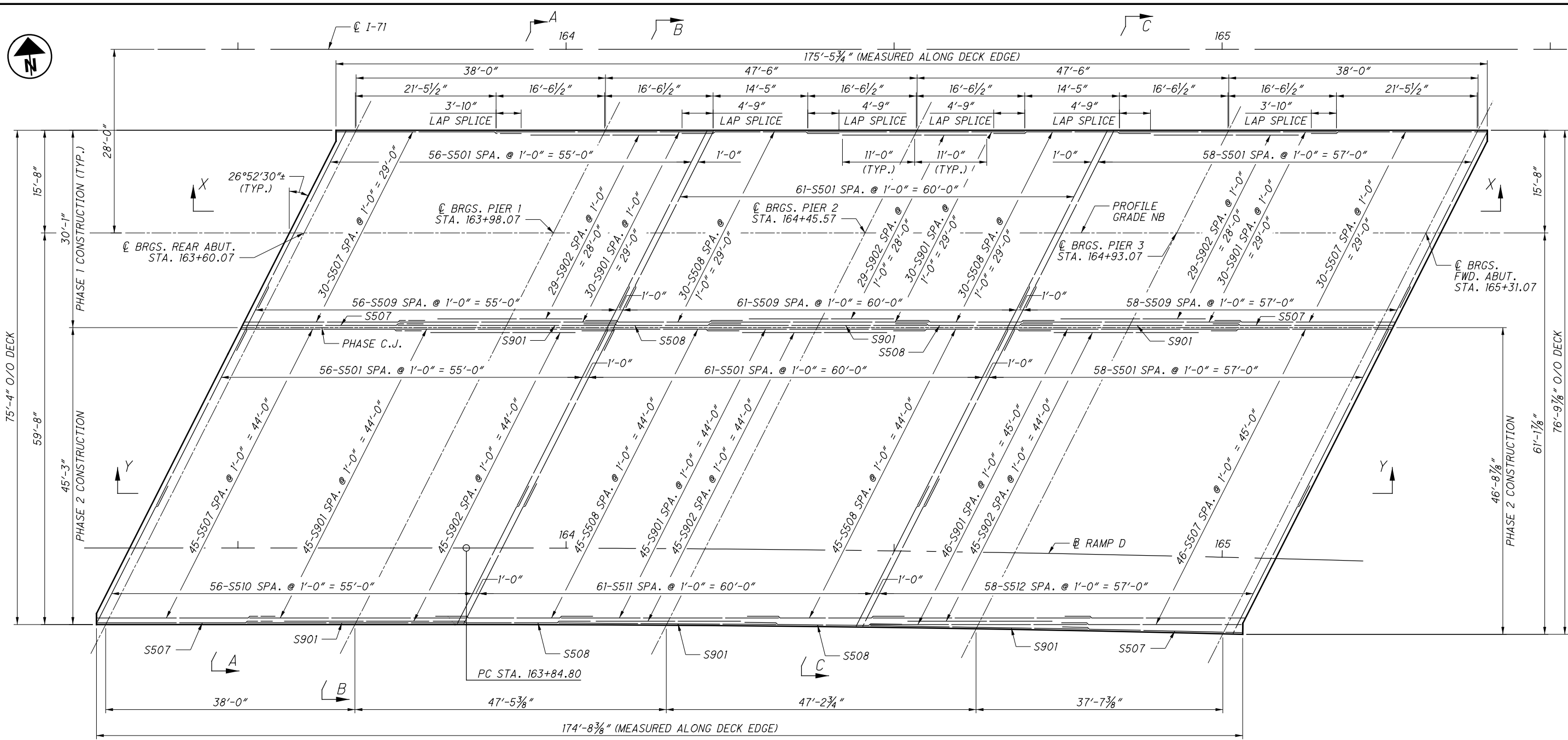
NOTES:

1. FOR LOCATION OF SECTION A-A THRU C-C, SEE SHEETS 61/80 AND 62/80.
2. REBAR LABELED AT SECTION CUT ONLY.
3. FOR PARAPET REINFORCING DETAILS, SEE SHEETS 63/80 AND 64/80.
4. FIELD BEND TRANSVERSE BARS TO FIT THE CROWN AND GRADE BREAK. INCLUDE COST OF FIELD BENDS WITH ITEM 511, EPOXY COATED REINFORCING STEEL, AS PER PLAN.
5. FOR SUPERELEVATION TRANSITION AT THE GRADE BREAK, SEE SHEET 2/80.

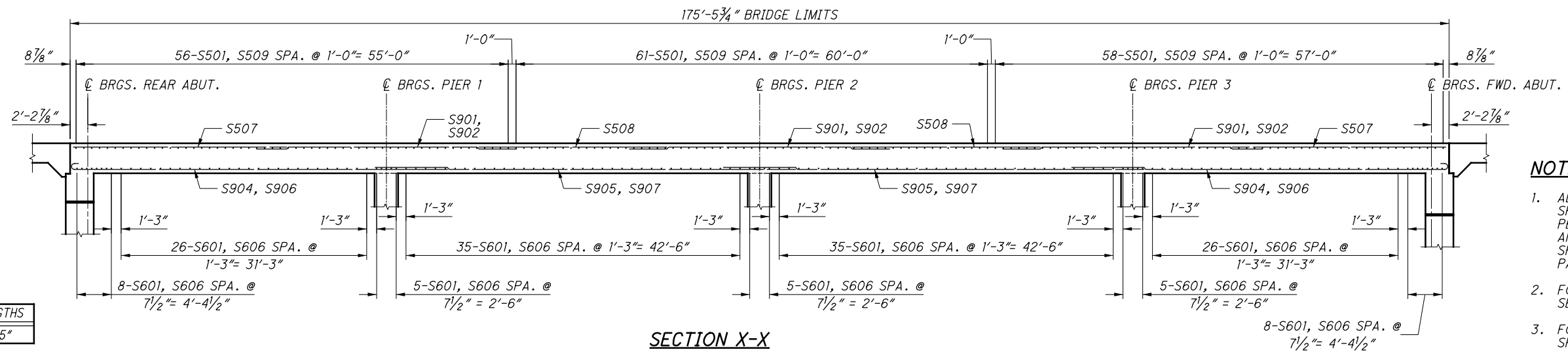
MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"
NO. 6 BAR	3'-10"

DESIGN AGENCY: Mead & Hunt
 4700 LAUREL CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE
 DATE: 8/9/2016
 REVIEWED: KVB
 DRAWN: ALM
 CHECKED: KVB/CMH
 STRUCTURE FILE NUMBER: 25069631/2506998R
 BRIDGE NO.: FRA-71-0308 L/R
 OVER US ROUTE 62
 TRANSVERSE SECTIONS - NORTHBOUND BRIDGE
 FRA-71-0.00
 PID No. 107201
 60/80
 1253
 1312

X:\4037000\21957.6\10720\structures\FRA071_0308C\sheet\071_0308C\DP004.dgn Sheet 10/28/2019 11:16:42 AM 14585js



TOP REINFORCING PLAN - NORTHBOUND
(PARAPET NOT SHOWN)



SECTION X-X

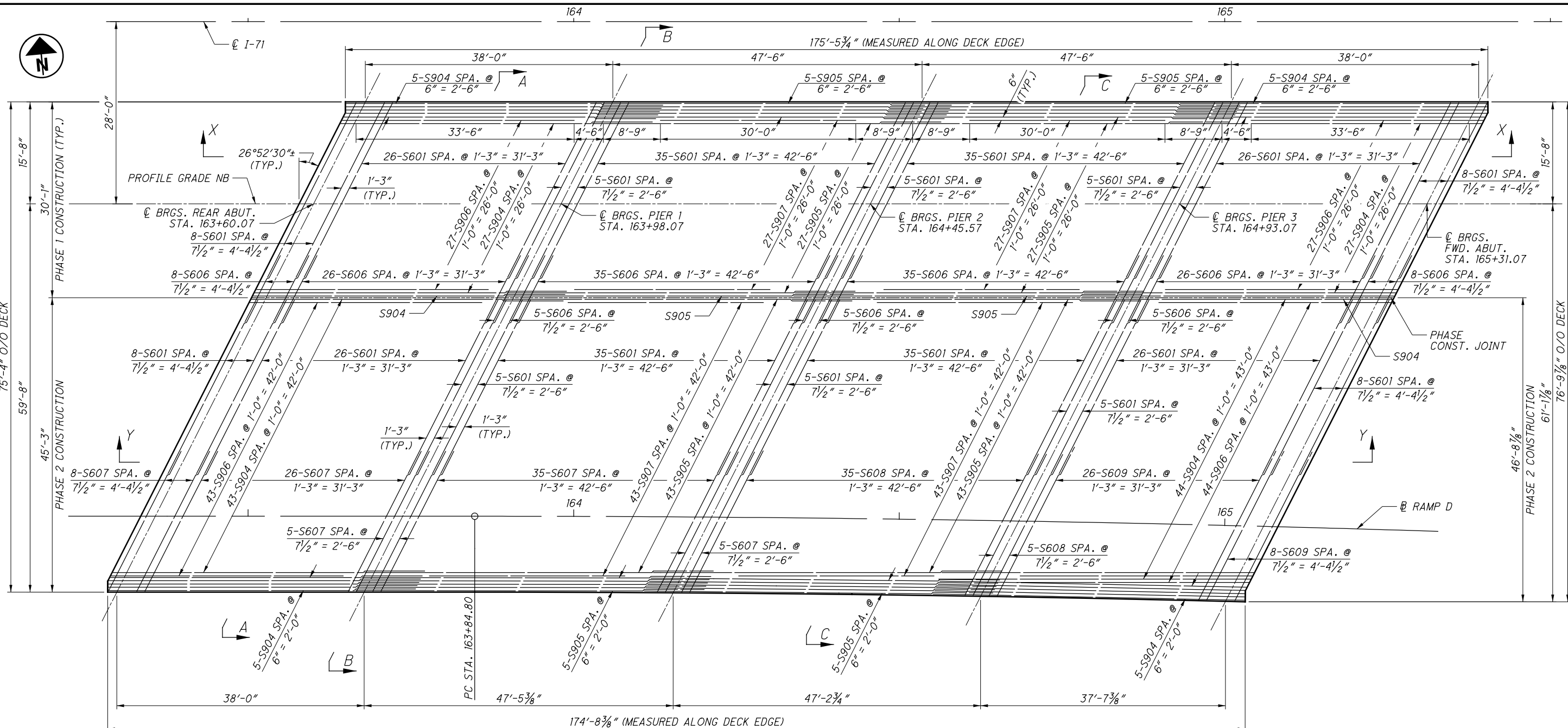
NOTES:

1. ALL LONGITUDINAL REBAR SPACING SHALL BE MEASURED PERPENDICULAR TO C I-71 AND ALL TRANSVERS REBAR SPACING SHALL BE MEASURED PARALLEL TO C I-71 .
2. FOR SECTION A-A THRU C-C, SEE SHEET 60/80.
3. FOR SECTION Y-Y, SEE SHEET 62/80.

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

DESIGN AGENCY Mead & Hunt	DATE	8/9/2016
	REVIEWED	KVB
DRAWN	D/JC/ALM	REVISED
	CMH	
BRIDGE NO. FRA-71-0308 L/R	OVER US ROUTE 62	
FRA-71-0.00	PID No. 107201	
61/80	1254	1312

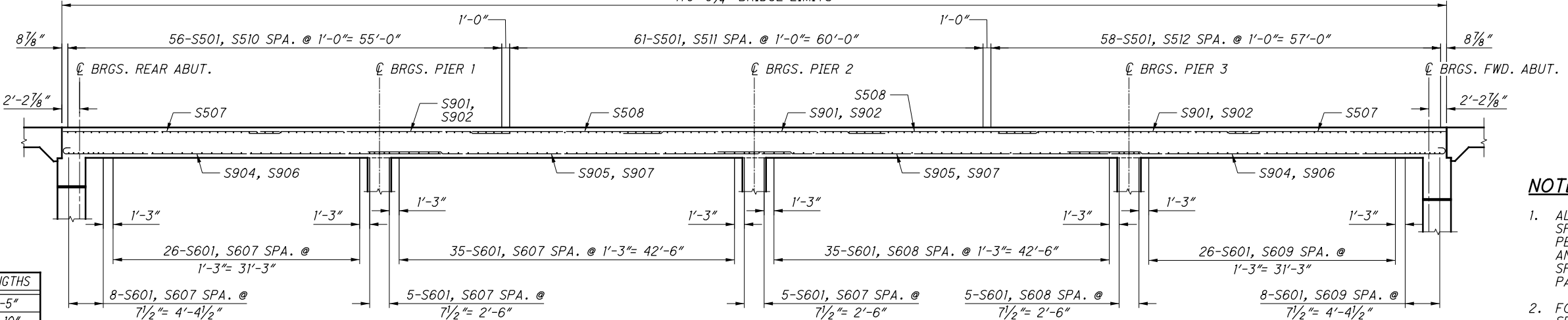
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BOTTOM REINFORCING PLAN - NORTHBOUND

(PARAPET NOT SHOWN)

175'-5 3/4" BRIDGE LIMITS



SECTION Y-Y

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"
NO. 6 BAR	3'-10"
NO. 9 BAR	9'-2"

- NOTES:**
- ALL LONGITUDINAL REBAR SPACING SHALL BE MEASURED PERPENDICULAR TO C I-71 AND ALL TRANSVERS REBAR SPACING SHALL BE MEASURED PARALLEL TO C I-71 .
 - FOR SECTION A-A THRU C-C, SEE SHEET 60/80.
 - FOR SECTION X-X, SEE SHEET 61/80.

DESIGN AGENCY: **Mead & Hunt**
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43068
 (614) 782-5900 PHONE

DATE: 8/9/2016
 REVIEWED: KVB
 DRAWN: DJC/ALM
 CHECKED: CMH

BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

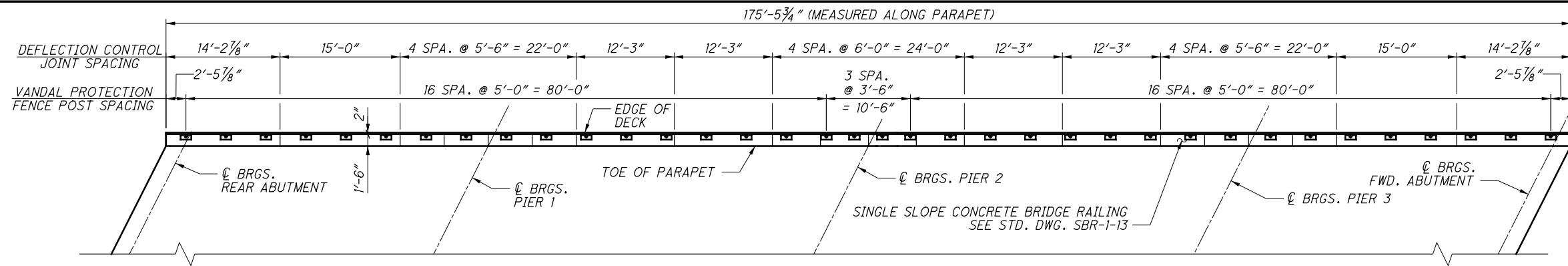
DESIGNED: ALM
 CHECKED: CMH

STRUCTURE FILE NUMBER: 25069631/2506998R

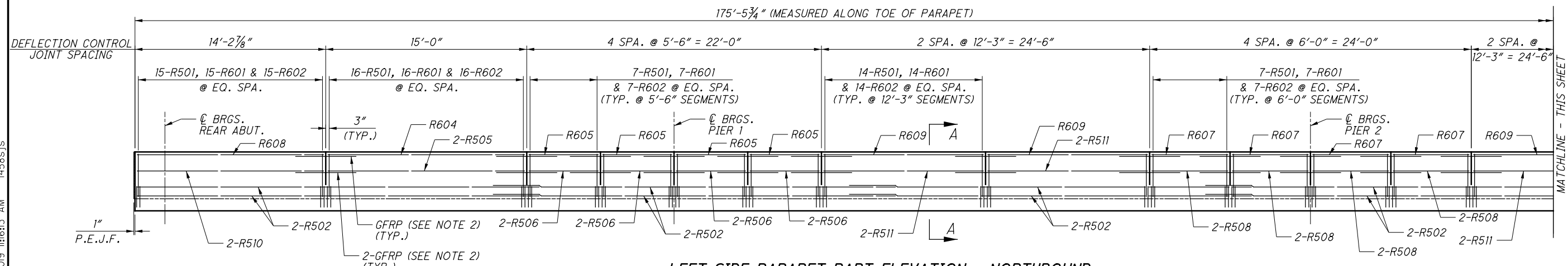
62 / 80

FRA-71-0.00
 PID No. 107201

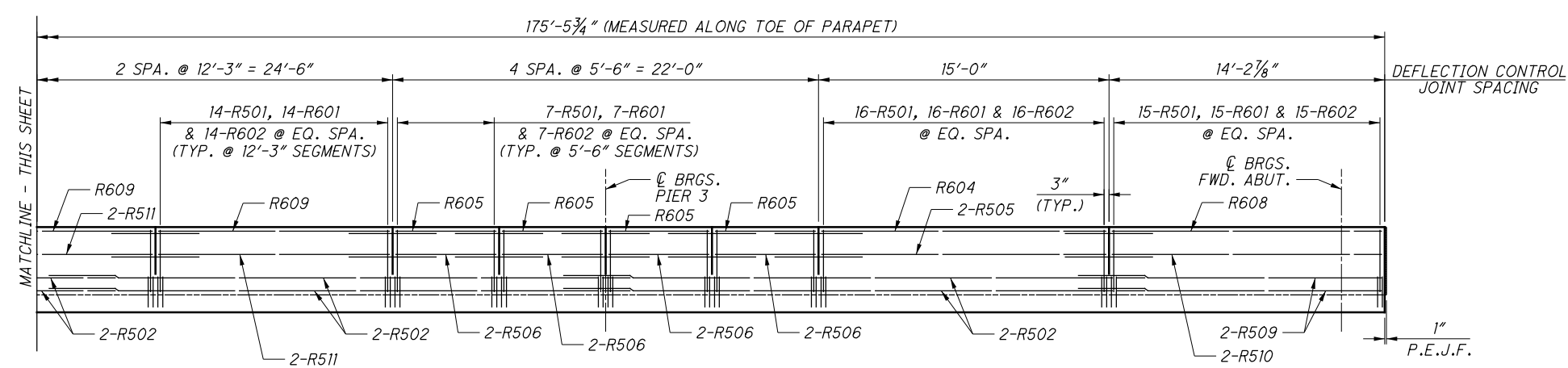
1255
 1312



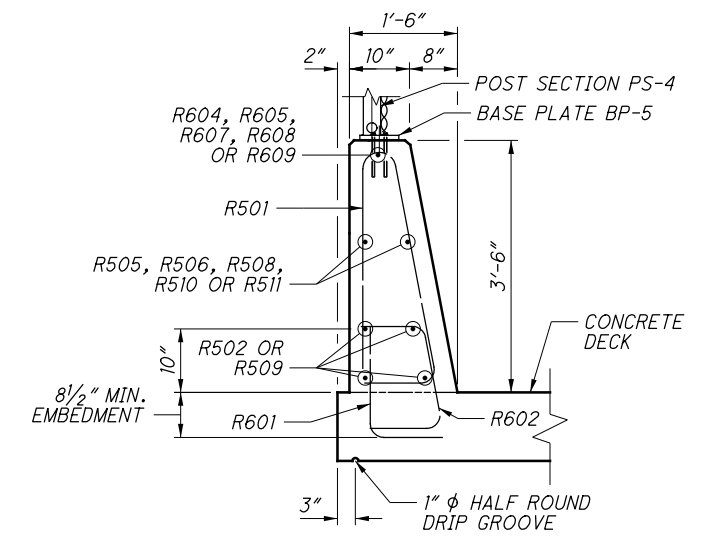
LEFT SIDE PARAPET PLAN - NORTHBOUND



LEFT SIDE PARAPET PART ELEVATION - NORTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



LEFT SIDE PARAPET PART ELEVATION - NORTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



SECTION A-A

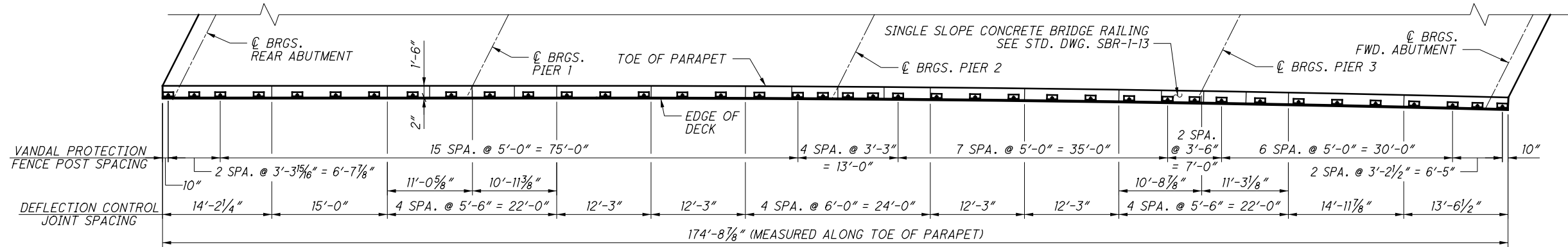
NOTES:

1. FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE STD. DWG. SBR-1-13.
2. 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT. INCLUDE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT.
3. FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS & NOTES, SEE STD. DWG. VPF-1-90.

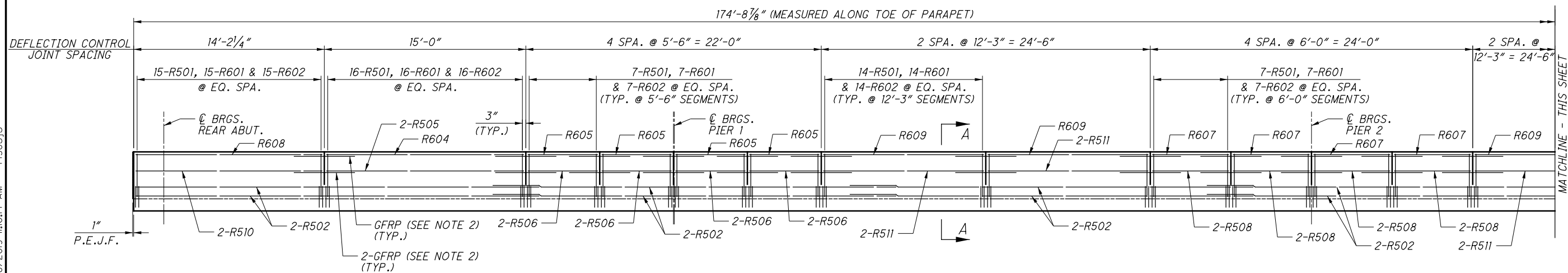
MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

X:\4037000\21957.16\107201\structures\FRA071_0308C\structures\071_0308CRA003.dgn Sheet 10/28/2019 11:16:13 AM 14585js

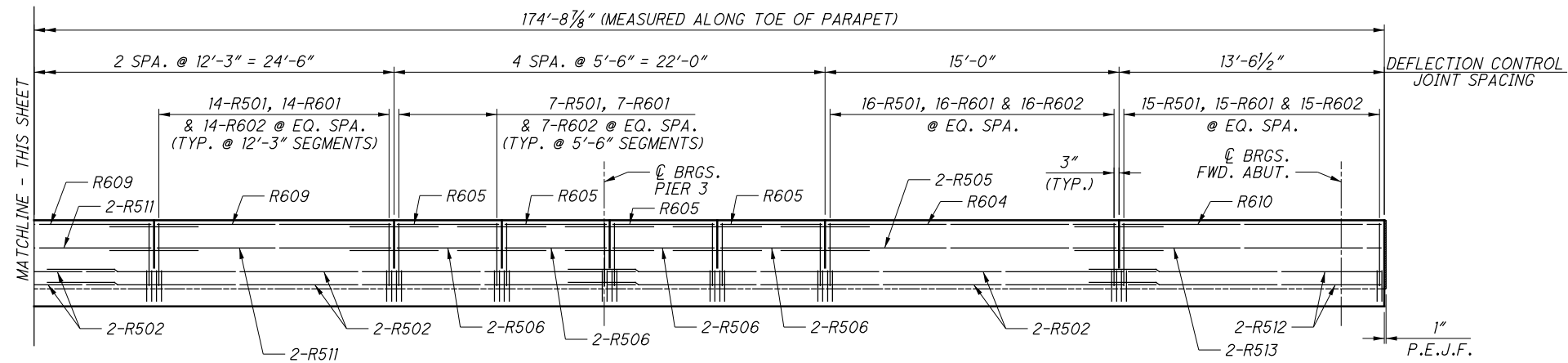
DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-9900 PHONE
 DATE: 8/9/2016
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: ALM
 CHECKED: CMH
 STRUCTURE FILE NUMBER: 25069631/2506998R
PARAPET DETAILS - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62
FRA-71-0.00
 PID No. 107201
 63/80
 1256
 1312



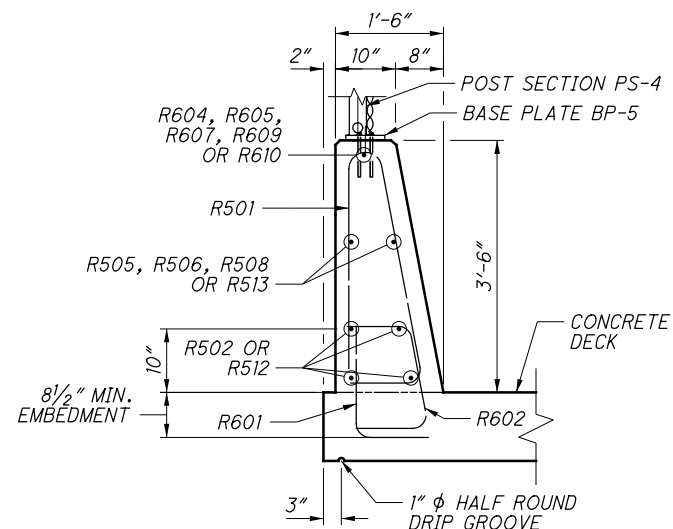
RIGHT SIDE PARAPET PLAN - NORTHBOUND



RIGHT SIDE PARAPET PART ELEVATION - NORTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



RIGHT SIDE PARAPET PART ELEVATION - NORTHBOUND
(VANDAL PROTECTION FENCE POST NOT SHOWN FOR CLARITY)



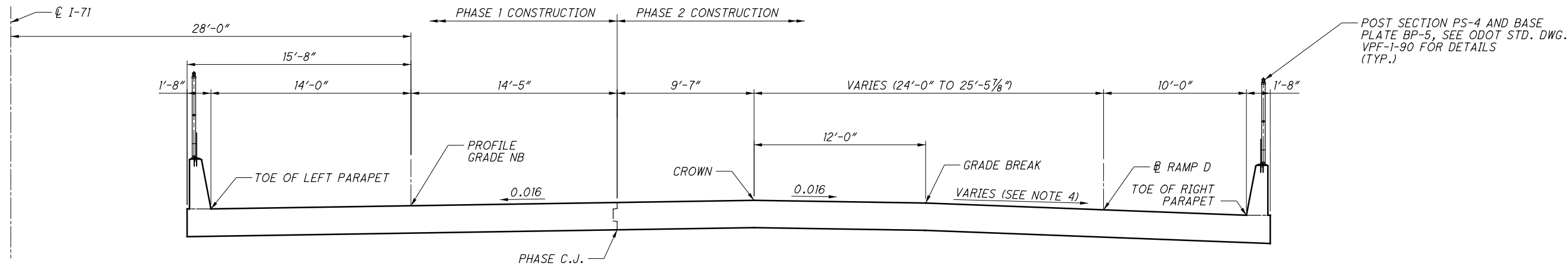
SECTION A-A

NOTES:

1. FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE STD. DWG. SBR-1-13.
2. 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT. INCLUDE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT.
3. FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS & NOTES, SEE STD. DWG. VPF-1-90.

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

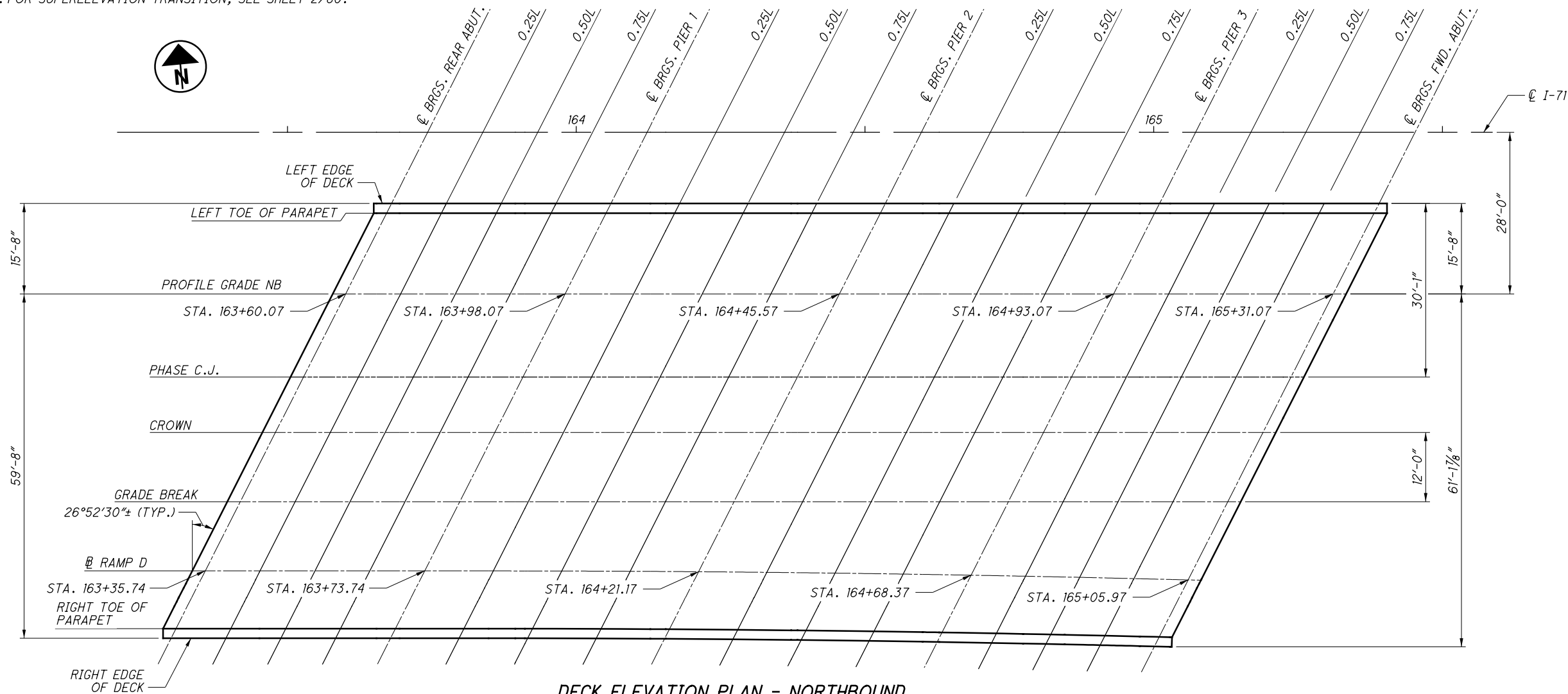
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NOTES:

1. FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEET 66/80.
2. L=SPAN LENGTH.
3. TO COMPENSATE FOR FALSEWORK DEFLECTION AND FOR THE DEFLECTION OF THE SLAB AFTER THE FALSEWORK IS REMOVED, BUILD CAMBER INTO THE FALSEWORK ACCORDING TO CMS 508.02.
4. FOR SUPERELEVATION TRANSITION, SEE SHEET 2/80.

DECK SURFACE LOCATIONS - NORTHBOUND



DECK ELEVATION PLAN - NORTHBOUND

DESIGN AGENCY: Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DESIGNED	ALM	CHECKED	CMH
DRAWN	ALM	REVISED	
REVIEWED	KVB	DATE	8/9/2016
STRUCTURE FILE NUMBER	25069631/2506998R		

BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0.00
 PID No. 107201

65/80

1258
 1312

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FINAL DECK SURFACE ELEVATION TABLE - NORTHBOUND

LOCATION	LEFT TOE OF PARAPET		PROFILE GRADE NB		PHASE CONSTRUCTION JOINT		CROWN		GRADE-BREAK		RAMP D		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
☉ BRGS. R.A.	163+67.16	893.68	163+60.07	893.93	163+52.76	894.19	163+47.91	894.36	163+41.83	894.19	163+35.74	894.02	163+30.68	893.87
0.25L	163+76.66	893.64	163+69.57	893.89	163+62.26	894.15	163+57.41	894.33	163+51.33	894.16	163+45.24	893.99	163+40.18	893.84
0.50L	163+86.16	893.59	163+79.07	893.85	163+71.76	894.11	163+66.91	894.29	163+60.83	894.12	163+54.74	893.93	163+49.68	893.81
0.75L	163+95.66	893.55	163+88.57	893.81	163+81.26	894.07	163+76.41	894.25	163+70.33	894.08	163+64.24	893.87	163+59.18	893.72
☉ BRGS. PIER 1	164+05.16	893.50	163+98.07	893.76	163+90.76	894.03	163+85.91	894.20	163+79.83	894.04	163+73.74	893.80	163+68.68	893.62
0.25L	164+17.04	893.43	164+09.94	893.70	164+02.64	893.97	163+97.78	894.15	163+91.70	893.98	163+85.62	893.70	163+80.55	893.50
0.50L	164+28.91	893.36	164+21.82	893.63	164+14.51	893.90	164+09.66	894.08	164+03.58	893.92	163+97.49	893.61	163+92.42	893.38
0.75L	164+40.79	893.29	164+33.69	893.56	164+26.39	893.83	164+21.53	894.02	164+15.45	893.86	164+09.34	893.51	164+04.28	893.24
☉ BRGS. PIER 2	164+52.66	893.21	164+45.57	893.48	164+38.26	893.76	164+33.41	893.94	164+27.33	893.79	164+21.17	893.40	164+16.12	893.11
0.25L	164+64.54	893.13	164+57.44	893.40	164+50.14	893.68	164+45.28	893.87	164+39.20	893.72	164+32.99	893.29	164+27.95	892.96
0.50L	164+76.41	893.04	164+69.32	893.32	164+62.01	893.60	164+57.16	893.79	164+51.08	893.64	164+44.80	893.21	164+39.76	892.86
0.75L	164+88.29	892.95	164+81.20	893.23	164+69.03	893.55	164+69.04	893.70	164+62.95	893.55	164+56.59	893.12	164+51.56	892.78
☉ BRGS. PIER 3	165+00.16	892.85	164+93.07	893.13	164+85.76	893.42	164+80.91	893.61	164+74.83	893.47	164+68.37	893.03	164+63.34	892.69
0.25L	165+09.66	892.77	165+02.57	893.05	164+95.26	893.35	164+90.41	893.54	164+84.33	893.39	164+77.78	892.95	164+72.76	892.62
0.50L	165+19.16	892.69	165+12.07	892.97	165+04.76	893.27	164+99.91	893.46	164+93.83	893.32	164+87.18	892.87	164+82.17	892.54
0.75L	165+28.66	892.60	165+21.57	892.89	165+14.26	893.18	165+09.41	893.38	165+03.33	893.24	164+96.56	892.79	164+91.56	892.46
☉ BRGS. F.A.	165+38.16	892.51	165+31.07	892.80	165+23.76	893.10	165+18.91	893.30	165+12.83	893.16	165+05.95	892.70	165+00.95	892.37

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

REVIEWED DATE
 KVB 8/9/2016
 STRUCTURE FILE NUMBER
 25069631/2506998R

DRAWN ALM
 ALM
 CHECKED CMH
 REVISIONS

DESIGNED ALM
 CMH

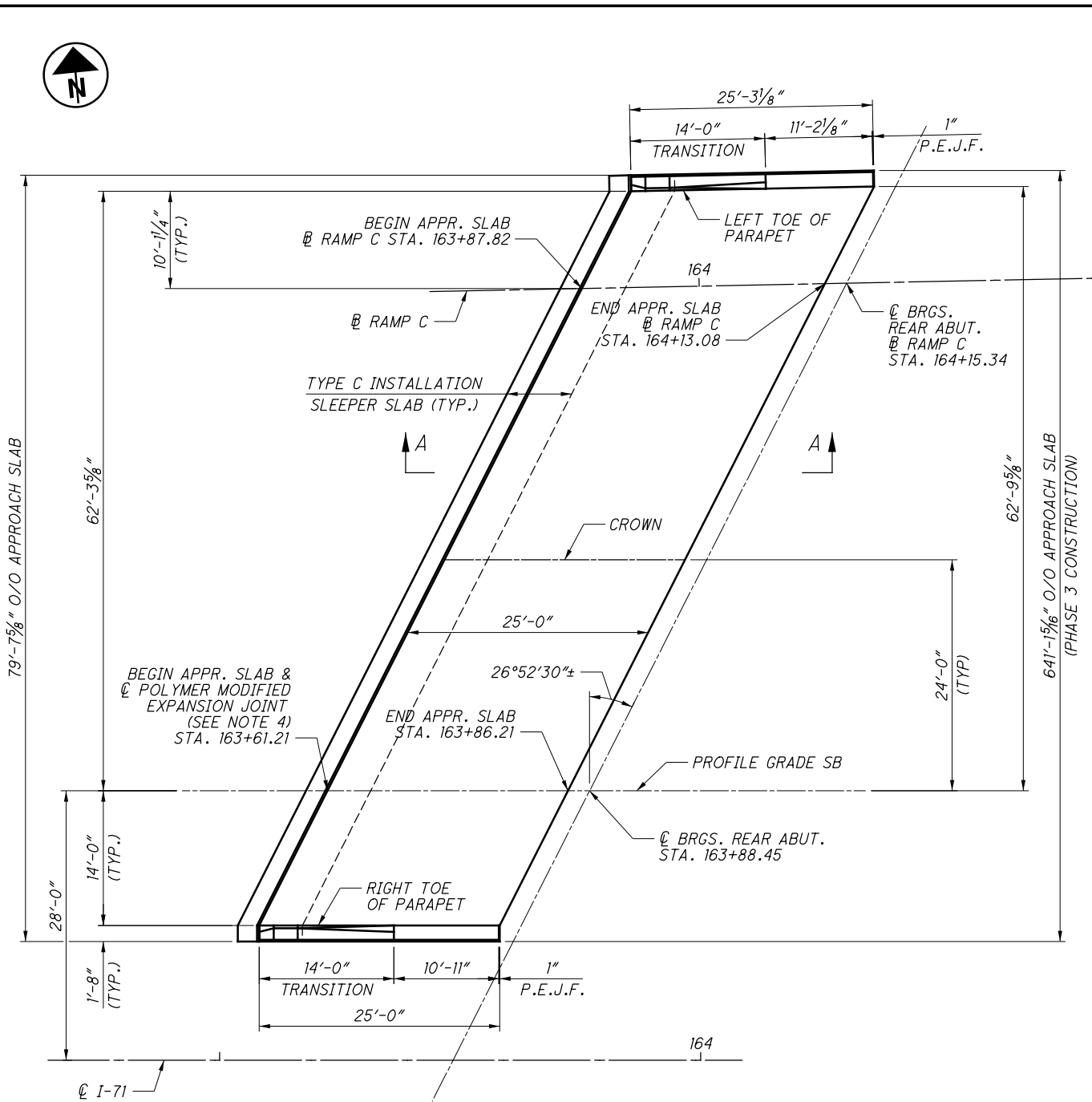
FINAL DECK SURFACE ELEVATION TABLE - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0.00
 PID No. 107201

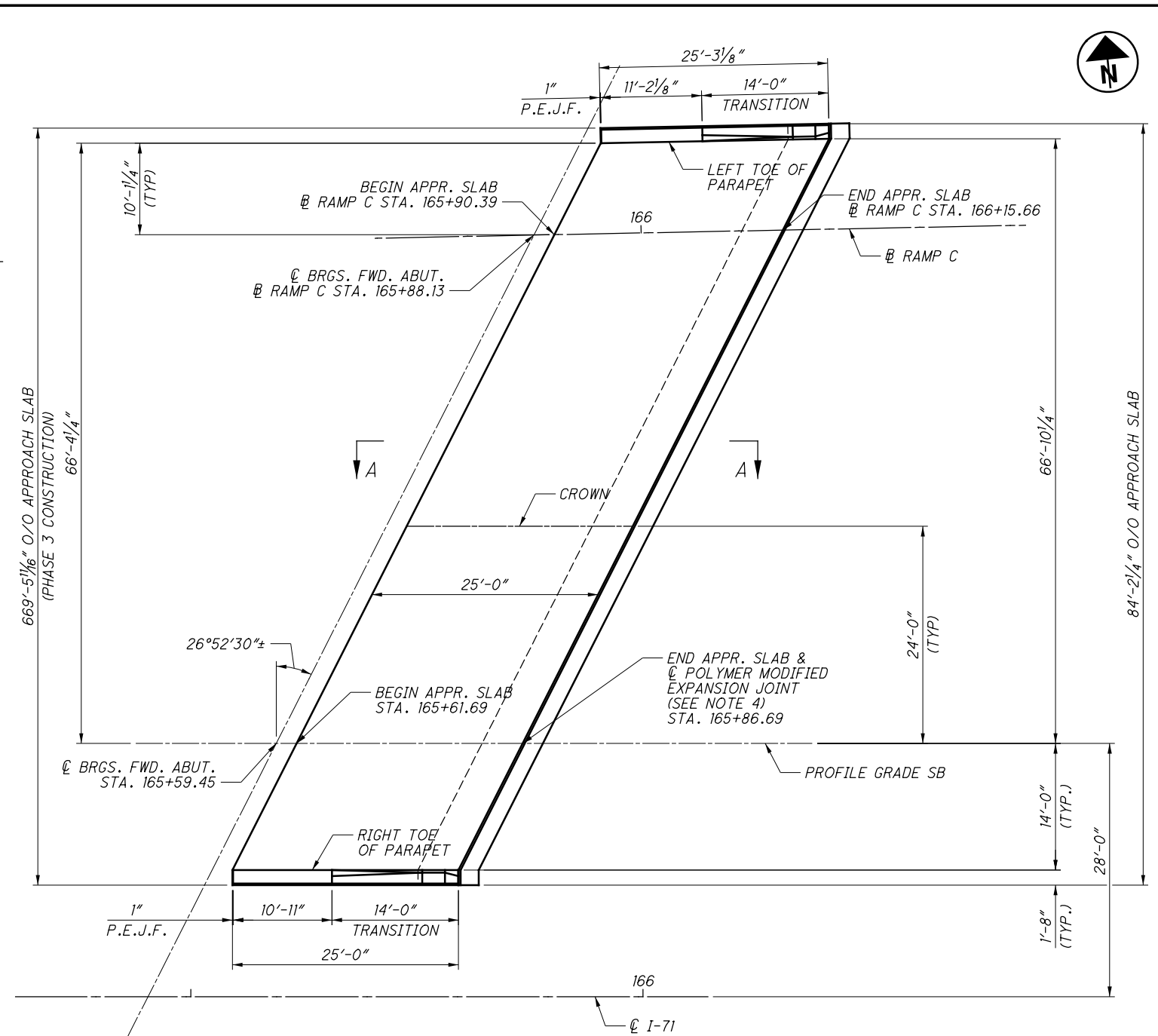
66/80

1259
 1312

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REAR APPROACH SLAB PLAN - SOUTHBOUND



FORWARD APPROACH SLAB PLAN - SOUTHBOUND

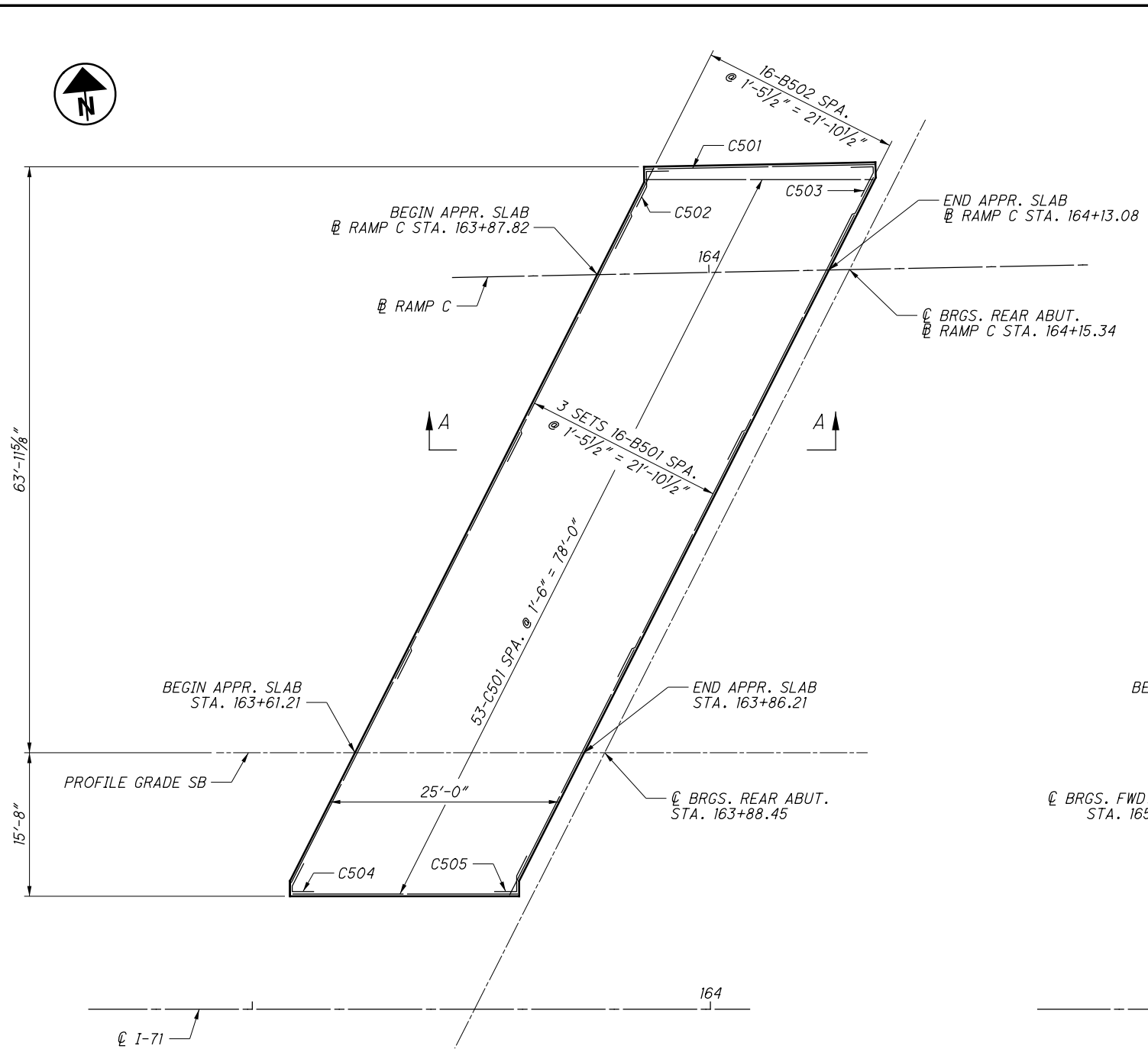
TOP OF APPROACH SLAB ELEVATION TABLE - SOUTHBOUND

APPROACH SLAB	LOCATION	LEFT TOE OF PARAPET			RAMP C			CROWN			PROFILE GRADE SB			RIGHT TOE OF PARAPET		
		STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
REAR ABUT.	0.0 L	163+92.78	90.30	894.38	163+87.66	80.20	894.55	163+73.37	52.00	895.03	163+61.21	28.00	894.67	163+54.11	14.00	894.45
	0.5 L	164+05.41	90.55	894.34	164+00.29	80.45	894.52	163+85.87	52.00	895.01	163+73.71	28.00	894.65	163+66.61	14.00	894.43
	1.0 L	164+18.04	90.81	894.30	164+12.92	80.70	894.48	163+98.37	52.00	894.98	163+86.21	28.00	894.62	163+79.11	14.00	894.41
FORWARD ABUT.	0.0 L	165+95.32	94.35	893.23	165+90.20	84.25	893.43	165+73.85	52.00	894.08	165+61.69	28.00	893.78	165+54.60	14.00	893.61
	0.5 L	166+07.95	94.60	893.11	166+02.82	84.50	893.32	165+86.35	52.00	893.98	165+74.19	28.00	893.69	165+67.10	14.00	893.52
	1.0 L	166+20.57	94.86	893.00	166+15.45	84.75	893.21	165+98.85	52.00	893.87	165+86.69	28.00	893.59	165+79.60	14.00	893.42

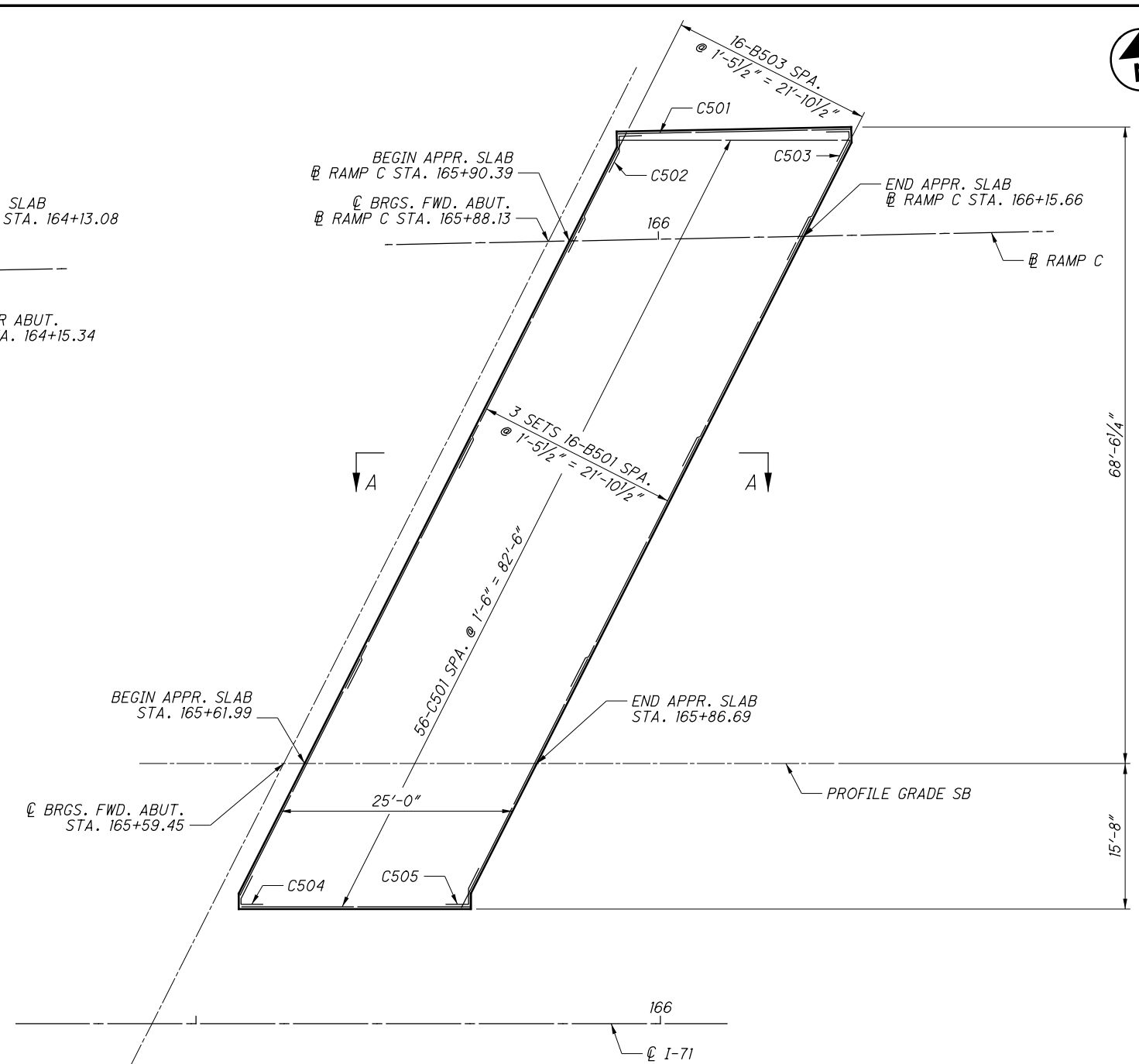
NOTES:

1. FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.
2. FOR DETAILS AND NOTES FOR THE CONCRETE PARAPET, SEE SHEETS 57/80 AND 58/80.
3. FOR APPROACH SLAB REINFORCING DETAILS, SEE SHEETS 68/80 AND 69/80.

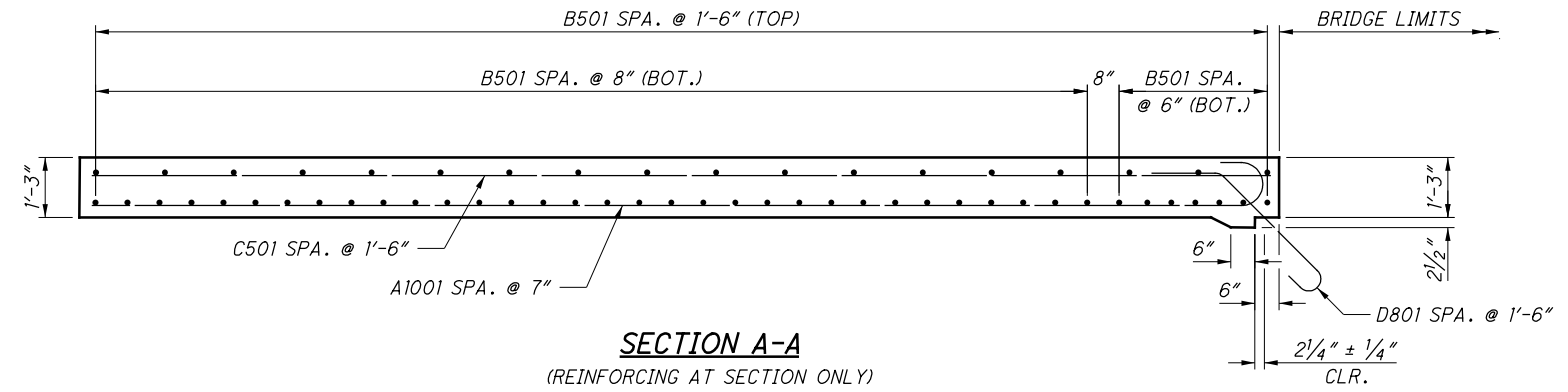
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REAR APPROACH SLAB TOP REINFORCING PLAN - SOUTHBOUND



FORWARD APPROACH SLAB TOP REINFORCING PLAN - SOUTHBOUND



MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

NOTE:

- FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.
- FIELD BEND TRANSVERSE BARS TO FIT THE CROWN. INCLUDE COST OF FIELD BENDS WITH ITEM 511, EPOXY COATED REINFORCING STEEL, AS PER PLAN.



DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

DATE
 8/9/2016
 REVIEWED
 KVB
 DRAWN
 DJC
 DESIGNED
 ALM
 CHECKED
 CMH

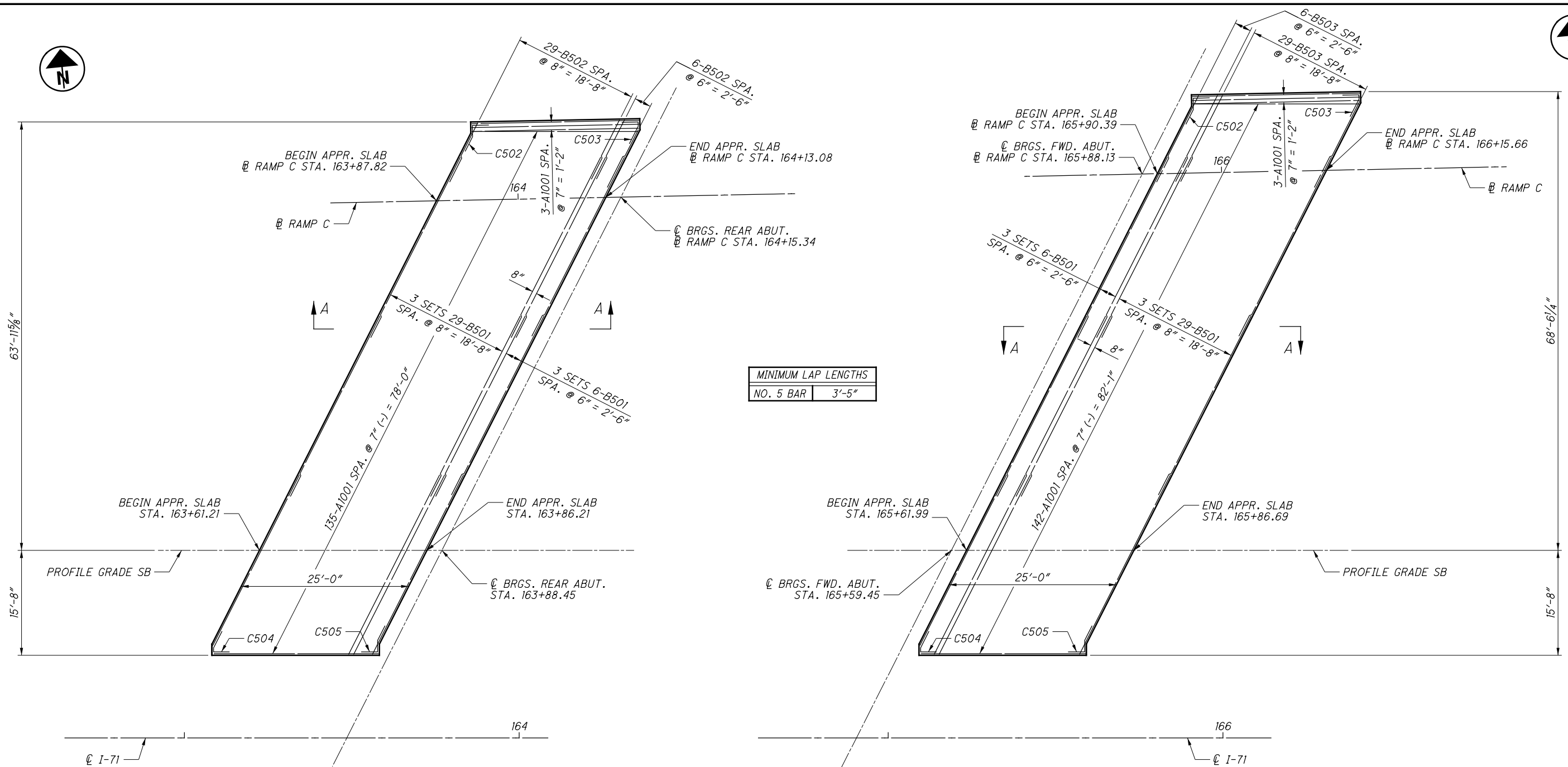
BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62
APPROACH SLAB REINFORCING DETAILS - SOUTHBOUND BRIDGE

FRA-71-0.00
 PID No. 107201

68/80

1261
 1312

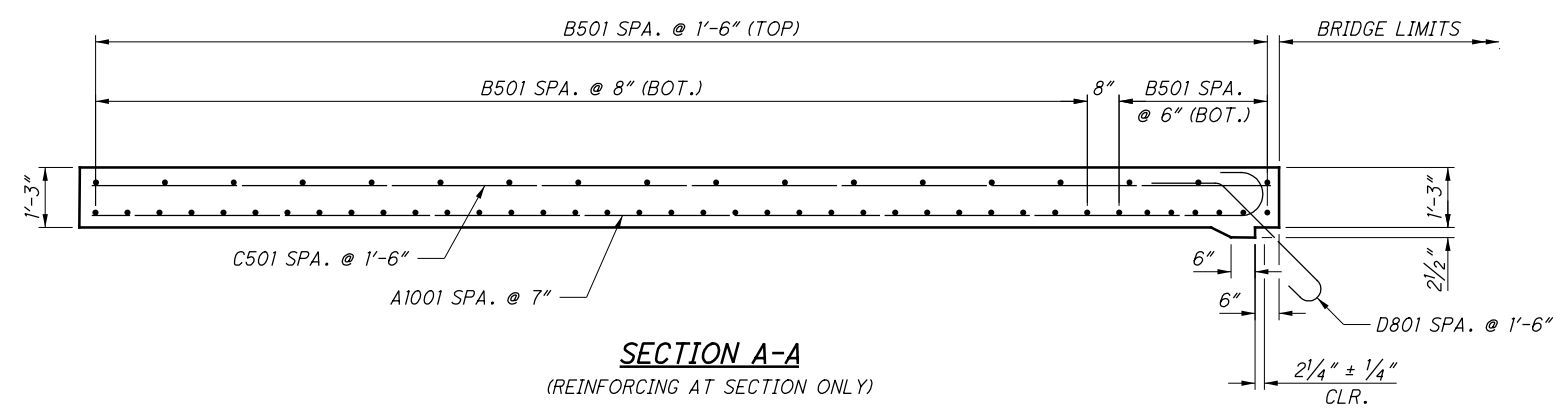
X:\4037000\21957.16\107201\structures\FRA071_0308C\sheets\071_0308CMD002.dgn Sheet 10/28/2019 11:16:18 AM 1458sjs



REAR APPROACH SLAB BOTTOM REINFORCING PLAN - SOUTHBOUND

FORWARD APPROACH SLAB BOTTOM REINFORCING PLAN - SOUTHBOUND

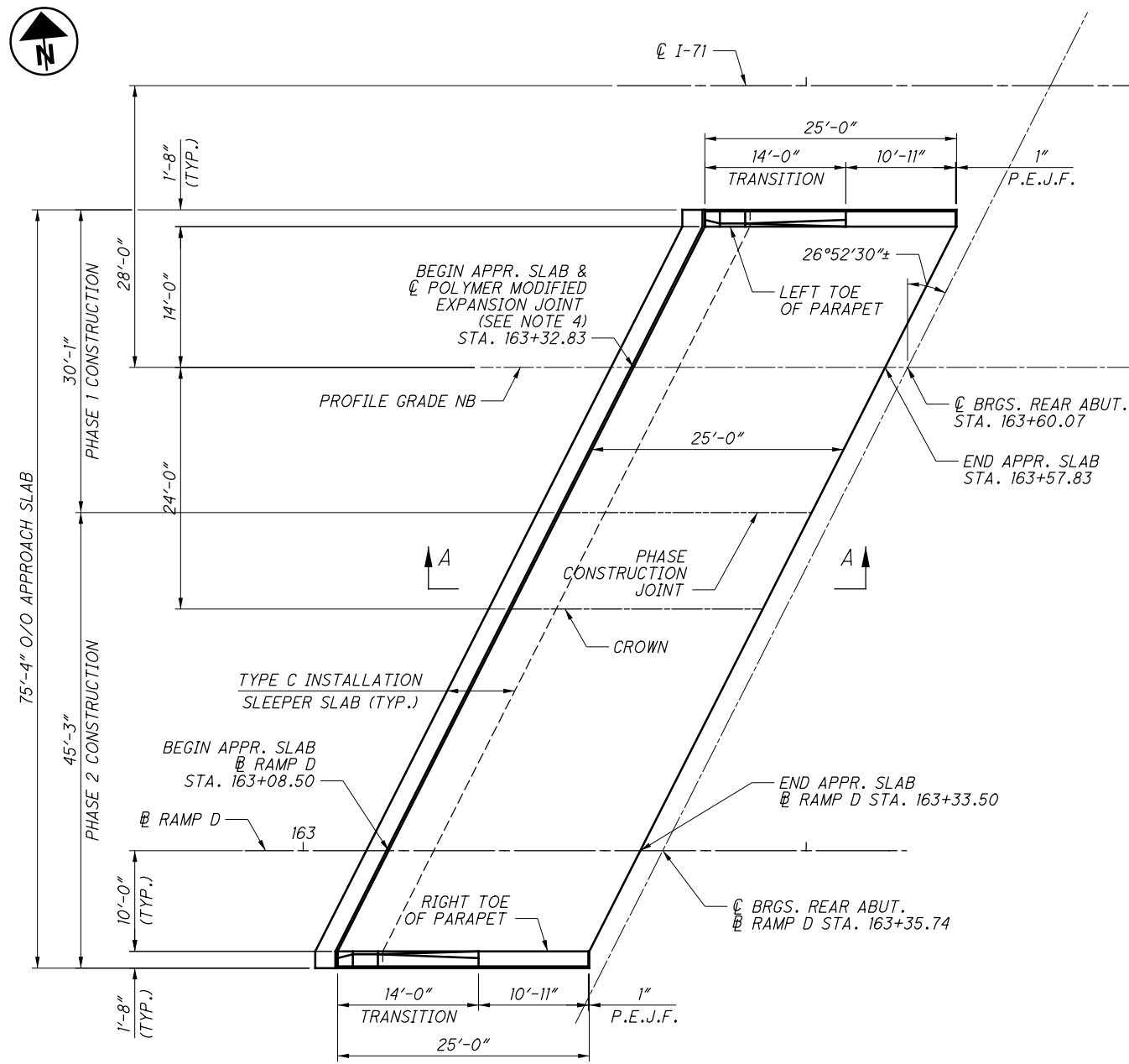
MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"



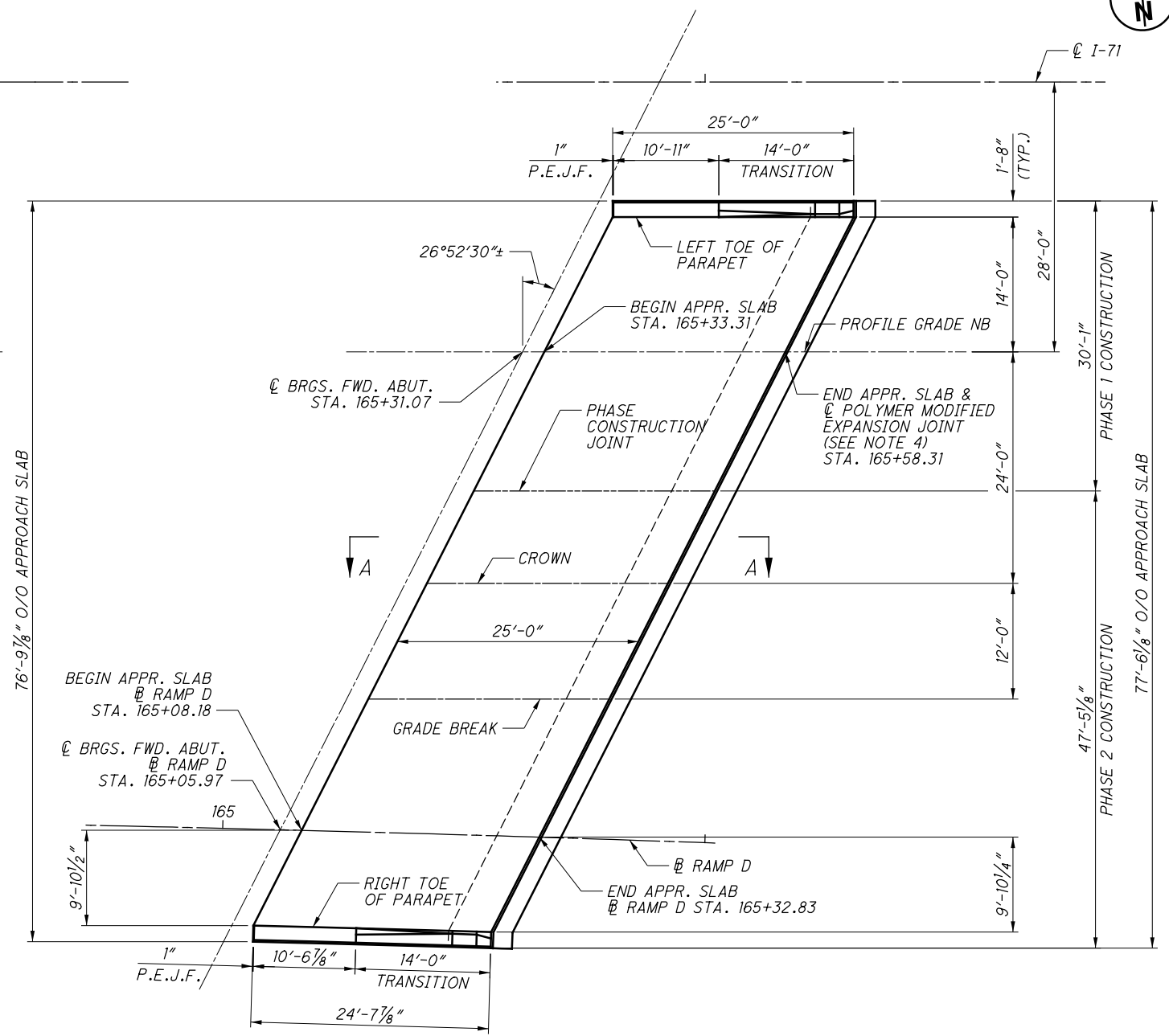
NOTE:

- FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.





REAR APPROACH SLAB PLAN - NORTHBOUND



FORWARD APPROACH SLAB PLAN - NORTHBOUND

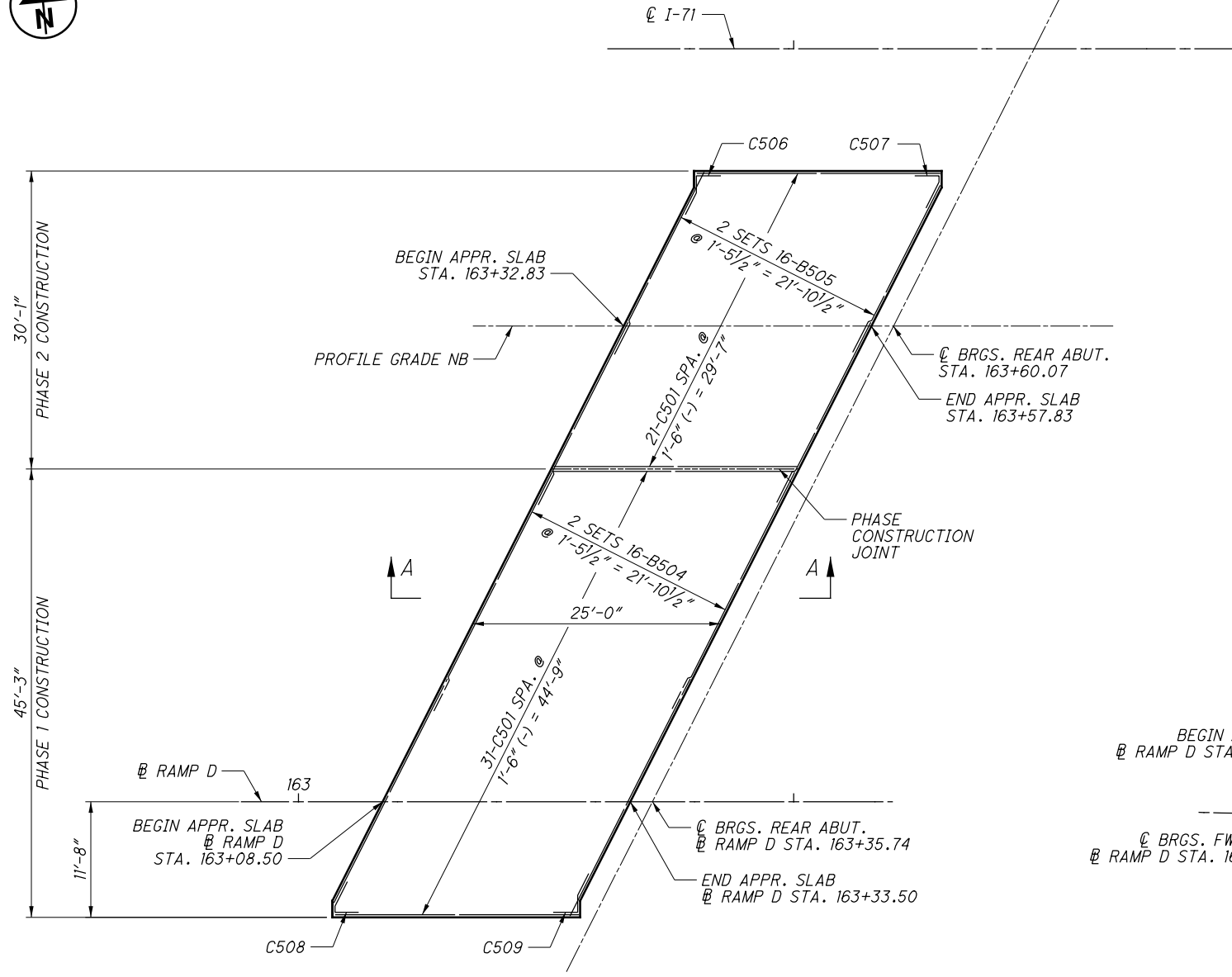
- NOTES:**
- FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.
 - FOR DETAILS AND NOTES FOR THE CONCRETE PARAPET, SEE SHEETS 63/80 AND 64/80.

TOP OF APPROACH SLAB ELEVATION TABLE - NORTHBOUND

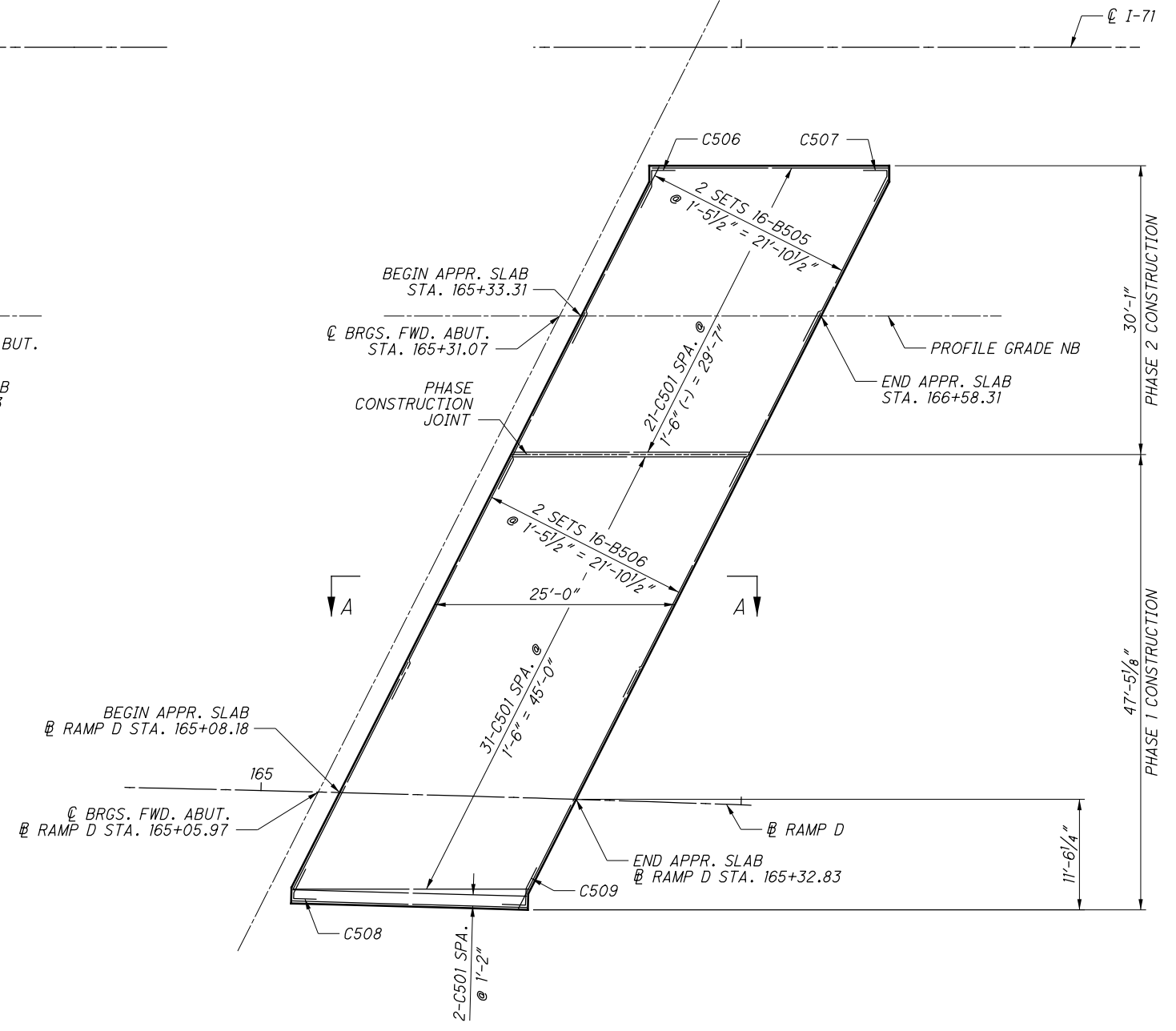
APPROACH SLAB	LOCATION	LEFT TOE OF PARAPET			PROFILE GRADE NB			PHASE CONSTRUCTION JOINT			CROWN			GRADE BREAK			RAMP D			RIGHT TOE OF PARAPET		
		STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
REAR ABUT.	0.0 L	163+39.92	14.00	893.78	163+32.83	28.00	894.03	163+25.52	42.42	894.28	163+20.66	52.00	894.44	-	-	-	163+08.50	76.00	894.09	163+03.43	86.00	893.94
	0.5 L	163+52.42	14.00	893.74	163+45.33	28.00	893.99	163+38.02	42.42	894.24	163+33.16	52.00	894.41	-	-	-	163+21.00	76.00	894.06	163+15.93	86.00	893.91
	1.0 L	163+64.92	14.00	893.69	163+57.83	28.00	893.94	163+50.52	42.42	894.20	163+45.66	52.00	894.37	-	-	-	163+33.50	76.00	894.02	163+28.43	86.00	893.88
FORWARD ABUT.	0.0 L	165+40.41	14.00	892.49	165+33.31	28.00	892.78	165+26.01	42.42	893.08	165+21.15	52.00	893.28	165+15.07	64.00	893.14	165+08.17	77.62	892.68	165+03.16	87.49	892.35
	0.5 L	165+52.91	14.00	892.37	165+45.81	28.00	892.66	165+38.51	42.42	892.96	165+33.65	52.00	893.16	165+27.57	64.00	893.03	165+20.50	77.96	892.56	165+15.50	87.82	892.23
	1.0 L	165+65.41	14.00	892.24	165+58.31	28.00	892.54	165+51.01	42.42	892.84	165+46.15	52.00	893.04	165+40.07	64.00	892.91	165+32.81	78.33	892.43	165+27.82	88.18	892.11

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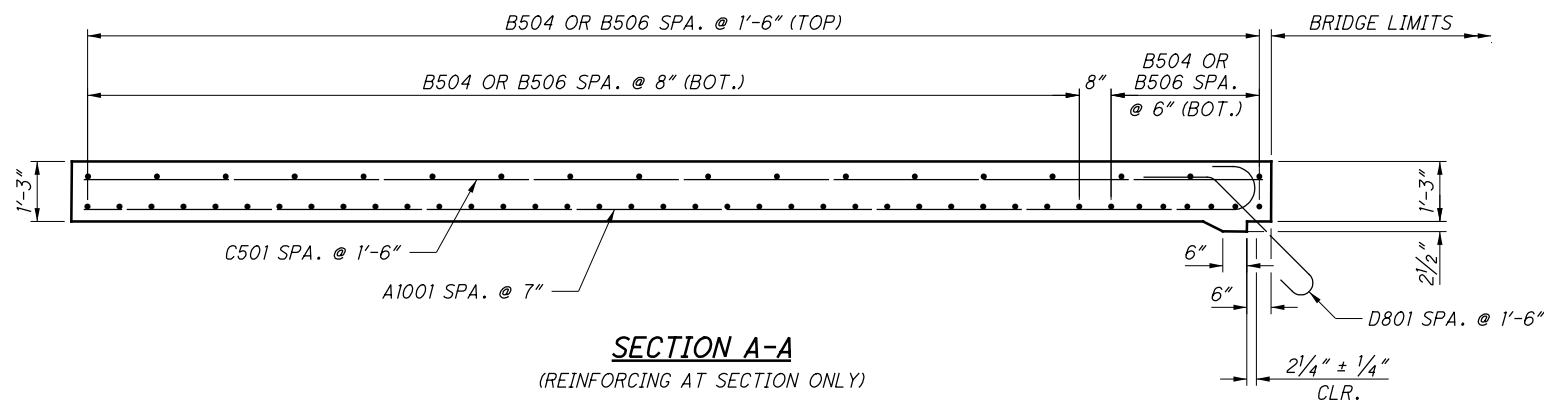
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REAR APPROACH SLAB TOP REINFORCING PLAN - NORTHBOUND



FORWARD APPROACH SLAB TOP REINFORCING PLAN - NORTHBOUND



SECTION A-A
(REINFORCING AT SECTION ONLY)

MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

NOTE:
1. FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.

DESIGN AGENCY: **Mead & Hunt**
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-5900 PHONE

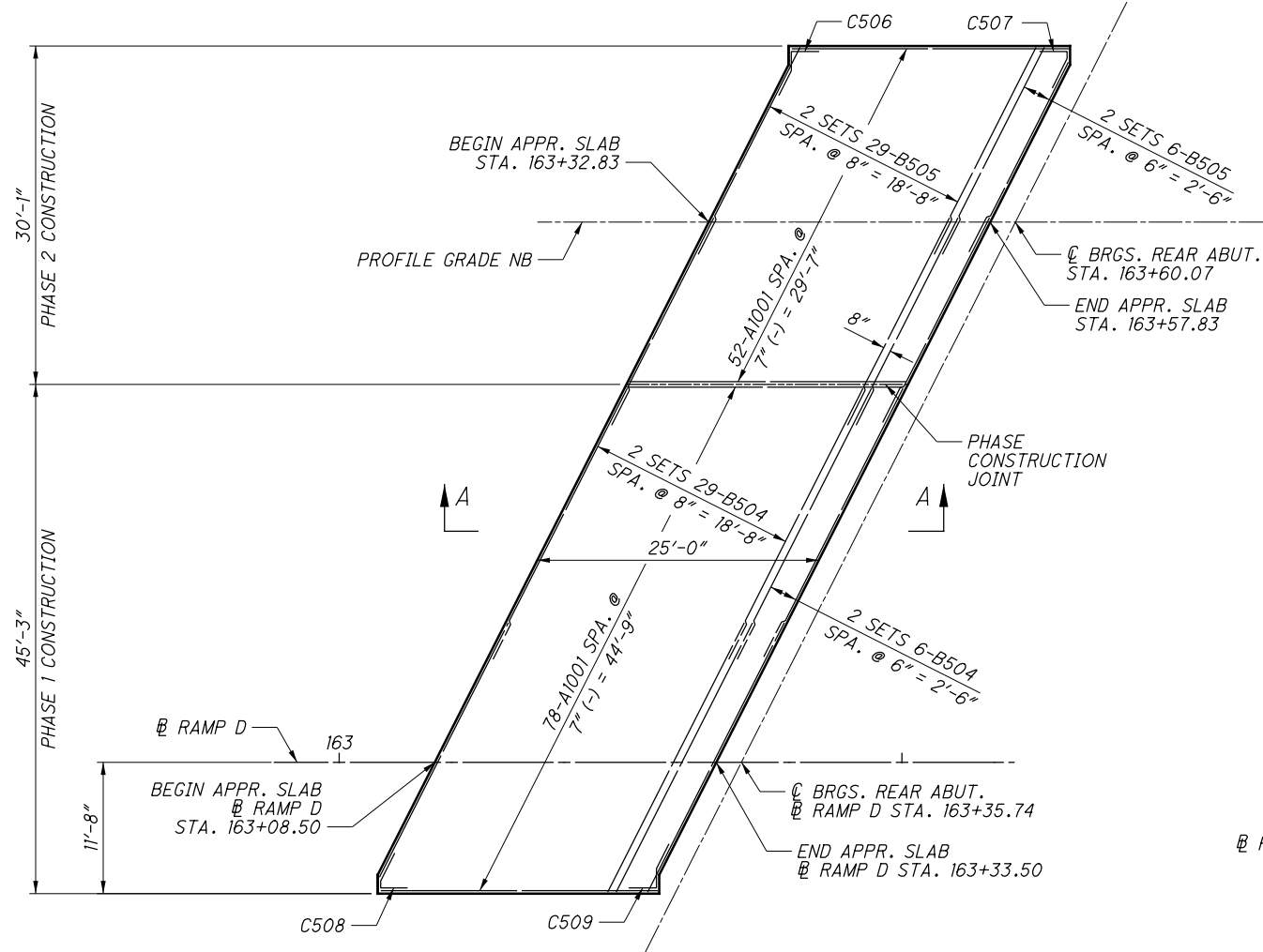
DATE: 8/9/2016
 REVIEWED: KVB
 DRAWN: DJC
 DESIGNED: ALM
 CHECKED: CMH

STRUCTURE FILE NUMBER: 25069631/2506998R

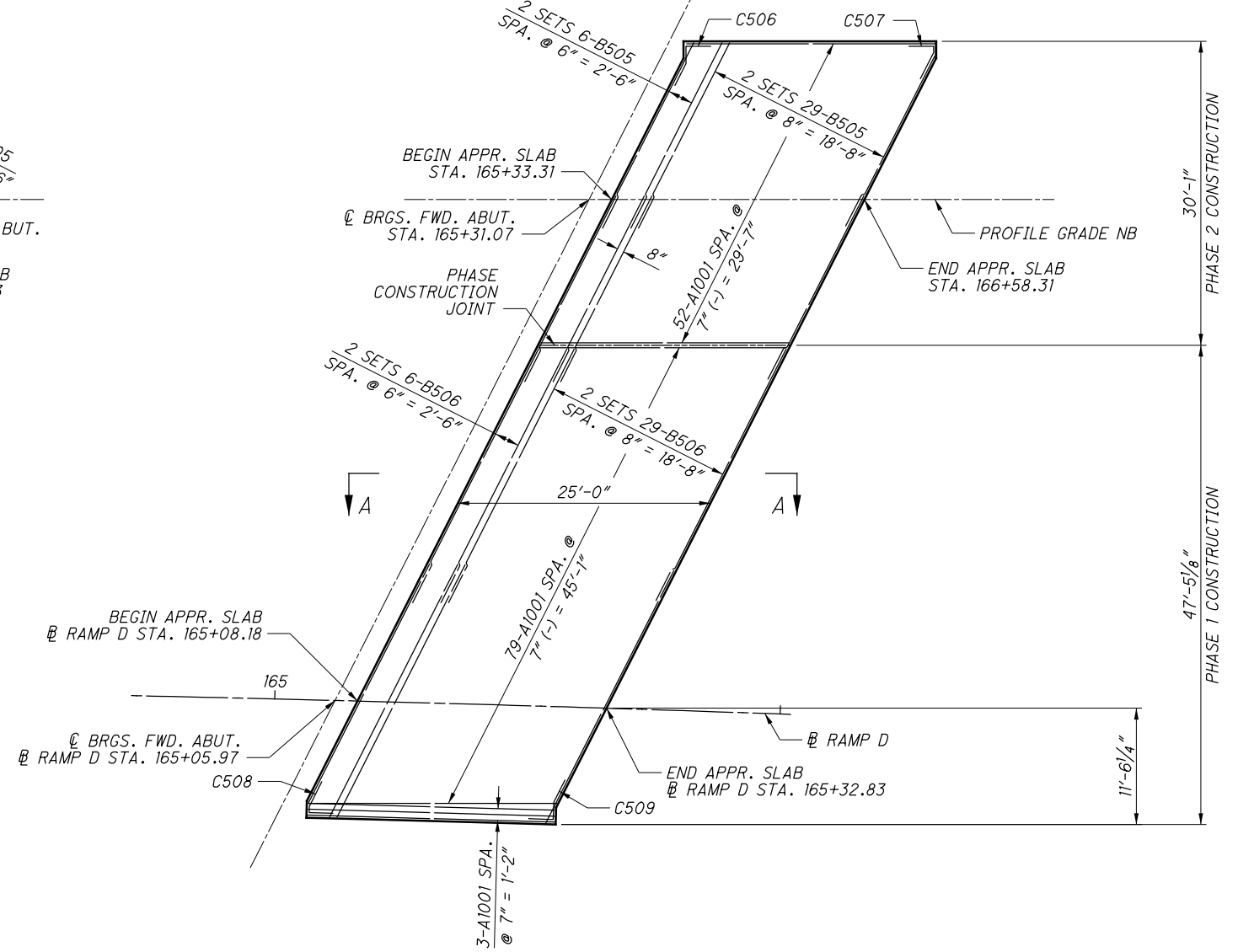
APPROACH SLAB REINFORCING DETAILS - NORTHBOUND BRIDGE
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0-00
 PID No. 107201

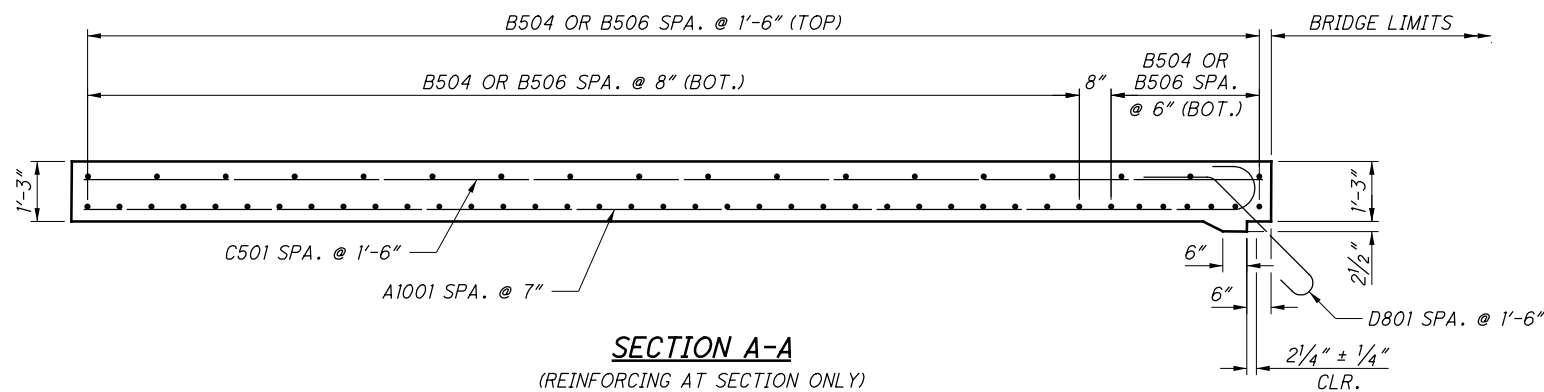
71/80
 1264
 1312



REAR APPROACH SLAB BOTTOM REINFORCING PLAN - NORTHBOUND



REAR APPROACH SLAB BOTTOM REINFORCING PLAN - NORTHBOUND



MINIMUM LAP LENGTHS	
NO. 5 BAR	3'-5"

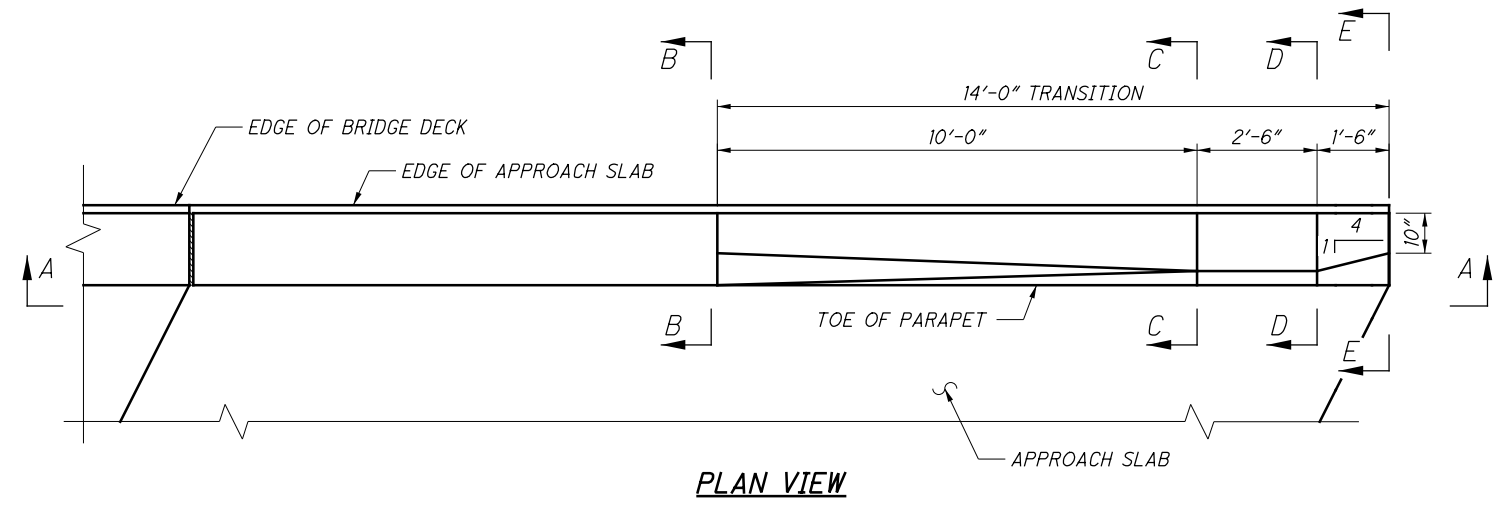
NOTE:

- FOR ADDITIONAL DETAIL NOTES AND APPROACH SLAB REINFORCING, SEE ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.

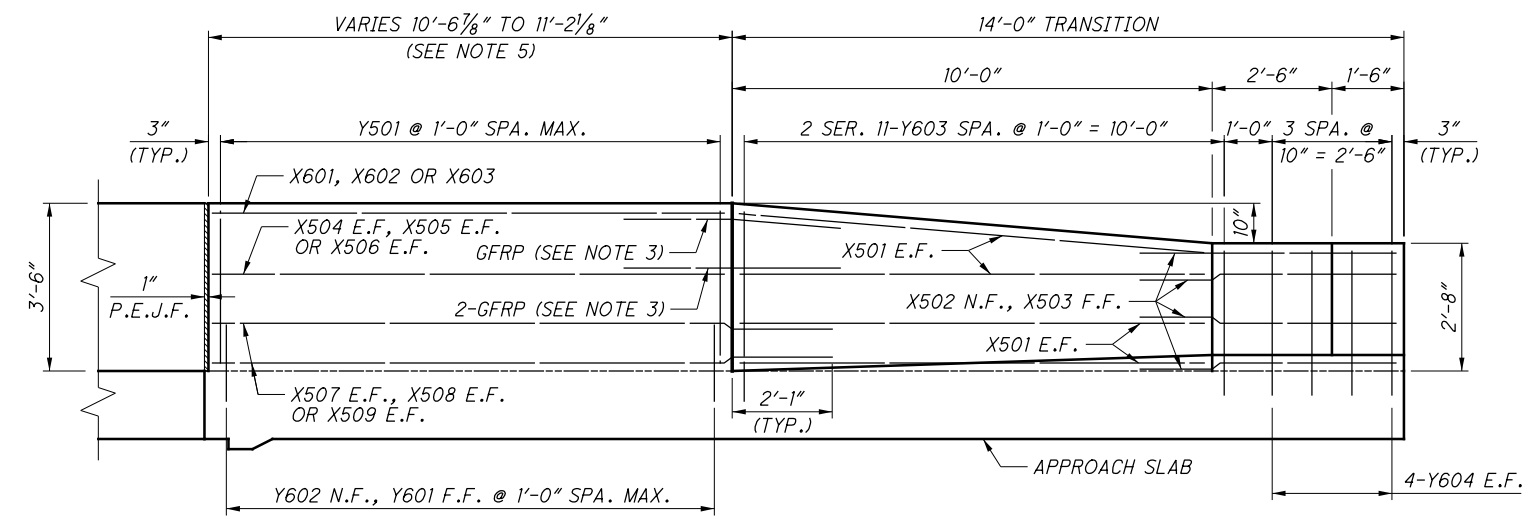
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DESIGNED	DRAWN	REVIEWED	DATE
ALM	DJC	KVB	8/9/2016
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CMH		25069631/2506998R	

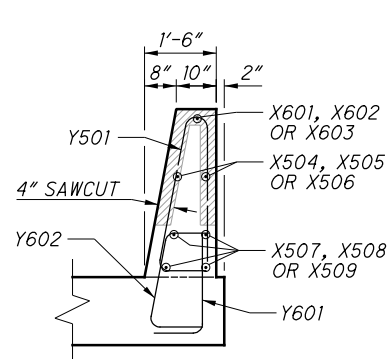
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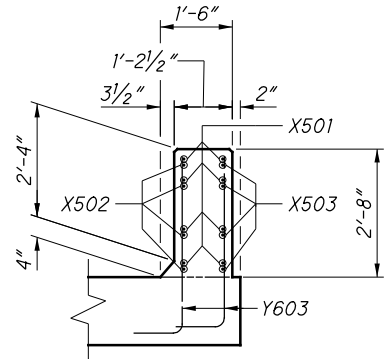
PLAN VIEW



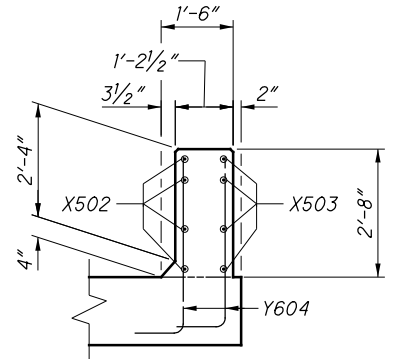
SECTION A-A



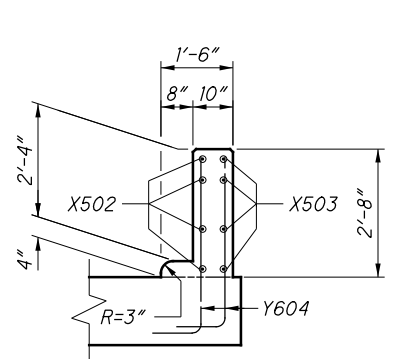
SECTION B-B
(GFRP NOT SHOWN)



SECTION C-C



SECTION D-D



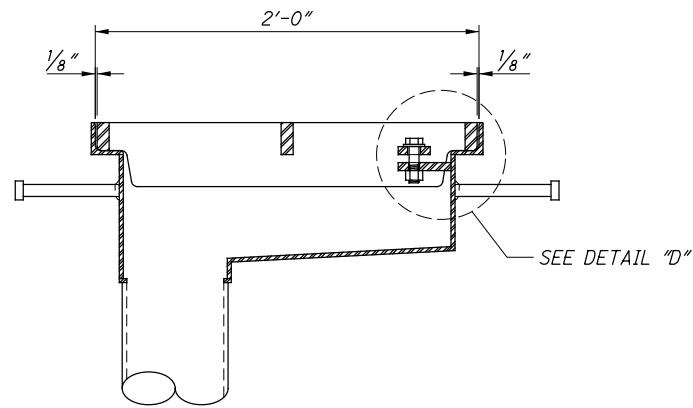
SECTION E-E

NOTES:

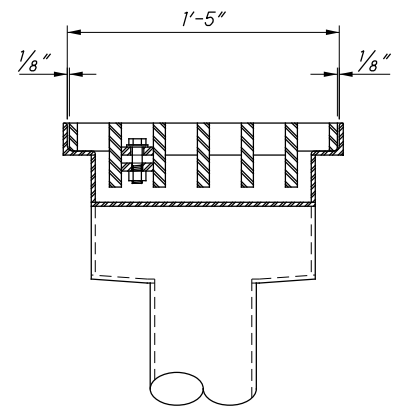
1. FOR DETAILS AND NOTES NOT SHOWN, SEE ODOT STD. DWG. SBR-1-13.
2. FOR BRIDGE PARAPET DETAILS, SEE SHEETS 56/80, 57/80, 63/80 AND 64/80.
3. 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BAR, 4'-6" LONG, CENTERED ON 4" SAWCUT.
4. PARAPETS AND TRANSITIONS ON THE APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET, AS PER PLAN.
5. FOR CONCRETE PARAPET DIMENSIONS, SEE APPROACH SLAB DETAILS ON SHEETS 67/80 AND 70/80.
6. FOR BRIDGE TERMINAL ASSEMBLY AND CONNECTIONS, SEE ROADWAY PLANS.

DESIGNED ALM	CHECKED CMH	DRAWN DJC	REVISOR REVISED	REVIEWED KVB	DATE 8/9/2016	DESIGN AGENCY Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
				STRUCTURE FILE NUMBER 25069631/2506998R		
PARAPET TRANSITION DETAILS						
BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62						
FRA-71-0.00 PID No. 107201						
73/80						
1266 1312						

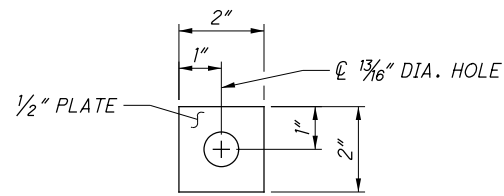
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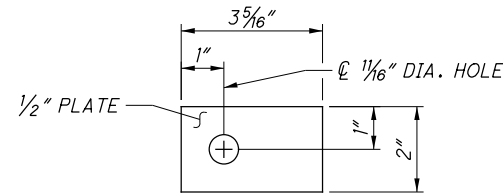
ELEVATION VIEW OF GRATE AND FRAME IN SECTION A-A



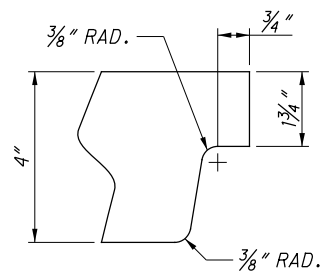
ELEVATION VIEW OF GRATE AND FRAME IN SECTION B-B



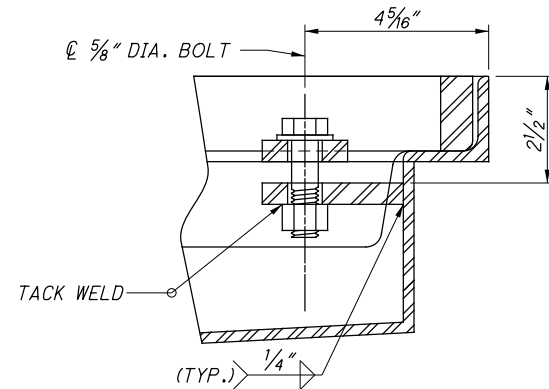
DETAIL "A"
HOLD-DOWN PLATE FOR GRATE



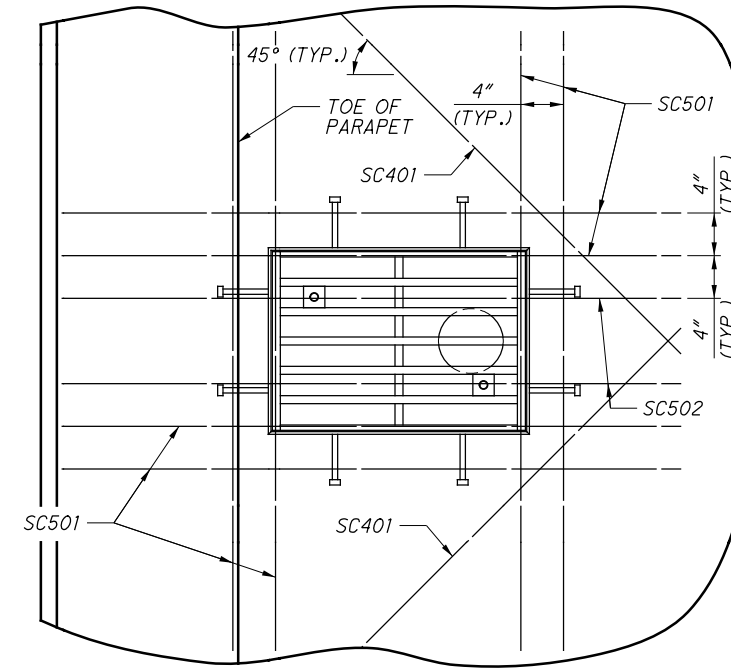
DETAIL "B"
HOLD-DOWN PLATE FOR FRAME



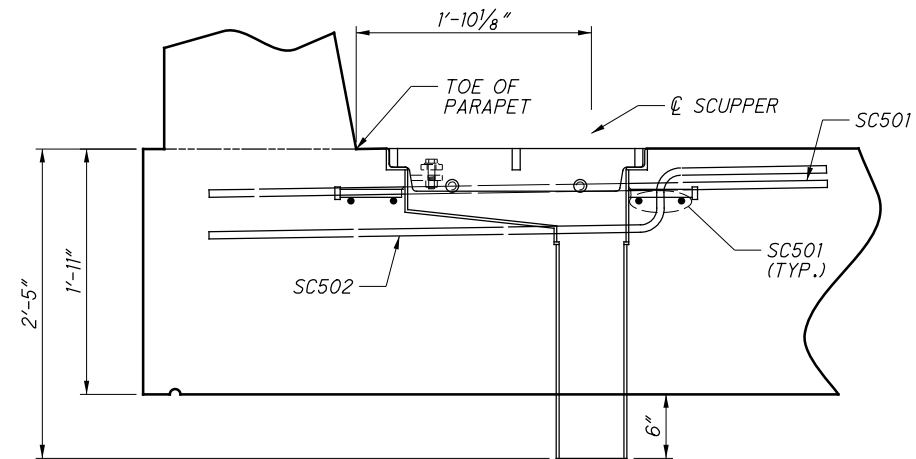
DETAIL "C"
END CUT OF 3/4" x 4" PLATE



DETAIL "D"
5/8" DIA. HOLD-DOWN BOLT

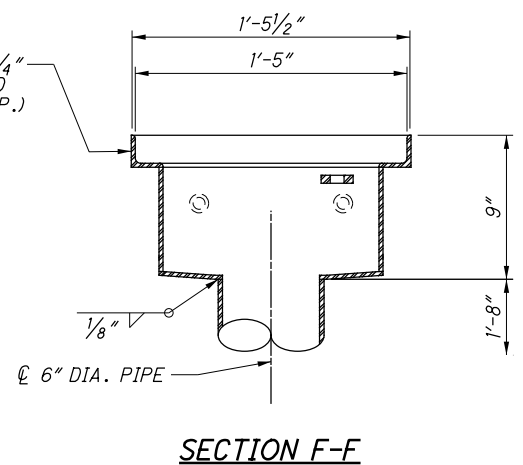
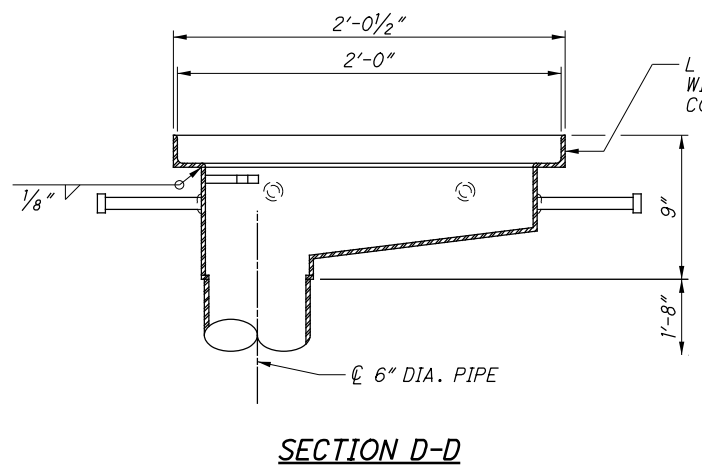
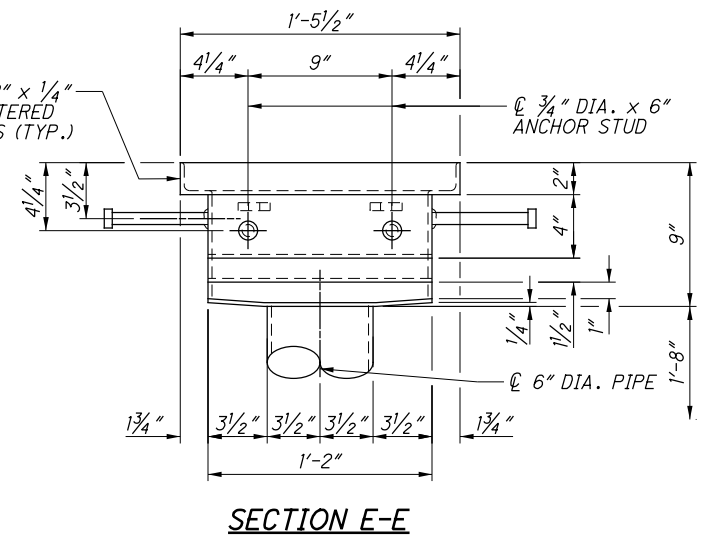
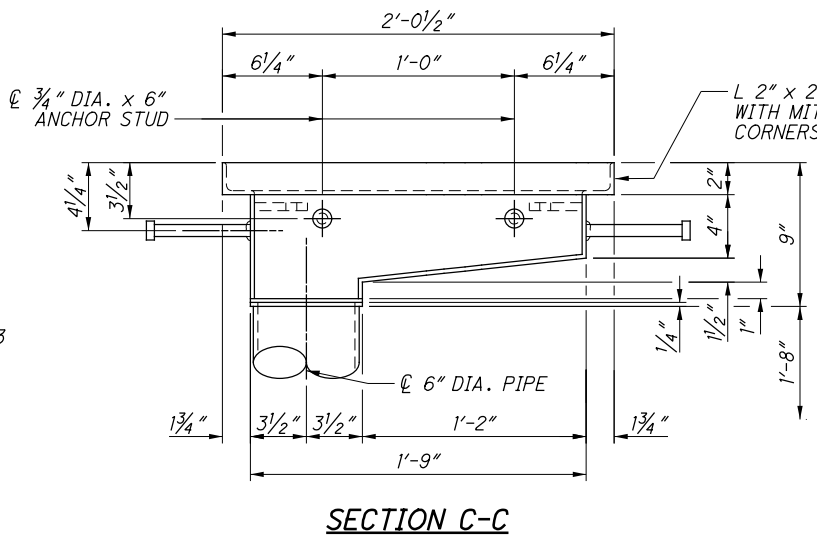
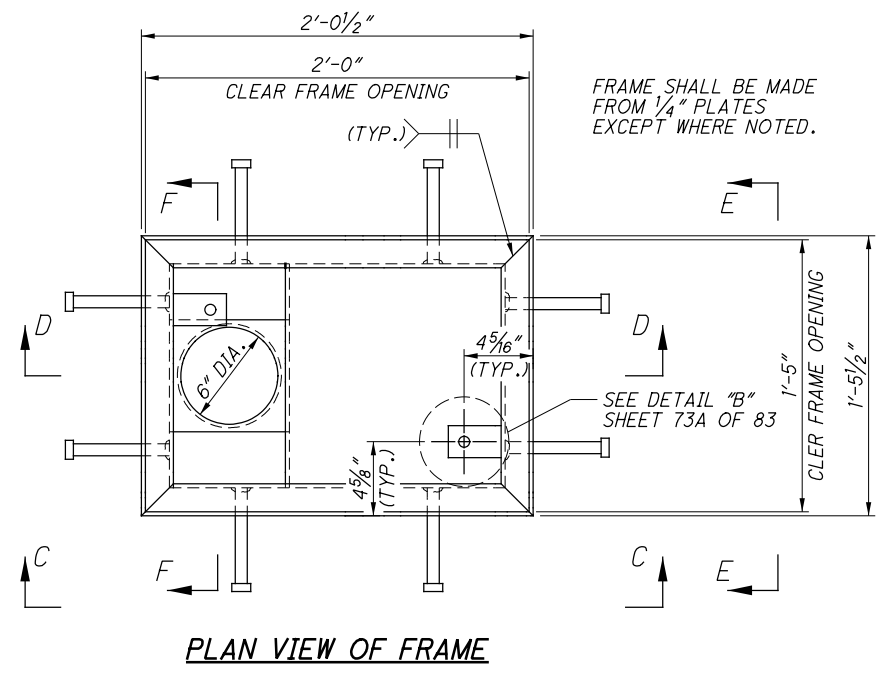
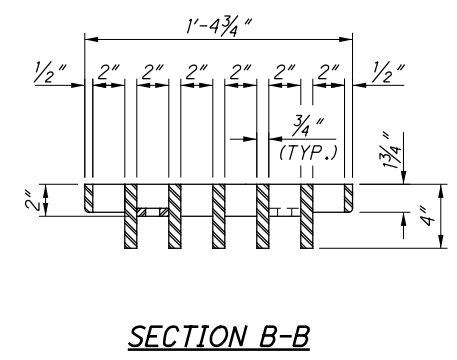
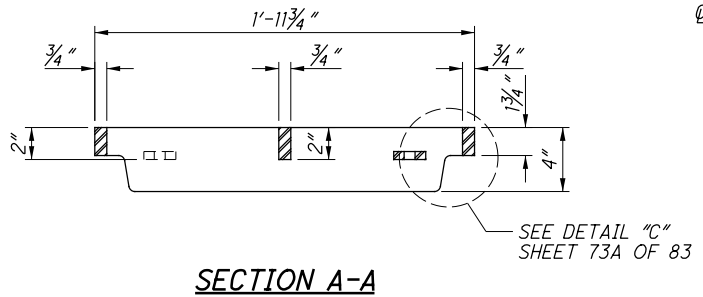
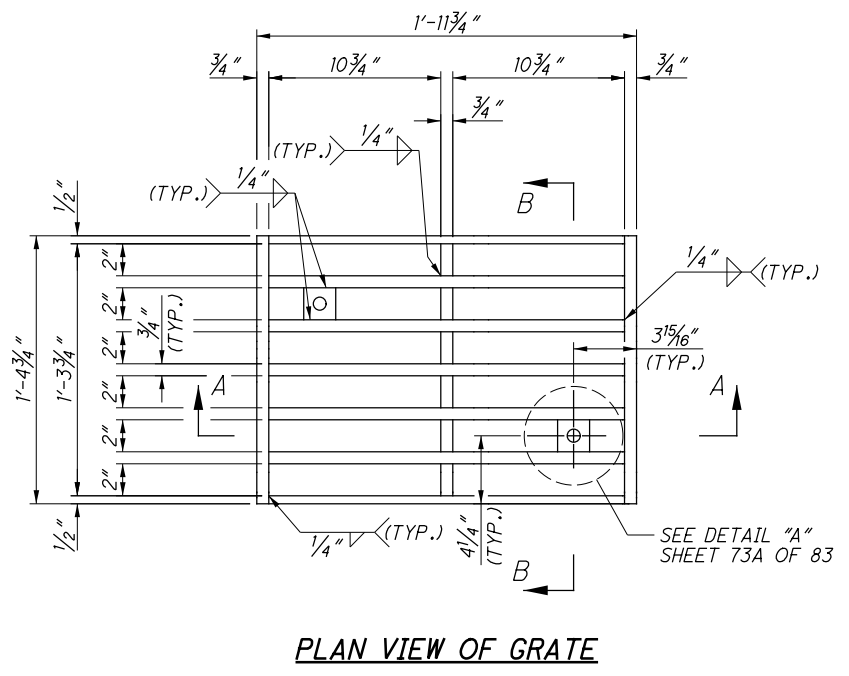


PLAN VIEW OF SLAB
SLAB REINFORCEMENT NOT SHOWN FOR CLARITY



ELEVATION VIEW OF SLAB AND SCUPPER IN SECTION G-G
SLAB REINFORCEMENT NOT SHOWN FOR CLARITY

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NOTES:

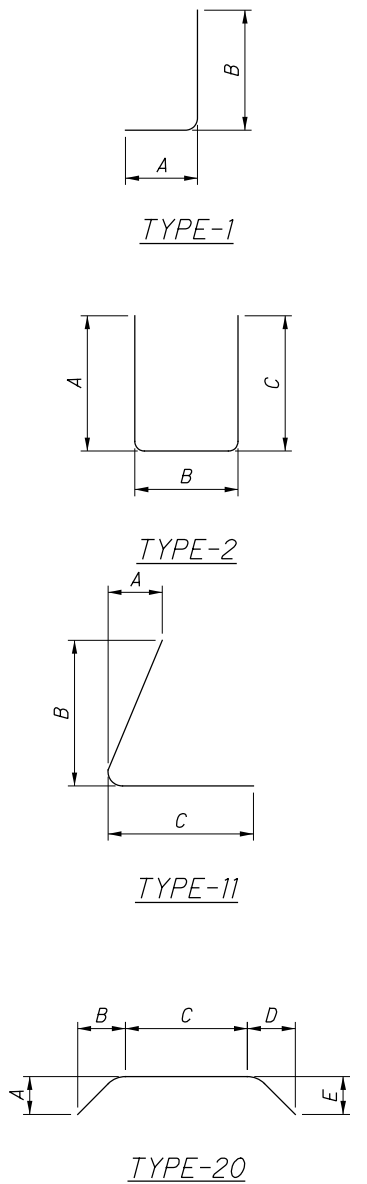
1. FRAME AND GRATE ARE DESIGNED TO WITHSTAND HS20 LOADING.
2. FRAME, GRATE, PIPE AND ALL PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 STEEL OR APPROVED EQUAL. PIPE SHALL CONFORM TO ASTM A53, TYPE S. ALL HOLD-DOWN BOLTS AND NUTS SHALL BE AASHTO M164. WASHERS SHALL CONFORM TO AASHTO M293. ALL ANCHOR STUDS SHALL CONFORM TO AASHTO M169 GRADES 1010 THRU 1020 OR APPROVED EQUAL.
3. ANCHOR STUDS SHALL BE SHOP WELDED AND ALL HOLES SHALL BE SHOP DRILLED AS SHOWN ON PLANS.
4. ANCHOR STUDS SHALL BE ELECTRIC ARC END WELDED WITH COMPLETE FUSION.
5. UPON COMPLETION OF SHOP FABRICATION, ALL STEEL PARTS, INCLUDING BOLTS AND WASHERS, SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH CMS 711.02.
6. WELDING TO BE PERFORMED IN ACCORDANCE WITH THE ANSI/AASHTO/AWS D1.5 WELDING CODE. ALL CONNECTIONS SHALL BE SEAL WELDED ALONG TOP AND BOTTOM HORIZONTAL SEAMS OF CONNECTIONS IN ADDITION TO ANY REQUIRED STRUCTURAL WELDS.
7. FRAME SHALL BE COVERED DURING THE POURING OF THE DECK CONCRETE.
8. PRIOR TO PLACING THE GRATE, ALL DEBRIS SHALL BE CLEARED FROM FRAME IN ORDER TO ALLOW FOR PROPER SEATING OF THE GRATE AND ELIMINATE POTENTIAL ROCKING HAZARDS.
9. REINFORCING STEEL IN THE DECK AND BARRIER RAIL MAY BE SHIFTED, FIELD BENT, OR CUT AS APPROVED BY THE ENGINEER TO AVOID INTERFERENCE WITH THE BRIDGE SCUPPER.
10. FOR LOCATION OF SCUPPERS, SEE SHEET 12/80.
11. THE COST INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS TO FURNISH AND INSTALL THE SCUPPERS AS SPECIFIED IN THE PLANS ARE INCLUDED IN ITEM 518, SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, FOR PAYMENT.

DESIGN AGENCY Mead & Hunt		DESIGN AGENCY 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
DESIGNED RLC	CHECKED CMH	DATE 8/8/2016
DRAWN DJC	REVIEWED KVB	STRUCTURE FILE NUMBER 25069631/2506998R
DRAINAGE SCUPPER DETAILS BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62		
FRA-71-0.00 PID No. 107201		
75 / 80		
1268 1312		

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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS - SOUTHBOUND BRIDGE											
A501	140	8'-3"	1205	2	1'-7"	5'-4"	1'-7"				
A502	4	8'-4"	35	2	1'-7"	5'-5"	1'-7"				
A503	2	8'-6"	18	2	1'-7"	5'-7"	1'-7"				
A504	2	8'-10"	18	2	1'-7"	5'-11"	1'-7"				
A505	2	6'-9"	14	2	1'-7"	3'-10"	1'-7"				
A506	2	6'-5"	13	2	1'-7"	3'-6"	1'-7"				
A507	36	8'-7"	322	2	1'-7"	5'-8"	1'-7"				
A508	8	5'-0"	42	2	1'-7"	2'-1"	1'-7"				
A509	10	17'-11"	187	2	8'-0"	2'-2"	8'-0"				
A510	1	16'-2"	17	2	7'-1"	2'-3"	7'-1"				
A511	1	16'-4"	17	2	7'-1"	2'-5"	7'-1"				
A512	14	14'-1"	206	2	5'-7"	3'-2"	5'-7"				
A513	86	13'-9"	1233	2	5'-7"	2'-10"	5'-7"				
A514	8	13'-10"	115	2	5'-7"	2'-11"	5'-7"				
A515	4	13'-11"	58	2	5'-7"	3'-0"	5'-7"				
A516	140	5'-0"	730	1	2'-7"	2'-7"					
A517	2	11'-5"	24	2	4'-4"	3'-0"	4'-4"				
A518	2	11'-7"	24	2	4'-4"	3'-2"	4'-4"				
A519	19	23'-7"	467	2	11'-4"	1'-2"	11'-4"				
A520	1 SR	6'-3"			2'-8"		2'-8"				
	OF	TO	21	2	TO	1'-2"	TO				0'-2 1/2"
	3	7'-1"			3'-1"		3'-1"				
A521	1	40'-10"	43	STR							
A522	1	38'-0"	40	STR							
A523	1 SR	38'-0"									
	OF	TO	206	STR							0'-8 1/2"
	5	40'-10"									
A524	50	4'-5"	230	STR							
A525	10	17'-7"	183	STR							
A526	6	25'-9"	161	STR							
A527	2	9'-11"	21	STR							
A528	2	11'-0"	23	STR							
A529	3	10'-6"	33	STR							
A530	3	8'-5"	26	STR							
A531	3	7'-10"	25	STR							
A532	2	13'-6"	28	STR							
A533	1 SR	13'-9"									
	OF	TO	44	STR							0'-5"
	3	14'-7"									
A534	2	12'-8"	26	STR							
A535	6	31'-10"	199	STR							
A536	10	14'-9"	154	2	6'-5"	2'-2"	6'-5"				
A537	1	14'-10"	15	2	6'-5"	2'-3"	6'-5"				
A538	2	15'-2"	32	2	6'-6"	2'-5"	6'-6"				
A539	9	7'-5"	70	2	3'-3"	1'-2"	3'-3"				
A540	2	27'-5"	57	STR							
A541	4	14'-4"	60	STR							
A542	4	13'-3"	55	STR							
A543	6	14'-5"	90	STR							
A544	2	3'-11"	8	STR							
A560	12	16'-2"	202	STR							
A563	3	12'-0"	38	STR							
A564	3	13'-1"	41	STR							
A574	22	10'-5"	239	STR							
A577	6	14'-5"	90	STR							
A578	2	3'-11"	8	STR							
A579	2	5'-2"	11	11	1'-3"	2'-5"	2'-9"				
A580	2	8'-1"	17	20	2'-7"	1'-6"	2'-3"	1'-6"	2'-7"		
A581	2	5'-11"	12	2	1'-7"	3'-0"	1'-7"				
A582	2	9'-0"	19	2	1'-7"	6'-1"	1'-7"				
A583	4	11'-11"	50	2	4'-6"	3'-2"	4'-6"				
A584	1	17'-2"	18	2	7'-6"	2'-5"	7'-6"				
A585	10	18'-7"	194	2	8'-4"	2'-2"	8'-4"				

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS - SOUTHBOUND BRIDGE											
A586	7	11'-8"	85	STR							
A587	7	11'-0"	80	STR							
A588	6	9'-5"	59	STR							
A589	6	33'-9"	211	STR							
A590	2	36'-7"	76	STR							
	1 SR	36'-8"									
A591	OF	TO	116	STR							0'-4 1/2"
	3	37'-5"									
A592	2	38'-8"	81	STR							
A593	3	26'-2"	82	STR							
A594	3	25'-9"	81	STR							
A595	10	15'-3"	159	2	6'-8"	2'-2"	6'-8"				
A596	10	7'-3"	76	2	3'-2"	1'-2"	3'-2"				
	1 SR	6'-3"			2'-8"		2'-8"				
A597	OF	TO	21	2	TO	1'-2"	TO				0'-2"
	3	6'-11"			3'-0"		3'-0"				
A5120	4	5'-8"	24	1	2'-6"	3'-4"					
A5121	2	13'-6"	28	STR							
A5122	8	5'-4"	45	1	2'-6"	3'-0"					
A5123	6	6'-7"	41	1	2'-6"	4'-3"					
A5124	2	30'-6"	64	STR							
A801	12	33'-8"	1079	STR							
	1 SR	38'-0"									
A802	OF	TO	526	STR							0'-8 1/2"
	5	40'-10"									
A803	20	8'-8"	463	STR							
A804	1	9'-11"	26	STR							
	1 SR	8'-11"									
A805	OF	TO	123	STR							0'-2"
	5	9'-7"									
A806	1	10'-9"	29	STR							
A807	1	13'-0"	35	20	4'-8"	2'-10"	2'-3"	2'-10"	4'-8"		
A808	1	9'-9"	26	11	2'-7"	4'-10"	4'-9"				
A809	1	13'-6"	36	STR							
	1 SR	13'-9"									
A810	OF	TO	113	STR							0'-5"
	3	14'-7"									
A811	1	12'-8"	34	STR							
A820	12	35'-7"	1140	STR							
A821	5	11'-8"	156	STR							
A822	5	11'-0"	147	STR							
A823	1	36'-7"	98	STR							
	1 SR	36'-8"									
A824	OF	TO	297	STR							0'-4 1/2"
	3	37'-5"									
A825	1	38'-6"	103	STR							
SUB-TOTAL			13,294								



REINFORCING LIST
BRIDGE NO. FRA-71-0308 L/R
OVER US ROUTE 62

<p>FRA-71-0.00 PID No. 107201</p>	<p>DESIGNED: ALM CHECKED: CMH</p>	<p>DRAWN: DJC REVISED:</p>
<p>DESIGN AGENCY: Mead & Hunt 4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE</p>	<p>REVIEWED: KVB STRUCTURE FILE NUMBER: 25069631/2506998R</p>	<p>DATE: 8/9/2016</p>

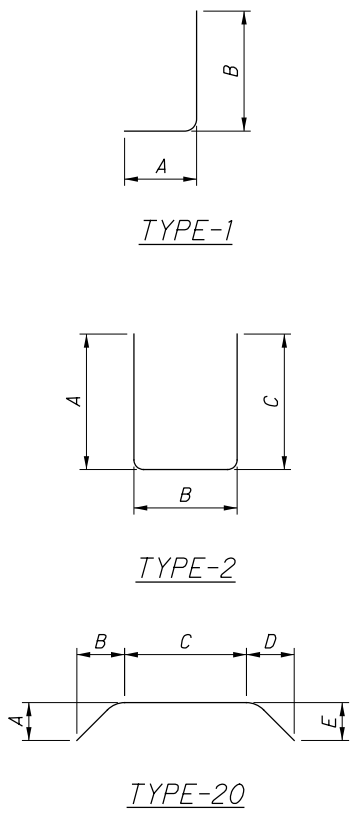
76/80

1269
1312

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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS - NORTHBOUND BRIDGE											
A501	110	8'-3"	947	2	1'-7"	5'-4"	1'-7"				
A502	2	8'-4"	17	2	1'-7"	5'-5"	1'-7"				
A503	2	8'-6"	18	2	1'-7"	5'-7"	1'-7"				
A504	2	8'-11"	19	2	1'-7"	6'-0"	1'-7"				
A507	42	8'-7"	376	2	1'-7"	5'-8"	1'-7"				
A524	42	4'-5"	193	STR							
A525	10	17'-7"	183	STR							
A534	2	12'-8"	26	STR							
A541	3	14'-5"	45	STR							
A545	2	13'-2"	27	2	4'-10"	3'-9"	4'-10"				
A546	2	12'-10"	27	2	4'-10"	3'-5"	4'-10"				
A547	12	12'-7"	157	2	4'-10"	3'-2"	4'-10"				
A548	2	11'-10"	25	2	4'-10"	2'-5"	4'-10"				
A549	2	11'-7"	24	2	4'-10"	2'-2"	4'-10"				
A550	68	12'-3"	869	2	4'-10"	2'-10"	4'-10"				
A551	8	12'-4"	103	2	4'-10"	2'-11"	4'-10"				
A552	8	12'-8"	106	2	4'-10"	3'-3"	4'-10"				
A553	1	15'-0"	16	2	6'-6"	2'-3"	6'-6"				
A554	10	15'-9"	164	2	6'-11"	2'-2"	6'-11"				
A555	2	35'-11"	75	STR							
A556	2	37'-9"	79	STR							
A557	1 SR OF TO 3	36'-0" TO 36'-8"	114	STR							0'-4"
A558	4	25'-1"	105	STR							
* A559	2	33'-4"	70	STR							
A560	8	16'-5"	137	STR							
A561	2	15'-2"	32	2	6'-6"	2'-5"	6'-6"				
A562	20	14'-11"	311	2	6'-6"	2'-2"	6'-6"				
A563	4	12'-0"	50	STR							
A564	7	13'-1"	96	STR							
A565	68	4'-4"	307	1	2'-6"	2'-0"					
* A566	4	28'-3"	118	STR							
A567	4	3'-8"	15	STR							
A568	2	11'-9"	25	STR							
A569	1 SR OF TO 3	12'-10" TO 13'-7"	41	STR							0'-4 1/2"
A570	2	14'-7"	30	STR							
A571	2	8'-8"	18	2	1'-7"	5'-9"	1'-7"				
A572	2	9'-3"	19	2	1'-7"	6'-4"	1'-7"				
A573	10	20'-11"	218	2	10'-0"	1'-2"	10'-0"				
A574	18	10'-5"	196	STR							
A575	10	7'-7"	79	2	3'-4"	1'-2"	3'-4"				
A576	1 SR OF TO 3	6'-3" TO 7'-3"	21	2	2'-8" TO 3'-2"	1'-2" TO 3'-2"	2'-8" TO 3'-2"				0'-3"
A577	12	14'-5"	180	STR							
A578	4	4'-0"	17	STR							
A598	2	7'-9"	16	2	1'-7"	4'-10"	1'-7"				
A599	10	15'-5"	161	2	6'-9"	2'-2"	6'-9"				
A5100	1	13'-6"	14	2	5'-9"	2'-3"	5'-9"				
A5101	1	15'-8"	16	2	6'-9"	2'-5"	6'-9"				
A5102	70	4'-0"	292	1	2'-6"	1'-8"					
A5103	1	40'-1"	42	STR							
A5104	1	37'-4"	39	STR							
A5105	1 SR OF TO 5	37'-4" TO 40'-1"	202	STR							0'-8 1/4"
A5106	4	25'-1"	105	STR							
A5107	2	27'-10"	58	STR							
* A5108	2	33'-2"	69	STR							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS - NORTHBOUND BRIDGE											
A5109	2	13'-2"	27	STR							
A5110	1 SR OF TO 3	13'-8" TO 14'-4"	44	STR							0'-4"
A5111	2	4'-6"	9	STR							
A5112	2	7'-8"	16	20	2'-4"	1'-5"	2'-4"	1'-5"	2'-4"		
A5113	3	3'-4"	10	STR							
A5114	3	2'-9"	9	STR							
A5115	2	8'-9"	18	2	3'-8"	1'-8"	3'-8"				
* A5116	4	27'-8"	115	STR							
A5117	9	20'-5"	192	2	9'-9"	1'-2"	9'-9"				
A5118	9	13'-3"	124	2	3'-2"	1'-2"	9'-2"				
A5119	1 SR OF TO 3	6'-3" TO 6'-11"	21	2	2'-8" TO 3'-0"	1'-2" TO 3'-0"	2'-8" TO 3'-0"				A = 0'-2" C = 0'-2"
A5125	2	8'-9"	7	STR							
A5126	8	5'-10"	125	1	2'-6"	3'-7"					
A5127	4	5'-4"	57	1	2'-6"	3'-1"					
A5128	2	28'-3"	21	STR							
A5129	4	5'-0"	53	1	2'-6"	2'-8"					
A5130	6	4'-7"	73	1	2'-6"	2'-4"					
A5131	2	7'-4"	6	STR							
A803	15	8'-8"	347	STR							
* A812	4	33'-4"	356	STR							
A813	1	35'-11"	96	STR							
A814	1 SR OF TO 3	36'-0" TO 36'-8"	291	STR							0'-4"
A815	1	37'-9"	101	STR							
* A816	8	29'-8"	634	STR							
A817	1	11'-9"	31	STR							
A818	1 SR OF TO 3	12'-10" TO 13'-7"	106	STR							0'-4 1/2"
A819	1	14'-7"	39	STR							
* A826	4	33'-5"	357	STR							
A827	1 SR OF TO 5	37'-4" TO 40'-1"	517	STR							0'-8 1/4"
A828	8	29'-0"	619	STR							
A829	1	4'-6"	12	STR							
A830	1	12'-3"	33	20	4'-8"	2'-11"	2'-4"	2'-5"	3'-10"		
A831	1 1 SR	13'-2" 13'-8"	35	STR							
A832	OF TO 3	TO 14'-4"	112	STR							0'-4"
A833	1	12'-8"	34	STR							
A834	5	7'-10"	105	STR							
SUB-TOTAL			12,095								



DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 782-5900 PHONE

DESIGNED BY
ALM
CHECKED BY
CMH

DRAWN BY
DJC
REVISED BY

REVIEWED BY
KVB
STRUCTURE FILE NUMBER
25069631/2506998R

DATE
8/9/2016

BRIDGE NO. FRA-71-0308 L/R
OVER US ROUTE 62

REINFORCING LIST

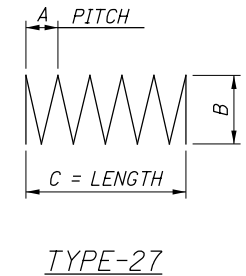
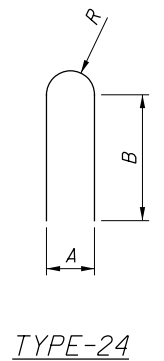
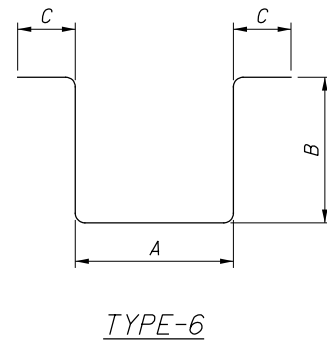
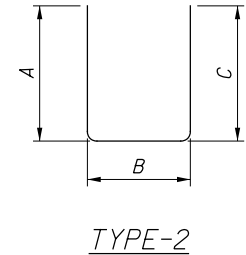
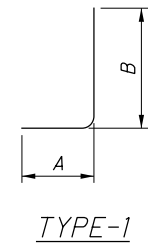
FRA-71-0.00
PID No. 107201

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1312

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
PIER - SOUTHBOUND BRIDGE											
SP402	2	369'-2"	493	27	0'-4 1/2"	2'-6"	16'-9"				
SP403	4	364'-0"	973	27	0'-4 1/2"	2'-6"	16'-6"				
P501	78	8'-8"	705	STR							
P503	36	9'-2"	344	24	2'-8"	2'-6"				1'-4"	
P506	48	30'-0"	1502	STR							
P511	30	5'-2"	162	STR							
P512	268	9'-7"	2679	2	4'-0"	1'-10 1/2"	4'-0"				
P513	4	8'-1"	34	2	0'-10"	6'-8"	0'-10"				
P514	8	31'-5"	262	STR							
P515	528	9'-9"	5369	2	4'-1"	1'-10 1/2"	4'-1"				
P516	8	8'-4"	70	2	0'-10"	6'-11"	0'-10"				
P517	8	32'-6"	271	STR							
P518	8	33'-7"	280	STR							
P603	67	17'-2"	1728	6	2'-8"	6'-7"	1'-0"				
P604	132	17'-6"	3470	6	2'-8"	6'-9"	1'-0"				
P901	81	8'-8"	2387	STR							
P902	66	10'-3"	2300	1	1'-7"	8'-11"					
P909	30	5'-2"	527	STR							
P910	44	21'-5"	3204	STR							
P911	5	44'-3"	752	STR							
P912	5	45'-4"	771	STR							
P913	11	21'-4"	798	STR							
P914	5	46'-5"	789	STR							
P915	30	30'-0"	3060	STR							
P1005	45	30'-0"	5809	STR							
P1006	5	26'-8"	574	STR							
P1007	5	27'-9"	597	STR							
P1008	5	28'-10"	620	STR							
SUB-TOTAL			40,530								



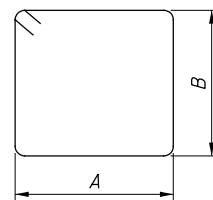
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					A	B	C	D	E	R	INC
PIER - NORTHBOUND BRIDGE											
SP401	3	379'-6"	761	27	0'-4 1/2"	2'-6"	17'-3"				
P501	60	8'-8"	542	STR							
P502	4	6'-10"	29	2	0'-10"	5'-5"	0'-10"				
P503	30	9'-2"	287	24	2'-8"	2'-6"				1'-4"	
P504	248	8'-5"	2177	2	3'-5"	1'-10 1/2"	3'-5"				
P505	18	31'-6"	591	STR							
P506	18	30'-0"	563	STR							
P507	12	21'-0"	263	STR							
P508	8	6'-8"	56	2	0'-10"	5'-3"	0'-10"				
P509	500	8'-3"	4302	2	3'-4"	1'-10 1/2"	3'-4"				
P510	6	21'-11"	137	STR							
P601	62	14'-10"	1381	6	2'-8"	5'-5"	1'-0"				
P602	125	14'-6"	2722	6	2'-8"	5'-3"	1'-0"				
P901	60	8'-8"	1768	STR							
P902	33	10'-3"	1150	1	1'-7"	8'-11"					
P903	22	20'-8"	1546	STR							
P904	15	31'-5"	1602	STR							
P905	15	25'-0"	1275	STR							
P906	10	32'-5"	1102	STR							
P907	11	20'-6"	767	STR							
P908	5	33'-2"	564	STR							
P1001	15	31'-5"	2028	STR							
P1002	15	35'-0"	2259	STR							
P1003	10	23'-6"	1011	STR							
P1004	5	24'-2"	520	STR							
SUB-TOTAL			29,403								

FRA-71-0.00 PID No. 107201	REINFORCING LIST BRIDGE NO. FRA-71-0308 L/R OVER US ROUTE 62	DESIGNED ALM CHECKED CMH	DRAWN DJC REVISED	REVIEWED KVB STRUCTURE FILE NUMBER 2506963L/2506998R	DATE 8/9/2016		DESIGN AGENCY 4700 LAKEHURST CT. STE 110 DUBLIN, OH 43016 (614) 782-5900 PHONE
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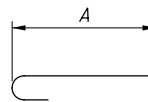
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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE - SOUTHBOUND BRIDGE											
S501	573	30'-0"	17929	STR							
S502	64	11'-0"	734	STR							
S503	66	12'-6"	860	STR							
S504	61	13'-9"	875	STR							
S505	2	28'-4"	59	STR							
S506	2	24'-2"	50	STR							
S507	163	27'-6"	4670	STR							
S508	163	23'-11"	4066	STR							
S513	125	11'-4"	1478	3	3'-0"	2'-4"					
S514	125	8'-6"	1108	3	1'-1"	2'-10"					
S601	459	30'-0"	20683	STR							
S602	39	12'-0"	703	STR							
S603	40	13'-0"	781	STR							
S604	40	14'-1"	846	STR							
S605	34	15'-0"	766	STR							
S901	246	33'-1"	27671	STR							
S902	243	22'-0"	18176	STR							
S903	3	33'-6"	342	STR							
S904	163	49'-1"	27202	16	47'-10"						
S905	163	53'-6"	29650	STR							
S906	155	36'-10"	19411	16	35'-7"						
S907	155	30'-0"	15810	STR							
S908	10	49'-1"	1669	STR							
S909	10	54'-1"	1839	STR							
SUB-TOTAL			197,378								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE - NORTHBOUND BRIDGE											
S501	382	30'-0"	11953	STR							
S507	155	27'-5"	4432	STR							
S508	154	23'-11"	3842	STR							
S509	191	10'-9"	2142	STR							
S510	64	23'-7"	1574	STR							
S511	61	24'-0"	1527	STR							
S512	66	25'-3"	1738	STR							
S513	117	11'-4"	1383	3	3'-0"	2'-4"					
S514	117	8'-6"	1037	3	1'-1"	2'-10"					
S601	306	30'-0"	13788	STR							
S606	153	11'-6"	2643	STR							
S607	79	24'-3"	2877	STR							
S608	40	24'-10"	1492	STR							
S609	34	25'-9"	1315	STR							
S901	232	33'-1"	26096	STR							
S902	222	22'-0"	16606	STR							
S904	161	49'-1"	26868	16	47'-10"						
S905	160	53'-6"	29104	STR							
S906	141	36'-10"	17658	16	35'-7"						
S907	140	30'-0"	14280	STR							
SUB-TOTAL			182,355								



TYPE-3



TYPE-16

REINFORCING LIST
 BRIDGE NO. FRA-71-0308 L/R
 OVER US ROUTE 62

FRA-71-0.00
 PID No. 107201

79/80

1272
1312

DESIGN AGENCY
Mead & Hunt
 4700 LAKEHURST CT, STE 110
 DUBLIN, OH 43016
 (614) 782-9900 PHONE

DATE
8/9/2016

REVIEWED
KVB

DRAWN
DJC

DESIGNED
ALM

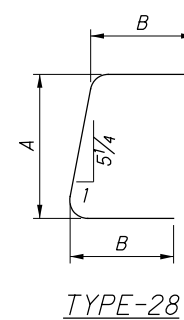
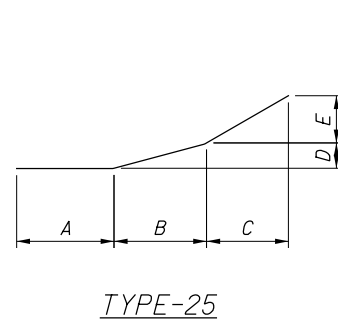
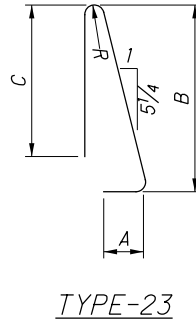
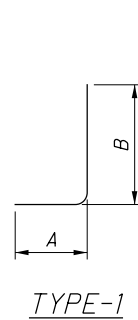
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25069631/2506998R

CHECKED
CMH

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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
PARAPET - SOUTHBOUND BRIDGE											
R501	406	7'-4"	3105	23	0'-11"	3'-3"	3'-0"			0'-3"	
R502	48	30'-0"	1502	STR							
R503	4	17'-6"	73	STR							
R504	4	14'-4"	60	STR							
R505	8	14'-8"	122	STR							
R506	32	5'-2"	172	STR							
R507	8	12'-2"	102	STR							
R508	16	5'-8"	95	STR							
R509	4	15'-8"	65	STR							
R510	4	13'-11"	58	STR							
R511	8	11'-11"	99	STR							
X501	32	10'-0"	334	STR							
X502	16	5'-9"	96	25	1'-10"	2'-5"	1'-5"	0'-1 1/2"	0'-5"		
X503	16	5'-8"	95	STR							
X504	4	10'-10"	45	STR							
X505	4	10'-7"	44	STR							
X507	8	13'-1"	109	STR							
X508	8	12'-10"	107	STR							
Y501	48	7'-4"	367	23	0'-11"	3'-3"	3'-0"			0'-3"	
R601	406	2'-6"	1525	1	1'-0"	1'-8"					
R602	406	3'-4"	2033	28	1'-8"	1'-0"					
R603	2	14'-4"	43	STR							
R604	4	14'-8"	88	STR							
R605	16	5'-2"	124	STR							
R606	4	12'-2"	73	STR							
R607	8	5'-8"	68	STR							
R608	2	13'-11"	42	STR							
R609	4	11'-11"	72	STR							
X601	2	10'-10"	33	STR							
X602	2	10'-7"	32	STR							
Y601	48	2'-6"	180	1	1'-0"	1'-8"					
Y602	48	3'-4"	240	28	1'-8"	1'-0"					
	8 SR	4'-0"				3'-2"					
Y603	OF	TO	584	1	1'-0"	TO					0'-1"
	11	4'-11"				4'-1"					
Y604	32	4'-1"	196	1	1'-0"	3'-3"					
SUB-TOTAL			11,983								



MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
PARAPET - NORTHBOUND BRIDGE											
R501	404	7'-4"	3090	23	0'-11"	3'-3"	3'-0"			0'-3"	
R502	48	30'-0"	1502	STR							
R505	8	14'-8"	122	STR							
R506	32	5'-2"	172	STR							
R508	16	5'-8"	95	STR							
R509	4	15'-8"	65	STR							
R510	4	13'-11"	58	STR							
R511	16	11'-11"	199	STR							
R512	4	14'-11"	62	STR							
R513	2	13'-10"	29	STR							
R514	2	13'-3"	28	STR							
X501	32	10'-0"	334	STR							
X502	16	5'-9"	96	25	1'-10"	2'-5"	1'-5"	0'-1 1/2"	0'-5"		
X503	16	5'-8"	95	STR							
X505	6	10'-7"	66	STR							
X506	2	10'-3"	21	STR							
X508	12	12'-10"	161	STR							
X509	4	12'-6"	52	STR							
Y501	48	7'-4"	367	23	0'-11"	3'-3"	3'-0"			0'-3"	
R601	404	2'-6"	1517	1	1'-0"	1'-8"					
R602	404	3'-4"	2023	28	1'-8"	1'-0"					
R604	4	14'-8"	88	STR							
R605	16	5'-2"	124	STR							
R607	8	5'-8"	68	STR							
R608	2	13'-11"	42	STR							
R609	8	11'-11"	143	STR							
R610	1	13'-10"	21	STR							
R611	1	13'-3"	20	STR							
X602	3	10'-7"	48	STR							
X603	1	10'-3"	15	STR							
Y601	48	2'-6"	180	1	1'-0"	1'-8"					
Y602	48	3'-4"	240	28	1'-8"	1'-0"					
	8 SR	4'-0"				3'-2"					
Y603	OF	TO	584	1	1'-0"	TO					0'-1"
	11	4'-11"				4'-1"					
Y604	32	4'-1"	196	1	1'-0"	3'-3"					
SUB-TOTAL			11,923								

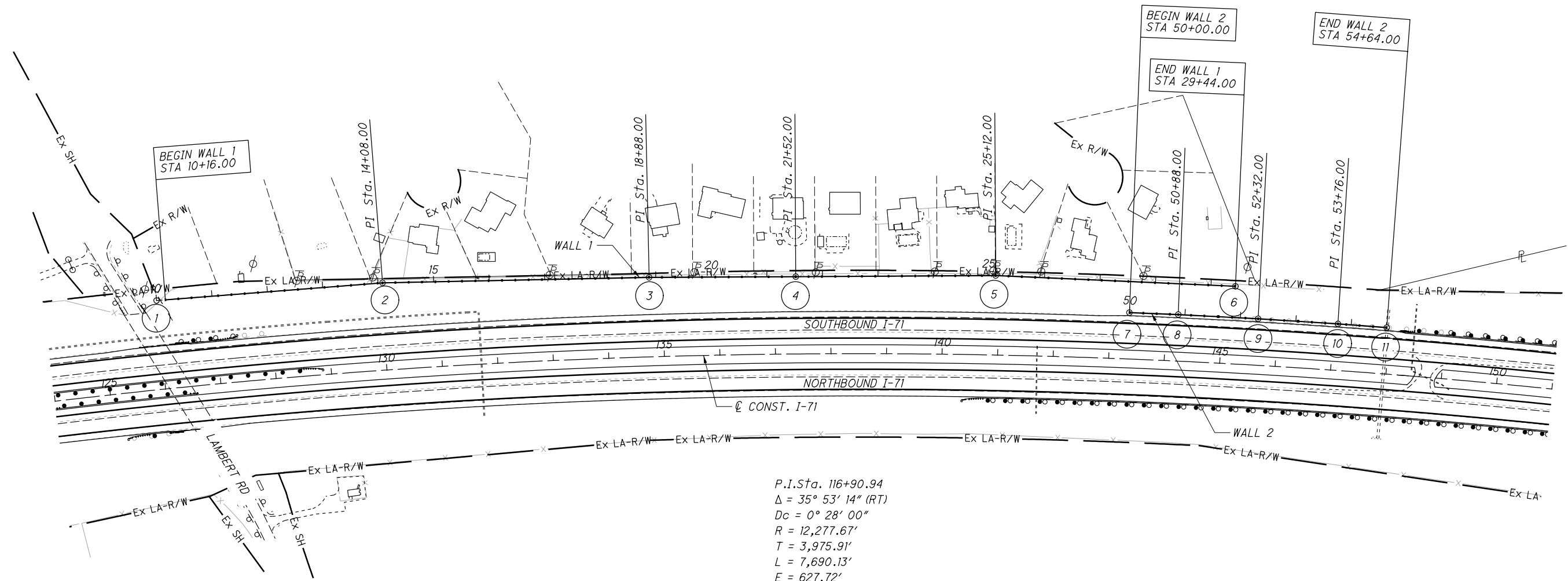
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CALCULATED
EGD
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0 100 200
HORIZONTAL
SCALE IN FEET

**SCHEMATIC PLAN - I-71
NOISE WALLS**

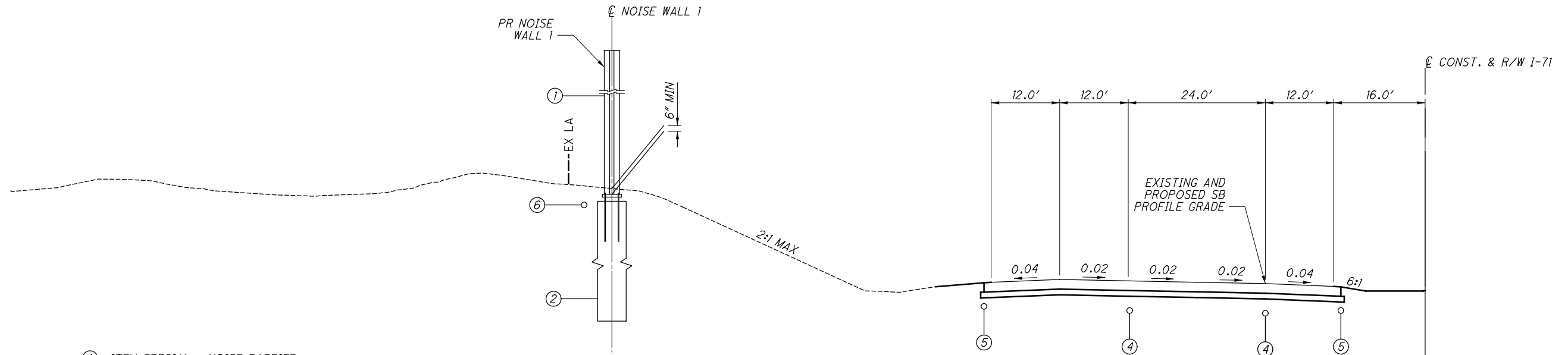
FRA-71-0.00



P.I. Sta. 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $P.C. STA. 77+15.03$
 $P.T. STA. 154+05.16$
 $DESIGN SPEED = 75 MPH$
 $emax = 0.020$

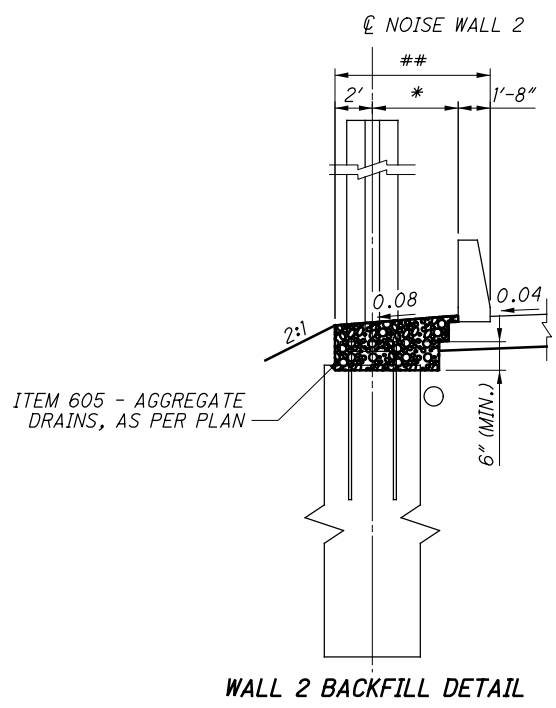
WALL 1						
P.I. NO.	NOISE BARRIER STATION	I-71 STATION	I-71 OFFSET	NORTHING	EASTING	BEARING
1	10+00.00	126+00.00	160.00' LT	665489.53	1784576.7	N 83° 47' 03" E
2	14+08.00	130+02.81	157.00' LT	665533.7	1784982.3	N 87° 04' 48" E
3	18+88.00	134+76.84	143.00' LT	665558.16	1785461.7	N 87° 59' 31" E
4	21+52.00	137+37.82	139.00' LT	665567.41	1785725.6	N 87° 55' 36" E
5	25+12.00	140+93.72	143.00' LT	665580.43	1786085.3	S 89° 10' 39" E
6	29+44.00	145+20.81	139.74' LT	665574.23	1786517.3	
WALL 2						
7	50+00.00	143+34.11	83.51' LT	665521.14	1786328	S 89° 24' 37" E
8	50+88.00	144+21.51	83.71' LT	665520.23	1786416	S 88° 44' 34" E
9	52+32.00	145+64.54	83.71' LT	665517.07	1786559.9	S 88° 04' 32" E
10	53+76.00	147+07.57	83.71' LT	665512.24	1786703.9	S 87° 24' 29" E
11	54+64.00	147+94.97	83.51' LT	665508.26	1786791.8	

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- ① ITEM SPECIAL - NOISE BARRIER
- ② ITEM 524 - DRILLED SHAFTS
- ③ ITEM 622 - CONCRETE BARRIER, TYPE D
- ④ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
- ⑤ ITEM 605 - 6" BASE PIPE UNDERDRAINS
- ⑥ ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS

SUPERELEVATED SECTION - I-71
SOUTHBOUND
STA 126+00.00 TO STA 145+44.54

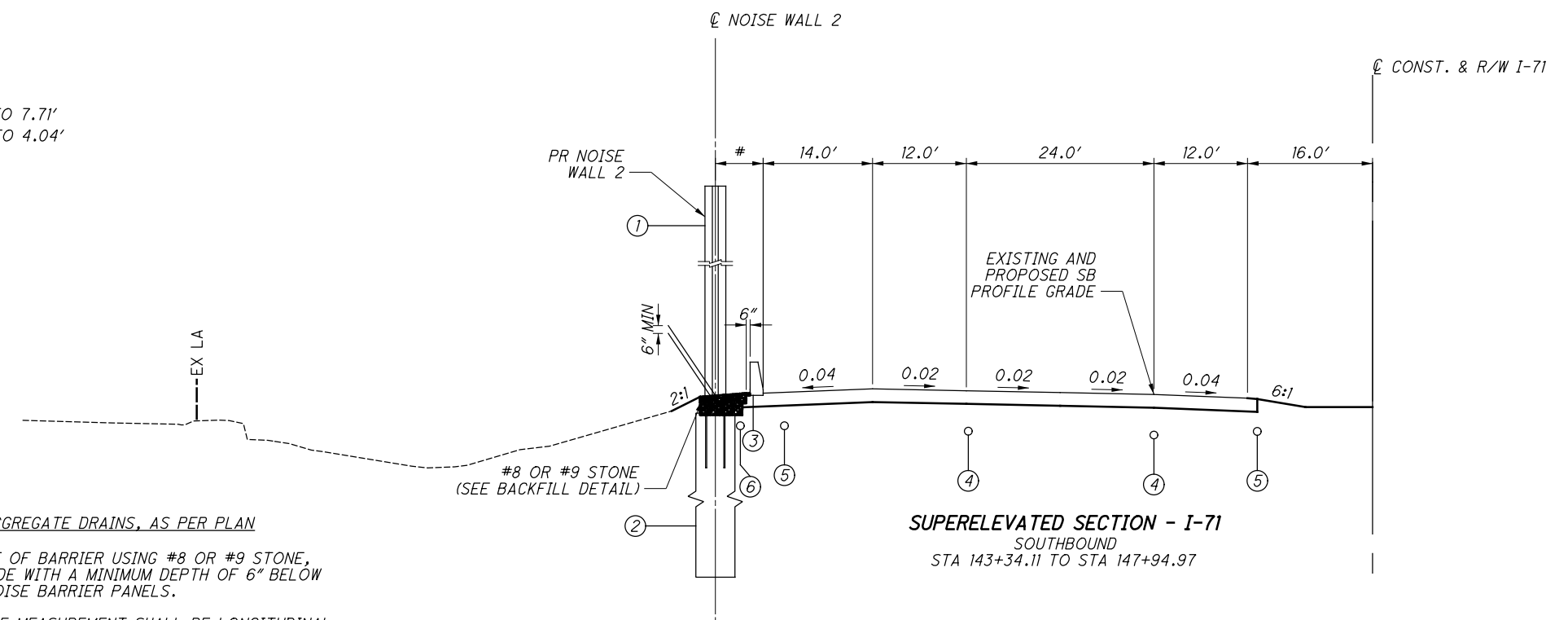


WALL 2 BACKFILL DETAIL

VARIES 7.51' TO 7.71'
* VARIES 3.84' TO 4.04'

ITEM 605 - AGGREGATE DRAINS, AS PER PLAN
BACKFILL BASE OF BARRIER USING #8 OR #9 STONE, 5.84'-6.04' WIDE WITH A MINIMUM DEPTH OF 6" BELOW BOTTOM OF NOISE BARRIER PANELS.

THE METHOD OF MEASUREMENT SHALL BE LONGITUDINAL WITH THE WALL INCLUDING FULL PAYMENT FOR THE ABOVE WIDTH.



SUPERELEVATED SECTION - I-71
SOUTHBOUND
STA 143+34.11 TO STA 147+94.97

VARIES 5.51' TO 5.71'

CALCULATED
 ANM
 CHECKED
 DCB

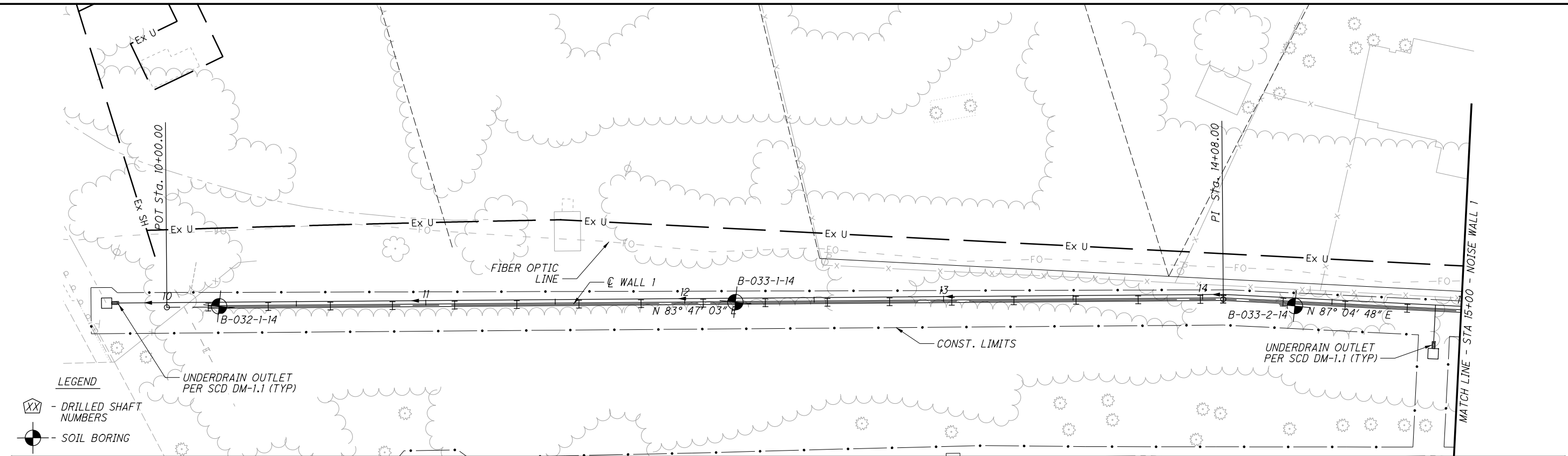


0 20 40
 HORIZONTAL
 SCALE IN FEET

PLAN AND PROFILE - WALL 1
STA 10+00 TO STA 15+00

FRA-71-0.00

1277
 1312



TOP OF WALL ELEV.	ACOUSTIC PROFILE ELEV.	BOTTOM OF WALL ELEV.	PANEL NO.
871.00	870.85	859.00	1
872.00	871.43	859.00	2
873.00	871.94	859.00	3
873.00	872.38	859.00	4
874.00	873.05	860.00	5
874.00	873.53	860.50	6
874.00	873.97	860.50	7
874.00	874.05	861.50	8
875.00	874.26	861.50	9
875.00	874.33	861.50	10
875.00	874.57	861.50	11
876.00	875.01	861.50	12
876.00	875.66	862.50	13
877.00	876.46	863.50	14
877.00	877.07	864.00	15
878.00	877.37	864.00	16
878.00	877.78	865.00	17
878.00	878.14	865.00	18
878.00	878.17	865.00	19
878.00	878.02	865.00	20
879.00	878.28	865.00	21

PROPOSED GRADE ELEV.	EX. GROUND ELEV.
858.85	858.85
859.43	859.43
859.94	859.94
860.38	860.38
861.05	861.05
861.53	861.53
861.97	861.97
862.05	862.05
862.26	862.26
862.33	862.33
862.57	862.57
863.01	863.01
863.66	863.66
864.46	864.46
865.07	865.07
865.37	865.37
865.78	865.78
866.14	866.14
866.17	866.17
866.02	866.02
866.28	866.28

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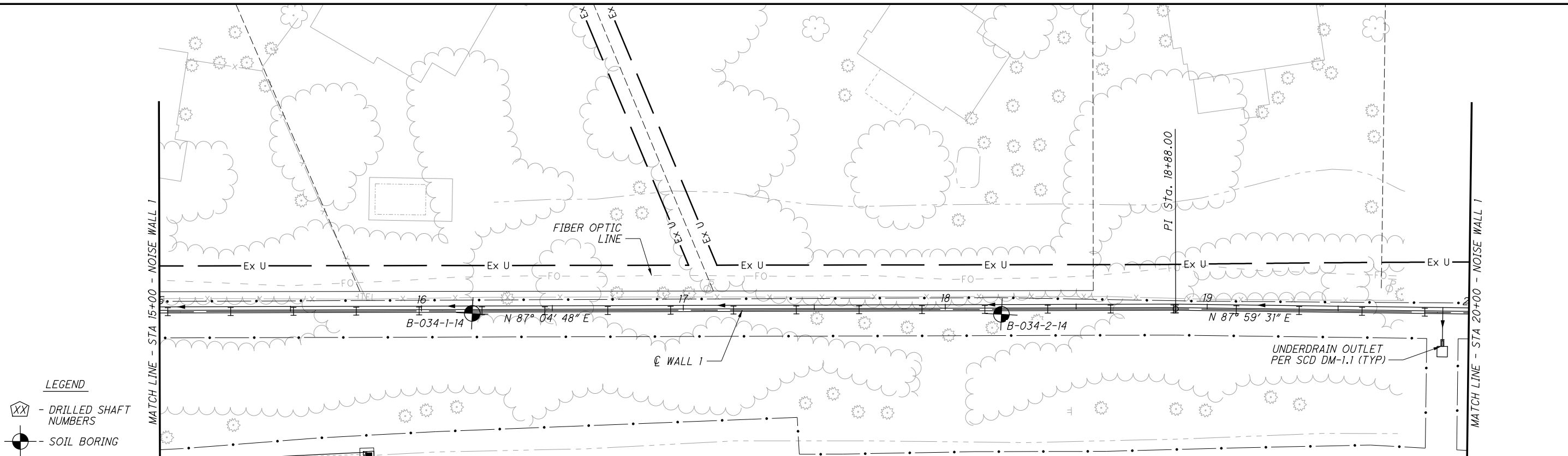
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CALCULATED
ANN
CHECKED
DCB

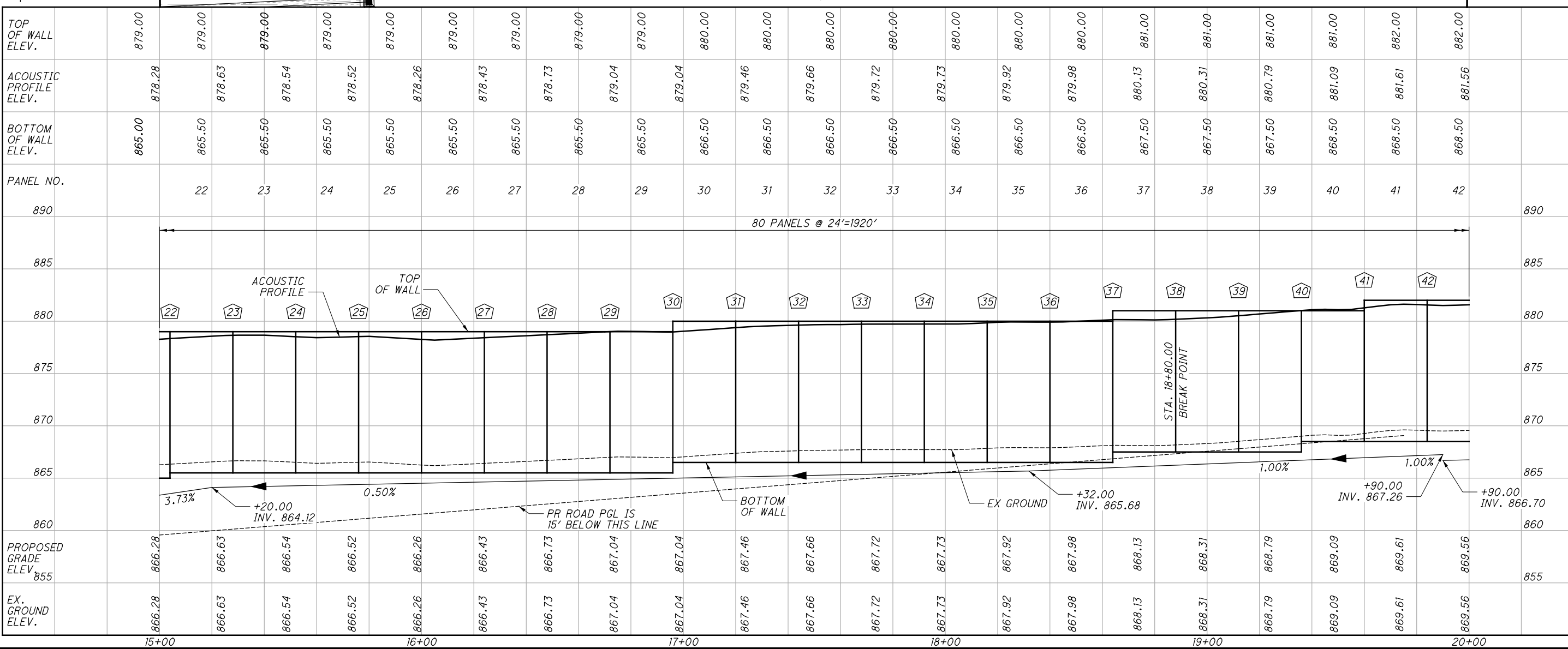
0 10 20
HORIZONTAL
SCALE IN FEET

10
40

PLAN AND PROFILE - WALL 1
STA 15+00 TO STA 20+00



TOP OF WALL ELEV.	ACOUSTIC PROFILE ELEV.	BOTTOM OF WALL ELEV.	PANEL NO.	PROPOSED GRADE ELEV.	EX. GROUND ELEV.
879.00	878.28	865.00		866.28	866.28
879.00	878.63	865.50	22	866.63	866.63
879.00	878.54	865.50	23	866.54	866.54
879.00	878.52	865.50	24	866.52	866.52
879.00	878.26	865.50	25	866.26	866.26
879.00	878.43	865.50	26	866.43	866.43
879.00	878.73	865.50	27	866.73	866.73
879.00	879.04	865.50	28	866.73	866.73
879.00	879.04	865.50	29	867.04	867.04
880.00	879.04	866.50	30	867.04	867.04
880.00	879.46	866.50	31	867.46	867.46
880.00	879.66	866.50	32	867.66	867.66
880.00	879.72	866.50	33	867.72	867.72
880.00	879.73	866.50	34	867.73	867.73
880.00	879.92	866.50	35	867.92	867.92
880.00	879.98	866.50	36	867.98	867.98
881.00	880.13	867.50	37	868.13	868.13
881.00	880.31	867.50	38	868.31	868.31
881.00	880.79	867.50	39	868.79	868.79
881.00	881.09	868.50	40	869.09	869.09
882.00	881.61	868.50	41	869.61	869.61
882.00	881.56	868.50	42	869.56	869.56



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CALCULATED
ANN
CHECKED
DCB

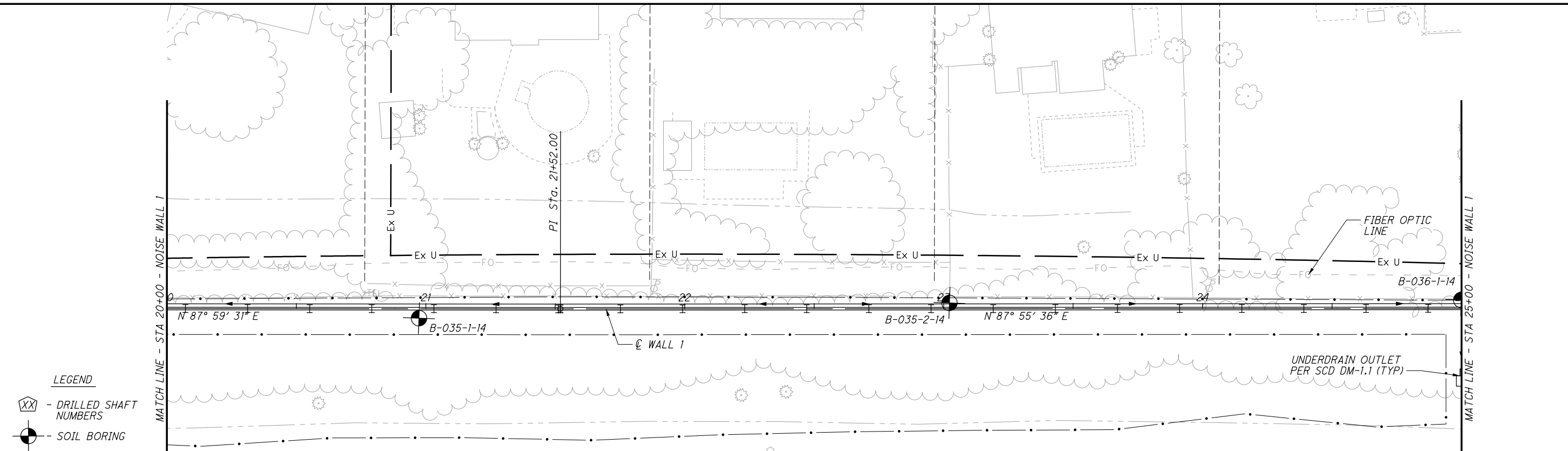
0 20 40
10
HORIZONTAL
SCALE IN FEET

↑
N

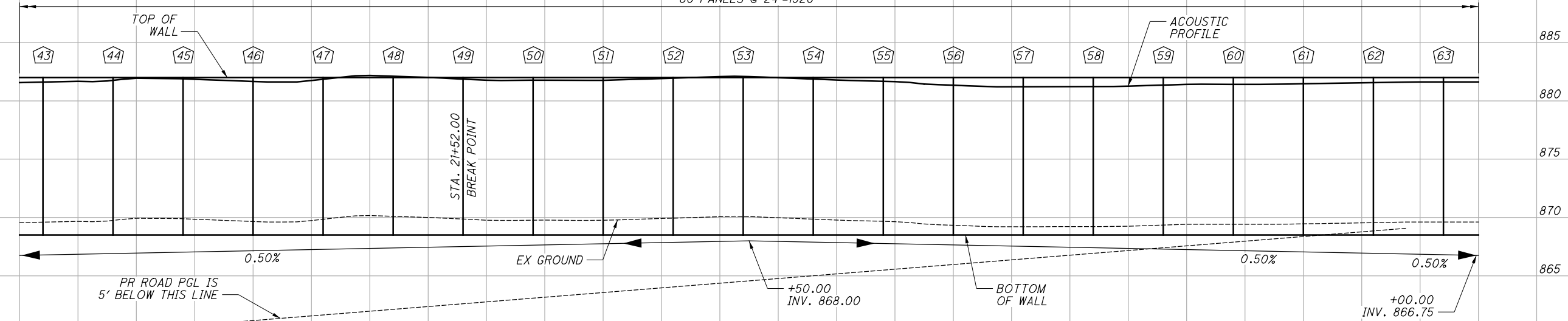
PLAN AND PROFILE - WALL 1
STA 20+00 TO STA 25+00

FRA-71-0.00

1279
1312



TOP OF WALL ELEV.	ACOUSTIC PROFILE ELEV.	BOTTOM OF WALL ELEV.	PANEL NO.	PROPOSED GRADE ELEV.	EX. GROUND ELEV.
882.00	881.56	868.50	42	869.56	869.56
882.00	881.65	868.50	43	869.65	869.65
882.00	881.92	868.50	44	869.92	869.92
882.00	881.71	868.50	45	869.71	869.71
882.00	881.75	868.50	46	869.75	869.75
882.00	882.13	868.50	47	870.13	870.13
882.00	881.89	868.50	48	869.89	869.89
882.00	881.77	868.50	49	869.77	869.77
882.00	881.76	868.50	50	869.76	869.76
882.00	881.95	868.50	51	869.95	869.95
882.00	882.08	868.50	52	870.08	870.08
882.00	881.83	868.50	53	869.83	869.83
882.00	881.65	868.50	54	869.65	869.65
882.00	881.29	868.50	55	869.29	869.29
882.00	881.22	868.50	56	869.22	869.22
882.00	881.23	868.50	57	869.23	869.23
882.00	881.41	868.50	58	869.41	869.41
882.00	881.41	868.50	59	869.41	869.41
882.00	881.50	868.50	60	869.50	869.50
882.00	881.61	868.50	61	869.61	869.61
882.00	881.62	868.50	62	869.62	869.62
882.00	881.62	868.50	63	869.62	869.62



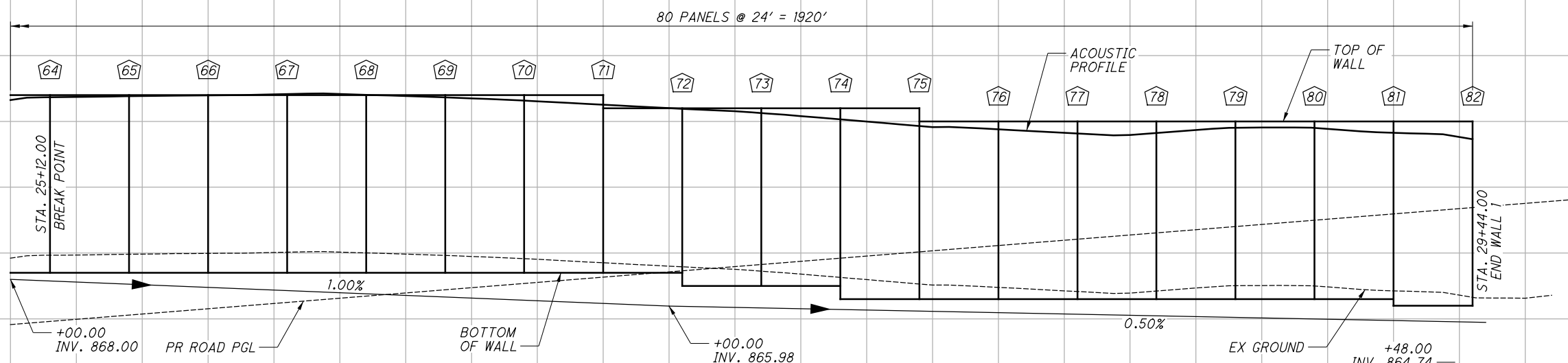
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LEGEND
 XX - DRILLED SHAFT NUMBERS
 ● - SOIL BORING

TOP OF WALL ELEV.	ACOUSTIC PROFILE ELEV.	BOTTOM OF WALL ELEV.	PANEL NO.
882.00	881.62	868.50	63
882.00	881.87	868.50	64
882.00	881.96	868.50	65
882.00	882.02	868.50	66
882.00	882.07	868.50	67
882.00	881.89	868.50	68
882.00	881.65	868.50	69
882.00	881.33	868.50	70
881.00	881.01	868.50	71
881.00	880.68	867.50	72
881.00	880.19	867.50	73
881.00	879.67	866.50	74
880.00	879.40	866.50	75
880.00	879.07	866.50	76
880.00	879.15	866.50	77
880.00	879.52	866.50	78
880.00	879.43	866.50	79
880.00	879.10	866.00	80
880.00		866.00	81

PROPOSED GRADE ELEV.	EX. GROUND ELEV.
869.62	869.62
869.87	869.87
869.96	869.96
870.02	870.02
870.07	870.07
869.89	869.89
869.65	869.65
869.33	869.33
869.01	869.01
868.68	868.68
868.19	868.19
867.67	867.67
867.40	867.40
867.07	867.07
867.15	867.15
867.52	867.52
867.43	867.43
867.10	867.10
866.59	866.59



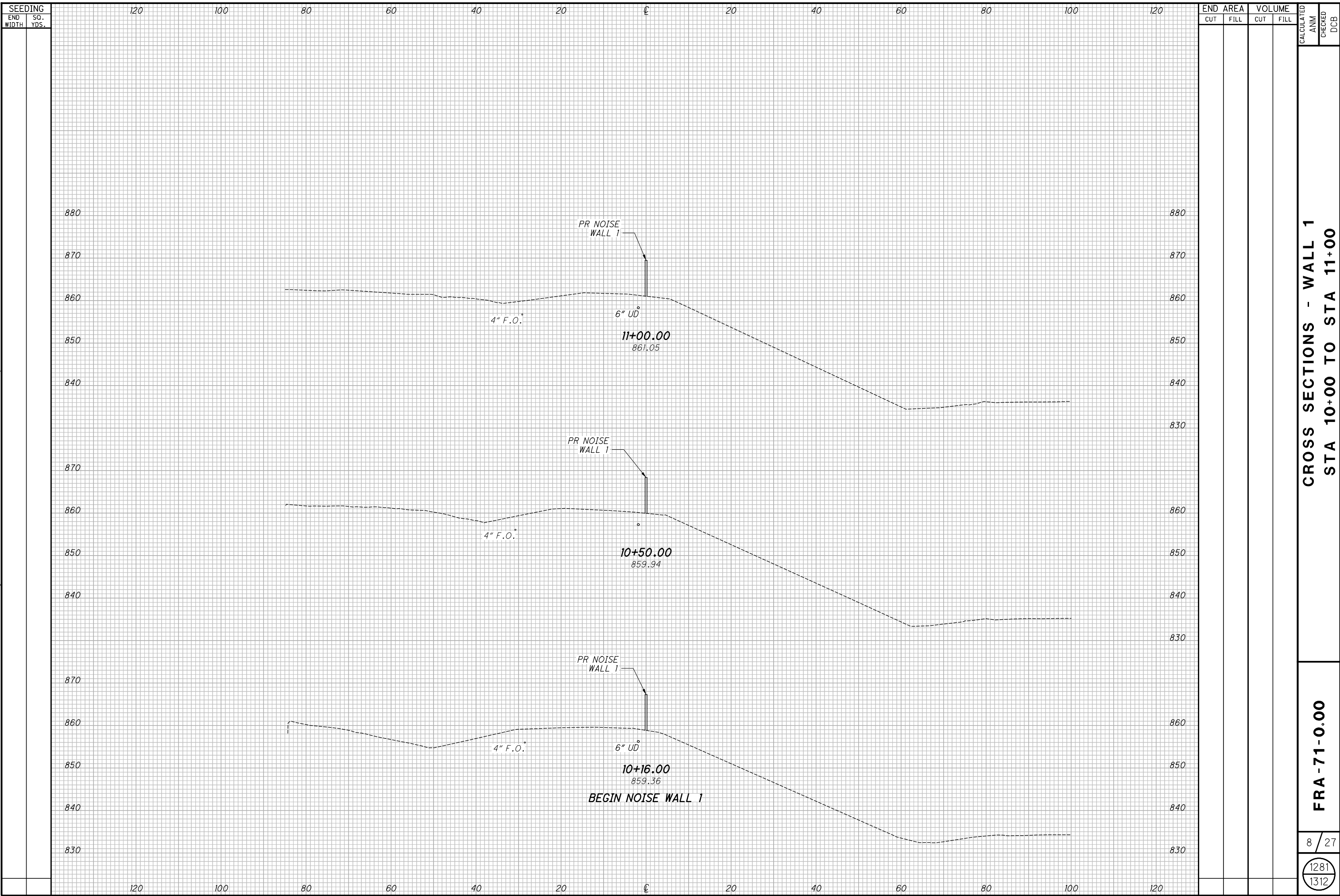
PLAN AND PROFILE - WALL 1
STA 25+00 TO STA 29+44

FRA -71-0.00

7 / 27

1280
1312

X:\4037000\121957.16\107201\structures\Wall_001\sheets\107201WX101.dgn XS_SHEET_1 10/28/2019 11:16:35 AM 14585.js



SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	ANN	DCB

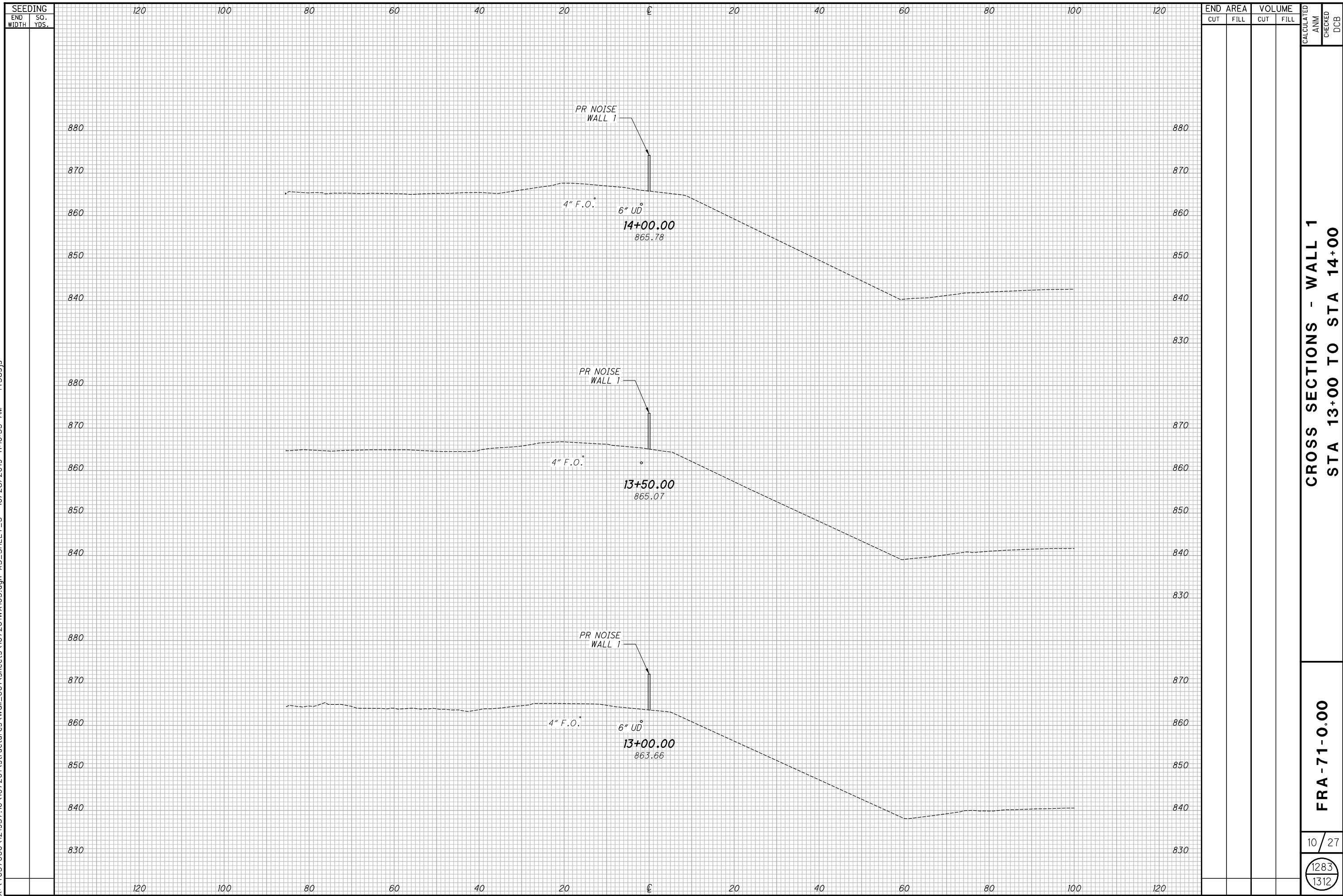
**CROSS SECTIONS - WALL 1
STA 10+00 TO STA 11+00**

FRA - 71 - 0.00

8 / 27

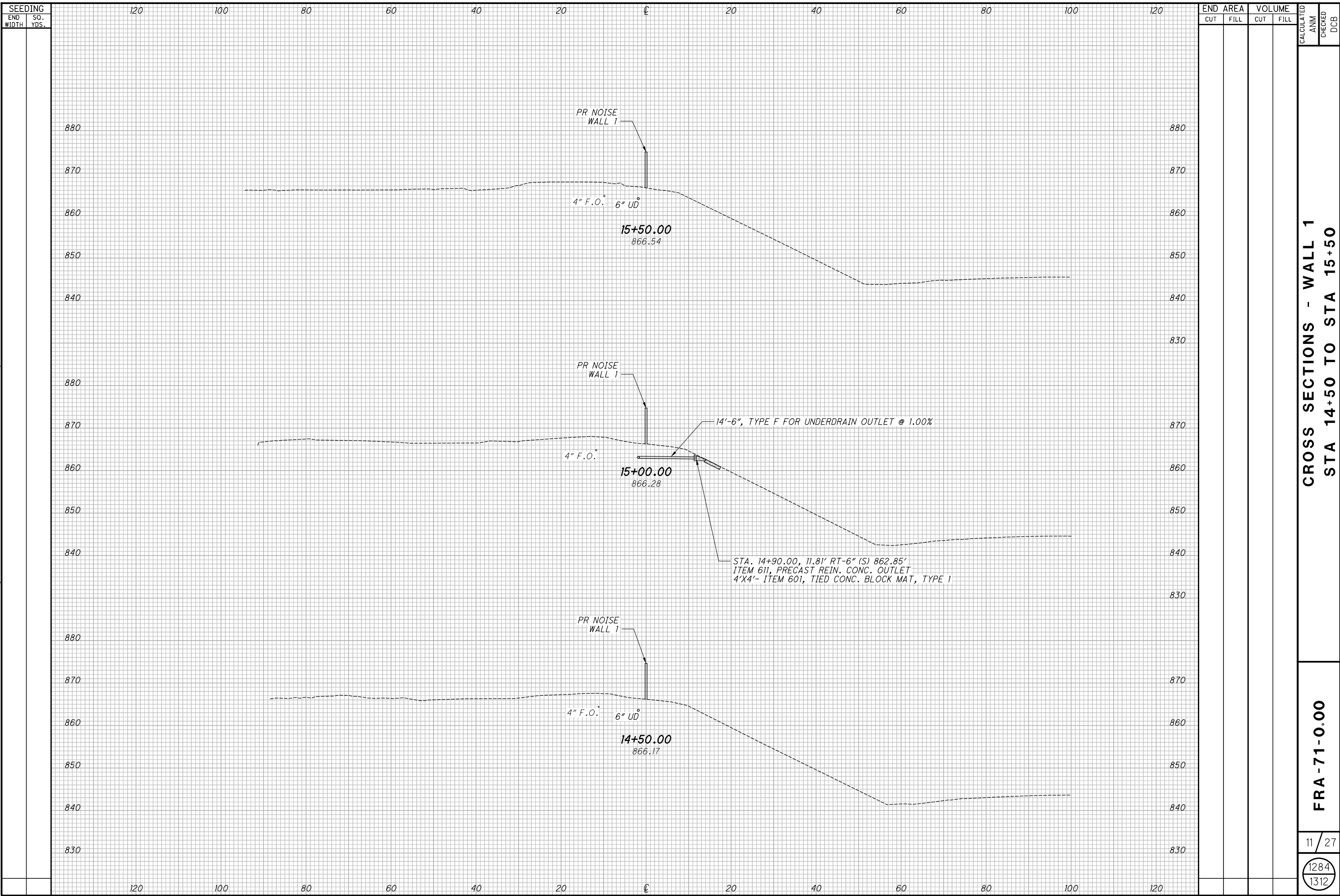
1281
1312

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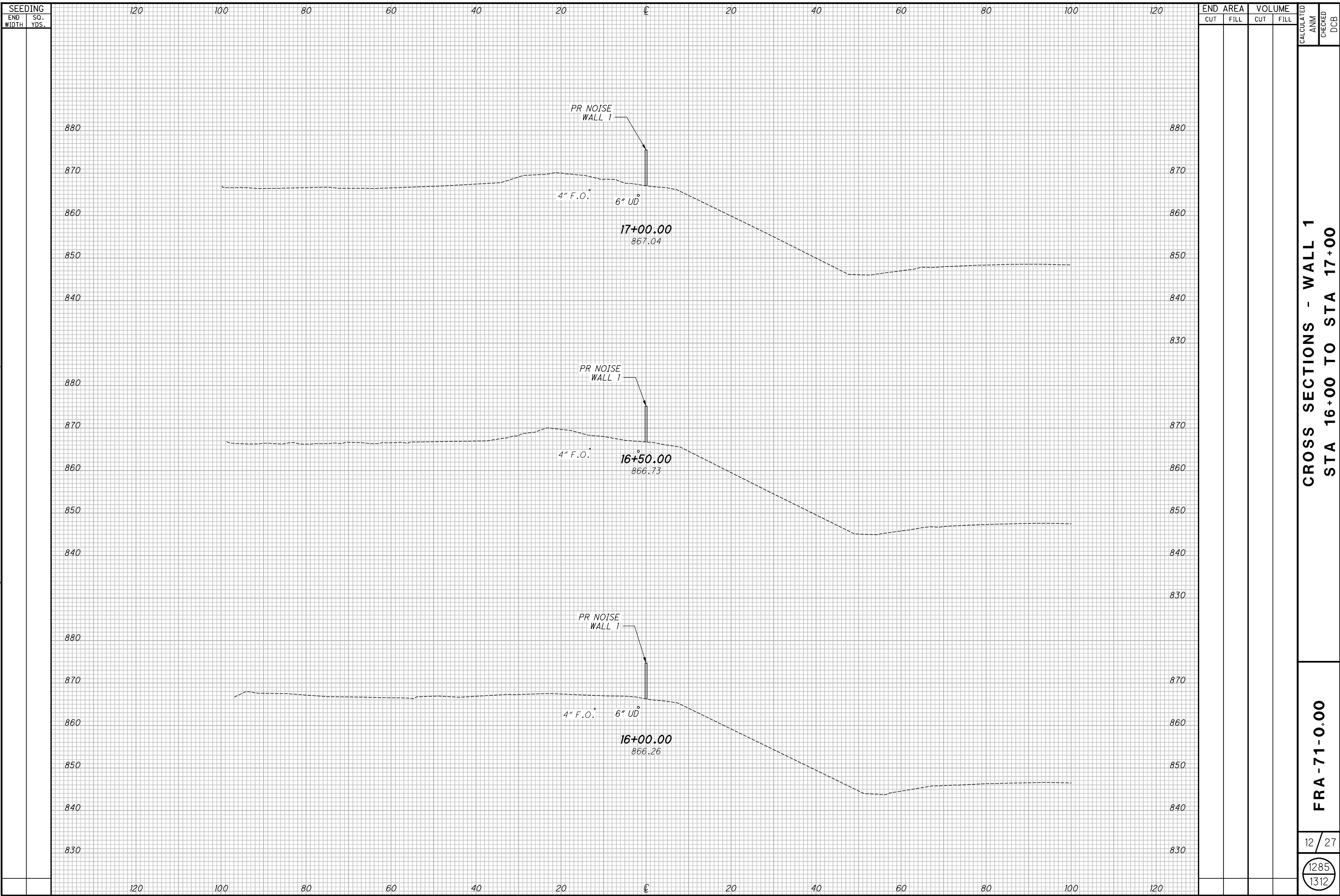
SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANN	DCB
CROSS SECTIONS - WALL 1							
STA 13+00 TO STA 14+00							
FRA - 71 - 0:00							
10/27							
(1283)							
(1312)							

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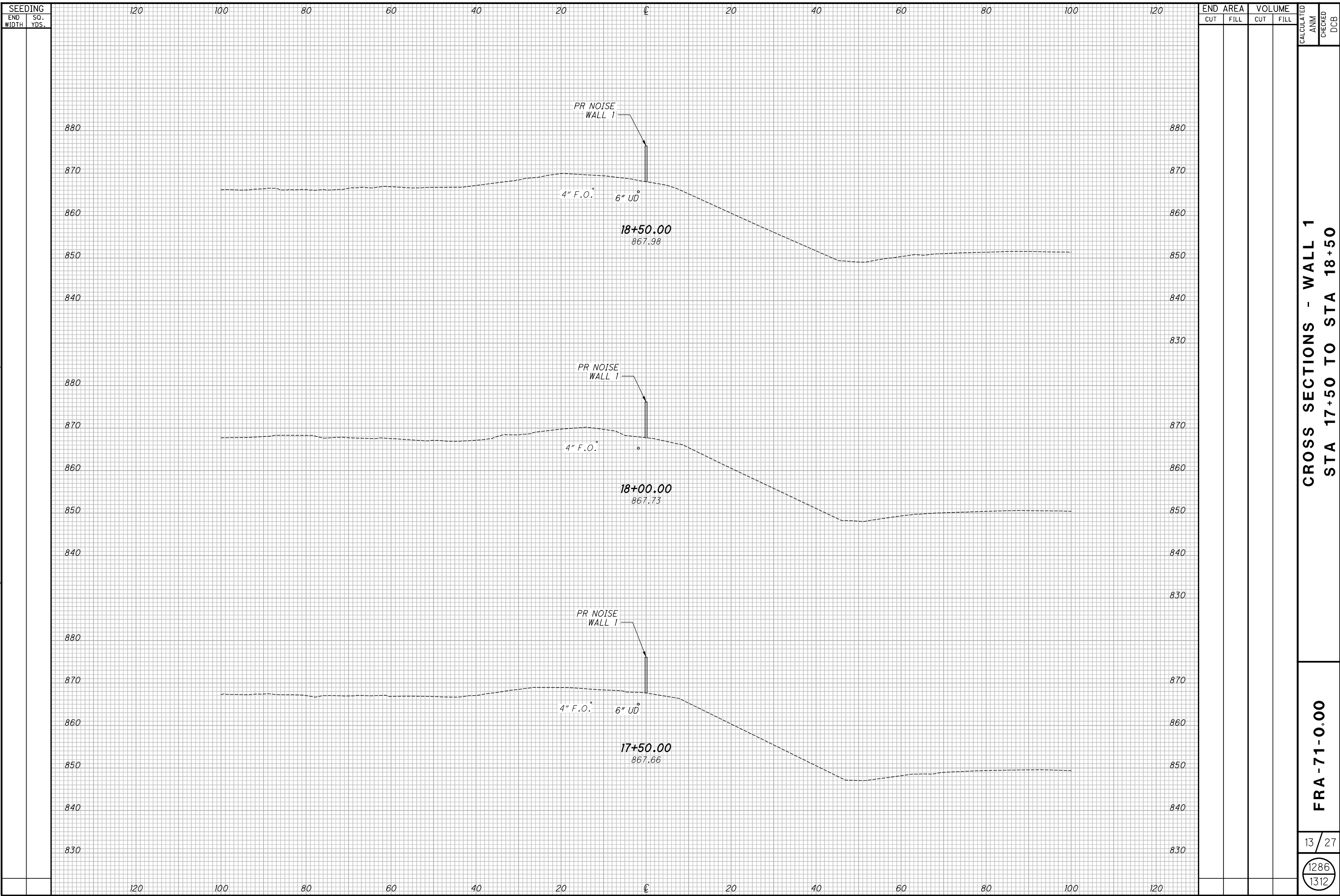
SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANN	DCB
CROSS SECTIONS - WALL 1							
STA 14+50 TO STA 15+50							
FRA - 71 - 0.00							
11 / 27							
1284							
1312							

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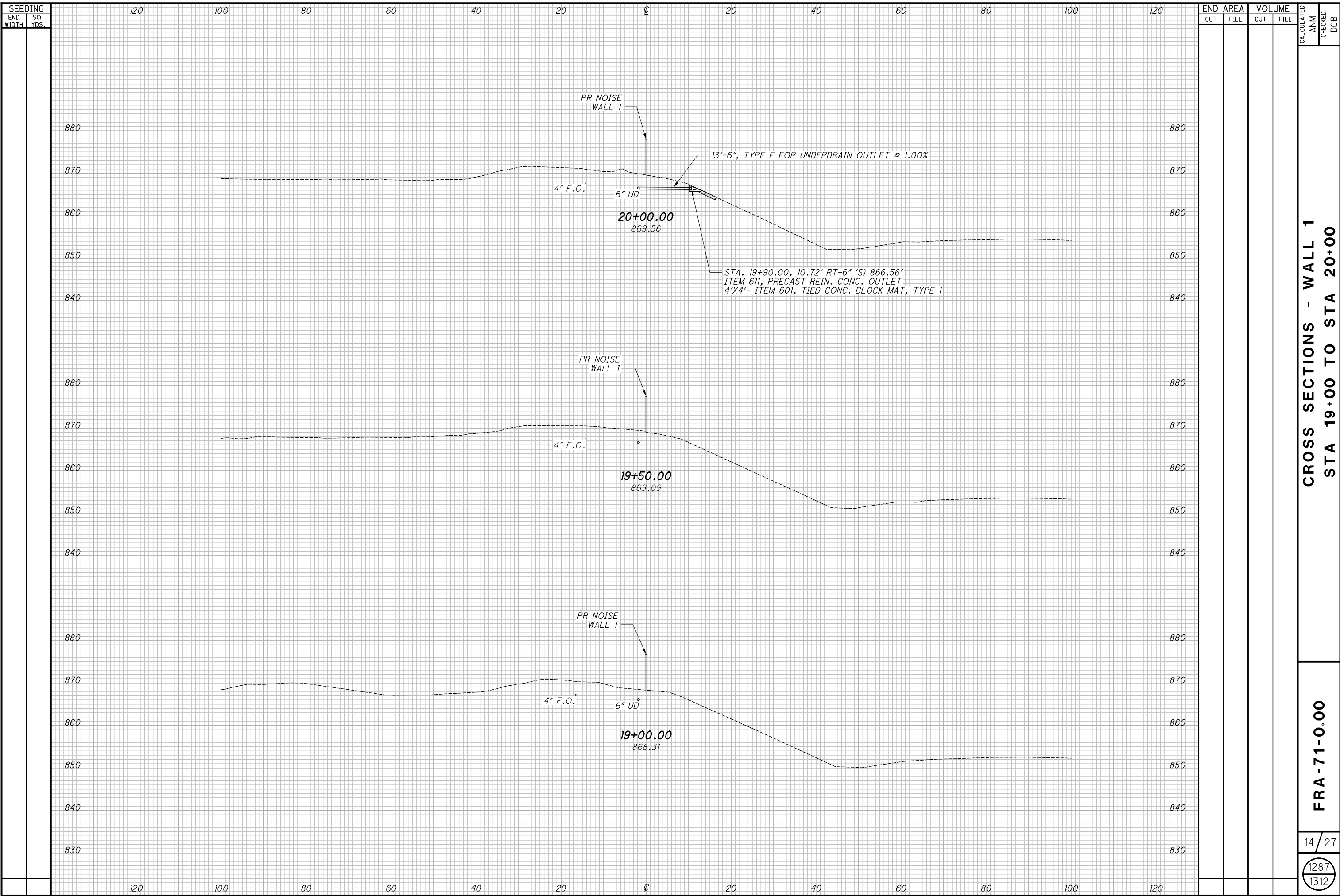


SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANN	DCB
CROSS SECTIONS - WALL 1							
STA 16+00 TO STA 17+00							
FRA - 71 - 0.00							
12/27							
1285							
1312							

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SEEDING		END AREA		VOLUME		CALCULATED		
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANN	CHECKED	DCB
CROSS SECTIONS - WALL 1								
STA 19+00 TO STA 20+00								
FRA - 71 - 0.00								
14 / 27								
(1287)								
1312								

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SEEDING
END SO.
WIDTH YDS.

120

100

80

60

40

20

0

20

40

60

80

100

120

END AREA
CUT FILL

VOLUME
CUT FILL

CALCULATED
ANN
CHECKED
DCB

880

870

860

850

840

880

870

860

850

840

880

870

860

850

840

880

870

860

850

840

880

870

860

850

840

830

880

870

860

850

840

830

120

100

80

60

40

20

0

20

40

60

80

100

120

PR NOISE
WALL 1

4" F.O.

6" UD

21+50.00
869.89

PR NOISE
WALL 1

4" F.O.

21+00.00
869.75

PR NOISE
WALL 1

4" F.O.

6" UD

20+50.00
869.92

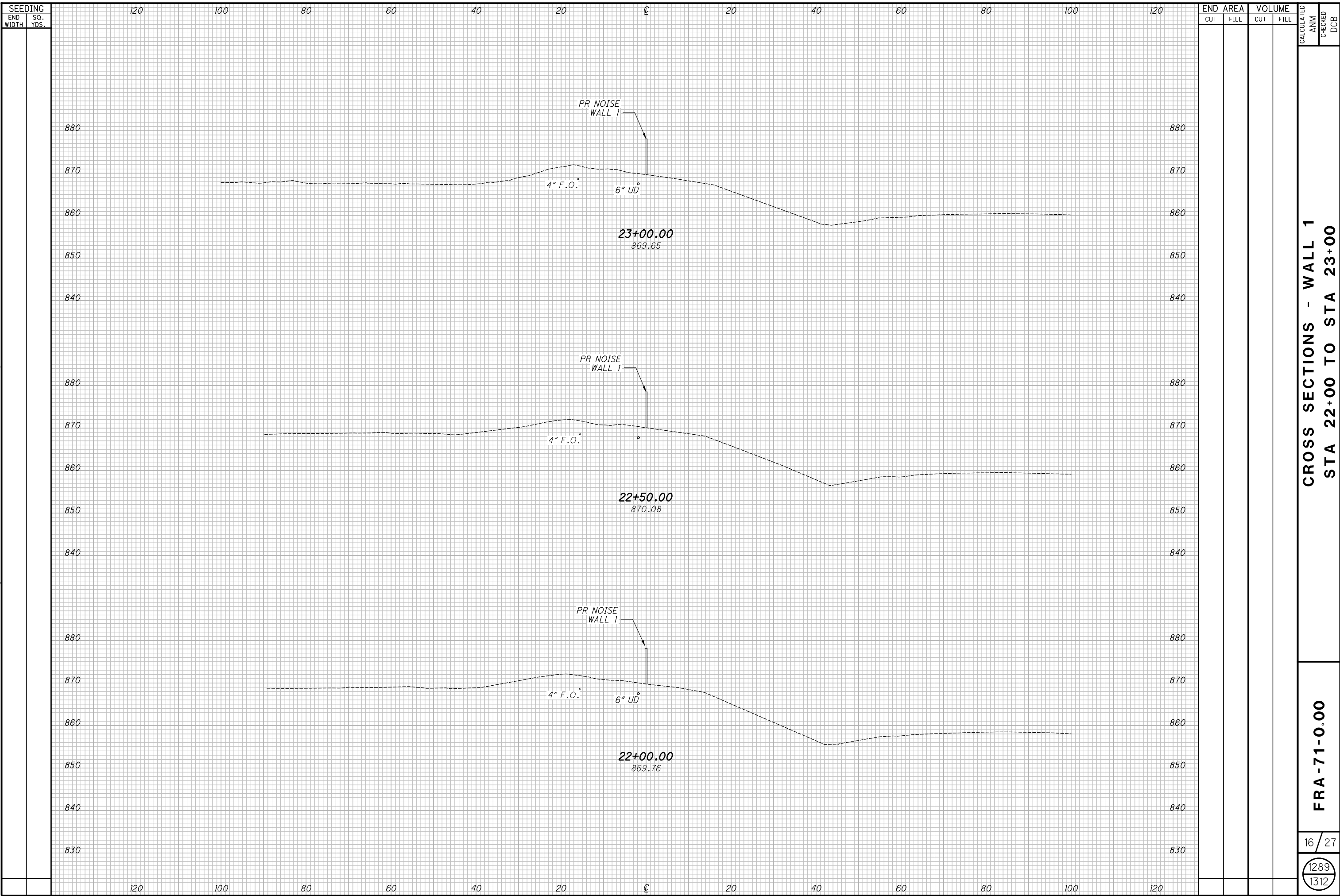
CROSS SECTIONS - WALL 1
STA 20+50 TO STA 21+50

FRA - 71 - 0.00

15 / 27

1288
1312

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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	ANM	DCB

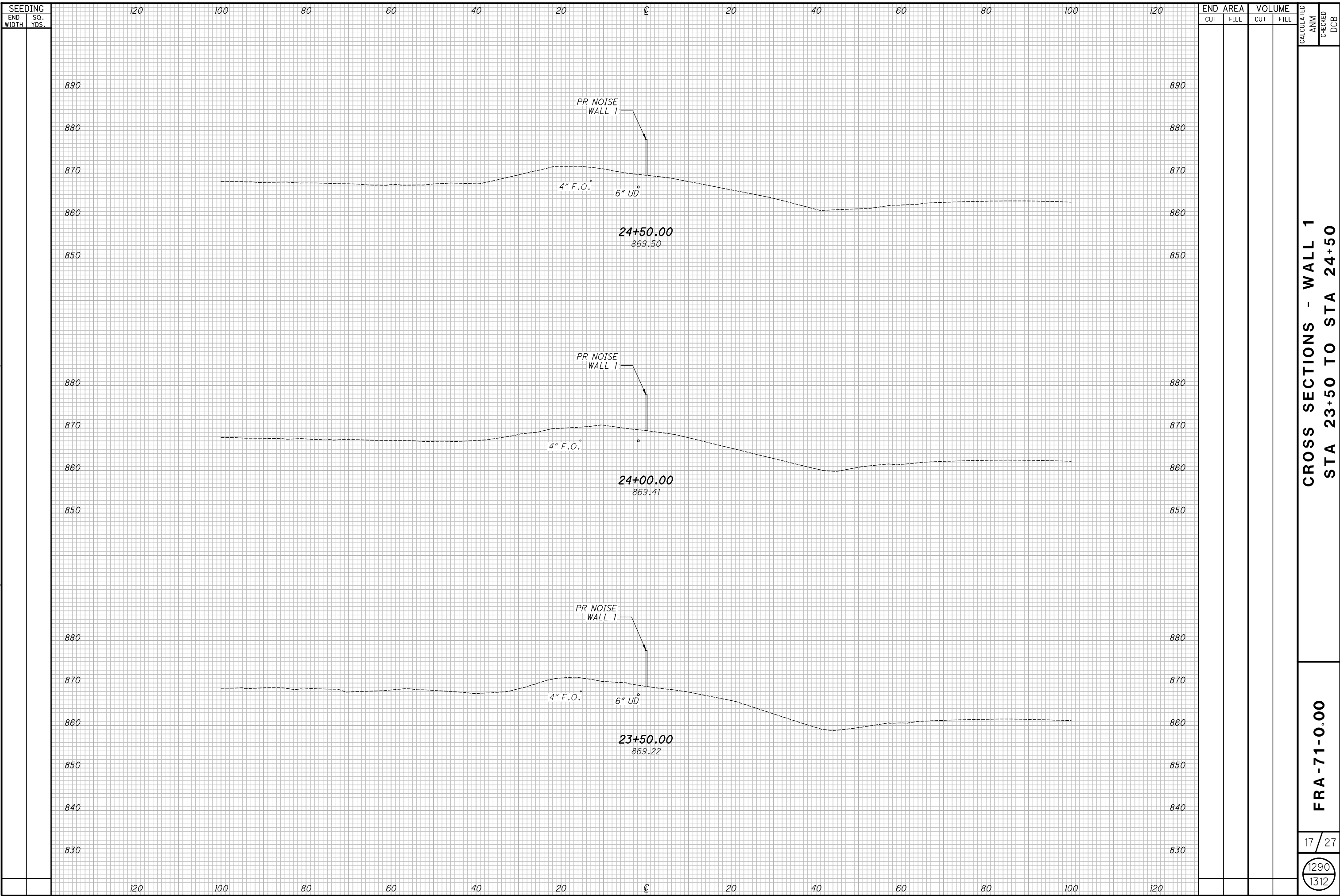
**CROSS SECTIONS - WALL 1
STA 22+00 TO STA 23+00**

FRA - 71 - 0.00

16 / 27

1289
1312

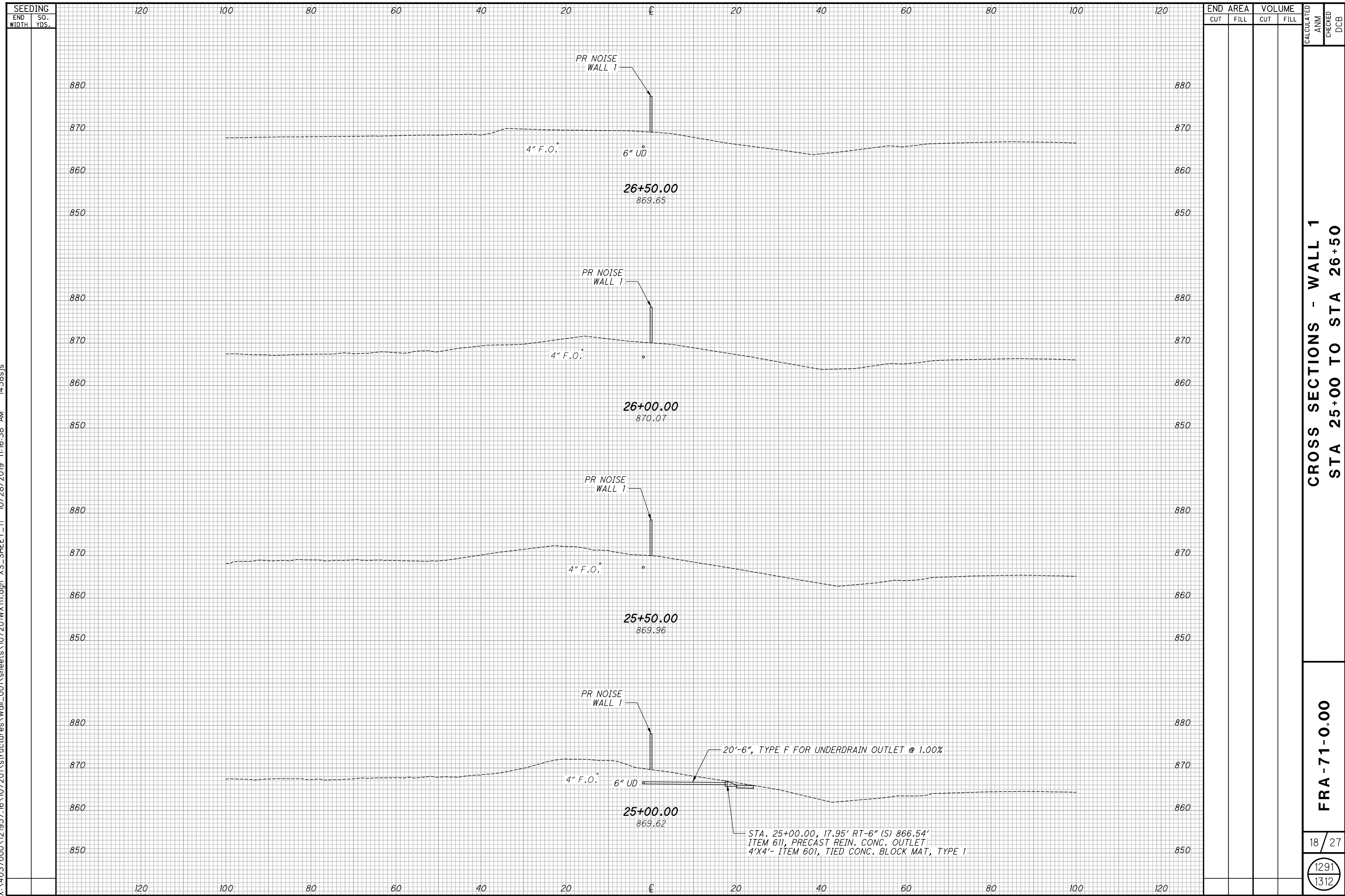
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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANN	DCB

CROSS SECTIONS - WALL 1	
STA 23+50 TO STA 24+50	
FRA - 71 - 0.00	
17 / 27	
1290	
1312	

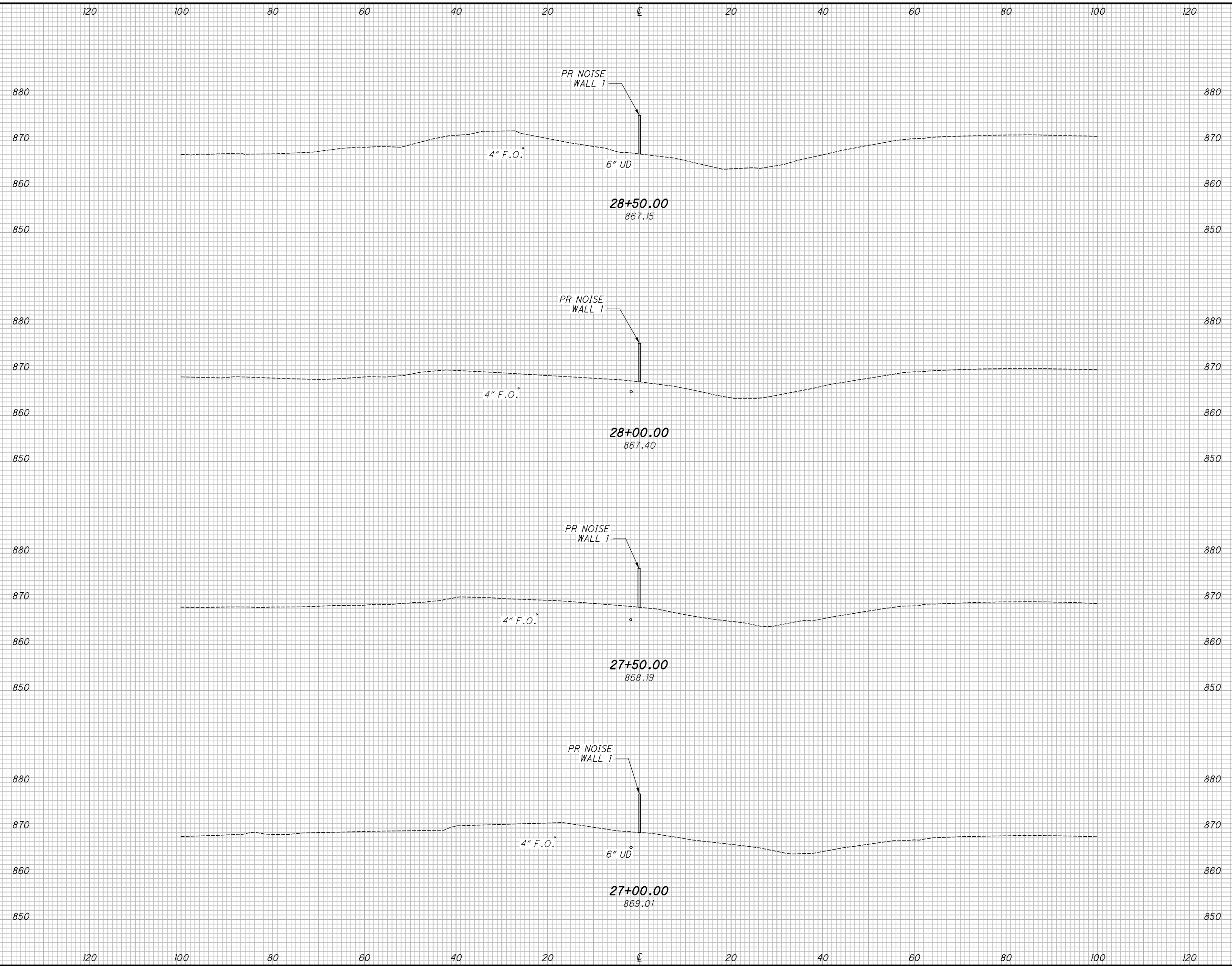
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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANN	DCB
CROSS SECTIONS - WALL 1							
STA 25+00 TO STA 26+50							
FRA - 71 - 0.00							
18 / 27							
(1291)							
1312							

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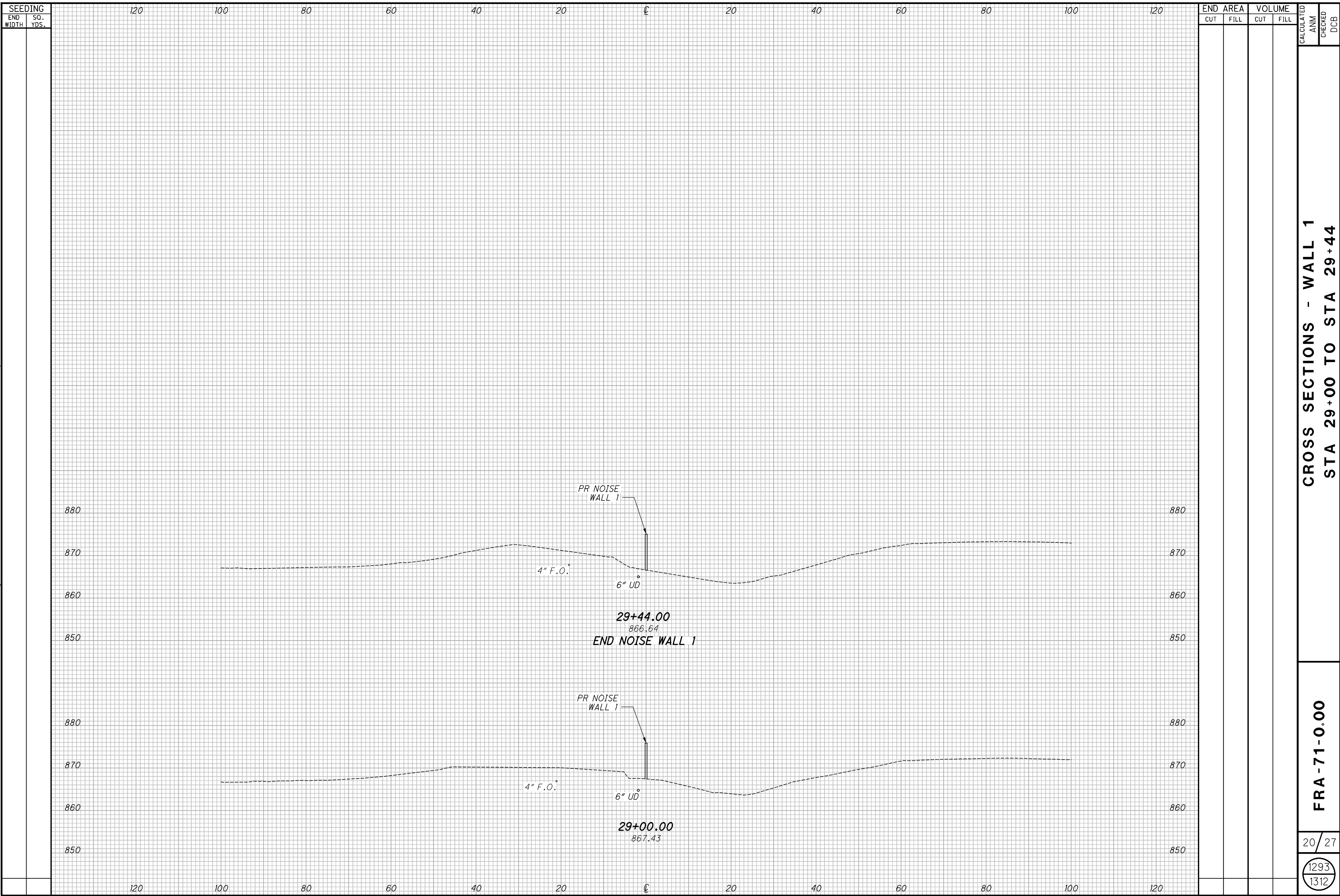
SEEDING	
END WIDTH	SO. YDS.



END AREA		VOLUME		CALCULATED ANN	CHECKED DCB
CUT	FILL	CUT	FILL		

CROSS SECTIONS - WALL 1			
STA 27+00 TO STA 28+50			
FRA - 71 - 0.00			
19 / 27			
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1292			
1312			

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SEEDING	
END WIDTH	SO. YDS.

120 100 80 60 40 20 0 20 40 60 80 100 120

880 870 860 850

PR NOISE WALL 1

4" F.O.

6" UD

29+44.00
866.64
END NOISE WALL 1

PR NOISE WALL 1

4" F.O.

6" UD

29+00.00
867.43

880 870 860 850

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA		VOLUME		CALCULATED ANN	CHECKED DCB
CUT	FILL	CUT	FILL		

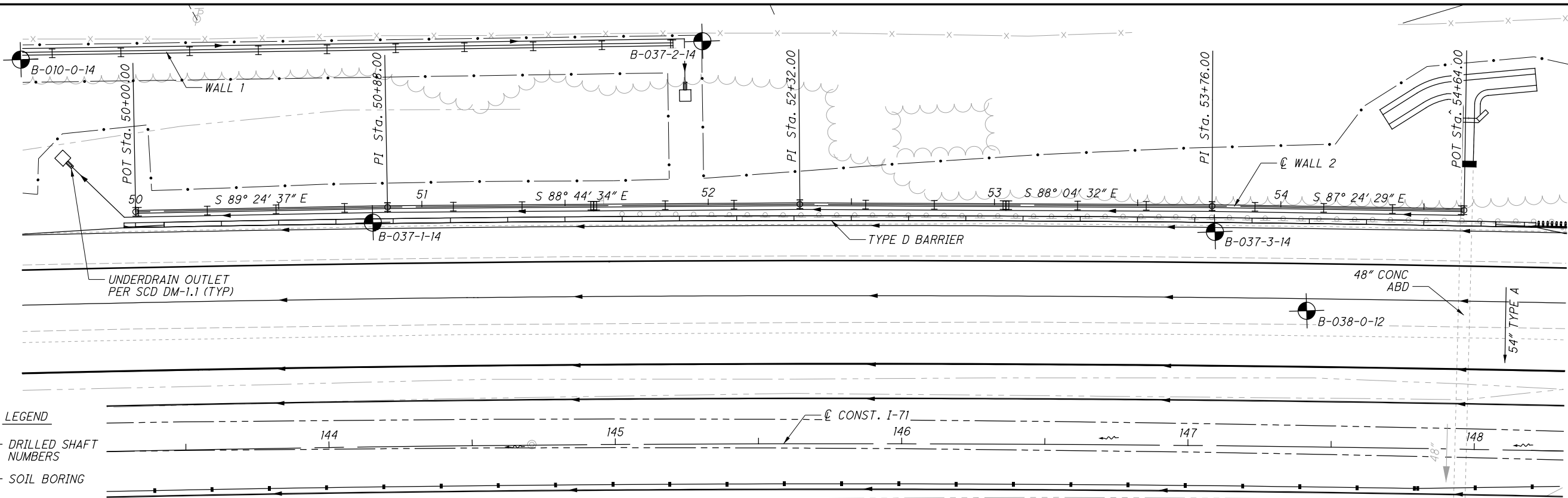
CROSS SECTIONS - WALL 1
STA 29+00 TO STA 29+44

FRA - 71 - 0.00

20/27

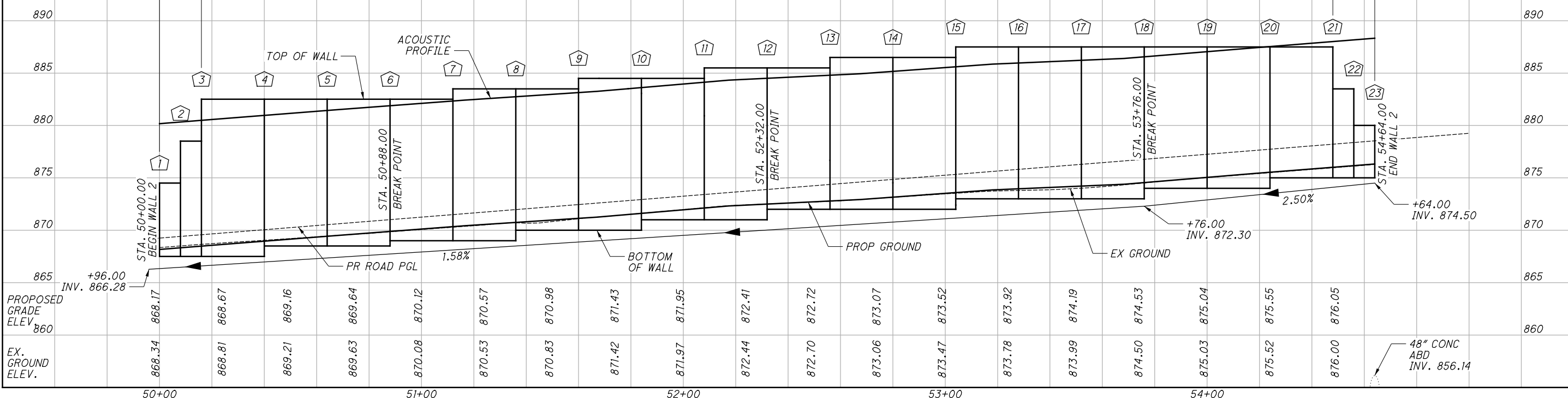
1293
1312

X:\4037000\121957.16\107201\structures\Wall_002\sheets\107201WP201.dgn Sheet 10/28/2019 11:16:40 AM 1458sjs



- LEGEND**
- XX - DRILLED SHAFT NUMBERS
 - - SOIL BORING

TOP OF WALL ELEV.	ACOUSTIC PROFILE ELEV.	BOTTOM OF WALL ELEV.	PANEL NO.	PROPOSED GRADE ELEV.	EX. GROUND ELEV.
874.50	880.17	867.50	1	868.34	868.34
878.50	880.67	867.50	2	868.81	868.81
882.50	881.16	868.50	3	869.21	869.21
882.50	881.64	868.50	4	869.63	869.63
882.50	882.12	869.00	5	870.08	870.08
883.50	882.57	869.00	6	870.53	870.53
883.50	882.98	870.00	7	870.98	870.98
884.50	883.43	870.00	8	871.43	871.43
884.50	883.95	871.00	9	871.97	871.97
885.50	884.41	871.00	10	872.44	872.44
885.50	884.72	872.00	11	872.70	872.70
886.50	885.07	872.00	12	873.06	873.06
886.50	885.52	872.00	13	873.47	873.47
887.50	885.92	873.00	14	873.78	873.78
887.50	886.19	873.00	15	873.99	873.99
887.50	886.53	873.00	16	874.50	874.50
887.50	887.04	874.00	17	875.03	875.03
887.50	887.55	874.00	18	875.52	875.52
887.50	888.05	875.00	19	876.00	876.00
888.50	888.05	875.00	20	876.05	876.05
880.00	880.00	875.00	21	876.05	876.05
			22		

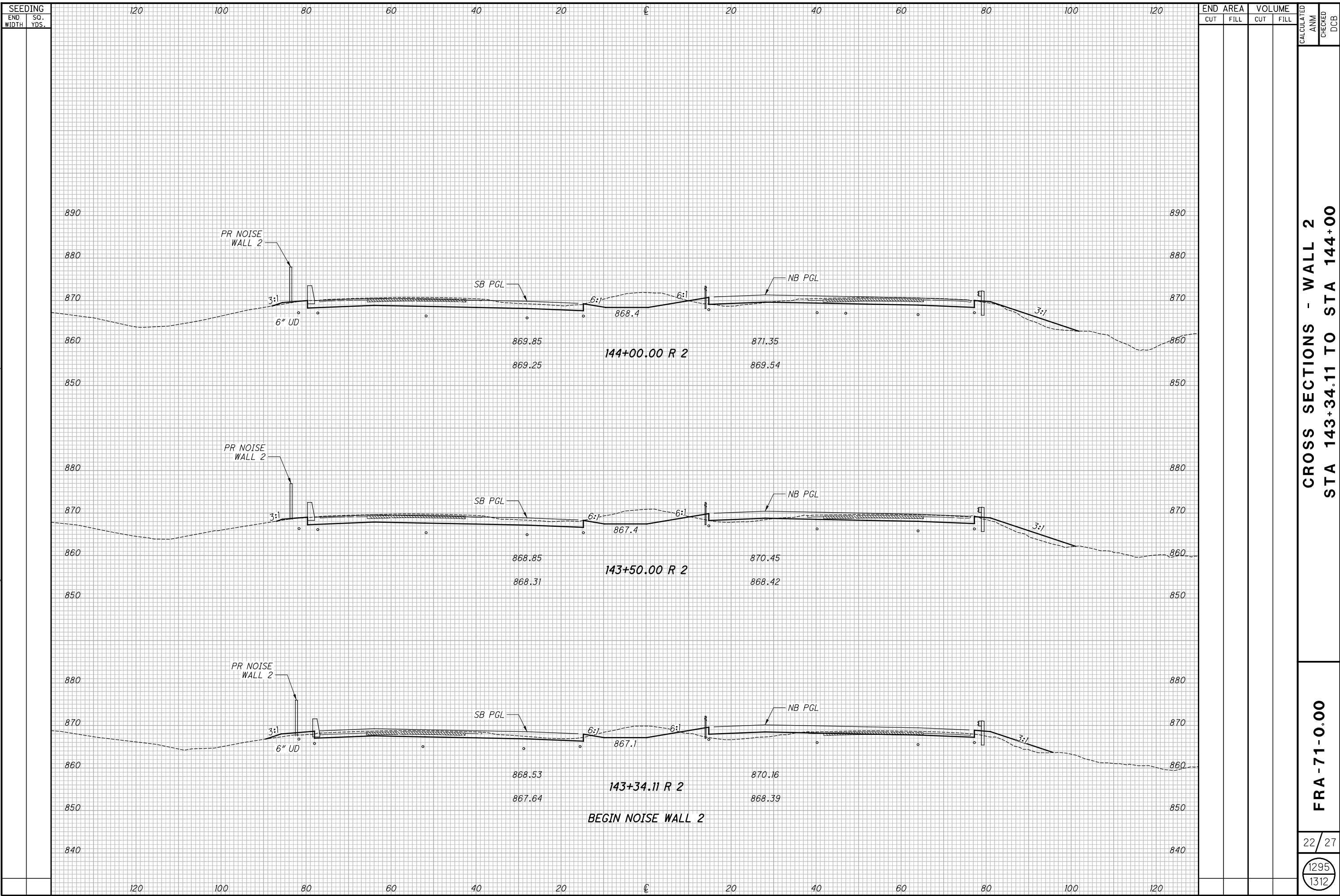


CALCULATED
ANN
CHECKED
DCB

0 20 40
HORIZONTAL
SCALE IN FEET

**PLAN AND PROFILE - WALL 2
STA 50+00 TO STA 54+64**

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANM	DCB

CROSS SECTIONS - WALL 2
STA 143+34.11 TO STA 144+00

FRA - 71 - 0.00

SEEDING
END SO.
WIDTH YDS.

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA
CUT FILL

VOLUME
CUT FILL

CALCULATED
ANM

CHECKED
DCB

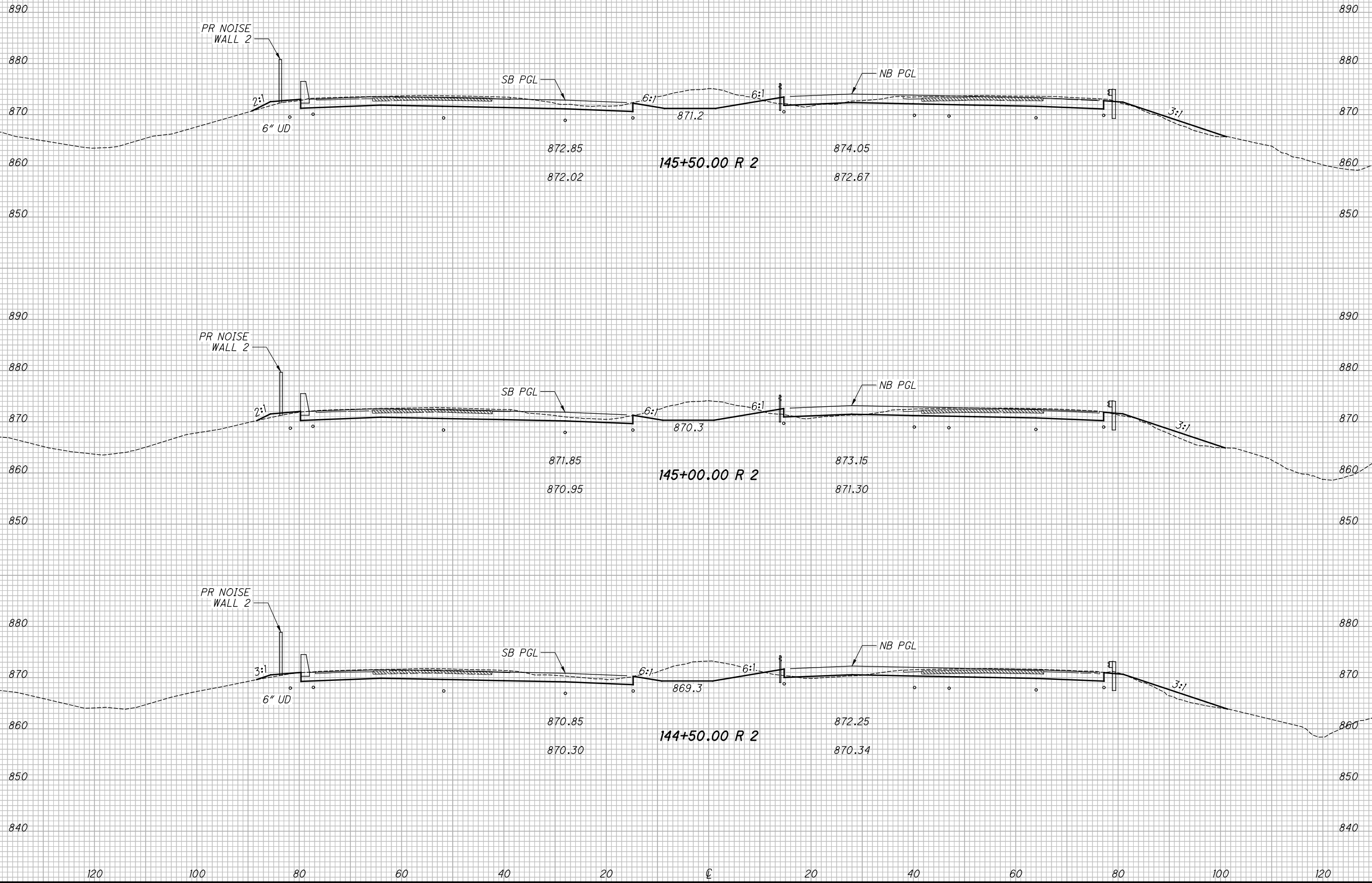
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STA 144+50 TO STA 145+50

FRA - 71 - 0.00

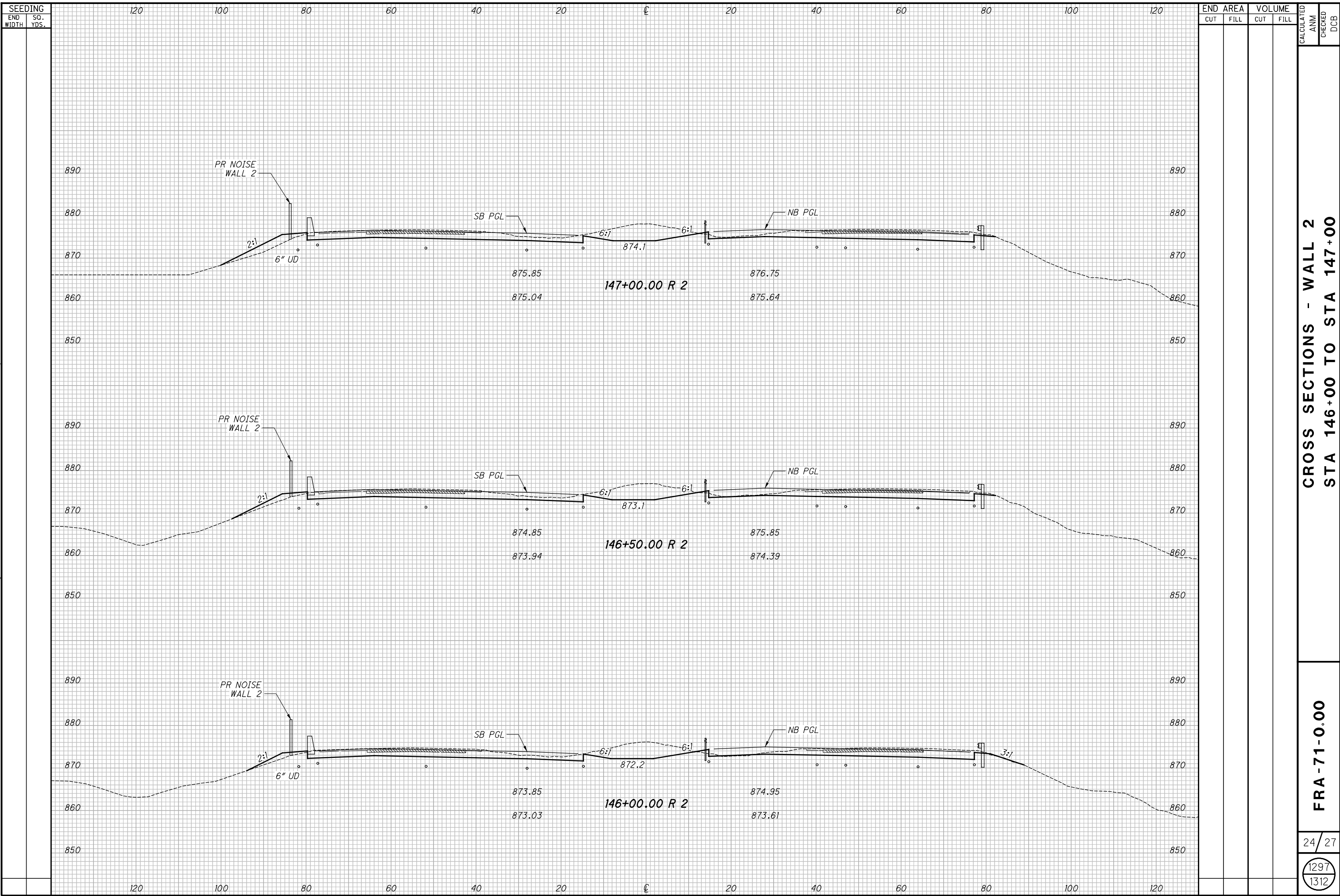
23 / 27

1296
1312

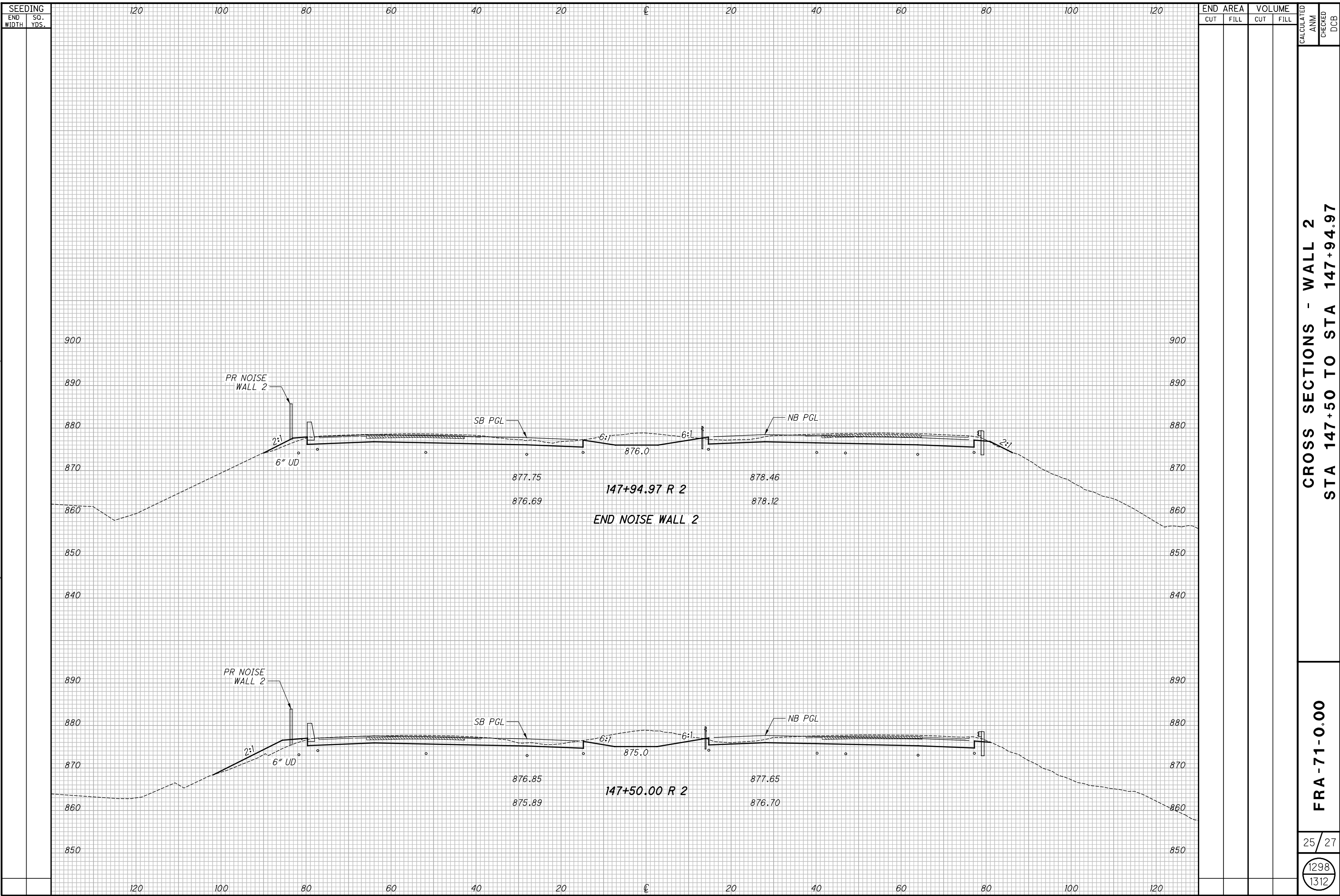
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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ANM	CHECKED
							DCB

CROSS SECTIONS - WALL 2 STA 147+50 TO STA 147+94.97
FRA - 71 - 0.00
25 / 27
1298 1312

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NOISE BARRIER WALL - 1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
1	10+16.00	858.76	9.00
2	10+24.00	858.69	9.00
3	10+48.00	858.69	9.00
4	10+72.00	858.69	9.00
5	10+96.00	858.69	9.00
6	11+20.00	859.69	9.00
7	11+44.00	860.19	7.00
8	11+68.00	860.19	7.00
9	11+92.00	861.19	7.00
10	12+16.00	861.19	7.00
11	12+40.00	861.19	7.00
12	12+64.00	861.19	9.00
13	12+88.00	861.19	9.00
14	13+12.00	862.19	9.00
15	13+36.00	863.19	7.00
16	13+60.00	863.69	9.00
17	13+84.00	863.69	9.00
18	14+08.00	864.69	7.00
19	14+32.00	864.69	7.00
20	14+56.00	864.69	7.00
21	14+80.00	864.69	9.00
22	15+04.00	864.69	9.00
23	15+28.00	865.19	7.00
24	15+52.00	865.19	7.00
25	15+76.00	865.19	7.00
26	16+00.00	865.19	7.00
27	16+24.00	865.19	7.00
28	16+48.00	865.19	7.00
29	16+72.00	865.19	7.00
30	16+96.00	865.19	9.00
31	17+20.00	866.19	7.00
32	17+44.00	866.19	7.00
33	17+68.00	866.19	7.00
34	17+92.00	866.19	7.00
35	18+16.00	866.19	7.00
36	18+40.00	866.19	7.00
37	18+64.00	866.19	9.00
38	18+88.00	867.19	7.00
39	19+12.00	867.19	7.00
40	19+36.00	867.19	7.00
41	19+60.00	868.19	7.00
42	19+84.00	868.19	7.00
43	20+08.00	868.19	7.00
44	20+32.00	868.19	7.00
45	20+56.00	868.19	7.00
46	20+80.00	868.19	7.00
47	21+04.00	868.19	7.00
48	21+28.00	868.19	7.00
49	21+52.00	868.19	7.00
50	21+76.00	868.19	7.00
51	22+00.00	868.19	10.00
52	22+24.00	868.19	10.00
53	22+48.00	868.19	10.00
54	22+72.00	868.19	10.00
55	22+96.00	868.19	10.00
56	23+20.00	868.19	10.00
57	23+44.00	868.19	10.00
58	23+68.00	868.19	10.00
59	23+92.00	868.19	10.00

NOISE BARRIER WALL - 1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
60	24+16.00	868.19	10.00
61	24+40.00	868.19	10.00
62	24+64.00	868.19	10.00
63	24+88.00	868.19	10.00
64	25+12.00	868.19	10.00
65	25+36.00	868.19	10.00
66	25+60.00	868.19	10.00
67	25+84.00	868.19	10.00
68	26+08.00	868.19	10.00
69	26+32.00	868.19	10.00
70	26+56.00	868.19	6.50
71	26+80.00	868.19	6.50
72	27+04.00	867.19	6.50
73	27+28.00	867.19	6.50
74	27+52.00	866.19	9.00
75	27+76.00	866.19	9.00
76	28+00.00	866.19	7.00
77	28+24.00	866.19	7.00
78	28+48.00	866.19	7.00
79	28+72.00	866.19	7.00
80	28+96.00	866.19	7.00
81	29+20.00	865.69	9.00
82	29+44.00	865.69	9.00

NOISE BARRIER WALL - 2			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
1	50+00.00	867.27	6.00
2	50+08.00	867.22	6.00
3	50+16.00	867.19	9.00
4	50+40.00	867.19	9.00
5	50+64.00	868.19	9.00
6	50+88.00	868.19	9.00
7	51+12.00	868.69	9.00
8	51+36.00	868.69	9.00
9	51+60.00	869.69	9.00
10	51+84.00	869.69	9.00
11	52+08.00	870.69	9.00
12	52+32.00	870.69	13.00
13	52+56.00	871.69	13.00
14	52+80.00	871.69	13.00
15	53+04.00	871.69	13.00
16	53+28.00	872.69	13.00
17	53+52.00	872.69	13.00
18	53+76.00	872.69	13.00
19	54+00.00	873.69	6.50
20	54+24.00	873.69	6.50
21	54+48.00	874.69	6.50
22	54+56.00	874.72	6.50
23	54+64.00	874.77	6.50

CALCULATED
ANN
CHECKED
RLC

NOISE BARRIER DATA TABLES

FRA - 71 - 0.00

NOISE WALL DETAILS

FRA - 71 - 0.00

PANEL NOTES:

THE ALIGNMENT OF THE HORIZONTAL JOINTS WHEN THE TOP OF WALL ELEVATIONS ARE STEPPING UP OR DOWN FROM BAY TO BAY IS NOT REQUIRED. HOWEVER, WHEN THE TOP OF WALL ELEVATIONS ARE THE SAME FROM BAY TO BAY, THE ALIGNMENT OF THE HORIZONTAL JOINTS IS REQUIRED.

PROVIDE 3/4" BACKER ROD (NOT 1/2") SPECIFIED BY ASTM D5249 TYPE 1 OR 3.

NOISE BARRIER POSTS WITH KRYTON KRYSTOL INTERNAL MEMBRANE (KIM)

POSTS FROM BAY 1 TO BAY 41 OF WALL 1 SHALL BE CONSTRUCTED USING CONCRETE WITH A WATERPROOFING ADMIXTURE, KRYTON KRYSTOL INTERNAL MEMBRANE (KIM), AS FURNISHED BY KRYTON, 761 BETA DRIVE (UNIT W), CLEVELAND, OH, TELEPHONE NO. 216-475-8112. MODIFICATIONS OF THE MIX DESIGN, DOSAGE OF ADMIXTURE, APPLICATION INSTRUCTIONS AND CURE METHOD SHALL BE AS RECOMMENDED BY KRYTON.

AESTHETIC NOTES:

1. SEE STANDARDS DRAWING NBS-1-09 FOR ADDITIONAL DETAILS.

2. FOR THE COLOR AND TEXTURE ON ROADWAY SIDE OF THE WALLS USE ARCHITECTURAL POLYMER FORM LINER OR ENGINEER-APPROVED EQUAL-ASHLAR TEXTURE, 9050 SMALL AGED ASHLAR. USE DRYSTACK PATTERN TEXTURE ON RESIDENTIAL SIDE.

RESIDENTIAL SIDE:

WALL 1 & 2- FED. COLOR NO. 36373

ROADWAY SIDE:

WALL 1 & 2- FED. COLOR NO. 34227

3. AESTHETIC TREATMENTS SHALL BE CONSIDERED INCIDENTAL AND INCLUDED WITH ITEM 606 - SPECIAL, NOISE BARRIER QUANTITIES.

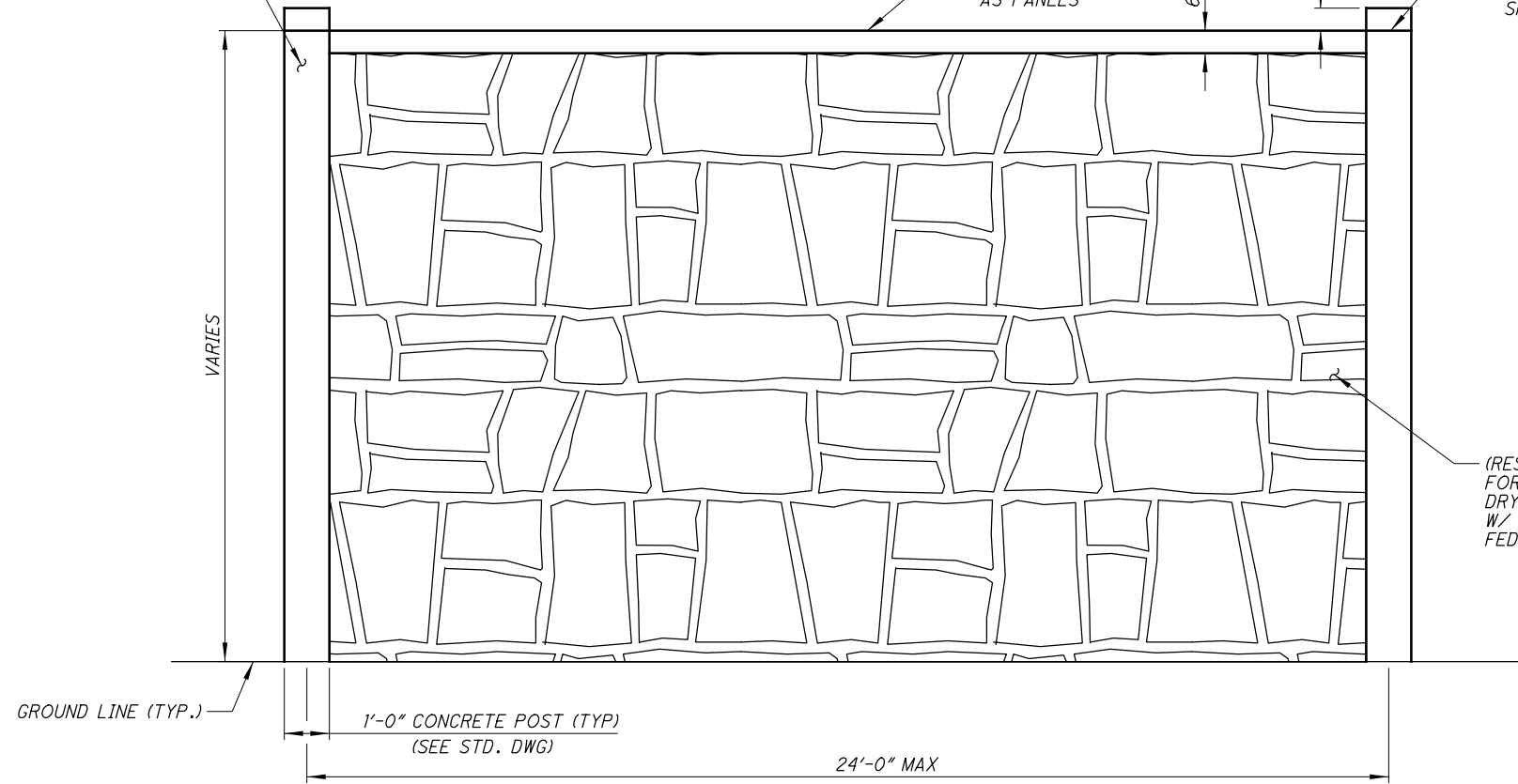
4. USE THE ARCHITECTURAL POLYMERS DRYSTACK STONE PATTERN 9050 OR ENGINEERED APPROVED EQUAL.

SEAL POSTS 42-82 OF WALL 1 AND ALL POSTS OF WALL 2 WITH NON-EPOXY SEALER PER ITEM 512 (NO COLOR) FOR POSTS 1-41 OF WALL 1, SEE KRYTON KRYSTOL NOTE

INTEGRAL CAP, SAME COLOR AS PANELS

RUSTICATION GROOVE SHALL MEET THE TOP ELEVATION OF THE HIGHEST ADJACENT PANEL. THE GROOVE ON THE POSTS SHALL BE 3/4"

(RESIDENTIAL SIDE) FORMLINER PATTERN 1: DRYSTACK FORMLINER W/ 2" MAX RELIEF, FEDERAL COLOR NO. 36373, GRAY



NOISE WALL ELEVATION
(RESIDENTIAL SIDE)

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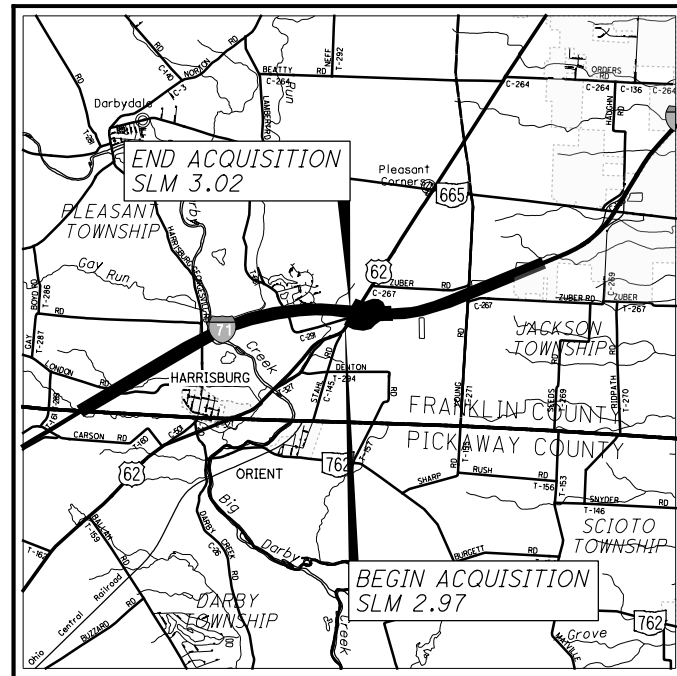
RIGHT OF WAY LEGEND SHEET FRA-71-0.00 (PIC)

PROJECT DESCRIPTION

THIS PROJECT WILL CONSIST OF WIDENING 5.29 MILES OF I-71 FROM THE FRANKLIN/PICKAWAY COUNTY LINE NORTH TO JUST SOUTH OF THE I-71 AND SR 665 INTERCHANGE. THE PROJECT INCLUDES ADDING A THIRD LANE TO THE MEDIAN SIDE IN BOTH DIRECTIONS, REPLACING TWIN SUPER-STRUCTURES OVER THE BIG DARBY CREEK, INDIANA & OHIO RAILWAY COMPANY RAILROAD TRACKS AND US 62, AND ASSOCIATED ROADWAY, SIGNING AND DRAINAGE IMPROVEMENTS. THE PROJECT ALSO INCLUDES RECONSTRUCTION OF ALL THE RAMPS AT THE US 62 INTERCHANGE.

PLANS PREPARED BY:

FIRM NAME : MEAD & HUNT
 R/W DESIGNER: TIFFANY ELCHERT
 R/W REVIEWER: STEVEN J. SCHEID JR., P.S.
 FIELD REVIEWER: STEVEN J. SCHEID JR., P.S.
 PRELIMINARY FIELD REVIEW DATE: 6/18/2015
 TRACINGS FIELD REVIEW DATE: 9/4/2015
 OWNERSHIP UPDATED BY: SJS
 DATE COMPLETED: 9/4/2015
 PLAN COMPLETION DATE: 10/14/2015



LOCATION MAP

LATITUDE: 39°49'30" LONGITUDE: 83°09'00"

FRANKLIN COUNTY
(PICKAWAY COUNTY)
PLEASANT TOWNSHIP
JACKSON TOWNSHIP
(DARBY TOWNSHIP)

VMS 931, 947, 1365, 1405, 1466, 2595 & 6178

UTILITY OWNERS	
AMERICAN ELECTRIC POWER 850 TECH CENTER DRIVE GAHANNA, OH 43230-6605 BRENT GATES 614-883-6802	TIME WARNER CABLE 3760 INTERCHANGE DR. COLUMBUS, OHIO 43204 (614) 255-6349
MCI COMMUNICATIONS 2400 NORTH GLENVILLE RICHARDSON, TX 75082 JOHN BACHELDER 972-729-6322	ODOT DISTRICT 6 TRAFFIC (SIGNALS AND LIGHTING) 400 E. WILLIAM STREET DELAWARE, OH 43015 740-833-8024
ODOT DISTRICT 6 400 E. WILLIAM STREET DELAWARE, OH 43015 KRAIG SHREWSBERRY 740-833-8198	CITY OF COLUMBUS DIVISION OF WATER 910 DUBLIN RD COLUMBUS, OH 43215 614-645-8276

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2-6
PROPERTY MAP	7
SUMMARY OF ADDITIONAL R/W	8
R/W TOPOGRAPHY SHEET	9
R/W BOUNDARY SHEET	10
RAILROAD PLATS	11-12

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

PB 122 P 043 SHOWS THE PROJECT FRA-71-0.00, PID 93496 AS ORIGINALLY DESIGNED AND IS THE BASIS FOR THE RIGHT OF WAY PURCHASED FROM CSX TRANSPORTATION, INC. IN INSTRUMENT 201704270056732.

FOR CONSTRUCTION PURPOSES, THE PROJECT HAS BEEN SPLIT INTO TWO SEPARATE PROJECTS. THE FIRST PROJECT, FRA-71-1.53, PID 93496, CONSTRUCTS THE BRIDGE OVER THE BIG DARBY CREEK AND THE ASSOCIATED APPROACH ROADWAY. SAID PROJECT DOES NOT CONTAIN PROPOSED RIGHT OF WAY. THE SECOND PROJECT, FRA-71-0.00, PID 107201, CONSTRUCTS THE REMAINDER OF THE ORIGINAL PROJECT AND INCLUDES THE RIGHT OF WAY PURCHASED FROM THE INDIANA AND OHIO RAILWAY.

NOTES: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

SURVEYORS SEAL

CONVENTIONAL SYMBOLS

County Line	Edge of Pavement (Ex)
Township Line	Edge of Pavement (Pr)
Section Line	Edge of Shoulder (Ex)
Corporation Line	Edge of Shoulder (Pr)
Fence Line (Ex)	Ditch / Creek (Ex)
Center Line	Ditch / Creek (Pr)
Right of Way (Ex)	Tree Line (Ex)
Right of Way (Pr)	Ownership Hook Symbol
Standard Highway Ease.(Ex)	Property Line Symbol
Standard Highway Ease.(Pr)	Break Line Symbol
Limited Access Ease.(Ex)	Tree (Pr)
Warranty Limited Access Ease.(Ex)	Tree (Ex)
Temporary Right of Way	Shrub (Ex)
Channel Ease. (Ex)	Tree (Remove)
Aerial Ease. (Pr)	Shrub (Remove)
Aerial Ease. (Ex)	Evergreen (Ex)
Utility Ease. (Ex)	Evergreen (Remove)
Railroad	Stump (Remove)
Guardrail (Ex)	Wetland (Pr)
Construction Limits	Grass (Pr)
	Aerial Target
	Post (Ex)
	Mailbox (Ex)
	Mailbox (Pr)
	Light (Ex)
	Telephone Marker (Ex)
	Fire Hydrant (Ex)
	Water Meter (Ex)
	Water Valve (Ex)
	Utility Valve Unknown (Ex)
	Telephone Pole (Ex)
	Power Pole (Ex)
	Light Pole (Ex)

STRUCTURE KEY

	RESIDENTIAL
	COMMERCIAL
	OUT-BUILDING

TITLE LEGEND:

WL = FEE SIMPLE WITH LIMITATION OF ACCESS
 SH = STANDARD HIGHWAY EASEMENT
 LA = LIMITED ACCESS EASEMENT
 T = TEMPORARY EASEMENT
 A = AERIAL EASEMENT
 SL = SLOPE EASEMENT
 S = SEWER EASEMENT

I, Steven J. Scheid, Jr., P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation on April 2013. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System South Zone on NAD 83 CORS 1996 datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (Meters or US Survey Feet) by a Project Adjustment Factor of 1.000000000 (GRID). As a part of this project I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersection, points along the right of way and/or angle points on the right of way, Section Corners and other points as shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

RECEIVED _____, 20____
 RECORDED _____, 20____
 BOOK _____ PAGE _____
 COUNTY RECORDER

FRANKLIN COUNTY
 (PICKAWAY COUNTY)
 PLEASANT TOWNSHIP
 (DARBY TOWNSHIP)
 VMS 931, 947, 1405, 1466, & 2595

FOR RAMP DETAILS, SEE SHEET 4 OF 12
 FOR EXISTING & PROPOSED MONUMENT TABLES, SEE SHEETS 5-6 OF 12

THE INTENT OF THE I-71 CENTERLINE IS TO DUPLICATE THE CENTERLINE SHOWN ON THE PIC-1-3.06 FRA-1-0.00 AND FRA-62-2.12 SET OF PLANS. THE STATIONING USED ON FRA-71-0.00 IS SUCH THAT IT FOLLOWS THE COUNTY LINE STA. 0+00.00. THE ORIGINAL SET OF PLANS SHOW THE COUNTY LINE AS STA. 840+28.99.

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING
 PIC-1-3.06/FRA-1-0.00 (1962)
 FRA-62-2.12 (1957)
 FRA-71-4.31 (2005)
 FRA-62-1.34 (2008)

THIS PLAT SUPERSEDES
 PB 122 P 043.
 SEE NOTE ON SHEET 4 / 5.

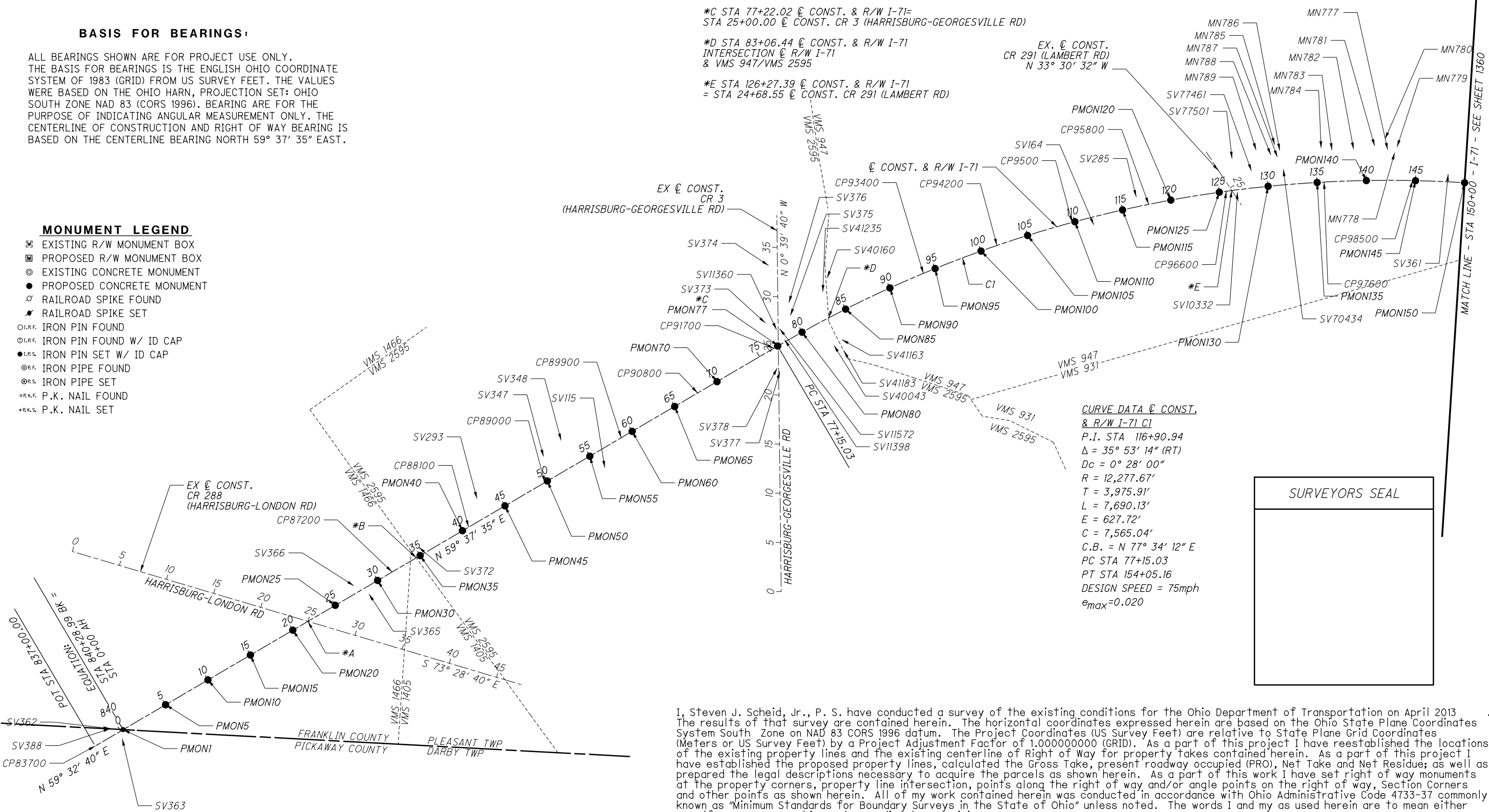
BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY. THE BASIS FOR BEARINGS IS THE ENGLISH OHIO COORDINATE SYSTEM OF 1983 (GRID) FROM US SURVEY FEET. THE VALUES WERE BASED ON THE OHIO HARN, PROJECTION SET: OHIO SOUTH ZONE NAD 83 (CORS 1996). BEARING ARE FOR THE PURPOSE OF INDICATING ANGULAR MEASUREMENT ONLY. THE CENTERLINE OF CONSTRUCTION AND RIGHT OF WAY BEARING IS BASED ON THE CENTERLINE BEARING NORTH 59° 37' 35" EAST.

MONUMENT LEGEND

- ☐ EXISTING R/W MONUMENT BOX
- ▣ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⚡ RAILROAD SPIKE FOUND
- ⚡ RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- ⊙ I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- ⊙ I.R.F. IRON PIPE FOUND
- ⊙ I.R.S. IRON PIPE SET
- ⊙ P.K.F. P.K. NAIL FOUND
- ⊙ P.K.S. P.K. NAIL SET

- *A STA 21+78.11 @ CONST. & R/W I-71 = STA 25+00.00 @ CONST. CR 288 (HARRISBURG-LONDON RD)
- *B STA 34+54.98 @ CONST. & R/W I-71 INTERSECTION @ R/W I-71 & VMS 2595/VMS 1405
- *C STA 77+22.02 @ CONST. & R/W I-71 = STA 25+00.00 @ CONST. CR 3 (HARRISBURG-GEORGESVILLE RD)
- *D STA 83+06.44 @ CONST. & R/W I-71 INTERSECTION @ R/W I-71 & VMS 947/VMS 2595
- *E STA 126+27.39 @ CONST. & R/W I-71 = STA 24+68.55 @ CONST. CR 291 (LAMBERT RD)



CURVE DATA @ CONST. & R/W I-71 C1
 P.I. STA 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
 $C.B. = N 77^\circ 34' 12'' E$
 $PC STA 77+15.03$
 $PT STA 154+05.16$
 $DESIGN SPEED = 75mph$
 $e_{max} = 0.020$

SURVEYORS SEAL

I, Steven J. Scheid, Jr., P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation on April 2013. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System South Zone on NAD 83 CORS 1996 datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (Meters or US Survey Feet) by a Project Adjustment Factor of 1.000000000 (GRID). As a part of this project I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersection, points along the right of way and/or angle points on the right of way, Section Corners and other points as shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

CENTERLINE PLAT

PID NO. 107201
 R/W DESIGNER TIME
 R/W REVIEWER SJS

FRA-71-0.00
 FRA-71-1.53

1 / 5

1302
 1312

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PID NO. 107201
93496

R/W DESIGNER
TIME
R/W REVIEWER
SJS

CENTERLINE PLAT

FRA-71-0.00
FRA-71-1.53

2 / 5

1303
1312

FRANKLIN COUNTY PLEASANT TOWNSHIP JACKSON TOWNSHIP VMS 931, 947, 1365, & 6178

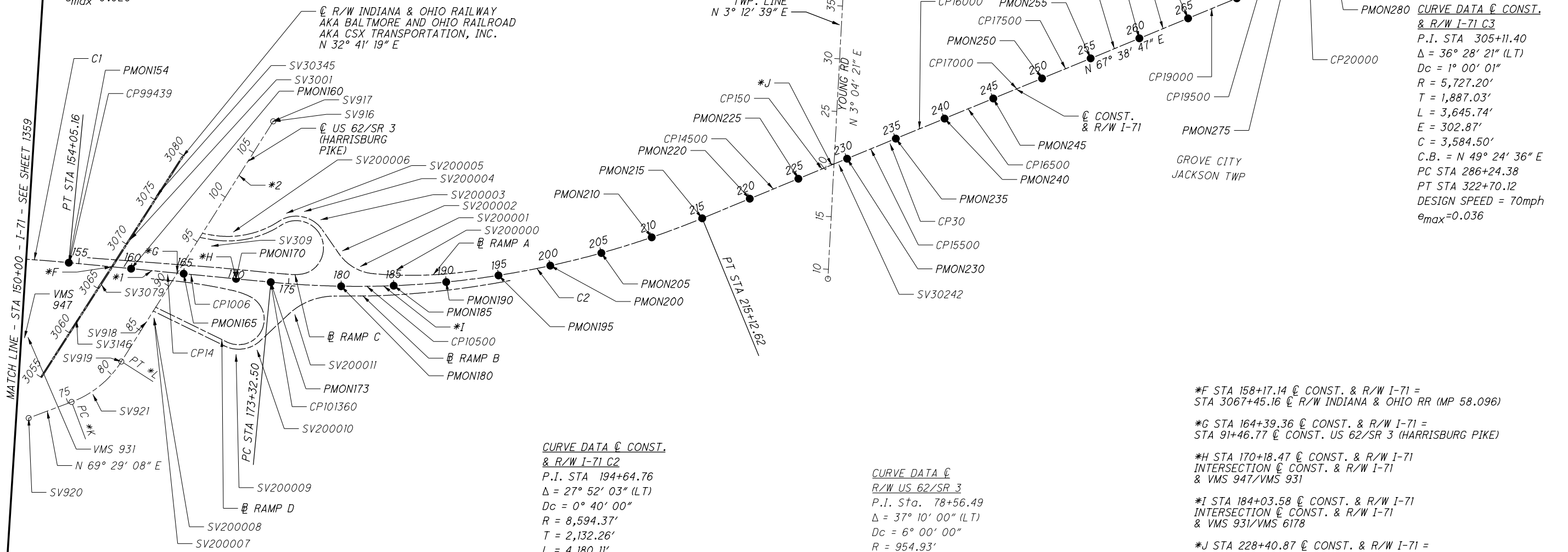
CURVE DATA @ CONST.
& R/W I-71 C1
P.I. STA 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
C.B. = N 77° 34' 12" E
PC STA 77+15.03
PT STA 154+05.16
DESIGN SPEED = 75mph
 $e_{max} = 0.020$

CURVE DATA @ CONST.
& R/W I-71 C3
P.I. STA 305+11.40
 $\Delta = 36^\circ 28' 21''$ (LT)
 $Dc = 1^\circ 00' 01''$
 $R = 5,727.20'$
 $T = 1,887.03'$
 $L = 3,645.74'$
 $E = 302.87'$
 $C = 3,584.50'$
C.B. = N 49° 24' 36" E
PC STA 286+24.38
PT STA 322+70.12
DESIGN SPEED = 70mph
 $e_{max} = 0.036$

CURVE DATA @ CONST.
& R/W I-71 C2
P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N 81° 34' 48" E
PC STA 173+32.50
PT STA 215+12.62
DESIGN SPEED = 75mph
 $e_{max} = 0.028$

CURVE DATA @
R/W US 62/SR 3
P.I. Sta. 78+56.49
 $\Delta = 37^\circ 10' 00''$ (LT)
 $Dc = 6^\circ 00' 00''$
 $R = 954.93'$
 $T = 321.06'$
 $L = 619.44'$
 $E = 52.53'$
 $C = 608.64'$
C.B. = N 50° 54' 08" E

- *F STA 158+17.14 @ CONST. & R/W I-71 = STA 3067+45.16 @ R/W INDIANA & OHIO RR (MP 58.096)
- *G STA 164+39.36 @ CONST. & R/W I-71 = STA 91+46.77 @ CONST. US 62/SR 3 (HARRISBURG PIKE)
- *H STA 170+18.47 @ CONST. & R/W I-71 INTERSECTION @ CONST. & R/W I-71 & VMS 947/VMS 931
- *I STA 184+03.58 @ CONST. & R/W I-71 INTERSECTION @ CONST. & R/W I-71 & VMS 931/VMS 6178
- *J STA 228+40.87 @ CONST. & R/W I-71 = VMS 6178/VMS 1365/PLEASANT TWP/JACKSON TWP STA. 228+65.40 @ CONST. & R/W I-71 = STA 20+00.00 @ R/W TR 271 (YOUNG RD)
- *K PC Sta. 75+35.43 @ R/W SR 62
- *L PT Sta. 81+54.87 @ R/W SR 62
- *1 @ CONST. & R/W I-71 = S 84° 29' 11" E
- *2 @ R/W SR 62 = N 32° 19' 08" E



MATCH LINE - STA 150+00 - I-71 - SEE SHEET 1359

FOR RAMP DETAILS, SEE SHEET 3 OF 5
FOR EXISTING & PROPOSED MONUMENT TABLES, SEE SHEETS 4-5 OF 5

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PID NO.
107201
93496

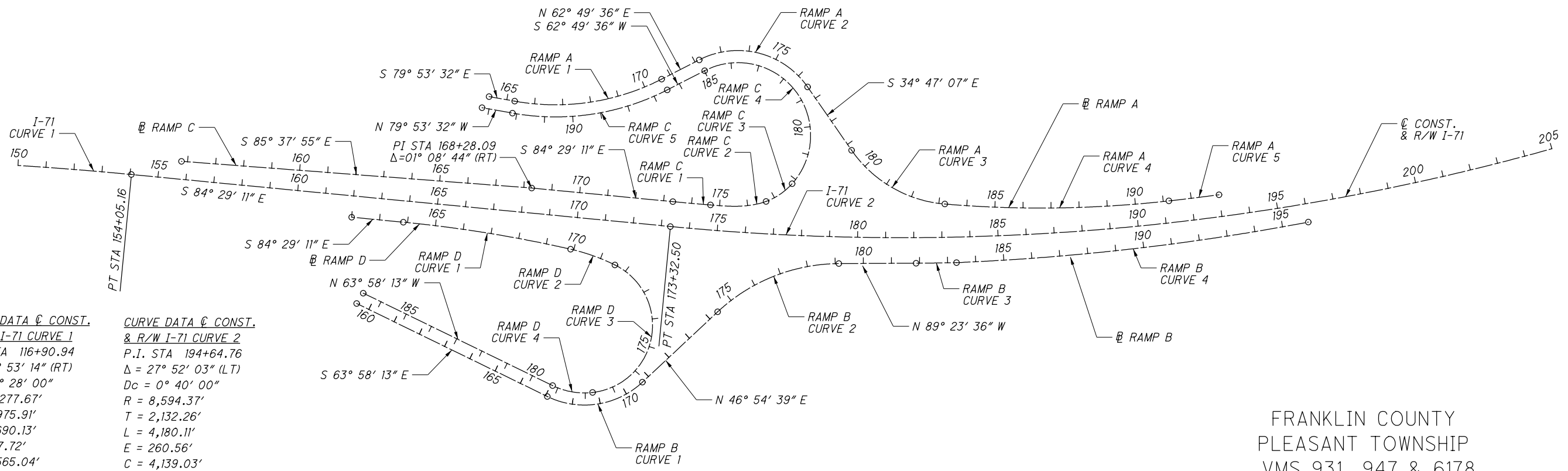
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CENTERLINE PLAT

FRA-71-0.00
FRA-71-1.53

1304
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FRANKLIN COUNTY
PLEASANT TOWNSHIP
VMS 931, 947 & 6178



CURVE DATA & CONST. & R/W I-71 CURVE 1
P.I. STA 116+90.94
 $\Delta = 35^\circ 53' 14''$ (RT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 3,975.91'$
 $L = 7,690.13'$
 $E = 627.72'$
 $C = 7,565.04'$
C.B. = N $77^\circ 34' 12''$ E
PC STA 77+15.03
PT STA 154+05.16
DESIGN SPEED = 75mph
 $e_{max} = 0.020$

CURVE DATA & CONST. & R/W I-71 CURVE 2
P.I. STA 194+64.76
 $\Delta = 27^\circ 52' 03''$ (LT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 2,132.26'$
 $L = 4,180.11'$
 $E = 260.56'$
 $C = 4,139.03'$
C.B. = N $81^\circ 34' 48''$ E
PC STA 173+32.50
PT STA 215+12.62
DESIGN SPEED = 75mph
 $e_{max} = 0.028$

RAMP A CURVE 1
P.I. STA 168+07.44
 $\Delta = 37^\circ 16' 52''$ (LT)
 $D_c = 6^\circ 55' 15''$
 $R = 827.88'$
 $T = 279.26'$
 $L = 538.68'$
 $E = 45.83'$
 $C = 529.23'$
C.B. = N $81^\circ 28' 02''$ E
PC STA 165+28.17
PT STA 170+66.86
DESIGN SPEED = 30mph
NDC = 40mph
 $e_{max} = 0.046$

RAMP A CURVE 2
P.I. STA 174+81.18
 $\Delta = 82^\circ 23' 17''$ (RT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 264.32'$
 $L = 434.25'$
 $E = 99.34'$
 $C = 397.80'$
C.B. = S $75^\circ 58' 45''$ E
PC STA 172+16.86
PT STA 176+51.11
DESIGN SPEED = 30mph
NDC = 40mph
 $e_{max} = -0.075$

RAMP A CURVE 3
P.I. STA 181+37.39
 $\Delta = 50^\circ 25' 26''$ (LT)
 $D_c = 12^\circ 45' 00''$
 $R = 449.38'$
 $T = 211.58'$
 $L = 395.48'$
 $E = 47.32'$
 $C = 382.84'$
C.B. = S $59^\circ 59' 50''$ E
PC STA 179+25.81
PT STA 183+21.30
DESIGN SPEED = 40mph
 $e_{max} = 0.080$

RAMP A CURVE 4
P.I. STA 187+21.97
 $\Delta = 11^\circ 11' 00''$ (LT)
 $D_c = 1^\circ 24' 00''$
 $R = 4,092.56'$
 $T = 400.68'$
 $L = 798.81'$
 $E = 19.57'$
 $C = 797.54'$
C.B. = N $89^\circ 11' 57''$ E
PCC STA 183+21.30
PCC STA 191+20.11
DESIGN SPEED = 65mph
 $e_{max} = 0.043$

RAMP A CURVE 5
P.I. STA 192+10.06
 $\Delta = 1^\circ 12' 37''$ (LT)
 $D_c = 0^\circ 40' 22''$
 $R = 8,516.37'$
 $T = 89.95'$
 $L = 179.89'$
 $E = 0.48'$
 $C = 179.89'$
C.B. = N $83^\circ 00' 08''$ E
PCC STA 191+20.11
PT STA 193+00.00
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP C CURVE 1
P.I. STA 173+99.90
 $\Delta = 0^\circ 54' 17''$ (LT)
 $D_c = 0^\circ 40' 25''$
 $R = 8,505.37'$
 $T = 67.15'$
 $L = 134.30'$
 $E = 0.27'$
 $C = 134.30'$
C.B. = S $84^\circ 56' 19''$ E
PC STA 173+32.75
CS STA 174+67.05
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP C CURVE 2
P.I. STA 176+01.71
 $L_s = 200.00'$
 $f_s = 24^\circ 45' 00''$
LT = 134.66'
ST = 67.87'
 $x = 196.30'$
 $y = 28.42'$
 $k = 99.38'$
 $p = 7.15'$
CS STA 174+67.05
SC STA 176+67.05
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

RAMP C CURVE 3
P.I. STA 177+24.87
 $\Delta = 28^\circ 02' 45''$ (LT)
 $D_c = 24^\circ 45' 00''$
 $R = 231.50'$
 $T = 57.82'$
 $L = 113.32'$
 $E = 7.11'$
 $C = 112.19'$
C.B. = N $55^\circ 50' 10''$ E
SC STA 176+67.05
PCC STA 177+80.36
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

RAMP C CURVE 4
P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
C.B. = N $37^\circ 40' 48''$ W
PCC STA 177+80.36
PT STA 184+98.34
DESIGN SPEED = 30mph
 $e_{max} = 0.078$

RAMP C CURVE 5
P.I. STA 189+42.20
 $\Delta = 37^\circ 16' 52''$ (RT)
 $D_c = 6^\circ 34' 38''$
 $R = 871.13'$
 $T = 293.85'$
 $L = 566.83'$
 $E = 48.23'$
 $C = 556.88'$
C.B. = S $81^\circ 28' 02''$ W
PT STA 186+48.34
PT STA 192+15.17
DESIGN SPEED = 30mph
 $e_{max} = -0.045$

RAMP B CURVE 1
P.I. STA 169+14.53
 $\Delta = 69^\circ 07' 08''$ (LT)
 $D_c = 18^\circ 58' 20''$
 $R = 302.00'$
 $T = 208.02'$
 $L = 364.31'$
 $E = 64.71'$
 $C = 342.62'$
C.B. = N $81^\circ 28' 13''$ E
PC STA 167+06.51
PT STA 170+70.83
DESIGN SPEED = 30mph
NDC = 40mph
 $e_{max} = -0.075$

RAMP B CURVE 2
P.I. STA 176+86.95
 $\Delta = 42^\circ 46' 01''$ (RT)
 $D_c = 9^\circ 00' 00''$
 $R = 636.62'$
 $T = 249.28'$
 $L = 475.19'$
 $E = 47.06'$
 $C = 464.23'$
C.B. = N $68^\circ 17' 39''$ E
PC STA 174+37.68
CS STA 179+12.87
DESIGN SPEED = 40mph
 $e_{max} = 0.080$

RAMP B CURVE 3
P.I. STA 182+59.67
 $\Delta = 0^\circ 56' 50''$ (LT)
 $D_c = 0^\circ 39' 35''$
 $R = 8,685.37'$
 $T = 71.80'$
 $L = 143.60'$
 $E = 0.30'$
 $C = 143.60'$
C.B. = N $89^\circ 12' 15''$ E
PC STA 181+87.87
PCC STA 183+31.47
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP B CURVE 4
P.I. STA 189+63.41
 $\Delta = 8^\circ 20' 00''$ (LT)
 $D_c = 0^\circ 39' 38''$
 $R = 8,674.56'$
 $T = 631.95'$
 $L = 1,261.66'$
 $E = 22.99'$
 $C = 1,260.55'$
C.B. = N $83^\circ 25' 49''$ E
PCC STA 183+31.47
PT STA 195+93.13
DESIGN SPEED = 75mph
 $e_{max} = 0.028$ (MATCH I-71)

RAMP D CURVE 1
P.I. STA 166+87.05
 $\Delta = 7^\circ 20' 40''$ (RT)
 $D_c = 1^\circ 13' 00''$
 $R = 4,709.24'$
 $T = 302.24'$
 $L = 603.66'$
 $E = 9.69'$
 $C = 603.24'$
C.B. = S $80^\circ 48' 50''$ E
PC STA 163+84.80
PCC STA 169+88.46
DESIGN SPEED = 65mph
 $e_{max} = 0.038$

RAMP D CURVE 2
P.I. STA 170+72.67
 $\Delta = 13^\circ 24' 44''$ (RT)
 $D_c = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 84.21'$
 $L = 167.65'$
 $E = 4.93'$
 $C = 167.27'$
C.B. = S $70^\circ 26' 08''$ E
PCC STA 169+88.46
PCC STA 171+56.12
DESIGN SPEED = 45mph
 $e_{max} = 0.080$

RAMP D CURVE 3
P.I. STA 179+75.80
 $\Delta = 147^\circ 19' 49''$ (RT)
 $D_c = 23^\circ 51' 00''$
 $R = 240.23'$
 $T = 819.69'$
 $L = 617.74'$
 $E = 613.93'$
 $C = 461.07'$
C.B. = S $9^\circ 56' 09''$ W
PCC STA 171+56.12
PCC STA 177+73.85
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

RAMP D CURVE 4
P.I. STA 178+49.10
 $\Delta = 32^\circ 25' 43''$ (RT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 75.24'$
 $L = 146.45'$
 $E = 10.72'$
 $C = 144.50'$
C.B. = N $80^\circ 11' 05''$ W
PCC STA 177+73.85
PT STA 179+20.30
DESIGN SPEED = 30mph
 $e_{max} = 0.080$

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MONUMENT TABLE								
POINT NUMBER	C. OF CONST. & R/W I-71		PROJECT COORDINATES U.S. SURVEY FEET		REFERENCE MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON. EXPECTED TO BE DISTURBED	DESCRIPTION
	STATION	OFFSET	NORTHING (Y)	EASTING (X)	PID 93496	PID 107201	R/W MON.	
PMON1	840+28.99	0.00	659,851.99	1,773,352.61		1		REFERENCE MONUMENT SET
PMON5	5+00.00	0.00	660,104.81	1,773,783.99		1		REFERENCE MONUMENT SET
PMON10	10+00.00	0.00	660,357.63	1,774,215.36		1		REFERENCE MONUMENT SET
PMON15	15+00.00	0.00	660,610.44	1,774,646.73		1		REFERENCE MONUMENT SET
PMON20	20+00.00	0.00	660,863.26	1,775,078.11		1		REFERENCE MONUMENT SET
PMON25	25+00.00	0.00	661,116.08	1,775,509.48		1		REFERENCE MONUMENT SET
PMON30	30+00.00	0.00	661,368.90	1,775,940.85		1		REFERENCE MONUMENT SET
PMON35	35+00.00	0.00	661,621.71	1,776,372.23		1		REFERENCE MONUMENT SET
PMON40	40+00.00	0.00	661,874.53	1,776,803.60		1		REFERENCE MONUMENT SET
PMON45	45+00.00	0.00	662,127.35	1,777,234.98		1		REFERENCE MONUMENT SET
PMON50	50+00.00	0.00	662,380.17	1,777,666.35		1		REFERENCE MONUMENT SET
PMON55	55+00.00	0.00	662,632.99	1,778,097.72		1		REFERENCE MONUMENT SET
PMON60	60+00.00	0.00	662,885.80	1,778,529.10		1		REFERENCE MONUMENT SET
PMON65	65+00.00	0.00	663,138.62	1,778,960.47		1		REFERENCE MONUMENT SET
PMON70	70+00.00	0.00	663,391.44	1,779,391.84		1		REFERENCE MONUMENT SET
PMON77	77+15.03	0.00	663,752.98	1,780,008.74	1			REFERENCE MONUMENT SET
PMON80	80+00.00	0.00	663,894.21	1,780,256.24	1			REFERENCE MONUMENT SET
PMON85	85+00.00	0.00	664,127.98	1,780,698.19	1			REFERENCE MONUMENT SET
PMON90	90+00.00	0.00	664,343.56	1,781,149.28	1			REFERENCE MONUMENT SET
PMON95	95+00.00	0.00	664,540.60	1,781,608.78		1		REFERENCE MONUMENT SET
PMON100	100+00.00	0.00	664,718.77	1,782,075.93		1		REFERENCE MONUMENT SET
PMON105	105+00.00	0.00	664,877.78	1,782,549.93		1		REFERENCE MONUMENT SET
PMON110	110+00.00	0.00	665,017.35	1,783,030.02		1		REFERENCE MONUMENT SET
PMON115	115+00.00	0.00	665,137.26	1,783,515.40		1		REFERENCE MONUMENT SET
PMON120	120+00.00	0.00	665,237.31	1,784,005.25		1		REFERENCE MONUMENT SET
PMON125	125+00.00	0.00	665,317.33	1,784,498.77		1		REFERENCE MONUMENT SET
PMON130	130+00.00	0.00	665,377.20	1,784,995.14		1		REFERENCE MONUMENT SET
PMON135	135+00.00	0.00	665,416.81	1,785,493.53		1		REFERENCE MONUMENT SET
PMON140	140+00.00	0.00	665,436.09	1,785,993.12		1		REFERENCE MONUMENT SET
PMON145	145+00.00	0.00	665,435.02	1,786,493.09		1		REFERENCE MONUMENT SET
PMON150	150+00.00	0.00	665,413.59	1,786,992.59		1		REFERENCE MONUMENT SET
PMON154	154+05.16	0.00	665,381.32	1,787,396.45		1		REFERENCE MONUMENT SET
PMON160	160+00.00	0.00	665,324.17	1,787,988.54		1		REFERENCE MONUMENT SET
PMON165	165+00.00	0.00	665,276.12	1,788,486.22		1		REFERENCE MONUMENT SET
PMON170	170+00.00	0.00	665,228.08	1,788,983.91		1		REFERENCE MONUMENT SET
PMON173	173+32.50	0.00	665,196.13	1,789,314.88		1		REFERENCE MONUMENT SET
PMON180	180+00.00	0.00	665,157.85	1,789,981.10		1		REFERENCE MONUMENT SET
PMON185	185+00.00	0.00	665,163.11	1,790,481.01		1		REFERENCE MONUMENT SET
PMON190	190+00.00	0.00	665,197.43	1,790,979.76		1		REFERENCE MONUMENT SET
PMON195	195+00.00	0.00	665,260.69	1,791,475.67		1		REFERENCE MONUMENT SET
PMON200	200+00.00	0.00	665,352.68	1,791,967.06		1		REFERENCE MONUMENT SET
PMON205	205+00.00	0.00	665,473.08	1,792,452.27		1		REFERENCE MONUMENT SET
PMON210	210+00.00	0.00	665,621.49	1,792,929.67		1		REFERENCE MONUMENT SET
PMON215	215+12.62	0.00	665,802.20	1,793,409.29		1		REFERENCE MONUMENT SET
PMON220	220+00.00	0.00	665,987.56	1,793,860.05		1		REFERENCE MONUMENT SET
PMON225	225+00.00	0.00	666,177.73	1,794,322.48		1		REFERENCE MONUMENT SET
PMON230	230+00.00	0.00	666,367.89	1,794,784.91		1		REFERENCE MONUMENT SET
PMON235	235+00.00	0.00	666,558.05	1,795,247.33		1		REFERENCE MONUMENT SET
PMON240	240+00.00	0.00	666,748.21	1,795,709.76		1		REFERENCE MONUMENT SET
PMON245	245+00.00	0.00	666,938.37	1,796,172.19		1		REFERENCE MONUMENT SET
PMON250	250+00.00	0.00	667,128.53	1,796,634.61		1		REFERENCE MONUMENT SET
PMON255	255+00.00	0.00	667,318.69	1,797,097.04		1		REFERENCE MONUMENT SET
PMON260	260+00.00	0.00	667,508.86	1,797,559.47		1		REFERENCE MONUMENT SET
PMON265	265+00.00	0.00	667,699.02	1,798,021.89		1		REFERENCE MONUMENT SET
PMON270	270+00.00	0.00	667,889.18	1,798,484.32		1		REFERENCE MONUMENT SET
PMON275	275+00.00	0.00	668,079.34	1,798,946.75		1		REFERENCE MONUMENT SET
PMON280	280+00.00	0.00	668,269.50	1,799,409.17		1		REFERENCE MONUMENT SET
PMON285	285+00.00	0.00	668,459.66	1,799,871.60		1		REFERENCE MONUMENT SET
PMON286	286+24.38	0.00	668,506.97	1,799,986.63		1		REFERENCE MONUMENT SET
TOTAL CARRIED TO GENERAL SUMMARY SHEET PID 93496					4			
TOTAL CARRIED TO GENERAL SUMMARY SHEET PID 107201						55		

FRANKLIN COUNTY
(PICKAWAY COUNTY)
PLEASANT TOWNSHIP
JACKSON TOWNSHIP
(DARBY TOWNSHIP)
VMS 931, 947, 1365, 1405, 1466, 2595 & 6178

PB 122 P 043 SHOWS THE PROJECT FRA-71-0.00, PID 93496 AS ORIGINALLY DESIGNED AND IS THE BASIS FOR THE RIGHT OF WAY PURCHASED FROM CSX TRANSPORTATION, INC. IN INSTRUMENT 201704270056732.

FOR CONSTRUCTION PURPOSES, THE PROJECT HAS BEEN SPLIT INTO TWO SEPARATE PROJECTS. THE FIRST PROJECT, FRA-71-1.53, PID 93496, CONSTRUCTS THE BRIDGE OVER THE BIG DARBY CREEK AND THE ASSOCIATED APPROACH ROADWAY. SAID PROJECT DOES NOT CONTAIN PROPOSED RIGHT OF WAY. THE SECOND PROJECT, FRA-71-0.00, PID 107201, CONSTRUCTS THE REMAINDER OF THE ORIGINAL PROJECT AND INCLUDES THE RIGHT OF WAY PURCHASED FROM THE INDIANA AND OHIO RAILWAY.

CENTERLINE MONUMENTS WILL BE SET WITH THE PROJECT THAT CONTAINS THE MONUMENT AS INDICATED ON THE TABLE ON THIS SHEET.

SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PINS AND CAPS (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.

CALCULATED
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CENTERLINE PLAT

FRA-71-0.00
FRA-71-1.53

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⊕ CONST. & R/W I-71 ADDITIONAL MONUMENTS FOUND						
POINT NUMBER	STATION	OFFSET	GRID COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
			NORTHING (Y)	EASTING (X)		
SV362	839+23.20	75.97' LT	659863.85	1773222.92	904.82	NAIL
SV388	839+23.22	75.95' LT	659863.85	1773222.94	904.71	NAIL
SV363	839+73.90	75.79' RT	659758.73	1773343.54	904.54	NAIL
SV366	27+64.29	75.37' LT	661314.74	1775699.39	872.83	NAIL
SV365	28+53.43	75.05' RT	661230.04	1775852.35	870.70	NAIL
SV372	35+31.51	80.21' LT	661706.85	1776358.85	857.46	NAIL
SV293	42+92.07	207.57' LT	662201.30	1776950.63	860.90	NAIL
SV347	50+92.25	234.98' LT	662629.54	1777627.12	856.45	NAIL
SV348	53+29.52	285.71' LT	662793.28	1777806.18	851.15	NAIL
SV115	55+72.08	177.66' RT	662516.15	1778249.74	829.60	NAIL
SV378	75+96.75	190.94' RT	663528.44	1780003.24	816.52	NAIL
SV377	76+04.62	231.83' RT	663497.15	1780030.70	815.61	NAIL
SV373	77+24.58	265.83' LT	663987.25	1779882.74	786.41	NAIL
SV11360	77+87.49	151.27' LT	663920.39	1779995.65	821.13	BM
SV11398	78+07.80	20.02' LT	663816.94	1780078.96	796.83	NAIL
SV11572	78+20.33	141.06' LT	663928.15	1780029.53	821.75	BM
SV375	79+79.17	205.19' LT	664063.30	1780138.12	786.91	NAIL
SV376	80+28.21	327.05' LT	664194.16	1780122.80	786.10	NAIL
SV374	80+28.71	758.62' LT	664572.20	1779914.62	789.44	NAIL
SV40043	82+23.03	273.92' RT	663758.85	1780580.81	779.04	NAIL
SV41183	82+89.28	368.64' RT	663705.24	1780682.10	781.95	NAIL
SV41163	83+23.60	258.56' RT	663818.29	1780660.71	781.93	NAIL
SV41235	83+74.79	262.27' LT	664304.20	1780466.36	781.84	NAIL
SV40160	84+76.83	366.71' LT	664444.81	1780512.06	781.65	NAIL
SV164	111+77.41	79.33' RT	664985.25	1783221.16	805.04	NAIL
SV285	116+62.31	99.89' LT	665269.65	1783653.28	814.64	NAIL
SV77501	126+71.36	321.70' LT	665659.26	1784628.04	861.35	IPIPE
SV10332	126+83.54	23.81' RT	665318.04	1784683.66	834.79	NAIL
SV77461	128+49.08	173.66' LT	665533.83	1784825.66	864.04	IPIPE
MN789	129+17.45	380.87' LT	665747.43	1784872.58	862.78	IPIPE
MN788	130+57.21	316.04' LT	665697.37	1785022.10	864.81	IPIPE
MN785	131+04.31	414.85' LT	665800.27	1785061.20	864.23	IPIPE
MN787	131+20.29	286.90' LT	665674.32	1785089.14	865.79	IPIPE
MN786	131+48.55	351.38' LT	665741.12	1785112.31	865.42	IPIPE
SV70434	131+69.11	157.05' LT	665549.34	1785150.05	869.41	IPIPE
MN784	135+58.60	347.52' LT	665767.13	1785533.22	867.18	IPIPE
MN783	136+65.11	320.46' LT	665745.56	1785643.84	867.17	IPIPE
MN782	138+79.51	320.14' LT	665753.31	1785863.69	867.01	IPIPE
MN781	140+88.46	349.36' LT	665786.73	1786077.73	865.74	IPIPE
MN780	141+91.17	419.55' LT	665857.63	1786183.17	865.27	IPIPE
MN777	142+17.51	310.99' LT	665749.11	1786210.46	865.95	IPIPE
MN778	142+87.20	280.95' LT	665718.91	1786281.76	866.48	IPIPE
MN779	143+10.42	340.34' LT	665778.15	1786305.93	866.22	IPIPE
SV361	148+29.26	77.78' LT	665500.87	1786825.96	878.88	NAIL
SV920	151+34.40	1501.24' RT	663907.26	1787015.42	843.45	MONBOX
SV3146	155+32.02	535.17' RT	664836.43	1787471.30	861.98	NAIL
SV3079	157+33.13	176.61' RT	665174.01	1787705.93	864.08	NAIL
SV921	157+51.69	1219.68' RT	664133.98	1787624.19	868.13	MONBOX
SV3001	159+66.94	273.85' LT	665599.92	1787981.94	866.34	NAIL
SV919	159+92.06	885.31' RT	664443.71	1787895.57	871.15	MONBOX
SV30345	161+70.17	709.24' LT	666013.77	1788226.07	869.62	NAIL
SV918	161+93.15	488.43' RT	664819.44	1788133.86	873.58	MONBOX
SV200007	162+60.43	444.17' RT	664857.03	1788205.08	872.62	IPIN
SV200008	162+60.67	444.00' RT	664857.17	1788205.34	872.24	IPIPE
CP14	163+49.34	20.62' RT	665270.08	1788334.28		IPIN
SV309	167+35.52	285.44' LT	665537.61	1788748.08	868.65	BM
SV200006	169+31.00	438.19' LT	665670.87	1788957.33	875.90	CMON
SV200009	170+68.51	712.73' RT	664512.06	1788983.62	875.04	CMON
SV917	172+01.47	1519.17' LT	666720.86	1789330.42	877.67	RSPK
SV916	172+07.42	1520.16' LT	666721.28	1789336.43	877.75	RSPK
SV200010	172+62.35	651.47' RT	664554.42	1789182.45	875.37	CMON
SV200005	174+21.06	663.83' LT	665849.46	1789460.04	877.02	CMON
SV200011	175+79.01	286.46' RT	664890.16	1789541.21	874.06	IPIN

⊕ CONST. & R/W I-71 ADDITIONAL MONUMENTS FOUND						
POINT NUMBER	STATION	OFFSET	GRID COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
			NORTHING (Y)	EASTING (X)		
SV200004	176+03.90	693.02' LT	665865.90	1789630.16	877.40	CMON
SV200003	177+76.98	623.91' LT	665788.17	1789785.97	875.78	CMON
SV200002	180+04.53	333.75' LT	665491.47	1789991.65	876.71	CMON
SV200001	181+81.27	187.15' LT	665343.55	1790161.90	875.54	IPIPE
SV200000	185+31.39	147.06' LT	665311.33	1790506.01	873.93	IPIPE
SV30242	229+06.23	22.17' RT	666311.72	1794706.62	873.82	NAIL
CP30	234+30.94	20.80' RT	666512.54	1795191.38		CMON

⊕ CONST. & R/W I-71 EXISTING REFERENCE POINTS						
POINT NUMBER	STATION	OFFSET	GRID COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
			NORTHING (Y)	EASTING (X)		
CP83700	837+00.00	0.00' RT	659,685.24	1,773,069.02	908.97	CMON
CP87200	31+70.67	0.19' LT	661,455.35	1,776,088.01	866.21	CMON
CP88100	40+71.26	0.09' LT	661,910.64	1,776,865.04	847.95	CMON
CP89000	49+71.15	0.03' LT	662,365.61	1,777,641.44	830.15	CMON
CP89900	58+70.98	0.04' RT	662,820.53	1,778,417.80	811.92	CMON
CP90800	67+71.02	0.02' LT	663,275.67	1,779,194.28	797.22	CMON
CP91700	76+70.85	0.05' RT	663,730.60	1,779,970.65	799.25	CMON
CP93400	93+71.58	0.04' RT	664,491.75	1,781,490.02	798.81	CMON
CP94200	101+71.41	0.03' RT	664,775.43	1,782,237.70	796.63	CMON
CP95000	109+71.25	0.03' RT	665,009.83	1,783,002.28	803.43	CMON
CP95800	117+71.24	0.02' LT	665,194.03	1,783,780.62	819.36	CMON
CP96600	125+71.21	0.05' RT	665,327.04	1,784,569.31	835.44	CMON
CP97600	135+70.95	0.14' LT	665,420.92	1,785,564.36	855.69	CMON
CP98500	144+70.84	0.22' LT	665,435.86	1,786,463.93	873.71	CMON
CP99439	154+09.79	0.27' LT	665,381.15	1,787,401.08	889.71	CMON
CP1006	165+70.88	0.08' LT	665,269.39	1,788,556.79	890.64	CMON
CP101360	173+31.13	0.05' RT	665,196.22	1,789,313.50	879.92	CMON
CP10500	182+43.17	0.07' RT	665,156.70	1,790,224.26	877.04	CMON
CP14500	222+43.00	0.10' RT	666,079.89	1,794,084.83	872.24	CMON
CP150	227+42.23	0.04' RT	666,269.81	1,794,546.52	869.11	CMON
CP15500	232+42.19	0.02' LT	666,460.02	1,795,008.89	869.11	CMON
CP16000	237+42.32	0.08' LT	666,650.28	1,795,471.41	867.23	CMON
CP16500	242+42.29	0.02' LT	666,840.37	1,795,933.84	865.60	CMON
CP17000	247+42.07	0.06' LT	667,030.49	1,796,396.04	864.12	CMON
CP17500	252+42.07	0.03' LT	667,220.63	1,796,858.48	862.68	CMON
CP18000	257+42.06	0.02' RT	667,410.74	1,797,320.92	861.44	CMON
CP18500	262+42.12	0.03' LT	667,600.96	1,797,783.38	859.85	CMON
CP19000	267+42.09	0.02' LT	667,791.11	1,798,245.79	858.60	CMON
CP19500	272+42.21	0.03' LT	667,981.33	1,798,708.32	857.22	CMON
CP20000	277+42.19	0.09' RT	668,171.37	1,799,170.77	855.89	CMON
CP20881	286+24.37	0.03' RT	668,506.94	1,799,986.63	851.89	CMON

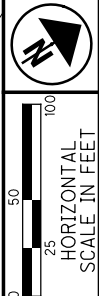
⊕ R/W US 62/SR 3 (HARRISBURG PIKE) ADDITIONAL MONUMENTS FOUND						
POINT NUMBER	STATION	OFFSET	GRID COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
			NORTHING (Y)	EASTING (X)		
SV920	71+00.00	0.03' RT	663907.26	1787015.42	843.45	MONBOX
SV921	77+45.91	24.72' RT	664133.98	1787624.19	868.13	MONBOX
SV919	81+54.87	0.00' RT	664443.71	1787895.57	871.15	MONBOX
SV918	85+99.79	0.50' RT	664819.44	1788133.86	873.58	MONBOX
SV200007	86+69.64	40.59' RT	664857.03	1788205.08	872.62	IPIN
SV200008	86+69.89	40.74' RT	664857.17	1788205.34	872.24	IPIPE
SV917	108+46.37	4.86' LT	666720.86	1789330.42	877.67	RSPK
SV916	108+49.94	0.00' RT	666721.28	1789336.43	877.75	RSPK
CP14	90+87.77	71.05' LT	665270.08	1788334.28		IPIPE

FRANKLIN COUNTY
(PICKAWAY COUNTY)
PLEASANT TOWNSHIP
JACKSON TOWNSHIP
(DARBY TOWNSHIP)
VMS 931, 947, 1365, 1405,
1466, 2595, & 6178

CALCULATED TIME CHECKED SUS
CENTERLINE PLAT
FRA - 71 - 0.00
FRA - 71 - 1.53
RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER
5 / 5
1306
1312

FRANKLIN COUNTY
PLEASANT TOWNSHIP
VMS 931 & 947

- 1 ANDREW J. SHAW
- 2 CSX TRANSPORTATION, INC. LEASE & TRACK PURCHASED BY INDIANA & OHIO RAILWAY COMPANY
- 3 B & B INDUSTRIES, INC.
- 4 PEWAMO LTD
- 5 JAS GROUP, INC.



PID NO.
107201
R/W REVIEWER
93496

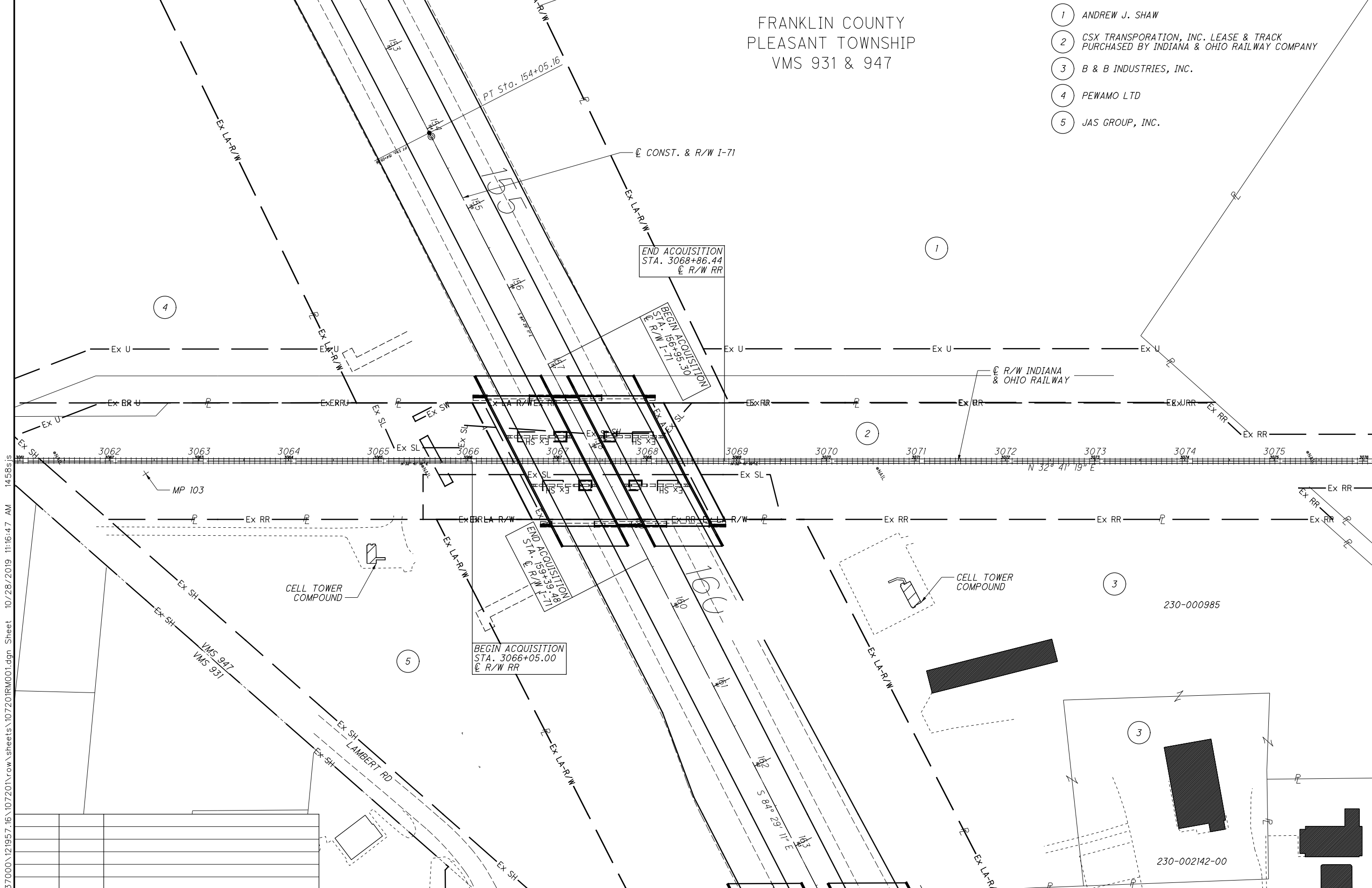
R/W DESIGNER
ANM
R/W REVIEWER
SJS

PROPERTY MAP

FRA-71-0.00

7 / 12

1307
1312



END ACQUISITION
STA. 3068+86.44
@ R/W RR

BEGIN ACQUISITION
STA. 154+05.16
@ R/W I-71

END ACQUISITION
STA. 159+33.90
@ R/W I-71

BEGIN ACQUISITION
STA. 3066+05.00
@ R/W RR

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REV. BY	DATE	DESCRIPTION

DATE COMPLETED 10/14/2015

TOTAL NUMBER OF :

1 OWNERSHIPS 0 TOTAL TAKES
 7 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

GRANTEE :

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
 THE OHIO DEPARTMENT OF TRANSPORTATION
 UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			INSTRUMENT #	
1	ANDREW J. & KRISTA J. SHAW	9-10	INST 200508050158290		230-000281-00	80.177									NO TAKE		
2	CSX TRANSPORTATION, INC. FKA BALTIMORE AND OHIO RAILROAD (SEE CSX NOTE BELOW)	9-12	DB 592	1	230-000007-00	15.762									SEE CSX NOTE BELOW		
2-A1								0.037	0.000	0.037							201704270056732
2-A2								0.039	0.000	0.039							201704270056732
	TOTAL							0.076	0.000	0.076				100% STATE			
2-SH1								0.004	0.000	0.004							201704270056732
2-SH2								0.004	0.000	0.004							201704270056732
2-SH3								0.004	0.000	0.004							201704270056732
2-SH4								0.004	0.000	0.004							201704270056732
	TOTAL							0.016	0.000	0.016							
2-T								0.639	0.023	0.616					CONSTRUCT BRIDGE		201704270056732
3	B & B INDUSTRIES, INC	9-10	OR 24884 E07		230-000985-00	4.668									NO TAKE		
			OR 24884 E07		230-002142-00	0.985									NO TAKE		
			OR 24884 E04														
	TOTAL					5.653											
4	PEWAMO LTD	9-10	INST 201007270094859		230-003346-00	47.663									NO TAKE		
5	JAS GROUP, INC	9-10	OR 29584 G10		230-000282-00	2.185									NO TAKE		

FEDERAL PROJECT NO.
E180(796)
E120(525)

PTD NO.
107201
93496

STATE JOB NO.
468047
467225

R/W DESIGNER
 TME
 R/W REVIEWER
 SJS

SUMMARY OF ADDITIONAL RIGHT OF WAY

FRA-71-0.00

8 / 12

1308
 1312

TYPES OF TITLE LEGEND:
 SH = STANDARD HIGHWAY EASEMENT
 T = TEMPORARY EASEMENT
 A = AERIAL EASEMENT
 S = SEWER EASEMENT

(c) = CALCULATED AREA
 * DENOTES RIGHT OF WAY ENCROACHMENT
 NOTE: ALL TEMPORARY PARCELS TO BE OF 30 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: SEE SHEET 11/12 FOR OVERLAP TABLE

CSX NOTE: BALTIMORE & OHIO RAILROAD COMPANY ACQUIRED THE PROPERTY BY DEED BOOK 592, PAGE 1. THROUGH MERGERS RECORDED IN OR 13276 B15, OR 13275 A14, & OR 13283 G13, THEY ARE NOW KNOWN AS CSX TRANSPORTATION, INC. CSX TRANSPORTATION, INC. EXECUTED AN UNRECORDED LEASE AND PURCHASE OF RAIL IMPROVEMENTS AGREEMENT DATED 10/13/2004 WITH INDIANA & OHIO CENTRAL RAILROAD, INC. THE INDIANA & OHIO CENTRAL RAILROAD, INC. MERGED INTO INDIANA & OHIO RAILWAY COMPANY EFFECTIVE 5/1/2005. THE INDIANA & OHIO RAILWAY COMPANY HAS SECURED MORTGAGES BY INST. 200908310126897, 201109140116143 AND 201204180053422 WHICH REFERENCE THE LEGAL DESCRIPTION OF THE 10/13/2004 AGREEMENT. THE INDIANA & OHIO RAILWAY COMPANY LEASES THE PROPERTY, OWNS THE RAIL IMPROVEMENTS, AND OPERATES THE RAILWAY.

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY SJS	DATE: 9/4/2015	
OWNERSHIP VERIFIED BY SJS	DATE: 9/4/2015	
DATE COMPLETED	10/14/2015	

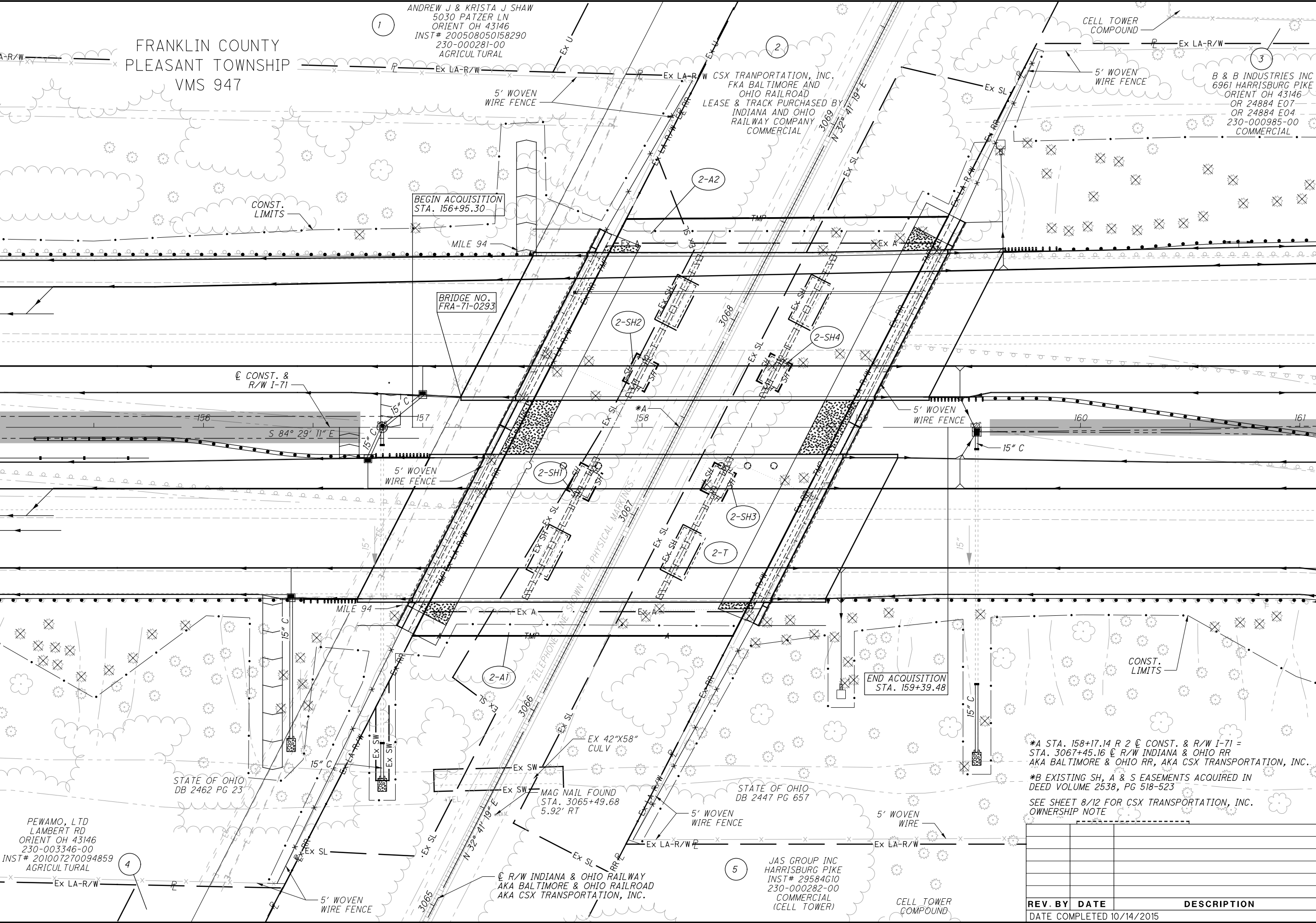
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FRANKLIN COUNTY
PLEASANT TOWNSHIP
VMS 947

ANDREW J & KRISTA J SHAW
5030 PATZER LN
ORIENT OH 43146
INST# 200508050158290
230-000281-00
AGRICULTURAL

CSX TRANSPORTATION, INC.
FKA BALTIMORE AND OHIO RAILROAD
LEASE & TRACK PURCHASED BY
INDIANA AND OHIO RAILWAY COMPANY
COMMERCIAL

B & B INDUSTRIES INC
6961 HARRISBURG PIKE
ORIENT OH 43146
OR 24884 E07
OR 24884 E04
230-000985-00
COMMERCIAL



*A STA. 158+17.14 R 2 @ CONST. & R/W I-71 = STA. 3067+45.16 @ R/W INDIANA & OHIO RR AKA BALTIMORE & OHIO RR, AKA CSX TRANSPORTATION, INC.
*B EXISTING SH, A & S EASEMENTS ACQUIRED IN DEED VOLUME 2538, PG 518-523
SEE SHEET 8/12 FOR CSX TRANSPORTATION, INC. OWNERSHIP NOTE

REV. BY	DATE	DESCRIPTION

DATE COMPLETED 10/14/2015

N

HORIZONTAL SCALE IN FEET

PID NO.
107201

R/W DESIGNER
TME

R/W REVIEWER
SJS

RIGHT OF WAY TOPO PLAN
STA. 155+00.00 TO STA. 161+00.00

FRA-71-0.00
9 / 12

1309
1312

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FRANKLIN COUNTY
PLEASANT TOWNSHIP
VMS 947

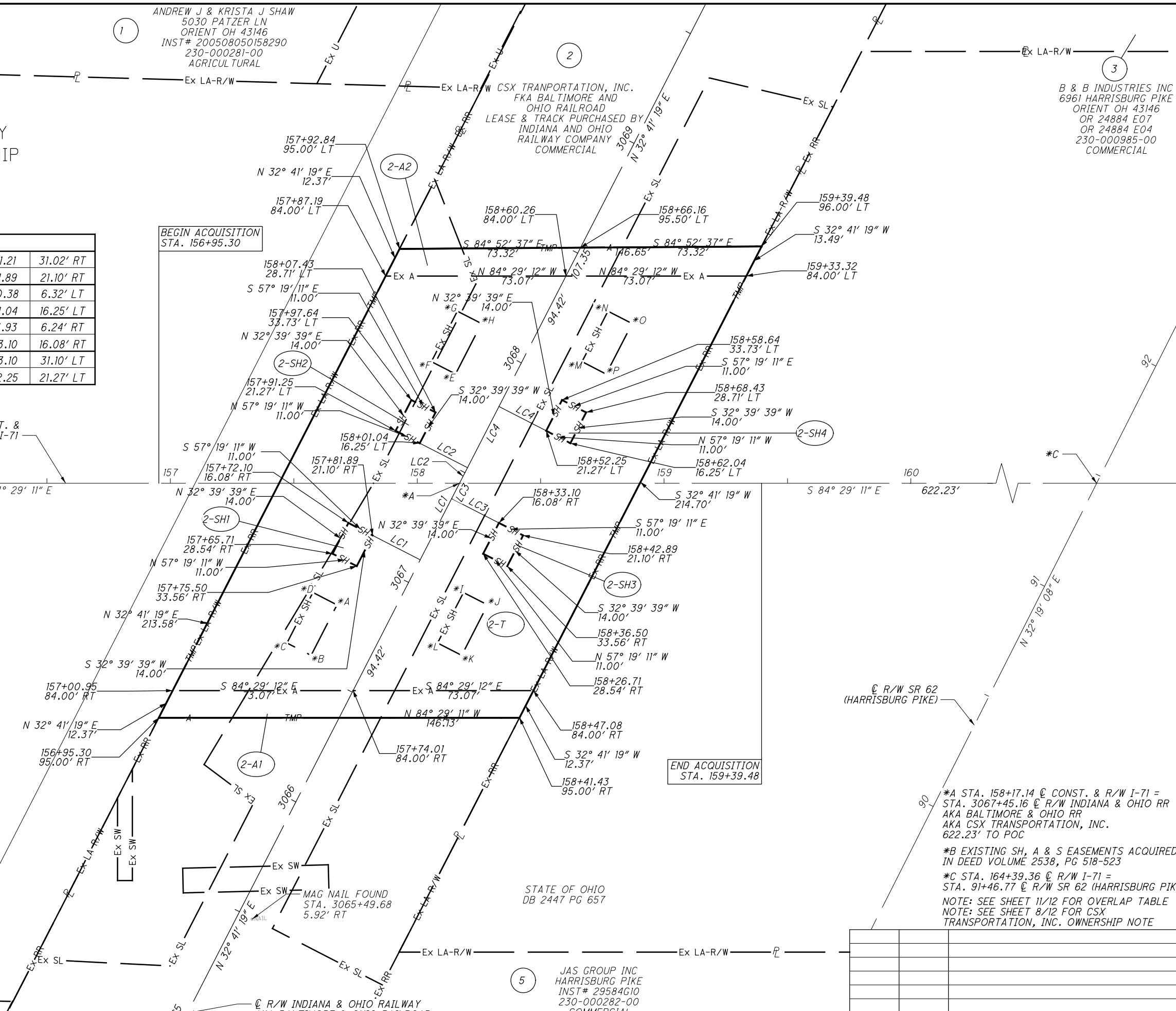
LEAD IN COURSES FROM *A				
LC1	S 32° 41' 19" W	34.87'	158+01.21	31.02' RT
	N 57° 18' 41" W	21.72'	157+81.89	21.10' RT
LC2	N 32° 41' 19" E	7.11'	158+20.38	6.32' LT
	N 57° 18' 41" W	21.74'	158+01.04	16.25' LT
LC3	S 32° 41' 19" W	7.01'	158+13.93	6.24' RT
	S 57° 18' 41" E	21.55'	158+33.10	16.08' RT
LC4	N 32° 41' 19" E	34.96'	158+33.10	31.10' LT
	S 57° 18' 41" E	21.53'	158+52.25	21.27' LT

EXISTING SH R/W		
POINT	RR STA	OFFSET
*A	3066+78.66	21.64' LT
*B	3066+55.66	21.64' LT
*C	3066+55.66	32.64' LT
*D	3066+78.66	32.64' LT
*E	3067+83.81	21.64' LT
*F	3067+83.81	32.64' LT
*G	3068+06.81	32.64' LT
*H	3068+06.81	21.64' LT
*I	3067+06.51	21.64' RT
*J	3067+06.51	32.64' RT
*K	3066+83.51	32.64' RT
*L	3066+83.51	21.64' RT
*M	3068+11.66	21.64' RT
*N	3068+34.66	21.64' RT
*O	3068+34.66	32.64' RT
*P	3068+11.66	32.64' RT

ANDREW J & KRISTA J SHAW
5030 PATZER LN
ORIENT OH 43146
INST# 200508050158290
230-000281-00
AGRICULTURAL

CSX TRANSPORTATION, INC.
FKA BALTIMORE AND OHIO RAILROAD
LEASE & TRACK PURCHASED BY INDIANA AND OHIO RAILWAY COMPANY
COMMERCIAL

B & B INDUSTRIES INC
6961 HARRISBURG PIKE
ORIENT OH 43146
OR 24884 E07
OR 24884 E04
230-000985-00
COMMERCIAL



STATE OF OHIO
DB 2462 PG 23

STATE OF OHIO
DB 2447 PG 657

PEWAMO, LTD
LAMBERT RD
ORIENT OH 43146
230-003346-00
INST# 201007270094859
AGRICULTURAL

INDIANA & OHIO RAILWAY
AKA BALTIMORE & OHIO RAILROAD
AKA CSX TRANSPORTATION, INC.

JAS GROUP INC
HARRISBURG PIKE
INST# 29584G10
230-000282-00
COMMERCIAL
(CELL TOWER)

*A STA. 158+17.14 @ CONST. & R/W I-71 = STA. 3067+45.16 @ R/W INDIANA & OHIO RR AKA BALTIMORE & OHIO RR AKA CSX TRANSPORTATION, INC. 622.23' TO POC
*B EXISTING SH, A & S EASEMENTS ACQUIRED IN DEED VOLUME 2538, PG 518-523
*C STA. 164+39.36 @ R/W I-71 = STA. 91+46.77 @ R/W SR 62 (HARRISBURG PIKE)
NOTE: SEE SHEET 11/12 FOR OVERLAP TABLE
NOTE: SEE SHEET 8/12 FOR CSX TRANSPORTATION, INC. OWNERSHIP NOTE

REV. BY	DATE	DESCRIPTION

DATE COMPLETED 10/14/2015

RIGHT OF WAY BOUNDARY PLAN
STA. 155+00.00 TO STA. 161+00.00

FRA-71-0.00

10 / 12

(1310)
(1312)

PID NO. 107201
R/W DESIGNER TIME
R/W REVIEWER SUS

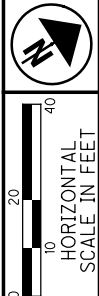
HORIZONTAL SCALE IN FEET

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INDIANA & OHIO RAILWAY COMPANY / CSX TRANSPORTATION, INC.

FRANKLIN COUNTY
PLEASANT TOWNSHIP
VMS 947

PARCEL NO.	GROSS AREA	OVERLAP AREA (SF)						
		EX SL	EX A	EX SH	EX SW(LF)	PR SH	PR A	PR T
2-A1	1608	948	0	0	0	0	-	1608
2-A2	1681	999	0	0	0	0	-	1681
2-SH1	154	1	154	0	0	-	0	154
2-SH2	154	24	154	0	0	-	0	154
2-SH3	154	154	154	0	0	-	0	154
2-SH4	154	154	154	0	0	-	0	154
2-T	27838	17495	24549	1012	0	616	3289	-

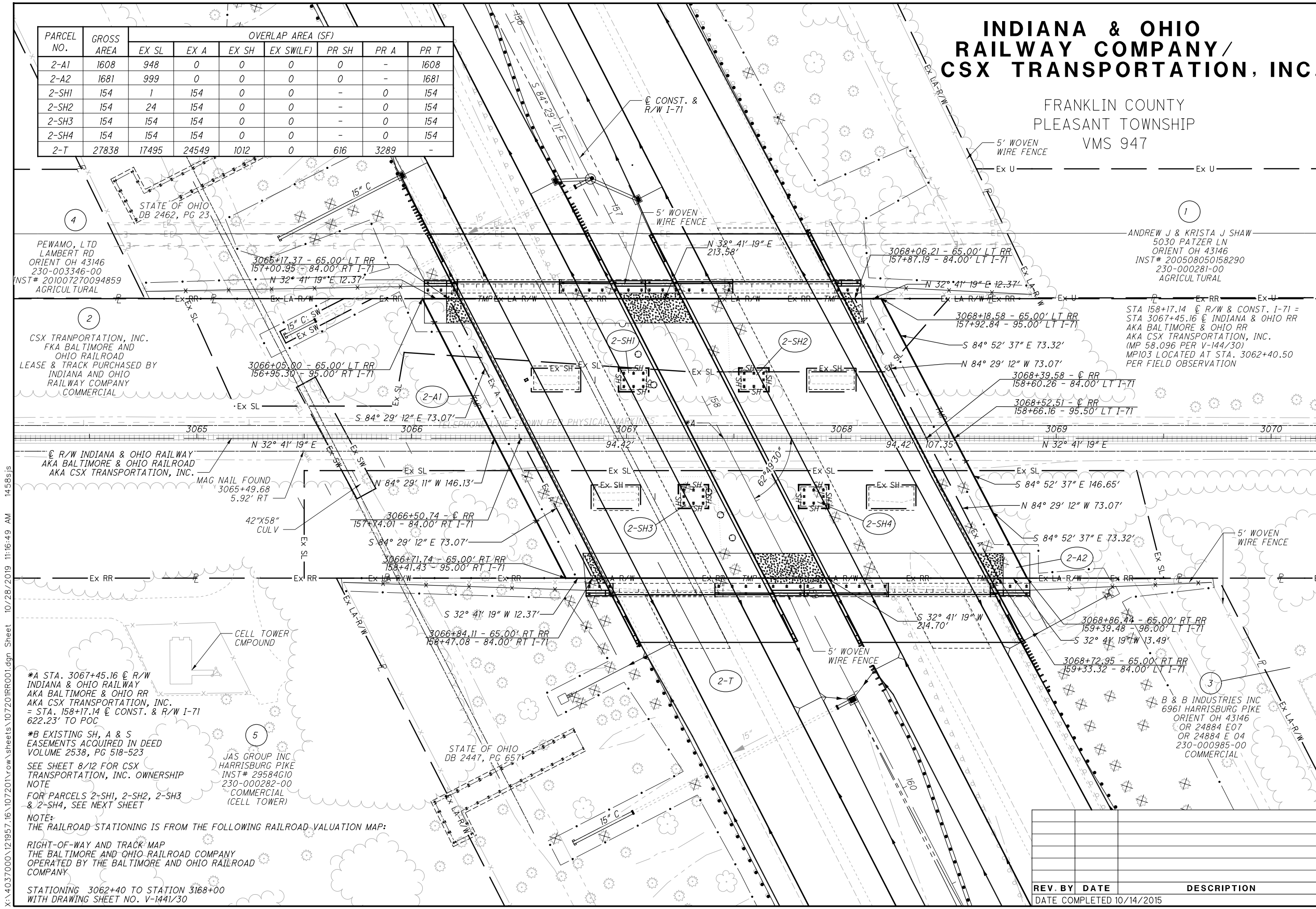


PID NO. **107201**
R/W DESIGNER TIME
R/W REVIEWER SJS

RAILROAD PLAT

FRA-71-0.00

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PEWAMO, LTD
LAMBERT RD
ORIENT OH 43146
230-003346-00
INST# 201007270094859
AGRICULTURAL

CSX TRANSPORTATION, INC.
FKA BALTIMORE AND OHIO RAILROAD
LEASE & TRACK PURCHASED BY INDIANA AND OHIO RAILWAY COMPANY
COMMERCIAL

INDIANA & OHIO RAILWAY
AKA BALTIMORE & OHIO RAILROAD
AKA CSX TRANSPORTATION, INC.

*A STA. 3067+45.16 @ R/W INDIANA & OHIO RAILWAY AKA BALTIMORE & OHIO RR AKA CSX TRANSPORTATION, INC. = STA. 158+17.14 @ CONST. & R/W I-71 622.23' TO POC

*B EXISTING SH, A & S EASEMENTS ACQUIRED IN DEED VOLUME 2538, PG 518-523
SEE SHEET 8/12 FOR CSX TRANSPORTATION, INC. OWNERSHIP NOTE FOR PARCELS 2-SH1, 2-SH2, 2-SH3 & 2-SH4, SEE NEXT SHEET

NOTE: THE RAILROAD STATIONING IS FROM THE FOLLOWING RAILROAD VALUATION MAP:

RIGHT-OF-WAY AND TRACK MAP THE BALTIMORE AND OHIO RAILROAD COMPANY OPERATED BY THE BALTIMORE AND OHIO RAILROAD COMPANY

STATIONING 3062+40 TO STATION 3168+00 WITH DRAWING SHEET NO. V-1441/30

ANDREW J & KRISTA J SHAW
5030 PATZER LN
ORIENT OH 43146
INST# 200508050158290
230-000281-00
AGRICULTURAL

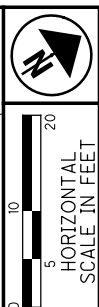
STA 158+17.14 @ R/W & CONST. I-71 = STA 3067+45.16 @ INDIANA & OHIO RR AKA BALTIMORE & OHIO RR AKA CSX TRANSPORTATION, INC. (MP 58.096 PER V-144/30) MP103 LOCATED AT STA. 3062+40.50 PER FIELD OBSERVATION

B & B INDUSTRIES INC
6961 HARRISBURG PIKE
ORIENT OH 43146
OR 24884 E07
OR 24884 E 04
230-000985-00
COMMERCIAL

REV. BY	DATE	DESCRIPTION

DATE COMPLETED 10/14/2015

**INDIANA & OHIO
RAILWAY COMPANY /
CSX TRANSPORTATION, INC.**
FRANKLIN COUNTY
PLEASANT TOWNSHIP
VMS 947



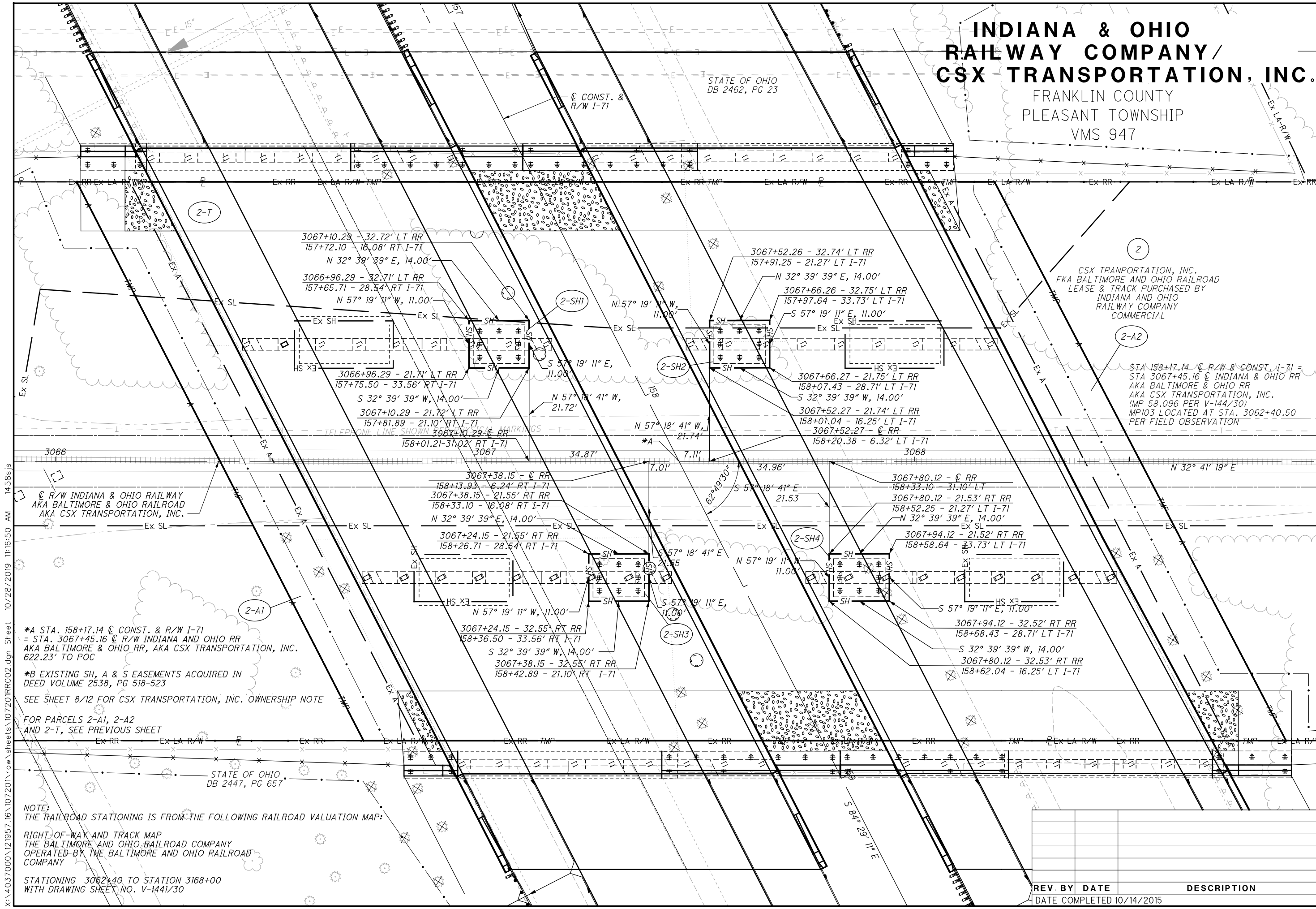
PID NO. **107201**
R/W DESIGNER TIME R/W REVIEWER SUS

**RAILROAD PLAT
FOUNDATION DETAILS**

FRA-71-0.00

12 / 12

1312
1312



X:\4037000\121957.16\107201\row sheets\107201\RR002.dgn Sheet 10/28/2019 11:16:50 AM 1458sjjs

*A STA. 158+17.14 @ CONST. & R/W I-71
= STA. 3067+45.16 @ R/W INDIANA AND OHIO RR
AKA BALTIMORE & OHIO RR, AKA CSX TRANSPORTATION, INC.
622.23' TO POC

*B EXISTING SH, A & S EASEMENTS ACQUIRED IN
DEED VOLUME 2538, PG 518-523

SEE SHEET 8/12 FOR CSX TRANSPORTATION, INC. OWNERSHIP NOTE

FOR PARCELS 2-A1, 2-A2
AND 2-T, SEE PREVIOUS SHEET

STATE OF OHIO
DB 2447, PG 657

NOTE:
THE RAILROAD STATIONING IS FROM THE FOLLOWING RAILROAD VALUATION MAP:

RIGHT-OF-WAY AND TRACK MAP
THE BALTIMORE AND OHIO RAILROAD COMPANY
OPERATED BY THE BALTIMORE AND OHIO RAILROAD
COMPANY

STATIONING 3062+40 TO STATION 3168+00
WITH DRAWING SHEET NO. V-1441/30

STATE OF OHIO
DB 2462, PG 23

REV. BY	DATE	DESCRIPTION

DATE COMPLETED 10/14/2015

PROJECT DESCRIPTION

THE FRA-71-0.00 PROJECT INVOLVES IMPROVEMENTS TO APPROXIMATELY 5.29 MILES OF INTERSTATE 71 (IR 71) FROM THE FRANKLIN/PICKAWAY COUNTY LINE TO APPROXIMATELY 4,400 FEET (FT) SOUTH OF THE INTERSECTION OF IR-71 AND LONDON GROVEPORT ROAD (STATE ROUTE 665). THE PROJECT CONSISTS OF RECONSTRUCTION OF EXISTING LANES AND THE ADDITION OF A THIRD LANE IN THE MEDIAN, IN EACH DIRECTION. THE PROJECT ALSO INCLUDES THE FOLLOWING BRIDGES AND A NEW NOISE WALL:

1. FRA-71-0153 L&R - REPLACEMENT
2. FRA-71-0296 L&R - WIDENING
3. FRA-71-0308 L&R - WIDENING
4. NOISE WALL - SEGMENT 1 STATION 126+00, 155' RT TO 145+50, 139' RT
5. NOISE WALL - SEGMENT 2 STATION 143+50, 80' RT TO 148+00, 77' RT

HISTORIC RECORDS

HISTORICAL STRUCTURE FOUNDATION INVESTIGATIONS ARE AVAILABLE THROUGH THE ODOT FALCON DATABASE SYSTEM FOR ALL THE PROJECT BRIDGES. LISTED BELOW ARE INVESTIGATION'S PROJECT NUMBERS, DATES AND LIST OF HISTORICAL BORINGS BEING RELIED UPON FOR THIS EXPLORATION, BY BRIDGE.

- FRA-71-0153 L&R
 - o REPORT OF FOUNDATION INVESTIGATION, INTERSTATE I-71, BRIDGE NO. FRA-1-0153 (R & L) -1962
 - o BORINGS B-001-B-62 AND B-010-B-62.
- FRA-71-0296 L&R
 - o REPORT OF FOUNDATION INVESTIGATION, INTERSTATE I-71, BRIDGE NO. FRA-1-0296 (I-71 OVER B&O RAILROAD) AUGUST 17, 1962
 - o BORINGS B-001-C-62, B-004-C-62, B-005-C-62 AND B-008-C-62.
- FRA-71-0308 L&R
 - o REPORT OF FOUNDATION INVESTIGATION, INTERSTATE I-71, BRIDGE NO. FRA-1-0308 (R & L) - 1962
 - o BORINGS B-001-U-62, B-004-U-62, B-005-U-62, B-006-U-62, B-007-U-62 AND B-010-U-62.

WHILE BORINGS WERE AVAILABLE FOR THE ORIGINAL SUBGRADE, DUE TO THE CHANGES IN GRADE FROM THE ORIGINAL EXPLORATION THEY ARE NOT BEING RELIED UPON FOR THE SUBGRADE EXPLORATION.

GEOLOGY

THE ALIGNMENT CROSSES THROUGH THE DARBY PLAIN REGION OF THE SOUTHERN OHIO LOAMY TILL PLAIN, PART OF THE CENTRAL LOWLANDS. THIS AREA IS CHARACTERIZED AS BROADLY HUMMOCKY GROUND MORaine WITH INDISTINCT RECESSONAL MORAINES AND FEW LARGE STREAMS. THE HIGHEST ELEVATION ALONG THE ALIGNMENT OCCURS AT THE EXTREME SOUTHERN END WHERE IT REACHES AN APPROXIMATE ELEVATION OF 905 FT. FROM THIS POINT THE TERRAIN SLOPES TOWARDS BIG DARBY CREEK, WHICH IS AT APPROXIMATE ELEVATION 780 FT WHERE IT FLOWS BENEATH IR-71. FROM BIG DARBY CREEK THE TERRAIN RISES; AT THE NORTHERN TERMINUS THE ELEVATION REACHES 860 FT. THE SURFICIAL GEOLOGY ALONG THE ALIGNMENT CAN BE DIVIDED IN TWO PRIMARY AREAS: THE FLOODPLAIN OF BIG DARBY CREEK (ABOUT 1 MILE WIDE) AND THE REMAINDER OF THE ALIGNMENT. MAPPING INDICATES THE FLOODPLAIN IS UNDERLAIN BY (TOP TO BOTTOM): 10 FT OF PATCHY ALLUVIUM/10 FT OF SAND AND GRAVEL/50 FT OF TILL/90 FT OF CLAY OVER SILURIAN AND/OR DEVONIAN-AGE DOLOMITE BEDROCK. THE REMAINDER OF THE ALIGNMENT IS UNDERLAIN BY BETWEEN 30 AND 40 FT OF LOAM TILL OVER 60 TO 120 FT OF TILL. IN ALL BUT THE NORTHERN 25%, THIS IS OVER EITHER DOLOMITE BEDROCK OR DEVONIAN-AGE SHALE. IN THE NORTHERN 25% THE TILL IS UNDERLAIN BY UP TO 170 FT OF SAND AND GRAVEL OVER DOLOMITE. THE SURFICIAL UNITS MAY BE MASKED BY EMBANKMENT PLACED DURING CONSTRUCTION OF IR-71.

BEDROCK ELEVATIONS ARE MAPPED FROM 727 FT AT THE SOUTHERN END TO 631 FT AT BIG DARBY CREEK BACKUP TO 708 FT AT THE NORTHERN END. THIS SUGGESTS THAT BEDROCK WOULD VARY BETWEEN 150 AND 180 FT IN DEPTH BASED ON IR-71 ELEVATIONS. THE SILURIAN/DEVONIAN CARBONATE BEDROCK IS SHOWN AS KARST GEOLOGY ON ODNr'S KNOWN AND PROBABLE KARST IN OHIO. THE MAP ALSO INDICATES THAT THE CARBONATE ROCK IS OVERLAIN BY MORE THAN 20 FEET OF GLACIAL DRIFT AND/OR ALLUVIUM, AND NO KNOWN OR PROBABLE KARST FEATURES ARE DEPICTED.

SURFACE WATER DRAINAGE IN THE AREA IS DOMINATED BY THE SOUTH-FLOWING BIG DARBY CREEK, LOCATED ABOUT 1.5 MILES NORTH OF THE FRANKLIN AND PICKAWAY COUNTY BOUNDARY; THE ALIGNMENT ALSO CROSSES THREE OF ITS TRIBUTARIES (SPRINGWATER RUN AND TWO UNNAMED INTERMITTENT TRIBUTARIES).

RECONNAISSANCE

THE SITE RECONNAISSANCE WAS CONDUCTED IN TWO PHASES: ONCE DURING THE SUBGRADE EXPLORATION IN 2012 AND AGAIN IN 2014 DURING THE STRUCTURE FOUNDATION INVESTIGATIONS. THE FIRST RECONNAISSANCE TOOK PLACE BETWEEN SEPTEMBER 24 AND OCTOBER 5, 2012 AT WHICH TIME IT WAS NOTED THAT DRAINAGE ALONG THE ROADWAY ALIGNMENT APPEARED TO BE ADEQUATE, AS NO EVIDENCE OF FLOODING OR POTENTIAL FLOODING OF THE ROADWAY WAS OBSERVED. THERE WAS NO VISIBLE EVIDENCE OF LANDSLIDE SUSCEPTIBILITY DURING FIELD OBSERVATIONS OR DRILLING.

THE SECOND PHASE INVOLVED THREE SITE VISITS: 2/4/14 IN FEBRUARY, 5/24/14 AND 1/28/15. THE OBSERVATIONS ARE PRESENTED BELOW BY STRUCTURE.

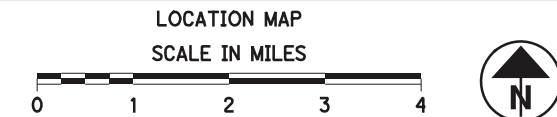
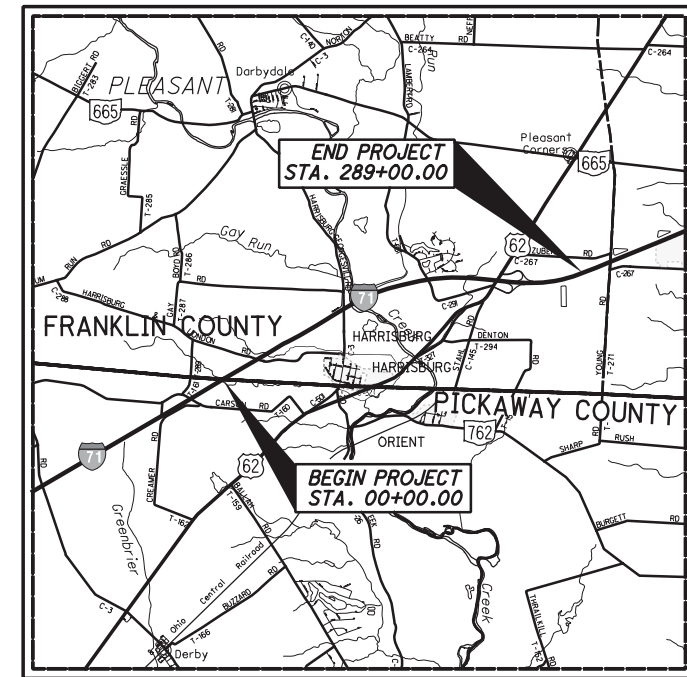
FRA-71-0153 L&R
RURAL AND RECREATIONAL LAND SURROUNDS THE BRIDGE SITE. IMMEDIATELY NORTH AND SOUTH ARE PARCELS INCLUDED IN THE BATTLELLE DARBY CREEK METRO PARK (CENTRAL OHIO METRO PARKS).

LEGEND

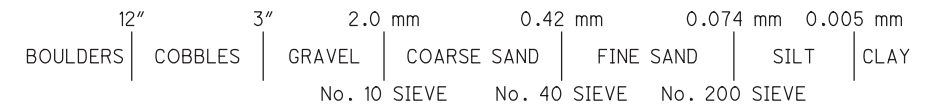
DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL
GRAVEL AND/OR STONE FRAG	A-1-a	0 2
GRAVEL AND/OR STONE FRAG. W/ SAND	A-1-b	4 5
GRAV. AND/OR STONE FRAG. W/ SAND, SILT & CLAY	A-2-4	9 5
COARSE AND FINE SAND	A-3a	0 1
SANDY SILT	A-4a	141 179
SILT	A-4b	6 4
SILT AND CLAY	A-6a	54 33
SILTY CLAY	A-6b	35 38
CLAY	A-7-6	22 7
TOTAL	TOTAL	262 268
BOULDERY ZONE	VISUAL	
DOLOMITE	VISUAL	
LIMESTONE	VISUAL	
SILTSTONE	VISUAL	
BACKFILL / UNCONTROLLED FILL	VISUAL	
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL	
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL	
BORING LOCATION - PLAN VIEW.		
HISTORIC BORING LOCATION - PLAN VIEW.		
DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
WC INDICATES WATER CONTENT IN PERCENT.		
N₆₀ INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
X/Y/Z NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.		
INDICATES FREE WATER ELEVATION.		
INDICATES STATIC WATER ELEVATION.		
INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.		
INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.		
INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.		
SS INDICATES A SPLIT SPOON SAMPLE.		
NP INDICATES A NON-PLASTIC SAMPLE.		
TR INDICATES A TOP OF ROCK ELEVATION		

RECONNAISSANCE (CONTINUED)

THE AREA TO THE NORTH IS FOREST AND TO THE SOUTH IS ALLOCATED FOR FIELDS AND MEADOWS. MORE FOREST, FOLLOWED BY AGRICULTURAL FIELDS LAY TO THE EAST AND WEST. THE EXISTING TWIN STRUCTURES ARE EACH SUPPORTED ON PILED ABUTMENTS WITH SPILL-THROUGH SLOPES AND TWO HAMMER-HEAD PIERS FOUNDED ON BEDROCK USING SPREAD FOOTINGS. NO EVIDENCE OF DISTRESS OR POOR PERFORMANCE WAS OBSERVED AT THE SUPPORTS THAT COULD BE ATTRIBUTED TO GEOTECHNICAL FACTORS.



PARTICLE SIZE DEFINITIONS



HISTORIC BORING DESCRIPTIONS	ODOT CLASS	CLASSIFIED MECH./VISUAL
GRAVEL AND/OR STONE FRAGMENTS	A-1-a	31 3
GRAVEL AND/OR ST. FRAGS. W/SAND	A-1-b	11 -
GRAVEL AND/OR ST. FRAGS. W/SAND & SILT	A-2-4	9 -
GRAVEL AND/OR ST. FRAGS. W/SAND, SILT & CLAY	A-2-6	2 -
SANDY SILT	A-4a	133 2
SILT	A-4b	5 -
SILT AND CLAY	A-6a	30 2
SILTY CLAY	A-6b	7 -
ELASTIC CLAY	A-7-5	3 -
CLAY	A-7-6	18 -
TOTAL	TOTAL	249 7
DOLOMITE	VISUAL	

- RECON. - STANTEC 9/24-10/5/12; Z.J. 2/4/14; S.E. 5/24/14; M.L. 1/28/15
 DRILLING - STANTEC 9/24-10/5/12; Z.J., J.G. 3/29/14-3/31/15
 DRAWN - C.H., D.M.L., G.L., K.A. 4/13-6/16/15
 REVIEWED - L.E. 6/11/15-6-16-15

RECONNAISSANCE (CONTINUED)

FRA-71-0153 L&R (CONTINUED)

THE BRIDGE PARAPET LINES APPEAR TO BE STRAIGHT AND TRUE WHICH IS INTERPRETED TO INDICATE ABSENCE OF SIGNIFICANT DIFFERENTIAL SETTLEMENT. THE SPILL THROUGH SLOPES HAVE EXPERIENCED SOME EROSION AND RIPRAP THAT IS SHOWN ON THE ORIGINAL DRAWINGS IS ABSENT IN SOME PLACES, AND ADDITIONAL ARMORING APPEARS TO HAVE BEEN PLACED AT OTHERS. A BENCH THAT WAS SHOWN AT APPROXIMATE ELEVATION 782 FT (ABOUT 10 FT BELOW THE GIRDERS) IN THE CONSTRUCTION DRAWINGS IS ABSENT, SUGGESTING SOME EROSION OF THE SLOPE. AN ISLAND EXISTS IN THE CHANNEL BETWEEN PIERS 1 AND 2 THAT EXTENDS THE FULL LENGTH OF THE PROJECT AREA. THIS MATERIAL HAS ACCUMULATED SINCE THE END OF ORIGINAL CONSTRUCTION AND THE ISLAND NOW SUPPORTS MATURE WOODLANDS. THE HELLBRANCH RUN CHANNEL IS APPARENTLY NOT (OR ONLY POORLY) CONNECTED TO BIG DARBY CREEK UPSTREAM OF THE BRIDGE AND DURING LOW FLOW IN THE RUN, PROBABLY FUNCTIONS AS A FAIRLY STATIC BACKWATER CHANNEL TO BIG DARBY CREEK.

FRA-71-0296 L&R

THE SINGLE CSX TRACK PARALLELS HARRISBURG PIKE APPROXIMATELY 600 FT TO THE EAST. THE AREA BETWEEN THE TRACK AND THE PIKE HAS BEEN DEVELOPED WITH PREDOMINANTLY LIGHT COMMERCIAL FACILITIES; THE AREA TO THE WEST IS AGRICULTURAL FARMLAND. THE RAIL LINE IS LOCATED IN A SHALLOW (ABOUT 6 FT DEEP) CUT, AND THE APPROACH EMBANKMENTS ARE ON THE ORDER OF 24 FT HIGH CREATING APPROXIMATELY 25 FT OF CLEARANCE ABOVE THE TRACK. NO EVIDENCE OF DISTRESS OR POOR PERFORMANCE WAS OBSERVED AT THE SUPPORTS THAT COULD BE ATTRIBUTED TO GEOTECHNICAL FACTORS. THE BRIDGE PARAPET LINES APPEAR TO BE STRAIGHT AND TRUE WHICH IS INTERPRETED TO INDICATE ABSENCE OF SIGNIFICANT DIFFERENTIAL SETTLEMENT. SPILL THROUGH SLOPES APPEAR TO BE STABLE AND ARE GENERALLY WELL VEGETATED. SURFACE DRAINAGE IS POOR IN THE VICINITY OF PIERS 2 (L&R) WHERE STANDING WATER CAN BE SEEN. WIDENING WILL TAKE PLACE IN THE AREA BETWEEN THE TWO EXISTING STRUCTURES.

FRA-71-0308 L&R

IMMEDIATELY EAST ARE THE INFIELDS FOR THE EXIT AND ENTRANCE RAMPS TO IR-71 AT US-62. TO THE WEST LAND USE INCLUDES A GOLF CART MANUFACTURER, AN ACTIVE GASOLINE STATION AND AN ABANDONED GASOLINE STATION. THE EMBANKMENTS ARE VEGETATED WITH BUSHES, GRASS AND A FEW TREES. US 62 (HARRISBURG PIKE) PARALLELS THE CSX RAILROAD APPROXIMATELY 600 FT TO THE WEST. THE AREA BETWEEN THE TRACK AND THE PIKE HAS BEEN DEVELOPED WITH PREDOMINANTLY LIGHT COMMERCIAL FACILITIES; THE AREA TO THE EAST IS AGRICULTURAL FARMLAND AND LIGHT RURAL RESIDENTIAL DEVELOPMENT. THE TWIN BRIDGES ARE CONFIGURED FOR SEPARATE NORTHBOUND AND SOUTHBOUND LANES, BUT PRESENTLY SPAN ONLY A SINGLE, TWO-LANE ROAD BETWEEN PIERS 1 AND 2. THE AREA BETWEEN PIERS 2 AND 3 IS GRASS COVERED. NO EVIDENCE OF DISTRESS OR POOR PERFORMANCE WAS OBSERVED AT THE SUPPORTS THAT COULD BE ATTRIBUTED TO GEOTECHNICAL FACTORS. THE BRIDGE PARAPET LINES APPEAR TO BE STRAIGHT AND TRUE WHICH IS INTERPRETED TO INDICATE ABSENCE OF SIGNIFICANT DIFFERENTIAL SETTLEMENT. SPILL THROUGH SLOPES APPEAR TO BE STABLE AND ARE GENERALLY WELL MAINTAINED WITH CRUSHED ROCK. SURFACE DRAINAGE APPEARS TO BE ADEQUATE. WIDENING WILL TAKE PLACE IN THE AREA BETWEEN THE TWO EXISTING STRUCTURES.

NOISE WALL

AT THE TIME OF THE RECONNAISSANCE SNOW COVERED MUCH OF THE SURFACE UP TO 2 INCHES THICK. LAND USE TO THE NORTH OF THE PROPOSED WALL CONSISTS OF SINGLE-FAMILY RESIDENCES. AGRICULTURAL FIELDS ARE LOCATED TO THE SOUTH OF IR-71. THE NOISE WALL ALIGNMENT PARALLELS A SLOPE THAT MAY EXCEED 2:1 IN PLACES, BUT DECREASES IN STEEPNESS TO THE EAST. THE TREES ON THE SLOPE APPEAR TO BE CLOSE TO VERTICAL, SO CREEP DOES NOT SEEM TO HAVE OCCURRED, INDICATING STABLE SLOPES. THE UPPER PORTION OF THE SLOPE IS COVERED IN THICK VEGETATION, COMPOSED OF TREES, BUSHES, AND GRASS. THE REMAINDER OF THE SLOPE HAS A WELL-ESTABLISHED GRASS COVER, WITH TREES INTERSPERSED THROUGHOUT. PROPERTIES TO THE NORTH OF THE SITE AT THE TOP OF THE SLOPE APPEAR TO BE RELATIVELY FLAT. POWER LINES AND FIBER OPTIC CABLE MARKERS WERE OBSERVED ALONG THE TOP OF THE SLOPE AT THE REAR OF THE RESIDENTIAL PROPERTIES. AN OLD CULVERT PIPE WAS ENCOUNTERED AT THE EAST END OF THE SITE ALONG AN INTERMITTENT TRIBUTARY TO BIG DARBY CREEK; THE BOTTOM HALF WAS CORRODED. THE NEARBY CULVERT CARRYING THE TRIBUTARY BENEATH IR-71 WAS OBSERVED TO BE IN GOOD CONDITION. SITE DRAINAGE APPEARED TO BE ADEQUATE, AS SNOW WAS MELTING AND NO LARGE POOLS OF WATER WERE ENCOUNTERED.

SUBSURFACE EXPLORATION

THE SUBSURFACE EXPLORATION WAS CONDUCTED IN TWO PHASES: THE SUBGRADE EXPLORATION WAS CONDUCTED BY STANTEC CONSULTING SERVICES, INC. (STANTEC) BETWEEN SEPTEMBER 24 AND OCTOBER 5, 2012 AND THE STRUCTURE FOUNDATION EXPLORATIONS WERE CONDUCTED BY BARR ENGINEERING, INC. (BEI) BETWEEN MARCH 31, 2014 AND MARCH 31, 2015.

STANTEC DRILLED 70 ROADWAY BORINGS TO DEPTHS BETWEEN 6.5 AND 9.5 FT BELOW GROUND SURFACE; 56 BORINGS WERE ADVANCED WITHIN THE EXISTING TRAFFIC LANES AND 14 BORINGS WERE ADVANCED WITHIN THE MEDIAN. THE BORINGS WERE ADVANCED USING ONE OF TWO CME 45 (C2 AND C3) TRUCK-MOUNTED DRILL RIGS WITH 3.5-INCH INSIDE DIAMETER SOLID-STEM AUGERS. DISTURBED SOIL SAMPLES WERE OBTAINED CONTINUOUSLY BY STANDARD PENETRATION TEST (SPT) WITH AUTOMATIC HAMMERS CALIBRATED OCTOBER 4, 2012 AS 88.7% EFFICIENT (C3) AND 86.2% EFFICIENT (C2).

BEI DRILLED 16 OF THE 24 STRUCTURE BORINGS; OF THE REMAINING 8, BEI SUBCONTRACTED 5 TO CENTRAL STAR DRILLING AND 3 TO STOCK DRILLING, INC. ALL WERE SUPERVISED AND LOGGED BY A BEI REPRESENTATIVE. THE BORINGS WERE DRILLED TO DEPTHS BETWEEN 25 FT AND 74.9 FT BELOW GROUND SURFACE USING ONE OF THE FOLLOWING DRILL RIGS:

SUBSURFACE EXPLORATION (CONTINUED)

Table with columns: OWNER RIG, AUGERS, AUTO-HAMMER ENERGY RATIO, CALIBRATION DATE. Rows include BEI CME 550X, BEI CME 55X, STAR CME 55, and STOCK CME 750X.

SOIL SAMPLES WERE RECOVERED AT 2.5-FT SAMPLE INTERVALS TO 30 FT AND 5-FT THEREAFTER, USING A SPLIT SPOON SAMPLER (AASHTO T-206 "STANDARD METHOD FOR PENETRATION TEST AND SPLIT BARREL SAMPLING OF SOILS."). SPT WAS CONDUCTED DURING SAMPLING USING AN AUTO-HAMMER. AT BEDROCK, THE SAMPLES WERE COLLECTED IN 5.0-FT INCREMENTS USING AN NQ2, TRIPLE TUBE, CORE BARREL, WATER METHOD TO CORE. FIELD BORING LOGS WERE PREPARED BY THE DRILLER INDICATING THE LITHOLOGICAL DESCRIPTION AND STANDARD PENETRATION TEST RESULTS RECORDED AS BLOWS PER 6-INCH INCREMENT OF PENETRATION. GROUNDWATER OBSERVATIONS WERE RECORDED DURING THE INVESTIGATION. HAND PENETROMETER TESTING WAS CONDUCTED ON A MAJORITY OF SPT SAMPLES PRIOR TO REMOVAL FROM THE SAMPLER. BORINGS WERE BACKFILLED WITH EITHER SOIL CUTTINGS OR BENTONITE GROUT AS INDICATED ON THE LOGS.

EXPLORATION FINDINGS

NINETY-ONE PERCENT OF THE ROADWAY SOIL SAMPLES TESTED WERE CLASSIFIED AS FINE-GRAINED, COHESIVE SOILS AND INCLUDED SANDY SILT (A-4A 50%), SILT AND CLAY (A-6A 21%), SILTY CLAY (A-6B-13%) AND CLAY (A-7-6 6%). TWO SAMPLES WERE CLASSIFIED AS SILT (A-4B-1%). THE REMAINING 9% WERE CLASSIFIED AS COARSE-GRAINED SOILS, OR WHICH 5% WERE GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT (A-2-4), 3% WERE GRAVEL AND/OR STONE FRAGMENTS WITH SAND (A-1-B) AND 1% WERE GRAVEL AND/OR STONE FRAGMENTS (A-1-A). THE CONSISTENCY OF THE FINE-GRAINED SOILS RANGED FROM STIFF TO HARD. HAND PENETROMETER VALUES OVERALL VARIED BETWEEN 1.5 AND GREATER THAN 4.5 TONS PER SQUARE FOOT (TSF) WITH THE MAJORITY GREATER THAN 4.5 TSF. SPT, N-VALUES RANGED FROM 10 BLOWS PER FOOT (BPF) TO 121 BPF, WITH 50% BETWEEN 21 AND 39 BPF. LIQUID LIMITS RANGED FROM 17 TO 58 WITH 50% BETWEEN 21 AND 28. PLASTIC LIMITS RANGED FROM 10 TO 22 WITH 50% BETWEEN 13 AND 16. NATURAL MOISTURE CONTENTS RANGED FROM 4 AND 28%, WITH 50% BETWEEN 10 AND 14 PERCENT. GROUNDWATER WAS NOT ENCOUNTERED IN ANY OF THE BORINGS.

FRA-71-1053 L&R

OVERBURDEN SOILS ARE FAIRLY CONSISTENT. THE APPROACH EMBANKMENTS ARE COMPOSED OF SAND, SILT AND CLAY MIXTURES (A-4A, A-6A, A-6B) THAT ARE TYPICALLY STIFF TO VERY STIFF, OR DENSE. THE EMBANKMENTS ARE FOUNDED ON NATURAL SOILS THAT ARE ALSO FINE GRAINED AND APPEAR TO BE FLOODPLAIN DEPOSITS WITH TRACES OF ORGANICS (ROOTS), AND SHELLS BEING REPORTED IN THE SAMPLES. THIS STRATUM IS ON THE ORDER OF 1.5 - 2.5 FT THICK AT THE TWO PROJECT BORING LOCATIONS WHERE IT WAS OBSERVED. THE REMAINING OVERBURDEN IS DOMINANTLY SAND AND GRAVEL MIXTURES WITH VARYING AMOUNTS OF SILT AND CLAY (A-1-A, A-2-6) AND IS MEDIUM DENSE TO DENSE. BEDROCK IS OCCASIONALLY MANTLED BY A THIN STRATUM OF HIGHLY PLASTIC REDDISH BROWN CLAY (A-7-5, A-7-6) UP TO ABOUT 4 FT IN THICKNESS. ALTERNATIVELY, THIS STRATUM MAY BE COMPRISED OF BROWN SILT AND CLAY MIXTURES (A-6A). BEDROCK WAS ENCOUNTERED AT AN ELEVATION OF 761-770 FT AND CONSISTS OF LIMESTONE WITH OCCASIONAL DOLOMITE AND SILTSTONE STRATA IN THE UPPER 30 FT. AS INDICATED ABOVE, THE SITE LIES IN AN AREA OF KARST GEOLOGY. SURFACE FEATURES INDICATIVE OF A KARSTIC LANDSCAPE ARE NOT PRESENT IN THE AREA, BUT THIS DOES NOT PRECLUDE THE EXISTENCE OF PALEO-KARST SOLUTION FEATURES WITHIN THE BEDROCK ITSELF THAT WERE FORMED IN THE DISTANT PAST. ONE HISTORICAL BORING (B-007-B-62) SHOWS EVIDENCE OF SOLUTIONING. PROJECT BORINGS B-021-1-14 SHOWED SIMILAR RECOVERIES IN THE TOP 16 FT OF BEDROCK. GROUNDWATER WAS ENCOUNTERED IN ALL THE BORINGS AND MAY BE EXPECTED AT, OR A LITTLE ABOVE, THE CREEK LEVEL OF 780 FT.

FRA-71-0296 L&R AND FRA-71-0308 L&R

THE STRATIGRAPHY AT BOTH BRIDGE SITES ARE GENERALLY CONSISTENT WITH OVER 50 FT OF GLACIAL TILL OVERBURDEN ENCOUNTERED TO THE DEPTH EXPLORED. BEDROCK WAS NOT REACHED IN ANY OF THE BORINGS AND IS ESTIMATED TO BE ON THE ORDER OF 100 FT DEEP. THREE DISTINCT OVERBURDEN FORMATIONS ARE DESCRIBED, EACH OF WHICH IS GLACIALLY DERIVED TILL, BUT WITH DIFFERING DEPOSITIONAL HISTORIES AND PROPERTIES. THE REAR APPROACH EMBANKMENT WAS EXPLORED (B-040-1-14 AND B-042-1-14, RESPECTIVELY) AND FOUND TO CONSIST OF REWORKED GLACIAL TILL COMPRISED PRIMARILY OF HARD SANDY SILT (A-4A) WITH MINOR AMOUNTS OF SILT AND CLAY (A-6A) AT FRA-71-0296 AND LESSER AMOUNTS OF SILT AND CLAY (A-6A, A-6B, A-7-6) NEAR THE BASE OF THE EMBANKMENT AT FRA-71-0308. THE SAMPLE DRIVING ENERGY (N) AVERAGED 23 AND 31 (RESPECTIVELY) BPF WHICH IS NOT A HIGH VALUE, BUT THE HAND PENETROMETER READINGS WERE CONSISTENTLY GREATER THAN 4.5 TSF EXCEPT IN THE MORE CLAYEY SOILS WHERE THEY WERE IN THE RANGE 2 - 4.5+ TSF. THE ORIGINAL GROUND ELEVATION AT THE HISTORICAL BORING LOCATIONS WAS 869 - 870 FT (FRA-71-0296) AND 871-874 FT (FRA-71-0308) AND IS TAKEN TO BE THE BASE OF THE FREEWAY EMBANKMENT. BELOW THE EMBANKMENT IS A LAYER OF INTACT GLACIAL TILL, EXTENDING TO ELEVATION 845 FT, THAT IS ALMOST EXCLUSIVELY SANDY SILT (A-4A). IT IS GENERALLY LOGGED AS MEDIUM STIFF TO STIFF WITH AN AVERAGE BLOW COUNT OF 18 AND 19 BPF, RESPECTIVELY. AT FRA-71-0296 THIS MATERIAL IS FREQUENTLY MANTLED WITH A 1-3 FT LAYER OF CLAY THAT INCLUDES A THIN LAYER OF A-7-6 ON TOP OF A THIN LAYER OF A-6A. AT ELEVATION 844 - 845 FT A MUCH HARDER TILL WAS ENCOUNTERED, AGAIN CONSISTING PRIMARILY OF SANDY SILT (A-4A), BUT WITH A BLOW COUNT IN THE RANGE 32-89 AND AN AVERAGE OF 61 BPF. AT FRA-71-0308 THIS MATERIAL INCLUDES A SURFACE MANTLED LAYER OF CLAY UP TO 8 FT THICK (A-7-6, A-6A, A-6B). IN B-042-3-14 AND B-042-2-14 THIS STRATUM WAS LESS STRONG WITH BLOW COUNTS AVERAGING 9 BPF AND HAND PENETROMETER VALUES OF 1.0-2.75 TSF. AT ELEVATION 844 - 845 FT A MUCH HARDER TILL WAS ENCOUNTERED, AGAIN CONSISTING PRIMARILY OF SANDY SILT (A-4A), BUT WITH A BLOW COUNT IN THE RANGE 32-89 AND AN AVERAGE OF 61 BPF. THIS MATERIAL WAS PRESENT IN EACH OF THE HISTORICAL BORINGS TO THE DEPTHS EXPLORED. THIS IS A UNIFORM MATERIAL BASED ON LIQUID LIMIT AND PLASTICITY INDEX. TILL (2) IS INTERPRETED TO BE AN ILLINOIAN GLACIAL DEPOSIT AND TILL (1), A MORE RECENT WISCONSINAN.

EXPLORATION FINDINGS (CONTINUED)

FRA-71-0296 L&R AND FRA-71-0308 L&R (CONTINUED) GROUNDWATER WAS ENCOUNTERED IN THE HISTORICAL BORINGS BETWEEN 5 AND 11 FT DEEP (AROUND ELEVATION 864 AND 865 FT) AND STANDING WATER WAS OBSERVED AT ELEVATION 865 FT.

NOISE WALL

THE STRATIGRAPHY AT THE SITE IS GENERALLY CONSISTENT WITH OVER 25 FT OF GLACIAL TILL OVERBURDEN TO THE DEPTH EXPLORED. BEDROCK WAS NOT ENCOUNTERED IN ANY OF THE BORINGS AND IS ESTIMATED TO BE ON THE ORDER OF 100 FT DEEP. GROUNDWATER WAS NOT ENCOUNTERED IN ANY OF THE BORINGS. THE SOIL PROFILE IS DOMINATED BY HARD SANDY SILT (A-4A) THAT IS OVERLAIN BY UP TO ABOUT 10 FT OF VERY STIFF TO HARD CLAY AND SILT/CLAY MIXTURES (A-6A, A-7-6). MUCH OF THE ALIGNMENT IS MANTLED BY 2-7 FT OF FILL CONSISTING OF THE FINER GRAINED CLAY/SILT MIXTURES DESCRIBED ABOVE. THE THICKNESS OF FILL AT THE EAST END OF THE SHORTER WALL INCREASES TO ABOUT 15 FT REFLECTING THE PRESENCE OF EMBANKMENT CROSSING THE SMALL VALLEY.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, IN PLACE AT THE TIME OF THE EXPLORATIONS (I.E. JULY 2012 AND JULY 2014).

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

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PID NO. 93496

SOIL PROFILE

FRA-71-0.00

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DESIGN AGENCY: BARR ENGINEERING INC. 4760 RED BANK EXPRESSWAY, STE. 300 CINCINNATI, OH 45227

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INDEX OF SHEETS						
LOCATION		PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET	CUT MAX.	FILL EMB. MAX.
FROM STA.	TO STA.					
IR 71						
0+00	5+00	12	13	-	1 FT	0 FT
5+00	17+50	14	15	-	1 FT	0 FT
17+50	30+00	16	17	-	1 FT	0 FT
30+00	42+50	18	19	-	1 FT	0 FT
42+50	55+00	20	21	-	1 FT	0 FT
55+00	67+50	22	23	-	1 FT	0 FT
67+50	80+00	24	25	-	1 FT	1 FT
80+00	92+50	26	27	-	1 FT	12 FT
92+50	105+00	28	29	-	1 FT	1 FT
105+00	117+50	30	31	-	1 FT	1 FT
117+50	130+00	32	33	-	2 FT	1 FT
130+00	142+50	34	35	-	1 FT	1 FT
142+50	155+00	36	37	-	2 FT	1 FT
155+00	167+50	41	42, 43	-	1 FT	8 FT
167+50	180+00	44	45	-	1 FT	1 FT
180+00	192+50	46	47	-	2 FT	0 FT
192+50	205+00	48	49	-	2 FT	0 FT
205+00	217+50	50	51	-	2 FT	0 FT
217+50	230+00	52	53	-	1 FT	0 FT
230+00	242+50	54	55	-	1 FT	0 FT
242+50	255+00	56	57	-	1 FT	0 FT
255+00	267+50	58	59	-	1 FT	0 FT
267+50	280+00	60	61	-	1 FT	0 FT
280+00	286+24.38	62	63	-	0 FT	0 FT

STRUCTURES	PLAN SHEET VIEW	PROFILE SHEET VIEW
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FRA-71-0296 L&R	41	42, 43
FRA-71-0308 L&R	41	42, 43
WALLS	PLAN SHEET VIEW	PROFILE SHEET VIEW
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NOISE WALL 2	36, 39, 40	40

BORING NAME	PLAN VIEW SHEET	PROFILE VIEW SHEET
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B-002-0-12	12	13
B-003-0-12	14	15
B-004-0-12	14	15
B-005-0-12	14	15
B-006-0-12	16	17
B-007-0-12	16	17
B-008-0-12	16	17
B-009-0-12	18	19
B-010-0-12	18	19
B-011-0-12	18	19
B-012-0-12	20	21
B-013-0-12	20	21
B-014-0-12	20	21
B-015-0-12	22	23
B-016-0-12	22	23
B-017-0-12	22	23
B-018-0-12	24	25
B-019-0-12	24	25
B-020-0-12	24	25
B-021-0-12	24	25
B-021-1-14	26	27
B-021-2-14	26	27
B-022-0-12	26	27
B-023-0-12	26	27
B-024-0-12	26	27
B-025-0-12	28	29
B-026-0-12	28	29
B-027-0-12	28	29
B-028-0-12	30	31
B-029-0-12	30	31
B-030-0-12	30	31
B-031-0-12	32	33
B-032-0-12	32	33
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B-033-1-14	32, 38	38
B-033-2-14	34, 38	38
B-034-0-12	34	35
B-034-1-14	34, 38	38
B-034-2-14	34, 38	38
B-035-0-12	34	35
B-035-1-14	34, 38	38
B-035-2-14	34, 39	39
B-036-0-12	34	35
B-036-1-14	34, 39	39
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B-037-2-14	36, 39, 40	39, 40
B-037-3-14	36, 39, 40	39, 40
B-038-0-12	36	37
B-038-1-14	36, 40	40
B-039-0-12	36	37
B-040-0-12	41	42
B-040-1-14	41	42
B-040-2-14	41	43

BORING NAME	PLAN VIEW SHEET	PROFILE VIEW SHEET
B-040-3-14	41	42
B-041-0-12	41	43
B-042-0-12	41	42
B-042-1-14	41	43
B-042-2-14	41	43
B-042-3-14	41	42
B-042-4-14	41	43
B-042-5-14	41	42
B-043-0-12	44	45
B-044-0-12	44	45
B-045-0-12	44	45
B-046-0-12	46	47
B-047-0-12	46	47
B-048-0-12	46	47
B-049-0-12	46	47
B-050-0-12	48	49
B-051-0-12	48	49
B-052-0-12	48	49
B-053-0-12	50	51
B-054-0-12	50	51
B-055-0-12	50	51
B-056-0-12	52	53
B-057-0-12	52	53
B-058-0-12	52	53
B-059-0-12	54	55
B-060-0-12	54	55
B-061-0-12	54	55
B-062-0-12	56	57
B-063-0-12	56	57
B-064-0-12	56	57
B-065-0-12	58	59
B-066-0-12	58	59
B-067-0-12	58	59
B-068-0-12	58	59
B-069-0-12	60	61
B-070-0-12	60	61
B-001-B-62	26	27
B-001-C-62	41	42
B-001-U-62	41	42
B-002-B-62	26	27
B-003-B-62	26	27
B-004-B-62	26	27
B-004-C-62	41	42
B-004-U-62	41	42
B-005-B-62	26	27
B-005-C-62	41	43
B-005-U-62	41	42
B-006-B-62	26	27
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B-007-B-62	26	27
B-007-U-62	41	43
B-008-B-62	26	27
B-008-C-62	41	42
B-009-B-62	26	27
B-010-B-62	26	27
B-010-U-62	41	43
B-011-B-62	26	27
B-012-B-62	26	27

	FRA - 71 - 0.00	SOIL PROFILE	PID NO. 93496	DESIGN AGENCY BARR ENGINEERING INC. 4760 RED BANK EXPRESSWAY, STE. 300 CINCINNATI, OH 45227
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SUMMARY OF SOIL TEST DATA

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP tsf	% AGG	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	OHIO CLASS (GI)	SO4 ppm	EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP tsf	% AGG	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	OHIO CLASS (GI)	SO4 ppm			
B-001-0-12 STA. 0+86, 61.6' RT LATITUDE = 39.809591 LONGITUDE = -83.194282	01.30	02.80	SS-1	47	-	56	12	9	14	9	20	14	6	16	A-1-b (0)		B-011-0-12 STA. 40+27, 45.3' RT LATITUDE = 39.815171 LONGITUDE = -83.182263	02.00	03.50	SS-1	67	4.5+	23	5	16	30	26	21	13	8	10	A-4a (4)	653			
	02.80	04.30	SS-2	53	-	19	12	15	31	23	24	14	10	15	A-4a (4)	793		03.50	05.00	SS-2	100	4.5+	9	7	18	36	30	20	13	7	8	A-4a (6)				
	04.30	05.80	SS-3	73	-			SAME AS SS-2					20		A-4a (VISUAL)			05.00	06.50	SS-3	100	4.5+			SAME AS SS-2					9	A-4a (VISUAL)					
	05.80	07.30	SS-4	94	-			SAME AS SS-2					16		A-4a (VISUAL)				06.50	08.00	SS-4	100	4.5+			SAME AS SS-2					9	A-4a (VISUAL)				
B-002-0-12 STA. 4+78, 45.5 LT LATITUDE = 39.810396 LONGITUDE = -83.193277	02.00	03.50	SS-1	56	2.25 - 3.25	10	8	11	17	54	58	22	36	26	A-7-6 (18)	<100	B-012-0-12 STA. 44+21, 60.0' LT LATITUDE = 39.815974 LONGITUDE = -83.181249	02.00	03.50	SS-1	100	3.0 - 4.5+	21	6	15	33	25	26	15	11	17	A-6a (5)	253			
	03.50	05.00	SS-2	72	-	46	20	11	14	9	22	13	9	8	A-2-4 (0)			03.50	05.00	SS-2	100	4.5+	16	16	16	33	19	21	13	8	11	A-4a (3)				
	05.00	06.50	SS-3	67	-	43	24	9	14	10	21	13	8	7	A-2-4 (0)			05.00	06.50	SS-3	100	-	27	32	19	12	10	17	13	4	7	A-1-b (0)				
	06.50	07.33	SS-4	80	-			SAME AS SS-3					10		A-2-4 (VISUAL)				06.50	08.00	SS-4	100	-			SAME AS SS-3					7	A-1-b (VISUAL)				
B-003-0-12 STA. 8+71, 46.1' RT LATITUDE = 39.810731 LONGITUDE = -83.191911	02.00	03.50	SS-1	50	3.0 - 3.5	25	5	12	33	25	25	15	10	13	A-4a (5)	593	B-013-0-12 STA. 48+14, 58.7' RT LATITUDE = 39.816246 LONGITUDE = -83.179832	02.00	03.50	SS-1	78	3.5 - 4.5+	10	9	19	33	29	22	12	10	11	A-4a (5)	1320			
	03.50	05.00	SS-2	72	4.5+	26	10	14	30	20	21	12	9	9	A-4a (3)			03.50	05.00	SS-2	100	4.5+	12	9	16	36	27	22	12	10	10	A-4a (6)				
	05.00	06.50	SS-3	83	4.5+			SAME AS SS-2					11		A-4a (VISUAL)				05.00	06.50	SS-3	28	-			SAME AS SS-2					10	A-4a (VISUAL)				
	06.50	08.00	SS-4	100	4.5+			SAME AS SS-2					12		A-4a (VISUAL)				06.50	08.00	SS-4	100	4.5+			SAME AS SS-2					10	A-4a (VISUAL)				
B-004-0-12 STA. 12+64, 59.6' LT LATITUDE = 39.811534 LONGITUDE = -83.190900	02.00	03.50	SS-1	67	-	54	17	10	13	6				6	A-1-a (VISUAL)	607	B-014-0-12 STA. 52+08, 45.8' LT LATITUDE = 39.817046 LONGITUDE = -83.178818	02.00	03.50	SS-1	67	4.5+	18	9	15	33	25	24	13	11	12	A-6a (5)	1033			
	03.50	05.00	SS-2	83	-	50	6	9	20	15	20	16	4	8	A-2-4 (0)			03.50	05.00	SS-2	72	3.5 - 4.0	31	0	18	36	15	20	13	7	10	A-4a (3)				
	05.00	06.50	SS-3	89	-			SAME AS SS-2					11		A-2-4 (VISUAL)				05.00	06.50	SS-3	39	-	62	0	10	20	8	21	14	7	8	A-2-4 (0)			
	06.50	08.00	SS-4	94	-			SAME AS SS-2					15		A-2-4 (VISUAL)				06.50	08.00	SS-4	89	-			SAME AS SS-3					9	A-2-4 (VISUAL)				
B-005-0-12 STA. 16+59, 59.6' RT LATITUDE = 39.811808 LONGITUDE = -83.189477	01.30	02.80	SS-1	72	-	42	14	13	18	13	22	14	8	9	A-2-4 (0)	667	B-015-0-12 STA. 56+51, 45.7' RT LATITUDE = 39.817454 LONGITUDE = -83.177295	02.00	03.50	SS-1	100	4.5+	17	9	15	32	27	26	15	11	13	A-6a (5)	1013			
	02.80	04.30	SS-2	11	-	65	14	15	SAND, TRACE	SILT & CLAY	7			7	A-1-a (VISUAL)			03.50	05.00	SS-2	100	4.5+	16	11	13	31	29	26	14	12	11	A-6a (6)				
	04.30	05.80	SS-3	50	-	23	11	14	30	22	21	12	9	9	A-4a (3)			05.00	06.50	SS-3	100	4.5+			SAME AS SS-2					12	A-6a (VISUAL)					
	05.80	07.30	SS-4	6	-			SAME AS SS-3					8		A-4a (VISUAL)				06.50	08.00	SS-4	100	4.5+			SAME AS SS-2					10	A-6a (VISUAL)				
B-006-0-12 STA. 20+55, 47.2' LT LATITUDE = 39.812616 LONGITUDE = -83.188461	02.00	03.50	SS-1	50	4.5+	18	10	14	31	27	27	15	12	14	A-6a (5)	1113	B-016-0-12 STA. 59+96, 60.2' LT LATITUDE = 39.818189 LONGITUDE = -83.176432	02.00	03.50	SS-1	100	4.5+	28	7	12	28	25	26	15	11	10	A-6a (4)	1127			
	03.50	05.00	SS-2	89	3.5 - 4.0	25	10	14	32	19	21	14	7	10	A-4a (3)			03.50	05.00	SS-2	100	4.5+	8	10	14	41	27	21	12	9	10	A-4a (7)				
	05.00	06.50	SS-3	100	4.5+			SAME AS SS-2					10		A-4a (VISUAL)				05.00	06.50	SS-3	100	2.5 - 4.5+			SAME AS SS-2					10	A-4a (VISUAL)				
	06.50	08.00	SS-4	67	2.5			SAME AS SS-2					12		A-4a (VISUAL)				06.50	08.00	SS-4	100	4.5+			SAME AS SS-2					9	A-4a (VISUAL)				
B-007-0-12 STA. 24+48, 44.7' RT LATITUDE = 39.812953 LONGITUDE = -83.187090	02.00	03.50	SS-1	100	4.5+	30	7	13	28	22	23	14	9	10	A-4a (3)	513	B-017-0-12 STA. 63+90, 59.0' RT LATITUDE = 39.818461 LONGITUDE = -83.175012	02.00	03.50	SS-1	73	4.25	11	9	19	34	27	22	13	9	11	A-4a (5)	793			
	03.50	05.00	SS-2	100	4.5+	19	9	14	33	25	21	12	9	9	A-4a (5)			03.50	05.00	SS-2	87	4.5+	13	10	18	35	24	21	12	9	8	A-4a (5)				
	05.00	06.50	SS-3	100	4.0-4.5+			SAME AS SS-2					9		A-4a (VISUAL)				05.00	06.50	SS-3	100	4.5+			SAME AS SS-2					10	A-4a (VISUAL)				
	06.50	08.00	SS-4	83	4.5+			SAME AS SS-2					10		A-4a (VISUAL)				06.50	08.00	SS-4	67	4.5+			SAME AS SS-2					11	A-4a (VISUAL)				
B-008-0-12 STA. 28+42, 60.9' LT LATITUDE = 39.813755 LONGITUDE = -83.186080	02.00	03.50	SS-1	67	4.5+	19	7	13	31	30	28	16	12	14	A-6a (6)	1020	B-018-0-12 STA. 67+86, 45.3' LT LATITUDE = 39.819264 LONGITUDE = -83.173991	02.00	03.50	SS-1	67	4.5+	16	9	16	33	26	24	14	10	12	A-4a (5)	533			
	03.50	05.00	SS-2	100	4.5+	13	12	15	33	27	26	13	13	12	A-6a (6)			03.50	05.00	SS-2	73	4.25	16	10	26	24	24	25	12	13	10	A-6a (4)				
	05.00	06.50	SS-3	61	4.5+			SAME AS SS-2					12		A-6a (VISUAL)				05.00	06.50	SS-3	100	4.5+			SAME AS SS-2					10	A-6a (VISUAL)				
	06.50	08.00	SS-4	100	4.5+			SAME AS SS-2					10		A-6a (VISUAL)				06.50	08.00	SS-4	80	4.5+			SAME AS SS-2					11	A-6a (VISUAL)				
B-009-0-12 STA. 32+33, 58.1' RT LATITUDE = 39.814025 LONGITUDE = -83.184666	01.30	02.80	SS-1	87	-	57	18	8	12	5	18	14	4	7	A-1-b (0)		B-019-0-12 STA. 71+79, 44.9' RT LATITUDE = 39.819603 LONGITUDE = -83.172625	02.00	03.50	SS-1	56	3	28	11	12	27	22	25	16	9	14	A-4a (3)	913			
	02.80	04.30	SS-2	80	-	62	11	8	13	6	21	16	5	10	A-1-b (0)	233		03.50	05.00	SS-2	100	2.25 - 4.5+	25	7	15	36	17	20	13	7	9	A-4a (4)				
	04.30	05.80	SS-3	67	-			SAME AS SS-2					13		A-1-b (VISUAL)				05.00	06.50	SS-3	89	4.5+			SAME AS SS-2					9	A-4a (VISUAL)				
	05.10	05.10	SS-4		-			SAME AS SS-2					12		A-1-b (VISUAL)				06.50	08.00	SS-4	100	4.5+			SAME AS SS-2					9	A-4a (VISUAL)				
	05.80	07.30	SS-5	7	-			SAME AS SS-2					10		A-1-b (VISUAL)																					
	07.30	08.80	SS-6	100	-			SAME AS SS-2					14		A-1-b (VISUAL)																					
B-010-0-12 STA. 36+32, 46.3' LT LATITUDE = 39.814833 LONGITUDE = -83.183636	02.00	03.50	SS-1	67	4.5+	14	9	13	34	30	25	16	9	11	A-4a (6)	193	B-020-0-12 STA. 75+71, 61.3' LT LATITUDE = 39.820405 LONGITUDE = -83.171620	02.00	03.50	SS-1	61	-	41	13	13	19	14	24	15	9	12	A-2-4 (0)	413			
	03.50	05.00	SS-2	100	4.5+	12	10	23	26	29	24	13	11	13	A-6a (4)			03.50	05.00	SS-2	83	4.5+	11	10	15	37	27	22	12	10	10	A-4a (6)				
	05.00	06.50	SS-3	100	4.25 - 4.5+	16	10	13	32	29	24	14	10	13	A-4a (5)				05.00	06.50	SS-3	100	4.5+			SAME AS SS-2					10	A-4a (VISUAL)				
	06.50	08.00	SS-4	100	4.5			SAME AS SS-3					13		A-4a (VISUAL)				06.50	08.00	SS-4	100	3.25 - 4.5			SAME AS SS-2										

SUMMARY OF SOIL TEST DATA

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP †sf	% AGG	% CS	% FS	% SILT	% CLAY	LL	PL	PI	WC	OHIO CLASS (GI)	SO4 ppm	EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP †sf	% AGG	% CS	% FS	% SILT	% CLAY	LL	PL	PI	WC	OHIO CLASS (GI)	SO4 ppm					
B-022-0-12 STA. 85+67, 44.8' LT LATITUDE = 39.821700 LONGITUDE = -83.168480	02.00	03.50	SS-1	67	3.5 - 4.5+	21	11	14	31	23	24	14	10	13	A-4a (4)	993	B-033-0-12 STA. 127+85, 59.7' RT LATITUDE = 39.824792 LONGITUDE = -83.154091	02.00	03.50	SS-1	100	4.5+	19	10	15	32	24	21	13	8	9	A-4a (4)	1220					
	03.50	05.00	SS-2	50	2.5	22	0	16	34	28	24	11	13	13	A-6a (7)			03.50	05.00	SS-2	67	4.5+	12	10	16	39	23	20	13	7	9	A-4a (5)						
	05.00	06.50	SS-3	17	-			SAME AS SS-2								14	A-6a (VISUAL)			05.00	06.50	SS-3	100	4.5+			SAME AS SS-2								10	A-4a (VISUAL)		
	06.50	08.00	SS-4	17	-			SAME AS SS-2								16	A-6a (VISUAL)			06.50	08.00	SS-4	100	4.5+			SAME AS SS-2								9	A-4a (VISUAL)		
B-023-0-12 STA. 87+83, 43.8' RT LATITUDE = 39.821744 LONGITUDE = -83.167654	02.00	03.50	SS-1	67	4.5+	19	11	15	32	23	22	14	8	12	A-4a (4)	847	B-034-0-12 STA. 131+73, 48.4' LT LATITUDE = 39.825202 LONGITUDE = -83.152759	02.00	03.50	SS-1	53	4.5+	39	8	11	24	18	25	15	10	11	A-4a (1)	3347					
	03.50	05.00	SS-2	0	-			SAME AS SS-1									A-4a (VISUAL)			03.50	05.00	SS-2	93	4.5+	10	0	12	52	26	21	12	9	9	A-4b (8)				
	05.00	06.50	SS-3	100	1.5 - 2.0	13	10	20	33	24	21	11	10	12	A-4a (4)			05.00	06.50	SS-3	73	4.5+			SAME AS SS-2								10	A-4b (VISUAL)				
	06.50	08.00	SS-4	100	-			SAME AS SS-3								11	A-4a (VISUAL)			06.50	08.00	SS-4	100	4.5+			SAME AS SS-2								10	A-4b (VISUAL)		
B-024-0-12 STA. 91+76, 60.8' LT LATITUDE = 39.822459 LONGITUDE = -83.166541	02.00	03.50	SS-1	67	4.5+	19	11	15	32	23	22	14	8	9	A-4a (4)	3240	B-035-0-12 STA. 135+66, 45.6' RT LATITUDE = 39.825027 LONGITUDE = -83.151338	02.00	03.50	SS-1	72	4.5+	17	10	17	34	22	19	13	6	9	A-4a (4)	953					
	03.50	05.00	SS-2	67	4.5+	15	11	16	34	24	20	13	7	9	A-4a (5)			03.50	05.00	SS-2	83	4.5+	14	11	16	35	24	21	14	7	9	A-4a (5)						
	05.00	06.50	SS-3	50	-			SAME AS SS-2								10	A-4a (VISUAL)			05.00	06.50	SS-3	89	4.5+			SAME AS SS-2								10	A-4a (VISUAL)		
	06.50	08.00	SS-4	89	4.5+			SAME AS SS-2								9	A-4a (VISUAL)			06.50	08.00	SS-4	100	4.5+			SAME AS SS-2								10	A-4a (VISUAL)		
B-025-0-12 STA. 95+69, 61.8' RT LATITUDE = 39.822573 LONGITUDE = -83.165080	02.00	03.50	SS-1	80	4	16	11	16	31	26	24	14	10	13	A-4a (4)	1220	B-036-0-12 STA. 139+59, 60.9' LT LATITUDE = 39.825368 LONGITUDE = -83.149957	02.00	03.50	SS-1	67	4.5+	10	8	13	35	34	29	16	13	18	A-6a (8)	1087					
	03.50	05.00	SS-2	93	2.5	11	11	16	37	25	21	13	8	9	A-4a (5)			03.50	05.00	SS-2	100	4.0 - 4.5+	14	10	14	34	28	23	13	10	13	A-4a (5)						
	05.00	06.50	SS-3	67	4.5+			SAME AS SS-2								13	A-4a (VISUAL)			05.00	06.50	SS-3	6	-			SAME AS SS-2								13	A-4a (VISUAL)		
	06.50	08.00	SS-4	100	1.5 - 4.5+			SAME AS SS-2								10	A-4a (VISUAL)			06.50	08.00	SS-4	100	2.0 - 3.5			SAME AS SS-2								12	A-4a (VISUAL)		
B-026-0-12 STA. 99+63, 46.4' LT LATITUDE = 39.823241 LONGITUDE = -83.163914	02.00	03.50	SS-1	61	3.5 - 4.0	20	11	16	32	21	21	14	7	10	A-4a (4)	3107	B-037-0-12 STA. 143+51, 61.0' RT LATITUDE = 39.825047 LONGITUDE = -83.148557	02.00	03.50	SS-1	73	4.5+	10	11	16	37	26	23	14	9	10	A-4a (6)	2880					
	03.50	05.00	SS-2	83	4.5+	20	0	17	40	23	21	11	10	10	A-4a (6)			03.50	05.00	SS-2	100	4.5+	15	9	14	36	26	24	15	9	9	A-4a (5)						
	05.00	06.50	SS-3	100	4.5+			SAME AS SS-2								8	A-4a (VISUAL)			05.00	06.50	SS-3	73	2.5			SAME AS SS-2								13	A-4a (VISUAL)		
	06.50	08.00	SS-4	72	4.5+			SAME AS SS-2								9	A-4a (VISUAL)			06.50	08.00	SS-4	73	4.5+			SAME AS SS-2								14	A-4a (VISUAL)		
B-027-0-12 STA. 103+57, 45.7' RT LATITUDE = 39.823361 LONGITUDE = -83.162481	02.00	03.50	SS-1	67	4.5+	23	10	15	31	21	21	14	7	11	A-4a (3)	2040	B-038-0-12 STA. 147+41, 47.5' LT LATITUDE = 39.825324 LONGITUDE = -83.147162	02.00	03.50	SS-1	93	4.5+	16	10	15	34	25	23	14	9	10	A-4a (5)	1827					
	03.50	05.00	SS-2	100	1.5 - 2.0	15	8	11	53	13	21	14	7	11	A-4b (6)			03.50	05.00	SS-2	80	4.5+	18	0	16	40	26	22	13	9	8	A-4a (6)						
	05.00	06.50	SS-3	100	3.5 - 4.5+			SAME AS SS-2								9	A-4b (VISUAL)			05.00	06.50	SS-3	80	4.5+			SAME AS SS-2								9	A-4a (VISUAL)		
	06.50	08.00	SS-4	67	3.5			SAME AS SS-2								11	A-4b (VISUAL)			06.50	08.00	SS-4	100	4.5+			SAME AS SS-2								10	A-4a (VISUAL)		
B-028-0-12 STA. 107+50, 61.4' LT LATITUDE = 39.823967 LONGITUDE = -83.161262	02.00	03.50	SS-1	17	-	49	9	10	18	14	24	15	9	14	A-2-4 (0)	1440	B-039-0-12 STA. 151+35, 45.8' RT LATITUDE = 39.825013 LONGITUDE = -83.145776	02.00	03.50	SS-1	83	4.5+	15	10	16	33	26	22	13	9	9	A-4a (5)	2667					
	03.50	05.00	SS-2	67	4.5+	18	12	16	33	21	21	13	8	10	A-4a (4)			03.50	05.00	SS-2	56	4.0 - 4.5	27	11	13	30	19	21	14	7	10	A-4a (3)						
	05.00	06.50	SS-3	83	4.5+			SAME AS SS-2								10	A-4a (VISUAL)			05.00	06.50	SS-3	78	4.5+			SAME AS SS-2								8	A-4a (VISUAL)		
	06.50	08.00	SS-4	100	4.5+			SAME AS SS-2								11	A-4a (VISUAL)			06.50	08.00	SS-4	100	4.5+			SAME AS SS-2								8	A-4a (VISUAL)		
	08.00	09.50		89	4.5+			SAME AS SS-2								9	A-4a (VISUAL)																					
B-029-0-12 STA. 111+42, 60.8' RT LATITUDE = 39.809591 LONGITUDE = -83.159799	01.50	03.00	SS-1	56	4.5+	16	11	16	33	24	23	14	9	11	A-4a (4)	887	B-040-0-12 STA. 155+29, 59.9' LT LATITUDE = 39.825214 LONGITUDE = -83.144348	02.00	03.50	SS-1	61	4	16	14	14	31	25	26	15	11	12	A-6a (5)	1653					
	03.00	04.50	SS-2	72	3.5 - 4.5+	17	12	15	33	23	21	15	6	10	A-4a (4)			03.50	05.00	SS-2	72	4.5+	26	11	13	29	21	21	13	8	10	A-4a (3)						
	04.50	06.00	SS-3	100	4.5+			SAME AS SS-2								9	A-4a (VISUAL)			05.00	06.50	SS-3	100	4.5+			SAME AS SS-2								11	A-4a (VISUAL)		
	06.00	07.50	SS-4	67	4.0 - 4.5+			SAME AS SS-2								10	A-4a (VISUAL)			06.50	08.00	SS-4	100	3.5 - 4.5+			SAME AS SS-2								10	A-4a (VISUAL)		
B-030-0-12 STA. 115+35, 48.4' LT LATITUDE = 39.824485 LONGITUDE = -83.158537	02.00	03.50	SS-1	87	3.25	12	11	18	36	23	21	14	7	11	A-4a (5)	2813	B-041-0-12 STA. 159+45, 61.6' RT LATITUDE = 39.824780 LONGITUDE = -83.142912	02.00	03.50	SS-1	72	4.5+	20	10	14	31	25	23	14	9	11	A-4a (4)	2467					
	03.50	05.00	SS-2	47	4.5+	13	0	18	44	25	22	13	9	10	A-4a (7)			03.50	05.00	SS-2	67	4.5+	14	12	15	35	24	21	12	9	9	A-4a (5)						
	05.00	06.50	SS-3	73	4.5+			SAME AS SS-2								9	A-4a (VISUAL)			05.00	06.50	SS-3	11	-			SAME AS SS-2								4	A-4a (VISUAL)		
	06.50	08.00	SS-4	93	4.5+			SAME AS SS-2								9	A-4a (VISUAL)			06.50	08.00	SS-4	11	-			SAME AS SS-2								10	A-4a (VISUAL)		
B-031-0-12 STA. 119+25, 45.5' RT LATITUDE = 39.824457 LONGITUDE = -83.157109	02.00	03.50	SS-1	100	4.5+	16	11	16	35	22	20	13	7	10	A-4a (4)	620	B-042-0-12 STA. 162+84, 45.9' LT LATITUDE = 39.824992 LONGITUDE = -83.141675	02.00	03.50	SS-1	53	1.5	26	8	13	30	23	25	14	11	12	A-6a (4)	1073					
	03.50	05.00	SS-2	100	4.0 - 4.5	15	11	26	25	23	21	10	11	11	A-6a (3)			03.50	05.00	SS-2	87	4.25 - 4.5+	11	0	18	44	27	22	14	8	10	A-4a (7)						
	05.00	06.50	SS-3	100	3.0 - 3.75	16	11	15	33	25	21	11	10	11	A-4a (5)			05.00	06.50	SS-3	100	4.5+			SAME AS SS-2								9	A-4a (VISUAL)				
	06.50	08.00	SS-4	100	-			SAME AS SS-3								12	A-4a (VISUAL)			06.50	08.00	SS-4	100	3.25 - 4.5+			SAME AS SS-2								8	A-4a (VISUAL)		
B-032-0-12 STA. 123+19, 61.7' LT LATITUDE = 39.824938 LONGITUDE = -83.155795	02.00	03.50	SS-1	83	4.5+	15	10	16	35	24	20	13	7	10	A-4a (5)	1000	B-043-0-12 STA. 168+36, 30.9' RT LATITUDE = 39.824647 LONGITUDE = -83.139742	00.50	02.00	SS-1	100	4.5+	7	6	10	35	42	36	17	19	14	A-6b (12)	873					
	0																																					

SUMMARY OF SOIL TEST DATA

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP t _{sf}	% AGG	% CS	% FS	% SILT	% CLAY	LL	PL	PI	WC	OHIO CLASS (GI)	SO4 ppm	EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP t _{sf}	% AGG	% CS	% FS	% SILT	% CLAY	LL	PL	PI	WC	OHIO CLASS (GI)	SO4 ppm
B-044-0-12 STA. 172+32, 46.0' LT LATITUDE = 39.824760 LONGITUDE = -83.138315	02.00	03.50	SS-1	78	2.5 - 4.0	10	5	9	32	44	41	18	23	19	A-7-6 (13)	<100	B-055-0-12 STA. 215+54, 32.9' RT LATITUDE = 39.826313 LONGITUDE = -83.123228	00.50	02.00	SS-1	100	4.5+	20	10	13	32	25	25	15	10	8	A-4a (4)	4747
	03.50	05.00	SS-2	72	3.0 - 4.5+	13	0	12	39	36	34	16	18	18	A-6b (11)			02.00	03.50	SS-2	100	4.5+	12	13	15	35	25	23	15	8	9	A-4a (5)	
	05.00	06.50	SS-3	61	3.5	31	0	9	32	28	36	15	21	19	A-6b (9)			03.50	05.00	SS-3	100	4.5	21	6	9	31	33	37	16	21	20	A-6b (10)	
	06.50	08.00	SS-4	100	3.5 - 4.0									23	A-6b (VISUAL)			05.00	06.50	SS-4	100	3.0 - 4.5+	-	-	SAME AS SS-3	-	-	-	24	A-6b (VISUAL)			
B-045-0-12 STA. 176+26, 32.6' LT LATITUDE = 39.824641 LONGITUDE = -83.136923	00.50	02.00	SS-1	100	4.5+	12	4	8	31	45	43	17	26	16	A-7-6 (15)	200	B-056-0-12 STA. 219+48, 62.2' LT LATITUDE = 39.826972 LONGITUDE = -83.122066	02.00	03.50	SS-1	100	4.5+	13	10	17	36	24	21	14	7	9	A-4a (5)	2840
	02.00	03.50	SS-2	83	4.5+	14	3	8	28	47	48	19	29	14	A-7-6 (17)			03.50	05.00	SS-2	78	4.5+	20	11	13	31	25	22	13	9	9	A-4a (4)	
	03.50	05.00	SS-3	100	3.25	8	6	9	29	48	43	19	24	21	A-7-6 (14)			05.00	06.50	SS-3	100	4.5+	-	-	SAME AS SS-2	-	-	-	9	A-4a (VISUAL)			
	05.00	06.50	SS-4	78	3.75 - 4.0									20	A-7-6 (VISUAL)			06.50	08.00	SS-4	89	3.0 - 4.5	-	-	SAME AS SS-2	-	-	-	16	A-4a (VISUAL)			
B-046-0-12 STA. 180+19, 46.4' RT LATITUDE = 39.824390 LONGITUDE = -83.135534	02.00	03.50	SS-1	89	2.5 - 4.5	10	8	11	34	37	33	17	16	17	A-6b (10)	<100	B-057-0-12 STA. 223+38, 33.0' LT LATITUDE = 39.827312 LONGITUDE = -83.120746	00.50	02.00	SS-1	100	4.5+	14	8	13	36	29	29	17	12	13	A-6a (7)	8427
	03.50	05.00	SS-2	83	2.0 - 3.5	6	4	8	38	44	42	17	25	24	A-7-6 (14)			02.00	03.50	SS-2	100	4.5+	13	11	15	36	25	23	14	9	10	A-4a (5)	
	05.00	06.50	SS-3	100	2.0 - 3.0									24	A-7-6 (VISUAL)			03.50	05.00	SS-3	78	4.5+	-	-	SAME AS SS-2	-	-	-	12	A-4a (VISUAL)			
	06.50	08.00	SS-4	100	4.5+									23	A-7-6 (VISUAL)			05.00	06.50	SS-4	100	2.5 - 3.0	-	-	SAME AS SS-2	-	-	-	20	A-4a (VISUAL)			
B-047-0-12 STA. 184+12, 31.8' RT LATITUDE = 39.824445 LONGITUDE = -83.134128	00.50	02.00	SS-1	100	4.5+	23	11	14	30	22	23	14	9	9	A-4a (3)	5813	B-058-0-12 STA. 227+11, 62.1' RT LATITUDE = 39.827468 LONGITUDE = -83.119388	02.00	03.50	SS-1	67	4.5+	16	11	16	32	25	23	14	9	12	A-4a (4)	787
	02.00	03.50	SS-2	83	4.5+	15	9	17	37	22	22	13	9	9	A-4a (5)			03.50	05.00	SS-2	87	2.75	11	9	14	36	30	26	13	13	13	A-6a (7)	
	03.50	05.00	SS-3	67	4.5+									10	A-4a (VISUAL)			05.00	06.50	SS-3	80	2	-	-	SAME AS SS-2	-	-	-	12	A-6a (VISUAL)			
	05.00	06.50	SS-4	89	4.0 - 4.5+									17	A-4a (VISUAL)			06.50	08.00	SS-4	93	4.5+	-	-	SAME AS SS-2	-	-	-	19	A-6a (VISUAL)			
B-048-0-12 STA. 188+07, 64.4' LT LATITUDE = 39.824772 LONGITUDE = -83.132749	02.00	03.50	SS-1	67	4.0 - 4.5+	14	13	15	36	22	21	15	6	12	A-4a (5)	367	B-059-0-12 STA. 231+29, 32.2' RT LATITUDE = 39.827986 LONGITUDE = -83.118059	00.50	02.00	SS-1	100	3.5	15	10	14	33	28	27	15	12	7	A-6a (6)	2827
	03.50	05.00	SS-2	67	4.5+	23	11	14	30	22	21	11	10	11	A-4a (3)			02.00	03.50	SS-2	83	4.0 - 4.5	16	5	10	28	41	40	18	22	20	A-6b (12)	
	05.00	06.50	SS-3	89	4.5+									10	A-4a (VISUAL)			03.50	05.00	SS-3	94	4.5+	-	-	SAME AS SS-2	-	-	-	14	A-6b (VISUAL)			
	06.50	08.00	SS-4	100	3.25 - 4.5									18	A-4a (VISUAL)			05.00	06.50	SS-4	100	4.5+	-	-	SAME AS SS-2	-	-	-	14	A-6b (VISUAL)			
B-049-0-12 STA. 192+00, 32.2' LT LATITUDE = 39.824797 LONGITUDE = -83.131353	00.50	02.00	SS-1	100	4.5+	14	9	14	35	28	25	15	10	13	A-4a (6)	2507	B-060-0-12 STA. 235+18, 45.9' LT LATITUDE = 39.828597 LONGITUDE = -83.116888	02.00	03.50	SS-1	87	4.5+	12	7	13	34	34	30	16	14	16	A-6a (8)	<100
	02.00	03.50	SS-2	100	4.0 - 4.5+	15	9	13	34	29	28	14	14	16	A-6a (7)			03.50	05.00	SS-2	73	4.5+	8	0	8	51	33	35	15	20	22	A-6b (12)	
	03.50	05.00	SS-3	83	2.0 - 2.5									7	A-6a (VISUAL)			05.00	06.50	SS-3	80	3.5 - 4.5	-	-	SAME AS SS-2	-	-	-	17	A-6b (VISUAL)			
	05.00	06.50	SS-4	100	4.5+									14	A-6a (VISUAL)			06.50	08.00	SS-4	87	4.5+	-	-	SAME AS SS-2	-	-	-	13	A-6b (VISUAL)			
B-050-0-12 STA. 195+92, 61.2' RT LATITUDE = 39.824706 LONGITUDE = -83.129921	02.00	03.50	SS-1	73	4.5+	12	9	15	34	30	24	14	10	10	A-4a (5)	527	B-061-0-12 STA. 239+15, 32.6' LT LATITUDE = 39.828984 LONGITUDE = -83.115568	00.50	02.00	SS-1	100	4.5+	14	9	14	35	28	26	15	11	11	A-6a (6)	6347
	03.50	05.00	SS-2	100	4.5+	11	10	16	38	25	22	13	9	8	A-4a (6)			02.00	03.50	SS-2	100	4.5+	14	9	13	33	31	28	14	14	13	A-6a (7)	
	05.00	06.50	SS-3	87	4.5+									9	A-4a (VISUAL)			03.50	05.00	SS-3	78	4.0 - 4.5+	9	7	12	36	36	35	15	20	17	A-6b (11)	
	06.50	08.00	SS-4	93	4.5+									15	A-4a (VISUAL)			05.00	06.50	SS-4	100	4.0 - 4.5+	-	-	SAME AS SS-3	-	-	-	21	A-6b (VISUAL)			
B-051-0-12 STA. 199+84, 31.9' RT LATITUDE = 39.824996 LONGITUDE = -83.128564	00.50	02.00	SS-1	100	4.5+	9	10	16	36	29	26	15	11	11	A-6a (6)	14027	B-062-0-12 STA. 243+07, 45.6' RT LATITUDE = 39.829203 LONGITUDE = -83.114171	02.00	03.50	SS-1	83	4.0 - 4.5+	21	12	15	32	20	22	14	8	10	A-4a (3)	513
	02.00	03.50	SS-2	100	4.5+	13	12	16	36	23	22	14	8	9	A-4a (5)			03.50	05.00	SS-2	78	4.5+	16	11	14	36	23	23	15	8	12	A-4a (5)	
	03.50	05.00	SS-3	100	4.5+									12	A-4a (VISUAL)			05.00	06.50	SS-3	94	2.5 - 2.75	-	-	SAME AS SS-2	-	-	-	18	A-4a (VISUAL)			
	05.00	06.50	SS-4	100	2.75 - 4.5+									11	A-4a (VISUAL)			06.50	08.00	SS-4	100	3.75 - 4.5	-	-	SAME AS SS-2	-	-	-	17	A-4a (VISUAL)			
B-052-0-12 STA. 203+78, 46.1' LT LATITUDE = 39.825463 LONGITUDE = -83.127271	02.00	03.50	SS-1	67	3.5	21	8	13	31	27	25	15	10	13	A-4a (5)	213	B-063-0-12 STA. 247+07, 32.9' RT LATITUDE = 39.829660 LONGITUDE = -83.112875	00.50	02.00	SS-1	100	4.5+	11	10	15	37	27	29	17	12	8	A-6a (7)	2307
	03.50	05.00	SS-2	100	4.5+	12	0	20	43	25	21	13	8	8	A-4a (7)			02.00	03.50	SS-2	78	4.5+	8	10	13	38	31	28	15	13	16	A-6a (8)	
	05.00	06.50	SS-3	100	2	12	0	14	40	34	28	13	15	14	A-6a (10)			03.50	05.00	SS-3	100	4.0 - 4.5	13	4	9	34	40	40	18	22	22	A-6b (13)	
	06.50	08.00	SS-4	80	2.75									15	A-6a (VISUAL)			05.00	06.50	SS-4	78	3.5 - 4.0	-	-	SAME AS SS-3	-	-	-	22	A-6b (VISUAL)			
B-053-0-12 STA. 207+70, 33.0' LT LATITUDE = 39.825732 LONGITUDE = -83.125925	00.50	02.00	SS-1	100	4.5+	8	6	12	35	39	34	16	18	11	A-6b (11)	2933	B-064-0-12 STA. 251+10, 62.5' LT LATITUDE = 39.830329 LONGITUDE = -83.111683	02.00	03.50	SS-1	39	4.5+	29	12	13	27	19	22	14	8	12	A-4a (2)	427
	02.00	03.50	SS-2	72	4.5+	7	8	11	37	37	36	18	18	11	A-6b (11)			03.50	05.00	SS-2	72	4.5+	23	5	10	30	32	33	15	18	17	A-6b (9)	
	03.50	05.00	SS-3	83	4.5+									8	A-6b (VISUAL)			05.00	06.50	SS-3	89	3	21	11	14	31	23	39	17	22	19	A-6b (8)	
	05.00	06.50	SS																														

SUMMARY OF SOIL TEST DATA

EXPLORATION NO., STATION & OFFSET	FROM TO	SAMPLE ID	% REC	HP tsf	% AGG	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	OHIO CLASS (GI)	SO4 ppm
B-066-0-12	02.00 - 03.50	SS-1	60	4.0 - 4.5+	17	6	12	32	33	31	16	15	18	A-6a (8)	<100
STA. 259+ 09, 61.2' RT	03.50 - 05.00	SS-2	80	4.5+	5	5	12	39	39	34	17	17	21	A-6b (11)	
LATITUDE = 39.830864	05.00 - 06.50	SS-3	87	4.5+	0	3	12	39	46	43	19	24	24	A-7-6 (14)	
LONGITUDE = -83.108890	06.50 - 08.00	SS-4	93	3			SAME AS SS-3						22	A-7-6 (VISUAL)	
B-067-0-12	00.50 - 02.00	SS-1	100	4.5+	6	3	10	34	47	41	18	23	17	A-7-6 (13)	<100
STA. 263+09, 33.2' RT	02.00 - 03.50	SS-2	100	4.5+	7	6	13	42	32	30	17	13	7	A-6a (9)	
LATITUDE = 39.831359	03.50 - 05.00	SS-3	100	3.5 - 4.5	3	5	11	42	39	38	18	20	16	A-6b (12)	
LONGITUDE = -83.107615	05.00 - 06.50	SS-4	100	3.5			SAME AS SS-3						23	A-6b (VISUAL)	
B-068-0-12	02.00 - 03.50	SS-1	72	3	11	6	12	34	37	32	16	16	21	A-6b (10)	220
STA. 267+10, 46.5' LT	03.50 - 05.00	SS-2	89	3.5 - 4.0	5	0	9	47	39	30	16	14	22	A-6a (10)	
LATITUDE = 39.831987	05.00 - 06.50	SS-3	100	3.5 - 4.0			SAME AS SS-2						26	A-6a (VISUAL)	
LONGITUDE = -83.106407	06.50 - 08.00	SS-4	100	4.0 - 4.5			SAME AS SS-2						16	A-6a (VISUAL)	
B-069-0-12	00.50 - 02.00	SS-1	100	4.5	20	10	13	31	26	25	16	9	7	A-4a (4)	<100
STA 271+11, 32.6' LT	02.00 - 03.50	SS-2	100	4.5+	8	6	12	34	40	34	17	17	18	A-6b (11)	
LATITUDE = 39.832377	03.50 - 05.00	SS-3	94	4	3	4	10	35	48	40	17	23	21	A-6b (13)	
LONGITUDE = -83.105070	05.00 - 06.50	SS-4	100	4.25			SAME AS SS-3						18	A-6b (VISUAL)	
B-070-0-12	02.00 - 03.50	SS-1	89	4.5+	11	9	14	36	30	25	14	11	10	A-6a (7)	<100
STA 275+11, 45.1' RT	03.50 - 05.00	SS-2	72	4.5+	23	9	12	33	23	25	15	10	21	A-4a (4)	
LATITUDE = 39.832604	05.00 - 06.50	SS-3	100	1.5 - 3.5	8	5	10	37	40	39	17	22	17	A-6b (13)	
LONGITUDE = -83.103652	06.50 - 08.00	SS-4	100	-			SAME AS SS-3						28	A-6b (VISUAL)	

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SOIL PROFILE
SUMMARY OF SOIL TEST DATA

FRA - 71 - 00.00



Unconfined Compressive Strength of Rock Core

(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

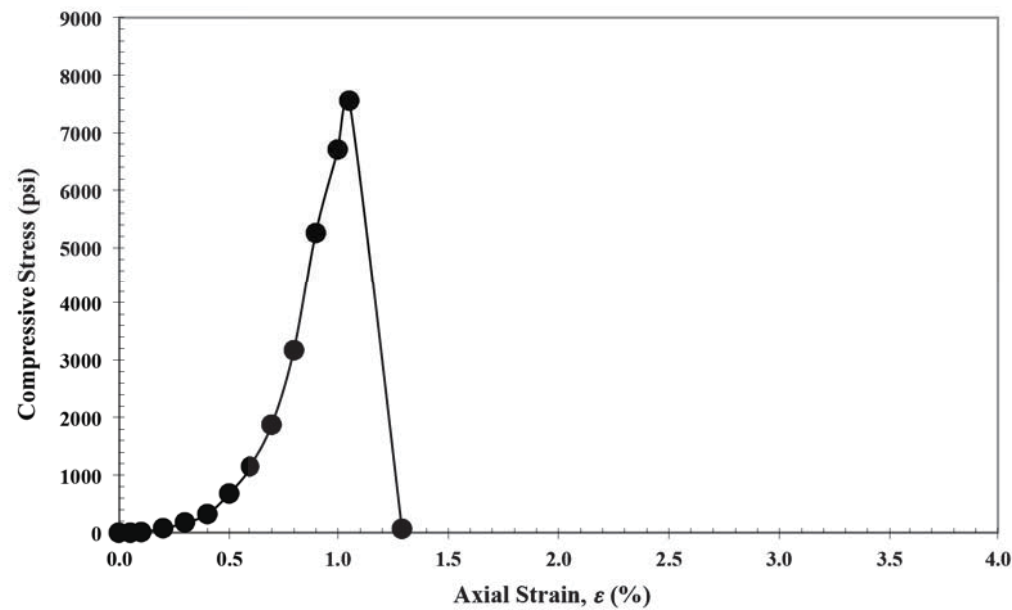
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.18
Area, A (in ²):	3.03
Volume, V (in ³):	12.69
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	0.5
Dry Mass of Specimen (lb):	1.2
Wet Unit Weight, γ (lb/ft ³):	161.0
Dry Unit Weight, γ_d (lb/ft ³):	160.2

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **7558**
Strain (%): **1.1**



Notes: Stong, light gray LIMESTONE

Unconfined Compressive Strength of Rock Core

(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

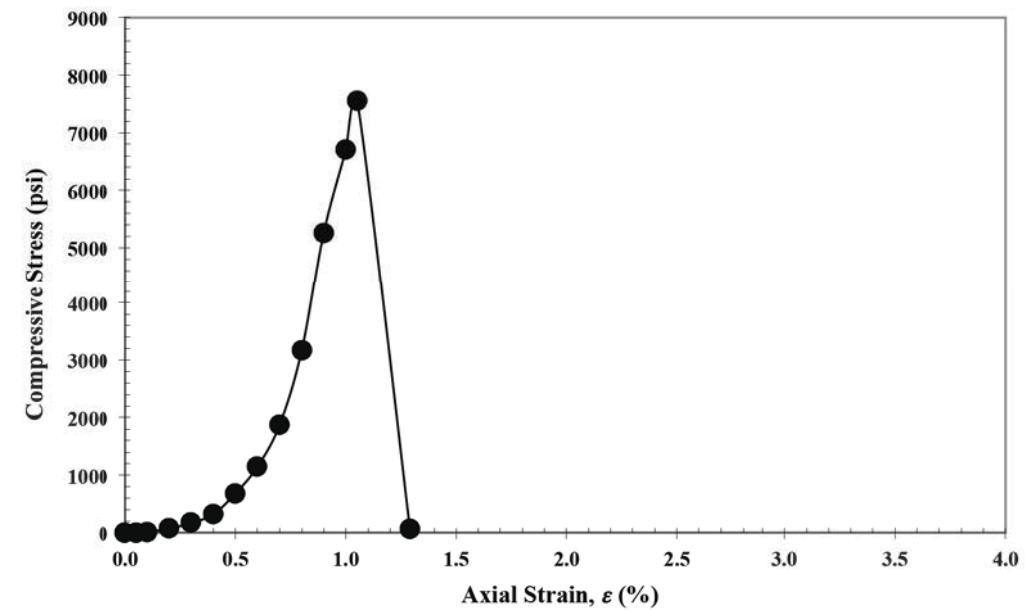
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.18
Area, A (in ²):	3.03
Volume, V (in ³):	12.69
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	0.5
Dry Mass of Specimen (lb):	1.2
Wet Unit Weight, γ (lb/ft ³):	161.0
Dry Unit Weight, γ_d (lb/ft ³):	160.2

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **7558**
Strain (%): **1.1**



Notes: Stong, light gray LIMESTONE



Unconfined Compressive Strength of Rock Core

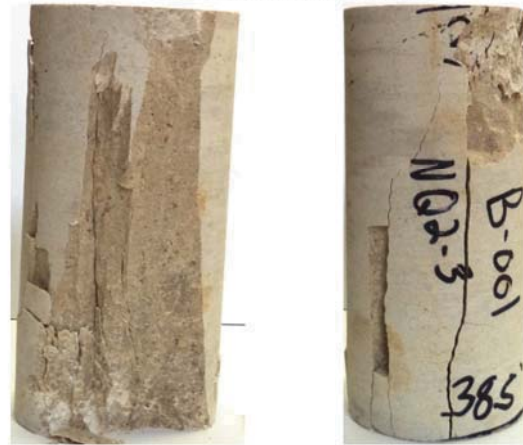
(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

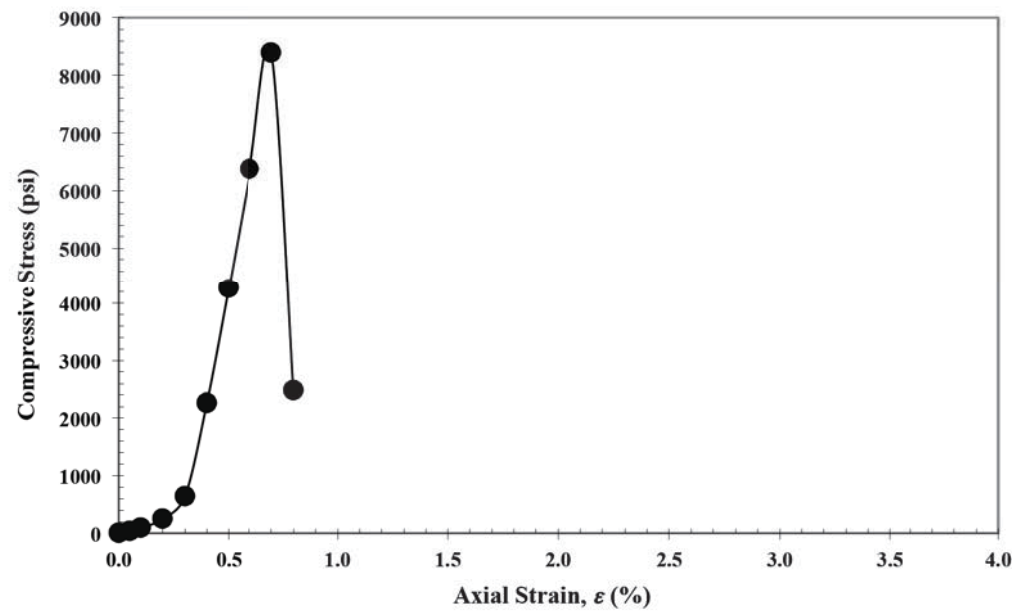
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.75
Area, A (in ²):	3.04
Volume, V (in ³):	14.44
Wet Mass of Specimen (lb):	1.4
Moisture Content (%):	0.4
Dry Mass of Specimen (lb):	1.4
Wet Unit Weight, γ (lb/ft ³):	166.4
Dry Unit Weight, γ_d (lb/ft ³):	165.7

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **8396**
Strain (%): **0.8**



Notes: Strong, light gray, LIMESTONE

Unconfined Compressive Strength of Rock Core

(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

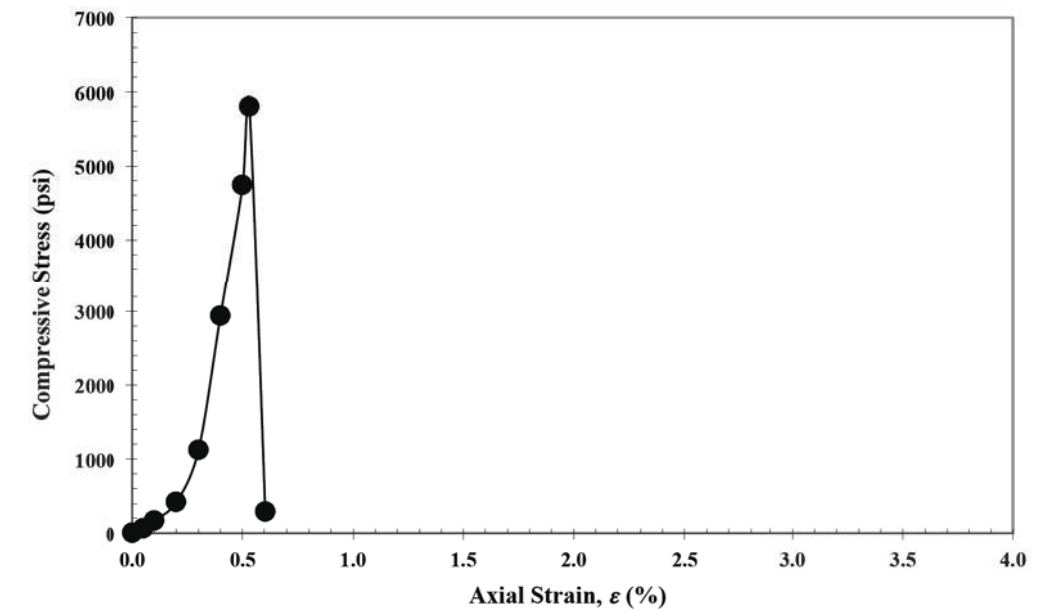
Average Dia., D_{avg} (in):	1.96
Average Height, H_{avg} (in):	4.15
Area, A (in ²):	3.02
Volume, V (in ³):	12.54
Wet Mass of Specimen (lb):	1.1
Moisture Content (%):	9.2
Dry Mass of Specimen (lb):	1.0
Wet Unit Weight, γ (lb/ft ³):	147.7
Dry Unit Weight, γ_d (lb/ft ³):	135.3

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **5803**
Strain (%): **0.5**



Notes: Moderately strong, grayish brown, SILTSTONE



Unconfined Compressive Strength of Rock Core

(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

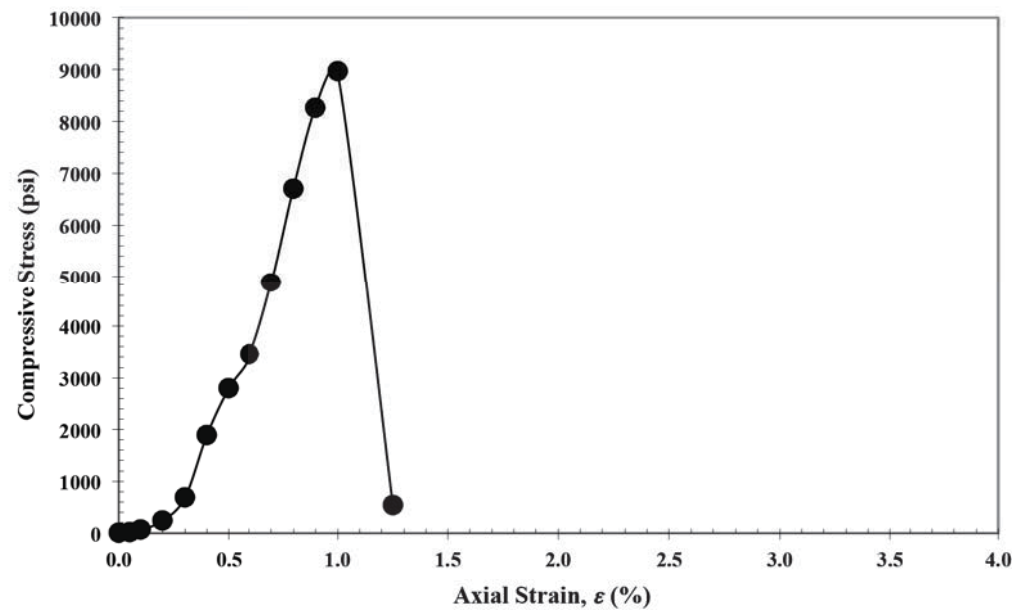
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.16
Area, A (in ²):	3.04
Volume, V (in ³):	12.64
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	4.1
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft ³):	157.9
Dry Unit Weight, γ_d (lb/ft ³):	151.7

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **8960**
Strain (%): **1.0**



Notes: Strong, grayish brown, DOLOMITE

Unconfined Compressive Strength of Rock Core

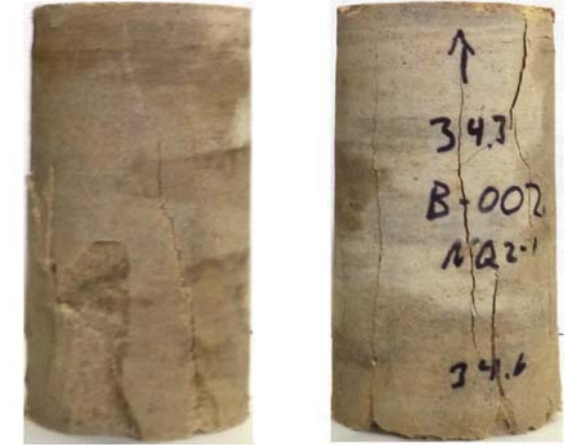
(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

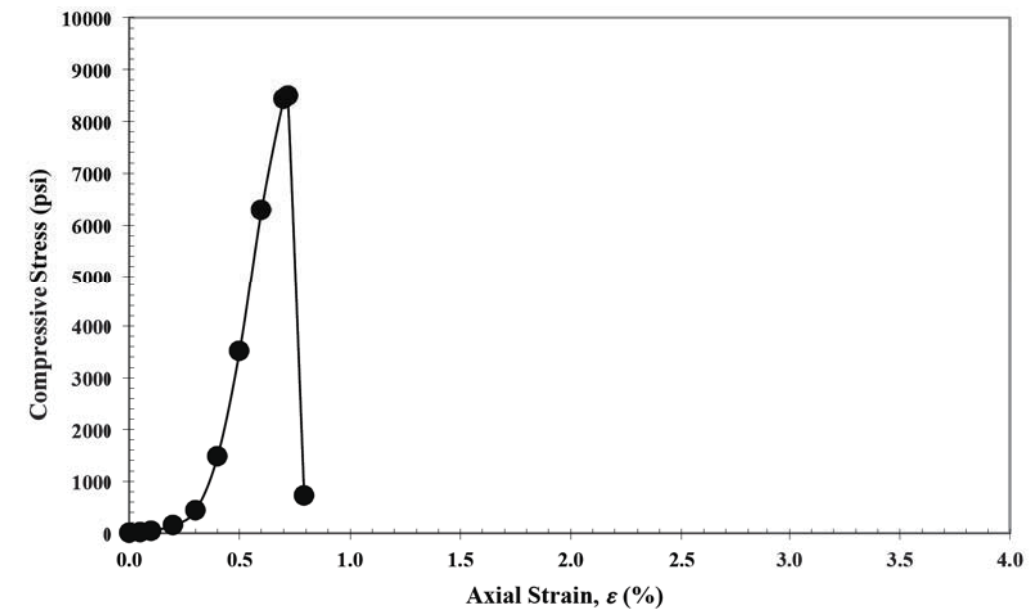
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.04
Area, A (in ²):	3.04
Volume, V (in ³):	12.26
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	1.8
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft ³):	162.2
Dry Unit Weight, γ_d (lb/ft ³):	159.3

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **8491**
Strain (%): **0.7**



Notes: Strong, light grayish brown, LIMESTONE



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Unconfined Compressive Strength of Rock Core

(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

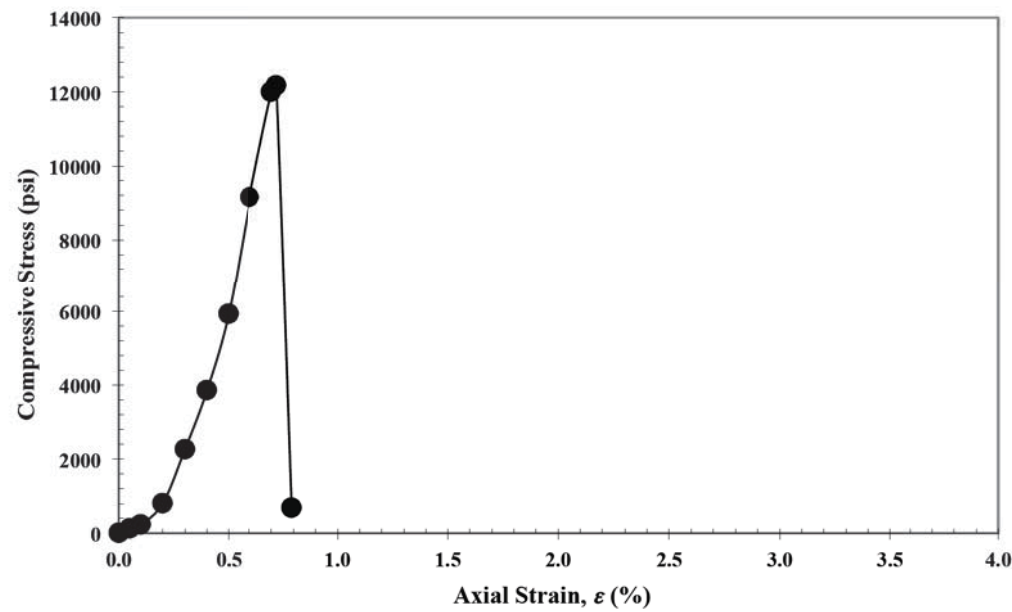
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.29
Area, A (in ²):	3.05
Volume, V (in ³):	13.08
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	0.9
Dry Mass of Specimen (lb):	1.2
Wet Unit Weight, γ (lb/ft ³):	164.2
Dry Unit Weight, γ_d (lb/ft ³):	162.7

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): 12175
Strain (%): 0.7



Notes: Strong, light gray, LIMESTONE

Unconfined Compressive Strength of Rock Core

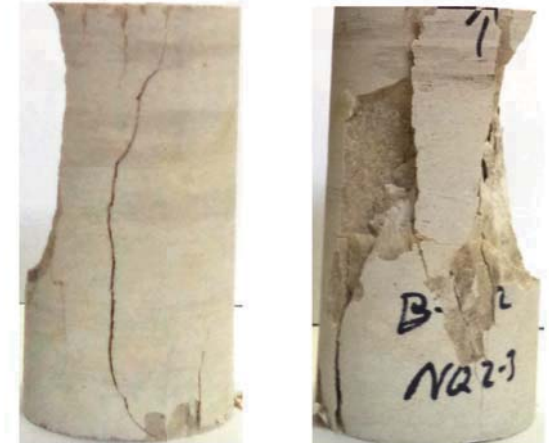
(Project: FRA-71-0.00, Boring Location: B-021-1-14, NQ2-1, Depth: 31.8 - 32.1 ft)

Tested Date: 4/22/14

Specimen Properties

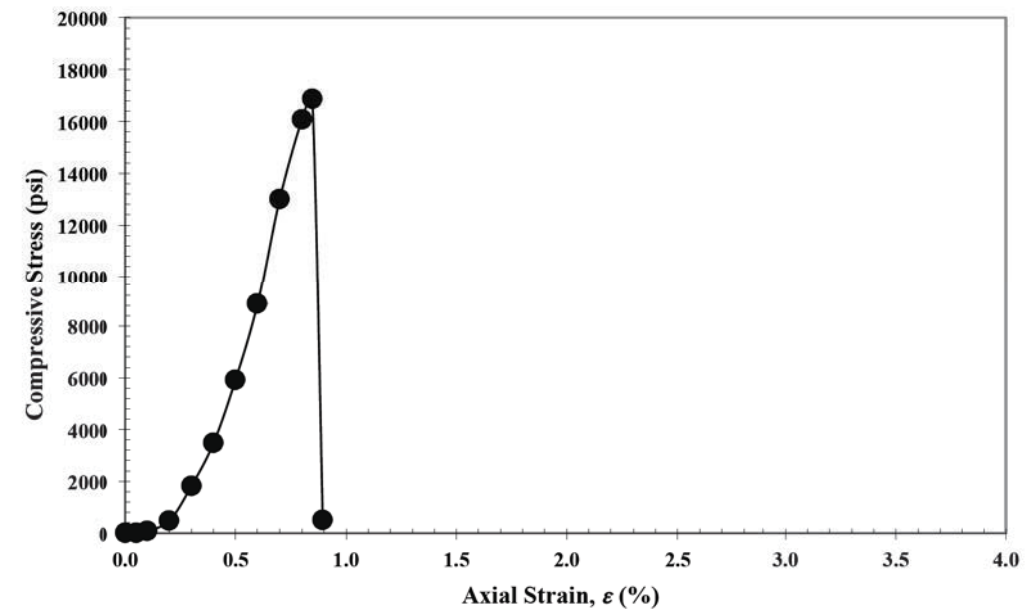
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.25
Area, A (in ²):	3.04
Volume, V (in ³):	12.89
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	0.7
Dry Mass of Specimen (lb):	1.2
Wet Unit Weight, γ (lb/ft ³):	166.5
Dry Unit Weight, γ_d (lb/ft ³):	165.4

Final Specimen Figure



Results

Unconfined Compressive Strength (psi): 16868
Strain (%): 0.9



Notes: Very strong, light gray, LIMESTONE

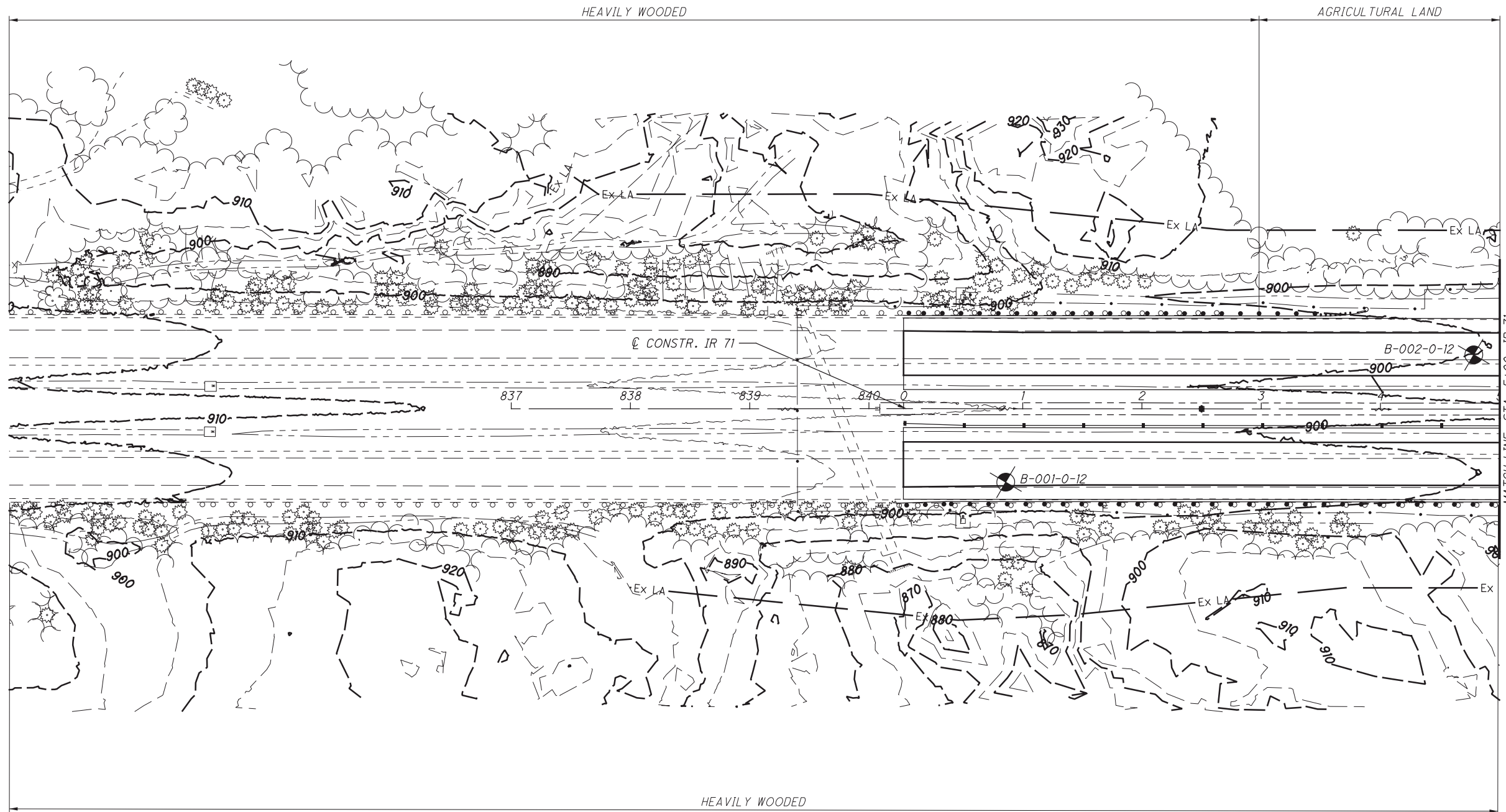


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BORING ID	PROFILE (SEE SHEET)
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B-002-0-12	13



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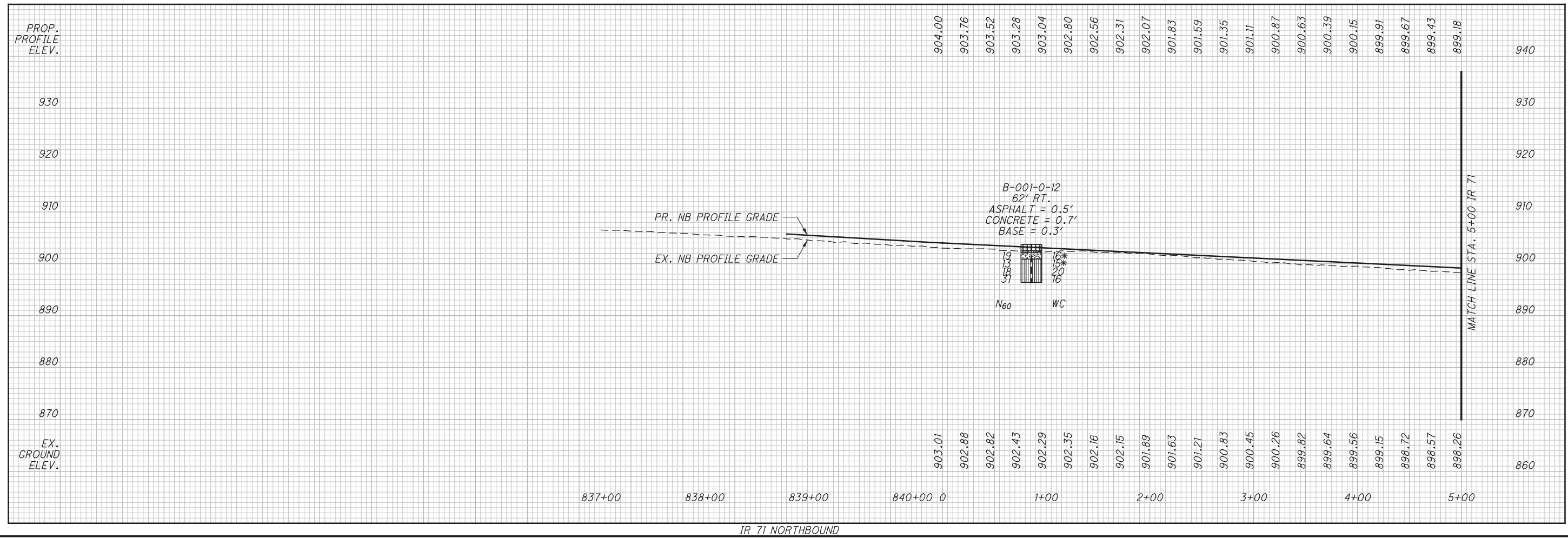
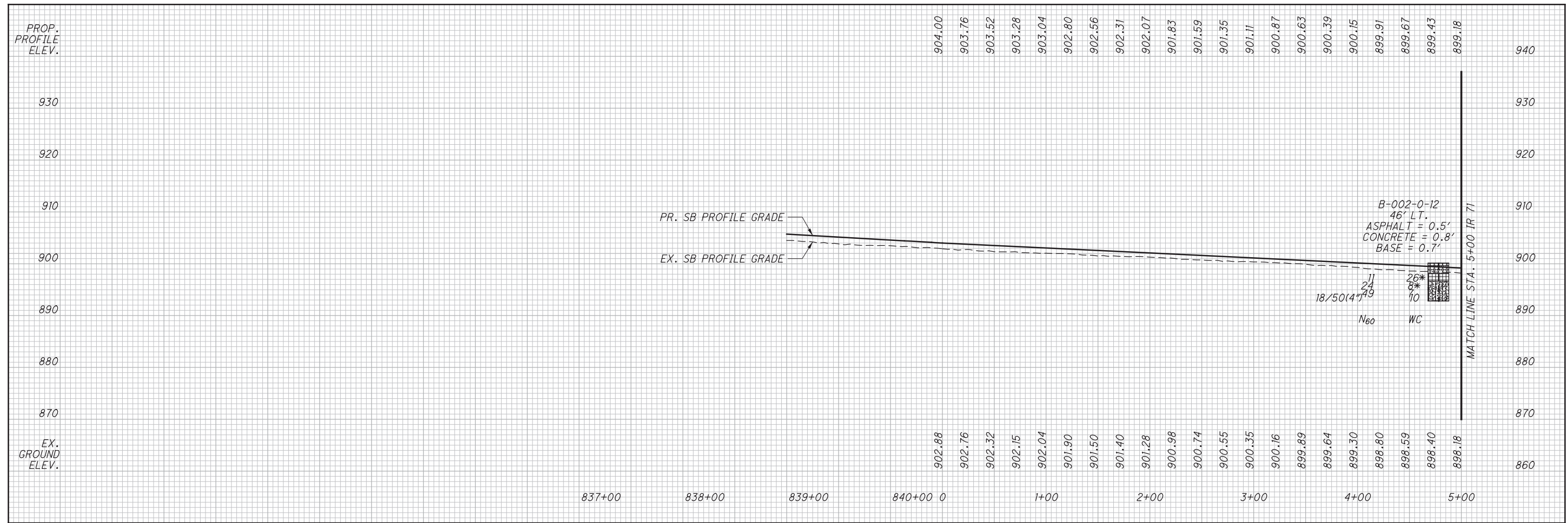


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FRA-71-0.00

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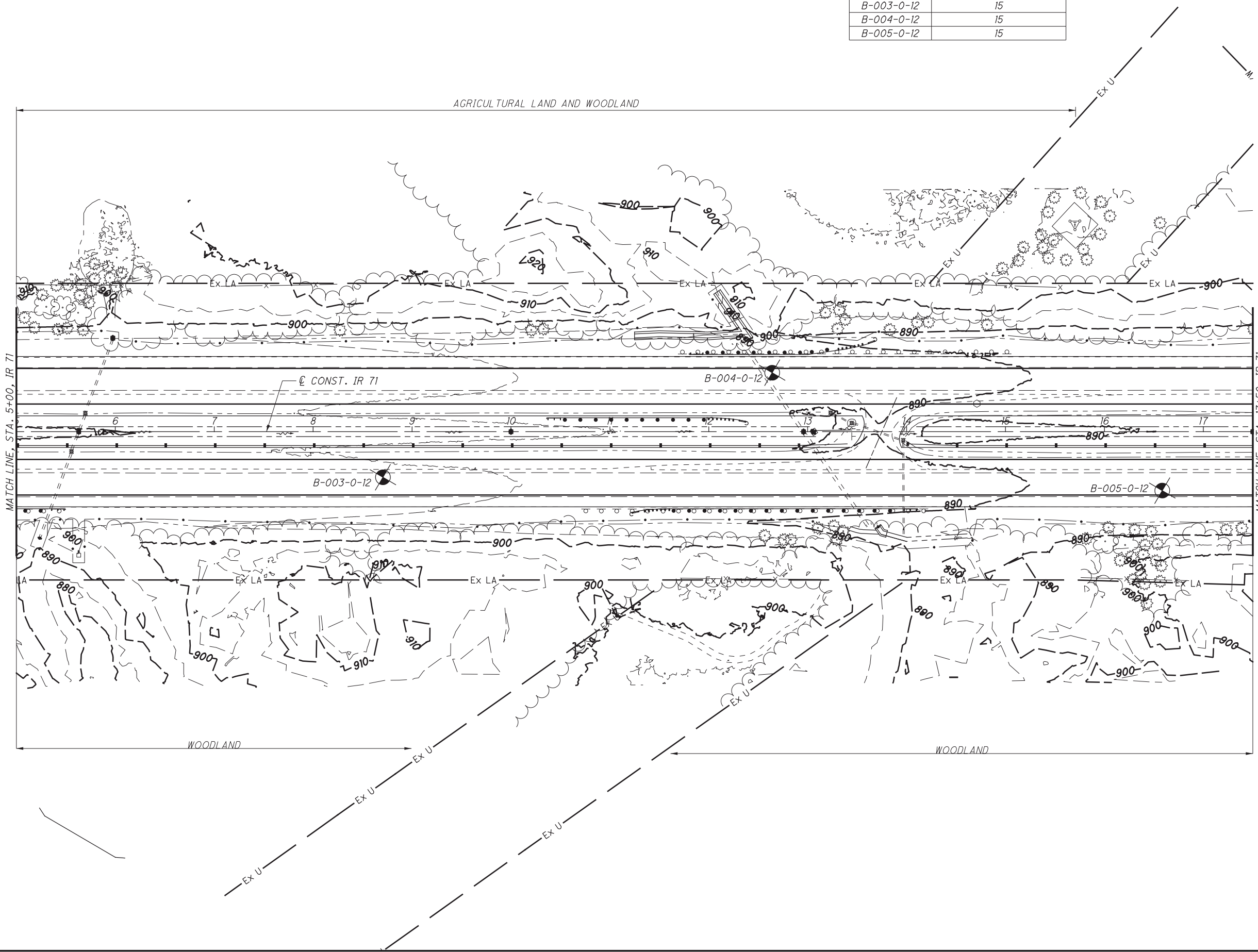
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BORING ID	PROFILE (SEE SHEET)
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B-004-0-12	15
B-005-0-12	15







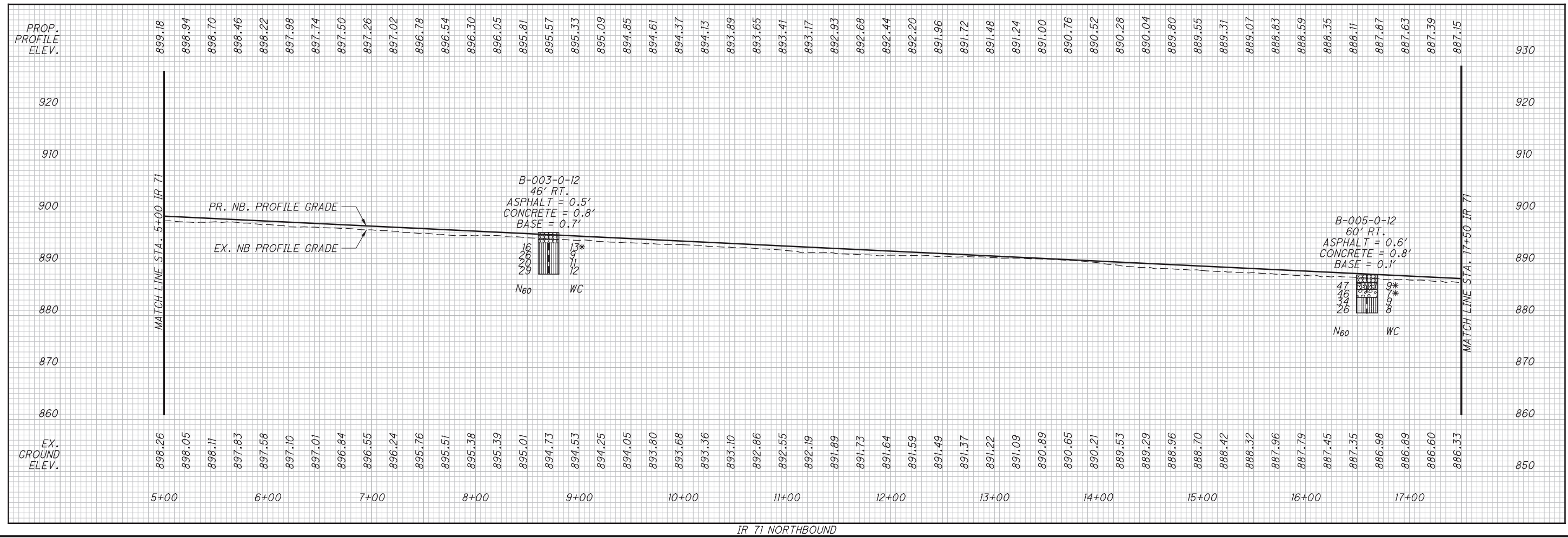
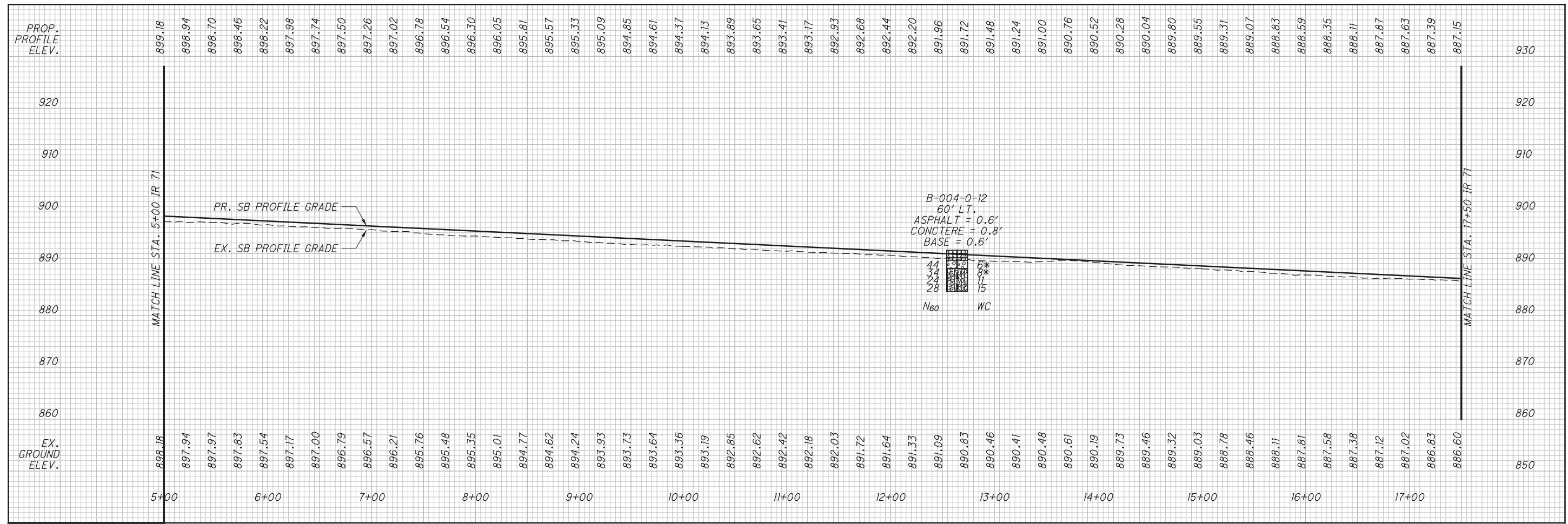
 HORIZONTAL SCALE IN FEET

DRAWN KA
 CHECKED LE

PROFILE - IR 71
STA. 5+00 TO STA. 17+50

FRA-71-0.00





DRAWN KA
CHECKED LE

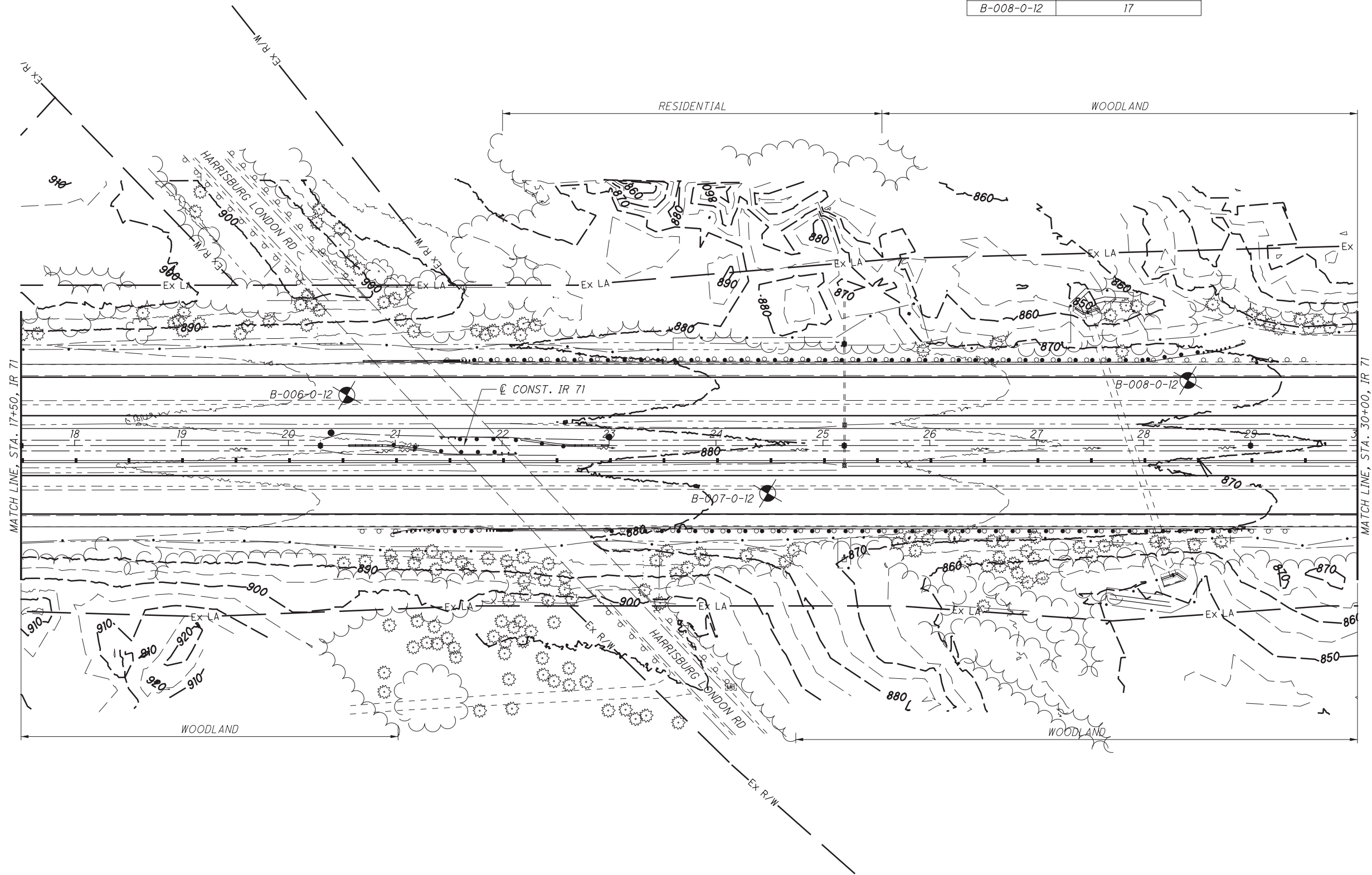
**SOIL PROFILE - IR 71
STA. 5+00 TO STA. 17+50**

FRA-71-0.00



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BORING PROFILE LOCATION REFERENCE	
STA. 17+50 TO STA. 30+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-006-0-12	17
B-007-0-12	17
B-008-0-12	17







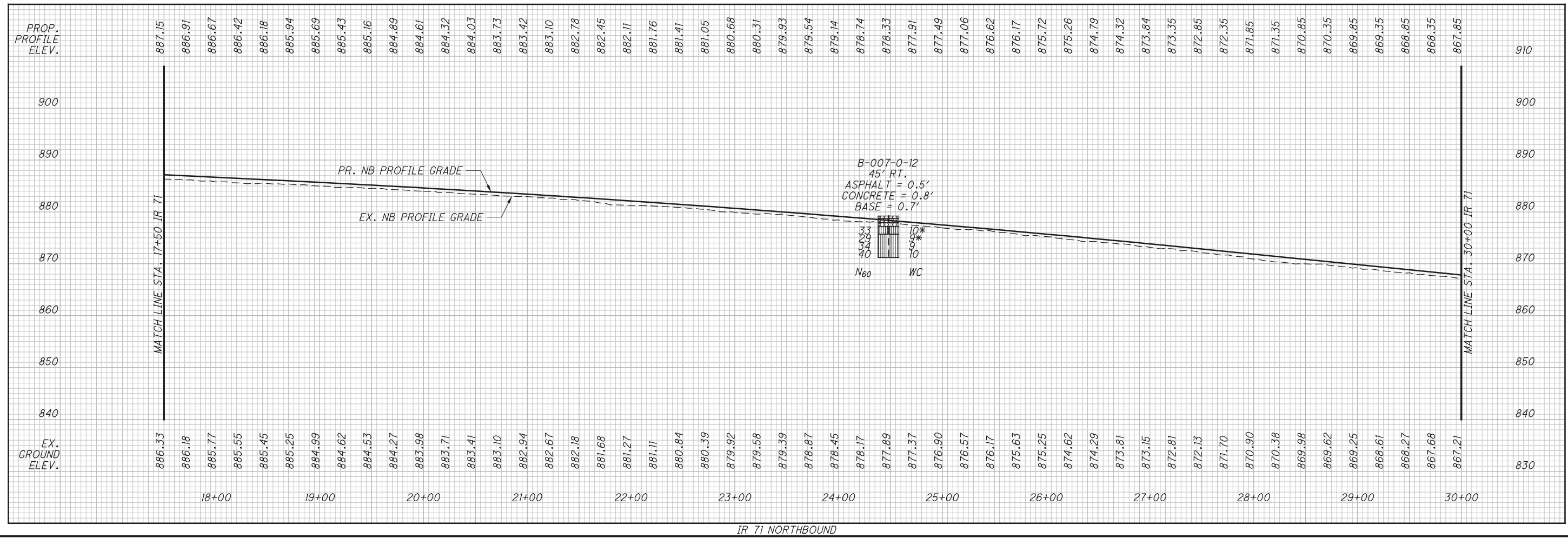
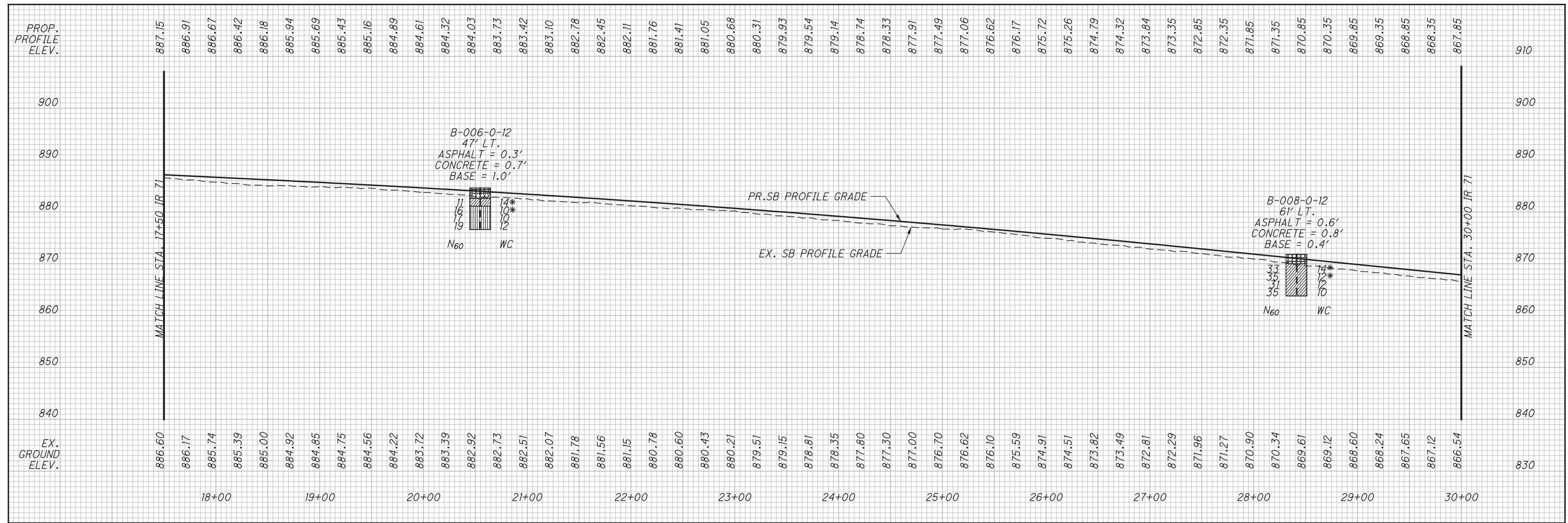
 HORIZONTAL SCALE IN FEET

DRAWN KA
 CHECKED LE

PROFILE - IR 71
STA. 17+50 TO STA. 30+00

FRA-71-0.00





DRAWN KA
 CHECKED LE

SOIL PROFILE - IR 71
STA. 17+50 TO STA. 30+00

FRA-71-0.00



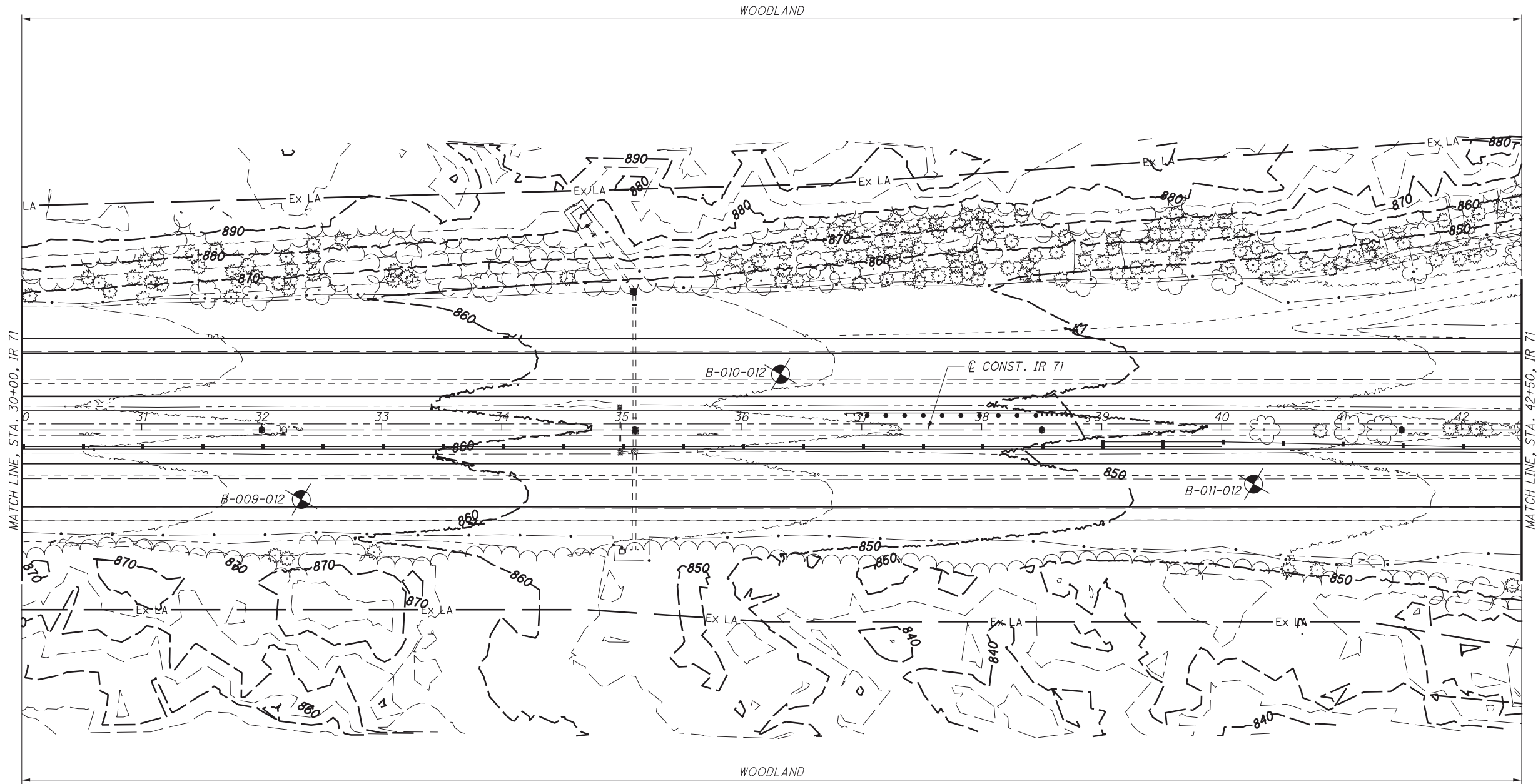
BORING PROFILE LOCATION REFERENCE	
STA. 30+00 TO STA. 42+50 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-009-0-12	19
B-010-0-12	19
B-011-0-12	19





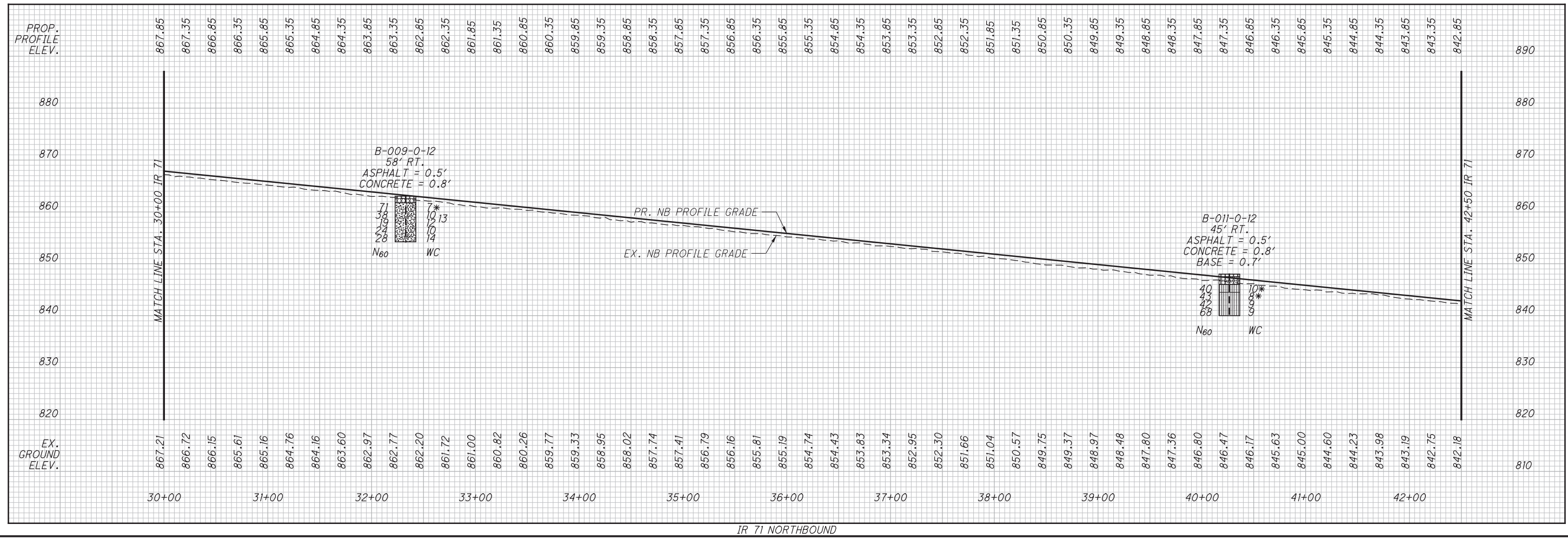
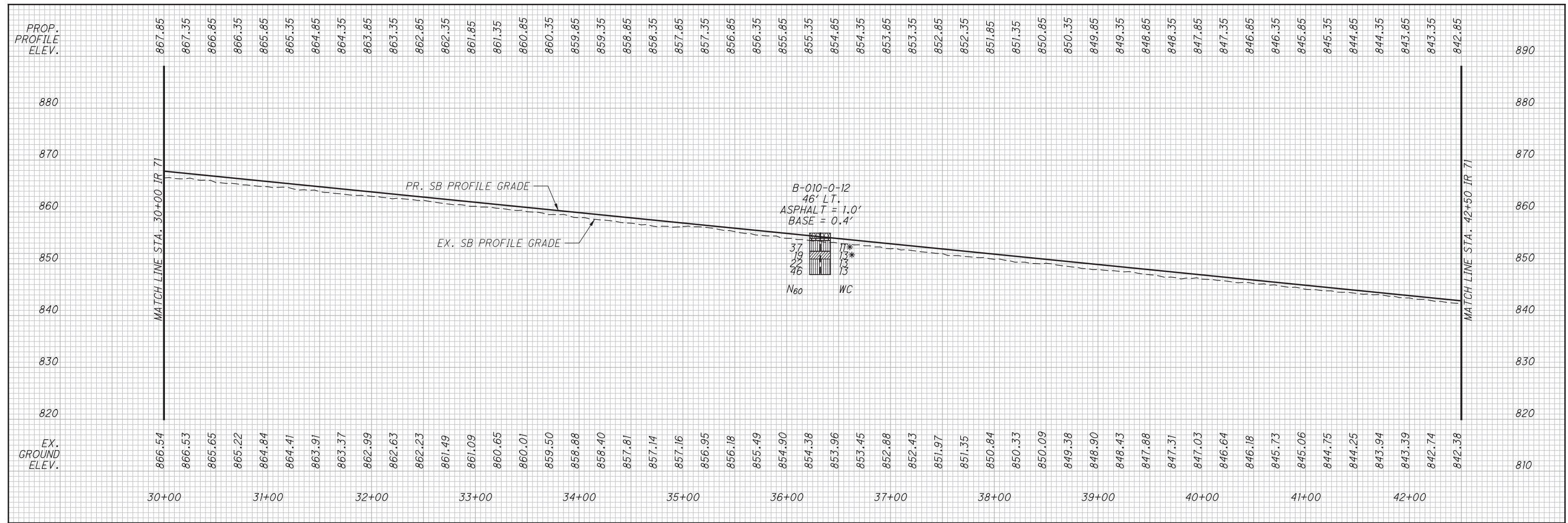
 HORIZONTAL SCALE IN FEET

DRAWN: KA
 CHECKED: LE



SOIL PROFILE - IR 71
STA. 30+00 TO STA. 42+50

FRA-71-0.00



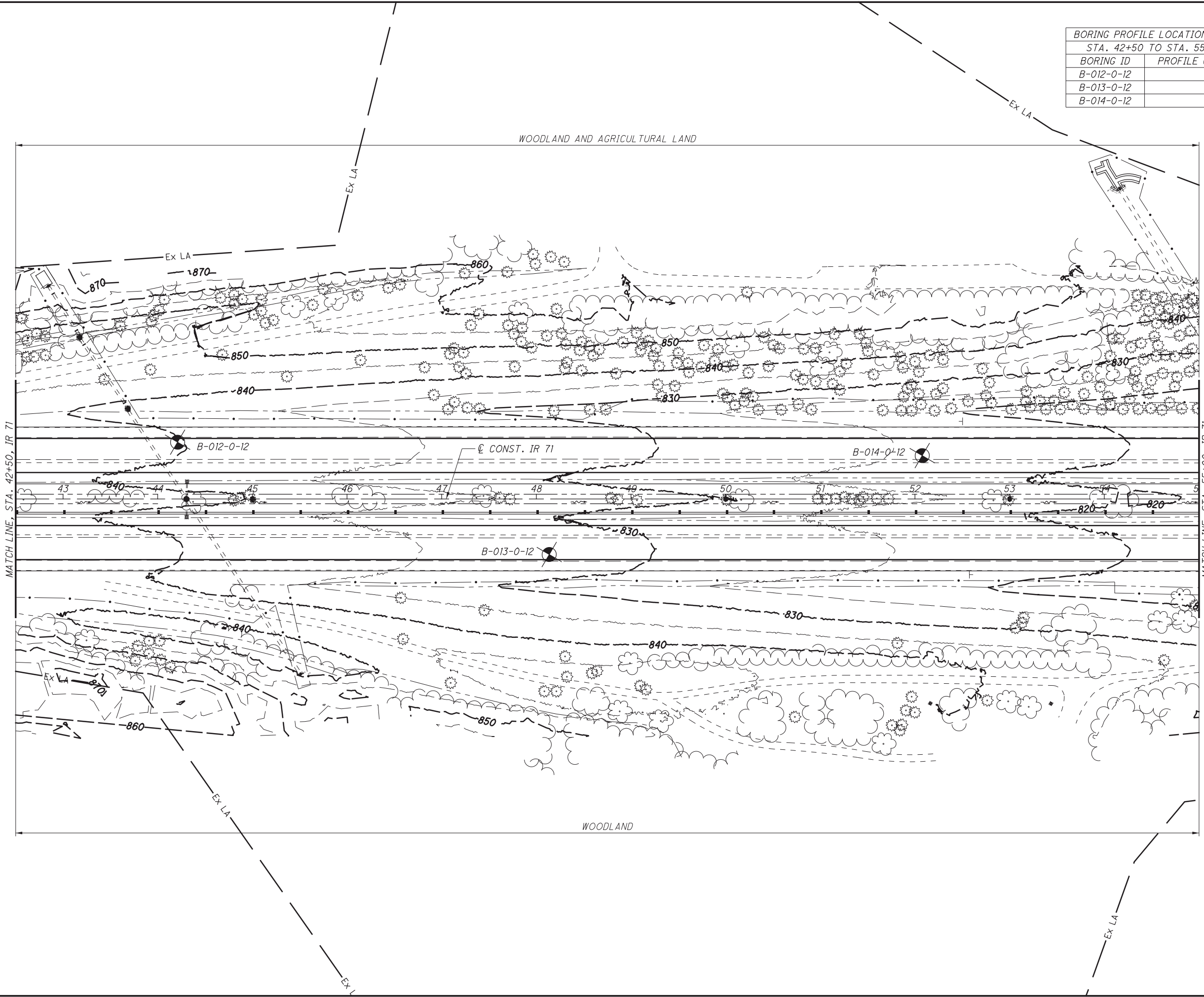
DRAWN KA
 CHECKED LE

SOIL PROFILE - IR 71
STA. 30+00 TO STA. 42+50

FRA-71-0.00



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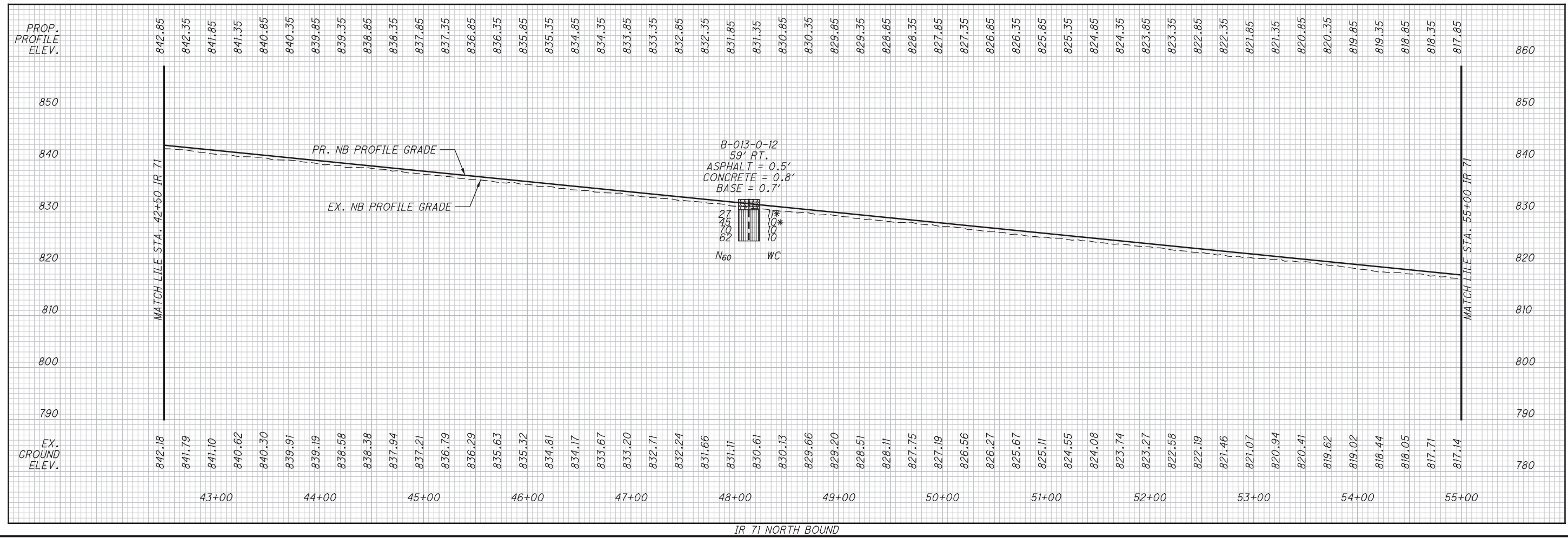
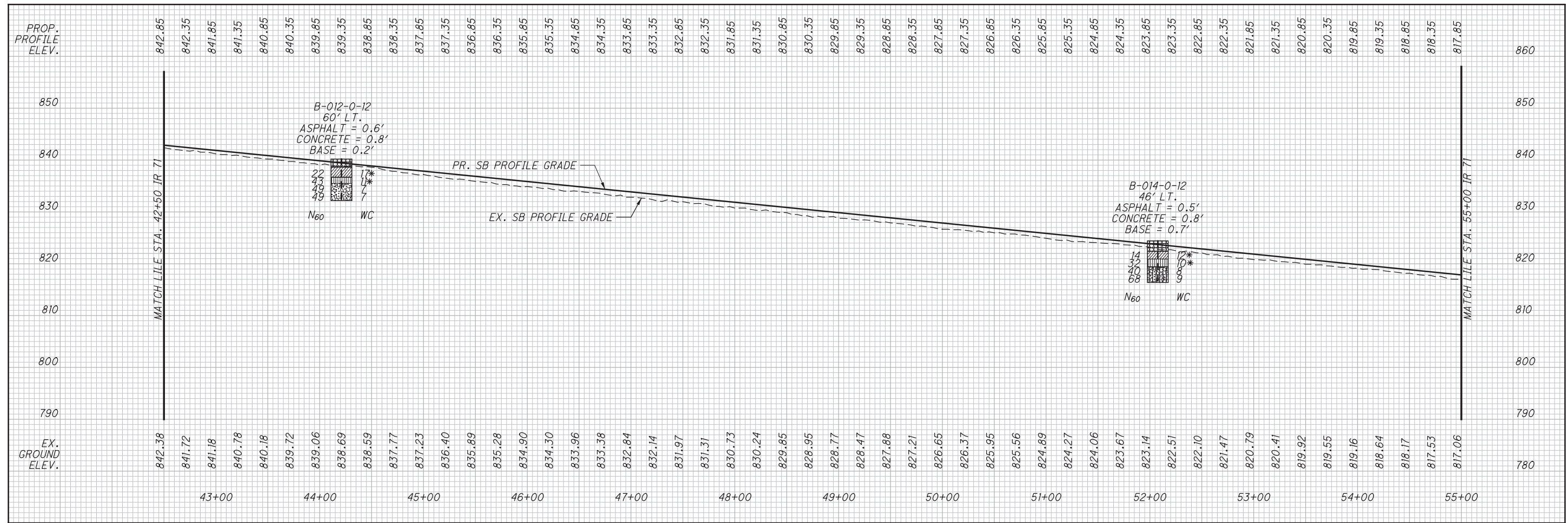
BORING PROFILE LOCATION REFERENCE	
STA. 42+50 TO STA. 55+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-012-0-12	21
B-013-0-12	21
B-014-0-12	21

0 50 100
25
HORIZONTAL
SCALE IN FEET

DRAWN KA
CHECKED LE

SOIL PROFILE - IR 71
STA. 42+50 TO STA. 55+00

FRA-71-0.00



DRAWN KA
 CHECKED LE

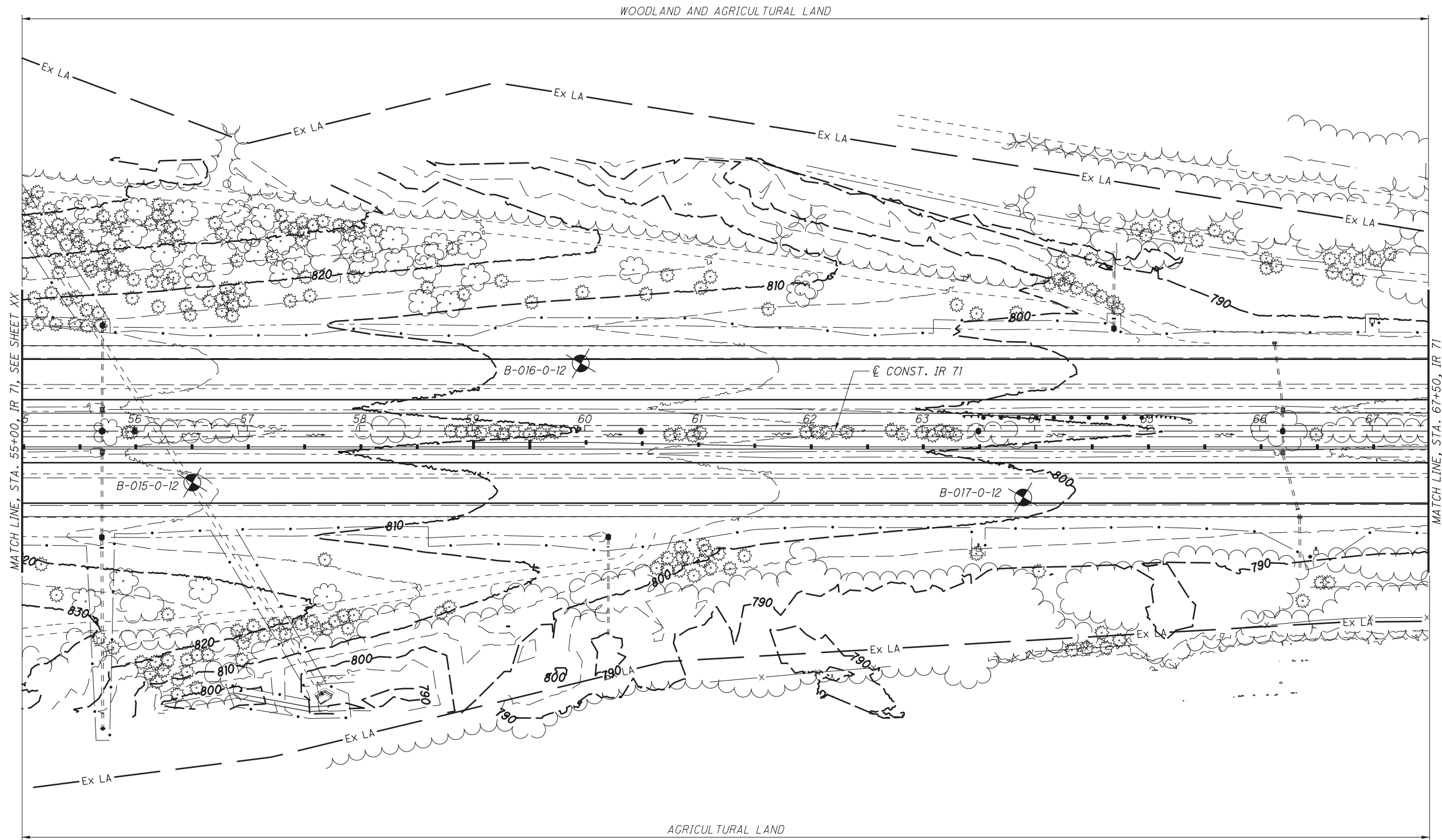
SOIL PROFILE - IR 71
STA. 42+50 TO STA. 55+00

FRA-71-0.00



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BORING PROFILE LOCATION REFERENCE	
STA. 55+00 TO STA. 67+50 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-015-0-12	23
B-016-0-12	23
B-017-0-12	23

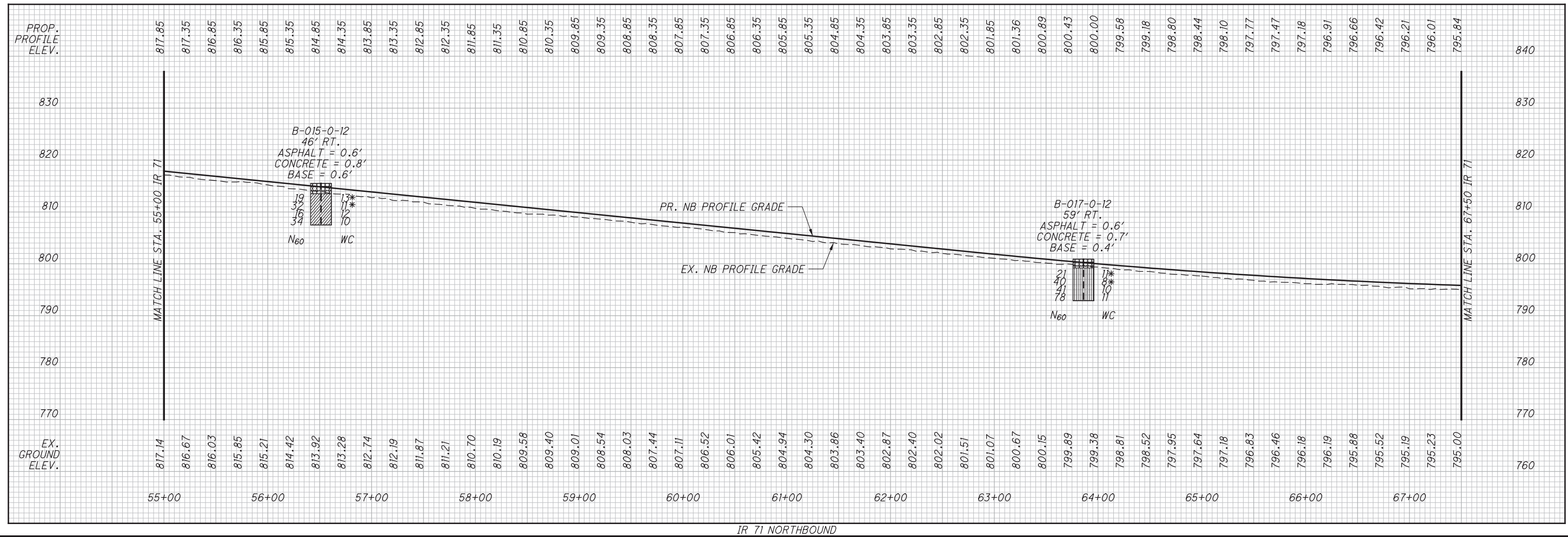
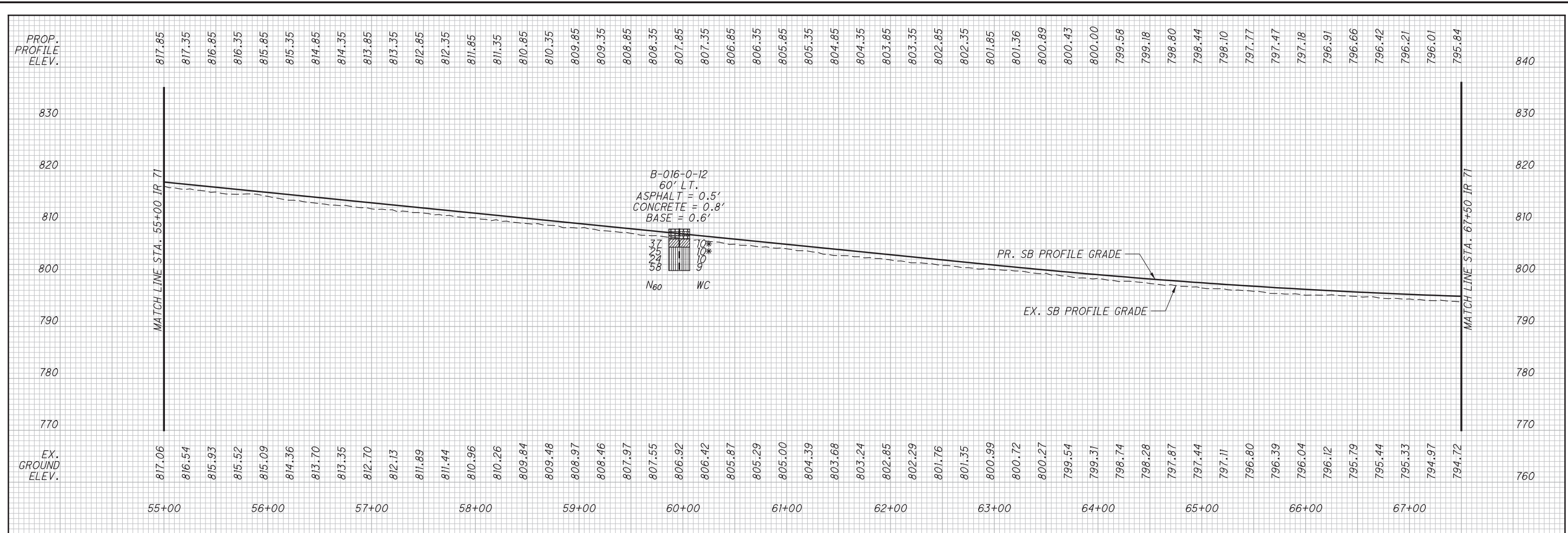


DRAWN KA
CHECKED LE

SOIL PROFILE - IR 71
STA. 55+00 TO STA. 67+50

FRA-71-0.00

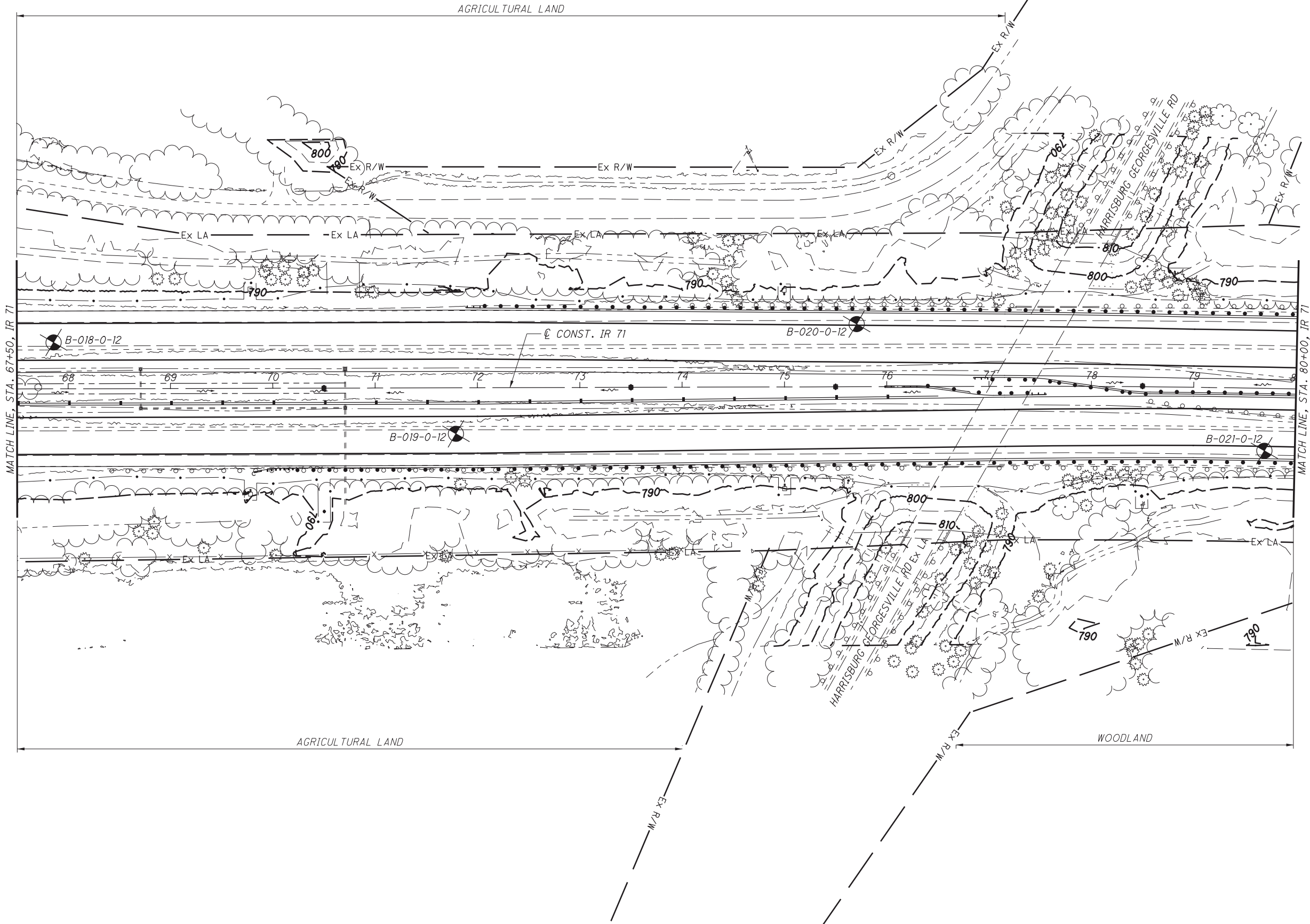




DRAWN KA
 CHECKED LE

SOIL PROFILE - IR 71
STA. 55+00 TO STA. 67+50

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BORING PROFILE LOCATION REFERENCE	
STA. 67+50 TO STA. 80+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-018-0-12	25
B-019-0-12	25
B-020-0-12	25
B-021-0-12	25



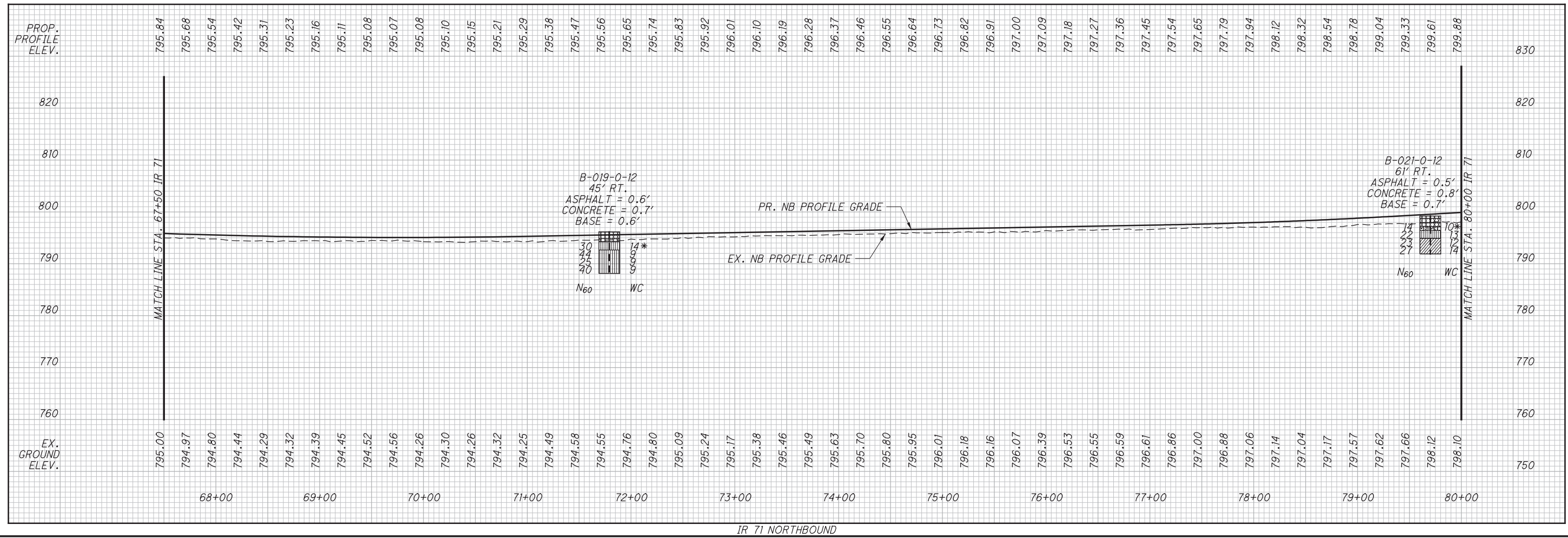
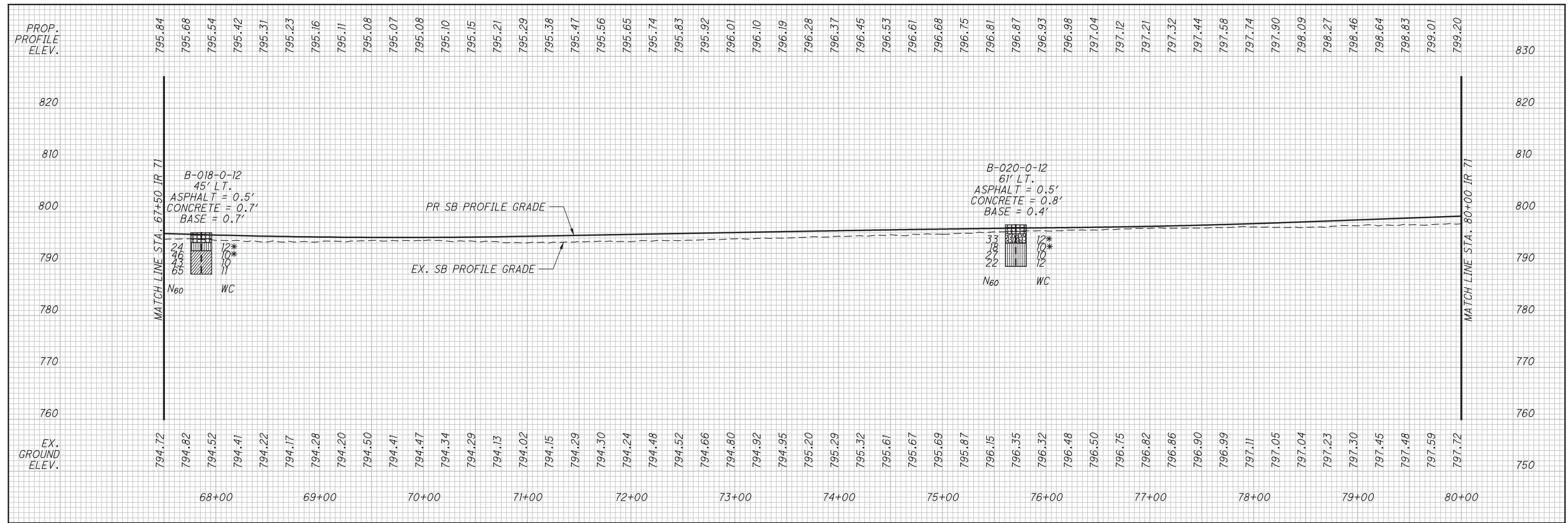
DRAWN KA
CHECKED LE

SOIL PROFILE - IR 71
STA. 67+50 TO STA. 80+00

FRA-71-0.00

24/111



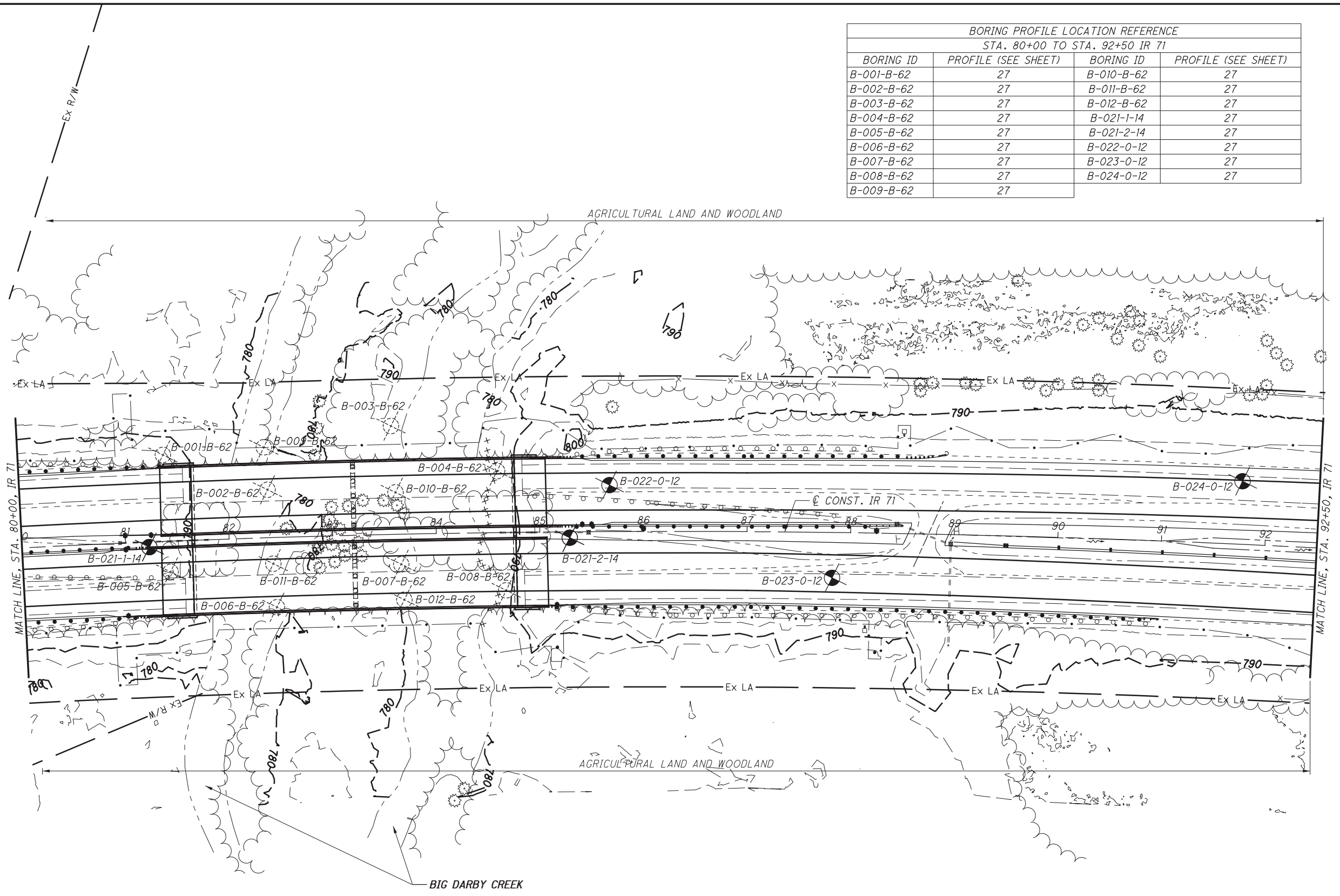


DRAWN: KA
CHECKED: LE

SOIL PROFILE - IR 71
STA. 67+50 TO STA. 80+00

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BORING PROFILE LOCATION REFERENCE			
STA. 80+00 TO STA. 92+50 IR 71			
BORING ID	PROFILE (SEE SHEET)	BORING ID	PROFILE (SEE SHEET)
B-001-B-62	27	B-010-B-62	27
B-002-B-62	27	B-011-B-62	27
B-003-B-62	27	B-012-B-62	27
B-004-B-62	27	B-021-1-14	27
B-005-B-62	27	B-021-2-14	27
B-006-B-62	27	B-022-0-12	27
B-007-B-62	27	B-023-0-12	27
B-008-B-62	27	B-024-0-12	27
B-009-B-62	27		







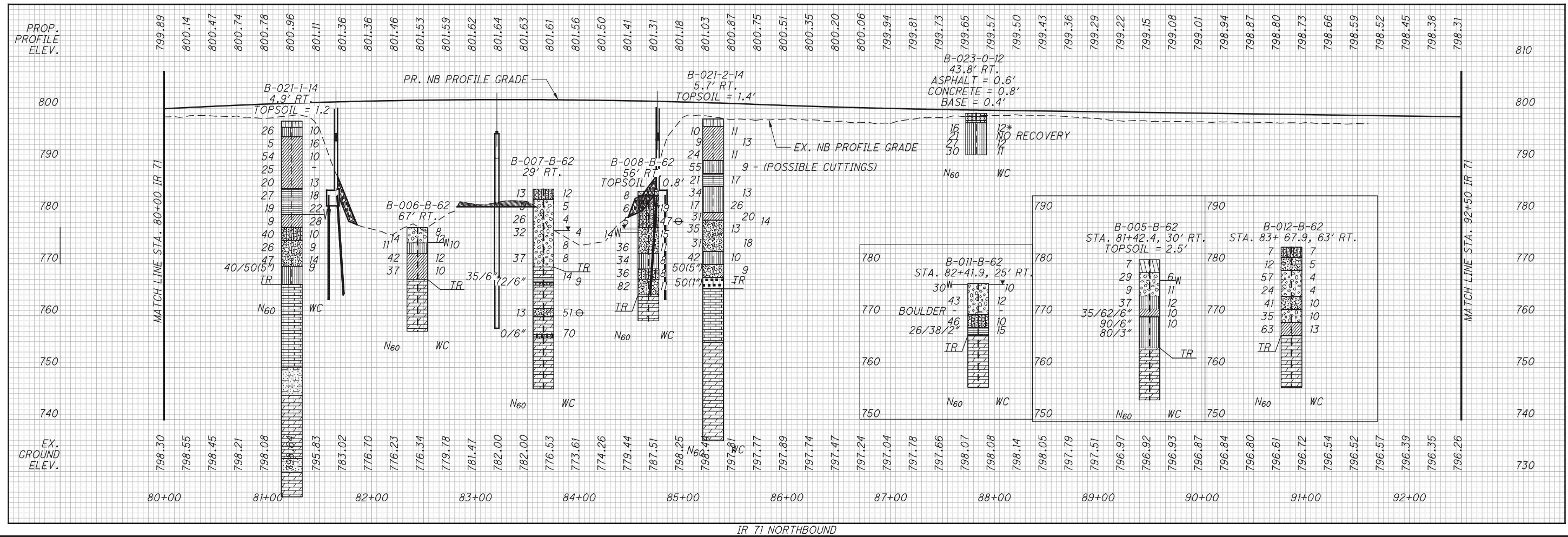
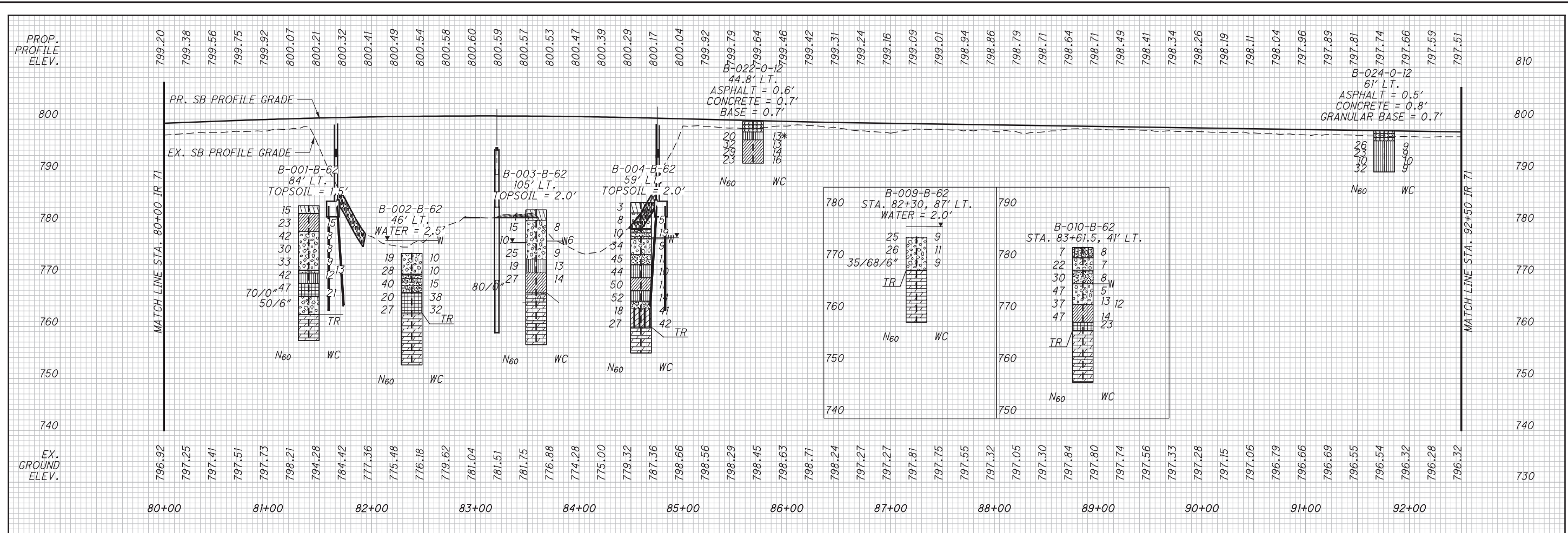
 HORIZONTAL SCALE IN FEET

DRAWN KA
 CHECKED LE

SOIL PROFILE - IR 71
STA. 80+00 TO STA 92+50

FRA-71-0.00

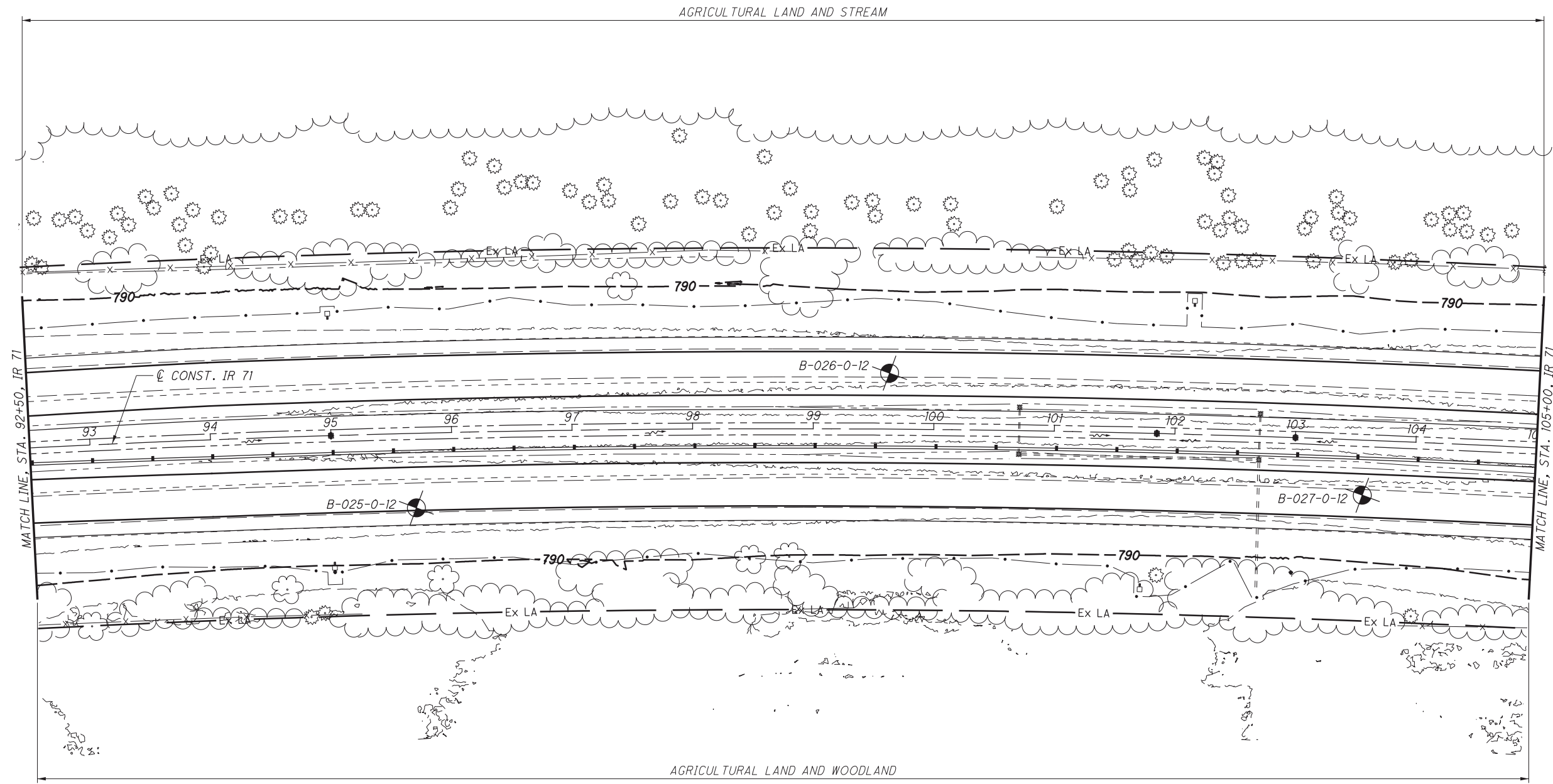




BORING PROFILE LOCATION REFERENCE	
STA. 92+50 TO STA. 105+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-025-0-12	29
B-026-0-12	29
B-027-0-12	29

0 50 100
HORIZONTAL SCALE IN FEET

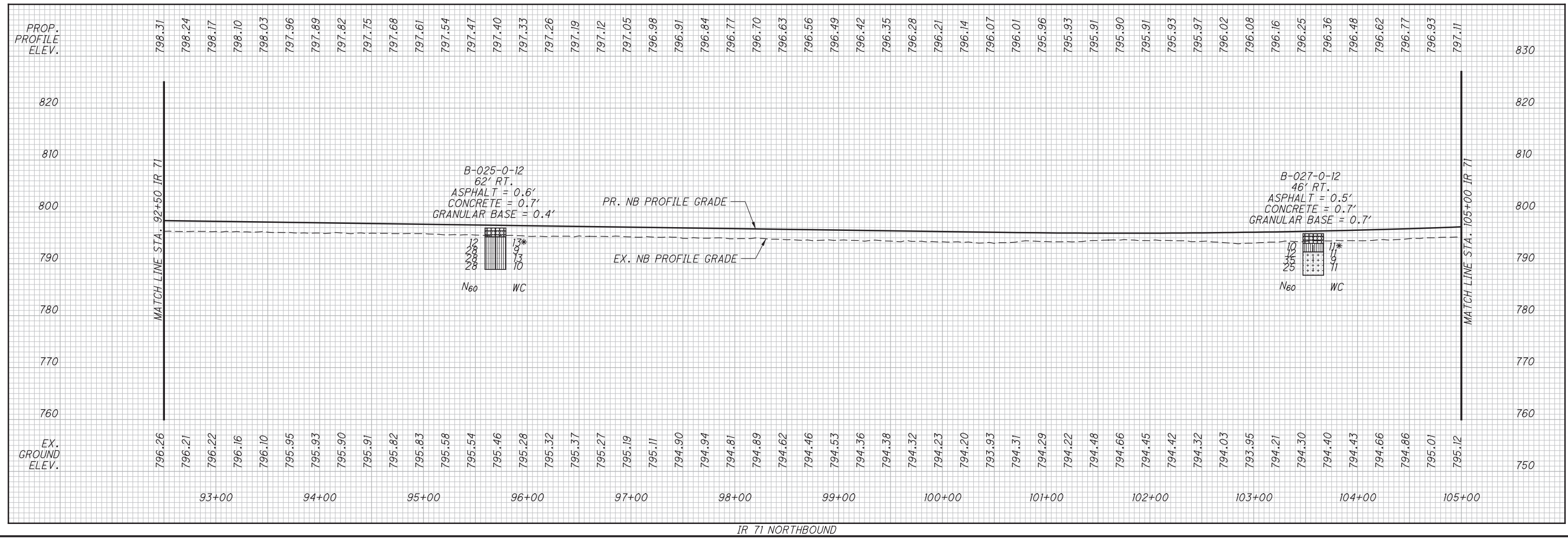
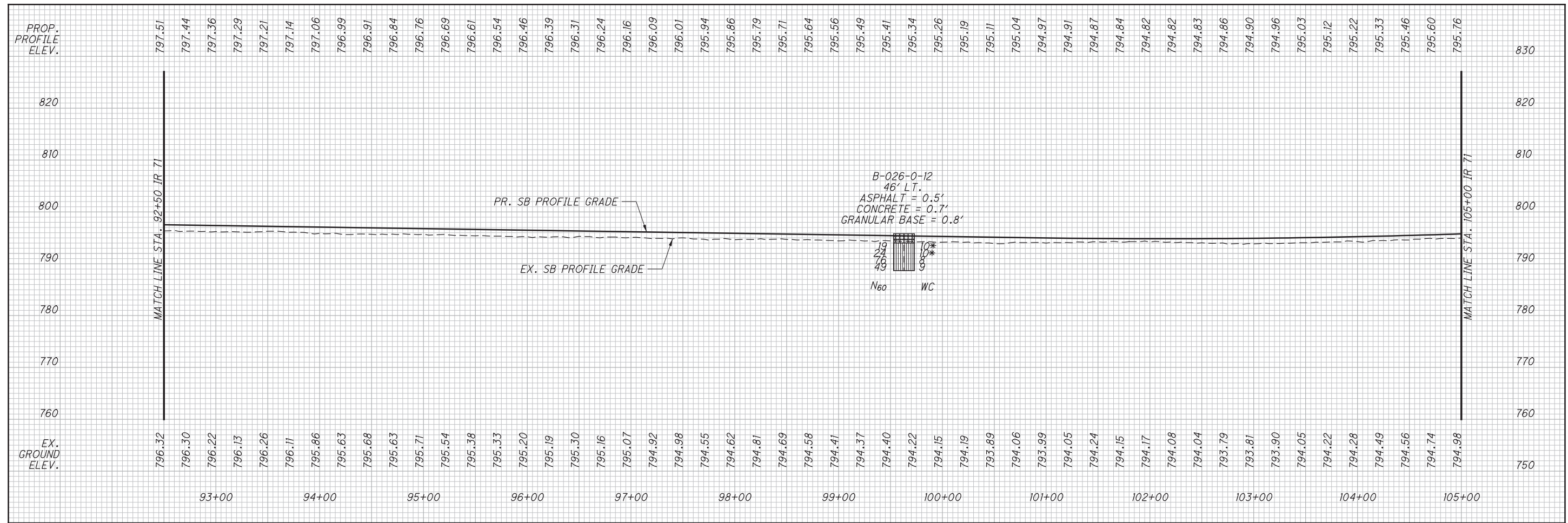
DRAWN KA
CHECKED LE



SOIL PROFILE - IR 71
STA. 92+50 TO STA. 105+00

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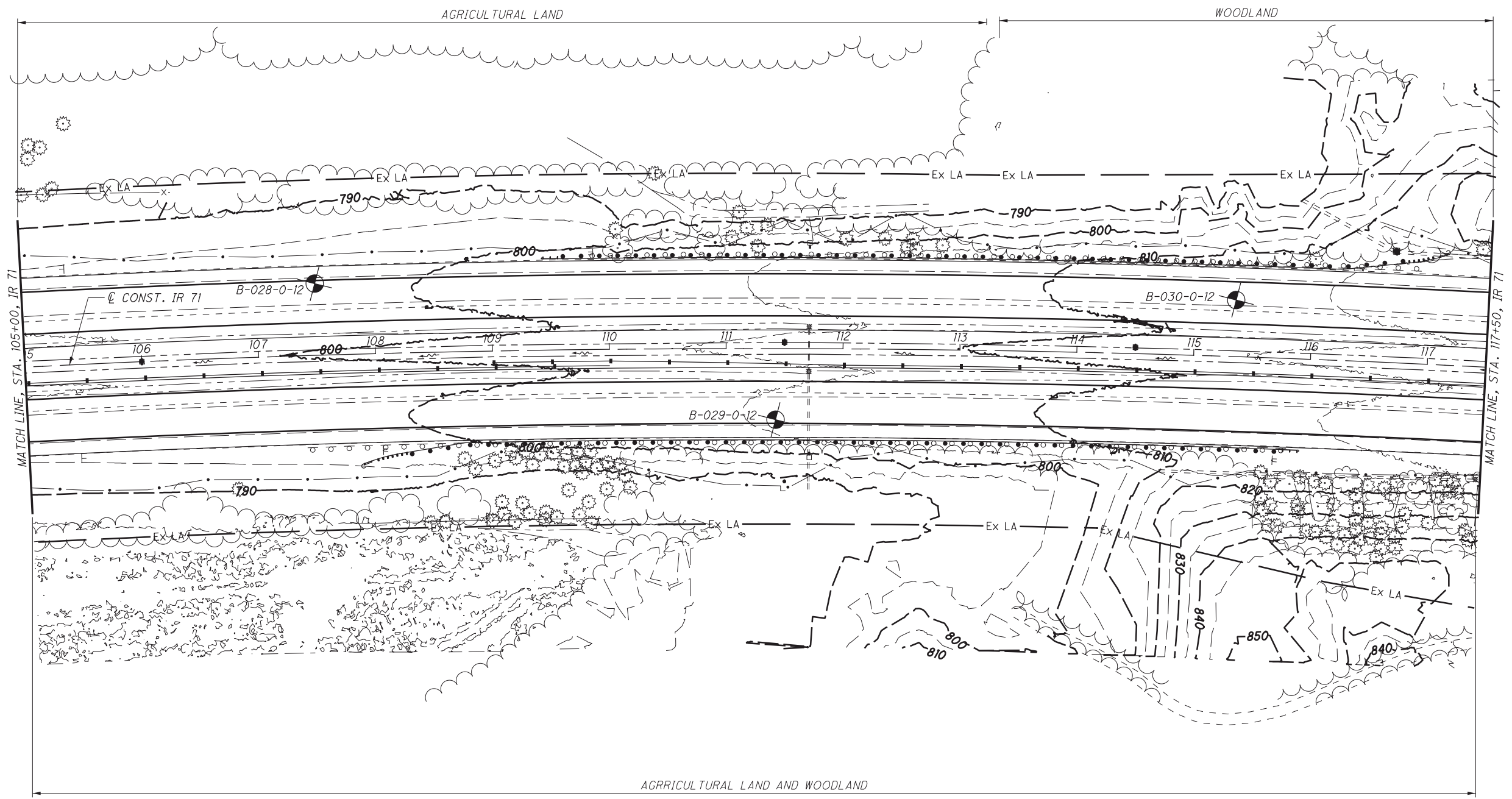
SOIL PROFILE - IR 71
STA. 92+50 TO STA. 105+00





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BORING PROFILE LOCATION REFERENCE STA. 105+00 TO STA. 117+50 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-028-0-12	31
B-029-0-12	31
B-030-0-12	31



SOIL PROFILE - IR 71
STA. 105+00 TO STA. 117+50

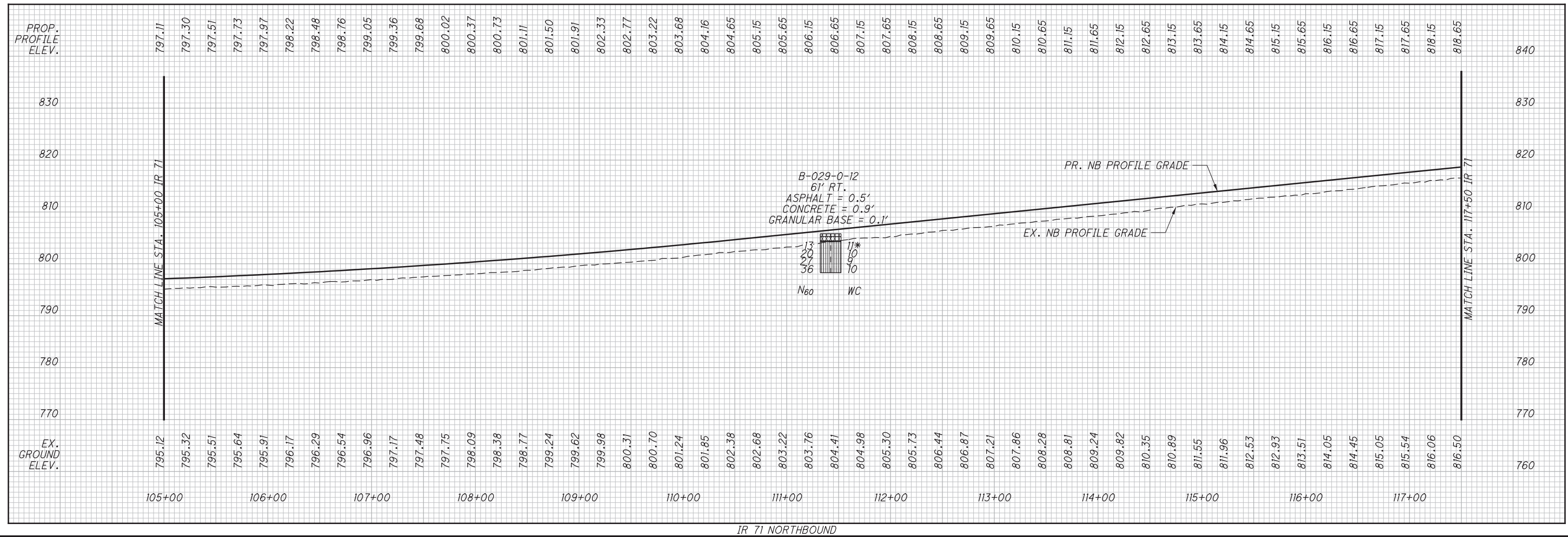
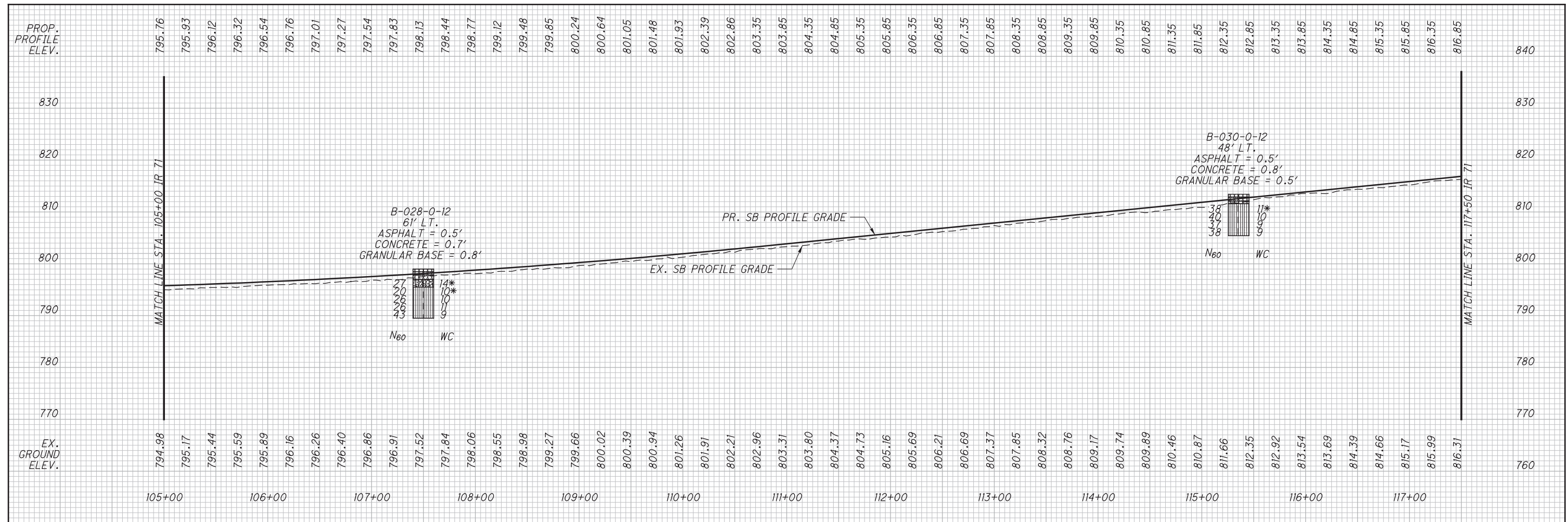
FRA-71-0.00

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SOIL PROFILE - IR 71
STA. 105+00 TO STA. 117+50

FRA-71-0.00



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BORING PROFILE LOCATION REFERENCE	
STA. 117+50 TO STA. 130+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-031-0-12	33
B-032-0-12	33
B-032-1-14	38
B-033-0-12	33
B-033-1-14	38







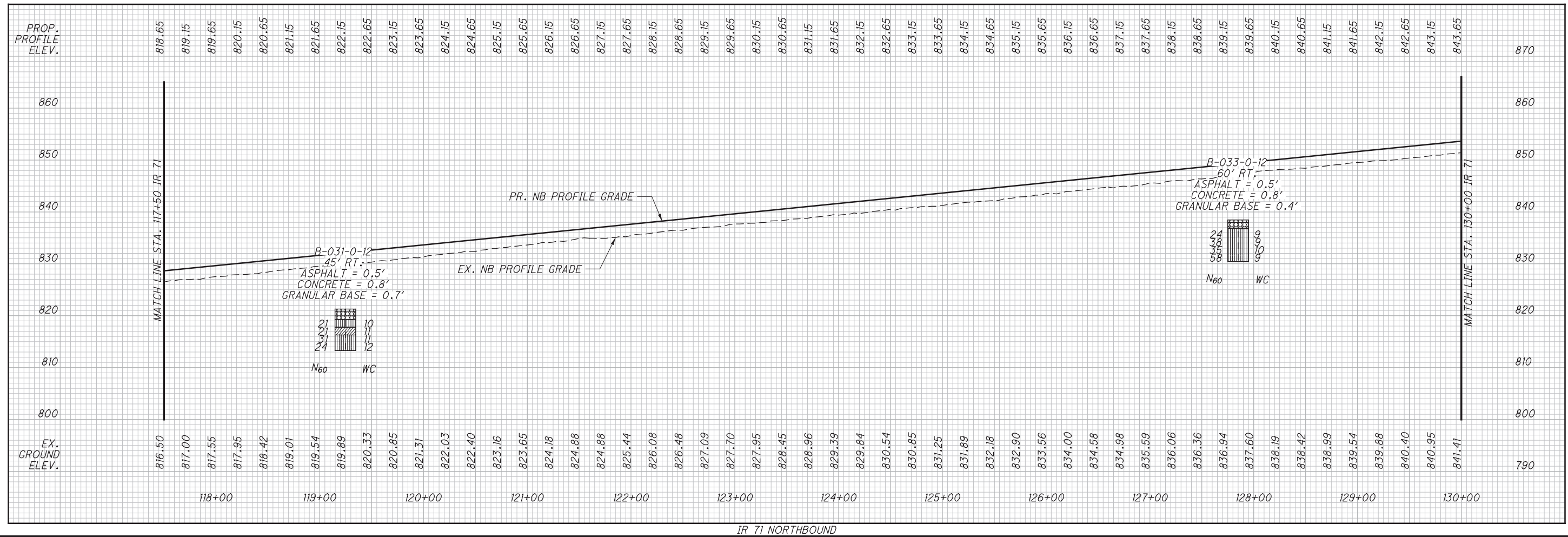
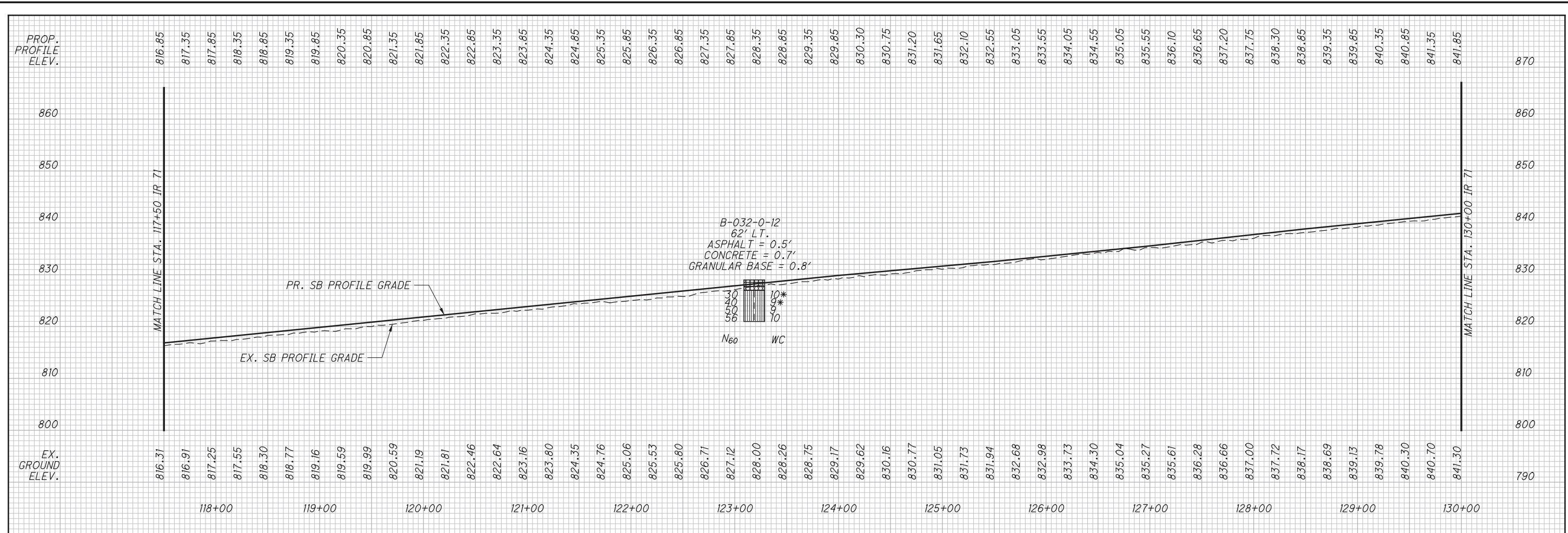
 HORIZONTAL SCALE IN FEET

DRAWN KA
 CHECKED LE

SOIL PROFILE - IR 71
STA. 117+50 TO STA. 130+00

FRA-71-0.00





DRAWN: KA
 CHECKED: LE

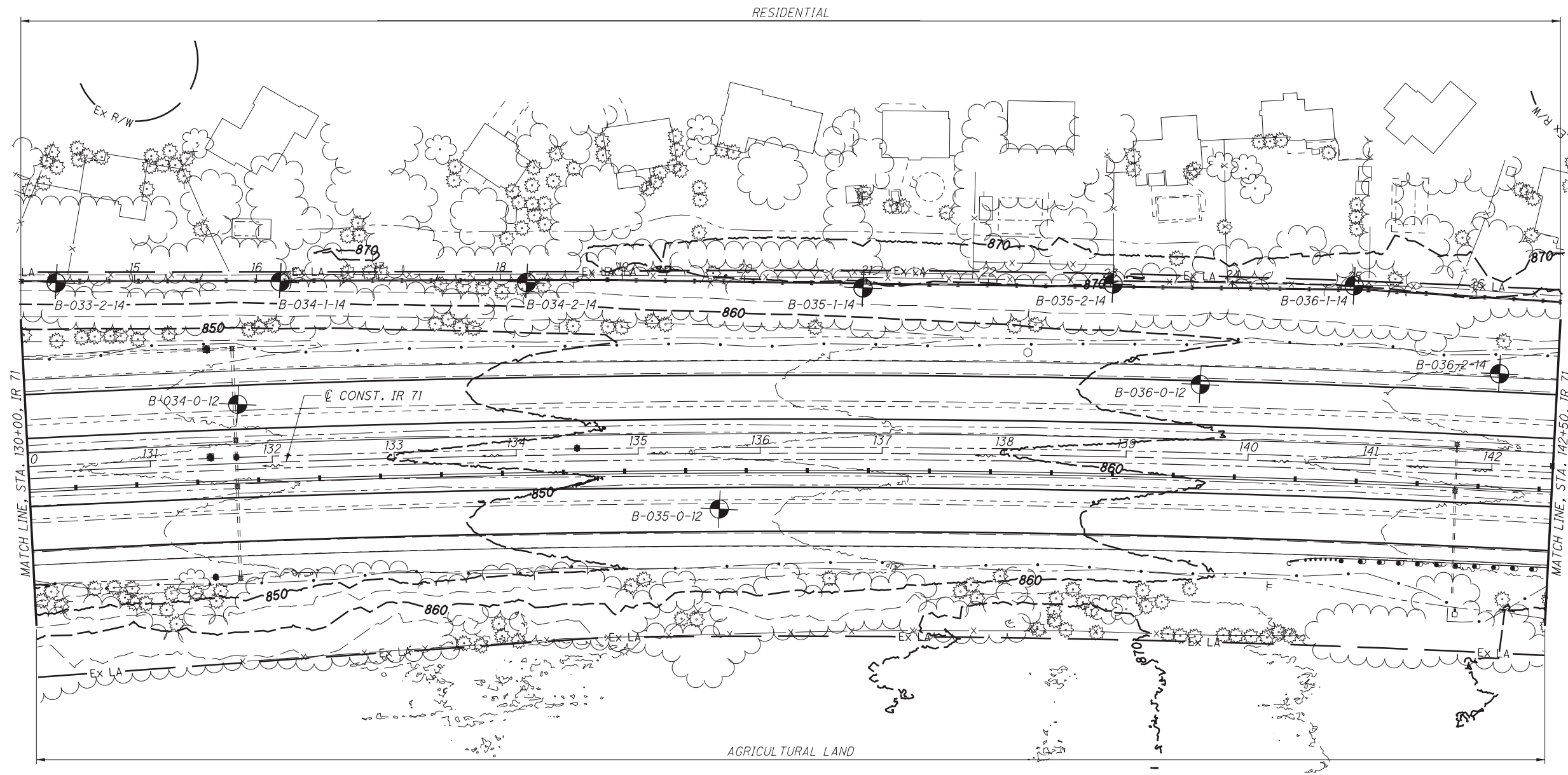
SOIL PROFILE - IR 71
STA. 117+50 TO STA. 130+00

FRA-71-0.00

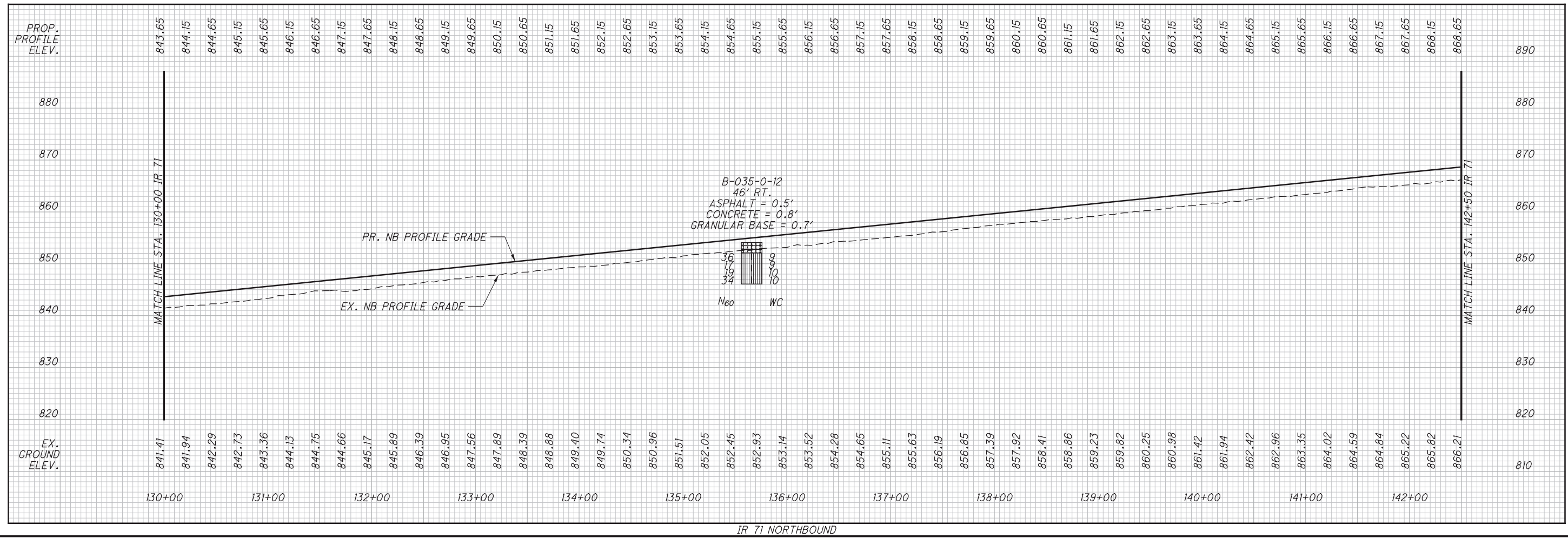
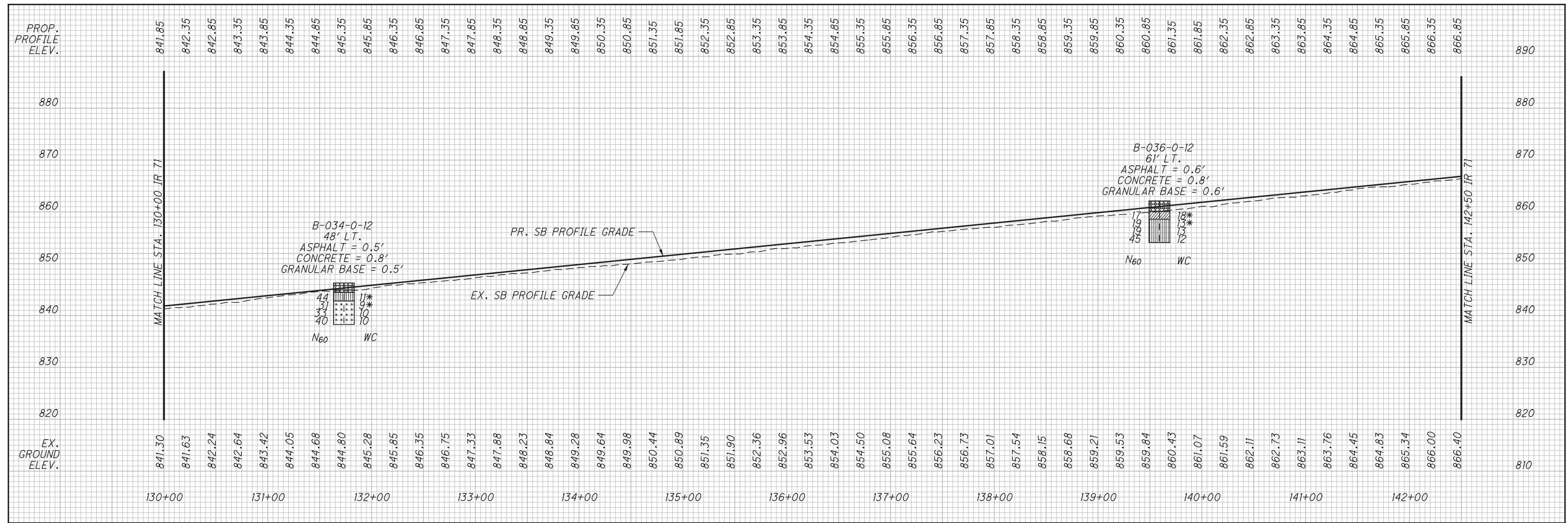


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BORING PROFILE LOCATION REFERENCE			
STA. 130+00 TO STA. 142+50 IR 71			
BORING ID	PROFILE (SEE SHEET)	BORING ID	PROFILE (SEE SHEET)
B-033-2-14	38	B-035-1-14	38
B-034-0-12	35	B-035-2-14	39
B-034-1-14	38	B-036-0-12	35
B-034-2-14	38	B-036-1-14	39
B-035-0-12	35	B-036-2-14	39



FRA - 71 - 0.00
SOIL PROFILE - IR 71
STA. 130+00 TO STA. 142+50



DRAWN: KA
 CHECKED: LE

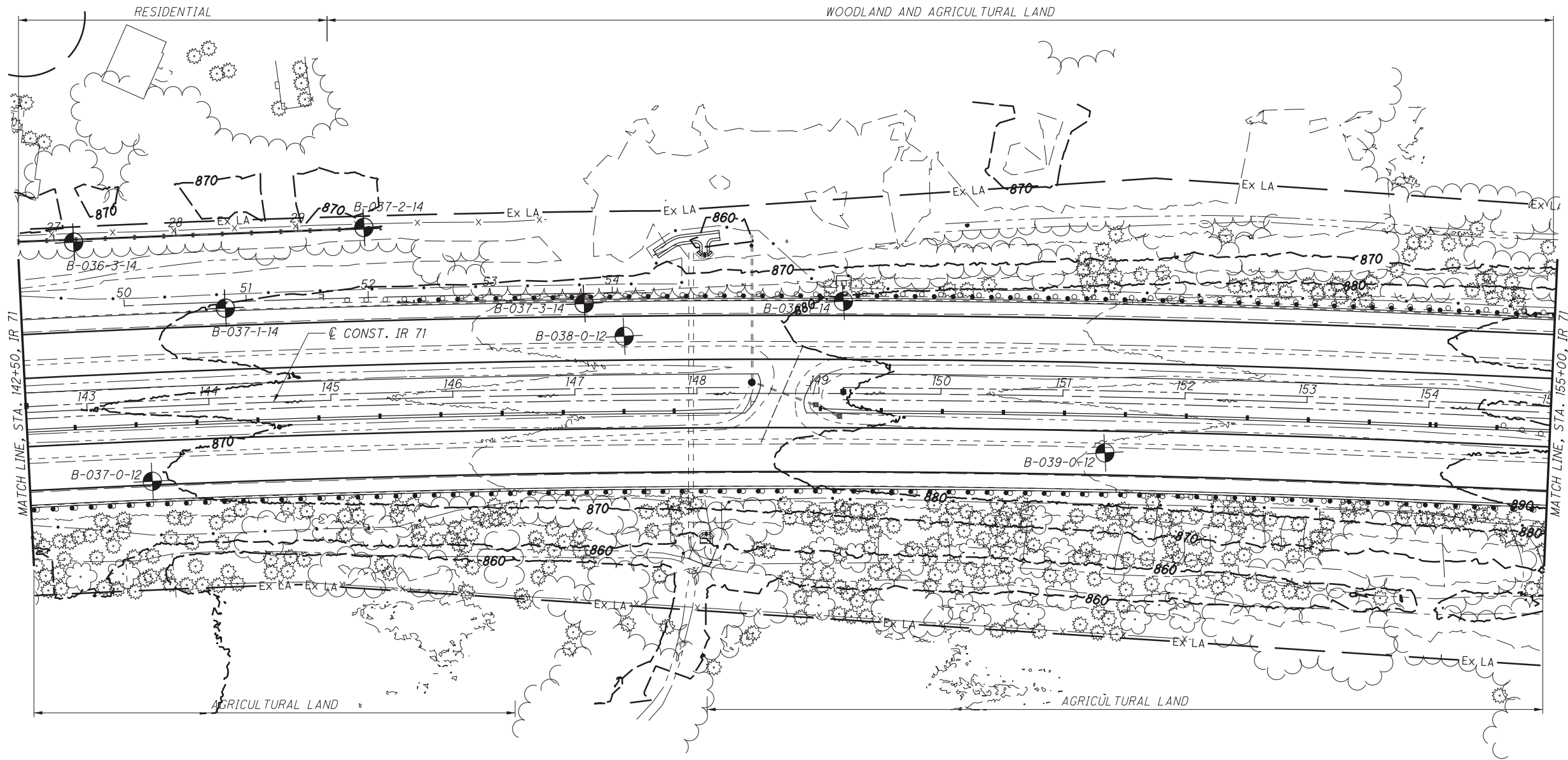
SOIL PROFILE - IR 71
STA. 130+00 TO STA. 142+50

FRA-71-0.00



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BORING PROFILE LOCATION REFERENCE	
STA. 142+50 TO STA. 155+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-036-3-14	39
B-037-0-12	37
B-037-1-14	39, 40
B-037-2-14	39, 40
B-037-3-14	39, 40
B-038-0-12	37
B-038-1-14	40
B-039-0-12	37

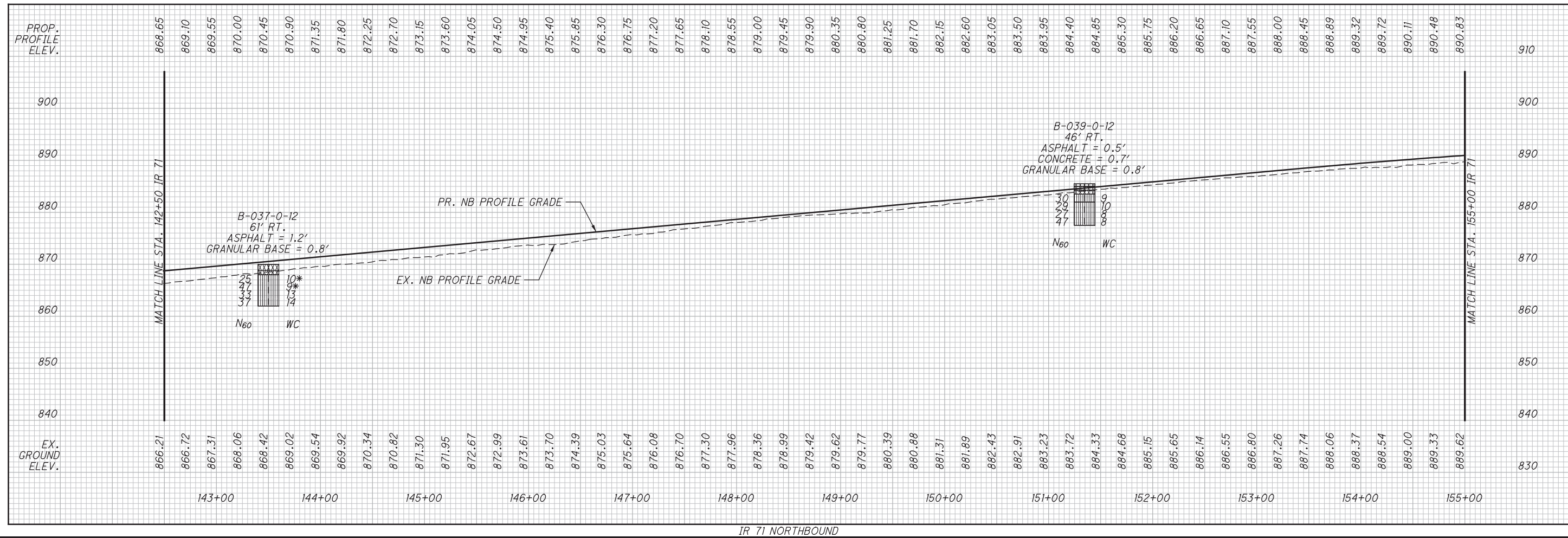
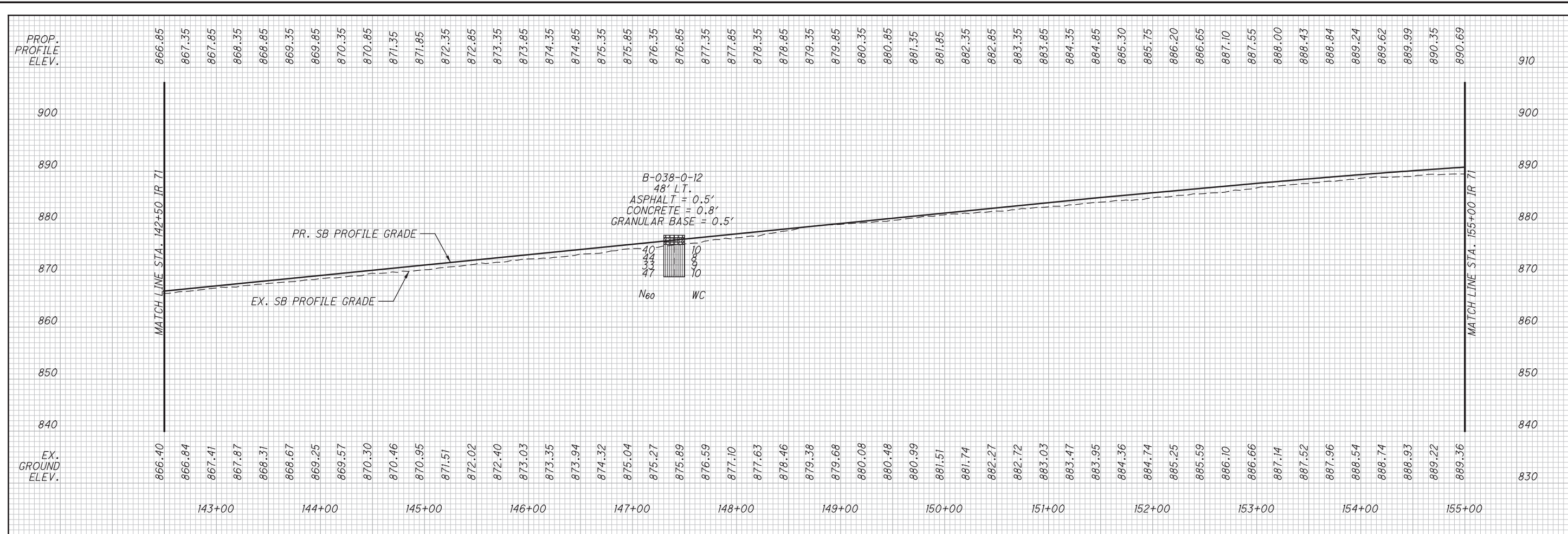


0 50 100
 25
 HORIZONTAL
 SCALE IN FEET

DRAWN KA
 CHECKED LE

SOIL PROFILE - IR 71
STA. 142+50 TO STA. 155+00

FRA-71-0.00



DRAWN	DML
CHECKED	LE

SOIL PROFILE - IR 71
STA. 142+50 TO STA. 155+00

FRA-71-0.00





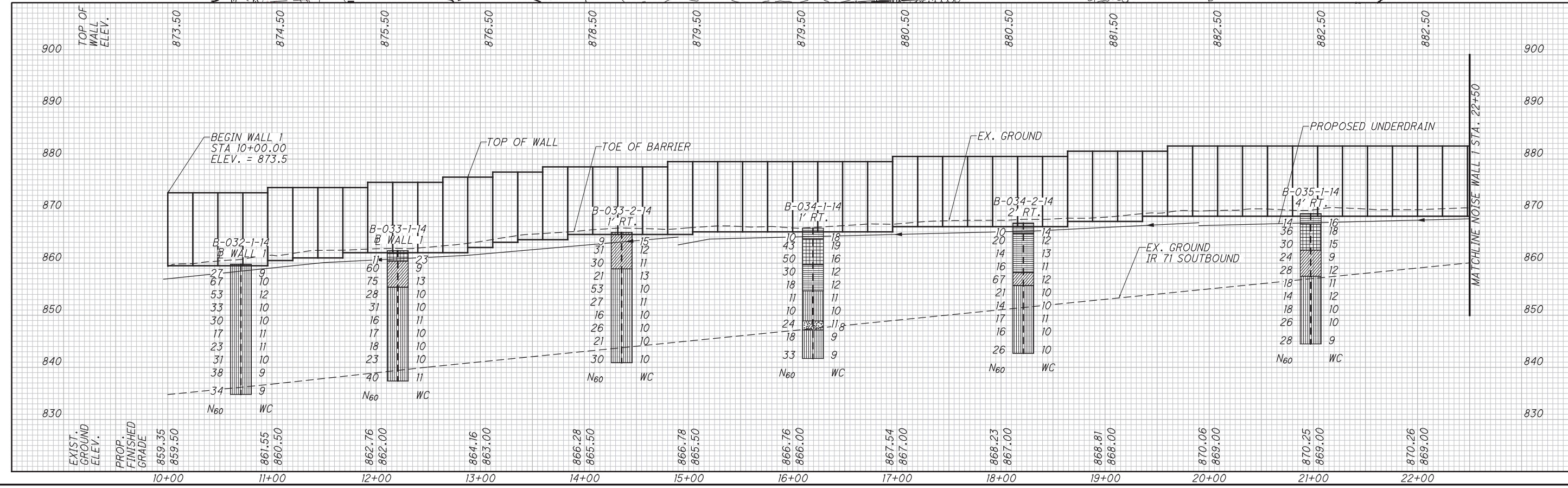
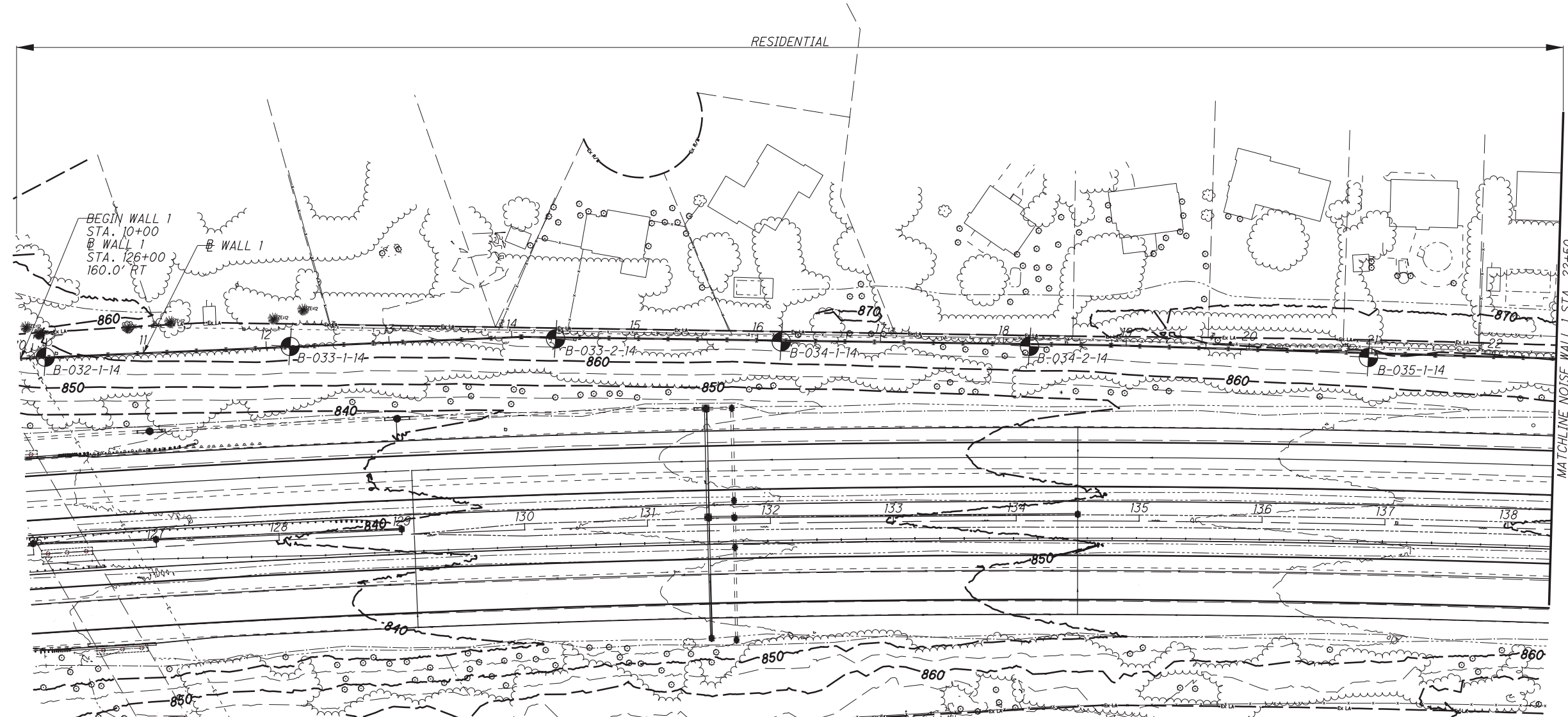
0 50 100
25
HORIZONTAL
SCALE IN FEET

DRAWN KA
CHECKED LE

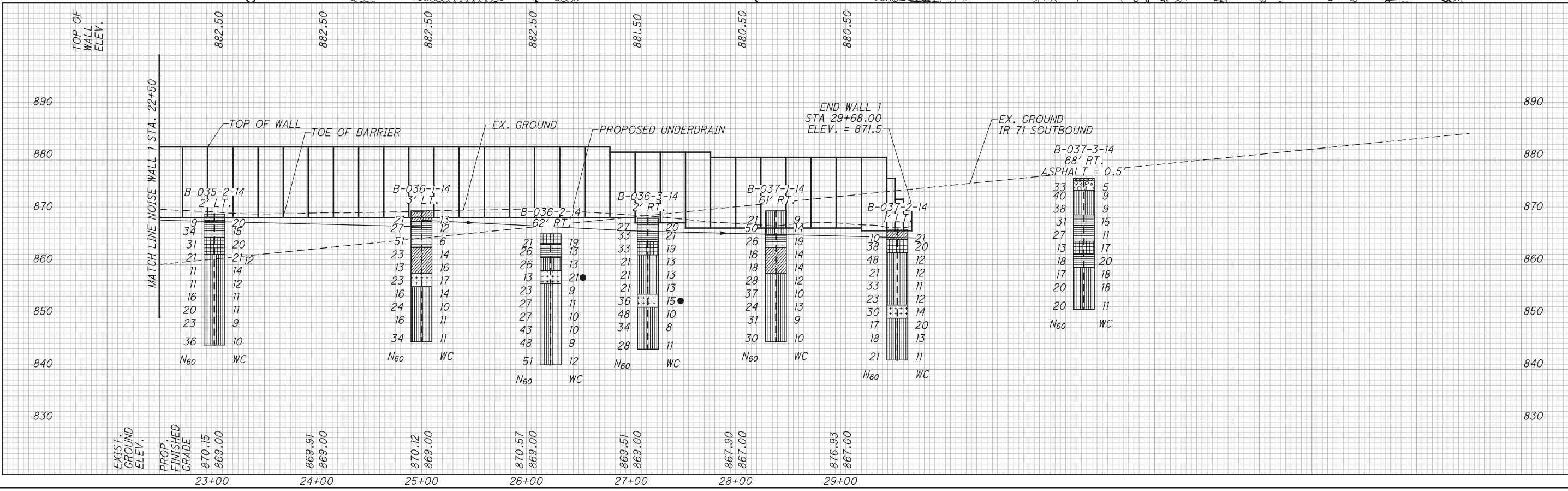
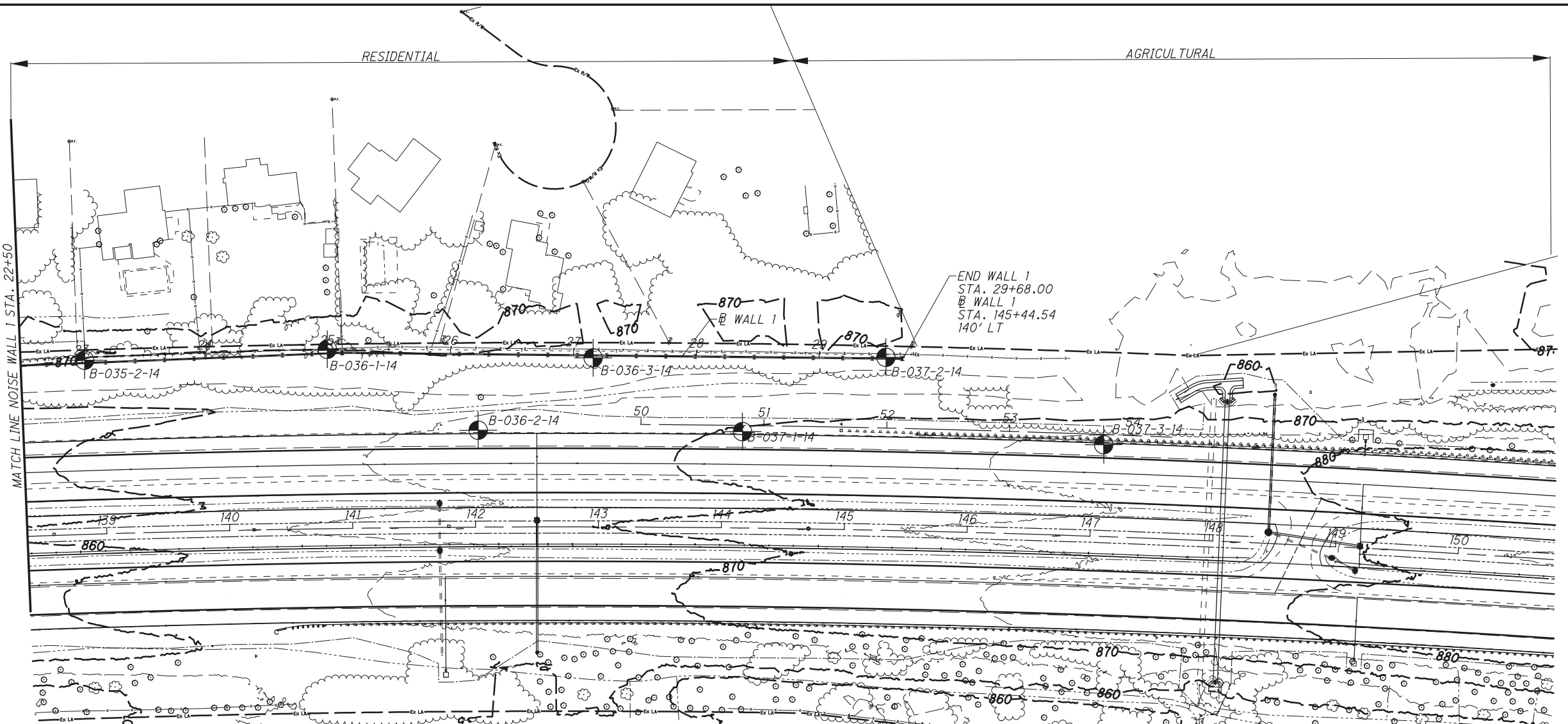
SOIL PROFILE
NOISE WALL 1 ALONG BASELINE WALL 1

FRA-71-0.00

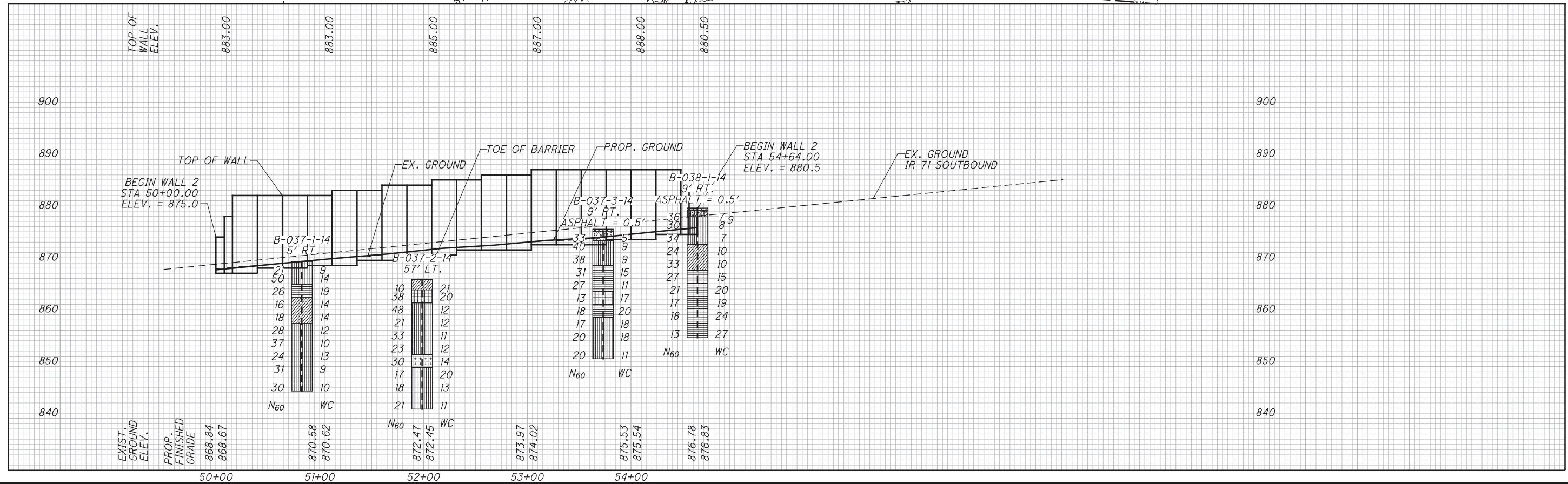
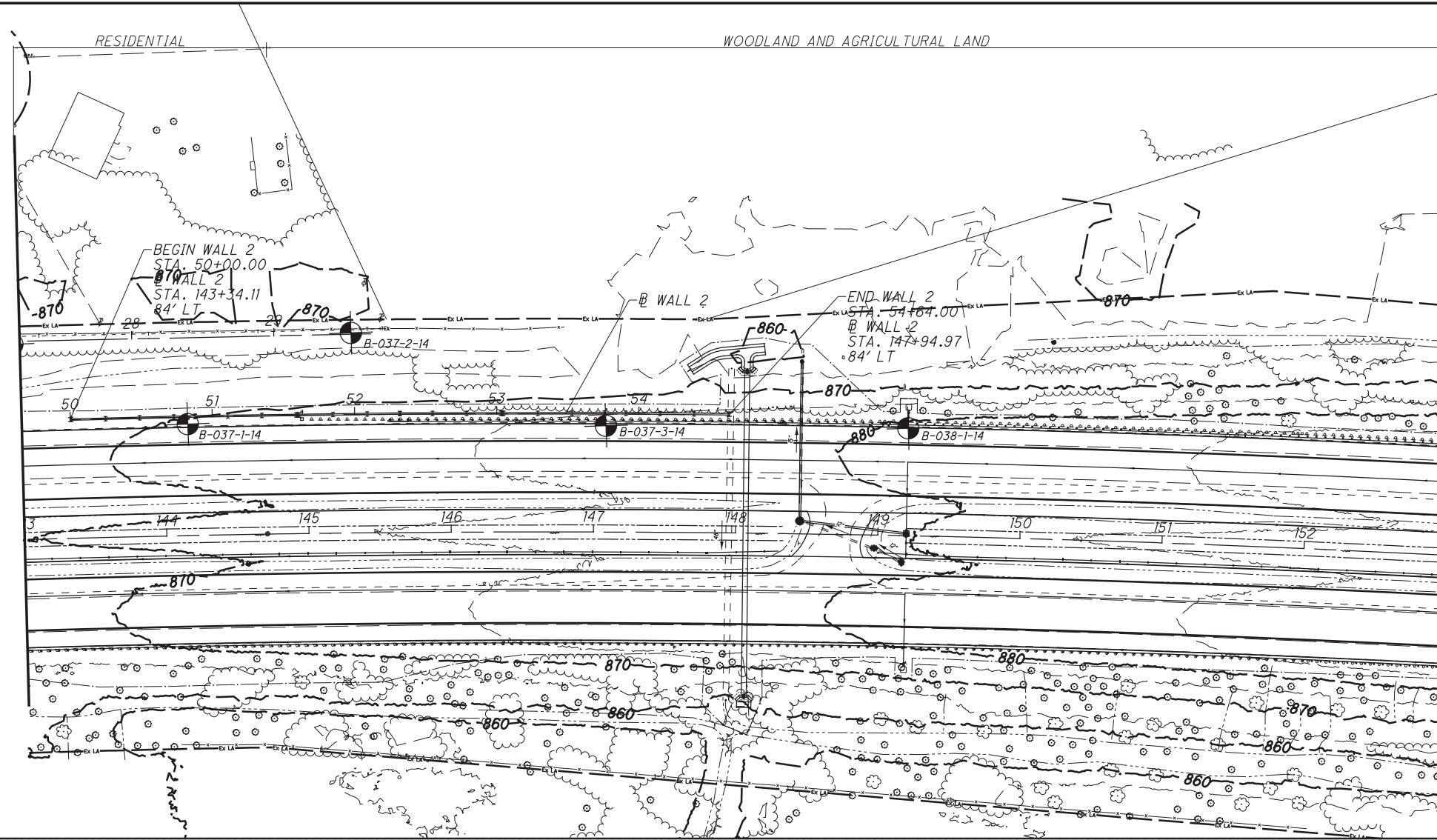
38 / 111



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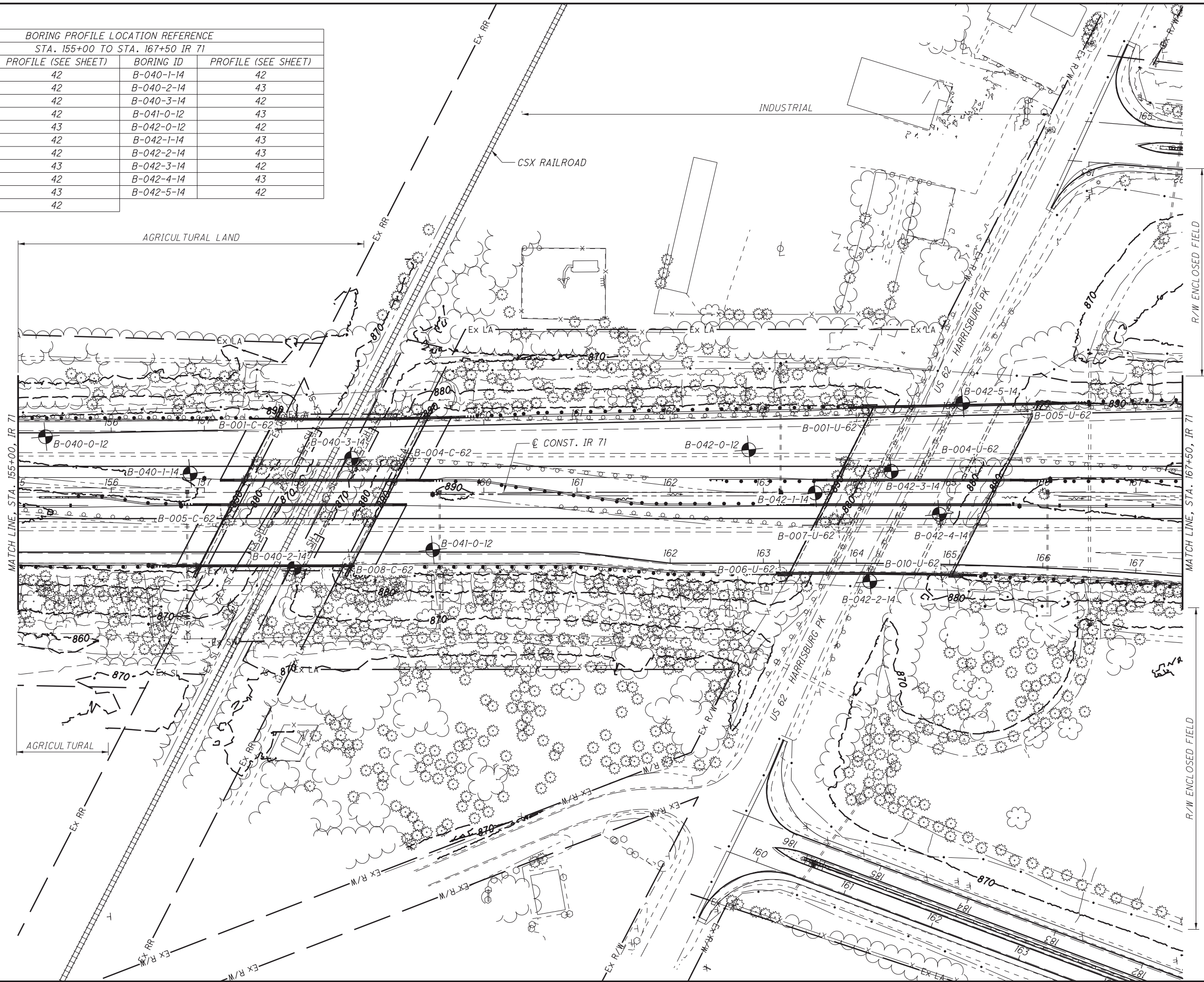
DRAWN KA
CHECKED LE

SOIL PROFILE
NOISE WALL 2 ALONG BASELINE WALL 2

FRA-71-0.00

40/111

BORING PROFILE LOCATION REFERENCE			
STA. 155+00 TO STA. 167+50 IR 71			
BORING ID	PROFILE (SEE SHEET)	BORING ID	PROFILE (SEE SHEET)
B-001-C-62	42	B-040-1-14	42
B-001-U-62	42	B-040-2-14	43
B-004-C-62	42	B-040-3-14	42
B-004-U-62	42	B-041-0-12	43
B-005-C-62	43	B-042-0-12	42
B-005-U-62	42	B-042-1-14	43
B-006-U-62	42	B-042-2-14	43
B-007-U-62	43	B-042-3-14	42
B-008-C-62	42	B-042-4-14	43
B-010-U-62	43	B-042-5-14	42
B-040-0-12	42		







 HORIZONTAL SCALE IN FEET

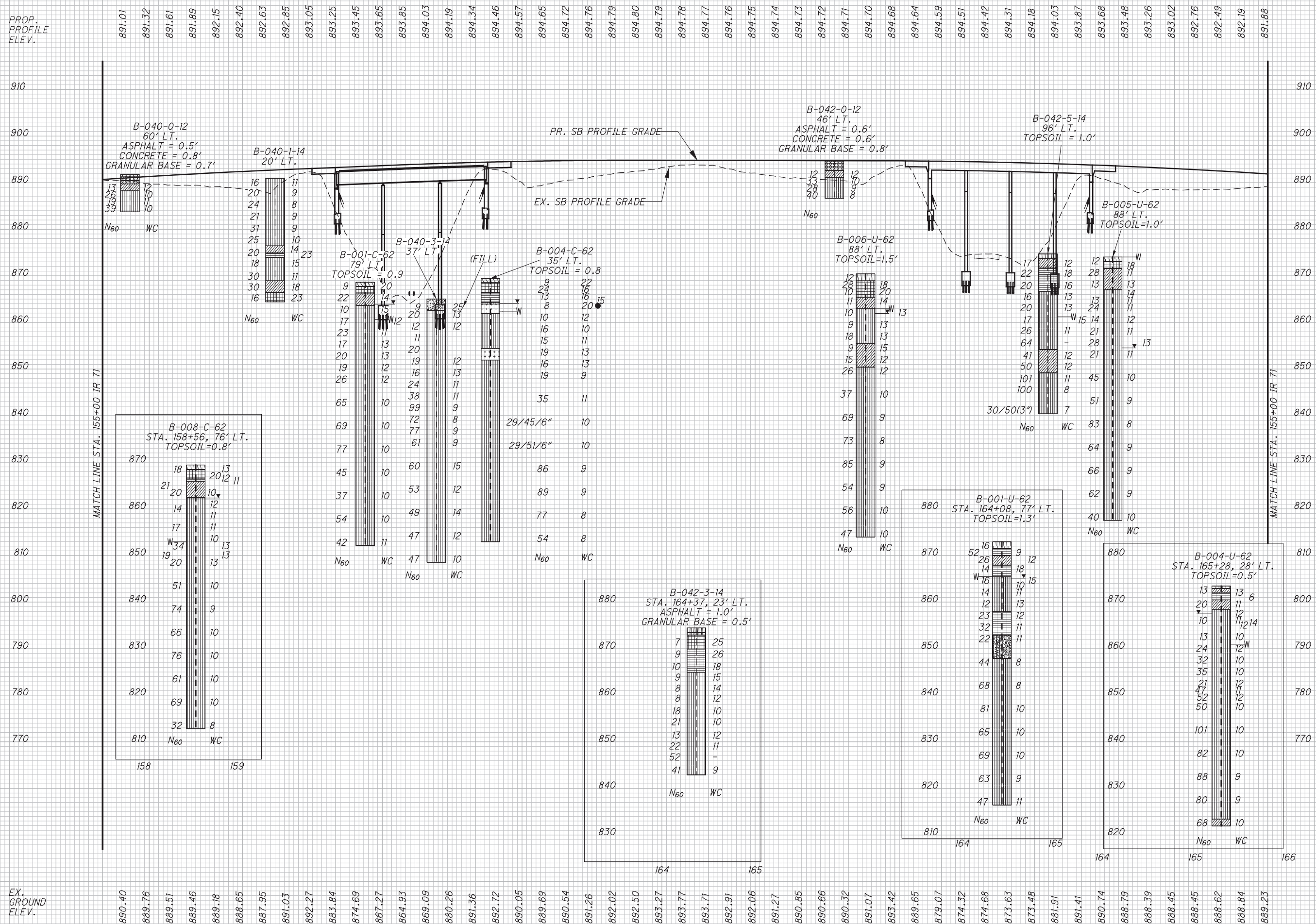
DRAWN: KA
 CHECKED: LE

SOIL PROFILE - IR 71
STA. 155+00 TO STA. 167+50

FRA-71-0.00

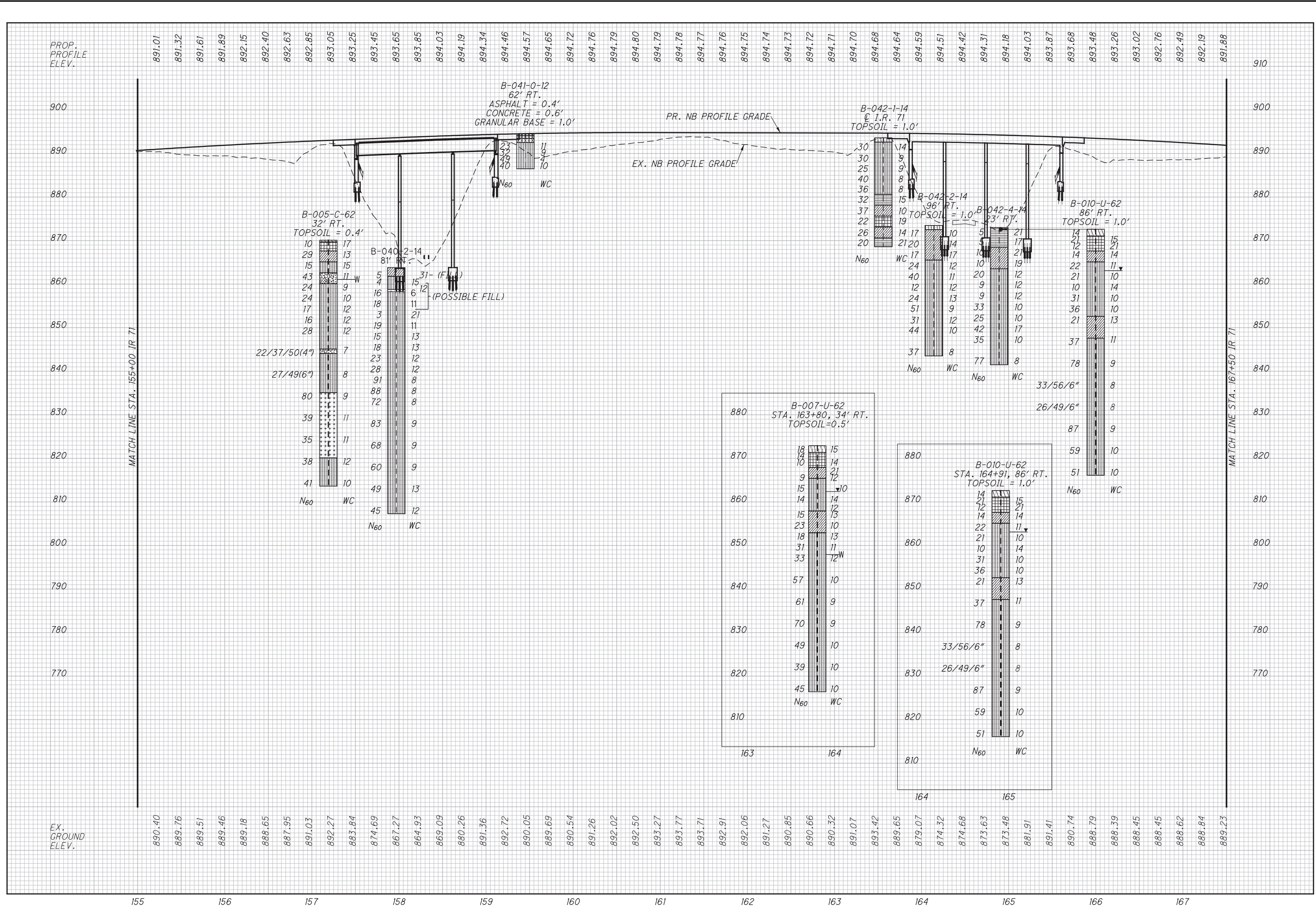


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SOIL PROFILE - IR 71 SOUTHBOUND
STA. 155+00 TO STA. 167+50

FRA-71-0.00



SOIL PROFILE - IR 71 NORTHBOUND
STA. 155+00 TO STA. 167+50

FRA-71-0.00



BORING PROFILE LOCATION REFERENCE STA. 167+50 TO STA. 180+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-043-0-12	45
B-044-0-12	45
B-045-0-12	45

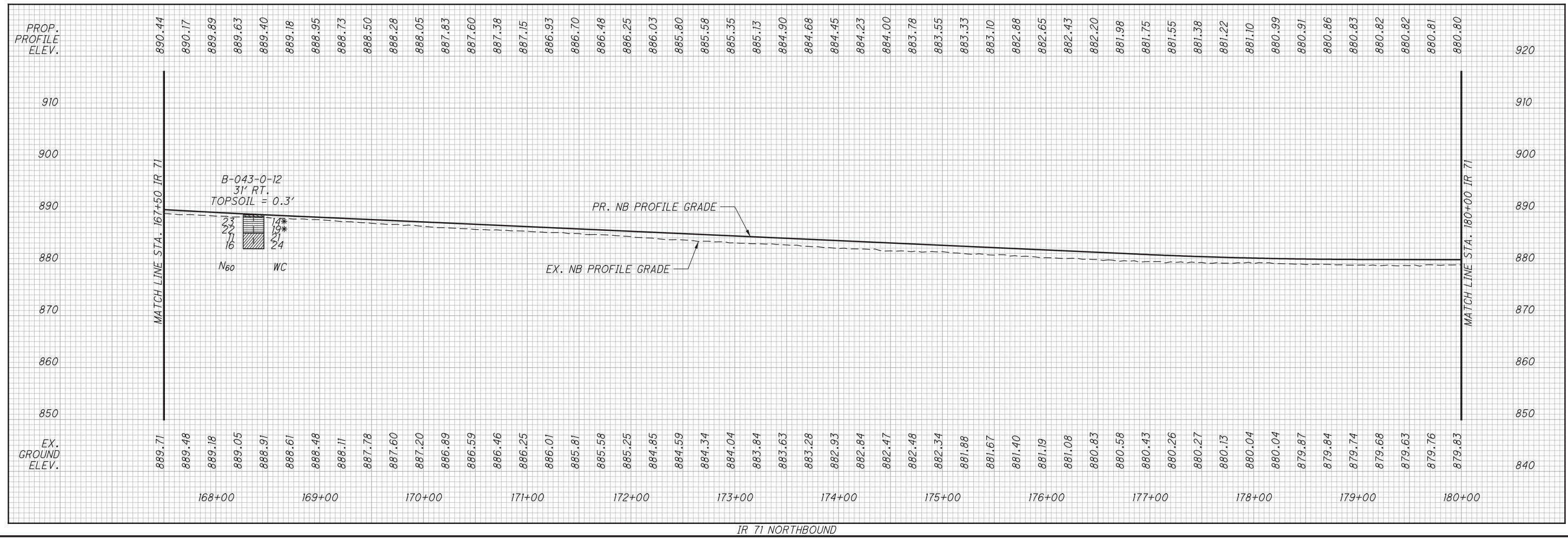
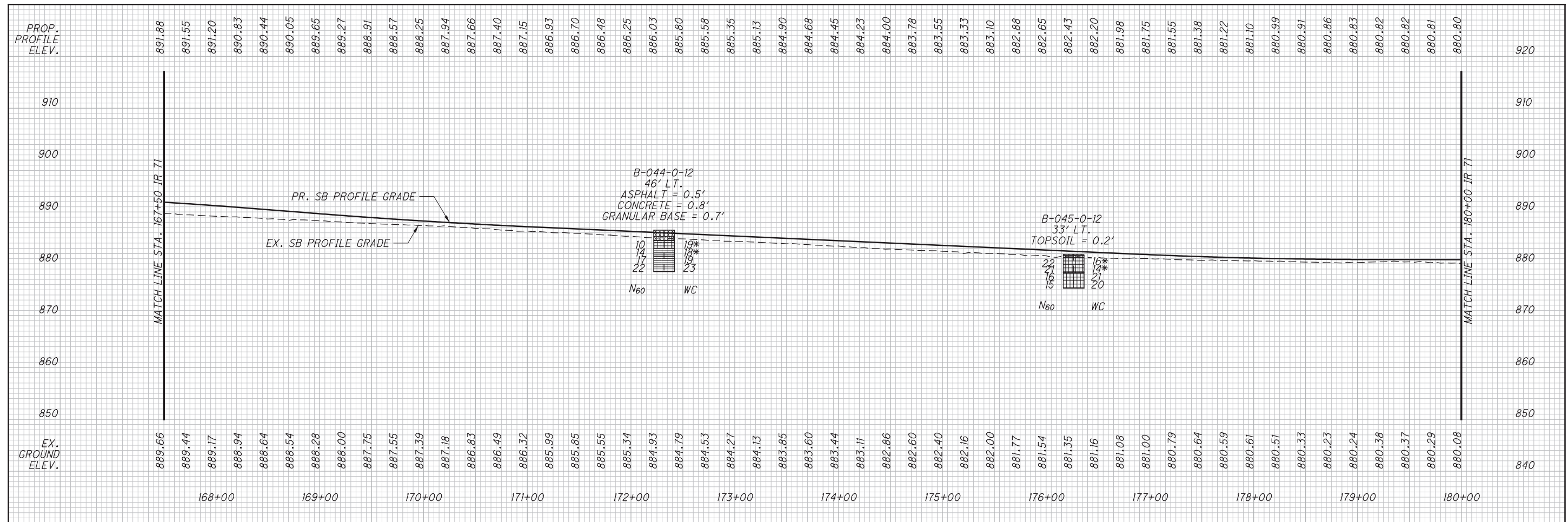
0 50 100
25
HORIZONTAL
SCALE IN FEET

DRAWN KA
CHECKED

SOIL PROFILE - IR 71
STA. 167+50 TO STA. 180+00

FRA-71-0.00





SOIL PROFILE - IR 71
STA. 167+50 TO STA. 180+00

FRA-71-0.00





DRAWN KA
CHECKED LE

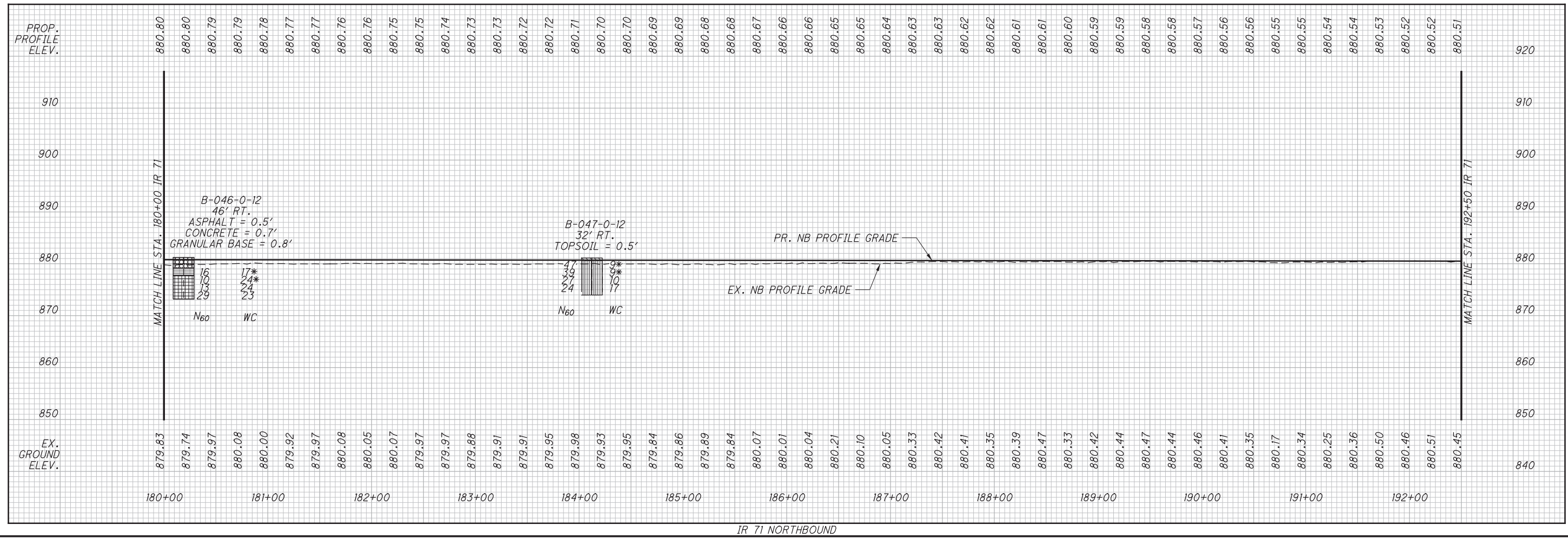
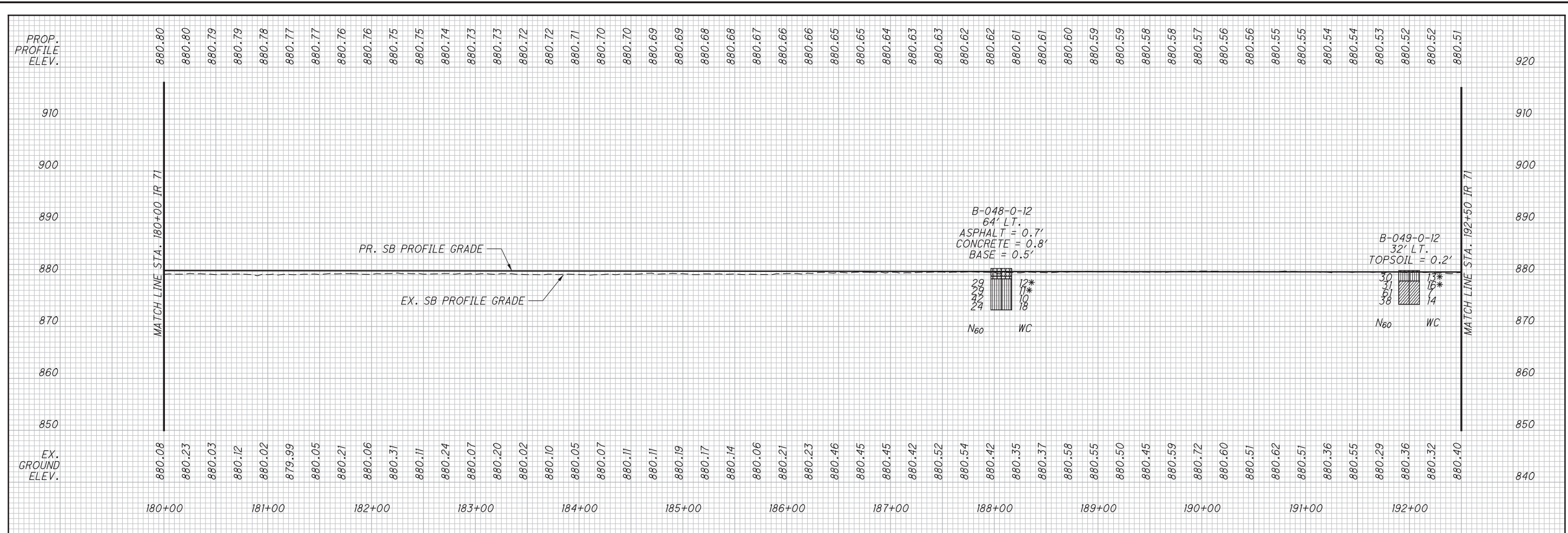
BORING PROFILE LOCATION REFERENCE	
STA. 180+00 TO STA. 192+50 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-046-0-12	47
B-047-0-12	47
B-048-0-12	47
B-049-0-12	47



SOIL PROFILE - IR 71
STA. 180+00 TO STA. 192+50

FRA-71-0.00





DRAWN: DML
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SOIL PROFILE - IR 71
STA. 180+00 TO STA. 192+50

FRA-71-0.00





DRAWN KA
CHECKED LE

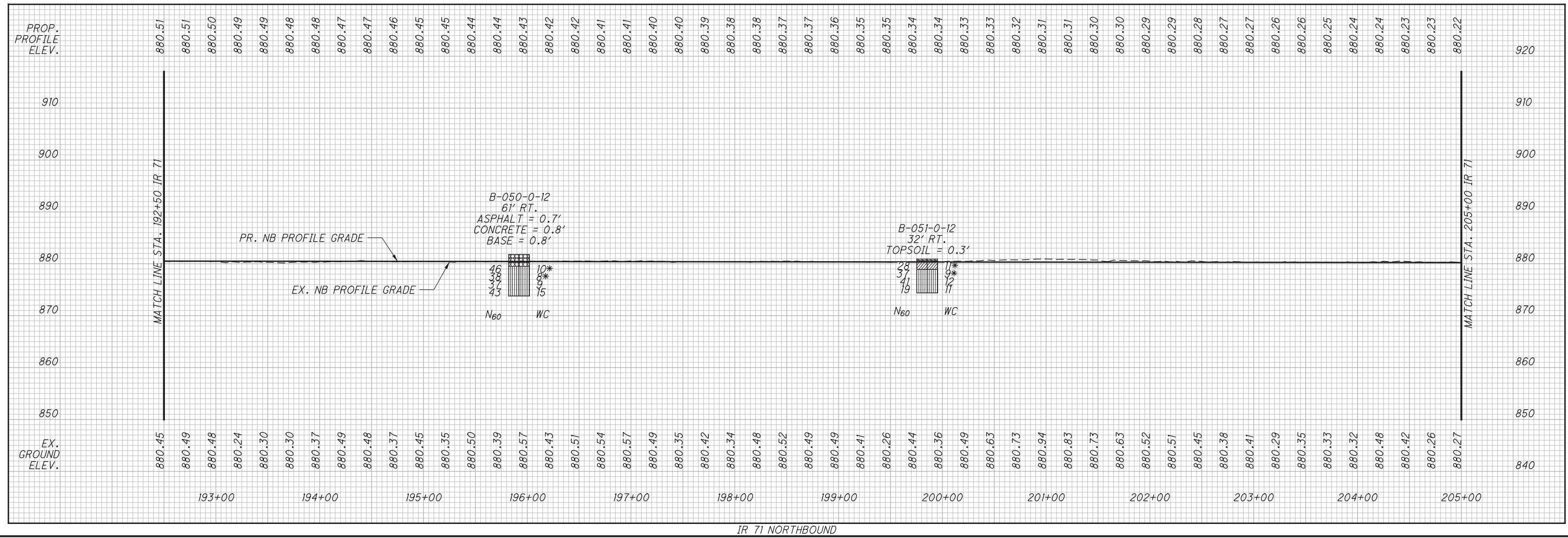
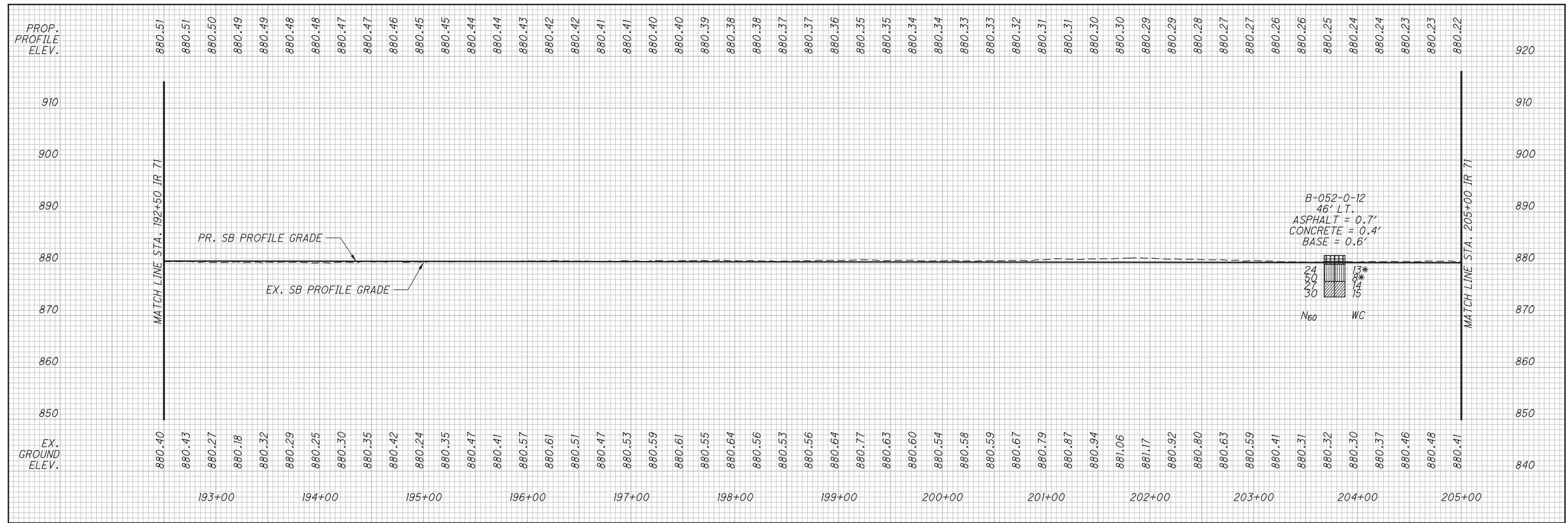
BORING PROFILE LOCATION REFERENCE	
STA. 192+50 TO STA. 205+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-050-0-12	49
B-051-0-12	49
B-052-0-12	49



SOIL PROFILE - IR 71
STA. 192+50 TO STA. 205+00

FRA-71-0.00





DRAWN: DML
CHECKED: LE

SOIL PROFILE - IR 71
STA. 192+50 TO STA. 205+00

FRA-71-0.00

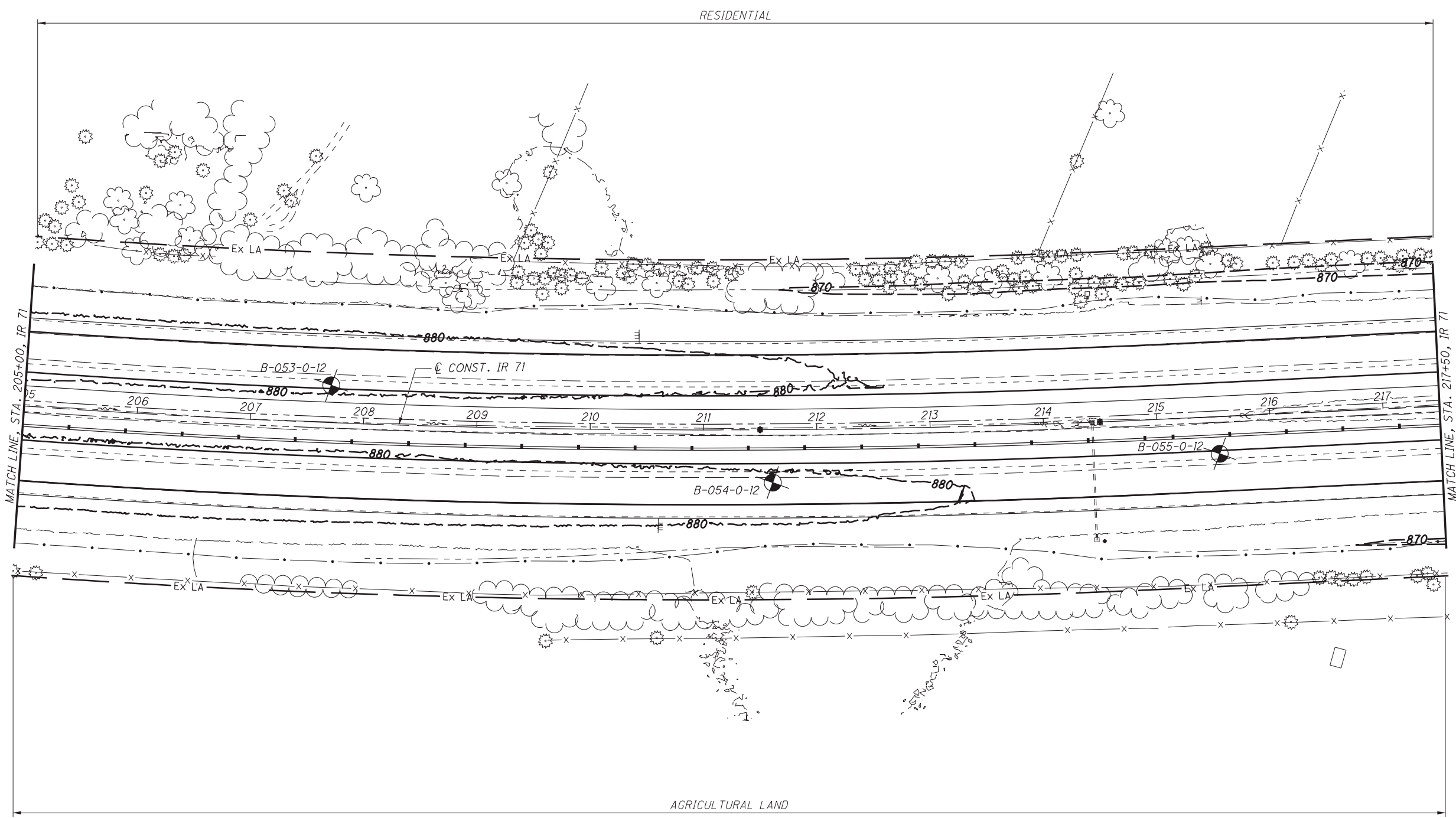






 HORIZONTAL SCALE IN FEET

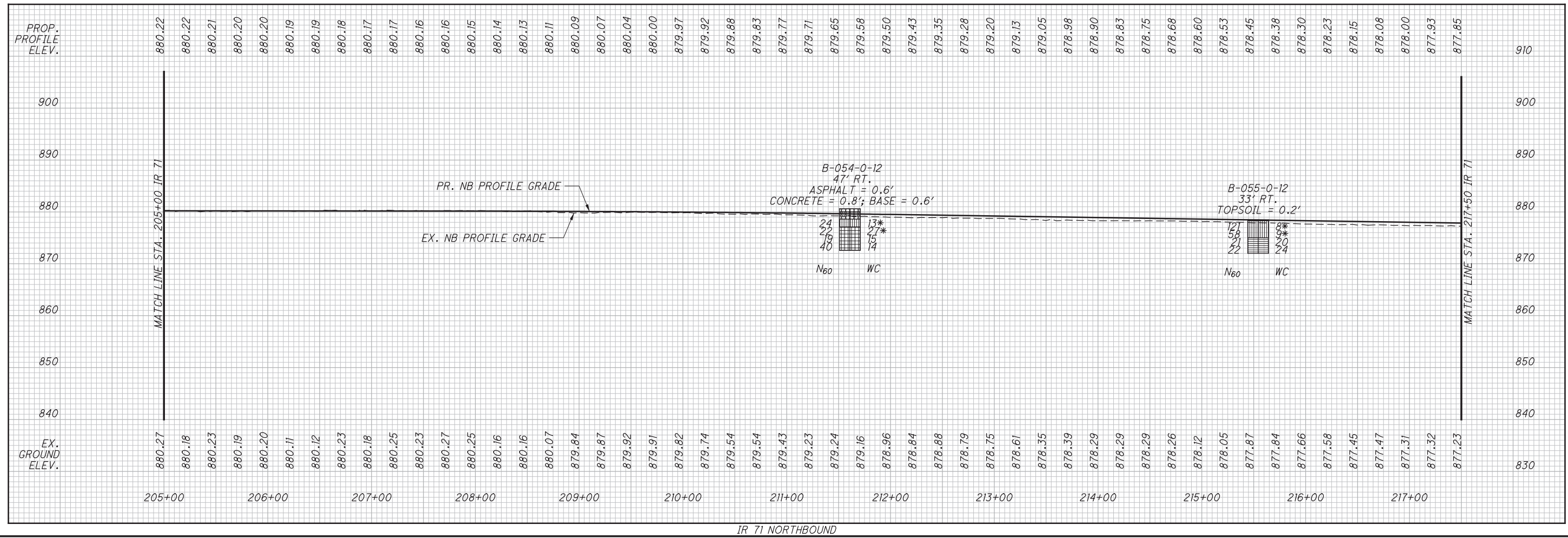
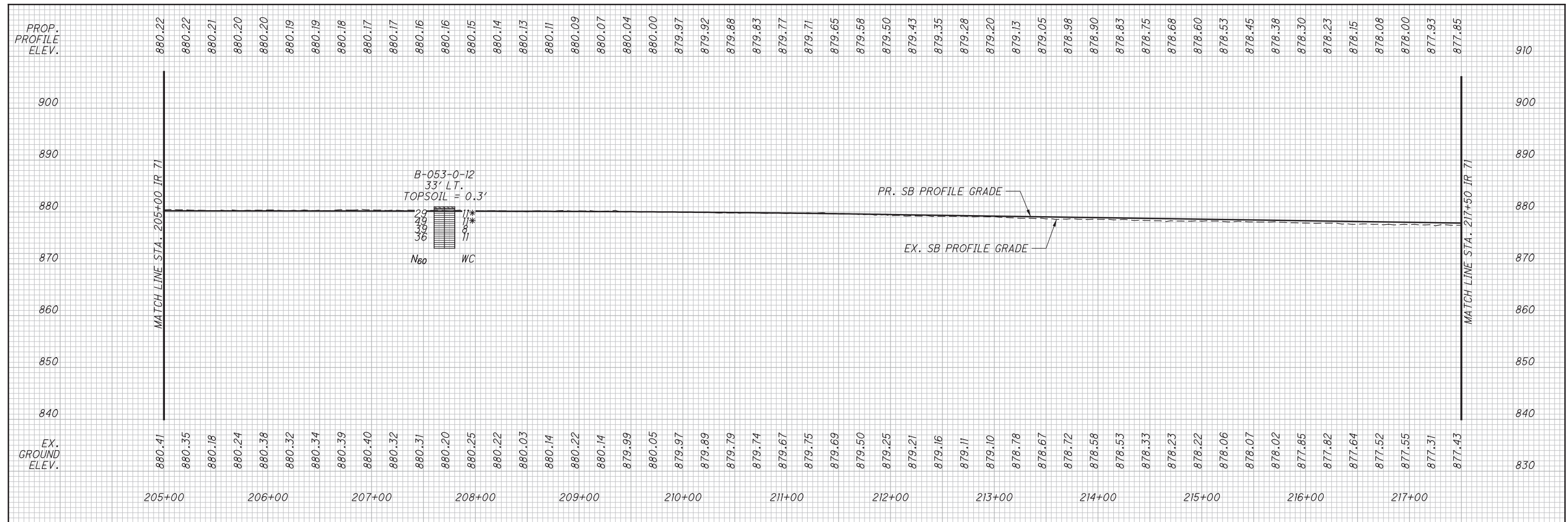
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STA. 205+00 TO STA. 217+50 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-053-0-12	51
B-054-0-12	51
B-055-0-12	51



SOIL PROFILE - IR 71
STA. 205+00 TO STA. 217+50

FRA-71-0.00





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 CHECKED: LE

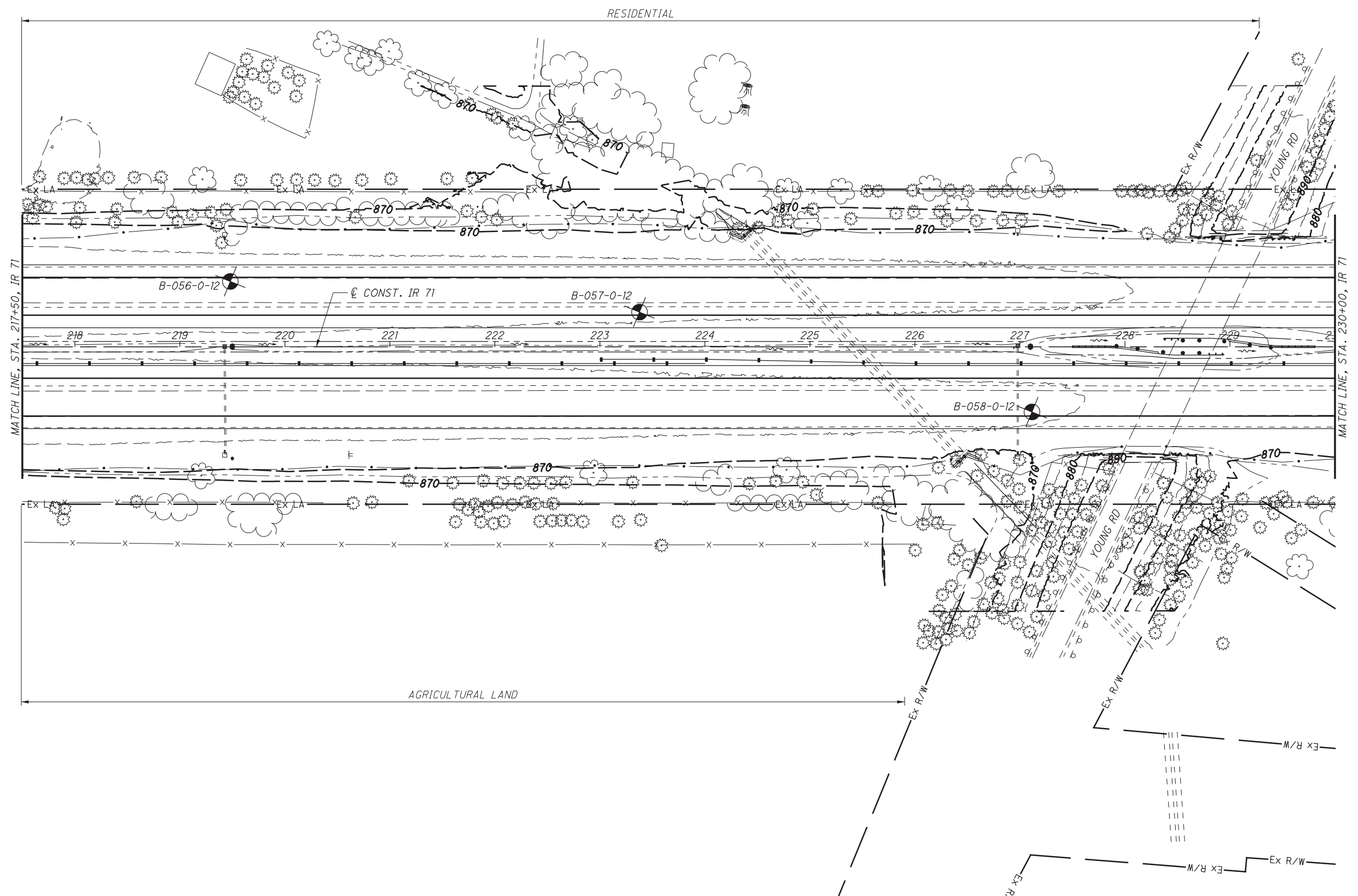
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STA. 205+00 TO STA. 217+50

FRA-71-0.00



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BORING PROFILE LOCATION REFERENCE STA. 217+50 TO STA. 230+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
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B-057-0-12	53
B-058-0-12	53



0 50 100
25
HORIZONTAL
SCALE IN FEET

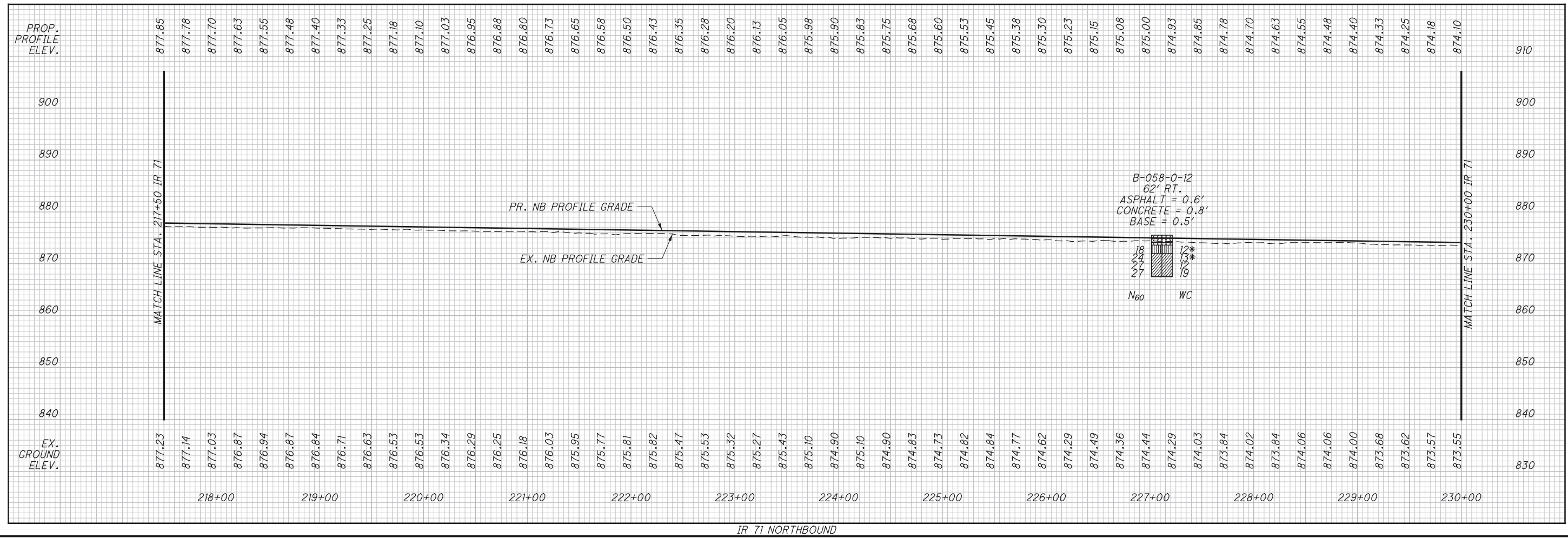
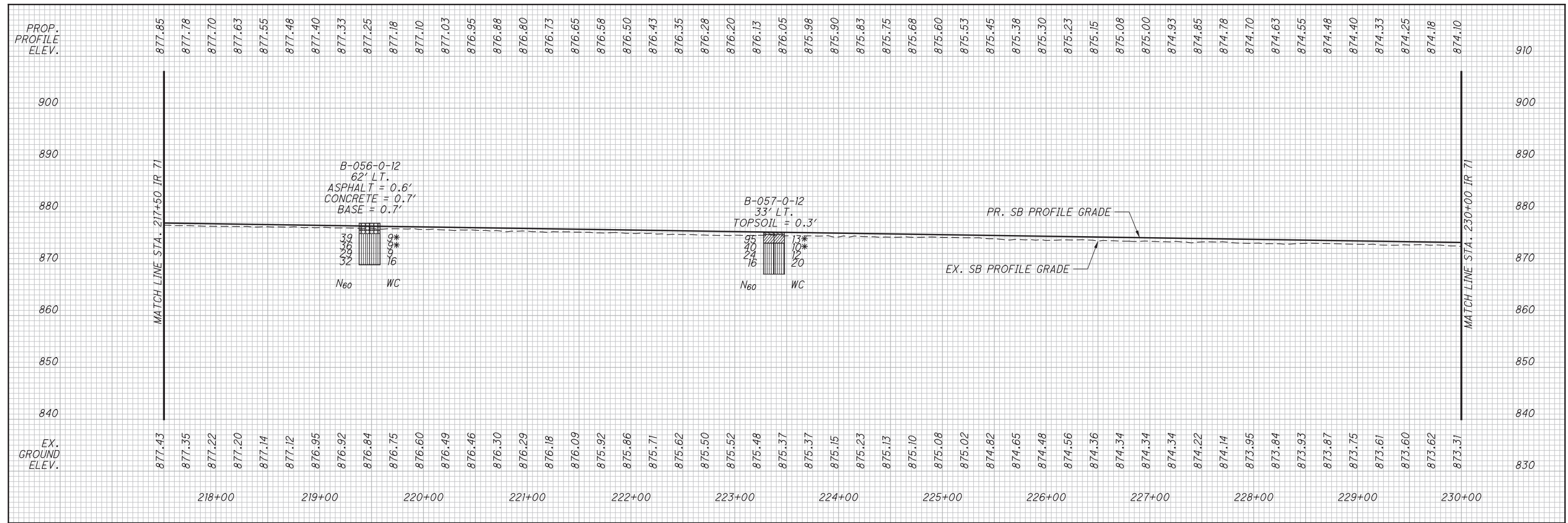
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CHECKED LE

SOIL PROFILE - IR 71
STA. 217+50 TO STA. 230+00

FRA-71-0.00



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0 25 50 100
HORIZONTAL SCALE IN FEET
DRAWN: DML
CHECKED: LE

SOIL PROFILE - IR 71
STA. 217+50 TO STA. 230+00

FRA-71-0.00



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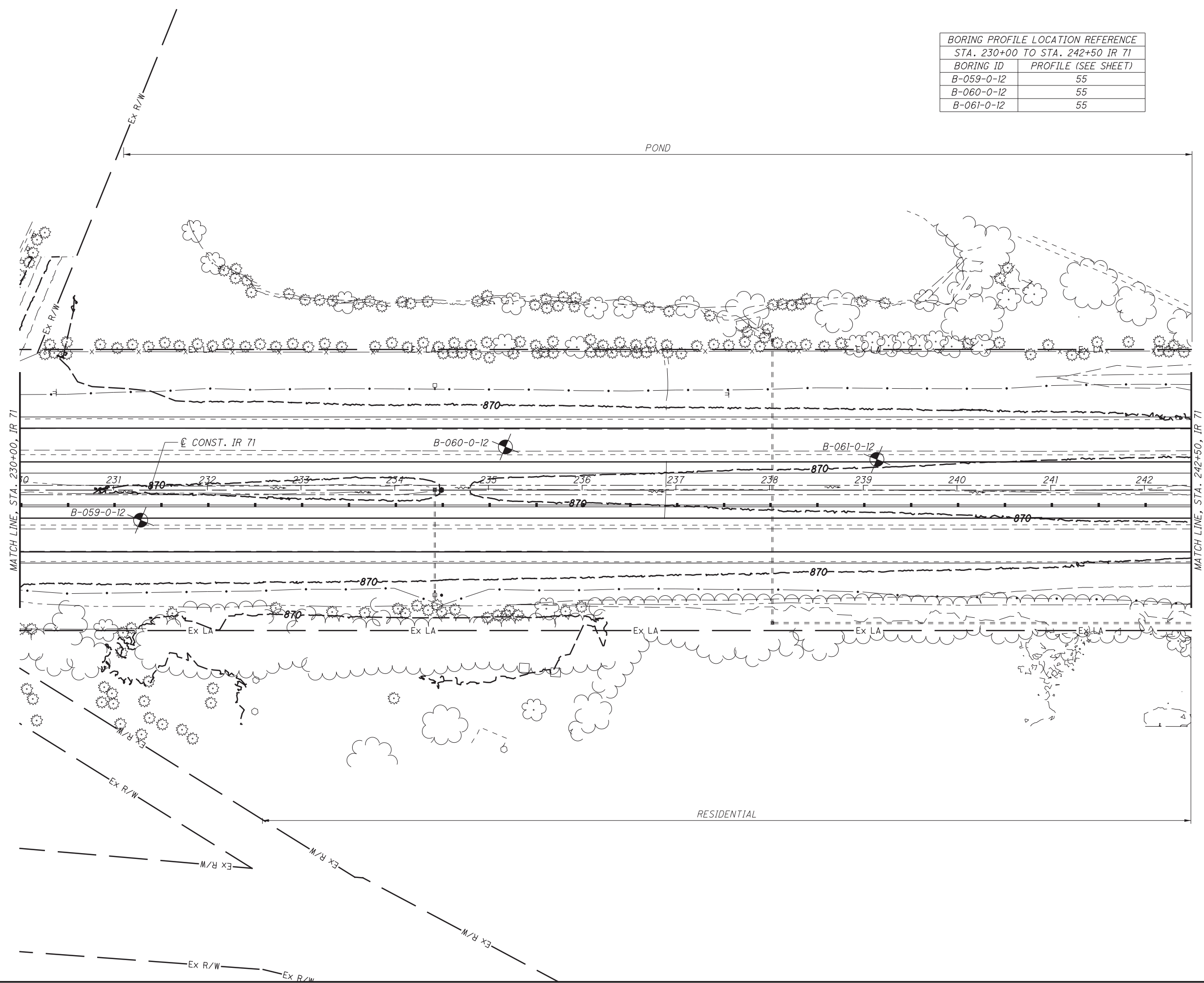
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STA. 230+00 TO STA. 242+50 IR 71	
BORING ID	PROFILE (SEE SHEET)
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B-060-0-12	55
B-061-0-12	55





 HORIZONTAL SCALE IN FEET

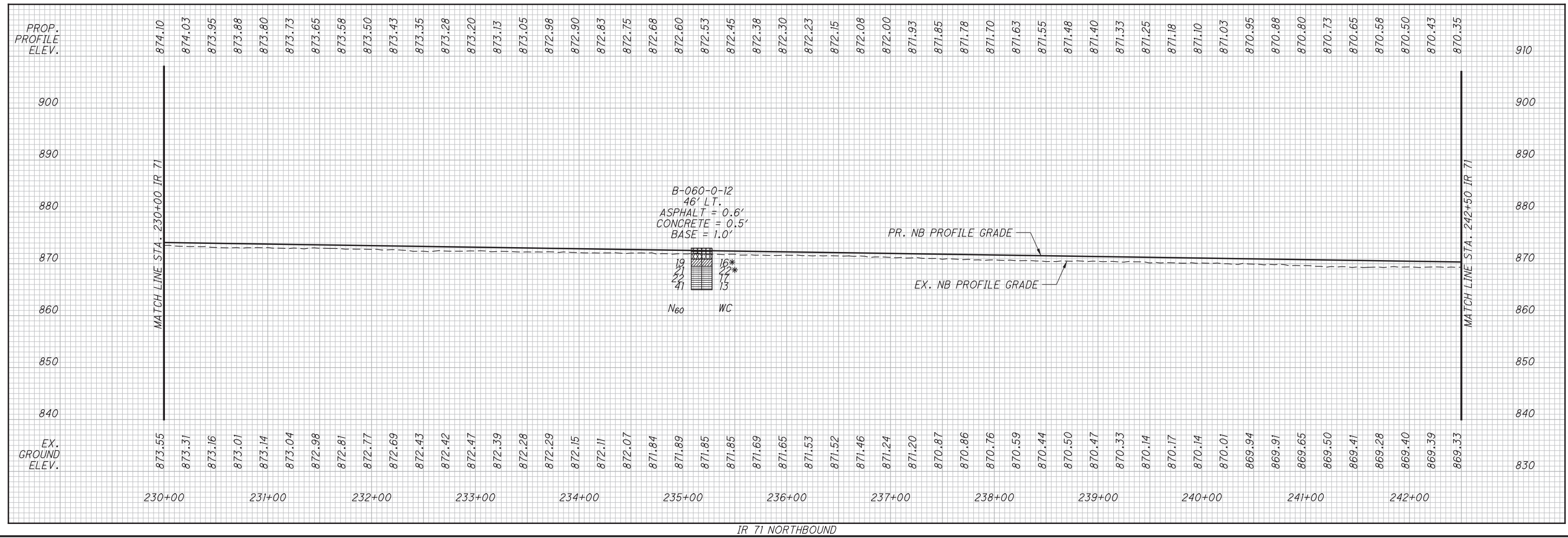
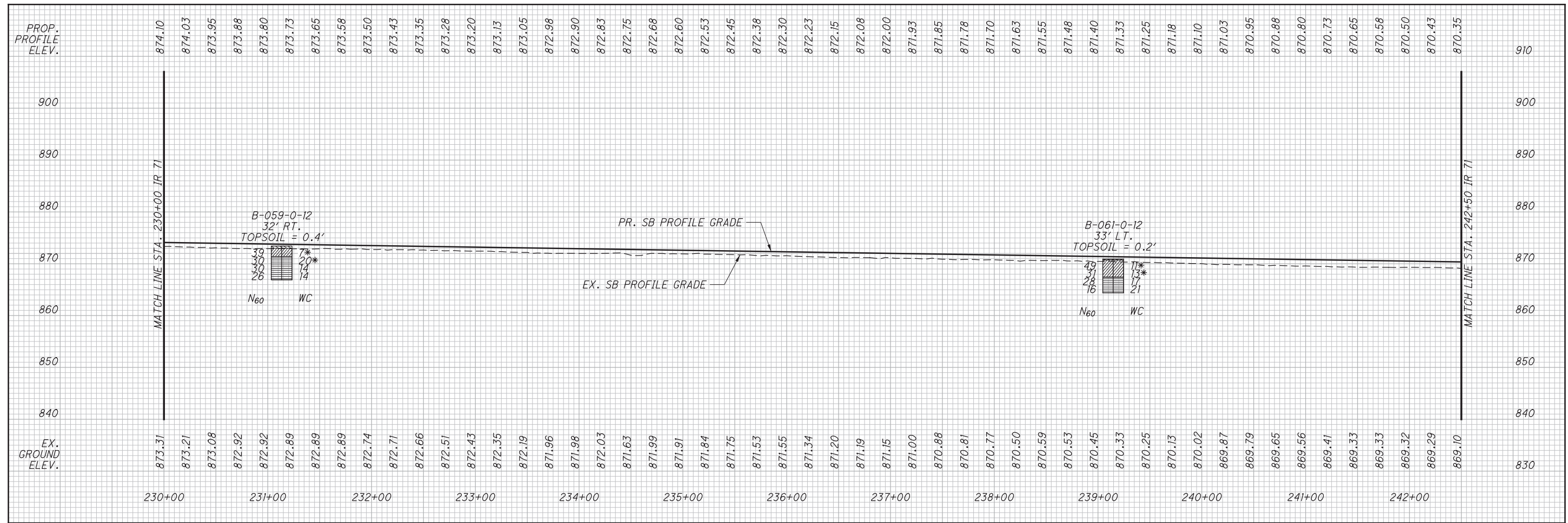
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SOIL PROFILE - IR 71
STA. 230+00 TO STA. 242+50

FRA-71-0.00





SOIL PROFILE - IR 71
STA. 230+00 TO STA. 242+50

FRA-71-0.00

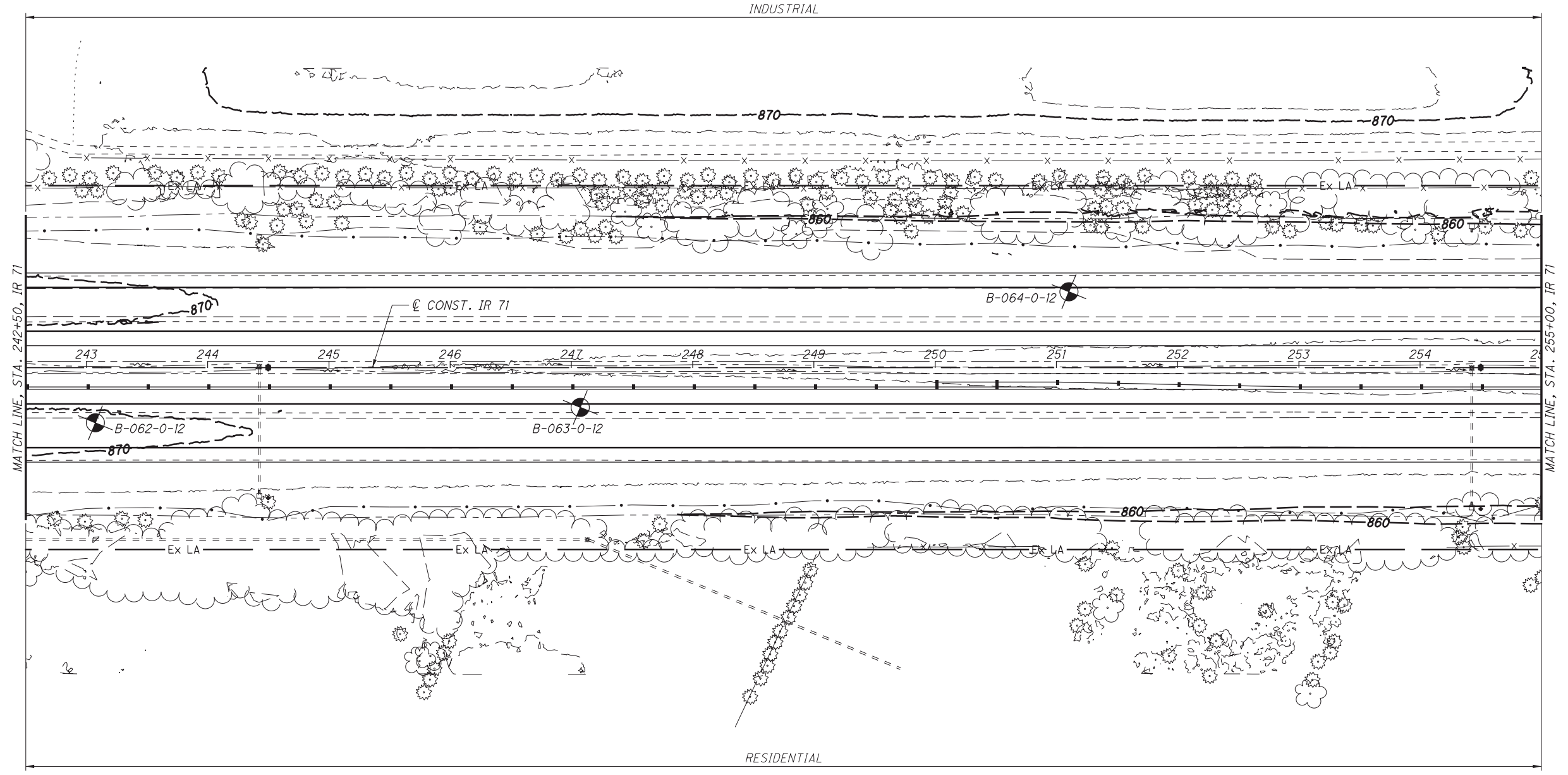


BORING PROFILE LOCATION REFERENCE	
STA. 242+50 TO STA. 255+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
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B-063-0-12	57
B-064-0-12	57

N

0 50 100
HORIZONTAL
SCALE IN FEET

DRAWN	KA
CHECKED	LE

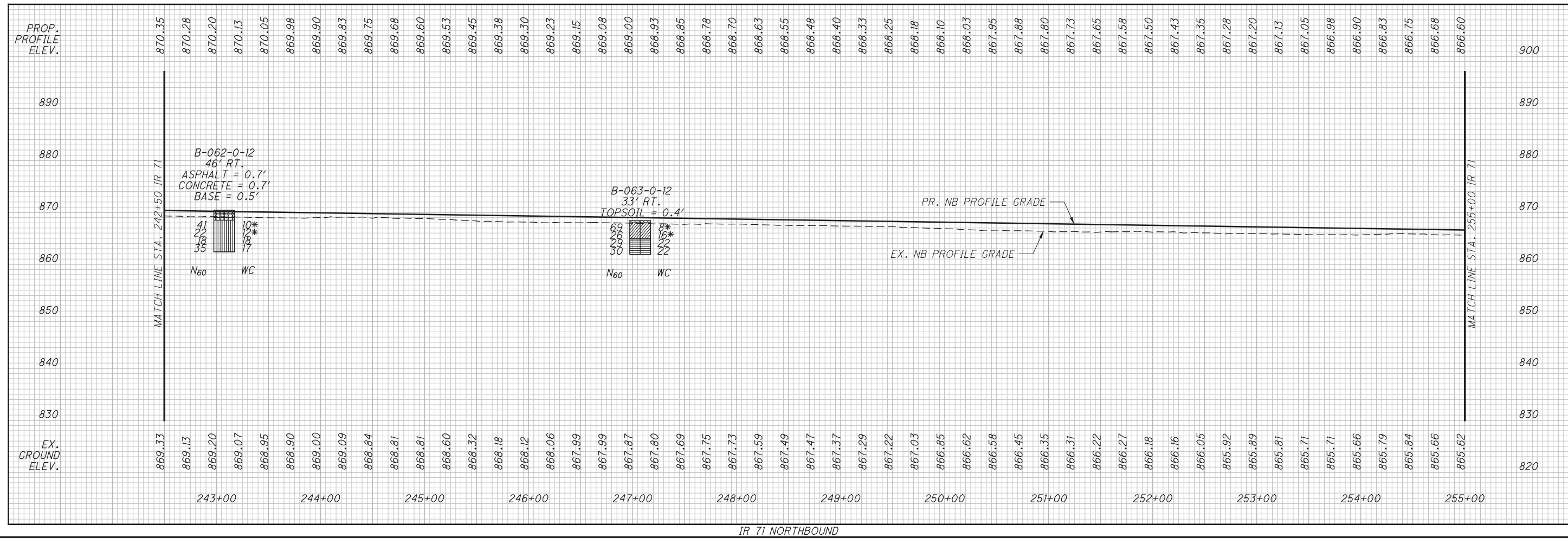
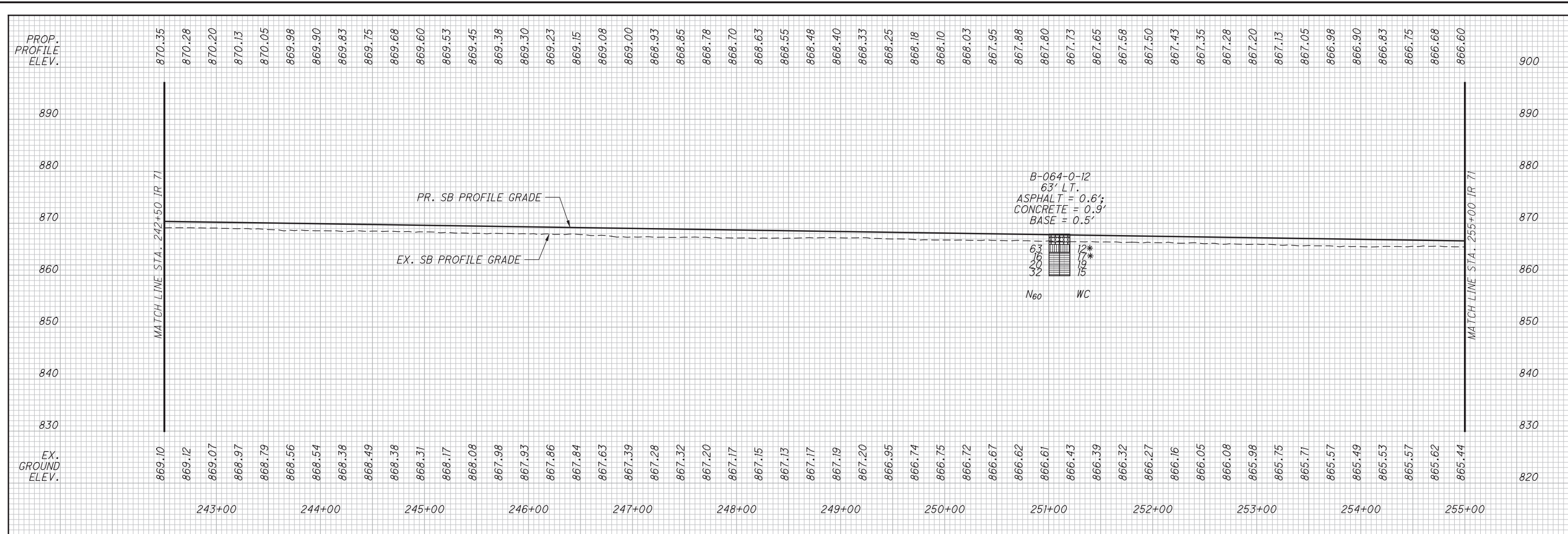


SOIL PROFILE - IR 71
STA. 242+50 TO STA. 255+00

FRA-71-0.00



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0 25 50 100
 HORIZONTAL SCALE IN FEET
 DRAWN: DML
 CHECKED: LE

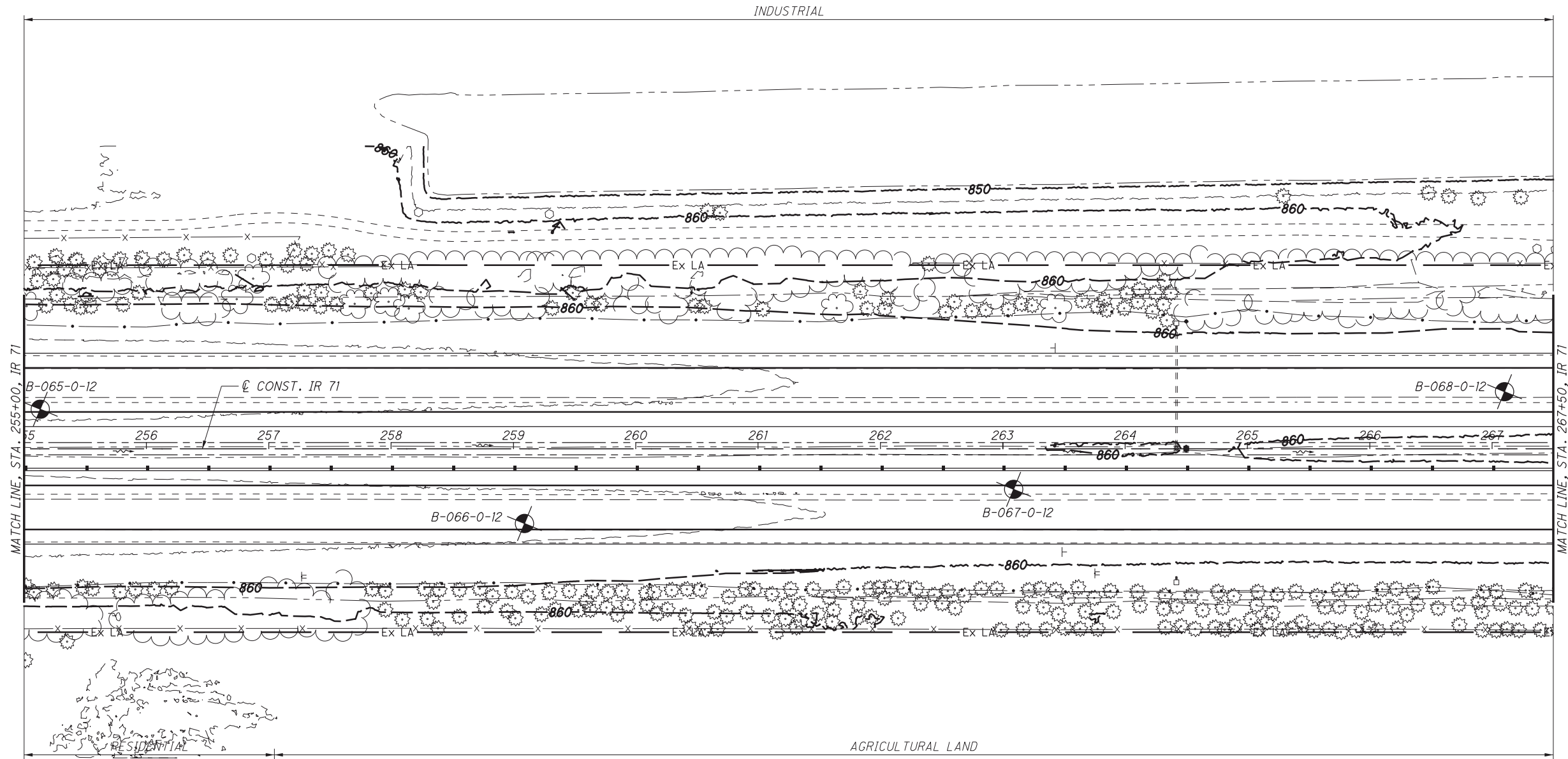
SOIL PROFILE - IR 71
STA. 242+50 TO STA. 255+00

FRA-71-0.00



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BORING PROFILE LOCATION REFERENCE	
STA. 255+00 TO STA. 267+50 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-065-0-12	59
B-066-0-12	59
B-067-0-12	59
B-068-0-12	59



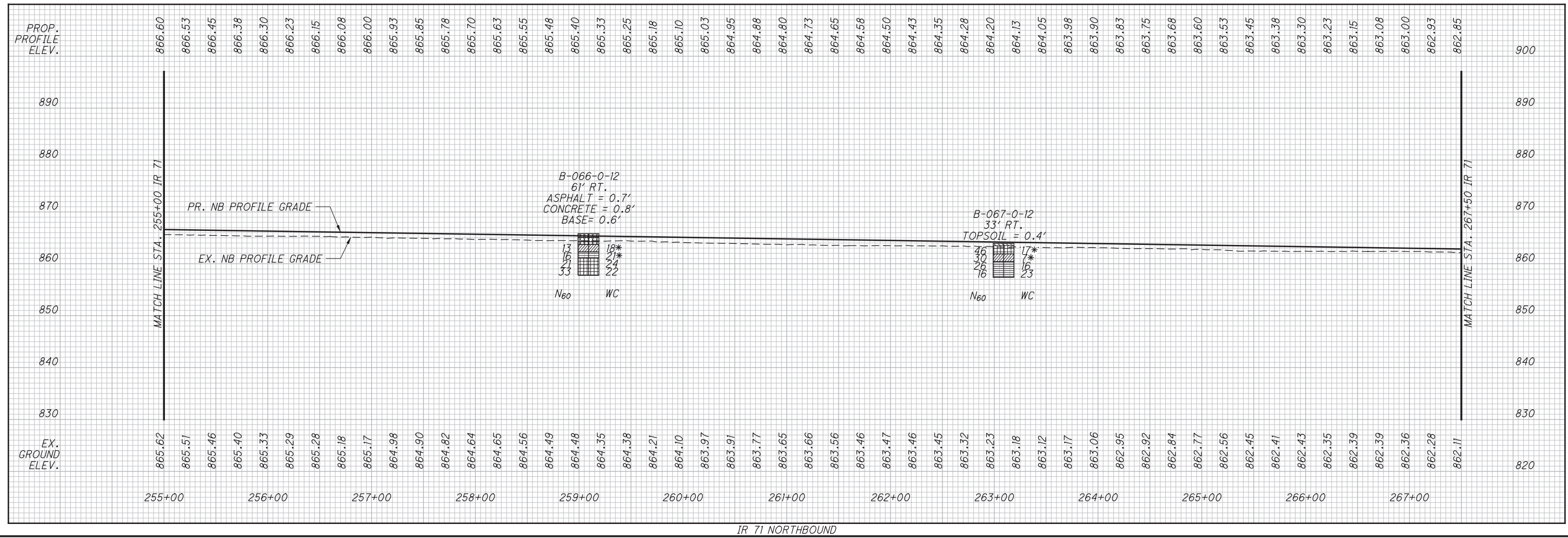
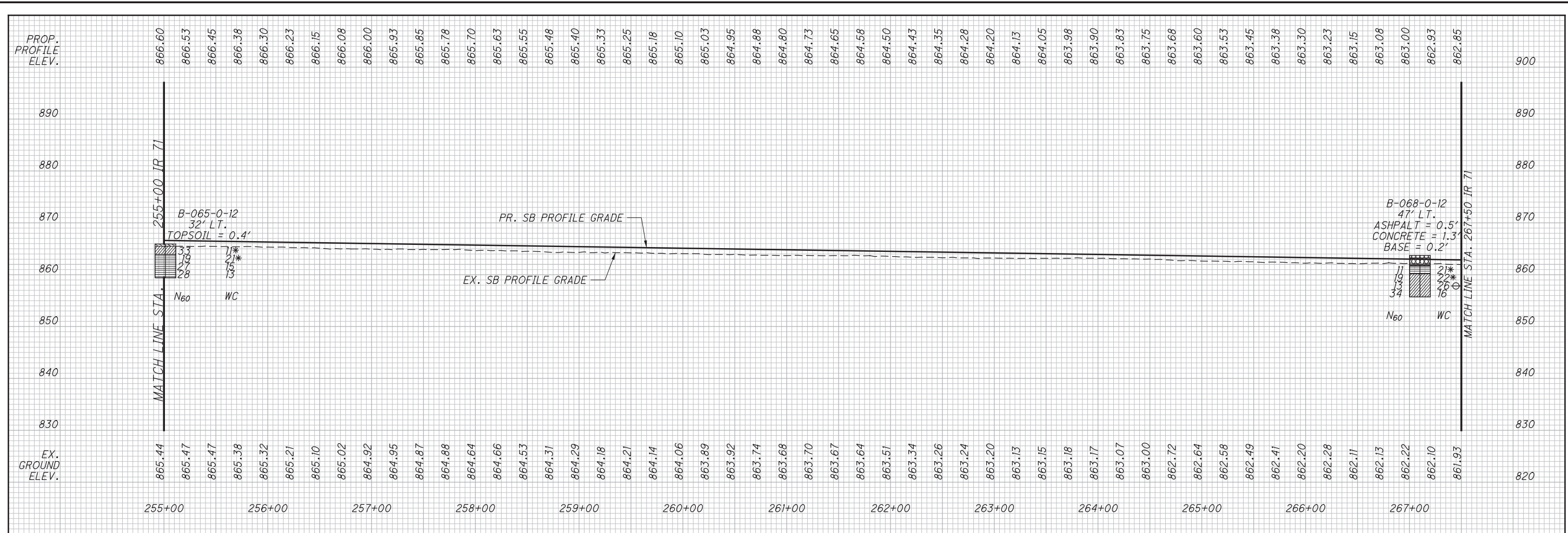


 HORIZONTAL SCALE IN FEET
 DRAWN: KA
 CHECKED: LE

SOIL PROFILE - IR 71
STA. 255+00 TO STA. 267+50

FRA-71-0.00





DRAWN: DML
 CHECKED: LE

SOIL PROFILE - IR 71
STA. 255+00 TO STA. 267+50



DRAWN KA
CHECKED LE

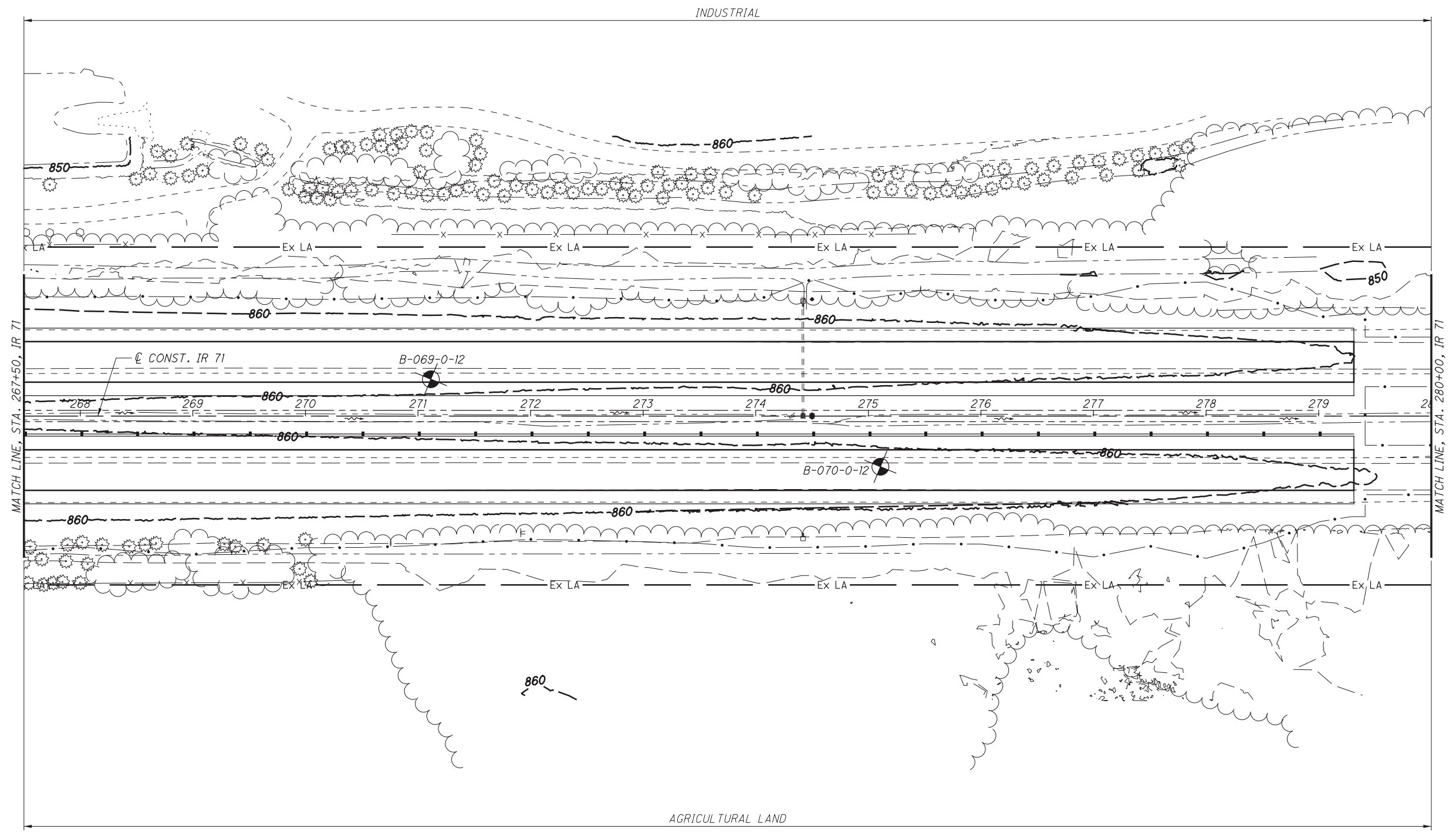
SOIL PROFILE - IR 71
STA. 267+50 TO STA. 280+00

FRA-71-0.00

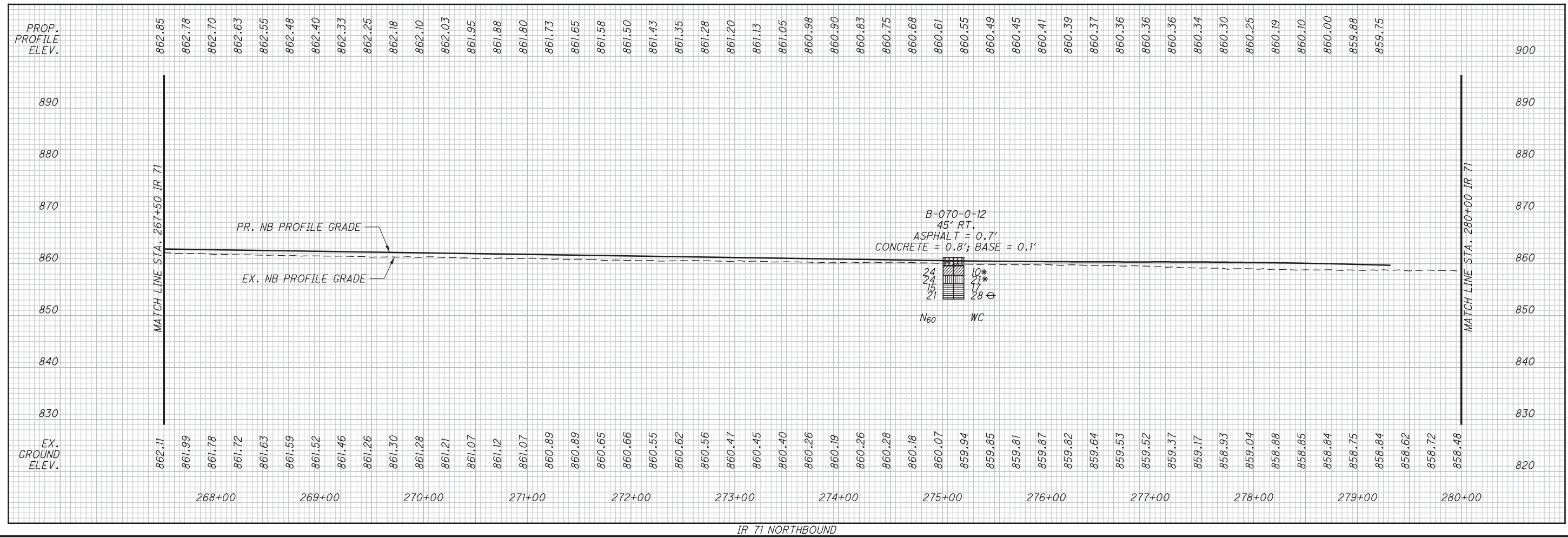
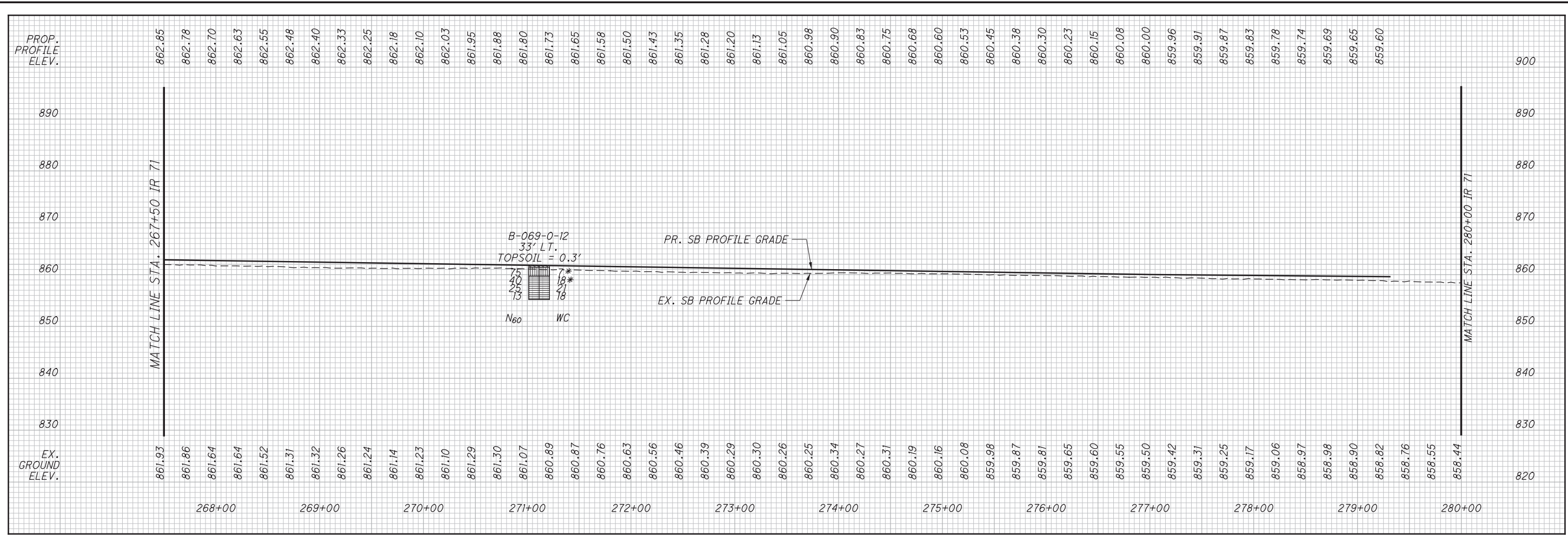
60/111



BORING PROFILE LOCATION REFERENCE	
STA. 267+50 TO STA. 280+00 IR 71	
BORING ID	PROFILE (SEE SHEET)
B-069-0-12	61
B-070-0-12	61

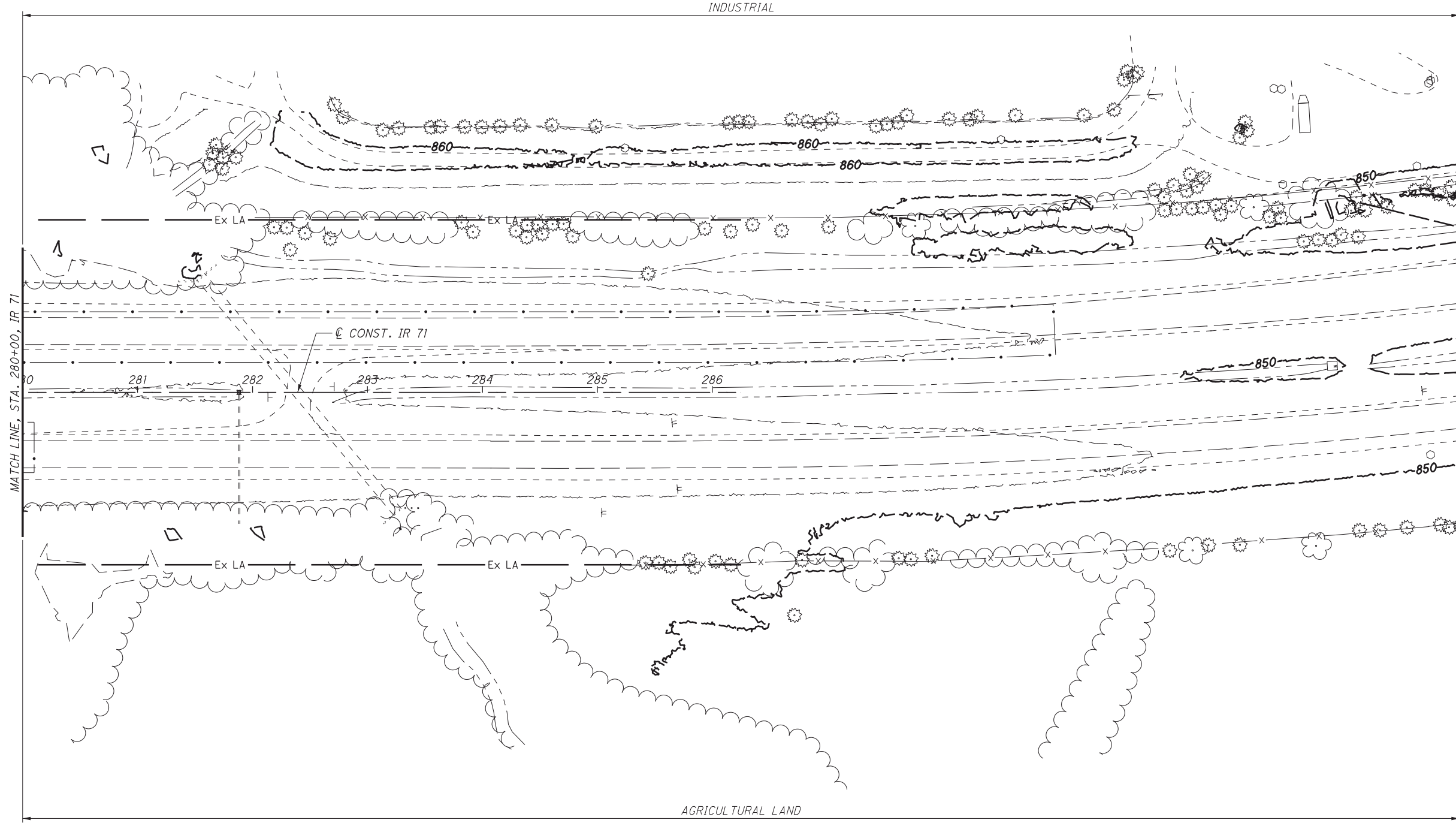


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DRAWN: DML
 CHECKED: LE

SOIL PROFILE - IR 71
STA. 267+50 TO STA. 280+00

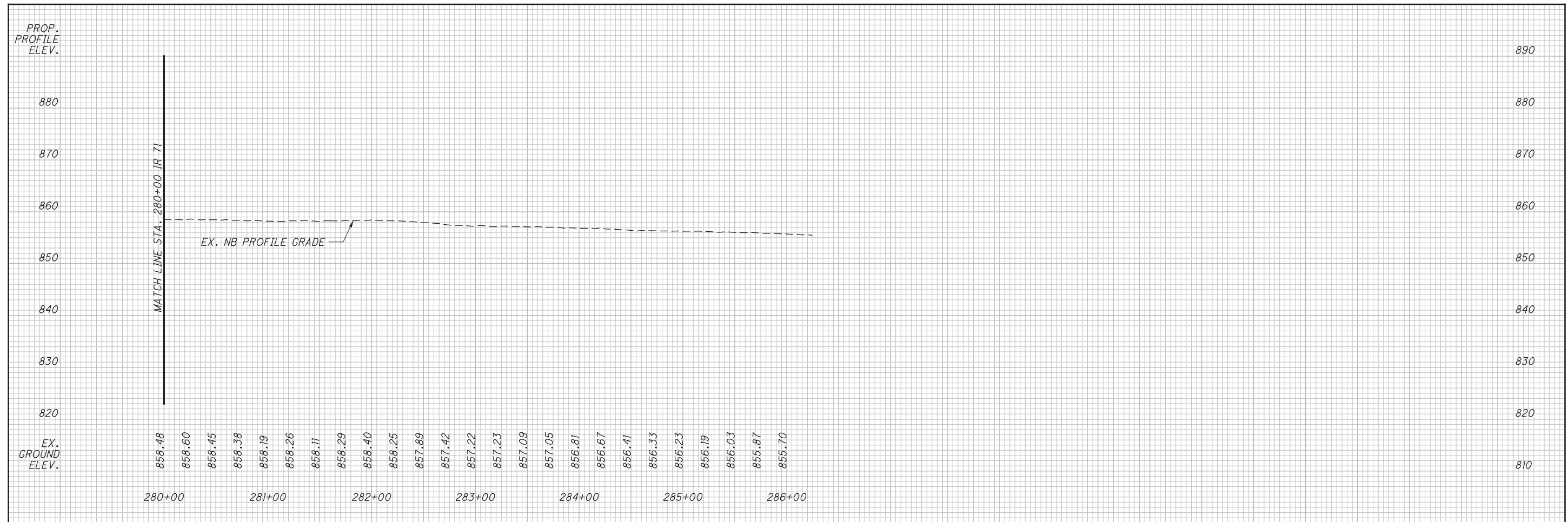
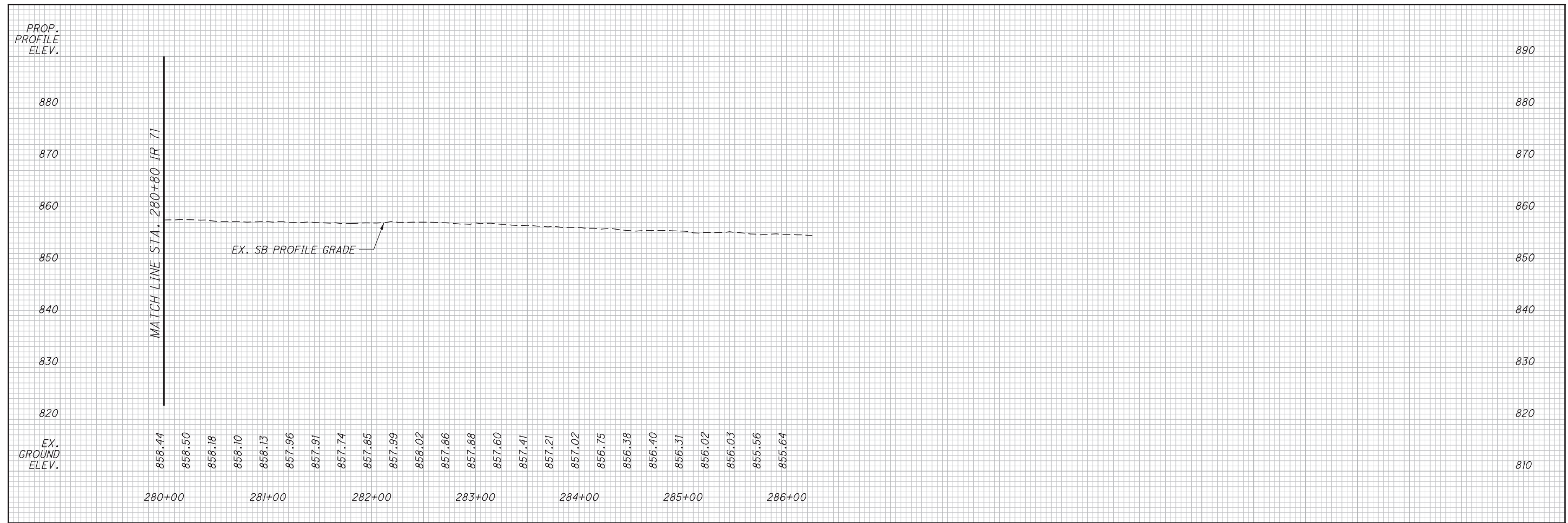


0 50 100
 HORIZONTAL SCALE IN FEET

DRAWN	KA
CHECKED	LE

SOIL PROFILE - IR 71
280+00 TO STA. 286+24

FRA-71-0.00



SOIL PROFILE - IR 71
STA. 280+00 TO STA. 286+24.38

FRA-71-0.00



PROJECT: FRA-71-00.00		DRILLING FIRM / OPERATOR: CENTRAL STAR / MJ		DRILL RIG: CME 55 (CS)		STATION / OFFSET: 81+23.5 RT		EXPLORATION ID					
TYPE: BRIDGE		SAMPLING FIRM / LOGGER: B&P / Z. JEWELL		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-021-1-14					
PID: 93496 BR ID: FRA-71-0153		DRILLING METHOD: 2.25" HSA / NQ2		CALIBRATION DATE: 6/12/12		ELEVATION: 797.0 (MSL), EOB: 72.4 ft.		PAGE					
START: 4/1/14 END: 4/1/14		SAMPLING METHOD: SPT / NQ2		ENERGY RATIO (%): 74.9		LAT / LONG: 39.821008, -83.169800		1 OF 2					
MATERIAL DESCRIPTION AND NOTES		ELEV.		SPT / RQD		REC SAMPLE (%)		GRADATION (%)		ATTERBERG		HOLE	
		797.0		N ₆₀		ID		GR CS FS SI CL		LL PL PI		OOOT CLASS (G) SEaled	
12.0' TOPSOIL		795.8		3		SS-1		11 12 28 19 25 15 10		25 15 10		10 A-4a (2)	
HARD, BROWN, SANDY SILT, SOME GRAVEL, LITTLE CLAY, CONTAINS LARGE ROOT, DAMP (FILL)		794.0		4		SS-2		10 12 16 34 28 30 16 14		30 16 14		16 A-6a (7)	
MEDIUM STIFF TO VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, TRACE TO LITTLE GRAVEL, DAMP (FILL)				6		SS-3							
@6.0'; SS-3 HARD				21		SS-3						10 A-6a (V)	
@8.5'; SS-4 NO RECOVERY				9		SS-4						A-6a (V)	
VERY STIFF, DARK GRAY, SILTY CLAY, SOME SAND, TRACE GRAVEL, CONTAINS SHELLS AND DECAYING WOOD, DAMP TO MOIST		784.0		8		SS-5		10 12 15 35 28 28 15 13		28 15 13		13 A-6a (7)	
@16.0'; SS-7 NO LONGER FILL		779.0		6		SS-7		2 28 37 32 37 21 16		37 21 16		22 A-6b (9)	
SOFT TO MEDIUM STIFF, DARK GRAY, SILT AND CLAY "AND" SAND, TRACE GRAVEL, CONTAINS SHELLS AND ROOTS, MOIST		776.5		3		SS-8		4 44 30 21 32 19 13		32 19 13		28 A-6a (4)	
DENSE, LIGHT BROWN WITH BROWN, GRAVEL WITH SAND AND SILT TRACE CLAY, DAMP		774.0		18		SS-9		38 22 13 23 4		NP NP NP		10 A-2-4 (0)	
MEDIUM DENSE, BROWN, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, DAMP		769.0		5		SS-10		41 22 16 18 3		NP NP NP		9 A-1-b (0)	
VERY DENSE, GRAYISH BROWN MOTTLED WITH GRAY, SANDY SILT, TRACE CLAY, TRACE GRAVEL, DAMP		765.5		40		SS-12						9 A-4a (V)	
LIMESTONE LIGHT GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, THICK BEDDED, FOSSILIFEROUS, PARTLY VUGGY, CLAY LAYERS- WASHED OUT DURING DRILLING, JOINT DISCONTINUITIES: LOW AND DIAGONAL FRACTURES WITH HIGH ANGLE FRACTURE AT 43.0' TO 43.5', MODERATELY FRACTURED, NARROW TO OPEN, SLIGHTLY TO VERY ROUGH; RQD 16.6%, REC 38.7%		749.6		59		NQ2-1						CORE	
SILTSTONE GRAYISH BROWN, UNWEATHERED, SLIGHTLY STRONG, VERY THICK BEDDED, FEW IRON STAINED CRACKS, JOINT DISCONTINUITIES: LOW ANGLE FRACTURES WITH HIGH ANGLE FRACTURES AT 47.8' TO 48.4' AND 48.7' TO 49.2', MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 68.2%, REC 96.1%		744.2		28		NQ2-2						CORE	
DOLOMITE GRAYISH BROWN, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM BEDDED, FOSSILIFEROUS- INCREASES WITH DEPTH, PARTLY VUGGY, IRON STAINS, BEDDING DISCONTINUITIES: LOW ANGLE FRACTURES WITH HIGH ANGLES FRACTURES AT 55.4' TO 55.7' AND 57.3' TO 57.5', MODERATELY FRACTURED, NARROW; RQD 57.4%, REC 100%				14		NQ2-3						CORE	
				0		NQ2-4						CORE	
				66		NQ2-5						CORE	
				83		NQ2-6						CORE	

STANDARD ODOT BORING LOG (1 X 17) - OH DOT GDT - 6/9/15 11:18 - \\COLUMBUSLAB\ABACTIVE PROJECTS\FRA-71-00 2014-15\COMBINED GINTS.RENUMBERED\FRA-71-00 2014.GPJ

PID: 93496	BR ID: FRA-71-0153	PROJECT: FRA-71.00.00	STATION / OFFSET: 81+22.77, 4.9 RT	START: 4/1/14	END: 4/1/14	PG 2 OF 2			B-021-1-14				
						GR	CS	FS					
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP ID (tsf)	GRADATION (%)			ODOT CLASS (GI)	HOLE SEALED		
		737.0		45	100	NQ2-7	LL	PL	PI	WC			
<p>DOLOMITE GRAYISH BROWN, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM BEDDED, FOSSILIFEROUS. INCREASES WITH DEPTH, PARTLY VUGGY, IRON STAINS. BEDDING DISCONTINUITIES: LOW ANGLE FRACTURES WITH HIGH ANGLES FRACTURES AT 55.4' TO 55.7' AND 57.3' TO 57.5'. MODERATELY FRACTURED, NARROW; RQD 57.4%, REC 100%. (continued)</p>			- 61								CORE		
			- 62										
			- 63										
			- 64										
			- 65	732.0	48	100	NQ2-8						CORE
			- 66										
			- 67										
<p>SILTSTONE GRAY, UNWEATHERED, MODERATELY STRONG, VERY THICK BEDDED, JOINT DISCONTINUITIES. LOW ANGLE FRACTURE, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 54%, REC 97.2%.</p>			- 68										
			- 69										
			- 70		40	95	NQ2-9						CORE
			- 71										
<p>DOLOMITE GRAY, MODERATELY WEATHERED, SLIGHTLY STRONG, THICK BEDDED, VUGGY, CONTAINS IRON STAINING, JOINT DISCONTINUITIES; LOW ANGLE FRACTURES WITH DIAGONAL, TO HIGH ANGLE FRACTURE AT 70.6' TO 72.4'. MODERATELY FRACTURED TO FRACTURED, NARROW TO OPEN, SLIGHTLY ROUGH; RQD 42.6%, REC 94.9%.</p>			- 72										
			- EOB	724.6									

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 11:18 - \\COLLUMBUS\SUBLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-00 2014-15\COMBINED GINTS.RENUMBERED\FRA-71-00 2014.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 18.0' DURING DRILLING. CAVE DEPTH 23.5'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 20 GAL. BENTONITE GROUT

PROJECT: TYPE: PID: START:	FRA-71-00.00 BRIDGE 93496 BR ID: FRA-71-0153 3/31/14 END: 3/31/14	DRILLING FIRM / OPERATOR: SAMPLING FIRM / LOGGER: DRILLING METHOD: SAMPLING METHOD:	CENTRAL STAR / M/J B&P / Z. JEWELL 2.25" HSA / NQ2 SPT / NQ2	DRILL RIG: HAMMER: CALIBRATION DATE: ENERGY RATIO (%):	CME 55 (CS) CME AUTOMATIC 6/12/12 74.9	STATION / OFFSET:										EXPLORATION ID				
						ALIGNMENT:		CL CONST.		IR 71		85+29.6 RT		B-021-2-14						
MATERIAL DESCRIPTION AND NOTES				SPT/ RQD	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG					HOLE CLASS (G)	SEAL	
								GR	CS	FS	SI	CL	LL	PL	PI	WC				
14.0' TOPSOIL																				
VERY STIFF TO HARD, GRAY WITH GRAYISH BROWN, SILT AND CLAY SOME SAND, LITTLE GRAVEL, SS-1 FEW ROOT HAIRS, DAMP				796.6	3	10	2.5-3.5	11	14	16	35	24	27	14	13	11	A-6a (6)			
@3.5'; BECOMES GRAY					5	4	9	94	SS-2	4.00	-	-	-	-	-	13	A-6a (V)			
VERY DENSE, REDDISH BROWN, SANDY SILT, "AND" GRAVEL, LITTLE CLAY, DAMP (Possible cuttings)				790.0	5	7	24	100	SS-3	4.5+	-	-	-	-	-	11	A-6a (V)			
VERY STIFF, GRAYISH BROWN MOTTLED WITH DARK GRAY, SILTY CLAY, SOME SAND, LITTLE GRAVEL, DAMP				787.5	18	20	55	33	SS-4	-	-	-	-	-	-	9	A-4a (V)			
MEDIUM DENSE TO DENSE, DARK GRAYISH BROWN, SANDY SILT, TRACE TO LITTLE CLAY, TRACE TO LITTLE GRAVEL, DAMP TO WET				785.0	5	7	21	100	SS-5	3.0-3.25	14	12	20	27	38	18	20	17	A-6b (8)	
@16.0'; SS-7 BECOMES DARK GRAY, CONTAINS WOOD FRAGMENTS					10	8	34	44	SS-6	-	-	-	-	-	-	13	A-4a (V)			
MEDIUM STIFF TO STIFF, DARK GRAY, SILT AND CLAY "AND" SAND, TRACE GRAVEL, CONTAINS SHELLS AND WOOD FRAGMENTS, MOIST				780.0	11	8	17	100	SS-7	-	2	11	39	29	19	NP	NP	26	A-4a (3)	
DENSE, GRAYISH BROWN, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, MOIST TO WET				778.5	8	15	31	100	SS-8	1.00	10	22	28	20	33	19	14	20	A-6a (2)	
HARD, GRAY, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP				772.5	9	12	35	100	SS-9	-	28	38	15	13	6	NP	NP	13	A-1-b (0)	
VERY DENSE, GRAY, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, DAMP				770.0	9	12	31	33	SS-10	-	8	50	24	12	6	NP	NP	18	A-1-b (0)	
DARK GRAY, LIMESTONE BOULDER				767.5	13	17	42	100	SS-11	4.5+	13	12	20	35	20	13	7	10	A-4a (4)	
LIMESTONE LIGHT GRAYISH BROWN, BECOMES GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, MODERATELY STRONG, THICK MODERATELY STRONG, MEDIUM BEDDED, CONGLOMERATIC, JOINT DISCONTINUITIES; LOW ANGLE FRACTURES WITH HIGH ANGLE FRACTURES AT 32.3' TO 33.0', 36.5' TO 36.8', AND 39.3' TO 40.0'. FRACTURED TO MODERATELY FRACTURED, TIGHT TO NARROW, VERY ROUGH; RQD 33.7%, REC 95.2%.				765.3	32	50/5*	-	45	SS-12	-	-	-	-	-	-	-	-	9	A-1-b (V)	
DOLOMITE LIGHT GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, MODERATELY STRONG, THICK BEDDED, FEW VUGGY ZONES, FEW FOSSILS, CONGLOMERATIC AT 43.5' TO 43.7', JOINT DISCONTINUITIES; LOW ANGLE FRACTURES WITH HIGH ANGLE FRACTURES AT 52.8' TO 53.1'. MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 63.6%, REC 97.4%.				755.0	50/1*	-	0	SS-13	-	-	-	-	-	-	-	-	-	-	-	-
48.1' to 48.3' Clay Seam					14			90	NQ2-1										CORE	
56.4' to 56.5' Shale Layer					42			100	NQ2-2										CORE	
					62			100	NQ2-3										CORE	
					71			97	NQ2-4										CORE	
					67			100	NQ2-5										CORE	
					56			93	NQ2-6										CORE	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 5/15 11:18 - \COLUMBUS\LAB\ACTIVE PROJECTS\FRA-71-00 2014-15\COMBINED GINTS.RENUNBERED\FRA-71-00 2014.GPJ

PID: 93496	BR ID: FRA-71-0153	PROJECT: FRA-7100.00	STATION / OFFSET: 85+28.79, 5.7 RT	START: 3/31/14	END: 3/31/14	PG 2 OF 2	B-021-2-14
MATERIAL DESCRIPTION AND NOTES		ELEV.	SPT / RQD	HP (tsf)	GRADATION (%)	ODOT CLASS (GI)	HOLE SEALED
59.8' to 60.0'	Shale Layer	738.0	N ₆₀	ID	GR CS FS SI CL LL PL PI WC		
		736.0					

EOB -62

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 20 GAL. BENTONITE GROUT

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 11:18 - \\COLUMBUS\SLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-00 2014.GPJ



PROJECT: FRA-71-00.00 TYPE: NOISE BARRIER		DRILLING FIRM / OPERATOR: BARR / J.GILBERT		DRILL RIG: CME 550X		STATION / OFFSET: 126+20.160 LT		EXPLORATION ID											
PID: 93496 BR ID: 12/18/14		SAMPLING FIRM / LOGGER: BARR / J.GILBERT		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-032-1-14											
START: 12/18/14 END: 12/18/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 859.8 (MSL) EOB: 25.0 ft.		PAGE											
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825329, -83.154778		1 OF 1											
MATERIAL DESCRIPTION AND NOTES		ELEV. 859.8		SPT/ RQD		GRADATION (%)		ATTERBERG		BACK FILL									
		DEPTHS		N ₆₀		GR CS FS SI		LL PL PI		OOOT CLASS (GI)									
				REC (%)		HP (tsf)													
				ID															
HARD, BROWN TO BROWN MOTTLED WITH GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, SS-1 TO SS-3 CONTAINS FEW ROOTS, DAMP @12.5'; SS-6 CHANGES TO DARK GRAY		1	3	6	27	89	SS-1	4.5+	-	-	-	9	A-4a (V)						
		2	6	13															
		3	19	24	67	100	SS-2	4.5+	8	12	14	36	30	27	17	10	10	A-4a (6)	
		4	23																
		5	11	16	53	100	SS-3	4.5+	-	-	-	-	-	-	-	-	-	12	A-4a (V)
		6	21																
		7																	
		8	9	11	33	100	SS-4	4.5+	8	13	16	40	23	14	9	10	10	A-4a (6)	
		9	12																
		10	7	9	30	100	SS-5	4.5+	-	-	-	-	-	-	-	-	-	10	A-4a (V)
		11	12																
		12																	
		13	4	5	17	100	SS-6	4.5+	10	12	16	36	26	13	9	11	11	A-4a (5)	
		14	7																
		15	4	7	23	100	SS-7	4.5+	-	-	-	-	-	-	-	-	-	11	A-4a (V)
		16	9																
		17																	
		18	7	9	31	100	SS-8	4.5+	-	-	-	-	-	-	-	-	-	10	A-4a (V)
		19	13																
		20	9	12	38	100	SS-9	4.5+	10	12	17	37	24	23	13	10	9	A-4a (5)	
		21	15																
		22																	
		23																	
		24	8	11	34	100	SS-10	4.5+	-	-	-	-	-	-	-	-	-	9	A-4a (V)
		25	13																

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/16/15 15:51 - \\COLUMBUS\SUBLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: FRA-71-00.00 TYPE: NOISE BARRIER		DRILLING FIRM / OPERATOR: BARR / J.GILBERT		DRILL RIG: CME 550X		STATION / OFFSET: 128+17.157 LT		EXPLORATION ID										
PID: 93496 BR ID: 12/19/14		SAMPLING FIRM / LOGGER: BARR / J.GILBERT		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-033-1-14										
START: 12/19/14 END: 12/19/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 862.5 (MSL) EOB: 25.0 ft.		PAGE										
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825393, -83.154073		1 OF 1										
MATERIAL DESCRIPTION AND NOTES		ELEV.		REC SAMPLE ID		GRADATION (%)		ATTERBERG		BACK FILL								
		862.5		HP (tsf)		GR CS FS SI CL		LL PL PI		OOOT CLASS (GI)								
		860.5		N ₆₀		GR CS FS SI CL		LL PL PI		OOOT CLASS (GI)								
		855.5		SPT / RQD		GR CS FS SI CL		LL PL PI		OOOT CLASS (GI)								
		837.5		N ₆₀		GR CS FS SI CL		LL PL PI		OOOT CLASS (GI)								
		EOB		N ₆₀		GR CS FS SI CL		LL PL PI		OOOT CLASS (GI)								
VERY STIFF TO HARD, BROWN MOTTLED WITH ORANGISH BROWN, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, CONTAINS ROOTS, IRON STAINED, MOIST	1	2	3	5	11	78	SS-1	2.75+ 4.5+	1	5	8	39	47	51	20	31	23	A-7-6 (18)
HARD, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, SILT AND CLAY SOME SAND, TRACE GRAVEL, CONTAINS FEW ROOTS, IRON STAINED, DAMP	2	11	16	26	60	100	SS-2	4.5+	8	12	15	36	29	28	16	12	9	A-6a (7)
	3	18	22	31	75	100	SS-3	4.5+	-	-	-	-	-	-	-	-	13	A-6a (V)
HARD, BROWN MOTTLED WITH GRAY, SANDY SILT, SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP	4	9	10	10	28	89	SS-4	4.5+	10	14	16	38	22	22	14	8	10	A-4a (5)
	5	8	9	13	31	100	SS-5	4.5+	11	14	15	39	21	22	14	8	10	A-4a (5)
@10.0': SS-5 BECOMES BROWN MOTTLED WITH GRAYISH BROWN AND ORANGISH BROWN, CONTAINS IRON STAINING	6	3	4	7	16	100	SS-6	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)
	7	3	5	7	17	100	SS-7	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)
@12.5': SS-6 TO SS-10 BECOMES DARK GRAY	8	5	5	8	18	67	SS-8	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)
	9	6	7	9	23	100	SS-9	4.5+	10	13	18	36	23	21	13	8	10	A-4a (5)
	10	10	13	15	40	28	SS-10	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 15:52 - \\COLUMBUS\SLAB\LABACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: FRA-71-00.00 TYPE: NOISE BARRIER		DRILLING FIRM / OPERATOR: BARR / J.GILBERT		DRILL RIG: CME 550X		STATION / OFFSET: 130+30.154 LT		EXPLORATION ID									
PID: 93496 BR ID: 12/19/14		SAMPLING FIRM / LOGGER: BARR / J.GILBERT		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-033-2-14									
START: 12/19/14 END: 12/19/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 865.9 (MSL) EOB: 25.0 ft.		PAGE									
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825453, -83.153308		1 OF 1									
MATERIAL DESCRIPTION AND NOTES		ELEV. 865.9		SPT/ RQD		GRADATION (%)		ATTERBERG		BACK FILL							
		DEPTHS		N ₆₀		GR CS FS SI CL		LL PL PI		WC							
VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY, DARK GRAY AND ORANGISH BROWN, SILT AND CLAY. SOME SAND, TRACE TO LITTLE GRAVEL, SS-1 AND SS-2 CONTAIN ROOTS, DAMP	1	2	3	9	89	SS-1	3.2-3.6	13	9	12	37	29	32	17	15	15	A-6a (8)
	2	3	3														
@2.5'; SS-2 AND SS-3 BECOME LIGHT BROWN MOTTLED WITH GRAY	3	8	10	31	100	SS-2	4.5+	-	-	-	-	-	-	-	-	12	A-6a (V)
	4	10	12														
	5	8	10	30	100	SS-3	4.5+	-	-	-	-	-	-	-	-	11	A-6a (V)
	6	10	11														
	7																
VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP	8	3	5	21	100	SS-4	4.5+	6	12	16	39	27	25	17	8	13	A-4a (6)
	9	5	10														
	10	11	18	53	100	SS-5	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)
	11	18	19														
	12																
	13	6	6	27	67	SS-6	2.75	-	-	-	-	-	-	-	-	11	A-4a (V)
	14	6	13														
	15	5	5	16	100	SS-7	4.0-4.5+	10	14	16	39	21	20	13	7	10	A-4a (5)
	16	5	6														
	17																
@15.0'; SS-7 BECOMES GRAY	18	8	7	26	100	SS-8	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)
	19	7	11														
	20	4	6	21	100	SS-9	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)
	21	6	9														
	22																
	23																
	24	7	9	30	100	SS-10	4.5+	10	13	16	36	25	22	14	8	10	A-4a (5)
	25	9	12														

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/15 15:52 - \COLLUMBUS\LAB\ACTIVE PROJECTS\FRA-71-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT:	FRA-71-00.00	DRILLING FIRM / OPERATOR:	BARR / D.ROSE	DRILL RIG:	CME 550X	STATION / OFFSET:	132+11, 148 LT	EXPLORATION ID	B-034-1-14										
TYPE:	NOISE BARRIER	SAMPLING FIRM / LOGGER:	BARR / D.ROSE	HAMMER:	CME AUTOMATIC	ALIGNMENT:	CL CONST. IR 71												
PID:	93496	DRILLING METHOD:	3.25" HSA	CALIBRATION DATE:	1/26/14	ELEVATION:	866.7 (MSL), EOB: 25.0 ft.		PAGE										
START:	12/29/14	SAMPLING METHOD:	SPT	ENERGY RATIO (%):	85.3	COORD:	39.825483, -83.152655		1 OF 1										
MATERIAL DESCRIPTION AND NOTES																			
VERY STIFF TO HARD, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, CONTAINS FEW ROOTS, DAMP (FILL)	866.7	DEPTHS		SPT/ RQD	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	OOOT CLASS (GI)	BACK FILL	
		1		2	89	SS-1	2.6-4.5+	-	-	-	-	-	-	-	-	-	18	A-6b (V)	<L><L>
HARD, BROWN MOTTLED WITH DARK GRAY AND GRAY, CLAY, "AND" SILT, TRACE TO LITTLE SAND, TRACE GRAVEL, SS-2 CONTAINS FEW ROOTS, DAMP	864.7	2																	<L><L>
		3		11	94	SS-2	4.5+	1	4	8	-	87	-	53	21	32	19	A-7-6 (19)	<L><L>
		4		14															<L><L>
		5		16															<L><L>
@5.0'; SS-3 CONTAINS IRON STAINS	859.7	6		11	100	SS-3	4.5+	1	3	7	42	47	48	18	30	16	A-7-6 (18)	<L><L>	
		7		19															<L><L>
HARD, BROWN MOTTLED WITH GRAY, SILTY CLAY, LITTLE SAND, TRACE TO LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP	854.7	8		6	100	SS-4	4.5+	-	-	-	-	-	-	-	-	-	12	A-6b (V)	<L><L>
		9		10															<L><L>
		10		4	18	SS-5	4.5+	-	-	-	-	-	-	-	-	-	12	A-6b (V)	<L><L>
		11		6	94	SS-6	2.7-4.5+												<L><L>
VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP @12.5'; SS-8A BECOMES GRAY		12		3	89	SS-6	4.5+	12	12	16	40	20	21	14	7	11	A-4a (5)	<L><L>	
		13		4															<L><L>
		14		4															<L><L>
@15.0'; SS-7 BECOMES BROWN, SOME GRAVEL		15		3	17	SS-7	-	-	-	-	-	-	-	-	-	-	10	A-4a (V)	<L><L>
		16		3															<L><L>
		17		4															<L><L>
MEDIUM DENSE, GRAY, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, DAMP	848.9	18		5	100	SS-8	4.5+	-	16	46	22	11	5	NP	NP	8	A-1-b (0)	<L><L>	
		19		10															<L><L>
		20		7															<L><L>
HARD, GRAY, SANDY SILT, SOME CLAY, LITTLE GRAVEL, DAMP	847.2	21		4	100	SS-9	4.5+	17	12	15	35	21	23	14	9	9	A-4a (4)	<L><L>	
		22		6															<L><L>
		23		7															<L><L>
		24		10															<L><L>
		25		13															<L><L>
		EOB																	<L><L>

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/15 15:52 - \COLLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



FRA - 71 - 0.00

SOIL PROFILE
 BORING LOG: B-034-1-14

DRAWN
 DML
 CHECKED
 LE

PROJECT: FRA-71-00.00 TYPE: NOISE BARRIER		DRILLING FIRM / OPERATOR: BARR / D.ROSE		DRILL RIG: CME 550X		STATION / OFFSET: 134+11.142 LT			EXPLORATION ID	
PID: 93496 BR ID: 12/29/14		SAMPLING FIRM / LOGGER: BARR / D.ROSE		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71			B-034-2-14	
START: 12/29/14 END: 12/29/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 867.7 (MSL) EOB: 25.0 ft.			PAGE	
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825512, -83.151937			1 OF 1	
MATERIAL DESCRIPTION AND NOTES		ELEV.		REC SAMPLE ID		GRADATION (%)			BACK FILL	
		867.7		HP (tsf)		GR CS FS SI CL LL PL PI WC			OOOT CLASS (GI)	
		865.7		SS-1		2 3 4			A-6b (V)	
VERY STIFF, BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, DAMP				SS-2		6 7 7			A-6b (12)	
HARD, BROWN TO BROWN MOTTLED WITH DARK GRAY AND GRAY, SILTY CLAY, LITTLE TO SOME SAND, TRACE TO LITTLE GRAVEL, DAMP				SS-3		5 5 5			A-6b (V)	
		858.2		SS-4		4 6 5			A-6b (V)	
HARD, BROWN, SILT AND CLAY SOME SAND, TRACE GRAVEL, DAMP				SS-5		5 25 22			A-6a (7)	
		855.7		SS-6		2 7 8			A-4a (5)	
VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP				SS-7		3 5 5			A-4a (V)	
@15.0'; SS-7 BECOMES BROWN				SS-8		3 5 7			A-4a (V)	
@17.5'; SS-8 TO SS-10 BECOME GRAY TO GRAYISH BROWN				SS-9		2 5 6			A-4a (4)	
		842.7		SS-10		4 8 10			A-4a (V)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 15:52 - \\COLUMBUS\SUBLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-00 2014-15\COMBINED GINTS.RENUNBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: FRA-71-00.00		DRILLING FIRM / OPERATOR: BARR / D.ROSE		DRILL RIG: CME 550X		STATION / OFFSET: 136+84, 136 LT		EXPLORATION ID										
TYPE: NOISE BARRIER		SAMPLING FIRM / LOGGER: BARR / D.ROSE		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-035-1-14										
PID: 93496 BR ID: 12/30/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 869.5 (MSL), EOB: 25.0 ft.		PAGE										
START: 12/30/14 END: 12/30/14		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825542, -83.150955		1 OF 1										
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	REC (%)	HP (tsf)	GRADATION (%)			ATTERBERG			BACK FILL					
							GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)		
HARD, BROWN AND DARK BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, CONTAINS FEW ROOTS, DAMP (FILL)		869.5	1	2	67	4.5+	-	-	-	-	-	-	-	-	16	A-6b (V)		
		867.5	2	3														
HARD, BROWN MOTTLED WITH DARK GRAY CLAY, "AND" SILT, TRACE TO LITTLE SAND, TRACE GRAVEL, SS-2 CONTAINS FEW ROOTS, DAMP			3	7	100	4.5+	2	4	8	42	44	50	18	32	18	A-7-6 (18)		
			4	12														
			5	13														
			6	10	30	100	4.5+	1	2	6	45	46	50	19	31	15	A-7-6 (18)	
			7	11														
HARD, BROWN TO BROWN MOTTLED WITH GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP		862.5	8	6	100	4.5+	-	-	-	-	-	-	-	-	9	A-6a (V)		
			9	7	24	100	4.5+	-	-	-	-	-	-	-	-	-		
			10	10														
			11	9	28	100	4.5+	8	11	14	39	28	26	15	11	12	A-6a (7)	
			12	11														
			13	7	18	100	2.2-3.2	-	-	-	-	-	-	-	-	11	A-4a (V)	
			14	4	9													
			15	5	14	17	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	
			16	5	5													
			17	5														
@17.5'; SS-8 TO SS-10 BECOME GRAY			18	3	18	100	4.5+	11	12	17	40	20	22	14	8	A-4a (5)		
			19	4	9													
			20	4	7	26	100	4.5+	-	-	-	-	-	-	-	10	A-4a (V)	
			21	7	11													
			22															
			23															
			24	5	9	28	100	4.5+	-	-	-	-	-	-	-	9	A-4a (V)	
			25	11														

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 15:52 - \\COLUMBUS\SUBLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



PROJECT: FRA-71-00.00 TYPE: NOISE BARRIER	DRILLING FIRM / OPERATOR: BARR / J.GILBERT	DRILL RIG: CME 550X	STATION / OFFSET: 138+86.142 LT	EXPLORATION ID B-035-2-14
PID: 93496 BR ID:	SAMPLING FIRM / LOGGER: BARR / J.GILBERT	HAMMER: CME AUTOMATIC	ALIGNMENT: CL CONST. IR 71	
START: 12/18/14 END: 12/18/14	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/26/14	ELEVATION: 869.7 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
MATERIAL DESCRIPTION AND NOTES	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.3	COORD: 39.825563, -83.150227	
VERY STIFF TO HARD, DARK GRAYISH BROWN AND BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, DAMP (FILL)	ELEV. 869.7	SPT / RQD	GRADATION (%)	ODOT CLASS (GI)
HARD, DARK GRAYISH BROWN WITH ORANGISH BROWN, AND DARK GRAY, CLAY, "AND" SILT, LITTLE SAND, TRACE GRAVEL, DAMP (FILL)	865.2	2 2 4	GR CS FS SI CL LL PL WC	A-6b (10)
@7.5'; SS-4A CHANGES TO BROWN AND DARK BROWN STIFF TO HARD, BROWN TO BROWN MOTTLED WITH GRAY, SANDY SILT LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP	862.0	9 12 12	8 10 14 39 29 40 21 19	A-6b (V)
@15.0'; SS-7 BECOMES GRAYISH BROWN		3 12 12	- - - - - - - -	
@17.5'; SS-8 BECOMES GRAY		8 10 12	4 9 36 49 53 20 33	A-7-6 (19)
@20.0'; SS-9 BECOMES DARK GRAY		8 8 7	- - - - - - - -	
		3 4 4	- - - - - - - -	
		4 4 4	5 12 15 39 29 26 16 10	A-7-6 (V)
		5 7 9	- - - - - - - -	
		10 12 13	12 14 18 36 19 21 14 7	A-4a (4)
	844.7 EOB			

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/15 15:52 - \\COLUMBUSLAB\ABACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT:	FRA-71-00.00	DRILLING FIRM / OPERATOR:	BARR / J.GILBERT	DRILL RIG:	CME 550X	STATION / OFFSET:	140+82.146 LT	EXPLORATION ID	B-036-1-14									
TYPE:	NOISE BARRIER	SAMPLING FIRM / LOGGER:	BARR / J.GILBERT	HAMMER:	CME AUTOMATIC	ALIGNMENT:	CL CONST. IR 71											
PID:	93496	DRILLING METHOD:	3.25" HSA	CALIBRATION DATE:	1/26/14	ELEVATION:	870.3 (MSL)	EOB:	25.0 ft.									
START:	12/17/14	SAMPLING METHOD:	SPT	ENERGY RATIO (%):	85.3	COORD:	39.825609, -83.149524		PAGE									
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
HARD, BROWN, SILT AND CLAY LITTLE SAND, LITTLE GRAVEL, DAMP		870.3	1	3	56	SS-1	4.5+	17	8	10	37	28	32	18	14	13	A-6a (8)	<L><L>
HARD, LIGHT BROWN WITH GRAY AND BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, CONTAINS ROOTS, DAMP (FILL)		868.3	2	8	100	SS-2	4.5+	3	4	10	49	34	36	20	16	12	A-6b (10)	<L><L>
HARD, BROWN MOTTLED WITH GRAY, SILT AND CLAY. SOME SAND, LITTLE GRAVEL, DAMP		863.3	3	14	100	SS-3	4.5+	-	-	-	-	-	-	-	-	6	A-6b (V)	<L><L>
@10.0'; SS-5 CONTAINS ROOTS		858.3	4	17	100	SS-4	4.5+	-	-	-	-	-	-	-	-	-		<L><L>
HARD, GRAYISH BROWN, SILT, LITTLE CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		855.8	5	19	100	SS-5	4.0-4.2	-	-	-	-	-	-	-	-	16	A-6a (V)	<L><L>
VERY STIFF, GRAYISH BROWN, SANDY SILT, LITTLE CLAY, TRACE TO LITTLE GRAVEL, DAMP TO MOIST		845.3	6	23	100	SS-6	4.5+	1	3	9	70	17	23	18	5	17	A-4b (8)	<L><L>
			7	8	100	SS-7	2.0-3.5	-	-	-	-	-	-	-	-	14	A-4a (V)	<L><L>
			8	5	100	SS-8	-	-	-	-	-	-	-	-	-	10	A-4a (V)	<L><L>
			9	6	100	SS-9	2.75-3.5	-	-	-	-	-	-	-	-	11	A-4a (V)	<L><L>
			10	16	100	SS-10	2.25-2.75	10	14	17	40	19	20	13	7	11	A-4a (5)	<L><L>
			11	24	100	SS-11	-	-	-	-	-	-	-	-	-	-		<L><L>
			12	8	100	SS-12	-	-	-	-	-	-	-	-	-	-		<L><L>
			13	10	100	SS-13	-	-	-	-	-	-	-	-	-	-		<L><L>
			14	34	100	SS-14	-	-	-	-	-	-	-	-	-	-		<L><L>
			15	10	100	SS-15	-	-	-	-	-	-	-	-	-	-		<L><L>
			16	14	100	SS-16	-	-	-	-	-	-	-	-	-	-		<L><L>
			17	14	100	SS-17	-	-	-	-	-	-	-	-	-	-		<L><L>
			18	10	100	SS-18	-	-	-	-	-	-	-	-	-	-		<L><L>
			19	14	100	SS-19	-	-	-	-	-	-	-	-	-	-		<L><L>
			20	10	100	SS-20	-	-	-	-	-	-	-	-	-	-		<L><L>
			21	14	100	SS-21	-	-	-	-	-	-	-	-	-	-		<L><L>
			22	10	100	SS-22	-	-	-	-	-	-	-	-	-	-		<L><L>
			23	14	100	SS-23	-	-	-	-	-	-	-	-	-	-		<L><L>
			24	10	100	SS-24	-	-	-	-	-	-	-	-	-	-		<L><L>
			25	14	100	SS-25	-	-	-	-	-	-	-	-	-	-		<L><L>

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 15:52 - \\COLUMBUS\SLAB\LABACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: FRA-71-00.00 TYPE: NOISE BARRIER		DRILLING FIRM / OPERATOR: BARR / D.ROSE		DRILL RIG: CME 550X		STATION / OFFSET: 142+03.79 LT		EXPLORATION ID											
PID: 93496 BR ID: 12/31/14		SAMPLING FIRM / LOGGER: BARR / D.ROSE		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-036-2-14											
START: 12/31/14 END: 12/31/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 865.9 (MSL) EOB: 25.0 ft.		PAGE											
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825429, -83.149086		1 OF 1											
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
VERY STIFF TO HARD, BROWN, CLAY, AND SILT, LITTLE SAND, TRACE GRAVEL, MOIST		865.9	1	4	21	100	SS-1	3.0-4.5+	4	5	10	38	43	48	18	30	19	A-7-6 (18)	CL
HARD, BROWN, SILTY CLAY, SOME SAND, LITTLE GRAVEL, DAMP		863.9	2	5	26	100	SS-2	4.5+	-	-	-	-	-	-	-	-	13	A-6b (V)	CL
HARD, BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, DAMP		861.4	3	6	26	100	SS-3	4.2-4.5+	13	11	15	38	23	24	16	8	13	A-4a (5)	CL
MEDIUM DENSE, BROWN AND GRAY, SILT, LITTLE CLAY, LITTLE SAND, TRACE GRAVEL, WET		858.9	4	3	13	100	SS-4	1.2-1.5	1	1	14	68	16	21	19	2	21	A-4b (8)	CL
VERY STIFF TO HARD, GRAYISH BROWN, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP		856.4	5	3	23	100	SS-5	4.5+	16	11	16	40	17	19	13	6	9	A-4a (4)	CL
@17.5'; SS-8 TO SS-10 BECOME GRAY, SS-8 CONTAINS FEW FINE SAND LENSES			6	6	27	100	SS-6	3.5-4.9+	-	-	-	-	-	-	-	-	11	A-4a (V)	CL
			7	7	27	100	SS-7	4.5+	-	-	-	-	-	-	-	-	-	10	A-4a (V)
			8	5	43	100	SS-8	4.5+	12	8	21	42	17	19	13	6	10	A-4a (5)	CL
			9	9	48	100	SS-9	4.5+	-	-	-	-	-	-	-	-	-	9	A-4a (V)
			10	9	51	100	SS-10	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	CL
			11	11	51	100	SS-10	4.5+	-	-	-	-	-	-	-	-	-	12	A-4a (V)

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 15:52 - \\COLUMBUS\BUSB\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



PROJECT: FRA-71-00.00		DRILLING FIRM / OPERATOR: BARR / J.GILBERT		DRILL RIG: CME 550X		STATION / OFFSET: 142+95.138 LT		EXPLORATION ID									
TYPE: NOISE BARRIER		SAMPLING FIRM / LOGGER: BARR / J.GILBERT		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-036-3-14									
PID: 93496 BR ID: 12/22/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 868.9 (MSL) EOB: 25.0 ft.		PAGE									
START: 12/22/14 END: 12/22/14		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825592, -83.148754		1 OF 1									
MATERIAL DESCRIPTION AND NOTES		ELEV.		REC SAMPLE		GRADATION (%)		ATTERBERG		BACK FILL							
		868.9		ID		GR FS SI CL LL PL PI		WC		OOOT CLASS (GI)							
				HP (tsf)													
				N ₆₀													
				SPT / RQD													
				DEPTHS													
VERY STIFF TO HARD, BROWN, SILTY CLAY, SOME SAND, LITTLE GRAVEL, SS-1 CONTAINS MANY ROOTS, (FILL)	868.9	SS-1	33	27	9	10	12	10	12	43	23	40	24	16	20	A-6b (9)	
@2.5' SS-2 CHANGES TO DARK GRAYISH BROWN AND BROWN, CONTAINS ONE PIECE OF 1.0"+ COARSE GRAVEL, ROOTS	864.4	SS-2	56	33	9	11									21	A-6b (V)	
HARD, BROWN MOTTLED WITH LIGHT BROWN, CLAY, "AND" SILT, LITTLE SAND, TRACE GRAVEL, CONTAINS FEW ROOTS, DAMP	861.9	SS-3	100	33	10	11									19	A-7-6 (18)	
HARD, BROWN TO BROWN MOTTLED WITH GRAY, SANDY SILT, SOME CLAY, LITTLE GRAVEL, DAMP		SS-4	100	21	5	7									13	A-4a (V)	
@12.5' SS-6 BECOMES GRAYISH BROWN MOTTLED WITH BROWN		SS-5	100	21	6	7									13	A-4a (5)	
HARD, GRAYISH BROWN, SILT, SOME SAND, LITTLE CAY, TRACE GRAVEL, INTERBEDDED SILT AND SAND, DAMP	854.4	SS-6	100	21	6	7									13	A-4a (V)	
HARD, GRAYISH BROWN TO BROWN, SANDY SILT, LITTLE CLAY, LITTLE TO SOME GRAVEL, DAMP	851.9	SS-7	100	36	7	11									15	A-4b (6)	
		SS-8	100	48	10	12									10	A-4a (V)	
		SS-9	100	34	10	11									8	A-4a (4)	
		SS-10	100	28	8	9									11	A-4a (V)	
	843.9																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT:	FRA-71-00.00	DRILLING FIRM / OPERATOR:	BARR / J.GILBERT	DRILL RIG:	CME 550X	STATION / OFFSET:	140+82.146 LT	EXPLORATION ID	B-036-1-14										
TYPE:	NOISE BARRIER	SAMPLING FIRM / LOGGER:	BARR / J.GILBERT	HAMMER:	CME AUTOMATIC	ALIGNMENT:	CL CONST. IR 71												
PID:	93496	DRILLING METHOD:	3.25" HSA	CALIBRATION DATE:	1/26/14	ELEVATION:	870.3 (MSL)	EOB:	25.0 ft.										
START:	12/17/14	SAMPLING METHOD:	SPT	ENERGY RATIO (%):	85.3	COORD:	39.825609, -83.149524		PAGE										
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
HARD, BROWN, SILT AND CLAY LITTLE SAND, LITTLE GRAVEL, DAMP		870.3	1	3	7	8	56	SS-1	4.5+	17	8	10	37	28	32	18	14	13	A-6a (8)
HARD, LIGHT BROWN WITH GRAY AND BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, CONTAINS ROOTS, DAMP (FILL)		868.3	2	8	10	9	100	SS-2	4.5+	3	4	10	49	34	36	20	16	12	A-6b (10)
HARD, BROWN MOTTLED WITH GRAY, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, DAMP		863.3	3	14	17	19	100	SS-3	4.5+	-	-	-	-	-	-	-	-	6	A-6b (V)
@10.0'; SS-5 CONTAINS ROOTS		858.3	4	3	7	9	100	SS-4	4.5+	13	11	14	37	25	30	16	14	14	A-6a (7)
HARD, GRAYISH BROWN, SILT, LITTLE CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		855.8	5	3	4	5	100	SS-5	4.0-4.2	-	-	-	-	-	-	-	-	16	A-6a (V)
VERY STIFF, GRAYISH BROWN, SANDY SILT, LITTLE CLAY, TRACE TO LITTLE GRAVEL, DAMP TO MOIST		845.3	6	7	8	8	100	SS-6	4.5+	1	3	9	70	17	23	18	5	17	A-4b (8)
			7	3	5	6	100	SS-7	2.0-3.5	-	-	-	-	-	-	-	-	14	A-4a (V)
			8	6	8	9	100	SS-8	-	-	-	-	-	-	-	-	-	10	A-4a (V)
			9	4	5	6	100	SS-9	2.75-3.5	-	-	-	-	-	-	-	-	11	A-4a (V)
			10	6	10	14	100	SS-10	2.25-2.75	10	14	17	40	19	20	13	7	11	A-4a (5)
			11	10	14	14	100												
			12	10	14	14	100												
			13	10	14	14	100												
			14	10	14	14	100												
			15	10	14	14	100												
			16	10	14	14	100												
			17	10	14	14	100												
			18	10	14	14	100												
			19	10	14	14	100												
			20	10	14	14	100												
			21	10	14	14	100												
			22	10	14	14	100												
			23	10	14	14	100												
			24	10	14	14	100												
			25	10	14	14	100												
			EOB																

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 15:52 - \\COLUMBUS\SLAB\LABACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-11-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



PROJECT: FRA-71-00.00 TYPE: NOISE BARRIER		DRILLING FIRM / OPERATOR: BARR / J.GILBERT		DRILL RIG: CME 550X		STATION / OFFSET: 147+09.75 LT		EXPLORATION ID											
PID: 93496 BR ID: 12/22/14		SAMPLING FIRM / LOGGER: BARR / J.GILBERT		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-037-3-14											
START: 12/22/14 END: 12/22/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 876.5 (MSL) EOB: 25.0 ft.		PAGE											
MATERIAL DESCRIPTION AND NOTES		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825402, -83.147274		1 OF 1											
		ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
6.0" ASPHALT		876.5	1	14	33	44	SS-1	-	62	18	7	10	3	NP	NP	NP	5	A-1-a (0)	↖ ↗ ↘ ↙
DENSE BROWN, GRAVEL, SOME SAND, TRACE SILT, TRACE CLAY, DAMP (FILL)		874.2	2	11															↖ ↗ ↘ ↙
HARD, GRAYISH BROWN, BROWN AND GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP (FILL)			3	7	40	100	SS-2	4.5+	9	13	16	39	23	14	8		9	A-4a (5)	↖ ↗ ↘ ↙
			4	18															↖ ↗ ↘ ↙
			5	9	38	100	SS-3	4.5+	-	-	-	-	-	-	-	-	9	A-4a (V)	↖ ↗ ↘ ↙
		869.5	6	16															↖ ↗ ↘ ↙
HARD, BROWN, GRAY, AND LIGHT BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, DAMP (FILL)			7																↖ ↗ ↘ ↙
			8	10	31	100	SS-4	4.5+	3	8	13	40	36	34	16	18	15	A-6b (11)	↖ ↗ ↘ ↙
			9	13															↖ ↗ ↘ ↙
			10	6	27	100	SS-5	4.5+	-	-	-	-	-	-	-	-	11	A-6b (V)	↖ ↗ ↘ ↙
		864.5	11	10															↖ ↗ ↘ ↙
VERY STIFF, GRAY MOTTLED WITH LIGHT AND DARK GRAY, CLAY, "AND" SILT, TRACE SAND, DAMP			12																↖ ↗ ↘ ↙
			13	2	13	100	SS-6	3.0-3.25	0	1	4	53	42	46	17	29	17	A-7-6 (17)	↖ ↗ ↘ ↙
		862.0	14	6															↖ ↗ ↘ ↙
HARD, BROWN MOTTLED WITH GRAY, SILTY CLAY, TRACE TO LITTLE SAND, TRACE GRAVEL, CONTAINS LITTLE IRON STAINING, DAMP			15	5	18	100	SS-7	4.5+	1	1	6	48	44	40	20	20	20	A-6b (12)	↖ ↗ ↘ ↙
			16	7															↖ ↗ ↘ ↙
VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP		859.5	17																↖ ↗ ↘ ↙
			18	2	17	100	SS-8	3.75-4.5+	-	-	-	-	-	-	-	-	18	A-4a (V)	↖ ↗ ↘ ↙
			19	7															↖ ↗ ↘ ↙
@20.0': SS-9 BECOMES BROWN, CONTAINS LITTLE IRON STAINING			20	4	20	100	SS-9	4.5+	4	8	12	44	32	29	19	10	18	A-4a (8)	↖ ↗ ↘ ↙
			21	9															↖ ↗ ↘ ↙
			22																↖ ↗ ↘ ↙
			23																↖ ↗ ↘ ↙
@23.5': SS-10 BECOMES GRAY MOTTLED WITH ORANGISH BROWN		851.5	24	6	20	100	SS-10	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	↖ ↗ ↘ ↙
			25	7															↖ ↗ ↘ ↙

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/15 15:52 - \\COLUMBUSLAB\ABACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: FRA-71-00.00		DRILLING FIRM / OPERATOR: BARR / J.GILBERT		DRILL RIG: CME 550X		STATION / OFFSET: 149+20.76 LT		EXPLORATION ID					
TYPE: NOISE BARRIER		SAMPLING FIRM / LOGGER: BARR / J.GILBERT		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-038-1-14					
PID: 93496 BR ID: 12/22/14		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 1/26/14		ELEVATION: 880.6 (MSL) EOB: 25.0 ft.		PAGE					
START: 12/22/14 END: 12/22/14		SAMPLING METHOD: SPT		ENERGY RATIO (%): 85.3		COORD: 39.825380, -83.146518		1 OF 1					
MATERIAL DESCRIPTION AND NOTES													
		ELEV.		SPT / RQD		REC SAMPLE ID		GRADATION (%)		ATTERBERG		BACK FILL	
								GR CS FS SI CL LL PL PI WC				OOOT CLASS (GI)	
6.0" ASPHALT		880.6		19		SS-1		40 21 13 19 7 20 16 4				A-2.4 (0)	
DENSE BROWN GRAVEL WITH SAND AND SILT TRACE CLAY DAMP (FILL - GRANULAR BASE)		878.9		14		SS-1		-				A-4a (V)	
HARD GRAY SANDY SILT LITTLE CLAY, LITTLE GRAVEL, DAMP (FILL)		873.6		8		SS-2		18 13 15 36 18 22 14 8				A-4a (4)	
HARD BROWN SILT AND CLAY SOME SAND, LITTLE GRAVEL, DAMP (FILL)		868.6		10		SS-3		-				A-4a (V)	
HARD BROWN WITH LIGHT BROWN AND GRAY SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP (FILL)		866.1		6		SS-4		16 11 13 38 22 25 13 12				A-6a (6)	
VERY STIFF TO HARD BROWN MOTTLED WITH GRAY SILTY CLAY LITTLE SAND, TRACE GRAVEL, SS-7 CONTAINS DECAYED ROOTS AND IRON STAINS, HAS ORGANIC ODOR, MOIST				9		SS-5		-				A-6a (V)	
@17.5' SS-8 BECOMES DARK GRAY MOTTLED WITH BROWN				2		SS-8		3 7 11 42 37 38 17 21				A-6b (12)	
@20.0' SS-9 BECOMES DARK GRAYISH BROWN, CONTAINS ROOTS AND HAS ORGANIC ODOR				5		SS-9		-				A-6b (V)	
@23.5' SS-10 BECOMES DARK GRAY MOTTLED WITH ORANGISH BROWN, CONTAINS IRON STAINING		855.6		4		SS-10		-				A-6b (V)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/15 15:53 - \\COLUMBUS\SUBLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 NOISE WALL.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



PROJECT: FRA-71-00.00		DRILLING FIRM / OPERATOR: STOCK / AUSTIN		DRILL RIG: CME 750X (STOCK)		STATION / OFFSET: 156+85.20 LT		EXPLORATION ID									
TYPE: BRIDGE		SAMPLING FIRM / LOGGER: B&P / Z. JEWELL		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-040-1-14									
PID: 93496 BR ID: FRA-71-0296		DRILLING METHOD: 2.25" HSA		CALIBRATION DATE: 3/1/13		ELEVATION: 891.0 (MSL) EOB: 26.5 ft.		PAGE									
START: 4/11/14 END: 4/11/14		SAMPLING METHOD: SPT		ENERGY RATIO (%): 78.6		LAT / LONG: 39.825068, -83.143810		1 OF 1									
MATERIAL DESCRIPTION AND NOTES		ELEV.		REC SAMPLE ID		GRADATION (%)		ATTERBERG		BACK							
		891.0		HP (tsf)		GR CS FS SI CL		LL PL PI		WC							
		DEPTHS		N ₆₀		SPT / RQD		GR CS FS SI CL		WC							
HARD, GRAYISH BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, SS-1 AND SS-2 CONTAINS ROOTS, DAMP @2.5'; SS-2 BECOMES GRAY @10.0'; SS-5 BECOMES GRAY MOTTLED WITH BROWN VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY, SILT AND CLAY SOME SAND, TRACE GRAVEL, DAMP VERY STIFF TO HARD, DARK GRAY MOTTLED WITH BROWN, SILTY CLAY, TRACE SAND, TRACE GRAVEL, DAMP HARD, ORANGISH BROWN MOTTLED WITH GRAYISH BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, DAMP HARD GRAY, SILT AND CLAY SOME SAND, TRACE GRAVEL, DAMP VERY STIFF, DARK GRAY MOTTLED WITH ORANGISH BROWN, CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, MOIST	1	16	72	SS-1	4.5+	12	11	18	35	24	23	14	9	11	A-4a (5)	↖ ↗	
	2																↖ ↗
	3																↖ ↗
	4																↖ ↗
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STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 11:20 - \COLLUMBUS\LAB\ACTIVE PROJECTS\FRA-71-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-00 2014.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



FRA - 71 - 0.00

SOIL PROFILE
 BORING LOG B-040-1-14

DRAWN
 DML
 CHECKED

PROJECT: TYPE: PID: START:	FRA-71-00.00 BRIDGE 93496 BR ID: FRA-71-0296 3/31/15 END: 3/31/15	DRILLING FIRM / OPERATOR: SAMPLING FIRM / LOGGER: DRILLING METHOD: SAMPLING METHOD:	BARR / J.GILBERT BARR / Z.JEWELL 3.25" HSA SPT	DRILL RIG: HAMMER: CALIBRATION DATE: ENERGY RATIO (%):	CME 55X CME AUTOMATIC 1/26/14 81.2	STATION / OFFSET:												EXPLOURATION ID
						158+58.37 LT ALIGNMENT: CL CONST. IR 71 ELEVATION: 865.0 (MSL) EOB: 56.5 ft. LAT / LONG: 39.825071, -83.143191												
MATERIAL DESCRIPTION AND NOTES				SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	OOOT CLASS (GI)	BACK FILL
LOOSE, GRAY, DARK GRAY AND BROWN, GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, CONTAINS ROOT HAIRS AND COAL FRAGMENTS, WET (FILL)				3	4	9	17	SS-1	-	-	-	-	-	-	-	-	25	A-1-b (V)
				8	8	20	100	SS-2	1.75- 4.5+	12	16	19	38	15	20	15	5	13
STIFF TO HARD, BROWN, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP				3	4	12	72	SS-3	3.0- 3.5	-	-	-	-	-	-	-	12	A-4a (V)
				2	3	11	0	SS-4	-	-	-	-	-	-	-	-	-	-
@7.5'; SS-4 NO RECOVERY				4	8	20	0	SS-5	-	-	-	-	-	-	-	-	-	-
				5	7	19	100	SS-6	4.5+	9	7	15	41	28	14	10	12	A-4a (7)
@10.0'; SS-5 NO RECOVERY				3	4	16	100	SS-7	2.0- 3.0	-	-	-	-	-	-	-	13	A-4a (V)
				6	7	24	100	SS-8	4.0- 4.5+	-	-	-	-	-	-	-	-	11
@12.5'; SS-6 TO SS-18 BECOME VERY STIFF TO HARD, DARK GRAYISH BROWN, SOME CLAY, TRACE GRAVEL, DAMP				9	12	38	89	SS-9	4.5+	-	-	-	-	-	-	11	A-4a (V)	
				27	32	99	100	SS-10	4.5+	4	8	18	41	29	14	9	9	A-4a (7)
@35.0'; SS-14 BECOMES MOIST				13	24	72	100	SS-11	4.5+	-	-	-	-	-	-	8	A-4a (V)	
				13	23	77	100	SS-12	4.5+	-	-	-	-	-	-	-	9	A-4a (V)
				9	12	61	100	SS-13	4.5+	-	-	-	-	-	9	A-4a (V)		
				13	19	60	100	SS-14	4.5+	-	-	-	-	-	-	-	15	A-4a (V)
				11	15	53	100	SS-15	4.5+	4	8	19	43	26	13	8	A-4a (7)	
				8	14	49	100	SS-16	4.5+	-	-	-	-	-	-	-	14	A-4a (V)
				5	15	47	100	SS-17	4.5+	-	-	-	-	-	-	12	A-4a (V)	
				7	15	47	100	SS-18	4.5+	-	-	-	-	-	-	-	10	A-4a (V)

808.5 EOB

NOTES: NONE
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED, SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 11:23 - \\COLLUMBUSLAB\ABACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-0-00 2014-11-15\COMBINED GINTS RENUMBERED\FRA-71-0-00 RRRIDGE.GPJ

PROJECT:	FRA-71-00.00	DRILLING FIRM / OPERATOR:	CENTRAL STAR / MJ	DRILL RIG:	CME 55 (CS)	STATION / OFFSET:	163+56.1 RT	EXPLORATION ID											
TYPE:	BRIDGE	SAMPLING FIRM / LOGGER:	B&P / Z. JEWELL	HAMMER:	CME AUTOMATIC	ALIGNMENT:	CL CONST. IR 71	B-042-1-14											
PID:	93496 BR ID: FRA-71-0308	DRILLING METHOD:	2.25" HSA	CALIBRATION DATE:	6/12/12	ELEVATION:	894.0 (MSL) EOB:	25.0 ft.											
START:	3/29/14 END: 3/29/14	SAMPLING METHOD:	SPT	ENERGY RATIO (%):	74.9	LAT / LONG:	39.824847, -83.141437	1 OF 1											
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
12.0' TOPSOIL		894.0	1																
HARD, GRAYISH BROWN, SANDY SILT, SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP		893.0	2	6	30	61	SS-1	4.5+	8	13	17	35	27	23	15	8	14	A-4a (5)	
@3.5'; SS-2 BECOMES BROWN MOTTLED WITH GRAY			3																
@6.0'; SS-3 BECOMES GRAY			4	10	30	39	SS-2	4.5+	-	-	-	-	-	-	-	-	9	A-4a (V)	
@8.5'; SS-4 BECOMES GRAY MOTTLED WITH BROWN, CONTAINS ONE PIECE OF COARSE GRAVEL			5	12															
@11.0'; SS-5 BECOMES BROWN MOTTLED WITH GRAY			6	10	25	44	SS-3	4.5+	-	-	-	-	-	-	-	-	9	A-4a (V)	
HARD, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, DAMP		881.0	7	11	36	61	SS-5	4.5+	19	10	14	35	22	22	14	8	8	A-4a (4)	
HARD, BROWN, SILT AND CLAY SOME SAND, LITTLE GRAVEL, DAMP		878.5	8																
VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY, CLAY, "AND" SILT, LITTLE SAND, TRACE GRAVEL, DAMP		876.0	9	14	40	67	SS-4	4.5+	-	-	-	-	-	-	-	-	8	A-4a (V)	
HARD, BROWN MOTTLED WITH GRAY, SILT AND CLAY SOME SAND, TRACE GRAVEL, DAMP		873.5	10	12	32	44	SS-6	4.5+	6	9	12	35	38	34	18	16	15	A-6b (10)	
VERY STIFF, GRAY MOTTLED WITH BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST		871.0	11	11	36	61	SS-7	4.5+	-	-	-	-	-	-	-	-	10	A-6a (V)	
			12	12	37	61	SS-8	3.25-4.5+	4	5	11	38	42	44	19	25	19	A-7-6 (15)	
			13	7	22	72	SS-9	4.5+	7	10	13	37	33	28	16	12	14	A-6a (8)	
			14	8	22	72	SS-10	3.0-3.5	-	-	-	-	-	-	-	-	21	A-6b (V)	
			15	10	26	100													
			16	7	20	100													
			17	5	7	9													
			18	9	20	100													
			19	12	20	100													
			20	15	20	100													
			21	15	20	100													
			22	15	20	100													
			23	15	20	100													
			24	15	20	100													
			25	15	20	100													
			EOB																

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 11:22 - \\COLLUMBUS\LAB\ACTIVE PROJECTS\FRA-71-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-00 2014.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 10.0'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT:	FRA-71-00.00	DRILLING FIRM / OPERATOR:	CENTRAL STAR / MJ	DRILL RIG:	CME 55 (CS)	STATION / OFFSET:	164+14.96 RT	EXPLORATION ID								
TYPE:	BRIDGE	SAMPLING FIRM / LOGGER:	B&P / Z. JEWELL	HAMMER:	CME AUTOMATIC	ALIGNMENT:	CL CONST. IR 71	B-042-2-14								
PID:	93496 BR ID: FRA-71-0308	DRILLING METHOD:	2.25" HSA	CALIBRATION DATE:	6/12/12	ELEVATION:	874.0 (MSL) EOB:	30.0 ft.								
START:	3/29/14 END: 3/29/14	SAMPLING METHOD:	SPT	ENERGY RATIO (%)	74.9	LAT / LONG:	39.824573, -83.141259	PAGE								
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)	ATTERBERG	BACK FILL						
		874.0						GR CS FS SI CL	LL PL PI	OOOT CLASS (GI) WC						
12.0' TOPSOIL																
HARD, BROWN MOTTLED WITH GRAY, SILT AND CLAY SOME SAND, LITTLE TO SOME GRAVEL, DAMP		873.0	1	7	17	100	4.5+	23	12	28	25	28	16	12	10	A-6a (4)
			2	7	7											
			3													
			4	4	20	94	4.5+	-	-	-	-	-	-	-	14	A-6a (V)
			5	7	9											
			6	4	17	100	1.1 - 2.1	13	7	12	36	32	31	17	14	A-6a (8)
@6.0'; SS-3 BECOMES STIFF TO VERY STIFF		866.0	7	7												
			8													
VERY STIFF, GRAYISH BROWN, SANDY SILT, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP			9	4	24	100	2.25	10	18	21	32	19	18	13	5	A-4a (3)
			10	6	13											
@11.0'; SS-5 BECOMES DENSE			11	10	40	100	-	16	17	22	33	12	NP	NP	11	A-4a (2)
			12	12	20											
			13													
@13.5'; SS-6 TO SS-7 SOFT TO STIFF			14	4	12	100	1.25 - 2.5	12	12	15	38	23	21	15	6	A-4a (5)
			15	5	5											
			16													
@18.5'; SS-8 BECOMES HARD			17	5	24	100	5 - 1.5	-	-	-	-	-	-	-	13	A-4a (V)
			18	8	11											
			19	12	20	50	4.5+	-	-	-	-	-	-	-	9	A-4a (V)
@21.0'; SS-9 BECOMES GRAY			20	21												
			21	8	31	61	4.5+	-	-	-	-	-	-	-	12	A-4a (V)
			22	13	12											
			23													
			24	12	44	50	4.5+	18	10	13	32	27	24	15	9	A-4a (5)
			25	15	20											
			26													
			27													
			28													
			29	14	37	67	4.5+	-	-	-	-	-	-	-	8	A-4a (V)
			30	15	15											
		844.0	EOB													

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 11:22 - \COLLUMBUS\LAB\ACTIVE PROJECTS\FRA-71-00 2014-15\COMBINED GINTS RENUMBERED\FRA-71-00 2014.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



PROJECT: FRA-71-00.00		DRILLING FIRM / OPERATOR: STOCK / AUSTIN		DRILL RIG: CME 750X (STOCK)		STATION / OFFSET: 164+89.23 RT		EXPLORATION ID																							
TYPE: BRIDGE		SAMPLING FIRM / LOGGER: B&P / Z. JEWELL		HAMMER: CME AUTOMATIC		ALIGNMENT: CL CONST. IR 71		B-042-4-14																							
PID: 93496 BR ID: FRA-71-0308		DRILLING METHOD: 2.25" HSA		CALIBRATION DATE: 3/1/13		ELEVATION: 873.0 (MSL) EOB: 31.5 ft.		PAGE																							
START: 4/10/14 END: 4/10/14		SAMPLING METHOD: SPT		ENERGY RATIO (%): 78.6		LAT / LONG:		1 OF 1																							
MATERIAL DESCRIPTION AND NOTES		ELEV.		SPT / RQD		REC SAMPLE ID		HP (tsf)		GRADATION (%)		ATTERBERG		BACK FILL																	
		873.0		DEPTHS		N ₆₀		ID		GR		FS		SI		CL		LL		PL		WC		OOOT CLASS (GI)							
STIFF TO VERY STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST				1		5		SS-1		1.75-2.0		7		12		34		40		36		17		19		21		A-6b (11)			
@2.5'; SS-2 BECOMES BROWN MOTTLED WITH DARK GRAY, CONTAINS ROOTS		868.5		2		5		SS-2		1.0-2.75																					
STIFF, BROWN MOTTLED WITH GRAY, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, MOIST				3		10		SS-3		1.0-2.0		10		8		11		37		34		18		15		21		A-6a (9)			
@7.5'; SS-4 BECOMES VERY STIFF, BROWN		863.5		4																											
STIFF TO VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP				5		3		SS-4		2.5-3.25		17		10		16		36		21		14		7		12		A-4a (4)			
@17.5'; SS-8 TO SS-12 BECOMES VERY STIFF TO HARD				6		20		SS-5		1.0-3.75																					
				7		9		SS-7		1.0-1.75																					
				8		33		SS-8		4.5+																					
				9		25		SS-9		4.5+																					
				10		42		SS-10		2.5-3.75		7		6		10		47		30		26		18		8		17		A-4a (8)	
				11		35		SS-11		4.5+		12		12		19		33		24		23		14		9		10		A-4a (4)	
@30.0'; SS-12 BECOMES GRAY		841.5		12		77		SS-12		4.5+		6		8		17		42		27		22		14		8		8		A-4a (7)	
				13		9																									
				14		9																									
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				30		9																									
				31		9																									
				EOB		9																									

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 29.5'.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



PROJECT:	FRA-71-00.00	DRILLING FIRM / OPERATOR:	CENTRAL STAR / MJ	DRILL RIG:	CME 55 (CS)	STATION / OFFSET:	165+14.96 LT	EXPLORATION ID	
TYPE:	BRIDGE	SAMPLING FIRM / LOGGER:	B&P / Z. JEWELL	HAMMER:	CME AUTOMATIC	ALIGNMENT:	CL CONST. IR 71	B-042-5-14	
PID:	93496 BR ID: FRA-71-0308	DRILLING METHOD:	2.25" HSA	CALIBRATION DATE:	6/12/12	ELEVATION:	875.0 (MSL) EOB:	34.3 ft.	
START:	3/29/14 END: 3/29/14	SAMPLING METHOD:	SPT	ENERGY RATIO (%):	74.9	LAT / LONG:	39.825073, -83.140845	PAGE	
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT / RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)	ATTERBERG	BACK FILL
		875.0	1				GR CS FS SI CL	LL PL PI	OOOT CLASS (GI) WC
12.0' TOPSOIL									
VERY STIFF, BROWN, SILT AND CLAY, SOME GRAVEL, LITTLE SAND, DAMP		874.0	2	5	50	2.5-3.5	8 11 29 25	28 17 11	12 A-6a (4)
VERY STIFF, BROWN MOTTLED WITH GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, SS-2 CONTAINS IRON STAINING, MOIST		872.0	3	7					
			4	7	100	2.75-3.0	7 10 34 41	36 16 20	18 A-6b (12)
			5	11					
			6	4	72	2.0-3.0	- - -	- - -	16 A-6b (V)
			7	7					
			8	9					
STIFF, BROWN MOTTLED WITH GRAY, SANDY SILT, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP TO MOIST		867.0	9	6	16	1.75-2.0	12 16 36 24	21 15 6	13 A-4a (5)
			10	6					
			11	7					
@11.0': SS-5 BECOMES BROWN			12	3	20	1.0-2.0	- - -	- - -	13 A-4a (V)
			13	6					
@13.5': SS-6 BECOMES GRAYISH BROWN			14	5	17	1.0-1.5	- - -	- - -	15 A-4a (V)
			15	6					
@16.0': SS-7 BECOMES HARD			16	8					
			17	9	26	4.5+	- - -	- - -	11 A-4a (V)
			18	12					
@18.5': SS-8 ONE PIECE COARSE GRAVEL			19	24					
			20	31	64				
HARD, GRAYISH BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP		854.5	21	14	17				12 A-6a (V)
			22	16					
			23	17					
			24	10	50	4.5+	9 15 39 31	27 15 12	12 A-6a (8)
			25	15					
			26	20					
VERY DENSE, GRAYISH BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, DAMP		849.5	27	40	100				11 A-4a (V)
			28	41					
@28.5': SS-12 BECOMES HARD			29	28	100	4.5+	9 19 37 24	23 14 9	8 A-4a (5)
			30	33					
			31	47					
			32						
			33						
			34	30					
			EOB	50/3"	100	4.5+	- - -	- - -	7 A-4a (V)

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 6/9/15 11:22 - \\COLLUMBUS\SUBLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\FRA-71-00 2014-15\COMBINED GINTS.RENUMBERED\FRA-71-00 2014.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 13.5' DURING DRILLING. CAVE DEPTH 8.0'.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



B-001-B-62

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/20/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE None CLIENT: Bartlett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/20/62 & NXM Core Barrel DIA. 3.5" I.D. AFTER 24 HOURS Hole PROJECT: Interstate 71
 CASING LENGTH DIA. Caved at 779.3. Bridge No. FRA-1-0153 (R&L)

BORING No. 1 STATION AND OFFSET 921+94, 86' L. of C.L. of SR-1 SURFACE ELEV. 783.3

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						% AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.			
783.3	0				Topsoil.	No Tests Performed											
781.8	2	1	7-6-9	15"													
	4	2	10-11-12	10"	Dark brown silt and clay, some sand, some gravel, moist - stiff.	24	8	25	27	16	32	13	15	A-6a			
778.3	6	3	17-21-21	14"	Brown sandy gravel, little clay, wet - dense.	76	9	3	-1	0	-		8	A-1-a			
	8	4	13-13-17	10"	Brown sandy gravel, trace of silt, wet - medium dense.	79	10	3	-	8	-		8	A-1-a			
	10	5	12-16-17	8"	Brown sandy gravel, trace of silt, wet - dense.	77	10	5	-	8	-		9	A-1-a			
770.8	12																
770.3	14	6	14	4"	Brown sandy gravel, little silt, moist - dense.	57	17	8	17	1	17	2	13	A-1-b			
	14	7	17-25	8"	Brown sandy silt, some medium dense, moist - stiff.	35	13	15	24	13	24	10	12	A-4a			
768.3	16	8	11-21-26	14"	Gray and brown clay, trace of sand, trace rock fragments, moist - stiff (fat).	4	4	4	15	73	52	29	21	A-7-6			
765.8	18	9	70	*	Brown sandy gravel.									A-1-a			
	20	10	50	4"	(Field Classification) Brown sandy gravel, little clay, wet - very dense. (Visual)	Insufficient Sample For Testing.								A-1-a			
762.3	22																
	24	11	NXM	88%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1/2" to 9", averaging 5"); evidence of high angle jointing.												
757.3	26																
	28				Boring Completed.												
	30																
	32																
	34																

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC, AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS, OR EXTRACTS FROM, OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

B-001-C-62

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-16-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 861.2 CLIENT: Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-17-62 CASING: LENGTH 24 DIA. 3.5" I.D. Hollow AFTER 24 Stem Augers PROJECT: I-71, Bridge No. FRA-1-0298
 BORING No. 1 STATION AND OFFSET 998+07, 79' L. of CL of SR-1 SURFACE ELEV. 869.2 HOURS 864.5

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.			
869.2	0																
868.2	2	1	1-2	11"	Topsoil	No tests performed											A-7-6
866.7	4	2	4-7	4"	Brown clay, little sand, moist - stiff	0	3	8	43	46	51	32	20				A-6a
864.2	6	3	9-11-11	17"	Mottled brown and gray silt and clay, little sand, little gravel, moist - stiff	18	7	10	36	29	30	14	14				A-4a
	8	4	4-4-6	17"	Mottled brown and gray sandy silt, some sand, very moist - medium stiff	22	11	15	37	15	23	7	15				A-4a
	10	5	5-8-9	18"	Brown sandy silt, with sand seams, little gravel, very moist - medium stiff	17	24	20	28	11	18	4	12				A-4a
	12	6	6-11-12	15"	Brown sandy silt, some gravel, moist - stiff	20	11	13	83	18	20	6	11				A-4a
	14	7	8-8-9	16"	do	21	9	15	35	20	22	8	13				A-4a
	16	8	6-8-12	17"	Brownish gray sandy silt, little gravel, moist - stiff	15	10	13	37	25	22	8	13				A-4a
	18	9	7-8-11	18"	do	20	10	15	35	20	23	9	12				A-4a
	20	10	10-12-14	17 1/2"	Brown sandy silt, little gravel, moist - stiff	14	7	16	40	23	24	10	12				A-4a
	22																
	24																
	26	11	13-24-41	18"	Brownish gray sandy silt, little gravel, moist - very stiff	17	7	14	39	23	24	10	10				A-4a
	28																
	30	12	29-40	12"	Brownish gray sandy silt, trace of gravel, moist - very stiff	9	8	18	44	21	21	8	10				A-4a
	32																
	34																

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B-001-C-62

Form No. 530-16-55

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-16-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 961.2 CLIENT: Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-17-62 CASING: LENGTH 24 DIA. 3.5" I.D. Hollow AFTER 24 Stem Augers PROJECT: I-71, Bridge No. FRA-1-0298
 BORING No. 1 STATION AND OFFSET 998+07, 79' L. of CL of SR-1 SURFACE ELEV. 869.2 HOURS 864.5

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.			
	34																
	36	13	23-31-46	18"	Brown sandy silt, trace of gravel, moist - very stiff	7	8	17	42	26	21	8	10				A-4a
	38																
	40																
	42	14	18-20-25	18"	Brownish gray sandy silt, little gravel, moist - very stiff	10	8	17	41	24	21	8	10				A-4a
	44																
	46	15	16-17-20	18"	do	16	8	16	38	22	20	7	10				A-4a
	48																
	50																
	52	16	16-23-31	18"	Brown sandy silt, little gravel, moist - stiff	11	8	18	40	23	20	8	10				A-4a
	54																
812.7	56	17	10-16-26	18"	do	13	8	18	39	22	20	8	11				A-4a
	58				Boring completed												
	60																
	62																
	64																
	66																
	68																

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B-001-U-62

Form No. 530-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/10/62 SAMPLER: TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE 866.0 CLIENT: Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/11/62 CASING: LENGTH DIA. 3.5" I.D. AFTER 24 HOURS 865.7 PROJECT: I-71 - Bridge No. FRA-1-0310
 BORING No. 1 STATION AND OFFSET 30+41, 55' L. of C.L. of SR-3 SURFACE ELEV. 873.5 R & L

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.			
873.5	0					No Tests Performed.											
872.0	2	1	3-7-9	16"	Topsoil, dry - hard.												
870.5	4	2	10-19-33	15"	Brown silty clay, little sand, trace gravel, dry - hard.	9	7	11	38	35	38	22	9	A-6b			
868.5	6	3	15-14-12	16"	Brown silt and clay, some sand, little gravel, moist - very stiff.	12	12	13	38	25	29	14	12	A-6a			
866.0	8	4	5-6-8	17"	Mottled brown and gray silt and clay, some sand, little gravel, moist - stiff.	10	9	12	37	32	40	23	18	A-6b			
	10	5	4-5	12"	Brown sandy silt, little gravel, very moist - medium stiff.	13	15	18	39	15	21	6	15	A-4a			
	12	6	11	6"	Brown sandy silt, little gravel, moist - stiff.	15	20	17	38	10	19	6	10	A-4a			
	14	7	10-7-7	16"	do do do	17	11	13	40	19	21	8	11	A-4a			
858.5	16	8	6-6-6	17"	Brown sandy silt, little gravel, moist - medium stiff.	15	12	13	42	18	21	8	13	A-4a			
	18	9	5-9-14	18"	Brown silt and clay, some sand, little gravel, moist - medium stiff.	13	11	15	39	22	25	11	13	A-6a			
853.5	20	10	11-14-18	16½"	Brown silt and clay, some sand, trace gravel, moist - medium stiff.	8	11	15	41	25	25	12	12	A-6a			
	22	11	8-10-12	17"	Gray sandy silt, little gravel, moist - stiff.	10	9	15	40	26	23	8	11	A-4a			
848.5	24	12	10-16-28	18"	Brownish gray silty sand, little gravel, moist - dense.	11	9	61	4	15	23	9	11	A-2-4			
843.5	30	13	24-44	12"	Brownish gray sandy silt, little gravel, moist - very stiff.	10	7	17	41	25	23	10	8	A-4a			

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B-001-U-62

Form No. 530-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/10/62 SAMPLER: TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE 866.0 CLIENT: Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/11/62 CASING: LENGTH DIA. 3.5" I.D. AFTER 24 HOURS 865.7 PROJECT: I-71 - Bridge No. FRA-1-0310
 BORING No. 1 STATION AND OFFSET 30+41, 55' L. of C.L. of SR-3 SURFACE ELEV. 873.5 R & L

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.			
	34																
	36	14	32-49	12"	Brownish gray sandy silt, little gravel, moist - very stiff.	10	7	17	41	25	22	9	8	A-4a			
	38																
	40																
	42	15	17-26-39	17½"	do do do	11	8	16	39	26	22	9	10	A-4a			
	44																
	46	16	22-29-40	18"	do do do	16	7	16	39	22	21	8	10	A-4a			
	48																
	50																
	52	17	20-26-37	18"	do do do	12	8	16	40	24	22	8	9	A-4a			
	54																
817.0	56	18	13-23-24	18"	Brownish gray sandy silt, little gravel, moist - very stiff.	10	9	18	40	23	21	8	11	A-4a			
	58				Boring Completed.												
	60																
	62																

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B-002-B-62

Form No. 590-16-59

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/24/62 SAMPLER: TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE 776.6 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 7/24/62 CASING: LENGTH DIA. 3.5" I.D. AFTER 24 HOURS 776.6 PROJECT: Interstate 71
BRIDGE NO. FRA-1-0153 (R&L)

BORING NO. 2 STATION AND OFFSET 924+88.46 L. OF C.L. OF SR-1 SURFACE ELEV. 774.1 (Creek Bed Elevation)

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics						SHTL CLASS		
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.		P.I.	W.C.
776.6	0				WATER									
774.1	2													
	4	1	7-8-11	10"	Brown sandy gravel, little silt, wet - medium dense.	71	12	6	-	11			10	A-1-a
770.1	6	2	15-15-13	8"	Brown sandy gravel, little silt, wet - dense.	70	13	6	-	11			10	A-1-a
766.6	8	3	16-18-22	6"	Reddish brown and gray clayey gravel, with sand, moist - stiff.	45	11	12	27	5	29	16	15	A-2-6
	10	4	10-8-12	12"	Reddish brown clay, some sand, trace of gravel, moist - stiff.	7	11	11	12	59	74	48	38	A-7-6
762.6	12	5	14-13-14	10"	Reddish brown clay, some sand, little gravel, moist - stiff.	11	20	12	9	48	61	43	32	A-7-6
	14	6	NXM	74%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1" to 8", averaging about 5" with the thinner beds near top of core); 2" broken zone 3" below top of core, and more broken pieces near the bottom of the last run (Sample No. 8).									
	16	7	NXM	100%										
	18													
	20													
	22	8	NXM	34%										
752.6	24				Boring Completed.									
	26													
	28													
	30													
	32													
	34													

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Form No. 590-16-59

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/26/62 SAMPLER: TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE 777.1 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 7/26/62 CASING: LENGTH DIA. 3.5" I.D. AFTER 24 HOURS 776.8 PROJECT: Interstate 71
BRIDGE NO. FRA-1-0153 (R&L)

BORING NO. 3 STATION AND OFFSET 924+13.103 L. OF C.L. OF SR-1 SURFACE ELEV. 783.1

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics						SHTL CLASS		
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.		P.I.	W.C.
783.1	0													
781.1	2	1	1-2-2	10"	Topsoil.	No Tests Performed.								
	4	2	9-8-7	12"	Brown sandy gravel, trace of silt, dry - medium dense.	68	20	5	-	7			8	A-1-a
	6	3	6-5-5	10"	Brown sandy gravel, trace of silt, moist - loose.	71	17	4	-	8			6	A-1-a
773.6	8	4	12-12-13	12"	Brown sandy gravel, little silt, wet - medium dense.	69	13	6	-	12			9	A-1-a
771.1	10	5	8-9-10	16"	Brown sandy silt, some gravel, moist - stiff.	22	14	16	32	16	23	10	13	A-4a
	12	6	8-11-16	12"	Brownish gray silt and clay, some sand, little gravel, moist - med. stiff.	17	11	18	38	16	24	11	14	A-6a
767.1	14	7	80	*	Brownish gray silt and clay. (Field Classification)									A-6a
	16													
	18	8	NXM	100%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1/2" to 7", averaging 2 1/4" near top to 5" near bottom of core). 4" broken zone at depth of 5-ft. (at top of 2nd run or Sample No. 9), probably high angle joint.									
757.1	20	9	NXM	90%										
	22													
	24													
	26				Boring Completed.									
	28													
	30				*No Recovery.									
	32													
	34													

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

Form No. 530-16-5

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

B-004-B-62

DATE STARTED 7/26/62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 777.5 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 7/26/62 CASING: TYPE NXM COKE BARREL DIA. 3.5" I.D. AFTER 24 HOURS 777.8 PROJECT: Interstate 71
BORING No. 4 STATION AND OFFSET 925+10, 57' L. of C.L. of SR-1 SURFACE ELEV. 784.5 Bridge No. FRA-1-0153 (R&L)

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics						SHTL CLASS		
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.		P.I.	W.C.
784.5	0				Topsoil.	No Tests	Performed.							
782.5	2	1	1-1-2	8"	Brown sandy gravel, little silt,	55	23	12	-10	-			5	A-1-a
779.5	4	2	7-5-3	10"	Brown clayey sand, some gravel, moist - loose.	24	23	29	19	5	29	11	19	A-2-6
777.5	6	3	5-5-5	14"	Brown sandy gravel, little silt, wet - dense.	63	15	8	-14	-			9	A-1-a
774.5	8	4	12-12-22	10"	Brown gravelly sand, little silt, wet - dense.	58	15	7	18	2	17	2	11	A-1-b
772.5	10	5	18-21-24	6"	Brown sandy silt, little gravel, moist stiff.	12	12	20	41	15	23	10	10	A-4a
770.0	12	6	14-20-22	8"	Brownish gray silt and clay, some sand, little gravel, moist - stiff.	10	9	16	36	29	27	13	11	A-6a
767.5	14	7	21-24-26	14"	Brown sandy silt, trace of gravel, moist - medium stiff.	8	5	21	38	28	23	10	14	A-4a
765.5	16	8	21-26-26	10"	Reddish brown gravelly sand, little silt, moist - medium dense.	71	7	3	-19	-			41	A-1-b
764.0	18	9	14	4"	Reddish brown elastic clay, moist-stiff	0	0	0	8	92	129	86	41	A-7-5
	20	10	7-11	10"	Reddish brown elastic clay, trace of sand, moist - stiff.	0	0	1	9	90	124	83	42	A-7-5
760.5	22	11	8-11-16	15"	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1' to 4", averaging 3"), with 1/4" disconnected solution openings in upper 1/2-ft. of core.									
755.5	24	12	NXM	76%	Boring Completed.									
	25													
	28													
	30													
	32													
	34													

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B-004-C-62

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-11-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 863.0 Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-12-62 CASING: LENGTH 24' DIA. 3.5" I.D. Hollow AFTER 24' HOURS 865.6 PROJECT: I-71, Bridge No. FRA-1-0298
 BORING No. 4 STATION AND OFFSET 999+45, 36' L. of CL of SR-1 SURFACE ELEV. 870.0 Stem Augers

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SMTL CLASS				
						Agg	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.		W.C.			
870.0	0				Topsoil												
869.0	1	1	1-3	10"	Dark brown clay, little sand, moist-stiff												A-7-6
	2	2	6	5"	Mottled brown and gray clay, little sand, moist - very stiff												A-7-6
867.0	4	3	8-10-14	16"	Mottled brown and gray silty clay, little sand, trace of gravel, moist-very stiff												A-6b
865.9	4	4	6-6-7	14"	Mottled brown and gray sandy silt, little gravel, moist - stiff												A-4a
864.5	6	5	4	4"	Brown silt, and sand, trace of gravel, wet - loose												A-4b
862.5	8	6	4-4	12"	Brown sandy silt, some gravel, very moist - medium stiff												A-4a
	10	7	3-3-7	17"	Brown sandy silt, some gravel, moist - stiff												A-4a
855.0	12	8	4-7-9	16"	Brownish gray sandy silt, trace of gravel, moist - stiff												A-4b
	14	9	6-7-8	14"	do												A-4a
852.5	16	10	4-8-11	18"	Brownish gray silt, some sand, trace of gravel, moist - stiff												A-4b
	18	11	5-7-9	18"	Brownish gray sandy silt, trace of gravel, moist - stiff												A-4a
	20				Brownish gray sandy silt, little gravel, moist - stiff												A-4a
	22	12	9-10-9	17 1/2"	Brownish gray sandy silt, trace of gravel, moist - stiff												A-4a
	24																A-4a
	26	13	10-13-22	18"	Brownish gray sandy silt, trace of gravel, moist - stiff												A-4a
	28																A-4a
	30	14	29-45	12"	Brown sandy silt, trace of gravel, moist - very stiff												A-4a
	32																A-4a
	34																A-4a

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B-004-C-62

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-11-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 863.0 Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-12-62 CASING: LENGTH 24' DIA. 3.5" I.D. Hollow AFTER 24' HOURS 865.6 PROJECT: I-71, Bridge No. FRA-1-0298
 BORING No. 4 STATION AND OFFSET 999+45, 36' L. of CL of SR-1 SURFACE ELEV. 870.0 Stem Augers

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SMTL CLASS				
						Agg	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.		W.C.			
	34																
	36	15	29-51	12"	Brown sandy silt, trace of gravel, moist - very stiff												A-4a
	38																A-4a
	40																A-4a
	42	16	20-35-51	18"	do												A-4a
	44																A-4a
	46	17	23-36-53	18"	Brownish gray sandy silt, little gravel, moist - stiff												A-4a
	48																A-4a
	50																A-4a
	52	18	17-30-47	18"	Brownish gray sandy silt, little gravel, moist - very stiff												A-4a
	54																A-4a
813.5	56	19	16-22-32	18"	do												A-4a
	58				Boring completed												A-4a
	60																A-4a
	62																A-4a
	64																A-4a
	66																A-4a
	68																A-4a

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

B-005-B-62

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/24/62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 777.4 CLIENT: Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/24/62 & NXM Core Barrel DIA. 3.5" I.D. PROJECT: Interstate 71
 CASEING LENGTH: _____ AFTER _____ HOURS _____ BRIDGE No. FRA-1-0153 (R&L)

BORING No.	STATION AND OFFSET	ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics										SHTL CLASS	
								AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	W.C.				
5	921+90, 31' E. of C.L. of SR-1	781.4	0				Topsoil.	No Tests Performed.											
		778.9	2	1	2-3-4	7"	Brown sandy gravel, little silt, moist - medium dense.		66	15	6	-	13	-			6	A-1-a	
		774.4	6	3	2-3-6	10"	Brown sandy gravel, trace of silt, wet - loose.		70	19	5	-	6	-			11	A-1-a	
		771.9	8	4	11-16-21	14"	Gray sandy silt, little gravel, moist - dense.		18	7	24	44	7	16	3	12	A-4a		
		770.4	10	5	35-62	7"	Brown silt and clay, some sand, little gravel, moist - stiff.		15	10	18	43	14	25	12	10	A-6a		
		764.4	12	6	90	4"	Brownish gray sandy silt, some gravel, moist - stiff.		21	13	20	32	14	19	6	10	A-4a		
			16	7	80	3"	do do do (Visual) - Insufficient Sample.												
			18																
			20	8	NXM	76%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1" to 7", averaging 2 1/2" near top of core and 4" in bottom half). Top 1-ft. of core broken.												
			22																
			24	9	NXM	96%													
			26	10	NXM	78%													
		754.4	28				Boring Completed.												
			30																
			32																
			34																

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-17-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 861.7 CLIENT: Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-18-62 CASING: LENGTH 997+49, 36' R. of CL of SR-1 Stem Augers PROJECT: I-71, Bridge No. FRA-1-0298
 BORING No. 5 STATION AND OFFSET 997+49, 36' R. of CL of SR-1 SURFACE ELEV. 870.7 HOURS 870.7

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS			
						% AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PI		W.C.		
870.7	0	1	3"		Topsoil											
870.7	2	2	3-7	10"	Brown clay, little sand, moist-medium stiff	0	4	10	37	49	44	24	17	A-7-6		
868.2	4	3	9-14-15	16 1/2"	Mottled brown and gray silt and clay, some sand, some gravel, moist - stiff	23	9	11	33	24	27	11	13	A-6a		
865.7	6	4	6-7-8	17"	Mottled brown and gray sandy silt, trace of gravel, moist - stiff	9	13	14	40	24	24	9	15	A-4a		
863.2	8	5	15-19-24	14"	Brown gravelly sand, some clay, moist-dense	49	18	13	16	4	18	3	11	A-1-b		
860.7	10	6	10-11-13	17"	Brown sandy silt, little gravel, moist - very stiff	20	13	15	36	16	20	7	9	A-4a		
	12															
	14	7	9-11-13	17"	Brown sandy silt, little gravel, moist - stiff	12	12	13	43	20	22	8	10	A-4a		
	16	8	5-8-9	18"	Gray sandy silt, some gravel, moist-stiff	21	10	14	35	20	22	9	12	A-4a		
	18	9	5-7-9	16"	Brownish gray sandy silt, trace of gravel, moist - stiff	10	9	15	48	18	24	10	12	A-4a		
	20															
	22	10	6-18-10	18"	do do	9	10	18	38	25	23	9	12	A-4a		
	24															
845.7	26	11	22-37	12"	Brownish gray gravelly sand, some silt, moist - very stiff	35	29	16	14	6	18	4	7	A-1-b		
844.7	28	12	50	4"	Brownish gray sandy silt, moist - very stiff (Visual)	Insufficient sample for testing										
	30															
	32	13	27-49	12"	Brownish gray sandy silt, some gravel, moist - very stiff	21	8	15	44	12	21	8	8	A-4a		
	34															

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-17-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 861.7 CLIENT: Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-18-62 CASING: LENGTH 997+49, 36' R. of CL of SR-1 Stem Augers PROJECT: I-71, Bridge No. FRA-1-0298
 BORING No. 5 STATION AND OFFSET 997+49, 36' R. of CL of SR-1 SURFACE ELEV. 870.0

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS	
						% AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PI		W.C.
835.7	34													
	36	14	12-35-45	18"	Brownish gray silt, some sand, little gravel, moist - very stiff	10	9	17	50	14	22	9	9	A-4b
	38													
	40													
	42	15	11-16-23	18"	Brownish gray silt, some sand, little gravel, moist - stiff	11	8	17	50	14	22	9	11	A-4b
	44													
	46	16	10-15-20	18"	do do	10	8	18	50	14	20	7	11	A-4b
	48													
820.7	50	17	13-16-22	18"	Brownish gray sandy silt, little gravel, moist - stiff	12	7	17	42	22	21	8	12	A-4a
	52													
	54													
814.2	56	18	13-17-24	18"	do do	12	8	18	41	21	21	8	10	A-4a
	58				Boring completed									
	60													
	62													
	64													
	66													
	68													

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

Form No. 530-16

B-006-B-62

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/25/62 SAMPLER TYPE Spit Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 775.6 CLIENT Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/25/62 & NXM Core Barrel CASING LENGTH 3.5" I.D. AFTER HOURS PROJECT: Interstate 71
Bridge No. FRA-1-0153 (R&L)

BORING No. 6 STATION AND OFFSET 922+85, 69' R. of C.L. of SR-1 SURFACE ELEV. 777.6

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.			
777.6	0																
	2	1	5-6-8	14"	Brown sandy gravel, little silt, wet medium dense.	65	17	7	-	11					8	A-1-a	
774.6	4	2	9	6"	Brown sandy gravel; trace of silt, wet - medium dense.	64	23	6	-	7					12	A-1-a	
772.6	4	3	5-6	8"	Gray sandy silt, little gravel, moist medium stiff.	16	11	21	41	11	17	4		10	A-4a		
	6	4	11-20-22	8"	Brown silt and clay, some sand, little gravel, moist - stiff.	14	8	16	35	27	27	13		12	A-6a		
	8				do												
767.6	10	5	10-16-21	10"	do	11	9	17	36	27	27	14		10	A-6a		
	12	6	NXM	62%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1/2" to 6", averaging 1 1/2" in top 5-ft. and 3" in bottom 5-ft. of core). Broken zone near top of core and again near bottom of second run (Sample No. 7); bottom two runs give evidence of high angle jointing.												
	14	7	NXM	68%													
	16	8	NXM	80%													
	18																
757.6	20	9	NXM	100%													
	22				Boring Completed.												
	24																
	26																
	28																
	30																
	32																
	34																

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4120 AIRPORT ROAD
CINCINNATI 26, OHIO

Form No. 530-16-

TESTING ENGINEERS AND SOILS CONSULTANTS

B-007-B-62

LOG OF BORING

DATE STARTED 8/11/62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE None CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/11/62 CASING: LENGTH 3.5" I.D. AFTER 24 HOURS 777.0 PROJECT: Interstate 71
BORING No. 7 STATION AND OFFSET 924+13, 31' E. of C.L. of SR-1 SURFACE ELEV. 785.0

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS			
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.		W.C.		
785.0	0															
783.0	2	1	2-5-8	12"	Brown silty sand and gravel, moist - medium dense.	46	20	15	12	7	28	10	12	A-2-4		
	4	2	5-4-5	5"	Brown sandy gravel, trace of silt, moist - loose.	71	14	6	-	-			5	A-1-a		
	6	3	11-11-15	16"	Brown sandy gravel, little silt, moist - medium dense.	56	21	10	-	-			4	A-1-a		
	8	4	11-14-18	11"	Brown sandy gravel, trace of silt, moist - dense.	72	12	6	-	-			4	A-1-a		
	10															
	12	5	17-24-27	14"	Brown sandy gravel, trace of silt, wet - very dense.	74	9	8	-	-			8	A-1-a		
	14	6	16-18-19	10"	Brown sandy gravel, little silt, wet - dense.	68	12	7	-	-			8	A-1-a		
770.0	16	6A	NXM	25%	Dolomite, white, crystalline, dense, hard, broken, evidence of vertical joint.											
	18	7	-35-	4"	Reddish brn. silty clay, some sand, some gravel, some sand.*	31	10	13	23	23	38	25	14	A-6b		
	20	8	-72-	6"	Brownish gray silty gravel, some sand.*	46	15	12	18	9	20	7	9	A-2-4		
	22	9	NXM	25%	Dolomite, white, crystalline, dense, hard, broken, evidence of vertical joint.											
	24	10	3-5-8	4"	Reddish brown gravel and rock fragments, trace of sand, some silt. *	68	7	2	-	-			51	A-1-b		
	26															
	28	11	NXM	30%	Dolomite, white, crystalline, medium dense, hard, broken, evidence of vertical joint.											
	30	12	- 0 -	6"	Reddish brown elastic clay. *			1	11	85	126	85	70	A-7-5		
	32	13	NXM	96%	Dolomite, cream white, crystalline, fine grained, dense, hard, thinly bedded, (1" to 6", averaging 3"). Evidence of high angle jointing near middle of sample No. 14.											
	34	14			* = Soils contained in vertical joint.											

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THE H. C. NUTTING COMPANY

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CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

B-007-B-62

LOG OF BORING

DATE STARTED 8/11/62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE None CLIENT: Barrett-Cargo-Wither & Assoc.
DATE COMPLETED 8/11/62 CASING: LENGTH 3.5" I.D. AFTER 24 HOURS 777.0 PROJECT: Interstate 71
BORING No. 7 STATION AND OFFSET 924+13, 31' E. of C.L. of SR-1 SURFACE ELEV. 785.0

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS			
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.		W.C.		
746.5	34															
	36	14	(Continued)		Dolomite. (See description on previous page.)											
	38	15														
	40				Boring Completed.											
	42															
	44															

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CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

B-008-B-62 **LOG OF BORING**

DATE STARTED 7/25/62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 776.6 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 7/25/62 & NXM Core Barrel DIA. 3.5" I.D. AFTER 24 HOURS 777.3 PROJECT: Interstate 71
BRIDGE No. FRA-1-0153 (R&L)

BORING No. 8 STATION AND OFFSET 925+11, 58' R. of C.L. of SR-1 SURFACE ELEV. 784.6

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS			
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.		W.C.		
784.6	0					No Tests Performed.										
783.1	2	1	2-3-5	10"	Topsoil.											
	4	2	3-3-3	12"	Brown silty sand, some gravel, moist - loose.	23	14	36	19	8	23	7	19		A-2-4	
777.6	6	3	3-3-2	10"	Brown and gray silt sand, trace of gravel, moist - loose.	4	16	46	25	9	31	9	47		A-2-4	
	8	4	3-5-9	10"	Brown and gray gravelly sand, some silt, moist - medium dense.	31	21	27	16	5	28	6	15		A-1-b	
	10															
772.6	12	5	26-18-18	12"	Brown gravelly sand, little silt, wet - dense.	63	13	7	-	17	-		11		A-1-b	
	14	6	15-15-19	14"	Gray sandy silt, some gravel, moist - stiff.	22	16	18	31	13	19	7	8		A-4a	
769.6	16	7	13-15-21	15"	Brown silty sand and gravel, moist - dense.	37	13	15	24	11	20	8	8		A-2-4	
767.6	18															
764.6	20	8	34-37-45	10"	Brown gravelly sand, little silt, wet - very dense.	46	18	21	-	15	-		11		A-1-b	
	22	9	NXM	100%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1/4" to 4", averaging 2"). Two 1" broken zones near center of run 2 (Sample No. 10).											
	24	10	NXM	100%												
759.6	26	11	NXM	92%												
	28				Boring Completed.											
	30															
	32															
	34															

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-13-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 853.3 CLIENT: Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-13-62 CASING: LENGTH 24' DIA. 3" I.D. Hollow AFTER 24' Stem Augers HOURS 862.8 PROJECT: I-71, Bridge No. FRA-1-0298

BORING No. 8 STATION AND OFFSET 998+85, 79' R. of CL of SR-1 SURFACE ELEV. 869.8

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics								SHTL CLASS						
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PI	W.C.							
869.8	0				Topsoil	No tests performed														
868.8	2	1	2-4	10"	Mottled brown clay, little sand, moist - stiff	0	4	8	44	44	42	26	13							A-7-6
866.8	4	2	14	4"	Brown clay, little sand, moist - stiff	0	2	9	27	37	36	32	20							A-7-6
866.3	4	S-1		18"	Mottled brown and gray silt and clay	0	6	12	45	37	36	19	20							A-6b
	6	3	10-10-11	15"	Mottled brown and gray silt and clay	23	9	11	34	23	28	12	11							A-6a
862.8	6	4	5-9-11	17"	some sand, some gravel, moist - stiff	8	12	14	40	26	27	11	10							A-6a
	8	S-2		18"	Brown silt and clay, some sand, trace of gravel, moist - stiff	13	14	15	37	21	20	6	12							A-4a
	10	5	7-6-8	18"	Brown sandy silt, little gravel, moist - stiff	15	13	16	39	17	20	6	11							A-4a
	12				do															
	14	6	6-8-9	17"	Brownish gray sandy silt, some gravel, moist - stiff	27	8	11	35	19	21	7	11							A-4a
	16	S-3		8"	Brownish gray sandy silt, trace of gravel, moist - stiff	9	11	16	39	25	23	9	10							A-4a
	18	7	16-16-18	16"	Brownish gray sandy silt, trace of gravel, moist - very stiff	23	10	17	34	16	21	7	13							A-4a
	20	8	5-8-11	18"	Brownish gray sandy silt, some gravel, moist - stiff	23	10	17	34	16	21	7	13							A-4a
	22	9	5-9-11	18"	Brownish gray sandy silt, little gravel, moist - stiff	14	9	15	46	16	22	8	13							A-4a
	24																			
	26	10	12-19-32	18"	Brownish gray sandy silt, little gravel, moist - very stiff	10	9	17	40	24	23	10	10							A-4a
	28																			
	30	11	30-44	12"	do	11	8	18	40	23	22	9	9							A-4a
	32																			
	34																			

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Form No. 530-16-59

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7-16-62 SAMPLER: TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 861.2 CLIENT: Barrett-Cargo-Withers & Assoc., Ltd.
 DATE COMPLETED 7-17-62 CASING: LENGTH 24' DIA. 3" I.D. Hollow AFTER 24' Stem Augers HOURS 864.5 PROJECT: I-71, Bridge No. FRA-1-0298

BORING No. 1 STATION AND OFFSET 998+07, 79' L. of CL of SR-1 SURFACE ELEV. 869.2

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics								SHTL CLASS							
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PI	W.C.								
869.2	0				Topsoil	No tests performed															
868.2	2	1	1-2	11"	Brown clay, little sand, moist - stiff	0	3	8	43	46	51	32	20								A-7-6
866.7	4	2	7	4"	Mottled brown and gray silt and clay, little sand, little gravel, moist - stiff	18	7	10	36	29	30	14	14								A-6a
864.2	6	3	9-11-11	17"	Mottled brown and gray sandy silt, some sand, very moist - medium stiff	22	11	15	37	15	23	7	15								A-4a
	8	4	4-4-6	17"	Brown sandy silt, with sand seams, little gravel, very moist - medium stiff	17	24	20	28	11	18	4	12								A-4a
	10	5	5-8-9	18"	Brown sandy silt, some gravel, moist - stiff	20	11	13	83	18	20	6	11								A-4a
	12	6	6-11-12	15"	Brown sandy silt, some gravel, moist - stiff	21	9	15	35	20	22	8	13								A-4a
	14	7	8-8-9	16"	do	21	9	15	35	20	22	8	13								A-4a
	16	8	6-8-12	17"	Brownish gray sandy silt, little gravel, moist - stiff	15	10	13	37	25	22	8	13								A-4a
	18	9	7-8-11	18"	do	20	10	15	35	20	23	9	12								A-4a
	20					14	7	16	40	23	24	10	12								A-4a
	22	10	10-12-14	17½"	Brown sandy silt, little gravel, moist - stiff	17	7	14	39	23	24	10	10								A-4a
	24																				
	26	11	13-24-41	18"	Brownish gray sandy silt, little gravel, moist - very stiff	9	8	18	44	21	21	8	10								A-4a
	28																				
	30	12	29-40	12"	Brownish gray sandy silt, trace of gravel, moist - very stiff																A-4a
	32																				
	34																				

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC, AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS, OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS
LOG OF BORING

B-009-B-62

DATE STARTED 8/9/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 776.6 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/10/62 & NXM Core Barrel DIA. 3.5" I.D. AFTER 48 HOURS 776.6 PROJECT: Interstate 71 Bridge No. FRA-1-0153 (R&L)

BORING No. 9 STATION AND OFFSET 922+88, 91' L. of C.L. of SR-1 SURFACE ELEV. 774.5 (Creek Bed Elevation)

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS		
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.	
776.6	0				WATER										
774.5	2														
	4	1	8-10-15	12"	Brown sandy gravel, little silt, wet - medium dense.	67	15	7	- 1	1			9	A-1-a	
	6	2	10-14-12	14"	do	67	17	6	- 1	0			11	A-1-a	
768.1	8	3	35-68	10"	Brown sandy gravel, trace of silt, wet - very dense.	68	19	5	- 8	-			9	A-1-a	
	10	4	NXM	78%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1" to 8", averaging 2" in top half and 5" in bottom half of 10' core). Several broken zones at top and center of run 2 (Sample No. 5), probably high angle joints.										
	12	5	NXM	84%											
	14	6	NXM	100%											
	16														
	18														
758.1	20				Boring Completed.										
	22														
	24														
	26														
	28														
	30														
	32														
	34														

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Form No. 630-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS
LOG OF BORING

B-010-B-62

DATE STARTED 8/12/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 776.1 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/12/62 & NXM Core Barrel DIA. 3.5" I.D. AFTER 48 HOURS 776.1 PROJECT: Interstate 71 Bridge No. FRA-1-0153 (R&L)

BORING No. 10 STATION AND OFFSET 924+13, 39' L. of C.L. of SR-1 SURFACE ELEV. 783.1

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS	
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		W.C.
783.1	0													
781.1	2	1	2-3-4	10"	Brown silty sand and gravel, moist - loose.	35	25	17	15	8	26	10	8	A-2-4
778.6	4	2	10-11-11	14"	Brown sandy gravel, little silt, moist - medium dense.	61	17	9	9	4	19	4	7	A-1-a
	6	3	19-15-15	10"	Brown gravelly sand, some silt, moist - medium dense.	44	20	15	16	5	21	6	8	A-1-b
776.1	8	4	16-18-29	8"	Brown sandy gravel, little silt, moist - dense.	62	17	8	- 13	-			5	A-1-a
772.1	10	5	25-22	8"	do	69	13	6	10	2	17	3	13	A-1-a
	12	6	15	6"	Brown silt and clay, some sand, little gravel, moist - stiff.	17	9	17	32	25	26	13	12	A-6a
768.6	14	7	30-26-21	8"	Brown silt and clay and gravel, little sand, moist - medium stiff.	43	6	9	23	19	27	13	14	A-6a
767.1	16	8	6		Reddish brown clay, little sand, some gravel, moist - medium stiff.	21	7	7	14	51	77	51	23	A-7-6
	18													
	20	9	NXM	100%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1" to 10", averaging 2" in top half and 5" in bottom half of 10' core). Traces of red clay on some bedding planes in the top run (Sample No. 9).									
	22	10	NXM	100%										
	24	11	NXM	100%										
757.1	26				Boring Completed.									
	28													
	30													
	32													
	34													

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B-010-U-62

Form No. 530-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/7/62 SAMPLER TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE None CLIENT Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/8/62 CASING LENGTH DIA. 3.5" I.D. AFTER 96 HOURS 863.7 PROJECT: I-71 - Bridge No. FRA-1-0310
 BORING No. 10 STATION AND OFFSET 29+34, 97' E. of C.L. of SR-3 SURFACE ELEV. 873.2 R & L

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		WC			
873.2	0					No Tests Performed											
871.7	2	1	1-7-7	12"	Topsoil and brown sandy clay, with fine gravel, fill, dry - loose (visual)												
	4	2	7-9-12	14"	Brown clay, little sand, moist - very stiff.	0	4	6	37	53	54	36	15				A-7-6
868.2	4	3	5-6-6	17"	Mottled brown and gray clay, little sand, trace gravel, moist - very stiff	1	3	10	40	46	42	24	21				A-7-6
	6	4	5-7-7	17 1/2"	Brown silt and clay, some sand, little gravel, moist - stiff.	11	10	14	41	24	26	11	14				A-6a
865.7	8				Brown sandy silt, some gravel, moist - stiff.	22	10	13	36	19	24	10	11				A-4a
	10				do	21	10	12	36	21	23	9	10				A-4a
	12				do	17	11	14	40	18	22	9	14				A-4a
	14				Brown sandy silt, little gravel, very moist - medium stiff.	22	9	14	35	20	22	9	10				A-4a
	16	8	11-13-18	18"	Brown sandy silt, some gravel, moist - stiff.	10	8	12	43	27	25	10	10				A-4a
853.2	18	9	9-15-21	18"	Brown sandy silt, little gravel, moist - stiff.	9	10	14	40	27	26	12	13				A-6a
	20				Brown silt and clay, some sand, trace gravel, moist - stiff.												
	22																
	24																
848.2	26	11	7-15-22	17 1/2"	Brown sandy silt, trace gravel, moist - stiff.	9	9	17	44	21	24	10	11				A-4a
	28																
	30																
	32				Brownish gray sandy silt, trace gravel, moist - very stiff.	7	10	18	42	23	22	9	9				A-4a
	34																

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B-010-U-62

Form No. 530-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/7/62 SAMPLER TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE None CLIENT Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/8/62 CASING LENGTH DIA. 3.5" I.D. AFTER 96 HOURS 863.7 PROJECT: I-71 - Bridge No. FRA-1-0310
 BORING No. 10 STATION AND OFFSET 29+34, 97' R. of C.L. of SR-3 SURFACE ELEV. 873.2 R & L

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		WC			
873.2	0																
	34																
	36	13	33-56	12"	Brownish gray sandy silt, little gravel, moist - very stiff.	11	10	17	40	22	22	9	8				A-4a
	38																
	40																
	42	14	26-49	12"	Brownish gray sandy silt, trace gravel, moist - very stiff.	9	9	15	42	25	22	9	8				A-4a
	44																
	46	15	22-37-50	18"	Brownish gray sandy silt, little gravel, moist - very stiff.	12	9	16	40	23	21	9	9				A-4a
	48																
	50																
	52	16	15-24-35	18"	Brownish gray sandy silt, trace gravel, moist - very stiff.	9	8	17	40	26	21	9	10				A-4a
	54																
816.7	56	17	13-21-30	18"	Brownish gray sandy silt, trace gravel, moist - very stiff.	8	9	19	39	25	21	9	10				A-4a
	58				Boring Completed.												
	60																

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

B-011-B-62 **LOG OF BORING**

DATE STARTED 8/10/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 776.6 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/10/62 CASING LENGTH 3.5" I.D. AFTER 48 HOURS 776.6 PROJECT: Interstate 71
BORING No. 11 STATION AND OFFSET 922+88, 24' R. of C.L. of SR-1 SURFACE ELEV. 776.8

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS	
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.		W.C.
776.8	0	1	3-8-22	14"	Brown sandy gravel, little silt, wet - dense.	71	14	5	-	10			10	A-1-a
	2				do	62	16	7	12	3	20	4	12	A-1-a
770.8	6	3	NXM	33%	do do (Visual)	36	17	16	23	8	20	5	10	A-2-4
768.3	8	4	29-27-19	16"	Brown silty sand and gravel, moist - dense.	37	17	10	20	16	31	17	15	A-6b
766.8	10	5	26-38	8"	Brown silty clay and gravel, some sand moist - stiff.									
	12													
	14		NXM	100%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1/4" to 7", averaging 2 1/2" in top half and 4" in bottom half of 10' core). Upper run (Sample No. 6) rather porous below top of core.									
756.8	20	7	NXM	100%	Boring Completed.									
	22													
	24													
	26													
	28													
	30													
	32													
	34													

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

B-012-B-62 **LOG OF BORING**

DATE STARTED 8/10/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE None CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/11/62 CASING LENGTH 3.5" I.D. AFTER 24 HOURS None PROJECT: Interstate 71
BORING No. 12 STATION AND OFFSET 924+13, 66' R. of C.L. of SR-1 SURFACE ELEV. 783.8

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS	
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.		W.C.
783.8	0	1	3-3-4	10"	Brown silty sand and gravel, moist - loose.	42	21	15	15	7	26	8	7	A-2-4
781.8	2				do	43	29	14	-	14			5	A-1-b
779.3	4	2	6-6-6	16"	Brown gravelly sand, little silt, moist - medium dense.	56	20	11	-	13			4	A-1-a
	6	3	12-22-35	10"	Brown sandy gravel, little silt, moist - very dense.	56	21	8	-	15			4	A-1-a
774.3	8	4	26-12-12	16"	Brown sandy gravel, little silt, moist - medium dense.	60	14	8	-	18			10	A-1-b
	10				do	68	12	6	-	14			10	A-1-a
771.8	12	5	21-21-20	12"	Brown gravelly sand, little silt, wet - dense.	8	7	18	36	31	28	14	13	A-6a
769.3	14	6	16-17-18	15"	Brown sandy gravel, little silt, wet - dense.									
766.8	16	7	13-30-33	12"	Brown silt and clay, some sand, trace of gravel, moist - stiff.									
	18				do									
	20	8	NXM	78%	Dolomite, cream white, crystalline, medium-fine grained, dense, hard, thinly bedded (1/4" to 6", averaging 2" in upper half and 4" in lower half of 10' core). Upper 1-ft. of first run (Sample No. 8) and upper 4-inches of second run (Sample No. 9) are broken.									
	22				do									
	24	9	NXM	100%	Boring Completed.									
	26	10	NXM	73%										
756.8	28													
	30													
	32													
	34													

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THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS
LOG OF BORING

B-009-B-62

DATE STARTED 8/9/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 776.6 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/10/62 & NXM Core Barrel DIA. 3.5" I.D. AFTER 48 HOURS 776.6 PROJECT: Interstate 71 Bridge No. FRA-1-0153 (R&L)

BORING No. 9 STATION AND OFFSET 922+88, 91' L. of C.L. of SR-1 SURFACE ELEV. 774.5 (Creek Bed Elevation)

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics						SHTL CLASS		
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL		PL	W.C.
776.6	0				WATER									
774.5	2													
	4	1	8-10-15	12"	Brown sandy gravel, little silt, wet - medium dense.	67	15	7	- 1	1			9	A-1-a
	6	2	10-14-12	14"	do	67	17	6	- 1	0			11	A-1-a
768.1	8	3	35-68	10"	Brown sandy gravel, trace of silt, wet - very dense.	68	19	5	- 8	-			9	A-1-a
	10	4	NXM	78%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1" to 8", averaging 2" in top half and 5" in bottom half of 10' core). Several broken zones at top and center of run 2 (Sample No. 5), probably high angle joints.									
	12	5	NXM	84%										
	14	6	NXM	100%										
	16													
	18													
758.1	20				Boring Completed.									
	22													
	24													
	26													
	28													
	30													
	32													
	34													

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Form No. 630-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS
LOG OF BORING

B-010-B-62

DATE STARTED 8/12/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 776.1 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/12/62 & NXM Core Barrel DIA. 3.5" I.D. AFTER 48 HOURS 776.1 PROJECT: Interstate 71 Bridge No. FRA-1-0153 (R&L)

BORING No. 10 STATION AND OFFSET 924+13, 39' L. of C.L. of SR-1 SURFACE ELEV. 783.1

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics						SHTL CLASS		
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL		PL	W.C.
783.1	0													
781.1	2	1	2-3-4	10"	Brown silty sand and gravel, moist - loose.	35	25	17	15	8	26	10	8	A-2-4
778.6	4	2	10-11-11	14"	Brown sandy gravel, little silt, moist - medium dense.	61	17	9	9	4	19	4	7	A-1-a
776.1	6	3	19-15-15	10"	Brown gravelly sand, some silt, moist - medium dense.	44	20	15	16	5	21	6	8	A-1-b
	8	4	16-18-29	8"	Brown sandy gravel, little silt, moist - dense.	62	17	8	- 13	-			5	A-1-a
772.1	10	5	25-22	8"	do	69	13	6	10	2	17	3	13	A-1-a
	12	6	15	6"	Brown silt and clay, some sand, little gravel, moist - stiff.	17	9	17	32	25	26	13	12	A-6a
768.6	14	7	30-26-21	8"	Brown silt and clay and gravel, little sand, moist - medium stiff.	43	6	9	23	19	27	13	14	A-6a
767.1	16	8	6		Reddish brown clay, little sand, some gravel, moist - medium stiff.	21	7	7	14	51	77	51	23	A-7-6
	18													
	20	9	NXM	100%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1" to 10", averaging 2" in top half and 5" in bottom half of 10' core). Traces of red clay on some bedding planes in the top run (Sample No. 9).									
	22	10	NXM	100%										
	24	11	NXM	100%										
757.1	26				Boring Completed.									
	28													
	30													
	32													
	34													

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B-010-U-62

Form No. 530-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/7/62 SAMPLER TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE None CLIENT Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/8/62 CASING LENGTH DIA. 3.5" I.D. AFTER 96 HOURS 863.7 PROJECT: I-71 - Bridge No. FRA-1-0310
 BORING No. 10 STATION AND OFFSET 29+34, 97' E. of C.L. of SR-3 SURFACE ELEV. 873.2 Hollow Stem Augers R & L

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		WC			
873.2	0					No Tests Performed											
871.7	2	1	1-7-7	12"	Topsoil and brown sandy clay, with fine gravel, fill, dry - loose (visual)												
	4	2	7-9-12	14"	Brown clay, little sand, moist - very stiff.	0	4	6	37	53	54	36	15				A-7-6
868.2	4	3	5-6-6	17"	Mottled brown and gray clay, little sand, trace gravel, moist - very stiff	1	3	10	40	46	42	24	21				A-7-6
	6	4	5-7-7	17 1/2"	Brown silt and clay, some sand, little gravel, moist - stiff.	11	10	14	41	24	26	11	14				A-6a
865.7	8				Brown sandy silt, some gravel, moist - stiff.	22	10	13	36	19	24	10	11				A-4a
	10				do	21	10	12	36	21	23	9	10				A-4a
	12				do	17	11	14	40	18	22	9	14				A-4a
	14				Brown sandy silt, little gravel, very moist - medium stiff.	22	9	14	35	20	22	9	10				A-4a
	16				Brown sandy silt, some gravel, moist - stiff.	10	8	12	43	27	25	10	10				A-4a
853.2	20				Brown sandy silt, little gravel, moist - stiff.	9	10	14	40	27	26	12	13				A-6a
	22				Brown silt and clay, some sand, trace gravel, moist - stiff.	10	8	12	43	27	25	10	10				A-4a
	24				Brown sandy silt, trace gravel, moist - stiff.	9	9	17	44	21	24	10	11				A-4a
848.2	26				Brown sandy silt, trace gravel, moist - stiff.	7	10	18	42	23	22	9	9				A-4a
	28				Brownish gray sandy silt, trace gravel, moist - very stiff.												
	30																
	32																
	34																

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC, AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS, OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

B-010-U-62

Form No. 530-16

THE H. C. NUTTING COMPANY

4120 AIRPORT ROAD
CINCINNATI 26, OHIO

TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

DATE STARTED 7/7/62 SAMPLER TYPE Spoon DIA. 2"O.D. WATER ELEV. IMMEDIATE None CLIENT Barrett-Cargo-Withers & Assoc.
 DATE COMPLETED 7/8/62 CASING LENGTH DIA. 3.5" I.D. AFTER 96 HOURS 863.7 PROJECT: I-71 - Bridge No. FRA-1-0310
 BORING No. 10 STATION AND OFFSET 29+34, 97' R. of C.L. of SR-3 SURFACE ELEV. 873.2 R & L

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS				
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	PL		WC			
873.2	0																
	34																
	36	13	33-56	12"	Brownish gray sandy silt, little gravel, moist - very stiff.	11	10	17	40	22	22	9	8				A-4a
	38																
	40																
	42	14	26-49	12"	Brownish gray sandy silt, trace gravel, moist - very stiff.	9	9	15	42	25	22	9	8				A-4a
	44																
	46	15	22-37-50	18"	Brownish gray sandy silt, little gravel, moist - very stiff.	12	9	16	40	23	21	9	9				A-4a
	48																
	50																
	52	16	15-24-35	18"	Brownish gray sandy silt, trace gravel, moist - very stiff.	9	8	17	40	26	21	9	10				A-4a
	54																
816.7	56	17	13-21-30	18"	Brownish gray sandy silt, trace gravel, moist - very stiff.	8	9	19	39	25	21	9	10				A-4a
	58				Boring Completed.												
	60																

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TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

B-011-B-62

DATE STARTED 8/10/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE 776.6 CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/10/62 CASING LENGTH DIA. 3.5" I.D. AFTER 48 HOURS 776.6 PROJECT: Interstate 71
BRIDGE No. FRA-1-0153 (R&L)

BORING No. 11 STATION AND OFFSET 922+88, 24' R. of C.L. of SR-1 SURFACE ELEV. 776.8

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS	
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.		W.C.
776.8	0	1	3-8-22	14"	Brown sandy gravel, little silt, wet - dense.	71	14	5	-	10			10	A-1-a
	2				do	62	16	7	12	3	20	4	12	A-1-a
770.8	6	3	NXM	33%	do do (Visual)	36	17	16	23	8	20	5	10	A-2-4
768.3	8	4	29-27-19	16"	Brown silty sand and gravel, moist - dense.	37	17	10	20	16	31	17	15	A-6b
766.8	10	5	26-38	8"	Brown silty clay and gravel, some sand moist - stiff.									
	12													
	14		NXM	100%	Dolomite, cream white, crystalline, fine-grained, dense, hard, thinly bedded (1/4" to 7", averaging 2 1/2" in top half and 4" in bottom half of 10' core). Upper run (Sample No. 6) rather porous below top of core.									
756.8	20	7	NXM	100%										
	22				Boring Completed.									
	24													
	26													
	28													
	30													
	32													
	34													

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TESTING ENGINEERS AND SOILS CONSULTANTS

LOG OF BORING

B-012-B-62

DATE STARTED 8/10/62 SAMPLER TYPE Spoon DIA. 2" O.D. WATER ELEV. IMMEDIATE None CLIENT: Barrett-Cargo-Withers & Assoc.
DATE COMPLETED 8/11/62 CASING LENGTH DIA. 3.5" I.D. AFTER 24 HOURS None PROJECT: Interstate 71
BRIDGE No. FRA-1-0153 (R&L)

BORING No. 12 STATION AND OFFSET 924+13, 66' R. of C.L. of SR-1 SURFACE ELEV. 783.8

ELEV.	DEPTH	SAMPLE No.	STD. PEN. (N)	% REC.	DESCRIPTION	Physical Characteristics							SHTL CLASS	
						AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL	P.I.		W.C.
783.8	0	1	3-3-4	10"	Brown silty sand and gravel, moist - loose.	42	21	15	15	7	26	8	7	A-2-4
781.8	2				do	43	29	14	-	14			5	A-1-b
779.3	4	2	6-6-6	16"	Brown gravelly sand, little silt, moist - medium dense.	56	20	11	-	13			4	A-1-a
	6	3	12-22-35	10"	Brown sandy gravel, little silt, moist - very dense.	56	21	8	-	15			4	A-1-a
774.3	8	4	26-12-12	16"	Brown sandy gravel, little silt, moist - medium dense.	60	14	8	-	18			10	A-1-b
	10				do	68	12	6	-	14			10	A-1-a
771.8	12	5	21-21-20	12"	Brown gravelly sand, little silt, wet - dense.	8	7	18	36	31	28	14	13	A-6a
769.3	14	6	16-17-18	15"	Brown sandy gravel, little silt, wet - dense.									
766.8	16	7	13-30-33	12"	Brown silt and clay, some sand, trace of gravel, moist - stiff.									
	18				do									
	20	8	NXM	78%	Dolomite, cream white, crystalline, medium-fine grained, dense, hard, thinly bedded (1/2" to 6", averaging 2" in upper half and 4" in lower half of 10' core). Upper 1-ft. of first run (Sample No. 8) and upper 4-inches of second run (Sample No. 9) are broken.									
	22				do									
	24	9	NXM	100%										
	26	10	NXM	73%										
756.8	28				Boring Completed.									
	30													
	32													
	34													

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FRA-71-0.00

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SOIL PROFILE
BORING LOG B-011-B-62, B-012-B-62



PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

1. The Contractor shall develop a Track Monitoring Program for monitoring of the railroad track, railroad embankment and temporary shoring installed within the Theoretical Live Load Influence Zone of the Railroad.
2. The purpose of the Track Monitoring Program include but are not limited to providing:
3. Preconstruction baseline data for comparison with construction and post-construction data.
4. Monitor track and embankment during and after construction, to determine whether they have been adversely affected by construction activities.
5. A forewarning of unforeseen conditions that may require remedial or precautionary measures.
6. The Railroad and Railroad Representative are not responsible for the safety of the Work based on Contractor instrumentation data collection and reporting.

1.02 CONTRACTOR RESPONSIBILITIES

- A. Develop a Track Monitoring Program for monitoring the track, railroad embankment and temporary shoring installed within the Theoretical Live load Influence Zone of the Railroad.
- B. Furnish all instrumentation.
- C. Install, monitor, and report data collected from all track monitoring instrumentation.
 1. Protect from damage and maintain instruments installed by the Contractor. Repair or replace damaged instruments in a timely manner.
 2. Interpret instrumentation data and implement remedial and precautionary measures based on results of instrumentation monitoring.
 3. The Contractor shall immediately implement a Contingency Plan if Threshold Values specified in section 3.03.C Table 1 of this special provision, are exceeded. The proposed plan shall include, but not be limited to, additional bracing, segmented and/or slotted excavation, temporary berms, backfilling the excavation, bracing slabs and/or other measures. The Contractor shall demonstrate that the proposed measures can be implemented immediately to prevent damage to Railroad.

1.03 QUALIFICATIONS OF CONTRACTOR'S INSTRUMENTATION PERSONNEL

- A. Development and implementation of a track monitoring program requires highly specialized personnel. The Contractor's personnel responsible for furnishing installing,



maintaining, monitoring, reporting, and interpreting data of instrumentation required, shall include and have the following qualifications:

1. Track Monitoring Instrumentation Specialist with a minimum of a Bachelor of Science Degree in civil engineering and who has five years prior experience in installation and monitoring of the types of instruments to be installed. A comparably qualified engineering geologist is also acceptable as the Instrumentation Specialist. The Instrumentation Specialist shall:
 - a. Prepare detailed step by step procedures for implementing the Contractor's Track Monitoring Program.
 - b. Be on site and supervise at least the first installation of each type of instrument.
 - c. Supervise the interpretation of all instrumentation data.
2. Superintendent who will be in responsible charge during implementation of the Track Monitoring Program. The Superintendent shall have prior field experience in excavation adjacent to sensitive structures, temporary shoring systems, installation and monitoring of the types of instrumentation installed. The Superintendent shall:
 - a. Be on site and supervise all instrument installations following installations supervised by the Instrumentation Specialist.
 - b. Supervise data collection and reporting in cooperation with the Instrumentation Specialist
3. The person in responsible charge of survey data collection shall be a Registered Land Surveyor in the state the Work is to take place. The field survey party chief shall have experience in survey measurements of the types and accuracies specified herein.
- B. The Contractor's instrumentation personnel including the Instrumentation Specialist, Superintendent, Registered Land Surveyor, field survey party chief and all other field or office personnel responsible for scope of the Track Monitoring Program may be subject to review by the Railroad.

1.04 MONITORING INSTRUMENTATION

- A. Instrumentation shall be installed to monitor the horizontal and vertical deformation of existing structures, ground, and temporary shoring systems installed Within the Theoretical Live Load Influence Zone.
- A. Qualified instrumentation personnel, under the supervision of the Instrumentation Specialist, Superintendent, and or Surveyor shall install the following instrumentation.
 1. Track monitoring instrumentation
 2. Embankment monitoring instrumentation
 3. Temporary shoring monitoring instrumentation
 4. The Contractor may obtain additional data from the instrumentation and/or furnish, install and monitor, and determine the need for additional instrumentation as necessary to monitor construction performance and safety aspects of the Work.



Furnishing, installing and monitoring of additional instrumentation shall be at the Contractor's discretion.

1.05 REFERENCES

- A. ASTM: Specifications of the American Society for Testing and Materials.

1.06 SUBMITTALS

- A. Review of design submittals by the Railroad will require a minimum of four (4) weeks. To avoid impacting the construction schedule, the Contractor must schedule submittals well in advance. Partial, incomplete or inadequate designs will be rejected, thus delaying the approval. Drawings and calculations must be signed and stamped by a Registered Professional Engineer familiar with Railway loadings and who is licensed in the state where the shoring system is intended for use. Drawings accompanying the shoring plans shall be submitted in 11" x 17" or 8½" x 11" sized paper format.
- B. The Contractor shall submit for review by the Railroad the following information:
 1. A Track Monitoring Program to be implemented on the project based means and methods of excavation and temporary shoring to be used within the Theoretical Live Load Influence Zone of the Railroad.
 2. Product information indicating the instrumentation sizes, material types, specifications, installation procedures, and locations.
 3. Personnel Qualifications for Instrumentation Specialist and Superintendent.
- B. As-built data and monitoring data of all Contractor installed instrumentation.
- C. Contingency Plan
 1. The Contractor shall submit a Contingency Plan, in the event that the Threshold Values specified in section 3.03.C Table 1, are exceeded.
 2. Emergency contact numbers and notification procedures shall be included in the plan.
- D. Contractor submittals shall be acceptable to the Railroad prior to undertaking the Work. The Contractor shall obtain an acceptable submittal and shall forward submittals in advance considering that re-submittals may be required.

1.07 QUALITY ASSURANCE

- A. The Contractor shall monitor, record, and plot the instrumentation data.
- B. The Contractor shall install all instrumentation to the satisfaction of the Railroad. The Contractor shall immediately repair or replace any Contractor installed instrumentation, which fails, for whatever reason, to perform its intended function.

PART 2 - MATERIALS



- 2.01 Instrumentation may be of an optical survey type with readings taken using an optical survey instrument to observe levels of rail-mounted, ground-mounted and shoring mounted targets.
- 2.02 Instrumentation may alternatively involve an electronic track monitoring system using rail mounted sensors that transmit via radio signals to a nearby base station.
- 2.03 The proposed monitoring system must minimize the risk of railway operations as well as track surveyors. It must be possible to collect monitoring data remote from the track. Viewing of survey targets must be from a position away from the track and the position must allow the survey measurements to be taken without the need for Railroad Protection.
 - A. Track monitoring instrumentation must be securely fixed to the rail, but must not interfere with the passage of trains. Drilling of rail is not permitted. No target may protrude above the height of the plane of the top of rails and must not be susceptible to vibration of passing trains.
 - B. Embankment monitoring instrumentation shall be used to monitor vertical deformation of the ground adjacent to excavations within the Theoretical Live Load Influence Zone of the Railroad. Ground surface monitoring points shall consist of a ¼-inch diameter masonry nail driven into wooden stake, or a 3-foot long, ¾-inch diameter steel rod at locations.
 - C. The maximum spacing of temporary shoring instrumentation shall be 10 feet.
- 2.04 At least 3 survey control points must be established for collection of survey information of monitoring instrumentation. The location of each survey control point must not be affected by settlement due to construction works or traffic.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. The Contractor shall establish a Track Monitoring Program as described above prior to excavation activity within the Theoretical Live Load Influence Zone.
- B. Prior to installation of any instrumentation, the Contractor shall evaluate field conditions and select proposed locations for the instrumentation. The Contractor shall submit the proposed locations of instrumentation to the Railroad for review.
- C. The Contractor shall notify the Railroad at least 72 hours prior to installing the first instrument.
- D. The Contractor shall install, monitor, and interpret data from instrumentation in addition to that specified herein, that the Contractor deems necessary to ensure performance of the work in accordance with the specifications.
- E. The Contractor shall exercise caution during the progress of Work and shall prevent damage to all track monitoring instrumentation.



INSTALLATION

- A. Monitoring instrumentation shall be installed in accordance with approved Contractor’s Track Monitoring Program. Following completion of installation, the as-built location of survey dependent monitoring instrumentation shall be determined to an accuracy of 0.03 ft. in horizontal position and to an accuracy of 0.01 ft. in elevation.
- B. The Contractor’s instrumentation personnel shall consider field conditions, obstructions and the Contractor’s means and methods when determining field locations of instruments. Final location of instrumentation that deviate from the Track Monitoring Program shall be subject to review and acceptance by the Railroad.

3.02 DATA COLLECTION AND REPORTING

- A. The Contractor will monitor the instrumentation on a schedule based on the location and extent of construction activities. Data collected by the Contractor shall be emailed to the Railroad a maximum of 24 hours after collection in report form. At a minimum, the report must include:
 - 1. Project Title
 - 2. Date of report
 - 3. Instrument data presented in tabular form showing all previous readings of the instrument.
 - 4. Plot of readings versus time.
- B. The Contractor shall collect data from the instrumentation in accordance with the following schedule:
 - 1. Obtain a minimum of three initial readings over a period of 2 weeks prior to excavation to establish baseline readings.
 - 2. Obtain daily readings, or at a frequency approved by the Railroad, when excavation activities are within 25 feet of the monitoring point or if threshold limits are reached.
 - 3. Reading must be taken during construction and during a 2 week period thereafter.
- C. Threshold and Limiting Values
 - 1. If Threshold Values of instrumentation readings are reached, the Railroad and Contractor shall jointly assess necessity of altering methods, rate, or sequence of excavation and temporary shoring within the Theoretical Live load Influence Zone.
 - 2. If Limiting Values of instrumentation readings are reached, Railroad can order the Contractor to cease construction operations, make site and affected properties secure, and take necessary and agreed upon measures to mitigate movements and to assure the safety of the Work and the public.



- 3. The project threshold and limiting values are specified in Table 1 below. Immediately inform the Railroad verbally, and in writing within 24-hours, when the threshold and limiting levels are reached.

TABLE 1

INSTRUMENTATION TYPE	INSTRUMENT CRITERIA	
	THRESHOLD	LIMITING
Track Monitoring	0.25-in.	0.5-in.
Ground Monitoring	0.5-in.	1.0-in.
Temporary Shoring Monitoring	Vertical: 0.25-in. Horizontal: 0.75-in.	Vertical: 0.5-in. Horizontal: 1.0-in.

- E. Each week the Contractor shall submit to the Railroad a description of the work performed during that week including:
 - 1. A summary of excavation support system construction activities. This summary shall include any sheet pile driving activities and other activities associated with construction of excavation support systems.
 - 2. A summary of excavation and filling activities. This summary shall include a general description of where excavation has occurred during the week.
 - 3. A description of any events which may have affected instrumentation readings. Include a description of any remedial or precautionary measures that were implemented during the week in response to monitoring instrumentation or other data, including when they were implemented and for what reason. Include a description of any future remedial or precautionary measures that are planned in response to existing monitoring instrumentation or other data.

Public Project Manual

For any activity or project that may involve the railroad



a Genesee & Wyoming Company

Prepared by Public Projects Department
Revision: April 2019

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Section 1.02 – Introduction

Indiana & Ohio Railway Company (the Railroad) is a subsidiary of Genesee & Wyoming Inc. (G&W), the largest holding company in the U.S. of regional and short line railroads. G&W has more than 100 subsidiary railroads in 41 U.S. states and four Canadian provinces serving thousands of communities and customers. G&W also has a major rail freight presence in Australia and Europe.

Each G&W subsidiary railroad is its own separate legal entity with local decision making to best meet customers' needs. G&W's North American railroads are organized in six operating regions that provide a consistent focus on safety, operating standards, and marketing.

G&W railroads receive corporate staff support in areas such as accounting, engineering, legal, mechanical, real estate, and other functions.

The Public Projects Department (PPD) at G&W is part of Engineering Services with the goal to support the railroads. PPD is also tasked to support outside agencies by streamlining the flow of outside party projects and initiatives.

PPD is involved in a wide variety of projects initiated by government agencies, local businesses, and others. Accurate and timely communication of information between the Railroad and these parties improves planning, relationships, and successful completion of projects. The information in this manual explains important steps project sponsors should follow to streamline their projects and proposals.

G&W railroads place the highest priority on the safety of the public and their employees. Therefore, any activity that has the potential to adversely impact safe railroad operations must be evaluated by the Railroad. This manual is intended to be a general guide for reference to the Railroad's minimum requirements and standards. The Railroad reserves the right to deviate from any of the requirements or standards set forth in this manual.

We look forward to working together to serve the common goal of the safe operation of trains. We hope the information provided in this manual makes it easier to work together as a team.

Jacob Smith
Director of Public Projects

Section 1.03 – Basic Information in this Manual

This manual is intended to be a general guide, but it in no way overrides the express guidance, requirements, or standards of the Railroad. As a tool only, the information herein is intended for broad use and each project will be reviewed by PPD and the Railroad to ensure the safest actions are taken.

Any subject not covered in the manual should be routed to PPD for review.

Any activity that either directly or indirectly impacts railroad property must have approval by the Railroad.

Common Types of Public Projects

- **Highway-Rail Grade Crossings:** Closure, removal, installation, and alterations of public highway-rail grade crossings.
- **Bridges Over Railroad:** Construction, reconstruction, rehabilitation, repair, removal, painting, and maintenance of bridges over the Railroad by outside parties.
- **Parallel Roads/Facilities:** Construction, reconstruction, modification, removal, and maintenance of parallel roads or other public facilities affecting railroad property or operations.
- **Entry on to Railroad Property:** Temporary rights of entry onto railroad property and utility installation licenses.
- **Other Projects Involving Rail Corridors:** Publicly sponsored projects involving or altering railroad facilities or its property. These projects may be on, above, adjacent to, or otherwise have the potential to impact the property.
- **General Engineering Consultants (GEC):** Although the PPD is the primary point of contact, GECs provide additional engineering services as directed by the Railroad to assist the Railroad in managing public projects.

Section 1.04 – Definitions and Common Terms

- **Agency** – The project sponsor (i.e., state DOT, local agencies, private developer, etc.)
- **AREMA** – American Railway Engineering and Maintenance-of-Way Association – the North American railroad industry standards group. The use of this term shall be in specific reference to the AREMA Manual for Railway Engineering.
- **Basis for Design (BOD)** – The developed scope of a project needed to bid out the project.
- **Construction Engineering Inspection (CEI)** – Consultant who oversees the construction operations who is authorized to act on behalf of the Railroad to ensure that only the safest and least impactful practices are being performed.
- **Contractor** – The agency’s representative retained to perform the project work.
- **Engineer** – G&W engineering representative or a GEC authorized to act on their behalf.
- **Employee in Charge (EIC)** – An employee or designated contractor qualified to protect a project team during an operation, activity, or project.
- **Flagman/Flagger** – A qualified EIC with the sole responsibility protect the outside public and contractors while facilitating the safe passage of trains.
- **General Engineering Consultant (GEC)** – Consultant who has been authorized to act on the behalf of the Railroad. GECs perform preliminary engineering, construction inspection, and monitoring under the direction of the engineering personnel. GEC personnel also perform day-to-day administration of certain types of projects.
- **Notice to Proceed (NTP)** – Authorization by the project sponsor allowing the Railroad, its appointed consultants, and subcontractors to proceed out of PE and move into construction.
- **Order of Magnitude (OOM)** – A high-level estimate to quantify the estimated total value of the project. Typically the estimate is marked up to account for the project unknowns.
- **Potential to Encroach** – Any activity having the possibility of impacting railroad property or operations, defined as one or more of the following:
 - Any activity where access onto railroad property is required.
 - Any activity where work is being performed on the Railroad’s Right of Way (ROW).
 - Any excavation work adjacent to railroad tracks or facilities, within the theoretical railroad live load influence zone, or where the active earth pressure zone extends within railroad property.
 - The use of any equipment that, if tipped and laid flat in any direction (360 degrees) about its center pin, can encroach within twenty-five feet (25’-0”) of the nearest track. This is based upon the proposed location of the equipment during use and may be a function of the equipment boom length.
 - Note that hoisting equipment with the potential to foul must satisfy the 150% factor of safety requirement for lifting capacities.
 - Any activity where the scatter of debris or other materials has the potential to encroach within twenty-five feet (25’-0”) of the nearest track.
 - Any activity where significant vibration forces may be induced upon the track structure or existing structures located under, over, or adjacent to the track structure.

- Any other work that poses the potential to disrupt rail operations, threaten the safety of railroad employees, or otherwise negatively impact railroad property, as determined by the Railroad.
- **Preliminary Engineering (PE)** – The review and development of the project scope or project discovery that typically includes a site visit, design or design review, and estimate to complete the project.
- **Public Projects Department (PPD)** – A member of the G&W Public Projects team or assigned GEC representative.
- **Request for Proposal (RFP)** – The process by which a design-build contractor is selected and awarded to complete the project.
- **Right of Entry (ROE)** – Formal document applied for through the G&W Real Estate Department.
- **Right of Way (ROW)** – Railroad Right of Way as well as any railroad property and facilities. This includes all aerial space within the property limits and any underground facilities.
- **Theoretical Railroad Live Load Influence Zone** – 1 horizontal to 1 vertical theoretical slope line starting at bottom corner of tie.
- **Top of Rail (TOR)** – This is the base point for clearance measurements. It refers to the crown (top) of the steel rail, the point where train wheels bear on the steel rails. Use the higher of the two rails when track is superelevated.
- **Track Structure** – All load-bearing elements that support the train. This includes, but is not limited to, the rail, ties, appurtenances, ballast, sub-ballast, embankment, retaining walls, and bridge structures.
- **Vertical Clearance** – Distance measured from TOR to the lowest obstruction, within six feet (6’-0”) of the track centerline, in either direction.

Section 1.05 – Payment of Railroad Cost and Expenses

Summary

The project types addressed in this manual typically do not directly benefit railroad operations. In some cases, they create risk to and challenges for railroad operations and impact the Railroad's ability to serve its customers and the American economy. For these reasons, the Railroad seeks payment for its costs and expenses incurred in connection with project reviews and construction.

Types of Reimbursable Costs and Expenses

Costs reimbursable by the project sponsor in connection with the project include, but are not limited to:

- The Railroad's labor and support services
- Sums paid to railroad consultants and subcontractors
- Engineering reviews and CEI
- All out-of-pocket expenses
- Costs for equipment, tools, materials, and supplies
- Telephone, facsimile, and mailing expenses
- Real estate or legal reviews
- Cost for flagging or other action to protect rail operations and infrastructure

Key Points

- Preliminary engineering is usually initiated by the project sponsor with a commitment to reimburse for the project discovery and engineering services.
- The Railroad will not begin its preliminary engineering review until a PE agreement or other legal reimbursable agreement is provided.
- PE costs typically range between \$10,000 to \$30,000 depending on the project.
- All funding sources must be identified up front, and any time funding sources change, the Railroad must be immediately informed. All special funding requirements must be identified prior to the commencement of any project, such as "Buy America" or "Buy American" requirements.
- All costs billed will be actual cost and no profit will be gained by performing services on behalf of the project.
- Construction and CEI will be estimated prior to getting an NTP.
- The Railroad will not begin construction until all applicable contracts are provided along with an NTP.

Section 1.06 – Insurance Requirements for Public Projects

Summary

For any project that is performed on, above, or adjacent to railroad property, proper insurance must be obtained, submitted, and approved prior to work commencing. Insurance requirements will be incorporated in all applicable contracts.

The insurance requirements will be determined based on site-specific location as well as level of impact to the Railroad. Those specific requirements can be requested at the initiation of the project once the scope and project limits have been determined.

If during the project the insurance coverage expires or lapses, the agency or its contractor, as applicable, is responsible for notifying the Railroad and ceasing all work until the requirements have once again been met and approved by the Railroad.

Section 1.07 – Railroad Flagging Requirements

Summary

In the interest of public safety and the safety of the Railroad's and project sponsor's employees and property, the Railroad will work cooperatively with agencies, consultants, contractors, and others who need to access railroad property when work brings them in close proximity to active railroad tracks to determine the appropriate flagging services needed and to make arrangements for those services.

Flagging services may only be performed by personnel qualified by the Railroad who are trained in the proper procedures related to rail operations and safety requirements, familiar with rail operations and procedures in a project area and able to communicate directly with dispatching personnel and train crews.

All costs and expenses associated with railroad flagging services are the sole responsibility of the agency, consultant, or contractor. The GEC will provide its estimated costs prior to the start of the project work or its assignment of flagging personnel, but it is up to the agency to provide the estimated number of days the flagmen are needed.

Once flagging personnel are formally assigned to a specific work location, the period of assignment can only be changed with appropriate advanced arrangements. Charges for providing flagging services beyond a normal eight-hour weekday are calculated and billed at an overtime rate.

The GEC will coordinate the flagmen and should be the primary point of contact for scheduling, including changing the working schedule or duration the flagmen are required.

Conditions

The following are conditions that may require the use of a flagman by the Railroad:

- When any entity is working on, near, or adjacent to active railroad tracks.
- When an outside party is using railroad property or performing operations that may affect railroad property or facilities (including occasions when a party has been given express permission to enter railroad property or perform such operations under the terms of the applicable contracts).
- When work off railroad property has the potential to impact railroad property or operations.
- When off-highway construction equipment is crossing the railroad at a private or public crossing.
- When oversized equipment or highway vehicles are to cross the railroad at a private or public crossing.
- In other instances, as determined by the Railroad.

Section 1.08 – Engineering Reviews and Construction Monitoring

Summary

Any project proposals that may affect or be near the Railroad’s right of way must be evaluated by the Railroad. To initiate a project, a PE agreement or other applicable contract is required to identify the project sponsor and the scope, define the tasks to be accomplished, and specify the payment required. Once the plans and scope are approved by the Railroad, the project can proceed into construction.

The purpose of PE is to identify issues related to safety, engineering, customer service, operations, legal and regulatory matters, expense, risk, and other considerations specific to any proposed project. The Railroad’s review is only to determine that the plans and improvements constructed are in accordance with the Railroad standards and satisfy the Railroad’s requirements. Plans should be submitted early in project development to ensure that the Railroad requirements can be incorporated up front. If property is leased, the review might require additional party signoff.

Cost and Timing

Prior to commencing with engineering, design, or reviews, a legal document or associated PE agreement must be executed where the outside party will bear the cost of the design or design reviews (see Section 1.05). This includes the cost of railroad employees as well as GEC support. The scope includes attending meetings, site surveys, reviewing plans, preparing plans, correspondence, and any other activity to support the review of the project and development of scope.

It is the goal of PPD to have a design review turned around within 30 to 45 days depending on the level of effort. It is in the interest of all parties to complete the PE review before commitments are made or construction steps begin. The Railroad and its GEC will work with the project sponsor to schedule PE and construction to meet project schedule objectives whenever possible, considering available resources.

Construction Monitoring

To ensure the safety of the public and railroad employees, maintain quality rail service to customers, and to protect railroad assets, the Railroad may require construction monitoring (in addition to flagman protection) of the project. The construction monitoring will be conducted by the Railroad and its GEC at the expense of the project sponsor.

Construction monitoring includes intermittent or continuous on-site presence of the Railroad or its GEC during construction activities. The following typically applies:

- The construction project sponsor, owner, or agency in charge will pay for the cost of construction monitoring. Construction monitoring will be specified, and the estimated cost will be included in the construction agreement for the project.
- Construction monitoring is in addition to railroad-required flagging.
- Construction monitoring includes the Railroad’s review and approval of all plan changes and required contractor submissions during the construction phase of the project.
- The project sponsor is responsible for its safety and the safety of its property, contractors, and employees. The GEC, as part of its construction monitoring, will review the work site for activities that could interfere with safe operation of the Railroad.
- The GEC is only responsible for monitoring the general work activities for safety and impact to the Railroad and its property and not for managing the overall project work. Any observed unsafe acts or conditions will be reported immediately to the project sponsor or contractor representative.

Section 1.09 – Real Estate

Summary

All projects that modify or impact the Railroad’s property must be reviewed by the G&W Real Estate Department to determine property descriptions, ownership, and implications. Any rail line requiring special handling due to a lease or property agreement must be taken into consideration when performing engineering reviews and providing project acceptance.

All parties accessing the Railroad’s ROW for investigative activities or for the performance of construction work are required to have a written agreement with the Railroad fully detailing each party’s responsibilities. Activities by others with the potential to affect the Railroad’s property, operations, and/or personnel without actually entering the Railroad’s property must also be reviewed by the Railroad and appropriate arrangements and agreements completed.

If a right of entry or utility license, or any applicable agreement is required for the project, the agency or its contractor, as applicable, will need to work directly with the G&W Real Estate Department to enter all contracts into place prior to commencing work on the property.

Construction and improvement projects involving railroad property may require a conveyance of property rights, subject to adequate consideration and corporate approvals. Such projects include, but are not limited to:

- Highway – rail grade crossings
- Bridges over/under the railroad
- Parallel roads/facilities
- Road/bridge widening projects

Further clarification can be requested by contacting the PPD and the appropriate G&W Real Estate Department specialist.

Section 1.10 – Project Requirements

Summary

The project requirements set forth in this Section 1.10 shall apply to any project, subject to the terms or conditions of any applicable contracts. The Railroad representative shall have final authority in all matters affecting the safe maintenance of railroad operations and property, and his or her approval shall be obtained by the agency or its contractor for methods of construction to avoid interference with railroad operations and property and all other matters contemplated by these requirements.

The agency or its contractor shall arrange and conduct its work so that there will be no interference with railroad operations, including train, signal, telephone, and telegraphic services, or damage to railroad property or to poles, wires, and other facilities of tenants on its property or right of way. The agency or its contractor shall store materials so as to prevent trespassers from causing damage to trains or property. Whenever work is likely to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad for approval, but such approval shall not relieve the agency or its contractor from liability in connection with such work. No work shall be performed without it first being approved by the Railroad.

If conditions arising from or in connection with the project require that immediate and unusual provisions be made to protect train operation or property, the agency or its contractor shall make such provisions. If the Railroad determines that such provisions are insufficient, the Railroad may, at the expense of the agency or its contractor, require or provide such provisions as may be deemed necessary, or cause the work to cease immediately.

If the agency or its contractor violate or fail to comply with any of the requirements in the section, the Railroad may:

- Require the agency and/or the contractor to vacate its property;
- Withhold monies due the agency and/or the contractor;
- Require the agency to withhold monies due to the contractor; and
- Cure such failure, and the agency and/or any contractor shall reimburse the Railroad for the cost of curing such failure.

Notice to Start Work

The agency or its contractor shall not commence any work on railroad property or ROW until it has entered into all applicable contracts and received all requisite approvals from the Railroad. Thereafter, unless otherwise specified in such applicable contracts, the agency or its contractor must:

- Notify the Railroad in writing of the date that it intends to commence work on the project. Such notice must be received at least 10 business days in advance of the date the agency or its contractor proposes to begin work on railroad property. The notice must refer to the specific project agreement. If flagging service is required, such notice shall be submitted at least thirty (30) business days in advance of the date scheduled to commence the work.
- Obtain authorization from the Railroad to begin work on the property, such authorization to include an outline of specific conditions with which it must comply.
- Obtain from the Railroad the names, addresses, and telephone numbers of railroad personnel who must receive notice under provisions in the construction agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

Hauling across Railroad

If the agency or its contractor desires access across the Railroad's property or tracks at a location other than an existing and open public road crossing in or adjacent to the construction of the project, the agency or contractor must first obtain the permission of the Railroad and shall execute any applicable contracts as described in **Section 1.09** Real Estate herein.

Cooperation & Delays

The agency or its contractor shall arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad. In arranging its schedule, the agency or contractor shall ascertain from the Railroad the lead time required for assembling crews and materials and shall make due allowance therefore.

The agency or its contractor may not charge any costs or submit any claims against the Railroad for hindrance or delay caused by railroad traffic; for any work done by the Railroad or other delay incident necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these requirements. Agency and contractor shall cooperate with others participating in the construction of the project to the end that all work may continue to move forward.

The agency and its contractor understand and agree that the Railroad does not assume any responsibility for work performed by others in connection with the project. The agency and contractor further understand and agree that they shall have no claim whatsoever against the Railroad for any inconvenience, delay, or additional cost incurred by the agency or contractor on account of operations by others.

Storage

The agency and its contractor shall not store their materials or equipment on railroad property or where they may potentially interfere with operations unless the agency or contractor has received prior written permission. The agency and contractor understand and agree that the Railroad will not be liable for any damage to such materials and equipment from any cause and that the Railroad may move, or require the agency or its contractor to move, such material and equipment at the agency's or contractor's sole expense. To minimize the possibility of damage to the Railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

Construction

Construction work on railroad property shall be subject to the Railroad's inspection and approval. Work shall be in accordance with written specific conditions and with these requirements. The agency or its contractor shall obtain the Railroad and agency representative's prior written approval for use of explosives on or adjacent to railroad property. If permission for use of explosives is granted, the agency or contractor must comply with the following:

- Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of agency or contractor.
- Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
- No blasting shall be done without the presence of the Railroad's CEI. At least 30 days' notice to the Railroad is required to arrange for site presence.
- Explosives shall not be stored on railroad property.

The Railroad will:

- Determine the approximate location of trains and advise the agency or contractor of the approximate amount of time available for the blasting operation and cleanup.
- Have the authority to order discontinuance of blasting if, in the Railroad's opinion, blasting is too hazardous or is not in accord with these requirements.

The agency or its contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from their operations. The agency or contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to agency's or contractor's operations shall be performed at agency's expense.

The agency shall arrange, upon approval from the Railroad, to have any utility facilities on or over railroad property changed as may be necessary to provide clearances for the proposed trackage.

The agency or its contractor, upon completion of the project, shall remove from railroad property any temporary grade crossings; any temporary erosion control measures used to control drainage; and all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to the agency or contractor. The agency or contractor, upon completion of the project, shall leave railroad property in neat condition, satisfactory to the Railroad.

Section 1.11 – Construction Submission Criteria

Summary

The intent of this manual is to guide outside parties and their contractors when performing work on, over, or with potential to impact railroad property. Work plans shall be submitted for review to the Railroad for all work that presents the potential to affect railroad property or operations. All work shall be performed in a manner that does not adversely impact the Railroad operations or safety; as such, the requirements of this manual shall be strictly adhered to, in addition to all other applicable standards associated with the construction.

General

- A construction work plan is required to be submitted by the agency or the Railroad for review and acceptance prior to accessing or performing any work with potential to foul.
- The agency or its representative shall submit sets of plans, specifications, supporting calculations, detailed means and methods, and procedures for the specific proposed work activity.
- Construction submissions shall include all information relevant to the work activity and shall clearly and concisely explain the nature of the work, how it is being performed, and what measures are being taken to ensure that railroad property and operations are continuously maintained.
- All construction plans shall include a map of the work site depicting the tracks, the ROW, proposed means of access, proposed locations for equipment and material staging (dimensioned from nearest track centerline), as well as all other relevant project information. An elevation drawing may also be necessary to depict clearances or other components of the work.
- Please note that the Railroad will not provide pricing to individual contractors involved in bidding projects. Bidding contractors shall request information from the agency only.
- The contractor shall install a geotextile fabric ballast protection system to prevent construction or demolition debris and fines from fouling ballast. The geotextile ballast protection system shall be installed and maintained by the contractor to the satisfaction of the Railroad.
- The Railroad shall be kept aware of the construction schedule. The contractor shall provide timely communication to the Railroad when scheduling the work such that a representative may be present during the work. The contractor's schedule shall not dictate the work plan review schedule, and flagging shall not be scheduled prior to receipt of an accepted work plan.

- At any time during construction activities, the Railroad may require revisions to the previously approved procedures to address weather, site conditions, or other circumstances that may create a potential hazard to rail operations or facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Railroad's satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.
- Blasting will not be permitted to demolish a structure over or within railroad property. When blasting off railroad property but with potential to foul, vibration monitoring, track settlement surveying, and/or other protective measures may be required as determined by the Railroad.
- Blasting is not permitted adjacent to the Railroad's ROW without written approval from the Railroad.
- Mechanical and chemical means of rock removal must be explored before blasting is considered. If written permission for the use of explosives is granted, the agency or contractor must submit a work plan (see **Section 1.08 & Section 1.10**).

Hoisting

All proposed hoisting operations with potential to foul shall be submitted in accordance with the following:

- A plan view drawing shall depict the work site, the track(s), the proposed location(s) of the lifting equipment, as well as the proposed locations for picking, any intermediate staging, and setting the load(s). All locations shall be dimensioned from the centerline of the nearest track. Crane locations shall also be dimensioned from a stationary point at the work site for field confirmation.
- Computations showing the anticipated weight of all picks. Computations shall be made based upon the field-verified plans of the existing structure. Pick weights shall account for the weight of concrete rubble or other materials attached to the component being removed; this includes the weight of subsequent rigging devices/components. Rigging components shall be sized for the subsequent pick weight.
- All lifting equipment, rigging devices, and other load bearing elements shall have a rated (safe lifting) capacity that is greater than or equal to 150% of the load it is carrying, as a factor of safety. Supporting calculations shall be furnished to verify the minimum capacity requirement is maintained for the duration of the hoisting operation.
- Dynamic hoisting operations are prohibited when carrying a load with the potential to foul. Cranes or other lifting equipment shall remain stationary during lifting (i.e., no moving picks).
- For lifting equipment, the manufacturer's capacity charts, including crane, counterweight, maximum boom angle, and boom nomenclature are to be submitted.
- A schematic rigging diagram must be provided to clearly call out each rigging component from crane hook to the material being hoisted. Copies of catalog or information sheets shall be provided to verify rigging weights and capacities.
- For built-up rigging devices, the contractor shall submit the following:
 - Details of the device, calling out material types, sizes, connections, and other properties.
 - Load test certification documents and/or design computations bearing the seal and signature of a professional engineer. Load tests shall be performed in the configuration of its intended use as part of the subject demolition procedure.
 - Copies of the latest inspection reports of the rigging device. The device shall be inspected within one (1) calendar year of the proposed date for use.
- A detailed drawing shall be provided showing the crane outrigger setup, including dimensions from adjacent slopes or facilities. The drawing shall indicate requirements for bearing surface preparation, including material requirements and compaction efforts. As a minimum, outriggers and/or tracks shall bear on mats positioned on level material with adequate bearing capacity.

- A complete written narrative shall be provided that describes the sequence of events, indicating the order of lifts and any repositioning or re-hitching of the crane(s).

Demolition

The agency or its contractor shall submit a detailed procedure for a controlled demolition of any structure on, over, or adjacent to the ROW. The controlled demolition procedure must be approved by the Railroad prior to beginning work on the project.

Existing condition of the structure being demolished:

- The contractor shall submit as-built plans for the structure(s) being demolished.
- If as-built plans are unavailable, the contractor shall perform an investigation of the structure, including any foundations, substructures, etc. The field measurements are to be made under the supervision of the professional engineer submitting the demolition procedure. Findings shall be submitted as part of the demolition means and methods submittal for review by the Railroad.
- Any proposed method for temporary stabilization of the structure during the demolition shall be based on the existing plans or investigative findings and submitted as part of the demolition means and methods for review by the Railroad.

Demolition work plans shall include a schematic plan depicting the proposed locations of the following at various stages of the demolition:

- All cranes and equipment, calling out the operating radii.
- All proposed access and staging locations with all dimensions referenced from the centerline of the nearest track.
- Proposed locations for stockpiling material or locations for truck loading.
- The location, with relevant dimensions, of all tracks, other railroad facilities, and wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions.
- Note that no crane or equipment may be set on the rails or track structure and no material may be dropped on railroad property.

Demolition submittal shall also include the following information:

- A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure and hoisting. The proposed time frames for all critical subtasks (i.e., torch/saw cutting various portions of the superstructure or substructure, dismantling splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to operations may be assessed and eliminated or minimized.
- The names and experience of the key contractor personnel involved in the operation shall be included in the contractor's means and methods submission.
- Design and supporting calculations shall be prepared, signed, and sealed by the professional engineer for items including the temporary support of components or intermediate stages and shall be submitted for review. A guardrail will be required to be installed in the proximity of temporary bents or shoring towers when located within twelve feet (12'-0") from the centerline of the track. The guardrail will be installed at the expense of the agency or its contractor.

Girders or girder systems shall be stable at all times during demolition. Temporary bracing shall be provided at the piers, abutments, or other locations to resist overturning and/or buckling of the member(s). The agency shall submit a design and details of the proposed temporary bracing system for review by the Railroad. Lateral wind forces for the temporary conditions shall be considered in accordance with the current version of AREMA.

Existing obsolete bridge piers shall be removed to a minimum of three feet (3'-0") below the finished grade, final ditch line invert, or as directed by the Railroad.

A minimum quantity of twenty-five (25) tons of approved granite track ballast may be required to be furnished and stockpiled on-site by the contractor or as directed by the Railroad.

The use of acetylene gas is prohibited for use on or over railroad property. Torch cutting shall be performed utilizing other materials such as propane.

Tracks, signals, structures, and other railroad facilities shall be protected from damage during demolition of existing structure or replacement of deck slab.

Demolition Debris Shield

- On-track or ground-level debris shields (such as crane mats) are prohibited for use.
- The demolition debris shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the structure. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris. The debris shield shall not be the primary means of debris containment.
 - The demolition debris shield design and supporting calculations, all signed and sealed by a professional engineer, shall be submitted for review and acceptance.
 - The demolition debris shield shall have a minimum design load of 50 pounds per square foot (50 psf) plus the weight of the equipment, debris, personnel, and all other loads.
 - The contractor shall verify the maximum particle size and quantity of the demolition debris generated during the procedure does not exceed the shield design loads. Shield design shall account for loads induced by particle impact; however, the demolition procedure shall be such that impact forces are minimized. The debris shield shall not be the primary means of debris containment.
 - The contractor shall include installation/removal means and methods for the demolition debris shield as part of the proposed controlled demolition procedure submission.
 - The demolition debris shield shall provide twenty-three feet (23'-0") minimum vertical clearance or maintain the existing vertical clearance if the existing clearance is less than twenty-three feet (23'-0").
 - Horizontal clearance to the centerline of the track should not be reduced unless approved by the Railroad.
 - The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Railroad.

Vertical Demolition Debris Shield

This type of shield may be required for substructure removals in close proximity to tracks and other facilities, as determined by the Railroad.

The agency or its contractor shall submit detailed plans with detailed calculations prepared, signed, and sealed by a professional engineer of the protection shield.

Erection

The agency or its contractor shall submit a detailed procedure for erection of a structure with potential to foul. The erection procedure must be approved by the Railroad prior to beginning work on the project.

Erection work plans shall include a schematic plan depicting the following, at all stages of the construction:

- All proposed locations of all cranes and equipment, calling out the operating radii.

- All proposed access and staging locations with all dimensions referenced from the centerline of the nearest track.
- All proposed locations for stockpiling material or locations for truck loading.
- The location, with relevant dimensions, of all tracks, other railroad facilities, and wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions.
- No crane or equipment may be set on the rails or track structure and no material may be dropped on railroad property.

For erection of a structure over the tracks, the following information shall be submitted for review and acceptance by the Railroad at least thirty (30) days prior to erection:

- As-built beam seat elevations – field surveyed upon completion of pier/abutment construction.
- Current top of rail (TOR) elevations – field measured at the time of as-built elevation collection.
- Computations verifying the anticipated minimum vertical clearance in the final condition that account for all deflection and camber based upon the current TOR and as-built beam seat elevations. The anticipated minimum vertical clearance shall be greater than or equal to that which is indicated by the approved plans. Vertical clearance (see definitions) is measured from TOR to the lowest point on the overhead structure at any point within six feet (6'-0") from the centerline of the track. Calculations shall be signed and sealed by a professional engineer.

Girders or girder systems shall be stable at all times during erection. No crane may unhook prior to stabilizing the beam or girder.

- Lateral wind forces for the temporary conditions shall be considered in accordance with the current version of AREMA.
- Temporary bracing shall be provided at the piers, abutments, or other locations to resist overturning and/or buckling of the member(s). The agency shall submit a design and details of the proposed temporary bracing system for review by the Railroad.
- Temporary bracing shall not be removed until sufficient lateral bracing or diaphragm members have been installed to establish a stable condition. Supporting calculations furnished by the professional engineer shall confirm the stable condition.

Erection procedure submissions shall also include the following information:

- A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical subtasks (i.e., performing aerial splices, installing temporary bracing, installation of diaphragm members, etc.) shall be furnished so that the potential impact(s) to operations may be assessed and eliminated or minimized.
- The names and experience of the key contractor personnel involved in the operation shall be included in the contractor's means and methods submission.
- A guardrail will be required to be installed in a track in the proximity of temporary bents or shoring towers when these are located within twelve feet (12'-0") from the centerline of the track.
- Design and supporting calculations prepared by the professional engineer for items including the temporary support of components or intermediate stages shall be submitted for review.

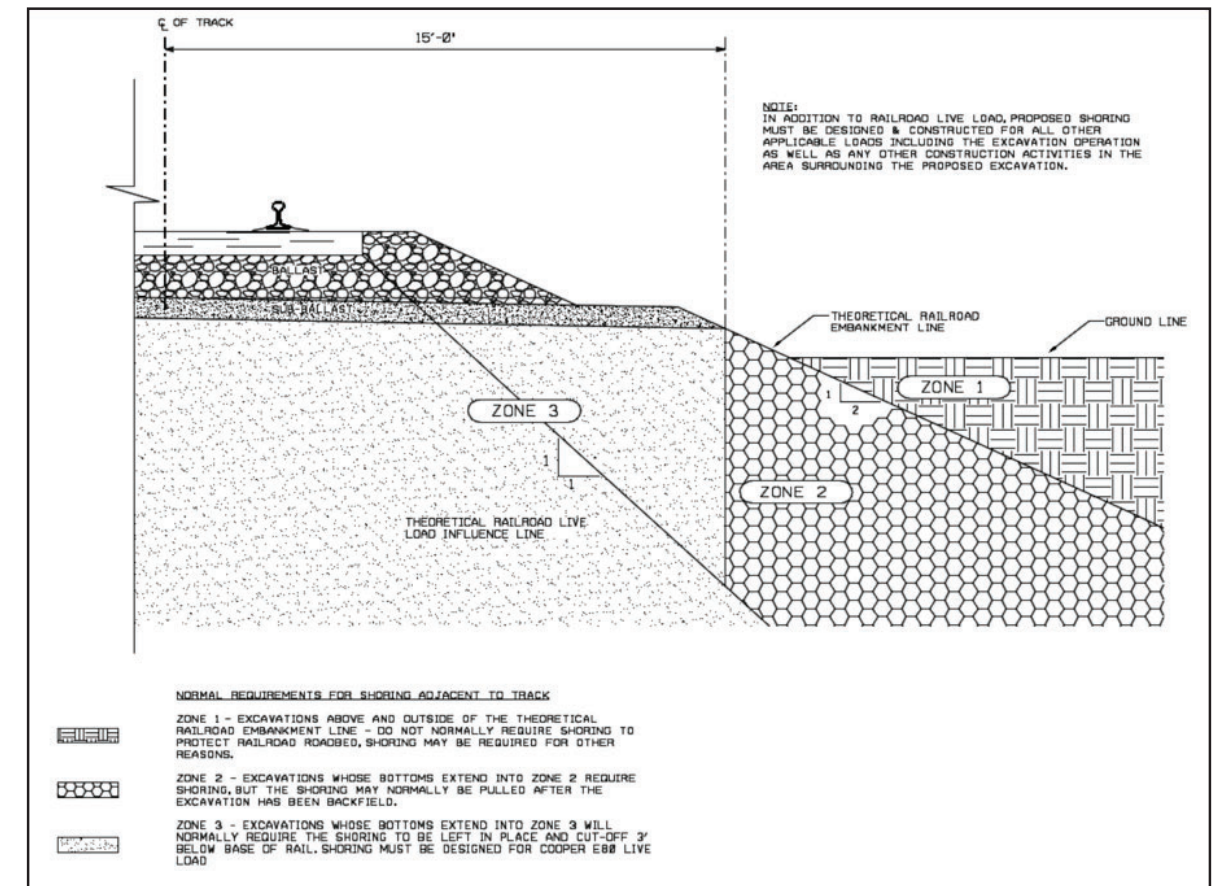
Excavation and Shoring

The agency or its contractor shall submit a detailed design and procedure for the installation of a sheeting/shoring system adjacent to the tracks. Shoring protection shall be provided when excavating with

potential to foul, or as otherwise determined by the Railroad. Shoring shall be provided in accordance with AREMA, except as noted below.

Shoring may not be required if all of the following conditions are satisfied:

- The excavation does not encroach within the theoretical live load influence zone. Please refer to figure below.



- The track structure is situated on level ground, or in a cut section, and on stable soil.
- The excavation does not adversely impact the stability of a railroad facility (i.e., signal bungalow, drainage facility, undergrade bridge, building, etc.), or the stability of any structure on, over, or adjacent to railroad property with potential to foul.
- Shoring is not required by any governing federal, state, local, or other construction code.

Shoring is required when excavating the toe of an embankment. Excavation of any embankment that supports an active track structure without shoring will not be permitted.

Trench boxes are not an acceptable means of shoring. Trench boxes are prohibited for use on railroad property or within the theoretical railroad live load influence zone.

Shoring shall be a cofferdam-type, which completely encloses the excavation. However, where justified by site or work conditions, partial cofferdams with open sides away from the track may be permissible, as determined by the Railroad.

Cofferdams shall be constructed using interlocking steel sheet piles, or when approved by the engineer, steel soldier piles with timber lagging. Wales and struts shall be included when dictated by the design.

The use of tiebacks can be permissible for temporary shoring systems when conditions warrant. Tiebacks shall have a minimum clear cover of six feet (6'-0"), measured from the bottom of the rail. Upon completion of the work, tiebacks shall be grouted, cut off, and remain in place.

All shoring systems on or adjacent to the Railroad's ROW shall be equipped with railings or other fall protection and be compliant with the governing federal, state, or local requirements. The area around pits shall be graded to eliminate all potential tripping hazards.

Interlocking steel sheet piles shall be used for shoring systems that qualify with one or more of the following conditions:

- Within eighteen feet (18'-0") of the nearest track centerline
- Within the theoretical live load influence zone
- Within slopes supporting the track structure
- As otherwise deemed necessary by the Railroad

Sheet piles qualifying for one or more of the requirements listed in this document shall not be removed. Sheet piles shall be left in place and cut off a minimum of three feet (3'-0") below the finished grade, the ditch line invert, or as otherwise directed by the Railroad. The ground shall be backfilled and compacted immediately after sheet pile is cut off.

The following design considerations shall be considered when preparing the shoring design package:

- Shoring shall be designed to resist a vertical live load surcharge of **1,882 lbs.** per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, eight feet six inches (8'-6") wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in the current version of AREMA.
- Allowable stresses in materials shall be in accordance with the current version of AREMA.
- A minimum horizontal clearance of ten feet (10'-0") from the centerline of the track to face of nearest point of shoring shall be maintained, provided twelve feet (12'-0") of roadbed is maintained with a temporary walkway and handrail system.
- For temporary shoring systems with potential to foul, piles shall be plumb under full dead load. Maximum deflection at the top of wall, under full live load, shall be as follows:
 - One-half inch (.5") for walls within twelve feet (12'-0") of track centerline (measured from the centerline of the nearest track to the nearest point of the supporting structure).
 - One inch (1") for walls located greater than twelve feet (12'-0") from track centerline.

Shoring work plans shall be submitted in accordance with this document, as well as the following additional requirements:

- The work plan shall include detailed drawings of the shoring systems, calling out the sizes of all structural members and details of all connections. Both plan and elevation drawings shall be provided, calling out dimensions from the face of shoring relative to the nearest track centerline. The elevation drawing shall also show the height of shoring and track elevation in relation to the bottom of excavation.
- Full design calculations for the shoring system shall be furnished.
- A procedure for cutting off the sheet pile, backfilling, and restoring the embankment shall be included.

Track Monitoring

When work being performed has the potential to disrupt the track structure, a work plan must be submitted detailing a track monitoring program that will serve to monitor and detect both horizontal and vertical movement of the track and roadbed.

The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. The Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.

The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Railroad for analysis.

If any movement has occurred as determined by the Railroad, the Railroad, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled, and/or determine what corrective action is required.

Soil and Water Management

The Railroad must review and approve reuse of soil on railroad property.

If the soil cannot be reused on railroad property, it must be properly disposed of at an approved disposal facility. The Railroad prohibits any contractor from taking soils for off-property for reuse. Coordinate with the Railroad to handle waste characterization and profiling into an approved disposal facility. The Railroad prohibits any environmental sampling of its property unless approved in writing. If the agency has arrangements with a disposal facility not approved by the Railroad, the agency can request to evaluate the disposal facility. A request to evaluate alternate disposal facilities should take place prior to work being initiated on railroad property.

If dewatering is planned for a public project, the Railroad must review and approve the dewatering plan prior to work being initiated on or near railroad property. The Railroad prohibits the discharge of water onto its property without prior approval. The Railroad prohibits environmental sampling of groundwater or surface water.

All materials discarded by or on behalf of the Railroad will be managed in accordance with local, state, and federal regulations as well as best management practices and sustainability goals. To ensure that these goals are achieved, the Railroad has mechanisms in place to monitor waste management activities.

The cleanup and disposal of material from the surface preparation for painting and actual painting must comply with all appropriate regulations. The materials removed during the surface preparation must not impact the surrounding area, including ground, water, or air impacts. Materials must not be stored on railroad property.

Drainage

For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to the Railroad's ROW, the contractor may be required to submit a detailed track monitoring program for approval prior to performing any work near the Railroad's ROW.

When water is known or expected to be encountered, all plans and specifications must be submitted to the Railroad for approval before the process begins. Pumps of sufficient capacity to handle the flow shall be maintained at the site, provided the contractor has received approval to operate them. Pumps in operation shall be constantly attended on a 24-hour basis until, in the sole judgment of the Railroad, the operation can be safely halted. When dewatering, a process for monitoring for any settlement of track or structures must be in place.

If any track movement has occurred as determined by the Railroad, the Railroad, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled, and/or determine what corrective action is required. Any corrective action required or performed by the Railroad, including the monitoring of corrective action of the contractor, will be at project expense.

All pipes, ditches, and other structures carrying surface drainage on railroad property and/or under track(s) shall be designed to carry the runoff from the **100-year, 24-hour design** storm without ponding of water against the roadbed.

Pipe(s) used to carry surface drainage on the Railroad's ROW shall have a minimum diameter of 24 inches (24").

When calculating the capacity of existing or proposed drainage structures under track(s), the headwater calculation at the structure shall not be greater than one (1):

$$\text{HW/D} \leq 1.$$

Rate and quantity of storm water runoff from any proposed development shall not exceed the rate and quantity of runoff prior to development. This standard shall be maintained for all design storms up to the **100-year storm event**.

Pipes (casing or carrier) placed under tracks shall not be less than five feet six inches (5'-6") from base of rail to top of pipe at its shallowest point.

Pipelines laid longitudinally on ROW fifty feet (50'-0") or less from the centerline of the track shall be buried not less than four feet (4'-0") from ground surface to top of pipe. Where the pipeline is laid more than fifty feet (50'-0") from the centerline of the track, the minimum cover shall be at least three feet (3'-0").

Erosion prevention methods shall be used to protect railroad ditches and other drainage facilities during construction on and adjacent to ROW.

Permanent erosion and sediment pollution control facilities shall be designed for the **100-year storm**. Provide calculations and details of any riprap outlet protection and channel linings as needed within ROW.

Pipes and culverts within the theoretical live load influence zone shall conform to current AREMA recommendations and ASTM specifications. All such structures shall be designed to carry **Cooper E80** loading with diesel impact.

ROW shall not be utilized for retention, detention, or settling basins. Also, the Railroad embankment must not be used as any part of a detention pond structure.

Track roadbed fills shall not be used as dams or levees for retention of runoff.

Temporary sediment basins/traps shall not be constructed against track roadbed fill.

Formal approval of the proposed design by the appropriate governmental agency having jurisdiction shall be submitted to the Railroad for their review and acceptance.

Pipes and culverts are not to be located within the limits of a turnout or nor closer than fifty feet (50'-0") to any railroad bridge, building, or any other important structure.

When excavation for a pipeline or other structure will be within the theoretical railroad embankment line of an adjacent track, interlocking steel sheet piling will be required to protect the track(s). Trench boxes are prohibited for use on ROW within the theoretical railroad live load influence zone.

Blasting is not permitted on or adjacent to the Railroad's ROW without prior written approval.

Crossing of tracks at grade by equipment and personnel is prohibited except by prior arrangement with and as directed by the Railroad.

Temporary track supports may be required when a jacking, boring, or tunneling method of installation is used, depending upon the size and location of the drainage crossing. The agency's contractor shall furnish and supply the approved track supports, with the installation and removal performed by a person approved by the Railroad. The agency shall reimburse the Railroad for all costs associated with the installation and removal of the track supports.

Plans submitted to the Railroad for approval shall be prepared by a professional engineer and should indicate design, suitable topographic plan, and outline of total drainage area.

If the drainage is to discharge into an existing drainage channel on ROW and/or through a drainage structure under track(s), the computations must include the hydraulic analysis of any existing ditch and/or structure.

Extension of pipes, culverts, and other drainage structures previously installed under tracks shall be made with culvert or drainage structure having the same size, shape, and dimensions as the existing pipe. In no case shall the existing drainage structure be extended so that the hydraulic capacity is decreased or obstructed. In some cases, it may be necessary to extend existing outlets with pipe or culvert of a larger size. Details of connections to mismatched culverts shall be submitted for approval.

The agency may be required to provide reasonable corrective measures to alleviate an existing drainage problem within railroad property that may be affected by the proposed development. It shall be the responsibility of the agency to obtain all drainage easements and permits. The Railroad shall be indemnified and held harmless of any liability.

The agency is to provide information on groundwater recharge if infiltration is proposed adjacent to railroad property. Soils testing and certification by a registered professional engineer shall be required.

Emergency spillways discharging onto railroad property are to be designed and constructed so that the basin berm is protected against erosion.

Energy dissipating devices are to be placed at all outlets discharging to railroad property.

Concrete end walls shall be placed at outlets discharging to railroad property. All concrete outlet pipes on property must be equipped with a trash rack.

Under no conditions shall any person be allowed to modify, alter, or change a previously approved storm water management (SWM) facility discharging to railroad property unless an approved alternate facility is approved.

Design of the drainage system, including alterations of the existing drainage system on ROW, is the responsibility of the agency. Drainage shall not be diverted, directed toward the Railroad, or increased in quantity without prior written approval.

Supporting calculations must be provided for all proposed drainage and storm water management facilities that discharge onto or impact property.

Occupancies shall be designed, and their construction shall be accomplished, so that adequate and uninterrupted drainage of the Railroad's ROW is maintained.

If, in the course of construction, it may be necessary to block a ditch, pipe, or other drainage facility, temporary pipes, ditches, or other proposed drainage facilities shall be installed to maintain adequate drainage, as approved. Upon completion of the project, the temporary facilities shall be removed, and the permanent facilities restored.

Temporary and permanent erosion control and sedimentation (E&S) devices must be provided to prevent the flow of sediment onto and adjacent to railroad property.

The design shall take into account and provide upstream areas within the entire watershed in computing discharge, sizing of pipes, inlets, and other structures.

When applicable, the agency is to provide maintenance and operation of E&S/storm water facilities.

Plans shall include, but not be limited to, the following:

- Existing property boundaries, easements, etc.
- Existing drainage features and topography.
- Existing utility locations.
- Existing structures, tracks, roads, features, etc.
- Existing topography, including wetlands and all environmental features.
- Delineation & dimension of proposed property acquisition or property easements.
- Dimension distances from all temporary and proposed E&S and SWM facilities to railroad property line and/or easement.
- Dimension distances from all temporary and proposed E&S and SWM facilities to tracks.
- Dimension of all temporary and proposed encroachments within property.
- Existing contours.
- TOR elevations.
- Proposed contours, site grading, and drainage facilities.
- Proposed improvements, including easements and property lines and limit of disturbance.
- Details for all temporary and proposed drainage structures, SWM, and E&S best management practices (BMP) devices.
- Details for proposed E&S, SWM, and drainage collection and conveyance systems (pipes, ditches, etc.).
 - Location, size, slope, and type of pipe.
 - Ditch cross sections.
 - Invert elevations.
 - Grate and rim elevations.
- If applicable, identification of the 100-year floodplain if project is within a specified flood zone.
- E&S plans in compliance with all state and local requirements.
- Signature and seal of state-licensed professional engineer.

Design Calculations

Pre- and post-development drainage area maps.

- Provide soils boundary lines & soil types.
- Delineate drainage areas.
- Provide time of concentration (Tc) flow path.
- Provide weighted CN and c-values (as applicable to design method).

Pre-development 100-year runoff volume and flows for all facilities draining to or on ROW.

Post-development 100-year runoff volume and flows for all facilities draining to or on ROW.

- Verify no increase in rate or quantity of runoff to property from pre-development conditions.
- Provide hydraulic analysis (depth and velocity calculations) for all facilities draining to or on ROW (existing and proposed) and verify sufficient capacity for proposed flow is provided.

Design of proposed collection and conveyance systems (pipes, ditches, etc.)

- Required capacity for a **100-year, 24-hour storm**.
- Required a minimum diameter of **24-inches** for pipes within ROW.

Provide all temporary and permanent E&S and SWM BMP calculations.

Signature and seal of state-licensed professional engineer.

Project narrative/summary describing proposed improvements, drainage design, SWM and E&S methodologies, site soil and geological conditions (if known), flooding characteristics (if applicable), and state and local requirements used to produce designs.

Recommended: Photographs of the site and adjacent property as well as discharge locations and drainage facilities on property to receive runoff from the proposed development.

Section 1.12 – Railroad Property Safety

All work on or near railroad property shall be conducted in accordance with the Railroad’s safety rules and regulations. Specifically, all agency’s employees and contractors, while on railroad property, shall be required to wear a hard hat, safety glasses with side shields, 6” lace up boots with a distinct heel, shirts with sleeves, and long pants; additional personal protective equipment may be required based on certain operations. The contractor and its employees shall always comply with the safety rules while occupying railroad property. Operations will be subject to inspection at any time. All personnel operating equipment must be qualified on it to perform task at hand.

The agency, its contractors, or any person refusing to comply with the Railroad’s safety rules may be removed from the property at the Railroad’s discretion. Although the GEC and the Railroad may perform site visits to verify compliance to safety rules and regulations, it is up to the agency and its contractors to adhere to all safety rules and regulations at all times.

Additionally, all equipment shall be used only in the manner it was designed for. All applicable safety rules shall be followed, including the use of seat belts on all equipment equipped with such. Equipment operators shall only operate equipment for which they are trained, certified, and qualified to operate. Operators shall have such credentials on their person anytime in which they operate on railroad property.

If an onsite flagman (**see Section 1.07**) is assigned, a job briefing must be performed by all persons entering the property even if no work is being performed. If a job function is being performed outside the view of the flagman, it is the responsibility of the agency and its contractors to brief with the flagman.

For additional safety requirements, please refer to “Contractor Safety Rules” document. It is the goal of the Railroad to have zero safety incidents every day.

Section 2.01 – Public Road Crossing Openings and Closures

Summary

The Railroad understands the importance of highway-rail grade crossings and their relevance to such priorities as economic development, emergency vehicle access, and other growth opportunities in the communities through which we operate. Because of the safety concerns associated with highway-rail grade crossings, however, every effort must be made to obtain alternative access or additional capacity using grade separations, or by other roads leading to existing crossings.

The Railroad shares the goal of eliminating at grade crossings with both the state DOTs and the Federal Railroad Administration (FRA). Likewise, the Federal Highway Administration (FHWA) Railroad-Highway Grade Crossing Handbook acknowledges that the first alternative that should always be considered for a highway-rail at-grade crossing is elimination. Elimination of a crossing provides the highest level of crossing safety because the point of intersection between highway and railroad is removed. Closing adjacent crossings simplifies the design, installation, and operation of highway-rail grade crossing warning systems.

The addition of any grade crossing brings the potential for incidents involving trains and motor vehicles. For this reason, both federal and state government policies discourage the creation of new grade crossings. As such the Railroad, other railroads, the United States Department of Transportation, and most state DOTs encourage communities to carefully consider all alternatives, including grade separations (crossings that go over or under railroad tracks), as opposed to the creation of new at-grade crossings.

The cost of a grade separation should not outweigh the enhanced safety it would provide for motorists.

Before agreeing to the establishment of a new crossing, the Railroad encourages communities to engage in a study with the purpose of identifying existing redundant public crossings for closure. To comply with and in support of the federal initiative to reduce grade crossings, the Railroad requires that the community identify the closure of three (3) or more comparable active public at-grade crossings.

As discussed above, the appropriate public authority will be expected to reimburse the Railroad for its cost of design, installation, and future maintenance of the crossing.

Process

- Appropriate public authority provides a written request to PPD outlining the reason for the new crossing or for seeking to convert a private crossing to a public one. Include the following:
 - A description of the proposed highway project, including proposed passive or active traffic control devices, and the need for preemption and/or interconnection with traffic signals, together with a scale drawing or sketch of the proposed highway and vicinity.
 - Expected annual average daily traffic (AADT), proposed vehicular speed limit, photographs, and aerial map. Please include any expected future development.
 - Identification of at-grade crossings to be closed. Include their vehicular speed limit, AADT, and traffic type.
 - The determination by the highway or regulatory authority of the need for passive or active traffic control devices and other safety treatments (i.e., signage, roadway medians, etc.), as selected by the highway authority consistent with applicable federal, state, and Manual on Uniform Traffic Control Devices (MUTCD) guidelines and requirements.
 - A plan to satisfy any appropriate regulatory authority's requirements, procedures, and approval. The project sponsor should coordinate with all applicable agencies (state, county, city, etc.) to ensure proper procedures are followed.

- Authorization for the Railroad to incur costs for its preliminary engineering to review the crossing request (whether or not its approved), design and construction expenses, and for the ongoing maintenance of the crossing surface and related grade crossing warning devices.
- PPD will review the request and follow up with appropriate state authorities.
- If it is approved by the Railroad, the state DOT, and appropriate roadway authorities, PPD will proceed with creating a project and starting the design review process. The design process will include, but is not limited to, the following:
 - Assignment of temporary DOT number.
 - Site survey & diagnostic review to determine level of protection.
 - Basis for design.
 - Estimate to complete.
 - Agency/sponsor and the Railroad enter into all applicable contracts.
 - RFP and vendor selection.
 - Design and order material.
 - Construct surface (must remain closed and inaccessible).
 - Install level of protection as indicated by DOT.
 - Testing and DOT signoff.
 - Open crossing and close offset crossings.
 - Update FRA to make DOT number permanent.

Section 2.02 – Highway-Rail Grade Crossing Warning Devices

Summary

PPD will process all projects proposing alterations to public highway-rail grade crossing warning systems. Included will be projects for opening new crossings, closing existing crossings, modifying or widening of existing crossings, installing new warning systems, removing and/or relocating existing warning systems and modifying/upgrading existing warning systems. This also pertains to preemption projects.

Each crossing has a unique DOT inventory identification number posted at the crossing. There is often more than one crossing on the same road. The number (i.e., DOT 654321D) must be used to identify the specific crossing in all communications with the Railroad to reduce possible confusion about the specific location.

Highway-rail grade crossing warning systems must adhere to all applicable federal and state standards and regulations; all local policies, laws, and ordinances; as well as the Railroad's standards. The state DOT and highway agency, not the Railroad, is responsible for determining the level of protection and configuration of warning devices for a public highway-rail grade crossing. In addition, the highway agency or other governmental agency responsible for making warning system and equipment determinations is responsible for selecting appropriate vehicular traffic control signs and/or devices for a specific public highway. Loop detection circuitry will not be designed, installed, owned, or maintained by the Railroad.

The highway agency must determine whether advanced or simultaneous preemption is needed.

The agency must also provide a traffic study to determine how much advanced preemption time is required if needed. The Railroad as well as AREMA and MUTCD discourage the use of excessive preemption times. The Railroad will furnish one preemption interconnection circuit of a normally closed contact that is designed to open upon the approach or presence of a train and will terminate the closed preemption interconnection circuit in a common cable junction box (set at ROW line) to be used for the interconnection of the traffic signals and the grade crossing warning devices.

Recommended practices and additional information are available in AREMA and the MUTCD.

The Railroad will provide engineering reviews, signal designs, and cost estimates for the installation of highway-rail grade crossing warning devices at the expense of the project sponsor as part of the preliminary engineering for a project. Changes to highway-rail grade crossing surfaces may also require engineering and pre-approval by the Railroad. Installation or modification of warning devices must be supervised and performed by a qualified entity as determined by the Railroad.

The Railroad typically does not allow the mixing of different equipment. If additional gates or equipment is added to a location, the entire location should be redesigned and upgraded to the latest standard.

If the roadway footprint changes in width, including adding a sidewalk or multiuse path, an easement review must be completed prior to the project construction start (see **Section 1.09**).

Process

- Agency requests a diagnostic review.
- Agency sends review results, and PPD supplies agency with OOM estimate.
- Agency/sponsor and the Railroad enter into applicable contracts.
- PPD assigns a GEC to develop BOD, estimate to complete, and RFP.
- GEC solicits bids for design-build contractor.
- Contractor completes design and orders material.
- Utility concerns are resolved.
- Construct warning system.
- Testing and DOT signoff and update FRA.

Section 2.03 – Highway-Rail Grade Crossing Surface Maintenance

Summary

The crossing surface provides a path for highway vehicles to cross railroad tracks. The objective is to provide a safe, smooth, and cost-effective crossing for highway and railroad traffic. Highway and railroad maintenance work near highway-rail grade crossings must consider safety concerns for both highway and railroad traffic before, during, and after the work is implemented.

Each public crossing has a unique DOT inventory identification number posted at the crossing. There is often more than one crossing on the same road. The number (i.e., DOT 654321D) must be used to identify the specific crossing in all communications with the Railroad to reduce possible confusion about the specific location.

Railroad track is continuous through the crossing and includes railroad ties, rail, and fasteners below the surface of the crossing (joints shall not be made within the crossing). The crossing surface for highway traffic can be made of several different materials. Drainage is required for all four quadrants at a crossing.

Crossing surface material and construction methods are selected for each crossing based on the type of highway and railroad traffic, past experience, and funding available from highway agencies for individual projects. Highway agencies seeking replacement of crossing surfaces should contact PPD. The request for the work and the recommended surface must be reviewed and approved by the Railroad.

Crossing work requires closing the entire highway-rail grade crossing. Replacement of track components through a crossing requires removal of the crossing surface, replacement of track ballast, and surfacing the

track through the crossing prior to replacement of the crossing surface. If the subgrade needs to be improved, the application of a hot mixed asphalt underlayment should be considered. Drainage will be reestablished for all four quadrants. After the crossing surface is replaced, the highway approach paving is completed and then the road is opened to highway traffic. Replacement of the track and crossing surface usually requires that the highway be closed for several days. In the event the agency wants to reopen the crossing prior to allowing the asphalt to properly cool, the agency is responsible for any rutting that may occur.

If the roadway footprint changes in width, including adding additional lanes, a sidewalk, or a multiuse path, an easement review must be completed prior to the project construction start (see **Section 1.09**).

Process

- Agency submits request to PPD.
- Agency and PPD research existing contractual requirements.
- Agency/sponsor and the Railroad enter into applicable contracts.
- The Railroad assigns GEC to develop estimate.
- The Railroad orders materials and schedules work.
- Reconstruct crossing:
 - Place barricades and close roadway.
 - Sawcut roadway.
 - Remove existing track panel, ballast, and sub-ballast.
 - Establish new foundation.
 - Install new track panel.
 - Run tonnage to settle system.
 - Install surface materials.
 - Install asphalt (and concrete if needed).
 - Let cool and cure.
 - Remove barricades.
- Cleanup.
- Agency signoff and update FRA.

Section 2.04 – Parallel Road Construction and Maintenance

Summary

New Roadway Construction

In the interest of public safety, parallel public roads shall be located off railroad property. Parallel roads involving intersections with existing or proposed highways where public or private crossings are present should be aligned to provide sufficient distance from the crossing for the largest vehicle (design vehicle) permitted to use the road to stop between the Railroad and the parallel road traffic control signs, markings, and warning devices without interfering with railroad operations, obstructing or preventing the operation of traffic control devices, or obstructing the crossing in any manner.

The design of highways and highway intersections and configuration of highway-rail grade crossings is the responsibility of the highway agency. Drainage for highway runoff, the railroad corridor, and adjacent property must be designed to reduce or maintain existing railroad drainage and to prevent standing water

and potential erosion. Access for railroad equipment to railroad property, structures, and track cannot be restricted or prevented.

Federal and state design manuals, the Manual on Uniform Traffic Control Devices (MUTCD), and additional recommended practices available in American Railway Engineering and Maintenance-of-Way Association (AREMA) manuals provide design information to be considered by the highway agency responsible for the project engineering. The table of contents of this document has additional information on the MUTCD and AREMA manuals and information.

If new construction encroaches on railroad property, an easement review must be completed prior to the project construction start (**see Section 1.09**).

Maintenance of Existing Roadway

Projects that are either parallel or bisect as roadway crossings within the Railroad's ROW require both a ROE and the use of a qualified flagman at the cost of the project sponsor (**see Section 1.09**).

Process

- Request a ROE through G&W Real Estate.
- Agency/sponsor and the Railroad will enter into applicable contracts, including contractor ROE agreement.
- Submit executed ROE and insurance documents to PPD.
- PPD coordinate with region to provide flagman.

Section 2.05 – Overhead and Undergrade Bridges

Summary

The Railroad requires that new overhead bridges (including existing bridge replacements) span the Railroad's right of way and have a minimum twenty-three feet (**23'-0"**) vertical clearance above top of rail. The Railroad requires that new undergrade bridges provide accommodations for future operating needs, as determined by the Railroad.

During project construction, rail operations must not be impeded. Temporary run-around track(s) and/or phased construction may be necessary as determined by the Railroad.

All bridge projects over or under the Railroad's ROW shall be governed by the appropriate criteria found in this document. This includes, but is not limited to, replacements, new construction, substructure modifications and/or repairs, superstructure replacement or repair, and deck replacement or overlay. The following criteria must be reviewed and approved by the Railroad prior to construction:

- Temporary and final drainage plans must be approved by the Railroad.
- The Railroad's access to its property must be maintained.
- Plans must show all tracks and horizontal and vertical track clearances for both the existing conditions and the proposed project.
- Bridge demolition criteria are found in the Construction Submission Criteria (**see Section 1.11**) in this document.
- Upon completion of construction, a full set of as-built drawings, showing actual measured vertical and horizontal clearances, shall be furnished to the Railroad.

If new construction is bisecting railroad property, an easement review must be performed prior to the project construction start (**see Section 1.09**). Please note that the project may require both a temporary construction easement and a permanent easement.

Process

- Agency/sponsor and the Railroad enter into applicable contracts.
- PPD assigns GEC.
- GEC works with the agency to gather easement documentation and ROE.
- GEC works directly with the agency and its contractor on submittal reviews.
- GEC sends agency an estimate to complete project.
- Agency schedules construction.
- The Railroad supplies flagman.
- GEC provides CEI services.
- Project completion when both the Railroad and agency signoff.
- Agency submits as-built plans.

Overhead Bridge Criteria

The Railroad has minimum requirements for outside parties constructing, rehabilitating, or replacing bridges over the Railroad's ROW. These requirements are intended to provide safe and continuous passage of all train traffic during and after construction of bridges over its tracks. Part of these requirements is for the outside party to submit a detailed plan of the project as well as provide details of the construction methodology. This document provides information on the requirements for overhead bridges over railroad property.

Plans and specifications for new or reconstructed bridges over the Railroad's ROW shall meet the following requirements:

General

- The Railroad's valuation station and the distance from the nearest milepost at the intersection of the centerline of the track and the centerline of the bridge shall be shown on the general plan.
- The existing and proposed minimum horizontal and vertical clearances shall be marked clearly on the general plan and elevation.
- At least one subsurface exploration boring for each substructure unit adjacent to the track shall be furnished to the Railroad during the design submittal. Borings shall provide enough information to design shoring and foundations.
- Prior to construction activities, all overhead bridge projects will require the procurement of the appropriate property rights from G&W Real Estate.
- All lifting equipment and connection devices shall have capacity for 150% of the actual lifting load. The factor of safety provided by the manufacturer in the lifting capacity data shall not be considered in the 150% requirement. A licensed professional engineer familiar with lifting and rigging and in the state where the construction work is proposed must sign and seal all plans and calculations related to critical lifting on the project.

Clearance

- Horizontal Clearance: Standard horizontal clearance from the centerline of the track to the face of the pier or abutment shall typically be twenty-five feet (**25'-0"**) or greater, but never less than eighteen feet (**18'-0"**), measured perpendicular to the track. Provisions for future tracks, access roads, other railroad facilities, and drainage may require the minimum clearance be increased or the use of multi-span

structures. The toe of footings shall not be closer than eleven feet (11'-0") from the centerline of the track to provide adequate room for sheeting.

- Vertical Clearance: A standard vertical clearance of twenty-three feet (23'-0") shall be provided, measured from top of high rail to lowest point of structure in the horizontal clearance area, which extends six feet (6'-0") either side of the centerline of the track.
- Temporary construction clearances to be used shall be subject to approval by the Railroad, (typically reductions in clearance for construction are not permitted).
- As-built drawings showing actual clearances as constructed are to be provided to the Railroad.

Crashwalls

- Reference the AREMA specifications that cover the requirements for crashwalls. Crashwalls are required when the face of the pier is closer than twenty-five feet (25'-0") from the centerline of the track, measured perpendicular to the track, except as noted below.
- Crashwalls shall meet the following requirements:
 - Crashwalls for single column piers shall be minimum two feet six inches (2'-6") thick and shall extend a minimum of six feet (6'-0") above the top of high rail for piers located between eighteen feet (18'-0") and twenty-five feet (25'-0") from the centerline of the nearest track. The wall shall extend minimum six feet (6'-0") beyond the column on each side in the direction parallel to the track.
 - For multi-column piers, the columns shall relate to a wall of the same thickness as the columns or two feet six inches (2'-6"), whichever is greater. The wall shall extend a minimum of two feet six inches (2'-6") beyond the end of the outside columns in a direction parallel to the track.
 - Reinforcing steel to adequately anchor the crashwalls to the column and footing shall be provided. For piers of heavy construction, crashwalls may be omitted. Solid piers with a minimum thickness of two feet six inches (2'-6") and length of twenty feet (20'-0"), single column piers of minimum four feet by twelve feet six inches (4'-0" x 12'-6") dimensions, or any other solid pier sections with equivalent cross sections and minimum two feet six inches (2'-6") thickness are considered as heavy construction.

Drainage

Drainage from the bridge shall be preferably collected with drain pipes and drained away from the Railroad's ROW. When open scuppers are provided on the bridge, none shall be closer than twenty-five feet (25'-0") from the centerline of nearest track. Flow from the scuppers shall be directed away from railroad drainage ditches.

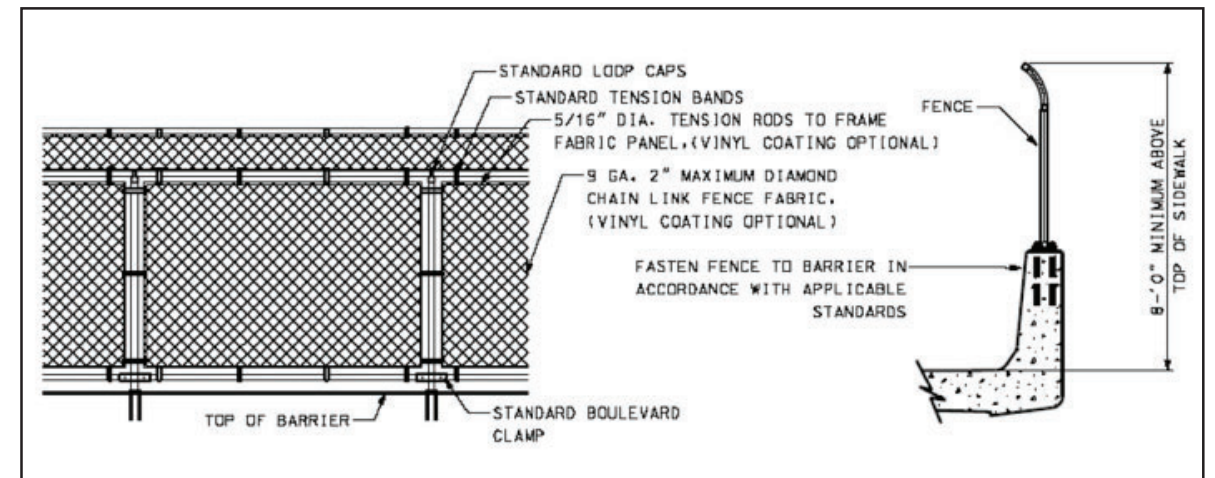
Projects including storm water systems shall be designed for a **100-year storm event** as a minimum. If storm water is drained on or to the Railroad ROW, calculations must be submitted to the Railroad to verify the **100-year storm event** is properly handled. Improvements to the adjacent drainage systems may be required at project expense to ensure the impacted system will meet the **100-year storm event** minimum condition.

During and after completion of construction, the outside party or its contractor must clear the Railroad's drainage ditches of all debris to the satisfaction of the Railroad.

Fencing

All highway structures shall have a protective barrier fence to extend at least eight feet (8'-0") from the top of the sidewalk or driving surface adjacent to the barrier wall. The fence may be placed on top of the barrier wall. The fence shall be capable of preventing pedestrians from dropping debris onto the Railroad's ROW.

Openings in the fence shall not exceed two inches by two inches (2" x 2"). Fencing should also include anti-climb shields or be of a configuration to minimize the likelihood of climbing on the outside of the protective fencing. A chain link fence option is shown below.



Excavation and Shoring

Shoring protection shall be provided when excavating adjacent to an active track. Shoring will be provided in accordance with AREMA, except as noted below.

Shoring will not be required if both the following conditions are satisfied:

- Excavation does not encroach upon a 1 horizontal to 1 vertical theoretical slope line starting at bottom corner of tie (theoretical live load influence zone).
- Track is on level ground or in a cut section and on stable soil.

When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.

Preferred protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with open sides away from the track may be used. Cofferdams shall be constructed using steel sheet piling or steel soldier piles with timber lagging. Wales and struts shall be provided as needed. The following shall be considered when designing cofferdams:

- Shoring shall be designed to resist a vertical live load surcharge of **1,882 lbs.** per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip eight feet six inches (8'-6") wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA.
- Allowable stresses in materials shall be in accordance with AREMA.
- A construction procedure for temporary shoring shall be shown on the drawing.
- Safety railing shall be installed when temporary shoring is within fifteen feet (15'-0") of the centerline of the track.
- A minimum distance of ten feet (10'-0") from the centerline of the track to the face of nearest point of shoring shall be maintained.

The contractor shall submit the following drawings and calculations for the Railroad's review and approval:

- Detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances from the centerline of the track to the face of shoring. Drawing shall show a section that includes the height of shoring and track elevation in relation to the bottom of excavation.
- One set of calculations of the shoring design.
- The drawings and calculations shall be prepared by and bear the seal and signature of a licensed professional engineer in the state where the shoring is to be constructed. Shoring plans shall be approved by the Railroad.
- For sheeting and shoring within eighteen feet (18'-0") of the centerline of the track, within the theoretical live load influence zone, and in slopes, the contractor shall use sheet pile. No sheet pile in slopes or within eighteen feet (18'-0") of the centerline of the track shall be removed. Sheet piles shall be cut off three feet (3'-0") below the finished ground line. The remaining three feet (3'-0") shall be backfilled and compacted immediately after cutting off.

Demolition of Existing Structure

The contractor shall submit a detailed procedure for demolition of existing structures over or adjacent to the Railroad's ROW. The procedure shall clearly indicate the capacity of cranes, location of cranes with respect to the tracks, and calculated lifting loads. The demolition procedure shall be approved by the Railroad.

The Railroad's tracks, signals, structures, and other facilities shall be protected from damage during demolition of existing structure or replacement of deck slab. As a minimum, both of the following methods shall be used:

- During demolition of the deck, a debris shield shall be erected from the underside of the bridge over the track area to catch falling debris. The shield shall be supported from girders or beams. The deck shall be removed by cutting it in sections and lifting each section out. The shield shall be designed, with supporting calculations, for a minimum of **50 pounds** per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.

Large pieces of deck shall not be allowed to fall on the debris shield:

- A ballast protection system consisting of geofabric or canvas shall be placed over the track structure to keep the ballast clean. The system shall extend along the track structure for a minimum of twenty-five feet (25'-0") beyond the limits of the demolition work, or farther if required by the Railroad.
- The contractor shall submit detailed plans, with supporting calculations, of the debris shield and ballast protection systems for approval prior to the start of demolition.
- Blasting will not be permitted to demolish a structure over or within the Railroad's ROW.

Erection

The contractor shall submit a detailed procedure for erecting over or adjacent to ROW. The procedure shall clearly indicate the capacity of cranes, location of cranes with respect to the tracks, and calculated lifting loads. The erection procedure shall be approved by the Railroad.

Pile Installation

For the installation of piles and sheeting for abutment foundations, pier foundations, retaining wall foundations, temporary and permanent shoring, and other structures on or adjacent to the Railroad's ROW, the contractor may be required to submit a detailed track monitoring program for review and approval by the Railroad.

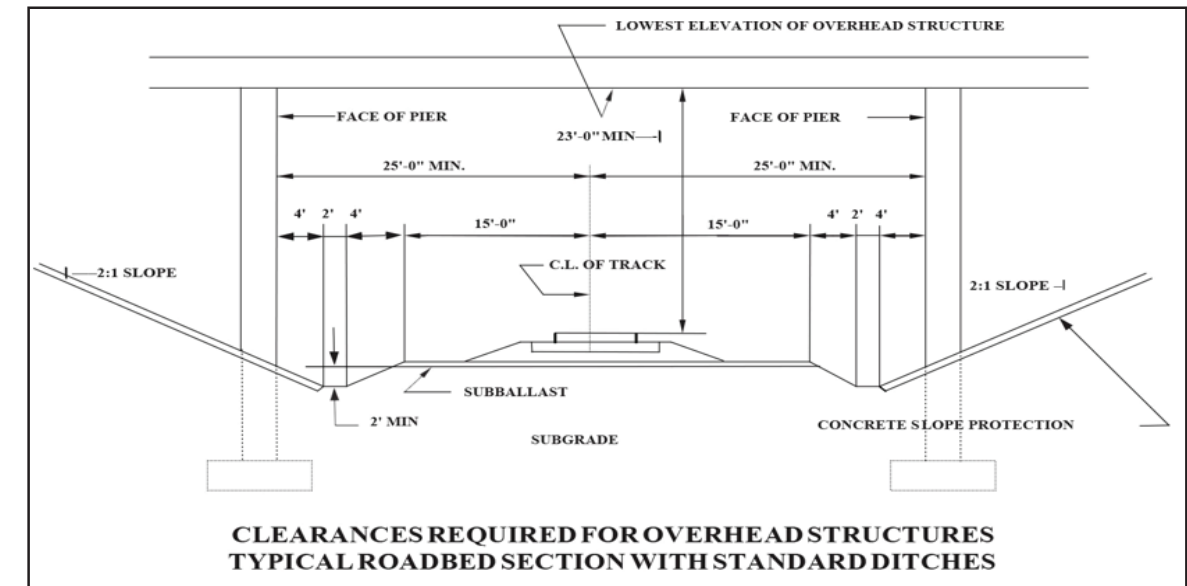
The program shall specify the survey locations, the distance between the location points, and the frequency of monitoring before, during, and after construction. The Railroad shall have the capability of modifying the survey locations and monitoring frequency as needed during the project.

If any settlement is observed, the Railroad shall be immediately notified. The Railroad shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled,

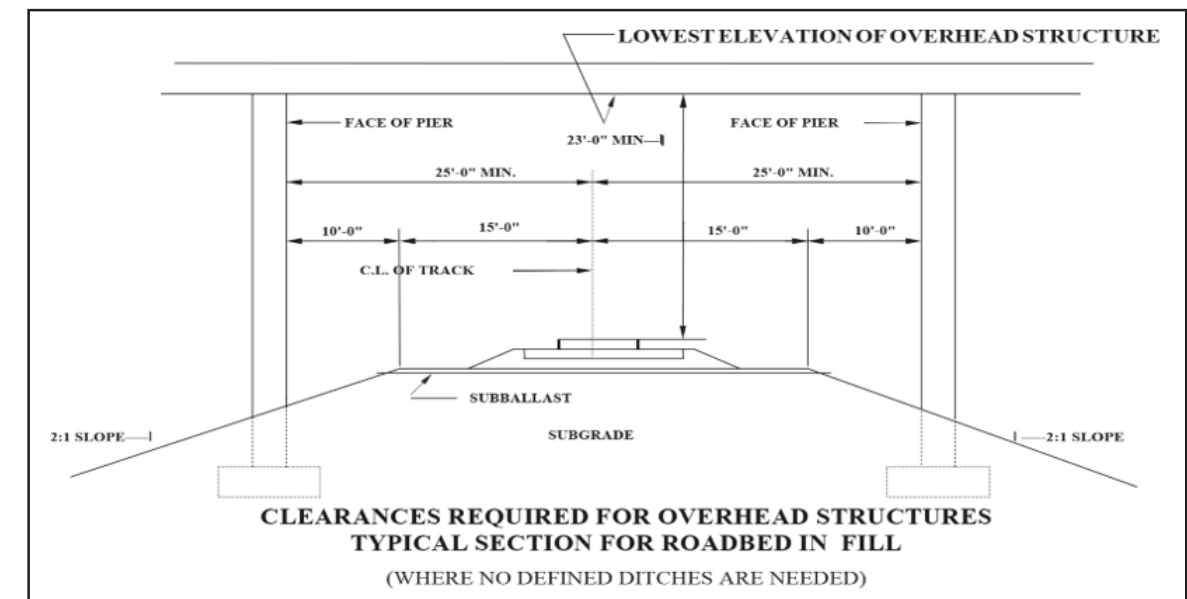
and/or determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad, including the monitoring of corrective action of the contractor, will be at project expense.

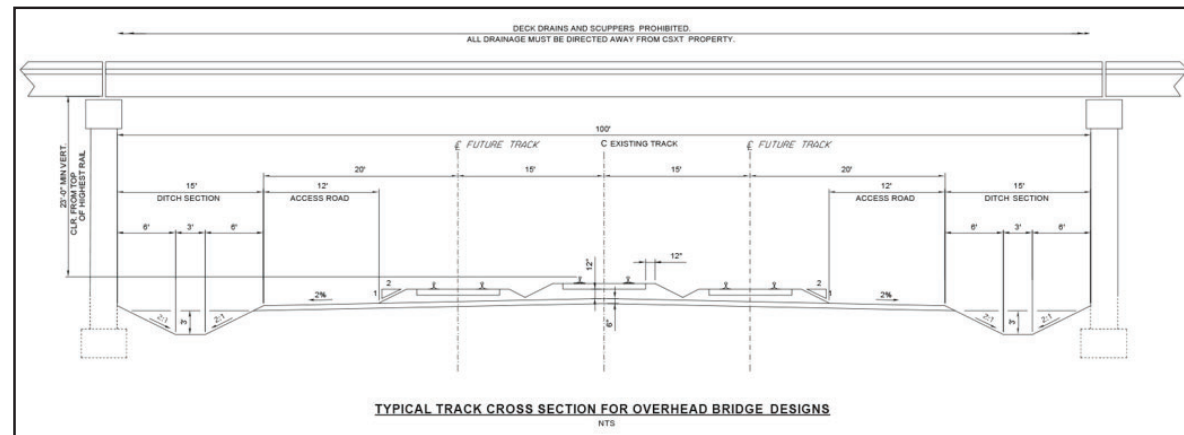
Pedestrian Bridge

- Pedestrian overhead bridges shall span the entire width of the Railroad's ROW. Intermediate piers or other supports will not be permitted.
- Pedestrian overhead bridges shall be completely enclosed with protective canopy or by other means to prevent users from dropping debris onto the Railroad's ROW.



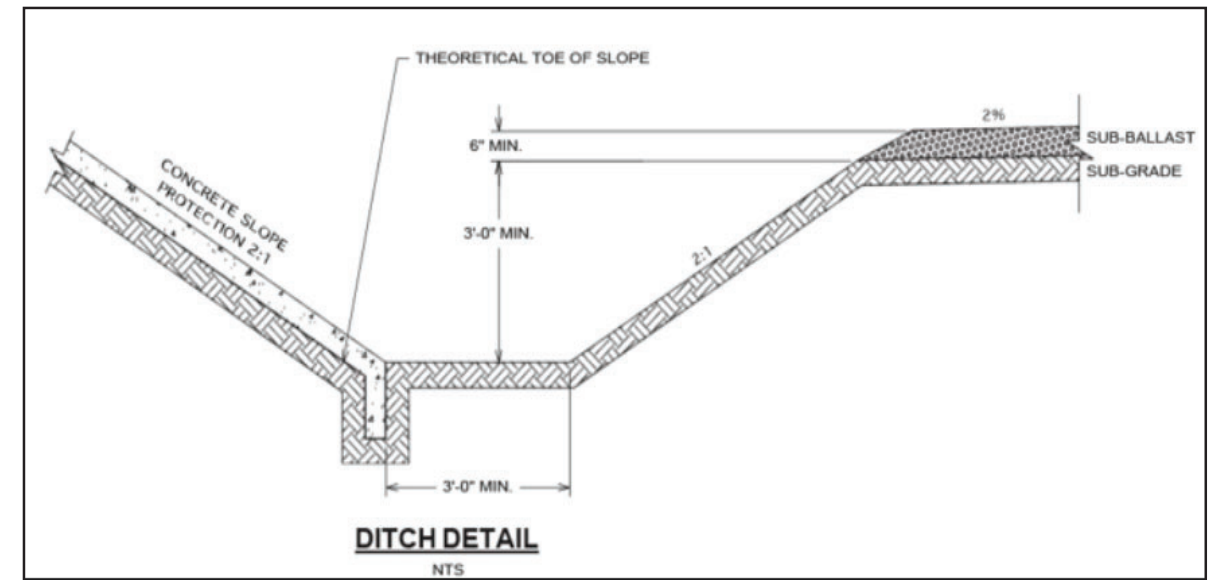
For multiple tracks, standard track centers are fifteen feet (15'-0") wide. An access road may be required to provide thirty-three feet (33'-0") minimum distance from the centerline of the track to the face of the pier.





The following applies to the typical cross section for bridges:

- Clear span width should account for the number of existing tracks at the specific project site. Each additional track adds fifteen feet (15'-0") to the clear span width calculation.
- Horizontal dimensions shown are perpendicular to center of track.
- Crashwalls may be required based on specific parameters.
- Actual required horizontal clearances may need to be increased due to existing roadbed section, location of parallel ditches, hydrological conditions, and future track requirements.
- Theoretical toe of slope is based on the standard roadbed section. Actual toe of slope may vary due to ground line.
- The ditch section shown is the minimum acceptable section.
- The ditch section is to be increased as required by local conditions, based on hydrological and hydraulic studies.
- Horizontal dimensions shown are the minimum that will allow the construction of railroad standard roadbed section.



Undergrade Bridge Criteria

AREMA shall serve as the overarching authority for recommended practice in designing railroad bridges. The intent of this document is to provide criteria that supplements, modifies, and/or supersedes the applicable sections of AREMA for designing undergrade railway bridges that are to be owned and/or operated on by the Railroad. Additionally, these requirements help guide an outside party through the necessary procedures for interacting with the Railroad and delivering an acceptable structure that is constructible, inspectable, maintainable, long lasting, and reliable.

General

Bridge shall be designed in accordance with the applicable specifications from the current edition of AREMA. Applicable sections may include, but are not limited to, the following:

- Chapter 8 Concrete Structures and Foundations
- Chapter 9 Seismic Design for Railway Structures
- Chapter 15 Steel Structures

Special Considerations

- AREMA recommendations for dampproofing and deck waterproofing.
- Coating of structural steel shall be performed in accordance with AREMA.
- Bridge shall be located to provide optimal railroad geometry.

Construction Specifications

- Shall be in accordance with AREMA recommendations for fabrication and erection.
- Items not covered by shall be governed by applicable DOT specifications from the commonwealth, district, province, or state where the bridge is being constructed.

Non-traditional bridge systems require written notice of acceptance by the Railroad. The proposed use of such a system shall be presented for review with thorough investigation, data, and detailed engineering justification.

Bridge Layout

The general plan drawing of the bridge shall show the Railroad valuation stations at the front face of backwalls, and centerline of piers or bents, along the centerline of the bridge. Distance from front face of low milepost backwall to low milepost nearest the bridge shall also be shown. The following criteria will serve as a guide for labeling the bridge layout.

- Railroad bridges are laid out in direction of increasing milepost, increasing from left to right on plans.
- Plans should denote the railroad direction and the nearest significant terminal or junction leading away from either end of the bridge.
- For through plate and truss bridges, the substructures are numbered starting with zero and increasing in the direction of increasing mileposts.
- Superstructures are numbered starting with 1 and increasing in the direction of increasing mileposts.
- Floor systems of through plate girder, through truss, and deck truss spans are numbered starting with 0 and increasing in the direction of increasing mileposts.
- Bridge components are numbered from left to right facing the direction of increasing milepost.

Low mile post backwall GPS coordinates shall be detailed on plans in degrees-minutes-seconds or decimal format with precision to six decimal places.

For bridges on curves, the girders, abutments, and piers shall be located with reference to chords.

Clearances

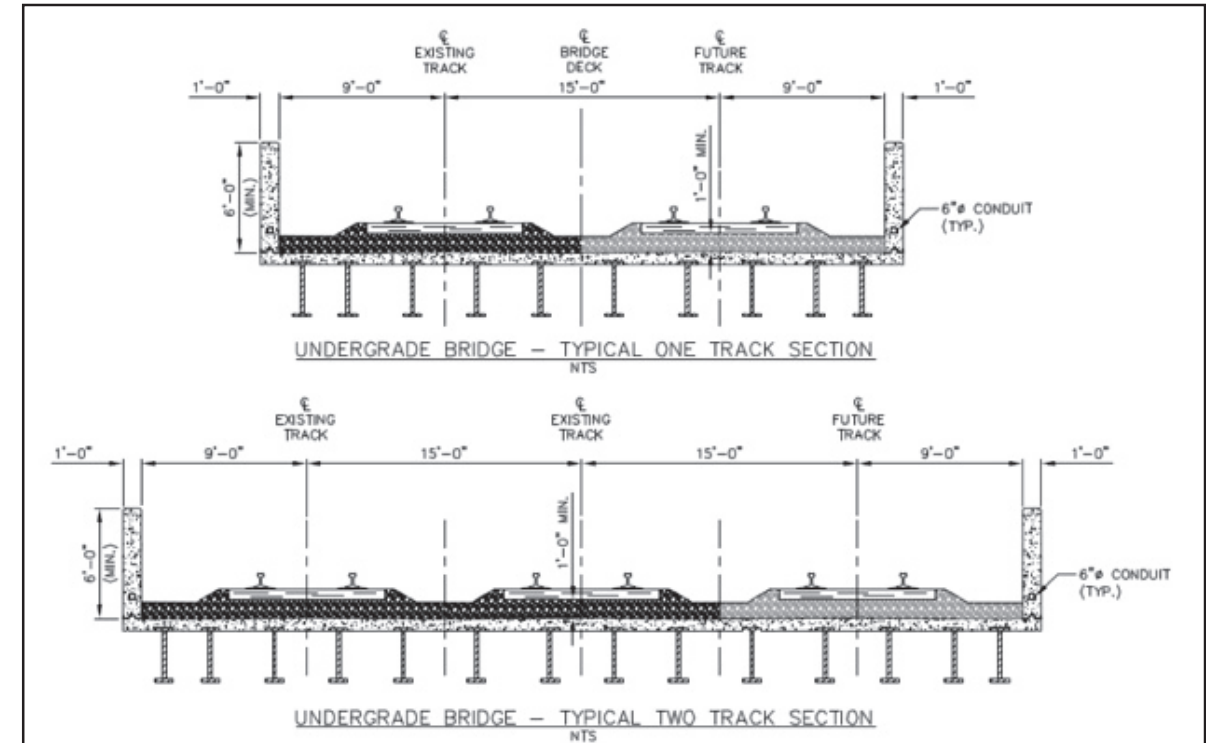
Under Bridge Vehicular Clearances

- Undergrade structures shall be designed to ensure that the structure will be protected from oversized or unauthorized loads by providing sufficient vertical clearance and protective devices. Provide a minimum vertical clearance over the entire roadway width for all new or reconstructed structures as follows:
 - Sixteen feet six inches (**16'-6"**) for steel superstructure with 5 or more beams or 4 or more deck plate girders per track.
 - Seventeen feet six inches (**17'-6"**) for steel through plate girders or less than 4 deck plate girders per track with bolted bottom flanges.
 - Twenty feet (**20'-0"**) for steel through plate girders or less than 4 deck plate girders per track with welded bottom flanges.
 - Vertical clearance must not be violated due to the deflection of the superstructure.
- Roadway profile and design roadway vehicle information shall be provided and considered in vertical clearance design.

Bridge Clearances

- Standard clearances on the bridge shall not be modified without written notice of approval by the Railroad. Any proposed modification shall be furnished with detailed engineering justification for review.
- Commonwealth, district, provincial, or state clearance laws must not be violated. Legal requirements must be upheld unless written permission for waiver is provided by the appropriate regulatory authority.
- Adequate clearance and capacity shall be provided for a future track.
- Track centers shall not be closer than fifteen feet (**15'-0"**).

- Minimum horizontal clearance on the bridge shall be provided as shown below:



- Standard clearances are for tangent track and increases must be provided to account for effects from curvature and superelevation.

Design Loads

Railroad bridges shall be designed for all loads specified in AREMA.

Live loads for steel structures shall consider both the **Cooper E80** loading and the alternate live load with full diesel impact, whichever produces the greater stress. Live loads for concrete structures shall consider **Cooper E80** loading with full diesel impact.

All bridges shall be designed with non-composite interaction between superstructure and deck. Mechanical connections shall be provided as necessary to satisfy design load requirements.

The weight of the minimum ballast depth one foot (**1'-0"**) plus an additional two feet (**2'-0"**) of ballast below the tie shall be included when computing the dead load of the structure.

Plans and Submittals

Preliminary Plans

- An electronic copy of type, size, and location (TS&L) plans shall be submitted to the Railroad for review and acceptance. The TS&L plan shall show plan view, elevation, and typical cross section of the proposed structure. Railroad acceptance must be granted before proceeding with design.
- Furnish cross sections showing the AREMA clearance envelope, topographic map with contours, and soil exploration data along with TS&L plans. Railroad acceptance must be granted before proceeding with design.

- The Railroad will assign a bridge designation (railroad, region, subdivision, MP) when TS&L plans are reviewed. This bridge designation shall be shown on all drawings.

Construction Work Plans

- The Railroad may require construction work plans to be submitted, particularly when work is being performed in the proximity of an active track, with potential to foul.
- All construction work plans shall be submitted in accordance with the Construction Submission Criteria (see Section 1.11).

Material Submissions

- Structural steel shop drawings shall be provided for review and acceptance prior to ordering material. Welding procedures shall be submitted with the structural steel shop drawings.
- Concrete mix designs shall be submitted for review and acceptance prior to ordering material.
- Third party testing reports shall be provided for review and acceptance in a timely manner.
- All other materials shall be provided in accordance with the plans. All materials shall be reviewed and approved by the agency or its representative. Proposed changes are subject to review and acceptance. Approved material submissions shall be furnished to the Railroad for confirmation and project documentation.

Final Plans

- Provide electronic set of final signed and sealed design plans and calculations for acceptance.
- Submit special provisions or special specifications for acceptance.
- Provide an electronic set of as-built plans to the Railroad upon completion of construction. All changes shall be noted and clearly called out on a redlined set of as-built plans. All pages shall be clearly marked "AS-BUILT" and include the date of completion.

Construction Considerations

After a construction contract is awarded, a copy of the contract shall be provided to the Railroad.

Maintenance of Railroad Traffic

- It is essential that the construction be performed with minimum interference to rail traffic. Continuity of safe rail operations will be required for the duration of the project.
- The agency's design engineer should contact the PPD in the preliminary design stage to determine railroad operational requirements. The most effective method of maintaining traffic is to temporarily reroute traffic around the construction site using detour tracks. Detour tracks will be required where feasible. If detour tracks cannot be provided, the new superstructure shall be constructed adjacent to final location and rolled into place. Construction plans shall show complete details of temporary bridges and/or roll-in structure.
- A detailed construction procedure for maintaining traffic shall be shown on the plans. When construction requires total interruption of rail traffic, an estimate of the time required will be shown in the procedure. This interval must be within the approved time frame furnished by PPD.
- Prior to the start of construction, written approval from the Railroad for the construction procedure must be secured.

Bridge Decks

Walkways and Parapets

- Deck shall be a uniform ballast pan across all tracks and provide for a ballast walkway between all tracks and on the field side of the exterior tracks. Intermediate curbs shall not be permitted.
- All exterior walkways shall utilize the uniform ballast pan and be equipped with a **72-inch**-tall parapet wall, measured from top surface of bridge deck. Parapet walls should each include two six-inch ducts to accommodate signal and utility needs.
- Walkways and parapets shall be designed to satisfy the requirements specified by AREMA.

Minimum ballast depth shall be one foot (**1'-0"**) measured from top of deck waterproofing to the bottom of tie at the centerline of the low rail. This dimension shall be clearly labeled on cross section drawings.

On bridges, timber crossties (**7" x 9" x 8'6"**) shall be used, spaced at **19"** centers. Alternatively, concrete crossties may be used also at **20"** centers or steel crossties may be used at **24"** centers.

Track material shall be subject to review by the Railroad at project expense.

Steel Deck Plates

- Steel deck plates shall be shop welded with a pair of **5/16-inch** continuous fillet welds to each floor beam or deck girder. Deck units shall be shop assembled with multiple beams per unit, and areas to be field welded shall be masked and field painted after welding is complete.
- The closing deck plate between adjacent deck units shall be fillet welded to the beams with continuous **5/16-inch** fillet welds at each beam. After deck plates are welded to the beam, space between deck plates shall be filled at the joint with material compatible with deck waterproofing membrane.
- The minimum thickness of steel deck plates shall be as follows:

<u>Plate Thickness</u>	<u>Maximum Clear Distance Between Beams</u>
½ inch	1'-6"
5/8 inch	2'-0"
¾ inch	2'-4"

- For multiple deck girders with steel deck plates:
 - Provide a welded field splice in the deck plate at or near the centerline of bearing of the girders. Provide a closing deck plate from the abutments to this field splice that is normal to the girders and normal to the long direction of the main deck plates. This will avoid splicing deck plates over the back wall.
 - Outside girders shall be spaced such that deck plates will not overhang the flange of the outside girders by more than 2 inches and a concrete parapet wall shall be provided. The wall shall be securely anchored to the deck girder and have a minimum width of **12 inches** at the top.

Concrete Decks

- Bridge deck shall have adequate anchorage to the bridge superstructure. Shear studs shall not be permitted.
- The outside edge of the slab shall be not more than one foot six inches (**1'-6"**) from the centerline of the outside (fascia) girder.
- Provide a drip edge on the outside edge, bottom face of the deck slab.

Deck Drainage & Waterproofing

- Top surface of waterproofing protection shall have a minimum transverse slope of **1/8"** per foot with a crown at the centerline of the deck.
- Top surface of waterproofing protection shall have a minimum longitudinal slope of **0.5%**.
- Concrete decks shall be designed and constructed to provide the required slopes and to direct water to deck drains.
- When the deck is level or slopes less than **0.5%**, underlayment is to be used to provide required slopes.
- Deck drains shall be cast iron and downspouts shall be ductile iron. Deck drains shall have a grate or perforated cover. Downspouts shall be provided with cleanouts at each change in direction.
- All bridge decks shall be waterproofed using membrane waterproofing.
- All deck joints between spans shall be watertight.
- Waterproofing shall be applied to the entire surface of the deck and the bottom three feet (**3'-0"**) of inside faces of parapets or curb plates. Materials and construction are to be in accordance with AREMA, Chapter 8.

Superstructure

All bridges shall be composed of simple spans. Continuous spans are prohibited, and skewed spans are discouraged.

Design shall provide accommodations for future maintenance. Jacking locations as well as jack sizing shall be specifically denoted and laid out in the bridge plans. Jacks shall be sized to accommodate full dead load, including future ballast.

Welded Plate Girders

- A full penetration groove weld shall be used for flange to web connection.
- No more than two flange section transitions will be permitted without special permission.
- When a lateral bracing system is required as recommended by AREMA, girder connections shall be bolted.
- Jacking stiffeners are required at all end diaphragms. These locations must be specifically called out in the plans.
- Bearing stiffeners shall be welded or milled to bear for both top and bottom flanges.
- All cross frames shall be designed in accordance with AREMA recommendations.

Through Plate Girders

- Through plate girder bridges are only permitted for double track bridges. The use of intermediate girders in double track applications will not be permitted.
- Floor beam brackets (or knee braces) are stiffened diagonal plates that are bolted to the top flange of the floor beams and to vertical stiffeners on the through girder and shall be designed to satisfy AREMA recommendations.
- All stringers shall frame into floor beams.
- End floor beams and connections shall be designed such that the bridge can be jacked up by placing jacks between the end floor beams and pier or abutment. Jacking stiffeners shall be provided at points of jacking.

- Intermediate floor beams shall frame into the girder web using double connection angles and high strength bolts.
- All stringers shall have top and bottom flanges clipped at an angle not greater than **45 degrees** to permit field removal and installation.

Substructure

Design shall provide accommodations for future maintenance. Jacking locations as well as jack sizing shall be specifically denoted and laid out in the bridge plans.

Abutments and Wing Walls

- Abutment shall be designed in accordance with recommendations of AREMA, Chapter 8.
- The minimum abutment width shall be sufficient to provide for fifteen feet (**15'-0"**) track centers and standard road bed section.
- Wing walls shall be designed to support 2 horizontal to 1 vertical embankment slope as well as a level approach to the bridge walkways. MSE and sheet pile walls are not permissible.
- Provide minimum clearance necessary between end of structural steel and face of backwalls to accommodate expansion, but not less than two inches at each end.
- Provide keyways and water stops at all construction joints. Water stops shall be a hollow bulb **PVC 9" X 3/8"** (**bulb 3/4 inch inside diameter, 1 1/2 inch outside diameter**) continuous across joint.
- Two feet of porous backfill, measured horizontally, shall be provided full height below sub-ballast, behind all abutments and wing walls.
- Provide adequate drainage behind abutments and wing walls utilizing perforated pipe drains at the base of the abutments and wing walls. When abutment geometry does not allow for perforated pipe drains, weep holes may be required.
- Non-perforated pipe shall be connected to the perforated pipe and drain away from the bridge with a **1% minimum slope**.

Piers

- Width of pier shall be minimum four feet (**4'-0"**), measured at the bearing seat.

Section 2.06 – Cleaning and Painting of Bridges

Summary

Requests are occasionally made by outside parties for various beautification projects, including painting of overhead and undergrade bridges. These requests are considered on a case-by-case basis by the Railroad. The cost of painting and future aesthetic maintenance will be the responsibility of the project sponsor proposing to paint the bridge.

All work over railroad property has the potential to impact rail operations. The Railroad will review bridge painting and cleaning projects to ensure environmental and engineering standards are met. This review, flagging protection, and construction monitoring costs will be paid for by the project sponsor.

Process

- Project sponsor engages a public entity (unless the public entity is the sponsor).
- Sponsor contacts PPD to identify objective.

- Agency/sponsor and the Railroad enter into applicable contracts.
- PPD assigns GEC to receive and review submittals.
- Agency contractor to request ROE.
- Agency/sponsor indicates number of days on/over/around railroad property.
- GEC supplies estimate to complete, including flagmen coverage.
- GEC helps to coordinate an onsite flagman.
- Project work (onsite CEI may be required).
- Site cleanup.
- The Railroad and agency signoff.

General

All proposals must comply with the Railroad’s safety and environmental regulations and must not impact railroad property or operations. The public agency or its designee will be responsible for maintenance of the painted surfaces, including aesthetic damage caused by highway vehicles and vandalism. The Railroad will incur no costs or liabilities as a result of the project.

A written request by the party wishing to undertake such a project should be forwarded to the PPD for handling. The request should include information about the situation and the project objectives to assist with completion of the review. The following information should be included:

- The project sponsor and public agency that will execute appropriate agreements for implementation as well as future maintenance of the painted surfaces.
- Paint specifications, including color of the paint, that meet the Railroad’s standards and methods for surface preparation, cleanup, and paint application.
- Qualifications and experience of the painting contractor. The Railroad will accept state qualified bridge painting contractors working for the responsible agency or company.
- The materials removed during the surface preparation must not impact the surrounding area, including ground, water, or air. Materials must not be stored on railroad property.
- Control of paint overspray and vapors during application. The work must be done complying with appropriate regulations and overspray controlled to prevent damage to adjacent property and vehicles in the area.
- Containment system cleanup and disposal of all paint and other material removed from the bridge. The cleanup and disposal of material from the surface preparation for painting and actual painting must comply with all appropriate regulations.
- Pictures and conceptual drawing should be submitted with the initial request from the community to simplify the initial review and comment by the Railroad.
- Work site safety plan, including keeping all personnel away from the tracks and fall protection measures where required.

Section 2.07 – Quiet Zones

Summary

The Railroad will fully comply with the train horn rules as specified by the FRA, which provides requirements for the sounding of locomotive horns when approaching public highway-rail grade crossings.

The rule also provides guidance for conditions under which a public authority with jurisdiction over the roadway crossing railroad tracks may apply for and establish Quiet Zones. A Quiet Zone is a section of a rail line that contains one or more consecutive public crossings at which locomotive horns are not routinely sounded. (For full details on the rules, please visit the FRA web site at www.fra.dot.gov or contact the FRA’s Office of Safety at **202-493-6299**). While the complete responsibility for completion of a Quiet Zone analysis and application rests with the public authority, it should be done in conjunction with the Railroad.

Each crossing has a unique DOT inventory identification number posted at the crossing. There is often more than one crossing on the same road. The crossing number (i.e., 654321D) must be used to identify the specific crossing in all communications with the Railroad to reduce possible confusion about the specific location. The rule clearly defines requirements that must be satisfied by the public authority requesting that a Quiet Zone be established or continued.

Process

- Agency contacts the FRA on intent.
- Agency contacts PPD on intent.
- Agency/sponsor issues a legal reimbursement document or PE agreement.
- PPD assigns GEC.
- GEC will schedule a diagnostic review with agency/PPD/FRA/state DOT.
 - Please plan out your SSMs and ASMs in the FRA calculator prior to the site review.
- PPD to provide OOM for all SSMs and ASMs dictated by the review.
- Agency works with FRA to establish a notice of intent (NOI).
- Agency mails NOI and FRA calculator to PPD.
 - Please note that the estimate for ASMs and SSMs in the calculator is to not account for actual railroad expenses. For these, refer to OOM from PPD.
- All designs of ASMs and SSMs are reviewed by the Railroad at the expense of the agency.
- All ASMs and SSMs requiring modifications to the Railroad or signal system will be designed by the Railroad at the agency’s expense (**see Section 2.03**).
- GEC supplies estimate to complete (including flagmen coverage if needed).
- Agency issues NTP for construction with a legal reimbursement document or construction agreement.
- Project work is completed (CEI may be required).
- The Railroad places “No Horn” signs.
- Agency and the Railroad signoff.
- Agency coordinates with FRA for final review.
- Agency works with FRA on notice of establishment (NOE).
- Agency mails certified copy of NOE to FRA/PPD/and state DOT.
- The Railroad complies within timeframe set in the rule.
- FRA database is updated.