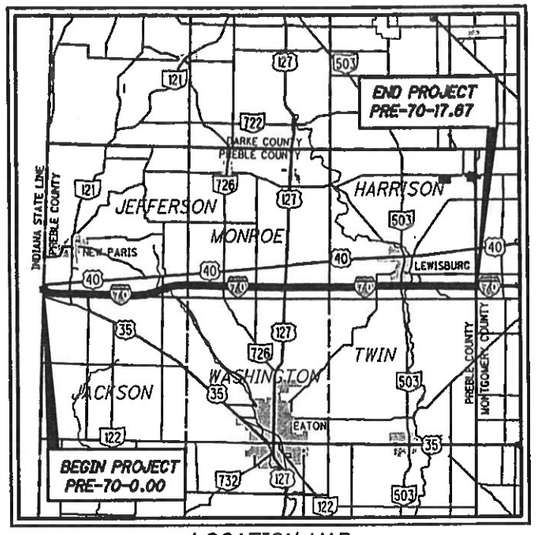
PRE - 70 - 0.00 Part 1&2
200043 PID - 96654
Dist 8 3/12/2020



LOCATION MAP

LATITUDE: 39°50'08" LONGITUDE: 84°38'59"

SCALE IN MILES

0 3 6 9 12

N

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

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

PRE-70-0.00

PART 1

JACKSON TOWNSHIP
JEFFERSON TOWNSHIP
MONROE TOWNSHIP
HARRISON TOWNSHIP

FOR PART 2, SEE PRE-35-1.95

PROJECT DESCRIPTION

REPAIR AND RESURFACING OF ALL LANES, SHOULDERS, RAMPS AND MEDIAN CROSSOVERS ON I.R. 70 IN PREBLE COUNTY. THE PROJECT INCLUDES 22 BRIDGES THAT RECEIVE A RANGE OF WORK FROM SEALING TO DECK REPLACEMENT. THE EASTBOUND REST AREA IS ALSO INCLUDED FOR CONCRETE PAVEMENT REPAIR AND RESURFACING OF ASPHALT RAMPS. THE EASTBOUND WEIGH STATION ASPHALT PARKING AREA AND RAMPS ARE TO BE RESURFACED. REHABILIATION OF EXISTING LIGHTING SYSTEMS WEIGH STATION AND U.S. 127 INTERCHANGE. INSTALLATION OF PARTIAL INTERCHANGE LIGHTING AT U.S. 35 AND S.R. 503 INTERCHANGES. REMOVAL OF EXISTING PAVEMENT, LIGHTING AND OTHER APPURTENANCES IN THE FORMER WESTBOUND REST AREA.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A*
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A*
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A*

* MAINTENANCE PROJECT

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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

INDEX OF SHEETS:

SHEETS NOT USED: 53, 63, 64, 65
ADDITIONAL SHEETS: 28A, 36A, 48A, 48B

DESIGN DESIGNATION

	I.R. 70 0.00-1.66	I.R. 70 1.66-9.91	I.R. 70 9.91-14.66	I.R. 70 14.66-17.67	S.R. 320	S.R. 726
CURRENT ADT (2020)	38000	32000	35000	38000	1300	1200
DESIGN YEAR ADT (2040)	54000	39000	42000	44000	1300	1300
DESIGN HOURLY VOLUME (2040)	4900	3500	3800	4400	120	160
DIRECTIONAL DISTRIBUTION	53%	52%	50%	52%	52%	55%
TRUCKS (24 HOUR B&C)	35%	37%	30%	31%	7%	7%
DESIGN SPEED	70MPH	70MPH	70MPH	70MPH	45MPH	55MPH
LEGAL SPEED	70MPH	70MPH	70MPH	70MPH	45MPH	55MPH

DESIGN FUNCTIONAL CLASSIFICATION:
I.R. 70 - 01 INTERSTATE (RURAL)
S.R. 320 - 05 MAJOR COLLECTOR (RURAL)
S.R. 726 - 05 MAJOR COLLECTOR (RURAL)
NHS PROJECT ..... YES

DESIGN EXCEPTIONS

VERTICAL ALIGNMENT: STOPPING SIGHT DISTANCE — APPROVAL DATE 12/04/2018 — SHEET No. 40

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
Stantec
11687 Lebanon Road
Cincinnati OH 45241
(513) 842-8200
CARPENTER MARTY transportation
6812 SINGLETREE DR. COLUMBUS, OH 43229
614.656.2434 • CMTRANS.COM

ENGINEERS SEAL:
STATE OF OHIO — STEVEN N SHADIX E-63369 — REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: OCTOBER 28, 2019

ENGINEERS SEAL:
SHEETS 118-126
STATE OF OHIO — SHANE THOMAS KALINOSKI 73569 — REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: OCTOBER 25, 2019

ENGINEERS SEAL:
SHEETS 73-117, 127-147
STATE OF OHIO — MICHAEL R. STURDEVANT E-49854 — REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: OCTOBER 25, 2019

PARTS 1 AND 2

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	MGS-2.1	1/19/18	HL-30.21	1/17/14	MT-98.20	4/19/19	TC-22.10	10/18/13
BP-2.2	7/18/08	MGS-3.1	1/19/18	HL-30.22	1/17/14	MT-98.22	1/20/17	TC-41.20	10/18/13
BP-2.4	7/19/13	MGS-3.2	1/18/13	HL-40.10	1/20/17	MT-98.28	1/20/17	TC-41.30	10/18/13
BP-2.5	7/19/13	MGS-4.2	7/19/13	HL-50.21	1/18/19	MT-98.29	7/19/19	TC-41.50	10/18/13
BP-2.6	7/15/16	MGS-4.3	1/18/13	HL-60.11	7/21/17	MT-99.20	4/19/19	TC-42.20	10/18/13
BP-3.1	10/18/19	MGS-5.2	7/15/16	HL-60.21	7/20/18	MT-99.30	1/19/18	TC-52.10	10/18/13
BP-4.1	7/19/13	MGS-5.3	7/15/16	HL-60.31	1/18/19	MT-99.60	7/15/16	TC-52.20	7/20/18
BP-5.1	1/18/19	MGS-6.1	1/19/18	MT-95.30	7/19/19	MT-100.00	1/15/16	TC-61.30	7/19/19
BP-6.1	7/19/13	RM-4.2	10/24/19	MT-95.31	7/19/19	MT-101.60	1/20/17	TC-65.10	1/17/14
BP-9.1	1/18/19	AS-1-15	7/17/15	MT-95.40	1/20/17	MT-101.70	7/20/18	TC-65.11	7/21/17
DM-1.1	7/21/17	EXJ-4-87	1/19/18	MT-95.41	7/21/17	MT-101.75	7/15/16	TC-71.10	1/19/18
DM-1.2	1/18/13	SBR-1-13	7/20/18	MT-95.45	1/17/20	MT-101.90	7/21/17	TC-72.20	7/20/18
DM-4.2	7/20/12	HL-10.11	7/19/19	MT-95.50	7/21/17	MT-102.30	10/16/15	TC-73.20	7/21/17
DM-4.4	1/15/16	HL-10.12	1/20/17	MT-95.70	7/20/18	MT-103.10	1/19/18	TC-81.10	7/15/16
F-21	7/20/18	HL-10.13	7/20/18	MT-97.10	4/19/19	MT-104.10	10/16/15	TC-84.20	10/18/13
F-3.4	7/19/13	HL-20.11	4/21/17	MT-98.10	1/20/17	MT-105.10	7/19/13		
MGS-1.1	1/19/18	HL-30.11	7/19/19	MT-98.11	4/19/19	TC-21.20	7/20/18		

SUPPLEMENTAL SPECIFICATIONS

800	10/18/19
808	1/18/19
809	10/18/19
813	10/19/18
821	4/20/12
832	10/19/18
843	10/18/19
878	1/18/19
908	10/20/17
913	4/21/17
921	4/20/12

SPECIAL PROVISIONS

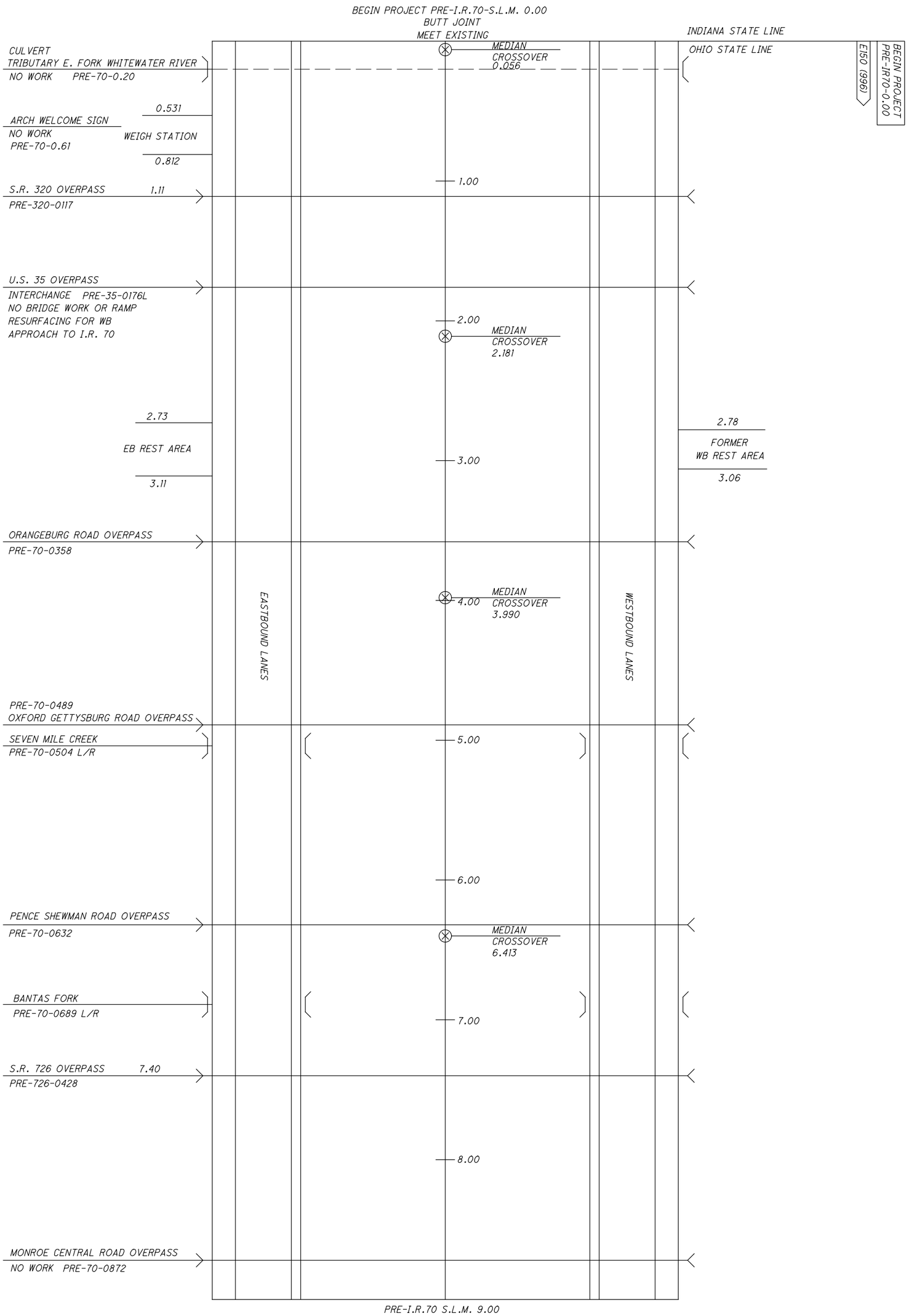
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE FIVE LOCATIONS AS DESCRIBED ON SHEET 21 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

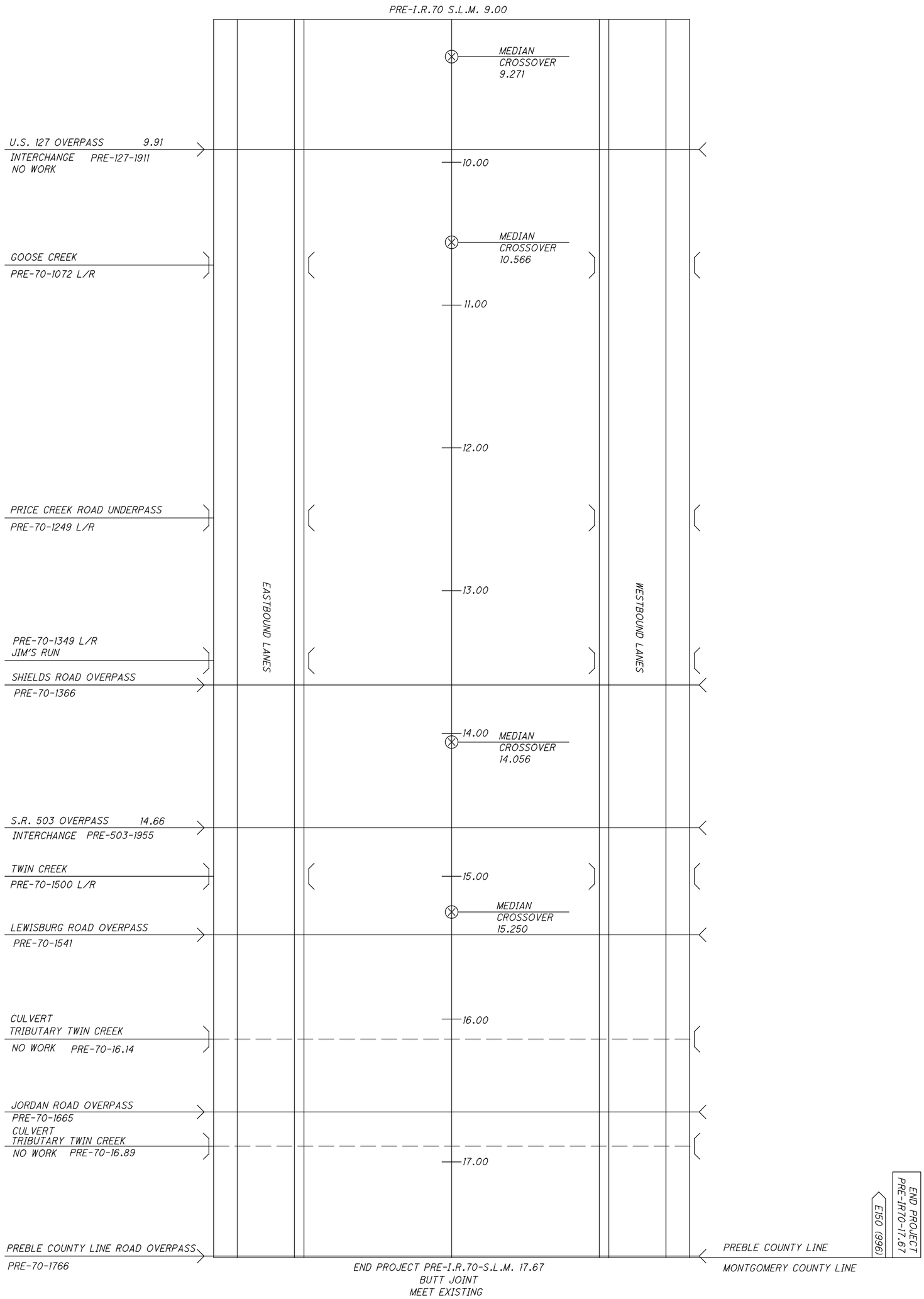
APPROVED Jamey K Cogswell
DATE 11/7/19 DISTRICT DEPUTY DIRECTOR

APPROVED
DATE 11/8/19 DIRECTOR, DEPARTMENT OF TRANSPORTATION

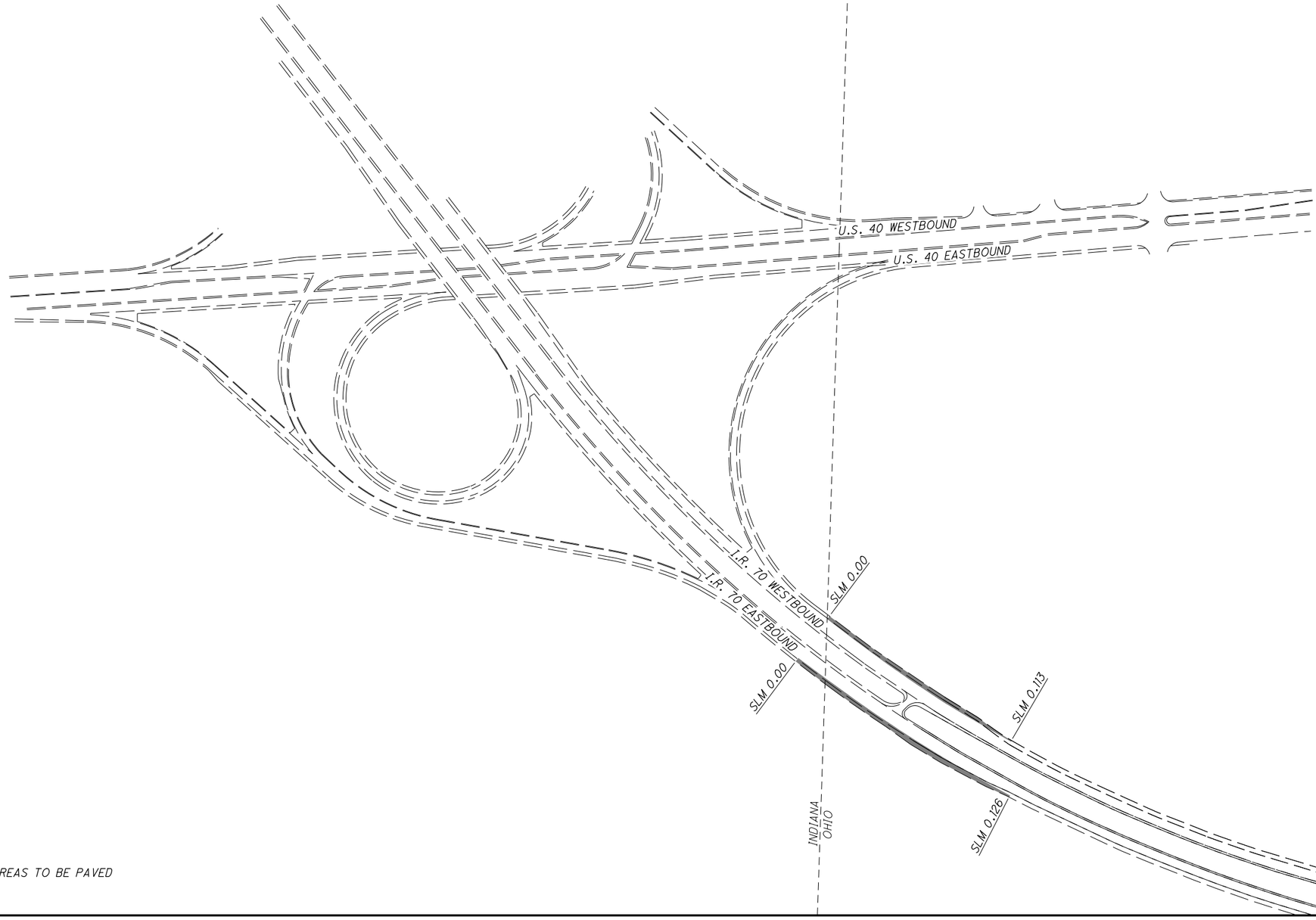
CONFORMED SET

FEDERAL PROJECT NO. E150(996)
PID NO. 96654
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
PRE-70-0.00 PART 1
1/147


BEGIN PROJECT PRE-I.R.70-S.L.M. 0.00
BUTT JOINT
MEET EXISTING
INDIANA STATE LINE
OHIO STATE LINE
E150 (1996)
BEGIN PROJECT PRE-IR70-0.00
CULVERT
TRIBUTARY E. FORK WHITEWATER RIVER
NO WORK PRE-70-0.20
MEDIAN CROSSOVER 0.056
0.531
ARCH WELCOME SIGN
NO WORK
PRE-70-0.61
WEIGH STATION
0.812
1.00
S.R. 320 OVERPASS 1.11
PRE-320-0117
U.S. 35 OVERPASS
INTERCHANGE PRE-35-0176L
NO BRIDGE WORK OR RAMP
RESURFACING FOR WB
APPROACH TO I.R. 70
2.00
MEDIAN CROSSOVER 2.181
2.73
EB REST AREA
3.11
2.78
FORMER WB REST AREA
3.06
3.00
ORANGEBURG ROAD OVERPASS
PRE-70-0358
EASTBOUND LANES
MEDIAN CROSSOVER 3.990
4.00
WESTBOUND LANES
PRE-70-0489
OXFORD GETTYSBURG ROAD OVERPASS
SEVEN MILE CREEK
PRE-70-0504 L/R
5.00
6.00
PENCE SHEWMAN ROAD OVERPASS
PRE-70-0632
MEDIAN CROSSOVER 6.413
BANTAS FORK
PRE-70-0689 L/R
7.00
S.R. 726 OVERPASS 7.40
PRE-726-0428
8.00
MONROE CENTRAL ROAD OVERPASS
NO WORK PRE-70-0872
PRE-I.R.70 S.L.M. 9.00



SCHEMATIC
PRE-70-0.00-0.143
I.R. 70 & U.S. 40



N

0 75 150 300
HORIZONTAL SCALE IN FEET

CALCULATED LBA
CHECKED PJD

SCHEMATIC
I.R. 70 AND U.S. 40

PRE-70-0.00

4
147

V:\1736\active\173620094\engineering\96654\Design\Roadway\Sheets\96654_GP006.dgn 10/25/2019 11:48:13 AM latchley

SCHEMATIC
PRE-70-0.53-0.81
WEIGH STATION

I.R. 70 WESTBOUND

I.R. 70 EASTBOUND

RAMP A EASTBOUND

RAMP C EASTBOUND

SLM 0.416

SLM 0.531

SLM 0.812

SLM 1.111

OH-Comb

S.R. 320

OH-Comb

OH-Comb

SLM 0.614

SLM 0.638

SLM 0.677

LOT B

EX CONCRETE PAVEMENT
TO REMAIN

PARKING
LOT LIMITS

AREAS TO BE PAVED

N

0 75 150 300
HORIZONTAL
SCALE IN FEET

CALCULATED LBA
CHECKED PJD

SCHEMATIC
WEIGH STATION

PRE-70-0.00

5
147

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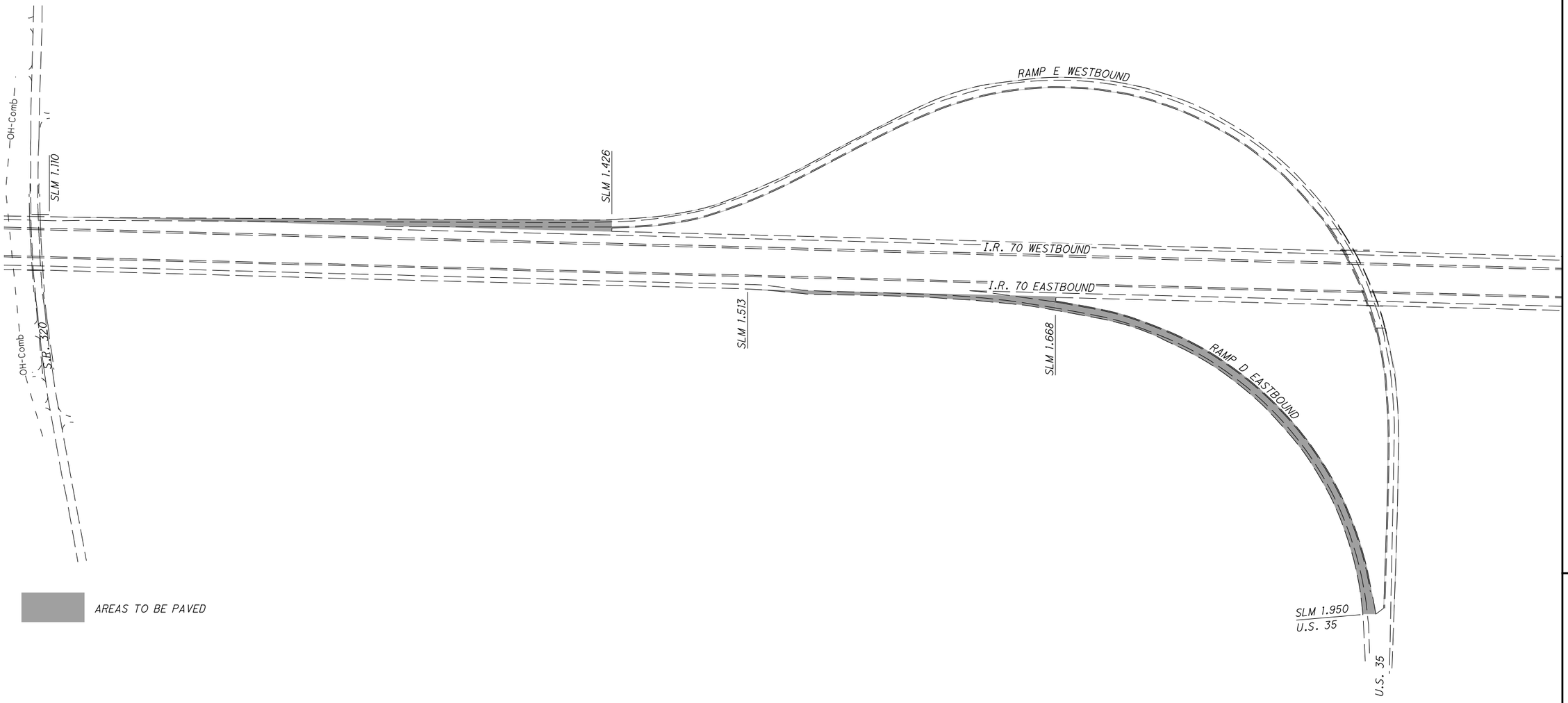
SCHEMATIC
PRE-70-1.83
INTERCHANGE
I.R. 70 AND U.S. 35



HORIZONTAL SCALE IN FEET
0 75 150 300

CALCULATED LBA
CHECKED PJD

SCHEMATIC
I.R. 70 AND U.S. 35

PRE-70-0.00

6
147

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SCHEMATIC
PRE-70-2.59-3.13
REST AREA

SLM 2.400

REMOVAL WORK FOR WESTBOUND AREA

SLM 3.410

FORMER WESTBOUND
REST AREA

OH-Comb

OH-E

I.R. 70 WESTBOUND

I.R. 70 EASTBOUND

DO NOT DISTURB
ASPHALT PARKING LOT

SLM 2.434

SLM 2.590

SLM 3.133

SLM 3.367
EAST LIMIT OF
RAMP PAVING

AREAS TO BE PAVED

CONCRETE PAVEMENT JOINT REPAIR AREA FOR EASTBOUND REST AREA
SEE SHEET NOS. 47-48

HORIZONTAL
SCALE IN FEET
0 75 150 300

CALCULATED LBA
CHECKED PJD

SCHEMATIC
EASTBOUND REST AREA

PRE-70-0.00

7
147

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SCHEMATIC
PRE-70-9.91
INTERCHANGE
I.R. 70 AND U.S. 127

HORIZONTAL SCALE IN FEET
0 100 200 400

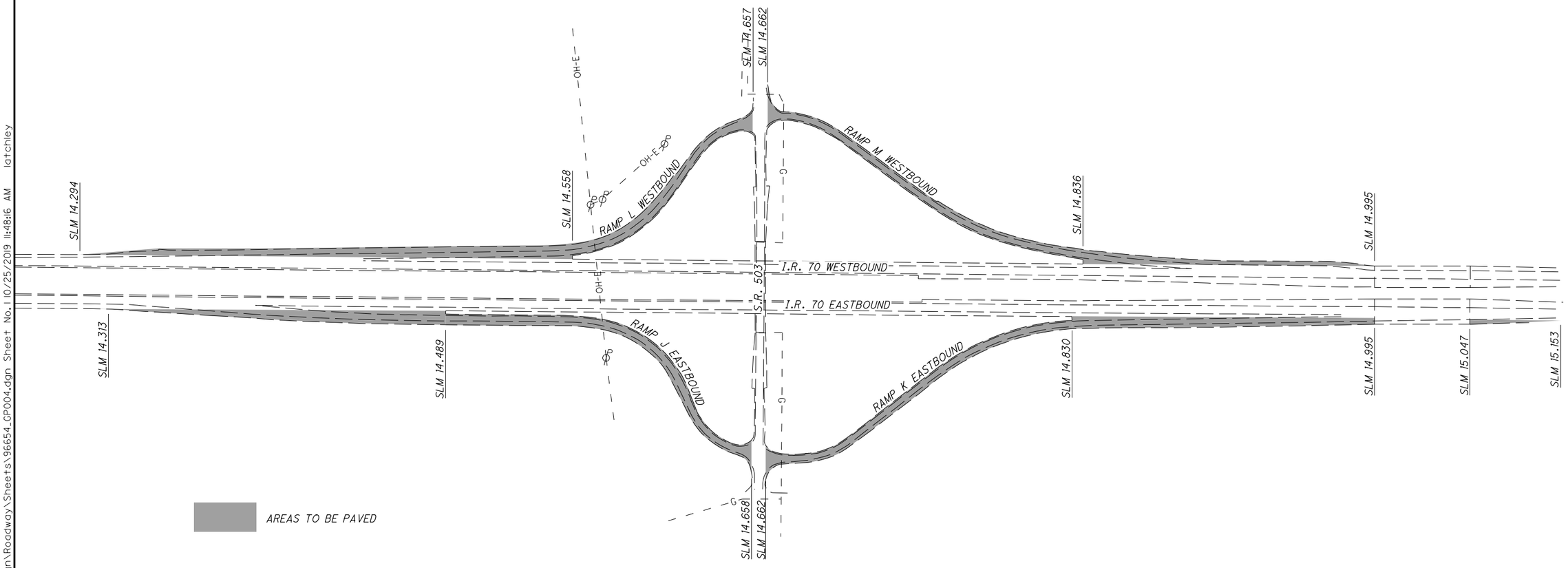
CALCULATED LBA
CHECKED PJD

SCHEMATIC
I.R. 70 AND U.S. 127

PRE-70-0.00

8
147

SCHEMATIC
PRE-70-14.66
INTERCHANGE
I.R. 70 AND S.R. 503



HORIZONTAL SCALE IN FEET
0 75 150 300

CALCULATED LBA
CHECKED PJD

SCHEMATIC
I.R. 70 AND S.R. 503

PRE-70-0.00

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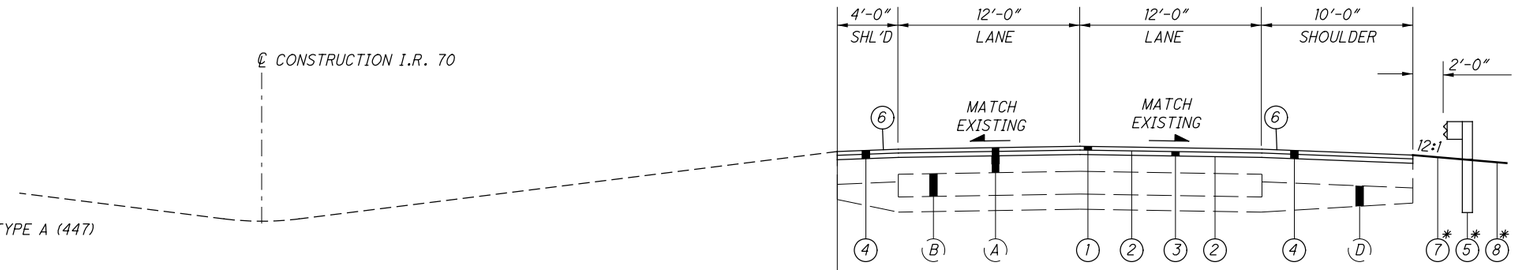
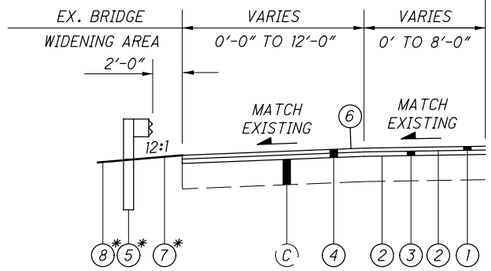
LEGEND

(1) ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)
(2) ITEM 407, NON-TRACKING TACK COAT
(3) ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
(4) ITEM 254, 3¼" PAVEMENT PLANING ASPHALT CONCRETE
(5) ITEM 606, GUARDRAIL, TYPE MGS
(6) ITEM 618, RUMBLE STRIPS, (ASPHALT CONCRETE)
(7) ITEM 209, RESHAPING UNDER GUARDRAIL
(8) ITEM 659, SEEDING AND MULCHING

(A) 9"-10" EXISTING ASPHALT PAVEMENT
(B) 9" EXISTING CONCRETE PAVEMENT
(C) 18" EXISTING ASPHALT PAVEMENT
(D) AGGREGATE BASE



TYPICAL NORMAL SECTION
SLM 0.00 I.R. 70 TO SLM 17.67 I.R. 70



* SEE SHEET NOS. 34-35 FOR GUARDRAIL LIMITS. DO NOT DISTURB EXISTING GRADED SHOULDER EXCEPT UNDER PROPOSED GUARDRAIL.

NOTE:
EXISTING GUARDRAIL POSTS ARE IN 3" OF ASPHALT. FOR REMOVAL QUANTITIES, SEE SHEET NOS. 34-35.

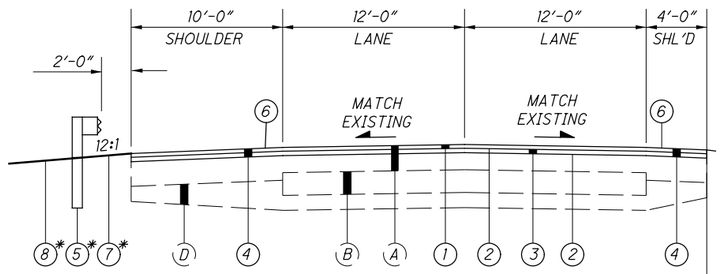
1	5.040-5.063 SEVEN MILE CREEK BRIDGE	4.815-5.040/5.063-5.310
2	6.890-6.911 BANTAS FORK BRIDGE	6.638-6.890/6.911-7.167
3	10.715-10.737 GOOSE CREEK BRIDGE	10.468-10.715/10.737-10.989
4	12.487-12.538 PRICE CREEK ROAD BRIDGE	12.242-12.487/12.538-12.786
5	13.476-13.488 JIMS RUN BRIDGE	13.225-13.476/13.488-13.740
6	14.995-15.047 TWIN CREEK BRIDGE	14.749-14.995/15.047-15.296

COUNTY	ROUTE	DIRECTION	STRAIGHT LINE MILEAGE FROM	STRAIGHT LINE MILEAGE TO	LENGTH	TYPICAL PAVEMENT WIDTH	AREA (COMPUTER GENERATED)	254 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE (AREA/9)	254 PATCHING PLANED SURFACE (AREA/9)x0.01	407 NON-TRACKING TACK COAT (AREAx0.070/9)x2	442 AREA FOR ANTI-SEGREGATION EQUIPMENT	442 ANTI-SEGREGATION EQUIPMENT (AREAx0.271/27)	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN (AREAx0.146/27)	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447) (AREAx0.125/27)	618 RUMBLE STRIPS, (ASPHALT CONCRETE)
			FROM	TO	FOOT	FOOT	SQ FT	SQ YD	SQ YD	GAL	SQ FT	CU YD	CU YD	CU YD	MILE
PREBLE	I.R. 70	EASTBOUND	0.000	17.670	93297.60	38'	3508992.80	389888.09	3898.88	54584.33	2216205.98	22244.14	18974.55	16245.34	34.98
PREBLE	I.R. 70	EASTBOUND	1 4.815	5.040	-	VARIES 0'-20'	12059.86	1339.98	13.40	187.60			65.21	55.83	
PREBLE	I.R. 70	EASTBOUND	1 5.063	5.310	-	VARIES 20'-0'	12855.74	1428.42	14.28	199.98			69.52	59.52	
PREBLE	I.R. 70	EASTBOUND	2 6.638	6.890	-	VARIES 0'-20'	13572.35	1508.04	15.08	211.13			73.39	62.83	
PREBLE	I.R. 70	EASTBOUND	2 6.911	7.167	-	VARIES 20'-0'	11341.26	1260.14	12.60	176.42			61.33	52.51	
PREBLE	I.R. 70	EASTBOUND	3 10.468	10.715	-	VARIES 4'-20'	14798.17	1644.24	16.44	230.19			80.02	68.51	
PREBLE	I.R. 70	EASTBOUND	3 10.737	10.989	-	VARIES 20'-4'	15214.93	1690.55	16.91	236.68			82.27	70.44	
PREBLE	I.R. 70	EASTBOUND	4 12.242	12.487	-	VARIES 4'-20'	13010.12	1445.57	14.46	202.38			70.35	60.23	
PREBLE	I.R. 70	EASTBOUND	4 12.538	12.786	-	VARIES 20'-4'	13210.15	1467.79	14.68	205.49			71.43	61.16	
PREBLE	I.R. 70	EASTBOUND	5 13.225	13.476	-	VARIES 0'-20'	12801.63	1422.40	14.22	199.14			69.22	59.27	
PREBLE	I.R. 70	EASTBOUND	5 13.488	13.740	-	VARIES 20'-4'	12635.21	1403.91	14.04	196.55			68.32	58.50	
PREBLE	I.R. 70	EASTBOUND	6 14.749	14.995	-	VARIES 4'-20'	14009.75	1556.64	15.57	217.93			75.76	64.86	
PREBLE	I.R. 70	EASTBOUND	6 15.047	15.296	-	VARIES 20'-4'	14892.58	1654.73	16.55	231.66			80.53	68.95	
TOTALS CARRIED TO SHEET NO. 16								407710.50	4077.11	57079.48		22244.14	19841.90	16987.95	34.98

CALCULATED LBA
CHECKED PJD

TYPICAL SECTION I.R. 70 EASTBOUND

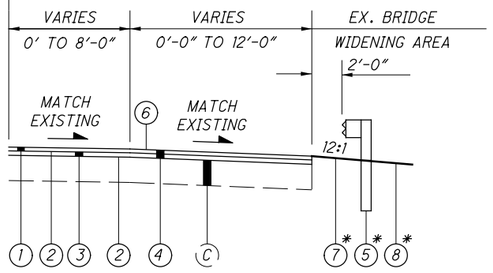
PRE-70-0.00



℄ CONSTRUCTION I.R. 70

TYPICAL NORMAL SECTION

SLM 0.00 I.R. 70 TO SLM 17.67 I.R. 70



* SEE SHEET NOS. 34-35 FOR GUARDRAIL LIMITS. DO NOT DISTURB EXISTING GRADED SHOULDER EXCEPT UNDER PROPOSED GUARDRAIL.

NOTE:
EXISTING GUARDRAIL POSTS ARE IN 3" OF ASPHALT. FOR REMOVAL QUANTITIES, SEE SHEET NOS. 34-35.

1	5.035-5.058 SEVEN MILE CREEK BRIDGE	4.813-5.035/5.058-5.307
2	6.890-6.911 BANTAS FORK BRIDGE	6.641-6.890/6.911-7.159
3	10.721-10.743 GOOSE CREEK BRIDGE	10.470-10.721/10.743-10.990
4	12.486-12.538 PRICE CREEK ROAD BRIDGE	12.238-12.486/12.538-12.784
5	13.470-13.482 JIMS RUN BRIDGE	13.215-13.470/13.482-13.731
6	14.995-15.047 TWIN CREEK BRIDGE	14.747-14.995/15.047-15.295

LEGEND

(1) ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)
(2) ITEM 407, NON-TRACKING TACK COAT
(3) ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
(4) ITEM 254, 3¼" PAVEMENT PLANING ASPHALT CONCRETE
(5) ITEM 606, GUARDRAIL, TYPE MGS
(6) ITEM 618, RUMBLE STRIPS, (ASPHALT CONCRETE)
(7) ITEM 209, RESHAPING UNDER GUARDRAIL
(8) ITEM 659, SEEDING AND MULCHING

(A) 9"-10" EXISTING ASPHALT PAVEMENT
(B) 9" EXISTING CONCRETE PAVEMENT
(C) 18" EXISTING ASPHALT PAVEMENT

COUNTY	ROUTE	DIRECTION	STRAIGHT LINE MILEAGE FROM	STRAIGHT LINE MILEAGE TO	LENGTH	TYPICAL PAVEMENT WIDTH	AREA (COMPUTER GENERATED)	254 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE (AREA/9)	254 PATCHING PLANED SURFACE (AREA/9)x0.01	407 NON-TRACKING TACK COAT (AREAx0.070/9)x2	442 AREA FOR ANTI-SEGREGATION EQUIPMENT	442 ANTI-SEGREGATION EQUIPMENT (AREAx0.271/27)	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN (AREAx0.146/27)	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447) (AREAx0.125/27)	618 RUMBLE STRIPS, (ASPHALT CONCRETE)
			FROM	TO	FOOT	FOOT	SQ FT	SQ YD	SQ YD	GAL	SQ FT	CU YD	CU YD	CU YD	MILE
PREBLE	I.R. 70	WESTBOUND	0.000	17.670	93297.60	38'	3508792.80	389865.87	3898.66	54581.22	2216079.27	22242.87	18973.47	16244.41	34.98
PREBLE	I.R. 70	WESTBOUND	1 4.813	5.035	-	VARIES 0'-20'	11606.43	1289.60	12.90	180.54			62.76	53.73	
PREBLE	I.R. 70	WESTBOUND	1 5.058	5.307	-	VARIES 20'-4'	12060.07	1340.01	13.40	187.60			65.21	55.83	
PREBLE	I.R. 70	WESTBOUND	2 6.641	6.890	-	VARIES 4'-20'	13975.91	1552.88	15.53	217.40			75.57	64.70	
PREBLE	I.R. 70	WESTBOUND	2 6.911	7.159	-	VARIES 20'-4'	12623.18	1402.58	14.03	196.36			68.26	58.44	
PREBLE	I.R. 70	WESTBOUND	3 10.47	10.721	-	VARIES 4'-20'	16323.83	1813.76	18.14	253.93			88.27	75.57	
PREBLE	I.R. 70	WESTBOUND	3 10.743	10.990	-	VARIES 20'-4'	16147.78	1794.20	17.94	251.19			87.32	74.76	
PREBLE	I.R. 70	WESTBOUND	4 12.238	12.486	-	VARIES 4'-20'	13636.42	1515.16	15.15	212.12			73.74	63.13	
PREBLE	I.R. 70	WESTBOUND	4 12.538	12.784	-	VARIES 20'-4'	13713.46	1523.72	15.24	213.32			74.15	63.49	
PREBLE	I.R. 70	WESTBOUND	5 13.215	13.470	-	VARIES 4'-20'	15814.41	1757.16	17.57	246.00			85.51	73.21	
PREBLE	I.R. 70	WESTBOUND	5 13.482	13.731	-	VARIES 20'-4'	14191.61	1576.85	15.77	220.76			76.74	65.70	
PREBLE	I.R. 70	WESTBOUND	6 14.747	14.995	-	VARIES 4'-20'	15163.64	1684.85	16.85	235.88			82.00	70.20	
PREBLE	I.R. 70	WESTBOUND	6 15.047	15.295	-	VARIES 20'-4'	13535.66	1503.96	15.04	210.55			73.19	62.67	
TOTALS CARRIED TO SHEET NO. 16								408620.60	4086.22	57206.87		22242.87	19886.19	17025.84	34.98

CALCULATED LBA
CHECKED PJD

TYPICAL SECTION I.R. 70 WESTBOUND

PRE-70-0.00

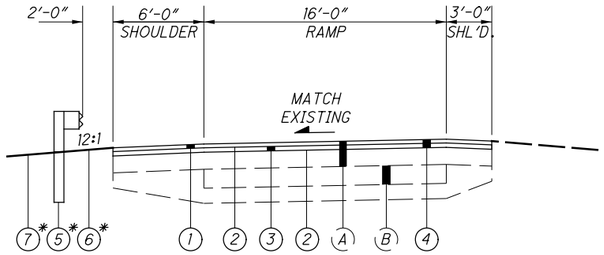
LEGEND

(1) ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)
(2) ITEM 407, NON-TRACKING TACK COAT
(3) ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
(4) ITEM 254, 3¼" PAVEMENT PLANING ASPHALT CONCRETE
(5) ITEM 606, GUARDRAIL, TYPE MGS
(6) ITEM 209, RESHAPING GUARDRAIL
(7) ITEM 659, SEEDING AND MULCHING

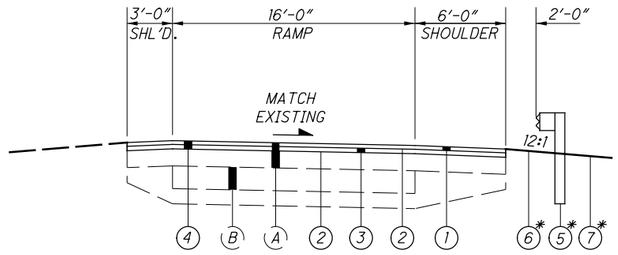
(A) 9"-10" EXISTING ASPHALT PAVEMENT
(B) 9" EXISTING CONCRETE PAVEMENT

* SEE SHEET NOS. 34-35 FOR GUARDRAIL LIMITS. DO NOT DISTURB EXISTING GRADED SHOULDER EXCEPT UNDER PROPOSED GUARDRAIL.

NOTE:
EXISTING GUARDRAIL POSTS ARE IN 3" OF ASPHALT. FOR REMOVAL QUANTITIES, SEE SHEET NOS. 34-35.



WESTBOUND TYPICAL NORMAL RAMP SECTION



EASTBOUND TYPICAL NORMAL RAMP SECTION

COUNTY	ROUTE	RAMPS	STRAIGHT LINE MILEAGE FROM	STRAIGHT LINE MILEAGE TO	TYPICAL PAVEMENT WIDTH	AREA (COMPUTER GENERATED)	254 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE (AREA/9)	254 PATCHING PLANED SURFACE (AREA/9)x0.01	407 NON-TRACKING TACK COAT (AREAx0.070/9)x2	442 COMPUTER GENERATED AREA FOR ANTI-SEGREGATION EQUIPMENT	442 ANTI-SEGREGATION EQUIPMENT (AREAx0.271/27)	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN (AREAx0.146/27)	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447) (AREAx0.125/27)
			FROM	TO	FOOT	SQ FT	SQ YD	SQ YD	GAL	SQ FT	CU YD	CU YD	CU YD
		EASTBOUND											
PREBLE	I.R. 70	EXIT RAMP A	0.531	0.638	25'	13540.78	1504.53	15.05	210.63	9180.51	92.15	73.22	62.69
PREBLE	I.R. 70	ENTRANCE RAMP C	0.677	0.812	25'	19016.10	2112.90	21.13	295.81	11306.46	113.48	102.83	88.04
PREBLE	U.S. 35	EXIT RAMP D	1.668	1.950	VARIES 25'-36.84'	38863.35	4318.15	43.18	604.54	23210.76	232.97	210.15	179.92
PREBLE	I.R. 70	EXIT RAMP F	9.736	9.891	25'	24197.42	2688.60	26.89	376.40	13879.05	139.30	130.85	112.03
PREBLE	I.R. 70	ENTRANCE RAMP G	9.942	10.091	25'	23531.96	2614.66	26.15	366.05	14003.48	140.55	127.25	108.94
PREBLE	I.R. 70	EXIT RAMP J	14.489	14.658	VARIES 25'-123.81'	32012.60	3556.96	35.57	497.97	18105.78	181.73	173.11	148.21
PREBLE	I.R. 70	ENTRANCE RAMP K	14.662	14.830	VARIES 118.04'-25'	27785.61	3087.29	30.87	432.22	16586.69	166.48	150.25	128.64
		WESTBOUND											
PREBLE	I.R. 70	ENTRANCE RAMP H	9.746	9.902	25'	23778.71	2642.08	26.42	369.89	14601.73	146.56	128.58	110.09
PREBLE	I.R. 70	EXIT RAMP I	9.949	10.109	25'	25471.77	2830.20	28.30	396.23	14518.08	145.72	137.74	117.92
PREBLE	I.R. 70	ENTRANCE RAMP L	14.558	14.657	VARIES 25'-96.46'	21830.75	2425.64	24.26	339.59	11380.50	114.23	118.05	101.07
PREBLE	I.R. 70	EXIT RAMP M	14.662	14.836	VARIES 130.3'-25'	27618.41	3068.71	30.69	429.62	17222	172.86	149.34	127.86
TOTALS CARRIED TO SHEET NO. 16							30849.72	308.51	4318.95		1646.03	1501.37	1285.41

CALCULATED LBA
CHECKED PJD

TYPICAL RAMP SECTION EAST AND WESTBOUND

PRE-70-0.00

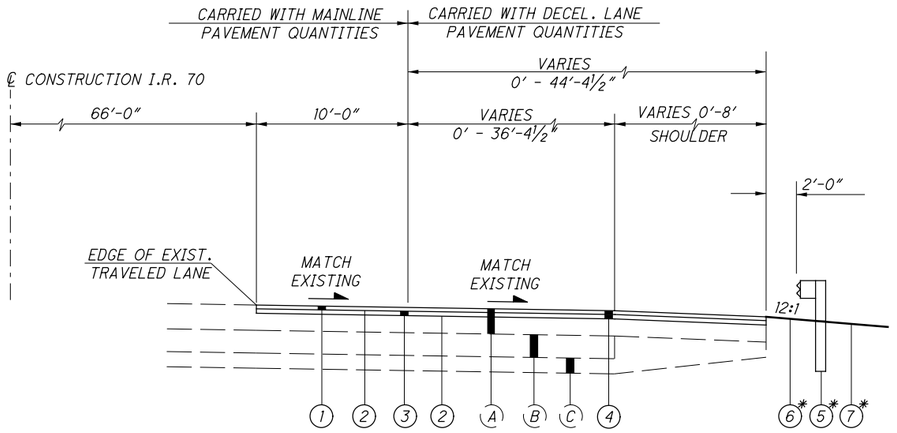
LEGEND

(1) ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)
(2) ITEM 407, NON-TRACKING TACK COAT
(3) ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
(4) ITEM 254, 3¼" PAVEMENT PLANING ASPHALT CONCRETE
(5) ITEM 606, GUARDRAIL, TYPE MGS
(6) ITEM 209, RESHAPING UNDER GUARDRAIL
(7) ITEM 659, SEEDING AND MULCHING

(A) 9"-10" EXISTING ASPHALT PAVEMENT
(B) 9" EXISTING CONCRETE PAVEMENT
(C) AGGREGATE BASE

* SEE SHEET NOS. 34-35 FOR GUARDRAIL LIMITS. DO NOT DISTURB EXISTING GRADED SHOULDER EXCEPT UNDER PROPOSED GUARDRAIL.

NOTE:
EXISTING GUARDRAIL POSTS ARE IN 3" OF ASPHALT. FOR REMOVAL QUANTITIES, SEE SHEET NOS. 34-35.



TYPICAL DECELERATION LANE

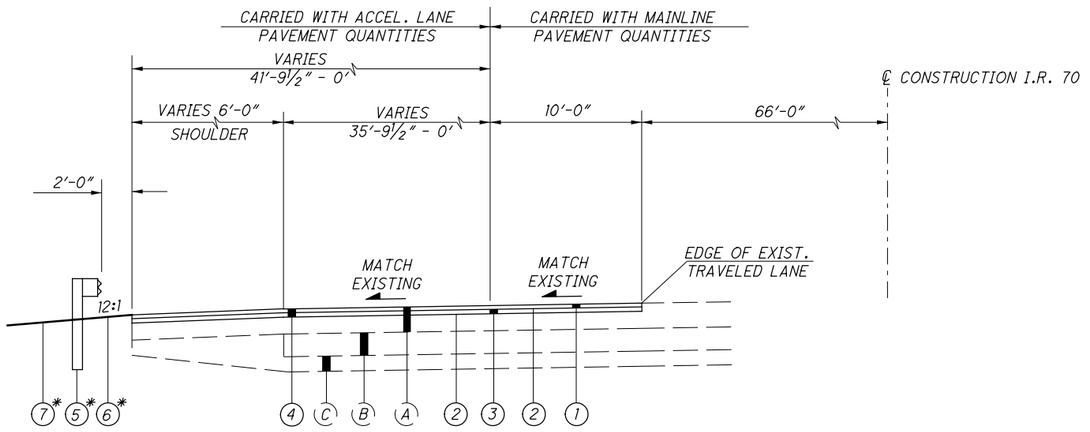
COUNTY	ROUTE	DECELERATION LANE	STRAIGHT LINE MILEAGE		TYPICAL PAVEMENT WIDTH	AREA (COMPUTER GENERATED)	254	254	407	442		442	442
							3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE (AREA/9)	PATCHING PLANED SURFACE (AREA/9)x0.01	NON-TRACKING TACK COAT (AREAx0.070/9)x2	COMPUTER GENERATED AREA FOR ANTI-SEGREGATION EQUIPMENT	ANTI-SEGREGATION EQUIPMENT (AREAx0.271/27)	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN (AREAx0.146/27)	1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447) (AREAx0.125/27)
			FROM	TO	FOOT	SQ FT	SQ YD	SQ YD	GAL	SQ FT	CU YD	CU YD	CU YD
		EASTBOUND											
PREBLE	I.R. 70	EXIT RAMP A	0.416	0.531	VARIES 0'-38.86'	10470.32	1163.37	11.63	162.87	7583.27	76.11	56.62	48.47
PREBLE	I.R. 70	EXIT RAMP D	1.513	1.668	VARIES 0'-39.5'	12572.93	1396.99	13.97	195.58	10332.93	103.71	67.99	58.21
PREBLE	I.R. 70	REST AREA EXIT RAMP	2.434	2.590	VARIES 0'-42.29'	16327.49	1814.17	18.14	253.98	9395.70	94.30	88.29	75.59
PREBLE	I.R. 70	EXIT RAMP F	9.578	9.736	VARIES 0'-44.38'	15450.21	1716.69	17.17	240.34	9879.92	99.17	83.55	71.53
PREBLE	I.R. 70	EXIT RAMP J	14.313	14.489	VARIES 0'-39.77'	26402.50	2933.61	29.34	410.71	12686.87	127.34	142.77	122.23
		WESTBOUND											
PREBLE	I.R. 70	EXIT RAMP ⊛	0.000	0.113	VARIES 10'-0'	7711	856.78	8.57	119.95	1835.99	18.43	41.70	35.70
PREBLE	I.R. 70	EXIT RAMP I	10.109	10.266	VARIES 39.80'-0'	12920.89	1435.65	14.36	200.99	10875.84	109.16	69.87	59.82
PREBLE	I.R. 70	EXIT RAMP M	14.836	14.995	VARIES 40.72'-0'	14255.91	1583.99	15.84	221.76	9838.65	98.75	77.09	66.00
TOTALS CARRIED TO SHEET NO. 16							12901.25	129.02	1806.18		726.97	627.88	537.55

⊛ EXIT RAMP TO INDIANA U.S. 40

CALCULATED LBA CHECKED PJD

TYPICAL DECELERATION LANE SECTION EAST & WESTBOUND

PRE-70-0.00



TYPICAL ACCELERATION LANE

LEGEND

(1) ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)
(2) ITEM 407, NON-TRACKING TACK COAT
(3) ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
(4) ITEM 254, 3¼" PAVEMENT PLANING ASPHALT CONCRETE
(5) ITEM 606, GUARDRAIL, TYPE MGS
(6) ITEM 209, RESHAPING UNDER GUARDRAIL
(7) ITEM 659, SEEDING AND MULCHING

(A) 9"-10" EXISTING ASPHALT PAVEMENT
(B) 9" EXISTING CONCRETE PAVEMENT

* SEE SHEET NOS. 34-35 FOR GUARDRAIL LIMITS. DO NOT DISTURB EXISTING GRADED SHOULDER EXCEPT UNDER PROPOSED GUARDRAIL.

NOTE:
EXISTING GUARDRAIL POSTS ARE IN 3" OF ASPHALT. FOR REMOVAL QUANTITIES, SEE SHEET NOS. 34-35.

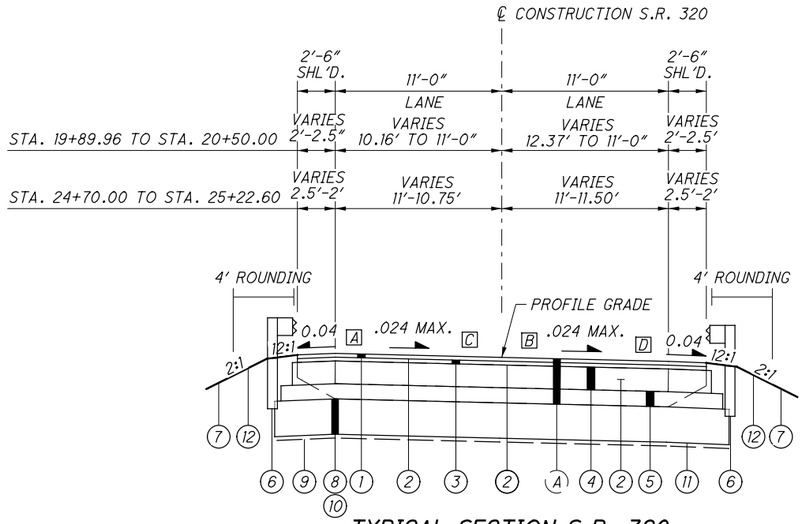
COUNTY	ROUTE	ACCELERATION LANE	STRAIGHT LINE MILEAGE		TYPICAL PAVEMENT WIDTH	AREA (COMPUTER GENERATED)	254	254	407	442		442	442
							3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE (AREA/9)	PATCHING PLANED SURFACE (AREA/9)X0.01	NON-TRACKING TACK COAT (AREAx0.070/9)x2	COMPUTER GENERATED AREA FOR ANTI-SEGREGATION EQUIPMENT	ANTI-SEGREGATION EQUIPMENT (AREAx0.271/27)	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN (AREAx0.146/27)	1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447) (AREAx0.125/27)
			FROM	TO	FOOT	SQ FT	SQ YD	SQ YD	GAL	SQ FT	CU YD	CU YD	CU YD
		EASTBOUND											
PREBLE	I.R. 70	ENTRANCE RAMP ⊛	0.000	0.126	VARIES 10'-0'	5793.57	643.73	6.44	90.12	2708.32	27.18	31.33	26.82
PREBLE	I.R. 70	ENTRANCE RAMP C	0.812	1.111	VARIES 34.5'-0'	26190.90	2910.10	29.10	407.41	18924.40	189.94	141.62	121.25
PREBLE	I.R. 70	ENTRANCE REST AREA	3.133	3.367	VARIES 24.72'-0'	15271.03	1696.78	16.97	237.55	12158.61	122.04	82.58	70.70
PREBLE	I.R. 70	ENTRANCE RAMP G	10.091	10.410	VARIES 37.44'-0'	27944.91	3104.99	31.05	434.70	18594.44	186.63	151.11	129.37
PREBLE	I.R. 70	ENTRANCE RAMP K	14.830	14.995	VARIES 35.10-15.57'	22646.70	2516.30	25.16	352.28	13124.75	131.73	122.46	104.85
PREBLE	I.R. 70	ENTRANCE RAMP K	15.047	15.153	VARIES 12.83'-0'	2707.21	300.80	3.01	42.11	1888.38	18.95	14.64	12.53
		WESTBOUND											
PREBLE	I.R. 70	ENTRANCE RAMP E	1.110	1.426	VARIES 0'-33.5'	25309.94	2812.22	28.12	393.71	14558.11	146.12	136.86	117.18
PREBLE	I.R. 70	ENTRANCE RAMP H	9.457	9.746	VARIES 0'-35.54'	27089.49	3009.94	30.10	421.39	18277.73	183.45	146.48	125.41
PREBLE	I.R. 70	ENTRANCE RAMP L	14.294	14.558	VARIES 0'-41.78	32937.09	3659.68	36.60	512.35	18007.18	180.74	178.10	152.49
TOTALS CARRIED TO SHEET NO. 16							20654.54	206.55	2891.62		1186.78	1005.18	860.60

⊛ ENTRANCE RAMP FROM INDIANA U.S. 40

CALCULATED LBA CHECKED PJD

TYPICAL ACCELERATION LANE SECTION EAST & WESTBOUND

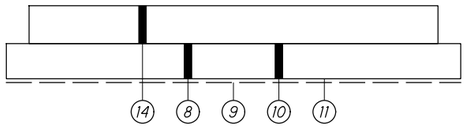
PRE-70-0.00



TYPICAL SECTION S.R. 320

STA. 19+89.96 TO STA. 21+03.71
STA. 24+37.23 TO STA. 25+22.60

BRIDGE AND APPROACH SLAB
STA. 21+03.71 TO STA. 24+37.23



APPROACH SLAB

S.R. 320
STA. 21+03.71 TO STA. 21+28.71
STA. 24+12.23 TO STA. 24+37.23
S.R. 726
STA. 8+34.25 TO STA. 8+59.25
STA 11+40.75 TO STA 11+65.75

A TRANSITION PAVEMENT SLOPE FROM +.0072 AT STA. 19+89.96 TO +.024 AT STA. 20+29.96

B TRANSITION PAVEMENT SLOPE FROM -.0257 AT STA. 19+89.96 TO -.024 AT STA. 19+99.96

C TRANSITION PAVEMENT SLOPE FROM +.024 AT STA. 24+65.60 TO FLAT AT STA. 25+22.74

D TRANSITION PAVEMENT SLOPE FROM -.024 AT STA. 25+12.60 TO -.0208 AT STA. 25+22.60

E TRANSITION PAVEMENT SLOPE FROM -.0181 AT STA. 7+09.25 TO -.016 AT STA. 7+19.25

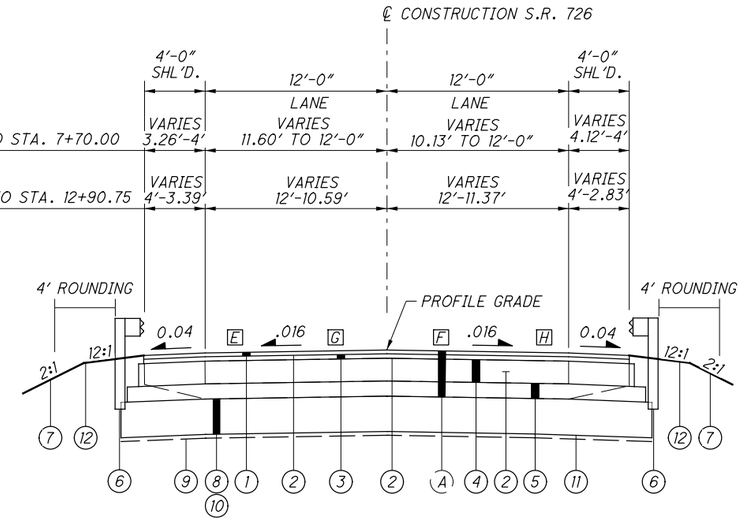
F TRANSITION PAVEMENT SLOPE FROM -.0186 AT STA. 7+09.25 TO -.016 AT STA. 7+19.25

G TRANSITION PAVEMENT SLOPE FROM -.016 AT STA. 12+68.75 TO -.0096 AT STA. 12+83.99

H TRANSITION PAVEMENT SLOPE FROM -.016 AT STA. 12+80.75 TO -.0176 AT STA. 12+90.75

LEGEND

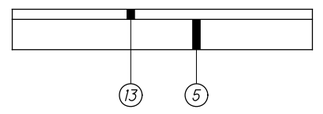
(1) ITEM 441, 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22
(2) ITEM 407, TACK COAT
(3) ITEM 441, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448)
(4) ITEM 301, 9" ASPHALT CONCRETE BASE, PG64-22
(5) ITEM 304, 6" AGGREGATE BASE
(6) ITEM 606, GUARDRAIL, TYPE MGS WITH LONG POSTS
(7) ITEM 659, SEEDING AND MULCHING
(8) ITEM 204, EXCAVATION OF SUBGRADE
(9) ITEM 204, GEOTEXTILE FABRIC
(10) ITEM 204, 14" GRANULAR MATERIAL, TYPE C
(11) ITEM 204, SUBGRADE COMPACTION & PROOF ROLLING
(12) ITEM 209, RESHAPING UNDER GUARDRAIL
(13) ITEM 441, 2" ASPHALT CONCRETE SURFACE COURSE,TYPE 1, (448), PG64-22
(14) ITEM 526, REINFORCED CONCRETE APPROACH SLABS (T=15")
(A) EXISTING ASPHALT PAVEMENT W/ GRANULAR BASE



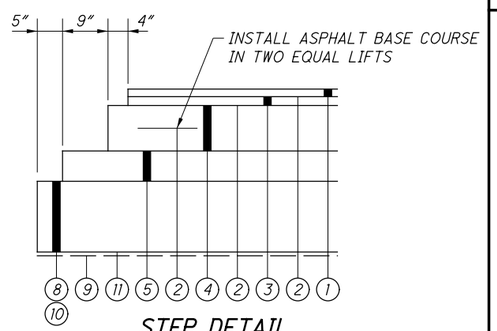
TYPICAL SECTION S.R. 726

STA. 7+09.25 TO STA. 8+34.25
STA. 11+65.57 TO STA. 12+90.75

BRIDGE AND APPROACH SLAB
STA. 8+34.25 TO STA. 11+65.57



DRIVEWAY DETAIL



STEP DETAIL

STATION		AREA (COMPUTER GENERATED)	204		301	304	407	441	441	441	COMMENTS AND ADDITIONAL AREAS FOR STEPS
			SUBGRADE COMPACTION (AREA/9)	PROOF ROLLING (SUBGRADE COMPACTION/2000)	ASPHALT CONCRETE BASE, PG64-22 (AREAx0.75/27)	AGGREGATE BASE (AREAx0.55/27)	TACK COAT (AREAx0.055/9)x3	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22 (AREAx0.104/27)	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448) (AREAx0.146/27)	2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448) (DRIVEWAYS) (AREAx0.167/27)	
FROM	TO	SQ FT	SQ YD	HOUR	CU YD	CU YD	GAL	CU YD	CU YD	CU YD	
S.R. 726											
7+09.25	8+59.25	3926.99	584.47	0.29	111.40	85.51	71.99	15.13	21.23		ADD 1333.25 FOR 204, ADD 83.33 FOR 301, ADD 270.83 FOR 304
11+40.75	12+90.75	3908.42	582.41	0.29	110.88	85.13	71.65	15.05	21.13		ADD 1333.25 FOR 204, ADD 83.33 FOR 301, ADD 270.83 FOR 304
S.R. 320											
19+89.96	21+28.71	3033.66	458.29	0.23	86.37	67.31	55.62	11.69	16.40		ADD 1090.98 FOR 204, ADD 75.83 FOR 301, ADD 246.46 FOR 304
24+12.23	25+22.60	2292.60	366.53	0.18	65.26	52.22	42.03	8.83	12.40		ADD 1006.14 FOR 204, ADD 56.91 FOR 301, ADD 184.97 FOR 304
20+20.19, LT		673.44				19.24				4.17	DRIVE
19+98.50	20+45.13, RT	74.96				7.04				0.46	MAILBOX TURNOUT
24+66.22, LT		581.75				17.37				3.60	DRIVE
24+66.55, RT		692.22				19.62				4.28	DRIVE WITH MAILBOX TURNOUT
TOTALS CARRIED TO SHEET NO. 16			1991.70	0.99	373.91	353.44	241.29	50.70	71.16	12.51	

CALCULATED JTK
CHECKED PJD

TYPICAL SECTION S.R. 320 & S.R. 726

PRE-70-0.00

COUNTY	ROUTE	CROSSOVERS	STRAIGHT LINE MILEAGE	AREA (COMPUTER GENERATED)	254 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE (AREA/9)	254 PATCHING PLANED SURFACE (AREA/9)x0.01	407 NON-TRACKING TACK COAT (AREAx0.070/9)x2	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN (AREAx0.146/27)	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447) (AREAx0.125/27)
				SQ FT	SQ YD	SQ YD	GAL	CU YD	CU YD
PREBLE	I.R. 70	CROSSOVER	0.056	3108.17	345.35	3.45	48.35	16.81	14.39
PREBLE	I.R. 70	CROSSOVER	2.181	4185.21	465.02	4.65	65.10	22.63	19.38
PREBLE	I.R. 70	CROSSOVER	3.990	4515.79	501.75	5.02	70.25	24.42	20.91
PREBLE	I.R. 70	CROSSOVER	6.413	4484.96	498.33	4.98	69.77	24.25	20.76
PREBLE	I.R. 70	CROSSOVER	9.271	4609.93	512.21	5.12	71.71	24.93	21.34
PREBLE	I.R. 70	CROSSOVER	10.566	1604.56	178.28	1.78	24.96	8.68	7.43
PREBLE	I.R. 70	CROSSOVER	14.056	4667.73	518.64	5.19	72.61	25.24	21.61
PREBLE	I.R. 70	CROSSOVER	15.250	1738.51	193.17	1.93	27.04	9.40	8.05
TOTALS CARRIED TO PAVEMENT SUBSUMMARY					3212.75	32.12	449.79	156.36	133.87

COUNTY	ROUTE	PARKING LOTS	STRAIGHT LINE MILEAGE FROM	STRAIGHT LINE MILEAGE TO	AREA (COMPUTER GENERATED)	254 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE (AREA/9)	254 PATCHING PLANED SURFACE (AREA/9)x0.01	407 NON-TRACKING TACK COAT (AREAx0.070/9)x2	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448) (AREAx0.125/27)	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN (AREAx0.146/27)
					SQ FT	SQ YD	SQ YD	GAL	CU YD	EACH
PREBLE	I.R. 70	WEIGH STATION	0.614	0.677	45417.94	5046.44	50.46	706.50	210.27	245.59
TOTALS CARRIED TO PAVEMENT SUBSUMMARY						5046.44	50.46	706.50	210.27	245.59

PAVEMENT SUBSUMMARY	204 SUBGRADE COMPACTION	204 PROOF ROLLING	253 PAVEMENT REPAIR	254 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE	254 PATCHING PLANED SURFACE	301 ASPHALT CONCRETE BASE, PG64-22	304 AGGREGATE BASE	407 TACK COAT	407 NON-TRACKING TACK COAT	441 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22	441 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448)	441 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)	442 ANTI-SEGREGATION EQUIPMENT	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447)	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448)	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN	618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
	SQ YD	HOUR	CU YD	SQ YD	SQ YD	CU YD	CU YD	GAL	GAL	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	MILE
TOTALS FROM (I.R. 70 EASTBOUND) SHEET NO. 10				407710.50	4077.11				57079.48				22244.14	19841.90	16987.95			34.98
TOTALS FROM (I.R. 70 WESTBOUND) SHEET NO. 11				408620.60	4086.22				57206.87				22242.87	19886.19	17025.84			34.98
TOTALS FROM (EAST/WESTBOUND RAMPS) SHEET NO. 12				30849.72	308.51				4318.95				1646.03	1501.37	1285.41			
TOTALS FROM (DECELERATION) SHEET NO. 13				12901.25	129.02				1806.18				726.97	627.88	537.55			
TOTALS FROM (ACCELERATION) SHEET NO. 14				20654.54	206.55				2891.62				1186.78	1005.18	860.60			
TOTALS FROM (S.R. 320 AND S.R. 726) SHEET NO. 15	1991.70	0.99				373.91	353.44	241.29		50.70	71.16	12.51						
TOTALS FROM (CROSSOVERS) THIS SHEET				3212.75	32.12				449.79					156.36	133.87			
TOTALS FROM (PARKING LOTS) THIS SHEET				5046.44	50.46				706.50							210.27	245.59	
TOTALS FROM (NOTES) SHEET NO. 17			2811.00															
SUBTOTAL	1991.70	0.99	2811.00	888995.80	8889.99	373.91	353.44	241.29	124459.39	50.70	71.16	12.51	48046.79	43018.88	36831.22		245.59	69.96
TOTALS CARRIED TO GENERAL SUMMARY	1992	1	2811	888996	8890	374	354	242	124460	51	72	13	48047	43019	36832	211	246	70

CALCULATED LBA
CHECKED PJD

PAVEMENT SUBSUMMARY

PRE-70-0.00

UTILITIES

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

DARKE RURAL ELECTRIC
P.O. BOX 278
GREENVILLE, OHIO 45331
(937) 548-4114 (BRUCE BURKE)
BRUCEB@DARKEREC.COM

DAYTON POWER & LIGHT
1900 DRYDEN ROAD
DAYTON, OHIO 45439
(937) 331-4521 (BILL GOURLEY)
WILLIAM.GOURLEY@AES.COM

ODOT ITS LAB
1606 WEST BROAD STREET
COLUMBUS, OHIO 43223
(614) 487-4113
CEN.ITS.LAB@DOT.OHIO.GOV

LIGHTING
ODOT DISTRICT 8
505 S. STATE ROUTE 741
LEBANON, OHIO 45036
(513) 933-6689

FRONTIER COMMUNICATIONS
241 S. NELSON AVENUE
WILMINGTON, OHIO 45177
(937) 382-0055 (DAVID LONGWORTH)
DAVID.M.LONGWORTH@FTR.COM

CENTURY LINK
803 E. 12TH STREET
GREENVILLE, OHIO 45331
(937) 547-4255 (DAVID KAPLAN)
DAVID.W.KAPLAN@CENTURYLINK.COM

CHARTER COMMUNICATIONS (SPECTRUM) - DAYTON
3691 TURNER ROAD
DAYTON, OHIO 45415
(937) 396-8372 (JACOB HOUDESHELL)
JACOB.HOUDESHELL@CHARTER.COM

VECTREN GAS
1335 E. DAYTON YELLOW SPRINGS ROAD
FAIRBORN, OH 45324
(937) 312-2539 (JEFF PIKE)
JEFFREY.T.PIKE@CENTERPOINTENERGY.COM

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.

ROUNDING

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

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.

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.

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 CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 8 TRAFFIC MAINTENANCE DEPARTMENT DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY DISTRICT 8 TRAFFIC MAINTENANCE AT 513-933-6689 AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

ITS:

ITS FACILITIES AREN'T LISTED WITH OUPS, SO THE CONTRACTOR IS REQUIRED TO CONTACT ODOT CENTRAL OFFICE ITS LAB DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY ODOT CENTRAL OFFICE ITS LAB AT THE CONTACT INFORMATION LISTED BELOW AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK FOR THE NEED TO MARK ODOT OWNED UTILITIES.

CENTRAL OFFICE ITS LAB
1606 W. BROAD STREET, COLUMBUS, OHIO 43223
614-387-4113 - PHONE (ITS LOCATES LINE)
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 PROPOSAL NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY WORK. THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE OF THE PROJECT.

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 204, SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS ON S.R. 320 AND S.R. 726 AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.

2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7- 5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.

IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

3. COMPACT THE SUBGRADE ACCORDING TO 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

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

ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) & (448), AS PER PLAN

ON THIS PROJECT SUPPLY A 19MM INTERMEDIATE COURSE MEETING THE REQUIREMENTS OF 442 EXCEPT AS MODIFIED BELOW.

MODIFY TABLE 442.02-2 AS FOLLOWS:

Sieve Size		9.5 mm mix	12.5 mm mix	19 mm mix
		Total Percent Passing		
1 1/2 inch	(3.75 mm)	*	*	100
3/4 inch	(19 mm)	*	100	95 to 100
1/2 inch	(12.5 mm)	100	95 to 100	90 to 100
3/8 inch	(9.5 mm)	90 to 100	96 max	96 max
No. 4	(4.75 mm)	70 max	52 to 65	60 max
No. 8	(2.36 mm)	34 to 52	34 to 45	34 to 45
No. 200	(75 ²m)	2 to 8	2 to 8	2 to 8

MODIFY TABLE 442.02-3 AS FOLLOWS: APPLY 14.0 FOR A VMA (PERCENT MINIMUM) FOR A 19MM MIX. APPLY 5.3 PERCENT FOR THE MINIMUM TOTAL ASPHALT BINDER CONTENT FOR A 19MM MIX.

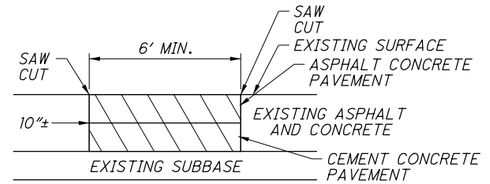
ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) & (448), AS PER PLAN (CONTINUED)

MODIFY THE 442 INTERMEDIATE COURSE REQUIREMENTS OF TABLES 401.04-1 AND 401.04-2 AS FOLLOWS: APPLY 3.5 PERCENT FOR THE TOTAL VIRGIN ASPHALT BINDER CONTENT, MINIMUM.

USE A PG64-22 IF USING 25 PERCENT OR LESS RAP. USE PG64-28 IF USING GREATER THAN 25 PERCENT RAP. PROVIDE AN APPROVED DENSITY GAUGE AND OPERATOR TO COLLECT INFORMATIONAL DENSITY READINGS EACH DAY OR NIGHT OF PAVING AS DIRECTED BY THE ENGINEER.

ITEM 253, PAVEMENT REPAIR

AN ESTIMATED QUANTITY OF ITEM 253 PAVEMENT REPAIR HAS BEEN CARRIED TO THE GENERAL SUMMARY TO REMOVE AND REPLACE EXISTING DETERIORATED PAVEMENT JOINTS WITH ITEM 301, ASPHALT CONCRETE BASE. THE EXACT LOCATIONS AND SIZES OF THE REPAIRS SHALL BE DETERMINED BY THE ENGINEER. THE ASPHALT CONCRETE BASE SHALL BE COMPACTED AS PER 401.16 AND PLACED IN APPROXIMATELY EQUAL LAYERS. QUANTITIES HAVE BEEN PROVIDED IN THE TABLE BELOW FOR ESTIMATING PURPOSES ONLY. IT IS ASSUMED THAT 15 JOINTS WILL REQUIRE FULL DEPTH REPAIR (MAXIMUM DEPTH OF 19") AND THE REMAINDER OF JOINTS WILL REQUIRE REMOVAL AND REPLACEMENT OF THE ASPHALT PORTION OF THE COMPOSITE PAVEMENT ONLY (MAXIMUM 10" DEPTH). THE APPROXIMATE SIZE OF JOINT REPARS IS ASSUMED TO BE 24' WIDE BY 6' LONG. AN ADDITIONAL ESTIMATED QUANTITY OF ITEM 253 PAVEMENT REPAIR, 5000 SQUARE YARDS HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. THIS QUANTITY IS TO BE USED FOR PARTIAL DEPTH REPAIRS TO RESTORE AREAS OF PAVEMENT OUTSIDE OF THE JOINTS. THESE AREAS WILL BE AT A MINIMUM 4 FT X 4 FT X 4 IN DEEP.



STRAIGHT LINE MILEAGE		DIRECTION	JOINTS TO BE REPAIRED	253 PAVEMENT REPAIR
FROM	TO			CU YD
0.00	10.00	EASTBOUND	270	1200
0.00	10.00	WESTBOUND	237	1053
10.00	17.67	EASTBOUND	63	280
10.00	17.67	WESTBOUND	34	151
0.00	17.67	EAST/WEST	15	127
QUANTITIES CARRIED TO SHEET 16				2811

ITEM 254, PAVEMENT PLANING

THE PAVEMENT PLANING SHALL BE SCHEDULED SO AS TO BE COVERED BY THE INTERMEDIATE COURSE PRIOR TO REOPENING THE LANE TO TRAFFIC. THE COST OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE RESPECTIVE ITEM. A DISINCENTIVE IN THE AMOUNT OF $10,000 SHALL BE ASSESSED FOR EACH DAY, OR PORTION THEREOF, A PLANED SURFACE IS OPEN TO TRAFFIC.

CALCULATED JTK CHECKED PJD

GENERAL NOTES

PRE-70-0.00

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, ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016)

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.

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

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.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

PROJECTS IN OR NEAR A DRINKING WATER SOURCE:

THE PROJECT IS LOCATED IN OR NEAR THE SOURCE OF A PUBLIC DRINKING WATER SUPPLY. IN ORDER TO MINIMIZE THE POTENTIAL TO CONTAMINATE THIS WATER SUPPLY, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTIMINATE THE DRINKING WATER SUPPLY.

ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO THE CORRESPONDING PWS. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT THE TOWNSHIP'S FIRE DEPARTMENT OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

PUBLIC WATER SUPPLIES

ODOT-REST AREA 8-40 PWS
CRS: PRE-70-2.72 TO 3.04
PHONE: (937) 933-6537
FIRE DEPT.: NORTH WEST FIRE (CHIEF PAUL CONES)
FIRE DEPT. PHONE: (937) 437-8354

ODOT-REST AREA 8-39 PWS
CRS: PRE-70-2.72 TO 3.04
PHONE: (937) 933-6537
FIRE DEPT.: NORTH WEST FIRE (CHIEF PAUL CONES)
FIRE DEPT. PHONE: (937) 437-8354

PROVIMI NORTH AMERICA, INC.
CRS: PRE-70-14.73 TO 15.20, 15.00 L, R
PHONE: (937) 962-2661
FIRE DEPT.: LEWISBURG FIRE (CHIEF BJ STEWART)
FIRE DEPT. PHONE: (937) 962-4640

ITEM 626, BARRIER REFLECTOR, TYPE 1, ONE WAY

INSTALL BARRIER REFLECTOR IN ACCORDANCE WITH THE DETAIL SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS, FOR ANY MISSING OR DAMAGED REFLECTORS, FOR BRIDGES ALONG I.R. 70. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY.

ITEM 626, BARRIER REFLECTOR, TYPE 1, ONE WAY 10 EACH

PROJECTS LOCATED OVER A SOLE SOURCE AQUIFER:

THE PROJECT AREA IS LOCATED OVER THE GREATER MIAMI SOLE SOURCE AQUIFER SYSTEM, A DESIGNATED SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GOUNDWATER SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT THE FIRE CHIEF OF THE COORDINATING TOWNSHIP OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

COUNTY/ROUTE/SECTION	FIRE DEPARTMENT
PRE/IR-70/15.0 L,R	LEWISBURG FIRE
PRE/IR-70/14.73 TO 15.20	CHIEF BJ STEWART

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 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 ADMINISTRATOR.

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 FIVE MARKINGS PLACED IN EACH 1 MILE OF ROADWAY SHALL EQUAL ONE ZONE. ONE ZONE SHALL BE MEASURED AS 1 EACH FOR AIR SPEED ZONE MARKING.

ENHANCED WRONG-WAY TRAFFIC CONTROL DEVICES FOR RAMPS

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SIGNS, PAVEMENT MARKING, AND ADDITIONAL RAISED PAVEMENT MARKERS AS REQUIRED BY STANDARD CONSTRUCTION DRAWING TC-73.20 ENHANCED WRONG-WAY TRAFFIC CONTROL FOR RAMPS. THIS ITEM WILL BE NECESSARY AT FOUR EXIT RAMPS, TWO AT EACH OF THE U.S. 127 AND S.R. 503 INTERCHANGES. ALL ASPECTS OF ITEM 630 SHALL APPLY TO SIGNING, ALL ASPECTS OF ITEM 621 SHALL APPLY TO RAISED PAVEMENT MARKERS, AND ALL ASPECTS OF ITEM 644 SHALL APPLY TO PAVEMENT MARKING.

SEE SHEET NOS. 36 - 38 FOR QUANTITIES

ITEM SPECIAL, MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE.

CALCULATED JTK
CHECKED PJD

GENERAL NOTES

PRE-70-0.00

SEEDING AND MULCHING

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

659, REPAIR SEEDING AND MULCHING
24713 SQ. YD. (S&M) x 0.05 = 1235.6 SQ. YD.
USE 1236 SQ. YD.

659, COMMERCIAL FERTILIZER
24713 / 7410 = 3.34 TON

659, LIME
24713 x 9 / 43560 = 5.11 ACRES

659, WATER
24713 x 2 x .0027 = 133.4 M. GAL
USE 134 M. GAL.

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.

ITEM 832 EROSION CONTROL

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR LOCATING, FURNISHING, INSTALLING AND MAINTAINING TEMPORARY SEDIMENT AND EROSION CONTROL FOR EARTH DISTURBED AREAS.

ITEM 832 EROSION CONTROL 5000 EACH

VERTICAL GRADE WARNING SIGNS

THE CONTRACTOR SHALL FURNISH AND INSTALL PERMANENT W7-6-36 "HILL BLOCKS VIEW" SIGNS WITH W13-1P-18 "ADVISORY SPEED PLAQUE" SIGNS ON SR 726 ON EITHER SIDE OF THE IR 70 OVERPASS BRIDGE TO WARN DRIVERS TO REDUCE SPEED APPROACHING THE CREST VERTICAL CURVE ON THE BRIDGE. THE ADVISORY SPEED TO BE LISTED ON THE W13-1P-18 SIGNS SHALL BE 45 MPH. THESE SIGNS SHOULD BE LOCATED AT APPROXIMATELY STA 6+00 AND STA 14+00.

SEE SHEET NO. 38 FOR QUANTITIES

COORDINATION BETWEEN CONTRACTORS

THE CONSTRUCTION AT PRE-70-0.00 MAY REQUIRE THE CONTRACTOR TO COORDINATE WITH THE ADJACENT PREBLE COUNTY CULVERT PROJECTS (PID 106504 AND PID 105967) AND PRE-35-1.76 (PID 100807).

COOPERATION WITH THE ENGINEER, INSPECTORS, AND ALL OTHER CONTRACTORS ON OR ADJACENT TO THE PROJECT IS REQUIRED, AS PER CMS 105.08.

ASBESTOS NOTIFICATION

SHOULD THE CONTRACTOR ENCOUNTER ASBESTOS CONTAINING MATERIALS (ACM) ON THE EXISTING STRUCTURES, THE HANDLING AND DISPOSAL OF SAID ACM WILL BE COVERED UNDER CMS ITEM 202 WITH PAYMENT IN ACCORDANCE WITH CMS 109.05.

A WEBLINK TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, WILL BE PROVIDED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. ODOT WILL SUPPLY THE INFORMATION FOR SECTIONS I-VII AND XVII-XVIII OF THE FORM. THE CONTRACTOR WILL COMPLETE THE ONLINE FORMS AND SUBMIT THEM TO THE SOUTHWEST OEPA DISTRICT OFFICE (OEPA-SWDO) AT LEAST 10 DAYS PRIOR TO DEMOLITION/RENOVATION ACTIVITIES. THE COSTS ASSOCIATED WITH ASBESTOS NOTIFICATION SHALL BE INCIDENTAL TO ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

IN THE EVENT THAT THE CONTRACTOR, OR THE ASSOCIATED SUB-CONTRACTORS, ENCOUNTER ANY MATERIAL SUSPECTED OF CONTAINING ACM, DEMOLITION ACTIVITIES SHALL CEASE AND THE SUSPECT AREAS WETTED. THE CONTRACTOR SHALL THEN NOTIFY THE PROJECT ENGINEER, OEPA-SWDO AND THE ODOT DISTRICT 08 CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST (CAHES) (KEITH SMITH, (513) 933-6590).

ASBESTOS ABATEMENT

IN THE EVENT THAT ACM IS ENCOUNTERED, THE CONTRACTOR SHALL TAKE WHATEVER PRECAUTIONS ARE POSSIBLE TO ENSURE THAT THE ACM DOES NOT BECOME FRIABLE. TO ENSURE THAT THE NONFRIABLE ACM DOES NOT BECOME FRIABLE, OR IN THE EVENT THAT THE NONFRIABLE MATERIALS BECOME FRIABLE, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THE NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) TO BE LOCATED ON-SITE DURING DEMOLITION AND/OR REMOVAL OF THE ACM. ALL ACM SHALL BE PROPERLY CONTAINERIZED, TRANSPORTED AND DISPOSED OF IN ACCORDANCE WITH THE ASSOCIATED STATE AND FEDERAL REGULATIONS.

THE CONTRACTOR SHALL FURNISH ALL THE LABOR (INCLUDING A CAHES), EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE, SUBMIT AND COMPLY WITH THE OEPA NOTIFICATION FOR, AND TO REMOVE, TRANSPORT AND DISPOSE OF ACM IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OEPA) SOLID WASTE FACILITY.

NON-USE OF ASBESTOS-CONTAINING MATERIALS

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE TABLE ON THIS SHEET 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:	AS NOTED IN PROJECT CONTROL TABLE BELOW

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	12B

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD 83 (2011)
ELLIPSOID:	GRS 80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE (SOUTH ZONE)
COMBINED SCALE FACTOR:	1.000000000
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.

LOCATION	203 EXCAVATION CY	203 EMBANKMENT CY	204 EXCAVATION OF SUBGRADE CY	204 GRANULAR MATERIAL, TYPE C CY	204 GEOTEXTILE FABRIC (AREA IS EQUAL TO SUBGRADE COMPACTION FROM PAVEMENT CALCS) SY	659 SEEDING AND MULCHING SY
SR 320	325	20	223	223	825	556
SR 726	455	19	443	443	1167	668
SR 320 STA 20+20.19 DRIVE LT	12	1				
SR 320 STA 24+66.22 DRIVE LT	10	2				
SR 320 STA 24+66.55 DRIVE RT	22	2				
FROM SHEET NO. 50 (LIGHTING)						10860
TOTALS CARRIED TO GENERAL SUMMARY	824	44	666	666	1992	12084

PROJECT CONTROL

PRE-70-0.00 Stantec Job#173620094

CONTROL POINT COORDINATES SUPPLIED BY ODOT

CONTROL FOR SR 320	Grid North	Grid East	Mon. Type	Elevation
SA1	674213.325	1324465.674	IPINS STA 22+71.20, 55.65 RT	1161.780
SA3	673998.722	1324443.235	MAGS STA 20+56.92, 16.89 RT	1183.520
VA2	674366.551	1324422.490	IPINS STA 24+27.06, 16.93 RT	1178.110

CONTROL FOR SR 726	Grid North	Grid East	TYPE	ELEVATION
SE2	675692.327	1357319.406	MAGS STA 7+93.86, 13.71 RT	1138.066
VE1	675186.493	1357277.530	MAGS STA 2+87.31, 18.30 LT	1118.836

CALCULATED JTK CHECKED PJD

GENERAL NOTES

PRE-70-0.00

ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CMS SPECIFICATIONS 455 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S), ALL EQUIPMENT, AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIAN SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TEST AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING-RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE-TESTING WORK.

ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION (CONTINUED)

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT 20%
PROGRESSIVE EQUIVALENT PAYMENTS 50%
UPON SUBMISSION OF FINAL REPORT . . . . . 30%.

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

CALCULATED JTK
CHECKED PJD

GENERAL NOTES

PRE-70-0.00

ITEM 614, MAINTAINING TRAFFIC

IT IS THE INTENTION OF THESE PLANS TO PERFORM THE REQUIRED WORK WITH THE LEAST INCONVENIENCE TO AND THE MAXIMUM SAFETY OF BOTH THE CONTRACTOR AND THE TRAVELING PUBLIC. THE REQUIREMENTS FOR MAINTAINING TRAFFIC SHALL BE AS INDICATED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, THE PROPOSAL, THE SPECIFICATIONS AND THE PLANS. ANY VARIANCE FROM THESE REQUIREMENTS SHALL BE APPROVED BY THE DIRECTOR IN WRITING.

I.R. 70: ALL LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE TIMES NOTE, BY USE OF THE EXISTING PAVEMENT AND COMPLETED PAVEMENT. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT SPECIFIED IN THE LANE VALUE CONTRACT TABLE ON SHEET NO. 24 PER 1 MIN. PERIOD THE LANE REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

S.R. 320, S.R. 726, AND PENCE SHEWMAN ROAD: A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED THE NUMBER OF CONSECUTIVE CALENDAR DAYS SHOWN ON THE LANE VALUE CONTRACT TABLE ON SHEET NO. 24, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET NO's. 26-28. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT SPECIFIED IN THE LANE VALUE CONTRACT TABLE ON SHEET NO. 24 PER DAY, OR PORTION THEREOF, FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

REST AREA AND WEIGH STATION: THE EXISTING TRAFFIC IN THESE FACILITIES SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED THE NUMBER OF CONSECUTIVE CALENDAR DAYS SHOWN ON THE LANE VALUE CONTRACT TABLE ON SHEET NO. 24, WHEN THESE FACILITIES MAY BE CLOSED TO TRAFFIC. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT SPECIFIED IN THE LANE VALUE CONTRACT TABLE ON SHEET NO. 24 PER DAY, OR PORTION THEREOF, FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
EASTER	THANKSGIVING
MEMORIAL DAY	INDIANAPOLIS 500
BRICKYARD 400	

ITEM 614, MAINTAINING TRAFFIC (CONTINUED)

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

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	(THANKSGIVING ONLY) 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $240.00 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

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.

TRAFFIC SHALL BE MAINTAINED AT ALL INTERSECTIONS AND DRIVES AT ALL TIMES AND SHALL BE CONTROLLED WITH FLAGGERS AND TRAFFIC CONTROL DEVICES AS REQUIRED AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

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.

NOTICE OF CLOSURE SIGN TIME TABLE

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	≥ 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

ITEM 614, MAINTAINING TRAFFIC (CONTINUED)

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 LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO THE DISTRICT 8 PUBLIC INFORMATION OFFICE, (513) 933-6534.

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
50 CU. YD.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

LOCATIONS:
EXIT RAMP TO WEIGH STATION
EXIT RAMP TO EASTBOUND REST AREA
S.R. 320 STA. 19+50.00 AND STA. 26+00.00
S.R. 726 STA. 6+50.00 AND STA. 13+50.00

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, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

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.

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 50 M GAL

WORK ZONE MARKINGS AND SIGNS

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, WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT 35.81 MILE
ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT 75.42 MILE
ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT 14225 FT
ITEM 614, WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT 6295 FT
ITEM 614, WORK ZONE STOP LINE, CLASS I, 642 PAINT 90 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 5 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.

CALCULATED PJD CHECKED SNS

MAINTENANCE OF TRAFFIC NOTES

PRE-70-0.00

ITEM 614, WORK ZONE SPEED ZONES (WZSZS)

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

WZSZ REVISION NUMBER	COUNTY & ROUTE	DIRECTION
WZ-45075	PRE-70	E.B. & W.B.

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 TO RIGHT 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.

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 OMUTCD 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 WITH-IN 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.

ITEM 614, WORK ZONE SPEED ZONES (WZSZS) (CONTINUED)

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	WITH Positive Protection		WITHOUT Positive Protection	
	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, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 90 SIGN MNTH
(ASSUMING 5 DSL SIGN ASSEMBLIES FOR 18 MONTHS)

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.

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 SHOWN ON SHEETS 29-30 OF 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.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONTINUED)

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 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 PLAN
16 SIGN MONTH

(ASSUMING 2 PCMS SIGNS FOR 4 MONTHS PER SEASON)

CALCULATED PJD
CHECKED SNS

MAINTENANCE OF TRAFFIC NOTES

PRE-70-0.00

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.

WORKSITE TRAFFIC SUPERVISOR (CONTINUED)

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 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 WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRECONSTRUCTION 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.

WORKSITE TRAFFIC SUPERVISOR (CONTINUED)

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, 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 OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, 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.

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, 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, 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).

ONE LEO IS NEEDED WHEN INSTALLING A SINGLE OR DOUBLE LANE CLOSURE. WHEN LANE CLOSURES ARE BEING INSTALLED IN MULTIPLE DIRECTIONS OR MULTIPLE LOCATIONS, ONE LEO IS NEEDED PER MOT WORK CREW. IN OTHER WORDS, IF THE SAME WORK CREW INSTALLS BOTH LANE CLOSURES, THEN ONLY ONE LEO IS NEEDED; IF TWO SEPARATE WORK CREWS INSTALL A LANE CLOSURE IN EACH DIRECTION, THEN TWO LEOS WILL BE NEEDED. THE LEO SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION.

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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 2000 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. THE HOURS PAID SHALL INCLUDE UP TO ½ HOUR PRIOR TO THE START OF THE SHIFT TO RECEIVE INSTRUCTIONS FOR THE WORK ASSIGNMENTS; SPECIAL WORK ASSIGNMENTS REQUIRING ADDITIONAL TIME SHALL BE APPROVED BY THE ENGINEER PRIOR TO SCHEDULING THE LEO. THE HOURS PAID PER LEO FOR LANE CLOSURES SHALL INCLUDE THE MINIMUM SHOW-UP TIME FOR THE INITIAL SET-UP PERIOD AND THE MINIMUM SHOW-UP TIME FOR THE TEAR DOWN PERIOD; BUT NO MORE THAN THE ACTUAL INVOICED HOURS.

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.

CALCULATED PJD CHECKED SNS

MAINTENANCE OF TRAFFIC NOTES

PRE-70-0.00

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), THE DISTRICT PUBLIC INFORMATION OFFICE (PIO) (DOT.D08.PIO@DOT.OHIO.GOV), THE DISTRICT PERMIT SECTION (D08.PERMITS@DOT.OHIO.GOV), AND THE DISTRICT TRAFFIC, DETOUR SECTION (DOT.D08.DETOURS@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.

NOTIFICATION TIME TABLE

ITEM	DURATION	NOTICE DUE TO PERMITS & PIO
ROAD CLOSURES	< 12 HOURS	4 BUSINESS DAYS
	>= 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS
	>= 2 WEEKS	21 CALENDAR DAYS
LANE CLOSURES & RESTRICTIONS	< 2 WEEKS	2 BUSINESS DAYS
	>= 2 WEEKS	21 CALENDAR DAYS
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 BUSINESS DAYS

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

PERMITTED LANE CLOSURE TIMES

SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THIS NOTE. THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 8 WORK ZONE TRAFFIC CONTROL MANAGER. SHORT TERM CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED IN THE LANE. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED. PERMITTED LANE CLOSURES SHALL ONLY BE ALLOWED DURING THE TIMES SPECIFIED IN THE LANE VALUE CONTRACT TABLE INCLUDED IN THESE PLANS. NO LANE OR SHOULDER CLOSURE SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

LANE VALUE CONTRACT TABLE

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE $ PER TIME UNITS
IR 70: ALL LANES OPEN TO TRAFFIC	10 AM TO 9 PM	1 MINUTE	$240
SR 320	120 DAYS	1 DAY	$980
SR 726	120 DAYS	1 DAY	$277
PENCE SHERMAN RD	14 DAYS	1 DAY	$277
LEWISBURG RD	14 DAYS	1 DAY	$277
REST AREA	45 DAYS	1 DAY	$1400
WEIGH STATION	7 DAYS	1 DAY	$1400

DURING NON-RESTRICTED TIME PERIODS MAINTAIN A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON I-70 AND MAINTAIN ALL RAMPS.

ITEM 614, DETOUR SIGNING

A LUMP SUM QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO INCLUDE FURNISHING, INSTALLING, MAINTAINING, AND REMOVING THE DETOUR SIGNING AND THEIR NECESSARY SUPPORTS SHOWN ON THE PLANS.

INTERIM COMPLETION REQUIREMENTS

THE PROJECT HAS AN INTERIM COMPLETION DATE OF OCTOBER 15, 2020. ON OR BEFORE THE INTERIM COMPLETION DATE, ALL PAVEMENT REPAIRS SHALL BE COMPLETED. ON OR BEFORE THE INTERIM COMPLETION DATE, ANY RESURFACING STARTED SHALL BE COMPLETED UP TO AND INCLUDING THE ASPHALT CONCRETE SURFACE COURSE AND ITEM 621 RAISED PAVEMENT MARKERS INSTALLED.

THE PROJECT HAS AN INTERIM COMPLETION DATE OF OCTOBER 15, 2021. ON OR BEFORE THE INTERIM COMPLETION DATE, ALL WORK EXCEPT FINAL PAVEMENT MARKINGS SHALL BE COMPLETED.

THE CONTRACT WILL BE SUBJECT TO DAILY DISINCENTIVES FOR FAILURE TO COMPLETE ALL THE REQUIRED WORK, AND ASSOCIATED INCIDENTALS RELATED TO THE WORK, AS OUTLINED IN THE TABLE INCLUDED IN THIS NOTE. APPLICATION OF THE DISINCENTIVES WILL BE BASED ON THE OVERALL CONTRACT AMOUNT. DAILY DISINCENTIVES ARE APPLICABLE TO THE WORK REQUIRED TO THE INTERIM COMPLETION DATE ONLY. THE CONTRACT IS STILL SUBJECT TO LIQUIDATED DAMAGES AS OUTLINED IN CMS 108.07 FOR THE REMAINDER OF THE CONTRACT.

SCHEDULE OF DAILY DISINCENTIVES FOR FAILURE TO MEET THE INTERIM COMPLETION REQUIREMENTS

ORIGINAL CONTRACT AMOUNT (TOTAL AMOUNT AT TIME OF BIDDING)		DAILY DISINCENTIVE FOR EACH FULL OR PARTIAL CALENDAR DAY OF TIME OVERRUN BEYOND THE PLAN INTERIM COMPLETION DATE
FROM MORE THAN	TO AND INCLUDING	
$0.00	$500,000	$800
$500,000	$1,000,000	$1,200
$1,000,000	$5,000,000	$2,500
$5,000,000	$10,000,000	$3,500
$10,000,000	$50,000,000	$5,000
OVER $50,000,000		$7,500

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. THE MINIMUM SLOPE OF THE TEMPORARY PAVEMENT WEDGES SHALL BE 3:1 ALONG LONGITUDINAL JOINTS AND 120:1 AT TRANSVERSE JOINTS. THESE WEDGES SHALL BE REMOVED PRIOR TO PLACING THE SPECIFIED PAVEMENT COURSE. PAYMENT FOR ALL WORK, MATERIALS, ETC. ASSOCIATED WITH THIS ITEM SHALL BE PAID FOR UNDER ITEM 614, MAINTAINING TRAFFIC LUMP SUM.

VERTICAL CLEARANCE

ANY WORK (FALSEWORK, TRAFFIC PROTECTION, CONTAINMENT, ETC.) OVER LIVE TRAFFIC BY THE CONTRACTOR THAT REDUCES THE EXISTING VERTICAL CLEARANCE IS PROHIBITED UNLESS 4 WEEKS ADVANCED NOTICE IS PROVIDED TO THE ENGINEER WITH NEW PROPOSED VERTICAL CLEARANCES. THE CONTRACTOR SHALL PROVIDE FIELD MEASUREMENTS BEFORE ALLOWING TRAFFIC UNDERNEATH. IF ANY WORK IS TO OCCUR BELOW 14'-6", THEN SIGNS ON THE STRUCTURE AND ADVANCE WARNING SIGNS SHALL BE INSTALLED A MINIMUM OF 2 WEEKS PRIOR TO PERFORMING SUCH WORK. SIGNING SHALL BE IN ACCORDANCE WITH THE 'OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES' (OMUTCD) AND THE OHIO "TRAFFIC ENGINEERING MANUAL" (TEM). NO WORK OVER TRAFFIC SHALL OCCUR WITH A VERTICAL CLEARANCE LESS THAN 13'-10". LOWERING THE VERTICAL CLEARANCE DURING CONSTRUCTION IS CONSIDERED THE CONTRACTOR'S MEANS AND METHODS OF ACCOMPLISHING THE WORK, AND THEREFORE THE STATE IS NOT RESPONSIBLE FOR ANY DAMAGE FROM VEHICULAR IMPACTS THAT MAY RESULT AS PER 107.10. PAYMENT FOR ANY SIGNS, SIGN SUPPORTS, ETC. MATERIALS AND LABOR SHALL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION OUTLINED BELOW IS INTENDED TO GUIDE THE WORK IN A MANNER THAT PROVIDES A BASIC LEVEL OF SERVICE TO ALL MOTORISTS. ALTHOUGH THIS SEQUENCE OF CONSTRUCTION LISTS TASKS IN A SPECIFIC ORDER, NOT EVERY ITEM LISTED MUST BE COMPLETED BEFORE COMMENCING THE NEXT ITEM, AND SOME TASKS MAY BE PERFORMED CONCURRENTLY.

PHASE 1, TASK 1: MAJOR BRIDGE REHABILITATION OF PRE-320-0117

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR A PERIOD OF TIME AS DESCRIBED ON SHEET 24 WHEN TRAFFIC MAY BE DETOURED. THE DETOUR AND DETOUR SIGNING ARE SHOWN ON SHEET 26. ACCESS TO ALL DRIVES SHALL BE MAINTAINED AT ALL TIMES, INCLUDING DURING THE CLOSURE. FALSEWORK WILL BE REQUIRED ON THE BRIDGE DURING CONSTRUCTION AND SHOULD BE INSTALLED PRIOR TO ANY BRIDGE WORK. THE FALSEWORK CAN BE INSTALLED, AND SUBSUEQUENTLY REMOVED, USING SINGLE LANE CLOSURES ON I.R. 70 AT PERMISSIBLE TIMES AS SHOWN ON SHEET 24. LANE CLOSURES ON I.R. 70 SHOULD BE INSTALLED ACCORDING TO STANDARD CONSTRUCTION DRAWING (SCD) MT-95.30.

PHASE 1, TASK 2: MAJOR BRIDGE REHABILITATION OF PRE-726-0428

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR A PERIOD OF TIME AS DESCRIBED ON SHEET 24 WHEN TRAFFIC MAY BE DETOURED. THE DETOUR AND DETOUR SIGNING ARE SHOWN ON SHEET 27. ACCESS TO ALL DRIVES SHALL BE MAINTAINED AT ALL TIMES, INCLUDING DURING THE CLOSURE. FALSEWORK WILL BE REQUIRED ON THE BRIDGE DURING CONSTRUCTION AND SHOULD BE INSTALLED PRIOR TO ANY BRIDGE WORK. THE FALSEWORK CAN BE INSTALLED, AND SUBSEQUENTLY REMOVED, USING SINGLE LANE CLOSURES ON I.R. 70 AT PERMISSIBLE TIMES AS SHOWN ON SHEET 24. LANE CLOSURES ON I.R. 70 SHOULD BE INSTALLED ACCORDING TO SCD MT-95.30.

PHASE 1, TASK 3: BRIDGE PARAPET REPAIR ON PRE-70-0632

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON PENCE SHEWMAN ROAD SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR A PERIOD OF TIME AS DESCRIBED ON SHEET 24 WHEN TRAFFIC MAY BE DETOURED. THE DETOUR AND DETOUR SIGNING ARE SHOWN ON SHEET 28. ACCESS TO ALL DRIVES SHALL BE MAINTAINED AT ALL TIMES, INCLUDING DURING THE CLOSURE. FALSEWORK WILL BE REQUIRED ON THE BRIDGE DURING CONSTRUCTION AND SHOULD BE INSTALLED PRIOR TO ANY BRIDGE WORK. THE FALSEWORK CAN BE INSTALLED, AND SUBSEQUENTLY REMOVED, USING SINGLE LANE CLOSURES ON I.R. 70 AT PERMISSIBLE TIMES AS SHOWN ON SHEET 24. LANE CLOSURES ON I.R. 70 SHOULD BE INSTALLED ACCORDING TO STANDARD CONSTRUCTION DRAWING (SCD) MT-95.30.

THE DETOUR PLAN FOR THIS WORK UTILIZES S.R. 726. THEREFORE, TASK 2 AND TASK 3 SHALL NOT BE CONSTRUCTED CONCURRENTLY. ONLY ONE DETOUR MAY BE IN PLACE AT A TIME.

SEQUENCE OF CONSTRUCTION (CONTINUED)

PHASE 1, TASK 4: BRIDGE PARAPET REPAIR ON PRE-70-1541

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON LEWISBURG ROAD SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR A PERIOD OF TIME AS DESCRIBED ON SHEET 24 WHEN TRAFFIC MAY BE DETOURED. THE DETOUR AND DETOUR SIGNING ARE SHOWN ON SHEET 28A. FALSEWORK WILL BE REQUIRED ON THE BRIDGE DURING CONSTRUCTION AND SHOULD BE INSTALLED PRIOR TO ANY BRIDGE WORK. THE FALSEWORK CAN BE INSTALLED, AND SUBSEQUENTLY REMOVED, USING SINGLE LANE CLOSURES ON I.R. 70 AT PERMISSIBLE TIMES AS SHOWN ON SHEET 24. LANE CLOSURES ON I.R. 70 SHOULD BE INSTALLED ACCORDING TO SCD MT-95.30.

PHASE 2, TASK 1: MINOR BRIDGE REHABILITATION ON THE REMAINING STRUCTURES AS DETAILED IN THE PLANS.

REHABILITATION OF THE FOLLOWING BRIDGES AS DETAILED IN THE PLANS SHOULD NOT REQUIRE ANY LANE OR SHOULDER CLOSURES OR RESTRICTIONS. ALTHOUGH NONE ARE ANTICIPATED, ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO AND WHEN REQUIRED BY THE OMUTCD AND SCDs.

PRE-70-358
PRE-70-0489
PRE-70-0632
PRE-70-1366
PRE-503-1955
PRE-70-1665
PRE-70-1766

NIGHTTIME LANE CLOSURES WILL BE REQUIRED TO PERFORM BRIDGE REHABILITATION ON THE FOLLOWING STRUCTURES.

PRE-70-0504 L/R
PRE-70-0689 L/R
PRE-70-1072 L/R
PRE-70-1249 L/R
PRE-70-1349 L/R
PRE-70-1500 L/R

THE HOURS OF SUCH CLOSURES ARE SUBJECT TO THE PERMITTED LANE CLOSURE SCHEDULE AND LANE VALUE CONTRACT TABLE SHOWN IN THE PLANS. LANES SHOULD BE CLOSED AS OUTLINED ON SCD MT-95.30, CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS. SOME BRIDGES ARE LOCATED NEAR ENTRANCE AND EXIT RAMPS AND WILL ALSO REQUIRE SCDS MT-98.10 LANE CLOSURE AT ENTRANCE RAMP AND MT-98.20 LANE CLOSURE AT EXIT RAMP USING DRUMS. ONE LANE IN EACH DIRECTION MUST REMAIN OPEN TO TRAFFIC AT ALL TIMES.

PARAPET REPAIR ON PRE-70-1541 WILL REQUIRE ADDITIONAL MAINTENANCE OF TRAFFIC ON C.R. 34 (LEWISBURG RD). REPAIRS SHOULD NOT BE MADE ABOVE LIVE TRAFFIC ON I.R. 70. WORK MAY ONLY BE COMPLETED OVER ONE LANE AT A TIME, WHILE CLOSED, TO PREVENT DEBRIS FROM FALLING ONTO MOTORISTS. ALTERNATIVELY, AT THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY CHOOSE TO PROTECT I.R. 70 MOTORISTS BY INSTALLING A CATCHMENT SYSTEM ON THE BRIDGE TO PREVENT DEBRIS FROM FALLING ON THE HIGHWAY BELOW. A FLAGGER SHOULD BE USED TO MAINTAIN ONE LANE OF TRAFFIC ON C.R. 34 DURING PARAPET REPAIR. USE SCD MT-97.10 FLAGGER CLOSING 1 LANE OF A 2-LANE HIGHWAY - STATIONARY OPERATION.

SEQUENCE OF CONSTRUCTION (CONTINUED)

PHASE 2, TASK 2: LIGHTING INSTALLATIONS

IT IS ANTICIPATED THAT ALL WORK RELATED TO LIGHTING CAN BE COMPLETED WITHOUT LANE RESTRICTIONS ON ANY ROAD. ALL LIGHTING WORK, WITH THE EXCEPTION OF LUMINAIRE REPLACEMENTS, ARE OUTSIDE OF THE EXISTING SHOULDERS OF ALL ROUTES. USE SCD MT-95.45 CLOSING RIGHT OF LEFT SHOULDER OF A MULTILANE DIVIDED HIGHWAY TO CLOSE SHOULDERS AS NECESSARY. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO AND WHEN REQUIRED BY THE OMUTCD AND SCDs.

PHASE 2, TASK 3: MILLING AND FILLING OF WEIGH STATION PAVEMENT

THIS WORK SHALL CONSIST OF MILLING AND FILLING PAVEMENT WITHIN THE LIMITS OF THE WEIGH STATION. THE WEIGH STATION MAY BE CLOSED FOR A PERIOD NOT TO EXCEED THE NUMBER OF CONSECUTIVE CALENDAR DAYS SHOWN ON SHEET 24. CLOSURE OF THE WEIGH STATION SHALL BE PERFORMED AS OUTLINED ON SHEET NO. 29. A NOTICE OF CLOSURE SIGN SHALL BE INSTALLED PRIOR TO THE RAMP CLOSURE AS NOTED ON SHEET 21. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE THE WEIGH STATION IS OPENED TO TRAFFIC.

PHASE 2, TASK 4: PAVEMENT REPAIR IN REST AREA

THIS WORK SHALL CONSIST OF CONCRETE PAVEMENT REPAIR ON THE RAMPS AND TRUCK PARKING AREAS WITHIN THE EASTBOUND REST AREA. THE REST AREA MAY BE CLOSED FOR A PERIOD NOT TO EXCEED THE NUMBER OF CONSECUTIVE CALENDAR DAYS SHOWN ON SHEET 24 IN ORDER TO COMPLETE THIS WORK. CLOSURE OF THE REST AREA SHALL BE COMPLETE AS OUTLINED ON SHEET NO. 30. A NOTICE OF CLOSURE SIGN SHALL BE INSTALLED PRIOR TO THE RAMP CLOSURE AS NOTED ON SHEET 21. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE THE REST AREA IS OPENED TO TRAFFIC.

PHASE 3, TASK 1: WESTBOUND REST AREA

THE CONTRACTOR SHALL CLOSE THE SHOULDER OF WESTBOUND I.R. 70 AS NECESSARY TO PERFORM THE WORK. THE SHOULDER SHALL BE CLOSED ACCORDING TO SCD MT-95.45 CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY.

PHASE 3, TASK 2: PAVEMENT REPAIR ALONG IR 70 AND RAMPS

NIGHTLY LANE CLOSURES WILL BE REQUIRED TO PERFORM PAVEMENT REPAIRS ALONG MAINLINE I.R. 70. THE HOURS OF SUCH CLOSURES ARE SUBJECT TO THE PERMITTED LANE CLOSURE SCHEDULE AND LANE VALUE CONTRACT TABLE SHOWN IN THE PLANS. LANES SHOULD BE CLOSED AS OUTLINED ON SCD MT-95.30, CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS. SOME PAVEMENT REPAIRS ARE LOCATED NEAR ENTRANCE AND EXIT RAMPS AND WILL REQUIRE SCDS MT-98.10 LANE CLOSURE AT ENTRANCE RAMP AND MT-98.20 LANE CLOSURE AT EXIT RAMP USING DRUMS. ONE LANE IN EACH DIRECTION MUST REMAIN OPEN TO TRAFFIC AT ALL TIMES.

SEQUENCE OF CONSTRUCTION (CONTINUED)

PHASE 3, TASK 3: MILLING PAVEMENT AND PLACING INTERMEDIATE COURSE

THIS WORK SHALL CONSIST OF MILLING THE EXISTING ASPHALT SURFACE AND PLACING A NEW INTERMEDIATE COURSE ON I.R. 70 AS INDICATED IN THE PLANS. PAVEMENT REPAIRS SHALL BE COMPLETED PRIOR TO PLACING THE NEW PAVEMENT. A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON I.R. 70 IN EACH DIRECTION AT ALL TIMES, INCLUDING RAMPS. LANE CLOSURES SHOULD BE PERFORMED AS OUTLINED IN SCD MT-95.30 CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS. PAVING WORK IN THE VICINITY OF RAMPS SHALL ALSO BE ACCORDING TO SCDS MT-98.10 LANE CLOSURE AT ENTRANCE RAMP, MT-98.11 LANE CLOSURE AT ENTRANCE RAMP ACCELERATION LANE, MT-98.20 LANE CLOSURE AT EXIT RAMP USING DRUMS, MT-98.22 LANE CLOSURE IN DECELERATION LANE, AND MT-98.28 LANE CLOSURE WITHIN EXIT RAMP. INSTALL TEMPORARY PAVEMENT MARKINGS PRIOR TO OPENING ANY PAVED SECTION TO TRAFFIC.

A MINIMUM OF ONE 10' LANE SHALL BE MAINTAINED ON ALL RAMPS DURING MILLING AND PAVING OPERATIONS. HALF OF EACH RAMP SHOULD BE CLOSED AT A TIME AS OUTLINED ON SCD MT-98.28 LANE CLOSURE WITHIN EXIT RAMP. TEMPORARY PAVEMENT MARKINGS SHOULD BE PERFORMED AS OUTLINED IN SCD MT-99.20 TRAFFIC CONTROL FOR LONG LINE PAVEMENT MARKING OPERATIONS.

PHASE 4: PLACING FINAL SURFACE COURSE ON IR 70

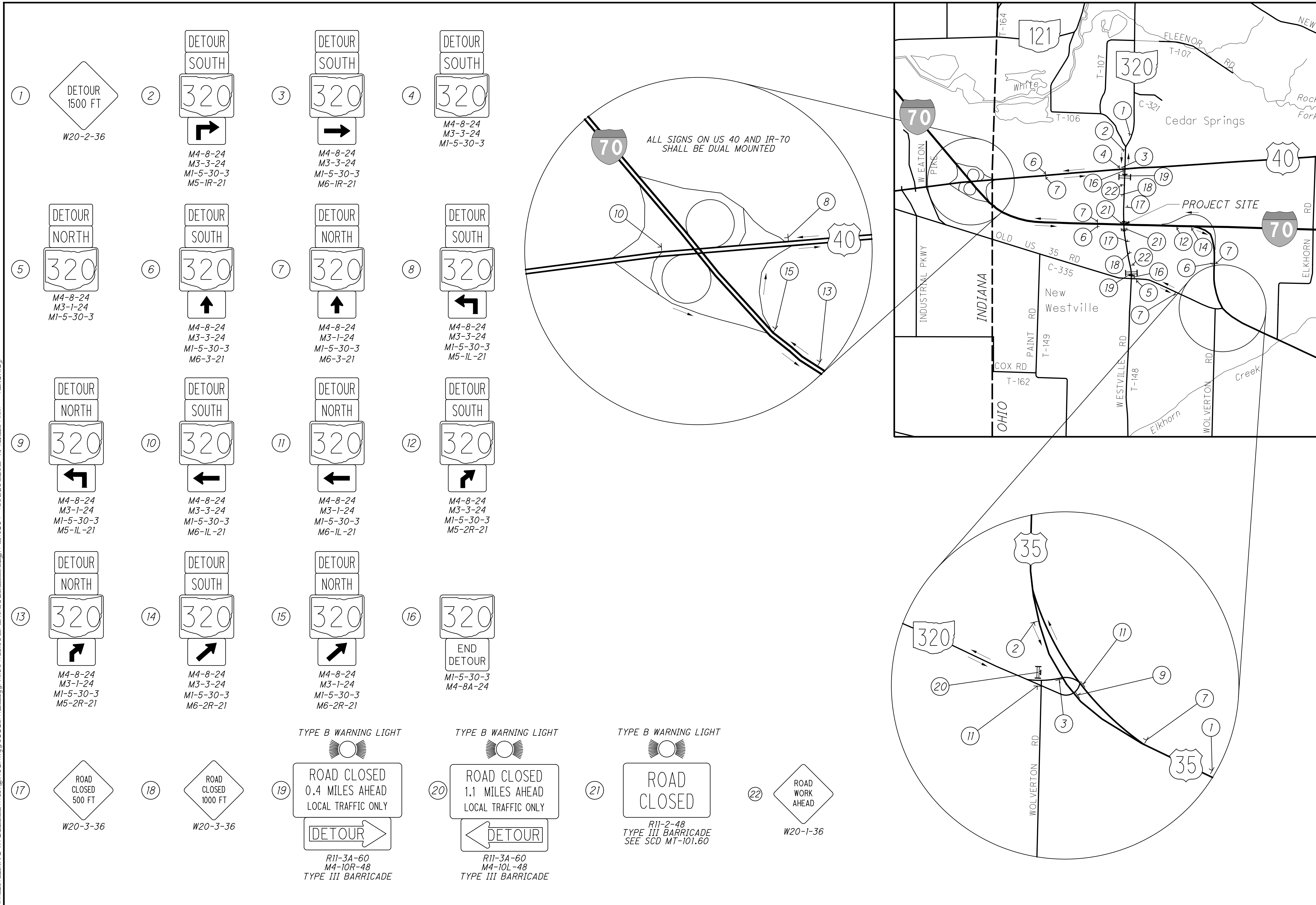
THIS WORK SHALL CONSIST OF PAVING THE FINAL SURFACE COURSE ON IR 70, INCLUDING RAMPS, AS INDICATED IN THE PLANS. LANE CLOSURES FOR PAVING SHALL BE IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE SCHEDULE AND LAE VALUE CONTRACT TABLE SHOWN IN THE PLANS. A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON IR 70 IN EACH DIRECTION AT ALL TIMES, INCLUDING RAMPS. LANE CLOSURES SHOULD BE PERFORMED AS OUTLINED IN SCD MT-95.30 CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS. PAVING WORK IN THE VICINITY OF RAMPS SHALL ALSO BE ACCORDING TO SCDS MT-98.10 LANE CLOSURE AT ENTRANCE RAMP, MT-98.11 LANE CLOSURE AT ENTRANCE RAMP ACCELERATION LANE, MT-98.20 LANE CLOSURE AT EXIST RAMP USING DRUMS, MT-98.22 LANE CLOSURE IN DECELERATION LANE, AND MT-98.28 LANE CLOSURE WITHIN EXIT RAMP. INSTALL PERMANENT PAVEMENT MARKINGS PRIOR TO OPENING ANY PAVED SECTION TO TRAFFIC.

A MINIMUM OF ONE 10' LANE SHALL BE MAINTAINED ON ALL RAMPS DURING PAVING OPERATIONS. HALF OF EACH RAMP SHOULD BE CLOSED AT A TIME AS OUTLINED ON SCD MT-98.28 LANE CLOSURE WITHIN EXIT RAMP. PERMANENT PAVEMENT MARKINGS SHOULD BE PERFORMED AS OUTLINED IN SCD MT-99.20 TRAFFIC CONTROL FOR LONG LINE PAVEMENT MARKING OPERATIONS.

CALCULATED PJD
CHECKED SNS

MAINTENANCE OF TRAFFIC NOTES

PRE-70-0.00



NOT TO SCALE

CALCULATED MGM
CHECKED TWG

MAINTENANCE OF TRAFFIC
S.R. 320 DETOUR MAP

PRE-70-0.00

TYPE B WARNING LIGHT

① OPEN TO ORPHANS ROAD / ROAD CLOSED 4.1 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR

R11-3a-60
M4-10R-48
TYPE III BARRICADE

TYPE B WARNING LIGHT

② ROAD CLOSED 0.6 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR

R11-3a-60
M4-10L-48
TYPE III BARRICADE

TYPE B WARNING LIGHT

③ ROAD CLOSED 1.2 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR

R11-3a-60
M4-10L-48
TYPE III BARRICADE

④ DETOUR / NORTH / 726

M4-8-24
M3-1-24
M1-5-30-3
M6-3-21

⑤ DETOUR / SOUTH / 726

M4-8-24
M3-3-24
M1-5-30-3
M6-3-21

⑥ DETOUR / NORTH / 726

M4-8-24
M3-1-24
M1-5-30-3
M5-1-21

⑦ DETOUR / NORTH / 726

M4-8-24
M3-1-24
M1-5-30-3
M6-1-21

⑧ DETOUR / SOUTH / 726

M4-8-24
M3-3-24
M1-5-30-3
M6-1-21

⑨ DETOUR / SOUTH / 726

M4-8-24
M3-3-24
M1-5-30-3
M5-1-21

⑩ ROAD CLOSED 1000 FT

W20-3-36

⑪ ROAD CLOSED 500 FT

W20-3-36

⑫ 726 / END DETOUR

M1-5-30-3
M4-8a-24

⑬ DETOUR AHEAD

W20-2-36

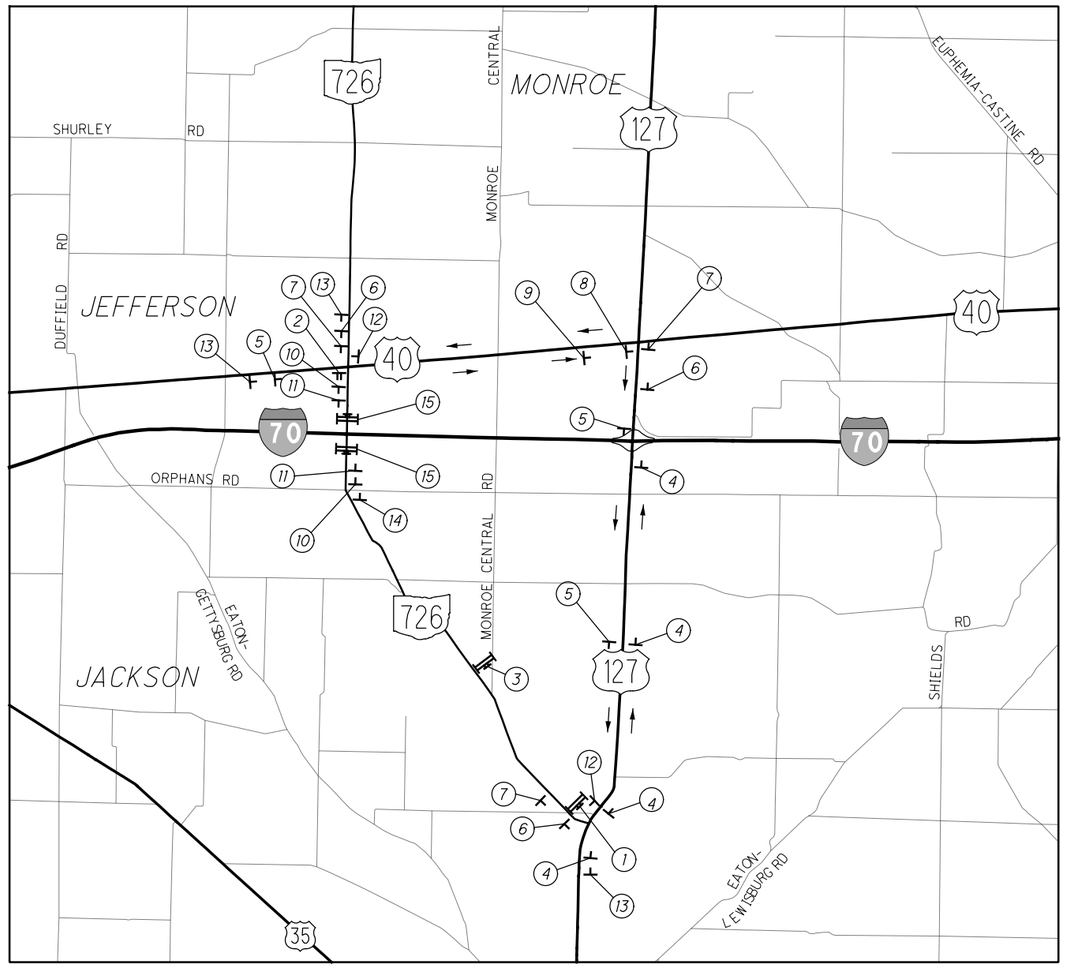
⑭ ROAD WORK AHEAD

W20-1-36

TYPE B WARNING LIGHT

⑮ ROAD CLOSED

R11-2-48
TYPE III BARRICADE



NOT TO SCALE

CALCULATED JTK
CHECKED PJD

MAINTENANCE OF TRAFFIC
S.R. 726 DETOUR MAP

PRE-70-0.00

27
147

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TYPE B WARNING LIGHT

(1)

R11-3a-60
M4-10R-48
TYPE III BARRICADE

TYPE B WARNING LIGHT

(2)

R11-3a-60
M4-10L-48
TYPE III BARRICADE

TYPE B WARNING LIGHT

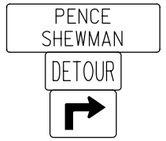
(3)

R11-2-48
TYPE III BARRICADE

(4)

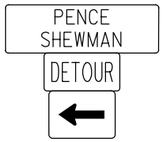
D3-1-42
M4-8-24
M5-1-21

(5)



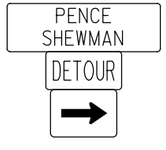
D3-1-42
M4-8-24
M5-1-21

(6)



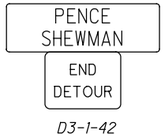
D3-1-42
M4-8-24
M6-1-21

(7)



D3-1-42
M4-8-24
M6-1-21

(8)



D3-1-42
M4-8a

(9)

W20-2-36

(10)

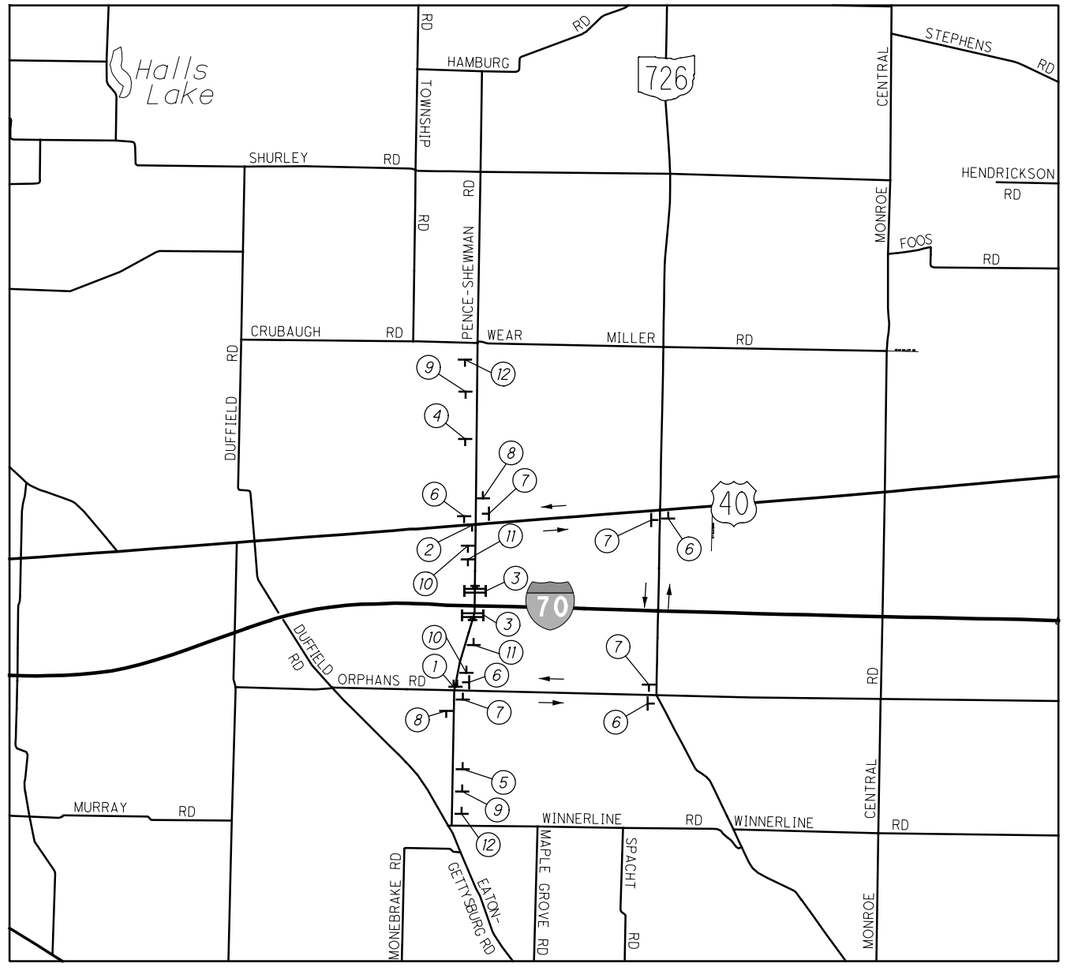
W20-3-36

(11)

W20-3-36

(12)

W20-1-36



NOT TO SCALE

CALCULATED JTK
CHECKED PJD

MAINTENANCE OF TRAFFIC
PENCE SHEWMAN ROAD DETOUR MAP

PRE-70-0.00

(1) DETOUR 1500 FT
W20-2-36

TYPE B WARNING LIGHT
(2) ROAD CLOSED
R11-2-48
TYPE III BARRICADE

(3) ROAD CLOSED 500 FT
W20-3-36

(4) LEWISBURG ROAD / DETOUR
D3-1-48
M4-8-24
M6-3-21

TYPE B WARNING LIGHT
(5) ROAD CLOSED 1.5 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR
R11-3a-60
M4-10R-48
TYPE III BARRICADE

(6) ROAD WORK AHEAD
W20-1-36

(7) LEWISBURG ROAD / DETOUR
D3-1-48
M4-8-24
M5-1-21

(8) LEWISBURG ROAD / DETOUR
D3-1-48
M4-8-24
M6-1-21

(9) ROAD CLOSED AHEAD
W20-3-36

(10) LEWISBURG ROAD / DETOUR
D3-1-48
M4-8-24
M5-1-21

TYPE B WARNING LIGHT
(11) ROAD CLOSED 0.5 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR
R11-3a-60
M4-10L-48
TYPE III BARRICADE

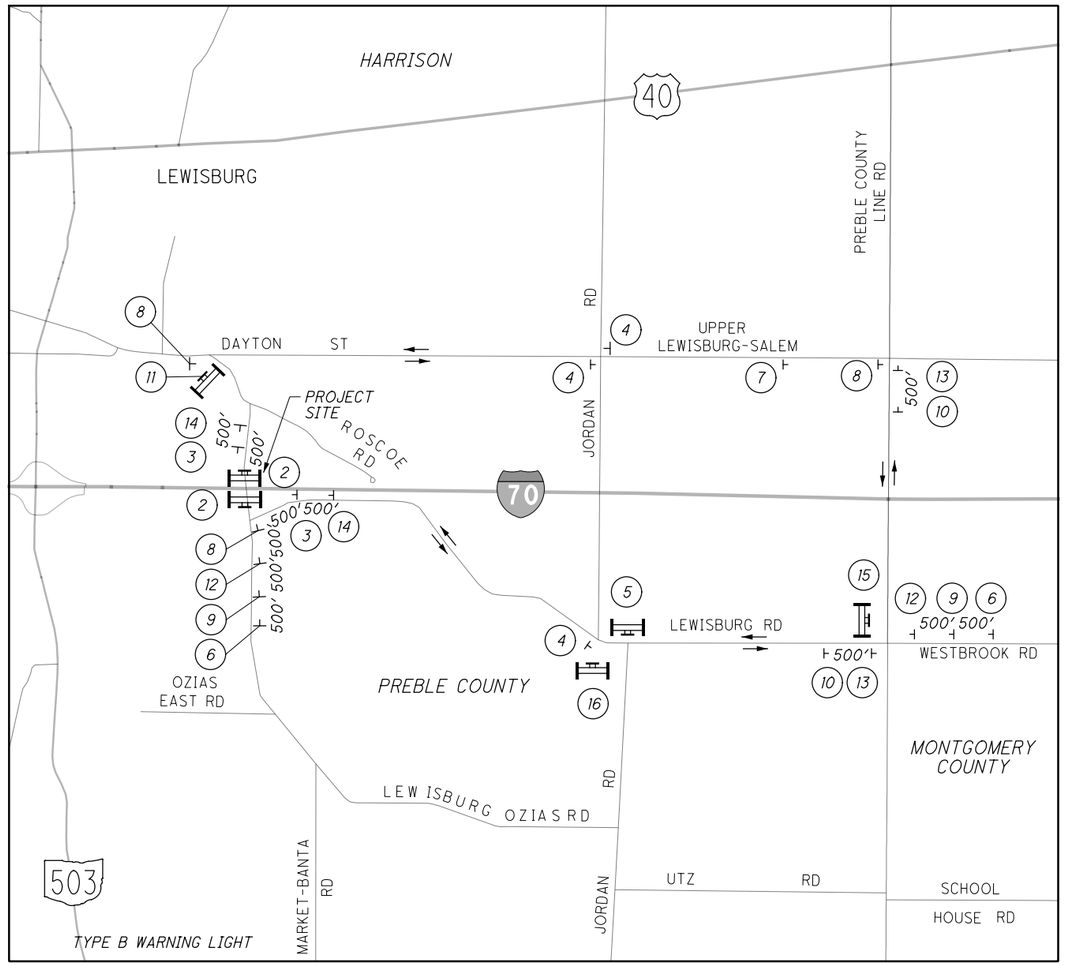
(12) DETOUR AHEAD
W20-2-36

(13) LEWISBURG ROAD / DETOUR
D3-1-48
M4-8-24
M6-1-21

(14) ROAD CLOSED 1000 FT
W20-3-36

TYPE B WARNING LIGHT
(15) ROAD CLOSED 2.5 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR
R11-3a-60
M4-10R-48
TYPE III BARRICADE

(16) ROAD CLOSED 1.5 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR
R11-3a-60
M4-10L-48
TYPE III BARRICADE

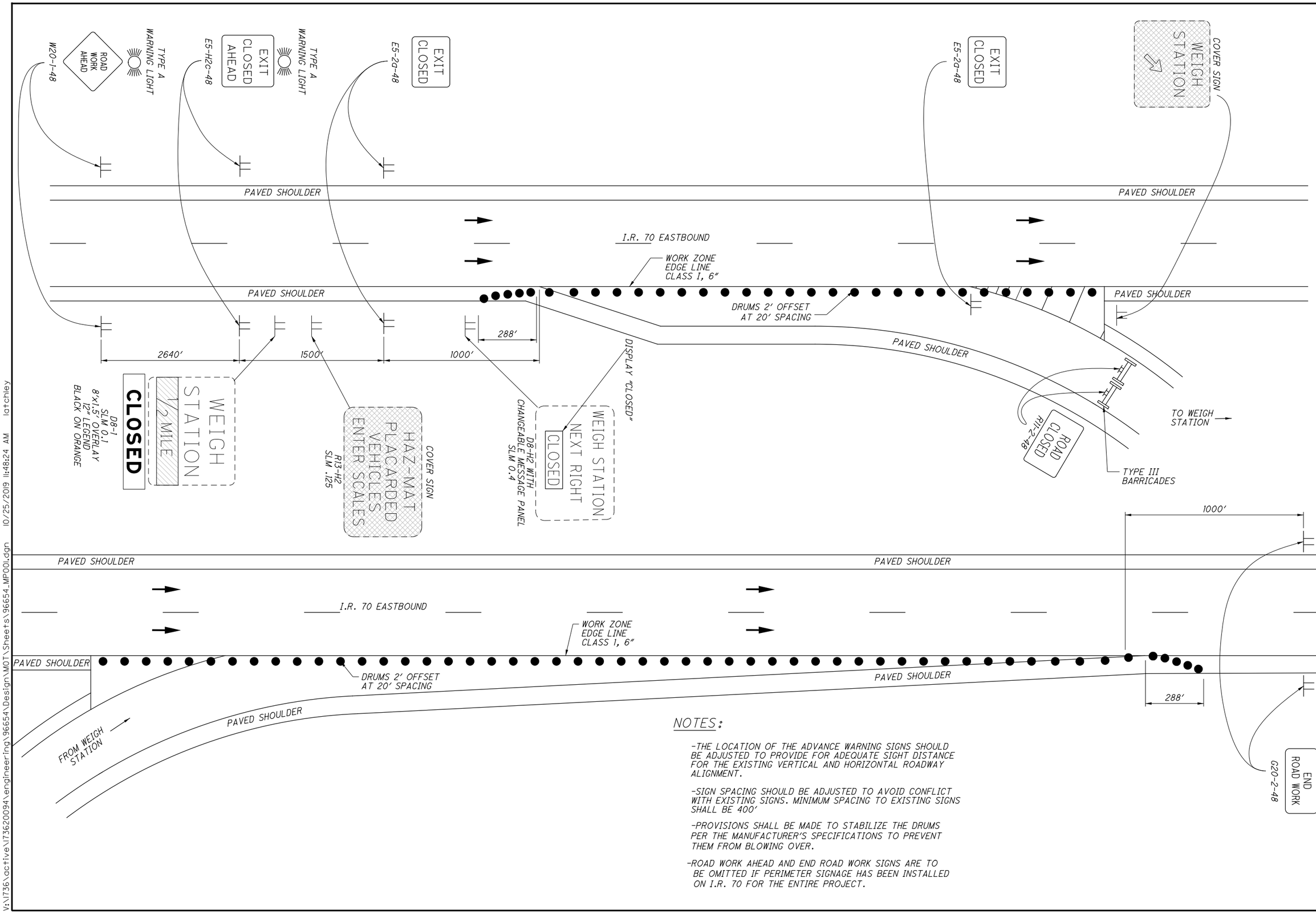


NOT TO SCALE

CALCULATED JTK
CHECKED PJD

MAINTENANCE OF TRAFFIC
LEWISBURG ROAD DETOUR MAP

PRE-70-0.00



NOTES:

-THE LOCATION OF THE ADVANCE WARNING SIGNS SHOULD BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT.

-SIGN SPACING SHOULD BE ADJUSTED TO AVOID CONFLICT WITH EXISTING SIGNS. MINIMUM SPACING TO EXISTING SIGNS SHALL BE 400'

-PROVISIONS SHALL BE MADE TO STABILIZE THE DRUMS PER THE MANUFACTURER'S SPECIFICATIONS TO PREVENT THEM FROM BLOWING OVER.

-ROAD WORK AHEAD AND END ROAD WORK SIGNS ARE TO BE OMITTED IF PERIMETER SIGNAGE HAS BEEN INSTALLED ON I.R. 70 FOR THE ENTIRE PROJECT.

CALCULATED PJD
CHECKED SNS

NOT TO SCALE

MAINTENANCE OF TRAFFIC
EASTBOUND WEIGH STATION CLOSURE

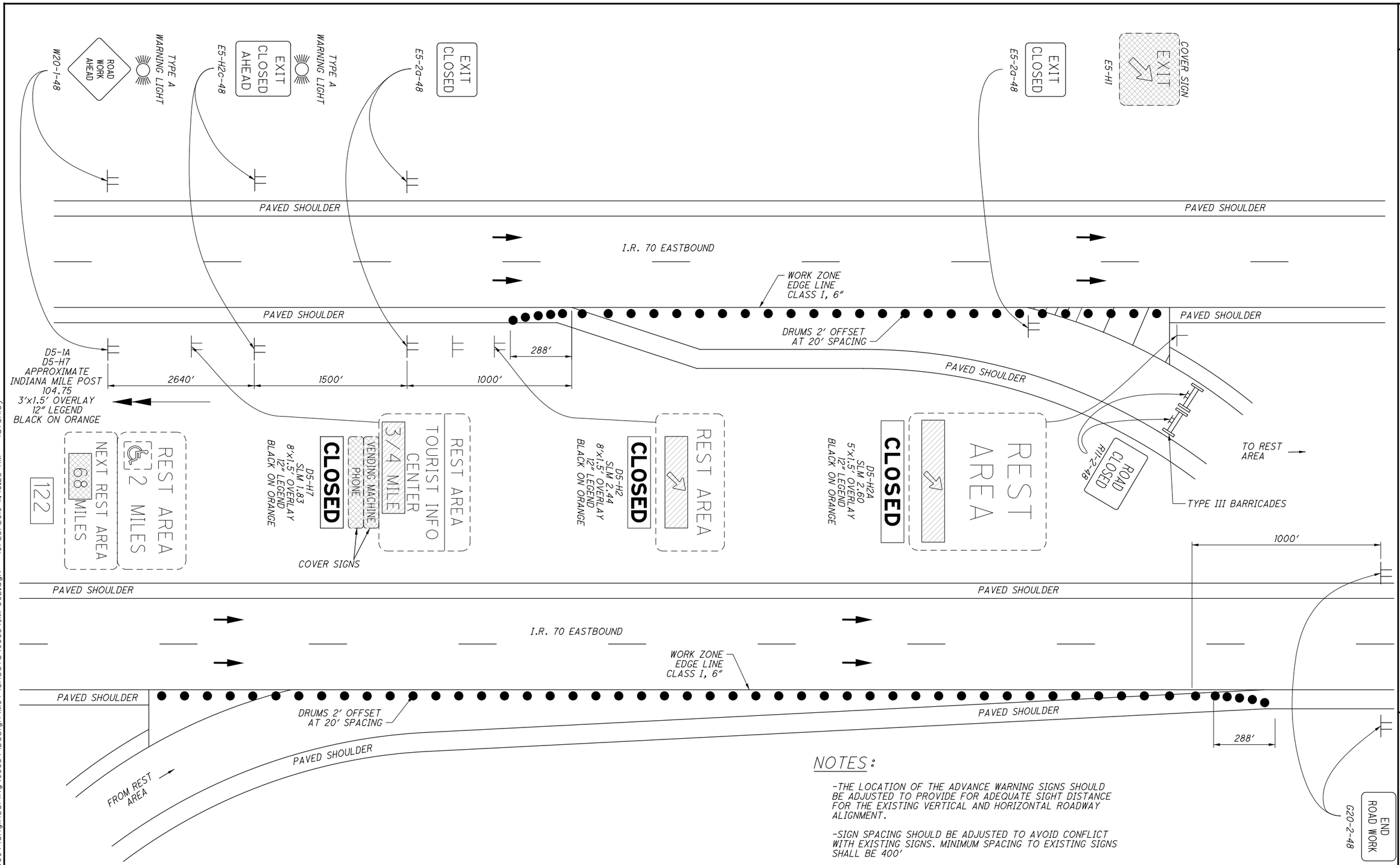
PRE-70-0.00

MAINTENANCE OF TRAFFIC EASTBOUND REST AREA CLOSURE

NOT TO SCALE

CALCULATED PJD | CHECKED SNS

PRE-70-0.00



NOTES:

-THE LOCATION OF THE ADVANCE WARNING SIGNS SHOULD BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT.

-SIGN SPACING SHOULD BE ADJUSTED TO AVOID CONFLICT WITH EXISTING SIGNS. MINIMUM SPACING TO EXISTING SIGNS SHALL BE 400'

-PROVISIONS SHALL BE MADE TO STABILIZE THE DRUMS PER THE MANUFACTURER'S SPECIFICATIONS TO PREVENT THEM FROM BLOWING OVER.

-ROAD WORK AHEAD AND END ROAD WORK SIGNS ARE TO BE OMITTED IF PERIMETER SIGNAGE HAS BEEN INSTALLED ON I.R. 70 FOR THE ENTIRE PROJECT.

SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
16	17	19	20	35	36A	48				01/IMS/PV	02/IMS/BR	03/IMS/PV	05/STR/PV						
																		ROADWAY	
	LS									LS				201	11000	LS		CLEARING AND GRUBBING	
					3,688							3,688		202	23000	3,688	SY	PAVEMENT REMOVED	
				8,799	3,882					8,799		3,882		202	23010	12,681	SY	PAVEMENT REMOVED, ASPHALT	
					472							472		202	32000	472	FT	CURB REMOVED	
					76							76		202	35100	76	FT	PIPE REMOVED, 24" AND UNDER	
				19,109						19,109				202	38000	19,109	FT	GUARDRAIL REMOVED	
				46						46				202	42010	46	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
				14						14				202	42040	14	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
				12						12				202	42050	12	EACH	ANCHOR ASSEMBLY REMOVED, TYPE B	
				63						63				202	47000	63	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
					1							1		202	58100	1	EACH	CATCH BASIN REMOVED	
					2							2		202	58200	2	EACH	INLET REMOVED	
					1							1		202	58400	1	EACH	INLET ABANDONED	
		824			95					824		95		203	10000	919	CY	EXCAVATION	
		44								44				203	20000	44	CY	EMBANKMENT	
1,992										1,992				204	10000	1,992	SY	SUBGRADE COMPACTION	
		666								666				204	13000	666	CY	EXCAVATION OF SUBGRADE	
		666								666				204	30020	666	CY	GRANULAR MATERIAL, TYPE C	
1										1				204	45000	1	HOUR	PROOF ROLLING	
		1,992								1,992				204	50000	1,992	SY	GEOTEXTILE FABRIC	
				227						227				209	15000	227	STA	RESHAPING UNDER GUARDRAIL	
				734						734				209	70000	734	CY	BORROW	
				15,250						15,250				606	15050	15,250	FT	GUARDRAIL, TYPE MGS	
				4,213						4,213				606	15100	4,213	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
				12						12				606	26050	12	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
				46						46				606	26150	46	EACH	ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016)	
				14						14				606	26550	14	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
				59						59				606	35002	59	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
				4						4				606	35102	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
				5						5				SPECIAL	69050100	5	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	18
			LS							LS				SPECIAL	69098400	LS		CONSULTANT FOR CONCRETE QUALITY CONTROL/INCLUDING TESTING AND INSPECTION	20
																		EROSION CONTROL	
					1,261							1,261		659	00300	1,261	CY	TOPSOIL	
		12,084		12,629	11,355					24,713		11,355		659	10000	36,068	SY	SEEDING AND MULCHING	
		1,236								1,236				659	14000	1,236	SY	REPAIR SEEDING AND MULCHING	
		3.34			1.54					3.34		1.54		659	20000	4.88	TON	COMMERCIAL FERTILIZER	
		5.11			2.35					5.11		2.35		659	31000	7.46	ACRE	LIME	
		134			62					134		62		659	35000	196	MGAL	WATER	
					4,861							4,861		670	00500	4,861	SY	SLOPE EROSION PROTECTION	
		5,000			10,000					5,000		10,000		832	30000	15,000	EACH	EROSION CONTROL	
					LS							LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
					LS							LS		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
					LS							LS		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
																		PAVEMENT	
	5,000									5,000				253	01000	5,000	SY	PAVEMENT REPAIR	
2,811										2,811				253	02000	2,811	CY	PAVEMENT REPAIR	
888,996										884,678			4,318	254	01000	888,996	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 3 1/4"	
8,890										8,847			43	254	01600	8,890	SY	PATCHING PLANED SURFACE	
						566						566		255	10160	566	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS	
						852						852		255	20000	852	FT	FULL DEPTH PAVEMENT SAWING	
						2,452						2,452		256	10000	2,452	SF	BONDED PATCHING OF PORTLAND CEMENT CONCRETE PAVEMENT, TYPE A	
						1,270						1,270		258	10000	1,270	EACH	RETROFIT DOWEL BAR	
374										374				301	46000	374	CY	ASPHALT CONCRETE BASE, PG64-22	
354										354				304	20000	354	CY	AGGREGATE BASE	
242										242				407	10000	242	GAL	TACK COAT	
124,460										123,855			605	407	20000	124,460	GAL	NON-TRACKING TACK COAT	
51										51				441	50000	51	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	

CALCULATED LBA
CHECKED SNS

GENERAL SUMMARY

PRE-70-0.00

SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
18	35	37	36A	38	49	57				01/IMS/PV	02/IMS/BR	03/IMS/PV	05/STR/PV						
																		PAVEMENT CONTINUED	
										72				441	50300	72	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
										13				441	50400	13	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)	
										47,814			233	442	00100	48,047	CY	ANTI-SEGREGATION EQUIPMENT	
										42,809			210	442	10101	43,019	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN, PG64-28	17
										36,652			180	442	10300	36,832	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)	
										211				442	20000	211	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
										246				442	20201	246	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN, PG64-28	17
	736									736				609	24510	736	FT	CURB, TYPE 4-C	
										70				618	40600	70	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
																		LIGHTING	
						118				118				625	00450	118	EACH	CONNECTION, FUSED PULL APART	
						20				20				625	00451	20	EACH	CONNECTION, FUSED PULL APART, AS PER PLAN	50
						99				99				625	00480	99	EACH	CONNECTION, UNFUSED PERMANENT	
						42				42				625	10490	42	EACH	LIGHT POLE, CONVENTIONAL, AT20B40	
						42				42				625	14100	42	EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP	
						17				17				625	18400	17	EACH	BRACKET ARM, 20'	
						7,053				7,053				625	23200	7,053	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
						10,725				10,725				625	23302	10,725	FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	
						9,036				9,036				625	23400	9,036	FT	NO. 10 AWG POLE AND BRACKET CABLE	
						19,404				19,404				625	24320	19,404	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
						708				708				625	24324	708	FT	1-1/2" DUCT CABLE WITH THREE NO. 6 AWG 2400 VOLT CABLES	
						160				160				625	25500	160	FT	CONDUIT, 3", 725.04	
						1,926				1,926				625	25902	1,926	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
						67				67				625	26253	67	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, IES-III-M, LED, 9200-11600 LUMENS	49
						2				2				625	26273	2	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, IES-V-M, LED, 38400-42000 LUMENS	49
						19,552				19,552				625	29000	19,552	FT	TRENCH	
						32				32				625	30700	32	EACH	PULL BOX, 725.08, 18"	
			11			6				6		11		625	31510	17	EACH	PULL BOX REMOVED	
						59				59				625	32000	59	EACH	GROUND ROD	
						5				5				625	34001	5	EACH	POWER SERVICE, AS PER PLAN	49
						19,552				19,552				625	36000	19,552	FT	PLASTIC CAUTION TAPE	
					LS					LS				SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	49
					2					2				SPECIAL	62540010	2	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	49
						16				16				625	75350	16	EACH	LIGHT TOWER REMOVED	
			9									9		625	75351	9	EACH	LIGHT TOWER REMOVED, AS PER PLAN	36A
			50			82				82		50		625	75506	132	EACH	LUMINAIRE REMOVED	
						2				2				625	75510	2	EACH	POWER SERVICE REMOVED	
						1				1				625	75511	1	EACH	POWER SERVICE REMOVED, AS PER PLAN	49
			9			16				16		9		625	75540	25	EACH	LIGHT TOWER FOUNDATION REMOVED	
						3				3				625	75800	3	EACH	DISCONNECT CIRCUIT	
						3,722				3,722				632	29901	3,722	FT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	50
						17				17				632	64000	17	EACH	STRAIN POLE FOUNDATION	
						17				17				632	84501	17	EACH	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN	50
																		TRAFFIC CONTROL	
		1,996								1,979			17	621	00100	1,996	EACH	RPM	
		1,927								1,910			17	621	54000	1,927	EACH	RAISED PAVEMENT MARKER REMOVED	
10	16										26			626	00102	26	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
	338									338				626	00110	338	EACH	BARRIER REFLECTOR, TYPE 2, ONE WAY	
				286						286				630	03100	286	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
				4						4				630	08004	4	FT	ONE WAY SUPPORT, NO. 3 POST	
				32						32				630	08600	32	EACH	SIGN POST REFLECTOR	
				186.5						186.5				630	80100	186.5	SF	SIGN, FLAT SHEET	
			2	8						8		2		630	84900	10	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
			4	8						8		4		630	86002	12	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	

CALCULATED LBA
CHECKED SNS

GENERAL SUMMARY

PRE-70-0.00

SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
36A	37	73	101							01/IMS/PV	02/IMS/BR	03/IMS/PV	05/STR/PV						
																		TRAFFIC CONTROL CONTINUED	
	73.89									73.37			0.52	644	00104	73.89	MILE	EDGE LINE, 6"	
	35.43									35.43				644	00204	35.43	MILE	LANE LINE, 6"	
	0.09									0.09				644	00300	0.09	MILE	CENTER LINE	
	13,640									13,640				644	00404	13,640	FT	CHANNELIZING LINE, 12"	
	90									90				644	00500	90	FT	STOP LINE	
	6									6				644	01360	6	EACH	WRONG WAY ARROW	
	6,020									6,020				644	01510	6,020	FT	DOTTED LINE, 6"	
	8									8				SPECIAL	64440000	8	EACH	AIR SPEED ZONE MARKING	18
	1.96										1	0.96		646	10010	1.96	MILE	EDGE LINE, 6"	
	0.38										0.38			646	10110	0.38	MILE	LANE LINE, 6"	
	0.13										0.13			646	10200	0.13	MILE	CENTER LINE	
	585											585		646	10310	585	FT	CHANNELIZING LINE, 12"	
	6,254											6,254		646	20200	6,254	FT	PARKING LOT STALL MARKING	
	2									2				646	20320	2	EACH	WRONG WAY ARROW	
	275									275				646	20504	275	FT	DOTTED LINE, 6"	
																		**** STRUCTURE OVER 20 FOOT SPAN***	
																		STRUCTURE PRE-320-0117 GENERAL SUMMARY	
																		STRUCTURE PRE-70-0358 GENERAL SUMMARY	
																		STRUCTURE PRE-70-0489 GENERAL SUMMARY	
																		STRUCTURE PRE-70-0504 LT/RT GENERAL SUMMARY	
																		STRUCTURE PRE-70-0632 GENERAL SUMMARY	
																		STRUCTURE PRE-70-0689 LT/RT GENERAL SUMMARY	
																		STRUCTURE PRE-726-0428 GENERAL SUMMARY	
																		STRUCTURE PRE-70-1072 LT/RT GENERAL SUMMARY	
																		STRUCTURE PRE-70-1249 LT/RT GENERAL SUMMARY	
																		STRUCTURE PRE-70-1349 LT/RT GENERAL SUMMARY	
																		STRUCTURE PRE-70-1366 GENERAL SUMMARY	
																		STRUCTURE PRE-70-1500 LT/RT GENERAL SUMMARY	
																		STRUCTURE PRE-70-1541 GENERAL SUMMARY	
																		STRUCTURE PRE-503-1955 GENERAL SUMMARY	
																		STRUCTURE PRE-70-1665 GENERAL SUMMARY	
																		STRUCTURE PRE-70-1766 GENERAL SUMMARY	
																		MAINTENANCE OF TRAFFIC	
										2,000				614	11110	2,000	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
2												2		614	12336	2	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
										LS				614	12420	LS		DETOUR SIGNING	
										5				614	12500	5	EACH	REPLACEMENT SIGN	
										300				614	12600	300	EACH	REPLACEMENT DRUM	
										50				614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
60												60		614	13350	60	EACH	OBJECT MARKER, ONE WAY	
										16				614	18601	16	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	22
										35.81				614	20110	35.81	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
										75.42				614	22110	75.42	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
										14,225				614	23200	14,225	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
										6,295				614	24202	6,295	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	
										90				614	26200	90	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
										50				616	10000	50	MGAL	WATER	
2,950												2,950		622	41100	2,950	FT	PORTABLE BARRIER, UNANCHORED	
60												60		614	13310	60	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
										90				808	18700	90	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																		INCIDENTALS	
										LS				108	10000	LS		CPM PROGRESS SCHEDULE	
										LS				614	11000	LS		MAINTAINING TRAFFIC	
										18				619	16020	18	MNTH	FIELD OFFICE, TYPE C	
										LS				623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS				624	10000	LS		MOBILIZATION	
																		* SEE STRUCTURAL DRAWINGS FOR QUANTITIES UNDER PARTICIPATION NO. 02/IMS/BR	

CALCULATED LBA
CHECKED SNS

GENERAL SUMMARY

PRE-70-0.00

SLM		SIDE	202						209		606							609	626		659	690
			PAVEMENT REMOVED, ASPHALT	GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE E	ANCHOR ASSEMBLY REMOVED, TYPE T	ANCHOR ASSEMBLY REMOVED, TYPE B	BRIDGE TERMINAL ASSEMBLY REMOVED	RESHAPING UNDER GUARDRAIL	BORROW	GUARDRAIL, TYPE MGS	GUARDRAIL, TYPE MGS WITH LONG POSTS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	CURB, TYPE 4-C	BARRIER REFLECTOR, TYPE 1, ONE WAY	BARRIER REFLECTOR, TYPE 2, ONE WAY	SEEDING AND MULCHING	SPECIAL - MAILBOX SUPPORT SYSTEM, SINGLE
FROM	TO		SY	FT	EACH	EACH	EACH	EACH	STA	CY	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	SY	EACH
EASTBOUND I.R. 70																						
0.000	0.012	MEDIAN		113		1					112.50				1					4		
0.094	0.412	RT	656.30	1625	1	1			16.88	54.70	1625.00			1	1					18	938	
1.068	1.111	RT	85.10	138	1			1	2.25	7.10	150.00			1		1		18		3	125	
1.796	1.834	RT	75.30	113	1			1	2.00	6.30	125.00			1		1		18		3	112	
3.546	3.584	RT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
4.854	4.892	RT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
4.954	5.046	RT	187.20	400	1			1	4.88	15.60	412.50			1		1		8		6	272	
5.000	5.040	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1		8		3	119	
6.280	6.318	RT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
6.839	6.893	RT	109.40	200	1			1	2.88	9.10	212.50			1		1		8		4	160	
6.853	6.893	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1		8		3	119	
7.360	7.398	RT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
8.211	8.287	RT	150.70	325	1	1			4.50	12.60	387.50			1	1						250	
8.672	8.717	RT	89.90	150	1			1	2.38	7.50	162.50			1		1		18		3	133	
9.875	9.913	RT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
10.653	10.710	RT	114.20	213	1			1	3.00	9.50	225.00			1		1				4	167	
10.677	10.717	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1				3	119	
12.340	12.489	RT	303.80	700	1			1	7.88	25.30	712.50			1		1				9	438	
12.449	12.489	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1				3	119	
12.538	12.600	RT	136.10	338		1		1	3.50	11.30	337.50				1		1			5	195	
13.415	13.484	RT	138.50	275	1			1	3.63	11.50	287.50			1		1		8		5	202	
13.442	13.482	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1		8		3	119	
13.613	13.656	RT	87.50	144	1			1	2.25	7.30	150.00			1		1		18		3	125	
14.617	14.655	RT	75.30	113	1			1	2.00	6.30	125.00			1		1		18		3	112	
14.960	15.000	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1		8		3	119	
15.045	15.079	RT	68.10	163		1		1	1.75	5.70	162.50				1		1			3	98	
15.364	15.402	RT	75.30	113	1			1	2.00	6.30	125.00			1		1		18		3	112	
16.606	16.651	RT	75.30	113	1			1	1.88	6.30	112.50			1		1		18		3	105	
17.617	17.662	RT	89.90	150	1			1	2.38	7.50	162.50			1		1		18		3	133	
RAMP F		RT	252.80	600	1				6.50	21.10		600.00		1						14	362	
RAMP G		RT	165.30	413		1			4.25	13.80		412.50			1					10	237	
RAMP K		RT	593.10	1444	1			1	15.25	49.40		1450.00		1		1		18		16	848	
S.R. 320																						
20+26.73		RT																				1
20+29.74		RT																				1
20+36.50	21+18.11	LT		44		1		1				50.00			1	1		18		3		
19+90.00	21+14.85	RT		94				1				100.00				1		18		3		
BRIDGE PARAPET		LT/RT																	8			
24+12.11	24+55.51	LT		7		1		1							1	1		18		3		
24+24.12	24+54.63	RT				1		1							1	1		18		3		
24+85.19		RT																				1
24+88.21		RT																				1
24+91.23		RT																				1
S.R. 726																						
7+09.83	8+34.83	LT		94				1				100.00				1		18		3		
7+09.83	8+34.83	RT		94				1				100.00				1		18		3		
BRIDGE PARAPET		LT/RT																	8			
11+64.97	12+91.00	LT		94				1				100.00				1		18		3		
11+64.97	12+91.00	RT		94				1				100.00				1		18		3		
TOTALS CARRIED TO SHEET NO. 35			4362.80	9842	22	9	6	35	114.22	363.90	7050.00	3012.50	6	22	9	33	2	452	16	179	6363	5

CALCULATED JTK
CHECKED PJD

ROADWAY SUBSUMMARY

PRE-70-0.00

SLM FROM	SLM TO	SIDE	202 PAVEMENT REMOVED, ASPHALT	202 GUARDRAIL REMOVED	202 ANCHOR ASSEMBLY REMOVED, TYPE E	202 ANCHOR ASSEMBLY REMOVED, TYPE T	202 ANCHOR ASSEMBLY REMOVED, TYPE B	202 BRIDGE TERMINAL ASSEMBLY REMOVED	209 RESHAPING UNDER GUARDRAIL	209 BORROW	606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS WITH LONG POSTS	606 ANCHOR ASSEMBLY, MGS TYPE B	606 ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016)	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	609 CURB, TYPE 4-C	626 BARRIER REFLECTOR, TYPE 1, ONE WAY	626 BARRIER REFLECTOR, TYPE 2, ONE WAY	659 SEEDING AND MULCHING	690 SPECIAL - MAILBOX SUPPORT SYSTEM, SINGLE
			SY	FT	EACH	EACH	EACH	EACH	STA	CY	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	SY	EACH
WESTBOUND I.R. 70																						
0.000	0.066	LT	131.30	288	1				3.25	10.90	275.00			1						4	181	
0.189	0.523	LT	709.70	1763	1	1			18.25	59.10	1762.50			1	1					19	1014	
1.122	1.158	LT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
1.837	1.877	LT	82.60	132	1			1	2.13	6.90	137.50			1		1		18		3	119	
3.597	3.633	LT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
4.915	4.951	LT	72.90	107	1			1	1.88	6.10	112.50			1		1		18		3	105	
5.052	5.144	LT	187.20	400	1			1	4.88	15.60	412.50			1		1				6	272	
5.057	5.097	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1				3	119	
6.332	6.386	LT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
6.909	6.954	LT	109.40	200	1			1	2.88	9.10	212.50			1		1				4	160	
6.909	6.949	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1				3	119	
7.411	7.447	LT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
8.729	8.765	LT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
9.596	9.655	LT	116.70	238	1	1				9.70	237.50			1	1							
9.932	9.968	LT	70.50	100	1			1	1.88	5.90	112.50			1		1		18		3	105	
10.748	10.819	LT	143.40	288	1			1	3.75	12.00	300.00			1		1		8		5	209	
10.741	10.779	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1		8		3	119	
12.427	12.489	LT	126.40	313		1		1	3.25	10.50	312.50				1		1			4	181	
12.536	12.621	LT	172.60	363	1			1	4.50	14.40	375.00			1		1				6	250	
12.536	12.576	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1				3	119	
13.476	13.545	LT	138.50	275	1			1	3.63	11.50	287.50			1		1		8		5	202	
13.483	13.523	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1		8		3	119	
13.670	13.713	LT	85.10	138	1			1	2.25	7.10	150.00			1		1		18		3	125	
14.667	14.705	LT	75.30	113	1			1	2.00	6.30	125.00			1		1		18		3	112	
14.753	14.997	LT	500.70	1275		1		1	12.88	41.70	1275.00				1		1			14	716	
15.045	15.095	LT	99.70	175	1			1	2.63	8.30	187.50			1		1				4	147	
15.045	15.085	MEDIAN	80.20	163			1	1	2.13	6.70	150.00		1			1				3	119	
15.410	15.457	LT	94.80	163	1			1	2.50	7.90	175.00			1		1		18		4	139	
16.662	16.700	LT	77.80	119	1			1	2.00	6.50	125.00			1		1		18		3	112	
17.673	17.718	LT	89.90	150	1			1	2.38	7.50	162.50			1		1		18		3	133	
RAMP H		LT	252.80	638		1			6.50	21.10		637.50			1					14	362	
RAMP I		LT	209.00	488	1				5.38	17.40		487.50		1						12	299	
RAMP L		LT	55.90	63.00	1			1	1.50	4.70		75.00		1		1		18		4	84	
TOTALS SHEET NO. 34			4362.80	9842	22	9	6	35	114.22	363.90	7050.00	3012.50	6	22	9	33	2	452	16	179	6363	5
TOTALS THIS SHEET			4435.90	9267	24	5	6	28	112.48	369.90	8200.00	1200.00	6	24	5	26	2	284	0	159	6266	0
SUBTOTAL			8798.70	19109	46	14	12	63	226.70	733.80	15250	4212.50	12	46	14	59	4	736	16	338	12629	5
TOTALS CARRIED TO SHEET GENERAL SUMMARY			8799	19109	46	14	12	63	227	734	15250	4213	12	46	14	59	4	736	16	338	12629	5

FOR GUARDRAIL END TERMINAL REMOVALS ASSUME THE FOLLOWING LENGTHS:

ANCHOR ASSEMBLY REMOVED, TYPE B 12.5'
ANCHOR ASSEMBLY REMOVED, TYPE E 50'
ANCHOR ASSEMBLY REMOVED, TYPE T 12.5'
BRIDGE TERMINAL ASSEMBLY REMOVED (TYPE 1) 31.25'
BRIDGE TERMINAL ASSEMBLY REMOVED (TYPE 2) 0'

CALCULATED JTK
CHECKED PJD

ROADWAY SUBSUMMARY

PRE-70-0.00

ROUTE	DIRECTION	S.L.M. SECTION		RPM DETAIL *	621					644									646							
					RPM (ONE-WAY WHITE)	RPM (TWO-WAY WHITE/RED)	RPM (TWO-WAY YELLOW/RED)	RPM (TWO-WAY YELLOW/YELLOW)	RAISED PAVEMENT MARKER REMOVED	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	CENTER LINE (DOUBLE SOLID)	CHANNELIZING LINE, 12"	STOP LINE	WRONG WAY ARROW	DOTTED LINE, 6" (WHITE)	SPECIAL-AIR SPEED ZONE MARKING	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	CENTER LINE (DOUBLE SOLID)	CHANNELIZING LINE, 12"	PARKING LOT STALL MARKING	WRONG WAY ARROW	DOTTED LINE, 6"
		FROM	TO		EACH	EACH	EACH	EACH	EACH	MILE	MILE	MILE	MILE	FT	FT	EACH	FT	EACH	MILE	MILE	MILE	MILE	FT	FT	EACH	FT
IR 70	EASTBOUND	0.000	0.531	2	24				24	0.531	0.531	0.531														
IR 70	EASTBOUND	0.445	0.477									0.032														
IR 70	EASTBOUND	0.477	0.531	4		13			13					570												
RAMP A	EASTBOUND	IR 70	WEIGH STATION	4			7		7	0.109	0.109															
IR 70	EASTBOUND	0.531	0.812	2	13				13	0.281	0.281	0.281														
RAMP C	EASTBOUND	WEIGH STATION	IR 70	3			9		9	0.136	0.136															
IR 70	EASTBOUND	0.812	0.927	3		15			15					1215												
IR 70	EASTBOUND	0.927	1.097														900									
IR 70	EASTBOUND	0.812	1.668	2	38				38	0.856	0.856	0.856														
IR 70	EASTBOUND	1.534	1.619									0.085														
IR 70	EASTBOUND	1.619	1.668	4	13				13					515												
RAMP D	EASTBOUND	IR 70	US 35	1			17		17	0.257	0.261															
IR 70	EASTBOUND	1.668	2.590	2	41				41	0.922	0.922	0.922														
IR 70	EASTBOUND	2.469	2.544									0.075														
IR 70	EASTBOUND	2.544	2.590	4		11			11					485												
IR 70	EASTBOUND	2.590	3.033	2	20				20	0.443	0.443	0.443														
IR 70	EASTBOUND	3.033	3.143	2	5				5		0.110	0.110		580												
IR 70	EASTBOUND	3.143	3.187	3			6		6					460												
IR 70	EASTBOUND	3.187	3.346														840									
IR 70	EASTBOUND	3.143	5.041	2	84				84	1.898	1.898	1.898														
IR 70	EASTBOUND	5.041	5.065	2	1				1										0.024	0.024	0.024					
IR 70	EASTBOUND	5.065	6.890	2	80				80	1.825	1.825	1.825														
IR 70	EASTBOUND	6.890	6.911	2	1				1										0.021	0.021	0.021					
IR 70	EASTBOUND	6.911	9.736		125				125	2.825	2.825	2.825														
IR 70	EASTBOUND	9.602	9.690									0.088														
IR 70	EASTBOUND	9.690	9.736	4		11			11					485												
RAMP F	EASTBOUND	IR 70	US 127	5,6		11	18		6	0.172	0.172					1									1	
IR 70	EASTBOUND	9.736	10.091	2	16				16	0.355	0.355	0.355														
RAMP G	EASTBOUND	US 127	IR 70	1			13		13	0.168	0.169															
IR 70	EASTBOUND	10.091	10.222	3		17			17					1385												
IR 70	EASTBOUND	10.222	10.371														790									
IR 70	EASTBOUND	10.091	10.711	2	28				28	0.620	0.620	0.620														
IR 70	EASTBOUND	10.711	10.735	2	1				1										0.024	0.024	0.024					
IR 70	EASTBOUND	10.735	12.487	2	77				77	1.752	1.752	1.752														
IR 70	EASTBOUND	12.487	12.538	2	2				2										0.051	0.051	0.051					
IR 70	EASTBOUND	12.538	13.478	2	41				41	0.940	0.940	0.940														
IR 70	EASTBOUND	13.478	13.492	2	1				1										0.014	0.014	0.014					
IR 70	EASTBOUND	13.492	14.489	2	44				44	0.997	0.997	0.997														
IR 70	EASTBOUND	14.309	14.363														285									
IR 70	EASTBOUND	14.363	14.489			17			17					1330												
RAMP J	EASTBOUND	IR 70	SR 503	5,6		11	19		28	0.208	0.203				40	2										
IR 70	EASTBOUND	14.489	14.830	2	15				15	0.341	0.341	0.341														
RAMP K	EASTBOUND	SR 503	IR 70	1			13		13	0.192	0.190															
IR 70	EASTBOUND	14.830	14.977	3		19			19					1550												
IR 70	EASTBOUND	14.977	14.995														95									
IR 70	EASTBOUND	14.830	14.995	2	7				7	0.165	0.165	0.165														
IR 70	EASTBOUND	14.995	15.047	2	2				2										0.052	0.052	0.052					275
IR 70	EASTBOUND	15.047	15.136														470									
IR 70	EASTBOUND	15.047	17.670	2	116				116	2.623	2.623	2.623														
IR 70	EASTBOUND	8.000	9.000															2								
IR 70	EASTBOUND	12.750	13.750															2								
	EASTBOUND REST AREA	2.590	2.829																0.301	0.301			204			
	EASTBOUND REST AREA	2.744	2.892																					6254		
	EASTBOUND REST AREA	2.914	3.033																0.153	0.201			381			
TOTALS CARRIED TO SHEET NUMBER 37					795	125	102	0	997	18.616	18.724	17.764	0.000	8575	40	3	3380	4	0.640	0.688	0.186	0.000	585	6254	1	275

* FOR RPM DETAILS, SEE SHEET NO. 37

CALCULATED PJD
CHECKED SNS

PAVEMENT MARKING ESTIMATED QUANTITIES

PRE-70-0.00

ITEM 625 - LIGHT TOWER REMOVED, AS PER PLAN

THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL LIGHT TOWER COMPONENTS ACCORDING TO C&MS 625 EXCEPT THAT THE LIGHT RINGS SHALL BE SALVAGED AND STORED ON THE PROJECT SITE. THE LIGHT RINGS WILL BE PICKED UP BY ODOT FOR USE ON ANOTHER PROJECT.

SUBSUMMARY

REF. NO	SHEET NO	202						203	614		622	625				626	630		659					832			
		PAVEMENT REMOVED	PAVEMENT REMOVED, ASPHALT	CURB REMOVED	PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	INLET REMOVED	INLET ABANDONED	EXCAVATION	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	OBJECT MARKER, ONE WAY	PORTABLE BARRIER, UNANCHORED	PULL BOX REMOVED	LIGHT TOWER REMOVED, AS PER PLAN	LUMINAIRE REMOVED	LIGHT TOWER FOUNDATION REMOVED	BARRIER REFLECTOR, TYPE 1, ONE WAY	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	TOPSOIL	SEEDING AND MULCHING	COMMERCIAL FERTILIZER	LIME	WATER	EROSION CONTROL	STORM WATER POLLUTION PREVENTION PLAN	STORM WATER POLLUTION PREVENTION INSPECTIONS	STORM WATER POLLUTION PREVENTION SOFTWARE
		SY	SY	FT	FT	EACH	EACH	EACH	CY	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	CY	SY	TON	ACRE	MGAL	EACH	LUMP	LUMP	LUMP
RA1	48A,48B																			1261	11355	1.54	2.35	62				
RA2	48A													1	4	1												
RA3	48A		1927																									
RA4	48A													1	6	1												
RA5	48A	2575		472					95																			
RA6	NOT USED																											
RA7	48A																	2	4									
RA8	48A		514																									
RA9	48A				28		1	1																				
RA10	48A												1															
RA11	48A													1	6	1												
RA12	48A												1															
RA13	48A												1															
RA14	48A													1	6	1												
RA15	48A												1															
RA16	48A												1															
RA17	48A													1	6	1												
RA18	48B												1															
RA19	48B													1	6	1												
RA20	48B												1															
RA21	48B												1															
RA22	48B												1															
RA23	48B												1															
RA24	48B													1	6	1												
RA25	48B												1															
RA26	48B	1113																										
RA27	48B													1	6	1												
RA28	48B				48	1	1																					
RA29	48B		1441																									
RA30	48B													1	4	1												
RA31	48A																								10000	LUMP	LUMP	LUMP
MAINTENANCE OF TRAFFIC										2	60	2950					60											
TOTALS CARRIED TO GENERAL SUMMARY		3688	3882	472	76	1	2	1	95	2	60	2950	11	9	50	9	60	2	4	1261	11355	1.54	2.35	62	10000	LUMP	LUMP	LUMP

CALCULATED LBA
CHECKED PJD

WESTBOUND REST AREA SUBSUMMARY

PRE-70-0.00

36A
147

PAVEMENT MARKING ESTIMATED QUANTITIES

CALCULATED PJD CHECKED SNS

ROUTE	DIRECTION	S.L.M. SECTION		RPM DETAIL	621					646																
					RPM (ONE-WAY WHITE)	RPM (TWO-WAY WHITE/RED)	RPM (TWO-WAY YELLOW/RED)	RPM (TWO-WAY YELLOW/YELLOW)	RAISED PAVEMENT MARKER REMOVED	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	CENTER LINE (DOUBLE SOLID)	CHANNELIZING LINE, 12"	STOP LINE	WRONG WAY ARROW	DOTTED LINE, 6" (WHITE)	SPECIAL-AIR SPEED ZONE MARKING	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	CENTER LINE (DOUBLE SOLID)	CHANNELIZING LINE, 12"	PARKING LOT STALL MARKING	WRONG WAY ARROW	DOTTED LINE, 6"
		FROM	TO		EACH	EACH	EACH	EACH	EACH	MILE	MILE	MILE	MILE	FT	FT	EACH	FT	EACH	MILE	MILE	MILE	MILE	FT	FT	EACH	FT
IR 70	WESTBOUND	0.000	1.427	2	63				63	1.427	1.427	1.427														
IR 70	WESTBOUND	1.135	1.303														890									
IR 70	WESTBOUND	1.303	1.427	4			16		16					1310												
IR 70	WESTBOUND	1.427	5.032	2	159				159	3.605	3.605	3.605														
IR 70	WESTBOUND	5.032	5.057	2	1				1										0.025	0.025	0.025					
IR 70	WESTBOUND	5.037	6.890	2	82				82	1.853	1.853	1.853														
IR 70	WESTBOUND	6.890	6.911	2	1				1										0.021	0.021	0.021					
IR 70	WESTBOUND	6.911	9.746	2	125				125	2.835	2.835	2.835														
IR 70	WESTBOUND	9.460	9.617														830									
IR 70	WESTBOUND	9.617	9.746	3		17			17					1365												
RAMP H	WESTBOUND	IR 70	US 127	1		11	13		13	0.174	0.175															
IR 70	WESTBOUND	9.746	10.109	2	16				16	0.363	0.363	0.363														
RAMP I	WESTBOUND	US 127	IR 70	5,6		11	19		18	0.178	0.179					1									1	
IR 70	WESTBOUND	10.109	10.168	4		15			15					625												
IR 70	WESTBOUND	10.168	10.249									0.081														
IR 70	WESTBOUND	10.109	10.723	2	27				27	0.614	0.614	0.614														
IR 70	WESTBOUND	10.723	10.747	2	1				1										0.024	0.024	0.024					
IR 70	WESTBOUND	10.747	12.487	2	77				77	1.740	1.740	1.740														
IR 70	WESTBOUND	12.487	12.538	2	2				2										0.051	0.051	0.051					
IR 70	WESTBOUND	12.538	13.467	2	41				41	0.929	0.929	0.929														
IR 70	WESTBOUND	13.467	13.481	2	1				1										0.014	0.014	0.014					
IR 70	WESTBOUND	13.481	14.558	2	47				47	1.077	1.077	1.077														
IR 70	WESTBOUND	14.270	14.444														920									
IR 70	WESTBOUND	14.444	14.558	3		15			15					1205												
RAMP L	WESTBOUND	IR 70	SR 503	1		11	9		9	0.131	0.128															
IR 70	WESTBOUND	14.558	14.836	2	12				12	0.278	0.278	0.278														
RAMP M	WESTBOUND	SR 503	IR 70	5,6		11	18		19	0.202	0.197				50	2										
IR 70	WESTBOUND	14.836	14.889	4		13			13					560												
IR 70	WESTBOUND	14.889	14.970									0.081														
IR 70	WESTBOUND	14.836	14.995	2	7				7	0.159	0.159	0.159														
IR 70	WESTBOUND	14.995	15.047	2	2				2										0.052	0.052	0.052					
IR 70	WESTBOUND	15.047	17.670	2	116				116	2.623	2.623	2.623														
IR 70	WESTBOUND	11.000	12.000															2								
IR 70	WESTBOUND	15.500	16.500															2								
SR 320		STA 19+89.96	STA 21+03.71	2A				2	2	0.043			0.022													
SR 320		STA 21+03.71	STA 24+37.23	2A				4	4										0.128		0.064					
SR 320		STA 24+37.23	STA 25+22.70	2A				1	1	0.034			0.017													
SR 726		STA 7+09.25	STA 8+34.25	2A				2	2	0.048			0.024													
SR 726		STA 8+34.25	STA 11+65.75	2A				4	4										0.126		0.063					
SR 726		STA 11+65.75	STA 12+90.75	2A				2	2	0.048			0.024													
TOTALS THIS SHEET					780	104	75	15	930	18.361	18.182	17.665	0.087	5065	50	3	2640	4	0.441	0.187	0.187	0.127	0	0	1	0
TOTALS SHEET NUMBER 36					795	125	102	0	997	18.616	18.724	17.764	0.000	8575	40	3	3380	4	0.640	0.688	0.186	0	585	6254	1	275
SUBTOTAL					1575	229	177	15	1927	36.977	36.906	35.429	0.087	13640	90	6	6020	8	1.081	0.875	0.373	0.127	585	6254	2	275
TOTALS CARRIED TO GENERAL SUMMARY					1996				1927	73.89		35.43	0.09	13640	90	6	6020	8	1.96		0.38	0.13	585	6254	2	275

RPM DETAIL LEGEND

RPM DETAIL	SCD TC-65.10 & TC-65.11
1	EDGE LINE SPACING (RAMPS)
2	LANE LINE SPACING
2A	CENTER LINE SPACING
3	ACCELERATION LANE (ENTRANCE RAMPS)
4	DECELERATION LANE (EXIT RAMPS)
5	STOP APPROACH
6	WRONG WAY (TC-73.20)

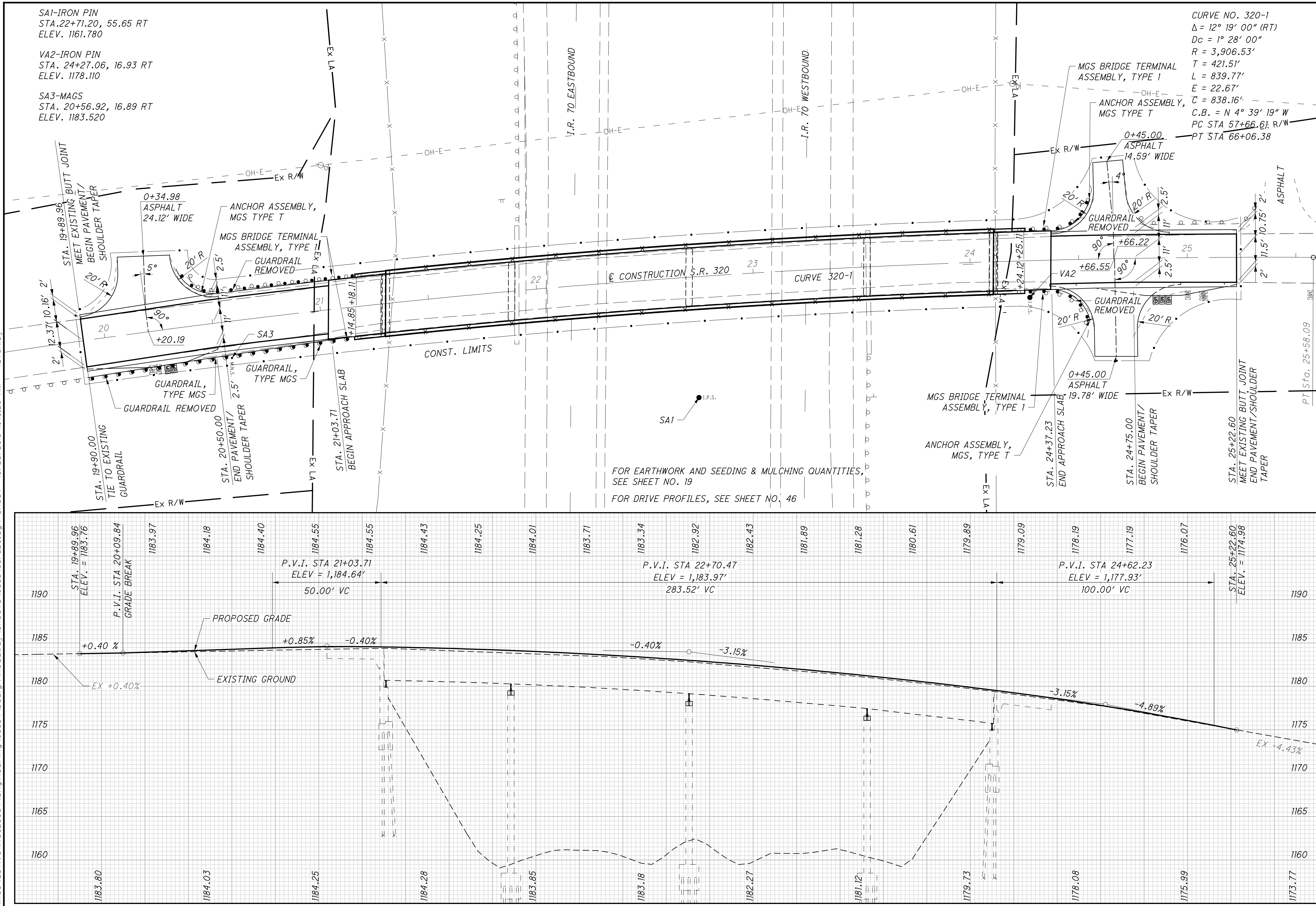
PRE-70-0.00

SHEET NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 3 POST (FOOT)	630 ONE WAY SUPPORT, NO. 3 POST (EACH)	630 SIGN POST REFLECTOR (RED) (EACH)	630 SIGN, FLAT SHEET (SF)	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL (EACH)	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL (EACH)
18	RAMP F		RT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
			LT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
				R6-1R	36x12		1		3.0		
				R6-1L	36x12				3.0		
18	RAMP I		RT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
			LT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
				R6-1R	36x12		1		3.0		
				R6-1L	36x12				3.0		
18	RAMP J		RT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
			LT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
				R6-1R	36x12		1		3.0		
				R6-1L	36x12				3.0		
18	RAMP M		RT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
			LT	R5-1A	42x30	14 / 14		4	8.8	1	1
				R5-1A	42x30				8.8		
				R6-1R	36x12		1		3.0		
				R6-1L	36x12				3.0		
19	SR 726 BRIDGE	6+00.00	RT	W7-6	36x36	31.0			9.0		
				W13-1P	18x18				2.3		
		14+00.00	LT	W7-6	36x36	31.0			9.0		
				W13-1P	18x18				2.3		
TOTALS CARRIED TO GENERAL SUMMARY						286.0	4	32	186.5	8	8

CALCULATED JTK
CHECKED PJD

SIGNING SUBSUMMARY

PRE-70-0.00



CALCULATED PJD
CHECKED SNS

PLAN AND PROFILE
S.R. 320

PRE-70-0.00

SE2- MAG NAIL
STA. 7+93.86, 13.71 RT
ELEV. 1138.066

Ex R/W — Ex R/W — Ex LA — I.R. 70 EASTBOUND — POT Sta. 10+00.00 — I.R. 70 WESTBOUND — Ex LA — Ex R/W — Ex R/W

POT Sta. 7+00.00

STA. 7+09.83
TIE TO EXISTING GUARDRAIL

GUARDRAIL REMOVED

GUARDRAIL, TYPE MGS

MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

3.26'
11.60'
4.12'
10.13'
4'
12'
12'
4'
M.N.S.
SE2

8 — 9 — 10 — 11 — 12

N 1° 07' 02" E

℄ CONSTRUCTION S.R. 726

+34.83 +34.83

+64.97 +64.97

CONST. LIMITS

GUARDRAIL REMOVED

MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

GUARDRAIL REMOVED

GUARDRAIL, TYPE MGS

CONST. LIMITS

4'
12'
12'
4'
11.37'
10.59'
3.39'
2.83'

STA. 12+91.00
TIE TO EXISTING GUARDRAIL
POT STA. 13+00.00

STA. 7+09.25
MEET EXISTING BUTT JOINT
BEGIN PAVEMENT/ SHOULDER TAPER

STA. 7+70.00
END PAVEMENT/ SHOULD TAPER

STA. 8+34.25
BEGIN APPROACH SLAB

STA. 11+65.57
END APPROACH SLAB

STA. 12+00.00
BEGING PAVEMENT/ SHOULDER TAPER

STA. 12+90.75
MEET EXISTING BUTT JOINT
END PAVEMENT/SHOULDER TAPER

Ex R/W — Ex R/W — Ex R/W

1,160 1,155 1,150 1,130 1,125

1136.44 1137.33 1138.12 1138.81 1139.40 1139.89 1140.29 1140.61 1140.86 1141.04 1141.14 1141.18 1141.14 1141.04 1140.86 1140.61 1140.29 1139.89 1139.39 1138.79 1138.07 1137.24 1136.30

1137.15 1138.50 1139.31 1140.23 1140.66 1140.81 1140.69 1140.23 1139.33 1138.47 1137.02

8+00 9+00 10+00 11+00 12+00

P.V.I. STA 7+84.25
ELEV = 1,138.84'
150.00' VC

P.V.I. STA 10+00.00
ELEV = 1,142.31'
281.50' VC

P.V.I. STA 12+15.75
ELEV = 1,138.84'
150.00' VC

PROPOSED GRADE
EXISTING GROUND

STA. 7+09.25
ELEV. = 1135.83

EX. 3.79%
+4.02%
+1.61%
+1.61%
-1.61%
-1.61%
-4.25%
EX. -3.87%

STA. 12+90.75
ELEV. = 1,135.65

DESIGN EXCEPTION: STOPPING SIGHT DISTANCE (SSD)
NORMAL DESIGN CRITERIA SSD: 495'
EXISTING SSD: 410'
PROPOSED SSD: 389'

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PJD
CHECKED SNS

PLAN AND PROFILE
S.R. 726

PRE-70-0.00

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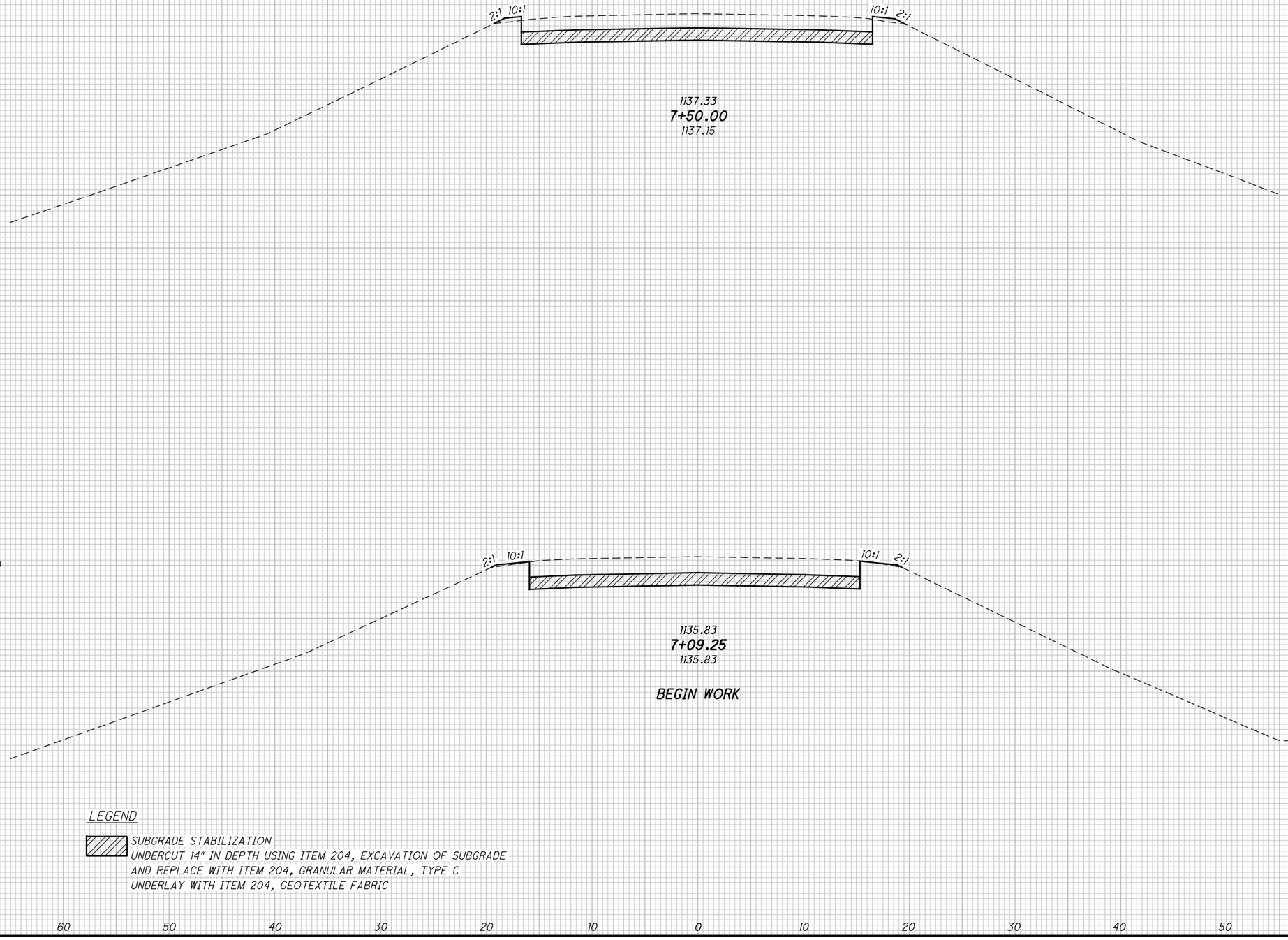
SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	111				77	4
		SUBGRADE EXC.			74	74
20						
			44	2		
		SUBGRADE EXC.	39	39		
		1135				
		1130				
		1125				
		1120				
	91	1115			70	3
		SUBGRADE EXC.			58	58
20		AHEAD	48	1		
		SUBGRADE EXC.	37	37		
		1135				
		1130				
		1125				
		1120				
		1115				
					147	7
	202	SUBGRADE EXC.			132	132

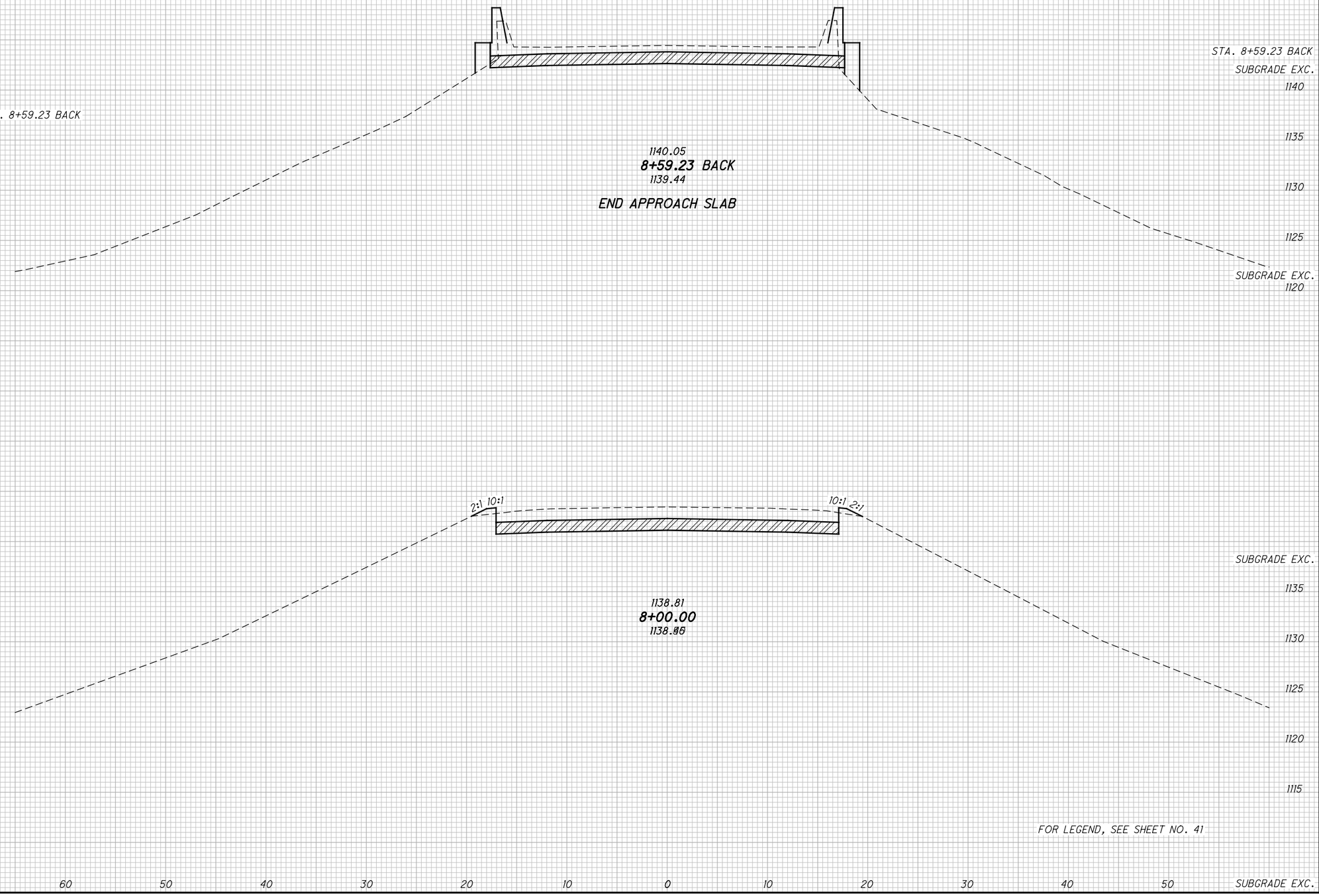


CALCULATED PJD
CHECKED SNS

CROSS SECTIONS S.R. 726
STA. 7+09.25 TO STA. 7+50.00

PRE-70-0.00

SEEDING	
END WIDTH	SQ. YDS.
20	
	132
20	
	132



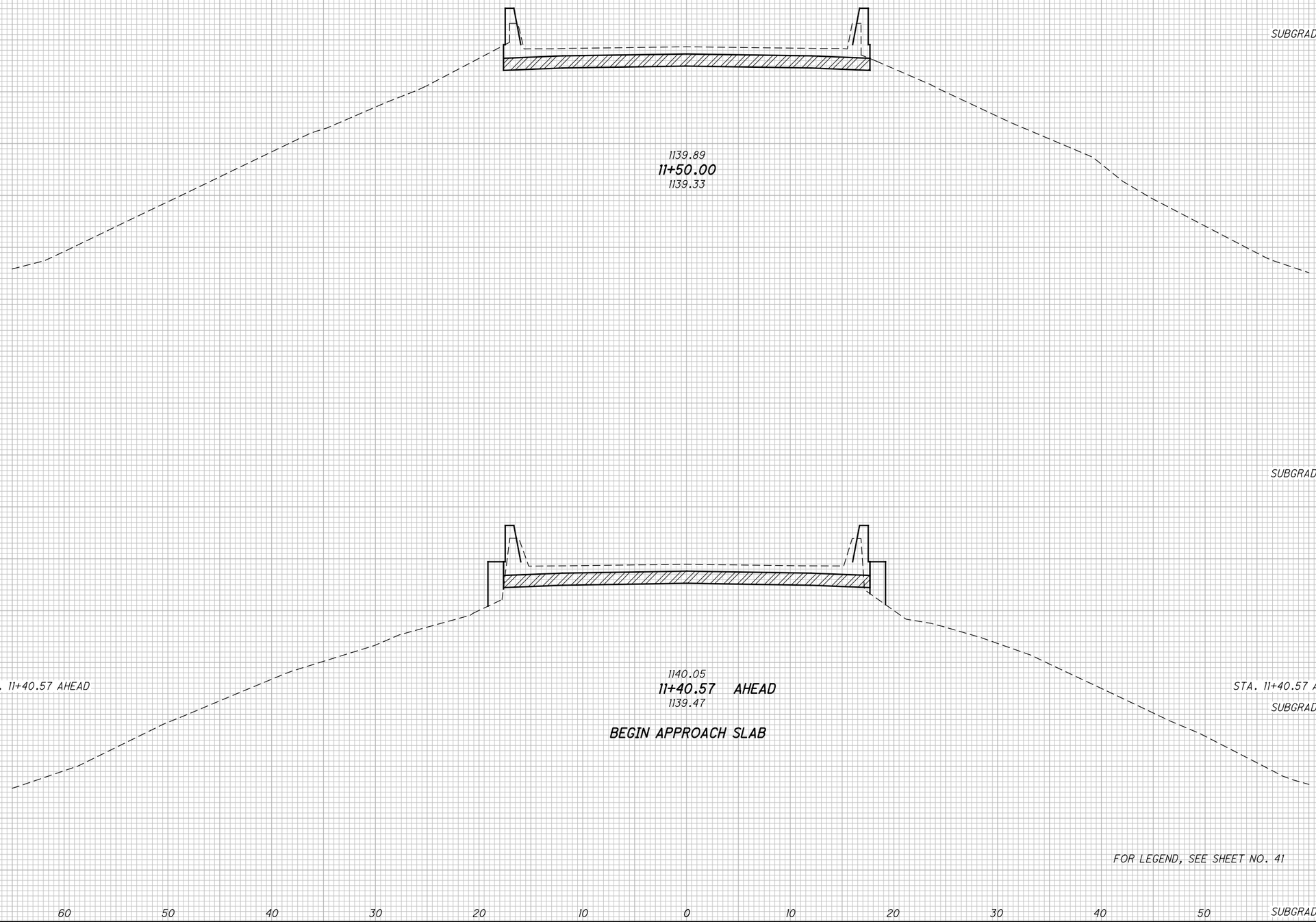
END AREA		VOLUME	
CUT	FILL	CUT	FILL
30	0		
41	41		
		76	3
		89	89
39	2		
40	40		
		76	3
		89	89

CALCULATED PJD
CHECKED SNS

CROSS SECTIONS S.R. 726
STA. 8+00.00 TO STA. 8+59.23

PRE-70-0.00

SEEDING END WIDTH	SEEDING SQ. YDS.
	111
20	
	21
20	
	132



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
		68	2	
		75	75	SUBGRADE EXC.
32	0			
42	42			SUBGRADE EXC.
		12	0	
		15	15	SUBGRADE EXC.
33	0			STA. 11+40.57 AHEAD
41	42			SUBGRADE EXC.
		80	2	
		90	90	SUBGRADE EXC.

FOR LEGEND, SEE SHEET NO. 41

CALCULATED PJD
CHECKED SNS

CROSS SECTIONS S.R. 726
STA. 11+40.57 TO STA. 11+50.00

PRE-70-0.00

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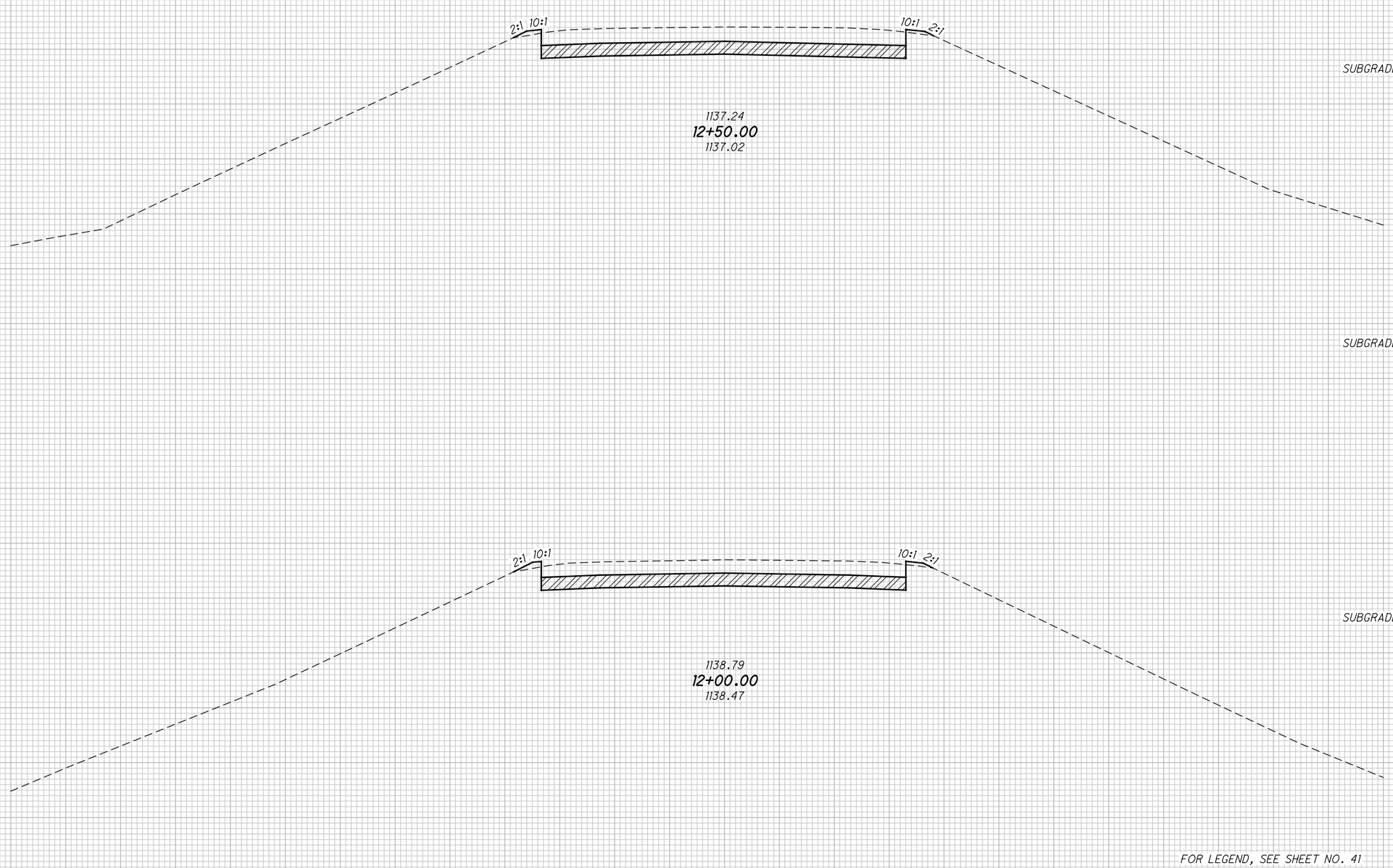
SEEDING END WIDTH	SEEDING SQ. YDS.
	91
20	
	111
20	
	202



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
		72	3	
		59	59	SUBGRADE EXC.
45	2			1140
39	39			SUBGRADE EXC.
				1135
				1130
				1125
				1120
		80	4	
		73	73	SUBGRADE EXC.
41	2			1140
39	39			SUBGRADE EXC.
				1135
				1130
				1125
				1120
		152	7	
		132	132	SUBGRADE EXC.

FOR LEGEND, SEE SHEET NO. 41

CALCULATED PJD
CHECKED SNS

CROSS SECTIONS S.R. 726
STA. 12+00.00 TO STA. 12+50.00

PRE-70-0.00

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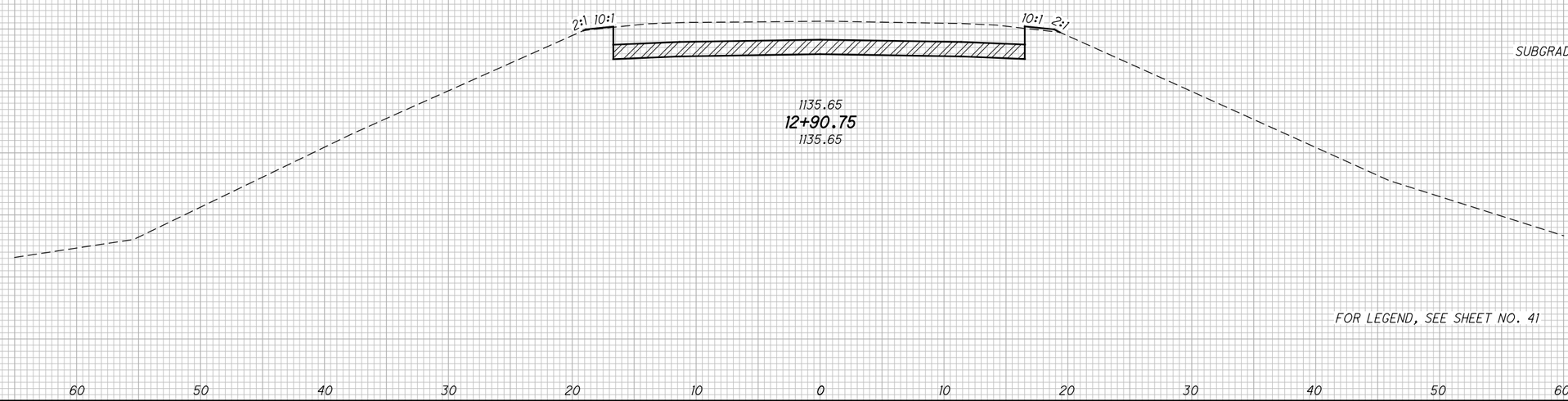
SEEDING	
END WIDTH	SQ. YDS.
20	

S.R. 726 EARTHWORK	
EXCAVATION	EMBANKMENT
455 CU YD	19 CU YD
EXCAVATION OF SUBGRADE	GRANULAR MATERIAL, TYPE C
443 CU YD	443 CU YD
SEEDING & MULCHING	
668 SQ YD	

QUANTITIES CARRIED TO SHEET No. 19

END WORK



END AREA		VOLUME	
CUT	FILL	CUT	FILL
BACK		50	1
SUBGRADE EXC.		39	39

FOR LEGEND, SEE SHEET NO. 41

CALCULATED PJD
CHECKED SNS

CROSS SECTIONS S.R. 726
STA. 12+90.75

PRE-70-0.00

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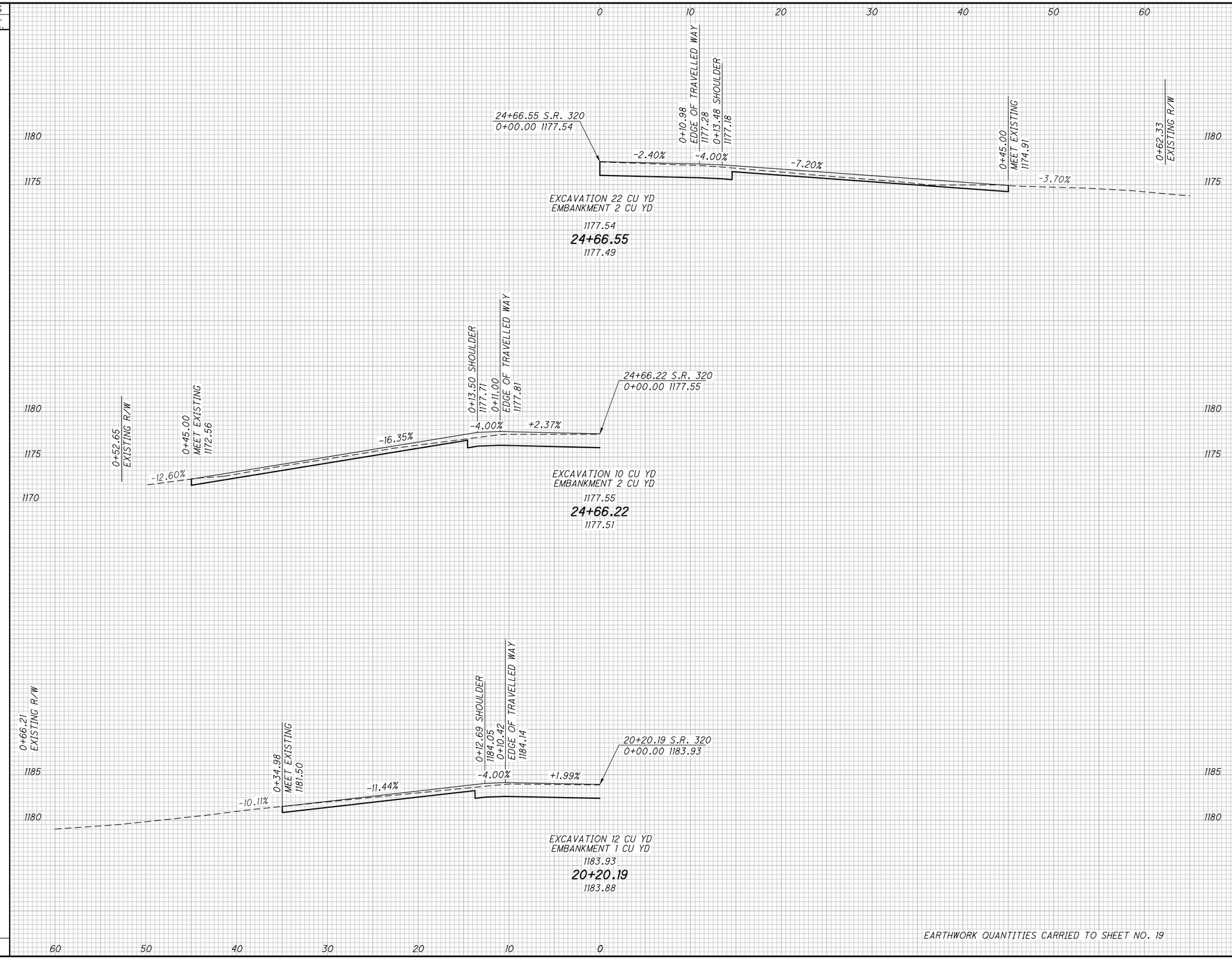
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED PJD

CHECKED SNS



EARTHWORK QUANTITIES CARRIED TO SHEET NO. 19

DRIVE PROFILES
S.R. 320

PRE-70-0.00

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NOTES:

- EXISTING PLANS ENTITLED PRE-70-2.41 MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON, OHIO.

- TYPICAL SLAB DIMENSIONS ARE 21' LONG X 16' WIDE

- CONCRETE PAVEMENT DETERIORATION WAS SURVEYED IN JULY 2018 AND THE PROPOSED REPAIRS SHOWN ON THESE PLANS CORRECT HIGH PRIORITY PROBLEMS AT THAT TIME. NOT ALL PAVEMENT REPAIRS SHOWN ON SHEETS 47 AND 48 WILL BE PERFORMED. THE REPAIR WORK SHALL NOT EXCEED THE QUANTITIES SHOWN ON SHEET 48. FINAL DETERMINATION OF REPAIRS INCLUDING, BUT NOT LIMITED TO, THOSE SHOWN IN THE PLANS SHALL BE AT THE DISCRETION AND APPROVAL OF THE ENGINEER. THE ENGINEER WILL LOCATE AND MARK ALL AREAS TO BE REPAIRED AS INDICATED IN THE C&MS.

- LOAD TRANSFER RETROFIT REPAIRS WILL BE PAID FOR ACCORDING TO ITEM 258 RETROFIT DOWEL BARS. THE TYPICAL SPACING FOR THE DOWEL BARS SHOULD BE MODIFIED FROM SCD BP-2.6 AS SHOWN, OR AS DIRECTED BY THE ENGINEER.

- ALL FULL DEPTH PAVEMENT REPAIRS SHOULD BE MADE ACCORDING TO SCD BP-2.5 AND ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT. FULL DEPTH REPAIRS CONSIST OF FULL SLAB REPLACEMENTS AND PARTIAL SLAB REPLACEMENTS. CLASS QC MS SHALL BE USED FOR PAVEMENT REPAIRS. WHERE FULL DEPTH REPAIRS OCCUR AT EXISTING EXPANSION JOINTS, THE EXPANSION JOINT SHALL BE REPLACED ACCORDING TO SCD BP-2.2. WHERE FULL DEPTH REPAIRS REPLACE EXISTING REINFORCED SLABS, AS SHOWN ON THE PLANS, THE REPLACEMENT PAVEMENT SHALL ALSO INCLUDE STEEL REINFORCING ACCORDING TO SCD BP-1.1. THE FOLLOWING ASSUMPTION HAS BEEN MADE TO CALCULATE A BIDDABLE ESTIMATE OF QUANTITIES:

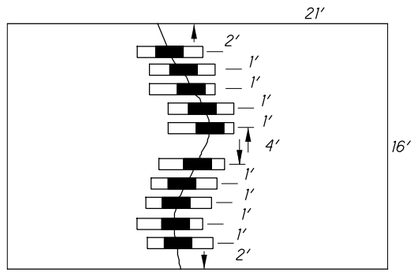
- PARTIAL SLAB REPLACEMENTS ARE ON AVERAGE 4' x 4' AND REQUIRE 16' OF PAVEMENT SAWING.

-JOINTS ARE TO BE REPAIRED ACCORDING TO ITEM 256, BONDED PATCHING OF PORTLAND CEMENT CONCRETE PAVEMENT. IT HAS BEEN ASSUMED THAT EACH JOINT, AS INDICATED, WILL REQUIRE 12 SQUARE FEET OF BONDED PATCHING. AN ADDITIONAL 160 SF OF ITEM 256 HAS BEEN INCLUDED IN THE PLANS TO BE USED AS NEEDED, AND DIRECTED, BY THE ENGINEER.

- A SUMMARY TABLE OF THE QUANTITIES REQUIRED TO REPAIR THE REST AREA PAVEMENT HAS BEEN INCLUDED ON THE FOLLOWING SHEET AND CARRIED TO THE GENERAL SUMMARY.

EXISTING PAVEMENT MAKEUP

11" UNREINFORCED CONCRETE PAVEMENT
(EX. PAVEMENT REINFORCED AS INDICATED IN THE LEGEND)
6" AGGREGATE BASE



TYPICAL RETROFIT DOWEL BAR SPACING

LEGEND

ITEM 255 FULL SLAB REPLACEMENT

ITEM 255 FULL SLAB REPLACEMENT WITH REINFORCEMENT

ITEM 255 PARTIAL SLAB REPLACEMENT

ITEM 258 LOAD TRANSFER RETROFIT USING DOWEL BARS

ITEM 256 JOINT REPAIRS OR

N

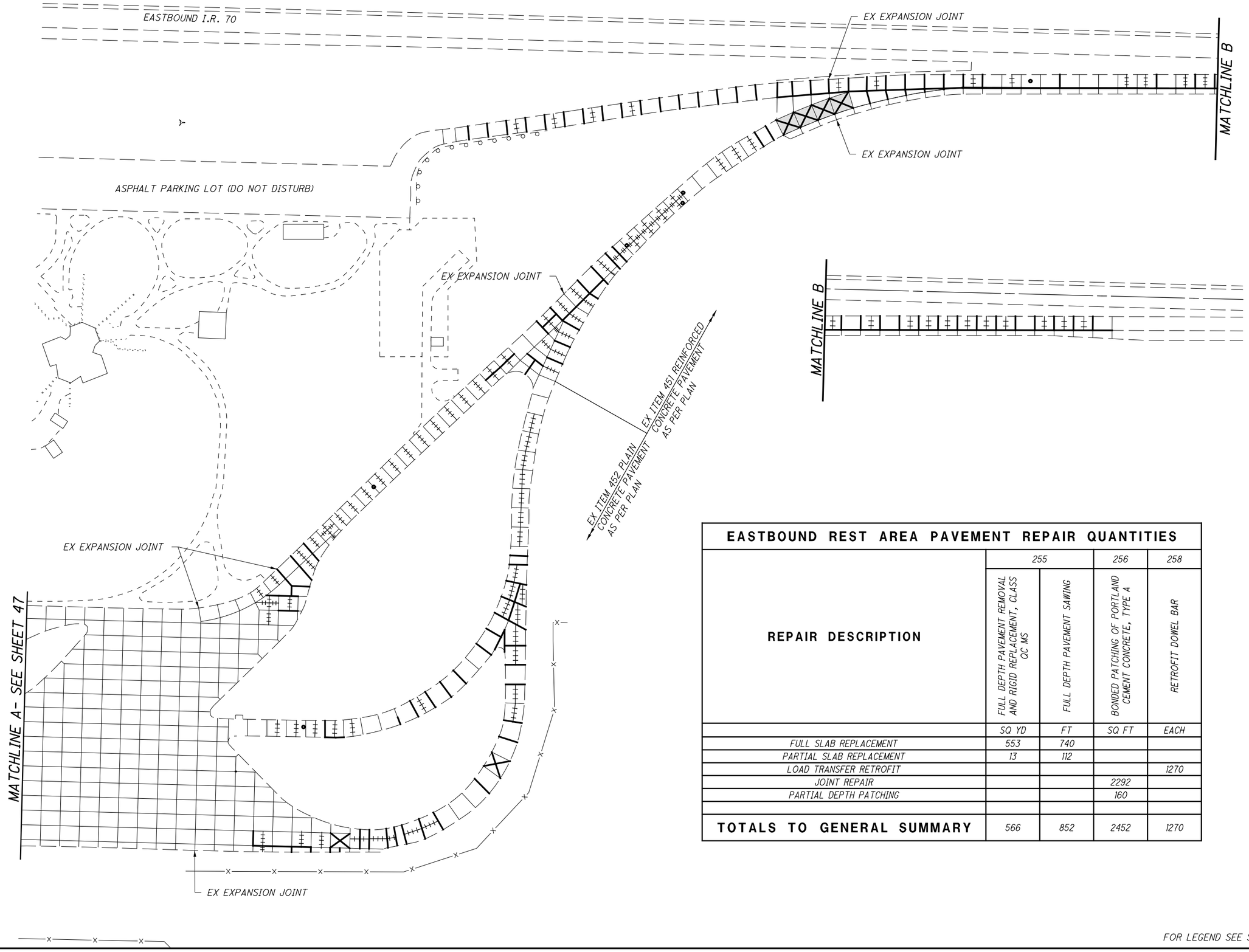
0 25 50 100 HORIZONTAL SCALE IN FEET

CALCULATED JTK CHECKED PJD

PAVEMENT REHABILITATION PLAN EASTBOUND REST AREA SHEET 1

PRE-70-0.00

47 / 147



EASTBOUND REST AREA PAVEMENT REPAIR QUANTITIES

REPAIR DESCRIPTION	255		256	258
	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS	FULL DEPTH PAVEMENT SAWING	BONDED PATCHING OF PORTLAND CEMENT CONCRETE, TYPE A	RETROFIT DOWEL BAR
	SQ YD	FT	SQ FT	EACH
FULL SLAB REPLACEMENT	553	740		
PARTIAL SLAB REPLACEMENT	13	112		
LOAD TRANSFER RETROFIT				1270
JOINT REPAIR			2292	
PARTIAL DEPTH PATCHING			160	
TOTALS TO GENERAL SUMMARY	566	852	2452	1270

FOR LEGEND SEE SHEET NO. 47

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JTK
CHECKED PJD

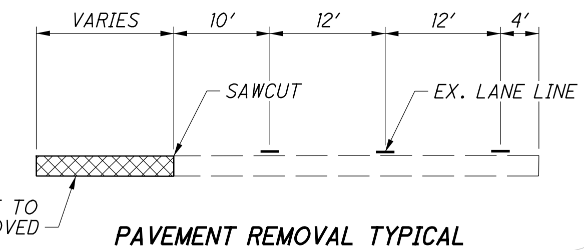
PAVEMENT REHABILITATION PLAN
EASTBOUND REST AREA SHEET 2

PRE-70-0.00

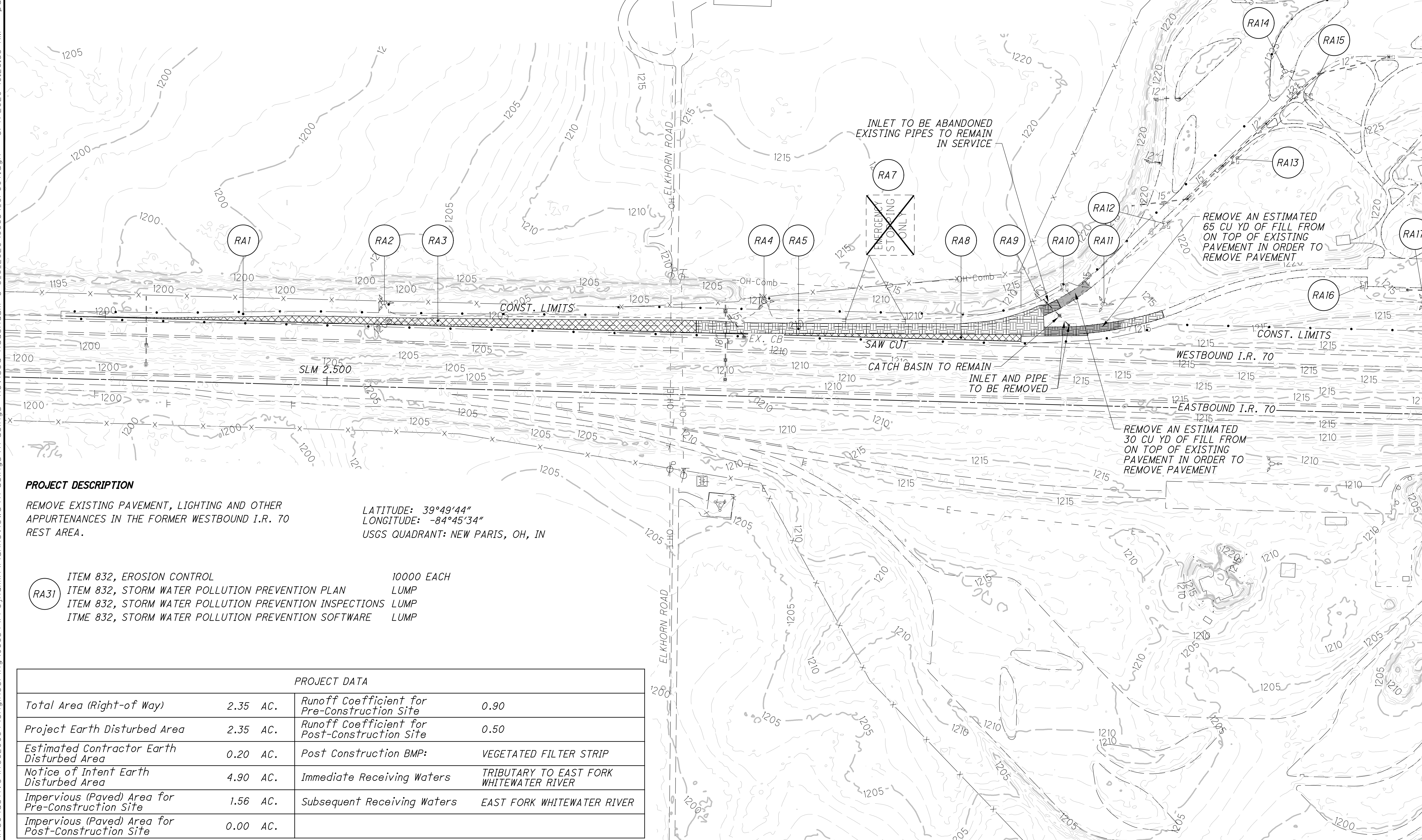
LEGEND

- ASPHALT PAVEMENT REMOVED
- CONCRETE PAVEMENT REMOVED (11" REINFORCED CONCRETE PAVEMTENT)
- FILL REMOVED

NOTE:
ALL BACKFILL MATERIAL REQUIRED BY C&MS 202.02 AND 202.05 THAT IS LOCATED WITHIN 15' OF THE EDGE OF TRAVELED WAY OF I.R. 70, SHALL HAVE A SLOPE OF NO MORE THAN 12:1.



PAVEMENT REMOVAL TYPICAL WESTBOUND I.R. 70



PROJECT DESCRIPTION

REMOVE EXISTING PAVEMENT, LIGHTING AND OTHER APPURTENANCES IN THE FORMER WESTBOUND I.R. 70 REST AREA.

LATITUDE: 39°49'44"
LONGITUDE: -84°45'34"
USGS QUADRANT: NEW PARIS, OH, IN

RA31

ITEM 832, EROSION CONTROL	10000 EACH
ITEM 832, STORM WATER POLLUTION PREVENTION PLAN	LUMP
ITEM 832, STORM WATER POLLUTION PREVENTION INSPECTIONS	LUMP
ITME 832, STORM WATER POLLUTION PREVENTION SOFTWARE	LUMP

PROJECT DATA				
Total Area (Right-of Way)	2.35	AC.	Runoff Coefficient for Pre-Construction Site	0.90
Project Earth Disturbed Area	2.35	AC.	Runoff Coefficient for Post-Construction Site	0.50
Estimated Contractor Earth Disturbed Area	0.20	AC.	Post Construction BMP:	VEGETATED FILTER STRIP
Notice of Intent Earth Disturbed Area	4.90	AC.	Immediate Receiving Waters	TRIBUTARY TO EAST FORK WHITEWATER RIVER
Impervious (Paved) Area for Pre-Construction Site	1.56	AC.	Subsequent Receiving Waters	EAST FORK WHITEWATER RIVER
Impervious (Paved) Area for Post-Construction Site	0.00	AC.		

HORIZONTAL SCALE IN FEET 0 50 100 200

CALCULATED LBA
CHECKED PJD

WEST BOUND REST AREA PLAN ENTRANCE RAMP REMOVAL

PRE-70-0.00

LEGEND

ASPHALT PAVEMENT REMOVED

CONCRETE PAVEMENT REMOVED

RA19 RA20 RA21 RA18 RA22 RA23 RA24 RA25 RA26 RA27 RA28 RA1 RA30 RA29 RA30

12" 15" 18" 36" 27"

CONST. LIMITS

WESTBOUND I.R. 70

EASTBOUND I.R. 70

SLM 3.000

MATCH LINE SLM 2.935

SAW CUT

CATCH BASIN AND PIPE TO REMAIN

FOR TYPICAL, SEE SHEET NO 48A

NOTE:
ALL BACKFILL MATERIAL REQUIRED BY C&MS 202.02 AND 202.05 THAT IS LOCATED WITHIN 15' OF THE EDGE OF TRAVELED WAY OF I.R. 70, SHALL HAVE A SLOPE OF NO MORE THAN 12:1.

N

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED LBA
CHECKED PJD

WEST BOUND REST AREA PLAN
EXIT RAMP REMOVAL

PRE-70-0.00

ITEM 625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

DAYTON POWER & LIGHT
1900 DRYDEN ROAD
DAYTON, OHIO 45439
(937) 331-4521 (BILL GOURLEY)
WILLIAM.GOURLEY@AES.COM

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. 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.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS 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.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEMS BEING LOCKED.

ITEM SPECIAL, MAINTAIN EXISTING LIGHTING

DURING CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ENTIRETY OF ANY CIRCUIT, INCLUDING BUT NOT LIMITED TO POLES, FIXTURES, CABLE, FUSES, ETC., THAT PASSES THROUGH THE PROJECT LIMITS.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

ITEM SPECIAL, MAINTAIN EXISTING LIGHTING (CONTINUED)

REPLACEMENT OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

THE FOLLOWING ESTIMATED QUANTITES ARE INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM SPECIAL, MAINTAIN EXISTING LIGHTING LUMP
ITEM SPECIAL, REPLACEMENT OF EXISTING LIGHTING UNIT 2 EACH

ITEM 625, LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, IES-III-M, LED, 9200-11600 LUMENS

LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AMERICAN ELECTRIC LIGHTING "AUTOBAHN ATBM D 480 R2 4B", COOPER INDUSTRIES "VERDEON VERD-A02-E-U-T2-7030-10K-IP66-4B-AP", GENERAL ELECTRIC "EVOLVE ERLH-5-10-B3-30-E-GRAY", OR EQUAL AS APPROVED BY THE ENGINEER. PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625 LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), IES-III-M, LED, 9200-11600 LUMENS, 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, LOW MAST, SOLID STATE (LED), AS PER PLAN, IES-V-M, LED, 38400-42000 LUMENS

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN C&MS 725.11 ARE HEREBY WAIVED. INSTEAD, THE LUMINAIRES FOR LOW-MAST AND HIGH-MAST LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS:

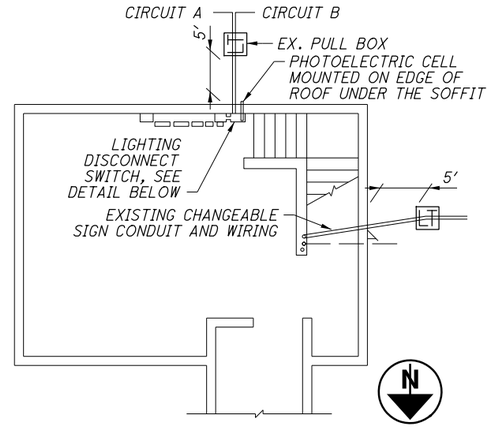
LUMINAIRES FOR LOW-MAST UNITS SHALL BE HOLOPHANE "HMLED3-PK2-30K-HVOLT- G-AW", CAROLINA HIGH MAST "CLED-4M-G-30-SO-B-05", GENERAL ELECTRIC "ERHM-01-5-40-VM-7-30-N-1-4B-GRAY-R", OR EQUAL AS APPROVED BY THE ENGINEER.

IN ADDITION, 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.

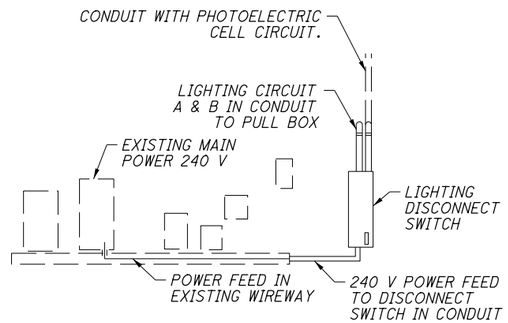
PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, IES-V-M, LED, 38400-42000 LUMENS FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, POWER SERVICE REMOVED, AS PER PLAN

REMOVE THE EXISTING POWER SERVICE FOR CIRCUITS A AND B FROM THE BASEMENT OF THE WEIGH STATION BUILDING AS SHOWN IN THE DETAILS BELOW. ALL ASPECTS OF ITEM 625.21 F SHALL APPLY WITH THE ADDITION THAT ANY HOLES IN THE WEIGH STATION BUILDING SHALL BE FILLED AND REPAIRED WITH MORTAR OR OTHER APPROPRIATE MATERIAL TO THE SATISFACTION OF THE ENGINEER.



WEIGH STATION BASEMENT PLAN



CONTROL CENTER ELEVATION

CONTROL CENTER DATA TABLE

CONTROL CENTER DESIGNATION	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCES CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
B	480	2.09	4	60	B	4.36	15	4	ODOT
C	480	1.3	4	60	C	2.7	15	4	ODOT
D	480	1.56	4	60	D	3.24	15	4	ODOT
E	480	1.56	4	60	E	3.24	15	4	ODOT
F	480	3.11	4	60	F	3.51	15	4	ODOT
					G	2.97	15	4	ODOT

NOTE: FOR ADDITIONAL CONTROL CENTER DETAILS, SEE STANDARD DRAWINGS.

CALCULATED PJD CHECKED SNS

LIGHTING NOTES

PRE-70-0.00

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE 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.
   - A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   - B. 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.
   - C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
   - D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
   - E. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.
2. CONDUITS.
   - A. THE 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.
   - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   - C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   - D. 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.
   - A. 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:
     - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
     - II. 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)

   - B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE 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.
4. GROUND ROD.
   - A. A ¾ 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.
   - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.
5. POWER SERVICE AND DISCONNECT SWITCH.
   - A. 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, UN-SPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
   - B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
     - I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
     - II. 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. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

ITEM 625, CONNECTION, FUSED PULL APART, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A FUSED PULL APART CONNECTION AS DETAILED IN C&MS 625. ADDITIONAL WORK INCLUDED WITH THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF THE REMAINING PORTION OF THE EXISTING PULL APART CONNECTION AT THE END OF THE POLE AND BRACKET CABLE. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "CONNECTION, FUSED PULL APART, AS PER PLAN" FOR EACH CONNECTION AND SHALL INLCUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 632, MESSENGER WIRE, 7 STRAND, ¼" DIAMETER WITH ACCESSORIES, AS PER PLAN

ALL ASPECTS OF ITEM 632 SHALL APPLY WITH THE EXCEPTION THAT PVC COATED MESSENGER SUPPORT RINGS SHALL BE USED TO SUPPORT LIGHTING CONDUCTORS INSTEAD OF LASHING ROD. MESSENGER SUPPORT RINGS SHOULD BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 632 MESSENGER WIRE, 7 STRAND, ¼" DIAMETER WITH ACCESSORIES, AS PER PLAN PER FOOT AND SHALL INLCUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 632, COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN

ALL ASPECTS OF 632 SHALL APPLY. ADDITIONALLY, LABEL EACH STRAIN POLE WITH THE ALPHA NUMERIC IDENTIFIER. PLACE THE IDENTIFIER ON THE QUADRANT OF THE SURFACE OF THE POLE THAT FACES ONCOMING TRAFFIC AT APPROXIMATELY 7 FEET (2 METERS) ABOVE THE ROADWAY SURFACE. APPLY THE IDENTIFIER LETTERS AND NUMERALS WHEN THE AMBIENT AIR TEMPERATURE, THE TEMPERATURE OF THE LABELING MATERIAL AND THE TEMPERATURE OF THE SURFACE TO WHICH THE LABELS ARE APPLIED ARE ALL ABOVE 40° F (4° C).

ITEM 659, SEEDING AND MULCHING

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL NOTES TO COVER SEEDING AND MULCHING OF DISTURBED AREAS DUE TO THE CONSTRUCTION OF THE PROPOSED LIGHTING CIRCUITS. THE ESTIMATED QUANTITY WAS CALCULATED BASED ON AN ASSUMPTION OF 5 FEET OF DISTURBANCE PER LINEAR FOOT OF TRENCH.

ITEM 659, SEEDING & MULCHING 10860 SY

CALCULATED PJD CHECKED SNS

LIGHTING NOTES

PRE-70-0.00

LIGHTING QUANTITIES

CALCULATED PJD CHECKED SNS

SHEET NO.	REFERENCE NO.	CIRCUIT	COORDINATES		625																										632		
					CONNECTION, FUSED PULL APART	CONNECTION, FUSED PULL APART, AS PER PLAN	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, AT20B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	BRACKET ARM, 20'	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE	1-1/2" DUCT CABLE WITH THREE NO.4 AWG 2400 VOLT CABLES	1-1/2" DUCT CABLE WITH THREE NO.6 AWG 2400 VOLT CABLES	CONDUIT, 3", 725.04	CONDUIT, JACKED OR DRILLED, 725.04, 3"	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN	TRENCH	PULL BOX, 725.08, 18"	PULL BOX REMOVED	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	LIGHT TOWER REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED	POWER SERVICE REMOVED, AS PER PLAN	LIGHT TOWER FOUNDATION REMOVED	DISCONNECT CIRCUIT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	STRAIN POLE FOUNDATION	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN
			NORTHING	EASTING	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH
58	1	B	674220	1320831		2												1										1						
	2	B												470						460					460								
	3	B	674173	1321287		2												1										1						
	4	B												243						233					233								
	5	B	674132	1321514		2												1										1						
	6	B												265						255					255								
	7	B	674065	1321756			6														1													
	8	B												200						190					190								
	9	B	673924	1321833		2												1										1						
	10	B												220						210					210								
	11	B	673918	1322041		2												1										1						
	12	B												221						211					211								
	13	B	674068	1322133			3														1													
	14	B												16						11					11								
	15	B	674064	1321728																				1										
	16	B									135					30				30					30								
	17	B									360						110																	
	18	B	674087	1321864		2													1									1						
	19	B									315						95																	
	20	B	674082	1322039		2													1									1						
	21	B	674087	1321746																		1												
	22	B	674068	1321996																		1							1		1			
59	1	B												1381						1381					1381								
60	1	B												40						35					35								
	2	B	674131	1323558		2												1										1						
	3	B												485						475					475								
	4	B	674129	1324032		2												1										1						
	5	B												520						510					510								
	6	B	674123	1324540		2												1										1						
TOTALS CARRIED TO SHEET NO. 57					0	20	9	0	0	0	810	0	0	4061	0	30	205	8	2	4001	2	2	0	1	4001	0	10	0	1	0	1	0	0	0

PRE-70-0.00

51
147

SHEET NO.	REFERENCE NO.	CIRCUIT	COORDINATES		625																								632		
			NORTHING	EASTING	CONNECTION, FUSED PULL APART	CONNECTION, FUSED PULL APART, AS PER PLAN	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, AT20B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	BRACKET ARM, 20'	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE	1-1/2" DUCT CABLE WITH THREE NO.4 AWG 2400 VOLT CABLES	1-1/2" DUCT CABLE WITH THREE NO.6 AWG 2400 VOLT CABLES	CONDUIT, 3", 725.04	CONDUIT, JACKED OR DRILLED, 725.04, 3"	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN	TRENCH	PULL BOX, 725.08, 18"	PULL BOX REMOVED	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	LIGHT TOWER REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED	POWER SERVICE REMOVED, AS PER PLAN	LIGHT TOWER FOUNDATION REMOVED	DISCONNECT CIRCUIT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	STRAIN POLE FOUNDATION	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN
					EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	5.5	FT	EACH	EACH
60	7	C	674346	1324324																			1										
	8	C									195					50				50				50									
	9	C	674294	1324323			3														1												
	10	C												210						200				200									
	11	C	674294	1324523	2			1	1				180					1				1											
	12	C												277						272				272									
61	1	C												109						104				104									
	2	C	674291	1324897	2			1	1				180					1				1											
	3	C												366						356				356									
	4	C	674290	1325253	2			1	1				180					1				1											
	5	C												345						335				335									
	6	C	674288	1325587	2			1	1				180					1				1											
	7	C												320						310				310									
	8	C	674287	1325897	2			1	1				180					1				1											
	9	C												15						5				5									
	10	C	674282	1325897			3														1												
	11	C									624						198																
	12	C	674084	1325897			3														1												
	13	C												295						290				290									
62	1	C												451						446				446									
	2	C	674055	1326626	2			1	1				180					1				1											
	3	C												487						477				477									
	4	C	674035	1327102	2			1	1				180					1				1											
	5	C												185						175				175									
	6	C	674013	1327275	2			1	1				180					1				1											
	7	C												210						200				200									
	8	C	671977	1327470	2			1	1				180					1				1											
	9	C									171						47																
	10	C	674022	1327457			3														1												
	11	C												36						26				26									
	12	C	674046	1327450	2			1	1				180					1				1											
TOTALS CARRIED TO SHEET NO. 57					20	0	12	10	10	0	990	0	1800	3306	0	50	245	10	0	3246	4	0	10	1	3246	0	0	0	0	0	0	0	0	0

CALCULATED PJD
CHECKED SNS

LIGHTING QUANTITIES

PRE-70-0.00

52
147

SHEET NO.	REFERENCE NO.	CIRCUIT	COORDINATES		625																								632		
					CONNECTION, FUSED PULL APART	CONNECTION, FUSED PULL APART, AS PER PLAN	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, AT20B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	BRACKET ARM, 20'	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE	1-1/2" DUCT CABLE WITH THREE NO.4 AWG 2400 VOLT CABLES	1-1/2" DUCT CABLE WITH THREE NO.6 AWG 2400 VOLT CABLES	CONDUIT, 3", 725.04	CONDUIT, JACKED OR DRILLED, 725.04, 3"	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN	TRENCH	PULL BOX, 725.08, 18"	PULL BOX REMOVED	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	LIGHT TOWER REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED	POWER SERVICE REMOVED, AS PER PLAN	LIGHT TOWER FOUNDATION REMOVED	DISCONNECT CIRCUIT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	STRAIN POLE FOUNDATION	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN
			NORTHING	EASTING	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH
66	1	D	675698	1368143	2			1	1				180					1					1		374								
	2	D												384						374												
	3	D	675697	1368517	2			1	1				180					1					1		356								
	4	D												366						356												
	5	D	675696	1368873	2			1	1				180					1					1		334								
	6	D												344						334												
	7	D	675694	1369207	2			1	1				180					1					1		322								
	8	D												332						322												
	9	D	675694	1369529	2			1	1				180					1					1		86								
	10	D												91						86						1	4			1		
	11	D	675717	1368721																						1	4			1		
	12	D	675714	1369330																												
	13	E	675498	1368919	2			1	1				180					1					1		495								
	14	E												505						495												
	15	E	675478	1369413	2			1	1				180					1					1		176								
	16	E												186						176												
	17	E	675456	1369587	2			1	1				180					1					1		26								
	18	E												31						26						1	4			1		
	19	E	675468	1369085																						1	4			1		
	20	E	675432	1369578																												
67	1	D												1086						1081												
	2	D	676103	1370589			3														1											
	3	D									159						48															
	4	D									276						82															
	5	D	676021	1370585			3														1											
	6	D												37						27					27							
	7	D	675995	1370584	2			1	1				180					1					1										
	8	D	675736	1369832																						1	4			1		
	9	D	675668	1369857																		1										
	10	D	675732	1370389																						1	6			1		
	11	E												123						118					118							
	12	E	675430	1369728			3														1											
	13	E												65						55					55							
	14	E	675417	1369782	2			1	1				180					1					1										
	15	E												820						810					810							
	16	E	675057	1370493			3														1											
	17	E									237						74															
	18	E									171						47															
	19	E	675475	1369739			3														1											
	20	E												37						27					27							
	21	E	675491	1369761	2			1	1				180					1					1										
	22	E												67						57					57							
	23	E	675012	1370527	2			1	1				180					1					1										
	24	E	675477	1369708																		1										
	25	E	675381	1370157																						1	6			1		
	26	E	675188	1370507																						1	4			1		
TOTALS CARRIED TO SHEET NO. 57					24	0	15	12	12	0	843	0	2160	4474	0	0	251	12	0	4344	5	2	12	0	4344	8	36	0	0	8	0	0	0	0

CALCULATED PJD CHECKED SNS

LIGHTING QUANTITIES

PRE-70-0.00

SHEET NO.	REFERENCE NO.	CIRCUIT	COORDINATES		625																								632		
					CONNECTION, FUSED PULL APART	CONNECTION, FUSED PULL APART, AS PER PLAN	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, AT20B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	BRACKET ARM, 20'	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE	1-1/2" DUCT CABLE WITH THREE NO.4 AWG 2400 VOLT CABLES	1-1/2" DUCT CABLE WITH THREE NO.6 AWG 2400 VOLT CABLES	CONDUIT, 3", 725.04	CONDUIT, JACKED OR DRILLED, 725.04, 3"	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN	TRENCH	PULL BOX, 725.08, 18"	PULL BOX REMOVED	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	LIGHT TOWER REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED	POWER SERVICE REMOVED, AS PER PLAN	LIGHT TOWER FOUNDATION REMOVED	DISCONNECT CIRCUIT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMTER WITH ACCESSORIES, AS PER PLAN	STRAIN POLE FOUNDATION	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN
			NORTHING	EASTING	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH
68	1	D									219						68																
	2	D	676124	1370701			3														1												
	3	D												378						368					368								
	4	D	675947	1371009			3														1												
	5	D												514						504					504								
	6	D	675719	1371452	2			1	1				180					1					1										
	7	D												45						35					35								
	8	D	675711	1371485			3														1												
	9	D												133						128					128								
	10	D												19						9					9								
	11	D	676133	1370700	2			1	1				180					1					1										
	12	D									180					45																	
	13	D	675985	1371043																				1									
	14	D									165						45																
	15	D	675668	1371476			3														1												
	16	D												32						22					22								
	17	D	675647	1371472	2			1	1				180					1					1										
	18	D																								1	4			1			
	19	D	675976	1371043																								1			1		
	20	D	675761	1371198																		1											
	21	D	675667	1371200																						1	6			1			
	22	E									261						82																
	23	E	675057	1370649			3														1												
	24	E												167						157					157								
	25	E	675130	1370788			3														1												
	26	E												892						887					887								
	27	E									264						78																
	28	E	675135	1370649			3														1												
	29	E												27						17					17								
	30	E	675144	1370635	2			1	1				180					1					1										
	31	E									150					35																	
	32	E	675092	1370813																				1									
	33	E	675104	1370815																								1		1			
	34	E	675299	1370900																		1											
	35	E	675362	1370810																						1	6			1			
69	1	D												41						36					36								
	2	D	675684	1371646	2			1	1				180					1					1										
	3	D												185						175					175								
	4	D	675666	1371820	2			1	1				180					1					1										
	5	D												543						533					533								
	6	D	675654	1372353	2			1	1				180					1					1										
	7	D	675692	1371764																						1	4			1			
	8	D	675674	1372366																						1	4			1			
	9	E												39						34					34								
	10	E	675448	1371664	2			1	1				180					1					1										
	11	E												332						322					322								
	12	E	675450	1371986	2			1	1				180					1					1										
	13	E												344						334					334								
	14	E	675455	1372320	2			1	1				180					1					1										
	15	E												366						356					356								
	16	E	675463	1372676	2			1	1				180					1					1										
	17	E												384						374					374								
	18	E	675469	1373050	2			1	1				180					1					1										
	19	E	675420	1371668																						1	4			1			
	20	E	675427	1372173																						1	4			1			
	21	E	675440	1372670																						1	4			1			
TOTALS CARRIED TO SHEET NO. 57					24	0	21	12	12	0	1239	0	2160	4441	0	80	273	12	0	4291	7	2	12	2	4291	8	36	2	0	8	2	0	0	0

CALCULATED PJD
CHECKED SNS

LIGHTING QUANTITIES

PRE-70-0.00

SHEET NO.	REFERENCE NO.	CIRCUIT	COORDINATES		625																										632		
					CONNECTION, FUSED PULL APART	CONNECTION, FUSED PULL APART, AS PER PLAN	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, AT20B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	BRACKET ARM, 20'	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE	1-1/2" DUCT CABLE WITH THREE NO.4 AWG 2400 VOLT CABLES	1-1/2" DUCT CABLE WITH THREE NO.6 AWG 2400 VOLT CABLES	CONDUIT, 3", 725.04	CONDUIT, JACKED OR DRILLED, 725.04, 3"	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN	TRENCH	PULL BOX, 725.08, 18"	PULL BOX REMOVED	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	LIGHT TOWER REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED	POWER SERVICE REMOVED, AS PER PLAN	LIGHT TOWER FOUNDATION REMOVED	DISCONNECT CIRCUIT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	STRAIN POLE FOUNDATION	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN
			NORTHING	EASTING	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH
70	1	F	675773	1393545	2			1	1				180					1					1										
	2	F													385					375				375									
	3	F	675786	1393919	2					1			150					1					1									1	1
	4	F										1098																			356		
	5	F	675782	1394275	2					1			60					1					1									1	1
	6	F										1032																			334		
	7	F	675786	1394609	2					1			60					1					1									1	1
	8	F										1032																			334		
	9	F	675791	1394943	2					1			150					1					1									1	1
	10	F												58						53				53									
	11	F	675593	1393861	2			1	1				174					1					1										
	12	F													323					313				313									
	13	F	675576	1394171	2					1			150					1					1									1	1
	14	F										555																			175		
	15	F	675566	1394345	2					1			54					1					1									1	1
	16	F										555																			175		
	17	F	675560	1394519	2					1								1					1									1	1
	18	F										555																			175		
	19	F	675557	1394693	2					1			54					1					1									1	1
	20	F										615																			195		
	21	F	675555	1394888	2					1			150					1					1									1	1
	22	F												60						50				50									
	23	F	675554	1394938			3														1												
	24	F									153						41																
	25	F	675595	1394938			3														1												
	26	F												62						57				57									
71	1	F												218						213				213									
	2	F	675823	1395203			3														1												
	3	F									279						78																
	4	F, G	675893	1395168																					1								
	5	G												564						554				554									
	6	G	676209	1395609			3														1												
	7	G									216						62																
	8	G	676209	1395671			3														1												
	9	G												15						5				5									
	10	G	676209	1395676	2			1	1				180					1					1										
	11	G												704						699				699									
	12	G									390						120																
	13	G	676089	1395612			3														1												
	14	G												15						5				5									
	15	G	676084	1395612	2			1	1				180					1					1										
	16	F									162						44																
	17	F	675784	1395222			3														1												
	18	F									609						193																
	19	F	675592	1395220			3														1												
	20	F												230						225				225									
	21	F												532						522				522									
	22	F	675234	1395595			3														1												
	23	F									297						89																
	24	F	675146	1395604			3														1												
	25	F												26						16				16									
	26	F	675131	1395606	2			1	1				180					1					1										
	27	F									207						59																
	28	F	675240	1395653			3														1												
	29	F												21						11				11									
	30	F	675241	1395653	2			1	1				180					1					1										
TOTALS CARRIED TO SHEET NO. 57					30	0	33	6	6	9	2313	5442	1902	2505	708	0	686	15	0	3098	11	0	15	1	3098	0	0	0	0	0	0	1744	9	9

CALCULATED PJD CHECKED SNS

LIGHTING QUANTITIES

PRE-70-0.00

SHEET NO.	REFERENCE NO.	CIRCUIT	COORDINATES		625																										632		
			NORTHING	EASTING	CONNECTION, FUSED PULL APART EACH	CONNECTION, FUSED PULL APART, AS PER PLAN EACH	CONNECTION, UNFUSED PERMANENT EACH	LIGHT POLE, CONVENTIONAL, AT20B40 EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP EACH	BRACKET ARM, 20' EACH	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE FT	NO. 10 AWG POLE AND BRACKET CABLE FT	1-1/2" DUCT CABLE WITH THREE NO.4 AWG 2400 VOLT CABLES FT	1-1/2" DUCT CABLE WITH THREE NO.6 AWG 2400 VOLT CABLES FT	CONDUIT, 3", 725.04 FT	CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN EACH	TRENCH FT	PULL BOX, 725.08, 18" EACH	PULL BOX REMOVED EACH	GROUND ROD EACH	POWER SERVICE, AS PER PLAN EACH	PLASTIC CAUTION TAPE FT	LIGHT TOWER REMOVED EACH	LUMINAIRE REMOVED EACH	POWER SERVICE REMOVED EACH	POWER SERVICE REMOVED, AS PER PLAN EACH	LIGHT TOWER FOUNDATION REMOVED EACH	DISCONNECT CIRCUIT EACH	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN FT	STRAIN POLE FOUNDATION EACH	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 5, AS PER PLAN EACH
72	1	G												121						116					116								
	2	G	675816	1396413	2			1	1				174					1					1										
	3	G												93						83					83								
	4	G	675800	1396494			3														1												
	5	G												125						115					115								
	6	G	675782	1396608	2					1			150					1					1									1	1
	7	G										555																			175		
	8	G	675763	1396782	2					1			60					1					1									1	1
	9	G										630																			200		
	10	G	675753	1396981	2					1			60					1					1									1	1
	11	G										861																			277		
	12	G	675750	1397258	2					1			60					1					1									1	1
	13	G									195						55														277		
	14	G	675746	1396494			3														1												
	15	G									663						211																
	16	G	675535	1396494			3														1												
	17	G												207						197					197								
	18	G	675544	1396691	2					1			150					1					1									1	1
	19	G										960																			310		
	20	G	675548	1397001	2					1			60					1					1									1	1
	21	G										1032																			334		
	22	G	675554	1397335	2					1			60					1					1									1	1
	23	G										1245																			405		
	24	G	675558	1397740	2					1			60					1					1									1	1
	25	G												71						61					61								
	26	G	675746	1396434	2			1	1				180					1					1											
TOTALS FROM SHEET 51					0	20	9	0	0	0	810	0	0	4061	0	30	205	8	2	4001	2	2	0	1	4001	0	10	0	1	0	1	0	0	0
TOTALS FROM SHEET 52					20	0	12	10	10	0	990	0	1800	3306	0	50	245	10	0	3246	4	0	10	1	3246	0	0	0	0	0	0	0	0	0
TOTALS FROM SHEET 54					24	0	15	12	12	0	843	0	2160	4474	0	0	251	12	0	4344	5	2	12	0	4344	8	36	0	0	8	0	0	0	0
TOTALS FROM SHEET 55					24	0	21	12	12	0	1239	0	2160	4441	0	80	273	12	0	4291	7	2	12	2	4291	8	36	2	0	8	2	0	0	0
TOTALS FROM SHEET 56					30	0	33	6	6	9	2313	5442	1902	2505	708	0	686	15	0	3098	11	0	15	1	3098	0	0	0	0	0	0	1744	9	9
TOTALS THIS SHEET					20	0	9	2	2	8	858	5283	1014	617	0	0	266	10	0	572	3	0	10	0	572	0	0	0	0	0	0	1978	8	8
TOTALS CARRIED TO GENERAL SUMMARY					118	20	99	42	42	17	7053	10725	9036	19404	708	160	1926	67	2	19552	32	6	59	5	19552	16	82	2	1	16	3	3722	17	17

CALCULATED PJD CHECKED SNS

LIGHTING QUANTITIES

PRE-70-0.00

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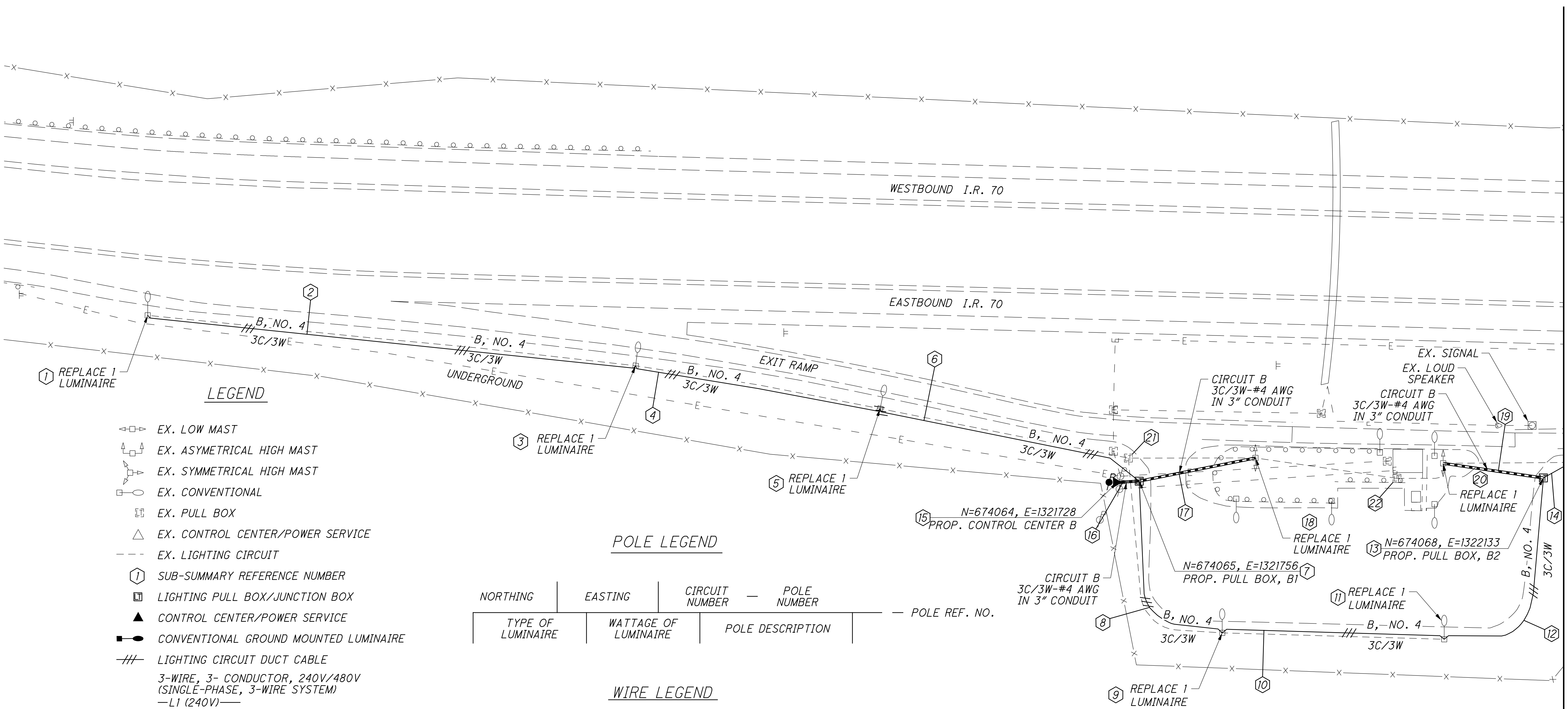


LEGEND

- EX. LOW MAST
- EX. ASYMETRICAL HIGH MAST
- EX. SYMMETRICAL HIGH MAST
- EX. CONVENTIONAL
- EX. PULL BOX
- EX. CONTROL CENTER/POWER SERVICE
- EX. LIGHTING CIRCUIT
- SUB-SUMMARY REFERENCE NUMBER
- LIGHTING PULL BOX/JUNCTION BOX
- CONTROL CENTER/POWER SERVICE
- CONVENTIONAL GROUND MOUNTED LUMINAIRE
- LIGHTING CIRCUIT DUCT CABLE
- 3-WIRE, 3- CONDUCTOR, 240V/480V (SINGLE-PHASE, 3-WIRE SYSTEM)
  - L1 (240V)
  - L2 (240V)
  - N
- PROPOSED 3" CONDUIT WITH DISTRIBUTION CABLE
- PROPOSED 3" CONDUIT WITH DISTRIBUTION CABLE JACKED OR DRILLED

POLE LEGEND

NORTHING	EASTING	CIRCUIT NUMBER — POLE NUMBER
TYPE OF LUMINAIRE	WATTAGE OF LUMINAIRE	POLE DESCRIPTION

— POLE REF. NO.

WIRE LEGEND

CIRCUIT — B, #4 — AWG

NO. OF CONDUCTORS — 3C/3W — NO. OF WIRES

NOTE: EXISTING CIRCUITS TO BE ABANDONED IN PLACE

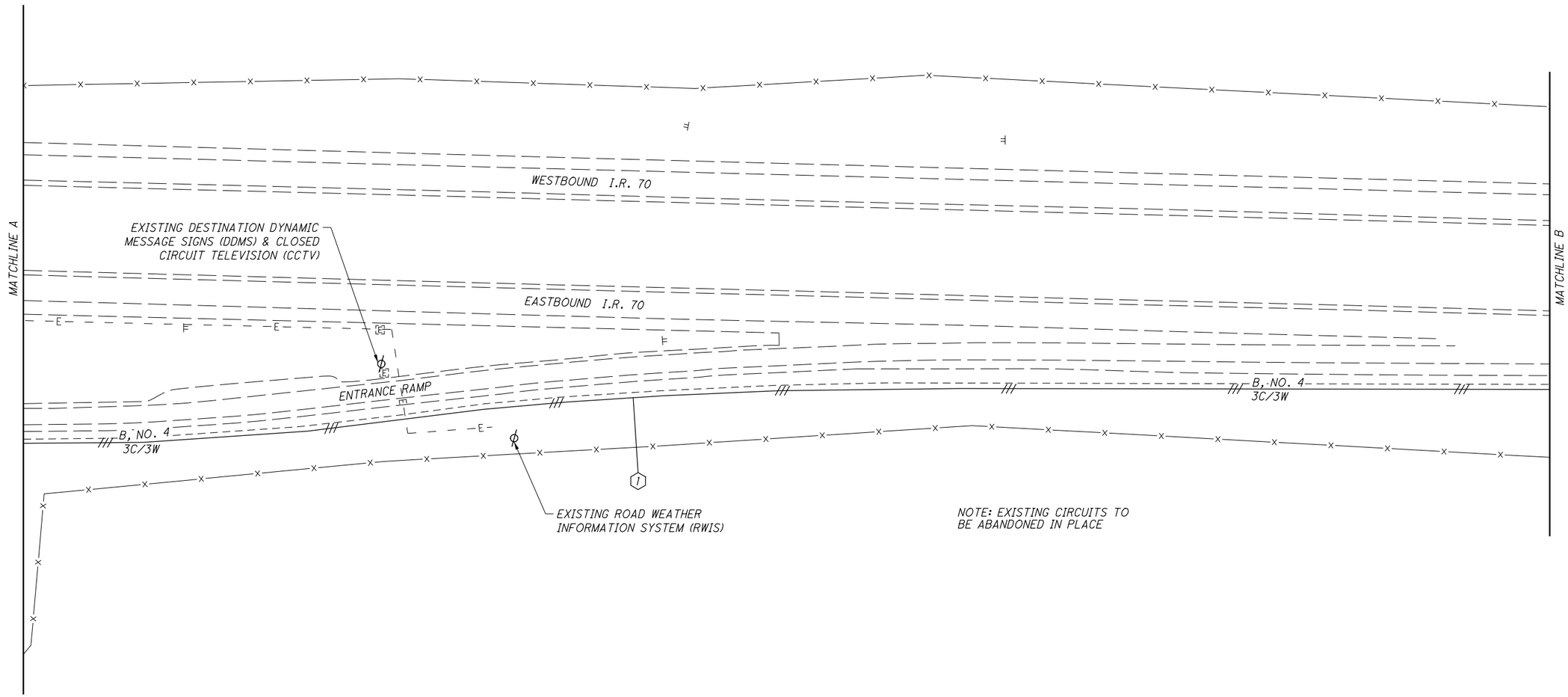
NOTE:
THERE ARE FIVE EXISTING LUMINAIRES ON WOOD POLES NEAR THE WEIGH STATION BUILDING. THESE LUMINAIRES ARE CONNECTED AERIALLY ON A SEPARATE CIRCUIT. DO NOT DISTURB THESE LUMINAIRES OR THE LIGHTING CIRCUIT.

HORIZONTAL SCALE IN FEET: 0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
EASTBOUND WEIGH STATION

PRE-70-0.00



FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
EASTBOUND WEIGH STATION

PRE-70-0.00

59
147

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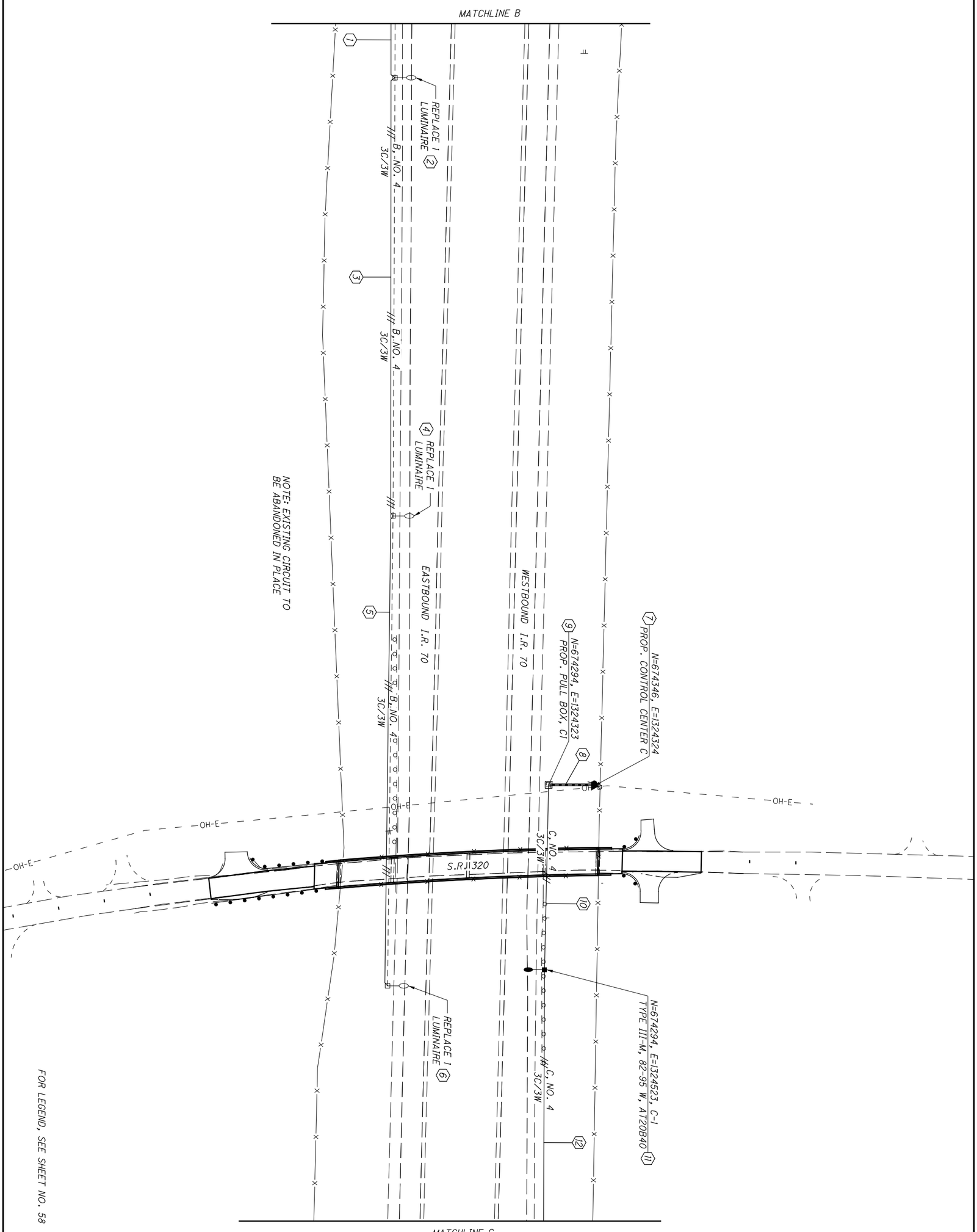
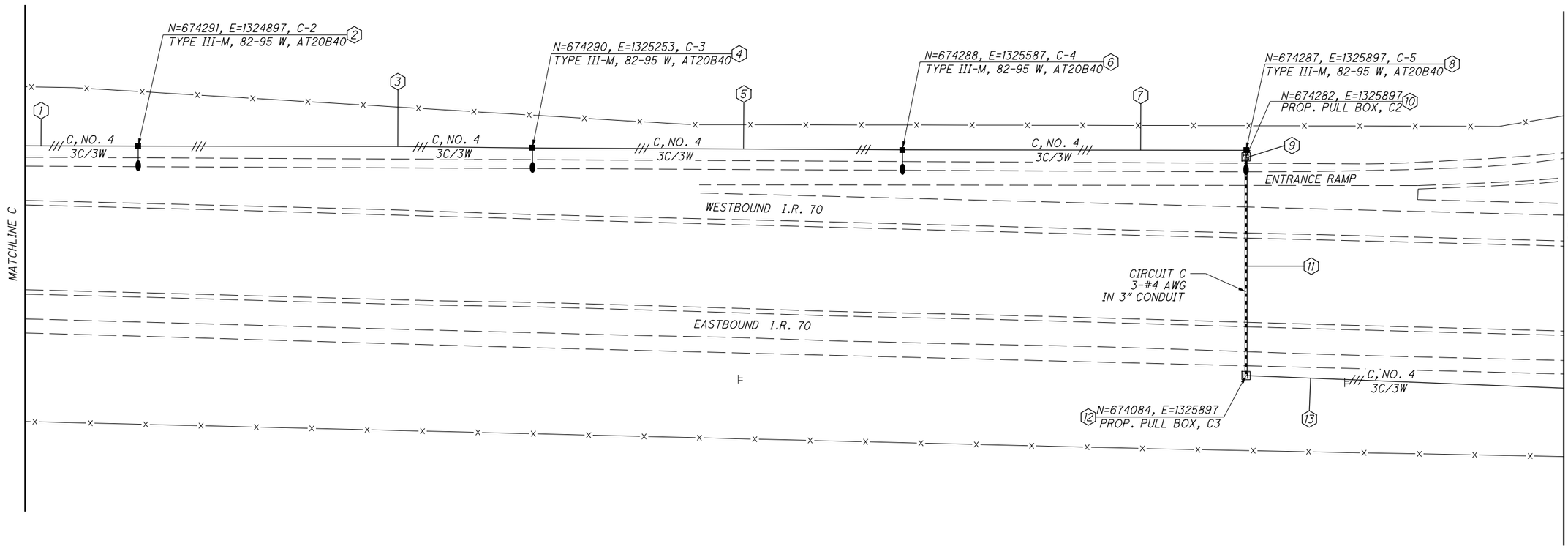


FOR LEGEND, SEE SHEET NO. 58

60 / 147	PRE-70-0.00	LIGHTING PLAN EASTBOUND WEIGH STATION & US 35	CALCULATED PJD CHECKED SNS	0 25 50 100 HORIZONTAL SCALE IN FEET



FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
US 35 INTERCHANGE

PRE-70-0.00

MATCHLINE D

ENTRANCE RAMP

WESTBOUND I.R. 70

EASTBOUND I.R. 70

EXIT RAMP

C, NO. 4
3C/3W

C, NO. 4
3C/3W

C, NO. 4
3C/3W

C, NO. 4
3C/3W

1

2 N=674055, E=1326626, C-6
TYPE III-M, 82-95 W, AT20B40

3

4 N=674035, E=1327102, C-7
TYPE III-M, 82-95 W, AT20B40

5

6 N=674013, E=1327275, C-8
TYPE III-M, 82-95 W, AT20B40

7

8 N=673977, E=1327470, C-9
TYPE III-M, 82-95 W, AT20B40

9

10 N=674022, E=1327457
PROP. PULL BOX, C4

11

12 N=674046, E=1327450, C-10
TYPE III-M, 82-95 W, AT20B40

CIRCUIT C
3-#4 AWG
IN 3" CONDUIT

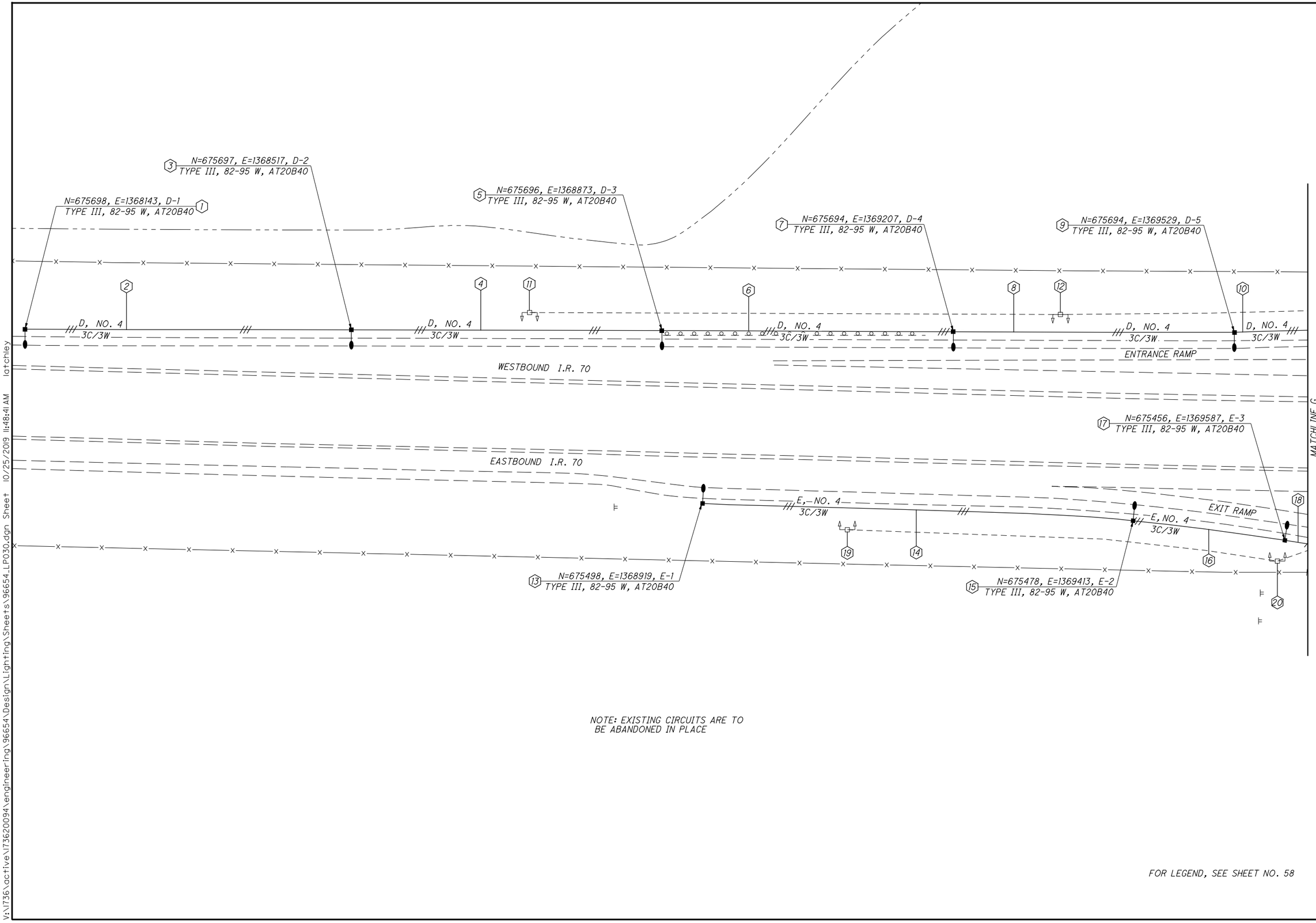
FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
US 35 INTERCHANGE

PRE-70-0.00



NOTE: EXISTING CIRCUITS ARE TO BE ABANDONED IN PLACE

FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
US 127 INTERCHANGE

PRE-70-0.00

MATCHLINE H

U.S. 127

CIRCUIT D
3-#4 AWG
IN 3" CONDUIT

2 N=676103, E=1370589
PROP. PULL BOX, D1

CIRCUIT D
3-#4 AWG

N=675995, E=1370584, D-6
TYPE III, 82-95 W, AT20B40 7

CIRCUIT D
3-#4 AWG
IN 3" CONDUIT

5 N=676021, E=1370585
PROP. PULL BOX, D2

D, 1"NO. 4 3C/3W

ENTRANCE RAMP

WESTBOUND I.R. 70

EASTBOUND I.R. 70

E, 1"NO. 4 3C/3W

EXIT RAMP

CIRCUIT E
3-#4 AWG
IN 3" CONDUIT

16 N=675057, E=1370493
PROP. PULL BOX, E3

CIRCUIT E
3-#4 AWG

N=675012, E=1370527, E-6
TYPE III, 82-95 W, AT20B40 23

CIRCUIT E
3-#4 AWG

N=675491, E=1369761, E-4
TYPE III, 82-95 W, AT20B40 21

CIRCUIT E
3-#4 AWG

19 N=675475, E=1369739
PROP. PULL BOX, E1

CIRCUIT E
3-#4 AWG
IN 3" CONDUIT

N=675417, E=1369782, E-5
TYPE III, 82-95 W, AT20B40 14

CIRCUIT E
3-#4 AWG

24 N=675430, E=1369728
PROP. PULL BOX, E2 12

CIRCUIT E
3-#4 AWG

MATCHLINE G

NOTE: EXISTING CIRCUITS ARE TO BE ABANDONED IN PLACE

FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
US 127 INTERCHANGE

PRE-70-0.00

67
147

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MATCHLINE I

CIRCUIT D
3-#4 AWG
IN 3" CONDUIT

N=675711, E=1371485
PROP. PULL BOX, D5

CIRCUIT D
3-#4 AWG

N=675668, E=1371476
PROP. PULL BOX, D6

N=675647, E=1371472, D-9
TYPE III, 82-95 W, AT20B40

N=675719, E=1371452, D-8
TYPE III, 82-95 W, AT20B40

D, NO. 4
3C/3W

OH-E

G

N=675985, E=1371043
PROP. CONTROL CENTER D

CIRCUIT D
3-#4 AWG
IN 3" CONDUIT

N=675947, E=1371009
PROP. PULL BOX, D4

EXIT RAMP

WESTBOUND I.R. 70

EASTBOUND I.R. 70

E, NO. 4
3C/3W

ENTRANCE RAMP

CIRCUIT E
3-#4 AWG
IN 3" CONDUIT

N=675092, E=1370813
PROP. CONTROL CENTER E

N=675130, E=1370788
PROP. PULL BOX, E6

N=675135, E=1370649
PROP. PULL BOX, E4

CICUIT E
3-#4 AWG

N=675144, E=1370635, E-7
TYPE III, 82-95 W, AT20B40

N=675057, E=1370649
PROP. PULL BOX, E5

N=676133, E=1370700, D-7
TYPE III, 82-95 W, AT20B40

CIRCUIT D
3-#4 AWG

N=676124, E=1370701
PROP. PULL BOX, D3

CIRCUIT D
3-#4 AWG
IN 3" CONDUIT

U.S. 127

CIRCUIT E
3-#4 AWG
IN 3" CONDUIT

CIRCUIT E
3-#4 AWG
IN 3" CONDUIT

NOTE: EXISTING CIRCUITS ARE TO BE ABANDONED IN PLACE

FOR LEGEND, SEE SHEET NO. 58

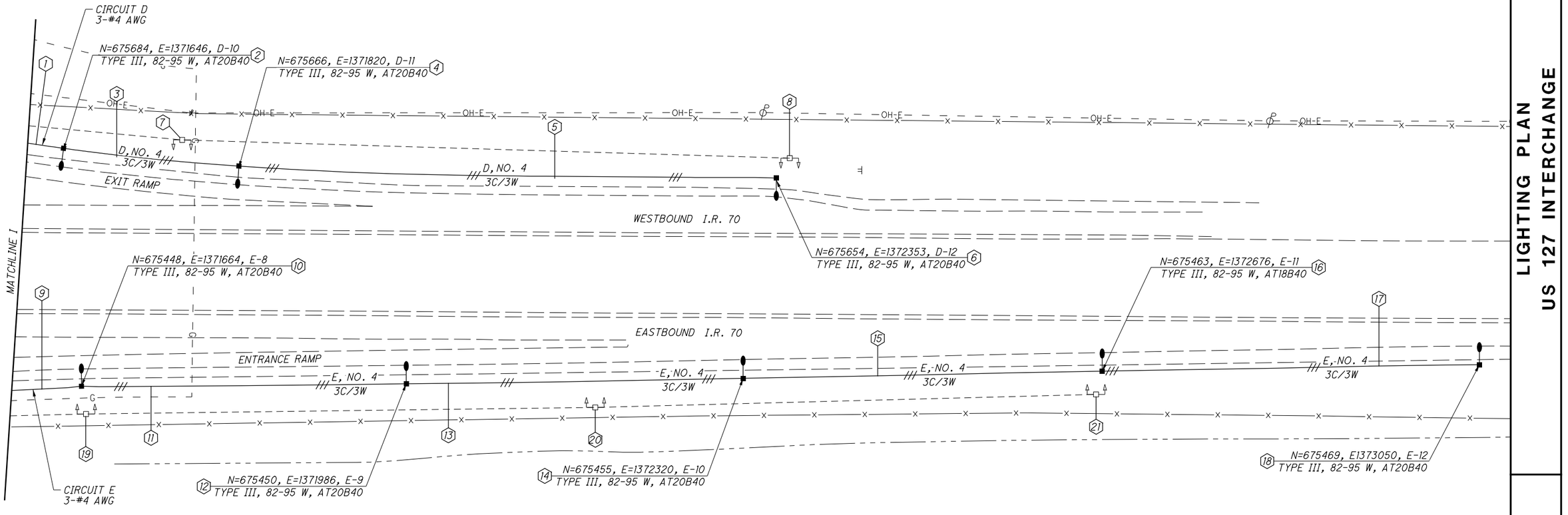
MATCHLINE H

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
US 127 INTERCHANGE

PRE-70-0.00



NOTE: EXISTING CIRCUITS TO BE ABANDONED IN PLACE

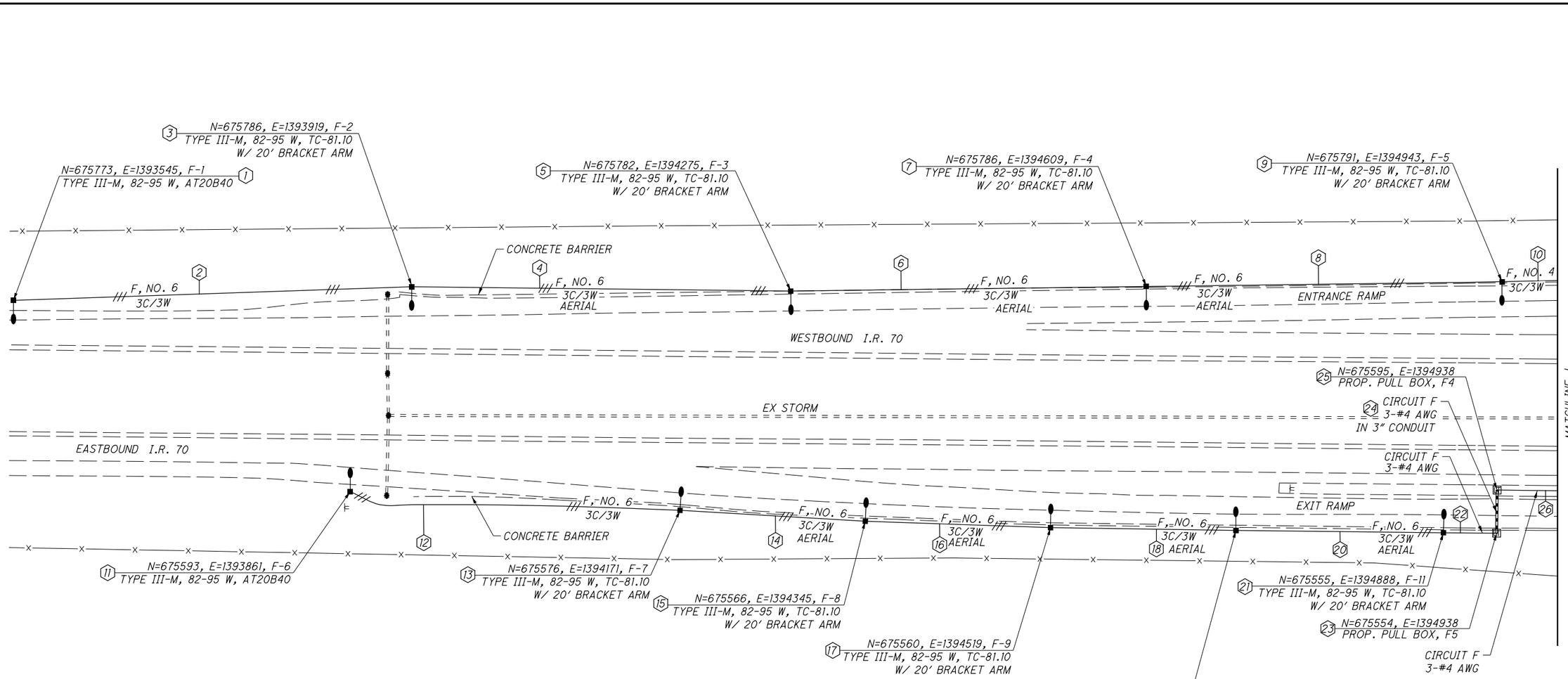
FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

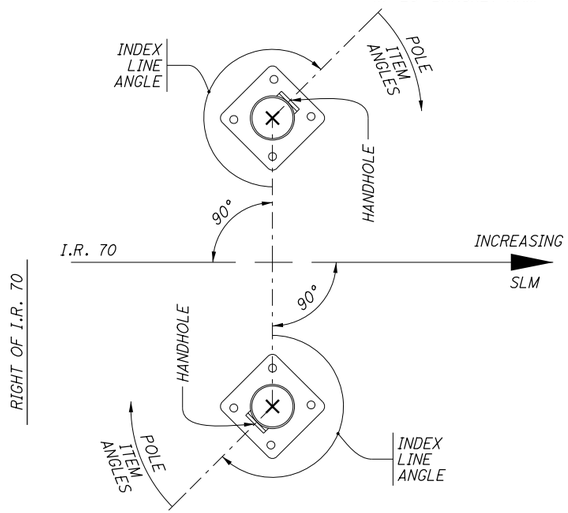
LIGHTING PLAN
US 127 INTERCHANGE

PRE-70-0.00



PLAN DETAILS FOR STRAIN POLES											
REFERENCE SHEET NO. 56	NORTHING	EASTING	POLE NO.	DESIGN NO.	POLE HEIGHT (FT.) #	FOUNDATION ELEV.	SPAN WIRE ATTACHED HEIGHT	CABLE ENTRANCE DISTANCE FROM TOP (IN.)	INDEX LINE ANGLE (DEG.)	ANGLES (DEG.) FROM INDEX LINE	
										LUMINAIRE BRACKET	CABLE ENTRANCE
F-2	675786	1393919	81.10	5	33	-	29	48"	180°	180°	0°
F-3	675782	1394275	81.10	5	33	-	29	48"	180°	180°	0°
F-4	675786	1394609	81.10	5	33	-	29	48"	180°	180°	0°
F-5	675791	1394943	81.10	5	33	-	29	48"	180°	180°	0°
F-7	675576	1394171	81.10	5	33	-	29	48"	180°	180°	0°
F-8	675566	1394345	81.10	5	33	-	29	48"	180°	180°	0°
F-9	675560	1394519	81.10	5	33	-	29	48"	180°	180°	0°
F-10	675557	1394693	81.10	5	33	-	29	48"	180°	180°	0°
F-11	675555	1394888	81.10	5	33	-	29	48"	180°	180°	0°

6.5' BRACKET ARM UPSWEEP



POLE ORIENTATION

NOTES:

- ALL ANGLES ARE MEASURED CLOCKWISE.
- THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.

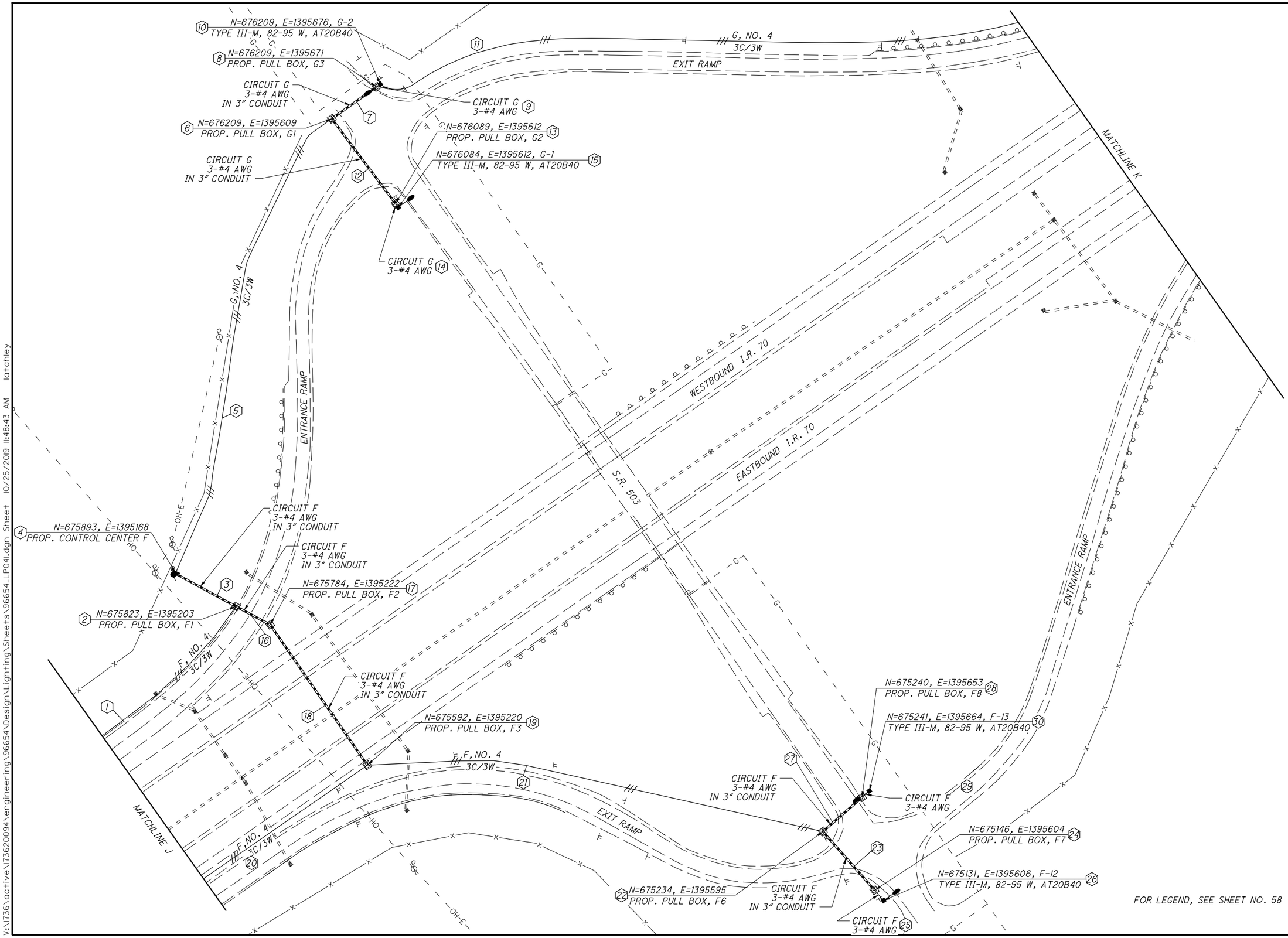
FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
S.R. 503 INTERCHANGE

PRE-70-0.00



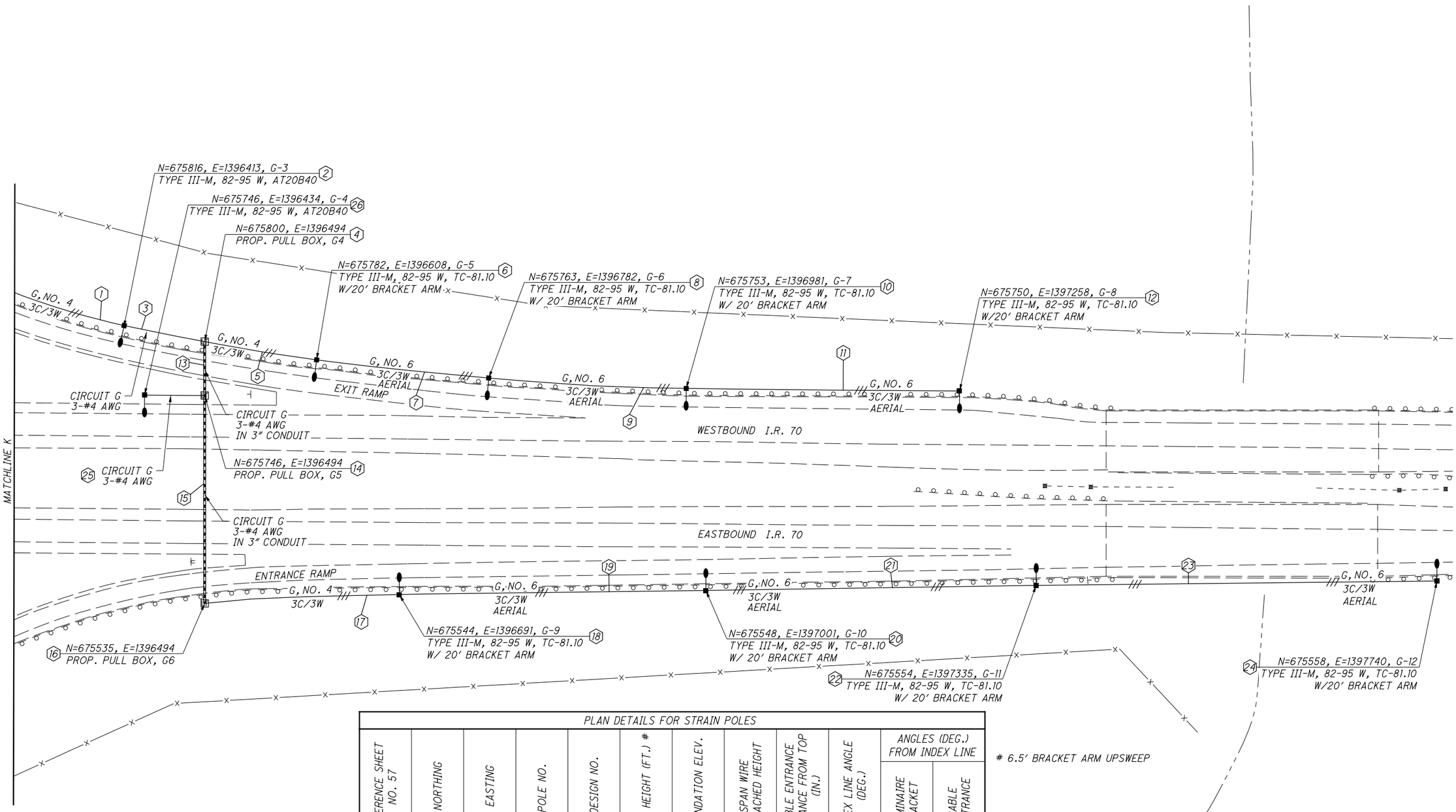
FOR LEGEND, SEE SHEET NO. 58

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
S.R. 503 INTERCHANGE

PRE-70-0.00



PLAN DETAILS FOR STRAIN POLES

REFERENCE SHEET NO. 57	NORTHING	EASTING	POLE NO.	DESIGN NO.	POLE HEIGHT (FT.) #	FOUNDATION ELEV.	SPAN WIRE ATTACHED HEIGHT	CABLE ENTRANCE DISTANCE FROM TOP (IN.)	INDEX LINE ANGLE (DEG.)	ANGLES (DEG.) FROM INDEX LINE	
										LUMINAIRE BRACKET	CABLE ENTRANCE
G-5	675782	1396608	81.10	5	33	-	29	48"	180°	180°	0°
G-6	675763	1396782	81.10	5	33	-	29	48"	180°	180°	0°
G-7	675753	1396981	81.10	5	33	-	29	48"	180°	180°	0°
G-8	675750	1397258	81.10	5	33	-	29	48"	180°	180°	0°
G-9	675544	1396691	81.10	5	33	-	29	48"	180°	180°	0°
G-10	675548	1397001	81.10	5	33	-	29	48"	180°	180°	0°
G-11	675554	1397335	81.10	5	33	-	29	48"	180°	180°	0°
G-12	675558	1397740	81.10	5	33	-	29	48"	180°	180°	0°

6.5' BRACKET ARM UPSWEEP

FOR LEGEND, SEE SHEET NO. 58
FOR POLE ORIENTATION DETAIL, SEE SHEET NO. 70

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

LIGHTING PLAN
S.R. 503 INTERCHANGE

PRE-70-0.00

PROPOSED WORK ON BRIDGE PRE-70-0358

1. JACK AND TEMPORARILY SUPPORT THE BEAMS AT EACH ABUTMENT.

2. REMOVE ALL THE EXISTING BEARINGS AT EACH ABUTMENT.

3. PATCH ABUTMENT SEATS PER CMS 519.

3. INSTALL NEW LAMINATED ELASTOMERIC BEARINGS AS SHOWN IN THE PLANS.

4. PAINT NEW BEARINGS.

PROPOSED WORK ON BRIDGES PRE-70-0489, PRE-70-1366, PRE-503-1955, PRE-70-1665, AND PRE-70-1766

1. JACK AND TEMPORARILY SUPPORT THE BEAMS AT EACH ABUTMENT. EXISTING GAS LINE SUPPORTED ON BEAMS ON PRE-503-1955 SHALL NOT BE DISTURBED DURING JACKING.

2. REMOVE ALL THE EXISTING BEARINGS AT EACH ABUTMENT.

3. INSTALL NEW LAMINATED ELASTOMERIC BEARINGS AS SHOWN IN THE PLANS.

4. PAINT NEW BEARINGS.

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 , AND THE ODOT BRIDGE DESIGN MANUAL, 2004

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE EXISTING BEARINGS FROM THE STEEL BEAMS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF BEAMS THAT ARE TO BE REMAIN. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS.

THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

PRE-70-0358 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP		73/147
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			8		75/147
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		73/147
519	11101	25	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	25				76/147

PRE-70-0489 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP		73/147
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			8		75/147
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		73/147

PRE-70-1366 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP		73/147
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			8		74/147
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		73/147

PRE-503-1955 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP		73/147
516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			10		74/147
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		73/147

PRE-70-1665 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP		73/147
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			8		74/147
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		73/147

PRE-70-1766 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP		73/147
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			8		74/147
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		73/147

(1) QUANTITIES PAID FOR UNDER PARTICIPATION SPLIT 02/IMS/BR

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED EDA | DRAWN ALH | REVIEWED EER | DATE 10/25/19
CHECKED MRS | REVISED XXX | STRUCTURE FILE NUMBER VARIES

GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE NO. VARIES

PRE-70-0.00
PID No. 96654

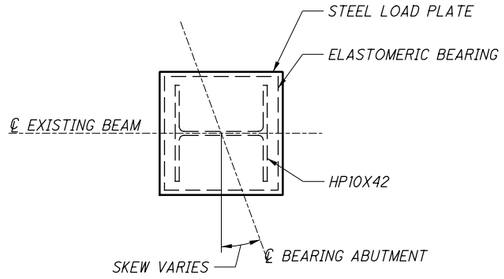
1 / 1

73
147

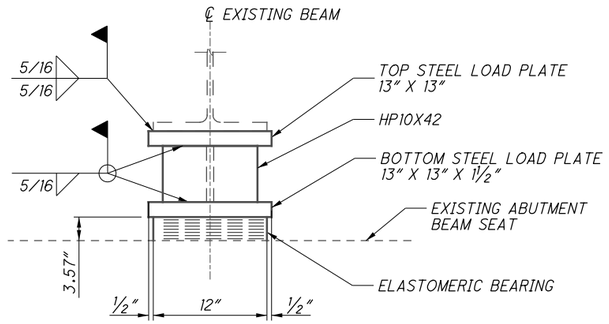
THICKNESS OF EXTERNAL ELASTOMER = 0.200"
(1 REQUIRED)

THICKNESS OF INTERNAL ELASTOMER = 0.300"
(9 REQUIRED)

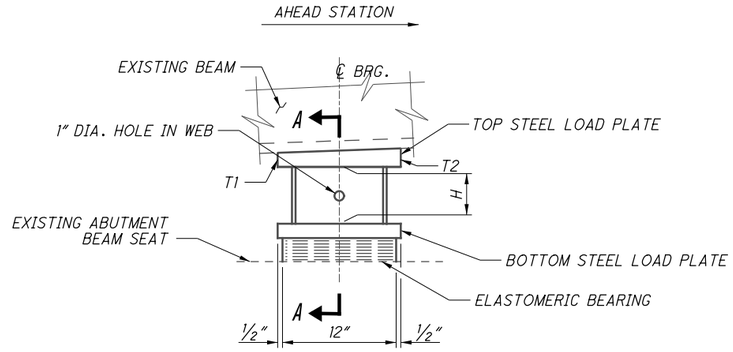
INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)
(9 REQUIRED)



PLAN



SECTION A-A



ELEVATION

BEARINGS AT ABUTMENTS

BRIDGE NO.	HP SECTION HEIGHT (H)									
	REAR ABUTMENT					FORWARD ABUTMENT				
	HP SECTION HEIGHT			BEVELED PLATE		HP SECTION HEIGHT			BEVELED PLATE	
	MIN.	MAX.	AVG.	T1	T2	MIN.	MAX.	AVG.	T1	T2
	(INCH)	(INCH)	(INCH)	(INCH)	(INCH)	(INCH)	(INCH)	(INCH)	(INCH)	(INCH)
PRE-70-0632	12 5/8"±	12 7/8"±	12 3/4"±	1 3/8"	1 5/8"	12 1/8"±	13"±	12 15/16"±	1 5/8"	1 3/8"
PRE-70-1366	11"±	11 1/4"±	11 1/8"±	1 1/4"	1 3/4"	10 3/8"±	11 1/8"±	10 15/16"±	1 3/4"	1 1/4"
PRE-503-1955	12 5/8"±	13"±	12 13/16"±	1 1/2"	1 1/2"	13"±	13 1/4"±	13 1/8"±	1 1/2"	1 1/2"
PRE-70-1665	11 1/8"±	11 1/2"±	11 5/16"±	1 3/8"	1 5/8"	10 5/8"±	11 1/4"±	10 15/16"±	1 5/8"	1 3/8"
PRE-70-1766	11 1/4"±	11 3/4"±	11 1/2"±	1 3/8"	1 5/8"	10 3/4"±	11"±	10 1/8"±	1 5/8"	1 3/8"

REAR ABUTMENT = SOUTH ABUTMENT
FORWARD ABUTMENT = NORTH ABUTMENT

NOTES

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.

THE STEEL LOAD PLATE AND MASONRY PLATE SHALL BE A709 GRADE 36 STEEL. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. LOAD PLATES SHALL BE CLEANED AND SHOP PRIMED ACCORDING TO CMS 514. LOAD PLATES AND DAMAGED BEAM FINISH AREAS SHALL BE PAINTED PER CMS 514. THE FINISH COAT OF PAINT SHALL MATCH THE COLOR OF THE EXISTING BRIDGE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR PAINTING SHALL BE INCIDENTAL TO ITEM 516, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN. INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE MASONRY LOAD PLATE (WITH A FULL PERIMETER WELD) TO PORVIDE A SNUG FIT ARE INCLUDED WITH ITEM 516, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

DIRT AND DEBRIS ON THE ABUTMENT BEAM SEAT SHALL BE REMOVED PRIOR TO SETTING THE NEW BEARINGS. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION AN THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.

THE CONTRACTOR IS REQUIRED TO FIELD MEASURE THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS AT CENTERLINE OF BEARING. THE CONTRACTOR IS TO SUBMIT THE FIELD MEASURED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS AND THE ORDER OF MATERIALS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND THE THICKNESS OF THE ELASTOMERIC BEARING (INCLUDING TOP AND BOTTOM LOAD PLATES) FROM THE BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THESE BRIDGES ARE NOT BEING RAISED. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTORS ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER. FOR BIDDING PURPOSES THE HP SECTION HEIGHTS ARE ANTICIPATED TO VARY AS SHOWN IN THE TABLE. USE THE AVERAGE HP SECTION HEIGHT SHOWN IN THE TABLE FOR BIDDING PURPOSES.

FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL BEAM ELEVATION) - (CONTRACTOR'S EXISTING BEAM SEAT ELEVATION) - (BEARING HEIGHT & LOAD PLATE THICKNESSES).

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, H-PILE, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	VARIES	

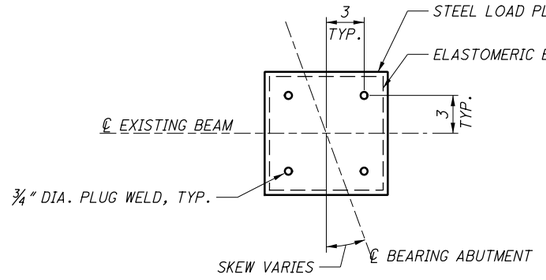
BEARING DETAILS
BRIDGE NO. VARIES

PRE-70-0.00
PID No. 96654

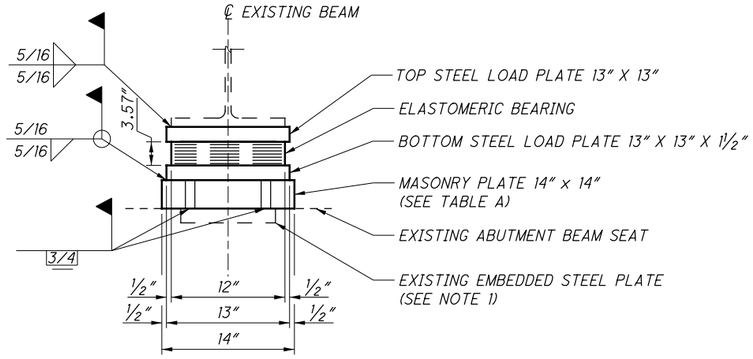
THICKNESS OF EXTERNAL ELASTOMER = 0.200"
(1 REQUIRED)

THICKNESS OF INTERNAL ELASTOMER = 0.300"
(9 REQUIRED)

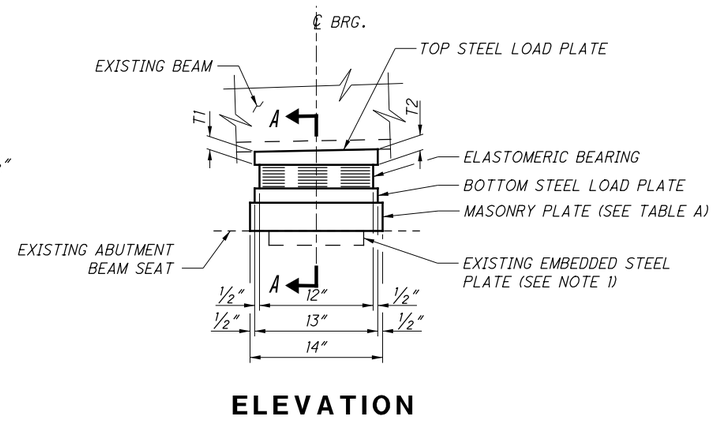
INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)
(9 REQUIRED)



PLAN



SECTION A-A



ELEVATION

BEARINGS AT ABUTMENTS

TABLE A										
BRIDGE NO.	REAR ABUTMENT					FORWARD ABUTMENT				
	MASONRY PLATE THICKNESS			BEVELED PLATE		MASONRY PLATE THICKNESS			BEVELED PLATE	
	MIN.	MAX.	AVG.	T1	T2	MIN.	MAX.	AVG.	T1	T2
PRE-70-0358	2 5/8"±	3 1/4"±	2 15/16"±	1 3/8"	1 5/8"	3 1/8"±	3 3/8"±	3 1/4"±	1 3/8"	1 5/8"
PRE-70-0489	3"±	3 3/8"±	3 3/16"±	1 3/8"	1 5/8"	2 7/8"±	3 3/8"±	3 1/8"±	1 3/8"	1 5/8"

REAR ABUTMENT = SOUTH ABUTMENT
FORWARD ABUTMENT = NORTH ABUTMENT

NOTE: 1
EXISTING PLATE SHALL BE CLEANED PRIOR TO INSTALLING NEW BEARING. ALL EXPOSED AREAS SHALL BE PAINTED WITH NEW BEARINGS. CLEANING AND PAINTING INCLUDED WITH ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN FOR PAYMENT.

NOTES

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.

THE STEEL LOAD PLATE AND MASONRY PLATE SHALL BE A709 GRADE 36 STEEL. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. LOAD PLATES SHALL BE CLEANED AND SHOP PRIMED ACCORDING TO CMS 514. LOAD PLATES AND DAMAGED BEAM FINISH AREAS SHALL BE PAINTED PER CMS 514. THE PAINT SHALL BE FEDERAL STANDARD COLOR NUMBER 14277. PAYMENT FOR PAINTING SHALL BE INCIDENTAL TO ITEM 516, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN. INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE MASONRY LOAD PLATE (WITH A FULL PERIMETER WELD) TO PORVIDE A SNUG FIT ARE INCLUDED WITH ITEM 516, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

DIRT AND DEBRIS ON THE ABUTMENT BEAM SEAT SHALL BE REMOVED PRIOR TO SETTING THE NEW BEARINGS. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION AN THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.

THE CONTRACTOR IS REQUIRED TO FIELD MEASURE THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS AT CENTERLINE OF BEARING. THE CONTRACTOR IS TO SUBMIT THE FIELD MEASURED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS AND THE ORDER OF MATERIALS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL MASONRY PLATE THICKNESS BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED ELASTOMERIC BEARING HEIGHT (INCLUDING LOAD PLATES) FROM THE BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THESE BRIDGES ARE NOT BEING RAISED. THIS MASONRY PLATE THICKNESS IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER. FOR BIDDING PURPOSES, THE MASONRY PLATE THICKNESSES ARE ANTICIPATED TO VARY AS SHOWN IN TABLE A. USE THE AVERAGE MASONRY PLATE THICKNESS SHOWN IN TABLE A FOR BIDDING PURPOSES. MULTIPLE PLATES MAY BE WELDED TOGETHER WITH A FULL PERIMETER WELD IF THE REQUIRED MASONRY PLATE THICKNESS IS GREATER THAN 2".

FINAL MASONRY PLATE THICKNESS = (CONTRACTOR'S EXISTING BOTTOM OF STEEL BEAM ELEVATION) - (CONTRACTOR'S EXISTING BEAM SEAT ELEVATION) - (HEIGHT OF BEARING'S TOP LOAD PLATE, LAMINATED ELASTOMERIC BEARING PAD AND BOTTOM LOAD PLATE).

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	VARIES	

BEARING DETAILS
BRIDGE NO. VARIES

PRE-70-0.00
PID No. 96654

PROPOSED WORK ON BRIDGE PRE-70-0632

1. REPLACE PORTION OF REFACED PARAPET AS SHOWN IN PLANS.
2. RESEAL REPLACED PORTION OF PARAPET WITH EPOXY-URETHANE SEALER.
3. JACK AND TEMPORARILY SUPPORT THE BEAMS AT EACH ABUTMENT.
4. REMOVE ALL THE EXISTING BEARINGS AT EACH ABUTMENT.
5. INSTALL NEW ELASTOMERIC BEARINGS AS SHOWN IN PLANS.
6. PAINT NEW BEARINGS.

PROPOSED WORK ON BRIDGE PRE-70-0689L/R

1. INJECT WIDER CRACKS IN DECKS WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS.
2. SEAL DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.
3. PATCH SUBSTRUCTURE. RESEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.

PROPOSED WORK ON BRIDGE PRE-70-1072L/R

1. INJECT WIDER CRACKS IN DECKS WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS.
2. REPAIR POTHOLES ON RIGHT DECK PER PROPOSAL NOTE 512, TYPE B.
3. SEAL DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.
4. PATCH SUBSTRUCTURE AND PARAPETS. RESEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.

PROPOSED WORK ON BRIDGE PRE-70-1249L/R

1. SEAL DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.
2. PATCH SUBSTRUCTURE AND PARAPETS. RESEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.
3. REPAIR POTHOLES ON DECK PER PROPOSAL NOTE 512, TYPE B.

PROPOSED WORK ON BRIDGE PRE-70-1349L/R

1. INJECT WIDER CRACKS IN DECKS WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS.
2. SEAL DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.
3. PATCH SUBSTRUCTURE. RESEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.
4. REPAIR CRACKS IN ABUTMENTS WITH EPOXY INJECTION.

PROPOSED WORK ON BRIDGE PRE-70-1500L/R

1. SEAL DECK AND APPROACH SLABS WITH GRAVITY FED RESIN
2. PATCH SUBSTRUCTURE AND PARAPETS. RESEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.
3. REMOVE CONCRETE SEALER ON TOP AND TRAFFIC SIDE OF BARRIERS. RESEAL WITH EPOXY-URETHANE SEALER.

PROPOSED WORK ON BRIDGE PRE-70-1541

1. REPLACE PORTIONS OF REFACED PARAPETS AS SHOWN IN PLANS.
2. REMOVE LOOSE CONCRETE ON WEST DECK FASCIA AS SHOWN IN PLANS.
3. RESEAL REPLACED PORTIONS OF PARAPETS WITH EPOXY-URETHANE SEALER.

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.

PRE-70-0632 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP		73/147
202	75267	40	FT	VANDAL PROTECTION FENCE REMOVED AND RESET, AS PER PLAN			40		78/147
509	10000	543	LB	EPOXY COATED REINFORCING STEEL			543		
510	10000	8	EA	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT			8		
511	34410	5	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE			5		
512	10100	25	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			25		
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			8		74/147
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		73/147

PRE-70-0689L/R ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
512	10100	7	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	7				
512	10601	196	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN			196		81/147
512	73501	1516	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN			1516		79/147
519	11101	55	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	55				76/147

PRE-70-1072L/R ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
512	10100	12	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	6	4	2		
512	10601	510	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN			510		86/147
512	73501	1784	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN			1784		82/147
519	11101	101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	53	35	13		76/147
519	12300	1	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B			1		

PRE-70-1249L/R ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
512	10100	29	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	2		27		
512	73501	3768	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN			3768		87/147
519	11101	235	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	14		221		76/147
519	12300	19	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B			19		

PRE-70-1349L/R ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
512	10100	21	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	21				
512	10600	210	FT	CONCRETE REPAIR BY EPOXY INJECTION	210				
512	10601	190	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN			190		92/147
512	73501	1025	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN			1025		90/147
519	11101	175	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	175				76/147

PRE-70-1500L/R ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
512	10100	471	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			471		
512	73501	4171	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN			4171		93/147
512	74000	443	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			443		
519	11101	234	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	15		219		76/147

PRE-70-1541 ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
202	11200	LUMP		PORTIONS OF STRUCTURE REMOVED			LUMP		
511	34410	2	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE			2		
512	10100	11	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			11		

(1) QUANTITIES PAID FOR UNDER PARTICIPATION SPLIT 02/IMS/BR

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1687 Lobdon Road
Cincinnati, Ohio 45241
(513) 842-8200

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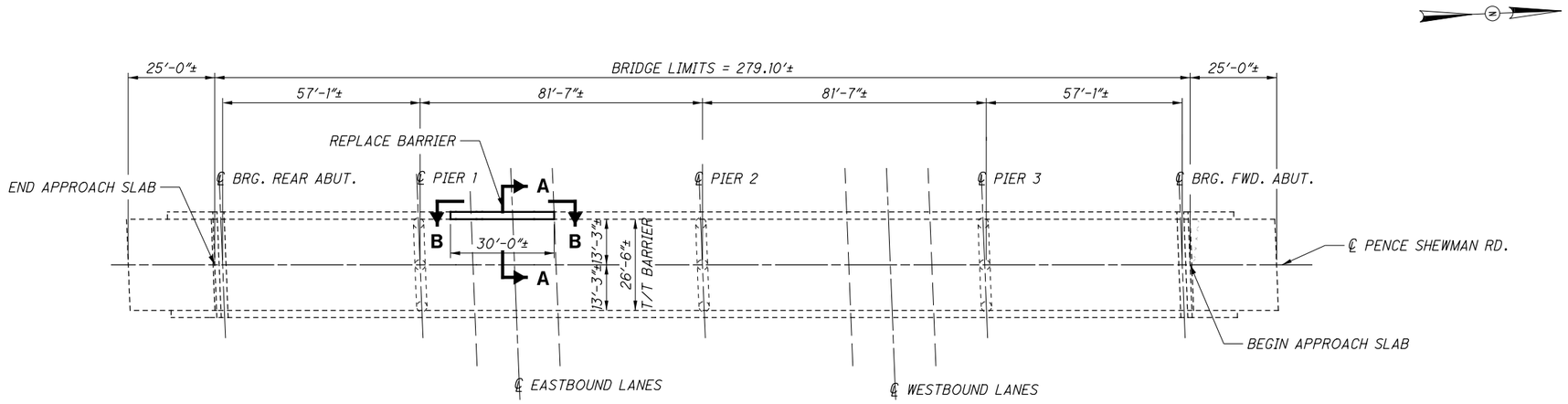
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	VARIES	

GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE NO. VARIES

PRE-70-0.00
PID No. 96654

1 / 1

76
147



PLAN

PROPOSED WORK

1. REPLACE PORTION OF PREVIOUSLY REFACED WEST BARRIER ABOVE EASTBOUND LANES.
2. SEAL REPAIRED PORTIONS OF CONCRETE BARRIER WITH EPOXY-URETHANE SEALER.

NOTES:
FOR SECTIONS A-A AND B-B, SEE SHEET 2 / 2

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 57'-1"±, 81'-7"±, 81'-7"±, 57'-1"± c/c BRGS.
ROADWAY: 26'-6"± T/T BARRIER
LOADING: CF=130(57)
SKEW: 2°15'00" RF
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: TANGENT
CROWN: 3/16"/FT.
WEARING SURFACE: MONOLITHIC CONCRETE
STRUCTURAL FILE NUMBER: 6800963
DATE BUILT: 1964
DISPOSITION: PATCH

DESIGN AGENCY
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11687 Lebanon Road
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(513) 842-8200

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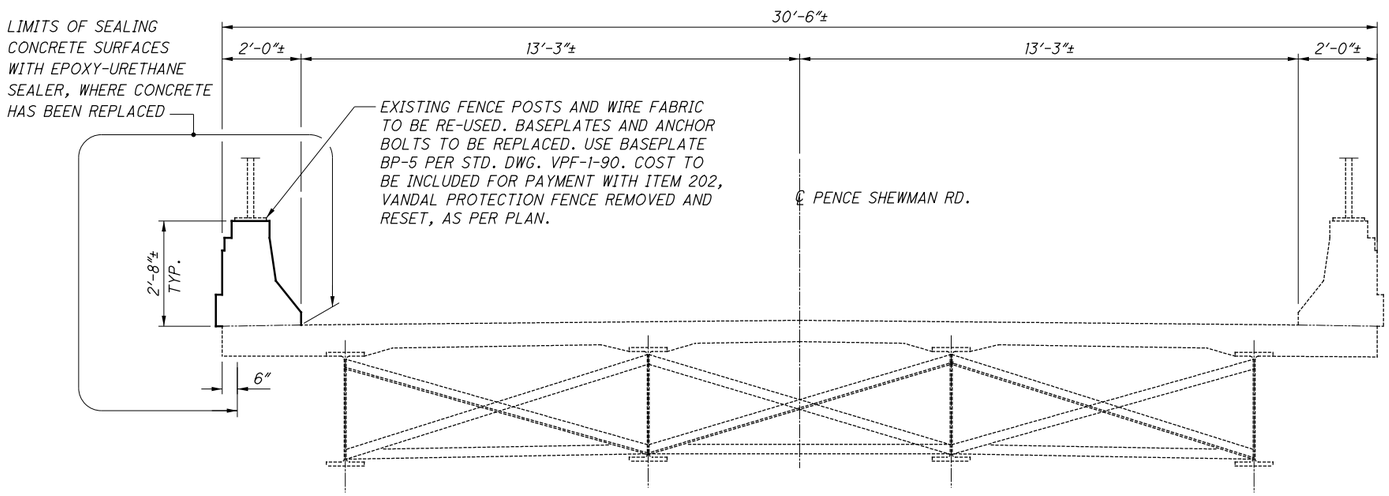
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6800963	

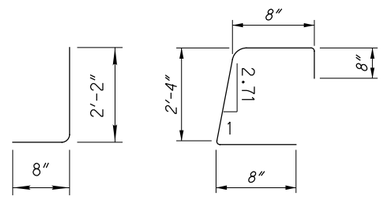
GENERAL PLAN

BRIDGE NO. PRE-70-0632
I-70 UNDER PENCE SHEWMAN RD.

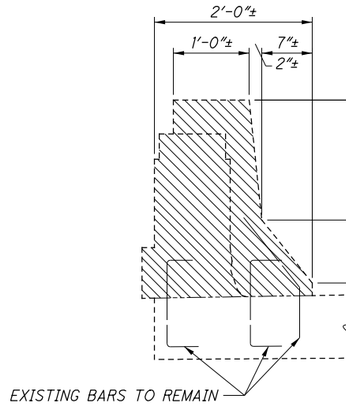
PRE-70-0.00
PID No. 96654



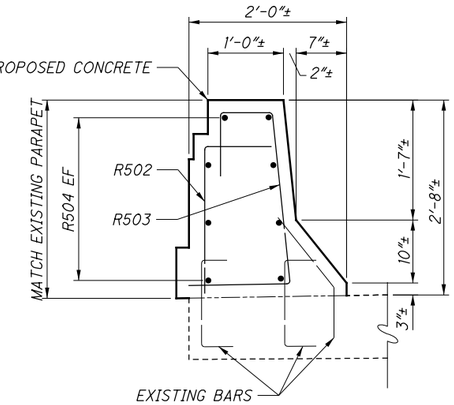
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D
RAILING								
R501	8	3'-0"	25	STR				
R502	31	2'-9"	89	1				
R503	31	4'-0"	129	2				
R504	16	18'-0"	300	STR				
		TOTAL	543					



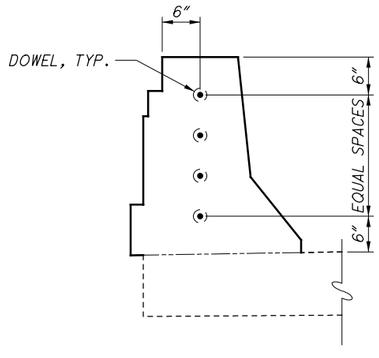
TYPICAL DECK SECTION



SECTION A-A
(EXISTING)

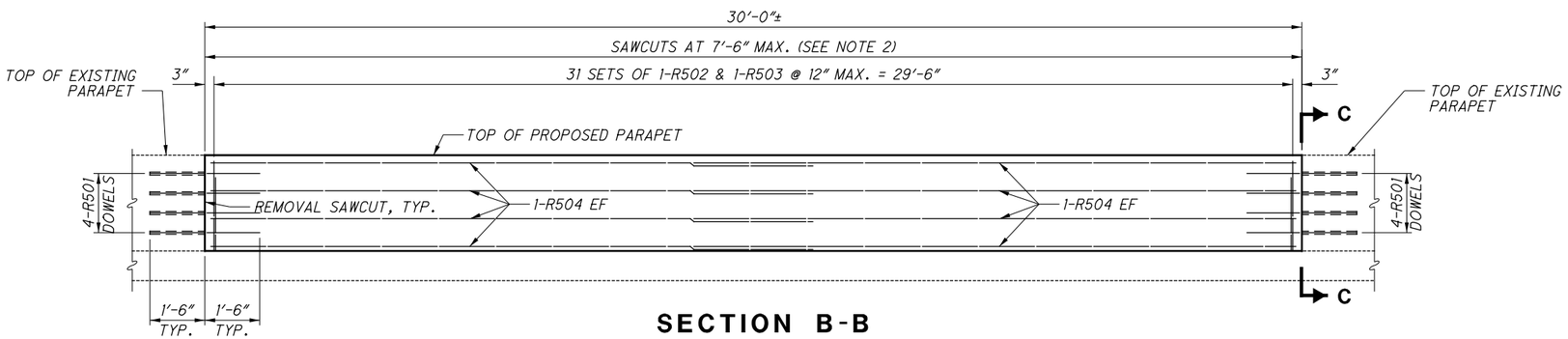


SECTION A-A
(PROPOSED)



SECTION C-C

DENOTES PORTION OF CONCRETE TO BE REMOVED AND REPLACED



SECTION B-B

NOTES:

1. *DIMENSIONS SHOWN ARE APPROXIMATE. PROPOSED CONCRETE BARRIER SHALL MATCH EXISTING BARRIER SHAPE. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.*

2. *SAWCUT 1¼ INCH DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.*

   USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

   ADJUST LOCATION OF SAWCUTS AS NEEDED TO AVOID CONFLICTS WITH EXISTING FENCE POSTS.

   SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ONE-HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED EDA | DRAWN ALH | REVIEWED EER | DATE 10/25/19
CHECKED MRS | REVISED XXX | STRUCTURE FILE NUMBER 6800963

DECK DETAILS
BRIDGE NO. PRE-70-0632
I-70 UNDER PENCE SHEWMAN RD.

PRE-70-0.00
PID No. 96654

2 / 2

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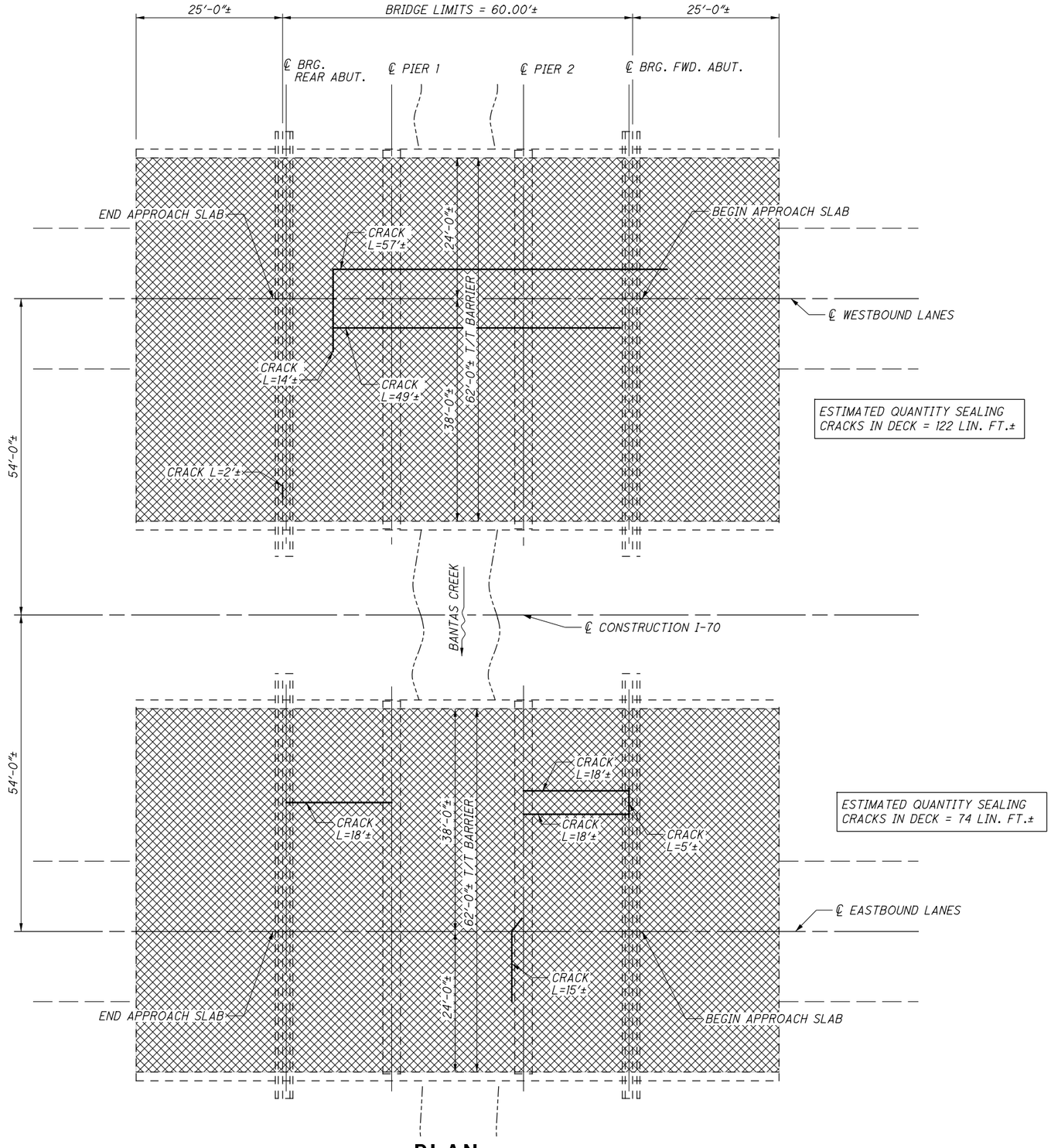

PLAN

ESTIMATED QUANTITY SEALING CRACKS IN DECK = 122 LIN. FT.±

ESTIMATED QUANTITY SEALING CRACKS IN DECK = 74 LIN. FT.±

LEGEND

DENOTES AREA TO BE SEALED WITH GRAVITY FED RESIN.

DENOTES CRACK IN TOP OF DECK.

PROPOSED WORK

1. PATCH PORTIONS OF ABUTMENTS.
2. INJECT CRACKS IN DECK WHICH ARE 0.025" IN WIDTH, OR GREATER, WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS.
3. SEAL WEARING SURFACES OF DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK (COMPOSITE) AND SUBSTRUCTURE

SPANS: 18'-0"±, 22'-2"±, 18'-4"± c/c BRGS.
ROADWAY: 62'-0"± T/T BARRIER
LOADING: HS20 & ALTERNATE MILITARY LOADING
SKEW: NONE
APPROACH SLABS: 25'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 3/16"/FT.
WEARING SURFACE: MONOLITHIC CONCRETE
STRUCTURAL FILE NUMBER: 6800998 (L) & 6801021 (R)
DATE BUILT: 1964 WIDENED 2001
DISPOSITION: REHABILITATE

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
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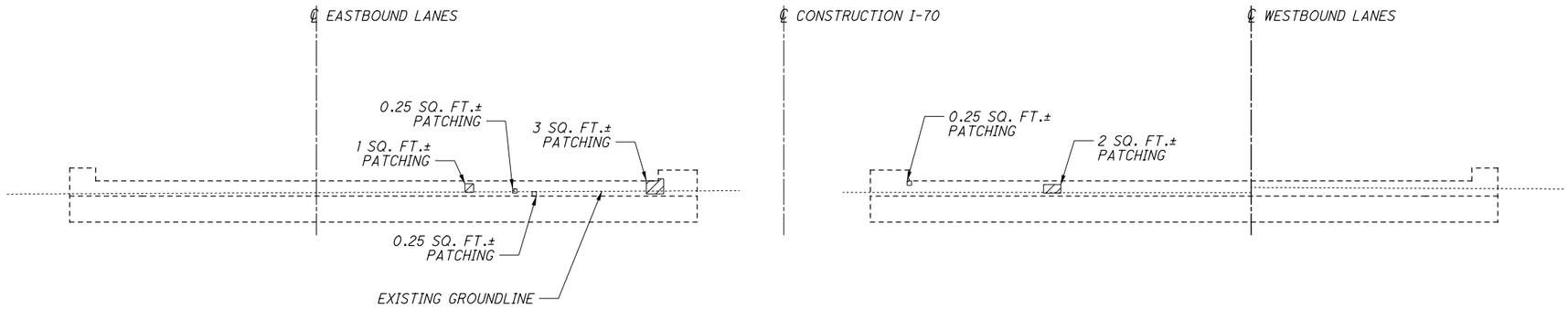
MRS	XXX	6800998/6801021	

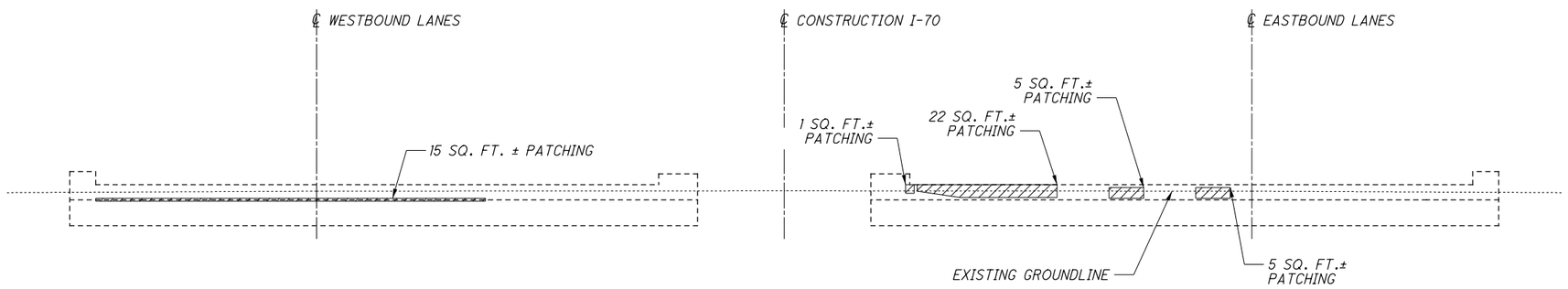
GENERAL PLAN
BRIDGE NO. PRE-70-0689L/R
I-70 OVER BANTAS CREEK

PRE-70-0.00
PID No. 96654



REAR ABUTMENT

(LOOKING BACK STATION)



FORWARD ABUTMENT

(LOOKING AHEAD STATION)

NOTES:
1. PATCHED PORTIONS OF ABUTMENT SHALL BE SEALED WITH EPOXY-URETHANE SEALER.

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MRS	XXX	6800998/6801021	

ABUTMENT DETAILS
BRIDGE NO. PRE-70-0689L/R
I-70 OVER BANTAS CREEK

PRE-70-0.00
PID No. 96654

2 / 3

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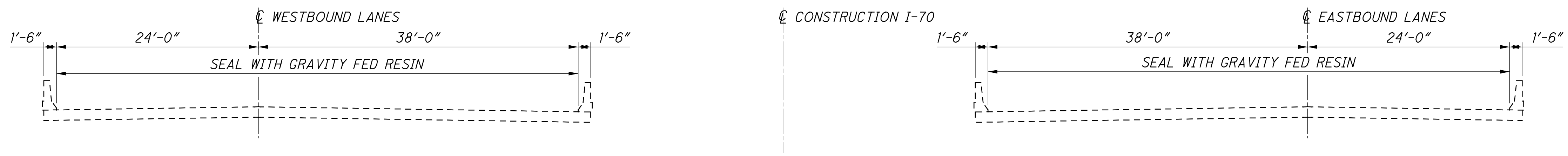

TYPICAL SECTION

NOTES:
1. INJECT CRACKS IN DECK WHICH ARE 0.025 INCHES IN WIDTH, OR GREATER, WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS. USE CRACKBOND LR-321 FROM ADHESIVES TECHNOLOGY, OR APPROVED EQUAL.

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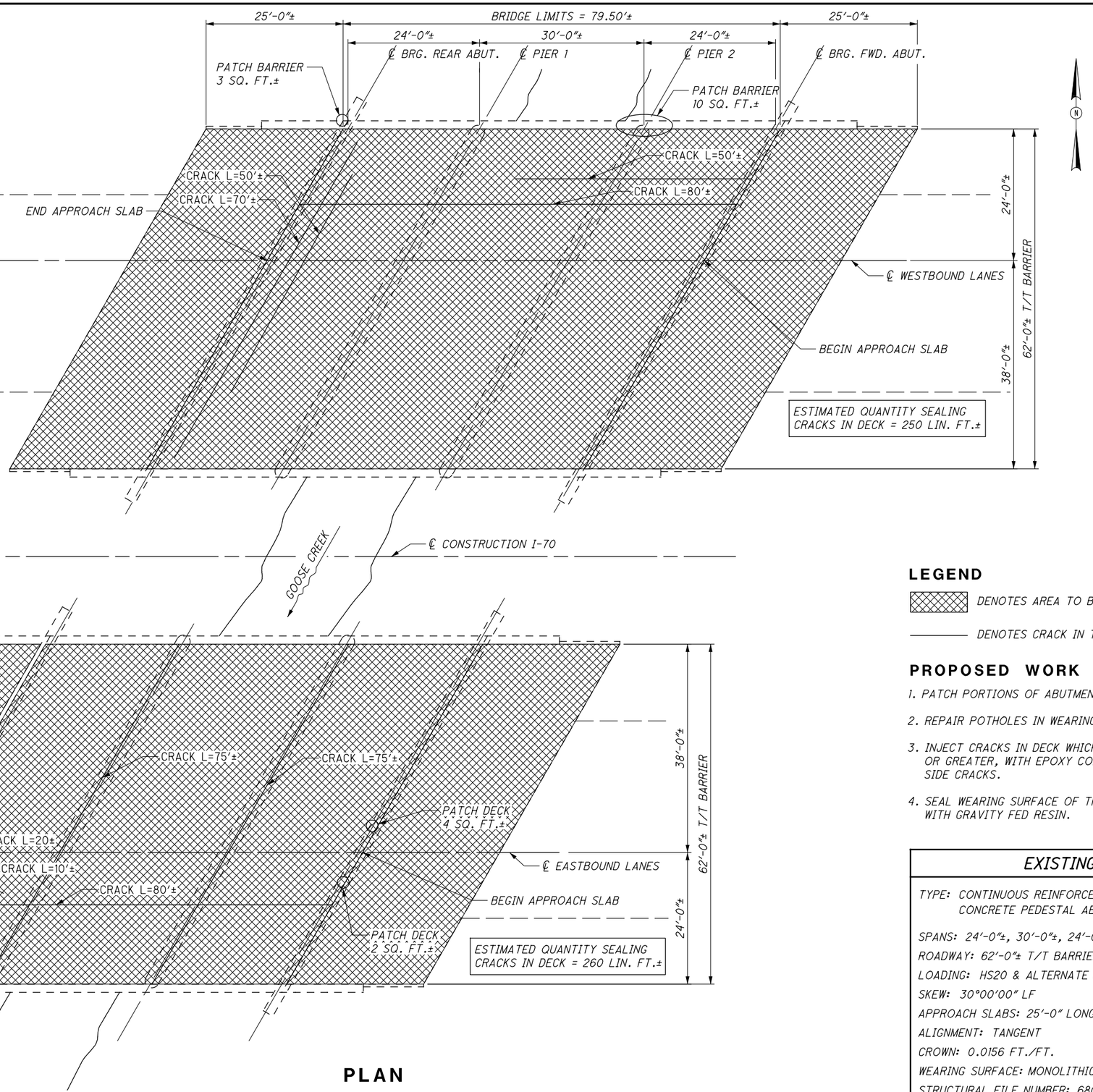
MRS	XXX	6800998/6801021	

SUPERSTRUCTURE DETAILS
BRIDGE NO. PRE-70-0689L/R
I-70 OVER BANTAS CREEK

PRE-70-0.00
PID No. 96654



PLAN

LEGEND

DENOTES AREA TO BE SEALED WITH GRAVITY FED RESIN.

DENOTES CRACK IN TOP OF DECK.

PROPOSED WORK

1. PATCH PORTIONS OF ABUTMENTS, PIERS AND PARAPETS.
2. REPAIR POTHOLES IN WEARING SURFACE ON RIGHT BRIDGE.
3. INJECT CRACKS IN DECK WHICH ARE 0.025 INCHES IN WIDTH, OR GREATER, WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS.
4. SEAL WEARING SURFACE OF THE DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE PEDESTAL ABUTMENT AND SOLID WALL PIERS

SPANS: 24'-0"±, 30'-0"±, 24'-0"± c/c BRGS.
ROADWAY: 62'-0"± T/T BARRIER
LOADING: HS20 & ALTERNATE MILITARY LOADING
SKEW: 30°00'00" LF
APPROACH SLABS: 25'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 0.0156 FT./FT.
WEARING SURFACE: MONOLITHIC CONCRETE
STRUCTURAL FILE NUMBER: 6801145 (L) & 6801234 (R)
DATE BUILT: 1964 WIDENED 2001
DISPOSITION: REHABILITATE

DESIGN AGENCY
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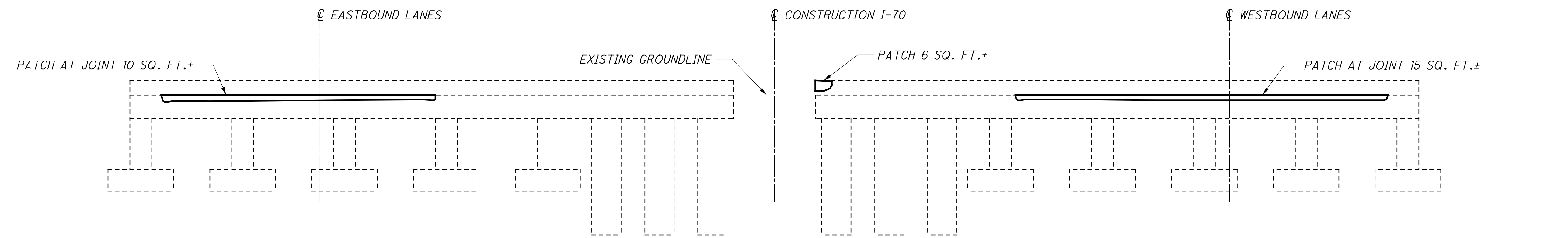
MRS	XXX	6801145/6801234	

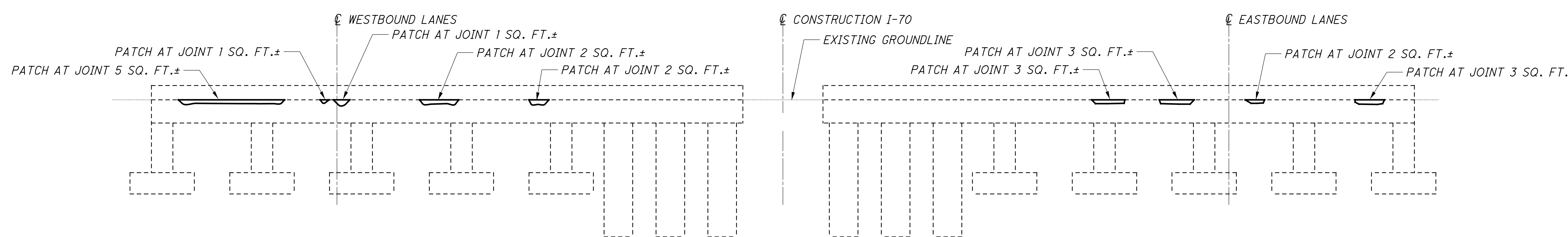
GENERAL PLAN
BRIDGE NO. PRE-70-1072L/R
1-70 OVER GOOSE CREEK

PRE-70-0.00
PID No. 96654



REAR ABUTMENT

(LOOKING BACK STATION)



FORWARD ABUTMENT

(LOOKING AHEAD STATION)

NOTES:
1. SEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

REVIEWED	DATE	STRUCTURE FILE NUMBER
EER	10/25/2019	6801145/6801234

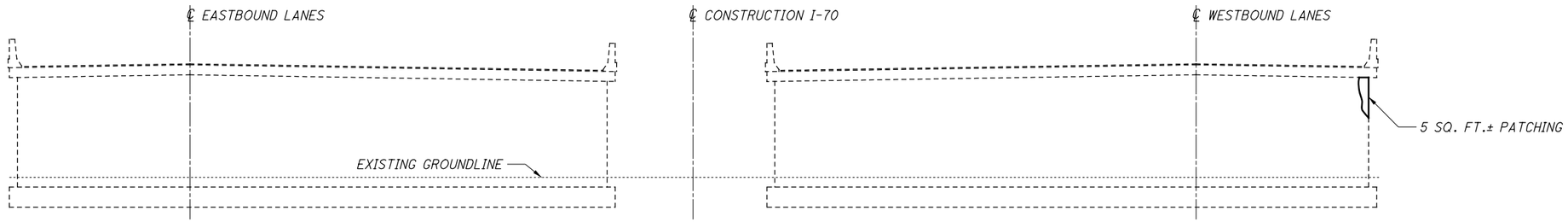
DESIGNED	CHECKED	DRAWN	REVISED
EDA	MRS	ALH	XXX

ABUTMENT DETAILS

BRIDGE NO. PRE-70-1072L/R
I-70 OVER GOOSE CREEK

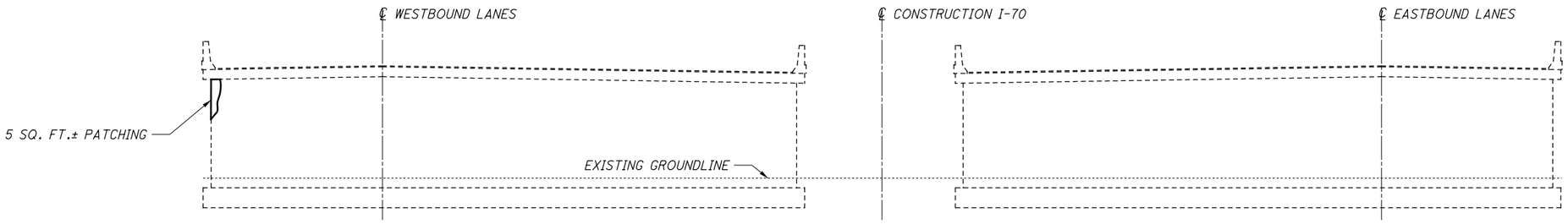
PRE-70-0.00

PID No. 96654



EAST ELEVATION

(LOOKING BACK STATION)



WEST ELEVATION

(LOOKING AHEAD STATION)

NOTES:
1. SEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.

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DESIGN AGENCY
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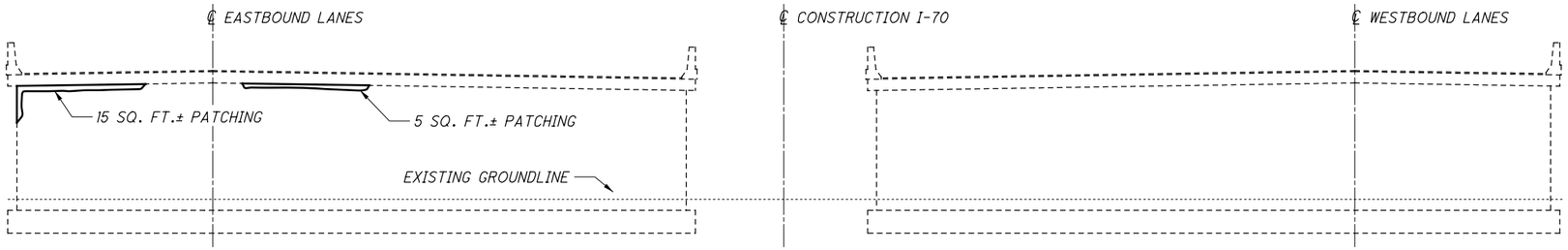
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801145/6801234	

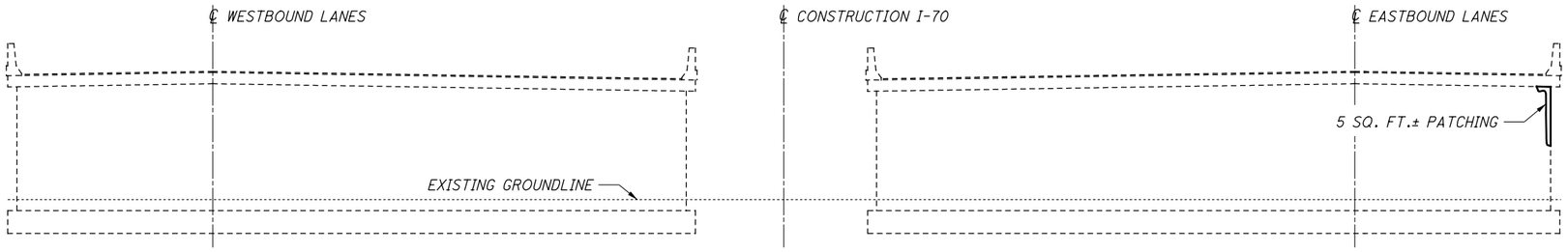
PIER 1 DETAILS
BRIDGE NO. PRE-70-1072L/R
I-70 OVER GOOSE CREEK

PRE-70-0.00
PID No. 96654



EAST ELEVATION

(LOOKING BACK STATION)



WEST ELEVATION

(LOOKING AHEAD STATION)

NOTES:
1. SEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.

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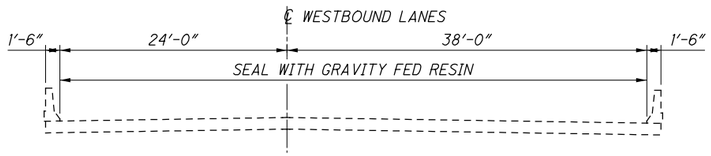
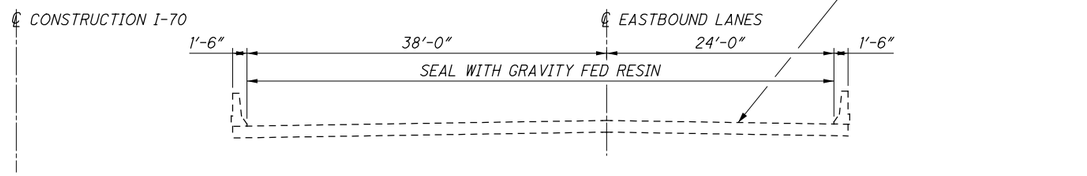
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801145/6801234	

PIER 2 DETAILS
BRIDGE NO. PRE-70-1072L/R
I-70 OVER GOOSE CREEK

PRE-70-0.00
PID No. 96654





TYPICAL SECTION

NOTES:
1. SEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.
2 INJECT CRACKS IN DECK WHICH ARE 0.025 INCHES IN WIDTH, OR GREATER, WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS. USE CRACKBOND LR-321 FROM ADHESIVES TECHNOLOGY, OR APPROVED EQUAL.

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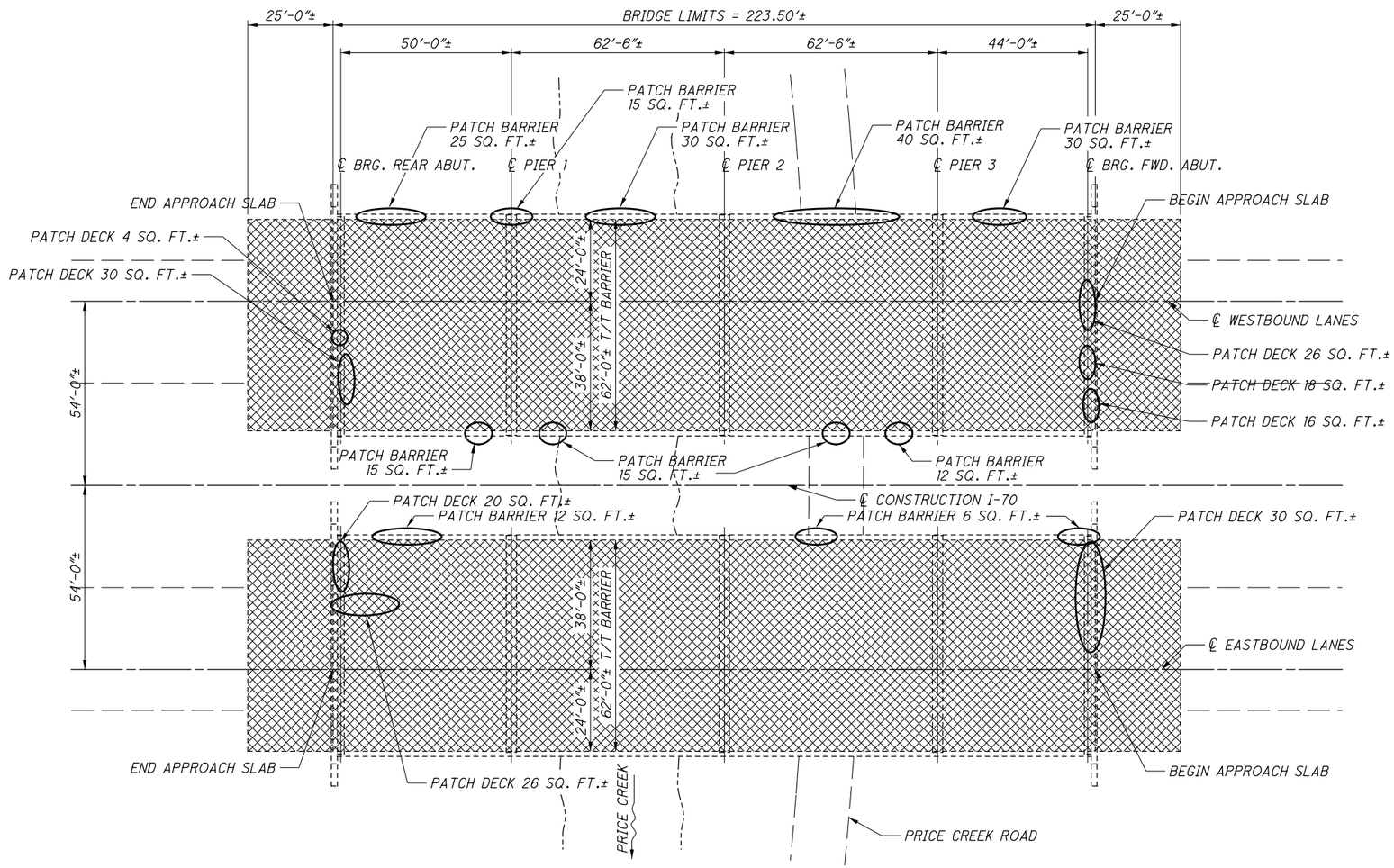
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801145/6801234	

SUPERSTRUCTURE DETAILS
BRIDGE NO. PRE-70-1072L/R
I-70 OVER GOOSE CREEK

PRE-70-0.00
PID No. 96654



PLAN

LEGEND

DENOTES AREA TO BE SEALED WITH GRAVITY FED RESIN.

PROPOSED WORK

1. PATCH PORTIONS OF ABUTMENTS, PIERS AND PARAPETS.
2. REPAIR POTHOLES IN WEARING SURFACE ON BRIDGE DECKS.
3. SEAL WEARING SURFACE OF DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK (COMPOSITE) AND SUBSTRUCTURE

SPANS: 50'-0"±, 62'-6"±, 62'-6"±, 44'-0"± c/c BRGS.
ROADWAY: 62'-0"± T/T BARRIER
LOADING: HS20 & ALTERNATE MILITARY LOADING
SKEW: NONE
APPROACH SLABS: 25'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 3/16"/FT.
WEARING SURFACE: MONOLITHIC CONCRETE
STRUCTURAL FILE NUMBER: 6801269 (L) & 6801293 (R)
DATE BUILT: 1964 WIDENED 2001
DISPOSITION: REHABILITATE

DESIGN AGENCY
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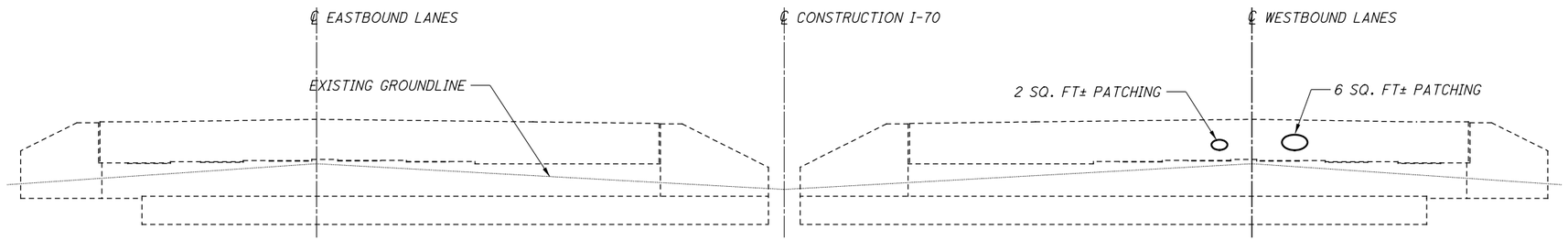
DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801269/6801293	

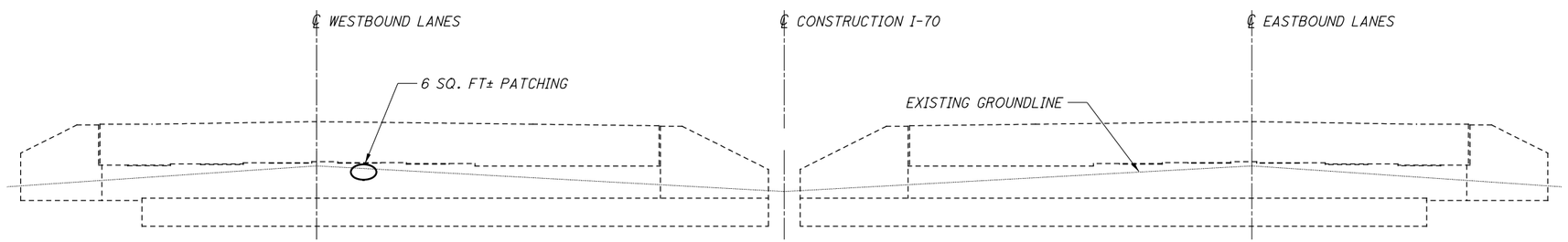
GENERAL PLAN
BRIDGE NO. PRE-70-1249L/R
I-70 OVER PRICE CREEK

PRE-70-0.00
PID No. 96654



REAR ABUTMENT

(LOOKING BACK STATION)



FORWARD ABUTMENT

(LOOKING AHEAD STATION)

NOTES:
1. PATCHED PORTIONS OF ABUTMENT SHALL BE SEALED WITH EPOXY-URETHANE SEALER.

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MRS	XXX	6801269/6801293	

ABUTMENT DETAILS
BRIDGE NO. PRE-70-1249L/R
I-70 OVER PRICE CREEK

PRE-70-0.00
PID No. 96654

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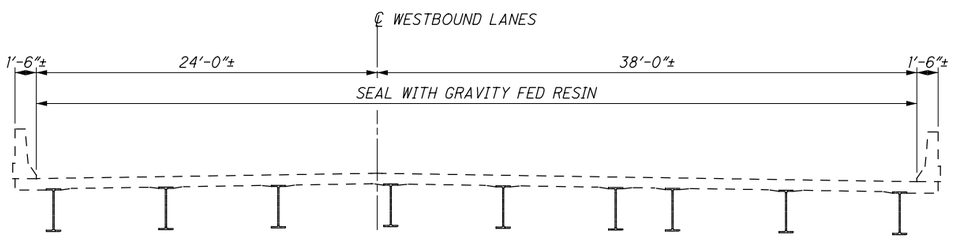

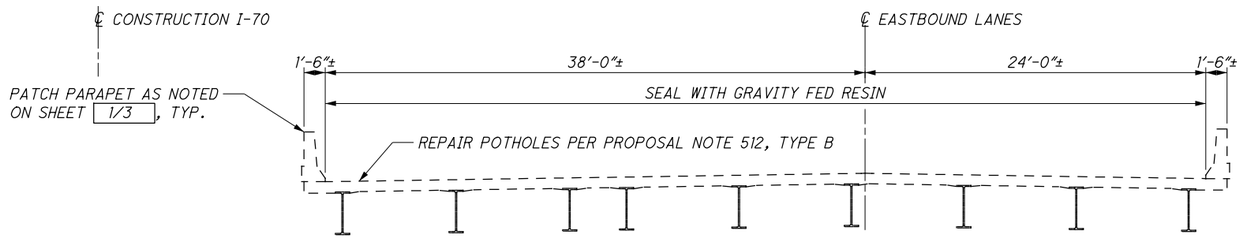

TYPICAL SECTION

NOTES:
1. PATCHED PORTIONS OF PARAPET SHALL BE SEALED WITH EPOXY-URETHANE SEALER.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801269/6801293	

SUPERSTRUCTURE DETAILS
BRIDGE NO. PRE-70-1249L/R
I-70 OVER PRICE CREEK

PRE-70-0.00
PID No. 96654

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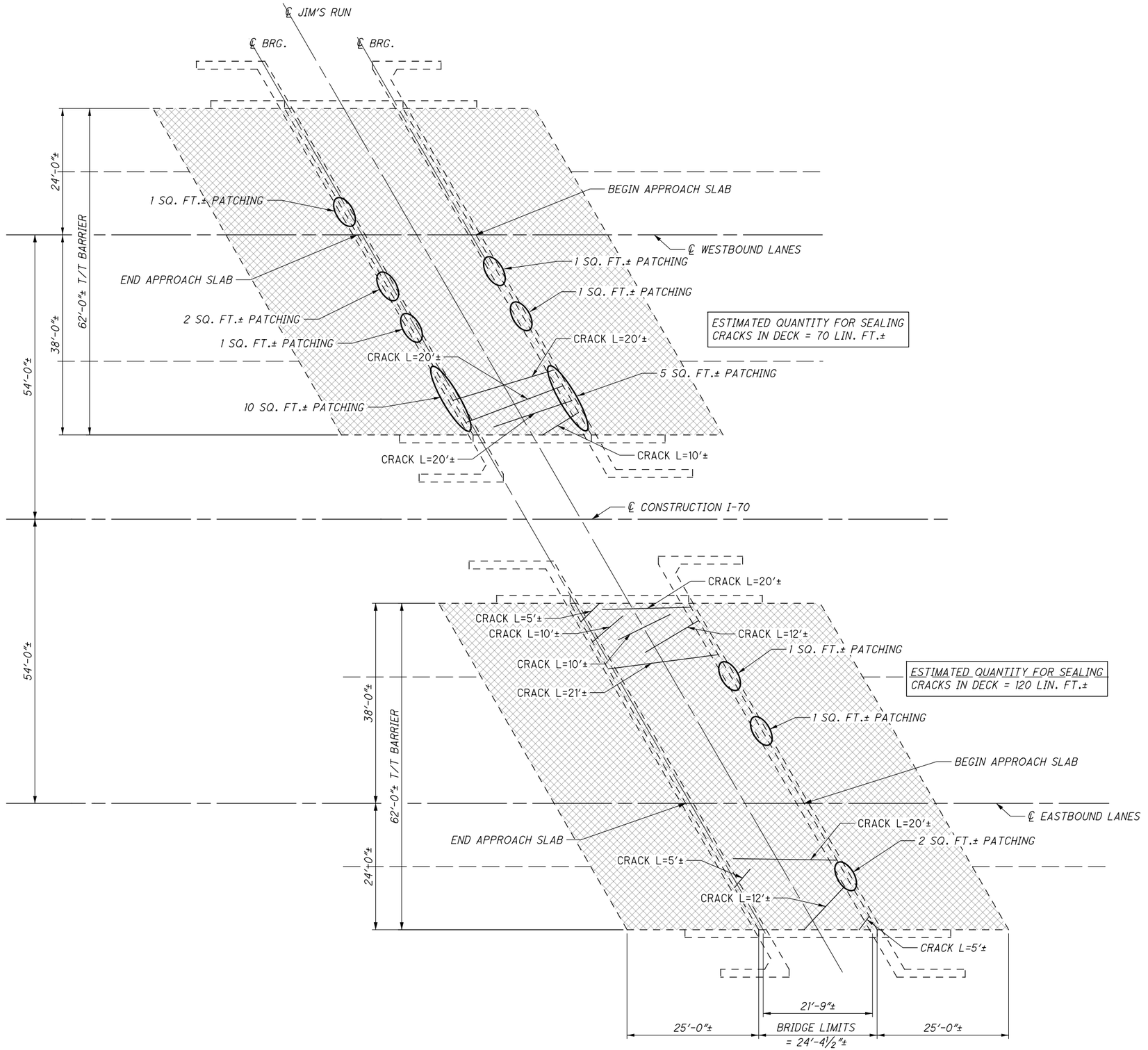

PLAN

N

LEGEND

DENOTES AREA TO BE SEALED WITH GRAVITY FED RESIN.

DENOTES CRACK IN TOP OF DECK.

PROPOSED WORK

1. PATCH PORTIONS OF ABUTMENTS.
2. INJECT CRACKS IN DECK WHICH ARE 0.025 INCHES IN WIDTH, OR GREATER, WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS.
3. SEAL WEARING SURFACE OF DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.
4. REPAIR CRACKS IN ABUTMENTS WITH EPOXY INJECTION.

EXISTING STRUCTURE

TYPE: SIMPLE SPAN REINFORCED CONCRETE SLAB WITH WALL ABUTMENTS

SPANS: 21'-9"± C/C BRG.
ROADWAY: 62'-0"± T/T BARRIER
LOADING: HS20 & ALTERNATE MILITARY LOADING
SKEW: 30°00'00" RT. FORWARD
APPROACH SLABS: 25'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 0.016 FT./FT.
WEARING SURFACE: MONOLITHIC CONCRETE
STRUCTURAL FILE NUMBER: 6801323 (L) & 6801358 (R)
DATE BUILT: 1964 WIDENED 2001
DISPOSITION: REHABILITATE

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801323/6801358	

GENERAL PLAN
BRIDGE NO. PRE-70-1349L/R
I-70 OVER JIM'S RUN

PRE-70-0.00
PID No. 96654

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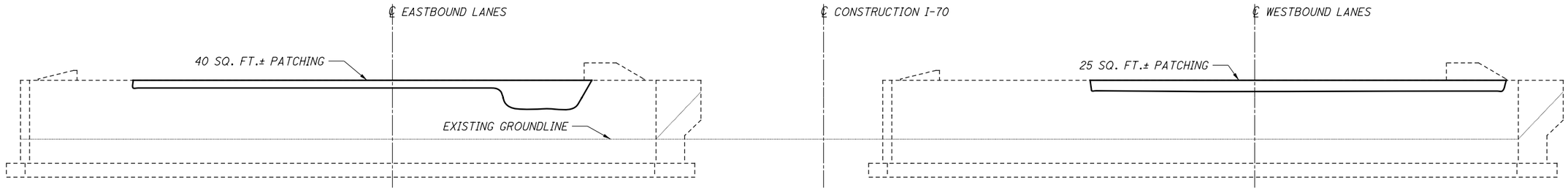
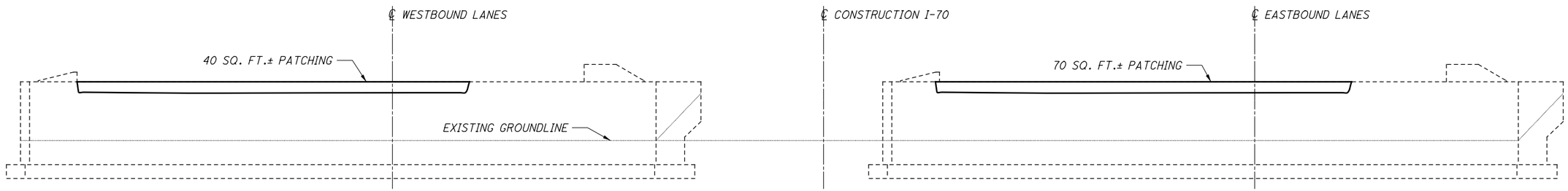


REAR ABUTMENT

(LOOKING BACK STATION)



FORWARD ABUTMENT

(LOOKING AHEAD STATION)

NOTES:
1. *SEAL PATCHED AREAS WITH EPOXY-URETHANE SEALER.*
2. *REPAIR CRACKS IN ABUTMENT WITH EPOXY INJECTION APPROXIMATELY 210 LIN. FT. OF CRACKS.*

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DESIGN AGENCY
Stantec
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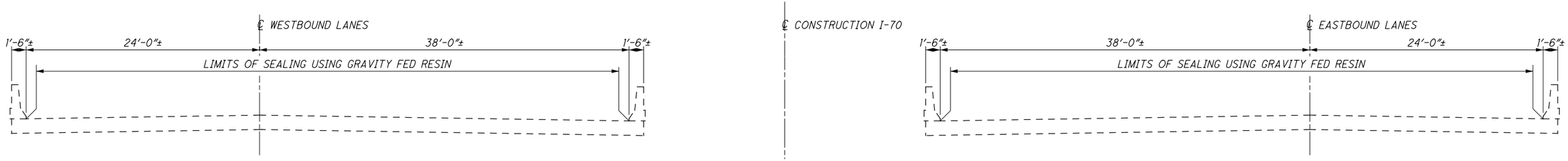
DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801323/6801358	

ABUTMENT DETAILS
BRIDGE NO. PRE-70-1349L/R
I-70 OVER JIM'S RUN

PRE-70-0.00
PID No. 96654



TYPICAL SECTION

NOTES:

1. INJECT CRACKS IN DECK WHICH ARE 0.025 INCHES IN WIDTH, OR GREATER, WITH EPOXY CONDUCIVE TO INJECTING BLIND SIDE CRACKS. USE CRACKBOND LR-321 FROM ADHESIVES TECHNOLOGY, OR APPROVED EQUAL.

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DESIGN AGENCY
Stantec
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DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801323/6801358	

SUPERSTRUCTURE DETAILS
BRIDGE NO. PRE-70-1349L/R
I-70 OVER JIM'S RUN

PRE-70-0.00
PID No. 96654

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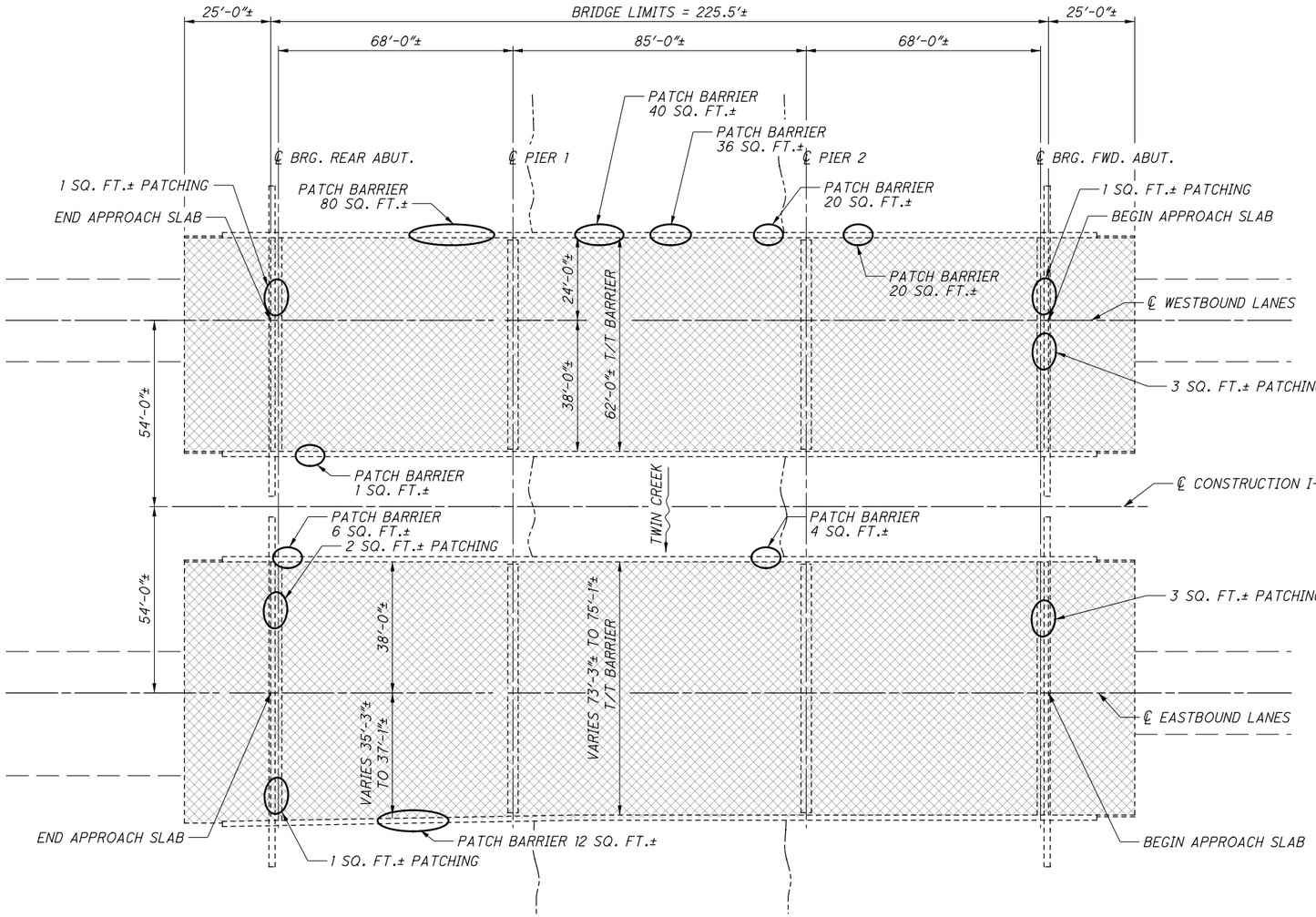
147



PLAN

LEGEND

DENOTES AREA TO BE SEALED WITH GRAVITY FED RESIN.

PROPOSED WORK

1. PATCH PORTIONS OF ABUTMENTS, PIERS AND PARAPETS.
2. REMOVE SEALER AND RESEAL BARRIER ON THE TOP AND TRAFFIC SIDE.
3. SEAL WEARING SURFACE OF DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 68'-0"±, 85'-0"±, 68'-0"± c/c BRGS.

ROADWAY: 62'-0"± T/T BARRIER (L)
VARIES 73'-3" TO 75'-1" T/T BARRIER (R)

LOADING: HS20 & ALTERNATE MILITARY LOADING

SKEW: NONE

APPROACH SLABS: 25'-0" LONG (AS-1-81)

ALIGNMENT: TANGENT

CROWN: 3/16"/FT.

WEARING SURFACE: MONOLITHIC CONCRETE

STRUCTURAL FILE NUMBER: 6801471 (L) & 6801501 (R)

DATE BUILT: 1964 WIDENED: 2001

DISPOSITION: REHABILITATE

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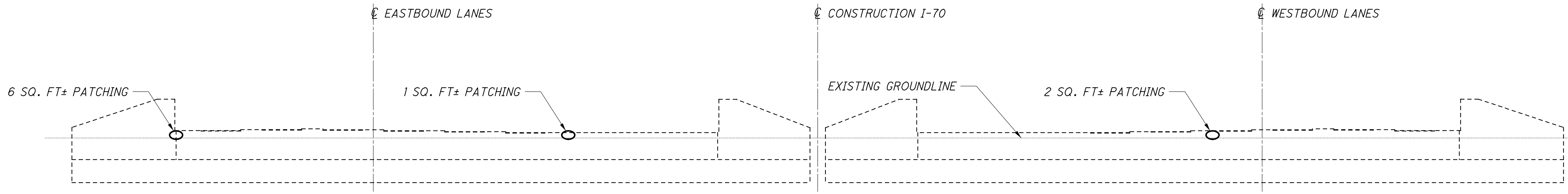
MRS	XXX	6801471/6801501	

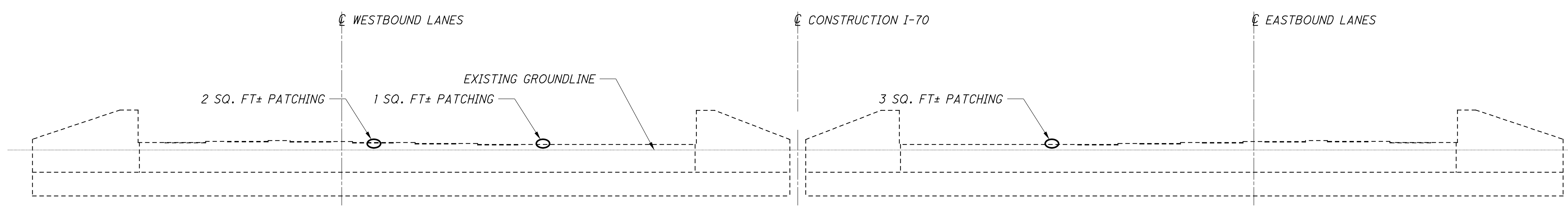
GENERAL PLAN
BRIDGE NO. PRE-70-1500L/R
I-70 OVER TWIN CREEK

PRE-70-0.00
PID No. 96654



REAR ABUTMENT

(LOOKING BACK STATION)



FORWARD ABUTMENT

(LOOKING AHEAD STATION)

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801471/6801501	

ABUTMENT DETAILS

BRIDGE NO. PRE-70-1500L/R

I-70 OVER TWIN CREEK

PRE-70-0.00

PID No. 96654

2/3

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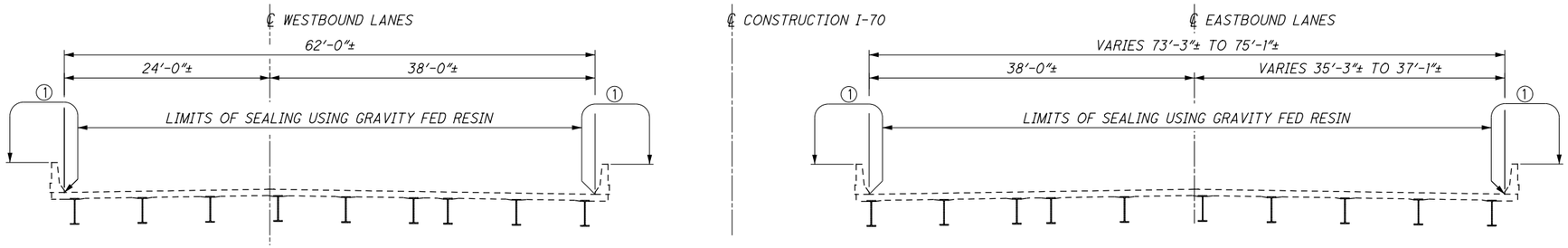
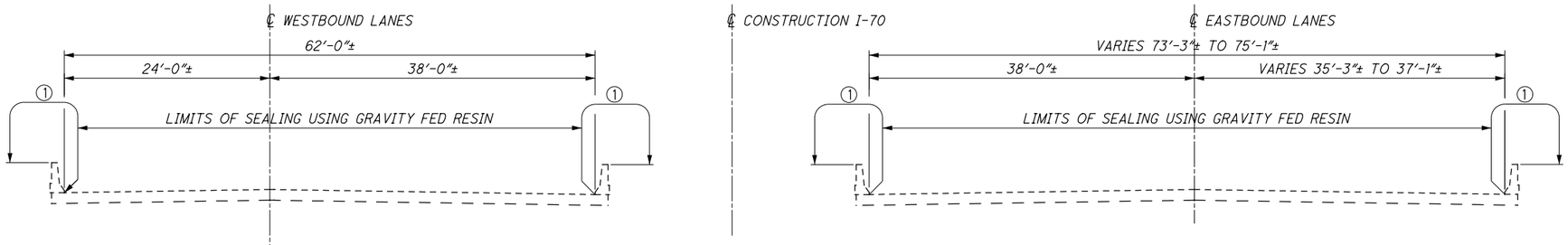


TYPICAL DECK SECTION

① REMOVE EXISTING EPOXY URETHANE SEALER WITHIN THE LIMITS SHOWN AND RESEAL WITH EPOXY-URETHANE SEALER.



TYPICAL APPROACH SLAB SECTION

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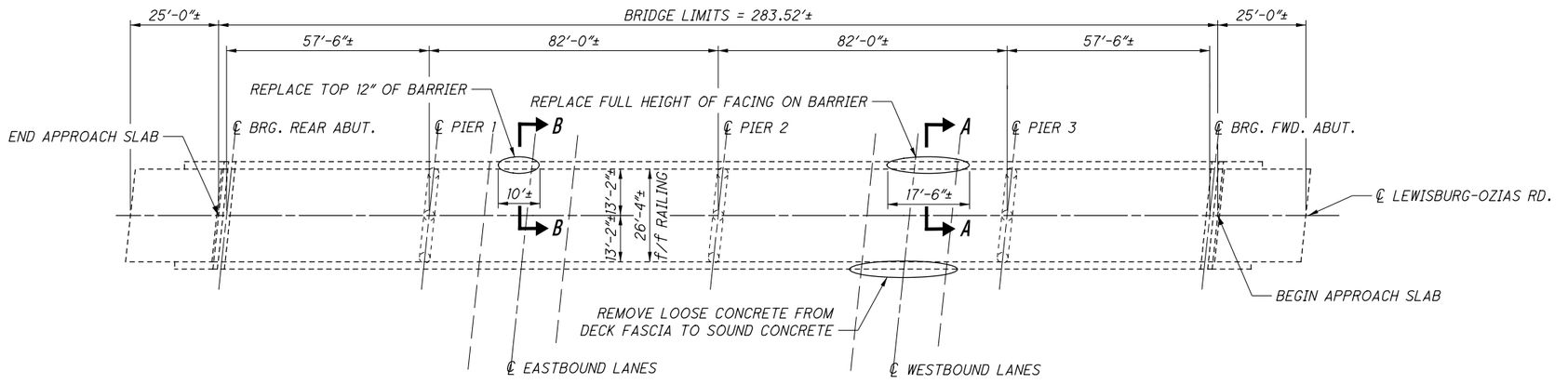
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801471/6801501	

SUPERSTRUCTURE DETAILS
BRIDGE NO. PRE-70-1500L/R
I-70 OVER TWIN CREEK

PRE-70-0.00
PID No. 96654



PLAN

PROPOSED WORK

1. REPLACE PORTIONS OF PREVIOUSLY REFACED WEST BARRIER AS SHOWN.
2. REMOVE AND REPLACE LOOSE AND DELAMINATED CONCRETE FROM WEST FASCIA OF DECK.
3. SEAL REPAIRED PORTIONS OF CONCRETE BARRIER AND DECK FASCIA WITH EPOXY-URETHANE SEALER.

NOTES:
FOR SECTIONS A-A AND B-B, SEE SHEET 2 / 2

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 57'-6"±, 82'-0"±, 82'-0"±, 57'-6"± c/c BRGS.
ROADWAY: 26'-4"± T/T BARRIER
LOADING: CF=130(57)
SKEW: 6°00'00" LF
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: TANGENT
CROWN: 3/16"/FT.
WEARING SURFACE: MONOLITHIC CONCRETE
STRUCTURAL FILE NUMBER: 6801536
DATE BUILT: 1964
DISPOSITION: PATCH

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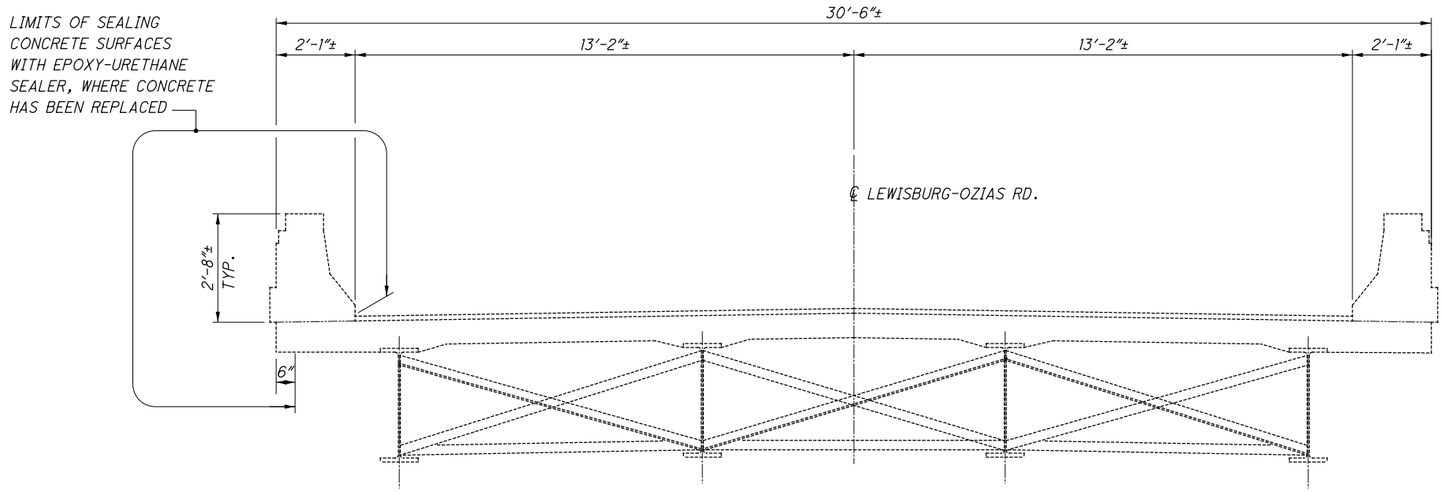
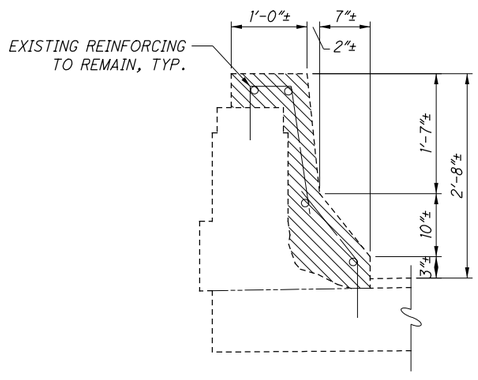
MRS	XXX	6801536	

GENERAL PLAN
BRIDGE NO. PRE-70-1541
I-70 UNDER LEWISBURG-OZIAS RD.

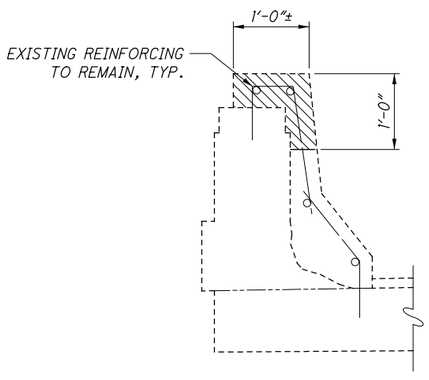
PRE-70-0.00
PID No. 96654



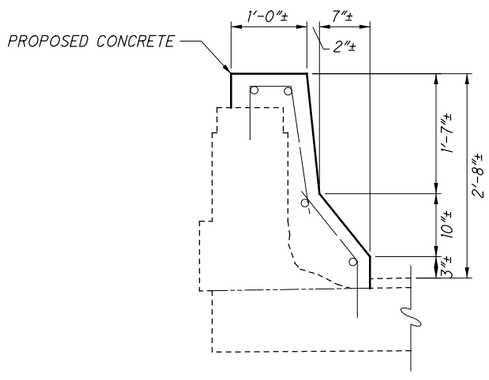
TYPICAL DECK SECTION



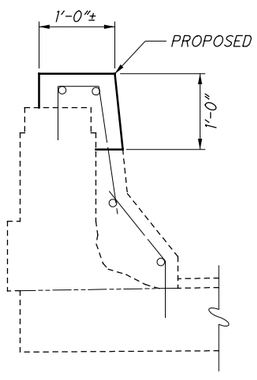
SECTION A-A
(EXISTING)



SECTION B-B
(EXISTING)



SECTION A-A
(PROPOSED)



SECTION B-B
(PROPOSED)

DENOTES PORTION OF CONCRETE TO BE REMOVED AND REPLACED

V:\1736\active\173620094\engineering\96654\Design\Structures\PRE_70_1541C\Sheets\070_1541C_TS001.dgn 10/25/2019 11:48:57 AM latchley

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6801536	

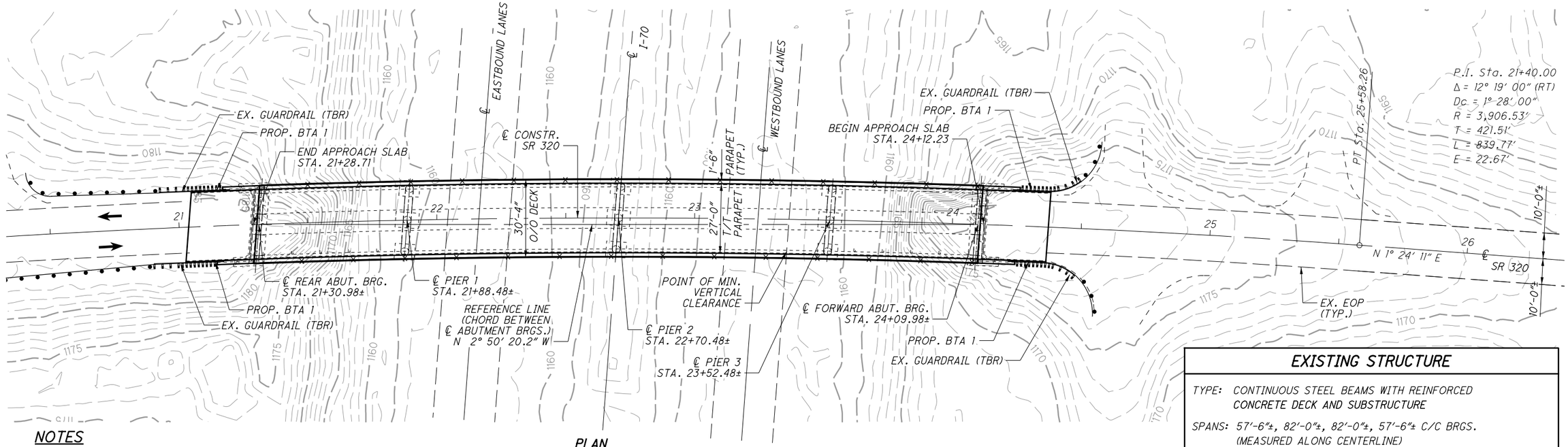
DECK DETAILS
BRIDGE NO. PRE-70-1541
I-70 UNDER LEWISBURG-OZIAS RD.

PRE-70-0.00
PID No. 96654

2 / 2

97
147

BENCHMARK DATA			
POINT	NORTH	EAST	ELEVATION
SA1	674218.325	1324465.674	1161.78
SA3	673998.722	1324443.235	1183.52



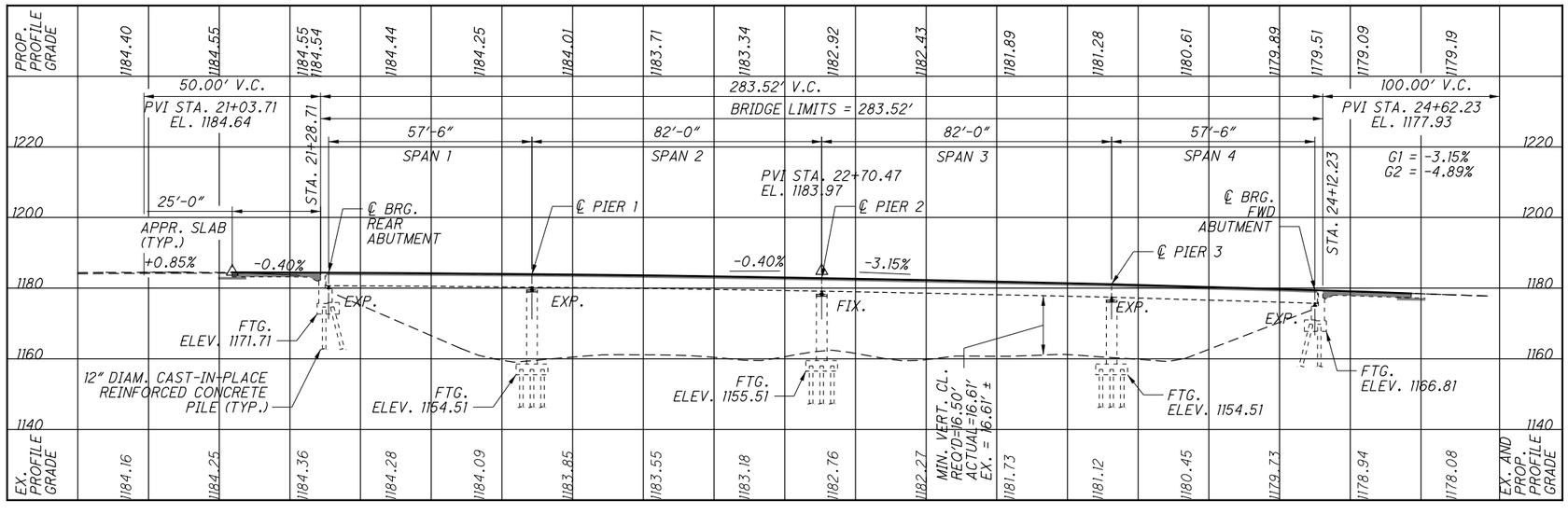
PLAN

NOTES

1. DIMENSIONS AND DATA TAKEN FROM EXISTING PLANS AND AERIAL MAPPING AND ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELEVATIONS.
2. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
3. A DATUM CORRECTION OF -0.49' WAS USED TO ESTABLISH THE BOTTOM OF FOOTING ELEVATIONS FROM THE EXISTING PLANS.
4. FIRST GUARDRAIL POST OFF BRIDGE TO BE ANCHORED TO EXISTING WINGWALL PER ODOT STD DWG TBR-1-11.
   NW CORNER: 24+26.67, 15.00' LT. (BTA-1)
   NE CORNER: 24+25.68, 15.00' RT. (BTA-1)
   SW CORNER: 21+16.55, 15.00' LT. (BTA-1)
   SE CORNER: 21+13.29, 15.00' RT. (BTA-1)

DESIGN TRAFFIC

2020 ADT = 1,300 2020 ADTT = 91
2040 ADT = 1,300 2040 ADTT = 91
DIRECTIONAL DISTRIBUTION = 52%



PROFILE ALONG ℄ CONSTRUCTION SR 320

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 57'-6"±, 82'-0"±, 82'-0"±, 57'-6"± C/C BRGS. (MEASURED ALONG CENTERLINE)
ROADWAY: 26'-4"± F/F PARAPET
LOADING: CF=130 (57)
SKEW: 4°-16'-15"± L.F.
APPROACH SLABS: AS-1-54 SPECIAL (25' LONG)
ALIGNMENT: 1°-28' CURVE RIGHT
SUPERELEVATION: 0.024 FT/FT
WEARING SURFACE: DENSE CONCRETE OVERLAY
STRUCTURAL FILE NUMBER: 6803180
DATE BUILT: 1962
DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE DECK, EXPANSION JOINTS, BACKWALLS, APPROACH SLABS, AND ABUTMENT SEATS; REPLACE ABUTMENT AND PIER BEARINGS; REPLACE PARAPET ON WINGWALLS; SEAL CONCRETE SURFACES AND PAINT STRUCTURAL STEEL; REPLACE BRIDGE TERMINAL ASSEMBLIES

SPANS: 57'-6"±, 82'-0"±, 82'-0"±, 57'-6"± C/C BRGS. (MEASURED ALONG CENTERLINE)
ROADWAY: 27'-0" TOE/TOE PARAPET
LOADING: HS20 CASE II, ALTERNATE MILITARY LOADING AND 60 PSF FWS
SKEW: 4°-16'-15"± L.F.
APPROACH SLABS: 25'-0" LONG AS-1-15 & AS-2-15 (TYPE A INSTALLATION)
ALIGNMENT: 1°-28' CURVE RIGHT
SUPERELEVATION: 0.024 FT/FT
WEARING SURFACE: 1" MONOLITHIC CONCRETE
COORDINATES: LATITUDE 39°49'41.73"
LONGITUDE 84°47'36.76"

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
KAE	KAE	EER	10/25/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		6803180	

PREBLE COUNTY
STA. 21+28.71
STA. 24+12.23

SITE PLAN
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-2015
AS-2-15	REVISED	01-19-2018
EXJ-4-87	REVISED	01-19-2018
GSD-1-96	REVISED	07-19-2002
SBR-1-13	REVISED	07-20-2018
VPF-1-90	REVISED	01-19-2018

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 , INCLUDING ALL INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL 2004.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

DESIGN DATA

CONCRETE QC3 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE QC3 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL (EPOXY COATED) - ASTM A615 OR A996 GRADE 60 MINIMUM, YIELD STRENGTH 60,000 PSI.

EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 S. STATE ROUTE 741, LEBANON, OHIO 45036. EXISTING BRIDGE PLANS MAY BE INSPECTED UPON REQUEST AT THE DISTRICT 8 OFFICE DURING NORMAL BUSINESS HOURS.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

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.

NON-USE OF ASBESTOS-CONTAINING MATERIALS

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. THESE ITEMS SHALL INCLUDE ABUTMENT BACKWALL REMOVAL, DECK REMOVAL, EXPANSION JOINTS, AND PARAPET CONCRETE. 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.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STEEL GIRDERS, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

CUT LINE 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.

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.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

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 OF 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.

THIS INCLUDES THE BACKWALL DOWELS AND DOWEL HOLES REQUIRED FOR THIS REINFORCING SHALL ALSO BE INCLUDED WITH THIS ITEM FOR PAYMENT.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN

FINISH COAT OF PAINT SHALL MATCH FEDERAL COLOR NUMBER 14277.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPER-STRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

INSPECTION OF EXISTING STRUCTURAL STEEL

INSPECTION OF EXISTING STRUCTURAL STEEL: THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511, SUPERSTRUCTURE CONCRETE. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

ABBREVIATION LEGEND

ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR SLAB - APPROACH SLAB
BOT - BOTTOM
BRG - BEARING
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CLR - CLEARANCE
CONSTR - CONSTRUCTION
DIA - DIAMETER
EL - ELEVATION
ELEV - ELEVATION
EOP - EDGE OF PAVEMENT
EF - EACH FACE
EST - ESTIMATED
EX - EXISTING
FS - FAR SIDE
FWD - FORWARD
IR - INTERSTATE ROUTE
LT - LEFT
LSM - LOW STRENGTH MORTAR
MAX - MAXIMUM
MIN - MINIMUM
MISC - MISCELLANEOUS
NS - NEAR SIDE
NO - NUMBER
PEJF - PREFORMED EXPANSION JOINT FILLER
PROP - PROPOSED
RD - ROAD
REF - REFERENCE
RT - RIGHT
SPA - SPACES
STA - STATION
TBR - TO BE REMOVED
TYP - TYPICAL

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
KAE	KAE	EER	10/25/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		6803180	

GENERAL NOTES
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654

ITEM 511 - CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE
499.03, CLASS QC3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02

FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 511 - CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE
499.03, CLASS QC3 MEETING A DESIGN STRENGTH OF 4,000 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02

FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSE-WORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPER-STRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.1 KIPS FOR A TOTAL MACHINE LOAD OF 8.88 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSE-WORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

DESIGN AGENCY
Stantec
11687 Lebanon Road
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KAE	KAE	EER	10/25/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		6803180	

GENERAL NOTES
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654

ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

CALCULATED BY: KAE CHECKED BY: MRS

ITEM	EXTENSION	TOTAL ①	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP		LUMP		2 | 20
202	22900	139	SY	APPROACH SLAB REMOVED				139	
503	21300	LUMP	LS	UNCLASSIFIED EXCAVATION		LUMP			
509	10000	99210	LB	EPOXY COATED REINFORCING STEEL	6360	1936	90914		
509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	100				2 | 20
510	10000	166	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	76	90			
511	53014	322	CY	CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN			322		3 | 20
511	53014	77	CY	CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN	63	14			3 | 20
512	10100	1118	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	153	266	699		
512	74000	419	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	153	266			
513	20000	2304	EACH	WELDED STUD SHEAR CONNECTORS			2304		
514	00050	12395	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			12395		
514	00056	12395	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			12395		
514	00060	12395	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			12395		
514	00067	12395	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			12395		2 | 20
514	00504	19	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			19		
514	10000	9	EACH	FINAL INSPECTION REPAIR			9		
516	11210	60	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	60				
516	44001	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11½" X 1'-8" X 1.504" ELASTOMERIC BEARING W/12½" X 1'-9" X 2" LOAD PLATE), AS PER PLAN		4			13 | 20
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (8½" X 1'-0" X 2.678" ELASTOMERIC BEARING W/9½" X 1'-1" X 1½" LOAD PLATE), AS PER PLAN	8				13 | 20
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-0" X 1'-7" X 2.474" ELASTOMERIC BEARING W/13" X 1'-8" X 2" LOAD PLATE), AS PER PLAN		8			13 | 20
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LUMP	2 | 20
518	21200	24	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	24				
SPECIAL	51900100	412	SF	COMPOSITE FIBER WRAP SYSTEM		412			
526	25010	150	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")				150	
526	90010	54	FT	TYPE A INSTALLATION				54	
607	39900	400	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			400		

① QUANTITIES PAID FOR UNDER PARTICIPATION SPLIT 02/IMS/BR

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ESTIMATED QUANTITIES
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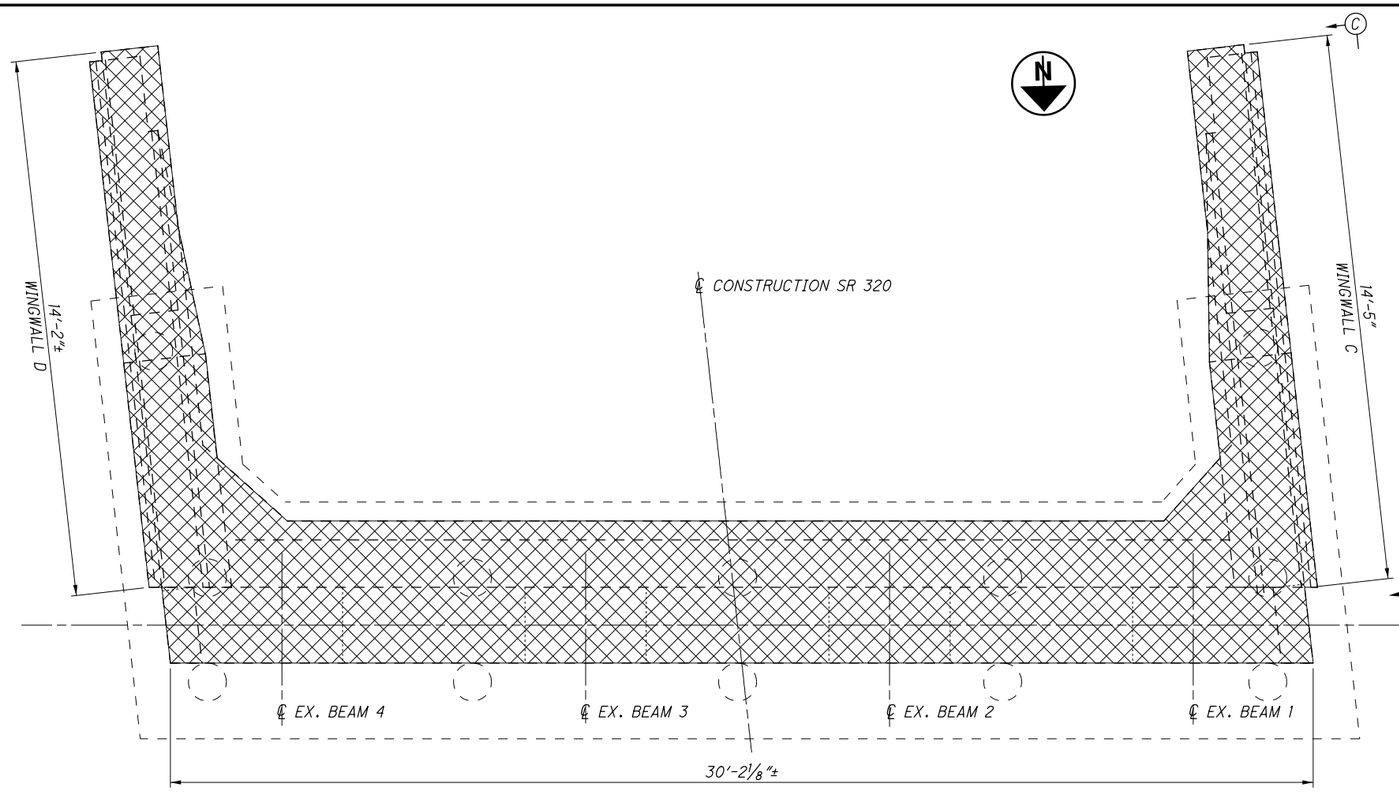
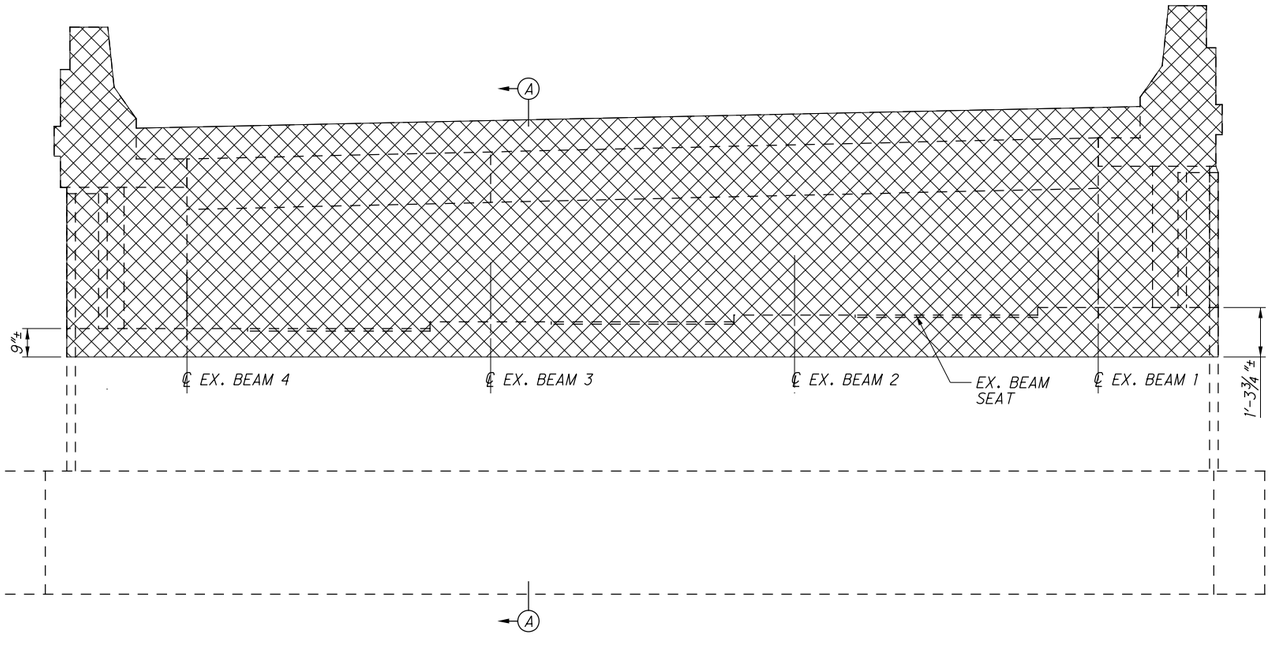
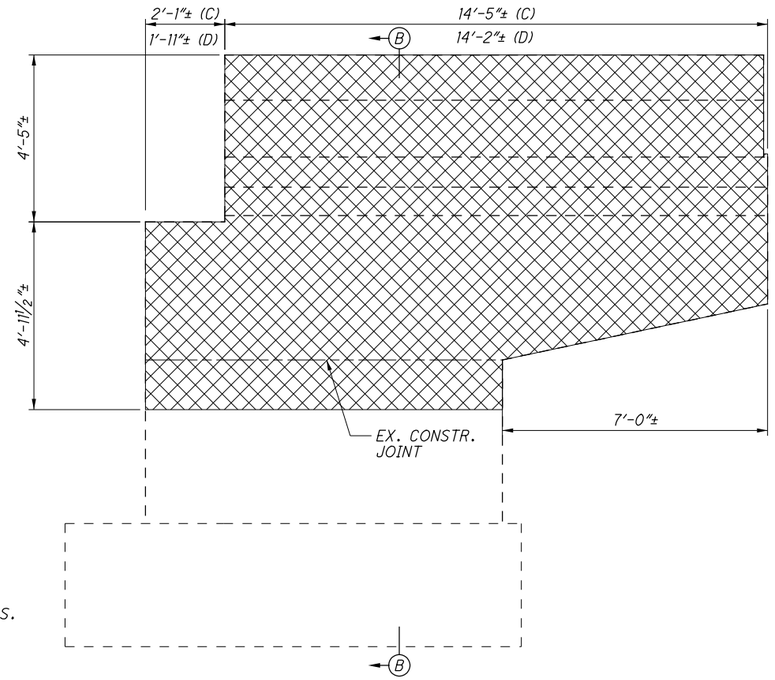


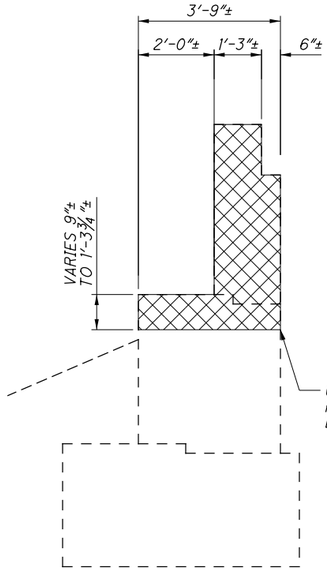
PLAN



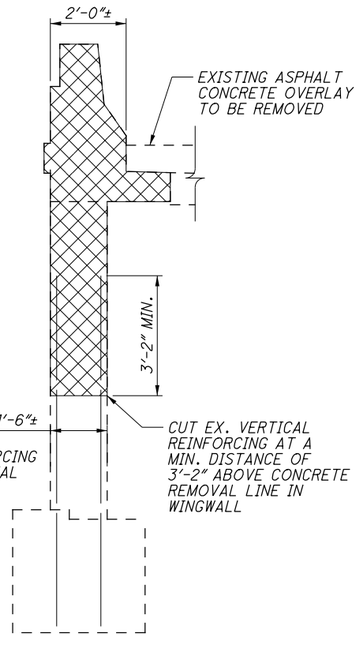
ELEVATION



VIEW C-C



SECTION A-A



SECTION B-B

LEGEND

DENOTES PORTION OF CONCRETE AND REINFORCING STEEL TO BE REMOVED.

REAR ABUTMENT REMOVAL DETAILS

BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654

5 / 20

102 / 147

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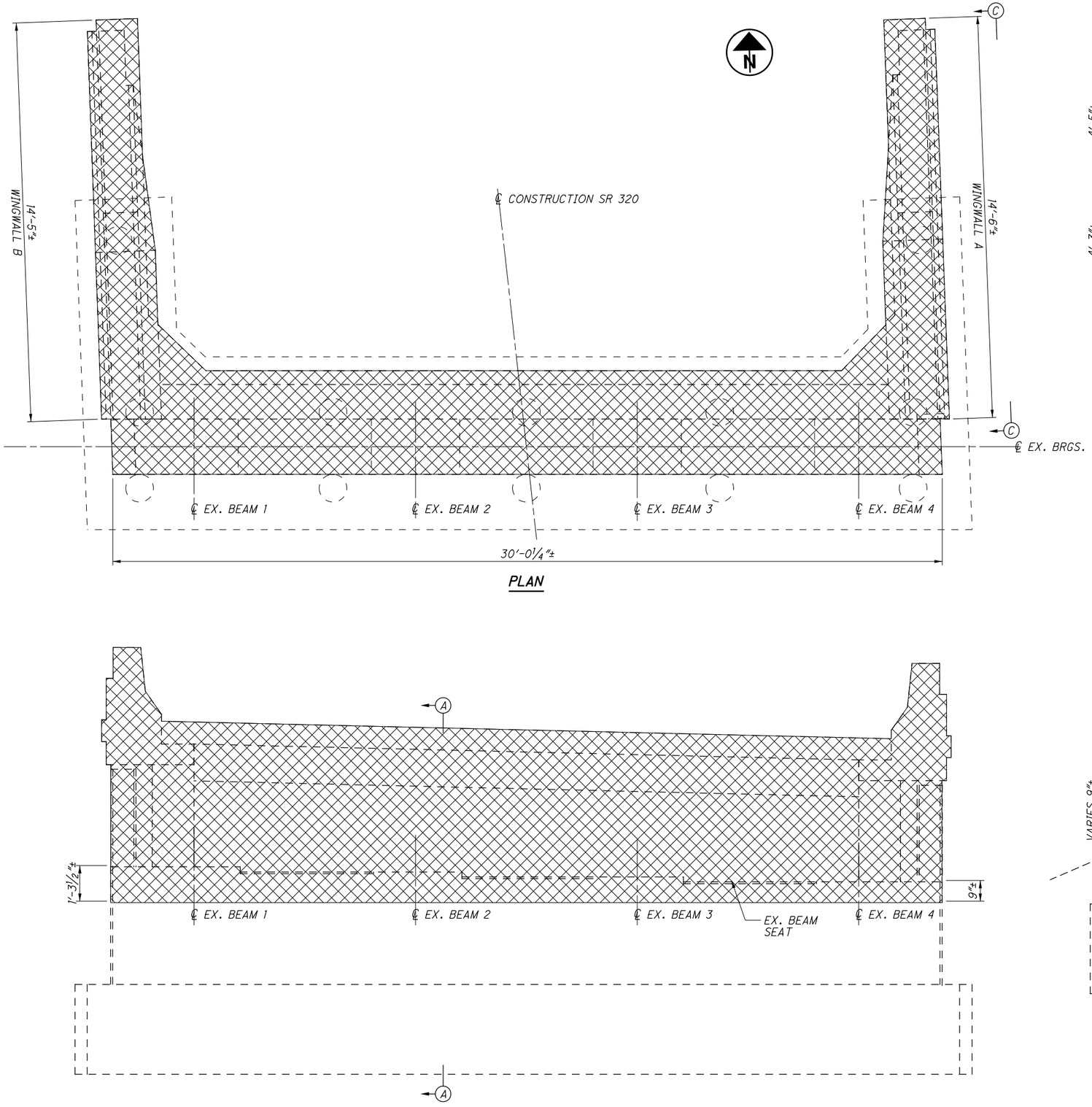
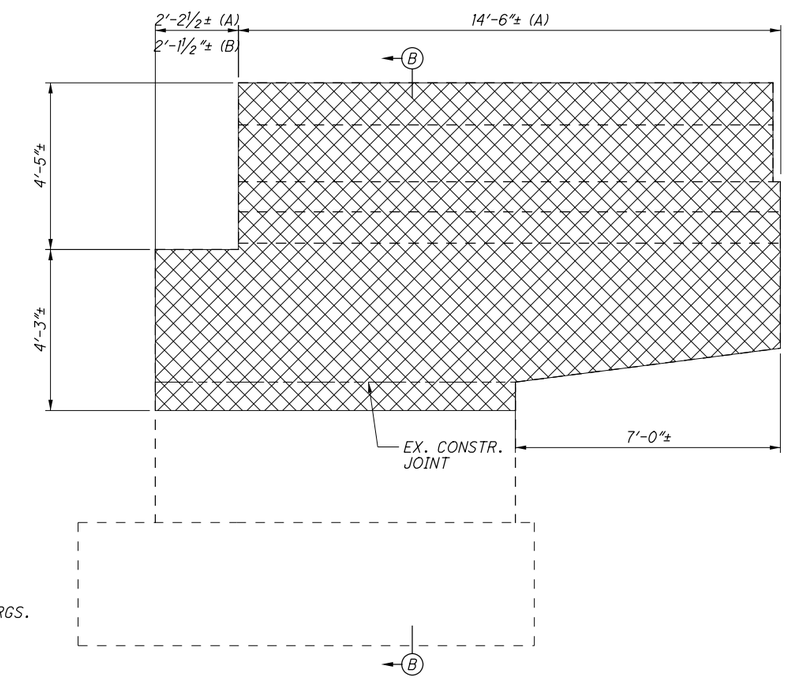


PLAN

ELEVATION



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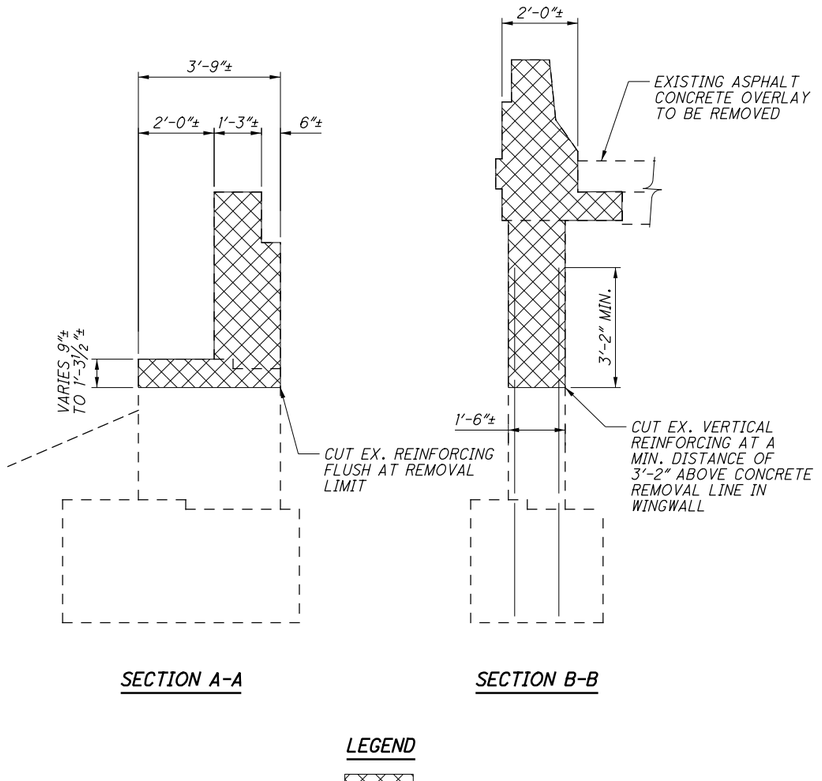

SECTION A-A

SECTION B-B

LEGEND

DENOTES PORTION OF CONCRETE AND REINFORCING STEEL TO BE REMOVED.

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FORWARD ABUTMENT REMOVAL DETAILS

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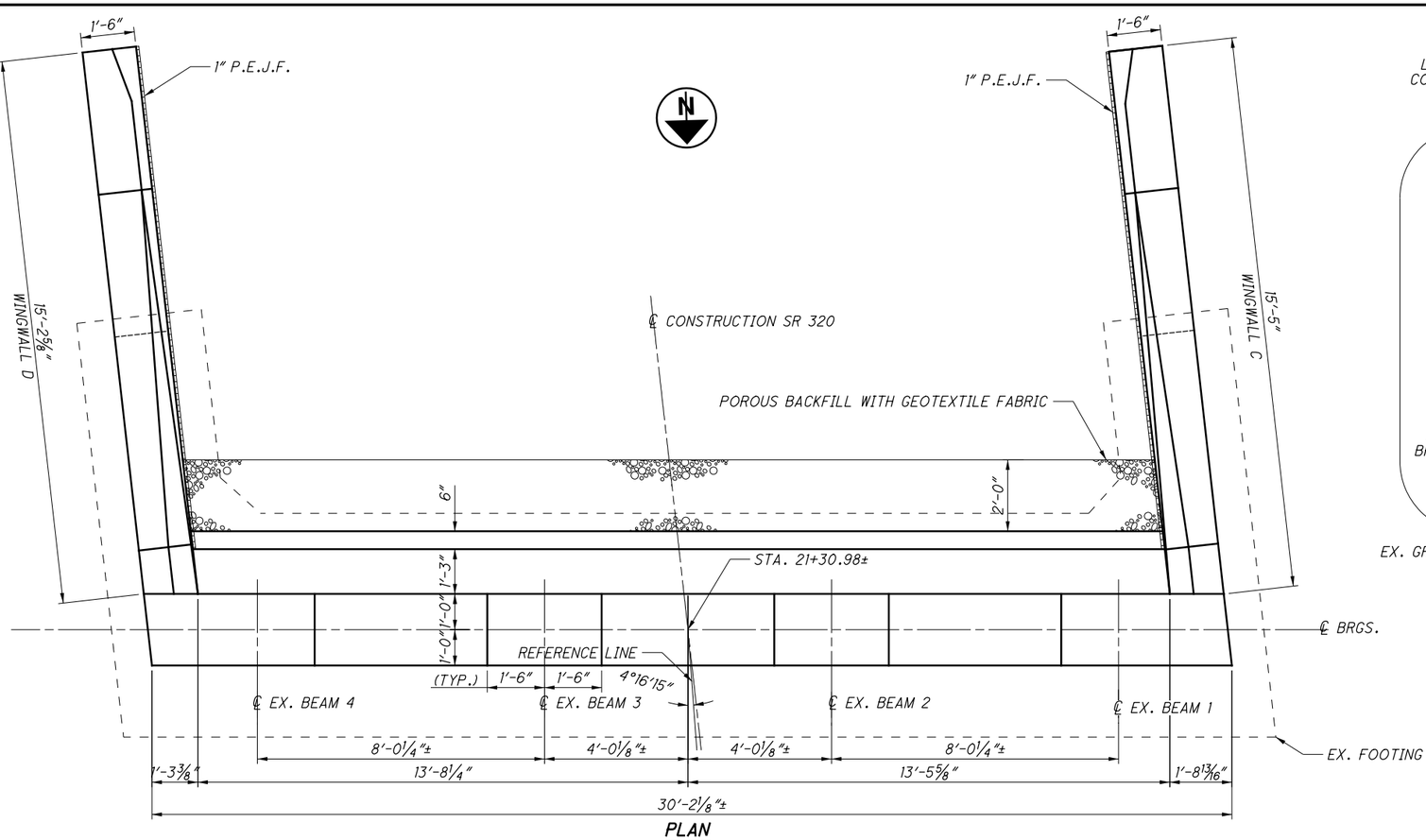

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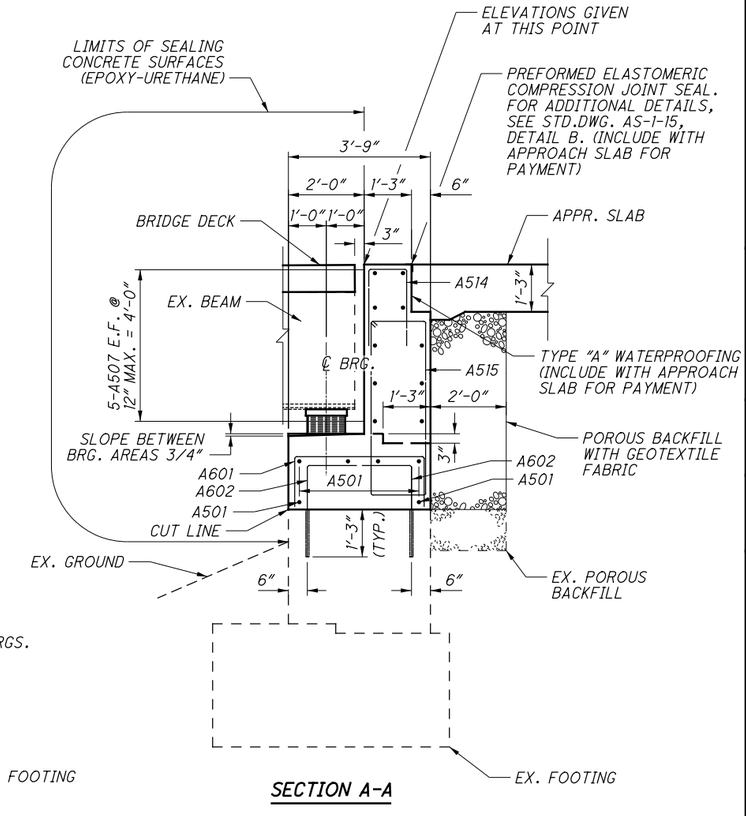
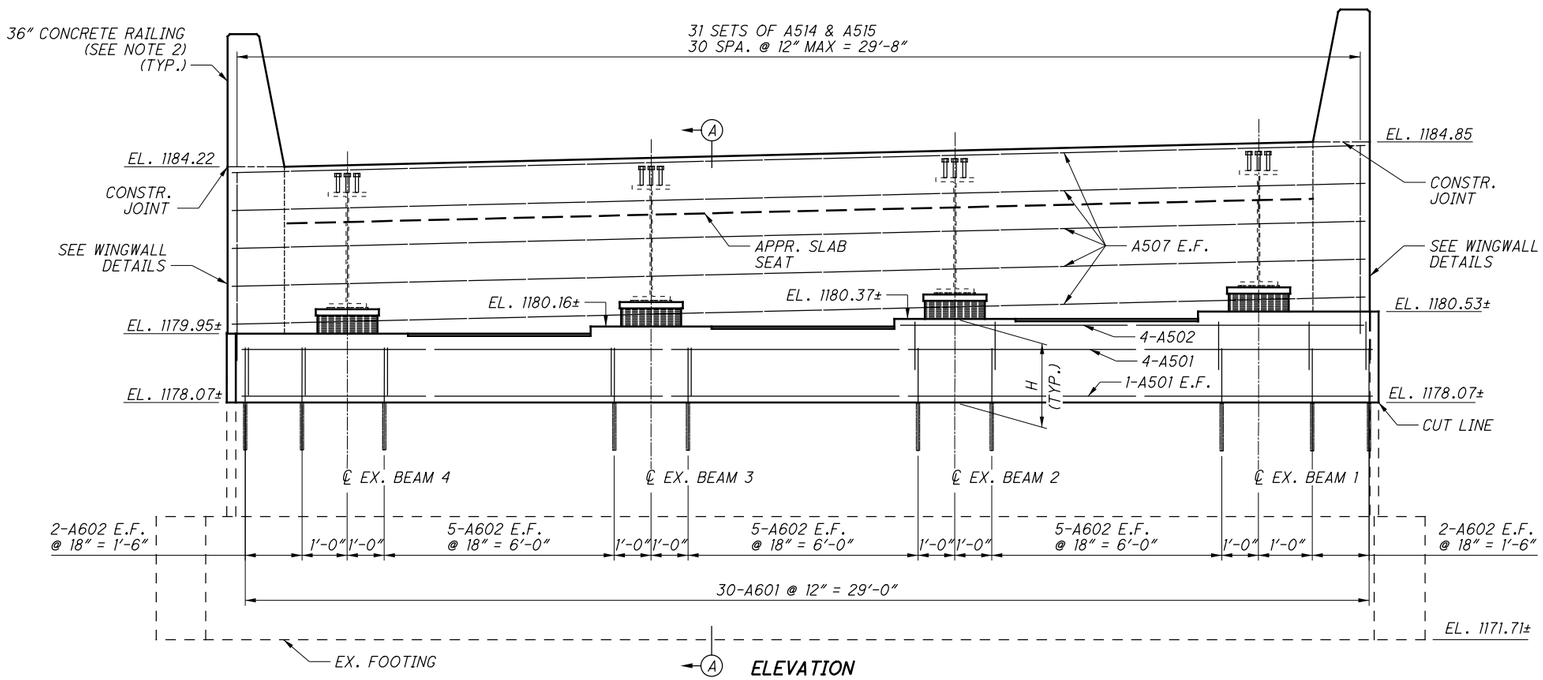


SECTION A-A



ELEVATION

NOTES

1. FOR WINGWALL DETAILS, SEE SHEET 8/20.
2. FOR ADDITIONAL DETAILS ON PROPOSED PARAPET, SEE SHEET 17/20.
3. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE ENGINEER, PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE HEIGHT OF THE PROPOSED ABUTMENT CAP SO THAT THE FINAL PROPOSED CONTRACTOR CALCULATED BEAM SEAT ELEVATIONS ARE IN AGREEMENT WITH THEIR FIELD VERIFIED MEASUREMENTS. THE FINAL CAP HEIGHT H CAN BE CALCULATED BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND THE THICKNESS OF THE ELASTOMERIC BEARING (INCLUDING LOAD PLATES) AT EACH BEARING LOCATION FROM THE EXISTING BOTTOM OF THE BEAM ELEVATION AND ADDING THE DEPTH OF THE BRIDGE SEAT REPLACEMENT. THE BRIDGE IS NOT TO BE RAISED. THE HEIGHT OF THE PROPOSED ABUTMENT CAP IS A CONTRACTOR CALCULATED DIMENSION AND ANY MODIFICATIONS NEEDED AS A RESULT OF THE CONTRACTORS ERROR WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

   PROPOSED DIMENSION H = (CONTRACTOR'S EXISTING BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S EXISTING BEAM SEAT ELEVATION) - (HEIGHT OF BEARING'S TOP LOAD PLATE AND LAMINATED ELASTOMERIC BEARING PAD) + (DEPTH OF THE BRIDGE SEAT REPLACEMENT).

EX. BEAM	DIMENSION "H" ± *
1	2.46'
2	2.30'
3	2.09'
4	1.88'

* SEE NOTE 3

4. THE CONCRETE IN THE BEAM SEAT CAP HAS TO BE CAST BEFORE THE DECK IS FORMED.

DESIGN AGENCY
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REAR ABUTMENT DETAILS
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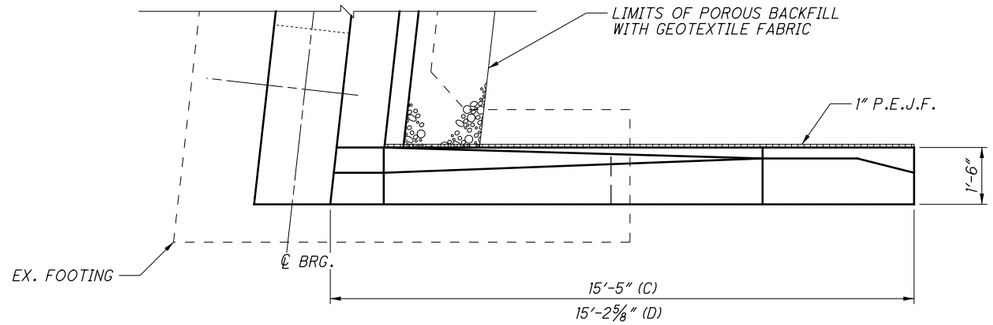
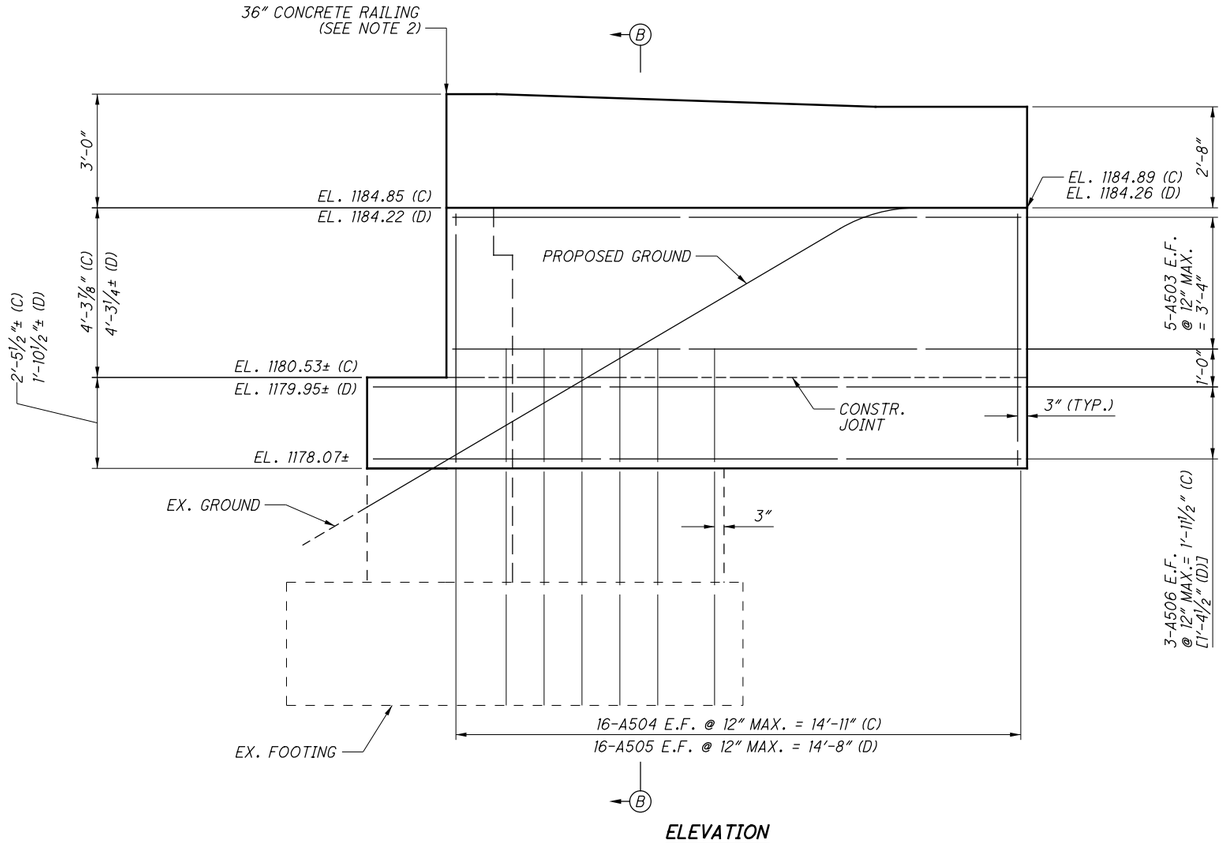


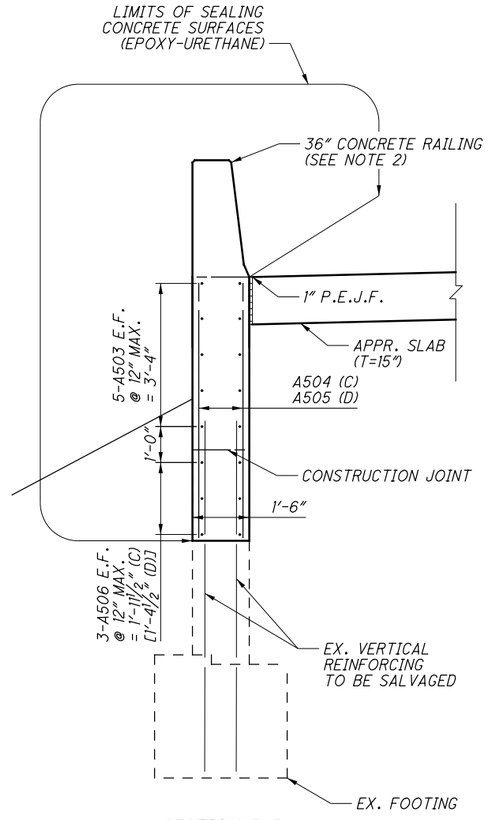
PLAN

(WINGWALL C SHOWN, WINGWALL D OPPOSITE HAND)



ELEVATION

(WINGWALL C SHOWN, WINGWALL D OPPOSITE HAND)



SECTION B-B

NOTES

1. FOR REAR ABUTMENT DETAILS, SEE SHEET 7/20.
2. FOR ADDITIONAL DETAILS ON PROPOSED CONCRETE RAILING AND RAILING REINFORCING STEEL, SEE SHEET 17/20.
3. LAP LENGTH FOR NO. 6 BARS SHALL BE 3'-0".

DESIGN AGENCY
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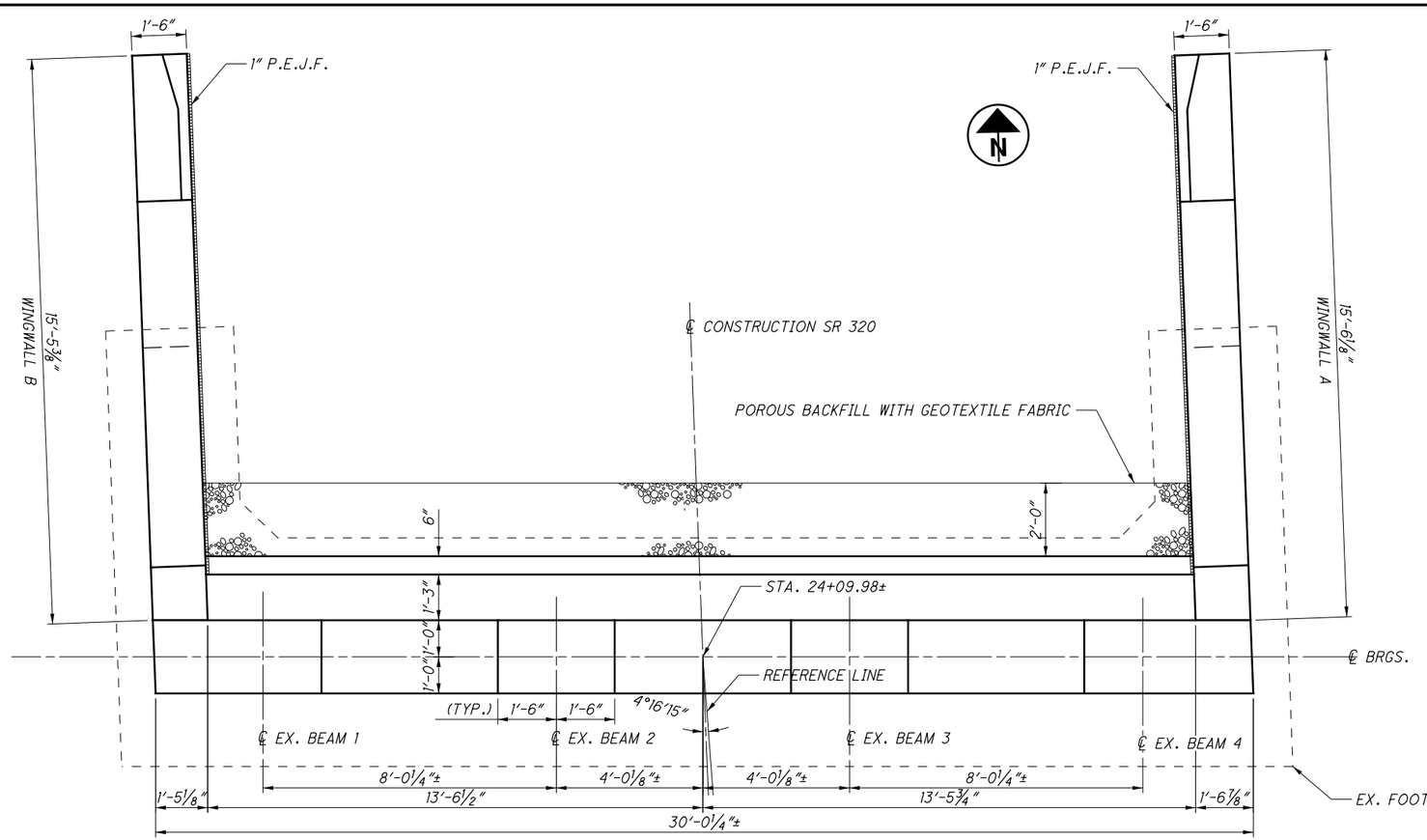
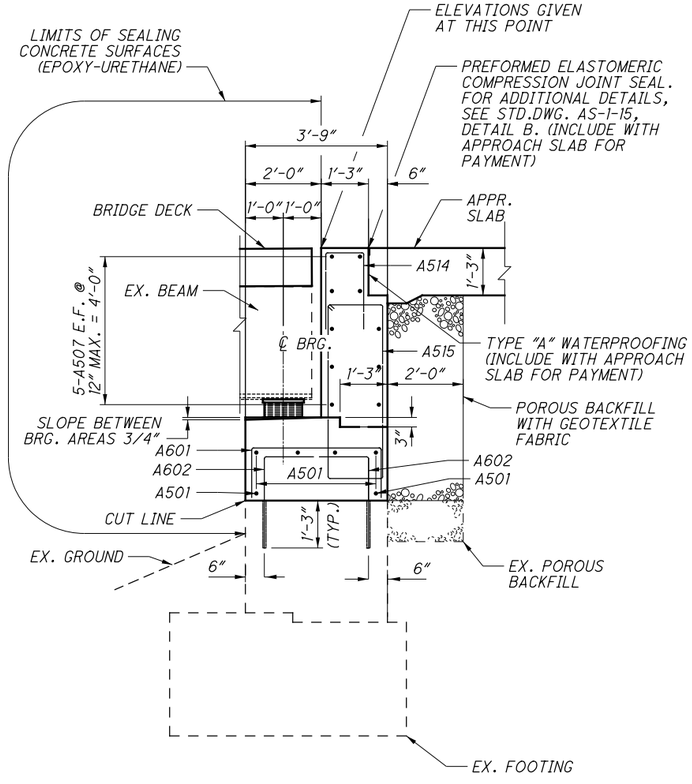
REAR ABUTMENT WINGWALL DETAILS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

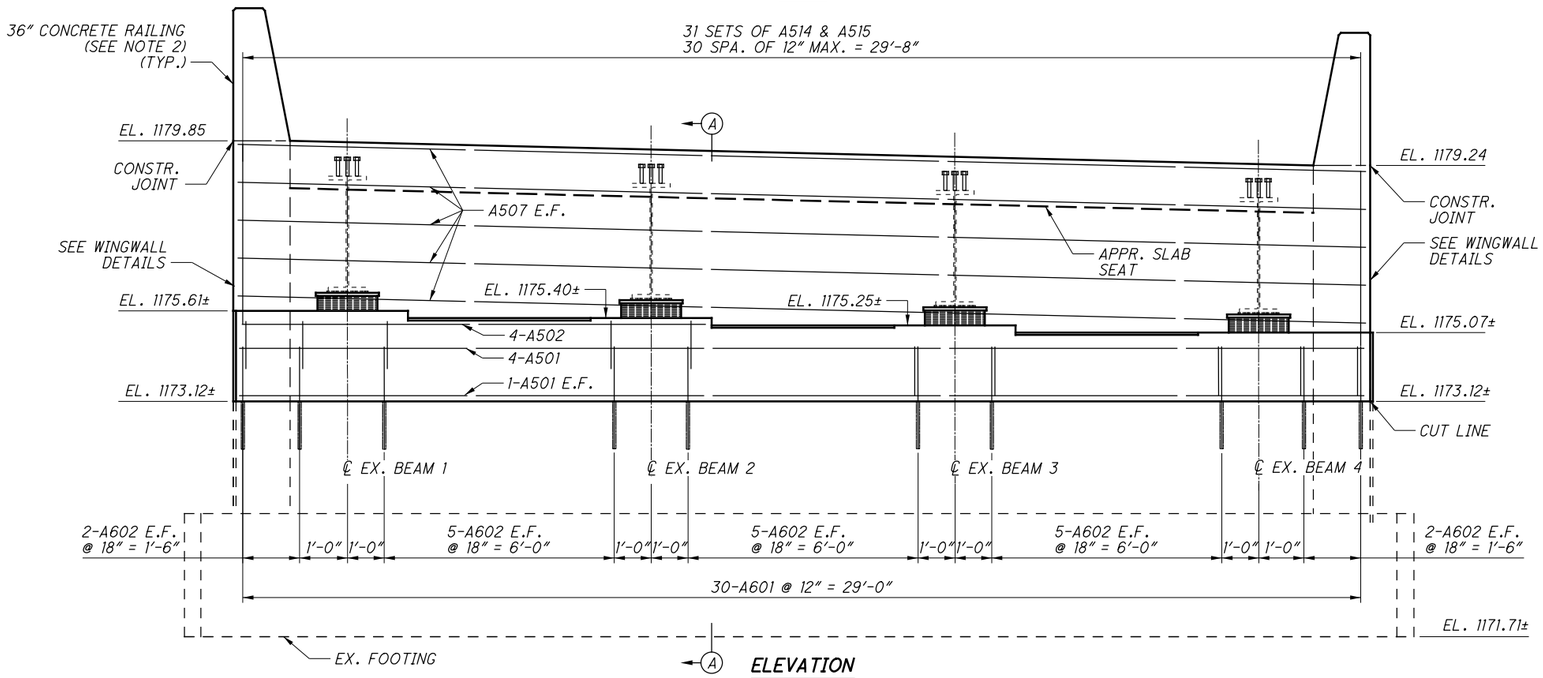
PRE-70-0.00
PID No. 96654



PLAN



SECTION A-A



ELEVATION

NOTES

1. FOR WINGWALL DETAILS, SEE SHEET 10/20.
2. FOR ADDITIONAL DETAILS ON PROPOSED PARAPET, SEE SHEET 17/20.
3. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE ENGINEER, PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE HEIGHT OF THE PROPOSED ABUTMENT CAP SO THAT THE FINAL PROPOSED CONTRACTOR CALCULATED BEAM SEAT ELEVATIONS ARE IN AGREEMENT WITH THEIR FIELD VERIFIED MEASUREMENTS. THE FINAL CAP HEIGHT H CAN BE CALCULATED BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND THE THICKNESS OF THE ELASTOMERIC BEARING (INCLUDING LOAD PLATES) AT EACH BEARING LOCATION FROM THE EXISTING BOTTOM OF THE BEAM ELEVATION AND ADDING THE DEPTH OF THE BRIDGE SEAT REPLACEMENT. THE BRIDGE IS NOT TO BE RAISED. THE HEIGHT OF THE PROPOSED ABUTMENT CAP IS A CONTRACTOR CALCULATED DIMENSION AND ANY MODIFICATIONS NEEDED AS A RESULT OF THE CONTRACTORS ERROR WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

   PROPOSED DIMENSION H = (CONTRACTOR'S EXISTING BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S EXISTING BEAM SEAT ELEVATION) - (HEIGHT OF BEARING'S TOP LOAD PLATE AND LAMINATED ELASTOMERIC BEARING PAD) + (DEPTH OF THE BRIDGE SEAT REPLACEMENT).

EX. BEAM	DIMENSION "H" ± *
1	2.49'
2	2.28'
3	2.13'
4	1.95'

* SEE NOTE 3

4. THE CONCRETE IN THE BEAM SEAT CAP HAS TO BE CAST BEFORE THE DECK IS FORMED.

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FORWARD ABUTMENT DETAILS
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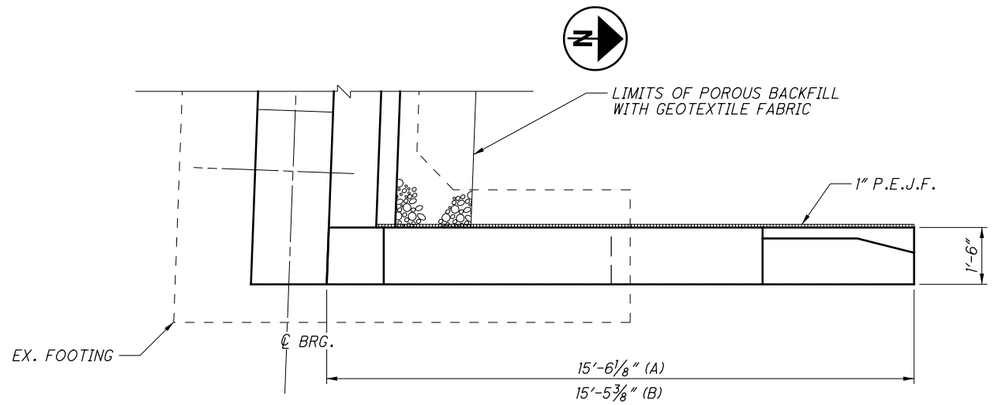
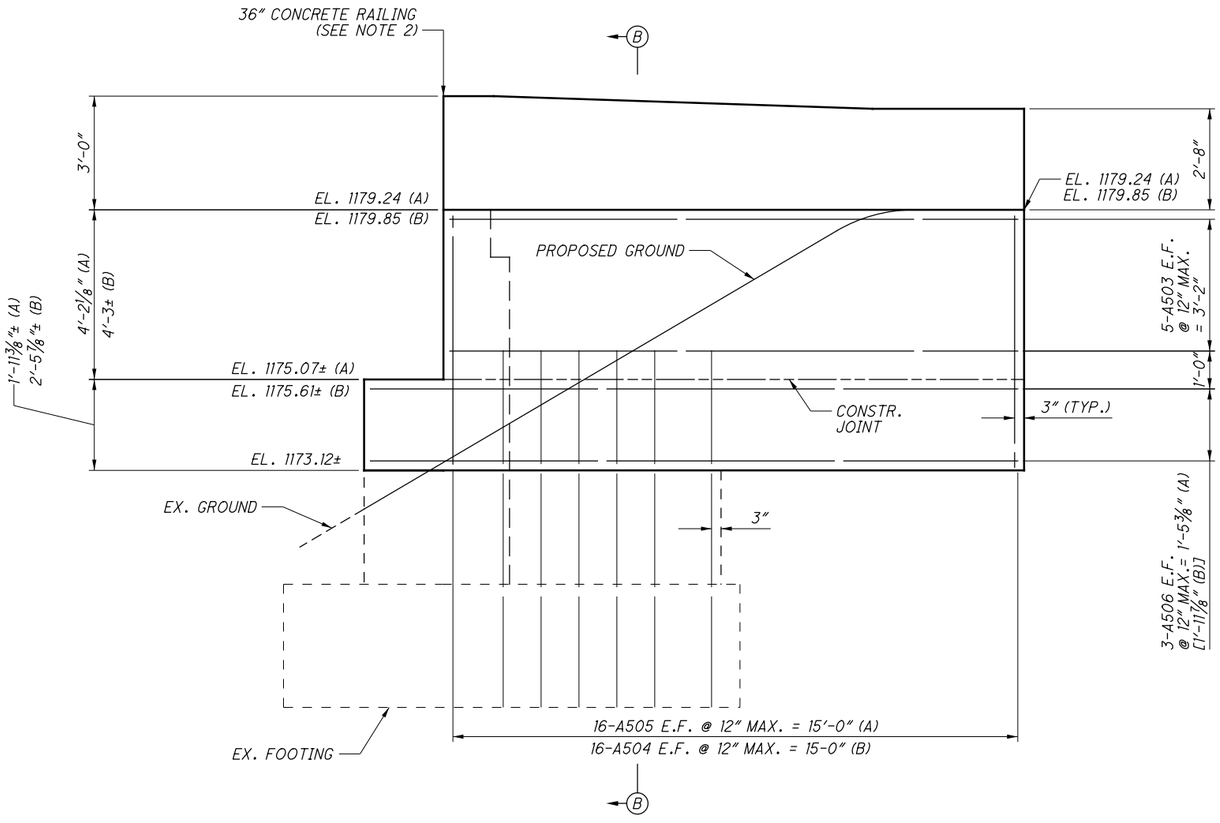


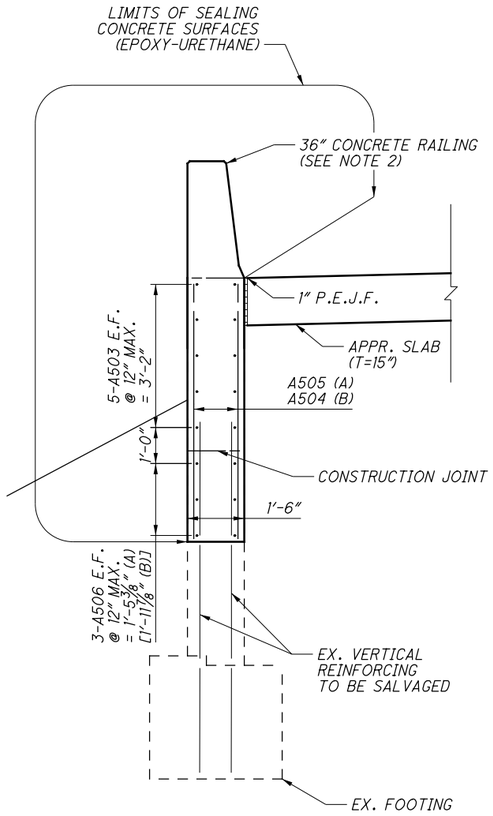
PLAN

(WINGWALL A SHOWN, WINGWALL B OPPOSITE HAND)



ELEVATION

(WINGWALL A SHOWN, WINGWALL B OPPOSITE HAND)



SECTION B-B

NOTES

1. FOR FORWARD ABUTMENT DETAILS, SEE SHEET 9/20.
2. FOR ADDITIONAL DETAILS ON PROPOSED CONCRETE RAILING AND RAILING REINFORCING STEEL, SEE SHEET 17/20.
3. LAP LENGTH FOR NO. 6 BARS SHALL BE 3'-0".

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DESIGNED KAE | DRAWN KAE | REVIEWED EER | DATE 10/25/19
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FORWARD ABUTMENT WINGWALL DETAILS

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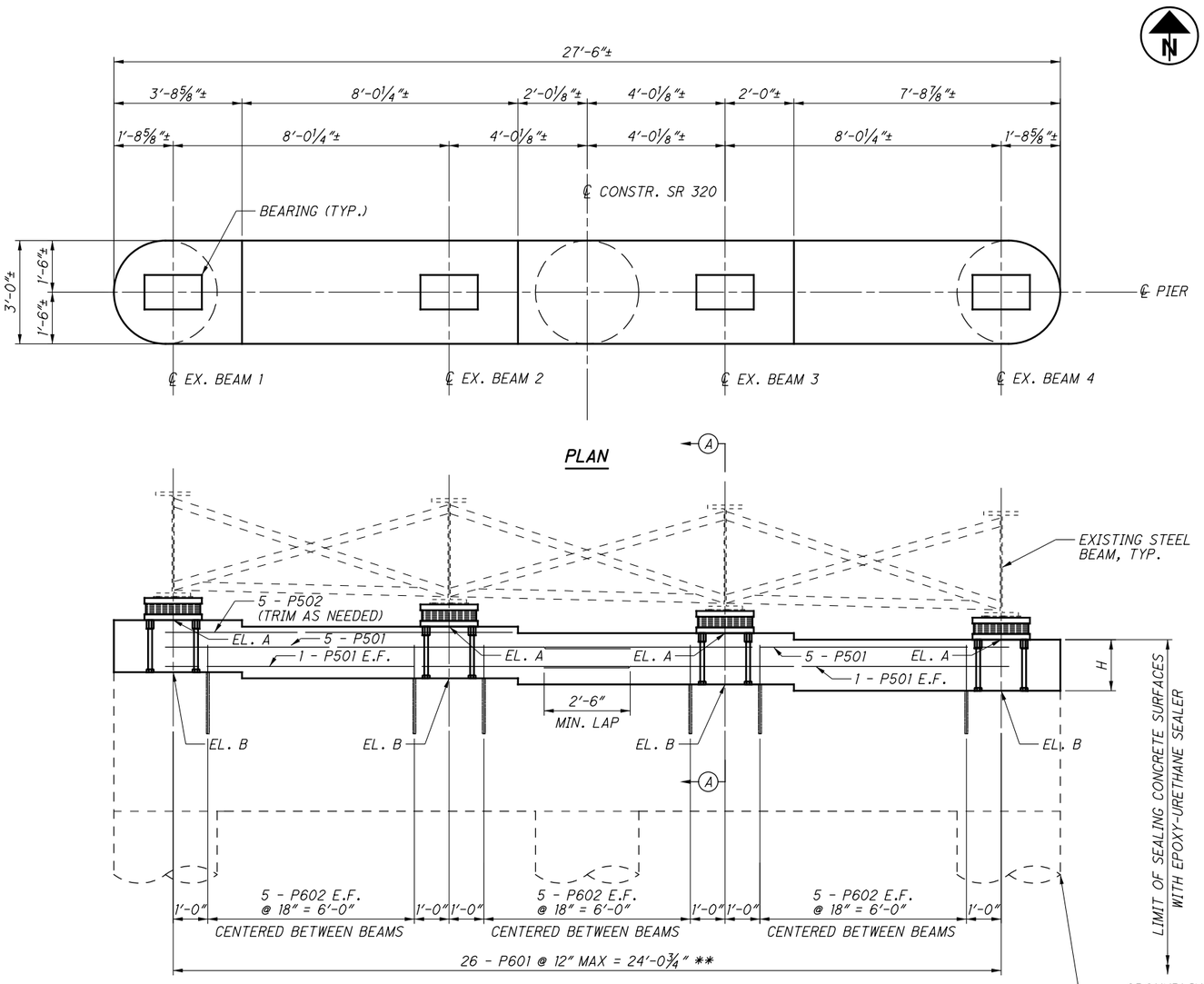


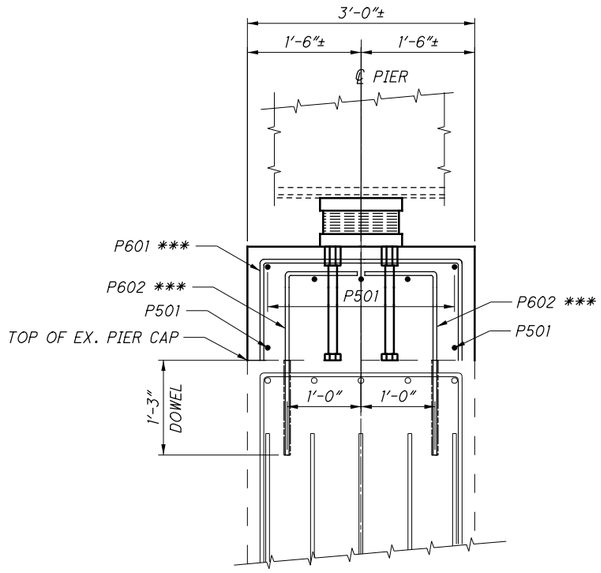
PLAN

ELEVATION

** ADJUST BARS AS NEEDED TO AVOID ANCHOR BOLTS

ESTIMATED PEDESTAL HEIGHT AND ELEVATIONS *					
PIER	EX. BEAM	PROPOSED ELEVATION A	EST. PROP. BOTTOM OF BEAM EL.	EXISTING ELEVATION B	ESTIMATED PEDESTAL HEIGHT H
1	1	1179.88±	1180.42±	1178.54±	1.34'±
1	2	1179.67±	1180.21±	1178.34±	1.33'±
1	3	1179.53±	1180.07±	1178.09±	1.44'±
1	4	1179.36±	1179.90±	1177.90±	1.46'±
2	1	1178.81±	1179.27±	1177.21±	1.60'±
2	2	1178.64±	1179.10±	1177.02±	1.62'±
2	3	1178.45±	1178.91±	1176.84±	1.61'±
2	4	1178.29±	1178.75±	1176.65±	1.64'±
3	1	1176.97±	1177.51±	1175.52±	1.45'±
3	2	1176.78±	1177.32±	1175.34±	1.44'±
3	3	1176.59±	1177.13±	1175.13±	1.46'±
3	4	1176.42±	1176.96±	1174.95±	1.47'±

* SEE NOTE 2



SECTION A-A

*** TRIM BAR LEGS AS NEEDED

NOTES

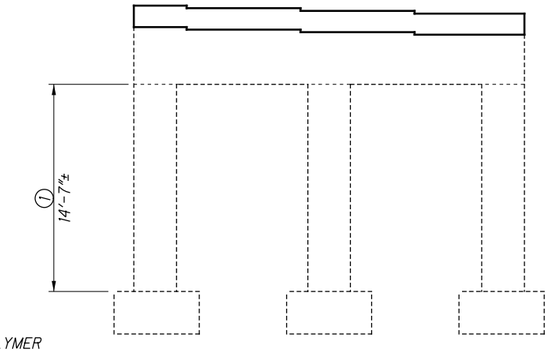
1. FOR BEARING DETAILS, SEE SHEET 13/20.

2. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE ENGINEER, PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE HEIGHT OF THE PROPOSED PIER CAP AND ADJUSTABLE PEDESTAL SO THAT THE FINAL PROPOSED CONTRACTOR CALCULATED BEAM SEAT ELEVATIONS ARE IN AGREEMENT WITH THEIR FIELD VERIFIED MEASUREMENTS. THE FINAL CAP HEIGHT H CAN BE CALCULATED BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND THE THICKNESS OF THE ELASTOMERIC BEARING (INCLUDING LOAD PLATES) AT EACH BEARING LOCATION FROM THE EXISTING BOTTOM OF THE BEAM ELEVATION. THE BRIDGE IS NOT TO BE RAISED. THE HEIGHT OF THE PROPOSED PIER CAP IS A CONTRACTOR CALCULATED DIMENSION AND ANY MODIFICATIONS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

   PROPOSED DIMENSION H = (CONTRACTOR'S EXISTING BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S EXISTING BEAM SEAT ELEVATION) - (HEIGHT OF BEARING'S TOP LOAD PLATE, LAMINATED ELASTOMERIC BEARING PAD AND BOTTOM LOAD PLATE).

4. THE CONCRETE IN THE BEAM SEAT CAP HAS TO BE CAST BEFORE THE DECK IS FORMED.

THE COLUMNS OF PIER 2 ARE TO BE WRAPPED WITH A COMPOSITE FIBER WRAP SYSTEM PER PROPOSAL NOTE 519.



① LIMIT OF FIBER REINFORCED POLYMER WRAP, TYPICAL EACH COLUMN. CONFINING STRESS (f_l') = 0.150 KSI.

PIER 2 ELEVATION

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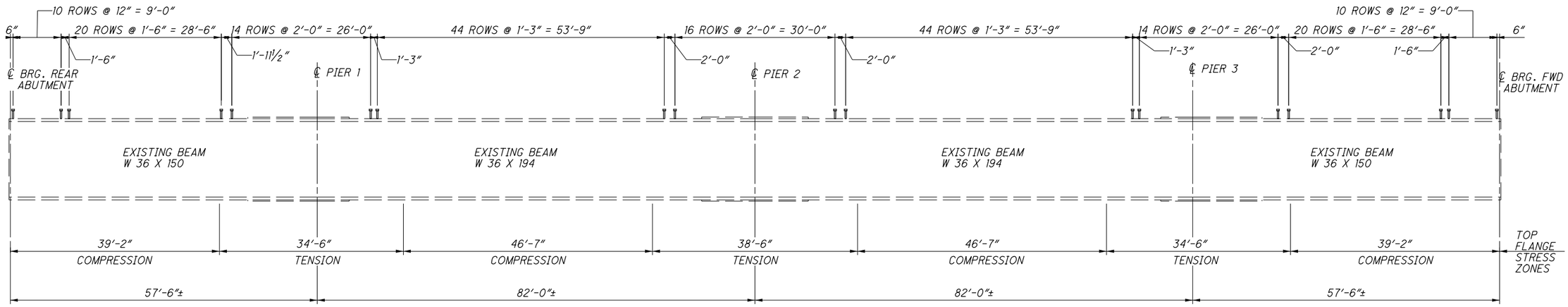
DESIGN AGENCY
Stantec
11687 Lebanon Road
Sharonville, Ohio 45241
(513) 842-8200

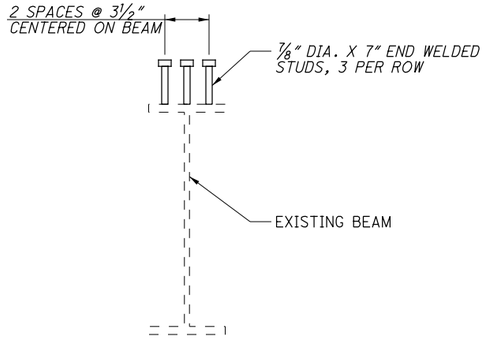
DESIGNED	DRAWN	REVIEWED	DATE
KAE	KAE	EER	10/25/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		6803180	

PIER DETAILS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654



TYPICAL BEAM ELEVATION (4 BEAMS)



SHEAR CONNECTOR DETAIL

NOTES

1. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESS UP TO ¾" OR 5/16" FOR GREATER THAN ¾" THICK.

2. ADJUST SPACING OF SHEAR CONNECTORS AS NECESSARY TO CLEAR ENDS OF SPLICE PLATES BY 2".

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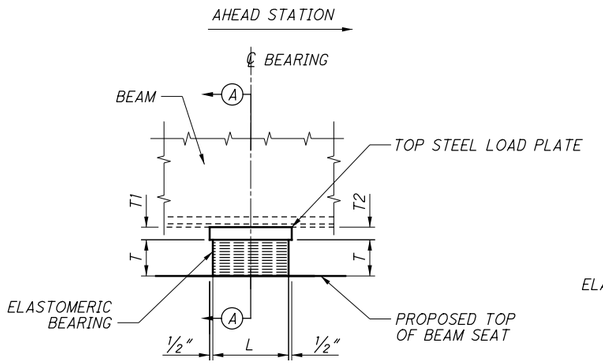
MRS		6803180	

STEEL BEAM DETAILS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

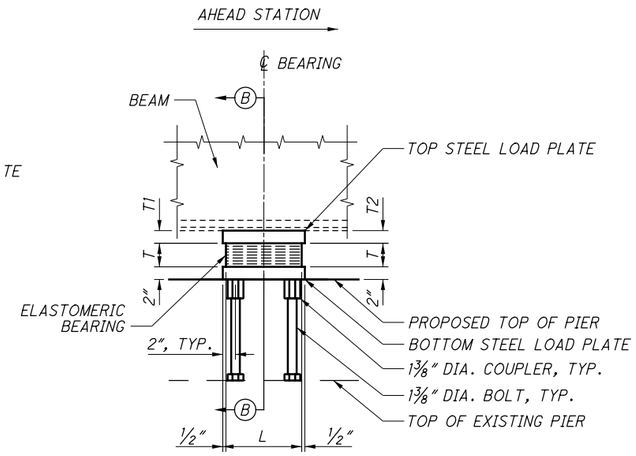
PRE-70-0.00
PID No. 96654

LAMINATED ELASTOMERIC TABLE														
LOCATION	BEARING TYPE	BEARING DIMENSIONS							TOP STEEL LOAD PLATE (LENGTH, IN. X WIDTH, IN.)	BOTTOM STEEL LOAD PLATE (LENGTH, IN. X WIDTH, IN.)	DIMENSION (IN.)		DESIGN LOAD (KIPS)		
		L (IN.)	W (IN.)	T (IN.)	Ti (IN.)	Te (IN.)	†L (IN.)	N			T1	T2	DL	LL	TOTAL
REAR ABUTMENT	EXPANSION	8.5	12	2.678	0.24	0.16	0.0747	8	9.5 X 13	-	1½	1½	38.0	46.6	84.6
PIER 1	EXPANSION	12	19	2.474	0.35	-	0.0747	5	13 X 20	13 X 20	2⅛	2	150.7	58.4	209.1
PIER 2	FIXED	11.5	20	1.504	0.32	-	0.0747	3	12.5 X 27	12.5 X 21	2 3/16	2	167.5	62.4	229.9
PIER 3	EXPANSION	12	19	2.474	0.35	-	0.0747	5	13 X 20	13 X 20	2 5/16	2	150.7	58.4	209.1
FWD ABUTMENT	EXPANSION	8.5	12	2.678	0.24	0.16	0.0747	8	9.5 X 13	-	1¾	1½	38.0	46.6	84.6

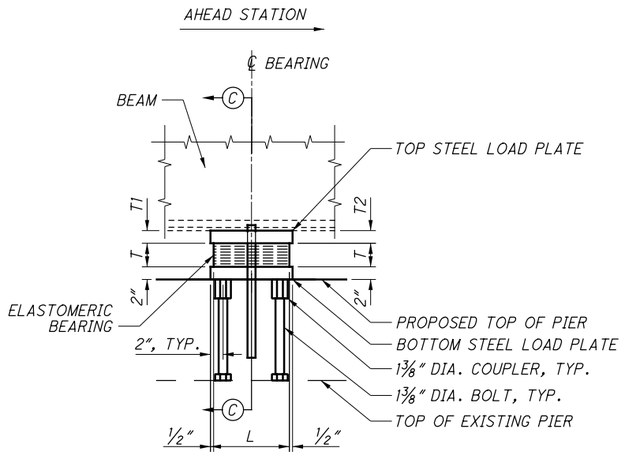
T_i = THICKNESS OF INTERNAL ELASTOMERIC LAYER
T_e = THICKNESS OF EXTERNAL ELASTOMER LAYER
†L = THICKNESS OF STEEL LAMINATE
N = NUMBER OF STEEL LAMINATES
DL = DEAD LOAD
LL = LIVE LOAD



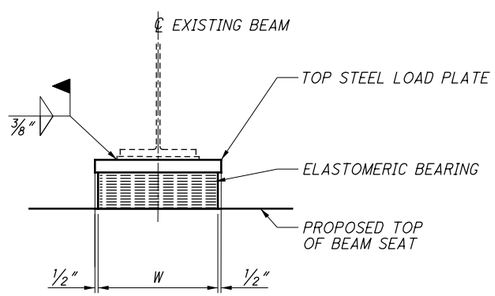
ELEVATION



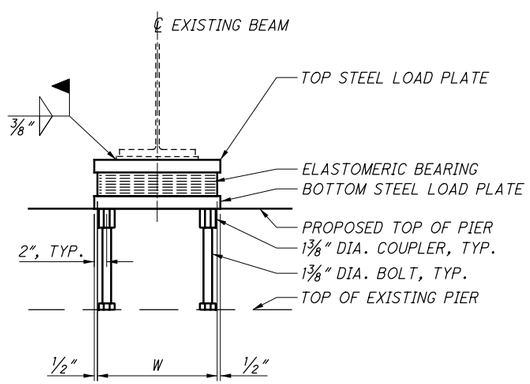
ELEVATION



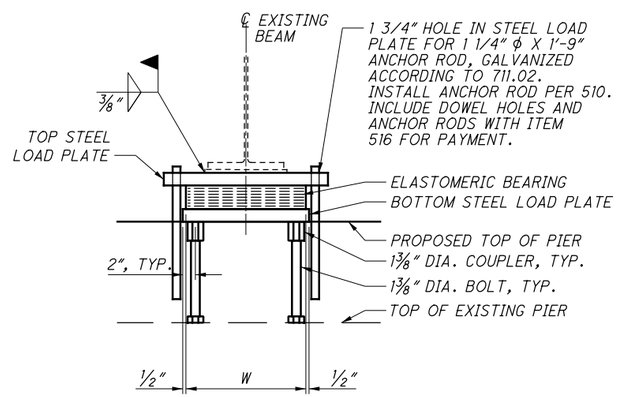
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

BEARING AT ABUTMENTS

BEARING AT PIERS 1 & 3

BEARING AT PIER 2

NOTES

1. LOAD PLATE: THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

   THE STEEL LOAD PLATE SHALL BE A50 GRADE STEEL AND SHALL RECEIVE INORGANIC ZINC PRIME COAT.

   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.

   BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR BOLTS, BEARING RETAINERS, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARIMNGS AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

   HIGH STRENGTH BOLTS SHALL BE 1⅜" DIAMETER A325 TYPE 3 GALVANIZED PER CMS 711.02.

   1⅜" HEX COUPLING NUT WELDED TO PLATE SHALL BE GALVANIZED PER CMS 700.02.

   BOTTOM STEEL LOAD PLATES AT PIERS SHALL BE GALVANIZED PER CMS 711.02 ON BOTTOM ONLY.

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
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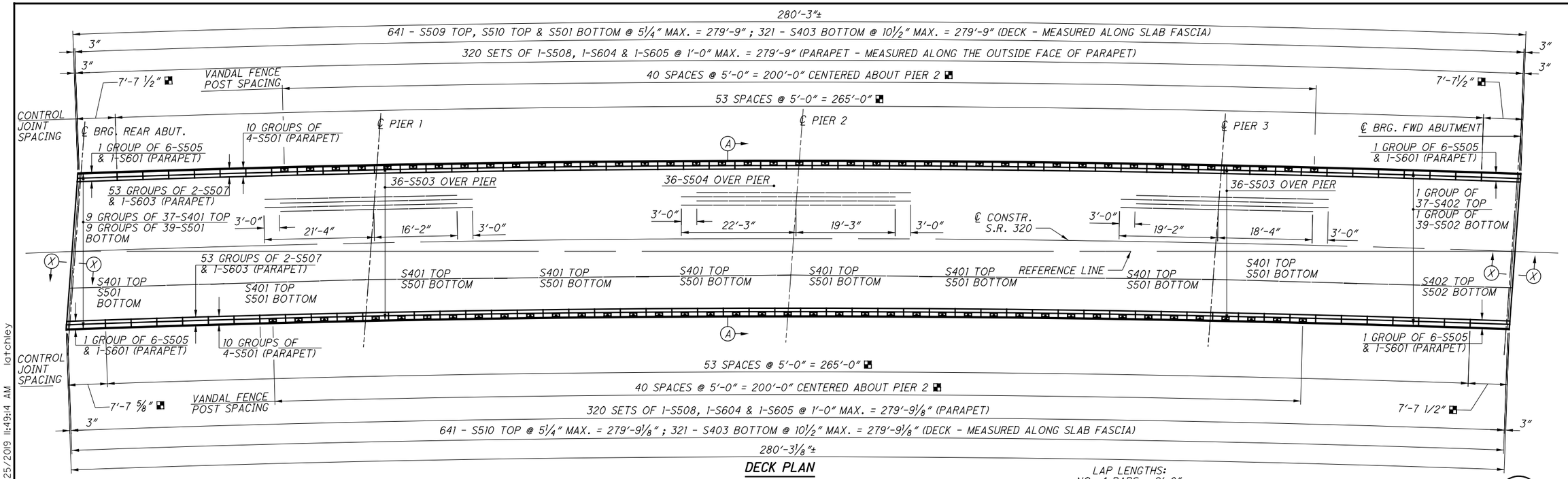
DESIGNED KAE | DRAWN KAE | REVIEWED EER | DATE 10/25/19
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 6803180

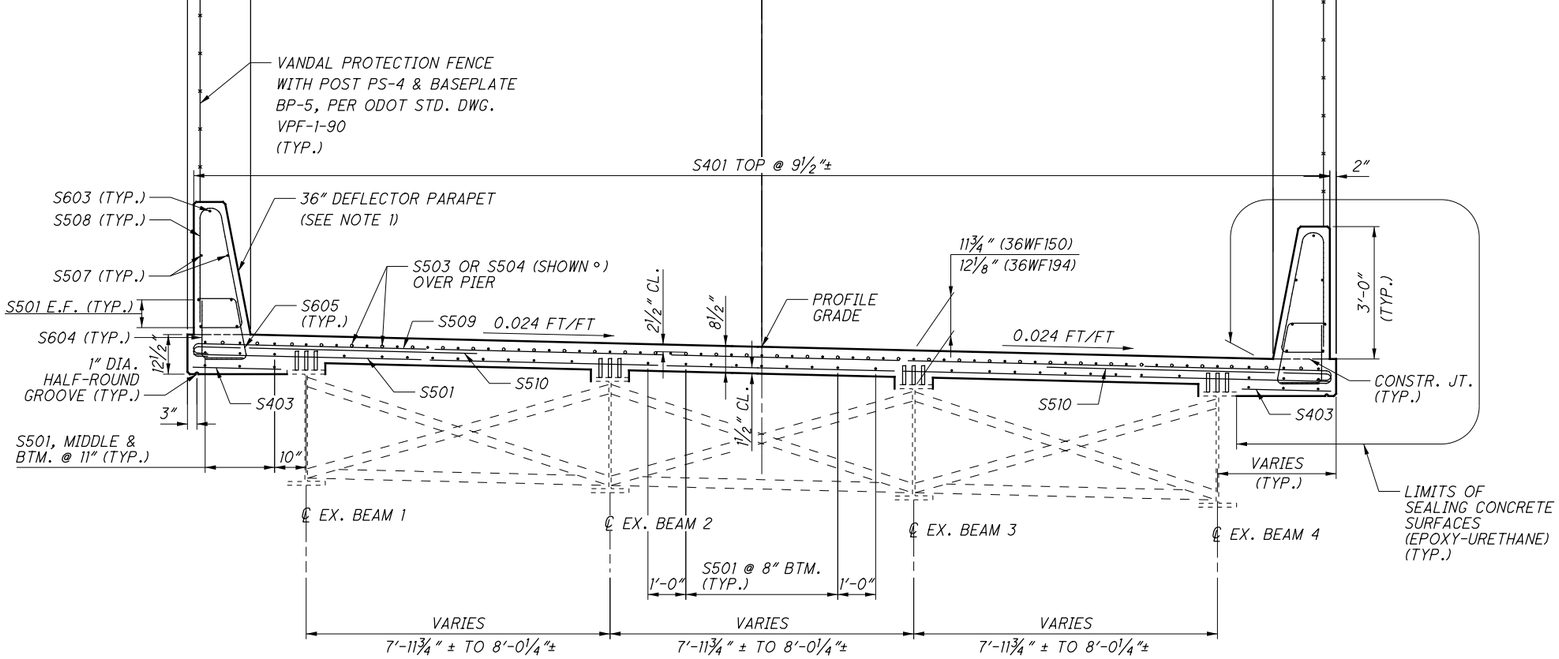
BEARING DETAILS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654



DECK PLAN

LAP LENGTHS:
NO. 4 BARS = 2'-0"
NO. 5 BARS = 2'-6"
NO. 6 BARS = 3'-0"



SECTION A-A

NOTES

1. FOR ADDITIONAL DETAILS ON PROPOSED PARAPET, SEE SHEET 17/20.
2. FOR DETAILS FOR SECTION X-X, SEE SHEET 18/20.
3. 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 3 5/16" ABOVE THE 36WF150 BEAMS AND 3⅝" ABOVE THE 36WF194 BEAMS AND A CONSTANT HAUNCH WIDTH EQUAL TO THE THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

   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

■ - MEASURED ALONG OUTSIDE FACE OF PARAPET

DESIGN AGENCY
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11687 Lebanon Road
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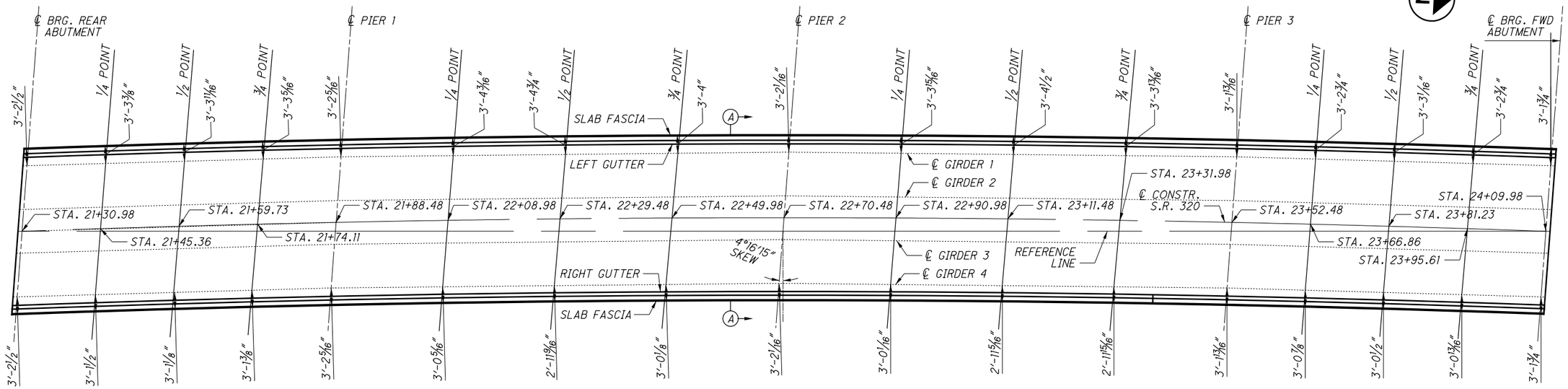
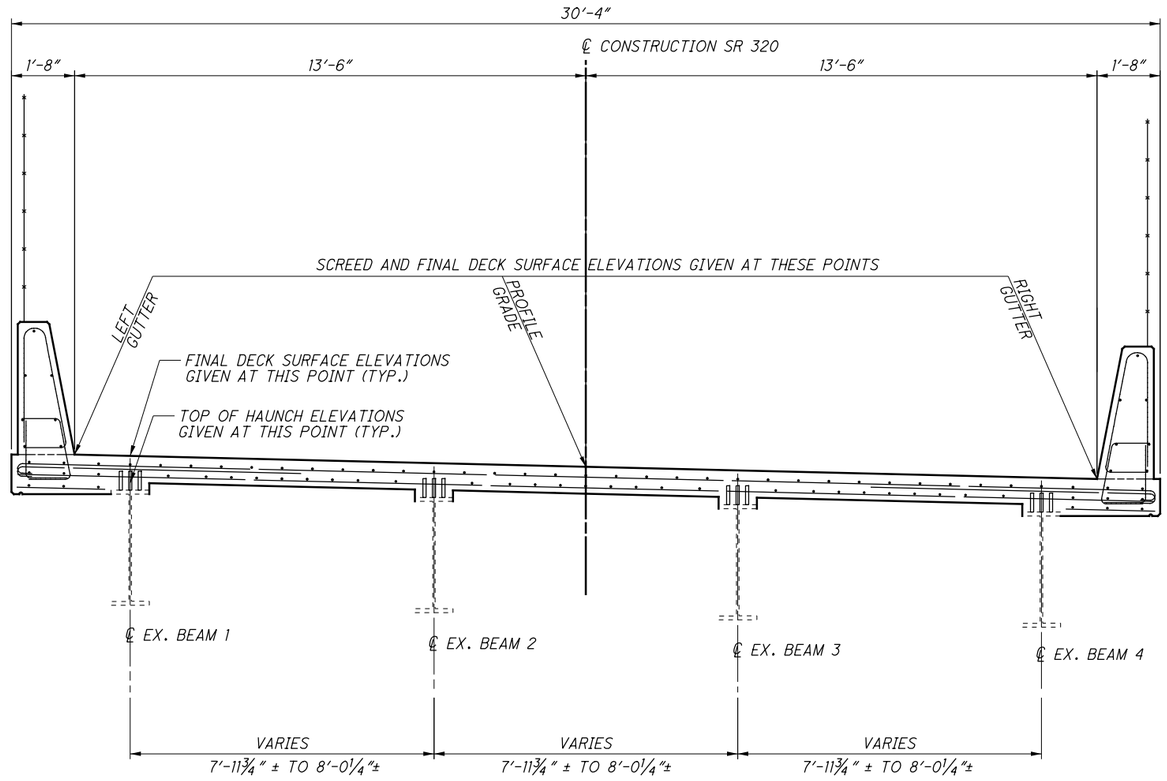
MRS		6803180	

SUPERSTRUCTURE DETAILS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654



PLAN VIEW



SECTION A-A

NOTES

FOR SCREED, TOP OF HAUNCH AND FINAL DECK ELEVATIONS, SEE SHEET 16/20.

DESIGN AGENCY
Stantec
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DESIGNED	DRAWN	REVIEWED	DATE
KAE	KAE	EER	10/25/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		6803180	

DECK ELEVATION DIAGRAM
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654

15 / 20

112 / 147

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DECK ELEVATIONS

LOCATION	SPAN 1				SPAN 2				SPAN 3				SPAN 4				
	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING
	STATION 21+30.98	STATION 21+45.36	STATION 21+59.73	STATION 21+74.11	STATION 21+88.48	STATION 22+08.98	STATION 22+29.48	STATION 22+49.98	STATION 22+70.48	STATION 22+90.98	STATION 23+11.48	STATION 23+31.98	STATION 23+52.48	STATION 23+66.86	STATION 23+81.23	STATION 23+95.61	STATION 24+09.98
LEFT GUTTER	1184.85	1184.78	1184.69	1184.58	1184.45	1184.23	1183.97	1183.66	1183.32	1182.93	1182.51	1182.04	1181.54	1181.16	1180.76	1180.34	1179.90
BEAM 1	1184.82	1184.75	1184.65	1184.54	1184.41	1184.19	1183.93	1183.63	1183.28	1182.90	1182.47	1182.01	1181.50	1181.12	1180.72	1180.30	1179.86
BEAM 2	1184.62	1184.55	1184.46	1184.35	1184.22	1184.00	1183.74	1183.43	1183.09	1182.71	1182.28	1181.82	1181.31	1180.93	1180.53	1180.11	1179.67
PROFILE GRADE	1184.53	1184.46	1184.37	1184.26	1184.12	1183.90	1183.64	1183.34	1183.00	1182.61	1182.19	1181.72	1181.21	1180.83	1180.43	1180.01	1179.58
BEAM 3	1184.43	1184.36	1184.27	1184.16	1184.03	1183.81	1183.55	1183.24	1182.90	1182.51	1182.09	1181.62	1181.12	1180.74	1180.34	1179.92	1179.48
BEAM 4	1184.22	1184.17	1184.08	1183.97	1183.84	1183.62	1183.35	1183.05	1182.71	1182.32	1181.90	1181.43	1180.93	1180.55	1180.15	1179.73	1179.29
RIGHT GUTTER	1184.20	1184.13	1184.04	1183.93	1183.80	1183.58	1183.32	1183.01	1182.67	1182.29	1181.86	1181.40	1180.89	1180.51	1180.11	1179.69	1179.25

SCREED ELEVATIONS

LOCATION	SPAN 1				SPAN 2				SPAN 3				SPAN 4				
	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING
	STATION 21+30.98	STATION 21+45.36	STATION 21+59.73	STATION 21+74.11	STATION 21+88.48	STATION 22+08.98	STATION 22+29.48	STATION 22+49.98	STATION 22+70.48	STATION 22+90.98	STATION 23+11.48	STATION 23+31.98	STATION 23+52.48	STATION 23+66.86	STATION 23+81.23	STATION 23+95.61	STATION 24+09.98
LEFT GUTTER	1184.85	1184.80	1184.72	1184.59	1184.45	1184.24	1184.02	1183.69	1183.32	1182.96	1182.56	1182.05	1181.54	1181.17	1180.78	1180.36	1179.90
PROFILE GRADE	1184.53	1184.48	1184.39	1184.26	1184.12	1183.91	1183.70	1183.37	1183.00	1182.64	1182.24	1181.73	1181.21	1180.84	1180.46	1180.04	1179.58
RIGHT GUTTER	1184.20	1184.16	1184.07	1183.94	1183.80	1183.59	1183.37	1183.04	1182.67	1182.31	1181.92	1181.40	1180.89	1180.52	1180.14	1179.71	1179.25

TOP OF HAUNCH ELEVATIONS

LOCATION	SPAN 1				SPAN 2				SPAN 3				SPAN 4				
	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING
	STATION 21+30.98	STATION 21+45.36	STATION 21+59.73	STATION 21+74.11	STATION 21+88.48	STATION 22+08.98	STATION 22+29.48	STATION 22+49.98	STATION 22+70.48	STATION 22+90.98	STATION 23+11.48	STATION 23+31.98	STATION 23+52.48	STATION 23+66.86	STATION 23+81.23	STATION 23+95.61	STATION 24+09.98
BEAM 1	1184.11	1184.06	1183.97	1183.84	1183.70	1183.49	1183.28	1182.95	1182.57	1182.22	1181.82	1181.31	1180.79	1180.42	1180.04	1179.62	1179.15
BEAM 2	1183.92	1183.87	1183.78	1183.65	1183.51	1183.30	1183.08	1182.75	1182.38	1182.03	1181.63	1181.12	1180.60	1180.23	1179.85	1179.43	1178.96
BEAM 3	1183.72	1183.68	1183.59	1183.46	1183.32	1183.11	1182.89	1182.56	1182.19	1181.83	1181.44	1180.92	1180.41	1180.04	1179.65	1179.23	1178.77
BEAM 4	1183.53	1183.48	1183.39	1183.27	1183.13	1182.92	1182.70	1182.37	1182.00	1181.64	1181.24	1180.73	1180.22	1179.85	1179.46	1179.04	1178.58

NOTES

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
2. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
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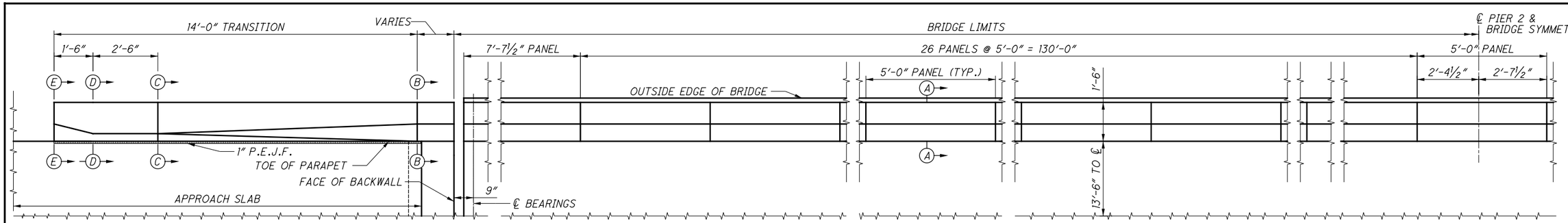
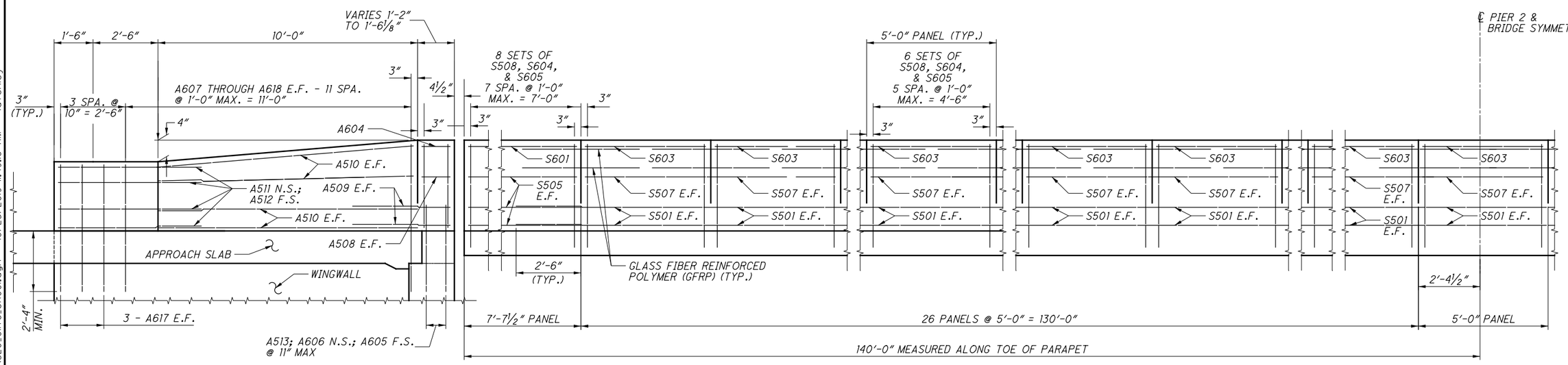
REVIEWED EER DATE 10/25/19
STRUCTURE FILE NUMBER 6803180
DRAWN KAE REVISED
DESIGNED KAE CHECKED MRS

SCREED ELEVATIONS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

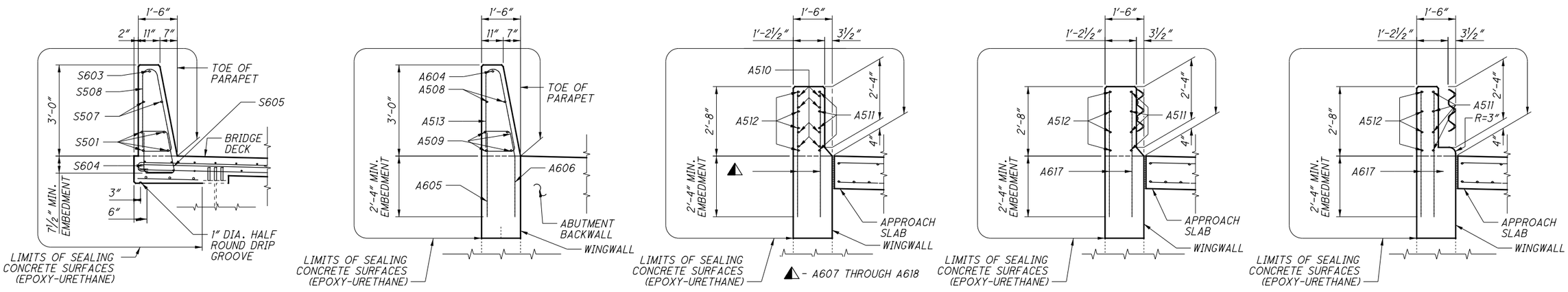
PRE-70-0.00
PID No. 96654



PARAPET PLAN VIEW



PARAPET ELEVATION VIEW



SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

NOTES:

1. FOR ADDITOINAL PARPET DETAILS, SEE ODOT STD DWG SBR-1-13.

DESIGN AGENCY
Stantec
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KAE	KAE	EER	10/25/19
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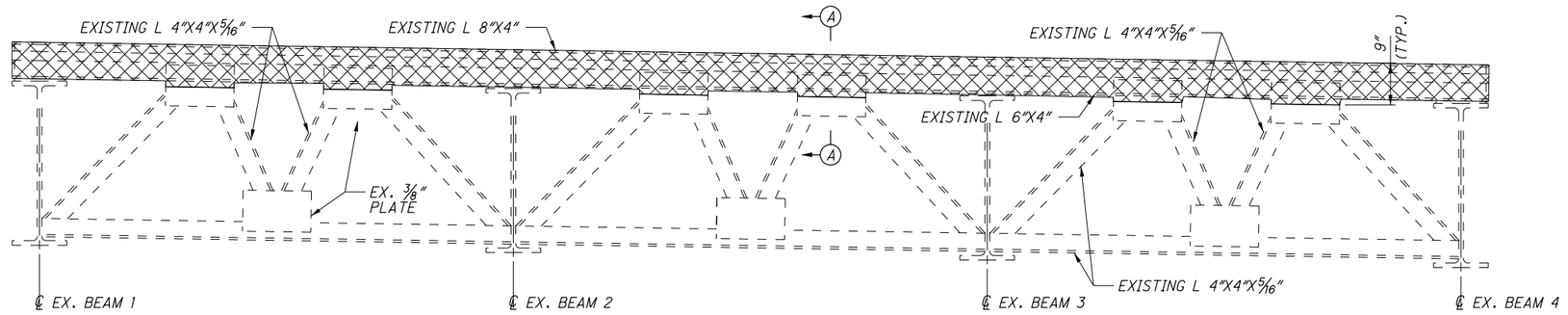
MRS		6803180	

PARAPET PLAN AND DETAILS

BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

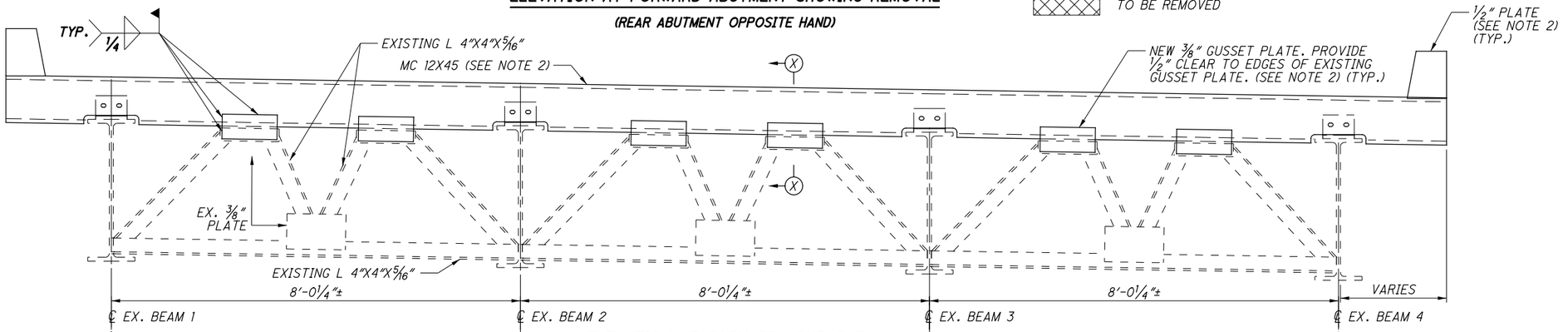
PRE-70-0.00
PID No. 99654



ELEVATION AT FORWARD ABUTMENT SHOWING REMOVAL

(REAR ABUTMENT OPPOSITE HAND)

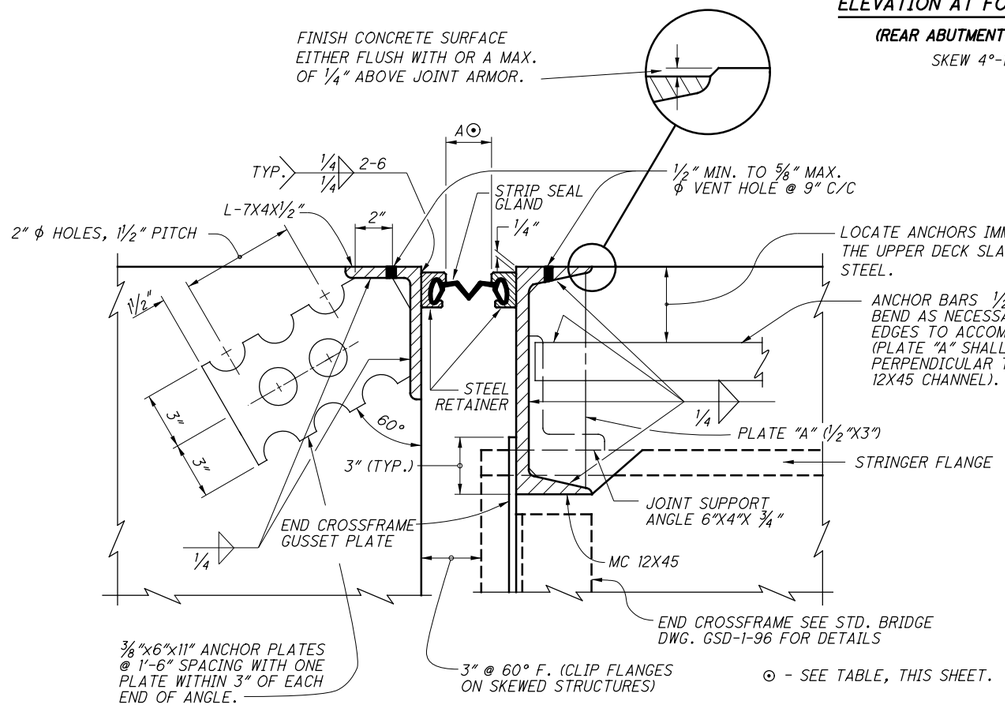
DENOTES PORTION OF STRUCTURE TO BE REMOVED



ELEVATION AT FORWARD ABUTMENT

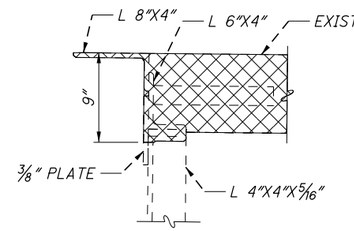
(REAR ABUTMENT OPPOSITE HAND)

SKEW 4°-16'-15"± L.F.



SECTION X-X

JOINT DIMENSIONS FOR 3" STRIP SEAL GLAND		
	DIM. "A" @ ABUT.	
TEMPERATURE	REAR	FORWARD
30°	1 7/8"	1 7/8"
40°	1 11/16"	1 11/16"
50°	1 3/4"	1 3/4"
60°	1 5/8"	1 5/8"
70°	1 7/16"	1 7/16"
80°	1 3/8"	1 3/8"
90°	1 3/16"	1 3/16"



SECTION A-A

NOTES

1. FOR ADDITIONAL EXPANSION JOINT DETAILS, SEE STD. DWG. EXJ-4-87.
2. INCLUDED WITH ITEM 516 STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL.

DESIGN AGENCY
Stantec
1687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-9200

DESIGNED	DRAWN	REVIEWED	DATE
KAE	KAE	EER	10/25/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		6803180	

EXPANSION JOINT DETAILS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654

18 / 20

115
147

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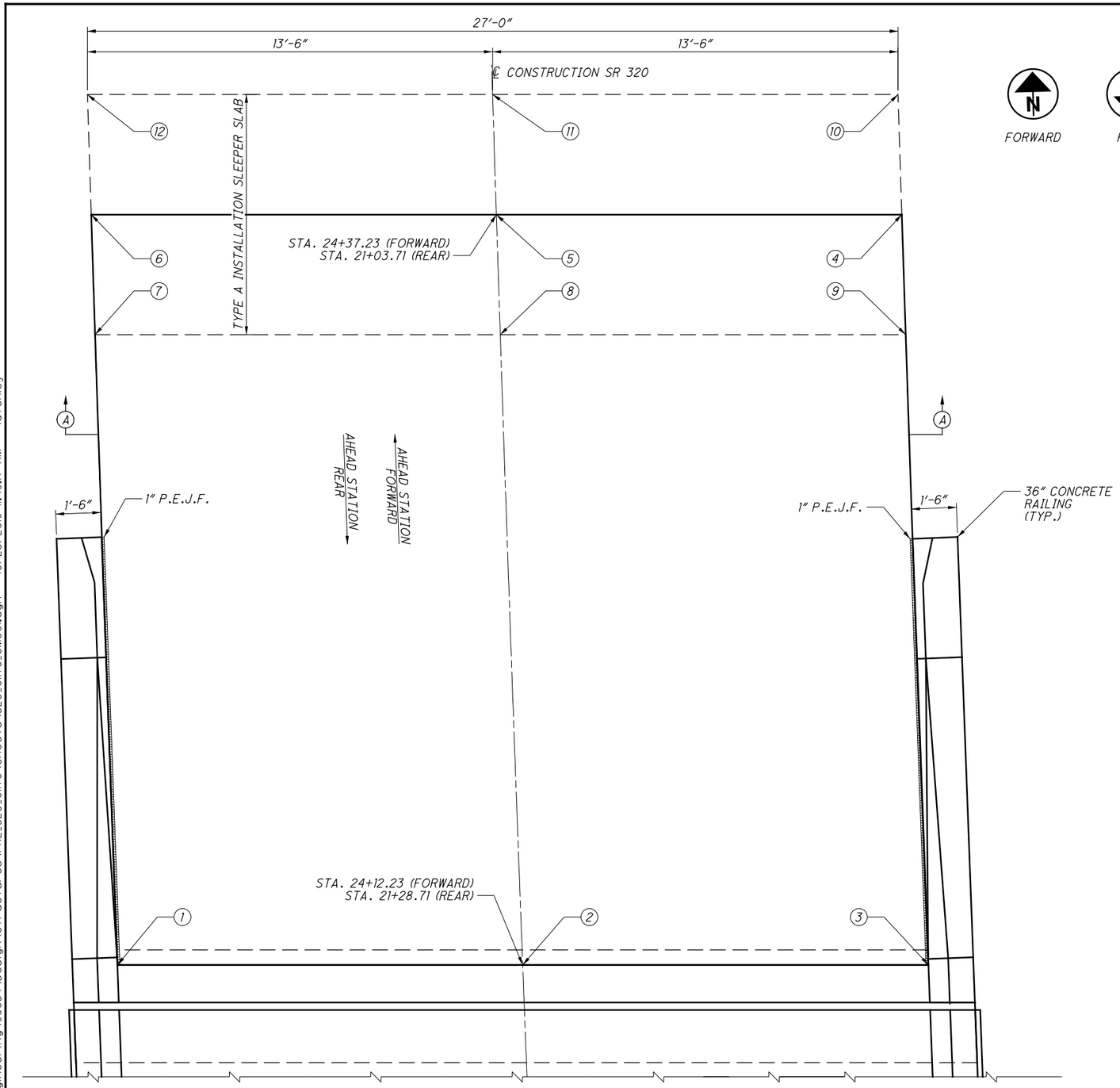


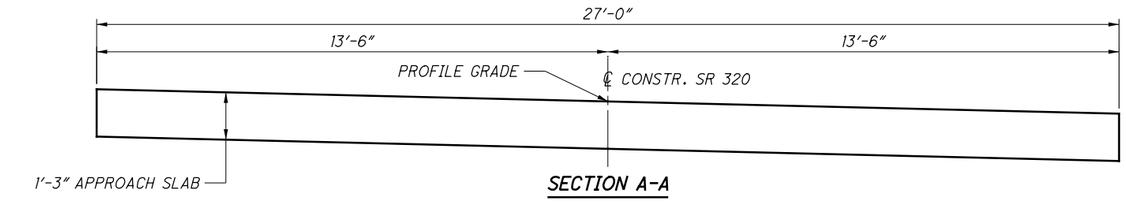
FORWARD

REAR

APPROACH SLAB

APPROACH SLAB SURFACE ELEVATIONS		
ELEVATION	REAR	FORWARD
1	1184.22	1178.83
2	1184.54	1179.51
3	1184.86	1178.18
4	1184.89	1178.35
5	1184.56	1178.68
6	1184.24	1179.00

SLEEPER SLAB SURFACE ELEVATIONS		
ELEVATION	REAR	FORWARD
7	1182.99	1177.88
8	1183.32	1177.56
9	1183.64	1177.23
10	1183.62	1176.94
11	1183.30	1177.27
12	1182.98	1177.59



SECTION A-A

NOTES

1. FOR ADDITIONAL INFORMATION, SEE STD. DWG AS-1-15 AND AS-2-15.
2. FOR CONCRETE RAILING INFORMATION, SEE SHEET 17/20.

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DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
KAE	KAE	EER	10/25/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		6803180	

APPROACH SLAB DETAILS
BRIDGE NO. PRE-320-0117
SR 320 OVER I-70

PRE-70-0.00
PID No. 96654

19/20

116
147

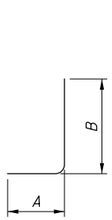
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	333	30'-0"	6673	STR							
S402	37	27'-11"	690	STR							
S403	642	2'-4"	1001	STR							
S501	1072	30'-0"	33543	STR							
S502	39	32'-5"	1319	STR							
S503	72	37'-6"	2816	STR							
S504	36	41'-6"	1558	STR							
S505	24	7'-1"	177	STR							
S506	NOT USED										
S507	212	4'-8"	1032	STR							
S508	640	6'-4"	4227	23	0'-11"	2'-9"	2'-6"			0'-3"	
S509	641	31'-2"	20837	17	30'-0"						
S510	1282	8'-1"	10808	16	7'-6"						
S601	4	7'-1"	43	STR							
S602	NOT USED										
S603	106	4'-8"	743	STR							
S604	640	2'-5"	2323	1	1'-0"	1'-7"					
S605	640	3'-3"	3124	28	1'-7"	1'-0"					
		SUB-TOTAL	90914								
ABUTMENT											
A501	12	29'-10"	373	STR							
A502	8	12'-3"	102	STR							
A503	40	14'-10"	619	STR							
A504	64	6'-0"	401	STR							
A505	64	5'-5"	362	STR							
A506	24	17'-0"	426	STR							
A507	20	29'-10"	622	STR							
A508	8	0'-8"	6	STR							
A509	16	3'-6"	58	STR							
A510	32	9'-10"	328	STR							
A511	16	5'-9"	96	25	1'-10"	2'-5"	1'-5"	0'-1 1/2"	0'-5"		
A512	16	5'-8"	95	STR							
A513	8	6'-4"	53	23	0'-11"	2'-9"	2'-6"			0'-3"	
A514	62	4'-6"	291	2	2'-0"	0'-9"	2'-0"				
A515	62	12'-8"	819	3	1'-5"	4'-7"					
A601	60	5'-7"	503	2	1'-3"	3'-5"	1'-3"				
A602	76	3'-6"	400	1	1'-3"	2'-5"					
A603	NOT USED										

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENT (CONTINUED)											
A604	4	0'-8"	4	STR							
A605	8	3'-3"	39	STR							
A606	8	4'-1"	49	13	2'-4"	0'-11"	0'-2"	0'-11"			
A607	8	5'-2"	62	STR							
A608	8	5'-1 1/2"	62	STR							
A609	8	5'-1"	61	STR							
A610	8	5'-0 1/2"	61	STR							
A611	8	5'-0"	60	STR							
A612	8	4'-11 1/2"	60	STR							
A613	8	4'-11"	59	STR							
A614	8	4'-10 1/2"	59	STR							
A615	8	4'-10"	58	STR							
A616	8	4'-9 1/2"	58	STR							
A617	8	4'-9"	57	STR							
A618	8	4'-8 1/2"	57	STR							
		SUB-TOTAL	6360								
PIER											
P501	42	14'-10"	650	STR							
P502	15	11'-4"	177	STR							
P601	78	5'-4"	625	2	1'-6"	2'-8"	1'-6"				
P602	90	3'-7"	484	1	1'-0"	2'-9"					
		SUB-TOTAL	1936								

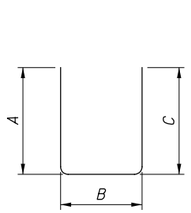
NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE S601 IS A NO. 6 BAR. BAR DIMENTIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

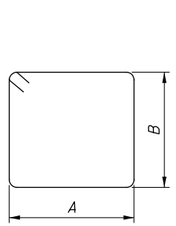
2. ALL REINFORCING STEEL TO BE EPOXY COATED.



TYPE-1



TYPE-2



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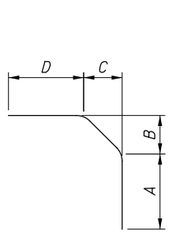

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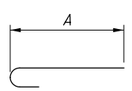

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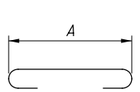

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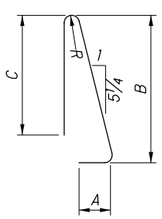

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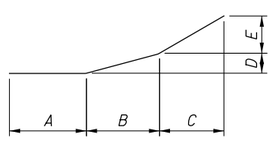

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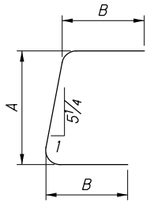


TYPE-28

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED KAE | DRAWN KAE | REVIEWED EER | DATE 10/25/19

CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 6803180

REINFORCING STEEL LIST

BRIDGE NO. PRE-320-0117

SR 320 OVER I-70

PRE-70-0.00

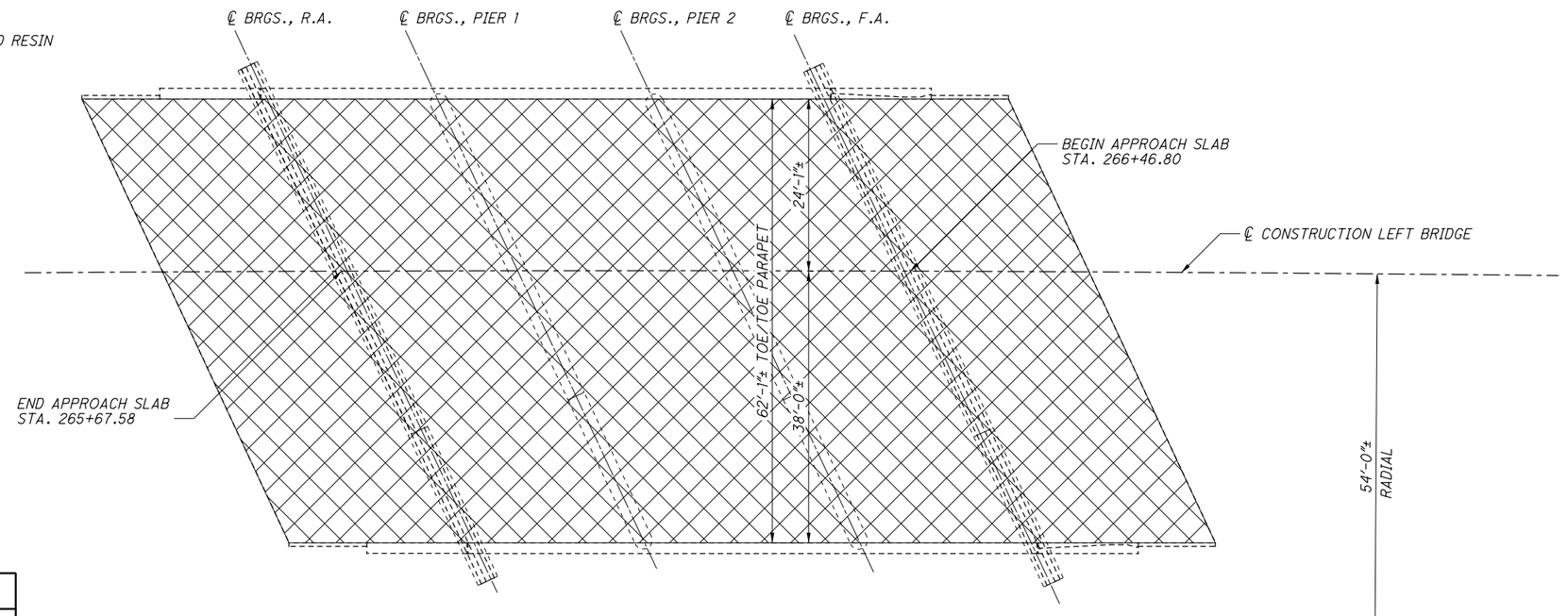
PID No. 96654

20/20

117/147

LEGEND

AREA TO BE SEALED WITH GRAVITY FED RESIN



EXISTING STRUCTURE

TYPE: 3 SPAN CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE
SPANS: 24'-0"±, 30'-0"±, 24'-0"± C/C BRGS.
ROADWAY: 62'-1"± TOE/TOE PARAPET
LOADING: HS20-44 WITH ALTERNATE MILITARY
WEARING SURFACE: 1" MONOLITHIC CONCRETE
SKEW: 25°00'00"± R.F.
APPROACH SLABS: 25'-0"± (AS-1-81)
ALIGNMENT: 0°28'± CURVE RIGHT (BRIDGE TANGENT)
CROWN: 0.0156±
STRUCTURAL FILE NUMBER: 6800904/6800939
DATE BUILT: 1964 (WIDENED 2001)
DISPOSITION: TO BE REHABILITATED

PROPOSED WORK

1. CONSTRUCT ABUTMENT SUPPORT FOR THE FORWARD ABUTMENT OF THE LEFT BRIDGE. REPAIR THE SPALLS ON THE ABUTMENT FACE OF THE RIGHT FORWARD, AND LEFT REAR ABUTMENTS WITH TROWELABLE MORTAR. REPAIR THE SPALLS AT THE RIGHT REAR ABUTMENT WITH 519 PATCHING. WINGWALL REPAIRS INCLUDE PATCHING AND REPLACEMENT.
2. REPLACE ALL JOINT SEALS BETWEEN DECKS AND APPROACH SLABS.
3. EPOXY INJECT CRACKS ON APPROACH SLABS AND DECKS.
4. SEAL DECKS AND APPROACH SLABS WITH GRAVITY FED RESIN.

PLAN

DESIGN AGENCY
CARPENTER MARTY transportation
6812 SINGLETREE DR. COLUMBUS, OH 43229
ARCHITECTS / CONSULTANTS

DESIGNED	DRAWN	REVIEWED	DATE
AMR	AMR	WHM	4-29-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
STK		6800904/6800939	

GENERAL PLAN
BRIDGE NO. PRE-70-0504L/R
I.R. 70 OVER SEVEN MILE CREEK

PRE-70-0.00
PID No. 96654

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

843 DATED 10-18-19

DESIGN SPECIFICATIONS:
THE PROPOSED STRUCTURE WORK CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:
CONCRETE QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

SELF CONSOLIDATING CONCRETE - COMPRESSIVE STRENGTH 4000 PSI

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

STRUCTURAL STEEL - ASTM A709 GRADE 36 - YIELD STRENGTH 36,000 PSI

DECK PROTECTION METHOD:
TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN

EXISTING STRUCTURE VERIFICATION:
DETAILS AND DIMENSIONS SHOWN ON 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 REFERRED 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.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, 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. 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. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. 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 CMS501.05.

CUT LINE 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.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY ALL REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

ALSO INCLUDED FOR PAYMENT WITH THIS ITEM IS THE REMOVAL AND REATTACHMENT OF THE EXISTING FENCE AT THE APPROPRIATE ABUTMENT LOCATIONS.

ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN:

IN ADDITION TO THE SPECIFICATION REQUIREMENTS, PROTECT BY MASKING OR OTHER MEANS THE EXISTING RAISED PAVEMENT MARKERS, EXPANSION JOINTS, AND PARAPETS LOCATED WITHIN THE PROPOSED SEALING LIMITS SO THAT NO RESIN IS DEPOSITED ON THEIR SURFACES DURING APPLICATION AND CURING TIMES. REMOVE THE PROTECTION PRIOR TO ALLOWING TRAFFIC ON THE TREATED SURFACE.

ALL EXISTING PAVEMENT MARKINGS SHALL BE REMOVED IN THE PROJECT AREA PRIOR TO PLACEMENT OF RESIN. THE CONTRACTOR SHALL ONLY USE SAND, SHOT, OR WATER BLASTING TO REMOVE MARKINGS ON CONCRETE PAVEMENT SURFACES.

ITEM 516 - SPECIAL - SAWING AND SEALING CONCRETE JOINTS

WORK SEQUENCE:

A. REMOVE EXISTING JOINT SEAL.
B. SAWCUT IF NECESSARY TO OBTAIN A GAP THAT IS 1" WIDE X 2" DEEP.
C. FILL ANY CRACKS BELOW 2" WITH BACKER ROD, CAULK, OR SPRAY FOAM.
D. CLEAN JOINT WITH COMPRESSED AIR. ODOT ENGINEER TO INSPECT CAVITY TO INSURE IT IS DRY, FREE OF LOOSE MATERIAL, AND 2" DEEP PRIOR TO PLACING SEALER.
E. PLACE JOINT SEALER.

MATERIALS:

THE JOINT SEALANT SHALL MEET THE REQUIREMENTS OF ITEM 705.04, JOINT SEALANTS, HOT-POURED, FOR CONCRETE AND ASPHALT PAVEMENTS. ACCEPTABLE ALTERNATE MATERIALS ARE:

A SILICONE SEALANT MEETING FEDERAL SPECIFICATIONS TT-S-001543A CLASS A (ONE-PART SILICONE SEALANTS) AND TT-S-00230C CLASS A (ONE-COMPONENT SEALANTS), SUCH AS THOSE MANUFACTURED BY GENERAL ELECTRIC, SILICONE PRODUCTS DIVISION, 4015 EXECUTIVE PARK DRIVE, CINCINNATI OHIO 45242 (513-243-1953) OR DOW CORNING, 400 TECHNE CENTER, SUITE 103, MILFORD, OHIO 45150 (513-831-3586); OR SOF-SEAL, A COLD-APPLIED, LOW-MODULUS, TWO-COMPONENT POLYMERIC COMPOUND HORIZONTAL SEALANT AS MANUFACTURED BY W.R. MEADOWS, INC., P.O. BOX 543, ELGIN, ILLINOIS 60121 (800-342-5976)

CONSTRUCTION DETAILS:

GENERAL: THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO THAT THE CUTTING, CLEANING AND SEALING OF TRANSVERSE JOINTS IS A CONTINUOUS OPERATION. TRAFFIC SHALL NOT BE ALLOWED TO KNEAD TOGETHER OR DAMAGE JOINT CUT PRIOR TO SEALING.

CUTTING OF TRANSVERSE JOINTS: THE CONTRACTOR SHALL SAW OR ROUT TRANSVERSE JOINTS TO THE DIMENSIONS SPECIFIED. THE BLADE OR BLADES SHALL BE OF SUCH SIZE THAT THE FULL WIDTH AND DEPTH OF THE CUT CAN BE MADE WITH ONE PASS. DRY OR WET CUTTING WILL BE ALLOWED. JOINTS SHALL EXTEND THE FULL WIDTH OF THE BRIDGE.

CLEANING JOINTS: DRY SAWED JOINTS SHALL BE THOROUGHLY CLEANED WITH A SUFFICIENT AMOUNT OF COMPRESSED AIR TO REMOVE ANY DIRT, DUST, OR DELETERIOUS MATTER. WET SAWED JOINTS SHALL BE WASHED CLEAN OF ALL CUTTINGS BY FLUSHING WITH A JET OF WATER AND WITH OTHER TOOLS AS NECESSARY. AFTER FLUSHING, THE JOINT SHALL BE BLOWN OUT WITH COMPRESSED AIR. WHEN THE SURFACES ARE THOROUGHLY CLEAN AND DRY, AND JUST PRIOR TO PLACING THE JOINT SEALER, COMPRESSED AIR HAVING A PRESSURE OF AT LEAST 90 P.S.I. SHALL BE USED TO BLOW OUT THE JOINT AND REMOVE ALL TRACES OF DUST. IN THE EVENT FRESHLY CUT JOINTS BECOME CONTAMINATED BEFORE THEY ARE SEALED, THEY SHALL BE RECLEANED OF ALL FOREIGN MATERIAL BY HIGH PRESSURE WATER JET.

SEALING JOINTS: THE JOINT SHALL BE THOROUGHLY DRY WHEN THE SEALANT IS PLACED.

HOT-POURED JOINT SEALANT MATERIAL SHALL BE HEATED IN A KETTLE OR MELTER CONSTRUCTED AS A DOUBLE BOILER, WITH SPACE BETWEEN THE INNER AND OUTER SHELLS FILLED WITH OIL OR OTHER HEAT TRANSFER MEDIUM. POSITIVE TEMPERATURE CONTROL AND MECHANICAL AGITATION SHALL BE PROVIDED.

HEATING MUST BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. JOINT SEALER MATERIAL SHALL NEVER BE KEPT HEATED AT THE POURING TEMPERATURE FOR MORE THAN FOUR HOURS AND SHALL NEVER BE REHEATED. SEALER LEFT IN THE APPLICATOR AT THE END OF A DAYS WORK SHALL NOT BE USED.

HOT-POURED SEALANT SHALL BE APPLIED IMMEDIATELY THROUGH A NOZZLE, WHICH MUST PROJECT INTO THE SAWED JOINT, FILLING FROM THE BOTTOM UP. THE SEALANT SHALL COMPLETELY FILL THE JOINT IN SUCH A MANNER THAT, AFTER COOLING, THE LEVEL OF THE SEALANT WILL NOT BE HIGHER THAN 1#8" BELOW THE PAVEMENT SURFACE. ANY DEPRESSION IN THE COOLED SEAL GREATER THAN 3#16" SHALL BE BROUGHT UP TO THE SPECIFIED LIMIT BY FURTHER ADDITION OF HOT-POURED SEALANT. CARE SHALL BE TAKEN IN SEALING OF THE JOINTS SO THAT THE FINAL APPEARANCE WILL PRESENT A NEAT FINE LINE.

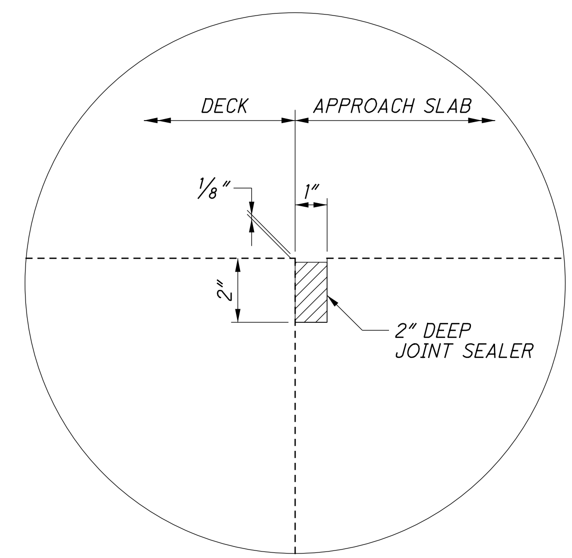
THE COLD APPLIED SEALANT MATERIALS (POLYURETHANE, SILICONE, AND POLYMERIC COMPOUNDS) SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. THE SEALANT SHALL BE INSTALLED WHEN THE AMBIENT TEMPERATURE IS 40 DEGREES F OR HIGHER. TRAFFIC SHALL NOT BE ALLOWED ON THE JOINT FOR ONE HOUR AFTER APPLICATION OF THE SEALANT.

METHOD OF MEASUREMENT:

THE QUANTITY TO BE PAID FOR UNDER THIS ITEM WILL BE THE NUMBER OF LINEAR FEET OF JOINTS SAWED AND SEALED AS PER THE ABOVE REQUIREMENTS.

BASIS OF PAYMENT:

THE UNIT PRICE PER LINEAR FOOT FOR ITEM SPECIAL, SAWING AND SEALING CONCRETE JOINTS, SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK, INCLUDING THE FURNISHING AND PLACEMENT OF THE JOINT SEALER MATERIAL.



JOINT SEAL DETAIL

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN:

PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR DOWEL HOLES AND GROUTING WITH ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN:

THIS ITEM INCLUDES THE WORK NECESSARY FOR INSTALLATION OF STEEL SLAB SUPPORTS. THIS SHALL BE COMPLETED AT THE LOCATIONS SPECIFIED IN THE PLANS.

STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE PROJECT ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED TO THE ENGINEER, IF REQUESTED, BY THE OFFICE OF STRUCTURAL ENGINEERING. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.06. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE OFFICE OF STRUCTURAL ENGINEERING FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE C&MS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIALS AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT FOR WELDING SHALL BE DEEMED TO BE INCLUDED FOR PAYMENT UNDER THIS ITEM. PAYMENT SHALL BE MADE AT A UNIT BID PRICE OF POUNDS.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE DEPARTMENT WILL NOT PAY FOR THE COST OF REQUIRED REPAIRS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES:

REMOVE THE EXISTING EPOXY-URETHANE SEALER FROM ALL ABUTMENT FACES.

ITEM 519 - PATCHING CONCRETE STRUCTURE, 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.

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.

DESIGN AGENCY
CARPENTER MARTY transportation

DESIGNED	DRAWN	REVIEWED	DATE
AMR	AMR	WHM	4-30-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
STK		6800904/6800939	

GENERAL NOTES
BRIDGE NO. PRE-70-0504L/R
I.R. 70 OVER SEVEN MILE CREEK

PRE-70-0.00
PID No. 96654

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ITEM 511 - CONCRETE, MISC.: CLASS QC1, SELF-CONSOLIDATING CONCRETE:
DEFINITION OF SELF-CONSOLIDATING CONCRETE (SCC): FLOWING CONCRETE THAT IS CAPABLE OF FILLING THE FORMWORK, SPREADING TO A LEVEL STATE WITHOUT SEGREGATION AND ENCAPSULATING THE REINFORCEMENT WITHOUT THE USE OF INTERNAL/EXTERNAL VIBRATORS OR MECHANICAL CONSOLIDATION.

SUBMITTALS
SUBMIT THE FOLLOWING BEFORE PLACING SCC:
1. MIX DESIGN AND PLACEMENT PROCEDURES
2. TRIAL BATCH TEST REPORT, INCLUDING TEST RESULTS FOR THE TESTS SPECIFIED IN THE SECTION ENTITLED "PREQUALIFICATION OF MIX DESIGN"
3. PROVIDE A MOCK-UP

QUALITY CONTROL AND ASSURANCE
PREPARE SCC SPECIMENS FOR COMPRESSIVE STRENGTH TESTING PER THE APPLICABLE ASTM C31, C39, C172, C192, C470, EXCEPT FABRICATE TEST SPECIMENS AS FOLLOWS:

1. PLACE THE TEST MOLDS ON A FIRM, FLAT SURFACE TO PREVENT DISTORTION OF THE BOTTOM SURFACE.
2. IF MORE THAN 1 SPECIMEN IS TO BE MADE FROM THE SAME BATCH, MAKE ALL THE SPECIMENS SIMULTANEOUSLY.
3. FILL THE MOLD IN 1 LIFT, POURING THE CONCRETE FROM A LARGER CONTAINER.
4. PAT THE SIDES OF THE MOLD LIGHTLY BY HAND OR JIG BY ROCKING THE MOLD FROM SIDE TO SIDE.
5. STRIKE OFF THE SURFACE OF THE CONCRETE EVEN WITH THE TOP EDGE OF THE MOLD.
6. WIPE THE SIDES OF THE MOLD FREE OF EXCESS CONCRETE AND PRESS THE LID ON.

PREQUALIFICATION OF MIX DESIGN
PREQUALIFY THE SCC MIX DESIGN WITH A TRIAL BATCH USING THE SAME MATERIALS, MIX PROPORTIONS, MIXING EQUIPMENT, PROCEDURES, AND BATCH SIZE TO BE USED IN SCC PRODUCTION.
THE SCC TRIAL BATCH MUST COMPLY WITH THE REQUIREMENTS SHOWN IN THE FOLLOWING TABLE:

SCC MIX DESIGN REQUIREMENTS

PROPERTY	TEST	REQUIREMENT
SLUMP FLOW	ASTM C 1611	AT LEAST 20 INCHES
FLOW RATE, T50	ASTM C 1611	2 - 7 SECONDS
VISUAL STABILITY INDEX	ASTM C 1611	1 OR LESS
J-RING FLOW	ASTM C 1621	THE DIFFERENCE BETWEEN J-RING FLOW AND SLUMP FLOW MUST NOT EXCEED 2 INCHES
COLUMN SEGREGATION	ASTM C 1610	STATIC SEGREGATION MUST NOT EXCEED 15 PERCENT
BLEEDING	ASTM C 232	BLEEDING CAPACITY MUST NOT EXCEED 2.5 PERCENT
COMPRESSIVE STRENGTH	ASTM C 39	THE AVERAGE OF 5 TEST CYLINDERS MUST BE AT LEAST 600 PSI GREATER THAN THE STANDARD CLASS 'C' CONCRETE STRENGTH AT 7 DAYS
MIN. COMPRESSIVE STRENGTH	ASTM C 39	THE MINIMUM FOR AN INDIVIDUAL TEST CYLINDER MUST NOT BE LESS THAN THE STANDARD CLASS QC1 CONCRETE STRENGTH

MOCK-UP
CONSTRUCT A MOCK-UP BEFORE PLACING THE SCC.

THE MOCK-UP MUST DEMONSTRATE THAT THE SCC WILL:
1. FLOW FOR THE DISTANCE REQUIRED BY THE PROPOSED CONSTRUCTION PROCEDURE
2. COMPLETELY FILL THE FORMS
3. ENCAPSULATE THE REINFORCEMENT AND EMBEDMENTS

PREQUALIFY THE SCC MIX DESIGN BEFORE CONSTRUCTING THE MOCK-UP.

THE MOCK-UP FORMS MUST BE SIMILAR TO THOSE USED FOR THE PRODUCTION ELEMENTS. INCLUDE IN THE MOCK-UP THE CONCRETE, REINFORCEMENT, AND CONCRETE EMBEDMENTS SHOWN ON THE AUTHORIZED PLANS/SHOP DRAWINGS, EXCEPT THE REINFORCEMENT AND EMBEDMENTS MUST STOP 12 INCHES FROM BOTH LONGITUDINAL ENDS OF THE MOCK-UP.

THE MOCK-UP MUST SIMULATE THE FLOW OF CONCRETE FOR THE MAXIMUM DISTANCE ANTICIPATED DURING PRODUCTION OR FOR A MINIMUM OF 10 FEET IF THE ANTICIPATED FLOW TRAVEL IS LESS THAN 10 FEET.

PLACE THE SCC IN THE MOCK-UP IN THE ENGINEER'S PRESENCE.

TAKE A TEST SAMPLE OF AT LEAST 100 POUNDS OF CONCRETE FROM WITHIN THE FORMS AT THE DISCHARGE POINT AND AT THE POINT FARTHEST FROM THE DISCHARGE POINT. DETERMINE THE COARSE AGGREGATE CONTENT OF EACH TEST SAMPLE. THE COARSE AGGREGATE CONTENT OF THE TEST SAMPLES MUST NOT DIFFER FROM EACH OTHER BY MORE THAN 8 POUNDS OF AGGREGATE PER CUBIC FOOT OF CONCRETE.

SAW-CUT THE MOCK-UP FULL-DEPTH IN THE TRANSVERSE DIRECTION APPROXIMATELY 2 FEET FROM THE END OF THE POUR. VOIDS OR HONEYCOMBING IN THE SCC OR BETWEEN THE CONCRETE AND EMBEDDED ELEMENTS ARE NOT ACCEPTABLE.

IF THE ENGINEER REJECTS THE SCC PLACED IN THE MOCK-UP, CONSTRUCT ADDITIONAL MOCK-UPS UNTIL THE SCC IS ACCEPTED BY THE ENGINEER.

TEST SAMPLES AND TEST RESULTS FROM THE MOCK-UP
SUBMIT TEST RESULTS FOR SLUMP FLOW AND VISUAL STABILITY INDEX.
IF THE ENGINEER REJECTS THE SCC FOR SLUMP FLOW AND VISUAL STABILITY INDEX, MAKE CORRECTIVE CHANGES AND RESUBMIT THE SCC MIX DESIGN OR PLACEMENT PROCEDURES.
SUBMIT THE AGGREGATE GRADINGS AS AN INFORMATIONAL SUBMITTAL.

DISPOSE OF THE MOCK-UP.

FIELD QUALITY CONTROL

FINE AGGREGATE MOISTURE CONTENT
DETERMINE THE FINE AGGREGATE MOISTURE CONTENT FOR EACH BATCH OF SCC.

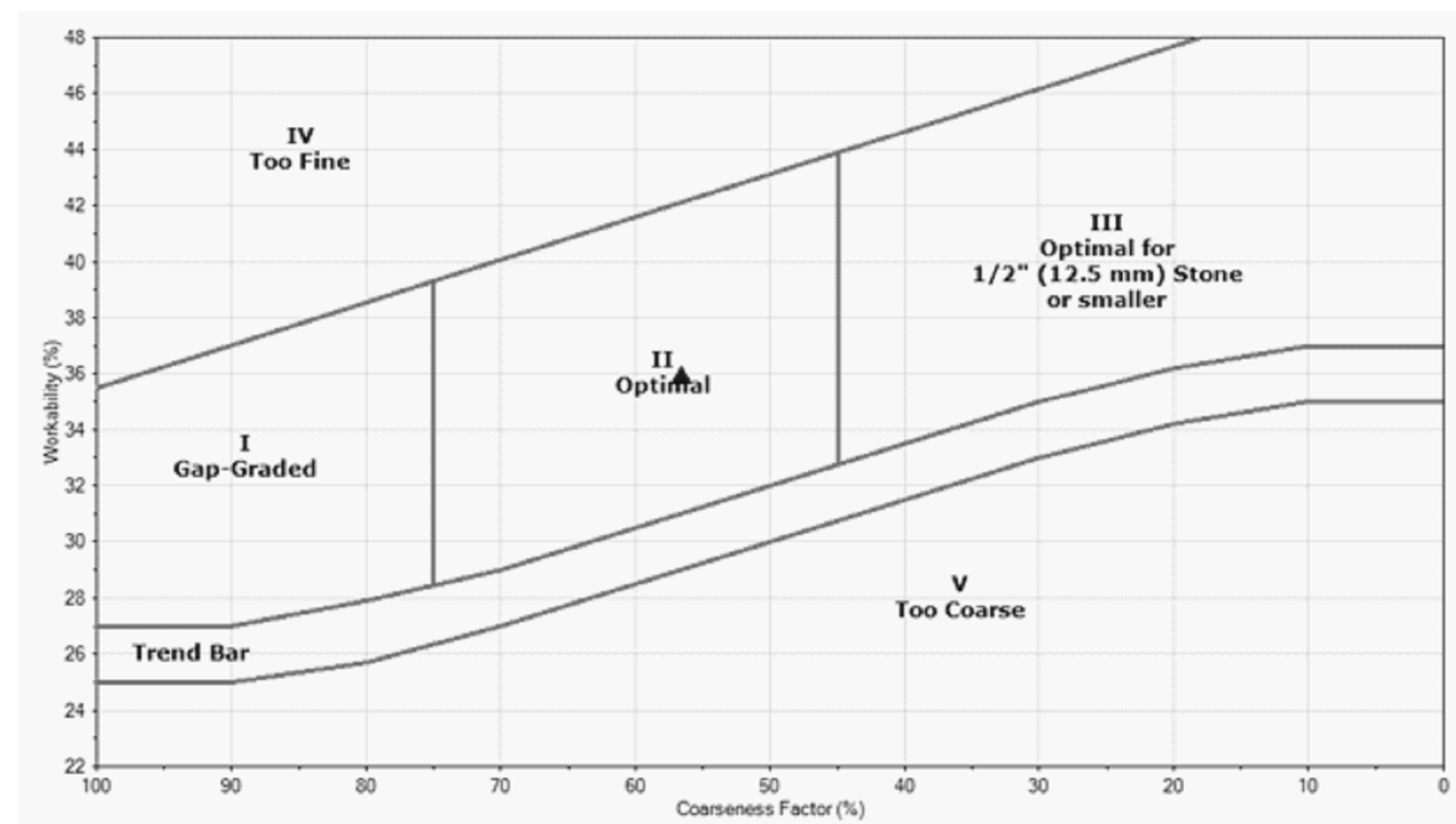
SLUMP FLOW AND VISUAL STABILITY INDEX
AT THE START OF SCC PLACEMENT AND WHENEVER A SET OF CONCRETE CYLINDERS IS PREPARED, DETERMINE THE SLUMP FLOW AND THE VISUAL STABILITY INDEX UNDER ASTM C 1611.

MATERIALS
PROVIDE AN SCC MIX WITH AGGREGATE GRADATIONS WITHIN ZONE II OF THE COARSENESS FACTOR CHART. INCREASING THE AMOUNT OF AN APPROVED CMS 705.12 (SCC) ADMIXTURE OF AN APPROVED JOB MIX FORMULA TO ACHIEVE THE DESIRED CONSISTENCY; RE-PROPORTIONING THE AGGREGATES WITHIN ZONE II; ADDING CEMENTITIOUS MATERIAL; AND INCLUDING A VISCOSITY MODIFYING ADMIXTURE (VMA) ARE ACCEPTABLE METHODS OF IMPROVING THE STABILITY OF THE MIX. A NEW MIX DESIGN IS NOT REQUIRED.

SLUMP REQUIREMENTS OF CMS TABLE 499.03-1 DO NOT APPLY.

ESTABLISH QUALITY CONTROL PROCEDURES IN THE QUALITY CONTROL PLAN FOR SCC CONCRETE. SET THE TARGET SLUMP FLOW FOR THE MIX AND MAINTAIN THE FLOW WITHIN ± 2 INCHES. VISUALLY INSPECT THE STABILITY OF THE MIX TO ENSURE THAT THERE IS NO AGGREGATE PILE IN THE MIDDLE OF, NOR MORTAR HALO IN EXCESS OF ½ INCH ON THE LEADING EDGE OF THE SLUMP FLOW TEST PILE. TEST THE SLUMP FLOW ACCORDING TO ASTM C1611.

GRADATION
PROVIDE A WELL-GRADED CONCRETE MIX BY MAINTAINING THE GRADATION OF THE COMBINATION OF AGGREGATES WITHIN ZONE II (OPTIMAL) OF THE COARSENESS FACTOR CHART (FIGURE 1) AS DEFINED IN THE COMPASS OR EQUAL SOFTWARE. USE A 1 INCH NOMINAL MAXIMUM SIZE AGGREGATE. ENSURE THAT THE DESIGN YIELD IS 27.0 CUBIC FEET.



CARPENTER MARTY transportation
DESIGN AGENCY

DESIGNED	DRAWN	REVIEWED	DATE
AMR	AMR	WHM	4-30-15
CHECKED STK	REVISED	STRUCTURE FILE NUMBER 6800904/6800939	

GENERAL NOTES
BRIDGE NO. PRE-70-0504L/R
I.R. 70 OVER SEVEN MILE CREEK

PRE-70-0.00
PID No. 96654

3/9

120/147

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USE THE FOLLOWING SIEVE SIZES TO DETERMINE THE GRADATION OF THE AGGREGATES:

1 1/2 INCH	# 8
1 INCH	# 16
3/4 INCH	# 30
1/2 INCH	# 50
3/8 INCH	# 100
#4	# 200

IN THE CHART:

WORKABILITY FACTOR (%) REFERS TO THE PERCENT OF THE COMBINED AGGREGATE THAT PASSES THE NO. 8 SIEVE. COARSENESS FACTOR (%) REFERS TO THE PERCENT OF THE COMBINED AGGREGATE THAT IS RETAINED ON THE NO. 8 SIEVE THAT IS ALSO RETAINED ON THE 3/8 IN. SIEVE. THE CHART IS BASED ON A CEMENT CONTENT OF 564 LBS /CUBIC YARD. ADJUST TO WORKABILITY PROPORTIONATELY AND DIRECTLY BY 2.5% PER 94 LBS. OF CEMENT WHEN USING EITHER LESS OR MORE.

THE MINIMUM ALLOWABLE SLUMP FLOW IS 20 INCHES. THE MAXIMUM ALLOWABLE SLUMP FLOW IS 24 INCHES. THE SLUMP FLOW MUST NOT VARY BY MORE THAN 3 INCHES FROM THE MIX DESIGN SLUMP FLOW.

THE VISUAL STABILITY INDEX MUST NOT EXCEED 1.

CONSTRUCTION

SSC SHALL BE PUMPED INTO THE FORMS FROM BELOW THE BRIDGE DECK. CORE DRILLING OF THE BRIDGE DECK TO ACCESS THE ABUTMENT FORMS SHALL NOT BE ALLOWED.

ENSURE THAT THE CONCRETE MIX DESIGN IS WORKABLE AND FINISHABLE DURING THE TRIAL PROCESS. WHEN THE MIX IS DETERMINED TO HAVE ISSUES RELATING TO WORKABILITY OR FINISHABILITY IN THE FIELD, THE DEPARTMENT MAY RESCIND THE MIX DESIGN ACCEPTANCE.

PAYMENT

ALL MATERIALS, LABOR, EQUIPMENT AND ANY MISCELLANEOUS APPURTENANCES REQUIRED TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER ITEM 511, CONCRETE, MISC.: CLASS QC1, SELF-CONSOLIDATING CONCRETE FOR PAYMENT.

REFERENCES

ACI 237R - SELF CONSOLIDATING CONCRETE

ASTM C 31 - MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD
ASTM C 39 - COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS
ASTM C 127 - STANDARD TEST METHOD FOR DENSITY, RELATIVE DENSITY (SPECIFIC GRAVITY), AND ABSORPTION OF COARSE AGGREGATE
ASTM C 128 - STANDARD TEST METHOD FOR DENSITY, RELATIVE DENSITY (SPECIFIC GRAVITY), AND ABSORPTION OF FINE AGGREGATE
ASTM C 172 - SAMPLING FRESHLY MIXED CONCRETE
ASTM C 192 - MAKING AND CURING CONCRETE TEST SPECIMENS IN THE LABORATORY
ASTM C 232 - STANDARD TEST METHODS FOR BLEEDING OF CONCRETE
ASTM C 470 - MOLDS FOR FORMING CONCRETE TEST CYLINDERS VERTICALLY
ASTM C 1610 - STANDARD TEST METHOD FOR STATIC SEGREGATION OF SELF-CONSOLIDATING CONCRETE USING COLUMN TECHNIQUE
ASTM C 1611 - STANDARD TEST METHOD FOR SLUMP FLOW OF SELF-CONSOLIDATING CONCRETE
ASTM C 1621 - STANDARD TEST METHOD FOR PASSING ABILITY OF SELF-CONSOLIDATING CONCRETE BY J-RING

ENVIRONMENTAL NOTES

IF PAINTING, WELDING, SAND AND/OR WATER BLASTING (CLEANING), HYDRO-DEMOLITION OR SEALING ANY PORTION OF THE BRIDGE STRUCTURES IS INCORPORATED AS PART OF THE PROJECT AT OR OVER A ROAD OR WATERWAY, THEN APPROPRIATE APRONS SHALL BE UTILIZED TO PROVIDE FOR COMPLETE CONTAINMENT OF ALL PAINT, WELDING SLAG AND/OR SEALANT OVER SPRAY AND OTHER DEBRIS. APRONS SHALL PREVENT DEBRIS, PAINT OVER SPRAY, AND SEALANTS FROM AFFECTING VEHICULAR/PEDESTRIAN TRAFFIC AND/OR PROTECTED AREAS.

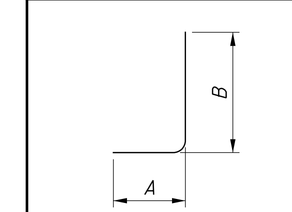
NO TOXIC OR HAZARDOUS MATERIAL SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTEWATER, FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO A SCENIC RIVER OR ANY TRIBUTARY WATER COURSES. ALL ASPHALT OR CONCRETE GRINDINGS, EXCESS ASPHALTIC OR CONCRETE MATERIALS OR ANY OTHER DEBRIS GENERATED DURING SEALING, RESURFACING OR OTHER BRIDGE/PAVEMENT ACTIVITIES SHALL BE REMOVED IMMEDIATELY AND DISPOSED OF AT AN APPROPRIATE FACILITY ABOVE THE FEMA 100 YEAR FLOOD ELEVATION AND NOT WITHIN 1000 FEET OF THE SCENIC RIVER OR TRIBUTARY.

NO IN-STREAM WORK WILL BE ALLOWED.

ESTIMATED QUANTITIES					DESIGN: AMR DATE: 4/24/15 PRE-70-0504L			CHECK: STK DATE: 4/24/15 PRE-70-0504R			SHEET #
ITEM	EXTENSION	TOTAL ①	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.	ABUT.	SUPER.	GEN.	
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS			LS	2
503	21300	LS	-	UNCLASSIFIED EXCAVATION	LS						
509	10000	400	LB	EPOXY COATED REINFORCING STEEL	366			34			
509	20001	262	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	242			20			2
510	10001	70	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	70						2
511	45710	7	CY	CLASS QC1 CONCRETE, ABUTMENT	6			1			
511	71100	2	CY	CONCRETE, MISC.: CLASS QC1, SELF-CONSOLIDATING CONCRETE	2						3, 4
512	10100	77	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	36			41			
512	10600	60	FT	CONCRETE REPAIR BY EPOXY INJECTION		15	35			10	
512	73501	1789	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN		549	345		550	345	2
512	74000	65	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	26			39			
513	21600	5217	LB	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN	5217						2
516	13600	8	SF	1" PREFORMED EXPANSION JOINT FILLER	3			5			
SPECIAL	51631250	274	FT	SAWING AND SEALING CONCRETE JOINTS		137			137		2
516	41100	10	EACH	1/8" PREFORMED BEARING PAD	10						
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN		LS					2
519	11101	78	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	6			72			2
843	50000	108	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	42			66			

① QUANTITIES PAID FOR UNDER PARTICIPATION SPLIT 02/IMS/BR

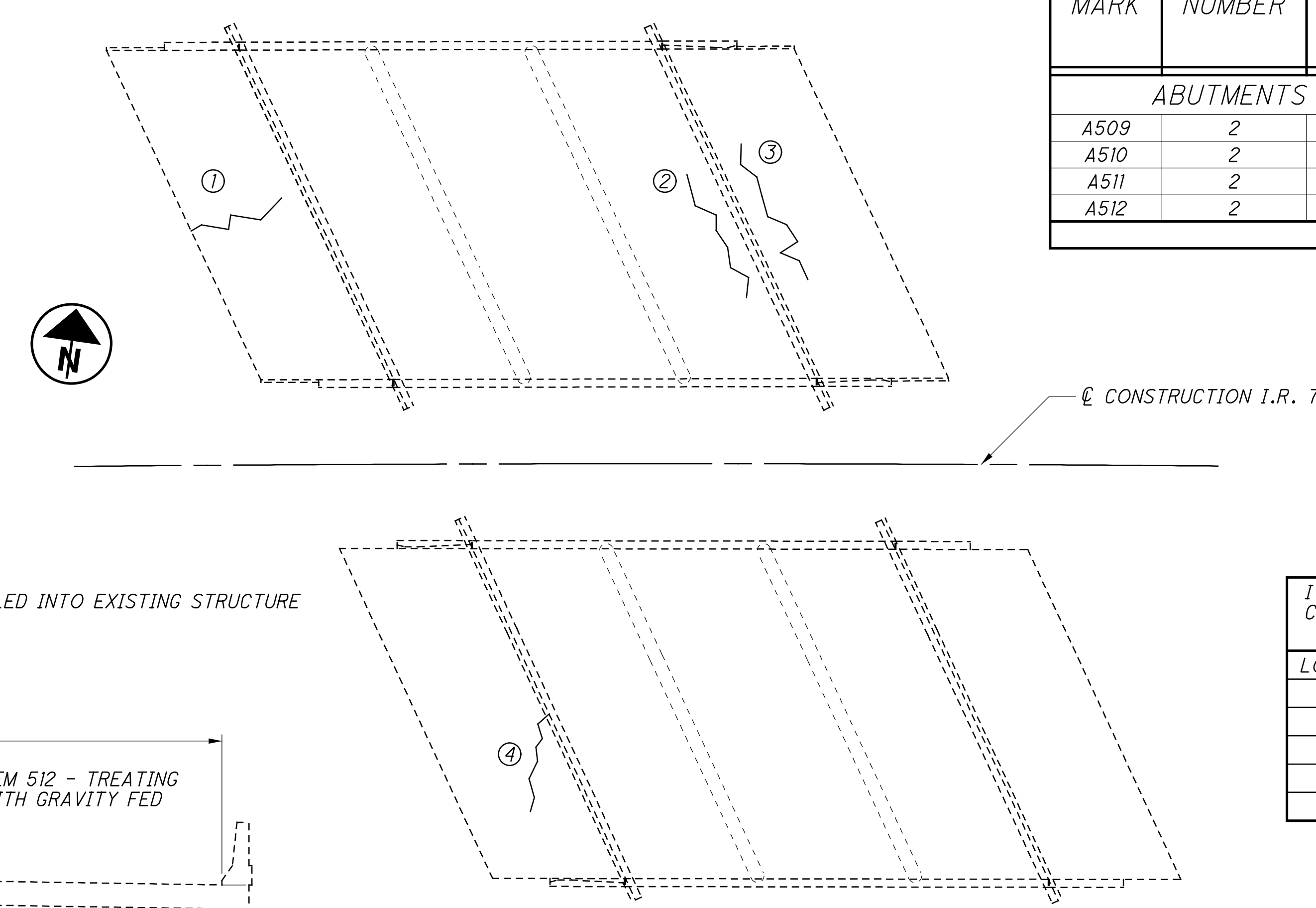
BENDING DIAGRAM



TYPE-1

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS A	DIMENSIONS B
ABUTMENTS (LEFT BRIDGE)						
A501	4	30'-0"	126	STR		
A502	2	15'-6"	33	STR		
A503#	9	2'-2"	21	1	1'-0"	1'-4"
A504#	8	2'-4"	20	1	1'-0"	1'-6"
A505#	14	2'-7"	38	1	1'-0"	1'-9"
A506#	16	2'-9"	46	1	1'-0"	1'-11"
A507#	15	2'-6"	40	1	1'-0"	1'-8"
A508#	8	2'-8"	23	1	1'-0"	1'-10"
A509	2	4'-0"	9	STR		
A510	2	4'-5"	10	STR		
		TOTAL	366			

MARK	NUMBER	LENGTH	WEIGHT	TYPE
ABUTMENTS (RIGHT BRIDGE)				
A509	2	4'-0"	9	STR
A510	2	4'-5"	10	STR
A511	2	3'-10"	8	STR
A512	2	3'-4"	7	STR
		TOTAL	34	



ITEM 519 - SPECIAL - CONCRETE REPAIR BY EPOXY INJECTION	
LOCATION	LENGTH
①	20'±
②	15'±
③	15'±
④	10'±
TOTAL	60'±

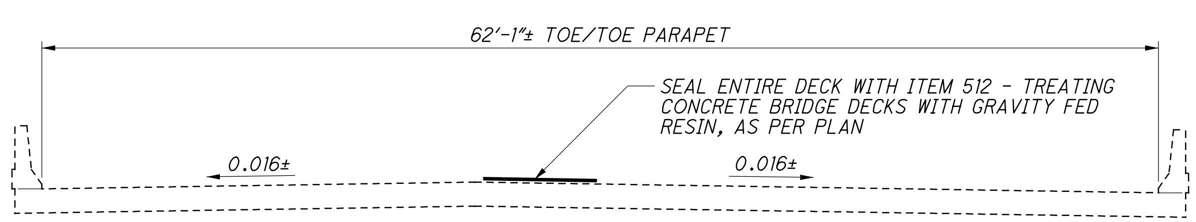
EPOXY INJECTION PLAN

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.

LEGEND

- BAR TO BE DOWELED INTO EXISTING STRUCTURE



TRANSVERSE SECTION
(FOR INFORMATION ONLY)

DESIGN AGENCY
CARPENTER MARTY transportation
6612 SINGLETREE DR. COLUMBUS, OH 43229
614.656.3424 CMTRAN.COM

DESIGNED AMR | CHECKED STK | DRAWN AMR | REVISED | REVIEWED WHM | DATE 4-30-15 | STRUCTURE FILE NUMBER 6800904/6800939

ESTIMATED QUANTITIES AND MISCELLANEOUS DETAILS
BRIDGE NO. PRE-70-0504L/R
I.R. 70 OVER SEVEN MILE CREEK

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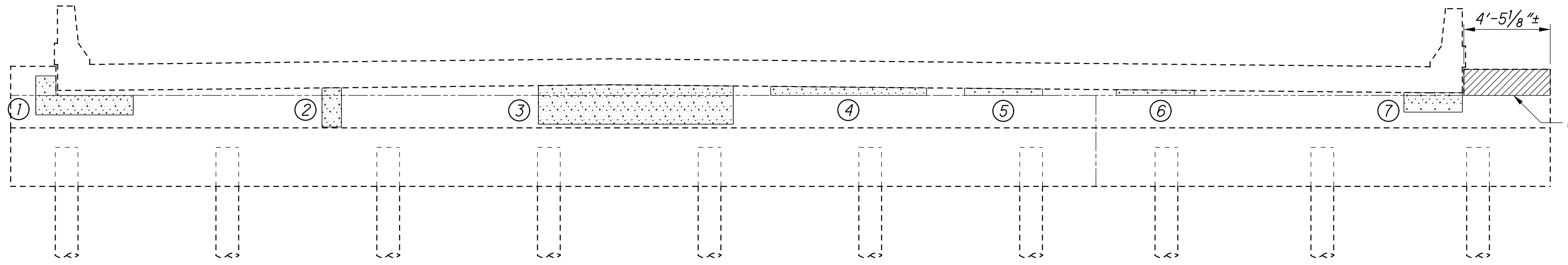
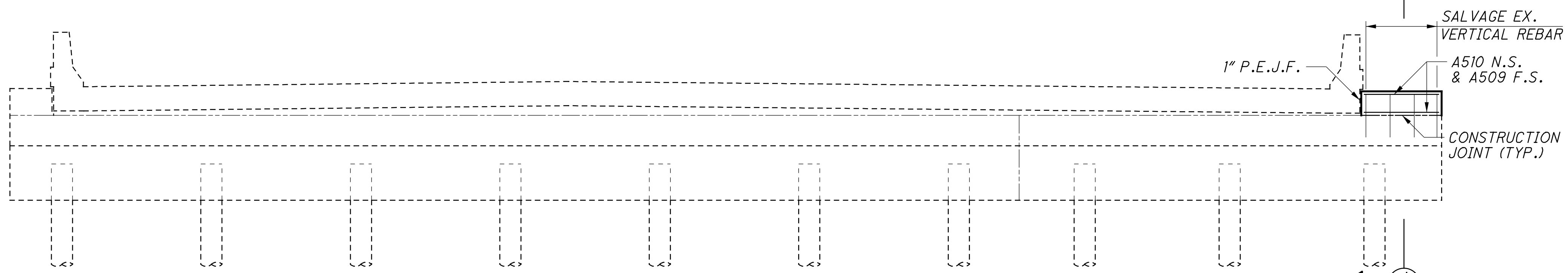
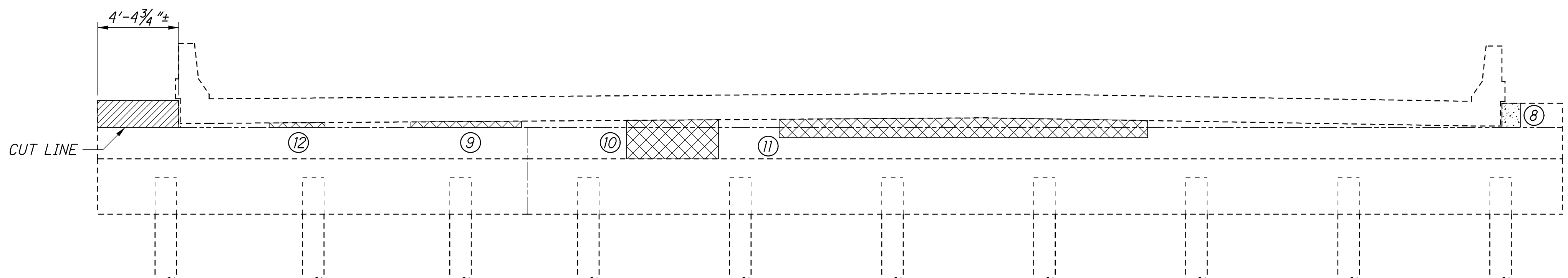


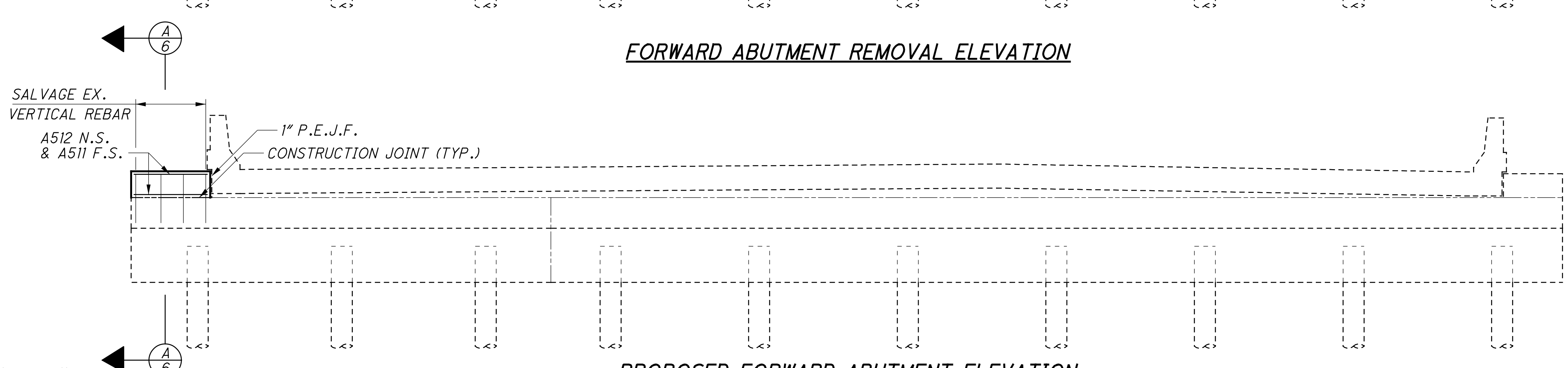
REAR ABUTMENT REMOVAL ELEVATION



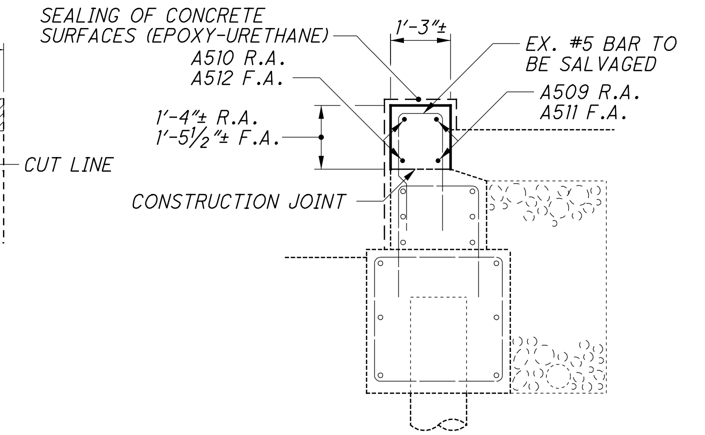
PROPOSED REAR ABUTMENT ELEVATION



FORWARD ABUTMENT REMOVAL ELEVATION



PROPOSED FORWARD ABUTMENT ELEVATION



A/6 SECTION

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MARCH OF 2015.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

LOCATION	MEASURED QUANTITY	ESTIMATED QUANTITY
1	5.0	7.5*
2	2.0	3.0*
3	20.0	30.0*
4	8.0	12.0*
5	4.0	6.0*
6	4.0	6.0*
7	3.0	4.5*
8	2.0	3.0*
TOTAL	48.0	72.0*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MARCH OF 2015.

EXACT DIMENSIONS AND LOCATIONS OF TROWELABLE MORTAR SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ESTIMATED TROWELABLE MORTAR QUANTITIES (SQ. FT.)

LOCATION	MEASURED QUANTITY	ESTIMATED QUANTITY
9	6.0	9.0*
10	15.0	22.5*
11	20.0	30.0*
12	3.0	4.5*
TOTAL	44.0	66.0*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

LEGEND

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN
- ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

N.S. - NEAR SIDE

F.S. - FAR SIDE

NOTES

1. AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY CUT THE VERTICAL REINFORCING STEEL AT THE CUT LINE AND USE DOWELS. THE CONTRACTOR WILL BE RESPONSIBLE FOR CALCULATING THE REQUIRED REINFORCING STEEL LENGTHS AND DOWEL EMBEDMENT DEPTHS.
2. WINGWALL CONCRETE SHALL BE CLASS QC1 AND INCLUDED FOR PAYMENT WITH ITEM 511 - CLASS QC1 CONCRETE, ABUTMENT.
3. ALL ABUTMENT FACES SHALL BE SEALED WITH EPOXY-URETHANE.

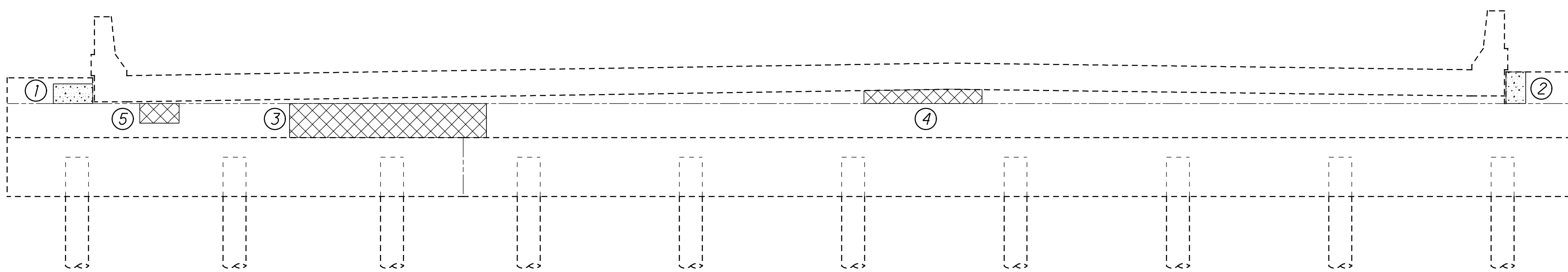
V:\1736\active\173620094\engineering\96654\Design\Structures\PRE_70_0504R\sheets\070_0504RRE001.dgn Sheet 10/25/2019 11:49:23 AM latchley

DESIGN AGENCY
CARPENTER MARTY transportation
6612 SINGLETREE DR. COLUMBUS, OH 43229
614.656.2424 CMTRAN.COM

DESIGNED AMR | CHECKED STK | DRAWN AMR | REVISED | REVIEWED WHM | DATE 4-30-15 | STRUCTURE FILE NUMBER 6800939

ABUTMENT DETAILS
BRIDGE NO. PRE-70-0504R
I.R. 70 OVER SEVEN MILE CREEK

PRE-70-0.00
PID No. 96654



REAR ABUTMENT ELEVATION

NOTE

ALL ABUTMENT FACES SHALL BE SEALED WITH EPOXY-URETHANE.

LEGEND

- ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

- ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MARCH OF 2015.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

LOCATION	MEASURED QUANTITY	ESTIMATED QUANTITY
1	2.0	3.0*
2	2.0	3.0*
TOTAL	4.0	6.0*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MARCH OF 2015.

EXACT DIMENSIONS AND LOCATIONS OF TROWELABLE MORTAR SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ESTIMATED TROWELABLE MORTAR QUANTITIES (SQ. FT.)

LOCATION	MEASURED QUANTITY	ESTIMATED QUANTITY
3	20.0	30.0*
4	6.0	9.0*
5	2.0	3.0*
TOTAL	28.0	42.0*

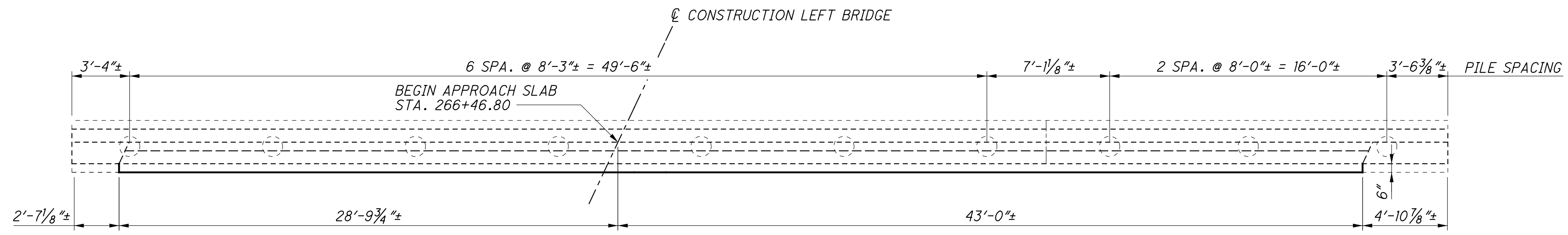
* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

DESIGN AGENCY
CARPENTER MARTY transportation

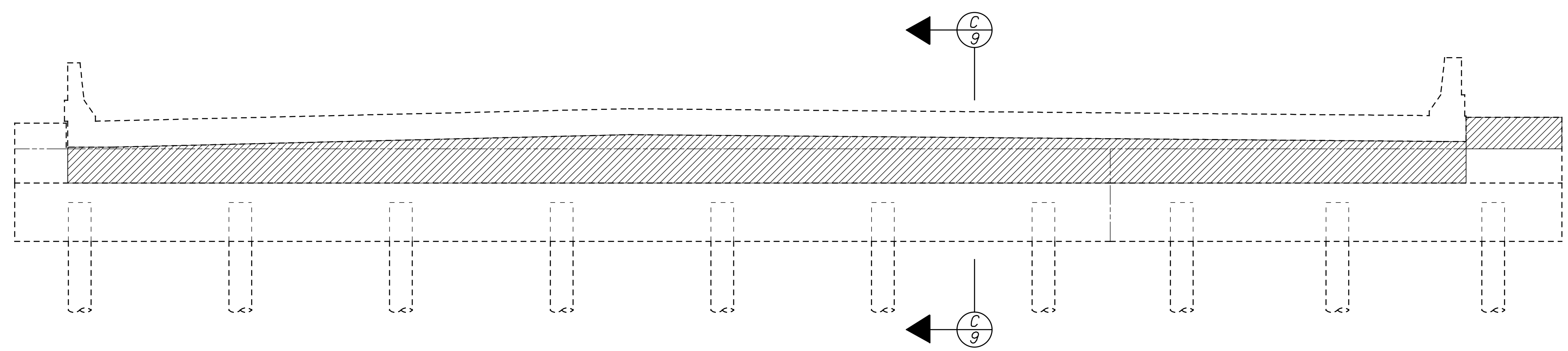
DESIGNED AMR | CHECKED STK | DRAWN AMR | REVISED | REVIEWED WHM | DATE 4-30-15 | STRUCTURE FILE NUMBER 6800904

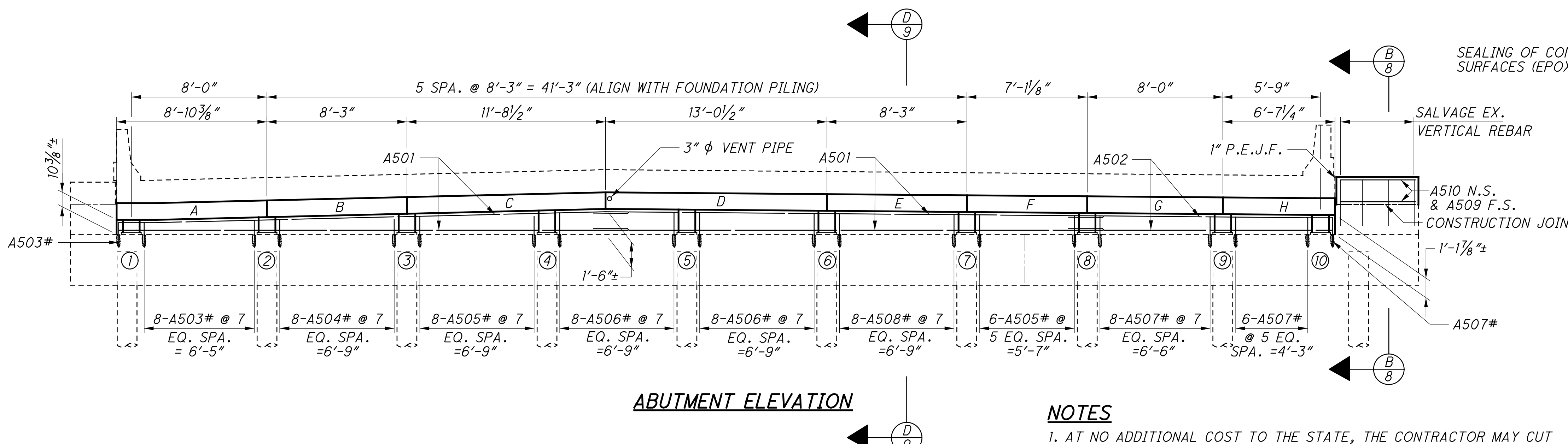
PATCHING DETAILS
BRIDGE NO. PRE-70-0504L
I.R. 70 OVER SEVEN MILE CREEK

PRE-70-0.00
PID No. 96654



PLAN





ABUTMENT ELEVATION

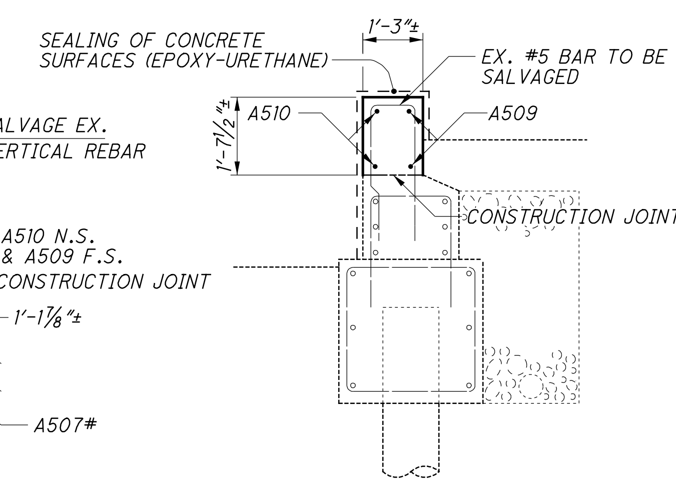
LEGEND

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

N.S. - NEAR SIDE

F.S. - FAR SIDE

- BAR TO BE DOWELED INTO EXISTING STRUCTURE



B/8 SECTION

APPROXIMATE EXISTING BOTTOM OF DECK TO TOP OF FOOTING DIMENSIONS (FOR ESTIMATING PURPOSES ONLY)										
LOCATION	1	2	3	4	5	6	7	8	9	10
HEIGHT *	1'-10⅛"	2'-0"	2'-2½"	2'-4⅞"	2'-5⅜"	2'-4½"	2'-3¾"	2'-3"	2'-2¼"	2'-1⅝"

* HEIGHTS SHALL BE CONSIDERED APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FORMING THE CONCRETE CAPS OR FABRICATION OF STEEL BEARING PEDESTALS. ANY ERRORS IN THE FABRICATION OF THE STEEL SUPPORTS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

NOTES

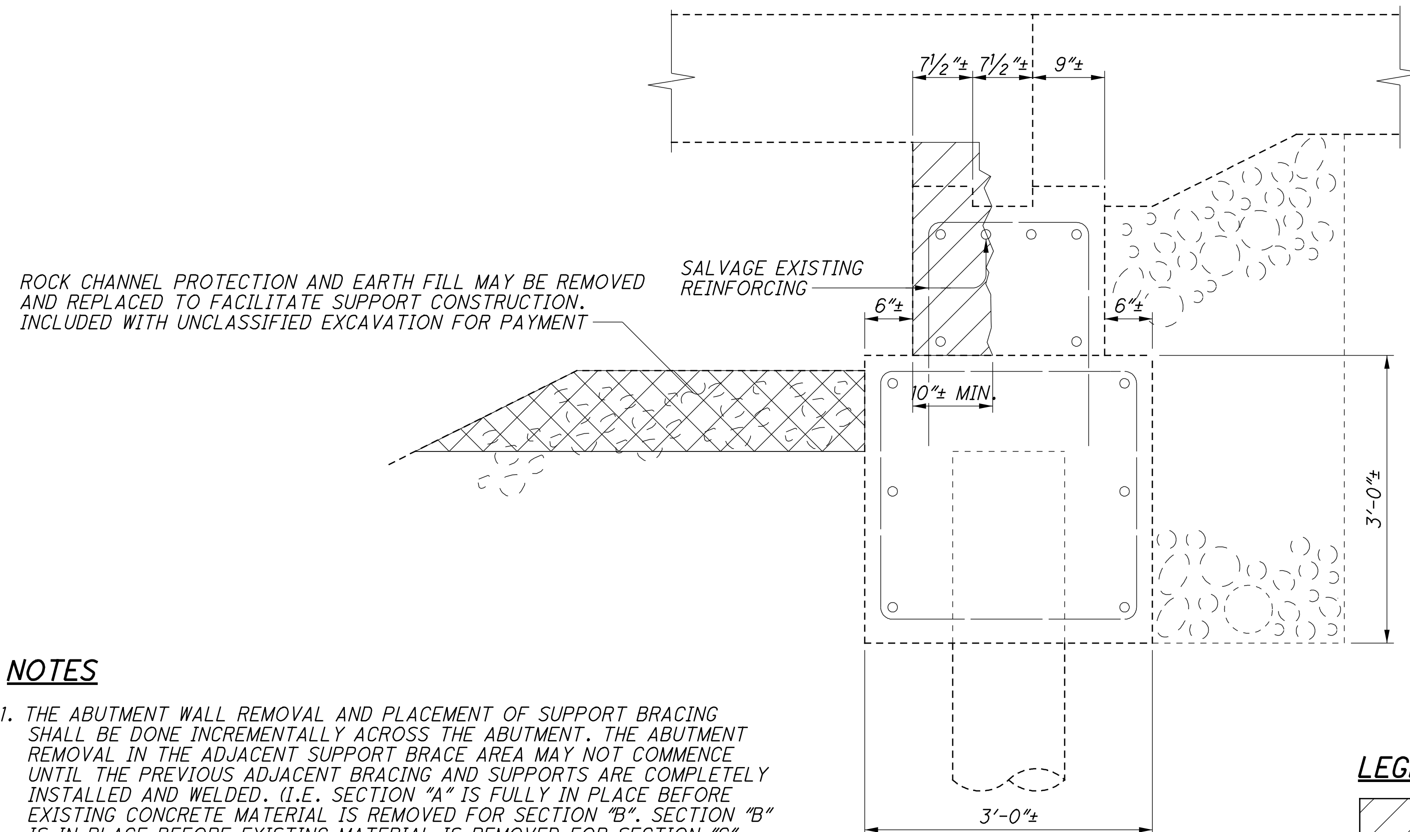
1. AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY CUT THE VERTICAL REINFORCING STEEL AT THE CUT LINE AND USE DOWELS. THE CONTRACTOR WILL BE RESPONSIBLE FOR CALCULATING THE REQUIRED REINFORCING STEEL LENGTHS AND DOWEL EMBEDMENT DEPTHS.
2. WINGWALL CONCRETE SHALL BE CLASS QC1 AND INCLUDED FOR PAYMENT WITH ITEM 511 - CLASS QC1 CONCRETE, ABUTMENT.
3. MINIMUM LAP LENGTH:
   #5 BAR = 24 INCHES
4. MINIMUM EMBEDMENT DEPTH OF #5 DOWEL BARS IS 8 INCHES.
5. CUT EXISTING VERTICAL REINFORCING AS NEEDED TO CLEAR HP SECTIONS.
6. ALL ABUTMENT FACES SHALL BE SEALED WITH EPOXY-URETHANE.

DESIGN AGENCY
CARPENTER MARTY transportation
6612 SINGLETREE DR. COLUMBUS, OH 43229
614.656.2424 CMTRAN.COM
REVIEWED WHM | DATE 4-30-15
STRUCTURE FILE NUMBER 6800904
DRAWN AMR | REVISED
DESIGNED AMR | CHECKED STK

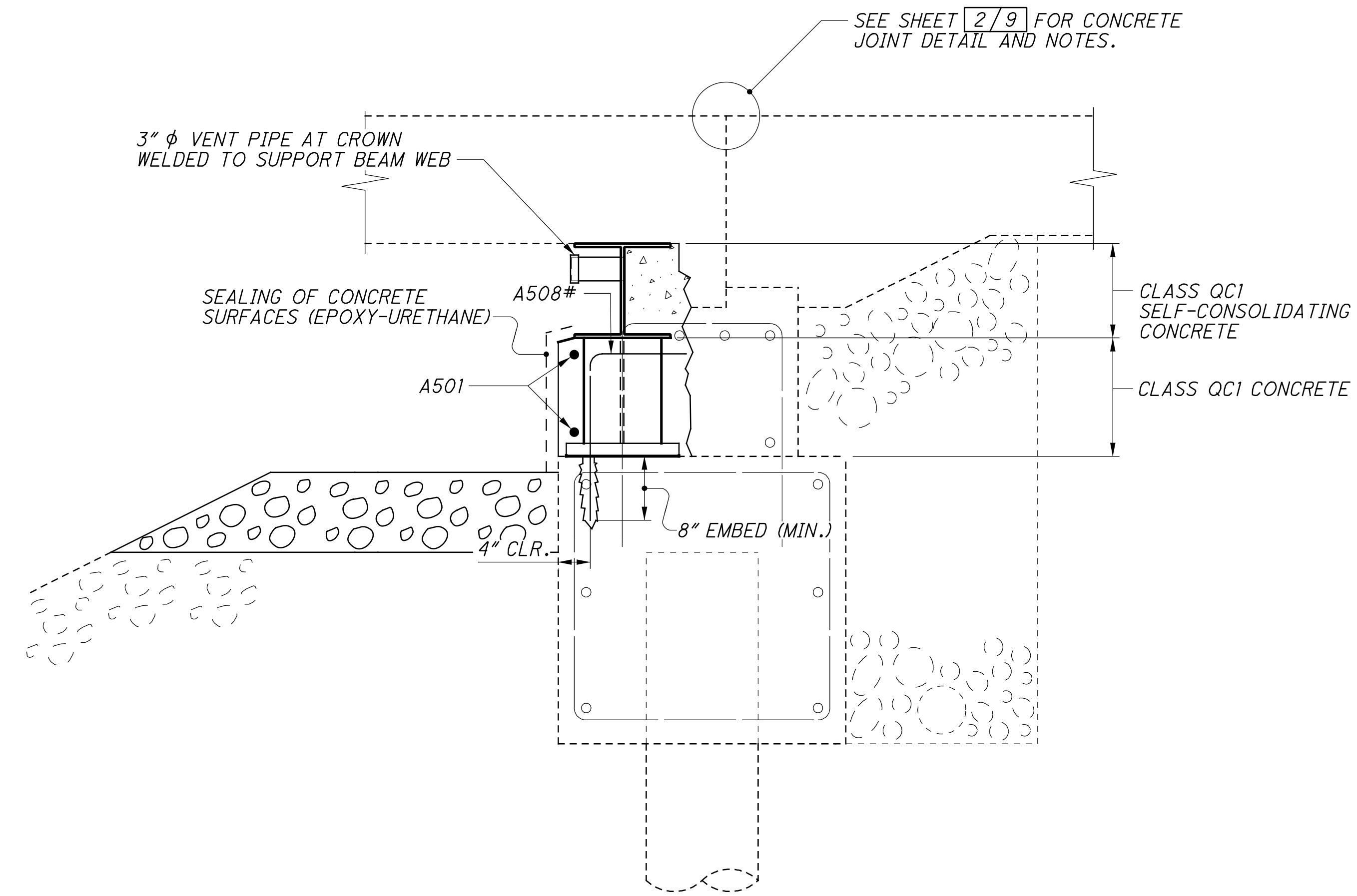
FORWARD ABUTMENT DETAILS

BRIDGE NO. PRE-70-0504L
I.R. 70 OVER SEVEN MILE CREEK

PRE-70-0.00
PID No. 96654



C/8 SECTION



D/8 SECTION

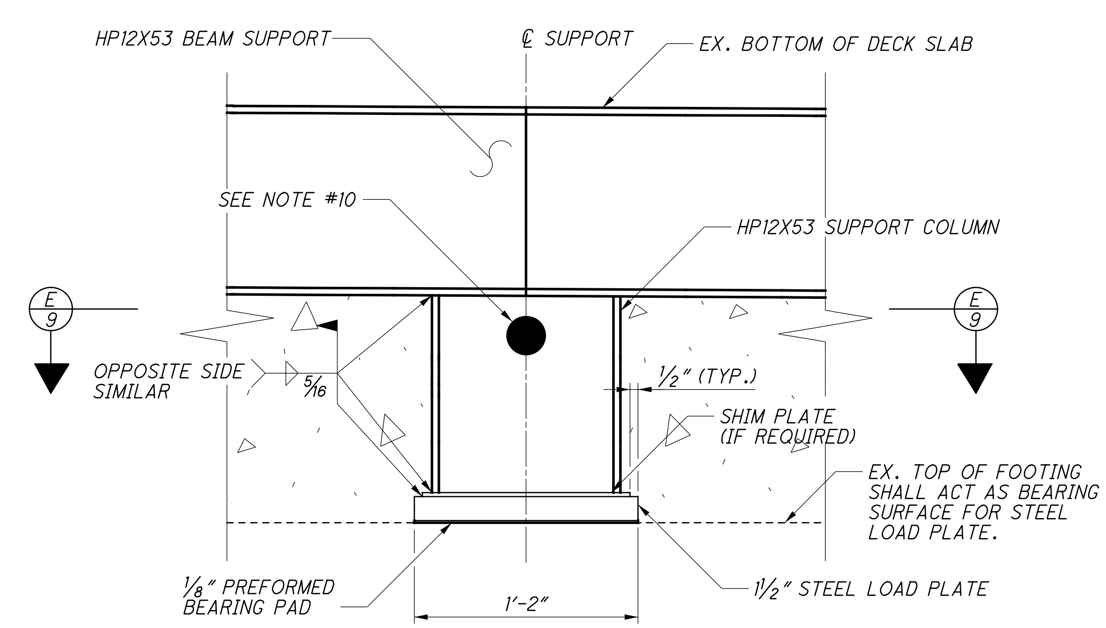
NOTES

1. THE ABUTMENT WALL REMOVAL AND PLACEMENT OF SUPPORT BRACING SHALL BE DONE INCREMENTALLY ACROSS THE ABUTMENT. THE ABUTMENT REMOVAL IN THE ADJACENT SUPPORT BRACE AREA MAY NOT COMMENCE UNTIL THE PREVIOUS ADJACENT BRACING AND SUPPORTS ARE COMPLETELY INSTALLED AND WELDED. (I.E. SECTION "A" IS FULLY IN PLACE BEFORE EXISTING CONCRETE MATERIAL IS REMOVED FOR SECTION "B". SECTION "B" IS IN PLACE BEFORE EXISTING MATERIAL IS REMOVED FOR SECTION "C" AND SO ON.) BRACING BEAM SECTION LENGTHS ARE APPROXIMATE. ADJUSTMENT OF THESE LENGTHS IS SUBJECT TO APPROVAL BY THE ENGINEER.
2. REMOVE AND REPLACE EXISTING ROCK CHANNEL PROTECTION AND EARTH FILL IN FRONT OF THE ABUTMENT AS NECESSARY TO REHABILITATE THE STEM WALL.
3. THE STEEL SUPPORT AND REBAR LENGTHS SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL REQUIRED STEEL AND REBAR LENGTHS PRIOR TO FABRICATION. BEVEL AT TOP OF COLUMN SUPPORTS TO ACCOMODATE DECK CROSS SLOPE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. CONCRETE FOR THE MODIFIED ABUTMENT SHALL BE CLASS QC1 FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE SUPPORT BEAM. THE CONTRACTOR MAY SUBSTITUTE SELF-CONSOLIDATING CONCRETE IN LIEU OF THE CLASS QC1 CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT. CONCRETE PLACED BEHIND THE SUPPORT BEAM SHALL BE SELF-CONSOLIDATING CONCRETE PUMPED INTO PLACE AND NON-VIBRATED TO ACHIEVE SOLID FILLING.
5. ALL HP SECTIONS SHALL BE A36 MINIMUM AND GALVANIZED PER CMS 711.02.
6. HP SECTIONS, LOAD PLATES AND ANY REQUIRED SHIMS SHALL BE INCLUDED WITH ITEM 513, STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN FOR PAYMENT.
7. CONTRACTOR SHALL SHIM BETWEEN THE STEEL LOAD PLATE AND HP COLUMN SUPPORT AS NECESSARY TO ENSURE A SNUG FIT BETWEEN THE DECK SLAB AND BEAM SUPPORT. ONE SHIM PLATE SHALL BE ALLOWED PER SUPPORT COLUMN. SHIM PLATES SHALL BE WELDED TO THE LOAD PLATE AND SUPPORT COLUMN.
8. THE CONTRACTOR SHALL SUBMIT A PROPOSED CONSTRUCTION SCHEDULE AND METHODOLOGY TO THE ENGINEER FOR APPROVAL AT LEAST 14 DAYS PRIOR TO THE START OF CONSTRUCTION.
9. THE 3" DIAMETER VENT PIPE WITH THREADED END CAP SHALL BE WELDED TO THE SUPPORT BEAM WEB. LOCATE THE VENT AS CLOSE AS POSSIBLE TO THE TOP FLANGE AT THE CROWN OF THE ROAD. PAYMENT FOR THE PIPE SHALL BE INCLUDED UNDER ITEM 513, STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN.
10. THE ENTIRE SUPPORT BEAM SHALL REMAIN EXPOSED AFTER THE REPAIR WORK IS COMPLETED. IN ADDITION, THE CONTRACTOR SHALL PROVIDE A POCKET IN THE CONCRETE FACING BELOW THE SUPPORT BEAM TO SHOW THE LOCATION OF EACH SUPPORT COLUMN.

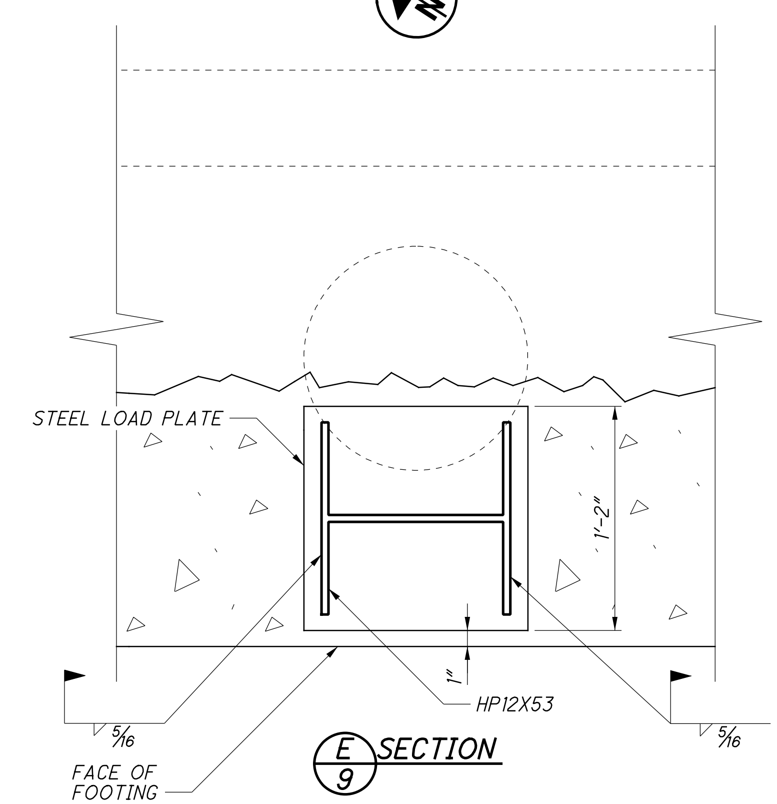
LEGEND

(hatched) ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

- BAR TO BE DOWELED INTO EXISTING STRUCTURE



ABUTMENT MODIFICATION DETAIL



E/9 SECTION

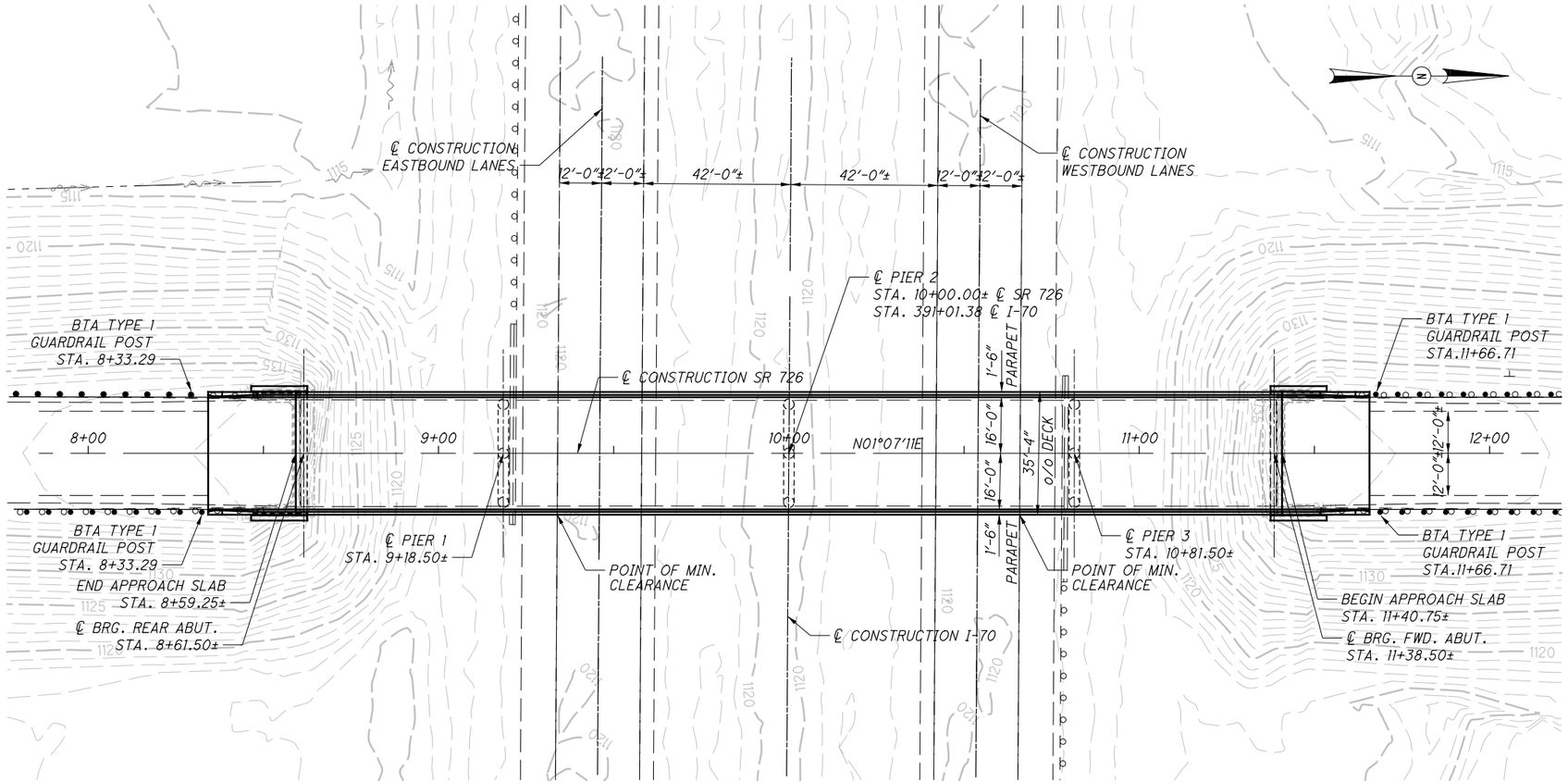
DESIGN AGENCY: CARPENTER MARTY transportation

DESIGNED	DRAWN	REVIEWED	DATE
AMR	AMR	WHM	4-30-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
STK		6800904	

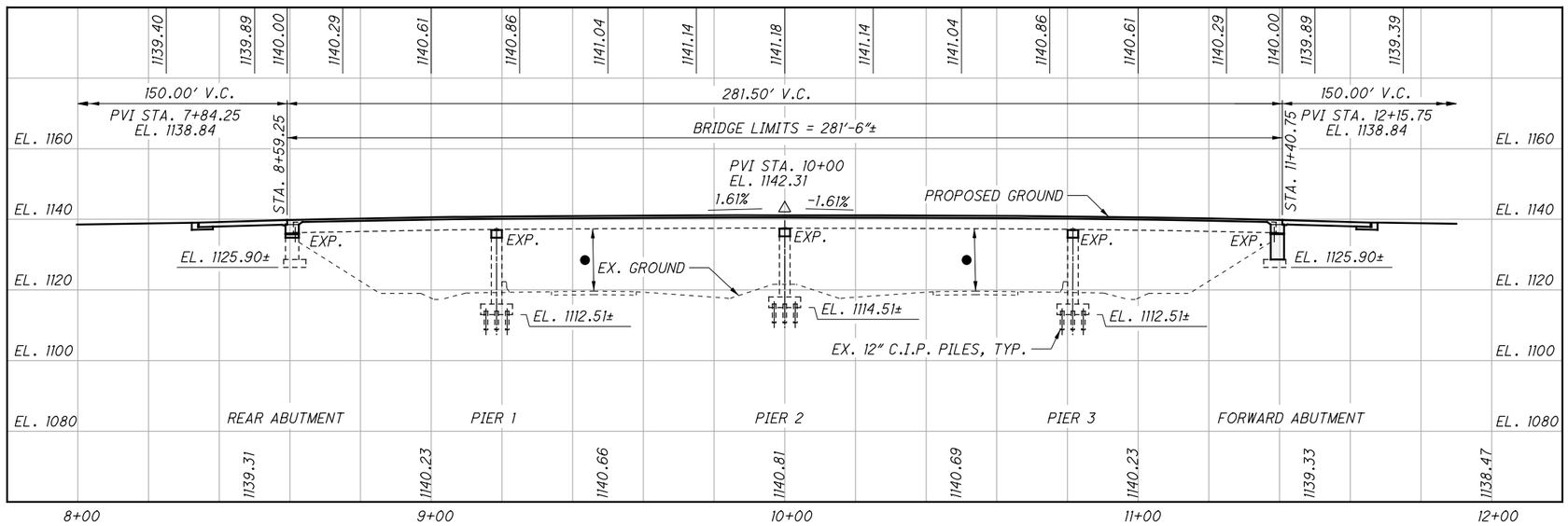
FORWARD ABUTMENT DETAILS
BRIDGE NO. PRE-70-0504L
I.R. 70 OVER SEVEN MILE CREEK

PRE-70-0.00
PID No. 96654

9/9



PLAN



ELEVATION

BENCHMARK DATA

BM #1 STA. 225+31.54, ELEV. 1138.066, OFFSET 13.71', RIGHT
BM #2 STA. 220+24.99, ELEV. 1118.836, OFFSET 18.30', LEFT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET (19/147)

NOTES

DIMENSIONS AND DATA TAKEN FROM EXISTING PLANS AND AERIAL MAPPING AND ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELEVATIONS.

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

A DATUM CORRECTION OF -0.49' WAS USED TO ESTABLISH THE BOTTOM OF FOOTING ELEVATIONS FROM THE EXISTING PLANS.

FOR PROPOSED WORK LIST, SEE GENERAL NOTES.

DESIGN TRAFFIC:
2020 ADT = 1210 2020 ADTT = 84
2040 ADT = 1290 2040 ADTT = 90
DIRECTIONAL DISTRIBUTION = 0.55

LEGEND

- 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
  16'-3½" EXISTING MINIMUM VERTICAL CLEARANCE
  16'-6" ACTUAL MINIMUM VERTICAL CLEARANCE

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH CONCRETE DECK, CAP AND COLUMN PIER AND STUB ABUTMENTS.
SPANS: 57'-0"±, 81'-6"±, 81'-6"±, 57'-0"± c/c BRGS.
ROADWAY: 30'-6" F/F PARAPET
LOADING: CF-130 (57)
SKEW: 0°00'00"±
APPROACH SLABS: 25'-0"± LONG (AS-1-54 SPECIAL)
WEARING SURFACE: 1¾" DENSE CONCRETE OVERLAY
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT.
STRUCTURAL FILE NUMBER: 6804659
DATE BUILT: 1964
DISPOSITION: REHABILITATE

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE DECK, CONVERT ABUTMENTS TO SEMI-INTERGAL, RAISE SUPERSTRUCTURE, REPLACE BEARINGS, PAINT STEEL.
TYPE: CONTINUOUS STEEL BEAM WITH COMPOSITE CONCRETE DECK, CAP AND COLUMN PIERS AND SEMI-INTEGERAL STUB ABUTMENTS.
SPANS: 57'-0"±, 81'-6"±, 81'-6"±, 57'-0"± c/c BRGS.
ROADWAY: 32'-0" TOE/TOE PARAPET
LOADING: HS20 CASE II, ALT. MILITARY LOADING & 60 PSF FWS
SKEW: 0°00'00"±
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" LONG AS-1-15 & AS-2-15 (TYPE C INSTALLATION)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
COORDINATES: LATITUDE 39°50'06.48"
LONGITUDE -84°40'35.96"

DESIGN AGENCY
Stantec
1687 Lobdon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	-	6804659	

PREBLE COUNTY
STA. 8+59.25
STA. 11+40.75

SITE PLAN
BRIDGE NO. PRE-726-0428
S.R. 726 OVER I-70

PRE-70-0.00
PID No. 96654

1 / 21

127
147

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GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-19-18
SBR-1-13	REVISED	07-20-18
SICD-1-96	REVISED	07-18-14
SICD-2-14	DATED	07-18-14
VPF-1-90	REVISED	07-20-18

DESIGN SPECIFICATIONS
DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 , AND THE ODOT BRIDGE DESIGN MANUAL, 2004

DESIGN LOADING
DESIGN LOADING: HS20, CASE II AND THE ALTERNATE MILITARY LOADING.

FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

DESIGN DATA
CONCRETE QC3 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE QC3 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL (EPOXY COATED)- ASTM A615 OR A996, GRADE 60 MINIMUM, YIELD STRENGTH 60,000 PSI

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 INCH THICK.

NON-USE OF ASBESTOS-CONTAINING MATERIALS
THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

EXISTING STRUCTURE VERIFICATION
DETAILS AND DIMENSIONS SHOWN ON 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 REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

EXISTING PLANS MAY BE VIEWED AT, OR COPIES OBTAINED FROM, ODOT DISTRICT 8 OFFICE IN LEBANON, OHIO.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, END CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, GUTTER SUPPORTS FOR BULB ANGLES, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

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.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 509, REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN
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.

ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES
EXISTING COATINGS SHALL BE REMOVED FROM ALL SURFACES OF PIERS AND ABUTMENTS.

ITEM 514, FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN
FINISH COAT OF PAINT SHALL MATCH FEDERAL COLOR NUMBER 14277.

INSPECTION OF EXISTING STRUCTURAL STEEL
THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511, CLASS QSC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, SUPERSTRUCTURE. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

DECK PLACEMENT DESIGN ASSUMPTIONS:
DECK PLACEMENT DESIGN ASSUMPTIONS: THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.11 KIPS FOR A TOTAL MACHINE LOAD OF 8.88 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

LEGEND:
PEJF = PREFORMED EXPANSION JOINT FILLER
EF = EACH FACE

DESIGN AGENCY
Stantec
1687 Lobdon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6804659	

GENERAL NOTES (1)
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

GENERAL NOTES, CONTINUED

ITEM 511, CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE CORROSION INHIBITOR	ASTM C1116, TYPE III 515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 511, CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,000 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE CORROSION INHIBITOR	ASTM C1116, TYPE III 515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6804659	

GENERAL NOTES (2)
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

ESTIMATED QUANTITIES (GENERAL SUMMARY ITEMS)

CALCULATED BY: ALH DATED: 5/18
CHECKED BY: EDA DATED: 5/18

ITEM	EXTENSION	TOTAL (1)	UNIT	DESCRIPTION	SUPERSTRUCTURE	ABUTMENT	PIER	GENERAL	SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/21 & 8/21
202	22900	178	SY	APPROACH SLAB REMOVED				178	
503	21300	LUMP		UNCLASSIFIED EXCAVATION		LUMP			
509	10000	116,530	LB	EPOXY COATED REINFORCING STEEL	108,567	5921	2042		
509	20001	500	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN		500			2/21
510	10000	262	EACH	DOWEL HOLES WITH NON-SHRINK, NON-METALLIC GROUT		154	108		
511	33500	1	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		1			
511	33501	1	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN		1			
511	53014	424	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN	424				
511	53014	95	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN		77	18		
512	10100	1143	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	849	61	233		
512	74000	203	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		10	193		2/21
513	20000	2508	EACH	WELDED STUD SHEAR CONNECTORS	2508				
514	00050	13,500	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	13,500				
514	00056	13,500	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	13,500				
514	00060	13,500	SF	FIELD PAINTING OF STRUCTURAL STEEL, INTERMEDIATE COAT	13,500				
514	00067	13,500	SF	FIELD PAINTING OF STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	13,500				2/21
514	00504	19	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	19				
514	10000	11	EACH	FINAL INSPECTION REPAIR	11				
516	13900	442	SF	2" PREFORMED EXPANSION JOINT FILLER		442			
516	14020	125	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL		125			
516	44001	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-0" x 1'-0" x 3.198" ELASTOMERIC BEARING W/1'-1" x 1'-1" x 1½" LOAD PLATE)		8			14/21
516	44001	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-0" x 1'-8" x 2.548" ELASTOMERIC BEARING W/1'-1" x 1'-9" x 2" LOAD PLATE)			8		14/21
516	44001	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-0" x 1'-10" x 2.548" ELASTOMERIC BEARING W/1'-1" x 1'-11" x 2" LOAD PLATE)			4		14/21
516	10010	72	FT	ARMORLESS PREFORMED JOINT SEAL				72	
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LUMP	2/21
518	21200	50	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		50			
518	40000	90	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		90			
518	40010	80	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		80			
526	25011	199	SY	REINFORCED CONCRETE APPROACH SLAB, WITH QC/QA (T=15"), AS PER PLAN	199				
526	90030	72	FT	TYPE C INSTALLATION				72	
601	20010	36	SY	CRUSHED AGGREGATE SLOPE PROTECTION				36	
607	39900	400	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	400				

(1) QUANTITIES PAID FOR UNDER PARTICIPATION SPLIT 02/IMS/BR

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DESIGN AGENCY
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DESIGNED EDA
DRAWN ALH
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ESTIMATED QUANTITIES
BRIDGE NO. PRE-726-0428
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4 / 21

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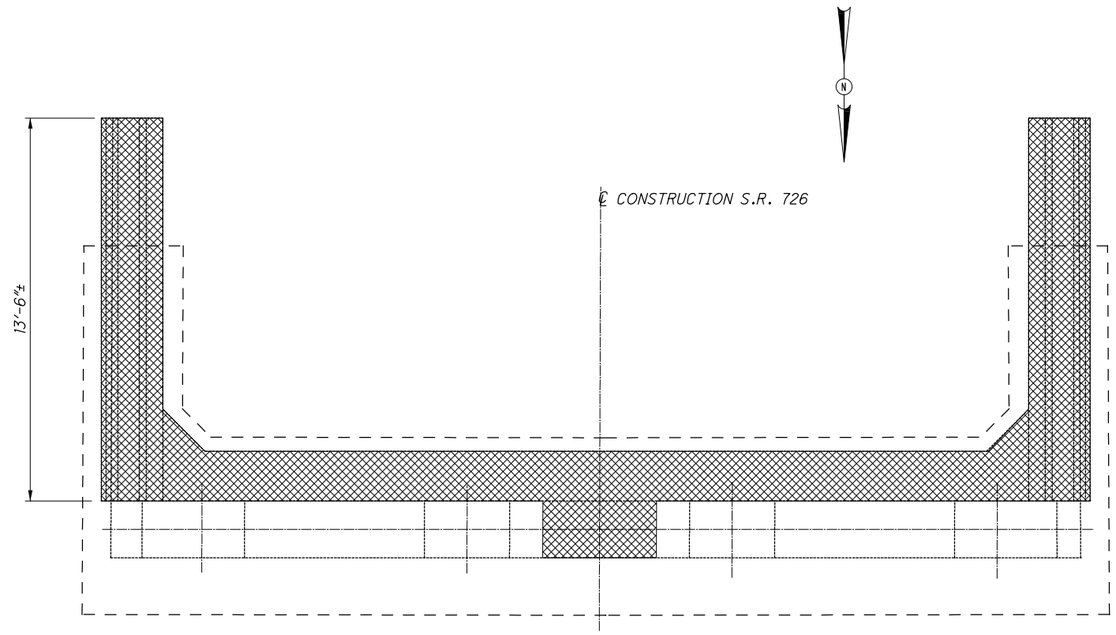
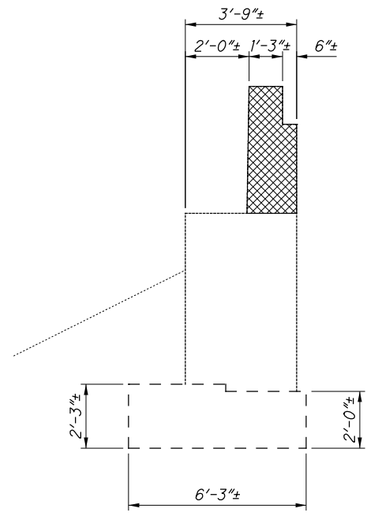
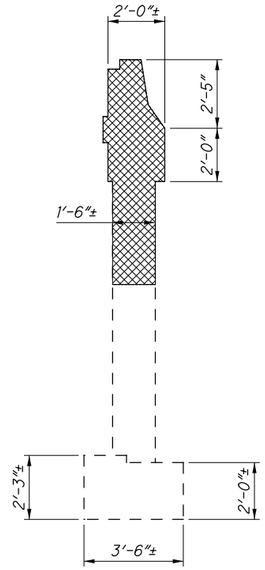


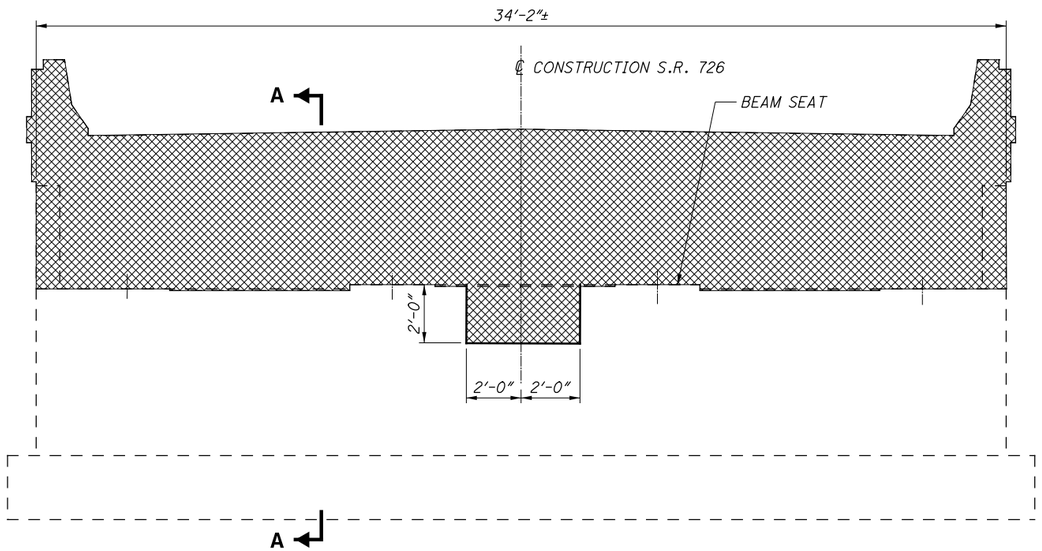


SECTION A-A

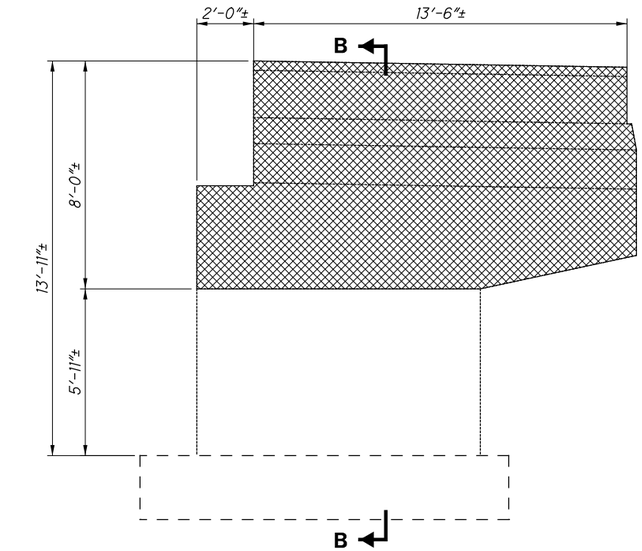


SECTION B-B

PLAN



ELEVATION



VIEW C-C

LEGEND:

DENOTES PORTION OF CONCRETE AND REINFORCING STEEL TO BE REMOVED.

DESIGN AGENCY
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11687 Lebanon Road
Cincinnati, Ohio 45241
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DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
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REAR ABUTMENT REMOVAL DETAILS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

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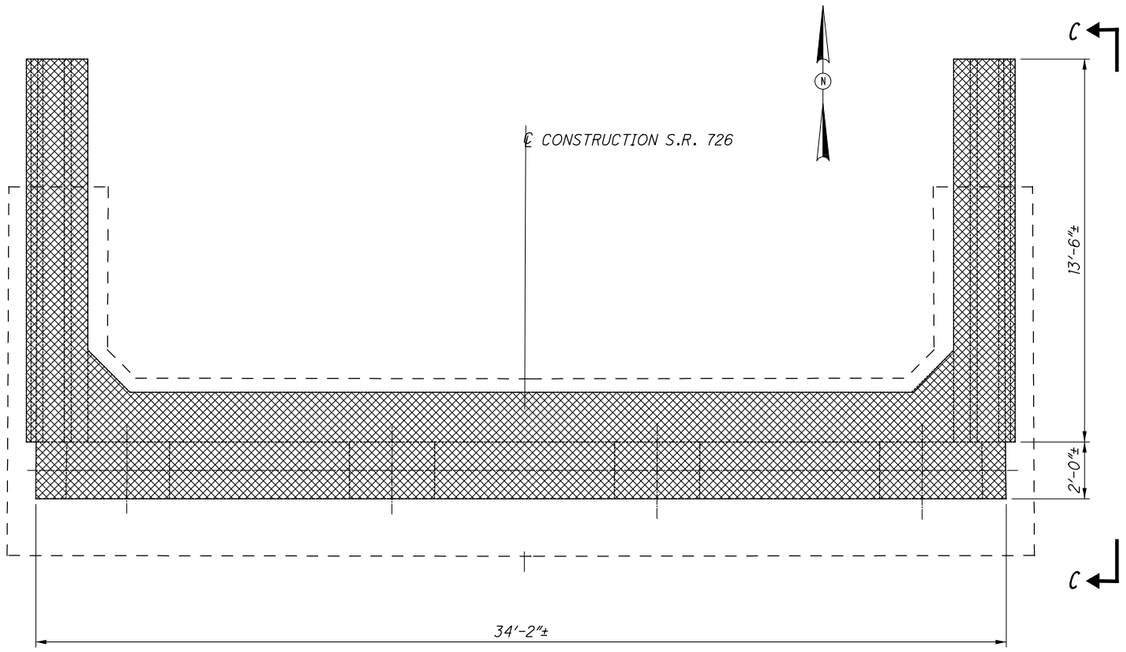
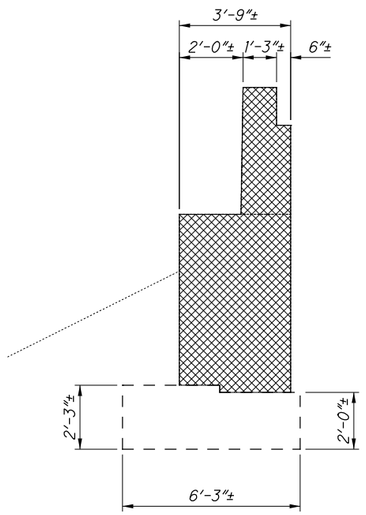
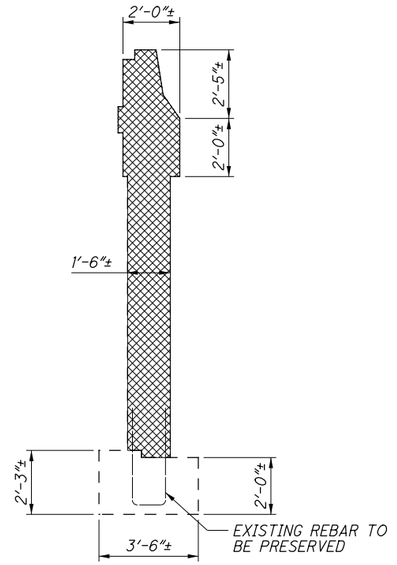


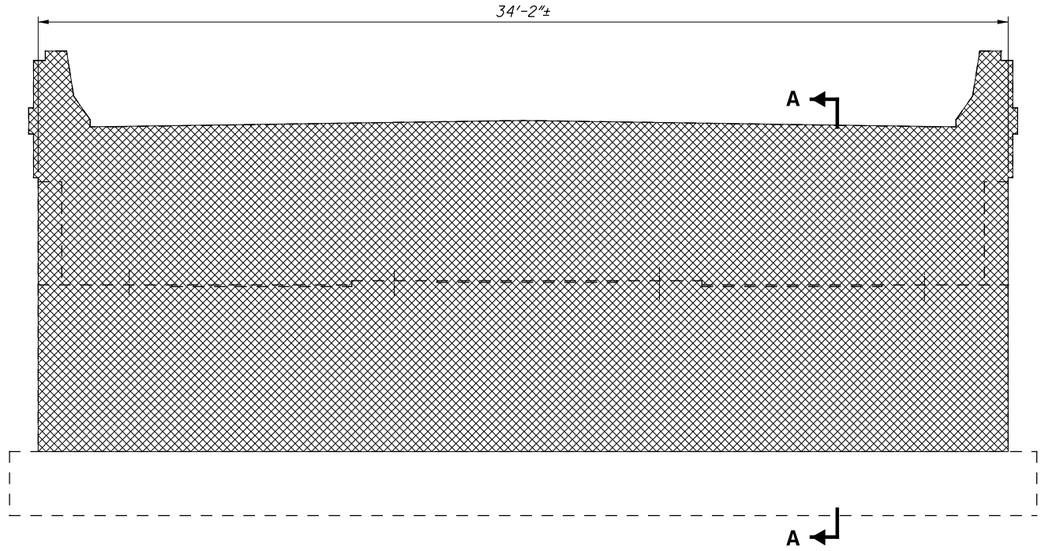
PLAN



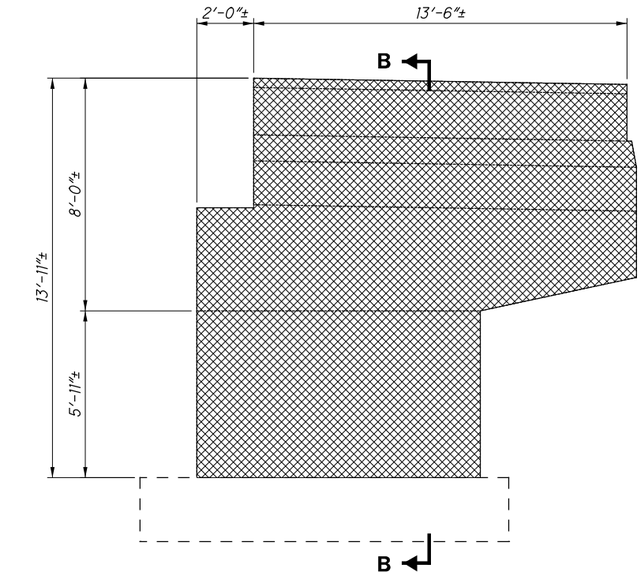
SECTION A-A



SECTION B-B



ELEVATION



VIEW C-C

LEGEND:

DENOTES PORTION OF CONCRETE AND REINFORCING STEEL TO BE REMOVED, UNLESS NOTED OTHERWISE.

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FORWARD ABUTMENT REMOVAL DETAILS

BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

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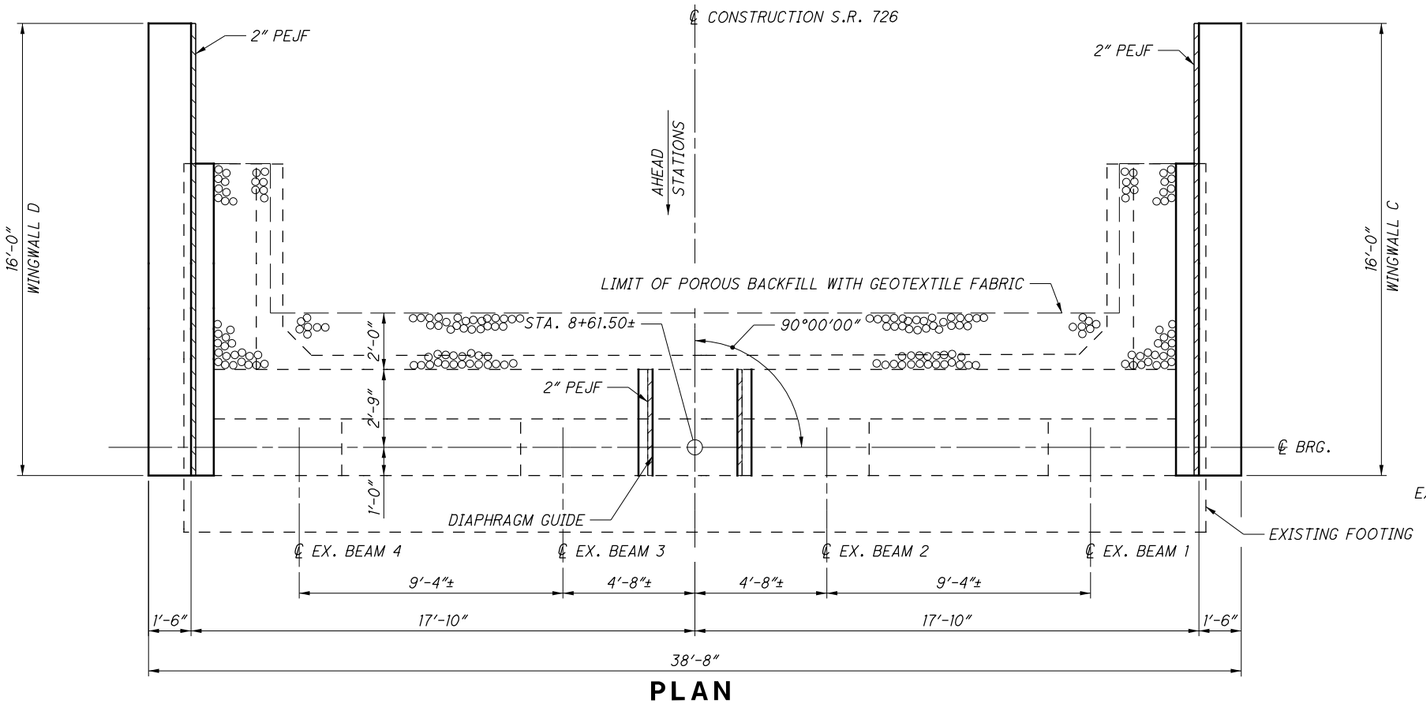
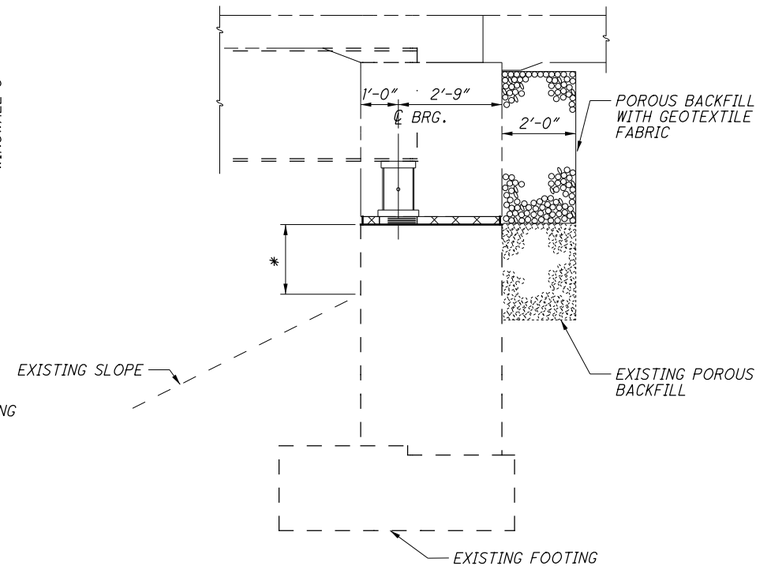
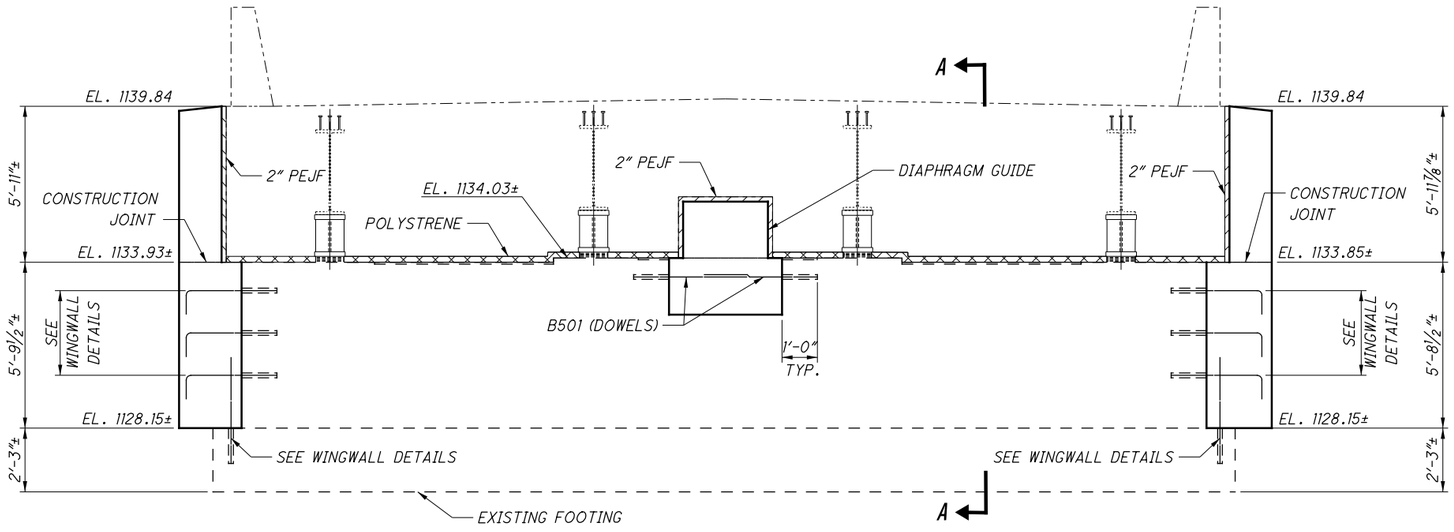


PLAN



* LIMIT OF SEALING CONCRETE SURFACES WITH EPOXY-URETHANE SEALER.

SECTION A-A



ELEVATION

NOTES:
1. FOR WINGWALL AND DIAPHRAGM GUIDE DETAILS, SEE SHEET 8/21.
2. FOR ADDITIONAL DETAILS NOT SHOWN, SEE STD. DWG. SICD-1-96 AND SICD-2-14.
3. FOR DIAPHRAGM DETAILS, SEE SHEET 11/21.

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REAR ABUTMENT DETAILS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

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PID No. 96654

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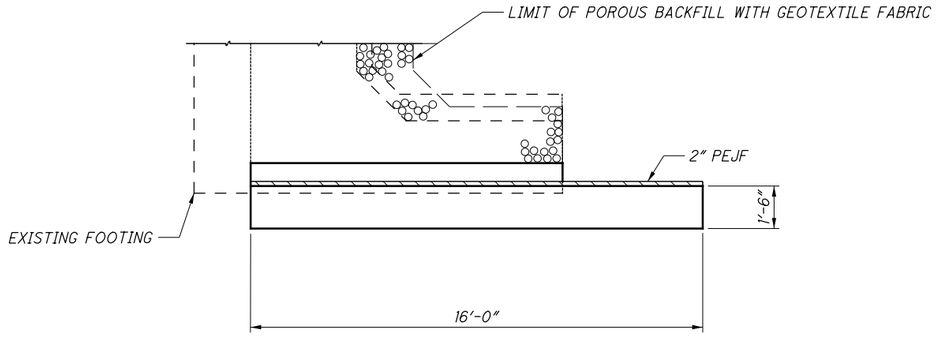

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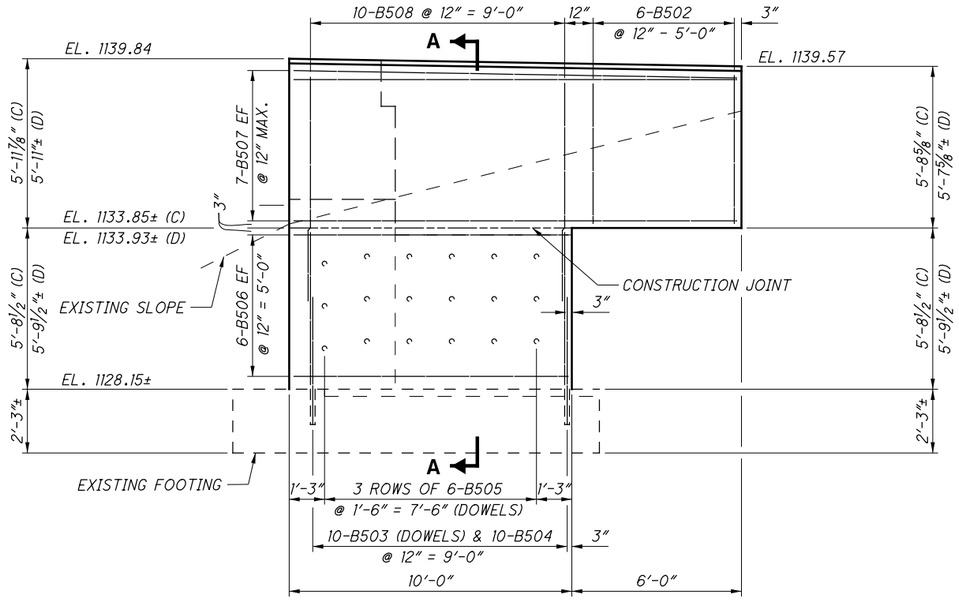
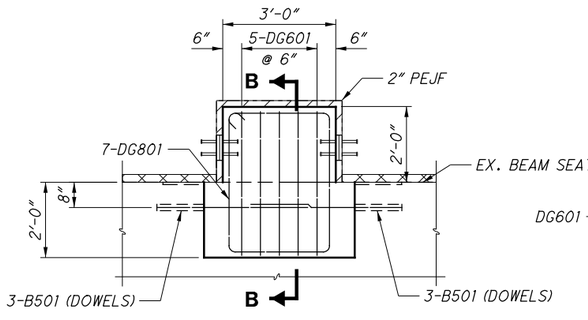
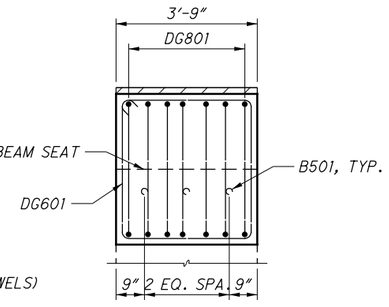


ELEVATION

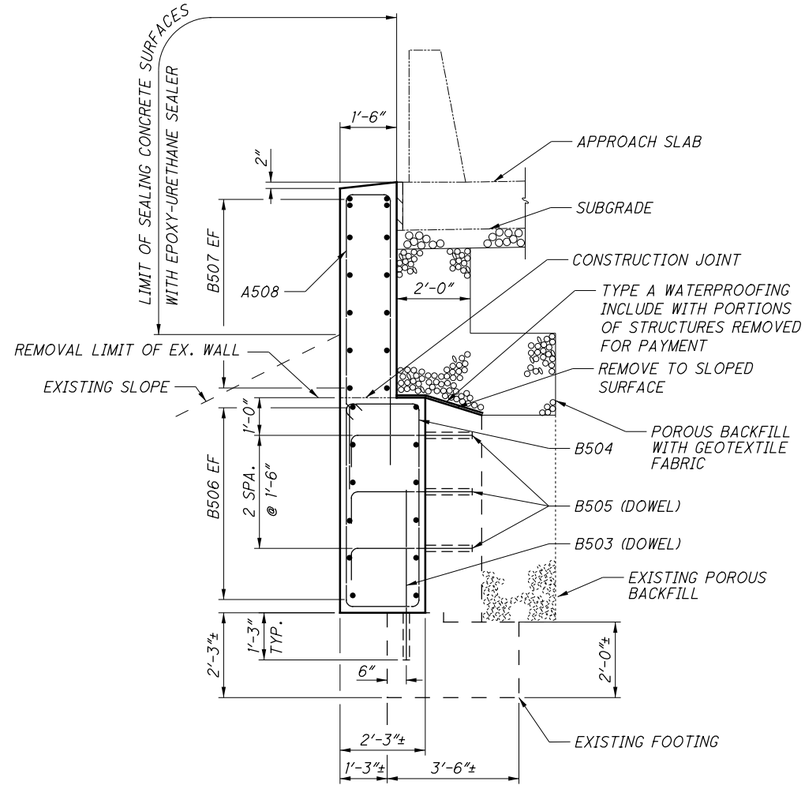
(WINGWALL C SHOWN, WINGWALL D OPPOSITE HAND)



DIAPHRAGM GUIDE DETAIL



SECTION B-B



SECTION A-A

NOTES:

1. FOR ADDITIONAL DETAILS NOT SHOWN, SEE STD. DWG. SICD-1-96 AND SICD-2-14.
2. ALL DOWELS SHALL BE EMBEDDED 1'-3" INTO EXISTING CONCRETE USING NONSHRINK, NONMETALLIC GROUT.
3. REMOVAL OF EXISTING CONCRETE AND ALL NEW CONCRETE FOR THE DIAPHRAGM GUIDE SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, SEMI-INTEGERAL DIAPHRAGM GUIDE, AS PER PLAN.

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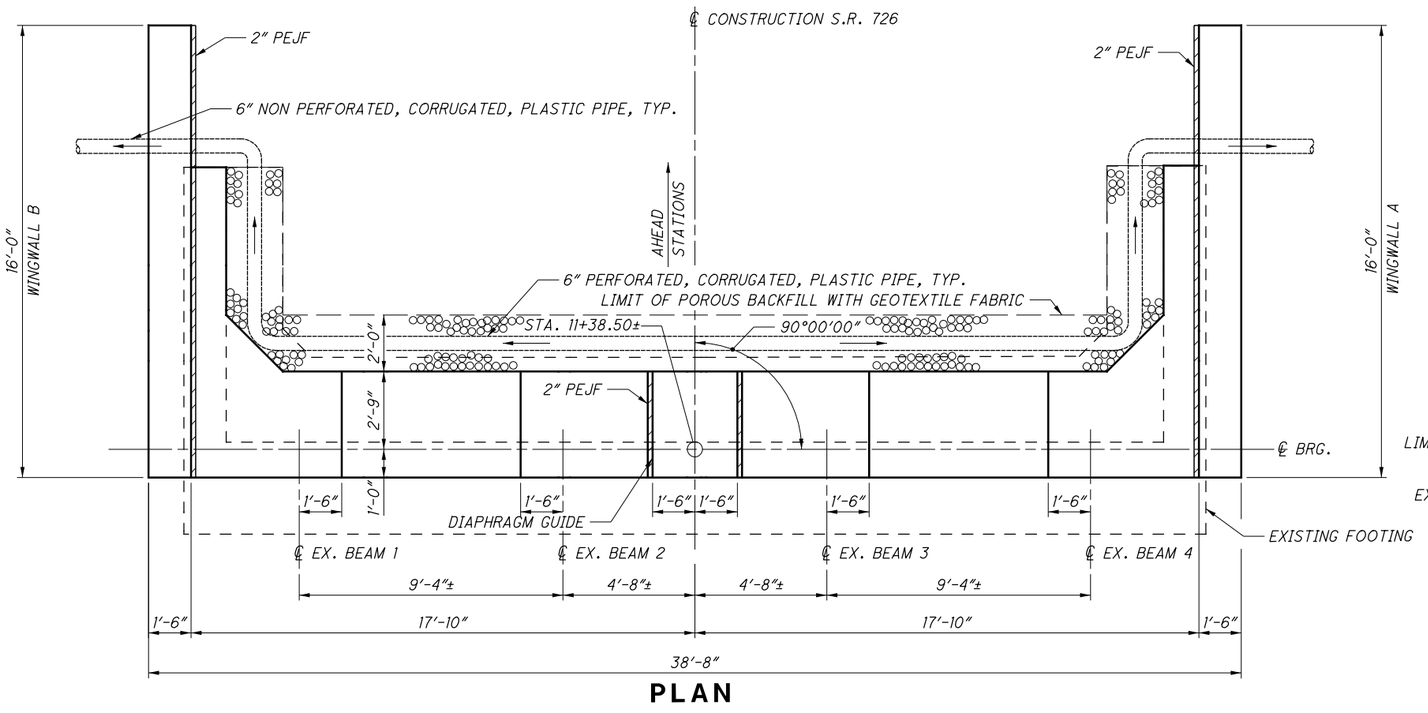
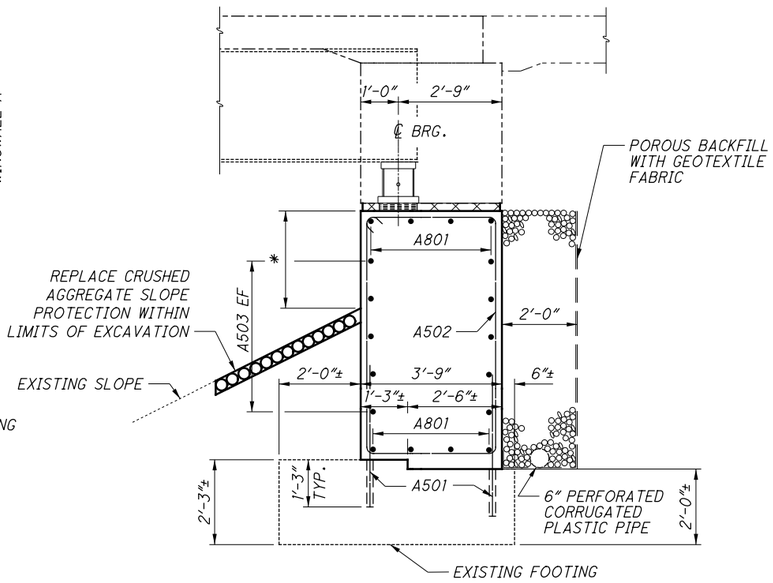
REAR ABUTMENT AND WINGWALL DETAILS

BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

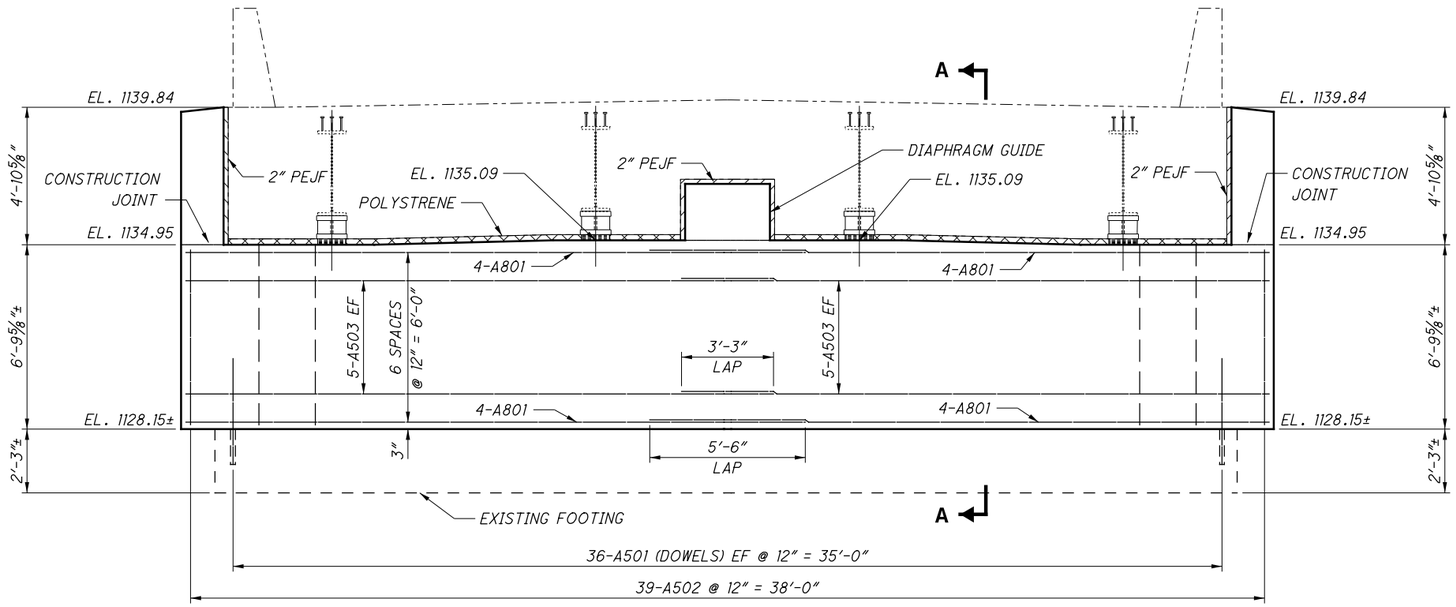


PLAN



* LIMIT OF SEALING CONCRETE SURFACES WITH EPOXY-URETHANE SEALER.

SECTION A-A



ELEVATION

NOTES:
1. FOR WINGWALL, DIAPHRAGM GUIDE AND PIPE OUTLET DETAILS, SEE SHEET 10/21 .
2. FOR ADDITIONAL DETAILS NOT SHOWN, SEE STD. DWG. SICD-1-96 AND SICD-2-14.

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FORWARD ABUTMENT DETAILS
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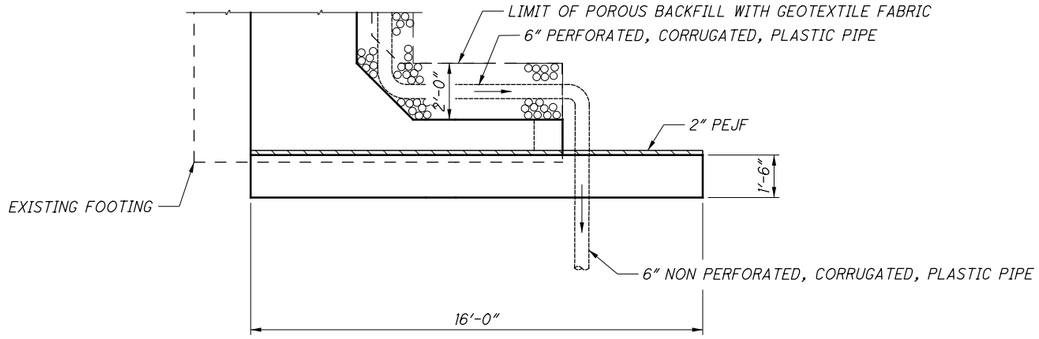

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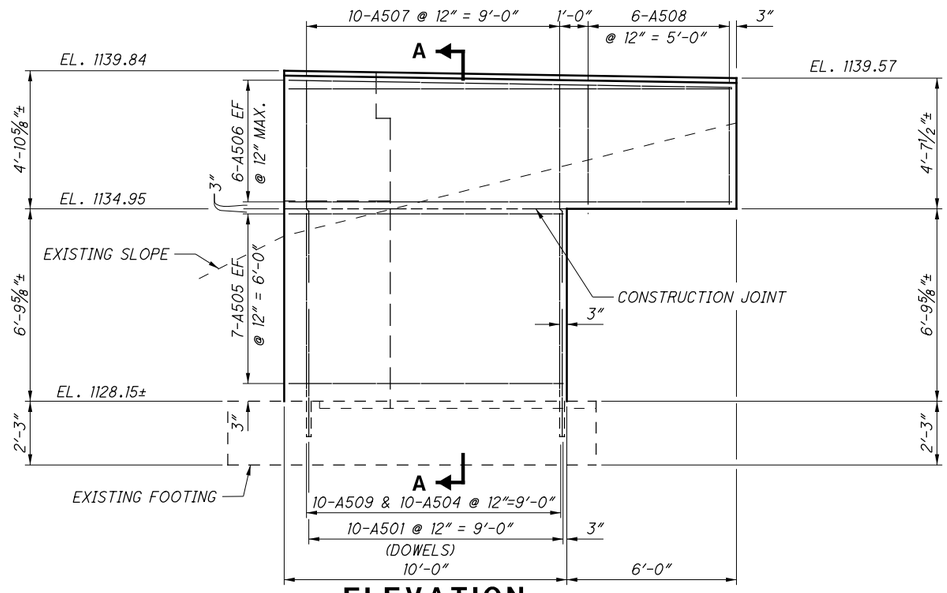
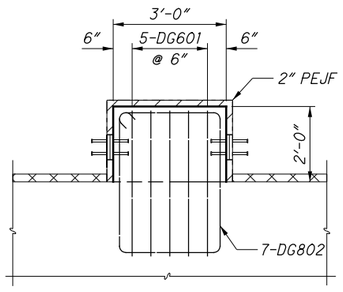
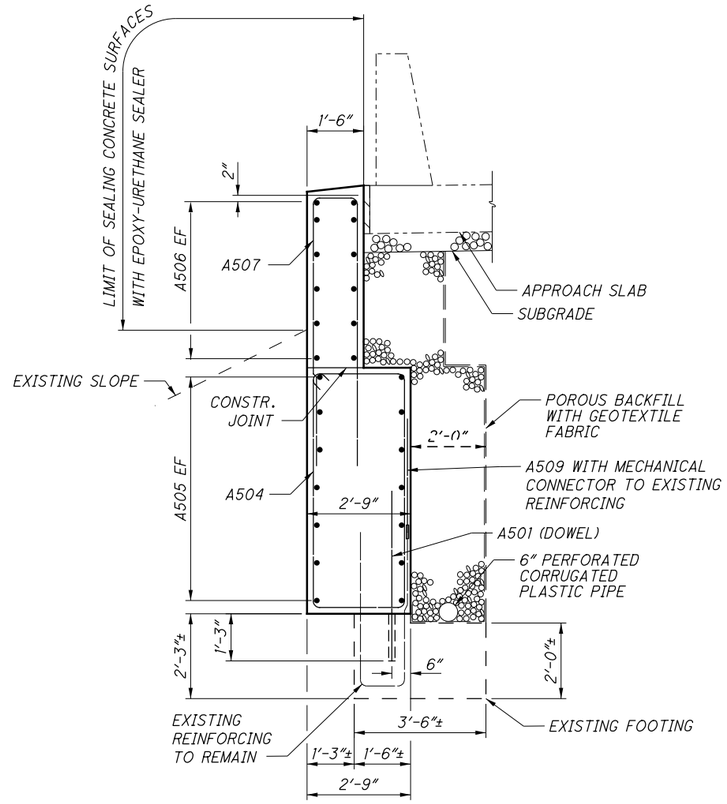


ELEVATION

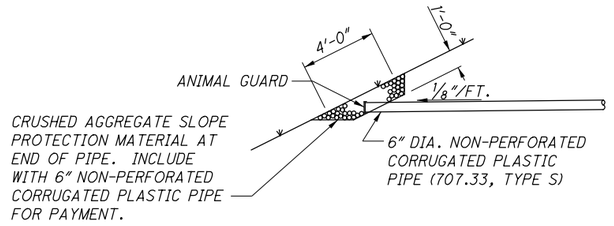
(WINGWALL A SHOWN, WINGWALL B OPPOSITE HAND)



DIAPHRAGM GUIDE DETAIL



SECTION A-A



PIPE OUTLET DETAIL

NOTES:
1. FOR ADDITIONAL DETAILS NOT SHOWN, SEE STD. DWG. SICD-1-96 AND SICD-2-14.

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FORWARD ABUTMENT AND WINGWALL DETAILS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

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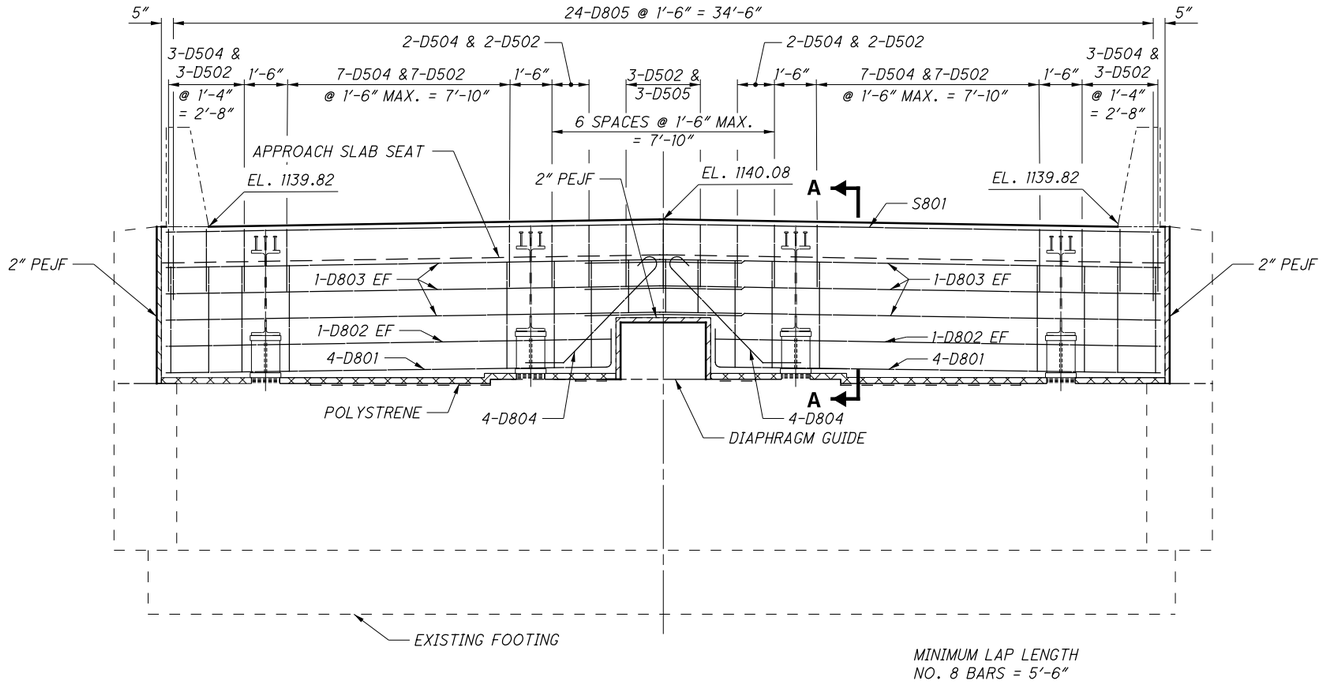
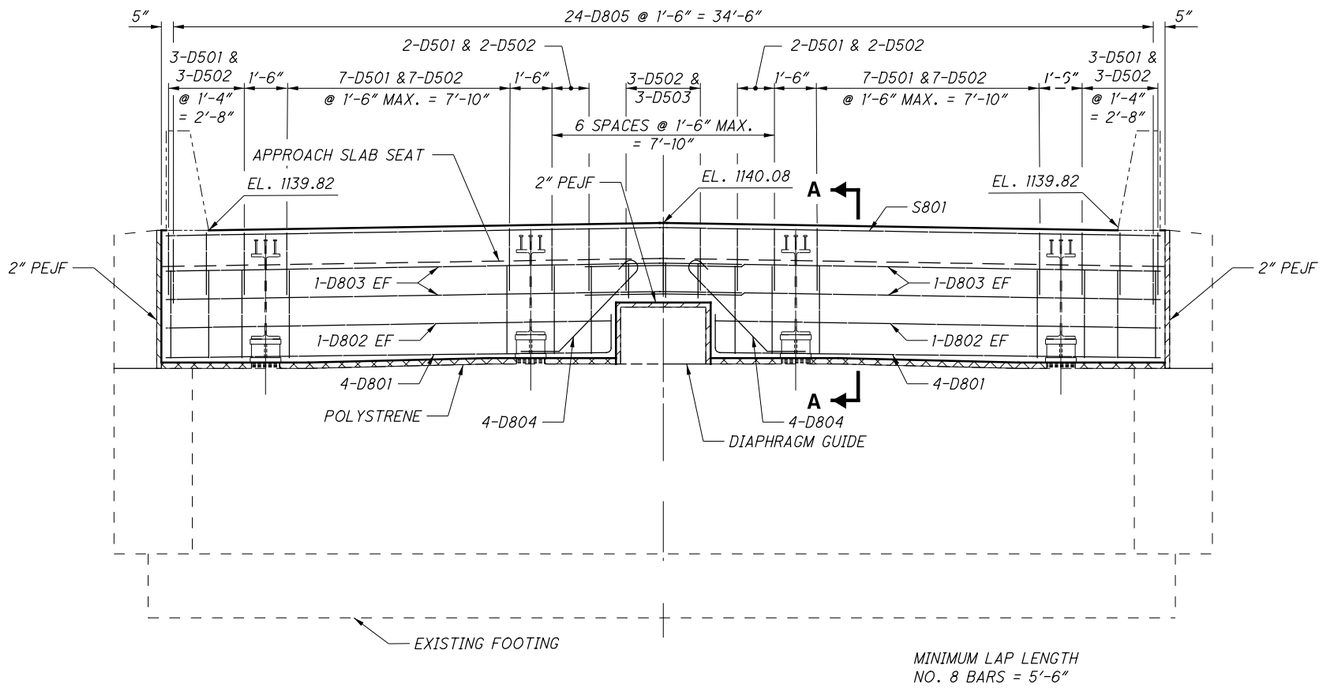


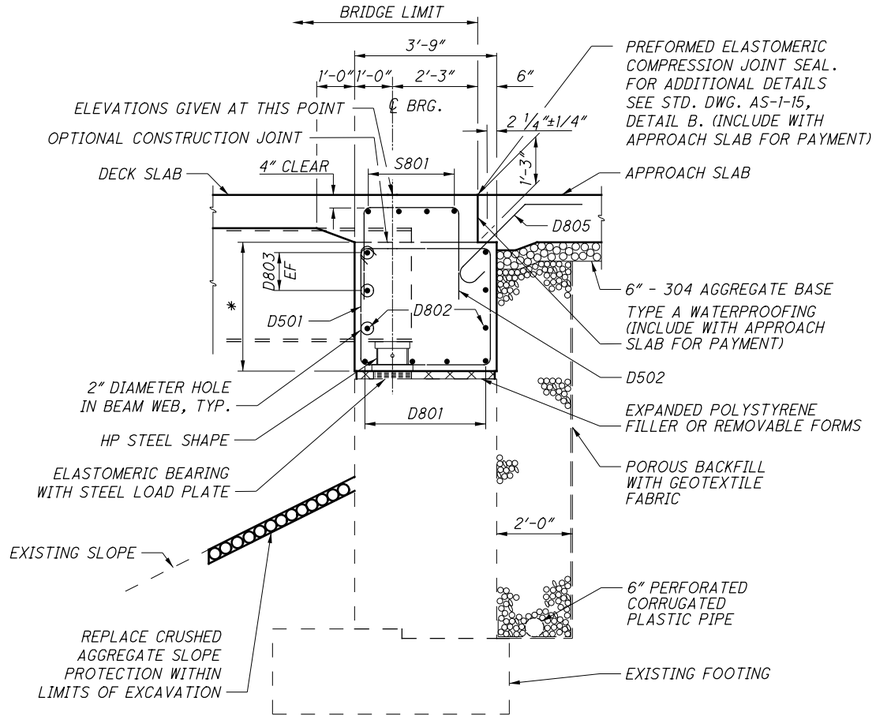
MINIMUM LAP LENGTH
NO. 8 BARS = 5′-6″

REAR ABUTMENT DIAPHRAGM ELEVATION



MINIMUM LAP LENGTH
NO. 8 BARS = 5′-6″

FORWARD ABUTMENT DIAPHRAGM ELEVATION



* LIMIT OF SEALING CONCRETE SURFACES WITH EPOXY-URETHANE SEALER.

SECTION A-A

(FORWARD ABUTMENT SHOWN, REAR ABUTMENT SIMILAR)

NOTES:
1. FOR ADDITIONAL INFORMATION, SEE STD. DWG. SICD-1-96 AND SICD-2-14.
2. WORK THIS SHEET WITH SUPERSTRUCTURE DETAILS SHEET 15/21 .
3. ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL STEEL MEMBER ENDS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE A HORIZONTAL CONSTRUCTION JOINT IN THE DIAPHRAGM AS SHOWN ON SICD-1-96 AND PLACE REMAINING DIAPHRAGM CONCRETE WITH THE DECK.

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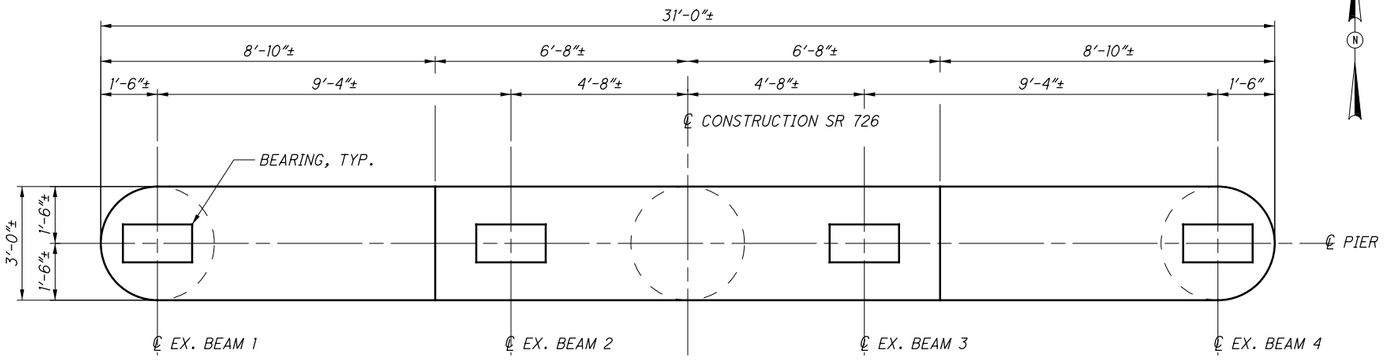
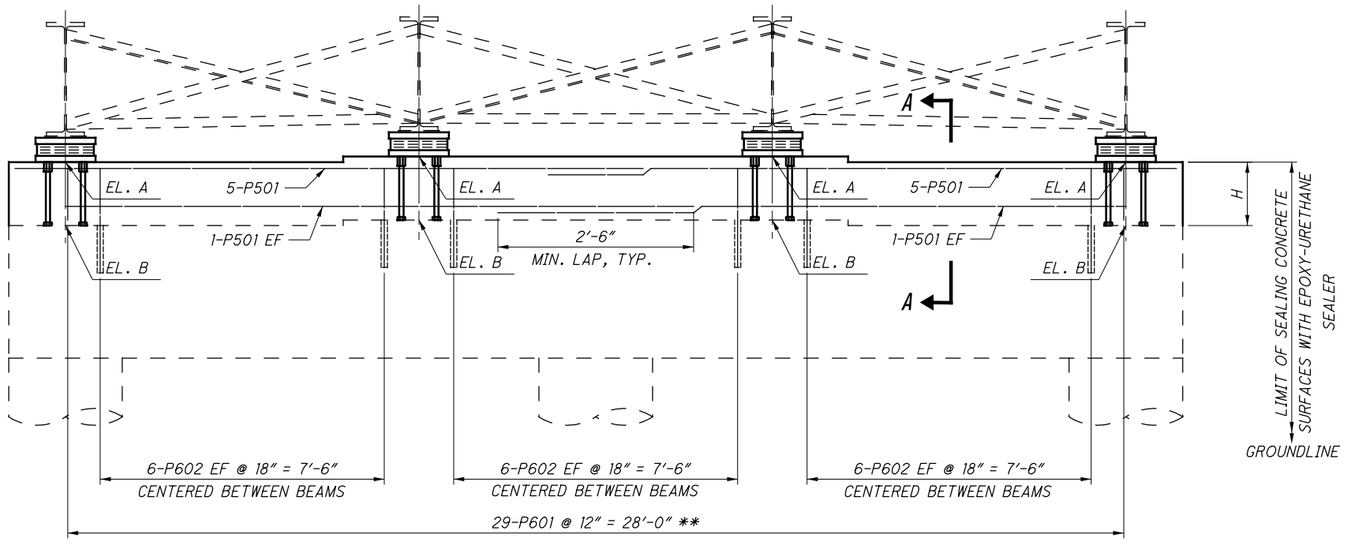
CHECKED MRS | REVISED XXX | STRUCTURE FILE NUMBER 6804659

ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654



PLAN

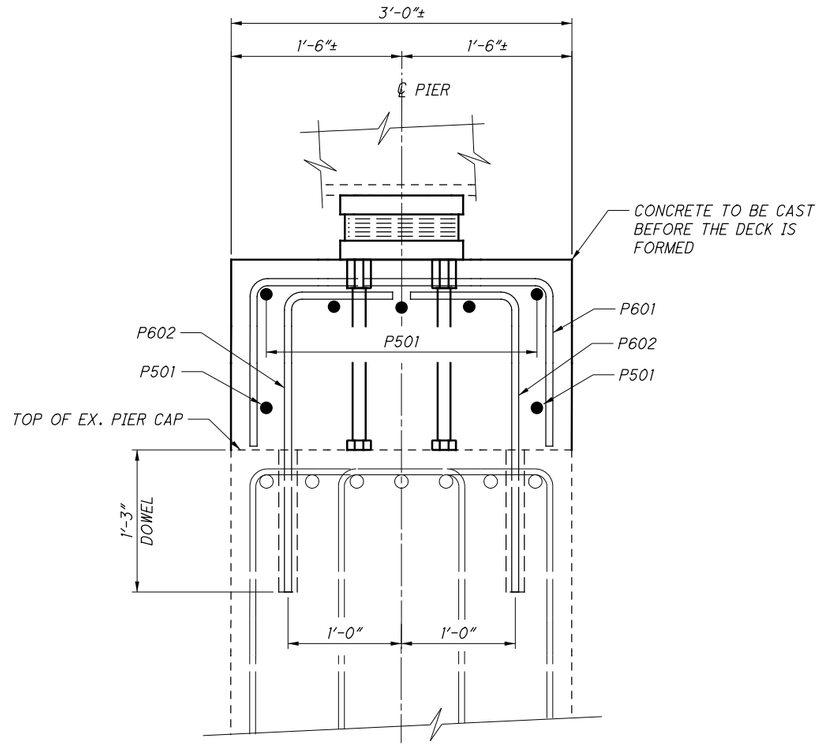


ELEVATION

** ADJUST BARS AS NEEDED TO AVOID ANCHOR BOLTS.

ESTIMATED PEDESTAL HEIGHT AND ELEVATIONS*					
PIER	EX. BEAM	PROPOSED ELEVATION A	EST. PROP. BOTTOM OF BEAM EL.	EXISTING ELEVATION B	ESTIMATED PEDESTAL HEIGHT H
1	1	1135.94±	1136.49±	1134.27±	1.67'±
1	2	1136.09±	1136.64±	1134.40±	1.69'±
1	3	1136.09±	1136.64±	1134.40±	1.69'±
1	4	1135.94±	1136.49±	1134.27±	1.67'±
2	1	1136.36±	1136.90±	1134.62±	1.74'±
2	2	1136.51±	1137.05±	1134.76±	1.75'±
2	3	1136.51±	1137.05±	1134.76±	1.75'±
2	4	1136.36±	1136.90±	1134.62±	1.74'±
3	1	1135.94±	1136.49±	1134.27±	1.67'±
3	2	1136.09±	1136.64±	1134.40±	1.69'±
3	3	1136.09±	1136.64±	1134.40±	1.69'±
3	4	1135.94±	1136.49±	1134.27±	1.67'±

* SEE NOTE 2



SECTION A-A

NOTES:

1. FOR BEARING DETAILS, SEE SHEET 14/21 .

2. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER, PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE HEIGHT OF THE PROPOSED PIER CAP AND ADJUSTABLE PEDESTAL SO THAT THE FINAL PROPOSED CONTRACTOR CALCULATED BEAM SEAT ELEVATIONS ARE IN AGREEMENT WITH THEIR FIELD VERIFIED MEASURMENTS. THE FINAL CAP HEIGHT H CAN BE CALCULATED BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND THE THICKNESS OF THE ELASTOMERIC BEARING (INCLUDING LOAD PLATE & SOLE PLATE) AT EACH BEARING LOCATION FROM THE EXISTING BOTTOM OF THE BEAM ELEVATION AND ADDING THE AMOUNT THE BRIDGE IS TO BE RAISED. THE BRIDGE IS TO BE RAISED 2½". THE HEIGHT OF THE PROPOSED PIER CAP IS A CONTRACTOR CALCULATED DIMENSION AND ANY MODIFICATIONS NEEDED AS A RESULT OF THE CONTRACTORS ERROR WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

PROPOSED DIMENSION H = (CONTRACTOR'S EXISTING BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S EXISTING BEAM SEAT ELEVATION) - (HEIGHT OF BEARING'S TOP LOAD PLATE, LAMINATED ELASTOMERIC BEARING PAD AND BOTTOM SOLE PLATE) + (AMOUNT THE BRIDGE IS TO BE RAISED).

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PIER DETAILS
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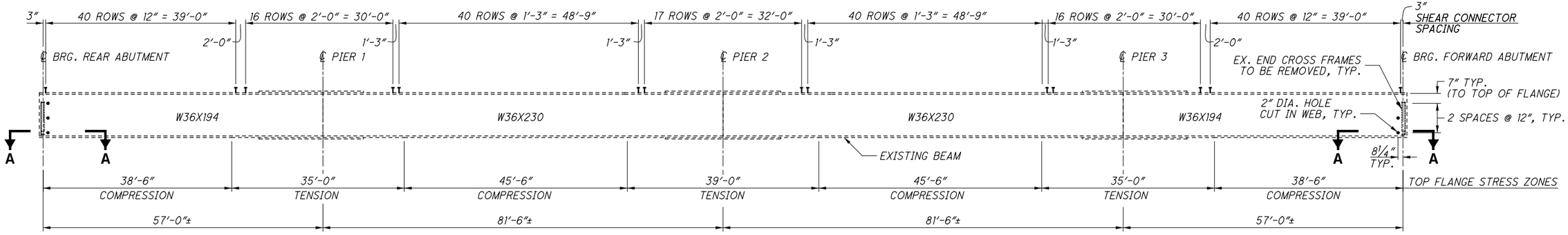
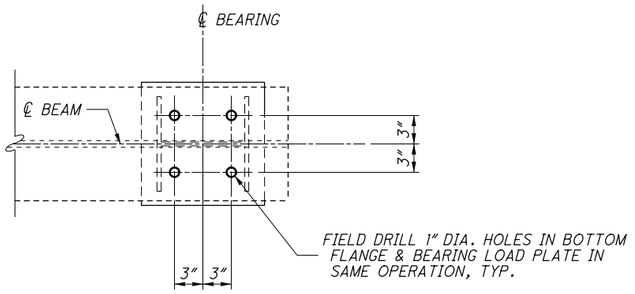
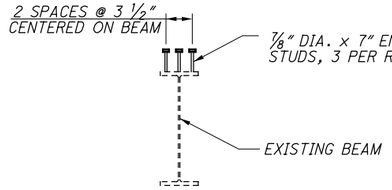


TYPICAL EXISTING BEAM ELEVATION
(4 BEAMS)



SECTION A-A



SHEAR CONNECTOR DETAIL

NOTE:
WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESS UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

ADJUST SPACING OF SHEAR CONNECTORS AS NECESSARY TO CLEAR ENDS OF SPLICE PLATES BY 2".

DRILLING OF HOLES IN BEAM ENDS (WEB & BOTTOM FLANGE) IS INCLUDED FOR PAYMENT WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

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STEEL BEAM DETAILS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

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LAMINATED ELASTOMERIC TABLE

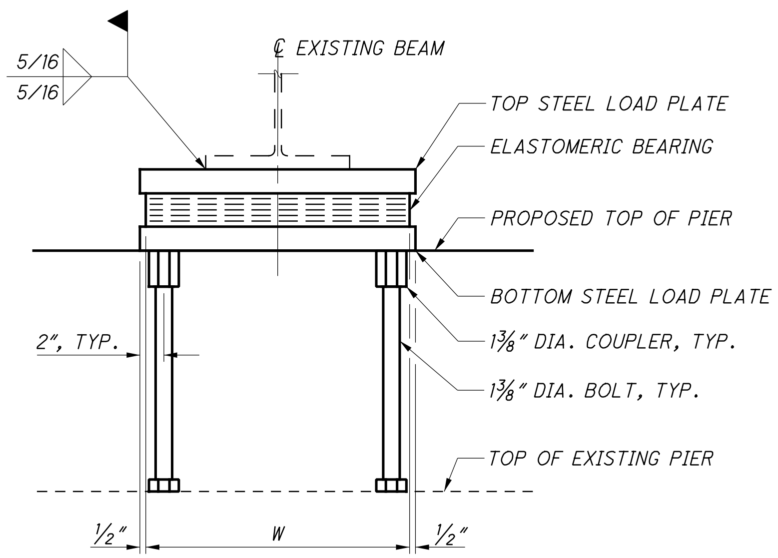
PIER NO.	BEARING TYPE	BEARING DIMENSIONS							TOP STEEL LOAD PLATE	BTM. STEEL LOAD PLATE	DIMENSION		DESIGN LOAD (KIPS)		
		L	W	T	Ti	Te	†L	N	(LENGTHxWIDTH)	(LENGTHxWIDTH)	T1	T2	DL	LL	TOTAL
1	EXPANSION	12″	20″	2.548″	0.300″	-	0.747″	7	13″x21″	13″x21″	2″	2⅛″	168	68	236
2	EXPANSION	12″	22″	2.548″	0.300″	-	0.747″	7	13″x23″	13″x23″	2″	2″	185	73	258
3	EXPANSION	12″	20″	2.548″	0.300″	-	0.747″	7	13″x21″	13″x21″	2⅛″	2″	168	68	236

T = TOTAL THICKNESS OF ELASTOMERIC BEARING
Ti = THICKNESS OF INTERNAL ELASTOMER LAYER
Te = THICKNESS OF EXTERNAL ELASTOMER LAYER
†L = THICKNESS OF STEEL LAMINATE
N = NUMBER OF INTERNAL ELASTOMER LAYERS

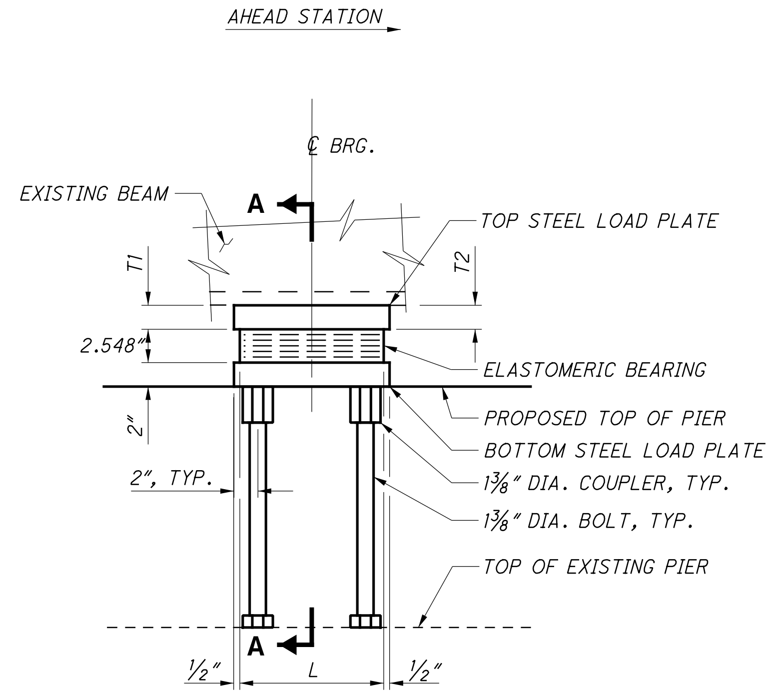
DL = DEAD LOAD
LL = LIVE LOAD

DIMENSION "H"

BEAM NO.	REAR ABUTMENT		FORWARD ABUTMENT	
	H1	H2	H1	H2
1	22⅜″±	22⅝″±	4¾″	4½″
2	22″±	22¼″±	4¾″	4½″
3	22″±	22¼″±	4¾″	4½″
4	21±″	21⅝″±	4¾″	4½″



SECTION A-A



ELEVATION

BEARING AT PIERS

NOTES

LOAD PLATE: THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

THE STEEL LOAD PLATEs AND HP SECTION SHALL BE GRADE 50 STEEL AND SHALL RECEIVE INORGANIC ZINC PRIME COAT.

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.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR BOLTS, HP SECTION, BEARING RETAINERS, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AS DETAILED. 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 DETAILS, SEE STD. DWG. SICD-1-96

HIGH STRENGTH BOLTS SHALL BE 1⅜″ DIAMETER A325 TYPE 3 GALVANIZED PER CMS 711.02.

1⅜″ HEX COUPLING NUT WELDED TO PLATE SHALL BE GALVANIZED PER CMS 711.02.

BOTTOM STEEL LOAD PLATES AT PIERS SHALL BE GALVANIZED PER CMS 711.02 ON BOTTOM ONLY.

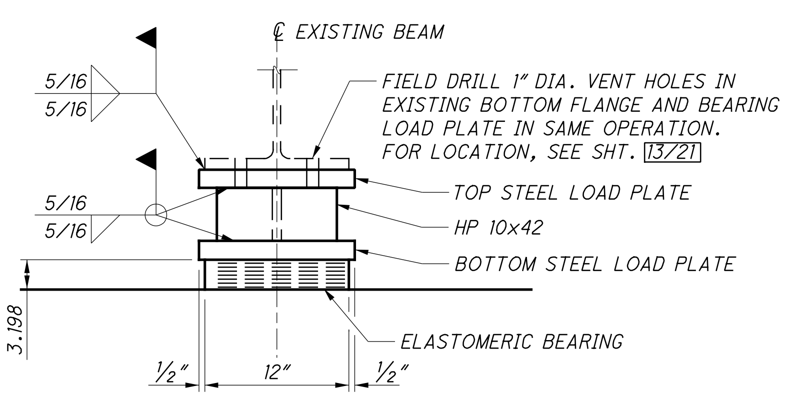
AT THE REAR ABUTMENT, THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE BOTTOM OF BEAM AND EXISTING BEAM SEAT ELEVATIONS LOCATED AT THE CENTERLINE OF BEARING. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER, PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE HEIGHT OF THE ADJUSTABLE H-PILE SECTION SO THAT THE FINAL PROPOSED CONTRACTOR CALCULATED BEARING HEIGHTS ARE IN AGREEMENT WITH THEIR FIELD VERIFIED MEASURMENTS. THE PEDESTAL HEIGHT H CAN BE CALCULATED BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND THE THICKNESS OF THE ELASTOMERIC BEARING (INCLUDING TOP AND BOTTOM LOAD PLATES) AT EACH BEARING LOCATION FROM THE EXISTING BOTTOM OF BEAM ELEVATION AND ADDING THE AMOUNT THE BRIDGE IS TO BE RAISED. THE BRIDGE IS TO BE RAISED 2″. THE CONTRACTOR IS TO ORDER THE H-PILE SECTIONS LONGER THAN NEEDED AND TRIM THE SECTIONS IN THE FIELD TO FIT THE FIELD CONDITIONS.

PROPOSED DIMENSION H = (CONTRACTOR'S EXISTING BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S EXISTING BEAM SEAT ELEVATION) - (HEIGHT OF BEARING'S TOP LOAD PLATE, LAMINATED ELASTOMERIC BEARING PAD AND BOTTOM SOLE PLATE) + (AMOUNT THE BRIDGE IS TO BE RAISED).

EXTERNAL ELASTOMER THICKNESS = 0.200″
(1 REQUIRED)

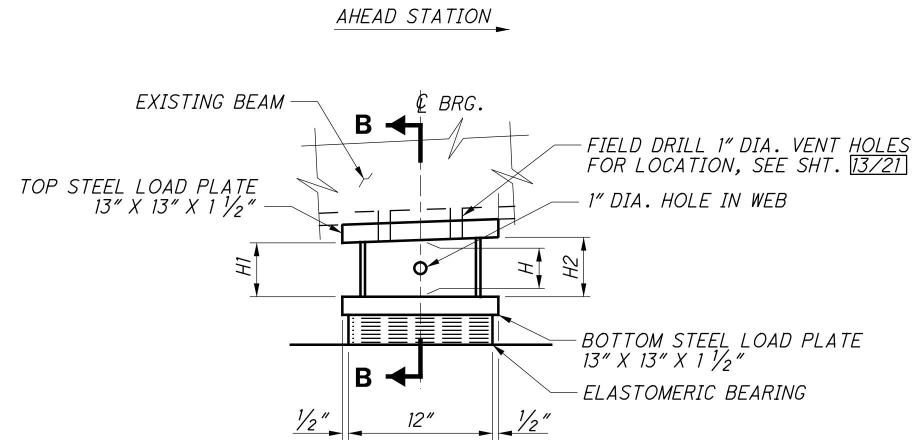
INTERNAL ELASTOMER THICKNESS = 0.300″
(8 REQUIRED)

INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)
(8 REQUIRED)



DEAD LOAD REACTION = 42.0 K
LIVE LOAD REACTION = 53.0 K
TOTAL REACTION = 95.0 K

SECTION B-B



ELEVATION

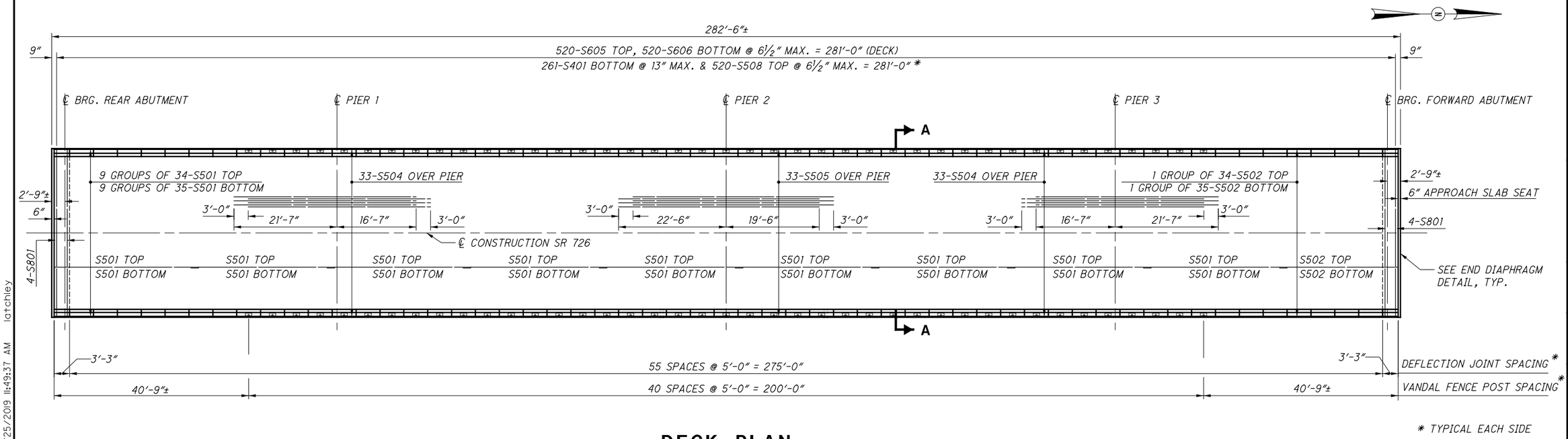
BEARING AT ABUTMENTS

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6804659	

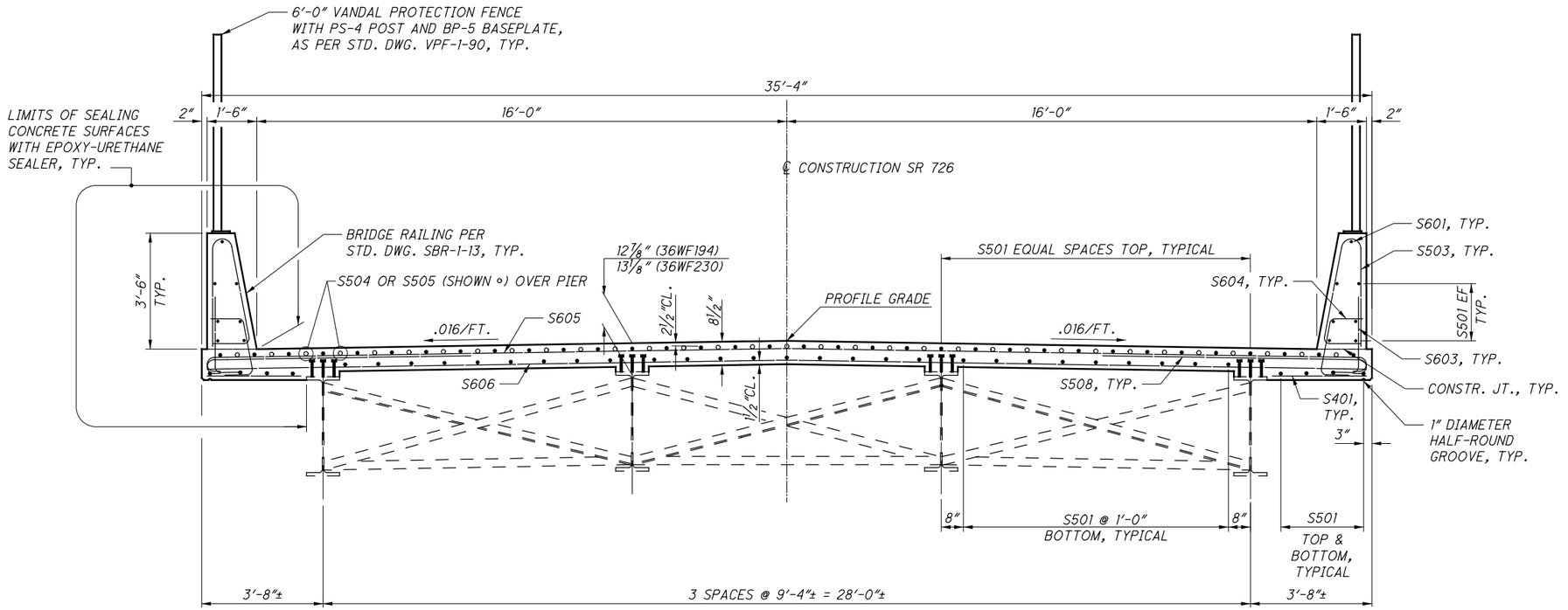
BEARING DETAILS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654



DECK PLAN

LAP LENGTHS:
NO. 5 BARS = 2'-6"



SECTION A-A

NOTES:

1. FOR END DIAPHRAGM DETAILS, SEE SHEET 11/21 .

2. 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 HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 4⅜" ABOVE THE 36WF194 BEAMS AND 4⅝" ABOVE THE 36WF230 BEAMS AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

   THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, 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 511.23.

3. FOR RAILING DETAILS, SEE SHEET 18/21 .

DESIGN AGENCY
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(513) 842-8200

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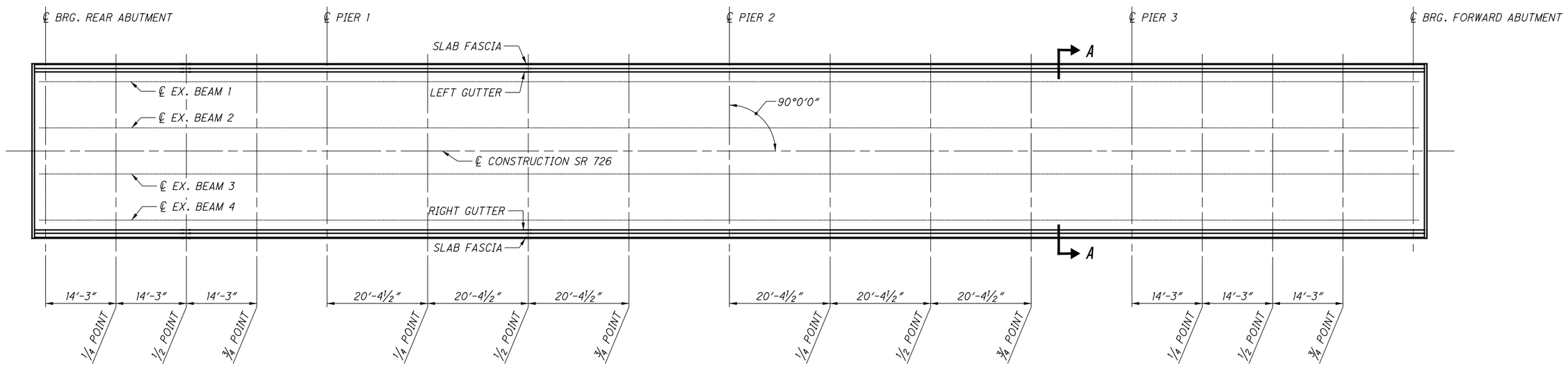
MRS	XXX	6804659	

SUPERSTRUCTURE DETAILS (1)
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

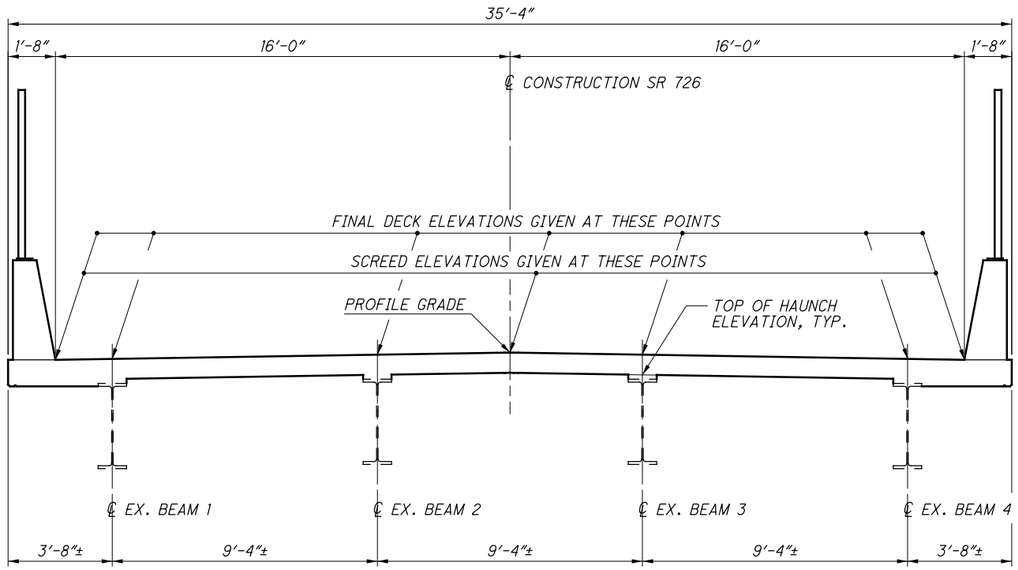
PRE-70-0.00
PID No. 96654

15 / 21

141 / 147



PLAN



SECTION A-A

NOTES:
1. WORK THIS SHEET WITH SHEET 17/21 .

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
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MRS	XXX	6804659	

DECK ELEVATION DIAGRAM
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

16 / 21

142 / 147

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DECK ELEVATIONS

LOCATION	SPAN 1				SPAN 2				SPAN 3				SPAN 4				
	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING
	STATION 8+61.50	STATION 8+75.75	STATION 8+90.00	STATION 9+04.25	STATION 9+18.50	STATION 9+38.88	STATION 9+59.25	STATION 9+79.63	STATION 10+00.00	STATION 10+20.38	STATION 10+40.75	STATION 10+61.13	STATION 10+81.50	STATION 10+95.75	STATION 11+10.00	STATION 11+24.25	STATION 11+38.50
LEFT GUTTER	1139.82	1140.04	1140.23	1140.40	1140.54	1140.71	1140.83	1140.90	1140.92	1140.90	1140.83	1140.71	1140.54	1140.40	1140.23	1140.04	1139.82
BEAM 1	1139.86	1140.07	1140.26	1140.43	1140.57	1140.74	1140.86	1140.93	1140.95	1140.93	1140.86	1140.74	1140.57	1140.43	1140.26	1140.07	1139.86
BEAM 2	1140.01	1140.22	1140.41	1140.58	1140.72	1140.89	1141.01	1141.08	1141.10	1141.08	1141.01	1140.89	1140.72	1140.58	1140.41	1140.22	1140.01
CENTERLINE	1140.08	1140.29	1140.48	1140.65	1140.80	1140.96	1141.08	1141.15	1141.18	1141.15	1141.08	1140.96	1140.80	1140.65	1140.48	1140.29	1140.08
BEAM 3	1140.01	1140.22	1140.41	1140.58	1140.72	1140.89	1141.01	1141.08	1141.10	1141.08	1141.01	1140.89	1140.72	1140.58	1140.41	1140.22	1140.01
BEAM 4	1139.86	1140.07	1140.26	1140.43	1140.57	1140.74	1140.86	1140.93	1140.95	1140.93	1140.86	1140.74	1140.57	1140.43	1140.26	1140.07	1139.86
RIGHT GUTTER	1139.82	1140.04	1140.23	1140.40	1140.54	1140.71	1140.83	1140.90	1140.92	1140.90	1140.83	1140.71	1140.54	1140.40	1140.23	1140.04	1139.82

SCREED ELEVATIONS

LOCATION	SPAN 1				SPAN 2				SPAN 3				SPAN 4				
	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING
	STATION 8+61.50	STATION 8+75.75	STATION 8+90.00	STATION 9+04.25	STATION 9+18.50	STATION 9+38.88	STATION 9+59.25	STATION 9+79.63	STATION 10+00.00	STATION 10+20.38	STATION 10+40.75	STATION 10+61.13	STATION 10+81.50	STATION 10+95.75	STATION 11+10.00	STATION 11+24.25	STATION 11+38.50
LEFT GUTTER	1139.82	1140.06	1140.25	1140.40	1140.54	1140.73	1140.87	1140.92	1140.92	1140.92	1140.87	1140.73	1140.54	1140.40	1140.25	1140.06	1139.82
PROFILE GRADE	1140.08	1140.31	1140.50	1140.66	1140.80	1140.99	1141.12	1141.17	1141.18	1141.17	1141.12	1140.99	1140.80	1140.66	1140.50	1140.31	1140.08
RIGHT GUTTER	1139.82	1140.06	1140.25	1140.40	1140.54	1140.73	1140.87	1140.92	1140.92	1140.92	1140.87	1140.73	1140.54	1140.40	1140.25	1140.06	1139.82

TOP OF HAUNCH ELEVATIONS

LOCATION	SPAN 1				SPAN 2				SPAN 3				SPAN 4				
	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING	¼ POINT	½ POINT	¾ POINT	℄ BEARING
	STATION 8+61.50	STATION 8+75.75	STATION 8+90.00	STATION 9+04.25	STATION 9+18.50	STATION 9+38.88	STATION 9+59.25	STATION 9+79.63	STATION 10+00.00	STATION 10+20.38	STATION 10+40.75	STATION 10+61.13	STATION 10+81.50	STATION 10+95.75	STATION 11+10.00	STATION 11+24.25	STATION 11+38.50
BEAM 1	1139.15	1139.38	1139.57	1139.73	1139.86	1140.06	1140.19	1140.24	1140.24	1140.24	1140.19	1140.06	1139.86	1139.73	1139.57	1139.38	1139.15
BEAM 2	1139.30	1139.53	1139.72	1139.88	1140.01	1140.21	1140.34	1140.39	1140.39	1140.39	1140.34	1140.21	1140.01	1139.88	1139.72	1139.53	1139.30
BEAM 3	1139.30	1139.53	1139.72	1139.88	1140.01	1140.21	1140.34	1140.39	1140.39	1140.39	1140.34	1140.21	1140.01	1139.88	1139.72	1139.53	1139.30
BEAM 4	1139.15	1139.38	1139.57	1139.73	1139.86	1140.06	1140.19	1140.24	1140.24	1140.24	1140.19	1140.06	1139.86	1139.73	1139.57	1139.38	1139.15

NOTES:
1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

2. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

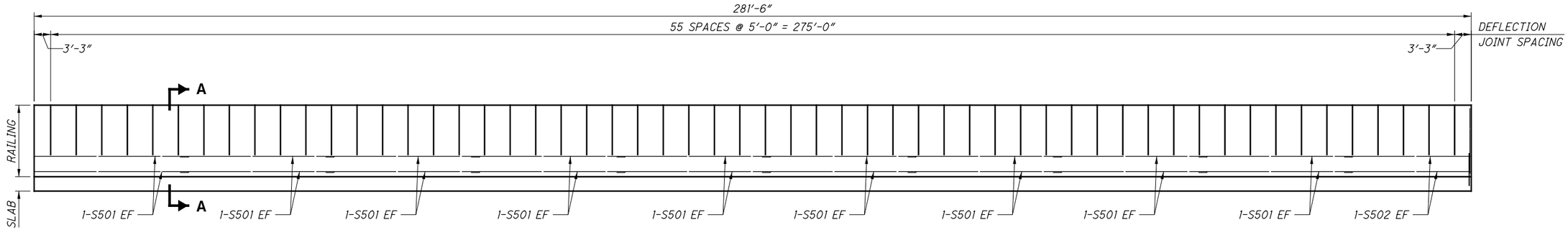
3. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
Stantec
1687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED EDA | DRAWN ALH | REVIEWED EER | DATE 10/25/2019
CHECKED MRS | REVISED XXX | STRUCTURE FILE NUMBER 6804659

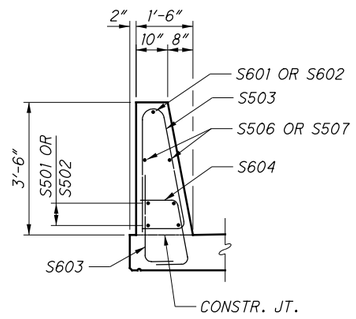
DECK ELEVATIONS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

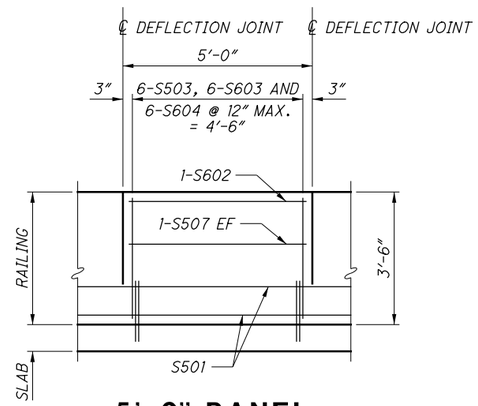


RAILING ELEVATION

(1 REQUIRED PER SIDE)
(EXAGGERATED VERTICAL SCALE)

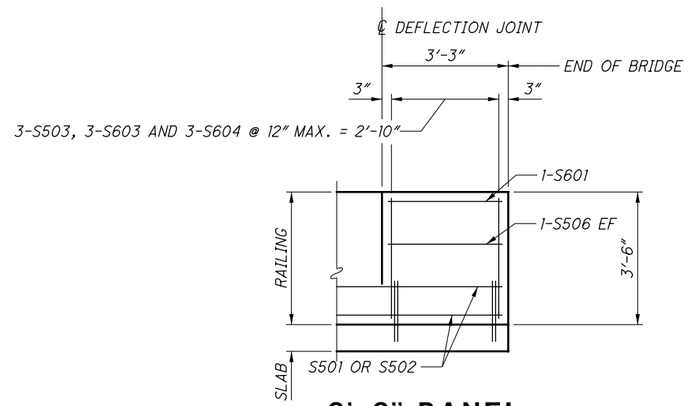


SECTION A-A



5'-0" PANEL

(55 REQUIRED PER SIDE)



3'-3" PANEL

(2 REQUIRED PER SIDE)

NOTES:
1. FOR ADDITIONAL RAILING INFORMATION, SEE STD. DWG. SBR-1-13.
2. MINIMUM LAP LENGTH: NO. 5 BARS = 1'-6".

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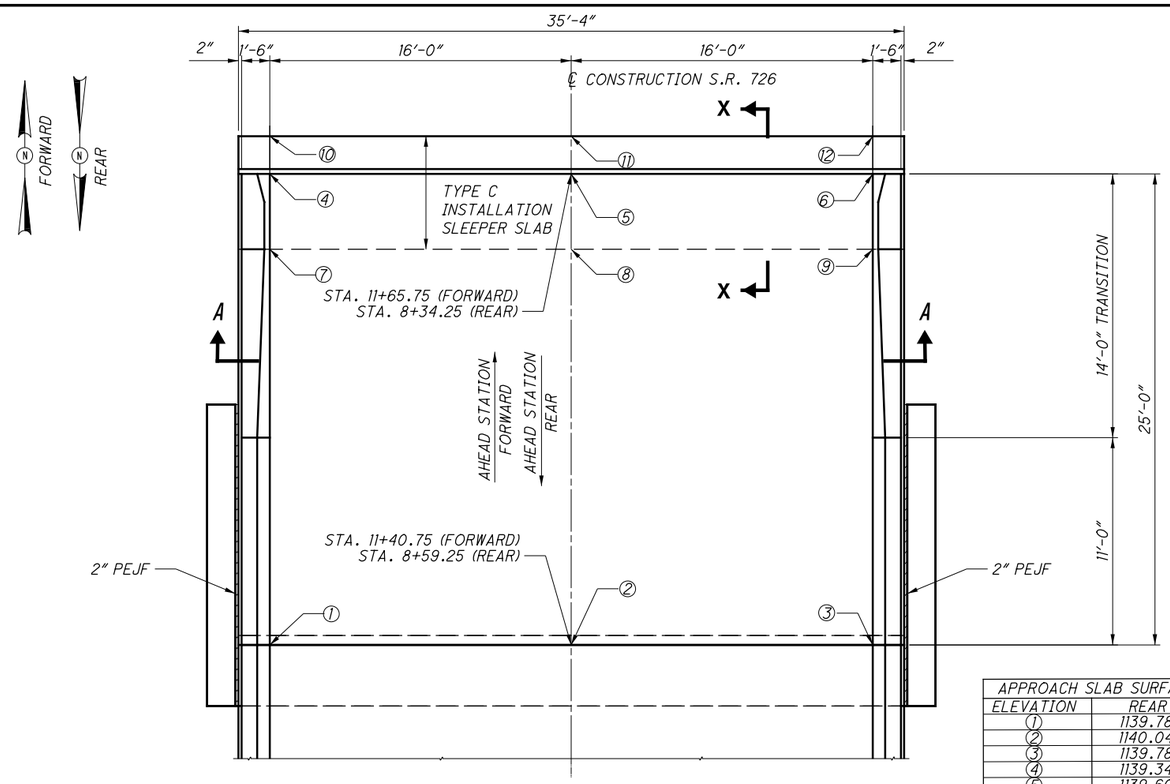
DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6804659	

SUPERSTRUCTURE DETAILS (1)
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

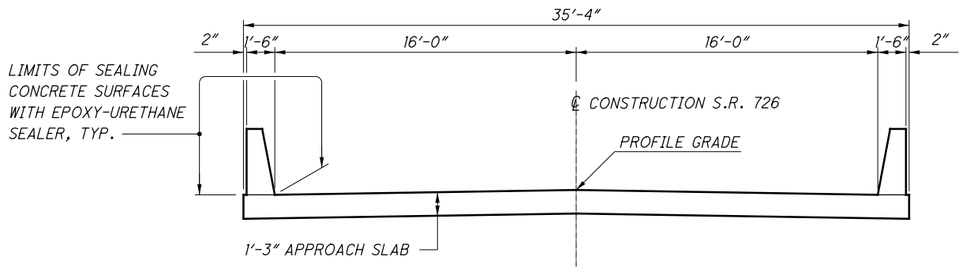
PRE-70-0.00
PID No. 96654



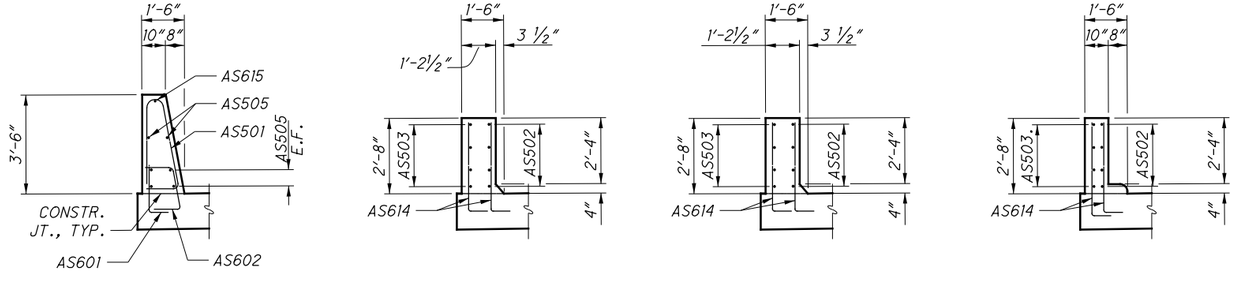
APPROACH SLAB

APPROACH SLAB SURFACE ELEVATIONS		
ELEVATION	REAR	FORWARD
①	1139.78	1139.78
②	1140.04	1140.04
③	1139.78	1139.78
④	1139.34	1139.33
⑤	1139.60	1139.59
⑥	1139.34	1139.33

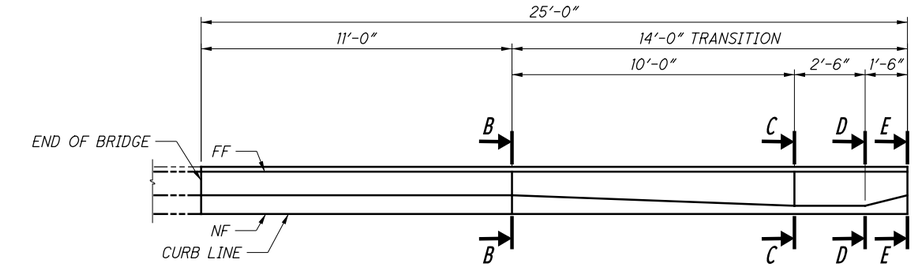
SLEEPER SLAB SURFACE ELEVATIONS		
ELEVATION	REAR	FORWARD
⑦	1139.42	1139.42
⑧	1139.67	1139.67
⑨	1139.42	1139.42
⑩	1139.30	1139.29
⑪	1139.55	1139.55
⑫	1139.30	1139.29



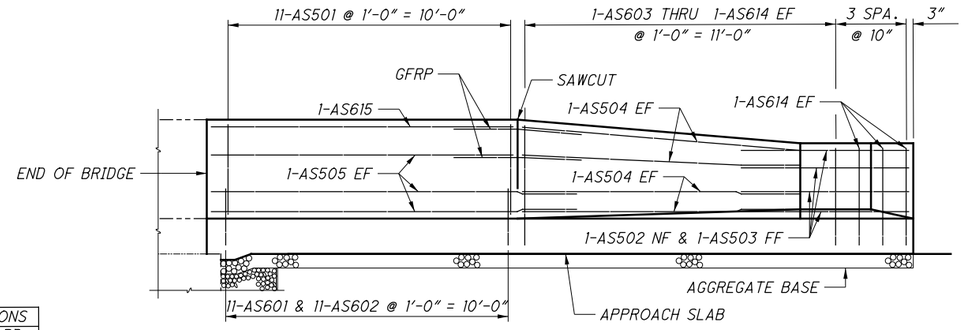
SECTION A-A



SECTION B-B SECTION C-C SECTION D-D SECTION E-E



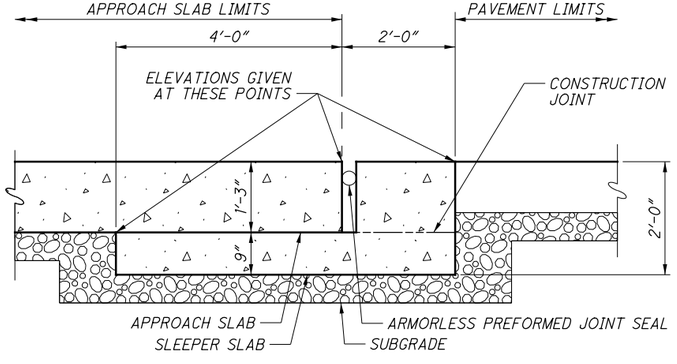
PLAN



ELEVATION

TRANSITION DETAIL

(4 REQUIRED)



SECTION X-X

NOTES:
1. FOR ADDITIONAL INFORMATION, SEE STD. DWG. AS-1-15, AS-2-15 AND SBR-1-13.
2. THE COST OF BARRIER, 1" PEFJ, REINFORCING STEEL IN SLAB AND BARRIER, AGGREGATE BASE, & SUBGRADE COMPACTION IS INCLUDED FOR PAYMENT WITH ITEM 526, REINFORCED CONCRETE APPROACH SLAB (15"), AS PER PLAN.

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, OHio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
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MRS	XXX	6804659	

APPROACH SLAB DETAILS
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

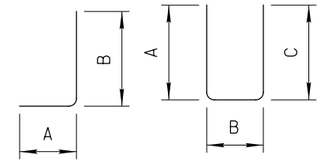
19 / 21

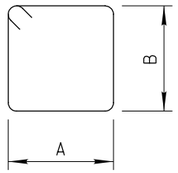
145 / 147

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
FORWARD ABUTMENT											
A801	16	21'-11"	936	STR.							
A501	92	3'-9"	360	STR.							
A502	39	20'-1"	817	3	3'-5"	6'-4"					
A503	20	20'-10"	435	STR.							
A504	20	18'-4"	382	3	2'-5"	6'-5½"					
A505	28	9'-8"	282	STR.							
A506	24	15'-8"	392	STR.							
A507	20	15'-5"	322	2	7'-3"	1'-2"	7'-3"				
A508	12	11'-8"	146	3	1'-2"	4'-4½"					
A501	20	2'-6"	52	STR.							
		TOTAL	4124								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
REAR ABUTMENT											
B501	6	4'-0"	18	STR							
B502	12	13'-5"	168	3	1'-2"	5'-3"					
B503	20	3'-9"	78	STR.							
B504	20	15'-2"	316	3	1'-11"	5'-4½"					
B505	36	4'-0"	150	1	10"	3'-3"					
B506	24	9'-8"	242	STR.							
B507	28	15'-8"	458	STR.							
B508	20	17'-7"	367	2	8'-4"	1'-2"					
		TOTAL	1797								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
PIERS											
P601	87	5'-5"	708	2	1'-6"	2'-8"	1'-6"				
P602	108	3'-9"	608	1	1'-0"	2'-10"					
P501	42	16'-7"	726	STR.							
		TOTAL	2042								





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DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6804659	

REINFORCING STEEL LIST
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

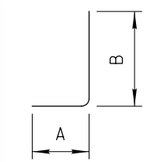
20 / 21

146
147

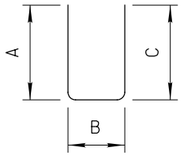
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE											
D801	16	16'-10"	719	1	1'-4"	15'-8"					
D802	8	15'-8"	335	STR.							
D803	20	20'-5"	1090	STR.							
D804	16	6'-4"	271	18	4'-1"	11"	11"				
D805	48	4'-7"	587	18	2'-3"	1'-0"	1'-0"				
D501	24	13'-7"	340	3	3'-5"	3'-1"					
D502	54	7'-1"	399	2	2'-7"	2'-2"	2'-7"				
D503	3	10'-1"	32	3	3'-5"	1'-4"					
D504	6	15'-9"	99	3	3'-5"	4'-2"					
D505	3	12'-3"	38	3	3'-5"	2'-5"					
S801	8	35'-0"	748	STR.							
S601	4	2'-11"	18	STR.							
S602	42	4'-8"	294	STR.							
S603	672	2'-5"	2439	1	1'-0"	1'-7"					
S604	672	3'-2"	3196	39	1'-7"	11"	1'-0"				
S605	520	36'-4"	28,378	17	35'-0"						
S606	520	35'-0"	26,390	STR.							
S501	693	30'-0"	21,684	STR.							
S502	77	33'-8"	2704	STR.							
S503	672	7'-4"	5140	23	11"	3'-3"	3'-0"			2¾"	
S504	66	38'-2"	2627	STR.							
S505	33	42'-0"	1446	STR.							
S506	8	2'-11"	24	STR.							
S507	220	4'-8"	107	STR.							
S508	1040	8'-1"	8768	16	7'-6"						
S401	522	2'-10"	988	STR.							
		TOTAL	108,567								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
APPROACH SLAB RAILING *											
AS601	44	2'-5"	160	1	1'-0"	1'-7"					
AS602	44	3'-2"	209	39	1'-7"	11"	1'-0"				
AS603	8	4'-10"	58	1	1'-0"	4'-0"					
AS604	8	4'-9"	57	1	1'-0"	3'-11"					
AS605	8	4'-8"	56	1	1'-0"	3'-10"					
AS606	8	4'-7"	55	1	1'-0"	3'-9"					
AS607	8	4'-6"	54	1	1'-0"	3'-8"					
AS608	8	4'-5"	53	1	1'-0"	3'-7"					
AS609	8	4'-4"	52	1	1'-0"	3'-6"					
AS610	8	4'-3"	51	1	1'-0"	3'-5"					
AS611	8	4'-2"	50	1	1'-0"	3'-4"					
AS612	8	4'-1"	49	1	1'-0"	3'-3"					
AS613	8	4'-0"	48	1	1'-0"	3'-2"					
AS614	32	3'-11"	188	1	1'-0"	3'-1"					
AS615	4	10'-8"	64	STR.							
AS501	44	7'-4"	337	23	11"	3'-3"	3'-0"			2¾"	
AS502	16	5'-9"	96	25	1'-10"	2'-5"	1'-5"	1½"	5"		
AS503	16	5'-8"	95	STR.							
AS504	32	10'-0"	334	STR.							
AS505	24	10'-8"	267	STR.							
		TOTAL	2333 *								

* REINFORCING WEIGHTS ARE FOR INFORMATION ONLY. REINFORCING IS INCLUDED IN THE PRICE BID FOR ITEM 526, REINFORCED CONCRETE APPROACH SLAB (15"), AS PER PLAN FOR PAYMENT.



TYPE-1



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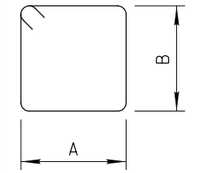

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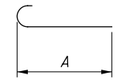

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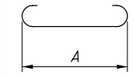

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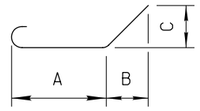

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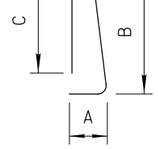

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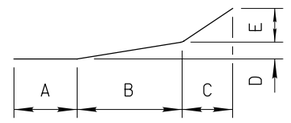

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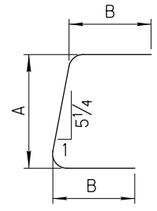


TYPE-39

DESIGN AGENCY
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45241
(513) 842-8200

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	EER	10/25/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	6804659	

REINFORCING STEEL LIST

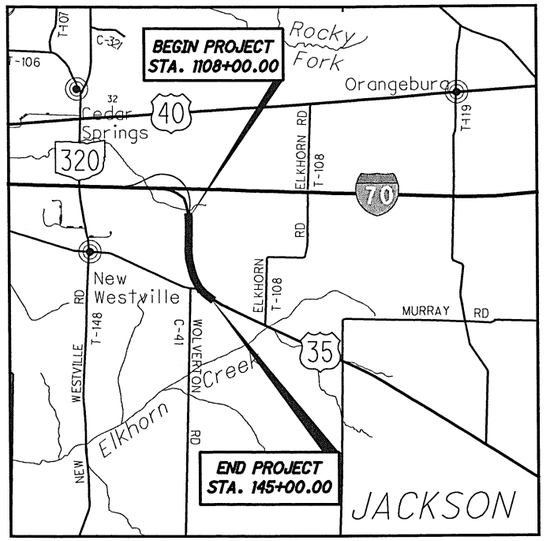
BRIDGE NO. PRE-726-0428
SR 726 OVER I-70

PRE-70-0.00
PID No. 96654

21 / 21

147
147

V:\1736\active\17362094\engineering\96654\Design\Structures\PRE_726_0428C\Sheets\726_0428C_RL002.dgn 10/25/2019 11:49:42 AM lat chley



LOCATION MAP

LATITUDE: 39°49'14" LONGITUDE: 84°46'47"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

DESIGN DESIGNATION

	SLM 1.66-2.38	SLM 2.38-6.08
CURRENT ADT (2020)	2100	6400
DESIGN YEAR ADT (2040)	3800	9400
DESIGN HOURLY VOLUME (2040)	350	850
DIRECTIONAL DISTRIBUTION	0.57	0.57
TRUCKS (24 HOUR B&C)	0.07	0.09
DESIGN SPEED	55	55
LEGAL SPEED	55	55

DESIGN FUNCTIONAL CLASSIFICATION:
04 MINOR ARTERIAL (RURAL)

NHS PROJECT NO

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
Stantec
11687 Lebanon Road
Cincinnati, Ohio 45249
(513) 842-8200

ENGINEERS SEAL:

STATE OF OHIO
PAUL J. DURHAM
E-81699
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Paul Durham
DATE: NOVEMBER 6, 2019

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

PRE-35-1.95
PART 2
JACKSON TOWNSHIP

FOR PART 1, SEE PRE-70-0.00

INDEX OF SHEETS:

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBER
SHOULDER WIDTH	11/6/2019	4

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
		SEE PART 1		SEE PART 1	SEE PART 1

PROJECT DESCRIPTION

REPLACEMENT OF 0.7 MILES OF PAVEMENT ON US 35 BETWEEN THE IR 70 RAMPS AND THE START OF THE TWO LANE SECTION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 9.45 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 9.70 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

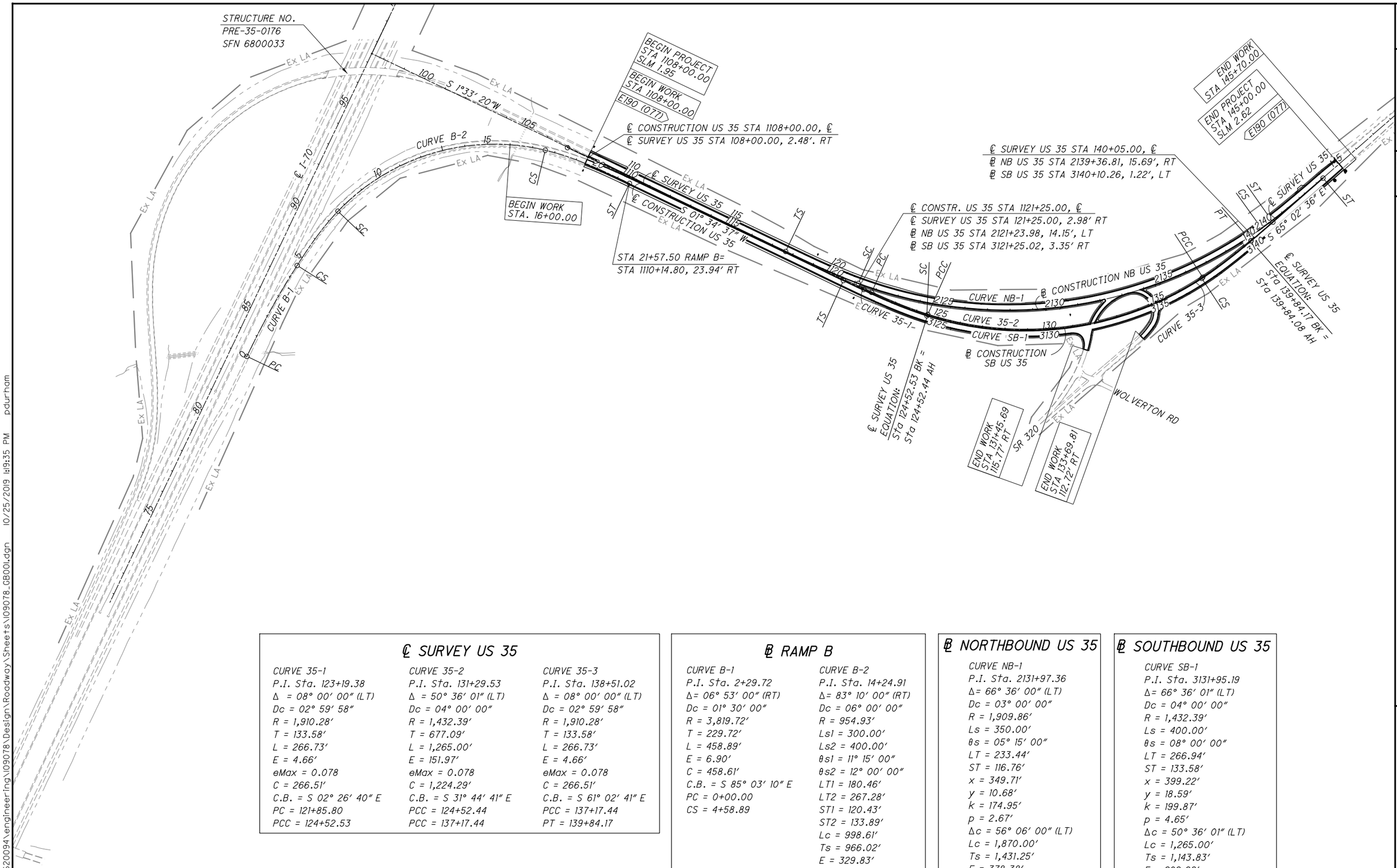
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 15, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Tony K Cyphell
DATE 11/7/19 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E190 (077)
PID NO. 96654
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
PRE-35-1.95 PART 2
1 / 88



℄ SURVEY US 35

CURVE 35-1	CURVE 35-2	CURVE 35-3
P.I. Sta. 123+19.38	P.I. Sta. 131+29.53	P.I. Sta. 138+51.02
Δ = 08° 00′ 00″ (LT)	Δ = 50° 36′ 01″ (LT)	Δ = 08° 00′ 00″ (LT)
Dc = 02° 59′ 58″	Dc = 04° 00′ 00″	Dc = 02° 59′ 58″
R = 1,910.28′	R = 1,432.39′	R = 1,910.28′
T = 133.58′	T = 677.09′	T = 133.58′
L = 266.73′	L = 1,265.00′	L = 266.73′
E = 4.66′	E = 151.97′	E = 4.66′
eMax = 0.078	eMax = 0.078	eMax = 0.078
C = 266.51′	C = 1,224.29′	C = 266.51′
C.B. = S 02° 26′ 40″ E	C.B. = S 31° 44′ 41″ E	C.B. = S 61° 02′ 41″ E
PC = 121+85.80	PCC = 124+52.44	PCC = 137+17.44
PCC = 124+52.53	PCC = 137+17.44	PT = 139+84.17

℄ RAMP B

CURVE B-1	CURVE B-2
P.I. Sta. 2+29.72	P.I. Sta. 14+24.91
Δ= 06° 53′ 00″ (RT)	Δ= 83° 10′ 00″ (RT)
Dc = 01° 30′ 00″	Dc = 06° 00′ 00″
R = 3,819.72′	R = 954.93′
T = 229.72′	Ls1 = 300.00′
L = 458.89′	Ls2 = 400.00′
E = 6.90′	θs1 = 11° 15′ 00″
C = 458.61′	θs2 = 12° 00′ 00″
C.B. = S 85° 03′ 10″ E	LT1 = 180.46′
PC = 0+00.00	LT2 = 267.28′
CS = 4+58.89	ST1 = 120.43′
	ST2 = 133.89′
	Lc = 998.61′
	Ts = 966.02′
	E = 329.83′
	eMax = 0.083
	CS = 4+58.89
	SC = 7+58.89
	CS = 17+57.50
	ST = 21+57.50

℄ NORTHBOUND US 35

CURVE NB-1
P.I. Sta. 2131+97.36
Δ= 66° 36′ 00″ (LT)
Dc = 03° 00′ 00″
R = 1,909.86′
Ls = 350.00′
θs = 05° 15′ 00″
LT = 233.44′
ST = 116.76′
x = 349.71′
y = 10.68′
k = 174.95′
p = 2.67′
Δc = 56° 06′ 00″ (LT)
Lc = 1,870.00′
Ts = 1,431.25′
E = 378.38′
eMax = -0.068
TS = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11

℄ SOUTHBOUND US 35

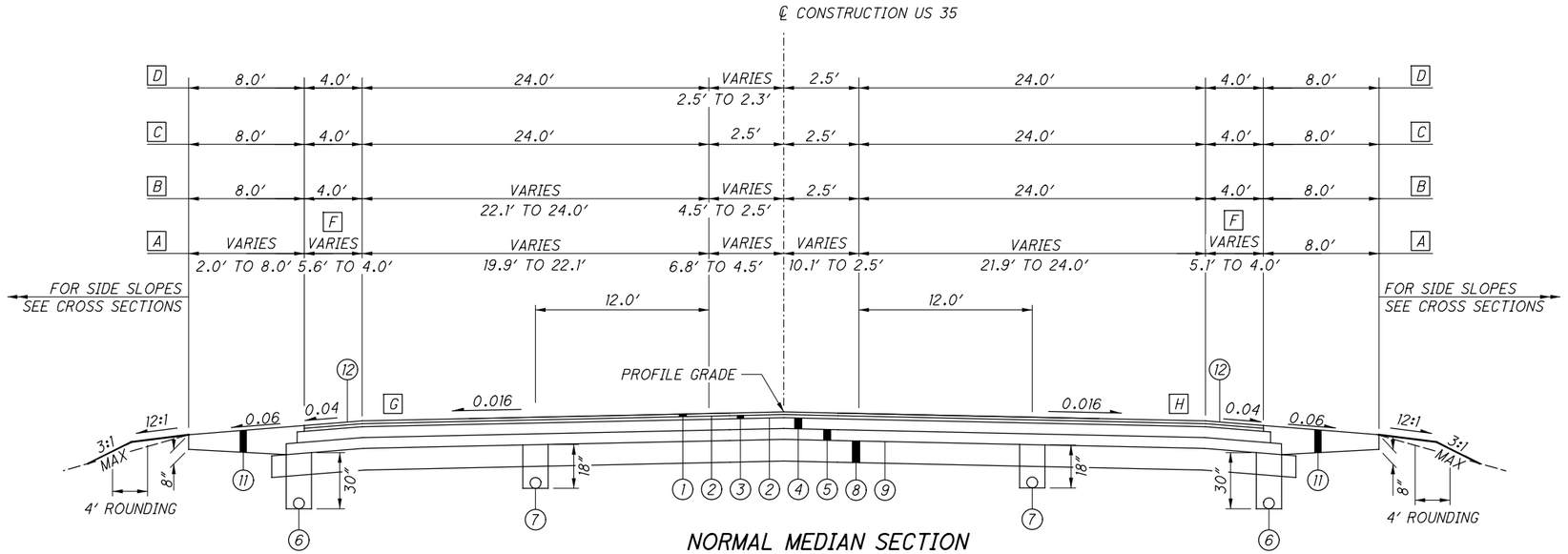
CURVE SB-1
P.I. Sta. 3131+95.19
Δ= 66° 36′ 01″ (LT)
Dc = 04° 00′ 00″
R = 1,432.39′
Ls = 400.00′
θs = 08° 00′ 00″
LT = 266.94′
ST = 133.58′
x = 399.22′
y = 18.59′
k = 199.87′
p = 4.65′
Δc = 50° 36′ 01″ (LT)
Lc = 1,265.00′
Ts = 1,143.83′
E = 286.96′
eMax = 0.078
TS = 3120+51.36
SC = 3124+51.36
CS = 3137+16.36
ST = 3141+16.36

HORIZONTAL SCALE IN FEET
0 150 300 600

CALCULATED JTK
CHECKED PJD

SCHEMATIC PLAN

PRE-35-1.95



NORMAL MEDIAN SECTION

- A STA 1108+00.00 TO STA 1110+14.80
- B STA 1110+14.80 TO STA 1112+00.00
- C STA 1112+00.00 TO STA 1117+00.00
- D STA 1117+00.00 TO STA 1117+66.11

- F STA 1108+00.00 TO STA 1108+40.00
- G TRANSITION PAVEMENT SLOPE FROM -0.013 AT STA 1108+00.00 TO -0.016 AT STA 1108+12.00
- H TRANSITION PAVEMENT SLOPE FROM -0.043 AT STA 1108+00.00 TO -0.016 AT STA 1110+14.80
- L TRANSITION PAVEMENT SLOPE FROM -0.016 AT STA 144+84.00 TO -0.020 AT STA 145+00.00
- M TRANSITION PAVEMENT SLOPE FROM -0.016 AT STA 144+80.00 TO -0.021 AT STA 145+00.00

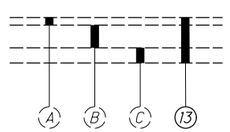
LEGEND

1. ITEM 442, 1½″ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)
2. ITEM 407, NON-TRACKING TACK COAT
3. ITEM 442, 1¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
4. ITEM 301, 6″ ASPHALT CONCRETE BASE, PG64-22
5. ITEM 304, 6″ AGGREGATE BASE
6. ITEM 605, 6″ SHALLOW PIPE UNDERDRAIN
7. ITEM 605, 6″ BASE PIPE UNDERDRAIN
8. ITEM 206, CEMENT STABILIZED SUBGRADE (12″ DEEP)
9. ITEM 204, PROOF ROLLING
10. ITEM 606, GUARDRAIL, TYPE MGS
11. ITEM 411, STABILIZED CRUSHED AGGREGATE
12. ITEM 618, RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
13. ITEM 202, PAVEMENT REMOVED

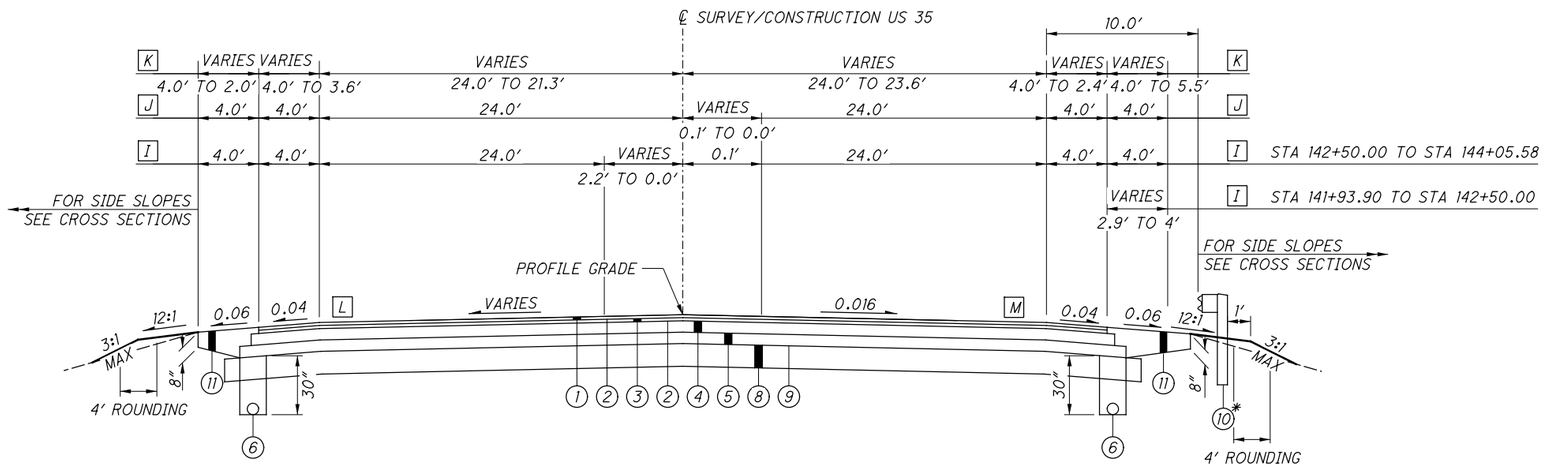
A. EXISTING 3″ ASPHALT

B. EXISTING 9″ REINFORCED CONCRETE PAVEMENT

C. EXISTING 6″ GRANULAR SUBBASE



EX. PAVEMENT MAKE-UP



NORMAL SECTION

- I STA 141+93.90 TO STA 144+05.57
- J STA 144+05.57 TO STA 144+25.00
- K STA 144+25.00 TO STA 145+00.00

* GUARDRAIL LIMITS: STA 142+20.00 TO STA 145+70.00

FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET NO. 4

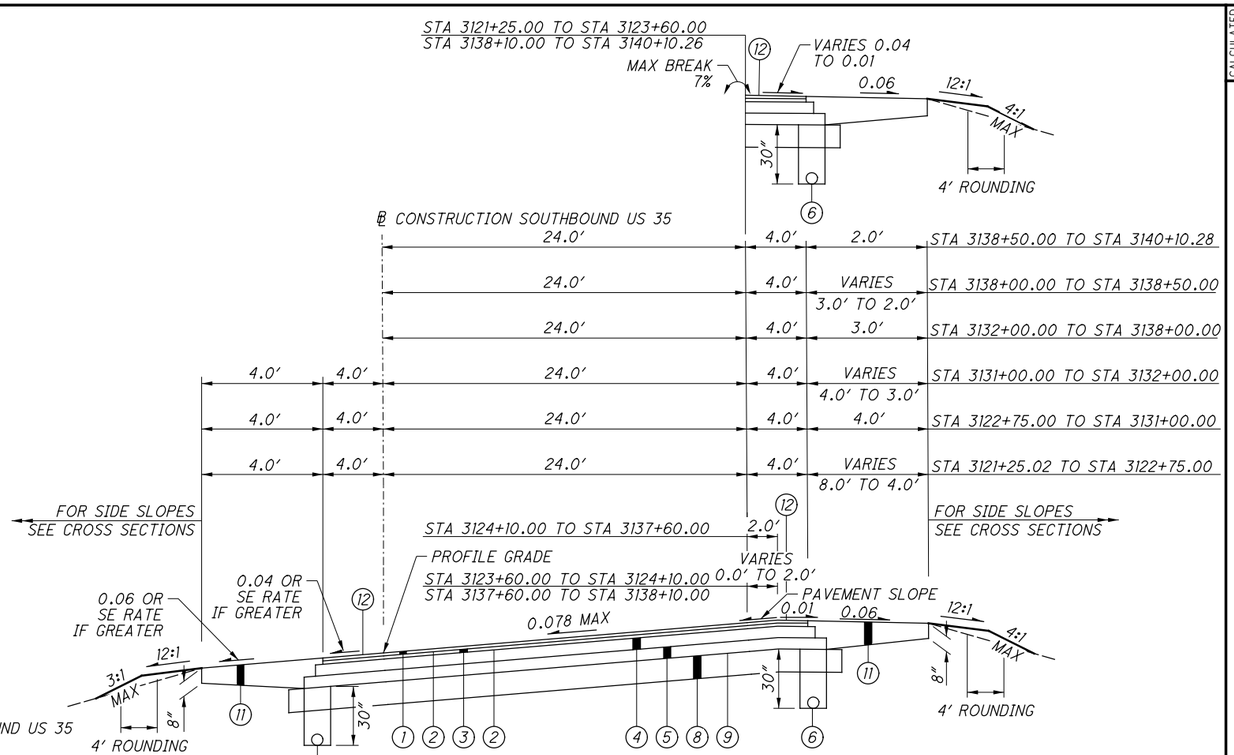
CALCULATED JTK
CHECKED PJD

TYPICAL SECTIONS US 35

PRE-35-1.95

LEGEND

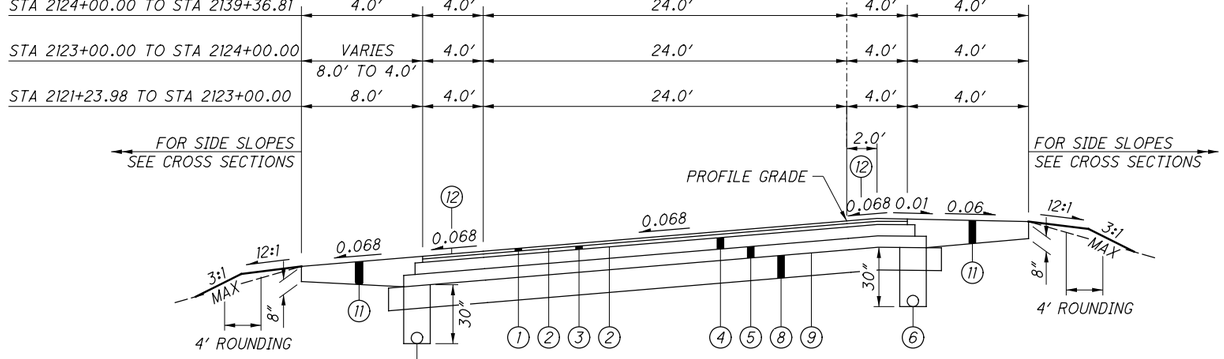
1. ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)
2. ITEM 407, NON-TRACKING TACK COAT
3. ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
4. ITEM 301, 6" ASPHALT CONCRETE BASE, PG64-22
5. ITEM 304, 6" AGGREGATE BASE
6. ITEM 605, 6" SHALLOW PIPE UNDERDRAINS
7. ITEM 605, 6" BASE PIPE UNDERDRAINS
8. ITEM 206, CEMENT STABILIZED SUBGRADE (12" DEEP)
9. ITEM 204, PROOF ROLLING
10. ITEM 606, GUARDRAIL, TYPE MGS
11. ITEM 411, STABILIZED CRUSHED AGGREGATE
12. ITEM 618, RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)



SUPERELEVATED SECTION SOUTHBOUND US 35

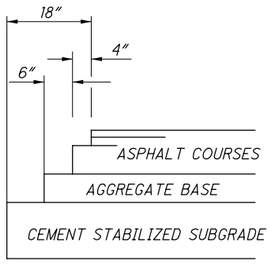
STA 3121+25.00 TO STA 3124+51.36 (TRANS)
STA 3124+51.36 TO STA 3137+16.36 (0.078)
STA 3137+16.36 TO STA 3140+10.26 (TRANS)

TOTAL GRADED SHOULDER WIDTH VARIES FROM 12' TO 8' BETWEEN STA 3122+75.00 TO STA 3138+50.00 NORMAL DESIGN CRITERIA 12"

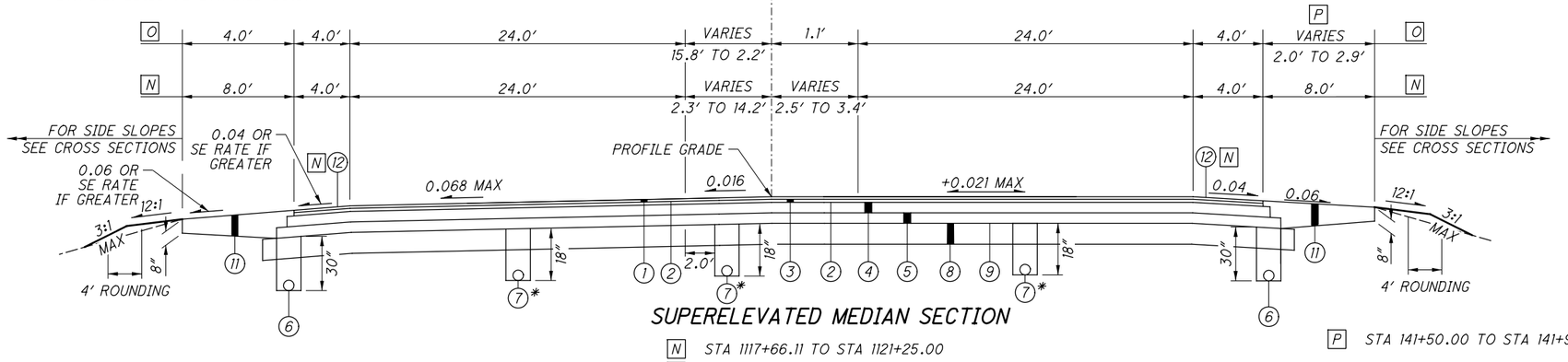


SUPERELEVATED SECTION NORTHBOUND US 35

STA 2121+23.98 TO STA 2139+36.81



STEP DETAIL



SUPERELEVATED MEDIAN SECTION

N STA 1117+66.11 TO STA 1121+25.00
O STA 140+05.00 TO STA 141+93.90
P STA 141+50.00 TO STA 141+93.00

* FOR EXACT UNDERDRAIN LOCATIONS, SEE PLAN SHEETS

CALCULATED JTK CHECKED PJD

TYPICAL SECTIONS US 35

PRE-35-1.95

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:

DAYTON POWER & LIGHT
1900 DRYDEN ROAD
DAYTON, OHIO 45439
(937) 331-4521 (BILL GOURLEY)
WILLIAM.GOURLEY@AES.COM

CENTURY LINK
803 E. 12TH STREET
GREENVILLE, OHIO 45331
937-547-4255 (DAVID KAPLAN)
DAVID.W.KAPLAN@CENTURYLINK.COM

CHARTER COMMUNICATIONS (SPECTRUM) - DAYTON
3691 TURNER ROAD
DAYTON, OHIO 45415
937-396-8372 (JACOB HOUDESHELL)
JACOB.HOUDESHELL@CHARTER.COM

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.

EXISTING PLANS

EXISTING PLANS ENTITLED PRE-40-0.00 MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON, OHIO.

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.

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.

ITEM 206, CURING COAT, AS PER PLAN

CURE THE CHEMICALLY STABILIZED SUBGRADE WITH RAPID SETTING EMULSIFIED ASHPALT, CONFORMING TO 702.04. NO SUBSTITUTE FOR THE EMULSIFIED ASPHALT CURE SHALL BE PERMITTED. ALL OTHER ITEMS OF ITEM 206, CEMENT STABILIZED SUBGRADE SHALL APPLY.

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 CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 8 TRAFFIC MAINTENANCE DEPARTMENT DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY DISTRICT 8 TRAFFIC MAINTENANCE AT 513-933-6689 AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

ITS:

ITS FACILITIES AREN'T LISTED WITH OUPS, SO THE CONTRACTOR IS REQUIRED TO CONTACT ODOT CENTRAL OFFICE ITS LAB DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY ODOT CENTRAL OFFICE ITS LAB AT THE CONTACT INFORMATION LISTED BELOW AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK FOR THE NEED TO MARK ODOT OWNED UTILITIES.

CENTRAL OFFICE ITS LAB
1606 W. BROAD STREET, COLUMBUS, OHIO 43223
614-387-4113 - PHONE (ITS LOCATES LINE)
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 PROPOSAL NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY WORK. THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE OF THE PROJECT.

COORDINATION BETWEEN CONTRACTORS

THE CONSTRUCTION AT PRE-35-1.95 MAY REQUIRE THE CONTRACTOR TO COORDINATE WITH THE ADJACENT PREBLE COUNTY CULVERT PROJECTS (PID 106504 AND PID 105967) AND PRE-35-1.76 (PID 100807).

COOPERATION WITH THE ENGINEER, INSPECTORS, AND ALL OTHER CONTRACTORS ON OR ADJACENT TO THE PROJECT IS REQUIRED, AS PER CMS 105.08.

ITEM 204, PROOF ROLLING

A QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE SHEET NO. 28 FOR ADDITIONAL INFORMATION.

ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN

ON THIS PROJECT SUPPLY A 19MM INTERMEDIATE COURSE MEETING THE REQUIREMENTS OF 442 EXCEPT AS MODIFIED BELOW.

MODIFY TABLE 442.02-2 AS FOLLOWS:

Sieve Size		9.5 mm mix	12.5 mm mix	19 mm mix
		Total Percent Passing		
1 1/2 inch	(3.75 mm)	*	*	100
3/4 inch	(19 mm)	*	100	95 to 100
1/2 inch	(12.5 mm)	100	95 to 100	90 to 100
3/8 inch	(9.5 mm)	90 to 100	96 max	96 max
No. 4	(4.75 mm)	70 max	52 to 65	60 max
No. 8	(2.36 mm)	34 to 52	34 to 45	34 to 45
No. 200	(75 ²m)	2 to 8	2 to 8	2 to 8

MODIFY TABLE 442.02-3 AS FOLLOWS: APPLY 14.0 FOR A VMA (PERCENT MINIMUM) FOR A 19MM MIX. APPLY 5.3 PERCENT FOR THE MINIMUM TOTAL ASPHALT BINDER CONTENT FOR A 19MM MIX.

MODIFY THE 442 INTERMEDIATE COURSE REQUIREMENTS OF TABLES 401.04-1 AND 401.04-2 AS FOLLOWS: APPLY 3.5 PERCENT FOR THE TOTAL VIRGIN ASPHALT BINDER CONTENT, MINIMUM.

USE A PG64-22 IF USING 25 PERCENT OR LESS RAP. USE PG64-28 IF USING GREATER THAN 25 PERCENT RAP. PROVIDE AN APPROVED DENSITY GAUGE AND OPERATOR TO COLLECT INFORMATIONAL DENSITY READINGS EACH DAY OR NIGHT OF PAVING AS DIRECTED BY THE ENGINEER.

ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E

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.

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

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.

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

ITEM 621, RAISED PAVEMENT MARKER REMOVED

THE CONTRACTOR SHALL REMOVE ALL EXISTING RAISED PAVEMENT MARKERS WITH THE PROJECT LIMITS. ALL ASPECTS OF ITEM 621 SHALL APPLY. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

ITEM 621, RAISED PAVEMENT MARKER REMOVED 42 EACH

ITEM SPECIAL, MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE.

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.

CALCULATED PJD
CHECKED SNS

GENERAL NOTES

PRE-35-1.95

ITEM 659, SEEDING AND MULCHING

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

ITEM 659, SOIL ANALYSIS TEST 2 EACH

ITEM 659, TOPSOIL 1615 CU. YD.

ITEM 659, SEEDING AND MULCHING 14544 SQ. YD.

ITEM 659, REPAIR SEEDING AND MULCHING 728 SQ. YD.

ITEM 659, COMMERCIAL FERTILIZER 1.97 TON

ITEM 659, LIME 3.01 ACRES

ITEM 659, WATER 79 M. GAL.

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.

ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN

WHERE DESIGNATED, EXISTING ANCHOR ASSEMBLIES INCLUDING ALL POSTS AND HARDWARE SHALL BE REMOVED. THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF THE ENTIRE CONCRETE ANCHOR AND CONCRETE ENCASEMENT. ALL HOLES LEFT AFTER REMOVAL OF ASSEMBLIES AND POSTS SHALL BE FILLED WITH GRANULAR MATERIAL AS DIRECTED BY THE ENGINEER. PAYMENT SHALL INCLUDE ALL NECESSARY LABOR AND EQUIPMENT REQUIRED TO PERFORM THE WORK AS INDICATED ABOVE. PAYMENT SHALL BE AT THE UNIT BID PRICE FOR ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

THIS PLAN UTILIZES VEGETATED FILTER STRIPS FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670 SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS. THE EXISTING VEGETATION COVERAGE WITHIN THE LIMITS OF THE PROPOSED VEGETATED FILTER STRIPS IS APPROXIMATELY 70%. THE CONTRACTOR WILL THEREFORE NOT BE REQUIRED TO DO ANY WORK IN THE UNDISTURBED PORTIONS OF THESE LOCATIONS. IF THE CONTRACTOR DISTURBS THE EXISTING VEGETATION IN THESE AREAS FOR ANY REASON, HE WILL BE REQUIRED TO REESTABLISH VEGETATION IN THE DISTURBED AREAS WITH THE ITEMS ABOVE AT NO COST TO THE DEPARTMENT. DISTURBANCE WILL BE AT THE DISCRETION OF THE ENGINEER. THE CONTRACTOR SHALL NOT DRIVE OR STORE EQUIPMENT OVER THE AREAS TO BE USED AS VEGETATED FILTER STRIPS.

ITEM 670, SLOPE EROSION PROTECTION 4757 SQ YD

PROJECTS IN OR NEAR A DRINKING WATER SOURCE:

THIS PROJECT IS LOCATED IN OR NEAR THE SOURCE OF PUBLIC DRINKING WATER SUPPLY. IN ORDER TO MINIMIZE THE POTENTIAL TO CONTAMINATE THIS WATER SUPPLY, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY.

ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO THE CORRESPONDING PWS. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT THE TOWNSHIP'S FIRE DEPARTMENT OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

FIRE DEPARTMENT PHONE
NORTH WEST FIRE CHIEF PAUL CONES 937-437-8354
LEWISBURG FIRE CHIEF BJ STEWART 937-962-4640

PROJECTS LOCATED OVER A SOLE SOURCE AQUIFER:

THE PROJECT AREA IS LOCATED OVER THE GREATER MIAMI SOLE SOURCE AQUIFER SYSTEM, A DESIGNATED SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT THE FIRE CHIEF OF THE COORDINATING TOWNSHIP OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

FIRE DEPARTMENT PHONE
LEWISBURG FIRE CHIEF BJ STEWART 937-962-4640

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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE TABLE ON THIS SHEET 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:	AS NOTED IN PROJECT CONTROL TABLE

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	12B

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD 83 (2011)
ELLIPSOID:	GRS 80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE (SOUTH ZONE)
COMBINED SCALE FACTOR:	1.000000000
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.

CENTERLINE CONTROL

PRE-35-1.95 Stantec Job#173620094

PROPOSED CENTERLINE OF SURVEY AND CONSTRUCTION COORDINATES

CL SURVEY US 35	Grid North	Grid East
P.O.T. 97+42.08	674108.0317	1328274.5518
P.C. 121+85.80	671665.2123	1328208.2140
STA EQ P.C.C. 124+52.53	671398.9414	1328219.5813
STA EQ P.C.C. 124+52.44	671398.9414	1328219.5813
P.C.C. 137+17.44	670357.8038	1328863.7227
STA EQ P.T. 139+84.17	670228.7779	1329096.9215
STA EQ P.T. 139+84.08	670228.7779	1329096.9215
STA EQ P.O.T. 158+32.75	669448.7659	1330772.9770
STA EQ P.O.T. 128+00.00	669448.7659	1330772.9770

BL CON U.S. 35 N/B	Grid North	Grid East
T.S. 2117+66.11	672084.7686	1328219.0715
S.C. 2121+16.11	671734.9019	1328220.4680
C.S. 2139+86.11	670207.9816	1329166.4168
S.T. 2143+36.11	670050.9365	1329479.0594

BL CON U.S. 35 S/B	Grid North	Grid East
T.S. 3120+51.36	671799.7813	1328205.4143
S.C. 3124+51.36	671400.2029	1328213.1611
C.S. 3137+16.36	670359.0640	1328857.3005
S.T. 3141+16.36	670173.7727	1329211.4050

BL CON U.S. 35	Grid North	Grid East
P.O.T. 1107+00.00	673150.5311	1328246.1017
P.O.T. 1121+49.97	671701.1115	1328206.1960

BL RAMP B	Grid North	Grid East
P.C. 0+00.00	674067.9889	1326829.4607
C.S. 4+58.89	674028.4379	1327286.3662
S.C.7+58.89	673961.6327	1327578.3274
C.S. 17+57.50	673235.3632	1328196.4902
S.T. 21+57.50	672836.5053	1328213.5066

PROJECT CONTROL

PRE-35-1.95 Survey provided by ODOT

CONTROL POINT COORDINATES SUPPLIED BY ODOT

CONTROL FOR SR 35	Grid North	Grid East	Mon. Type	Elevation
SA20	673741.170	1328253.330	IPINS STA 30+66.57, 30.97' RT	1193.730
SA22	674112.060	1328144.550	IPINS STA 26+61.90, 48.35' RT	1179.150
VA21	674395.730	1327958.760	IPINS STA 23+07.01, 29.05' RT	1195.320

CALCULATED PJD CHECKED SNS

GENERAL NOTES

PRE-35-1.95

ITEM 614, MAINTAINING TRAFFIC

ON US 35, A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC.

ON SR 320, A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED FOURTEEN (14) CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET NO. 15. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $ 2,400.00 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
EASTER	THANKSGIVING
MEMORIAL DAY	INDIANAPOLIS 500
BRICKYARD 400	

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

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY	(THANKSGIVING ONLY) 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $25.00 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

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.

TRAFFIC SHALL BE MAINTAINTED AT ALL INTERSECTIONS AND DRIVES AT ALL TIMES, SHALL BE CONTROLLED WITH FLAGGERS AND TRAFFIC CONTROL DEVICES AS REQUIRED, AND SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

ITEM 614, MAINTAINING TRAFFIC (CONTINUED)

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

NOTICE OF CLOSURE SIGN TIME TABLE

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	≥ 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD 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 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 LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN SIGN SUPPORTS AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER TO THE MAINTENANCE OF TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 50 CU YD

All ROAD WORK AHEAD (W20-1) SIGNS AND END ROAD WORK (G20-2) SIGNS SHALL BE OMMITTED IF PERIMETER SIGNS ARE IN PLACE ON IR 70 FOR PART 1 CONSTRUCTION.

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, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

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

ITEM 616, WATER 50 M. GAL.

WORK ZONE MARKINGS

ESTIMATED QUANTITIES HAVE BEEN SHOWN ON SHEET NO. 11 AND CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11.

ITEM 614, WORK ZONE SPEED ZONES (WZSZS)

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

WZSZ REVISION NUMBER	COUNTY & ROUTE	DIRECTION
WZ-45090	PRE-35	E.B. & W.B.

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 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.

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 OMUTCD PART 6.

ITEM 614, WORK ZONE SPEED ZONES (WZSZS) (CONTINUED)

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 WITH-IN 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	WITH Positive Protection		WITHOUT Positive Protection	
	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 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 12 SIGN MNTH (ASSUMING 2 DSL SIGN ASSEMBLIES FOR 6 MONTHS)

CALCULATED PJD CHECKED SNS

GENERAL NOTES OF TRAFFIC MAINTENANCE

PRE-35-1.95

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:

DISTRICT PUBLIC INFORMATION OFFICER BY EMAIL AT DOT.D08.PIO@DOT.OHIO.GOV
DISTRICT PERMIT SECTION BY EMAIL AT D08.PERMITS@DOT.OHIO.GOV
CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV
DISTRICT TRAFFIC, DETOUR SECTION BY EMAIL AT DOT.D08.DETOURS@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.

NOTIFICATION TIME TABLE

ITEM	DURATION	NOTICE DUE TO PERMITS & PIO
ROAD CLOSURES	< 12 HOURS	4 BUSINESS DAYS
	>= 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS
	>= 2 WEEKS	21 CALENDAR DAYS
LANE CLOSURES & RESTRICTIONS	< 2 WEEKS	2 BUSINESS DAYS
	>= 2 WEEKS	21 CALENDAR DAYS
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 BUSINESS DAYS

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE FOLLOWING USING THE NOTIFICATION TIME TABLE: THE DISTRICT PUBLIC INFORMATION OFFICER BY EMAIL AT DOT.D08.PIO@DOT.OHIO.GOV, THE DISTRICT PERMIT SECTION BY EMAIL AT D08.PERMITS@DOT.OHIO.GOV, CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV, AND THE DISTRICT TRAFFIC DETOUR SECTION BY EMAIL AT DOT.D08.DETOURS@DOT.OHIO.GOV

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 SHUTDOWNS.

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 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 6 EACH

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

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

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NONGATING 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.

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 SINGLE CROSSOVER AT THE NORTH END OF THE PROJECT DURING PHASES 1 AND 2. 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, 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.

ESTIMATED QUANTITIES HAVE BEEN SHOWN ON SHEET NO. 11 AND CARRIED TO THE GENERAL SUMMARY.

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.

CALCULATED PJD CHECKED SNS

MAINTENANCE OF TRAFFIC GENERAL NOTES

PRE-35-1.95

DELINEATION OF PORTABLE AND PERMANENT BARRIER

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.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

ESTIMATED QUANTITIES HAVE BEEN SHOWN ON SHEET NO. 11 AND INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY.

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

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

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 OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, 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 OMUTCD, 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, 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).

1 LEO IS NEEDED WHEN INSTALLING A SINGLE OR DOUBLE LANE CLOSURE. WHEN LANE CLOSURES ARE BEING INSTALLED IN MULTIPLE DIRECTIONS OR MULTIPLE LOCATIONS, 1 LEO IS NEEDED PER MOT WORK CREW. IN OTHER WORDS, IF THE SAME WORK CREW INSTALLS BOTH LANE CLOSURES, THEN ONLY 1 LEO IS NEEDED; IF 2 SEPARATE WORK CREWS INSTALL A LANE CLOSURE IN EACH DIRECTION, THEN 2 LEOS WILL BE NEEDED. THE LEO SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION.

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.

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

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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 125 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. THE HOURS PAID SHALL INCLUDE UP TO ½ HOUR PRIOR TO THE START OF THE SHIFT TO RECEIVE INSTRUCTIONS FOR THE WORK ASSIGNMENTS; SPECIAL WORK ASSIGNMENTS REQUIRING ADDITIONAL TIME SHALL BE APPROVED BY THE ENGINEER PRIOR TO SCHEDULING THE LEO. THE HOURS PAID PER LEO FOR LANE CLOSURES SHALL INCLUDE THE MINIMUM SHOW-UP TIME FOR THE INITIAL SET- UP PERIOD AND THE MINIMUM SHOW-UP TIME FOR THE TEAR DOWN PERIOD; BUT NO MORE THAN THE ACTUAL INVOICED HOURS.

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.

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. 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 PAVEMENT COURSE. PAYMENT FOR ALL WORK, MATERIALS, ETC. ASSOCIATED WITH THIS ITEM SHALL BE PAID FOR UNDER ITEM 614 MAINTAINING TRAFFIC LUMP SUM.

INTERIM COMPLETION REQUIREMENTS

THE PROJECT HAS AN INTERIM COMPLETION DATE OF OCTOBER 31, 2020. ON OR BEFORE THE INTERIM COMPLETION DATE, TRAFFIC SHALL BE OPEN AND PLACED IN THE FINAL CONFIGURATION WITH ALL WORK COMPLETED UP TO AND INCLUDING THE INTERMEDIATE COURSE OF ASPHALT CONCRETE PAVEMENT. TEMPORARY PAVEMENT MARKINGS AND TEMPORARY RPMS SHALL BE INSTALLED.

THE CONTRACT WILL BE SUBJECT TO DAILY DISINCENTIVES FOR FAILURE TO COMPLETE ALL THE REQUIRED WORK, AND ASSOCIATED INCIDENTALS RELATED TO THE WORK, AS OUTLINED IN THE TABLE INCLUDED IN THIS NOTE. APPLICATION OF THE DISINCENTIVES WILL BE BASED ON THE OVERALL CONTRACT AMOUNT. DAILY DISINCENTIVES ARE APPLICABLE TO THE WORK REQUIRED TO THE INTERIM COMPLETION DATE ONLY. THE CONTRACT IS STILL SUBJECT TO LIQUIDATED DAMAGES AS OUTLINED IN CMS 108.07 FOR THE REMAINDER OF THE CONTRACT.

Schedule of Daily Disincentives for failure to meet the Interim Completion Requirements		
Original Contract Amount (Total amount at the time of bidding)		Daily Disincentive for each full or partial calendar day of time overrun beyond the plan interim completion date
From More Than	To and Including	
$0.00	$500,000	$800
$500,000	$1,000,000	$1,200
$1,000,000	$5,000,000	$2,500
$5,000,000	$10,000,000	$3,500
$10,000,000	$50,000,000	$5,000
Over $50,000,000		$7,500

CALCULATED PJD CHECKED SNS

TRAFFIC GENERAL NOTES

MAINTENANCE

PRE-35-1.95

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 TCC 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 TCC 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 TCC 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 TCC 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.

WORKSITE TRAFFIC SUPERVISOR (CONTINUED)

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 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 TCC 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 WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRECONSTRUCTION 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.

WORKSITE TRAFFIC SUPERVISOR (CONTINUED)

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.

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION OUTLINED BELOW IS INTENDED TO GUIDE THE WORK IN A MANNER THAT PROVIDES A BASIC LEVEL OF SERVICE TO ALL MOTORISTS. ALTHOUGH THIS SEQUENCE OF CONSTRUCTION LISTS TASKS IN A SPECIFIC ORDER, NOT EVERY ITEM LISTED MUST BE COMPLETED BEFORE COMMENCING THE NEXT ITEM, AND SOME TASKS MAY BE PERFORMED CONCURRENTLY.

PHASE 1

MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION OF US 35 AT ALL TIMES BY SHIFTING ALL TRAFFIC TO THE NORTHBOUND LANES OF US 35 IN ORDER TO CONSTRUCT THE SOUTHBOUND PORTIONS OF US 35 DURING THIS PHASE. TEMPORARY PAVEMENT WILL BE REQUIRED TO MAINTAIN TURNING MOVEMENTS AT THE SR 320 INTERSECTION. TEMPORARY PAVEMENT WILL ALSO BE REQUIRED AT THE LANE SHIFT AT THE BEGINNING OF THE PROJECT. SEE SHEETS 12-17 FOR DETAILS.

SEQUENCE OF CONSTRUCTION (CONTINUED)

FOR PHASE 1, TASK 1 MAINTAIN TWO WAY TRAFFIC ON THE NORTHBOUND LANES OF US 35 AND INSTALL A DETOUR FOR THE SR 320/ US 35 INTERSECTION AS SHOWN ON SHEET 15. THIS INTERSECTION SHALL BE CLOSED FOR A MAXIMUM OF 14 DAYS IN ORDER TO REMOVE AND BUILD THE NEW PAVEMENT SECTION UP TO THE INTERMEDIATE COURSE. SEE SHEET 14 FOR DETAILS.

FOR PHASE 1, TASK 2 MAINTAIN TWO WAY TRAFFIC ON THE NORTHBOUND LANES OF US 35 IN ORDER TO CONSTRUCT THE REMAINING SOUTHBOUND PORTIONS OF US 35 DURING THIS PHASE.

DO NOT PLACE THE FINAL SURFACE COURSE DURING THIS PHASE.

PHASE 2

MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION OF US 35 AT ALL TIMES BY SHIFTING ALL TRAFFIC TO THE SOUTHBOUND LANES OF US 35. CONSTRUCT THE NORTHBOUND PORTIONS OF US 35 AND THE REMAINDER OF THE SR 320 INTERSECTION DURING THIS PHASE. TEMPORARY PAVEMENT WILL BE REQUIRED TO MAINTAIN TURNING MOVEMENTS AT THE SR 320 INTERSECTION. TEMPORARY PAVEMENT WILL ALSO BE REQUIRED AT THE LANE SHIFT AT THE BEGINNING OF THE PROJECT. SEE SHEETS 18-21 FOR DETAILS.

DO NOT PLACE FINAL SURFACE COURSE DURING THIS PHASE.

PHASE 3

MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION OF US 35 AT ALL TIMES BY SHIFTING ALL TRAFFIC TO THE OUTSIDE LANES IN ORDER TO CONSTRUCT THE REMAINDER OF FULL DEPTH PAVEMENT BETWEEN STA. 1108+00 AND STA. 1115+60 AND BETWEEN STA. 140+86.05 AND STA 145+00. SEE SHEETS 22-25 FOR DETAILS.

DO NOT PLACE FINAL SURFACE COURSE DURING THIS PHASE.

PHASE 4

PLACE FINAL SURFACE COURSE AND PERMANENT TRAFFIC CONTROL ON US 35 AND SR 320 USING STANDARD CONSTRUCTION DRAWINGS MT-95.30 AND MT-97.10. THIS PHASE SHALL NOT START PRIOR TO SEPTEMBER 1, 2021 IN COORDINATION WITH PID 100807.

CALCULATED PJD CHECKED SNS

SEQUENCE OF TRAFFIC GENERAL NOTES

MAINTENANCE

PRE-35-1.95

MAINTENANCE OF TRAFFIC SUBSUMMARY

CALCULATED PJD
CHECKED SNS

MOT SUBSUMMARY

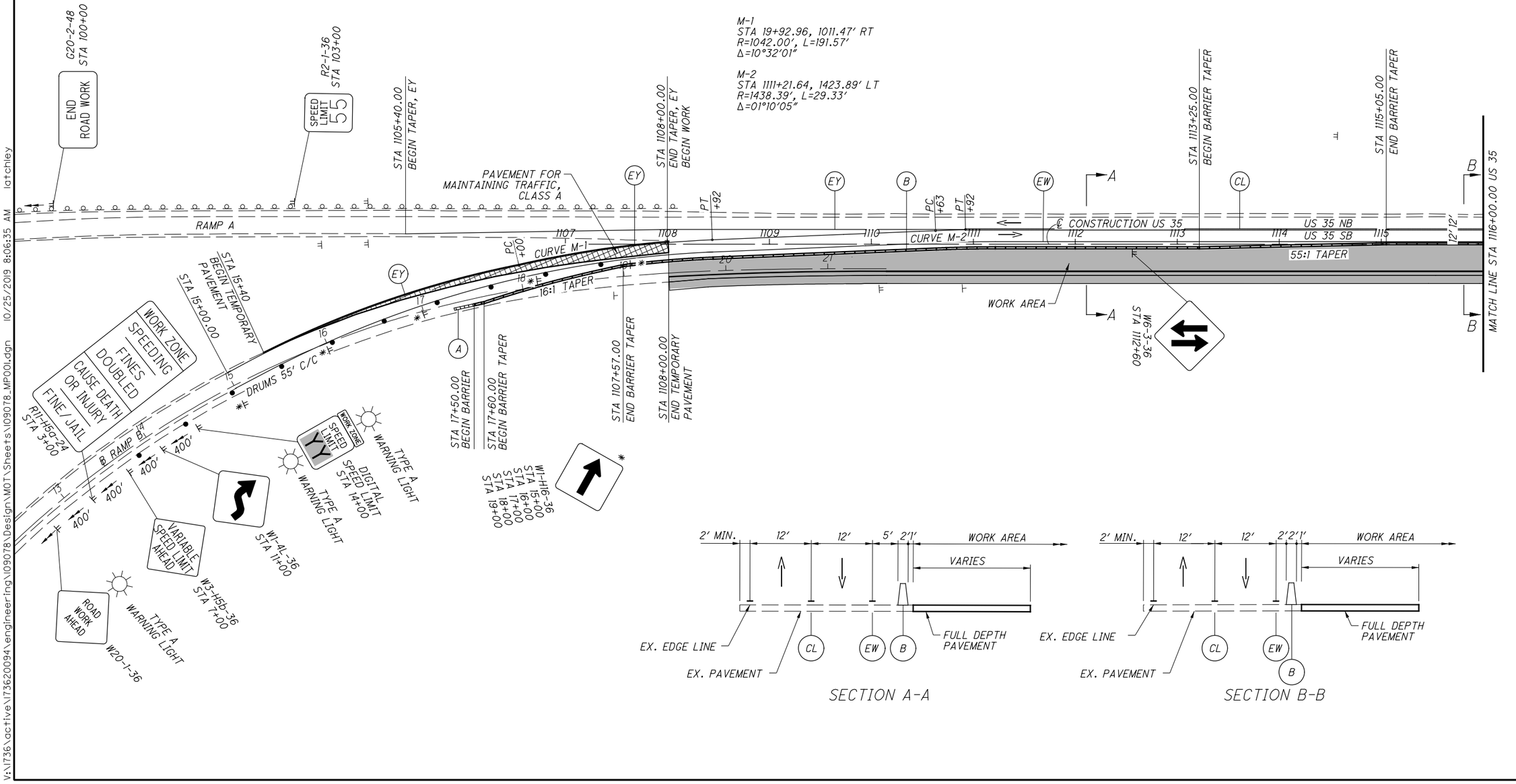
PHASE	SHEET NO.	LOCATION	614												615	622
			INCREASED BARRIER DELINEATION	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (YELLOW/YELLOW)	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (WHITE)	WORK ZONE CROSSOVER LIGHTING SYSTEM	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	OBJECT MARKER, TWO-WAY	WORK ZONE CENTER LINE, CLASS I, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT (YELLOW)	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT (WHITE)	WORK ZONE STOP LINE, CLASS I, 6", 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PORTABLE BARRIER, 32"
			FT	EACH	LS	EACH	EACH	EACH	EACH	EACH	MILE	MILE	MILE	FT	SY YD	FT
1	12-17	US 35	1100	2	LS	150	102	1	33	55	0.73	0.14	0.94	16	624	2700
2	18-21	US 35	350	3		154	90		44	51	0.88		1.96	20	176	2500
3	22-25	US 35	500	5		240			44	54	0.25	1.56	1.80			2660
SUBTOTAL			1950	10	LS	544	192	1	121	160	1.86	1.70	4.70	36	800	7860
TOTALS CARRIED TO GENERAL SUMMARY			1950	10	LS	736		1	121	160	1.86	6.40		36	800	7860

PRE-35-1.95

LEGEND

- WORK AREA
- PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PORTABLE BARRIER
- DIRECTION OF TRAFFIC
- DRUMS
- WORK COMPLETED IN PREVIOUS PHASE
- TYPE III BARRICADE

- (EW) EDGE LINE (WHITE)
- (EY) EDGE LINE (YELLOW)
- (CL) CENTER LINE, DOUBLE (YELLOW)
- (A) WORK ZONE IMPACT ATTENUATOR BIDIRECTIONAL
- (B) PORTABLE BARRIER
- (LL) LANE LINE
- (SL) STOP LINE



SECTION A-A

SECTION B-B

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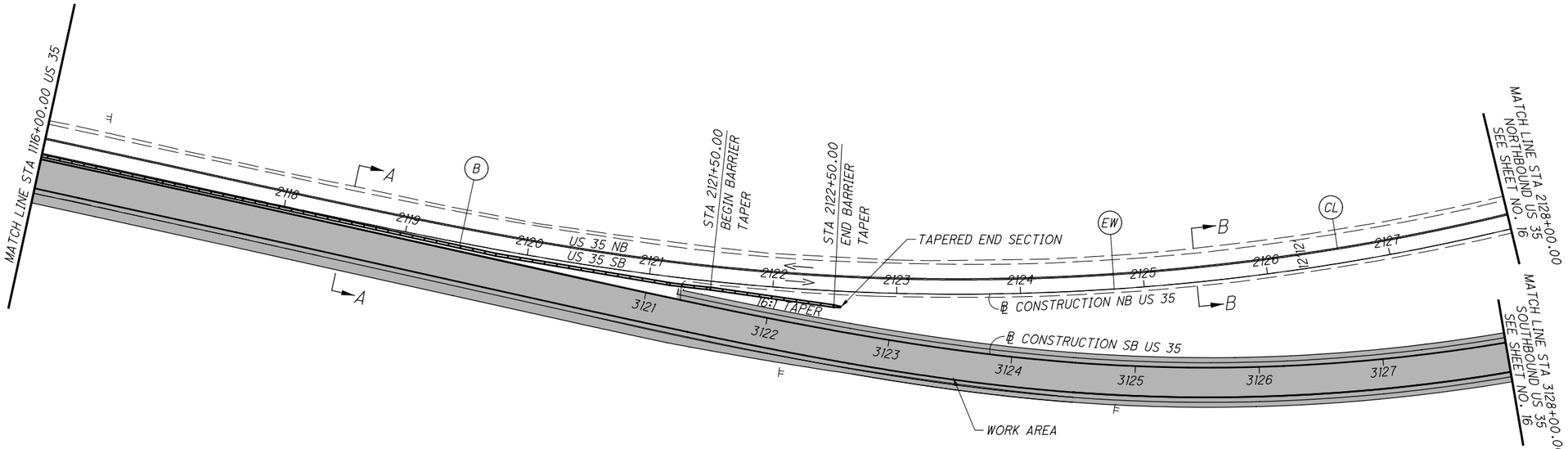
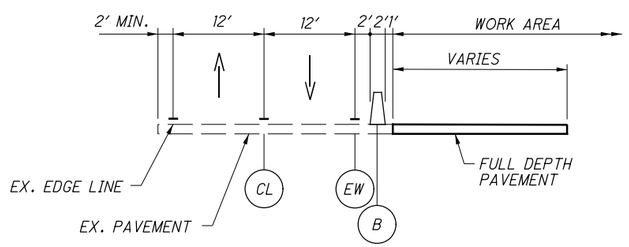
HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED PJD
CHECKED SNS

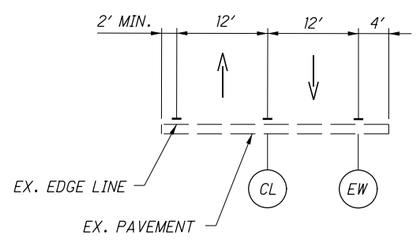
MAINTENANCE OF TRAFFIC - PHASE 1
STA 1108+00.00 TO STA 1116+00.00

PRE-35-1.95





SECTION A-A



SECTION B-B

FOR LEGEND, SEE SHEET NO. 12

CALCULATED P.JD
CHECKED SNS

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
STA 1116+00 TO NB: STA 2128+00, SB: STA 3128+00

PRE-35-1.95

13
88

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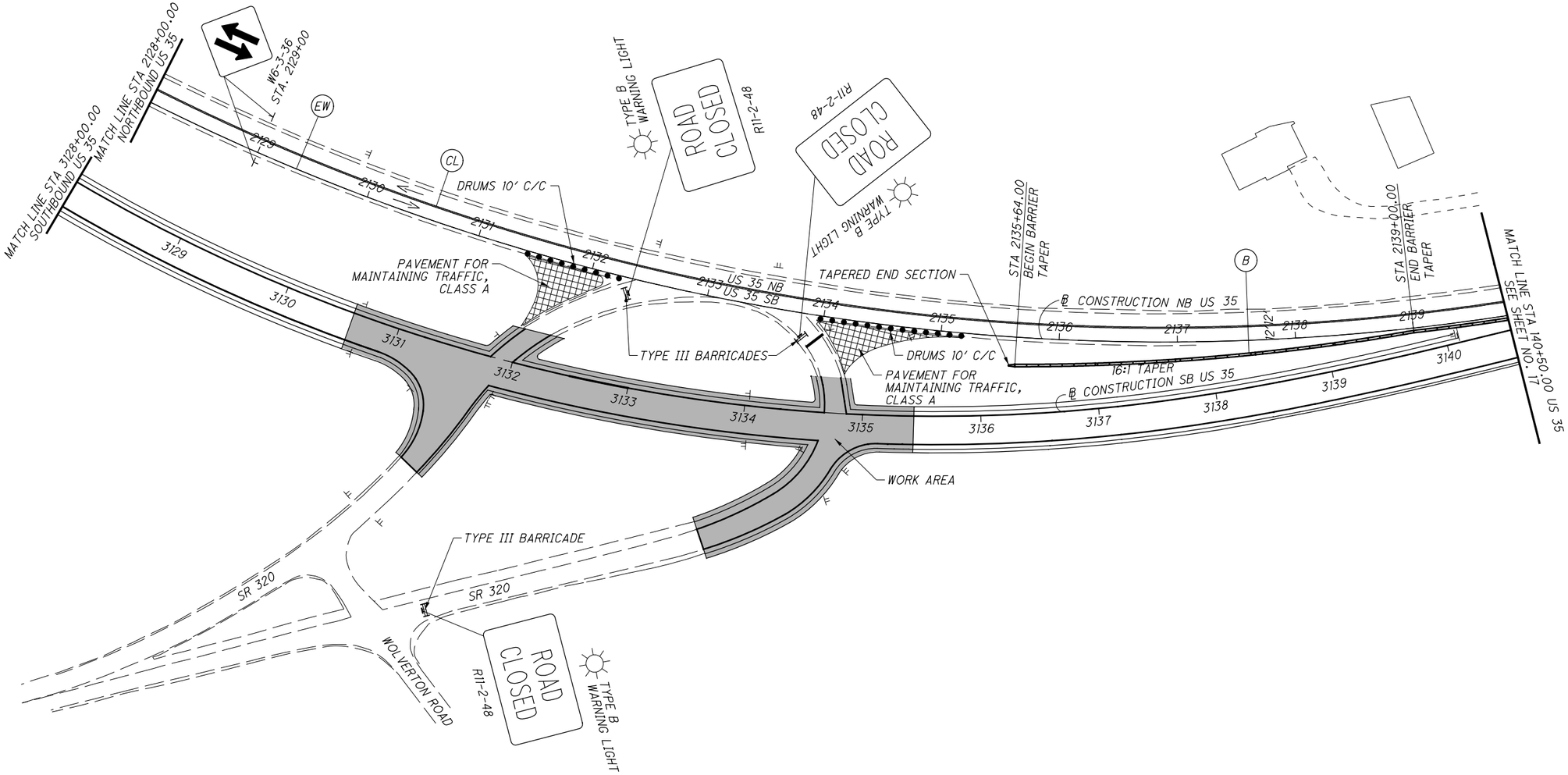

FOR SIGNS TO BE MOUNTED ON BARRICAES, SEE SHEET NO. 15

INTERSECTION TRAFFIC SHALL BE MAINTAINED WITH A DETOUR DURING THIS TASK. SEE SHEET NO. 15 FOR DETOUR PLAN

FOR LEGEND, SEE SHEET NO. 12

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

MAINTENANCE OF TRAFFIC - PHASE 1, TASK 1
NB: STA 2128+00 TO STA 140+50
SB: STA 3128+00 TO STA 140+50

PRE-35-1.95

14
88

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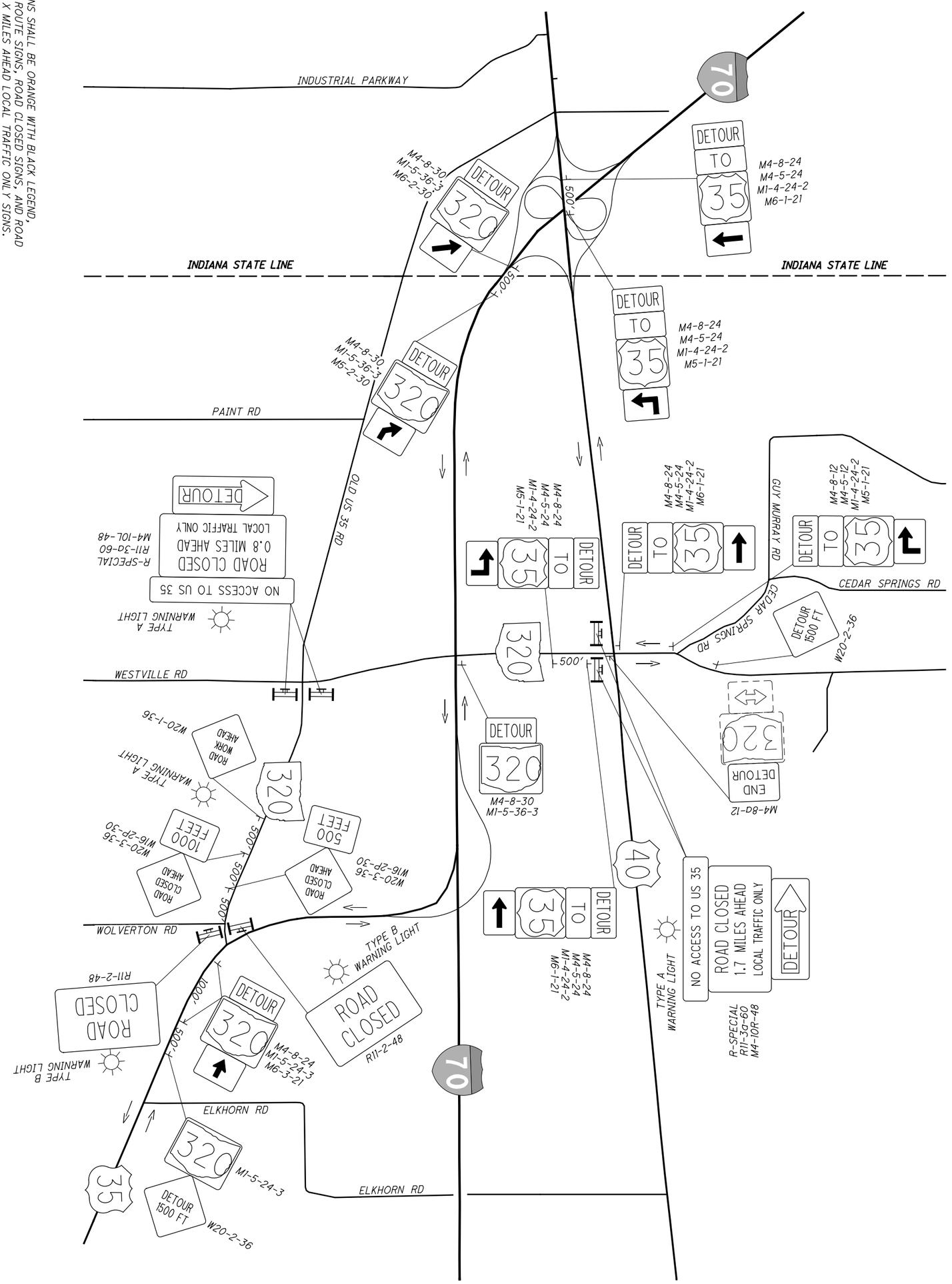
ALL SIGNS SHALL BE ORANGE WITH BLACK LEGEND, EXCEPT ROUTE SIGNS, ROAD CLOSED SIGNS, AND ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY SIGNS.



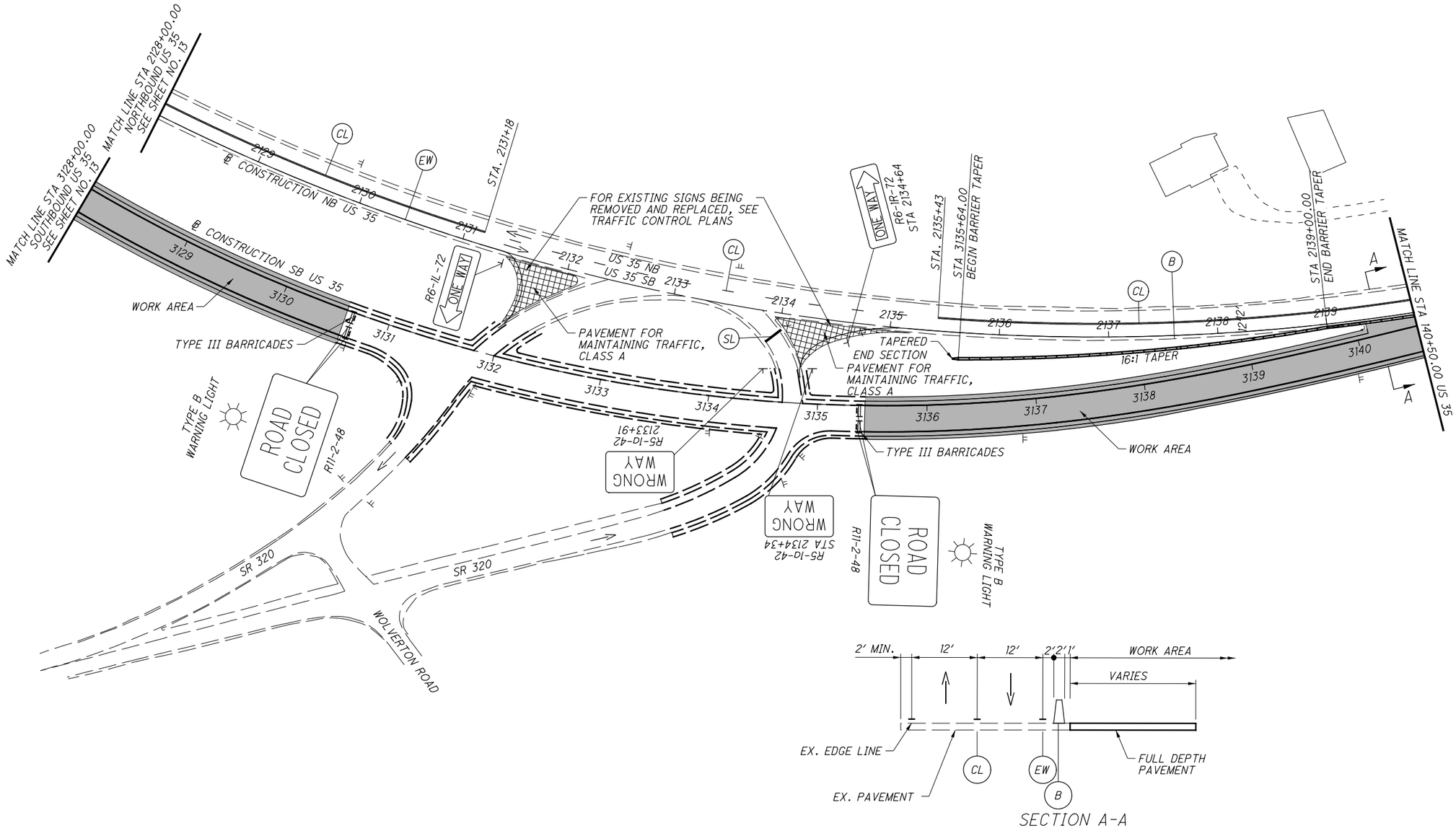
MAINTENANCE OF TRAFFIC - PHASE 1, TASK 2
NB: STA 2128+00, SB: STA 3128+00 TO STA 140+50

CALCULATED PJD | CHECKED SNS

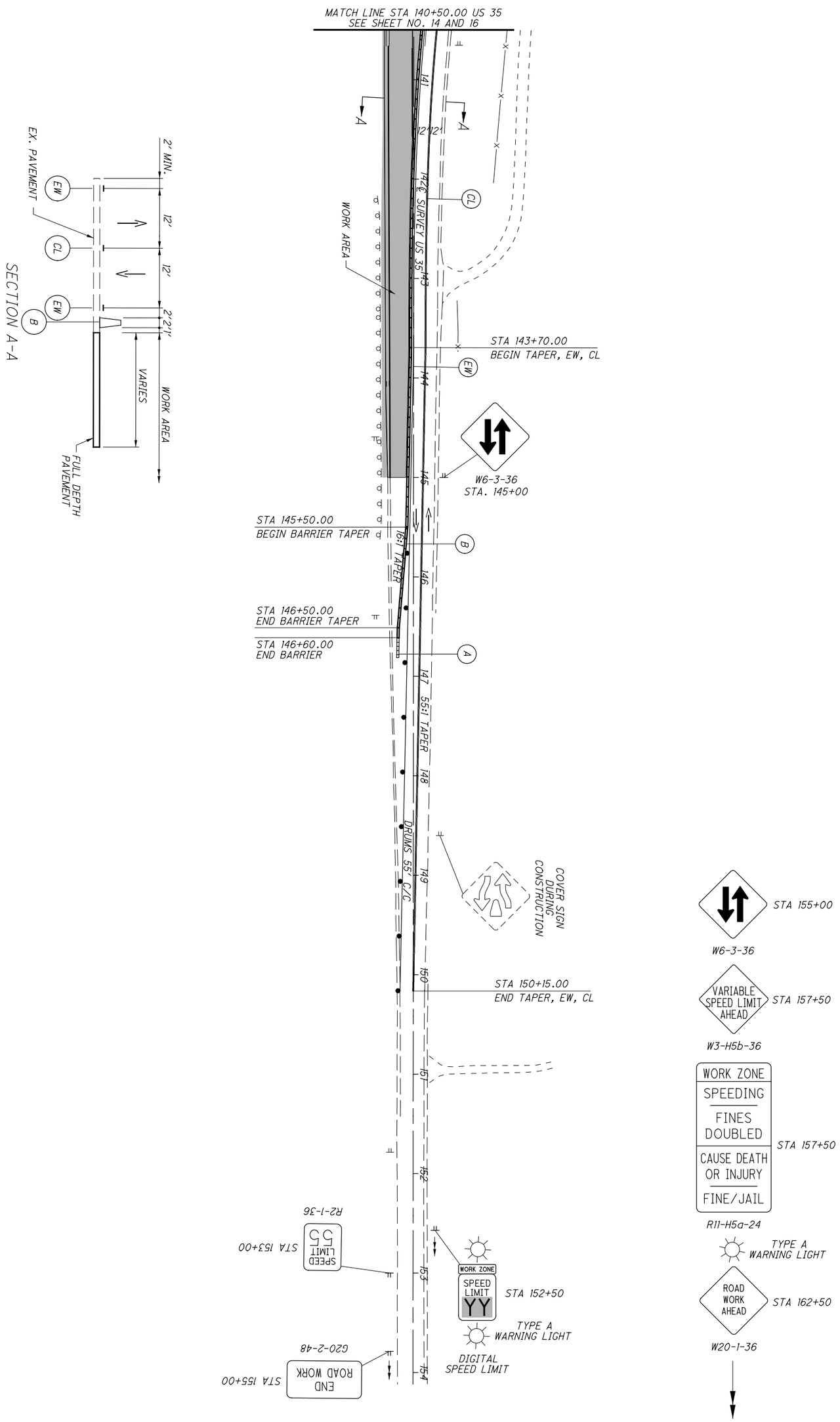
HORIZONTAL SCALE IN FEET
0 25 50 100

PRE-35-1.95

16
88



FOR LEGEND, SEE SHEET NO. 12

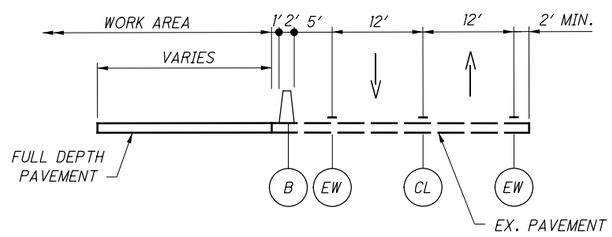


FOR LEGEND, SEE SHEET NO. 12

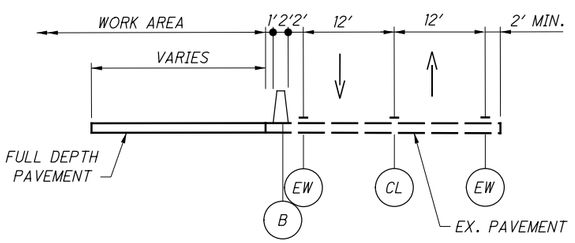
17/88	PRE-35-1.95	MAINTENANCE OF TRAFFIC - PHASE 1 STA 140+50.00 TO STA 150+15.00	CALCULATED PJD CHECKED SNS 0 50 25 100 HORIZONTAL SCALE IN FEET

CURVE M-3
STA 105+57.53, 1902.28' RT
R=1909.85', L=203.88'
Δ=06°06'59"

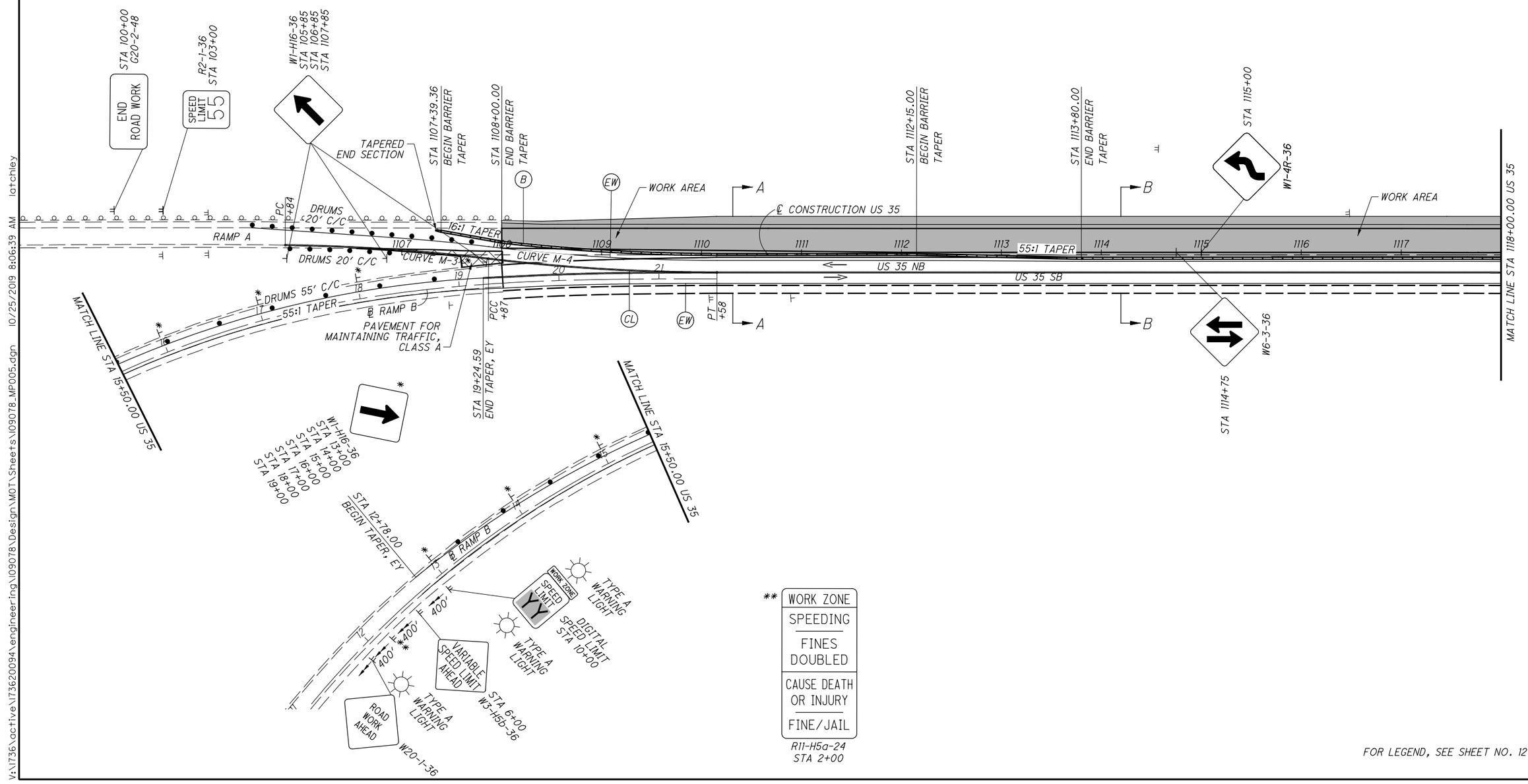
CURVE M-4
STA 1110+15.44, 1892.35' LT
R=1909.85', L=229.14'
Δ=06°52'27"



SECTION A-A



SECTION B-B



** WORK ZONE
SPEEDING
FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL

R11-H5a-24
STA 2+00

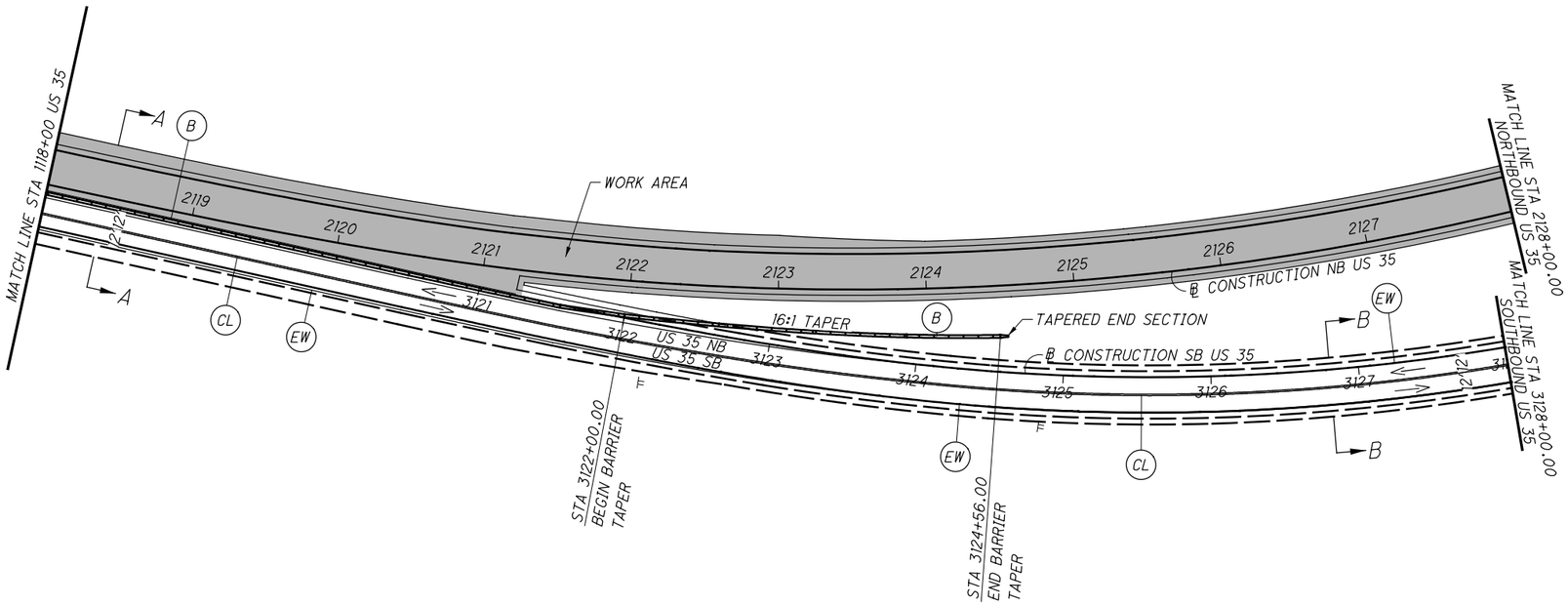
FOR LEGEND, SEE SHEET NO. 12

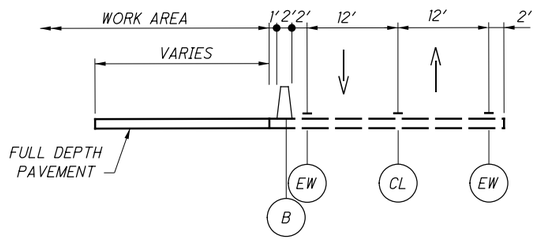
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

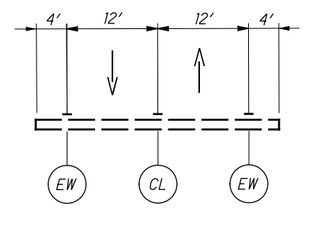
MAINTENANCE OF TRAFFIC - PHASE 2
STA 1108+00.00 TO STA 1118+00.00

PRE-35-1.95





SECTION A-A



SECTION B-B

FOR LEGEND, SEE SHEET NO. 12

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

MAINTENANCE OF TRAFFIC - PHASE 2
STA 1118+00 TO NB: STA 2128+00, SB: STA 3128+00

PRE-35-1.95

19
88

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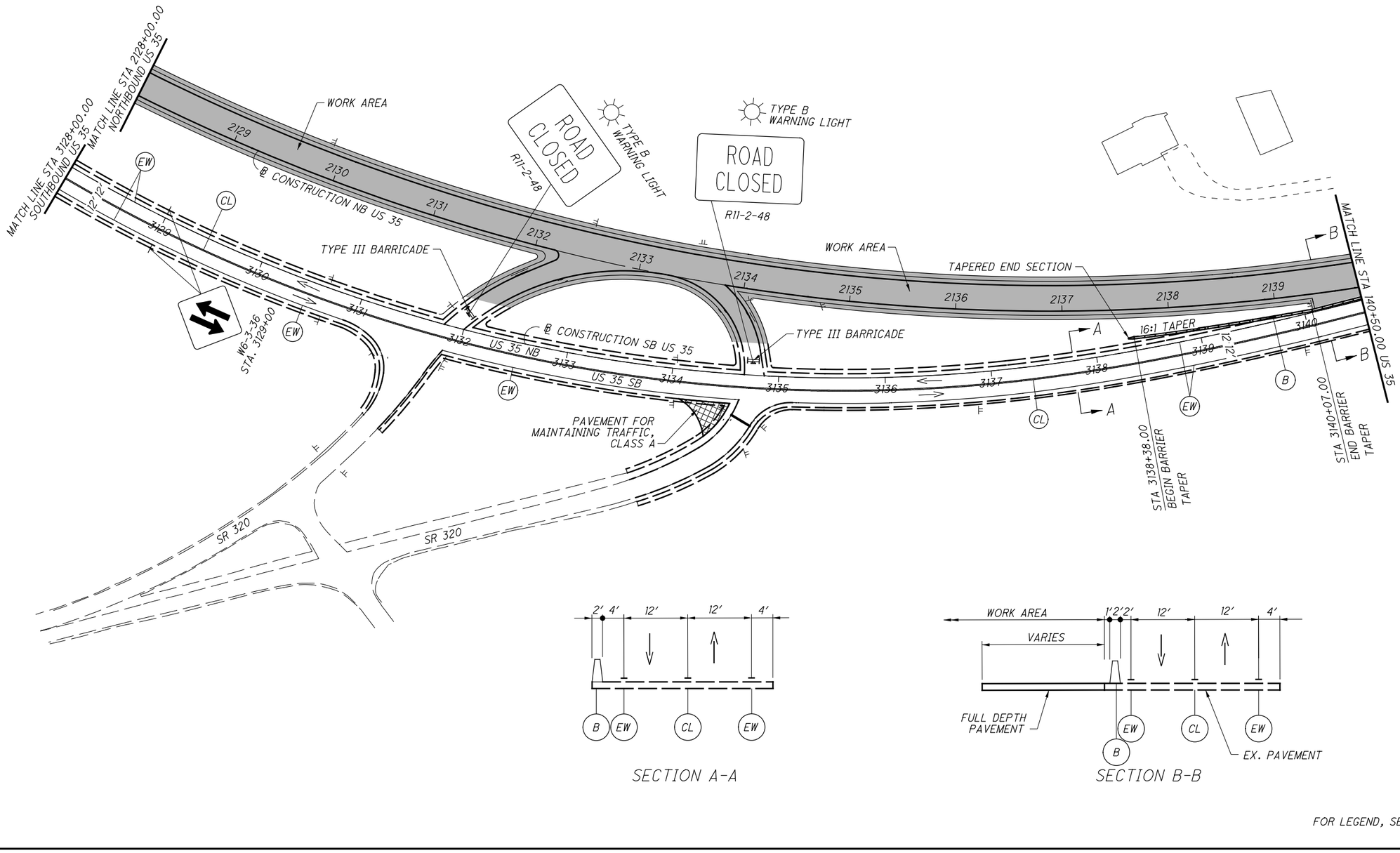

SECTION A-A

SECTION B-B

FOR LEGEND, SEE SHEET NO. 12

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

MAINTENANCE OF TRAFFIC - PHASE 2
NB: STA. 2128+00, SB: STA 3128+00 TO STA. 140+50

PRE-35-1.95

20
88

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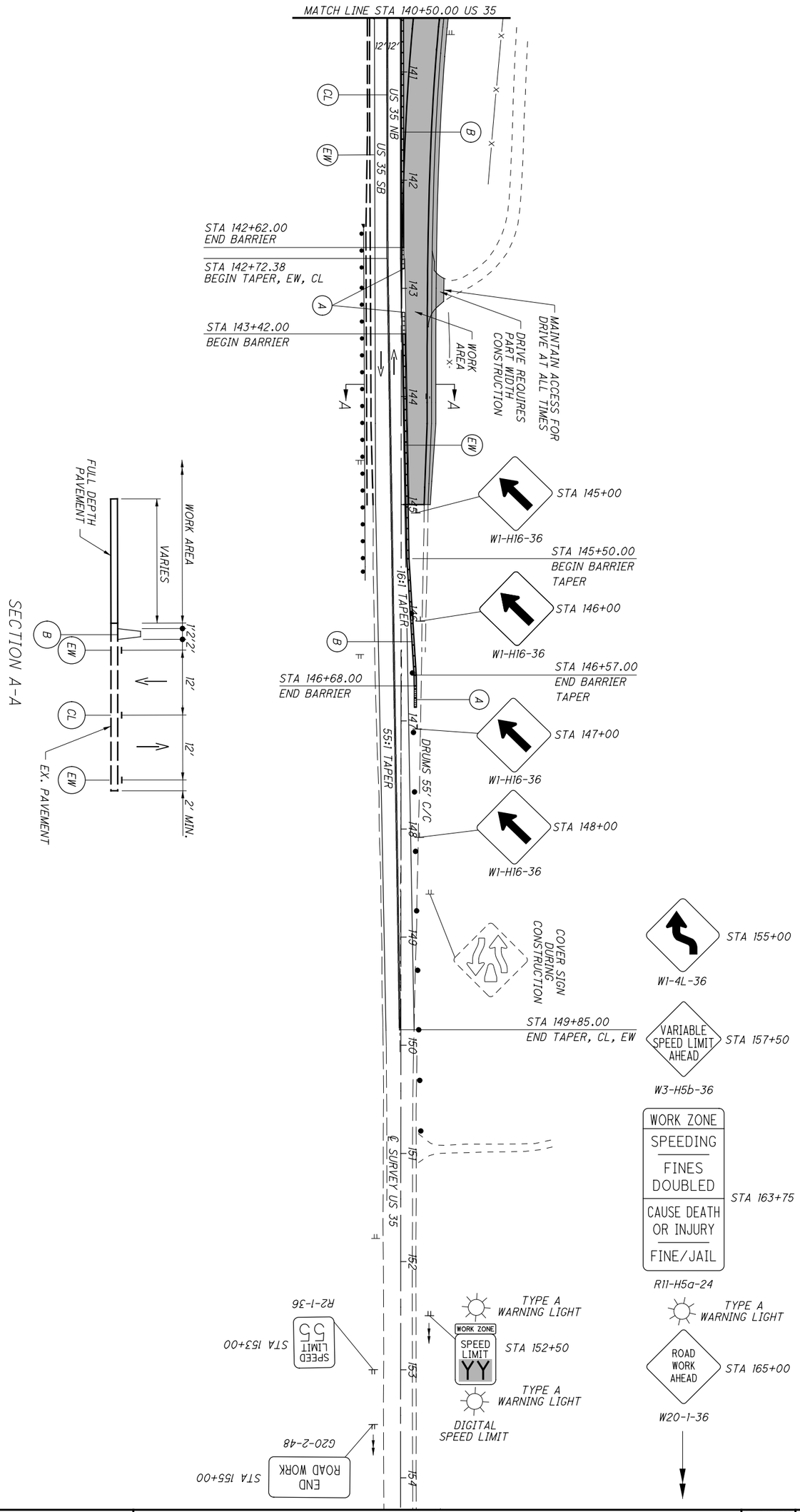
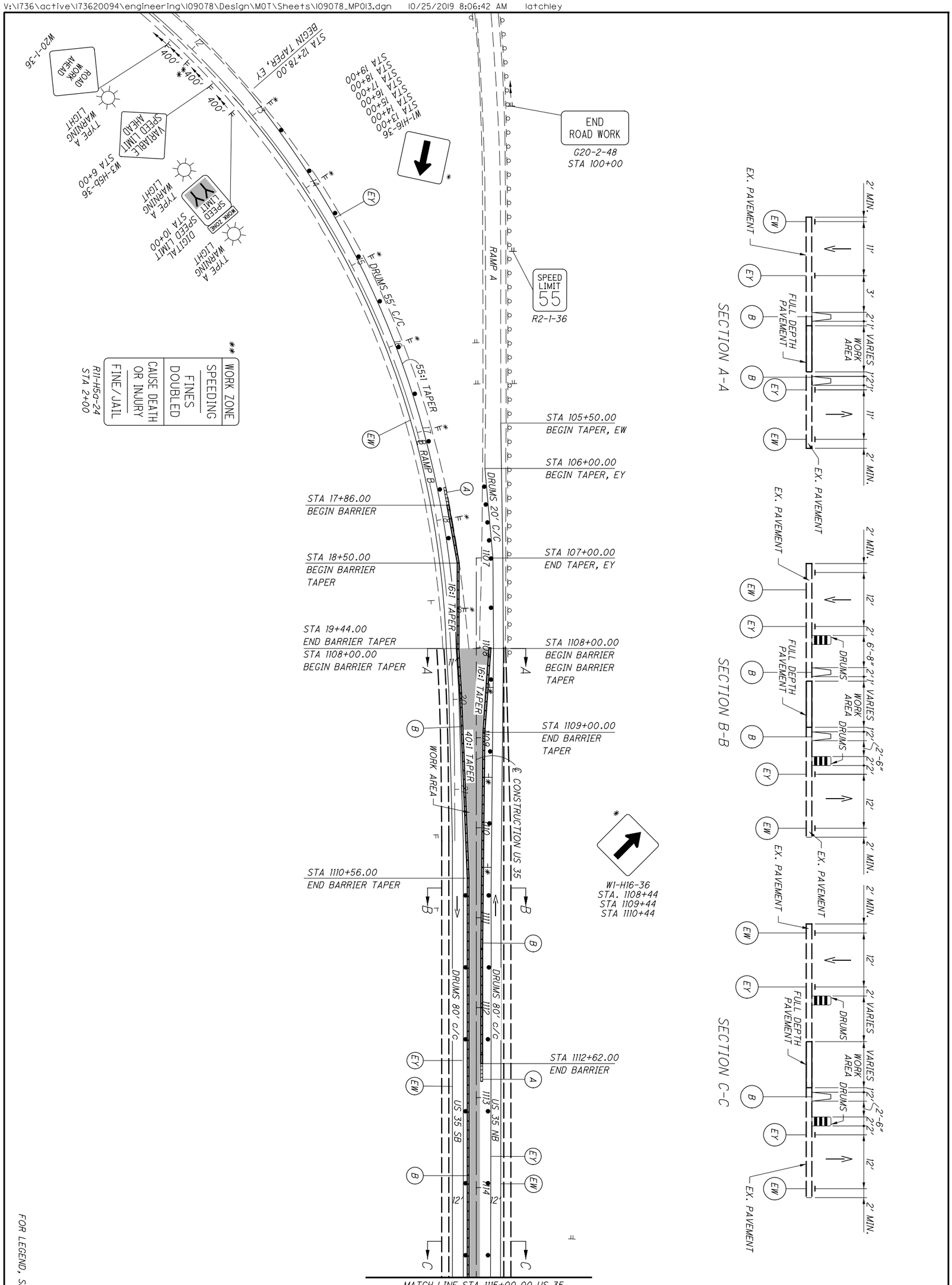
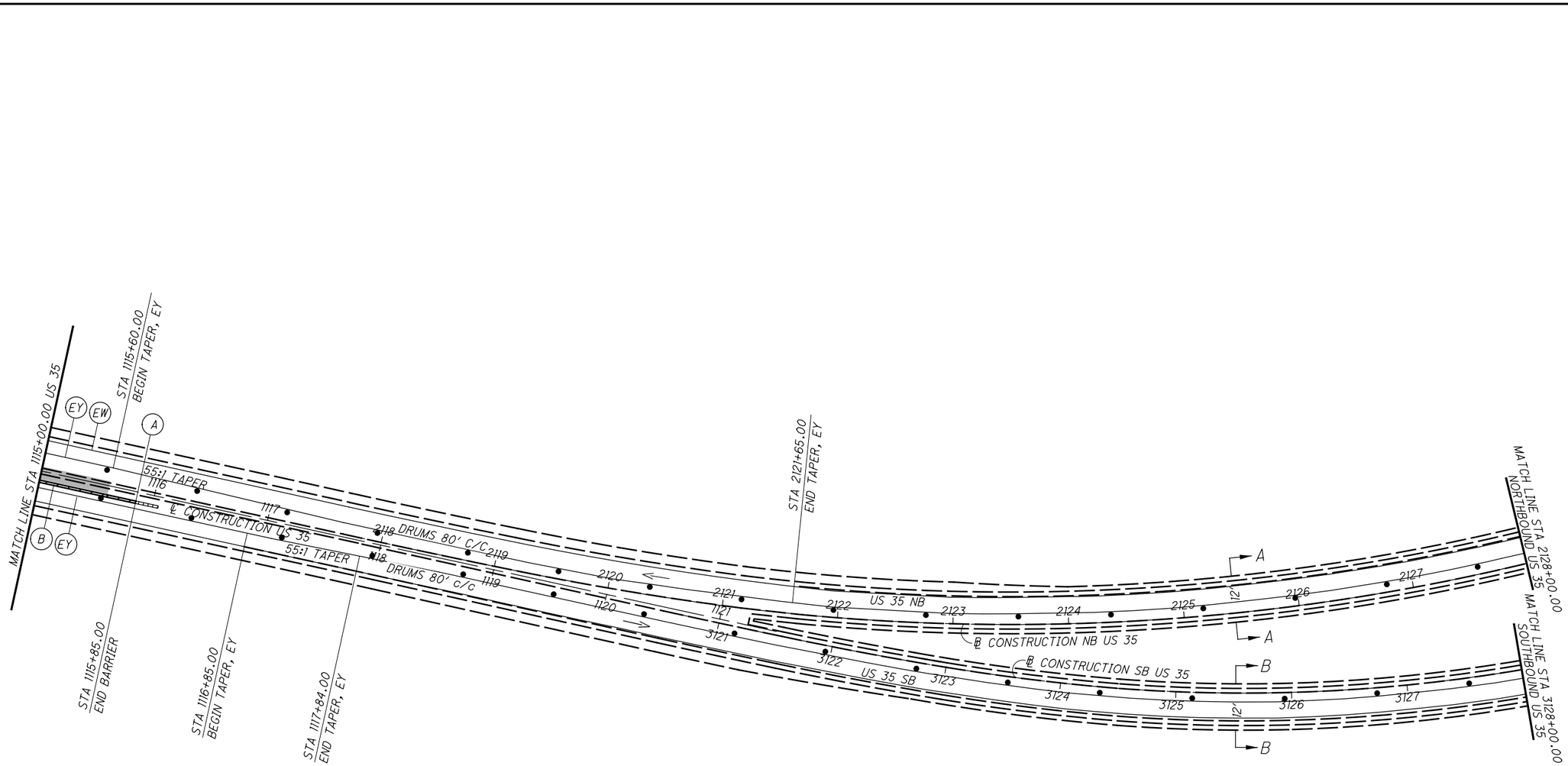


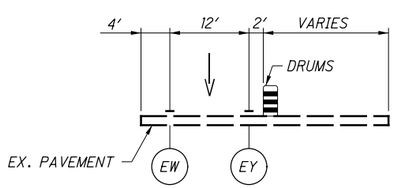
FOR LEGEND, SEE SHEET NO. 12



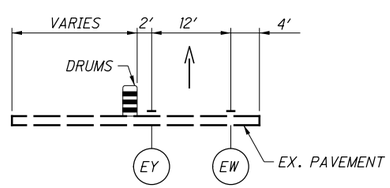
FOR LEGEND, SEE SHEET NO. 12

22 / 88	PRE-35-1.95	MAINTENANCE OF TRAFFIC - PHASE 3 STA 1108+00.00 TO STA 1115+00.00	CALCULATED PJD CHECKED SNS	0 50 25 100 HORIZONTAL SCALE IN FEET





SECTION A-A



SECTION B-B

FOR LEGEND, SEE SHEET NO. 12

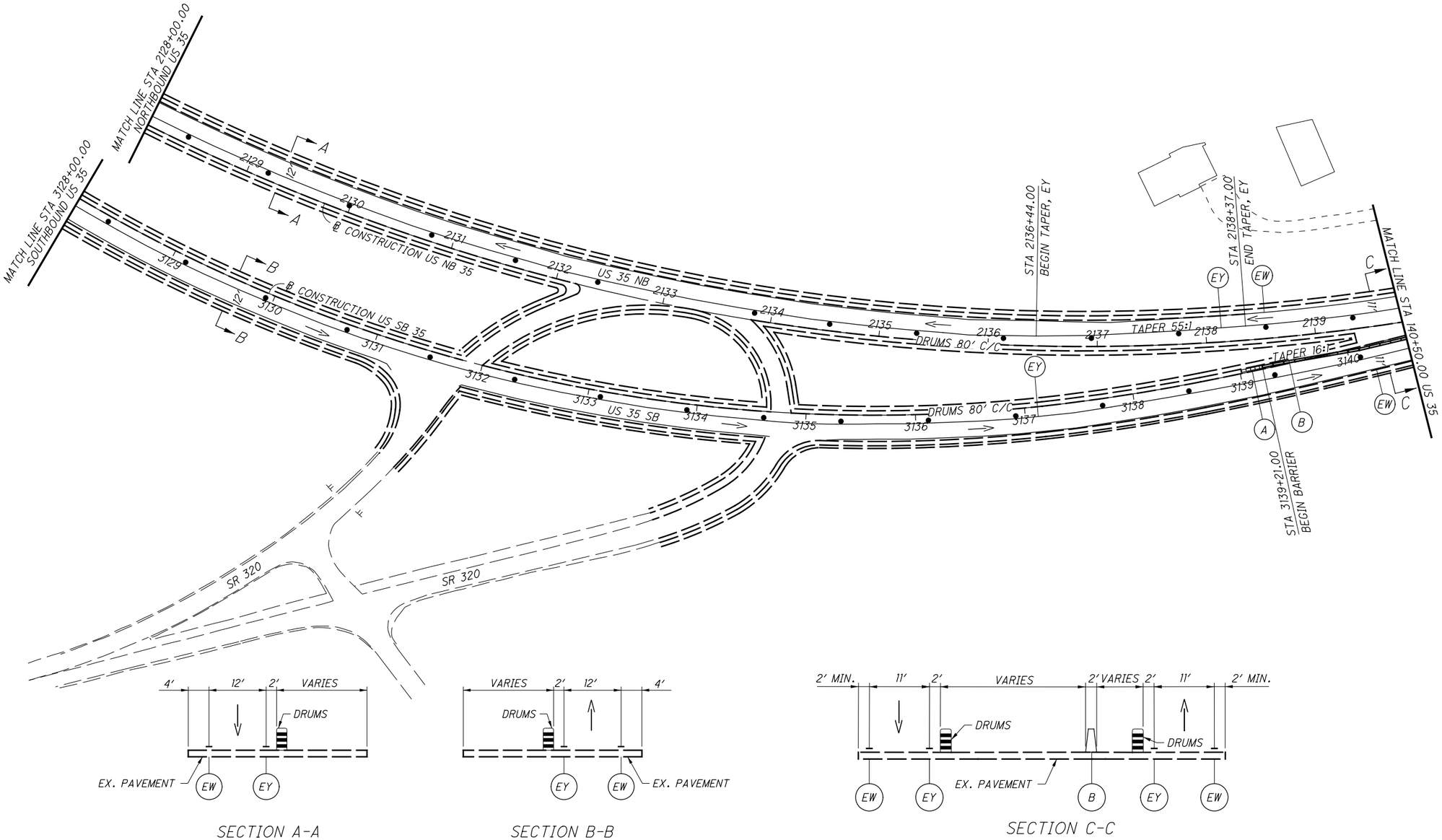
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED PJD
CHECKED SNS

MAINTENANCE OF TRAFFIC - PHASE 3
STA 1115+00 TO NB: STA. 2128+00, SB: STA. 3128+00

PRE-35-1.95

23
88



SECTION A-A

SECTION B-B

SECTION C-C

FOR LEGEND, SEE SHEET NO. 12

MAINTENANCE OF TRAFFIC - PHASE 3
NB: STA 2128+00, SB: STA 3128+00 TO STA 140+50

CALCULATED PJD
CHECKED SNS

HORIZONTAL SCALE IN FEET
0 25 50 100

PRE-35-1.95

24
88

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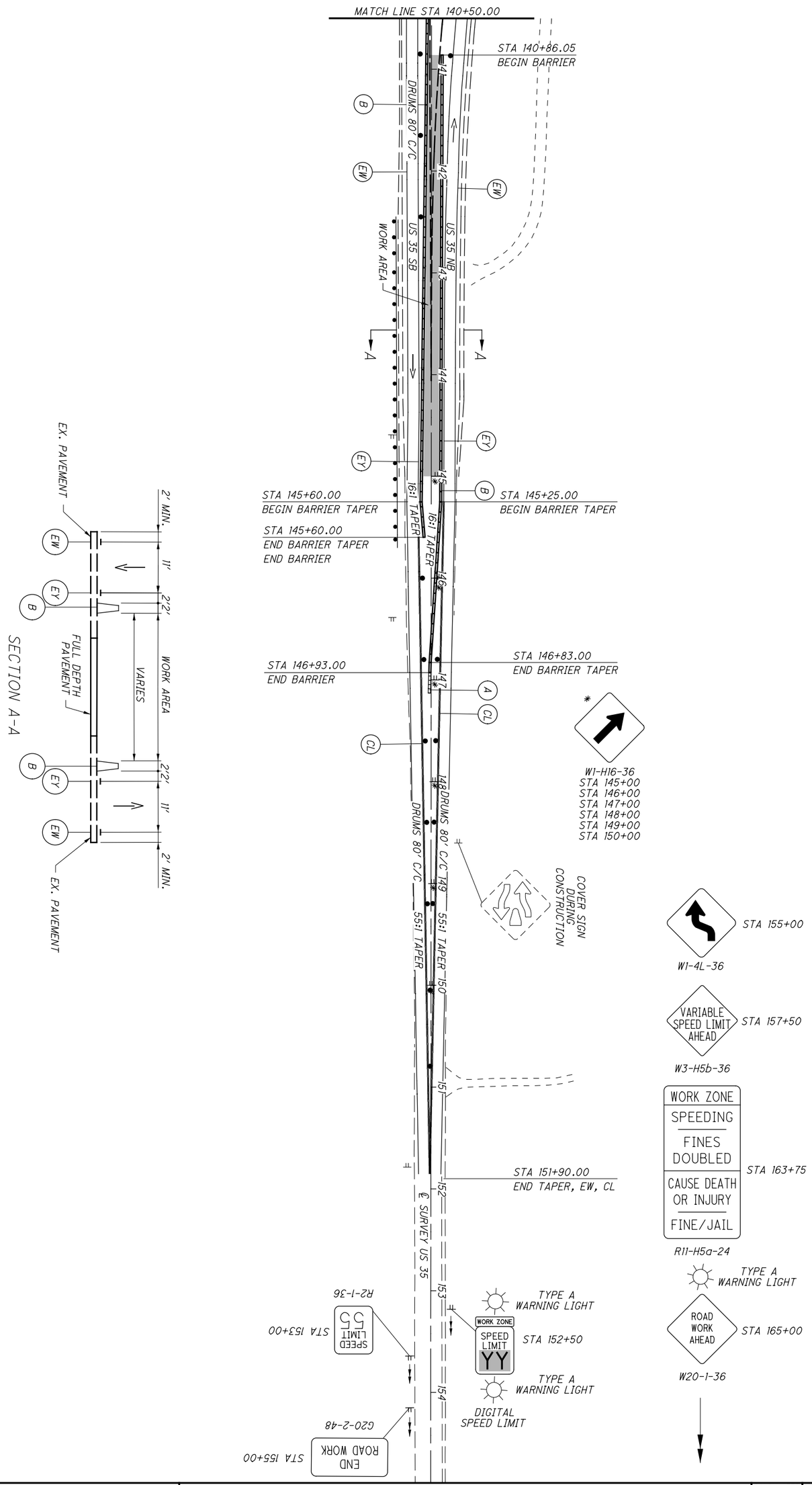

FOR LEGEND, SEE SHEET NO. 12

PRE-35-1.95

MAINTENANCE OF TRAFFIC - PHASE 3
STA 140+50 TO STA 145+00

CALCULATED PJD
CHECKED SNS

0 25 50 100
HORIZONTAL SCALE IN FEET

SHEET NUM.											PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	8	9	11	28	29	30	31	80	04/STR/PV						
																ROADWAY	
LS											LS	201	11000	LS		CLEARING AND GRUBBING	
							25,408				25,408	202	23000	25,408	SY	PAVEMENT REMOVED	
						300					300	202	38000	300	FT	GUARDRAIL REMOVED	
						2					2	202	42001	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	6
						1					1	202	53100	1	EACH	MAILBOX REMOVED	
						3,012					3,012	203	10000	3,012	CY	EXCAVATION	
						586					586	203	20000	586	CY	EMBANKMENT	
						15					15	204	45000	15	HOUR	PROOF ROLLING	
						751					751	206	10500	751	TON	CEMENT	
						28,997					28,997	206	11001	28,997	SY	CURING COAT, AS PER PLAN	5
							28,997				28,997	206	15010	28,997	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
						262.5					262.5	606	15050	262.5	FT	GUARDRAIL, TYPE MGS	
						1					1	606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350 OR MASH 2016)	
						1					1	606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
						1					1	SPECIAL	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	5
											LS	878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
																EROSION CONTROL	
								13			13	601	21050	13	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
	2										2	659	00100	2	EACH	SOIL ANALYSIS TEST	
	1,615										1,615	659	00300	1,615	CY	TOPSOIL	
	14,544										14,544	659	10000	14,544	SY	SEEDING AND MULCHING	
	728										728	659	14000	728	SY	REPAIR SEEDING AND MULCHING	
	1.97										1.97	659	20000	1.97	TON	COMMERCIAL FERTILIZER	
	3.01										3.01	659	31000	3.01	ACRE	LIME	
	79										79	659	35000	79	MGAL	WATER	
	4,757										4,757	670	00500	4,757	SY	SLOPE EROSION PROTECTION	
									LS		LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
									LS		LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
									LS		LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
									45,000		45,000	832	30000	45,000	EACH	EROSION CONTROL	
																DRAINAGE	
								11,007			11,007	605	11100	11,007	FT	6" SHALLOW PIPE UNDERDRAINS	
								2,767			2,767	605	14000	2,767	FT	6" BASE PIPE UNDERDRAINS	
								607			607	611	00510	607	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
								7			7	611	99710	7	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																PAVEMENT	
							4,581				4,581	301	46000	4,581	CY	ASPHALT CONCRETE BASE, PG64-22	
							4,696				4,696	304	20000	4,696	CY	AGGREGATE BASE	
							2,976				2,976	407	20000	2,976	GAL	NON-TRACKING TACK COAT	
							1,782				1,782	411	10000	1,782	CY	STABILIZED CRUSHED AGGREGATE	
							1,317				1,317	442	10101	1,317	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN, PG64-28	5
							1,128				1,128	442	10300	1,128	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)	
							3				3	442	20010	3	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) (DRIVEWAYS)	
							1.8				1.8	618	40600	1.8	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	

CALCULATED PJD
CHECKED SNS

GENERAL SUMMARY

PRE-35-1.95

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SHEET NUM.											PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	8	9	11	28	29	30	31	80	04/STR/PV						
																TRAFFIC CONTROL	
										166	166	621	00100	166	EACH	RPM	
42											42	621	54000	42	EACH	RAISED PAVEMENT MARKER REMOVED	
						7					7	626	00110	7	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
										113.8	113.8	630	03100	113.8	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										5	5	630	08600	5	EACH	SIGN POST REFLECTOR	
										10	10	630	85100	10	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
										9	9	630	86002	9	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
										2.31	2.31	644	00104	2.31	MILE	EDGE LINE, 6"	
										1.13	1.13	644	00204	1.13	MILE	LANE LINE, 6"	
										0.68	0.68	644	00300	0.68	MILE	CENTER LINE	
										20	20	644	00500	20	FT	STOP LINE	
										568	568	644	00700	568	FT	TRANSVERSE/DIAGONAL LINE	
										4	4	644	01350	4	EACH	LANE REDUCTION ARROW	
										1,966	1,966	644	01510	1,966	FT	DOTTED LINE, 6"	
																MAINTENANCE OF TRAFFIC	
				125							125	614	11110	125	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
					1,950						1,950	614	11630	1,950	FT	INCREASED BARRIER DELINEATION	
					10						10	614	12338	10	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
					LS						LS	614	12420	LS		DETOUR SIGNING	
			6								6	614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN	
					1						1	614	12756	1	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
					736						736	614	12801	736	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	8
		50									50	614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
					121						121	614	13310	121	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
					160						160	614	13360	160	EACH	OBJECT MARKER, TWO WAY	
					1.86						1.86	614	21100	1.86	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
					6.4						6.4	614	22110	6.4	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
					36						36	614	26200	36	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
					800						800	615	20000	800	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
		50									50	616	10000	50	MGAL	WATER	
					7,860						7,860	622	41000	7,860	FT	PORTABLE BARRIER, 32"	
		12									12	808	18700	12	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																INCIDENTALS	
		LS									LS	614	11000	LS		MAINTAINING TRAFFIC	
											6	619	16020	6	MNTH	FIELD OFFICE, TYPE C	
											LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LS	624	10000	LS		MOBILIZATION	

CALCULATED PJD
CHECKED SNS

GENERAL SUMMARY

PRE-35-1.95

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SUBGRADE STABILIZATION QUANTITIES
(CARRIED TO GENERAL SUMMARY)

ITEM 204 PROOF ROLLING
AREA OF ITEM 206 CEMENT STABILIZED SUBGRADE 28997 SQ YD (FROM PAVEMENT CALCULATIONS)
28997 SQ YD x 1 HR / 2000 SQ YD = 14.50, USE 15 HOURS

ITEM 206 CEMENT
AREA OF ITEM 206 CEMENT STABILIZED SUBGRADE 28997 SQ YD (FROM PAVEMENT CALCULATIONS)
28997 SQ YD x (0.75 x 12 x 115 x 0.05) LB/SQ YD X 1 TON / 2000 LB = 750.30, USE 751 TONS

ITEM 206 CURING COAT, AS PER PLAN
AREA OF ITEM 206 CEMENT STABILIZED SUBGRADE 28997 SQ YD (FROM PAVEMENT CALCULATIONS)

ROADWAY QUANTITIES

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED	202 ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	202 MAILBOX REMOVED	606 GUARDRAIL, TYPE MGS	606 ANCHOR ASSEMBLY, MGS TYPE E, (NCHRP 350 OR MASH 2016)	606 ANCHOR ASSEMBLY, MGS TYPE T	626 BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE
		FROM	TO		FT	EACH	EACH	FT	EACH	EACH	EACH	EACH
R1	42,44	142+20.00	145+70.00	RT	300	2						
R2	42,44	142+20.00	145+70.00	RT				262.5	1	1	7	
R3	42,44	142+82.00	143+30.00	LT			1					1
TOTALS CARRIED TO GENERAL SUMMARY					300	2	1	262.5	1	1	7	1

EARTHWORK QUANTITIES

STATION FROM	STATION TO	203 EXCAVATION	203 EMBANKMENT	659 SEEDING & MULCHING	659 SOIL ANALYSIS TEST (2 MINIMUM) (SEEDING & MULCHING*9/10/43560)	659 TOPSOIL (SEEDING & MULCHING*111/1000)	659 REPAIR SEEDING & MULCHING (SEEDING & MULCHING*0.05)	659 COMMERCIAL FERTILIZER (SEEDING & MULCHING/7410)	659 LIME (SEEDING & MULCHING*9/43560)	659 WATER (SEEDING & MULCHING*0.0027*2)
FROM	TO	CU YD	CU YD	SQ YD	EACH	CU YD	SQ YD	TON	ACRE	M GAL
1108+00.00	1121+25.00	821	302	4117	0.09	456.99	205.85	0.56	0.85	22.23
2121+23.98	2139+36.81	840	77	4279	0.09	474.97	213.95	0.58	0.88	23.11
3121+25.02	3140+10.26	974	149	4486	0.09	497.95	224.30	0.61	0.93	24.22
140+05.00	145+00.00	200	38	1187	0.02	131.76	59.35	0.16	0.25	6.41
SR 320		177	20	475	0.01	52.73	23.75	0.06	0.10	2.57
SUBTOTAL		3012	586	14544	0.30	1614.40	727.20	1.97	3.01	78.54
TOTALS CARRIED TO GENERAL SUMMARY		3012	586	*14544	*2	*1615	*728	*1.97	*3.01	*79

* TOTALS CARRIED TO GENERAL NOTES

CALCULATED PJD
CHECKED SNS

SUBSUMMARY

PRE-35-1.95

PAVEMENT SUBSUMMARY

REF. NO.	SHEET NO.	STATION FROM	STATION TO	AREA (COMPUTER GENERATED)	202 PAVEMENT REMOVED (COMPUTER GENERATED AREA)	206 CEMENT STABILIZED SUBGRADE (12" DEEP) (AREA/9)	301 6" ASPHALT CONCRETE BASE PG64-22 (AREAx0.50/27)	304 6" AGGREGATE BASE (AREAx0.50/27)	407 NON-TRACKING TACK COAT (AREAx0.055/9)x2	411 STABILIZED CRUSHED AGGREGATE (AREAx0.921/27)	442 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN (AREAx0.146/27)	442 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447) (AREAx0.125/27)	442 2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448) (DRIVEWAYS) (AREAx0.167/27)	618 RUMBLE STRIPS, (ASPHALT CONCRETE)	COMMENTS AND ADDITIONAL AREAS FOR STEPS
				SQ FT	SQ YD	SQ YD	CU YD	CU YD	GAL	CU YD	CU YD	CU YD	CU YD	MILE	
P1	32	1108+00.00	1113+00.00	30976	3406.78	3608.56	579.80	589.04	378.60		167.50	143.41		0.19	ADD 333 SF FOR 301, ADD 832 SF FOR 304, ADD 1501 SF FOR 204 AND 206
				7341						250.47					
P2	33	1113+00.00	1118+00.00	30490	3327.79	3554.56	570.80	580.06	372.66		164.88	141.16		0.19	ADD 333 SF FOR 301, ADD 833 SF FOR 304, ADD 1501 SF FOR 204 AND 206
				8012						273.36					
P3	34	1118+00.00	1121+25.00	21054	2277.1	2447.23	393.89	399.88	257.33		113.85	97.48		0.12	ADD 216 SF FOR 301, ADD 539 SF FOR 304, ADD 971 SF FOR 204 AND 206
				5207						177.66					
P4	34	2121+23.98	2123+00.00	5553	584.23	675.00	104.99	108.21	67.87		30.03	25.71		0.07	ADD 116 SF FOR 301, ADD 290 SF FOR 304, ADD 522 SF FOR 204 AND 206
				2055						70.12					
P5	34	3121+25.02	3123+00.00	5621	585.10	683.12	106.26	109.52	68.71		30.40	26.03		0.07	ADD 117 SF FOR 301, ADD 293 SF FOR 304, ADD 527 SF FOR 204 AND 206
				1718						58.62					
P6	36	2123+00.00	2128+00.00	15900	1666.57	1932.56	300.58	309.80	194.34		85.98	73.62		0.19	ADD 331 SF FOR 301, ADD 829 SF FOR 304, ADD 1493 SF FOR 204 AND 206
				4171						142.31					
P7	36	3123+00.00	3128+00.00	16126	1652.21	1959.78	304.86	314.19	197.10		87.20	74.66		0.19	ADD 336 SF FOR 301, ADD 840 SF FOR 304, ADD 1512 SF FOR 204 AND 206
				4031						137.54					
P8	38	2128+00.00	2133+00.00	15899	1662.77	1916.89	300.00	308.36	194.33		85.98	73.61		0.17	ADD 301 SF FOR 301, ADD 752 SF FOR 304, ADD 1353 SF FOR 204 AND 206
				3590						122.49					
P9	38	3128+00.00	3133+00.00	16134	1476.68	1940.34	304.26	312.49	197.20		87.25	74.70		0.15	ADD 296 SF FOR 301, ADD 740 SF FOR 304, ADD 1329 SF FOR 204 AND 206
				3385						115.50					
P10	38,40	3131+79.51	2133+27.89	3586	374.37	448.78	68.28	71.08	43.83		19.40	16.61			ADD 101 SF FOR 301, ADD 252 SF FOR 304, ADD 453 SF FOR 204 AND 206
P11	38	3130+89.62	3131+85.93	3165	321.49	383.12	59.80	61.54	38.69		17.12	14.66			ADD 64 SF FOR 301, ADD 158 SF FOR 304, ADD 283 SF FOR 204 AND 206
P12	40	2133+00.00	2138+00.00	15900	1641.9	1922.12	300.21	308.86	194.34		85.98	73.62		0.17	ADD 311 SF FOR 301, ADD 778 SF FOR 304, ADD 1399 SF FOR 204 AND 206
				3580						122.15					
P13	40	3133+00.00	3138+00.00	16127	1484.62	1946.34	304.39	312.97	197.11		87.21	74.67		0.16	ADD 310 SF FOR 301, ADD 773 SF FOR 304, ADD 1390 SF FOR 204 AND 206
				3216						109.73					
P14	40	2133+27.89	3134+89.68	2199	245.38	277.45	41.95	43.80	26.88		11.90	10.19			ADD 66 SF FOR 301, ADD 166 SF FOR 304, ADD 298 SF FOR 204 AND 206
P15	40	3133+70.92	3135+13.66	4243	467.00	519.56	80.38	83.04	51.86		22.95	19.65			ADD 97 SF FOR 301, ADD 241 SF FOR 304, ADD 433 SF FOR 204 AND 206
P16	40	2138+00.00	2139+36.81	4308	437.36	523.56	81.43	83.93	52.66		23.30	19.95		0.05	ADD 89 SF FOR 301, ADD 224 SF FOR 304, ADD 404 SF FOR 204 AND 206
				1065						36.34					
P17	42	3138+00.00	3140+10.26	6757	608.82	821.12	127.75	131.65	82.59		36.54	31.29		0.08	ADD 141 SF FOR 301, ADD 352 SF FOR 304, ADD 633 SF FOR 204 AND 206
				1291						44.05					
P18	42	140+05.00	143+00.00	18400	1960.48	2142.34	344.34	349.80	224.89		99.50	85.19			ADD 194 SF FOR 301, ADD 489 SF FOR 304, ADD 881 SF FOR 204 AND 206
				1972						67.29					
P19	44	143+00.00	145+00.00	11045	1196.19	1294.00	207.02	210.73	135.00		59.73	51.14			ADD 134 SF FOR 301, ADD 334 SF FOR 304, ADD 601 SF FOR 204 AND 206
				1582						53.98					
P20	42,44	143+01.50		363	30.61			6.73					2.25		
SUBTOTAL					25407.45	28996.43	4580.99	4695.68	2975.99	1781.61	1316.70	1127.35	2.25	1.80	
TOTALS CARRIED TO GENERAL SUMMARY					25408	28997	4581	4696	2976	1782	1317	1128	3	1.80	

CALCULATED PJD
CHECKED SNS

PAVEMENT QUANTITES

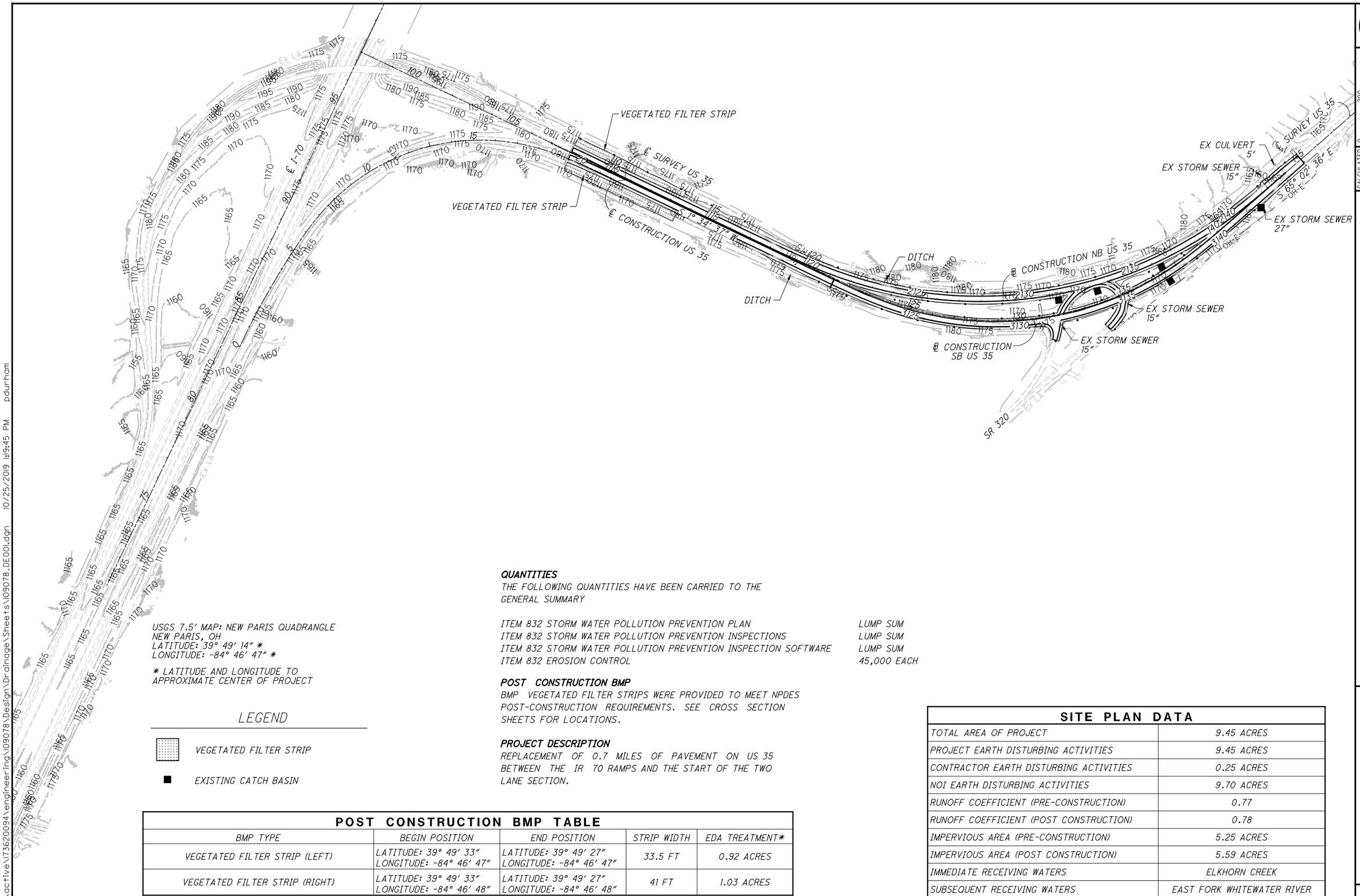
PRE-35-1.95

REF. NO.	SHEET NO.	STATION TO STATION		SIDE	OUTLET STATION	OUTLET OFFSET	OUTLET FLOW ELEVATION	601	605		611		FOR INFORMATION ONLY							
		TO	FROM					TIED CONCRETE BLOCK MAT, TYPE 1	6" SHALLOW PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	PRECAST REINFORCED CONCRETE OUTLET	OUTLET INTO UNDERDRAIN	OUTLET INTO DRAINAGE STRUCTURE	11.25° BEND	45° BEND	90° BEND	TEE	WYE	PLUG
								SY	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
U1	32,33	1108+10.00	1114+96.72	LT	1108+05	-41.00	1176.52		687		12		1			1	1		1	
U2	32,33	1108+05.00	1114+96.72	LT	1108+05	-52.00	1176.37	1.78		692	35	1					1			
U3	32,33	1108+03.14	1114+96.72	RT	1108+05	58.00	1175.50	1.78		694	37	1					1			
U4	32,33	1108+10.91	1114+96.72	RT	1108+05	54.00	1176.00		686		20		1			1	1		1	
U5	33,34	1114+96.72	1119+00.00	LT	1119+00	-49.00	1175.12	1.78	403		18	1						1		
U6	33,34	1114+96.72	1119+05.00	LT	1119+00	-39.00	1175.22			408	26		1			1		1	1	
U7	33,34	1114+96.72	1121+25.00	RT	1121+25	50.00	1174.90	1.78		628	35	1						1		
U8	33,34	1114+96.72	1121+20.00	RT	1121+25	44.00	1174.90		623		14		1			1		1	1	
U9	34	1120+00.00	1121+25.00	LT	1121+25	15.35	1174.90			125	26		1					1		1
U10	34	1119+05.00	2121+26.53	LT	2121+25	-28.25	1173.07			220	17		1				1	1		
U11	34,36,38	1119+00.00	2131+50.00	LT	2131+48	27.00	1163.91		1232		56			1	1			2		
U12	34,36,38	1121+25.00	2131+50.00	RT	2131+50	4.25	1164.13		1028		2		1					1		
U13	34,36,38	1121+25.00	3130+95.00	LT	3131+00	-16.00	1168.90		968		14		1			1		1	1	
U14	34,36,38	1121+20.00	3131+00.00	RT	3131+00	-53.00	1168.75	1.78	997		82	1					1			
U15	38,40	2131+50.00	2136+25.00	LT	2136+34	27.00	1162.36		468		60			1		1		2		
U16	38,40	2131+50.00	2136+25.00	RT	2136+25	4.25	1162.54		477		2		1					1		
U17	38,40	3130+95.00	3136+95.00	LT	3137+00	-17.00	1165.20		598		14		1			1		1	1	
U18	38,40	3131+90.00	3137+00.00	RT	3137+03	-29.00	1165.00		520		59			1	1			1		1
U19	40,42,44	2136+25.00	144+95.00	LT	144+95	-48.00	1160.23	1.78	793		22	1					1			
U20	40,42	2136+25.00	141+00.00	RT/LT	141+02	-35.15	1161.34		407		31		1				1	1		
U21	40,42	3136+95.00	140+05.00	LT	140+05	-11.50	1163.66		315		8		1				1	1		
U22	40,42,44	3137+00.00	144+95.00	RT	144+95	44.00	1160.20	1.78	805		17	1					1			
		SUBTOTAL						12.46	11007	2767	607	7	12	3	2	7	10	17	6	2
TOTALS CARRIED TO GENERAL SUMMARY								13	11007	2767	607	7								

CALCULATED PJD
CHECKED SNS

UNDERDRAIN QUANTITES

PRE-35-1.95



USGS 7.5' MAP: NEW PARIS QUADRANGLE
NEW PARIS, OH
LATITUDE: 39° 49' 14" *
LONGITUDE: -84° 46' 47" *

* LATITUDE AND LONGITUDE TO APPROXIMATE CENTER OF PROJECT

LEGEND

- VEGETATED FILTER STRIP
- EXISTING CATCH BASIN

QUANTITIES

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY

ITEM 832 STORM WATER POLLUTION PREVENTION PLAN	LUMP SUM
ITEM 832 STORM WATER POLLUTION PREVENTION INSPECTIONS	LUMP SUM
ITEM 832 STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	LUMP SUM
ITEM 832 EROSION CONTROL	45,000 EACH

POST CONSTRUCTION BMP

BMP VEGETATED FILTER STRIPS WERE PROVIDED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS. SEE CROSS SECTION SHEETS FOR LOCATIONS.

PROJECT DESCRIPTION

REPLACEMENT OF 0.7 MILES OF PAVEMENT ON US 35 BETWEEN THE IR 70 RAMPS AND THE START OF THE TWO LANE SECTION.

POST CONSTRUCTION BMP TABLE

BMP TYPE	BEGIN POSITION	END POSITION	STRIP WIDTH	EDA TREATMENT*
VEGETATED FILTER STRIP (LEFT)	LATITUDE: 39° 49' 33" LONGITUDE: -84° 46' 47"	LATITUDE: 39° 49' 27" LONGITUDE: -84° 46' 47"	33.5 FT	0.92 ACRES
VEGETATED FILTER STRIP (RIGHT)	LATITUDE: 39° 49' 33" LONGITUDE: -84° 46' 48"	LATITUDE: 39° 49' 27" LONGITUDE: -84° 46' 48"	41 FT	1.03 ACRES

* 1.89 ACRES TOTAL TREATMENT REQUIRED

SITE PLAN DATA

TOTAL AREA OF PROJECT	9.45 ACRES
PROJECT EARTH DISTURBING ACTIVITIES	9.45 ACRES
CONTRACTOR EARTH DISTURBING ACTIVITIES	0.25 ACRES
NOI EARTH DISTURBING ACTIVITIES	9.70 ACRES
RUNOFF COEFFICIENT (PRE-CONSTRUCTION)	0.77
RUNOFF COEFFICIENT (POST CONSTRUCTION)	0.78
IMPERVIOUS AREA (PRE-CONSTRUCTION)	5.25 ACRES
IMPERVIOUS AREA (POST CONSTRUCTION)	5.59 ACRES
IMMEDIATE RECEIVING WATERS	ELKHORN CREEK
SUBSEQUENT RECEIVING WATERS	EAST FORK WHITEWATER RIVER

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED JTK
CHECKED PJD

PROJECT SITE PLAN

PRE-35-1.95

BEGIN PROJECT
STA 1108+00.00
SLM 1.95
BEGIN WORK
STA 1108+00.00
E190 (077)

ITEM 601 - TIED CONC. BLOCK MAT, TYPE 1
4'x4'x1/9= 1.78 SQ YD

STA 1108+00.00 MEET EXISTING/BUTT JOINT
BEGIN PAVEMENT TAPER
BEGIN SHOULDER TAPER
STA 1108+40.00 END SHOULDER TAPER

CONSTR. LIMITS
STA 1112+00.00 END PAVEMENT TAPER
MATCH LINE STA 1113+00.00 US 35

605-6"X687' U1
605-6"X692' U2
605-6"X694' U3
605-6"X686' U4

6"X12'-F
6"X35'-F
6"X37'-F
6"X20'-F

P1
B-001-0-18

ASPHALT
5.6' 2.0'
19.9'
6.8'
10.1'
21.9'
5.1'
8.0'

℄ CONSTRUCTION US 35 STA 1108+00.00, ℄
℄ SURVEY US 35 STA 108+00.00, 2.48' RT
S 01° 33' 20" W
108 109 110 111 112
1108 1109 1110 1111 1112
℄ SURVEY US 35
℄ CONSTRUCTION US 35

℄ RAMP B
CURVE B-2
19 20 21
8.0' 4.0' 24.0' 2.6'
8.0' 4.0' 24.0' 4.0' 8.0'
5.0' 24.0'
RUMBLE STRIPS (TYP.)

STA 1110+14.80, 23.94' RT = END PAVEMENT TAPER
STA 1112+00.00 BEGIN 5' MEDIAN
CONSTR. LIMITS

CURVE B-2
P.I. Sta. 14+24.91
Δ = 83° 10' 00" (RT)
Dc = 06° 00' 00"
R = 954.93'
Ls1 = 300.00'
Ls2 = 400.00'
θs1 = 11° 15' 00"
θs2 = 12° 00' 00"
LT1 = 180.46'
LT2 = 267.28'
ST1 = 120.43'
ST2 = 133.89'
Lc = 998.61'
Ts = 966.02'
E = 329.83'
eMax = 0.083
CS = 4+58.89
SC = 7+58.89
CS = 17+57.50
ST = 21+57.50

VEGETATED FILTER STRIP
FOR INTERCHANGE DETAILS SEE SHEET NO. 76

Ex LA

1180.99 1180.99 1180.99 1180.99 1180.99 1180.99 1180.99 1180.99 1181.01 1181.05 1181.11 1181.19 1181.27 1181.35 1181.43 1181.51 1181.59 1181.67 1181.75 1181.83 1181.91

1,180.99

PROPOSED GRADE
EXISTING GROUND
+0.00% +0.32%
P.V.I. STA 1110+13.03
ELEV = 1,180.99'
100.00' VC
P.V.I. STA 1114+96.05
ELEV = 1,182.54'
400.00' VC

1195 1190 1185 1180 1175 1170 1165 1160

1180.88 1180.99 1181.01 1180.97 1181.00 1181.12 1181.29 1181.42 1181.55 1181.77 1181.92

1108+00 1109+00 1110+00 1111+00 1112+00 1113+00

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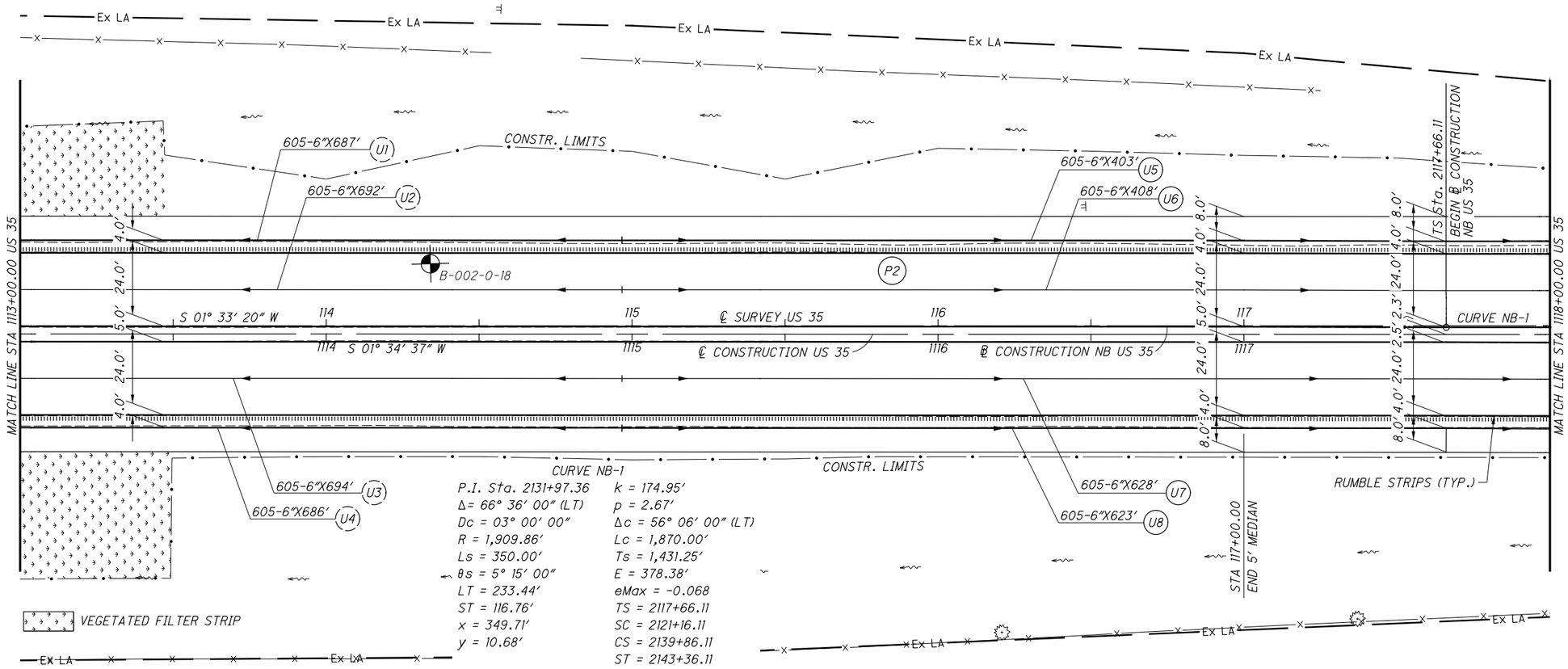
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED PJD
CHECKED SNS

PLAN AND PROFILE US 35
STA 1108+00.00 TO STA 1113+00.00

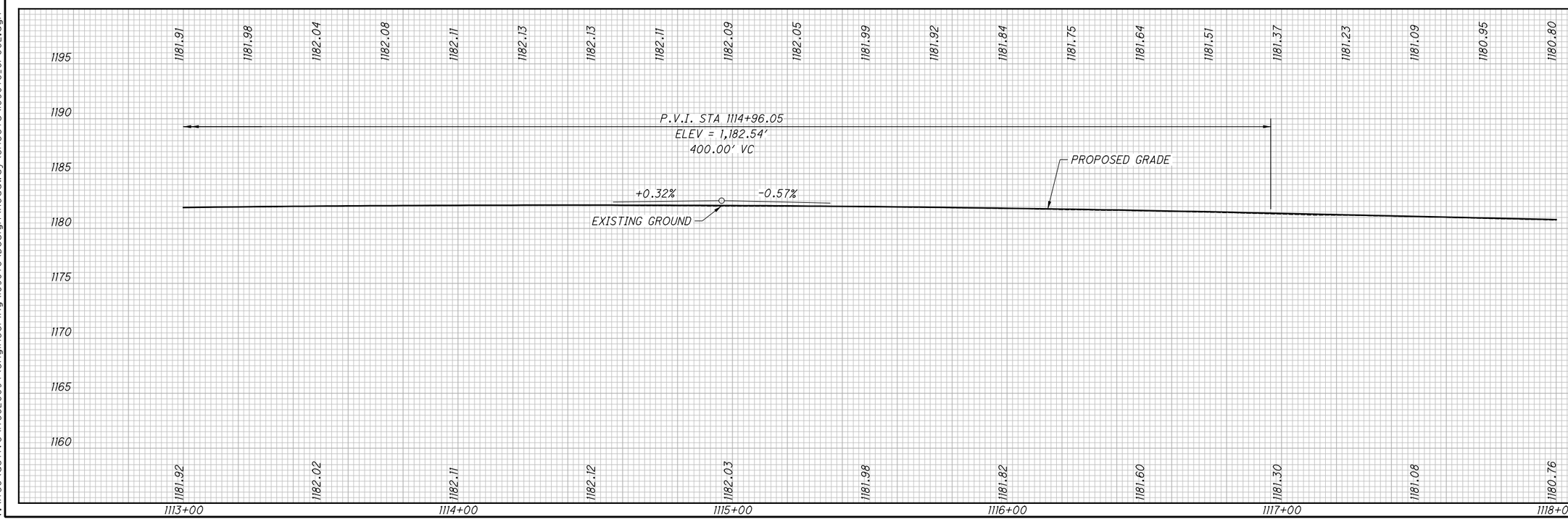
PRE-35-1.95

32
88



CURVE NB-1

P.I. Sta. 2131+97.36	k = 174.95'
Δ= 66° 36' 00" (LT)	p = 2.67'
Dc = 03° 00' 00"	Δc = 56° 06' 00" (LT)
R = 1,909.86'	Lc = 1,870.00'
Ls = 350.00'	Ts = 1,431.25'
θs = 5° 15' 00"	E = 378.38'
LT = 233.44'	eMax = -0.068
ST = 116.76'	TS = 2117+66.11
x = 349.71'	SC = 2121+16.11
y = 10.68'	CS = 2139+86.11
	ST = 2143+36.11



PLAN AND PROFILE US 35
STA 1113+00.00 TO STA 1118+00.00

CALCULATED PJD
CHECKED SNS

HORIZONTAL SCALE IN FEET
0 10 20 40

PRE-35-1.95

33
88

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CURVE NB-1
P.I. Sta. 2131+97.36
Δ= 66° 36′ 00″ (LT)
Dc = 03° 00′ 00″
R = 1,909.86′
Ls = 350.00′
θs = 5° 15′ 00″
LT = 233.44′
ST = 116.76′
x = 349.71′
y = 10.68′
k = 174.95′
p = 2.67′
Δc = 56° 06′ 00″ (LT)
Lc = 1,870.00′
Ts = 1,431.25′
E = 378.38′
eMax = 0.068
TS = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11

CURVE SB-1
P.I. Sta. 3131+95.19
Δ= 66° 36′ 01″ (LT)
Dc = 04° 00′ 00″
R = 1,432.39′
Ls = 400.00′
θs = 8° 00′ 00″
LT = 266.94′
ST = 133.58′
x = 399.22′
y = 18.59′
k = 199.87′
p = 4.65′
Δc = 50° 36′ 01″ (LT)
Lc = 1,265.00′
Ts = 1,143.83′
E = 286.96′
eMax = 0.078
TS = 3120+51.36
SC = 3124+51.36
CS = 3137+16.36
ST = 3141+16.36

CURVE 35-1
P.I. Sta. 123+19.38
Δ= 08° 00′ 00″ (LT)
Dc = 02° 59′ 58″
R = 1,910.28′
T = 133.58′
L = 266.73′
E = 4.66′
eMax = 0.078
C = 266.51′
C.B. = S 2° 26′ 40″ E
PC = 121+85.80
PCC = 124+52.53

℄ CONSTR. US 35 STA 1121+25.00, ℄
℄ SURVEY US 35 STA 121+25.00, 2.98′ RT
℄ NB US 35 STA 2121+23.98, 14.15′, RT
℄ SB US 35 STA 3121+25.02, 3.35′ LT

Ex LA
ITEM 601 - TIED CONC. BLOCK MAT, TYPE 1 4′x4′x1/9= 1.78 SQ YD
605-6″X403′ U5
605-6″X408′ U6
6″X18′-F
CONSTR. LIMITS
605-6″X1232′ U11
6″X26′-F
605-6″X220′ U10
605-6″X125′ U9
605-6″X628′ U7
605-6″X623′ U8
CONSTR. LIMITS
MATCH LINE STA 1118+00.00 US 35
S 01° 33′ 20″ W
S 01° 34′ 37″ W
B-003-0-18
TS Sta. 3120+51.36 BEGIN ℄ CONSTRUCTION SB US 35
SC Sta. 2121+16.11
POT Sta. 1121+49.97
PC Sta. 121+85.80
CURVE NB-1
℄ SURVEY US 35
CURVE SB-1
CURVE 35-1
℄ CONSTRUCTION NB US 35
℄ CONSTRUCTION SB US 35
P3
P4
P5
B-004-0-18
605-6″X1028′ U12
605-6″X968′ U13
605-6″X997′ U14
6″X17′-F
6″X26′-F
6″X35′-F
6″X14′-F
RUMBLE STRIPS (TYP.)
ITEM 601 - TIED CONC. BLOCK MAT, TYPE 1 4′x4′x1/9= 1.78 SQ YD
MATCH LINE STA 2123+00.00 NORTHBOUND US 35
SEE SHEET NO. 36
MATCH LINE STA 3123+00.00 SOUTHBOUND US 35
SEE SHEET NO. 36
FOR INTERCHANGE DETAILS, SEE SHEET NO. 77
STA 3121+25.00 BEGIN SHOULDER TAPER
STA 3122+75.00 END SHOULDER TAPER
FOR PROFILE NORTHBOUND US 35 AND SOUTHBOUND US 35 SEE SHEET NO. 35

PROPOSED GRADE
EXISTING GROUND
-0.57%

1195 1190 1185 1180 1175 1170 1165 1160
1180.80 1180.66 1180.52 1180.38 1180.23 1180.09 1179.95 1179.81 1179.66 1179.52 1179.38 1179.24 1179.09 1178.95
1180.76 1180.48 1180.19 1179.98 1179.69 1179.45 1179.12
1118+00 1119+00 1120+00 1121+00

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED PJD
CHECKED SNS

PLAN AND PROFILE NB AND SB US 35
STA 1118+00 TO NB: STA 2123+00, SB: STA 3123+00

PRE-35-1.95

34
88

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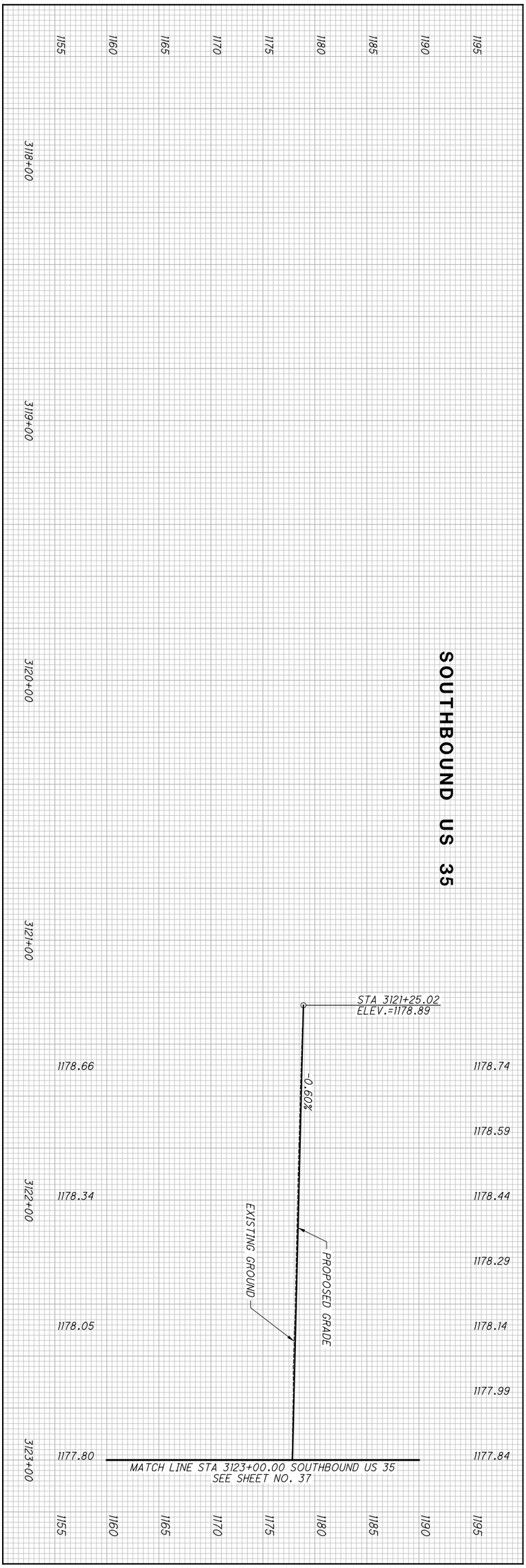
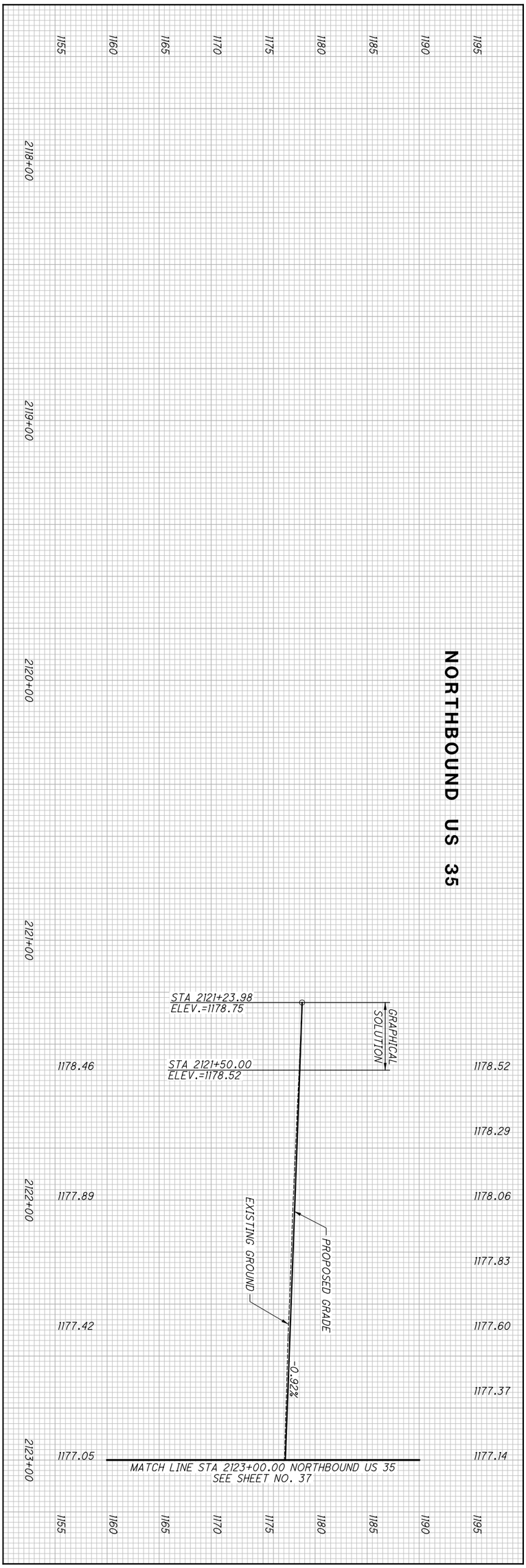




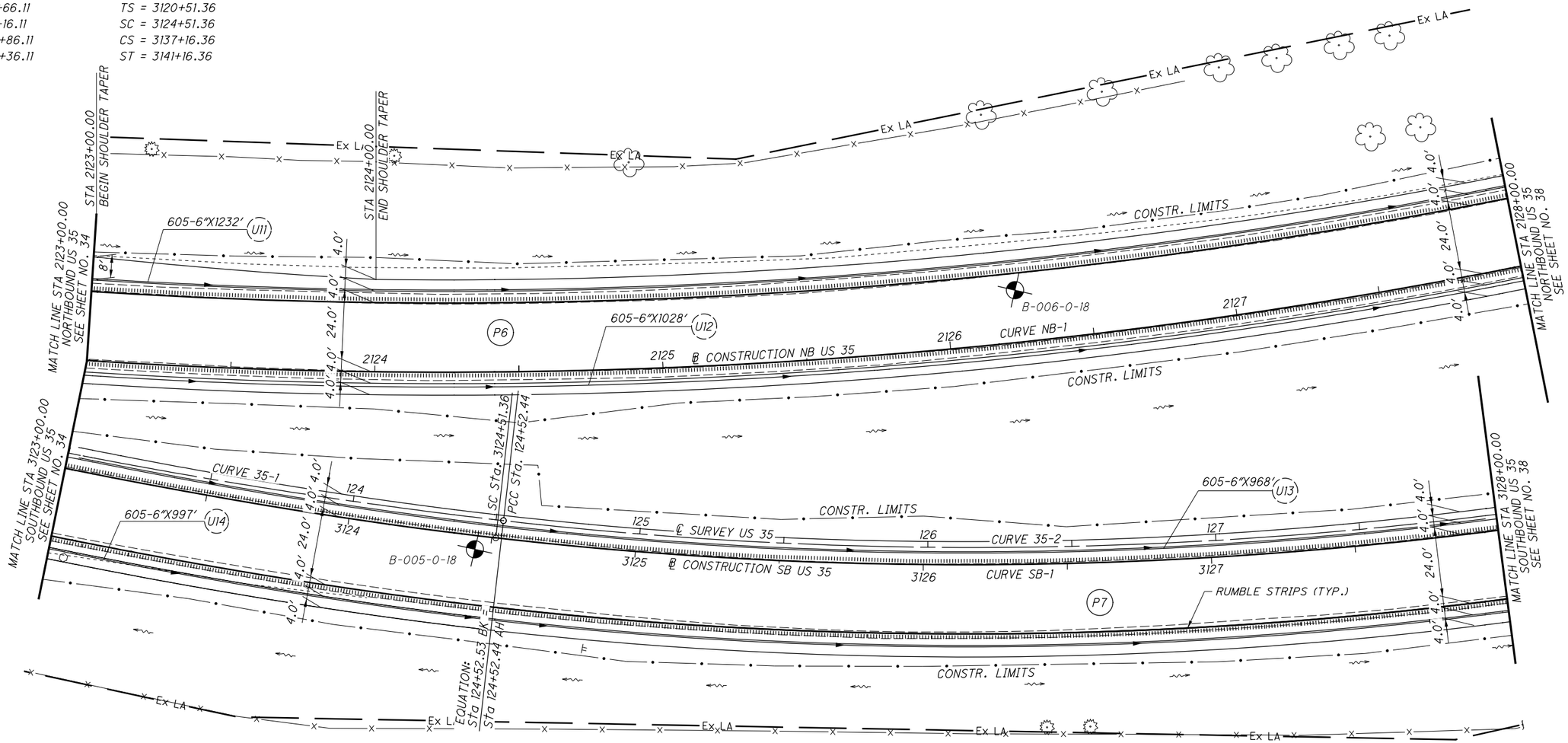
35/88	PRE-35-1.95	PROFILES NB: STA 2117+66.11 - 2123+00, SB: STA 3120+51.36 - 3123+00	CALCULATED PJD CHECKED SNS

CURVE NB-1
P.I. Sta. 2131+97.36
Δ = 66° 36′ 00″ (LT)
Dc = 03° 00′ 00″
R = 1,909.86′
Ls = 350.00′
θs = 5° 15′ 00″
LT = 233.44′
ST = 116.76′
x = 349.71′
y = 10.68′
k = 174.95′
p = 2.67′
Δc = 56° 06′ 00″ (LT)
Lc = 1,870.00′
Ts = 1,431.25′
E = 378.38′
eMax = -0.068
TS = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11

CURVE SB-1
P.I. Sta. 3131+95.19
Δ = 66° 36′ 01″ (LT)
Dc = 04° 00′ 00″
R = 1,432.39′
Ls = 400.00′
θs = 8° 00′ 00″
LT = 266.94′
ST = 133.58′
x = 399.22′
y = 18.59′
k = 199.87′
p = 4.65′
Δc = 50° 36′ 01″ (LT)
Lc = 1,265.00′
Ts = 1,143.83′
E = 286.96′
eMax = 0.078
TS = 3120+51.36
SC = 3124+51.36
CS = 3137+16.36
ST = 3141+16.36

CURVE 35-1
P.I. Sta. 123+19.38
Δ = 08° 00′ 00″ (LT)
Dc = 02° 59′ 58″
R = 1,910.28′
T = 133.58′
L = 266.73′
E = 4.66′
eMax = 0.078
C = 266.51′
C.B. = S 02° 26′ 40″ E
PC 121+85.80
PCC = 124+52.53

CURVE 35-2
P.I. Sta. 131+29.53
Δ = 50° 36′ 01″ (LT)
Dc = 04° 00′ 00″
R = 1,432.39′
T = 677.09′
L = 1,265.00′
E = 151.97′
eMax = 0.078
C = 1,224.29′
C.B. = S 31° 44′ 41″ E
PCC = 124+52.44
PCC = 137+17.44



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PJD
CHECKED SNS

PLAN SHEET NB AND SB US 35
NB: STA 2123+00 - 2128+00, SB: STA 3123+00 - 3128+00

PRE-35-1.95

36
88

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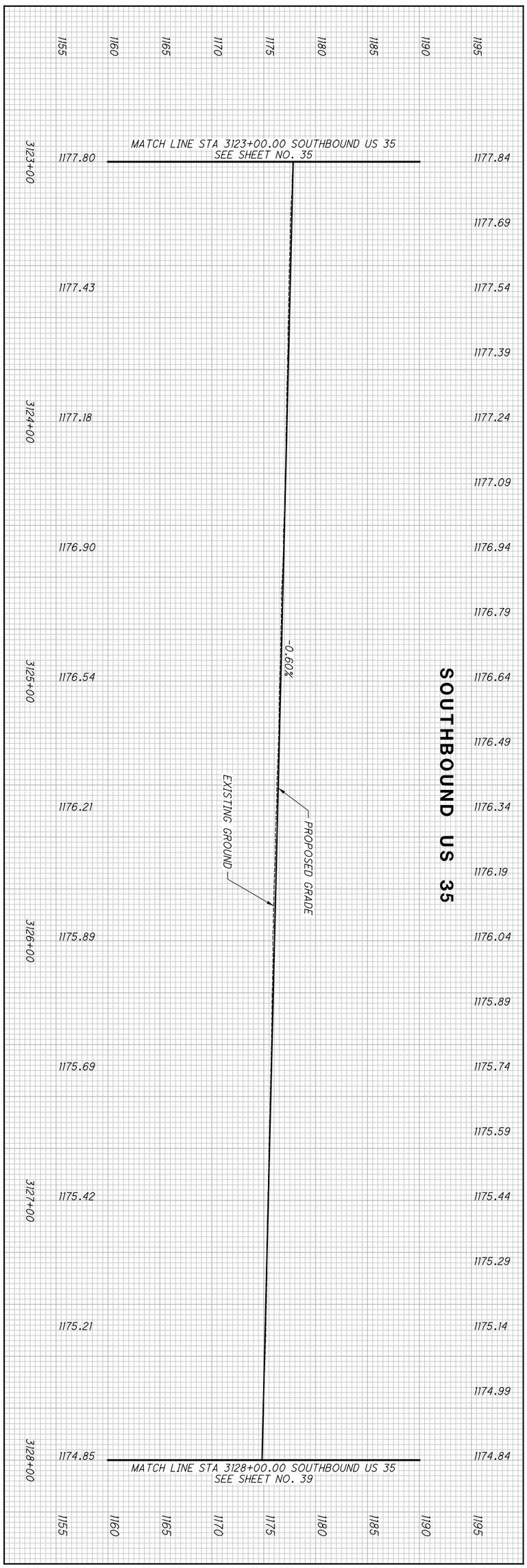
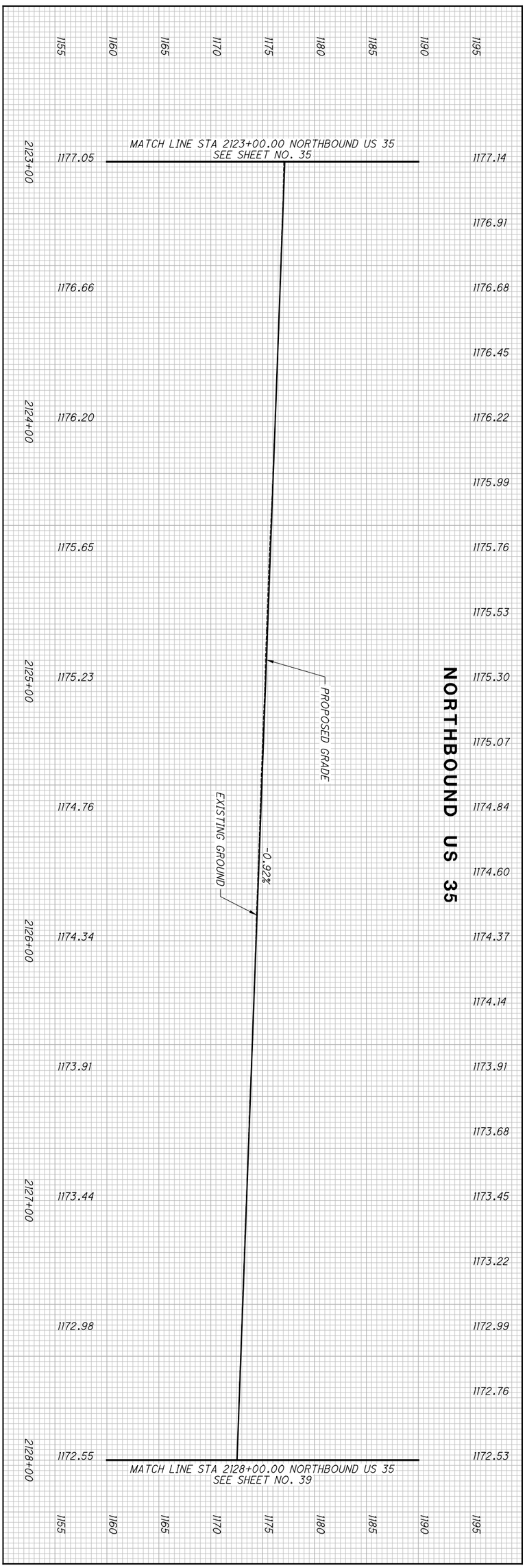
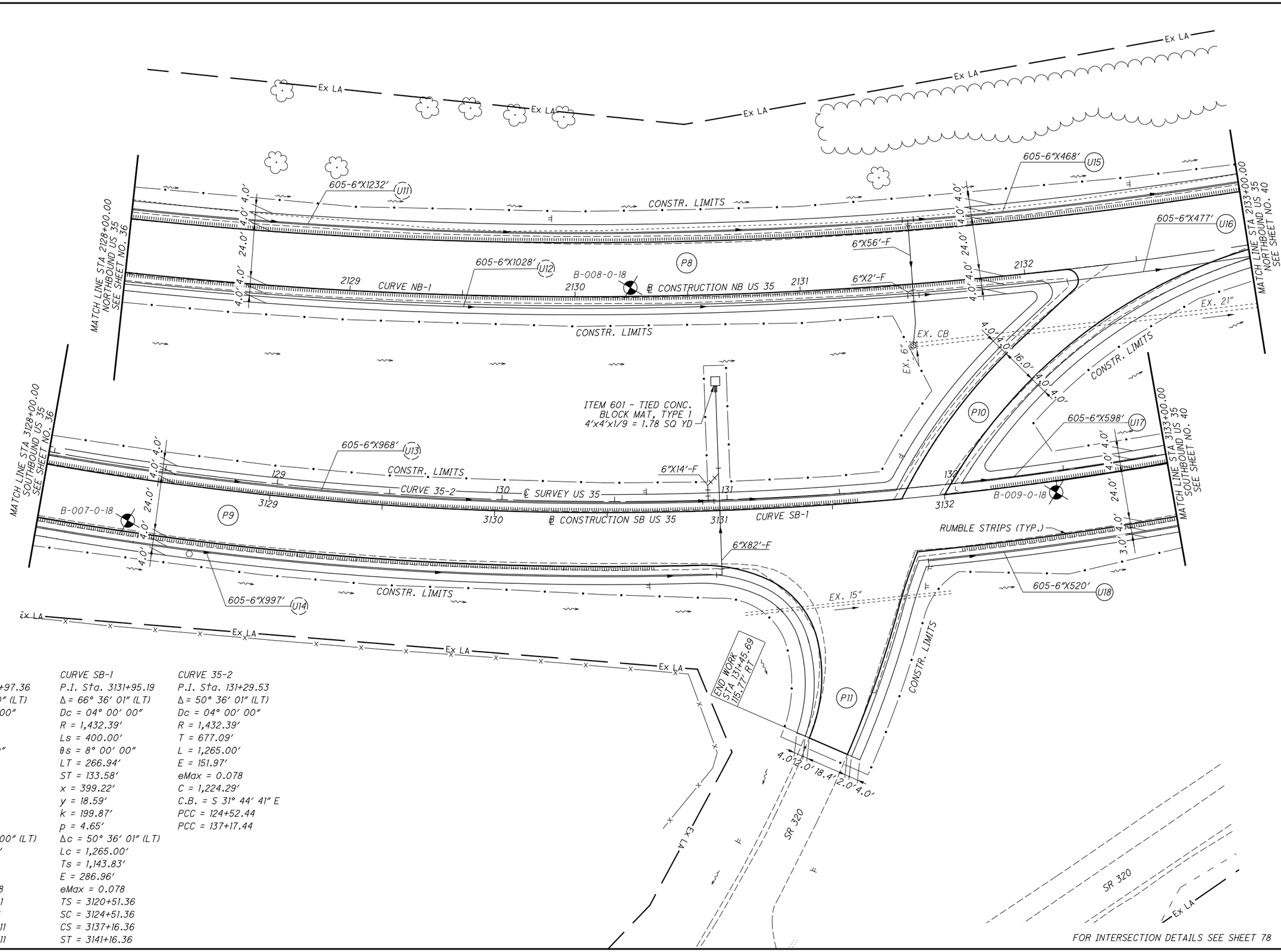




PRE-35-1.95

PROFILES NB: STA 2123+00 - 2128+00, SB: STA 3123+00 - 3128+00

CALCULATED PJD
CHECKED SNS



CURVE NB-1
P.I. Sta. 2131+97.36
Δ = 66° 36′ 00″ (LT)
Dc = 03° 00′ 00″
R = 1,909.86′
Ls = 350.00′
θs = 5° 15′ 00″
LT = 233.44′
ST = 116.76′
x = 349.71′
y = 10.68′
k = 174.95′
p = 2.67′
Δc = 56° 06′ 00″ (LT)
Lc = 1,870.00′
Ts = 1,431.25′
E = 378.38′
eMax = -0.068
TS = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11

CURVE SB-1
P.I. Sta. 3131+95.19
Δ = 66° 36′ 01″ (LT)
Dc = 04° 00′ 00″
R = 1,432.39′
Ls = 400.00′
θs = 8° 00′ 00″
LT = 266.94′
ST = 133.58′
x = 399.22′
y = 18.59′
k = 199.87′
p = 4.65′
Δc = 50° 36′ 01″ (LT)
Lc = 1,265.00′
Ts = 1,143.83′
E = 286.96′
eMax = 0.078
TS = 3120+51.36
SC = 3124+51.36
CS = 3137+16.36
ST = 3141+16.36

CURVE 35-2
P.I. Sta. 131+29.53
Δ = 50° 36′ 01″ (LT)
Dc = 04° 00′ 00″
R = 1,432.39′
T = 677.09′
L = 1,265.00′
E = 151.97′
eMax = 0.078
C = 1,224.29′
C.B. = S 31° 44′ 41″ E
PCC = 124+52.44
PCC = 137+17.44

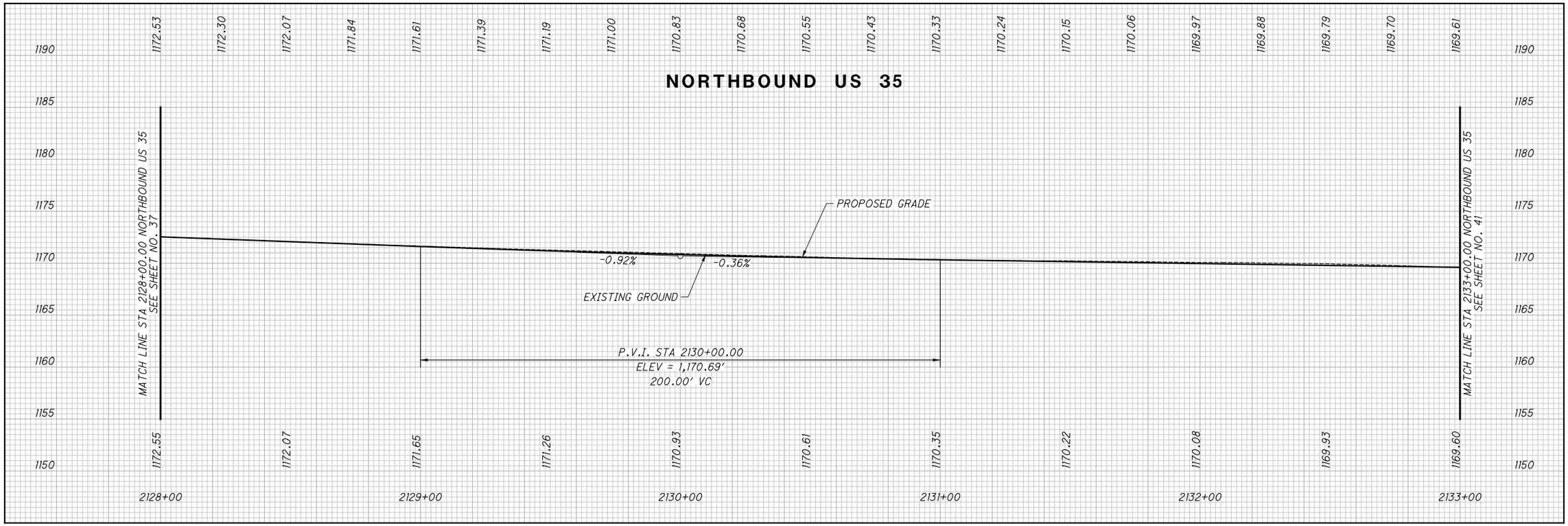
FOR INTERSECTION DETAILS SEE SHEET 78

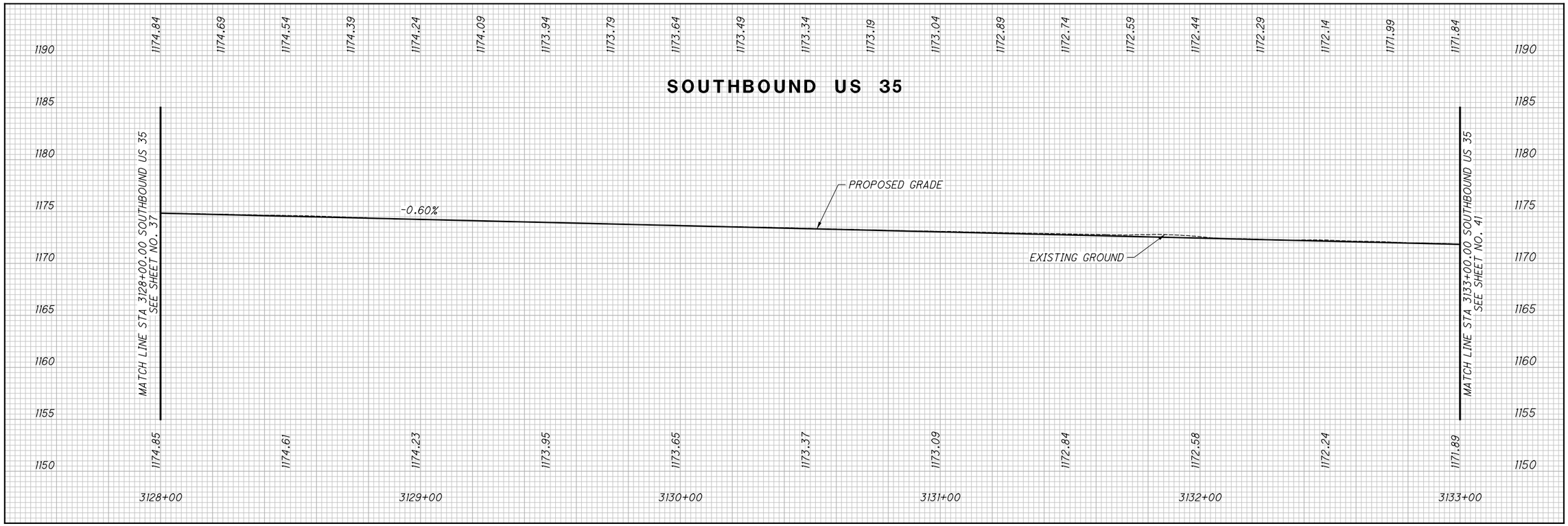
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED PJD
CHECKED SNS

PLAN SHEET NB AND SB US 35

NB: STA 2128+00 - 2133+00, SB: STA 3128+00 - 3133+00

PRE-35-1.95





CALCULATED PJD
CHECKED SNS

PROFILES NB: STA 2128+00 - 2133+00, SB: STA 3128+00 - 3133+00

PRE-35-1.95

39
88

CURVE NB-1	CURVE SB-1	CURVE 35-2	CURVE 35-3
P.I. Sta. 2131+97.36	P.I. Sta. 3131+95.19	P.I. Sta. 131+29.53	P.I. Sta. 138+51.02
Δ = 66° 36′ 00″ (LT)	Δ = 66° 36′ 01″ (LT)	Δ = 50° 36′ 01″ (LT)	Δ = 08° 00′ 00″ (LT)
Dc = 03° 00′ 00″	Dc = 04° 00′ 00″	Dc = 04° 00′ 00″	Dc = 02° 59′ 58″
R = 1,909.86′	R = 1,432.39′	R = 1,432.39′	R = 1,910.28′
Ls = 350.00′	Ls = 400.00′	T = 677.09′	T = 133.58′
θs = 05° 15′ 00″	θs = 08° 00′ 00″	L = 1,265.00′	L = 266.73′
LT = 233.44′	LT = 266.94′	E = 151.97′	E = 4.66′
ST = 116.76′	ST = 133.58′	eMax = 0.078	eMax = 0.078
x = 349.71′	x = 399.22′	C = 1,224.29′	C = 266.51′
y = 10.68′	y = 18.59′	C.B. = S 31° 44′ 41″ E	C.B. = S 61° 02′ 41″ E
k = 174.95′	k = 199.87′	PCC = 124+52.44	PCC = 137+17.44
p = 2.67′	p = 4.65′	PCC = 137+17.44	PT = 139+84.17
Δc = 56° 06′ 00″ (LT)	Δc = 50° 36′ 01″ (LT)		
Lc = 1,870.00′	Lc = 1,265.00′		
Ts = 1,431.25′	Ts = 1,143.83′		
E = 378.38′	E = 286.96′		
eMax = -0.068	eMax = 0.078		
TS = 2117+66.11	TS = 3120+51.36		
SC = 2121+16.11	SC = 3124+51.36		
CS = 2139+86.11	CS = 3137+16.36		
ST = 2143+36.11	ST = 3141+16.36		

#9255
SINGLE FAMILY
BRICK

Ex LA

OH-E

605-6"X468′ U15

605-6"X793′ U19

MATCH LINE STA 2133+00.00
NORTHBOUND US 35
SEE SHEET NO. 38

P10

P12

CONSTR. LIMITS

CURVE NB-1

2134

B-010-0-18

605-6"X477′ U16

2135

℄ CONSTRUCTION NB US 35

2136

6"X60′-F

6"X2′-F

605-6"X407′ U20

2137

B-012-0-18

MATCH LINE STA 2138+00.00
NORTHBOUND US 35
SEE SHEET NO. 42

24.0′

4.0′

EX. 21" EX. CB

EX. 21"

16.0′

605-6"X598′ U17

MATCH LINE STA 3133+00.00
SOUTHBOUND US 35
SEE SHEET NO. 38

133

134

3134

P14

P13

135

℄ SURVEY US 35

CURVE 35-2

136

3135

℄ CONSTRUCTION SB US 35

3136

CURVE SB-1

EX. 6"

EX. CB

CS Sta. 3137+16.36

PCC Sta. 137+17.44

605-6"X315′ U21

6"X14′-F

137

CURVE 35-3

3137

EX. 21"

6"X59′-F

B-011-0-18

RUMBLE STRIPS (TYP.)

EX. 27"

605-6"X805′ U22

MATCH LINE STA 3138+00.00
SOUTHBOUND US 35
SEE SHEET NO. 42

END WORK
STA 133+69.81
112.72′ RT

EX. 15"

605-6"X520′ U18

P15

6.5′

18.0′

SR 320

3-HO

FOR INTERSECTION DETAILS SEE SHEET NO. 78

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PJD
CHECKED SNS

PLAN SHEET NB AND SB US 35
NB: STA 2133+00 - 2138+00, SB: STA 3133+00 - 3138+00

PRE-35-1.95

40
88

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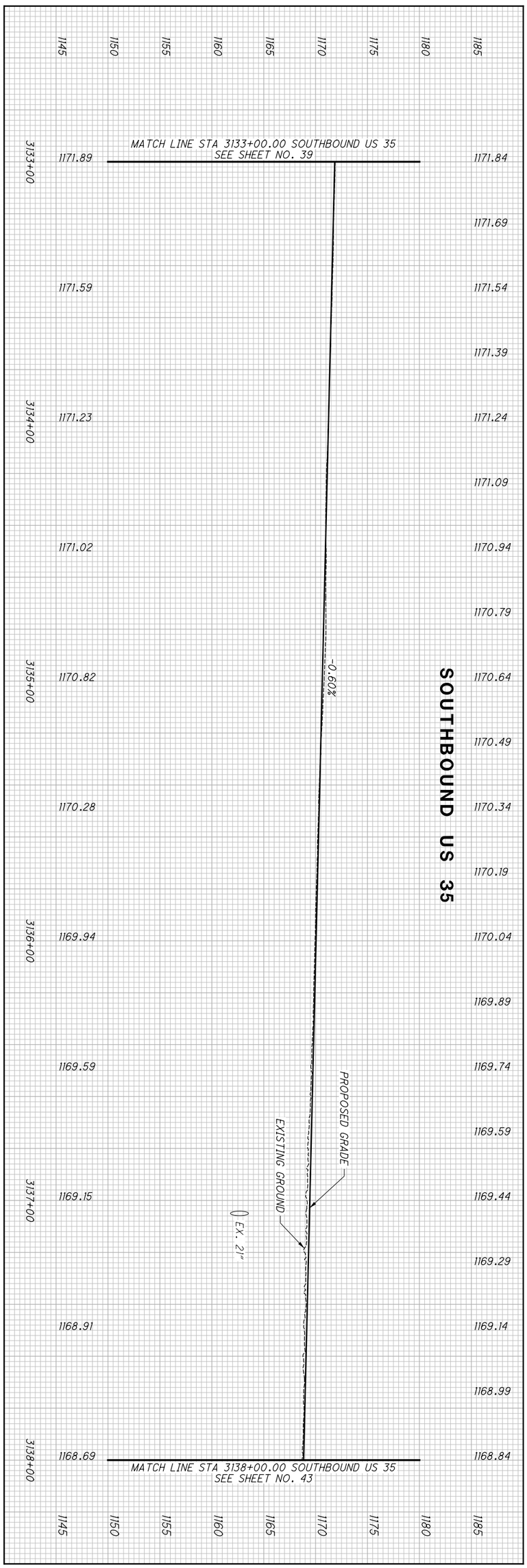
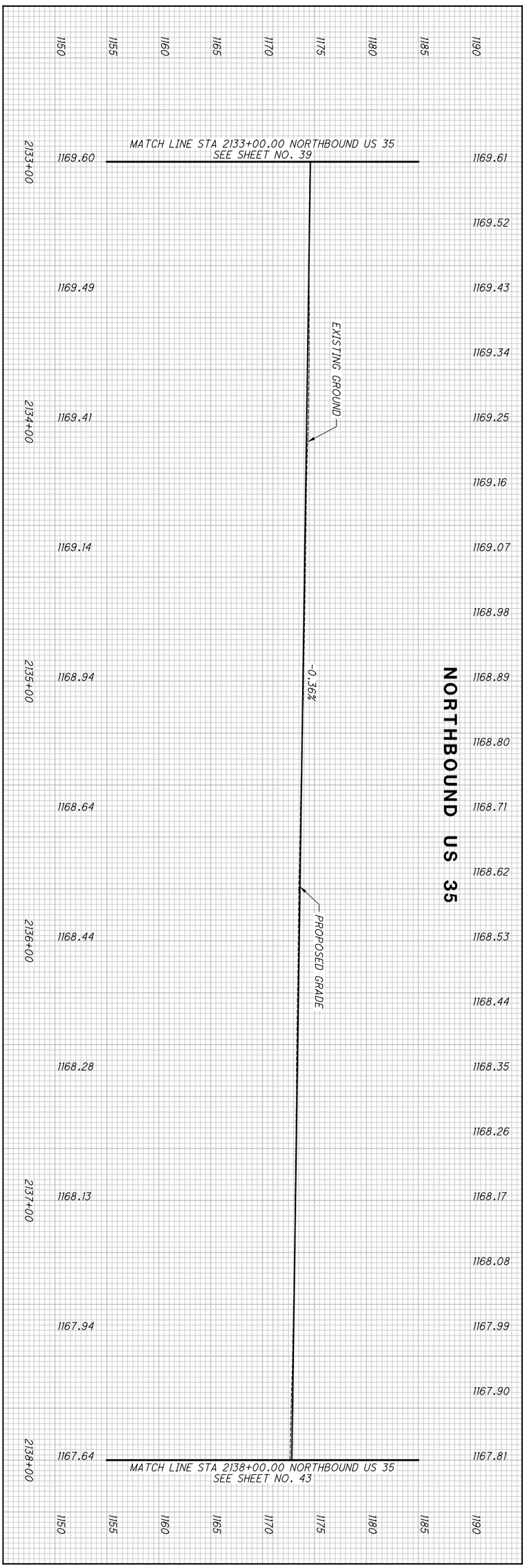
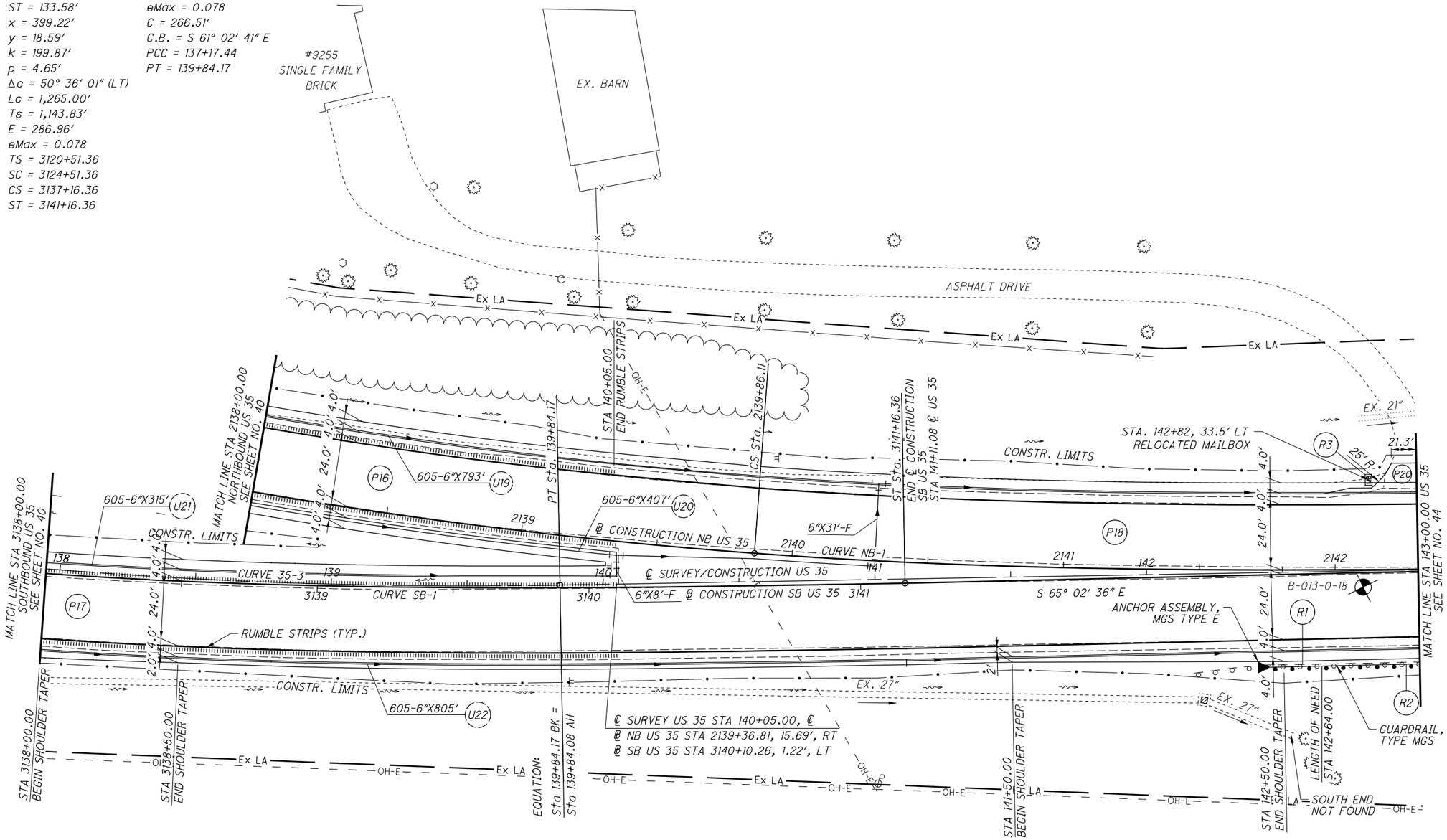

MATCH LINE STA 3133+00.00 SOUTHBOUND US 35
SEE SHEET NO. 39
MATCH LINE STA 3138+00.00 SOUTHBOUND US 35
SEE SHEET NO. 43
SOUTHBOUND US 35
-0.60%
EXISTING GROUND
PROPOSED GRADE
EX. 21"
3133+00
3134+00
3135+00
3136+00
3137+00
3138+00
1171.89
1171.59
1171.23
1171.02
1170.82
1170.28
1169.94
1169.59
1169.15
1168.91
1168.69
1171.84
1171.69
1171.54
1171.39
1171.24
1171.09
1170.94
1170.79
1170.64
1170.49
1170.34
1170.19
1170.04
1169.89
1169.74
1169.59
1169.44
1169.29
1169.14
1168.99
1168.84
1145
1150
1155
1160
1165
1170
1175
1180
1185


MATCH LINE STA 2133+00.00 NORTHBOUND US 35
SEE SHEET NO. 39
MATCH LINE STA 2138+00.00 NORTHBOUND US 35
SEE SHEET NO. 43
NORTHBOUND US 35
-0.36%
EXISTING GROUND
PROPOSED GRADE
2133+00
2134+00
2135+00
2136+00
2137+00
2138+00
1169.60
1169.49
1169.41
1169.14
1168.94
1168.64
1168.44
1168.28
1168.13
1167.94
1167.64
1169.61
1169.52
1169.43
1169.34
1169.25
1169.16
1169.07
1168.98
1168.89
1168.80
1168.71
1168.62
1168.53
1168.44
1168.35
1168.26
1168.17
1168.08
1167.99
1167.90
1167.81
1150
1155
1160
1165
1170
1175
1180
1185
1190

CURVE NB-1
P.I. Sta. 2131+97.36
Δ = 66° 36′ 00″ (LT)
Dc = 03° 00′ 00″
R = 1,909.86′
Ls = 350.00′
θs = 05° 15′ 00″
LT = 233.44′
ST = 116.76′
x = 349.71′
y = 10.68′
k = 174.95′
p = 2.67′
Δc = 56° 06′ 00″ (LT)
Lc = 1,870.00′
Ts = 1,431.25′
E = 378.38′
eMax = -0.068
TS = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11

CURVE SB-1
P.I. Sta. 3131+95.19
Δ = 66° 36′ 01″ (LT)
Dc = 04° 00′ 00″
R = 1,432.39′
Ls = 400.00′
θs = 08° 00′ 00″
LT = 266.94′
ST = 133.58′
x = 399.22′
y = 18.59′
k = 199.87′
p = 4.65′
Δc = 50° 36′ 01″ (LT)
Lc = 1,265.00′
Ts = 1,143.83′
E = 286.96′
eMax = 0.078
TS = 3120+51.36
SC = 3124+51.36
CS = 3137+16.36
ST = 3141+16.36

CURVE 35-3
P.I. Sta. 138+51.02
Δ = 08° 00′ 00″ (LT)
Dc = 02° 59′ 58″
R = 1,910.28′
T = 133.58′
L = 266.73′
E = 4.66′
eMax = 0.078
C = 266.51′
C.B. = S 61° 02′ 41″ E
PCC = 137+17.44
PT = 139+84.17



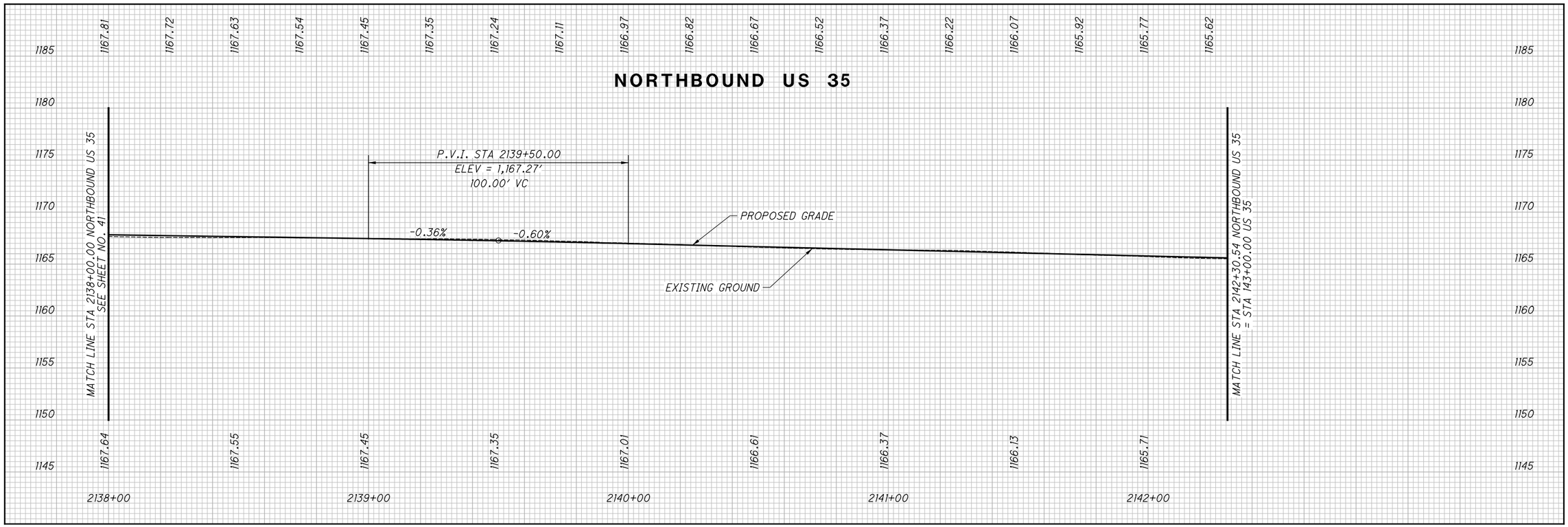
FOR INTERCHANGE DETAILS SEE SHEET NO. 79

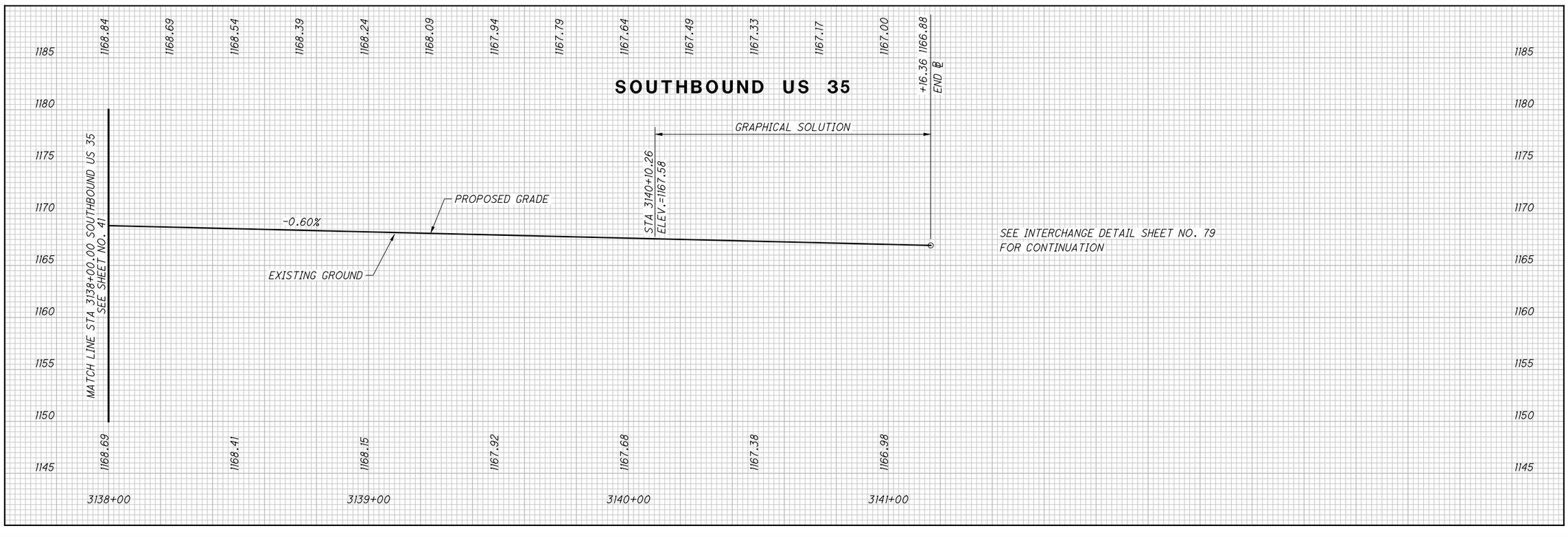
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PJD
CHECKED SNS

PLAN SHEET US 35
NB: STA 2138+00, SB: STA 3138+00 - STA 143+00

PRE-35-1.95



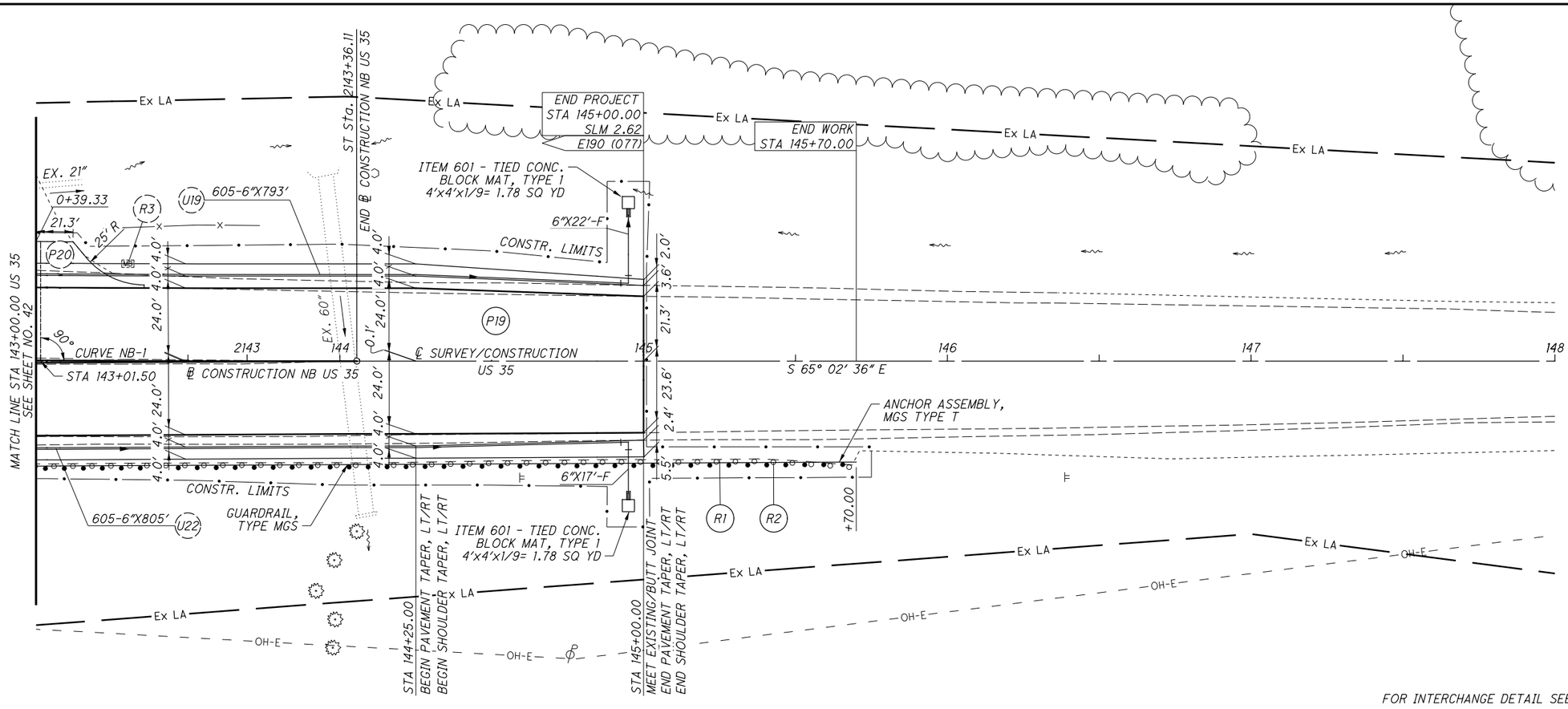


CALCULATED PJD
CHECKED SNS

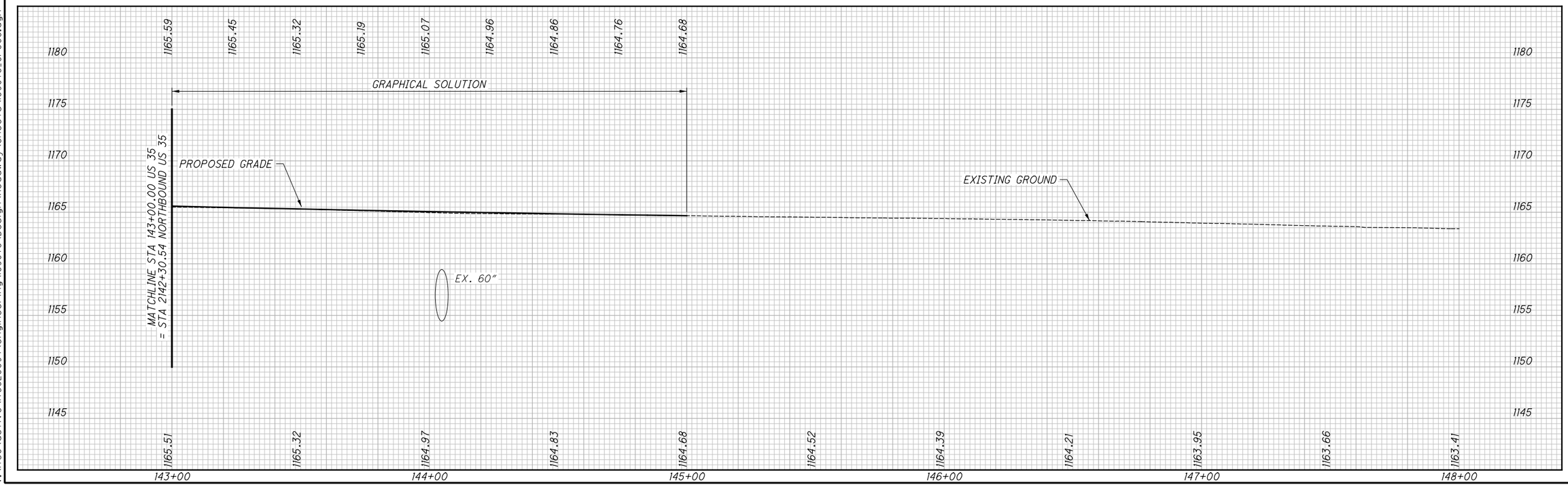
PROFILES NB: STA 2138+00-STA 2142+30.54 SB: STA 3138+00-END

PRE-35-1.95

CURVE NB-1
P.I. Sta. 2131+97.36
Δ = 66° 36′ 00″ (LT)
Dc = 03° 00′ 00″
R = 1,909.86′
Ls = 350.00′
θs = 05° 15′ 00″
LT = 233.44′
ST = 116.76′
x = 349.71′
y = 10.68′
k = 174.95′
p = 2.67′
Δc = 56° 06′ 00″ (LT)
Lc = 1,870.00′
Ts = 1,431.25′
E = 378.38′
eMax = -0.068
TS = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11



FOR INTERCHANGE DETAIL SEE SHEET NO. 79

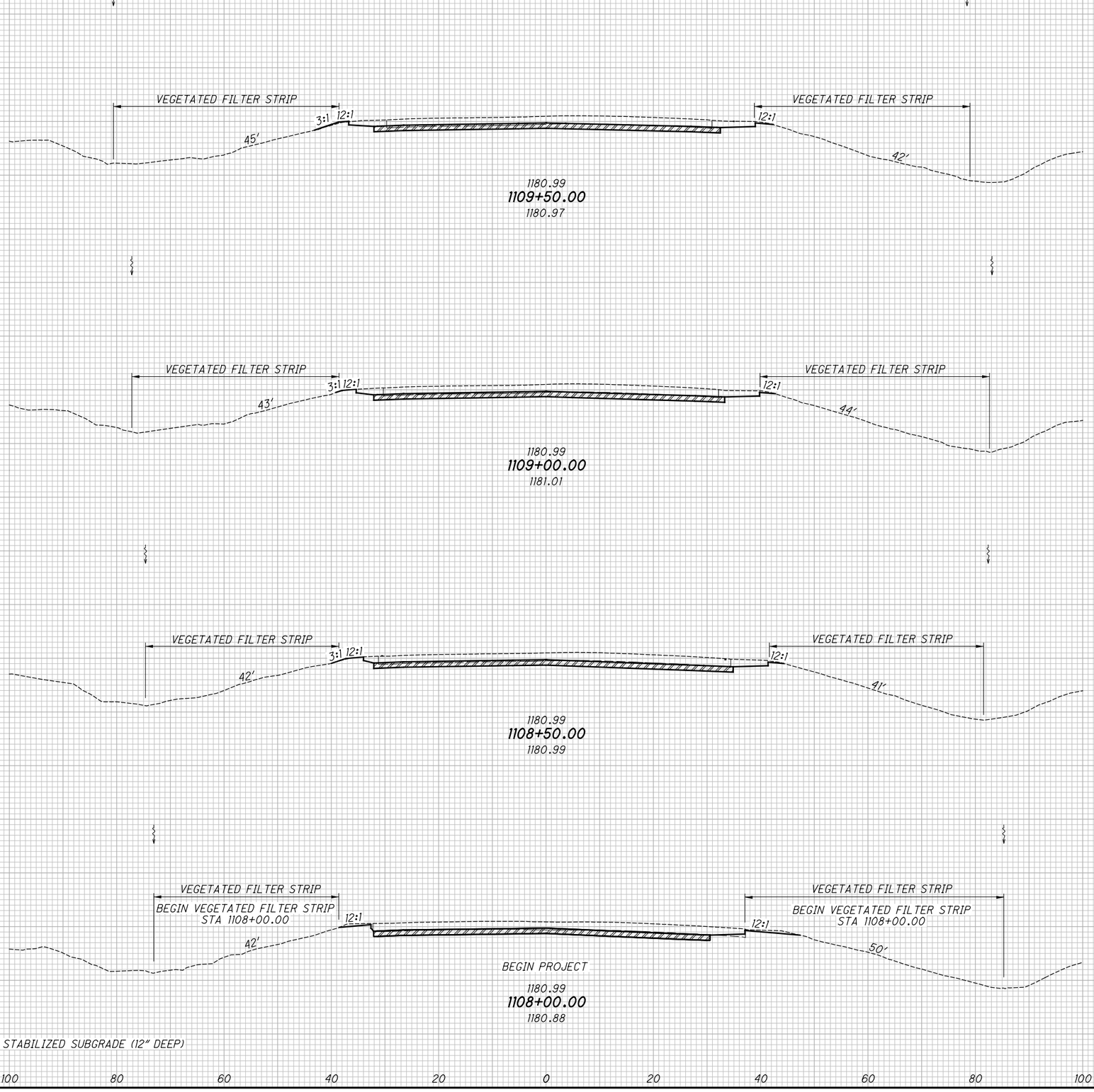


HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED PJD
CHECKED SNS

PLAN AND PROFILE US 35
STA 143+00.00 TO STA 148+00.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.	
	122	VFS
20	82	VFS
	103	VFS
17	82	VFS
	100	VFS
19	76	VFS
	125	VFS
26	83	VEGETATED FILTER STRIP (VFS)
	450	
	1790	VFS



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		31	6
16	1		
		28	1
14	0		
		24	0
12	0		
		17	0
6	0		
		100	7

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 CONSTRUCTION STA. 1108+00.00 TO STA. 1109+50.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.		1200	1190	1180	1170	1160	1190	1180	1170	1160	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	172	VFS												29	22
	419	VFS													
30					VEGETATED FILTER STRIP				VEGETATED FILTER STRIP						
78		VFS			3:1 12:1				12:1			15	12		
					37′					44′					
						1181.43									
						1111+50.00									
	181					1181.42								29	20
	433	VFS													
35					VEGETABLE FILTER STRIP				VEGETATED FILTER STRIP						
78		VFS			3:1 12:1				12:1			16	10		
					39′					43′					
						1181.27									
						1111+00.00									
	169					1181.29								31	16
	442	VFS													
26					VEGETATED FILTER STRIP				VEGETATED FILTER STRIP						
81		VFS			3:1 12:1				12:1			18	7		
					43′					41′					
						1181.11									
						1110+50.00									
	139					1181.12								32	12
	450	VFS													
24					VEGETATED FILTER STRIP				VEGETATED FILTER STRIP						
81		VEGETATED FILTER STRIP (VFS)			3:1 12:1				12:1			17	6		
					41′					44′					
						1181.01									
						1110+00.00									
						1181.00									
	661														
	1744	VFS	120	100	80	60	40	20	0	20	40	60	80	100	120

FOR LEGEND SEE SHEET NO. 45

CALCULATED JTK

CHECKED PJD

CROSS SECTIONS US 35 CONSTRUCTIONS
STA. 1110+00.00 TO STA. 1111+50.00

PRE-35-1.95

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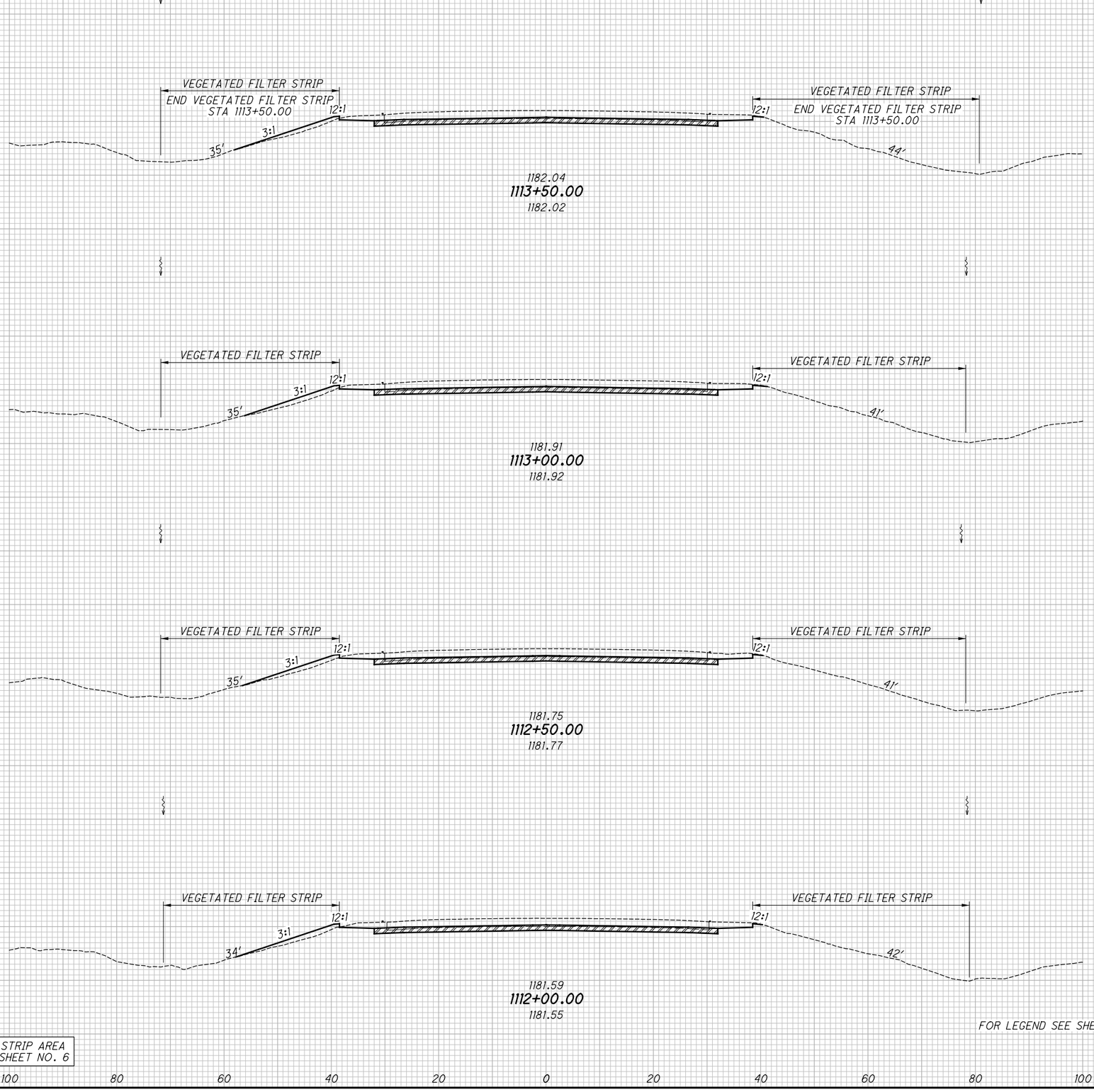
SEEDING END WIDTH	SEEDING SQ. YDS.	
	158	VFS
33	75	VFS
	178	VFS
	411	VFS
31	73	VFS
	172	VFS
	406	VFS
31	73	VFS
	175	VFS
	406	VFS
32	73	VEGETATED FILTER STRIP (VFS)
	683	
	1223	VFS

TOTAL VEGETATED FILTER STRIP AREA
4757 SQ YDS CARRIED TO SHEET NO. 6



FOR LEGEND SEE SHEET NO. 45

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		31	11
16	10		
		30	21
16	13		
		29	22
15	11		
		29	21
16	12		
		119	75

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 CONSTRUCTION
STA. 1112+00.00 TO STA. 1113+50.00

PRE-35-1.95

47
88

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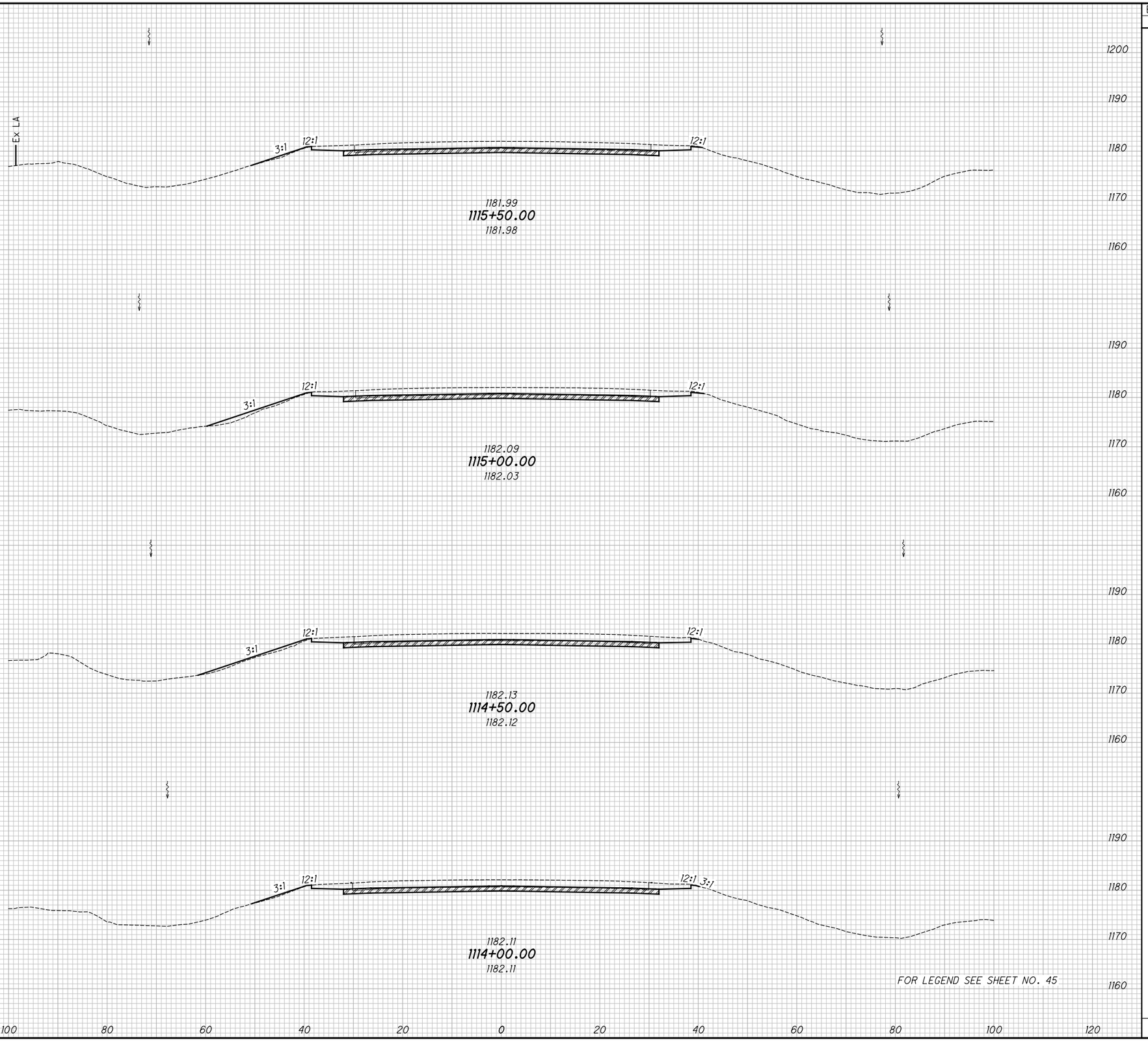
SEEDING END WIDTH	SEEDING SQ. YDS.
	164
25	
	167
35	
	197
36	
	167
24	
	695



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		31	7
17	2		
		32	11
18	10		
		32	17
17	8		
		31	9
17	2		
		126	44

CALCULATED JTK
CHECKED PJD

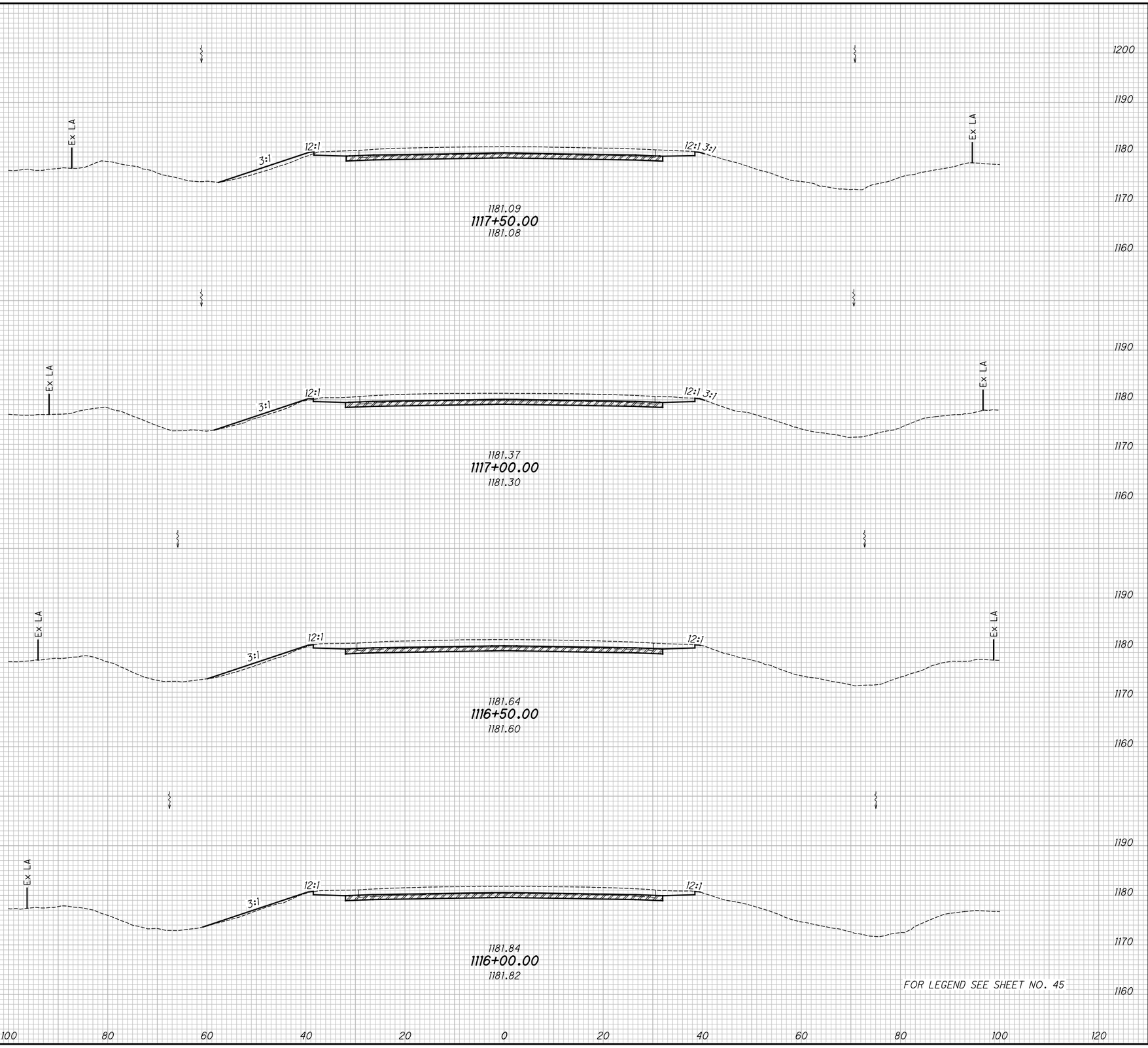
CROSS SECTIONS US 35 CONSTRUCTION
STA. 1114+00.00 TO STA. 1115+50.00

PRE-35-1.95

48
88

Y:\1736\active\173620094\engineering\109078\Design\Roadway\Sheets\109078_XS001.dgn 10/25/2019 1:20:08 PM pdurham

SEEDING END WIDTH	SEEDING SQ. YDS.
32	167
33	181
34	186
34	189
	723



FOR LEGEND SEE SHEET NO. 45

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		30	18
16	12		
		31	18
17	7		
		31	15
16	9		
		30	14
16	6		
		122	65

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 CONSTRUCTION
STA. 1116+00.00 TO STA. 1117+50.00

PRE-35-1.95

49
88

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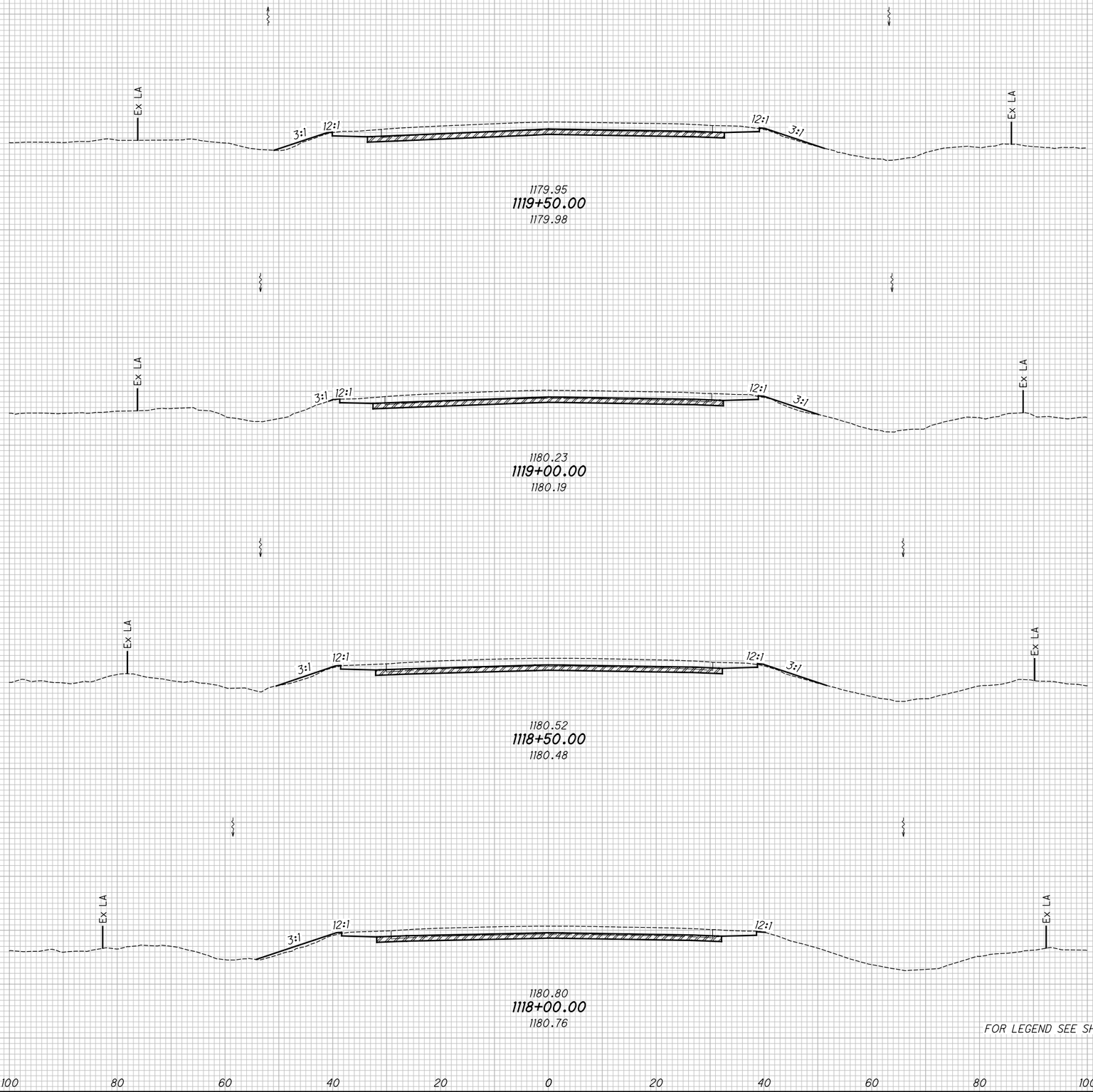
SEEDING END WIDTH	SEEDING SQ. YDS.
	164
34	
	161
24	
	167
36	
	178
28	
	670



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		34	7
18	6		
		32	9
17	4		
		30	10
15	7		
		29	13
16	7		
		125	39

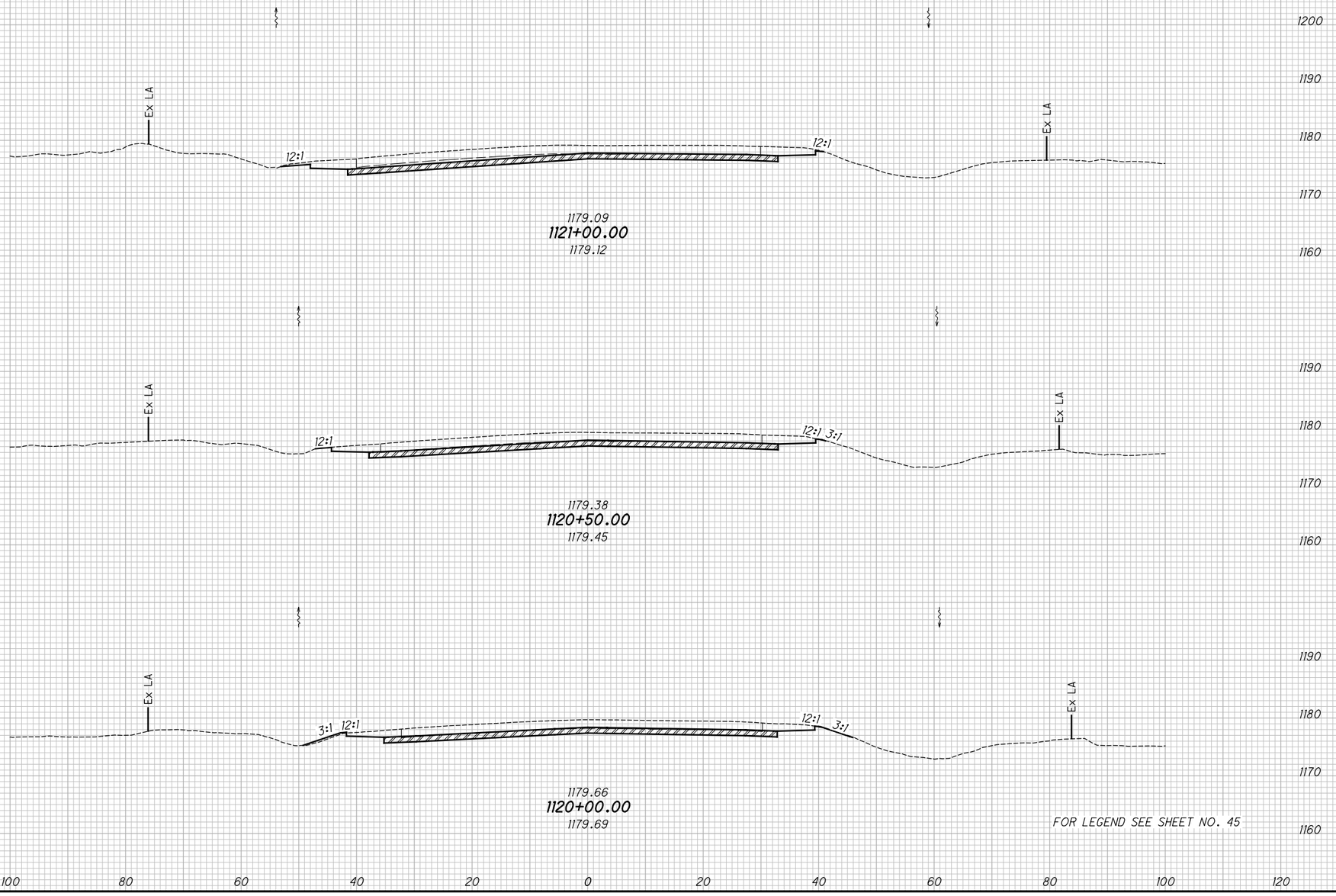
CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 CONSTRUCTION
STA. 1118+00.00 TO STA. 1119+50.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.
16	
	44
16	
	83
14	
	108
25	
	235

US 35 CONSTRUCTION EARTHWORK	
EXCAVATION	EMBANKMENT
821 CU YD	302 CU YD
SEEDING & MULCHING	
4117 SQ YD	
QUANTITIES CARRIED TO SHEET 28	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
27	0		
		25	0
27	0		
		45	0
22	0		
		38	2
19	2		
		108	2

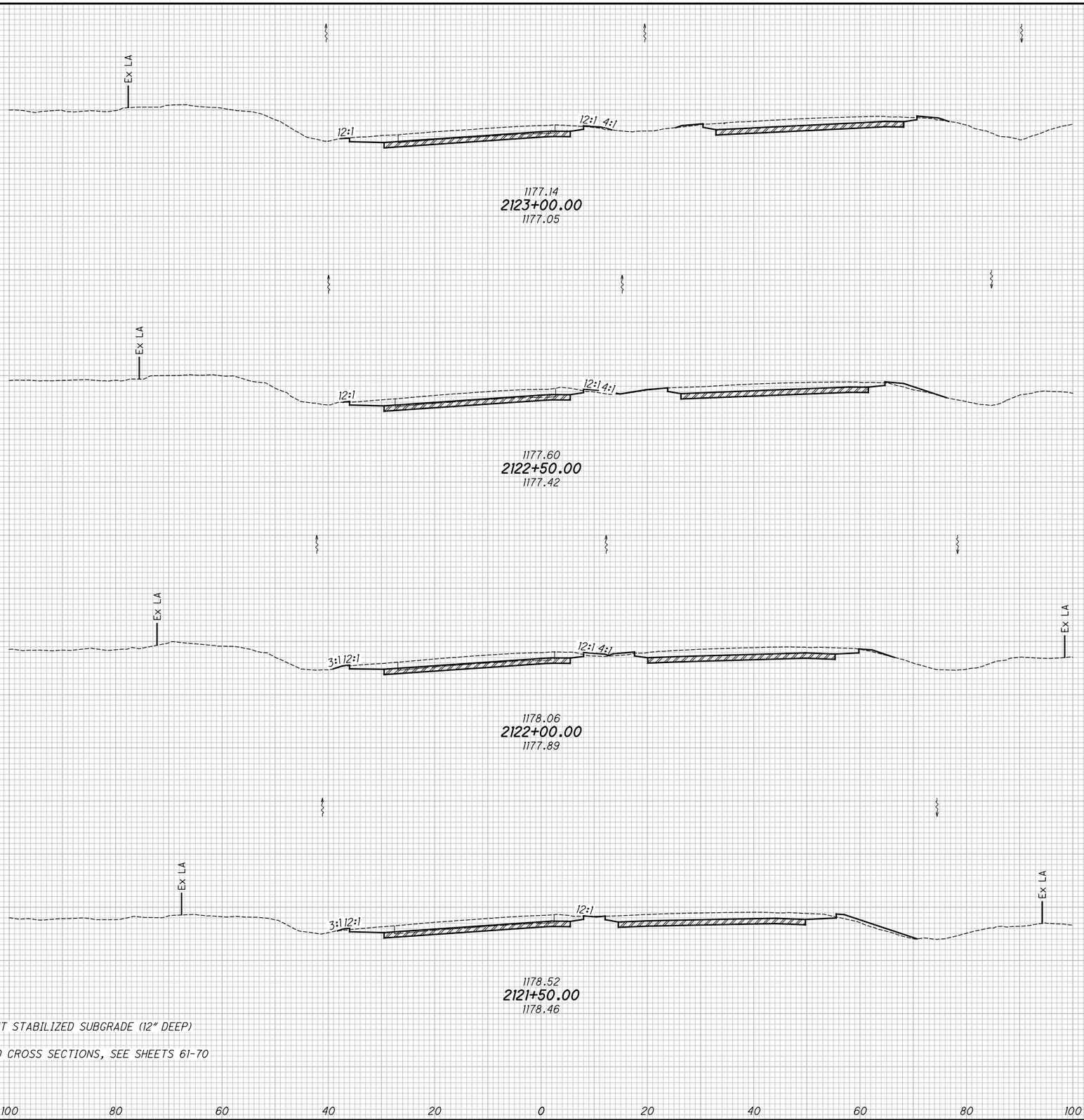
CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 CONSTRUCTION
STA. 1120+00.00 TO STA. 1121+25.00

PRE-35-1.95

51
88

SEEDING	
END WIDTH	SQ. YDS.
	100
17	
	83
13	
	72
13	
	64
10	
	29
10	
	348



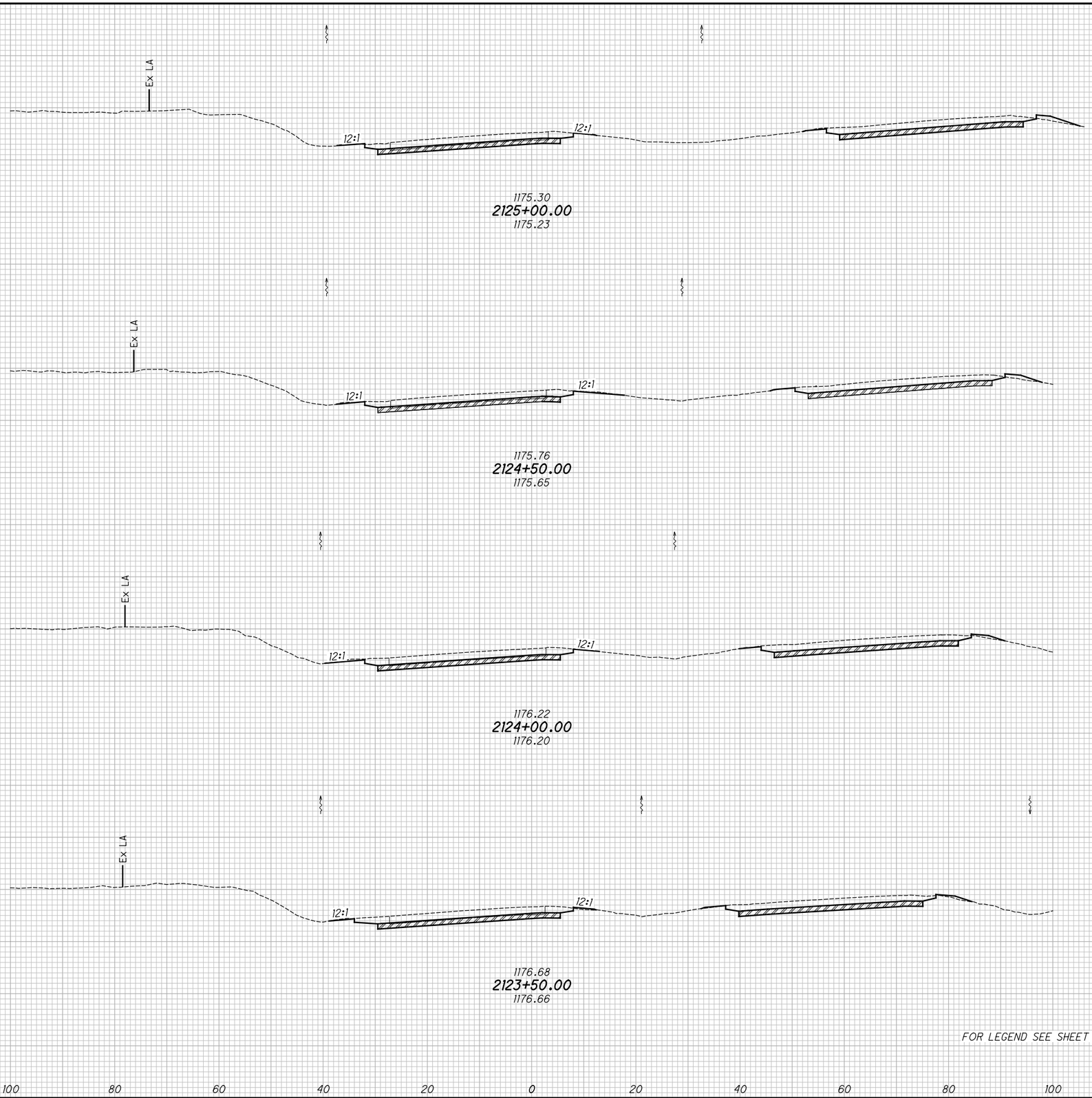
END AREA		VOLUME	
CUT	FILL	CUT	FILL
		27	2
15	1		
		26	4
13	3		
		25	5
14	2		
		24	3
12	1		
		12	1
12	1		
		114	15

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND
STA. 2121+23.98 TO STA. 2123+00.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.
	108
20	
	125
25	
	133
23	
	117
19	
	483



FOR LEGEND SEE SHEET NO. 52

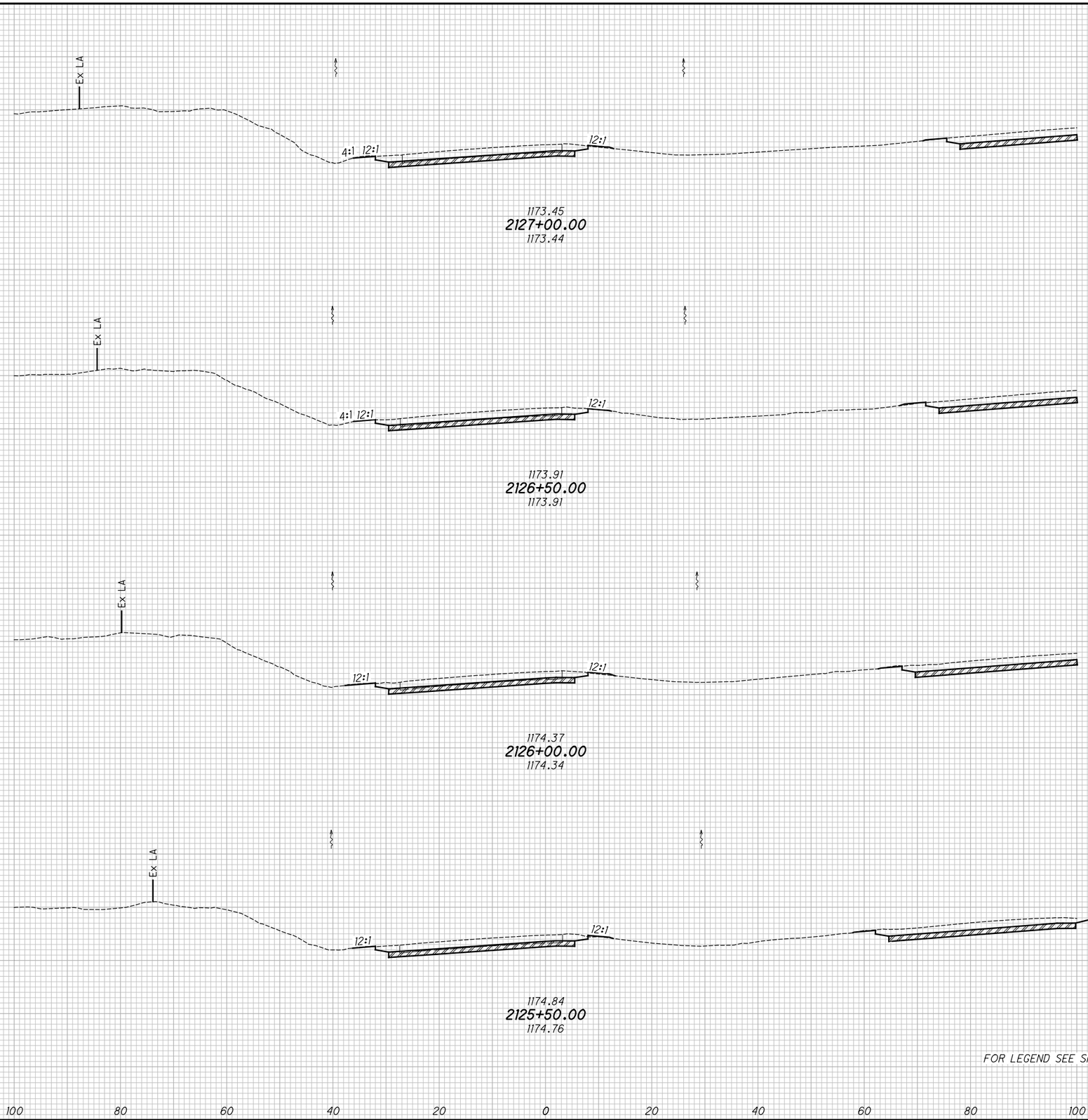
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		19	1
10	0		
		21	0
13	0		
		25	0
14	0		
		26	1
14	1		
		91	2

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND
STA. 2123+50.00 TO STA. 2125+00.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.
	106
19	
	106
19	
	111
21	
	111
19	
	434



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		20	2
11	1		
		19	1
10	0		
		19	1
10	1		
		19	2
10	1		
		77	6

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND STA. 2125+50.00 TO STA. 2127+00.00

PRE-35-1.95

FOR LEGEND SEE SHEET NO. 52

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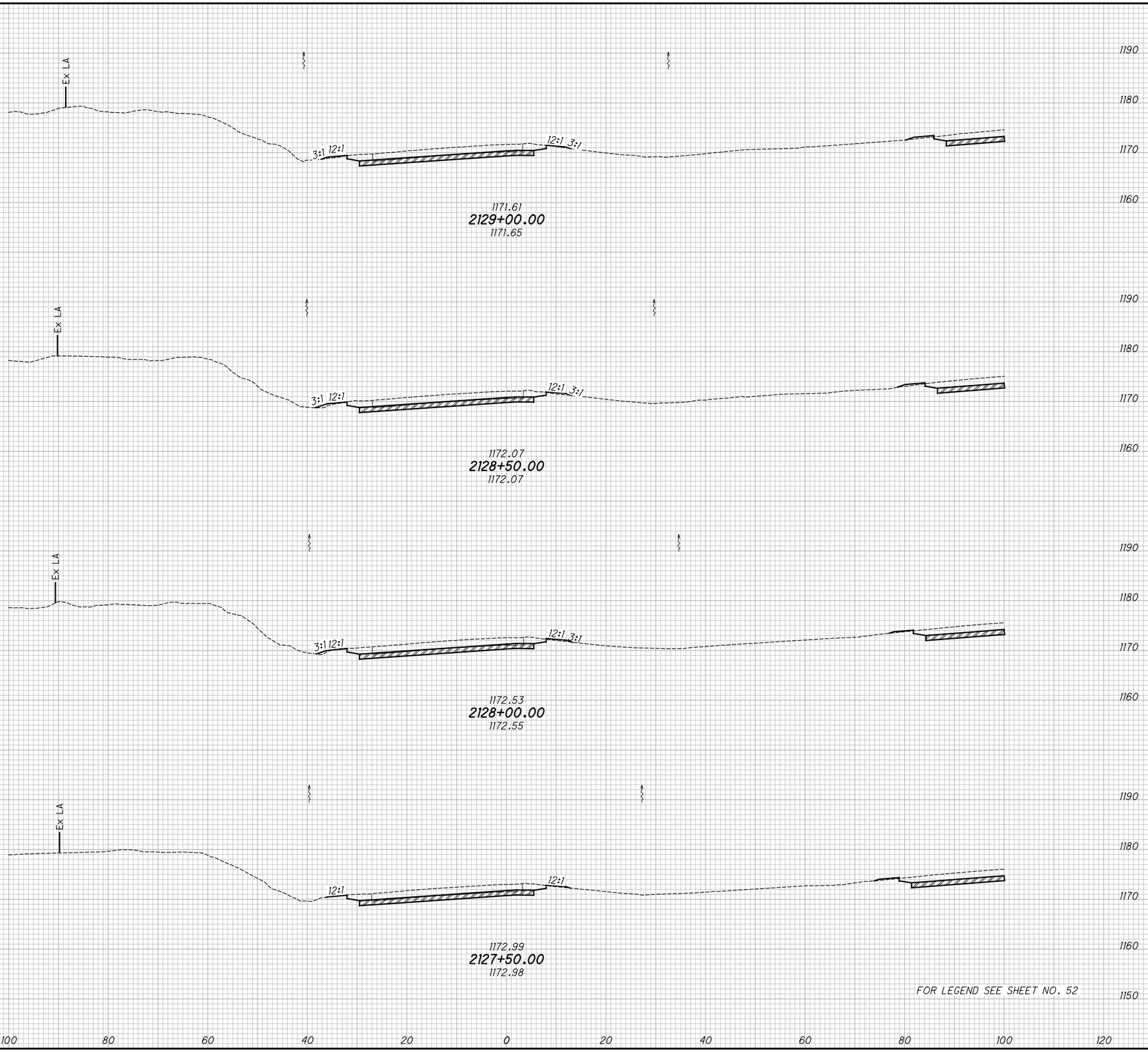
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	114			21	2
20		11	1		
	117			20	4
22		11	3		
	122			20	5
22		11	2		
	114			20	3
19		11	1		
	467			81	14



FOR LEGEND SEE SHEET NO. 52

CALCULATED JTK

CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND STA. 2127+50.00 TO STA. 2129+00.00

PRE-35-1.95

55
88

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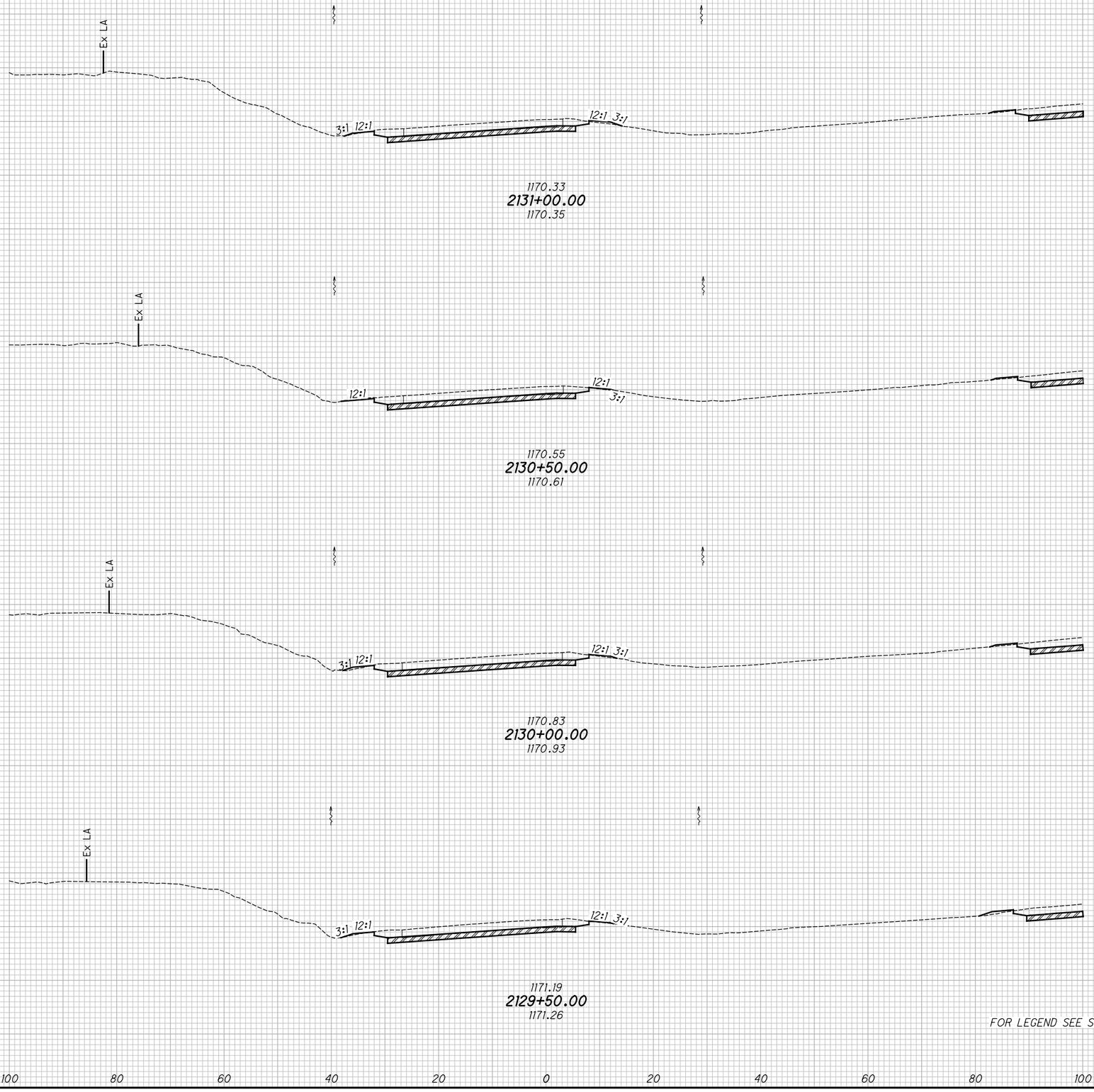
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	122			23	4
22		12	2		
	119			23	2
21		13	0		
	117			23	2
21		12	2		
	117			22	3
21		12	1		
	475			91	11



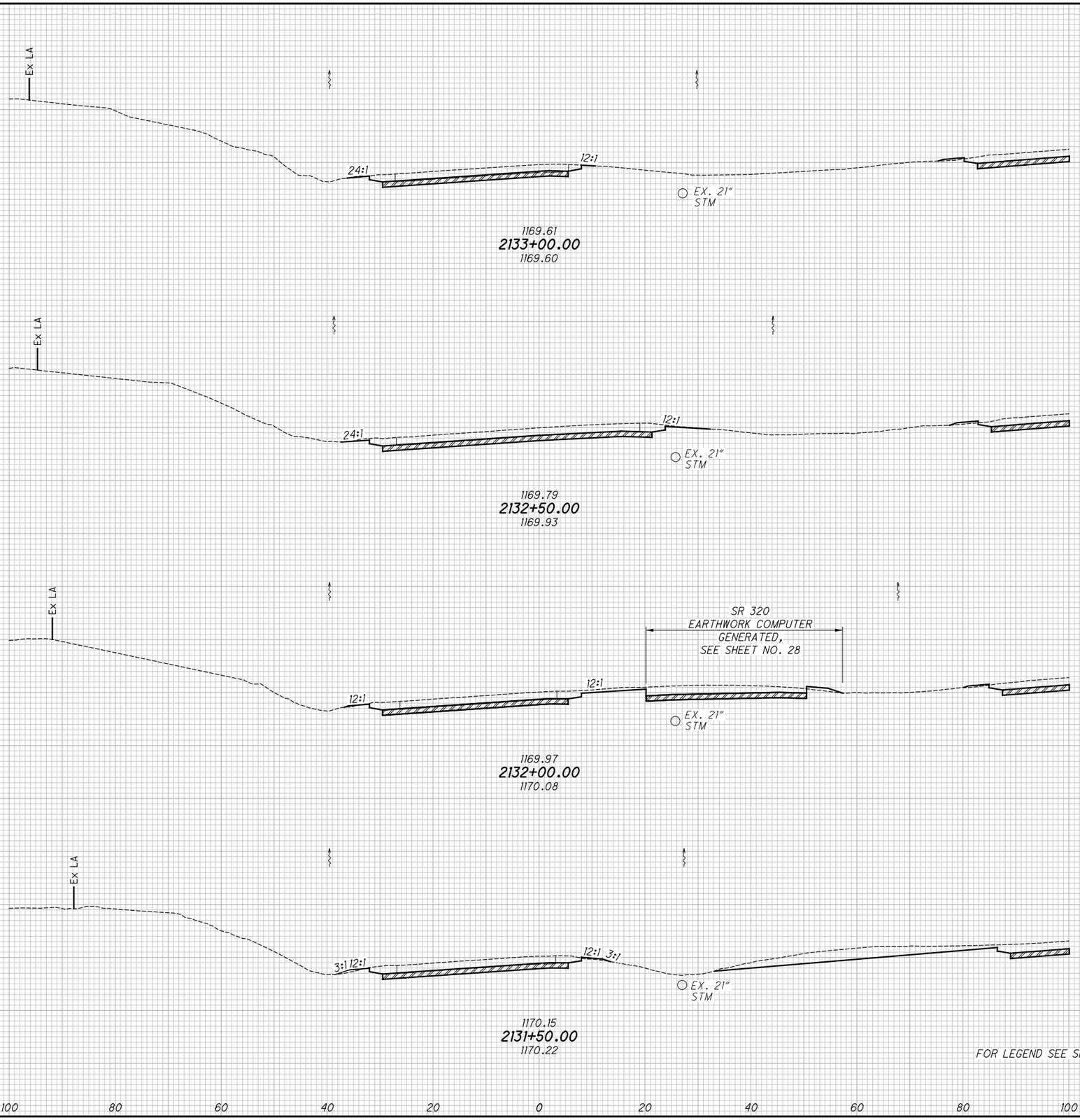
FOR LEGEND SEE SHEET NO. 52

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND
STA. 2129+50.00 TO STA. 2131+00.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	117			17	0
19		9	0		
	131			23	0
28		16	0		
	172			33	0
34		20	0		
	156			31	2
22		13	2		
	576			104	2



CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND
STA. 2133+00.00 TO STA. 2131+50.00

PRE-35-1.95

57
88

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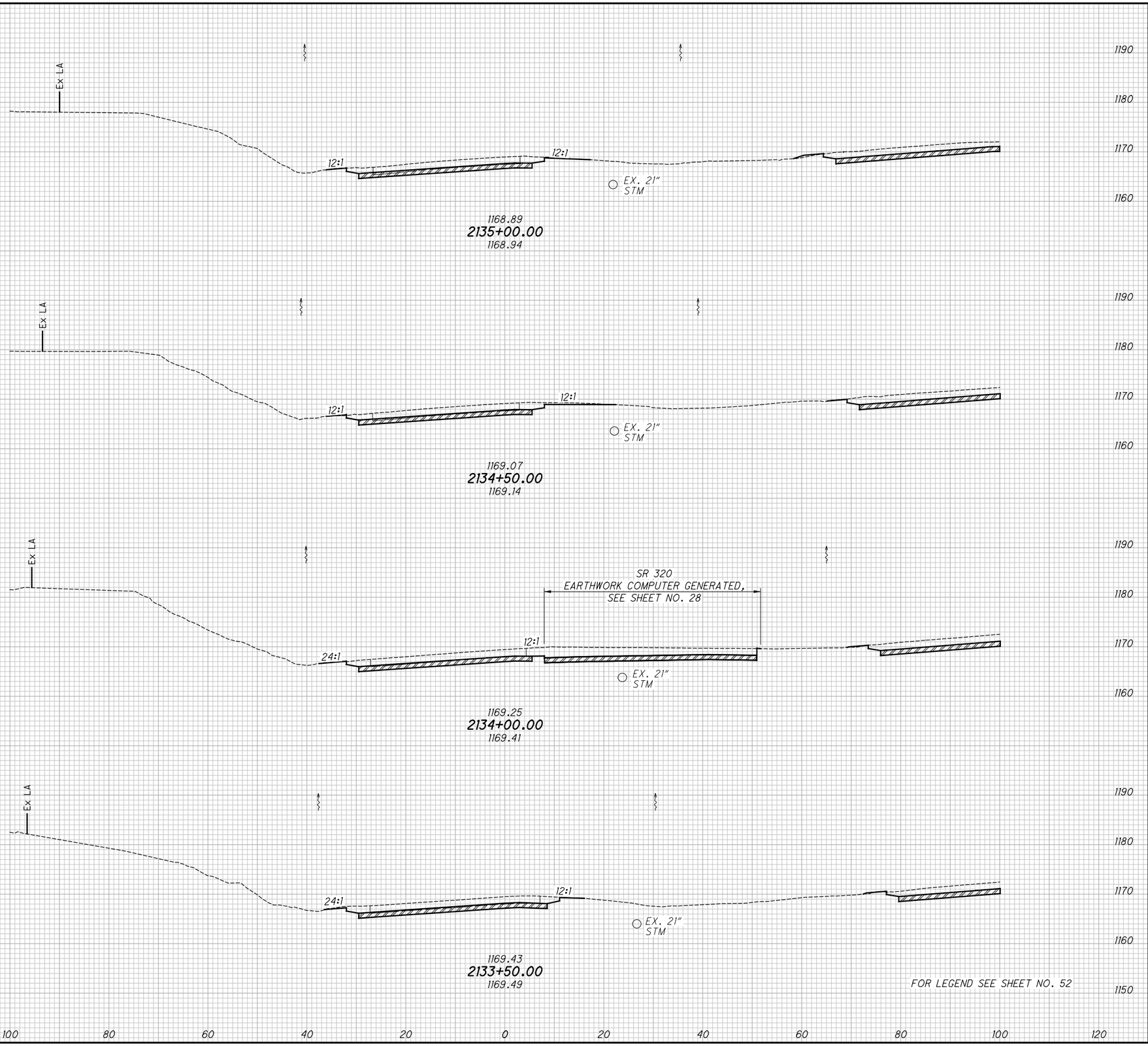
SEEDING	
END WIDTH	SQ. YDS.
	156
23	
	142
28	
	128
18	
	114
23	
	540



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		25	0
13	0		
		27	0
16	0		
		27	0
13	0		
		20	0
9	0		
		99	0

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND
STA. 2133+50.00 TO STA. 2135+00.00

PRE-35-1.95

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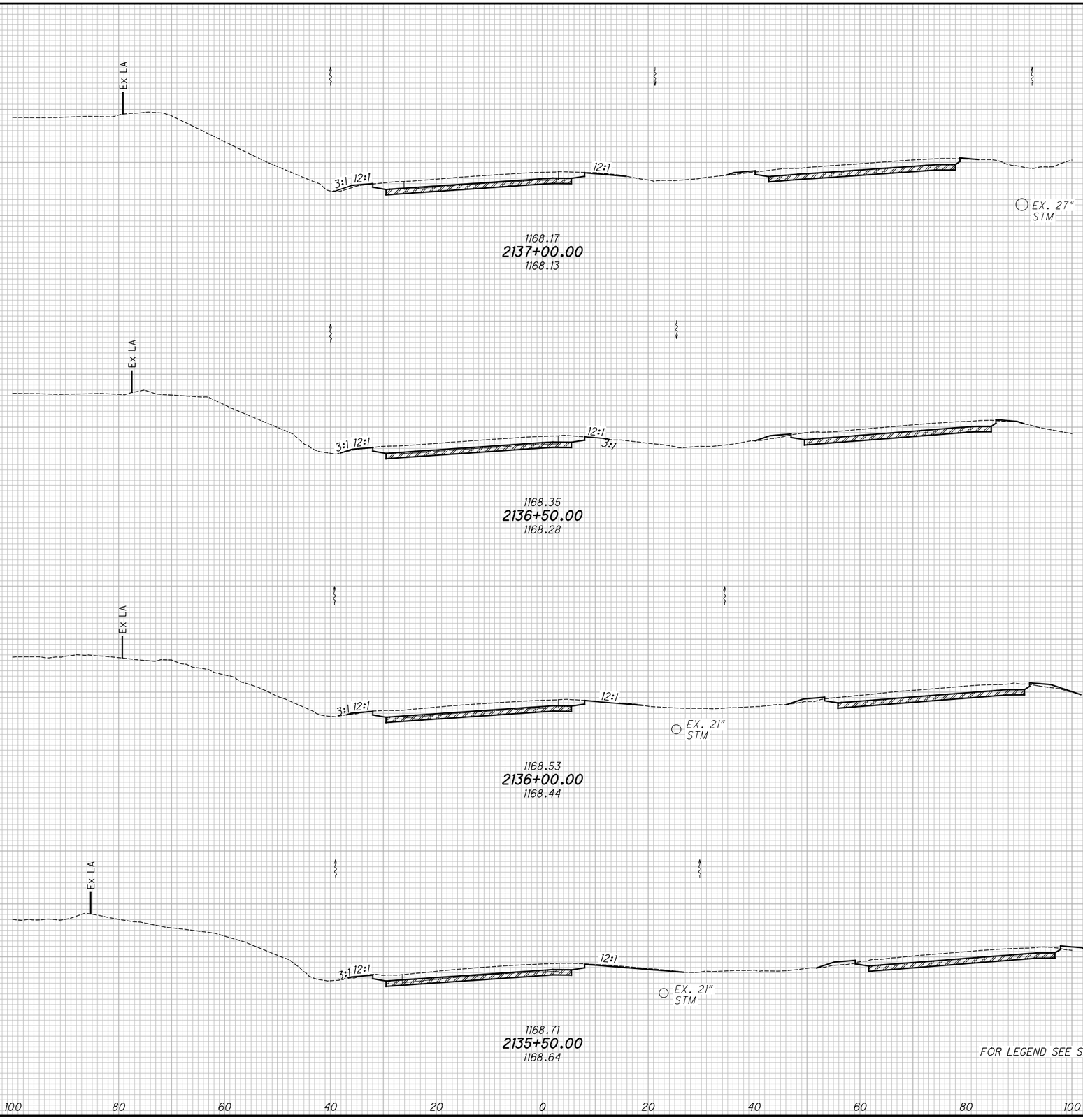
SEEDING	
END WIDTH	SQ. YDS.
	125
25	
	128
21	
	131
26	
	164
33	
	548



FOR LEGEND SEE SHEET NO. 52

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		24	3
14	2		
		24	3
12	1		
		23	2
13	1		
		25	1
14	0		
		96	9

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND
STA. 2135+50.00 TO STA. 2137+00.00

PRE-35-1.95

59
88

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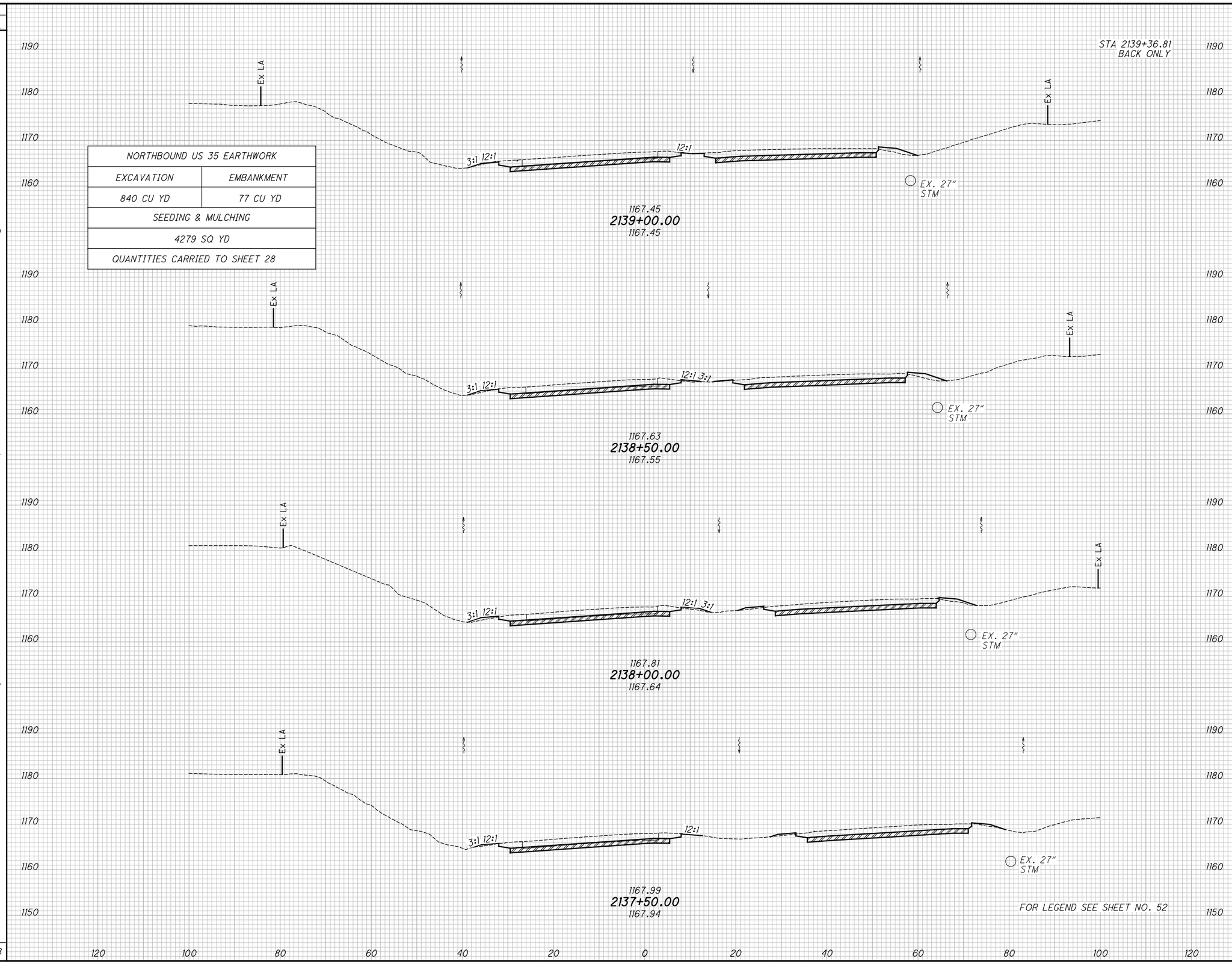
SEEDING	
END WIDTH	SQ. YDS.
15	61
15	
	100
21	
	125
24	
	122
20	
	408

NORTHBOUND US 35 EARTHWORK	
EXCAVATION	EMBANKMENT
840 CU YD	77 CU YD
SEEDING & MULCHING	
4279 SQ YD	
QUANTITIES CARRIED TO SHEET 28	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	1		
		18	1
13	1		
		24	4
13	3		
		23	7
12	5		
		22	6
12	1		
		87	18

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 NORTHBOUND
STA. 2137+50.00 TO STA. 2139+36.81

PRE-35-1.95

60
88

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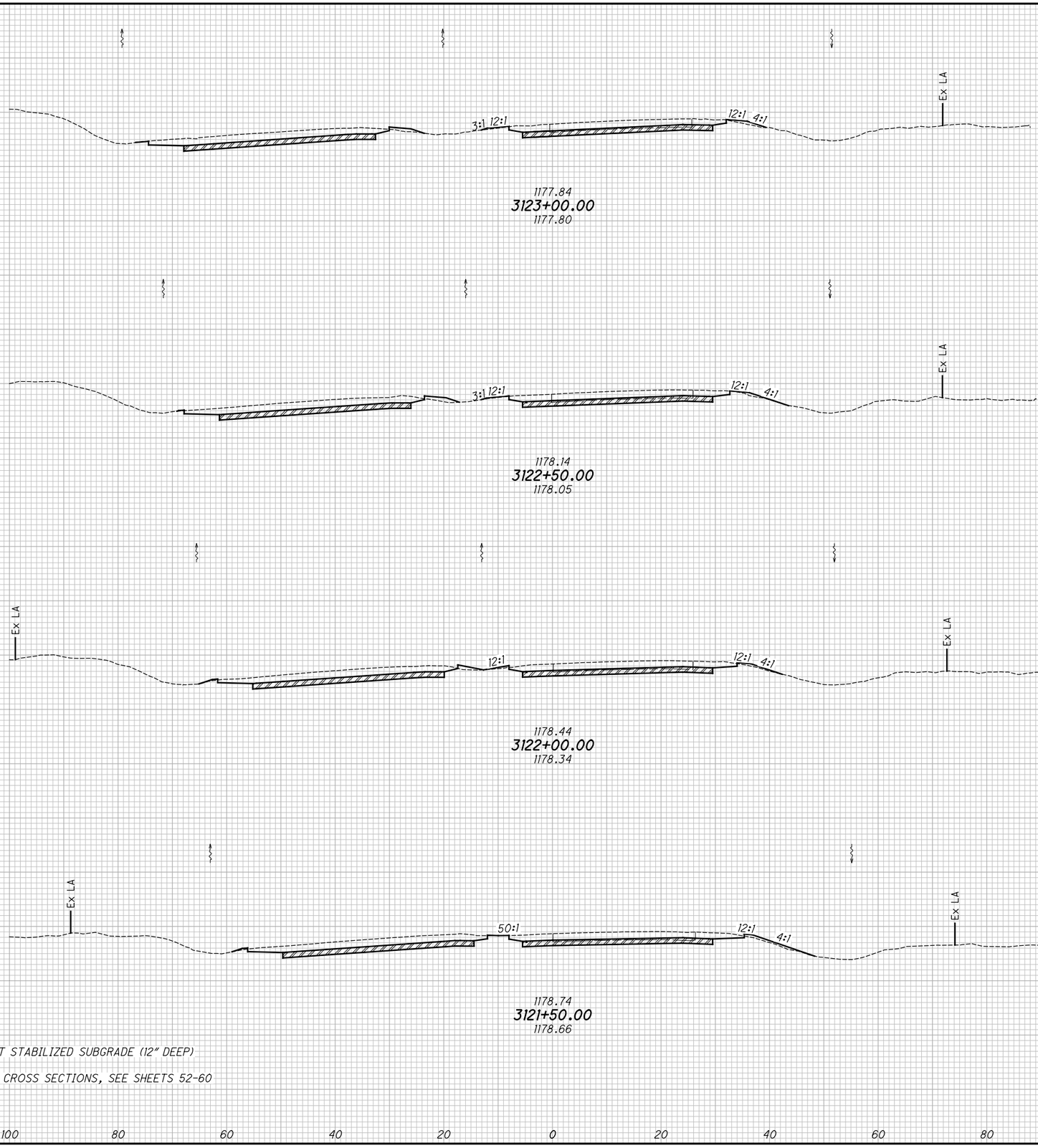
CROSS SECTIONS US 35 SOUTHBOUND
STA. 3121+25.08 TO STA. 3123+00.00

PRE-35-1.95

61
88

CALCULATED JTK
CHECKED PJD



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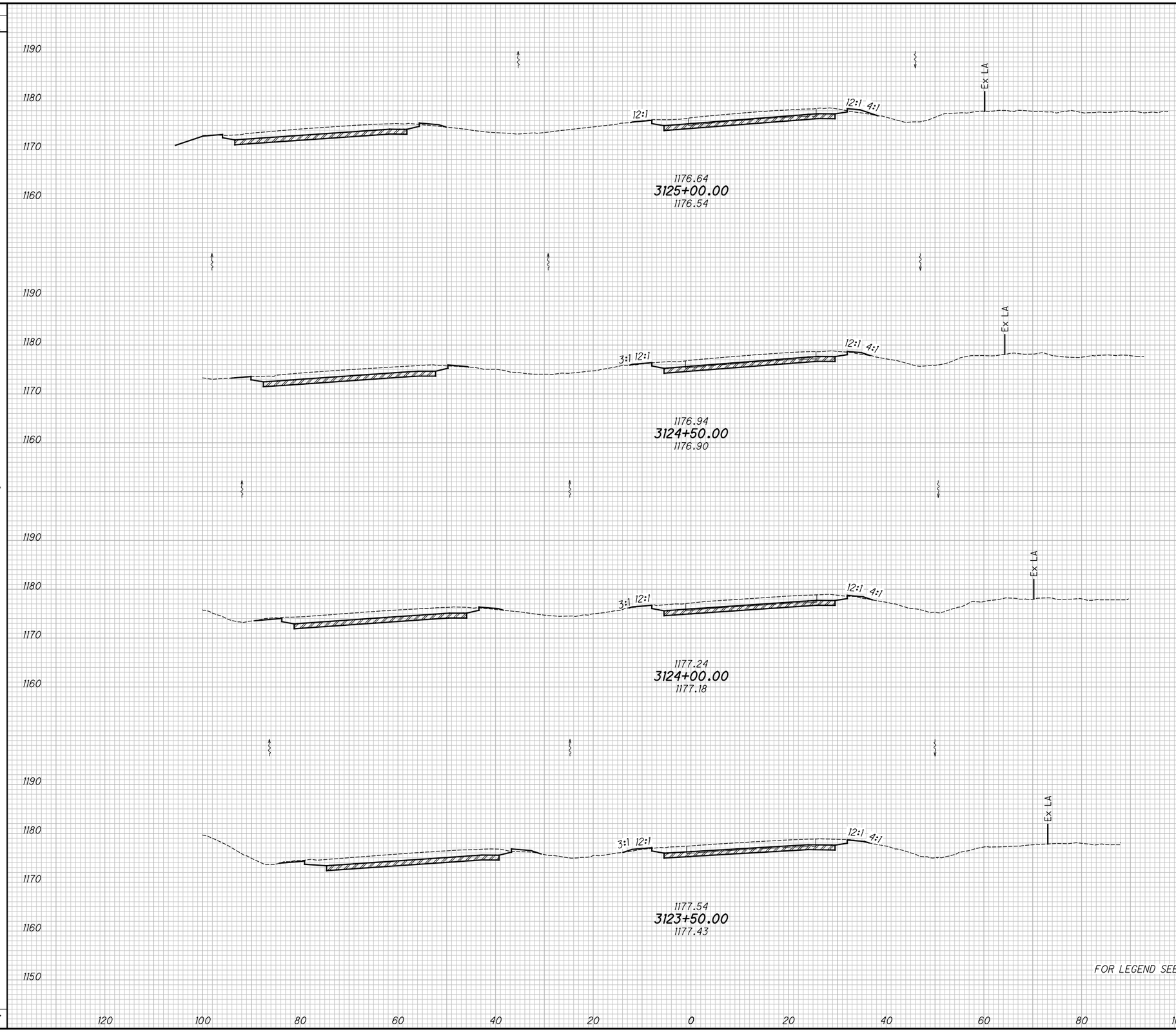
SEEDING END WIDTH	SEEDING SQ. YDS.
	117
21	
	111
19	
	108
20	
	111
20	
	447



FOR LEGEND SEE SHEET NO. 61

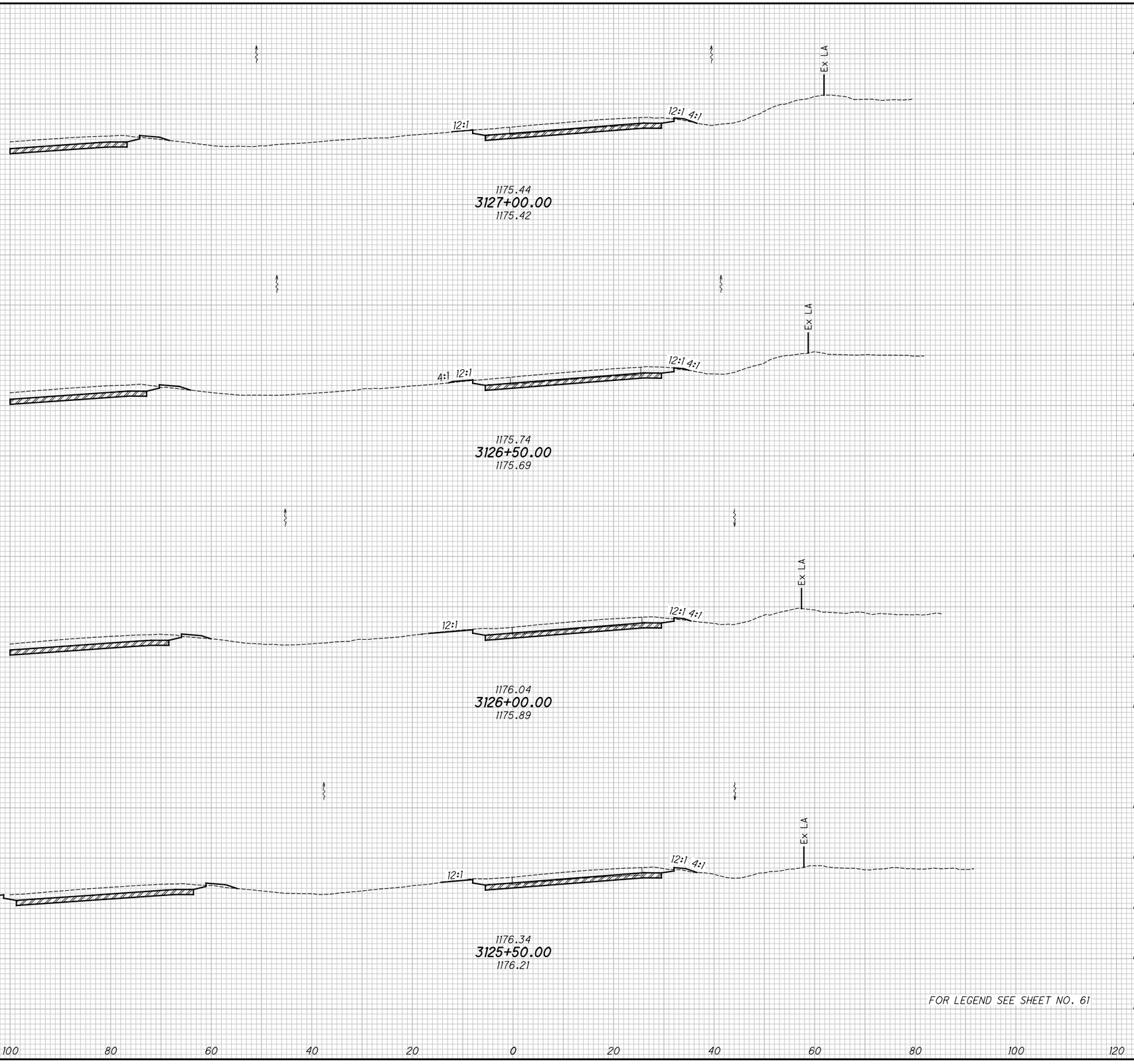
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		28	4
15	3		
		27	4
14	1		
		26	1
14	1		
		27	2
15	1		
		108	11

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3123+50.00 TO STA. 3125+00.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.
19	111
	103
18	
	108
21	
	117
21	
	439



FOR LEGEND SEE SHEET NO. 61

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		29	3
16	1		
		29	2
15	1		
		29	2
16	1		
		29	2
15	1		
		116	9

CALCULATED JTK
CHECKED PJD

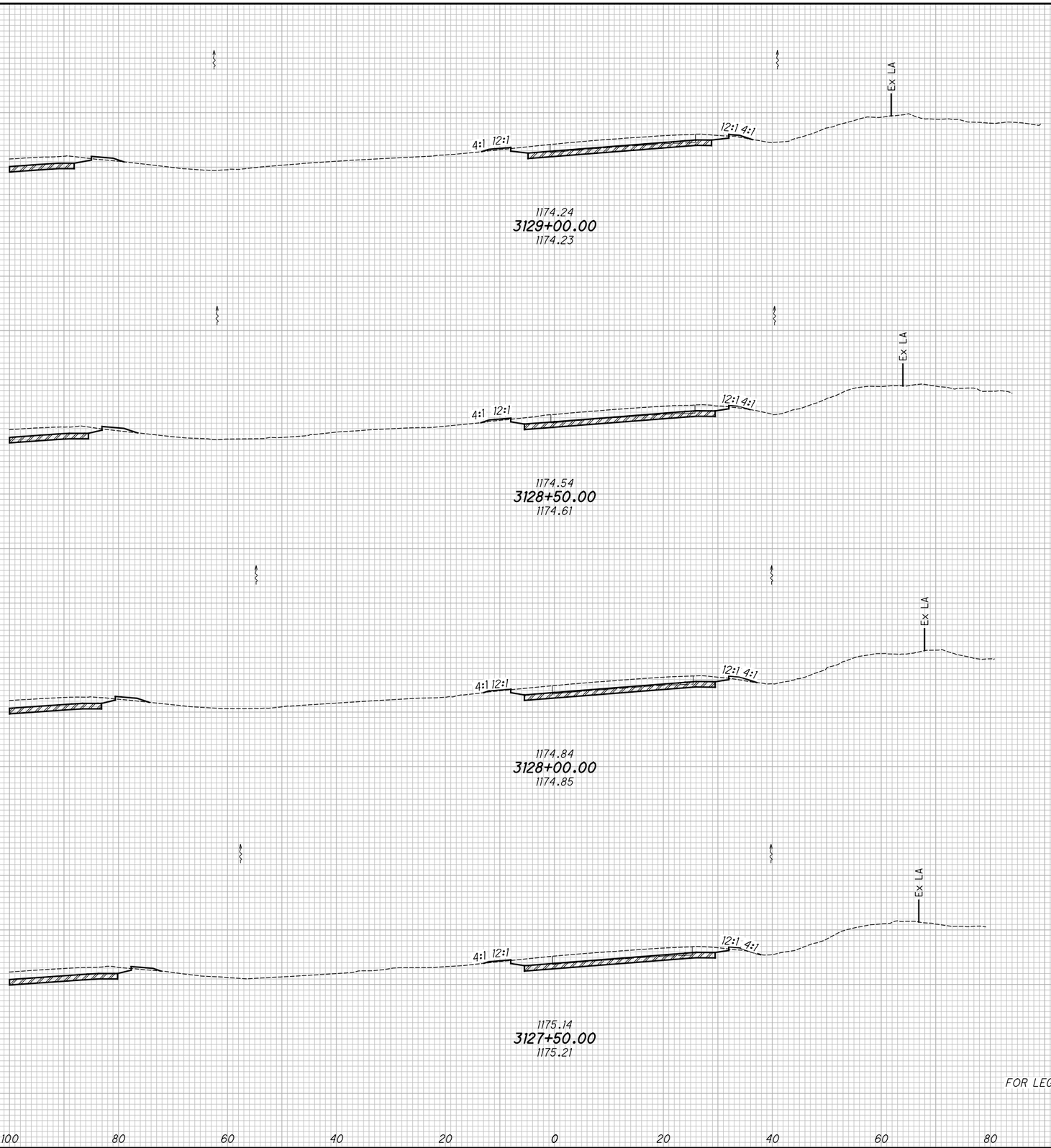
CROSS SECTIONS US 35 SOUTHBOUND
STA. 3125+50.00 TO STA. 3127+00.00

PRE-35-1.95

63
88

V:\1736\active\173620094\engineering\109078\Design\Roadway\Sheets\109078_XS003.dgn 10/25/2019 1:20:15 PM pdurham

SEEDING	
END WIDTH	SQ. YDS.
	111
20	
	108
19	
	108
20	
	114
21	
	441



FOR LEGEND SEE SHEET NO. 61

END AREA	
CUT	FILL
12	2
14	2
14	2
15	2

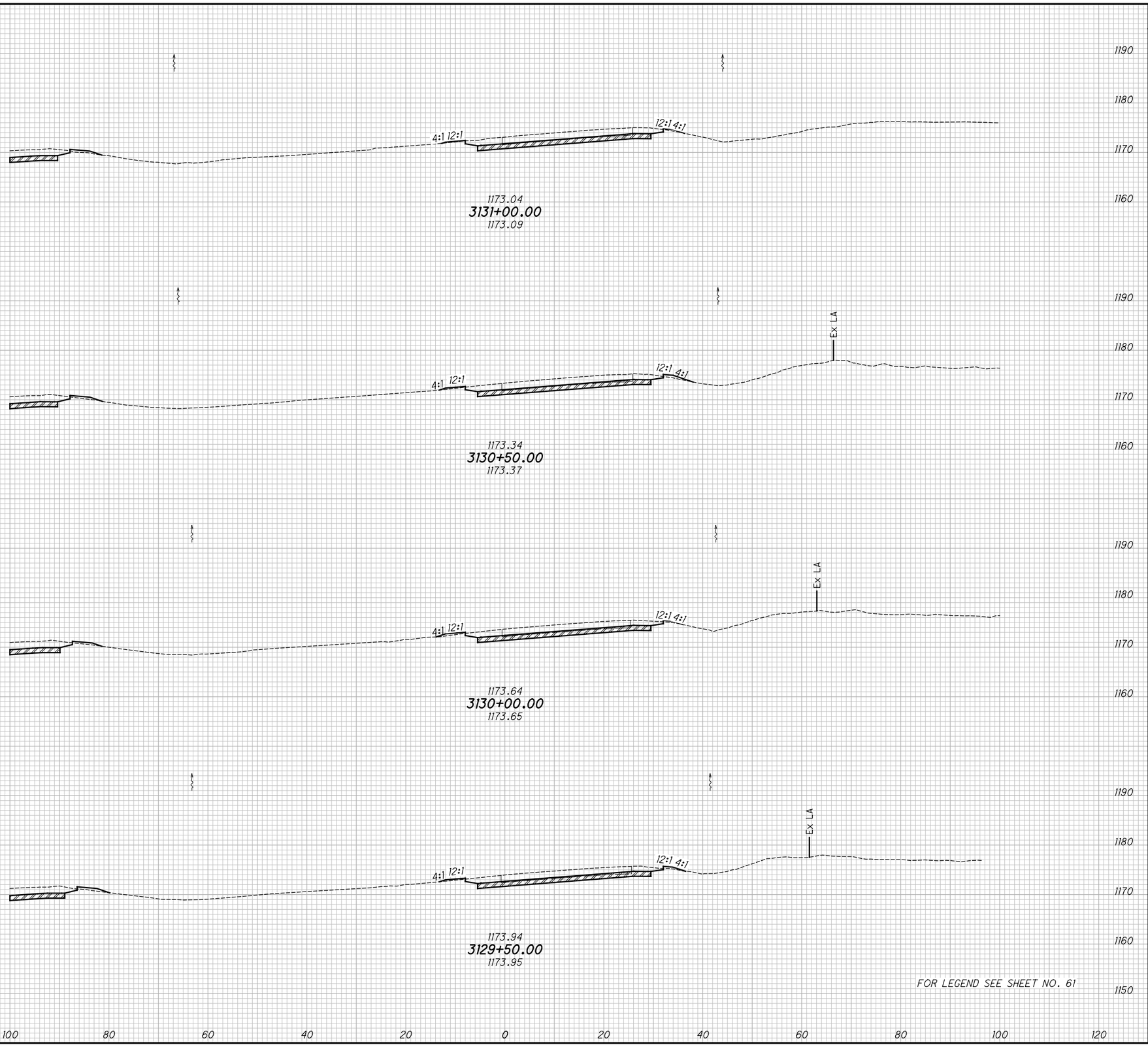
VOLUME	
CUT	FILL
23	4
24	4
26	4
27	4
100	16

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3127+50.00 TO STA. 3129+00.00

PRE-35-1.95

SEEDING	
END WIDTH	SQ. YDS.
	75
18	
	108
21	
	111
19	
	108
20	
	402



END AREA	
CUT	FILL
14	1
14	3
13	2
13	2

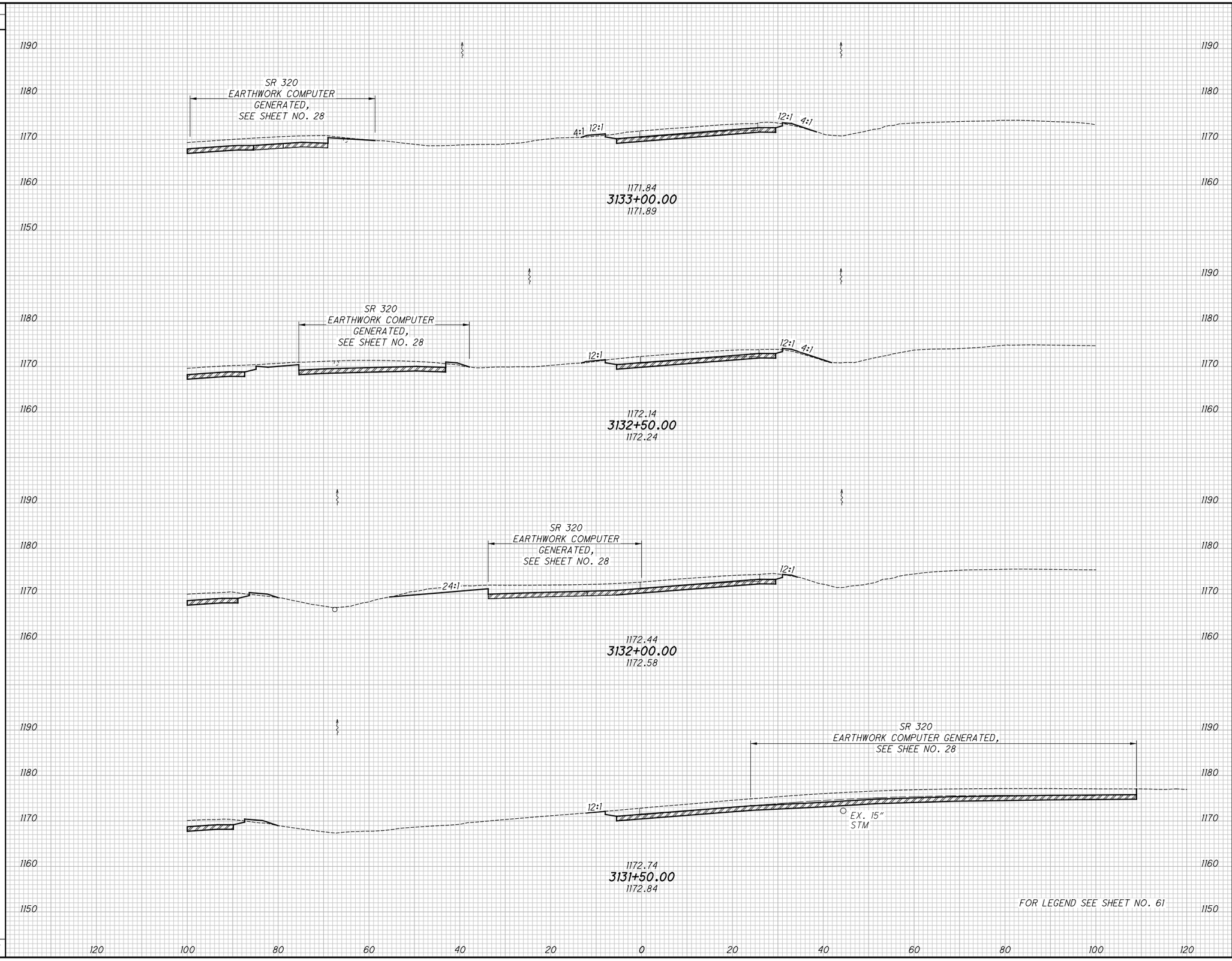
VOLUME	
CUT	FILL
21	1
26	4
25	5
24	4
96	14

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3129+50.00 TO STA. 3131+00.00

PRE-35-1.95

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	128			25	6
23		13	3		
	139			25	6
27		14	4		
	178			19	4
37		6	0		
	128			14	0
9		9	0		
	573			83	16



CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3131+50.00 TO STA. 3133+00.00

PRE-35-1.95

66
88

10/25/2019 1:20:16 PM pdurham
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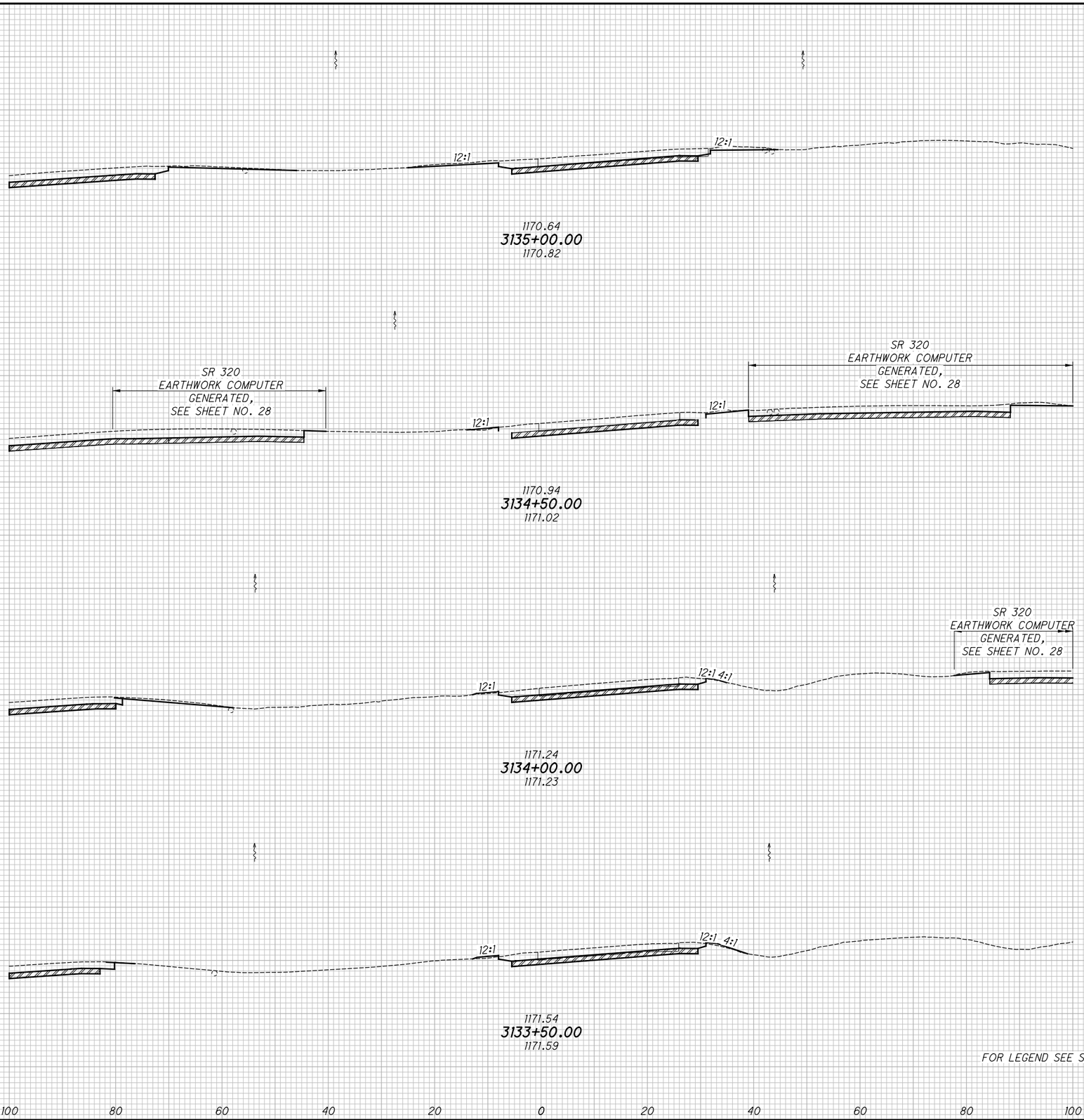
SEEDING END WIDTH	SEEDING SQ. YDS.
	167
40	
	211
36	
	153
19	
	117
23	
	648



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		32	2
23	0		
		38	1
18	1		
		29	2
13	1		
		25	4
14	3		
		124	9

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3133+50.00 TO STA. 3135+00.00

PRE-35-1.95

67
88

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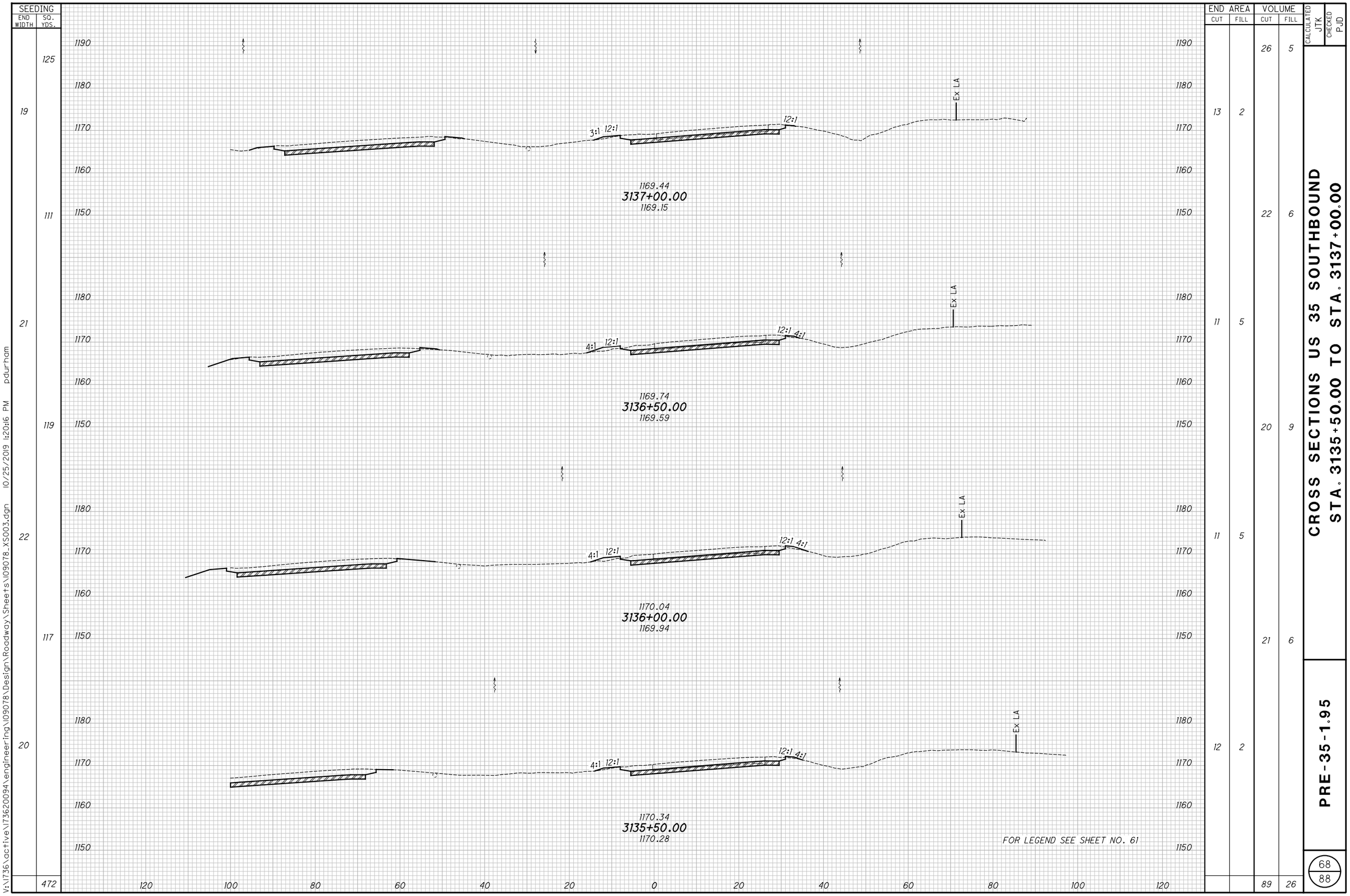
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	125			26	5
19		13	2		
	111			22	6
21		11	5		
	119			20	9
22		11	5		
	117			21	6
20		12	2		
	472			89	26



FOR LEGEND SEE SHEET NO. 61

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3135+50.00 TO STA. 3137+00.00

PRE-35-1.95

68
88

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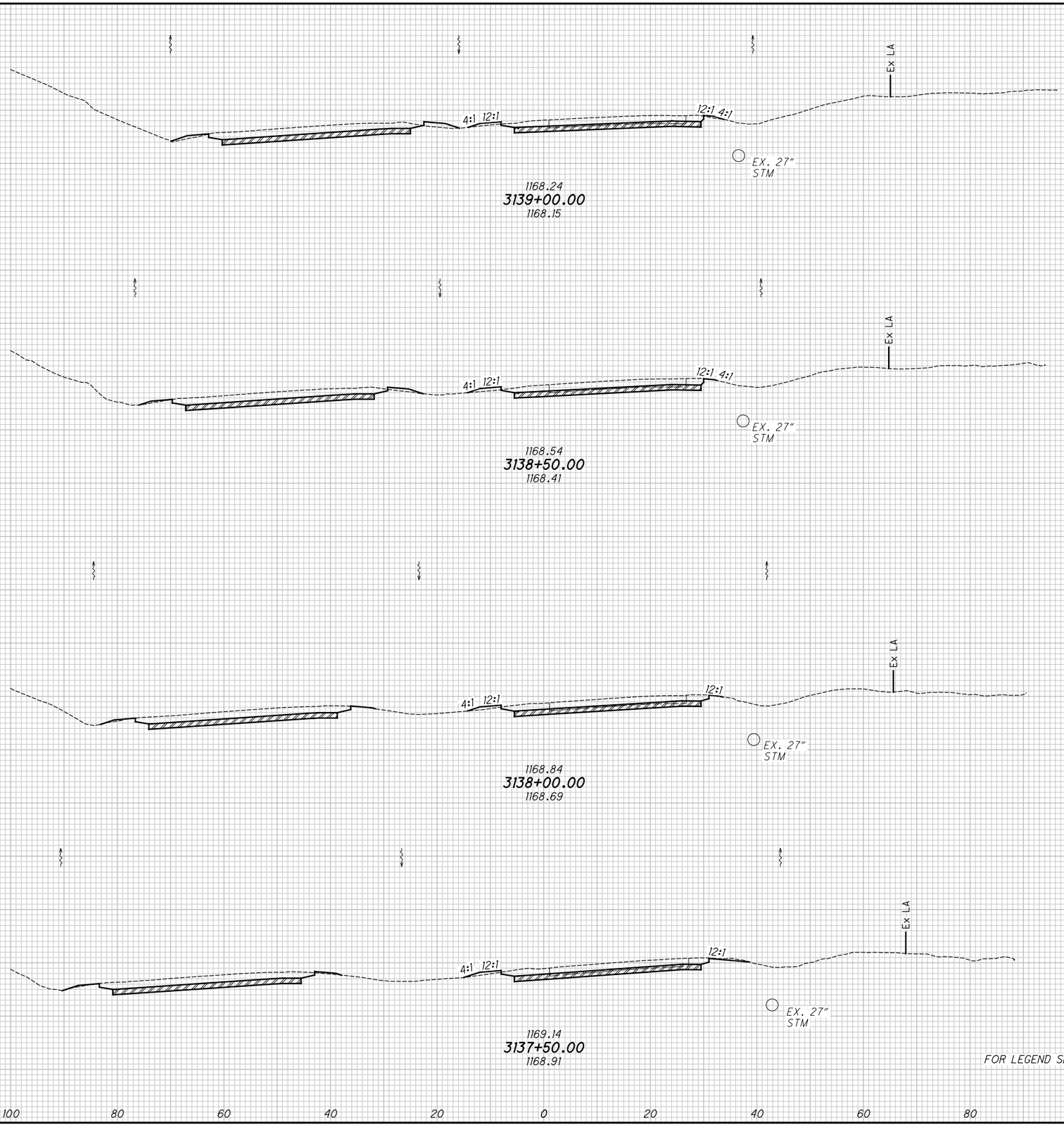
SEEDING END WIDTH	SEEDING SQ. YDS.
	97
20	
	108
19	
	106
19	
	125
26	
	436



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		24	4
12	3		
		22	6
12	3		
		23	6
13	3		
		26	6
15	3		
		95	22

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3137+50.00 TO STA. 3139+00.00

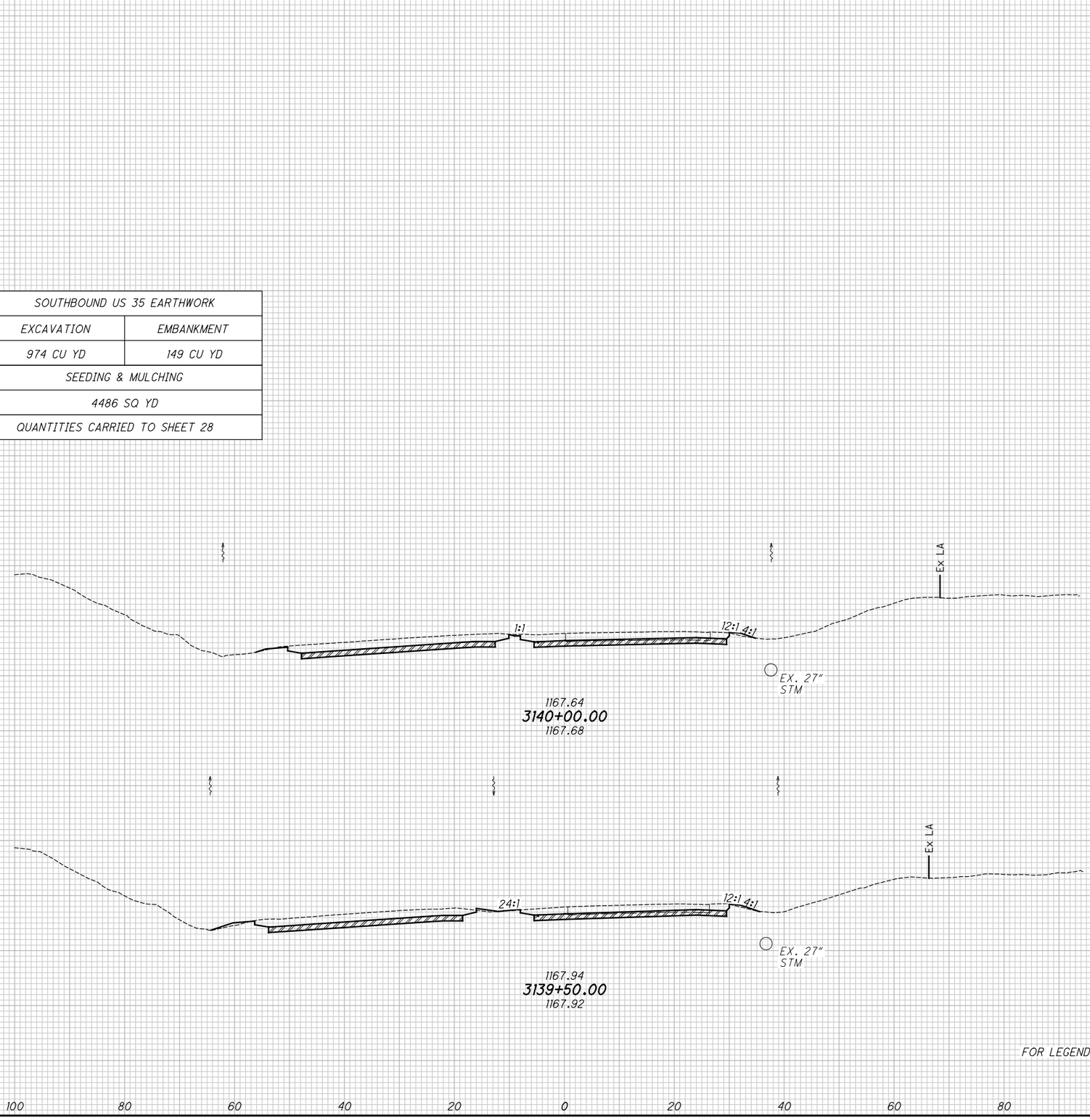
PRE-35-1.95

FOR LEGEND SEE SHEET NO. 61

SEEDING	
END WIDTH	SQ. YDS.
11	13
11	72
15	85

SOUTHBOUND US 35 EARTHWORK	
EXCAVATION	EMBANKMENT
974 CU YD	149 CU YD
SEEDING & MULCHING	
4486 SQ YD	
QUANTITIES CARRIED TO SHEET 28	

STA 3140+10.26
BACK ONLY



FOR LEGEND SEE SHEET NO. 61

END AREA	
CUT	FILL
14	1
14	1
14	1

VOLUME	
CUT	FILL
5	0
26	2
31	2

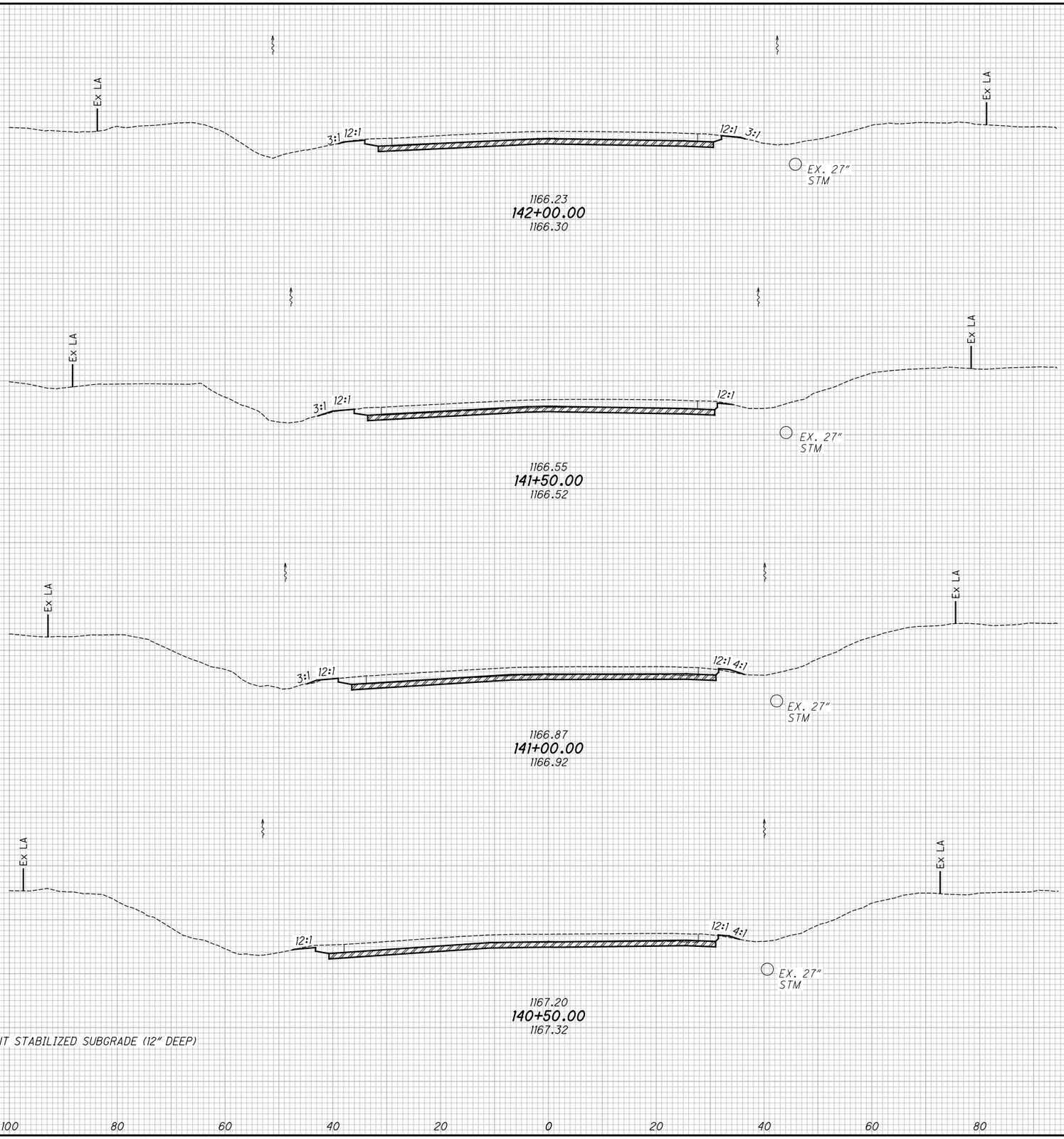
CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SOUTHBOUND
STA. 3139+50.00 TO STA. 3140+10.26

PRE-35-1.95

70
88

SEEDING END WIDTH	SEEDING SQ. YDS.
	117
19	
	108
20	
	114
21	
	108
18	
90	
18	
	537



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		24	0
12	0		
		22	1
12	1		
		21	3
11	2		
		22	3
13	1		
		22	2
13	1		
		111	9

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SURVEY
STA. 140+05.00 TO STA. 142+00.00

PRE-35-1.95

71
88

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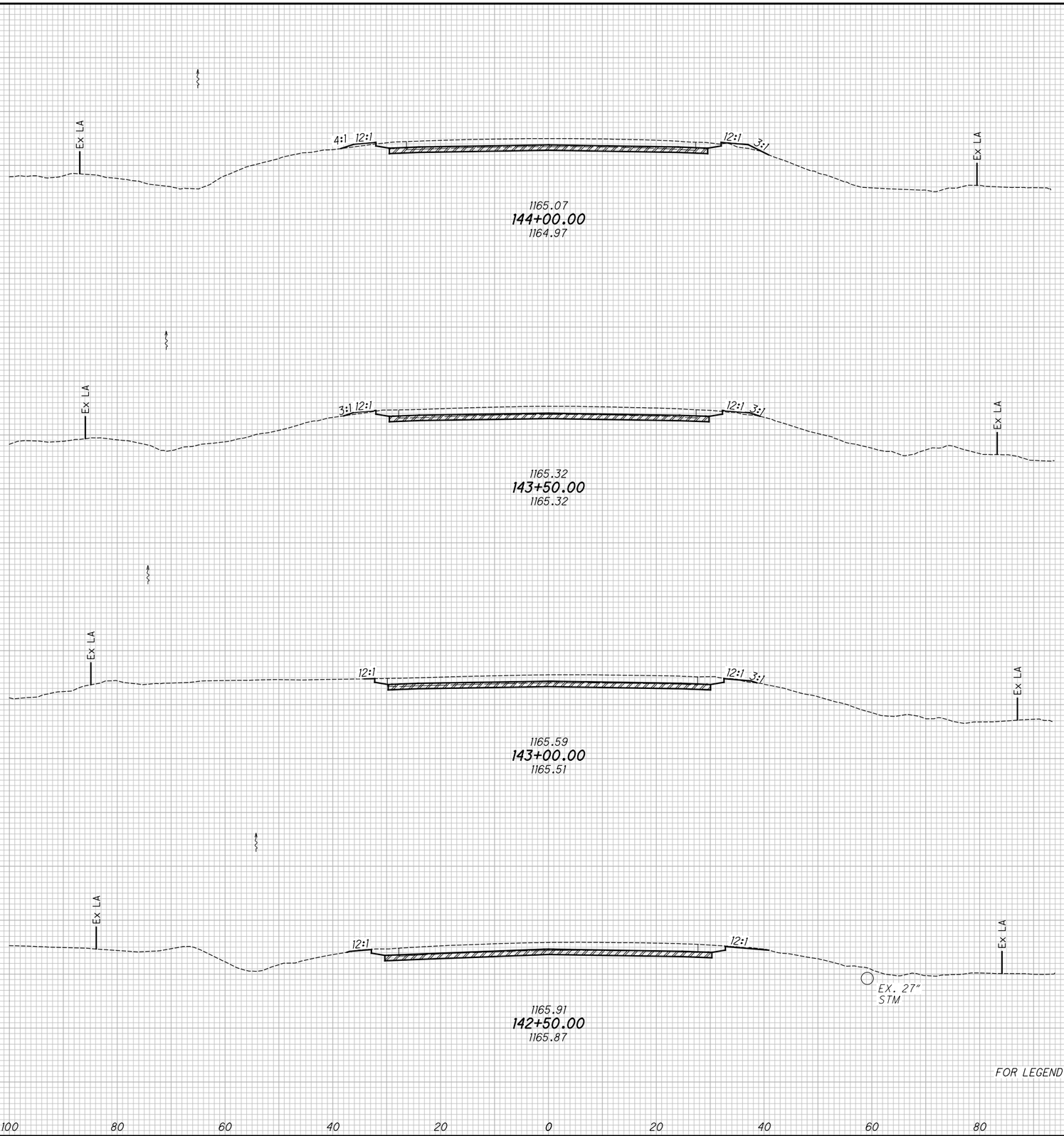
SEEDING END WIDTH	SEEDING SQ. YDS.
	144
26	
	136
23	
	114
18	
	114
23	
	508



FOR LEGEND SEE SHEET NO. 71

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		19	8
10	5		
		18	7
9	3		
		16	4
8	1		
		20	1
14	0		
		73	20

CALCULATED JTK
CHECKED PJD

CROSS SECTIONS US 35 SURVEY
STA. 142+50.00 TO STA. 144+00.00

PRE-35-1.95

72
88

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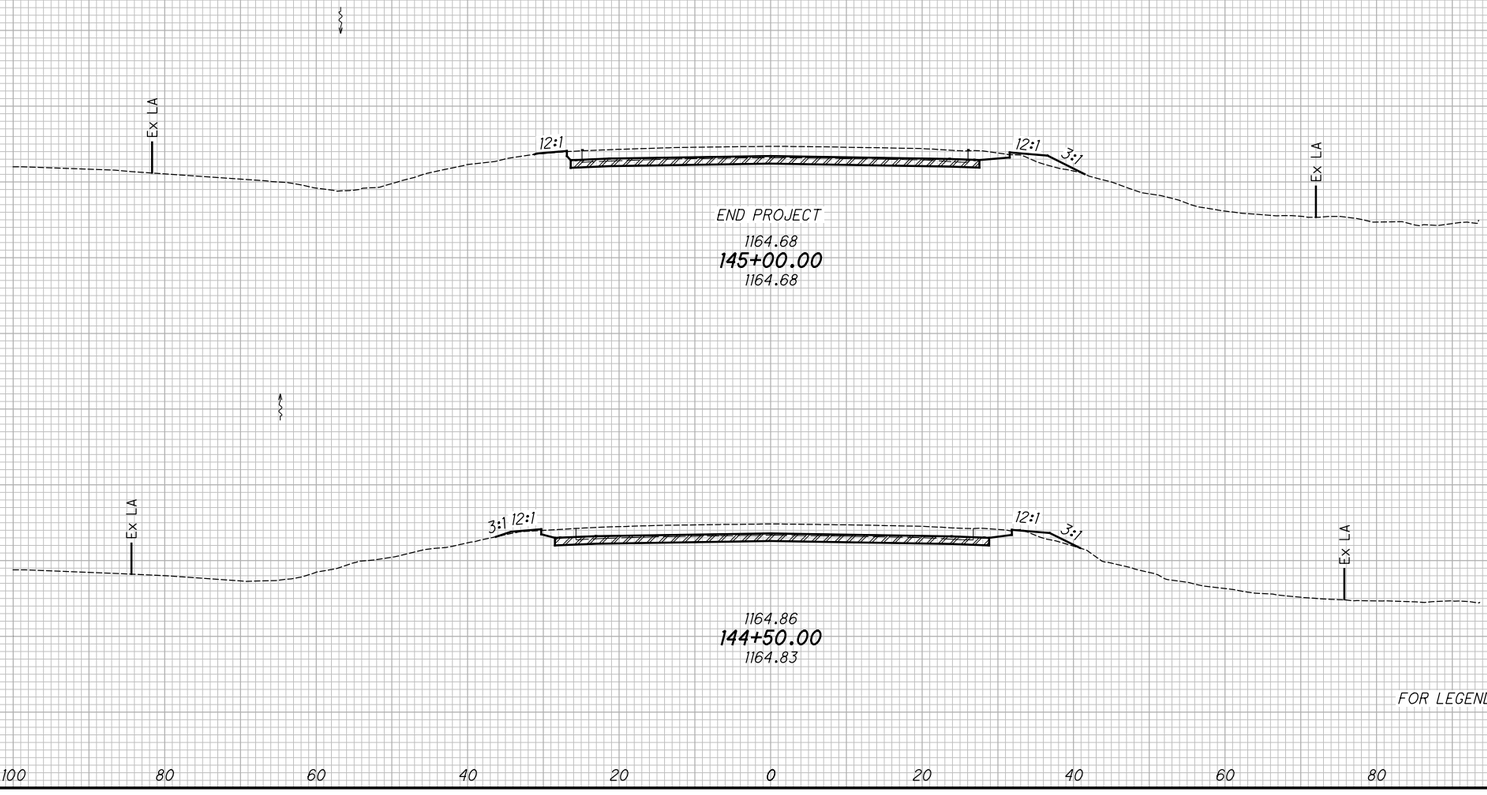
SEEDING	
END WIDTH	SQ. YDS.
25	142
26	
	142

US 35 SURVEY EARTHWORK	
EXCAVATION	EMBANKMENT
200 CU YD	38 CU YD
SEEDING & MULCHING	
1187 SQ YD	
QUANTITIES CARRIED TO SHEET 28	



END AREA	
CUT	FILL
7	6
10	4

VOLUME	
CUT	FILL
16	9
16	9

CALCULATED	CHECKED
JTK	PJD

CROSS SECTIONS US 35 SURVEY
STA. 144+50.00 TO STA. 145+00.00

PRE-35-1.95

73
88

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SUPERELEVATION TABLE

P.I STATION 2131+97.36 | Dc 3° 00'

LEFT SIDE					CENTERLINE 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	
1180.57		-0.38	-0.016	24.00	2117+66.11	1180.95						TS, NC
1180.49		-0.41	-0.017	24.00	2117+75.00	1180.90						
1180.25		-0.50	-0.021	24.00	2118+00.00	1180.75						
1180.00		-0.60	-0.025	24.00	2118+25.00	1180.60						
1179.79		-0.67	-0.028	24.00	2118+50.00	1180.46						
1179.54		-0.77	-0.032	24.00	2118+75.00	1180.31						
1179.30		-0.86	-0.036	24.00	2119+00.00	1180.16						
1179.05		-0.96	-0.040	24.00	2119+25.00	1180.01						
1178.84	280:1	-1.03	-0.043	24.00	2119+50.00	1179.87						
1178.59		-1.13	-0.047	24.00	2119+75.00	1179.72						
1178.35		-1.22	-0.051	24.00	2120+00.00	1179.57						
1178.12		-1.30	-0.054	24.00	2120+25.00	1179.42						
1177.89		-1.39	-0.058	24.00	2120+50.00	1179.28						
1177.63		-1.49	-0.062	24.00	2120+75.00	1179.12						
1177.36		-1.58	-0.066	24.00	2121+00.00	1178.94						
1177.18		-1.63	-0.068	24.00	2121+16.11	1178.81						SC, FS
1177.11		-1.63	-0.068	24.00	2121+25.00	1178.74						
1176.89		-1.63	-0.068	24.00	2121+50.00	1178.52						
1176.66		-1.63	-0.068	24.00	2121+75.00	1178.29						
1176.43		-1.63	-0.068	24.00	2122+00.00	1178.06						
1176.20		-1.63	-0.068	24.00	2122+25.00	1177.83						
1175.97		-1.63	-0.068	24.00	2122+50.00	1177.60						
1175.74		-1.63	-0.068	24.00	2122+75.00	1177.37						
1175.51		-1.63	-0.068	24.00	2123+00.00	1177.14						
1175.28		-1.63	-0.068	24.00	2123+25.00	1176.91						
1175.05		-1.63	-0.068	24.00	2123+50.00	1176.68						
1174.82		-1.63	-0.068	24.00	2123+75.00	1176.45						
1174.59		-1.63	-0.068	24.00	2124+00.00	1176.22						
1174.36		-1.63	-0.068	24.00	2124+25.00	1175.99						
1174.13		-1.63	-0.068	24.00	2124+50.00	1175.76						
1173.90		-1.63	-0.068	24.00	2124+75.00	1175.53						
1173.67		-1.63	-0.068	24.00	2125+00.00	1175.30						
1173.44		-1.63	-0.068	24.00	2125+25.00	1175.07						
1173.21		-1.63	-0.068	24.00	2125+50.00	1174.84						
1172.97		-1.63	-0.068	24.00	2125+75.00	1174.60						
1172.74		-1.63	-0.068	24.00	2126+00.00	1174.37						
1172.51		-1.63	-0.068	24.00	2126+25.00	1174.14						
1172.28		-1.63	-0.068	24.00	2126+50.00	1173.91						
1172.05		-1.63	-0.068	24.00	2126+75.00	1173.68						
1171.82		-1.63	-0.068	24.00	2127+00.00	1173.45						
1171.59		-1.63	-0.068	24.00	2127+25.00	1173.22						
1171.36		-1.63	-0.068	24.00	2127+50.00	1172.99						
1171.13		-1.63	-0.068	24.00	2127+75.00	1172.76						
1170.90		-1.63	-0.068	24.00	2128+00.00	1172.53						
1170.67		-1.63	-0.068	24.00	2128+25.00	1172.30						
1170.44		-1.63	-0.068	24.00	2128+50.00	1172.07						
1170.21		-1.63	-0.068	24.00	2128+75.00	1171.84						
1169.98		-1.63	-0.068	24.00	2129+00.00	1171.61						
1169.76		-1.63	-0.068	24.00	2129+25.00	1171.39						
1169.56		-1.63	-0.068	24.00	2129+50.00	1171.19						
1169.37		-1.63	-0.068	24.00	2129+75.00	1171.00						
1169.20		-1.63	-0.068	24.00	2130+00.00	1170.83						
1169.05		-1.63	-0.068	24.00	2130+25.00	1170.68						
1168.92		-1.63	-0.068	24.00	2130+50.00	1170.55						
1168.80		-1.63	-0.068	24.00	2130+75.00	1170.43						
1168.70		-1.63	-0.068	24.00	2131+00.00	1170.33						
1168.61		-1.63	-0.068	24.00	2131+25.00	1170.24						
1168.52		-1.63	-0.068	24.00	2131+50.00	1170.15						
1168.43		-1.63	-0.068	24.00	2131+75.00	1170.06						
1168.34		-1.63	-0.068	24.00	2132+00.00	1169.97						

SUPERELEVATION TABLE

P.I STATION 2131+97.36 | Dc 3° 00'

LEFT SIDE					CENTERLINE 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	
1168.25		-1.63	-0.068	24.00	2132+25.00	1169.88						
1168.16		-1.63	-0.068	24.00	2132+50.00	1169.79						
1168.07		-1.63	-0.068	24.00	2132+75.00	1169.70						
1167.98		-1.63	-0.068	24.00	2133+00.00	1169.61						
1167.89		-1.63	-0.068	24.00	2133+25.00	1169.52						
1167.80		-1.63	-0.068	24.00	2133+50.00	1169.43						
1167.71		-1.63	-0.068	24.00	2133+75.00	1169.34						
1167.62		-1.63	-0.068	24.00	2134+00.00	1169.25						
1167.53		-1.63	-0.068	24.00	2134+25.00	1169.16						
1167.44		-1.63	-0.068	24.00	2134+50.00	1169.07						
1167.35		-1.63	-0.068	24.00	2134+75.00	1168.98						
1167.26		-1.63	-0.068	24.00	2135+00.00	1168.89						
1167.17		-1.63	-0.068	24.00	2135+25.00	1168.80						
1167.08		-1.63	-0.068	24.00	2135+50.00	1168.71						
1166.99		-1.63	-0.068	24.00	2135+75.00	1168.62						
1166.90		-1.63	-0.068	24.00	2136+00.00	1168.53						
1166.81		-1.63	-0.068	24.00	2136+25.00	1168.44						
1166.72		-1.63	-0.068	24.00	2136+50.00	1168.35						
1166.63		-1.63	-0.068	24.00	2136+75.00	1168.26						
1166.54		-1.63	-0.068	24.00	2137+00.00	1168.17						
1166.45		-1.63	-0.068	24.00	2137+25.00	1168.08						
1166.36		-1.63	-0.068	24.00	2137+50.00	1167.99						
1166.27		-1.63	-0.068	24.00	2137+75.00	1167.90						
1166.18		-1.63	-0.068	24.00	2138+00.00	1167.81						
1166.09		-1.63	-0.068	24.00	2138+25.00	1167.72						
1166.00		-1.63	-0.068	24.00	2138+50.00	1167.63						
1165.91		-1.63	-0.068	24.00	2138+75.00	1167.54						
1165.82		-1.63	-0.068	24.00	2139+00.00	1167.45						
1165.72		-1.63	-0.068	24.00	2139+25.00	1167.35						
1165.61		-1.63	-0.068	24.00	2139+50.00	1167.24						
1165.48		-1.63	-0.068	24.00	2139+75.00	1167.11						
1165.42		-1.63	-0.068	24.00	2139+86.11	1167.05						CS,FS
1165.39		-1.58	-0.066	24.00	2140+00.00	1166.97						
1165.33		-1.49	-0.062	24.00	2140+25.00	1166.82						
1165.25		-1.42	-0.059	24.00	2140+50.00	1166.67						
1165.20		-1.32	-0.055	24.00	2140+75.00	1166.52						
1165.15		-1.22	-0.051	24.00	2141+00.00	1166.37						
1165.09		-1.13	-0.047	24.00	2141+25.00	1166.22						
1165.01		-1.06	-0.044	24.00	2141+50.00	1166.07						
1164.96	280:1	-0.96	-0.040	24.00	2141+75.00	1165.92						
1164.91		-0.86	-0.036	24.00	2142+00.00	1165.77						
1164.82		-0.77	-0.032	24.00	143+00.00	1165.59						
1164.78		-0.67	-0.028	24.00	143+25.00	1165.45						
1164.74		-0.58	-0.024	24.00	143+50.00	1165.32						
1164.69		-0.50	-0.021	24.00	143+75.00	1165.19						
1164.66		-0.41	-0.017	24.00	144+00.00	1165.07						
1164.67		-0.38	-0.016	24.00	144+05.57	1165.05						ST, NC

CALCULATED JTK | CHECKED PJD

NORTHBOUND US 35 SUPERELEVATION TABLE

PRE-35-1.95

SUPERELEVATION TABLE

P.I. STATION 3131+95.19 | Dc 4° 00'

LEFT SIDE					CENTERLINE 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	
					1119+69.31	1179.85	24.00	-0.016	-0.38	↑	1179.47	NC
					1119+75.00	1179.82	24.00	-0.015	-0.36		1179.46	
					1120+00.00	1179.69	24.00	-0.010	-0.24		1179.45	
					1120+25.00	1179.55	24.00	-0.005	-0.12		1179.43	
					1120+50.00	1179.39	24.00	0.000	0.00		1179.39	
					3120+51.36	1179.38	24.00	0.000	0.00		1179.38	TS
					3120+75.00	1179.22	24.00	0.005	0.12		1179.34	
					3121+00.00	1179.06	24.00	0.009	0.22		1179.28	
					3121+25.00	1178.89	24.00	0.014	0.34		1179.23	
					3121+50.00	1178.74	24.00	0.019	0.46		1179.20	
					3121+75.00	1178.59	24.00	0.024	0.58		1179.17	
					3122+00.00	1178.44	24.00	0.029	0.70	214:1	1179.14	
					3122+25.00	1178.29	24.00	0.034	0.82		1179.11	
					3122+50.00	1178.14	24.00	0.039	0.94		1179.08	
					3122+75.00	1177.99	24.00	0.044	1.06		1179.05	
					3123+00.00	1177.84	24.00	0.048	1.15		1178.99	
					3123+25.00	1177.69	24.00	0.053	1.27		1178.96	
					3123+50.00	1177.54	24.00	0.058	1.39		1178.93	
					3123+75.00	1177.39	24.00	0.063	1.51		1178.90	
					3124+00.00	1177.24	24.00	0.068	1.63		1178.87	
					3124+25.00	1177.09	24.00	0.073	1.75		1178.84	
					3124+50.00	1176.94	24.00	0.078	1.87		1178.81	
					3124+51.36	1176.93	24.00	0.078	1.87	↓	1178.80	SC,FS
					3124+75.00	1176.79	24.00	0.078	1.87		1178.66	
					3125+00.00	1176.64	24.00	0.078	1.87		1178.51	
					3125+25.00	1176.49	24.00	0.078	1.87		1178.36	
					3125+50.00	1176.34	24.00	0.078	1.87		1178.21	
					3125+75.00	1176.19	24.00	0.078	1.87		1178.06	
					3126+00.00	1176.04	24.00	0.078	1.87		1177.91	
					3126+25.00	1175.89	24.00	0.078	1.87		1177.76	
					3126+50.00	1175.74	24.00	0.078	1.87		1177.61	
					3126+75.00	1175.59	24.00	0.078	1.87		1177.46	
					3127+00.00	1175.44	24.00	0.078	1.87		1177.31	
					3127+25.00	1175.29	24.00	0.078	1.87		1177.16	
					3127+50.00	1175.14	24.00	0.078	1.87		1177.01	
					3127+75.00	1174.99	24.00	0.078	1.87		1176.86	
					3128+00.00	1174.84	24.00	0.078	1.87		1176.71	
					3128+25.00	1174.69	24.00	0.078	1.87		1176.56	
					3128+50.00	1174.54	24.00	0.078	1.87		1176.41	
					3128+75.00	1174.39	24.00	0.078	1.87		1176.26	
					3129+00.00	1174.24	24.00	0.078	1.87		1176.11	
					3129+25.00	1174.09	24.00	0.078	1.87		1175.96	
					3129+50.00	1173.94	24.00	0.078	1.87		1175.81	
					3129+75.00	1173.79	24.00	0.078	1.87		1175.66	
					3130+00.00	1173.64	24.00	0.078	1.87		1175.51	
					3130+25.00	1173.49	24.00	0.078	1.87		1175.36	
					3130+50.00	1173.34	24.00	0.078	1.87		1175.21	
					3130+75.00	1173.19	24.00	0.078	1.87		1175.06	
					3131+00.00	1173.04	24.00	0.078	1.87		1174.91	
					3131+25.00	1172.89	24.00	0.078	1.87		1174.76	
					3131+50.00	1172.74	24.00	0.078	1.87		1174.61	
					3131+75.00	1172.59	24.00	0.078	1.87		1174.46	
					3132+00.00	1172.44	24.00	0.078	1.87		1174.31	
					3132+25.00	1172.29	24.00	0.078	1.87		1174.16	
					3132+50.00	1172.14	24.00	0.078	1.87		1174.01	
					3132+75.00	1171.99	24.00	0.078	1.87		1173.86	
					3133+00.00	1171.84	24.00	0.078	1.87		1173.71	
					3133+25.00	1171.69	24.00	0.078	1.87		1173.56	
					3133+50.00	1171.54	24.00	0.078	1.87		1173.41	
					3133+75.00	1171.39	24.00	0.078	1.87		1173.26	
					3134+00.00	1171.24	24.00	0.078	1.87		1173.11	
					3134+25.00	1171.09	24.00	0.078	1.87		1172.96	

SUPERELEVATION TABLE

P.I. STATION 3131+95.19 | Dc 4° 00'

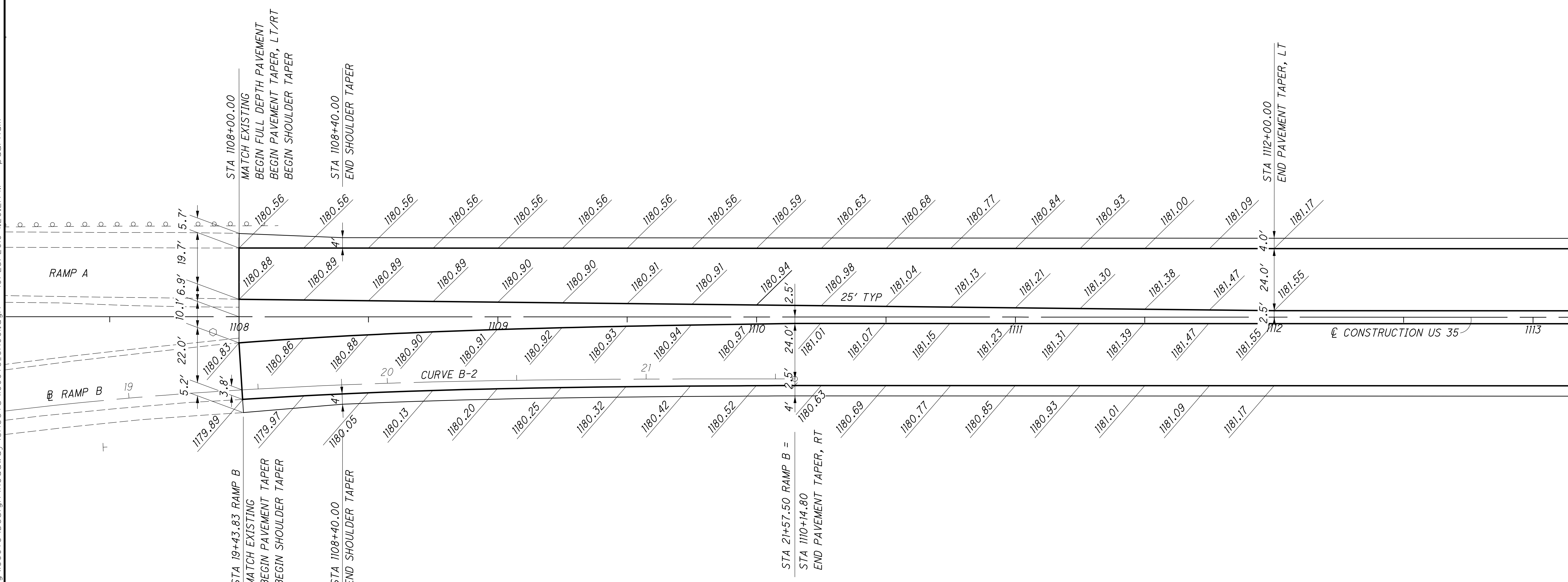
LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
					3134+50.00	1170.94	24.00	0.078	1.87		1172.81	
					3134+75.00	1170.79	24.00	0.078	1.87		1172.66	
					3135+00.00	1170.64	24.00	0.078	1.87		1172.51	
					3135+25.00	1170.49	24.00	0.078	1.87		1172.36	
					3135+50.00	1170.34	24.00	0.078	1.87		1172.21	
					3135+75.00	1170.19	24.00	0.078	1.87		1172.06	
					3136+00.00	1170.04	24.00	0.078	1.87		1171.91	
					3136+25.00	1169.89	24.00	0.078	1.87		1171.76	
					3136+50.00	1169.74	24.00	0.078	1.87		1171.61	
					3136+75.00	1169.59	24.00	0.078	1.87		1171.46	
					3137+00.00	1169.44	24.00	0.078	1.87		1171.31	
					3137+16.36	1169.34	24.00	0.078	1.87	↑	1171.21	CS,FS
					3137+25.00	1169.29	24.00	0.076	1.82		1171.11	
					3137+50.00	1169.14	24.00	0.071	1.70		1170.84	
					3137+75.00	1168.99	24.00	0.067	1.61		1170.60	
					3138+00.00	1168.84	24.00	0.062	1.49		1170.33	
					3138+25.00	1168.69	24.00	0.057	1.37		1170.06	
					3138+50.00	1168.54	24.00	0.052	1.25		1169.79	
					3138+75.00	1168.39	24.00	0.047	1.13		1169.52	
					3139+00.00	1168.24	24.00	0.042	1.01		1169.25	
					3139+25.00	1168.09	24.00	0.037	0.89		1168.98	
					3139+50.00	1167.94	24.00	0.032	0.77		1168.71	
					3139+75.00	1167.79	24.00	0.028	0.67	214:1	1168.46	
					3140+00.00	1167.64	24.00	0.023	0.55		1168.19	
					3140+25.00	1167.49	24.00	0.018	0.43		1167.92	
					3140+50.00	1167.33	24.00	0.013	0.31		1167.64	
					3140+75.00	1167.17	24.00	0.008	0.19		1167.36	
					3141+00.00	1167.00	24.00	0.003	0.07		1167.07	
					3141+16.36	1166.88	24.00	0.000	0.00		1166.88	ST
					141+25.00	1166.78	24.00	-0.003	-0.07		1166.71	
					141+50.00	1166.60	24.00	-0.007	-0.17		1166.43	
					141+75.00	1166.42	24.00	-0.012	-0.29		1166.13	
					141+93.90	1166.28	24.00	-0.016	-0.38	↓	1165.90	NC

CALCULATED JTK | CHECKED PJD

SOUTHBOUND US 35 SUPERELEVATION TABLE

PRE-35-1.95

CURVE B-2
P.I. Sta. 14+24.91
Δ= 83° 10′ 00″ (RT)
Dc = 06° 00′ 00″
R = 954.93′
Ls1 = 300.00′
Ls2 = 400.00′
θs1 = 11° 15′ 00″
θs2 = 12° 00′ 00″
LT1 = 180.46′
LT2 = 267.28′
ST1 = 120.43′
ST2 = 133.89′
Lc = 998.61′
Ts = 966.02′
E = 329.83′
eMax = 0.083
CS Sta. = 4+58.89
SC Sta. = 7+58.89
CS Sta. = 17+57.50
ST Sta. = 21+57.50



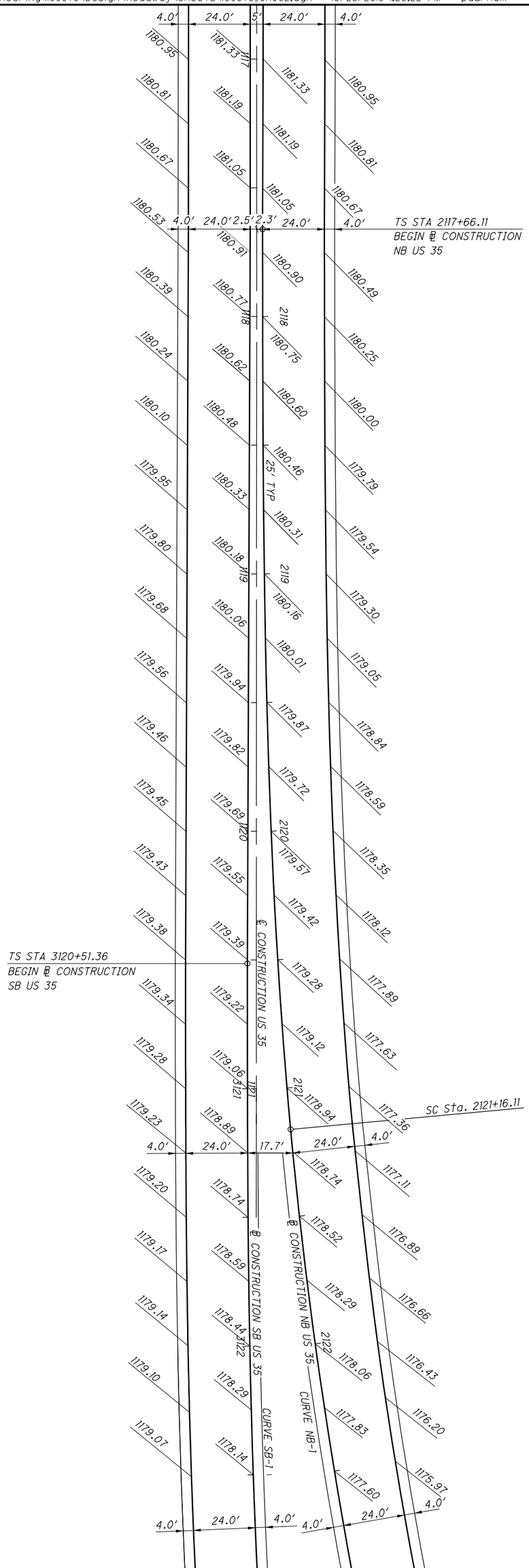
N
HORIZONTAL SCALE IN FEET
CALCULATED JTK
CHECKED PJD

INTERCHANGE DETAILS SHEET
RAMP A AND RAMP B

PRE-35-1.95

CURVE NB-1
P.I. Sta. 2131+97.36
Δ = 66° 36' 00" (LT)
Dc = 03° 00' 00"
R = 1,909.86'
Ls = 350.00'
θs = 5° 15' 00"
LT = 233.44'
ST = 116.76'
x = 349.71'
y = 10.68'
k = 174.95'
p = 2.67'
Δc = 56° 08' 00" (LT)
Lc = 1,870.00'
Ts = 1,431.25'
E = 378.38'
eMax = -0.068
TS = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11

CURVE SB-1
P.I. Sta. 3131+95.19
Δ = 66° 36' 01" (LT)
Dc = 04° 00' 00"
R = 1,432.39'
Ls = 400.00'
θs = 8° 00' 00"
LT = 266.94'
ST = 133.58'
x = 399.22'
y = 18.59'
k = 199.87'
p = 4.65'
Δc = 50° 36' 01" (LT)
Lc = 1,265.00'
Ts = 1,143.83'
E = 286.96'
eMax = 0.078
TS = 3120+51.36
SC = 3124+51.36
CS = 3137+16.36
ST = 3141+16.36



PRE-35-1.95

INTERCHANGE DETAILS SHEET
NORTHBOUND AND SOUTHBOUND LANES

CALCULATED JTK
CHECKED PJD

0 10 20 40
HORIZONTAL SCALE IN FEET

N

C-1
STA 3130+89.62, 94.00' RT
R=70.00', L=31.27'
Δ=25°35'43"

C-2
STA 3131+02.00, 67.00' RT
R=40.00', L=36.95'
Δ=52°55'22"

C-3
STA 3130+73.98, 73.01' RT
R=70.00', L=44.04'
Δ=36°02'46"

C-4
STA 3127+17.43, 41.32' LT
R=465.44', L=68.09'
Δ=08°22'54"

C-5
STA 3133+71.86, 143.19' RT
R=230.00', L=27.29'
Δ=06°47'50"

C-6
STA 3133+71.86, 143.19' RT
R=230.00', L=205.83'
Δ=51°16'25"

C-7
STA 2132+18.33, 5.00' RT
R=5.00', L=12.50'
Δ=143°16'34"

C-8
STA 3133+79.61, 1.42' RT
R=88.00', L=128.82'
Δ=83°52'28"

C-9
STA 3133+79.61, 1.42' RT
R=88.00', L=59.77'
Δ=38°54'56"

C-10
STA 2131+52.58, 93.29' LT
R=349.89', L=73.64'
Δ=12°03'30"

C-11
STA 3135+13.66, 69.00' RT
R=45.00', L=48.02'
Δ=61°08'20"

CURVE NB-1
P.I. Sta. 131+97.36
Δ= 66° 36' 00" (LT)
Dc = 03° 00' 00"
R = 1,909.86'
Ls = 350.00'
θs = 5° 15' 00"
LT = 233.44'
ST = 116.76'
x = 349.71'
y = 10.68'
k = 174.95'
p = 2.67'
Δc = 56° 06' 00" (LT)
Lc = 1,870.00'
Ts = 1,431.25'
E = 378.38'
eMax = -0.068
ST = 2117+66.11
SC = 2121+16.11
CS = 2139+86.11
ST = 2143+36.11

CURVE SB-1
P.I. Sta. 131+95.19
Δ= 66° 36' 01" (LT)
Dc = 04° 00' 00"
R = 1,432.39'
Ls = 400.00'
θs = 8° 00' 00"
LT = 266.94'
ST = 133.58'
x = 399.22'
y = 18.59'
k = 199.87'
p = 4.65'
Δc = 50° 36' 01" (LT)
Lc = 1,265.00'
Ts = 1,143.83'
E = 286.96'
eMax = 0.078
ST = 3120+51.36
SC = 3124+51.36
CS = 3137+16.36
ST = 3141+16.36

CALCULATED JTK
CHECKED PJD

HORIZONTAL SCALE IN FEET
0 10 20 40

INTERSECTION DETAILS SHEET
US 35 AND SR 320

PRE-35-1.95

78
88

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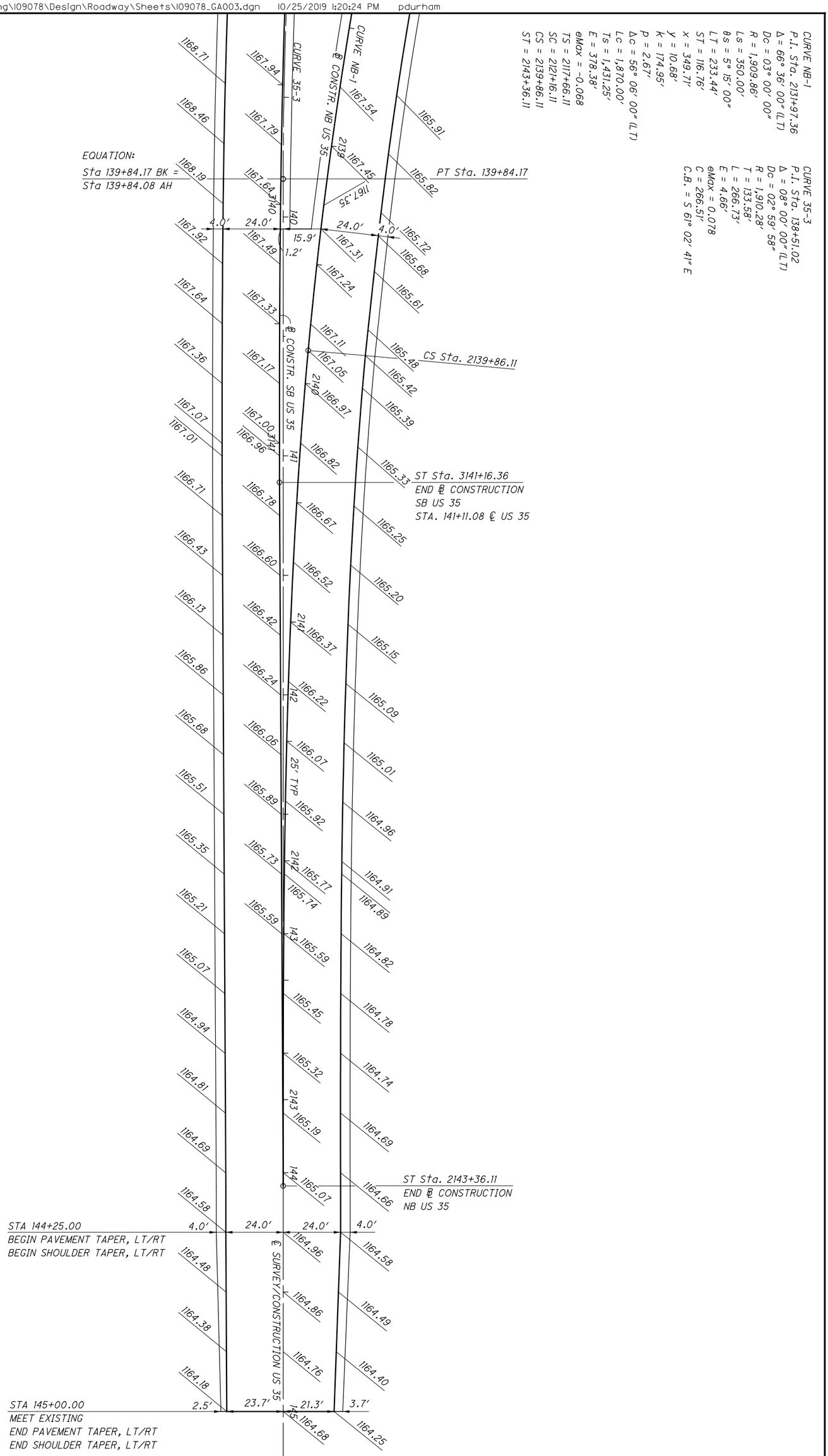


88 / 79	PRE-35-1.95	INTERCHANGE DETAILS SHEET NORTHBOUND AND SOUTHBOUND LANES	CALCULATED JTK CHECKED PJD	0 10 20 40 HORIZONTAL SCALE IN FEET

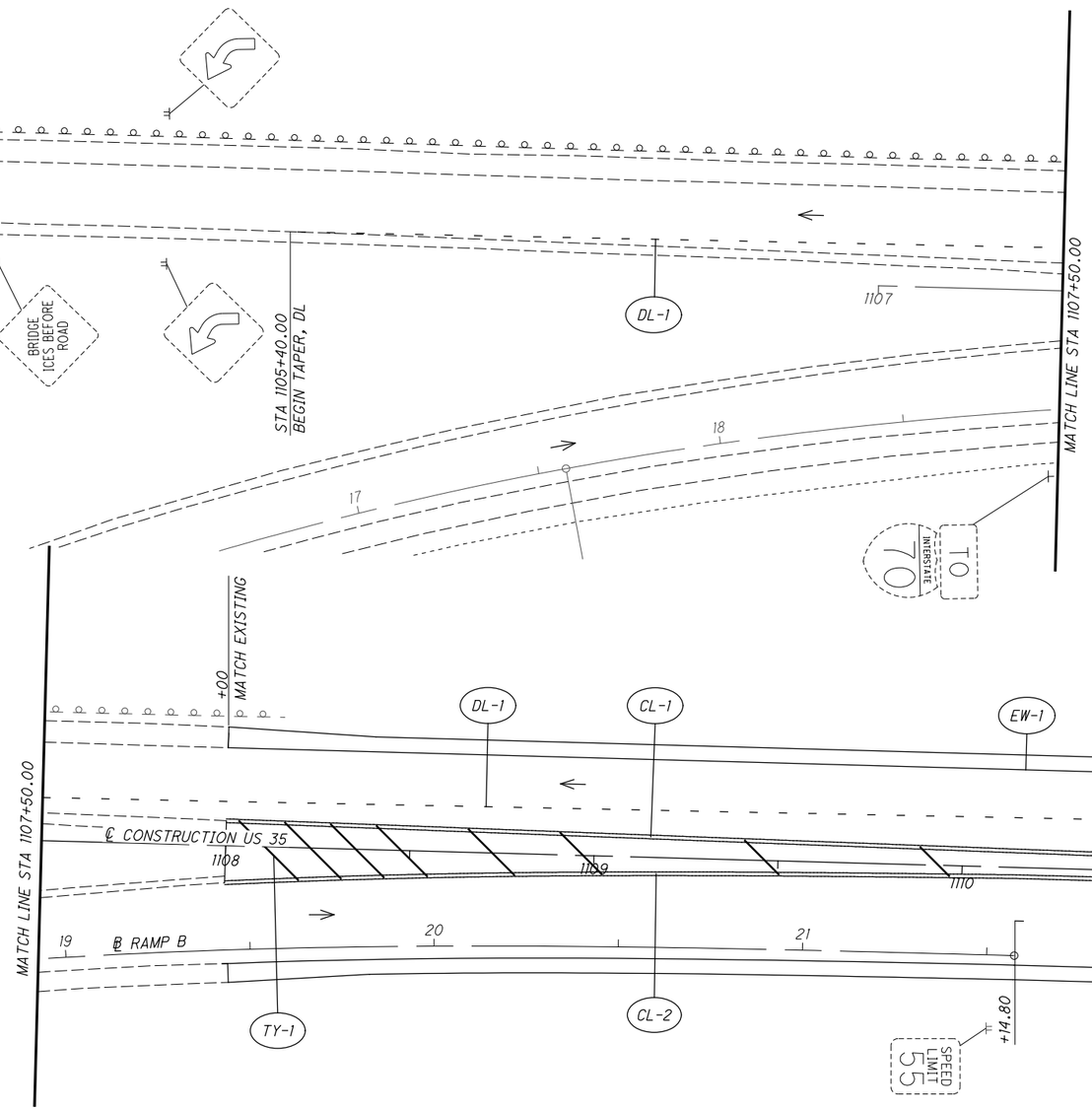
TRAFFIC CONTROL QUANTITIES

CALCULATED PJD | CHECKED SNS

REFERENCE NO.	SHEET NO.	LOCATION	STATION FROM	STATION TO	SIDE	CODE	SIZE (INCHES)	621 * RPM,YELLOW/YELLOW EACH	621 * RPM,WHITE/RED EACH	621 * RPM, ONE-WAY WHITE EACH	630 GROUND MOUNTED SUPPORT, NO. 3 POST FOOT	630 SIGN POST REFLECTOR EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	644 EDGE LINE, 6" (WHITE) MILE	644 EDGE LINE, 6" (YELLOW) MILE	644 LANE LINE, 6" MILE	644 CENTERLINE, DOUBLE CENTER MILE	644 STOP LINE FOOT	644 TRANSVERSE/DIAGONAL LINE (YELLOW) FOOT	644 LANE REDUCTION ARROW EACH	644 DOTTED LINE, 6" FOOT
EW-1	81-88	US 35	1108+00.00	145+00.00	LT				6	10					0.682							
EW-2	81-88	US 35	1108+00.00	145+00.00	RT				1	10					0.707							
LL-1	82-88	US 35 NB	1115+40.00	144+25.00	LT				36								0.534				1	
DL-1	81,82	US 35	1105+40.00	1115+40.00	LT																1	1000
CL-1	81-83	US 35	1108+00.00	1121+25.00	LT			17										0.251				
TY-1	81-83	US 35	1108+00.00	1121+25.00	LT/RT															428		
LL-2	81-87	US 35 SB	1110+14.80	141+00.00	RT				40								0.588				1	
CL-2	81-83	US 35	1108+00.00	1121+25.00	RT			17										0.251				
EY-1	83-87	US 35 NB	2121+23.98	2139+36.81	BL											0.343						
EY-2	83-87	US 35 SB	3121+25.02	3140+10.26	BL											0.357						
EW-3	85	SR 320	2132+18.34	3131+33.69	RT/RT										0.045							
EY-3	85,86	SR 320	2133+27.89	3131+48.93	RT/RT											0.062						
EW-4	86	SR 320	2133+82.17	3133+80.88	RT/RT					16					0.052							
EY-4	86	SR 320	2133+27.89	3133+73.66	RT/RT											0.054						
ST-1	86	SR 320	3134+58.22	3134+75.52	RT														20			
DL-2	87,88	US 35	141+00.00	150+66.00	RT																1	966
CL-3	87,88	US 35 NB	140+05.00	144+05.00	LT			5										0.076				
CL-4	87,88	US 35 SB	140+05.00	145+00.00	CL			8										0.094				
TY-2	87	US 35	140+05.00	144+50.57	LT/CL															140		
S-1	85	US 35 SB	3131+90.00		RT	M1-5-30	30 x 24				14.8 / 14.9		1	2								
						M6-1R-21	21 x 15						1									
S-2	85	US 35 SB	3131+90.00		RT	M1-1-24	24 x 24				15.0 / 15.1		1	2								
						M5-1R-21	21 x 15						1									
S-3	86	SR 320	3134+50.00		RT	R1-1-36	36 x 36				13.0 / 13.0	2	1	2								
						R5-1-36	36 x 36					2	1									
S-4	86		2134+06.00		RT	R1-2-30	30 x 36				14.0	1	1	1								
S-5	86	SR 320	2134+75.00		RT	M3-4-24	24 x 12				14.0		1	2								
						M1-1-24	24 x 24						1									
						M6-1-21	21 x 15						1									
SUBTOTAL								47	83	36	113.8	5	10	9	1.486	0.816	1.122	0.672	20	568	4	1966
TOTALS CARRIED TO GENERAL SUMMARY								166			113.8	5	10	9	2.31		1.13	0.68	20	568	4	1966

* NOTE: INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11

PRE-35-1.95



PAVEMENT MARKING LEGEND

CL — CENTER LINE, DOUBLE CENTER	ST — STOP LINE
EW — EDGE LINE (WHITE), 6″	TY — TRANSVERSE/DIAGONAL LINE (YELLOW)
EY — EDGE LINE (YELLOW), 6″	→ TRAFFIC FLOW
LL — LANE LINE, 6″	LANE REDUCTION ARROW
DL — DOTTED LINE (WHITE), 6″	

NOTE:
ALL PAVEMENT MARKINGS ARE ITEM 644

SIGNING LEGEND

EXISTING SIGN TO REMAIN

SIGN TO BE REMOVED AND REPLACED

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED P.JD
CHECKED SNS

TRAFFIC CONTROL PLAN SHEET
US 35 STA 1108+00.00 TO STA 1113+00.00

PRE-35-1.95

81
88

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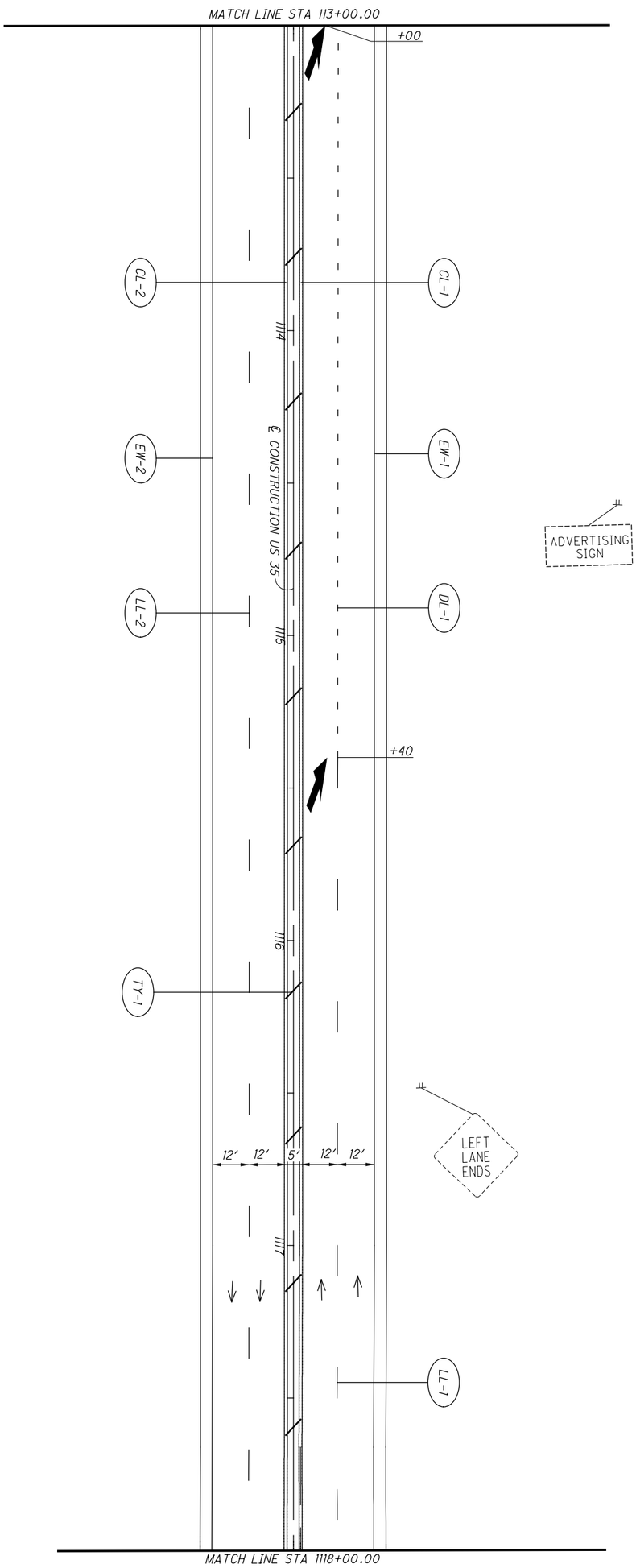

FOR LEGEND SEE SHEET NO. 81

82/88	PRE-35-1.95	TRAFFIC CONTROL PLAN SHEET US 35 STA 1113+00.00 TO STA 1118+00.00	CALCULATED PJD CHECKED SNS	0 10 20 40 HORIZONTAL SCALE IN FEET

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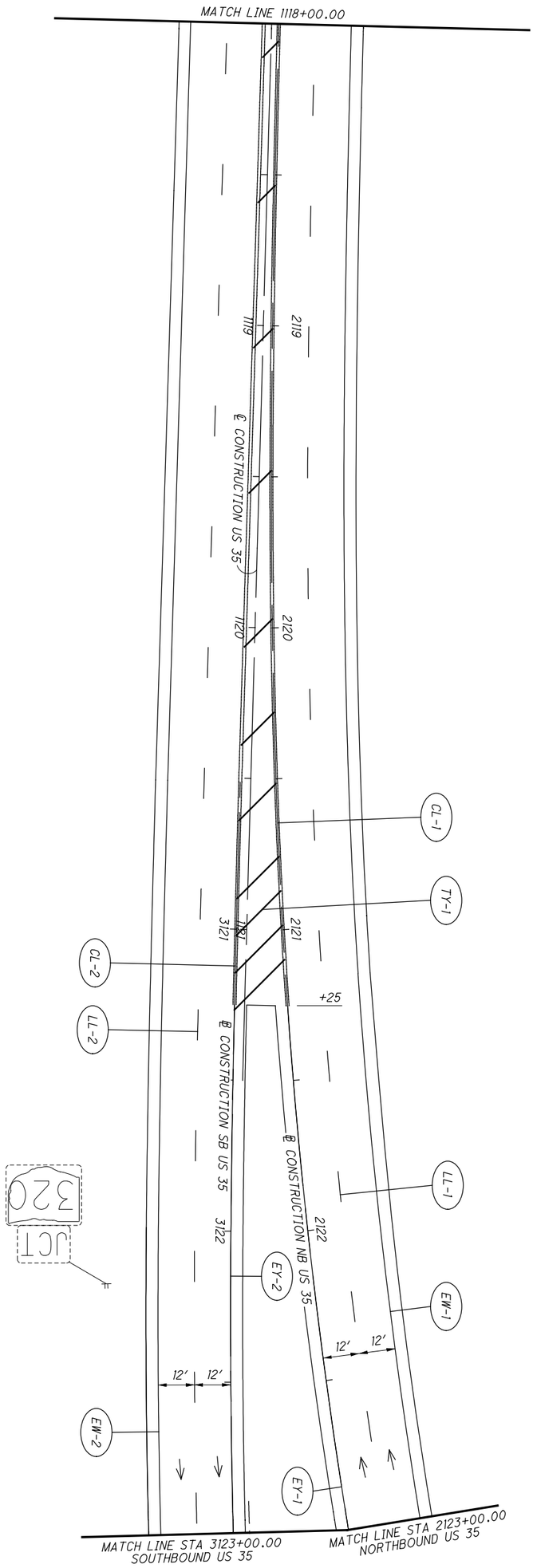

FOR LEGEND SEE SHEET NO. 81

83/88	PRE-35-1.95	TRAFFIC CONTROL PLAN SHEET US 35 STA 1118+00.00 TO STA 123+00.00	CALCULATED PJD CHECKED SNS	0 10 20 40 HORIZONTAL SCALE IN FEET

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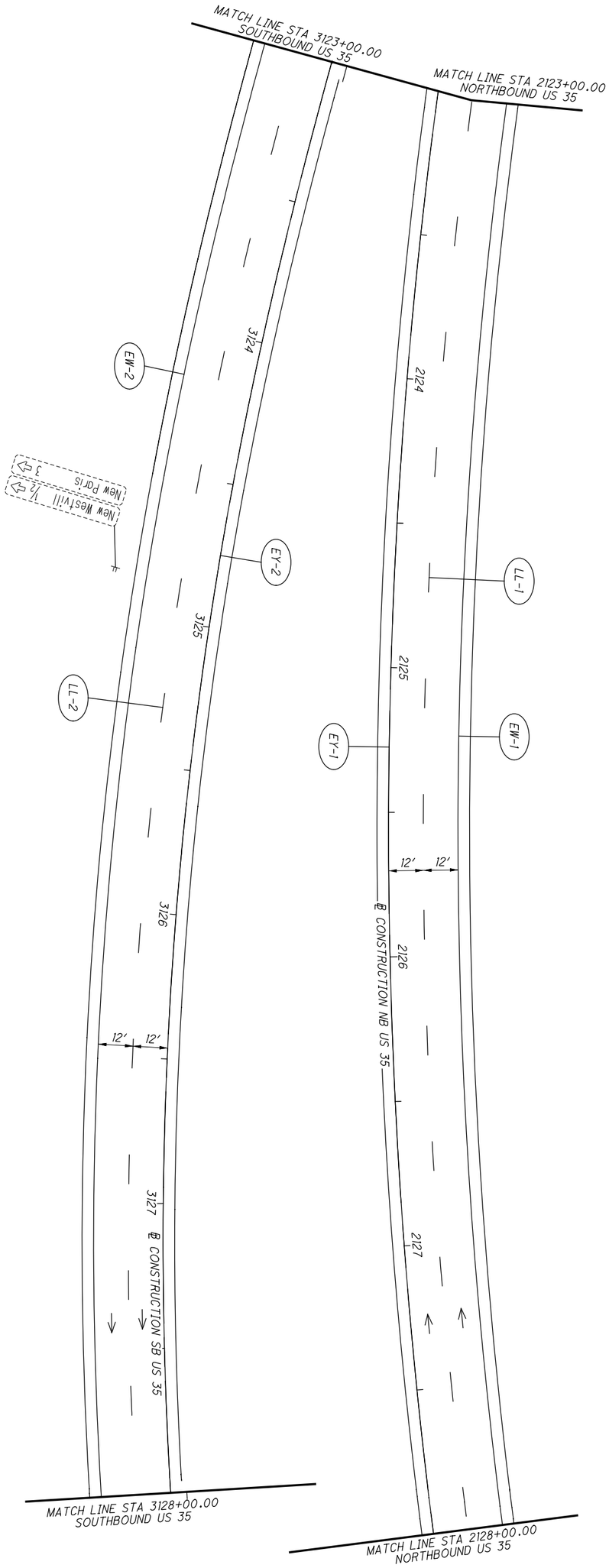

FOR LEGEND SEE SHEET NO. 81

84/88	PRE-35-1.95	TRAFFIC CONTROL PLAN SHEET US 35 STA 123+00.00 TO STA 128+00.00	CALCULATED PJD CHECKED SNS	0 10 20 40 HORIZONTAL SCALE IN FEET

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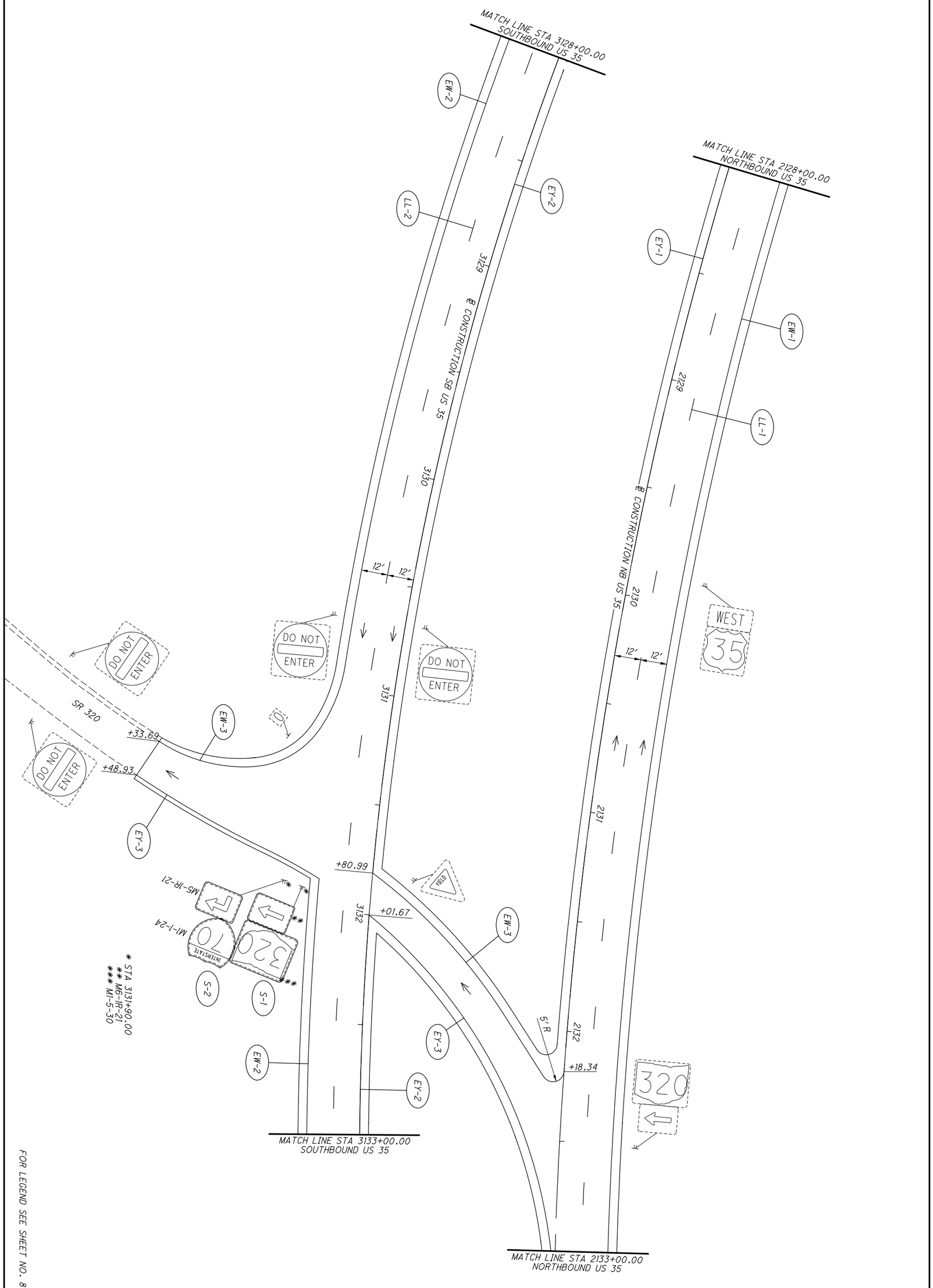

FOR LEGEND SEE SHEET NO. 81

85/88	PRE-35-1.95	TRAFFIC CONTROL PLAN SHEET US 35 STA 128+00.00 TO STA 133+00.00	CALCULATED PJD CHECKED SNS	0 10 20 40 HORIZONTAL SCALE IN FEET

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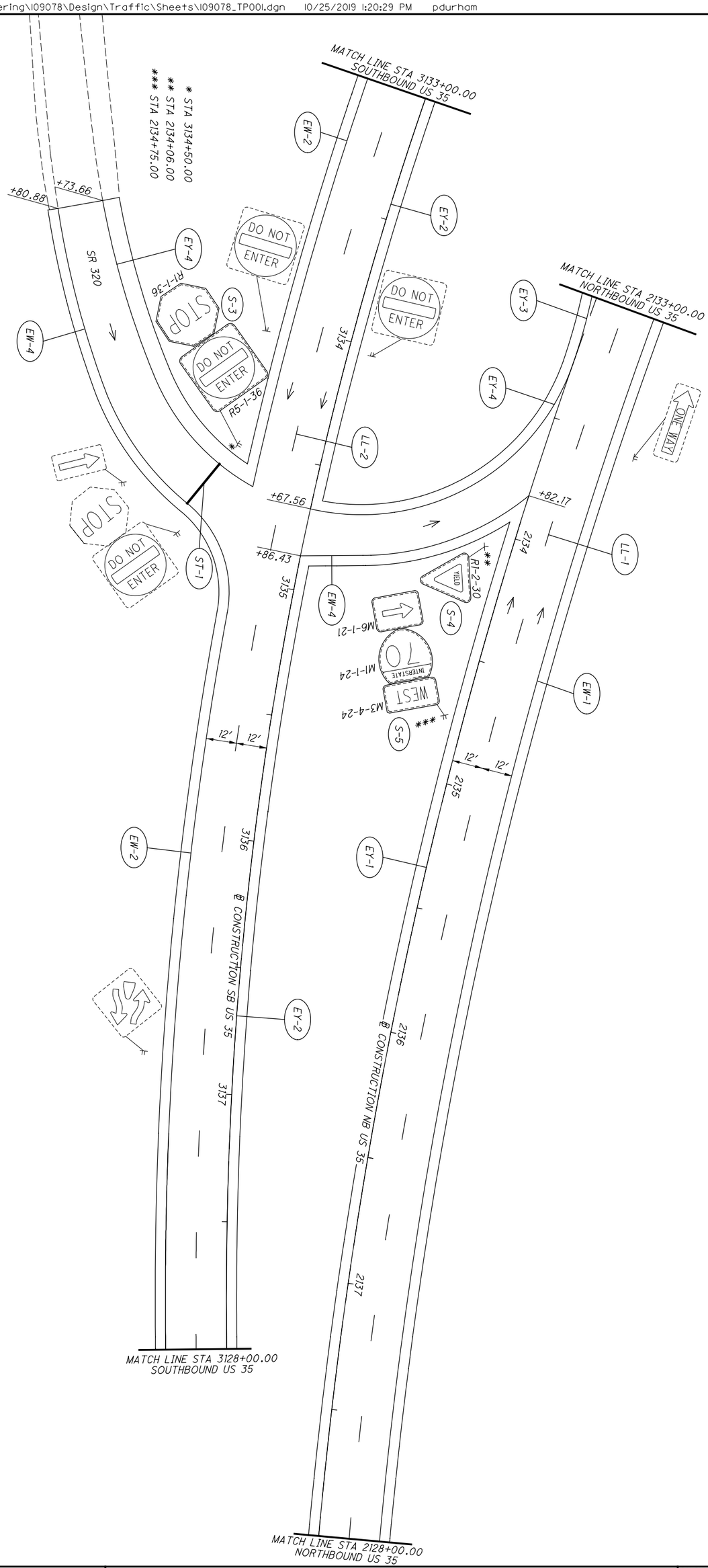
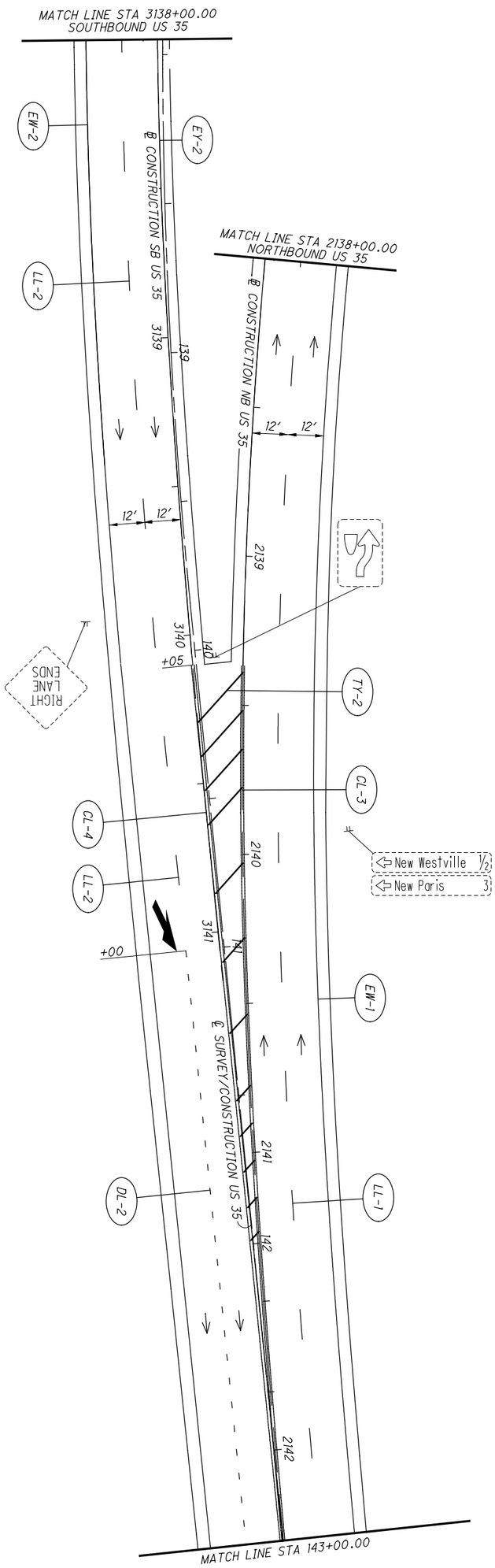


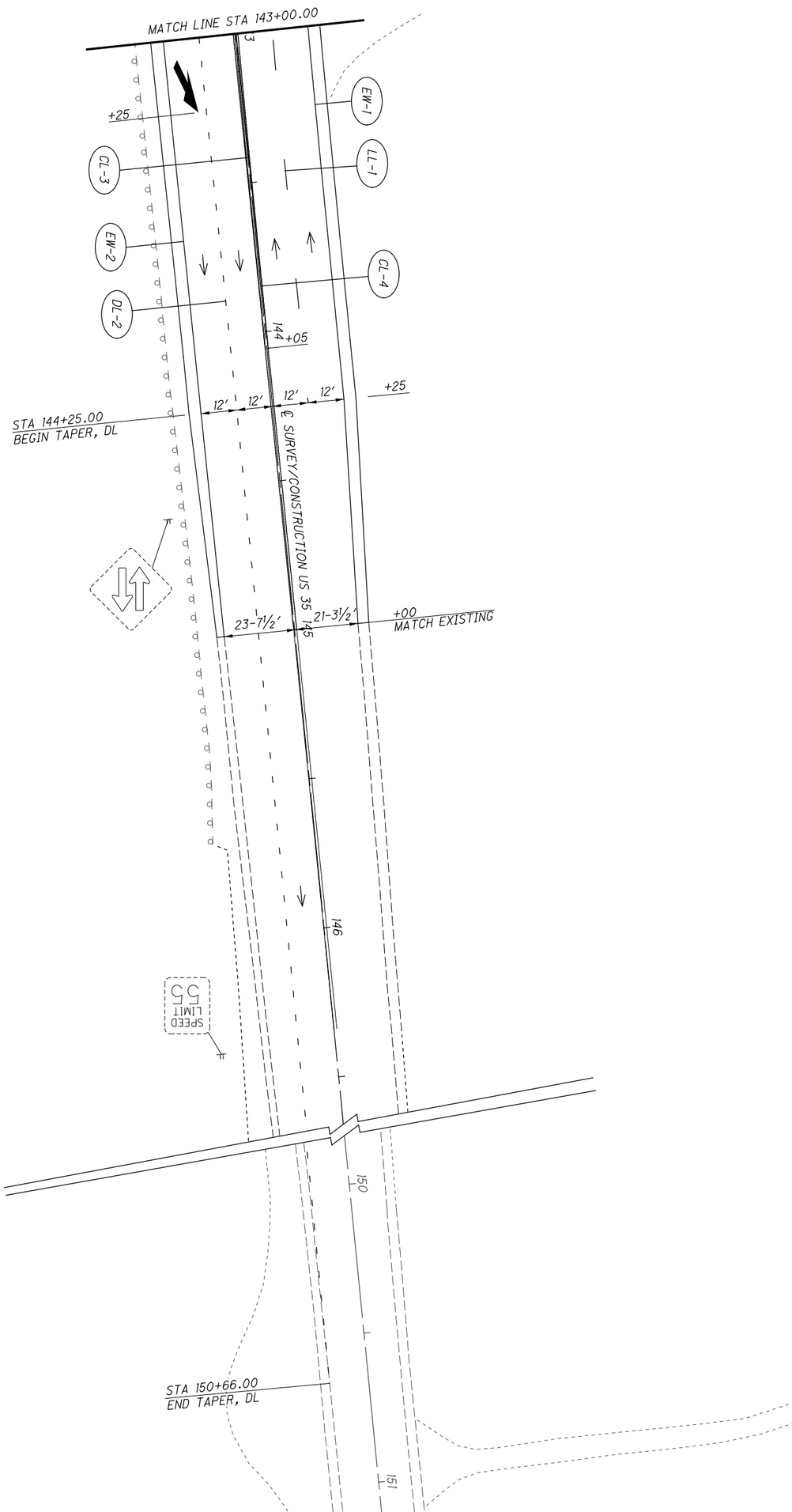
FOR LEGEND SEE SHEET NO. 81

86 88	PRE-35-1.95	TRAFFIC CONTROL PLAN SHEET US 35 STA 133+00.00 TO STA 138+00.00	CALCULATED PJD CHECKED SNS	0 20 10 40 HORIZONTAL SCALE IN FEET



FOR LEGEND SEE SHEET NO. 81

87/88	PRE-35-1.95	TRAFFIC CONTROL PLAN SHEET US 35 STA 138+00.00 TO STA 143+00.00	CALCULATED PJD CHECKED SNS	0 10 20 40 HORIZONTAL SCALE IN FEET



FOR LEGEND SEE SHEET NO. 81

88

PRE-35-1.95

TRAFFIC CONTROL PLAN SHEET
US 35 STA 143+00.00 TO STA 148+00.00

CALCULATED PJD
CHECKED SNS

0 10 20 40
HORIZONTAL SCALE IN FEET