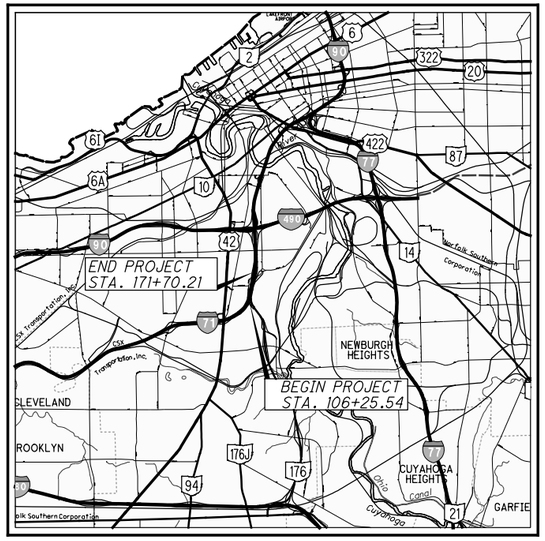

LOCATION MAP

LATITUDE: 41°27'42" LONGITUDE: -81°41'38"

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

	I.R. 71	RAMP J7
CURRENT ADT (2015)	59000	12000
DESIGN YEAR ADT (2035)	61000	12200
DESIGN HOURLY VOLUME (2035)	6930	1460
DIRECTIONAL DISTRIBUTION	100	100
TRUCKS (24 HOUR B&C)	0.07	0.02
DESIGN SPEED	60 MPH	45 MPH
LEGAL SPEED	60 MPH	N/A
DESIGN FUNCTIONAL CLASSIFICATION	URBAN INTERSTATE	
NHS PROJECT	YES	
DESIGN EXCEPTIONS	SUPERELEVATION	

OHIO Utilities Protection SERVICE
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800-362-2764 or 8-1-1
www.oups.org

PLAN PREPARED BY:

Michael Baker INTERNATIONAL

1111 SUPERIOR AVENUE, SUITE 2300
CLEVELAND, OHIO 44114

ROADWAY PLANS PREPARED BY:
MICHAEL BAKER INTERNATIONAL

STATE OF OHIO
DEREK JOSEPH JOHNSON
E-78938
REGISTERED PROFESSIONAL ENGINEER

DATE: 08/30/2019

STRUCTURE PLANS PREPARED BY:
MICHAEL BAKER INTERNATIONAL

STATE OF OHIO
THOMAS M. PORTER
E-79421
REGISTERED PROFESSIONAL ENGINEER

DATE: 08/30/2019

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

CUY-71-17.83/
CUY-176-12.76
INNERBELT CONSTRUCTION
CONTRACT GROUP 7A
CITY OF CLEVELAND
CUYAHOGA COUNTY

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PROJECT DESCRIPTION

SAWCUT AND WIDEN THE EXISTING I.R. 71 SOUTH BOUND LANES TO CONSTRUCT A LEFT SIDE DECELERATION LANE FOR RAMP J7 (EXIT RAMP TO S.R. 176 SOUTHBOUND) AND A PROPOSED RETAINING WALL TO SUPPORT THE LANE.

EARTH DISTURBED AREA

PROJECT EARTH DISTURBED AREA: 1.86 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 2.11 ACRES

LIMITED ACCESS

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

2019 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR RAMP J7 AS SHOWN ON SHEETS 16 - 32 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

DESIGN EXCEPTION

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBER
I.R. 71 SB TO S.R. 176 SB RAMP SUPERELEVATION	09-26-2018	2, 49, 79

STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-2.2	7/18/08	TC-64.10	1/20/17	MT-95.30	4/19/19	TC-7.65	7/20/18	HL-10.31	1/19/18	800	4/19/19		
BP-5.1	1/18/19	TC-65.10	1/17/14	MT-95.40	1/20/17	TC-12.30	1/19/18	HL-20.21	1/19/18	813	10/19/18		
BP-9.1	1/18/19	TC-65.11	7/21/17	MT-95.45	4/19/19	TC-15.115	7/20/18	HL-30.11	1/18/19	832	10/19/18		
		TC-72.20	7/20/18	MT-98.10	1/20/17	TC-21.10	7/21/17	HL-30.22	1/17/14	1047	10/19/18		
DM-1.1	7/21/17			MT-98.20	4/19/19	TC-21.20	7/20/18	HL-60.21	7/20/18				
DM-1.2	1/18/13	MGS-2.1	1/19/18	MT-98.21	7/18/14	TC-22.20	1/17/14						
CB-1.1	7/20/18	MGS-3.1	1/19/18	MT-98.28	1/20/17	TC-41.10	7/19/13	PCB-91	1/18/13				
CB-2.2	7/20/18	MGS-4.2	7/19/13	MT-98.29	1/20/17	TC-41.40	10/18/13	RM-4.3	7/18/14				
CB-2.3	1/15/16	MGS-5.2	7/15/16	MT-99.30	1/19/18	TC-42.10	10/18/13	RM-4.4	7/21/17				
HW-2.2	7/20/18	MGS-5.3	7/15/16	MT-99.60	7/15/16	TC-51.11	1/15/16	RM-4.5	7/21/17				
I-2.2	1/15/16			MT-101.70	7/20/18	TC-51.12	1/15/16	RM-4.6	7/19/13				
I-2.3	1/15/16			MT-101.75	7/15/16			GSD-1-19	1/18/19				
MH-1.2	1/15/16			MT-101.90	7/21/17								
				MT-102.10	1/18/19								
SBR-1-13	7/20/18			MT-105.10	7/19/13								

DRAFT

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. NON-FEDERAL

PID NO. 98063

CONSTRUCTION PROJECT NO. CUY-71-17.83/ CUY-176-12.76

RAILROAD INVOLVEMENT NONE

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CURVE 101
℄ RAMP J7
P.I. Sta. 111+45.42
Δ= 54° 10′ 50″ (LT)
Dc = 5° 30′ 00″
R = 1,041.74′
T = 532.86′
L = 985.10′
E = 128.37′
e = 0.044
(NDC 0.053)

CURVE 102
℄ RAMP J7
P.I. Sta. 100+90.86
Δ= 1° 25′ 24″ (RT)
Dc = 0° 47′ 00″
R = 7,314.35′
T = 90.85′
L = 181.70′
E = 0.56′
e = 0.022

CURVE 103
℄ SB I.R. 71
P.I. Sta. 140+68.97
Δ= 29° 43′ 32″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 506.84′
L = 990.85′
E = 66.11′
e = 0.055

CURVE 104
℄ SB I.R. 71
P.I. Sta. 147+36.97
Δ= 5° 30′ 56″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 184.00′
L = 367.71′
E = 4.43′
e = 0.037

CURVE 105
℄ SB I.R. 71
P.I. Sta. 153+34.45
Δ= 2° 08′ 15″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 106.88′
L = 213.74′
E = 1.00′
e = 0.027

CURVE 106
℄ SB I.R. 71
P.I. Sta. 172+80.65
Δ= 13° 55′ 43″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 699.89′
L = 1,392.87′
E = 42.59′
e = 0.017

NOTE: FOR PROTECTION OF LANDSCAPED AREAS WITHIN THE RIGHT-OF-WAY, SEE SHEET 7 .

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

CUY-71-17.83/
CUY-176-12.76

SURVEYOR'S NOTES:

1. THE HORIZONTAL DATUM IS THE OHIO STATE PLAN, NORTH ZONE NAD83(1995) GRID NORTH.

   THIS SURVEY IS ON GROUND COORDINATES.

   GRID (METERS) VALUES WERE CONVERTED TO GROUND (U.S. SURVEY FEET) VALUES USING A PROJECT ADJUSTMENT FACTOR (PAF) OF 1.000059799

2. VERTICAL DATUM IS NAVD 1988.

CONTROL TABLE

POINT	NORTH	EAST	ELEV	DESCRIPTION
240	655871.79	2189940.36	596.64	CNPT-IPINS
242	655884.48	2189630.65	651.15	CNPT-IPINS
243	655506.93	2189561.75	648.20	CNPT-IPINS
244	655109.53	2189489.46	645.12	CNPT-IPINS
246	655071.56	2189645.60	595.26	CNPT-IPINS
250	656146.61	2189679.38	653.67	CNPT-IPINS
251	655708.23	2189598.82	649.64	CNPT-IPINS
252	654899.99	2189451.65	643.00	CNPT-IPINS

BENCHMARKS

BENCHMARKS	ELEVATION	RAMP J7			IR 71 SB			EASTING	NORTHING	DESCRIPTION
		STATION	OFFSET	SIDE	STATION	OFFSET	SIDE			
BM 35	597.165	100+05.79	246.1583	LT	154+35.59	258.1589	RT	2189812.9130	655496.3505	CROSS CUT ON TOP FLANGE OF FH
BM 36	597.985	95+49.95	297.3542	LT	158+91.36	309.3542	RT	2189945.4020	655935.7009	MAG NAIL SET IN TOP OF LIGHT POLE BASE
BM 37	642.765	105+66.65	40.6062	LT	148+76.33	58.1881	RT	2189497.9561	654983.1388	MAG NAIL SET IN WEST FACE CONC PIER
BM 38	658.01	93+97.32	16.0377	LT	160+45.62	23.5041	RT	2189692.0080	656138.9238	CROSS CUT ON TOP OF THE NORTHWESTERLY BOLT OF LIGHT POLE BASE #HLM 1-2

CALCULATED JLD
CHECKED DJJ

CONTROL POINTS AND BENCHMARKS

CUY-71-17.83/
CUY-176-12.76

3
127

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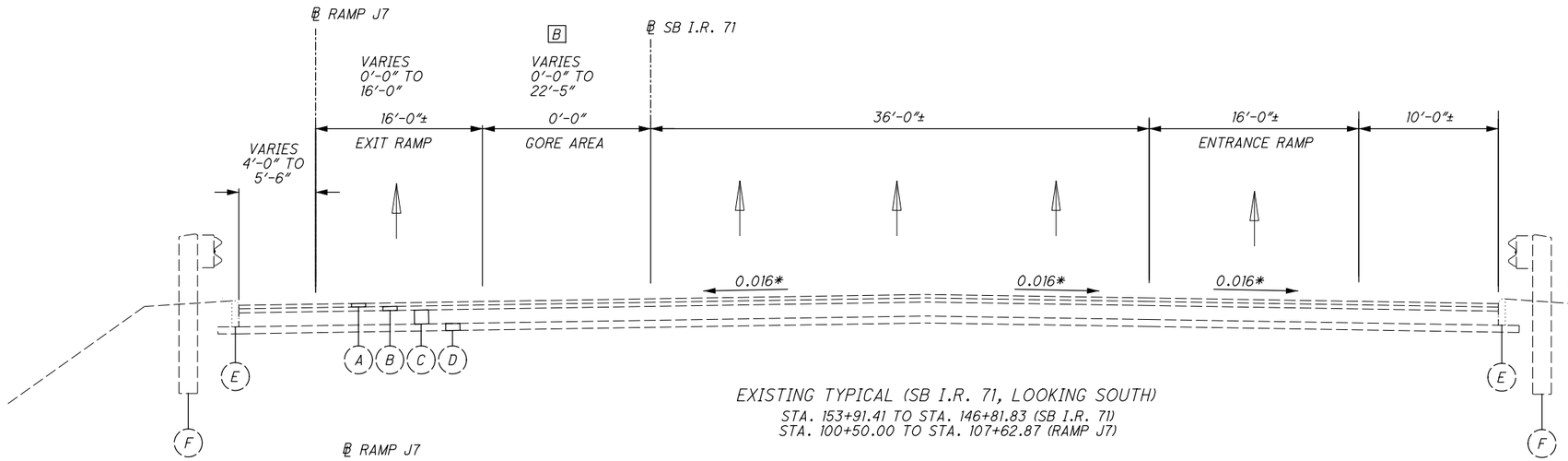
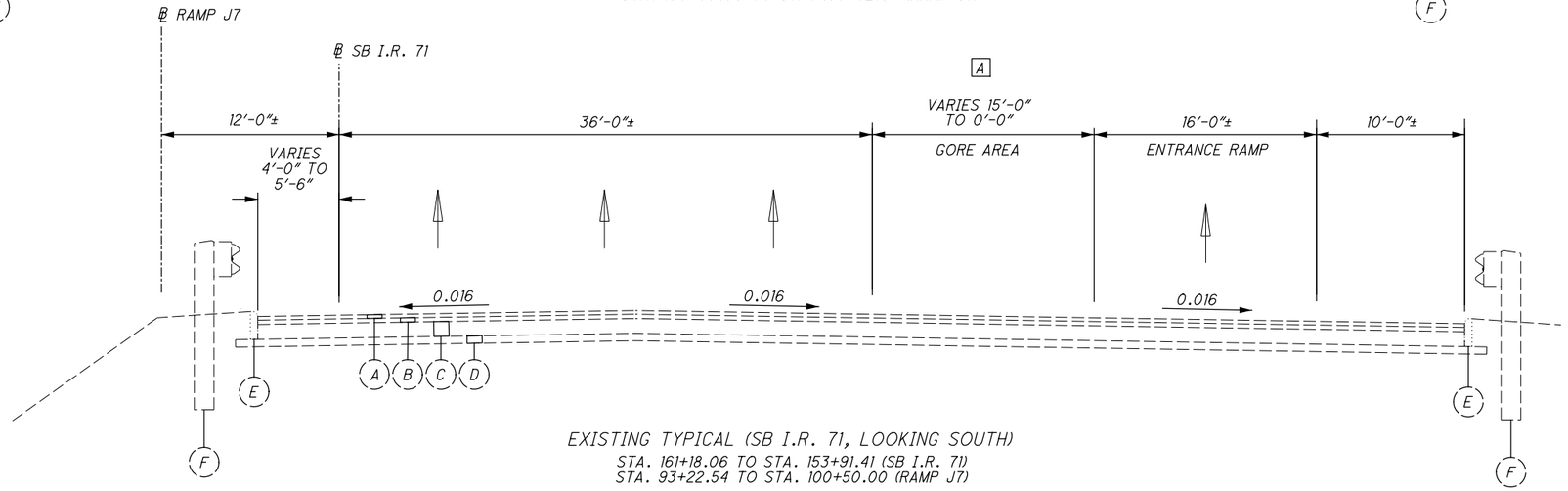


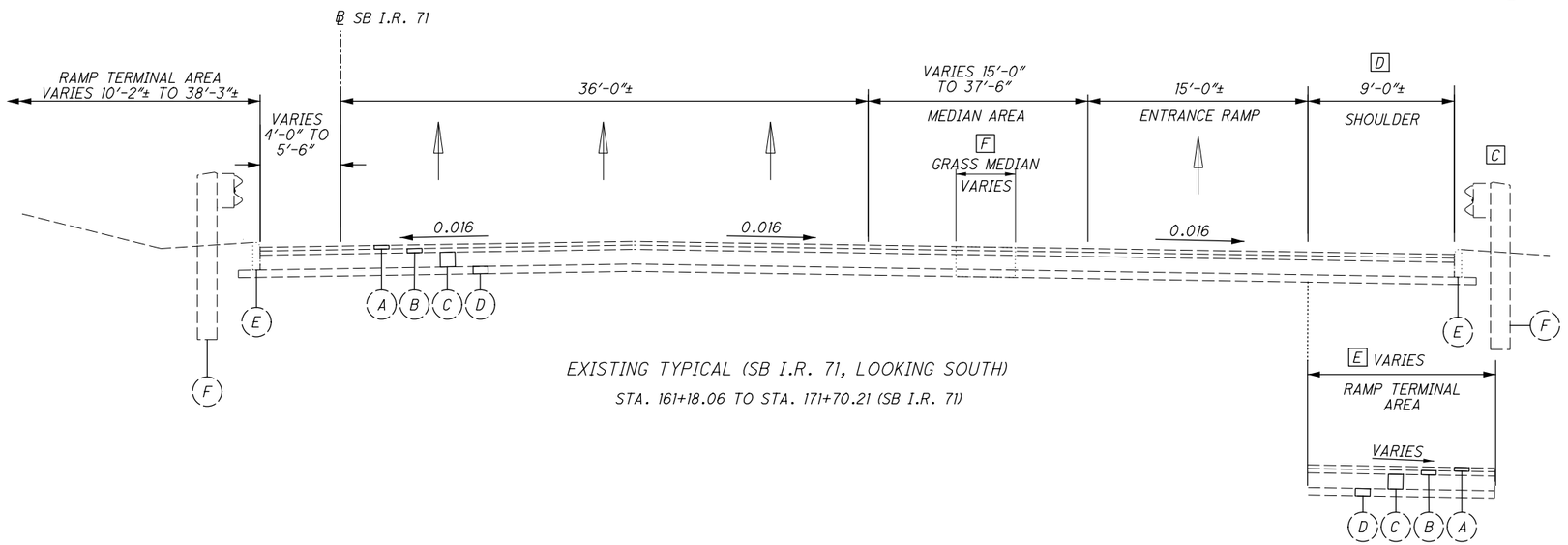
EXISTING TYPICAL (SB I.R. 71, LOOKING SOUTH)
STA. 153+91.41 TO STA. 146+81.83 (SB I.R. 71)
STA. 100+50.00 TO STA. 107+62.87 (RAMP J7)

EXISTING LEGEND

- (A) ± 1.5" - 2" ASPHALT SURFACE COURSE
- (B) ± 3.25" - 4" ASPHALT INTERMEDIATE COURSE
- (C) ± 9.75" - 11.25" CONCRETE
- (D) AGGREGATE BASE
- (E) CURB, TYPE 4-C
- (F) GUARDRAIL



EXISTING TYPICAL (SB I.R. 71, LOOKING SOUTH)
STA. 161+18.06 TO STA. 153+91.41 (SB I.R. 71)
STA. 93+22.54 TO STA. 100+50.00 (RAMP J7)



EXISTING TYPICAL (SB I.R. 71, LOOKING SOUTH)
STA. 161+18.06 TO STA. 171+70.21 (SB I.R. 71)

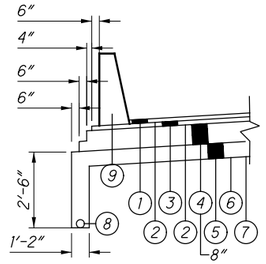
- A RAMP J7 STA. 98+76.00 TO STA. 100+50.00
- B RAMP J7 STA. 105+88.23 TO STA. 107+62.87
- C SB I.R. 71 STA. 161+18.06 TO STA. 163+31.55
- D SB I.R. 71 STA. 161+18.06 TO STA. 167+98.74
- E 32'-10" WIDTH SB I.R. 71 STA. 167+98.74 TO 15'-8" WIDTH SB I.R. 71 STA. 171+70.21
- F 0'-0" WIDTH SB I.R. 71 STA. 161+18.06 TO STA. 166+64.25

  10'-4" WIDTH SB I.R. 71 STA. 166+64.25 TO 15'-8" WIDTH SB I.R. 71 STA. 171+70.21

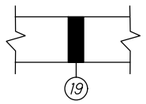
* - SUPERELEVATED SECTION STARTS APPROX. RAMP J7 STA. 103+50, TRANSITION FROM 1.6% N.C. TO 3.7%

EXISTING TYPICAL SECTIONS

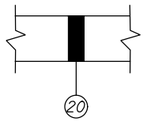
CUY-71-17.83/
CUY-176-12.76



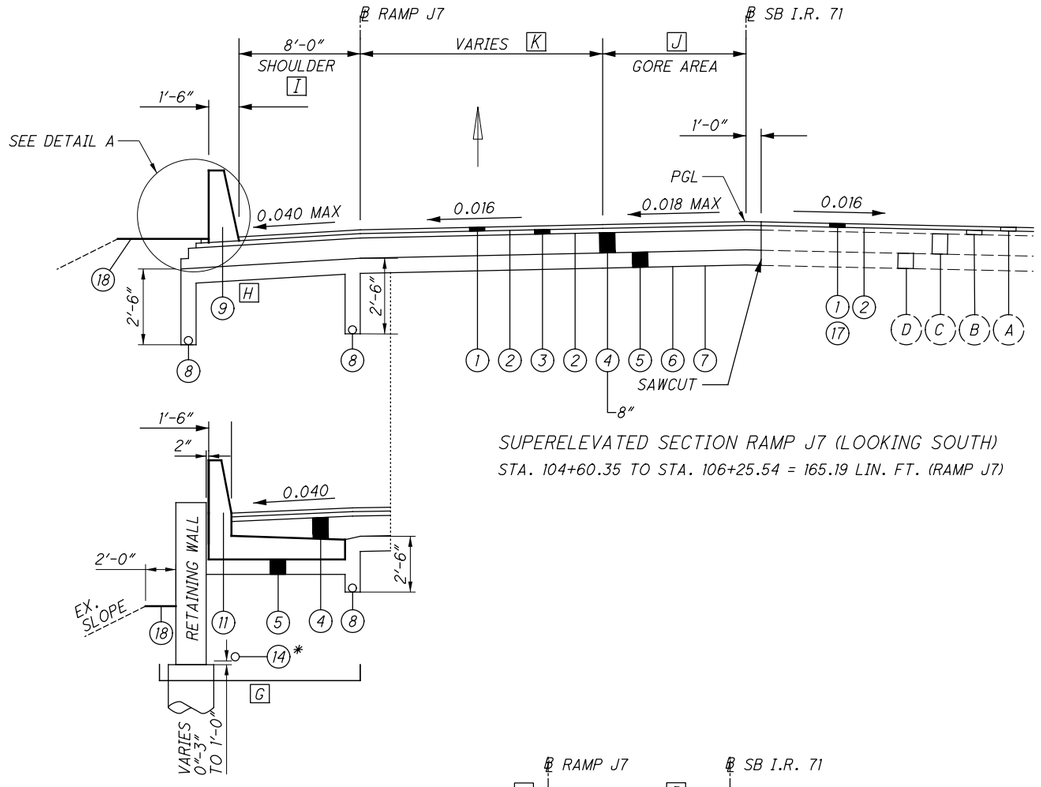
DETAIL A - TYPICAL ASPHALT PAVEMENT
WITH BARRIER EDGE COURSE



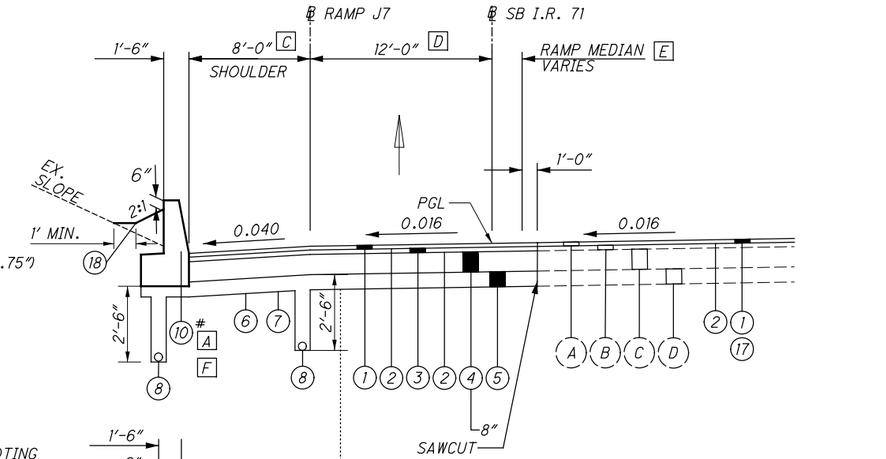
DETAIL B - BMP DR.
STA. 108+95.85 TO STA. 111+57.84 (RAMP J7)



DETAIL C - BMP DR.
STA. 109+68.55 TO STA. 111+31.30 (RAMP J7)



SUPERELEVATED SECTION RAMP J7 (LOOKING SOUTH)
STA. 104+60.35 TO STA. 106+25.54 = 165.19 LIN. FT. (RAMP J7)



NORMAL SECTION - RAMP J7 (LOOKING SOUTH)
STA. 93+22.54 TO STA. 104+60.35 = 1,137.82 LIN. FT. (RAMP J7)

NOTES:

FOR EXISTING LEGEND SEE SHEET 4

G END RETAINING WALL AT RAMP J7 STA. 105+44.21

SINGLE SLOPE CONCRETE BARRIER WITH MOMENT SLAB FROM RAMP J7 STA. 104+60.35 TO STA. 105+41.87

H CONCRETE BARRIER, SINGLE SLOPE, TYPE D FROM RAMP J7 STA. 105+41.87 TO STA. 106+25.54

I 8'-0" AT RAMP J7 STA. 105+50.00 TO 6'-0" AT RAMP J7 STA. 106+00.00

6'-0" FROM RAMP J7 STA. 106+00.00 TO STA. 106+25.54

J 2'-8" AT RAMP J7 STA. 104+60.35 TO 4'-2" AT RAMP J7 STA. 106+25.54

K 13'-4" AT RAMP J7 STA. 104+60.35 TO 15'-6" AT RAMP J7 STA. 106+25.64

PROPOSED LEGEND

(1) ITEM 442 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM., TYPE A (446), AS PER PLAN, PG 76-22M
(2) ITEM 407 - TACK COAT
(3) ITEM 442 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE 19MM, TYPE A (446)
(4) ITEM 302 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN (T = VARIES 5.75" TO 12.75")
(5) ITEM 304 - AGGREGATE BASE, AS PER PLAN (T = 6")
(6) ITEM 204 - SUBGRADE COMPACTION
(7) ITEM 204 - PROOF ROLLING
(8) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
(9) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D
(10) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN, WITH WALL FOOTING
(11) ITEM 511 - SINGLE SLOPE CONCRETE BARRIER WITH MOMENT SLAB (SEE SHEET 127)
(12) ITEM 618 - RUMBLE STRIPS
(13) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE TYPE C
(14) ITEM 518 - 6" PERFORATED CORRUGATED PLASTIC PIPE
(15) ITEM 609 - CURB, TYPE 4-C
(16) ITEM 606 - GUARDRAIL, TYPE MGS
(17) ITEM 254 - PAVEMENT PLANING, 1.5"
(18) ITEM 659 - SEEDING AND MULCHING
(19) ITEM 411 - STABILIZED CRUSHED AGGREGATE (T = 6")
(20) ITEM 203 - ROADWAY, MISC: REINFORCED TURF

A CONCRETE BARRIER, SINGLE SLOPE, TYPE D WITH WALL FOOTING FROM RAMP J7 STA. 93+22.54 TO STA. 94+55.25

B BEGIN RETAINING WALL AT RAMP J7 STA. 94+56.48

SINGLE SLOPE CONCRETE BARRIER WITH MOMENT SLAB FROM RAMP J7 STA. 94+55.25 TO STA. 104+60.35

C 5'-0" AT RAMP J7 STA. 93+22.54 TO 8'-0" AT RAMP J7 STA. 94+34.74

D 0'-0" AT RAMP J7 STA. 93+22.54 TO STA. 93+33.18

0'-0" AT RAMP J7 STA. 93+33.18 TO 12'-0" AT RAMP J7 STA. 94+34.74

12'-0" AT RAMP J7 STA. 100+00.00 TO STA. 103+53.40

12'-0" AT RAMP J7 STA. 103+53.40 TO 13'-4" AT RAMP J7 STA. 104+60.35

E 0'-0" AT RAMP J7 STA. 93+22.54 TO STA. 100+00.00

0'-0" AT RAMP J7 STA. 100+00.00 TO 2'-8" AT RAMP J7 STA. 104+60.35

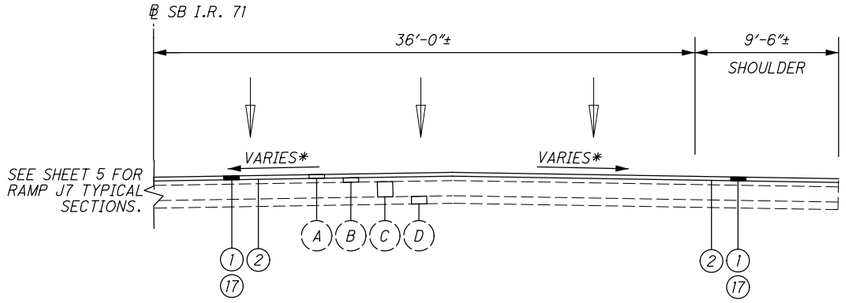
F CONCRETE BARRIER TRANSITION, NJ SHAPE TO SINGLE SLOPE TYPE D RAMP J7 STA. 93+02.54 TO STA. 94+22.54

* SEE WALL ELEVATION SHEETS FOR ADDITIONAL DETAIL ON 6" PERFORATED CORRUGATED PLASTIC PIPE INSTALLATION.

\# SEE BARRIER DETAIL SHEET FOR ADDITIONAL DETAIL.

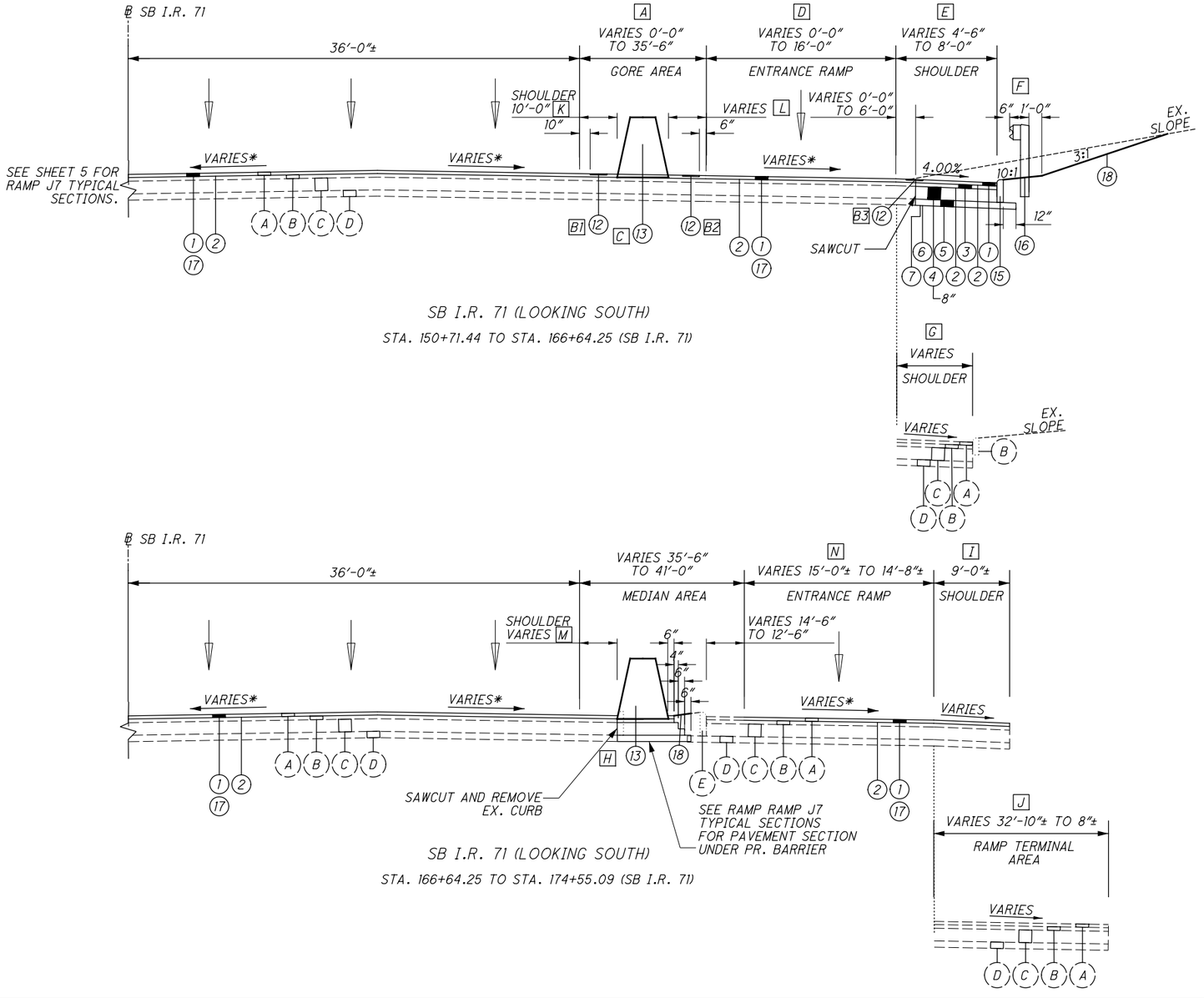
PROPOSED TYPICAL SECTIONS

CUY-71-17.83/
CUY-176-12.76



SB I.R. 71 (LOOKING SOUTH)

STA. 140+00.00 TO STA. 150+71.44 (SB I.R. 71)



SB I.R. 71 (LOOKING SOUTH)

STA. 150+71.44 TO STA. 166+64.25 (SB I.R. 71)

SB I.R. 71 (LOOKING SOUTH)

STA. 166+64.25 TO STA. 174+55.09 (SB I.R. 71)

NOTES:

* - SEE SHEET 4 FOR I.R.71 CROSS SLOPES.

RESURFACING TO LIMIT OF PR. MOT MARKINGS.

1. FOR EXISTING LEGEND SEE SHEET 4
2. FOR PROPOSED LEGEND SEE SHEET 5

A 0'-0" WIDTH SB I.R. 71 STA. 150+71.44 TO STA. 153+00.89

0'-0" WIDTH SB I.R. 71 STA. 153+00.89 TO 17'-0" WIDTH SB I.R. 71 STA. 159+98.96

17'-0" WIDTH SB I.R. 71 STA. 159+98.96 TO 35'-6" WIDTH SB I.R. 71 STA. 166+64.25

B1 RUMBLE STRIPS FROM SB I.R. 71 STA. 155+49.04 TO STA. 159+98.96

B2 RUMBLE STRIPS FROM SB I.R. 71 STA. 156+49.04 TO STA. 159+98.96

B3 RUMBLE STRIPS FROM SB I.R. 71 STA. 150+71.44 TO STA. 155+49.04

C CONCRETE BARRIER, SINGLE SLOPE TYPE C FROM SB I.R. 71 STA. 159+98.96 TO STA. 166+64.25

D 0'-0" WIDTH SB I.R. 71 STA. 150+71.44 TO 16'-0" WIDTH SB I.R. 71 STA. 153+00.89

16'-0" WIDTH SB I.R. 71 STA. 153+00.89 TO STA. 163+48.47

16'-0" WIDTH SB I.R. 71 STA. 163+48.47 TO 14'-8" WIDTH SB I.R. 71 STA. 164+26.45

END RESURFACING SB I.R. 71 STA. 164+26.45

14'-8" WIDTH SB I.R. 71 STA. 164+26.45 TO 15'-0" WIDTH SB I.R. 71 STA. 166+64.25

E 8'-0" WIDTH SB I.R. 71 STA. 151+28.97 TO STA. 160+70.52

8'-0" WIDTH SB I.R. 71 STA. 160+70.52 TO 4'-6" WIDTH SB I.R. 71 STA. 160+80.69

F STA. 154+84.77 TO SB I.R. 71 STA. 155+72.25 MAINTAIN 10:1 GRADING FROM PR. CURB TO 1' FROM BACK OF PR. GUARDRAIL POST ONLY.

G 9'-6"± WIDTH SB I.R. 71 STA. 150+71.44 TO 8'-0" WIDTH SB I.R. 71 STA. 151+28.97

3'-0"± WIDTH SB I.R. 71 STA. 160+80.69 TO 9'-0"± WIDTH SB I.R. 71 STA. 166+64.25

H CONCRETE BARRIER, SINGLE SLOPE, TYPE C FROM SB I.R. 71 STA. 166+64.25 TO STA. 171+70.21

GUARDRAIL, TYPE MGS ON EITHER END OF GRASS MEDIAN FROM SB I.R. 71 STA. 171+70.21 TO STA. 174+55.09

I SB I.R. 71 STA. 166+64.25 TO STA. 167+98.74

J 32'-10" WIDTH SB I.R. 71 STA. 167+98.74 TO 0'-6" WIDTH SB I.R. 71 STA. 174+55.09

K 10'-0" WIDTH SB I.R. 71 STA. 159+98.96 TO STA. 166+64.25

L 4'-0" WIDTH SB I.R. 71 STA. 159+98.96 TO 22'-6" WIDTH SB I.R. 71 STA. 166+64.25

M 10'-0" WIDTH SB I.R. 71 STA. 166+64.25 TO STA. 171+16.73

10'-0" WIDTH SB I.R. 71 STA. 171+16.73 TO 13'-3" WIDTH SB I.R. 71 STA. 174+55.09

N PAVEMENT RESURFACING ALONG ENTRANCE RAMP SB I.R. 71 STA. 166+64.25 TO STA. 172+27.00

PROPOSED TYPICAL SECTIONS

CUY-71-17.83/
CUY-176-12.76

GENERAL

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 KNOWN UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CITY OF CLEVELAND, DIVISION OF WATER (CWD)
1201 LAKESIDE AVE.
CLEVELAND, OH 44113
ATTN: FRED ROBERTS
PHONE: (216) 664-2444 EX. 5440

CITY OF CLEVELAND, DIVISION OF WATER
POLLUTION CONTROL (WPC)
12302 KIRBY AVE.
CLEVELAND, OH 44108
ATTN: ELIE RAMY
PHONE: (216) 664-2756

CLEVELAND PUBLIC POWER (CPP)
1300 LAKESIDE AVENUE, ROOM 152
CLEVELAND, OH 44114
ATTN: CHRIS HIRZEL
PHONE: (216) 664-3922

DOMINION ENERGY OHIO
ATTN: 2ND FLOOR RELOCATION DESIGN
320 SPRINGSIDE DR., SUITE 320
AKRON, OH 44333
330-664-2409

NEORSD
ATTN: MARY MACIEJOWSKI
3900 EUCLID AVE.
CLEVELAND, OH. 44115
216-881-6600

LIGHTING:
ODOT DISTRICT 12
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OH 44125
ROADWAY SERVICES LIGHTING
ATTN: KEITH HAMILTON
PHONE: (216) 584-2220

OHIO Utilities Protection SERVICE
Call Before You Dig
800-362-2764 or 8-1-1
www.oups.org

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. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE UTILITY INFORMATION SHOWN. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.

DOMINION ENERGY OHIO - PIPELINE PROTECTION

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION ENERGY'S PIPELINE, IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION ENERGY OHIO'S (DEO) EXISTING PIPELINE AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION ENERGY OHIO'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUSER (330-478-3757). DEO = DOMINION ENERGY OHIO, 1-800-362-7557

GAS LINE LOCATION

AN EXISTING 20 INCH GAS LINE CROSSES RAMP J7 BASELINE AT STA. 99+77 WAS LOCATED USING A RADIO DETECTION RD8100 LOCATING UNIT. HORIZONTAL LIMIT LOCATION ACCURACY IS WITHIN 10 INCHES.

THE LOCATING UNIT DETECTED THE GAS PIPE AT A DEPTH GREATER THAN FEASIBLE FOR TRADITIONAL SUBSURFACE UTILITY LOCATING TEST HOLE DRILLING. AT STA. 99+78.14, 2.36' RT (BEHIND EXISTING SOUTHBOUND I.R. 71 GUARDRAIL), THE DEPTH WAS DETERMINED TO BE IN THE RANGE OF 24 FEET TO 30 FEET BELOW EXISTING GRADE. AT STA. 99+73.16, 22.31' LT (ON BACKSLOPE EAST OF PROPOSED WALL) THE DEPTH WAS DETERMINED TO BE IN THE RANGE OF 20 FEET TO 24 FEET BELOW EXISTING GRADE.

PROPOSED STRUCTURES SHALL MAINTAIN A MINIMUM 12 INCH HORIZONTAL AND VERTICAL CLEARANCE TO THE GAS LINE.

RETAINING WALL DRILLED SHAFT LOCATIONS HAVE BEEN SPACED TO AVOID THE GAS LINE PER THE HORIZONTAL AND VERTICAL PARAMETERS DESCRIBED HEREIN.

ITEM 690 - SPECIAL, MISC.: UTILITY TEST HOLE

PRIOR TO BEGINNING WORK RELATED TO DRILLING OF DRILLED SHAFTS THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF THE EXISTING UTILITIES AS DESCRIBED IN THE PLANS. IN PARTICULAR, THE GAS LINE DESCRIBED IN THE GAS LINE LOCATION NOTE ON SHEET 7 AND DOCUMENTED TO BE AT A DEPTH IN EXCESS OF 20 FEET SHALL BE LOCATED.

IF IT IS DETERMINED THAT A PROPOSED DRILLED SHAFT WILL INTERSECT AN EXISTING UTILITY IF CONSTRUCTED AS SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE RETAINING WALL WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING UTILITY.

BACKFILL AND COMPACT THE HOLES AND RESTORE THE SURFACE AREAS WHEN DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR UTILITY DAMAGE BY TEST HOLE ACTIVITIES AS DETERMINED BY THE ENGINEER.

PAYMENT FOR UTILITY TEST HOLES INCLUDES THE COST OF LABOR, MATERIALS, EQUIPMENT, TOOLS, AND OTHER INCIDENTALS INCLUDING BACKFILL, COMPACTING, AND SURFACE RESTORATION.

ITEM 690 - SPECIAL, MISC.: UTILITY TEST HOLE 6 EACH

EXISTING PLANS

EXISTING PLANS ENTITLED CUY-71-17.83/CUY-176-12.76 (1965) AND CUY-71-17.95 (2017) MAY BE INSPECTED IN THE ODOT DISTRICT 12 OFFICE IN GARFIELD HEIGHTS.

ELEVATION DATUM AND SURVEYING PARAMETERS

THE HORIZONTAL COORDINATES EXPRESSED HEREIN ARE PROJECT GROUND COORDINATES IN U.S. SURVEY FEET BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD83(1995) AS SHOWN ON ODOT PROJECT CUY-90-14.90 (INNERBELT BRIDGE PROJECT).

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

VERTICAL POSITIONING:
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 2012A

HORIZONTAL POSITIONING:
REFERENCE FRAME: NAD 83 (1995) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99994020409

TO CONVERT PROJECT GROUND COORDINATES TO TRUE OHIO STATE PLANE COORDINATES, MULTIPLY THE NORTHINGS AND EASTINGS BY THE COMBINED SCALE FACTOR (0.99994020409).

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

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

CONSTRICT ALL ACTIVITIES, EQUIPMENT, STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. THE CONSTRUCTION LIMITS ARE IDENTIFIED AS SHOWN ON THE PLANS.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

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

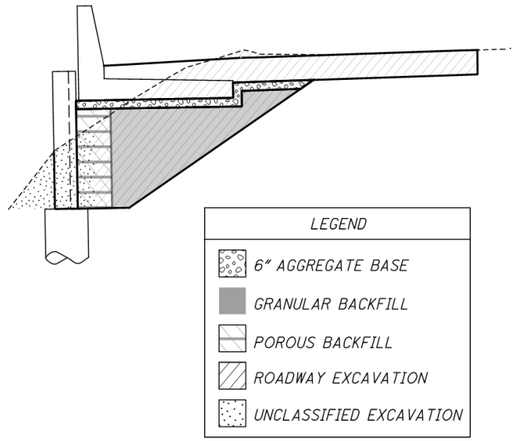
WORK LIMITS

THE WORK LIMITS 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.

EARTHWORK

FOR THE REGION OF RAMP J7 WITH RETAINING WALL AND SINGLE SLOPE CONCRETE BARRIER WITH MOMENT SLAB, THE CONTRACTOR SHALL PERFORM EXCAVATION AND EMBANKMENT ACCORDING TO THE FOLLOWING DIAGRAM.

EARTHWORK (CONTINUED)



ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 204 - PROOF ROLLING 3 HOURS

ENVIRONMENTAL COMMITMENTS

UTILITY COORDINATION

ALL UTILITY RELOCATIONS WILL BE COORDINATED BETWEEN THE CONTRACTOR AND THE UTILITY OWNERS IN SUCH A WAY AS TO AVOID AND/OR MINIMIZE ANY INCONVENIENCE TO POTENTIALLY AFFECTED CUSTOMERS. ALL UTILITY RELOCATIONS NOT INCLUDED IN THE CONSTRUCTION CONTRACT WILL BE PERFORMED BY THE AFFECTED UTILITY OWNER OR ITS CONTRACTOR AND WILL BE COMPLIANT WITH ODOT ROADWAY DESIGN STANDARDS. UTILITY WORK WILL BE ONGOING THROUGHOUT CONSTRUCTION OF THE PROJECT. UPON THE CONTRACT AWARD, THE COORDINATION OF ALL NECESSARY RELOCATIONS WITH THE UTILITIES BECOMES THE RESPONSIBILITY OF THE CONTRACTOR. A LIST OF ALL UTILITY OWNERS LOCATED WITHIN THE PROJECT WORK LIMITS HAS BEEN INCLUDED IN THE PROJECTS DESIGN BUILD SCOPE OF SERVICES

ENDANGERED SPECIES COMMITMENT

THE PROJECT IS WITHIN THE MIGRATION RANGE OF THE FEDERALLY ENDANGERED KIRTLAND'S WARBLER. IN ORDER TO AVOID IMPACTS TO ANY VEGETATION THAT THE KIRTLAND'S WARBLER WOULD USE AS HABITAT DURING MIGRATION, TREES AND WOODY VEGETATION THAT IS GREATER THAN 3-FEET TALL CANNOT BE REMOVED BETWEEN APRIL 22ND AND JUNE 1ST OR BETWEEN AUGUST 15TH AND OCTOBER 15TH.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR DUST CONTROL PURPOSES:

ITEM 616 - WATER 17 MGAL
ITEM 616 - CALCIUM CHLORIDE 2 TONS

NOTIFICATION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF EIGHTEEN (18) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, LANE CLOSURES, AND ROAD CLOSURES.

CALCULATED JLD CHECKED DJJ

GENERAL NOTES

CUY-71-17.83/
CUY-176-12.76

GENERAL (CONTINUED)

LOCAL LAWS, ORDINANCES, AND REGULATIONS

IN ACCORDANCE WITH SECTION 107.01 OF THE GENERAL PROVISIONS, THE CONTRACTOR SHALL STAY FULLY INFORMED OF ALL LOCAL LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES THAT AFFECT THE WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBSERVE AND COMPLY WITH ALL SUCH LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES AT NO ADDITIONAL COST TO THE PROJECT/COUNTY.

EXISTING TYPICAL SECTIONS

EXISTING TYPICAL SECTIONS HAVE BEEN DEVELOPED FROM SITE PAVEMENT CORES AND RECORD PLANS AND ARE BELIEVED TO REPRESENT THE WIDTH AND COMPOSITION OF THE EXISTING PAVEMENT, BUT THE OHIO DEPARTMENT OF TRANSPORTATION DOES NOT GUARANTEE THE ACCURACY OF SAME.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL ONLY BE PERMITTED BETWEEN THE HOURS OF (UNLESS APPROVAL TO WORK ADDITIONAL HOURS IS OBTAINED FROM THE ENGINEER AND THE CITY OF CLEVELAND):

1.	MONDAY THROUGH FRIDAY	7:00 A.M. TO 9:00 P.M.
2.	SATURDAYS	7:00 A.M. TO 11:00 P.M.
3.	SUNDAYS	7:00 A.M. TO 9:00 P.M.

IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

IN ADDITION THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF CLEVELAND AND COUNCIL PERSONS JASMIN SANTANA AND ANTHONY BRANCATELLI :

1. AT MINIMUM TWO (2) WEEKS IN ADVANCE OF THE PROJECT START DATE AND THE COMPLETION OF THE PROJECT.
2. SEVENTY-TWO (72) HOURS IN ADVANCE OF ANY WORK SCHEDULE CHANGES RELATED TO THE HOURS/DAYS OF OPERATION.
3. SEVENTY-TWO (72) HOURS IN ADVANCE IF ANY OTHER HEAVY EQUIPMENT IS UTILIZED OTHER THAN THOSE LISTED IN THE ORIGINAL NOISE VARIANCE REQUEST.

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.

TREE REMOVAL

TREES MARKED IN THE PLANS FOR REMOVAL BY OTHERS WILL BE REMOVED BY PROJECT D12 MNT FY2020, TREE REMOVAL, PID 10953.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 103 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAM BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL SUBSIDIARY AGREEMENT GOVERNING COMPLETION OF THIS PROJECT.

ROADWAY

ITEM 203 - ROADWAY, MISC.: REINFORCED TURF

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING REINFORCED TURF ON THE DRIVEWAY APRON AREA FOR THE WATER QUALITY STRUCTURE ACCESS DRIVE OFF NORTHBOUND SR 176 AS SHOWN ON SHEET 49.

THE REINFORCED TURF SHALL BE A PERMEABLE, PLANTABLE, AND FLEXIBLE PAVEMENT CAPABLE OF SUPPORTING AN H-20 LOADING. THE PRODUCT SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:

1. GEOBLOCK 5150
   MANUFACTURED BY:
   PRESTO GEOSYSTEMS
   670 N PERKINS STREET, PO BOX 2399
   APPLETON, WI 54912-2399
   800-548-3424
   www.prestogeo.com

2. DRIVEABLE GRASS
   MANUFACTURED BY:
   SOIL RETENTION
   1265 CARLSBAD VILLAGE DRIVE, SUITE 100
   CARLSBAD, CA 92008
   800-346-7995
   www.soilretention.com

3. TUFFTRACK GRASS PAVER
   MANUFACTURED BY:
   NDS
   851 NORTH HARVARD AVENUE
   LINDSAY, CA 93247
   888-825-4716
   www.ndspro.com

THE COMPOSITION, DEPTH, AND PREPARATION OF TOPSOIL, POROUS PAVEMENT, ENGINEERED BASE, AND PREPARED SUBGRADE SHALL MEET MANUFACTURER SPECIFICATIONS. ALL COST FOR THIS ITEM OF WORK INCLUDING SUBGRADE PREPARATION, AND BASE MATERIAL, ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS, PER MANUFACTURER REQUIREMENTS SHALL BE INCLUDED IN THE UNIT BID PRICE PER SY FOR: ITEM 203 - ROADWAY, MISC.: REINFORCED TURF.

ITEM 622 - BARRIER TRANSITION, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A 20' TYPE D BARRIER TRANSITION, AS PER PLAN ACCORDING TO THE C&MS AND THE ODOT PLAN INSERT SHEET "NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION" ON SHEET 81 .

THE END ANCHORAGE SHALL BE AS PER RM-4.5 EXCEPT THE Y401 REINFORCING STEEL WHICH SHALL BE BENT TO MATCH THE JERSEY BARRIER SHAPE. FOR ADDITIONAL INFORMATION SEE RM-4.5.

ALL COST FOR THIS ITEM OF WORK INCLUDING SAWCUTTING OF EXISTING SHOULDER ASPHALT, LABOR, MATERIALS, EQUIPMENT, INCIDENTALS, AND ITEMS ON THE PLAN INSERT SHEET SHALL BE INCLUDED IN THE UNIT BID PRICE PER EACH FOR: ITEM 622 - BARRIER TRANSITION, AS PER PLAN.

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN WITH WALL FOOTING

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A CONCRETE BARRIER, SINGLE SLOPE, TYPE D, WITH WALL FOOTING, AS PER PLAN ACCORDING TO THE C&MS, ODOT SCD RM-4.5, AND THE DETAIL ON SHEET 82 .

THE CONCRETE BARRIER, SINGLE SLOPE, TYPE D SHALL BE CONSTRUCTED INTEGRAL WITH A REINFORCED WALL FOOTING AT THE EDGE OF THE SHOULDER OF THE PROPOSED DECELERATION LANE AS SHOWN IN THE PLANS.

ALL COST FOR THIS ITEM OF WORK INCLUDING LABOR, MATERIALS, EQUIPMENT, INCIDENTALS, AND ITEMS ON THE DETAIL SHEET SHALL BE INCLUDED IN THE UNIT BID PRICE PER FOOT FOR: ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, AS PER PLAN WITH WALL FOOTING.

SINGLE SLOPE CONCRETE BARRIER WITH MOMENT SLAB

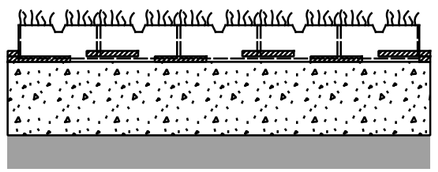
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A 42 INCH TALL REINFORCED CONCRETE BARRIER, SINGLE SLOPE WITH A MOMENT SLAB AS SHOWN IN THE DETAIL ON SHEET 127.

THE CONCRETE BARRIER, SINGLE SLOPE SHALL BE CONSTRUCTED INTEGRAL WITH A MOMENT SLAB UNDER THE SHOULDER OF THE PROPOSED DECELERATION LANE ALONG THE PROPOSED RETAINING WALL AS SHOWN IN THE PLANS.

ALL COST FOR THIS ITEM OF WORK INCLUDING LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT BID PRICES FOR THE APPROPRIATE ITEMS SHOWN IN RETAINING WALL ZZ GENERAL SUMMARY ON SHEET 111.

SYMBOLS

	PR. STORM SEWER		ATG MANHOLE
— —E— — -	EX. ELECTRIC		EX. CATCH BASIN
— —G— — -	EX. GAS LINE		ATG CATCH BASIN
— —T— — -	EX. TELEPHONE		RTG CATCH BASIN
— —W— — -	EX. WATER LINE		EX. STORM MANHOLE
	EX. STORM	SA	EX. SANITARY MANHOLE
— —CS— —	EX. COMBINED SEWER		PR. CATCH BASIN
Ex R/W	EX. RIGHT OF WAY		PR. MANHOLE
—x—	EX. FENCE		EX. GAS VALVE
	EX. GUARDRAIL	GAS	EX. GAS SERVICE STOP
	EX. WALL	E	EX. ELECTRIC MANHOLE
	EX. RAILROAD TRACKS		EX. ELECTRIC POLE
	PR. GUARDRAIL	T	EX. TELEPHONE MANHOLE
	REPLACED GUARDRAIL		EX. TELEPHONE POLE
W	PR. WATER LINE		EX. POST
R/W	PR. RIGHT OF WAY		EX. UTILITY POLE
	PR. SWALE		EX. LIGHT POLE
	PR. UNDERDRAIN		EX. TREE
	CONST LIMITS		EX. SHRUB
M	EX. MONUMENT BOX	UM	EX. UNKNOWN MANHOLE
M	ATG MONUMENT BOX		EX. TRAFFIC SIGN
E	EX. ELECTRIC PULL BOX		EX. YARD LIGHT
TR	EX. TRAFFIC PULL BOX		



LEGEND	
	TOPSOIL WITH GRASS
	2" POROUS PAVEMENT
	4" ENGINEERED BASE
	PREPARED SUB GRADE

CALCULATED JLD CHECKED DJJ

GENERAL NOTES

CUY-71-17.83/
CUY-176-12.76

DRAINAGE

REVIEW OF DRAINAGE FACILITIES

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

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

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

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

ITEM 895 - MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2

THIS PLAN UTILIZES A MANUFACTURED WATER QUALITY STRUCTURE FOR WATER QUALITY TREATMENT. AN AREA HAS BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THIS DEVICE SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - MISCELLANEOUS METAL	1,960 POUNDS

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIALS REMOVED SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

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

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

ITEM SPECIAL - PIPE CLEANOUT (CONTINUED)

ITEM SPECIAL - PIPE CLEANOUT, 24" AND UNDER	705 FT
ITEM SPECIAL - PIPE CLEANOUT, 27" TO 48"	2,461 FT
ITEM 611 - DRAINAGE STRUCTURE, MISC.: STRUCTURE CLEANOUT	23 EACH

EROSION CONTROL

ITEM 832 - EROSION CONTROL

THE CONTRACTOR SHALL FOLLOW GENERALLY ACCEPTED BEST PRACTICES FOR EROSION CONTROL AND SEDIMENTATION CONTROL. THE CONTRACTOR SHALL PROVIDE SILT FENCE, INLET PROTECTION, PERIMETER FENCING AND OTHER EROSION CONTROL MEASURES WITHIN THE PROJECT LIMITS AS APPROPRIATE TO LIMIT CONSTRUCTION DISTURBANCE TO PROPERTY AND WATERSHEDS AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY FOR EROSION CONTROL HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 832 - EROSION CONTROL	41,447 EACH

ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN

PER "PART III.G.2.e. POST - CONSTRUCTION STORM WATER MANAGEMENT REQUIREMENTS" OF THE OHIO EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (APPENDIX E OF SS 832), THE DETAILED DRAWINGS AND MAINTENANCE PLANS FOR ALL MANUFACTURED POST-CONSTRUCTION STORM WATER BMPs SHALL BE PROVIDED TO THE ENGINEER BY THE CONTRACTOR.

COST FOR THE ABOVE WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN.

ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS & SOFTWARE

THE CONTRACTOR SHALL PERFORM ALL PERMIT REQUIRED STORMWATER TESTING USING THE SWPPPTrack SOFTWARE. ADDITIONALLY, THE CONTRACTOR SHALL PERFORM THE ANTICIPATED WEEKLY, RAINFALL EVENT, AND MONTHLY INSPECTIONS. COST FOR INSPECTIONS WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS. AND COST FOR THE SWPPPTrack SOFTWARE WILL BE INCLUDED IN ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE.

SEEDING AND MULCHING

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

ITEM 659 - SOIL ANALYSIS TEST	2 EACH
ITEM 659 - TOPSOIL	404 CU. YD.
ITEM 659 - SEEDING AND MULCHING	3,633 SQ. YD.
ITEM 659 - REPAIR SEEDING AND MULCHING	190 SQ. YD.
ITEM 659 - INTER-SEEDING	190 SQ. YD.
ITEM 659 - COMMERCIAL FERTILIZER	0.33 TONS
ITEM 659 - LIME	0.75 ACRES
ITEM 659 - WATER	19.62 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 ITEM 659 - SEEDING AND MULCHING (TOTAL ABOVE REPEATED FROM SHEET 76) ARE BASED ON THESE LIMITS.

PAVEMENT

CONTRACTION AND/OR EXPANSION JOINT

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

ITEM 302 - ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

THE DEPTH OF ITEM 302 ASPHALT CONCRETE BASE SHALL BE 8 INCHES EXCEPT OVER THE MOMENT SLAB WHERE DEPTH IS VARIABLE. MAXIMUM DEPTH OVER THE MOMENT SLAB IS 12.75 INCHES. CONTRACTOR SHALL PLACE ITEM 302 ASPHALT CONCRETE BASE IN LIFT THICKNESSES AS PRESCRIBED BY THE C&MS.

PAYMENT TO INSTALL THE ASPHALT CONCRETE BASE FOR ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE COST OF ITEM 302 - ASPHALT CONCRETE BASE, AS PER PLAN.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG 76-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM OF 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

PAYMENT TO PROVIDE AND INSTALL THE ASPHALT CONCRETE SURFACE COURSE FOR ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE COST OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE 1 (446), AS PER PLAN, PG 76-22M.

ITEM 253 - PAVEMENT REPAIR

THE CONTRACTOR SHALL PERFORM PAVEMENT REPAIR AS SPECIFIED IN SECTION 253 OF THE CM&S.

AFTER PAVEMENT PLANING AND PRIOR TO FINAL SURFACE COURSE PLACEMENT, THE ENGINEER SHALL INSPECT THE EXPOSED EXISTING PAVEMENT LAYERS AND DETERMINE AREAS REQUIRING PAVEMENT REPAIR. THE CONTRACTOR SHALL REPAIR THE PAVEMENT AS DIRECTED BY THE ENGINEER. THE DEPTH, SURFACE AREA, AND MATERIAL TO BE USED IN THE REPAIR SHALL BE SPECIFIED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR ITEM 253 - PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 253 - PAVEMENT REPAIR	1,400 SY

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS AND DRAINAGE STRUCTURE INSTALLATIONS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES AND INSTALLATION OF ITEM 611, DRAINAGE STRUCTURES.

ITEM 301 - ASPHALT CONCRETE BASE, PG64-22	38 CY

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 8 INCHES. FOR PIPES, THE QUANTITY CONSIDERS A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

FOR DRAINAGE STRUCTURES, THE QUANTITY CONSIDERS A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE DRAINAGE STRUCTURE.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

TRAFFIC CONTROL

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 C&MS 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.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E 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 620 - DELINEATOR, BRACKET MOUNTED

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING DELINEATORS ALONG THE PROPOSED DECELERATION LANE PER ODOT SCD MT-101.70 AND C&MS 620. THE DELINEATORS SHALL BE MOUNTED TO THE TOP OF THE PROPOSED TYPE D CONCRETE BARRIER WITH A BRACKET.

ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO FURNISH AND INSTALL THE DELINEATORS AS SHOWN IN THE PLANS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 620 - DELINEATOR, BRACKET MOUNTED.

CALCULATED JLD CHECKED DJJ

GENERAL NOTES

CUY-71-17.83/ CUY-176-12.76

NOTIFICATIONS AND CONTACTS

THE CONTRACTOR SHALL PROVIDE TO THE AGENCIES LISTED BELOW, 14 DAYS ADVANCE WRITTEN NOTICE OF PENDING CHANGES IN MAINTENANCE OF TRAFFIC (MOT) OR TRAFFIC PATTERNS. THE NOTICE SHALL INCLUDE EXISTING AND PROPOSED MOT CONFIGURATION AND ALL APPLICABLE CHANGES AFFECTING PROPERTY ACCESS, DETOURS, WORK SCHEDULE, AND WORK DURATION.

ODOT DISTRICT 12
PUBLIC INFORMATION OFFICE
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OH 44125
216-584-2005

CITY OF CLEVELAND DEPARTMENT OF PUBLIC SAFETY
601 LAKESIDE AVENUE, ROOM 230
CLEVELAND, OH 44114
216-664-2485

CITY OF CLEVELAND
500 LAKESIDE AVENUE, CLEVELAND, OH 44114

DIVISION OF ENGINEERING AND CONSTRUCTION	216-664-2381
DIVISION OF STREETS	216-664-2510
DIVISION OF TRAFFIC ENGINEERING	216-664-3194

CITY OF CLEVELAND DEPARTMENT OF PUBLIC SAFETY

DIVISION OF EMERGENCY MEDICAL SERVICE (EMS)	216-664-2555
DIVISION OF FIRE	216-664-6800
DIVISION OF POLICE	216-623-5000

CITY OF CLEVELAND
DEPARTMENT OF PUBLIC UTILITIES
1201 LAKESIDE AVENUE
CLEVELAND, OH 44114
216-664-2444

MAINTENANCE OF TRAFFIC

TO CONSTRUCT THE RETAINING WALL ALONG THE PROPOSED DECELERATION LANE, A CLOSURE OF THE EXISTING SHOULDER WILL BE REQUIRED. ONCE THE RETAINING WALL CONSTRUCTION IS COMPLETE, A 5 FOOT LANE SHIFT ALONG I.R. 71 WOULD PERMIT THE CONSTRUCTION OF THE DECELERATION LANE PAVEMENT. A WEEKEND CLOSURE OF THE SR 176 RAMP MAY BE REQUIRED TO CONSTRUCT THE TRANSITION BETWEEN PROPOSED AND EXISTING PAVEMENT.

GENERAL SEQUENCE OF CONSTRUCTION - ALL PHASES
REMOVE CONFLICTING EXISTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS WITHIN THE RESURFACING LIMITS PER APPLICABLE STANDARD CONSTRUCTION DRAWINGS, AS SHOWN IN THE DETOUR AND PHASING PLANS, AND AS DIRECTED BY THE ENGINEER PRIOR TO EACH PHASE.

SEQUENCE OF CONSTRUCTION
THE CONSTRUCTION OF A DECELERATION LANE, RETAINING WALL, CONCRETE BARRIER WALL, AND APPURTENANT TRAFFIC CONTROL, LIGHTING, AND DRAINAGE WORK ALONG SOUTHBOUND I.R. 71 WITHIN THE LIMITS OF THIS PROJECT SHALL BE ACCOMPLISHED IN MULTIPLE PHASES AS DESCRIBED IN THE FOLLOWING COLUMNS.

PHASE ONE
SAWCUT SOUTHBOUND I.R. 71 AND REMOVE ROADWAY AND SHOULDER PAVEMENT AS SHOWN IN THE PLANS. CONSTRUCT MOMENT SLAB AND RETAINING WALL. CONSTRUCT DECELERATION LANE AND SHOULDER PAVEMENT UP TO INTERMEDIATE COURSE AND ASSOCIATED DRAINAGE, TRAFFIC CONTROL, AND HIGH MAST TOWER LIGHTING WITHIN THE LIMITS OF PHASE ONE AS SHOWN IN THE PLANS.

IMPACT TO THE EXISTING GAS LINE CROSSING THE PROPOSED RETAINING WALL AT APPROX. STA. 99+75 SHALL BE AVOIDED.

CONSTRUCT THE WATER QUALITY STRUCTURE, OUTFALL CONDUITS, AND ACCESS DRIVE IN THE MEDIAN BETWEEN NORTHBOUND AND SOUTHBOUND S.R. 176 DURING THIS PHASE.

PHASE ONE ACTIVITIES MAY BE PERFORMED CONCURRENT WITH ALL PHASE TWO, THREE, FOUR, AND FIVE ACTIVITIES.

PHASE TWO
SAWCUT SOUTHBOUND I.R. 71 AND RAMP J7 AND REMOVE ROADWAY AND SHOULDER PAVEMENT AS SHOWN IN THE PLANS. CONSTRUCT REMAINING DECELERATION LANE, RAMP TIE-IN, AND SHOULDER PAVEMENT UP TO INTERMEDIATE COURSE AND ASSOCIATED DRAINAGE AND TRAFFIC CONTROL WITHIN THE LIMITS OF PHASE TWO AS SHOWN IN THE PLANS.

PHASE TWO ACTIVITIES MAY BE PERFORMED CONCURRENT WITH ALL PHASE ONE, THREE, FOUR AND FIVE ACTIVITIES.

POST-PHASE TWO
INSTALL THE OVERHEAD SIGN TRUSS AT RAMP J7 STA. 106+40 OVER I.R. 71 AND THE SOUTHBOUND EXIT LANE TO RAMP J7 AFTER THE RETAINING WALL AND PAVEMENT WIDENING PHASE ONE AND TWO ACTIVITIES ARE COMPLETE.

PHASE THREE
CONSTRUCT SHOULDER PAVEMENT WIDENING UP TO THE INTERMEDIATE COURSE ON RAMP SBOR-M AND ASSOCIATED DRAINAGE AND TRAFFIC CONTROL WITHIN THE LIMITS OF PHASE THREE AS SHOWN IN THE PLANS.

PHASE THREE ACTIVITIES CAN BE PERFORMED CONCURRENT WITH PHASE ONE AND TWO CONSTRUCTION. PHASE THREE SHOULDER WIDENING OF RAMP SBOR-M SHALL BE COMPLETE PRIOR TO COMMENCING PHASE FOUR AND FIVE CONSTRUCTION.

PHASE FOUR
CONSTRUCT CONCRETE BARRIER WALL AND ASSOCIATED DRAINAGE AND TRAFFIC CONTROL IN THE GORE AREA BETWEEN I.R. 71 AND RAMP SBOR-M WITHIN THE LIMITS OF PHASE FOUR AS SHOWN IN THE PLANS.

PHASE FOUR ACTIVITIES CAN BE PERFORMED CONCURRENT WITH PHASE ONE AND TWO CONSTRUCTION. THE RAMP SBOR-M SHOULDER WIDENING DESCRIBED IN PHASE THREE SHALL BE COMPLETE PRIOR TO COMMENCING PHASE FOUR CONCRETE BARRIER WALL CONSTRUCTION.

PHASE FIVE
COMPLETE THE DRAINAGE CONNECTION AT MH D-012 AS SHOWN ON SHEET 46 AND ANY REMAINING PHASE FOUR PAVEMENT AND TRAFFIC CONTROL IN THE GORE AREA BETWEEN I.R. 71 AND RAMP SBOR-M WITHIN THE LIMITS OF PHASE FIVE AS SHOWN IN THE PLANS.

PHASE FIVE ACTIVITIES CAN BE PERFORMED CONCURRENT WITH PHASE ONE, TWO AND FOUR CONSTRUCTION.

POST-PHASE FIVE
PLANE 1.5 INCHES OF THE PAVEMENT AND SHOULDER ASPHALT SURFACE COURSE WITHIN THE RESURFACING LIMITS SHOWN IN THE PLANS.

PHASE SIX
PLACE FINAL ASPHALT SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND RUMBLE STRIPS ON SOUTHBOUND I.R. 71, RAMP SBOR-M AND RAMP J7 WITHIN THE LIMITS SHOWN ON THE PLANS. ALL PHASE ONE, TWO, THREE, FOUR AND FIVE PAVEMENT, ROADWAY, BARRIER, AND DRAINAGE WORK SHALL BE COMPLETE PRIOR TO COMMENCING PHASE SIX.

MAINTAINING TRAFFIC

PHASE ONE
THREE LANES OF SOUTHBOUND I.R. 71 SHALL BE MAINTAINED THROUGHOUT PHASE ONE AS SHOWN ON SHEETS 18 TO 21. THE THREE LANES SHALL BE SHIFTED PER SCD MT-102.10 AND AS SHOWN IN THE PLANS TO ACCOMMODATE THE WORKZONE. THE I.R. 71 LEFT SHOULDER SHALL BE CLOSED PER SCD MT-95.45 AS SHOWN IN THE PLANS.

TRAFFIC SHALL BE MAINTAINED ON EXIT RAMP J7 TO SOUTHBOUND S.R. 176 THROUGHOUT PHASE ONE. THE RAMP SHALL REMAIN OPEN PER SCD MT-98.21 AND AS SHOWN IN THE PLANS.

TRUCK LANE USE (R4-H5aL) AND ADVISORY SPEED (W13-1P) SIGNS AS SPECIFIED IN ODOT SCD MT-102.10 ARE NOT REQUIRED.

CLOSE THE LEFT SHOULDER OF NORTHBOUND S.R. 176 PER ODOT SCD MT-95.45 TO PROVIDE A WORK ZONE AND CONSTRUCTION ACCESS FOR THE INSTALLATION OF THE WATER QUALITY STRUCTURE ACCESS DRIVE AND OUTFALL CONDUITS. MAINTAIN TRAFFIC ON THE EXISTING TWO LANES OF NORTHBOUND S.R. 176.

REMOVE EXISTING CONFLICTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS AND INSTALL TEMPORARY PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS AS SHOWN ON THE PLANS AND PER THE STANDARD CONSTRUCTION DRAWINGS NOTED IN THIS PHASE.

PHASE TWO
EXIT RAMP J7 TO SOUTHBOUND S.R. 176 FROM SOUTHBOUND I.R. 71 SHALL BE CLOSED DURING PHASE TWO WEEKEND WORK ACTIVITIES ONLY. EXIT RAMP CLOSURE SHALL BE LIMITED TO ONE OR MORE WEEKEND CLOSURES BEGINNING AT 9:00 PM ON FRIDAY. THE RAMP SHALL REOPEN BY 5:00 A.M. ON MONDAY.

THREE LANES OF SOUTHBOUND I.R. 71 SHALL BE MAINTAINED THROUGHOUT PHASE TWO AS SHOWN ON SHEET 23. THE PHASE ONE LANE SHIFT, MARKINGS, SIGNING, AND PORTABLE BARRIER REMAIN IN PLACE DURING PHASE TWO EXCEPT THAT PORTABLE BARRIER EXTENDS TO CLOSE EXIT RAMP J7 AND EDGE LINE MARKINGS REPLACE DOTTED LINE MARKINGS AT THE RAMP GORE AS SHOWN IN THE PLANS.

TRAFFIC TO SOUTHBOUND S.R. 176 SHALL BE MAINTAINED ON A PRIMARY DETOUR AS SHOWN ON SHEET 16 AND A LOCAL DETOUR AS SHOWN ON SHEET 17 .

PHASE ONE TEMPORARY TRAFFIC CONTROL DEVICES APPROACHING THE RAMP CLOSURE SHALL REMAIN IN PLACE DURING PHASE TWO AS SHOWN IN THE PLANS.

POST-PHASE TWO
STOP I.R. 71 AND RAMP J7 TRAFFIC DURING AN OFF-PEAK PERIOD PER THE STOPPAGE OF MAINLINE TRAFFIC NOTE ON SHEET 14 TO ACCOMMODATE THE OVERHEAD SIGN INSTALLATION.

PHASE THREE
MAINTAIN TRAFFIC ON SOUTHBOUND I.R. 71 AND RAMP SBOR-M AS SHOWN ON SHEETS 24 TO 26. CLOSE THE RIGHT SHOULDER OF RAMP SBOR-M WITH PORTABLE BARRIER PER ODOT SCD MT-98.10 AND MT-95.45. SHIFT THE RAMP LANE LEFT (EAST) FOR THE LENGTH OF THE SHOULDER CLOSURE. MAINTAIN A MINIMUM RAMP LANE WIDTH OF 12 FT.

NO LANES OF SOUTHBOUND I.R. 71 SHALL BE IMPACTED BY PHASE THREE ACTIVITIES. THE PHASE ONE LANE SHIFT AND PAVEMENT MARKINGS MAY REMAIN IN PLACE DURING PHASE THREE.

PHASE FOUR
MAINTAIN TRAFFIC ON SOUTHBOUND I.R. 71 AND RAMP SBOR-M AS SHOWN ON SHEETS 27 TO 29. CLOSE THE RIGHT SHOULDER OF SOUTHBOUND I.R. 71 WITH PORTABLE BARRIER PER ODOT SCD MT-95.45. SHIFT SBOR-M TRAFFIC ONTO THE NEW RAMP PAVEMENT CONSTRUCTED IN PHASE THREE. CLOSE THE LEFT SHOULDER AND NARROW THE LANE OF RAMP SBOR-M WITH PORTABLE BARRIER PER ODOT SCD MT-95.45 AND MT-98.10.

THREE LANES OF SOUTHBOUND I.R. 71 SHALL BE MAINTAINED DURING PHASE FOUR. THE PHASE ONE LANE SHIFT AND PAVEMENT MARKINGS MAY REMAIN IN PLACE DURING PHASE FOUR.

PHASE FIVE
MAINTAIN TRAFFIC ON SOUTHBOUND I.R. 71 AND RAMP SBOR-M AS SHOWN ON SHEETS 30 TO 32. CLOSE THE RIGHT LANE OF SOUTHBOUND I.R. 71 WITH PORTABLE BARRIER PER ODOT SCD MT-95.40. MAINTAIN SBOR-M TRAFFIC PER PHASE FOUR OPERATIONS.

ONE LANE OF SOUTHBOUND I.R. 71 MAY BE CLOSED OVERNIGHT DURING PHASE FIVE. LANE CLOSURES SHALL NOT BEGIN PRIOR TO 7:00 PM AND ALL LANES SHALL REOPEN BY 5:00 AM.

THE PHASE ONE LANE SHIFT AND PAVEMENT MARKINGS MAY REMAIN IN PLACE DURING PHASE FOUR.

POST-PHASE FIVE
TRAFFIC FROM SOUTHBOUND I.R. 71 TO SOUTHBOUND S.R. 176 SHALL BE MAINTAINED ON THE NEW DECELERATION LANE TO EXIT 246.

MAINTAIN TRAFFIC DURING SURFACE COURSE PLANING USING OFF-PEAK LANE CLOSURES AND IN ACCORDANCE WITH ODOT SCDS MT-95.30 AND MT-101.90.

PHASE SIX
MAINTAIN SOUTHBOUND I.R. 71 TRAFFIC USING OFF-PEAK LANE CLOSURES PER SCD MT-95.30. MAINTAIN RAMP SBOR-M TRAFFIC USING OFF-PEAK LANE CLOSURES PER SCD MT-98.10. MAINTAIN RAMP J7 TRAFFIC USING OFF-PEAK LANE CLOSURES PER SCD MT-98.28. PAVEMENT MARKING OPERATIONS FOR ALL ROADWAYS SHALL BE PER SCD MT-99.20.

EXIT RAMP J7 AND ENTRANCE RAMP SBOR-M SHALL REMAIN OPEN THROUGHOUT PHASE SIX.

CALCULATED SED CHECKED DJJ

GENERAL NOTES OF TRAFFIC MAINTENANCE

CUY-71-17.83/
CUY-176-12.76

ITEM 614, MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS, AND THE FOLLOWING:

THE CONTRACTOR SHALL NOT CLOSE ANY LANES DURING PERIODS WHEN SNOW ACCUMULATION IS PROBABLE. DURING THESE PERIODS, DAILY ISOLATED LANE CLOSURES MAY BE USED DURING OFF-PEAK HOURS, WEATHER PERMITTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING SNOW AND DEICING THE ROADWAY PRIOR TO REOPENING AN ISOLATED LANE CLOSURE DURING A SNOW EVENT.

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE WHEN NO LONGER NEEDED DRUMS, SIGNS, PAVEMENT MARKINGS, BARRIERS, BARRICADES, TEMPORARY PAVEMENT, TEMPORARY SIGNALS, AND ALL OTHER TRAFFIC DEVICES USED FOR MOT. IF ANY OF THE ABOVE ITEMS ARE INADVERTENTLY MOVED, EITHER BY AN ERRANT VEHICLE OR OTHER REASON, THE CONTRACTOR SHALL RESET AND REPLACE THEM, IF DAMAGED, WITHIN FOUR HOURS. THE CONTRACTOR SHALL MAINTAIN ALL DEVICES IN SATISFACTORY CONDITION IN ACCORDANCE WITH THE DEPARTMENT'S QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL REMOVE CONFLICTING PAVEMENT MARKINGS BY USE OF HIGH PRESSURE WATER. THE CONTRACTOR SHALL REMOVE CONFLICTING RAISED PAVEMENT MARKERS WITHIN THE RESURFACING LIMITS AS SHOWN IN THE PLANS.

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.

LANE CLOSURE/REDUCTION

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.

CONSTRUCTION ACCESS

THE CONTRACTOR SHALL ACCESS THE WORKSITE FOR THE DECELERATION LANE WIDENING AND RETAINING WALL FROM RAMP J7 BEYOND THE SOUTH END OF THE PORTABLE CONCRETE BARRIER WALL. THE CONTRACTOR SHALL ACCESS THE WORKSITE FOR THE CONCRETE BARRIER WALL FROM THE NORTH END OF THE I-71 SOUTHBOUND AND RAMP SBOR-M SHOULDER CLOSURE PORTABLE CONCRETE BARRIER WALLS. THE CONTRACTOR SHALL ACCESS THE RAMP SBOR-M SHOULDER WIDENING FROM THE NORTH OR SOUTH END OF THE PORTABLE CONCRETE BARRIER WALL INSTALLED IN PHASE THREE.

ALL CONSTRUCTION ACTIVITIES AND STAGING AREAS SHALL BE LOCATED WITHIN THE EXISTING RIGHT-OF-WAY AND SHALL NOT IMPACT TRAFFIC ON ANY ROADWAYS OTHER THAN THOSE DESCRIBED IN THE STAGING AND MAINTENANCE OF TRAFFIC NOTES: SOUTHBOUND I.R. 71, RAMP J7 AND RAMP SBOR-M. ANY DELIVERIES AND/OR STAGING OF MATERIALS AND EQUIPMENT THAT REQUIRE CLOSURE OF ADDITION LANES SHALL BE PERFORMED DURING OFF-PEAK PERIODS UNDER THE APPROVAL OF THE ENGINEER.

CONSTRUCTION ACCESS (CONT'D)

ALL CONSTRUCTION ACCESS POINTS AND STAGING AREAS SHALL BE APPROVED BY THE ENGINEER.

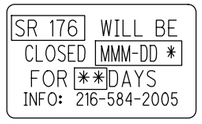
NOTICE OF CLOSURE SIGN

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

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

ITEM	DURATION OF CLOSURE	SIGN 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

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.



W20-H13-60

* CONTRACTOR TO SUPPLY DATE

** CONTRACTOR TO SUPPLY NUMBER OF DAYS

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS FOR NOTICE OF CLOSURE SIGNS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

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 THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

NOTIFICATION OF TRAFFIC RESTRICTIONS (CONT'D)

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 OF TRAFFIC RESTRICTIONS CONT'D

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

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

LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS

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
MEMORIAL DAY	THANKSGIVING
EASTER	

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/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

ALLOWABLE LANE CLOSURES

I.R. 71 SOUTHBOUND LANE CLOSURES SHALL BE RESTRICTED TO THE FOLLOWING TIMES PER THE ODOT DISTRICT 12 PERMITTED LANE CLOSURE TIMES REVISION #15 DATED DECEMBER 7, 2018:

	1 LANE CLOSED	2 LANES CLOSED
WEEKDAYS	7 PM - 7 AM	9 PM - 5 AM
WEEKENDS	7 PM FRI - 6 AM MON	9 PM FRI - 11 AM SAT 7 PM SAT - 11 AM SUN 8 PM SUN - 5 AM MON

THE S.R. 176 SOUTH RAMP FROM I.R. 71 WEEKEND CLOSURE SHALL BE RESTRICTED TO BEGIN AT 9:00 PM FRIDAY. THE RAMP SHALL REOPEN TO TRAFFIC NO LATER THAN 5:00 AM MONDAY.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UN-COMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

WORKZONE DROPOFFS

THE CONTRACTOR SHALL RAMP ALL DROPOFFS IN WORK ZONES AND EXPOSED CASTINGS IN RESURFACING AREAS WITH ASPHALT CONCRETE FOR MAINTAINING TRAFFIC PER C&MS 614.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AT WORK ZONE DROPOFFS AND AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 80 CY

HAUL ROADS

THE CONTRACTOR SHALL COMPLY WITH ALL LOAD RESTRICTIONS.

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.

CALCULATED SED CHECKED DJJ

MAINTENANCE OF TRAFFIC GENERAL NOTES

CUY-71-17.83/
CUY-176-12.76

ITEM 614 - WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

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

www.dot.state.oh.us/Divisions/Engineering/Roadway/DesignStandards/roadway/Pages/ImpactAttenuators.aspx

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 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, PORTABLE CHANGEABLE MESSAGE SIGNS CLASS A

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CLASS 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 UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET.

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.

THREE PROBABLE PCMS LOCATIONS ARE SHOWN ON DETOUR SHEETS 16 - 17. 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. AFTER THE CONSTRUCTION ACTIVITIES NECESSITATING THE WEEKEND DETOUR ARE COMPLETE, THE PCMS MAY BE RELOCATED TO OTHER LOCATIONS FOR OTHER MOT PHASES AT THE DIRECTION OF THE ENGINEER.

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 CLASS A (CONT'D)

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.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 8 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN CLASS A, AS PER PLAN (3 PCMS SIGNS FOR 6 MONTHS)	18 SIGN MONTHS

ADVANCE WORK ZONE INFORMATION

ADVANCE WORK ZONE INFORMATION SIGNS, AS USED IN THIS NOTE, ARE FIXED MESSAGE TYPES. THE SIGNS ARE TO BE LOCATED AT EXTREME DISTANCE FROM THE WORK AREA, AS SHOWN IN THE PLANS.

THE SIGNS SHALL BE BLACK ON ORANGE (INCLUDING A BLACK BORDER). THE LAYOUT SHALL BE IN CONFORMANCE WITH TEM CHAPTER 211.

WHEN REGULATORY INFORMATION IS PROVIDED, IT SHALL BE DISPLAYED SEPARATELY AS A STANDARD BLACK-ON-WHITE SIGN. MIXING OF BLACK-ON-WHITE REGULATORY INFORMATION ON A BLACK-ON-ORANGE INFORMATION SIGN IS PROHIBITED.

IF THE MOTORIST IS BEING DETOURED OR IF AN ALTERNATE ROUTE IS PROVIDED, THE ROUTE SHOULD BE SIGNED WITH ASSEMBLIES CONSISTING OF THE APPROPRIATE BLACK-ON-ORANGE DETOUR OR ALT MARKER WITH A STANDARD ROUTE MARKER AND ARROW PLATE. IF MORE TARGET VALUE IS DESIRED, THIS TRAIL BLAZER INFORMATION MAY BE SHOWN ON AN ORANGE PANEL (OMUTCD SECTION 2D.32).

ROUTE SIGN ASSEMBLIES SHALL BE SIZED ACCORDING TO THE TYPE OF ROAD ON WHICH THEY ARE LOCATED IN ACCORDANCE WITH THE OMUTCD.

SUPPORTS FOR SIGN INSTALLATIONS SHALL CONFORM TO ALL EXISTING STANDARDS FOR PERMANENT SIGNS. THESE SIGNS SHOULD NOT BE ATTACHED TO EXISTING SUPPORTS EXCEPT AS NOTED IN THE PLANS.

ALL ADVANCE WORK ZONE INFORMATION SIGN INSTALLATIONS LOCATED OUTSIDE OF THE PROJECT WORK LIMITS SHALL BE PAID FOR UNDER LUMP SUM ITEM 614 - MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED IN THE PLANS.

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 TOT HE 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 TOT HE 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 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, ARE ALLOWED TO PERFORM OTHER WORK ON THE PROJECT. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUR THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

WORKSITE TRAFFIC SUPERVISOR CONT'D

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 FIVE (5) CALENDAR DAYS PRIOR TO THIS MEETING.
8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.
9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED, AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.
11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
    a. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).
    b. DAILY TTC SETUP AND REMOVAL.
    c. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.
    d. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.
    e. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.
    f. ALL OTHER EMERGENCY TTC NEEDS.

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OFFICE OF TRAFFIC GENERAL NOTES

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WORKSITE TRAFFIC SUPERVISOR CONT'D

12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN #11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.

13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.

B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.

C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

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

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

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE PAID FOR ON A UNIT PRICE (MONTHLY) BASIS UNDER ITEM 614 - WORKSITE TRAFFIC SUPERVISOR.

ITEM 614, WORKSITE TRAFFIC SUPERVISOR 6 MONTHS

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 CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE ALONG TAPERS AND TRANSITION AREAS AND 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.

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 STACK OF BARRIER REFLECTORS.

PAYMENT FOR OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE FOLLOWING ITEMS:

ITEM 614, BARRIER REFLECTOR, TYPE 1
ITEM 614, OBJECT MARKER, ONE-WAY

ALSO, THE FOLLOWING ESTIMATE QUANTITIY HAS BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, INCREASED BARRIER DELINEATION - 640 EACH

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

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, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

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

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

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

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.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS CONT'D

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.

ITEM 614, SPECIAL LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 256 HOURS

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

CALCULATED SED CHECKED DJJ

GENERAL NOTES

MAINTENANCE OF TRAFFIC

CUY-71-17.83/
CUY-176-12.76

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.

WORK ZONE PAVEMENT MARKINGS
ODOT ITEM 642 PAINT SHALL BE USED FOR ALL TEMPORARY WORK ZONE PAVEMENT MARKINGS WITHIN THE LIMITS OF PAVING WORK.

ALL PAVEMENT MARKINGS (CENTERLINE, LANE LINE, CHANNELIZING LINE, EDGE LINE, TRANSVERSE LINE, ETC.) NECESSARY TO MAINTAIN TRAFFIC ON THE COMPLETED AND EXISTING INTERMEDIATE COURSE SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ALL WORK ZONE PAVEMENT MARKINGS AND SIGNS REQUIRED FOR A PARTICULAR LANE CLOSURE OF TRAFFIC PATTERN SHALL BE INSTALLED ON A SINGLE WORK DAY AND THE CORRESPONDING TRAFFIC PATTER SHALL BE IMMEDIATELY IMPLEMENTED. IN ADDITION, THE REQUIREMENTS OF ODOT C&MS 614.11 SHALL APPLY.

THE CONTRACTOR SHALL MAINTAIN WORK ZONE PAVEMENT MARKINGS THROUGHOUT THE DURATION OF EACH PHASE AS SHOWN IN THE PLANS. IF STRIPING CONDITIONS BECOME CONSIDERABLY REDUCED IN VISIBILITY AS DETERMINED BY THE DEPARTMENT IN ACCORDANCE WITH C&MS 614.11.A., THE CONTRACTOR SHALL REPLACE THE DEFICIENT WORK ZONE MARKINGS.

DETOUR ROUTES
THE CONTRACTOR WILL PROVIDE, INSTALL, MAINTAIN, AND SUBSEQUENTLY REMOVE THE DETOUR SIGNING INDICATED IN THESE PLANS AND NOTES.

THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN BARRIERS AND ADVANCE WARNING SIGNS OF THE RAMP CLOSURE AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL MAINTAIN DETOUR ROUTE SIGNING DURING CONSTRUCTION.

PAYMENT FOR THIS DETOUR SIGNING WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - DETOUR SIGNING. THE CONTRACTOR SHALL NOTIFY THE DISTRICT ROADWAY SERVICES MANAGER A MINIMUM OF 14 DAYS IN ADVANCE OF DISPLAYING THE NOTICE OF CLOSURE SIGN TO THE PUBLIC.

THE CONTRACTOR SHALL RESTRIPE ANY MARKINGS ON DETOUR ROUTES MODIFIED OR IMPACTED BY THE CONTRACTOR IN THE OPERATION OF THE DETOUR.

AFTER COMPLETION OF THE DETOUR, IMPACTED OR MODIFIED MARKINGS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER. MARKINGS RATING LOWER THAN SEVEN FOR DURABILITY, VISUAL EFFECTIVENESS, AND NIGHT VISIBILITY IN ACCORDANCE WITH SUPPLEMENT 1047 SHALL BE REPLACED. PAYMENT FOR THIS DETOUR ROUTE PAVEMENT MARKING WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - WORKZONE 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 NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR 621.

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

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

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

REPLACEMENT SIGNS
FLAT SHEET 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 THE APPROVAL OF 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 DAMAGED SIGNS, HARDWARE, AND SUPPORTS AS WELL AS PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

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

REPLACEMENT DRUMS
THE CONSTRUCTION DRUMS 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 INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC. THE COST FOR REMOVING AND DISPOSING DAMAGED DRUMS & PROVIDING AND MAINTAINING REPLACEMENT DRUMS IN ACCORDANCE WITH THE CONTRACT REQUIREMENT OF THE ORIGINAL DRUM SHALL BE INCLUDED IN ITEM 614 - REPLACEMENT DRUM.

AN ESTIMATED QUANTITY OF 20 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614 - 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 R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 70.19.

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 AND 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 4 EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AS SHOWN ON THE MOT PLANS.

STOPPAGE OF MAINLINE TRAFFIC (OVERHEAD SIGN WORK)
STOPPAGE TIMES SHALL BE SCHEDULED FOR OFF-PEAK TRAFFIC TIMES AND COINCIDE WITH THE ODOT DISTRICT 12 PERMITTED LANE CLOSURE TIMES. NO COMPLETE STOPPAGE WILL BE SCHEDULED DURING THOSE TIMES WHICH ARE UNACCEPTABLE FOR A LANE REDUCTION.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER/PERMIT OFFICE AND THE ODOT PUBLIC INFORMATION OFFICE SEVEN (7) DAYS PRIOR TO ANY MAINLINE TRAFFIC STOPPAGE.

PAYMENT FOR THE STOPPAGE OF TRAFFIC SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC EXCEPT FOR THE COST OF LAW ENFORCEMENT OFFICER WITH PATROL CAR WHICH WILL BE PAID SEPARATELY.

SEE SCD MT-99.60 FOR ADDITIONAL INFORMATION.

CONTRACTORS EQUIPMENT - OPERATION AND STORAGE
THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN WORK OPERATIONS ARE SCHEDULED TO CONTINUE WITH THE NEXT WORKDAY. OTHERWISE, THE EQUIPMENT THAT IS NOT PROTECTED BY CONCRETE BARRIERS SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER CMS 614.035. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT, TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/SUPERVISOR HAS BEEN GRANTED.

FAILURE TO COMPLY
IF THERE IS ANY FAILURE TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS OUTLINED IN THESE PLANS AND NOTES OR WITH THE PROVISIONS OF THE OMUTCD, THE ROADWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED TO BE IN A CONDITION FOR SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE ROADWAY IN THE VICINITY OF THE WORK AREA IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

CALCULATED SED CHECKED DJJ

TRAFFIC GENERAL NOTES

MAINTENANCE

CUY-71-17.83/
CUY-176-12.76

SUMMARY OF TRAFFIC SUBSUMMARY

CALCULATED GSH
CHECKED PDO

MAINTENANCE

CUY-71-17.83/
CUY-176-12.76

SHEET NO.	BASELINE	STATION FROM	STATION TO	SIDE	614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	614 BARRIER REFLECTOR, TYPE 1, ONE WAY EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS I, 6" MILE	614 WORK ZONE CENTER LINE, CLASS I, 6" MILE	614 WORK ZONE EDGE LINE, CLASS I, 6" (WHITE) MILE	614 WORK ZONE EDGE LINE, CLASS I, 6" (YELLOW) MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8" FT	614 WORK ZONE DOTTED LINE, CLASS I FT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I FT	621 RAISED PAVEMENT MARKER REMOVED EACH	622 PORTABLE BARRIER, 32" FT
		PHASE ONE															
18	I.R. 71	165+55.09	174+55.09	LT		94							1800			17	
18	I.R. 71	165+00.00	171+55.09	LT		32						0.12					
18	I.R. 71	165+00.00	171+55.09	LT		32					0.12						
18	I.R. 71	165+00.00	165+55.09	LT		2			0.02								
19	I.R. 71	156+64.41	165+00.00	LT		8					0.16						
19	I.R. 71	154+00.00	165+00.00	LT		10						0.21					
19	I.R. 71	154+00.00	165+00.00	LT		10			0.27							14	
19	I.R. 71	162+67.48		RT	1												
19	I.R. 71	154+00.00	162+67.48	LT/RT			18	18									876
19	I.R. 71	154+00.00	161+97.32	LT						0.15						21	
19	I.R. 71	154+41.31	156+64.41	LT		6							224				
19	I.R. 71	154+00.00	154+41.31	LT										41			
20	I.R. 71	150+36.27	154+00.00	LT										355			
20	I.R. 71	148+97.08	154+00.00	LT/RT			10	10									494
20	I.R. 71	149+00.00	154+00.00	LT		12			0.09							6	
20	RAMP J7 / I.R. 71	109+00.00	154+00.00	LT/RT		37						0.16					
20	I.R. 71	148+16.12	152+27.57	LT										411			
20	I.R. 71	145+00.00	150+36.27	LT		27					0.10						
20	I.R. 71	145+00.00	154+00.00	LT		42							666			7	
20	I.R. 71 / RAMP J7	148+16.12	107+00.54	LT/RT		6							77			4	
20	RAMP J7	107+00.54	109+00.00	RT		12					0.04						
20	I.R. 71	148+16.12	147+38.78	LT		6							77			4	
20	I.R. 71	148+16.12	147+38.78	LT											50		
20	I.R. 71	147+61.89	154+00.00							0.12						17	
20	I.R. 71	145+00.00	147+38.78	LT		13						0.05					
21	I.R. 71	143+00.00	145+00.00	LT		11					0.04						
21	I.R. 71	143+00.00	145+00.00	LT		11						0.04					
21	I.R. 71	140+00.00	145+00.00	LT		52							1000			11	
22	RAMP J7	109+00.00	110+87.31	RT		11					0.04						
22	RAMP J7	109+00.00	112+50.00	RT		19						0.07					
		PHASE TWO															
23	I.R. 71	147+47.85	152+27.57	LT		10						0.03					
23	I.R. 71	147+87.48	152+27.57	LT			9	9									440
		PHASE THREE															
24	I.R. 71	167+00.00	165+00.00	LT		22					0.04	0.04					
25	I.R. 71	165+00.00	154+00.00	LT	1	103	17	17			0.21	0.01	850	135		20	821
26	I.R. 71	154+00.00	150+37.10	LT		19	7	7			0.07						339
		PHASE FOUR															
27	I.R. 71	176+00.00	179+25.16	LT		18					0.06						
28	I.R. 71	171+55.09	176+00.00	LT		24					0.09						
28	I.R. 71	165+00.00	174+00.00	LT	2		35	35									1714
28	I.R. 71	165+00.00	172+27.00	LT		34						0.12					
28	I.R. 71	165+00.00	171+80.05	LT		37					0.13						
29	I.R. 71	159+55.94	165+00.00	LT			22	22									1086
29	I.R. 71	159+58.59	165+00.00	LT		29						0.10	50				
29	I.R. 71	159+27.22	165+00.00	LT		32					0.11						
		PHASE FIVE															
32	I.R. 71	158+06.17	161+95.64	LT			8	8									390
TOTALS CARRIED TO GENERAL SUMMARY					4	781	126	126	0.38	0.27	2.16		4744	942	50	121	6160

1

SOUTH

M3-3-24

176

M1-5-45

ROAD CLOSED AHEAD

W20-3-36

2

SOUTH

M3-3-24

176

M1-5-45

DETOUR AHEAD

W20-2-36

3

DETOUR

M4-8-24

SOUTH

M3-3-24

176

M1-5-45

M5-2R-21

4

DETOUR

M4-8-24

SOUTH

M3-3-24

176

M1-5-45

M6-3-21

5

DETOUR

M4-8-24

SOUTH

M3-3-24

176

M1-5-45

M6-2R-21

6

END DETOUR

M4-8A-24

SOUTH

M3-3-24

176

M1-5-30

EXIT 1A

176 SOUTH

Parma

EXIT ONLY

MOUNT SIGNS TO END POST OF EXISTING OVERHEAD SIGN TRUSS

P1

P2

PORTABLE CHANGABLE MESSAGE SIGNS (PCMS) TO BE PROGRAMMED BY THE CONTRACTOR. MESSAGE(S) SHALL BE APPROVED BY THE ENGINEER. POTENTIAL TWO-PHASE DISPLAY:

PHASE 1	PHASE 2
OH-176 CLOSED <DATE>	FOLLOW DETOUR SB I-77

WORK ZONE

HORIZONTAL SCALE IN FEET

0 1000 2000

CALCULATED SED

CHECKED DJJ

MAINTENANCE OF TRAFFIC
PRIMARY DETOUR MAP

CUY-71-17.83/
CUY-176-12.76

16
127

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1

SOUTH
M3-3-24

176
M1-5-45

ROAD CLOSED AHEAD
W20-3-36

2

SOUTH
M3-3-24

176
M1-5-45

DETOUR AHEAD
W20-2-36

3

DETOUR
M4-8-24

SOUTH
M3-3-24

176
M1-5-45

M6-3-21

4

DETOUR
M4-8-24

SOUTH
M3-3-24

176
M1-5-45

M5-2R-21

5

DETOUR
M4-8-24

SOUTH
M3-3-24

176
M1-5-45

M6-2R-21

6

DETOUR
M4-8-24

176
M1-5-30

M6-1R-21

7

DETOUR
M4-8-24

176
M1-5-30

M6-3-21

8

DETOUR
M4-8-24

176
M1-5-30

M5-1R-21

9

DETOUR
M4-8-24

NORTH
M3-1-24

176
M1-5-30

M6-1L-21

SOUTH
M3-3-24

176
M1-5-30

M6-3-21

10

DETOUR
M4-8-24

176
M1-5-30

M6-1L-21

11

DETOUR
M4-8-24

NORTH
M3-1-24

176
M1-5-45

M6-3-21

12

DETOUR
M4-8-24

NORTH
M3-1-24

176
M1-5-45

M5-2R-21

13

END DETOUR
M4-8A-24

SOUTH
M3-3-24

176
M1-5-30

14

END DETOUR
M4-8A-24

NORTH
M3-1-24

176
M1-5-30

15

DETOUR
M4-8-24

176
M1-5-30

M5-1L-21

P3

PORTABLE CHANGABLE MESSAGE SIGNS (PCMS) TO BE PROGRAMMED BY THE CONTRACTOR. MESSAGE(S) SHALL BE APPROVED BY THE ENGINEER. POTENTIAL TWO-PHASE DISPLAY:

PHASE 1	PHASE 2
EXIT 246 OH-176 CLOSED	FOLLOW DETOUR EXIT 245

HORIZONTAL SCALE IN FEET
0 100 200

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC
LOCAL DETOUR MAP

CUY-71-17.83/
CUY-176-12.76

17
127

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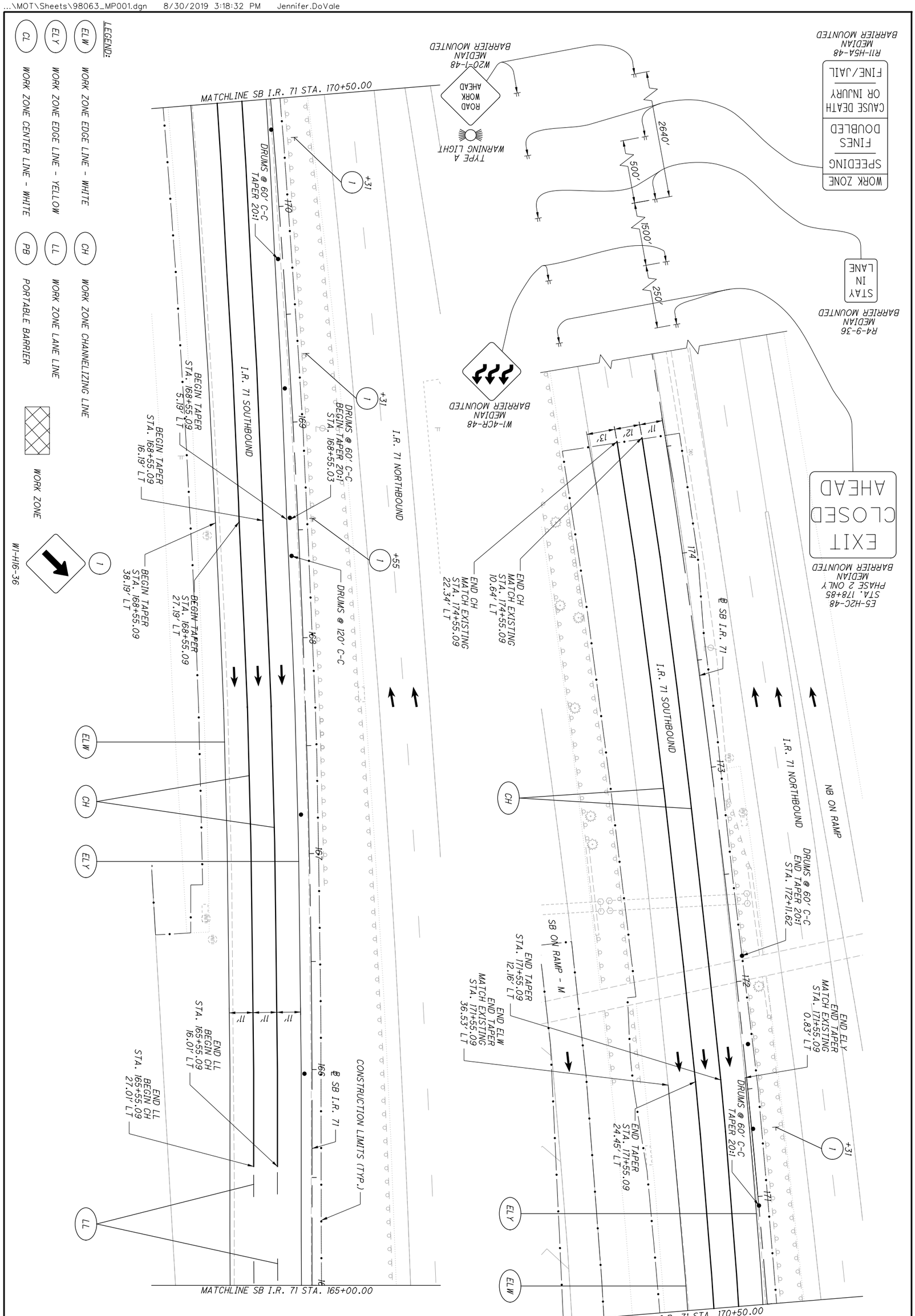
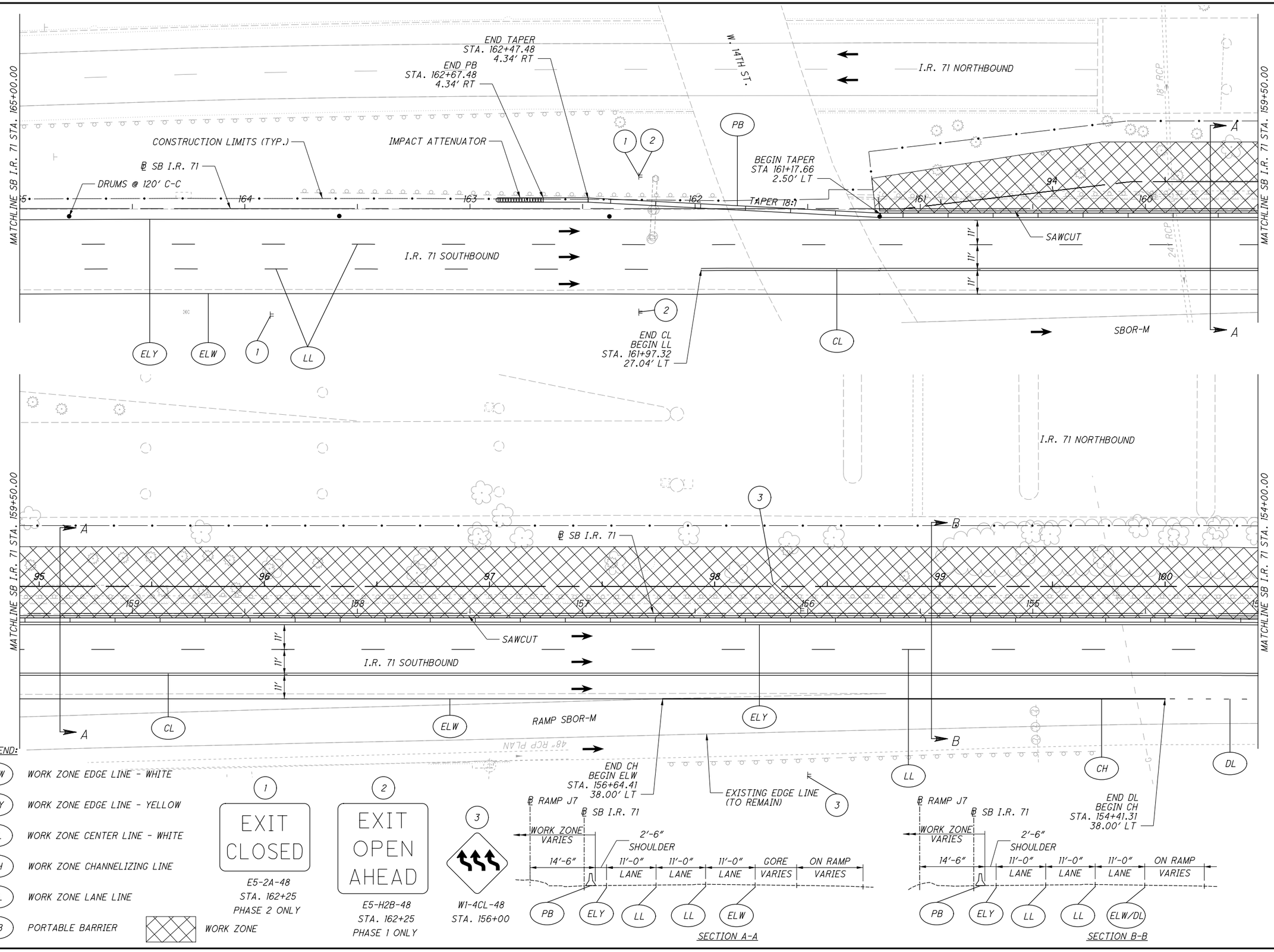


18 / 127	CUY-71-17.83/ CUY-176-12.76	MAINTENANCE OF TRAFFIC PHASE ONE BEGIN TO SB I.R. 71 STA. 165+00	CALCULATED SED / CHECKED DJJ	0 20 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE ONE
SB I.R. 71 STA. 165+00 TO SB I.R. 71 STA. 154+00

CUY-71-17.83/
CUY-176-12.76

19
127

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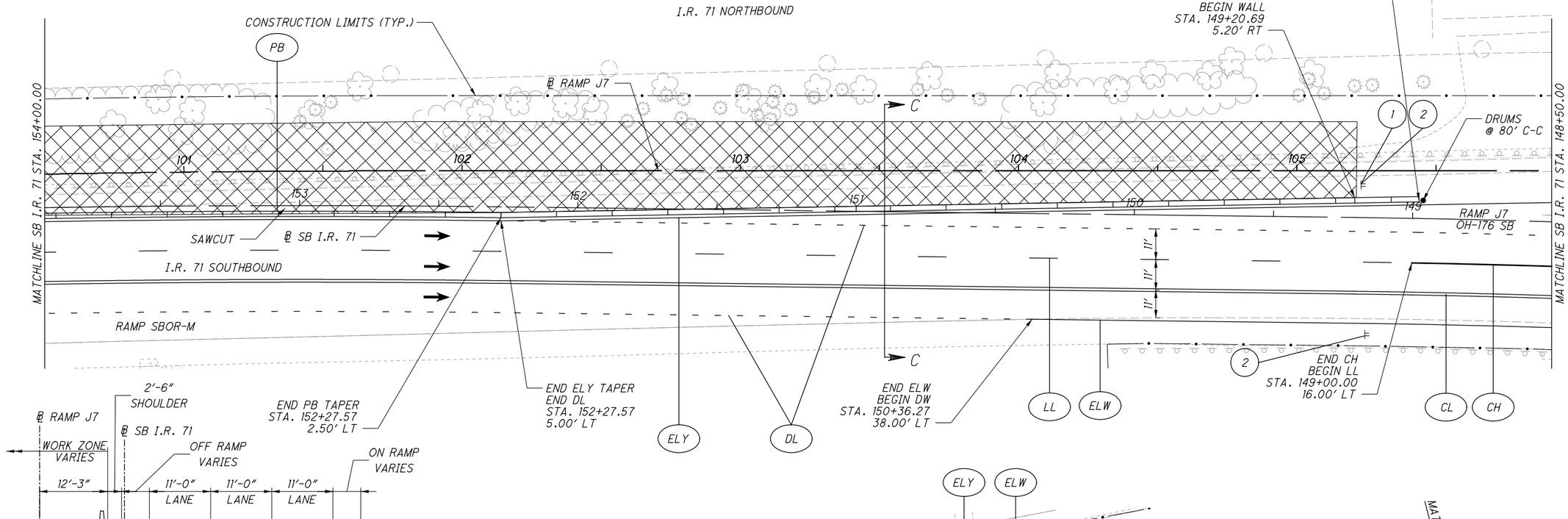
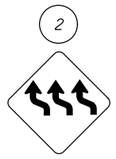


LEGEND:

ELW	WORK ZONE EDGE LINE - WHITE
ELY	WORK ZONE EDGE LINE - YELLOW
CL	WORK ZONE CENTER LINE - WHITE
CH	WORK ZONE CHANNELIZING LINE
LL	WORK ZONE LANE LINE
PB	PORTABLE BARRIER
TL	TRANSVERSE LINE
	WORK ZONE



E5-2-48
STA. 149+19
PHASE 1 ONLY

W1-4CL-48
STA. 149+19

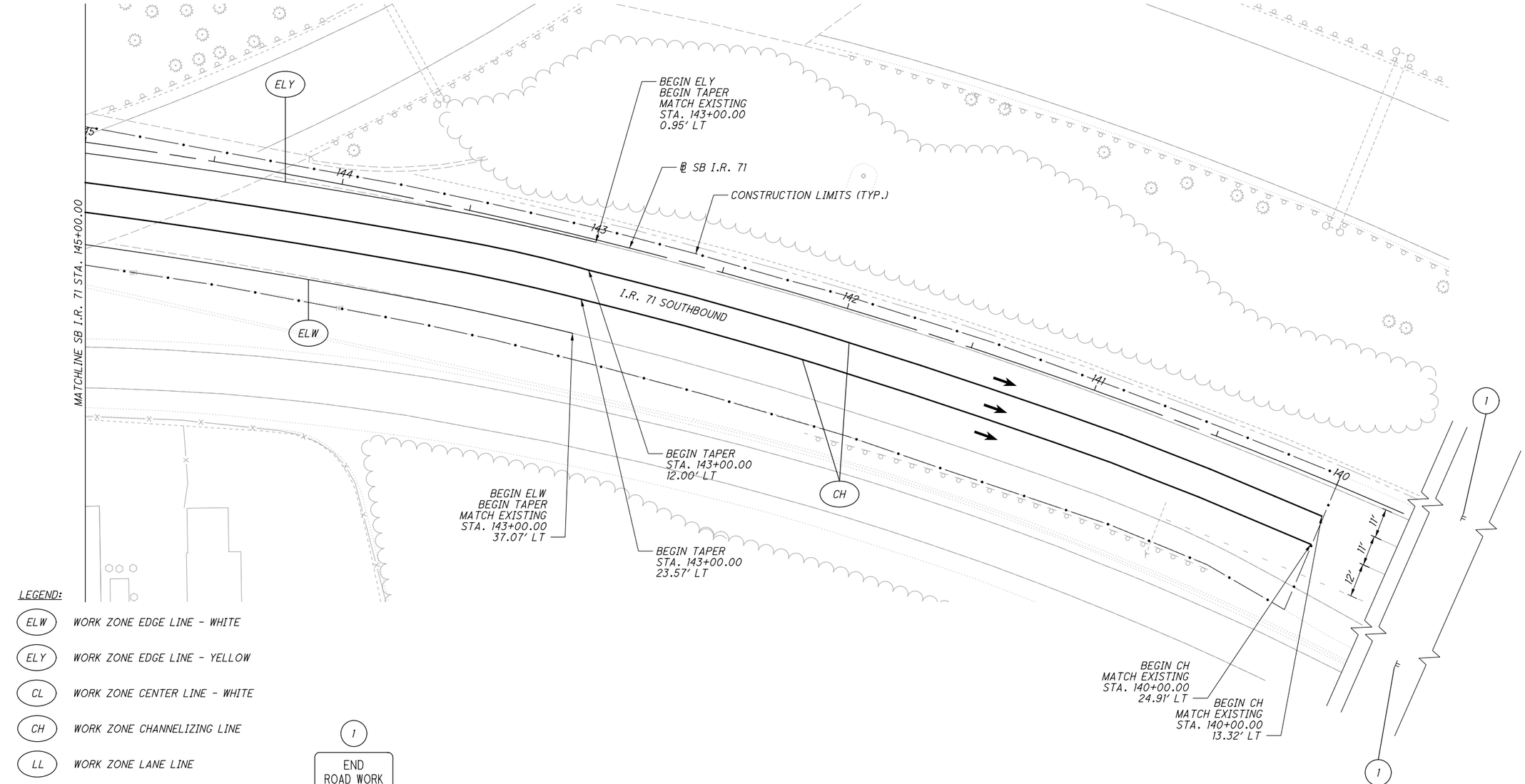
E5-H1c
STA. 146+21

HORIZONTAL SCALE IN FEET
0
20
40

CALCULATED SED
CHECKED DJJ

TRAFFIC PHASE ONE
MAINTENANCE OF TRAFFIC
SB I.R. 71 STA. 154+00 TO SB I.R. 71 STA. 145+00

CUY-71-17.83/
CUY-176-12.76



LEGEND:

- ELW — WORK ZONE EDGE LINE - WHITE
- ELY — WORK ZONE EDGE LINE - YELLOW
- CL — WORK ZONE CENTER LINE - WHITE
- CH — WORK ZONE CHANNELIZING LINE
- LL — WORK ZONE LANE LINE
- PB — PORTABLE BARRIER
- WORK ZONE

1

END
ROAD WORK

G20-2-48

STA. 130+47.70

HORIZONTAL
SCALE IN FEET
0 20 40

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE ONE
SB I.R. 71 STA. 145+00 TO END

CUY-71-17.83/
CUY-176-12.76

...\MOT\Sheets\98063_MP004.dgn 8/31/2019 11:44:32 PM Derek.Johnson

LEGEND:

- ELW — WORK ZONE EDGE LINE - WHITE
- ELY — WORK ZONE EDGE LINE - YELLOW
- CL — WORK ZONE CENTER LINE - WHITE
- CH — WORK ZONE CHANNELIZING LINE
- LL — WORK ZONE LANE LINE
- PB — PORTABLE BARRIER
- TL — TRANSVERSE LINE
- WORK ZONE

1 — END ROAD WORK

G20-2-48

℄ RAMP J7 STA. 113+50.00

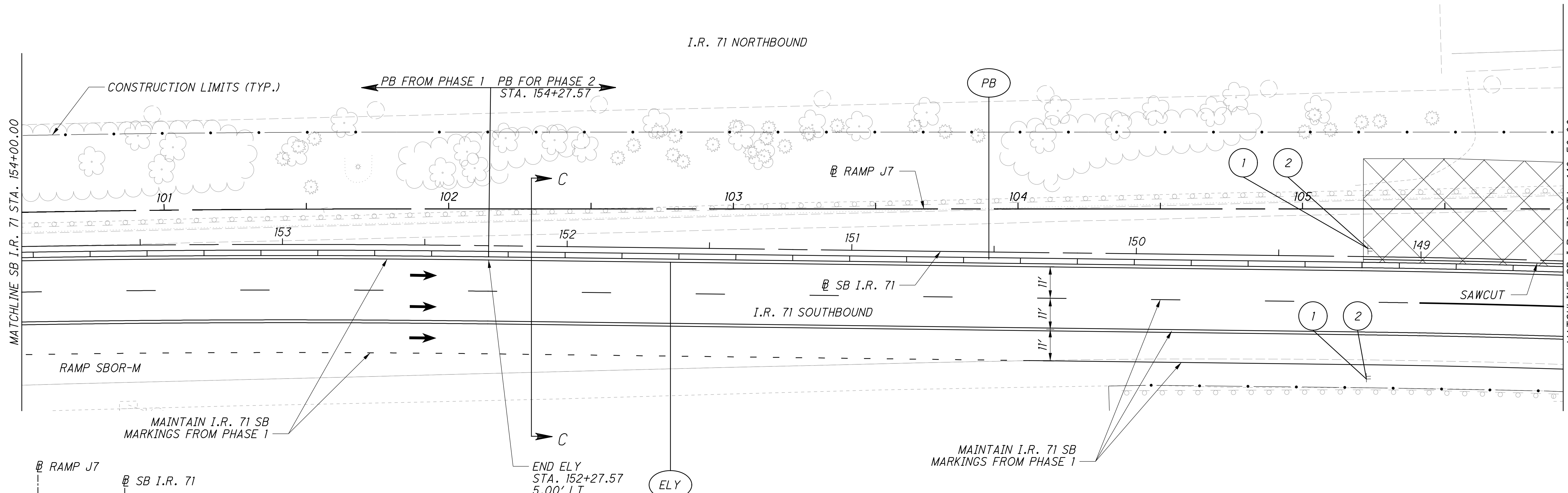
HORIZONTAL SCALE IN FEET
0 20 40

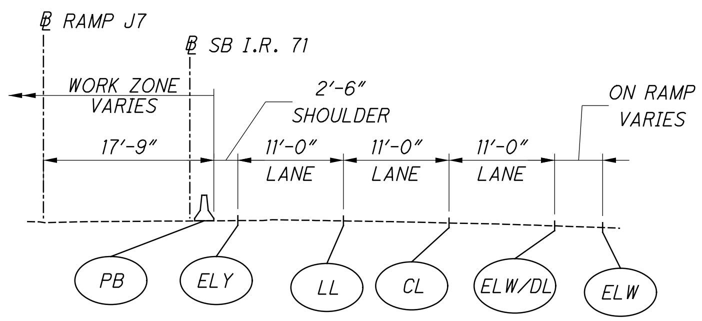
CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE ONE
RAMP J7 STA. 109+00 TO END

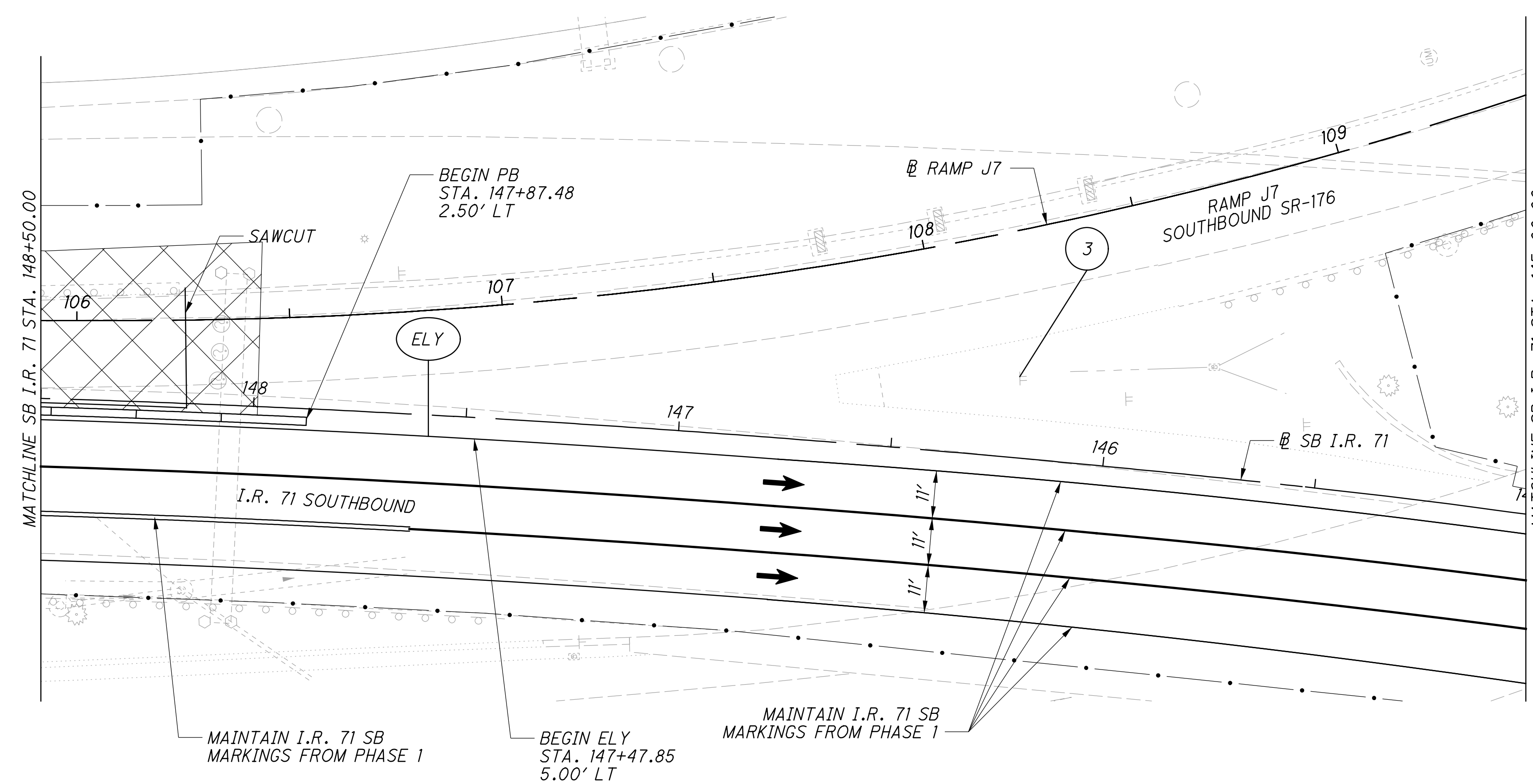
CUY-71-17.83/
CUY-176-12.76

...\MOT\Sheets\98063_MP004A.dgn 8/30/2019 3:18:58 PM Jennifer.DoVale





SECTION C-C



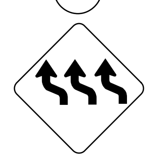
LEGEND:

ELW	WORK ZONE EDGE LINE - WHITE
ELY	WORK ZONE EDGE LINE - YELLOW
CL	WORK ZONE CENTER LINE - WHITE
CH	WORK ZONE CHANNELIZING LINE
LL	WORK ZONE LANE LINE
PB	PORTABLE BARRIER
TL	TRANSVERSE LINE
(hatched)	WORK ZONE

1

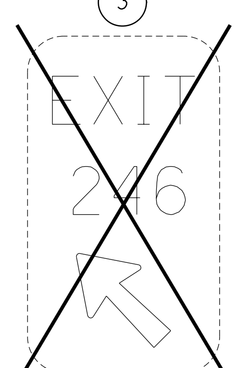
E5-2A-48
STA. 149+19
PHASE 2 ONLY

2



W1-4CL-48
STA. 149+19

3



MASK DURING PHASE 2 ONLY

NOTES

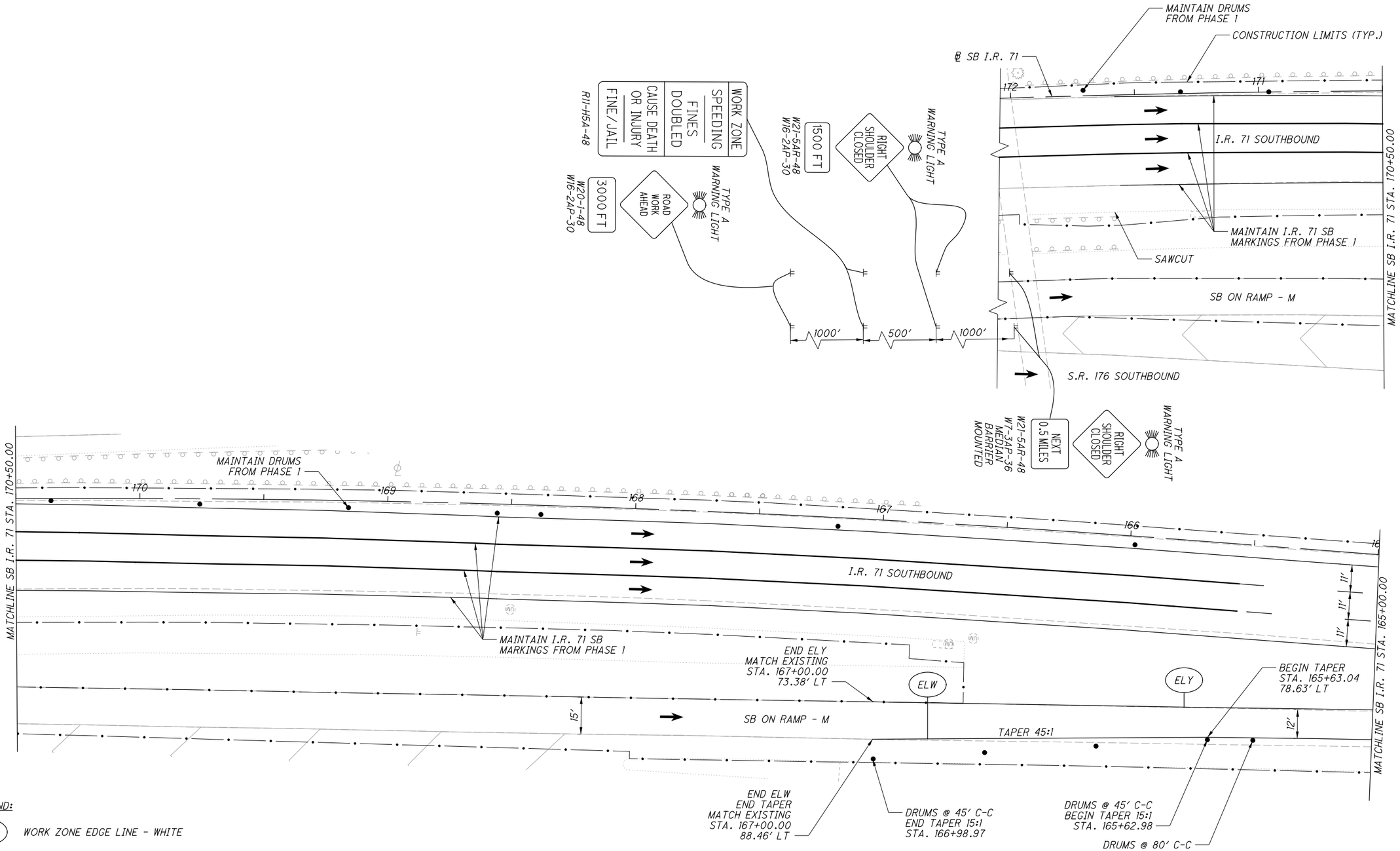
1. SEE PHASE 1 FOR ADDITIONAL STAGING DETAILS.
2. SEE PHASE 1 FOR PROPOSED MARKINGS THAT ARE TO REMAIN FOR PHASE 2.

HORIZONTAL SCALE IN FEET 0 20 40

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE TWO
SB I.R. 71 STA. 154+00 TO SB I.R. 71 STA. 145+00

CUY-71-17.83/
CUY-176-12.76



LEGEND:

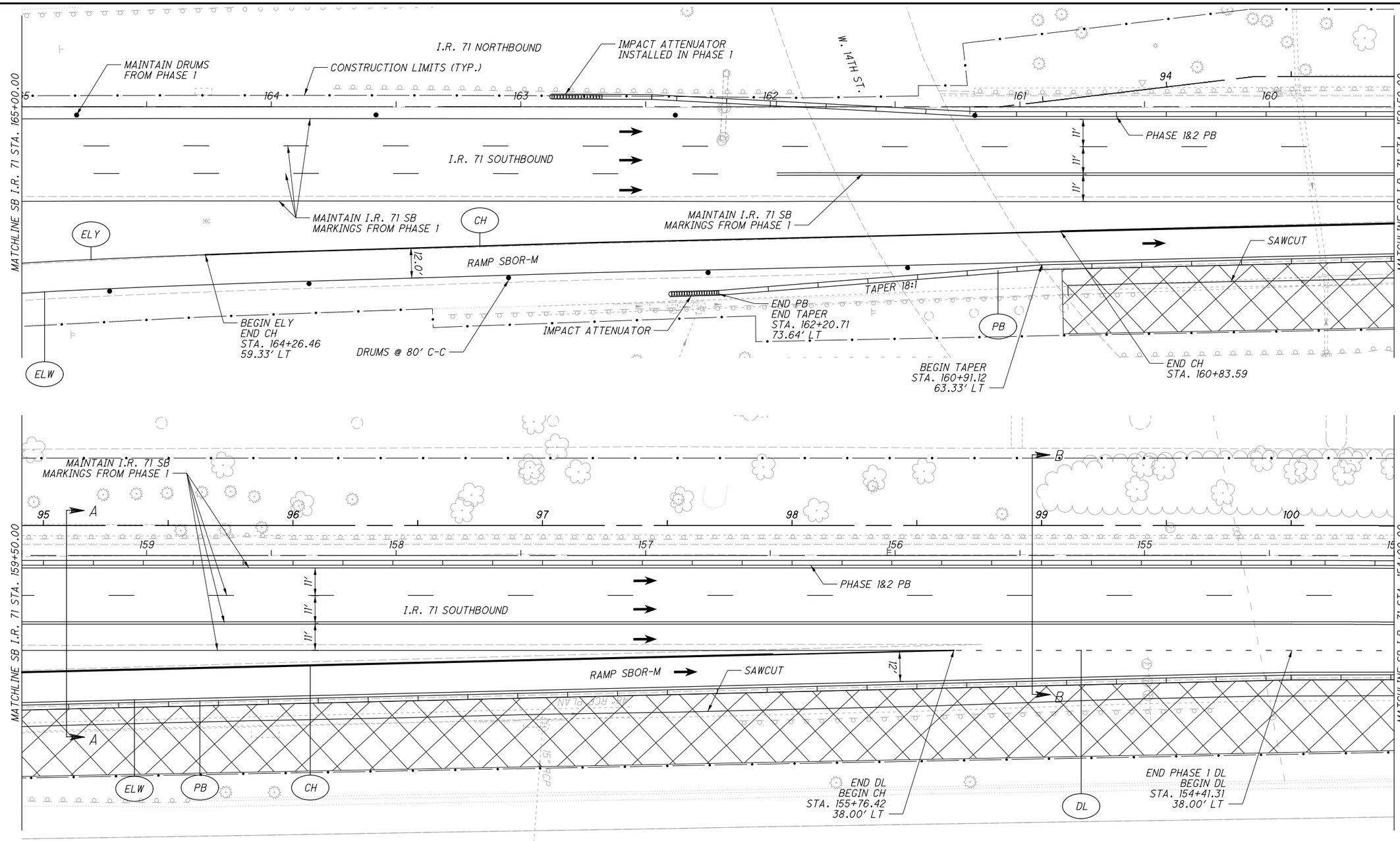
- ELW — WORK ZONE EDGE LINE - WHITE
- ELY — WORK ZONE EDGE LINE - YELLOW
- CL — WORK ZONE CENTER LINE - WHITE
- CH — WORK ZONE CHANNELIZING LINE
- LL — WORK ZONE LANE LINE
- PB — PORTABLE BARRIER
- WORK ZONE

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SED
CHECKED DJJ

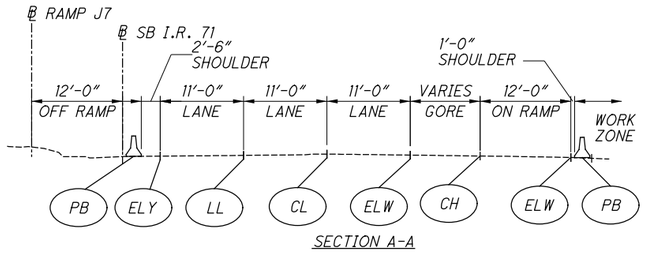
MAINTENANCE OF TRAFFIC PHASE THREE
BEGIN TO SB I.R. 71 STA. 165+00

CUY-71-17.83/
CUY-176-12.76

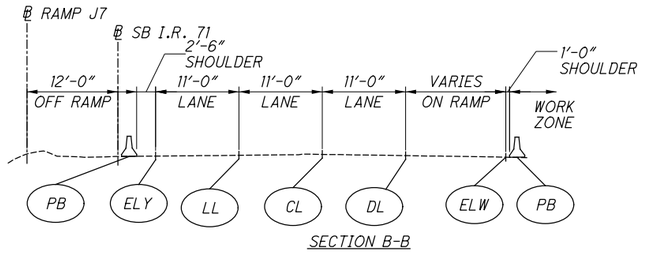


LEGEND:

ELW	WORK ZONE EDGE LINE - WHITE	CH	WORK ZONE CHANNELIZING LINE
ELY	WORK ZONE EDGE LINE - YELLOW	LL	WORK ZONE LANE LINE
CL	WORK ZONE CENTER LINE - WHITE	PB	PORTABLE BARRIER
			WORK ZONE



SECTION A-A



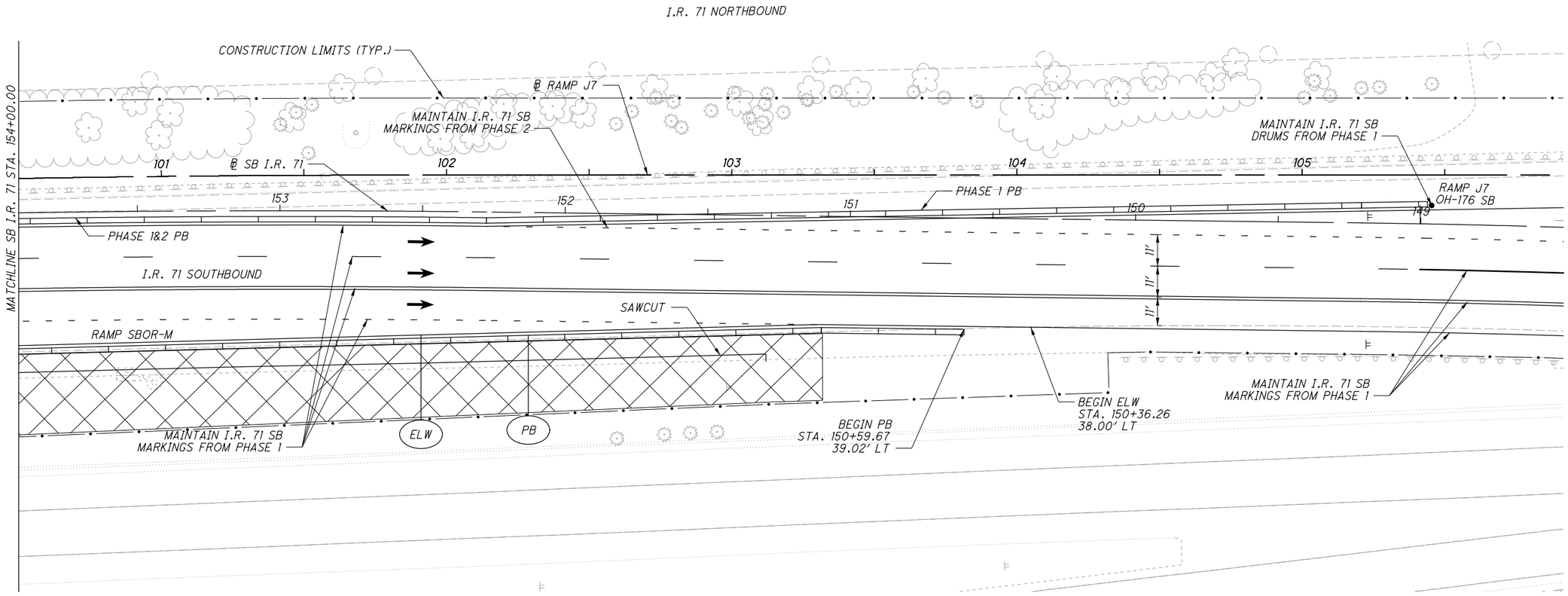
SECTION B-B

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE THREE
SB I.R. 71 STA. 165+00 TO STA. 154+00

CUY-71-17.83/
CUY-176-12.76



LEGEND:

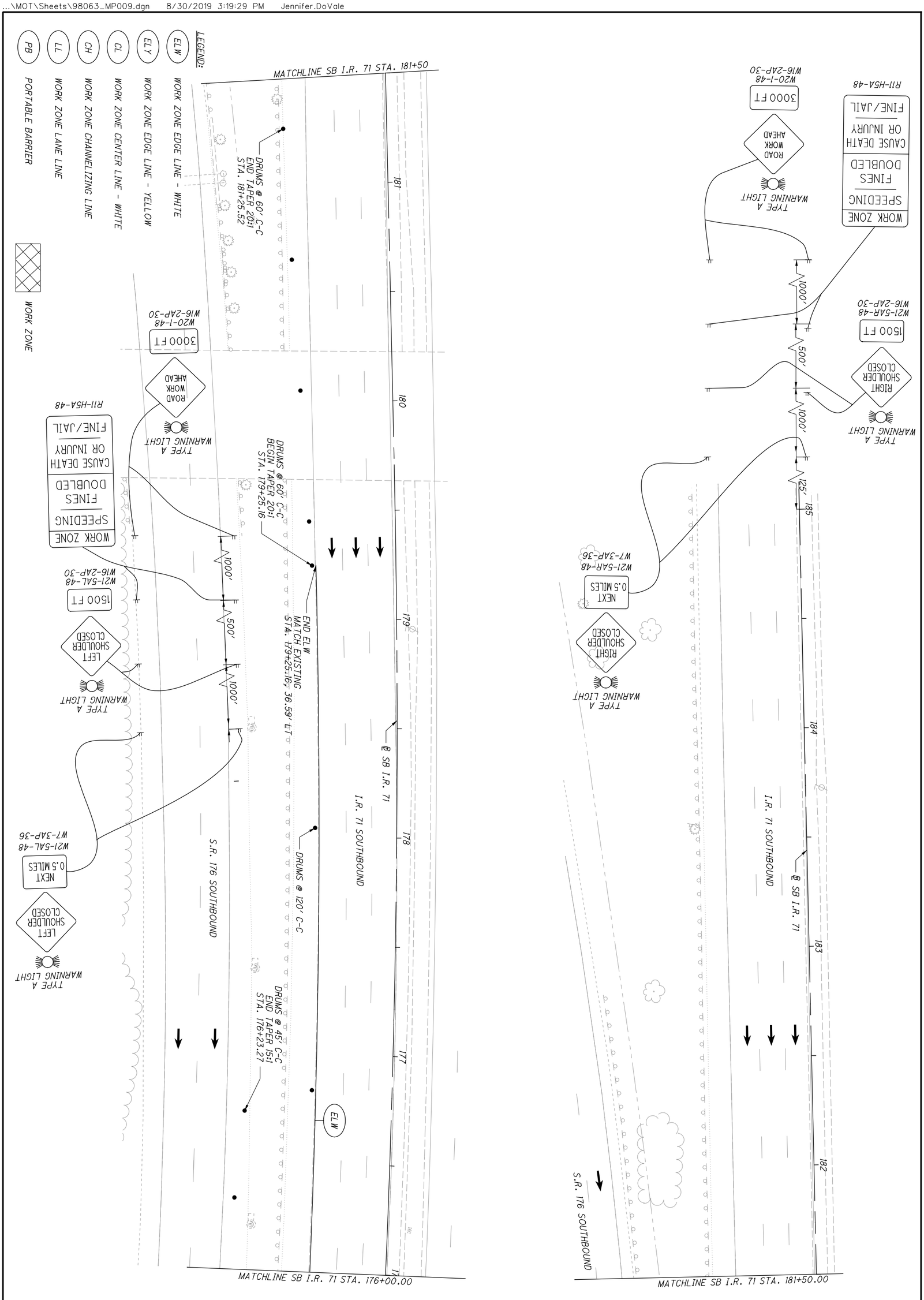
- ELW — WORK ZONE EDGE LINE - WHITE
- ELY — WORK ZONE EDGE LINE - YELLOW
- CL — WORK ZONE CENTER LINE - WHITE
- CH — WORK ZONE CHANNELIZING LINE
- LL — WORK ZONE LANE LINE
- PB — PORTABLE BARRIER
- TL — TRANSVERSE LINE
- WORK ZONE

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE THREE
SB I.R. 71 STA. 154+00 TO END

CUY-71-17.83/
CUY-176-12.76



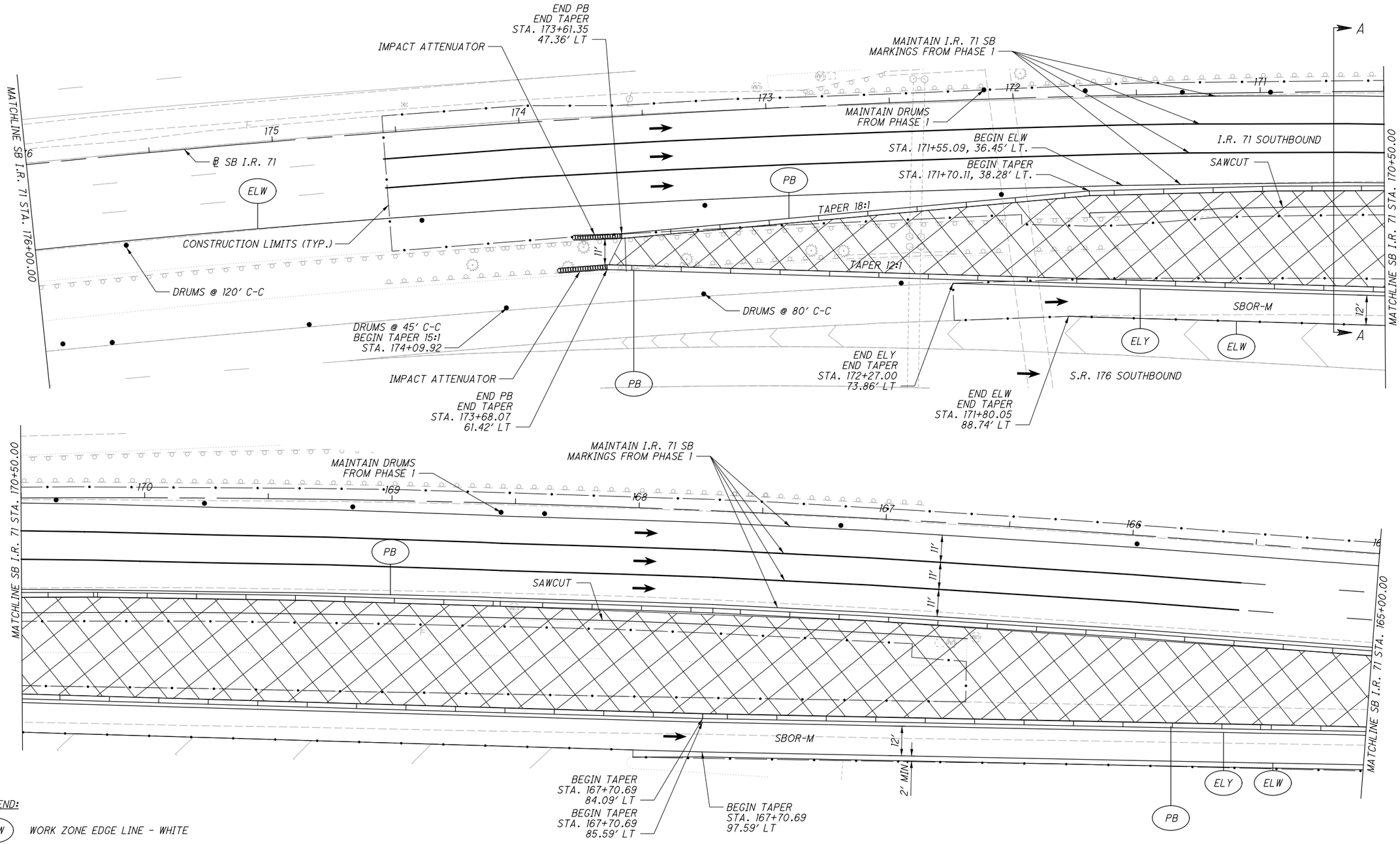
CUY-71-17.83/
CUY-176-12.76

MAINTENANCE OF TRAFFIC PHASE FOUR
BEGIN TO SB I.R. 71 STA. 176+00

CALCULATED SED
CHECKED DJJ

0 20 40
HORIZONTAL SCALE IN FEET

N



LEGEND:

ELW	WORK ZONE EDGE LINE - WHITE
ELY	WORK ZONE EDGE LINE - YELLOW
CL	WORK ZONE CENTER LINE - WHITE
CH	WORK ZONE CHANNELIZING LINE
LL	WORK ZONE LANE LINE
PB	PORTABLE BARRIER

WORK ZONE

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE FOUR
SB I.R. 71 STA. 176+00 TO STA. 165+00

CUY-71-17.83/
CUY-176-12.76

28
127

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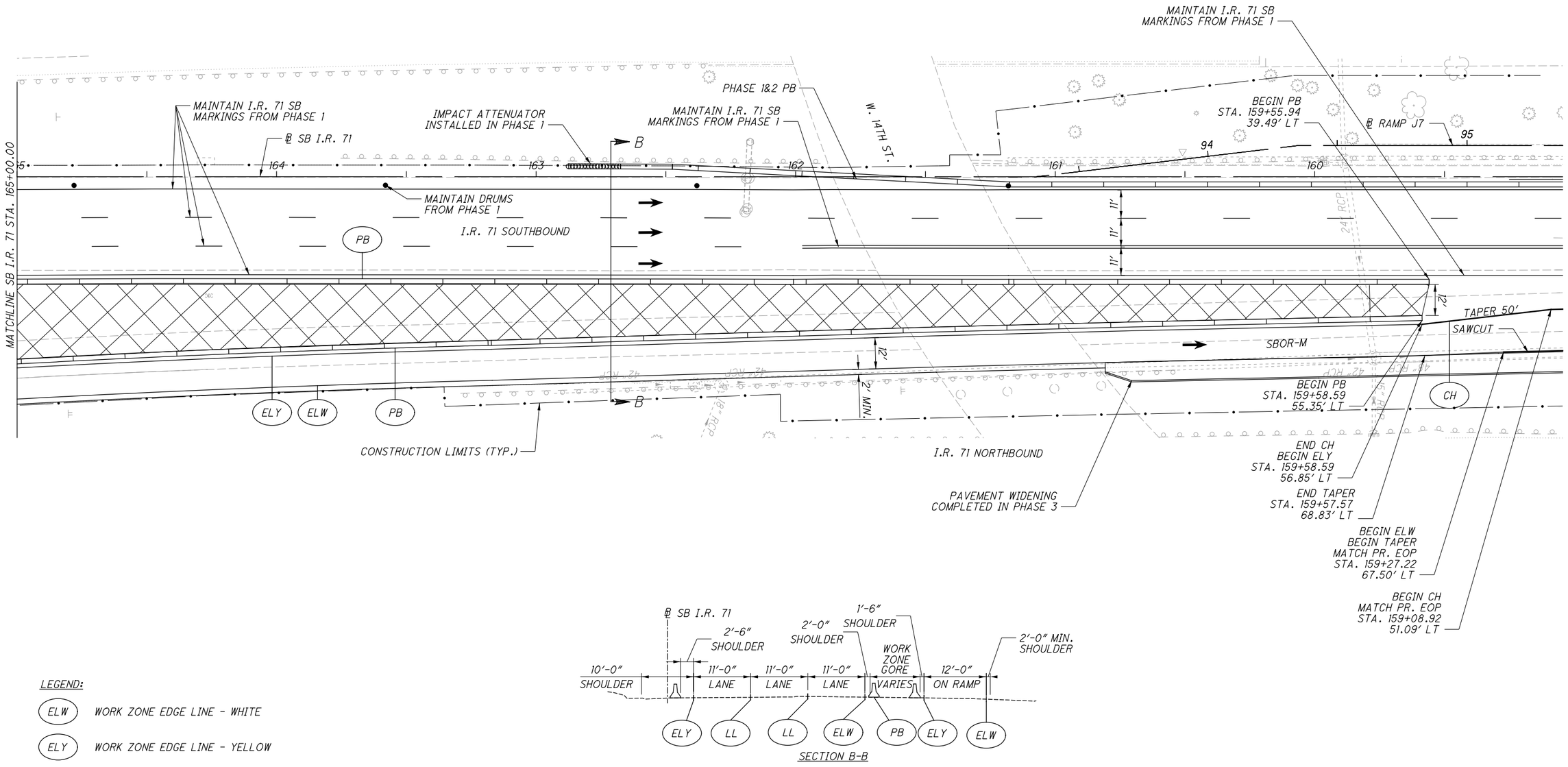


LEGEND:

- ELW — WORK ZONE EDGE LINE - WHITE
- ELY — WORK ZONE EDGE LINE - YELLOW
- CL — WORK ZONE CENTER LINE - WHITE
- CH — WORK ZONE CHANNELIZING LINE
- LL — WORK ZONE LANE LINE
- PB — PORTABLE BARRIER
- WORK ZONE

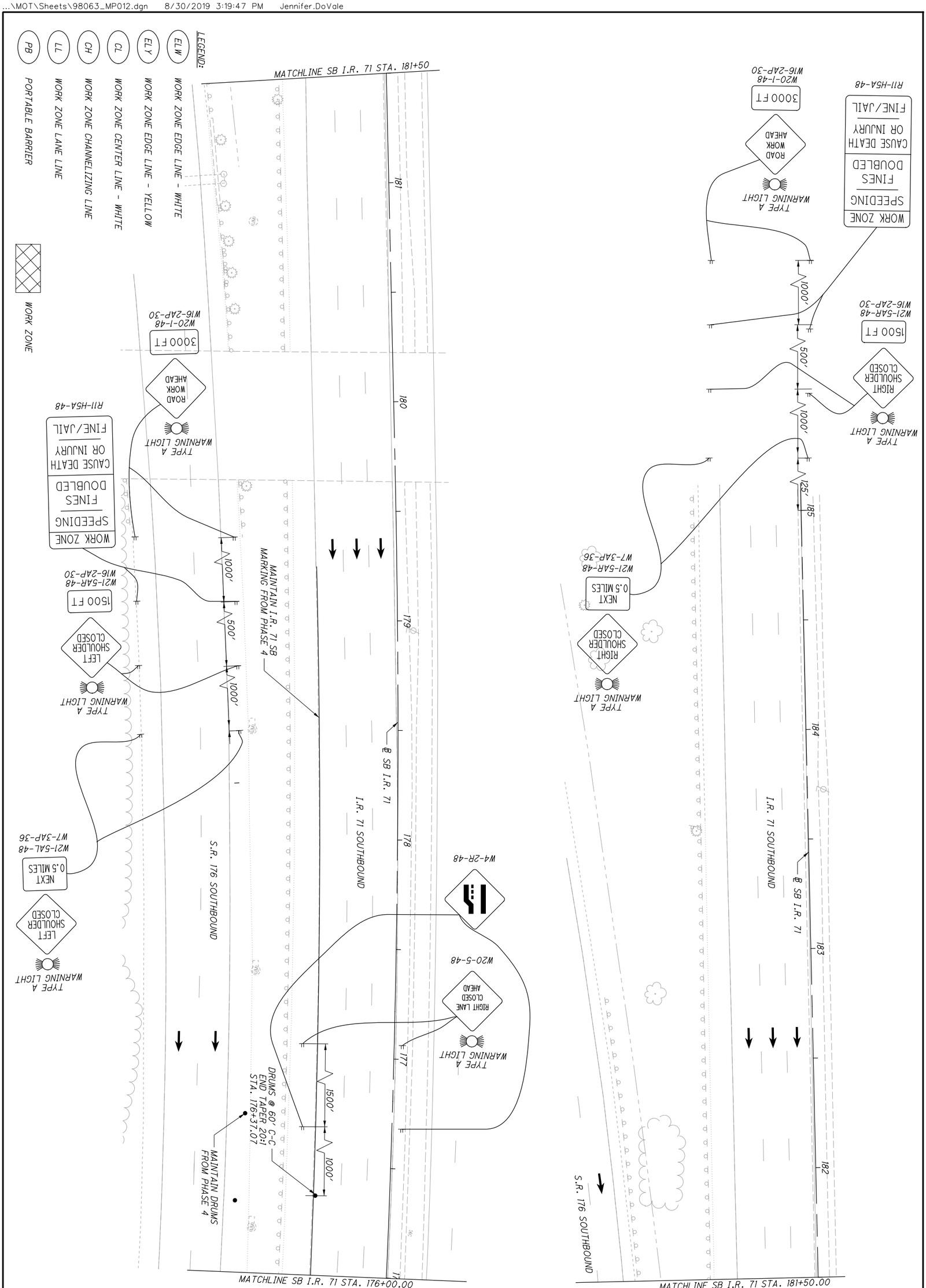
HORIZONTAL SCALE IN FEET: 0, 20, 40

CALCULATED SED | CHECKED DJJ

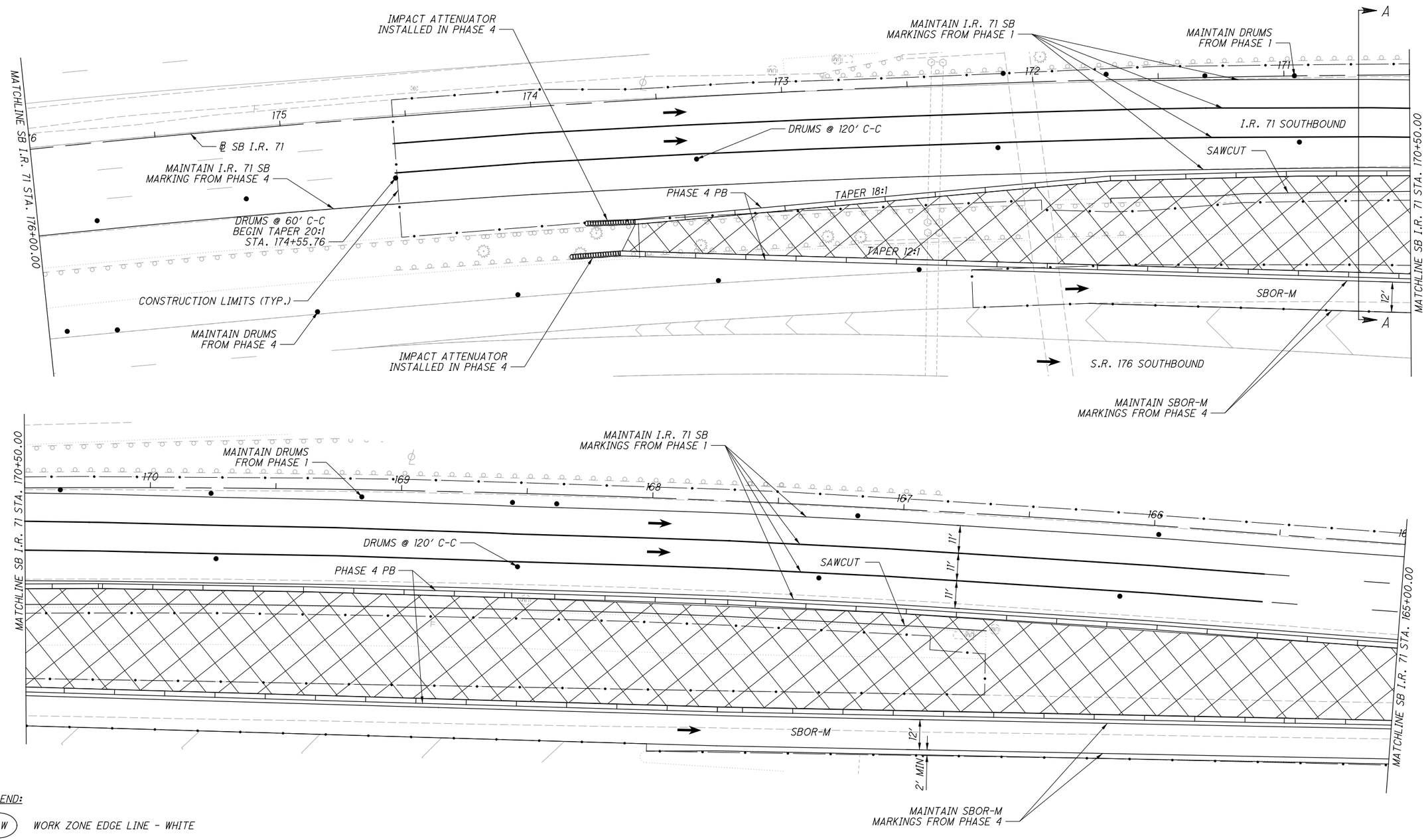
MAINTENANCE OF TRAFFIC PHASE FOUR
SB I.R. 71 STA. 165+00 TO END

CUY-71-17.83/
CUY-176-12.76

...\MOT\Sheets\98063_MP011.dgn 8/30/2019 3:19:41 PM Jennifer.DoVale



30 / 127	CUY-71-17.83/ CUY-176-12.76	MAINTENANCE OF TRAFFIC PHASE FIVE BEGIN TO SB I.R. 71 STA. 176+00	CALCULATED SED / CHECKED DJJ	0 20 40 HORIZONTAL SCALE IN FEET



LEGEND:

- ELW — WORK ZONE EDGE LINE - WHITE
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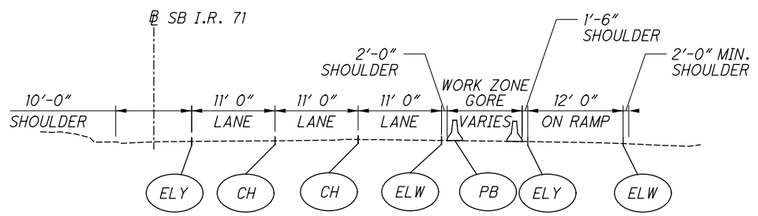
- CH — WORK ZONE CHANNELIZING LINE
- LL — WORK ZONE LANE LINE
- PB — PORTABLE BARRIER
- WORK ZONE



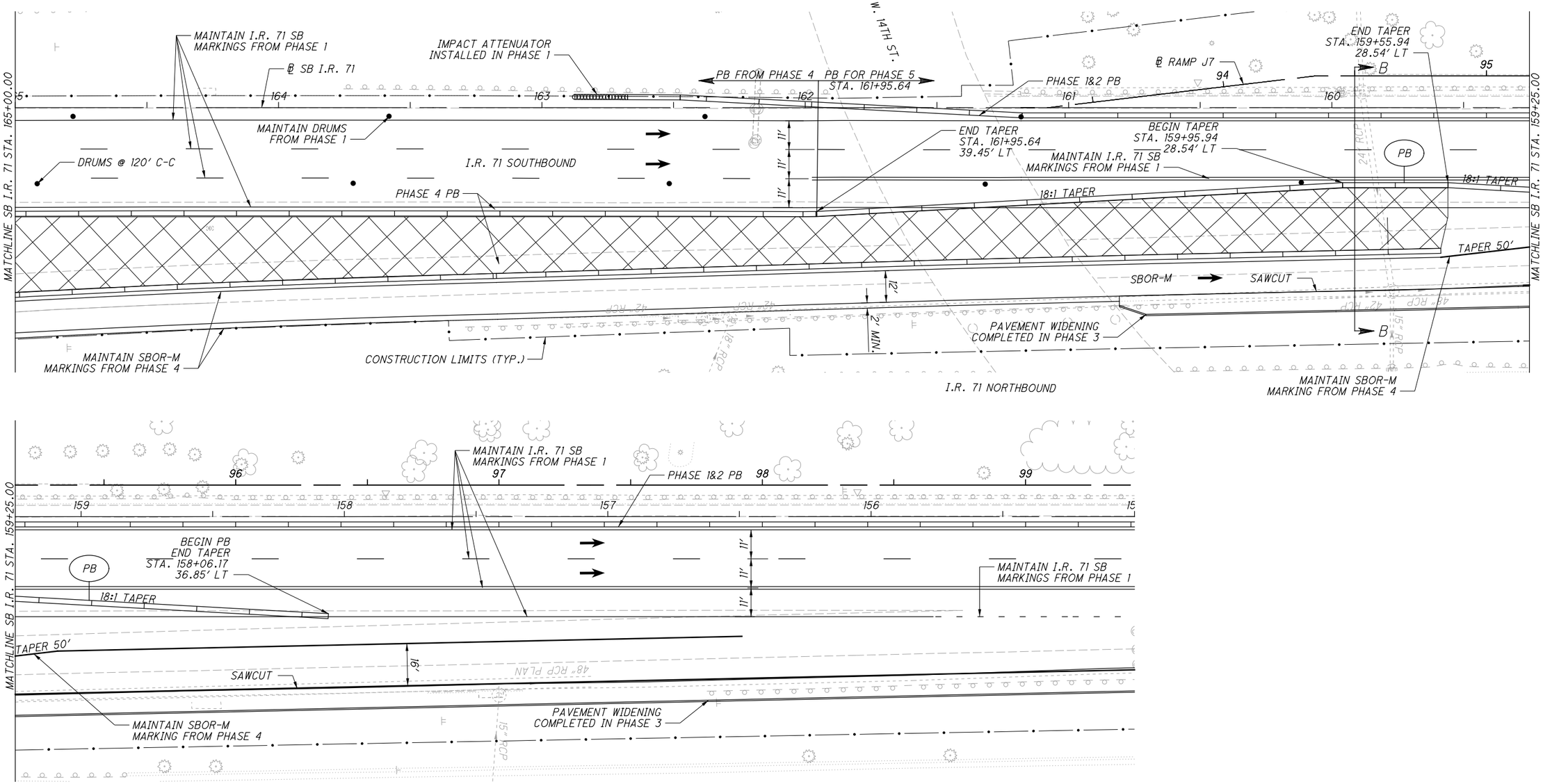
SECTION A-A

HORIZONTAL SCALE IN FEET: 0, 20, 40

CALCULATED SED CHECKED DJJ

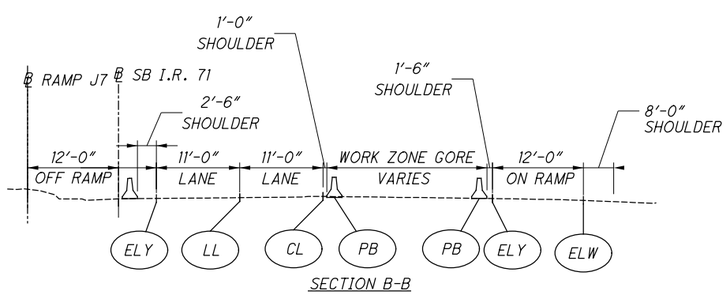
MAINTENANCE OF TRAFFIC PHASE FIVE
SB I.R. 71 STA. 176+00 TO STA. 165+00
CUY-71-17.83/ CUY-176-12.76

31
127



LEGEND:

ELW	WORK ZONE EDGE LINE - WHITE
ELY	WORK ZONE EDGE LINE - YELLOW
CL	WORK ZONE CENTER LINE - WHITE
CH	WORK ZONE CHANNELIZING LINE
LL	WORK ZONE LANE LINE
PB	PORTABLE BARRIER
	WORK ZONE



SECTION B-B

...\MOT\Sheets\98063_MP014.dgn 8/30/2019 3:19:59 PM Jennifer.DoVale

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SED
CHECKED DJJ

MAINTENANCE OF TRAFFIC PHASE FIVE
SB I.R. 71 STA. 165+00 TO END

CUY-71-17.83/
CUY-176-12.76

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	8	9	36	37	38	76													
																		ROADWAY	
	LS													201	11000	LS		CLEARING AND GRUBBING	8
			1,544											202	23000	1,544	SY	PAVEMENT REMOVED	
			1,809											202	32000	1,809	FT	CURB REMOVED	
			1,805											202	38000	1,805	FT	GUARDRAIL REMOVED	
						3,778.2								203	10000	3,778.2	CY	EXCAVATION	
						507.2								203	20000	507.2	CY	EMBANKMENT	
			125											606	15050	125	FT	GUARDRAIL, TYPE MGS	
			2											606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E	9
			1											606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			2											606	35000	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			953											609	24510	953	FT	CURB, TYPE 4-C	
			1,751											618	40100	1,751	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
			1,081											622	10120	1,081	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
			128											622	10160	128	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
			114											622	10161	114	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN WITH WALL FOOTING	8
			2											622	10201	2	EACH	BARRIER TRANSITION, AS PER PLAN	8
			1											622	24840	1	EACH	CONCRETE BARRIER END SECTION, TYPE B	
			1											622	25000	1	EACH	CONCRETE BARRIER END SECTION, TYPE D	
6														SPECIAL	69098000	6	EACH	UTILITY TEST HOLE	7
																		EROSION CONTROL	
		2												659	00100	2	EACH	SOIL ANALYSIS TEST	9
		404												659	00300	404	CY	TOPSOIL	9
		3,633												659	10000	3,633	SY	SEEDING AND MULCHING	9
		190												659	14000	190	SY	REPAIR SEEDING AND MULCHING	9
		190												659	15000	190	SY	INTER-SEEDING	9
		0.33												659	20000	0.33	TON	COMMERCIAL FERTILIZER	9
		0.75												659	31000	0.75	ACRE	LIME	9
		19.62												659	35000	19.62	MGAL	WATER	9
		41,447												832	30000	41,447	EACH	EROSION CONTROL	9
		LS												832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	9
		LS												832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	9
		LS												832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	9
																		DRAINAGE	
				30										202	35100	30	FT	PIPE REMOVED, 24" AND UNDER	
				3										202	58200	3	EACH	INLET REMOVED	
		705												SPECIAL	20270110	705	FT	PIPE CLEANOUT, 24" AND UNDER	9
		2,461												SPECIAL	20270120	2,461	FT	PIPE CLEANOUT, 27" TO 48"	9
				2,476										605	11110	2,476	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
				100										611	00510	100	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
				623										611	05900	623	FT	15" CONDUIT, TYPE B	
				8										611	10400	8	FT	24" CONDUIT, TYPE B	
				20										611	20900	20	FT	48" CONDUIT, TYPE B	
				1										611	98150	1	EACH	CATCH BASIN, NO. 3	
				1										611	98370	1	EACH	CATCH BASIN, NO. 6	
				2										611	98470	2	EACH	CATCH BASIN, NO. 2-2B	
				4										611	99104	4	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C	
				2										611	99114	2	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
				1										611	99150	1	EACH	INLET ADJUSTED TO GRADE	
				3										611	99574	3	EACH	MANHOLE, NO. 3	
				1										611	99582	1	EACH	MANHOLE, NO. 3 WITH 90" BASE I.D. AND 8" WEIR	
				4										611	99654	4	EACH	MANHOLE ADJUSTED TO GRADE	
		1,960												SPECIAL	61199820	1,960	LB	MISCELLANEOUS METAL	9
		23												611	99900	23	EACH	DRAINAGE STRUCTURE, MISC.:STRUCTURE CLEANOUT	9
				1										895	10020	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2	9
																		PAVEMENT	
					304									203	98100	304	SY	ROADWAY, MISC.: REINFORCED TURF	8
					4,116									204	10000	4,116	SY	SUBGRADE COMPACTION	
3														204	45000	3	HOUR	PROOF ROLLING	7

CALCULATED GSH CHECKED PDO

GENERAL SUMMARY

CUY-71-17.83/
CUY-176-12.76

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	9	38	40	41	76	99	100												
		2,797												252	01500	2,797	FT	FULL DEPTH PAVEMENT SAWING	
	1,400													253	01000	1,400	SY	PAVEMENT REPAIR	9
		25,962												254	01000	25,962	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
	38													301	46000	38	CY	ASPHALT CONCRETE BASE, PG64-22	9
		1,013												302	46001	1,013	CY	ASPHALT CONCRETE BASE, AS PER PLAN, PG64-22	9
		746			1,254									304	20000	2,000	CY	AGGREGATE BASE	
		2,651												407	10000	2,651	GAL	TACK COAT	
		58												411	10000	58	CY	STABILIZED CRUSHED AGGREGATE	
		197												442	10100	197	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
		1,250												442	10001	1,250	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG 76922	
																		TRAFFIC CONTROL	
			8											620	11000	8	EACH	DELINEATOR, BRACKET MOUNTED	9
			64											621	00300	64	EACH	RPM REFLECTOR (ONE-WAY)	
			56											621	00300	56	EACH	RPM REFLECTOR (TWO-WAY)	
				60										630	02100	60	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
				29										630	03100	29	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
				49.5										630	07000	49.5	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18	
				4										630	08600	4	EACH	SIGN POST REFLECTOR	
				1										630	21000	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10	
				1										630	21201	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 12, AS PER PLAN	97
				1										630	66500	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.115	
				2										630	79604	2	EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 2	
				37.7										630	80100	37.7	SF	SIGN, FLAT SHEET	
				838.5										630	80224	838.5	SF	SIGN, OVERHEAD EXTRUSHEET	
				2										630	84500	2	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
				4										630	84510	4	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
				3										630	84900	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				3										630	85100	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
				1										630	85600	1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
				6										630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
				2										630	86102	2	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
				4										630	87100	4	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
				4										630	87400	4	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
				1										630	89802	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
				1										630	89100	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30	
			1.82											644	00104	1.82	MILE	EDGE LINE, 6"	
			1.12											644	00204	1.12	MILE	LANE LINE, 6"	
			0.17											644	00300	0.17	MILE	CENTER LINE	
			2,666											644	00404	2,666	FT	CHANNELIZING LINE, 12"	
			97											644	00720	97	FT	CHEVRON MARKING	
			1,390											644	01510	1,390	FT	DOTTED LINE, 6"	
																		LIGHTING	
							6							625	00480	6	EACH	CONNECTION, UNFUSED PERMANENT	
							1							625	12410	1	EACH	LIGHT TOWER, BBB130	
							2							625	15400	2	EACH	LIGHT TOWER FOUNDATION, 42" X 25' DEEP	
							2,954							625	23300	2,954	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	
							1,322							625	25504	1,322	FT	CONDUIT, 3", 725.051	
							95							625	25903	95	FT	CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 3"	99
							12							625	26263	12	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN 480V	99
							1,322							625	29000	1,322	FT	TRENCH	
							1							625	30706	1	EACH	PULL BOX, 725.08, 24"	
							2							625	30707	2	EACH	PULL BOX, 725.08, 24", AS PER PLAN	99
							2							625	31510	2	EACH	PULL BOX REMOVED	
							4							625	32000	4	EACH	GROUND ROD	
							1,322							625	36000	1,322	FT	PLASTIC CAUTION TAPE	
						LS								SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	99
							2							625	75351	2	EACH	LIGHT TOWER REMOVED, AS PER PLAN	99
							12							625	75507	12	EACH	LUMINAIRE REMOVED, AS PER PLAN	99
							2							625	75541	2	EACH	LIGHT TOWER FOUNDATION REMOVED, AS PER PLAN	99

CALCULATED GSH
CHECKED PDO

GENERAL SUMMARY

CUY-71-17.83/
CUY-176-12.76

SHEET NUM.														PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	9	11	12	13	14	15	100													
							2								625	75800	2	EACH	DISCONNECT CIRCUIT	
							1								625	98000	1	EACH	LIGHTING, MISC.: LIGHT TOWER BBB140	99
							3								625	98000	3	EACH	LIGHTING, MISC.: CONNECT CIRCUIT TO EXISTING TOWER	99
																			MISCELLANEOUS STRUCTURE	
																			SEE RETAINING WALL ZZ ESTIMATED QUANTITIES	111
																			MAINTENANCE OF TRAFFIC	
				256											614	11110	256	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	13
				6											614	11500	6	MNTH	WORKSITE TRAFFIC SUPERVISOR	13
				640											614	11630	640	FT	INCREASED BARRIER DELINEATION	13
						4									614	12350	4	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	12
					LS										614	12420	LS		DETOUR SIGNING	14
					4										614	12484	4	EACH	WORK ZONE INCREASED PENALTIES SIGN	14
					10										614	12500	10	EACH	REPLACEMENT SIGN	14
					20										614	12600	20	EACH	REPLACEMENT DRUM	14
						781									614	12801	781	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	14
		80													614	13000	80	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	11
						126									614	13310	126	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	13
						126									614	13350	126	EACH	OBJECT MARKER, ONE WAY	13
			18												614	18601	18	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN CLASS A	12
						0.38									614	20010	0.38	MILE	WORK ZONE LANE LINE, CLASS I, 6"	
						0.27									614	21000	0.27	MILE	WORK ZONE CENTER LINE, CLASS I	
						2.16									614	22010	2.16	MILE	WORK ZONE EDGE LINE, CLASS I, 6"	
						4,744									614	23000	4,744	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	
						942									614	24000	942	FT	WORK ZONE DOTTED LINE, CLASS I	
						50									614	25000	50	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I	
17															616	10000	17	MGAL	WATER	7
2															616	20000	2	TON	CALCIUM CHLORIDE	7
						121									621	54000	121	EACH	RAISED PAVEMENT MARKER REMOVED	
						6,160									622	41000	6,160	FT	PORTABLE BARRIER, 32"	
																			INCIDENTALS	
															103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
		LS													614	11000	LS		MAINTAINING TRAFFIC	
															619	16010	9	MNTH	FIELD OFFICE, TYPE B	
															623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
															624	10000	LS		MOBILIZATION	

CALCULATED GSH
CHECKED PDO

GENERAL SUMMARY

CUY-71-17.83/
CUY-176-12.76

SHEET NO.	REF. NO.	BASELINE	STATION FROM	STATION TO	SIDE	202 PAVEMENT REMOVED SY	202 CURB REMOVED FT	202 GUARDRAIL REMOVED FT	606 GUARDRAIL, TYPE MGS FT	606 ANCHOR ASSEMBLY, MGS TYPE E EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	609 CURB, TYPE 4-C FT	618 RUMBLE STRIPS, SHOULDER FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN, WITH WALL FOOTING FT	622 BARRIER TRANSITION, AS PER PLAN EACH	622 CONCRETE BARRIER END SECTION, TYPE B EACH	622 CONCRETE BARRIER END SECTION, TYPE D EACH
44	R-01	I.R. 71	171+57.53	171+95.43	LT			38												
44	B-001	I.R. 71	171+67.69	171+95.43	LT							1								
44	R-02	I.R. 71	168+00.00	171+70.21	LT		370													
44	B-002	I.R. 71	168+00.00	171+70.21	LT										340				1	
45	R-03	I.R. 71	166+64.33	168+00.00	LT		136													
45	B-003	I.R. 71	163+00.00	168+00.00	LT										460					
45	R-05	I.R. 71	163+00.00	163+33.26	LT			33												
46	B-007	RAMP J7	93+02.54	94+55.25	LT												114	1		
46	R-07A	RAMP J7	93+22.54	96+00.00	LT/RT	164														
46	R-07B	RAMP J7	93+22.54	96+00.00	LT/RT		277													
46	R-07C	RAMP J7	93+22.54	96+00.00	LT/RT			277												
46	B-004	I.R. 71	161+55.86	163+33.26	LT				100	1		1								
46	B-005	I.R. 71	159+98.96	163+00.00	LT										281					
46	R-06	I.R. 71	160+53.67	163+00.00	LT			246												
46	B-006	I.R. 71	160+80.67	161+58.36	LT											64				1
46	P-08	I.R. 71	158+41.31	160+80.67	LT								240							
46	R-09	I.R. 71	158+41.31	160+80.67	LT	53														
46	RS-01	I.R. 71	158+41.31	159+98.96	LT									158						
46	RS-02	I.R. 71	158+41.31	159+98.96	LT									158						
47	R-10A	RAMP J7	96+00.00	101+00.00	RT	306														
47	R-10B	RAMP J7	96+00.00	101+00.00	RT		500													
47	R-10C	RAMP J7	96+00.00	101+00.00	RT			500												
47	P-11A	I.R. 71	153+41.47	158+41.31	LT								500							
47	R-11	I.R. 71	153+41.47	158+41.31	LT	111														
47	RS-03	I.R. 71	155+49.04	158+41.31	LT									192						
47	RS-04	I.R. 71	156+49.04	158+41.31	LT									208						
47	R-12	I.R. 71	154+77.06	156+62.34	LT			185												
47	B-008	I.R. 71	154+84.77	155+72.25	LT				25	1	1									
47	RS-05	I.R. 71	153+41.26	155+49.04	LT									207						
48	R-14A	RAMP J7	101+00.00	106+00.00	LT/RT	804														
48	R-14B	RAMP J7	101+00.00	106+00.00	LT/RT		500													
48	R-14C	RAMP J7	101+00.00	106+00.00	LT/RT			500												
48	B-009	RAMP J7	105+41.87	106+00.00	LT											58				
48	P-15A	I.R. 71	151+28.97	153+41.47	LT								213							
48	R-15	I.R. 71	151+28.97	153+41.47	LT	48														
48	RS-06	I.R. 71	150+71.44	153+41.47	LT									270						
48	RS-07	I.R. 71	148+41.61	150+88.22	LT									247						
49	RS-08	I.R. 71	146+76.21	148+41.61	RT									165						
49	RS-09	RAMP J7	106+21.88	107+65.06	RT									146						
49	B-010	RAMP J7	106+00.00	106+46.32	LT											6		1		
49	R-16A	RAMP J7	106+00.00	106+25.54	LT/RT	58														
49	R-16B	RAMP J7	106+00.00	106+25.54	LT		26													
49	R-16C	RAMP J7	106+00.00	106+25.54	LT			26												
TOTALS CARRIED TO GENERAL SUMMARY						1544	1809	1805	125	2	1	2	953	1751	1081	128	114	2	1	1

CALCULATED GSH
CHECKED PDO

ROADWAY SUBSUMMARY

CUY-71-17.83/
CUY-176-12.76

SHEET NO.	REF. NO.	BASELINE	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER FT	202 INLET REMOVED EACH	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT	611 15" CONDUIT, TYPE B FT	611 24" CONDUIT, TYPE B FT	611 48" CONDUIT, TYPE B FT	611 CATCH BASIN, NO. 3 EACH	611 CATCH BASIN, NO. 6 EACH	611 CATCH BASIN, NO. 2-2B EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH	611 INLET ADJUSTED TO GRADE EACH	611 MANHOLE, NO. 3 EACH	611 MANHOLE, NO. 3 WITH 90° BASE I.D. AND 8" WEIR EACH	611 MANHOLE ADJUSTED TO GRADE EACH	895 MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2 EACH
44	D-001	I.R. 71	171+26.74		LT					8						1						
45	D-002	I.R. 71	166+74.33		LT											1						
45	D-003	I.R. 71	166+60.86	166+74.33	LT					13												
45	R-04	I.R. 71	166+60.21	166+70.33	LT	11																
45	D-004	I.R. 71	166+70.65		LT		1															
45	D-005	I.R. 71	166+60.86		LT																1	
45	D-006	I.R. 71	164+26.06		LT					8						1						
46	D-009	I.R. 71	159+96.61		RT		1															
46	D-011A	I.R. 71	160+23.97		LT											1						
46	D-011B	I.R. 71	159+95.96	160+23.97	LT					28												
46	D-012A	I.R. 71	159+95.96		LT									1								
46	D-012B	I.R. 71	159+80.84	159+95.96	LT					15												
46	D-013	I.R. 71	159+80.84		LT						8								1			
46	D-014	I.R. 71	159+77.16		LT																1	
46	UD-01	RAMP J7	93+22.54	94+43.24	LT			111	10													
46	UD-02	RAMP J7	93+22.54	94+43.24	LT			112	10													
46	D-007	RAMP J7	94+44.74		LT												1					
46	R-08	RAMP J7	94+44.70	94+52.81	RT	8																
46	D-008	RAMP J7	94+44.74	94+52.81	LT/RT					16												
46	UD-03	RAMP J7	94+46.24	96+00.00	LT			144	10													
46	UD-04	RAMP J7	94+49.00	96+00.00	LT			141	10													
46	D-010	RAMP J7	94+52.81		RT																1	
47	D-015	I.R. 71	157+41.32		LT							20						1				
47	D-016	I.R. 71	153+54.55		LT								1									
47	D-017	I.R. 71	153+44.49	153+54.55	LT					10												
47	D-019	I.R. 71	153+54.70		LT		1															
47	D-018	I.R. 71	153+44.49		LT																1	
47	R-13	I.R. 71	153+44.49	153+54.70	LT	11																
47	UD-05	RAMP J7	96+00.00	101+00.00	LT			490	10													
47	UD-06	RAMP J7	96+00.00	101+00.00	LT			490	10													
48	UD-07	RAMP J7	101+00.00	106+00.00	LT			490	10													
48	UD-08	RAMP J7	101+00.00	106+00.00	LT			490	10													
49	UD-09	RAMP J7	106+00.00	106+15.49	LT			4	10													
49	UD-10	RAMP J7	106+00.00	106+15.49	LT			4	10													
49	D-020	RAMP J7	106+15.49		LT												1					
49	D-021	RAMP J7	106+15.49	106+27.09	LT					14												
49	D-022	RAMP J7	106+27.09		LT														1			
49	D-023	RAMP J7	106+27.09	108+92.25	LT					259												
49	D-024	RAMP J7	108+92.25		LT					30										1		1
49	D-025	RAMP J7	108+92.25	109+24.39	LT					42												
51	D-026	RAMP J7	110+00.42		LT										1							
51	D-027	RAMP J7	110+00.42	111+61.84	LT					154												
51	D-028	RAMP J7	111+61.84		LT					8									1			
51	D-029	RAMP J7	111+61.84	111+80.80	LT					18												
51	D-030	RAMP J7	111+80.80		LT										1							
TOTALS CARRIED TO GENERAL SUMMARY						30	3	2476	100	623	8	20	1	1	2	4	2	1	3	1	4	1

CALCULATED GSH
CHECKED PDO

DRAINAGE SUBSUMMARY

CUY-71-17.83/
CUY-176-12.76

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...\Roadway\Sheets\98063_GS001.dgn 8/30/2019 3:20:10 PM Jennifer.DeVale

SHEET NO.	REF. NO.	BASELINE	STATION FROM	STATION TO	SIDE	LENGTH	WIDTH	AREA	203 ROADWAY, MISC.: REINFORCED TURF	204 SUBGRADE COMPACTION	252 FULL DEPTH PAVEMENT SAWING	254 PAVEMENT PLANING, ASPHALT CONRETE	302 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	304 AGGREGATE BASE	407 TACK COAT (NEW ASPHALT - 0.055 GAL/SY)	407 TACK COAT (MILLED ASPHALT - 0.085 GAL/SY)	411 STABILIZED CRUSHED AGGREGATE	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN
						FT	FT	SY	SY	SY	FT	SY	CY	CY	GAL	GAL	CY	CY	CY
43	P-01	I.R. 71	173+00.00	174+55.09	LT/RT	155	VARIES	914				914				78			38
44	P-02	I.R. 71	168+00.00	173+00.00	LT/RT	500	51.0	2833				2833				241			118
44	SL-01	I.R. 71	168+00.00	171+70.21	LT	370					370								
44	SC-01	I.R. 71	168+00.00	171+70.21	LT	370	VARIES	144		199			40	33	16			7	6
44	P-02A	I.R. 71	168+00.00	172+27.00	LT	427	VARIES	875				875				74			36
45	P-03	I.R. 71	163+00.00	168+00.00	LT/RT	500	51.0	2833				2833				241			118
45	SL-02	I.R. 71	166+64.24	168+00.00	LT	136					136								
45	SC-02	I.R. 71	166+64.24	168+00.00	LT	136	VARIES	53		73			15	12	6			3	2
45	P-04	I.R. 71	163+00.00	168+00.00	LT	500	VARIES	1895				1895				161			79
46	P-05	I.R. 71	158+41.31	163+00.00	LT/RT	459	VARIES	2224				2224				189			93
46	P-06	I.R. 71	158+41.31	163+00.00	LT	459	VARIES	1429				1429				121			60
46	SL-03	RAMP J7	93+22.54	96+00.00	RT	277					279								
46	P-07	RAMP J7	93+22.54	96+00.00	LT/RT	278	VARIES	544		544			140	98	60			26	23
46	SL-04	I.R. 71	158+41.31	160+80.67	LT	239					244								
46	P-08	I.R. 71	158+41.31	160+80.67	LT	239	VARIES	196		196			43	39	22			10	8
47	P-09	I.R. 71	153+41.47	158+41.31	LT	500	36.0	2000				2000				170			83
47	P-10	I.R. 71	153+41.47	158+41.31	LT	500	VARIES	1341				1341				114			56
47	SL-05	I.R. 71	153+41.47	158+41.31	LT	500					500								
47	P-11	I.R. 71	153+41.47	158+41.31	LT	500	VARIES	440		440			98	87	48			21	18
47	SL-06	RAMP J7	96+00.00	101+00.00	RT	500					500								
47	P-12	RAMP J7	96+00.00	101+00.00	LT/RT	500	21.0	1167		1167			300	208	128			57	49
48	P-13	I.R. 71	148+41.53	153+41.47	LT	500	36.0	2000				2000				170			83
48	P-14	I.R. 71	148+41.53	153+41.47	LT	500	VARIES	705				705				60			29
48	SL-07	I.R. 71	151+29.04	153+41.47	LT	212					214								
48	P-15	I.R. 71	151+28.97	153+41.47	LT	213	VARIES	100		100			22	22	11			5	4
48	SL-08	RAMP J7	101+00.00	106+00.00	RT	500					500								
48	P-16	RAMP J7	101+00.00	106+00.00	LT/RT	500	VARIES	1313		1313			337	233	144			64	55
49	SL-09	RAMP J7	106+00.00	106+25.54	RT	26					54								
49	P-17	RAMP J7	106+00.00	106+25.54	LT/RT	26	VARIES	74		84			18	14	9			4	3
49	P-18	I.R. 71	145+00.00	148+41.56	RT/LT	342	VARIES	2125				2125				181			89
49	P-19	RAMP J7	106+25.54	109+50.00	LT/RT	324	VARIES	955				955				81			40
49	P-20	RAMP J7	108+95.85	109+50.00	LT	54	12.0	72									12		
50	P-21	I.R. 71	140+00.00	145+00.00	LT/RT	500	51.0	2833				2833				241			118
51	P-22	RAMP J7	109+50.00	111+58.55	LT	209	12.0	278									46		
51	P-23	RAMP J7	109+67.25	111+26.19	LT	159	VARIES	304	304										
51	P-24	RAMP J8	109+50.00	112+50.00	LT	300	30	1000				1000				85			42
TOTALS CARRIED TO GENERAL SUMMARY									304	4116	2797	25962	1013	746	2651		58	197	1250

CALCULATED GSH
CHECKED PDO

PAVEMENT SUBSUMMARY

CUY-71-17.83/
CUY-176-12.76

REF NO.	SHEET NO.	BASELINE	STATION FROM	STATION TO	SIDE	620 DELINEATOR, BRACKET MOUNTED EACH	621 RPM REFLECTOR (ONE-WAY) EACH	621 RPM REFLECTOR (TWO-WAY) EACH	644 EDGE LINE, 6" MILE	644 LANE LINE, 6" MILE	644 CENTER LINE (WHITE) MILE	644 CHANNELIZING LINE, 12" FT	644 CHEVRON MARKING FT	644 DOTTED LINE, 6" FT
ELY-1	83	I.R. 71	173+00.00	174+55.09					0.03					
LL-1	83	I.R. 71	173+00.00	174+55.09	LT		2			0.03				
LL-2	83	I.R. 71	173+00.00	174+55.09	LT		2			0.03				
ELW-1	83	I.R. 71	173+00.00	174+55.09	LT				0.03					
ELY-2	84	I.R. 71	168+00.00	173+00.00					0.09					
LL-3	84	I.R. 71	168+00.00	173+00.00	LT		4			0.09				
LL-4	84	I.R. 71	168+00.00	173+00.00	LT		4			0.09				
ELW-2	84	I.R. 71	168+00.00	173+00.00	LT				0.09					
ELY-2A	84	I.R. 71	168+00.00	172+27.00	LT				0.08					
ELW-2A	84	I.R. 71	168+00.00	172+27.00	LT				0.08					
ELY-3	85	I.R. 71	163+00.00	168+00.00					0.09					
LL-5	85	I.R. 71	163+00.00	168+00.00	LT		4			0.09				
LL-6	85	I.R. 71	163+00.00	168+00.00	LT		4			0.09				
ELW-3	85	I.R. 71	164+28.47	168+00.00	LT				0.07					
CH-1	85	I.R. 71	163+00.00	164+28.47	LT							129		
ELY-4	85	I.R. 71	163+00.00	168+00.00	LT				0.09					
ELW-4	85	I.R. 71	163+00.00	168+00.00	LT				0.09					
ELY-5	86	RAMP J7 / I.R. 71	96+00.00	163+00.00					0.09					
ELY-6	86	I.R. 71	159+98.96	163+00.00	LT				0.06					
ELW-5	86	I.R. 71	158+41.31	163+00.00	LT				0.09					
LL-7	86	I.R. 71	158+41.31	163+00.00	LT		4			0.09				
LL-8	86	I.R. 71	158+41.31	163+00.00	LT		4			0.09				
CH-2	86	I.R. 71	158+41.31	163+00.00	LT			4				459		
CH-3	86	I.R. 71	158+41.31	159+98.96	LT			4				158		
DL-1	86	I.R. 71	158+41.31	161+07.42	RT		3							267
	86	I.R. 71 / RAMP J7	163+00.00	96+00.00	LT	2								
ELY-7	87	RAMP J7	96+00.00	101+00.00					0.09					
DL-2	87	I.R. 71	154+41.31	158+41.31			3							400
LL-9	87	I.R. 71	153+41.48	158+41.31	LT		4			0.09				
LL-10	87	I.R. 71	156+49.04	158+41.31	LT		1			0.04				
CH-4	87	I.R. 71	156+49.04	158+41.31	LT			6				193		
CH-5	87	I.R. 71	156+49.04	158+41.31	LT			6				193		
CL-1	87	I.R. 71	153+41.48	156+49.04	LT		3				0.06			
ELW-6	87	I.R. 71	153+41.48	158+41.31	LT				0.09					
DL-3	87	I.R. 71	153+41.48	156+49.04	LT									307
CH-6	87	RAMP J7	100+00.00	101+00.00				3				100		
CH-7	87	I.R. 71	153+41.48	154+41.31	LT							100		
	87	RAMP J7	96+00.00	101+00.00	LT	2								
ELY-8	88	RAMP J7	101+00.00	106+00.00					0.09					
CH-8	88	RAMP J7	101+00.00	106+00.00	LT			10				500		
CH-9	88	I.R. 71	148+41.56	153+41.48				13				500		
LL-11	88	I.R. 71	148+41.56	153+41.48	LT		4			0.09				
CL-2	88	I.R. 71	148+41.56	153+41.48	LT		4				0.09			
ELW-7	88	I.R. 71	148+41.56	153+41.48	LT				0.09					
DL-4	88	I.R. 71	149+24.66	153+41.48	LT									416
	88	RAMP J7	101+00.00	106+00.00	LT	3								
CH-10	89	RAMP J7	106+00.00	107+65.06	RT			5				168		
CH-11	89	I.R. 71	146+76.21	148+41.56				5				166		
CL-3	89	I.R. 71	147+61.89	148+41.56	LT		1				0.02			
ELY-9	89	RAMP J7	106+00.00	111+00.00					0.09					
TOTALS CARRIED TO 40						7	51	56	1.43	0.82	0.17	2666		1390

CALCULATED GSH
CHECKED PDO

TRAFFIC CONTROL SUBSUMMARY

CUY-71-17.83/
CUY-176-12.76

REF NO.	SHEET NO.	BASELINE	STATION FROM	STATION TO	SIDE	620 DELINEATOR, BRACKET MOUNTED EACH	621 RPM REFLECTOR (ONE-WAY) EACH	621 RPM REFLECTOR (TWO-WAY) EACH	644 EDGE LINE, 6" MILE	644 LANE LINE, 6" MILE	644 CENTER LINE (WHITE) MILE	644 CHANNELIZING LINE, 12" FT	644 CHEVRON MARKING FT	644 DOTTED LINE, 6" FT
CV-1	89	I.R. 71	146+96.46	147+95.39	RT								97	
ELW-8	89	I.R. 71	145+50.00	148+40.34	LT				0.05					
LL-12	89	I.R. 71	145+50.00	147+61.89	LT		1			0.04				
LL-13	89	I.R. 71	145+50.00	148+41.56	LT		2			0.06				
ELY-10	89	I.R. 71	145+50.00	146+76.21					0.02					
ELW-9	89	RAMP J7	107+65.06	111+00.00	RT				0.06					
	89	RAMP J7 / I.R. 71	106+00.00	145+50.00		1								
ELY-11	90	I.R. 71	140+00.00	145+50.00					0.10					
LL-14	90	I.R. 71	140+00.00	145+50.00	LT		5			0.10				
LL-15	90	I.R. 71	140+00.00	145+50.00	LT		5			0.10				
ELW-10	90	I.R. 71	140+00.00	145+50.00	LT				0.10					
ELY-12	91	RAMP J7	111+00.00	112+50.00					0.03					
ELW-11	91	RAMP J7	111+00.00	112+50.00	RT				0.03					
TOTALS FROM THIS SHEET						1	13		0.39	0.30			97	
TOTALS FROM SHEET 39						7	51	56	1.43	0.82	0.17	2666		1390
TOTALS CARRIED TO GENERAL SUMMARY						8	64	56	1.82	1.12	0.17	2666	97	1390

CALCULATED GSH
CHECKED PDO

TRAFFIC CONTROL SUBSUMMARY

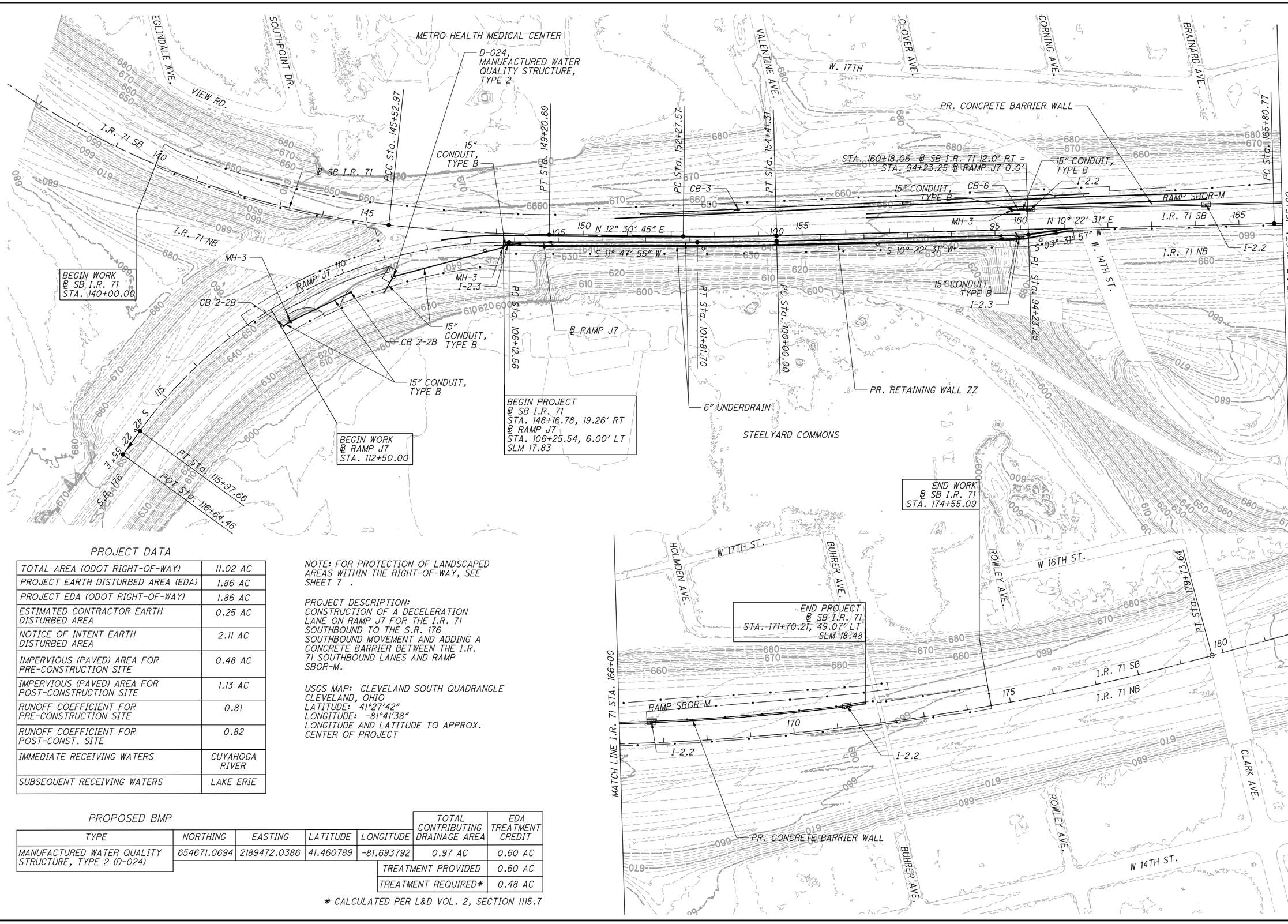
CUY-71-17.83/
CUY-176-12.76

SHEET NO.	REF. NO.	BASELINE	STATION FROM	STATION TO	SIDE	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18 FT	630 SIGN POST REFLECTOR EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 12, AS PER PLAN EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-15.115 EACH	630 SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 2 EACH	630 SIGN, FLAT SHET SF	630 SIGN, OVERHEAD EXTRUSHEET SF	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OFGROUND MOUNTED MAJOR SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30 EACH
84	OS-9	I.R. 71	172+40.00		LT																				1		
84	OS-10	I.R. 71	172+40.00		LT																				1		
84	S-1	I.R. 71	168+86.00		LT		14.5-14.5							16				1				2					
86	CL-3	I.R. 71	162+00.00		LT					1					195		1										
86	S-4	I.R. 71	161+59.00		LT	15-15			2					10.83				1				2					
87	GM-1	I.R. 71	157+63.00		LT			26-23.5								2				1			2				
87	S-5	I.R. 71	156+59.00		LT	15-15			2					10.83				1				2					
87	CL-4, 5	I.R. 71	154+98.00		LT												1							2			1
87	CL-6, 7	RAMP J7	97+49.00		LT						1				214.5												
87	S-6, 7	RAMP J7	98+31.00		RT								1						2								
87	S-8	RAMP J7	100+09.00		RT								1						1								
89	OS-5, 6	RAMP J7	106+40.00		LT										214.5												
89	OS-7, 8	RAMP J7	106+40.00		RT							1			214.5		2							2	2	1	
TOTALS CARRIED TO GENERAL SUMMARY						60.0	29.0	49.5	4	1	1	1	2	37.7	838.5	2	4	3	3	1	6	2	4	4	1	1

CALCULATED GSH
CHECKED PDO

TRAFFIC CONTROL SUBSUMMARY

CUY-71-17.83/
CUY-176-12.76



PROJECT DATA

TOTAL AREA (ODOT RIGHT-OF-WAY)	11.02 AC
PROJECT EARTH DISTURBED AREA (EDA)	1.86 AC
PROJECT EDA (ODOT RIGHT-OF-WAY)	1.86 AC
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.25 AC
NOTICE OF INTENT EARTH DISTURBED AREA	2.11 AC
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	0.48 AC
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	1.13 AC
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.81
RUNOFF COEFFICIENT FOR POST-CONST. SITE	0.82
IMMEDIATE RECEIVING WATERS	CUYAHOGA RIVER
SUBSEQUENT RECEIVING WATERS	LAKE ERIE

NOTE: FOR PROTECTION OF LANDSCAPED AREAS WITHIN THE RIGHT-OF-WAY, SEE SHEET 7 .

PROJECT DESCRIPTION:
CONSTRUCTION OF A DECELERATION LANE ON RAMP J7 FOR THE I.R. 71 SOUTHBOUND TO THE S.R. 176 SOUTHBOUND MOVEMENT AND ADDING A CONCRETE BARRIER BETWEEN THE I.R. 71 SOUTHBOUND LANES AND RAMP SBOR-M.

USGS MAP: CLEVELAND SOUTH QUADRANGLE
CLEVELAND, OHIO
LATITUDE: 41°27'42"
LONGITUDE: -81°41'38"
LONGITUDE AND LATITUDE TO APPROX. CENTER OF PROJECT

PROPOSED BMP

TYPE	NORTHING	EASTING	LATITUDE	LONGITUDE	TOTAL CONTRIBUTING DRAINAGE AREA	EDA TREATMENT CREDIT
MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2 (D-024)	654671.0694	2189472.0386	41.460789	-81.693792	0.97 AC	0.60 AC
				TREATMENT PROVIDED		0.60 AC
				TREATMENT REQUIRED*		0.48 AC

* CALCULATED PER L&D VOL. 2, SECTION 1115.7

HORIZONTAL SCALE IN FEET
0 50 100 200

PROJECT SITE PLAN

CUY-71-17.83/
CUY-176-12.76

42
127

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LEGEND:

PR. PAVEMENT RESURFACING

END WORK
℄ SB I.R. 71
STA. 174+55.09

END PAVEMENT RESURFACING
STA. 174+55.09

I.R. 71 NORTHBOUND

℄ SB I.R. 71

I.R. 71 SOUTHBOUND

6.7'

34.7'

13.3'

P-01

MATCHLINE STA. 173+00.00

CONSTRUCTION LIMITS

I.R. 71 SOUTHBOUND ENTRANCE RAMP
(RAMP SBOR-M)

CS

174

175

176

177

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

PLAN - I.R. 71
STA. 173+00.00 TO END

CUY-71-17.83/
CUY-176-12.76

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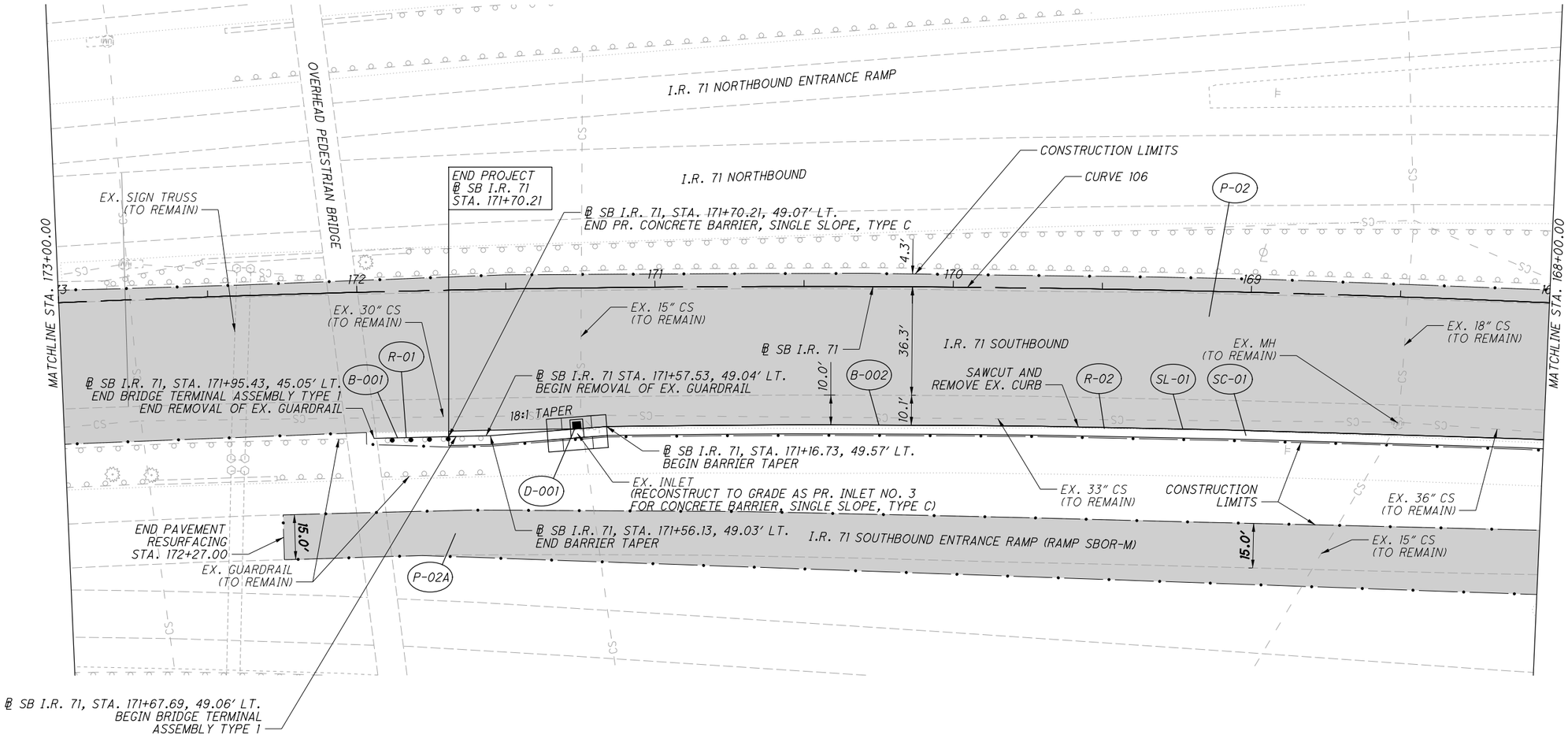
LEGEND:

PR. PAVEMENT RESURFACING

CURVE 106
℄ SB I.R. 71
P.I. Sta. 172+80.65
Δ = 13° 55′ 43″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 699.89′
L = 1,392.87′
E = 42.59′
e = 0.017



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

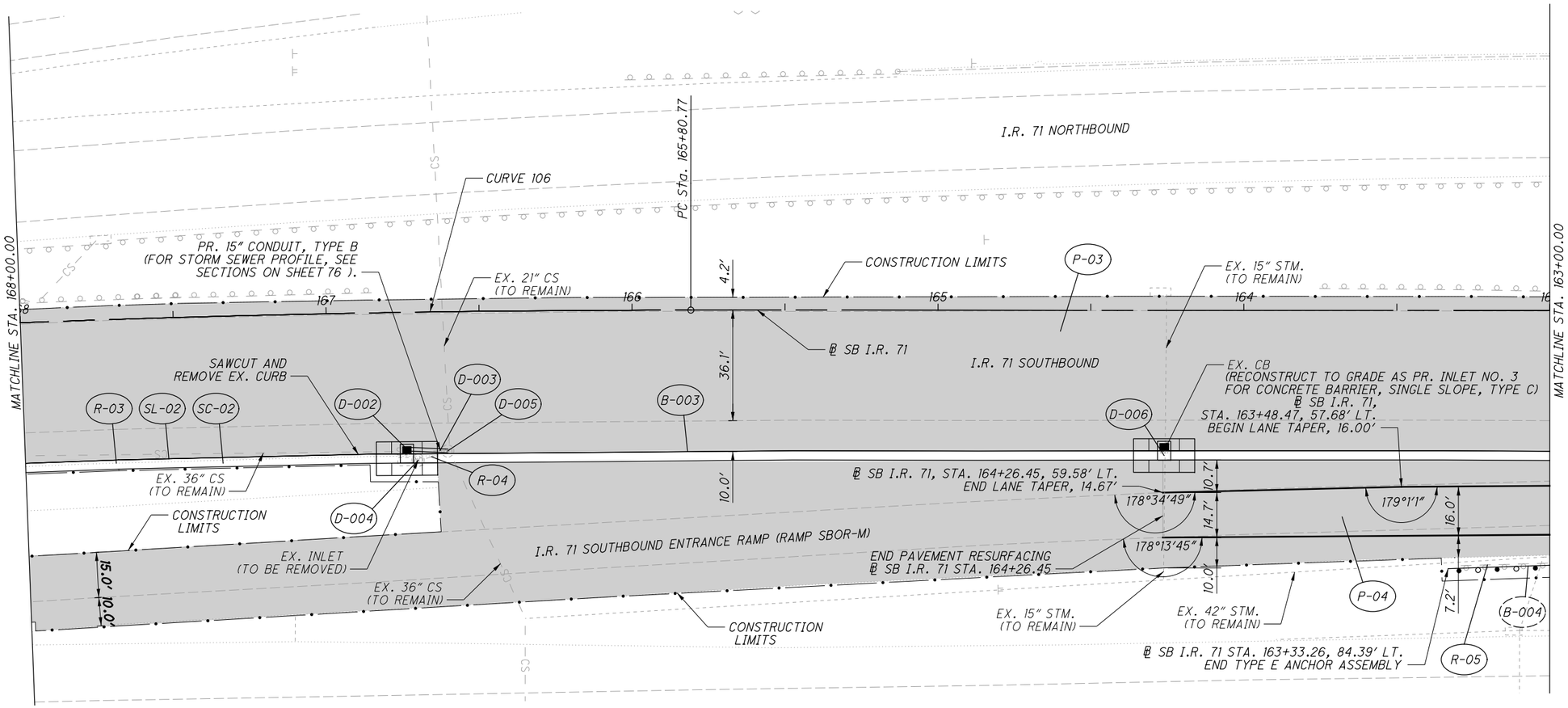
PLAN - SB I.R. 71
STA. 168+00.00 TO STA. 173+00.00

CUY-71-17.83/
CUY-176-12.76

LEGEND:

PR. PAVEMENT RESURFACING

CURVE 106
℄ SB I.R. 71
P.I. Sta. 172+80.65
Δ= 13° 55′ 43″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 699.89′
L = 1,392.87′
E = 42.59′
e = 0.017



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

PLAN - SB I.R. 71
STA. 163+00.00 TO STA. 168+00.00

CUY-71-17.83/
CUY-176-12.76

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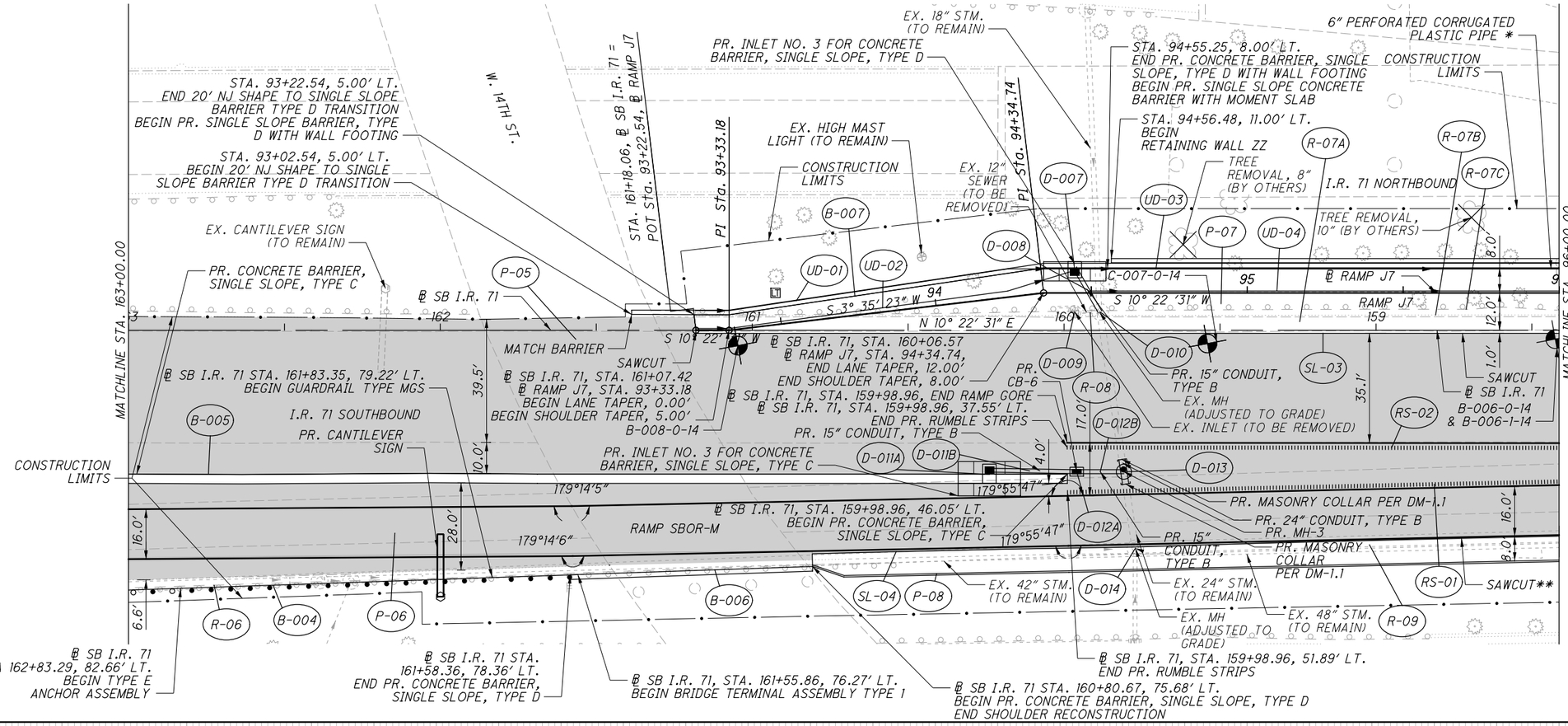
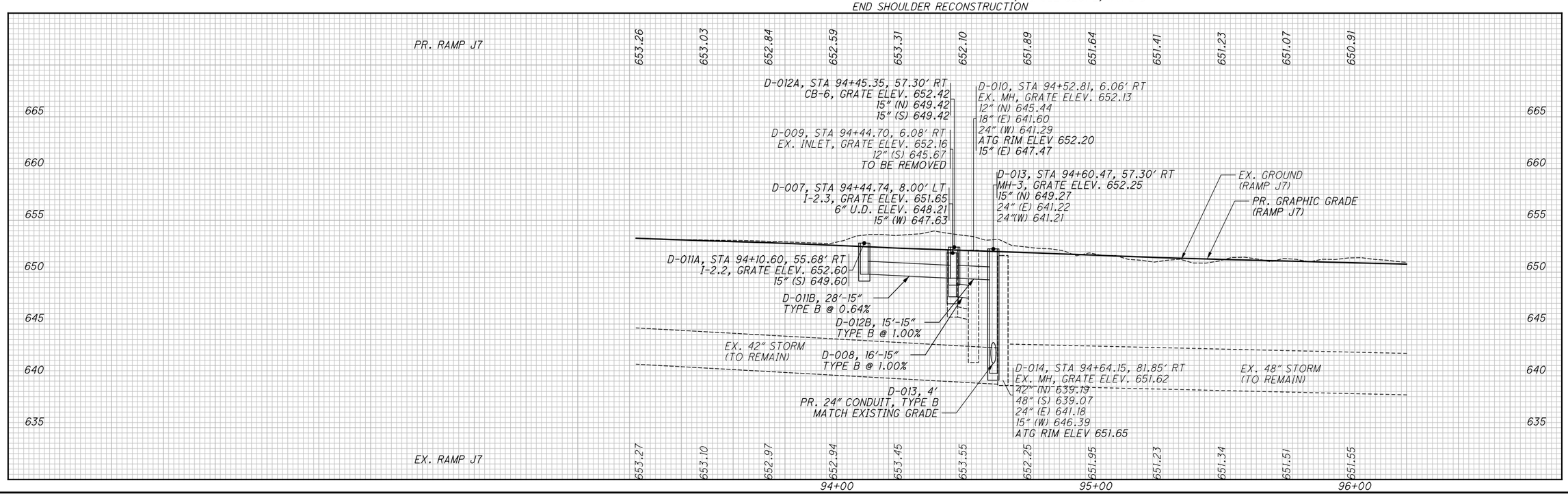
NOTES:

SEE DETAIL ON SHEETS 77 TO 78 FOR RAMP J7 GRADING PLAN.

* SEE WALL ELEVATION SHEETS FOR DETAIL ON 6" PERFORATED CORRUGATED PLASTIC PIPE INSTALLATION.

** SAWCUT 2' INSIDE OF EXISTING SHOULDER OF I.R. 71 RAMP SBOR-M.



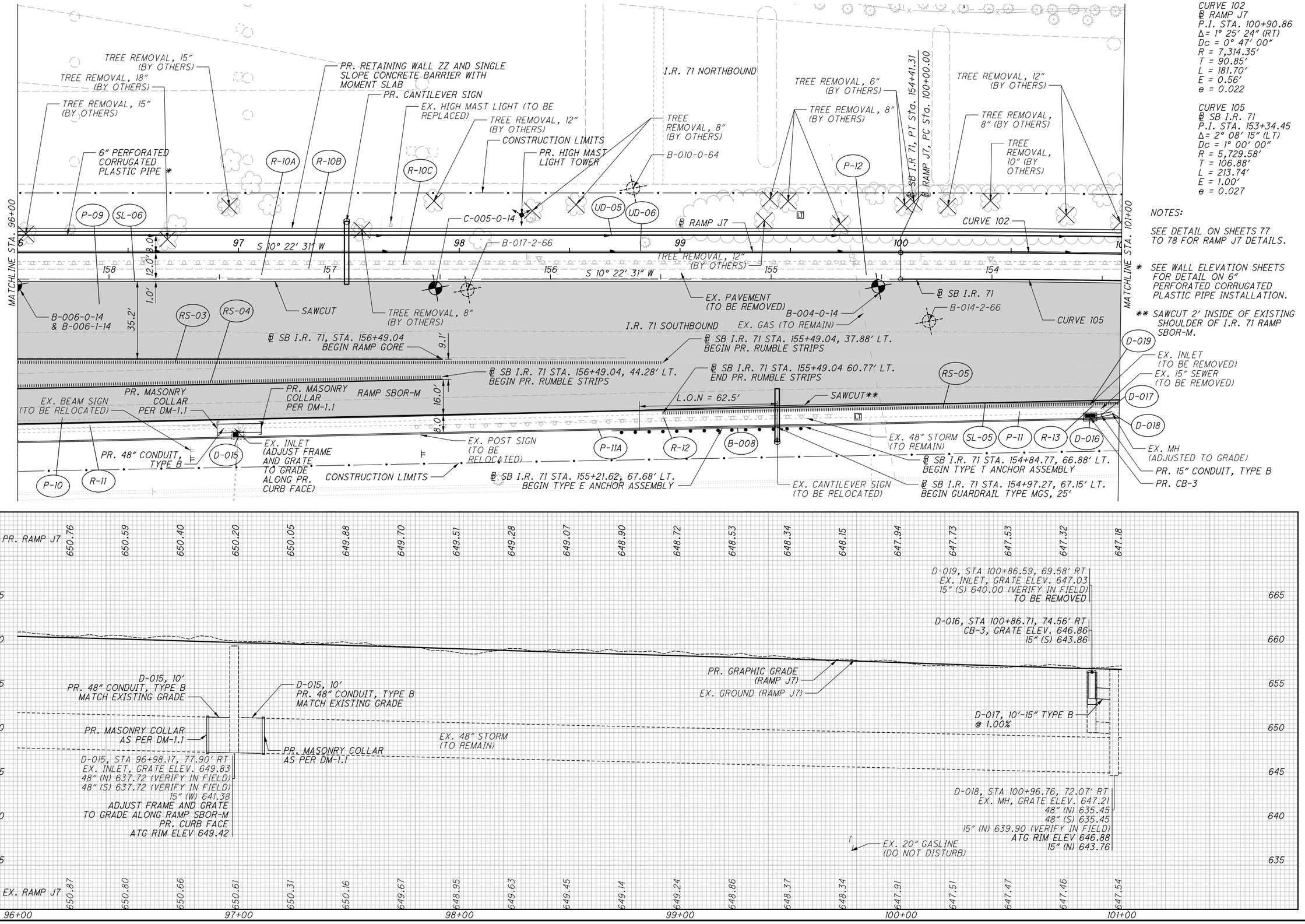


CALCULATED JLD CHECKED DJJ

HORIZONTAL SCALE IN FEET 0 10 20 40

PLAN AND PROFILE - SB I.R. 71 & RAMP J7 BEGIN TO STA. 96+00.00

CUY-71-17.83/ CUY-176-12.76



CURVE 102
℄ RAMP J7
P.I. STA. 100+90.86
Δ = 1° 25' 24" (RT)
Dc = 0° 47' 00"
R = 7,314.35'
T = 90.85'
L = 181.70'
E = 0.56'
e = 0.022

CURVE 105
℄ SB I.R. 71
P.I. STA. 153+34.45
Δ = 2° 08' 15" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 106.88'
L = 213.74'
E = 1.00'
e = 0.027

NOTES:

SEE DETAIL ON SHEETS 77 TO 78 FOR RAMP J7 DETAILS.

* SEE WALL ELEVATION SHEETS FOR DETAIL ON 6" PERFORATED CORRUGATED PLASTIC PIPE INSTALLATION.

** SAWCUT 2' INSIDE OF EXISTING SHOULDER OF I.R. 71 RAMP SBOR-M.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

PLAN AND PROFILE - SB I.R. 71 & RAMP J7
STA. 96+00.00 TO STA. 101+00.00

CUY-71-17.83/
CUY-176-12.76

47
127

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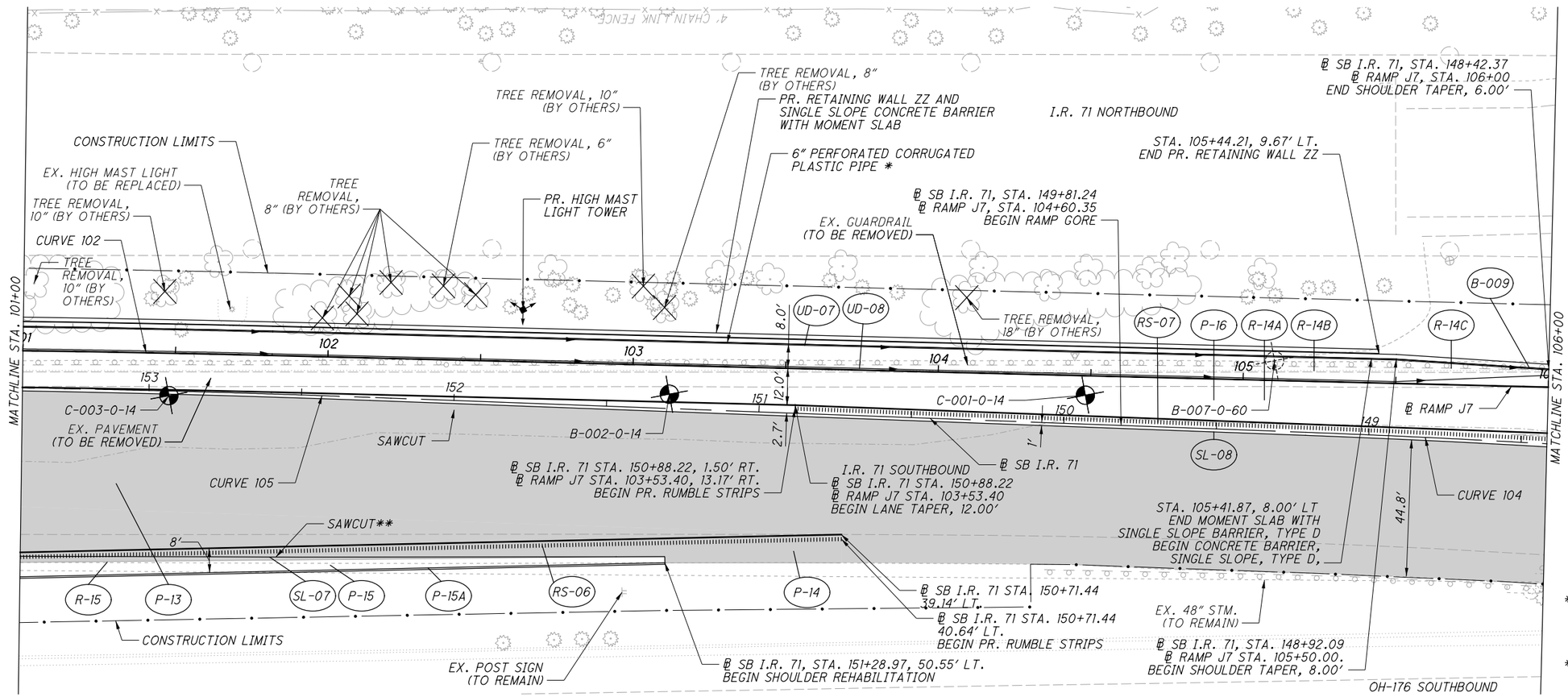


CURVE 102
℄ RAMP J7
P.I. STA. 100+90.86
Δ= 1° 25' 24" (RT)
Dc = 0° 47' 00"
R = 7,314.35'
T = 90.85'
L = 181.70'
E = 0.56'
e = 0.022

CURVE 104
℄ SB I.R. 71
P.I. STA.147+36.97
Δ= 5° 30' 56" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 184.00'
L = 367.71'
E = 4.43'
e = 0.037

CURVE 105
℄ SB I.R. 71
P.I. STA. 153+34.45
Δ= 2° 08' 15" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 106.88'
L = 213.74'
E = 1.00'
e = 0.027

LEGEND:

PR. PAVEMENT RESURFACING

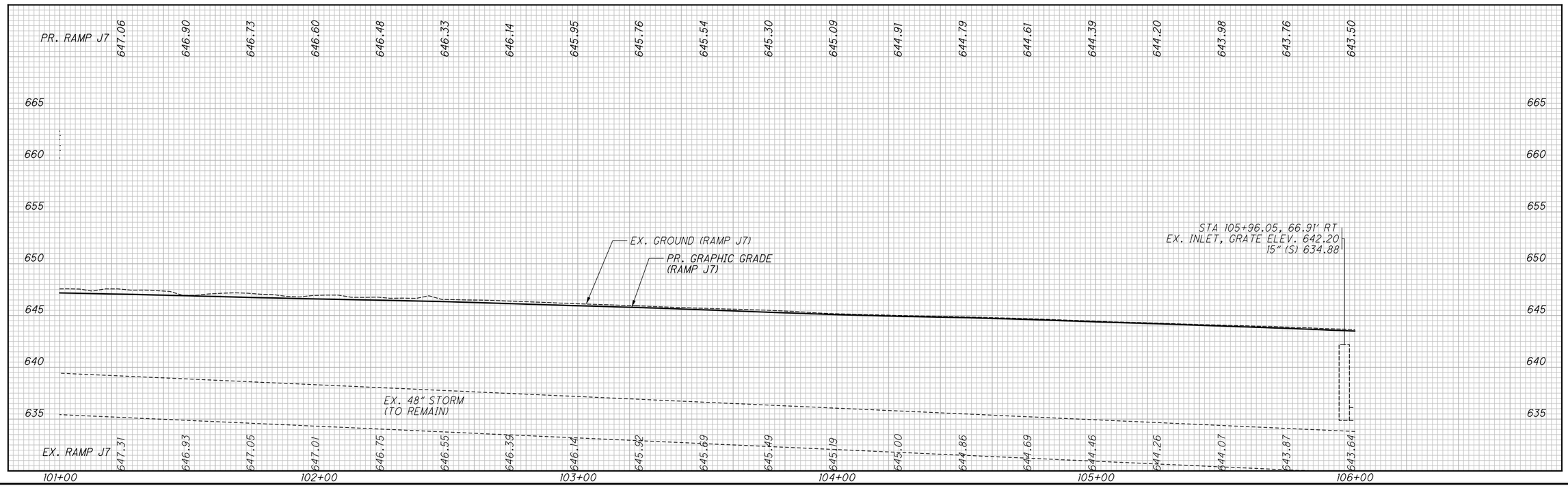
NOTES:

SEE DETAIL ON SHEETS 77 TO 78 FOR RAMP J7 DETAILS.

SEE DETAIL ON SHEET 79 FOR RAMP J7 GORE DETAIL.

* SEE WALL ELEVATION SHEETS FOR DETAIL ON 6" PERFORATED CORRUGATED PLASTIC PIPE INSTALLATION.

** SAWCUT 2' INSIDE OF EXISTING SHOULDER OF I.R. 71 RAMP SBOR-M.

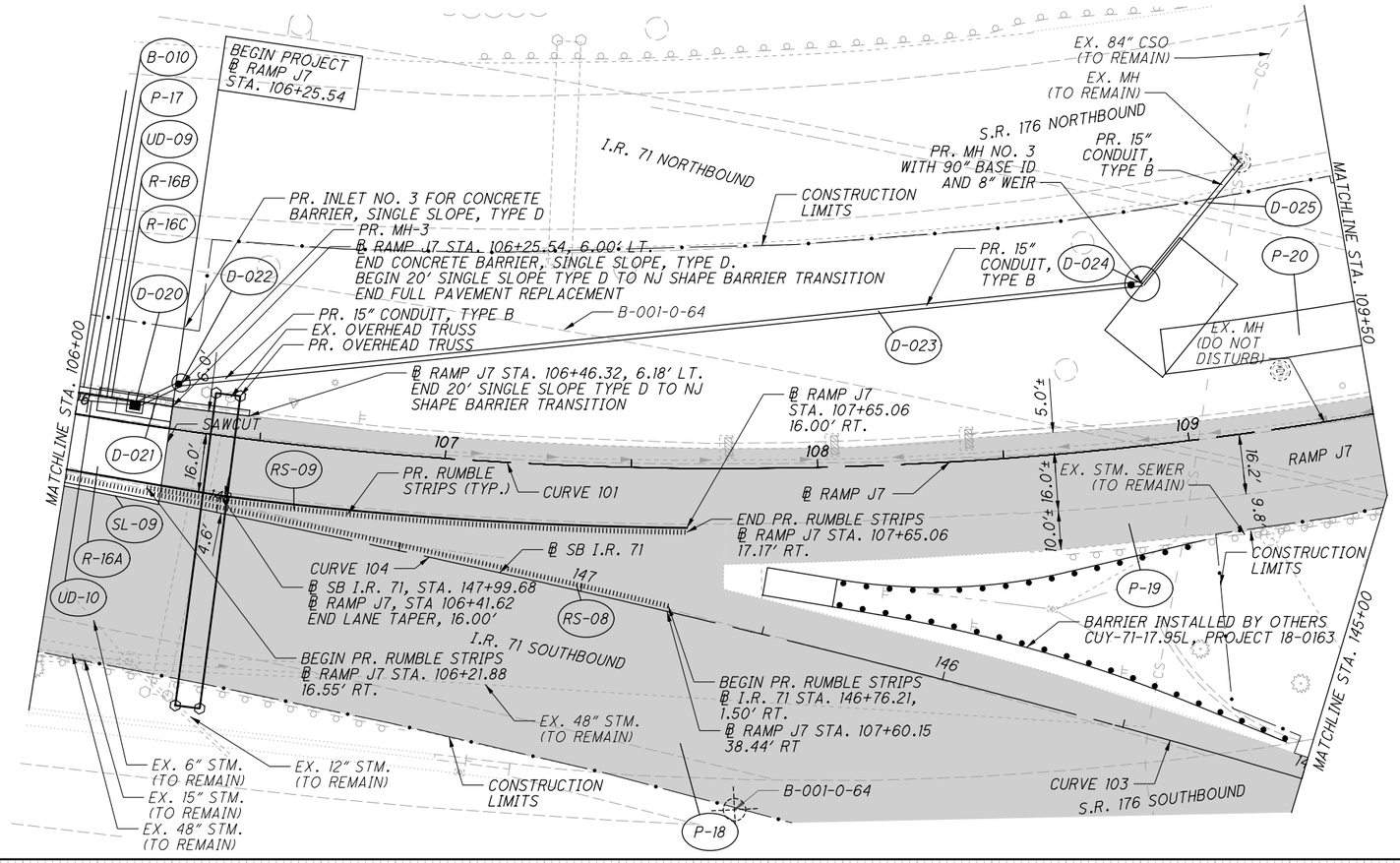


HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

PLAN AND PROFILE - SB I.R. 71 & RAMP J7
STA. 101+00.00 TO STA. 106+00.00

CUY-71-17.83/
CUY-176-12.76



CURVE 101
℄ RAMP J7
P.I. STA. 111+45.42
Δ= 54° 10' 50" (LT)
Dc = 5° 30' 00"
R = 1,041.74'
T = 532.86'
L = 985.10'
E = 128.37'
e = 0.044
(NDC 0.053)

CURVE 103
℄ SB I.R. 71
P.I. STA. 140+68.97
Δ= 29° 43' 32" (LT)
Dc = 3° 00' 00"
R = 1,905.86'
T = 506.84'
L = 990.85'
E = 66.11'
e = 0.055

CURVE 104
℄ SB I.R. 71
P.I. STA. 147+36.97
Δ= 5° 30' 56" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 184.00'
L = 367.71'
E = 4.43'
e = 0.037

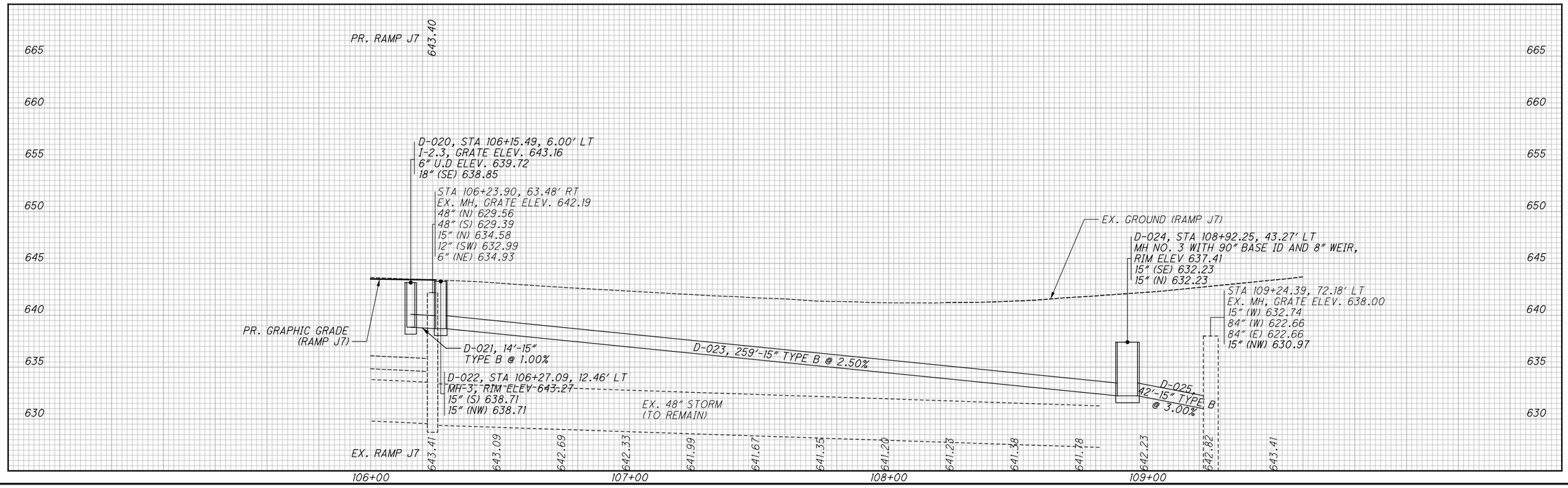
NOTES:

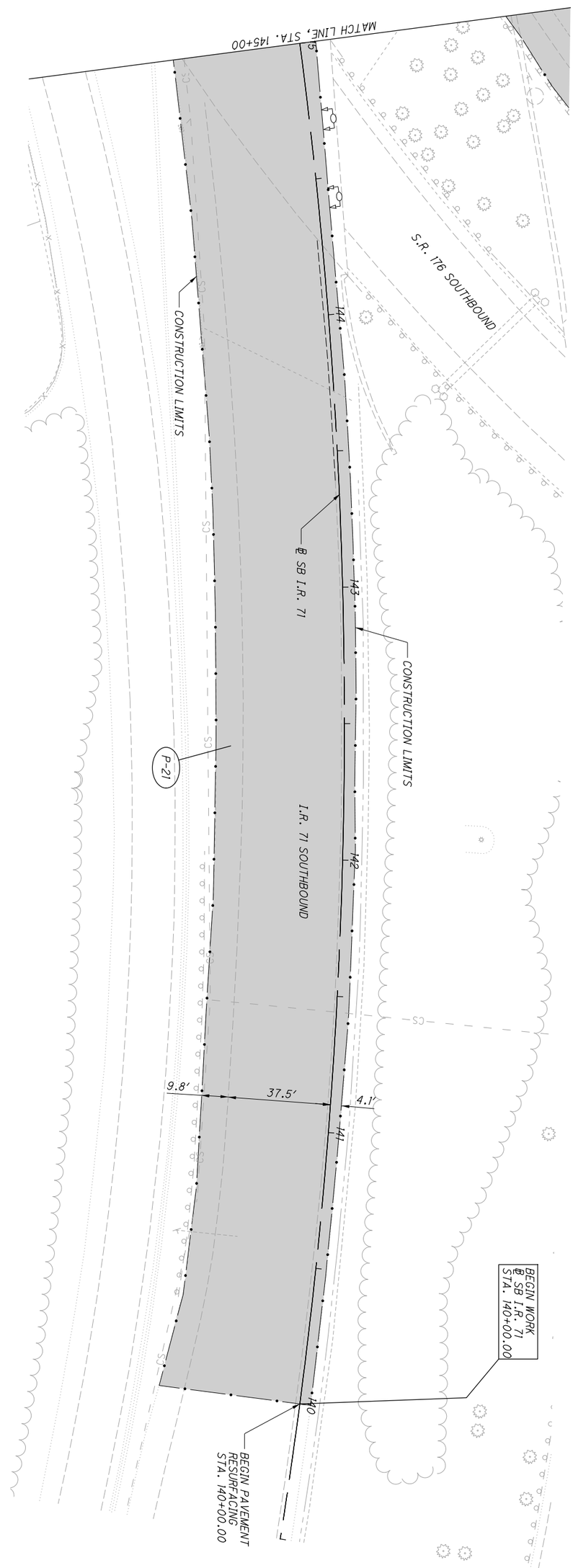
SEE DETAIL ON SHEETS 77
TO 78 FOR RAMP J7 DETAILS.

SEE DETAIL ON SHEET 79
FOR RAMP J7 GORE DETAIL.

LEGEND:

PR. PAVEMENT
RESURFACING



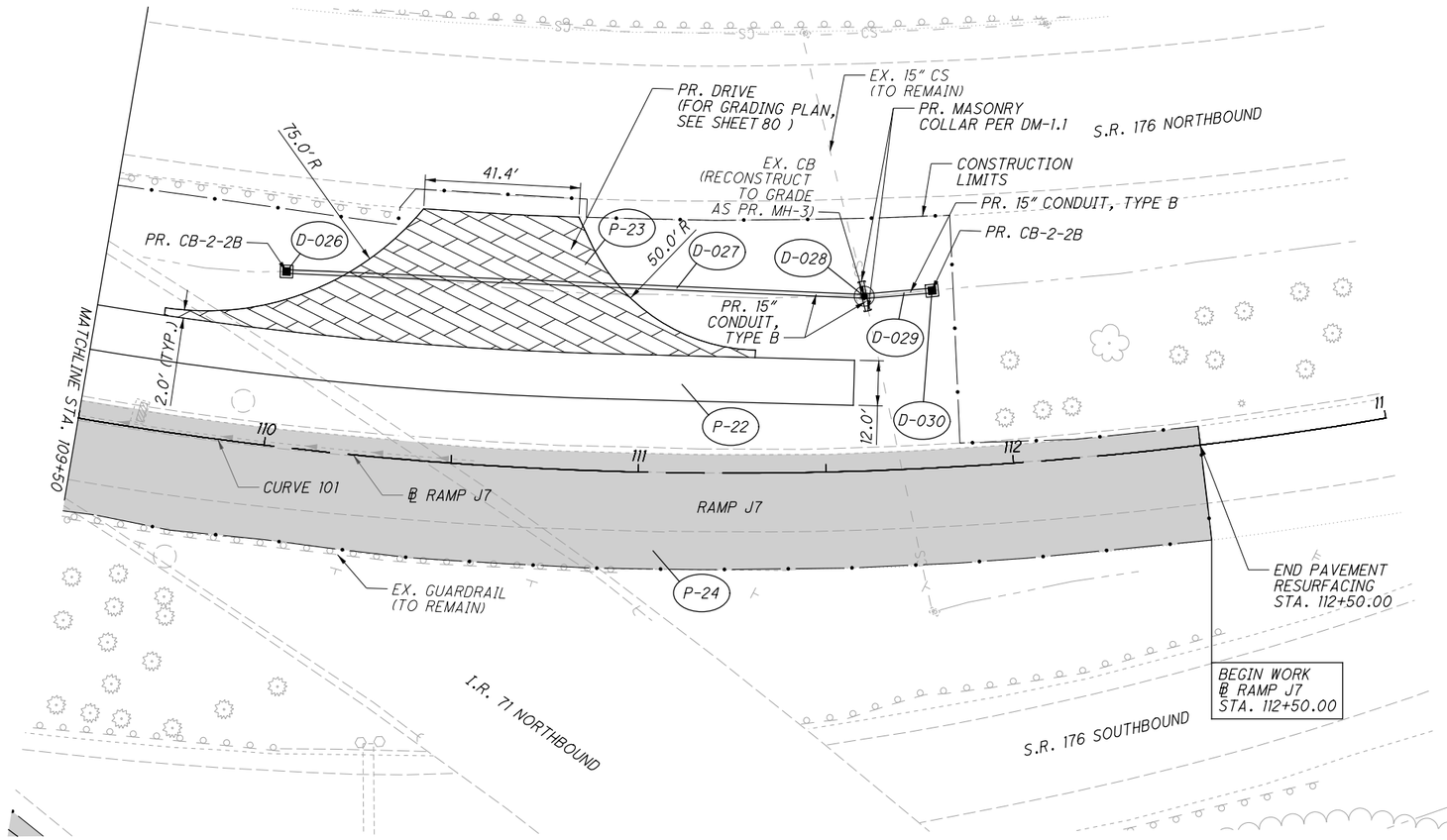


50 / 127	CUY-71-17.83/ CUY-176-12.76	PLAN - SB I.R. 71 BEGIN TO STA. 145+00.00	CALCULATED JLD CHECKED DJJ	0 20 10 40 HORIZONTAL SCALE IN FEET

CURVE 101
℄ RAMP J7
P.I. STA. 111+45.42
Δ = 54° 10′ 50″ (LT)
Dc = 5° 30′ 00″
R = 1,041.74′
T = 532.86′
L = 985.10′
E = 128.37′
e = 0.044
(NDC 0.053)

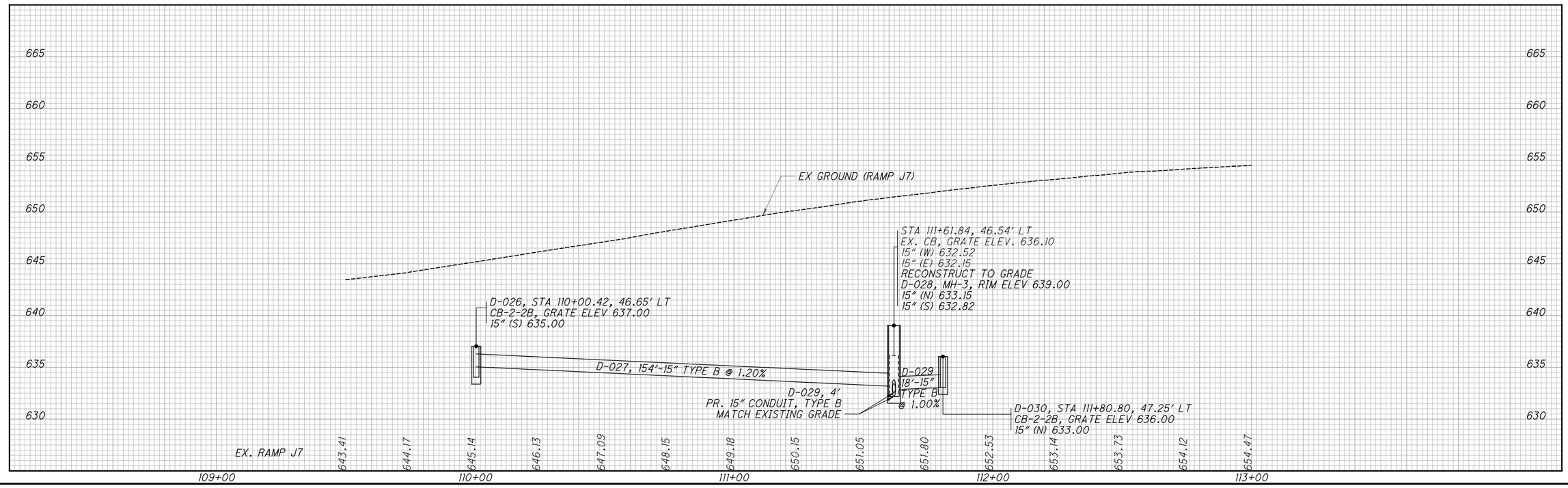
LEGEND:

REINFORCED TURF



NOTES:

FOR DRIVE DETAILS SEE SHEET 80.



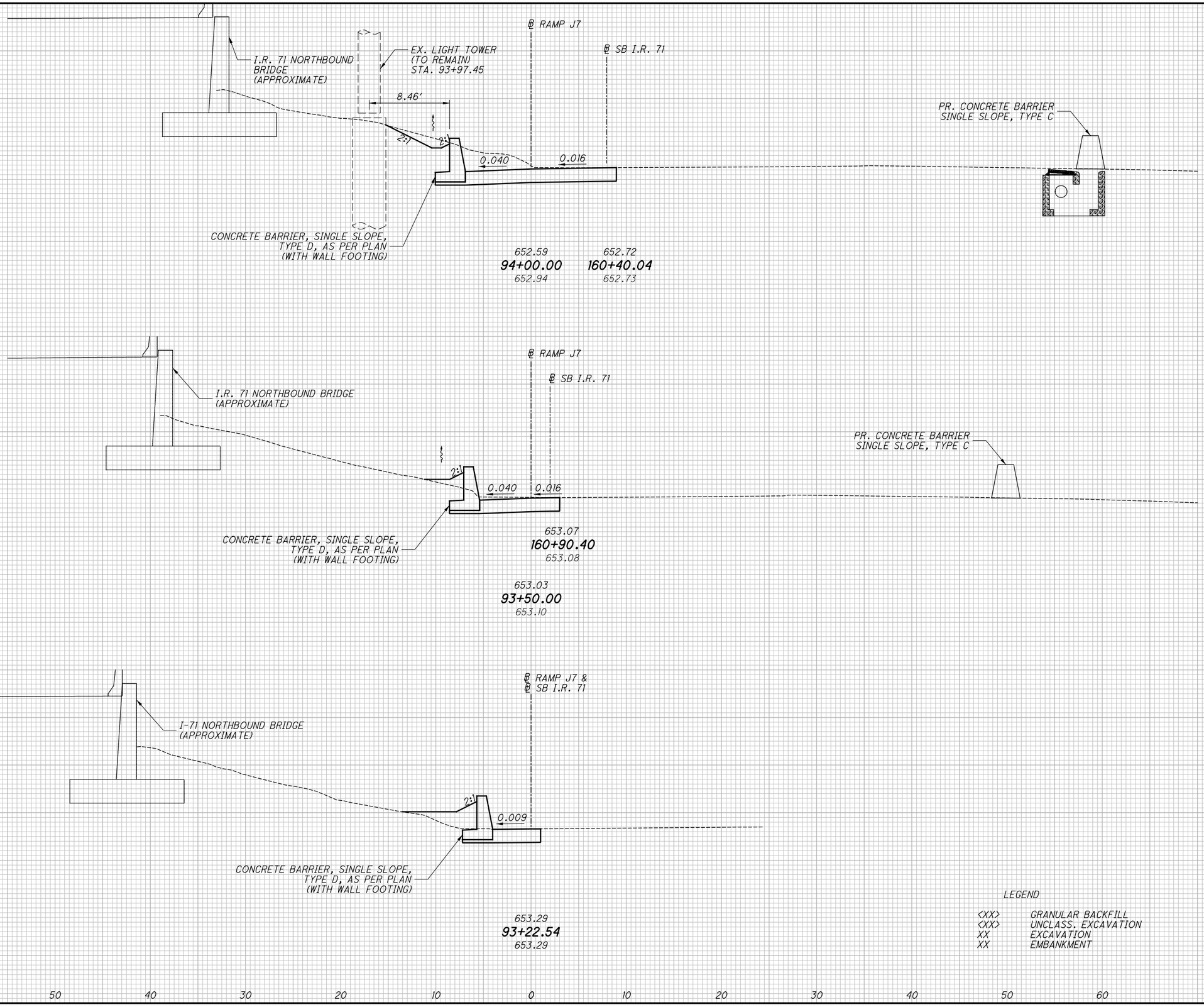
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

PLAN AND PROFILE - RAMP J7
STA. 109+50.00 TO END

CUY-71-17.83/
CUY-176-12.76

SEEDING END WIDTH	SEEDING SQ. YDS.
7	32
4	19
8	0
	51



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47 <0>	0 <0>		
		61 <0>	2 <0>
19 <0>	2 <0>		
		15 <0>	6 <0>
12 <0>	9 <0>		
		0 <0>	0 <0>
		76	8
		<0>	<0>

LEGEND

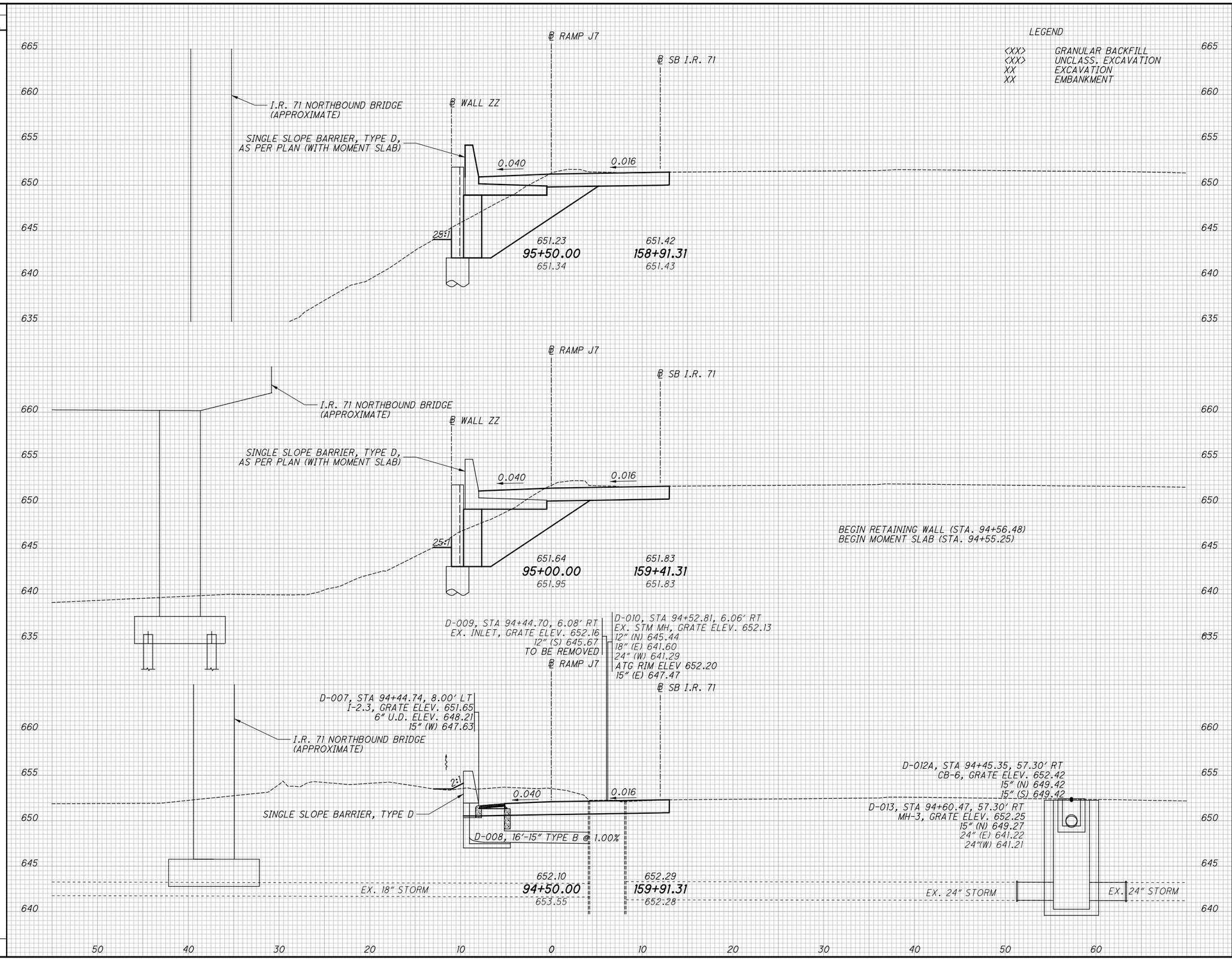
<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 93+22.53 TO STA. 94+00.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	11
2±	15
3	30
	56



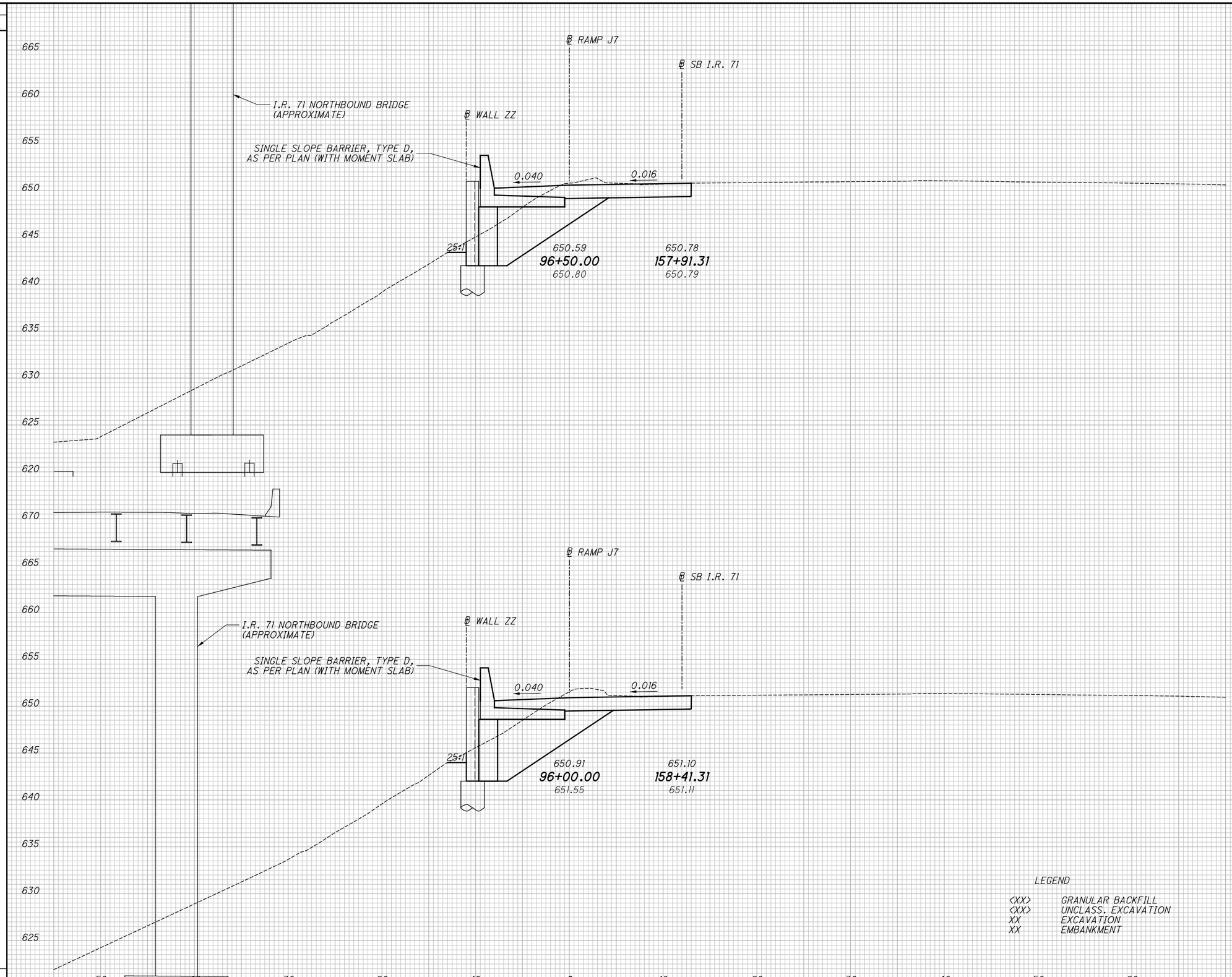
END AREA		VOLUME	
CUT	FILL	CUT	FILL
76 <17>	0 <41>	135 <32>	0 <69>
70 <18>	0 <34>	113 <16>	1 <31>
52 <0>	1 <0>	91 <0>	1 <0>
		339 <48>	2 <100>

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 94+50.00 TO STA. 95+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	11
2±	11
	22



END AREA		VOLUME	
CUT	FILL	CUT	FILL
69 <12>	0 <33>	134 <25>	0 <65>
75 <16>	0 <37>	140 <30>	0 <72>
		274 <55>	0 <137>

LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 96+00.00 TO STA. 96+50.00

CUY-71-17.83/
CUY-176-12.76

54
127

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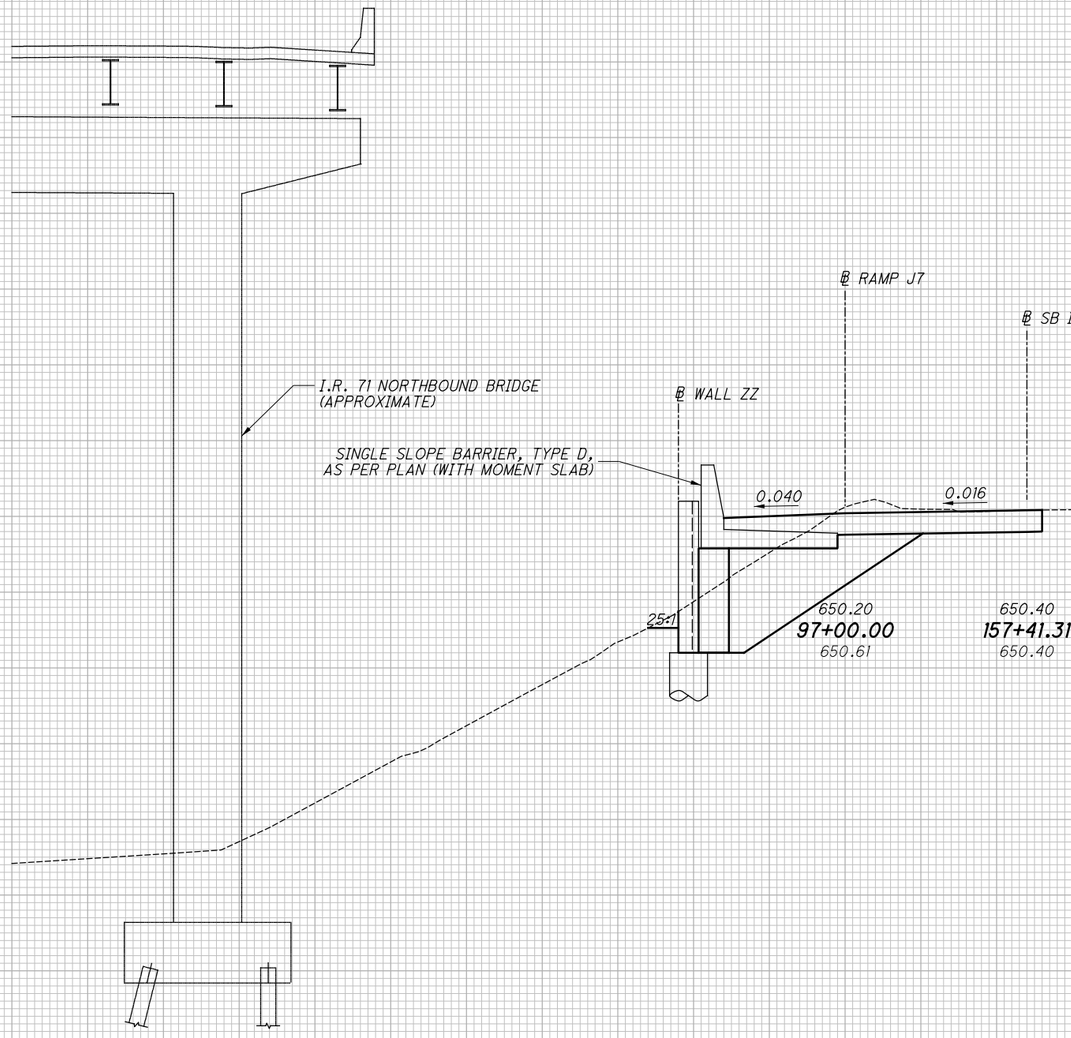
SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

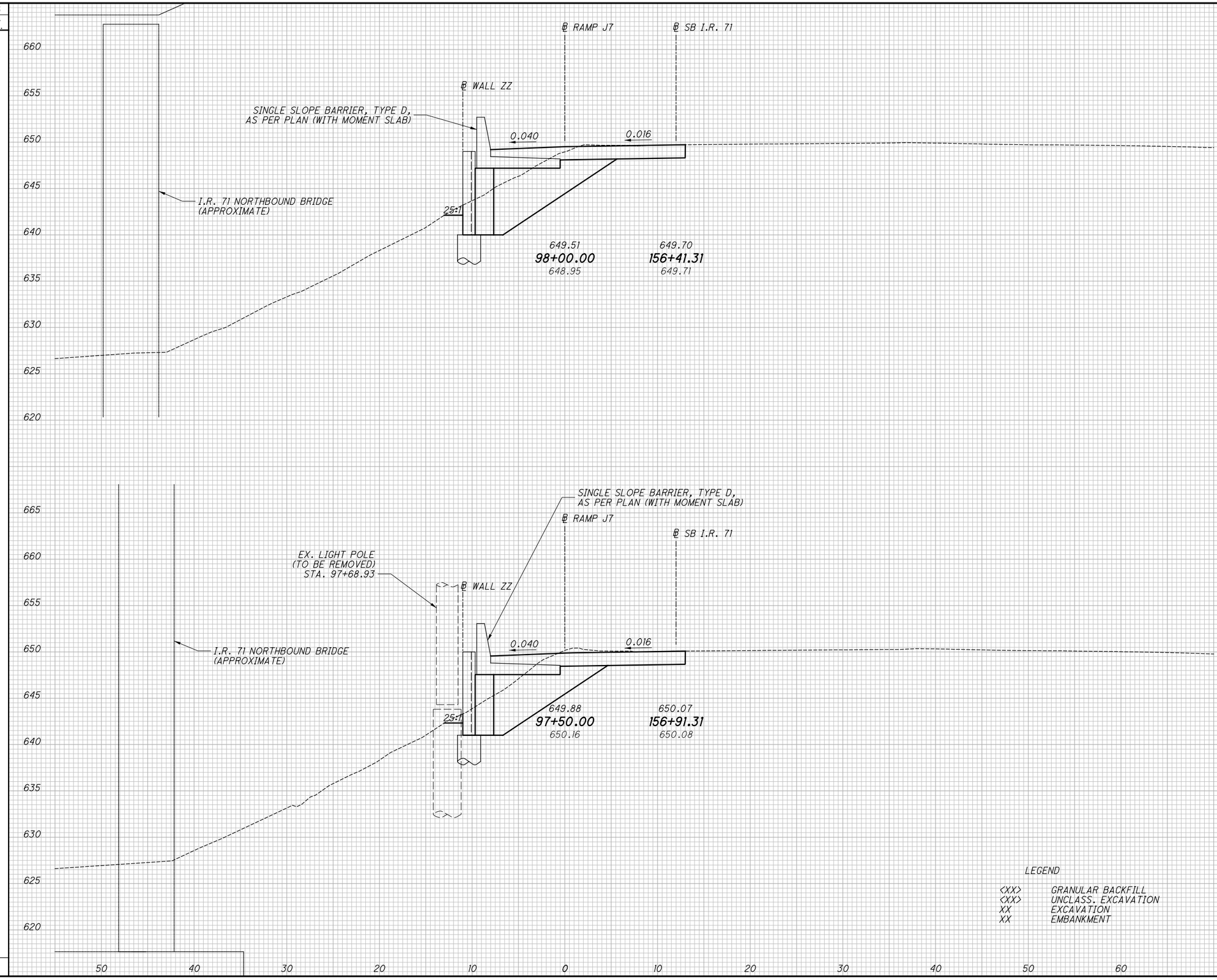
END AREA		VOLUME	
CUT	FILL	CUT	FILL
77 <14>	0 <40>	135 <24>	0 <68>
		135 <24>	0 <68>

CALCULATED	CHECKED
JLD	DJJ

CROSS SECTIONS - RAMP J7 STA. 97+00.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	11
2±	11
2±	11
	22



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
74 <16>	0 <44>		
		133 <25>	0 <75>
70 <11>	0 <36>		
		136 <23>	0 <71>
		269 <48>	0 <146>

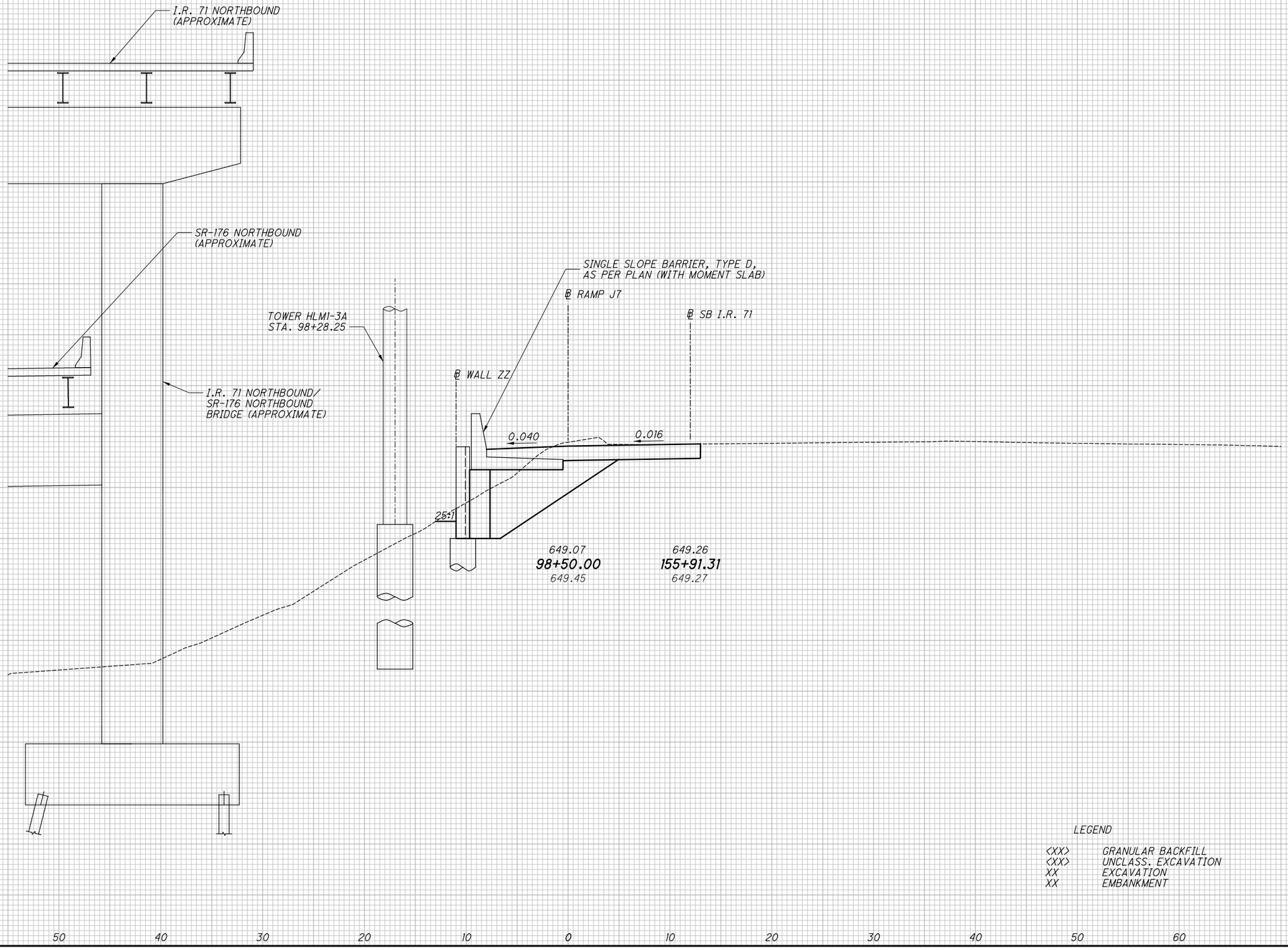
CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 97+50.00 TO STA. 98+00.00

CUY-71-17.83/
CUY-176-12.76

56
127

SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

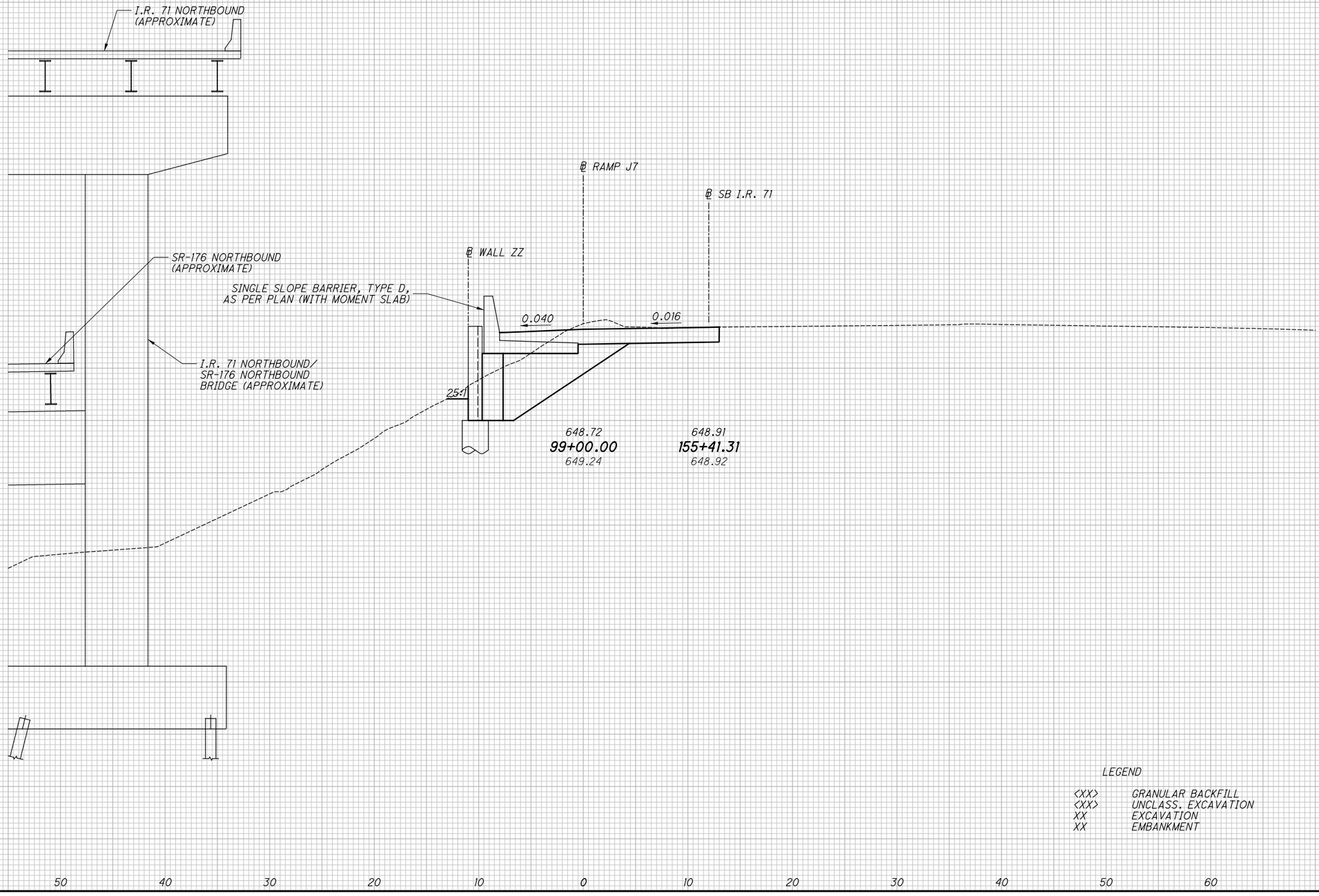
END AREA		VOLUME	
CUT	FILL	CUT	FILL
76 <14>	0 <39>	139 <28>	0 <77>
		139 <28>	0 <77>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 98+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	
11	
11	



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
74 <18>	0 <35>	139 <29>	0 <68>
		139 <29>	0 <68>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 99+00.00

CUY-71-17.83/
CUY-176-12.76

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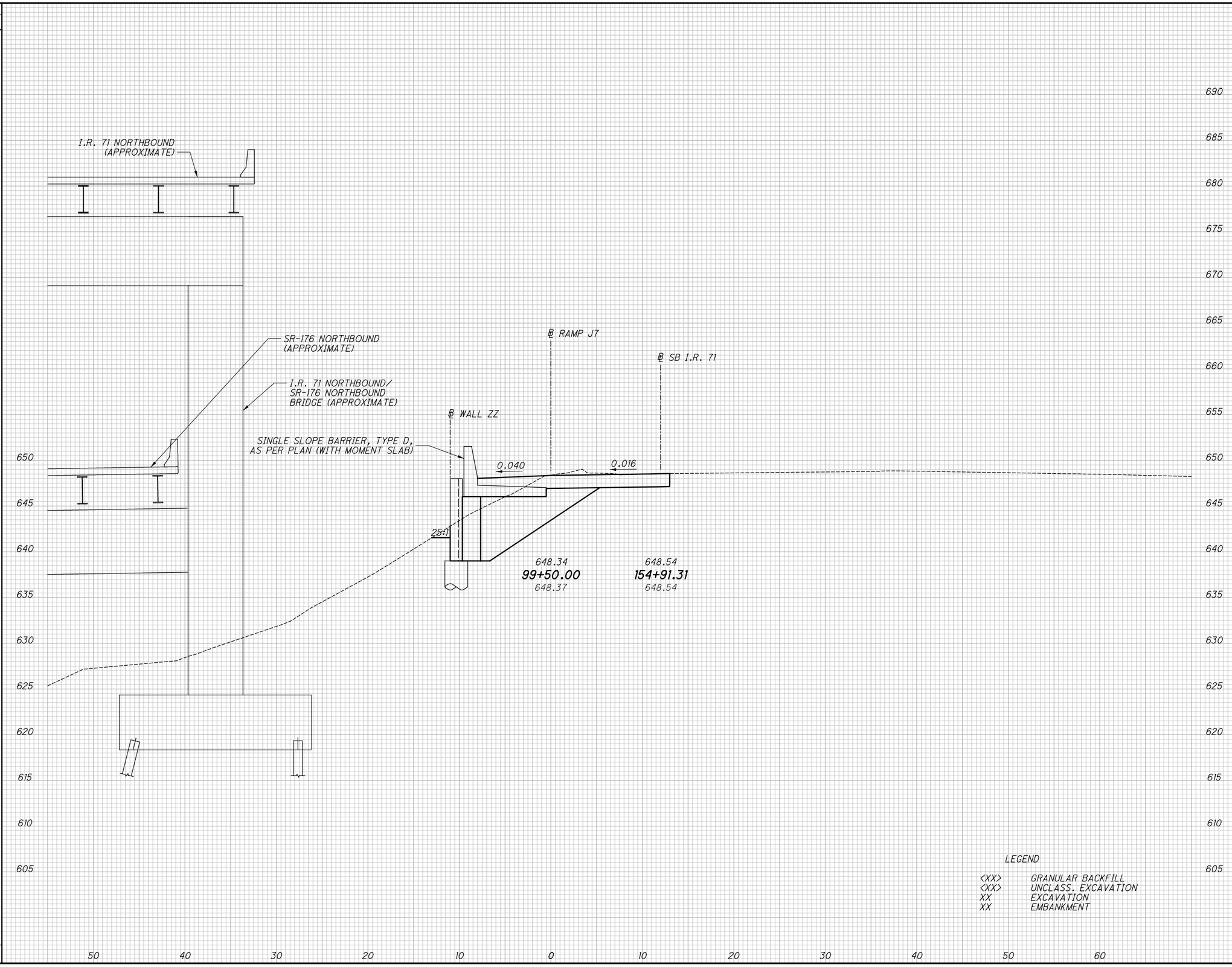
SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

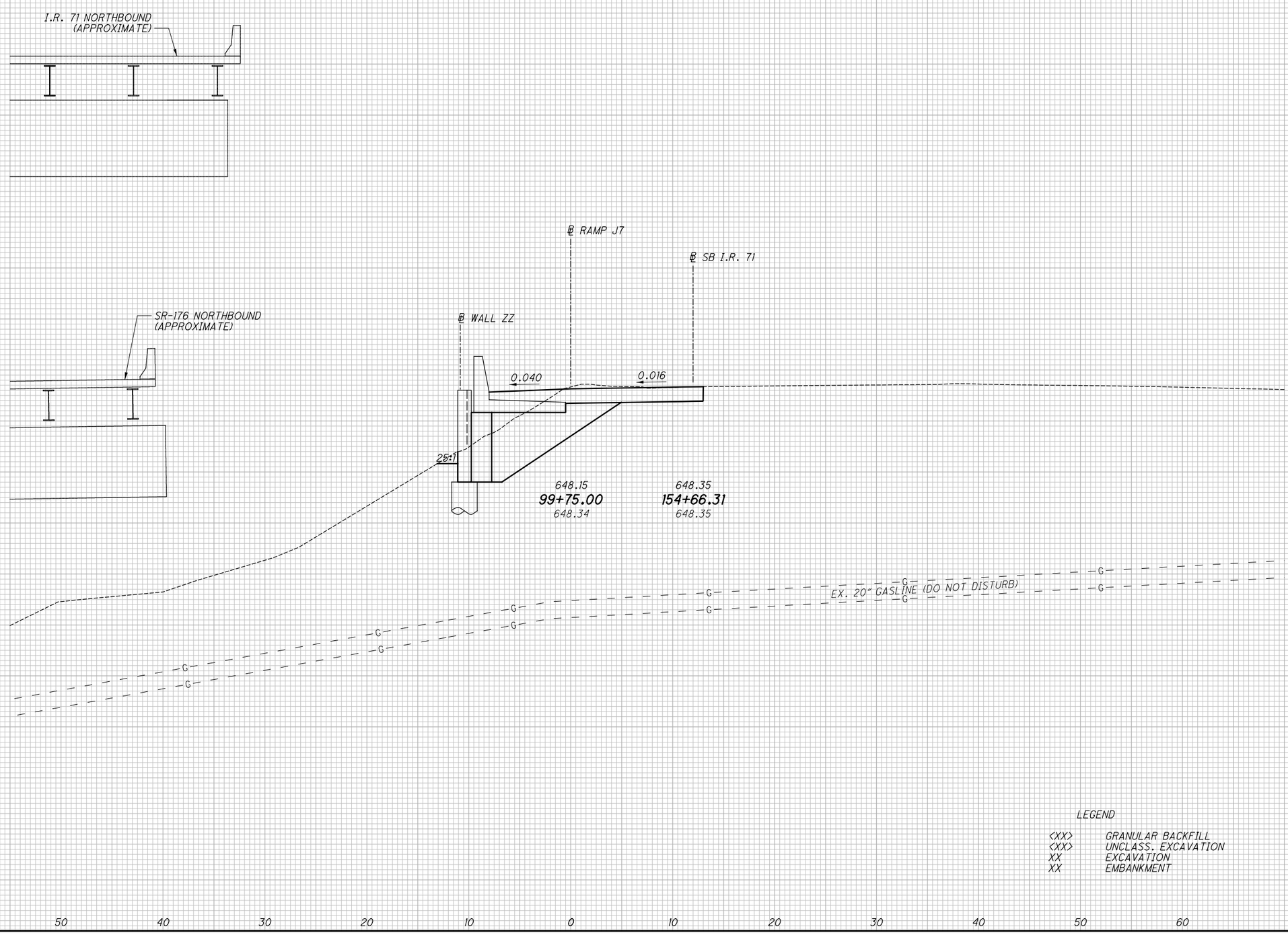
END AREA		VOLUME	
CUT	FILL	CUT	FILL
80 <21>	0 <42>	142 <36>	0 <71>
		142 <36>	0 <71>

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 99+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	6
	6



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

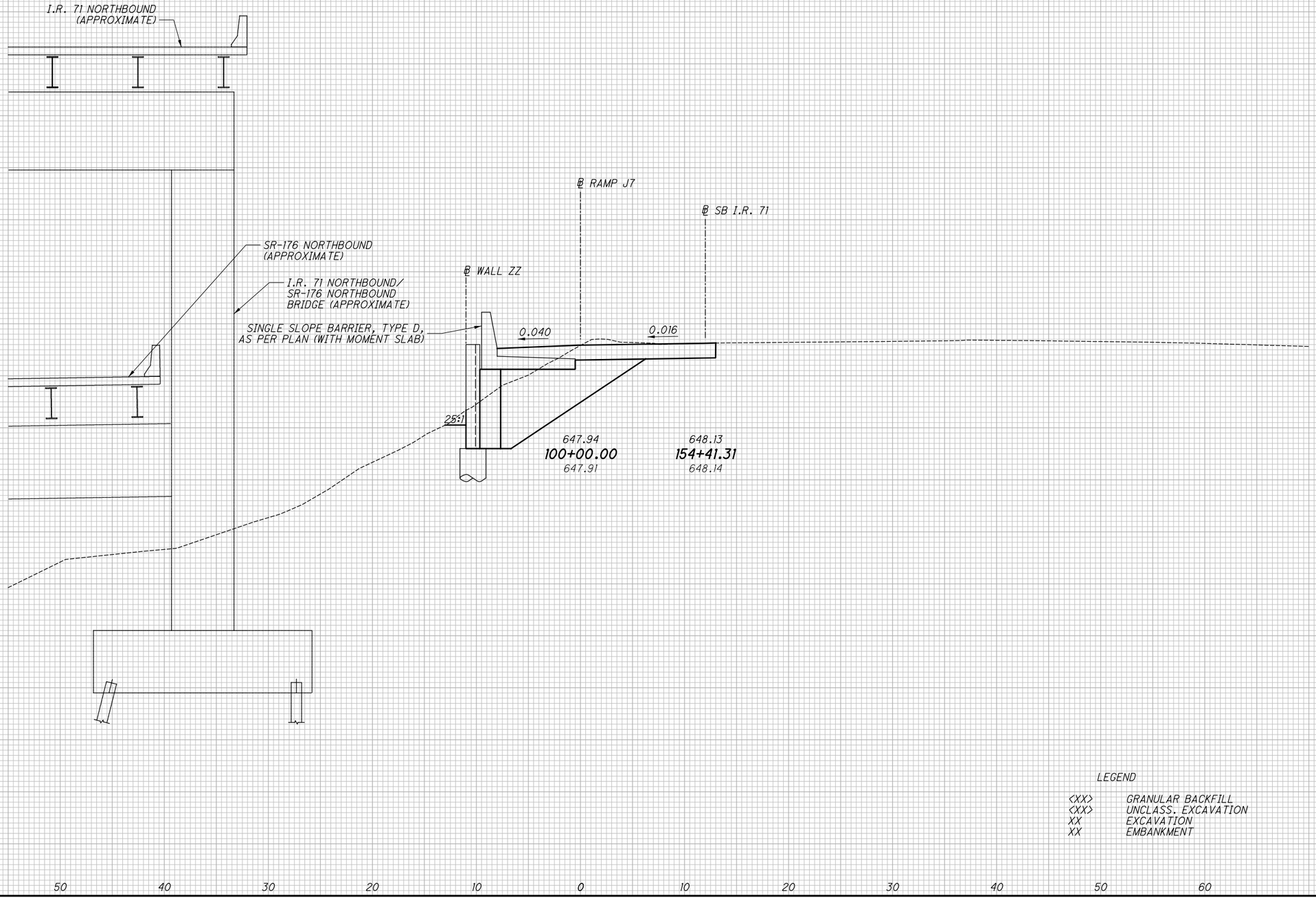
END AREA		VOLUME	
CUT	FILL	CUT	FILL
74 <15>	0 <39>	71 <16>	0 <38>
		71 <16>	0 <38>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 99+75.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	6
	6



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

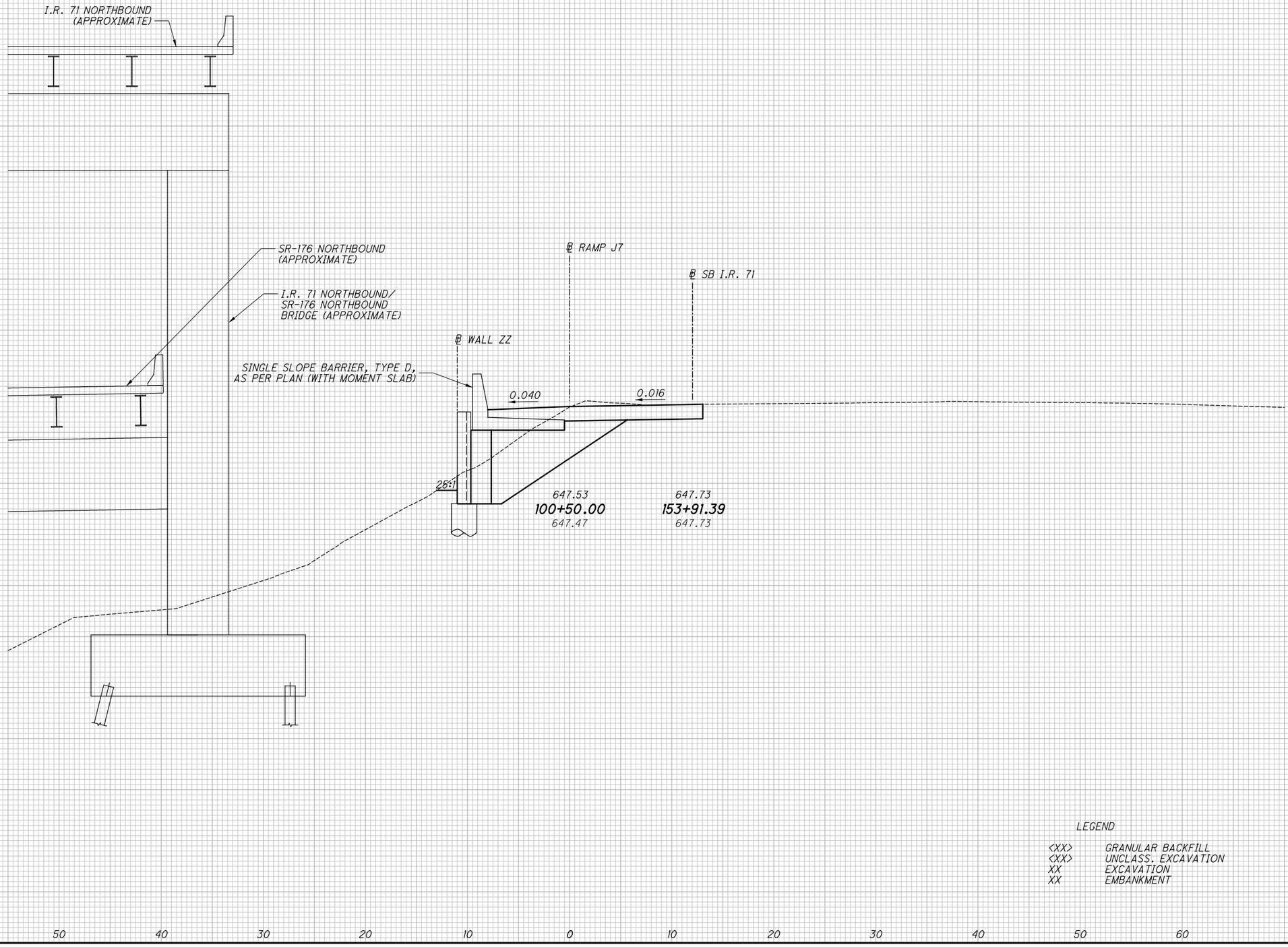
END AREA		VOLUME	
CUT	FILL	CUT	FILL
85 <20>	0 <49>	74 <16>	0 <41>
		74 <16>	0 <41>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 100+00.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

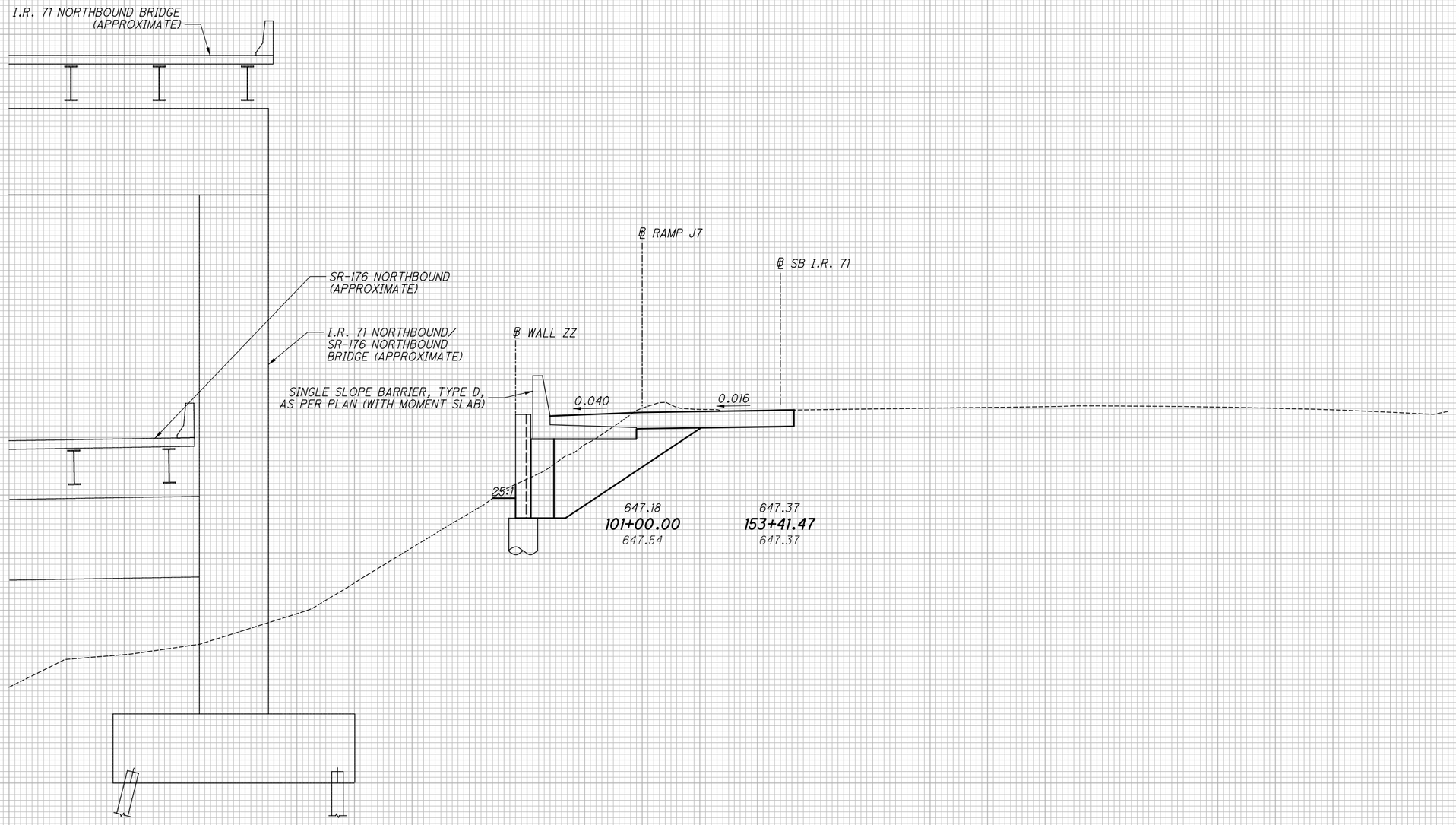
END AREA		VOLUME	
CUT	FILL	CUT	FILL
76 <12>	0 <44>	149 <29>	0 <87>
		149 <29>	0 <87>

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 100+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

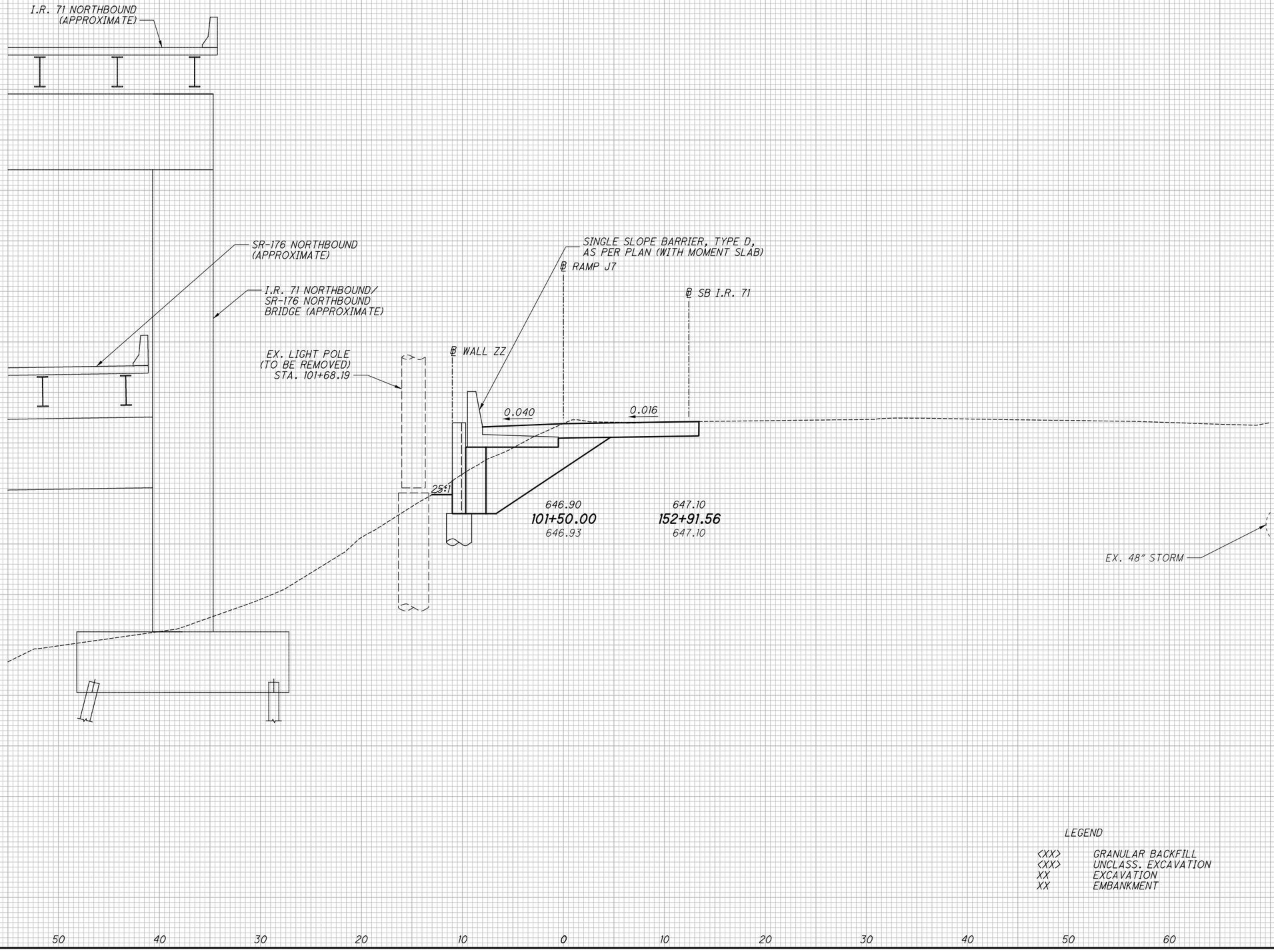
END AREA		VOLUME	
CUT	FILL	CUT	FILL
75 <14>	0 <40>	140 <24>	0 <78>
		140 <24>	0 <78>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 101+00.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

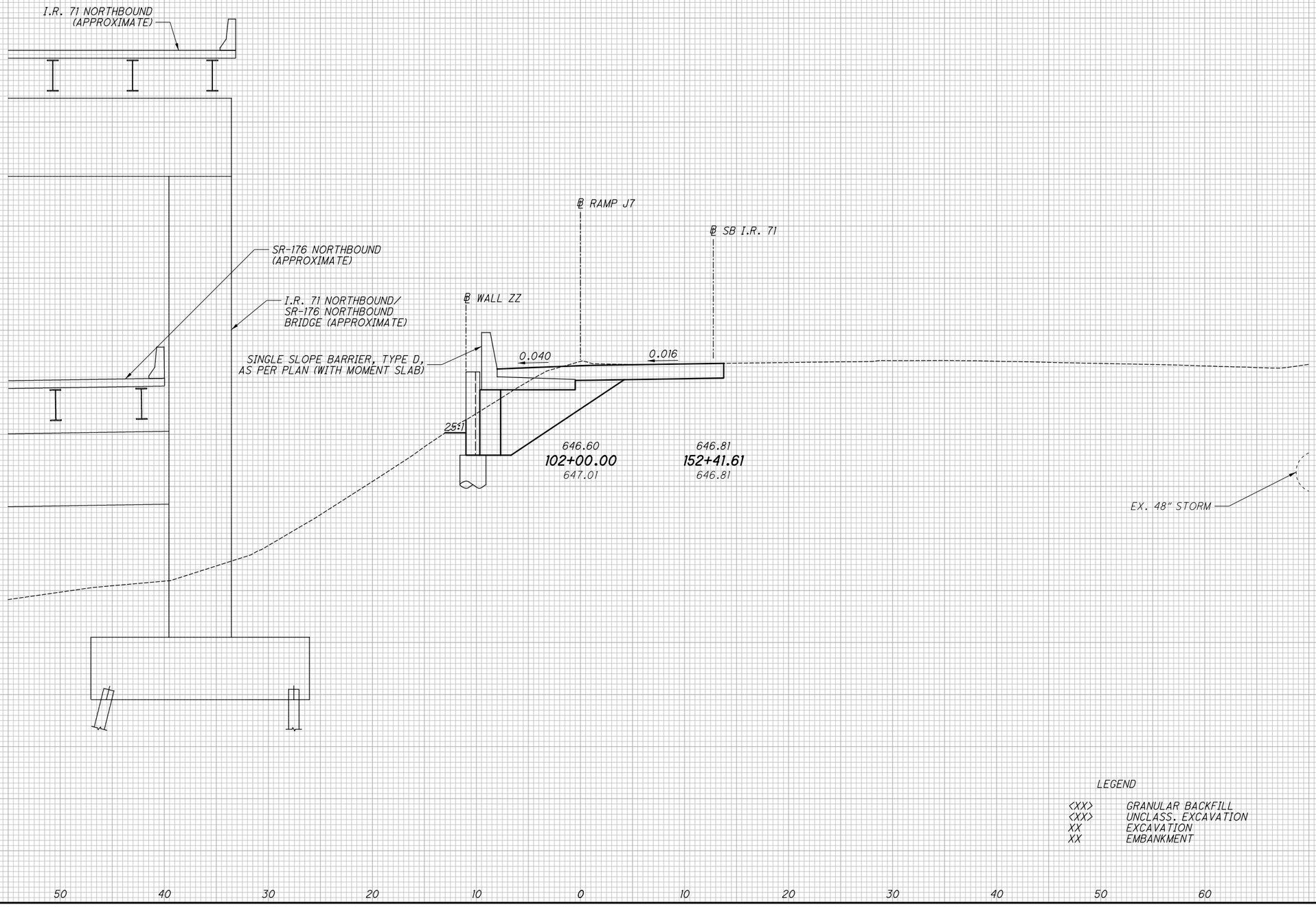
END AREA		VOLUME	
CUT	FILL	CUT	FILL
73 <16>	0 <37>	137 <28>	0 <71>
		137 <28>	0 <71>

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - RAMP J7 STA. 101+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	
11	
11	



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
76 <17>	0 <33>	138 <31>	0 <65>
		138 <31>	0 <65>

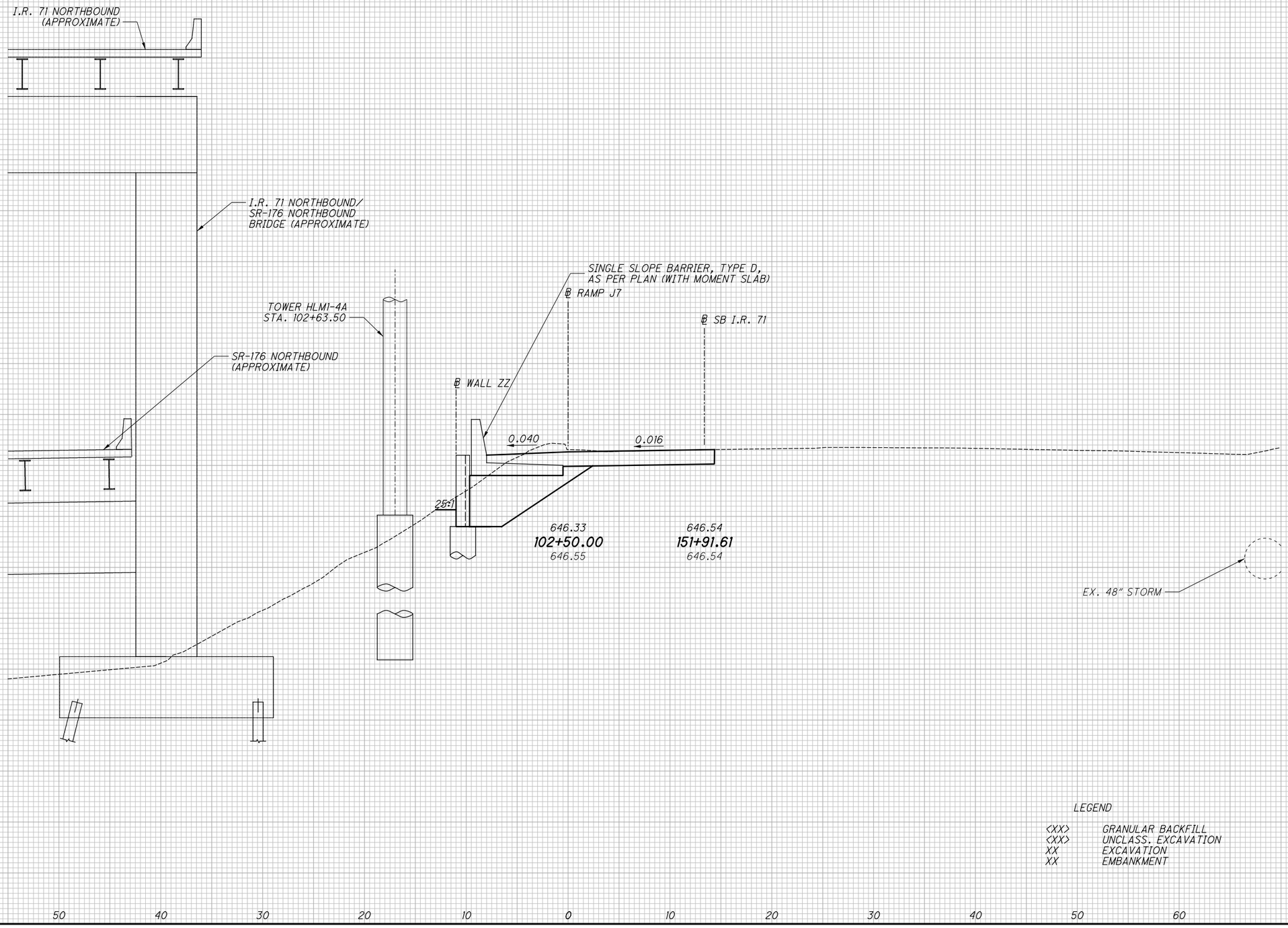
CALCULATED	CHECKED
JLD	DJJ

CROSS SECTIONS - RAMP J7
STA. 102+00.00

CUY-71-17.83/
CUY-176-12.76

65
127

SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

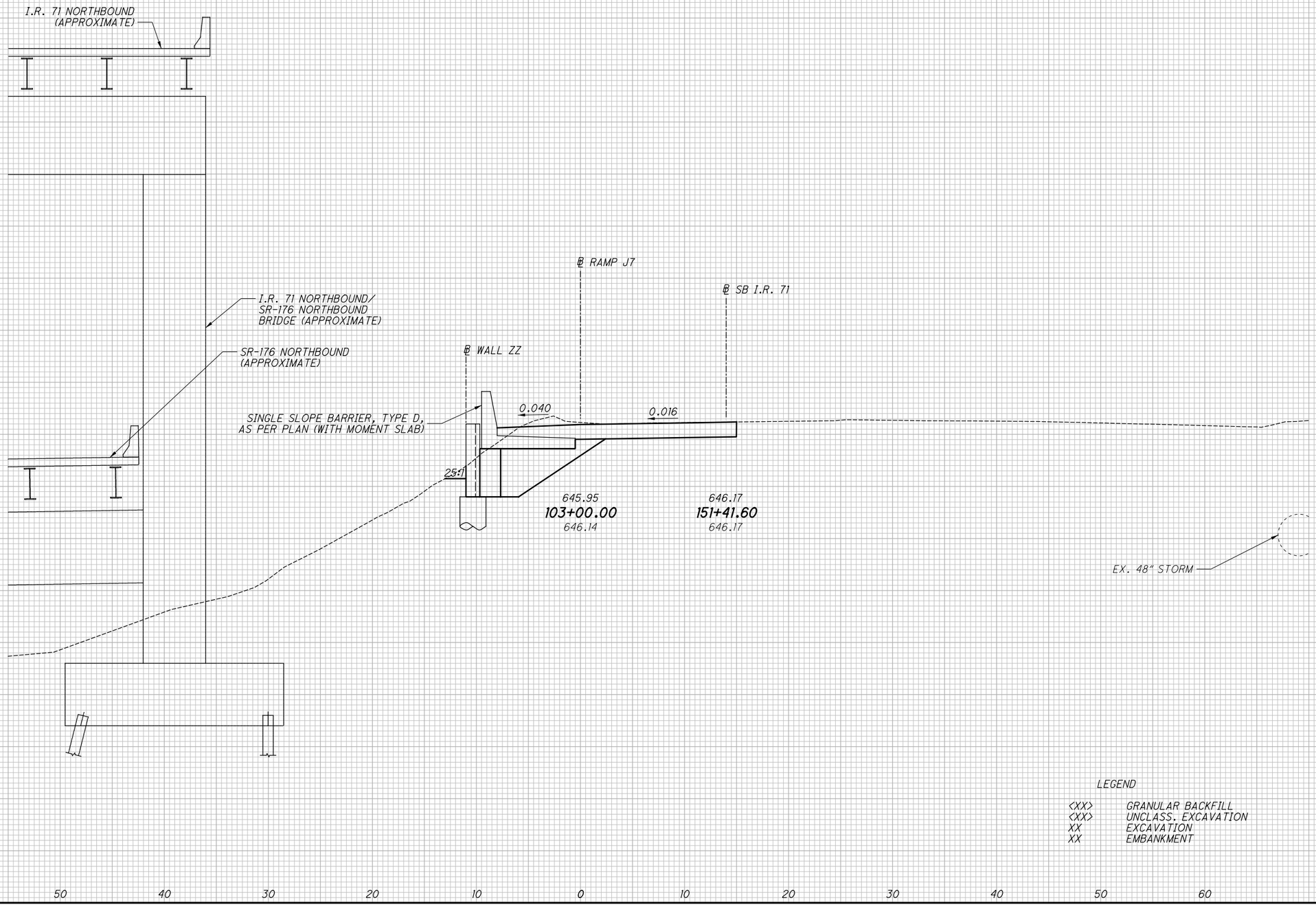
END AREA		VOLUME	
CUT	FILL	CUT	FILL
69 <14>	0 <21>	134 <29>	0 <51>
		134 <29>	0 <51>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 102+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

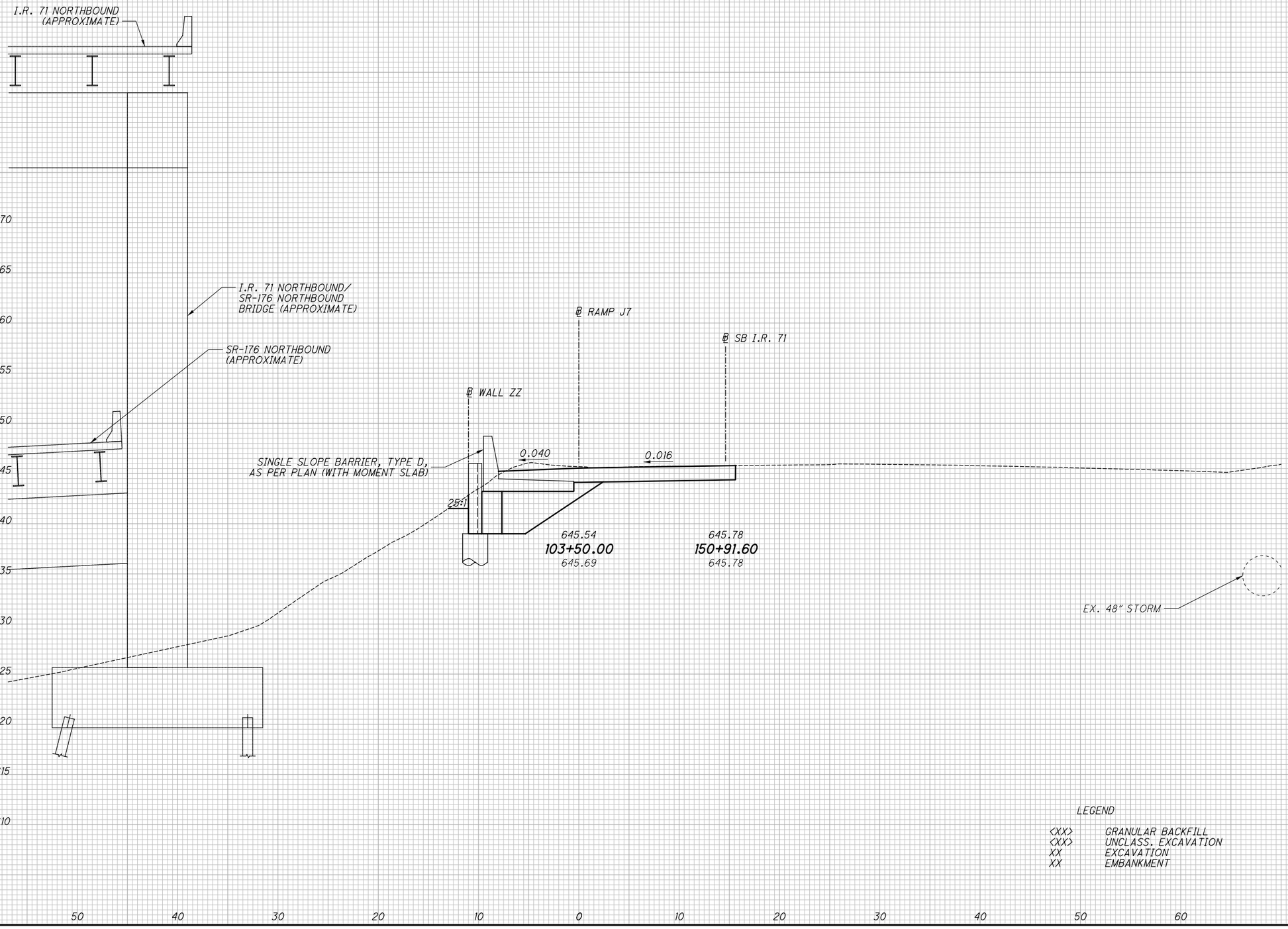
END AREA		VOLUME	
CUT	FILL	CUT	FILL
72 <15>	0 <21>	131 <26>	0 <39>
		131 <26>	0 <39>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 103+00.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	
11	



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

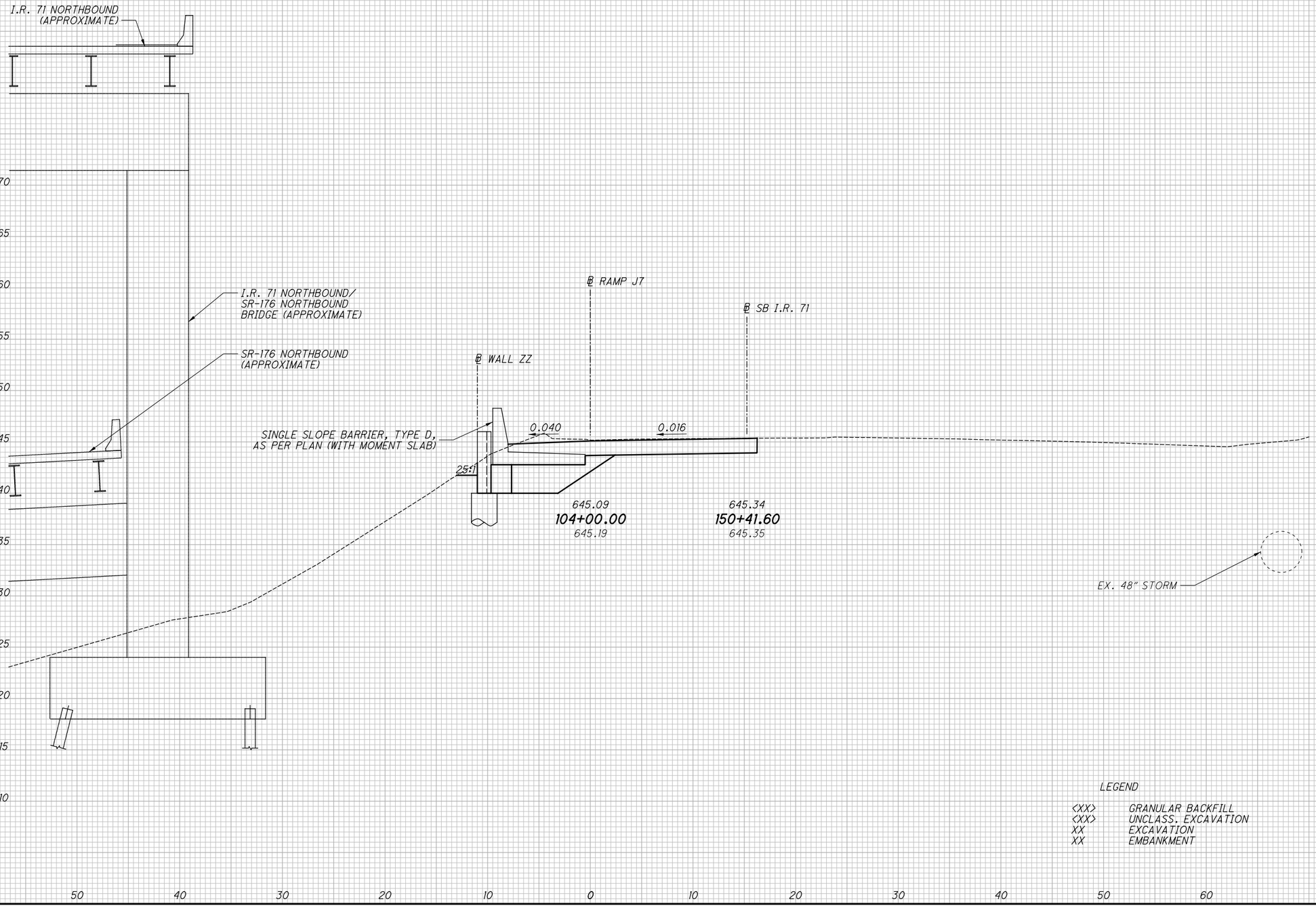
END AREA		VOLUME	
CUT	FILL	CUT	FILL
75 <19>	0 <20>	137 <32>	0 <38>
		137 <32>	0 <38>

CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 103+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
2±	
11	



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
71 <13>	0 <15>		
		135 <30>	0 <32>
		135 <30>	0 <32>

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 104+00.00

CUY-71-17.83/
CUY-176-12.76

69
127

SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11

LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
70 <14>	0 <14>	130 <24>	0 <26>
		130 <24>	0 <26>

CALCULATED	CHECKED
JLD	DJJ

CROSS SECTIONS - RAMP J7 STA. 104+50.00

CUY-71-17.83/
CUY-176-12.76

70
127

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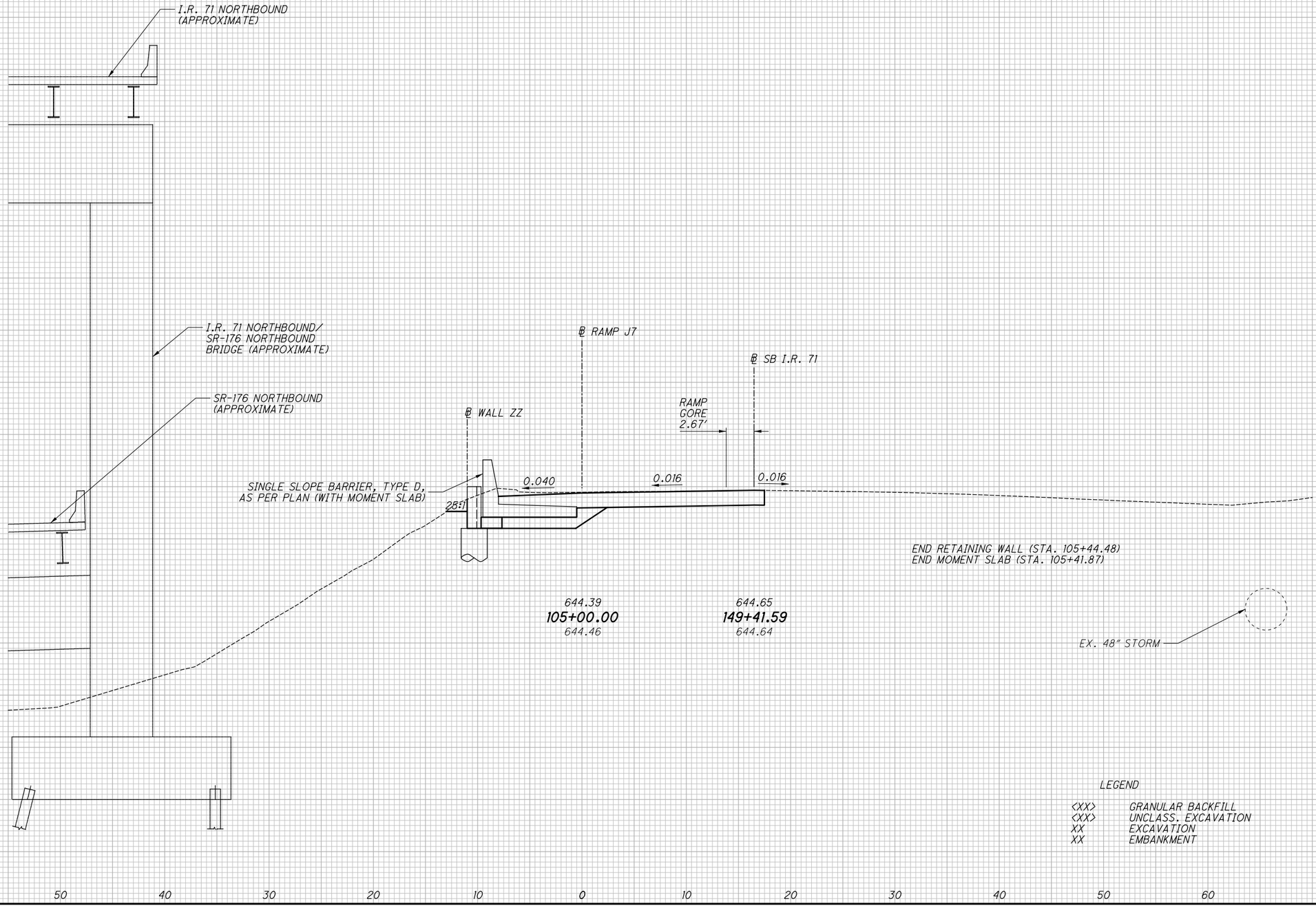
SEEDING	
END WIDTH	SQ. YDS.
2±	11
	11



LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
62 <10>	0 <5>	122 <22>	0 <17>
		122 <22>	0 <17>

CALCULATED JLD
CHECKED DJJ

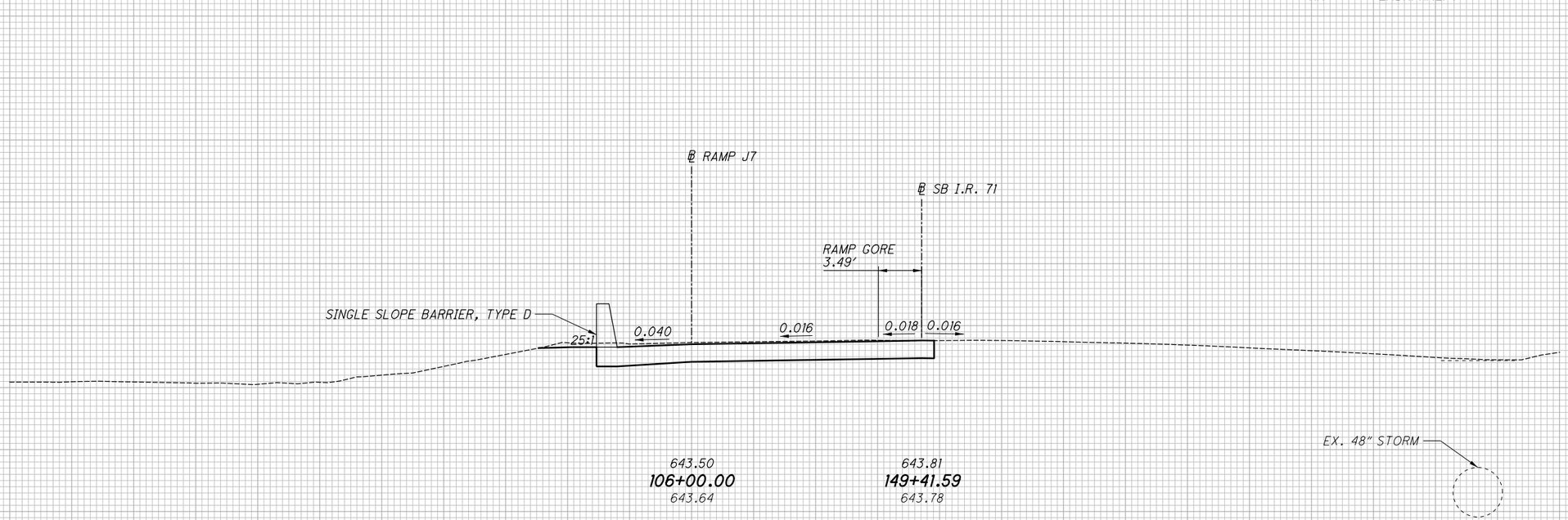
CROSS SECTIONS - RAMP J7 STA. 105+00.00

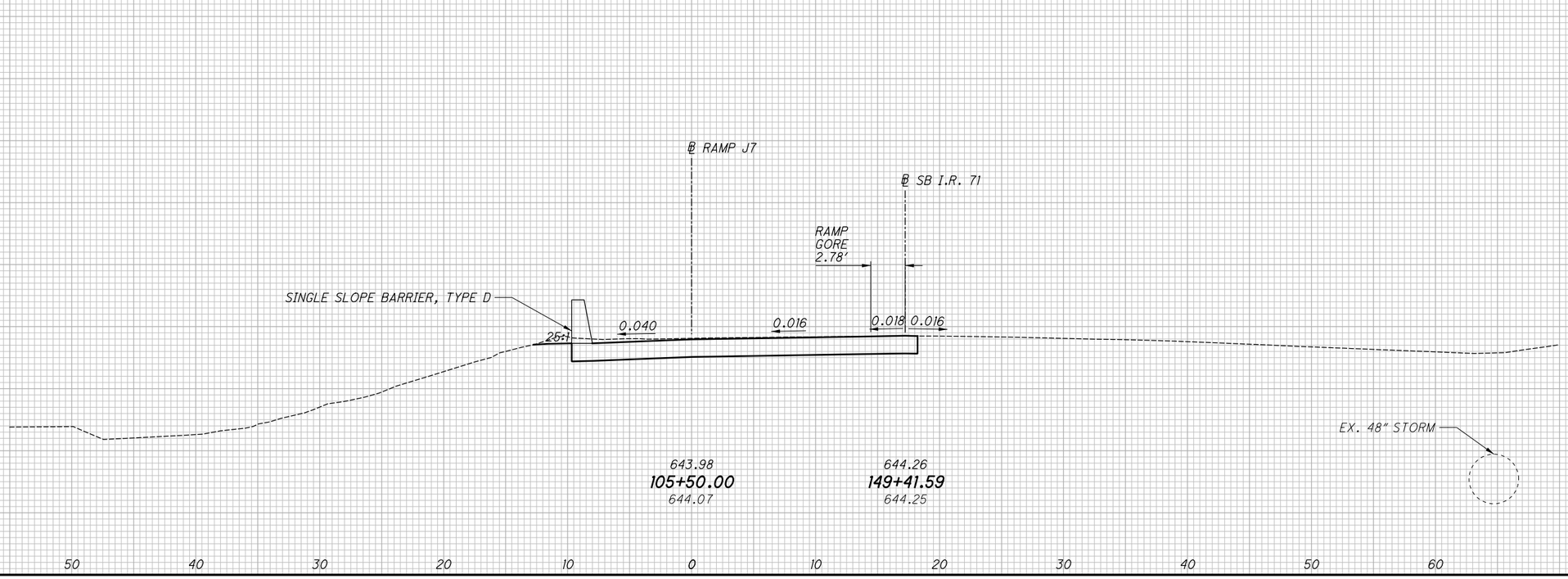
CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
5	
	21
3	
	14
	35

LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT





END AREA		VOLUME	
CUT	FILL	CUT	FILL
44 <0>	0 <0>		
		81 <0>	0 <0>
44 <0>	0 <0>		
		98 <9>	0 <5>
		179	0
		<9>	<5>

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - RAMP J7
STA. 105+50.00 TO STA. 106+00.00

CUY-71-17.83/
CUY-176-12.76

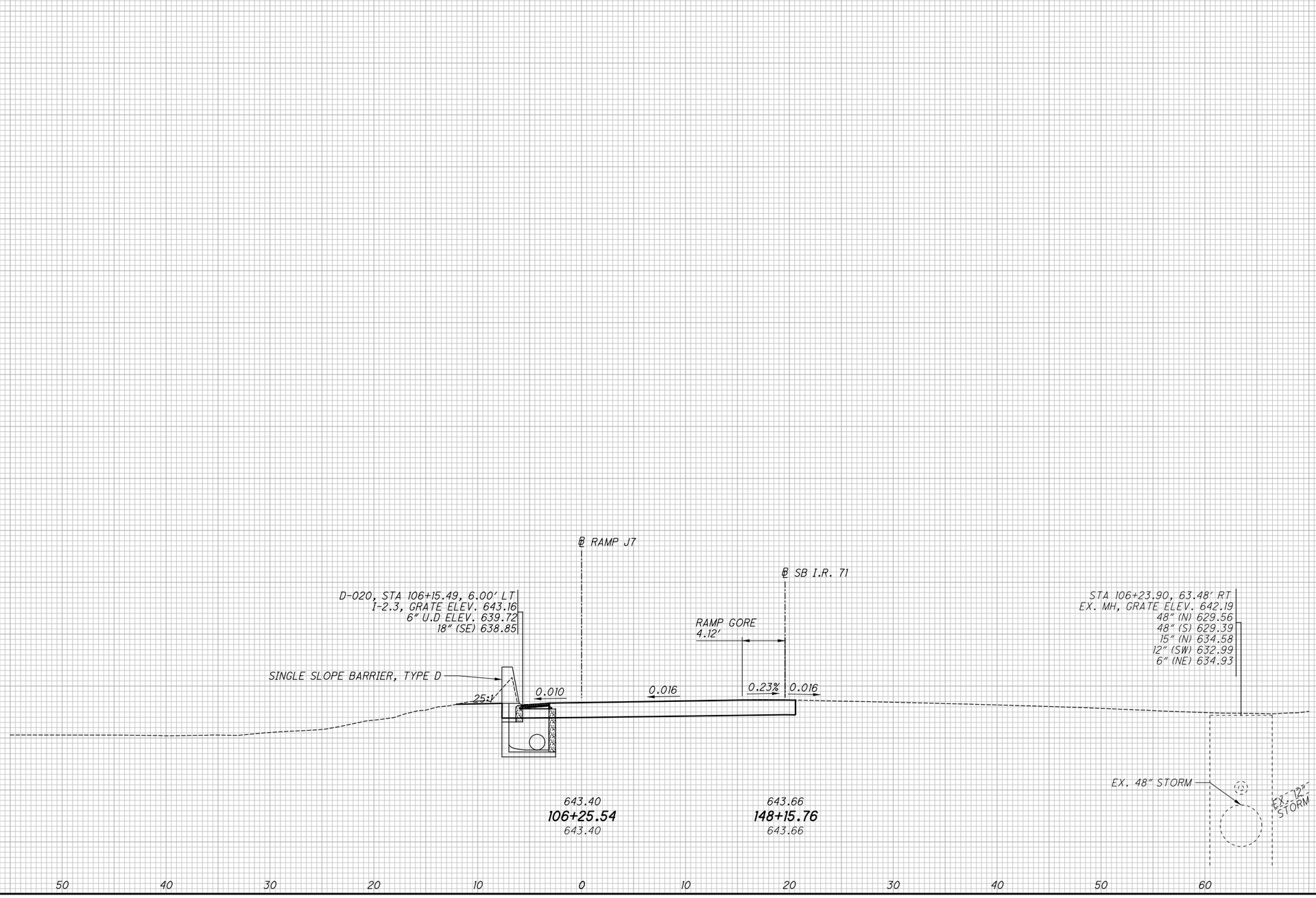
72
127

SEEDING	
END WIDTH	SQ. YDS.
4	13
	13

TOTAL EARTHWORK & SEEDING FOR RAMP J7				
EXCAVATION CY	EMBANKMENT CY	GRANULAR BACKFILL CY	UNCLASSIFIED EXCAVATION CY	SEEDING & MULCHING SY
3233.2	9.2	1253.9	584.0	366.8

LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT



END AREA		VOLUME	
CUT	FILL	CUT	FILL
45 <0>	0 <0>		
		42 <0>	0 <0>
		42	0
		<0>	<0>

CALCULATED JLD

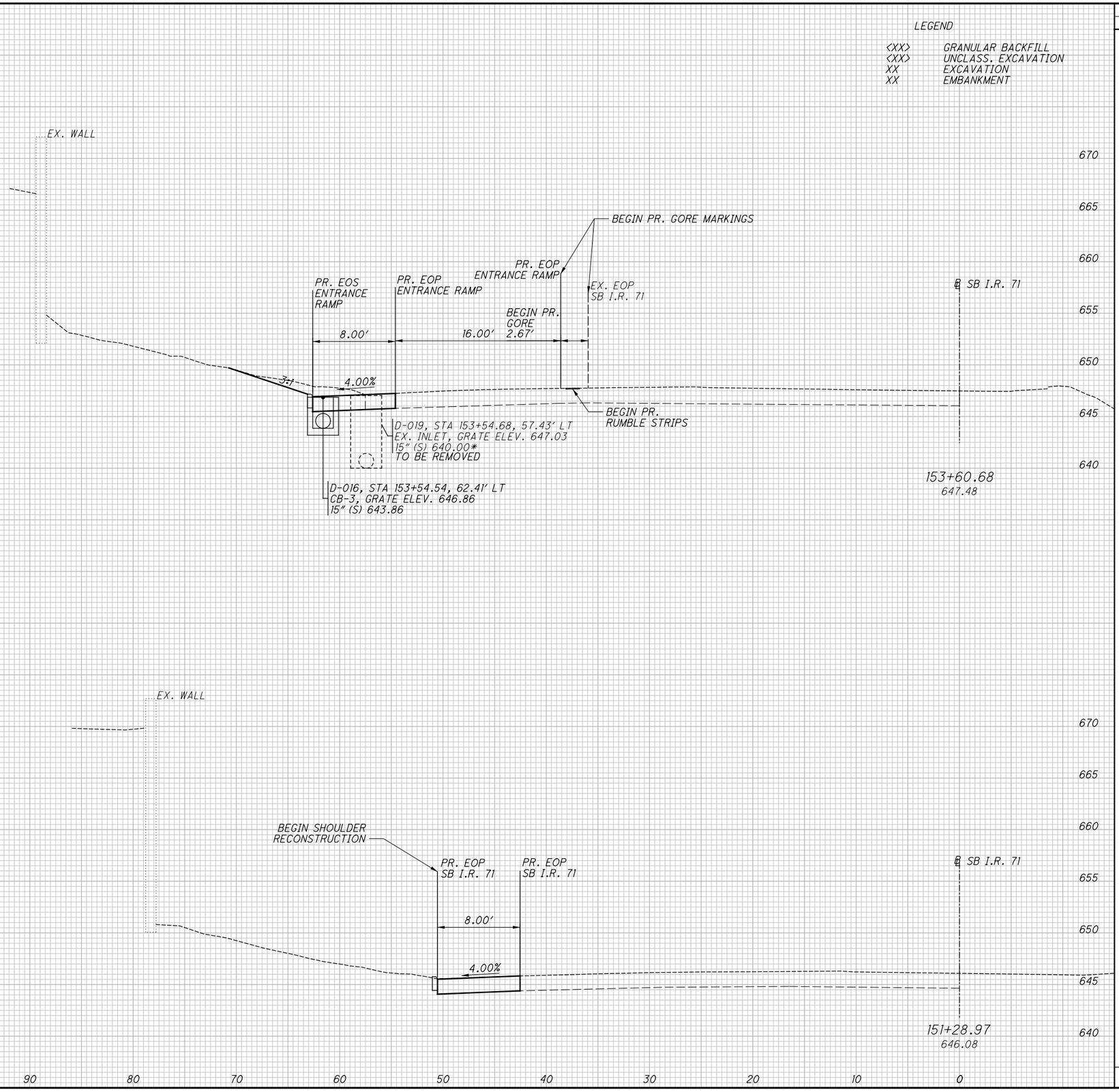
CHECKED DJJ

CROSS SECTIONS - RAMP J7

STA. 106+50.00

CUY-71-17.83/
CUY-176-12.76

SEEDING	
END WIDTH	SQ. YDS.
8	103
0	0
	103



END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	0		
		63	0
0	0		
		0	0
		63	0

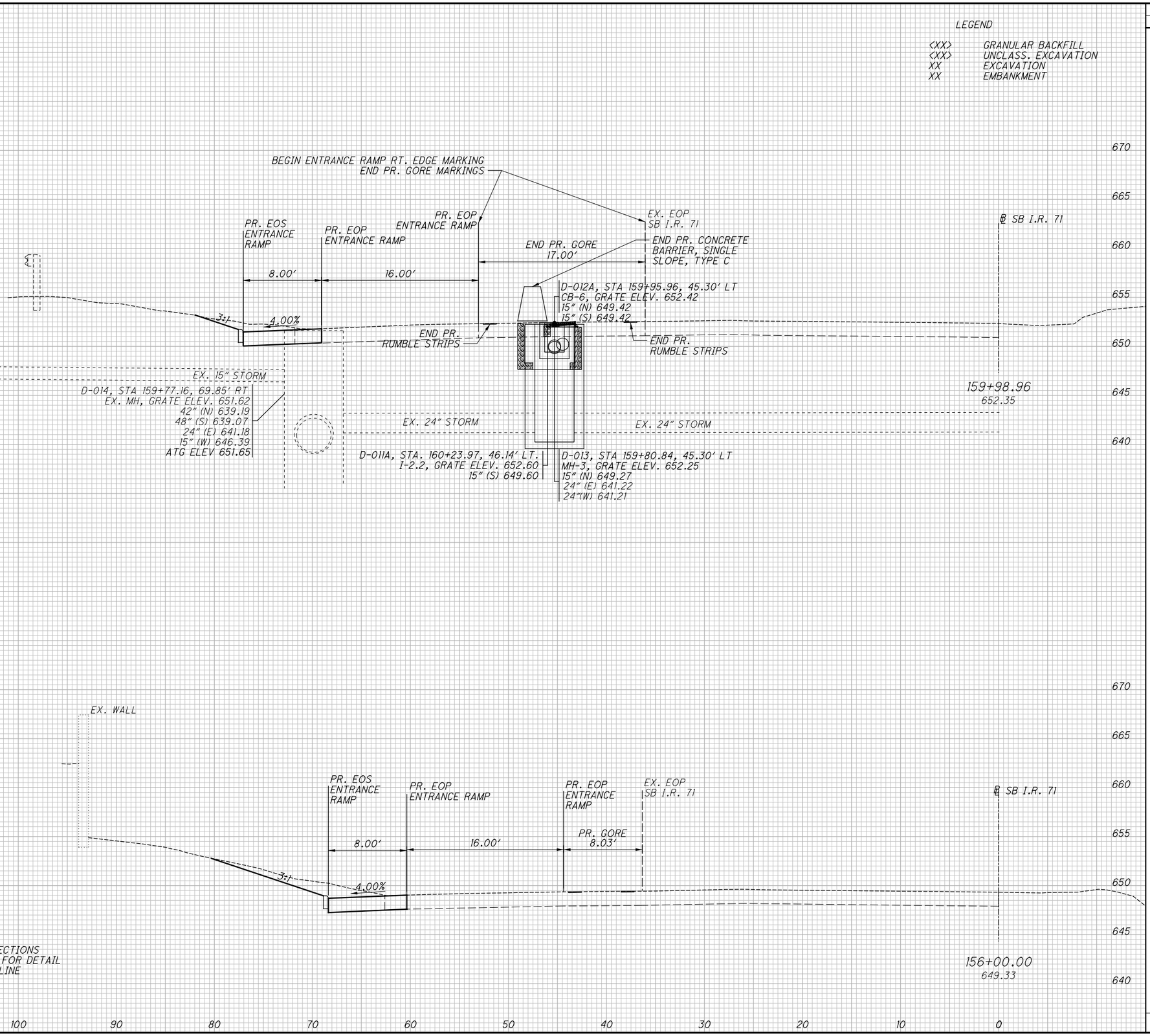
CALCULATED JLD
CHECKED DJJ

CROSS SECTIONS - SB I.R. 71
STA. 152+30.78 TO STA. 153+60.68

CUY-71-17.83/
CUY-176-12.76

74
127

SEEDING	
END WIDTH	SQ. YDS.
5	369
12	267
	636



NOTE:

SEE RAMP J7 CROSS SECTIONS ON SHEETS 52 TO 73 FOR DETAIL RIGHT OF I.R. 71 BASELINE

END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	0	254	0
21	0	159	0
		413	0

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - SB I.R. 71
STA. 156+00.00 TO STA. 159+98.96

CUY-71-17.83/
CUY-176-12.76

75
127

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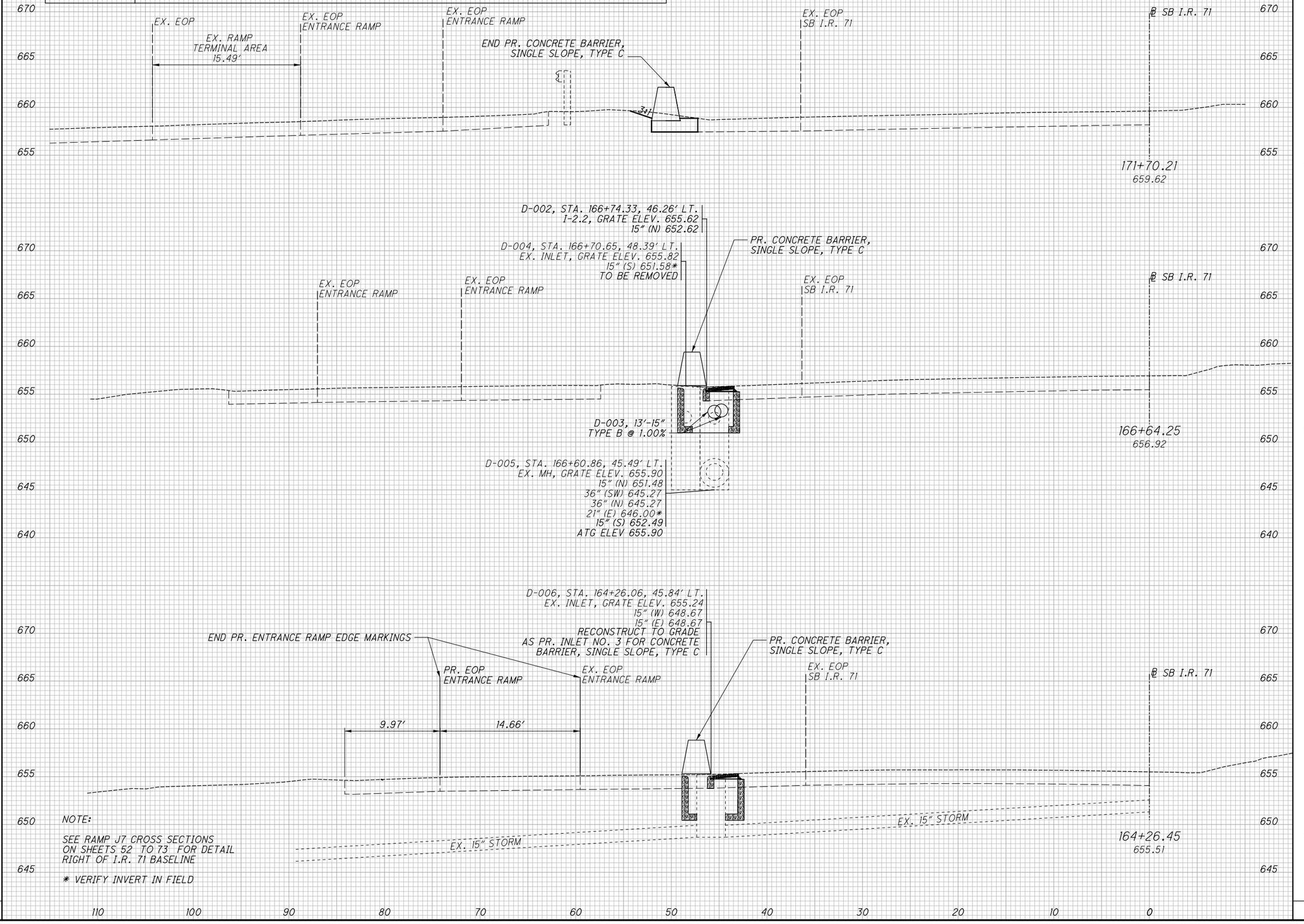
SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	21
	21

	TOTAL EARTHWORK				
	EXCAVATION CY	EMBANKMENT CY	GRANULAR BACKFILL CY	UNCLASSIFIED EXCAVATION CY	SEEDING & MULCHING SY
I.R. 71	495.5	0	0	0	760.1
PROJECT TOTAL	3778.2	507.2	1253.9	584.0	3632.6

LEGEND

<XX>	GRANULAR BACKFILL
<XX>	UNCLASS. EXCAVATION
XX	EXCAVATION
XX	EMBANKMENT



NOTE:

SEE RAMP J7 CROSS SECTIONS ON SHEETS 52 TO 73 FOR DETAIL RIGHT OF I.R. 71 BASELINE

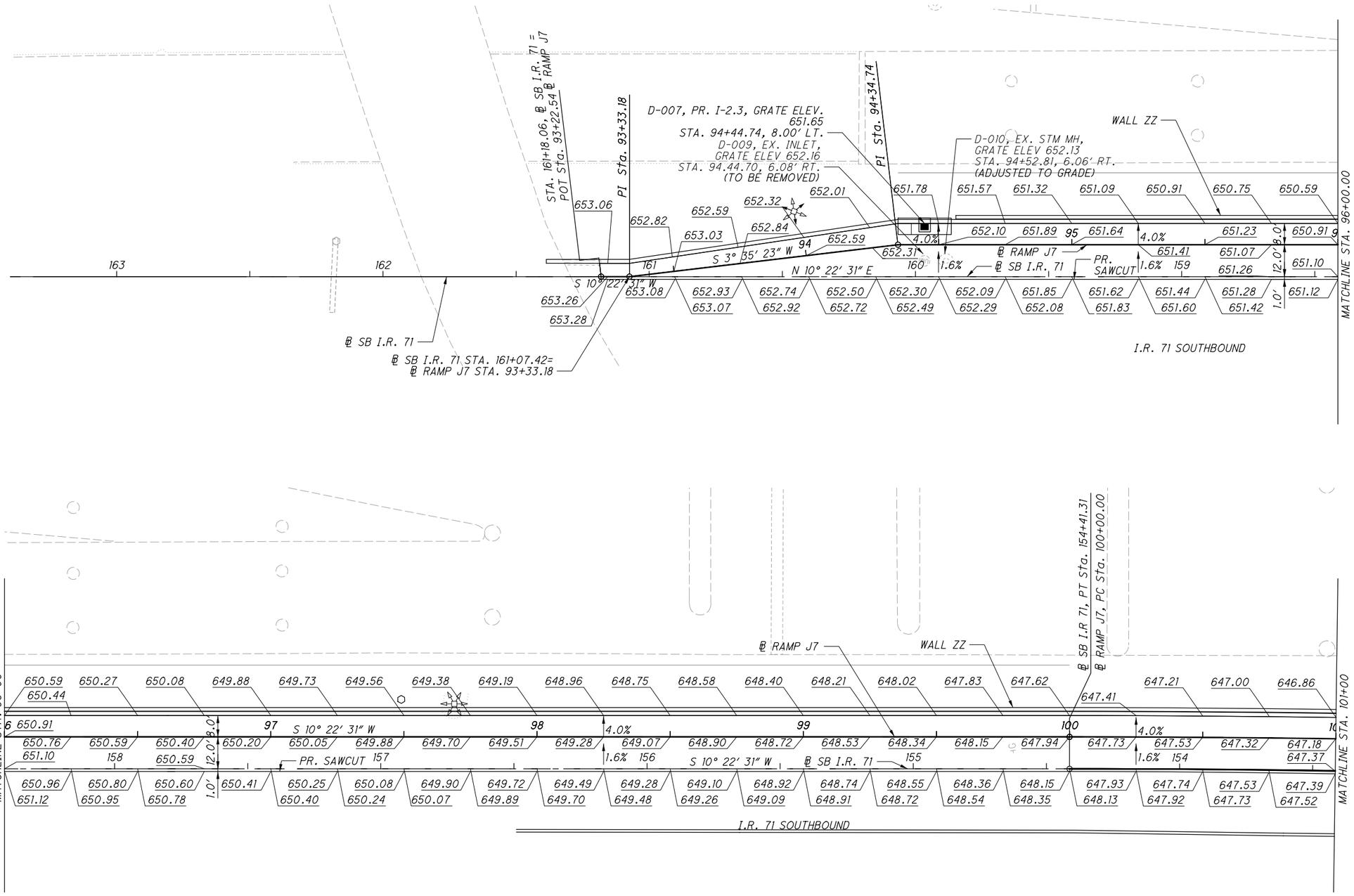
* VERIFY INVERT IN FIELD

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	0	0
0	0	0	0
0	0	20	0
		20	0

CALCULATED JLD | CHECKED DJJ

CROSS SECTIONS - SB I.R. 71
STA. 164+26.45 TO STA. 166+63.56

CUY-71-17.83/
CUY-176-12.76



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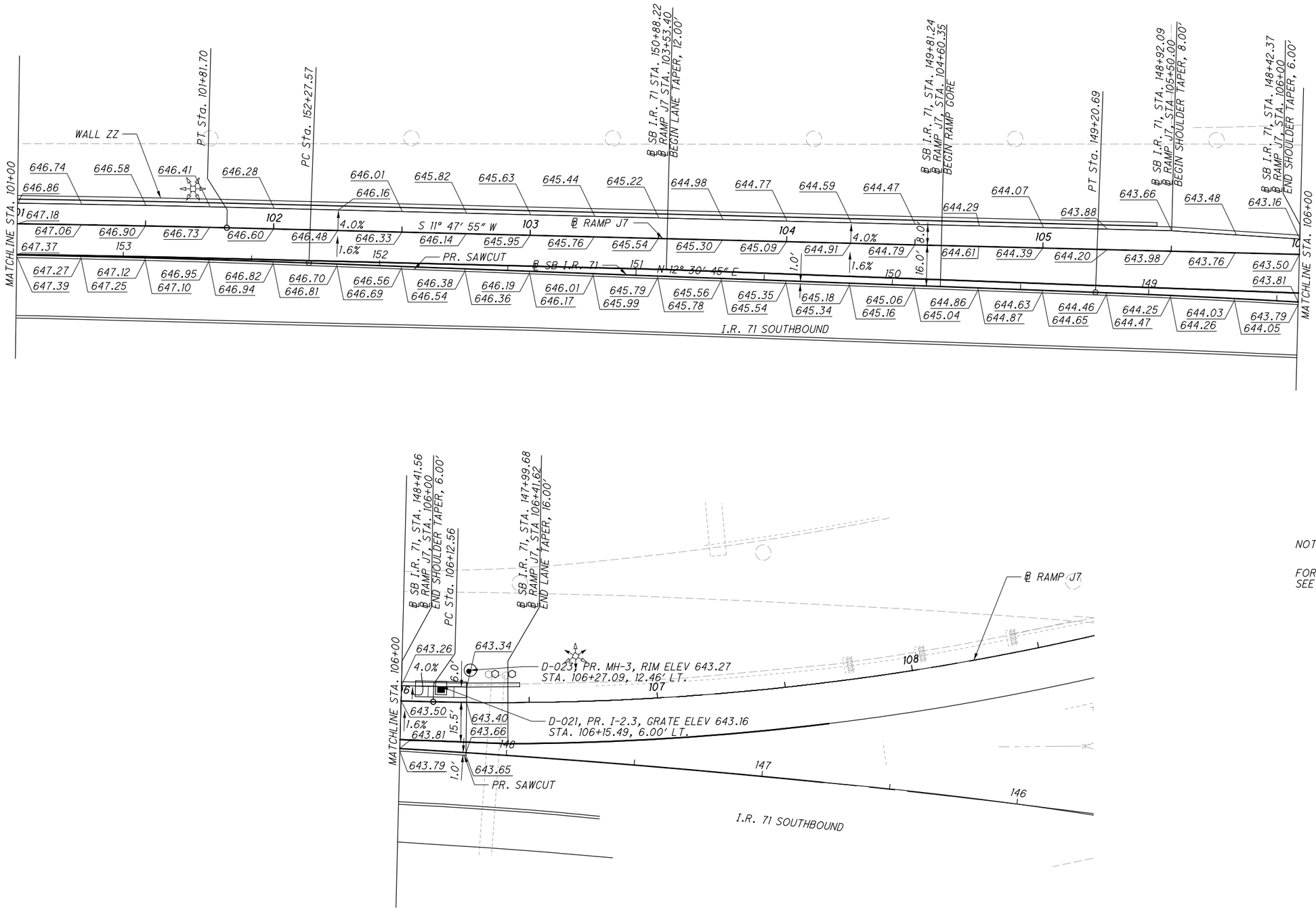
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

RAMP DETAIL
BEGIN TO STA. 101+00

CUY-71-17.83/
CUY-176-12.76

77
127



NOTE:

FOR RAMP GORE DETAIL,
SEE SHEET 79 .

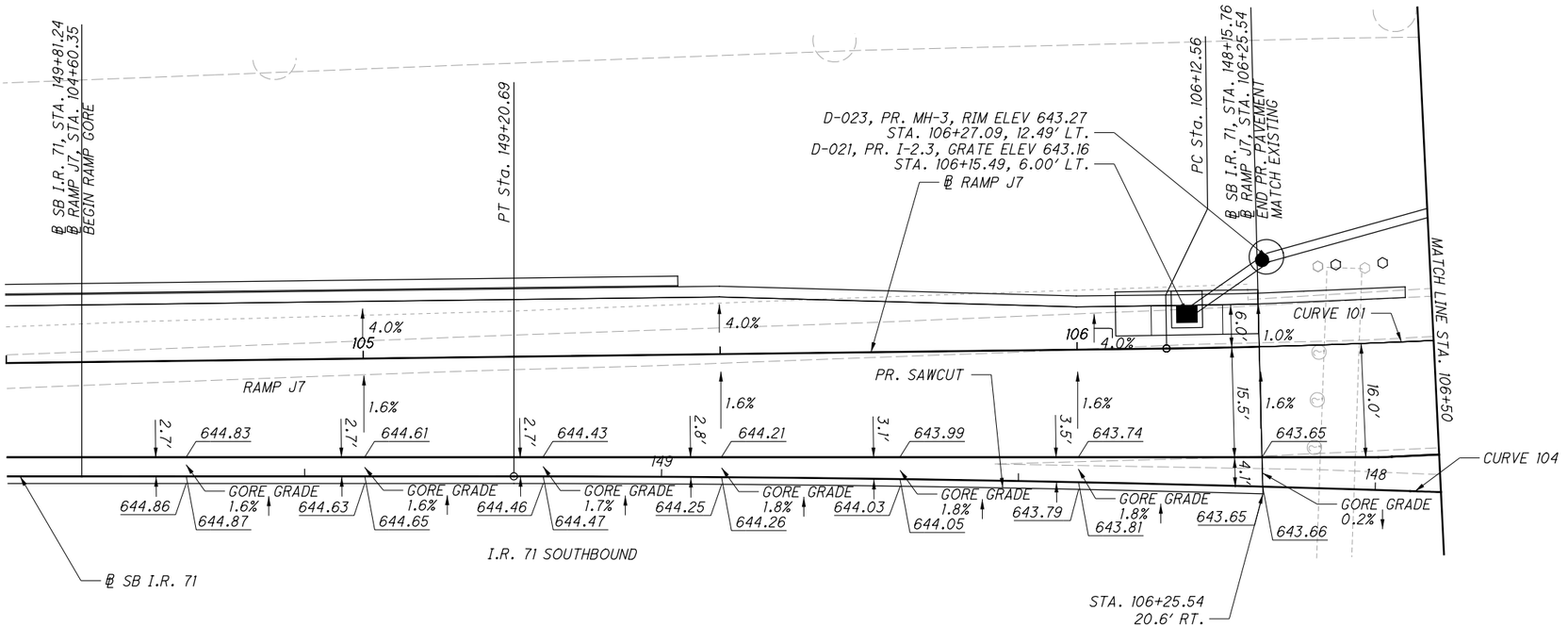
HORIZONTAL SCALE IN FEET
0 10 20 40

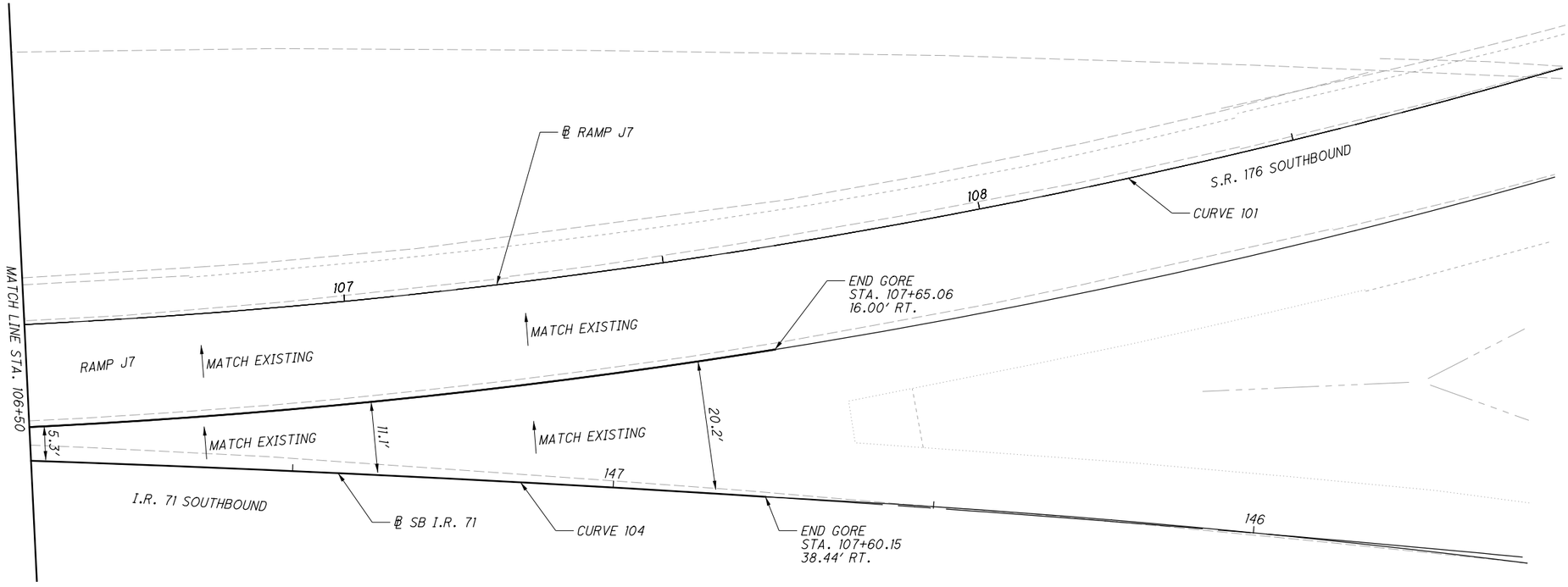
CALCULATED JLD
CHECKED DJJ

RAMP DETAIL
STA. 101+00 TO END

CUY-71-17.83/
CUY-176-12.76

78
127





CURVE 101
℄ RAMP J7
P.I. STA. 111+45.42
Δ= 54° 10' 50" (LT)
Dc = 5° 30' 00"
R = 1,041.74'
T = 532.86'
L = 985.10'
E = 128.37'
e = 0.044
(NDC 0.053)

CURVE 104
℄ SB I.R. 71
P.I. STA. 147+36.97
Δ= 5° 30' 56" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 184.00'
L = 367.71'
E = 4.43'
e = 0.037

NOTE:

FOR RAMP J7 DETAILS
SEE SHEETS 77 TO 78 .

N

0 5 10 20
HORIZONTAL
SCALE IN FEET

CALCULATED JLD
CHECKED DJJ

RAMP TERMINAL DETAIL
RAMP J7

CUY-71-17.83/
CUY-176-12.76

79
127

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TOTAL EARTHWORK FOR PR BMP DRIVE	
EXCAVATION CY	EMBANKMENT CY
49.4	498.0

D-030, STA 111+80.80, 47.25' LT
CB-2-2B, GRATE ELEV 636.00
15" (N) 633.00

EX. 15" CS
(TO REMAIN)

EX. CB
(RECONSTRUCT TO GRADE)
D-028, MH-3, RIM ELEV 639.00
15" (N) 633.15
15" (S) 632.82

PR. 15" CONDUIT
TYPE B

EX. 84" CSO
(TO REMAIN)

PR. 15" CONDUIT
TYPE B

END PR. DRIVE
STA. 111+57.84, 17.60' LT.

REINFORCED TURF

D-026, STA. 110+00.42, 46.65' LT.
CB-2-2B, GRATE ELEV 637.00
15" (S) 635.00

EX. MH
(TO REMAIN)

D-024, STA 108+92.25, 43.27' LT
MH NO. 3 WITH 90" ID BASE AND 8" WEIR,
RIM ELEV 637.41
15" (SE) 632.23
15" (N) 632.23

S.R. 176 NORTHBOUND
PR. 15" CONDUIT
TYPE B

PR. MANUFACTURED WATER
QUALITY STRUCTURE, TYPE 2

ITEM 411 - STABILIZED
CRUSHED AGGREGATE

℄ RAMP J7

PR. BMP DRIVE

I.R. 71 NORTHBOUND

BEGIN PR. DRIVE
STA. 108+95.85, 18.52' LT.

EX. MH
(DND)

D-020, STA 106+15.49, 6.00' LT
I-2.3, GRATE ELEV 643.16
18" (SE) 638.85

PR. 15" CONDUIT
TYPE B

RAMP J7

EX. 48" STORM
(TO REMAIN)

I.R. 71 SOUTHBOUND

D-022, STA 106+27.09, 12.46' LT
MH-3, RIM ELEV 643.27
15" (S) 638.71
15" (NW) 638.71

℄ SB I.R. 71

S.R. 176 SOUTHBOUND

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

BMP DRIVE DETAIL AND GRADING PLAN
RAMP J7

CUY-71-17.83/
CUY-176-12.76

80
127

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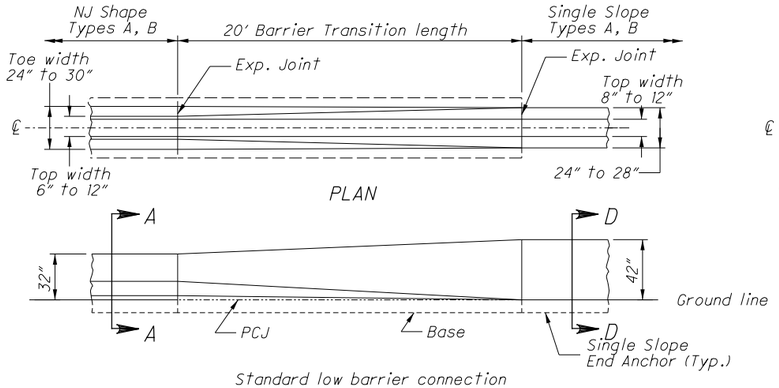
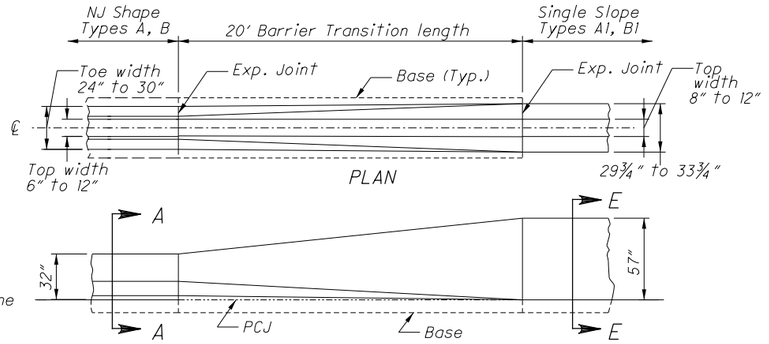


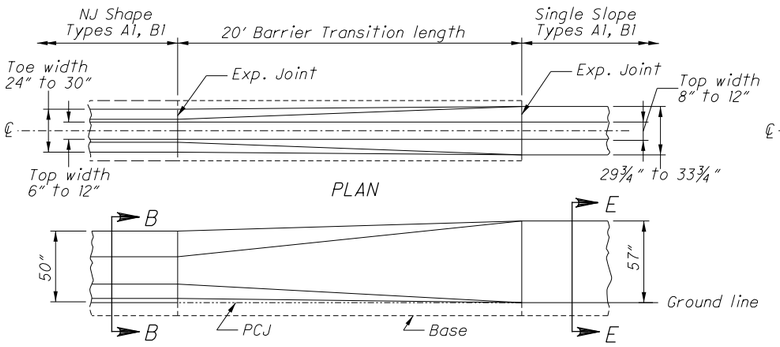
Standard low barrier connection

ELEVATION



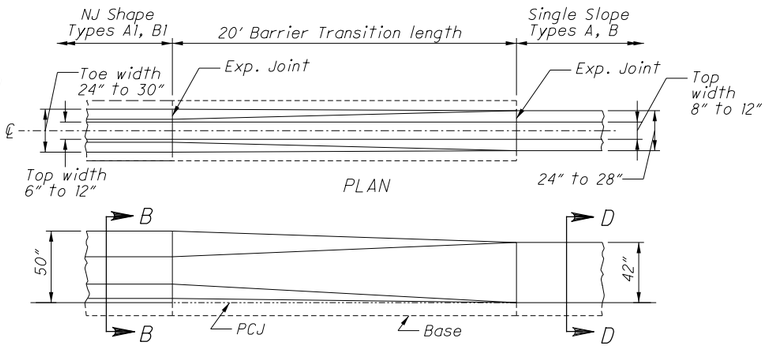
Atypical use

ELEVATION



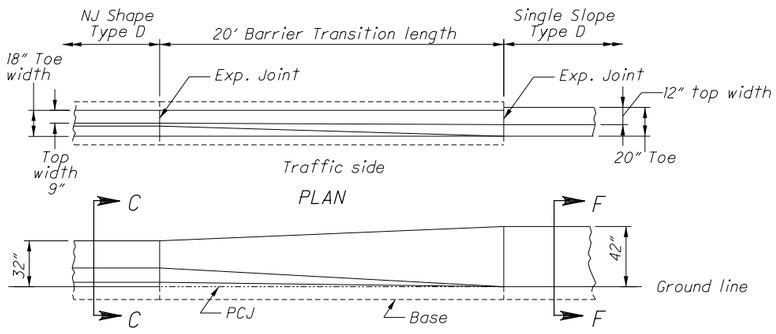
Standard tall barrier connection

ELEVATION



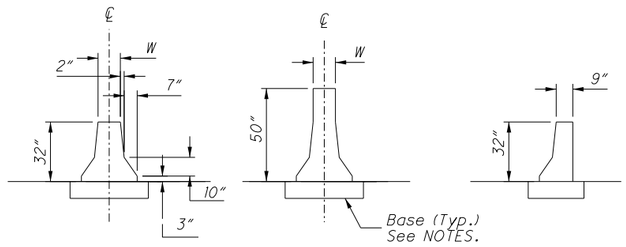
Atypical use

ELEVATION



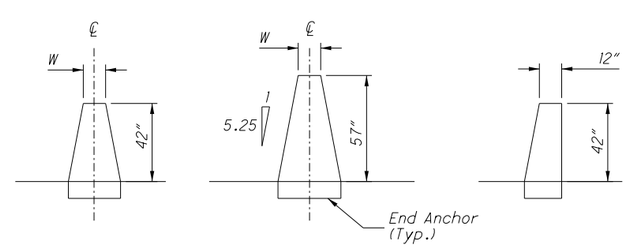
Standard Roadside barrier connection

ELEVATION



NJ SHAPE SECTIONS

See Plan Insert sheets for specific NJ Shape Concrete barrier details.



SINGLE SLOPE SECTIONS

See SCD RM-4.3 and RM-4.5 for specific Single Slope concrete barrier details.

NOTES

GENERAL: This insert details the Barrier Transition, to connect existing NJ Concrete Barrier (safety shape) to a new run of Single Slope Concrete Barrier at locations shown on the plans. For NJ barrier shape and other details see the respective plan insert sheets. For Single Slope barrier details, see SCD RM-4.3 (RM-4.5 for Type D).

ADJACENT CONCRETE BARRIER RUNS: Remove any tapered end sections, Impact attenuators, or other guardrail hardware from existing barrier end. The barrier to barrier transition is not intended to be used at transition sections (those shown on SCD RM-4.4), Inlets, or on Type C or C1 Barrier. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transiton should contain horizontal reinforcing steel similiar to that required in the respective single slope barrier. Reinforcement is not shown and should be detailed separately. The adjacent single slope end should be terminated with a reinforced End Anchor as detailed on the SCDs.

BARRIER FACE TRANSITION: To prevent vehicle snagging, a smooth transition from the safety shape face to the single slope face is made over a 20' length. The actual shape of the Transition is dependent on both the adjacent NJ barrier and the single slope barrier Types, as detailed on the plans. The contractor and Engineer will agree on a construction method to ensure a smooth barrier face.

MATERIALS: Materials are same for those shown on RM-4.3 and RM-4.5, except that cast-in-place is the only acceptable method. Edges may be chamfered or radiused as shown on those drawings.

CONCRETE BASE: Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

JOINTS: Construct joints as shown on respective barrier drawings.

RACEWAYS: When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

METRIC UNITS: Refer to respective barrier drawings or inserts for metric dimensions.

PAYMENT: This Barrier Transiton shall include all material and labor needed to construct this 20' section, including any raceways, reinforcing steel, dowels and other necessary incidentals. Payment shall be made at the unit price for Item 622 - Barrier Transition, Each.

OFFICE OF ROADWAY ENGINEERING

DESIGNED XXX REVIEWED XXX

REVISION DATE 10/20/2006 CHECKED CHECKED

PLAN INSERT SHEET

NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

CUY-71-17.83/
CUY-176-12.76

1 / 1

81
127

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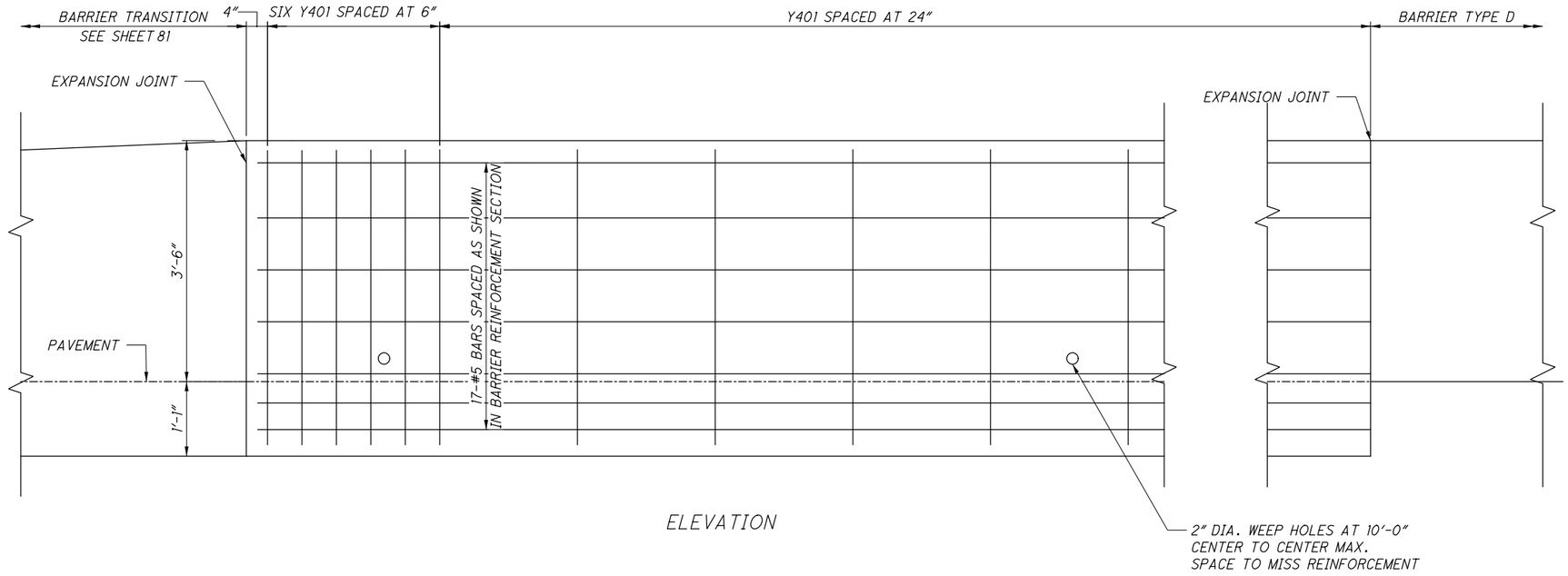
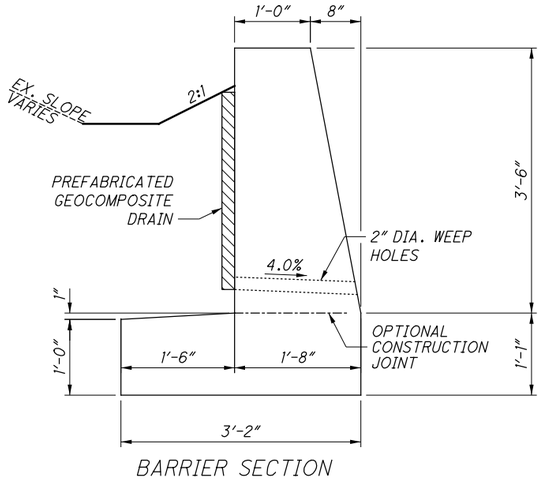
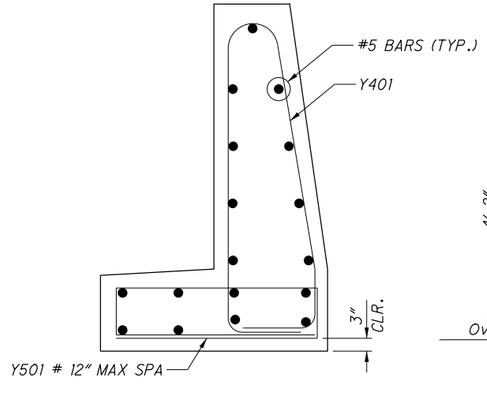


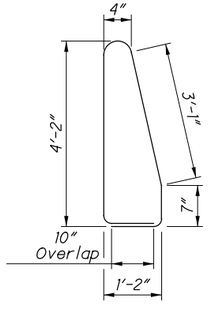
ELEVATION



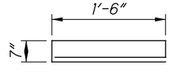
BARRIER SECTION



BARRIER REINFORCEMENT SECTION



BENDING DIAGRAM
Y401 #4



BENDING DIAGRAM
Y501 #5

NOTES:

1) THE CONTRACTOR SHALL CONSTRUCT SINGLE SLOPE BARRIER, TYPE D WITH WALL FOOTING AT THE EDGE OF SHOULDER OF THE PROPOSED EXIT RAMP FROM STATIONS 93+22.54 TO 94+55.25.

2) THE PROPOSED SINGLE SLOPE BARRIER, TYPE D WITH WALL FOOTING SHALL ADHERE TO DETAILS SHOWN ON THIS SHEET. ALL ADDITIONAL DETAILS AND NOTES NOT INDICATED ON THIS SHEET SHALL ADHERE TO ODOT SCD RM-4.5.

3) REINFORCEMENT IS REQUIRED FOR THE FULL LENGTH OF THE PROPOSED SINGLE SLOPE BARRIER, TYPE D WITH WALL FOOTING. USE THE BARRIER AND FOOTING REINFORCEMENT DETAILS SHOWN.

4) MINIMUM #5 LAP LENGTH = 3'-0"

5) PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER FEET FOR ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN. INCLUDE ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THE BARRIER.

6) COST OF PREFABRICATED GEOCOMPOSITE DRAIN AND WEEP HOLES INCLUDED IN COST OF PROPOSED SINGLE SLOPE BARRIER, TYPE D WITH WALL FOOTING.

CALCULATED JLD
CHECKED BCM

BARRIER DETAIL
SINGLE SLOPE BARRIER, TYPE D WITH WALL FOOTING

CUY-71-17.83/
CUY-176-12.76

SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:

UNLESS OTHERWISE NOTED, ALL STATION CALLOUTS REFER TO BASELINE SOUTHBOUND I.R 71.

RAISED PAVEMENT MARKER (RPM) LEGEND:

1 WAY (WHITE) @ 120' C/C (ON LANE LINE)

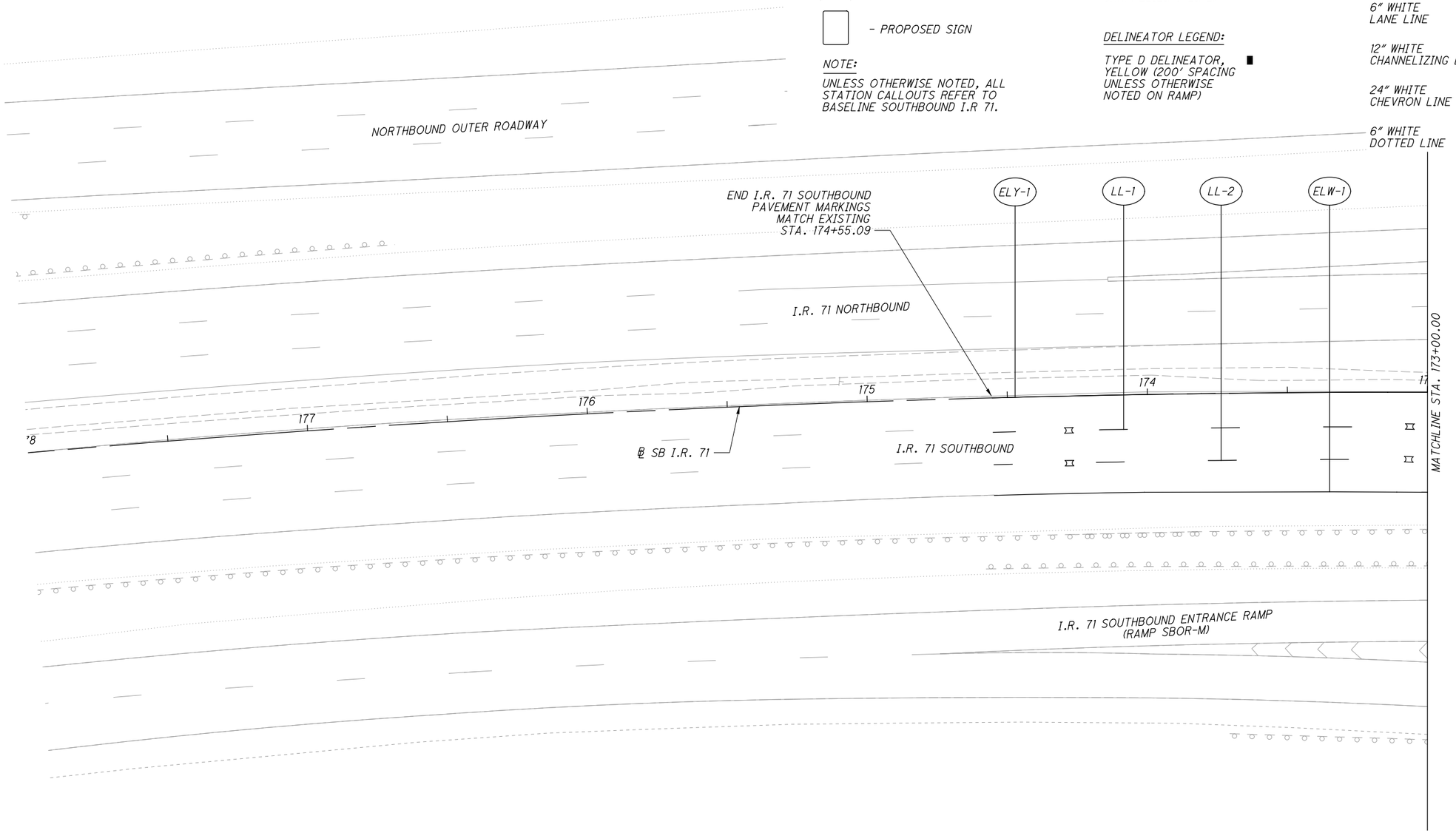
2 WAY (WHITE/RED) @ 40' C/C (ON CHANNELIZING LINE)

DELINEATOR LEGEND:

TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

MARKING LEGEND:

6" YELLOW EDGE LINE	ELY
6" WHITE EDGE LINE	ELW
6" WHITE LANE LINE	LL
12" WHITE CHANNELIZING LINE	CH
24" WHITE CHEVRON LINE	CV
6" WHITE DOTTED LINE	DL



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

TRAFFIC CONTROL PLAN - I.R. 71 STA. 173+00.00 TO END

CUY-71-17.83/
CUY-176-12.76

83
127

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SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:

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RAISED PAVEMENT MARKER (RPM) LEGEND:

1 WAY (WHITE) @ 120' C/C (ON LANE LINE)

2 WAY (WHITE/RED) @ 40' C/C (ON CHANNELIZING LINE)

DELINEATOR LEGEND:

TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

MARKING LEGEND:

6" YELLOW EDGE LINE	ELY
6" WHITE EDGE LINE	ELW
6" WHITE LANE LINE	LL
12" WHITE CHANNELIZING LINE	CH
24" WHITE CHEVRON LINE	CV
6" WHITE DOTTED LINE	DL

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

TRAFFIC CONTROL PLAN - I.R. 71
STA. 168+00.00 TO STA. 173+00.00

CUY-71-17.83/
CUY-176-12.76

84
127

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SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
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NOTE:
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RAISED PAVEMENT MARKER (RPM) LEGEND:

1 WAY (WHITE) @ 120' C/C (ON LANE LINE)

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TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

MARKING LEGEND:

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6" WHITE EDGE LINE	ELW
6" WHITE LANE LINE	LL
12" WHITE CHANNELIZING LINE	CH
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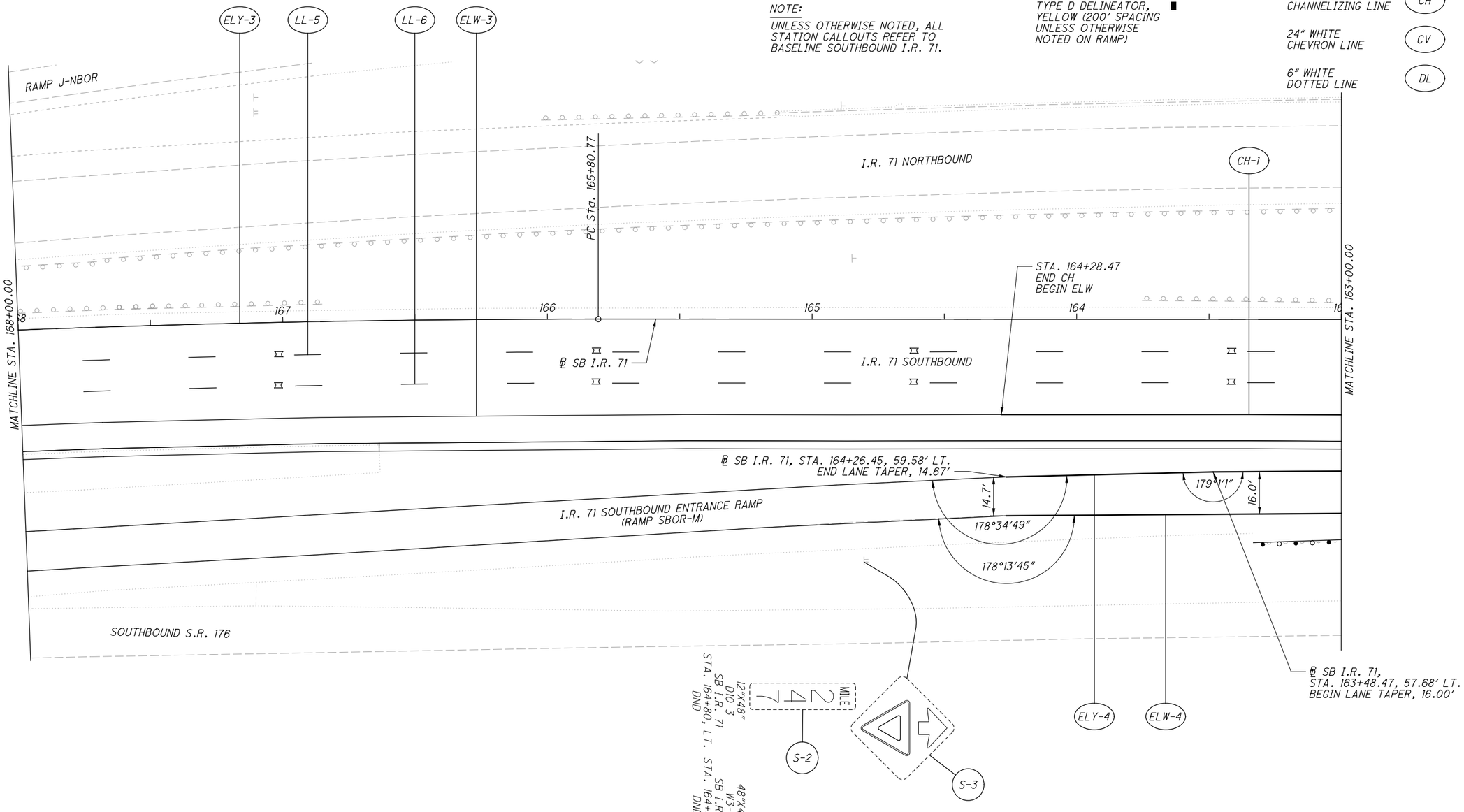
6" WHITE DOTTED LINE	DL



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

TRAFFIC CONTROL PLAN - I.R. 71
STA. 163+00.00 TO STA. 168+00.00

CUY-71-17.83/
CUY-176-12.76

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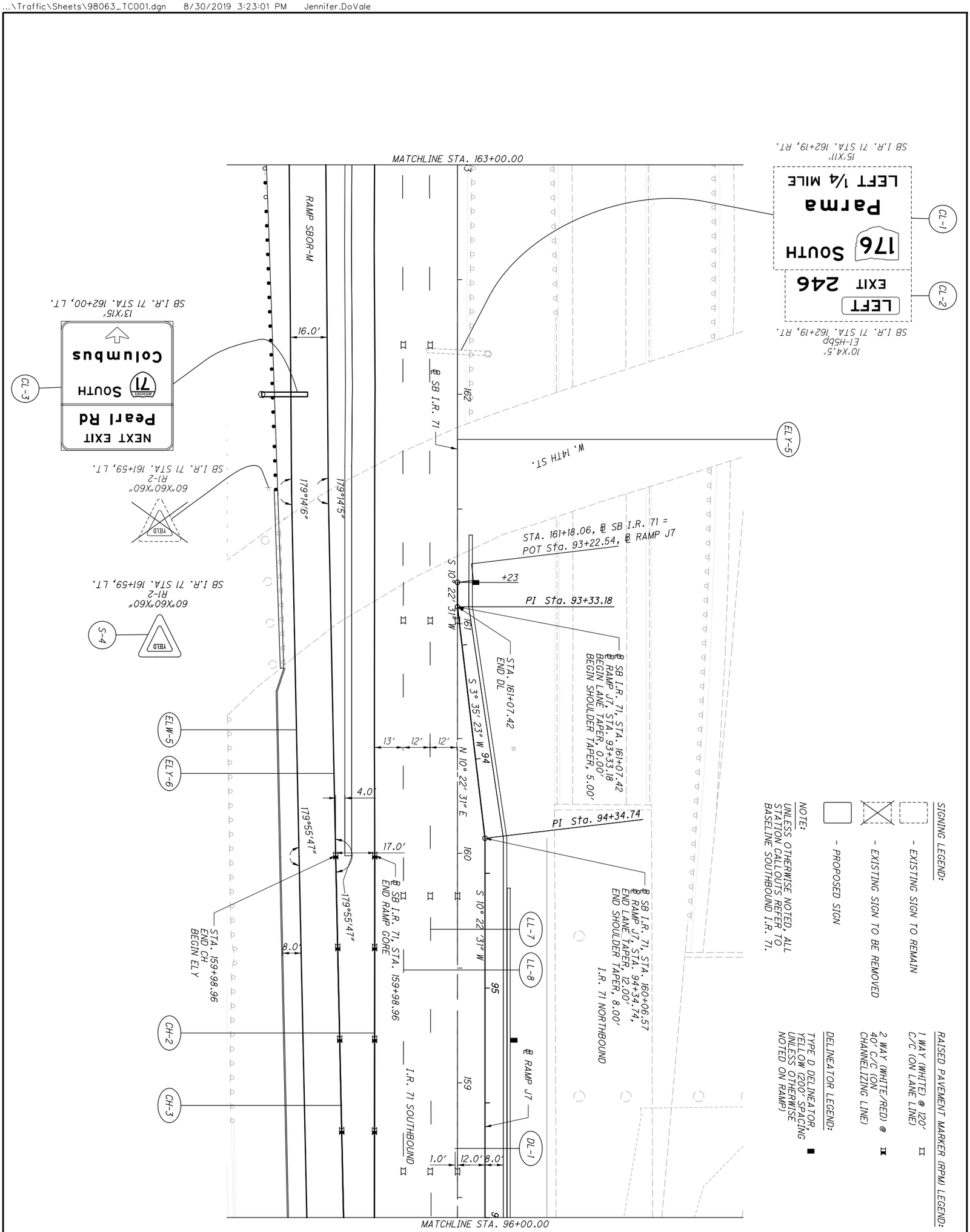

SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:
UNLESS OTHERWISE NOTED, ALL STATION CALLOUTS REFER TO BASELINE SOUTHBOUND I.R. 71.

RAISED PAVEMENT MARKER (RPM) LEGEND:

1 WAY (WHITE) @ 120' C/C (ON LANE LINE)
2 WAY (WHITE/RED) @ 40' C/C (ON CHANNELIZING LINE)

DELINEATOR LEGEND:

TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

MARKING LEGEND:

ELY	6" YELLOW EDGE LINE
ELW	6" WHITE EDGE LINE
LL	6" WHITE LANE LINE
CH	12" WHITE CHANNELIZING LINE
CV	24" WHITE CHEVRON LINE
DL	6" WHITE DOTTED LINE

86 / 127	CUY-71-17.83/ CUY-176-12.76	TRAFFIC CONTROL PLAN - RAMP J7 BEGIN TO STA. 96+00.00	CALCULATED JLD / CHECKED DJJ; 0 20 / 10 40 HORIZONTAL SCALE IN FEET

SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:

UNLESS OTHERWISE NOTED, ALL STATION CALLOUTS REFER TO BASELINE SOUTHBOUND I.R. 71.

DELINEATOR LEGEND:

TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

RAISED PAVEMENT MARKER (RPM) LEGEND:

1 WAY (WHITE) @ 120' C/C (ON LANE LINE)

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MARKING LEGEND:

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6" WHITE EDGE LINE	ELW
6" WHITE LANE LINE	LL
12" WHITE CHANNELIZING LINE	CH
24" WHITE CHEVRON LINE	CV
6" WHITE DOTTED LINE	DL

CL-6
CL-7
S-7
S-6
S-8
CH-6
CH-7
CL-1
ELY-7
DL-2
LL-9
LL-10
CH-4
CH-5
GM-1
S-5
ELW-6
CL-4
CL-5
DL-3

LEFT EXIT 246

176 SOUTH Parma

EXIT ONLY

15'X11' RAMP J7 STA. 97+49, LT.

11'X4.5' EI-H5bP

RAMP J7 STA. 98+31, RT. RELOCATE EX. SIGN TO PR. BARRIER PER SCD TC-41.40. TYPE 2 SUPPORT ASSEMBLY

30"X24" W16-2P

1000 FEET

13'-11"

48"X48" W12-2

RAMP J7 STA. 98+31, RT. RELOCATE EX. SIGN TO PR. BARRIER PER SCD TC-41.40. TYPE 2 SUPPORT ASSEMBLY

RAMP J7 STA. 100+09, RT. RELOCATE EX. SIGN TO PR. BARRIER PER SCD TC-41.40. TYPE 2 SUPPORT ASSEMBLY

18"X60" D10-5

S INTERSTATE 71 MILE 246 8

I.R. 71 NORTHBOUND

℄ SB I.R 71, PT Sta. 154+41.31

℄ RAMP J7, PC Sta. 100+00.00

℄ RAMP J7

STA 154+41.31 END CH BEGIN DL

STA 156+49.04 END CL BEGIN LL

I.R. 71 SOUTHBOUND

℄ SB I.R. 71

℄ SB I.R. 71, STA. 156+49.04 BEGIN RAMP GORE

RAMP SBOR-M

STA. 156+49.04 END DL BEGIN CH

MATCHLINE STA. 96+00

MATCHLINE STA. 101+00

S 10° 22' 31" W

S 10° 22' 31" W

96 97 98 99 100 101 154 155 156 157 158

12.0' 8.0' 12.0' 10.0' 9.1' 9.0' 8.0'

Metro Health Hospital Level 1 Trauma Center

Metroparks Zoo NEXT RIGHT

12'X10' SB I.R. 71 STA. 157+63, LT. RELOCATE TO PR. GROUND MOUNT

60"X60"X60" R1-2 SB I.R. 71 STA. 156+59, LT.

60"X60"X60" R1-2 SB I.R. 71 STA. 156+59, LT.

YIELD

YIELD

16'X12' SB I.R. 71 STA. 154+98, LT. RELOCATE TO PR. CANTILEVER FOUNDATION

42 Pearl Rd W 25th St Fulton Rd 1/2 MILE

EXIT 245

9'X2.5' EI-H5P SB I.R. 71 STA. 154+98, LT.

N

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JLD

CHECKED DJJ

TRAFFIC CONTROL PLAN - RAMP J7

STA. 96+00.00 TO STA. 101+00.00

CUY-71-17.83/
CUY-176-12.76

87
127

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SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:

UNLESS OTHERWISE NOTED, ALL STATION CALLOUTS REFER TO BASELINE SOUTHBOUND I.R. 71.

RAISED PAVEMENT MARKER (RPM) LEGEND:

1 WAY (WHITE) @ 120' C/C (ON LANE LINE)

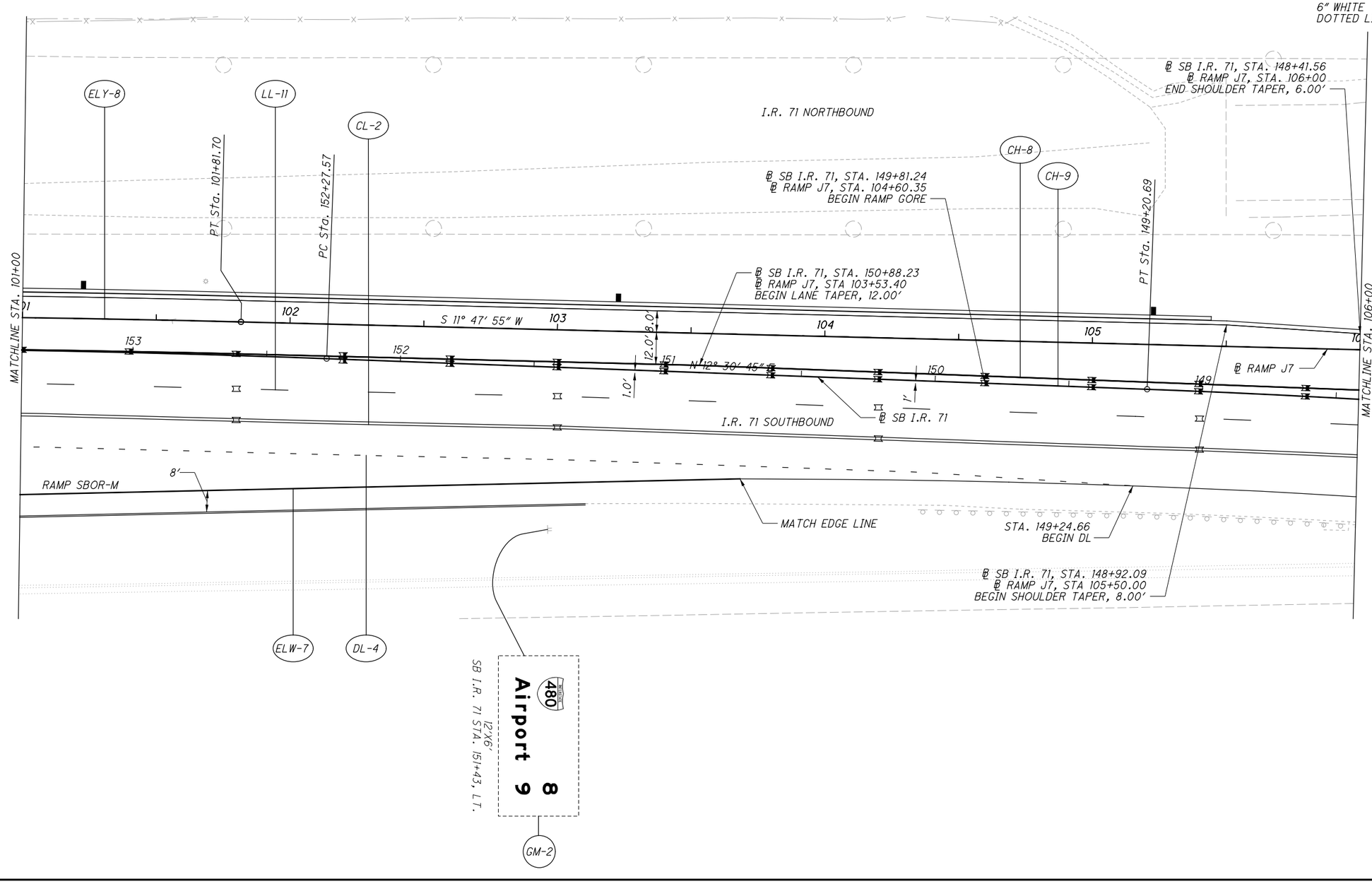
2 WAY (WHITE/RED) @ 40' C/C (ON CHANNELIZING LINE)

DELINEATOR LEGEND:

TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

MARKING LEGEND:

6" YELLOW EDGE LINE	ELY
6" WHITE EDGE LINE	ELW
6" WHITE LANE LINE	LL
12" WHITE CHANNELIZING LINE	CH
24" WHITE CHEVRON LINE	CV
6" WHITE DOTTED LINE	DL



CALCULATED JLD
CHECKED DJJ

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC CONTROL PLAN - RAMP J7
STA. 101+00.00 TO STA. 106+00.00

CUY-71-17.83/
CUY-176-12.76

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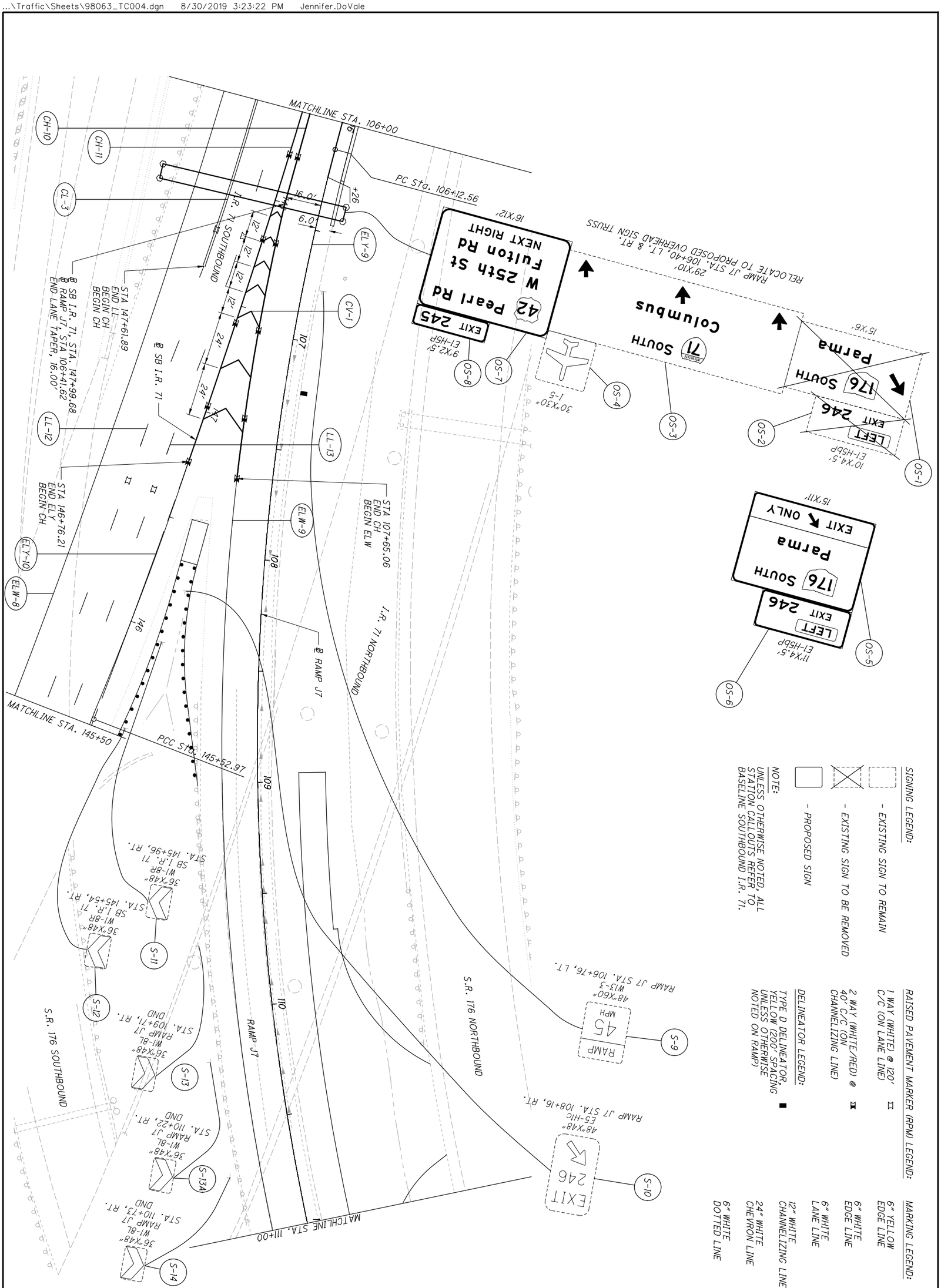

SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:
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RAISED PAVEMENT MARKER (RPM) LEGEND:

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- 2 WAY (WHITE/RED) @ 40' C/C (ON CHANNELIZING LINE)

DELINEATOR LEGEND:

- TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

MARKING LEGEND:

ELY	6" YELLOW EDGE LINE
ELW	6" WHITE EDGE LINE
LL	6" WHITE LANE LINE
CH	12" WHITE CHANNELIZING LINE
CV	24" WHITE CHEVRON LINE
DL	6" WHITE DOTTED LINE

89 / 127	CUY-71-17.83/ CUY-176-12.76	TRAFFIC CONTROL PLAN - RAMP J7 STA. 106+00.00 TO STA. 111+00.00	CALCULATED JLD	0 20	N
			CHECKED DJV	10 40 HORIZONTAL SCALE IN FEET	

SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:

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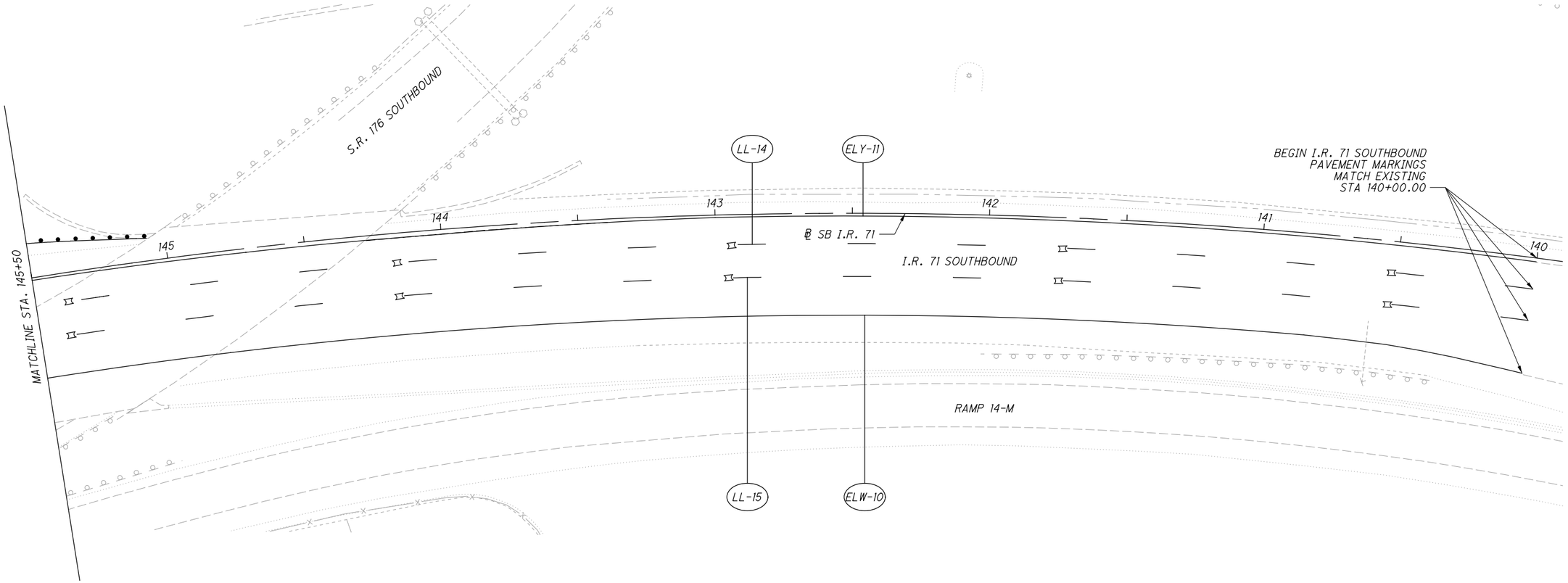
6" WHITE LANE LINE	LL
12" WHITE CHANNELIZING LINE	CH
24" WHITE CHEVRON LINE	CV
6" WHITE DOTTED LINE	DL



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLD
CHECKED DJJ

TRAFFIC CONTROL PLAN - SB I.R. 71 BEGIN TO STA. 145+00.00

CUY-71-17.83/
CUY-176-12.76

90
127

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SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE:

UNLESS OTHERWISE NOTED, ALL STATION CALLOUTS REFER TO BASELINE SOUTHBOUND I.R. 71.

RAISED PAVEMENT MARKER (RPM) LEGEND:

1 WAY (WHITE) @ 120' C/C (ON LANE LINE)

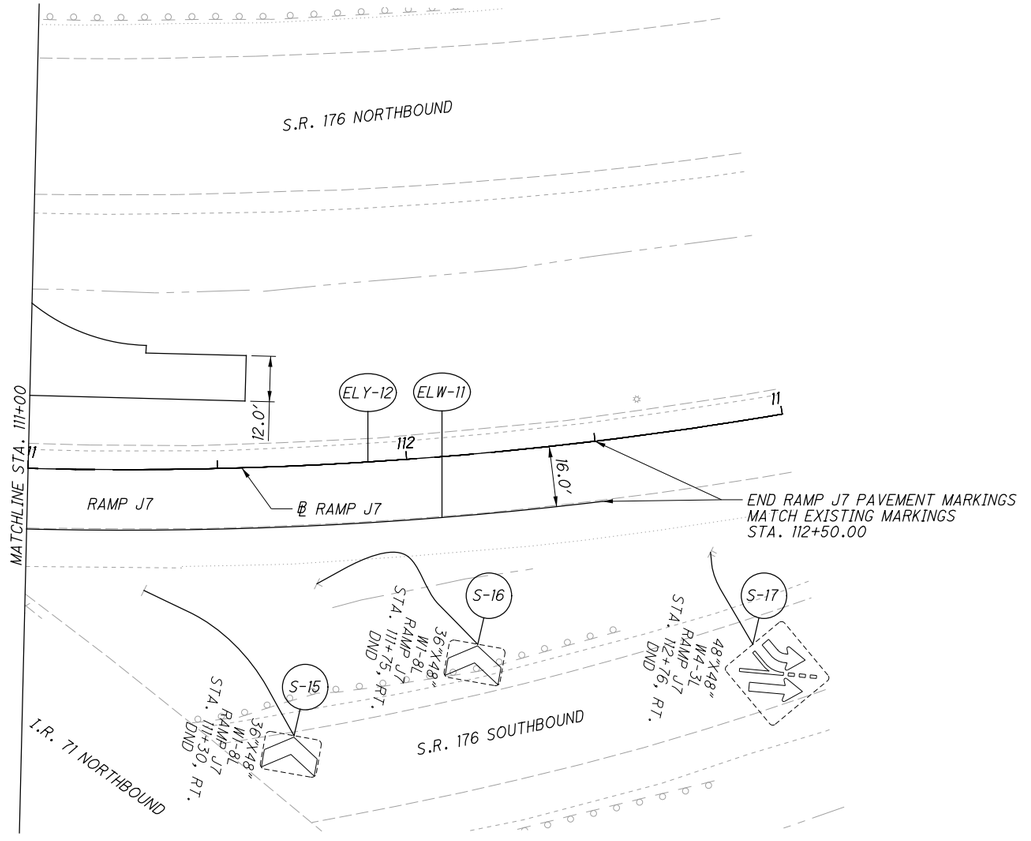
2 WAY (WHITE/RED) @ 40' C/C (ON CHANNELIZING LINE)

DELINEATOR LEGEND:

TYPE D DELINEATOR, YELLOW (200' SPACING UNLESS OTHERWISE NOTED ON RAMP)

MARKING LEGEND:

6" YELLOW EDGE LINE	ELY
6" WHITE EDGE LINE	ELW
6" WHITE LANE LINE	LL
12" WHITE CHANNELIZING LINE	CH
24" WHITE CHEVRON LINE	CV
6" WHITE DOTTED LINE	DL

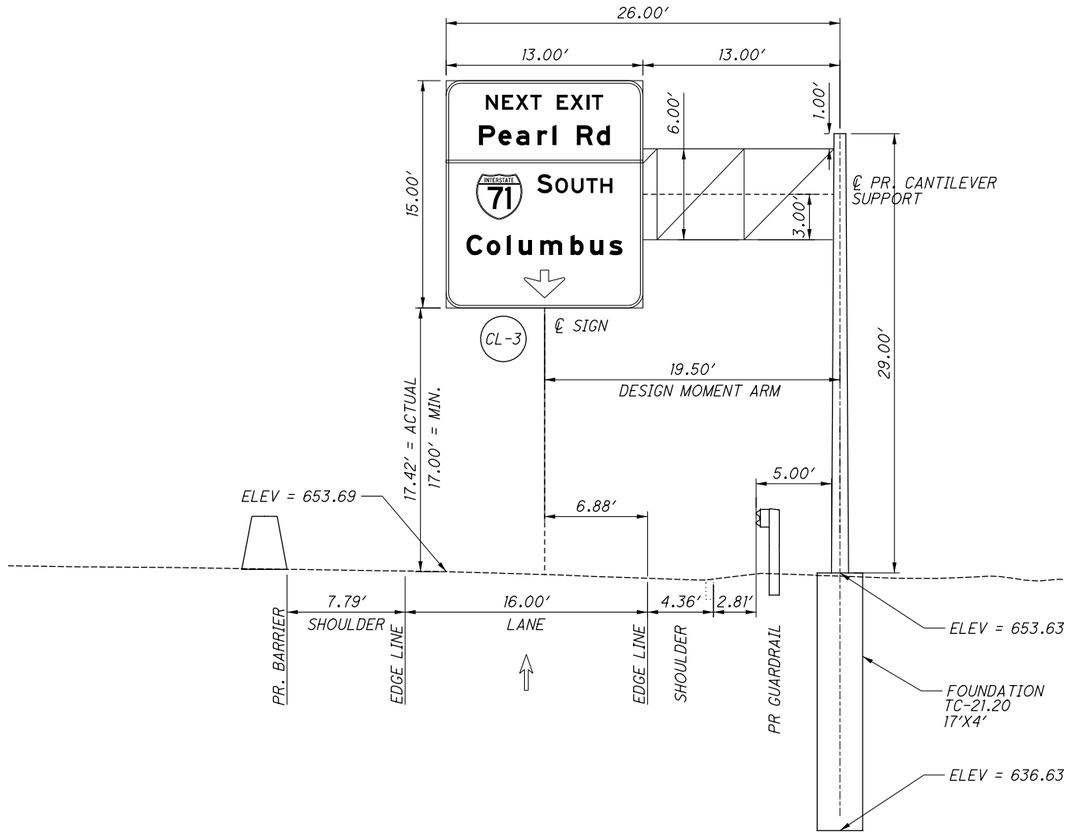


HORIZONTAL SCALE IN FEET
0 10 20 40

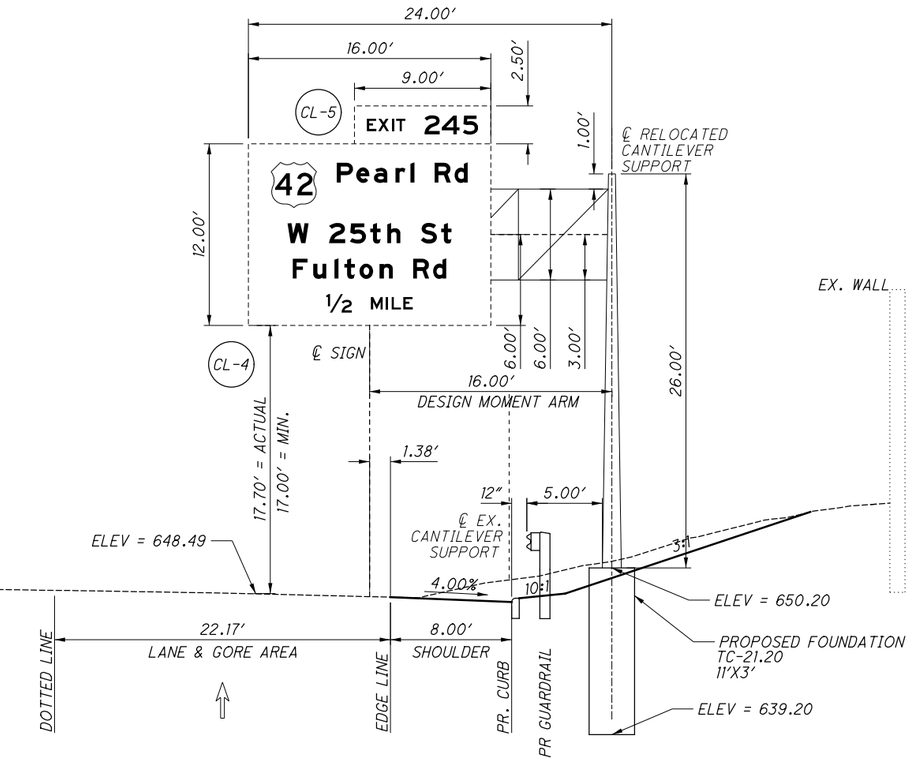
CALCULATED JLD
CHECKED DJJ

TRAFFIC CONTROL PLAN - RAMP J7
STA. 111+00.00 TO END

CUY-71-17.83/
CUY-176-12.76



I.R. 71 SOUTHBOUND AT RAMP SBOR-M, CL-3
PROPOSED CANTILEVER SIGN SUPPORT, TYPE TC-12.30, DESIGN 10
ARM LENGTH 26.00′



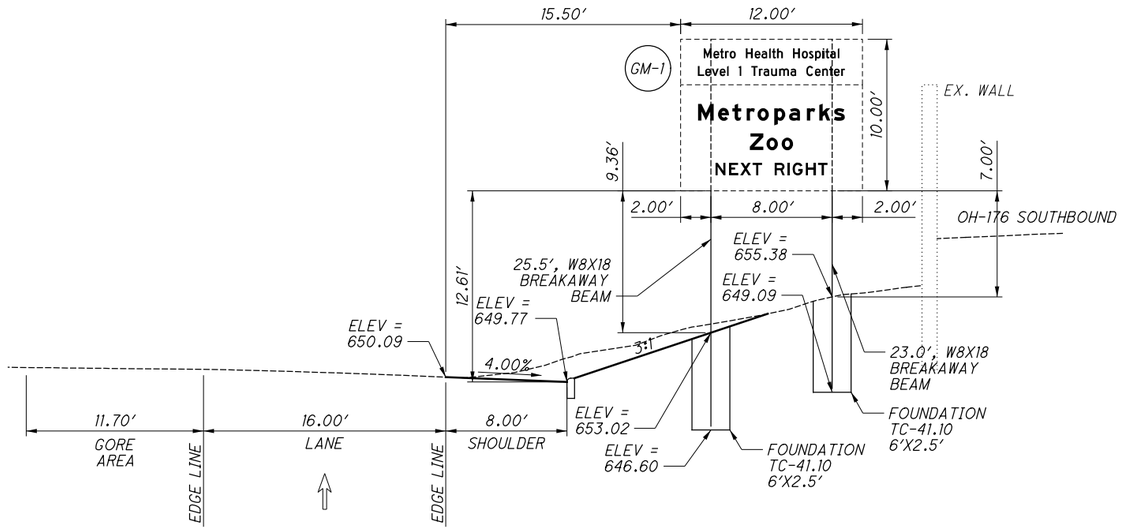
I.R. 71 RAMP SBOR-M, CL-4 & CL-5
EXISTING CANTILEVER SIGN SUPPORT, TO BE RELOCATED
TYPE TC-12.24, DESIGN 6
ARM LENGTH 24.00′

CALCULATED JLD
CHECKED DJJ

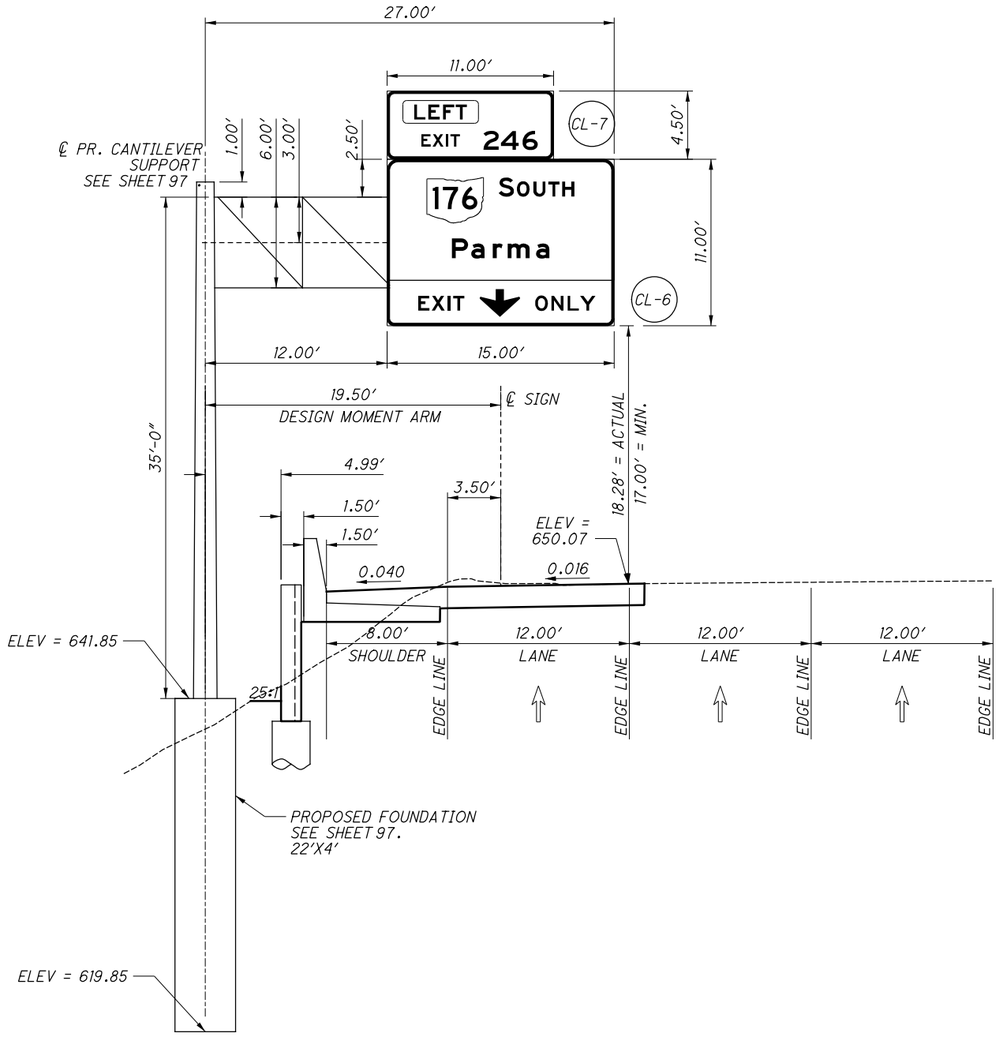
0 2.5 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVAITONS SIGNS CL-3, CL-4 & CL-5

CUY-71-17.83/
CUY-176-12.76



I.R. 71 SOUTHBOUND AT RAMP SBOR-M, GM-1
PROPOSED STRUCTURAL BEAM SIGN SUPPORT, TC-41.10



I.R. 71 SOUTHBOUND AT RAMP J7, CL-6 & CL-7
PROPOSED CANTILEVER SIGN SUPPORT, TYPE TC 12.30, DESIGN 12 AS PER PLAN
ARM LENGTH 27.00′

CALCULATED JLD
CHECKED DJJ

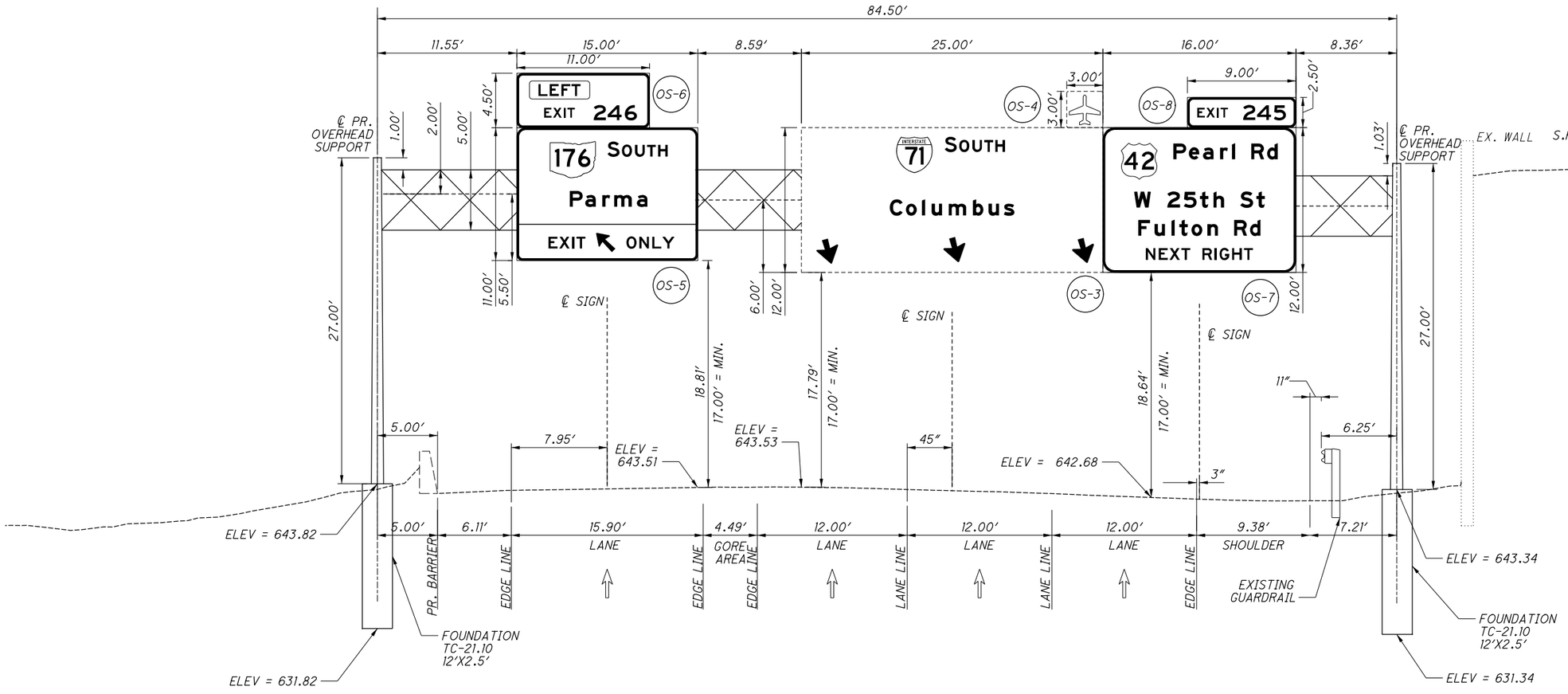
0 2.5 5 10
HORIZONTAL
SCALE IN FEET

SIGN ELEVAITONS
SIGNS GM-1, CL-6 & CL-7

CUY-71-17.83/
CUY-176-12.76

93
127

...\Traffic\Sheets\98063_TE002.dgn 8/30/2019 3:23:49 PM Jennifer.DoVale



I.R. 71 SOUTHBOUND AT RAMP M-J, OS-3 TO OS-8
PROPOSED OVERHEAD STEEL TRUSS, TYPE TC-15.115
SPAN LENGTH 83.00′

CALCULATED JLD
CHECKED DJJ

0 2.5 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVAITONS SIGNS OS-3 THROUGH OS-8

CUY-71-17.83/
CUY-176-12.76

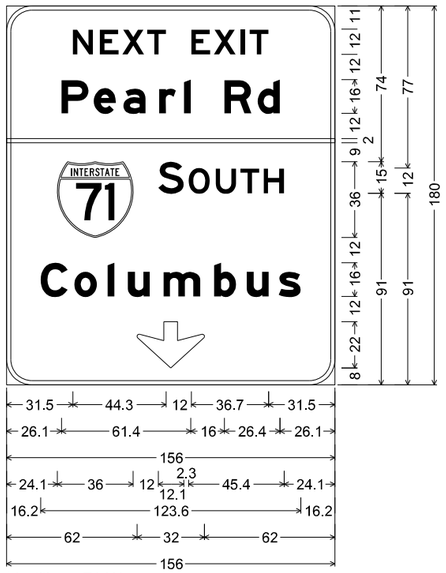
94
127

..\Traffic\Sheets\98063_TE003.dgn 8/30/2019 3:23:54 PM Jennifer.DoVale

SIGN DETAIL

PANEL STYLE: ODOT LEVEL 1 (REFLECTIVE)
DIMENSIONS ARE IN INCHES
LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER

CL-3



Identifier : E1-H1;
12.0" Radius, 2.0" Border, White on Green;
[NEXT EXIT] E 2K; [Pearl Rd] E Mod 2K;
Interstate 71 M1-1; [SOUTH] E 2K;
[Columbus] E Mod 2K;
Down Arrow C-1 - 22.0" 270°;
Table of letter and object lefts.

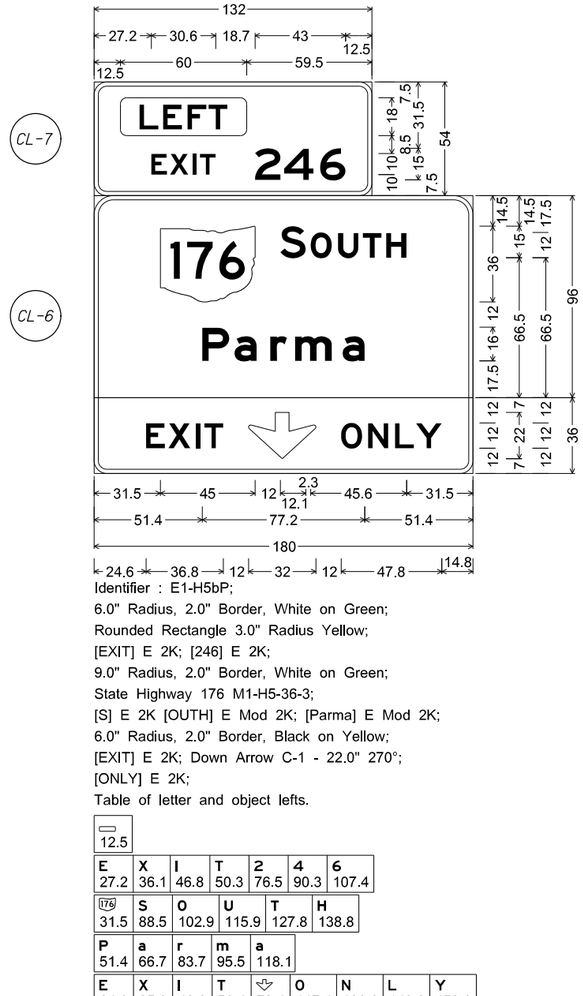
N 31.5	E 44.3	X 55.0	T 66.8	E 87.8	X 98.5	I 111.3	T 115.5
P 26.1	e 41.4	a 55.5	r 72.5	l 84.3	R 103.5	d 119.4	
-0.0							
24.1	S 72.1	O 86.5	U 99.4	T 111.1	H 122.2		
C 16.2	o 32.2	l 48.0	u 57.6	m 74.6	b 98.6	u 114.1	s 129.3
62.0							

SIGN DETAIL

PANEL STYLE: ODOT LEVEL 1 (REFLECTIVE)
DIMENSIONS ARE IN INCHES
LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER

CL-7

CL-6



Identifier : E1-H5bP;
6.0" Radius, 2.0" Border, White on Green;
Rounded Rectangle 3.0" Radius Yellow;
[EXIT] E 2K; [246] E 2K;
9.0" Radius, 2.0" Border, White on Green;
State Highway 176 M1-H5-36-3;
[S] E 2K [OUTH] E Mod 2K; [Parma] E Mod 2K;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] E 2K; Down Arrow C-1 - 22.0" 270°;
[ONLY] E 2K;
Table of letter and object lefts.

12.5									
E 27.2	X 36.1	I 46.8	T 50.3	2 76.5	4 90.3	6 107.4			
176 31.5	S 88.5	O 102.9	U 115.9	T 127.8	H 138.8				
P 51.4	a 66.7	r 83.7	m 95.5	a 118.1					
E 24.6	X 35.3	I 48.2	T 52.4	73.4	O 117.4	N 130.2	L 143.0	Y 153.0	

CALCULATED JSR
CHECKED DJJ

SIGN FABRICATION DETAILS
CL-3, CL-6, CL-7

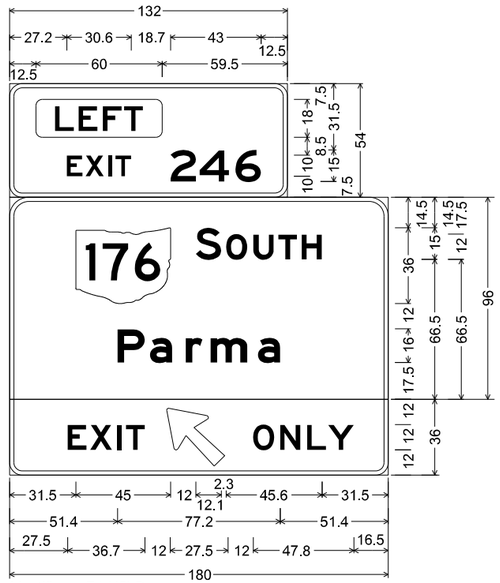
CUY-71-17.83/
CUY-176-12.76

SIGN DETAIL

PANEL STYLE: ODOT LEVEL 1 (REFLECTIVE)
DIMENSIONS ARE IN INCHES
LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER

OS-6

OS-5



Identifier : E1-H5bP;
6.0" Radius, 2.0" Border, White on Green;
Rounded Rectangle 3.0" Radius Yellow;
[EXIT] E 2K; [246] E 2K;
9.0" Radius, 2.0" Border, White on Green;
State Highway 176 M1-H5-36-3;
[S] E 2K [OUTH] E Mod 2K; [Parma] E Mod 2K;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] E 2K; Arrow A-1 - 35.0" 135°;
[ONLY] E 2K;
Table of letter and object lefts.

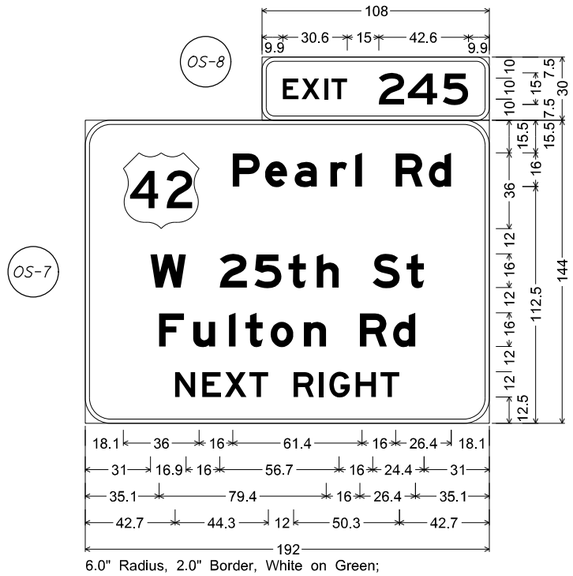
12.5						
E 27.2	X 36.1	I 46.8	T 50.3	2 76.5	4 90.3	6 107.4
176 31.5	S 88.5	O 103.0	U 115.9	T 127.8	H 138.9	
P 51.4	a 66.8	r 83.7	m 95.6	a 118.1		
E 27.5	X 38.2	I 51.0	T 55.2	76.2		
O 115.7	N 128.6	L 141.4	Y 151.4			

SIGN DETAIL

PANEL STYLE: ODOT LEVEL 1 (REFLECTIVE)
DIMENSIONS ARE IN INCHES
LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER

OS-8

OS-7



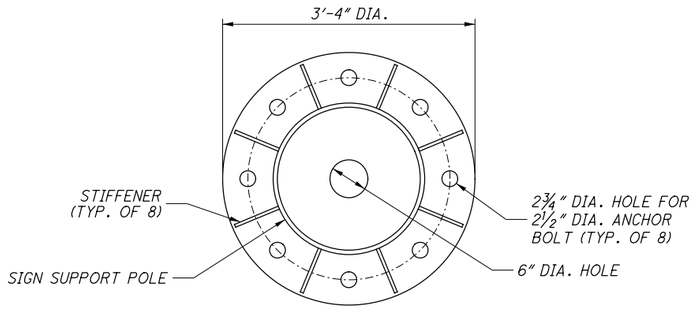
6.0" Radius, 2.0" Border, White on Green;
[EXIT] E 2K; [245] E 2K;
12.0" Radius, 2.0" Border, White on Green;
US 42 M1-4; [Pearl Rd] E Mod 2K;
[W 25th St] E Mod 2K; [Fulton Rd] E Mod 2K;
[NEXT RIGHT] E 2K;
Table of letter and object lefts.

E 9.9	X 18.8	I 29.5	T 33.0	2 55.5	4 69.3	5 85.9	
42 18.1	P 70.1	e 85.4	a 99.5	r 116.5	l 128.3	R 147.5	d 163.4
W 31.0	2 63.9	5 80.4	t 96.6	h 110.0	S 136.6	t 152.7	
F 35.1	u 51.3	l 68.2	t 76.1	o 88.1	n 103.9	R 130.5	d 146.3
N 42.7	E 55.6	X 66.2	T 78.0	R 99.0	I 111.1	G 116.0	H 128.5	T 140.3

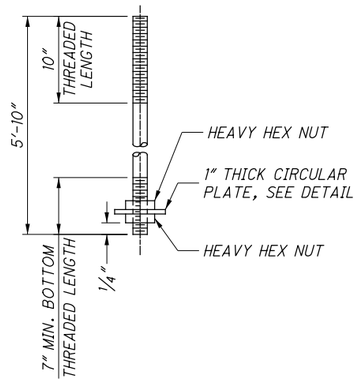
CALCULATED JSR
CHECKED DJJ

SIGN FABRICATION DETAILS OS-5, OS-6, OS-7, OS-8

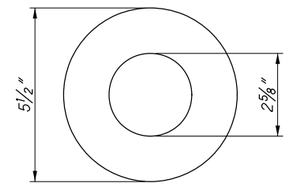
CUY-71-17.83/
CUY-176-12.76



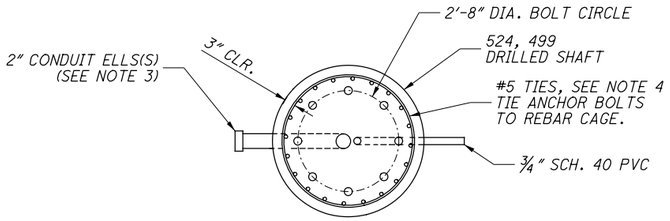
BASE PLATE PLAN



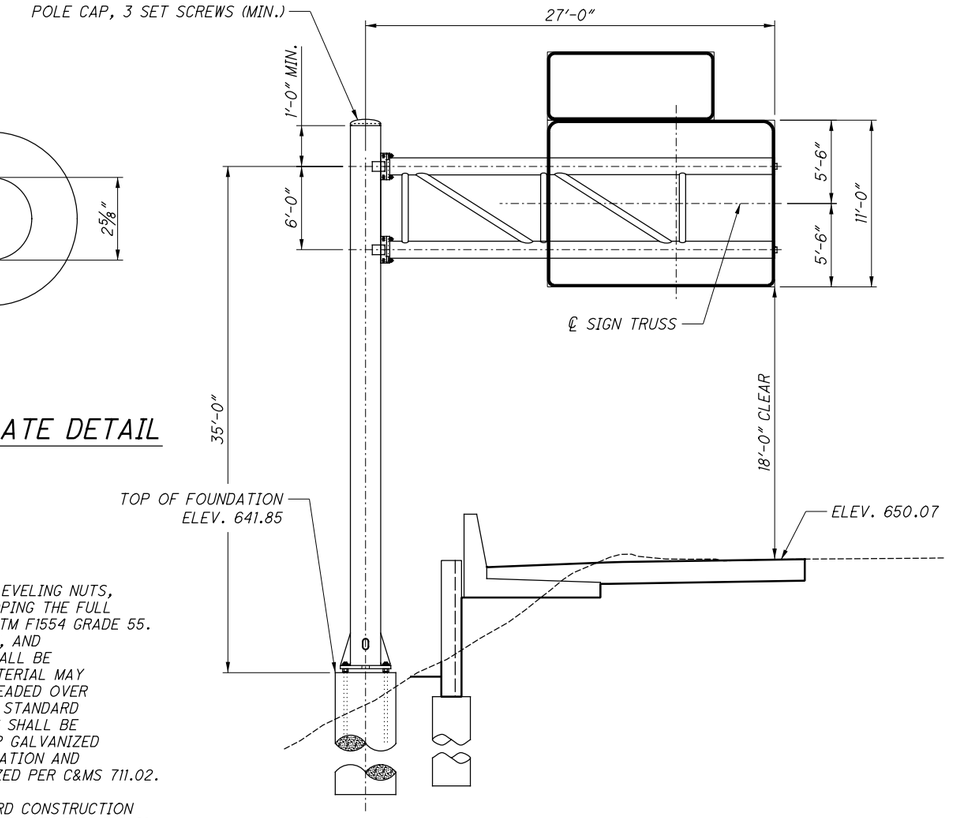
NUTTED ANCHOR BOLT



CIRCULAR PLATE DETAIL



FOUNDATION PLAN



CL-6 & CL-7 SIGN ELEVATION

NOTES:

1. SIGN SUPPORT SHALL CONFORM TO ODOT CMS 630 AND 730 AND WITH STANDARD DRAWING TC-12.30 EXCEPT FOR THE POLE AND DRILLED SHAFT DETAILS SHOWN ON THIS SHEET.

2. PROVIDE ALL ANCHOR BOLTS WITH STANDARD STEEL HEX NUTS, LEVELING NUTS, AND CIRCULAR PLATES. THE NUTS SHALL BE CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE ANCHOR BOLTS. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55. THREADS SHALL BE UNC-2A, AND MAY BE EITHER ROLLED OR CUT, AND COARSE THREADED. THE EMBEDDED END OF THE ANCHOR BOLT SHALL BE HEADED OR THREADED WITH A HEAVY HEX NUT. ANCHOR BOLT MATERIAL MAY BE SMOOTH STEEL ROD THAT IS THREADED AT THE ENDS OR THREADED OVER ITS ENTIRE LENGTH. HEX NUTS SHALL BE ASTM A563, AMERICAN STANDARD HEAVY HEX, GRADE DH, WITH UNC-2B THREADS. CIRCULAR PLATES SHALL BE A709 GRADE 36 OR GRADE 50. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED OVER THEIR ENTIRE LENGTH, AS PER C&MS 711.02, AFTER FABRICATION AND THREADING. ALL NUTS AND CIRCULAR PLATES SHALL BE GALVANIZED PER C&MS 711.02.

3. PROVIDE A MINIMUM OF ONE CAPPED 2" CONDUIT ELL IN STANDARD CONSTRUCTION DRAWINGS (SCDS) TC-81.10 AND TC-81.21 FOUNDATIONS FOR FUTURE USE. THIS ELL IS IN ADDITION TO ANY OTHER CONDUITS SPECIFIED IN THE PLANS.

4. TIE SPACING, STARTING FROM THE TOP OF THE DRILLED SHAFT, SHALL BE 3" BETWEEN THE FIRST TWO TIES AND 12" SPACING THEREAFTER.

5. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND COMPLY WITH AND BE PLACED IN ACCORDANCE WITH CMS 509. LAP ALL REBAR, INCLUDING THE BARS, PER THE LAP LENGTH TABLE IN 509. REBAR END HOOKS NOT REQUIRED. REBAR CAGE SHALL EXTEND TO WITHIN 3 ½" ± ½" OF TOP AND BOTTOM OF FOUNDATION.

6. MAST ARM AND ARM ATTACHMENT TO BE PROVIDED AND ASSEMBLED AS SHOWN IN STANDARD DRAWING TC-12.30 FOR DESIGN 12 ALT.

7. LOCATE DRILLED SHAFT FOR CANTILEVER SIGN MIDWAY BETWEEN SOLDIER PILE DRILLED SHAFTS #37 AND #38 AS SHOWN IN SHEET 111. PLACE DRILLED SHAFT PRIOR TO INSTALLATION OF WALL.

8. SIGN POST AND FOUNDATION DESIGNED IN ACCORDANCE WITH THE LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, FIRST EDITION WITH 2017 AND 2018 INTERIM REVISIONS.

ITEM 630 - OVERHEAD SIGN SUPPORT, TYPE TC-12.30, AS PER PLAN

THE PROVISIONS OF ITEM 630 SHALL APPLY, EXCEPT AS MODIFIED BELOW.

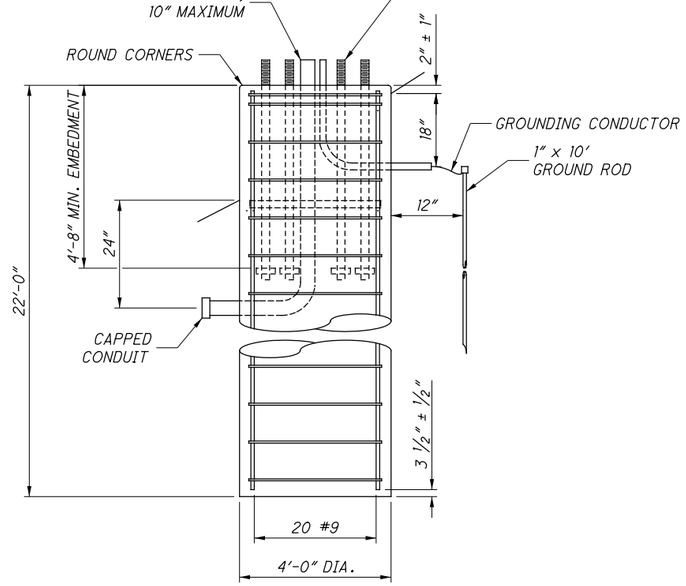
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A CUSTOM CANTILEVER SIGN SUPPORT AND FOUNDATION FOR SIGNS CL-6 & CL-7. THE SIGN LOCATION AND ELEVATION ARE ON SHEETS 87 AND 92, RESPECTIVELY.

PIPE SHALL MEET ASTM A53. STIFFENER PLATES AND BASE PLATE SHALL MEET ASTM A572 GRADE 50.

THE FOUNDATION SHALL BE CONSTRUCTED ACCORDING TO 524 EXCEPT AS NOTED BELOW.

TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE, USE METHOD B, WET CONSTRUCTION OR METHOD C, TEMPORARY CASING CONSTRUCTION METHOD TO INSTALL PRE-AUGERED HOLES FOR THE DRILLED SHAFT PER ODOT CMS 524.04. DO NOT DRIVE CASINGS INTO PLACE.

ITEM 630 - OVERHEAD SIGN SUPPORT, TYPE TC-12.30, AS PER PLAN, SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO FURNISH AND INSTALL A COMPLETE AND FUNCTIONAL CANTILEVER SIGN SUPPORT POLE, ARM, AND FOUNDATION.



FOUNDATION ELEVATION

ENGINEERS SEAL

STATE OF OHIO
EDWARD T BAZNIK
E-78469
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Edward T. Baznik

DATE: 08/30/2019

CALCULATED ETB
CHECKED BCM

SIGN SUPPORT DETAILS SHEET 1 OF 2
SIGNS CL-6 AND CL-7

CUY-71-17.83/
CUY-176-12.76

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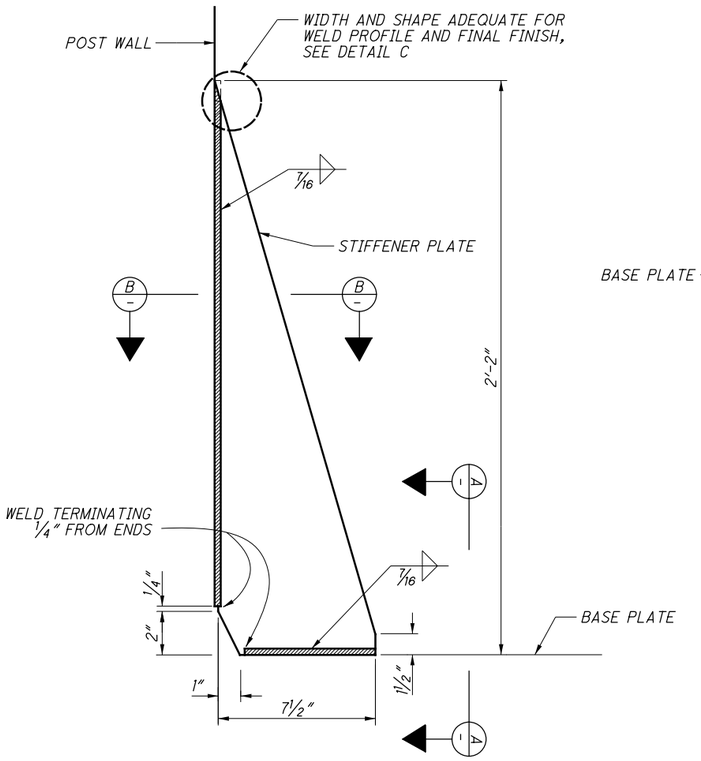
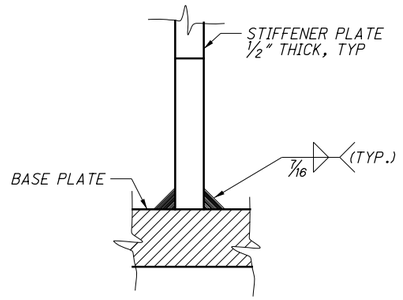
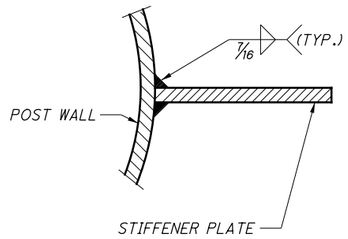


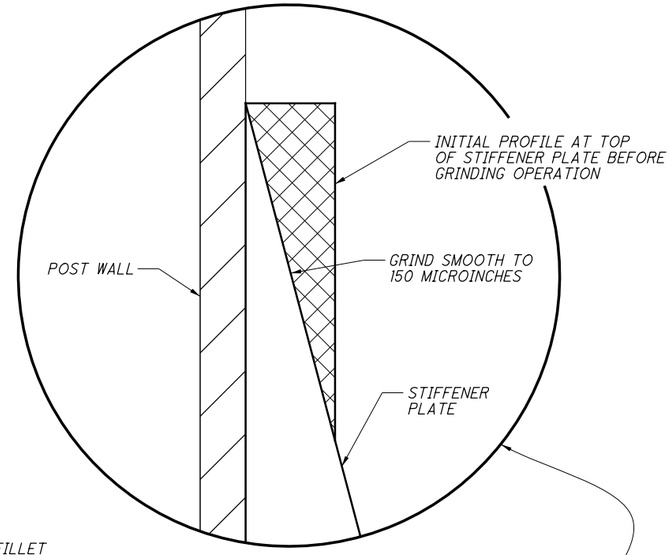
WELD DETAILS



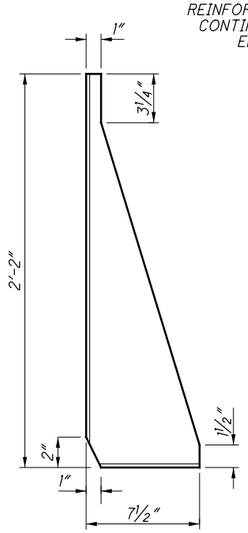
SECTION A-A



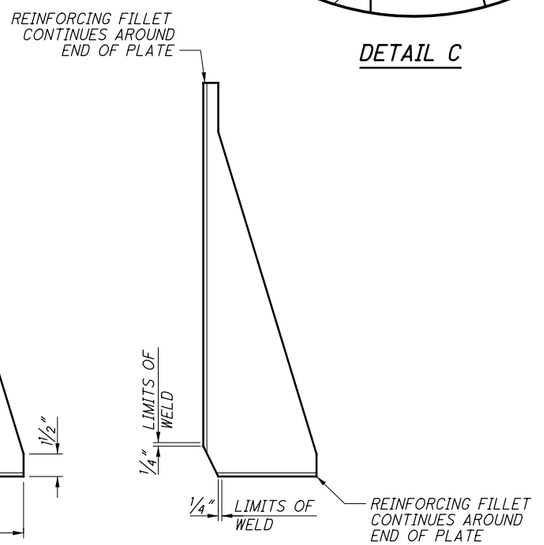
SECTION B-B



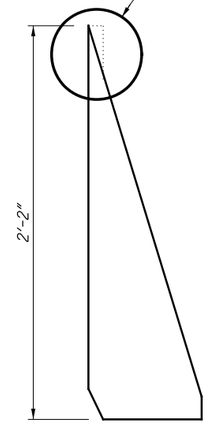
DETAIL C



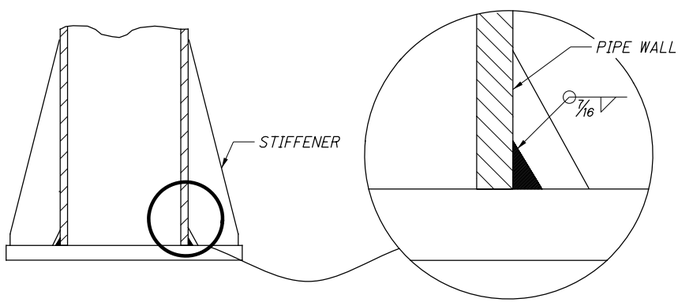
STIFFENER PLATE
(INITIAL SHAPE)



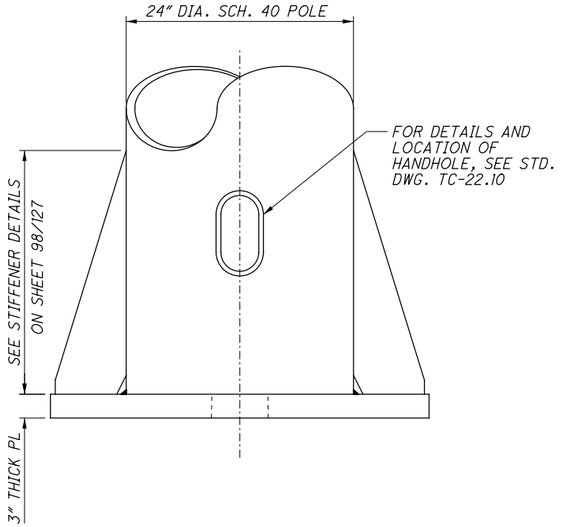
STIFFENER PLATE WELDING
(SEE WELD DETAILS)



STIFFENER PLATE GRINDING
(SEE DETAIL C)



POST TO BASE PLATE CONNECTION DETAIL



POLE BASE AND STIFFENER DETAIL

NOTES:

1. PROVIDE A SMOOTH TRANSITION FROM STIFFENER PLATE TO PIPE.

ENGINEERS SEAL

STATE OF OHIO
EDWARD T BAZNIK
E-78469
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Edward T. Baznik

DATE: 08/30/2019

CALCULATED ETB
CHECKED BCM

SIGN SUPPORT DETAILS SHEET 2 OF 2
SIGNS CL-6 AND CL-7

CUY-71-17.83/
CUY-176-12.76

98
127

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ITEM 625 - CONDUIT, JACKED OR DRILLED, 725.04, 3", AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF JACKING OR DRILLING A MINIMUM OF THREE (3) FEET UNDER I.R. 71 SB AND A MINIMUM OF ONE (1) FOOT BELOW THE BOTTOM OF PROPOSED LAGGING FOR WALL ZZ. SEE SHEET 115 FOR PROPOSED LAGGING ELEVATION.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 625, "CONDUIT, JACKED OR DRILLED, 725.04, 3", AS PER PLAN" AND SHALL INCLUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, HIGH MAST, SOLID STATE (LED), 480V, AS PER PLAN

IN ADDITION TO SUPPLEMENTAL SPECIFICATION 813, USE ONE OF THE FOLLOWING LUMINAIRES OR APPROVED EQUAL AS DIRECTED BY THE DISTRICT 12 HIGHWAY MAINTENANCE TRAFFIC ENGINEER:

HOLOPHANE HLMLED3-PK3-30K-HVOLT-G-AW WITH COLOR TEMPERATURE OF 3000K, TYPE V DISTRIBUTION AND AN AVERAGE OF 55000-65000 LUMEN PERFORMANCE.

GE LIGHTING ERHM-01-5-60-VM-7-30-N-1-4B-GRAY-R WITH A COLOR TEMPERATURE OF 3000K, TYPE V DISTRIBUTION AND AN AVERAGE OF 50000-60000 LUMEN PERFORMANCE.

CAROLINA CLED2-8C-G-30-70-B-** WITH A COLOR TEMPERATURE OF 3000K, TYPE V DISTRIBUTION** AND AN AVERAGE OF 50000-60000 LUMEN PERFORMANCE.

LUMINAIRE LED DRIVERS SHALL BE COMPATIBLE WITH SINGLE PHASE, 480V INPUT.

AS A PART OF THIS PAY ITEM THE CONTRACTOR SHALL INSTALL WEATHERPROOF CAPS AS APPROVED BY THE PROJECT ENGINEER ON THE MOUNTING TENONS WHERE LUMINAIRES HAVE BEEN REMOVED AND ARE NOT RECEIVING A NEW LED LUMINAIRE.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 625, "LUMINAIRE, HIGH MAST, SOLID STATE (LED), 480V, AS PER PLAN" AND SHALL INCLUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - PULL BOX, 725.08, 24", AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS, THIS ITEM OF WORK SHALL CONSIST OF INSTALLING A NEW PULL BOX OVER AN EXISTING CIRCUIT.

EXTREME CARE SHALL BE EXERCISED BY THE CONTRACTOR DURING EXCAVATION AS NOT TO DAMAGE THE EXISTING CONDUIT OR CABLES. THE CONTRACTOR SHALL FURNISH, AND INSTALL, IF NECESSARY, ANY EXTENSION(S) TO THE EXISTING CONDUIT TO ENSURE PROPER ORIENTATION IN THE NEW PULL BOX. THE EXTENSION(S) MAY BE OF PVC PIPE OR RIGID CONDUIT MATERIAL AS LONG AS IT IS COMPATIBLE WITH THE EXISTING CONDUIT SIZE AND CONFORMS TO THE REQUIREMENTS OF CMS 725.04 OR 725.051. IF THE EXISTING CABLES MUST BE SEVERED TO INSTALL THE CONDUIT EXTENSION(S), THE CONTRACTOR SHALL ALSO FURNISH AND INSTALL A CABLE SPLICE KIT OR CONNECTOR CONFORMING TO THE REQUIREMENTS OF CMS 725.15.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 625, "PULL BOX, 725.08, 24", AS PER PLAN" AND SHALL INCLUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

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.

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 "A" 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.

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING (CONT'D)

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 AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. 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.

ITEM 625 - LIGHT TOWER REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT TOWER, INCLUDING LOWERING DEVICE, BRACKETS, AND LUMINAIRES.

REMOVED LIGHT TOWERS, LOWERING DEVICES, BRACKETS, AND LUMINAIRES SHALL BE DELIVERED TO THE ODOT FACILITY LISTED BELOW:

ODOT DISTRICT 12
ATTN: TONY TOTH (216-584-2198)
DAVE NIMRICHTER (216-312-0201)
25609 EMERY RD
WARRENSVILLE HEIGHTS, OHIO 44128

ITEM 625 - LUMINAIRE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LUMINAIRE AND BRACKET.

REMOVED LUMINAIRES AND BRACKETS SHALL BE DELIVERED TO THE ODOT FACILITY LISTED BELOW:

ODOT DISTRICT 12
ATTN: TONY TOTH (216-584-2198)
DAVE NIMRICHTER (216-312-0201)
25609 EMERY RD
WARRENSVILLE HEIGHTS, OHIO 44128

ITEM 625 - LIGHT TOWER FOUNDATION REMOVED, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS, BACKFILL THE RESULTANT DEPRESSION AND NEARBY AREA WITH COMPACTED SOIL TO MATCH THE ADJACENT SLOPE ELEVATION AND RESTORE THE DISTURBED AREA.

ITEM 625 - LIGHTING, MISC.: LIGHT TOWER BBB140

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING A 140-FOOT LIGHT TOWER IN LIEU OF A 130-FOOT LIGHT TOWER. ALL OTHER WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEM 625, "LIGHT TOWER, BBB130".

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 625, "LIGHTING, MISC.: LIGHT TOWER BBB140" AND SHALL INCLUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING, MISC.: CONNECT CIRCUIT TO EXISTING TOWER

THIS ITEM OF WORK SHALL CONSIST OF THE CONNECTION OF A NEW LIGHT CIRCUIT TO AN EXISTING HIGH MAST TOWER.

CONNECTION SHALL INVOLVE EARTHWORK NEEDED TO EXPOSE EXISTING CONDUIT ENTRANCES, OPENING OF THE CONDUIT ENTRANCES, CONNECTION OF CONDUIT TO ENTRANCES, FEEDING THE CONDUCTORS INTO THE TOWER BASE, CONNECTION OF CIRCUITRY TO EXISTING TOWER CIRCUIT BREAKERS AND POWER CABLES FOR LIGHT TOWERS ARE INCLUDED IN THIS PAY ITEM.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 625, "LIGHTING MISC.: CONNECT CIRCUIT TO EXISTING TOWER" AT EACH LOCATION WHERE CONNECTION IS REQUIRED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

CALCULATED SED CHECKED TMP

LIGHTING GENERAL NOTES

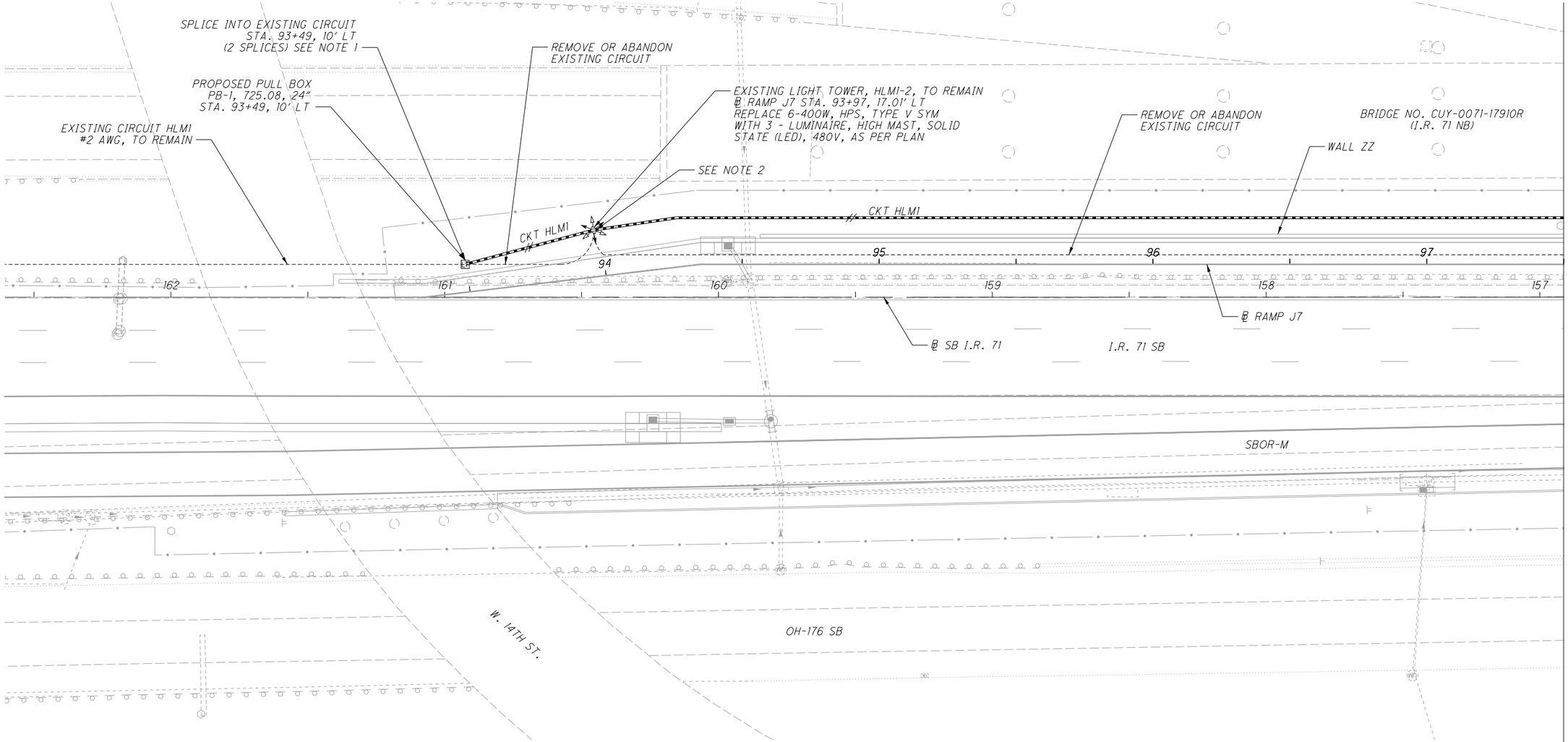
CUY-71-17.83\
CUY-176-12.76

SHEET NO.	BASELINE	STATION FROM	STATION TO	SIDE	CIRCUIT NODE	625 CONNECTION, UNFUSED PERMANENT	625 LIGHT TOWER, BBB130	625 LIGHT TOWER FOUNDATION, 42" X 25' DEEP	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	625 CONDUIT, 3", 725.051	625 CONDUIT, JACKED OR DRILLED, 725.04, 3", AS PER PLAN	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), 480V, AS PER PLAN	625 TRENCH	625 PULL BOX, 725.08, 24"	625 PULL BOX, 725.08, 24", AS PER PLAN	625 PULL BOX REMOVED	625 GROUND ROD	625 PLASTIC CAUTION TAPE	625 LIGHT TOWER REMOVED, AS PER PLAN	625 LUMINAIRE REMOVED, AS PER PLAN	625 LIGHT TOWER FOUNDATION REMOVED, AS PER PLAN	625 DISCONNECT CIRCUIT	625 LIGHTING, MISC.: LIGHT TOWER BBB140	625 LIGHTING, MISC.: CONNECT CIRCUIT TO EXISTING TOWER	
					(ML) = MATCH LINE	EACH	EACH	EACH	FT	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	
101	RAMP J7	93+49		LT	PB-1	2									1							1			
101	RAMP J7	93+49	93+97	LT	PB-1 TO HLM1-2				118	49			49					49							
101	RAMP J7	93+97		LT	HLM1-2							3								6				2	
101	RAMP J7	93+97	97+50	LT	HLM1-2 TO (ML)				720	355			355					355							
102	RAMP J7	97+50	98+28	LT	(ML) TO HLM1-3				168	79			79					79							
102	RAMP J7	97+69		LT	EXISTING HLM1-3														1		1				
102	RAMP J7	98+28		LT	HLM1-3		1	1				3					2								
102	RAMP J7	98+28	99+55	LT	HLM1-3 TO PB-2				270	125			125					125							
102	RAMP J7	99+52		RT	EXISTING PB											1									
102	RAMP J7	99+55		LT	PB-2	2								1											
102	RAMP J7 / SB I.R. 71	99+55	154+11	LT	PB-2 TO PB-3				210		95														
102	SB I.R. 71	154+61		LT	PB-3	2									1							1			
102	SB I.R. 71	154+69		LT	EXISTING PB											1									
102	RAMP J7	99+55	102+64	LT	PB-2 TO HLM1-4				638	309			309					309							
102	RAMP J7	101+68		LT	EXISTING HLM1-4														1		1				
102	RAMP J7	102+64		LT	HLM1-4			1				3					2						1		
102	RAMP J7	102+64	103+00	LT	HLM1-4 TO (ML)				84	37			37					37							
103	RAMP J7	103+00	106+69	LT	(ML) TO HLM1-5				746	368			368					368							
103	RAMP J7	106+69		LT	HLM1-5							3								6				1	
TOTALS CARRIED TO LIGHTING GENERAL SUMMARY						6	1	2	2954	1322	95	12	1322	1	2	2	4	1322	2	12	2	2	1	3	

CALCULATED SED
CHECKED TMP

LIGHTING SUBSUMMARY

CUY-71-17.83\
CUY-176-12.76



LIGHTING LEGEND

- EXISTING LIGHT TOWER WITH 6 - 400W HPS LUMINAIRES, TO BE REMOVED
- REPLACE 6 - 400W EXISTING HPS LUMINAIRES WITH 3 SYMMETRIC LED LUMINAIRES
- PROPOSED LIGHT TOWER WITH 3 SYMMETRIC LED LUMINAIRES
- EXISTING PULL BOX
- PROPOSED PULL BOX
- EXISTING CONDUIT
- PROPOSED 3" CONDUIT
- INDICATES TWO #2 AWG CONDUCTORS IN CONDUIT (2 WIRES: 2 CONDUCTOR SYSTEM, WITHOUT GROUND)
- EXISTING WALL MOUNT LIGHT
- EXISTING LIGHT POLE

NOTES:

1. STATION AND OFFSET OF EXISTING CIRCUIT IS APPROXIMATE. THE CONTRACTOR SHALL PHYSICALLY LOCATE THE EXISTING CIRCUIT AND PLACE PULL BOX DIRECTLY OVER EXISTING DISTRIBUTION CABLE. SPLICE PROPOSED DISTRIBUTION CABLE TO EXISTING CIRCUIT (TO REMAIN) WITH PERMANENT UNFUSED CONNECTIONS IN PROPOSED PULL BOX.
2. FOR CONNECTION TO EXISTING TOWER, SEE ITEM 625 - LIGHTING MISC.: CONNECT CIRCUIT TO EXISTING TOWER.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SED
CHECKED TMP

LIGHTING PLAN SHEET 1 OF 3
BEGIN TO RAMP J7 STA. 97+50

CUY-71-17.83/
CUY-176-12.76

101
127

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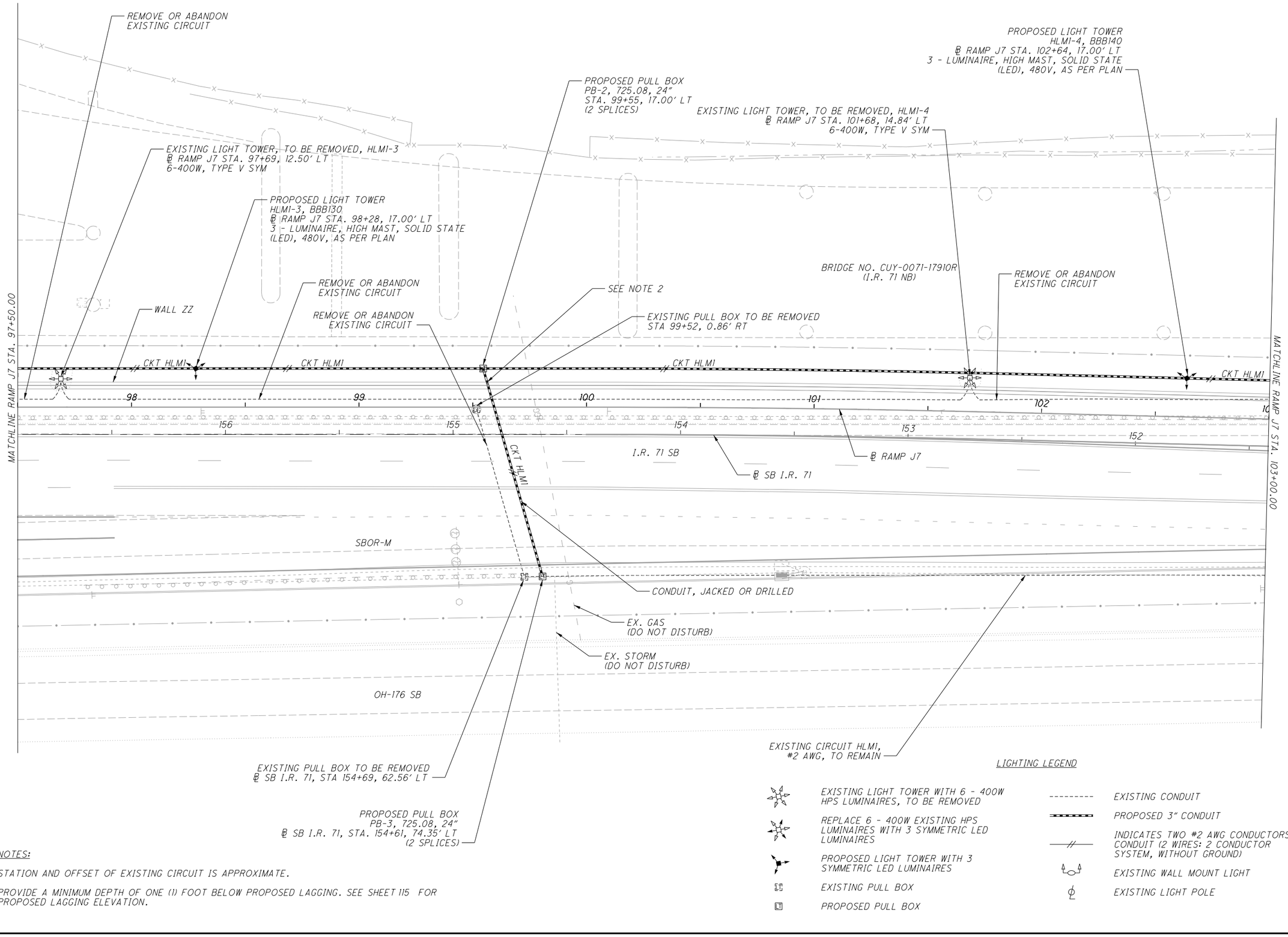

NOTES:

1. STATION AND OFFSET OF EXISTING CIRCUIT IS APPROXIMATE.
2. PROVIDE A MINIMUM DEPTH OF ONE (1) FOOT BELOW PROPOSED LAGGING. SEE SHEET 115 FOR PROPOSED LAGGING ELEVATION.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SED
CHECKED TMP

LIGHTING PLAN SHEET 2 OF 3
RAMP J7 STA. 97+50 TO STA. 103+00

CUY-71-17.83/
CUY-176-12.76

102
127

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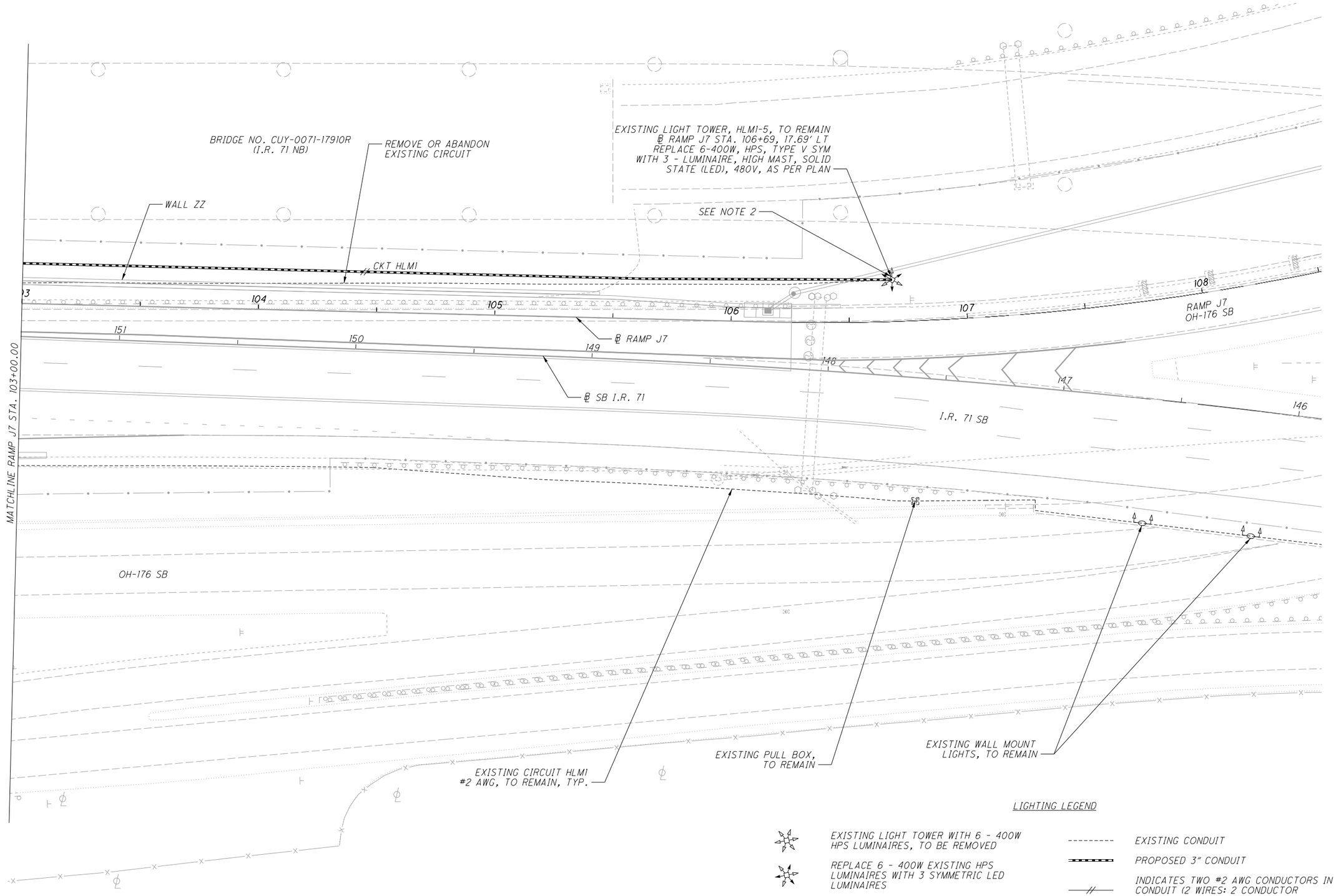

LIGHTING LEGEND

- EXISTING LIGHT TOWER WITH 6 - 400W HPS LUMINAIRES, TO BE REMOVED
- REPLACE 6 - 400W EXISTING HPS LUMINAIRES WITH 3 SYMMETRIC LED LUMINAIRES
- PROPOSED LIGHT TOWER WITH 3 SYMMETRIC LED LUMINAIRES
- EXISTING PULL BOX
- PROPOSED PULL BOX
- EXISTING CONDUIT
- PROPOSED 3" CONDUIT
- INDICATES TWO #2 AWG CONDUCTORS IN CONDUIT (2 WIRES: 2 CONDUCTOR SYSTEM, WITHOUT GROUND)
- EXISTING WALL MOUNT LIGHT
- EXISTING LIGHT POLE

NOTES:

1. STATION AND OFFSET OF EXISTING CIRCUIT IS APPROXIMATE.
2. FOR CONNECTION TO EXISTING TOWER, SEE ITEM 625 - LIGHTING MISC.: CONNECT CIRCUIT TO EXISTING TOWER.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SED
CHECKED TMP

LIGHTING PLAN SHEET 3 OF 3
RAMP J7 STA. 103+00 TO END

CUY-71-17.83/
CUY-176-12.76

103
127

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℄ HIGH MAST LIGHT TOWER

℄ RAMP J7

I.R. 71 NORTHBOUND BRIDGE (APPROX.)
BRIDGE NO. CUY-0071-17910R

14'-3" (APPROX.)

17'-0"

TOWER HLM1-3, BBB130

WALL ZZ

8'-0" SHOULDER

12'-0" LANE

12'-0" LANE

12'-0" LANE

12'-0" LANE

EOP

6" TO 12"

42"

FOUNDATION DEPTH 25'

EXISTING GROUND LINE

℄ RAMP J7, STA. 98+28

750 740 730 720 710 700 690 680 670 660 650 640 630 620 610 600 590 580 570

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

CALCULATED SED
CHECKED TMP

LIGHT TOWER HLM1-3 ELEVATION

CUY-71-17.83/
CUY-176-12.76

104
127

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℄ HIGH MAST LIGHT TOWER

I.R. 71 NORTHBOUND BRIDGE (APPROX.)
BRIDGE NO. CUY-0071-17910R

17'-10" (APPROX.)

17'-0"

℄ RAMP J7

TOWER HLM1-4, BBB140

WALL ZZ

8'-0" SHOULDER

12'-0" LANE | 12'-0" LANE | 12'-0" LANE | 12'-0" LANE

6" TO 12"

EOP

42"

FOUNDATION DEPTH 25'

EXISTING GROUND LINE

℄ RAMP J7, STA. 102+64

750 740 730 720 710 700 690 680 670 660 650 640 630 620 610 600 590 580 570

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

CALCULATED SED
CHECKED TMP

LIGHT TOWER HLM1-4 ELEVATION

CUY-71-17.83/
CUY-176-12.76

105
127

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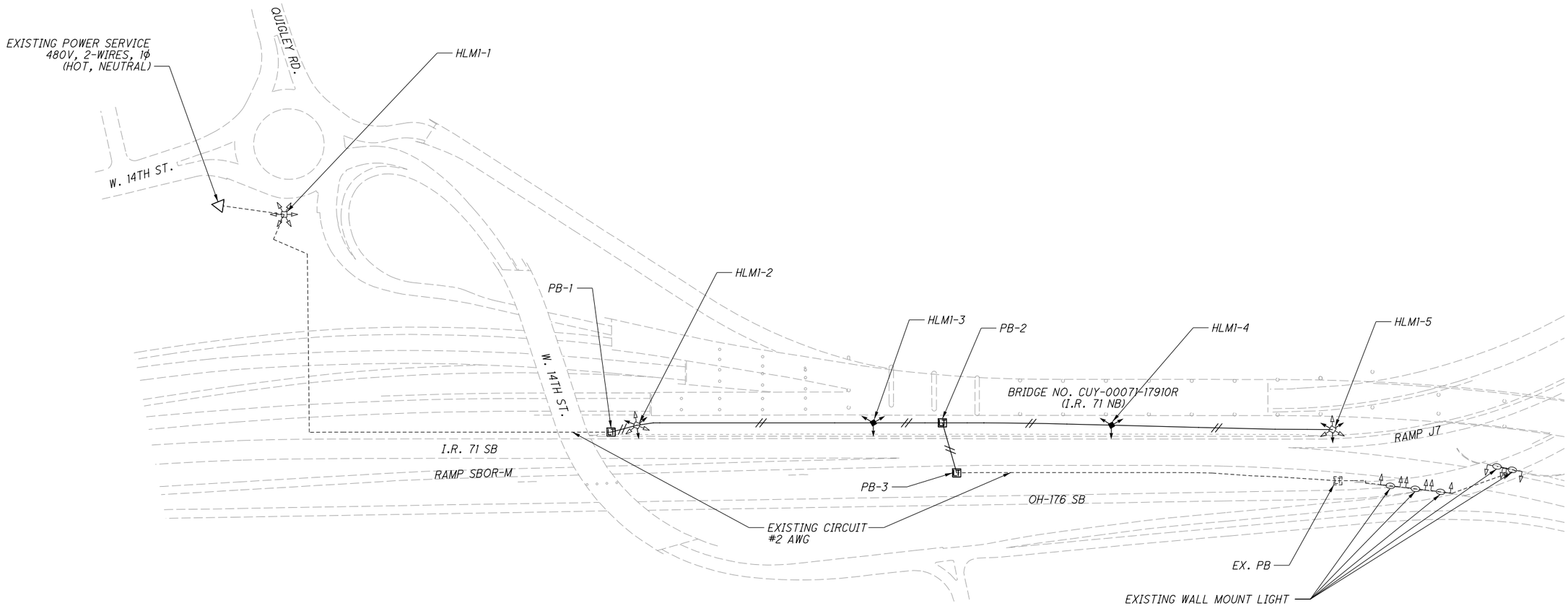

LIGHTING LEGEND

- EXISTING LIGHT TOWER WITH 6 - 400W HPS LUMINAIRES, TO BE REMOVED
- REPLACE 6 - 400W EXISTING HPS LUMINAIRES WITH 3 SYMMETRIC LED LUMINAIRES
- PROPOSED LIGHT TOWER WITH 3 SYMMETRIC LED LUMINAIRES
- EXISTING PULL BOX
- PROPOSED PULL BOX
- EXISTING CONDUIT
- PROPOSED 3" CONDUIT
- INDICATES TWO #2 AWG CONDUCTORS IN CONDUIT (2 WIRES: 2 CONDUCTOR SYSTEM, WITHOUT GROUND)
- EXISTING WALL MOUNT LIGHT
- EXISTING LIGHT POLE

LIGHT TOWER SCHEDULE

TOWER			LOCATION			APPROX. ELEVATION (SEE NOTE 2)	DETAILS			REFERENCE BORING
NO.	HEIGHT (FT)	NO. OF LUMINAIRES	ALIGNMENT	STATION	OFFSET		DIA. (IN)	REINF. BARS (SEE NOTE 3)	LENGTH (FT) (SEE NOTE 1)	
HLM1-3	130	3	℄ RAMP J7	98+28	17.00' LT	640	42	16 #9	25	B-006-0-14
HLM1-4	140	3	℄ RAMP J7	102+64	17.00' LT	642	42	16 #9	25	B-006-0-14

NOTES:

1. LENGTH OF DRILLED SHAFT IS FROM TOP OF FOUNDATION.
2. ELEVATION IS EXISTING GROUND SURFACE AT TOWER FOUNDATION.
3. SEE STANDARD DRAWING HL-20.21 FOR ADDITIONAL REINFORCING STEEL DETAILS. REINFORCING STEEL SHALL BE ITEM 509, GRADE 60. CONCRETE SHALL BE QC 1 OR QC MISC.

N

0 50 100 200 HORIZONTAL SCALE IN FEET

CALCULATED SED
CHECKED TMP

LIGHTING CIRCUIT DIAGRAM

CUY-71-17.83/
CUY-176-12.76

106
127

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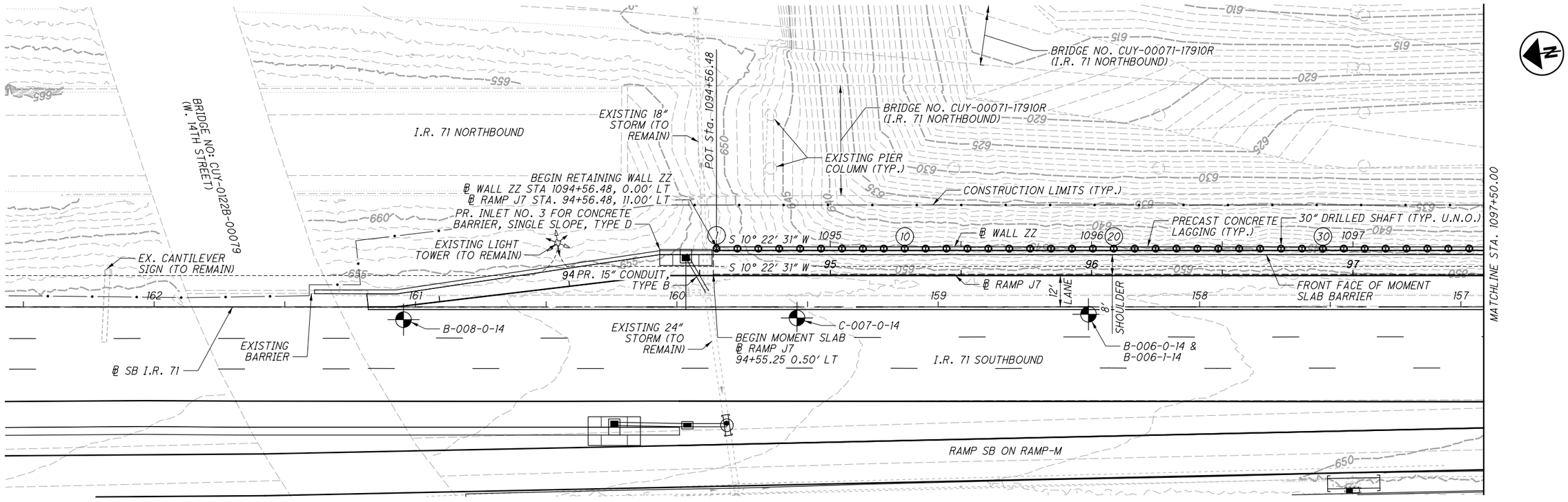
BENCHMARK DATA
BM - 38 STA. 93+97.32, ELEV. 658.01, OFFSET 16.04' LT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY SHEET 3/127.



PLAN

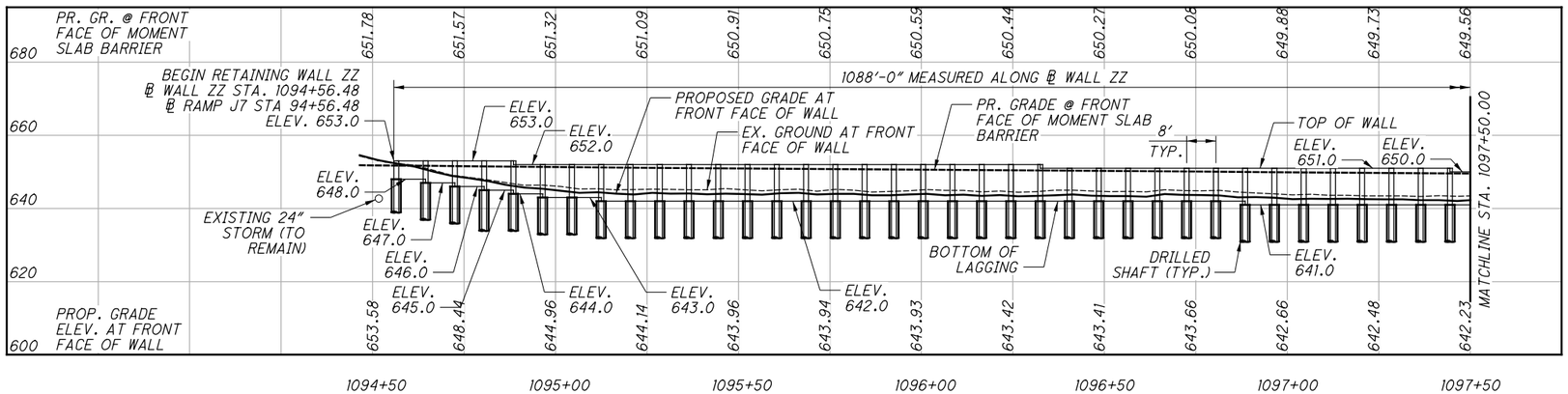
LEGEND:

BORING LOCATION

(1) SOLDIER PILE NUMBER

NOTES

1. SEE ROADWAY PLANS AND CROSS SECTION FOR ADDITIONAL INFORMATION AND EMBANKMENT QUANTITIES.
2. WALL BASELINE IS ALONG THE FRONT FACE OF PILE.
3. WALL STATIONING GIVEN ALONG WALL ZZ BASELINE.
4. BOTTOM OF DRILLED SHAFTS NOT SHOWN FOR CLARITY. FOR DRILLED SHAFTS AND PILE STATIONS, ELEVATIONS, AND DEPTHS, SEE TABLE OF ELEVATIONS ON SHEET 12 OF 21 .



PROFILE ALONG ℄ WALL ZZ

DESIGN AGENCY
Michael Baker INTERNATIONAL
111 SUPERIOR AVE., STE. 2000 CLEVELAND, OH 44114

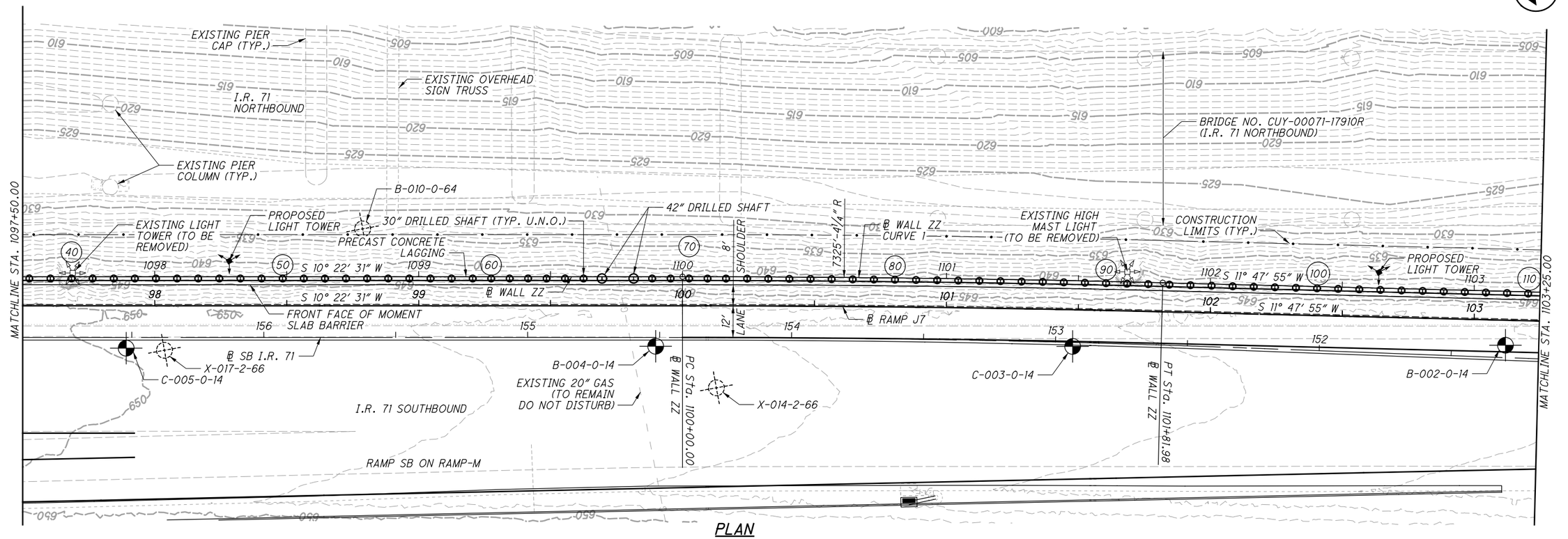
DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

SITE PLAN 1 OF 3
RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

1 / 21

107
127



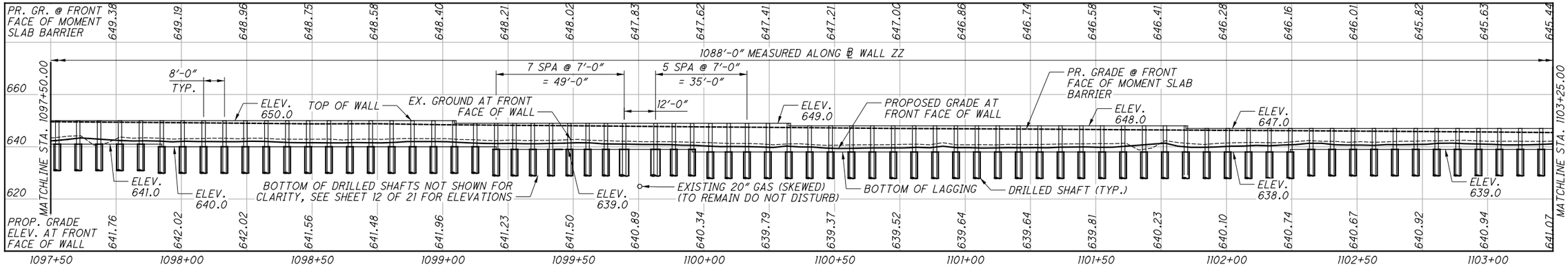
PLAN

LEGEND:

- BORING LOCATION
- HISTORIC BORING LOCATION
- (1) SOLDIER PILE NUMBER

℄ WALL ZZ
HORIZONTAL CURVE 1 DATA

P.I. Sta. 1100+90.99
Δ = 1° 25' 24" (RT)
Dc = 0° 46' 56"
R = 7,325.35'
T = 90.99'
L = 181.97'
E = 0.57'
C = 181.97'
C.B. = S 11° 05' 13" W



PROFILE ALONG ℄ WALL ZZ

NOTES:

SEE NOTES ON SHEET 1 / 21.

DESIGN AGENCY
Michael Baker INTERNATIONAL
1111 SUPERIOR AVE., STE 2000 CLEVELAND, OH 44114

DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

SITE PLAN 2 OF 3
RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

2 / 21

108
127

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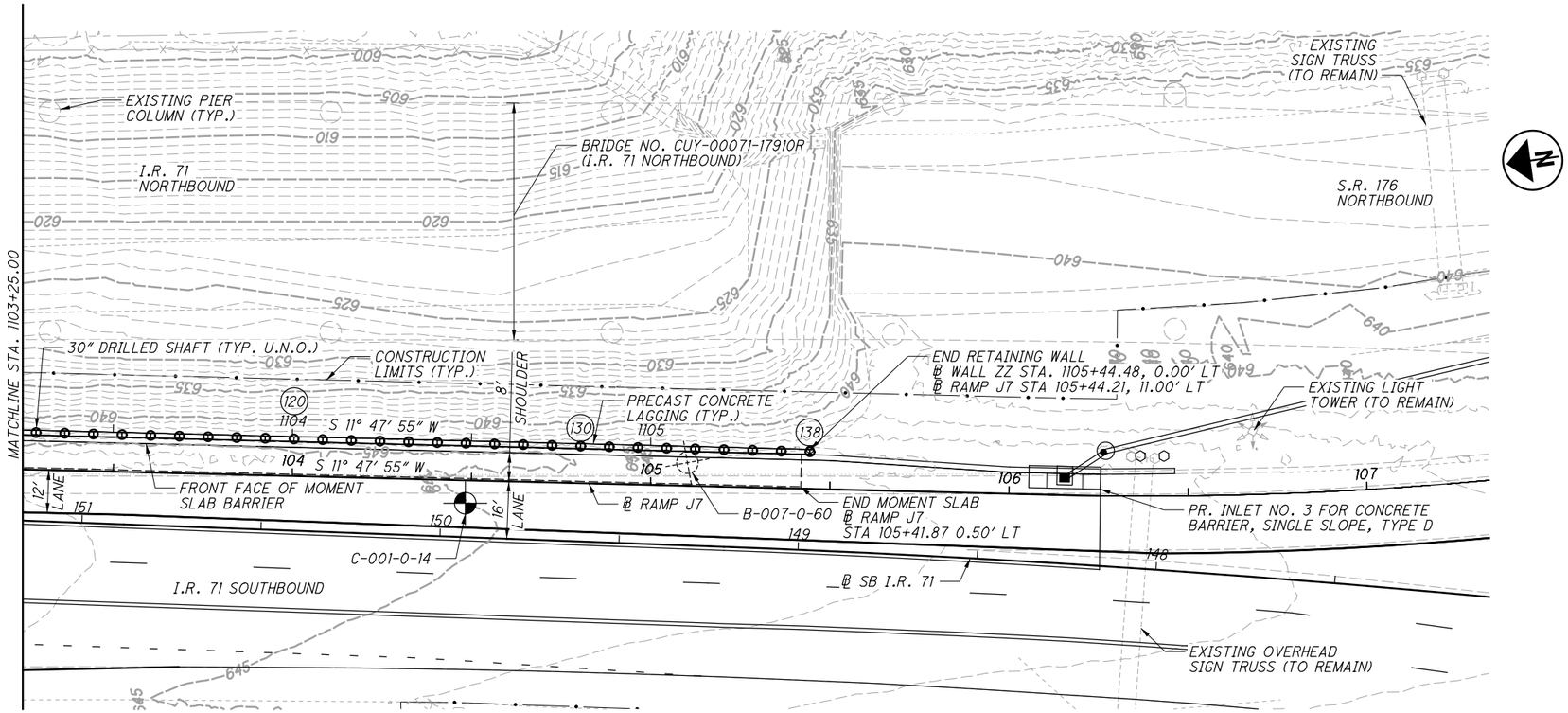
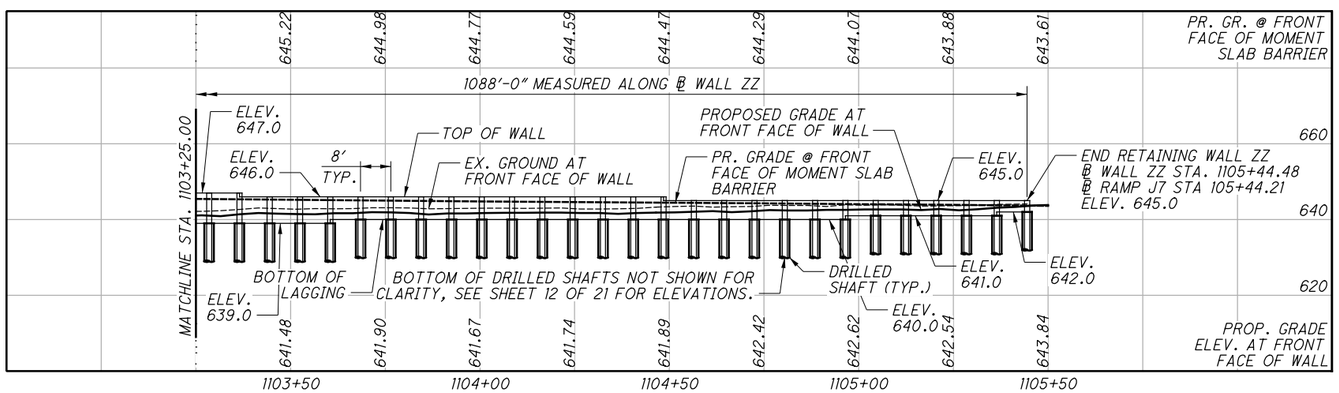


PLAN



PROFILE ALONG ℄ WALL ZZ

LEGEND:

- BORING LOCATION
- HISTORIC BORING LOCATION
- (1) SOLDIER PILE NUMBER

NOTES:

SEE NOTES ON SHEET 1 / 21.

DESIGN AGENCY
Michael Baker INTERNATIONAL
111 SUPERIOR AVE., STE 2300 CLEVELAND, OH 4114

DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

SITE PLAN 3 OF 3
RETAINING WALL ZZ
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

3 / 21

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
REFER TO THE FOLLOWING STANDARD DRAWING(S):

BP-2.2	DATED 07-18-08
DM-1.1	DATED 07-21-17
SBR-1-13	DATED 07-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

1073	DATED 07-20-18

DESIGN SPECIFICATIONS:
DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 7TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 INCLUDING THE 2015 AND 2016 INTERIM REVISIONS, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN LOADING
250 PSF LIVE LOAD VERTICAL SURCHARGE

GEOTECHNICAL INFORMATION
SOIL BORING LOGS AND SUBSURFACE PROFILES CAN BE FOUND IN THE GEOTECHNICAL ENGINEERING DESIGN REPORT "STRUCTURE FOUNDATION EXPLORATION CLEVELAND INNERBELT CONSTRUCTION CONTRACT GROUP 7A (CCG7A) WALL ZZ SUPPORTING IR-71 SB CUYAHOGA COUNTY, OHIO PID#: 98063" DATED AUGUST 30, 2019.

DESIGN DATA
ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT NOTED.

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (MOMENT SLAB)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (LAGGING & RAISED PANEL SEAT)

CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.0 KSI (DRILLED SHAFT)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

PROVIDE 2" CONCRETE COVER ON STEEL REINFORCING BARS, EXCEPT AS NOTED.

PLAN LOCATION OF PILE: MAXIMUM 1" VARIANCE FROM PLAN LOCATION AT BOTTOM OF WALL AND 1½" VARIANCE FROM PLAN LOCATION AT TOP OF WALL.

VERTICAL TOLERANCE OF PILE: MAXIMUM OF 1/8" PER 10 FT FROM PLUMB WHEN INITIALLY INSTALLED (UNLOADED)

EXCAVATION

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING STABLE SLOPES ABOVE AND BELOW THE WALLS. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION AND AWAY FROM THE AREA BEHIND THE WALL, INCLUDING ANY TEMPORARY EXCAVATION SUPPORT SYSTEM. PERFORM ALL EXCAVATIONS AND PROVIDE ALL SUPPORT IN ACCORDANCE WITH OSHA AND ODOT REQUIREMENTS FOR SHORING. A TEMPORARY EXCAVATION SUPPORT SYSTEM SHALL BE PROVIDED TO MAINTAIN OVERALL STABILITY INCLUDING FOR CONDITIONS OF PERCHED GROUNDWATER IF PRESENT AT TIME OF CONSTRUCTION. NO GENERAL EXCAVATION CUTS SHALL BE MADE IN FRONT OF THE PROPOSED WALL LOCATION UNTIL THE ENTIRE WALL IS CONSTRUCTED.

CHEMICAL ODORS WERE ENCOUNTERED AS NOTED IN THE STRUCTURE FOUNDATION EXPLORATION. DISPOSE OF MATERIAL NOT NEEDED OR NOT SUITABLE ACCORDING TO CMS ITEM 105.16 AND 105.17 UNLESS INSTRUCTED OTHERWISE BY THE DEPARTMENT.

PROTECTION OF UTILITIES:

THE CONTRACTOR IS REMINDED THAT ALL THE EXISTING COMPONENTS AND SYSTEMS TO REMAIN IN USE DURING AND/OR AFTER THIS PROJECT REQUIRE PROTECTION. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO:

WATER MAINS
GAS MAINS
ELECTRICAL/TELEPHONE CONDUITS AND OVERHEAD LINES
SIGNALS
SEWER

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT THESE SYSTEMS AND COMPONENTS FOR THE DURATION OF THE CONTRACT.

HIGHWAY LIGHTING:
THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE LOCATION OF THE UNDERGROUND POWER LINES AND SEQUENCE OF CONSTRUCTION FOR MAINTAINING HIGHWAY LIGHTING AT ALL TIMES.

ITEM 507 - STEEL PILES, MISC.: HP16X121, FURNISHED, AS PER PLAN:

THE PROVISIONS OF ITEM 507 SHALL APPLY, EXCEPT AS MODIFIED BELOW.

SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH CMS ITEM 514.13. ENTIRE PILE SURFACE SHALL RECEIVE PRIME COAT PRIOR TO PLACING.

STEEL PILES SHALL RECEIVE A SHOP PRIME COAT PER ODOT CMS 513.27.

SURFACE PREPARATION AND THE SHOP APPLIED PRIME COAT SHALL BE INCIDENTAL TO ITEM 507.

ITEM 511 - CLASS QC1 CONCRETE, MISC.: PRECAST CONCRETE LAGGING WITH QC/QA, AS PER PLAN:

ALL COURSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127.

CONCRETE FOR PRECAST LAGGING SHALL INCLUDE PAYMENT FOR REINFORCEMENT IN LAGGING PANELS.

ITEM 511 - CLASS QC2 CONCRETE, MISC.: MOMENT SLAB WITH QC/QA, AS PER PLAN:

THIS ITEM IS FOR THE CIP MOMENT SLABS. PAYMENT SHALL INCLUDE CONCRETE, EXPANSION AND CONSTRUCTION JOINTS, DOWELS, SLEEVES, AND JOINT MATERIAL AT EACH END AND WITHIN THE MOMENT SLABS.

ALIGN THE MOMENT SLAB AND BARRIER EXPANSION AND CONSTRUCTION JOINTS.

ITEM 511 - CONCRETE, MISC.: QC1 CONCRETE FOR RAISED PANEL SEAT, AS PER PLAN:

THIS ITEM IS FOR THE CIP RAISED PANEL SEAT. PAYMENT SHALL INCLUDE CONCRETE AND REINFORCEMENT.

A PRECAST ALTERNATE IS ALLOWED TO BE DEVELOPED AND USED BY THE CONTRACTOR SUBJECT TO APPROVAL OF THE ENGINEER.

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

INTERMEDIATE COAT SHALL BE APPLIED TO ALL EXPOSED PILE SURFACES AFTER PLACING PILE AND FILLING CASING. CASING FILL MUST BE CURED PRIOR TO PAINTING PILES

FINISH COAT SHALL BE APPLIED TO BOTH SIDES AND EDGES OF THE FRONT FACE PILE FLANGE FROM THE TOP OF CASING FILL TO TOP OF PILE. ADDITIONALLY, FINISH COAT SHALL BE APPLIED TO ALL EXPOSED SURFACES FOR THE TOP 1'-6" OF PILE. ALL FINISH COAT SHALL BE APPLIED PRIOR TO INSTALLATION OF LAGGING.

PILING SHALL BE FIELD PAINTED WITH INTERMEDIATE AND FINISH COAT IN ACCORDANCE WITH 514.17 TO THE TOP OF THE CASING FILL.

COLOR: FEDERAL COLOR NO. 30051

ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC, AS PER PLAN:

THE PROVISIONS OF ITEM 518 SHALL APPLY, EXCEPT AS MODIFIED BELOW.

SLAG IS NOT PERMITTED FOR POROUS BACKFILL.

ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN:

THE PROVISIONS OF ITEM 518 SHALL APPLY, EXCEPT AS MODIFIED BELOW.

EXCAVATE TRENCHES TO SUCH DIMENSIONS ALLOWING FOR AMPLE ROOM FOR CONSTRUCTION. CONSTRUCT TRENCH WIDTH TO AT LEAST 14 INCHES. EXCAVATE THE TRENCH WALLS AS VERTICAL AS POSSIBLE. REMOVE OBSTRUCTIONS ENCOUNTERED WHILE EXCAVATING FOR THE PIPE.

ITEM 524 - DRILLED SHAFTS, MISC.: 30" O.D. SOLDIER PILE FOUNDATIONS
ITEM 524 - DRILLED SHAFTS, MISC.: 42" O.D. SOLDIER PILE FOUNDATIONS:

THE PROVISIONS OF ITEM 524 SHALL APPLY, EXCEPT AS MODIFIED BELOW.

TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE, USE METHOD B, WET CONSTRUCTION METHOD OR METHOD C, TEMPORARY CASING CONSTRUCTION METHOD TO INSTALL PRE-AUGERED HOLES FOR SOLDIER PILE SOCKETS PER ODOT CMS 524.04. DO NOT DRIVE CASINGS INTO PLACE.

USE CENTRALIZERS, PLACE THE SOLDIER PILE INSIDE THE DRILLED SHAFT. ENSURE THAT THE SOLDIER PILE IS EMBEDDED STRAIGHT TO ASSURE THAT THE PILING ARE PARALLEL TO EACH OTHER AND AT THE REQUIRED SPACING. A CHECK USING A SURVEY INSTRUMENT SHOULD BE MADE TO CHECK THE PILE ALIGNMENT IN RELATION TO WALL ALIGNMENT. FILL SOCKET WITH STRUCTURAL CONCRETE USING A TREMIE OR CONCRETE PUMP. BRACE SOLDIER PILE TO MAINTAIN HORIZONTAL AND VERTICAL TOLERANCES.

QUANTITIES WILL BE MEASURED BASED ON LENGTH (FOOT) FROM TOP OF DRILLED SHAFT ELEVATION TO BOTTOM OF PILE ELEVATION. FOR DRILLED SHAFTS WITH TWO PRECAST CONCRETE LAGGING PANELS AT DIFFERENT ELEVATIONS DIRECTLY ABOVE, MEASUREMENT SHALL BE FROM THE LOWEST PANEL ELEVATION.

PAYMENT FOR THIS ITEM INCLUDES FULL COMPENSATION FOR PERFORMING REQUIRED EXCAVATION; FURNISHING AND PLACING TEMPORARY STEEL CASINGS; PLACING STEEL SOLDIER PILES; FURNISHING AND PLACING CONCRETE VIA PUMPING OR TREMIE METHOD; SUPPLYING EQUIPMENT AND PERFORMING SLURRY TESTING; SUPPLYING AND DISPOSING OF SLURRY, AND DISPOSING OF EXCAVATED MATERIAL.

ABBREVIATIONS:

CIP - CAST-IN-PLACE
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONST. - CONSTRUCTION
EXP. - EXPANSION
EX. - EXISTING
E.F. - EACH FACE
ELEV. - ELEVATION
GR. - GRADE
OPT. - OPTIONAL
O.D. - OUTSIDE DIAMETER
PEJF - PREFORMED EXPANSION JOINT FILLER
PR. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
SPA. - SPACE
STA. - STATION
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE

DESIGN AGENCY
Michael Baker INTERNATIONAL
111 SUPERIOR AVE., STE. 2300 CLEVELAND, OH. 44114

DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

GENERAL NOTES
RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

ESTIMATED QUANTITIES									
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	WALL ZZ	MOMENT SLAB			SHEET #
503	21101	584	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	584				4/21
507	00400	5774	FT	STEEL PILES, MISC.: HP16X162, FURNISHED, AS PER PLAN	5774				4/21
509	10000	152069	LB	EPOXY COATED REINFORCING STEEL	48545	103524			
511	53010	320.2	CY	CLASS QC1 CONCRETE, MISC.: PRECAST CONCRETE LAGGING WITH QC/QA, AS PER PLAN	320.2				4/21
511	53012	617.2	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB WITH QC/QA, AS PER PLAN		617.2			4/21
511	81300	14	EACH	CONCRETE, MISC.: QC1 CONCRETE FOR RAISED PANEL SEAT, AS PER PLAN	14				4/21
512	10050	2438	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	1159	1279			
514	00061	9770	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN	9770				4/21
514	00067	9770	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	9770				4/21
516	42000	274	EACH	ELASTOMERIC BEARING PAD, MISC.: 11" X 6" X 1/4" THICK	274				
516	42000	318	EACH	ELASTOMERIC BEARING PAD, MISC.: 1'-0" X 3" X 1/4" THICK	318				
516	42000	1030	EACH	ELASTOMERIC BEARING PAD, MISC.: 2'-0" X 3" X 1/4" THICK	1030				
518	21201	746	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC, AS PER PLAN	746				4/21
518	40001	1088	FT	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	1088				13/21
518	40011	80	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	80				13/21
524	95000	4503	FT	DRILLED SHAFTS, MISC.: 30" O.D. SOLDIER PILE FOUNDATIONS	4503				
524	95000	68	FT	DRILLED SHAFTS, MISC.: 42" O.D. SOLDIER PILE FOUNDATIONS	68				
611	99710	8	EACH	PRECAST REINFORCED CONCRETE OUTLET	8				

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GMC	GMC	TMP	06/21/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCM		N/A	

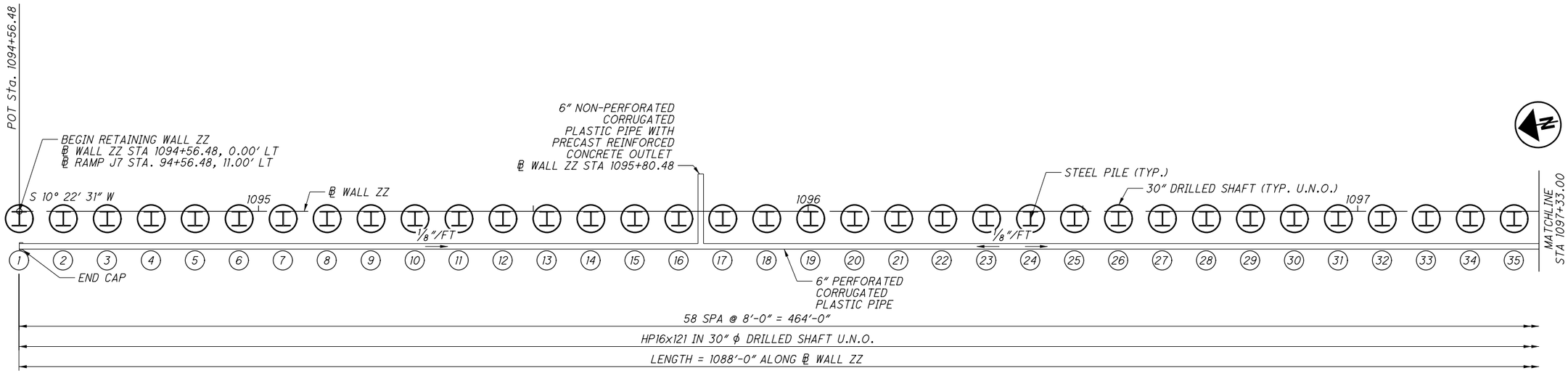
RETAINING WALL ZZ GENERAL SUMMARY

RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

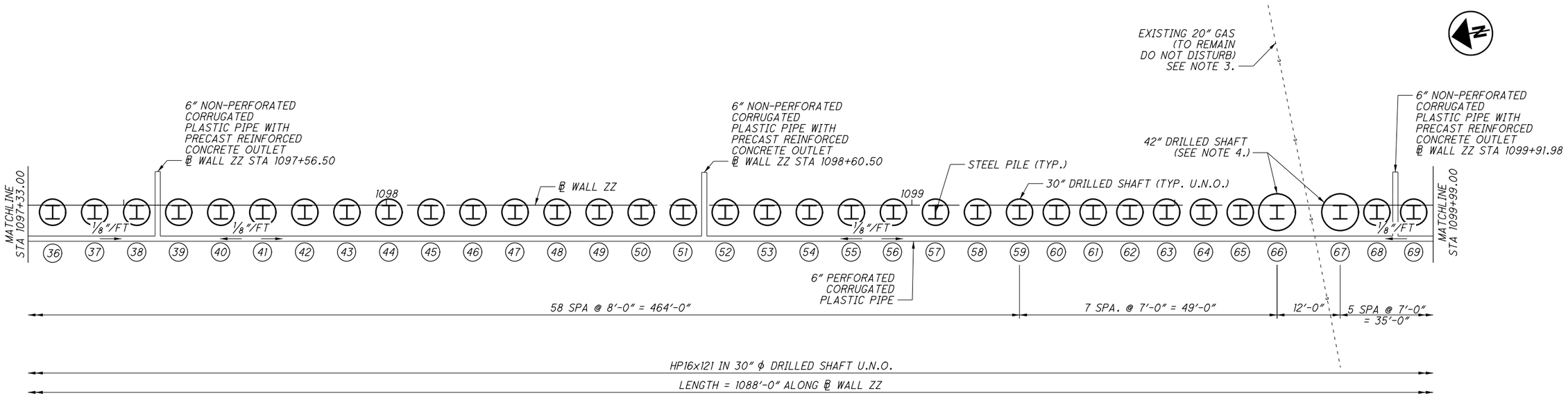
5 / 21

111
127



PLAN

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)
(CONCRETE LAGGING NOT SHOWN FOR CLARITY)



PLAN

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)
(CONCRETE LAGGING NOT SHOWN FOR CLARITY)

LEGEND:

- SOLDIER PILE PLACED INSIDE DRILLED SHAFT.
- (#) SOLDIER PILE NUMBER

NOTES:

1. FOR DRILLED SHAFT AND PILE STATIONS, ELEVATIONS, AND DEPTHS, SEE TABLE OF ELEVATIONS SHEETS ON SHEET 12 OF 21.
2. FOR TERMINATION OF 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, SEE PRECAST REINFORCED CONCRETE OUTLET IN ODOT STANDARD CONSTRUCTION DRAWING DM-1.1, AND DRAIN OUTLET DETAIL ON SHEET 13 OF 21.
3. ADJUST PILES 59-65 & 68-73 SPACING TO AVOID EXISTING GAS LINE AFTER FIELD VERIFICATION OF GAS LINE.
   MAXIMUM PILE SPACING = 8'-0"
   MINIMUM PILE SPACING = 7'-0"
   DO NOT ADJUST SPACING BETWEEN PILES 65-68.
4. SEE SHEET 14 OF 21 FOR ADDITIONAL DETAILS NEAR EXISTING GAS LINE.

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DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

WALL SCHEMATIC 1 OF 2
RETAINING WALL ZZ
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

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112 / 127

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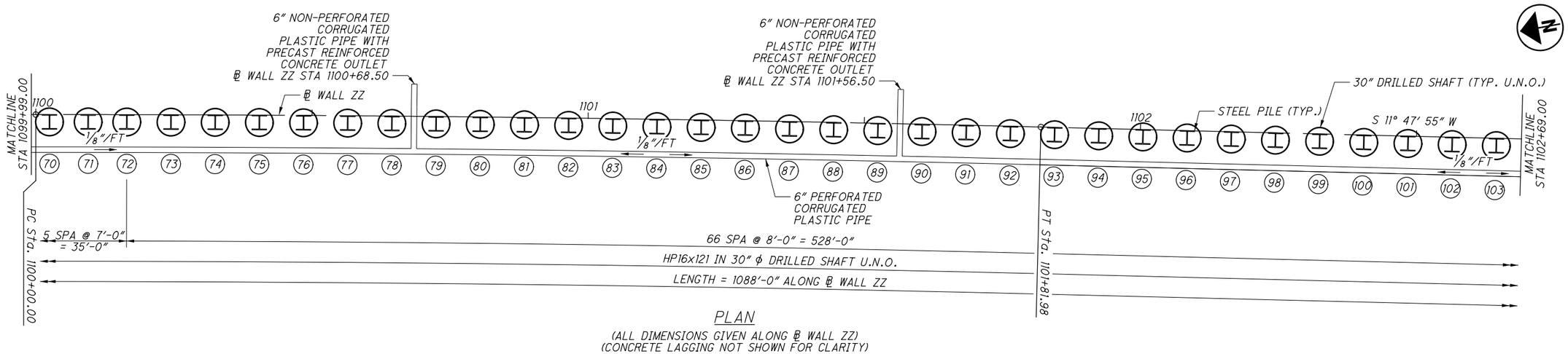
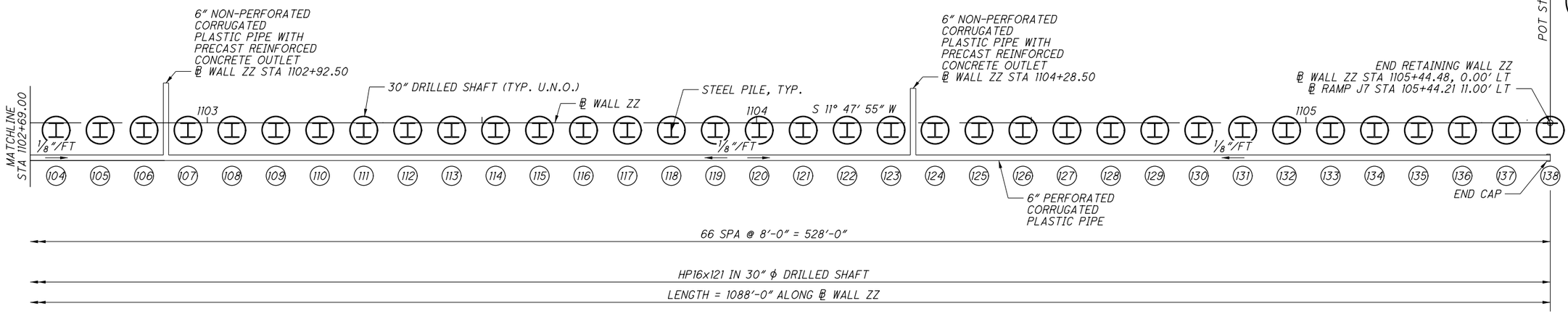


PLAN

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)
(CONCRETE LAGGING NOT SHOWN FOR CLARITY)



PLAN

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)
(CONCRETE LAGGING NOT SHOWN FOR CLARITY)

LEGEND:

- SOLDIER PILE PLACED INSIDE DRILLED SHAFT.
- (#) SOLDIER PILE NUMBER

NOTES:

1. FOR NOTES SEE SHEET 6 OF 21.

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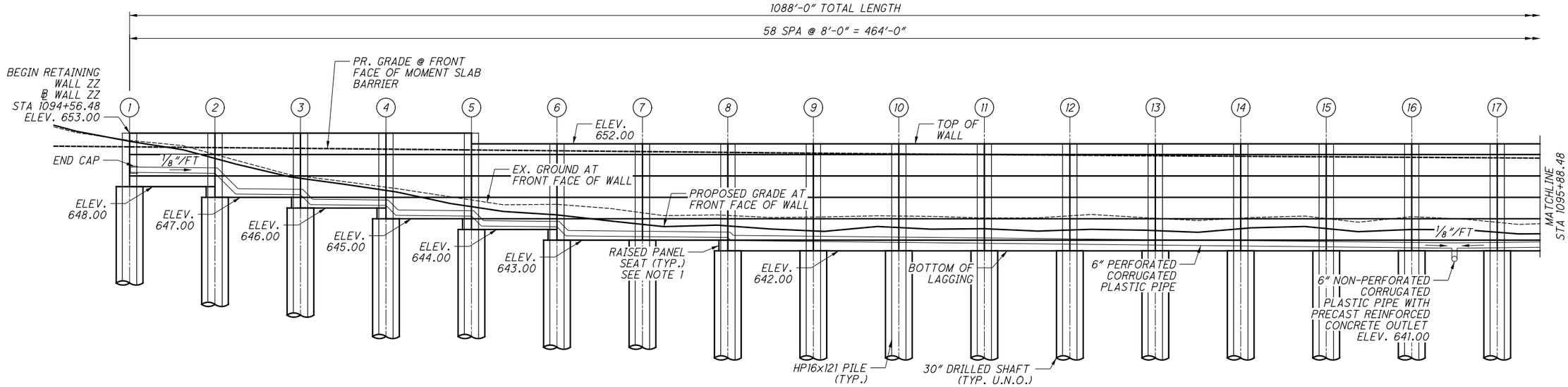
DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

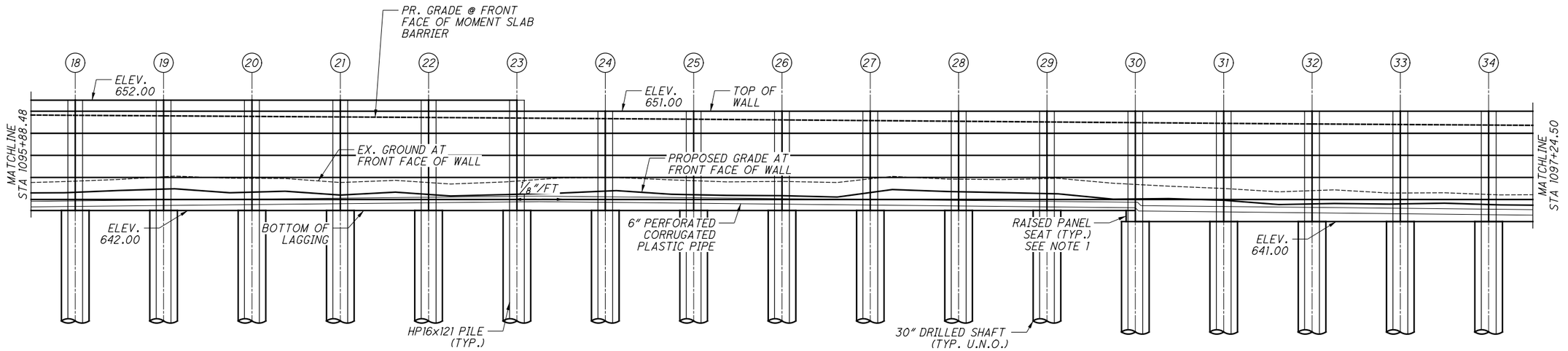
WALL SCHEMATIC 2 OF 2
RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063



PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)



PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)

LEGEND:

(#) SOLDIER PILE NUMBER

NOTES:

1. CONSTRUCT RAISED PANEL SEAT TO SUPPORT PRECAST CONCRETE LAGGING WHEN BOTTOM OF LAGGING IS 1' ABOVE TOP OF DRILLED SHAFT.
2. FOR DRILLED SHAFTS AND PILE STATIONS, ELEVATIONS, AND DEPTHS, SEE TABLE OF ELEVATIONS ON SHEET 12 OF 21.

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DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

WALL ELEVATION 1 OF 4

RETAINING WALL ZZ
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

8 / 21

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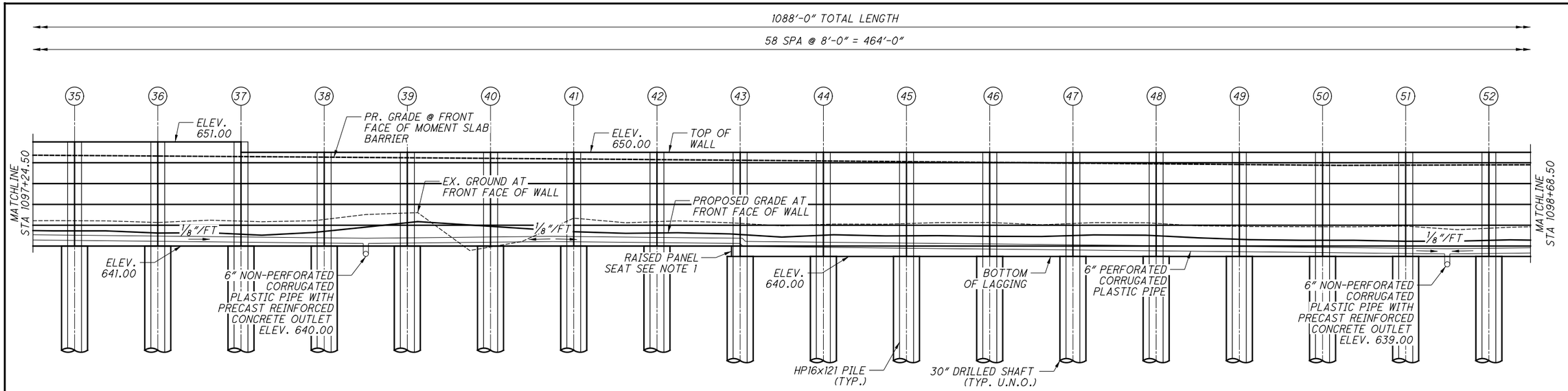
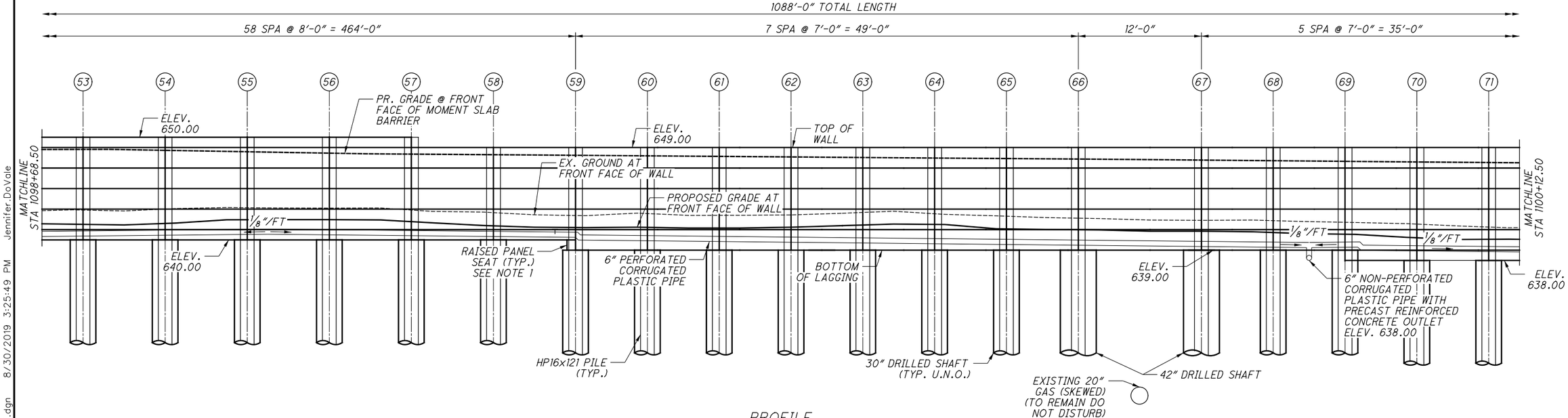


PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL CZ)



PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)

LEGEND:

(#) SOLDIER PILE NUMBER

NOTES:

1. SEE NOTES ON SHEET 8 OF 21 .
2. SEE SHEET 14 OF 21 FOR 42" DRILLED SHAFT DETAILS.

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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

WALL ELEVATION 2 OF 4

RETAINING WALL ZZ
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

9 / 21

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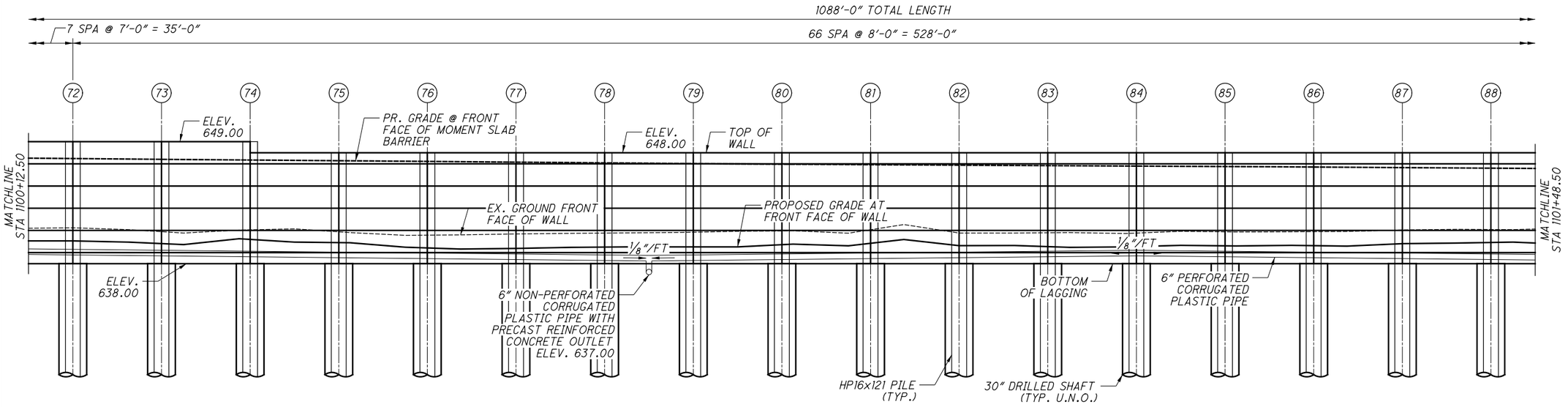
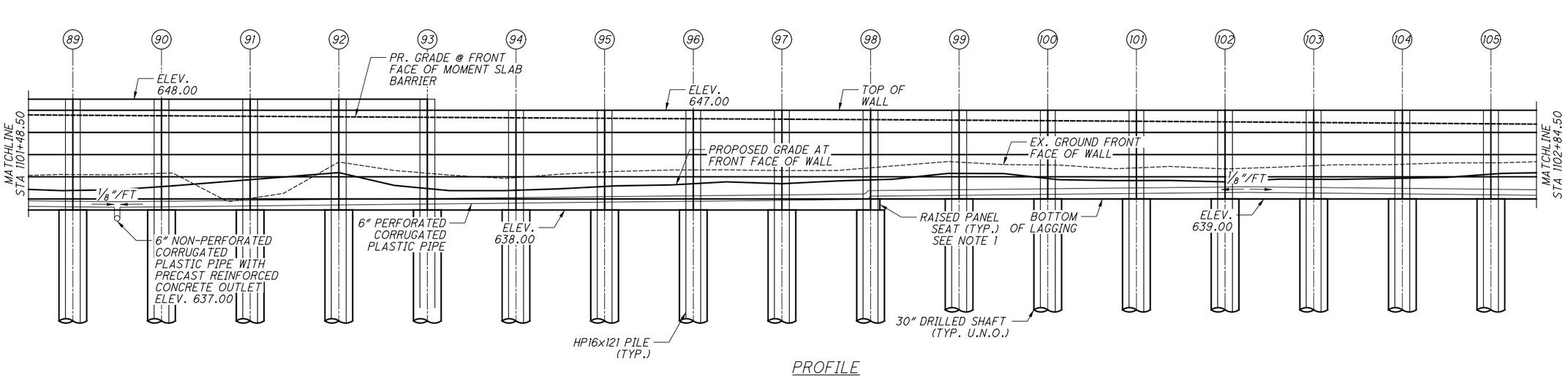


PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)



PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)

LEGEND:

(#) SOLDIER PILE NUMBER

NOTES:

1. SEE NOTES ON SHEET 8 OF 21.

DESIGN AGENCY
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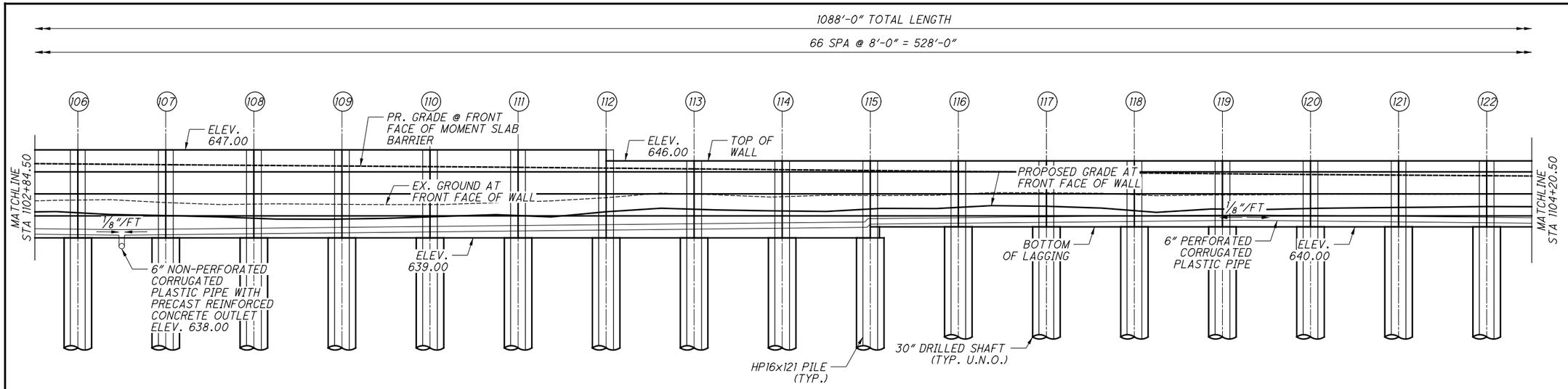
DESIGNED BCM | DRAWN BCM | REVIEWED TMP | DATE 03-11-19
CHECKED SE | REVISED | STRUCTURE FILE NUMBER N/A

WALL ELEVATION 3 OF 4

RETAINING WALL ZZ

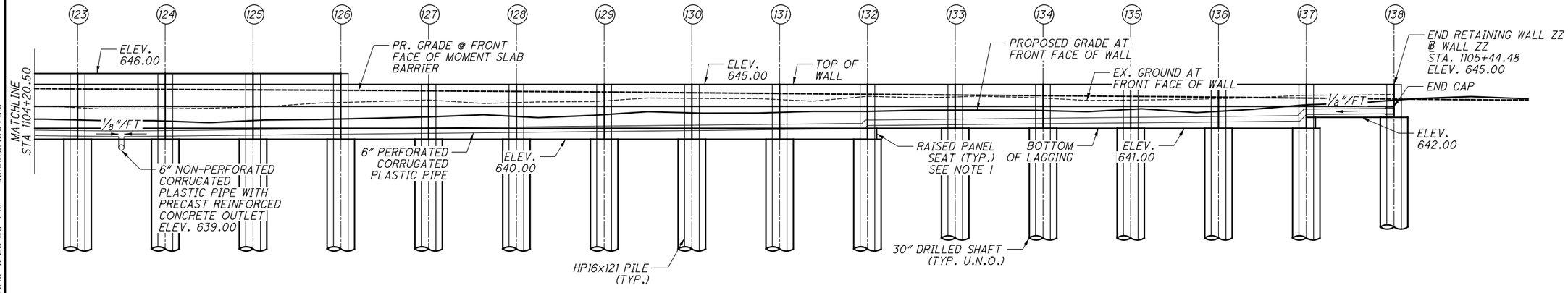
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063



PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)



PROFILE

(ALL DIMENSIONS GIVEN ALONG ℄ WALL ZZ)

LEGEND:

(#) SOLDIER PILE NUMBER

NOTES:

1. SEE NOTES ON SHEET 8 OF 21.

DESIGN AGENCY
Michael Baker INTERNATIONAL
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DESIGNED BCM | DRAWN BCM | REVIEWED TMP | DATE 03-11-19
CHECKED SE | REVISED | STRUCTURE FILE NUMBER N/A

WALL ELEVATION 4 OF 4

RETAINING WALL ZZ

INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76

PID No. 98063

TABLE OF ELEVATIONS

SOLDIER PILE NUMBER	STATION ALONG ℄ WALL ZZ	STATION ALONG ℄ RAMP J7	PILE OFFSET FROM ℄ RAMP J7 (FT)	SIDE	BOTTOM OF PILE ELEV.	TOP OF DRILLED SHAFT ELEV.	DRILLED SHAFT LENGTH (FT)	TOP OF PILE ELEV.	PILE LENGTH (FT)
1	1094+56.48	94+56.48	11	LT	621.00	648.00	27	653.00	32
2	1094+64.48	94+64.48	11	LT	619.00	647.00	28	653.00	34
3	1094+72.48	94+72.48	11	LT	618.00	646.00	28	653.00	35
4	1094+80.48	94+80.48	11	LT	616.00	645.00	29	653.00	37
5	1094+88.48	94+88.48	11	LT	610.00	644.00	34	653.00	43
6	1094+96.48	94+96.48	11	LT	609.00	643.00	34	652.00	43
7	1095+04.48	95+04.48	11	LT	608.00	643.00	35	652.00	44
8	1095+12.48	95+12.48	11	LT	608.00	642.00	34	652.00	44
9	1095+20.48	95+20.48	11	LT	608.00	642.00	34	652.00	44
10	1095+28.48	95+28.48	11	LT	608.00	642.00	34	652.00	44
11	1095+36.48	95+36.48	11	LT	608.00	642.00	34	652.00	44
12	1095+44.48	95+44.48	11	LT	608.00	642.00	34	652.00	44
13	1095+52.48	95+52.48	11	LT	608.00	642.00	34	652.00	44
14	1095+60.48	95+60.48	11	LT	608.00	642.00	34	652.00	44
15	1095+68.48	95+68.48	11	LT	608.00	642.00	34	652.00	44
16	1095+76.48	95+76.48	11	LT	608.00	642.00	34	652.00	44
17	1095+84.48	95+84.48	11	LT	607.00	642.00	35	652.00	45
18	1095+92.48	95+92.48	11	LT	607.00	642.00	35	652.00	45
19	1096+00.48	96+00.48	11	LT	607.00	642.00	35	652.00	45
20	1096+08.48	96+08.48	11	LT	607.00	642.00	35	652.00	45
21	1096+16.48	96+16.48	11	LT	607.00	642.00	35	652.00	45
22	1096+24.48	96+24.48	11	LT	607.00	642.00	35	652.00	45
23	1096+32.48	96+32.48	11	LT	607.00	642.00	35	652.00	45
24	1096+40.48	96+40.48	11	LT	607.00	642.00	35	651.00	44
25	1096+48.48	96+48.48	11	LT	607.00	642.00	35	651.00	44
26	1096+56.48	96+56.48	11	LT	607.00	642.00	35	651.00	44
27	1096+64.48	96+64.48	11	LT	607.00	642.00	35	651.00	44
28	1096+72.48	96+72.48	11	LT	607.00	642.00	35	651.00	44
29	1096+80.48	96+80.48	11	LT	607.00	642.00	35	651.00	44
30	1096+88.48	96+88.48	11	LT	607.00	641.00	34	651.00	44
31	1096+96.48	96+96.48	11	LT	607.00	641.00	34	651.00	44
32	1097+04.48	97+04.48	11	LT	606.00	641.00	35	651.00	45
33	1097+12.48	97+12.48	11	LT	606.00	641.00	35	651.00	45
34	1097+20.48	97+20.48	11	LT	606.00	641.00	35	651.00	45
35	1097+28.48	97+28.48	11	LT	606.00	641.00	35	651.00	45
36	1097+36.48	97+36.48	11	LT	606.00	641.00	35	651.00	45
37	1097+44.48	97+44.48	11	LT	606.00	641.00	35	651.00	45
38	1097+52.48	97+52.48	11	LT	606.00	641.00	35	650.00	44
39	1097+60.48	97+60.48	11	LT	606.00	641.00	35	650.00	44
40	1097+68.48	97+68.48	11	LT	606.00	641.00	35	650.00	44
41	1097+76.48	97+76.48	11	LT	606.00	641.00	35	650.00	44
42	1097+84.48	97+84.48	11	LT	606.00	641.00	35	650.00	44
43	1097+92.48	97+92.48	11	LT	606.00	640.00	34	650.00	44
44	1098+00.48	98+00.48	11	LT	606.00	640.00	34	650.00	44
45	1098+08.48	98+08.48	11	LT	606.00	640.00	34	650.00	44
46	1098+16.48	98+16.48	11	LT	606.00	640.00	34	650.00	44
47	1098+24.48	98+24.48	11	LT	606.00	640.00	34	650.00	44
48	1098+32.48	98+32.48	11	LT	605.00	640.00	35	650.00	45
49	1098+40.48	98+40.48	11	LT	605.00	640.00	35	650.00	45
50	1098+48.48	98+48.48	11	LT	605.00	640.00	35	650.00	45
51	1098+56.48	98+56.48	11	LT	605.00	640.00	35	650.00	45
52	1098+64.48	98+64.48	11	LT	605.00	640.00	35	650.00	45
53	1098+72.48	98+72.48	11	LT	605.00	640.00	35	650.00	45
54	1098+80.48	98+80.48	11	LT	605.00	640.00	35	650.00	45
55	1098+88.48	98+88.48	11	LT	605.00	640.00	35	650.00	45
56	1098+96.48	98+96.48	11	LT	605.00	640.00	35	650.00	45
57	1099+04.48	99+04.48	11	LT	605.00	640.00	35	650.00	45
58	1099+12.48	99+12.48	11	LT	605.00	640.00	35	649.00	44
59	1099+20.48	99+20.48	11	LT	605.00	639.00	34	649.00	44
60	1099+27.48	99+27.48	11	LT	605.00	639.00	34	649.00	44
61	1099+34.48	99+34.48	11	LT	605.00	639.00	34	649.00	44
62	1099+41.48	99+41.48	11	LT	605.00	639.00	34	649.00	44
63	1099+48.48	99+48.48	11	LT	605.00	639.00	34	649.00	44
64	1099+55.48	99+55.48	11	LT	605.00	639.00	34	649.00	44
65	1099+62.48	99+62.48	11	LT	605.00	639.00	34	649.00	44
66	1099+69.48	99+69.48	11	LT	605.00	639.00	34	649.00	44
67	1099+81.48	99+81.48	11	LT	605.00	639.00	34	649.00	44
68	1099+88.48	99+88.48	11	LT	605.00	639.00	34	649.00	44
69	1099+95.48	99+95.48	11	LT	604.00	639.00	35	649.00	45
70	1100+02.48	100+02.47	11	LT	604.00	638.00	34	649.00	45

TABLE OF ELEVATIONS

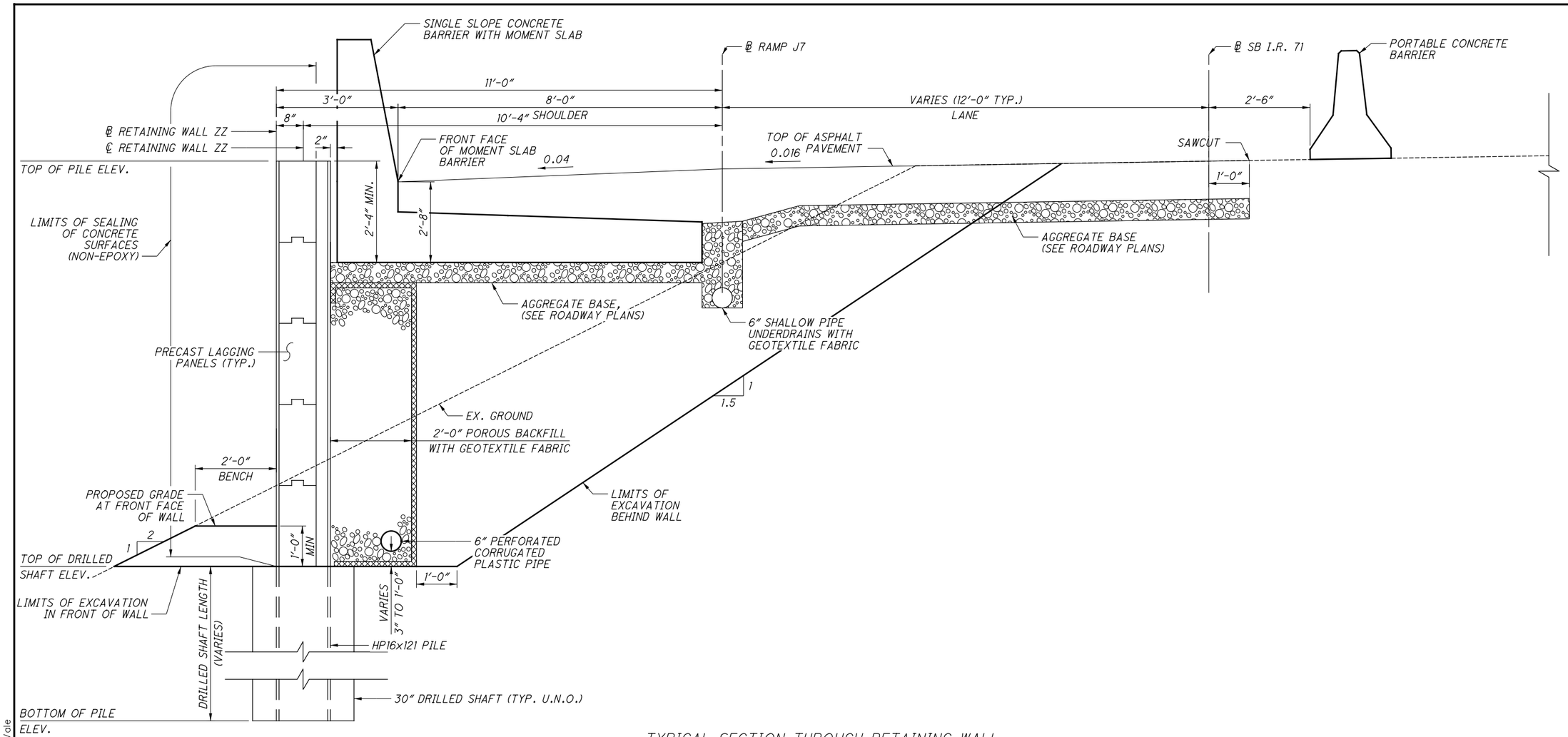
SOLDIER PILE NUMBER	STATION ALONG ℄ WALL ZZ	STATION ALONG ℄ RAMP J7	PILE OFFSET FROM ℄ RAMP J7 (FT)	SIDE	BOTTOM OF PILE ELEV.	TOP OF DRILLED SHAFT ELEV.	DRILLED SHAFT LENGTH (FT)	TOP OF PILE ELEV.	PILE LENGTH (FT)
71	1100+09.48	100+09.46	11	LT	604.00	638.00	34	649.00	45
72	1100+16.48	100+16.45	11	LT	604.00	638.00	34	649.00	45
73	1100+24.48	100+24.44	11	LT	604.00	638.00	34	649.00	45
74	1100+32.48	100+32.43	11	LT	604.00	638.00	34	649.00	45
75	1100+40.48	100+40.41	11	LT	603.00	638.00	35	648.00	45
76	1100+48.48	100+48.40	11	LT	603.00	638.00	35	648.00	45
77	1100+56.48	100+56.39	11	LT	603.00	638.00	35	648.00	45
78	1100+64.48	100+64.38	11	LT	603.00	638.00	35	648.00	45
79	1100+72.48	100+72.33	11	LT	603.00	638.00	35	648.00	45
80	1100+80.48	100+80.35	11	LT	603.00	638.00	35	648.00	45
81	1100+88.48	100+88.34	11	LT	603.00	638.00	35	648.00	45
82	1100+96.48	100+96.33	11	LT	603.00	638.00	35	648.00	45
83	1101+04.48	101+04.32	11	LT	603.00	638.00	35	648.00	45
84	1101+12.48	101+12.31	11	LT	603.00	638.00	35	648.00	45
85	1101+20.48	101+20.29	11	LT	603.00	638.00	35	648.00	45
86	1101+28.48	101+28.28	11	LT	603.00	638.00	35	648.00	45
87	1101+36.48	101+36.27	11	LT	604.00	638.00	34	648.00	44
88	1101+44.48	101+44.26	11	LT	604.00	638.00	34	648.00	44
89	1101+52.48	101+52.25	11	LT	604.00	638.00	34	648.00	44
90	1101+60.48	101+60.23	11	LT	604.00	638.00	34	648.00	44
91	1101+68.48	101+68.22	11	LT	604.00	638.00	34	648.00	44
92	1101+76.48	101+76.21	11	LT	604.00	638.00	34	648.00	44
93	1101+84.48	101+84.21	11	LT	604.00	638.00	34	648.00	44
94	1101+92.48	101+92.21	11	LT	604.00	638.00	34	647.00	43
95	1102+00.48	102+00.21	11	LT	604.00	638.00	34	647.00	43
96	1102+08.48	102+08.21	11	LT	604.00	638.00	34	647.00	43
97	1102+16.48	102+16.21	11	LT	604.00	638.00	34	647.00	43
98	1102+24.48	102+24.21	11	LT	604.00	638.00	34	647.00	43
99	1102+32.48	102+32.21	11	LT	604.00	639.00	35	647.00	43
100	1102+40.48	102+40.21	11	LT	604.00	639.00	35	647.00	43
101	1102+48.48	102+48.21	11	LT	604.00	639.00	35	647.00	43
102	1102+56.48	102+56.21	11	LT	604.00	639.00	35	647.00	43
103	1102+64.48	102+64.21	11	LT	604.00	639.00	35	647.00	43
104	1102+72.48	102+72.21	11	LT	609.00	639.00	30	647.00	38
105	1102+80.48	102+80.21	11	LT	609.00	639.00	30	647.00	38
106	1102+88.48	102+88.21	11	LT	609.00	639.00	30	647.00	38
107	1102+96.48	102+96.21	11	LT	609.00	639.00	30	647.00	38
108	1103+04.48	103+04.21	11	LT	609.00	639.00	30	647.00	38
109	1103+12.48	103+12.21	11	LT	609.00	639.00	30	647.00	38
110	1103+20.48	103+20.21	11	LT	609.00	639.00	30	647.00	38
111	1103+28.48	103+28.21	11	LT	609.00	639.00	30	647.00	38
112	1103+36.48	103+36.21	11	LT	610.00	639.00	29	647.00	37
113	1103+44.48	103+44.21	11	LT	610.00	639.00	29	646.00	36
114	1103+52.48	103+52.21	11	LT	610.00	639.00	29	646.00	36
115	1103+60.48	103+60.21	11	LT	610.00	639.00	29	646.00	36
116	1103+68.48	103+68.21	11	LT	610.00	640.00	30	646.00	36
117	1103+76.48	103+76.21	11	LT	610.00	640.00	30	646.00	36
118	1103+84.48	103+84.21	11	LT	610.00	640.00	30	646.00	36
119	1103+92.48	103+92.21	11	LT	610.00	640.00	30	646.00	36
120	1104+00.48	104+00.21	11	LT	610.00	640.00	30	646.00	36
121	1104+08.48	104+08.21	11	LT	610.00	640.00	30	646.00	36
122	1104+16.48	104+16.21	11	LT	610.00	640.00	30	646.00	36
123	1104+24.48	104+24.21	11	LT	610.00	640.00	30	646.00	36
124	1104+32.48	104+32.21	11	LT	610.00	640.00	30	646.00	36
125	1104+40.48	104+40.21	11	LT	610.00	640.00	30	646.00	36
126	1104+48.48	104+48.21	11	LT	610.00	640.00	30	646.00	36
127	1104+56.48	104+56.21	11	LT	611.00	640.00	29	645.00	34
128	1104+64.48	104+64.21	11	LT	611.00	640.00	29	645.00	34
129	1104+72.48	104+72.21	11	LT	611.00	640.00	29	645.00	34
130	1104+80.48	104+80.21	11	LT	611.00	640.00	29	645.00	34
131	1104+88.48	104+88.21	11	LT	611.00	640.00	29	645.00	34
132	1104+96.48	104+96.21	11	LT	611.00	640.00	29	645.00	34
133	1105+04.48	105+04.21	11	LT	611.00	641.00	30	645.00	34
134	1105+12.48	105+12.21	11	LT	611.00	641.00	30	645.00	34
135	1105+20.48	105+20.21	11	LT	611.00	641.00	30	645.00	34
136	1105+28.48	105+28.21	11	LT	611.00	641.00	30	645.00	34
137	1105+36.48	105+36.21	11	LT	612.00	641.00	29	645.00	33
138	1105+44.48	105+44.21	11	LT	612.00	642.00	30	645.00	33

DESIGN AGENCY
Michael Baker INTERNATIONAL
1111 SUPERIOR AVE., STE. 2300, CLEVELAND, OH 44114

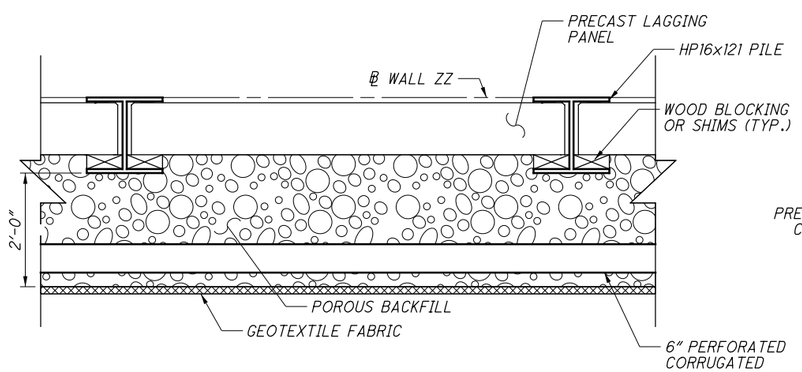
DESIGNED BCM | DRAWN BCM | REVIEWED TMP | DATE 03-11-19
CHECKED SE | REVISED | STRUCTURE FILE NUMBER N/A

TABLE OF ELEVATIONS
RETAINING WALL ZZ
INNERBELT CCG7A

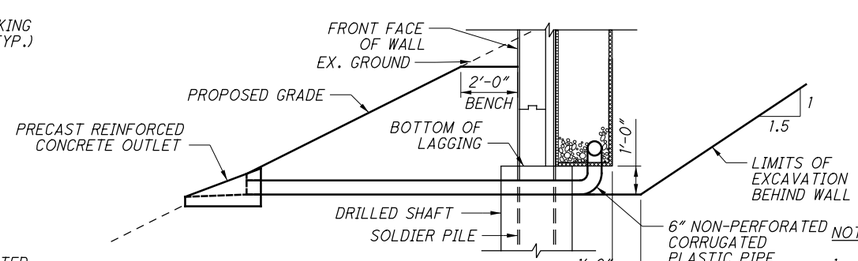
CUY-71-17.83/
CUY-176-12.76
PID No. 98063



TYPICAL SECTION THROUGH RETAINING WALL



TYPICAL PLAN



TYPICAL SECTION THROUGH RETAINING WALL
(AT LOCATIONS OF UNDERDRAIN OUTLET)

NOTES:

1. PROVIDE GEOTEXTILE FABRIC ON ALL SIDES OF POROUS BACKFILL, EXCEPT BACK SIDE OF PRECAST WALL PANELS.
2. SEE ROADWAY SHEETS FOR ROADWAY ITEMS LOCATIONS & QUANTITIES.

DESIGN AGENCY
Michael Baker INTERNATIONAL
1111 SUPERIOR AVE., STE. 2300, CLEVELAND, OH 44114

DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

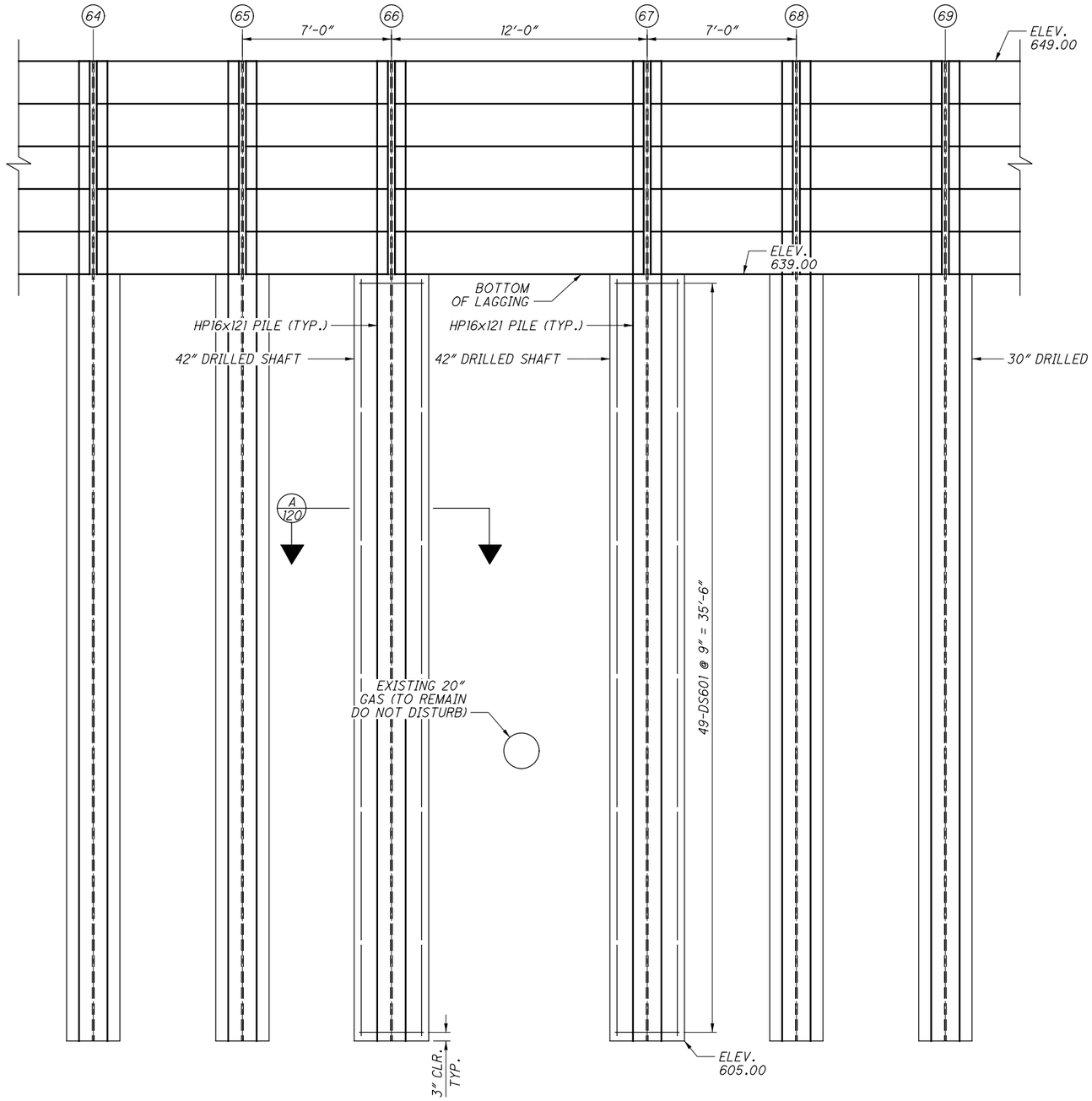
RETAINING WALL DETAILS 1 OF 3
RETAINING WALL ZZ
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

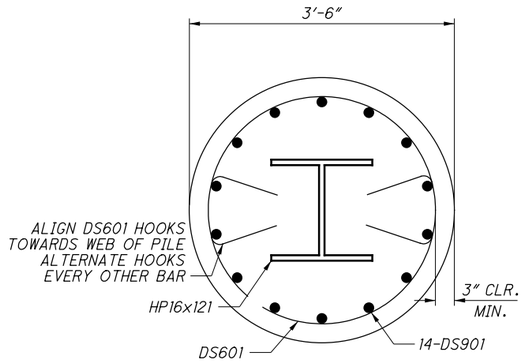
13 / 21

119 / 127

...\Wall ZZ\Sheets\98063_WD001 8/30/2019 3:26:09 PM Jennifer.DoVale

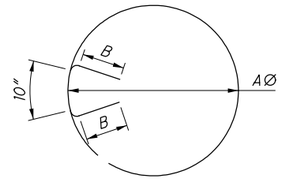


ELEVATION ALONG FRONT FACE OF WALL ZZ AT GAS LINE
GROUND LINE NOT SHOWN FOR CLARITY



SECTION A-A

DRILLED SHAFT											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
DS601	98	11'-11"	1754	35	3'-0"	0'-9"					
DS901	28	33'-6"	3189	STR							
		TOTAL:	4943	LBS.							



TYPE-35

NOTES:

1. EXISTING GAS LINE LOCATION SHOWN SUBJECT TO VARIATION AS DISCUSSED ON SHEET 7 OF 127.
2. MAINTAIN VERTICAL AND HORIZONTAL CLEARANCE AS STATED ON SHEET 7 OF 127.
3. DO NOT ADJUST SPACING DIMENSIONS SHOWN IN ELEVATION.

DESIGN AGENCY
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DESIGNED BCM | DRAWN BCM | REVIEWED TMP | DATE 03-11-19
CHECKED SE | REVISED | STRUCTURE FILE NUMBER N/A

RETAINING WALL DETAILS (2 OF 3)
RETAINING WALL ZZ
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

14 / 21

120
127

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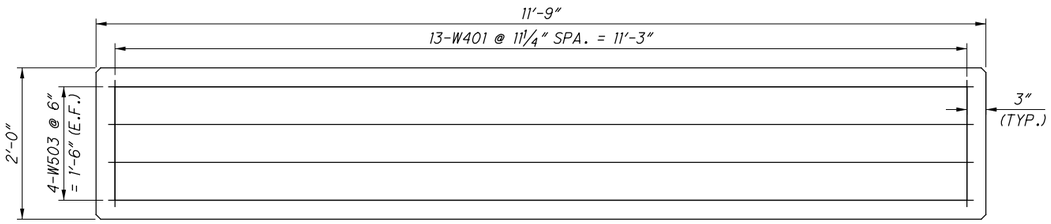
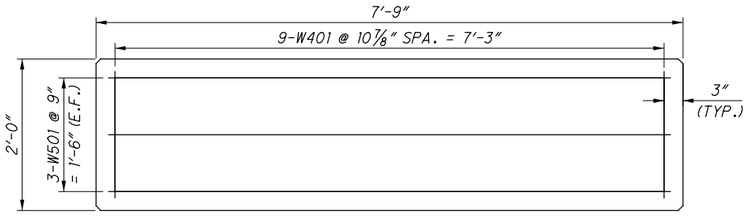
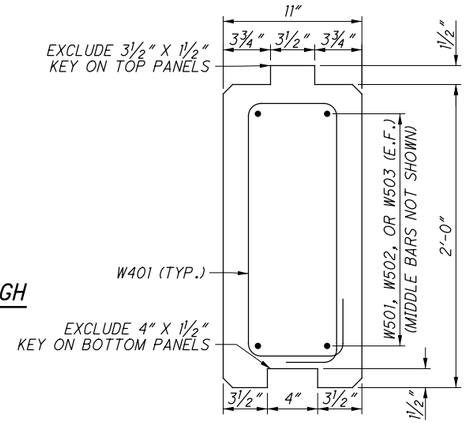


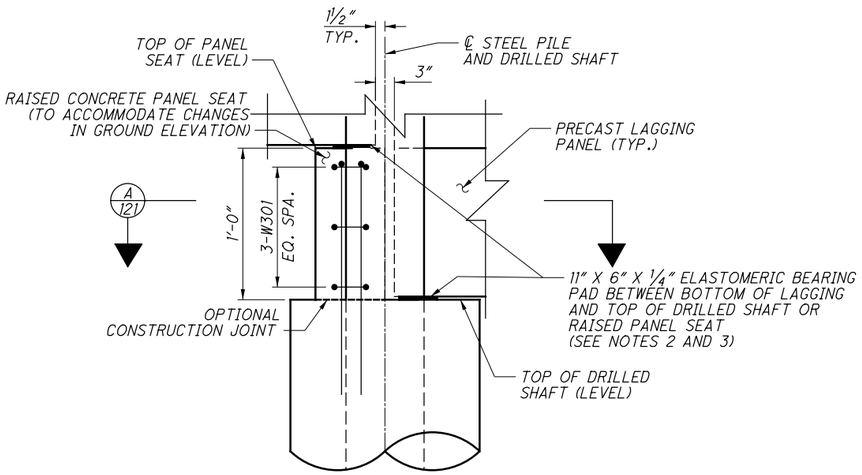
PRECAST LAGGING PANELS ELEVATION - 12′-0″ PILE SPACING X 2′ HIGH



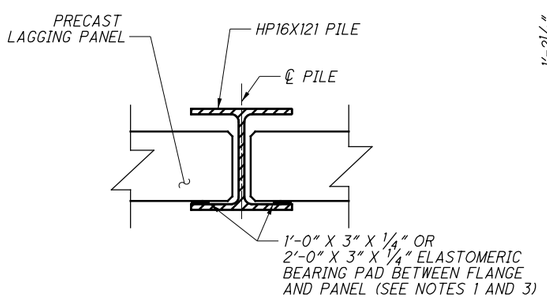
PRECAST LAGGING PANELS ELEVATION - 8′-0″ PILE SPACING X 2′ HIGH



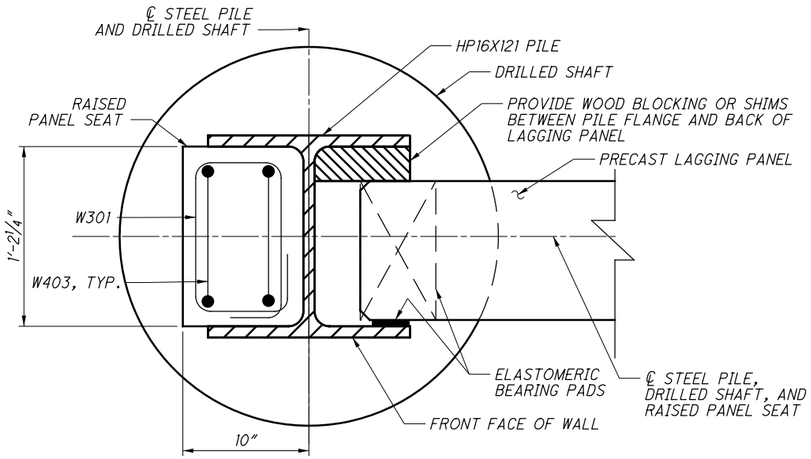
2′ HIGH PANEL SECTION



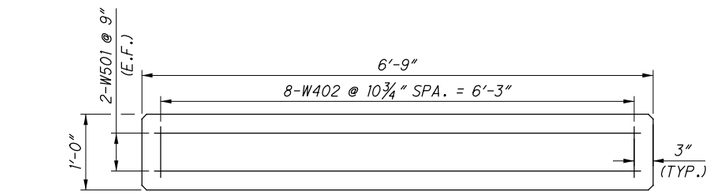
RAISED PANEL SEAT DETAIL AT PILE FLANGES



BEARING DETAIL AT PILE FLANGES

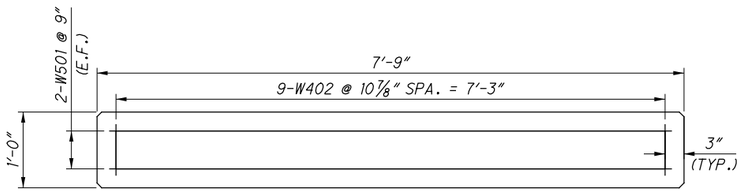


A / 121 SECTION

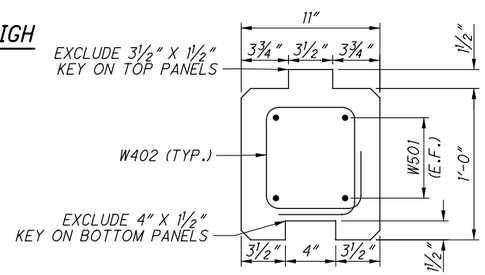


PRECAST LAGGING PANEL ELEVATION - 7′-0″ PILE SPACING X 2′ HIGH

PRECAST LAGGING PANEL ELEVATION - 7′-0″ PILE SPACING X 1′ HIGH



PRECAST LAGGING PANEL ELEVATION - 8′-0″ PILE SPACING X 1′ HIGH



1′ HIGH PANEL SECTION

NOTES:

1. ELASTOMERIC BEARING PADS SHALL BE PROVIDED AT ALL PANEL BEARINGS. STRIPS SHALL BE PLACED BETWEEN FRONT FACE OF CONCRETE PANEL AND BACK FACE OF PILE FLANGE AND SHALL BE ADHESIVELY BONDED TO THE FLANGE.
2. ELASTOMERIC BEARING PADS SHALL BE PROVIDED BENEATH THE BOTTOM PANELS, BETWEEN THE PANEL AND THE CONCRETE DRILLED SHAFT AND/OR RAISED PANEL SEAT.
3. ELASTOMERIC BEARING PADS SHALL BE NEOPRENE ELASTOMERIC PADS HAVING A DUROMETER HARDNESS OF 55 ± 5, HIGH DENSITY POLYETHYLENE PADS WITH A MINIMUM DENSITY OF 59 LB/FT3 [0.946 G/CM3] OR EQUIVALENT. SUPPLY CERTIFIED TEST DATA TO THE ENGINEER UPON DELIVERY OF THE MATERIAL TO THE PROJECT. BEARING PADS WILL BE PAID FOR UNDER ITEM 516 ELASTOMERIC BEARING PAD, MISC.: 2′-0″ X 3″ X 1/4″ THICK, ITEM 516 ELASTOMERIC BEARING PAD, MISC.: 1′-0″ X 3″ X 1/4″ THICK, AND ITEM 516 ELASTOMERIC BEARING PAD, MISC.: 11″ X 6″ X 1/4″ THICK. 2′-0″ X 3″ X 1/4″ & 1′-0″ X 3″ X 1/4″ BEARING PADS USED ON 2′ HIGH 1′ HIGH CONCRETE PANELS RESPECTIVELY.
4. REINFORCEMENT IN LAGGING PANELS SHALL BE INCLUDED WITH ITEM 511: CLASS QC1 CONCRETE, MISC.: PRECAST CONCRETE LAGGING AND RAISED PANEL SEAT WITH QC/QA, AS PER PLAN FOR PAYMENT.
5. PROVIDE ¾″ X ¾″ CHAMFER AT ALL EXPOSED CONCRETE CORNERS.
6. CENTER LAGGING PANELS BETWEEN PILE WEBS.

DESIGN AGENCY
Michael Baker INTERNATIONAL
111 SUPERIOR AVE., STE. 2300 CLEVELAND, OH 44114

DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

RETAINING WALL DETAILS 3 OF 3
RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

15 / 21

121 / 127

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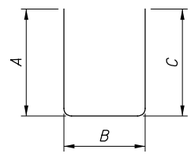
PANEL TABLE					
SOLDIER PILE BAY	PANEL LENGTH (FT)	2' HIGH PANELS	1' HIGH PANELS	TOP PANEL HEIGHT (FT)	BOTTOM PANEL HEIGHT (FT)
1 - 2	8	2	1	2	1
2 - 3	8	3	0	2	2
3 - 4	8	3	1	2	1
4 - 5	8	4	0	2	2
5 - 6	8	3	2	1	1
6 - 7	8	4	1	1	2
7 - 8	8	4	1	1	2
8 - 9	8	4	2	1	1
9 - 10	8	4	2	1	1
10 - 11	8	4	2	1	1
11 - 12	8	4	2	1	1
12 - 13	8	4	2	1	1
13 - 14	8	4	2	1	1
14 - 15	8	4	2	1	1
15 - 16	8	4	2	1	1
16 - 17	8	4	2	1	1
17 - 18	8	4	2	1	1
18 - 19	8	4	2	1	1
19 - 20	8	4	2	1	1
20 - 21	8	4	2	1	1
21 - 22	8	4	2	1	1
22 - 23	8	4	2	1	1
23 - 24	8	4	1	2	1
24 - 25	8	4	1	2	1
25 - 26	8	4	1	2	1
26 - 27	8	4	1	2	1
27 - 28	8	4	1	2	1
28 - 29	8	4	1	2	1
29 - 30	8	4	1	2	1
30 - 31	8	5	0	2	2
31 - 32	8	5	0	2	2
32 - 33	8	5	0	2	2
33 - 34	8	5	0	2	2
34 - 35	8	5	0	2	2
35 - 36	8	5	0	2	2
36 - 37	8	5	0	2	2
37 - 38	8	4	1	1	2
38 - 39	8	4	1	1	2
39 - 40	8	4	1	1	2
40 - 41	8	4	1	1	2
41 - 42	8	4	1	1	2
42 - 43	8	4	1	1	2
43 - 44	8	4	2	1	1
44 - 45	8	4	2	1	1
45 - 46	8	4	2	1	1
46 - 47	8	4	2	1	1

PANEL TABLE					
SOLDIER PILE BAY	PANEL LENGTH (FT)	2' HIGH PANELS	1' HIGH PANELS	TOP PANEL HEIGHT (FT)	BOTTOM PANEL HEIGHT (FT)
47 - 48	8	4	2	1	1
48 - 49	8	4	2	1	1
49 - 50	8	4	2	1	1
50 - 51	8	4	2	1	1
51 - 52	8	4	2	1	1
52 - 53	8	4	2	1	1
53 - 54	8	4	2	1	1
54 - 55	8	4	2	1	1
55 - 56	8	4	2	1	1
56 - 57	8	4	2	1	1
57 - 58	8	4	1	2	1
58 - 59	8	4	1	2	1
59 - 60	7	5	0	2	2
60 - 61	7	5	0	2	2
61 - 62	7	5	0	2	2
62 - 63	7	5	0	2	2
63 - 64	7	5	0	2	2
64 - 65	7	5	0	2	2
65 - 66	7	5	0	2	2
66 - 67	12	5	0	2	2
67 - 68	7	5	0	2	2
68 - 69	7	5	0	2	2
69 - 70	7	5	1	2	1
70 - 71	7	5	1	2	1
71 - 72	7	5	1	2	1
72 - 73	8	5	1	2	1
73 - 74	8	5	1	2	1
74 - 75	8	4	2	1	1
75 - 76	8	4	2	1	1
76 - 77	8	4	2	1	1
77 - 78	8	4	2	1	1
78 - 79	8	4	2	1	1
79 - 80	8	4	2	1	1
80 - 81	8	4	2	1	1
81 - 82	8	4	2	1	1
82 - 83	8	4	2	1	1
83 - 84	8	4	2	1	1
84 - 85	8	4	2	1	1
85 - 86	8	4	2	1	1
86 - 87	8	4	2	1	1
87 - 88	8	4	2	1	1
88 - 89	8	4	2	1	1
89 - 90	8	4	2	1	1
90 - 91	8	4	2	1	1
91 - 92	8	4	2	1	1
92 - 93	8	4	2	1	1

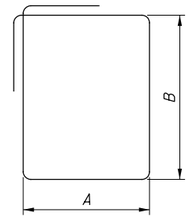
PANEL TABLE					
SOLDIER PILE BAY	PANEL LENGTH (FT)	2' HIGH PANELS	1' HIGH PANELS	TOP PANEL HEIGHT (FT)	BOTTOM PANEL HEIGHT (FT)
93 - 94	8	4	1	2	1
94 - 95	8	4	1	2	1
95 - 96	8	4	1	2	1
96 - 97	8	4	1	2	1
97 - 98	8	4	1	2	1
98 - 99	8	4	0	2	2
99 - 100	8	4	0	2	2
100 - 101	8	4	0	2	2
101 - 102	8	4	0	2	2
102 - 103	8	4	0	2	2
103 - 104	8	4	0	2	2
104 - 105	8	4	0	2	2
105 - 106	8	4	0	2	2
106 - 107	8	4	0	2	2
107 - 108	8	4	0	2	2
108 - 109	8	4	0	2	2
109 - 110	8	4	0	2	2
110 - 111	8	4	0	2	2
111 - 112	8	4	0	2	2
112 - 113	8	3	1	1	2
113 - 114	8	3	1	1	2
114 - 115	8	3	1	1	2
115 - 116	8	2	2	1	1
116 - 117	8	2	2	1	1
117 - 118	8	2	2	1	1
118 - 119	8	2	2	1	1
119 - 120	8	2	2	1	1
120 - 121	8	2	2	1	1
121 - 122	8	2	2	1	1
122 - 123	8	2	2	1	1
123 - 124	8	2	2	1	1
124 - 125	8	2	2	1	1
125 - 126	8	2	2	1	1
126 - 127	8	2	1	2	1
127 - 128	8	2	1	2	1
128 - 129	8	2	1	2	1
129 - 130	8	2	1	2	1
130 - 131	8	2	1	2	1
131 - 132	8	2	1	2	1
132 - 133	8	2	0	2	2
133 - 134	8	2	0	2	2
134 - 135	8	2	0	2	2
135 - 136	8	2	0	2	2
136 - 137	8	2	0	2	2
137 - 138	8	1	1	2	1

WALL LAGGING REINFORCEMENT											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
W401	4660	5'-5"	16861	33	1'-8"	0'-7"					
W402	1422	3'-5"	3245	33	0'-8"	0'-7"					
W501	3324	7'-5"	25713	STR							
W502	368	5'-5"	2079	STR							
W503	40	11'-5"	476	STR							
		TOTAL:	48374	LBS.							

RAISED PANEL SEAT REINFORCEMENT											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
W301	42	3'-3"	51	33	0'-6"	0'-10"					
W403	28	6'-5"	120	2	2'-11"	0'-9"	2'-11"				
		TOTAL:	171	LBS.							



TYPE-2



TYPE-33

PANEL QUANTITY TABLE							
PANEL LENGTH (FT)	TOTAL 2' HIGH PANELS	TOTAL 1' HIGH PANELS	2' TOP PANEL HEIGHT	1' TOP PANEL HEIGHT	2' INTERMEDIATE PANEL HEIGHT	2' BOTTOM PANEL	1' BOTTOM PANEL
12	5	0	1	0	3	1	0
8	450	156	53	71	358	39	85
7	60	3	12	0	39	9	3

NOTES:

1. ADJUST PANEL LENGTHS IF PILE SPACING CHANGED TO AVOID UTILITIES. ADJUST LENGTH OF STRAIGHT REINFORCEMENT AND INCLUDE TRANSVERSE REINFORCEMENT AT 12" MAXIMUM SPACING.

DESIGN AGENCY
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111 SUPERIOR AVE., STE. 2300 CLEVELAND, OH 44114

DESIGNED	DRAWN	REVIEWED	DATE
BCM	BCM	TMP	03-11-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SE		N/A	

LAGGING PANEL TABLES
RETAINING WALL ZZ
INTERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

16 / 21

122
127

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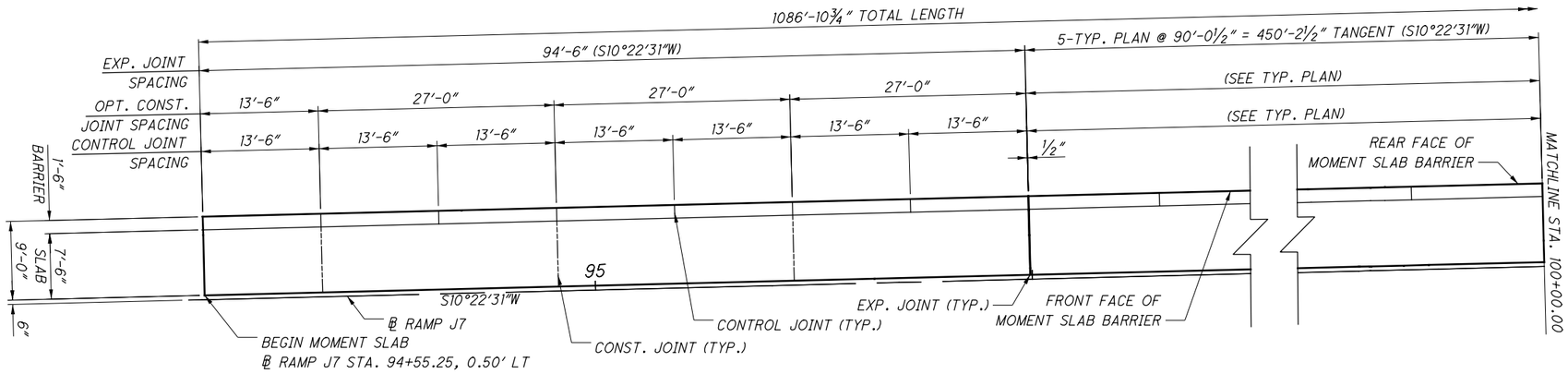
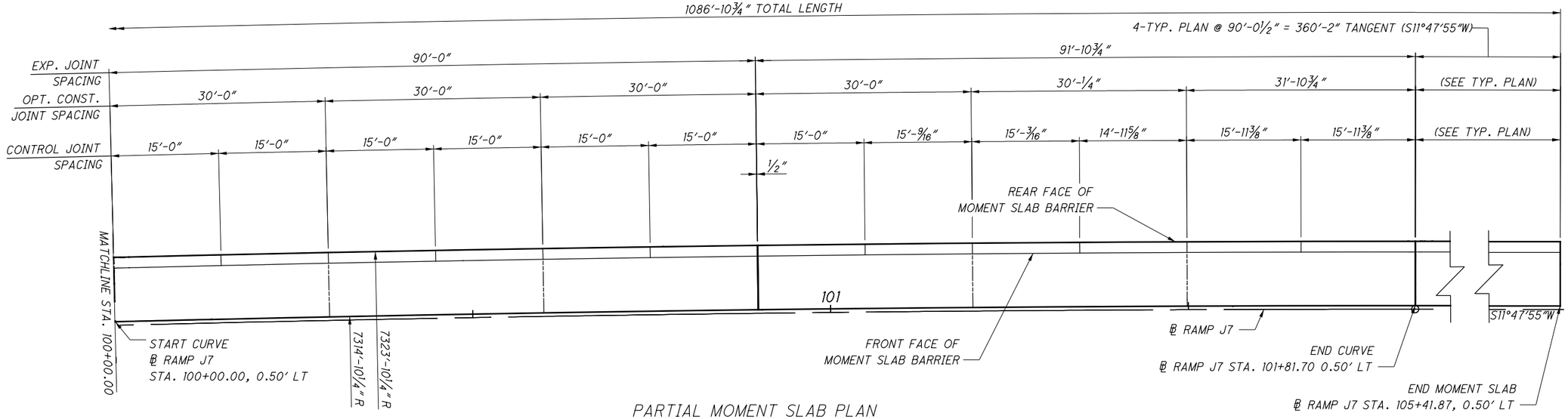


PARTIAL MOMENT SLAB PLAN



PARTIAL MOMENT SLAB PLAN

NOTES:

1. ALL DIMENSIONS ARE MEASURED ALONG REAR FACE OF MOMENT SLAB BARRIER UNLESS NOTED OTHERWISE.
2. FIELD ADJUST SEGMENTS TO MAINTAIN ½" EXPANSION JOINTS ACROSS BARRIERS, FOR MOMENT SLAB JOINT DETAILS, SEE SHEET 21
3. FOR MOMENT SLAB AND BARRIER TYPICAL SECTION AND MOMENT SLAB EXPANSION JOINT DETAILS SEE SHEET 21
4. FOR MOMENT SLAB TYPICAL ELEVATION AND TYPICAL PLAN SEE SHEET 20

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DESIGNED	DRAWN	REVIEWED	DATE
GMC	GMC	BCM	03-12-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCM		N/A	

MOMENT SLAB PLAN
RETAINING WALL ZZ
INNERBELT CCGTA

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

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127

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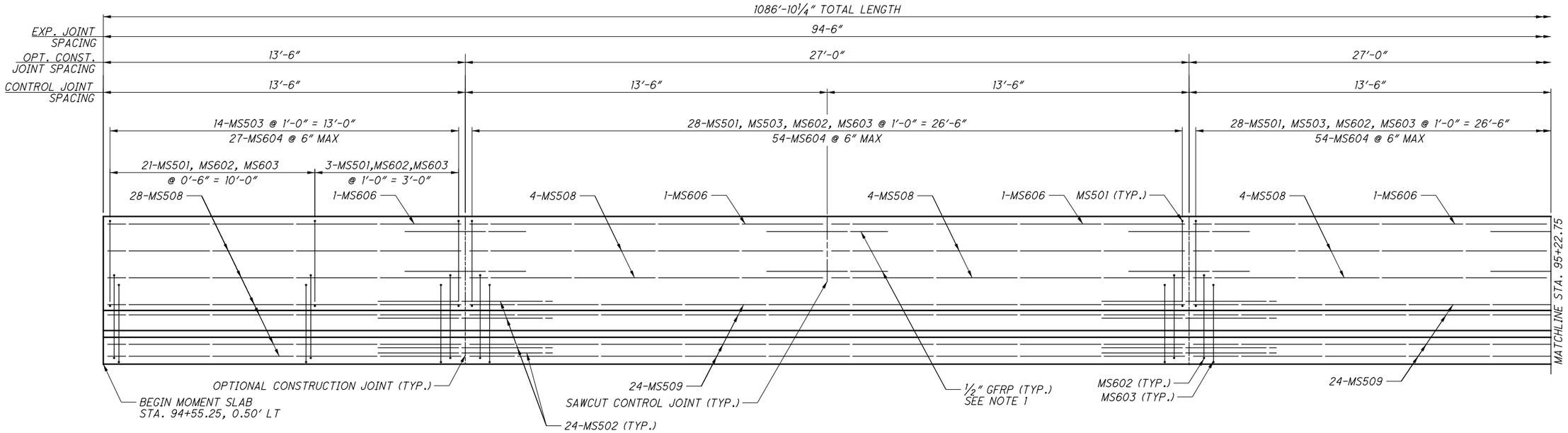
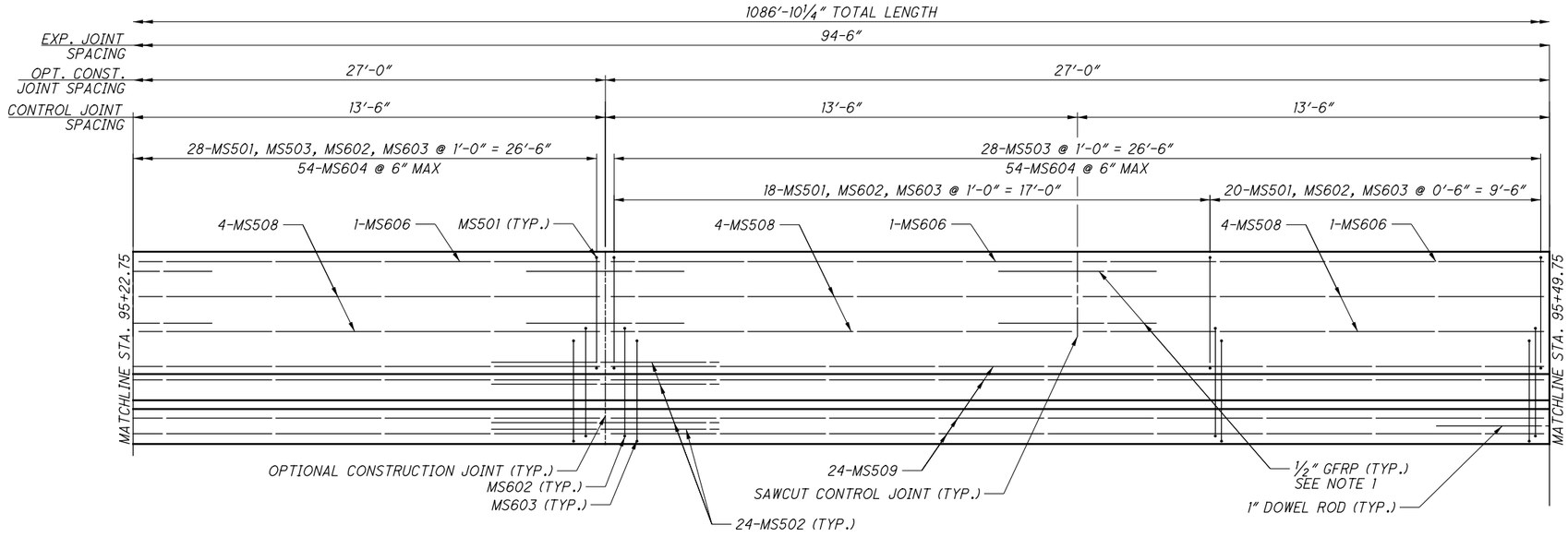


MOMENT SLAB & BARRIER ELEVATION



MOMENT SLAB & BARRIER ELEVATION

NOTES:

1. INSTALL 4'-6" GLASS FIBER REINFORCED POLYMER (GFRP) STIFFENING REINFORCEMENTS, CENTERED ON CONTROL JOINTS AND CONSTRUCTION JOINTS.
2. FOR MOMENT SLAB AND BARRIER TYPICAL LENGTH SEE SHEET 20.
3. FOR MOMENT SLAB JOINT DETAILS, SEE SHEET 21.
4. ALL DIMENSIONS ARE MEASURED ALONG REAR FACE OF MOMENT SLAB BARRIER UNLESS NOTED OTHERWISE.

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
GMC	GMC	BCM	03-12-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCM		N/A	

MOMENT SLAB & BARRIER ELEVATION 1 OF 2
RETAINING WALL ZZ
INTERBELT CCG7A

CUY-71-17.83
CUY-176-12.76
PID No. 98063

18 / 21

124
127

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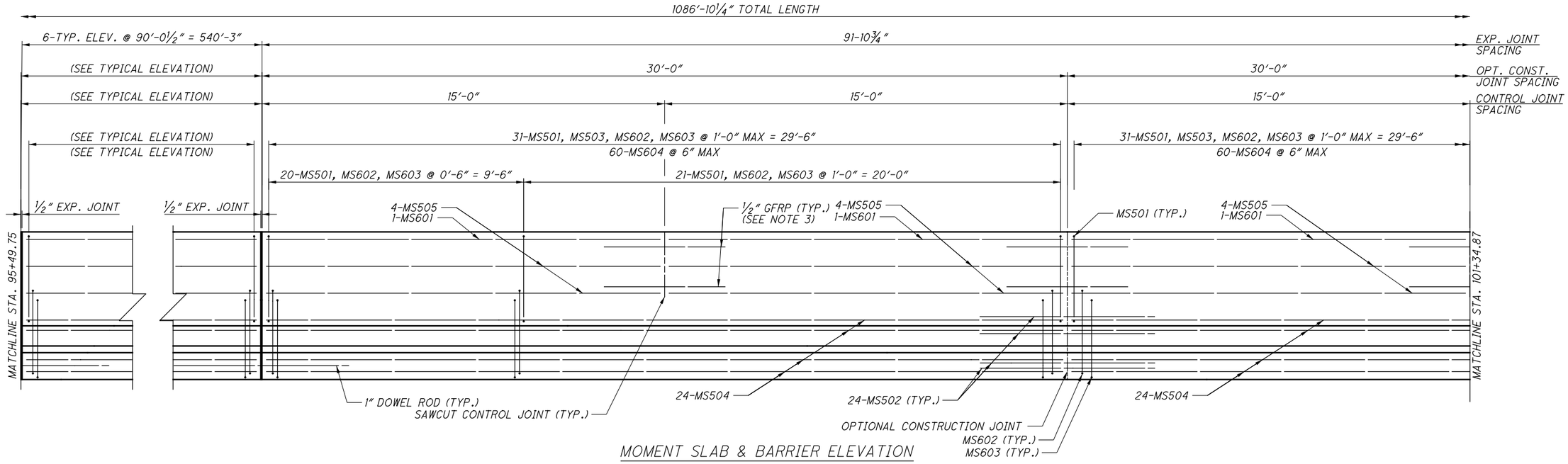
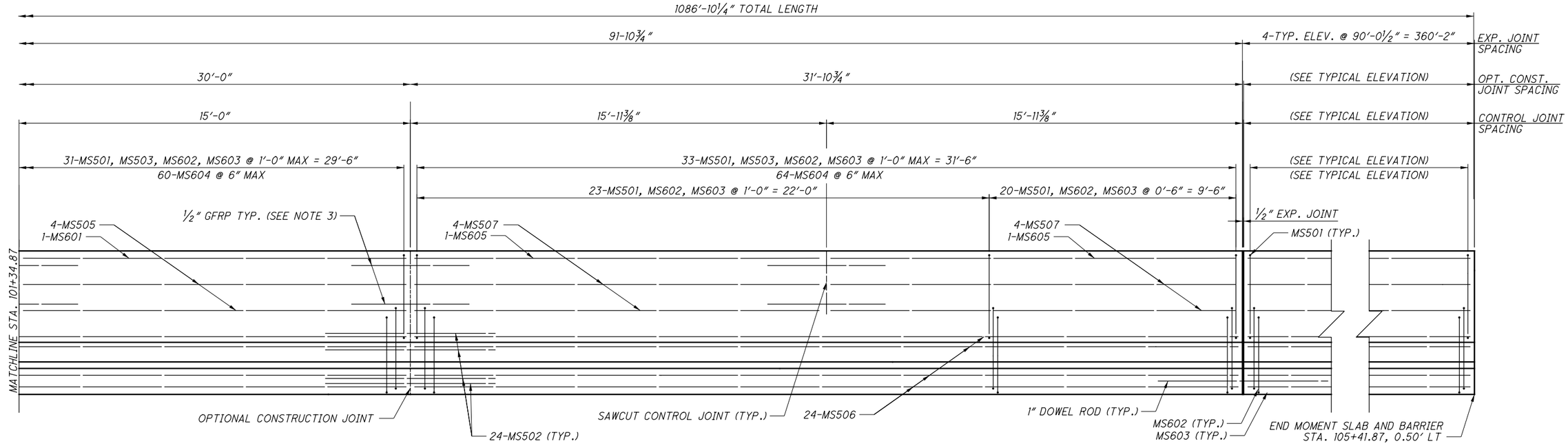


MOMENT SLAB & BARRIER ELEVATION



MOMENT SLAB & BARRIER ELEVATION

NOTES:

1. SEE SHEET 18 OF 21 FOR NOTES.

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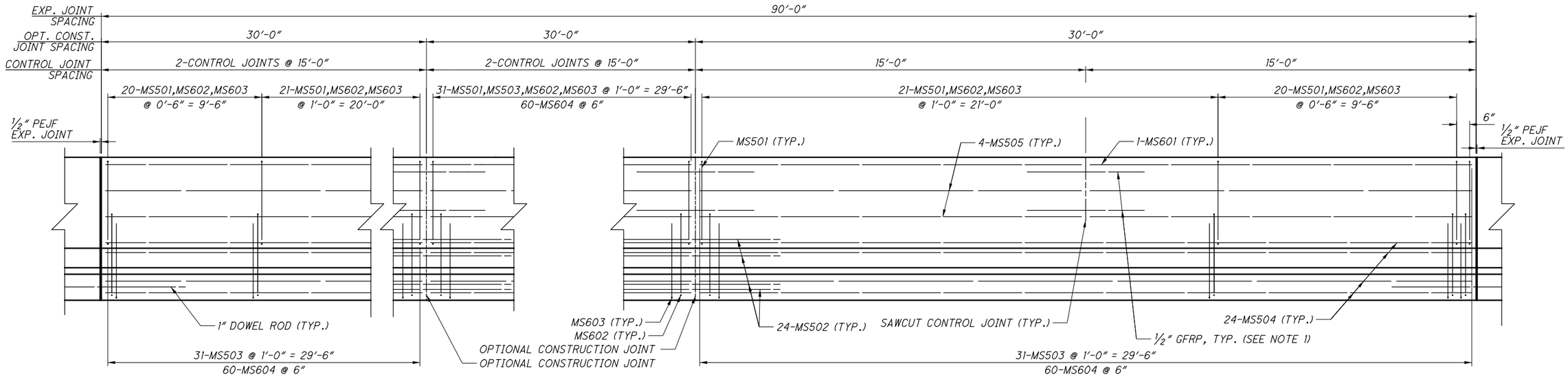
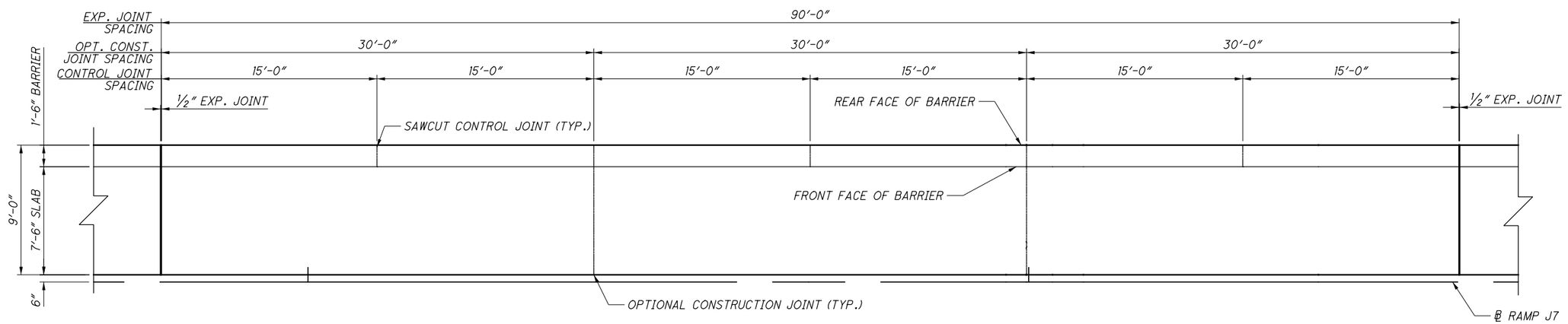
MOMENT SLAB & BARRIER ELEVATION 2 OF 2
RETAINING WALL ZZ
INTERBELT CCGTA

CUY-71-17.83
CUY-176-12.76
PID No. 98063



MOMENT SLAB & BARRIER TYPICAL ELEVATION



MOMENT SLAB & BARRIER TYPICAL PLAN

NOTES:

1. SEE SHEET 17 OF 21 FOR NOTES.

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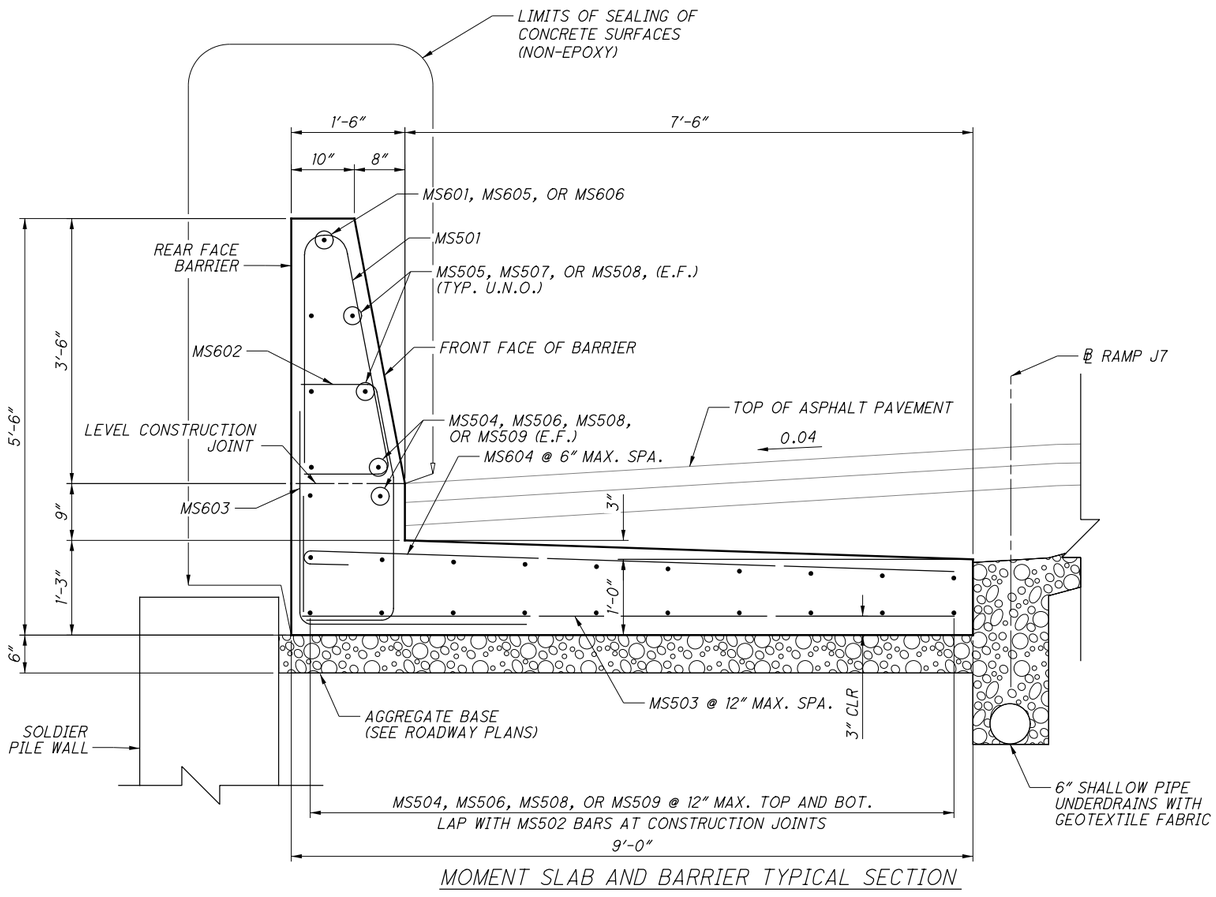
DESIGNED	DRAWN	REVIEWED	DATE
GMC	GMC	BCM	03-12-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCM		N/A	

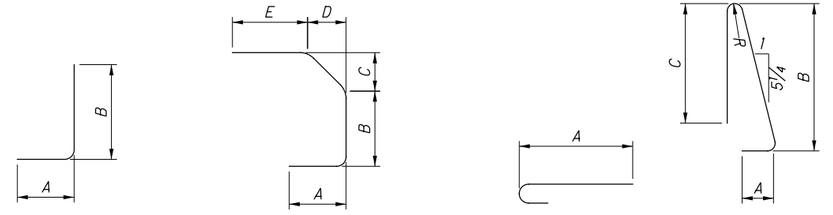
MOMENT SLAB & BARRIER TYPICAL PLAN AND ELEVATION
RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

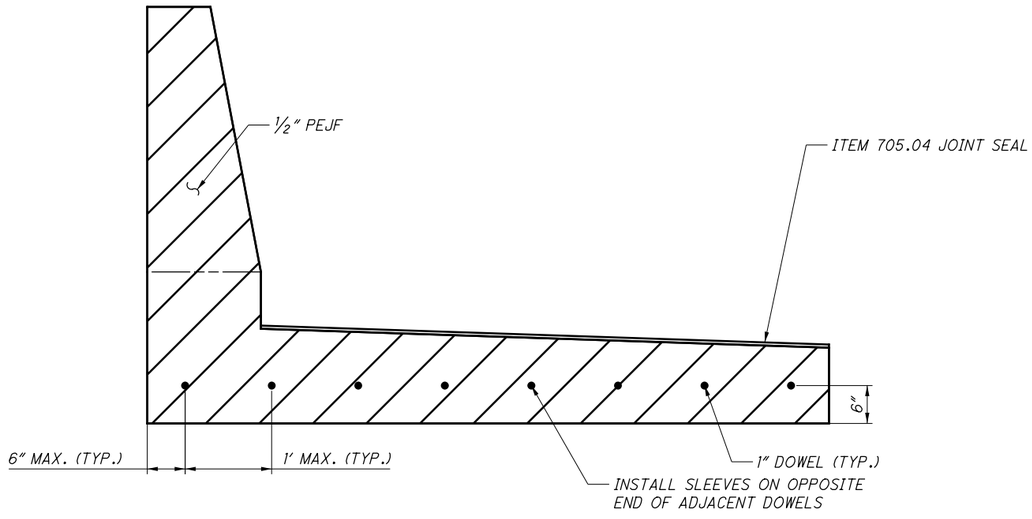


MOMENT SLAB AND BARRIER TYPICAL SECTION

MOMENT SLAB AND BARRIER REINFORCEMENT											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
MS501	1363	7'-1"	10070	23	1'-2"	2'-10"	2'-10"			0'-4"	
MS502	600	6'-6"	4068	STR							
MS503	1123	8'-8"	10151	STR							
MS504	768	29'-8"	23764	STR							
MS505	256	14'-8"	3916	STR							
MS506	24	31'-6"	789	STR							
MS507	8	15'-7"	130	STR							
MS508	52	13'-2"	714	STR							
MS509	72	26'-8"	2003	STR							
MS601	64	14'-8"	1410	STR							
MS602	1363	4'-7"	9383	14	1'-2"	1'-10"	0'-11"	0'-2"	0'-11"		
MS603	1363	8'-1"	16548	1	4'-0"	4'-3"					
MS604	2173	9'-4"	30463	16	8'-8"						
MS605	2	15'-7"	47	STR							
MS606	7	13'-2"	138	STR							
		TOTAL:	103524	LBS.							



TYPE-1 TYPE-14 TYPE-16 TYPE-23



EXPANSION JOINT DETAIL

NOTES:

1. MINIMUM LAP SPLICE LENGTH SHALL BE: #5 BAR: 3'-1" #6 BAR: 4'-0"
2. FOR ADDITIONAL 4" SAWCUT AND GFRP REINFORCEMENT DETAILS, SEE ODOT STANDARD DRAWING SBR-1-13.
3. ½" PREFORMED EXPANSION JOINT FILLER (PEJF) SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, QC2 CONCRETE, MISC.: MOMENT SLAB.
4. FOR ADDITIONAL EXP. JOINT AND DOWEL DETAILS SEE SCD BP-2.2
5. DOWELS AND SLEEVES SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, QC2 CONCRETE, MISC.: MOMENT SLAB.
6. CONTROL JOINTS SHALL BE PLACED AT A MAXIMUM OF 20 FEET, SPACE VERTICAL REINFORCING STEEL TO CLEAR CONTROL JOINTS BY A MINIMUM OF 2 INCHES. FOR ADDITIONAL 4" SAWCUT, GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCEMENT, AND CONSTRUCTION DETAILS SEE ODOT STANDARD DRAWING SBR-1-13
7. EXPANSION JOINTS SHALL BE PLACED EVERY 20 FEET MINIMUM AND 92 FEET MAXIMUM. ½" PEJF SHALL BE PLACED BETWEEN MOMENT SLABS AT EACH EXPANSION JOINT. REINFORCING STEEL SHALL NOT EXTEND THROUGH THE EXPANSION JOINT

DESIGN AGENCY
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MOMENT SLAB & BARRIER TYPICAL SECTION AND DETAILS

RETAINING WALL ZZ
INNERBELT CCG7A

CUY-71-17.83/
CUY-176-12.76
PID No. 98063

PROJECT DESCRIPTION

CONSTRUCTION OF RETAINING WALL ZZ ALONG APPROXIMATELY 1,500 FT LONG LANE ADDITION TO RAMP J7, AS PART OF THE CLEVELAND INNER BELT PLAN.

HISTORIC RECORDS

28 HISTORICAL BORINGS WERE IDENTIFIED IN THE VICINITY OF PROJECT, MANY OF WHICH ARE UNUSABLE DUE TO THE POOR QUALITY OF LOGS. HOWEVER B-001-0-64 AND B-010-0-64 AS PART OF PROJECT CUY-71-18.25, B-007-0-60 AS PART OF THE CUYAHOGA-MEDINA FREEWAY PROJECT, AND X-014-1-66, X-014-2-66, X-017-2-66,X-017-3-66 AS PART OF PROJECT CUY-71-17.83 WERE UTILIZABLE AND INCLUDED IN THIS SHEET SET.

GEOLOGY

THE PROJECT IS LOCATED ON THE LAKE ERIE PLAIN, DESCRIBED AS FINE-GRAINED LAKE DEPOSITS UP TO SEVERAL HUNDRED FEET IN THICKNESS. SOILS AT WALL SITES ARE MAPPED AS UDORTHENTS-LOAMY. PART OF PROJECT IS LOCATED ALONG VALLEY WALL OF CUYAHOGA RIVER, WHERE SUBSURFACE CONDITIONS ARE VARIABLE. ODNR MAPPING INDICATES PROJECT LIES AT BOUNDARIES OF FOUR (4) AREAS DISPLAYING DIFFERING SURFICIAL GEOLOGY, CONSISTING OF VARYING COMBINATIONS OF SAND, SILT, AND CLAY OVER SHALE.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS CONDUCTED OVER SEVERAL VISITS FROM LATE 2014 TO EARLY 2015. RECONNAISSANCE FOCUSED ON POTENTIAL FOR SITE INSTABILITY. OBSERVATIONS DID NOT INDICATE PRESENCE OF GLOBAL INSTABILITY. SOME EVIDENCE OF ISOLATED SHALLOW SEATED MOVEMENT OR CREEP WAS FOUND IN SLOPE BENEATH ELEVATED ROADWAY. AREA OF PROPOSED RETAINING WALL APPEARED STABLE.

SUBSURFACE EXPLORATION

FOUR (4) SPT BORINGS TO A DEPTH OF 61.5 FT WERE COMPLETED BETWEEN 11/12/2014 AND 11/13/2014 AND BETWEEN 11/25/2014 AND 11/26/2014. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH STANDARD PENETRATION TESTING METHODS (AASHTO T206) AT CONTINUOUS SAMPLING INTERVALS AND 2½ FT SAMPLING INTERVALS FOR THE FULL SOIL DEPTH OF THE BORINGS. DRILLING WAS ACCOMPLISHED USING A MOBILE B-58 DRILLING RIG WITH 3.25" ID HSA (92.2% EFFICIENT), CME-45B DRILLING RIG WITH 3.25" ID HSA (77.4% EFFICIENT), OR CME-55 DRILLING RIG EQUIPPED WITH 4.5" ID HSA (78.8% EFFICIENT). AUTO-HAMMERS WERE CALIBRATED JANUARY 26, 2014.

FOUR (4) CPT TESTS TO DEPTHS OF 47.90 TO 64.11 FT (PRE-DRILLED DEPTH OF 10 TO 15 FT) WERE PERFORMED BY ODOT UNDER THE TECHNICAL DIRECTION OF BEI. TESTING WAS PERFORMED TO DETERMINE STANDARD TIP RESISTANCE, SLEEVE FRICTION, AND PORE WATER PRESSURE PROFILES. PROBING WAS CONDUCTED ON 11/12/2014 AND 11/13/2014. TESTING WAS ACCOMPLISHED USING A TRACK-MOUNTED 20-TON RIG MADE BY A.P. VAN DEN BERG, CALIBRATED TO PUSH CPT EQUIPMENT IN COMPLIANCE WITH ASTM D5778-07.

EXPLORATION FINDINGS

ALL BORINGS ENCOUNTERED 16 TO 18 INCHES OF ASPHALT AND CONCRETE ROADWAY MATERIALS. B-006-0-14 ADDITIONALLY ENCOUNTERED 6 INCHES OF GRANULAR BASE BENEATH THE ASPHALT AND CONCRETE.

SUBSURFACE CONDITIONS WERE DETERMINED TO BE CONSISTENT WITH GEOLOGIC MODEL FOR THE SITE, TAKING INTO ACCOUNT THE EFFECTS OF DEVELOPING IR-71 AND SR-176. THE SOIL PROFILE ALONG PROPOSED WALL SITE CONSISTS OF 15 TO 35 FEET OF GENERALLY GRANULAR FILL OVERLYING LAKE DEPOSITS. GROUNDWATER WAS ENCOUNTERED AT DEPTHS OF 20 TO 30 FEET.

COHESIVE SOILS ENCOUNTERED CONSISTED OF SOFT TO HARD SILT AND CLAY (A-6a) AND MEDIUM STIFF TO HARD SILTY CLAY (A-6b).

GRANULAR SOILS ENCOUNTERED CONSISTED OF LOOSE TO VERY DENSE GRAVEL WITH SAND (A-1-b), MEDIUM DENSE TO VERY DENSE GRAVEL WITH SAND AND SILT (A-2-4), LOOSE TO VERY DENSE COARSE AND FINE SAND (A-3a), LOOSE TO VERY DENSE SANDY SILT (A-4a), AND MEDIUM DENSE SILT (A-4b).

BEDROCK WAS NOT ENCOUNTERED IN ANY OF THE BORINGS.

CPT TESTING SHOWED SEVERAL AREAS OF INTEREST. IN C-001-0-14, A 3-FT CLAY LAYER AT ELEVATION 618 FT SHOWS SIGNIFICANT STRENGTH FLUCTUATIONS WHICH SHOULD BE TAKEN INTO ACCOUNT DURING DESIGN. READINGS FROM C-003-0-14 AND C-005-0-14 SUGGEST A HIGH LEVEL OF DILATENCY IN MEDIUM DENSE SAND. C-007-0-14 SHOWS POSSIBLE ZONE OF GLACIAL TILL BELOW ELEVATION 600 FT WITH UNDRAINED SHEAR STRENGTH IN EXCESS OF 4,000 PSF, AS WELL AS ZONE OF UNUSUALLY NEGATIVE PORE PRESSURE BELOW ELEVATION 625 FT.

ZONES CONTAINING BOULDERS/BROKEN CONCRETE WERE ENCOUNTERED IN B-002-0-18 AT DEPTHS RANGING FROM 12.7-13 FT BELOW GROUND SURFACE (BGS), 14-14.3 FT BGS AND 17.2-18 FT BGS.

VARIOUS CHEMICAL ODERS WERE ENCOUNTERED IN MULTIPLE BORINGS. FUEL ODERS AND CHEMICAL ODERS WERE ENCOUNTERED IN BORING B-004-0-18 AT 26 FT BGS AND 28 FT BGS RESPECTIVELY. PETROLEUM ODERS WERE ENCOUNTERED IN BORING B-006-0-18 AT 5 FT BGS. CHEMICAL ODERS WERE ALSO ENCOUNTERED IN BORING B-008-0-18 AT 3 FT BGS.

28 HISTORICAL BORINGS WERE IDENTIFIED IN THE VICINITY OF PROJECT, MANY OF WHICH ARE UNUSABLE DUE TO QUALITY OF LOGS. BEDROCK WAS ENCOUNTERED IN SIX (6) BORINGS AT DEPTHS OF ABOUT 100 FT. DOMINANT SOIL ENCOUNTERED IN THESE BORINGS IS SILT (A-4b) TO SILT AND CLAY (A-6a). NINE (9) BORINGS TO DEPTHS OF 30 FT ENCOUNTERED PROGRESSIVE TRANSITION FROM SANDY SOILS TO SILTS TO CLAYS. SEVEN (7) BORINGS ENCOUNTERED ELASTIC CLAY AND PEAT BELOW SLAG, POSSIBLY A RELIC OX-BOW BOUNDED BY VALLEY WALL.

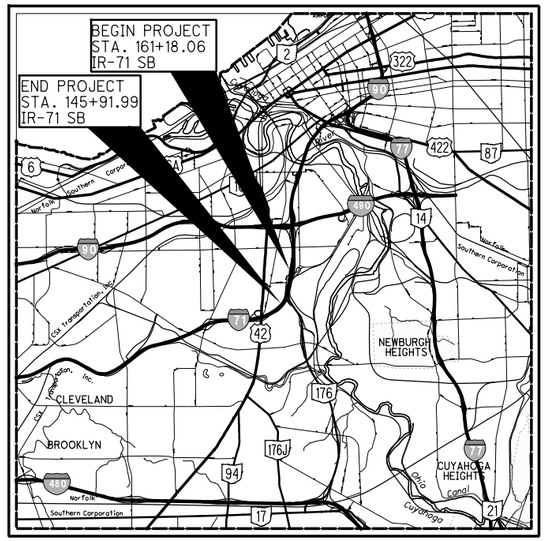
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2014.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH.	CLASSIFIED VISUAL
GRAVEL WITH SAND	A-1-b	3	13
GRAVEL WITH SAND AND SILT	A-2-4	3	2
COARSE AND FINE SAND	A-3a	6	9
SANDY SILT	A-4a	5	8
SILT	A-4b	5	11
SILT AND CLAY	A-6a	4	8
SILTY CLAY	A-6b	4	1
	TOTAL	30	52

- PAVEMENT OR BASE = X = APPROXIMATE THICKNESS — VISUAL
- BOULDERY ZONE
- BORING LOCATION - PLAN VIEW.
- DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.
- *WC* — INDICATES WATER CONTENT IN PERCENT.
- N_{60} — INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.
- *X/D"* — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X/D"= NUMBER OF BLOWS FOR D" OF PENETRATION AT REFUSAL.
- *X/Y/D"* — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED). Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.
- *X/Y/Z/D"* — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z/D"= NUMBER OF BLOWS FOR D" OF PENETRATION AT REFUSAL.
- W — INDICATES FREE WATER ELEVATION.
- ● — INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.
- ⊖ — INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.
- SS — INDICATES A SPLIT SPOON SAMPLE.
- NP — INDICATES A NON-PLASTIC SAMPLE.
- ST — INDICATES A SHELBY TUBE SAMPLE.
- CONE PENETRATION TEST PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BARS INDICATE TOP AND BOTTOM OF THE TEST



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE		

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

HISTORIC BORING DESCRIPTION	ODOT CLASS	CLASSIFIED MECH.	CLASSIFIED VISUAL
GRAVEL AND/OR STONE FRAGMENTS	A-1-a	2	2
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	1	0
GRAVEL AND/OR ST. FRAGS. WITH SAND AND SILT	A-2-4	0	3
SANDY SILT	A-4a	6	3
SILT	A-4b	29	1
SILT AND CLAY	A-6a	22	0
SILTY CLAY	A-6b		
CLAY	A-7-6	2	0
	TOTAL	95	9
SHALE	VISUAL		

RECON. - LATE 2014 - EARLY 2015
DRILLING - TG, GL 11/12 - 11/13/14, 11/25 - 11/26/14
DRAWN - MJ, EB 2/18/19 - 6/19/19
REVIEWED - MH 3/3/19

DESIGN AGENCY
NATIONAL ENGINEERING & ARCHITECTURAL SERVICES INC.
2800 CORPORATE EXCHANGE DR. STE. 240
COLUMBUS, OH 43231 (614) 714-0299

PID NO. 98063

STRUCTURE FOUNDATION EXPLORATION
RETAINING WALL ZZ
CUY-CCG7

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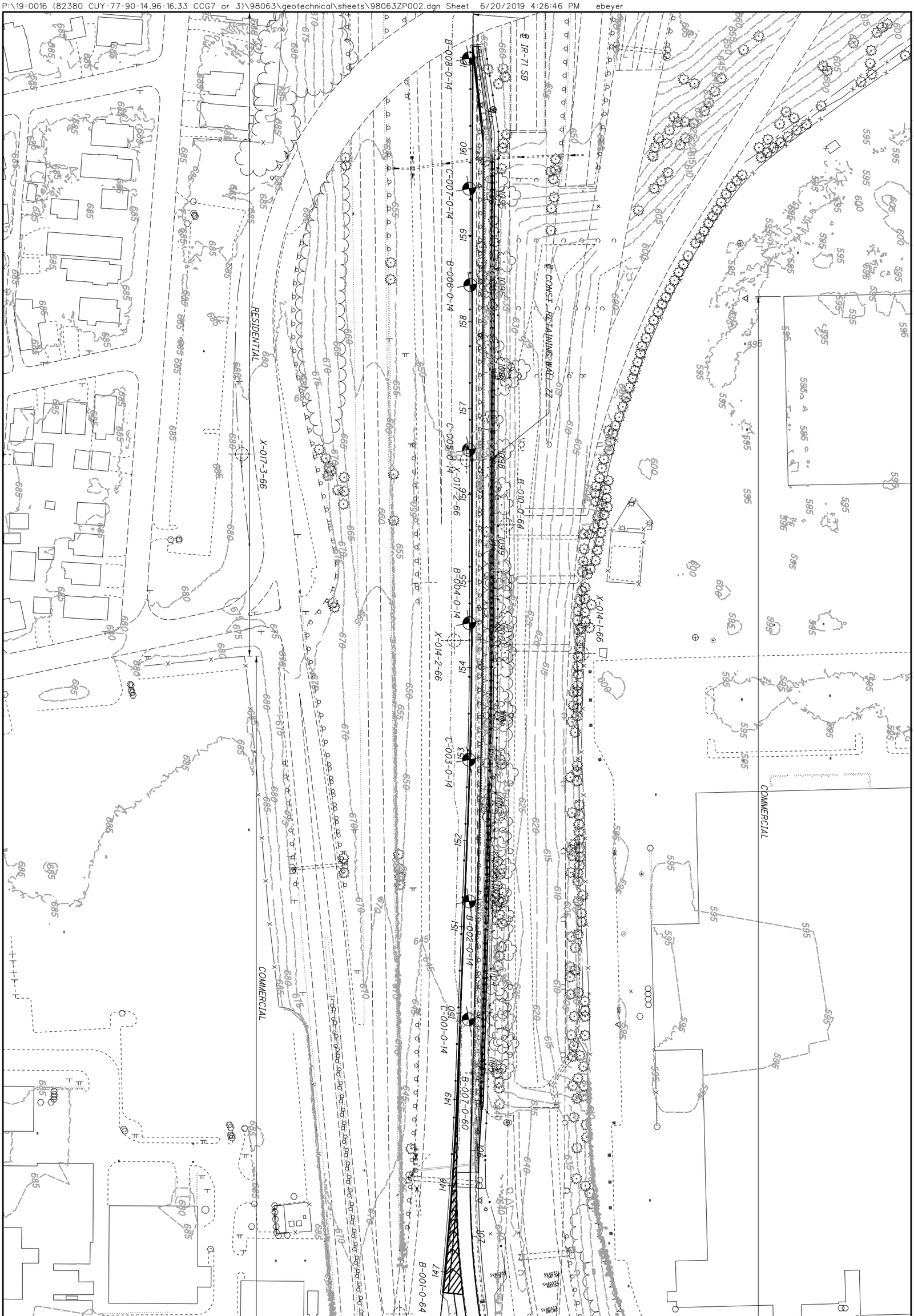


	2/23	CUY-CCG7	STRUCTURE FOUNDATION EXPLORATION RETAINING WALL ZZ	DRAWN MJ CHECKED CH	0 50 25 100 HORIZONTAL SCALE IN FEET

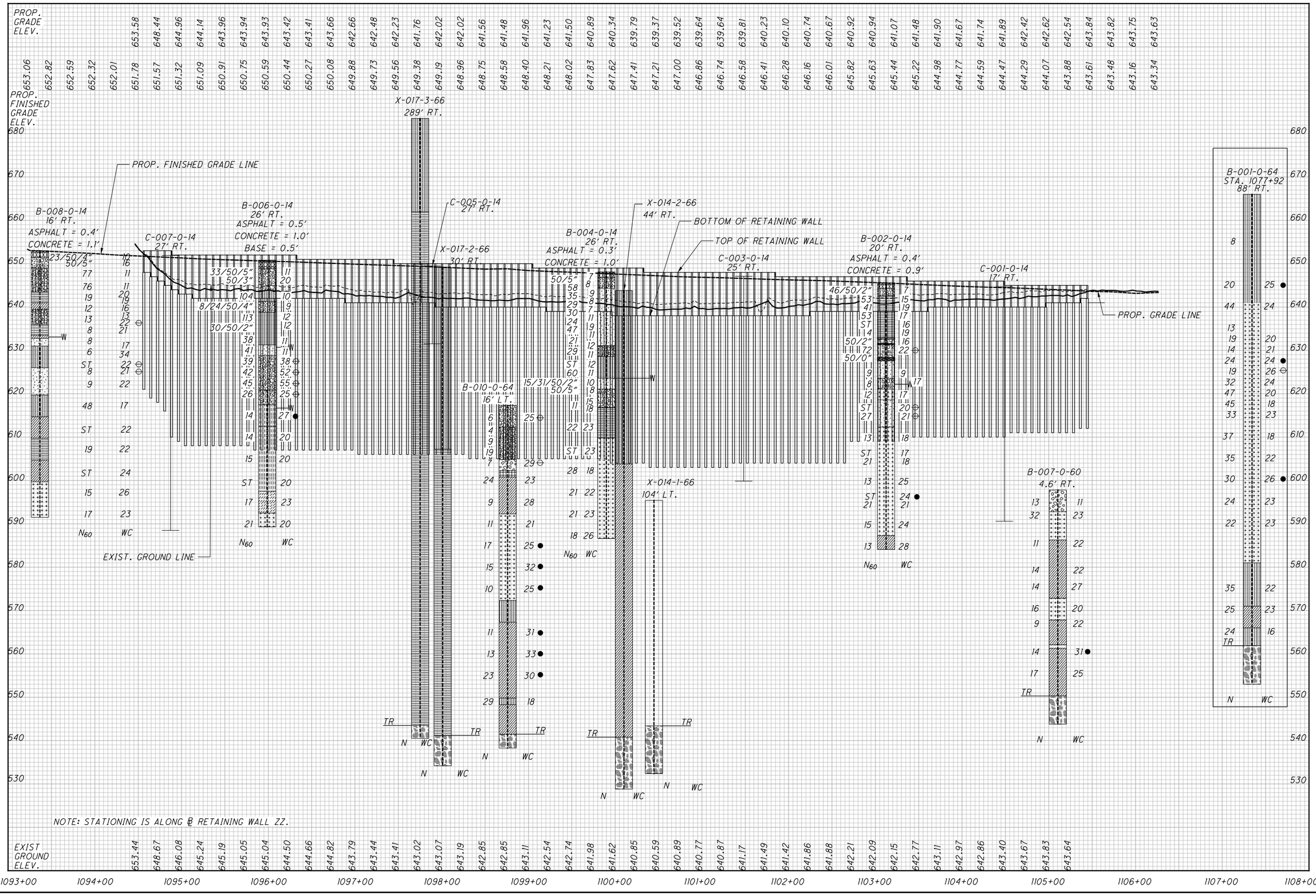
STRUCTURE FOUNDATION EXPLORATON
RETAINING WALL ZZ

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN MJ
CHECKED CH

CUY-CCG7

3 / 23



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PROJECT: CUY-CCG7	DRILLING FIRM / OPERATOR: BARR / T.GILBERT	DRILL RIG: CME 45B	STATION / OFFSET: 1103+12, 20' RT.	EXPLORATION ID B-002-0-14
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: BARR / D.LYON	HAMMER: CME AUTOMATIC	ALIGNMENT: RETAINING WALL ZZ	
PID: 82380 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/26/14	ELEVATION: 645.6 (MSL) EOB: 61.5 ft.	PAGE 1 OF 2
START: 11/25/14 END: 11/26/14	SAMPLING METHOD: SPT / ST	ENERGY RATIO (%): 77.4	LAT / LONG: 41.462357, -81.693667	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
5.0", **ASPHALT**	645.2																	
11.0", **CONCRETE**	644.3																	
VERY DENSE, DARK GRAY, **GRAVEL WITH SAND** TRACE SILT, TRACE CLAY, DAMP **(FILL)**	642.6		46 50/2"	-	100	SS-1	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
STIFF TO HARD, GRAYISH BROWN, **SILT AND CLAY**, LITTLE TO SOME SAND, TRACE GRAVEL, DAMP **(FILL)**			19 19 22	53	100	SS-2	4.5+	8	12	21	42	17	27	15	12	15	A-6a (6)	
			11 16 16	41	100	SS-3	4.5+	-	-	-	-	-	-	-	-	19	A-6a (V)	
			15 20 21	53	100	SS-4	4.5+	-	-	-	-	-	-	-	-	17	A-6a (V)	
					96	ST-5	3.75 - 4.25	2	3	8	43	44	31	18	13	16	A-6a (9)	
			2 1 2	4	94	SS-6	1.5 - 2.75	-	-	-	-	-	-	-	-	19	A-6a (V)	
	632.9		60/2"	-	100	SS-7	4.5+	-	-	-	-	-	-	-	-	16	A-6a (V)	
VERY DENSE, DARK GRAY, **GRAVEL WITH SAND** LITTLE SILT, TRACE CLAY, CONTAINS CONCRETE AND BRICK FRAGMENTS, WET @12.7'; CONCRETE/ BOULDER ZONES AT 12.7'-13.0'. 14.0'-14.3', AND 17.2'-18.0' **(FILL)**			14 28 28	72	100	SS-8	-	38	24	22	12	4	NP	NP	NP	22	A-1-b (0)	
@17.5'; SS-9 NO RECOVERY	627.6		50/0"	-		SS-9	-	-	-	-	-	-	-	-	-	-		
LOOSE, BROWN, **COARSE AND FINE SAND** LITTLE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	623.6		5 3 4	9	83	SS-10	-	-	-	-	-	-	-	-	-	9	A-3a (V)	
LOOSE, BROWN, **GRAVEL WITH SAND** TRACE SILT, TRACE CLAY, WET	621.1	W	3 2 4	8	50	SS-11	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	
MEDIUM DENSE, GRAY, **SILT**, LITTLE CLAY, TRACE SAND, (INTERBEDDED WITH "SILT AND CLAY"), DAMP	618.6		7 4 5	12	100	SS-12	1.75 - 2.0	-	-	-	-	-	-	-	-	17	A-4b (V)	
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND** SOME SILT, TRACE CLAY, WET	612.3				100	ST-13	-	0	0	75	21	4	NP	NP	NP	20	A-3a (0)	
			6 9 12	27	100	SS-14	-	-	-	-	-	-	-	-	-	21	A-3a (V)	
MEDIUM DENSE, GRAY, **SILT**, SOME CLAY, TRACE FINE SAND, DAMP TO MOIST			3 5 5	13	100	SS-15	2.0 - 4.25	-	-	-	-	-	-	-	-	18	A-4b (V)	
					100	ST-16	4.5+	0	0	2	69	29	25	18	7	17	A-4b (8)	
@40.0'; SS-17 BECOMES GRAYISH BROWN, (INTERBEDDED WITH "SILT AND CLAY")			5 7 9	21	100	SS-17	1.75 - 4.5+	-	-	-	-	-	-	-	-	18	A-4b (V)	
			3 4 6	13	100	SS-18	1.75 - 3.75	-	-	-	-	-	-	-	-	25	A-4b (V)	
					100	ST-19	2.0 - 2.75	0	0	1	73	26	27	19	8	24	A-4b (8)	
			5 7 9	21	100	SS-20	2.25 - 2.5	-	-	-	-	-	-	-	-	21	A-4b (V)	
	587.3		4 5 7	15	100	SS-21	2.5 - 3.5	-	-	-	-	-	-	-	-	24	A-4b (V)	
MEDIUM STIFF TO HARD, GRAYISH BROWN, **SILT AND CLAY**, TRACE SAND, CONTAINS FEW SILT SEAMS, MOIST TO WET																		

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 5/30/19 13:44 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\1ARCHIVE BY YEAR\2015 ARCHIVE\CUY-CCG7 82380\GINT FILES\CUY-CCG7.GPJ

PID: 82380	SFN:	PROJECT: CUY-CCG7	STATION / OFFSET: 1103+12, 20' RT.	START: 11/25/14	END: 11/26/14	PG 2 OF 2	B-002-0-14

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
	585.6																	
	584.1	61 EOB	5 4 6	13	100	SS-22	0.5 - 1.5	-	-	-	-	-	-	-	-	28	A-6a (V)	

NOTES: GROUNDWATER ENCOUNTERED AT 23.4' DURING DRILLING. CAVE DEPTH 20.4'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED .5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
BORING LOG B-002-0-14

DRAWN MJ
CHECKED CH

PROJECT: CUY-CCG7	DRILLING FIRM / OPERATOR: BARR / D.SHOPE	DRILL RIG: CME 55	STATION / OFFSET: 1099+90, 26' RT.	EXPLORATION ID B-004-0-14
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: BARR / C. PIERCE	HAMMER: CME AUTOMATIC	ALIGNMENT: RETAINING WALL ZZ	
PID: 82380 SFN:	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 1/26/14	ELEVATION: 648.1 (MSL) EOB: 61.5 ft.	PAGE 1 OF 2
START: 11/12/14 END: 11/12/14	SAMPLING METHOD: SPT / ST	ENERGY RATIO (%): 78.8	LAT / LONG: 41.463225, -81.693446	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
4.0", **ASPHALT**	647.8																	
12.0", **CONCRETE**	646.8																	
VERY DENSE, DARK BROWN, **GRAVEL WITH SAND** LITTLE SILT, TRACE CLAY, CONTAINS SLAG, DAMP **(FILL)**			50/5"	-	80	SS-1	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
	644.4		23 32 12	58	100	SS-2A	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
MEDIUM DENSE TO DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME SILT, TRACE TO LITTLE CLAY, TRACE TO LITTLE GRAVEL, DAMP **(FILL)**						SS-2B	-	-	-	-	-	-	-	-	-	9	A-3a (V)	
@4.5'; SS-3 TO SS-4 BECOME GRAYISH BROWN AND BROWN			15 15 12	35	100	SS-3	-	5	8	56	24	7	NP	NP	NP	8	A-3a (0)	
			7 10 12	29	100	SS-4	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
@7.5'; SS-5 TO SS-7 BECOME GRAYISH BROWN, SS-5 CONTAINS WOOD FRAGMENTS			7 11 12	30	100	SS-5	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
@10.0'; SS-6 TO SS-7 CONTAINS BRICK FRAGMENTS			7 9 9	24	100	SS-6	-	11	19	38	20	12	NP	NP	NP	9	A-3a (0)	
			10 14 22	47	100	SS-7	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
@15.0'; SS-8 BECOMES GRAYISH BROWN WITH DARK GRAY, CONTAINS CINDERS			8 8 8	21	100	SS-8	-	-	-	-	-	-	-	-	-	12	A-3a (V)	
	631.1																	
MEDIUM DENSE, BROWN MOTTLED WITH GRAYISH BROWN, **GRAVEL WITH SAND AND SILT**LITTLE CLAY, DAMP **(FILL)**	628.6		3 8 14	29	100	SS-9	-	24	23	20	18	15	23	16	7	11	A-2-4 (0)	
VERY DENSE, GRAYISH BROWN, **SANDY SILT**, TRACE GRAVEL, TRACE CLAY, CONTAINS BRICK FRAGMENTS AND CINDERS, DAMP **(FILL)**					88	ST-10	-	5	8	47	35	5	NP	NP	NP	12	A-4a (1)	
			16 16 30	60	100	SS-11	-	-	-	-	-	-	-	-	-	11	A-4a (V)	
	623.6	W																
VERY DENSE, BROWN AND DARK GRAY, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, CONTAINS SLAG, ASPHALT, AND FUEL ODOR, DAMP **(FILL)**	621.1		15 31 50/2"	-	100	SS-12	-	16	12	38	28	6	NP	NP	NP	10	A-3a (0)	
VERY DENSE, DARK GRAY, **GRAVEL WITH SAND** LITTLE SILT, TRACE CLAY, SS-13 CONTAINS CINDERS AND CHEMICAL ODOR, DAMP TO WET **(FILL)**			50/5"	-	80	SS-13	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
(continued from above)																		
@30.1'; SS-14 BECOMES DARK GRAYISH BROWN AND BROWN, CONTAINS CINDERS	616.8		4 4 4	11	100	SS-14A	-	35	24	21	13	7	NP	NP	NP	15	A-1-b (0)	
						SS-14B	0.5 1.0	-	-	-	-	-	-	-	-	18	A-6b (V)	
MEDIUM STIFF, BROWN, **SILTY CLAY**, SOME SILT, LITTLE GRAVEL, DAMP TO MOIST																		
@35.0'; SS-15 BECOMES STIFF, GRAYISH BROWN MOTTLED WITH ORANGISH BROWN AND GRAY, TRACE SAND, TRACE GRAVEL, CONTAINS IRON STAINING			5 7 10	22	100	SS-15	2.0 - 3.25	1	2	3	46	48	40	21	19	23	A-6b (12)	
	609.8																	
MEDIUM DENSE, GRAYISH BROWN, **SILT**, SOME CLAY, TRACE SAND, DAMP TO MOIST					100	ST-16	1.25	1	0	2	59	38	31	21	10	23	A-4b (8)	
			7 10 11	28	100	SS-17	2.75 - 4.5+	-	-	-	-	-	-	-	-	18	A-4b (V)	
			4 7 9	21	100	SS-18	3.0 - 4.0	-	-	-	-	-	-	-	-	22	A-4b (V)	
@55.0'; SS-21 TO SS-22 BECOME "AND" CLAY, INTERBEDDED SILT AND CLAY			6 7 9	21	100	SS-19	1.5 - 2.25	0	0	1	55	44	28	18	10	23	A-4b (8)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 5/30/19 13:45 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\1ARCHIVE BY YEAR\2015 ARCHIVE\CUY-CCG7 82380\GINT FILES\CUY-CCG7.GPJ

PID: 82380	SFN:	PROJECT: CUY-CCG7	STATION / OFFSET: 1099+90, 26' RT.	START: 11/12/14	END: 11/12/14	PG 2 OF 2	B-004-0-14

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
MEDIUM DENSE, GRAYISH BROWN, **SILT**, SOME CLAY, TRACE SAND, DAMP TO MOIST *(continued)*	588.1	61	5 6 8	18	100	SS-20	1.2 - 1.75	-	-	-	-	-	-	-	-	26	A-4b (V)	
	586.6	EOB																

NOTES: GROUNDWATER ENCOUNTERED AT 24.5' DURING DRILLING. CAVE DEPTH 20.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED .5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
BORING LOG B-004-0-14

DRAWN MJ
CHECKED CH

PROJECT: CUY-CCG7
TYPE: RETAINING WALL
PID: 82380 SFN:
START: 11/25/14 END: 11/26/14

DRILLING FIRM / OPERATOR: BARR / P.STROUD
SAMPLING FIRM / LOGGER: BARR / C. PIERCE
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT / ST

DRILL RIG: MOBILE B-58
HAMMER: MOBILE AUTOMATIC
CALIBRATION DATE: 1/26/14
ENERGY RATIO (%): 92.2

STATION / OFFSET: 1095+99, 26' RT.
ALIGNMENT: RETAINING WALL ZZ
ELEVATION: 650.9 (MSL) EOB: 61.5 ft.
LAT / LONG: 41.464278, -81.693174

EXPLORATION ID B-006-0-14

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
6.0", **ASPHALT**	650.4																	
12.0", **CONCRETE**	649.4																	
6.0", **GRANULAR BASE**	648.9																	
VERY DENSE, DARK GRAY AND BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP TO MOIST **(FILL)**			33 50/5"	-	100	SS-1	-	44	30	18	7	1	NP	NP	NP	11	A-1-b (0)	
@5.0'; SS-2 CHANGES TO BROWN AND GRAY, LITTLE SILT, CONTAINS CONCRETE FRAGMENTS AND HAS PETROLEUM ODOR	643.9		50/3"	-	100	SS-2	-	-	-	-	-	-	-	-	-	20	A-1-b (V)	
VERY DENSE, BROWN, **SANDY SILT**, LITTLE GRAVEL, TRACE CLAY, DAMP **(FILL)**	641.4		24 26 43	106	100	SS-3	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
VERY DENSE, BROWN, **GRAVEL WITH SAND** LITTLE SILT, TRACE CLAY, DAMP TO MOIST **(FILL)**	638.9		8 24 50/4"	-	100	SS-4	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	
DENSE TO VERY DENSE, BROWN, **SANDY SILT**, TRACE CLAY, TRACE GRAVEL, DAMP **(FILL)**			13 33 42	115	100	SS-5	-	-	-	-	-	-	-	-	-	12	A-4a (V)	
			30 50/2"	-	100	SS-6	-	5	15	44	28	8	NP	NP	NP	12	A-4a (0)	
	631.4		11 14 11	38	100	SS-7	-	-	-	-	-	-	-	-	-	11	A-4a (V)	
DENSE, BROWN, **COARSE AND FINE SAND** SOME SILT, TRACE CLAY, TRACE GRAVEL, MOIST **(FILL)**	628.9	W	10 14 13	41	100	SS-8	-	3	11	57	22	7	NP	NP	NP	11	A-3a (0)	
MEDIUM DENSE TO DENSE, BLUISH GRAY, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS SLAG, WET **(FILL)**			16 13 13	40	100	SS-9	-	-	-	-	-	-	-	-	-	38	A-1-b (V)	
			16 11 17	43	100	SS-10	-	-	-	-	-	-	-	-	-	52	A-1-b (V)	
			8 14 16	46	100	SS-11	-	-	-	-	-	-	-	-	-	55	A-1-b (V)	
			11 9 8	26	100	SS-12	-	-	-	-	-	-	-	-	-	25	A-1-b (V)	
	617.6																	
MEDIUM DENSE, GRAYISH BROWN AND DARK GRAY, **SANDY SILT**, LITTLE GRAVEL, TRACE CLAY, WET **(POSSIBLE FILL)**		W	2 3 6	14	100	SS-13	-	15	11	28	37	9	26	23	3	27	A-4a (2)	
	612.6																	
MEDIUM DENSE, GRAYISH BROWN, **SANDY SILT**, LITTLE GRAVEL, TRACE TO LITTLE CLAY, MOIST			3 3 6	14	100	SS-14	-	-	-	-	-	-	-	-	-	20	A-4a (V)	
@45.0'; SS-15 BECOMES MEDIUM STIFF TO STIFF, GRAY			3 4 6	15	100	SS-15	0.7 - 1.6	-	-	-	-	-	-	-	-	20	A-4a (V)	
@50.0'; ST-16 BECOMES MEDIUM STIFF, "AND" CLAY, TRACE GRAVEL					100	ST-16	0.5 - 1.0	1	3	9	48	39	26	16	10	20	A-4a (8)	
	597.6																	
MEDIUM STIFF TO STIFF, GRAY, **SILT AND CLAY**, TRACE SAND, TRACE GRAVEL, MOIST			4 5 6	17	100	SS-17	0.7 - 1.2	-	-	-	-	-	-	-	-	23	A-6a (V)	
	592.6																	
VERY STIFF, GRAY, **SILT**, SOME CLAY, TRACE SAND, (INTERBEDDED WITH "SILT AND CLAY"), MOIST																		

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 5/30/19 15:03 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\1ARCHIVE BY YEAR\2015 ARCHIVE\CUY-CCG7 82380\GINT FILES\FOR RE-CREATION OF B-006-0-14\CUY-CCG7 - COPY.GPJ

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
BORING LOG B-006-0-14

DRAWN MJ
CHECKED CH

PID: 82380	SFN:	PROJECT: CUY-CCG7	STATION / OFFSET: 1095+99, 26' RT.	START: 11/25/14	END: 11/26/14	PG 2 OF 2	B-006-0-14

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
VERY STIFF, GRAY, **SILT**, SOME CLAY, TRACE SAND, (INTERBEDDED WITH "SILT AND CLAY"), MOIST *(continued)*	590.9	61	5 6 8	22	100	SS-18	2.0 - 2.6	0	0	2	68	30	27	19	8	20	A-4b (8)	
	589.4	EOB																

NOTES: GROUNDWATER ENCOUNTERED AT 34.1' DURING DRILLING, 20.1' AFTER 1 HOUR. CAVE DEPTH 22.3'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 1 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 5/30/19 15:03 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\1ARCHIVE BY YEAR\2015 ARCHIVE\CUY-CCG7 82380\GINT FILES\FOR RE-CREATION OF B-006-0-14\CUY-CCG7 - COPY.GPJ

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
BORING LOG B-006-0-14

DRAWN MJ
CHECKED CH

PROJECT: CUY-CCG7	DRILLING FIRM / OPERATOR: BARR / T.GILBERT	DRILL RIG: CME 45B	STATION / OFFSET: 1093+37, 28' RT.	EXPLORATION ID B-008-0-14
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: BARR / D.KLIMKOWICZ	HAMMER: CME AUTOMATIC	ALIGNMENT: RETAINING WALL ZZ	
PID: 82380 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/26/14	ELEVATION: 653.0 (MSL) EOB: 61.5 ft.	PAGE 1 OF 2
START: 11/13/14 END: 11/13/14	SAMPLING METHOD: SPT / ST	ENERGY RATIO (%): 77.4	LAT / LONG: 41.464986, -81.693001	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
5.0", **ASPHALT**	652.6																	
13.0", **CONCRETE**	651.5																	
VERY DENSE, DARK GRAY AND GRAY, **GRAVEL WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, SS-1 CONTAINS SLAG, MOIST **(FILL)** @3.0'; SS-2 BECOMES BROWN AND GRAYISH BROWN, HAS CHEMICAL ODOR	649.0		23 50/4"	-	100	SS-1	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
			50/5"	-	100	SS-2	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	
VERY DENSE, BROWN AND BLUE GRAY, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, SS-3 CONTAINS SLAG, SS-3 TO SS-4 CONTAINS CINDERS, DAMP **(FILL)** @7.5'; SS-4 BECOMES BROWN	643.5		20 30 30	77	94	SS-3	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	
			25 34 25	76	100	SS-4	-	25	18	23	21	13	27	20	7	11	A-2-4 (0)	
HARD, BROWN, **SILTY CLAY**, TRACE SAND, TRACE GRAVEL, CONTAINS SILT LENSES AND FEW IRON STAINS, MOIST **(FILL)**	641.0		7 6 9	19	100	SS-5	4.0 - 4.5+	2	4	4	41	49	38	20	18	20	A-6b (11)	
VERY STIFF, LIGHT BROWN TO DARK GRAY, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, CONTAINS IRON STAINS, DAMP **(FILL)**	639.5		5 4 5	12	100	SS-6A	3.75 - 4.0	-	-	-	-	-	-	-	-	19	A-6a (V)	
						SS-6B	-	-	-	-	-	-	-	-	-	16	A-2-4 (V)	
MEDIUM DENSE, DARK GRAY AND BROWN, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, CONTAINS CINDERS, DAMP **(FILL)** @15.0'; SS-7 CONTAINS SLAG	636.0		5 5 5	13	100	SS-7	-	41	19	13	19	8	30	23	7	13	A-2-4 (0)	
STIFF TO HARD, BROWN MOTTLED WITH GRAY AND DARK GRAY, **SILTY CLAY**, TRACE SAND, TRACE GRAVEL, CONTAINS IRON STAINS, MOIST **(FILL)**	633.5		5 3 3	8	100	SS-8	1.5 - 4.5+	4	4	6	44	42	36	19	17	22	A-6b (11)	
STIFF, BROWN, **SILT AND CLAY**, SOME SAND, LITTLE GRAVEL, MOIST	632.8	W				SS-9A	2.00	-	-	-	-	-	-	-	-	21	A-6a (V)	
LOOSE, BROWN, **COARSE AND FINE SAND**, TRACE GRAVEL, TRACE SILT, TRACE CLAY, MOIST TO WET	631.0		3 3 3	8	100	SS-9B	-	-	-	-	-	-	-	-	-	17	A-3a (V)	
LOOSE, GRAYISH BROWN TO DARK GRAY, **SANDY SILT**, TRACE CLAY, TRACE GRAVEL, WET @22.5'; SS-10 SLIGHTLY ORGANIC			3 3 2	6	100	SS-10	-	-	-	-	-	-	-	-	-	34	A-4a (V)	
@25.0'; ST-11 BECOMES LIGHT BROWN	626.0				100	ST-11	-	1	2	46	41	10	NP	NP	NP	22	A-4a (3)	
LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, WET			2 2 4	8	100	SS-12	-	-	-	-	-	-	-	-	-	21	A-3a (V)	
			3 3 4	9	100	SS-13	-	0	3	80	12	5	NP	NP	NP	22	A-3a (0)	
DENSE, GRAYISH BROWN, **SANDY SILT**, LITTLE CLAY, MOIST	619.7																	
			10 16 21	48	100	SS-14	4.5+	-	-	-	-	-	-	-	-	17	A-4a (V)	
STIFF, GRAY, **SILT AND CLAY**, TRACE SAND, MOIST	614.7																	
					100	ST-15	1.25 - 1.75	0	0	1	60	39	30	19	11	22	A-6a (8)	
VERY STIFF, GRAY, **SILTY CLAY**, TRACE SAND, TRACE GRAVEL, MOIST	609.7																	
			4 6 9	19	100	SS-16	2.25 - 2.5	3	2	4	29	62	36	18	18	22	A-6b (11)	
SOFT TO MEDIUM STIFF, GRAY, **SILT AND CLAY**, TRACE SAND, TRACE GRAVEL, MOIST	604.7																	
@50.5'; UNCONFINED: 1943 PSF @ 11.5% STRAIN					100	ST-17	0.25 - 1.0	1	2	3	40	54	31	20	11	24	A-6a (8)	
MEDIUM DENSE, GRAY, **SILT**, SOME CLAY, TRACE SAND, (INTERBEDDED WITH SILT AND CLAY), MOIST	599.7																	
			4 6 6	15	100	SS-18	1.5 - 1.9	-	-	-	-	-	-	-	-	26	A-4b (V)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 5/30/19 13:46 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\1ARCHIVE BY YEAR\2015 ARCHIVE\CUY-CCG7 82380\GINT FILES\CUY-CCG7.GPJ

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
BORING LOG B-008-0-14

DRAWN MJ
CHECKED CH

PID: 82380	SFN:	PROJECT: CUY-CCG7	STATION / OFFSET: 1093+37, 28' RT.	START: 11/13/14	END: 11/13/14	PG 2 OF 2	B-008-0-14

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
MEDIUM DENSE, GRAY, **SILT**, SOME CLAY, TRACE SAND, (INTERBEDDED WITH SILT AND CLAY), MOIST *(continued)*	591.5	EOB 61	4 6 7	17	100	SS-19	2.5 - 4.0	-	-	-	-	-	-	-	-	23	A-4b (V)	

NOTES: GROUNDWATER ENCOUNTERED AT 20.0' DURING DRILLING, 20.0' UPON COMPLETION. CAVE DEPTH 21.5'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED .5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

B-001-0-64

LOG OF BORING

Date Started 3-24-64 | Sampler Type SS | Dia. 1 3/8" | Water Elev. ____
Date Completed 3-26-64 | Casing: Length 20' | Dia. 3 1/2"
Boring No. B-1 | Station & Offset 32+60, 49' LT. (NORTH ABUTMENT) | Surface Elev. 666.6

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
666.6	0														
661.6	4				No Sample Recovered-Fill Material (Driller's description)										VISUAL
	6														
656.6		4/4			Brown Silty Sand w/Cinders (Fill material)										VISUAL
651.6	16	10/5			Dark-Gray Cinders & Ashes-Fill Material (Driller's description)	2									VISUAL
	18														
646.6	20	14/6			Gray & Brown Sandy Gravelly Silt	3	33	8	14	25	20	28	8	25	
	22														
	24														
641.6	26	22/22			Gray Clayey Silt		0	1	3	50	46	28	8	24	
	28														
636.6	30	7/6			No Sample Recovered-Gray Clayey Silt-(Driller's description										VISUAL
634.1		8/11			Gray Clayey Silt	5	5	2	2	54	37	25	7	20	
631.6	36	6/8			Gray Clayey Silt	6	0	1	2	57	40	26	7	21	
629.1		7/17			Gray Silt	7	0	1	1	60	38	21	2	24	
626.6		9/10			Gray Silt	8	0	0	1	59	40	NP	NP	26	
624.1		11/21			Gray Silt	9	0	0	2	60	38	NP	NP	24	
621.6		21/26			Gray Silt	10	0	0	6	77	17	NP	NP	20	
619.1	48	20/25			Gray Silt	11	0	0	4	72	24	NP	NP	18	
616.6	50	17/16			Gray Silt	12	0	0	7	64	29	NP	NP	23	
611.6		16/21			Gray Silt	13	0	1	4	63	32	NP	NP	18	
606.6		14/21			Gray Silt	14	0	0	1	68	31	NP	NP	22	
601.6	66	12/18			Gray Silt	15	0	1	1	59	39	25	6	26	
	68														
596.6	[illegible]	9/15			Gray Silt	16	0	0	2	59	39	23	5	23	
591.6	[illegible]	9/13			Gray Silt	17	0	1	2	64	33	23	3	23	
586.6	80	12/14			Gray Silt	18	0	0	1	66	33	NP	NP	23	
	82														
	84														
581.6	86	11/18			Gray Clayey Silt	19	0	3	6	42	49	28	8	19	
	88														
576.6	90	15/20			Gray Clayey Silt	20	0	2	4	49	45	30	9	22	
	92														
	94														
571.6	96	9/16			Gray Silt & Clay		0	2	4	33	61	32	11	23	
566.6	100	8/16			Gray Clayey Silt		0	4	7	36	53	26	7	16	
.1	102														
	104				TOP OF ROCK										
	106														
	108		3.0	0.0	Shale, gray, argillaceous, with few clay seams above 108.0', fissile, medium-firm and crumbly-in-part above 108.0', generally firm in remainder. Core loss:8%										
	110														
	112		4.4	0.6											
553.6					BOTTOM OF BORING										

B-007-0-60

LOG OF BORING

Date Started 4-7-60 Sampler Type _____ Dia. _____ Water Elev. _____
Date Completed 4-7-60 Casing: Length _____ Dia. _____
Boring No. B-7 Station & Offset 92+87, 85' Rt. Surface Elev. 598.4'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
598.4	0														
596.4	2	7/6			Sandy Gravel	1	70	21	7	-2	-	NP	NP	11	
593.4	4														
	6	16/16			Sandy Silt	2	0	3	28	53	11	NP	NP	23	
	8														
588.4	10	PS			Silt	3	0	2	7	63	28	NP	NP	17	
586.9	12	4/7			Silt and Clay	4	0	6	8	37	49	34	14	22	
583.4	14														
581.9	16	PS			Silt and Clay	5	0	1	3	40	56	32	13	21	
	18	5/9			Silt and Clay	6	0	2	2	47	49	34	13	22	
578.4	20														
576.9	22	PS			Silt and Clay	7	0	1	2	44	53	27	11	20	
	24	5/9			Silt and Clay	8	0	3	3	48	46	33	12	27	
573.4	26	PS			Silt	9	0	0	0	59	41	26	6	23	
571.9	28	7/9			Silt	10	0	0	2	61	37	28	6	20	
568.4	30														
	32	3/6			Silt and Clay	11	0	2	4	37	56	32	11	22	
563.4	34														
562.7	36	PS			Silt and Clay	12	0	2	3	37	58	32	12	22	
561.9					Clayey Silt	13	0	2	4	59	35	30	10	22	
	38	6/8			Silt and Clay	14	4	5	6	32	53	31	11	31	
558.4	40														
		PS			Silt and Clay	15	0	3	4	30	63	31	11	22	
556.9	42	6/11			Silt and Clay	16	0	1	3	34	62	34	11	25	
	44														
	46														
550.9	48														
					TOP OF ROCK										
	50		6.4	0.1	Shale, dark-gray, argillaceous, calcareous in bottom 0.5', fissile, firm. Core loss 1%.										
544.4	52														
	54				BOTTOM OF BORING										

B-010-0-64

LOG OF BORING

Date Started 4-12-64
Date Completed 4-13-64
Boring No. B-10
Sampler Type SS Dia. 1 3/8"
Casing: Length ____ Dia. ____
Station & Offset 930+60, 2' Lt.
Water Elev. ____
Surface Elev. 617.9'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
617.9	0														
615.9	2	3/3			Silty Gravelly Sand (Fill Material)	1	49	18	12	11	10	NP	NP	25	
	4														
612.9	6	1/3			Brown Silty Sand and Gravel (Fill Material)	2	V	I	S	U	A	L			
610.4	8	3/6			Gray Sand and Gravel with Stone Fragments (Fill Material)	3	V	I	S	U	A	L			
607.9	10	10/9			Gray Silty Sandy Gravel with Stone Fragments (Fill Material)	4	V	I	S	U	A	L			
605.4	12														
	14	3/4			Silty Gravel (Fill Material)	5	73	8	7	1	11	NP	NP	29	
602.9	16	PS			Silty Clay	6	0	1	3	40	56	42	16	22	
601.4	18	8/16			Silt and Clay	7	0	2	2	41	55	37	14	23	
597.9	20														
	22	PS 4/5			Silt and Clay Silt and Clay	8 9	0 0	2 1	3 1	42 49	53 49	35 31	15 11	21 28	
596.4	24														
592.9	26	PS			Silt	10	0	0	0	59	41	26	6	23	
591.4	28	5/6			Silt	11	0	0	0	57	43	25	4	21	
587.9	30														
586.4	32	PS 7/10			Clayey Silt Clayey Silt	12 13	0 0	0 1	1 0	58 53	41 46	27 28	7 7	24 25	
582.9	34														
581.4	36	PS 7/8			Clayey Silt Silt	14 15	0 0	1 0	1 1	56 50	42 49	27 27	7 5	23 32	
577.9	38														
576.4	40	PS 5/5			Silt Clayey Silt	16 17	0 0	0 0	0 1	67 50	33 49	22 27	1 7	- 25	
572.9	42														
571.4	44	PS			Silt	18	0	3	14	41	42	23	5	-	
	46	PS													
567.9	48														
566.4	50	PS 4/7			Silt and Clay Silt and Clay	19 20	0 0	2 5	4 6	35 25	59 64	34 31	13 11	21 31	
562.9	52														
561.4	54	PS 6/7			Silt and Clay Silt and Clay	21 22	0 0	2 3	3 3	37 38	58 56	35 31	12 12	20 33	
557.9	56														
556.4	58	PS 8/15			Sandy Silt Silt and Clay	23 24	9 0	1 4	11 3	41 36	38 57	25 31	7 11	14 30	
552.9	60														
551.4	62	PS			Silt and Clay	25	0	4	3	37	56	34	14	19	
550.4	64	11/18			Silt	26	0	4	7	38	51	27	6	18	
	66														
	68				Gray calcareous clay with shale fragments. (Till)										
	70														
	72														
	74														
542.1	76				TOP OF ROCK										
	78				Shale, gray, fissile, firm, broken, dense in part. Core loss 34%.										
538.9					BOTTOM OF BORING										

State of Ohio
Department of Highways
Testing Laboratory

X-014-1-66

LOG OF BORING

Date Started 6-15-66 Sampler Type ____ Dia. ____ Water Elev. ____
Date Completed 6-16-66 Casing: Length 40' Dia. 3"

Project Identification: CUYAHOGA
CUY-71-17.83
Slope Indicator

Boring No. 14-1 Station & Offset 929+15, 137' Rt. Surface Elev. 596.4

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.	Physical Characteristics % Agg.	% C.S	% F.S	% Silt	% Clay	L.L.	P.I.	W.C	SHTL Class
596.4	0															
	2															
	4															
	6															
	8															
	10															
	12															
	14															
	16															
	18															
	20															
	22															
	24															
	26															
	28															
	30															
	32															
	34															
560.4	36															

Particle Sizes: Agg = >2.00mm, Coarse Sand = 2.00-0.42 mm, Fine Sand = 0.42-0.074mm, Silt = 0.074-0.005mm, Clay = <0.005mm

SHEET 3 of 20 sheets

Boring No. 14-1 Station & Offset 929+15, 137' Rt. Surface Elev. 596.4' Project: CUY-71-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
560.4	38			
	40			
	42			
	44			
	46			
	48			
	50			
544.4	52			TOP OF ROCK
	54			
	56			
	58			
	60			
	62			
533.4	64			BOTTOM OF BORING
	66			
	68			
	70			
	72			
	74			
	76			
	78			
	80			

SHEET 4 of 20 sheets

State of Ohio
Department of Highways
Testing Laboratory

X-014-2-66

LOG · OF BORING

Date Started 6/15/66 Sampler Type _____ Dia. _____ Water Elev _____
Date Completed _____ Casing: Length 110' Dia. 3"

Project Identification CUYAHOGA CUY-77-17.83

Boring No. 14-2 Station & Offset 929+30, 11' Lt. Surface Elev. 644.4 Slope Indicator

Elev	Depth	Std. Pen. (N)	Rec. ft	Loss ft	Description	Field No.	Lab. Nos.	Physical Characteristics % Agg	% C.S	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C	SHTL Class
644.4	0															
	2															
	4															
	6															
	8															
	10															
	12															
	14															
	16															
626.4	18				Gray Silty Sand. (Driller's Description)											
	20															
	22															
	24															
	26															
	28															
	30															
	32															
	34															
	36															

Particle Sizes: Agg= >2.00mm, Coarse Sand=2.00-0.42mm, Fine Sand=0.42-0.074mm, Silt=0.074-0.005mm, Clay= <0.005mm

Boring No. 14-2 Station & Offset 929+30, 11' Lt. Surface Elev. 644.4' Project: CUY-77-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
	38			
604.4	40			Gray Silty Sand
	42			
	44			
	46			
	48			
	50			
	52			
	54			
	56			
	58			
	60			Gray Silt and Clay (Driller's Description)
	62			
	64			
	66			
	68			
	70			
	72			
	74			
	76			
	78			
	80			

SHEET 6 of 31 sheets

Boring No. 14-2 Station & Offset 929+30, 11' Lt. Surface Elev. 644.4 Project: CUY-71-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
	82			
	84			
	86			
	88			
	90			
	92			Gray Silt and Clay (Driller's Description)
	94			
	96			
	98			
	100			
541.4	102			TOP OF ROCK
	104			
	106			
	108			Gray Shale
	110			
	112			
	114			
529.4	116			
	118			BOTTOM OF BORING
	120			
	122			
	124			

SHEET 7 OF 20 SHEETS

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
HISTORIC BORING LOG X-014-2-66

DRAWN EB
CHECKED CH

X-017-2-66

State of Ohio
Department of Highways
Testing Laboratory

LOG OF BORING

Date Started 6-16-66 Sampler Type ____ Dia. ____ Water Elev. ____
Date Completed 6-16-66 Casing Length 115' Dia. 3"

Project Identification: CUYAHOGA
CUY-71-17.83
Slope Indicator

Boring No. 17-2 Station & Offset 931+39, 3' Rt. Surface Elev. 649.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.	Physical Characteristics % Agg	% C.S	% F.S	% Silt	% Clay	L.L.	Pl.	W.C	SHTL Class
649.8	0				Brown Silty Sand (Driller's Description)											
	2															
	4															
	6															
	8															
	10															
	12															
	14															
	16															
	18															
	20															
	22															
	24															
	26															
	28															
	30															
	32															
	34															
613.8	36															

Particle Sizes: Agg= >2.00mm, Coarse Sand=2.00-0.42mm, Fine Sand=0.42-0.074mm, Silt=0.074-0.005mm, Clay= <0.005mm

SHEET 14 of 20 sheets

Boring No. 17-2 Station & Offset 931+39, 3' Rt. Surface Elev. 649.8' Project: CUY-71-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
613.8	38			
	40			Brown Silty Sand (Driller's Description)
607.8	42			
	44			
	46			
	48			
	50			
	52			
	54			
	56			
	58			
	60			Gray Clayey Silt (Driller's Description)
	62			
	64			
	66			
	68			
	70			
	72			
	74			
	76			
	78			
569.8	80			

SHEET 15 of 20 sheets

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
HISTORIC BORING LOG X-017-2-66

DRAWN EB
CHECKED CH

Boring No. 17-2 Station & Offset 931+39, 3' Rt. Surface Elev. 649.8' Project: CUY-71-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
569.8	82			
	84			
	86			
	88			
	90			
	92			
	94			Gray Clayey Silt (Driller's Description)
	96			
	98			
	100			
	102			
	104			
	106			
541.8	108			TOP OF ROCK
	110			Shale
	112			
	114			
534.8	116			BOTTOM OF BORING
	118			
	120			
	122			
	124			

SHEET 14 of 20 sheets

X-017-3-66

State of Ohio
Department of Highways
Testing Laboratory

LOG · OF BORING

Date Started 6/16/66 Sampler Type _____ Dia. _____ Water Elev. _____
Date Completed 6/17/66 Casing: Length 143' Dia. 3"

Project Identification: CUYAHOGA
CUY-71-17.83
Slope Indicator

Boring No. 17-3 Station & Offset 931+46, 257' Lt. Surface Elev. 684.1'

Elev.	Depth	Str. Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
684.1	0															
	2															
	4															
	6															
	8															
	10				Gray Silty Sand (Driller's Description)											
	12															
	14															
	16															
	18															
	20															
662.6	22															
	24															
	26															
	28				Gray Clayey Silt With Some Gravel (Driller's Description)											
	30															
	32															
	34															
	36															

SHEET 17 of 20 sheets

Particle Sizes: Agg= >2.00mm, Coarse Sand=2.00-0.42mm, Fine Sand=0.42-0.074mm, Silt=0.074-0.005mm, Clay= <0.005mm

Boring No. 17-3 Station & Offset 931+46, 257' Lt. Surface Elev. 684.1' Project: CUY-71-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
648.1	38			
	40			
	42			
	44			
	46			
	48			
	50			
	52			
	54			
	56			
	58			Gray Clayey Silt (Driller's Description)
	60			
	62			
	64			
	66			
	68			
	70			
	72			
	74			
	76			
	78			
	80			

SHEET 18 of 20 sheets

Boring No. 17-3 Station & Offset 931+46, 257' Lt. Surface Elev. 684.1 Project: CUY-77-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
604.1	82			
	84			
	86			
	88			
	90			
	92			
	94			
	96			
	98			
	100			Gray Clayey Silt (Driller's Description)
	102			
	104			
	106			
	108			
	110			
	112			
	114			
	116			
	118			
	120			
	122			
	124			

SHEET 19 of 20 sheets

Boring No. 17-3 Station & Offset 931+46, 257' Lt. Surface Elev. 684.1 Project: CUY-77-17.83 - Slope Indicator

Elev.	Depth	Rec. ft.	Loss ft.	Description
	126			
	128			
	130			
	132			Gray Clayey Silt (Driller's Description)
	134			
	136			
	138			
544.1	140			TOP OF ROCK
541.1	142			
	144			BOTTOM OF BORING
	146			
	148			
	150			
	152			
	154			
	156			
	158			
	160			
	162			
	164			
	166			
	168			

SHEET 20 of 20 sheets

CUY-CCG7

STRUCTURE FOUNDATION EXPLORATION
HISTORIC BORING LOG X-017-3-66

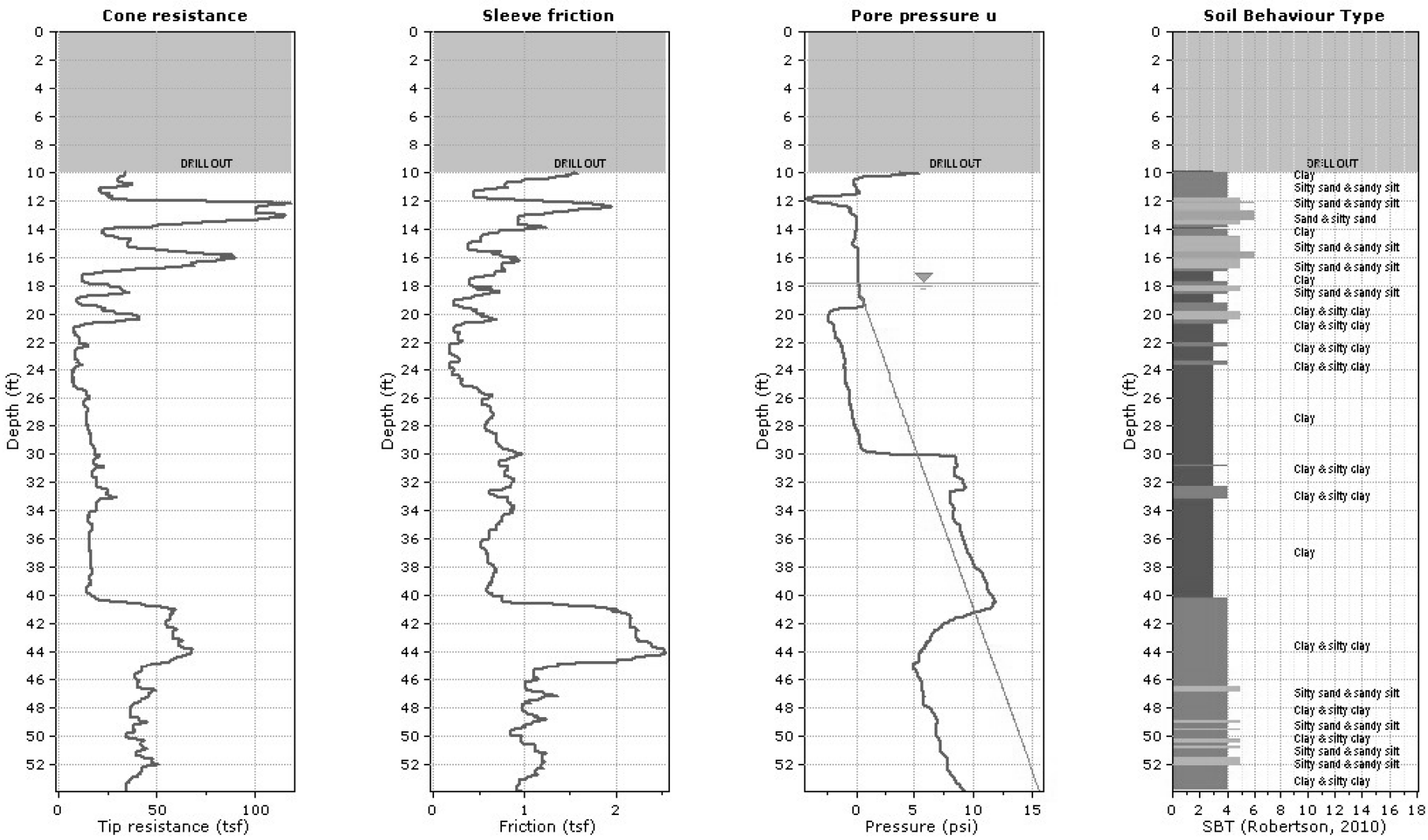
DRAWN EB
CHECKED CH

OHIO DEPARTMENT OF TRANSPORTATION

Office of Geotechnical Engineering
Geology, Exploration and Laboratory Section
http://portal.dot.state.oh.us/Divisions/Engineering/Geotechnical

Project: Barr Engineering CCG7A
Location: I-71 South

CPT: C-001-0-14
Total depth: 53.92 ft, Date: 11/13/2014
Surface Elevation: 644.70 ft
Coords: lat 41.461886° lon -81.694241°



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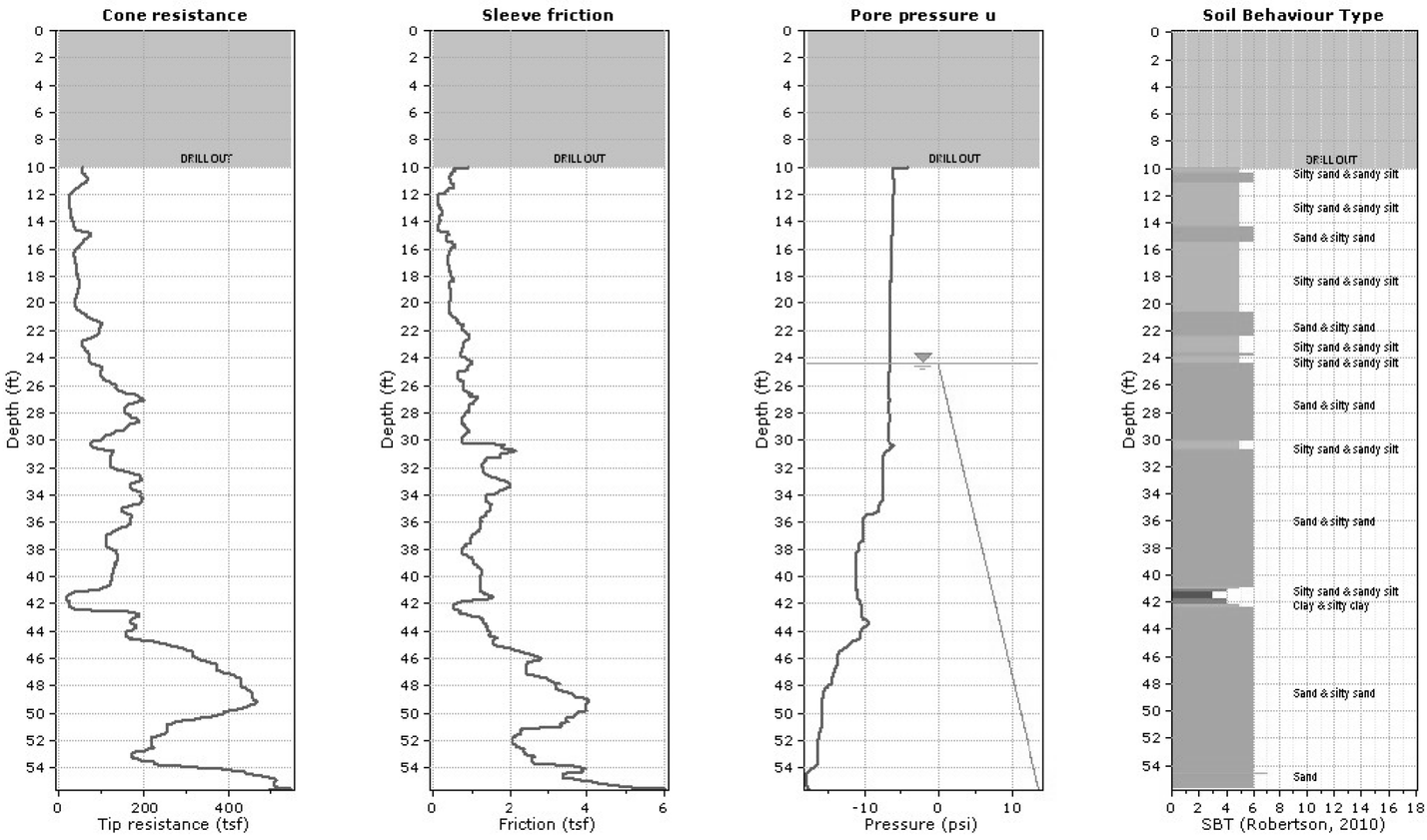
OHIO DEPARTMENT OF TRANSPORTATION

Office of Geotechnical Engineering
Geology, Exploration and Laboratory Section
http://portal.dot.state.oh.us/Divisions/Engineering/Geotechnical

Project: Barr Engineering CCG7A
Location: I-71 South

CPT: C-003-0-14
Total depth: 55.61 ft, Date: 11/12/2014
Surface Elevation: 647.10 ft
Coords: lat 41.462695° lon -81.694034°



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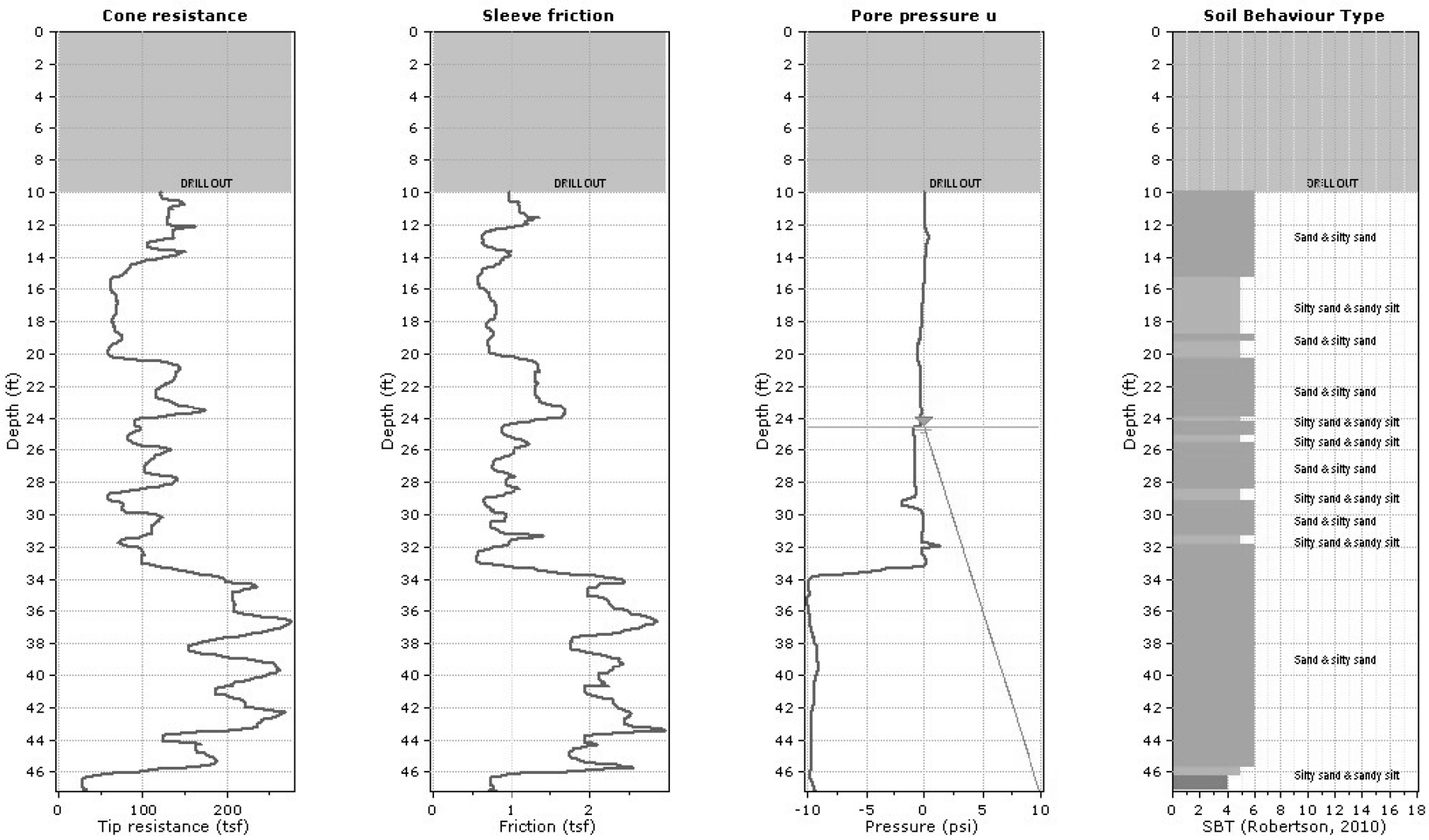
OHIO DEPARTMENT OF TRANSPORTATION

Office of Geotechnical Engineering
Geology, Exploration and Laboratory Section
http://portal.dot.state.oh.us/Divisions/Engineering/Geotechnical

Project: Barr Engineering CCG7A
Location: I-71 South

CPT: C-005-0-14
Total depth: 47.19 ft, Date: 11/12/2014
Surface Elevation: 649.50 ft
Coords: lat 41.463662° lon -81.693789°



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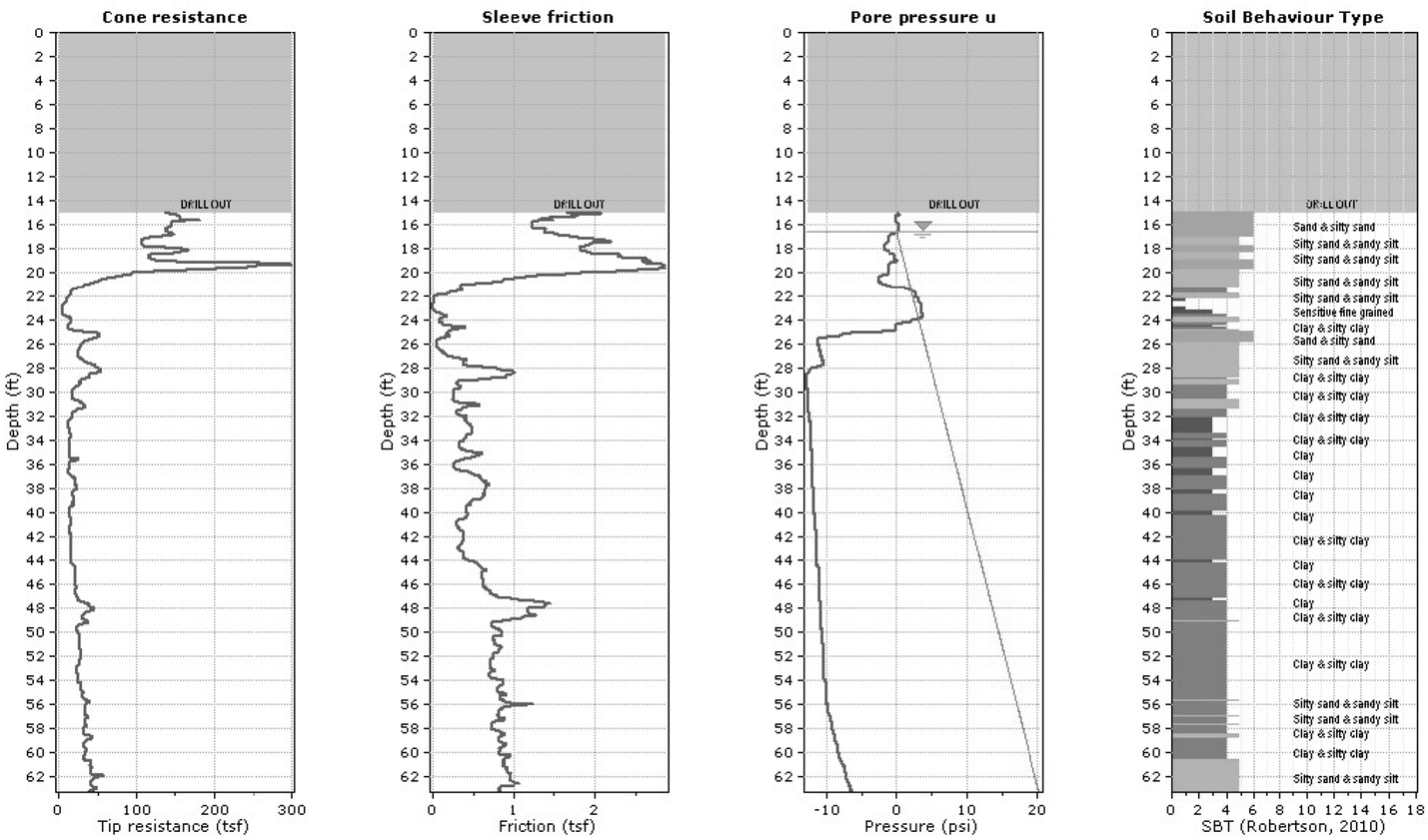
OHIO DEPARTMENT OF TRANSPORTATION

Office of Geotechnical Engineering
Geology, Exploration and Laboratory Section
http://portal.dot.state.oh.us/Divisions/Engineering/Geotechnical

Project: Barr Engineering CCG7A
Location: I-71 South

CPT: C-007-0-14
Total depth: 63.35 ft, Date: 11/13/2014
Surface Elevation: 651.90 ft
Coords: lat 41.464475° lon -81.693581°



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