



O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_GT002.dgn GT002 8/20/2018 8:40:20 AM arolland

**BALLOON LEGEND**

- (AB-#) ABANDON
- (B-#) CONCRETE BARRIER
- (BR-#) CONCRETE BARRIER REMOVED
- (D-#) CATCH BASINS, MANHOLES AND INLETS
- (DJ-#) CATCH BASINS, MANHOLES AND INLETS ADJUSTED/RECONSTRUCTED TO GRADE
- (DR-#) CATCH BASINS, MANHOLES AND INLETS REMOVED
- (DV-#) DRIVEWAYS
- (E-#) EROSION CONTROL
- (EX-#) EXISTING CATCH BASINS, MANHOLES AND INLETS
- (F-#) FENCE
- (FP-#) FILL & PLUG
- (FR-#) FENCE REMOVED
- (G-#) GUARDRAIL
- (GR-#) GUARDRAIL REMOVED
- (HR-#) HEADWALL REMOVED
- (HW-#) HEADWALL
- (LS-#) LANDSCAPING
- (P-#) DRAINAGE PIPES
- (PR-#) PIPES REMOVED
- (R-#) MISCELLANEOUS REMOVALS
- (SA-#) SANITARY MANHOLE
- (SJ-#) SANITARY STRUCTURE ADJUSTED/RECONSTRUCTED TO GRADE
- (SL-#) SANITARY LATERAL
- (SM-#) SEEDING AND MULCHING
- (SP-#) SANITARY PIPE
- (SR-#) SANITARY REMOVAL
- (U-#) UNDERDRAINS
- (W-#) WATER WORK
- (WJ-#) WATER WORK ADJUSTED TO GRADE
- (WR-#) WATER WORK REMOVALS

**DESIGN DESIGNATIONS**

	I-76		
CURRENT YEAR ADT (2020)	77,400		
DESIGN YEAR ADT (2040)	98,000		
DESIGN HOURLY VOLUME (2040)	7,340		
DIRECTIONAL DISTRIBUTION	0.57		
TRUCKS (24 HOUR B & C)	0.15		
TD	0.09		
DESIGN SPEED	60 MPH		
LEGAL SPEED	55 MPH		
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN INTERSTATE		
NHS PROJECT	YES		

	STATE ST.	WOOSTER ROAD	RELOCATED CENTRAL AVE/ GOODRICH AVE./ ROMIG AVE.
CURRENT YEAR ADT (2020)	13,900	9,000	-
DESIGN YEAR ADT (2040)	14,750	9,840	-
DESIGN HOURLY VOLUME (2040)	1,450	950	-
DIRECTIONAL DISTRIBUTION	0.66	0.58	-
TRUCKS (24 HOUR B & C)	0.03	0.07	-
TD	0.02	0.04	-
DESIGN SPEED	40 MPH	40 MPH	30 MPH
LEGAL SPEED	35 MPH	35 MPH	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN COLLECTOR	URBAN PRINCIPAL ARTERIAL	URBAN LOCAL
NHS PROJECT	NO	NO	NO

**EXISTING UTILITY SYMBOL LEGEND**

- ⌵ = Guy Pole
- ⚑ = Flag Pole
- ⚡ = Utility Pole
- ⚡ = Power Pole
- ⚡ = Yard Light
- ⊕ = Parking Meters
- ⊙ = Parking Meter
- ❄ = Air Condition Unit
- ↓ = Guy Wire w/Anchor
- ⦿ = Light Pole
- ⦿ = Light Pedestal
- ⦿ = Electric Marker Post
- ⦿ = Electric Meter
- ⦿ = Electric Transformer
- ⦿ = Electric Pedestal
- ⦿ = Electric Tower
- ⦿ = Electric Outlet
- ⦿ = Electric Pull Box
- ⦿ = Electric Manhole
- ⦿ = Gas Valve
- ⦿ = Gas Service
- ⦿ = Gas Marker Post
- ⦿ = Gas Meter/ Regulator
- ⦿ = Tank (Gas, Propane)
- ⦿ = Fire Hydrant
- ⦿ = Water Valve
- ⦿ = Water Manhole
- ⦿ = Water Well
- ⦿ = Water Meter
- ⦿ = Water Spigot / Tap
- ⦿ = Cistern
- ⦿ = Sprinkler
- ⦿ = Sprinkler Control Box
- ⦿ = Monitoring Well
- ⦿ = Cable TV Pole
- ⦿ = Cable TV Marker Post
- ⦿ = Cable TV Pedestal
- ⦿ = Telephone Pole
- ⦿ = Telephone Marker Post
- ⦿ = Telephone Pedestal
- ⦿ = Telephone Booth/or Drive-Up
- ⦿ = Traffic Lighting Control Box
- ⦿ = Traffic Lighting Pull Box
- ⦿ = Sign
- ⦿ = Curb Inlet
- ⦿ = Catch Basin
- ⦿ = Cleanout
- ⦿ = Sanitary Manhole
- ⦿ = Storm Manhole
- ⦿ = Telephone Manhole

**PROPOSED UTILITY SYMBOL LEGEND**

- ▣ = Proposed Catch Basins
- ⦿ = Proposed Manhole
- ⦿ = Manhole Adjusted To Grade
- ▬ = Proposed Exfiltration Trench
- ⦿ = Proposed Water Valve
- ⦿ = Proposed Fire Hydrant
- ⦿ = Sanitary Manhole Adjusted To Grade
- ⦿ = Proposed Traffic Pullbox
- ⦿ = Proposed Conventional Luminaire
- ⦿ = Proposed Lighting Pullbox
- ⦿ = Proposed Decorative Luminaire
- ⦿ = Proposed Signal Pole Pedestal
- ⦿ = Proposed Signal Pole
- ⦿ = Test Hole location

**UTILITY LINE LEGEND**

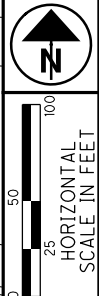
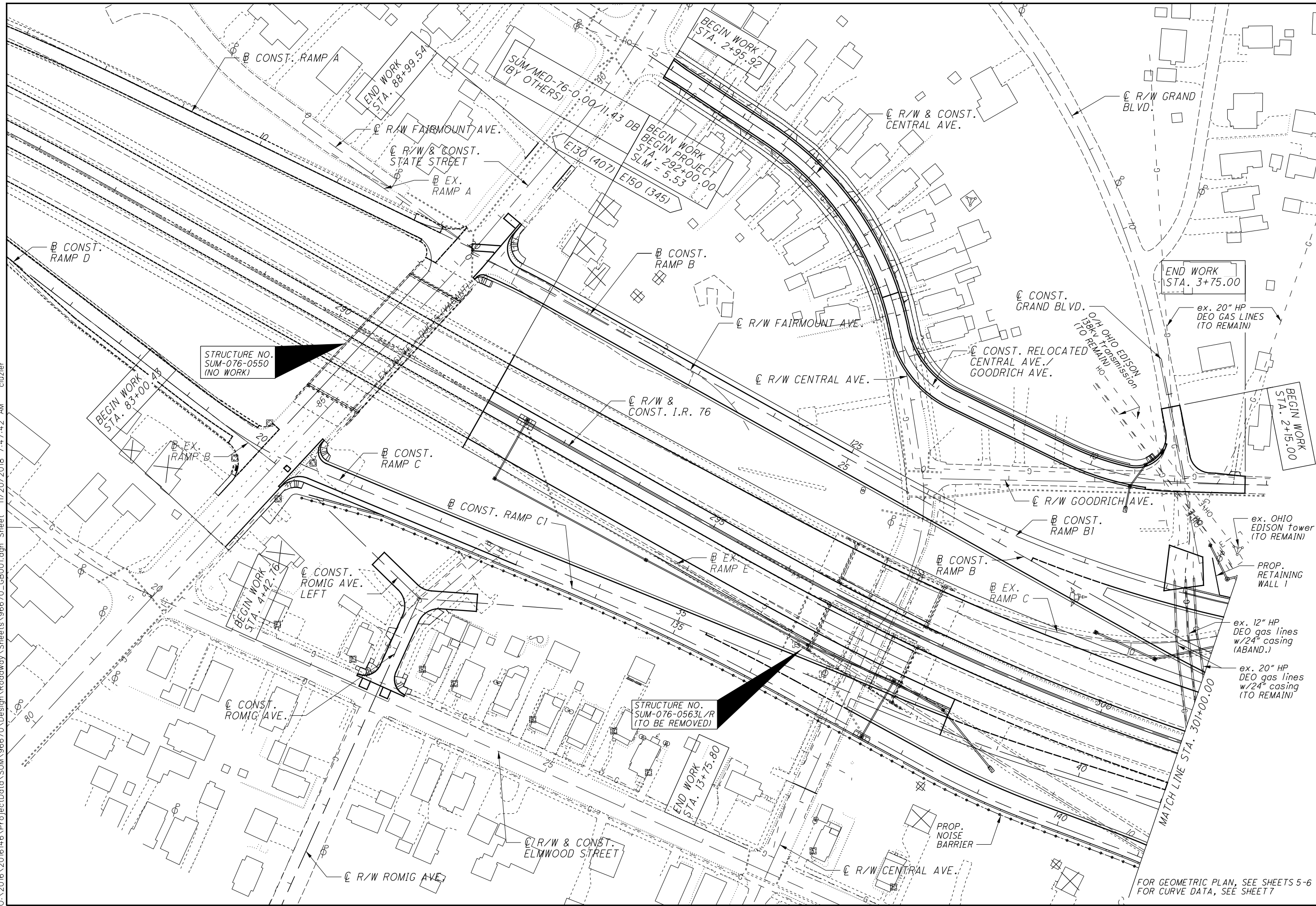
- W— = Water Line
- G— = Gas Line
- SAN— = Sanitary Line
- E— = Underground Electric
- P— = Propane Line
- T— = Underground Telephone
- D— = Diesel
- CATV— = Cable TV.
- TR— = Signal Wiring

CALCULATED  
ATR  
CHECKED  
CWL

**PLAN LEGEND AND DESIGN DESIGNATIONS**

**SUM-76-5.53**

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**SCHEMATIC PLAN**

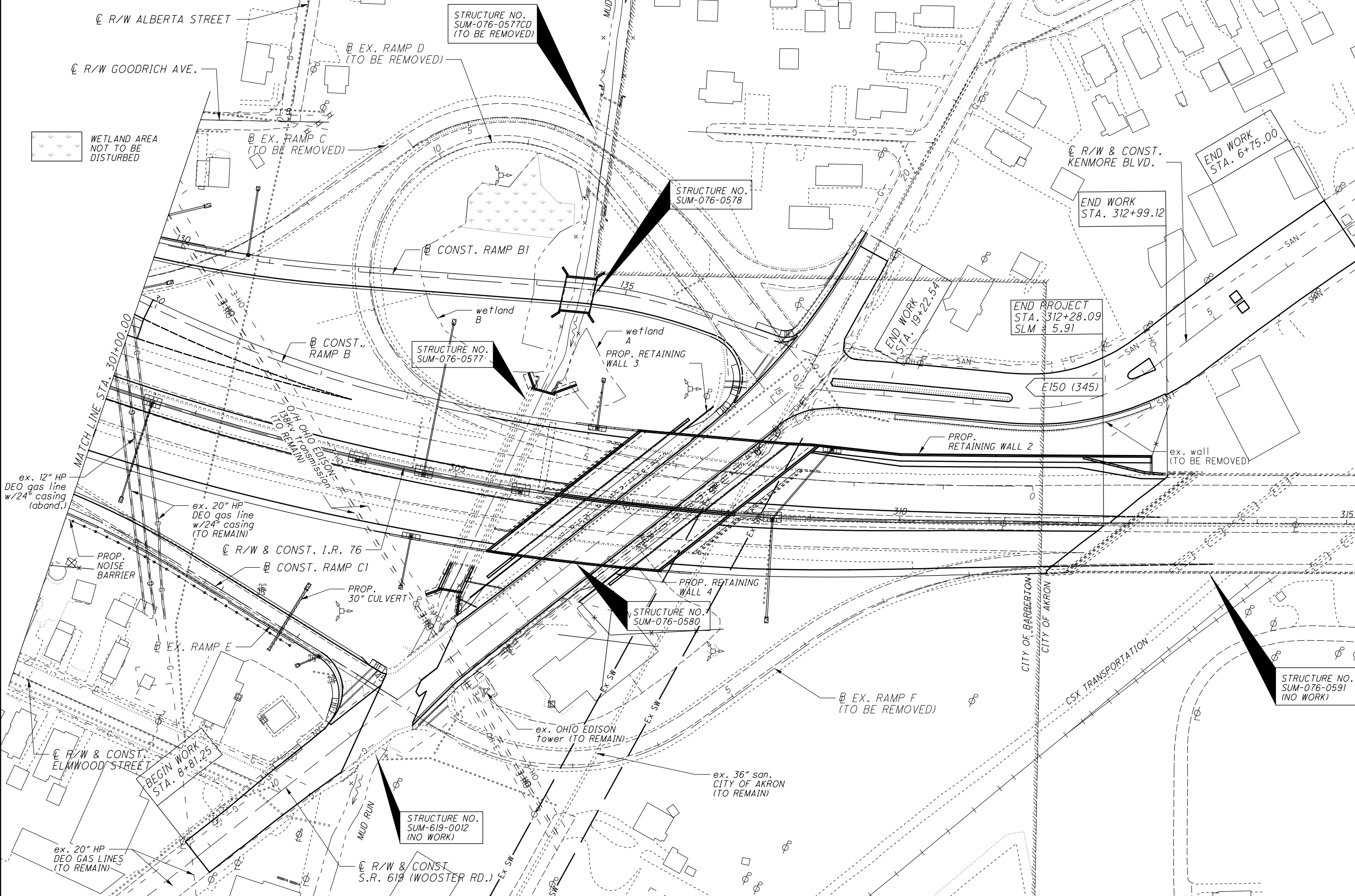
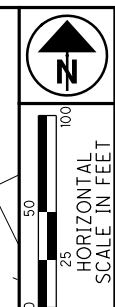
**SUM-76-5.53**

STRUCTURE NO.  
SUM-076-0550  
(NO WORK)

STRUCTURE NO.  
SUM-076-0563L/R  
(TO BE REMOVED)

FOR GEOMETRIC PLAN, SEE SHEETS 5-6  
FOR CURVE DATA, SEE SHEET 7

FOR GEOMETRIC PLAN, SEE SHEETS 5 - 6  
FOR CURVE DATA, SEE SHEET 7



**SCHEMATIC PLAN**

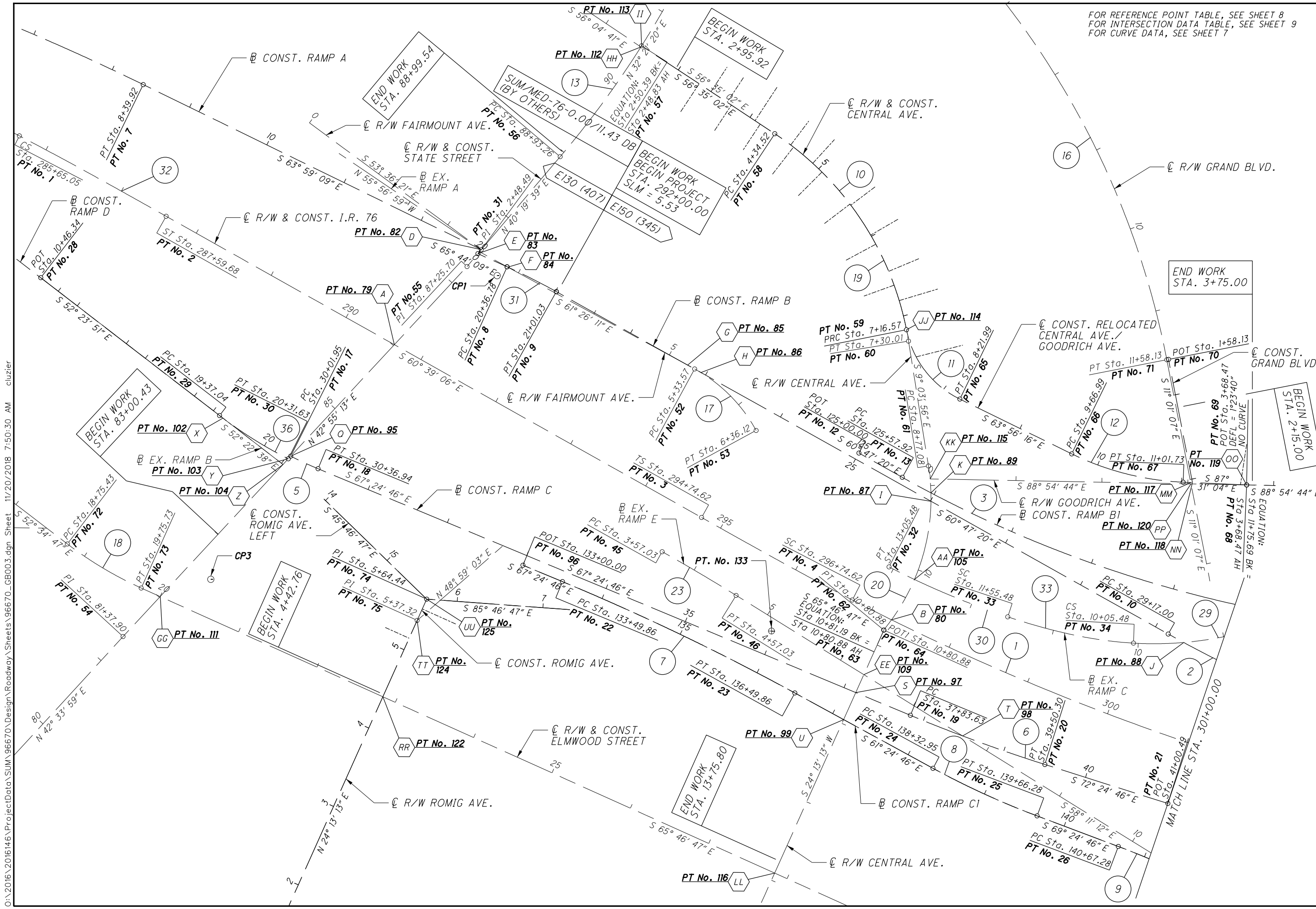
**SUM-76-5.53**

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FOR REFERENCE POINT TABLE, SEE SHEET 8  
FOR INTERSECTION DATA TABLE, SEE SHEET 9  
FOR CURVE DATA, SEE SHEET 7



0 50 100  
25  
HORIZONTAL  
SCALE IN FEET



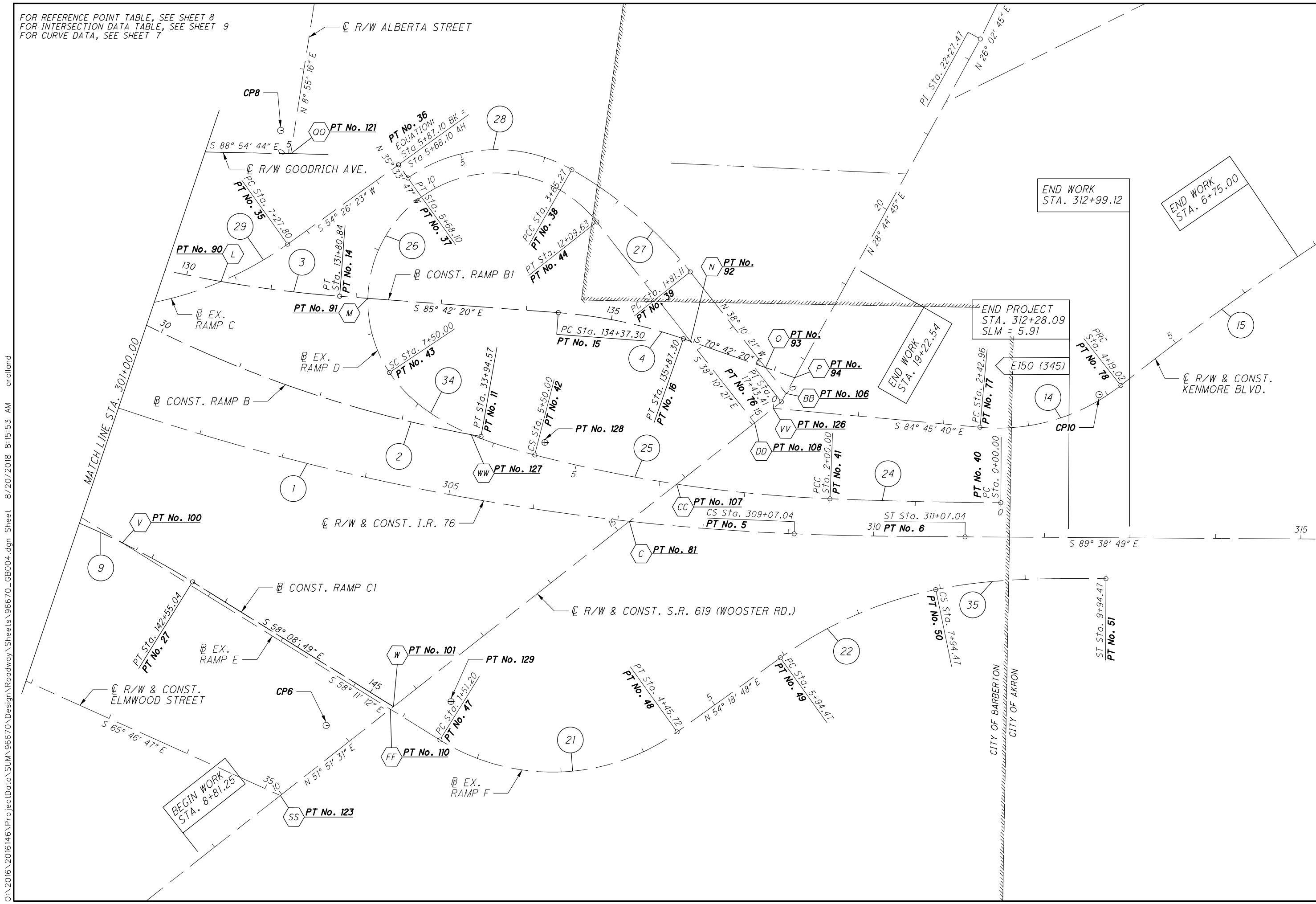
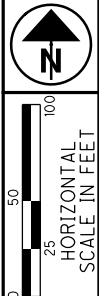
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GEOMETRIC PLAN

SUM-76-5.53

5  
672

FOR REFERENCE POINT TABLE, SEE SHEET 8  
 FOR INTERSECTION DATA TABLE, SEE SHEET 9  
 FOR CURVE DATA, SEE SHEET 7



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**GEOMETRIC PLAN**

**SUM-76-5.62**

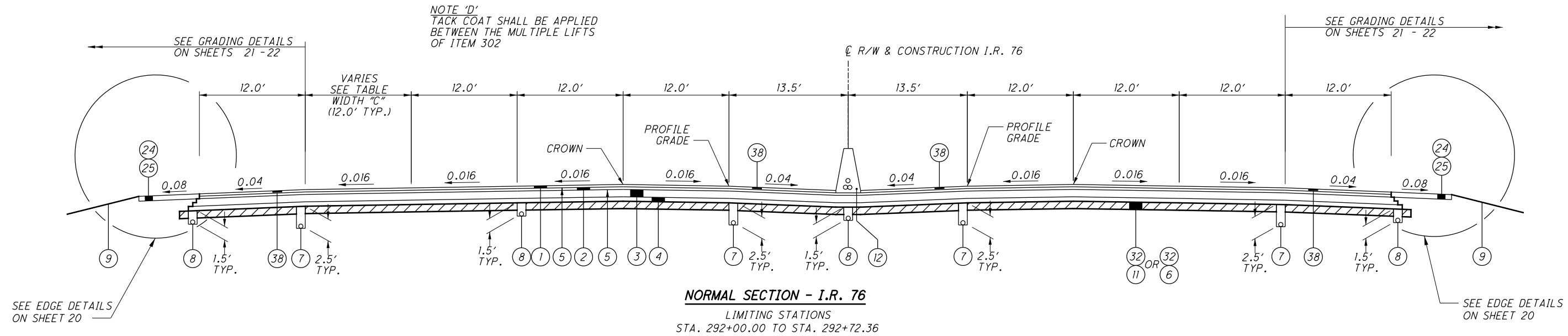




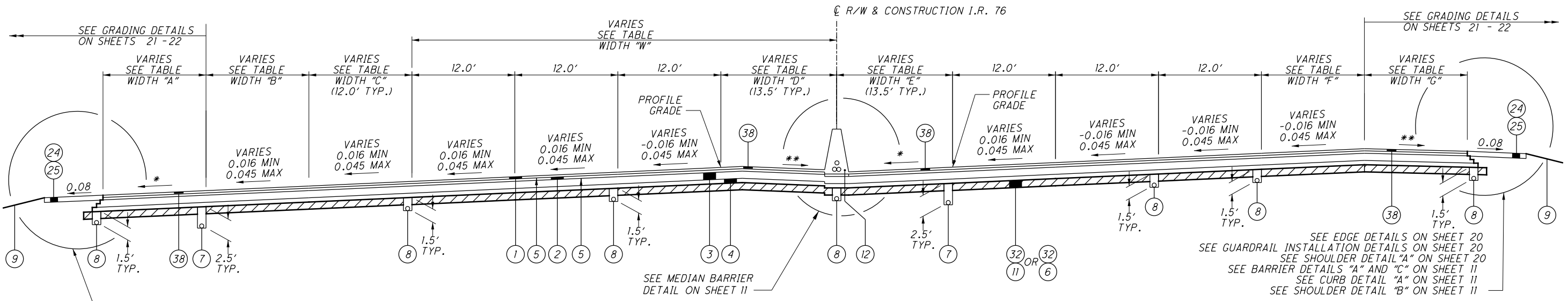


INTERSECTION DATA TABLE		INTERSECTION DATA TABLE	
A	STA. 290+64.47; C R/W & CONST. I.R. 76 STA. 86+01.56; C R/W & CONST. STATE ST.	AA	STA. 12+72.50; E EX. RAMP C STA. 3+68.47+A56:B86; C CONST. CENTRAL AVE.
B	STA. 297+25.79; C R/W & CONST. I.R. 76 STA. 10+65.94; C R/W CENTRAL AVE.	BB	STA. 0+00.00; E EX. RAMP C STA. 17+54.47; C R/W & CONST. S.R. 619 (WOOSTER RD.)
C	STA. 307+13.56; C R/W & CONST. I.R. 76 STA. 15+17.17; C R/W & CONST. S.R. 619 (WOOSTER RD.)	CC	STA. 3+80.20; E EX. RAMP D STA. 15+87.65; C R/W & CONST. S.R. 619 (WOOSTER RD.)
D	STA. 12+77.75; E CONST. RAMP A STA. 0+00.00; E EX. RAMP A STA. 2+48.49; C R/W FAIRMOUNT AVE. STA. 87+51.44; C R/W & CONST. STATE ST.	DD	STA. 15+08.53; E EX. RAMP D STA. 17+03.58; C R/W & CONST. S.R. 619 (WOOSTER RD.)
E	STA. 19+99.55; E CONST. RAMP B STA. 87+45.28; C R/W & CONST. STATE ST.	EE	STA. 6+31.96; E EX. RAMP E STA. 11+37.79; C R/W CENTRAL AVE.
F	STA. 20+37.71; E CONST. RAMP B STA. 2+85.94; C R/W FAIRMOUNT AVE.	FF	STA. 14+50.67; E EX. RAMP E STA. 0+82.82; E EX. RAMP F STA. 11+61.38; C R/W & CONST. S.R. 619 (WOODSTER RD.)
G	STA. 22+76.07; E CONST. RAMP B STA. 5+24.24; C R/W FAIRMOUNT AVE.	GG	STA. 82+01.41; C R/W & CONST. STATE ST. STA. 20+00.00; C R/W & CONST. ELMWOOD ST.
H	STA. 22+93.88; E CONST. RAMP B STA. 5+42.05; C R/W FAIRMOUNT AVE.	HH	STA. 90+51.92; C R/W & CONST. STATE ST. STA. 2+48.83; C R/W CENTRAL AVE.
I	STA. 26+00.61; E CONST. RAMP B STA. 9+18.28; C R/W CENTRAL AVE.	II	STA. 90+53.48; C R/W & CONST. STATE ST. STA. 2+48.83; C R/W & CONST. CENTRAL AVE.
J	STA. 29+37.48; E CONST. RAMP B STA. 9+47.03; E EX. RAMP C	JJ	STA. 7+16.57; C R/W CENTRAL AVE. STA. 7+16.57; C CONST. CENTRAL AVE.
K	STA. 125+95.79; E CONST. RAMP B1 STA. 9+08.51; C R/W CENTRAL AVE.	KK	STA. 8+92.27; C R/W CENTRAL AVE. STA. 0+00.00; C R/W GOODRICH AVE.
L	STA. 130+40.93; E CONST. RAMP B1 STA. 8+17.11; E EX. RAMP C	LL	STA. 13+90.88; C R/W CENTRAL AVE. STA. 27+84.09; C R/W & CONST. ELMWOOD ST.
M	STA. 132+13.88; E CONST. RAMP B1 STA. 8+41.70; E EX. RAMP D	MM	STA. 11+10.58; C CONST. RELOCATED CENTRAL AVE. STA. 13+03.63; C R/W GRAND BLVD.
N	STA. 135+96.21; E CONST. RAMP B1 STA. 13+87.18; E EX. RAMP D	NN	STA. 11+12.64; C CONST. RELOCATED CENTRAL AVE. STA. 3+04.11; C CONST. GRAND BLVD.
O	STA. 136+89.19; E CONST. RAMP B1 STA. 0+38.65; E EX. RAMP C	OO	STA. 3+68.47; C CONST. RELOCATED CENTRAL AVE. STA. 3+68.47; C R/W GOODRICH AVE.
P	STA. 137+25.23; E CONST. RAMP B1 STA. 17+75.54; C R/W & CONST. S.R. 619 (WOOSTER RD.)	PP	STA. 3+03.72; C R/W GOODRICH AVE. STA. 13+05.25; C R/W GRAND BLVD.
Q	STA. 30+01.95; E CONST. RAMP C STA. 84+24.37; C R/W & CONST. STATE ST.	QQ	STA. 5+02.27; C R/W GOODRICH BLVD. STA. 0+00.00; C R/W ALBERTA ST.
R	NOT USED	RR	STA. 22+84.09; C R/W & CONST. ELMWOOD ST. STA. 4+39.92; C R/W ROMIG AVE.
S	STA. 37+14.84; E CONST. RAMP C STA. 11+60.61; C R/W CENTRAL AVE.	SS	STA. 35+19.74; C R/W & CONST. ELMWOOD ST. STA. 9+97.81; C R/W & CONST. S.R. 619 (WOOSTER RD.)
T	STA. 38+49.03; E CONST. RAMP C STA. 7+67.24; E EX. RAMP E	TT	STA. 5+37.32; C CONST. ROMIG AVE. STA. 5+37.32; C R/W ROMIG AVE.
U	STA. 137+14.56; E CONST. RAMP C1 STA. 11+95.08; C R/W CENTRAL AVE.	UU	STA. 5+64.44; C CONST. ROMIG AVE. STA. 15+64.44; C CONST. ROMIG AVE. LEFT
V	STA. 141+60.93; E CONST. RAMP C1 STA. 10+81.57; E EX. RAMP E	VV	STA. 17+31.23; C R/W & CONST. S.R. 619 (WOOSTER RD.) STA. 0+00.00; C R/W & CONST. KENMORE BLVD.
W	STA. 145+31.78; E CONST. RAMP C1 STA. 11+66.04; C R/W & CONST. S.R. 619 (WOOSTER RD.)	WW	STA. 33+82.80; E CONST. RAMP B STA. 6+28.09; E EX. RAMP D
X	STA. 19+41.92; E CONST. RAMP D STA. 13+13.96; E EX. RAMP B		
Y	STA. 20+31.63; E CONST. RAMP D STA. 84+20.21; C R/W & CONST. STATE ST.		
Z	STA. 14+02.27; E EX. RAMP B STA. 84+11.24; C R/W & CONST. STATE ST.		

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**NORMAL SECTION - I.R. 76**  
LIMITING STATIONS  
STA. 292+00.00 TO STA. 292+72.36



**SUPERELEVATED LEFT SECTION - I.R. 76**  
LIMITING STATIONS  
STA. 292+72.36 TO STA. 306+18.49  
STA. 308+10.10 TO STA. 312+28.09

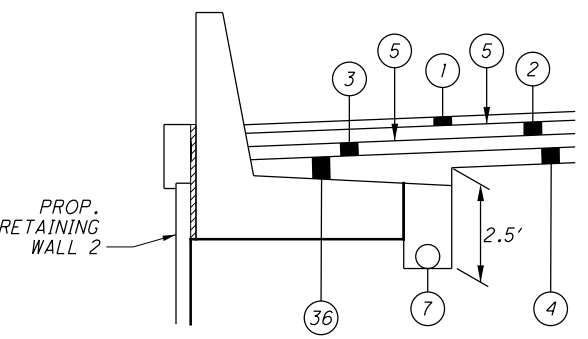
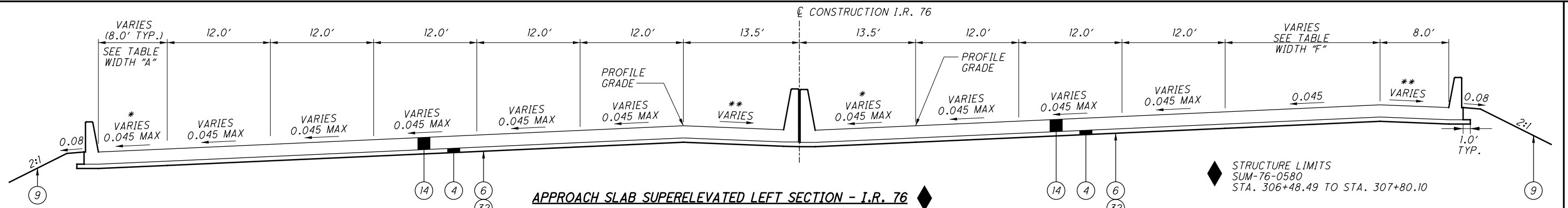
\* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.  
\*\* FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 20  
FOR WIDTH TABLES, SEE SHEET 11  
FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
FOR SUPERELEVATION TABLES, SEE SHEETS 323 - 324

**PROPOSED LEGEND**

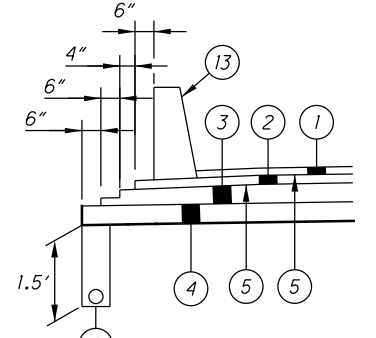
- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>① ITEM 806 - 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, AS PER PLAN</li> <li>② ITEM 442 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)</li> <li>③ ITEM 302 - 10" ASPHALT CONCRETE BASE, PG64-22</li> <li>④ ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN</li> <li>⑤ ITEM 407 - NON-TRACKING TACK COAT (SEE NOTE 'D' ON THIS SHEET)</li> <li>⑥ ITEM 204 - SUBGRADE COMPACTION</li> <li>⑦ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (CONSTRUCT AFTER CEMENT STABILIZATION)</li> <li>⑧ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (CONSTRUCT AFTER CEMENT STABILIZATION)</li> <li>⑨ ITEM 659 - SEEDING AND MULCHING</li> <li>⑩ ITEM 606 - GUARDRAIL, TYPE MGS</li> <li>⑪ ITEM 206 - CEMENT<br/>ITEM 206 - CURING COAT<br/>ITEM 206 - CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP (SEE SHEET 30)</li> <li>⑫ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1 (4" LIGHTING RACEWAY AND TWO 4" ITS MULTICELL CONDUITS PER SCD RM-4.3)</li> <li>⑬ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D</li> <li>⑭ ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17"), AS PER PLAN</li> </ul> | <ul style="list-style-type: none"> <li>⑮ ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN</li> <li>⑯ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (T=2 1/2")</li> <li>⑰ ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (446)</li> <li>⑱ ITEM 424 - 3/4" FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN</li> <li>⑲ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 3</li> <li>⑳ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (T = 3 1/4")</li> <li>㉑ ITEM 441 - 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN</li> <li>㉒ ITEM 301 - 4" ASPHALT CONCRETE BASE, PG64-22</li> <li>㉓ ITEM 304 - 4" AGGREGATE BASE, AS PER PLAN</li> <li>㉔ ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN<br/>ITEM 617 - SHOULDER PREPARATION<br/>ITEM 617 - WATER</li> <li>㉕ ITEM 408 - PRIME COAT, AS PER PLAN (0.40 GAL./S.Y.)</li> <li>㉖ ITEM 452 - 13" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC1 WITH OC/OA</li> <li>㉗ ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN</li> </ul> | <ul style="list-style-type: none"> <li>㉘ ITEM 209 - LINEAR GRADING, AS PER PLAN</li> <li>㉙ ITEM 608 - 4" CONCRETE WALK</li> <li>㉚ ITEM 609 - CURB, TYPE 4-C</li> <li>㉛ ITEM 609 - CURB, TYPE 6</li> <li>㉜ ITEM 204 - PROOF ROLLING</li> <li>㉝ ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448)</li> <li>㉞ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN</li> <li>㉟ ITEM 305 - 12" CONCRETE BASE, CLASS OC1</li> <li>㊱ ITEM 304 - VARIABLE DEPTH AGGREGATE BASE, AS PER PLAN (6" MIN.)</li> <li>㊲ SUBGRADE STABILIZATION, SEE SHEET 30</li> <li>㊳ ITEM 618 - RUMBLE STRIPS, (ASPHALT CONCRETE)</li> <li>㊴ ITEM 609 - CURB, TYPE 4-A</li> <li>㊵ ITEM 407 - TACK COAT, 702.13</li> <li>㊶ NOT USED</li> <li>㊷ LONGITUDINAL JOINT PER BP-2.1</li> </ul> |
|--|---|---|

**TYPICAL SECTIONS - I.R. 76**

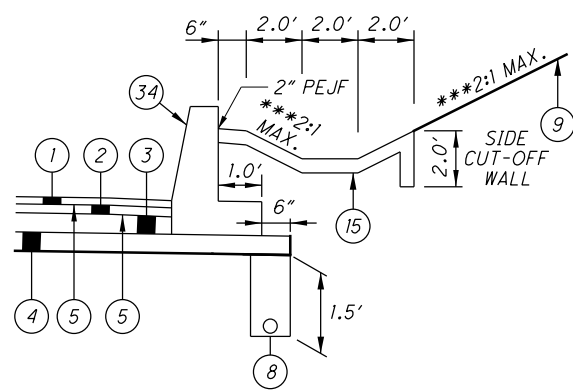
**SUM - 76 - 5.53**



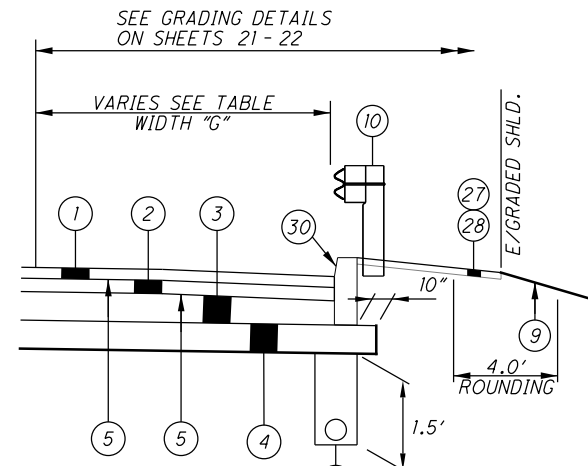
**MOMENT SLAB DETAIL "B"**  
 N.T.S.  
 LIMITING STATIONS  
 STA. 309+06.02 TO STA. 312+79.92 (I.R. 76 WB)



**BARRIER DETAIL "A"**  
 N.T.S.  
 LIMITING STATIONS  
 STA. 304+40.64 TO STA. 305+48.26 RT. (I.R. 76)  
 STA. 306+25.28 TO STA. 306+97.31 LT. (I.R. 76)  
 STA. 307+39.64 TO STA. 307+72.75 RT. (I.R. 76)

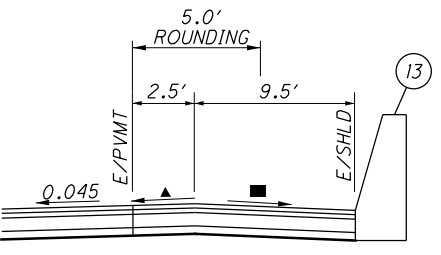


**BARRIER DETAIL "C"**  
 N.T.S.  
 LIMITING STATIONS  
 STA. 294+74.62 TO STA. 298+38.62 RT. (I.R. 76)  
 SEE SHEET 31 FOR INLET REINFORCEMENT DETAIL

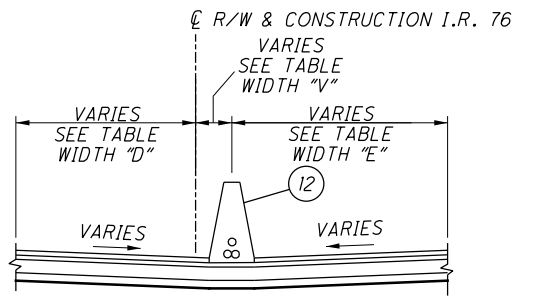


**CURB DETAIL "A"**  
 N.T.S.  
 EASTBOUND  
 LIMITING STATIONS  
 STA. 294+56.47 TO STA. 294+74.62, RT.  
 STA. 304+22.97 TO STA. 304+40.64, RT.  
 STA. 311+27.26 TO STA. 311+57.24, RT.

- ▲ STA. 297+38.62 @ 0.045  
 STA. 298+38.62 @ 0.0653
- STA. 297+38.62 @ 0.0400  
 STA. 298+38.62 @ -0.0653



**SHOULDER DETAIL "B"**  
 N.T.S.  
 STA. 297+38.62 TO STA. 298+38.62 (I-76 EB RT)



● **MEDIAN BARRIER DETAIL**  
 APPLIES TO  
 STA. 311+15.00 TO STA. 312+28.09

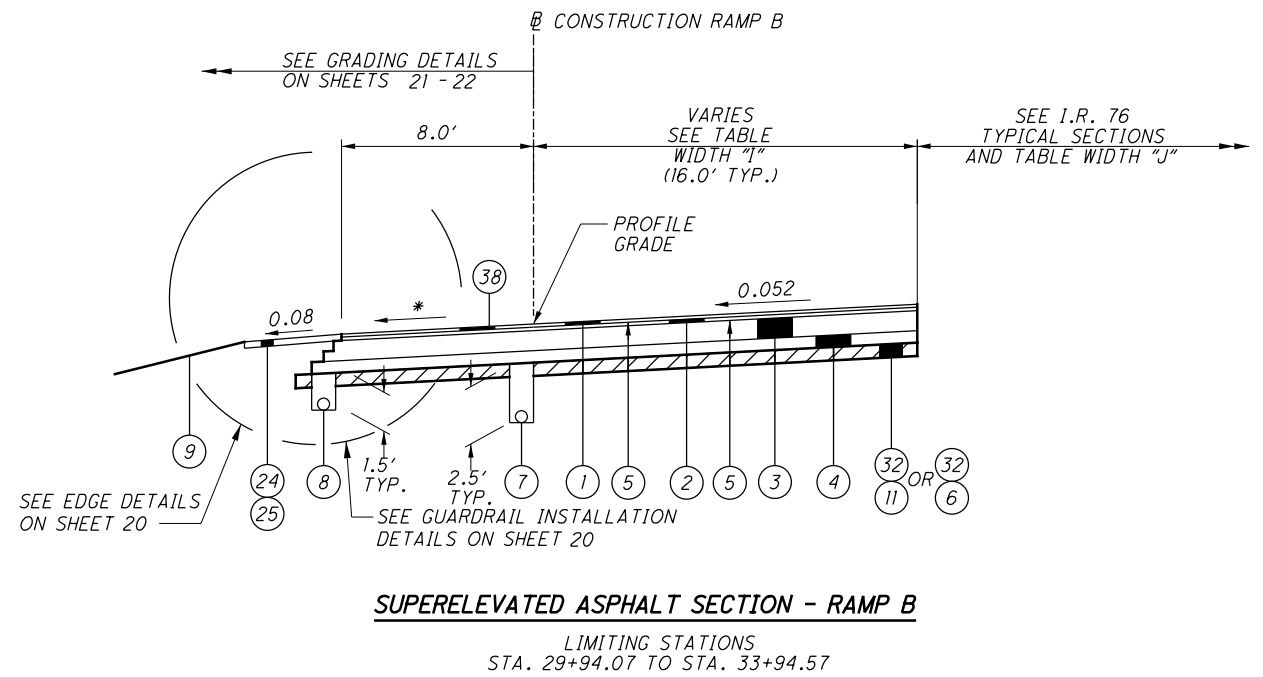
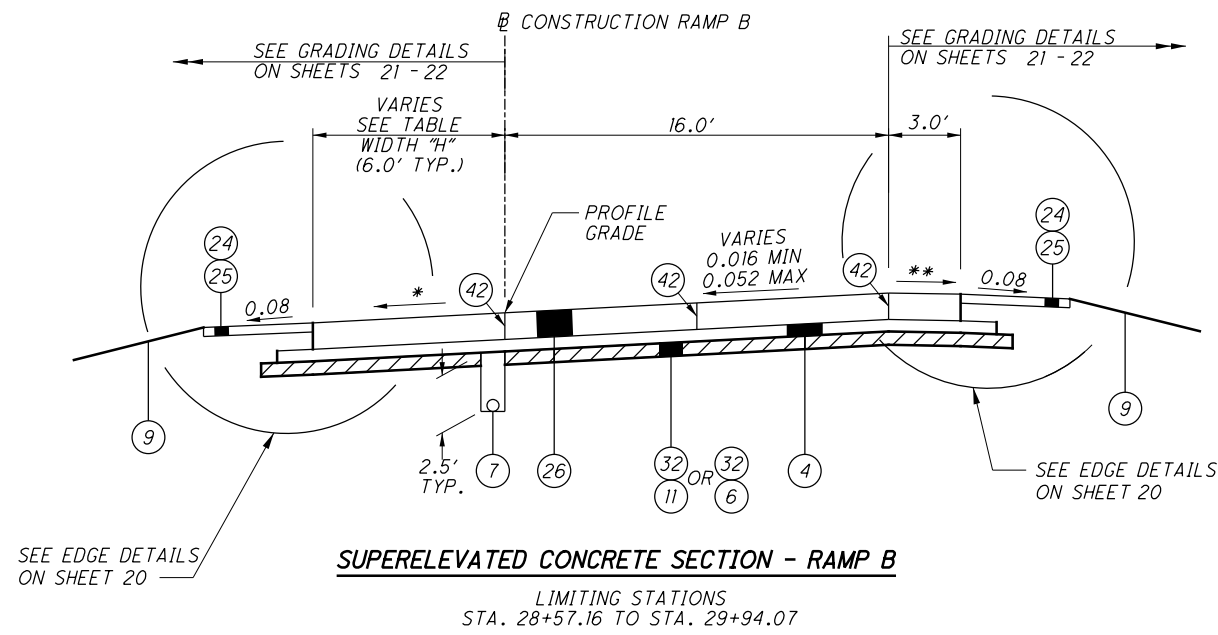
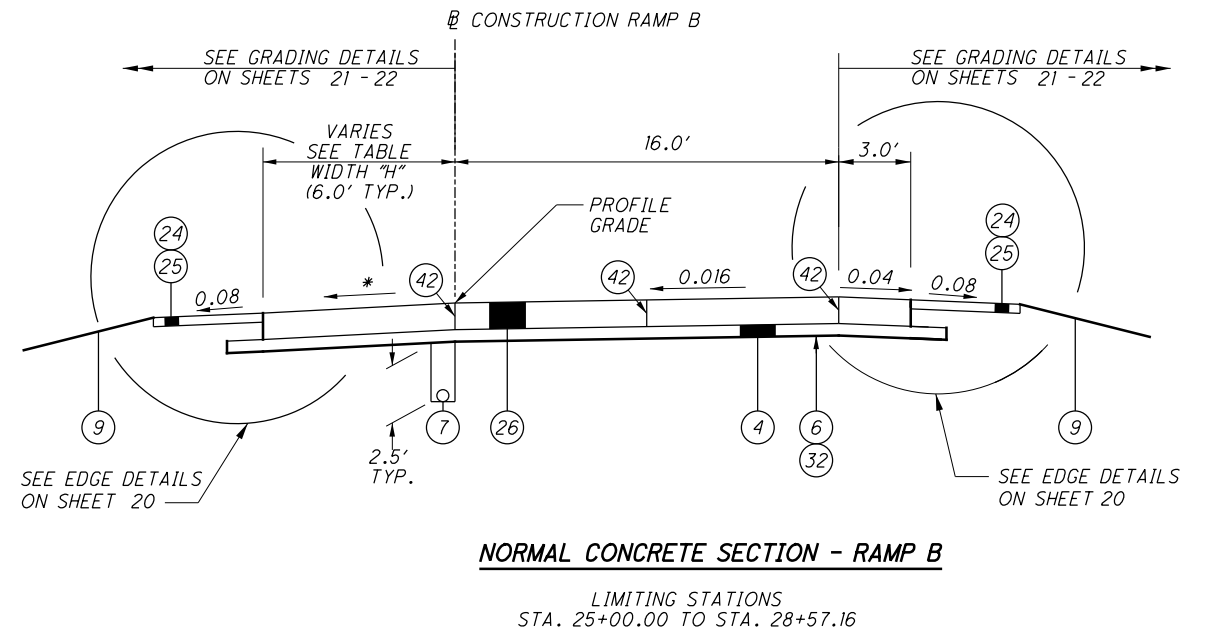
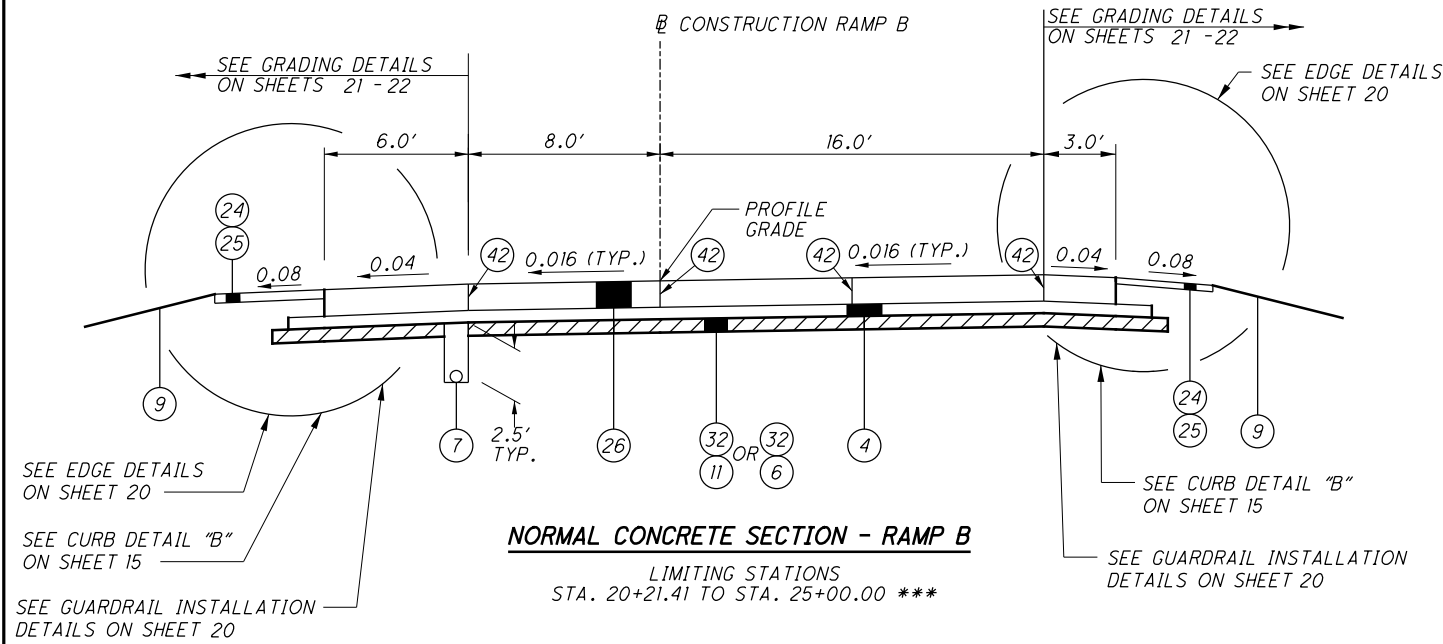
FOR MOMENT SLAB DETAILS, SEE SHEETS 520-521  
 FOR PROPOSED LEGEND, SEE SHEET 10  
 FOR GORE DETAILS, SEE SHEETS 340, 342  
 FOR STRUCTURE PLANS, SEE SHEETS 565-642  
 FOR SUPERELEVATION TABLES, SEE SHEETS 323-324  
 FOR RETAINING WALL PLANS, SEE SHEETS 509-530

\* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.  
 \*\* FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 20  
 \*\*\* OR AS SHOWN ON CROSS SECTIONS

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C\002.dgn\_Sheet 8/20/2018 9:33:57 AM jBumgarner

I.R. - 76 WIDTH TABLE																	
ROAD	WIDTH "A"				WIDTH "B"				WIDTH "D"				WIDTH "F"				
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		
	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	
IR-76	292+00.00	301+11.63	12.0	12.0	292+00.00	305+25.12	0.0	0.0	292+00.00	308+66.00	13.5	13.5	292+00.00	301+00.00	0.0	0.0	
	301+11.63	303+66.11	SEE GORE DETAILS		305+25.12	309+00.00	12.0	12.0	308+66.00	312+43.52	13.5	7.2	301+00.00	311+70.74	25.0	3.6	
	303+66.11	305+25.12	0.0	0.0	309+00.00	310+00.00	12.0	0.0									
	305+25.12	306+69.81	8.0	8.0	310+00.00	312+96.16	0.0	0.0									
	306+69.81	307+32.81	8.0	9.3													
	307+32.81	308+71.50	SEE STRUCTURE PLANS														
	308+71.50	309+00.00	8.0	8.0													
	309+00.00	310+00.00	8.0	12.0													
	310+00.00	312+00.00	12.0	12.0													
	312+00.00	312+70.00	12.0	24.0	292+00.00	299+20.00	0.0	12.0	292+00.00	308+35.00	13.5	13.5	300+99.52	311+07.21	8.0	8.0	
	312+70.00	312+79.92	24.0	24.0	299+20.00	312+00.00	12.0	12.0	308+35.00	310+61.40	13.5	9.7	311+07.21	311+57.24	8.0	7.3	
	312+79.92	312+93.15	5.3	4.2	312+00.00	312+70.00	12.0	0.0	310+61.40	312+20.72	9.7	9.7	311+57.24	311+64.65	7.3	7.4	
	312+93.15	312+99.14	4.2	4.2	312+70.00	312+96.16	0.0	0.0									

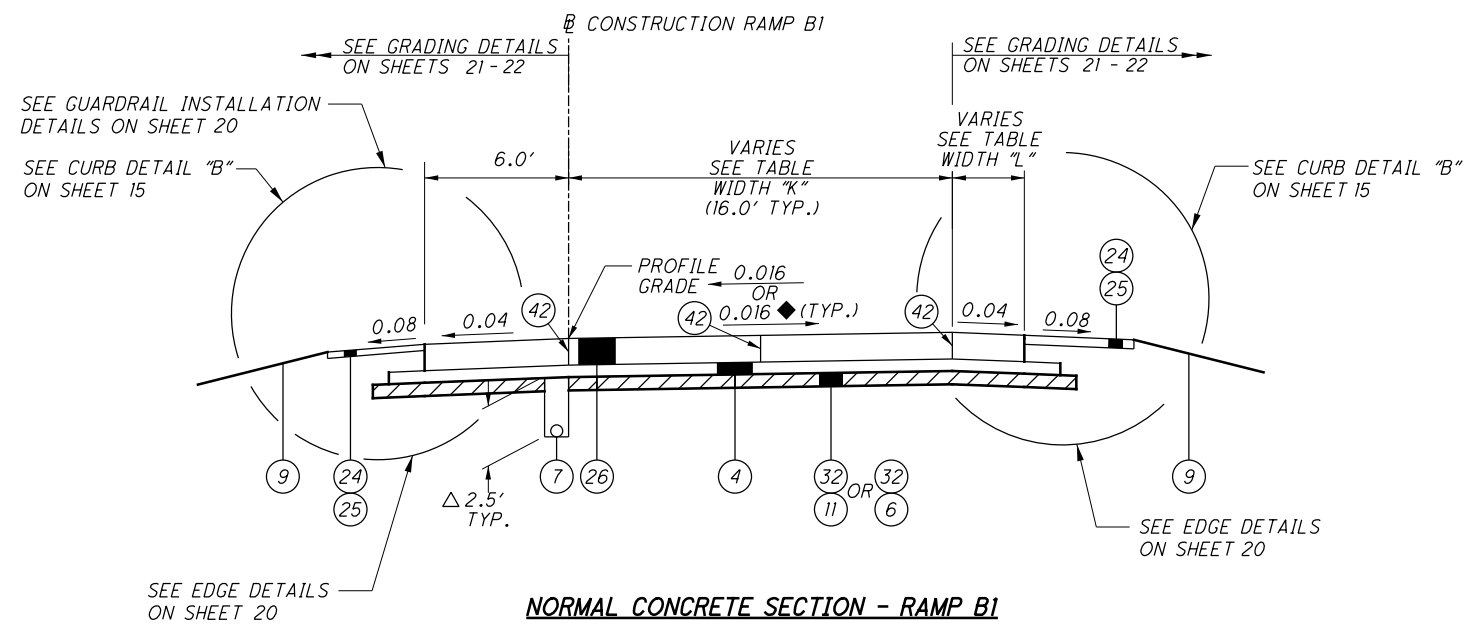
o:\2016\2016146\ProjectData\SUM\96670\Roadway\Design\Roadway\SUM\96670\_Cy003.dgn Sheet 8/20/2018 9:33:57 AM jBumgarner



RAMP B WIDTH TABLE												
RAMP B	WIDTH "H" ***				WIDTH "I" ***				WIDTH "J" ***			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO
	20+21.41	25+00.00	6.0	6.0	20+21.41	32+40.53	16.0	16.0	20+21.41	29+94.07	3.0	3.0
	25+00.00	27+09.94	0.0	0.0	32+40.53	33+94.57	SEE GORE DETAILS		29+94.07	32+40.53	SEE GORE DETAILS	
	27+09.94	28+36.33	SEE GORE DETAILS						32+40.53	33+94.57	0.0	0.0
	28+36.33	29+44.07	6.0	6.0								
	29+44.07	29+94.07	6.0	8.0								
	29+94.07	33+94.57	8.0	8.0								

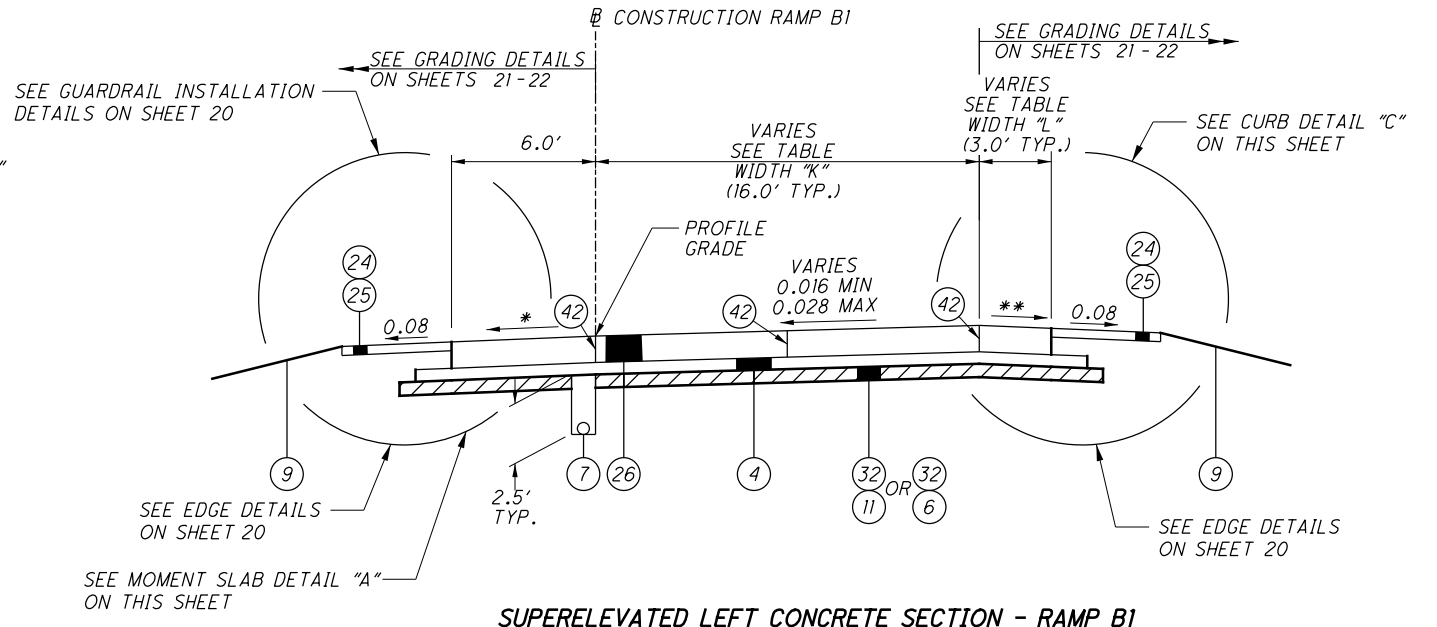
FOR GORE DETAILS, SEE SHEETS 340, 341  
 FOR PROPOSED LEGEND, SEE SHEET 10  
 FOR EXISTING LEGEND SEE SHEET 23  
 FOR SUPERELEVATION TABLES, SEE SHEET 325  
 \* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.  
 \*\* FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 10.  
 \*\*\* FOR INTERSECTION DETAILS, SEE SHEET 334

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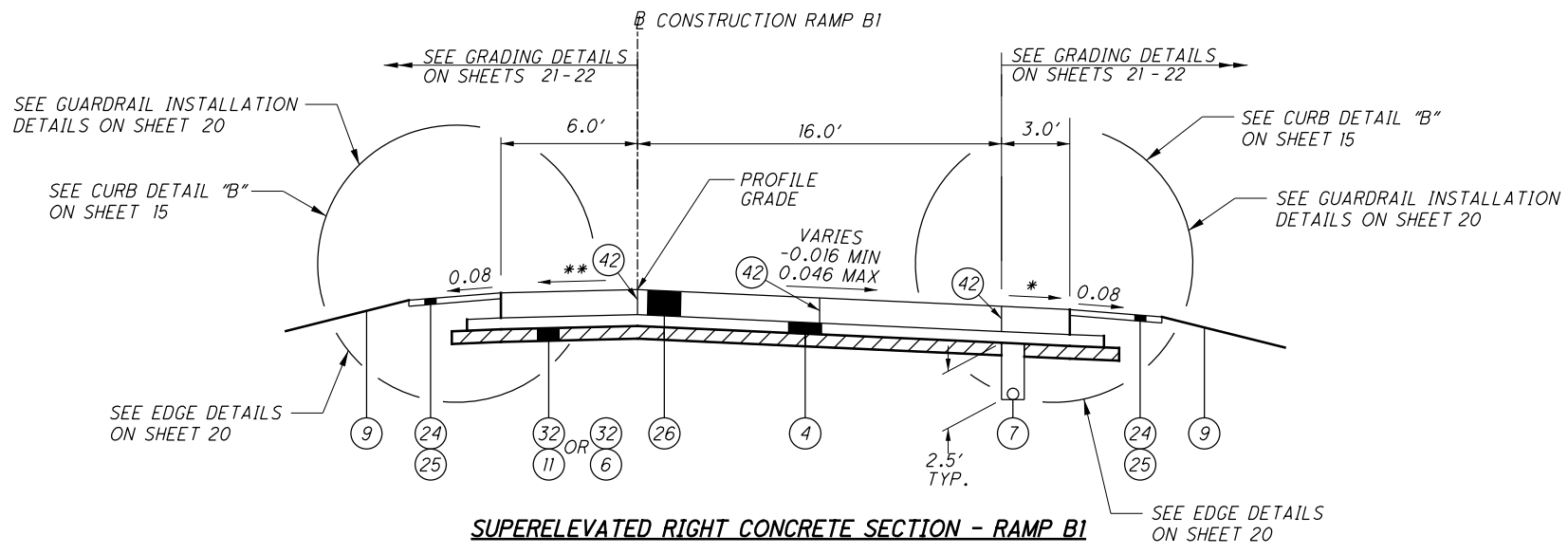
**NORMAL CONCRETE SECTION - RAMP B1**

LIMITING STATIONS  
 STA. 125+00.00 TO STA. 125+51.43  
 STA. 131+87.32 TO STA. 133+23.81  
 STA. 136+22.97 TO STA. 136+92.28 \*\*\* ◆



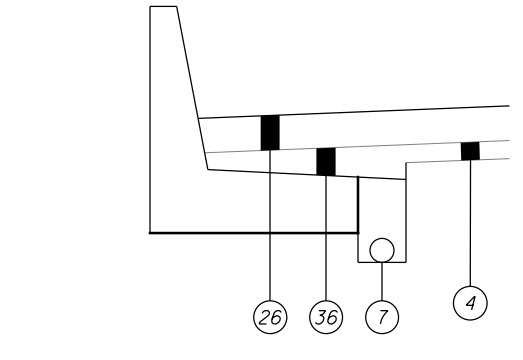
**SUPERELEVATED LEFT CONCRETE SECTION - RAMP B1**

LIMITING STATIONS  
 STA. 125+51.43 TO STA. 131+87.32



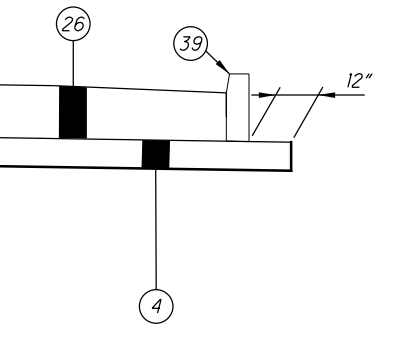
**SUPERELEVATED RIGHT CONCRETE SECTION - RAMP B1**

LIMITING STATIONS  
 STA. 133+23.81 TO STA. 136+22.97



**MOMENT SLAB DETAIL "A"**

N.T.S.  
 LIMITING STATIONS  
 STA. 129+19.91 TO STA. 130+50.00 LT. (RAMP B1)



**CURB DETAIL "C"**

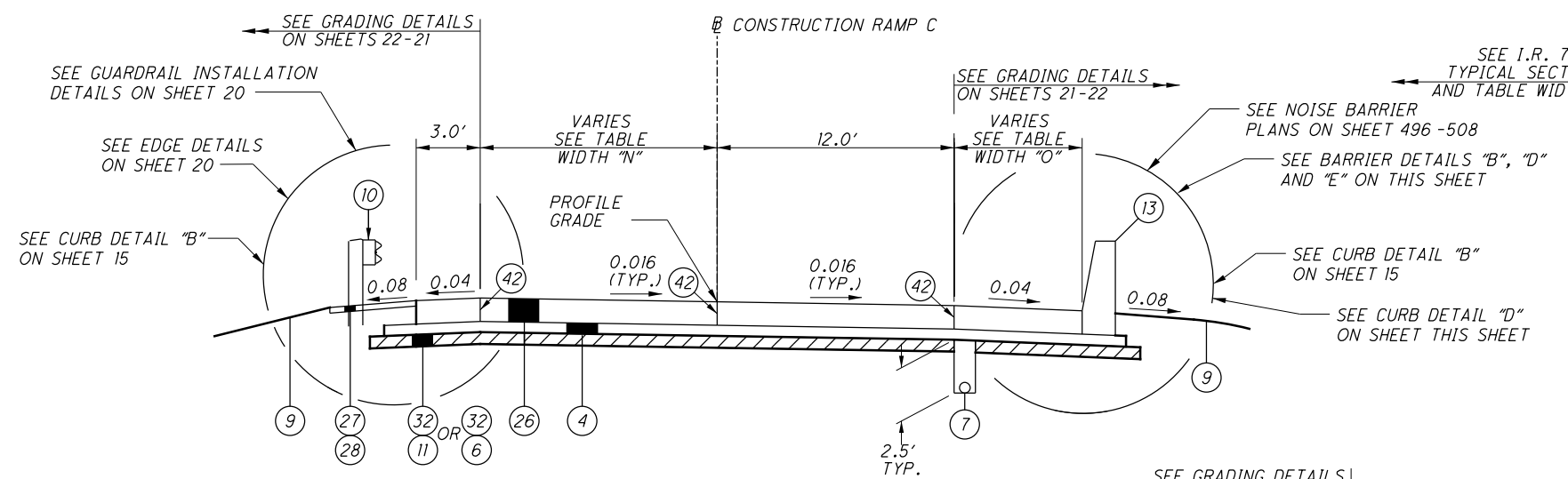
N.T.S.  
 LIMITING STATIONS  
 STA. 130+50.00 TO STA. 130+80.00 LT. (RAMP B1)

RAMP B1 WIDTH TABLE								
RAMP B1	WIDTH "K" ***				WIDTH "L" ***			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO
	125+00.00	125+57.92	8.0	8.0	125+00.00	127+08.54	0.0	0.0
	125+57.92	127+08.54	SEE GORE DETAILS		127+08.54	128+34.97	SEE GORE DETAILS	
	127+08.54	136+92.28	16.0	16.0	128+34.97	136+92.28	3.0	3.0

FOR GORE DETAILS, SEE SHEET 341  
 FOR PROPOSED LEGEND, SEE SHEET 10  
 FOR EXISTING LEGEND, SEE SHEET 23  
 FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
 FOR SUPERELEVATION TABLES, SEE SHEET 326  
 FOR MOMENT SLAB DETAILS, SEE SHEET 516

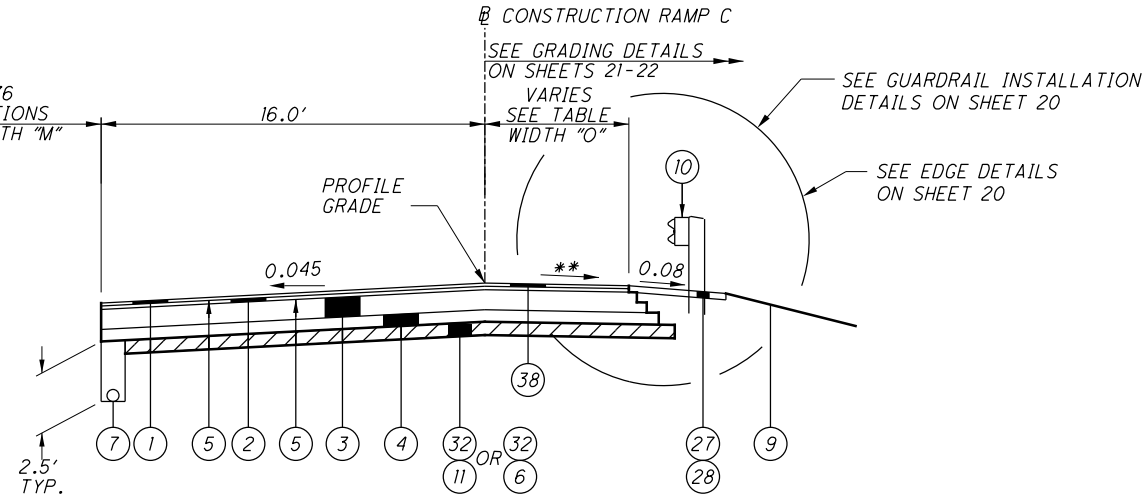
\* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.  
 \*\* FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 20.  
 \*\*\* FOR INTERSECTION DETAILS, SEE SHEET 336  
 Δ OR AS SHOWN IN UNDERDRAIN DETAILS

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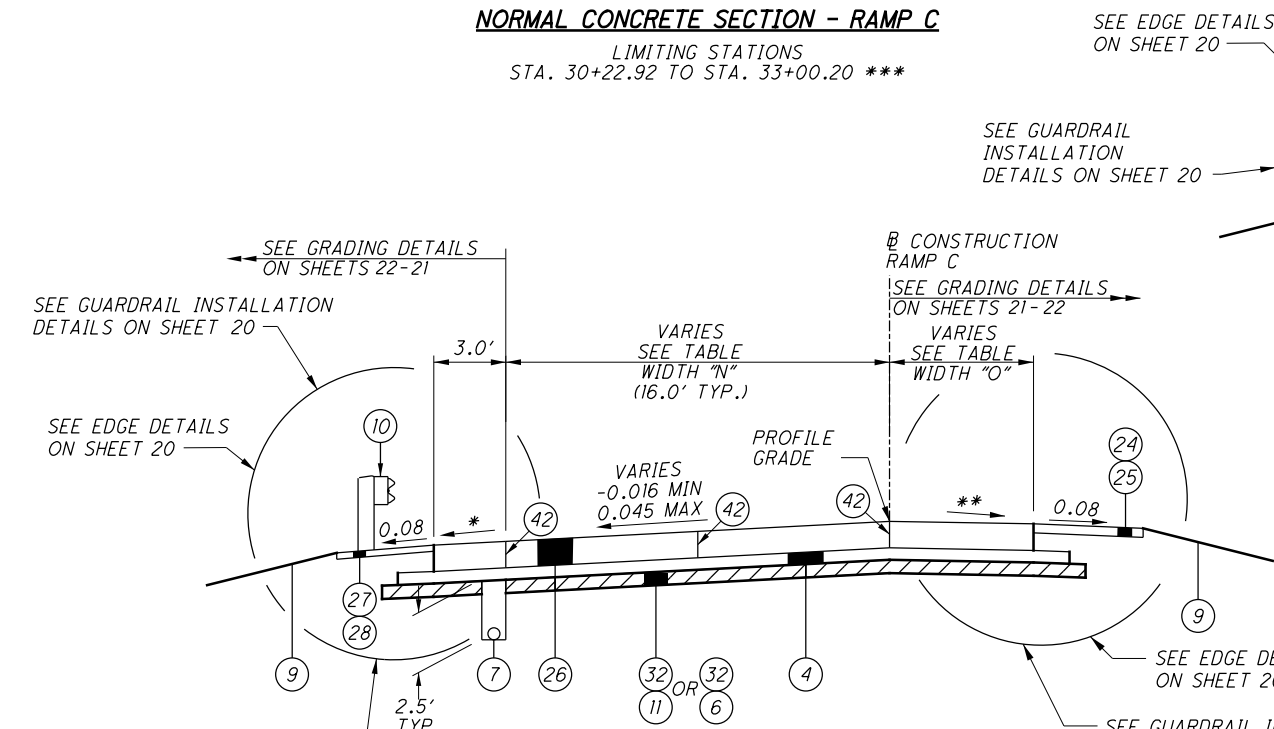
**NORMAL CONCRETE SECTION - RAMP C**

LIMITING STATIONS  
STA. 30+22.92 TO STA. 33+00.20 \*\*\*



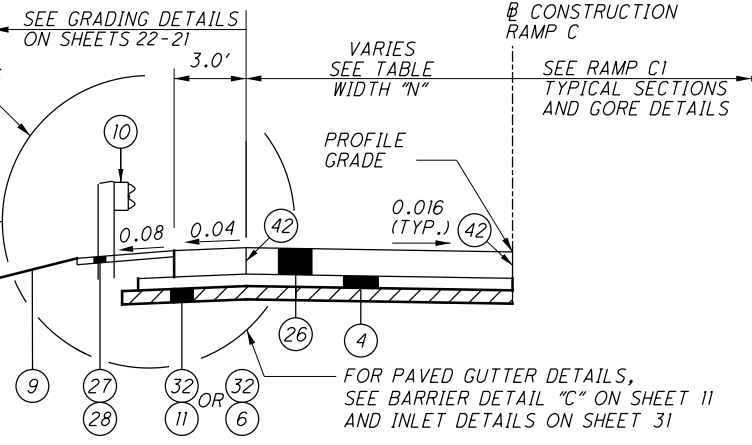
**SUPERELEVATED LEFT ASPHALT SECTION - RAMP C**

LIMITING STATIONS  
STA. 38+32.06 TO STA. 41+00.49



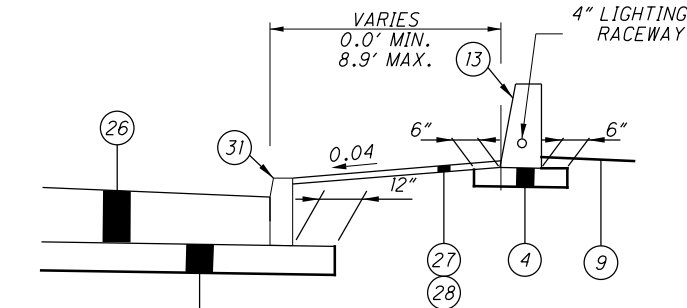
**SUPERELEVATED LEFT CONCRETE SECTION - RAMP C**

LIMITING STATIONS  
STA. 36+36.43 TO STA. 38+32.06



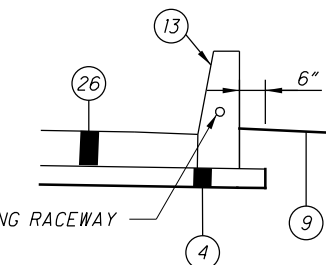
**NORMAL CONCRETE SECTION - RAMP C**

LIMITING STATIONS  
STA. 33+00.20 TO STA. 36+36.43



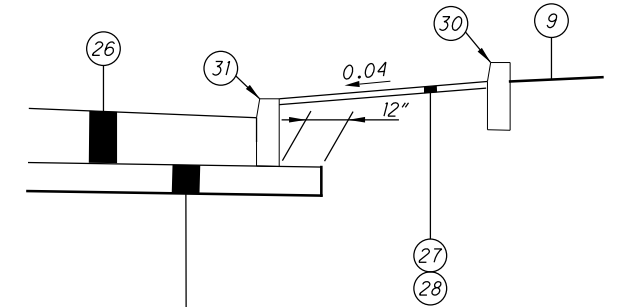
**BARRIER DETAIL "D"**

N.T.S.  
LIMITING STATIONS  
STA. 30+64.49 TO STA. 31+36.07 RT. (RAMP C)



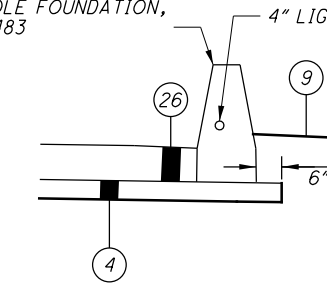
**BARRIER DETAIL "B"**

N.T.S.  
LIMITING STATIONS  
STA. 31+36.07 TO STA. 32+50.00 RT. (RAMP C)  
STA. 133+00.00 TO STA. 144+00.00 RT. (RAMP C)



**CURB DETAIL "D"**

N.T.S.  
LIMITING STATIONS  
STA. 30+46.48 TO STA. 30+64.49 RT. (RAMP C)



**BARRIER DETAIL "E"**

N.T.S.  
LIMITING STATIONS  
SEE LIGHTING PLANS ON SHEETS  
482 - 495 FOR LOCATIONS

ITEM 622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B  
(COST INCLUDED IN ITEM 625 - LIGHT POLE FOUNDATION,  
MISC.: ON TYPE B BARRIER) SEE SHEET 483

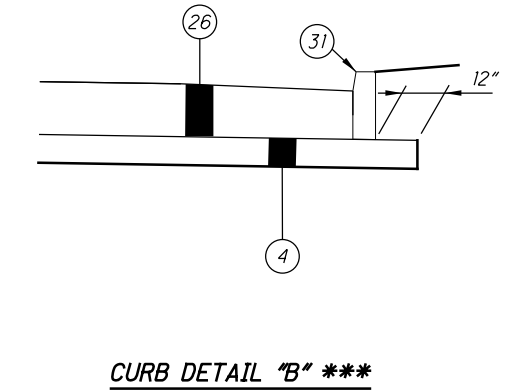
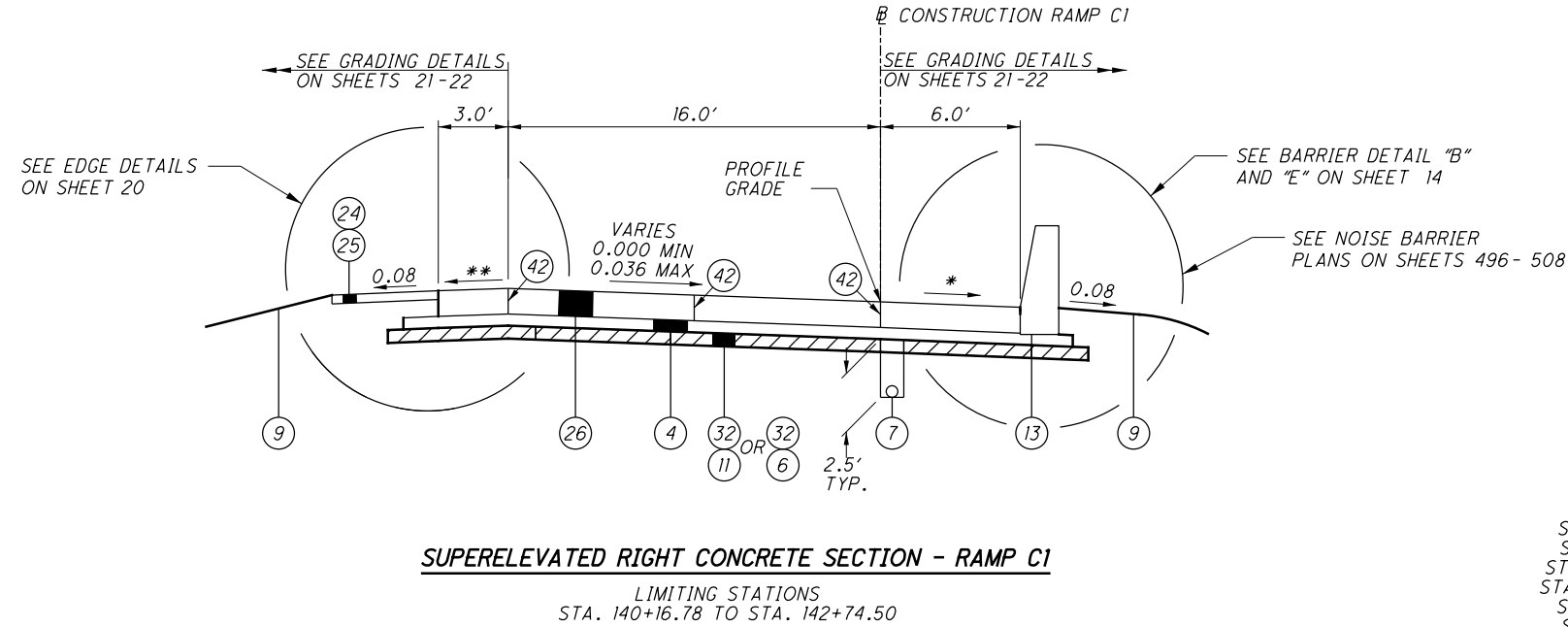
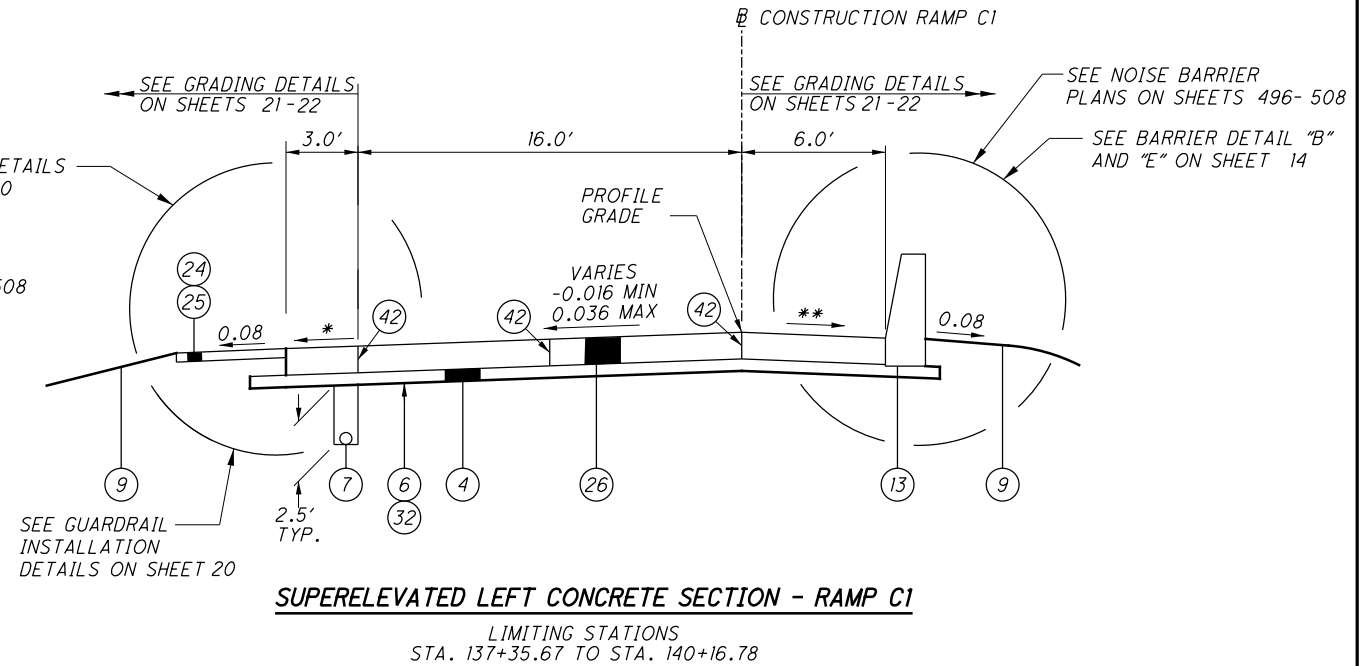
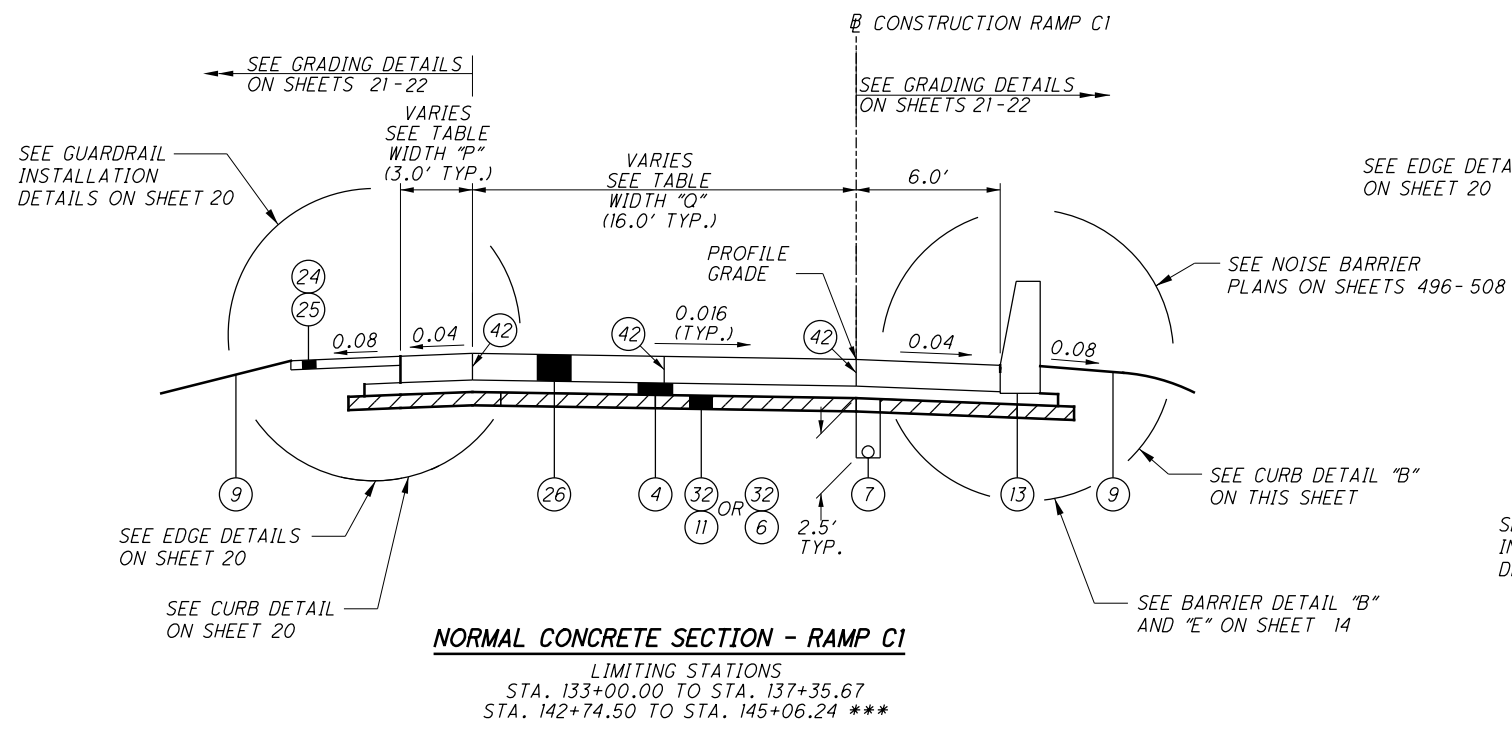
**RAMP C WIDTH TABLE**

RAMP C	WIDTH "M" ***		WIDTH "N" ***				WIDTH "O" ***					
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO
	30+22.92	38+32.06	3.0	3.0	30+22.92	32+50.00	12.0	12.0	30+22.92	33+00.20	6.0	6.0
	38+32.06	41+00.49	SEE GORE DETAILS		32+50.00	36+98.20	12.0	16.0	33+00.20	35+01.82	0.0	0.0
					36+98.20	41+00.49	16.0	16.0	35+01.82	37+19.87	SEE GORE DETAILS	
									37+19.87	40+50.49	6.0	6.0
									40+50.49	41+00.49	6.0	8.0

FOR GORE DETAILS, SEE SHEETS 342, 343  
FOR PROPOSED LEGEND, SEE SHEET 10  
FOR EXISTING LEGEND, SEE SHEET 23  
FOR SUPERELEVATION TABLES, SEE SHEET 327

\* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.  
\*\* FOR HIGH SIDE SHOULDER SLOPES,  
SEE SHOULDER DETAIL ON SHEET 20.  
\*\*\* FOR INTERSECTION DETAILS, SEE SHEET 335

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N.T.S.  
 LIMITING STATIONS  
 STA. 87+25.70 RT. (STATE) TO STA. 20+36.78 RT. (RAMP B)  
 STA. 88+09.19 RT. (STATE) TO STA. 20+59.70 LT. (RAMP B)  
 STA. 136+05.24 RT. (RAMP B) TO STA. 16+67.54 LT. (S.R. 619)  
 STA. 136+50.00 LT. (RAMP B) TO STA. 17+84.94 LT. (S.R. 619)  
 STA. 84+02.60 RT. (STATE) TO STA. 30+46.48 RT. (RAMP C)  
 STA. 84+69.81 RT. (STATE) TO STA. 30+52.45 LT. (RAMP C)  
 STA. 144+00.00 RT. (RAMP C) TO STA. 10+89.65 LT. (S.R. 619)  
 STA. 144+72+26 LT. (RAMP C) TO STA. 11+73.81 LT. (S.R. 619)

RAMP C1 WIDTH TABLE								
	WIDTH "P" ***				WIDTH "Q" ***			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO
RAMP C1	133+00.00	135+00.85	0.0	0.0	133+00.00	133+49.86	12.0	12.0
	135+00.85	137+18.61	SEE GORE DETAILS		133+49.86	135+00.85	SEE GORE DETAILS	
	137+18.61	144+72.26	3.0	3.0	135+00.85	145+06.24	16.0	16.0
	144+72.26	144+84.26	3.0	0.0				
	144+84.26	145+06.24	0.0	0.0				

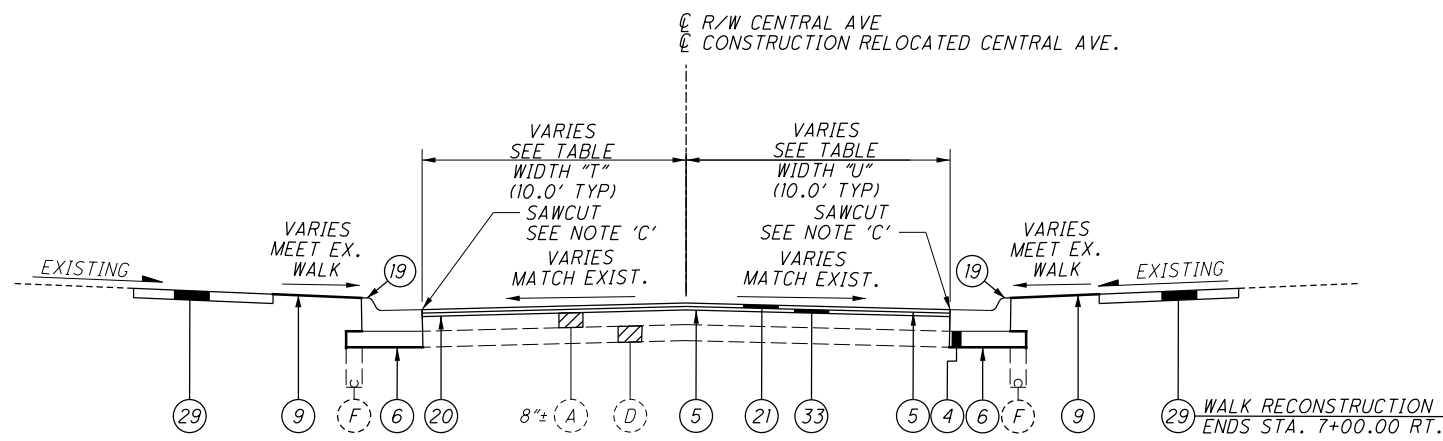
FOR GORE DETAILS, SEE SHEET 343  
 FOR PROPOSED LEGEND, SEE SHEET 10  
 FOR EXISTING LEGEND SEE SHEET 23  
 FOR SUPERELEVATION TABLES, SEE SHEET 328

\* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.  
 \*\* FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 20.  
 \*\*\* FOR INTERSECTION DETAILS, SEE SHEET 337

TYPICAL SECTIONS - RAMPS

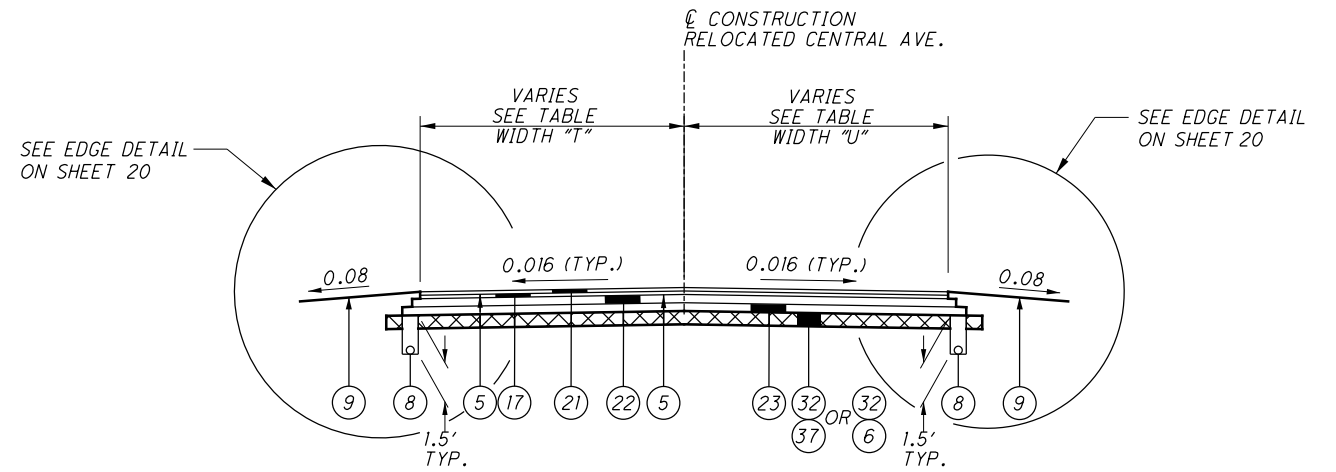
SUM-76-5.53

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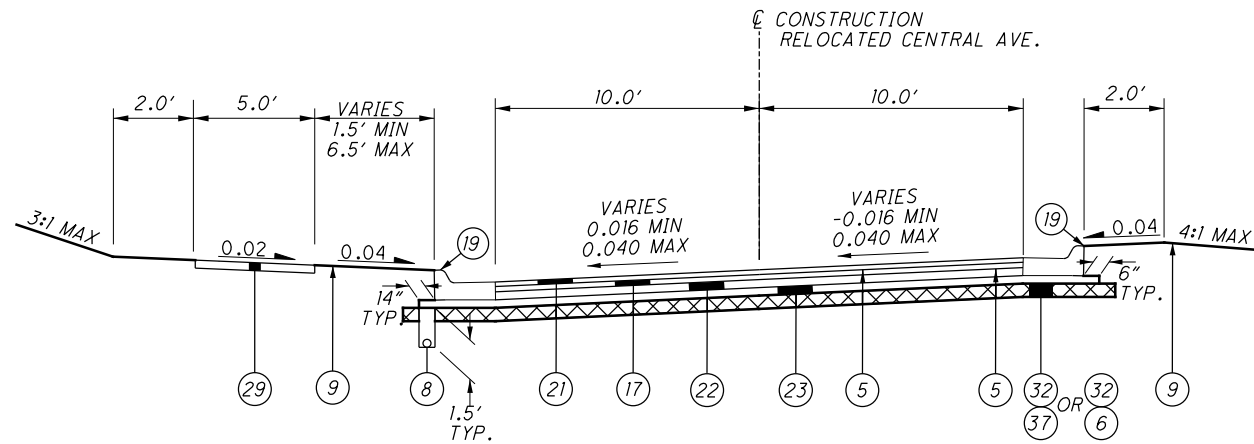
**NORMAL RESURFACING SECTION - EXISTING CENTRAL AVE.**

LIMITING STATIONS  
STA. 2+96.75 TO STA. 6+75.00



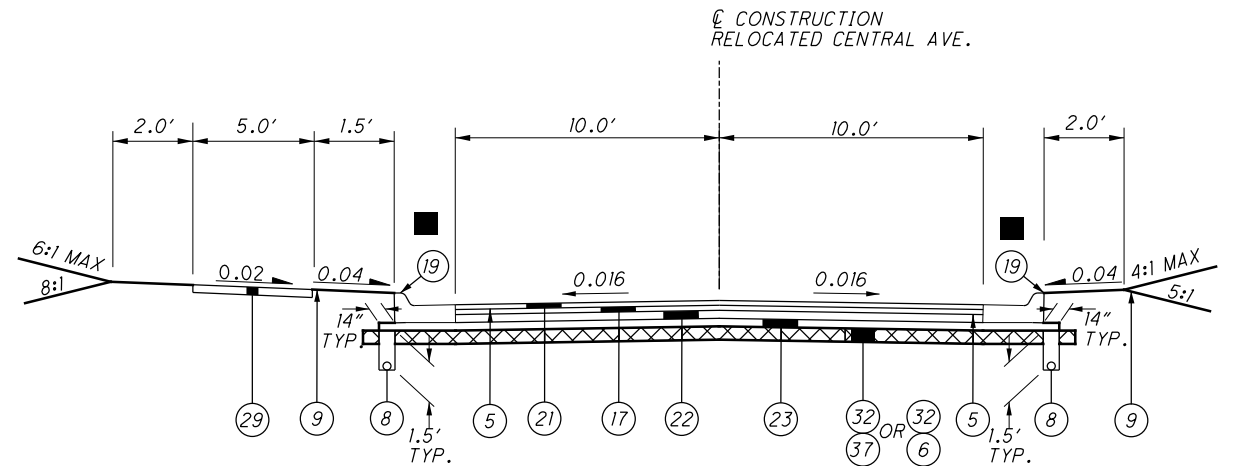
**NORMAL SECTION - RELOCATED CENTRAL AVE./GOODRICH AVE.**

LIMITING STATIONS  
STA. 10+67.43 TO STA. 3+75.00 \*\*\*  
(STATION EQUATION: STA. 11+75.69 BK = STA. 3+68.47 AH)



**SUPERELEVATED LEFT SECTION - RELOCATED CENTRAL AVE.**

LIMITING STATIONS  
STA. 6+75.00 TO STA. 8+86.84



**NORMAL SECTION - RELOCATED CENTRAL AVE./GOODRICH AVE.**

LIMITING STATIONS  
STA. 8+86.84 TO STA. 10+67.43 \*\*\*

■ CURB AND GUTTER ENDS:  
STA. 2+55.53 RT (GRAND BLVD.)  
STA. 10+67.43 RT (RELOCATED CENTRAL AVE)

RELOCATED CENTRAL AVE. WIDTH TABLE								
CENTRAL AVE.	WIDTH "T" ***				WIDTH "U"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
		2+96.05	3+15.00	11.1	10.0	2+97.44	3+15.00	10.8
	3+15.00	11+01.73	10.0	10.0	3+15.00	10+67.43	10.0	10.0
	11+01.73	11+47.22	12.0	12.0	10+67.43	3+75.00	12.0	10.1
	11+47.22	3+75.00	12.0	9.7				

FOR SUPERELEVATION TABLES, SEE SHEET 329  
FOR PROPOSED LEGEND, SEE SHEET 10  
FOR EXISTING LEGEND SEE SHEET 23

\* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

\*\* FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 20.

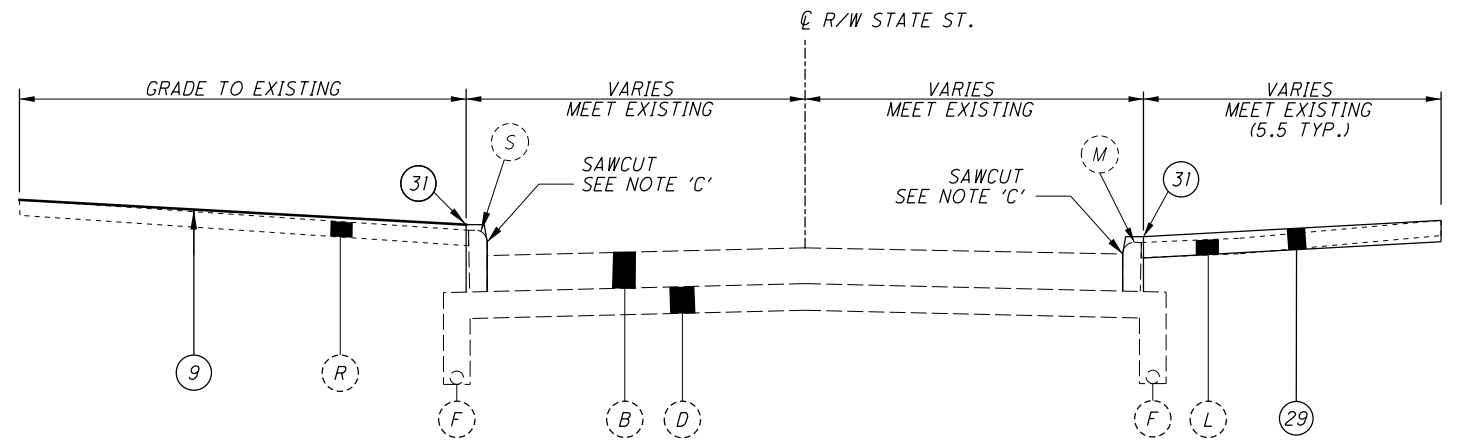
\*\*\* FOR INTERSECTION DETAILS, SEE SHEET 338

**NOTE 'C'**

THE EXISTING PAVEMENT SHALL BE CUT TO LOCATE A SOUND PAVEMENT EDGE AS PER SPEC 203.04 (E), VERTICAL FACE OF EXISTING PAVEMENT TO BE COATED WITH ASPHALT BINDER, 702.01, AS PER CMS 401.14. FOR ESTIMATING PURPOSES, PLAN CALCULATIONS ARE BASED ON LOCATIONS IN TYPICALS UNLESS OTHERWISE NOTED.

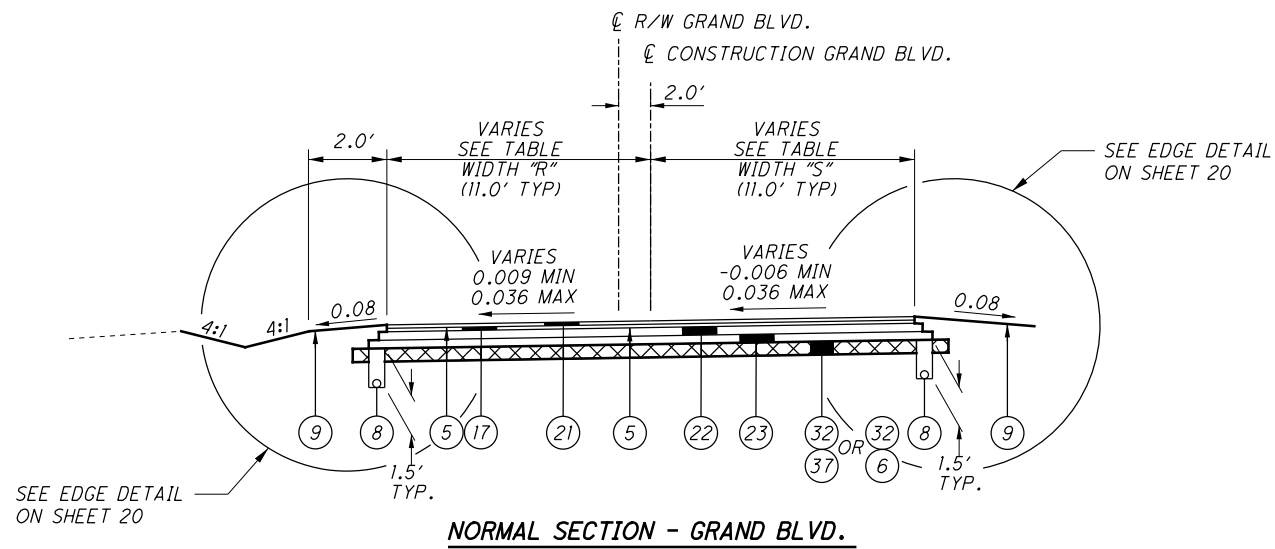


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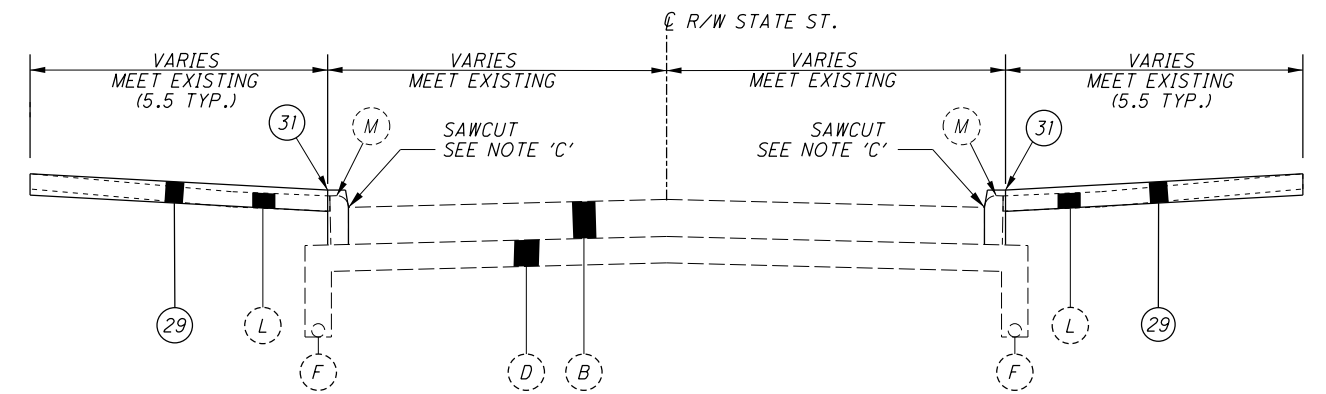
**STATE ST. - CURB & WALK REPLACEMENT SECTION (NORTH)**

LIMITING STATIONS  
 STA. 88+65.05 TO STA. 88+99.54 RT.  
 STA. 88+70.05 TO STA. 88+94.67 LT.



**NORMAL SECTION - GRAND BLVD.**

LIMITING STATIONS  
 STA. 2+15.00 TO STA. 2+91.77 \*\*\*



**STATE ST. - CURB & WALK REPLACEMENT SECTION (SOUTH)**

LIMITING STATIONS  
 STA. 83+00.43 TO STA. 83+94.59 RT.  
 STA. 83+38.64 TO STA. 83+69.25 LT.

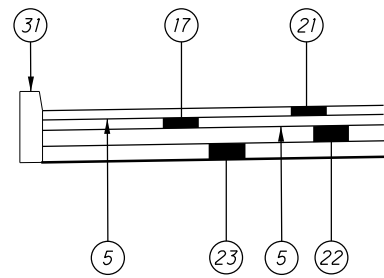
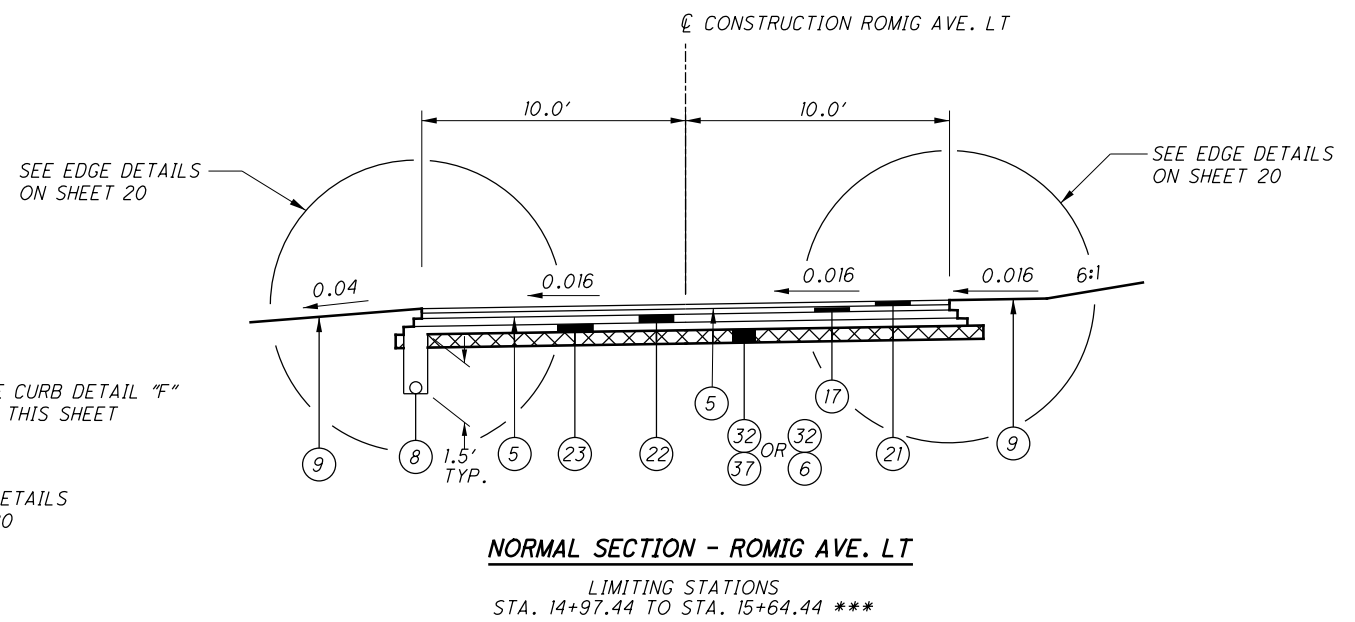
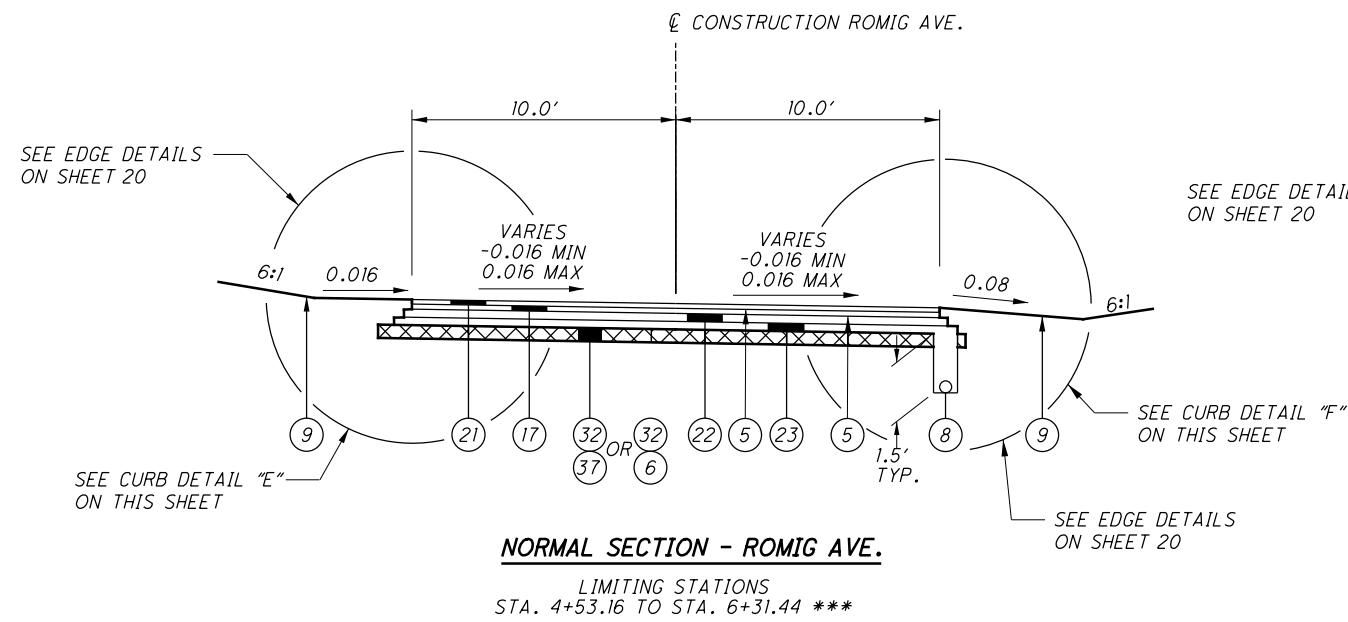
GRAND BLVD. WIDTH TABLE								
GRAND BLVD.	WIDTH "R" ***				WIDTH "S" ***			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
		2+15.00	2+25.00	10.7	11.0	2+15.00	2+25.00	10.8
	2+25.00	2+91.77	11.0	11.0	2+25.00	2+91.77	11.0	11.0

FOR NOTE 'C', SEE SHEET 16  
 FOR PAVEMENT ELEVATION TABLES, SEE SHEET 330  
 FOR PROPOSED LEGEND, SEE SHEET 10  
 FOR EXISTING LEGEND SEE SHEET 23  
 \* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.  
 \*\* FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 20.  
 \*\*\* FOR INTERSECTION DETAILS, SEE SHEET 338

TYPICAL SECTIONS - SIDE ROADS

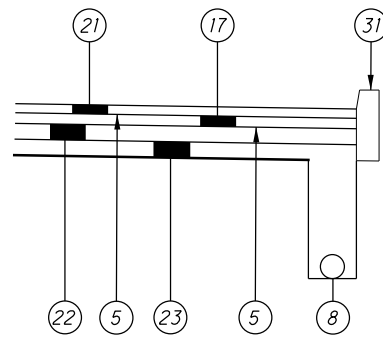
SUM-76-5.53

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**CURB DETAIL "E"**

N.T.S.  
LIMITING STATIONS  
STA. 22+54.33 LT. (ELMWOOD) TO STA. 4+71.40 LT. (ROMIG)



**CURB DETAIL "F"**

N.T.S.  
LIMITING STATIONS  
STA. 23+14.36 LT. (ELMWOOD) TO STA. 4+70.02 RT. (ROMIG)

FOR NOTE 'C', SEE SHEET 16

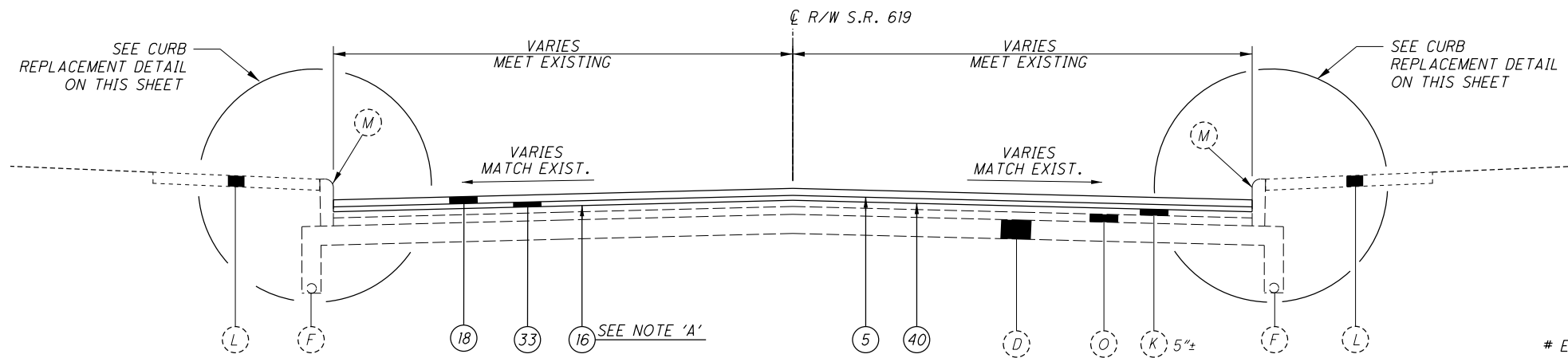
FOR PAVEMENT ELEVATION TABLES, SEE SHEET 331  
FOR PROPOSED LEGEND, SEE SHEET 10  
FOR EXISTING LEGEND SEE SHEET 23

\* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

\*\* FOR HIGH SIDE SHOULDER SLOPES,  
SEE SHOULDER DETAIL ON SHEET 20.

\*\*\* FOR INTERSECTION DETAILS, SEE SHEET 339

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C\Y017.dgn Sheet 9/28/2018 2:53:14 PM arolland



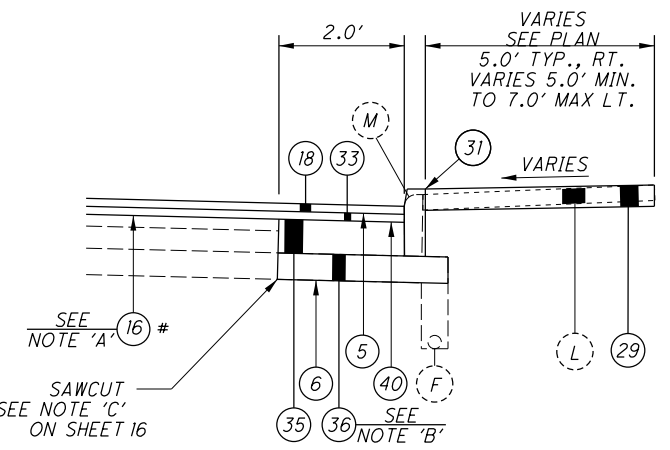
**S.R. 619/WOOSTER RD. RESURFACING SECTION**

LIMITING STATIONS  
 STA. 8+81.25 TO STA. 11+14.81 \*\*\*  
 STA. 11+99.38 TO STA. 19+06.29 \*\*\*

**NOTE 'A'**

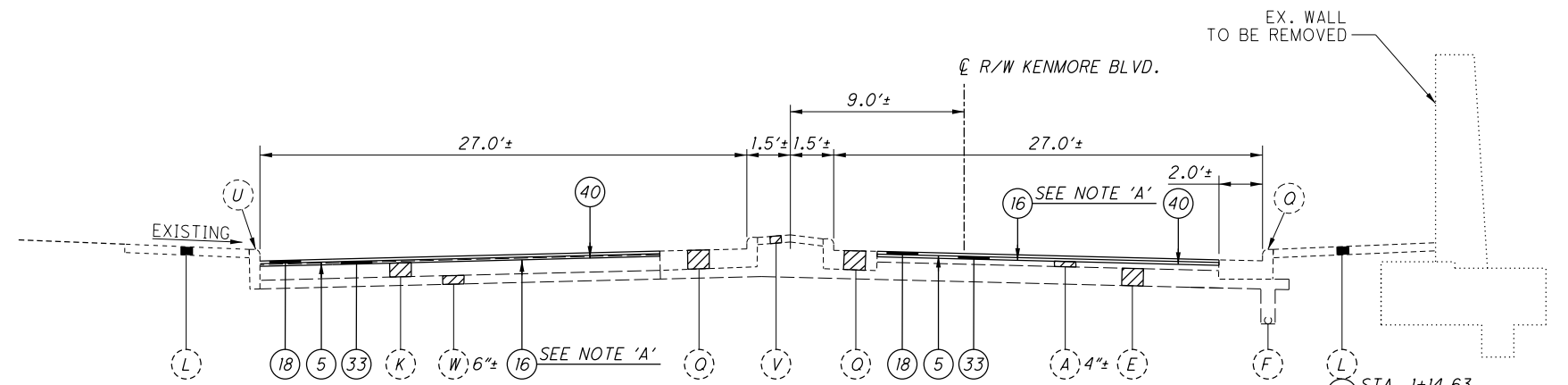
THE PAVEMENT CORES OBTAINED INDICATE EXISTING ASPHALT OVERLAY THICKNESS VARIES FROM 2" TO 4" ABOVE THE EXISTING BRICK BASE PAVEMENT. THE PROPOSED PAVEMENT PLANING DEPTH AND ASPHALT INTERMEDIATE COURSE THICKNESS SHALL BE 2.5" WHEREVER POSSIBLE. IF THE REQUIRED PLANING DEPTH EXCEEDS THE AVAILABLE THICKNESS OF THE EXISTING ASPHALT, THE CONTRACTOR SHALL REDUCE THE PLANING DEPTH TO AVOID GRINDING THE BRICK AND VARY THE PROPOSED INTERMEDIATE COURSE THICKNESS.

# END PLANING & RESURFACING @ STA. 19+06.29



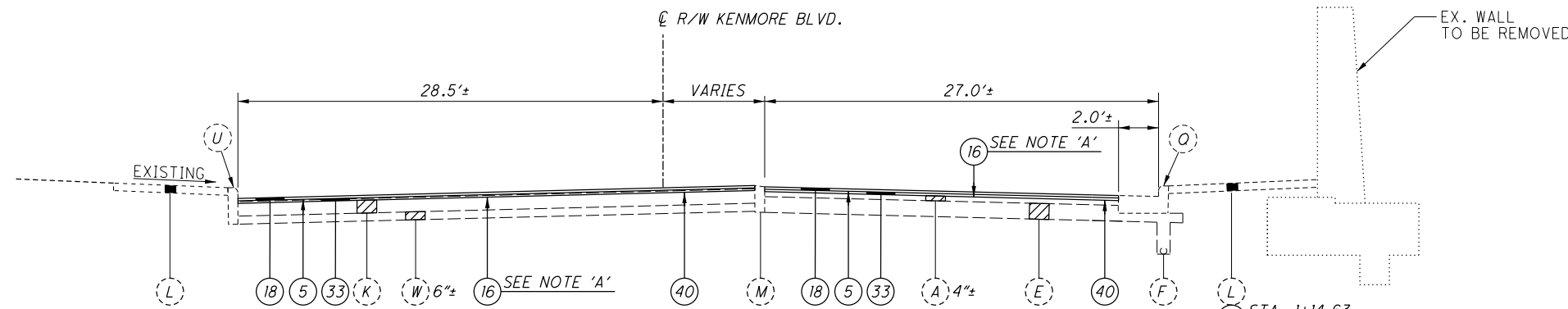
**CURB REPLACEMENT DETAIL**

N.T.S.  
 LIMITING STATIONS  
 STA. 10+10.98 TO STA. 10+48.11 LT. (WOOSTER RD./S.R. 619)  
 STA. 11+61.88 TO STA. 16+88.71 RT. (WOOSTER RD./S.R. 619)  
 STA. 12+71.27 TO STA. 16+67.54 LT. (WOOSTER RD./S.R. 619) \*\*\*  
 STA. 17+84.94 TO STA. 19+22.58 LT. (WOOSTER RD./S.R. 619) \*\*\*



**KENMORE BLVD. RESURFACING SECTION**

STA. 0+27.30 TO STA. 2+43.31



**KENMORE BLVD. RESURFACING SECTION**

STA. 2+43.31 TO STA. 6+75.00

**NOTE 'B'**

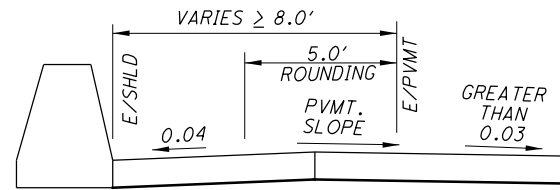
THE CONTRACTOR SHALL EXTEND THE THICKNESS OF THE ITEM 304 AGGREGATE BASE LAYER TO THE BOTTOM OF THE EXISTING AGGREGATE BASE. THE PLAN CALCULATIONS INDICATE AN AVERAGE DEPTH OF 12" NECESSARY

\*\*\* FOR INTERSECTION DETAILS, SEE SHEET 336, 337

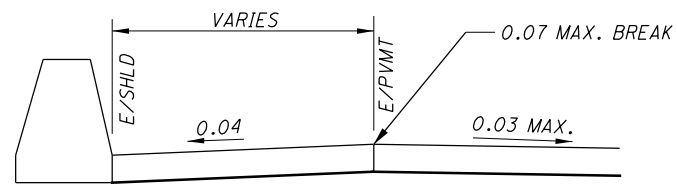
PROPOSED TYPICAL SECTIONS

SUM-76-5.53

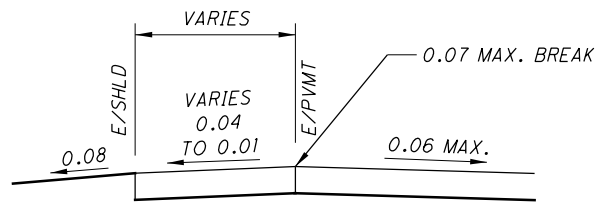
O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C\Y010.dgn Sheet 9/28/2018 2:53:56 PM orolland



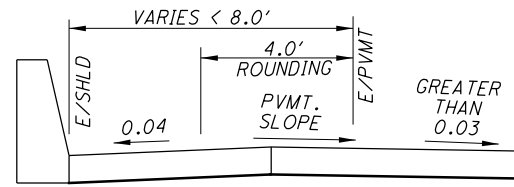
LANE SUPERELEVATION MORE THAN 0.03 WITH BARRIER (SHOWN) OR CURB



LANE SUPERELEVATION 0.03 MAX WITH BARRIER (SHOWN) OR CURB



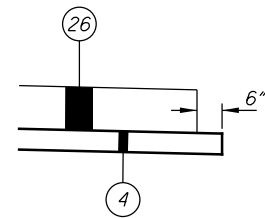
LANE SUPERELEVATION 0.06 MAX (W/O BARRIER OR CURB)



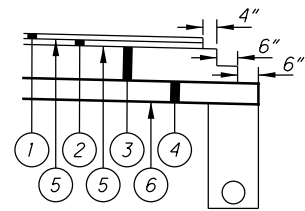
LANE SUPERELEVATION MORE THAN 0.03 WITH BARRIER (SHOWN) OR CURB

**SHOULDER DETAIL "A"**

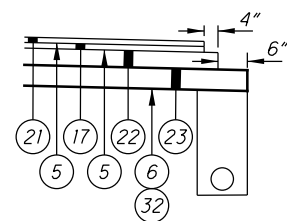
N.T.S.



RIGID PAVEMENT



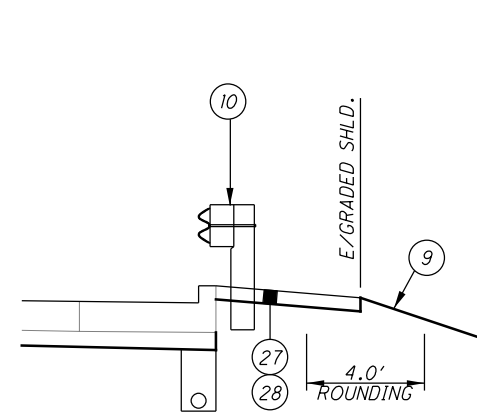
FLEXIBLE PAVEMENT  
ASPHALT CONCRETE BASE = 10"



FLEXIBLE PAVEMENT  
ASPHALT CONCRETE BASE = 4"

**EDGE DETAILS**

N.T.S.

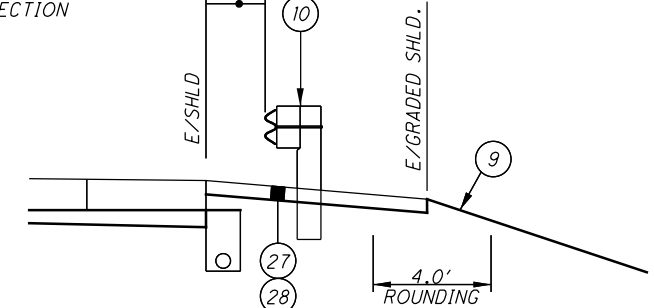


**CURBED ROADWAY  
GUARDRAIL INSTALLATION DETAIL**

SEE PLANS FOR LOCATIONS

2.0' LT./RT. I.R. 76, SIDE ROADS  
3.0' SINGLE LANE RAMP LT. SIDE  
2.0' SINGLE LANE RAMP RT. SIDE

NOTE: LT./RT. DETERMINED  
LOOKING DIRECTION  
OF TRAVEL



**UNCURBED ROADWAY  
GUARDRAIL INSTALLATION DETAIL**

SEE PLANS FOR LOCATIONS

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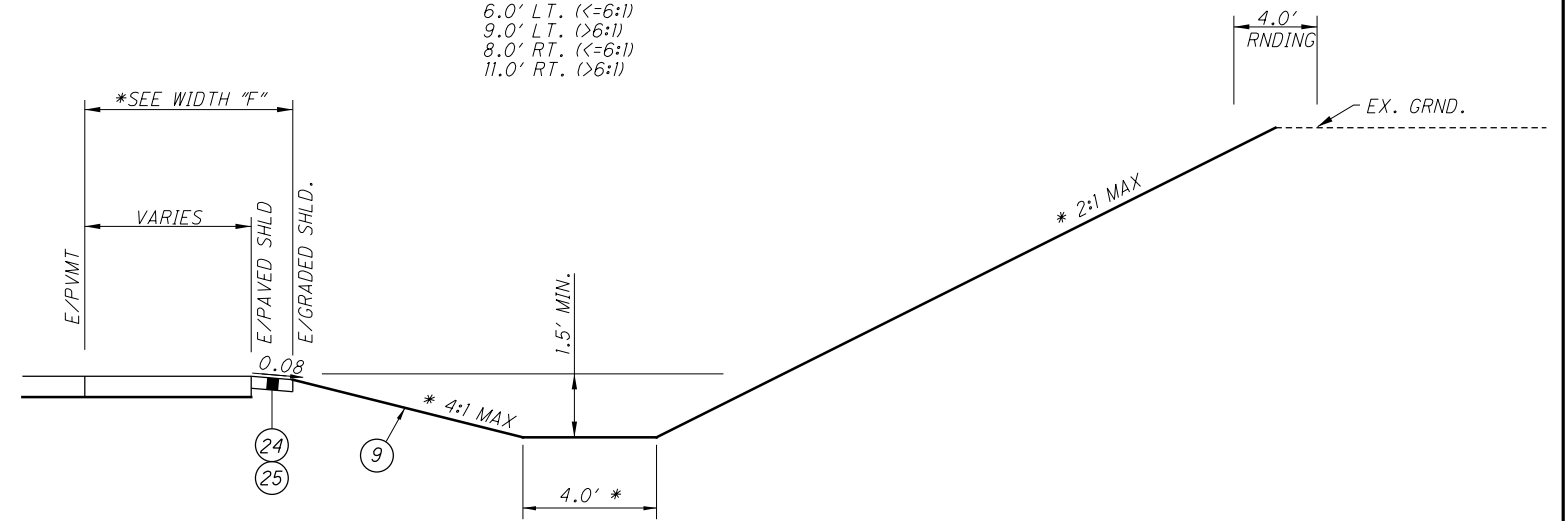
NOTE "Z"  
ALL DIMENSIONS ARE DEFINED LOOKING IN  
DIRECTION OF TRAVEL

WIDTH "F" (SEE NOTE "Z")

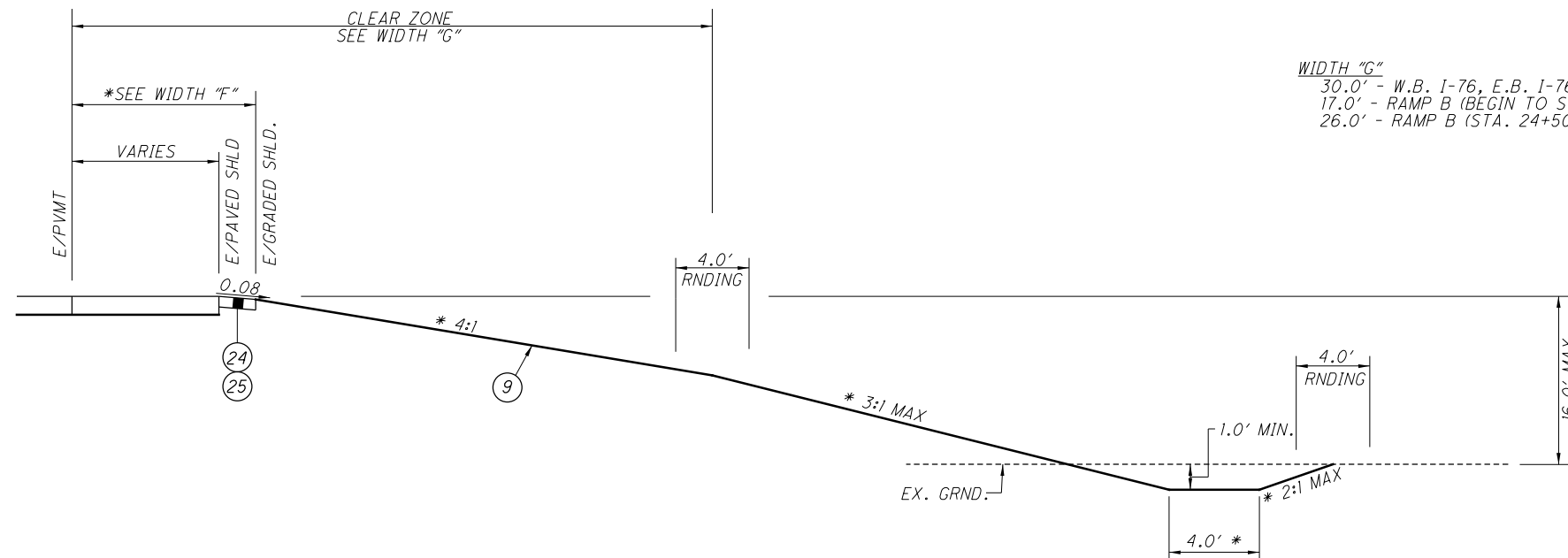
I.R. 76  
12.0' RT. (<=6:1)  
17.0' RT. (>6:1)

ACCEL/DECEL LANES  
8.0' RT. (<=6:1)  
13.0' RT. (>6:1)

SINGLE LANE RAMP  
6.0' LT. (<=6:1)  
9.0' LT. (>6:1)  
8.0' RT. (<=6:1)  
11.0' RT. (>6:1)



**CUT SECTION - (CLEAR ZONE GRADING)**



WIDTH "G"

30.0' - W.B. I-76, E.B. I-76  
17.0' - RAMP B (BEGIN TO STA. 24+00), RAMP B1, RAMP C1  
26.0' - RAMP B (STA. 24+50 TO END), RAMP C

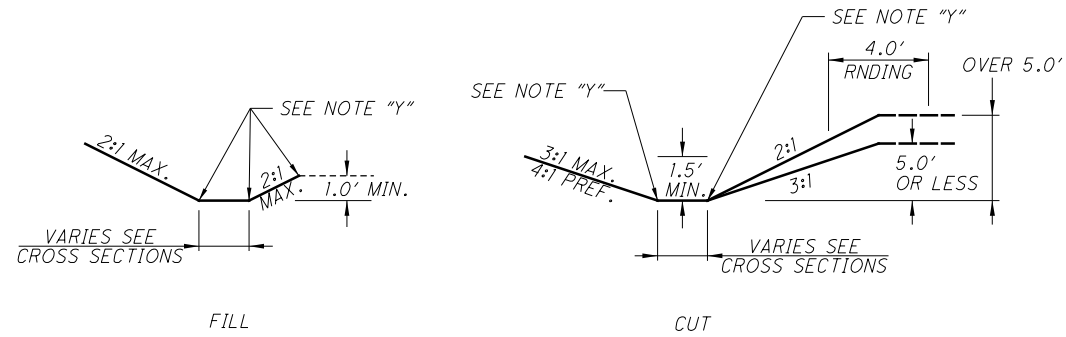
**FILL SECTION - (CLEAR ZONE GRADING)**

\*OR AS SHOWN ON CROSS SECTIONS

FOR PROPOSED LEGEND, SEE SHEET 10

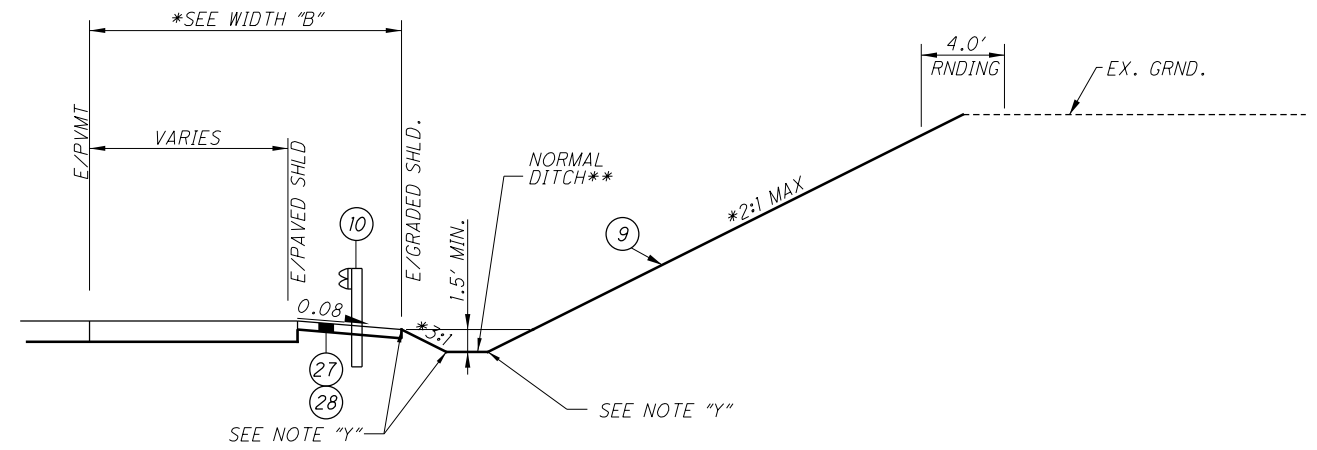
NOTE "Z"  
ALL DIMENSIONS ARE DEFINED LOOKING IN  
DIRECTION OF TRAVEL

NOTE "Y"  
4.0' ROUNDING

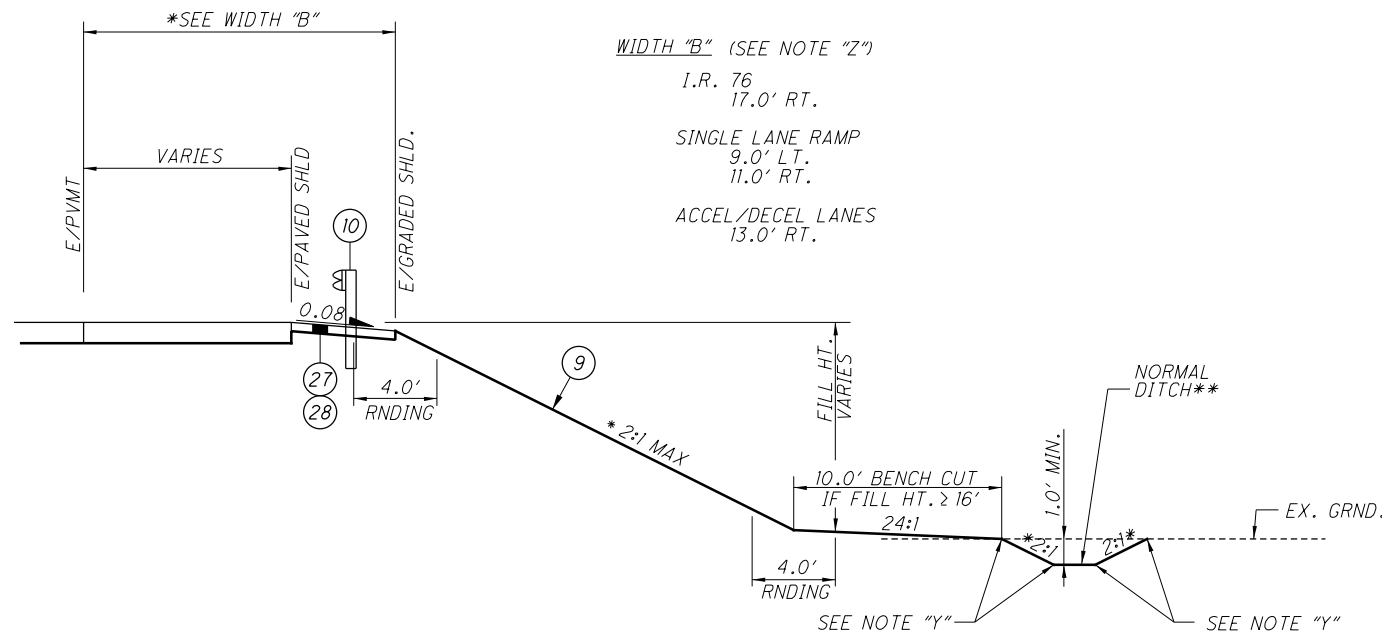


**NORMAL DITCH DETAILS**

N.T.S.



**CUT SECTION - (BARRIER GRADING)**



**FILL SECTION - (BARRIER GRADING)**

WIDTH "B" (SEE NOTE "Z")

I.R. 76  
17.0' RT.

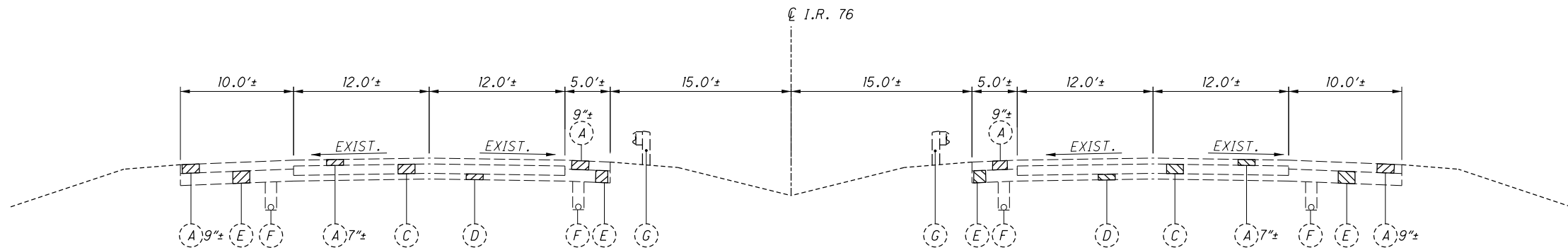
SINGLE LANE RAMP  
9.0' LT.  
11.0' RT.

ACCEL/DECEL LANES  
13.0' RT.

\*\* SEE NORMAL DITCH DETAIL ON THIS SHEET.  
\* OR AS SHOWN ON CROSS SECTIONS

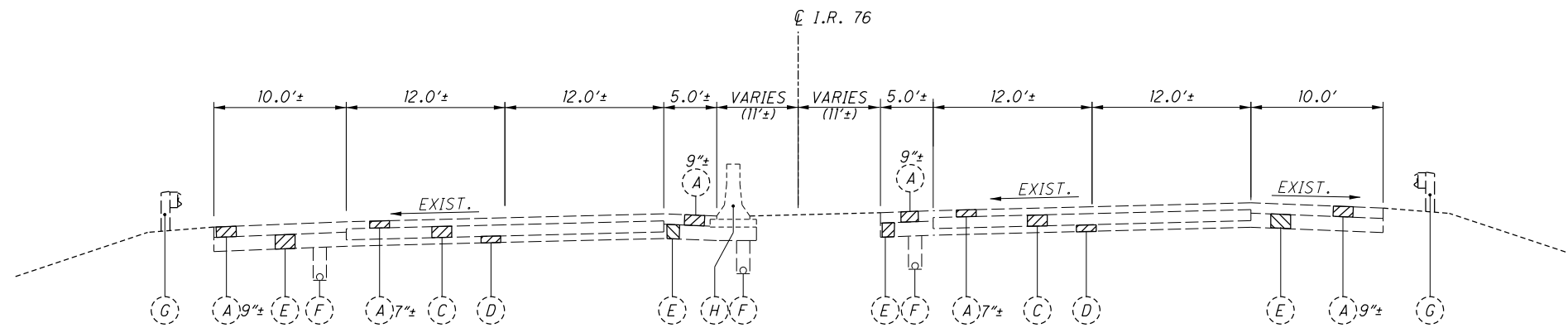
FOR PROPOSED LEGEND, SEE SHEET 10

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**EXISTING NORMAL SECTION - I.R. 76**

LIMITING STATIONS  
 STA. 292+00.00 TO STA. 292+75.00



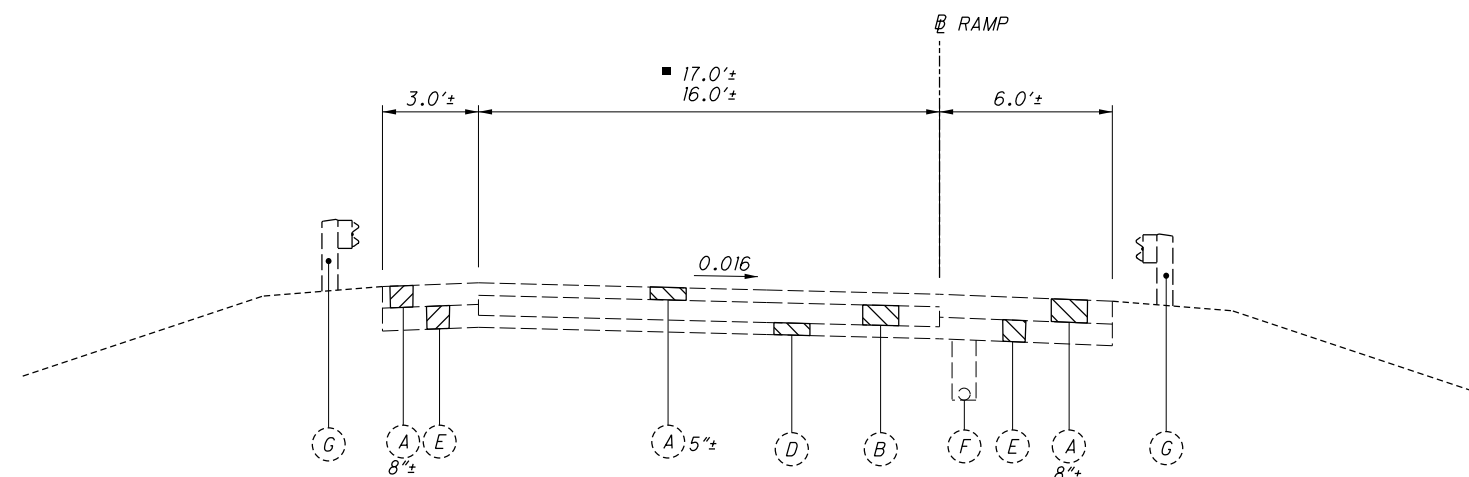
**EXISTING SUPERELEVATED SECTION - I.R. 76**

LIMITING STATIONS  
 STA. 292+75.00 TO STA. 312+30.00

**EXISTING LEGEND**

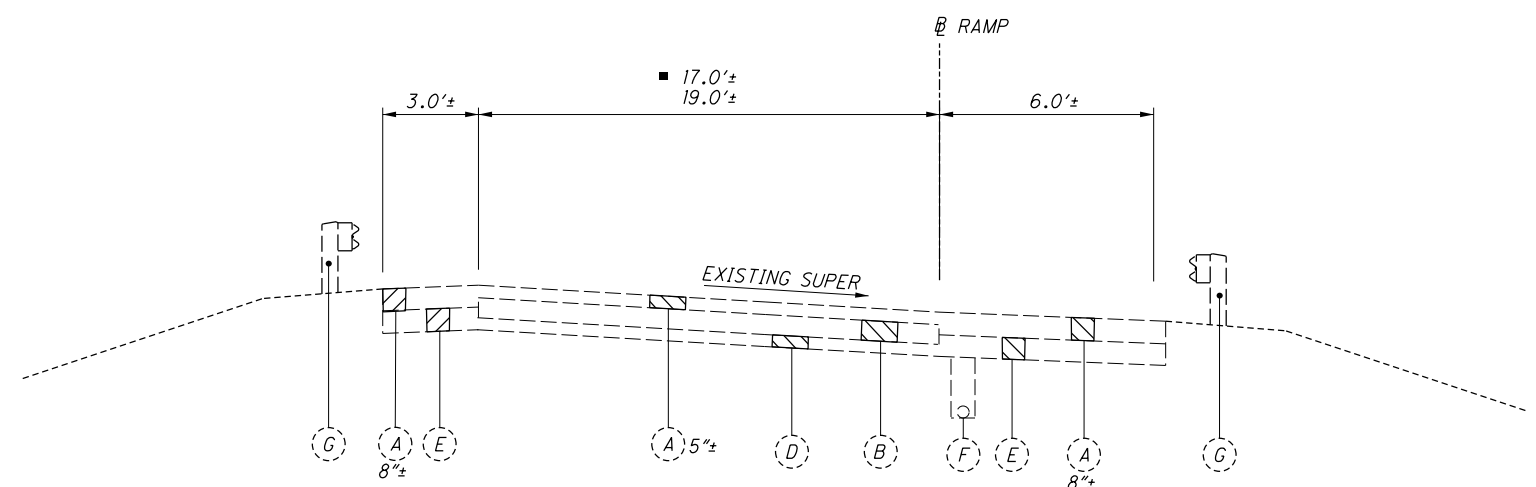
- (A) EXISTING ASPHALT PAVEMENT
- (B) EXISTING REINFORCED CONCRETE (T=9"±)
- (C) EXISTING REINFORCED CONCRETE (T=11"±)
- (D) EXISTING AGGREGATE (T=6"±)
- (E) EXISTING VARIABLE DEPTH AGGREGATE
- (F) EXISTING 6" UNDERDRAIN
- (G) EXISTING GUARDRAIL
- (H) EXISTING CONCRETE BARRIER
- (I) EXISTING CONCRETE BARRIER, SINGLE SLOPE
- (K) EXISTING BRICK
- (L) EXISTING CONCRETE WALK
- (M) EXISTING CONCRETE CURB
- (O) EXISTING REINFORCED CONCRETE (T=12"±)
- (Q) EXISTING CONCRETE CURB AND GUTTER
- (R) EXISTING DRIVEWAY
- (S) EXISTING CONCRETE DROP CURB
- (T) EXISTING NON-REINFORCED CONCRETE PAVEMENT
- (U) EXISTING STONE CURB
- (V) EXISTING CONCRETE MEDIAN
- (W) EXISTING CONCRETE BASE

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C\014.dgn Sheet 8/20/2018 9:34:03 AM jBlumgarner



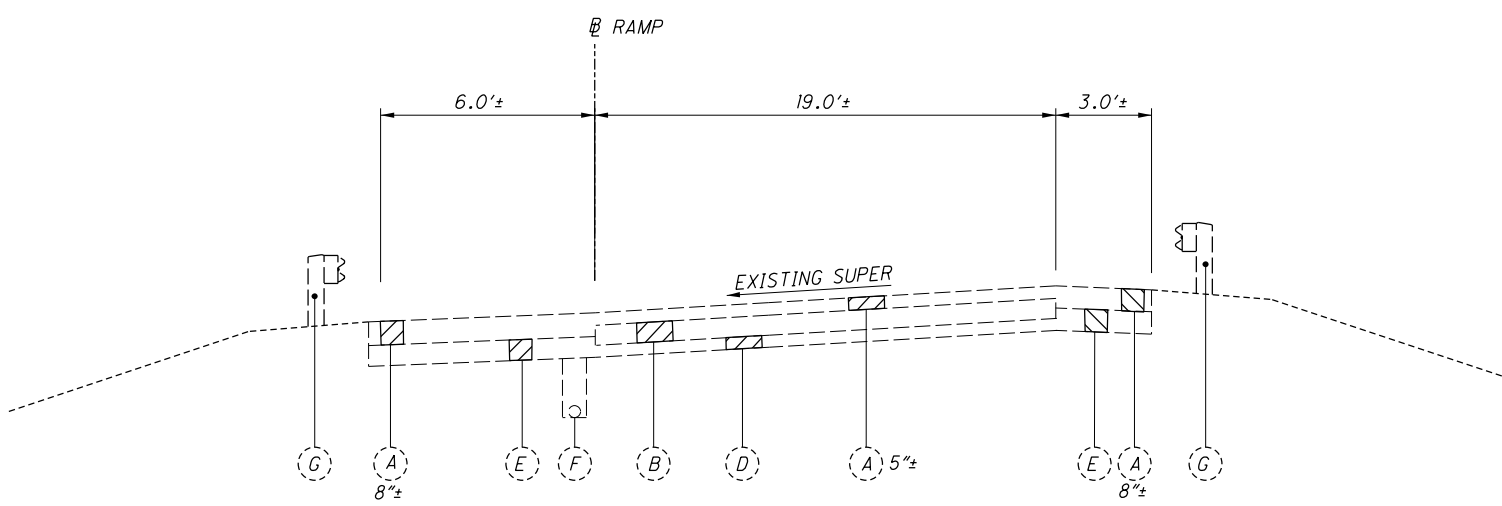
**EXISTING NORMAL RAMP SECTION**

- LIMITING STATIONS
- STA. 0+33.00 TO STA. 1+81.00 (EXISTING RAMP C)
  - STA. 11+50.00 TO STA. 13+05.48 (EXISTING RAMP C)
  - STA. 0+00.00 TO STA. 2+00.00 (EXISTING RAMP D)
  - STA. 3+57.03 TO STA. 14+25.00 (EXISTING RAMP E)
  - STA. 5+25.00 TO STA. 9+94.47 (EXISTING RAMP F)



**EXISTING SUPERELEVATED RIGHT RAMP SECTION**

- LIMITING STATIONS
- STA. 1+81.00 TO STA. 6+50.00 (EXISTING RAMP C)
  - STA. 2+00.00 TO STA. 15+00.00 (EXISTING RAMP D)
  - STA. 1+15.00 TO STA. 5+25.00 (EXISTING RAMP F)



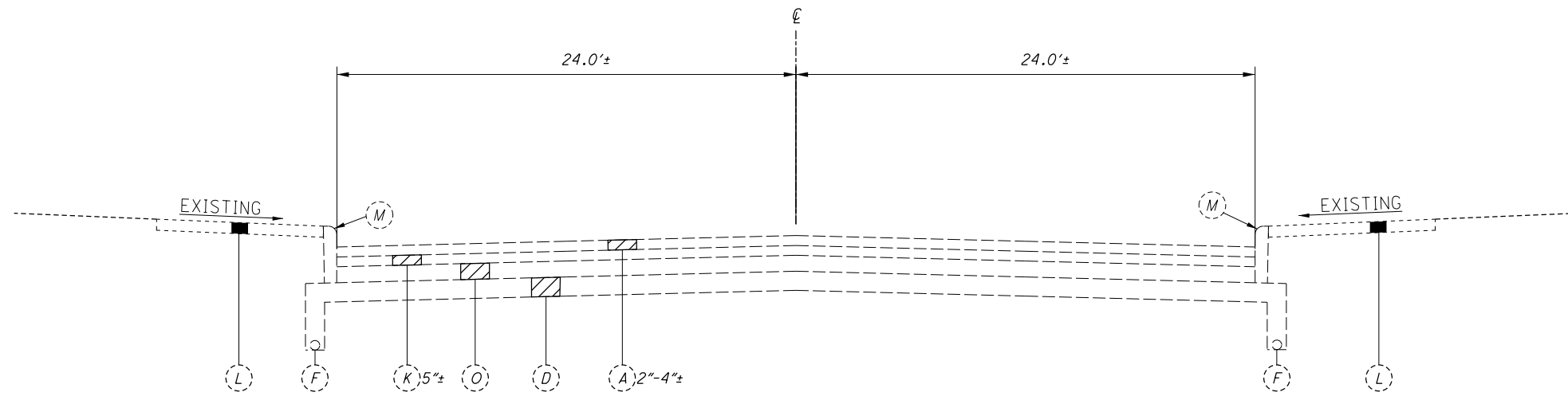
**EXISTING SUPERELEVATED LEFT RAMP SECTION**

- LIMITING STATIONS
- STA. 6+50.00 TO STA. 11+50.00 (EXISTING RAMP C)

FOR EXISTING LEGEND, SEE SHEET 23

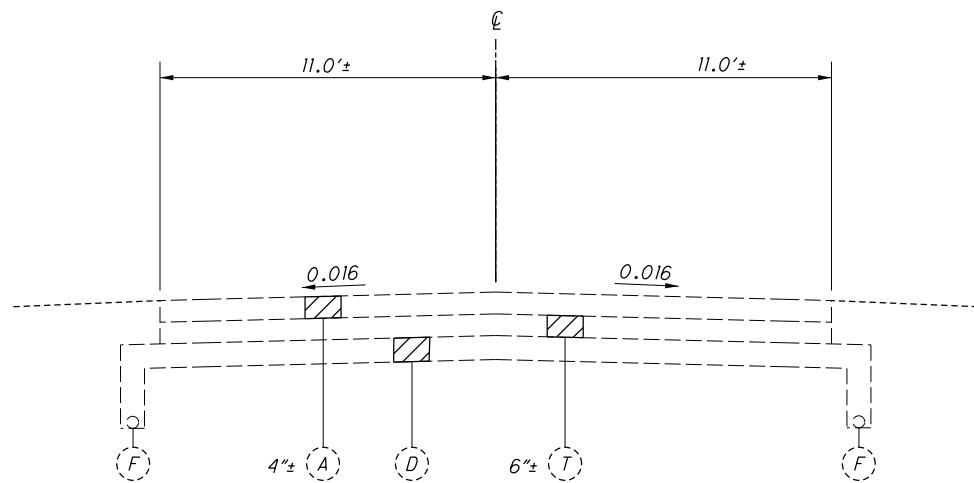


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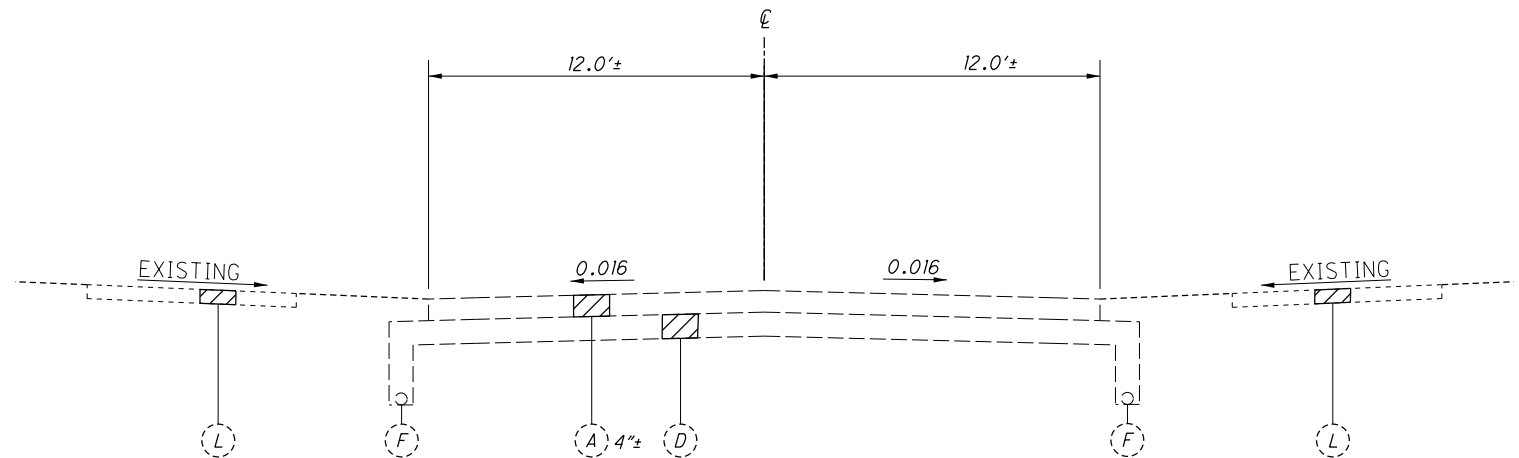
**EXISTING SECTION - S.R. 619/ WOOSTER RD.**

LIMITING STATIONS  
STA. 8+81.25 TO STA. 19+06.29



**EXISTING SECTION - GRAND BLVD.**

LIMITING STATIONS  
STA. 2+15.00 TO STA. 13+04.00

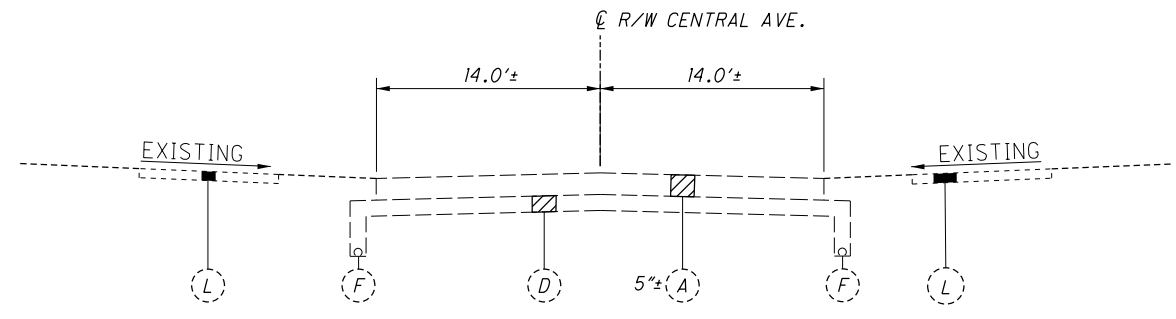


**EXISTING SECTION - ROMIG AVE.**

LIMITING STATIONS  
STA. 4+53.16 TO STA. 6+68.73

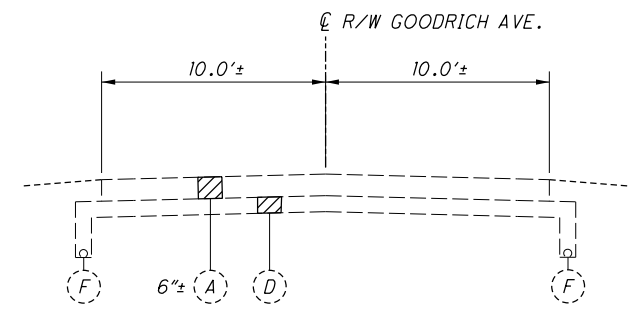
FOR EXISTING LEGEND, SEE SHEET 23

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C\016.dgn Sheet 8/20/2018 9:34:04 AM jBlumgarner



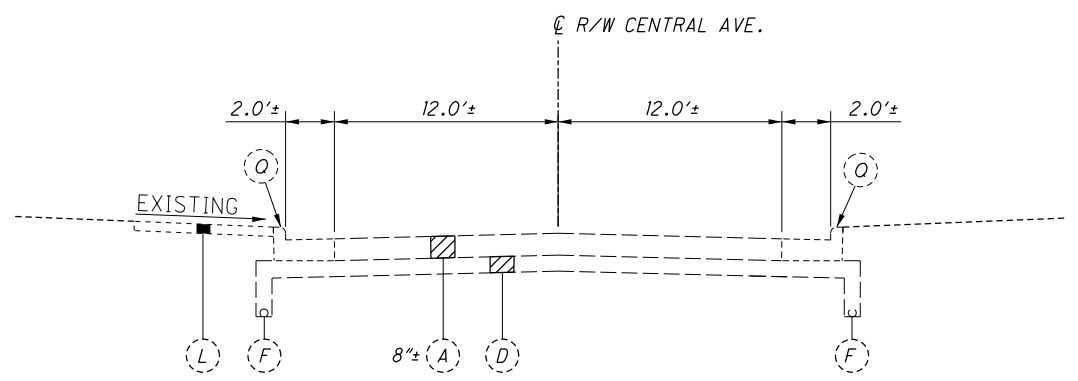
**EXISTING SECTION - CENTRAL AVE.**

LIMITING STATIONS  
STA. 2+95.00 TO STA. 9+00.00



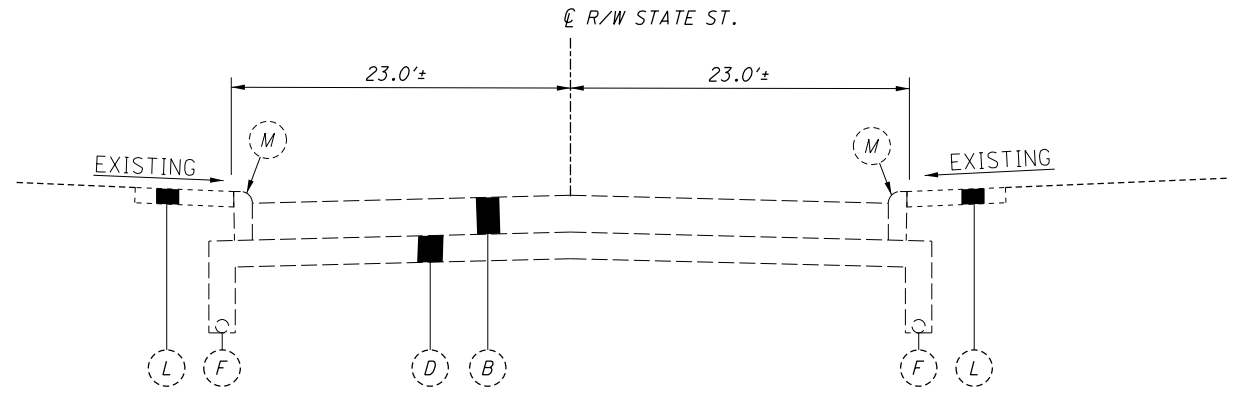
**EXISTING SECTION - GOODRICH AVE.**

LIMITING STATIONS  
STA. 0+00.00 TO STA. 3+75.00



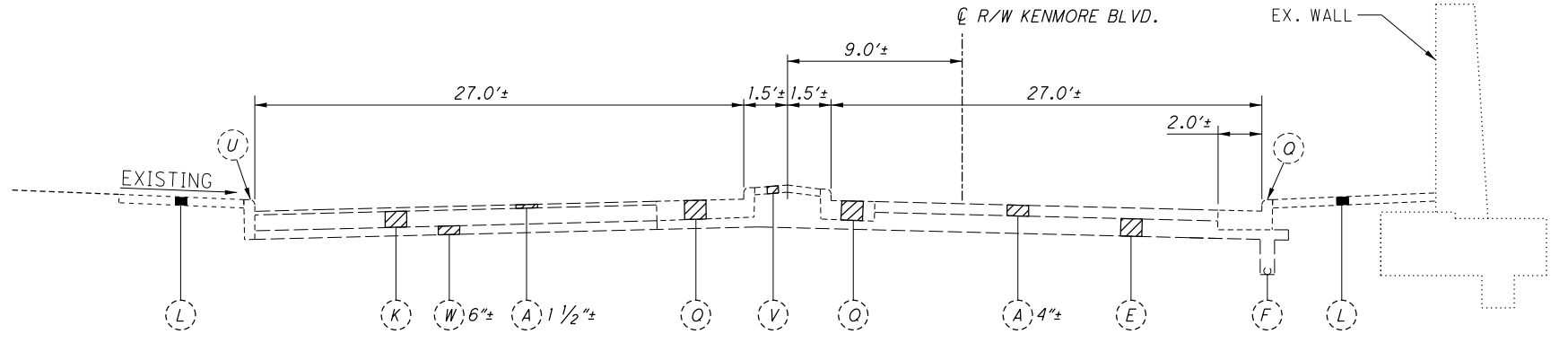
**EXISTING SECTION - CENTRAL AVE.**

LIMITING STATIONS  
STA. 9+00.00 TO STA. 13+75.00



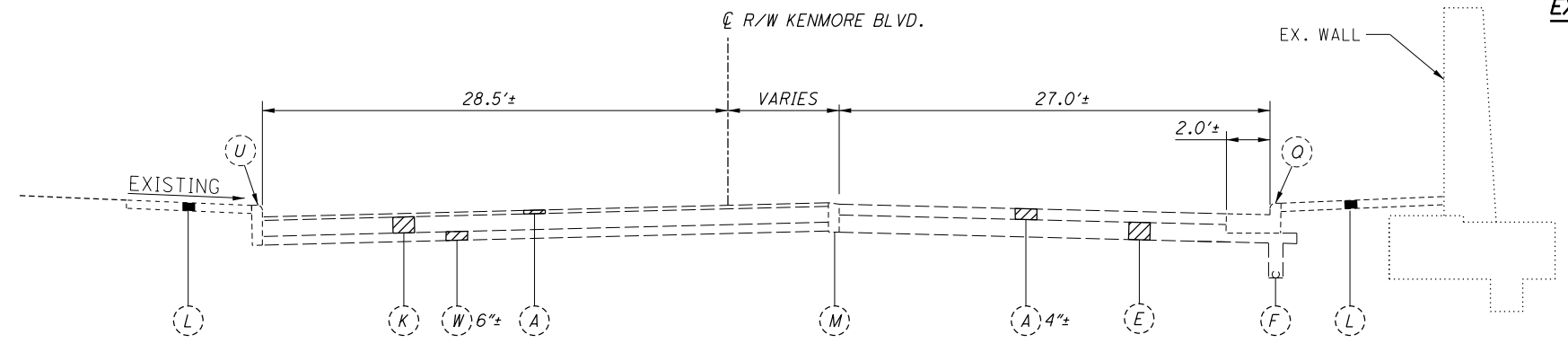
**EXISTING SECTION - STATE ST.**

LIMITING STATIONS  
STA. 83+00.00 TO STA. 89+00.00



**EXISTING SECTION - KENMORE BLVD.**

LIMITING STATIONS  
STA. 0+27.30 TO STA. 2+40.00



**EXISTING SECTION - KENMORE BLVD.**

LIMITING STATIONS  
STA. 2+40.00 TO STA. 6+75.00

FOR EXISTING LEGEND, SEE SHEET 23

EXISTING TYPICAL SECTIONS

SUM-76-5.53

**GENERAL**

**UTILITIES**

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

AKRON SEWER MAINTENANCE  
ATTN: JOE HARBESON  
1055 HOME AVENUE  
AKRON, OH 44310  
(330) 375-2666  
jharbenson@akronohio.gov

OHIO EDISON DISTRIBUTION  
ATTN: DAVID MILLER  
1910 WEST MARKET STREET, BLDG. 1  
AKRON, OH 44313  
(330) 436-4055  
millerdl@firstenergycorp.com

CITY OF AKRON TRAFFIC DIVISION  
ATTN: MIKE LUPICA  
1420 TRIPLETT BLVD, BUILDING 2  
AKRON, OH 44306  
(330) 375-2851  
mlupica@akronohio.gov

OHIO EDISON TRANSMISSION  
ATTN: BRYAN HUNSCH  
1910 WEST MARKET STREET, BLDG. 1  
AKRON, OH 44313  
(330) 384-5180  
bhunsch@firstenergycorp.com

AKRON WATER DISTRIBUTION  
ATTN: TONY PUGLIA  
1460 TRIPLETT BLVD.  
AKRON, OH 44306  
(330) 375-2420  
tpuglia@akronohio.gov

SPRINT COMMUNICATIONS  
ATTN: JOE THOMAS  
11370 ENTERPRISE DRIVE  
SHARONVILLE, OH 45241  
(440) 447-6163  
joseph.j.thomas@sprint.com

AT&T OHIO  
ATTN: LUCIE HINSHAW  
50 WEST BOWERY STREET, 6TH FLOOR  
AKRON, OH 44308  
(330) 384-3048  
lb2785@att.com

SPECTRUM  
ATTN: DREW FETTERMAN  
530 SOUTH MAIN STREET, SUITE 1751  
AKRON, OH 44311  
(330) 633-9203 ext. 3305553087  
drew.fetterman@charter.com

METROPOLITAN COMMUNICATIONS GROUP (AT&T TRANSMISSION)  
ATTN: BILL HARKNESS  
155 COMMERCE PARK DRIVE, SUITE 1  
WESTERVILLE, OH 43082  
(770) 316-5309  
bill.harkness@mcgfiber.com

SPECTRUM  
ATTN: LISA LAW  
750 CANYON DRIVE  
COPPELL, TX 75019  
(800) 362-2767  
west-engineering-relo@twcable.com

CITY OF BARBERTON/WATER  
ATTN: DENNY WEAVER  
576 WEST PARK AVENUE  
BARBERTON, OH 44203  
(330) 848-6713  
dweaver@cityofbarberton.com

MCI WORLDCOM/VERIZON BUSINESS  
ATTN: AL GUEST  
120 RAVINE STREET  
AKRON, OH 44303  
(330) 253-8267  
allan.guest@verizon.com

CITY OF BARBERTON - STORMWATER  
ATTN: CAROLINE KNORR  
576 WEST PARK AVENUE  
BARBERTON, OH 44203  
(330) 861-7298  
cknor@cifyofbarberton.com

ALFRED BENESCH & COMPANY  
ATTN: LARRY J. SHAW, P.E.  
201 N. ILLINOIS ST. 16TH FLOOR  
INDIANAPOLIS, IN 46204  
(317) 610-3241  
lshaw@benesch.com

DOMINION EAST OHIO  
ATTN: BILL SNYDER  
320 SPRINGSIDE DRIVE, SUITE 320  
AKRON, OH 44333  
(330) 664-2781  
william.d.snyder@dominionenergy.com  
relocation@dom.com

ODOT ITS (NON-ODPS MEMBER)  
(614) 387-4113  
FAX: (614) 887-4134  
cen.its.lab@dot.ohio.gov  
NOTE: CONTRACTOR SHALL CONTACT IF MARKING OF ITS INFRASTRUCTURE IS NEEDED. CONTRACTOR SHALL THEN MARK THROUGHOUT PROJECT DURATION IN ACCORDANCE WITH SS 809.

ODOT DISTRICT 4  
ATTN: DAVID KONEVAL  
2088 SOUTH ARLINGTON ROAD  
AKRON, OH 44306  
(330) 786-3146  
dave.koneval@dot.ohio.gov

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY USING A SUBSURFACE UTILITY ENGINEERING COMPANY [SUE]. IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT MIKE WEEKS OF CARPENTER MARTY TRANSPORTATION, PROJECT UTILITY COORDINATOR 614-656-2417, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED.

**PARCEL 43 DEMOLITION**

CONTRACTOR SHALL DEMO THE BUILDING, GARAGE AND SHED ON PARCEL 43 BY SEPTEMBER 1, 2019.

**CONSTRUCTION ACTIVITIES OVER GAS TRANSMISSION LINES**

THE CONTRACTOR SHALL BE AWARE OF THE PRESENCE OF TWO (2) 20" GAS TRANSMISSION LINES CROSSING THROUGH THE PROJECT SITE THAT ARE TO REMAIN AND THAT CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF THE LINES. THE CONTRACTOR IS PROHIBITED FROM CROSSING THE GAS TRANSMISSION LINES WITH HEAVY CONSTRUCTION EQUIPMENT, END DUMPING EMBANKMENT OR OTHER DISRUPTIVE CONSTRUCTION ACTIVITIES.

**BRIDGING EXISTING 20" DEO GAS LINES**

**ITEM 511 - 12" CLASS QC1 CONCRETE, SUBSTRUCTURE, AS PER PLAN**

THE FOLLOWING ITEMS SHALL BE PROVIDED TO BRIDGE THE EXISTING 20" GAS LINES PER DETAILS AND LIMITS BELOW.

CONCRETE SHALL MEET REQUIREMENTS OF SECTION 511 AND REINFORCING SHALL BE PER ODOT SCD BP-1.1. THE REINFORCING SHALL BE INCLUDED IN THE COST OF ITEM 511 - 12" CLASS QC1 CONCRETE, SUBSTRUCTURE, AS PER PLAN.

ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 511 - 12" CLASS QC1 CONCRETE, SUBSTRUCTURE, AS PER PLAN.

CONTRACTOR TO VERIFY LOCATION OF EX. 20" GAS LINES TO BE BRIDGED.

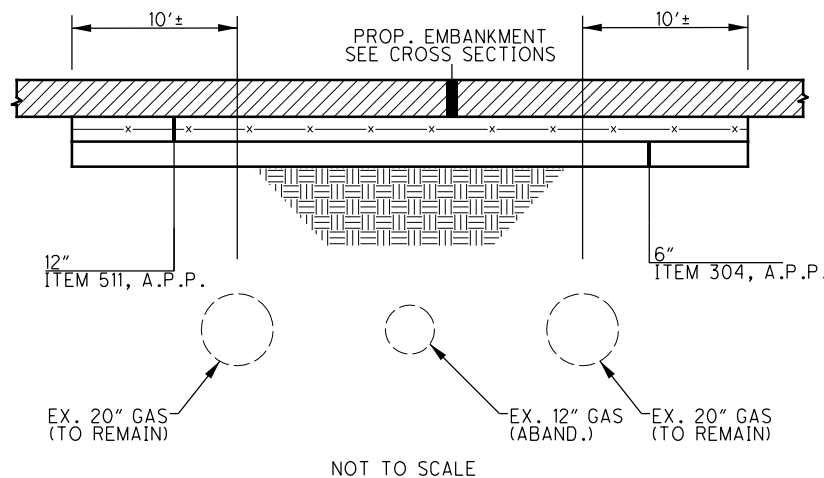
CONTRACTOR SHALL NOT KEEP IDLE EQUIPMENT STORED OR SETTING OVER THE EXISTING 20" GAS LINES.

CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE AREA OF THE EXISTING 20" GAS LINES. ANY DAMAGES DUE TO CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR BRIDGING THE EXISTING 20" GAS LINES.

ITEM 511 - 12" CLASS QC1 CONCRETE, SUBSTRUCTURE, AS PER PLAN 68 CU. YD.

ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN 34 CU. YD.



**PROTECTION OF AT&T DUCTS AT SUM-076-0577, SUM-076-0580 AND RETAINING WALL #3**

THE CONTRACTOR SHALL BE AWARE OF THE PRESENCE OF A CONCRETE ENCASED AT&T DUCT BANK LOCATED UNDER THE SOUTHEASTERN WINGWALL OF THE SUM-076-0577 CULVERT EXTENSION, THE SUM-076-0580 STRUCTURE AND RETAINING WALL #3. THE CONTRACTOR SHALL EXPOSE AND VERIFY DUCT LOCATION PRIOR TO FOOTER EXCAVATION AND PILE DRIVING FOR THE CULVERT EXTENSION. THE CONTRACTOR SHALL USE CAUTION WHEN WORKING IN THE VICINITY OF THE DUCTS. ACCORDING TO AT&T, THE CONCRETE ENCASED DUCTS SHOULD WITHSTAND THE VIBRATIONS ASSOCIATED WITH THE PROPOSED CONSTRUCTION ACTIVITIES. IF THE INTEGRITY OF THE CONCRETE ENCASEMENT IS COMPROMISED, THE CONTRACTOR SHALL STOP HIS CONSTRUCTION ACTIVITIES AND IMMEDIATELY NOTIFY AT&T (JEFF HONEYCUTT/330-384-9643). IF AT&T FACILITIES ARE DAMAGED DURING CONSTRUCTION OR IF AN UNFORESEEN UNDERGROUND CONFLICT ARISES, THE CONTRACTOR IS TO EXPECT A 21 DAY PERIOD FOR AT&T TO REPAIR THE DAMAGE AND/OR TO RESOLVE THE CONFLICT.

**ROUNDING**

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

**CLEARING AND GRUBBING, AS PER PLAN**

THE DEPARTMENT HAS NOT MARKED INDIVIDUAL TREES AND STUMPS FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DO NOT DISTURB" IN THE PLANS, REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 CLEARING AND GRUBBING.

TREES FROM APPROXIMATE STA. 291+00 TO STA. 305+00, RT. I-76 EB AND WITHIN THE AREA BETWEEN THE I-76 EB EXIT RAMP TO WOOSTER ROAD AND I-76 EB HAVE BEEN CUT DOWN. THE FALLEN TREES, HOWEVER WERE NOT REMOVED AND REMAIN ON SITE. THE CONTRACTOR SHALL REMOVE THE FALLEN TREES AND REMAINING STUMPS. ALL LABOR, EQUIPMENT AND OTHER INCIDENTALS NEEDED TO REMOVE THE FALLEN TREES AND REMAINING STUMPS IN THESE AREAS SHOULD BE INCLUDED IN THE LUMP SUM BID FOR THIS ITEM.

**BENCHING OF FOUNDATION SLOPES**

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

**MONUMENT ASSEMBLIES**

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 648.

**FENCE LENGTHS**

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

**WORK LIMITS**

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

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEETS 5 - 9 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: GPS  
MONUMENT TYPE: TYPE A & TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88  
GEOID: N/A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (CORS96) (EPOCH: 2002.0000)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)  
COMBINED SCALE FACTOR: 0.99989639169  
ORIGIN OF COORDINATE SYSTEM: EASTING (X): 0, NORTHING (Y): 0

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

UNITS ARE IN U.S. SURVEY FEET.

**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, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES ON ROADS OUTSIDE OF I.R. 76 L/A RIGHT OF WAY LIMITS BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM. THE SEGMENT OF WOOSTER ROAD BETWEEN THE I.R. 76 RAMPS AND KENMORE BOULEVARD SHALL BE EXCLUDED FROM THESE NOISE RESTRICTIONS. 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.

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NO.	DESCRIPTION	REV. BY	DATE
1	REVISED CLEARING AND GRUBBING	ATR	4-03-2019

QUANTITIES CARRIED TO GENERAL NOTES  
SUBSUMMARY ON SHEET 43

CALCULATED  
CJC  
CHECKED  
CWL

**GENERAL NOTES**

**SUM - 76 - 5.53**

27  
672

**GENERAL (CONTINUED)**

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

**619.01 DESCRIPTION**

THIS WORK CONSISTS OF PROVIDING, MAINTAINING, AND SUBSEQUENTLY REMOVING A FIELD OFFICE FOR THE EXCLUSIVE USE OF THE DEPARTMENT FOR THE DURATION OF THE CONTRACT AT A LOCATION APPROVED BY THE ENGINEER.

**619.02 GENERAL**

FURNISH A COMPLETELY FUNCTIONAL FIELD OFFICE OF THE TYPE SPECIFIED IN THE CONTRACT PRIOR TO BEGINNING WORK.

THE FIELD OFFICE WILL BE A SUITE TYPE OFFICE (NO TRAILER OR MODULAR OFFICE) WITH A MINIMUM OF 2,000 SQUARE FEET AND AT GROUND LEVEL WITH A MINIMUM CEILING HEIGHT OF EIGHT (8) FEET. PROVIDE TWO (2) OUTSIDE DOORS, LOCKABLE VANDAL PROOF CYLINDER TYPE DEAD BOLTS AND LOCKABLE WINDOWS. THE FLOOR SPACE WILL BE DIVIDED INTO A RESTROOM, ONE GENERAL OFFICE AREA (MINIMUM 300 SQUARE FEET), NOT LESS THAN THREE INDIVIDUAL OFFICES (MINIMUM 144 SQUARE FEET EACH), AND ONE CONFERENCE ROOM (MINIMUM 300 SQUARE FEET), AS DEEMED NECESSARY BY THE ENGINEER.

FURNISH EACH FIELD OFFICE WITH A MEANS FOR MAINTAINING ROOM TEMPERATURE BETWEEN 68° F AND 80° F.

FURNISH ELECTRIC SERVICE FOR EACH FIELD OFFICE.

FURNISH NEAT, SANITARY, ENCLOSED TOILET ACCOMMODATIONS CONNECTED TO AN EXISTING SANITARY SEWER LINE FOR THE USE OF THE OCCUPANTS OF THE FIELD OFFICE, MEETING APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. FURNISH ASSOCIATED LAVATORY AND SANITARY SUPPLIES. POTABLE HOT AND COLD RUNNING WATER WILL BE PROVIDED IN THE RESTROOM FOR SANITARY PURPOSES.

FURNISH TRASH COLLECTION SERVICE / DUMPSTER.

FURNISH PROFESSIONAL, BONDED AND INSURED JANITORIAL SERVICE WITH A WEEKLY CLEANING OF THE ENTIRE OFFICE TO INCLUDE THE RESTROOM FACILITIES FOR THE DURATION OF THE PROJECT.

FURNISH BOTTLED DRINKING WATER SERVICE WITH A HOT AND COLD DISPENSER AND ASSOCIATED SUPPLIES.

PROVIDE A LOCKABLE WOOD OR METAL STORAGE BOX OF SUFFICIENT SIZE TO STORE A NUCLEAR DENSITY GAUGE AND AN ELECTRICAL CONNECTION FOR THE GAUGE.

TELEPHONE SERVICE AND TELEPHONES, INCLUDING ALL NECESSARY WIRING, WILL BE SUPPLIED AT EACH DESK, THE CONFERENCE ROOM, AND THE GENERAL OFFICE AREA INTERCONNECTED BETWEEN TELEPHONES. ALL TELEPHONES WILL BE EQUIPPED WITH SPEAKER PHONE AND TWO (2) LINE CAPABILITIES WITH TWO (2) LINE SERVICE AT EACH LOCATION. A TOTAL OF THREE (3) OUTSIDE LINES WILL BE PROVIDED, ONE OF WHICH WILL BE DEDICATED FOR THE USE OF THE FACSIMILE MACHINE. THE TWO (2) LINES FOR THE TELEPHONE WILL HAVE THE ABILITY TO AUTOMATICALLY TRANSFER TO THE NEXT LINE IF ANOTHER LINE IS IN USE.

PROVIDE A BROADBAND INTERNET CONNECTION CAPABLE OF MINIMUM DOWNLOAD SPEEDS GREATER THAN 10 MBPS, UPLOAD SPEEDS GREATER THAN 2 MBPS, AND NETWORK LATENCY LESS THAN 50 MILLISECONDS. IF SPEEDS ARE NOT AVAILABLE THROUGH AND INDIVIDUAL OR SINGULAR CIRCUIT, PROVIDE THE HIGHEST SPEED AVAILABLE IN THE AREA AND INSTALL MULTIPLE CIRCUITS TO ACHIEVE THE SPECIFIED SPEEDS. WHEN MULTIPLE BROADBAND SERVICES ARE AVAILABLE, THE FOLLOWING IS THE PREFERRED ORDER: CABLE, DSL, CELLULAR, AND WIRELESS RADIO. SATELLITE COMMUNICATION IS NOT COMPATIBLE WITH ODOT VPN CONNECTION AND WILL NOT BE ACCEPTED. SUPPLY ALL WIRING, ROUTERS, MODEMS (CAPABLE TO BE CONFIGURED IN BRIDGE MODE), SOFTWARE, AND INCIDENTALS NECESSARY TO CONNECT FIVE (5) PERSONAL COMPUTERS AT SEPARATE LOCATIONS, DESIGNATED BY THE PROJECT ENGINEER, THROUGHOUT THE OFFICE TO THE SYSTEM. IF A CELLULAR NETWORK IS USED, PROVIDE THE CELLULAR EQUIPMENT, INCLUDING SOFTWARE AND ROUTER EQUIPMENT TO CONNECT TO THE ODOT PROVIDED CISCO ASA 5505 FIREWALL. SUPPLY ODOT WITH ALL DOCUMENTATION FOR THE BROADBAND CIRCUIT INCLUDING ALL USERNAME/USER IDS, PASSWORDS AND ACCOUNT INFORMATION. VERIFY THAT THE BROADBAND INTERNET CONNECTION IS ACTIVE AND WORKING AS SPECIFIED. ODOT IT PERSONNEL WILL CONFIRM THAT BANDWIDTH AND NETWORK LATENCY ARE COMPLIANT WITH THE REQUIRED FIELD OFFICE SPECIFICATIONS. ALL FIELD OFFICE INTERNET CONNECTIONS ARE FOR ODOT USE ONLY.

PROVIDE THE FOLLOWING OFFICE FURNITURE AND EQUIPMENT:

1. SIX (6) TELEPHONES WITH SPEAKER PHONE AND TWO (2) LINE CONNECTION.
2. ONE (1) DIGITAL ANSWERING MACHINE WITH TIME / DATE STAMP.
3. ONE (1) MULTI-FUNCTION COLOR COPIER THAT IS SET UP FOR SCANNING, PRINTING, FAXING, AND COPYING WITH THE FOLLOWING SPECIFICATIONS:
  - A. COLOR PRINT/COPY/SCAN
  - B. COPY/PRINT SPEED: 30 PPM (LETTER), 15 PPM (LEGAL), 15 PPM (LEDGER), OR HIGHER.
  - C. DUPLEX PRINTING SUPPORT
  - D. AUTOMATIC DOCUMENT FEEDER WITH 50 SHEET DUPLEXING DOCUMENT FEEDER
  - E. COPIER MEMORY: 1 GB
  - F. INSTALLED HDD: 40 GB
  - G. DATA ENCRYPTION AND HDD ERASE SUPPORT INCLUDED WITH MACHINE
  - H. INTERNAL STAPLER SUPPORT
  - I. PAPER CAPACITY: 250 SHEET X 2 TRAYS, 50 SHEET BYPASS TRAY
  - J. NETWORK INTERFACE: 10/100 BASE-TX, 1000 BASE-TX
  - K. ANALOG FAX SUPPORT INCLUDED WITH MACHINE
  - L. COLOR SCANNING WITH THE FOLLOWING REQUIREMENTS:
    - I. RESOLUTION: UP TO 600 X 600 DPI
    - II. SCAN AREA UP TO 11" X 17"
    - III. SCANNING PROTOCOL SUPPORT - TCP/IP, SMTP, SMB, FTP, POP3, NCP
    - IV. FILE SCAN TYPES SUPPORTED: SINGLE PAGE TIFF, JPEG, PDF, MULTI-PAGE TIFF, PDF, AND OCR PDF
    - V. SCANNING SUPPORT FOR SCAN-TO-EMAIL, HDD, SMB (FOLDER), URL, AND TWAIN
  - M. NETWORK PROTOCOL SUPPORT FOR TCP/IP
  - N. CLIENT AND SERVER PRINT DRIVER SUPPORT FOR PCL PRINT DRIVERS
  - O. SERVER OPERATING SYSTEM SUPPORT FOR WINDOWS SERVER 2008 AND WINDOWS SERVER 2008 R2 (32 BIT/64 BIT)
  - P. CLIENT PRINT DRIVER SUPPORT FOR WINDOWS XP/WINDOWS 7/WINDOWS 10 (BOTH PCL 32 BIT/64 BIT)
  - Q. MINIMUM PRINT/COPY RESOLUTION OF 600 X 600 DPI
  - R. SECURE PRINTING WITH PASSWORD OR PIN FROM CLIENT TO COPIER
  - S. PROVIDE THE COPIER WITH ALL NECESSARY TONER, PAPER SUPPLIES, STAPLES AND A SERVICE CONTRACT WITH A RESPONSE TIME OF 24 HOURS OR LESS FOR MAINTENANCE AND SUPPLIES OF THE COPY MACHINE.
4. ONE (1) DIGITAL HD 4K FLASH MEMORY VIDEO CAMERA, 16 GB INTERNAL MEMORY, 128 GB SDXC UHS-I MEMORY CARD, 3" MINIMUM LCD SCREEN SIZE, 60X OPTICAL ZOOM, 2000X DIGITAL ZOOM, 470K VIDEO RESOLUTION, SUPER STEADY SHOT IMAGE STABILIZATION, SUPER NIGHT SHOT INFRARED SYSTEM FOR FULL COLOR IMAGING IN LOW LIGHT CONDITIONS, BUILT-IN MICROPHONE, RECHARGEABLE LITHIUM ION BATTERY, BATTERY CHARGER, AC ADAPTER, CARRYING CASE, UNIVERSAL TRIPOD, USB INTERFACE CABLE, DIGITAL VIDEO CAMERA SOFTWARE FOR PC COMPUTER.
5. EIGHT (8) PRINTING DESK CALCULATORS WITH TAPE.
6. EIGHT (8) DESK AND ROLLING, ADJUSTABLE, ARM CHAIR SETS.
7. TWENTY (20) STACKABLE CHAIRS.
8. TEN (10) WORK TABLES, 30" X 72"
9. ONE (1) DRAFTING/PLAN TABLE WITH A MINIMUM 36" X 60" WORKING SURFACE WITH AN APPROPRIATE ADJUSTABLE HEIGHT DRAFTING CHAIR.
10. THREE (3), 4-DRAWER, LOCKABLE, LEGAL SIZE METAL FILING CABINETS.
11. FOUR (4), 2-DRAWER, LOCKABLE, LEGAL SIZE METAL FILING CABINETS.
12. THREE (3) PORTABLE, TYPE 2-A:10-BC, FIVE POUND SIZE FIRE EXTINGUISHERS.
13. THREE (3) PLAN RACKS, EACH CAPABLE OF HANDLING THE BREAKDOWN OF 22 X 34 INCH SIZED PLANS INTO TEN SECTIONS.
14. TWENTY (20) ALL-WEATHER PARKING SPACES.
15. EIGHT (8) 24-QUART WASTE BASKETS WITH APPROPRIATE SIZED TRASH BAGS.

EXPENSES FOR THE OPERATION OF THE FIELD OFFICE TO INCLUDE BUT NOT BE LIMITED TO ELECTRICAL SERVICE, HEATING/COOLING, RUNNING WATER SERVICE, SEWER SERVICE, TELEPHONE SERVICE, JANITORIAL SERVICE, BOTTLED WATER SERVICE, HIGH SPEED ONLINE SERVICE, ETC. WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL ALSO PROVIDE ALL NECESSARY SUPPLIES AND MAINTENANCE FOR ALL EQUIPMENT THAT THE CONTRACTOR IS REQUIRED TO FURNISH.

THE CONTRACTOR WILL RETAIN RESPONSIBILITY FOR RISK OF LOSS OR DAMAGE TO SAID FIELD OFFICE, FURNISHINGS, AND EQUIPMENT WHILE THE OFFICE IS IN USE FOR THIS CONTRACT.

THE FIELD OFFICE WILL BE APPROVED IN ADVANCE BY THE ENGINEER AND FULLY OPERATIONAL WITHIN 30 DAYS AFTER THE SIGNING AND EXECUTION OF THE CONTRACT OR PRIOR TO THE START OF ANY CONSTRUCTION WORK, WHICHEVER COMES FIRST.

**619.03 METHOD OF MEASUREMENT**

THE DEPARTMENT WILL MEASURE FIELD OFFICE, TYPE C, AS PER PLAN BY THE NUMBER OF MONTHS THE OFFICE IS MAINTAINED. A PARTIAL MONTH AT THE END OF THE PROJECT WILL BE PAID AS A FULL MONTH.

**619.04 BASIS OF PAYMENT**

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
619	MONTH	FIELD OFFICE, TYPE C, AS PER PLAN

CALCULATED  
CJC  
CHECKED  
CWL

GENERAL NOTES

SUM - 76 - 5.53

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**ROADWAY**

**ITEM 606 - IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 3 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

TYPE 3 IMPACT ATTENUATORS ARE NECESSARY AT THE FOLLOWING LOCATIONS:

- 1. RAMP C/RAMP C1 GORE

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR THE ITEM 606, IMPACT ATTENUATOR, TYPE 3 [50 MPH, TEST LEVEL 3(TL-3), 90" HAZARD WIDTH, ASPHALT FOUNDATION, ATTENUATOR MANUFACTURER'S GUARDRAIL TRANSITION AND BACKUP SUPPORT, UNIDIRECTIONAL] EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE, AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

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

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E**

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

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

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

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

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

**ITEM 622 - BARRIER, MISC: CONCRETE BARRIER, TYPE B50**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING CONCRETE BARRIER, TYPE B50 AS SHOWN ON THE DETAIL SHEET ON SHEET 353. 4" RACEWAYS AS SHOWN ON SCD RM - 4.3 ALSO REQUIRED.

ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE DESCRIBED WORK INCLUDING BUT NOT LIMITED TO CONCRETE AND STEEL, SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR:

ITEM 622 - BARRIER, MISC: CONCRETE BARRIER, TYPE B50 (FT)

**MEDIAN BARRIER WORK OUTSIDE OF PROJECT LIMITS**

THE MAINTENANCE OF TRAFFIC PLANS ON SHEETS 150 - 154 INCLUDE THE REMOVAL AND REPLACEMENT OF THE MEDIAN BARRIER WHICH IS OUTSIDE THE ROADWAY PROJECT AREA. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR THE REMOVAL AND REPLACEMENT OF THE MEDIAN BARRIER.

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 I.R. 76 STA. 253+50 TO STA. 259+50 = 600 FT

ITEM 622 - BARRIER, MISC.: CONCRETE BARRIER, TYPE B50 I.R. 76 STA. 317+75 TO STA. 323+97 = 622 FT

ITEM 202 - CONCRETE BARRIER REMOVED I.R. 76 STA. 317+75 TO STA. 323+97 = 622 FT

ITEM 202 - PAVEMENT REMOVED, ASPHALT 1372 SQ. YD.

ITEM 202 - CATCH BASIN REMOVED 3 EACH

ITEM 202 - REMOVAL MISC.: TRENCH DRAIN 850 FT.

ITEM 302 - 10" ASPHALT CONCRETE BASE, PG64-22 381 CU. YD.

ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN 229 CU. YD.

ITEM 407 - NON-TRACKING TACK COAT 151 GAL.

ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446) 67 CU. YD.

ITEM 626 - BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL 14 EACH

ITEM 611 - INLET, MISC.: INLET, STANDARD TYPE 1-3B50 RECONSTRUCTED TO GRADE 1 EACH

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B**

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

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

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

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

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

**ITEM SPECIAL - PRE-CONSTRUCTION / POST-CONSTRUCTION SURVEY**

**A. DESCRIPTION**

THIS ITEM OF WORK COVERS THE REQUIREMENTS FOR PRE-CONSTRUCTION, INTERIM POST-CONSTRUCTION AND POST-CONSTRUCTION SURVEYS FOR THE PURPOSE OF DETERMINING POTENTIAL CONSTRUCTION IMPACTS TO NEARBY BUSINESSES AND STRUCTURES. THESE SURVEYS SHALL BE COMPLETED IN CONJUNCTION WITH THE PROPOSED WORK ITEMS IN THE VICINITY OF THE BUSINESSES IN QUESTION.

**B. PROCEDURES**

THE CONTRACTOR SHALL EMPLOY AN APPROVED FIRM (WITH EXPERIENCE AS OUTLINED IN SECTION C, BELOW), TO COMPLETE PRE-CONSTRUCTION AND POST-CONSTRUCTION SURVEYS FOR THE STRUCTURES AS LISTED BELOW. THE SURVEYS SHALL INCLUDE ALL ASSOCIATED OUTBUILDINGS.

THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM EACH PROPERTY OWNER, AND SUBMIT A COPY TO THE ENGINEER PRIOR TO CONDUCTING THE SURVEY. IF WRITTEN PERMISSION CANNOT BE OBTAINED FROM A PROPERTY OWNER, THE CONTRACTOR SHALL PROVIDE IMMEDIATE NOTIFICATION TO THE ENGINEER, AS WELL AS A PLAN FOR MONITORING CONSTRUCTION VIBRATIONS IN THE VICINITY OF THE STRUCTURE.

THE SURVEYS SHALL INCLUDE A COMPREHENSIVE REVIEW OF BOTH THE INSIDE AND OUTSIDE OF EACH STRUCTURE, AND SHALL INCLUDE VIDEO AND/OR PHOTOGRAPHS OF THE STRUCTURES AS WELL AS WRITTEN NARRATIVE. THE PHOTOS AND NARRATIVE SHALL DESCRIBE, IN DETAIL, THE OVERALL CONDITION OF EACH STRUCTURE AS WELL AS IDENTIFY ALL EXISTING DAMAGE. PHOTOS SHALL BE TAKEN OF ALL NOTED CRACKS, AND/OR STRUCTURAL DEFICIENCIES, AND THESE SHALL BE MEASURES AS TO LOCATION, LENGTH, SIZE, THICKNESS, ETC. ALL INFORMATION SHALL BE INCLUDED IN A REPORT, SPECIFIC TO EACH PROPERTY (A RESIDENCE AND ALL ASSOCIATED OUT BUILDINGS MAY BE SUBMITTED WITHIN ONE (1) REPORT, BUT EACH STRUCTURE SHALL BE SEPARATED WITHIN THE REPORT).

SURVEYS OF EACH LOCATION SHALL BE TAKEN AS FOLLOWS, AND REPORTS SHALL BE SUBMITTED FOR EACH SURVEY:

1. THE PRE-CONSTRUCTION SURVEYS SHALL BE COMPLETED AND REPORTS SUBMITTED A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF REMOVAL ACTIVITIES.
2. INTERIM POST-CONSTRUCTION SURVEYS SHALL BE COMPLETED FOR EACH LOCATION (AND REPORTS SUBMITTED), NO LATER THAN ONE (1) WEEK FOLLOWING THE COMPLETION OF WORK.
3. POST-CONSTRUCTION SURVEYS SHALL BE COMPLETED FOR EACH LOCATION (AND REPORTS SUBMITTED), NO LATER THAN ONE (1) WEEK FOLLOWING THE COMPLETION OF THE PROJECT.

THE REPORTS SHALL DESCRIBE ANY PRECAUTIONARY MEASURES NECESSARY FOR SITE SPECIFIC CONDITIONS.

ALL PHOTOGRAPHS TAKEN SHALL BE TAKEN FROM EITHER FILM OR DIGITAL MEDIA, AND SHALL BE CLEARLY LABELED AS TO LOCATION, AND SUBJECT MATTER.

THE POST-CONSTRUCTION SURVEYS SHALL INCLUDE A COMPLETE SURVEY, AS DETAILED AS THE PRE-CONSTRUCTION SURVEY, WITH SPECIAL ATTENTION TO ANY DEFICIENCIES NOTED IN THE PRE-CONSTRUCTION SURVEY. ALL PHOTOS, VIDEOS AND MEASUREMENTS TAKEN FOR THE PRE-CONSTRUCTION SURVEY, SHALL BE RETAKEN AND INCLUDED IN THE POST-CONSTRUCTION SURVEY.

**C. QUALIFICATIONS**

THE FIRM SELECTED BY THE CONTRACTOR SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER AT LEAST THIRTY (30) DAYS PRIOR TO STARTING THE SURVEYS. THE FIRM AND PERSON(S) CONDUCTING THE SURVEYS MUST HAVE THE FOLLOWING MINIMUM QUALIFICATIONS.

1. AT LEAST FIVE (5) YEARS EXPERIENCE IN SIMILAR RESIDENTIAL AND COMMERCIAL PRE/POST CONSTRUCTION SURVEYS.
2. EXPERIENCE ON AT LEAST THREE (3) OTHER PROJECTS THAT ARE SIMILAR IN SCOPE, COST AND TYPE OF CONSTRUCTION AS THIS PROJECT.

THE SUBMITTAL MUST INCLUDE WRITTEN DOCUMENTATION OF THE ABOVE REQUIREMENTS, INCLUDING THE NAMES OF THE INDIVIDUALS WHO SHALL CONDUCT THE SURVEYS, AS WELL AS SAMPLE REPORTS FROM PREVIOUS PROJECTS.

NO WORK ON THIS ITEM IS TO BE STARTED UNTIL THE CONTRACTOR RECEIVES WRITTEN NOTIFICATION FROM THE ENGINEER.

**D. SUBMITTALS**

SUBMIT THREE (3) COPIES OF EACH REPORT TO THE ENGINEER WITHIN THE TIME FRAMES NOTED IN SECTION B ABOVE.

**E. LOCATIONS**

THE FOLLOWING IS A LIST OF PROPERTY OWNERS/BUSINESSES THAT ARE TO BE SURVEYED. ADDITIONAL SURVEYS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER

MICHAEL SALAMONE  
125 ELMWOOD ST.  
BARBERTON, OH 44203

**F. BASIS OF PAYMENT**

FOR EACH PROPERTY SURVEYED, INCLUDE THE PRE-CONSTRUCTION SURVEY, THE INTERIM POST-CONSTRUCTION SURVEY, THE POST-CONSTRUCTION SURVEY, ALL ASSOCIATED REPORTS, AND ALL REPAIRS OF DAMAGED ITEMS AS NOTED IN THE REPORTS.

PAYMENT SHALL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	LUMP SUM	PRE-CONSTRUCTION / POST-CONSTRUCTION SURVEY

**ITEM 623 - PROVIDING ELECTRONIC INSTRUMENTATION**

THE FOLLOWING QUANTITY HAS BEEN PROVIDED AND SHALL BE IN ACCORDANCE WITH ITEM 623.

ITEM 623 - PROVIDING ELECTRONIC INSTRUMENTATION LUMP SUM

**ITEM 608 - 6" CONCRETE WALK, AS PER PLAN**

ALL REQUIREMENTS OF SECTION 608 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY WITH THE FOLLOWING MODIFICATION: CONCRETE SHALL BE OC MS WITHIN THE DRIVE LIMITS AS SHOWN ON SHEET 350.

**ITEM 622 - PORTABLE BARRIER, 32", AS PER PLAN**

THIS ITEM SHALL CONSIST OF PORTABLE BARRIER PER ODOT STANDARD CONSTRUCTION DRAWING RM-4.2. PORTABLE BARRIER SHALL BE NEW SEGMENTS WITH NO VISIBLE GRAFFITI NOR MARKINGS AND SHALL BE LEFT IN PLACE UPON COMPLETION OF PROJECT CONSTRUCTION AND BECOME THE PROPERTY OF THE OHIO DEPARTMENT OF TRANSPORTATION.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE-DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - PORTABLE BARRIER, 32", AS PER PLAN.

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QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 43

CALCULATED  
CJC  
CHECKED  
CWL

GENERAL NOTES

SUM - 76 - 5.53

**ROADWAY (CONTINUED)**

**PAVING UNDER GUARDRAIL**

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

**METHOD A:**

1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

**METHOD B:**

1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN.

**ITEM SPECIAL - VERTICAL CLEARANCE**

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LICENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURE:

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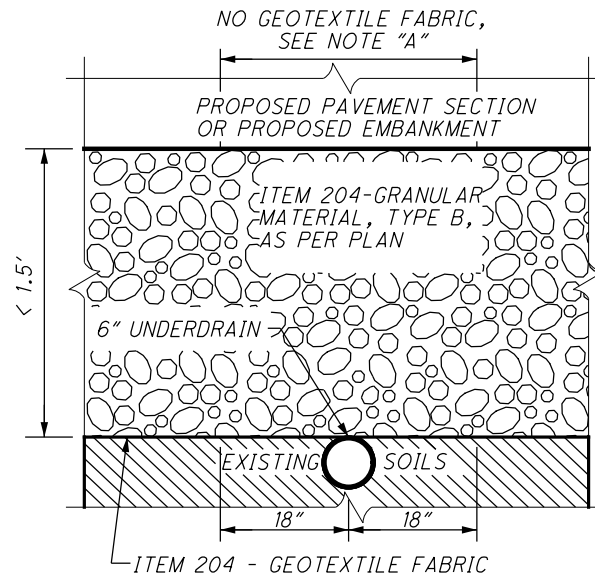
THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

SPECIAL - VERTICAL CLEARANCE 1 EACH

**SUBGRADE STABILIZATION**

**ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN**

THIS INVOLVES THE PLACEMENT OF GRANULAR MATERIAL, TYPE B, AS PER PLAN FOR THE LOCATIONS OF UNSUITABLE MATERIALS AS VERIFIED AND DELINEATED BY THE ENGINEER. GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 204 AND 703.16.C OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL BE APPLICABLE FOR GRANULAR MATERIAL, TYPE B, AS PER PLAN.



**NOTE "A":**  
THE CONTRACTOR SHALL SUSPEND THE USE OF GEOTEXTILE FABRIC WITHIN 18" OF EITHER SIDE OF A CONFLICTING UNDERDRAIN.

**DETAIL - UNDERCUT/ REPLACEMENT TREATMENT METHOD**

NOT TO SCALE

PAVEMENT SUBGRADE IMPROVEMENT SCHEDULE						
ALIGNMENT	BEGIN STATION	END STATION	SUBGRADE METHOD	DEPTH OF TREATMENT	SIDE	UNDERCUT REASON
IR-76 EB	292+00.00	296+61.05	CEMENT	14"	L/R	
	297+73.58	306+02.97				
	307+98.40	312+20.72				
IR-76 WB	292+00.00	296+59.69	CEMENT	14"	L/R	
	297+73.26	306+28.67				
	308+27.95	312+43.52				
RAMP B	20+21.41	23+50.00	CEMENT	14"	L/R	
	29+26.29	33+94.57				
RAMP B1	130+28.94	133+00.00	CEMENT	14"	L/R	
	134+65.11	136+92.28				
RAMP C	30+22.92	35+75.00	CEMENT	14"	L/R	
	38+25.00	41+00.49				
RAMP C1	132+49.09	135+75.00	CEMENT	14"	L/R	
	140+50.00	145+06.24				
GRAND BLVD.	2+15.00	3+04.11	UNDERCUT	12"	L/R	UNSTABLE
RELOCATED CENTRAL AVE./GOODRICH AVE.	6+75.00	3+75.00	UNDERCUT	12"	L/R	UNSTABLE
ROMIG AVE.	4+53.16	5+40.00	UNDERCUT	12"	L/R	UNSTABLE
	5+40.00	6+31.44	UNDERCUT	36"	L/R	UNSUITABLE
ROMIG AVE. LT.	14+97.44	15+54.44	UNDERCUT	36"	L/R	UNSUITABLE

**ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING**

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.

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

3. COMPACT THE SUBGRADE ACCORDING TO 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

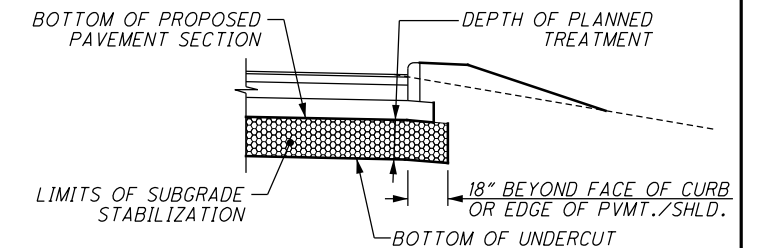
PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.

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

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

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

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



**TYPICAL PAVEMENT SUBGRADE CROSS SECTION**

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QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 43

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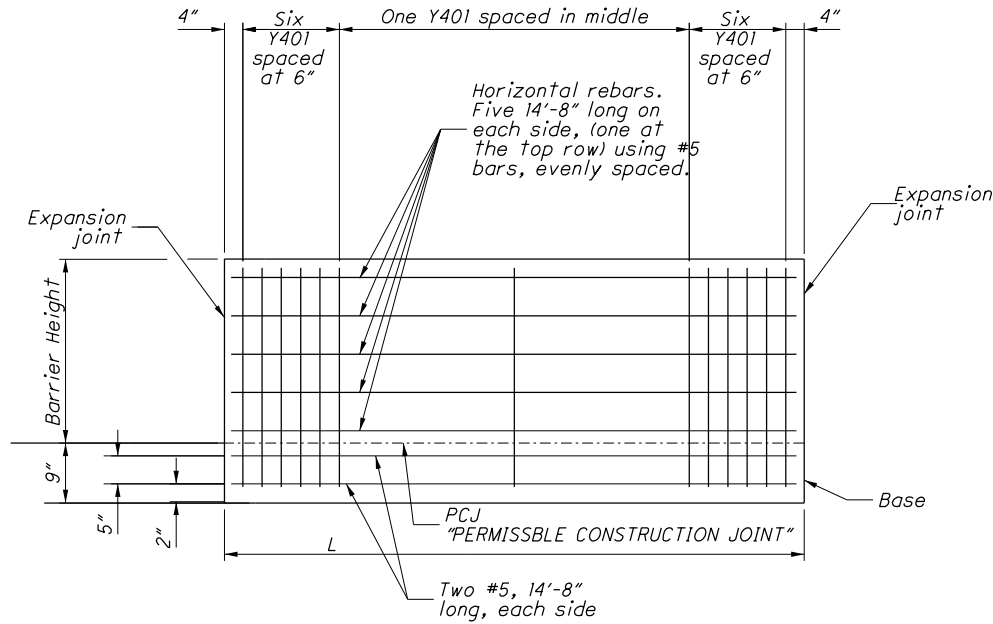
**GENERAL NOTES**

**SUM - 76 - 5.53**

**ROADWAY (CONTINUED)**

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

THIS ITEM SHALL CONSIST OF CONSTRUCTING REINFORCED END ANCHORAGES AS PER ODOT SCD RM-4.3 AND THE BARRIER DETAIL BELOW. THE Y401 REINFORCEMENT BARS SHALL BE SPACED AS SHOWN IN THE DETAIL. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS ANCHOR SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN (EACH).



**ELEVATION**

TYPE C1	
STATION	L
303+98.30	19.52'
304+25.82	28.29'
305+84.11	21.87'
308+23.07	24.43'
312+01.85	6.24'

**ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN**

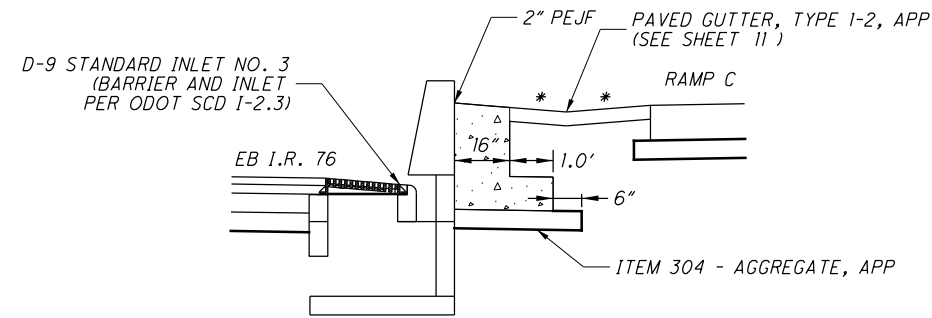
THIS ITEM SHALL CONSIST OF CONSTRUCTING TYPE D SINGLE SLOPE BARRIER AS PER ODOT SCD RM-4.5 AND THE BARRIER DETAIL "C" ON SHEET 11. THE BARRIER SHALL BE REINFORCED AS PER ODOT SCD RM-4.5. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS BARRIER INCLUDING THE ANCHOR AND REINFORCEMENT SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN (FT).

**ITEM 622 - CONCRETE BARRIER, END SECTION, TYPE D, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CONSTRUCTING TYPE D END SECTION AS PER ODOT SCD RM-4.6 AND THE BARRIER DETAIL "C" ON SHEET 11. THE BARRIER SHALL BE REINFORCED AS PER ODOT SCD RM-4.6. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS BARRIER INCLUDING THE ANCHOR AND REINFORCEMENT SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, END SECTION, TYPE D, AS PER PLAN (EACH).

**ITEM 622 - BARRIER, MISC.: INLET REINFORCEMENT**

THIS ITEM SHALL CONSIST OF CONSTRUCTING THE DETAIL BELOW FOR REINFORCING SUPPORT ALONG THE BACK OF THE STANDARD INLET NO. 3. THIS ITEM SHALL INCLUDE LONGITUDINAL STEEL REINFORCEMENT WITH FOUR (4) #5 EPOXY COATED BARS EVENLY SPACED. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS REINFORCING SUPPORT INCLUDING THE PEJF (PREFORMED EXPANSION JOINT FILLER) SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - BARRIER MISC.: INLET REINFORCEMENT (FT).



N.T.S.  
LIMITING STATIONS  
STA. 297+56.67 TO STA. 297+76.67 RT. (I.R. 76)

\* SEE CROSS SECTIONS FOR SLOPES

**ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CONSTRUCTING TYPE D END ANCHORAGES AS PER ODOT SCD RM-4.5 AND THE BARRIER DETAIL "C" ON SHEET 11. THE BARRIER SHALL BE REINFORCED AS PER ODOT SCD RM-4.5. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS BARRIER INCLUDING THE ANCHOR AND REINFORCEMENT SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN (EACH).

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**GENERAL NOTES**

**SUM - 76 - 5.53**

**PAVEMENT**

**CONTRACTION AND/OR EXPANSION JOINTS**

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

**CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING**

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

WHERE NEW CONCRETE IS PLACED ADJACENT TO AND TIED TO EXISTING CONCRETE, THE CONTRACTION JOINT SPACING REQUIRED IN STANDARD CONSTRUCTION DRAWING BP-2.2 WILL BE WAIVED. CONSTRUCT CONTRACTION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL CONTRACTION JOINTS IN THE EXISTING CONCRETE PAVEMENT. INSTALL EXPANSION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL EXPANSION JOINTS IN THE EXISTING CONCRETE PAVEMENT.

**MEDIAN AND/OR CURBING ON APPROACH SLABS**

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

**ITEM 304 - AGGREGATE BASE, AS PER PLAN**

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

**ITEM 806 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, AS PER PLAN**

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN**

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2 "	100
3/4 "	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

**ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN**

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN**

703.05 DO NOT USE FINE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**ITEM 408 - PRIME COAT, AS PER PLAN**

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

**PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS (FLEXIBLE)**

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR FLEXIBLE PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 202 - PAVEMENT REMOVED, ASPHALT	23 SQ. YD.
ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22, AS PER PLAN	1 CU. YD.
ITEM 407 - NON-TRACKING TACK COAT	2 GAL.
ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (446)	1 CU. YD.
ITEM 301 - 4" ASPHALT CONCRETE BASE, PG64-22	3 CU. YD.
ITEM 304 - 4" AGGREGATE BASE, AS PER PLAN	3 CU. YD.

THE ABOVE QUANTITIES ARE BASED ON A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

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

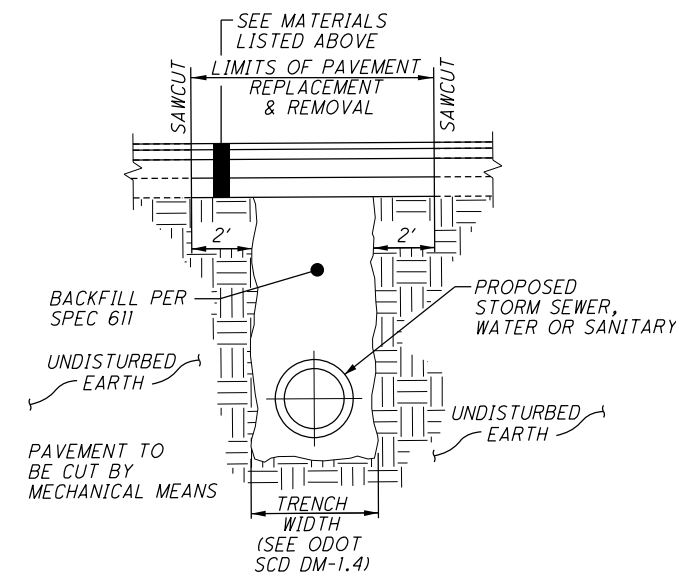
**PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS (RIGID)**

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR RIGID PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 202 - PAVEMENT REMOVED	47 SQ. YD.
ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	47 SQ. YD.

THE ABOVE QUANTITIES ARE BASED ON A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

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



PAVEMENT REPLACEMENT DETAIL  
N.T.S.

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**PAVEMENT (CONTINUED)**

**ITEM 253 - PAVEMENT REPAIR**

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. AS SHOWN IN THE DETAIL BELOW, THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12" 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF THE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAVEMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED:  
 ITEM 253, PAVEMENT REPAIR, 1100 SQ. YD.

**ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)**

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR).

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED:  
 ITEM 203, EXCAVATION (FOR PAVEMENT REPAIR) 183 CU. YD.

**ITEM 304 - AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR)**

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR).

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED:  
 ITEM 304, AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR), 183 CU. YD.

**ITEM 253 - PAVEMENT REPAIR, AS PER PLAN**

THIS ITEM SHALL CONSIST OF THE REMOVAL AND REPLACEMENT OF THE ASPHALT WITHIN THE EXISTING PRESSURE RELIEF JOINTS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING EXPANSION ASPHALT WITHOUT DAMAGING THE ADJACENT APPROACH SLAB, PAVEMENT OR SLEEPER SLAB. THE REPLACEMENT ASPHALT SHALL BE ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448); ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM (448); OR ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM (448). THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF CUBIC YARDS OF MATERIAL REMOVED AND REPLACED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED:  
 ITEM 253, PAVEMENT REPAIR, AS PER PLAN 20 CU. YD.

**ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RRCM**

A QUANTITY OF THIS ITEM HAS BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 9" 452 NON-REINFORCED CONCRETE PAVEMENT, CLASS RRCM. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER.

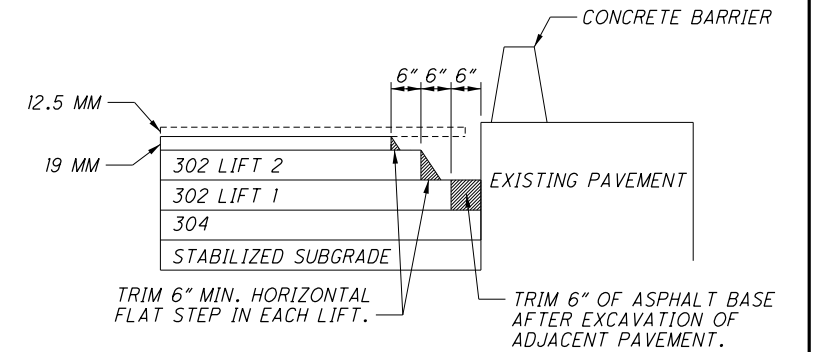
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED:  
 ITEM 255, FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RRCM 65 SQ. YD.

**PHASE JOINT FOR PAVEMENT**

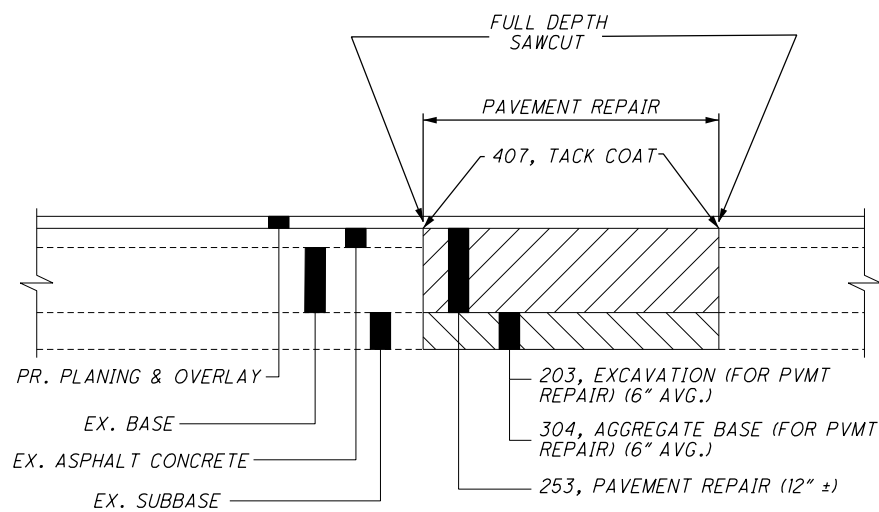
PER THE PHASE JOINT DETAIL, BEFORE PAVING AGAINST THE PHASE JOINT, THE CONTRACTOR SHALL MILL OUT THE UNCONSOLIDATED EDGE OF EACH PAVEMENT COURSE TO PROVIDE THE APPROPRIATE STEPS IN THE PAVEMENT JOINT, WHILE REMOVING UNCONSOLIDATED MATERIAL, PER THE DETAIL ON THIS SHEET. UPON COMPLETION OF THE MILLING, THE VERTICAL FACES SHALL BE SEALED WITH SUPPLEMENTAL SPECIFICATION 875.02 HOT APPLIED ASPHALT JOINT ADHESIVE TO PROVIDE 100% COVERAGE OF THE JOINTS. THE COST FOR MILLING AND SEALING SHALL BE INCIDENTAL TO THE COST OF THE PAVEMENT ITEMS.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR THE WORK NOTED ABOVE:

ITEM 442 - 1 3/4" ASPH. CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	10 CU. YD.
ITEM 302 - 10" ASPH. CONCRETE BASE, PG64-22	57 CU. YD.
ITEM 407 - NON-TRACKING TACK COAT	34 GAL.



**PHASING JOINT DETAIL**



**FULL-DEPTH, PAVEMENT REPAIR DETAIL**  
 N.T.S.

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**GENERAL NOTES**

**SUM - 76 - 5.53**

**PAVEMENT (CONTINUED)**

**ITEM SPECIAL – SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS**

DESCRIPTION: THE SURFACE TOLERANCE SPECIFICATION REQUIREMENTS ARE TO BE MET FOR ALL PAVEMENTS OF CONSTANT WIDTH INCLUDING PAVEMENT FOR RAMPS, ACCELERATION LANES, AND DECELERATION LANES. DO NOT INCLUDE PAVEMENT FOR TURN LANES INCLUDING CENTER TURN LANES, SHOULDERS, CROSSEOVERS, APPROACH SLABS, AND BRIDGE DECKS.

THE FOLLOWING AREAS ARE NOT PART OF THIS SPECIFICATION AND ARE SUBJECT TO THE REQUIREMENTS OF THE ORIGINAL ITEM(S) SPECIFIED:

- EXISTING CENTRAL AVENUE
- RELOCATED CENTRAL AVENUE
- GOODRICH AVENUE
- GRAND BOULEVARD
- ROMIG AVENUE
- S.R. 619/WOOSTER ROAD (PART 1 ONLY)
- KENMORE BOULEVARD

IF THE PAVEMENT SURFACE IS RUBBERIZED OPEN GRADED ASPHALT FRICTION COURSE (SUPPLEMENTAL SPECIFICATION 803), THIS SPECIFICATION APPLIES TO THE SURFACE OF THE COURSE IMMEDIATELY BELOW AND REFERENCES TO THE NUMBER OF COURSES PLACED DO NOT INCLUDE THE SS803 COURSE.

MATERIALS AND EQUIPMENT: PROVIDE SMOOTHNESS MEASURING EQUIPMENT CONFORMING TO SUPPLEMENT 1058. FURNISH THE DEPARTMENT'S APPROVAL LETTER OF THE PROFILER AND THE OPERATOR TO THE ENGINEER. THE ENGINEER WILL VERIFY THE SMOOTHNESS MEASURING EQUIPMENT CONFORMS TO SUPPLEMENT 1058. THE ENGINEER WILL COMPLETE THE SMOOTHNESS PROFILER VERIFICATION REPORT FOUND IN SUPPLEMENT 1058, APPENDIX A, TO DOCUMENT PROFILER CALIBRATION PRIOR TO MEASUREMENT. THE ENGINEER WILL VERIFY THE PROFILE OPERATOR'S CERTIFICATION AGAINST THE OPERATOR LIST POSTED ON THE OFFICE OF TECHNICAL SERVICES WEBSITE. FURNISH EQUIPMENT MEETING THE REQUIREMENTS OF C&MS 257.02 FOR PERFORMING CORRECTIVE DIAMOND GRINDING.

SMOOTHNESS MEASUREMENT: MEASURE THE PAVEMENT SURFACE SMOOTHNESS IN BOTH WHEEL PATHS. WHEEL PATHS ARE LOCATED PARALLEL TO THE CENTERLINE OR BASELINE OF THE ROADWAY OR RAMP AND APPROXIMATELY 3.0 FEET (1.0 M) FROM THE CENTERLINE OF THE LANE OR RAMP, MEASURED TRANSVERSELY IN BOTH DIRECTIONS. ENSURE THE PATH OF THE PROFILER IS PARALLEL TO THE LANE CENTERLINE AT ALL TIMES. MEASURE THE ENTIRE LENGTH OF PAVEMENT, EVENT MARKING THE PROFILE RUNS SUCH THAT PROFILE DATA CAN LATER BE IDENTIFIED WHEN THE PROFILE SENSOR(S) IS WITHIN 1.0 FOOT (0.3 M) OF ANY EXISTING PAVEMENT NOT CONSTRUCTED ON THE PROJECT, PRESSURE RELIEF JOINT, APPROACH SLAB, OR OTHER NON PAVEMENT FEATURES (I.E. MANHOLES, VALVE BOXES). REMOVE ANY OBJECTS SUCH AS DIRT, DEBRIS, CURING COVERS, ETC., PRIOR TO PERFORMING THE SURFACE SMOOTHNESS MEASUREMENTS. REPLACE ANY CURING COVERS AFTER THE MEASUREMENTS ARE TAKEN. REPAIR ANY MEMBRANE CURING DAMAGED DURING THE MEASUREMENTS.

DO NOT PERFORM ANY SURFACE SMOOTHNESS MEASUREMENTS UNTIL THE PAVEMENT HAS CURED SUFFICIENTLY TO ALLOW MEASURING WITHOUT DAMAGING THE PAVEMENT. WHEN THE PAVEMENT WILL NOT SUPPORT THE PROFILER ON THE NEXT WORKING DAY, NOTIFY THE ENGINEER AND INFORM THE ENGINEER WHEN THE 2 MEASUREMENTS WILL BE TAKEN. PROVIDE THE ENGINEER AT LEAST 24 HOURS NOTICE PRIOR TO PERFORMING ANY MEASUREMENTS. DO NOT TAKE MEASUREMENTS UNTIL PROJECT SITE VERIFICATION IS DEMONSTRATED TO THE ENGINEER ACCORDING TO SUPPLEMENT 1058.

DEVELOP AN INTERNATIONAL ROUGHNESS INDEX (IRI) ACCORDING TO ASTM E 1926 FOR EACH 0.1-MILE (0.16 KM) SECTION. SUBMIT TWO COPIES OF THE SUMMARY REPORT FROM PROVAL CONFORMING TO SUPPLEMENT 1110 AND TWO ELECTRONIC COPIES OF ALL LONGITUDINAL PAVEMENT PROFILES IN PROVAL COMPATIBLE FORMAT TO THE ENGINEER. THE ENGINEER WILL SUBMIT ONE COPY OF THE SUMMARY REPORT AND ONE ELECTRONIC COPY OF THE PROFILES TO THE OFFICE OF TECHNICAL SERVICES.

PROVIDE NECESSARY TRAFFIC CONTROL AND SURVEY STATIONING FOR ALL SURFACE SMOOTHNESS MEASUREMENTS.

MANDATORY CORRECTIVE ACTION: PERFORM CORRECTIVE ACTION FOR THE APPLICABLE SURFACE TYPE AS REQUIRED. DO NOT INCLUDE PAVEMENT WITHIN 40 FEET (12.2 M) OF A BRIDGE DECK OR APPROACH SLAB IN ANY 0.1-MILE (0.16 KM) SECTION EVALUATED FOR PAY ADJUSTMENT. MEASURE AND EVALUATE THESE 40 FOOT (12.2 M) SECTIONS FOR LOCALIZED ROUGHNESS CORRECTIONS. PROVIDE A LIST OF ALL MANDATORY CORRECTIVE ACTION LOCATIONS, WITH STATION, LANE, AND PROPOSED CORRECTIONS TO THE ENGINEER FOR APPROVAL. DO NOT PERFORM ANY CORRECTIVE ACTIONS WITHOUT APPROVAL OF THE ENGINEER.

ASPHALT CONCRETE SURFACE: CLASSIFY ASPHALT PAVEMENT AREAS INTO ONE OF THE FOLLOWING TYPES BASED ON THE WORK PERFORMED AS PART OF THE PROJECT.

TYPE A: ASPHALT PAVEMENT SPECIFIED AS AT LEAST TWO UNIFORM COURSES WITH THE TOTAL THICKNESS PLACED GREATER THAN OR EQUAL TO 3 INCHES (75 MM).

TYPE B: ASPHALT PAVEMENT SPECIFIED AS EITHER: A) AT LEAST ONE UNIFORM COURSE WITH THE TOTAL THICKNESS PLACED LESS THAN 3 INCHES (75 MM) AND INCLUDING ITEM 254 OR SS897 PLANING PRIOR TO RESURFACING, OR B) AT LEAST TWO UNIFORM COURSES WITH THE TOTAL THICKNESS LESS THAN 3 INCHES (75 MM) WITHOUT INCLUDING ITEM 254 OR SS897 PLANING PRIOR TO RESURFACING.

TYPE C: ASPHALT PAVEMENT SPECIFIED AS A SINGLE UNIFORM COURSE NOT MEETING THE CRITERIA OF TYPE B. THE UNIFORM COURSE MAY BE PLACED ON A NON-UNIFORM LEVELING COURSE.

Pavement Class	Divided Highways*		Undivided Highways*	
	Corrective Action	Pay Adjustment Schedule (Table 420-3)	Corrective Action	Pay Adjustment Schedule (Table 420-3)
Type A [ $\geq 3$ in. + 2-course]	[1],[5]	A	[2],[5]	A
Type B [ $< 3$ in. + Milling] or [ $< 3$ in. + 2-course]	[1],[5]	A	[3],[5]	A
Type C [ $< 3$ in. + 1-course]	[2],[5]	A	[4]	B

\* DIVIDED HIGHWAYS HAVE PHYSICAL SEPARATION SUCH AS A GRASS MEDIAN, RAISED CONCRETE MEDIAN, GUARDRAIL, OR BARRIER BETWEEN THE TWO DIRECTIONS OF TRAVEL. HIGHWAYS WITH CONTINUOUS TWO WAY LEFT TURN LANES ARE CONSIDERED UNDIVIDED. UNDIVIDED HIGHWAYS WITH SHORT SECTIONS, LESS THAN 1000 FEET (300 M), OF PHYSICAL SEPARATION ARE CONSIDERED UNDIVIDED FOR THE ENTIRE LENGTH.

CORRECTIVE ACTION:  
[1] CORRECT ALL AREAS OF LOCALIZED ROUGHNESS HAVING DEVIATIONS, HIGH OR LOW POINTS, WITH AN IRI IN EXCESS OF 160 INCHES PER MILE (2.53 M/KM) IN 25 FEET (7.6 M).

[2] CORRECT ALL AREAS OF LOCALIZED ROUGHNESS HAVING DEVIATIONS, HIGH OR LOW POINTS, WITH AN IRI IN EXCESS OF 200 INCHES PER MILE (3.16 M/KM) IN 25 FEET (7.6 M).

[3] CORRECT ALL AREAS OF LOCALIZED ROUGHNESS HAVING DEVIATIONS, HIGH OR LOW POINTS, WITH AN IRI IN EXCESS OF 225 INCHES PER MILE (3.55 M/KM) IN 25 FEET (7.6 M).

[4] CORRECT ALL AREAS OF LOCALIZED ROUGHNESS HAVING DEVIATIONS, HIGH OR LOW POINTS, WITH AN IRI IN EXCESS OF 250 INCHES PER MILE (3.95 M/KM) IN 25 FEET (7.6 M).

[5] CORRECT ANY 0.1-MILE (0.16 KM) SECTIONS HAVING AN IRI GREATER THAN 90 INCHES PER MILE (1.42 M/KM).

PERFORM CORRECTIVE ACTION AS REQUIRED IN TABLE 420-1 BY REMOVING AND REPLACING TO THE DEPTH NECESSARY TO CORRECT THE DEVIATIONS OR BY DIAMOND GRINDING. USE ASPHALT CONCRETE MEETING THE CONTRACT REQUIREMENTS FOR THE REPLACEMENT WORK. APPLY ITEM 407 TACK COAT PRIOR TO PLACING THE SURFACE COURSE. THE TOTAL AMOUNT OF GRINDING IS LIMITED TO NO MORE THAN 5% BY LONGITUDINAL LENGTH OF THE LANE-MILES (LANE-KM) ELIGIBLE FOR A PAY ADJUSTMENT.

RE-MEASURE EACH 0.1-MILE (0.16 KM) SECTION WHERE CORRECTIVE ACTION WAS PERFORMED TO ENSURE COMPLIANCE WITH TABLE 420-1.

IF THE FINAL SURFACE COURSE IS ITEM 803, SEAL ANY DIAMOND GROUND AREAS WITH MATERIAL MEETING THE REQUIREMENTS OF 702.04 PRIOR TO PLACING THE ITEM 803.

PORTLAND CEMENT CONCRETE SURFACE: CLASSIFY PAVEMENT AREAS INTO ONE OF THE FOLLOWING TYPES BASED ON THE WORK PERFORMED AS PART OF THE PROJECT.

TYPE A: CONCRETE PAVEMENT WITH THE TOTAL SPECIFIED THICKNESS GREATER THAN OR EQUAL TO 8 INCHES (200 MM).

TYPE B: CONCRETE PAVEMENT WITH THE TOTAL SPECIFIED THICKNESS GREATER THAN 6 INCHES (150 MM) AND LESS THAN 8 INCHES (200 MM).

TYPE C: CONCRETE PAVEMENT WITH THE TOTAL SPECIFIED THICKNESS LESS THAN OR EQUAL TO 6 INCHES (150 MM).

Pavement Class	Divided Highways*		Undivided Highways*	
	Corrective Action	Pay Adjustment Schedule (Table 420-3)	Corrective Action	Pay Adjustment Schedule (Table 420-3)
Type A [ $\geq 8$ in.]	[1],[5]	A	[1],[5]	A
Type B [ $> 6$ in. & $< 8$ in.]	[1],[5]	A	[2],[5]	A
Type C [ $\leq 6$ in.]	[2],[5]	A	[3]	B

\* DIVIDED HIGHWAYS HAVE PHYSICAL SEPARATION SUCH AS A GRASS MEDIAN, RAISED CONCRETE MEDIAN, GUARDRAIL, OR BARRIER BETWEEN THE TWO DIRECTIONS OF TRAVEL. HIGHWAYS WITH CONTINUOUS TWO WAY LEFT TURN LANES ARE CONSIDERED UNDIVIDED. UNDIVIDED HIGHWAYS WITH SHORT SECTIONS, LESS THAN 1000 FEET (300 M), OF PHYSICAL SEPARATION ARE CONSIDERED UNDIVIDED FOR THE ENTIRE LENGTH.

CORRECTIVE ACTION:  
[1] CORRECT ALL AREAS OF LOCALIZED ROUGHNESS HAVING DEVIATIONS, HIGH OR LOW POINTS, WITH AN IRI IN EXCESS OF 160 INCHES PER MILE (2.53 M/KM) IN 25 FEET (7.6 M).

[2] CORRECT ALL AREAS OF LOCALIZED ROUGHNESS HAVING DEVIATIONS, HIGH OR LOW POINTS, WITH AN IRI IN EXCESS OF 200 INCHES PER MILE (3.16 M/KM) IN 25 FEET (7.6 M).

[3] CORRECT ALL AREAS OF LOCALIZED ROUGHNESS HAVING DEVIATIONS, HIGH OR LOW POINTS, WITH AN IRI IN EXCESS OF 225 INCHES PER MILE (3.55 M/KM) IN 25 FEET (7.6 M).

[5] CORRECT ANY 0.1-MILE (0.16 KM) SECTIONS HAVING AN IRI GREATER THAN 90 INCHES PER MILE (1.42 M/KM).

PERFORM CORRECTIVE ACTION AS REQUIRED IN TABLE 420-2 BY DIAMOND GRINDING OR REMOVING AND REPLACING. USE PORTLAND CEMENT CONCRETE MEETING THE CONTRACT REQUIREMENTS FOR THE REPLACEMENT WORK.

RE-MEASURE EACH 0.1-MILE (0.16 KM) SECTION WHERE CORRECTIVE ACTION WAS PERFORMED TO ENSURE COMPLIANCE WITH TABLE 420-2.

COMPLETE ALL CORRECTIVE ACTION PRIOR TO DETERMINATION OF PAVEMENT THICKNESS. IF CORRECTIVE ACTION IS REQUIRED, THE SURFACE TEXTURE AFTER DIAMOND GRINDING IS ACCEPTABLE AND NO ADDITIONAL TEXTURING IS REQUIRED.

ASPHALT AND PORTLAND CEMENT CONCRETE SURFACES: IF CORRECTIVE ACTION IS REQUIRED, DEVELOP A CORRECTIVE ACTION PLAN AT LEAST 7 DAYS BEFORE BEGINNING CORRECTIVE ACTION. INCLUDE IN THE PLAN IDENTIFICATION AND DETAILED LOCATION DESCRIPTIONS OF ALL LOCALIZED AND LOT VIOLATIONS AND PROPOSED CORRECTIVE ACTION. DO NOT BEGIN CORRECTIVE ACTION UNTIL RECEIVING THE ENGINEER'S ACCEPTANCE OF THE CORRECTIVE ACTION PLAN. THE CORRECTIVE ACTION PLAN IS LIMITED TO GRINDING, PAVEMENT REMOVAL AND REPLACEMENT OR A COMBINATION OF THE TWO. UPON COMPLETION OF THE CORRECTIVE ACTION, RE-MEASURE SURFACE SMOOTHNESS ACCORDING TO THIS SPECIFICATION. IN THE EVENT THE CONTRACTOR IS NOT ABLE TO CORRECT THE SURFACE SMOOTHNESS TO MEET THE SPECIFICATION, THE DCA MAY ESTABLISH A DEDUCTION TO THE CONTRACT IN ACCORDANCE WITH SECTION 105.03 OF THE C&MS.

EXEMPTED CORRECTIONS: REQUIRED CORRECTIVE ACTION RESULTING FROM CONTRACT REQUIREMENTS FOR MAINTAINING TRAFFIC AND CONSTRUCTION JOINTS PLACED AT THE BEGINNING AND END OF EACH WORK PERIOD ARE CONSIDERED EXEMPTED CORRECTIONS. THE CONTRACTOR WILL IDENTIFY AND DEFINE ALL EXEMPTED CORRECTION LOCATIONS. EXEMPTED CORRECTIONS FOR MAINTAINING TRAFFIC OCCUR PRIMARILY AT RAMPS OR OTHER ACCESS POINTS WHERE PAVING MUST BE SUSPENDED. REQUIRED CORRECTIVE ACTION DUE TO MATERIAL AVAILABILITY, WEATHER, OR ANY OTHER REASON NOT LISTED ABOVE, IS NOT CONSIDERED AN EXEMPTED CORRECTION. NO EXEMPTED CORRECTIONS FOR MAINTAINING TRAFFIC EXIST ON PROJECTS WHERE THE MAINTENANCE OF TRAFFIC PLAN DOES NOT INTERFERE WITH PAVING OPERATIONS. PERFORM EXEMPTED CORRECTIONS ACCORDING TO THE REQUIREMENTS FOR MANDATORY CORRECTIVE ACTION.

METHOD OF MEASUREMENT: DETERMINE THE IRI FOR EACH LANE FOR EACH 0.1-MILE (0.16 KM) SECTION OF PAVING. THE IRI FOR A 0.1-MILE (0.16 KM) SECTION IS THE AVERAGE OF THE IRI OF THE TWO WHEEL PATHS.

PAY ADJUSTMENTS: A LUMP SUM PAY ADJUSTMENT WILL BE MADE ACCORDING TO THE FOLLOWING SCHEDULE AND CALCULATIONS FOR EACH LANE FOR EACH 0.1-MILE (0.16 KM) SECTION. PAYMENT WILL BE BASED ON A 12 FOOT (3.7 M) LANE WIDTH, REGARDLESS OF LANE WIDTH. PAY ADJUSTMENTS ARE BASED ON THE WEIGHTED AVERAGE BID UNIT COST PER SQUARE YARD FOR THE SECTION MULTIPLIED BY THE PAY FACTOR AS DETERMINED IN TABLE 420-3. PAVEMENT THICKNESS IS THE TOTAL THICKNESS OF ASPHALT CONCRETE, PORTLAND CEMENT CONCRETE, OR BOTH PLACED AS PART OF THE CONTRACT AND DOES NOT INCLUDE ANY SS803 COURSE, FREE DRAINING BASE, AGGREGATE BASE, STABILIZED SUBGRADE, ETC.

SCHEDULE A				SCHEDULE B			
IRI	PAY ADJUSTMENT	IRI	PAY ADJUSTMENT				
Inches per mile per 0.1 mile section (m/km per 0.16 km section)	Percentage of Unit Cost (PUC) (%)	Inches per mile per 0.1 mile section (m/km per 0.16 km section)	Percentage of Unit Cost (PUC) (%)				
35 (0.55) or less	4	45 (0.71) or less	4				
Over 35 to 50 (0.55 to 0.79)	$(50 - \text{IRI}) * (\frac{4}{15})$	Over 45 to 60 (0.71 to 0.95)	$(60 - \text{IRI}) * (\frac{4}{15})$				
Over 50 to 70 (0.79 to 1.10)	0	Over 60 (0.95)	0				
Over 70 to 90 (1.10 to 1.42)	$-(\text{IRI} - 70) * (\frac{6}{20})$						
Over 90 (1.42)	(1)						

(1) Corrective action required

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GENERAL NOTES

SUM - 76 - 5.53

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**PAVEMENT (CONTINUED)**

Asphalt Pavements:

$$WUC = \frac{(t_1 \times u_1) + (t_2 \times u_2) + (t_3 \times u_3) \dots}{36}$$

Where: WUC = weighted unit cost (\$/SY).  
t = lift thickness (in.).  
u = bid unit cost (\$/CY).

Concrete Pavements:

$$WUC = \text{bid unit cost } (\$/SY)$$

Pay Adjustment (PA):

$$PA = WUC \times 704 \times PUC$$

Where: WUC = weighted unit cost (\$/SY).  
PUC = percentage of unit cost from Table 420-3, expressed as a decimal.

PAY ADJUSTMENTS WILL BE BASED ON THE MEASURED IRI AFTER ANY MANDATORY CORRECTIVE ACTION HOWEVER NO INCENTIVE WILL BE PAID FOR ANY 0.1-MILE (0.16 KM) SECTION WHERE MANDATORY CORRECTIVE ACTION WAS PERFORMED REGARDLESS OF THE RESULTING IRI.

ONE-TENTH MILE (0.16 KM) SECTIONS WITH EXEMPTED CORRECTIONS ONLY ARE ELIGIBLE FOR INCENTIVE PAY BASED ON IRI MEASUREMENTS TAKEN AFTER COMPLETION OF THE EXEMPTED CORRECTIONS.

AT THE CONTRACTOR'S OPTION, CORRECTIVE ACTION MAY BE PERFORMED ON ANY SECTION WITH AN IRI GREATER THAN 70 INCHES PER MILE (1.10 M/KM) TO REDUCE OR ELIMINATE THE NEGATIVE PAY ADJUSTMENT HOWEVER, NO INCENTIVE WILL BE PAID REGARDLESS OF THE RESULTING IRI. AS AN OPTION THE DEPARTMENT MAY ALLOW CORRECTIVE ACTION, IN THE FORM OF DIAMOND GRINDING, ITEM 254, OR SS897 PAVEMENT PLANING, TO IMPROVE THE PROFILE ON ANY COURSE PRIOR TO THE SURFACE COURSE. IF THE FINAL COURSE IS ITEM 803 DO NOT PERFORM CORRECTIVE ACTION ON THE ITEM 803. ONLY DIAMOND GRINDING MAY BE PERFORMED ON THE COURSE IMMEDIATELY BELOW ITEM 803.

NEGATIVE PAY ADJUSTMENTS APPLY TO SECTIONS WITH MANDATORY CORRECTIVE ACTION AND EXEMPTED CORRECTIONS.

NO PAYMENT WILL BE MADE FOR ANY 0.1-MILE (0.16 KM) SECTION SUBJECT TO SCHEDULE A THAT HAS AN IRI GREATER THAN 90 INCHES PER MILE (1.42 M/KM) UNTIL CORRECTIVE ACTION HAS BEEN COMPLETED AND THE IRI HAS BEEN REDUCED TO LESS THAN 90 INCHES PER MILE (1.42 M/KM).

BASIS OF PAYMENT: INCLUDE THE COST OF ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO MEET THIS SPECIFICATION IN THE LUMP SUM PRICE FOR ITEM SPECIAL - SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS.

**ITEM SPECIAL - SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES**

**DESCRIPTION**

THE SURFACE SMOOTHNESS REQUIREMENTS OF C&MS 451.13 ARE MODIFIED AS FOLLOWS FOR BRIDGE ENCOUNTERS; DEFINED AS 25 FEET (7.6 M) OF ENTRY PAVEMENT, ENTRY APPROACH SLAB, BRIDGE DECK, EXIT APPROACH SLAB AND 25 FEET (7.6 M) OF EXIT PAVEMENT INCLUDING ALL JOINTS, IN ADDITION TO AND PAVEMENT TRANSITIONS.

**MATERIALS AND EQUIPMENT**

PROVIDE SMOOTHNESS MEASURING EQUIPMENT CONFORMING TO SUPPLEMENT 1058. FURNISH THE DEPARTMENT'S APPROVAL LETTER OF THE PROFILER AND THE OPERATOR TO THE ENGINEER PRIOR TO COMMENCING WORK. THE ENGINEER WILL VERIFY THE SMOOTHNESS MEASURING EQUIPMENT CONFORMS TO SUPPLEMENT 1058. THE ENGINEER WILL VERIFY THE PROFILE OPERATOR'S CERTIFICATION AGAINST THE OPERATOR LIST POSTED ON THE OFFICE OF TECHNICAL SERVICES WEBSITE. FURNISH EQUIPMENT MEETING THE REQUIREMENTS OF C&MS 257.02 FOR PERFORMING CORRECTIVE DIAMOND GRINDING. THE ENGINEER WILL COMPLETE THE SMOOTHNESS PROFILER VERIFICATION REPORT IN SUPPLEMENT 1058.

**SMOOTHNESS MEASUREMENT**

COLLECT SURFACE SMOOTHNESS MEASUREMENTS FOR BOTH WHEELPATHS IN EACH PROPOSED TRAVEL LANE DURING ONE CONTINUOUS PASS. THE WHEELPATHS ARE LOCATED PARALLEL TO THE CENTERLINE OR BASELINE OF THE ROADWAY OR RAMP AND APPROXIMATELY 3.0 FEET (1.0 M) FROM THE CENTERLINE OF THE LANE, MEASURED TRANSVERSELY IN BOTH DIRECTIONS. START THE PROFILE MEASUREMENT APPROXIMATELY 250 FEET (76 M) BEFORE THE APPROACH SLAB/PAVEMENT INTERFACE AT THE ENTRY END AND CONTINUE TO APPROXIMATELY 250 FEET (76 M) AFTER THE APPROACH SLAB/PAVEMENT INTERFACE AT THE EXIT END.

NOTIFY THE ENGINEER A MINIMUM OF 24 HOURS PRIOR TO SURFACE SMOOTHNESS MEASUREMENTS. DO NOT PERFORM ANY MEASUREMENTS UNTIL ALL FINAL WEARING COURSES ARE IN PLACE WITHIN THE BRIDGE ENCOUNTER LANES BEING MEASURED AND ALL CONCRETE SURFACES HAVE REACHED SPECIFIED CURING AND LOADING REQUIREMENTS. REMOVE ALL DIRT AND DEBRIS FROM THE SURFACE OF THE TRAVEL LANES PRIOR TO PERFORMING THE SURFACE SMOOTHNESS MEASUREMENTS. PROVIDE PERMANENT OR TEMPORARY PAVEMENT MARKINGS FOR ALL TRAVEL LANES THAT ARE OF SUFFICIENT SIZE TO BE VISIBLE DURING SURFACE SMOOTHNESS MEASUREMENTS. ENSURE THE PATH OF THE PROFILER IS PARALLEL TO THE LANE CENTERLINE AT ALL TIMES DURING DATA COLLECTION. DEVELOP AN INTERNATIONAL ROUGHNESS INDEX (IRI) ACCORDING TO ASTM E 1926 FOR THE BRIDGE ENCOUNTER USING A CONTINUOUS 25 FOOT (7.6 M) BASE LENGTH ANALYSIS FOR EACH WHEELPATH AND CALCULATE THE MEAN IRI (MRI) FOR EACH TRAVEL LANE. THE MRI IS THE AVERAGE OF THE IRI VALUES FOR THE RIGHT AND LEFT WHEELPATHS IN EACH TRAVEL LANE. SUBMIT TWO COPIES OF THE SUMMARY REPORT FROM PROVAL CONFORMING TO SUPPLEMENT 1112 AND TWO ELECTRONIC COPIES OF ALL BRIDGE ENCOUNTER PROFILES IN PROVAL COMPATIBLE FORMAT TO THE ENGINEER, OF WHICH ONE COPY OF THE SUMMARY REPORT AND ONE ELECTRONIC COPY OF THE PROFILES WILL BE SUBMITTED TO THE OFFICE OF TECHNICAL SERVICES.

PROVIDE NECESSARY TRAFFIC CONTROL AND SURVEY STATIONING FOR ALL SURFACE SMOOTHNESS MEASUREMENTS.

**MANDATORY CORRECTIVE ACTION**

FOR BRIDGE ENCOUNTERS, CORRECTIVE ACTION IS REQUIRED FOR EACH TRAVEL LANE WITH AN MRI ABOVE 130 INCHES PER MILE (2.05 M/KM). PERFORM CORRECTIVE ACTION TO REDUCE THE MRI FOR EACH CORRECTED LANE TO 100 INCHES PER MILE (1.58 M/KM) OR LESS.

CORRECTIVE ACTION IS REQUIRED WHERE THE IRI IN ANY 25 FOOT (7.6 M) SEGMENT OF THE BRIDGE ENCOUNTER EXCEEDS 250 INCHES PER MILE (3.94 M/KM), EXCEPT IN SEGMENTS THAT INCLUDE A STEEL ARMORED EXPANSION JOINT SYSTEM WHERE CORRECTIVE ACTION IS REQUIRED WHEN THE IRI EXCEEDS 350 INCHES PER MILE (5.52 M/KM). PERFORM CORRECTIVE ACTION TO REDUCE THE IRI FOR EACH CORRECTED LANE TO 250 INCHES PER MILE (3.16 M/KM) OR LESS FOR ANY 25 FOOT (7.6 M) SEGMENT. FOR ANY 25 FOOT (7.6 M) SEGMENT THAT INCLUDES A STEEL ARMORED EXPANSION JOINT SYSTEM, PERFORM CORRECTIVE ACTION TO REDUCE THE IRI AT THE STEEL ARMOR FOR EACH CORRECTED LANE TO 350 INCHES PER MILE (5.52 M/ KM) OR LESS. DO NOT PERFORM CORRECTIVE DIAMOND GRINDING WITHIN 1.5 FEET (0.45 M) OF A STEEL ARMORED EXPANSION JOINT SYSTEM INSTALLED PRIOR TO THE CORRECTIVE ACTION. DO NOT EXCEED 0.5 INCHES (13 MM) OF MATERIAL REMOVED BY CORRECTIVE DIAMOND GRINDING WITHOUT APPROVAL OF THE ENGINEER. IF PROPOSING DIAMOND GRINDING EXCEEDING 0.5 INCHES (13MM), USE A PACHOMETER OR EQUIVALENT, CAPABLE OF LOCATING THE NEAREST REINFORCEMENT, (I.E. SIZE AND LOCATION), ACCURATE TO WITHIN \*0.1 INCHES (2.5 MM). PROVIDE COVER READINGS WITHIN 6 INCHES (150 MM) OF GRINDING LOCATIONS EXCEEDING 0.5 INCHES (13 MM) OF REMOVAL DEPTH.

ANYTIME ITEM SPECIAL - SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS IS USED IN CONJUNCTION WITH ITEM SPECIAL - SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES, THE LOCALIZED ROUGHNESS CRITERIA FOR THE PAVEMENT BEYOND ONE FOOT OF THE APPROACH SLAB WILL BE GOVERNED BY THE CRITERIA IN ITEM SPECIAL - SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS [IRI IN ANY 25 FOOT (7.6 M) SEGMENT NOT TO EXCEED 160 INCHES PER MILE (3.94 M/KM)].

IF CORRECTIVE ACTION IS REQUIRED, DEVELOP A CORRECTIVE ACTION PLAN IN ACCORDANCE WITH SUPPLEMENT 1112. SUBMIT THE CORRECTIVE ACTION PLAN TO THE ENGINEER AT LEAST 7 DAYS BEFORE BEGINNING CORRECTIVE ACTION. DO NOT BEGIN CORRECTIVE ACTION UNTIL RECEIVING THE ENGINEER'S ACCEPTANCE OF THE CORRECTIVE ACTION PLAN. THE CORRECTIVE ACTION PLAN MAY INCLUDE BUT IS NOT LIMITED TO GRINDING, PAVEMENT REMOVAL AND REPLACEMENT OR A COMBINATION OF THE TWO. UPON COMPLETION OF THE CORRECTIVE ACTION, RE-MEASURE SURFACE SMOOTHNESS ACCORDING TO THIS SPECIFICATION. IN THE EVENT THE CONTRACTOR IS NOT ABLE TO CORRECT THE SURFACE SMOOTHNESS TO THE SPECIFICATION, THE DCA MAY ESTABLISH A DEDUCTION TO THE CONTRACT IN ACCORDANCE WITH SECTION 105.03 OF THE CONSTRUCTION AND MATERIALS SPECIFICATION. FEATHER AREAS ADJACENT TO GROUND AREAS TO PROVIDE A SMOOTH SURFACE. RE-GROOVE DIAMOND GROUND SURFACES ACCORDING TO 511.17 IF THE EXISTING GROOVES ARE LESS THAN 0.08 INCHES (2 MM) DEEP AT NO ADDITIONAL COST TO THE DEPARTMENT. REPLACE PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS ACCORDING TO THE PLANS.

BASIS OF PAYMENT: INCLUDE THE COST OF ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO MEET THIS SPECIFICATION IN THE LUMP SUM PRICE FOR ITEM SPECIAL - SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES.

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**GEOTECHNICAL**

**ITEM SPECIAL - ROADWAY, MISC.: EXISTING PIER MONITORING**

EXCAVATE AS REQUIRED TO INSTALL REFERENCE MONUMENTS AT THE FOLLOWING LOCATIONS:

- 1) EXISTING PIER 3 AND 4 COLUMN FOOTINGS TO REMAIN IN PLACE DURING PHASE 1; AND,
- 2) AT THE TWO SOUTHERN MOST EXISTING PIER 1 AND 2 COLUMN FOOTINGS TO REMAIN IN PLACE DURING PHASES 1 AND 2.

EXCAVATION SHALL BE OF MINIMUM DISTURBANCE AND MEET APPROVAL OF THE ENGINEER. EMBANKMENT USED TO FILL THE VOID SHALL BE COMPACTED IN 6 INCH LIFTS. THE REFERENCE MONUMENTS ARE TO BE PLACED AT THE APPROXIMATE BEAM CENTERLINE AND 1 FOOT FROM THE FOOTING EDGE ON THE CENTRAL AVENUE SIDE OF THE FOOTING, EIGHT (8) TOTAL. SEE REFERENCE MONUMENT LAYOUT ON THIS SHEET FOR LOCATIONS. THE REFERENCE MONUMENTS SHALL BE DOWELED INTO THE EXISTING FOOTINGS AND SHALL CONSIST OF A #8 EPOXY COATED REBAR EMBEDDED AT LEAST 6 INCHES INTO THE FOOTING AND BE EPOXY GROUTED. THE REBAR SHALL EXTEND VERTICALLY TO THE EXISTING GROUND SURFACE. INSTALL A SIX INCH DIAMETER, SCHEDULE 40, PLASTIC PIPE AROUND THE REFERENCE MONUMENT. CENTER THE PIPE ON THE REFERENCE MONUMENT AND INSTALL A REMOVABLE, SCHEDULE 40, PLASTIC CAP. PERMANENTLY ATTACH THE BOTTOM OF THE PIPE TO THE TOP OF EXISTING FOOTINGS.

ESTABLISH A BENCHMARK PRIOR TO PLACING EMBANKMENT. THE BENCHMARK IS TO BE USED TO DETERMINE THE ELEVATIONS OF THE REFERENCE MONUMENTS AT VARIOUS MONITORING PERIODS THROUGHOUT PHASE 1 AND 2 CONSTRUCTION. THE BENCHMARK SHALL BE THE SAME THROUGHOUT THE PROJECT AND SHALL BE INDEPENDENT OF ALL STRUCTURES.

RECORD THE ELEVATION OF EACH MONUMENT AT EACH MONITORING PERIOD DEFINED BELOW.

- 1) PRIOR TO PLACING INITIAL EMBANKMENT DURING CONSTRUCTION;
- 2) AFTER EACH LIFT IS COMPLETED FOR INITIAL EMBANKMENT PLACEMENT AND PHASE I EMBANKMENT PLACEMENT.
- 3) EACH WEEK AFTER PHASE I EMBANKMENT IS COMPLETED.
- 4) MONITORING CAN BE COMPLETED AFTER ALL TRAFFIC IS REMOVED FROM THE WESTBOUND STRUCTURE.

CRITERIA: THE CRITERIA TO DETERMINE WHEN EXISTING PIER FOOTING SETTLEMENT IS CONSIDERED ACCEPTABLE AND CONSTRUCTION CAN RESUME PRIOR TO BRIDGE DEMOLITION SHALL BE A MAXIMUM TOTAL SETTLEMENT THRESHOLD FOR ANY ONE REFERENCE MONUMENT OF 0.4 INCHES. IF THIS VALUE IS EXCEEDED THE CONTRACTOR SHALL IMMEDIATELY CEASE EMBANKMENT OPERATIONS AND CONTACT THE ODOT PROJECT ENGINEER, PROJECT MANAGER AND THE OFFICE OF STRUCTURAL ENGINEERING.

THE DEPARTMENT WILL MEASURE THE ABOVE WORK ON A LUMP SUM BASIS UNDER:

ITEM SPECIAL - ROADWAY, MISC.: EXISTING PIER MONITORING LUMP SUM

**ITEM SPECIAL - SETTLEMENT PLATFORM**

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT PLATFORMS ARE TO BE CONSTRUCTED PRIOR TO BEGINNING THE PLACEMENT OF THE FILL. SETTLEMENT READINGS SHALL BE TAKEN AND RECORDED AT EACH OF THE FOLLOWING SETTLEMENT MONITORING PERIODS:

- 1) ON A DAILY BASIS FOR THE FIRST WEEK;
- 2) THREE (3) TIMES A WEEK FOR THE FOLLOWING 2 WEEKS;
- 3) ON A WEEKLY BASIS THEREAFTER UNTIL THREE (3) CONSECUTIVE READINGS INDICATE LESS THAN A 1/8" DIFFERENCE BETWEEN READING.

CRITERIA: THE CRITERIA TO DETERMINE WHEN SETTLEMENT IS CONSIDERED ACCEPTABLE AND FINAL PAVEMENT CONSTRUCTION CAN BEGIN IS WHEN SETTLEMENT IS CONSIDERED AT ITS END. UPON COMPLETION OF FILL PLACEMENT IN THE COURSE OF EACH PHASE OF MAINTENANCE OF TRAFFIC, SETTLEMENT IS CONSIDERED TO END WHEN SETTLEMENT IS 1/8" DIFFERENCE OR LESS BETWEEN READINGS FOR THREE (3) CONSECUTIVE READINGS. ESTIMATED TIME FOR 90% CONSOLIDATION IS 60 DAYS AFTER COMPLETION OF FILL PLACEMENT IN THE COURSE OF EACH PHASE OF MAINTENANCE OF TRAFFIC.

THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). TWO COPIES OF EACH CUMULATIVE PLOT ARE TO BE DISTRIBUTED, ONE COPY IS TO BE SENT TO: ODOT, DISTRICT 4, PLANNING AND ENGINEERING AND THE SECOND COPY IS TO BE SENT TO ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING.

MATERIALS: SOUND LUMBER SUCH AS 3/4"-INCH EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2 1/2"-INCH STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X 1/8" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

METHOD OF MEASUREMENT: THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

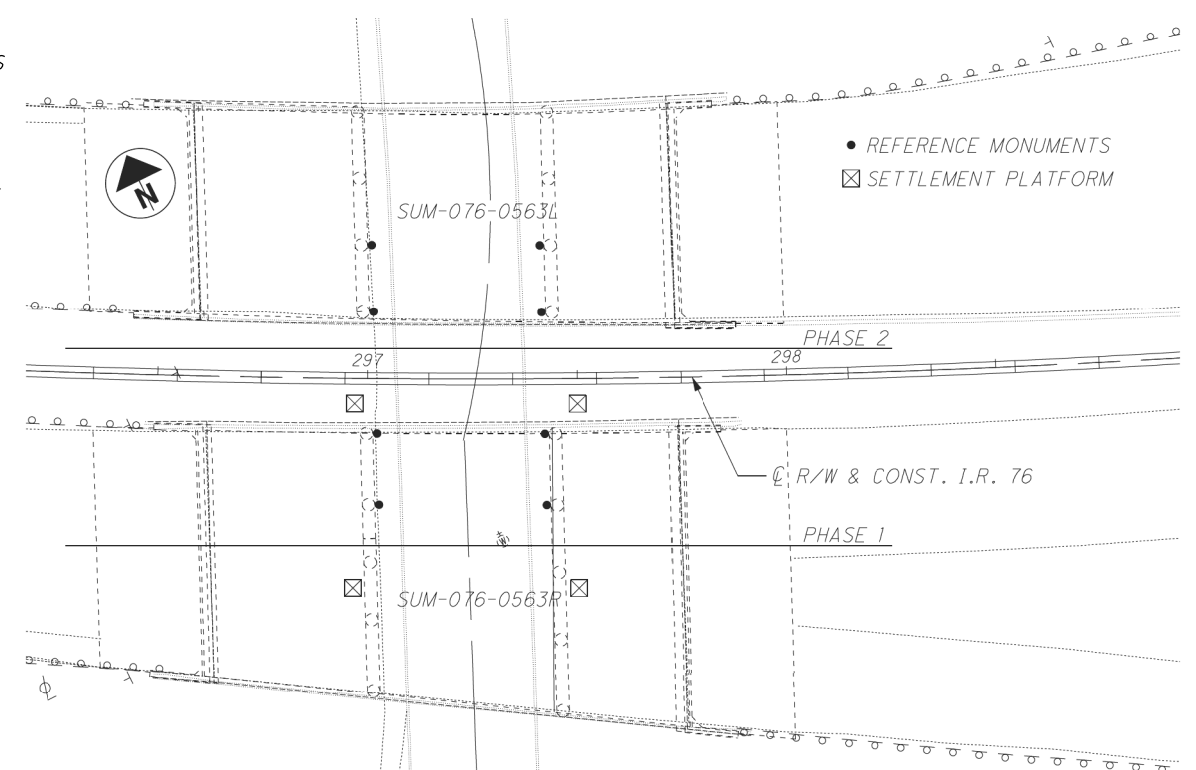
PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.

SETTLEMENT PLATFORM SCHEDULE				
ALIGNMENT	STATION	OFFSET	ESTIMATED TIME FOR 90% OF PRIMARY CONSOLIDATION	ITEM SPECIAL SETTLEMENT PLATFORM EACH
I.R. 76	296+97.00	6.00' RT	60 DAYS	1
I.R. 76	296+97.00	55.00' RT		1
I.R. 76	297+50.00	6.00' RT		1
I.R. 76	297+50.00	55.00' RT		1
TOTAL				4

**EMBANKMENT CONSTRUCTION FOR REPLACEMENT OF STRUCTURES SUM-076-0563L/R (I.R. 76 OVER CENTRAL AVE.)**

EXISTING PIER SURVEY REFERENCE MONUMENTS AND SETTLEMENT PLATFORMS SHALL BE INSTALLED PRIOR TO BEGINNING THE PLACEMENT OF THE FILL. THE SETTLEMENT CRITERIA IS INDICATED WITHIN EACH OF THE ITEM'S RESPECTIVE NOTES. EXISTING PIER SURVEY REFERENCE MONUMENTS SETTLEMENT CRITERIA AND SETTLEMENT PLATFORMS SETTLEMENT CRITERIA ARE LOCATED ON THIS SHEET.

FILL PLACEMENT SHALL BE PERFORMED AS SYMMETRICAL AS POSSIBLE ACROSS THE ENTIRE SITE TO PREVENT LATERAL STRESSES FROM DEVELOPING ON THE EXISTING BRIDGE PIERS AND THEIR FOUNDATION COMPONENTS. COMPACTION OF THE NEW FILL PLACEMENT AROUND THE EXISTING BRIDGE PIERS AND ABUTMENTS SHALL BE ACCOMPLISHED THROUGH THE USE OF PORTABLE COMPACTION EQUIPMENT (HAND OPERATED TAMPERS OR OTHER EQUIPMENT APPROVED BY THE ENGINEER). FURTHERMORE, IT IS RECOMMENDED THAT SELF-PROPELLED HEAVY COMPACTION EQUIPMENT BE KEPT AT LEAST 5 FEET AWAY FROM THE EXISTING SUBSTRUCTURE ELEMENTS.



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QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 43

CALCULATED  
CJC  
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GENERAL NOTES

SUM-76-5.53

36  
672

**DRAINAGE**

**ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT**

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 8" IN DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613 OR OTHER MATERIAL APPROVED BY THE ENGINEER.

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

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

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

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

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

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

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

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

**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.

**UNRECORDED STORM WATER DRAINAGE**

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

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

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	200 FT.

**ITEM 611 - INLET, MISC.: INLET, STANDARD TYPE I-3B50 RECONSTRUCTED TO GRADE**

THIS ITEM SHALL CONSIST OF RECONSTRUCTING TO GRADE THE INLET AS SHOWN ON THE DETAIL SHEET 361.

ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR:

ITEM 611 - INLET, MISC.: INLET, STANDARD TYPE I-3 B50 RECONSTRUCTED TO GRADE EACH

**ITEM 511 WINGWALLS OR HEADWALLS FOR 611 ITEMS**

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

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

**ITEM 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 PROVIDED FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 1000 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.

**EXISTING SUBSURFACE DRAINAGE**

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

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

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

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE WORK NOTED ABOVE:

601, TIED CONCRETE BLOCK MAT, TYPE I	8 SQ. YD.
611, 6" CONDUIT, TYPE F	40 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	4 EACH
605, 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	40 FT.

**TEMPORARY DRAINAGE ITEMS**

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

**PROPOSED IR-76 MEDIAN STORM SEWER**

STORM SEWERS NOTED AS "OFFSET" SHALL BE LOCATED WITHIN THE PROPOSED INLETS TO AVOID CONFLICT WITH ANY LIGHT POLE FOUNDATIONS OR SIGN TRUSS FOUNDATIONS.

**ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CONSTRUCTING A NO. 3 INLET FOR TYPE D SINGLE SLOPE BARRIER WITHIN THE LIMITS OF A MOMENT SLAB FOR A MSE WALL. SEE DETAILS ON SHEETS 522 - 523, 530 AND ODOT SCD 1-2.3 FOR A DETAILED LAYOUT. ALL CONCRETE ASSOCIATED WITH THIS ITEM SHALL BE QC2 CONCRETE (4500 PSI).

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE-DESCRIBED WORK INCLUDING THE CATCH BASIN, REINFORCING STEEL, CONCRETE, PEJF AND SEALING OF CONCRETE SURFACES SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN.

**ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF CMS 611.10.D FOR MANHOLES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE OF THE CASTING) AND ADJUST THE CASTING TO GRADE (ACCORDING TO THE TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN PLACED.

CMS 499 CLASS OCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION OF THE NEW CASTING, AND ALL LABOR REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

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QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 43

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CWL

GENERAL NOTES

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**EROSION CONTROL**

**SEEDING AND MULCHING**

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

FOR SEEDING AND MULCHING QUANTITIES, SEE SHEET 166 - 167

**ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CONSTRUCTING CONCRETE PAVED GUTTER AS PER STANDARD CONSTRUCTION DRAWING DM-2.1 AND THE DETAILS AS SHOWN ON SHEET NO. 11 AT THE LOCATIONS SHOWN IN THE PLANS. THE GUTTER SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN IN THE DETAIL. A SIDE CUTOFF WALL SHALL BE CONSTRUCTED AS SHOWN PER THE DETAIL FOR THE ENTIRE LENGTH OF THE GUTTER. END CUTOFF WALLS SHALL BE AS PER STANDARD DRAWING DM-2.1. PEJF (PERFORMED EXPANSION JOINT FILLER) SHALL BE PER CMS 516 AND IS INCLUDED IN THE COST OF THE PAVED GUTTER.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE-DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN.

**WATER QUALITY**

**POST CONSTRUCTION STORM WATER TREATMENT**

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

**LANDSCAPING**

**TREE PLANTING**

THE CONTRACTOR SHALL PROVIDE AND PLANT NATIVE TREES AND SHRUBS PER THE NOTES BELOW IN THE AREA SHOWN ON SHEET 554 ALONG THE BANKS OF MUD RUN WHERE THE SUM-76-0577CD BRIDGE STRUCTURE WAS REMOVED.

**GENERAL REQUIREMENTS:**

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, PLANTS, TOPSOIL, FERTILIZER, MULCH, AND ANY OTHER MATERIALS AND MEANS NECESSARY TO COMPLETE THE WORK AS FOLLOWS.
2. PLANT SIZING: MEASURE TREES AND SHRUBS ACCORDING TO ITEM 661.02.
3. ALL PLANTS SHALL BE TRANSPORTED, STORED AND HANDLED ACCORDING TO ODOT ITEM 661.

**TREE REQUIREMENTS:**

1. CONTACTOR SHALL PLANT A TOTAL OF 48 TREES AT LEAST 5' IN HEIGHT.
2. A MINIMUM OF SIX (6) DIFFERENT SPECIES OF TREES SHALL BE CHOSEN FROM THE FOLLOWING LIST:
  - A) ACER RUBRUM, RED MAPLE
  - B) QUERCUS PALUSTRIS, PIN OAK
  - C) QUERCUS BICOLOR, SWAMP WHITE OAK
  - D) SALIX NIGRA, BLACK WILLOW
  - E) SALIX EXIGUA, SANDBAR WILLOW
  - F) JULANS NIGRA, BLACK WALNUT
  - G) PLATANUS OCCIDENTALIS, SYCAMORE
  - H) CARYA OVATA, SHAGBARK HICKORY
  - I) AESCULUS GLABRA, OHIO BUCKEYE
3. TREES SHALL BE PLANTED WITHIN THE 30' PLANTING AREA BEGINNING AT ELEVATION 958.0, AT A MINIMUM SPACING OF 10 FEET ON-CENTER. TREES SHALL BE ARRANGED IN A STAGGERED PATTERN OR IN GROUPINGS OF NO MORE THAN THREE. TREE PLACEMENTS SHALL BE STAKED AND APPROVED BY THE ENGINEER AHEAD OF PLANTING
4. TREES SHALL BE PLANTED ACCORDING TO ODOT ITEM 661.
5. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE TREE PLANTINGS AND TO ENSURE ESTABLISHMENT OF THE PLANTINGS SHALL BE INCLUDED IN THE PRICES BID FOR:

ITEM 661 PLANTING, MISC: NATIVE TREES	48 EACH
ITEM 662 LANDSCAPE WATERING	1500 GALLONS

**SHRUB REQUIREMENTS:**

1. CONTRACTOR SHALL PLANT A TOTAL OF 48 SHRUBS AT LEAST 24" IN HEIGHT.
2. A MINIMUM OF FOUR (4) DIFFERENT SPECIES OF SHRUBS SHALL BE CHOSEN FROM THE FOLLOWING LIST:
  - A) CORNUS AMOMUM, SILKY DOGWOOD
  - B) CORNUS SERICEA, RED ODISER DOGWOOD
  - C) LINDERA BENZOIN, SPICEBUSH
  - D) ARONIA MELANOCARPA, BLACK CHOKEBERRY
  - E) SAMBUCUS CANADENSIS, COMMON ELDERBERRY
  - F) CEPHALANTHIS OCCIDENTALIS, BUTTONBUSH
  - G) PHYSPICARPUS OPULIFOLIUS, COMMON NINEBARK
3. SHRUBS SHALL BE PLANTED WITHIN 30' PLANTING AREA BEGINNING AT ELEVATION 958.0, AT A SPACING OF 4-6 FEET ON-CENTER. SHRUBS SHALL BE PLANTED IN A STAGGERED PATTERN OR IN GROUPINGS OF NO MORE THAN FIVE. SHRUB PLACEMENTS SHALL BE STAKED AND APPROVED BY THE ENGINEER AHEAD OF PLANTING
4. SHRUBS SHALL BE PLANTED ACCORDING TO ODOT ITEM 661.
5. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE SHRUB PLANTINGS AND TO ENSURE ESTABLISHMENT OF THE PLANTINGS SHALL BE INCLUDED IN THE PRICE BID FOR:

ITEM 661 PLANTING, MISC: NATIVE SHRUBS	48 EACH
ITEM 662 LANDSCAPE WATERING	400 GALLONS

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QUANTITIES CARRIED TO GENERAL NOTES  
SUBSUMMARY ON SHEET 43

NO.	DESCRIPTION	REV. BY	DATE
1	STREAM RESTORATION	CJC	2-22-2019

CALCULATED	CJC
CHECKED	CWL

**GENERAL NOTES**

**SUM - 76 - 5.53**

**WATER WORK**

**CITY OF AKRON WATER WORK NOTES**

OPERATION OF AKRON WATER VALVES WILL ONLY BE PERFORMED BY AKRON WATER DISTRIBUTION PERSONNEL.

**CITY OF BARBERTON WATER WORK NOTES**

ALL WATER WORK ITEMS AND CONSTRUCTION SHALL CONFORM TO ODOT ITEM 638 AND THE CITY OF BARBERTON STANDARD DETAILS. WHERE THERE IS CONTRADICTION, THE CITY OF BARBERTON STANDARD DETAILS WILL TAKE PRECEDENCE. SEE SHEETS 373 - 375 FOR DETAILS.

**ITEM 638 - WATER WORK, MISC.: 18" STEEL PIPE ENCASEMENT, OPEN CUT**  
**ITEM 638 - WATER WORK, MISC.: 24" STEEL PIPE ENCASEMENT, OPEN CUT (ALTERNATE BID)**

AFTER WATER MAIN HAS BEEN INSTALLED, DRY SAND SHALL BE BLOWN IN FROM BOTH ENDS. ALL OTHER REQUIREMENTS OF SECTION 638 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE. SEE SHEET 376 FOR DETAILS.

**ITEM SPECIAL - 6" FIRE HYDRANT (BARBERTON)**

THIS ITEM SHALL MEET ALL REQUIREMENTS OF ODOT SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF BARBERTON WATER DEPARTMENT STANDARDS AS SHOWN ON SHEET 373.

**ITEM SPECIAL - 6" WATER MAIN DIP CLASS 53, MECHANICAL JOINTS AND FITTINGS (BARBERTON)**  
**ITEM SPECIAL - 12" WATER MAIN DIP CLASS 53, MECHANICAL JOINTS AND FITTINGS (BARBERTON) (ALTERNATE BID)**

THIS ITEM SHALL MEET ALL REQUIREMENTS OF ODOT SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF BARBERTON WATER DEPARTMENT STANDARDS AS SHOWN ON SHEETS 374 - 375.

**ITEM 611 - VALVE BOX ADJUSTED TO GRADE, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF CMS 638.18 FOR VALVE BOXES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE OF THE CASTING) AND ADJUST THE CASTING TO GRADE (ACCORDING TO THE TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN PLACED.

CMS 499 CLASS OCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION OF THE NEW CASTING, AND ALL LABOR REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

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GENERAL NOTES

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**SANITARY SEWER**

**CITY OF BARBERTON SANITARY SEWER NOTES**

ALL SEWER WORK ITEMS AND CONSTRUCTION SHALL CONFORM TO ODOT ITEM 611 AND THE CITY OF BARBERTON STANDARD DETAILS. WHERE THERE IS CONTRADICTION, THE CITY OF BARBERTON STANDARD DETAILS WILL TAKE PRECEDENCE. SEE SHEETS 370-371 FOR DETAILS.

**ITEM 611 - MANHOLE, NO. 3 AS PER PLAN (SANITARY)**

ALL SANITARY SEWER MANHOLE CONSTRUCTION AND RECONSTRUCTION SHALL CONFORM TO ODOT ITEM 611, ODOT STANDARD CONSTRUCTION DRAWINGS MH-1.2 AND MH-3.1 (DROP PIPE DETAILS) EXCEPT AS MODIFIED BY THE CITY OF BARBERTON SANITARY SEWER STANDARDS AS SHOWN ON SHEET 370, WITH THE FOLLOWING MODIFICATIONS:

BY THIS NOTE, ALL SANITARY OR COMBINED SEWER MANHOLES SHALL BE EPOXY COATED.

**ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY)**

ALL SANITARY SEWER MANHOLE ADJUSTMENT SHALL CONFORM TO ODOT ITEM 611, ODOT STANDARD CONSTRUCTION DRAWINGS MH-1.2 AND MH-3.1 (DROP PIPE DETAILS) EXCEPT AS MODIFIED BY THE CITY OF BARBERTON SANITARY SEWER STANDARDS AS SHOWN ON SHEETS 370 AND 372, WITH THE FOLLOWING MODIFICATIONS:

BY THIS NOTE, ALL SANITARY OR COMBINED SEWER MANHOLES SHALL BE EPOXY COATED.

IN ADDITION TO THE REQUIREMENTS OF CMS 611.10.D FOR MANHOLES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE OF THE CASTING) AND ADJUST THE CASTING TO GRADE (ACCORDING TO THE TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN PLACED.

CMS 499 CLASS OCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION OF THE NEW CASTING, AND ALL LABOR REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

**CITY OF AKRON SANITARY SEWER NOTES**

ALL SEWER WORK ITEMS AND CONSTRUCTION SHALL CONFORM TO ODOT ITEM 611 AND THE CITY OF AKRON CONSTRUCTION AND MATERIAL SPECIFICATIONS AND APPLICABLE DETAILS. WHERE THERE IS CONTRADICTION, THE CITY OF AKRON SPECIFICATIONS WILL TAKE PRECEDENCE. SEE SHEET 372 FOR DETAILS.

THROUGHOUT THE DURATION OF THE PROJECT THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PROPERTY BACKUPS OR SEWER OVERFLOWS THAT OCCUR AS A RESULT OF HIS ACTIONS. THE CONTRACTOR SHALL IMMEDIATELY, REGARDLESS OF TIME OF DAY OR DAY OF WEEK, ADDRESS THE CAUSE AND CLEAN UP PRIVATE AND/OR PUBLIC PROPERTY TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL IMMEDIATELY REPORT THE EVENT DURATION, AMOUNT OF OVERFLOW (AREA AND DEPTH), AND ANY INTERACTION WITH THE PROPERTY OWNERS TO SCOTT DAVENPORT, CITY OF AKRON SEWER (330-375-2769). THE COST OF SUCH IS CONSIDERED INCIDENTAL TO THE APPROPRIATE 611 ITEM.

**ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (SANITARY)**

THE EXISTING CITY OF AKRON MANHOLE TO BE ABANDONED IS LOCATED ON A 36" SEWER THAT HAS BEEN LINED. THIS ITEM SHALL ALSO INCLUDE CAREFULLY CUTTING THE LINER TO ALLOW ACCESS TO THE SEWER. ANY PROPOSED MANHOLE WORK SHALL ALSO BE EPOXY COATED.

**ITEM 202 - MANHOLE ABANDONED, AS PER PLAN (SANITARY)**

THE EXISTING CITY OF AKRON 36" SANITARY SEWER HAS BEEN LINED AGAINST INFLOW AND INFILTRATION. ALL PROPOSED MANHOLE ABANDONMENTS ON THIS SEWER SHALL BE SEALED INSIDE AND OUT TO PREVENT INFLOW AND INFILTRATION. ALL WORK NECESSARY TO ENSURE SEALING SHALL BE INCLUDED IN PRICE BID FOR ITEM 202 - MANHOLE ABANDONED, AS PER PLAN.

**ITEM 611 - MANHOLE MISC.: AKRON S-1.3**

THIS ITEM SHALL CONSIST OF CONSTRUCTING A MANHOLE AS PER CITY OF AKRON CONSTRUCTION SPECIFICATIONS AND THE DETAIL ON SHEET 372. THIS MANHOLE IS LOCATED ON A BRICK/SEGMENT SANITARY SEWER THAT HAS BEEN LINED. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO ENSURE DEBRIS DOES NOT ENTER THE PIPE.

**ITEM SPECIAL - EXISTING SANITARY CONDUIT INSPECTION**

THE CONTRACTOR SHALL CLOSELY MONITOR THE EXISTING 36" MUD RUN TRUNK SANITARY SEWER LOCATED ON THE EAST SIDE OF WOOSTER ROAD OWNED BY THE CITY OF AKRON BEFORE, DURING AND AFTER CONSTRUCTION TAKES PLACE IN THE VICINITY OF THE LINES.

THE CONTRACTOR SHALL EXERCISE THE APPROPRIATE CARE WHILE PERFORMING ALL WORK IN THE VICINITY OF THIS SEWER, INCLUDING BUT NOT LIMITED TO EMBANKMENT PLACEMENT, EXCAVATION, UNDERGROUND ACTIVITIES AND THE INSTALLATION OF BRIDGE FOUNDATIONS.

THE CONSTRUCTOR SHALL INTERNALLY INSPECT THE SEWER BEFORE ANY WORK TAKES PLACE IN THE VICINITY OF THE SEWER AND AGAIN AFTER ALL WORK IS COMPLETED IN THE AREA. THE INTERNAL INSPECTION SHALL CONSIST OF VIDEO TAPING THE SANITARY LINE BETWEEN SA-7 AND SJ-7. THE VIDEO FILES SHALL BE SUBMITTED TO THE ODOT ENGINEER AND SCOTT DAVENPORT, CITY OF AKRON SEWER (330-375-2769) FOR THEIR REVIEW AND ACCEPTANCE.

VIDEO SHALL BE PER THE FOLLOWING REQUIREMENTS FOR ALL SEWERS TO BE CONSTRUCTED OR RECONSTRUCTED BY ANY METHOD:

IN ADDITION TO AKRON SPECIFICATION 551.12(C), PLEASE PROVIDE THE FOLLOWING INFORMATION TO THE CITY OF AKRON PRIOR TO SUBFINAL ACCEPTANCE ON ONE LABELED (PROJECT NAME INCLUDING AEB FILE NUMBER, PROJECT CONTRACTOR'S NAME, AND CCTV CONTRACTOR'S NAME) PORTABLE HARD DRIVE OR THUMB DRIVE:

- A. DATABASE FILE WITH ALL INSPECTION EVENTS AND DEFECT RECORDS IN MICROSOFT ACCESS (.MDB) (GRANITE NATIVE EXPORT DATABASE, PACP 4.2 SCHEMA-COMPLIANT DATABASE, OR APPROVED EQUAL)
- B. VIDEO FILE: MPEG (.MPG) OR WINDOWS MEDIA FILE (.WMV). ONE VIDEO FILE PER PIPE INSPECTION.
- C. INSPECTION REPORT: ONE REPORT IN ADOBE ADOBE PDF FORMAT PER PIPE INSPECTION. REPORT SHOULD INCLUDE:
  - i. INSPECTION HEADER INFO (WHO, WHAT, WHERE, WHEN)
  - ii. DEFECT LOG
  - iii. PHOTOS OF DEFECTS
- D. DEFECT PHOTOS: SCREEN CAPTURES FROM THE VIDEO (.JPG)
- E. PRIOR TO CONDUCTING THE POST CONSTRUCTION CCTV INSPECTIONS, EACH PIPE SEGMENT, MANHOLE, AND INLET MUST HAVE AN ASSIGNED "ASSET ID". THE CONTRACTOR SHALL NOTIFY THE ODOT PROJECT ENGINEER AT LEAST FIVE WORKING DAYS PRIOR TO PROPOSED INSPECTION DATE. THE ENGINEER SHALL CONTACT SCOTT DAVENPORT (330-375-2769) AT THE CITY OF AKRON SEWER DEPARTMENT TO VERIFY EXISTING ASSET ID'S AND/OR TO OBTAIN NEW ASSET ID'S. ONCE ALL ID'S ARE VERIFIED/OBTAINED FROM THE CITY OF AKRON SEWER DEPARTMENT, INSPECTION OF THE SEWERS CAN BEGIN. THE ASSET ID'S MUST BE USED WHEN REFERENCING THE "START MANHOLE", "END MANHOLE", "PIPE SEGMENT", AND/OR "INLET" IN BOTH THE INSPECTION DATABASE AND THE FILENAMES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE 36-INCH MUD RUN TRUNK SEWER, THE RECEIVING MUD RUN PUMP STATION (#2644 CORDELIA AVENUE), OR THE ENVIRONMENT THAT RESULTS FROM ANY ACT, OMISSION, NEGLIGENCE, DEFECTIVE WORK OR MATERIALS, OR MISCONDUCT IN THE MANNER OR METHOD OF EXECUTING THE WORK IN ACCORDANCE WITH SECTION 107.10 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK:

ITEM SPECIAL - EXISTING SANITARY CONDUIT INSPECTION 1 EACH

**UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS**

FURNISH A CONTINUANCE FOR ALL UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS SUCH AS SANITARY, WASTE-WATER, CURTAIN/ GRADIENT DRAINS, AND FOUNDATION FLOOR DRAINS DISTURBED BY THE WORK. FURNISH AN UNOBSTRUCTED CONTINUANCE OF THE UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS TO THE SATISFACTION OF THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT. ALL SANITARY AND SANITARY WASTE-WATER CONTINUANCE MAY ALSO REQUIRE A NPDES PERMIT FROM THE OHIO ENVIRONMENTAL PROTECTION AGENCY. REPORT ALL CONTINUANCE TO THE LOCAL HEALTH DEPARTMENT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.42, 707.43, 707.44, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35, 706.01, 706.02, OR 706.08 WITH JOINTS AS PER 706.11 OR 706.12.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

- ITEM 611 6" CONDUIT, TYPE B, FOR SANITARY 200 FT.
- ITEM 611 6" CONDUIT, TYPE C, FOR SANITARY 200 FT.

**ITEM 611 - CONDUIT, MISC.: 10" SANITARY SEWER, 706.08**

**ITEM 611 - CONDUIT, MISC.: 8" SANITARY SEWER, 707.45**

**ITEM 611 - CONDUIT, MISC.: 10" SANITARY SEWER, 707.45**

ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) ITEM 611, WITH THE FOLLOWING ADDITION; ALL BEDDING AND BACKFILL SHALL BE #6, #67, OR #68 CRUSHED AGGREGATE AND SHALL MEET ASTM C 12 FOR RIGID PIPE AND ASTM D 2321 FOR NON-RIGID PIPE. SEE SHEET 371 FOR DETAILS.

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QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 43

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GENERAL NOTES

SUM - 76 - 5.53

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**ENVIRONMENTAL**

**RIPARIAN HABITAT**

ANY AREAS DISTURBED DURING CONSTRUCTION ACTIVITIES SHALL BE RE-SEEDED/RE-VEGETATED WITH NATIVE PLANT SPECIES, INCLUDING NATIVE RIPARIAN TREE SPECIES, AND MULCHED DURING CONSTRUCTION TO ENCOURAGE ESTABLISHMENT OF NATIVE VEGETATION COVER, DECREASE EROSION AND PREVENT EROSION OF SEDIMENTS INTO WATERS OF THE U.S. EXISTING RIPARIAN HABITAT ZONES MAINTAINED TO THE MAXIMUM EXTENT POSSIBLE.

**MECHANICAL EQUIPMENT OPERATION AT STREAM CHANNEL**

CONSTRUCTION EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM STREAMS TO THE EXTENT PRACTICABLE. THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK AUTHORIZED HEREIN SHALL BE OPERATED IN A MANNER TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

**OIL SPILL KIT**

AN OIL SPILL KIT SHALL BE LOCATED WITHIN 150 FEET OF ANY EQUIPMENT WORKING IN A STREAM OR WETLANDS. THE OIL SPILL KIT SHALL BE MAINTAINED FOR THE LIFE OF THE CONSTRUCTION CONTRACT PER ODOT CONSTRUCTION AND MATERIALS SPECIFICATION 104.04.

**CONSTRUCTION AND DEMOLITION DEBRIS**

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING THE STREAM(S). ANY DEBRIS THAT DOES FALL INTO THE STREAM(S) SHALL BE REMOVED AS SOON AS POSSIBLE.

**BEST MANAGEMENT PRACTICES/SOIL EROSION AND SEDIMENTATION CONTROL**

ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER.

**PARK AVOIDANCE**

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT CARL J. HARTER PARK AND UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE OR STAGE CONSTRUCTION EQUIPMENT AND/OR MATERIALS WITHIN THE KNOWN BOUNDARIES OF CARL J. HARTER PARK.

**ENDANGERED SPECIES HABITAT**

PRIOR TO BRIDGE OR CULVERT DEMOLITION ACTIVITIES, THE UNDERSIDE OF EXISTING BRIDGES OR CULVERTS SHALL BE CAREFULLY EXAMINED FOR THE PRESENCE OF BATS, ESPECIALLY FROM APRIL 1 TO SEPTEMBER 30. IF ANY BATS ARE FOUND ROOSTING ON THE UNDERSIDE OF THE BRIDGE OR CULVERT, THE ECOLOGICAL STAFF OF ODOT'S OFFICE OF ENVIRONMENTAL SERVICES (614-466-7102) AND ODOT DISTRICT 4 ENVIRONMENTAL STAFF (330-786-4930) SHALL BE CONTACTED UPON IDENTIFICATION.

NO TREES SHALL BE REMOVED WITHIN THE PROPOSED CONSTRUCTION FOOTPRINT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO PROTECT THE BAT SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

**WETLAND IMPACTS/AVOIDANCE**

THIS PROJECT WILL IMPACT A TOTAL OF 0.49 ACRE OF WETLANDS. THE PROJECT WILL IMPACT WETLANDS AT THE FOLLOWING LOCATIONS:

WETLAND A: RAMP B1 STA. 134+80  
(EAST OF MUD RUN) 0.07 ACRE

WETLAND B: RAMP B1 STA. 133+50  
(WEST OF MUD RUN) 0.42 ACRE

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE REMAINING WETLANDS INDICATED ON THE PLAN. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS WITHIN THESE WETLANDS.

TO PROTECT AND DELINEATE THE BOUNDARY OF THE EXISTING REMAINING WETLANDS, TEMPORARY CONSTRUCTION FENCE AND FILTER FABRIC FENCE (400 LINEAR FEET, PAYMENT FOR THIS ITEM WILL BE MADE UNDER ITEM 832, EROSION CONTROL) SHALL BE INSTALLED ALONG THE PROPOSED CONSTRUCTION LIMITS WITHIN THE WETLANDS AREA BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES WITHIN THESE LIMITS AND ADJACENT AREA AND MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION.

**ASBESTOS INSPECTION**

THE EXISTING SUM-76-0563 L&R, SUM-76-0577, SUM-76-0577CD AND SUM-76-0580 STRUCTURES HAVE BEEN INSPECTED AND DETERMINED THAT NO ASBESTOS MATERIALS ARE PRESENT.

**WATERWAY PERMIT COMPLIANCE**

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT. THE SECTION 404/401 WATERWAY PERMITS FOR THIS PROJECT HAVE NOT YET BEEN AUTHORIZED BY THE US ARMY CORPS OF ENGINEERS (USACE) AND/OR THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

THE CONTRACTOR SHALL NOT PERFORM ANY WORK IN AND/OR PLACE ANY FILL BELOW THE ORDINARY HIGH WATER MARK (OHWM) OF A STREAM OR WITHIN ANY WETLANDS UNTIL THE WATERWAY PERMITS ARE AUTHORIZED. THE OHWM AND WETLAND/UPLAND BOUNDARY ARE THE USACE JURISDICTIONAL LIMITS. THE COMPLETE/AUTHORIZED WATERWAY PERMITS ARE ANTICIPATED TO BE PROVIDED TO THE CONTRACTOR BY ODOT BY MAY 10, 2019. THE CONTRACTOR SHALL NOT COORDINATE DIRECTLY WITH THE US ARMY CORPS OF ENGINEERS AND/OR THE OHIO ENVIRONMENTAL PROTECTION AGENCY.

USACE DEFINITION OF OHWM - THE ORDINARY HIGH WATER MARK IS THE LINE ON THE SHORES ESTABLISHED BY THE FLUCTUATIONS OF THE WATER AND INDICATED BY PHYSICAL CHARACTERISTICS SUCH AS A CLEAR, NATURAL LINE IMPRESSED ON THE BANK; SHELVEING; CHANGES IN THE CHARACTER OF THE SOIL; DESTRUCTION OF TERRESTRIAL VEGETATION; THE PRESENCE OF LITTER AND DEBRIS; OR THE APPROPRIATE MEANS THAT CONSIDER THE CHARACTERISTICS OF THE SURROUNDING AREAS.

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GENERAL NOTES

SUM - 76 - 5.53

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**ENVIRONMENTAL (CONTINUED)**

**ITEM SPECIAL - POST-CONSTRUCTION SURVEY AND AS-BUILTS FOR FEMA APPROVAL**

CONTRACTOR SHALL SUBMIT THE FOLLOWING DATA AND FILES FOR THE LETTER OF MAP REVISION (LOMR) APPROVAL THRU FEMA:

1. FULL TOPOGRAPHIC FIELD SURVEY OF THE HATCHED AREA SHOWN IN THE DETAIL ON THIS SHEET INCLUDING BUT NOT LIMITED TO:
  - a. GROUND SURVEY
  - b. STRUCTURE SURVEY (INVERTS, WINGWALLS/HEADWALLS, TOP OF STRUCTURE)
  - c. STORM SEWERS AND DITCHES
2. EXISTING GROUND TRIANGLE MODEL (GEOPAK/.tin and LANDXML/.xml FORMATS)
3. POINT FILE (.CSV FORMAT)
4. AS-BUILT PLANS OF ALL PROPOSED PROJECT ELEMENTS WITHIN HATCHED AREA CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER

UPON COMPLETION OF CONSTRUCTION IN HATCHED AREA SHOWN ON THIS SHEET, DATA AND FILES SHALL BE PROVIDED TO ODOT DISTRICT 4 WITHIN 60 DAYS. ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR:

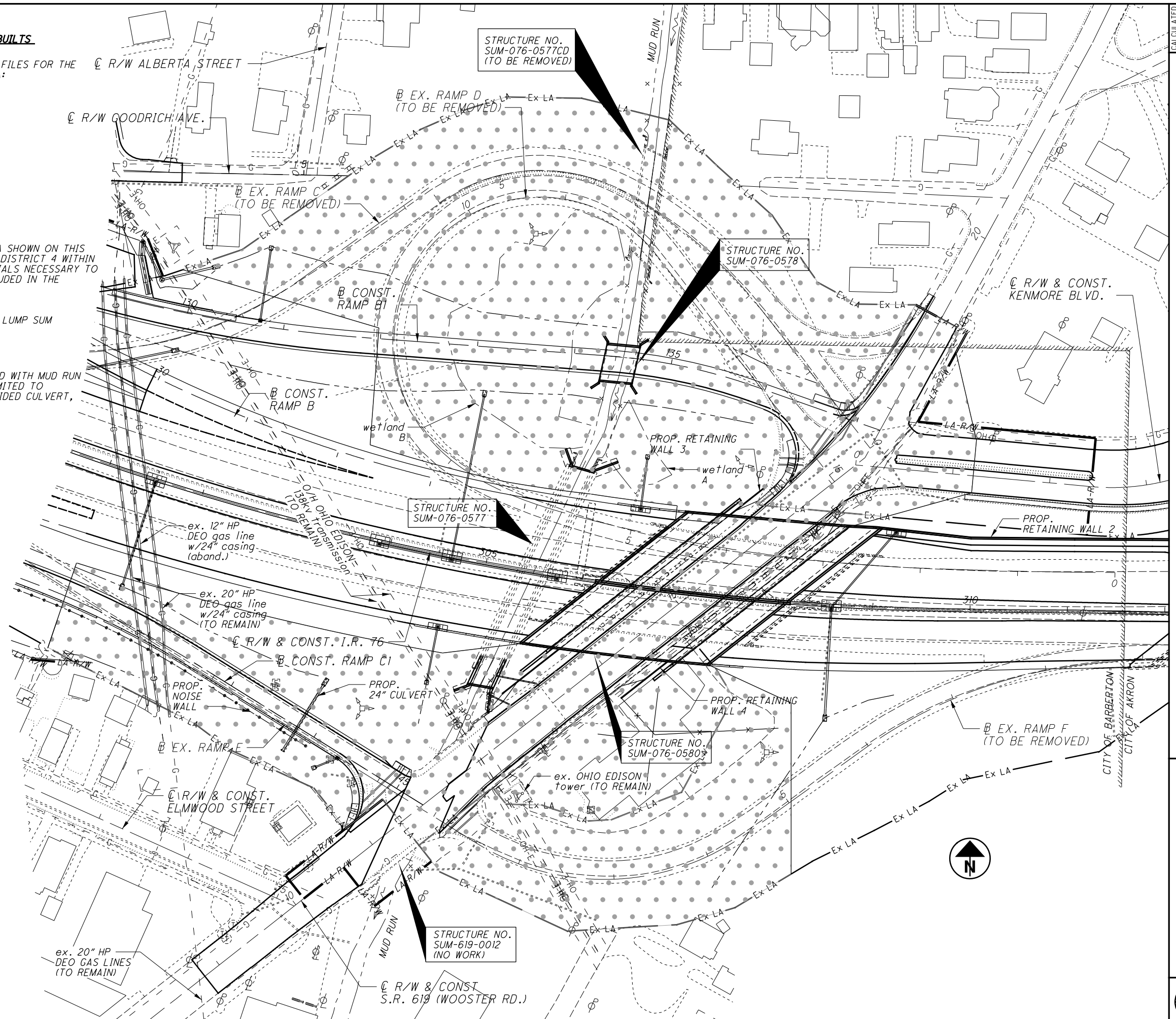
ITEM SPECIAL - POST-CONSTRUCTION SURVEY AND AS-BUILTS FOR FEMA APPROVAL

LUMP SUM

**MUD RUN CONSTRUCTION**

FOR FEMA APPROVAL, CONSTRUCTION WORK ASSOCIATED WITH MUD RUN MUST BE BUILT PER THE PLANS INCLUDING BUT NOT LIMITED TO INTERCHANGE GRADING, CULVERT EXTENSION, RAMP 3-SIDED CULVERT, CHANNEL GRADING, EROSION CONTROL, ETC.

 DENOTES MINIMUM AREA REQUIRING FIELD SURVEY



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QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 43

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**GENERAL NOTES**

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SHEET NO.	201	202	202	202	202	202	203	253	253	255	301	302	304	304	304	407	441	441	442	452	511	601	605	
	CLEARING AND GRUBBING	PAVEMENT REMOVED, ASPHALT	PAVEMENT REMOVED	CATCH BASIN REMOVED	REMOVAL MISC.: TRENCH DRAIN	CONCRETE BARRIER REMOVED	EXCAVATION (FOR PAVEMENT REPAIR)	PAVEMENT REPAIR	PAVEMENT REPAIR, AS PER PLAN	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RRCM	4" ASPHALT CONCRETE BASE, PG64-22	10" ASPHALT CONCRETE BASE, PG64-22	AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR)	4" AGGREGATE BASE, AS PER PLAN	6" AGGREGATE BASE, AS PER PLAN	NON-TRACKING TACK COAT	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE I (448), PG64-22, AS PER PLAN	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE B (446)	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC MS	12" CLASS OCI CONCRETE SUBSTRUCTURE, AS PER PLAN	TIED CONCRETE BLOCK MAT, TYPE I	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	LS	SY	SY	EACH	FT	FT	CY	SY	CY	SY	CY	CY	CY	CY	CY	GAL	CY	CY	CY	SY	CY	SY	FT	
27	LS															34					68			
29		1372		3	850	622						381				229	151			67				
32		23	47								3					2	1	1		47				
33							183	1100	20	65		57	183			34			10					
37																						8	40	
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>	LS	1395	47	3	850	622	183	1100	20	65	3	438	449			187	1	1	77	47	68	8	40	
SHEET NO.	611	611	611	611	611	611	611	611	622	622	623	626*	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	661	661	662
	INLET, MISC.: INLET, STANDARD TYPE J-3B50 RECONSTRUCTED TO GRADE	PRECAST REINFORCED CONCRETE OUTLET	6" CONDUIT, TYPE B	6" CONDUIT, TYPE C	6" CONDUIT, TYPE E	6" CONDUIT, TYPE F	6" CONDUIT, TYPE B, FOR SANITARY	6" CONDUIT, TYPE C, FOR SANITARY	CONCRETE BARRIER, SINGLE SLOPE, TYPE BI	BARRIER MISC.: CONCRETE BARRIER, TYPE B50	PROVIDING ELECTRONIC INSTRUMENTATION	BARRIER REFLECTOR, TYPE I, BI-DIRECTIONAL	PRE-CONSTRUCTION / POST-CONSTRUCTION SURVEY	VERTICAL CLEARANCE	MISCELLANEOUS METAL	SETTLEMENT PLATFORM	ROADWAY, MISC.: EXISTING PIER MONITORING	SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS	SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES	EXISTING SANITARY CONDUIT INSPECTION	POST-CONSTRUCTION SURVEY AND AS-BUILTS FOR FEMA APPROVAL	PLANTING, MISC: NATIVE TREES	PLANTING, MISC: NATIVE SHRUBS	LANDSCAPE WATERING
	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	FT	LS	EACH	LS	EACH	LB	EACH	LS	LS	LS	EACH	LS	EACH	EACH	GAL
29	1										600	622	LS	14	LS									
30																1								
35																		LS	LS					
36																								
37		4	200	200	200	240											1000	4	LS					
38																						48	48	1900
40							200	200													1			
42																						LS		
* QUANTITY CARRIED TO ROADWAY SUBSUMMARY ON SHEET 164																								
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>	1	4	200	200	200	240	200	200	600	622	LS	14	LS	1	1000	4	LS	LS	LS	1	LS	48	48	1900

NO.	DESCRIPTION	REV. BY	DATE
1	STREAM RESTORATION	CJC	2-22-2019

GENERAL NOTES SUBSUMMARY	<table border="1"> <tr> <td>CALCULATED</td> <td>LRK</td> </tr> <tr> <td>CHECKED</td> <td>CWL</td> </tr> </table>	CALCULATED	LRK	CHECKED	CWL
CALCULATED	LRK				
CHECKED	CWL				
<b>SUM - 76 - 5.53</b>					
43	672				

**ITEM 614, MAINTAINING TRAFFIC**

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

1. A MINIMUM OF TWO LANE(S) OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON I.R. 76 BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 502 STRUCTURE FOR MAINTAINING TRAFFIC, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

4. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

5. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

6. A QUANTITY OF 100 CY OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

7. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

8. THE CONTRACTOR SHALL PLACE THE SIGNS: W8-1 [BUMP] PER OMUTCD 2C.28; W8-11 [UNEVEN LANES] PER OMUTCD 6F.45; AND W6-3 [TWO-WAY TRAFFIC] PER OMUTCD 6F.32. PAYMENT FOR THESE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614- MAINTAINING TRAFFIC. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGNS HAS BEEN INCLUDED IN THE PLANS PER CMS 614.04.

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.

REVISIONS	NUMBER	DATE	DESCRIPTION
	△	4/3/19	REVISED PHASE RESTRICTION TIME

**I.R. 76 LANE CLOSURES**

ON I.R. 76, THE DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT:

<http://plcm.dot.state.oh.us>

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF \$7,500 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

**LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS**

NO WORK SHALL BE PERFORMED AND NO ADDITIONAL SHORT DURATION LANE CLOSURES ON I.R. 76 SHALL BE IMPLEMENTED DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
MUM FEST (CITY OF BARBERTON)	
CHERRY BLOSSOM FESTIVAL (CITY OF BARBERTON)	

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

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$100 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

**COOPERATION BETWEEN CONTRACTORS**

THE CONTRACTOR SHALL BE ADVISED THAT PROJECT SUM/MED-76-0.00/11.43DB (PID 93501) MAY BE ONGOING IN AN AREA IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECTS. IN ACCORDANCE WITH 105.08, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECIEVE DAILY APPROVALS FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA, OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

**ADVANCED NOTICE TO PAVE**

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

**NOTICE OF CLOSURE SIGN**

NOTICE OF CLOSURE SIGNS (W20-H14), AS DETAILED BELOW, SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. (AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.)



W20-H14-60

\* ROAD OR RAMP, AS APPLICABLE

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

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD	>=2 WEEKS > 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE & 7 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE COST OF THE NOTICE OF CLOSURE SIGN IS CONSIDERED TO BE INCIDENTAL TO AND INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC.

**TIME LIMITATION ON DETOURS**

THE FOLLOWING TABLE LISTS THE MAXIMUM DURATION AND DISINCENTIVE OF ALL REQUIRED ROAD CLOSURES ON THE PROJECT. DURATIONS ARE MEASURED IN CONSECUTIVE CALENDAR DAYS OR HOURS.

ROAD/RAMP MOVEMENT	PHASE	RESTRICTION TIME	DISINCENTIVE
IR-76 EB TO WOOSTER RD (EX. RAMP E/PR. RAMP C)	PHASE 1	120 CALENDAR DAYS	\$1,000 PER CALENDAR DAY
STATE ST/WOOSTER RD TO IR-76 EB (EX. RAMP F & PR. RAMP C)	PHASE 1A	30 CALENDAR DAYS	\$5,000 PER CALENDAR DAY
IR-76 WB TO WOOSTER RD (EX. RAMP C)	PHASE 2 & 3	548 CALENDAR DAYS	\$5,000 PER CALENDAR DAY

**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 OFFICE OF COMMUNICATIONS. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL 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, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTICE TO OFFICE OF COMMUNICATIONS TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO OFFICE OF COMMUNICATIONS
RAMP & ROAD CLOSURES	>= 2 WEEKS > 12 HOURS & < 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE & 14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	4 BUSINESS DAYS PRIOR TO CLOSURE

LANE CLOSURES & RESTRICTIONS		
LANE	DURATION OF CLOSURE	NOTICE DUE TO OFFICE OF COMMUNICATIONS
>= 2 WEEKS < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE & 2 BUSINESS DAYS PRIOR TO CLOSURE	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES

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

**DETOUR NOTIFICATION**

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) AND CITY OF BARBERTON (330-848-6717) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING

**SEQUENCE OF CONSTRUCTION**

**PRE-PHASE 1 (NO PLAN SHEETS PROVIDED)**

PRIOR TO BEGINNING WORK IN THE FIRST PHASE OF THE PROJECT, THE EXISTING SHOULDERS ALONG I.R. 76 THAT ARE UTILIZED TO MAINTAIN TRAFFIC SHALL BE RECONSTRUCTED AND WIDENED. THE SHOULDER RECONSTRUCTION LIMITS ARE DETAILED IN THE PHASE 1 MOT PLAN SHEETS (SHEETS 80-87). THIS WORK SHALL BE COMPLETED BY CLOSING THE ADJACENT RIGHT OR LEFT LANE AS PER THE PERMITTED LANE CLOSURE CHART. LANE CLOSURES SHALL BE AS PER STANDARD CONSTRUCTION DRAWING (SCD) MT-95.30. ALL DROP-OFFS ADJACENT TO THE TRAVEL LANE SHALL BE MAINTAINED AS PER SCD MT-101.90 DURING NON-WORKING HOURS. RECONSTRUCTION OF INSIDE AND OUTSIDE SHOULDERS SHALL NOT OCCUR SIMULTANEOUSLY.

CROSSOVERS SHALL BE CONSTRUCTED, INCLUDING ALL ASSOCIATED TEMPORARY DRAINAGE, ALONG I.R. 76 DIRECTLY WEST OF THE SUMMIT ROAD BRIDGE AND DIRECTLY WEST OF THE 27TH STREET BRIDGE. THESE CROSSOVER LOCATIONS WILL BE UTILIZED IN PHASES 1-3. IF NECESSARY, THIS WORK SHALL BE COMPLETED BY CLOSING THE ADJACENT LEFT LANE AS PER THE PERMITTED LANE CLOSURE CHART. LANE CLOSURES SHALL BE AS PER SCD MT-95.40. UPON REMOVAL OF THE EXISTING MEDIAN BARRIER IN THE CROSSOVER AREA, THE LEFT SHOULDER SHALL BE CLOSED AND THE REMOVED AREA SHALL BE PROTECTED WITH PORTABLE BARRIER AS PER SCD MT-95.45.

**PHASE 1 (SHEETS 71-97)**

THE CONTRACTOR IS NOT PERMITTED TO BEGIN THIS PHASE BEFORE AUGUST 15, 2019.

**MAINLINE/RAMPS**

ONE LANE OF I.R. 76 EB WILL BE SHIFTED TO THE WESTBOUND SIDE OF THE ROADWAY AND ONE LANE OF EASTBOUND TRAFFIC WILL BE MAINTAINED THROUGH THE WORK ZONE. THIS SINGLE LANE WILL BE SHIFTED TO THE MEDIAN SIDE OF THE EASTBOUND DIRECTION. 11' LANES WILL BE MAINTAINED THROUGH THE WORK ZONE.

CENTRAL AVENUE SHALL BE PERMANENTLY CLOSED AT ELMWOOD STREET TO THE SOUTH AND AT GOODRICH STREET TO THE NORTH PRIOR TO BEGINNING THE REMOVAL AND BACKFILL OF THE MAINLINE BRIDGE OVER CENTRAL AVENUE. THE PROPOSED WATERLINE SHALL THEN BE INSTALLED ALONG CENTRAL AVENUE.

THE FOLLOWING ITEMS SHALL BE COMPLETED IN THIS PHASE:

- PROPOSED EASTBOUND OUTSIDE LANE AND SHOULDER
- OUTSIDE LANE AND SHOULDER OF EASTBOUND SUM-76-0580 BRIDGE
- PROPOSED RAMPS C AND C1
- PROPOSED NOISE WALL ALONG RAMP C/C1
- REMOVAL OF THE OUTSIDE PORTION OF THE EXISTING EB BRIDGE OVER CENTRAL AVENUE FOLLOWED BY THE FIRST TEMPORARY MSE WALL ACROSS CENTRAL AVENUE
- TEMPORARY AND PROPOSED DRAINAGE ON THE SOUTH SIDE OF I.R. 76 AND ALONG RAMPS C/C1

**PHASE 1, CONT'D**

EXISTING RAMP C WILL BE CLOSED AT THE BEGINNING OF THIS PHASE AND WILL REMAIN CLOSED FOR THE DURATION OF THE PROJECT. EXISTING RAMP E WILL BE CLOSED AND PERMANENTLY REMOVED. UPON CLOSURE OF EXISTING RAMP E, THE EXISTING TRAFFIC SIGNAL AT ITS INTERSECTION WITH S.R. 619 (WOOSTER ROAD) SHALL BE PLACED ON FLASHING OPERATION. EXISTING RAMP F SHALL REMAIN OPEN UNTIL THE END OF THIS PHASE.

**SIDE STREETS**

RIGHT LANE CLOSURES ON STATE STREET WILL BE UTILIZED TO COMPLETE THE PROPOSED RAMP C TIE-IN WORK AND THE SIDEWALK ALONG THE EAST SIDE OF THE ROADWAY SOUTH OF I.R. 76. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ALONG THIS ROADWAY. THE PROPOSED TRAFFIC SIGNAL AT THE INTERSECTION WITH PROPOSED RAMP D/PROPOSED RAMP C SHALL BE CONSTRUCTED. THE EXISTING TRAFFIC SIGNAL SHALL REMAIN IN OPERATION UNTIL THE PROPOSED TRAFFIC SIGNAL IS COMPLETE.

RIGHT LANE CLOSURES ON S.R. 619 (WOOSTER ROAD) WILL BE UTILIZED TO COMPLETE THE DEMOLITION AND CONSTRUCTION OF THE SUM-76-0580 BRIDGE. DEMOLITION AND CONSTRUCTION THE BRIDGE OVER WOOSTER ROAD WILL REQUIRE BOTH SIDEWALKS ALONG WOOSTER ROAD TO BE CLOSED FOR THE DURATION OF THE PROJECT.

TO REMOVE AND INSTALL THE BRIDGE BEAMS OVER S.R. 619 (WOOSTER ROAD), THE CONTRACTOR SHALL UTILIZE SHORT DURATION CLOSURES, AS PER OMTCD TA-13, DURING NIGHTTIME HOURS. CLOSURES SHALL ONLY OCCUR BETWEEN THE HOURS OF 7PM TO 6AM. LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS SHALL BE UTILIZED FOR ALL SHORT DURATION CLOSURES.

THE PROPOSED TRAFFIC SIGNAL AT THE S.R. 619 (WOOSTER ROAD) INTERSECTION WITH PROPOSED RAMP C SHALL BE CONSTRUCTED IN THIS PHASE. THE EXISTING SIGNAL SHALL BE PLACED INTO FLASHING OPERATION UPON CLOSURE OF EXISTING RAMP E.

THE PERMANENT CLOSURE OF CENTRAL AVENUE ON THE NORTH AND SOUTH SIDE OF I.R. 76 SHALL OCCUR AT THE BEGINNING OF THIS PHASE. ROAD CLOSURE SHALL BE AS PER SCD MT-101.60. THE AREA UNDERNEATH THE EXISTING CENTRAL AVENUE BRIDGE SHALL BE BACKFILLED TO AN ELEVATION OF APPROXIMATELY 6 FEET BELOW THE EXISTING BRIDGE BEAMS. ONCE THIS FILL IS PLACED AND TRAFFIC ON I.R. 76 IS PLACED IN ITS PHASE 1 CONFIGURATION THEN DEMOLITION OF THE EXISTING BRIDGE CAN BEGIN. ROMIG AVENUE NORTH OF ELMWOOD STREET SHALL BE RECONSTRUCTED WITH THE PROPOSED TURNAROUND. TWO-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON ELMWOOD STREET.

**PHASE 1A (SHEET 98)**

IR-76 SHALL REMAIN IN THE PHASE 1 CONFIGURATION DURING THIS SUBPHASE. RAMP F SHALL BE CLOSED TO COMPLETE THE ROAD WORK AT ITS TIE-IN TO THE MAINLINE, DIRECTLY WEST OF THE BRIDGE OVER THE RAILROAD. THE MAXIMUM DURATION THIS RAMP IS PERMITTED TO BE CLOSED PRIOR TO OPENING THE PROPOSED RAMP C TO I.R. 76 EB SHALL BE 30 CALENDAR DAYS.

**PHASE 2 (SHEETS 99-123)**

THE CONTRACTOR IS NOT PERMITTED TO BEGIN THIS PHASE BEFORE APRIL 1, 2020.

**MAINLINE/RAMPS**

THE SINGLE LANE OF I.R. 76 EB MAINTAINED THROUGH THE WORK AREA SHALL BE SHIFTED TO THE OUTSIDE ONTO THE NEWLY COMPLETED PAVEMENT PLACED IN PHASE 1. 11' LANES WILL BE MAINTAINED THROUGH THE WORK ZONE.

THE EASTBOUND CROSSOVER LANE AND WESTBOUND I.R. 76 LANES SHALL BE SHIFTED TO THE NORTH TO ACCOMMODATE THE BRIDGE DECK REMOVAL ON THE WESTBOUND BRIDGE OVER WOOSTER AVE (S.R. 619). THE PORTABLE BARRIER ALONG THE RIGHT SIDE OF THE EASTBOUND CROSSOVER LANE SHALL BE PLACED DIRECTLY ADJACENT TO THE SAWCUT. OVERNIGHT LANE CLOSURES, AS PER THE PERMITTED LANE CLOSURE CHART, SHALL BE IMPLEMENTED TO COMPLETE THE SAWCUTTING OF THE BRIDGE DECK AND ANCHORING OF THE PORTABLE BARRIER.

THE EXISTING RAMP TO WOOSTER ROAD FROM I.R. 76 WB SHALL BE CLOSED AT THE BEGINNING OF THIS PHASE. TRAFFIC SHALL BE DETOURED WEST TO THE BARBER ROAD INTERCHANGE TO TURNAROUND BACK TO THE STATE STREET EXIT. THE OFF-RAMP TO BARBER ROAD FROM I.R. 76 WB SHALL BE RESTRIPEDED TO PROVIDE DEDICATED RIGHT AND LEFT TURN LANES. THE TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF THIS RAMP AND BARBER ROAD SHALL BE PLACED INTO OPERATION AT THE BEGINNING OF THIS PHASE.

THE FOLLOWING ITEMS SHALL BE COMPLETED IN THIS PHASE:

- PROPOSED EASTBOUND MIDDLE AND INSIDE LANES, SHOULDER AND MEDIAN BARRIER
- MIDDLE LANE, INSIDE LANE AND SHOULDER OF EASTBOUND SUM-76-0580 BRIDGE
- REMOVAL OF THE INSIDE PORTION OF THE EXISTING EB BRIDGE OVER CENTRAL AVENUE FOLLOWED BY THE SECOND TEMPORARY MSE WALL ACROSS CENTRAL AVENUE
- THE REMAINING PROPOSED DRAINAGE UNDER I.R. 76 EB (EXCLUDING THE MEDIAN INLET STRUCTURES)

RAMPS C AND C1 SHALL BE OPEN TO TRAFFIC AT THE BEGINNING OF THIS PHASE. PRIOR TO OPENING RAMPS C AND C1, PROPOSED SIGNING AND PAVEMENT MARKINGS MATCHING THE FINAL CONFIGURATION ON THESE RAMPS SHALL BE IN PLACE TO IDENTIFY ACCESS TO S.R. 619 (WOOSTER ROAD) FROM STATE STREET.

**SIDE STREETS**

RIGHT LANE CLOSURES WILL REMAIN IMPLEMENTED ON S.R. 619 (WOOSTER ROAD) TO COMPLETE THE CONSTRUCTION OF THE EASTBOUND PORTION OF THE SUM-76-0580 BRIDGE. BOTH SIDEWALKS ALONG WOOSTER ROAD SHALL REMAIN CLOSED IN THIS PHASE. TO REMOVE AND INSTALL THE BRIDGE BEAMS OVER S.R. 619 (WOOSTER ROAD), THE CONTRACTOR SHALL UTILIZE SHORT DURATION CLOSURES, AS PER OMTCD TA-13, DURING NIGHTTIME HOURS. CLOSURES SHALL ONLY OCCUR BETWEEN THE HOURS OF 7PM TO 6AM. LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS SHALL BE UTILIZED FOR ALL SHORT DURATION CLOSURES.

THE PROPOSED TRAFFIC SIGNAL SHALL BE CONSTRUCTED AT THE INTERSECTION OF S.R. 619 (WOOSTER ROAD) AND PROPOSED RAMP B1/KENMORE BLVD. THE EXISTING TRAFFIC SIGNAL SHALL BE KEPT IN OPERATION UNTIL THE PROPOSED TRAFFIC SIGNAL IS COMPLETE.

ON STATE STREET, ALL LANE RESTRICTIONS FROM THE PREVIOUS PHASE SHALL BE REMOVED.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

SUM-76-5.53

**SEQUENCE OF CONSTRUCTION CONT'D**

**PHASE 3 (SHEETS 124-149)**

**MAINLINE/RAMPS**

PRIOR TO BEGINNING WORK IN THIS PHASE, THE PROPOSED SANITARY SEWER LINE NORTH OF I.R.-76 BETWEEN STATE STREET AND CENTRAL AVENUE SHALL BE INSTALLED. A MINIMUM OF TWO-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ALONG STATE STREET. THE TRENCH ON STATE STREET SHALL BE ADEQUATELY PROTECTED DURING NON-WORKING HOURS BY THE USE OF STEEL PLATES OR BACKFILLING WITH ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B.

TWO LANES OF I.R.-76 WB SHALL BE CROSSED OVER TO THE EASTBOUND ROADWAY AND FOUR LANES SHALL BE MAINTAINED (2 EB AND 2 WB).

THE FOLLOWING ITEMS SHALL BE COMPLETED IN THIS PHASE:

- PROPOSED WESTBOUND LANES AND SHOULDERS
- WESTBOUND PORTION OF SUM-76-0580 BRIDGE
- CONSTRUCTION OF THE SUM-76-0578 BRIDGE ON PROPOSED RAMP B1
- REMOVAL OF THE WESTBOUND STRUCTURE OVER CENTRAL AVENUE
- PROPOSED RAMPS B AND B1
- RETAINING WALL 1 AND WALL 2
- PROPOSED DRAINAGE UNDER I.R.-76 WB AND PROPOSED RAMP B/B1

**SIDE STREETS**

CENTRAL AVENUE CURB REPLACEMENT/RECONSTRUCTION AND THE PROPOSED CONNECTION TO GOODRICH AVENUE SHALL BE COMPLETED IN THIS PHASE. CENTRAL AVENUE WILL BE CLOSED AT STATE STREET AND LOCAL TRAFFIC SHALL BE MAINTAINED TO ALL PROPERTIES ALONG THIS ROADWAY. GRAND BOULEVARD AND ALBERTA STREET WILL BE CLOSED JUST NORTH OF GOODRICH AVENUE TO COMPLETE CONSTRUCTION OF THE NEW CONNECTOR TO CENTRAL AVENUE. ROAD CLOSURES SHALL BE AS PER SCD MT-101.60.

THE NORTHBOUND RIGHT LANE ON STATE STREET WILL BE CLOSED TO COMPLETE PROPOSED RAMP B TIE-IN. THE PROPOSED TRAFFIC SIGNAL AT THE INTERSECTION WITH PROPOSED RAMP A/PROPOSED RAMP B SHALL BE CONSTRUCTED. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED ON THE EAST SIDE OF THE ROADWAY. THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY PEDESTRIAN PATH AS SHOWN IN THE PLANS WHILE THE CURB RAMPS ARE CONSTRUCTED AT THE INTERSECTION OF STATE STREET AND PROPOSED RAMP B.

KENMORE BLVD SHALL BE RECONFIGURED AT ITS INTERSECTION WITH WOOSTER RD/EAST AVE TO ACCOMMODATE THE WORK AREA FOR PROPOSED WALL 2. THE NORTHBOUND LANES SHALL BE CLOSED AND TWO-LANE, TWO-WAY TRAFFIC SHALL BE PLACED ON THE SOUTHBOUND LANES. NORTHBOUND TRAFFIC WILL BE CROSSED OVER IMMEDIATELY EAST OF THE WORK ZONE.

THE PROPOSED TRAFFIC SIGNAL AT THE INTERSECTION OF S.R. 619 (WOOSTER ROAD) AND PROPOSED RAMP B1/KENMORE BLVD SHALL BE OPERATIONAL AT THE START OF THIS PHASE.

**PHASE 3, CONT'D**

RIGHT LANE CLOSURES ON S.R. 619 (WOOSTER ROAD) WILL BE UTILIZED TO COMPLETE THE CONSTRUCTION OF THE WESTBOUND PORTION OF THE SUM-76-0580 BRIDGE. PEDESTRIAN TRAFFIC SHALL REMAIN CLOSED ON BOTH SIDES OF THE ROADWAY. TO REMOVE AND INSTALL THE BRIDGE BEAMS OVER S.R. 619 (WOOSTER ROAD), THE CONTRACTOR SHALL UTILIZE SHORT DURATION CLOSURES, AS PER OMTCD TA-13, DURING NIGHTTIME HOURS. CLOSURES SHALL ONLY OCCUR BETWEEN THE HOURS OF 7PM TO 6AM. LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS SHALL BE UTILIZED FOR ALL SHORT DURATION CLOSURES.

UPON COMPLETION OF THE SUM-76-0580 BRIDGE CONSTRUCTION, THE PROPOSED SIDEWALK ALONG WOOSTER ROAD SHALL BE CONSTRUCTED. RIGHT LANE CLOSURES SHALL REMAIN IN PLACE TO COMPLETE THIS WORK.

**PHASE 4 (NO PLAN SHEETS PROVIDED)**

INTERIM COMPLETION DATE:  
ALL WORK ON THIS PROJECT (PART 1), INCLUDING THIS FINAL PHASE, SHALL BE COMPLETED BY SEPTEMBER 30, 2021.

**MAINLINE/RAMPS**

THE SURFACE COURSE OF ASPHALT SHALL BE PLACED ON I.R. 76 AND THE RAMPS. IMMEDIATELY FOLLOWING THE PAVING, CLASS II MARKINGS SHALL BE PLACED PRIOR TO OPENING THE LANE TO TRAFFIC. FINAL PAVEMENT MARKINGS SHALL THEN BE PLACED UPON COMPLETION OF ALL PAVING WORK. TRAFFIC SHALL BE MAINTAINED DURING THESE OPERATIONS AND ALL LANE CLOSURES SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. ALL FINAL CLEANUP, GRADING AND SEEDING AND MULCHING SHALL ALSO BE COMPLETED IN THIS PHASE.

**SIDE STREETS**

ALL MILLING AND RESURFACING REQUIRED ON THE SIDE STREETS SHALL BE COMPLETED IN THIS PHASE. IMMEDIATELY FOLLOWING THE RESURFACING, CLASS II MARKINGS SHALL BE PLACED PRIOR TO OPENING THE LANE TO TRAFFIC. FINAL PAVEMENT MARKINGS SHALL BE PLACED UPON COMPLETION OF ALL PAVING WORK. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING THIS PHASE.

**TIME LIMITATION, TRAFFIC ON MILLED SURFACE**

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A MILLED SURFACE SHALL BE FIVE (5) CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$2000 PER DAY THAT THE TRAFFIC IS PLACED ON A MILLED SURFACE BEYOND THE SPECIFIED LIMIT.

**MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF BARBERTON FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6 AM TO 9 AM AND 4 PM TO 7 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS, EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY OFF-DUTY CITY OF BARBERTON POLICE, HIRED BY THE CONTRACTOR:

1. WOOSTER ROAD/EAST AVE & KENMORE BLVD
2. WOOSTER ROAD & I.R. 76 EB OFF-RAMP (PR. RAMP C1)
3. STATE STREET & I.R. 76 EB OFF-RAMP (EX. RAMP D)

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

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**ITS MESSAGE BOARDS**

THE EXISTING ITS MESSAGE BOARDS IN THE VICINITY OF THE PROJECT WILL BE UTILIZED TO PROVIDE SUPPLEMENTAL INFORMATION TO THE TRAVELING PUBLIC. THE CONTRACTOR WILL NOTIFY THE PROJECT ENGINEER ONE (1) WEEK IN ADVANCE OF ANY PHASE CHANGE ON I.R. 76. THE PROJECT ENGINEER WILL COORDINATE WITH BRENT KOVACS AT 330-786-2208 TO GET THE ITS MESSAGE BOARDS ADJUSTED.

**FLOODLIGHTING**

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

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

**EXISTING PORTABLE BARRIER**

AT THE COMPLETION OF THIS PROJECT, AND WHEN NO LONGER NEEDED, THE CONTRACTOR SHALL TAKE OWNERSHIP OF AND REMOVE ALL PORTABLE BARRIER LEFT IN PLACE FROM THE ADJACENT SUM/MED-76-0.00/11/43DB (PID 93501) PROJECT.

ALL COSTS ASSOCIATED WITH THIS REMOVAL IS CONSIDERED INCIDENTAL TO AND INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

**ITEM SPECIAL, WORK ZONE TRAFFIC SIGNAL**

PROVIDE A SPAN WIRE WORK ZONE TRAFFIC SIGNAL AT THE INTERSECTION OF BARBER ROAD AND THE IR-76 WESTBOUND OFF-RAMP DURING PHASES 2 AND 3. THE SIGNAL SHALL BE OPERATIONAL AT THE BEGINNING OF PHASE 2. THE SIGNAL SHALL REMAIN IN OPERATION UNTIL THE PROPOSED RAMP B (IR-76 WB OFF-RAMP TO STATE STREET) IS OPEN TO TRAFFIC AT WHICH TIME THE SIGNAL SHALL THEN BE REMOVED. REMOVAL OF THE TRAFFIC SIGNAL SHALL BE INCIDENTAL TO THIS ITEM.

ALL WORK ZONE TRAFFIC SIGNAL ITEMS SHALL BE AS PER C&MS 632 AND 633. PROVIDE A CONTROLLER CAPABLE OF OPERATING THE PHASING SHOWN IN THE PLANS AND CAPABLE OF UTILIZING A RADAR DETECTION SYSTEM.

ITEM SPECIAL, WORK ZONE TRAFFIC SIGNAL 1 EACH

**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 PRODUCTS WEB PAGE.

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

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

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

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

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

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

**ITEM SPECIAL, WORK ZONE GUARDRAIL**

THIS WORK AND MATERIALS SHALL COMPLY WITH ITEM 606 FOR PERMANENT GUARDRAIL, EXCEPT THAT USED TYPE 5 RAILS AND POSTS MAY BE USED IF IN GOOD CONDITION AND APPROVED BY THE ENGINEER. FOR EXISTING GUARDRAIL RUNS WHICH REQUIRE AN EXTENSION, THE EXISTING END TERMINAL ASSEMBLY SHALL BE REMOVED AND RESET TO THE NEW LOCATIONS, AS SHOWN ON THE PLANS. NEW RUNS, FOR BRIDGE PARAPET PROTECTION SHALL HAVE THE APPROPRIATE BRIDGE TERMINAL ASSEMBLIES INSTALLED. UPON COMPLETION OF THE PHASE WHICH REQUIRES THE TEMPORARY GUARDRAIL, ALL WORK ZONE GUARDRAIL SHALL BE REMOVED AND THE POST HOLES BACKFILLED (UNLESS PERMANENT GRADING TO BE PERFORMED LATER WOULD REPAIR THE HOLES), ALL TERMINAL ASSEMBLIES REMOVED, AND END TERMINAL ASSEMBLIES RESET TO THEIR ORIGINAL LOCATION.

PAYMENT SHALL INCLUDE ALL WORK FOR PROVIDING AND/OR RESETTING TERMINAL ASSEMBLIES, NEW GUARDRAIL, GUARDRAIL EXTENSIONS, AND REMOVAL AND RESTORATION UPON COMPLETION OF THE PHASE WHICH REQUIRES THE TEMPORARY GUARDRAIL. THE LENGTH OF MEASUREMENT FOR PAYMENT SHALL BE PER ITEM 606 FOR PERMANENT GUARDRAIL, EXCLUDING THE LENGTH OF TERMINAL ASSEMBLIES AND END TREATMENTS. PAYMENT SHALL BE AT THE UNIT PRICE BID, PER FOOT FOR ITEM SPECIAL - WORK ZONE GUARDRAIL.

**ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR HAZARDS OVER 24" AND LESS THAN 36" WIDE (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 PRODUCTS WEB PAGE.

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

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

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

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

**ITEM 614, WORK ZONE RAISED PAVEMENT MARKERS ON CONCRETE SURFACES**

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

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

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

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

AN ESTIMATED QUANTITY OF EACH OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER HAS BEEN PROVIDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

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

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

- RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.

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

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15TH TO APRIL 1ST.

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

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

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

THE FOLLOWING BID ITEMS HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE	66,191 SY
ITEM 407, NON-TRACKING TACK COAT	5,957 GAL
ITEM 806, 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, AS PER PLAN	2,758 CY

FOR WORK ZONE RAISED PAVEMENT MARKER QUANTITIES, SEE MAINTENANCE OF TRAFFIC SUBSUMMARIES.

**ESTIMATED QUANTITIES**

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

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B	200 CY
ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE C	200 CY
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	200 CY
ITEM 616, WATER	50 MGAL

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**ITEM 614. WORK ZONE CROSSOVER LIGHTING SYSTEM**

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

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

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

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY:

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM 1 EACH

**ITEM 614. PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN**

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

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

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 PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. 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 THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

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

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED 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 OF 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, DE-ACTIVATED 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 AREAS] ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 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 WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 83 SNMT

**ITEM 614. LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS**

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

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

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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).

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.

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 ZONE.

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

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

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 800 HOURS

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

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

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**WORKSITE TRAFFIC SUPERVISOR**

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

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

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

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

8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.
9. ON CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED, AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TCC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.
11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
  - A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).
  - B. DAILY TTC SETUP AND REMOVAL.
  - C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.
  - D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.
  - E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.
  - F. ALL OTHER EMERGENCY TTC NEEDS.
12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRECONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.
13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

- A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.
- B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.

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

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

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

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

**DELINEATION OF PORTABLE AND PERMANENT BARRIER**

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

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

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT- 101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT- 101.70.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARIES.

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

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

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**DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL**

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARIES.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

**DUST CONTROL**

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

ITEM 616, WATER 640 MGAL

**ITEM 622. PORTABLE BARRIER PLACEMENT**

DURING THE PLACEMENT OF THE PORTABLE BARRIER, TRAFFIC WILL BE PROHIBITED FROM OCCUPYING THE TRAVEL LANE ADJACENT TO THE BARRIER. THE BARRIER WILL BE PLACED AT NIGHT PER THE WORK HOUR RESTRICTION NOTE AND IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE MAP. THE CLOSURE OF THE ADJACENT LANE WILL BE PER THE STANDARD DRAWING MT-95.30.

THE CONTRACTOR SHALL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL SEVEN (7) DAYS IN ADVANCE OF THE PLANNED LANE CLOSURE. WORK WILL NOT BEGIN UNTIL APPROVAL OF THE PLANS HAS BEEN GRANTED.

ALL COSTS INVOLVED IN PLACING THE PORTABLE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 PORTABLE CONCRETE BARRIER.

**EARTHWORK FOR MAINTAINING TRAFFIC**

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC 125 CY  
EMBANKMENT FOR MAINTAINING TRAFFIC 415 CY

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

**ITEM 622. PORTABLE BARRIER, 50", AS PER PLAN**

THIS WORK SHALL CONSIST OF FURNISHING, MAINTAINING, AND SUBSEQUENTLY REMOVING A 50-INCH PORTABLE BARRIER AT THE LOCATIONS SHOWN ON THE PLANS. FOR DETAILS, SEE SCD RM-4.1.

PORTABLE STEEL BARRIER IS AN APPROVED ALTERNATIVE TO PORTABLE CONCRETE BARRIER. FOR INFORMATION ON APPROVED VENDORS, SEE THE APPROVED PRODUCTS LIST MAINTAINED BY ROADWAY ENGINEERING.

PORTABLE BARRIER, 32 INCHES HIGH WITH AN 18-INCH MINIMUM HEIGHT GLARE SCREEN MAY BE USED AT THE OPTION OF THE CONTRACTOR. THE GLARE SCREEN SHALL BE CONSTRUCTED USING ONE OF THE SCREENS PROVIDED ON THE APPROVED LIST, AVAILABLE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

PADDLE OR INTERMITTENT TYPE GLARE SCREENS SHALL BE DESIGNED USING A 20 DEGREE CUT-OFF ANGLE BASED ON TANGENT ALIGNMENT. THAT SPACING SHALL BE USED THROUGHOUT THE BARRIER LENGTH WITHOUT REGARD TO BARRIER CURVATURE.

THE GLARE SCREEN SYSTEM SHALL BE SECURELY FASTENED TO THE 32-INCH PORTABLE BARRIER USING THE HARDWARE AND PROCEDURES SPECIFIED BY THE MANUFACTURER.

FOR DIRECTIONS ON HOW TO INSTALL THE GLARE SCREEN AND THE BARRIER, SEE THE MANUFACTURER'S INSTRUCTIONS.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 622, PORTABLE BARRIER, 50", AS PER PLAN

**ITEM 614. MAINTAINING TRAFFIC, MISC.: 3" PARTIAL DEPTH PAVEMENT REPAIR**

THE FOLLOWING QUANTITY HAS BEEN PROVIDED TO REPAIR POTHOLES AND DETERIORATED JOINTS THROUGHOUT THE PROJECT LIMITS FOR THE DURATION OF THE PROJECT. THE WORK WILL BE COMPLETED IN COMPLIANCE WITH ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE DEPTH OF THE REPAIR WILL BE 3" MINIMUM FROM THE EXISTING PAVEMENT SURFACE. PAYMENT IS FULL COMPENSATIONS FOR FURNISHING ALL MATERIALS, INCLUDING PAINT, TACK COAT, ASPHALT CONCRETE AND ALL LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK. PAYMENT SHALL BE S.F. OF ITEM 614, MAINTAINING TRAFFIC, MISC.: PARTIAL DEPTH PAVEMENT REPAIR.

THIS ITEM IS INTENDED TO BE USED ON THE EXISTING MAINLINE PAVEMENT AND SHOULDER AREAS AND ALL DETOUR ROUTES UNLESS OTHERWISE NOTED. ALL REPAIRS WILL BE PERFORMED AT THE DIRECTION OF THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY FOR THE ABOVE REFERENCED WORK:

ITEM 614, MAINTAINING TRAFFIC, MISC.: 3" PARTIAL DEPTH PAVEMENT REPAIR, 24,500 SF

**WORK ZONE MARKINGS**

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

ITEM 614, WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT --- 0.86 MI

ITEM 614, WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT --- 12.06 MI

ITEM 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT --- 0.44 MI

ITEM 614, WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT --- 14.18 MI

ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT --- 638 FT

ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT --- 7658 FT

ITEM 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT --- 290 FT

ITEM 614, WORK ZONE ARROW, CLASS III, 642 PAINT --- 32 EACH

ITEM 614, WORK ZONE PAVEMENT MARKING, MISC.: WORK ZONE DOTTED LINE, 6", CLASS III, 642 PAINT --- 4,383 FT

**ITEM 614. WORK ZONE DOTTED LINE, CLASS I, 642 PAINT, AS PER PLAN**

THIS ITEM SHALL BE AS PER C&MS 614 AND C&MS 642 EXCEPT THE WIDTH OF LINE SHALL BE INCREASED TO 6". THE APPLICATION RATES FOR THE 6 INCH LINES SHALL BE 1.5 TIMES THE RATES SPECIFIED FOR THE 4 INCH LINES IN TABLE 614.11-1.

**ITEM 614. WORK ZONE PAVEMENT MARKINGS, MISC.: WORK ZONE DOTTED LINE, 6", CLASS III, 642 PAINT**

THIS ITEM SHALL BE AS PER C&MS 614 AND 642 EXCEPT THE WIDTH OF LINE SHALL BE INCREASED TO 6". THE APPLICATION RATES FOR THE 6 INCH LINES SHALL BE 1.5 TIMES THE RATES SPECIFIED FOR THE 4 INCH LINES IN TABLE 614.11-1.

**ITEM 615. ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN**

THIS ITEM SHALL BE AS PER C&MS 615 EXCEPT THAT ANY ROADS FOR MAINTAINING TRAFFIC INSTALLED EAST OF THE BRIDGE OVER THE CSX RAILROAD BRIDGE SHALL NOT BE REMOVED AND BE LEFT IN PLACE AT THE COMPLETION OF THE PROJECT. ALL OTHER LOCATIONS SHALL BE REMOVED AS PER C&MS 615.08.

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

THIS ITEM SHALL BE AS PER C&MS 615 EXCEPT THAT ALL PAVEMENT SHALL REMAIN IN PLACE AT THE COMPLETION OF THE PROJECT.

**ITEM 618. RUMBLE STRIPS (ASPHALT CONCRETE), AS PER PLAN**

THE CONTRACTOR SHALL MILL 2 INCHES BY 2 FEET WIDE OF THE EXISTING ASPHALT SHOULDER IN ORDER TO REMOVE THE EXISTING RUMBLE STRIPS ALONG I.R. 76 WHERE TRAFFIC IS SHIFTED ONTO THE SHOULDER AT THE FOLLOWING LOCATIONS:

- EB STA. 245+50 TO STA. 292+00 (OUTSIDE) = 4650 FT
- EB STA. 253+50 TO STA. 292+00 (INSIDE) = 3850 FT
- WB STA. 250+10 TO STA. 268+00 (OUTSIDE) = 1790 FT
- WB STA. 281+52 TO STA. 292+00 (OUTSIDE) = 948 FT
- WB STA. 317+25± TO STA. 334+25± (OUTSIDE) = 1700 FT
- WB STA. 254+00 TO STA. 259+52 (INSIDE) = 552 FT

THE CONTRACTOR SHALL THEN COAT ALL MILLED SURFACES HORIZONTAL AND VERTICAL WITH APPROVED AC LIQUID. NEXT THE CONTRACTOR SHALL PLACE 2 INCHES OF ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22.

ONCE THE PROJECT IS COMPLETE, THE CONTRACTOR SHALL INSTALL NEW RUMBLE STRIPS AS PER THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 618.

ALL COST ASSOCIATED WITH THE REMOVAL OF THE EXISTING PAVEMENT, PLACEMENT OF THE SURFACE COURSE AND INSTALLATION OF THE RUMBLE STRIPS SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT OF ITEM 618, RUMBLE STRIPS (ASPHALT CONCRETE), AS PER PLAN.

ITEM 618, RUMBLE STRIPS (ASPHALT CONCRETE), AS PER PLAN 13,490 FT

**ITEM 614. WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN**

THIS ITEM SHALL BE AS PER C&MS 614 EXCEPT THAT THE PAVEMENT MARKING MATERIAL AND INSTALLATION SHALL BE PER C&MS 648, SPRAY THERMOPLASTIC.

**ITEM 614. WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE (DOUBLE SOLID), CLASS I, 6"**

THIS ITEM SHALL BE AS PER C&MS 614. THE PAVEMENT MARKING MATERIAL AND INSTALLATION SHALL BE PER C&MS 648, SPRAY THERMOPLASTIC. THE PAVEMENT MARKING SHALL CONSIST OF TWO 6" WHITE LINES SEPERATED BY 6".

**ITEM 614. WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN**

THIS ITEM SHALL BE AS PER C&MS 614 EXCEPT THAT THE PAVEMENT MARKING MATERIAL AND INSTALLATION SHALL BE PER C&MS 648, SPRAY THERMOPLASTIC.

**ITEM 614. WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN**

THIS ITEM SHALL BE AS PER C&MS 614 EXCEPT THAT THE PAVEMENT MARKING MATERIAL AND INSTALLATION SHALL BE PER C&MS 648, SPRAY THERMOPLASTIC.

**ITEM 614. WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN**

THIS ITEM SHALL BE AS PER C&MS 614 EXCEPT THAT THE PAVEMENT MARKING MATERIAL AND INSTALLATION SHALL BE PER C&MS 648, SPRAY THERMOPLASTIC. THE DOTTED LINE WIDTH SHALL BE INCREASED TO 6".

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**TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT**

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

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.
2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.
3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.
4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:
  - A. COLLABORATE WITH ODOT AND SAFETY FORCES;
  - B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
  - C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:
  - A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
    - I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
    - II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
    - III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
    - IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
    - V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
    - VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE
  - B. FOLLOWING AN INCIDENT/CRASH:
    - I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
    - II. RECOMMEND ROADWAY REPAIR NEEDS.
    - III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
    - IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

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

**ITEM 614. WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)**

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

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

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

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

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

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

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 9 EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AT THE LOCATIONS AS SHOWN IN THE PLANS

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MAINTENANCE OF TRAFFIC GENERAL NOTES

SUM - 76 - 5.53

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SHEET NUM.												PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
44	47	48	50	51	54	55	56	57	58	59	60	01/IMS/PV	10/IMS/PV	02/IMS/BR	11/IMS/BR						
	200											66	134			410	12000	200	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
	200											66	134			410	13000	200	CY	TRAFFIC COMPACTED SURFACE, TYPE C	
						796		17				268	545			611	04400	813	FT	12" CONDUIT, TYPE B	
						328						108	220			611	04600	328	FT	12" CONDUIT, TYPE C	
						3						1	2			611	98370	3	EACH	CATCH BASIN, NO. 6	
		800										264	536			614	11110	800	HR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	1												1		SPECIAL	61411300	1	EACH	WORK ZONE TRAFFIC SIGNAL	47	
					1,258			3,026	2,425			2,214	4,495			614	11630	6,709	FT	INCREASED BARRIER DELINEATION	
									62.5			20.5	42		SPECIAL	61412200	62.5	FT	WORK ZONE GUARDRAIL	47	
						4		4	2			3	7			614	12336	10	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
										1			1			614	12346	1	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) FOR HAZARDS OVER 24" AND LESS THAN 36" WIDE	
LS				9									LS			614	12420	LS		DETOUR SIGNING	
		1										3	6			614	12484	9	EACH	WORK ZONE INCREASED PENALTIES SIGN	
													1			614	12756	1	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
						61		51	24			45	91			614	12800	136	EACH	WORK ZONE RAISED PAVEMENT MARKER	
						1,005		566	1,046			864	1,753			614	12801	2,617	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	47
100	200										4	100	204			614	13000	304	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
						537		248	410			394	801			614	13310	1,195	EACH	BARRIER REFLECTOR, TYPE I (ONE WAY)	
						21		20	3			15	29			614	13314	44	EACH	BARRIER REFLECTOR, TYPE 3 (ONE WAY)	
						235		152	122			168	341			614	13350	509	EACH	OBJECT MARKER, ONE WAY	
								143	58	144		114	231			614	13360	345	EACH	OBJECT MARKER, TWO WAY	
			24,500									8,085	16,415			614	18010	24,500	SF	MAINTAINING TRAFFIC, MISC.: 3" PARTIAL DEPTH PAVEMENT REPAIR	50
		83										27	56			614	18601	83	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	48
						1.41			2.67			1.35	2.73			614	20011	4.08	MILE	WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN	50
										0.23		0.08	0.15			614	20100	0.23	MILE	WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT	
							0.62					0.20	0.42			614	20110	0.62	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
			0.86									0.28	0.58			614	20550	0.86	MILE	WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT	
			12.06									3.98	8.08			614	20560	12.06	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
											0.07	0.12	0.06	0.13		614	21100	0.19	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
												0.15	0.29			614	21550	0.44	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
							13.79		1.21		7.88		7.55	15.33		614	22011	22.88	MILE	WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN	50
										0.58	0.32	0.30	0.60			614	22100	0.90	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT	
									5.05			1.67	3.38			614	22110	5.05	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
												4.68	9.50			614	22360	14.18	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
						6,436		930	10,188			5,793	11,761			614	23011	17,554	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN	50
											175	137	103	209		614	23200	312	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
												443	900			614	23210	1,343	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
												211	427			614	23680	638	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
			638									2,527	5,131			614	23690	7,658	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
			7,658									2,113	4,291			614	24001	6,404	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN	50
						3,795			2,609												
												477	967			614	24200	1,444	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	
												695	1,412			614	24201	2,107	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT, AS PER PLAN	50
												37	75			614	25200	112	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
												58	117			614	26200	175	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
				290								96	194			614	26610	290	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
												332	222			614	27200	332	FT	WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT	
												7	15			614	30200	22	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
												11	21			614	30650	32	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
												577	1,173			614	98100	1,750	FT	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE (DOUBLE SOLID), CLASS I, 6"	50
												1,446	2,937			614	98100	4,383	FT	WORK ZONE PAVEMENT MARKING, MISC.: WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	50
					LS								LS			615	10001	LS		ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	50
						4,243						1,400	2,843			615	20000	4,243	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
						4,663						1,539	3,124			615	20001	4,663	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	50
	50											228	462			616	10000	690	MGAL	WATER	

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

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SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
50	54	55	57	58	59	164	01/IMS/PV	10/IMS/PV	02/IMS/BR	11/IMS/BR									
13,490							4,452	9,038			618	40101	13,490	FT	RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN	50			
		4,840	4,920	170			3,280	6,650			622	41000	9,930	FT	PORTABLE BARRIER, 32"				
						90	30	60			622	41001	90	FT	PORTABLE BARRIER, 32", AS PER PLAN	29			
		7,080	2,850	7,160			5,640	11,450			622	41011	17,090	FT	PORTABLE BARRIER, 50", AS PER PLAN	50			
		440	440				290	590			622	41020	880	FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED				
		1						1			622	41050	1	EACH	PORTABLE BARRIER, "Y" CONNECTOR				
	54			164		31	82	167			630	80300	249	SF	SIGN, TEMPORARY OVERLAY				
	1			15		4	7	13			630	89894	20	EACH	REMOVAL OF TEMPORARY OVERLAY SIGN AND DISPOSAL				
		850					280	570			839	30000	850	FT	TRENCH DRAIN WITH STANDARD GRATE				

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

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REVISIONS	NUMBER	DATE	DESCRIPTION
	△	4/4/19	REVISED 32" PB AND 32" PB, BRIDGE MOUNTED QUANTITIES

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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	614	614	614	614	614	614	630	630							
			FROM	TO		FT	FT	FT	FT	FT	FT	FT	SF	EACH						
CH-1	75,76	I.R. 76	241+00	255+48	RT.				1448											
CH-2	75,76	I.R. 76	247+10	257+00	LT.				990											
CH-3	76	I.R. 76	251+00	255+48	RT.				448											
CH-4	78,79	I.R. 76	278+50	281+52	LT.				302											
CH-5	79	I.R. 76	280+00	283+85	RT.				385											
CH-6	79	I.R. 76	280+00	283+85	RT.				385											
CH-7	82	I.R. 76	305+33	306+17	LT.				84											
CH-8	82	I.R. 76	305+33	306+17	LT.				84											
CH-9	84	I.R. 76	311+50	313+83	RT.				233											
CH-10	84	I.R. 76	312+00	313+83	RT.				183											
CH-11	86	I.R. 76	320+00	323+00	LT.				300											
CH-12	86,87	I.R. 76	323+00	334+25	LT.				1125											
CH-13	87	I.R. 76	331+45	333+14	RT.				169											
CH-14	87	I.R. 76	335+80	338+80	RT.				300											
DL-1	77,78	I.R. 76	268+00	278+50	LT.					1050										
DL-2	78	I.R. 76	275+50	280+00	RT.					450										
DL-3	82,84	I.R. 76	306+17	311+50	LT.					533										
DL-4	84,86,87	I.R. 76	313+83	331+45	RT.					1762										
DSL-1	73-75	I.R. 76	223+50	241+00	RT.						1750									
EW-1	76,77	I.R. 76	250+10	268+00	LT.						1790									
EW-2	76-87	I.R. 76	255+48	335+80	LT./RT.						8032									
EW-3	76-79	I.R. 76	258+50	283+86	RT.						2536									
EW-4	79,80,82	I.R. 76	281+52	305+33	LT.						2381									
EW-5	79-84	I.R. 76	283+85	312+00	RT.						2815									
EW-6	82-87	I.R. 76	306+54	334+25	LT.						2771									
EW-7	84,86,87	I.R. 76	311+50	333+23	RT.						2173									
EW-8	86	I.R. 76	323+00	329+00	LT.						600									
EW-9	87	I.R. 76	333+14	335+80	RT.						266									
EY-1	71-87	I.R. 76	18+02	335+80	LT./RT.						31778									
EY-2	75-86	I.R. 76	246+10	329+00	LT.						8290									
EY-3	76-87	I.R. 76	255+48	335+80	RT.						8032									
EY-4	86,87	I.R. 76	323+00	334+25	LT.						1125									
LL-1	76-84	I.R. 76	257+00	320+00	LT.	6300														
LL-2	84,86	I.R. 76	311+50	323+00	LT.	1150														
TL-1	76	I.R. 76	251+00	255+48	RT.						112									
	75	I.R. 76	242+75±		RT.							13								
	76	I.R. 76	257+50±		RT.							22								
	79	I.R. 76	281+50±		RT.							13								
	84	I.R. 76	317+05±		RT.							6	1							
PHASE 1A QUANTITIES																				
EW-10	98	I.R. 76	313+83	316+00	RT.			217												
SUBTOTALS								23581	49225											
TOTALS CARRIED TO MOT GENERAL SUMMARY						1.41 MI	13.79 MI	6436	3795	112	1750	54	1							

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<b>MAINTENANCE OF TRAFFIC SUBSUMMARY - PHASE 1</b>	
<b>SUM - 76 - 5.53</b>	
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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	614																																
			FROM	TO		WORK ZONE LANE LINE, CLASS 1, 6", 642 PAINT FT	WORK ZONE EDGE LINE, CLASS 1, 6" (WHITE), AS PER PLAN FT	WORK ZONE EDGE LINE, CLASS 1, 6" (YELLOW), AS PER PLAN FT	WORK ZONE EDGE LINE, CLASS 1, 6", 642 PAINT (WHITE) FT	WORK ZONE EDGE LINE, CLASS 1, 6", 642 PAINT (YELLOW) FT	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 642 PAINT FT	WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT (6", WHITE), AS PER PLAN FT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT FT	WORK ZONE ARROW, CLASS 1, 642 PAINT EACH																							
A-3	105	RAMP D	17+77		LT.																																	
A-4	105	RAMP D	18+43		LT.																																	
A-5	105	RAMP D	19+09		LT.																																	
A-6	105	RAMP D	19+75		LT.																																	
A-7	122	RAMP B	5+50		LT.																																	
A-8	122	RAMP B	5+50		RT.																																	
A-9	122	RAMP B	6+90		LT.																																	
A-10	122	RAMP B	6+90		RT.																																	
A-11	122	RAMP B	7+70		LT.																																	
A-12	122	RAMP B	7+70		RT.																																	
A-13	122	RAMP B	8+50		LT.																																	
A-14	122	RAMP B	8+50		RT.																																	
A-15	122	RAMP B	9+30		LT.																																	
A-16	122	RAMP B	9+30		RT.																																	
A-17	122	RAMP B	10+10		LT.																																	
A-18	122	RAMP B	10+10		RT.																																	
CH-16	105	I.R. 76	281+34	283+85	RT.																																	
CH-17	105	I.R. 76	281+34	283+85	RT.																																	
CH-18	106,108	I.R. 76	298+38	301+80	RT.																																	
CH-19	106,108	I.R. 76	298+38	301+80	RT.																																	
CH-20	115	I.R. 76	-		RT.																																	
CH-21	106	RAMP C	35+36	37+20	RT.																																	
CH-22	106	RAMP C1	135+34	137+19	LT.																																	
CH-23	122	RAMP B	5+41	10+40	LT.																																	
DL-8	104,105	I.R. 76	276+25	281+34	RT.																																	
DL-9	108,110	I.R. 76	301+80	311+63	RT.																																	
DL-10	112	I.R. 76	320+00	326+15	RT.																																	
EW-15	103-105	I.R. 76	264+00	281+13	RT.																																	
EW-16	105,106	I.R. 76	283+85	298+39	RT.																																	
EW-17	106-113	I.R. 76	292+47	334+25	LT.																																	
EW-18	106,108,110	I.R. 76	292+47	317+50	LT.																																	
EW-19	106	RAMP C	37+20	38+31	Ⓝ																																	
EW-19	106-112	I.R. 76	298+38	321+10	RT.																																	
EW-20	112,113	I.R. 76	325+00	332+00	LT.																																	
EW-21	113,115	I.R. 76	336+80	-	LT.																																	
EW-22	106	RAMP C	30+38	32+50	LT.																																	
EW-22	106,108	RAMP C1	132+49	144+32	Ⓝ																																	
EW-23	122	RAMP B	4+91	10+40	RT.																																	
EY-5	102-112	I.R. 76	258+50	326+15	RT.																																	
EY-6	106-113	I.R. 76	292+47	332+00	LT.																																	
EY-7	106,108,110	I.R. 76	292+47	317+50	LT.																																	
EY-8	112,113,115	I.R. 76	325+00	-	LT.																																	
EY-9	106	RAMP C	30+44	38+32	LT.																																	
EY-10	106,108	RAMP C1	137+19	144+94	LT.																																	
EY-11	122	RAMP B	4+91	10+40	LT.																																	
LL-3	106-112	I.R. 76	292+47	325+00	LT.																																	
SL-3	105	RAMP D	19+85		LT./RT.																																	
SL-4	122	RAMP B	10+40		RT.																																	
SUBTOTALS						3253	4850	1563	11097	15586																												
TOTALS CARRIED TO MOT GENERAL SUMMARY						0.62 MI	1.21 MI	5.05 MI	930	1343	2107	59	16																									

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**MAINTENANCE OF TRAFFIC SUBSUMMARY - PHASE 2**

**SUM - 76 - 5.53**



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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	611	614	614	614	614	614	614	614	614	614	622	622	622	630	630	
			FROM	TO		12" CONDUIT, TYPE B FT	INCREASED BARRIER DELINEATION FT	WORK ZONE IMPACT ATTENUATOR EACH	WORK ZONE RAISED PAVEMENT MARKER (20' C/C) EACH	WORK ZONE RAISED PAVEMENT MARKER (120' C/C) EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (20' C/C) EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (120' C/C) EACH	BARRIER REFLECTOR, TYPE 1, (ONE WAY) EACH	BARRIER REFLECTOR, TYPE 3, (ONE WAY) EACH	OBJECT MARKER, ONE WAY EACH	OBJECT MARKER, TWO WAY EACH	PORTABLE BARRIER, 32" FT	PORTABLE BARRIER, 50", AS PER PLAN FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED FT	SIGN, TEMPORARY OVERLAY SF	REMOVAL OF TEMPORARY OVERLAY SIGN AND DISPOSAL EACH
IA-5	105	I.R. 76	282+90		RT.			1													
IA-6	106	I.R. 76	290+74		LT.			1													
IA-7	108	I.R. 76	300+30		LT.			1													
IA-8	108	I.R. 76	306+15		LT.			1													
PB-7	105-110	I.R. 76	282+90	314+20	RT.								64		64		2690		440		
PB-8	106	I.R. 76	290+74	294+74	LT.								9		9		400				
PB-9	106-112	I.R. 76	292+47	320+97	LT.								116		58		2850				
PB-10	108,110	I.R. 76	300+30	312+90	LT.								26		26		1260				
PB-11	108	I.R. 76	300+45	306+15	LT.								13		13		570				
D-8	108	I.R. 76	304+51	304+64	LT./RT.	17															
	103	I.R. 76	261+00	269+20	RT.								84								
	106-112	I.R. 76	292+50	325+00	LT.				4			24									
	106	I.R. 76	290+40	299+30	LT.								92								
	110	I.R. 76	310+20	317+50	LT.								55								
	110,112	I.R. 76	313+50	329+15	RT.			21					132								
	112,113	I.R. 76	322+00	335+00	LT.								66								
	112,113	I.R. 76	325+00	335+00	LT.								51								
	113,115	I.R. 76	-	-	LT.								62								
	108,110	I.R. 76	307+73	311+56	RT.								9		9						
	110,112	I.R. 76	315+98	320+80	RT.								11		11						
	106	I.R. 76	293+40	296+30	LT.																
	108	I.R. 76	305+50	307+73	RT.			870													
	108,110	I.R. 76	301+80	311+63	RT.			983					5		5						
	110	I.R. 76	311+56	315+98	RT.								10		10						
	110	I.R. 76	313+20	317+50	LT.																
	110,112	I.R. 76	319+50	320+70	LT.																
	112	I.R. 76	324+22	326+15	RT.								5		5						
	105	I.R. 76	281+50±		RT.														6	1	
	110	I.R. 76	317+05±		RT.														26	2	
	110	I.R. 76	319+52±		LT.														9		
	113	I.R. 76	339+75±		LT.														9		
	114	I.R. 76	343+00±		LT.														9		
	115	I.R. 76	-		LT.														39	4	
	115	I.R. 76	-		LT.														39	4	
	115	I.R. 76	-		LT.														6	2	
	115	I.R. 76	-		LT.														21	2	
SUBTOTALS								47	4	542	24										
TOTALS CARRIED TO MOT GENERAL SUMMARY						17	3026	4	51	566	248	20	152	58	4920	2850	440	164	15		

REVISIONS	NUMBER	DATE	DESCRIPTION
	△	4/4/19	REVISED 32" PB AND 32" PB, BRIDGE MOUNTED QUANTITIES

CALCULATED: NAU  
 CHECKED: NAU  
 SUMMARY - PHASE 2  
 SUM - 76 - 5.53  
 57  
 672



P:\DDT\MP\0093\_SUM-76-5.62\96670\Design\MOT\Sheets\96670\_MS306.dgn Sheet 10/1/2018 3:53:21 PM CMT031

REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	614	614	614	614	614	614	614	630	630					
			FROM	TO		WORK ZONE LANE LINE, CLASS 1, 4", 642 PAINT	WORK ZONE CENTER LINE, CLASS 1, 4", 642 PAINT (YELLOW)	WORK ZONE EDGE LINE, CLASS 1, 4", 642 PAINT (WHITE)	WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 642 PAINT	WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT (4", WHITE)	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	WORK ZONE CROSSWALK LINE, CLASS 1, 642 PAINT	WORK ZONE ARROW, CLASS 1, 642 PAINT	SIGN, TEMPORARY OVERLAY	REMOVAL OF TEMPORARY OVERLAY SIGN AND DISPOSAL				
						FT	FT	FT	FT	FT	FT	FT	EACH	SF	EACH				
PHASE 1 QUANTITIES																			
A-1	96	WOOSTER RD	12+30												1				
A-2	96	WOOSTER RD	12+86												1				
CH-15	96	WOOSTER RD	12+20	13+00	LT.				80										
DL-5	91	STATE ST	79+31	81+62	RT.						231								
DL-6	92,93	STATE ST	87+70	90+26	LT.						256								
DL-7	96	WOOSTER RD	13+00	14+25	LT.						125								
DY-1	94	ELMWOOD ST	22+10	23+60	RT.		150												
DY-2	94	ELMWOOD ST	27+10	28+60	RT.		150												
DY-3	96	WOOSTER RD	12+20	12+32	℄		12												
EW-11	91,92	STATE ST	79+31	85+20	RT.			589											
EW-12	92,93	STATE ST	84+85	90+26	LT.			541											
EW-13	95-97	WOOSTER RD	10+08	19+96	LT.			988											
EW-14	96	WOOSTER RD	12+32	15+65	RT.			333											
SL-1	92	STATE ST	84+85		LT.					24									
XW-1	91	STATE ST	82+22	82+29	℄						116								
XW-2	92	RAMP D	19+99	20+05	℄						123								
XW-3	92	STATE ST	84+74	84+80	℄						93								
		WOOSTER RD	12+25		RT.								16	2					
		WOOSTER RD	18+15		LT.								15	2					
PHASE 2 QUANTITIES																			
A-22	122	BARBER RD	18+21		RT.									1					
CH-38	122	BARBER RD	17+81	18+76	RT.				95										
DL-11	119	WOOSTER RD	8+40	10+75	RT.						235								
DY-7	122	BARBER RD	17+11	17+61	RT.		50												
EW-24	119,120	WOOSTER RD	8+40	12+32	RT.			392											
EW-25	120,121	WOOSTER RD	15+83	18+02	LT.			219											
LL-4	116,117	STATE ST	79+31	85+20	RT.	589													
LL-5	117,118	STATE ST	84+73	90+26	LT.	553													
LL-6	120	WOOSTER RD	12+20	13+00	LT.	80													
SL-5	117	STATE ST	83+45		RT.						22								
SL-6	117	STATE ST	84+73		LT.						24								
SL-7	122	BARBER RD	18+32		RT.						11								
SL-8	122	BARBER RD	18+76		RT.						12								
SL-9	122	BARBER RD	20+25		LT.						11								
SUBTOTALS						1222	362	3062											
TOTALS CARRIED TO MOT GENERAL SUMMARY						0.23 MI	0.07 MI	0.58 MI	175	847	104	332	3	31	4				

CALCULATED  
MGM  
CHECKED  
NAU

MAINTENANCE OF TRAFFIC SUBSUMMARY - SIDE STREETS

SUM - 76 - 5.53

59  
672





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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	614	614	614	614	614	614	614							
			FROM	TO		ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CY	WORK ZONE CENTER LINE, CLASS 1, 4", 642 PAINT (YELLOW) FT	WORK ZONE EDGE LINE, CLASS 1, 4", 642 PAINT (WHITE) FT	WORK ZONE EDGE LINE, CLASS 1, 4", 642 PAINT (YELLOW) FT	WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 642 PAINT FT	WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT (4", WHITE) FT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT FT	WORK ZONE ARROW, CLASS 1, 642 PAINT EACH						
PHASE 3 QUANTITIES																			
A-19	143	STATE ST	84+85		LT.													1	
A-20	143	STATE ST	86+15		LT.													1	
A-21	143	STATE ST	86+90		LT.													1	
CH-36	143	STATE ST	84+73	85+05	LT.							32							
CH-37	143	STATE ST	85+95	87+00	℄							105							
DL-15	143	STATE ST	84+74	87+05	RT.													231	
DL-16	143,144	STATE ST	87+80	90+26	LT.													246	
DL-17	149	KENMORE BLVD	5+55	6+75	LT.													120	
DY-4	143	STATE ST	85+25	87+00	LT.													175	
DY-5	148,149	KENMORE BLVD	0+62	4+65	LT.													403	
DY-6	149	KENMORE BLVD	4+00	4+65	LT.													65	
EW-34	143,144	STATE ST	84+74	89+50	RT.													476	
EW-35	147,148	WOOSTER RD	15+65	17+44	RT.													701	
	148,149	KENMORE BLVD	0+21	5+43	LT./RT.														
EY-16	143,144	STATE ST	87+80	90+05	LT.													225	
EY-17	149	KENMORE BLVD	4+65	6+75	LT.													210	
EY-18	149	KENMORE BLVD	4+65	5+43	LT./RT.													78	
SL-10	148	KENMORE BLVD	0+62		LT.													12	
TW-1	143,144	STATE ST	87+15	88+10	RT.	4													
SUBTOTALS							643	1177	513										
TOTALS CARRIED TO MOT GENERAL SUMMARY						4	0.12 MI	0.32 MI		137	597	12	3						

<b>Maintenance of Traffic Subsummary - Side Streets</b>	<b>SUM - 76 - 5.53</b>
CALCULATED MGM CHECKED NAU	60 672



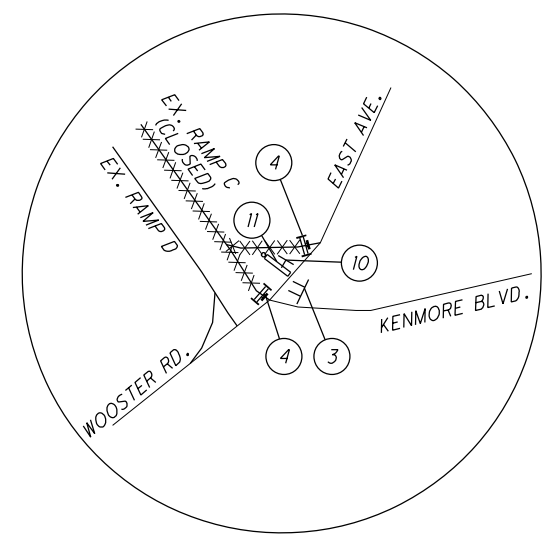
**LEGEND**

-  PROPOSED DETOUR SIGN
-  EXISTING SIGN
-  EXISTING SIGN TO BE COVERED OR OVERLAYED
-  EXISTING SIGN TO BE REMOVED

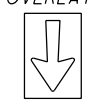
**NOTES**

1. THIS DETOUR SHALL BE IN EFFECT DURING THE EXISTING RAMP C CLOSURE IN PHASES 1-3.
  2. FOR OVERLAY SIZES, SEE SHEETS 96 AND 97.
- \* DENOTES BLACK ON ORANGE SIGN

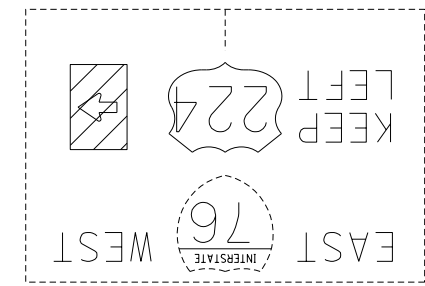
**DETAIL A**



(A-1) 24" X 36"  
BLACK/ORANGE  
OVERLAY

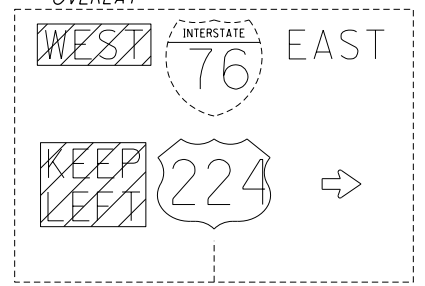


11

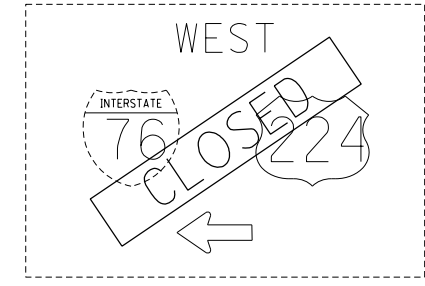


48" X 12"  
ORANGE  
OVERLAY

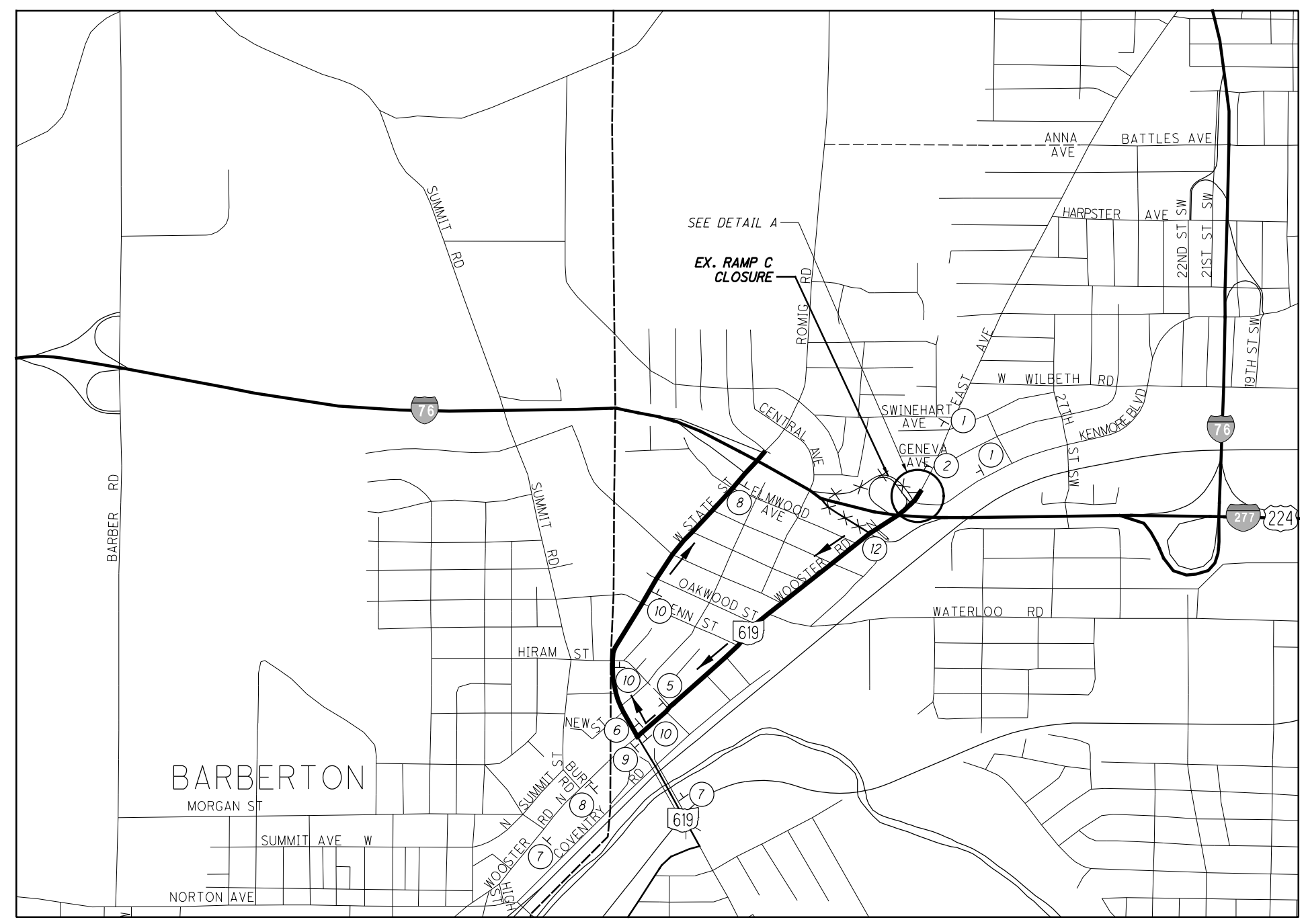
12



48" X 36"  
ORANGE  
OVERLAY



W20-H15A-72



1  
TYPE A  
WARNING LIGHT

M3-4-24  
M1-1-24-2  
W20-3-36\*

2

W20-2-36\*  
(POLE MTD.)

3

M4-5-24\* M4-5-24\*

TO WEST TO WEST

M6-1L-21\* M6-1L-21\*  
(POLE MTD.)

4

TYPE B WARNING LIGHTS

R11-2-48  
M4-10L-48  
ON TYPE 3 BARRICADES  
COMPLETELY ACROSS  
ROADWAY

5

TO WEST

M4-5-24\*  
M3-4-24  
M1-1-24-2  
M5-1R-21\*

6

TO WEST

M4-5-24\*  
M3-4-24  
M1-1-24-2  
M6-1R-21\*

7

TO WEST

M4-5-24\*  
M3-4-24  
M1-1-24-2  
W20-2-36\*

8

TO WEST

M4-5-24\*  
M3-4-24  
M1-1-24-2  
M5-1L-21\*

9

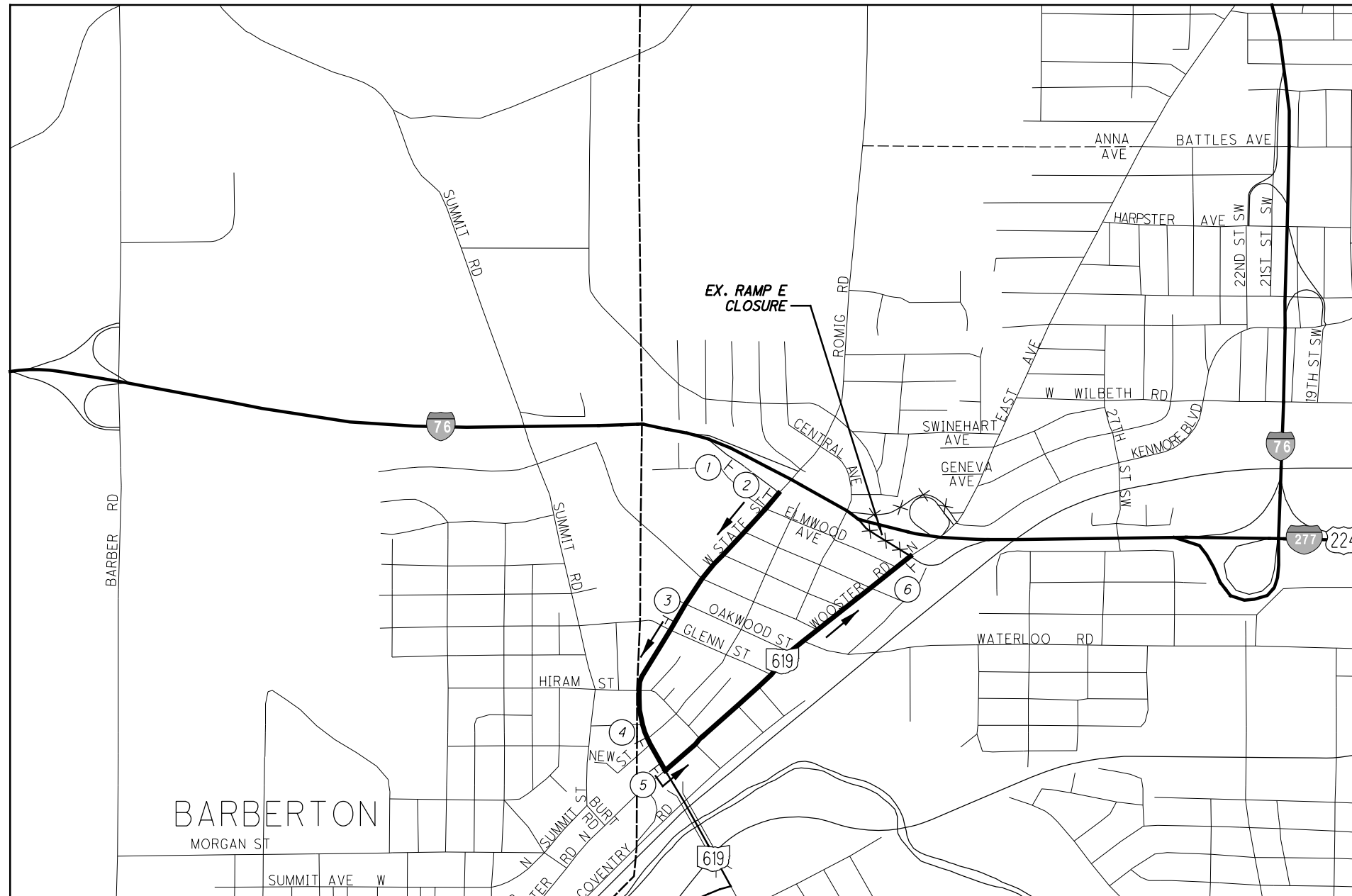
TO WEST

M4-5-24\*  
M3-4-24  
M1-1-24-2  
M6-1L-21\*

10

TO WEST

M4-5-24\*  
M3-4-24  
M1-1-24-2  
M6-3-21\*


































**LEGEND**

 PROPOSED DETOUR SIGN

**NOTES**

1. THIS DETOUR SHALL BE IN EFFECT DURING THE EXISTING RAMP E CLOSURE IN PHASE 1.
  2. SEE SHEET 61 FOR EXISTING RAMP C CLOSURE.
  3. SEE SHEETS 71-79 FOR THE EXISTING RAMP E DETOUR SIGNING ALONG I.R. 76.
- \* DENOTES BLACK ON ORANGE SIGN



<p>①</p> <p>DETOUR</p> <p>WOOSTER RD</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M1-5-30-3 M5-1R-21*</p>	<p>②</p> <p>DETOUR</p> <p>WOOSTER RD</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M1-5-30-3 M6-1R-21*</p>	<p>③</p> <p>DETOUR</p> <p>WOOSTER RD</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M1-5-30-3 M6-3-21*</p>	<p>④</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> <p>DETOUR</p> <p>WOOSTER RD</p> <p>WEST</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M3-4-24 M1-5-30-3 M5-1L-21*</p> </td> <td style="width: 50%;"> <p>DETOUR</p> <p>EAST</p> <p></p> <p></p> <p>M4-8-24* M3-2-24 M1-5-30-3 M6-3-21*</p> </td> </tr> </table>	<p>DETOUR</p> <p>WOOSTER RD</p> <p>WEST</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M3-4-24 M1-5-30-3 M5-1L-21*</p>	<p>DETOUR</p> <p>EAST</p> <p></p> <p></p> <p>M4-8-24* M3-2-24 M1-5-30-3 M6-3-21*</p>	<p>⑤</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> <p>DETOUR</p> <p>WOOSTER RD</p> <p>WEST</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M3-4-24 M1-5-30-3 M5-1L-21*</p> </td> <td style="width: 50%;"> <p>DETOUR</p> <p>EAST</p> <p></p> <p></p> <p>M4-8-24* M3-2-24 M1-5-30-3 M6-3-21*</p> </td> </tr> </table>	<p>DETOUR</p> <p>WOOSTER RD</p> <p>WEST</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M3-4-24 M1-5-30-3 M5-1L-21*</p>	<p>DETOUR</p> <p>EAST</p> <p></p> <p></p> <p>M4-8-24* M3-2-24 M1-5-30-3 M6-3-21*</p>	<p>⑥</p> <p>WOOSTER RD</p> <p></p> <p>END DETOUR</p> <p>D3-1-30* M1-5-30-3 M4-8A-24*</p>
<p>DETOUR</p> <p>WOOSTER RD</p> <p>WEST</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M3-4-24 M1-5-30-3 M5-1L-21*</p>	<p>DETOUR</p> <p>EAST</p> <p></p> <p></p> <p>M4-8-24* M3-2-24 M1-5-30-3 M6-3-21*</p>								
<p>DETOUR</p> <p>WOOSTER RD</p> <p>WEST</p> <p></p> <p></p> <p>M4-8-24* D3-1-30* M3-4-24 M1-5-30-3 M5-1L-21*</p>	<p>DETOUR</p> <p>EAST</p> <p></p> <p></p> <p>M4-8-24* M3-2-24 M1-5-30-3 M6-3-21*</p>								

DETOUR PLAN - EXISTING RAMP F

SUM - 76 - 5.53

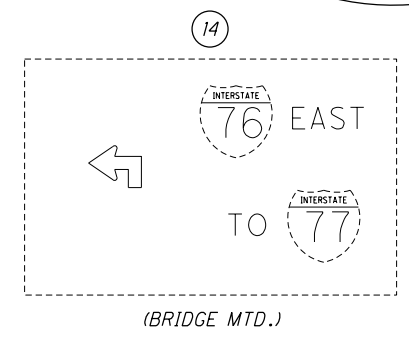
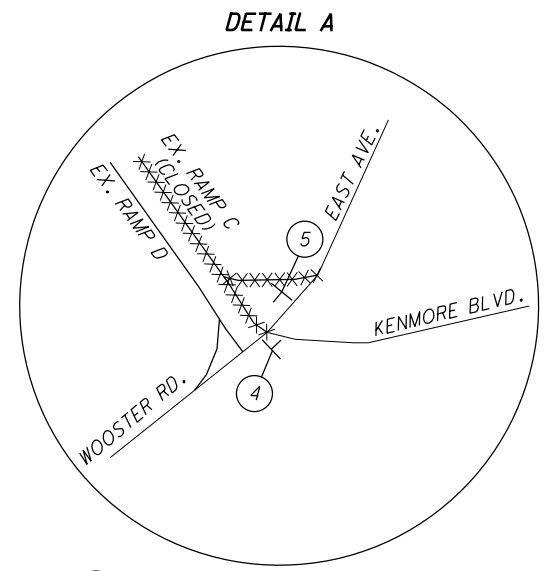
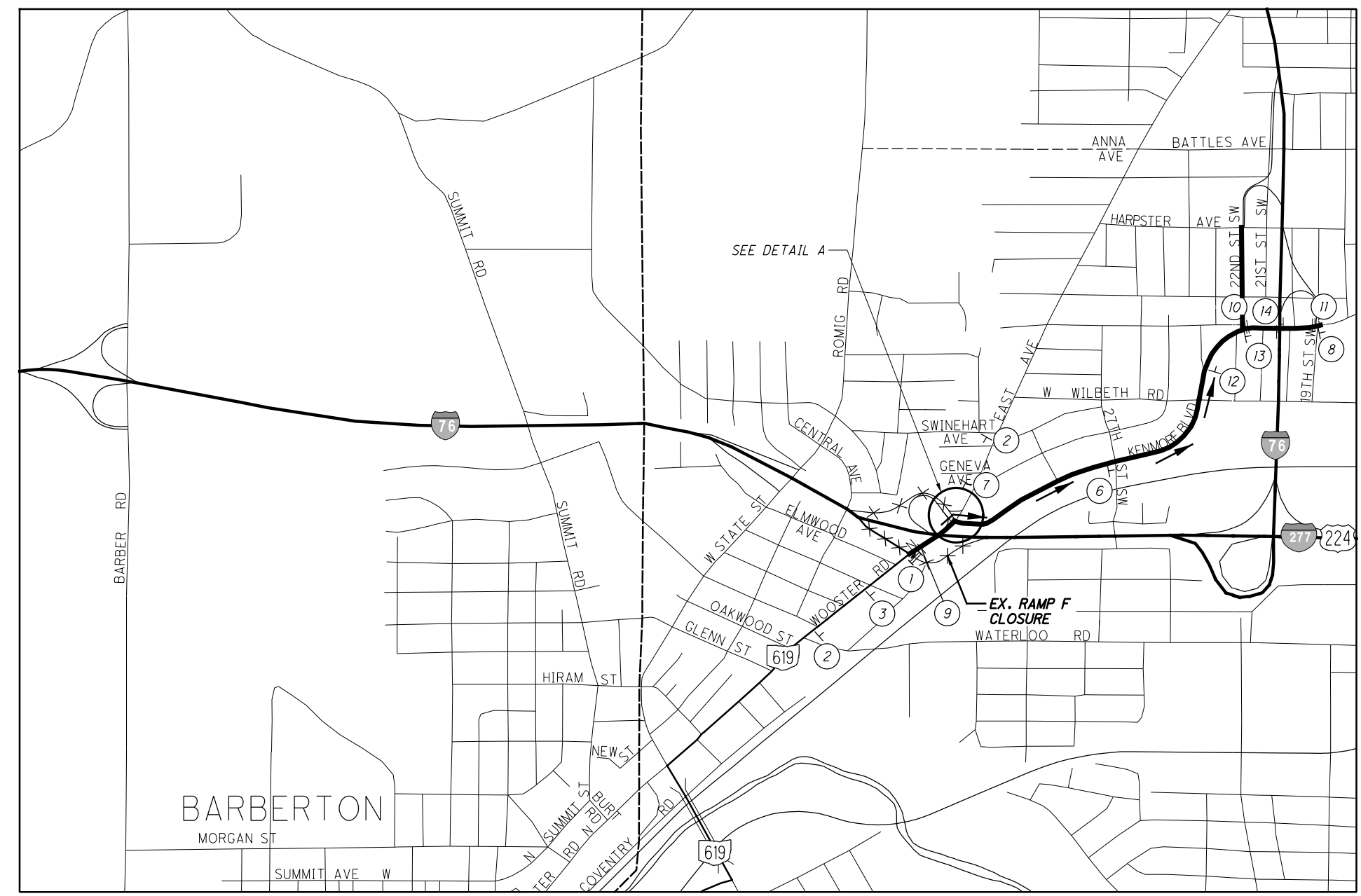


LEGEND

- PROPOSED DETOUR SIGN
- EXISTING SIGN

NOTES

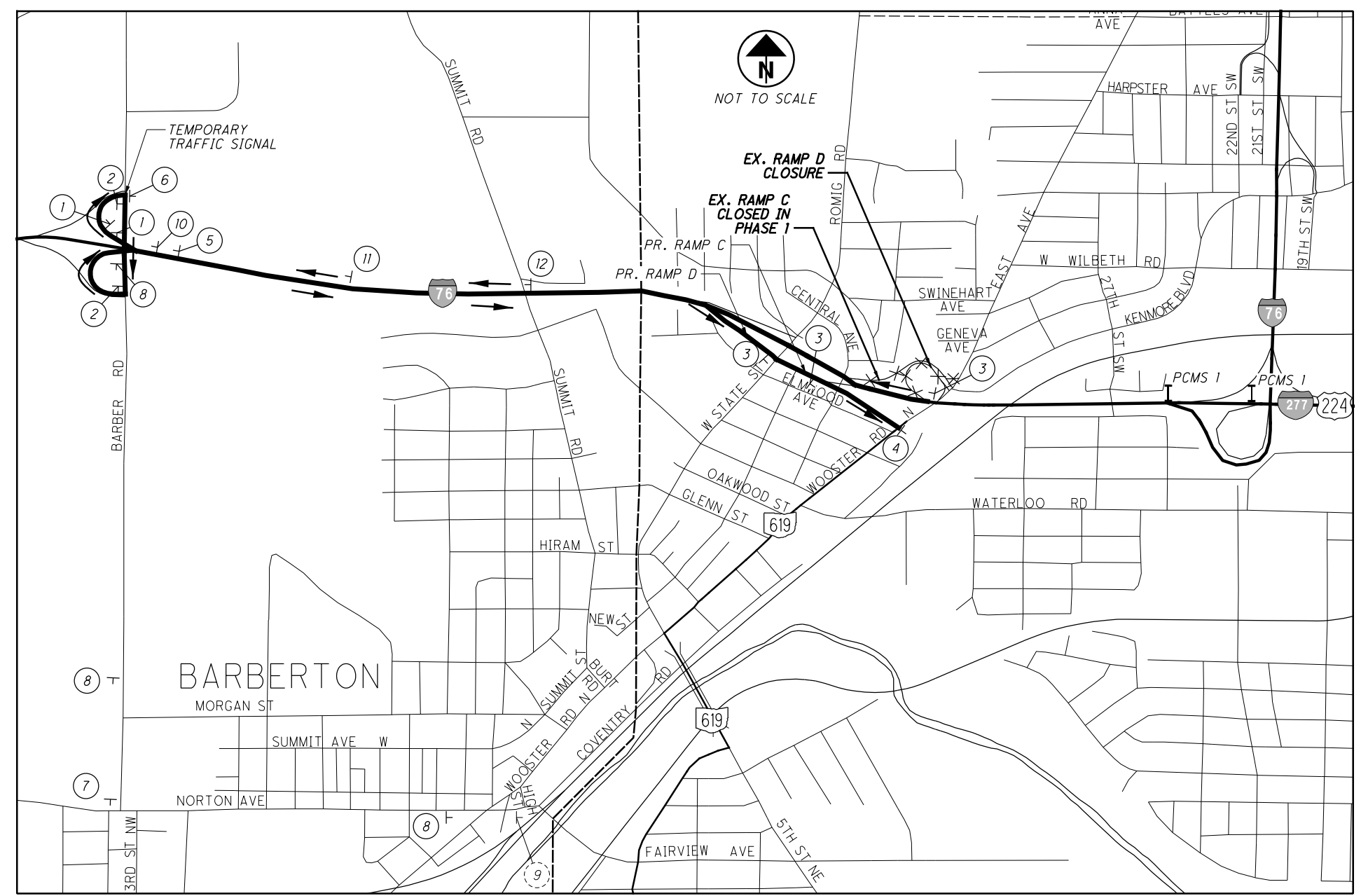
1. THIS DETOUR SHALL BE IN EFFECT DURING THE EXISTING RAMP F CLOSURE IN PHASE 1A.
  2. SEE SHEET 61 FOR EXISTING RAMP C CLOSURE.
  3. SEE SHEET 62 FOR EXISTING RAMP E CLOSURE.
- \* DENOTES BLACK ON ORANGE SIGN  
 # SIGN ERRECTED AS A PART OF AN ACTIVE PREVIOUSLY ESTABLISHED DETOUR (EXISTING RAMP C)



① TYPE B WARNING LIGHTS   R11-2-48# M4-10L-48# ON TYPE 3 BARRICADES COMPLETELY ACROSS ROADWAY	② TYPE A WARNING LIGHT     M3-2-24* M1-1-24-2# M1-4-30-3 W20-3-36#	③     M3-2-24 M1-1-24-2 M1-4-30-3 W20-2-36*	④     M4-5-24* M3-2-24 M1-1-24-2 M1-4-30-3 M6-1R-21*	⑤     M4-5-24* M3-2-24 M1-1-24-2 M1-4-30-3 M6-1L-21*	⑥     M4-5-24* M3-2-24 M1-1-24-2 M1-4-30-3 M6-3-21*	⑦    W20-2-36** (POLE MTD.)	⑧  M4-8A-24	⑨     M4-5-24* M3-2-24 M1-1-24-2 M1-4-30-3 M6-3-21* (POST MTD.)	⑩      M4-5-24* M3-2-24 M1-4-30-3 M6-1L-21* (POLE MTD.)	⑪      M4-5-24* M3-2-24 M1-4-30-3 M5-1L-21*	⑫     M4-5-24* M3-2-24 M1-4-30-3 M5-1L-21*	⑬     M4-5-24* M3-2-24 M1-1-24-2 M6-3-21*
---	---	---	---	---	--	--	-------------------	---	---	--	--	---

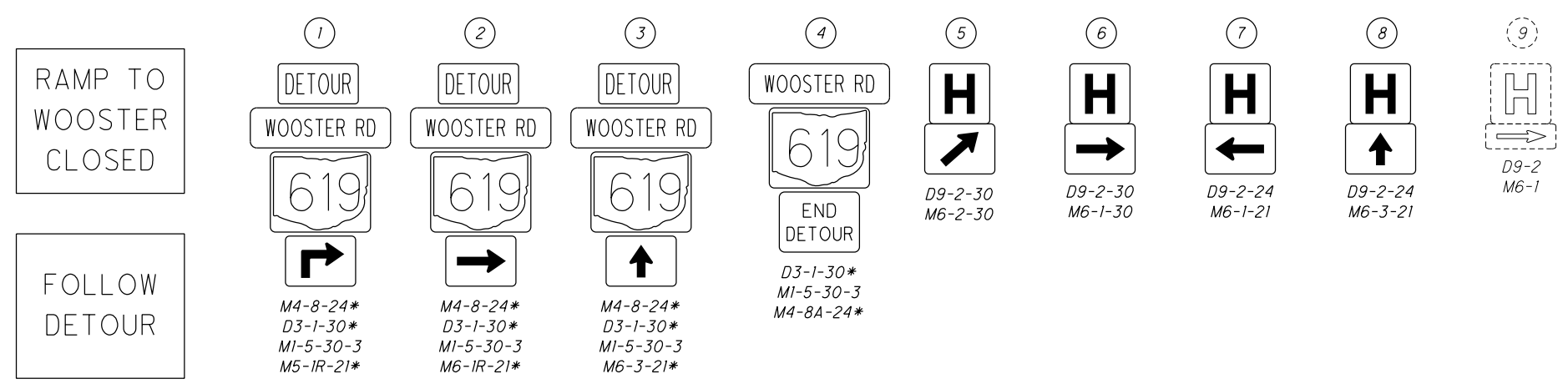
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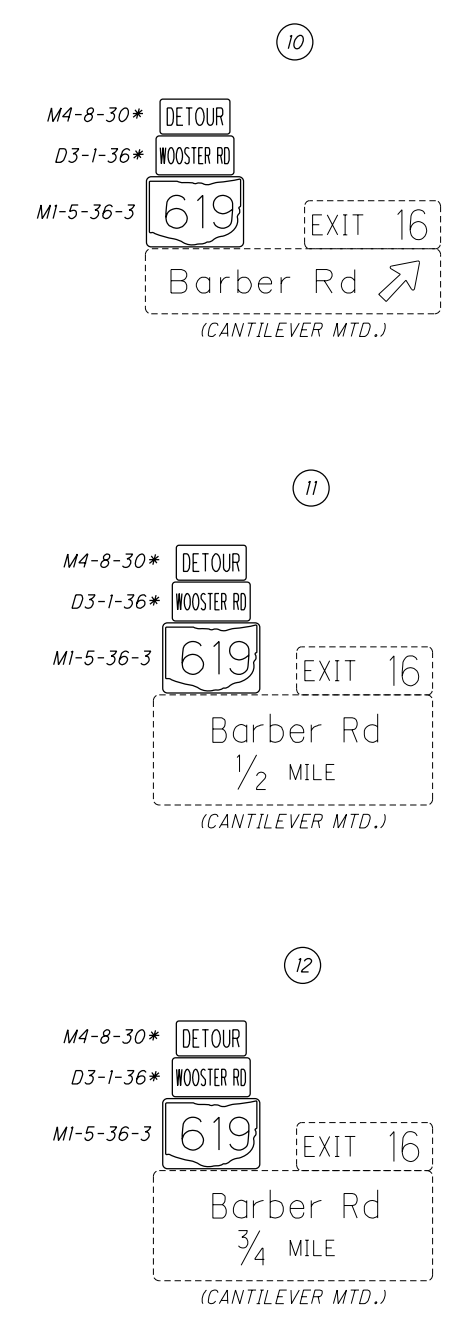


LEGEND

- PROPOSED DETOUR SIGN
- EXISTING SIGN



PCMS 1






NOTES

1. THIS DETOUR SHALL BE IN EFFECT DURING THE EXISTING RAMP D CLOSURE IN PHASES 2 & 3.
  2. SEE SHEETS 99-114, FOR ADDITIONAL SIGNING REQUIRED FOR CLOSURE OF RAMP D.
  3. SEE SHEET 61 FOR EXISTING RAMP C CLOSURE.
- \* DENOTES BLACK ON ORANGE SIGN



LEGEND

-  PROPOSED DETOUR SIGN
-  EXISTING SIGN
-  EXISTING SIGN TO BE REMOVED

NOTE

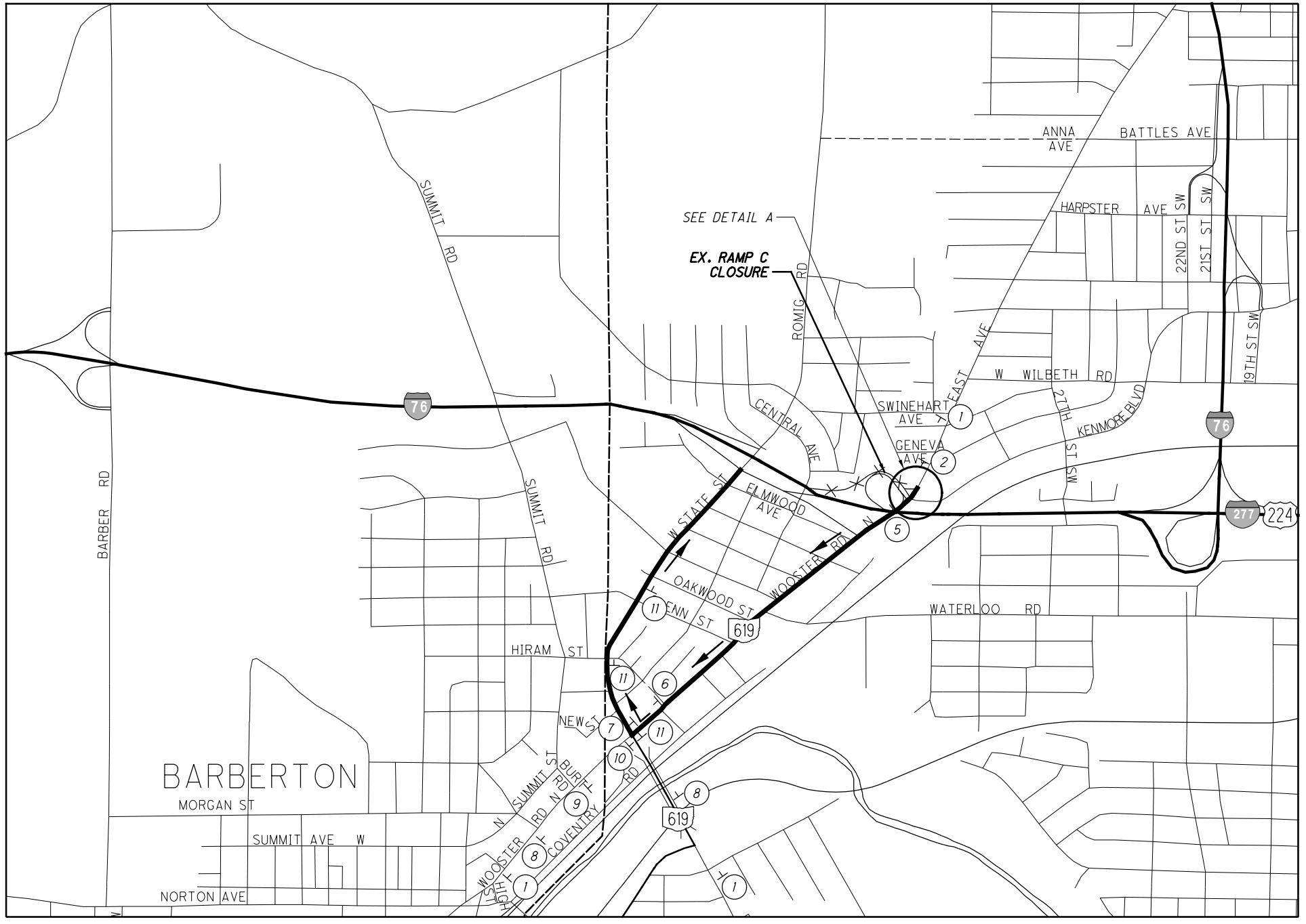
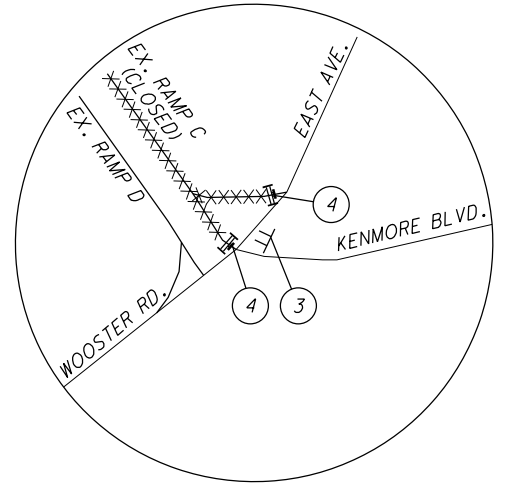
THIS DETOUR WILL BE IN EFFECT DURING PHASES 2 AND 3, AFTER THE REMOVAL OF EXISTING RAMP F AND THE COMPLETION OF PROPOSED RAMP C/CI.

\* DENOTES BLACK ON ORANGE SIGN.

# SIGN ERECTED AS A PART OF AN ACTIVE PREVIOUSLY ESTABLISHED DETOUR.

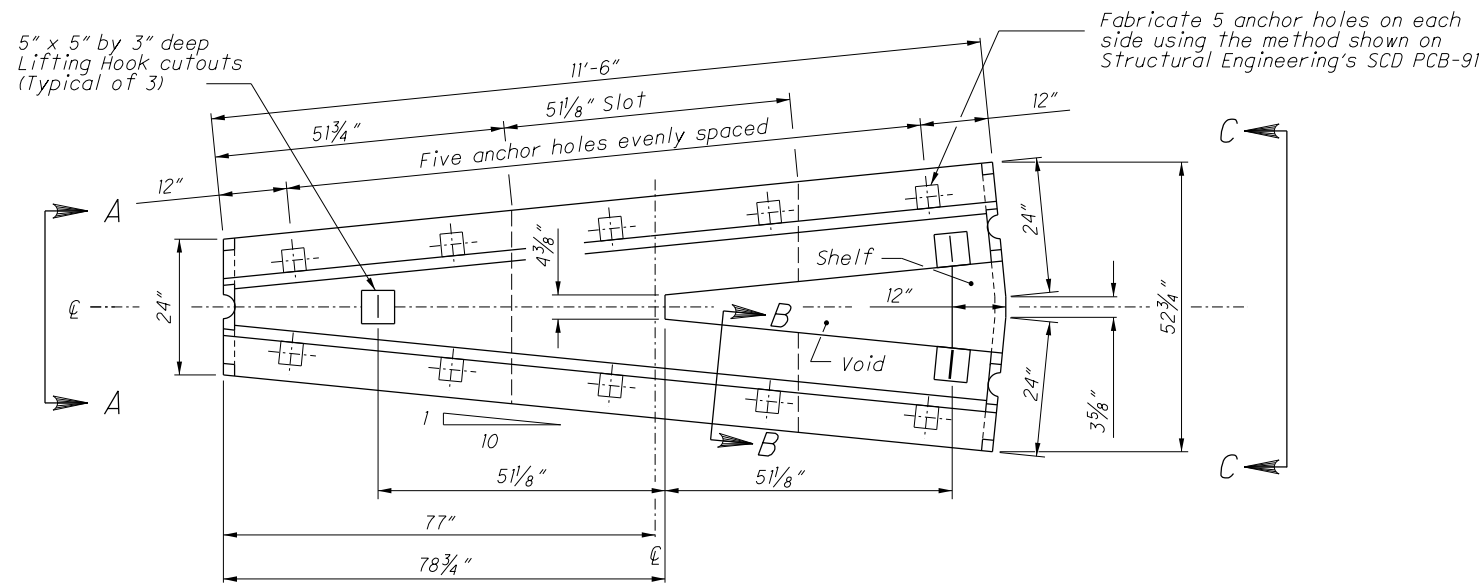


DETAIL A

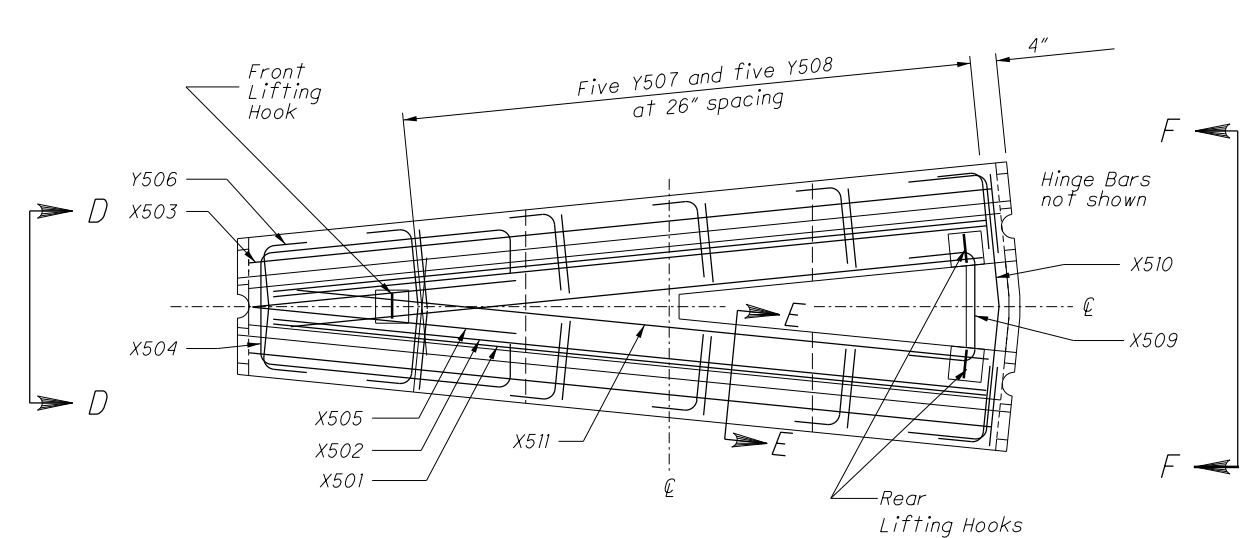


- |                         |                           |  |   |   |                                     |                                     |                                     |                                     |                                     |                                    |
|-------------------------|---------------------------|--|---|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|
| ①                       | ②                         | ③  | ④   | ⑤   | ⑥                                   | ⑦                                   | ⑧                                   | ⑨                                   | ⑩                                   | ⑪                                  |
| TYPE A<br>WARNING LIGHT | INTERSTATE<br>76<br>224   | M4-5-24#<br>TO TO<br>WEST WEST<br>INTERSTATE<br>76 224 | TYPE B WARNING LIGHTS   | <del>TO</del><br>INTERSTATE<br>76<br>224<br><del>↑</del>            | TO<br>INTERSTATE<br>76<br>→         | TO<br>INTERSTATE<br>76<br>→         | INTERSTATE<br>76<br>DETOUR<br>AHEAD | TO<br>INTERSTATE<br>76<br>←         | TO<br>INTERSTATE<br>76<br>←         | TO<br>INTERSTATE<br>76<br>↑        |
| MI-1-24-2#<br>W20-3-36# | W20-2-36**<br>(POLE MTD.) | M6-1L-21# M6-1L-21#<br>(POLE MTD.)                     | ROAD<br>CLOSED<br>← DETOUR  | <del>↑</del><br>INTERSTATE<br>76<br>224<br><del>↑</del><br>M6-3-21# | M4-5-24#<br>M1-1-24-2#<br>M5-1R-21# | M4-5-24#<br>M1-1-24-2#<br>M6-1R-21# | M1-1-24-2#<br>M3-4-24#<br>W20-2-36# | M4-5-24#<br>M1-1-24-2#<br>M5-1L-21# | M4-5-24#<br>M1-1-24-2#<br>M6-1L-21# | M4-5-24#<br>M1-1-24-2#<br>M6-3-21# |
|                         |                           |  | R11-2-48<br>M4-10L-48<br>ON TYPE 3 BARRICADES<br>COMPLETELY ACROSS<br>ROADWAY |   |                                     |                                     |                                     |                                     |                                     |                                    |

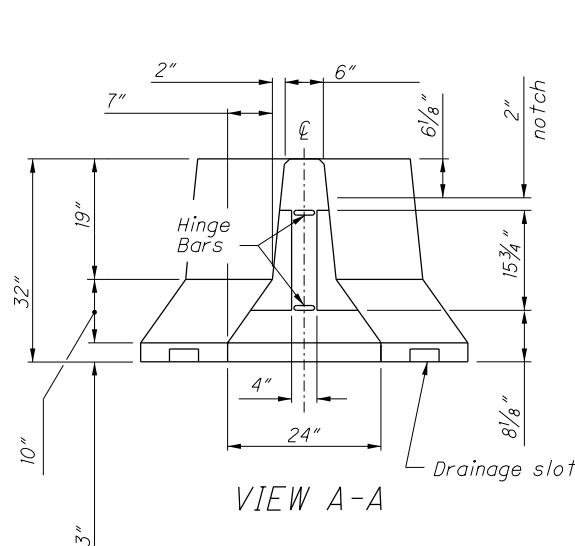
P:\ODT\MP\0093\_SUM-76-5.62\96670\_Design\DOT\Sheets\96670\_MD305.dgn Sheet 10/1/2018 3:53:24 PM CMT031



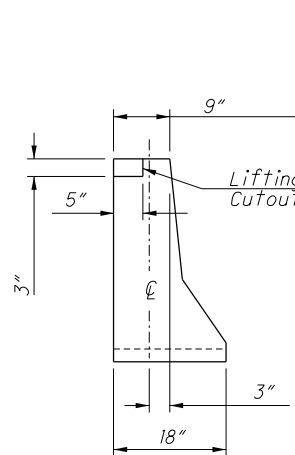
PLAN



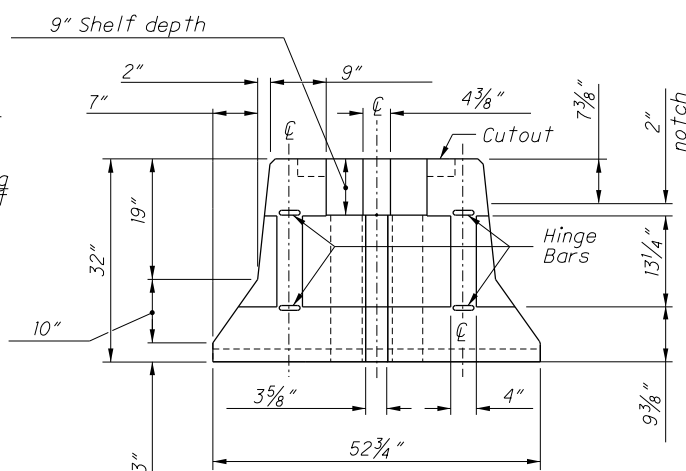
REINFORCING PLAN VIEW



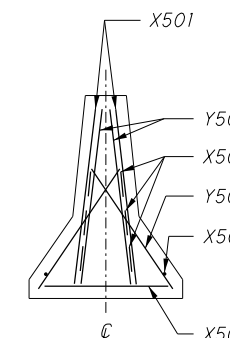
VIEW A-A



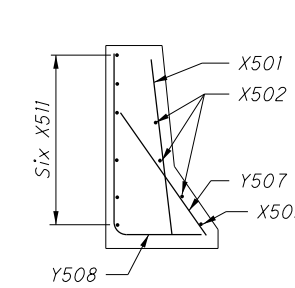
SECTION B-B



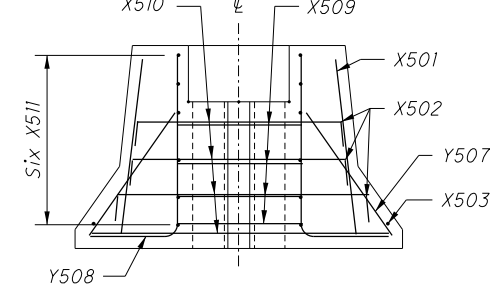
VIEW C-C



VIEW D-D



SECTION E-E



VIEW F-F

REINFORCING DETAILS

NOTES

**GENERAL:** This barrier segment is used to split one run of portable concrete barrier into dual runs. Attach directly to ODOT's 32" PCB; however, other approved barrier shapes may be connected to this segment by the use of an appropriate transition unit. Attach at least one standard PCB segment in between this "Y" and an Impact Attenuator. Its field application is shown in MOT plans and on MT standard drawings. Do not use this barrier in an unanchored configuration next to bridge deck edges or similar dropoffs, anchor according to method shown on PCBDD or other approved method.

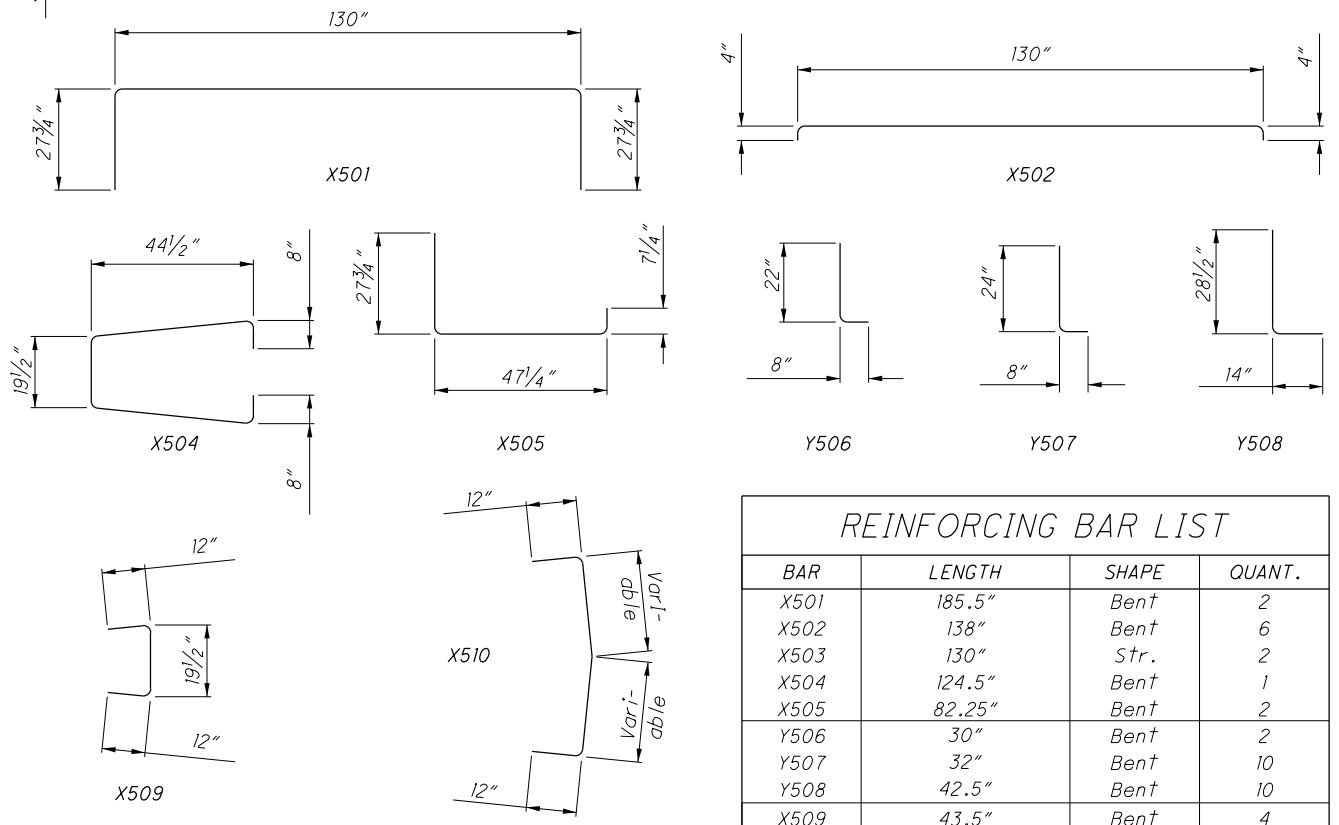
**BARRIER DETAILS:** Use SCD RM-4.2 for details not shown here, including the geometry of this pin and loop segment matches in every way the design of the end connections shown on the HINGED CONNECTION and JOINT CONNECTION Details (the alternate J-J Hooks connection design is permitted). Additionally, barrier edges may be radiused or chamfered as per the LEGEND Note, barrier is to be permanently marked as mentioned in the MARKINGS Note, and delineate as per the REFLECTORIZATOR Note.

**MATERIAL SPECIFICATIONS:** The minimum design strength of the concrete is 4,000 psi and meets the requirements of CMS 499. For reinforcing steel, use ASTM A615 Grade 60 black steel and provide 2" min. rebar cover. Material specifications for the Hinge and Reinforcing Bars, as well as the Connecting Hardware may be found on SCD RM-4.2. For additional material specifications not shown here, see SCD RM-4.2 and CMS 622.

**HANDLING:** The fabricator is responsible for the design of a lifting system for handling segments. As a minimum, use three lifting points at the locations suggested in the Plan views, and design with a lifting factor of safety of 4. Any protrusions from the lifting hook design is not to affect the crash worthiness of the barrier. The calculations shall be signed, sealed and dated by a Registered Engineer and include these calculations with the Manufacturing Drawings required by Supplement 1073.12. Refer to Part 5 of the PCI Handbook. Approximate segment weight is 8,500 lbs [3850 kg].

**PAYMENT:** Payment will be made under Item 622 - Portable Barrier, "Y" Connector, Each, and will include all forms, materials and labor to cast this segment.

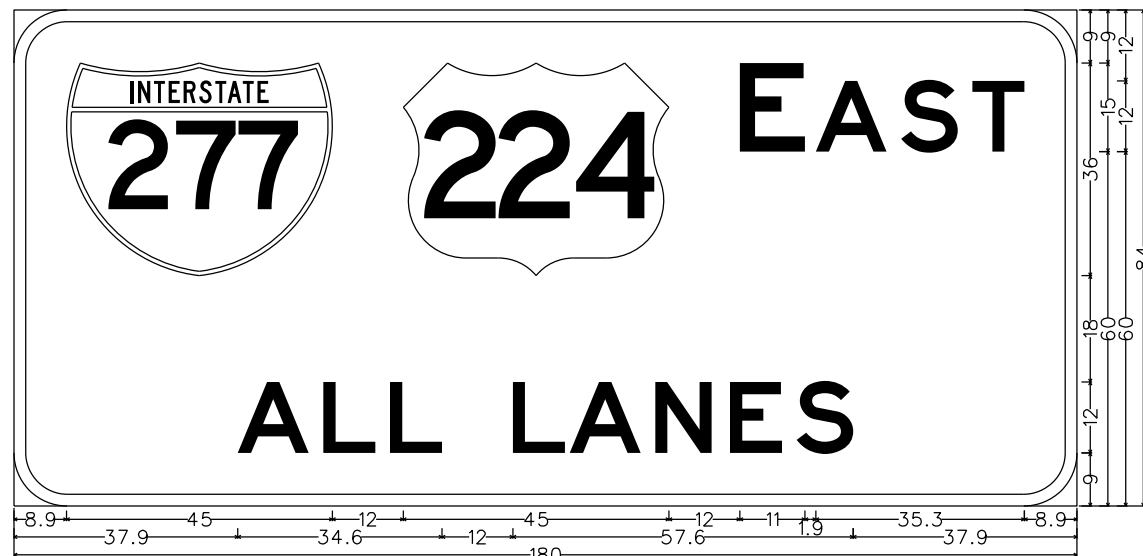
**ALTERNATE METHOD:** Contractors may choose to use a wide Impact Attenuator in lieu of the concrete "Y" alternate. The chosen unit will be a Type 2 or 3 Impact Attenuator matching the product previously called for on the project plans at the expected installation location.



BENDING DIAGRAMS

REINFORCING BAR LIST			
BAR	LENGTH	SHAPE	QUANT.
X501	185.5"	Bent	2
X502	138"	Bent	6
X503	130"	Str.	2
X504	124.5"	Bent	1
X505	82.25"	Bent	2
Y506	30"	Bent	2
Y507	32"	Bent	10
Y508	42.5"	Bent	10
X509	43.5"	Bent	4
X510	Varies	Bent	4
X511	124"	Str.	12

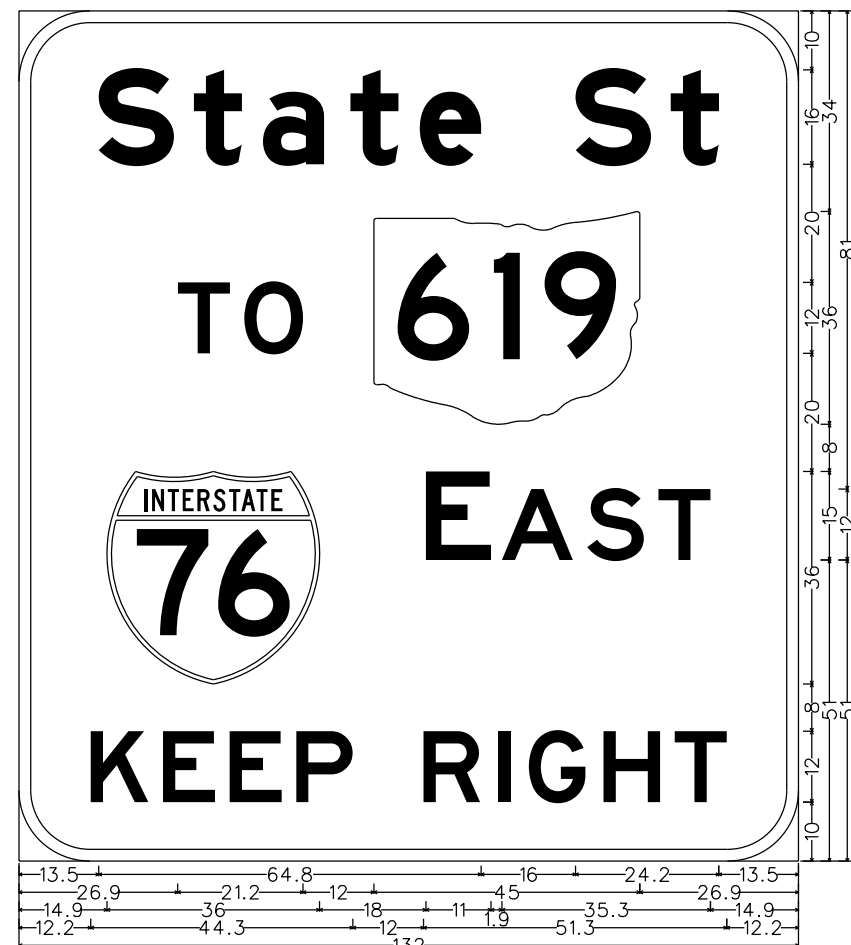
MOT SIGN "A"  
(LEVEL 1)



9.0" Radius, 2.0" Border, Black on Orange:  
Interstate 277 M1-1; US 224 M1-4; [EAST] E; [ALL LANES] E;  
Table of letter and object lefts.

🛣️	🛣️	E	A	S	T
8.9	65.9	122.9	135.8	150.2	162.3
A	L	L	L	A	N
37.9	52.4	63.7	84.5	94.1	108.6
E	S				
121.2	132.5				

MOT SIGN "B"  
(LEVEL 1)



12.0" Radius, 2.0" Border, Black on Orange:  
[State St] E Mod; [TO] E; State Highway 619 M1-H5-36-3; Interstate 76 M1-1; [EAST] E; [KEEP RIGHT] E;  
Table of letter and object lefts.

S	t	a	t	e	S	t
13.5	29.6	41.3	56.1	67.9	94.3	110.4
T	O	🛣️				
26.9	38.2	60.1				
🛣️	E	A	S	T		
14.9	68.9	81.8	96.2	108.3		
K	E	E	P	R	I	G
12.2	24.4	35.7	47.0	68.5	81.2	86.3
H	T					
99.0	111.0					

**NOTE**  
ALL DIMENSIONS SHOWN ARE IN INCHES.

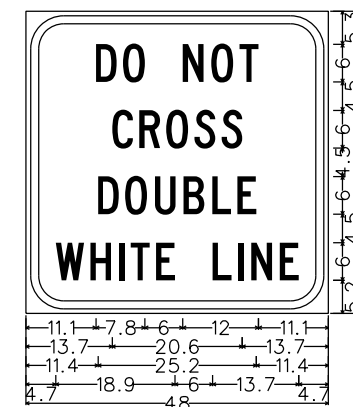
MOT SIGN "C"  
(LEVEL 1)



9.0" Radius, 2.0" Border, Black on Orange;  
[Wooster Rd] E Mod; [East Ave] E Mod; [KEEP RIGHT] E;  
Table of letter and object lefts.

W	o	o	s	t	e	r	R	d
13.8	34.4	48.6	62.4	75.8	87.6	103.0	126.9	143.8
E	a	s	t	A	v	e		
27.7	43.8	58.6	72.0	96.2	114.7	129.9		
K	E	E	P	R	I	G	H	T
30.2	42.4	53.7	65.0	86.5	99.2	104.3	117.0	129.0

MOT SIGN "D"  
(R4-3BT-48)

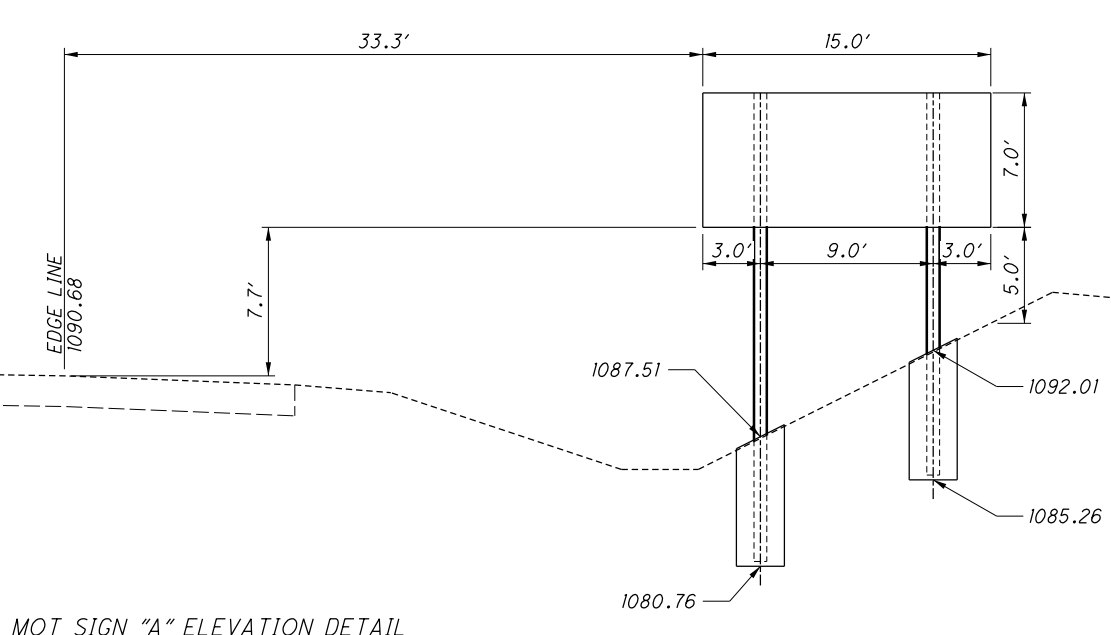


6.0" Radius, 1.3" Border, 0.8" Indent, Black on White;  
[DO NOT] C; [CROSS] C; [DOUBLE] C;  
[WHITE LINE] C;

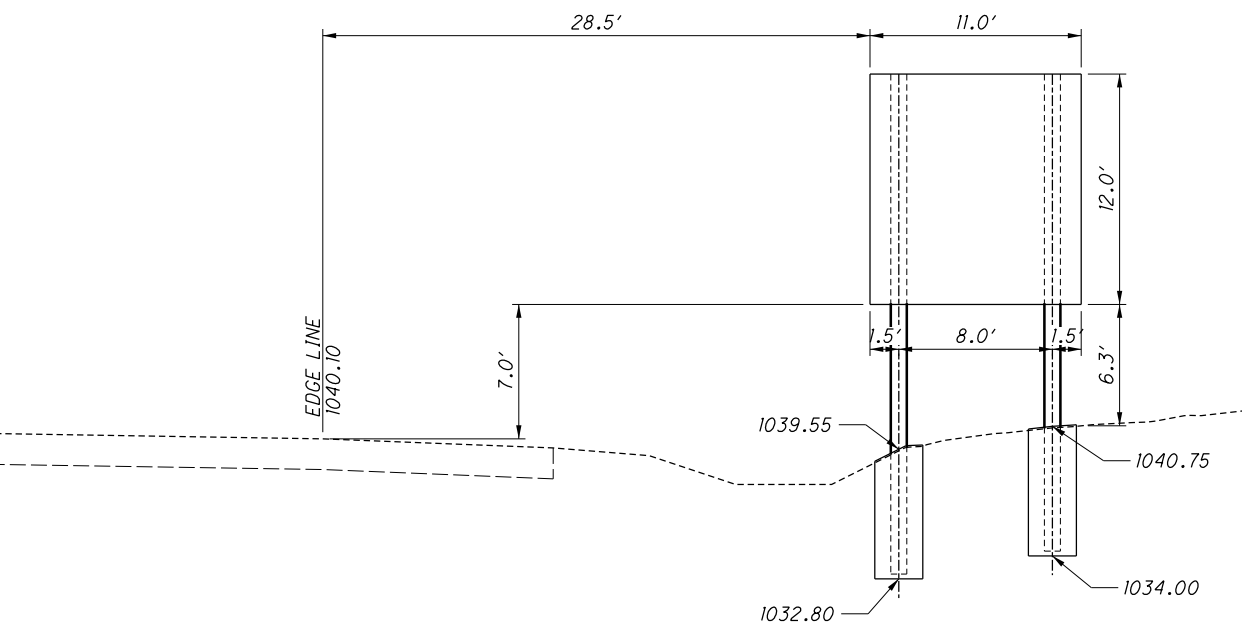
Table of letter and object lefts.

D	O	N	O	T				
11.1	15.4	24.9	29.4	33.9				
C	R	O	S	S				
13.7	18.0	22.3	26.7	31.0				
D	O	U	B	L	E			
11.4	15.7	20.5	25.0	29.6	33.6			
W	H	I	T	E	L	I	N	E
4.7	10.2	14.8	16.6	20.6	29.6	33.6	35.8	40.3

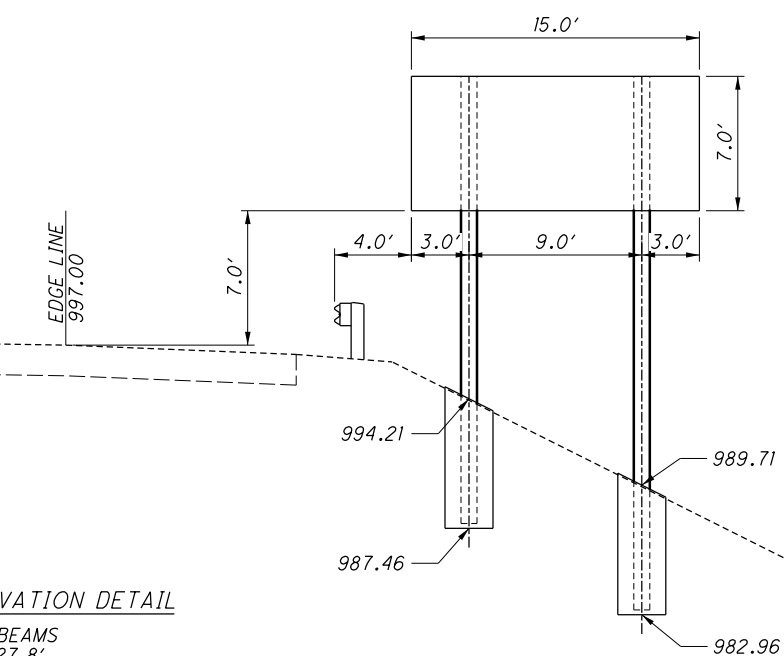
NOTE  
ALL DIMENSIONS SHOWN ARE IN INCHES.



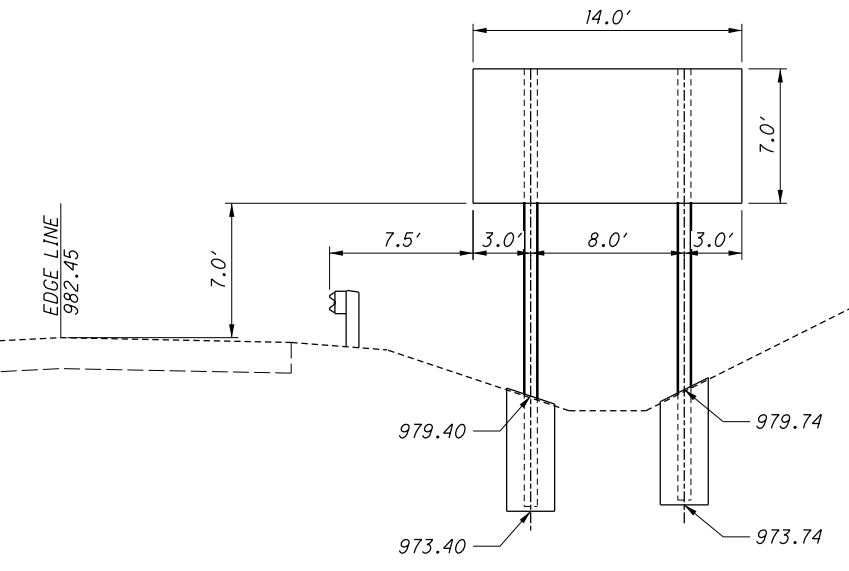
MOT SIGN "A" ELEVATION DETAIL  
 W8 X 18 BEAMS  
 24.4' & 19.9'  
 I.R. 76 EASTBOUND  
 STA. 119+00  
 PHASE 1 & PHASE 2



MOT SIGN "B" ELEVATION DETAIL  
 W10 X 22 BEAMS  
 26.0' & 24.9'  
 I.R. 76 EASTBOUND  
 STA. 142+00  
 PHASE 1 & PHASE 2



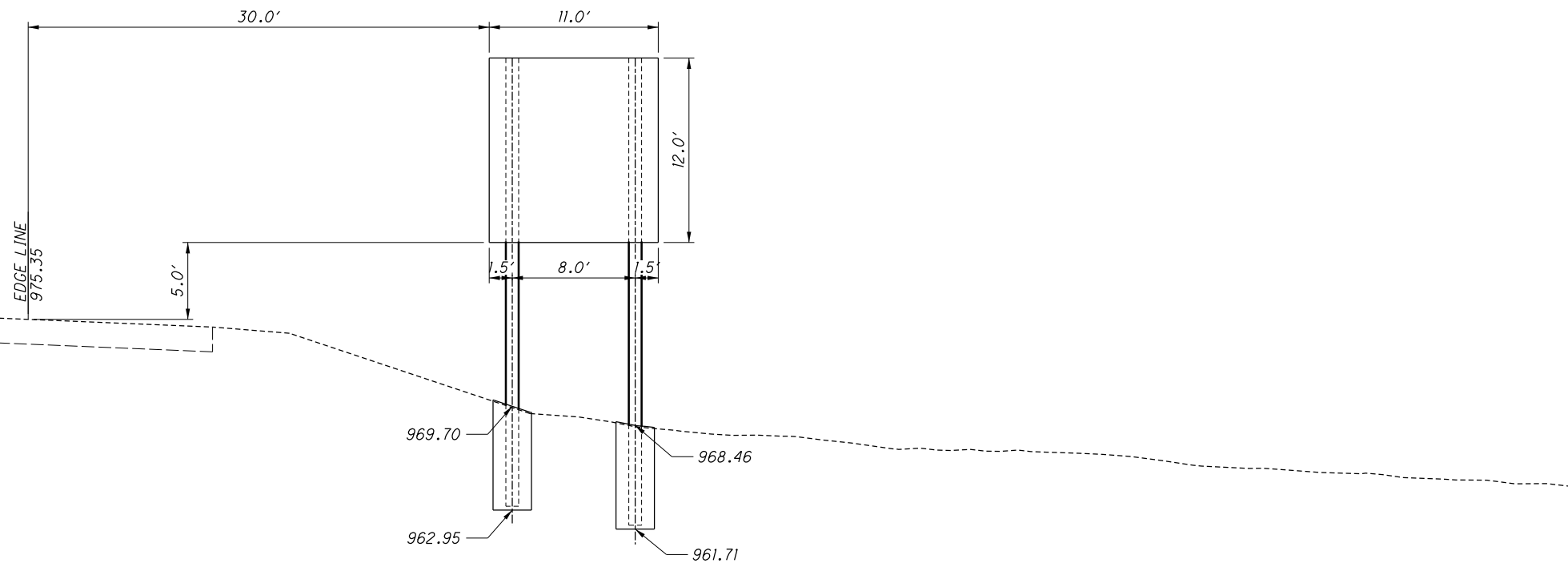
MOT SIGN "A" ELEVATION DETAIL  
 W10 X 22 BEAMS  
 23.3' & 27.8'  
 I.R. 76 EASTBOUND  
 STA. 174+00  
 PHASE 1 & PHASE 2



MOT SIGN "C" ELEVATION DETAIL  
 W8 X 18 BEAMS  
 22.8' & 22.5'  
 I.R. 76 EASTBOUND  
 STA. 190+00  
 PHASE 1 & PHASE 2

**NOTE**  
 BEAM LENGTHS SHOWN FOR INFORMATIONAL PURPOSE ONLY. CONTRACTOR SHALL VERIFY LENGTH REQUIRED AT EACH EXACT LOCATION.

P:\DDT\MP\0093\_SUM-76-5.62\96670\Design\MOT\Sheets\MM304.dgn Sheet 10/1/2018 3:53:25 PM CMT031



MOT SIGN "B" ELEVATION DETAIL

W10 X 22 BEAMS  
29.1' & 30.4'  
I.R. 76 EASTBOUND  
STA. 215+00  
PHASE 1 & PHASE 2

**NOTE**

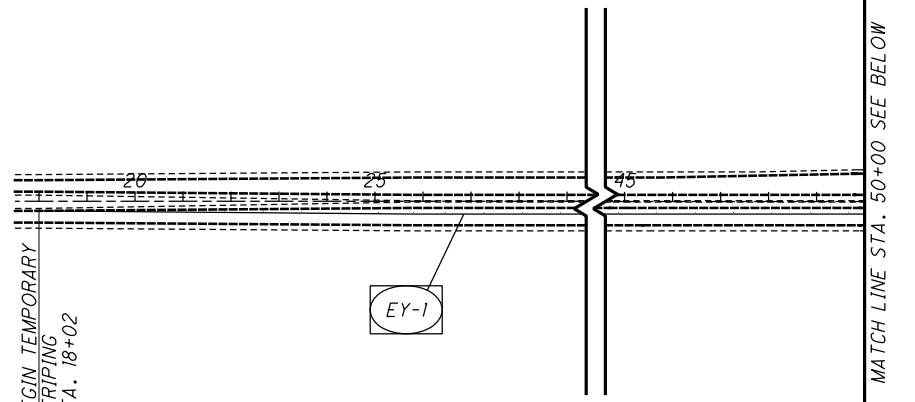
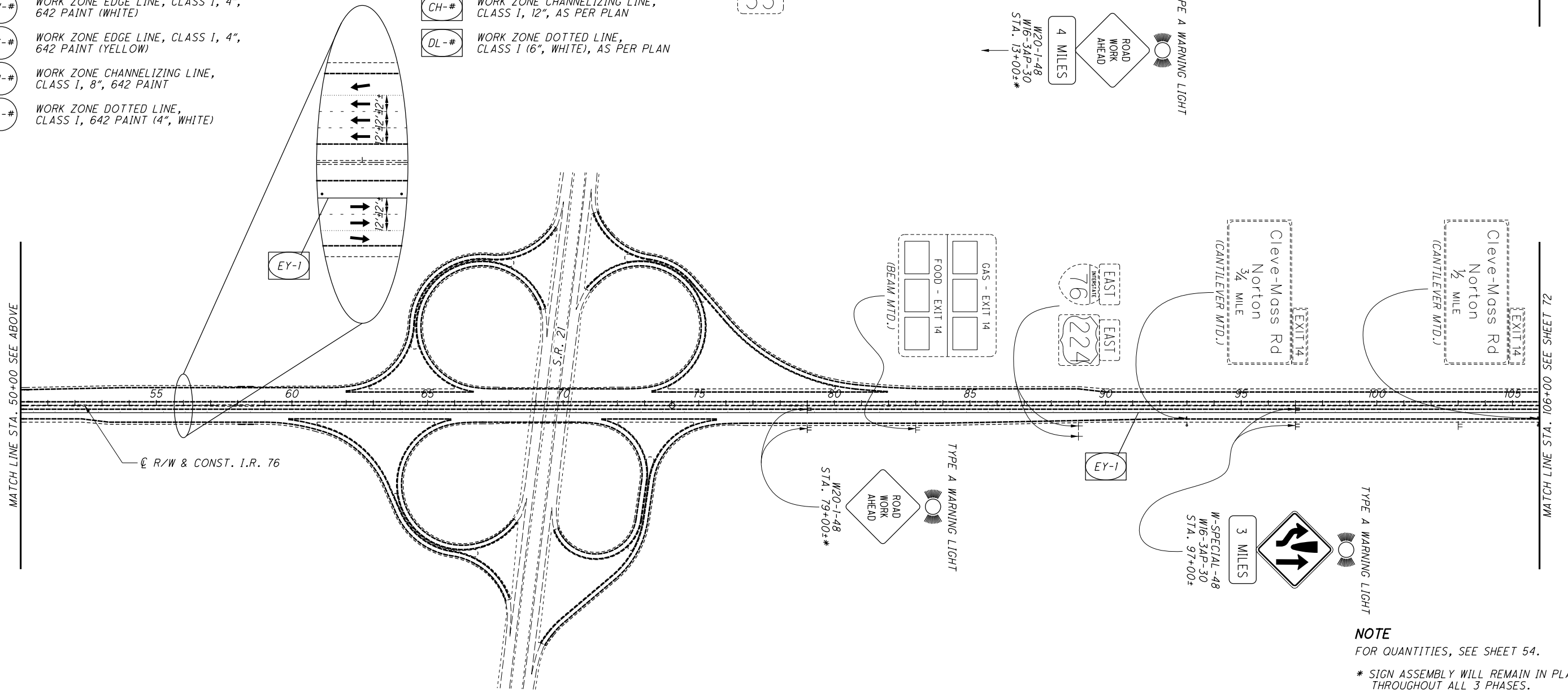
BEAM LENGTHS SHOWN FOR INFORMATIONAL PURPOSE ONLY. CONTRACTOR SHALL VERIFY LENGTH REQUIRED AT EACH EXACT LOCATION.

**LEGEND**

- LL-# WORK ZONE LANE LINE, CLASS 1, 6", 642 PAINT
- DY-# WORK ZONE CENTER LINE, DOUBLE SOLID, CLASS 1, 642 PAINT
- EW-# WORK ZONE EDGE LINE, CLASS 1, 6", 642 PAINT (WHITE)
- EY-# WORK ZONE EDGE LINE, CLASS 1, 6", 642 PAINT (YELLOW)
- CH-# WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 642 PAINT
- DL-# WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT (6", WHITE), AS PER PLAN
- TL-# WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS 1, 642 PAINT (WHITE)
- SL-# WORK ZONE STOP LINE, CLASS 1, 642 PAINT
- A-# WORK ZONE ARROW, CLASS 1, 642 PAINT
- XW-# WORK ZONE CROSSWALK LINE, CLASS 1, 642 PAINT
- LL-# WORK ZONE LANE LINE, CLASS 1, 4", 642 PAINT
- EW-# WORK ZONE EDGE LINE, CLASS 1, 4", 642 PAINT (WHITE)
- EY-# WORK ZONE EDGE LINE, CLASS 1, 4", 642 PAINT (YELLOW)
- CH-# WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 642 PAINT
- DL-# WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT (4", WHITE)
- PB-# 32" PORTABLE BARRIER OR 50" PORTABLE BARRIER, AS PER PLAN AS SPECIFIED IN THE PLAN
- IA-# IMPACT ATTENUATOR
- PV-# PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PVA-# PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN
- GR-# SPECIAL - WORK ZONE GUARDRAIL
- TW-# TEMPORARY WALK
- ##-# WORK ZONE ITEM PLACED IN PREVIOUS PHASE
- LL-# WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN
- DSL-# WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE (DOUBLE SOLID), CLASS 1, 6"
- EW-# WORK ZONE EDGE LINE, CLASS 1, 6" (WHITE), AS PER PLAN
- EY-# WORK ZONE EDGE LINE, CLASS 1, 6" (YELLOW), AS PER PLAN
- CH-# WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN
- DL-# WORK ZONE DOTTED LINE, CLASS 1 (6", WHITE), AS PER PLAN

- TRAFFIC FLOW ARROW
- PORTABLE BARRIER
- DRUMS
- WORK ZONE IMPACT ATTENUATOR
- WORK AREA
- PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A/ PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN
- EXISTING SIGN COVERED OR OVERLAYED DURING MAINTENANCE OF TRAFFIC
- EXISTING SIGN REMOVED DURING MAINTENANCE OF TRAFFIC
- EXISTING SIGN TO REMAIN UNDISTURBED

DRUM SPACING CHART			
	MAINLINE	RAMPS	SIDE STREETS
TANGENT	80'	20'	40'
TAPERS	40'	20'	20'
RADII	N/A	N/A	8'



MATCH LINE STA. 50+00 SEE ABOVE

MATCH LINE STA. 106+00 SEE SHEET 72

MATCH LINE STA. 50+00 SEE BELOW



**MAINTENANCE OF TRAFFIC - PHASES 1 & 2**  
**STA. 17+50 TO STA. 106+00**

**SUM-76-5.53**

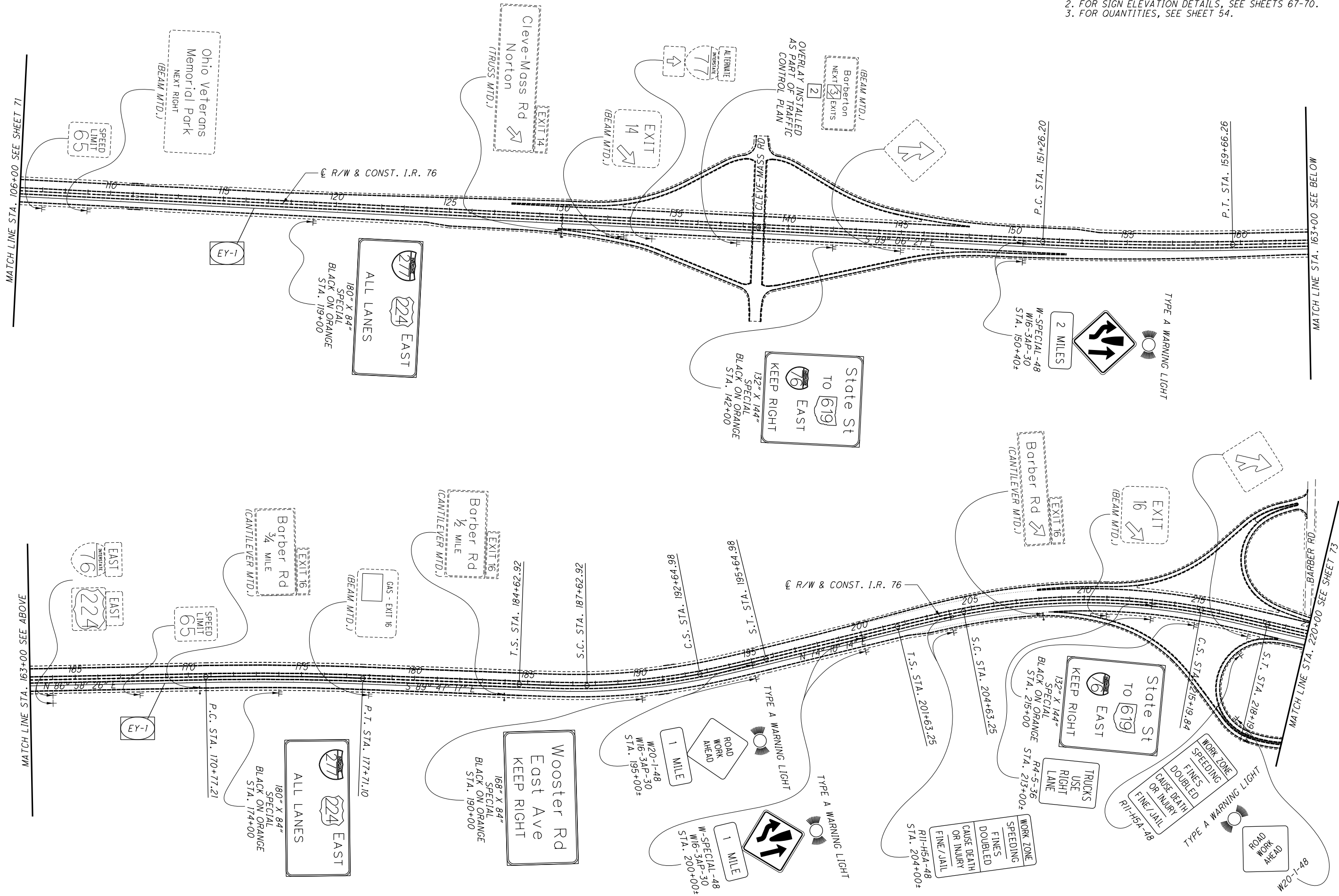
**NOTE**  
 FOR QUANTITIES, SEE SHEET 54.  
 \* SIGN ASSEMBLY WILL REMAIN IN PLACE THROUGHOUT ALL 3 PHASES.

MATCH LINE STA. 106+00 SEE SHEET 71

MATCH LINE STA. 163+00 SEE ABOVE

MATCH LINE STA. 163+00 SEE BELOW

MATCH LINE STA. 220+00 SEE SHEET 73



- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR SIGN ELEVATION DETAILS, SEE SHEETS 67-70.
  3. FOR QUANTITIES, SEE SHEET 54.

CALCULATED  
MGM  
CHECKED  
NAU

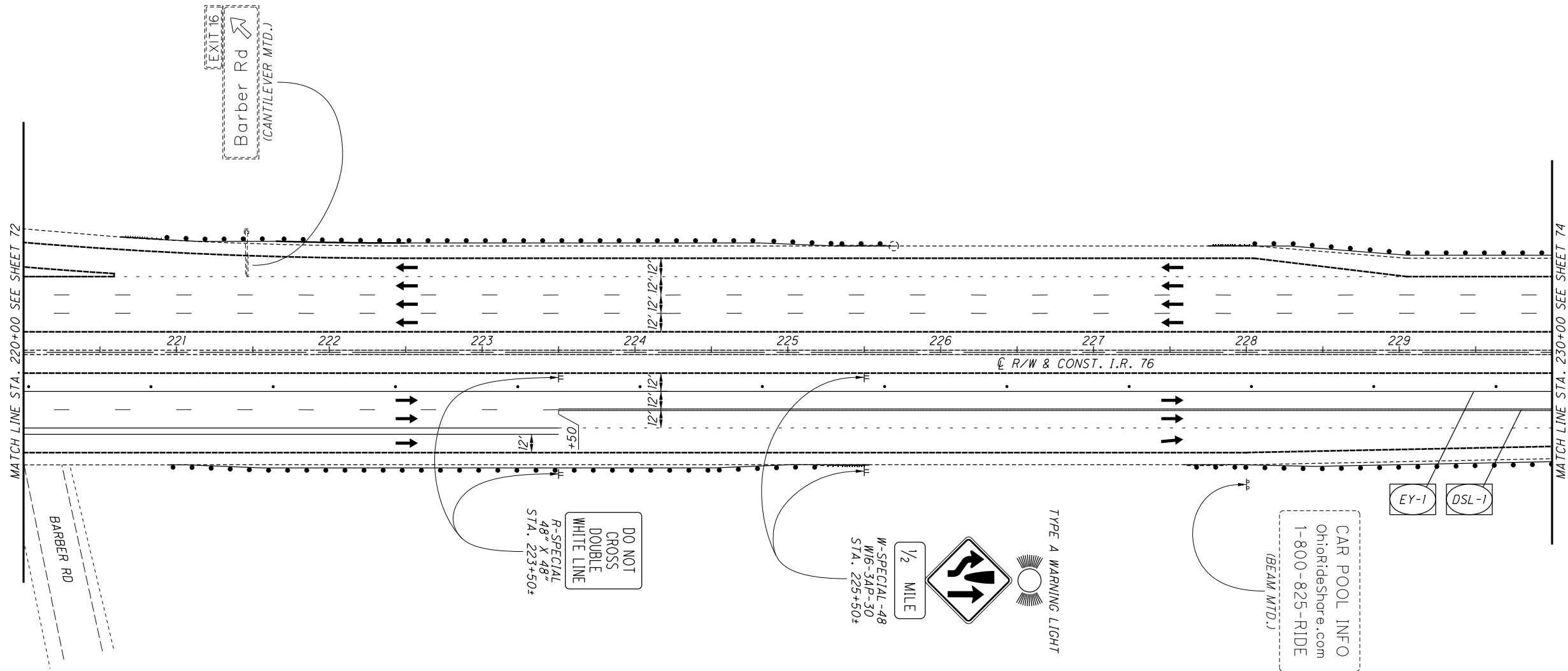
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HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASES 1 & 2**  
**STA. 106+00 TO STA. 220+00**

**SUM-76-5.53**

72  
672





**NOTES**

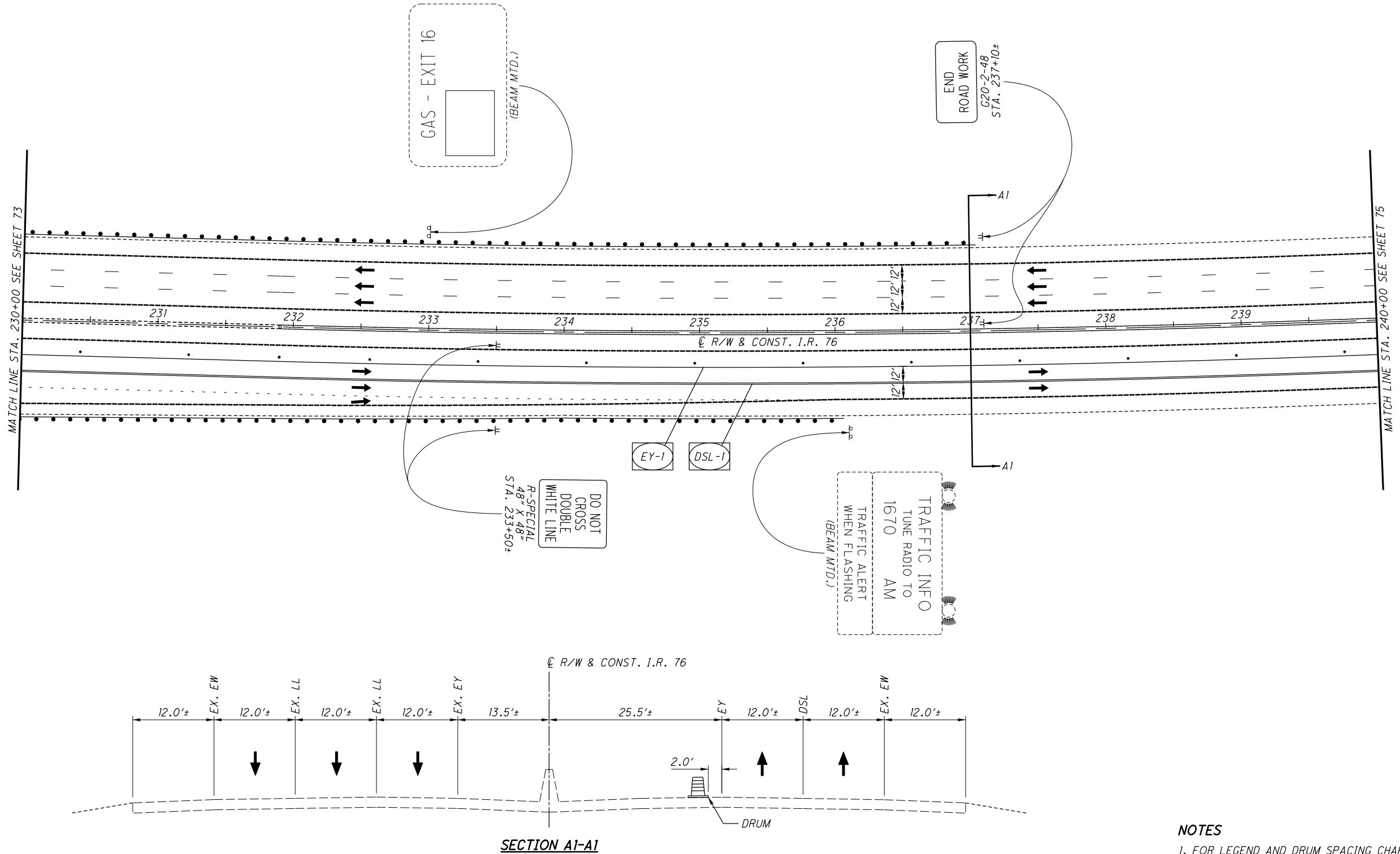
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
2. FOR QUANTITIES, SEE SHEET 54.

CALCULATED	MGM
CHECKED	NAU

0 20 40 80  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
STA. 220+00 TO STA. 230+00**

**SUM-76-5.53**



SECTION A1-A1

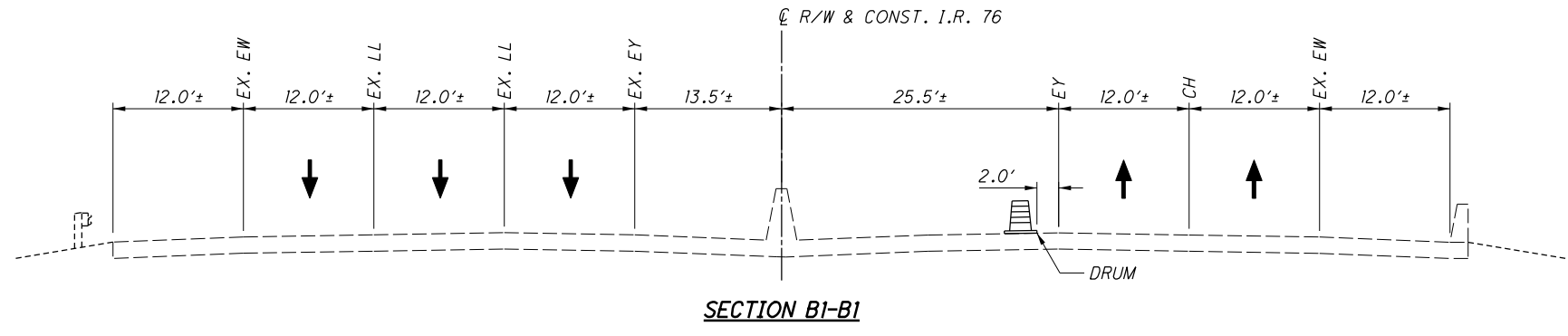
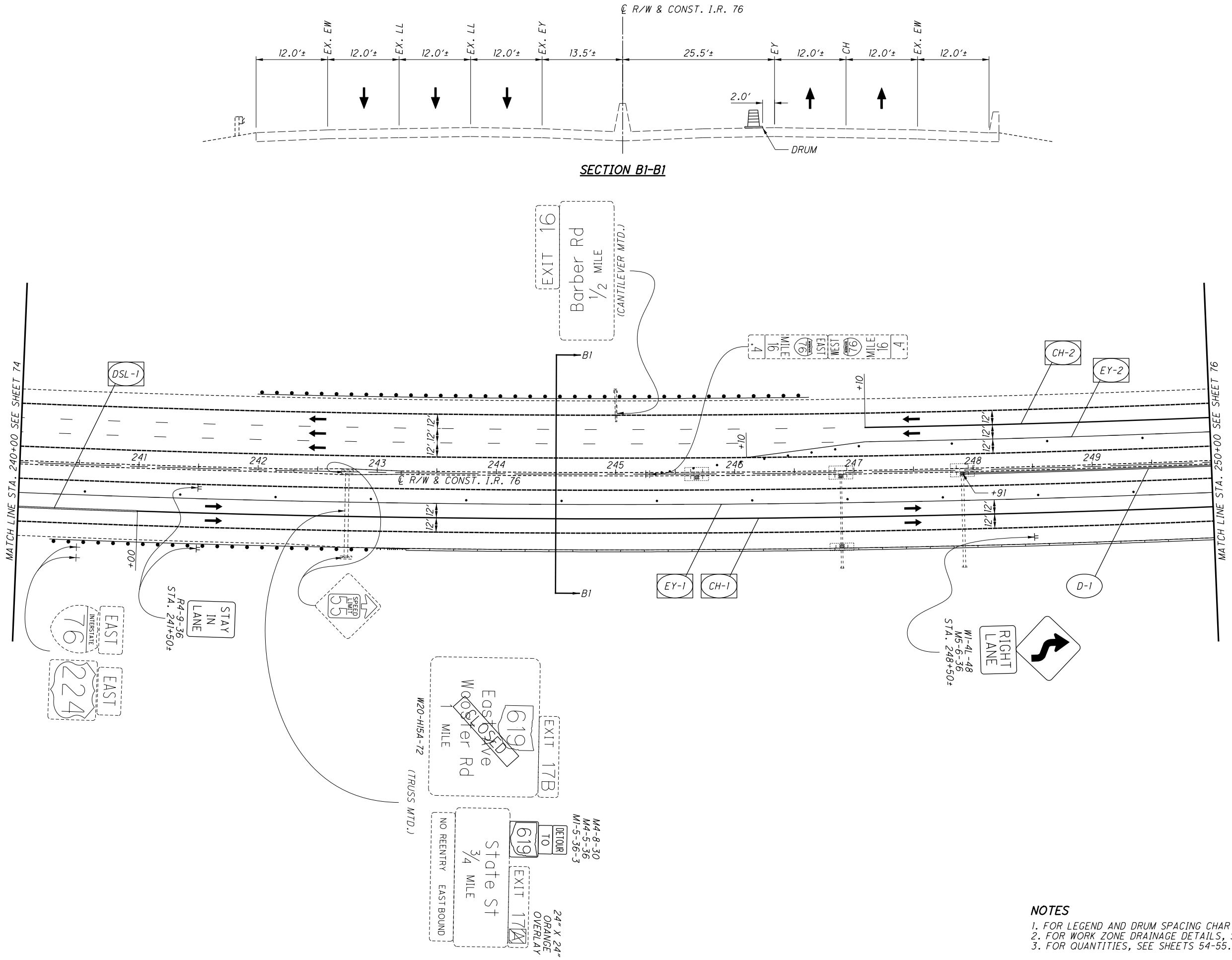
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR QUANTITIES, SEE SHEET 54.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STA. 230+00 TO STA. 240+00**

**SUM-76-5.53**



SECTION B1-B1

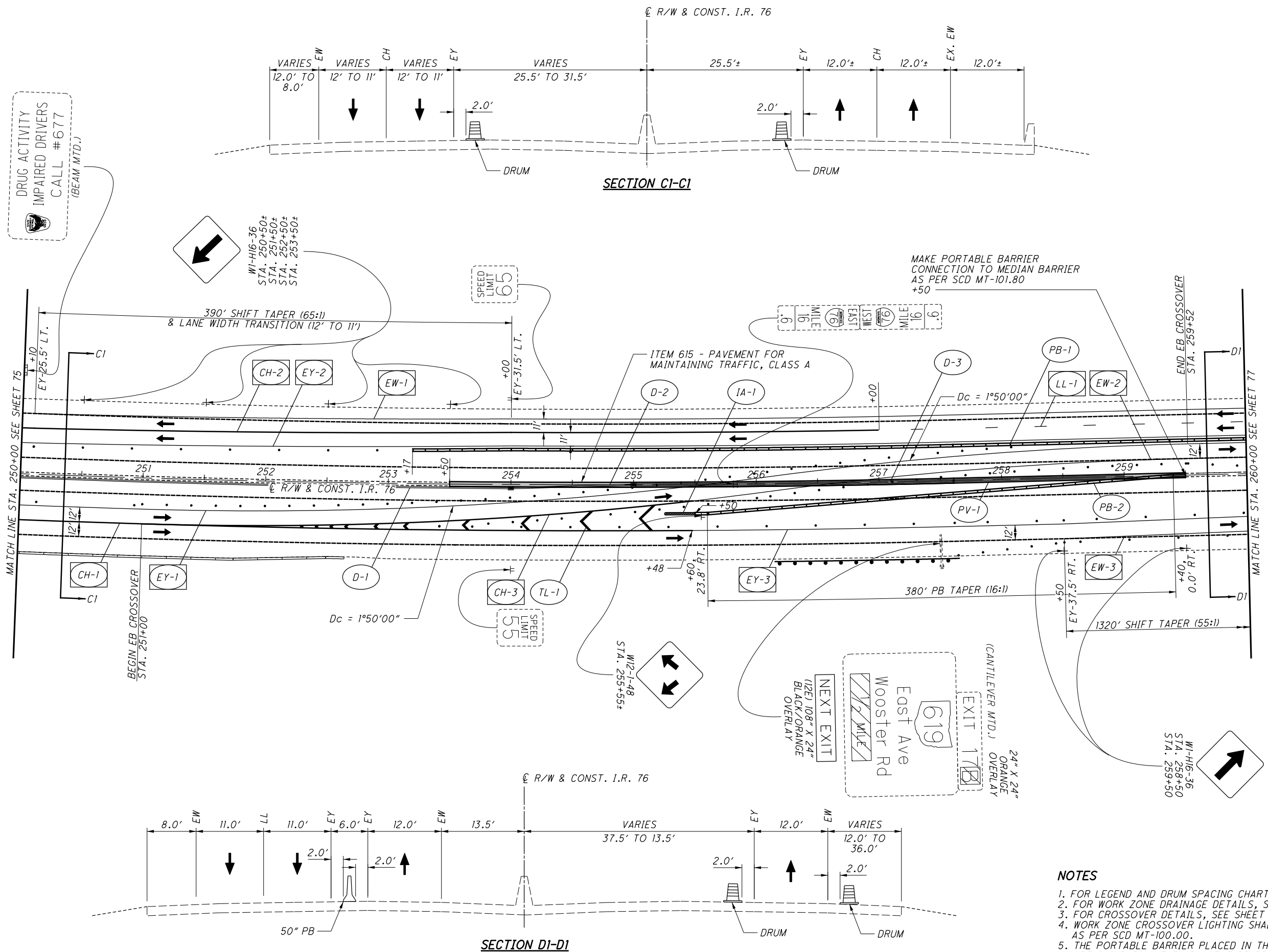
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 156.
  3. FOR QUANTITIES, SEE SHEETS 54-55.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STA. 240+00 TO STA. 250+00**

**SUM-76-5.53**



DRUG ACTIVITY  
IMPAIRED DRIVERS  
CALL #677  
(BEAM MTD.)

WI-H16-36  
STA. 250+50+  
STA. 251+50+  
STA. 252+50+  
STA. 253+50+

SPEED  
LIMIT  
65

SPEED  
LIMIT  
55

WI-12-1-48  
STA. 255+55+

619  
EXIT 1  
EAST AVE  
WOOSTER RD  
NEXT EXIT  
(2E) 108" X 24"  
BLACK/ORANGE  
OVERLAY  
CANTILEVER MTD.)  
ORANGE  
OVERLAY  
24" X 24"

WI-H16-36  
STA. 258+50  
STA. 259+50

SECTION C1-C1

SECTION D1-D1

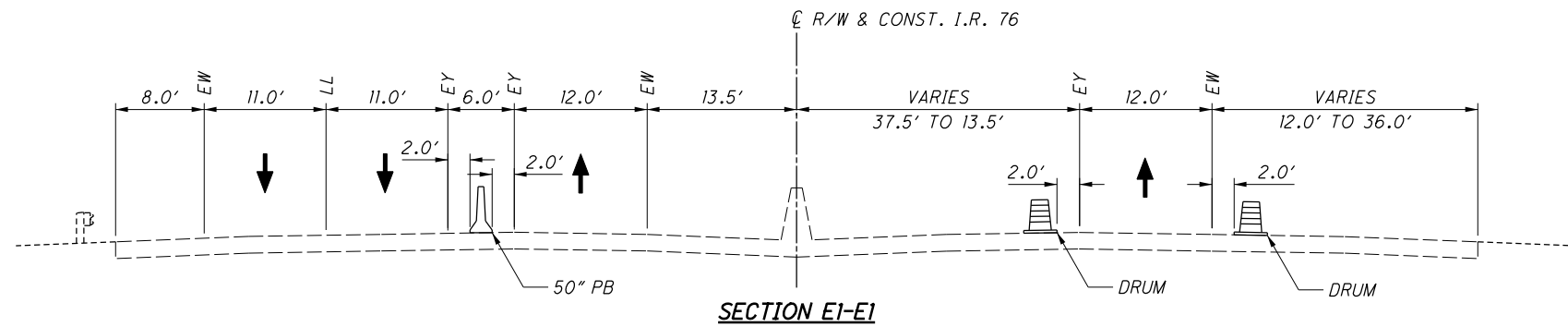
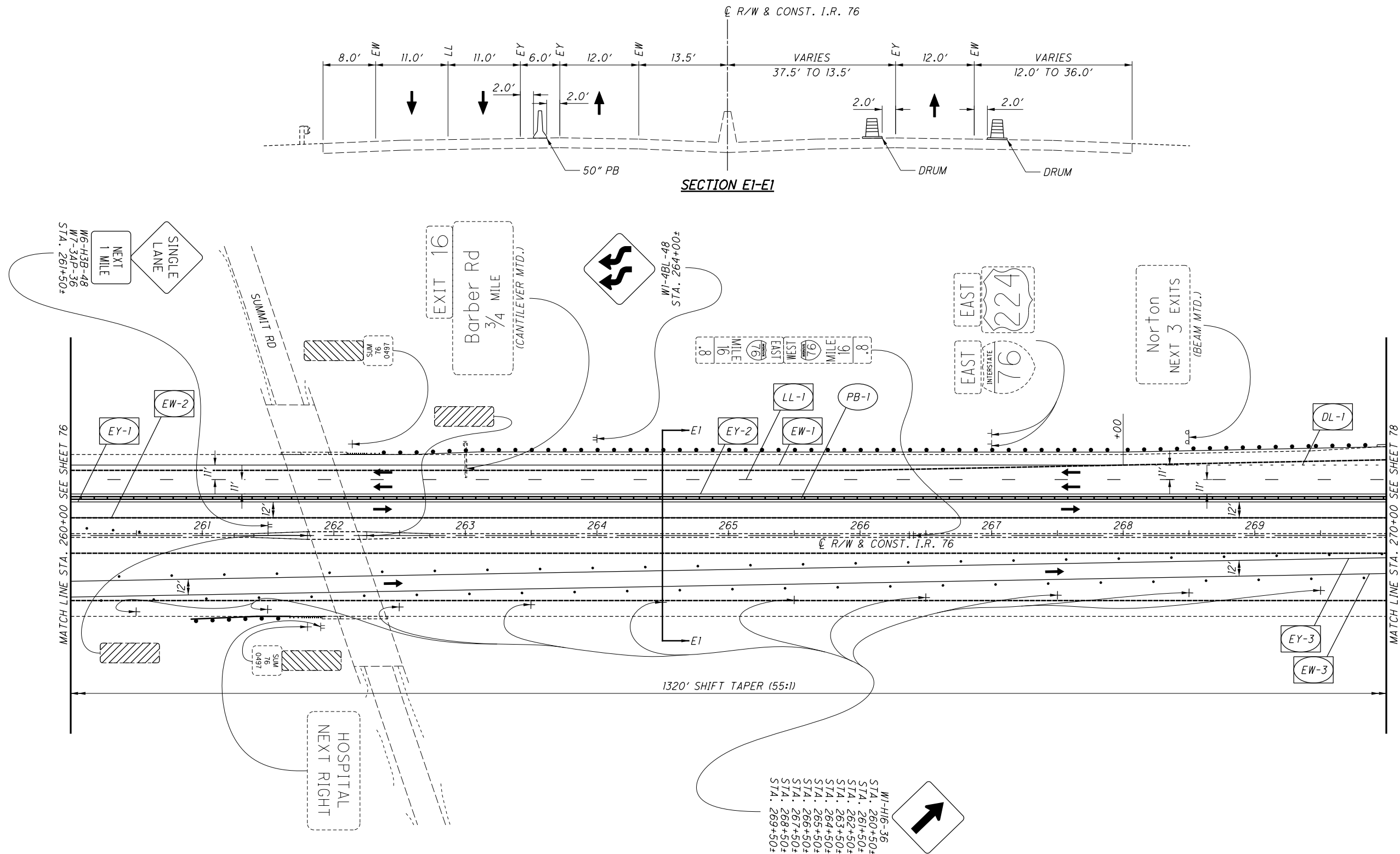
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 156.
  3. FOR CROSSOVER DETAILS, SEE SHEET 150.
  4. WORK ZONE CROSSOVER LIGHTING SHALL BE INSTALLED AS PER SCD MT-100.00.
  5. THE PORTABLE BARRIER PLACED IN THE CROSSOVER OPENING DURING THE ADJACENT DB PROJECT (PID 93501) SHALL BE REMOVED PRIOR TO BEGINNING WORK.
  6. FOR QUANTITIES, SEE SHEETS 54-55.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
STA. 250+00 TO STA. 260+00**

**SUM-76-5.53**



M6-H3B-48  
 M7-34P-36  
 STA. 261+50±  
 SINGLE LANE  
 NEXT 1 MILE

EXIT 16  
 Barber Rd  
 3/4 MILE  
 (CANTILEVER MTD.)

W1-4BL-48  
 STA. 264+00±

EAST 76  
 WEST 76  
 EAST 224  
 WEST 224

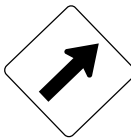
Norton  
 NEXT 3 EXITS  
 (BEAM MTD.)

MATCH LINE STA. 260+00 SEE SHEET 76

MATCH LINE STA. 270+00 SEE SHEET 78

1320' SHIFT TAPER (55:1)

W1-H16-36  
 STA. 260+50±  
 STA. 261+50±  
 STA. 262+50±  
 STA. 263+50±  
 STA. 264+50±  
 STA. 265+50±  
 STA. 266+50±  
 STA. 267+50±  
 STA. 268+50±  
 STA. 269+50±



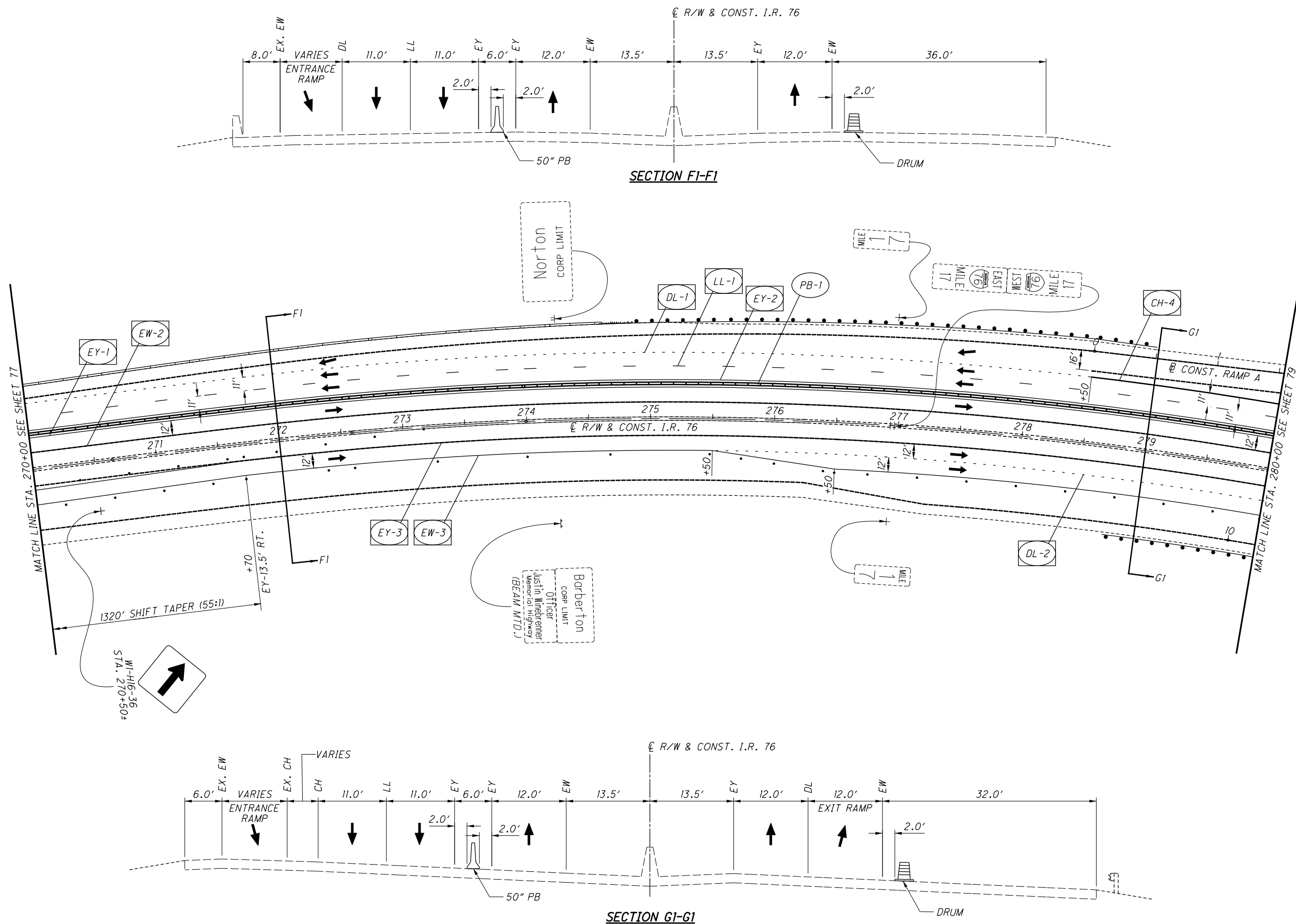
CALCULATED  
 MGM  
 CHECKED  
 NAU

0 20 40 80  
 HORIZONTAL  
 SCALE IN FEET

**Maintenance of Traffic - Phase 1**  
**STA. 260+00 TO STA. 270+00**

SUM-76-5.53

- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR QUANTITIES, SEE SHEETS 54-55.



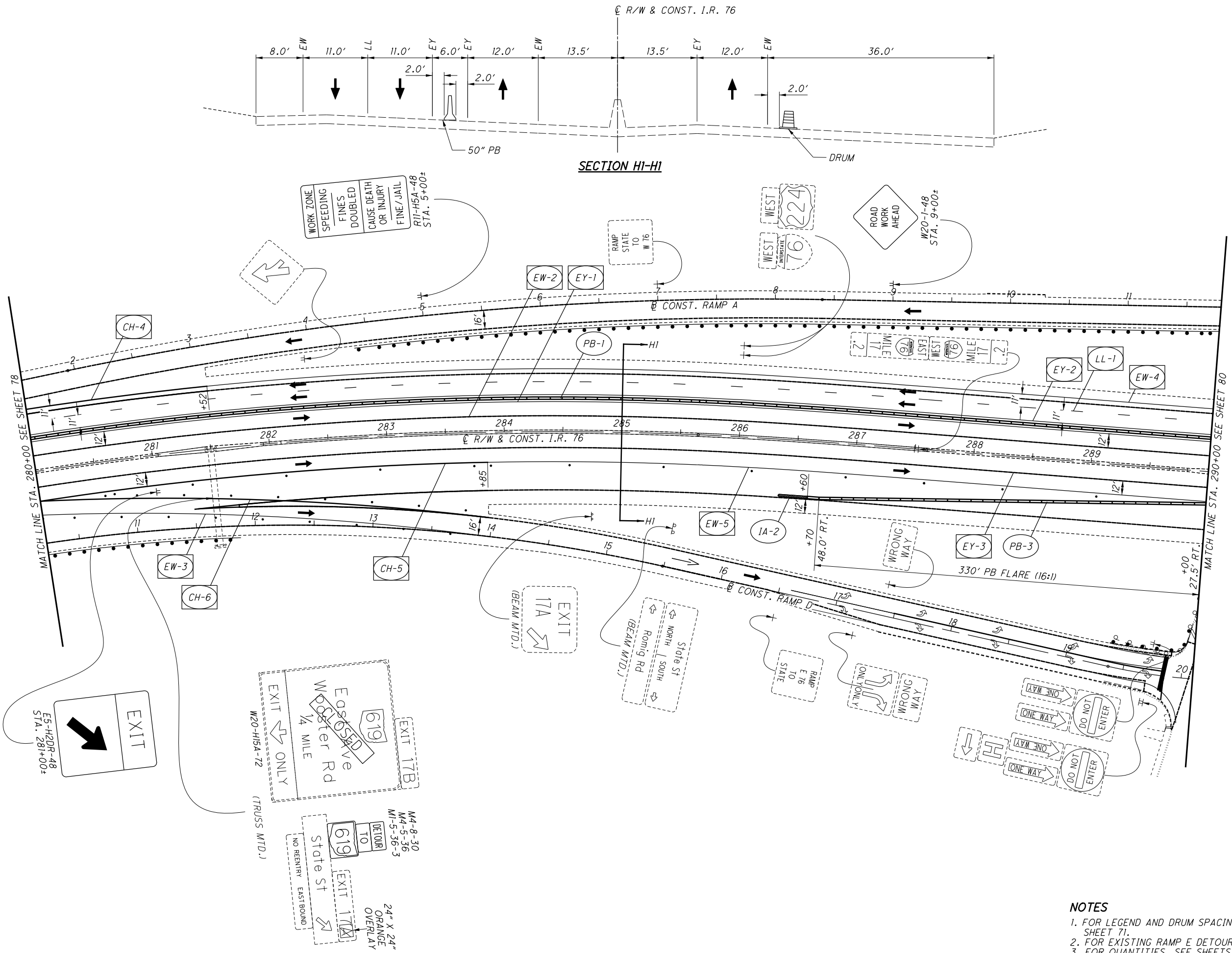
CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STA. 270+00 TO STA. 280+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR QUANTITIES, SEE SHEETS 54-55.



CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STA. 280+00 TO STA. 290+00**

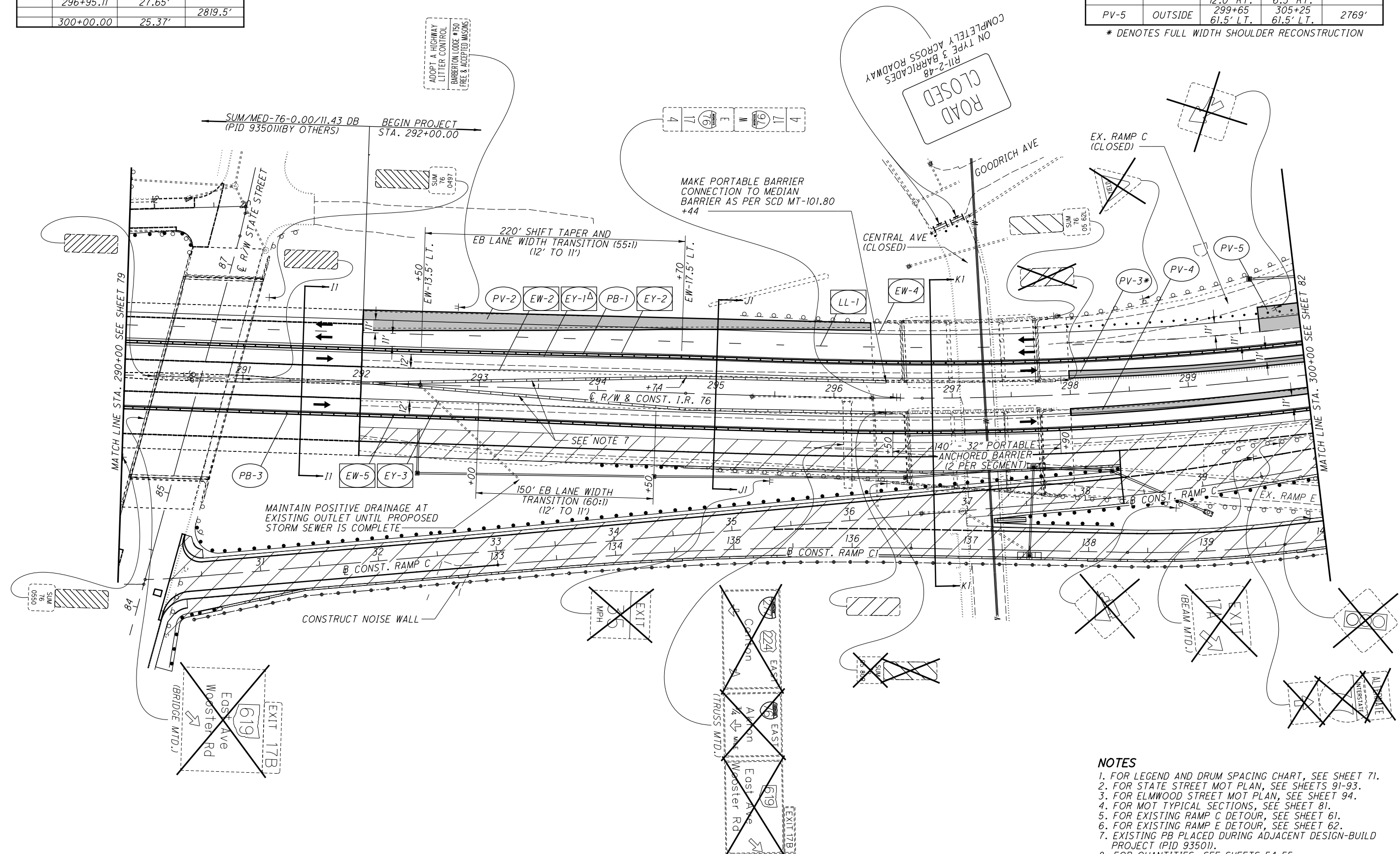
**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP E DETOUR, SEE SHEET 62.
  3. FOR QUANTITIES, SEE SHEETS 54-55.

ΔPAVEMENT MARKING GUIDANCE			
EY	STATION	OFFSET (L.T.)	RADIUS
EY-1	292+50.00	25.5'	-
	294+70.00	28.5'	-
	295+56.58	28.34'	-
	296+95.11	27.65'	-
	300+00.00	25.37'	2819.5'

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A STATION LIMITS					
	SHOULDER	START	END	RADIUS	
	PV-2	OUTSIDE	292+00 61.5' LT.	296+30 63.5' LT.	-
	PV-3*	INSIDE	298+00	309+99	-
	PV-4	INSIDE	298+00 12.0' RT.	305+80 6.5' RT.	2850'
	PV-5	OUTSIDE	299+65 61.5' LT.	305+25 61.5' LT.	2769'

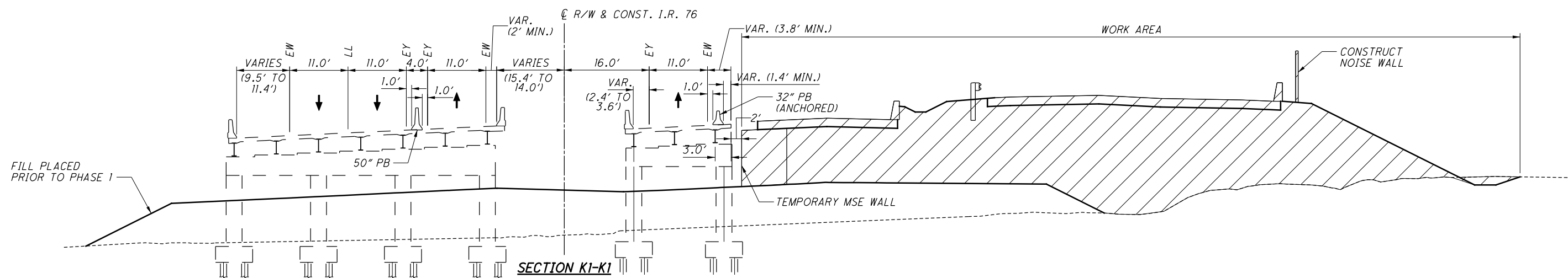
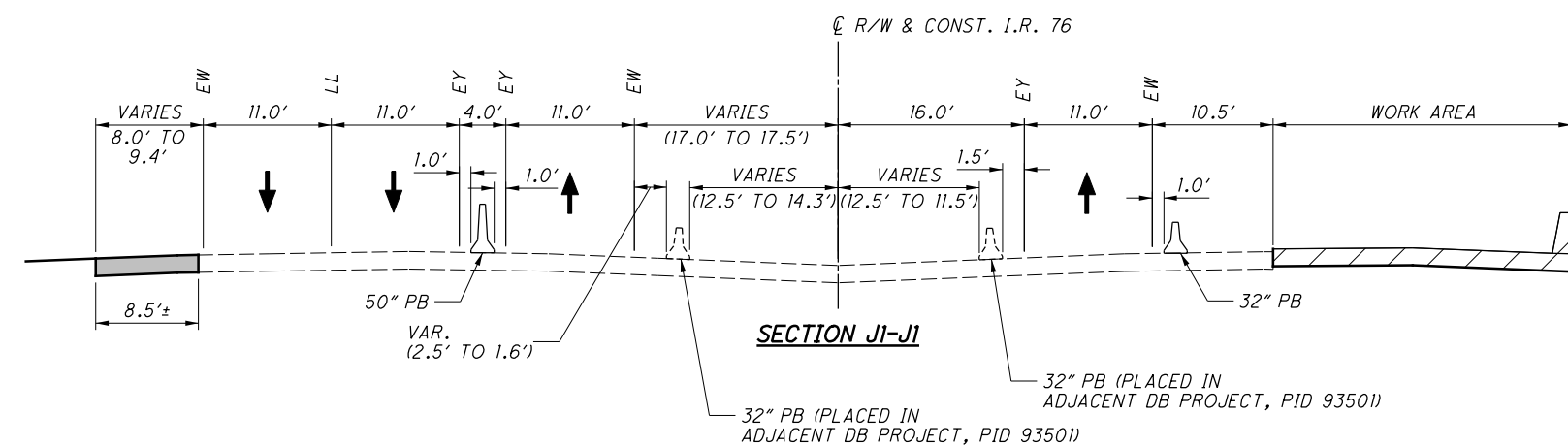
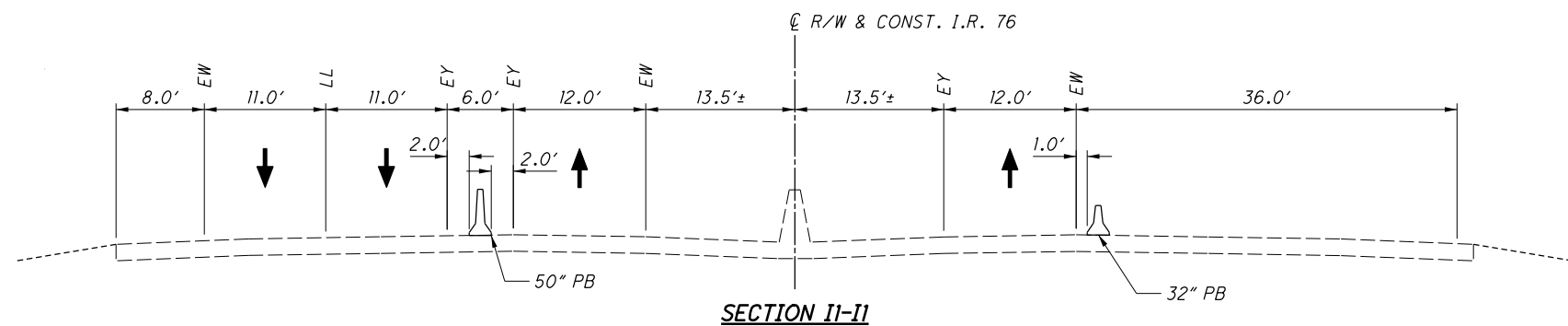
\* DENOTES FULL WIDTH SHOULDER RECONSTRUCTION



- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR STATE STREET MOT PLAN, SEE SHEETS 91-93.
  - FOR ELMWOOD STREET MOT PLAN, SEE SHEET 94.
  - FOR MOT TYPICAL SECTIONS, SEE SHEET 81.
  - FOR EXISTING RAMP C DETOUR, SEE SHEET 61.
  - FOR EXISTING RAMP E DETOUR, SEE SHEET 62.
  - EXISTING PB PLACED DURING ADJACENT DESIGN-BUILD PROJECT (PID 93501).
  - FOR QUANTITIES, SEE SHEETS 54-55.

P:\ODT\MP\0093\_SUM-76-5.62\96670\Design\MOT\Sheets\96670\_MP308.dgn Sheet 11/15/2018 10:42:26 AM CMT031





- NOTES**
1. FOR LEGEND, SEE SHEET 71.
  2. FOR MOT PLAN VIEW, SEE SHEET 80.
  3. FOR QUANTITIES, SEE SHEETS 54-55.

P:\DDT\MP\0093\_SUM-76-5.53\96670\Design\MOT\Sheets\96670\_MY308.dgn Sheet 10/1/2018 3:53:36 PM CMT031

PAVEMENT MARKING GUIDANCE							
EY	STATION	OFFSET (LT.)	RADIUS	EY	STATION	OFFSET (RT.)	RADIUS
EY-1	300+00.00	25.37'	2873.65'	EY-3	300+05.00	16.00'	2855.17'
	304+00.00	21.21'	2815.58'		304+05.00	10.50'	2861.79'
	306+11.55	20.46'	2755.70'		308+49.84	7.82'	7562.45'
	308+41.37	16.72'	1801.51'		311+00.00	7.83'	
	310+00.00	13.89'					
	311+07.04	14.25'					

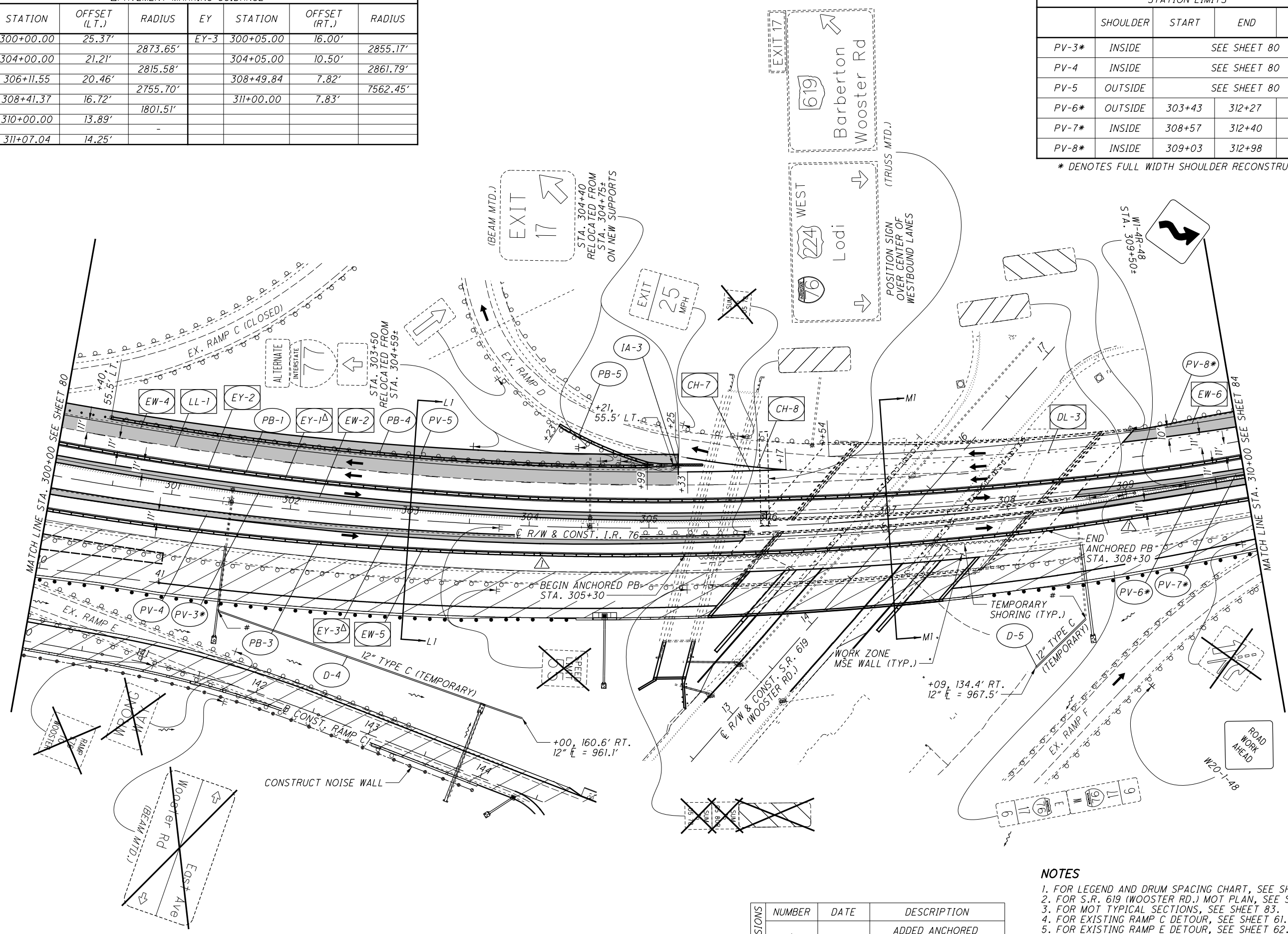
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A STATION LIMITS				
	SHOULDER	START	END	RADIUS
PV-3*	INSIDE	SEE SHEET 80		
PV-4	INSIDE	SEE SHEET 80		
PV-5	OUTSIDE	SEE SHEET 80		
PV-6*	OUTSIDE	303+43	312+27	-
PV-7*	INSIDE	308+57	312+40	-
PV-8*	INSIDE	309+03	312+98	-

\* DENOTES FULL WIDTH SHOULDER RECONSTRUCTION

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL SCALE IN FEET

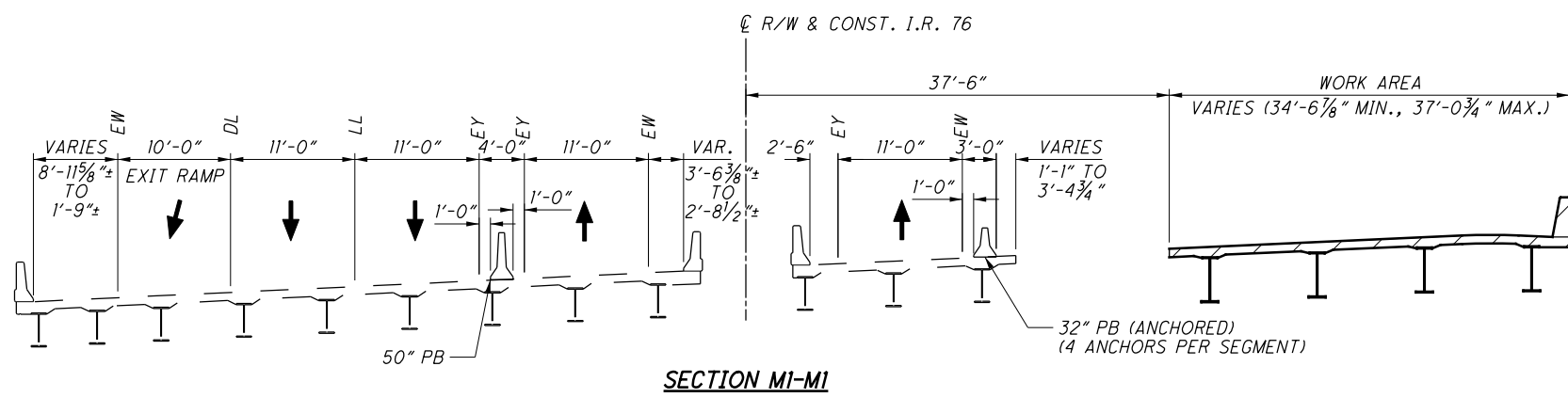
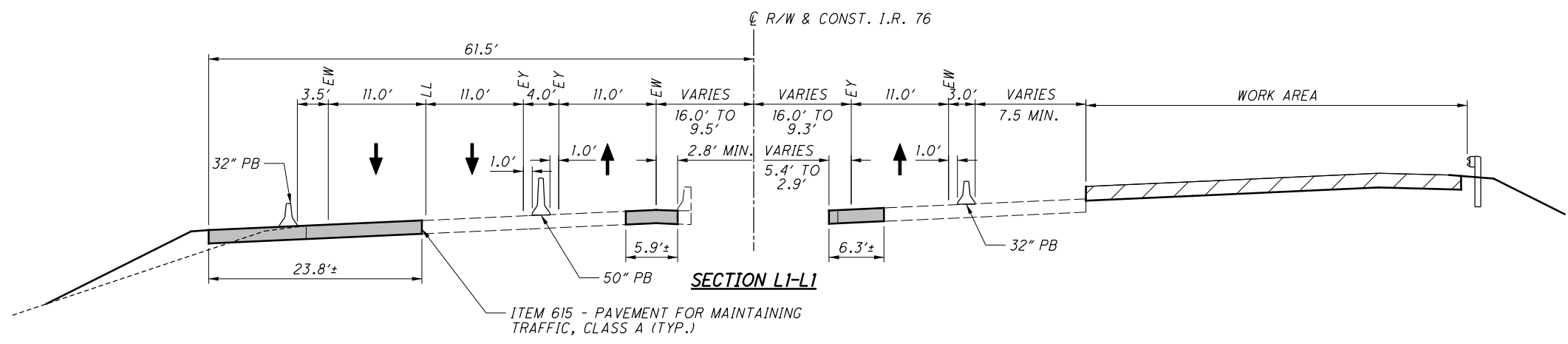
**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STA. 300+00 TO STA. 310+00**



REVISIONS	NUMBER	DATE	DESCRIPTION
▲	1	4/4/19	ADDED ANCHORED PORTABLE BARRIER SEGMENT

- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR S.R. 619 (WOOSTER RD.) MOT PLAN, SEE SHEETS 95-97.
  - FOR MOT TYPICAL SECTIONS, SEE SHEET 83.
  - FOR EXISTING RAMP C DETOUR, SEE SHEET 61.
  - FOR EXISTING RAMP E DETOUR, SEE SHEET 62.
  - FOR QUANTITIES, SEE SHEETS 54-55.
- # CONNECT 12" TYPE C (TEMPORARY) TO EXISTING 12"

P:\ODT\MP\0093\_SUM-76-5.62\96670\Design\MOT\Sheets\96670\_MP309.dgn Sheet 4/4/2019 4:45:20 PM CMT031



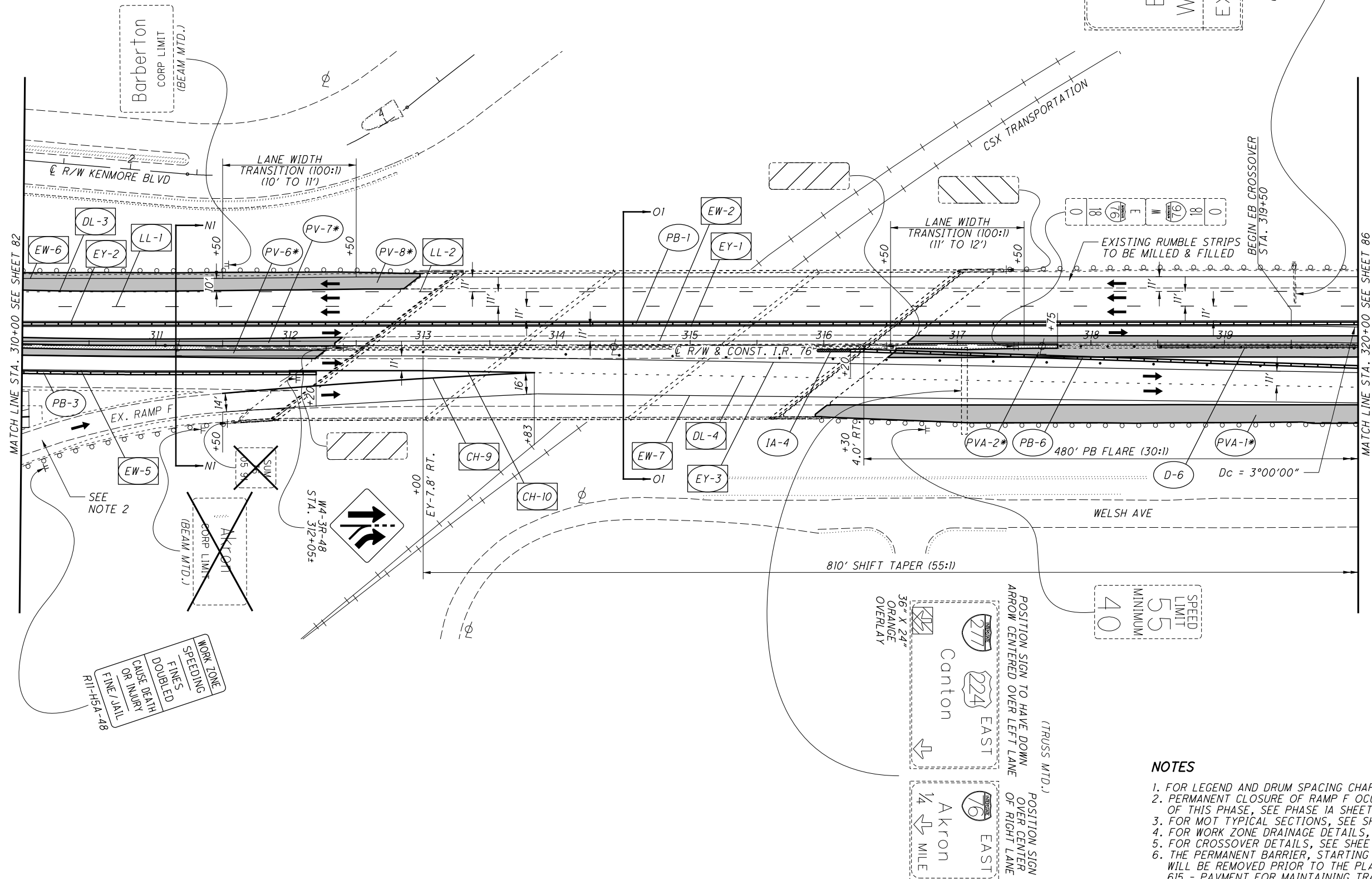
REVISIONS	NUMBER	DATE	DESCRIPTION
△		4/4/19	REVISED NUMBER OF ANCHORS PER PORTABLE BARRIER SEGMENT

- NOTES**
1. FOR LEGEND, SEE SHEET 71.
  2. FOR MOT PLAN VIEW, SEE SHEET 82.
  3. FOR QUANTITIES, SEE SHEETS 54-55.

P:\DDT\MP\0093\_SUM-76-5.62\96670\Design\MOT\Sheets\96670\_MY309.dgn Sheet 4/4/2019 3:00:49 PM CMT031

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A STATION LIMITS				
	SHOULDER	START	END	RADIUS
	PV-6*	INSIDE	SEE SHEET 82	
	PV-7*	INSIDE	SEE SHEET 82	
	PV-8*	OUTSIDE	SEE SHEET 82	
	PVA-1*	OUTSIDE	315+94	333+23
	PVA-2*	INSIDE	316+48	335+80

\* DENOTES FULL WIDTH SHOULDER RECONSTRUCTION

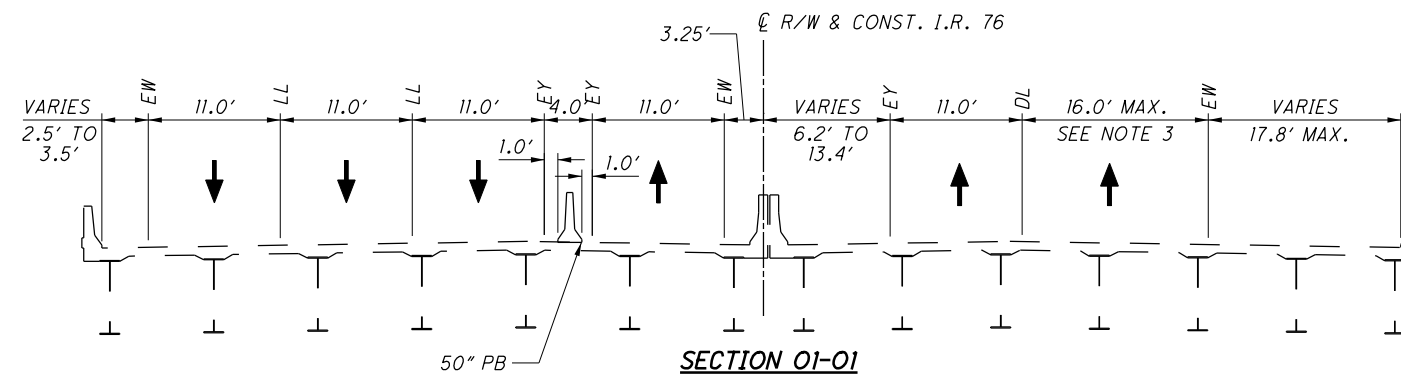
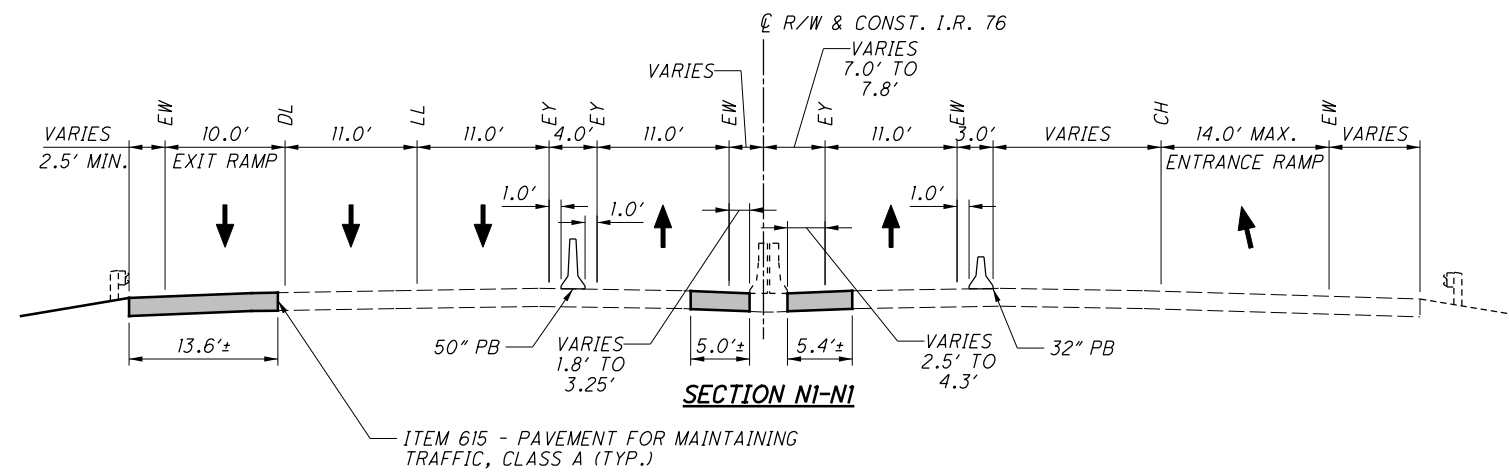


- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. PERMANENT CLOSURE OF RAMP F OCCURS AT THE END OF THIS PHASE, SEE PHASE 1A SHEET 98 FOR DETAILS.
  3. FOR MOT TYPICAL SECTIONS, SEE SHEET 85.
  4. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 158.
  5. FOR CROSSOVER DETAILS, SEE SHEET 153.
  6. THE PERMANENT BARRIER, STARTING AT STA. 317+75, WILL BE REMOVED PRIOR TO THE PLACEMENT OF ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A.
  7. FOR QUANTITIES, SEE SHEETS 54-55.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
STA. 310+00 TO STA. 320+00**



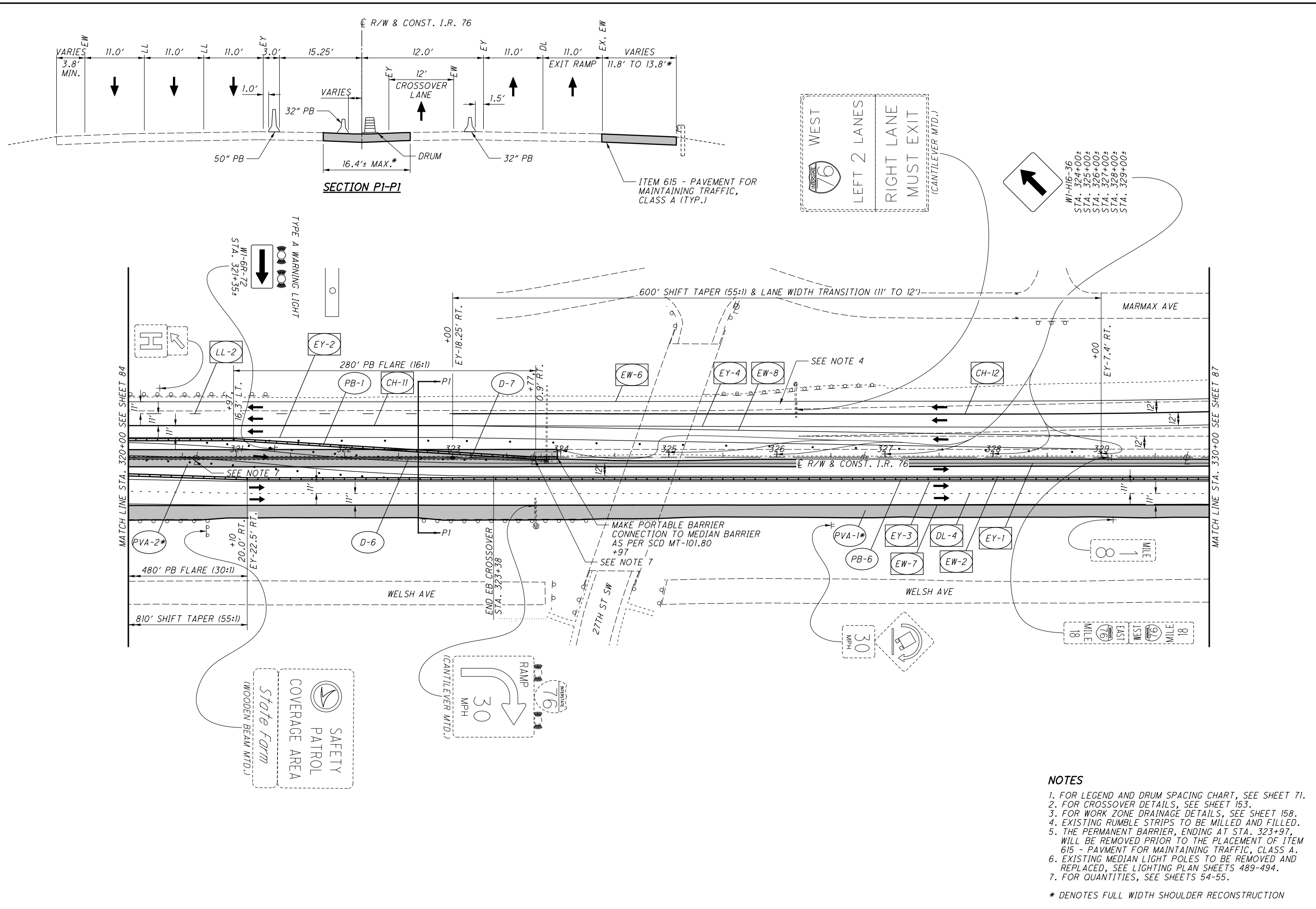
**NOTES**

1. FOR LEGEND, SHEET SHEET 71.
2. FOR MOT PLAN VIEW, SEE SHEET 84.
3. FOR QUANTITIES, SEE SHEETS 54-55.

CALCULATED  
MGM  
CHECKED  
NAU

**MAINTENANCE OF TRAFFIC - PHASE 1**

**SUM-76-5.53**



**SECTION P1-P1**

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (TYP.)



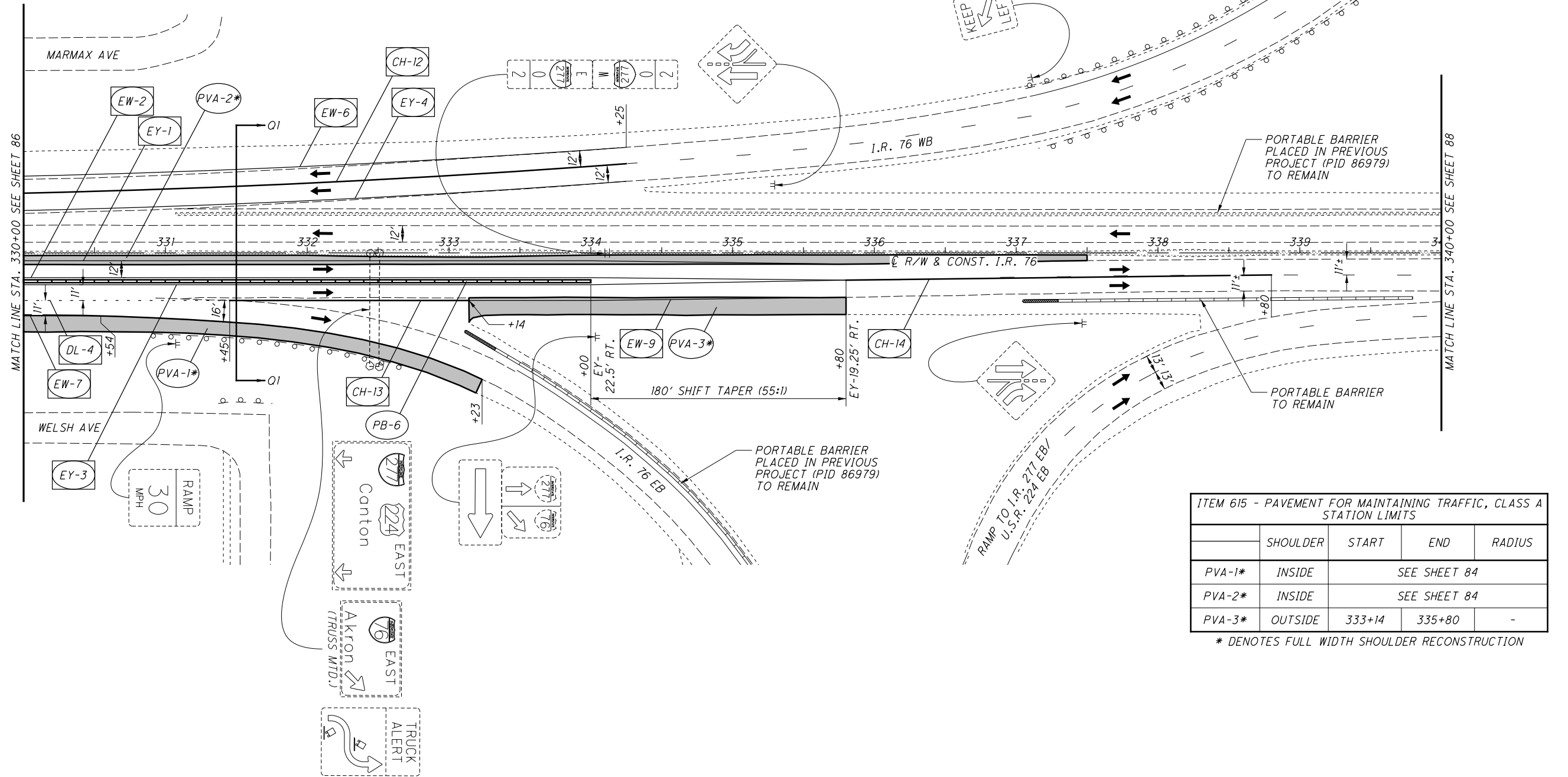
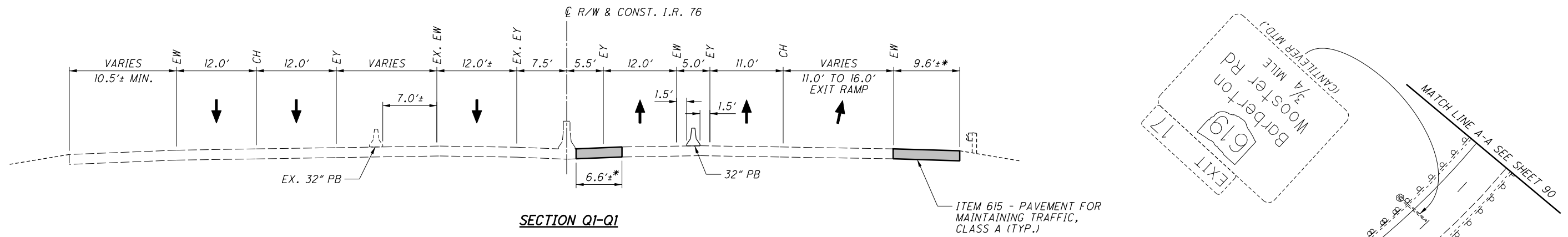
WI-H16-36  
STA. 324+00±  
STA. 325+00±  
STA. 326+00±  
STA. 327+00±  
STA. 328+00±  
STA. 329+00±



**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STA. 320+00 TO STA. 330+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR CROSSOVER DETAILS, SEE SHEET 153.
  3. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 158.
  4. EXISTING RUMBLE STRIPS TO BE MILLED AND FILLED.
  5. THE PERMANENT BARRIER, ENDING AT STA. 323+97, WILL BE REMOVED PRIOR TO THE PLACEMENT OF ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A.
  6. EXISTING MEDIAN LIGHT POLES TO BE REMOVED AND REPLACED, SEE LIGHTING PLAN SHEETS 489-494.
  7. FOR QUANTITIES, SEE SHEETS 54-55.
- \* DENOTES FULL WIDTH SHOULDER RECONSTRUCTION

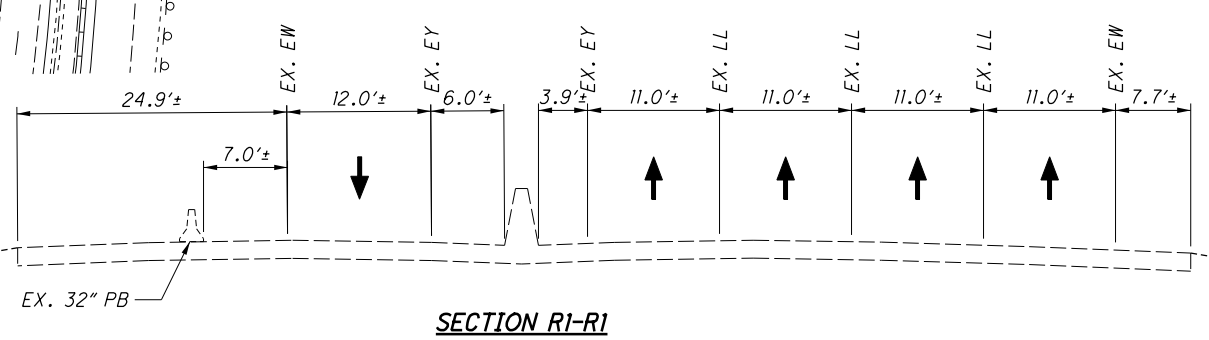
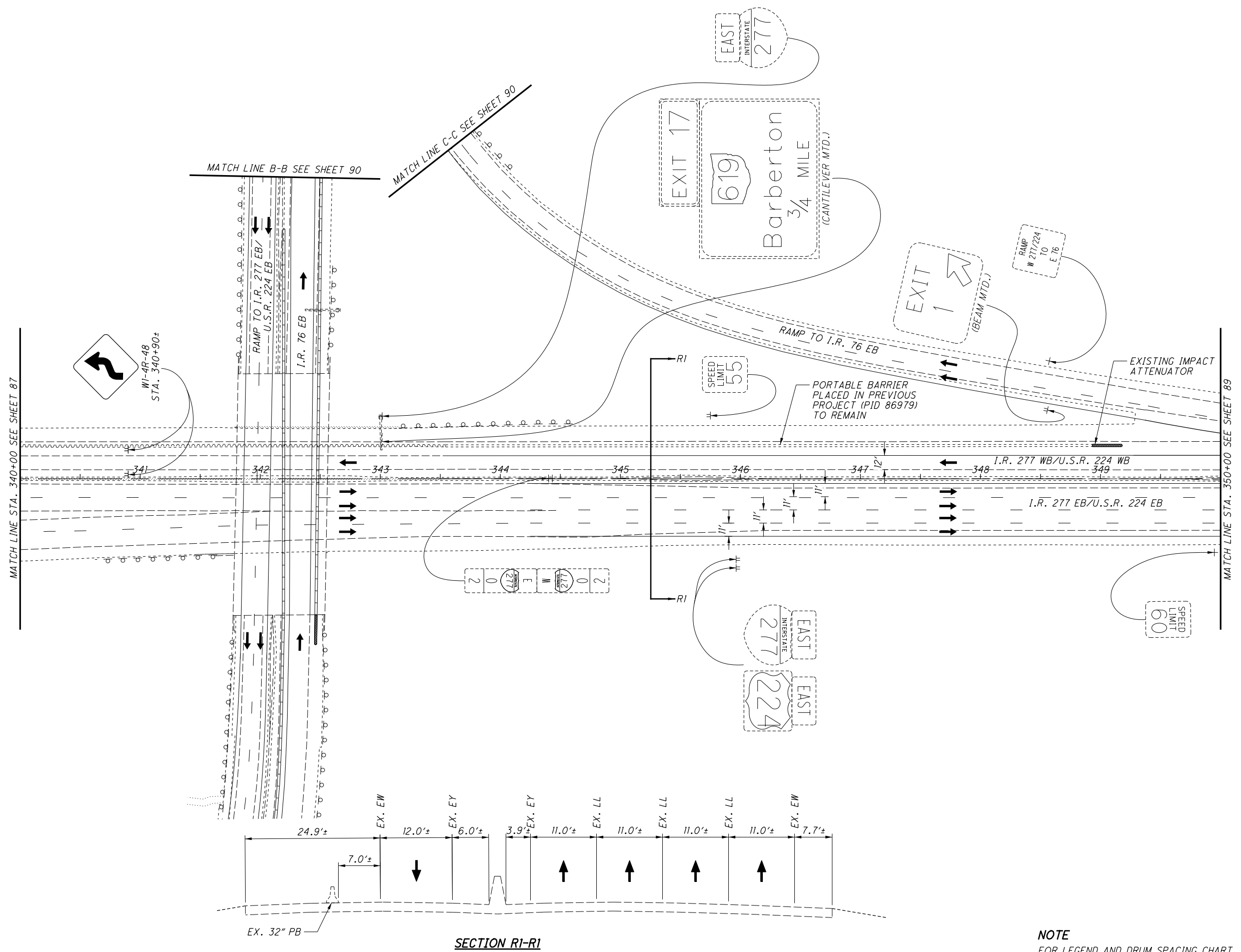


ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A STATION LIMITS

	SHOULDER	START	END	RADIUS
PVA-1*	INSIDE	SEE SHEET 84		
PVA-2*	INSIDE	SEE SHEET 84		
PVA-3*	OUTSIDE	333+14	335+80	-

\* DENOTES FULL WIDTH SHOULDER RECONSTRUCTION

**NOTES**  
 1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
 2. FOR QUANTITIES, SEE SHEETS 54-55.



SECTION R1-R1

NOTE  
FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.

CALCULATED  
MGM  
CHECKED  
NAU

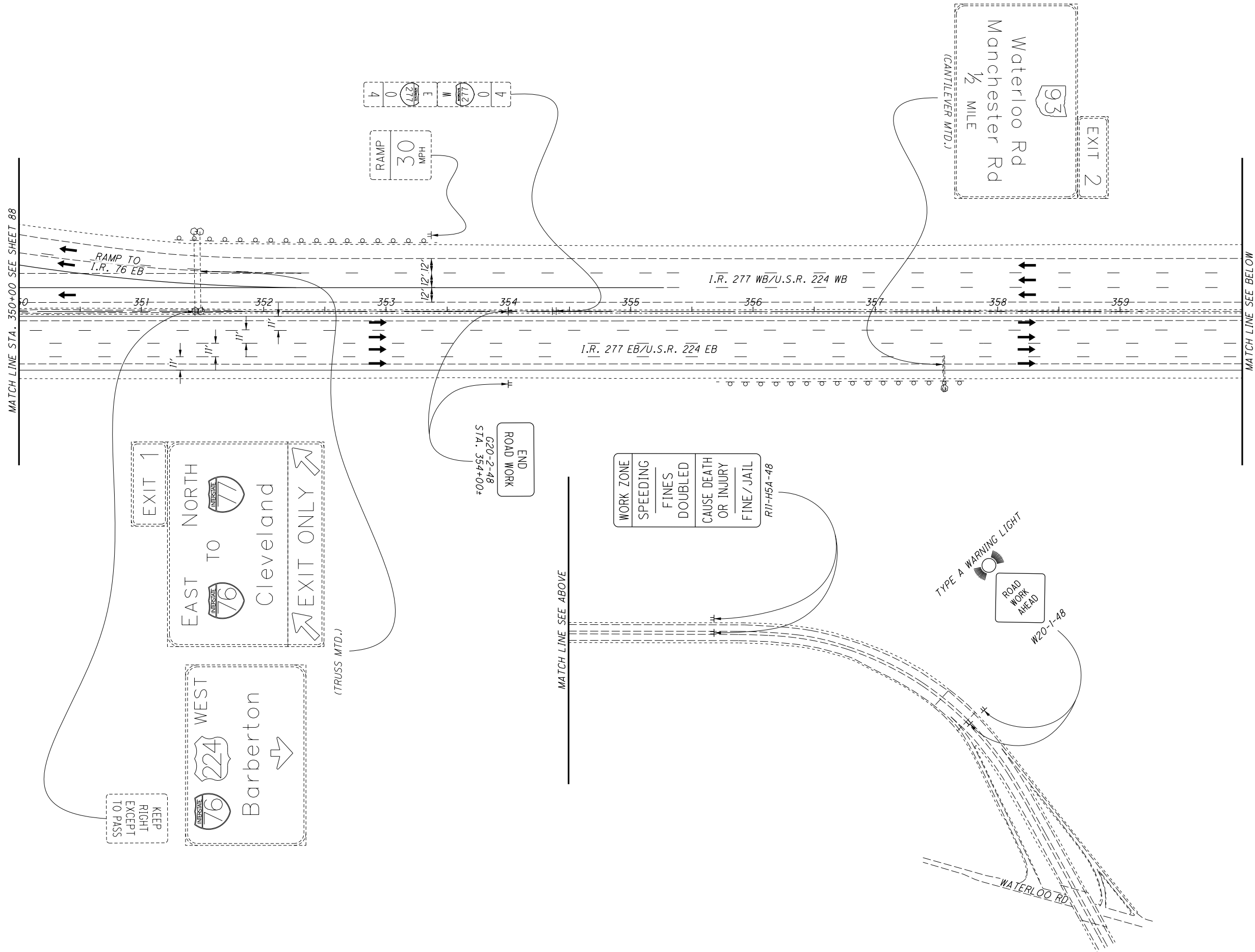
0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**I.R. 277 / U.S.R. 224**

**SUM-76-5.53**



**NOTE**  
FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.

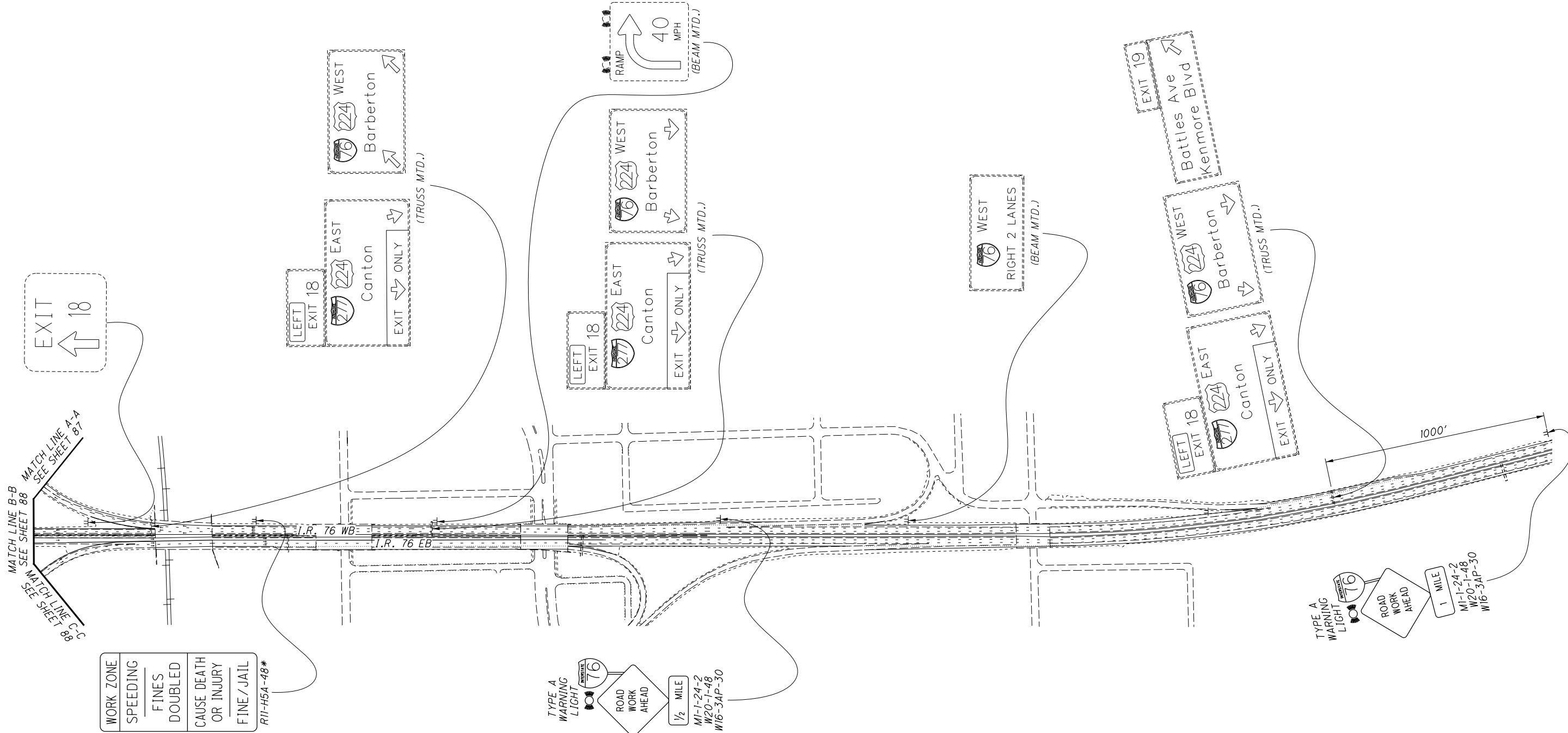


CALCULATED  
MGM  
CHECKED  
NAU



0 20 40 80  
HORIZONTAL  
SCALE IN FEET



**MAINTENANCE OF TRAFFIC - PHASES 1-3**  
**I.R. 277 / U.S.R. 224**

**SUM-76-5.53**



WORK ZONE  
 SPEEDING  
 FINES DOUBLED  
 CAUSE DEATH OR INJURY  
 FINE/JAIL  
 R11-H54-48\*

TYPE A WARNING LIGHT  
  
 ROAD WORK AHEAD  
  
 1/2 MILE  
 MI-1-24-2  
 W20-1-48  
 W16-3AP-30

TYPE A WARNING LIGHT  
  
 ROAD WORK AHEAD  
  
 1 MILE  
 MI-1-24-2  
 W20-1-48  
 W16-3AP-30

**NOTE**  
 FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.

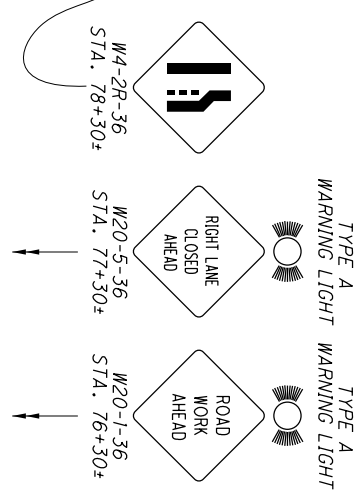
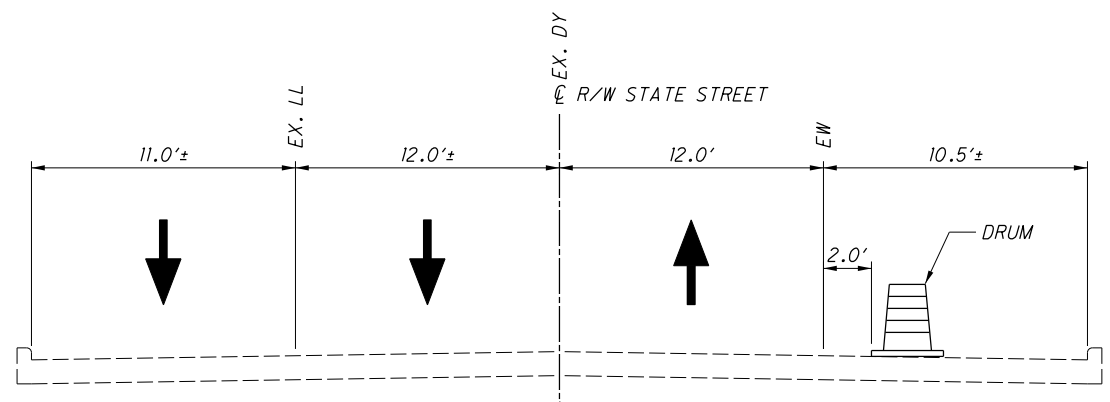
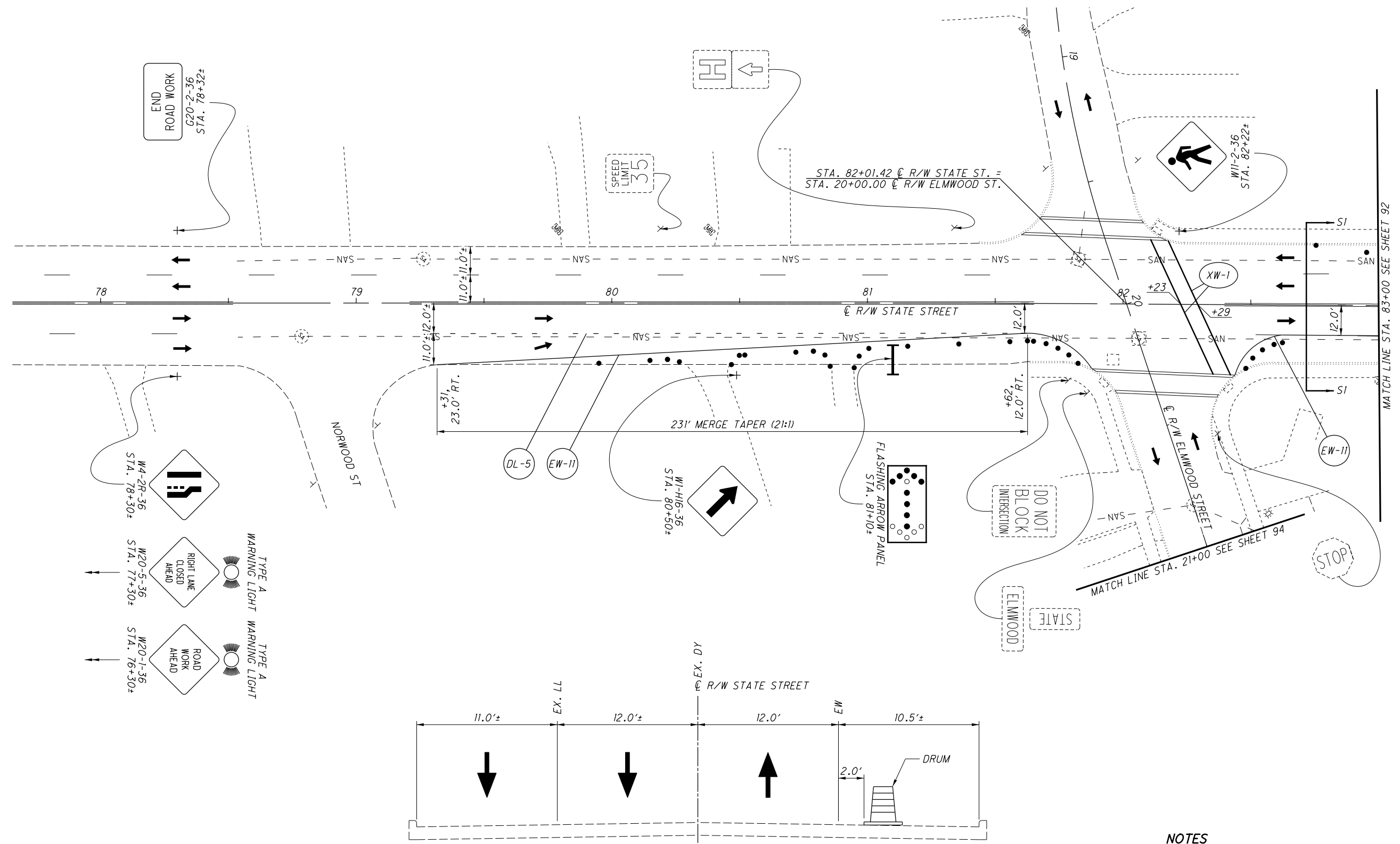
CALCULATED  
 MGM  
 CHECKED  
 NAU



HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**I.R. 76**

**SUM-76-5.53**



END ROAD WORK  
G20-2-36  
STA. 78+32±

SPEED LIMIT  
35

STA. 82+01.42 @ R/W STATE ST. =  
STA. 20+00.00 @ R/W ELMWOOD ST.

MATCH LINE STA. 21+00 SEE SHEET 94

MATCH LINE STA. 83+00 SEE SHEET 92

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR QUANTITIES, SEE SHEET 59.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40  
HORIZONTAL  
SCALE IN FEET

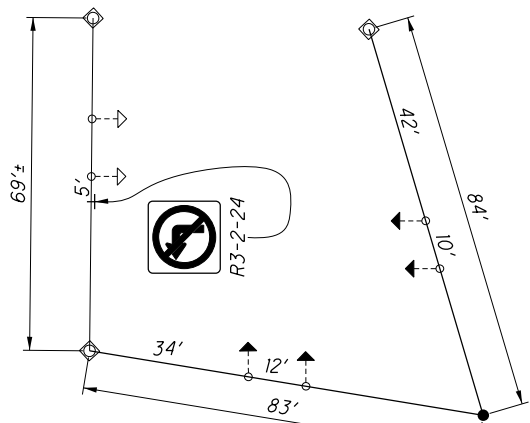
**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STATE ST. - STA. 78+00 TO STA. 83+00**

**SUM-76-5.53**

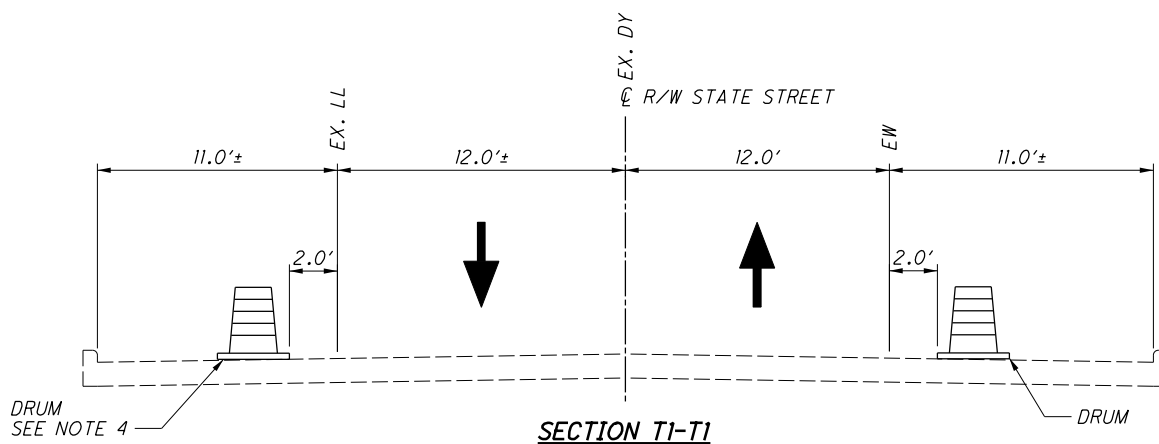
**TEMPORARY SIGNAL LEGEND**

- ◻ EXISTING STRAIN POLE
- TEMPORARY SIGNAL POLE
- EXISTING VEHICULAR SIGNAL HEAD
- RELOCATED VEHICULAR SIGNAL HEAD
- ⊥ SPAN WIRE MOUNTED SIGN

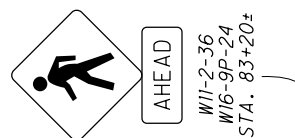
NOTE: THE EXISTING SIGNAL PHASING AND TIMING SHALL NOT BE MODIFIED DURING THIS PHASE



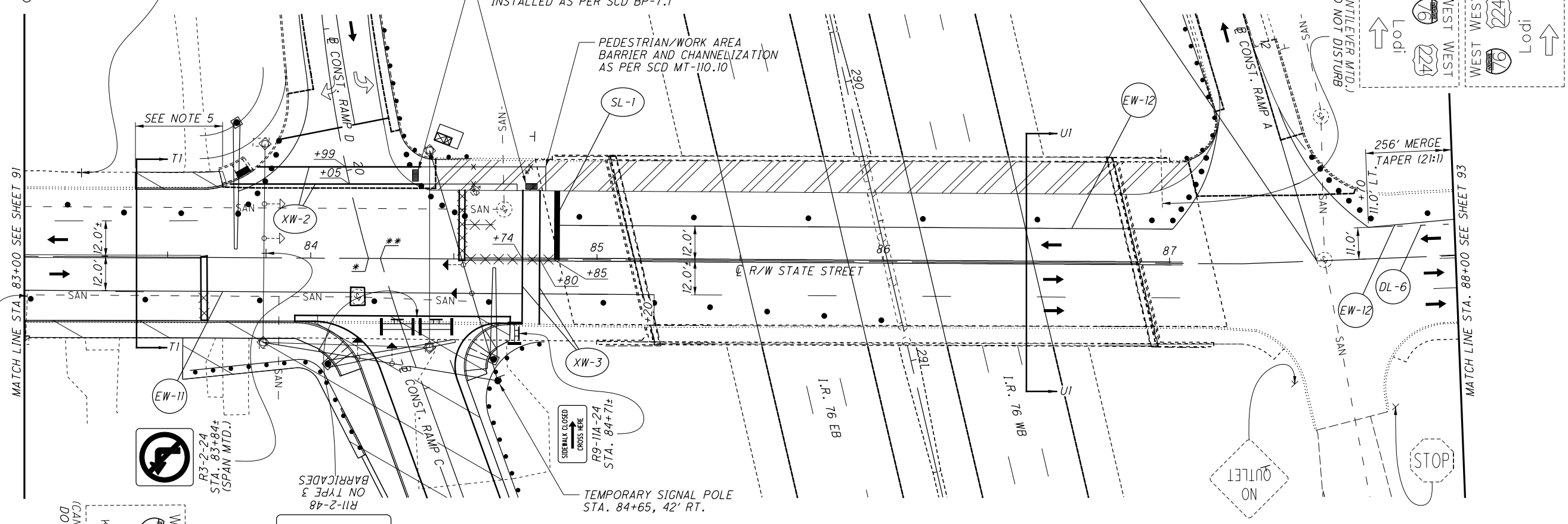
**TEMPORARY SIGNAL SPAN LAYOUT**



**SECTION T1-T1**



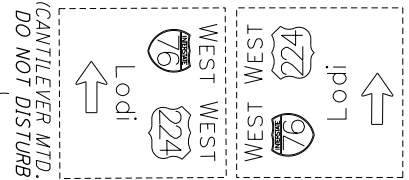
W11-2-36  
W16-9P-24  
STA. 83+20±



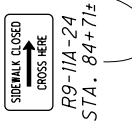
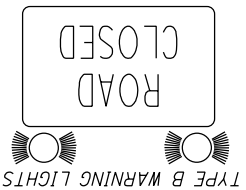
MATCH LINE STA. 83+00 SEE SHEET 91

MATCH LINE STA. 88+00 SEE SHEET 93

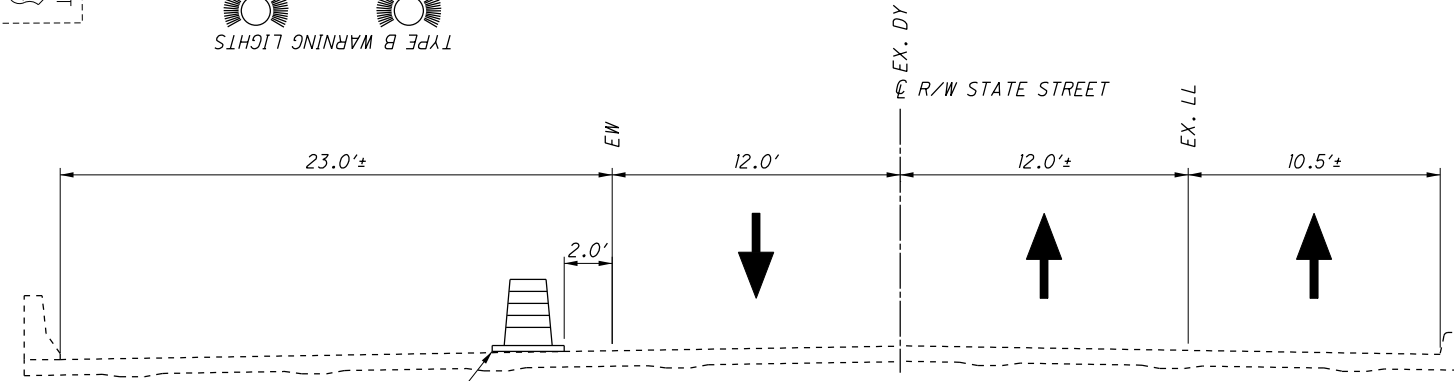
STA. 87+51.50 @ R/W STATE ST. =  
STA. 12+77.75 @ CONST. RAMP A



256' MERGE TAPER (2:1)



TEMPORARY SIGNAL POLE  
STA. 84+65, 42' RT.



**SECTION U1-U1**

- \* STA. 84+20.21 @ R/W STATE ST. = STA. 20+31.63 @ CONST. RAMP D
- \*\* STA. 84+24.37 @ R/W STATE ST. = STA. 30+01.95 @ CONST. RAMP C

**NOTES**

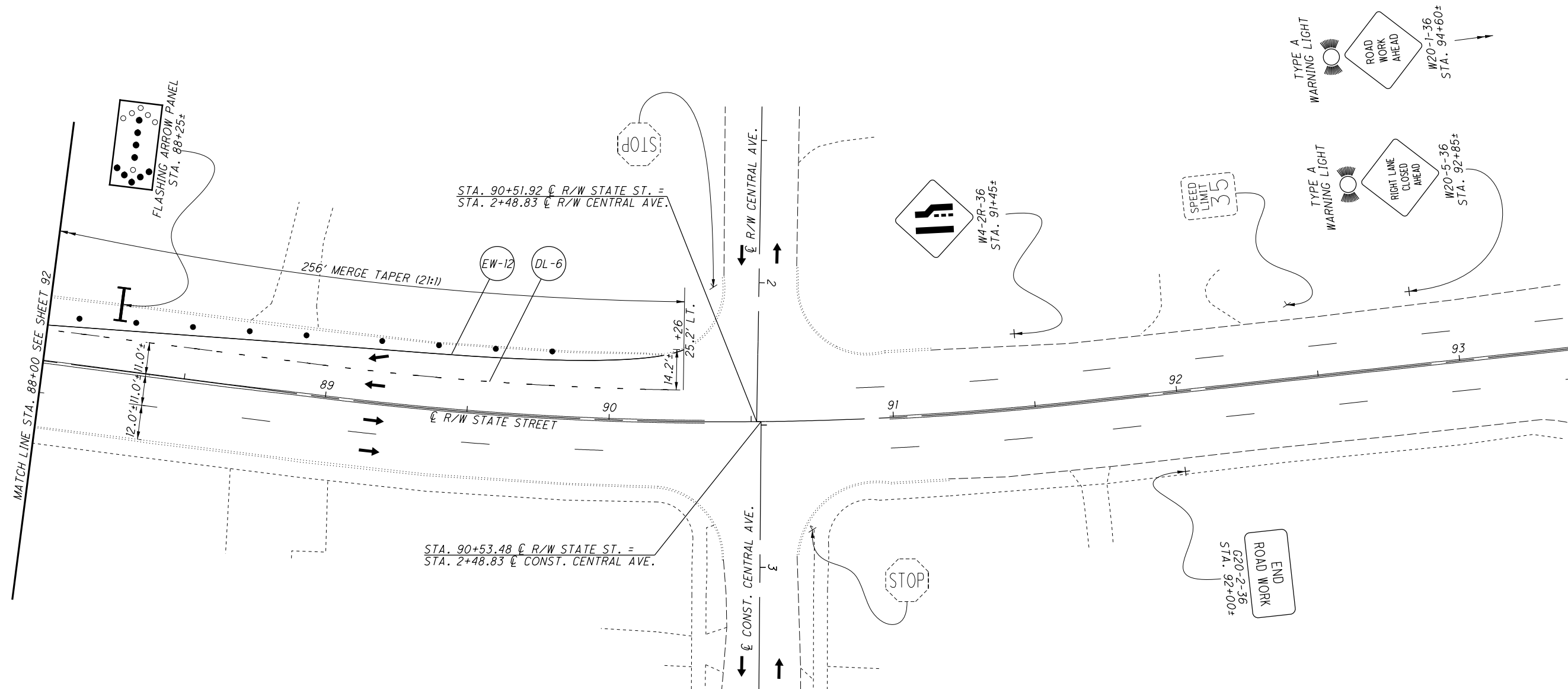
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
2. FOR I.R. 76 MOT PLAN, SEE SHEETS 71-90.
3. PROPOSED TRAFFIC SIGNAL AT THE PROPOSED RAMP C INTERSECTION SHALL BE CONSTRUCTED IN THIS PHASE.
4. SECTION SHOWS TYPICAL MOT SETUP DURING WORKING HOURS. DRUMS SHALL BE PULLED BACK DURING NON-WORKING HOURS.
5. SIDEWALK REPLACEMENT SHALL NOT OCCUR SIMULTANEOUSLY WITH SIDEWALK CLOSURE ON EAST SIDE OF STATE STREET.
6. FOR QUANTITIES, SEE SHEET 59.



**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STATE ST. - STA. 83+00 TO STA. 88+00**

**SUM-76-5.53**

92  
672

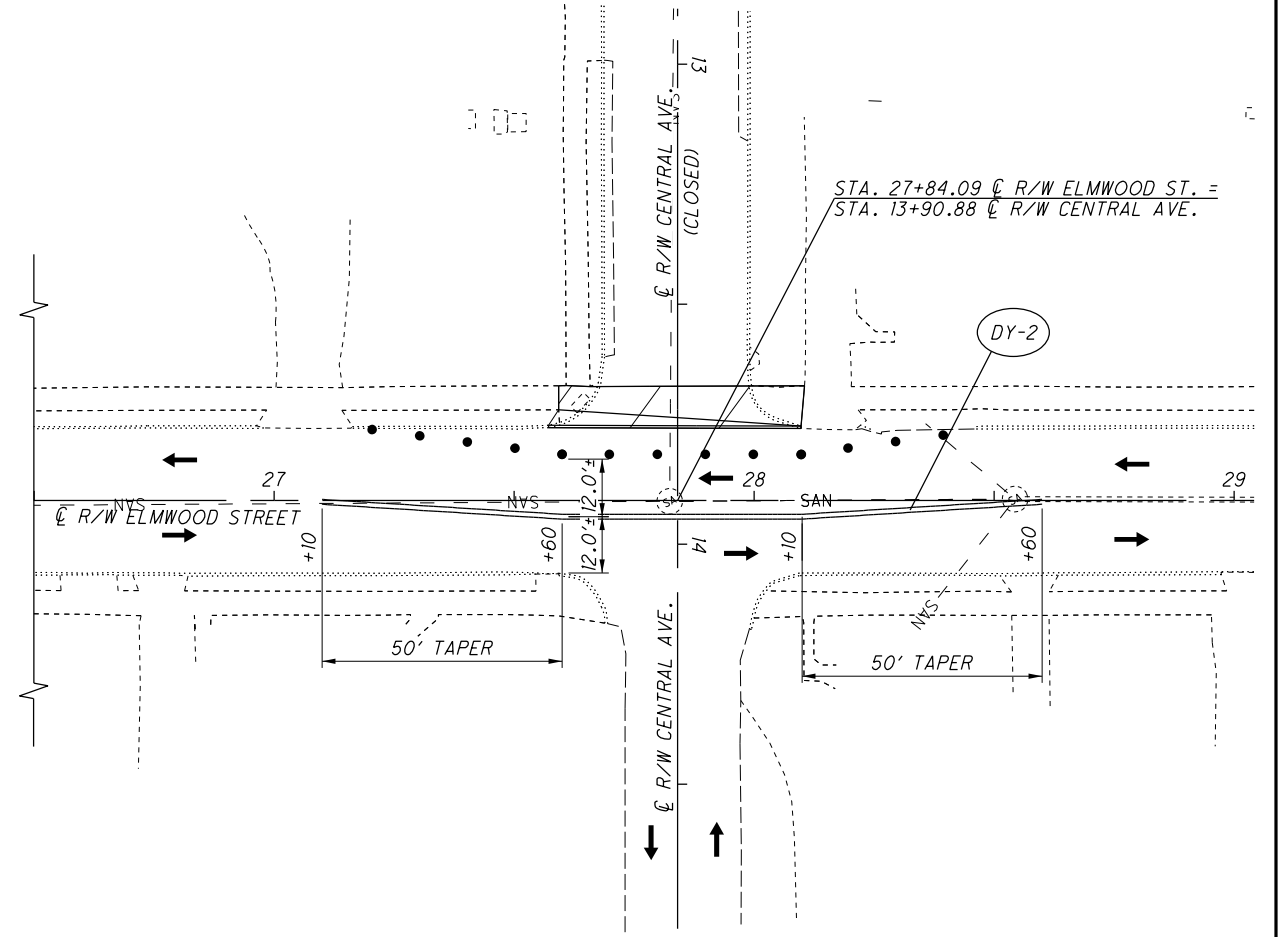
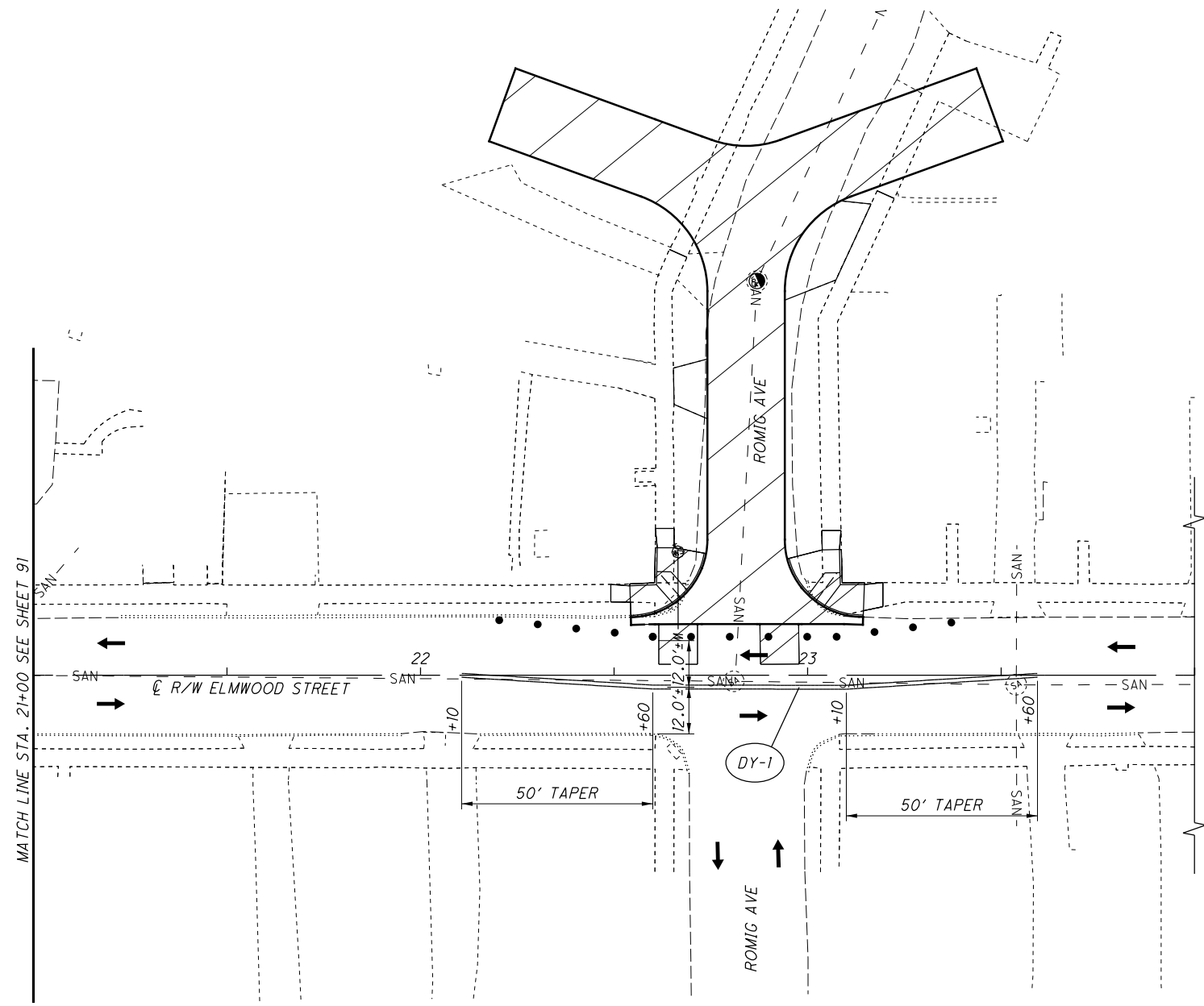


**NOTES**  
 1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
 2. FOR QUANTITIES, SEE SHEET 59.

CALCULATED	MGM
CHECKED	NAU

0 10 20 40  
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**STATE ST. - STA. 88+00 TO STA. 93+00**



**NOTES**

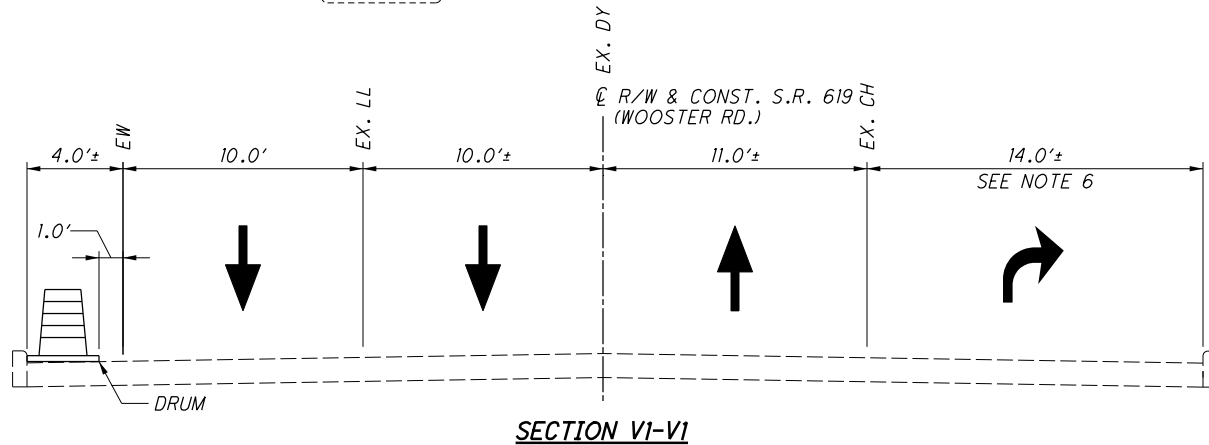
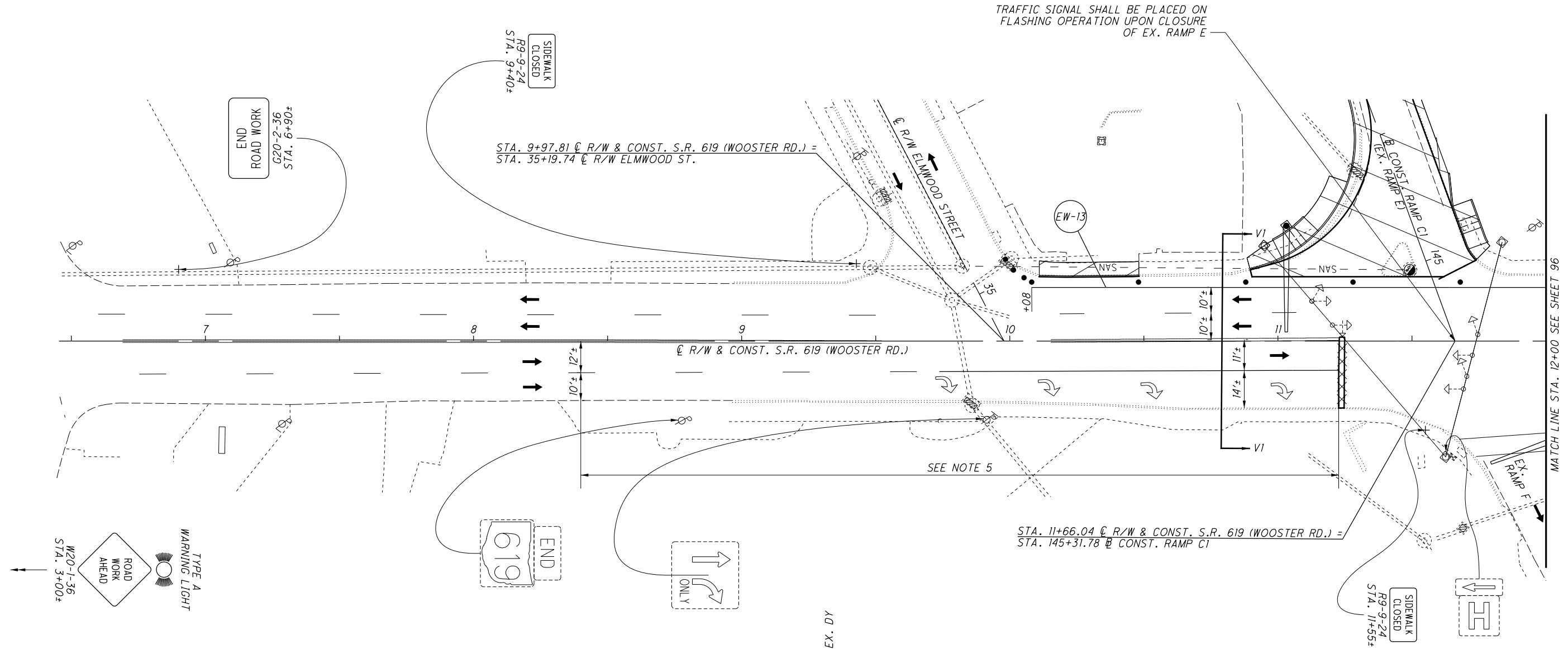
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
2. FOR QUANTITIES, SEE SHEET 59.

CALCULATED	MGM
CHECKED	NAU

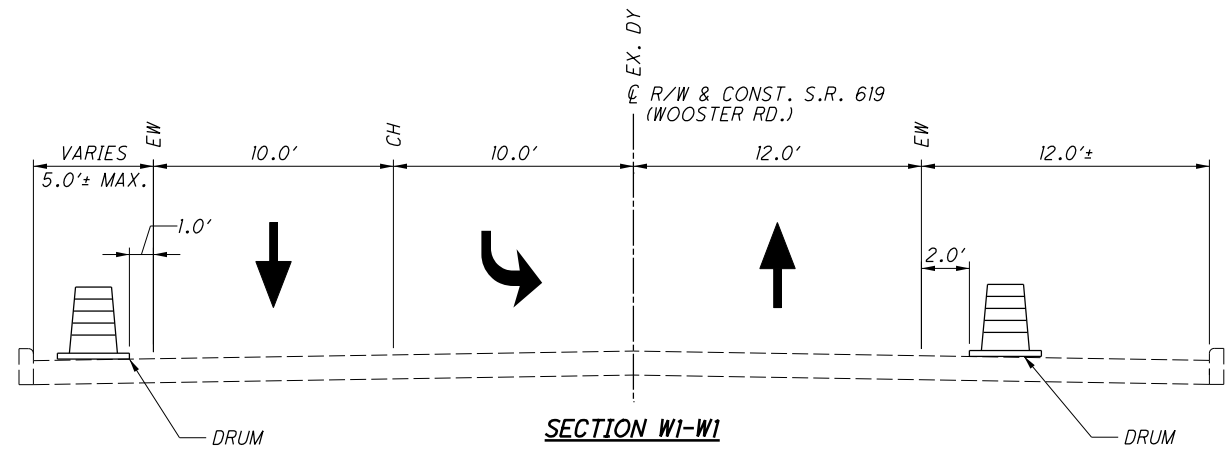
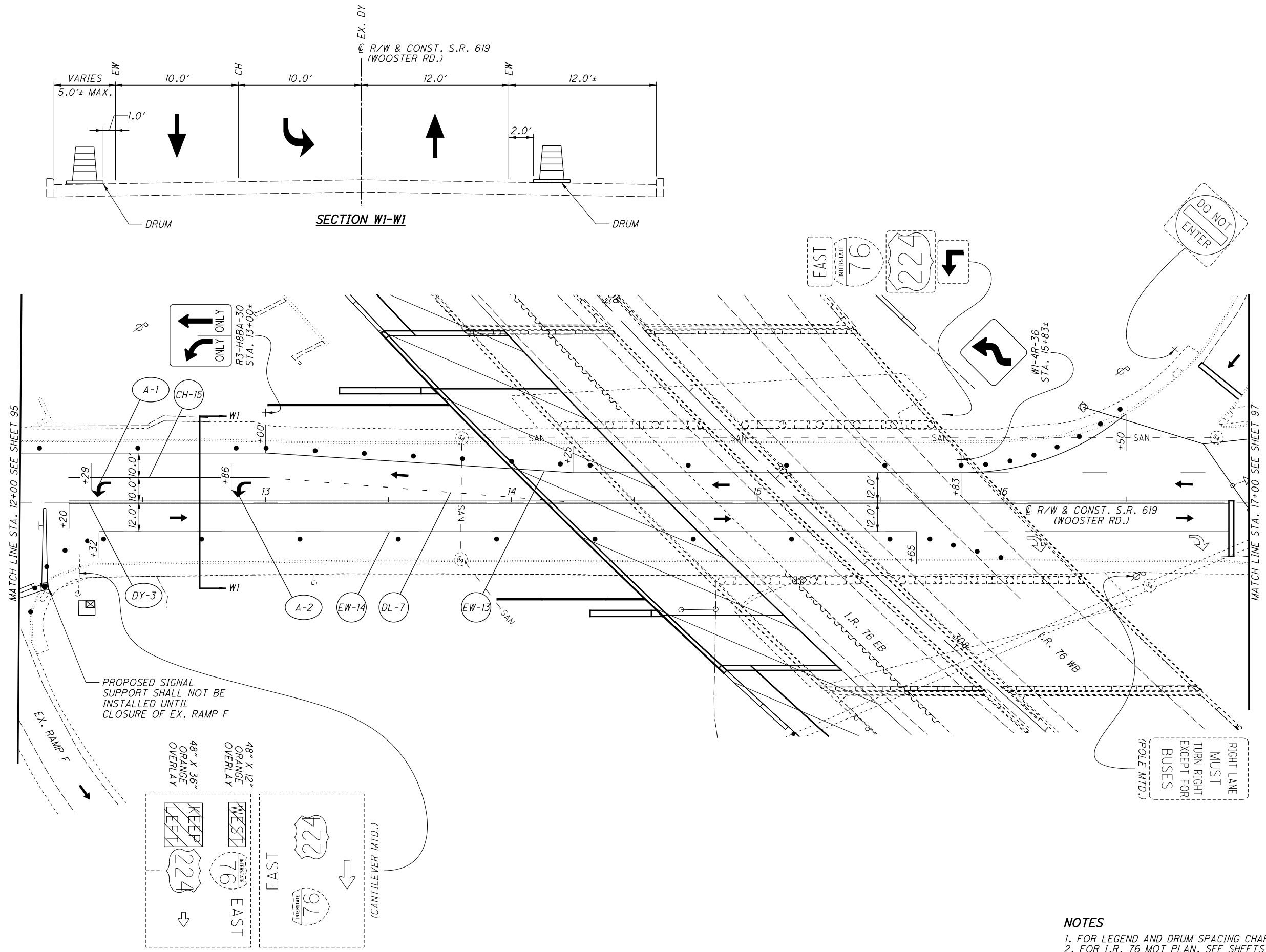
0 10 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**ELMWOOD ST. - STA. 21+00 TO STA. 29+00**

**SUM-76-5.53**



- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 71-90.
  3. FOR ELMWOOD STREET MOT PLAN, SEE SHEET 94.
  4. FOR EXISTING RAMP E DETOUR, SEE SHEET 62.
  5. RAMP F SHALL REMAIN OPEN DURING THIS PHASE AND WILL BE CLOSED AT THE BEGINNING OF PHASE 1A. UPON CLOSURE OF THIS RAMP, THE NORTHBOUND RIGHT LANE ON S.R. 619 SHALL BE CLOSED WITH DRUMS AS SHOWN ON PHASE 2 SHEET 119 AND BARRICADES SHALL BE PLACED ACROSS RAMP F AS PER SCD MT-101.60.
  6. FOR QUANTITIES, SEE SHEET 59.



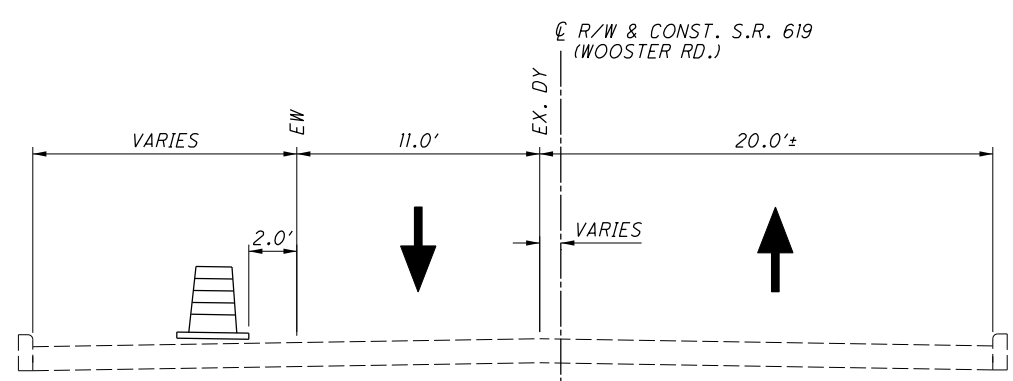
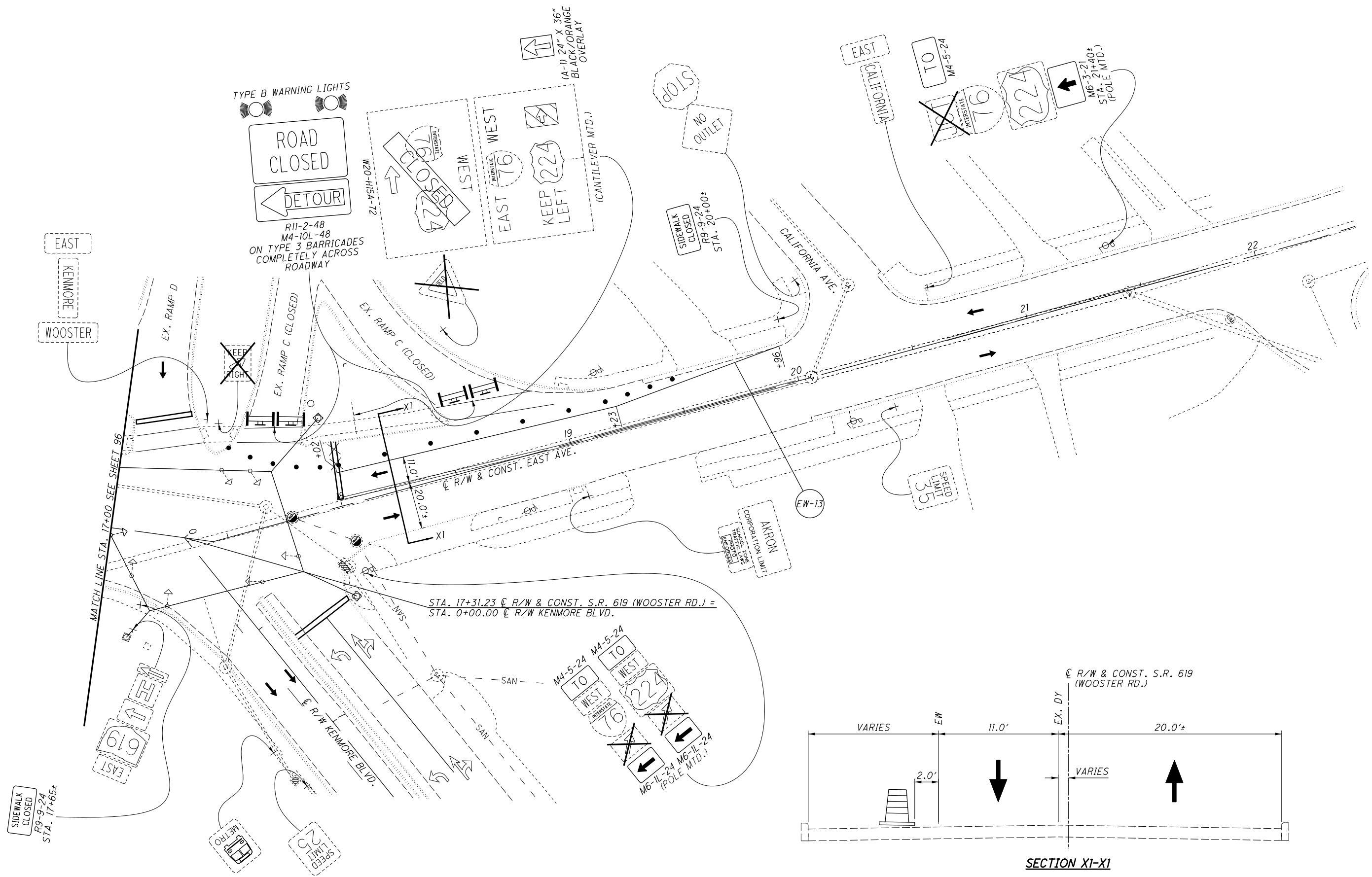
**Maintenance of Traffic - Phase 1**  
**S.R. 619 - STA. 12+00 TO STA. 17+00**

**SUM-76-5.53**

96  
672

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 71-90.
  3. FOR EXISTING RAMP E DETOUR, SEE SHEET 62.
  4. RAMP F SHALL REMAIN OPEN DURING THIS PHASE AND WILL BE CLOSED AT THE BEGINNING OF PHASE 1A.
  5. FOR QUANTITIES, SEE SHEET 59.





SECTION X1-X1

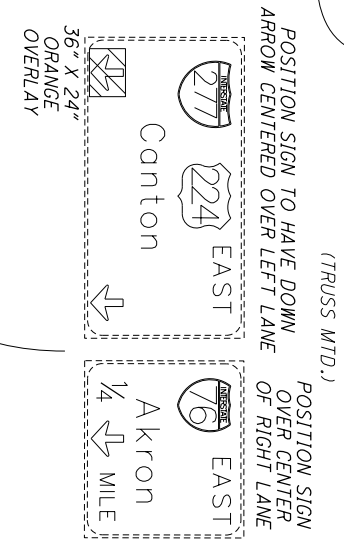
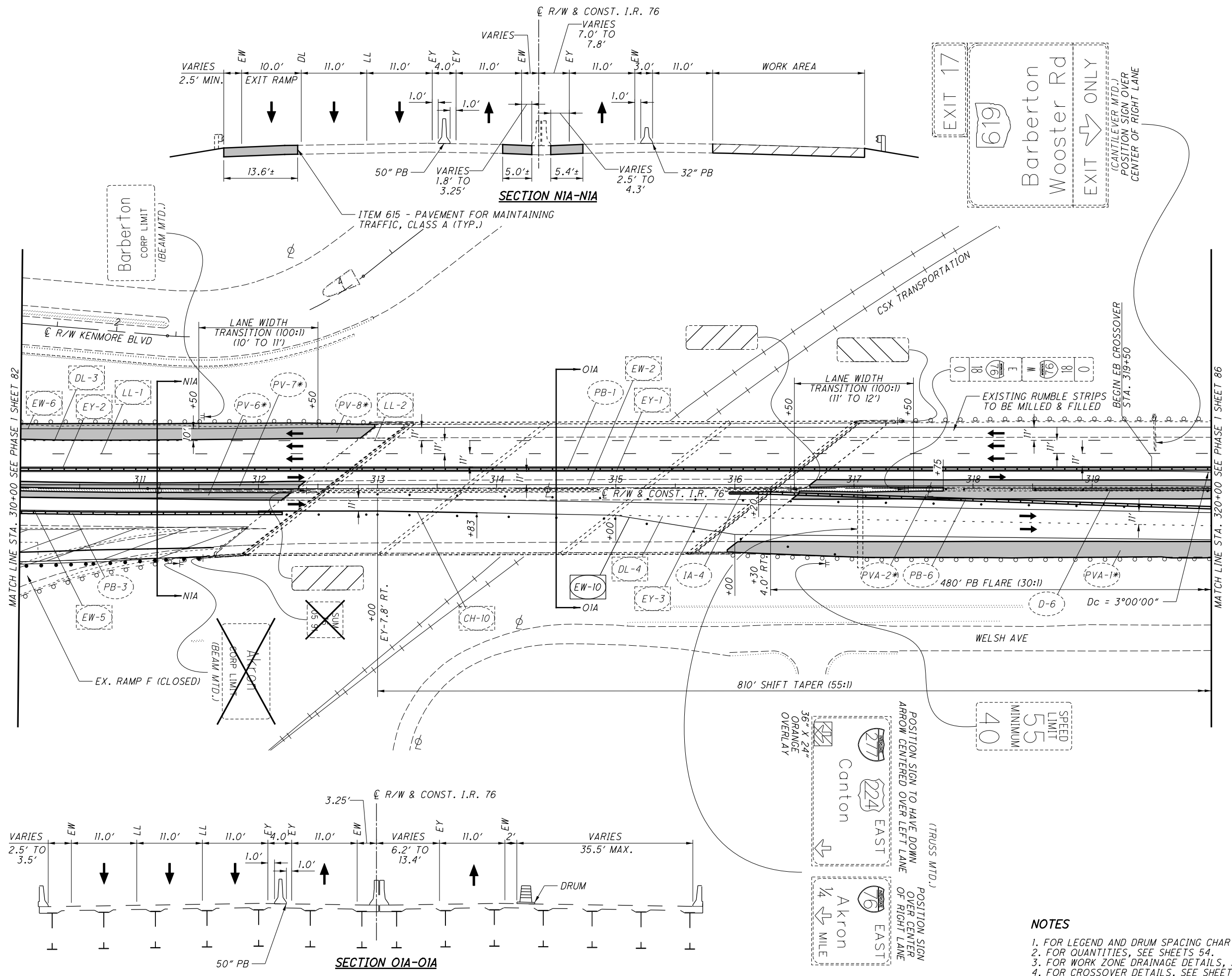
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 71-90.
  3. FOR EXISTING RAMP C DETOUR, SEE SHEET 61.
  4. FOR QUANTITIES, SEE SHEET 59.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**S.R. 619 - STA. 17+00 TO STA. 22+50**

**SUM-76-5.53**



- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR QUANTITIES, SEE SHEETS 54.
  3. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 158.
  4. FOR CROSSOVER DETAILS, SEE SHEET 153.

**Maintenance of Traffic - Phase 1A**

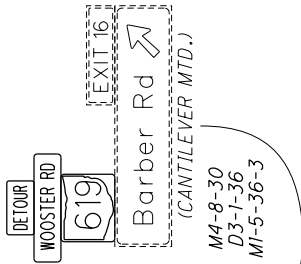
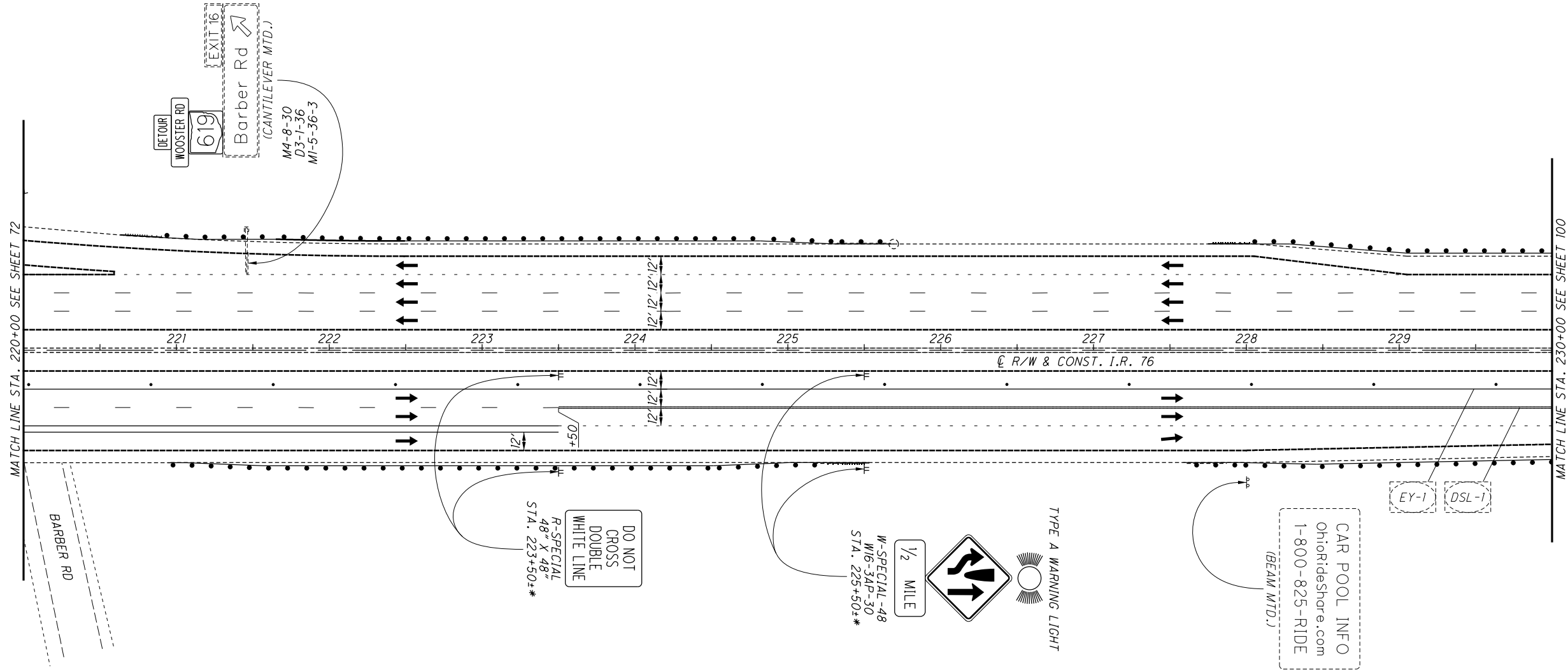
**STA. 310+00 TO STA. 320+00**

**SUM-76-5.53**

98  
672

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 60 80  
HORIZONTAL  
SCALE IN FEET



DO NOT  
CROSS  
DOUBLE  
WHITE LINE  
R-SPECIAL  
48" X 48"  
STA. 223+50+\*

1/2  
MILE  
W-SPECIAL -48  
W16-3AP-30  
STA. 225+50+\*

TYPE A WARNING LIGHT

CAR POOL INFO  
OhioRideShare.com  
1-800-825-RIDE  
(BEAM MTD.)

EY-1  
DSL-1

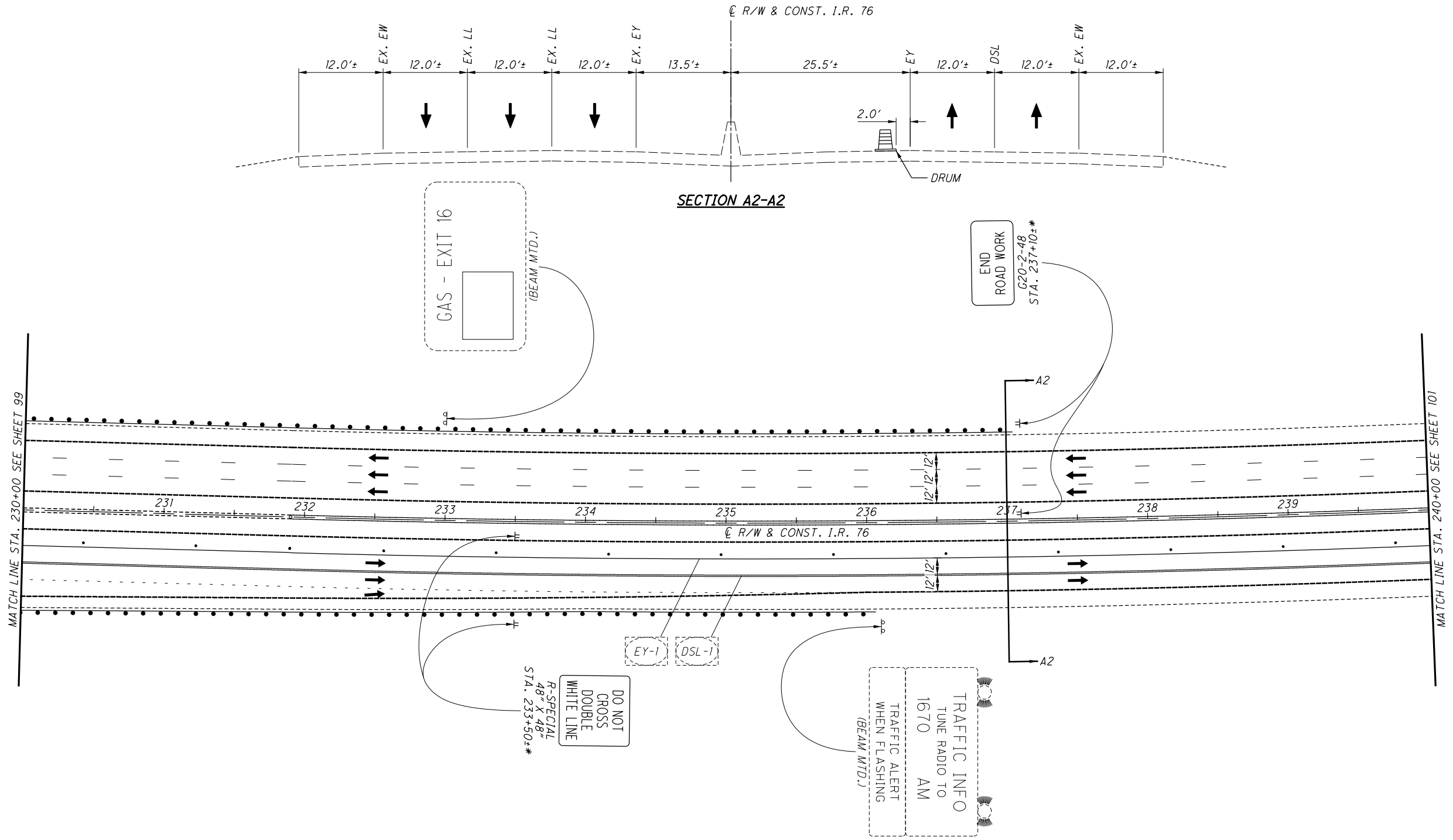
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR THE BARBER RD MOT PLAN, SEE SHEET 122.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE

CALCULATED	MGM
CHECKED	NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 220+00 TO STA. 230+00**

**SUM-76-5.53**



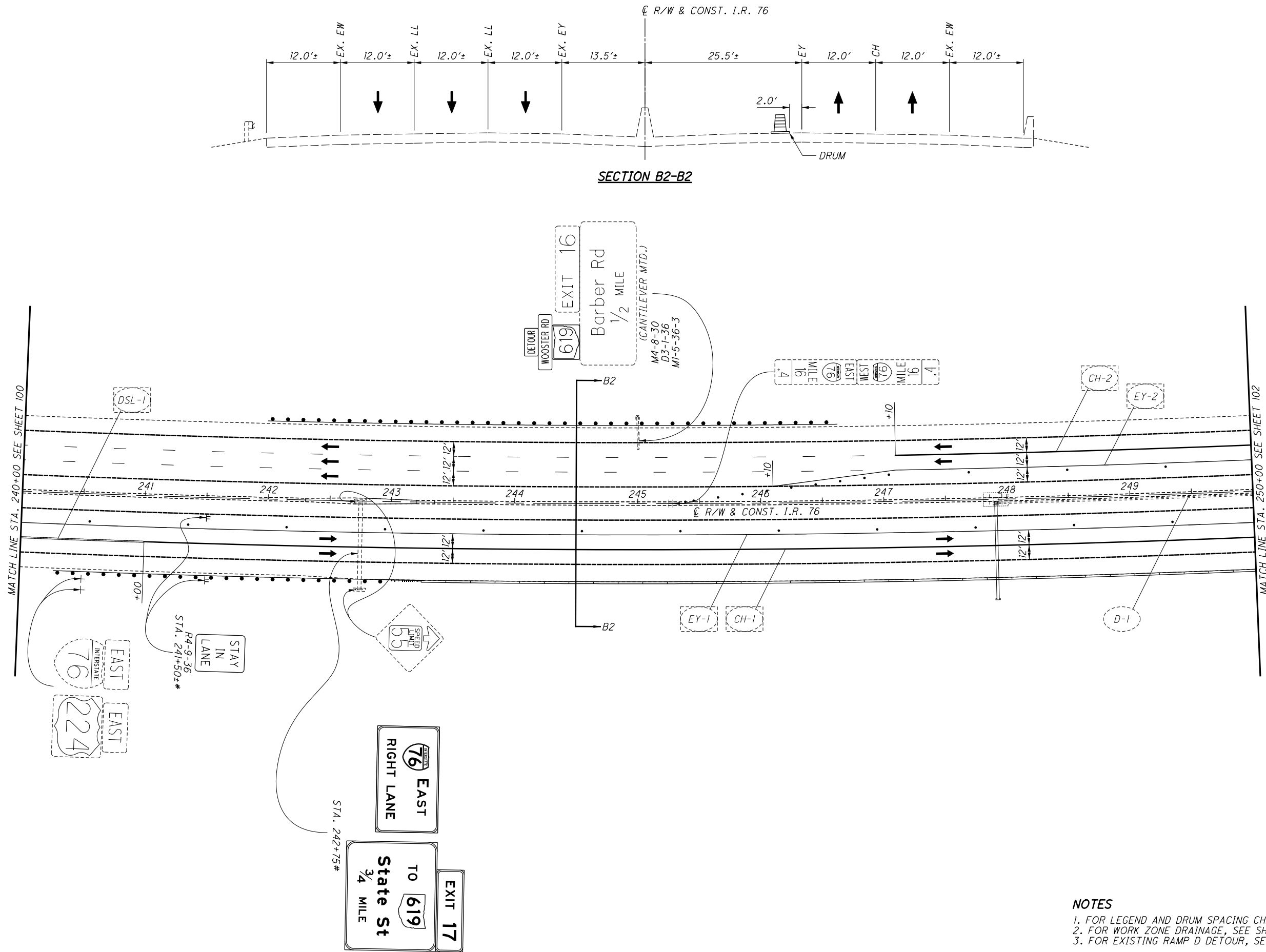
**NOTES**  
 1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
 2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.  
 \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

CALCULATED  
 MGM  
 CHECKED  
 NAU

0 20 40 80  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 230+00 TO STA. 240+00**

**SUM-76-5.53**

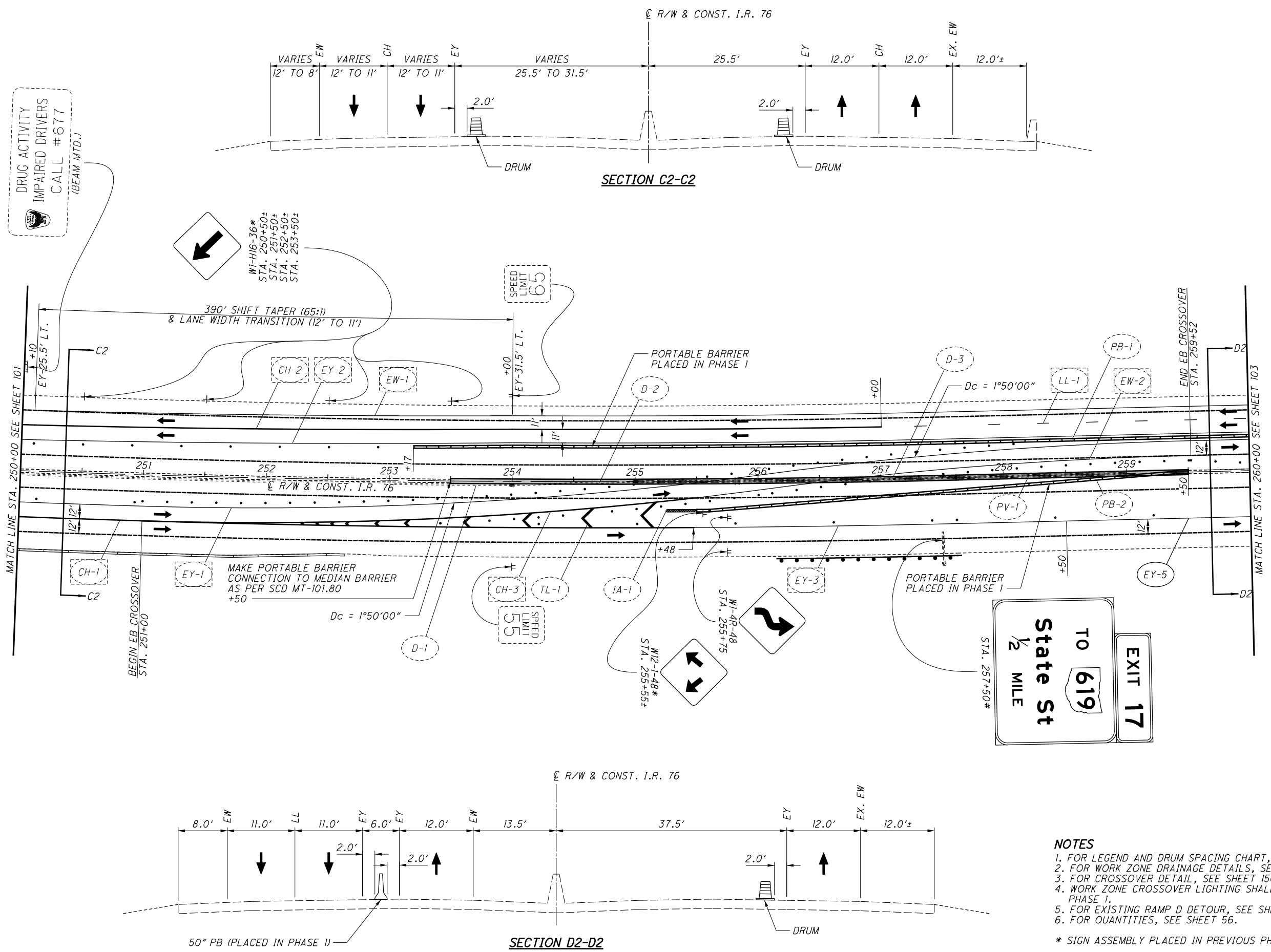


- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR WORK ZONE DRAINAGE, SEE SHEET 156.
  3. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.
- # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 240+00 TO STA. 250+00**



DRUG ACTIVITY  
IMPAIRED DRIVERS  
CALL #677  
(BEAM MTD.)

MI-H16-36\*  
STA. 250+50+  
STA. 251+50+  
STA. 252+50+  
STA. 253+50+

MAKE PORTABLE BARRIER  
CONNECTION TO MEDIAN BARRIER  
AS PER SCD MT-101.80  
+50

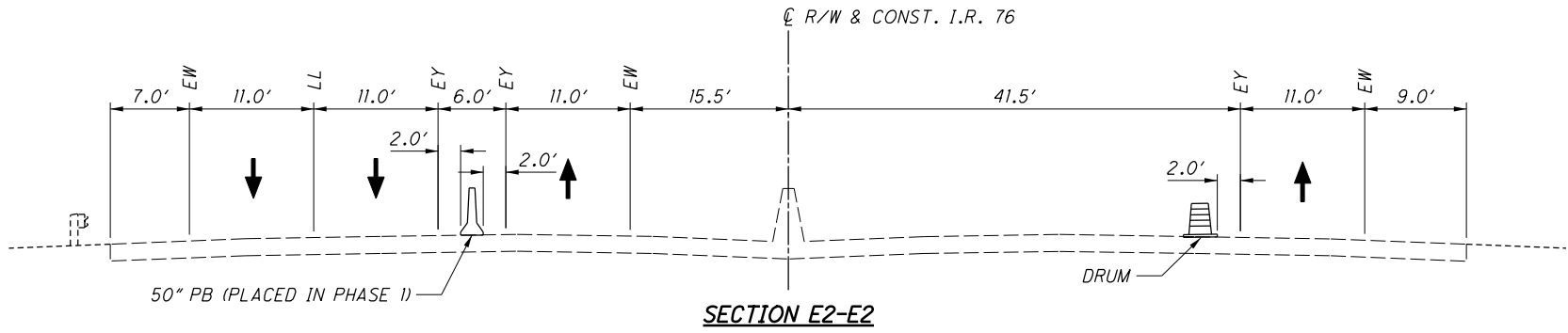
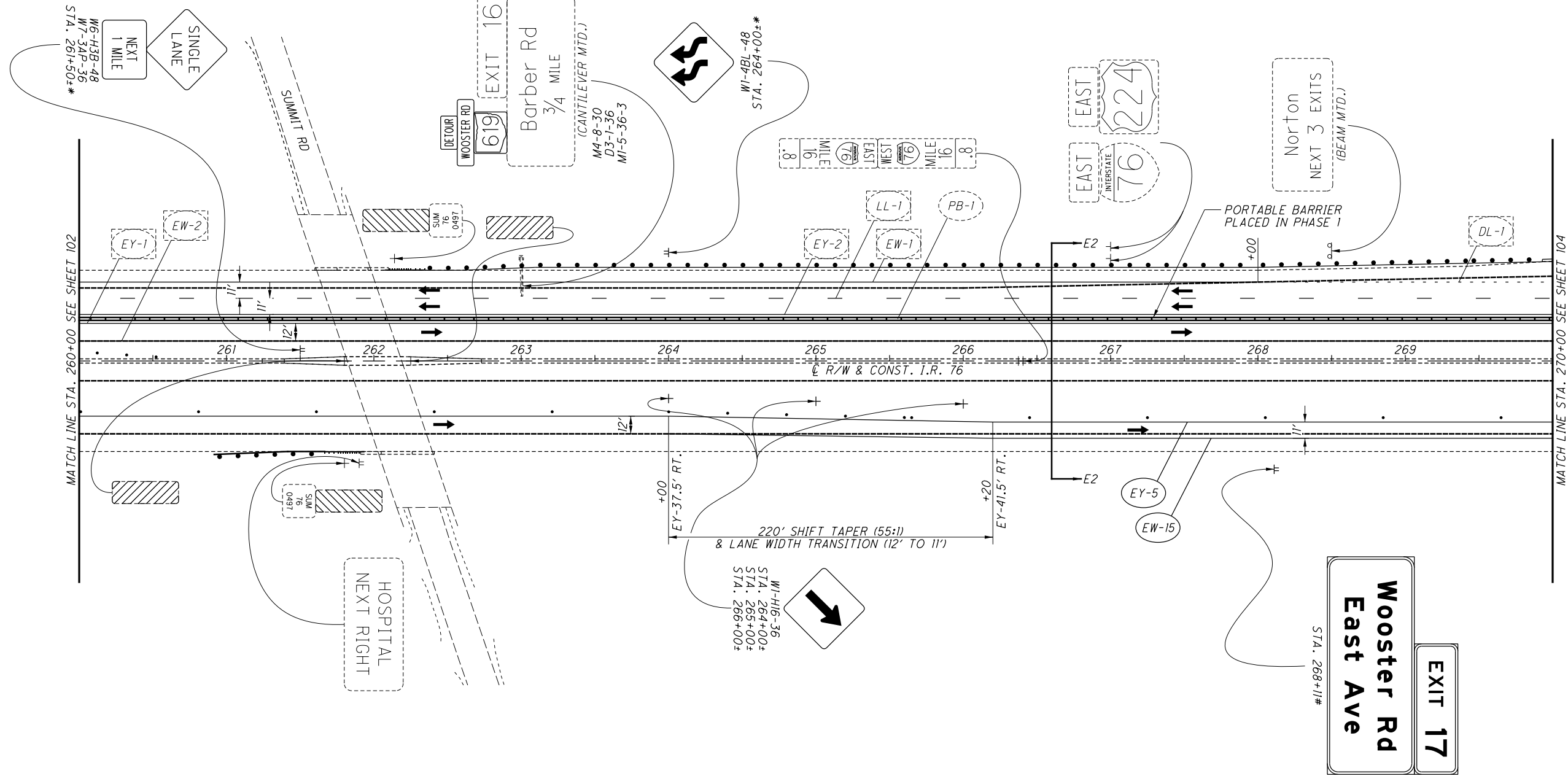
TO 619  
State St  
1/2 MILE  
EXIT 17

- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 156.
  - FOR CROSSOVER DETAIL, SEE SHEET 150.
  - WORK ZONE CROSSOVER LIGHTING SHALL REMAIN FROM PHASE 1.
  - FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  - FOR QUANTITIES, SEE SHEET 56.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 250+00 TO STA. 260+00**

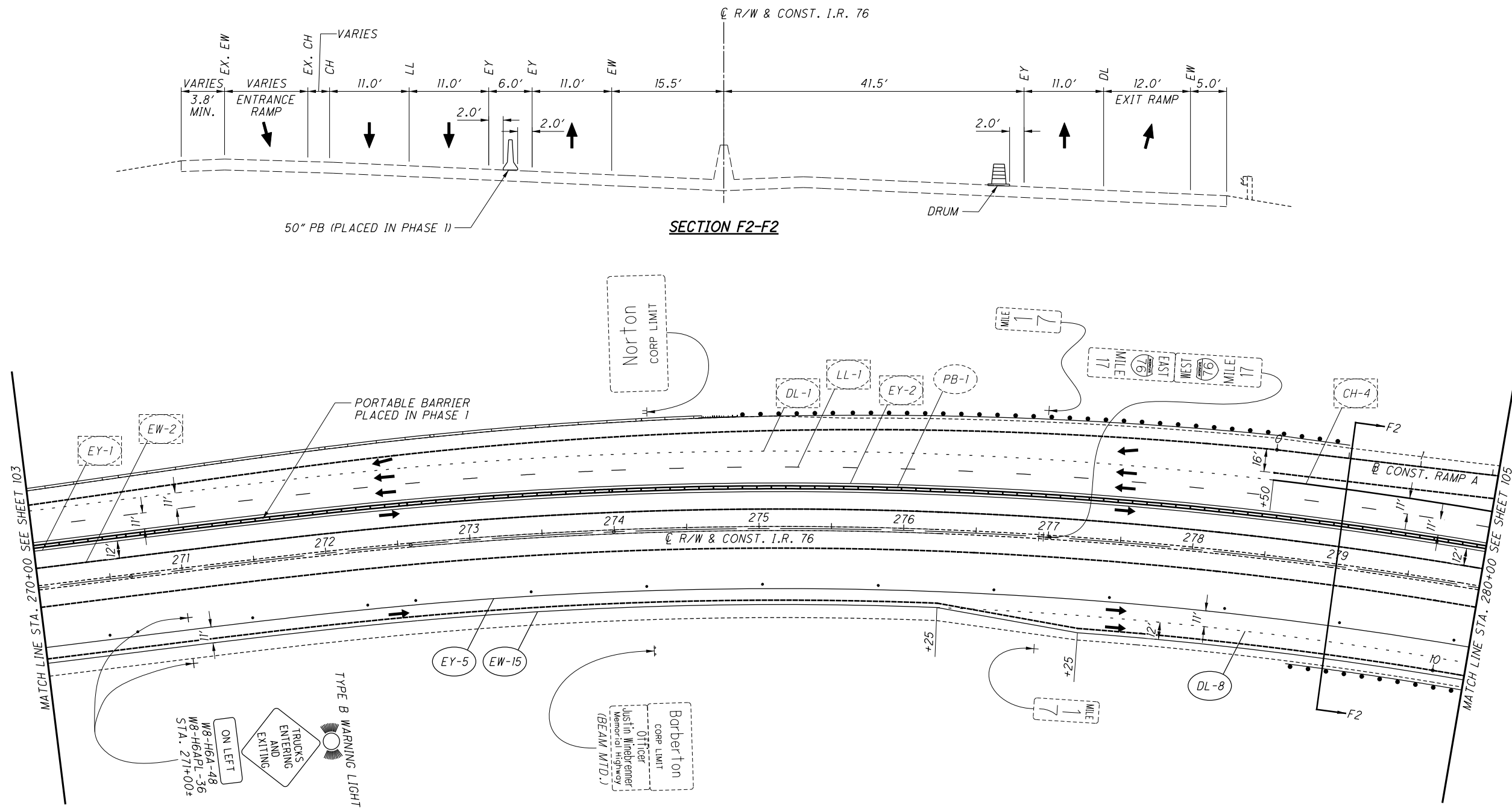


- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEET 56.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
 # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 260+00 TO STA. 270+00**



CALCULATED  
MGM  
CHECKED  
NAU

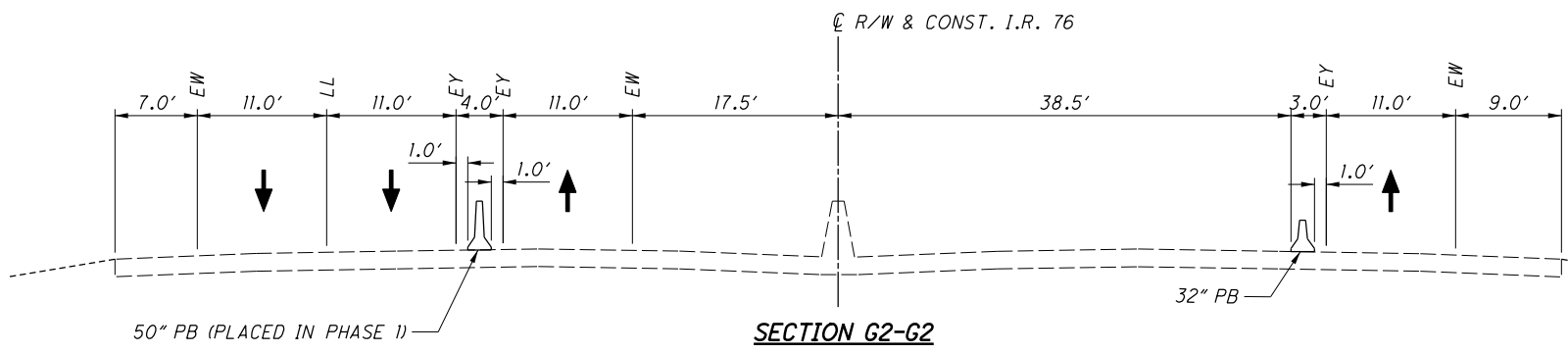
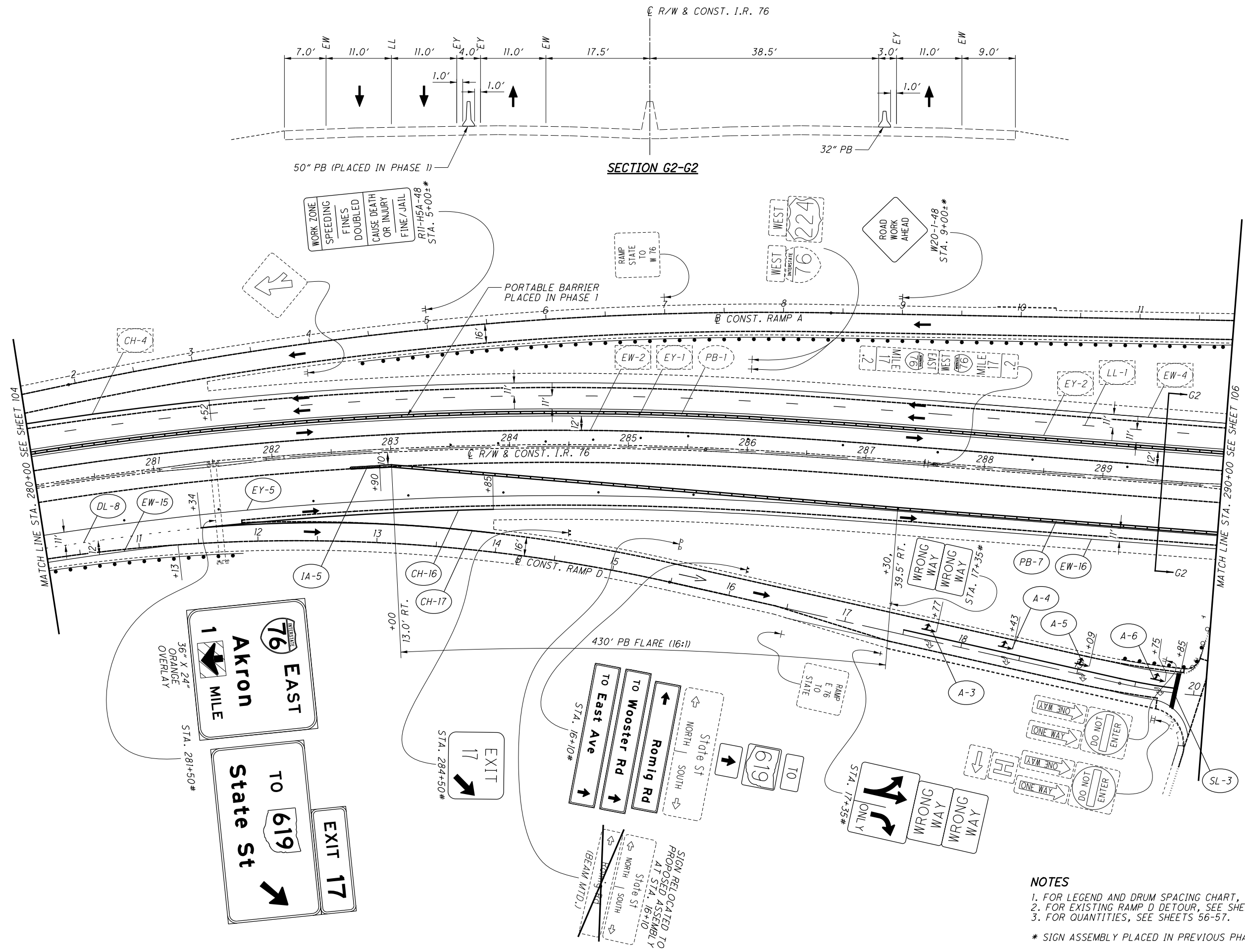
0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 270+00 TO STA. 280+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEET 56.





- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEETS 56-57.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

Δ PAVEMENT MARKING GUIDANCE			
EY	STATION	OFFSET (L.T.)	RADIUS
EY-7	293+40.00	25.50'	
	296+30.00	29.70'	-
	307+00.00	31.48'	2799.8'

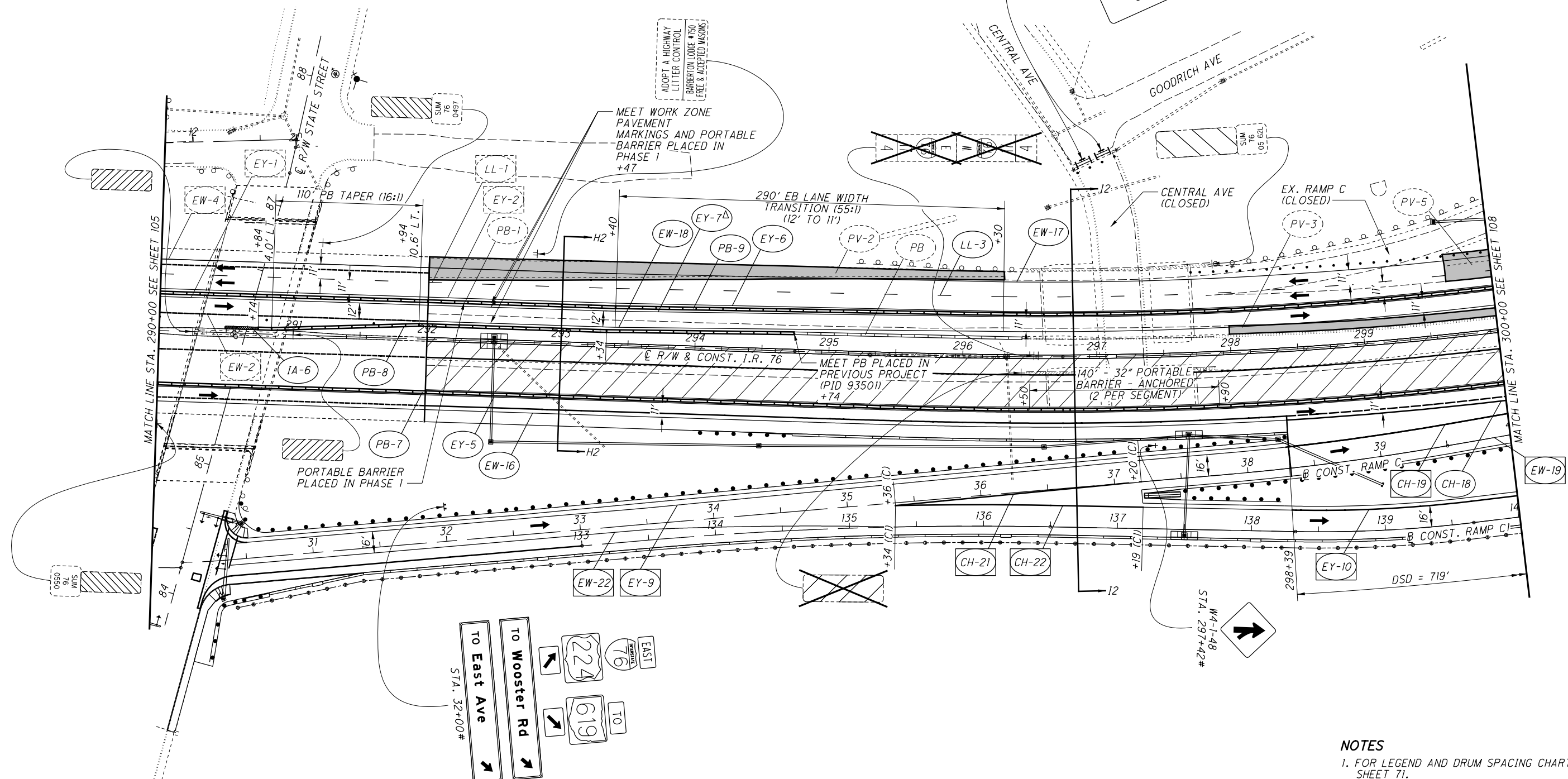
CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 290+00 TO STA. 300+00**

**SUM-76-5.53**

106  
672



**ROAD CLOSED**  
R11-2-48\*  
ON TYPE 3 BARRICADES COMPLETELY ACROSS ROADWAY

ADOPT A HIGHWAY LITTER CONTROL BARRIERTON LOOSE #150 (FREE & ACCEPTED MASONS)

MEET WORK ZONE PAVEMENT MARKINGS AND PORTABLE BARRIER PLACED IN PHASE 1 +47

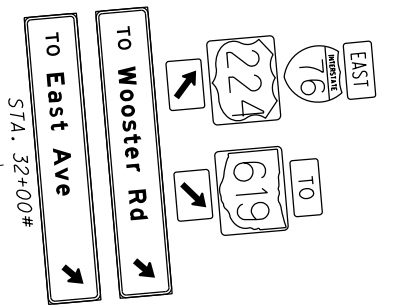
290' EB LANE WIDTH TRANSITION (55:1) (12' TO 11')

MEET PB PLACED IN PREVIOUS PROJECT (PID 93501) +74

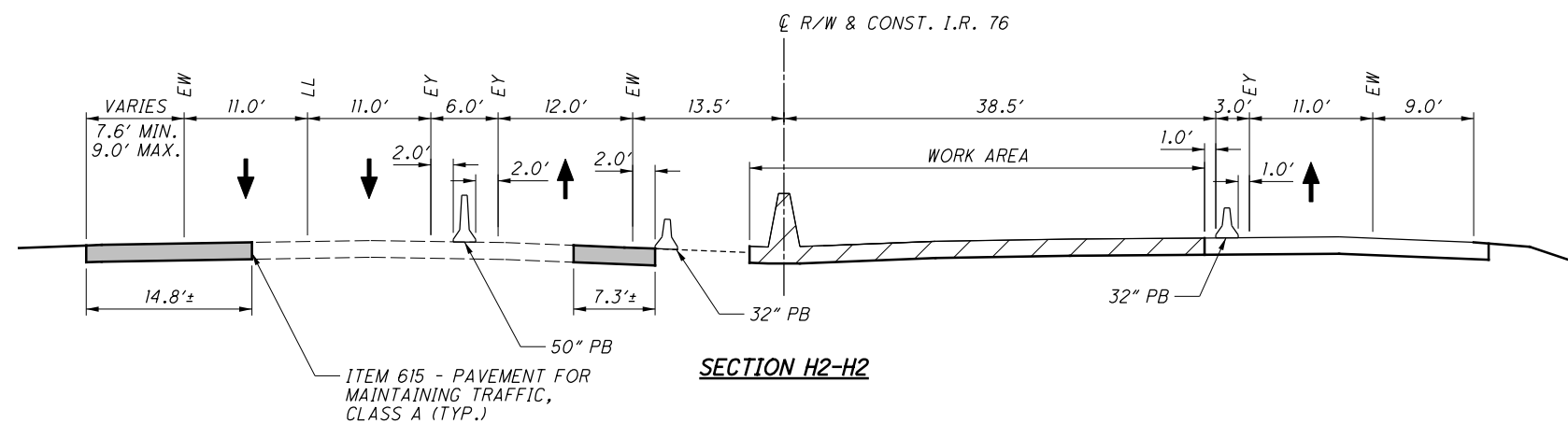
140' - 32\"/>

EX. RAMP C (CLOSED)

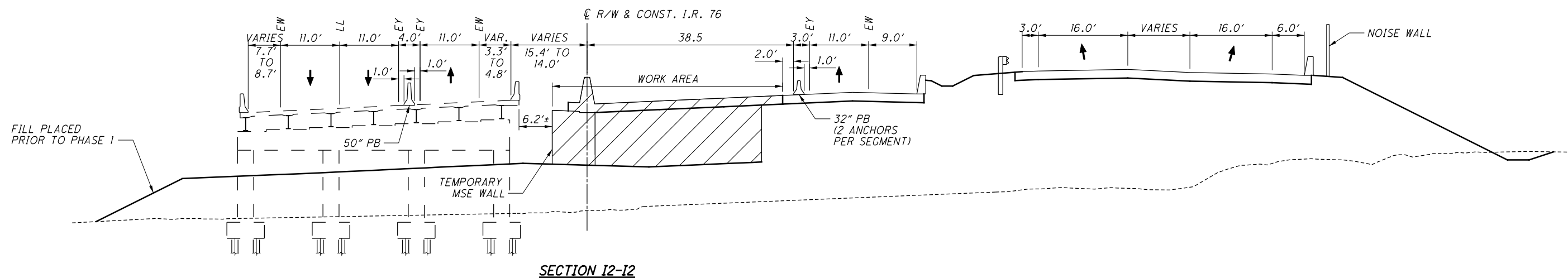
PORTABLE BARRIER PLACED IN PHASE 1



- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR MOT TYPICAL SECTIONS, SEE SHEET 107.
  3. FOR EXISTING RAMP C DETOUR, SEE SHEET 61.
  4. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  5. FOR QUANTITIES, SEE SHEETS 56-57.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.



**SECTION H2-H2**



**SECTION I2-I2**

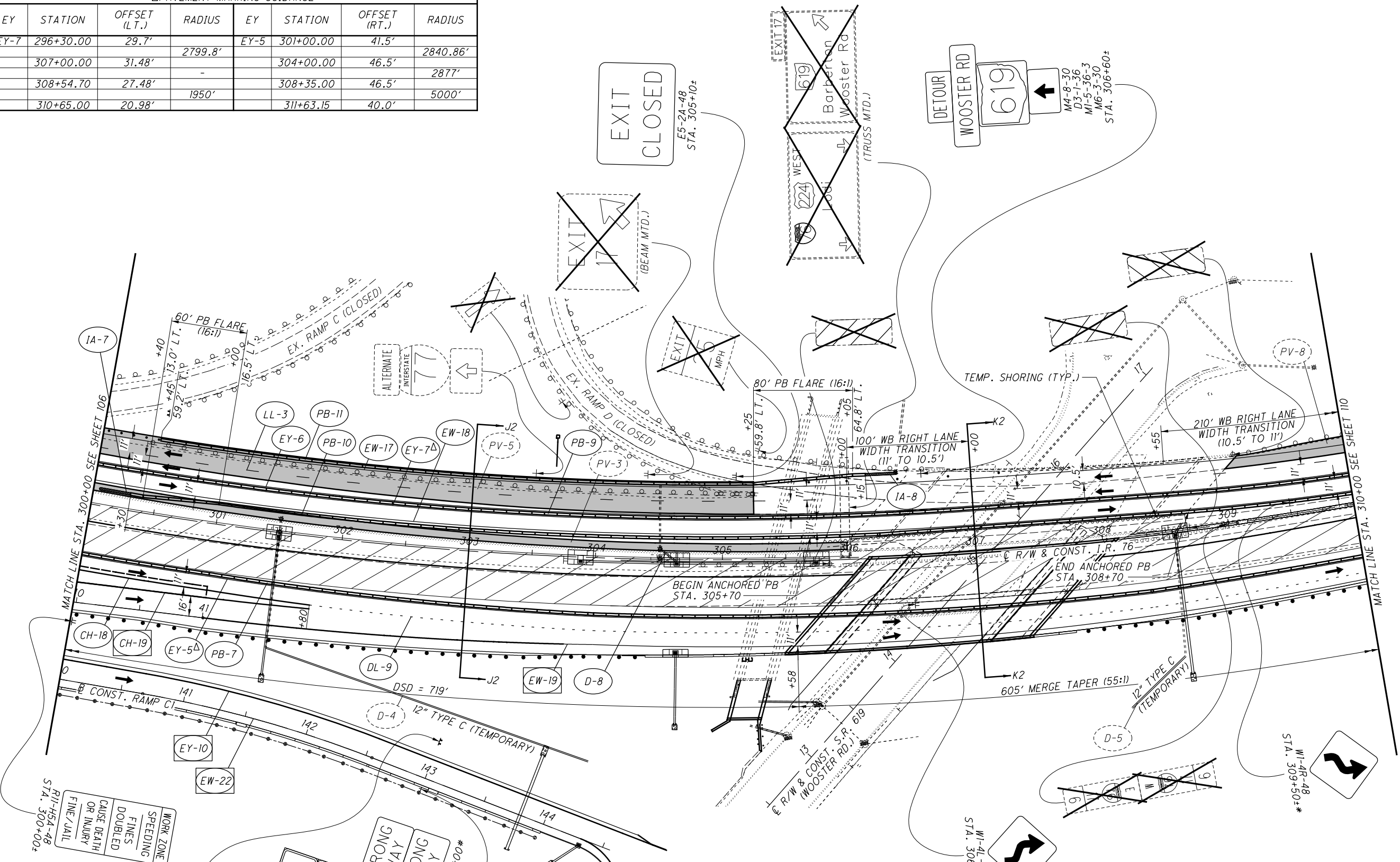
FILL PLACED PRIOR TO PHASE 1

**NOTES**

1. FOR LEGEND, SEE SHEET 71.
2. FOR MOT PLAN VIEW, SEE SHEET 106.
3. FOR QUANTITIES, SEE SHEETS 56-57.

P:\DDT\MP\0093\_SUM-76-5.53\Design\MOT\Sheets\96670\MY358.dgn Sheet 10/1/2018 3:54:03 PM CMT031

Δ PAVEMENT MARKING GUIDANCE							
EY	STATION	OFFSET (LT.)	RADIUS	EY	STATION	OFFSET (RT.)	RADIUS
EY-7	296+30.00	29.7'	2799.8'	EY-5	301+00.00	41.5'	2840.86'
	307+00.00	31.48'			304+00.00	46.5'	
	308+54.70	27.48'	-		308+35.00	46.5'	2877'
	310+65.00	20.98'	1950'		311+63.15	40.0'	5000'



CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL SCALE IN FEET

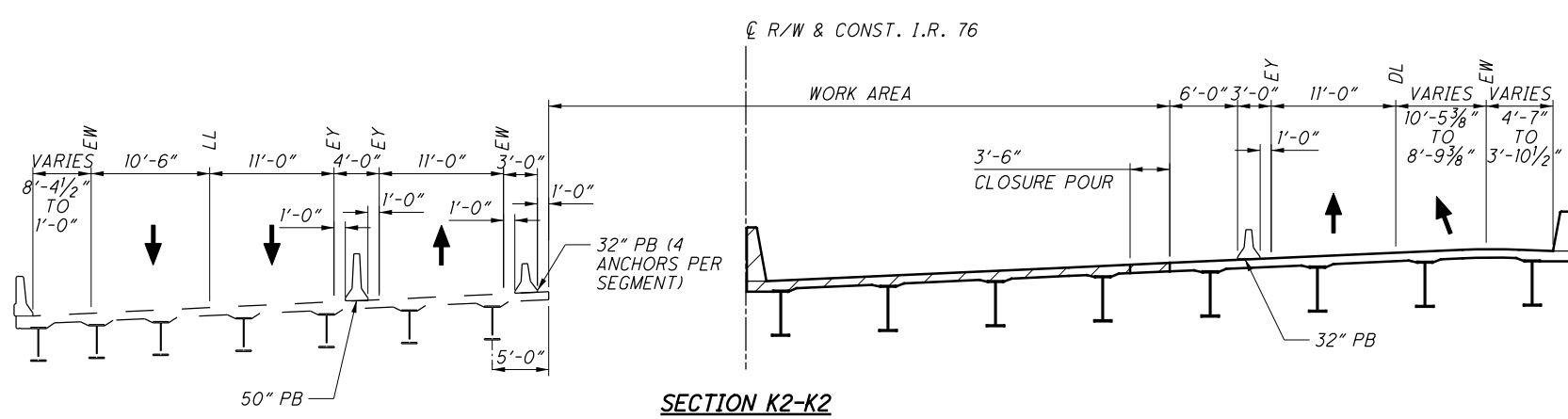
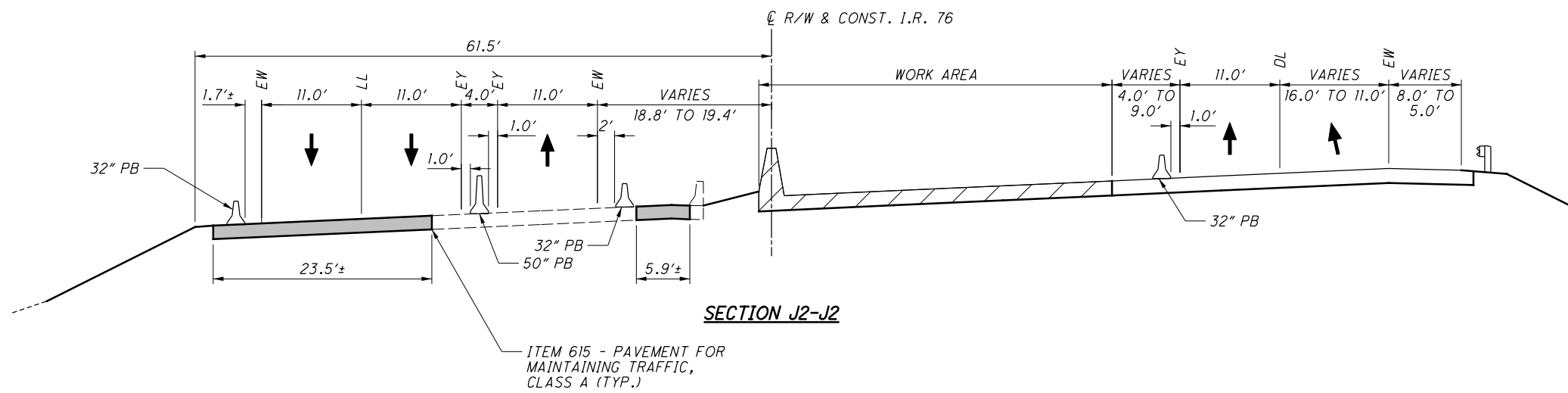
**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 300+00 TO STA. 310+00**

**SUM-76-5.53**

- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR S.R. 619 (WOOSTER RD.) MOT PLAN, SEE SHEETS 119-121.
  - FOR EXISTING RAMP C DETOUR, SEE SHEET 61.
  - FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  - FOR MOT TYPICAL SECTIONS, SEE SHEET 109.
  - FOR QUANTITIES, SEE SHEETS 56-57.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

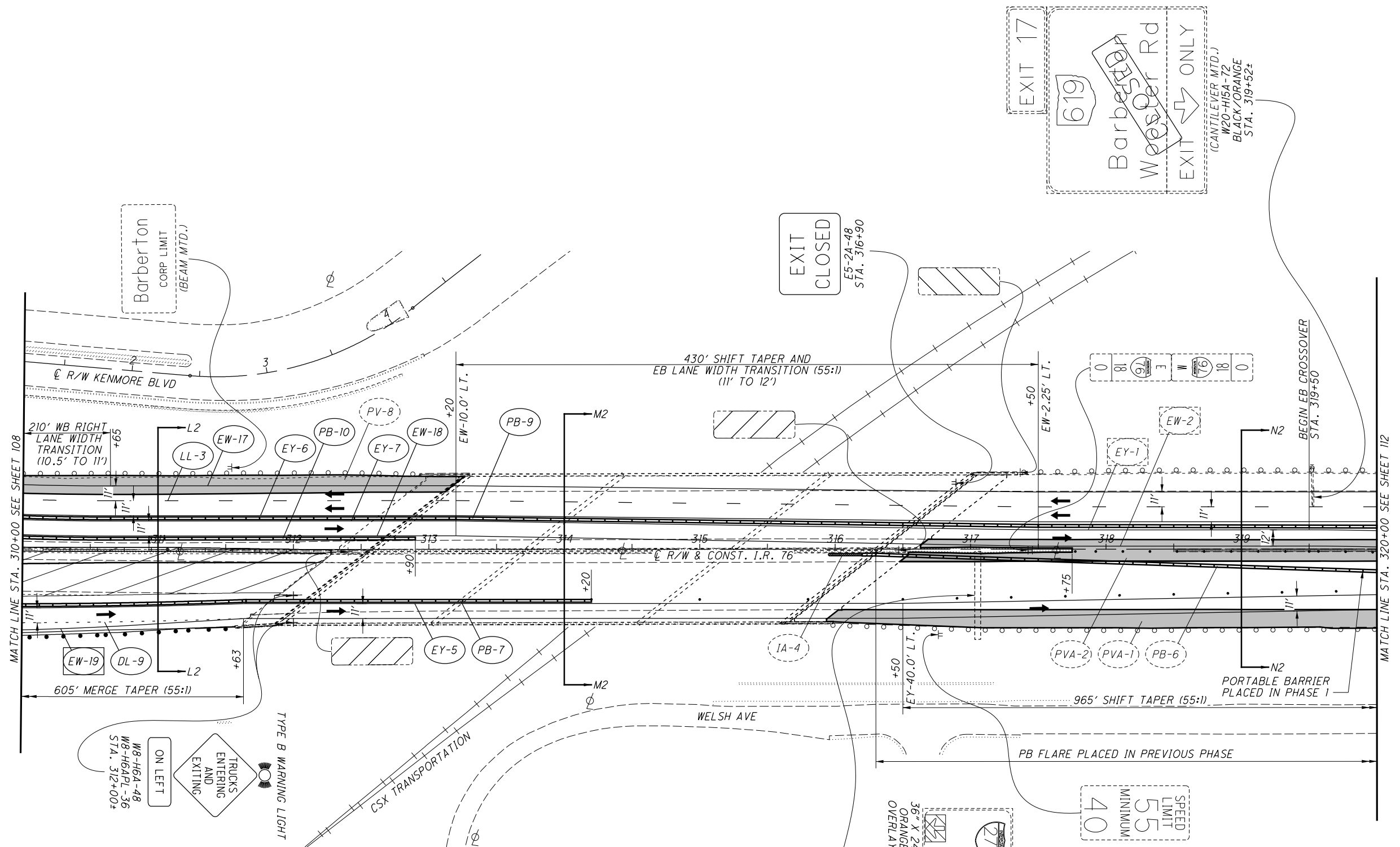
REVISIONS	NUMBER	DATE	DESCRIPTION
△	1	4/4/19	ADDED ANCHORED PORTABLE BARRIER SEGMENT

P:\ODT\MP\0093\\_SUM-76-5.62\96670\Design\WOT\Sheets\96670\_MP359.dgn Sheet 4/4/2019 4:18:58 PM CMT031



- NOTES**
1. FOR LEGEND SEE SHEET 71.
  2. FOR MOT PLAN VIEW, SEE SHEET 108.
  3. FOR QUANTITIES, SEE SHEETS 56-57.

P:\DDT\MP\0093\_SUM-76-5.53\96670\Design\MOT\Sheets\96670\_MY359.dgn Sheet 10/1/2018 3:54:05 PM CMT031



MATCH LINE STA. 310+00 SEE SHEET 108

MATCH LINE STA. 320+00 SEE SHEET 112

ON LEFT  
WB-H6A-48  
WB-H6APL-36  
STA. 312+00±

TRUCKS ENTERING AND EXITING

TYPE B WARNING LIGHT

CSX TRANSPORTATION

WELSH AVE

PB FLARE PLACED IN PREVIOUS PHASE

PORTABLE BARRIER PLACED IN PHASE 1

BEGIN EB CROSSOVER  
STA. 319+50

EXIT CLOSED  
E5-2A-48  
STA. 316+90

EXIT 17  
Barberton  
Wesper Rd  
EXIT ONLY  
(CANTILEVER MTD.)  
W20-HISA-72  
BLACK/ORANGE  
STA. 319+52±

36" X 24" ORANGE OVERLAY\*  
Canton EAST  
(TRUSS MTD.)  
KEEP RIGHT  
(22E) 120" X 24" BLACK/ORANGE OVERLAY  
Akron EAST

SPEED LIMIT  
MINIMUM  
55  
40

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR MOT TYPICAL SECTIONS, SEE SHEET 111.
  3. FOR CROSSOVER DETAILS, SEE SHEET 153.
  4. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 158.
  5. FOR QUANTITIES, SEE SHEETS 56-57.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

**SUM-76-5.53**

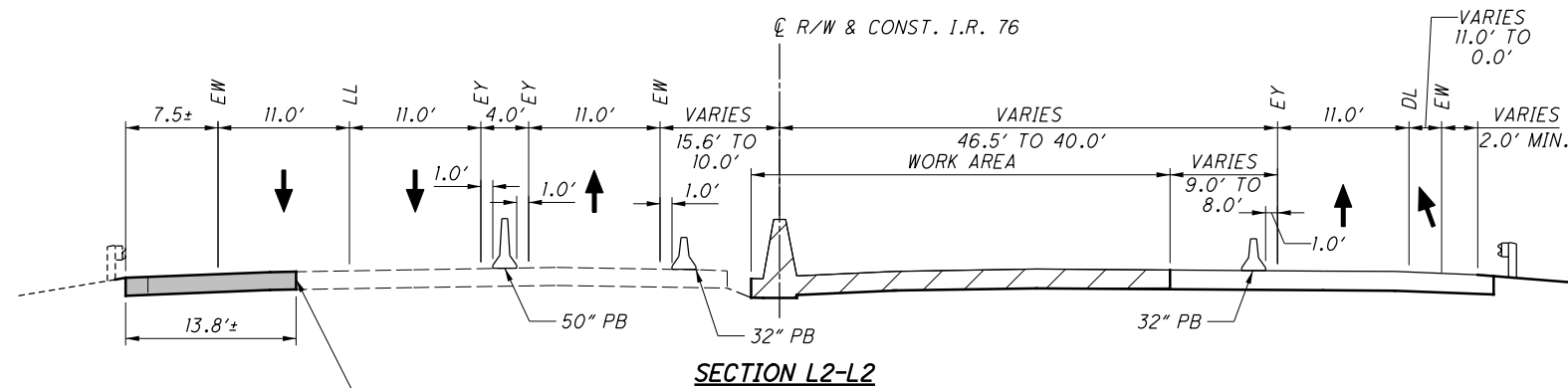
110  
672

**MAINTENANCE OF TRAFFIC - PHASE 2**

**STA. 310+00 TO STA. 320+00**

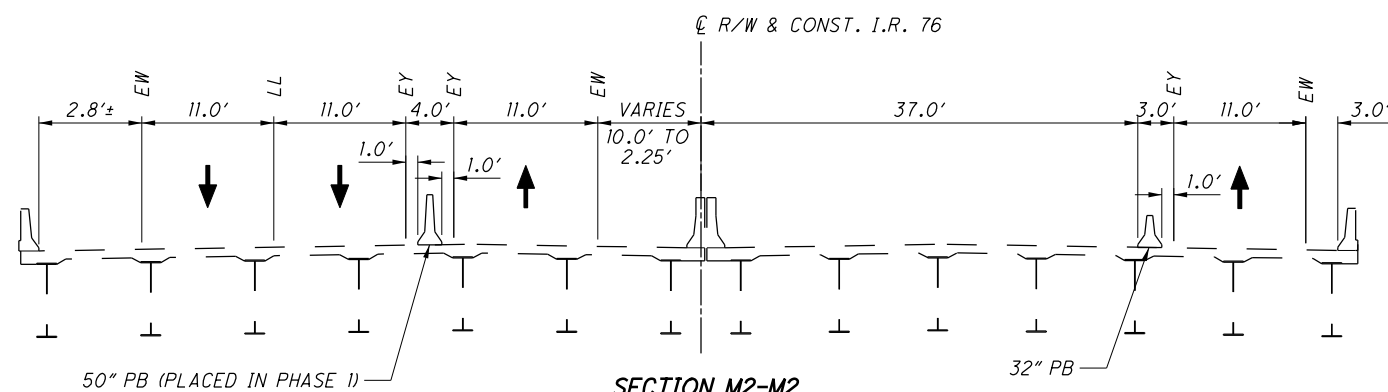
CALCULATED: MGM  
CHECKED: NAU

0 20 40 80  
HORIZONTAL SCALE IN FEET

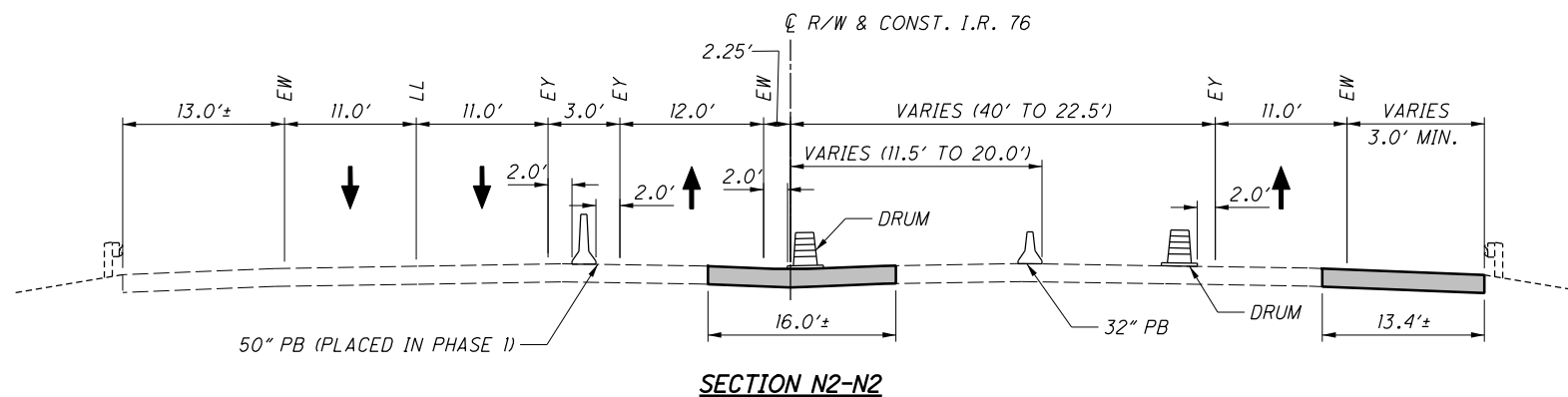


ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (TYP.)

**SECTION L2-L2**



**SECTION M2-M2**

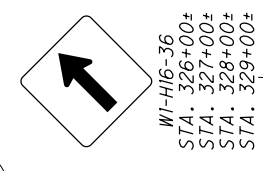
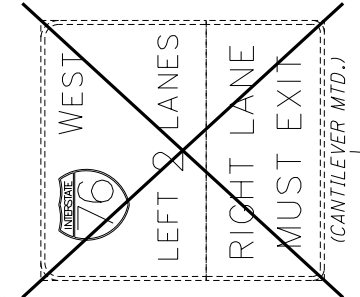
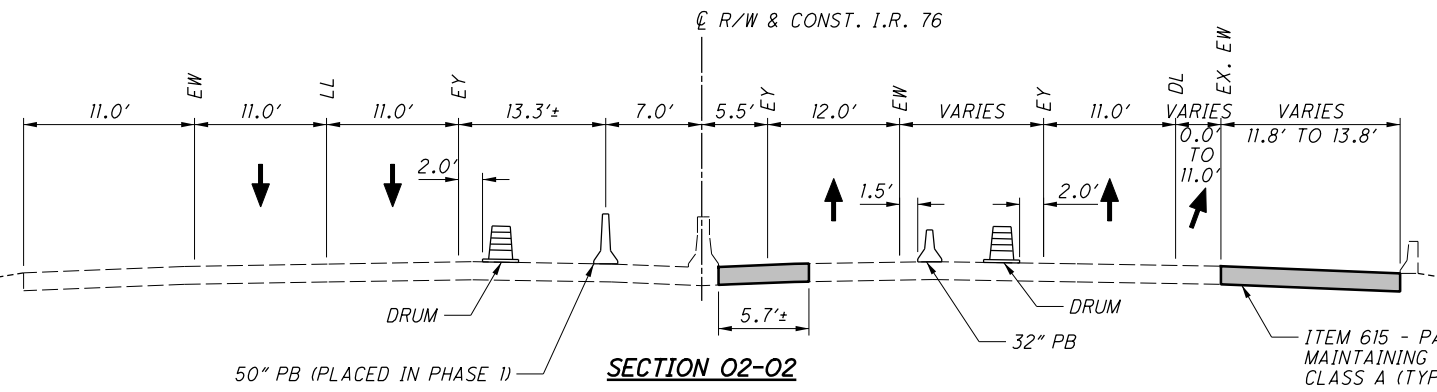
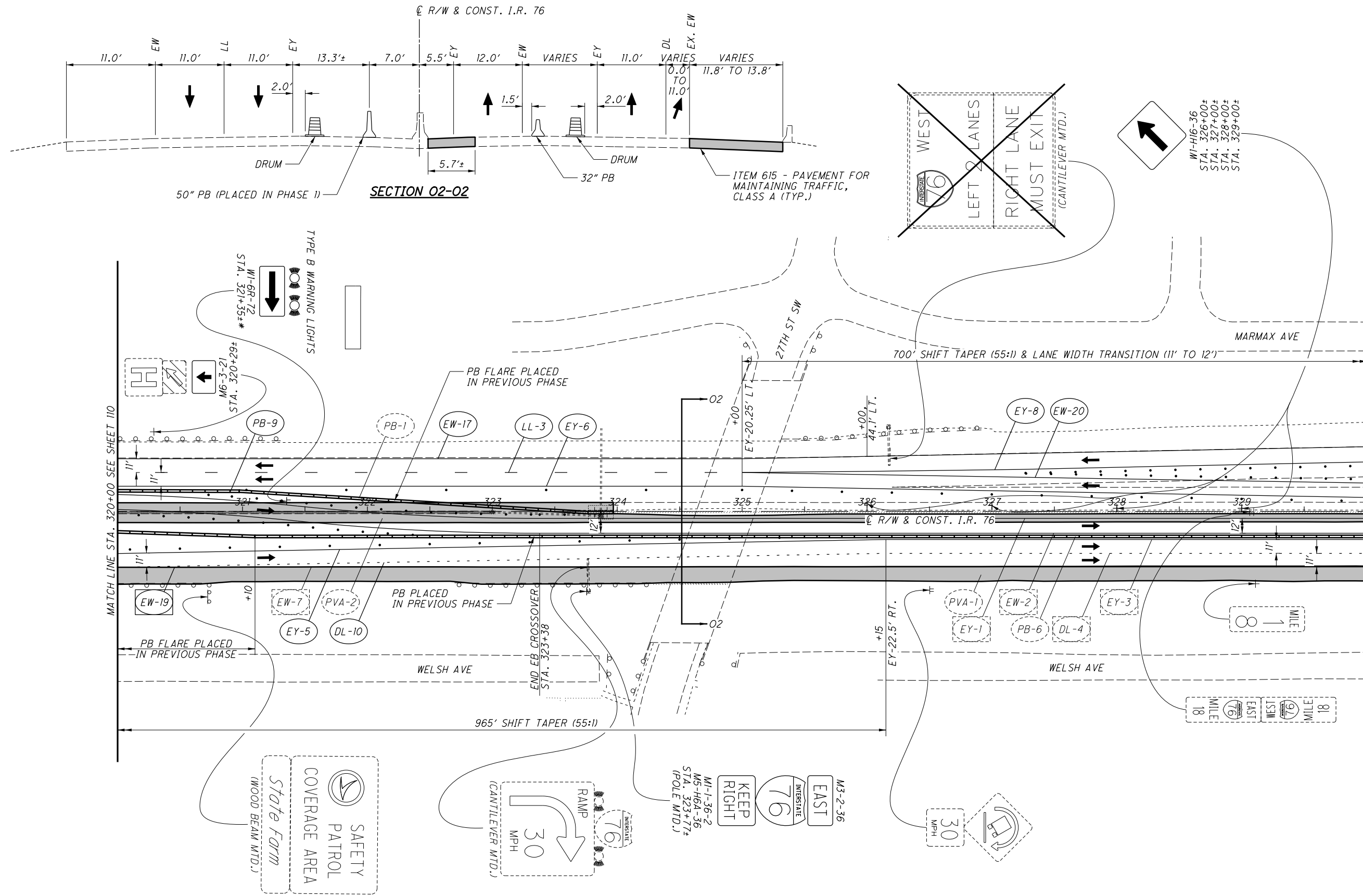


**SECTION N2-N2**

**NOTES**

1. FOR LEGEND, SHEET SHEET 71.
2. FOR MOT PLAN VIEW, SEE SHEET 110.
3. FOR QUANTITIES, SEE SHEETS 56-57.

CALCULATED	MGM
CHECKED	NAU



MATCH LINE STA. 320+00 SEE SHEET 110

MATCH LINE STA. 330+00 SEE SHEET 113

CALCULATED  
MGM  
CHECKED  
NAU

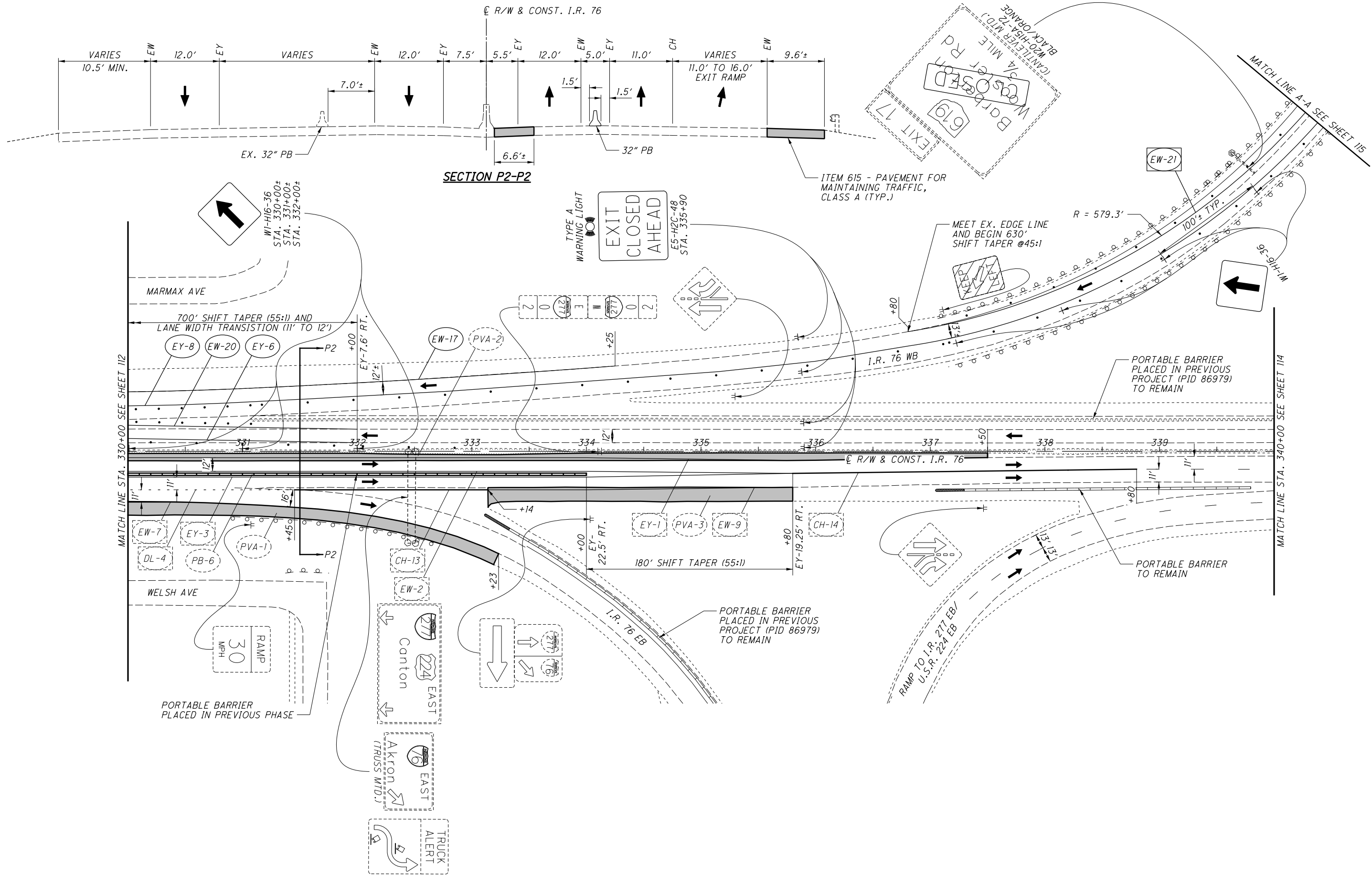
0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 320+00 TO STA. 330+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR CROSSOVER DETAILS, SEE SHEET 153.
  3. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 158.
  4. FOR QUANTITIES, SEE SHEETS 56-57.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE





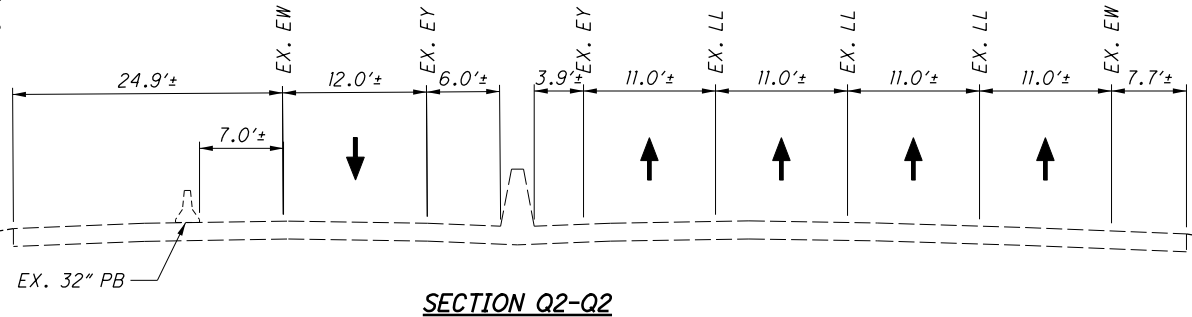
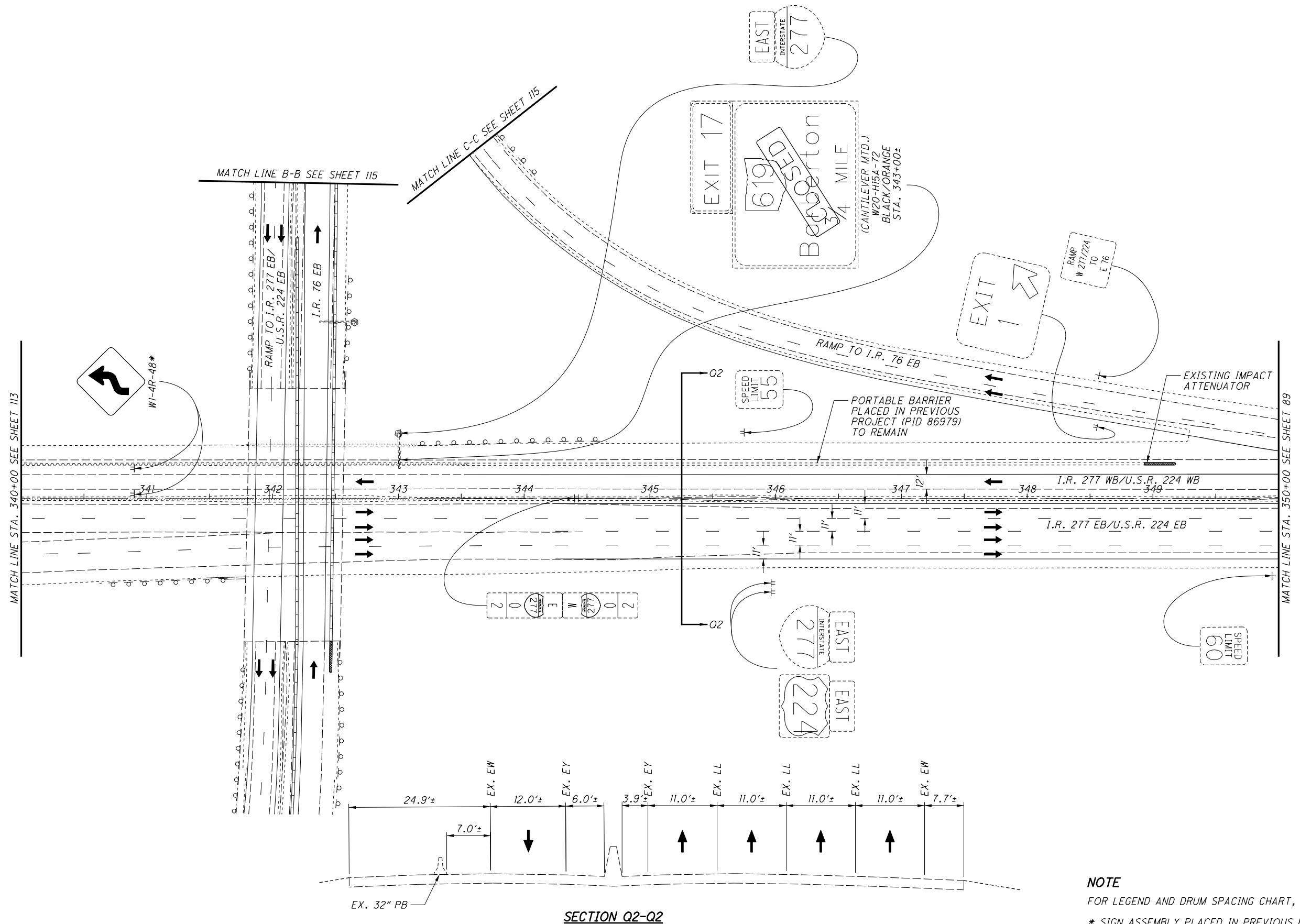
CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STA. 330+00 TO STA. 338+95**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR QUANTITIES, SEE SHEET 56.



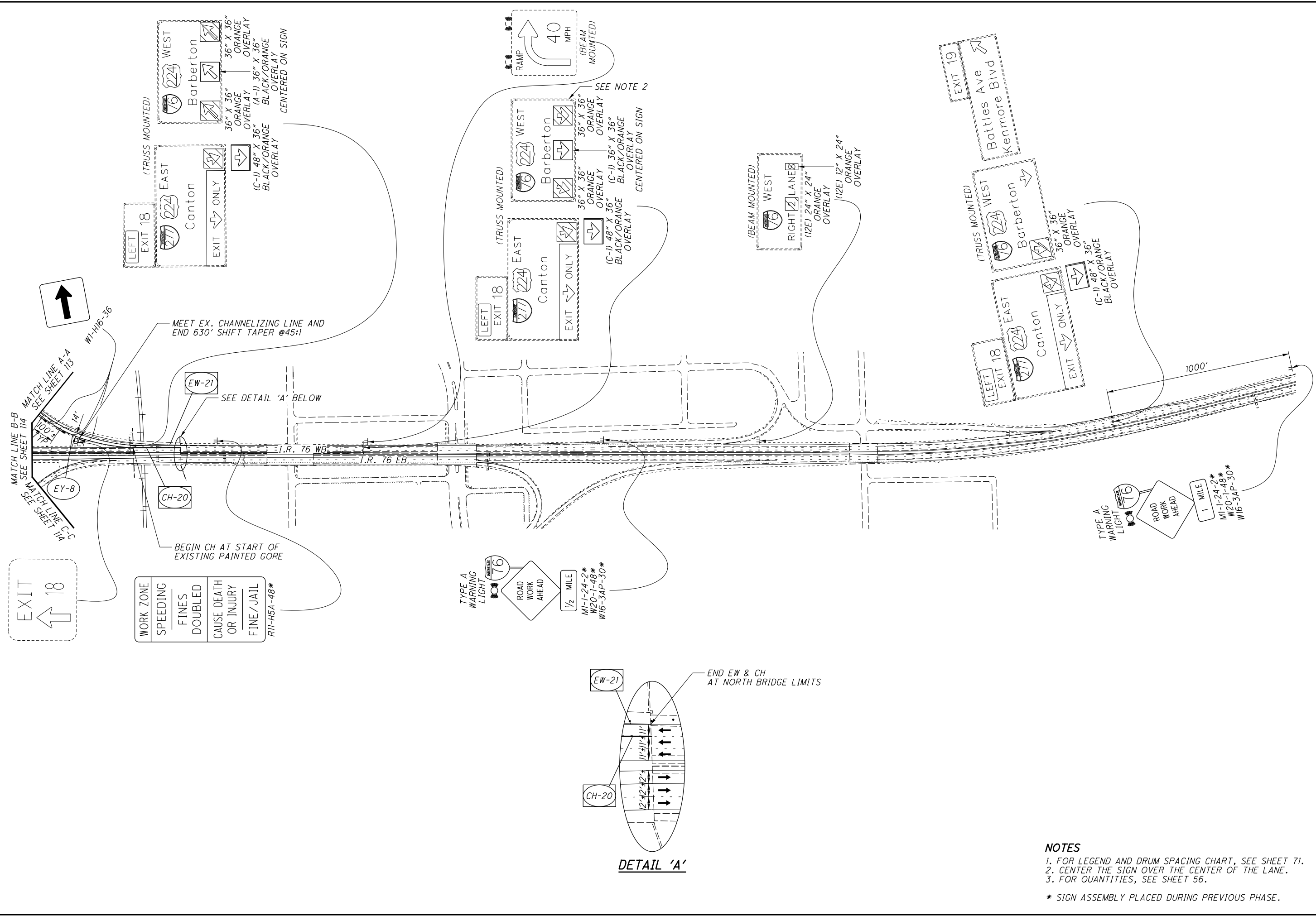
**NOTE**  
 FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
 \* SIGN ASSEMBLY PLACED IN PREVIOUS PAGE.

CALCULATED  
 MGM  
 CHECKED  
 NAU

0 20 40 80  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**I.R. 277 / U.S.R. 224**

**SUM-76-5.53**



WORK ZONE
SPEEDING
FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL
R77-H54-48*

TYPE A WARNING LIGHT

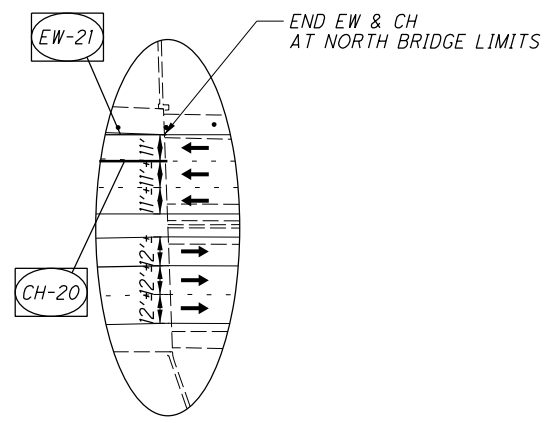
ROAD WORK AHEAD

1/2 MILE

MI-1-24-2\*

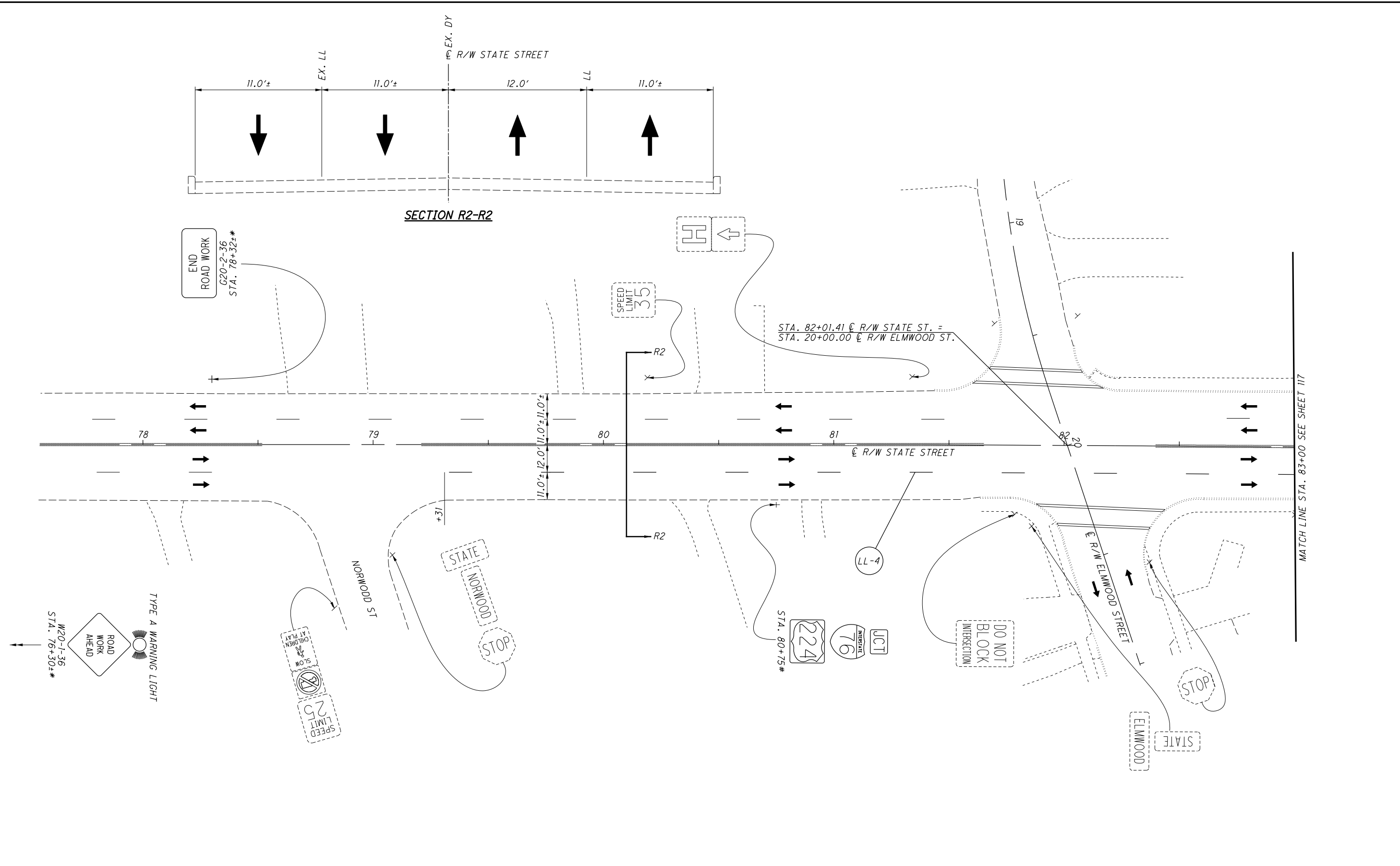
W20-1-48\*

W16-3AP-30\*



DETAIL 'A'

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. CENTER THE SIGN OVER THE CENTER OF THE LANE.
  3. FOR QUANTITIES, SEE SHEET 56.
- \* SIGN ASSEMBLY PLACED DURING PREVIOUS PHASE.



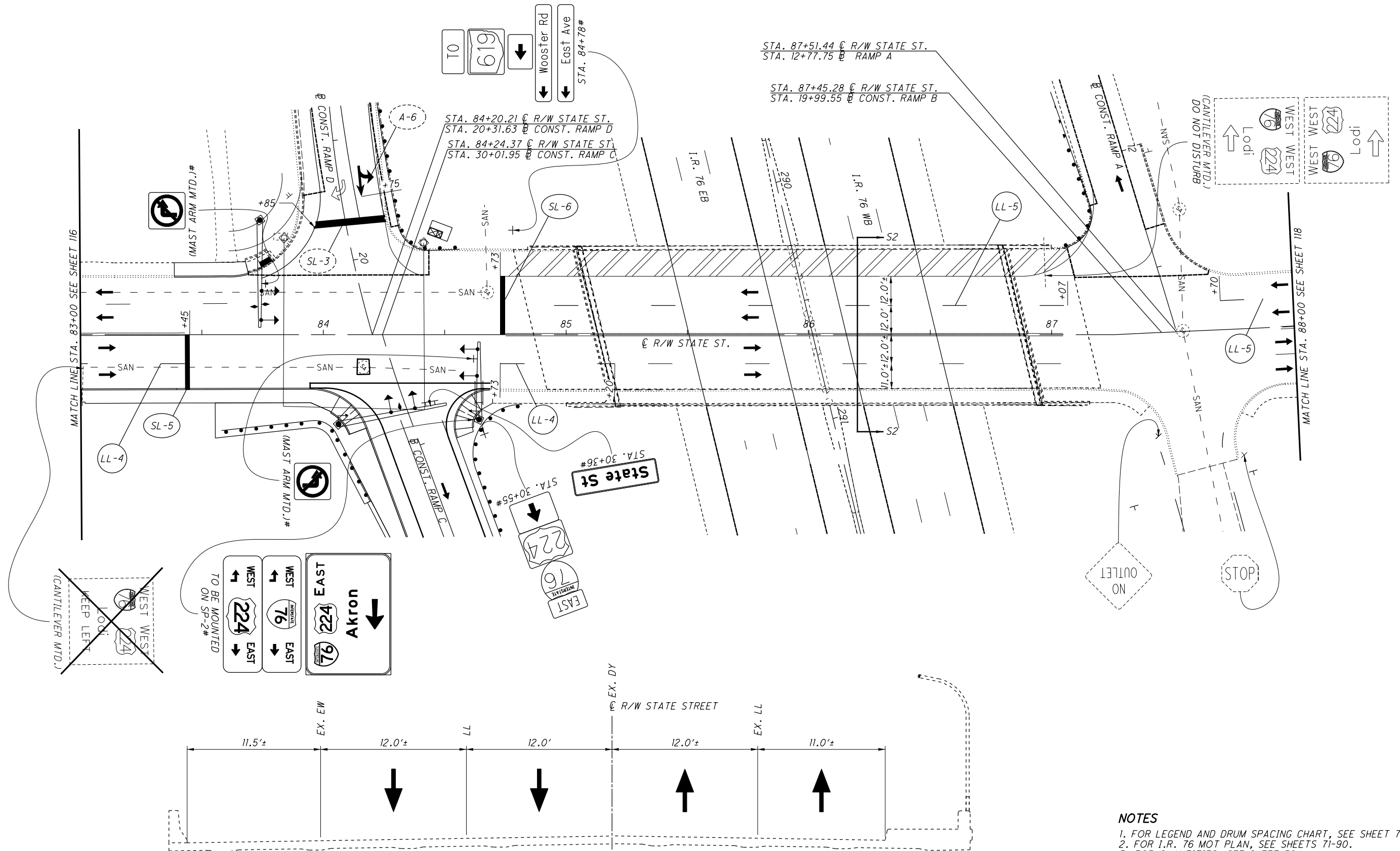
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR QUANTITIES, SEE SHEET 59.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.
- # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STATE ST. - STA. 77+50 TO STA. 83+00**

**SUM-76-5.53**

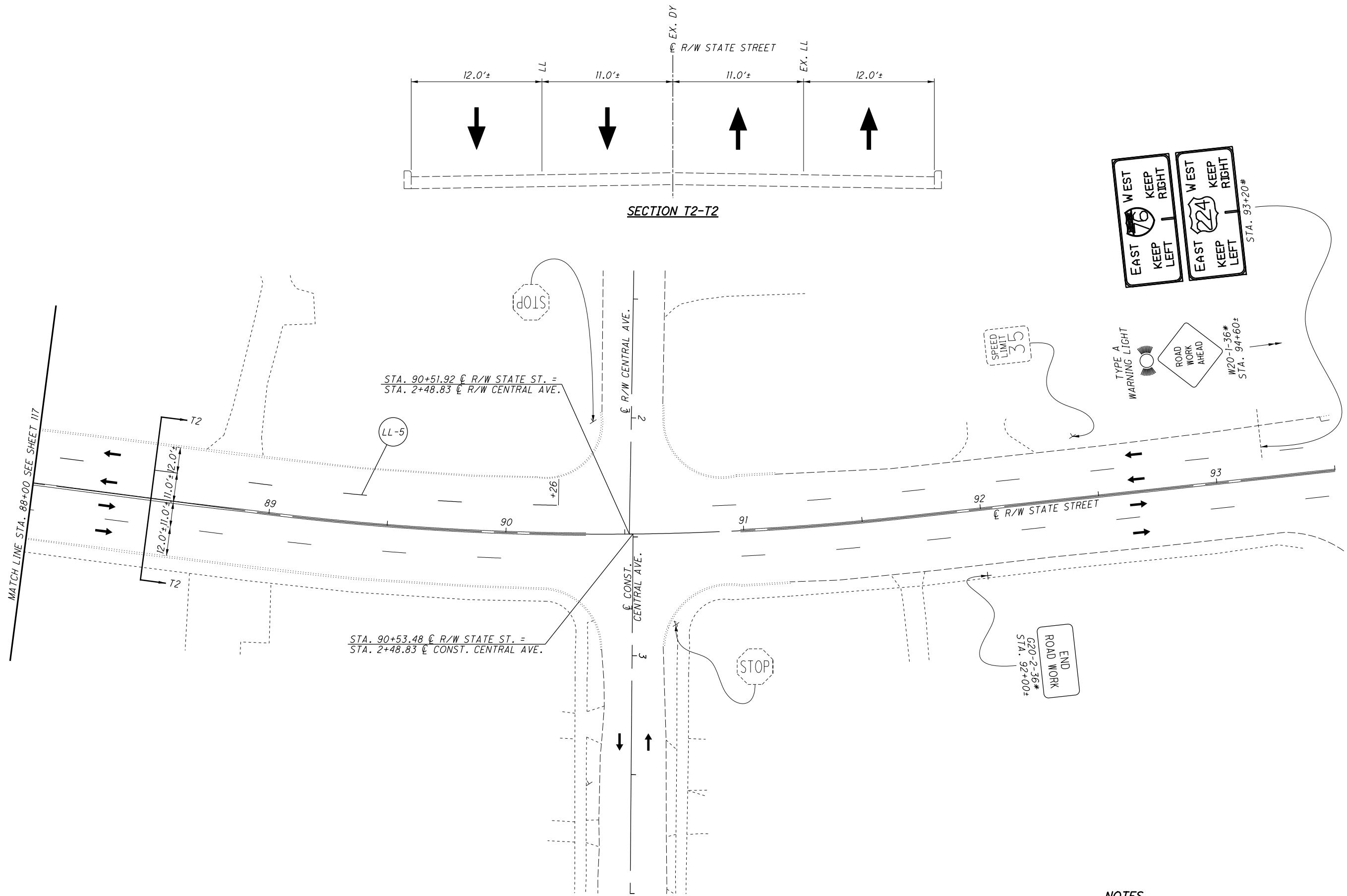


CALCULATED  
MGM  
CHECKED  
NAU

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**W. STATE ST. - STA. 83+00 TO STA. 88+00**

**SUM-76-5.53**



**NOTES**

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
2. FOR QUANTITIES, SEE SHEET 59.

\* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE

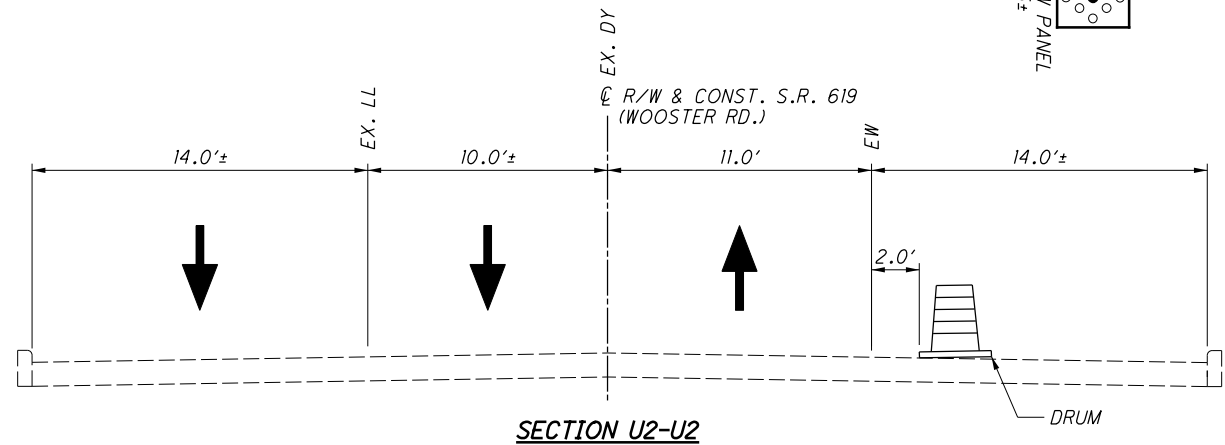
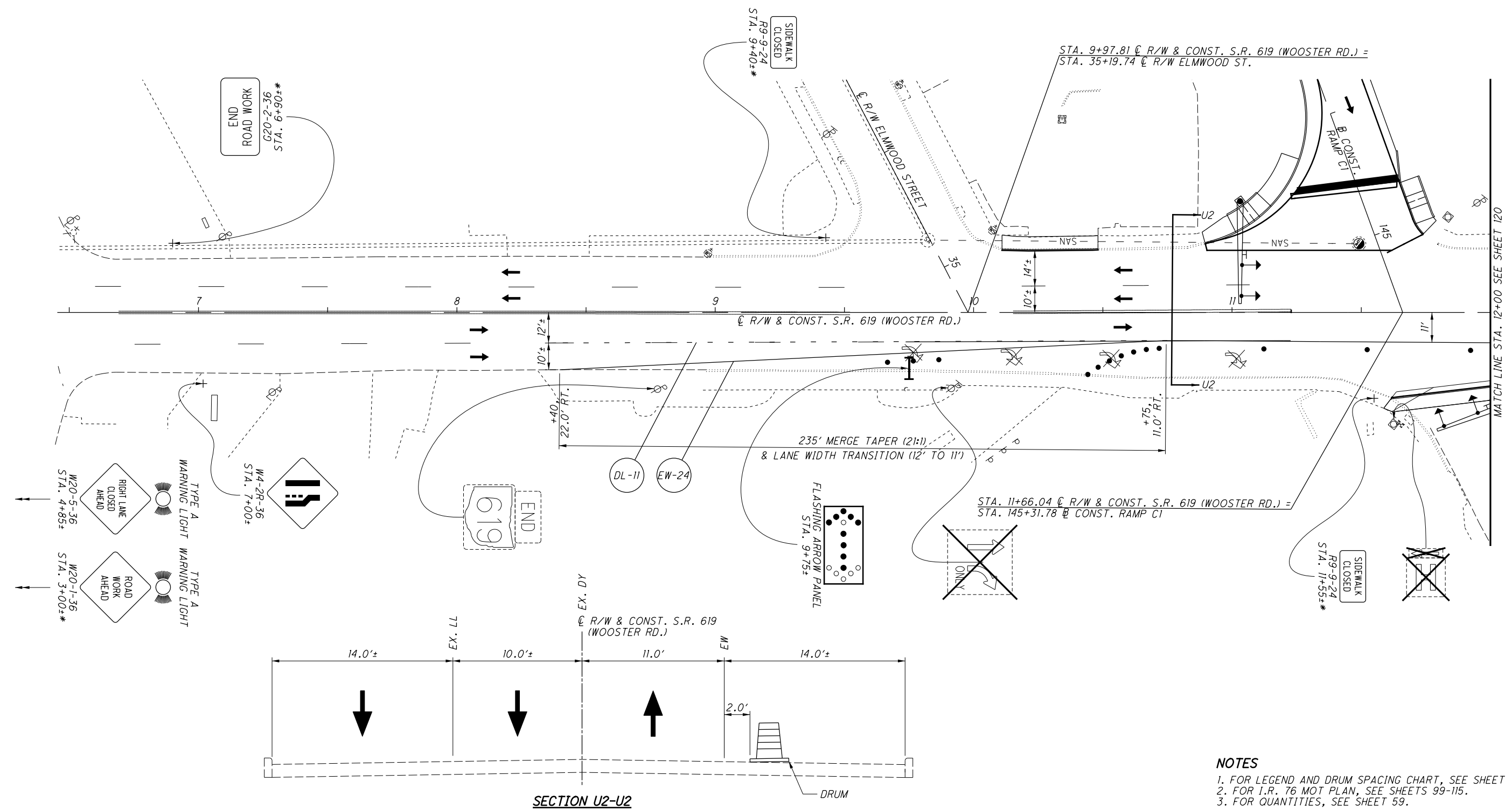
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40  
HORIZONTAL  
SCALE IN FEET

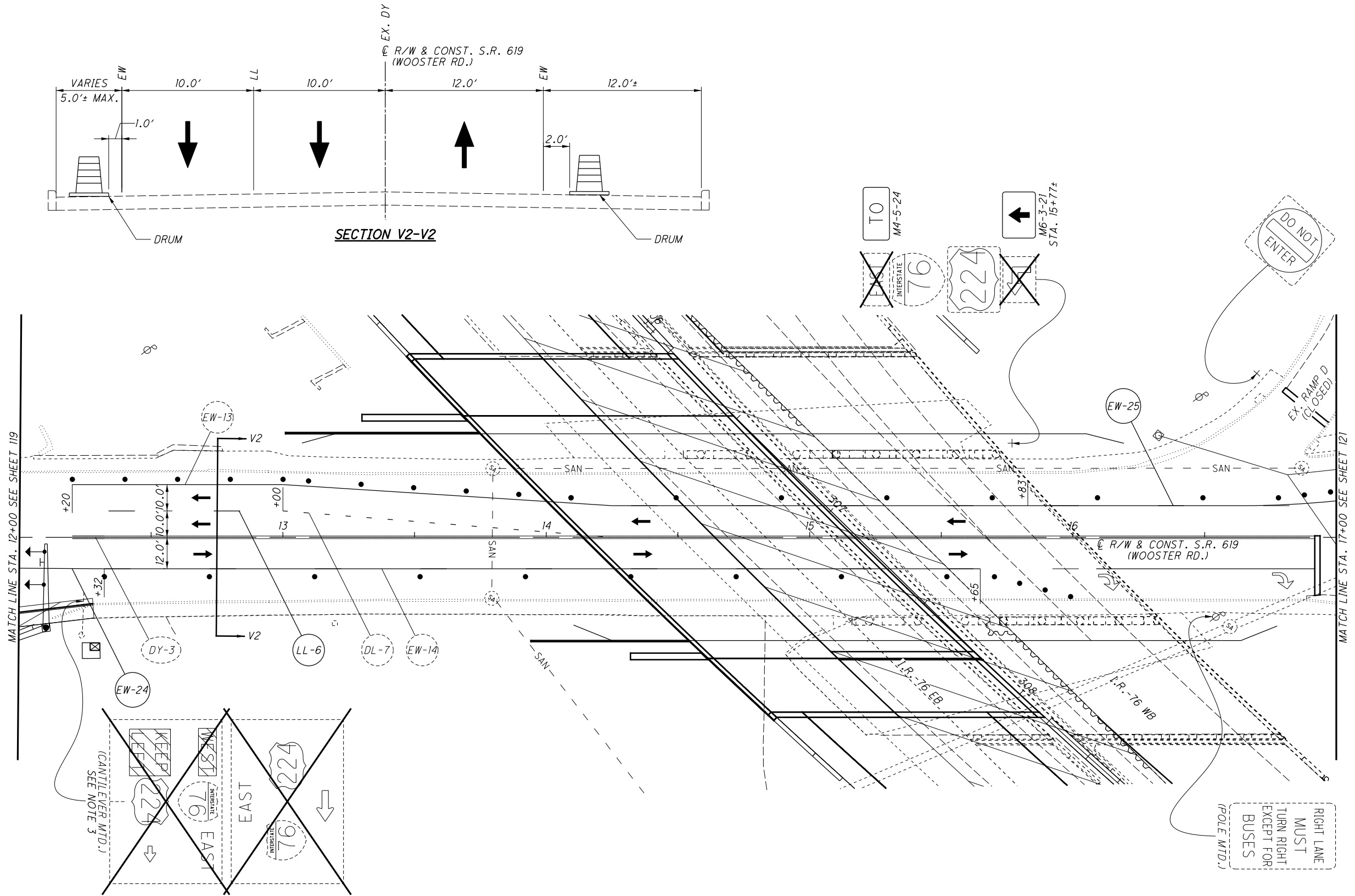
**MAINTENANCE OF TRAFFIC - PHASE 2**  
**STATE ST. - STA. 88+00 TO STA. 93+50**

**SUM-76-5.53**



**NOTES**  
 1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
 2. FOR I.R. 76 MOT PLAN, SEE SHEETS 99-115.  
 3. FOR QUANTITIES, SEE SHEET 59.  
 \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

MATCH LINE STA. 12+00 SEE SHEET 120



CALCULATED  
MGM  
CHECKED  
NAU

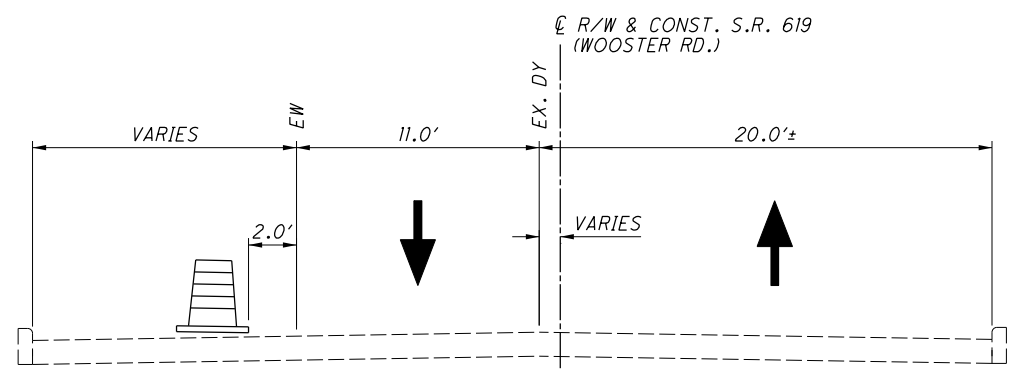
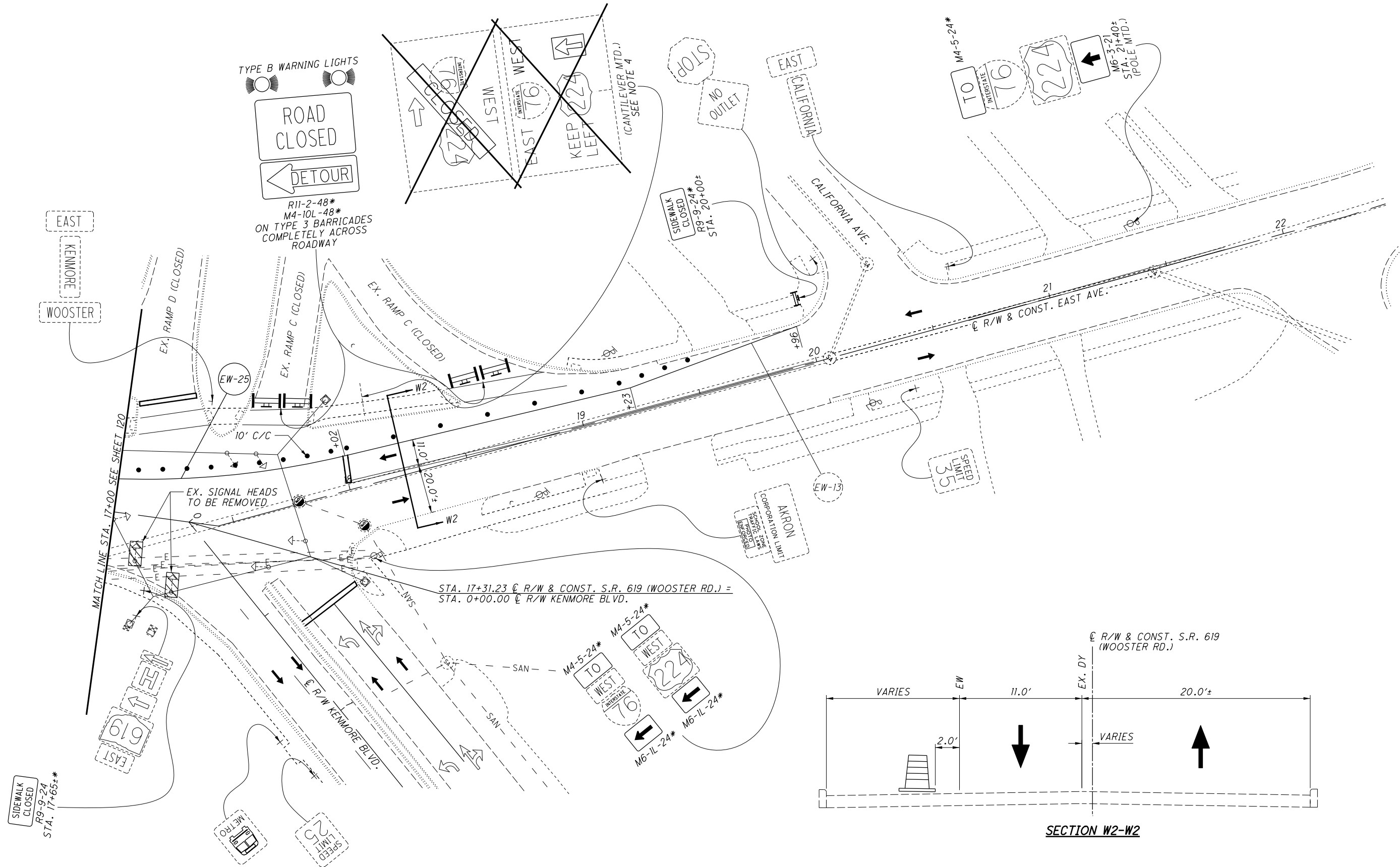
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**S.R. 619 - STA. 12+00 TO STA. 17+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 99-115.
  3. THIS SIGN SHALL BE REMOVED DURING THE REMOVAL OF EXISTING RAMP F IN PHASE 1A.
  4. FOR QUANTITIES, SEE SHEET 59.





SECTION W2-W2

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 99-115.
  3. FOR EXISTING RAMP C DETOUR, SEE SHEET 61.
  4. THIS SIGN SHALL BE REMOVED DURING THE REMOVAL OF EXISTING RAMP F IN PHASE 1A.
  5. FOR QUANTITIES, SEE SHEET 59.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

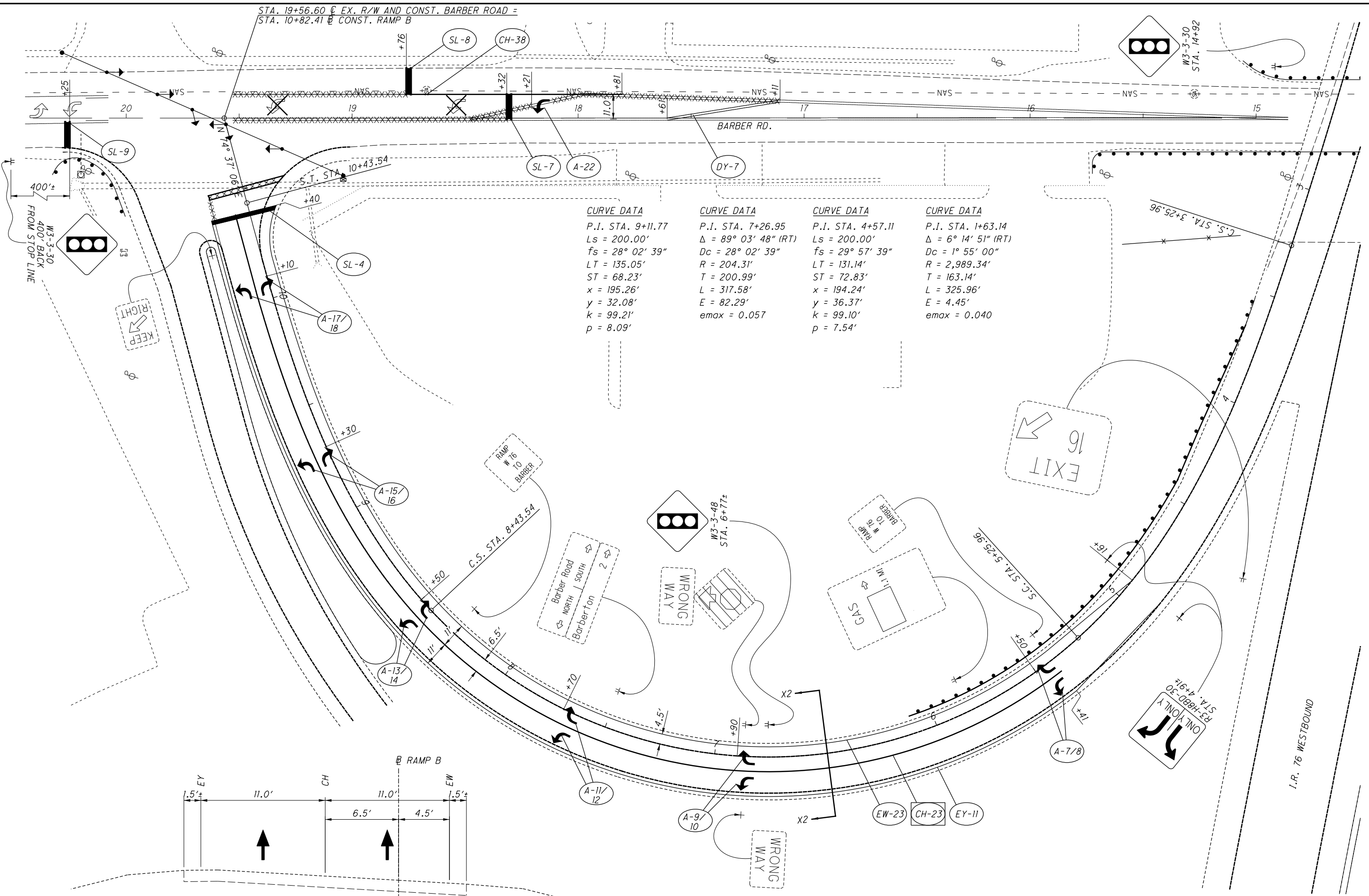
CALCULATED  
MGM  
CHECKED  
NAU

0 20 40  
10  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2**  
**S.R. 619 - STA. 17+00 TO STA. 21+00**

**SUM-76-5.53**

STA. 19+56.60 @ EX. R/W AND CONST. BARBER ROAD =  
 STA. 10+82.41 @ CONST. RAMP B



**CURVE DATA**

P.I. STA. 9+11.77  
 Ls = 200.00'  
 fs = 28° 02' 39"  
 LT = 135.05'  
 ST = 68.23'  
 x = 195.26'  
 y = 32.08'  
 k = 99.21'  
 p = 8.09'

**CURVE DATA**

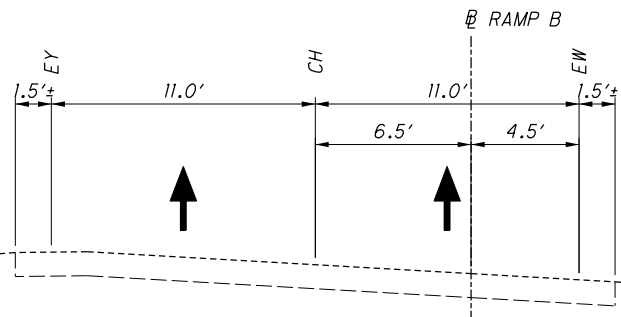
P.I. STA. 7+26.95  
 Δ = 89° 03' 48" (RT)  
 Dc = 28° 02' 39"  
 R = 204.31'  
 T = 200.99'  
 L = 317.58'  
 E = 82.29'  
 emax = 0.057

**CURVE DATA**

P.I. STA. 4+57.11  
 Ls = 200.00'  
 fs = 29° 57' 39"  
 LT = 131.14'  
 ST = 72.83'  
 x = 194.24'  
 y = 36.37'  
 k = 99.10'  
 p = 7.54'

**CURVE DATA**

P.I. STA. 1+63.14  
 Δ = 6° 14' 51" (RT)  
 Dc = 1° 55' 00"  
 R = 2,989.34'  
 T = 163.14'  
 L = 325.96'  
 E = 4.45'  
 emax = 0.040



**SECTION X2-X2**

**NOTES**

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
3. FOR QUANTITIES, SEE SHEETS 56-57.

CALCULATED: MCM  
 CHECKED: NAU

0 20 40  
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 2  
 WESTBOUND I.R. 76 RAMP B TO BARBER RD.**

**SUM-76-5.53**



CALCULATED NRB CHECKED NAU

**MAINTENANCE OF TRAFFIC - PHASE 2  
BARBER ROAD TEMPORARY SIGNAL PLAN**

**SUM-76-5.53**

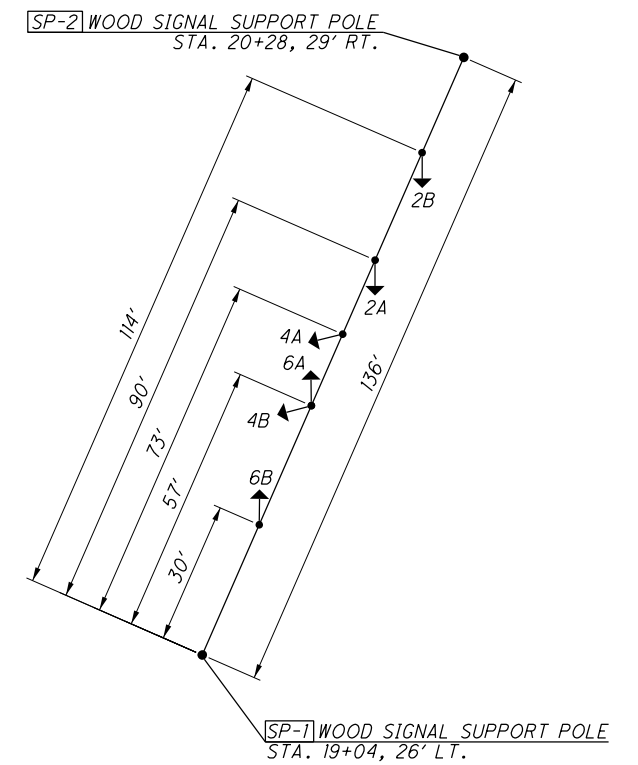
**LEGEND**

- PR. TRAFFIC SIGNAL, 3 UNIT HEAD, 12"
- PR. SIGNAL SUPPORT POLE
- PR. POLE MTD. CONTROLLER
- PR. STOP BAR RADAR DETECTION UNIT
- DETECTION ZONE
- REMOVAL OF PAVEMENT MARKING

**SIGNAL HEADS**

- ALL HEADS 12" LENSES
- - 
  -
- 2A, 2B, 4A, 4B, 6A & 6B

**TEMPORARY SIGNAL SPAN DIAGRAM**



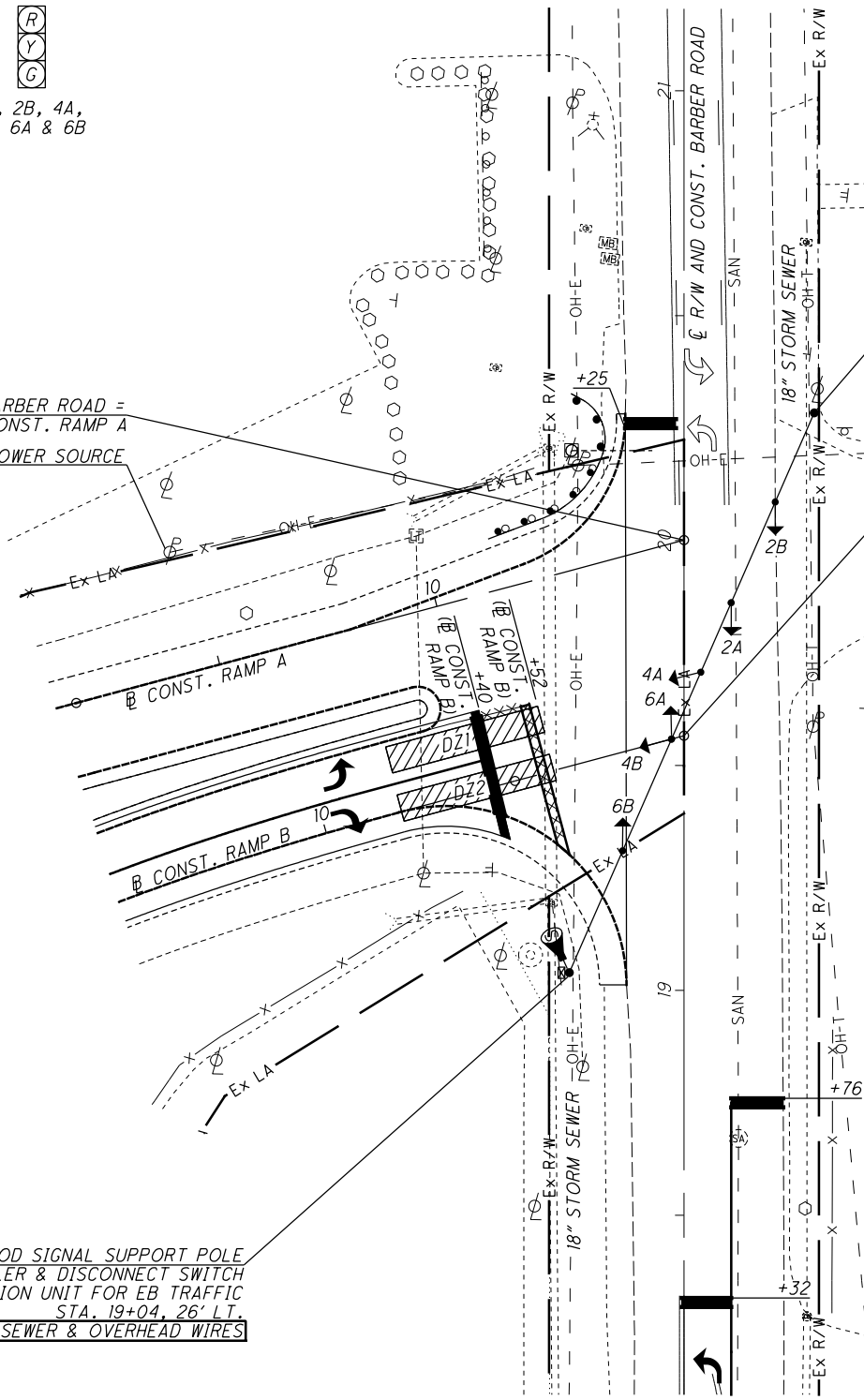
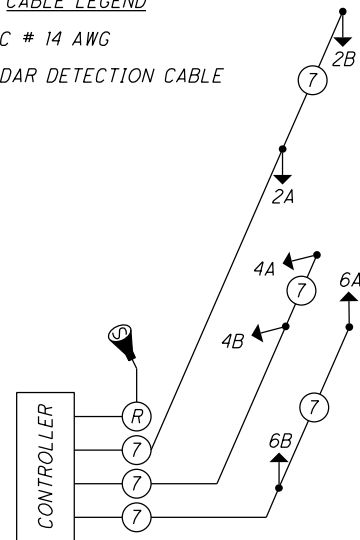
STA. 20+00.00 @ EX. R/W AND CONST. BARBER ROAD =  
STA. 10+56.86 @ CONST. RAMP A  
PR. TEMPORARY POWER SOURCE

STA. 19+56.60 @ EX. R/W AND CONST. BARBER ROAD =  
STA. 10+82.41 @ CONST. RAMP B

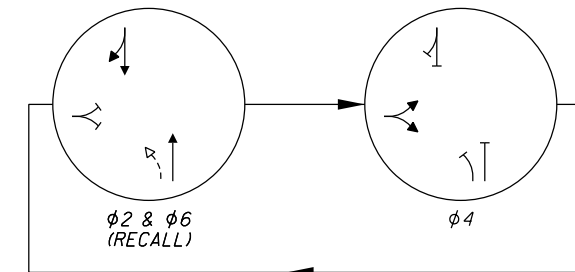
**WIRING DIAGRAM**

**CABLE LEGEND**

- 7/C # 14 AWG
- RADAR DETECTION CABLE



**TEMPORARY SIGNAL PHASING DIAGRAM**



**TEMPORARY RADAR DETECTION CHART**

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC.)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
DZ1	EB	PRESENCE	phi 4	3	phi 4	STOP BAR	35*
DZ2	EB	PRESENCE	phi 4	12	phi 4	STOP BAR	35*

\*SEE NOTE 3

**TEMPORARY SIGNAL TIMING CHART**

INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
	1	2	3	4	5	6	7	8
INTERSECTION MOVEMENT (PHASE)								
DIRECTION	-	SB	-	EB	-	NB	-	-
MINIMUM GREEN (SEC.)	-	10	-	10	-	10	-	-
PASSAGE TIME (SEC.)	-	-	-	3	-	-	-	-
MAXIMUM GREEN I (SEC.)	-	28.7	-	50.3	-	28.7	-	-
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	-	3.6	-	3.0	-	3.6	-	-
ALL RED CLEARANCE (SEC.)	-	1.7	-	2.7	-	1.7	-	-
MAXIMUM RECALL (ON/OFF)	-	OFF	-	OFF	-	OFF	-	-
MINIMUM RECALL (ON/OFF)	-	ON	-	OFF	-	ON	-	-
MEMORY (ON/OFF)	-	OFF	-	OFF	-	OFF	-	-

**TEMPORARY FIELD WIRING HOOK-UP CHART**

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A & 2B	R	phi 2 R	Y
	Y	phi 2 Y	
6A & 6B	G	phi 2 G	Y
	R	phi 6 R	
4A & 4B	Y	phi 6 Y	R
	G	phi 6 G	
4A & 4B	R	phi 4 R	R
	Y	phi 4 Y	
4A & 4B	G	phi 4 G	R
	R	phi 4 R	

**NOTES:**

1. ALL STATIONING AND OFFSETS FROM @ R/W AND CONSTRUCTION BARBER ROAD UNLESS OTHERWISE NOTED.
2. TEMPORARY TRAFFIC SIGNAL SHALL BE IN OPERATION DURING MOT PHASES 2 AND 3.
3. STOP BAR RADAR DETECTION UNIT AND DETECTION ZONES SHOWN FOR REFERENCE ONLY IN THE GENERAL DESIRED LOCATION. THE CONTRACTOR SHALL LOCATE THE UNIT IN THE OPTIMAL LOCATION PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS TO DETECT EB VEHICLES, INCLUDING MOTORCYCLES.
4. SIGNAL HEADS SHALL BE MOUNTED SUCH THAT THE VERTICAL CLEARANCE FROM THE ROADWAY TO THE BOTTOM OF THE HEAD IS BETWEEN 17' TO 19'. ALL LENSES SHALL BE 12".
5. ONE GROUND ROD SHALL BE FURNISHED AND INSTALLED FOR EACH WOOD SIGNAL SUPPORT POLE AND ATTACHED TO THE MESSENGER WIRE. TWO GROUND RODS SHALL BE FURNISHED AND INSTALLED FOR THE POLE MOUNTED CONTROLLER.
6. FURNISH AND INSTALL DOWN GUY WIRES AS NEEDED TO PROVIDE STABILITY FOR THE WOOD SIGNAL SUPPORTS.

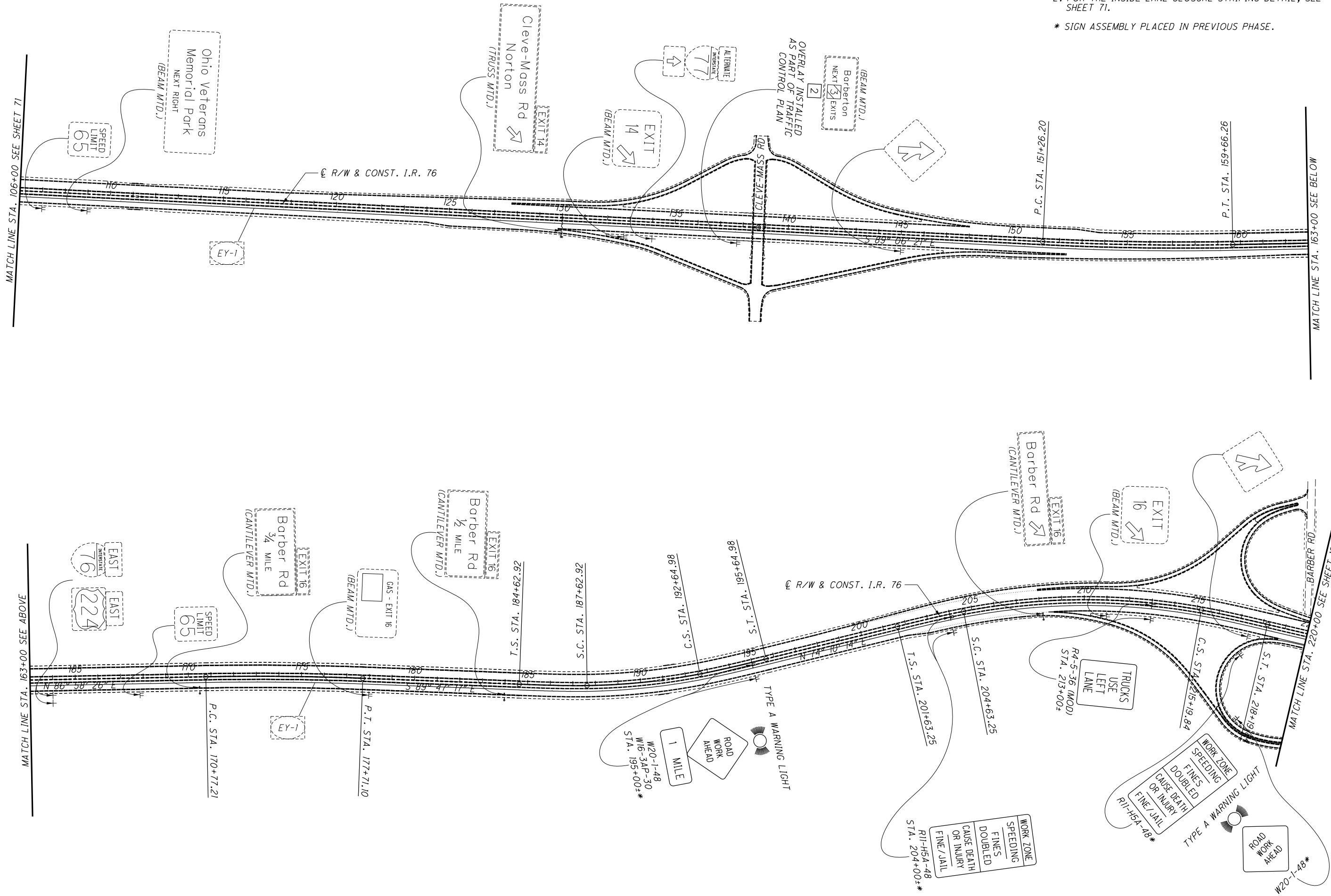
P:\DDT\MP\0093\_SUM-76-5.53\SUM-76-5.53\Design\MOT\Sheets\96670\_MH307.dgn Sheet 10/11/2018 3:54:24 PM CMT031

MATCH LINE STA. 106+00 SEE SHEET 71

MATCH LINE STA. 163+00 SEE ABOVE

MATCH LINE STA. 163+00 SEE BELOW

MATCH LINE STA. 220+00 SEE SHEET 125



- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR THE INSIDE LANE CLOSURE STRIPING DETAIL, SEE SHEET 71.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

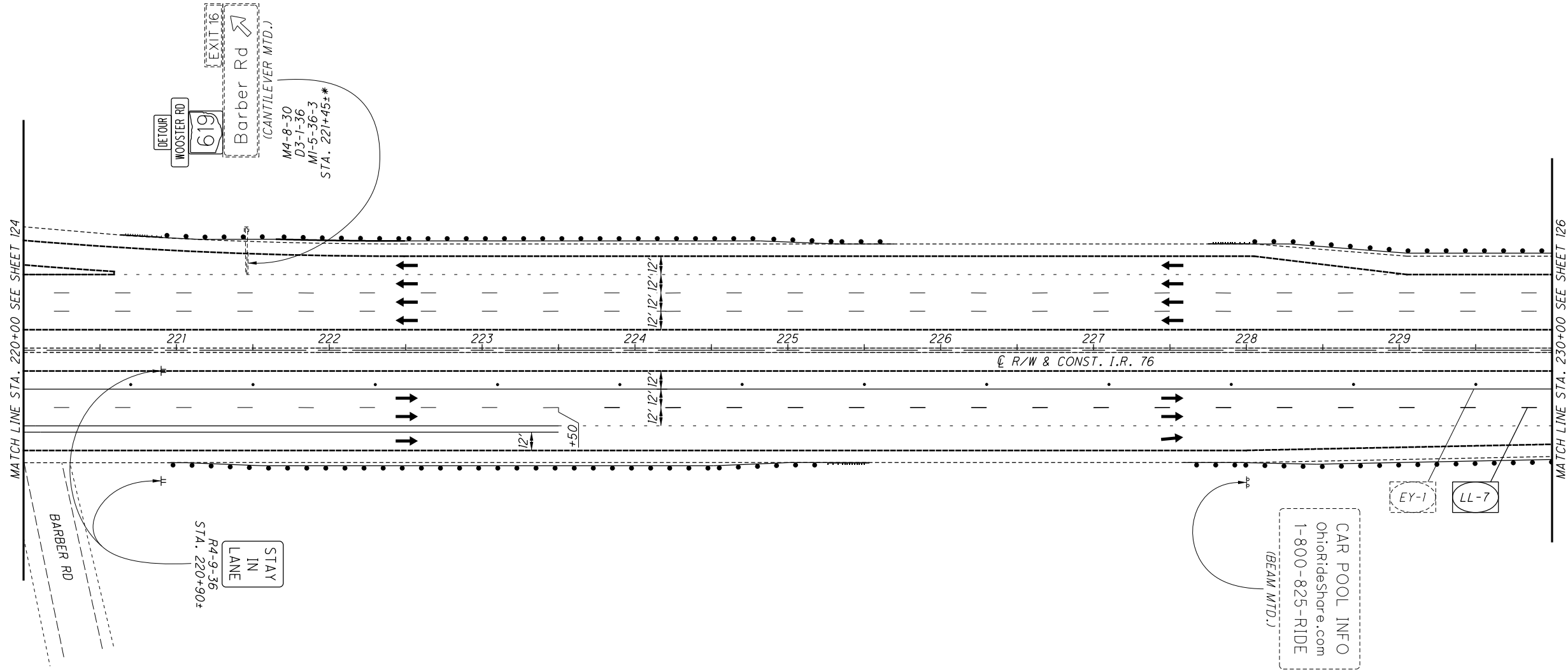
CALCULATED  
MGM  
CHECKED  
NAU

0 200 400  
HORIZONTAL  
SCALE IN FEET

124  
672

**MAINTENANCE OF TRAFFIC - PHASE 3  
STA. 106+00 TO STA. 220+00**

**SUM-76-5.53**



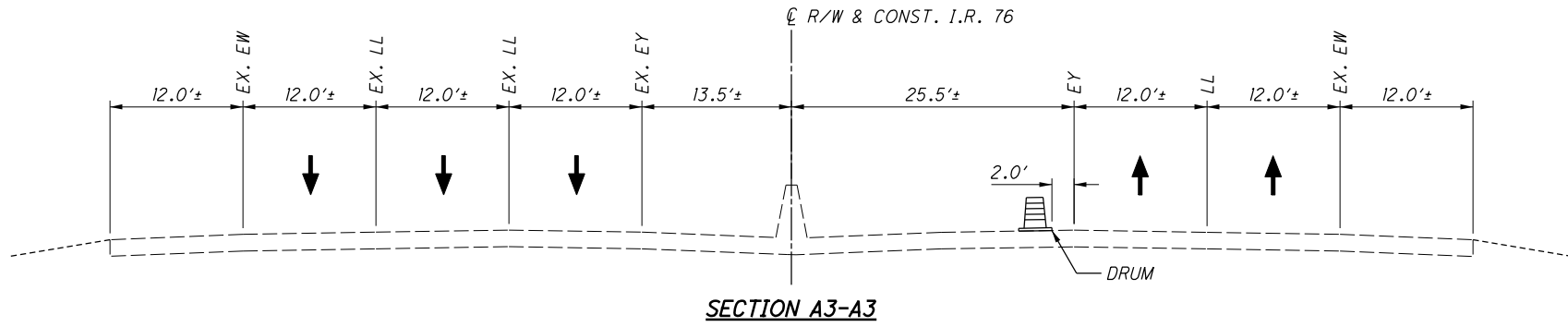
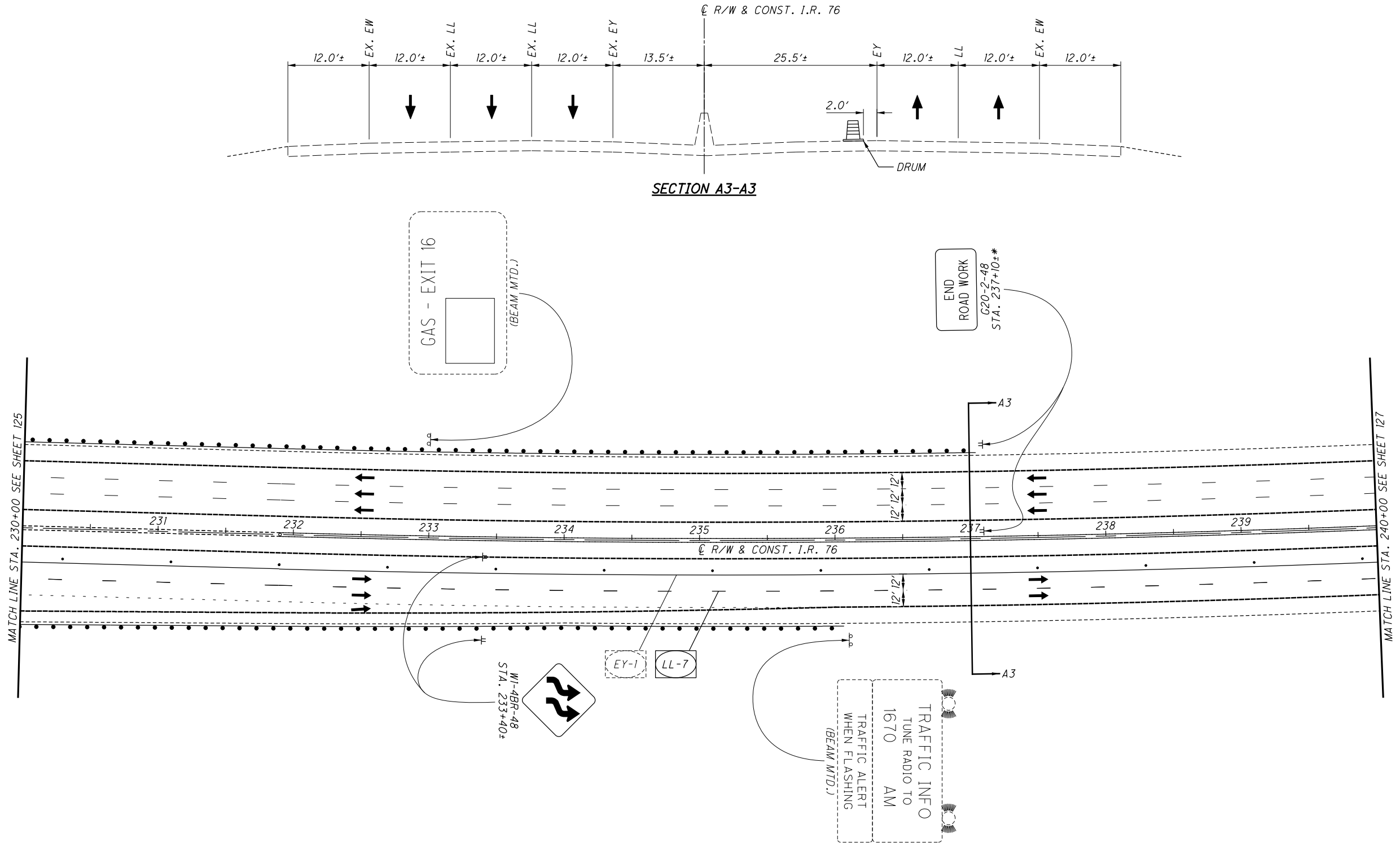
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR THE BARBER RD MOT PLAN, SEE SHEET 122.
  4. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

CALCULATED	MGM
CHECKED	NAU

0 20 40 80  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 220+00 TO STA. 230+00**

**SUM-76-5.53**

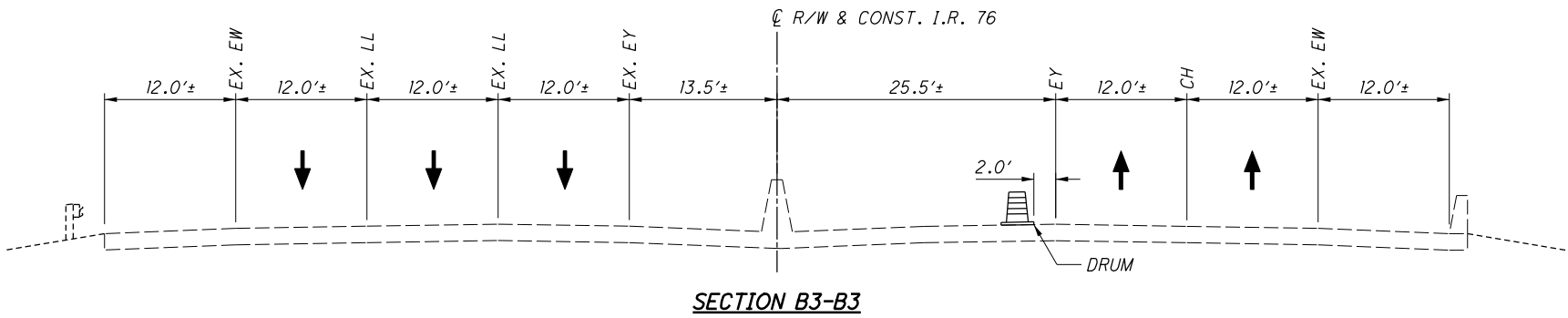
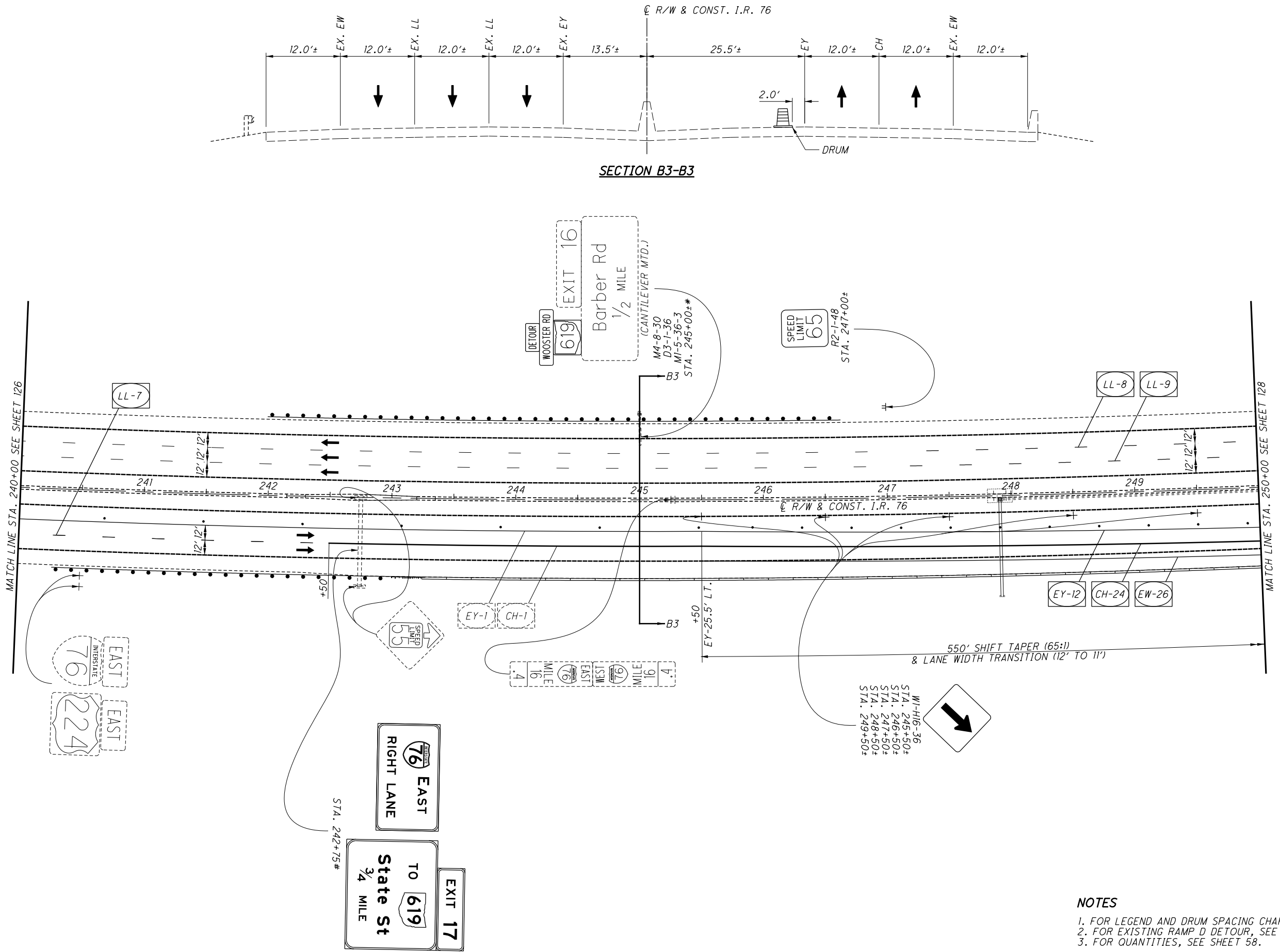


- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 230+00 TO STA. 240+00**



CALCULATED  
MGM  
CHECKED  
NAU

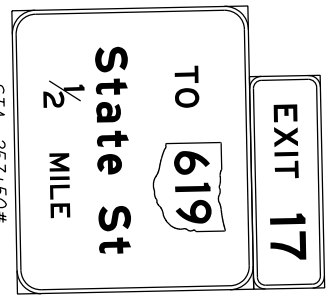
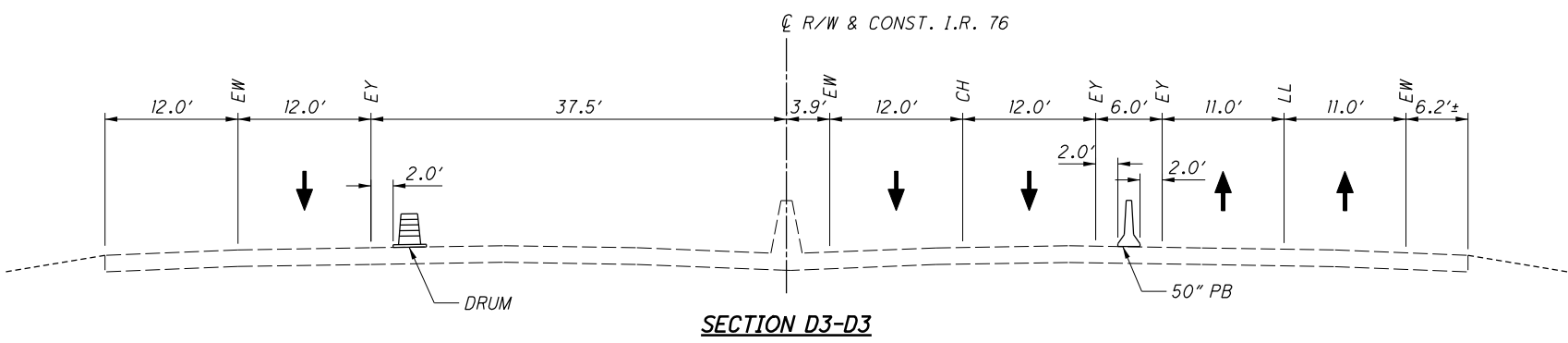
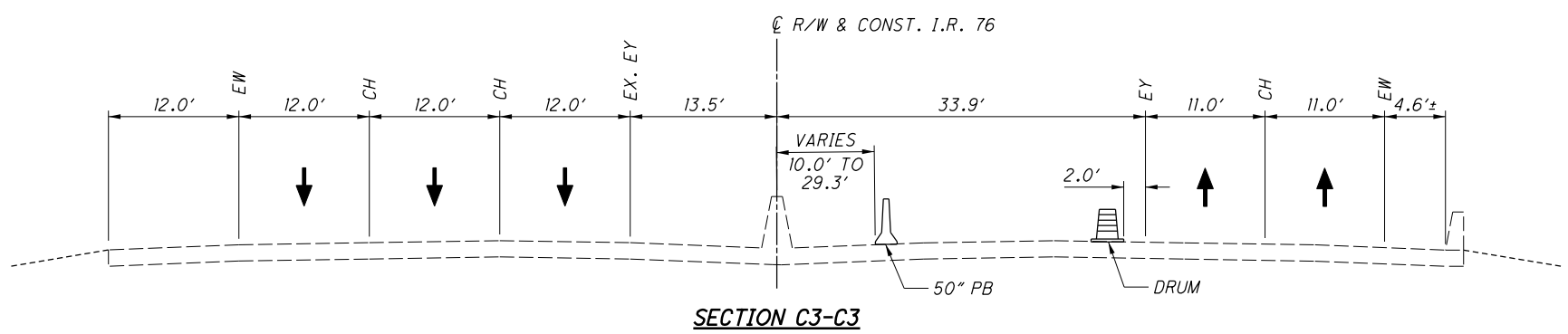
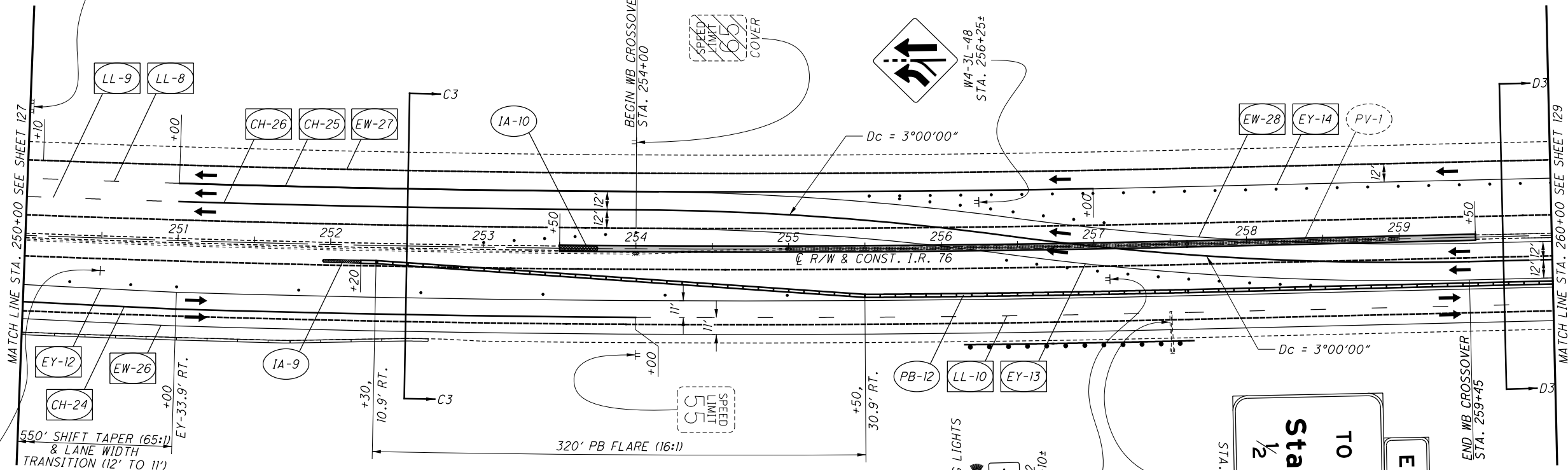
0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 240+00 TO STA. 250+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

DRUG ACTIVITY  
IMPAIRED DRIVERS  
CALL #677  
(BEAM MTD.)



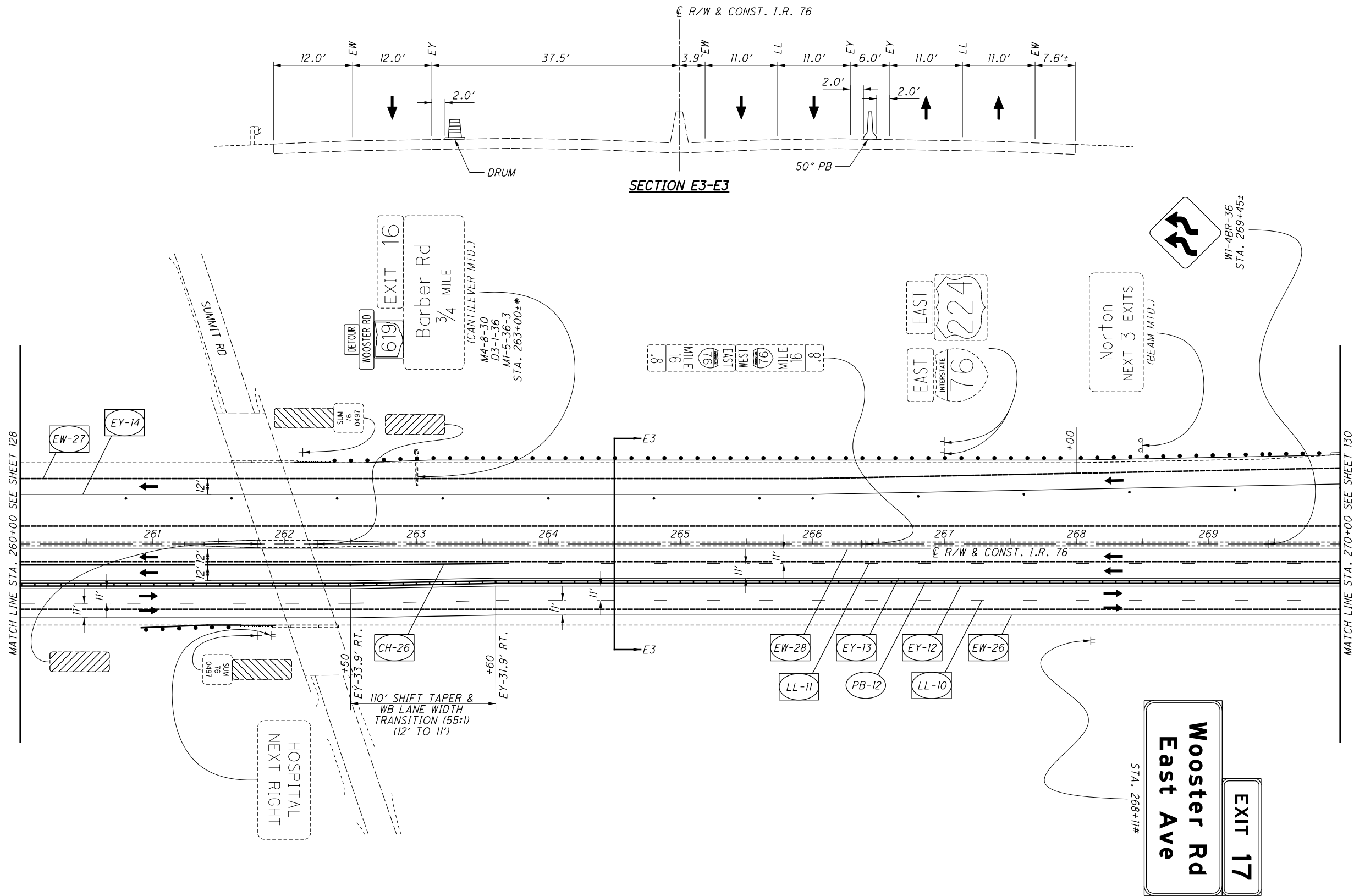
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR CROSSOVER DETAILS, SEE SHEET 151.
  3. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 156.
  4. WORK ZONE CROSSOVER LIGHTING SHALL REMAIN FROM PHASE 1.
  5. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  6. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 250+00 TO STA. 260+00**





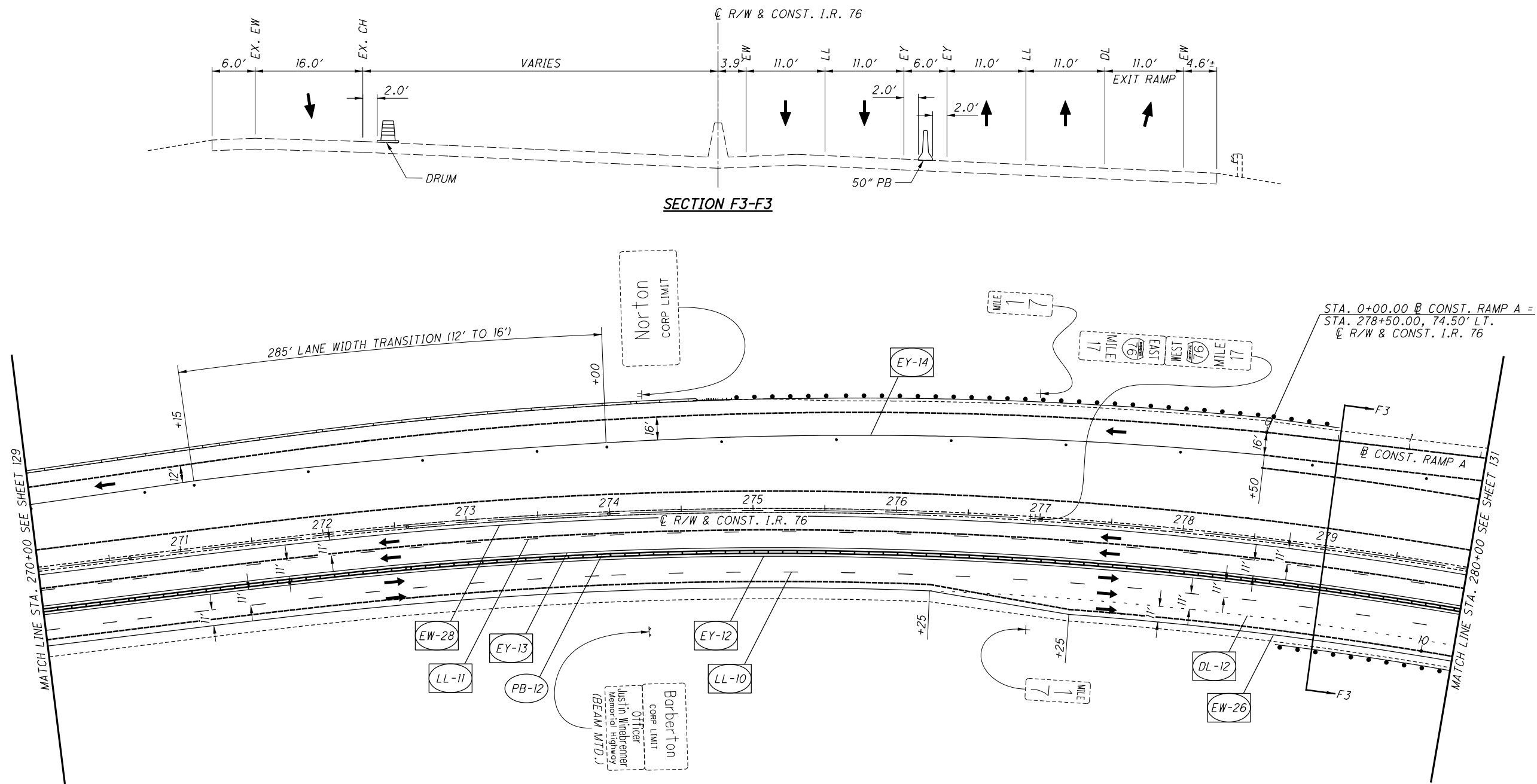
- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.
- # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 260+00 TO STA. 270+00**

**SUM-76-5.53**



**SECTION F3-F3**

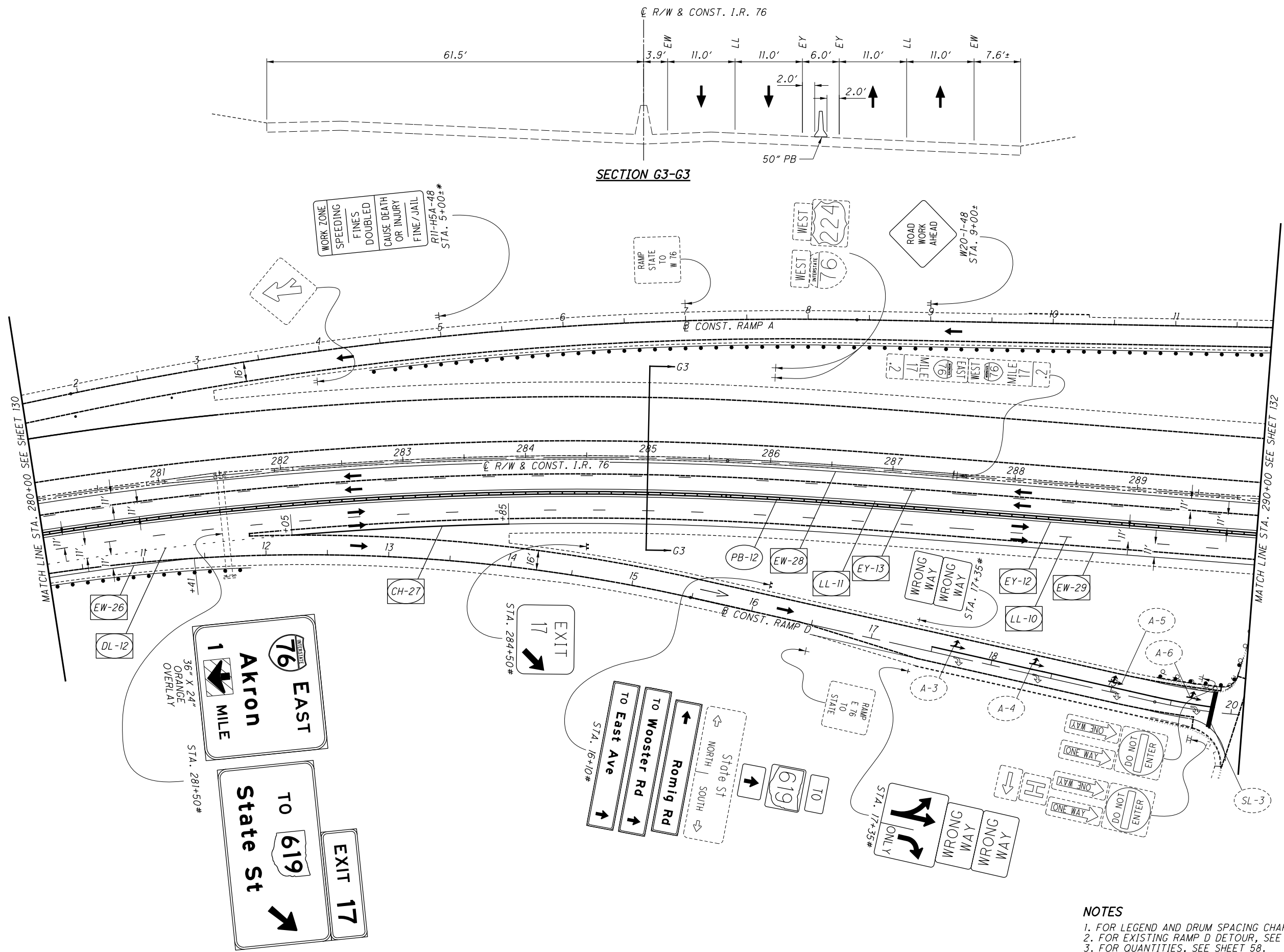
CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 270+00 TO STA. 280+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEET 58.



**SECTION G3-G3**

WORK ZONE  
SPEEDING  
FINES DOUBLED  
CAUSE DEATH  
OR INJURY  
FINE/JAIL  
RTI-HSA-48  
STA. 5+00+\*

ROAD WORK  
AHEAD  
W20-1-48  
STA. 9+00+\*

36" X 24" ORANGE OVERLAY  
1 MILE  
AKRON EAST  
76  
EXIT 17  
TO 619  
State St

EXIT 17  
STA. 284+50#

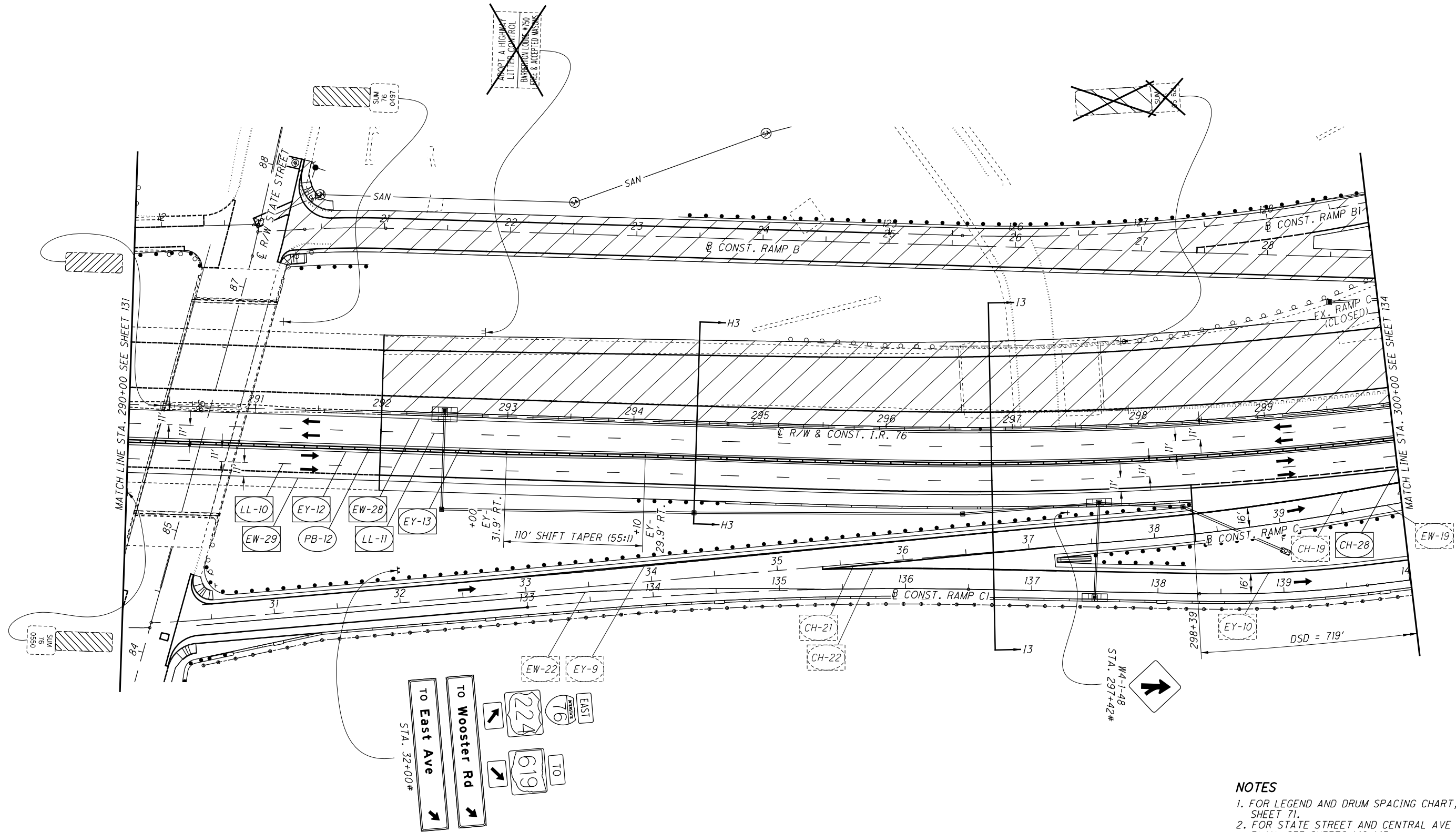
619 TO  
State St  
NORTH | SOUTH  
To Wooster Rd  
To East Ave  
STA. 16+10#

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  3. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 280+00 TO STA. 290+00**



CALCULATED  
MGM  
CHECKED  
NAU

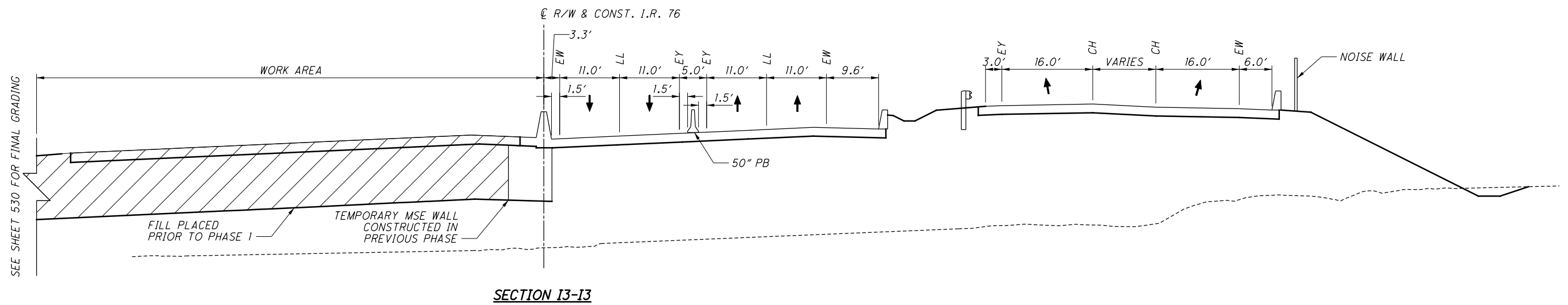
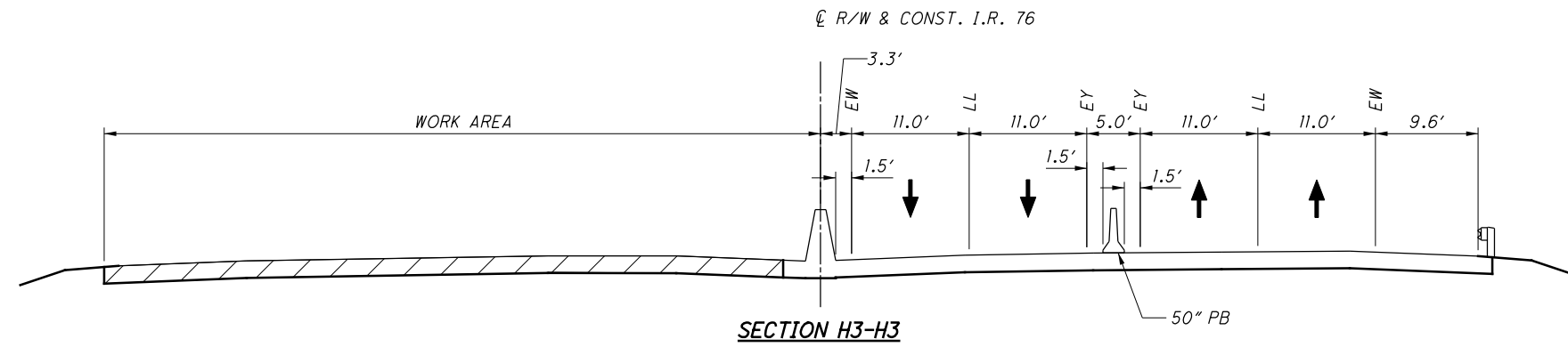
0 20 40 60 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 290+00 TO STA. 300+00**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR STATE STREET AND CENTRAL AVE MOT PLAN, SEE SHEETS 142-145.
  3. FOR MOT TYPICAL SECTIONS, SEE SHEET 133.
  4. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  5. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
# SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

P:\DDT\MP\0093\_SUM-76-5.62\96670\Design\MOT\Sheets\96670\_MY408.dgn Sheet 10/1/2018 3:54:36 PM CMT031

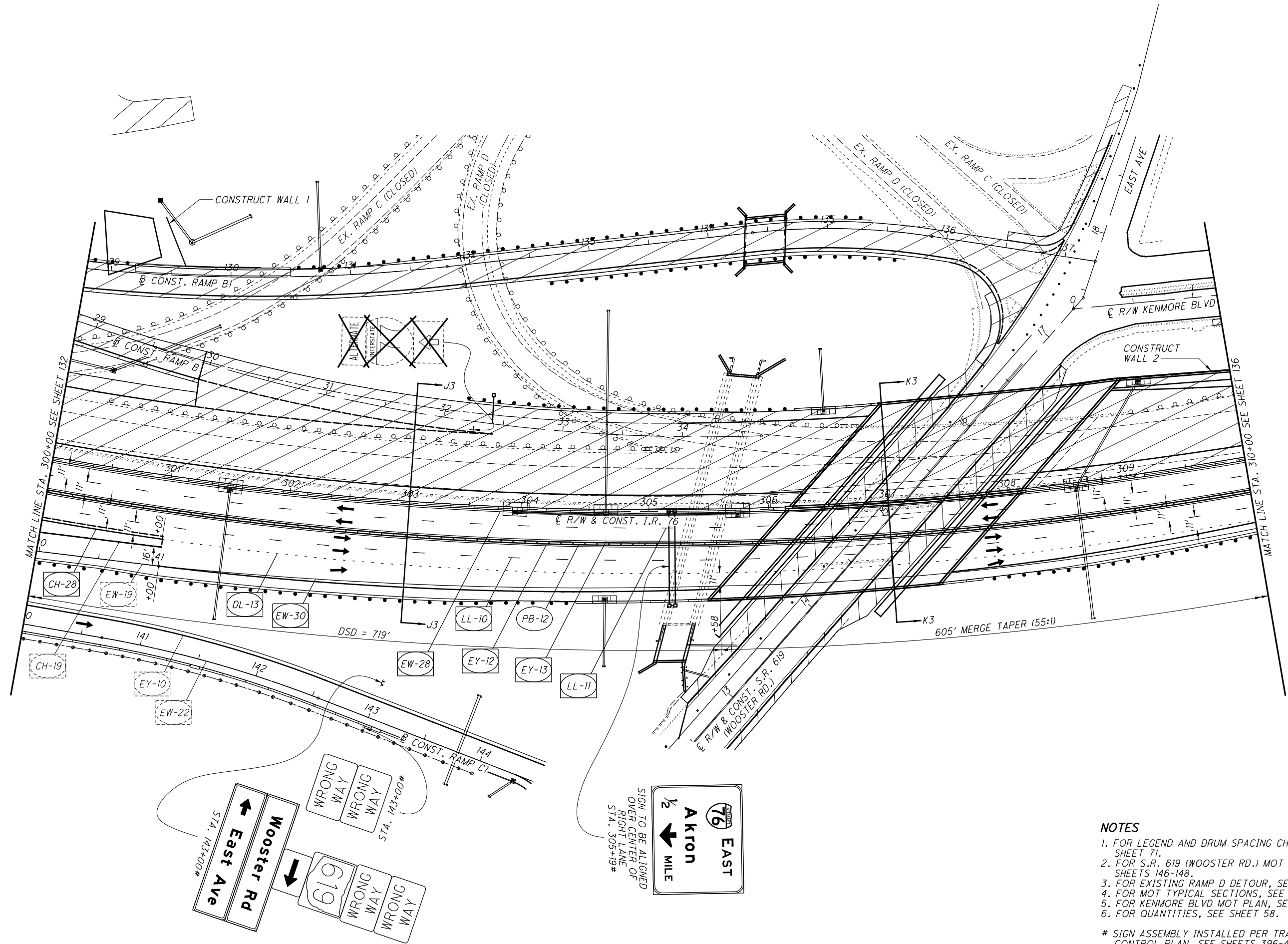


- NOTES**
1. FOR LEGEND, SEE SHEET 71.
  2. FOR MOT PLAN VIEW, SEE SHEET 132.
  3. FOR QUANTITIES, SEE SHEET 58.

CALCULATED	MGM
CHECKED	NAU

**MAINTENANCE OF TRAFFIC - PHASE 3**

**SUM-76-5.53**

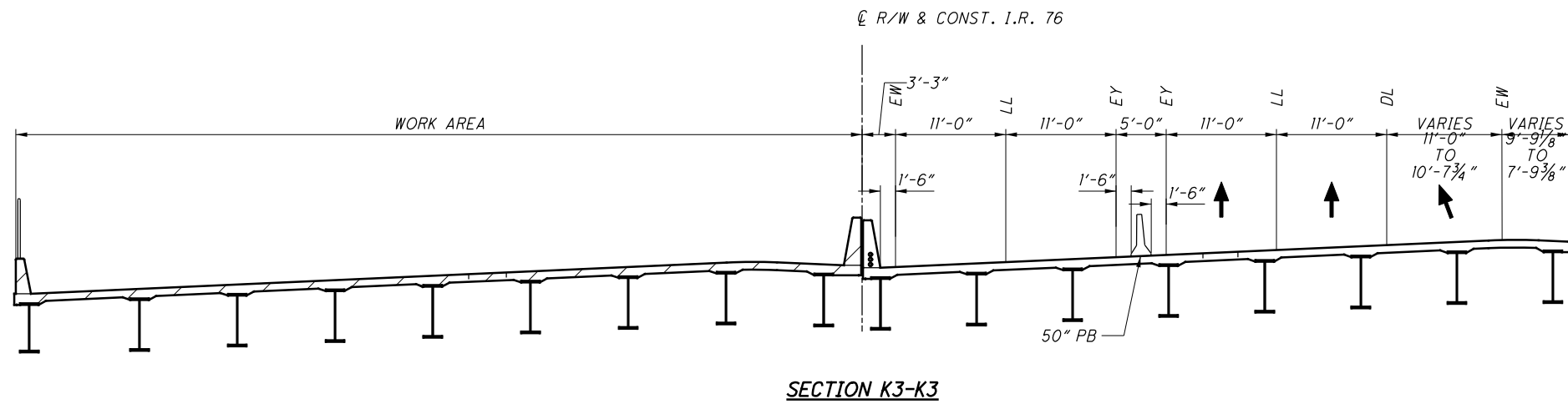
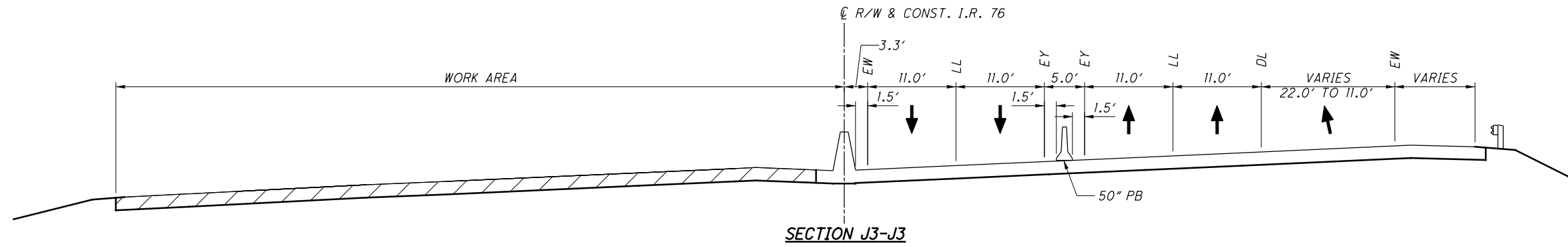


- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR S.R. 619 (WOOSTER RD.) MOT PLAN, SEE SHEETS 146-148.
  3. FOR EXISTING RAMP D DETOUR, SEE SHEET 64.
  4. FOR MOT TYPICAL SECTIONS, SEE SHEET 135.
  5. FOR KENMORE BLVD MOT PLAN, SEE SHEET 149.
  6. FOR QUANTITIES, SEE SHEET 58.
- # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

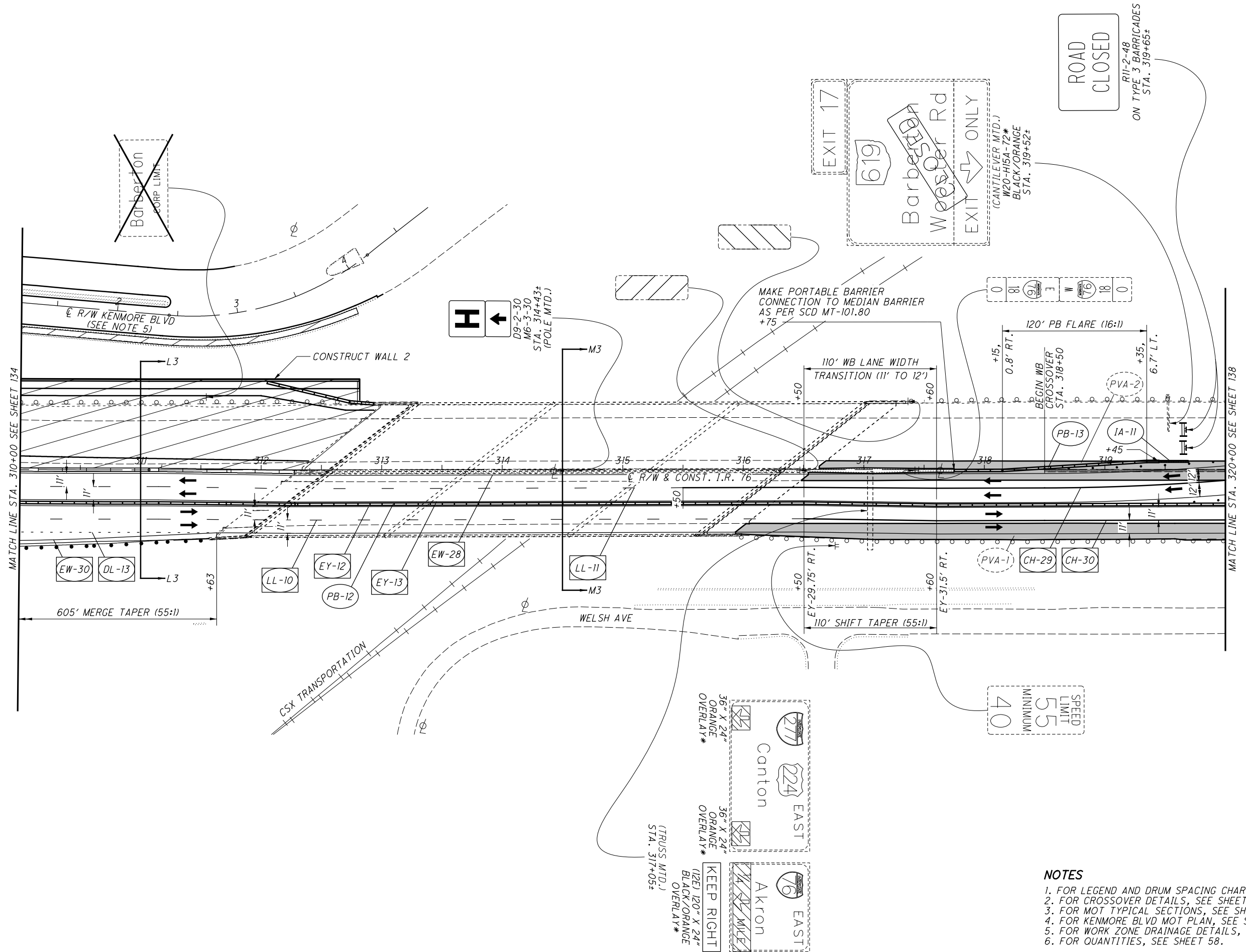
**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 300+00 TO STA. 310+00**



**NOTES**

1. FOR LEGEND, SEE SHEET 71.
2. FOR MOT PLAN VIEW, SEE SHEET 134.
3. FOR QUANTITIES, SEE SHEET 58.

CALCULATED	MGM
CHECKED	NAU



- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR CROSSOVER DETAILS, SEE SHEET 154.
  3. FOR MOT TYPICAL SECTIONS, SEE SHEET 137.
  4. FOR KENMORE BLVD MOT PLAN, SEE SHEET 149.
  5. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 158.
  6. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

**SUM-76-5.53**

136  
672

**MAINTENANCE OF TRAFFIC - PHASE 3**

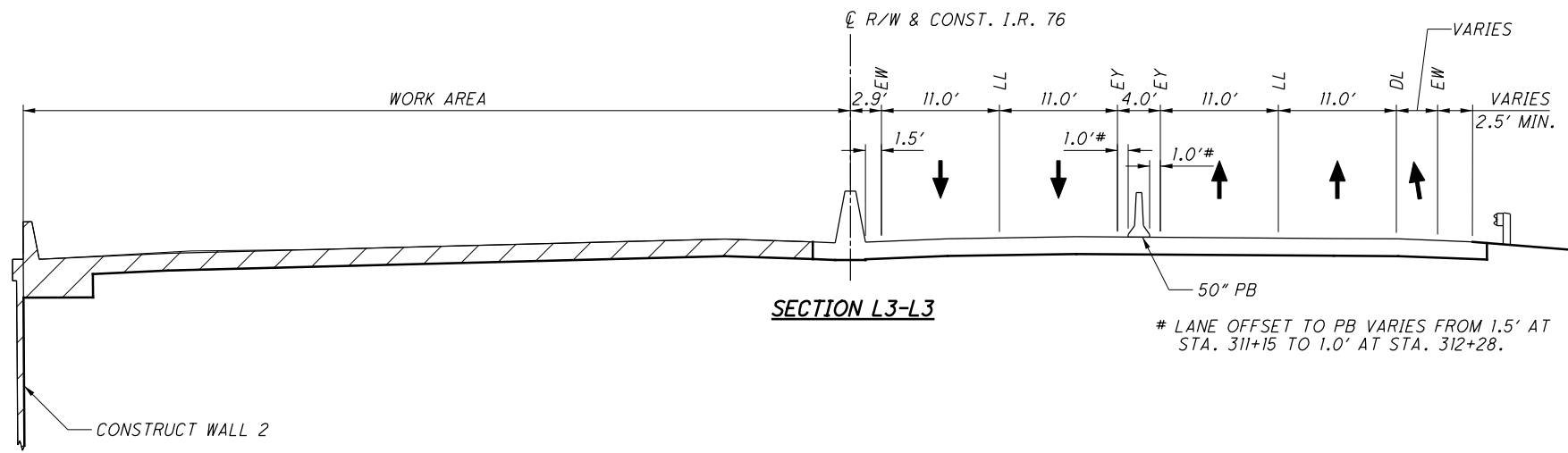
**STA. 310+00 TO STA. 320+00**

0 20 40 80  
HORIZONTAL SCALE IN FEET

0 20 40 60 80  
VERTICAL SCALE IN FEET

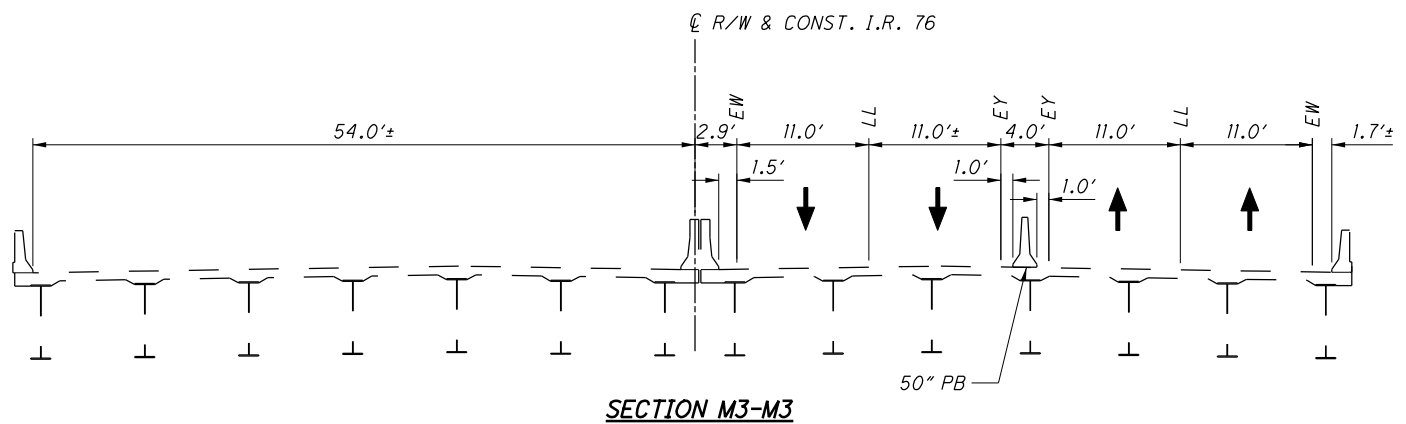
CALCULATED	MGM
CHECKED	NAU





**SECTION L3-L3**

# LANE OFFSET TO PB VARIES FROM 1.5' AT STA. 311+15 TO 1.0' AT STA. 312+28.

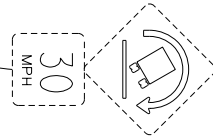
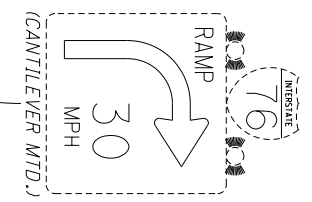
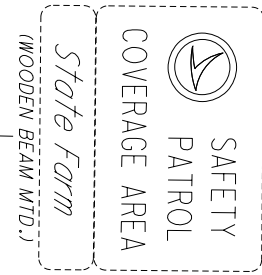
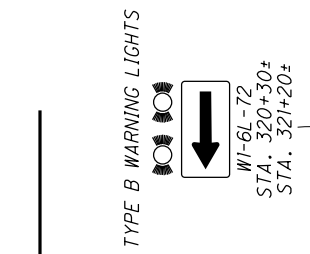
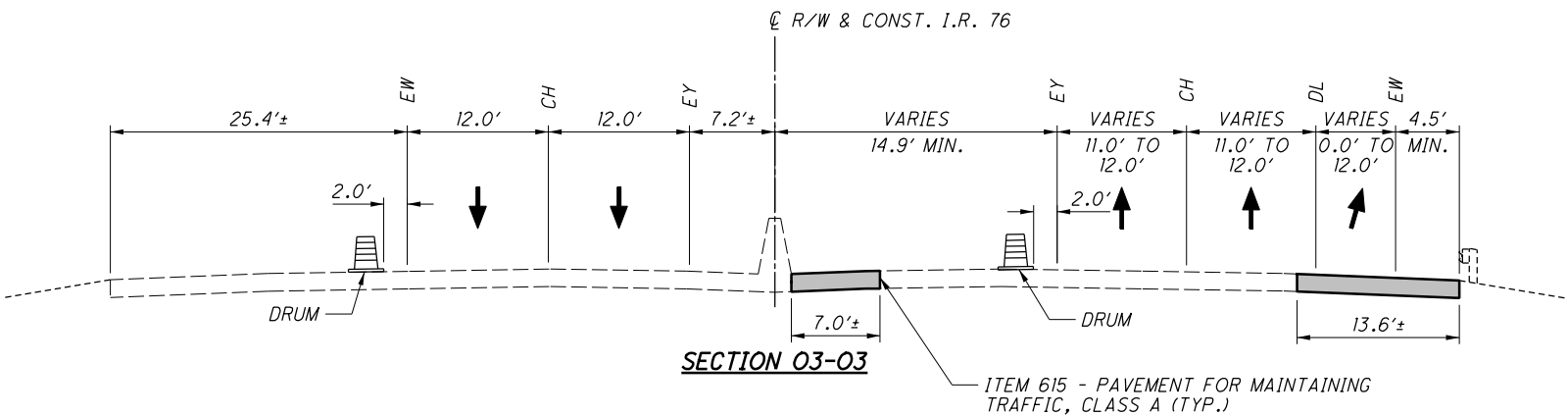
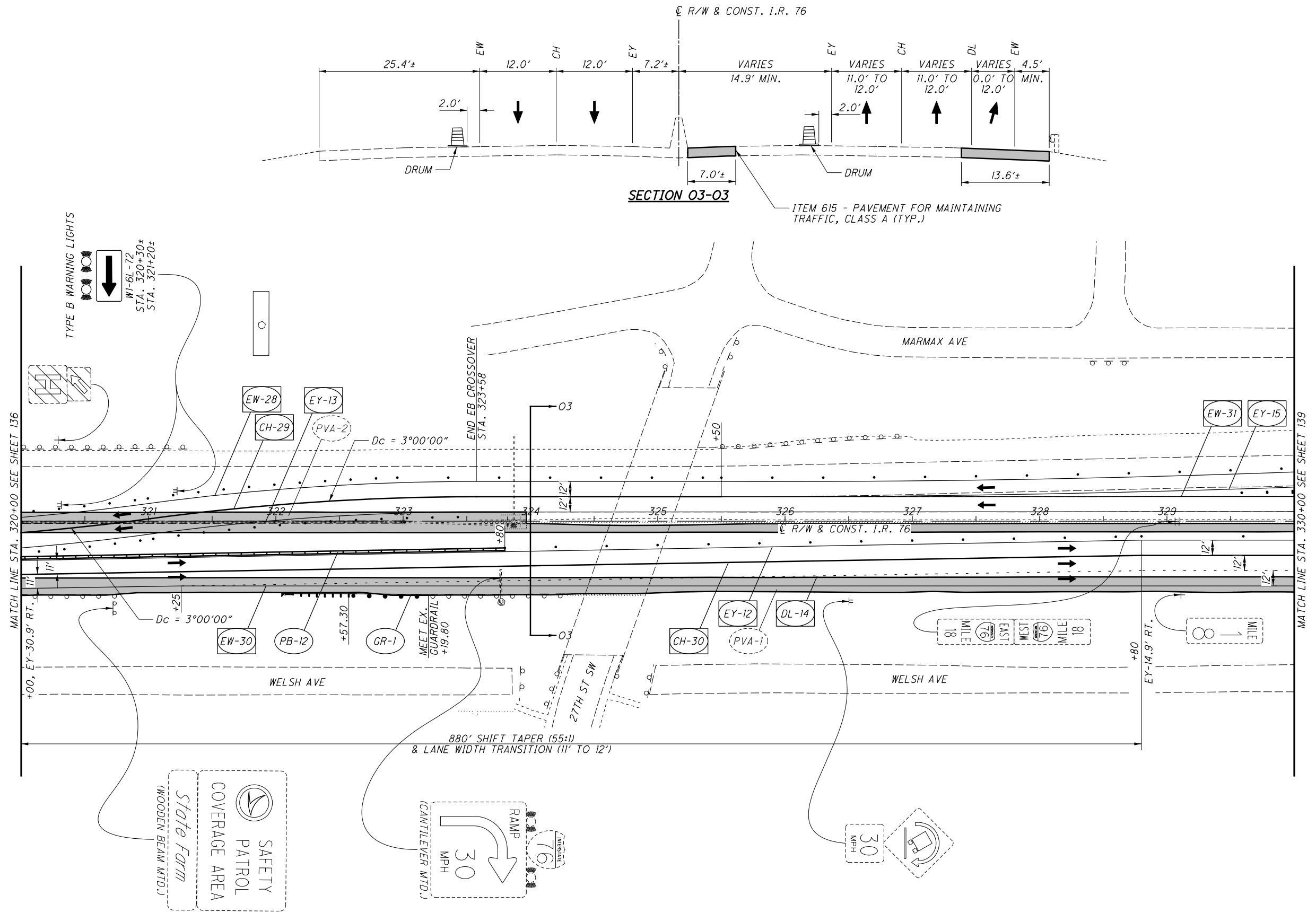


**SECTION M3-M3**

**NOTES**

1. FOR LEGEND, SHEET SHEET 71.
2. FOR MOT PLAN VIEW, SEE SHEET 136.
3. FOR QUANTITIES, SEE SHEET 58.

CALCULATED	MGM
CHECKED	NAU

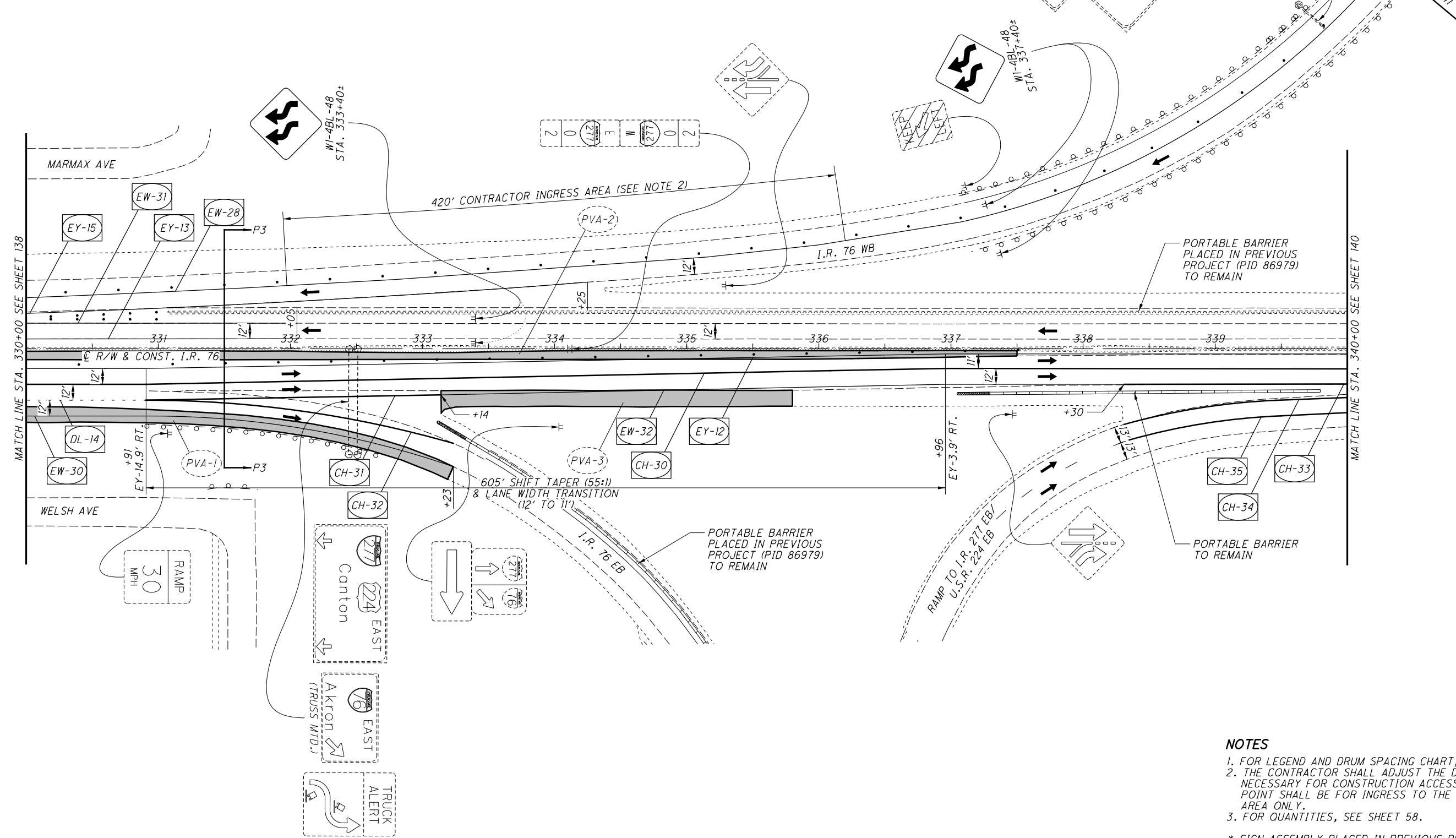
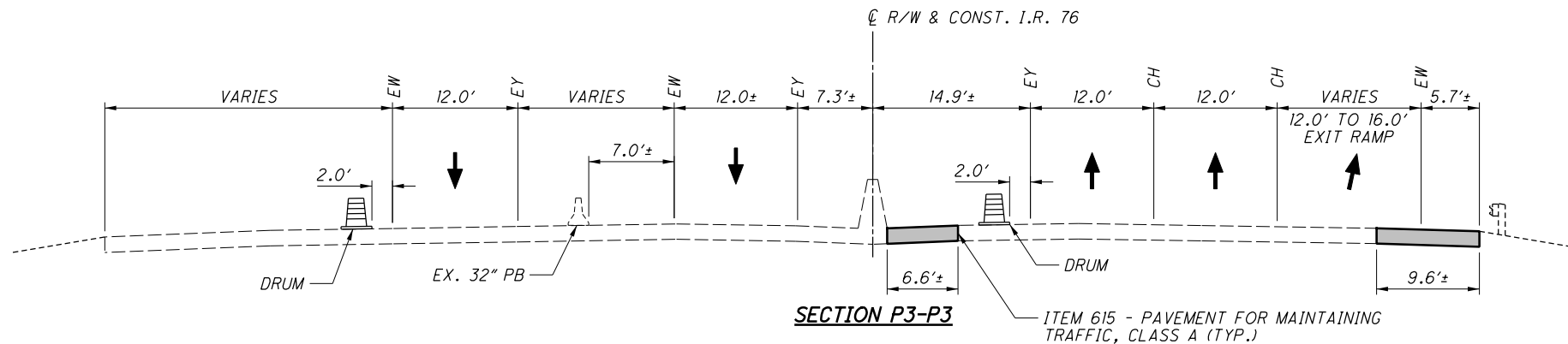


- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR CROSSOVER DETAILS, SEE SHEET 154.
  3. FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 158.
  4. FOR QUANTITIES, SEE SHEET 58.

CALCULATED	MGM
CHECKED	NAU

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STA. 320+00 TO STA. 330+00**

**SUM-76-5.53**



CALCULATED  
MGM  
CHECKED  
NAU

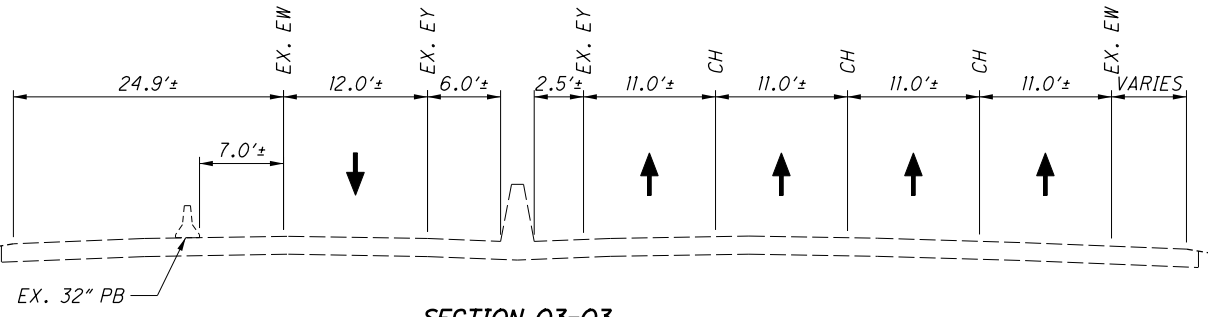
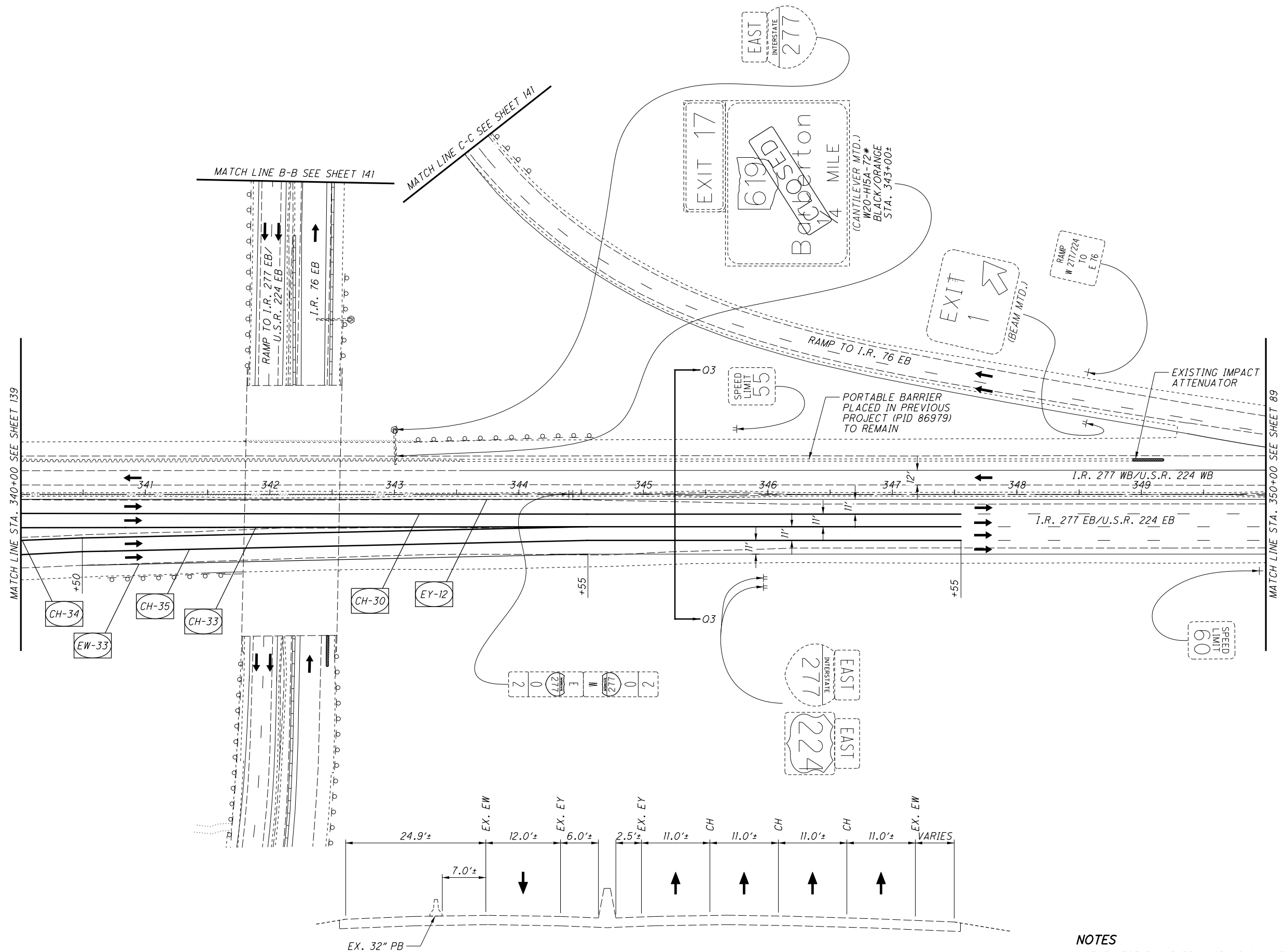
0 20 40 80  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
STA. 330+00 TO STA. 338+95

**SUM-76-5.53**

139  
672

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. THE CONTRACTOR SHALL ADJUST THE DRUMS AS NECESSARY FOR CONSTRUCTION ACCESS. THIS ACCESS POINT SHALL BE FOR INGRESS TO THE CONSTRUCTION AREA ONLY.
  3. FOR QUANTITIES, SEE SHEET 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.



**SECTION Q3-Q3**

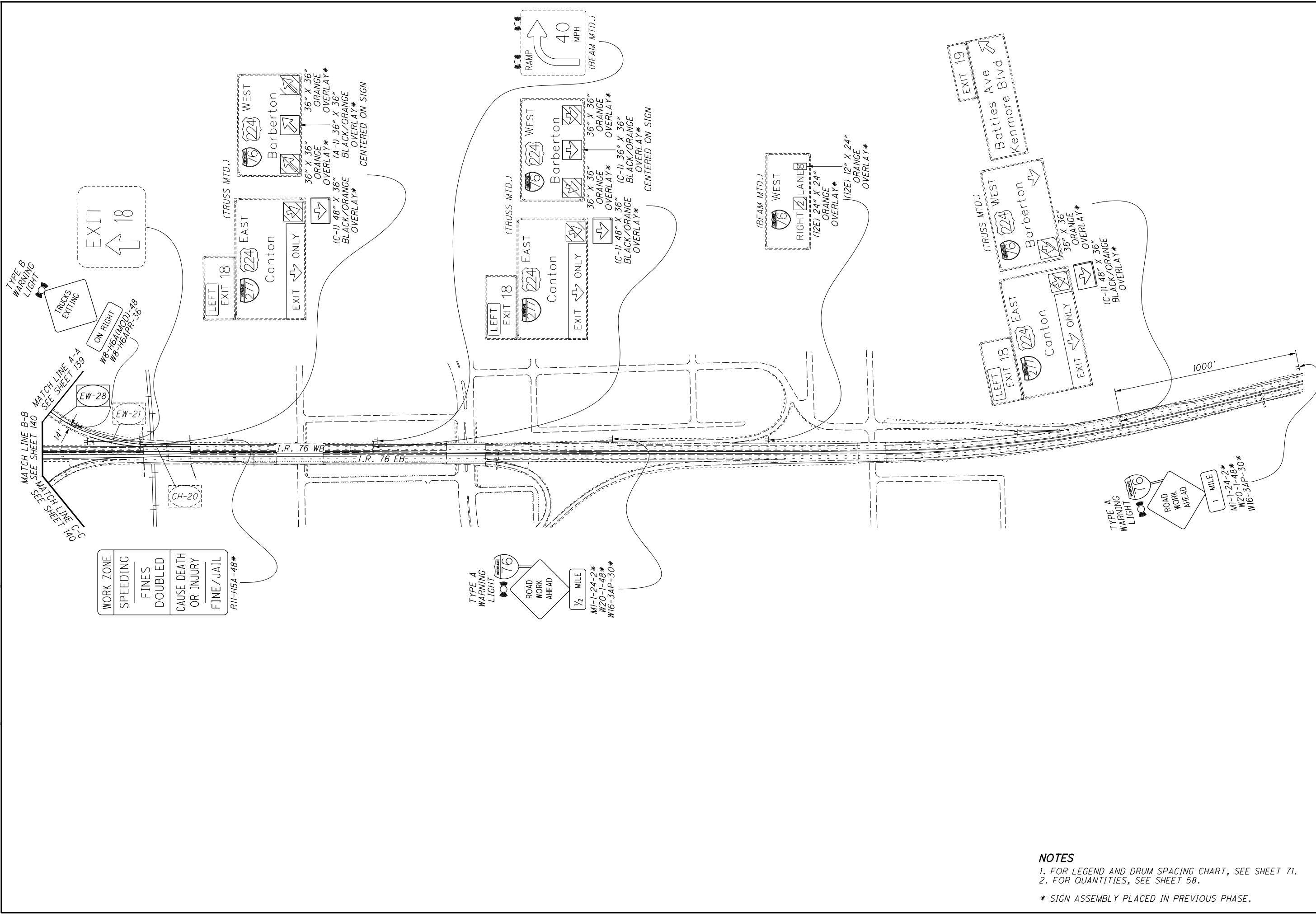
- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR QUANTITIES, SEE SHEETS 58.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

CALCULATED  
MGM  
CHECKED  
NAU

0 20 40 80  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**I.R. 277 / U.S.R. 224**

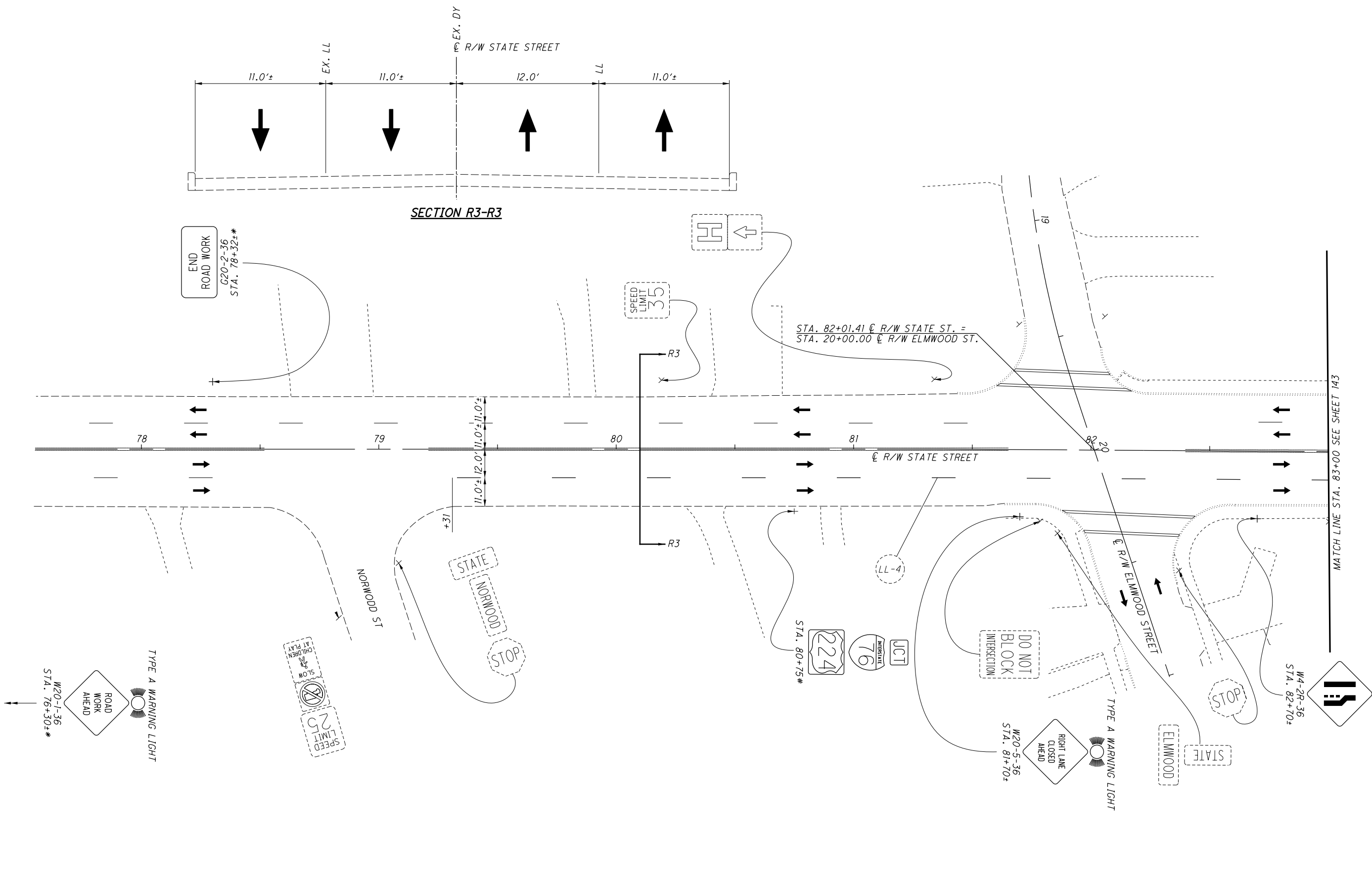
**SUM-76-5.53**



WORK ZONE  
SPEEDING  
FINES  
DOUBLED  
CAUSE DEATH  
OR INJURY  
FINE / JAIL  
R/I-45A-48\*

TYPE A  
WARNING  
LIGHT  
ROAD  
WORK  
AHEAD  
1/2 MILE  
M1-1-24-2\*  
W20-1-48\*  
W16-3AP-30\*

**NOTES**  
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
2. FOR QUANTITIES, SEE SHEET 58.  
\* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.



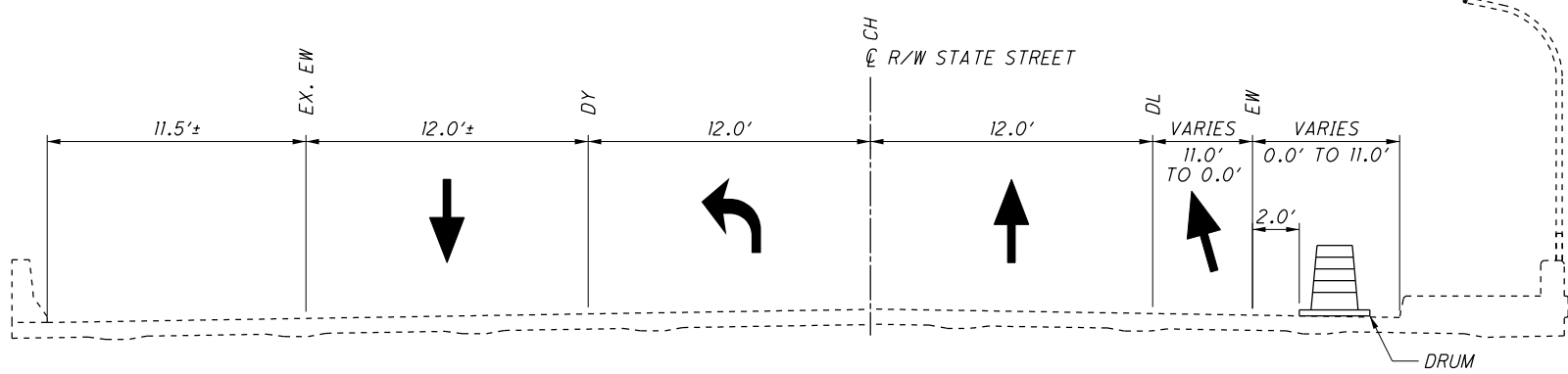
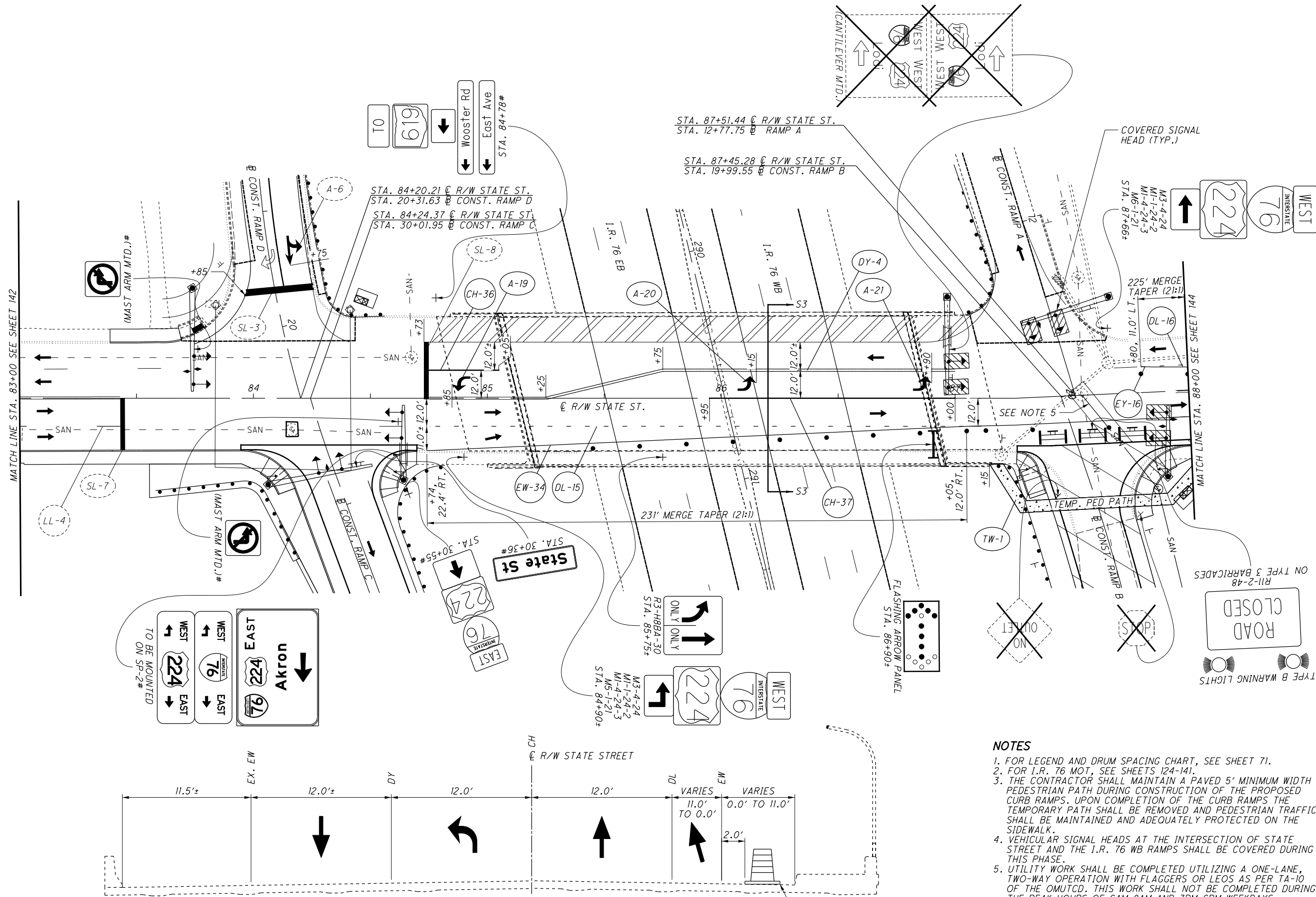
**NOTES**  
 1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
 2. FOR QUANTITIES, SEE SHEET 60.  
 \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.  
 # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

CALCULATED  
 MGM  
 CHECKED  
 NAU

0 10 20 40  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**STATE ST. - STA. 77+50 TO STA. 83+00**

**SUM-76-5.53**



- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT, SEE SHEETS 124-141.
  3. THE CONTRACTOR SHALL MAINTAIN A PAVED 5' MINIMUM WIDTH PEDESTRIAN PATH DURING CONSTRUCTION OF THE PROPOSED CURB RAMPS. UPON COMPLETION OF THE CURB RAMPS THE TEMPORARY PATH SHALL BE REMOVED AND PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AND ADEQUATELY PROTECTED ON THE SIDEWALK.
  4. VEHICULAR SIGNAL HEADS AT THE INTERSECTION OF STATE STREET AND THE I.R. 76 WB RAMPS SHALL BE COVERED DURING THIS PHASE.
  5. UTILITY WORK SHALL BE COMPLETED UTILIZING A ONE-LANE, TWO-WAY OPERATION WITH FLAGGERS OR LEOS AS PER TA-10 OF THE OMTCD. THIS WORK SHALL NOT BE COMPLETED DURING THE PEAK HOURS OF 6AM-8AM AND 3PM-6PM WEEKDAYS.
  6. FOR QUANTITIES, SEE SHEET 60.
- # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

MAINTENANCE OF TRAFFIC - PHASE 3

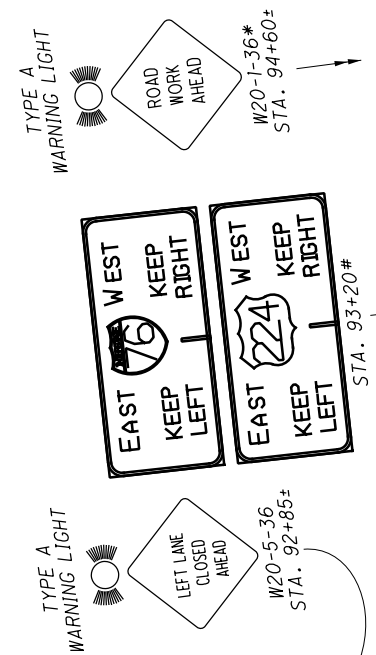
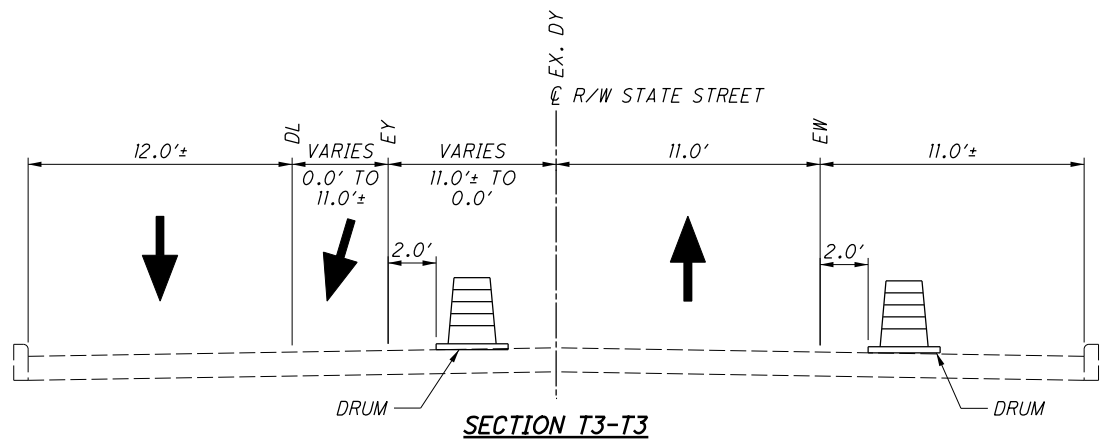
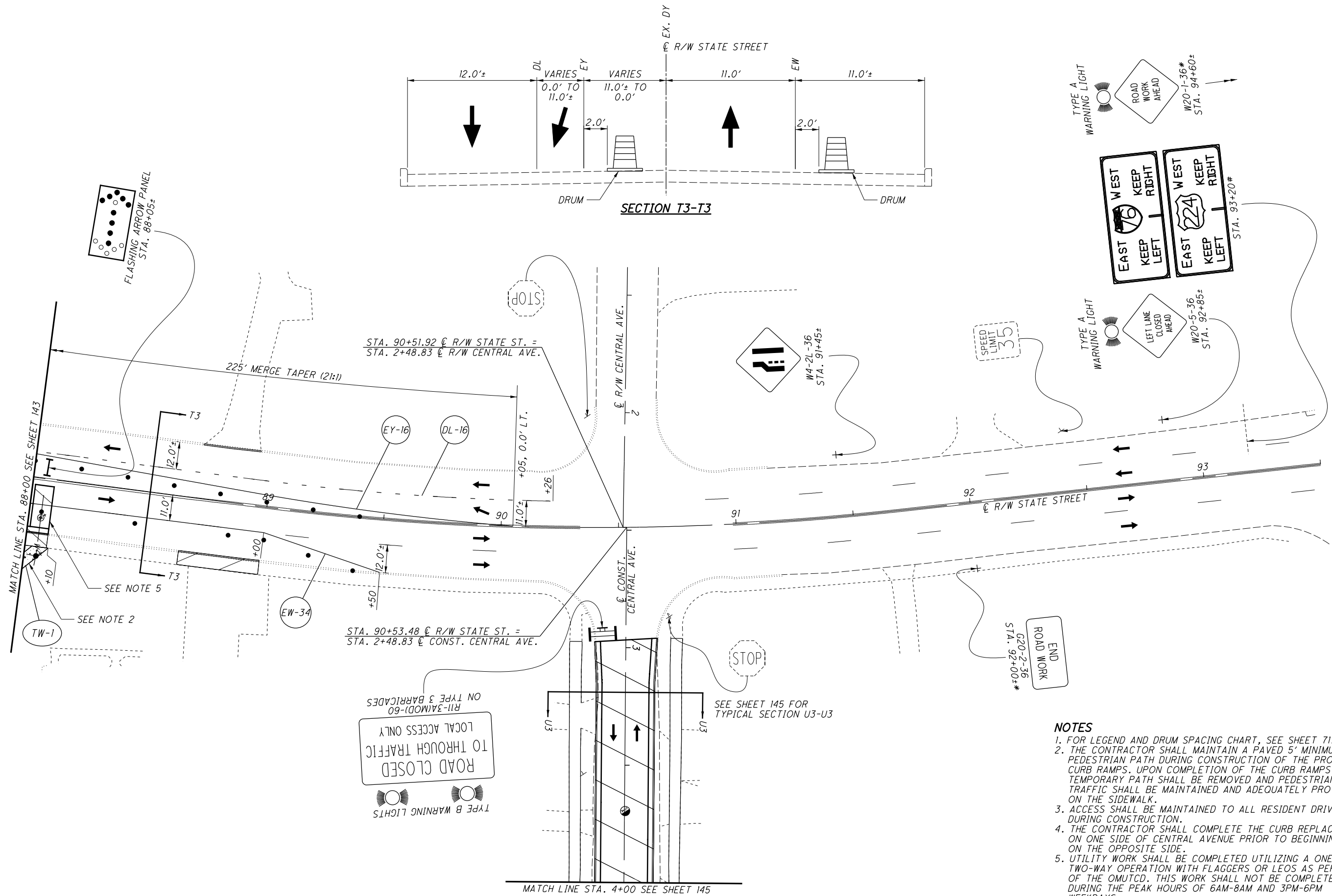
W. STATE ST. - STA. 83+00 TO STA. 88+00

SUM-76-5.53

143  
672

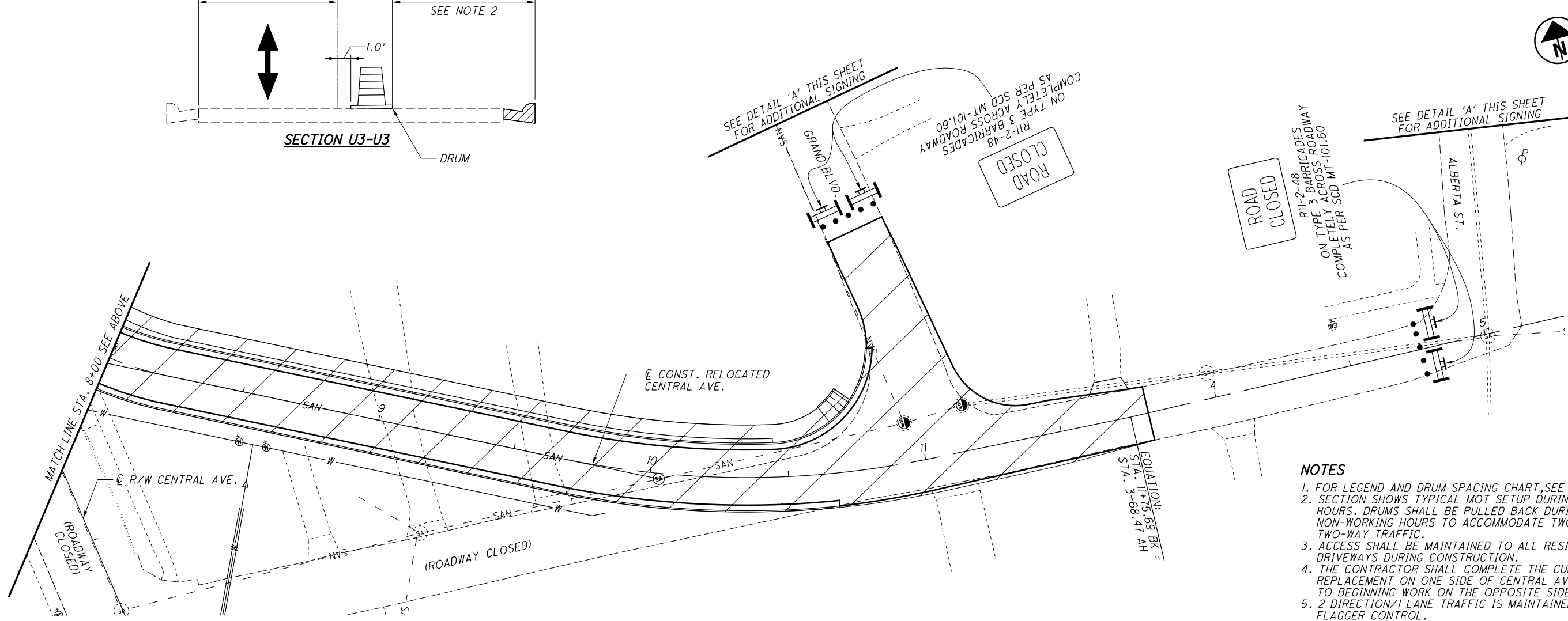
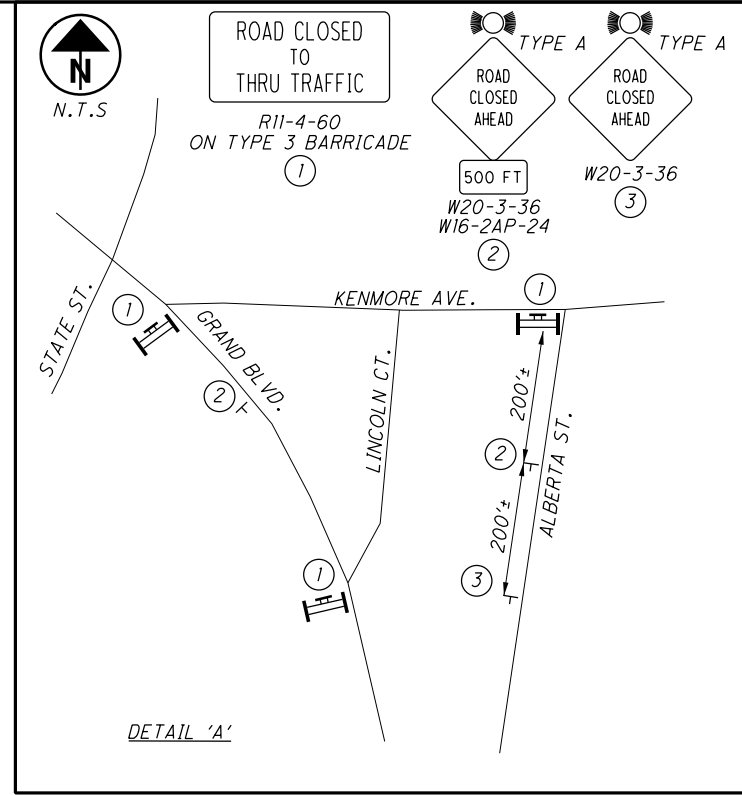
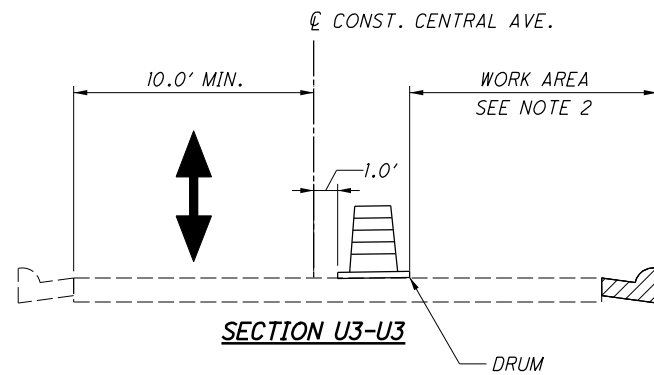
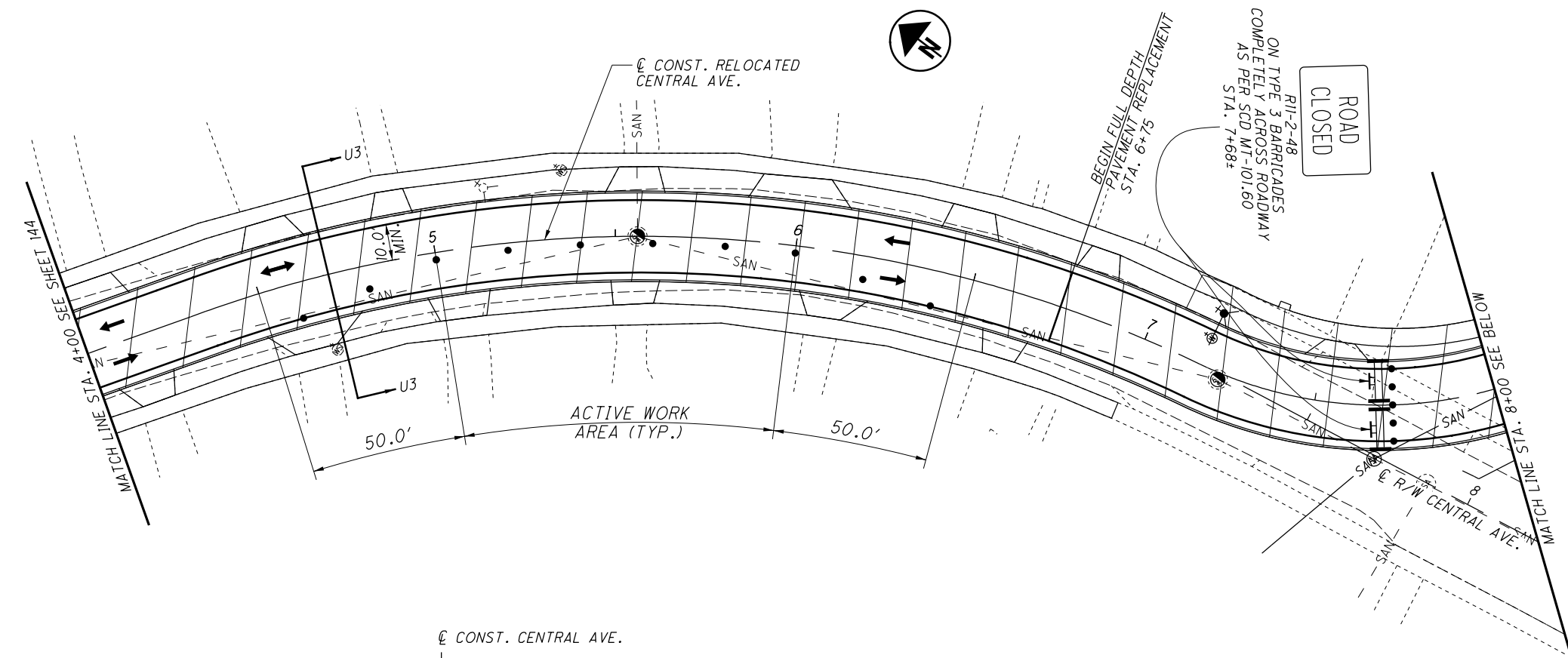
CALCULATED: MGM

CHECKED: NAU



- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. THE CONTRACTOR SHALL MAINTAIN A PAVED 5' MINIMUM WIDTH PEDESTRIAN PATH DURING CONSTRUCTION OF THE PROPOSED CURB RAMPS. UPON COMPLETION OF THE CURB RAMPS THE TEMPORARY PATH SHALL BE REMOVED AND PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AND ADEQUATELY PROTECTED ON THE SIDEWALK.
  3. ACCESS SHALL BE MAINTAINED TO ALL RESIDENT DRIVEWAYS DURING CONSTRUCTION.
  4. THE CONTRACTOR SHALL COMPLETE THE CURB REPLACEMENT ON ONE SIDE OF CENTRAL AVENUE PRIOR TO BEGINNING WORK ON THE OPPOSITE SIDE.
  5. UTILITY WORK SHALL BE COMPLETED UTILIZING A ONE-LANE, TWO-WAY OPERATION WITH FLAGGERS OR LEOS AS PER TA-10 OF THE OMTCD. THIS WORK SHALL NOT BE COMPLETED DURING THE PEAK HOURS OF 6AM-8AM AND 3PM-6PM WEEKDAYS.
  6. FOR QUANTITIES, SEE SHEET 60.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE  
 # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

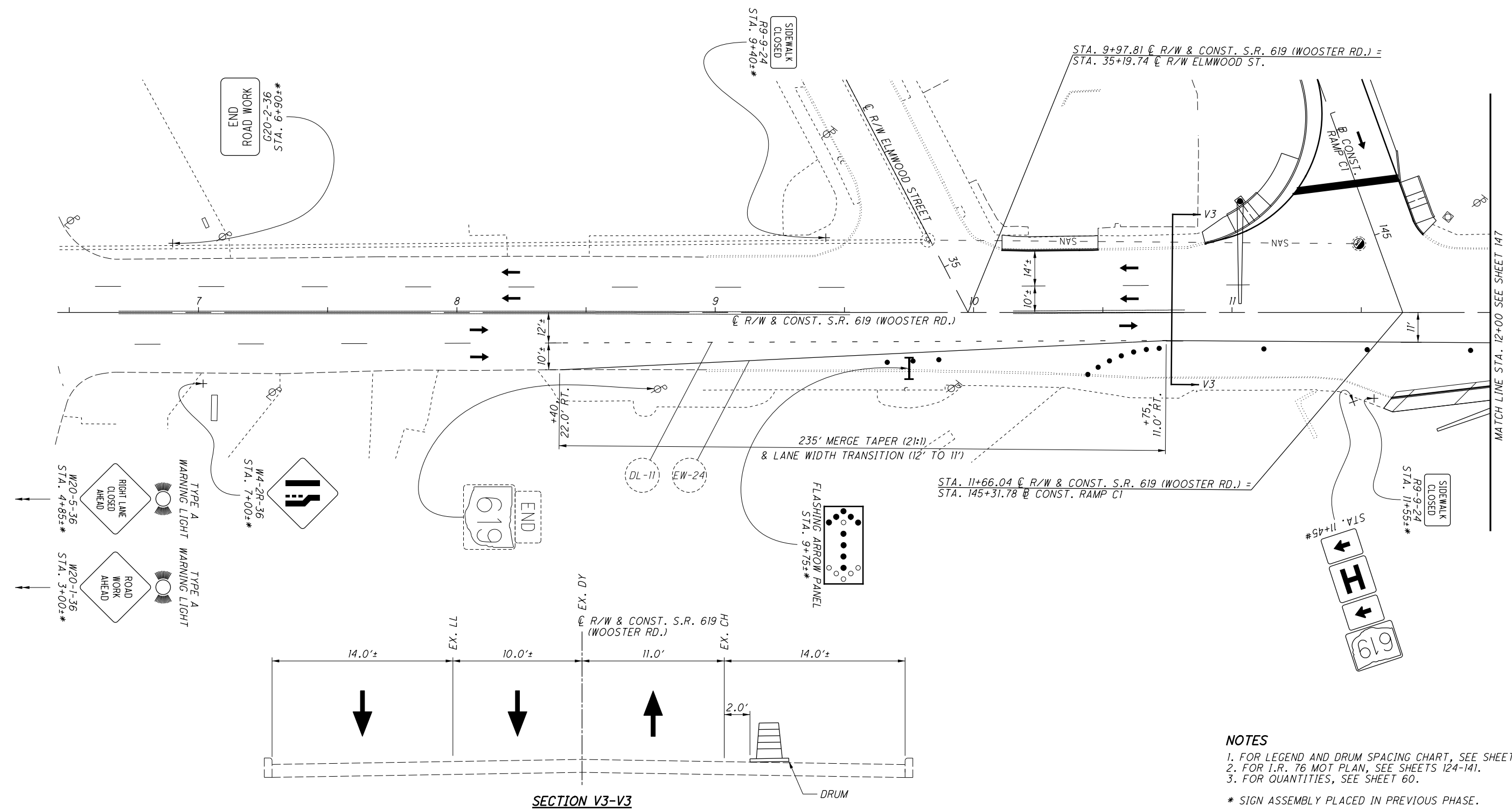




- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. SECTION SHOWS TYPICAL MOT SETUP DURING WORKING HOURS. DRUMS SHALL BE PULLED BACK DURING NON-WORKING HOURS TO ACCOMMODATE TWO-LANE, TWO-WAY TRAFFIC.
  3. ACCESS SHALL BE MAINTAINED TO ALL RESIDENT DRIVEWAYS DURING CONSTRUCTION.
  4. THE CONTRACTOR SHALL COMPLETE THE CURB REPLACEMENT ON ONE SIDE OF CENTRAL AVENUE PRIOR TO BEGINNING WORK ON THE OPPOSITE SIDE.
  5. 2 DIRECTION/1 LANE TRAFFIC IS MAINTAINED BY FLAGGER CONTROL.

CALCULATED	MGM	CHECKED	NAU
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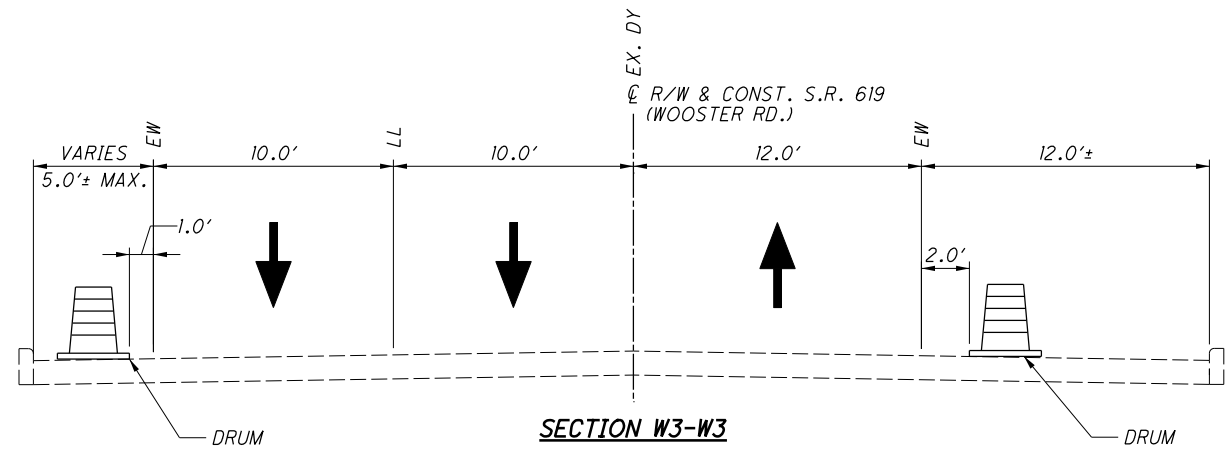
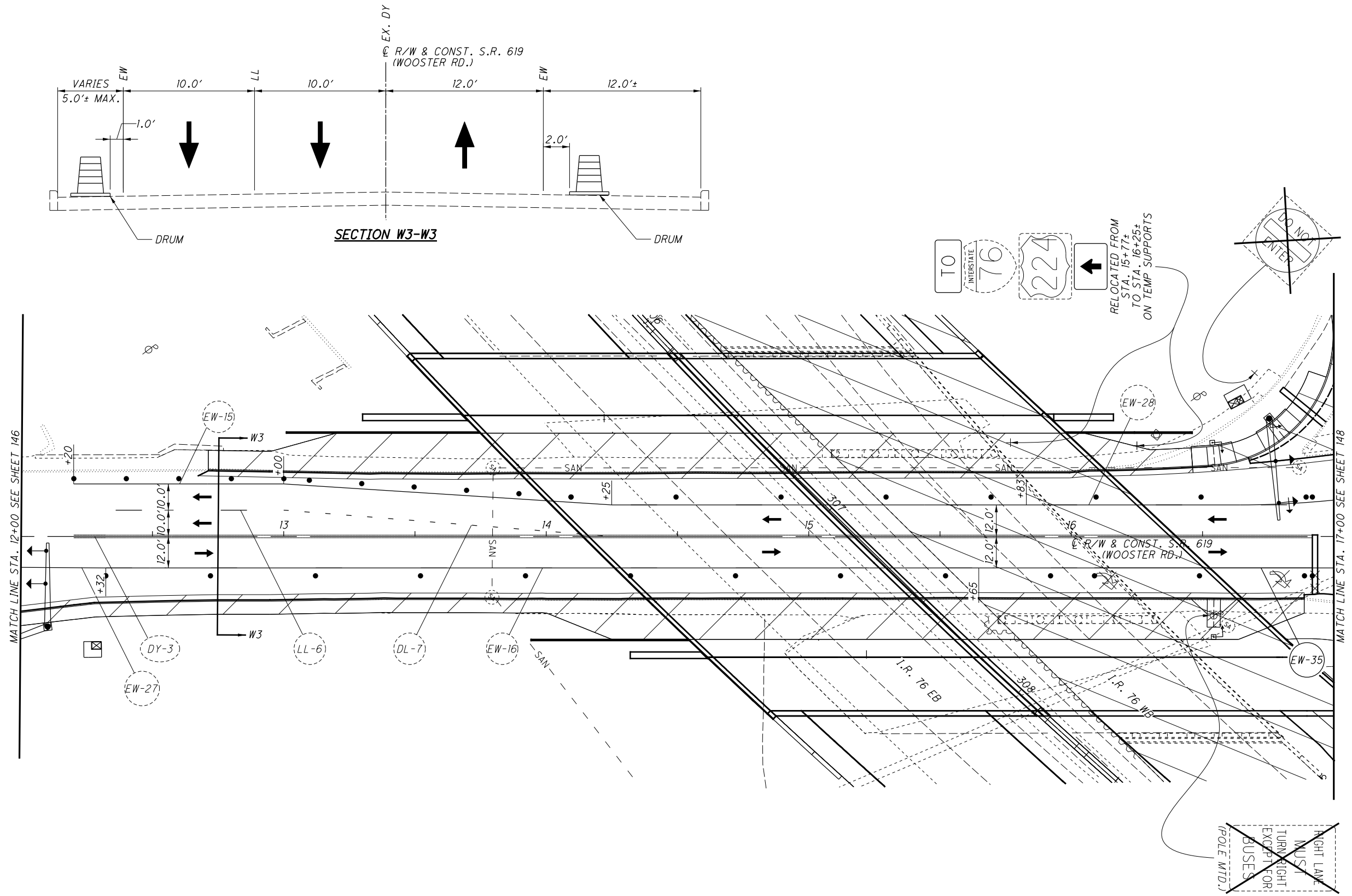
**MAINTENANCE OF TRAFFIC - PHASE 3**  
**CENTRAL AVE. - STA. 4+00 TO STA. 3+75**



**SECTION V3-V3**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 124-141.
  3. FOR QUANTITIES, SEE SHEET 60.
- \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.
- # SIGN ASSEMBLY INSTALLED PER TRAFFIC CONTROL PLAN, SEE SHEETS 396-439.

**MAINTENANCE OF TRAFFIC - PHASE 3**  
**S.R. 619 - STA. 6+50 TO STA. 12+00**



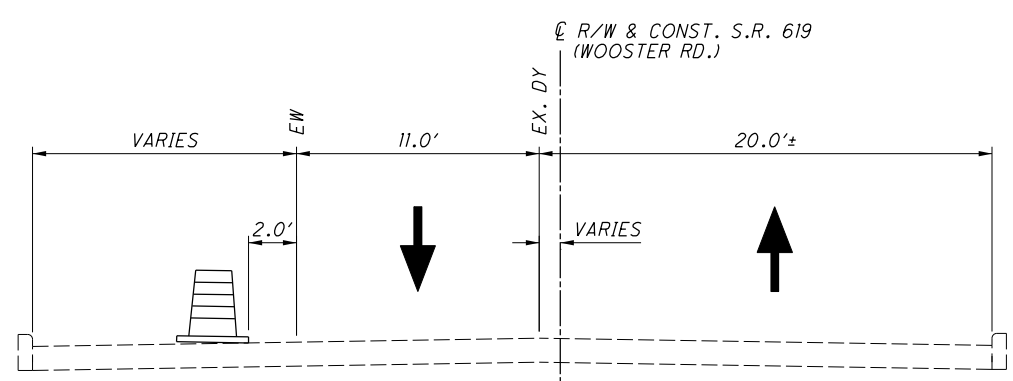
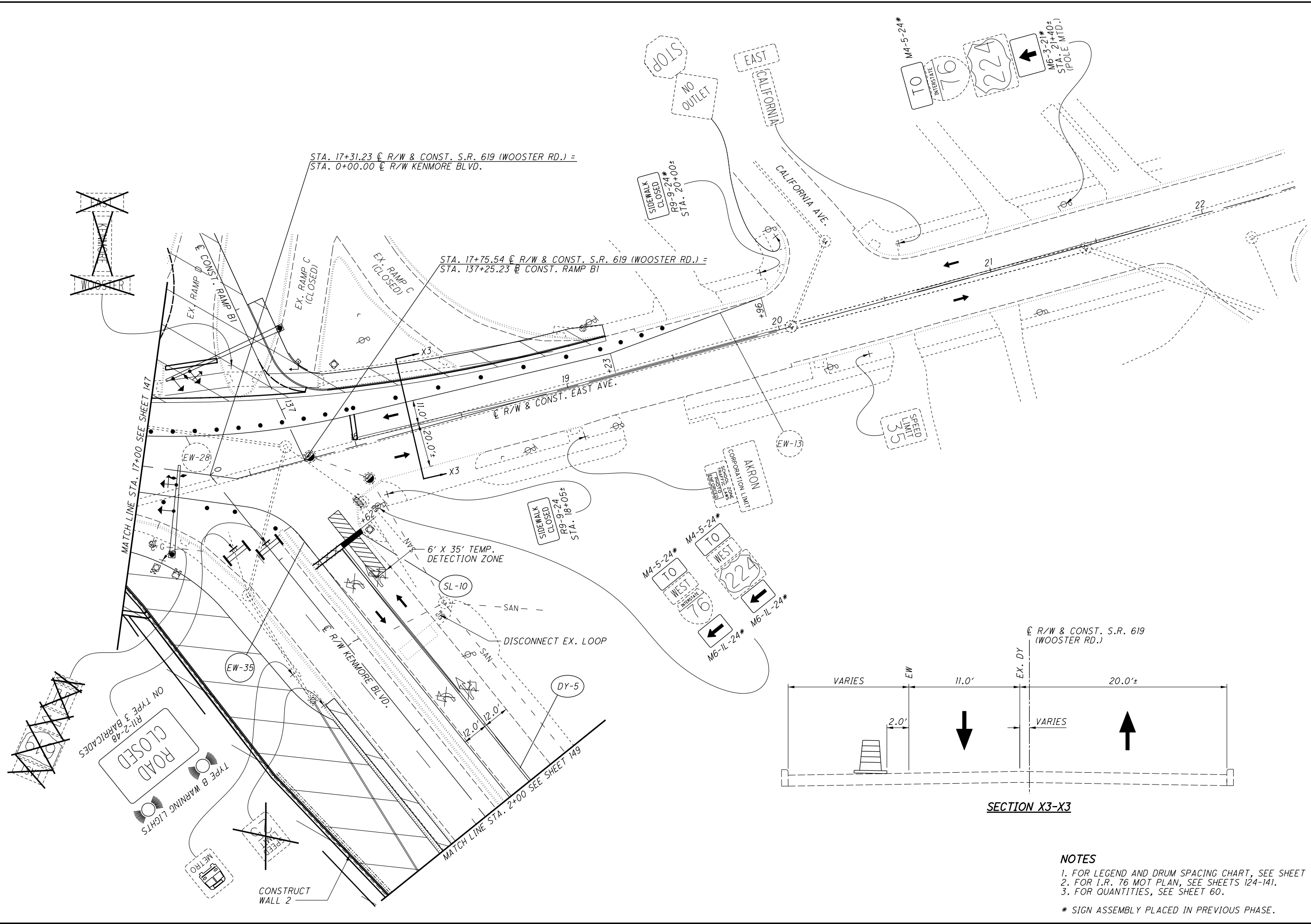
**SUM-76-5.53**  
**MAINTENANCE OF TRAFFIC - PHASE 3**  
**S.R. 619 - STA. 12+00 TO STA. 17+00**

147  
672

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 124-141.
  3. FOR QUANTITIES, SEE SHEET 60.

~~RIGHT LANE  
MUST  
TURN RIGHT  
EXCEPT FOR  
BUSES  
(POLE MTD.)~~

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**NOTES**  
 1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.  
 2. FOR I.R. 76 MOT PLAN, SEE SHEETS 124-141.  
 3. FOR QUANTITIES, SEE SHEET 60.  
 \* SIGN ASSEMBLY PLACED IN PREVIOUS PHASE.

**SUM-76-5.53**

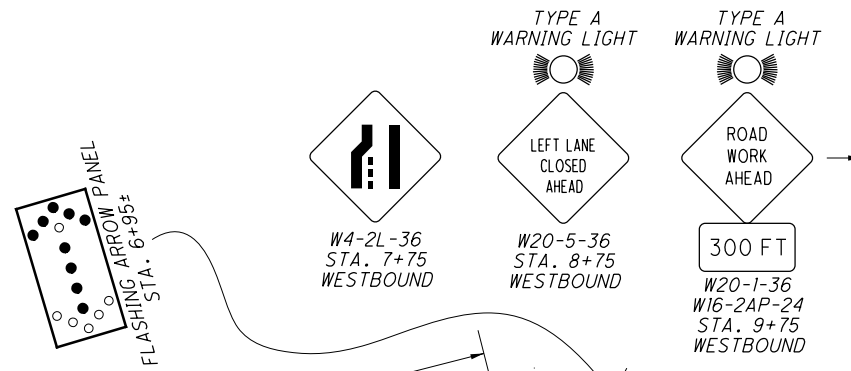
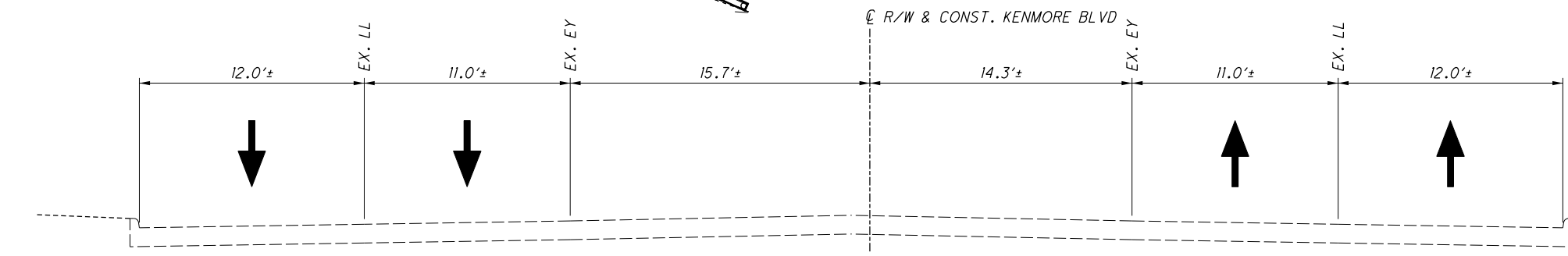
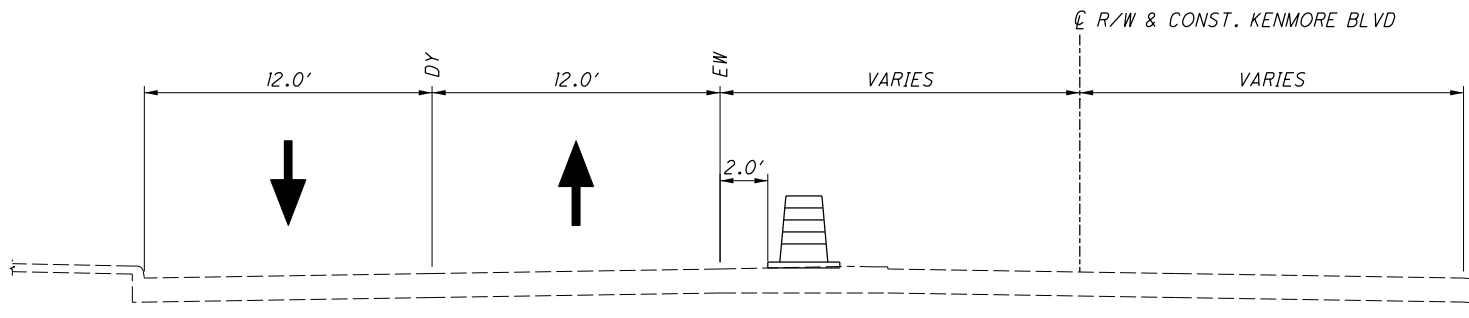
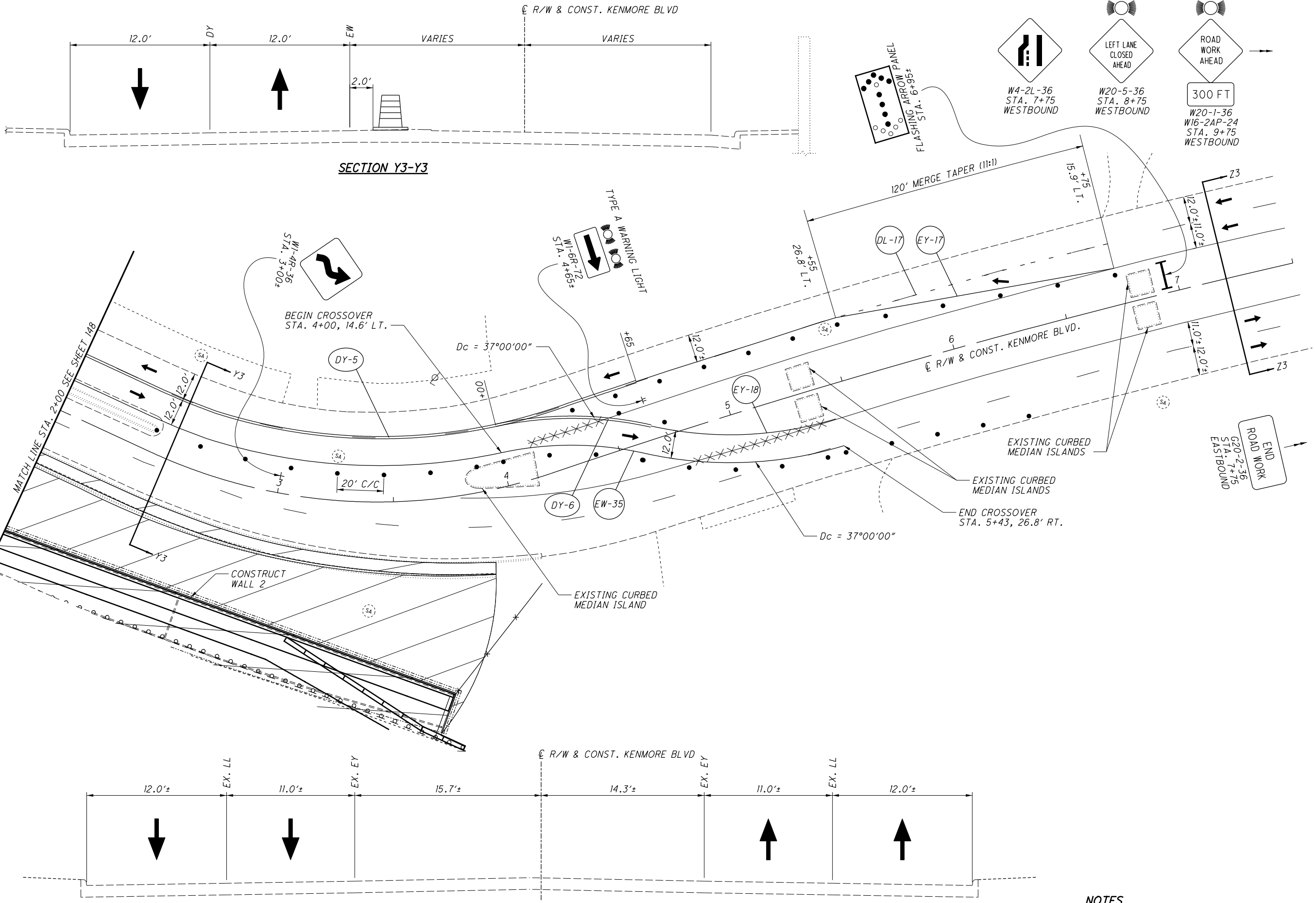
**MAINTENANCE OF TRAFFIC - PHASE 3**  
**S.R. 619 - STA. 17+00 TO STA. 22+50**

CALCULATED	MGM	CHECKED	NAU
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0 20 40  
 HORIZONTAL SCALE IN FEET

148  
 672

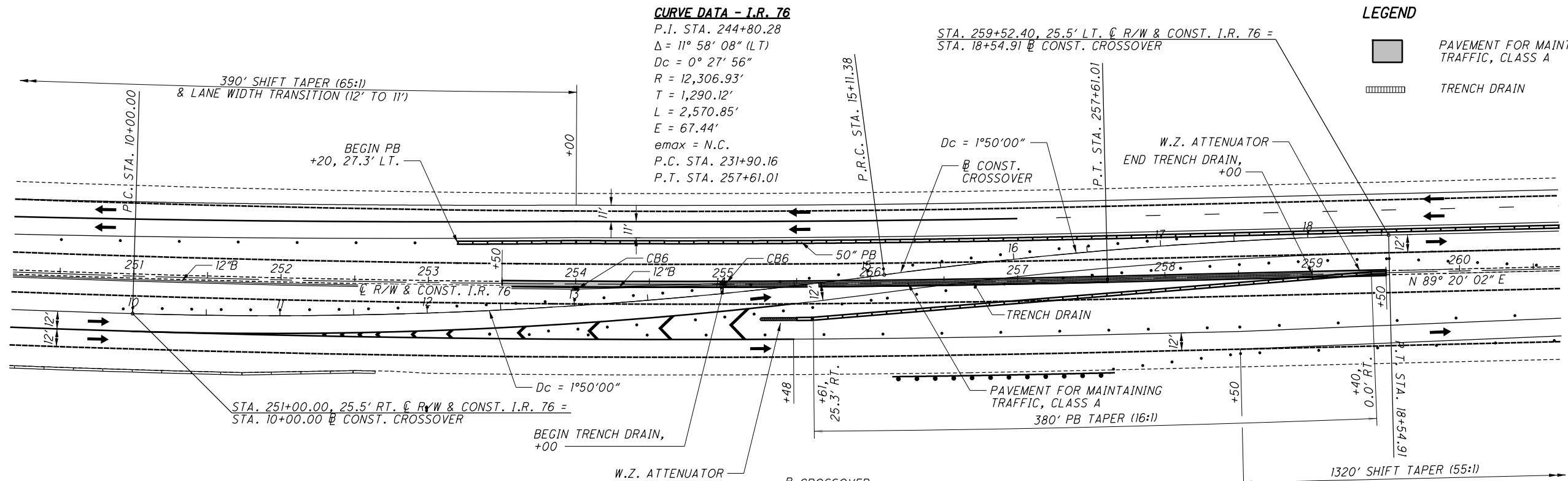
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**MAINTENANCE OF TRAFFIC - PHASE 3**  
**KENMORE BLVD - STA. 2+00 TO STA. 7+50**

**SUM-76-5.53**

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR I.R. 76 MOT PLAN, SEE SHEETS 124-141.
  3. FOR QUANTITIES, SEE SHEET 60.

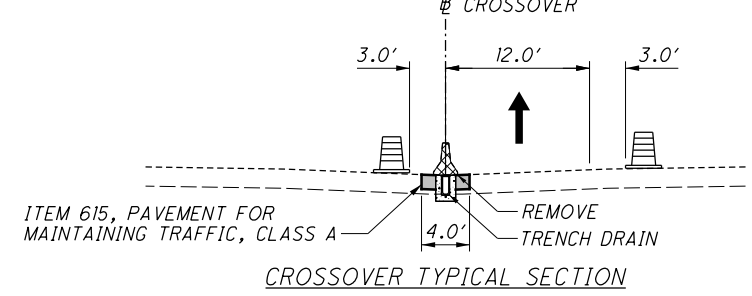


**LEGEND**

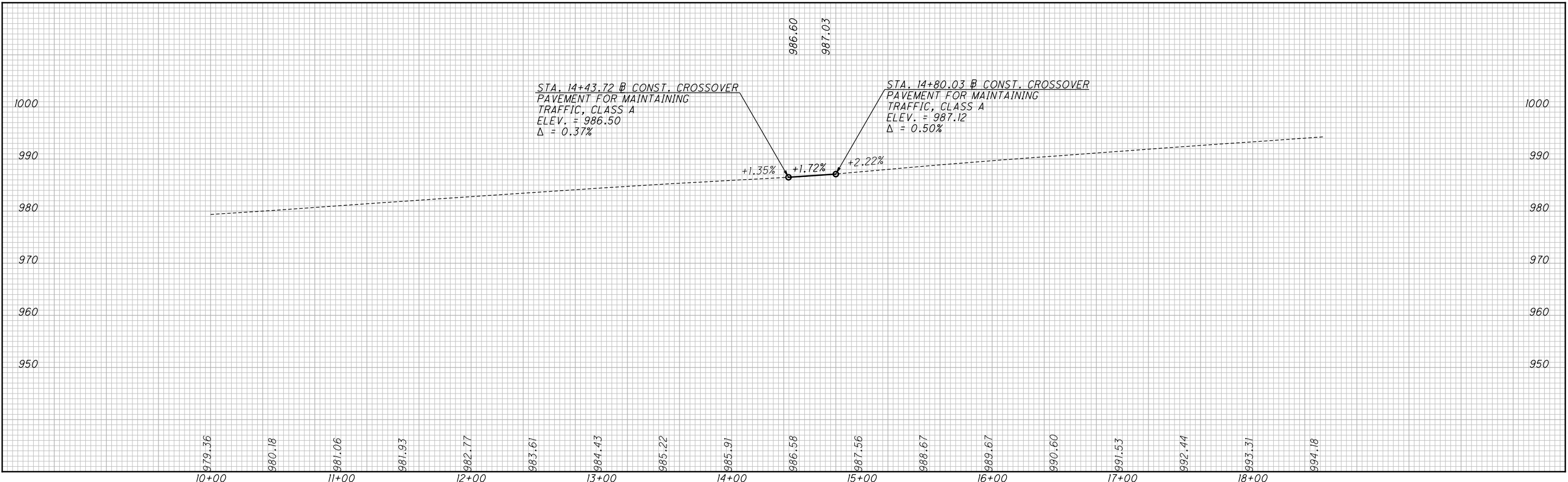
- PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- TRENCH DRAIN

0 20 40 80  
 HORIZONTAL SCALE IN FEET

CALCULATED  
 MGM  
 CHECKED  
 NAU



- NOTES**
- FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  - FOR PHASE 3 CROSSOVER DETAILS, SEE SHEET 151.
  - FOR WORK ZONE DRAINAGE DETAILS, SEE SHEET 156.
  - FOR CROSSOVER CROSS SECTIONS, SEE SHEET 152.
  - FOR WORK ZONE DRAINAGE CROSS SECTIONS, SEE SHEET 157.
  - PAVEMENT MARKINGS ARE SHOWN FOR PHASE 1. THE CROSSOVER PAVEMENT MARKINGS ARE THE SAME IN PHASE 2.
  - THE PORTABLE BARRIER PLACED IN THE CROSSOVER OPENING DURING THE PREVIOUS PROJECT SHALL BE REMOVED PRIOR TO BEGINNING WORK.
  - WORK ZONE CROSSOVER LIGHTING SHALL BE INSTALLED AS PER SCD MT-100.00.



**MAINTENANCE OF TRAFFIC PLAN AND PROFILE  
 PHASE 1 AND 2 CROSSOVER**

**CURVE DATA - I.R. 76**

P.I. STA. 244+80.28  
 $\Delta = 11^\circ 58' 08''$  (LT)  
 $D_c = 0^\circ 27' 56''$   
 $R = 12,306.93'$   
 $T = 1,290.12'$   
 $L = 2,570.85'$   
 $E = 67.44'$   
 $e_{max} = N.C.$   
 P.C. STA. 231+90.16  
 P.T. STA. 257+61.01



**CURVE DATA - CROSSOVER**

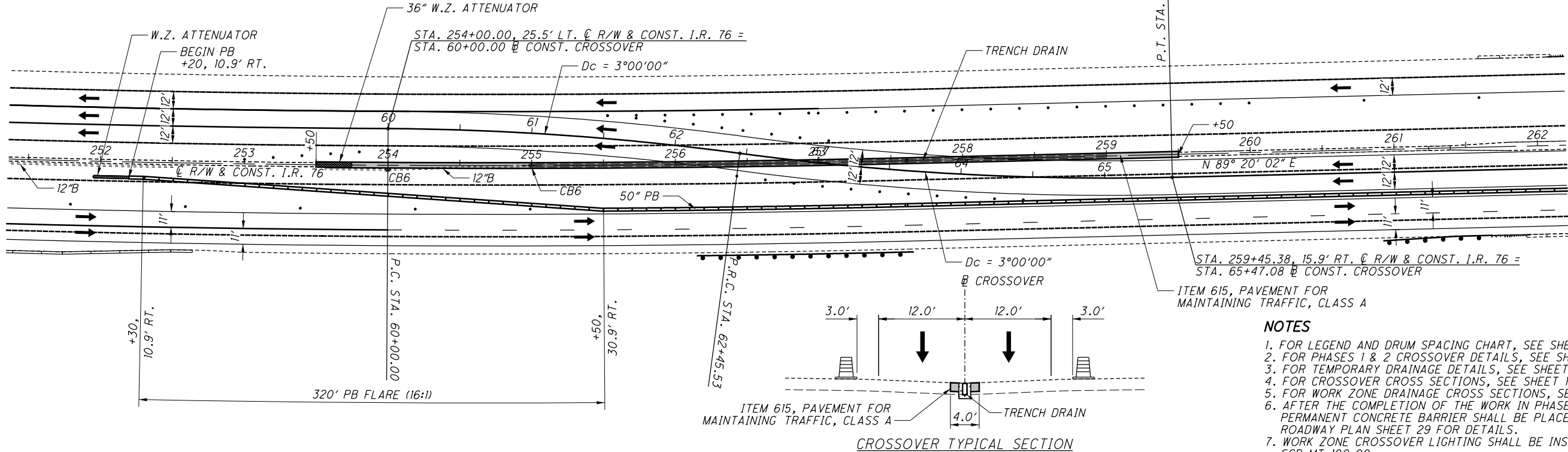
P.I. STA. 61+22.93  
 $\Delta = 7^\circ 21' 57''$  (RT)  
 $D_c = 3^\circ 00' 00''$   
 $R = 1,909.86'$   
 $T = 122.93'$   
 $L = 245.53'$   
 $E = 3.95'$   
 P.C. STA. 60+00.00  
 P.R.C. STA. 62+45.53

**CURVE DATA - CROSSOVER**

P.I. STA. 63+96.61  
 $\Delta = 9^\circ 02' 47''$  (LT)  
 $D_c = 3^\circ 00' 00''$   
 $R = 1,909.86'$   
 $T = 151.09'$   
 $L = 301.55'$   
 $E = 5.97'$   
 P.R.C. STA. 62+45.53  
 P.T. STA. 65+47.08

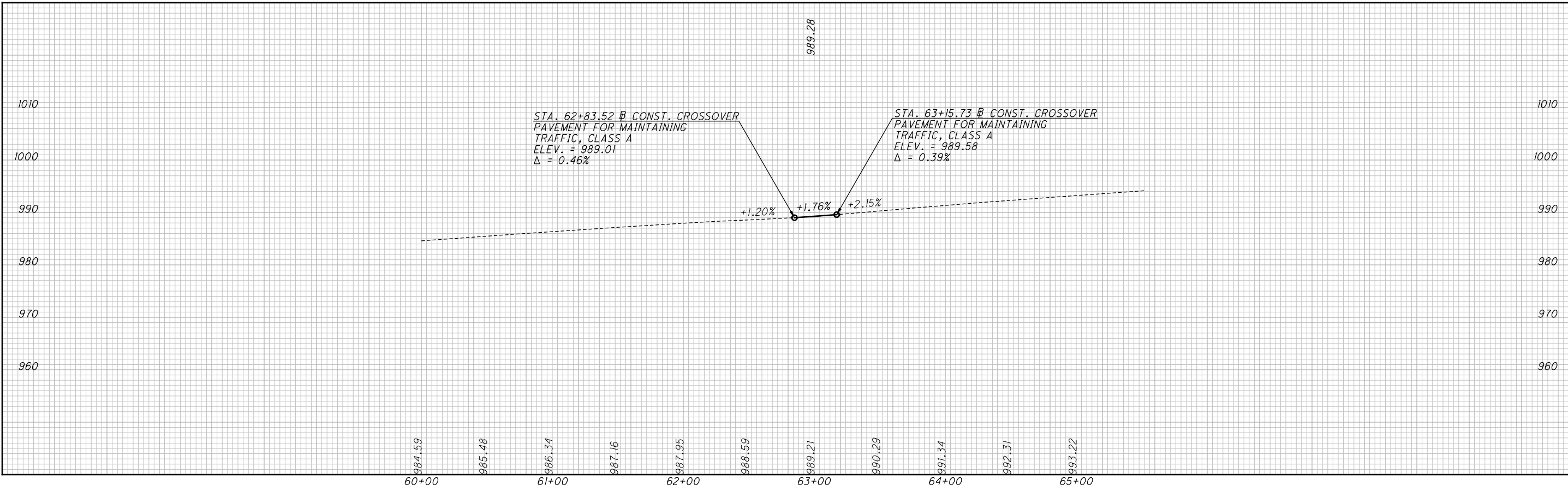
**LEGEND**

-  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  TRENCH DRAIN



**NOTES**

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
2. FOR PHASES 1 & 2 CROSSOVER DETAILS, SEE SHEET 150.
3. FOR TEMPORARY DRAINAGE DETAILS, SEE SHEET 156.
4. FOR CROSSOVER CROSS SECTIONS, SEE SHEET 152.
5. FOR WORK ZONE DRAINAGE CROSS SECTIONS, SEE SHEET 157.
6. AFTER THE COMPLETION OF THE WORK IN PHASE 3, 600' OF PERMANENT CONCRETE BARRIER SHALL BE PLACED. SEE ROADWAY PLAN SHEET 29 FOR DETAILS.
7. WORK ZONE CROSSOVER LIGHTING SHALL BE INSTALLED AS PER SCD MT-100.00.

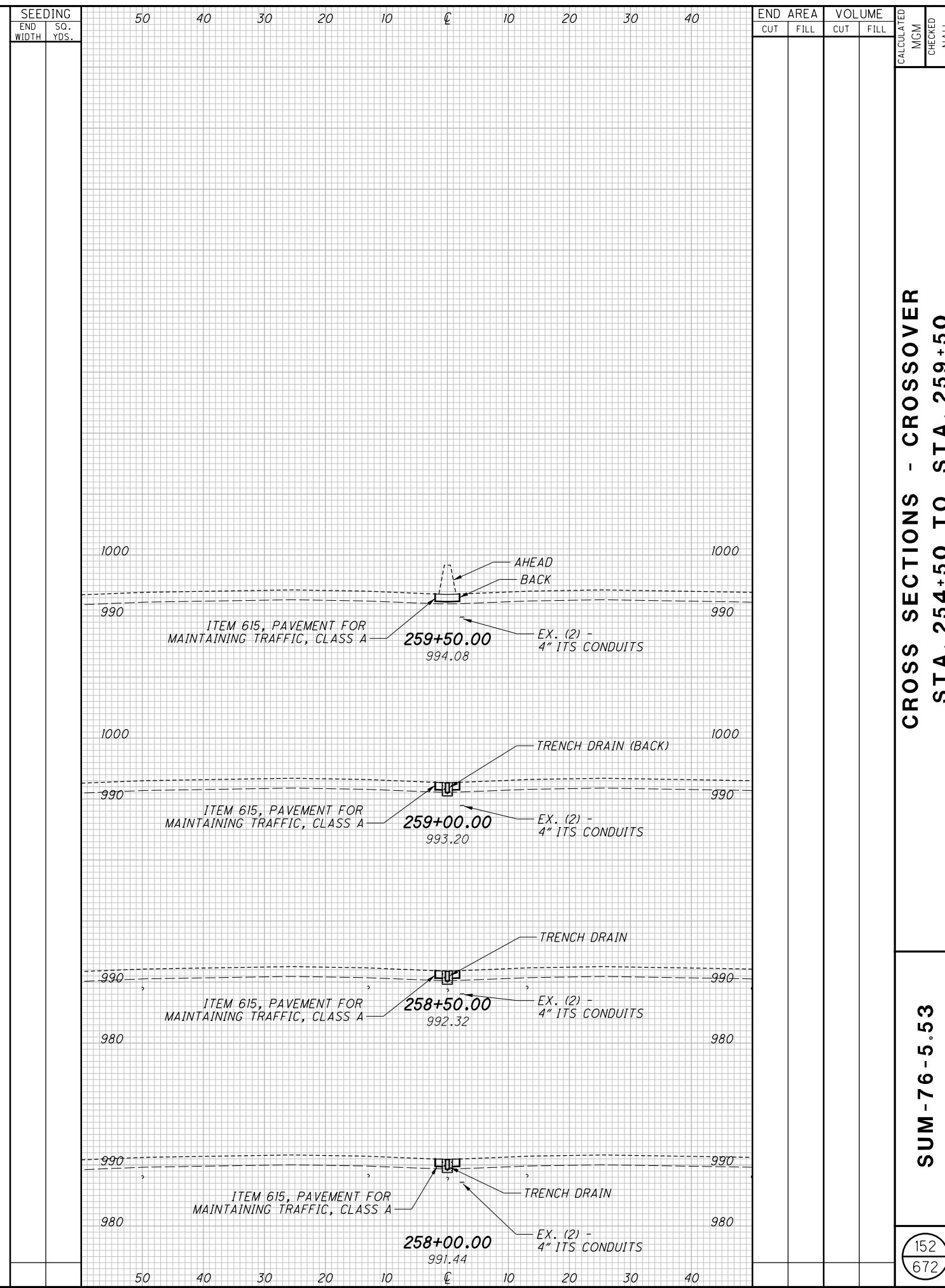
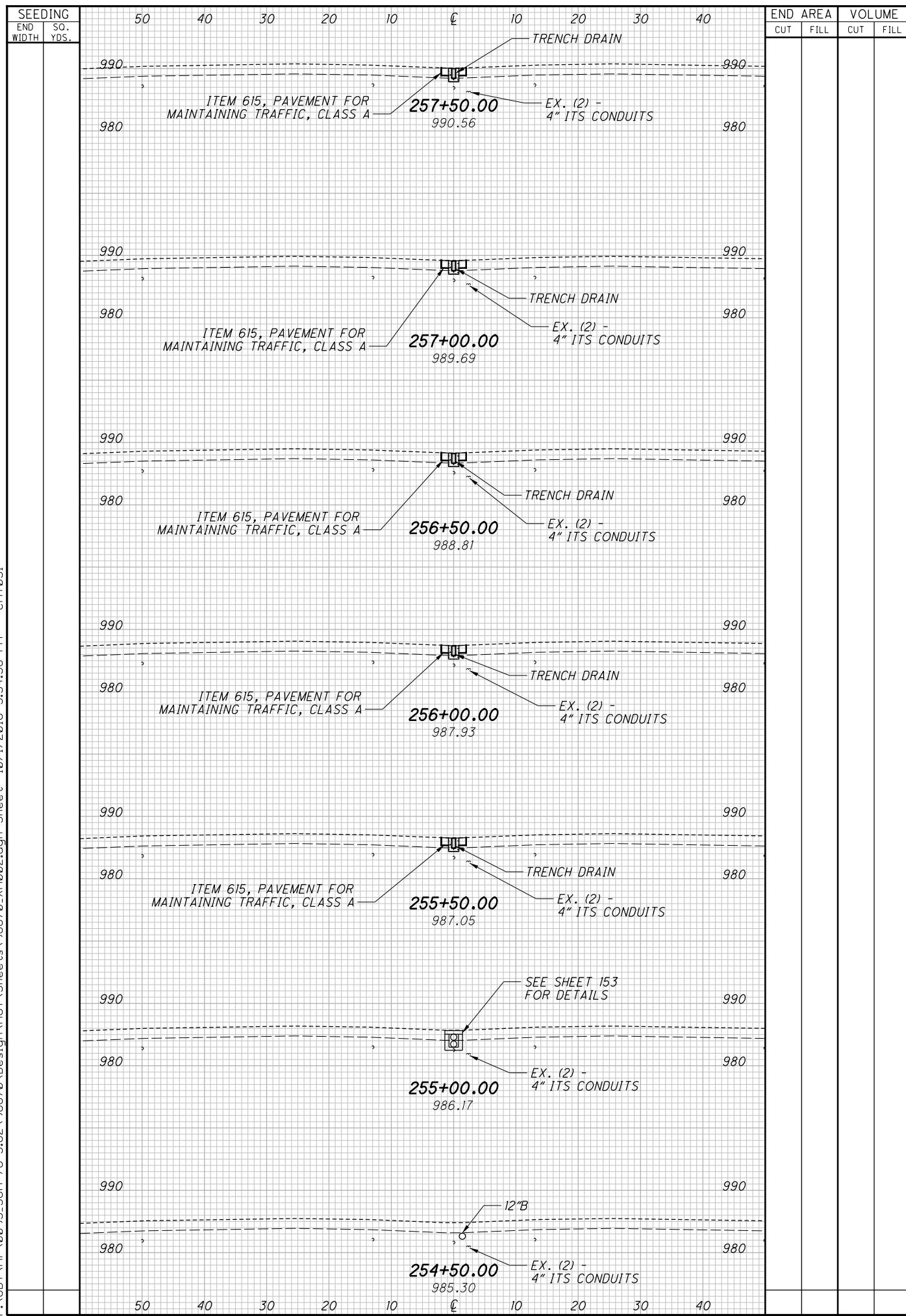


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**MAINTENANCE OF TRAFFIC PLAN AND PROFILE PHASE 3 CROSSOVER**

**SUM-76-5.53**

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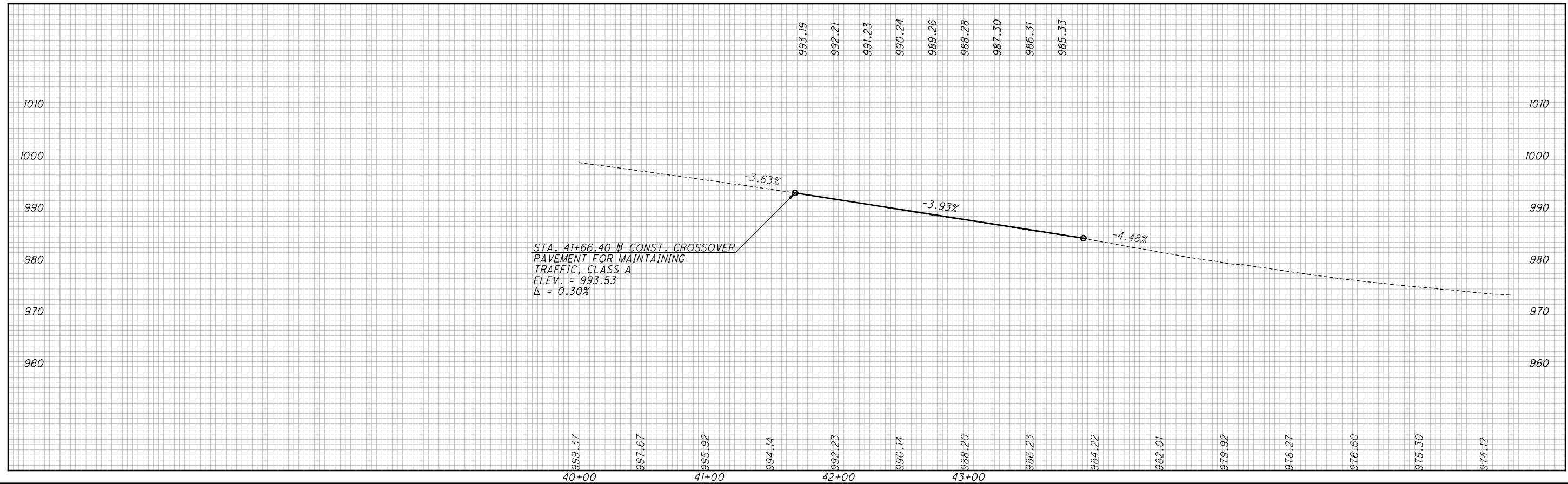
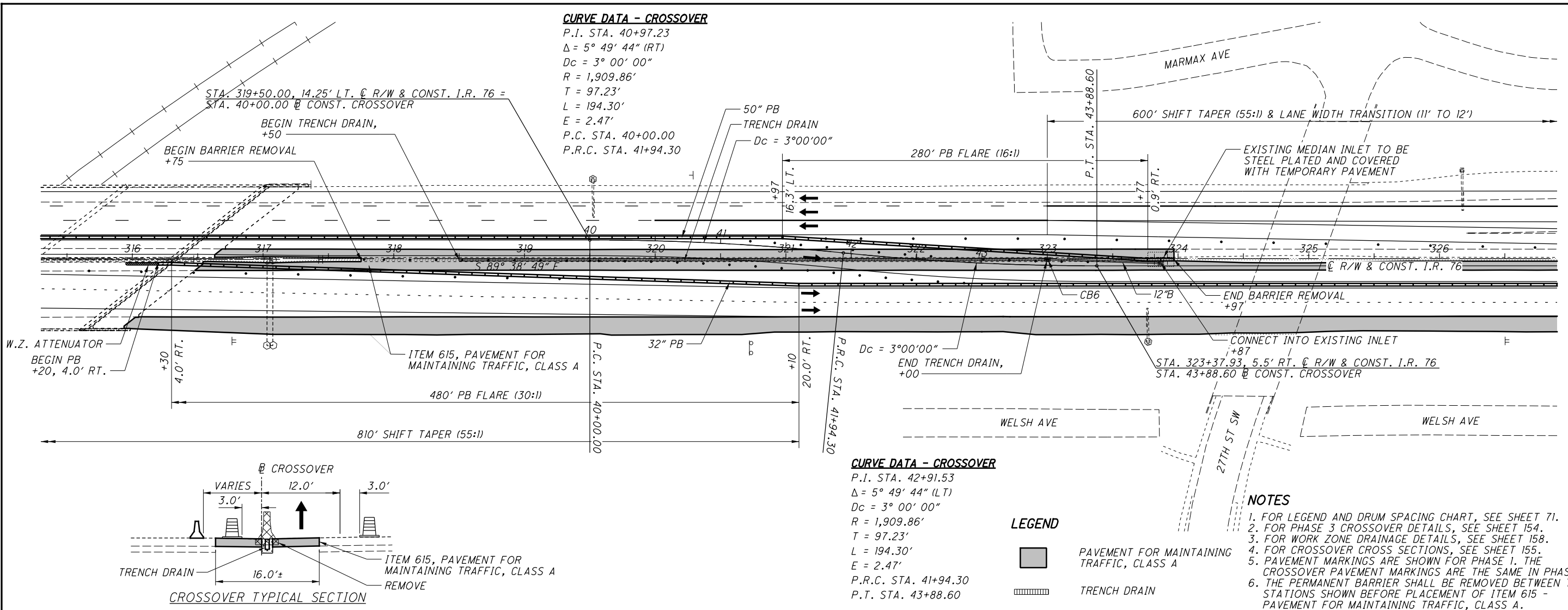
CROSS SECTIONS - CROSSOVER  
STA. 254+50 TO STA. 259+50

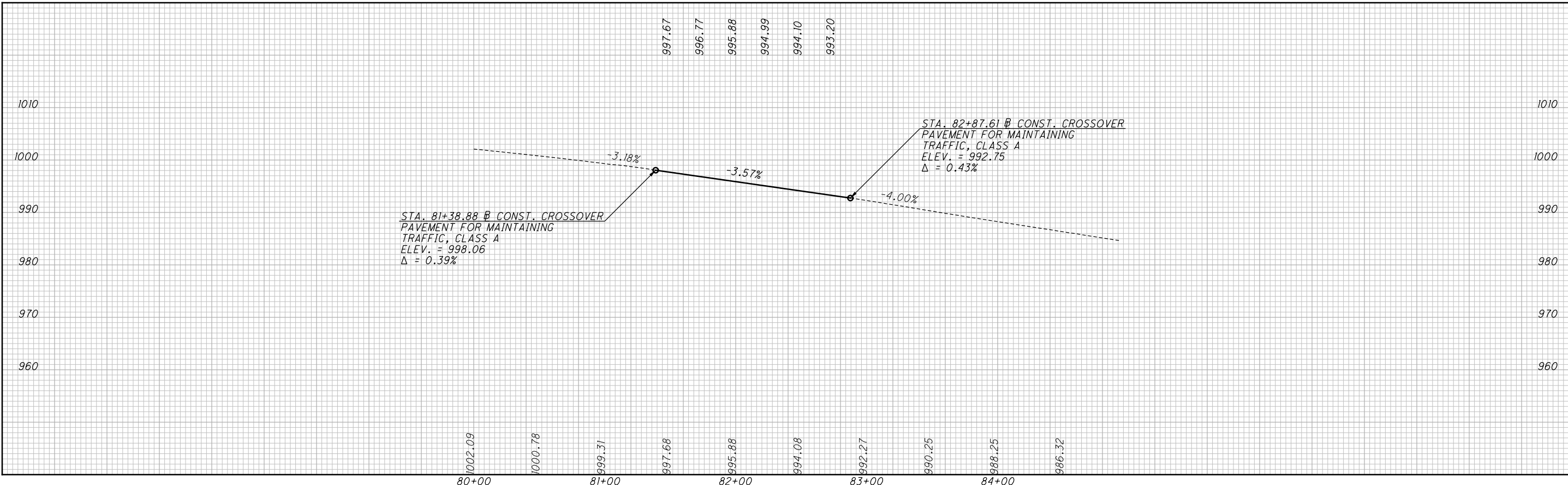
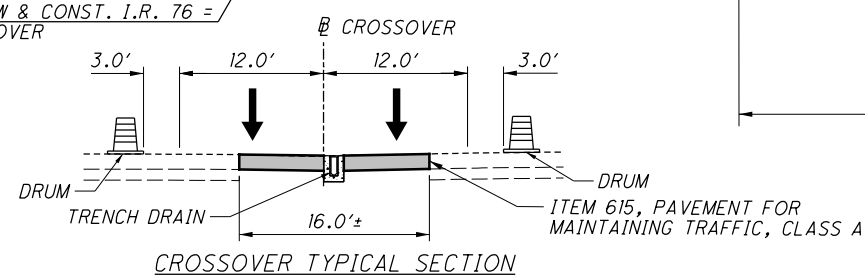
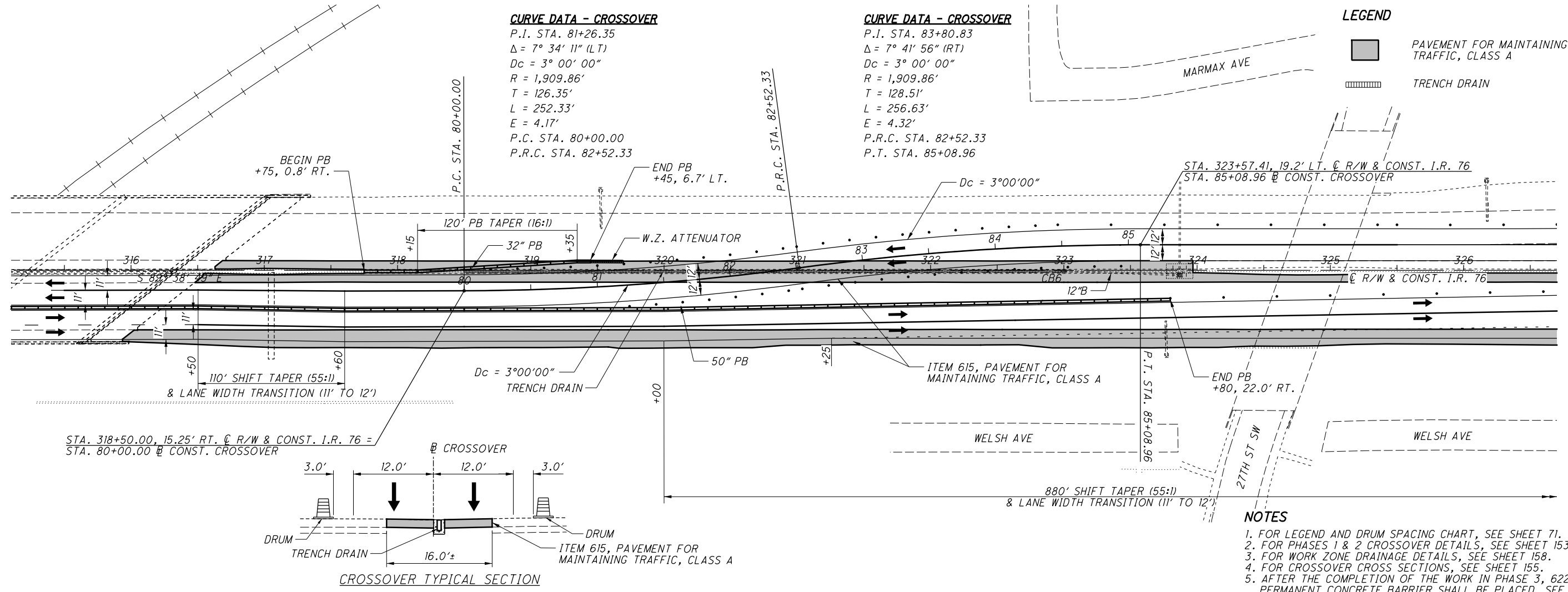
SUM - 76 - 5.53

152  
672

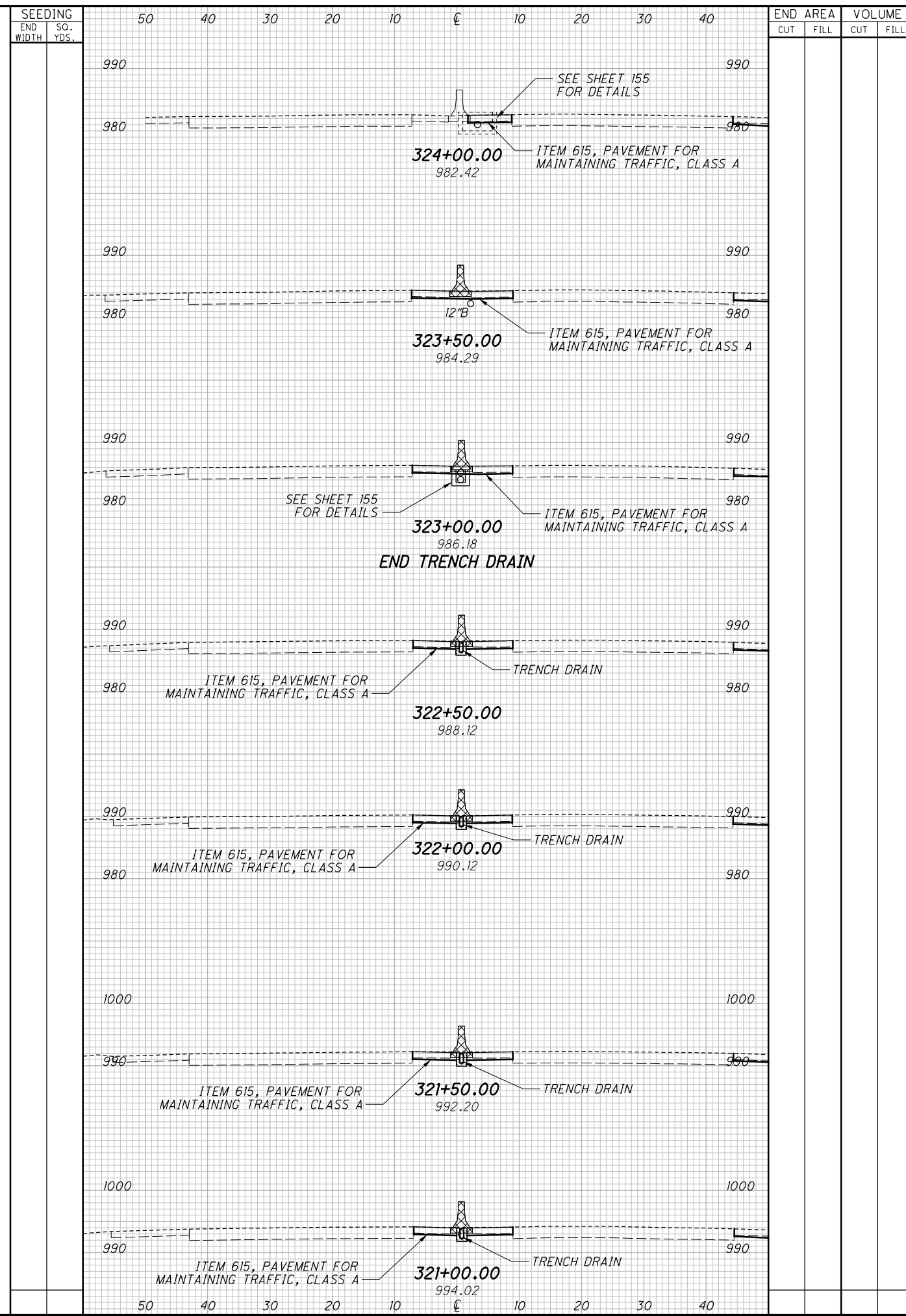
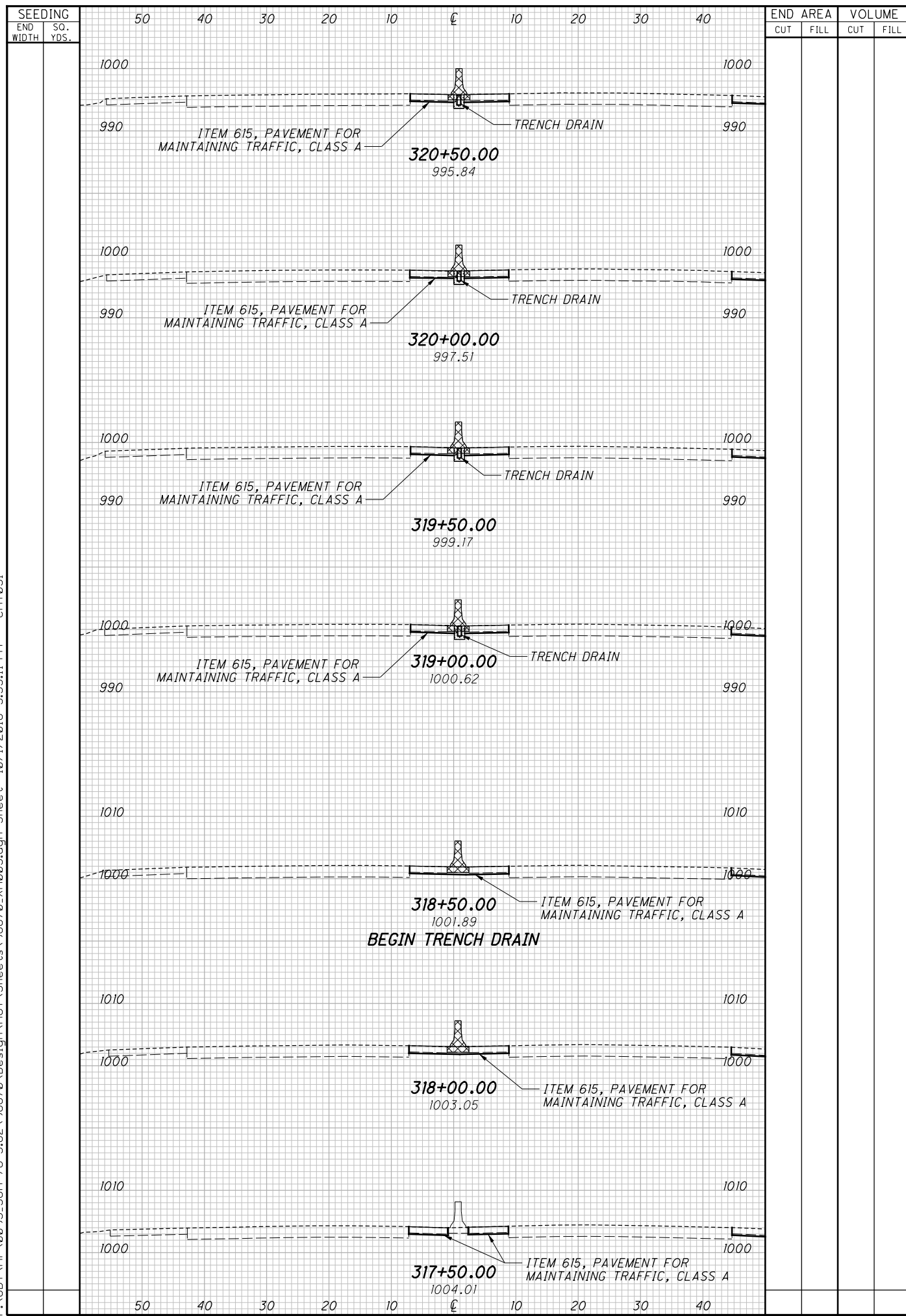


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CROSS SECTIONS - CROSSOVER  
STA. 317+50 TO STA. 324+00

SUM-76-5.53

155  
672

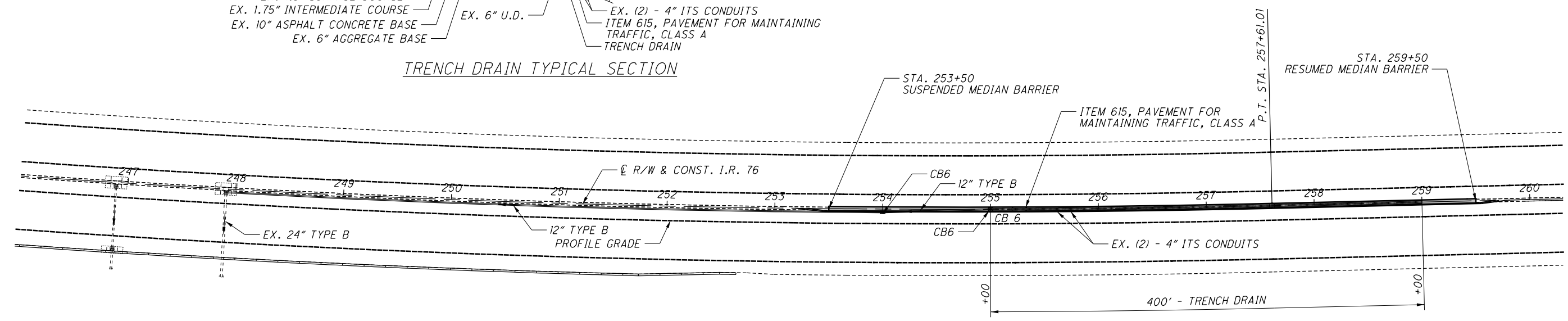
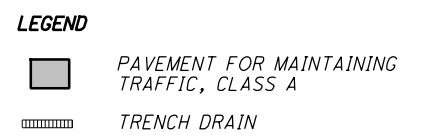
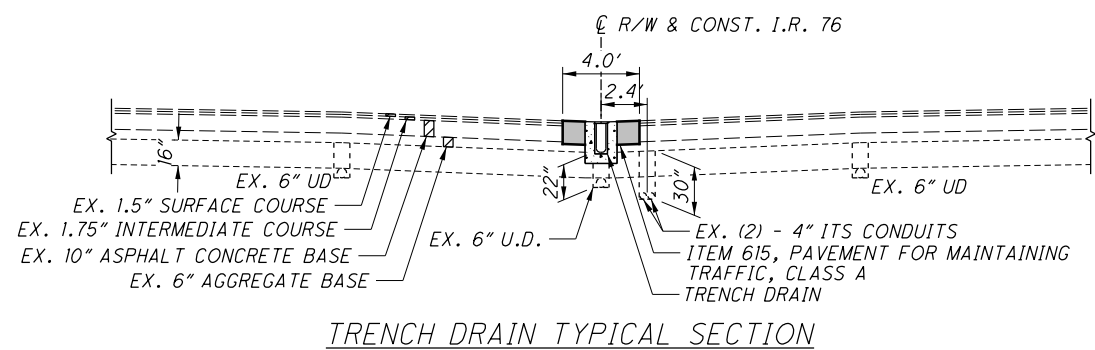


CALCULATED  
MGM  
CHECKED  
NAU

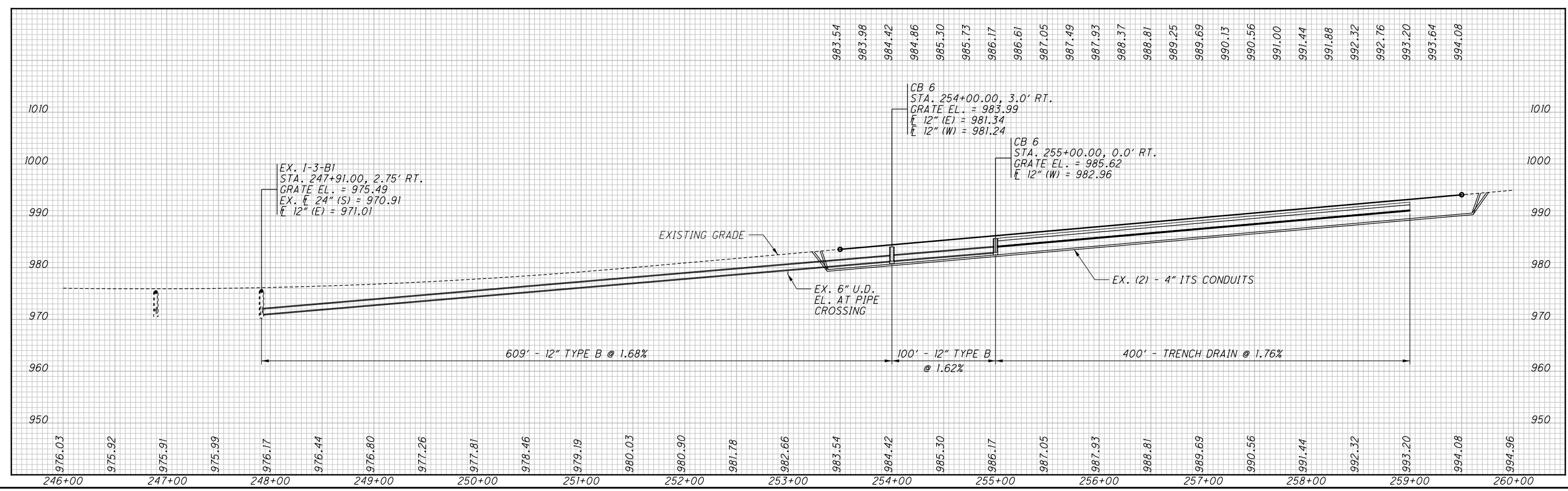
WORK ZONE DRAINAGE DETAIL

SUM-76-5.53

156  
672

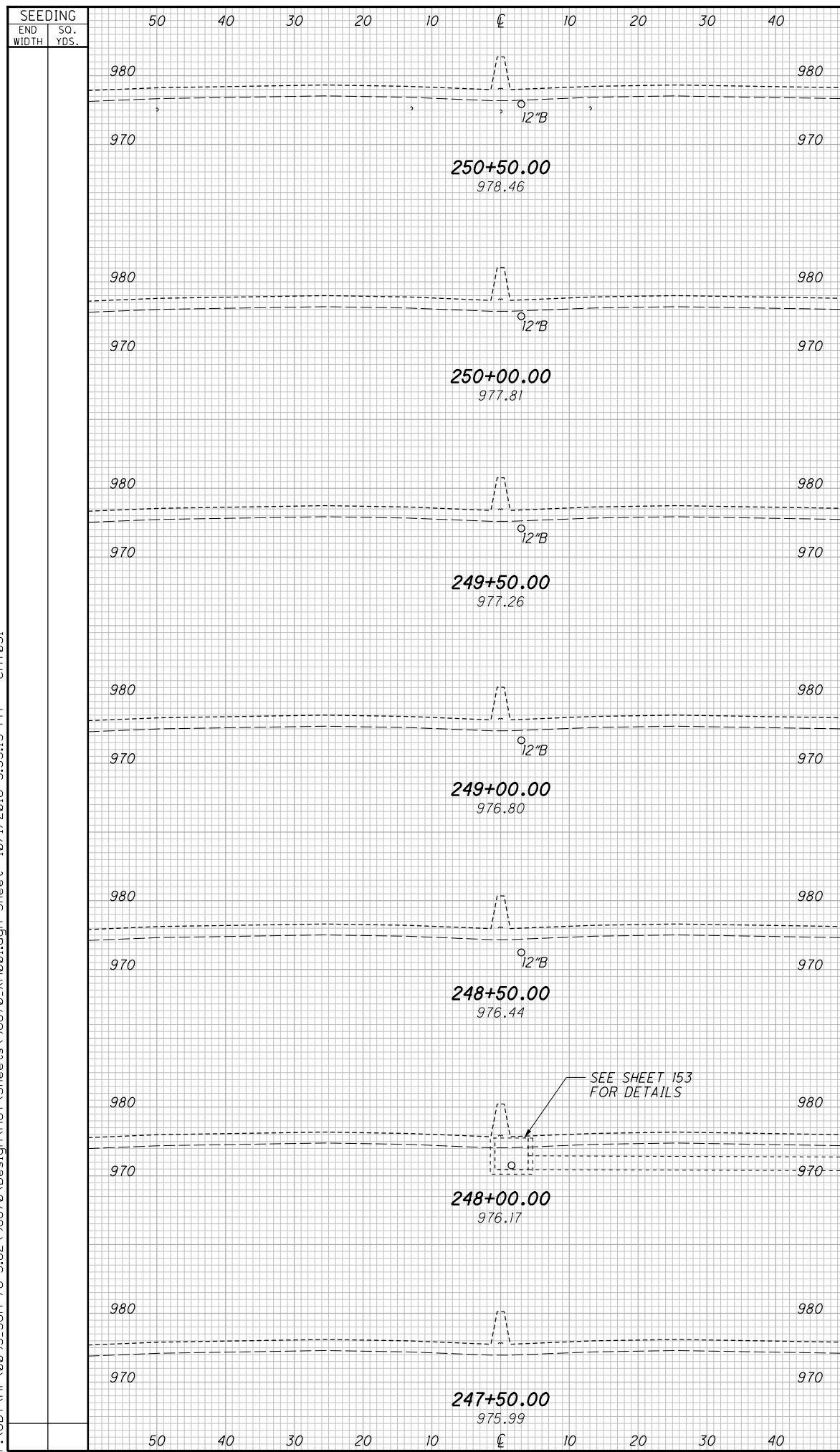


- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR PHASES 1 & 2 CROSSOVER DETAILS, SEE SHEET 150.
  3. FOR PHASE 3 CROSSOVER DETAILS, SEE SHEET 151.
  4. FOR CROSSOVER CROSS SECTIONS, SEE SHEET 152.
  5. FOR WORK ZONE DRAINAGE CROSS SECTIONS, SEE SHEET 157.

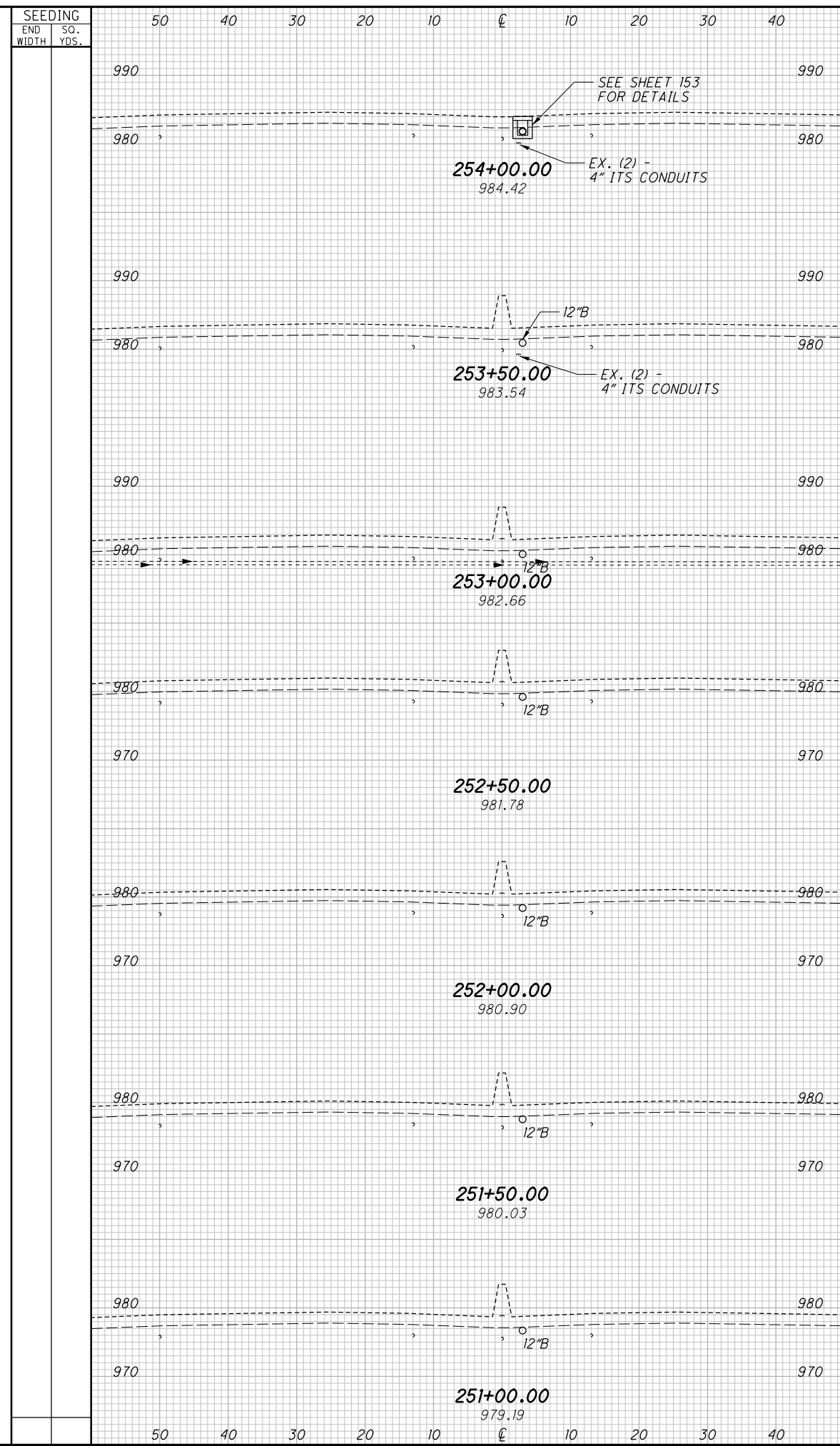


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SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL

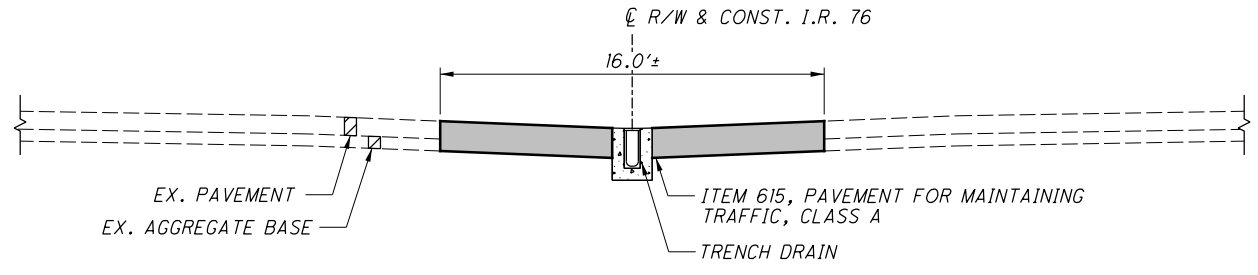
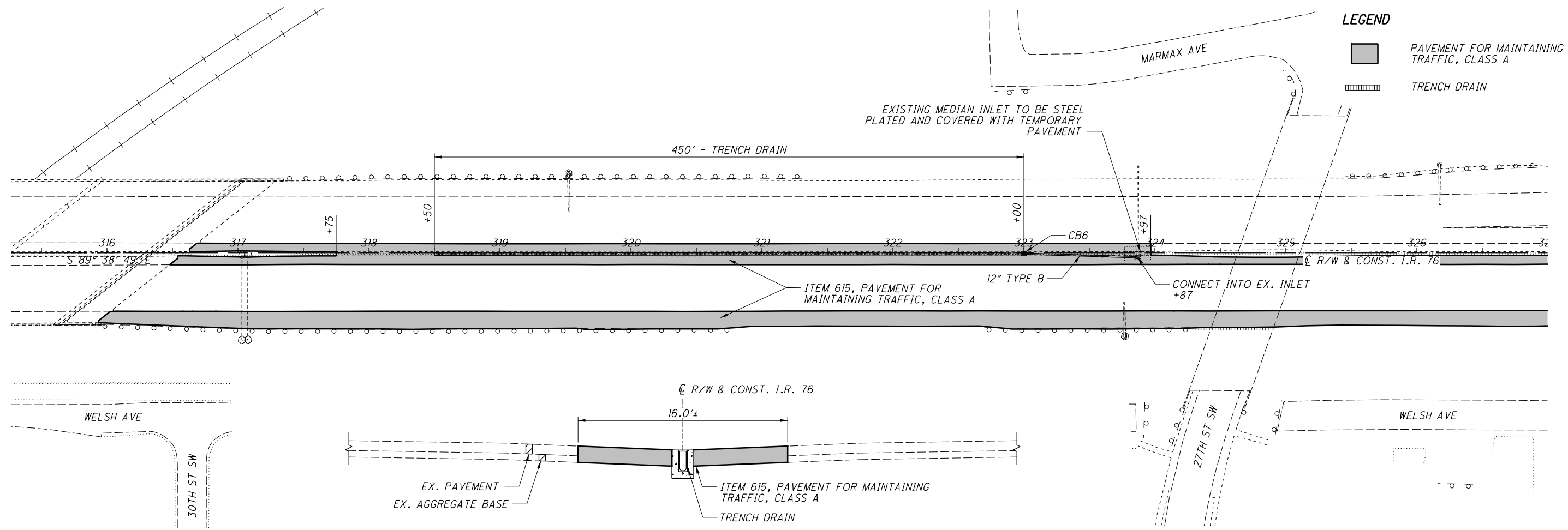


SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL

CALCULATED	CHECKED
MGM	NAU

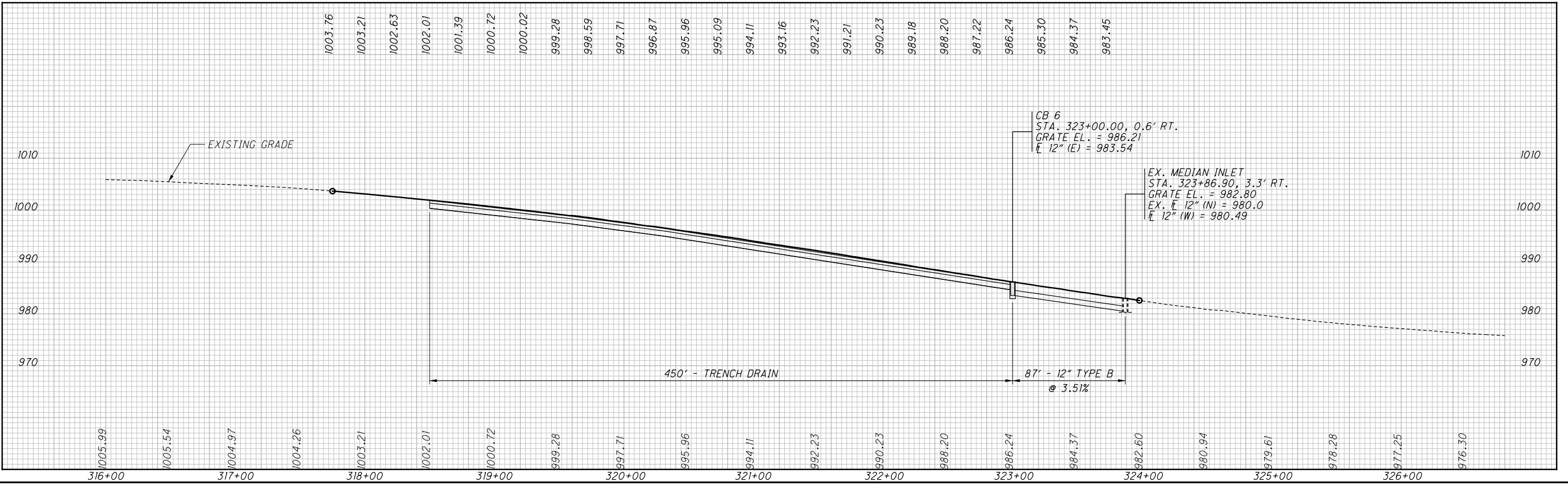
CROSS SECTIONS - WORK ZONE DRAINAGE  
STA. 247+50 TO STA. 254+00

SUM-76-5.53



TRENCH DRAIN TYPICAL SECTION

- NOTES**
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 71.
  2. FOR PHASES 1 & 2 CROSSOVER DETAILS, SEE SHEET 153.
  3. FOR PHASE 3 CROSSOVER DETAILS, SEE SHEET 154.
  4. FOR CROSSOVER CROSS SECTIONS, SEE SHEET 155.



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SHEET NUMBER									PARTICIPATION				ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED LRK	CHECKED CWL
OFFICE CALCS	43	47	177	180	181	189	01/IMS/PV	10/IMS/PV	02/IMS/BR	11/IMS/BR											
<b>PAVEMENT (CONTINUED)</b>																					
1464	77						514	1027				442	10150	1541	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE B (446)					
						238	79	159				452	10050	238	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC MS					
	47						16	31				452	13040	47	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC MS					
11725							3908	7817				452	16020	11725	SY	13" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC1 WITH OC/OA					
1565							522	1043				609	18000	1565	FT	COMBINATION CURB AND GUTTER, TYPE 3					
30							10	20				609	24000	30	FT	CURB, TYPE 4-A					
86							29	57				609	24510	86	FT	CURB, TYPE 4-C					
1749							583	1166				609	26000	1749	FT	CURB, TYPE 6					
123							41	82				617	10101	123	CY	COMPACTED AGGREGATE, AS PER PLAN			32		
2203							734	1469				617	20000	2203	SY	SHOULDER PREPARATION					
6							2	4				617	25000	6	MGAL	WATER					
2							1	1				618	40600	2	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)					
	LS						LS	LS				SPECIAL	69098400	LS		SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS			34,35		
	LS						LS	LS				SPECIAL	69098400	LS		SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES			35		
1230			2758				1329	2659				806	00101	3988	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, AS PER PLAN			32		
<b>WATER WORK</b>																					
				5			2	3				638	07800	5	EACH	6" GATE VALVE AND VALVE BOX					
				3			1	2				638	08704	3	EACH	6" CUTTING-IN SLEEVE					
				1			1	1				638	10400	1	EACH	FIRE HYDRANT ADJUSTED TO GRADE					
					4		1	3				638	10480	4	EACH	FIRE HYDRANT REMOVED					
				13			4	9				638	10801	13	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN			39		
				2			1	1				SPECIAL	63820750	2	EACH	6" FIRE HYDRANT (BARBERTON)			39,373		
<b>WATER WORK ALTERNATES</b>																					
				756			252	504			X	SPECIAL	63820048	756	FT	6" WATER MAIN DIP CLASS 53, MECHANICAL JOINTS AND FITTINGS (BARBERTON) (ALTERNATE 1)			39,375		
				410			137	273			X	638	98600	410	FT	WATER WORK, MISC.: 18" STEEL PIPE ENCASEMENT, OPEN CUT (ALTERNATE 1)			39		
				346			115	231			X	SPECIAL	63820048	346	FT	6" WATER MAIN DIP CLASS 53, MECHANICAL JOINTS AND FITTINGS (BARBERTON) (ALTERNATE 2)			39,375		
				410			137	273			X	SPECIAL	63820176	410	FT	12" WATER MAIN DIP CLASS 53, MECHANICAL JOINTS AND FITTINGS (BARBERTON) (ALTERNATE 2)			39,375		
				410			137	273			X	638	98600	410	FT	WATER WORK, MISC.: 24" STEEL PIPE ENCASEMENT, OPEN CUT (ALTERNATE 2)			39		
<b>SANITARY SEWER</b>																					
	200						67	133				611	00900	200	FT	6" CONDUIT, TYPE B					
	200						67	133				611	01100	200	FT	6" CONDUIT, TYPE C					
				254			85	169				611	97400	254	FT	CONDUIT, MISC.: 8" SANITARY SEWER, 707.45			40		
				10			3	7				611	97400	10	FT	CONDUIT, MISC.: 10" SANITARY SEWER, 706.08			40		
				524			175	349				611	97400	524	FT	CONDUIT, MISC.: 10" SANITARY SEWER, 707.45			40		
				7			2	5				611	99575	7	EACH	MANHOLE, NO.3, AS PER PLAN			40		
				11			4	7				611	99655	11	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN			40		
				1			1	1				611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN			40		
				1			1	1				611	99690	1	EACH	MANHOLE, MISC.: AKRON S-1.3			40		
	1							1				SPECIAL	69098000	1	EACH	EXISTING SANITARY CONDUIT INSPECTION			40		

**GENERAL SUMMARY**

**SUM - 76 - 5.53**

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O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CG005.dgn\_Sheet\_3/26/2019 3:57:22 PM ccox

SHEET NUMBER							PARTICIPATION				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	LRK CHECKED	CWL							
		43	164			500	01/IMS/PV	10/IMS/PV	02/IMS/BR	11/IMS/BR																
														<b>LIGHTING</b>												
														FOR LIGHTING GENERAL SUMMARY	485											
														<b>TRAFFIC SURVEILLANCE</b>												
														FOR TRAFFIC SURVEILLANCE GENERAL SUMMARY	476											
														<b>TRAFFIC CONTROL</b>												
														FOR TRAFFIC CONTROL GENERAL SUMMARY	378											
														<b>TRAFFIC SIGNALS</b>												
														FOR TRAFFIC SIGNALS GENERAL SUMMARY	461											
														<b>LANDSCAPING</b>												
														PLANTING, MISC: NATIVE TREES	38											
							16	32			661	99900	48	EACH	38											
							16	32			661	99900	48	EACH	38											
							633	1267			662	30000	1900	GAL	1900											
														<b>RETAINING WALLS</b>												
														FOR RETAINING WALLS 1, 2, 3, AND 4 GENERAL SUMMARY	511											
														<b>BUILDING DEMOLITION</b>												
							LS	LS			202	56000	LS	BUILDING DEMOLISHED, PARCEL 7, 1 STORY FRAME, GARAGE												
							LS	LS			202	56000	LS	BUILDING DEMOLISHED, PARCEL 8, 2 STORY FRAME, DECK, STEPS												
							LS	LS			202	56000	LS	BUILDING DEMOLISHED, PARCEL 38, GARAGE, SHED, FLOWER BED												
							LS	LS			202	56000	LS	BUILDING DEMOLISHED, PARCEL 43, GARAGE, SHED	27											
							LS	LS			202	56000	LS	BUILDING DEMOLISHED, PARCEL 45, SHED												
														<b>NOISE BARRIERS</b>												
							204	136			SPECIAL	60610200	204	SF	NOISE BARRIER (REFLECTIVE), 10' HEIGHT AND UNDER	497										
							175	117			SPECIAL	60610210	175	SF	NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT	497										
							25217	16811			SPECIAL	60610220	25217	SF	NOISE BARRIER (REFLECTIVE), OVER 14' TO 20' HEIGHT	497										
							697	465			SPECIAL	60610230	697	SF	NOISE BARRIER (REFLECTIVE), OVER 20' TO 25' HEIGHT	497										
														<b>STRUCTURE OVER 20 FOOT SPAN</b>												
														FOR SUM-076-0563L/R GENERAL SUMMARY	531											
														FOR SUM-076-0577 GENERAL SUMMARY	540											
														FOR SUM-076-0577CD GENERAL SUMMARY	553											
														FOR SUM-076-0578 GENERAL SUMMARY	556											
														FOR SUM-076-0580 GENERAL SUMMARY	570											
														<b>MISCELLANEOUS STRUCTURES</b>												
							68	45			511	50211	68	CY	CLASS OC1 CONCRETE SUBSTRUCTURE, AS PER PLAN	27										
														<b>MAINTENANCE OF TRAFFIC</b>												
														FOR MAINTENANCE OF TRAFFIC GENERAL SUMMARY	52,53											
														<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th><th>DESCRIPTION</th><th>REV. BY</th><th>DATE</th></tr> </thead> <tbody> <tr> <td>1</td><td>STREAM RESTORATION</td><td>CJC</td><td>2-22-2019</td></tr> </tbody> </table>	NO.	DESCRIPTION	REV. BY	DATE	1	STREAM RESTORATION	CJC	2-22-2019				
NO.	DESCRIPTION	REV. BY	DATE																							
1	STREAM RESTORATION	CJC	2-22-2019																							
														<b>INCIDENTALS</b>												
							LS	LS			108	10000	LS	CPM PROGRESS SCHEDULE												
							LS	LS			614	11000	LS	MAINTAINING TRAFFIC												
							13	26			619	16021	39	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	28										
							LS	LS			623	10000	LS	CONSTRUCTION LAYOUT STAKES AND SURVEYING												
							LS	LS			624	10000	LS	MOBILIZATION												

GENERAL SUMMARY

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SHEET NO.	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	SPECIAL	202	202	
	HEADWALL REMOVED EACH	PAVEMENT REMOVED SY	PAVEMENT REMOVED, ASPHALT SY	WALK REMOVED SF	STEPS REMOVED FT	CONCRETE MEDIAN REMOVED SY	CONCRETE BARRIER REMOVED FT	CURB REMOVED FT	CURB AND GUTTER REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	CONCRETE SLOPE PROTECTION REMOVED SY	GUARDRAIL REMOVED FT	BUILDING DEMOLISHED, PARCEL 7, 1 STORY FRAME, GARAGE LS	BUILDING DEMOLISHED, PARCEL 8, 2 STORY FRAME, DECK, STEPS LS	BUILDING DEMOLISHED, PARCEL 38, GARAGE, SHED, FLOWER BED LS	BUILDING DEMOLISHED, PARCEL 43, GARAGE, SHED LS	BUILDING DEMOLISHED, PARCEL 45, SHED LS	MANHOLE REMOVED EACH	CATCH BASIN REMOVED EACH	REMOVAL MISC.: PRIVATE LIGHT POLE EACH	MANHOLE ABANDONED EACH	FILL AND PLUG EXISTING CONDUIT FT	FENCE REMOVED FT	MANHOLE ABANDONED, AS PER PLAN EACH	
168																								1	
169																		2	20						
171																							475	2595	
172											6651														
173	16																								
175										1779															
176		496	1951	165	32								LS	LS	LS	LS	LS			1			523		
185		18896	12684	17013		59	1257	2840	741		1134														
355	2									80															
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>	18	19392	14635	17178	32	59	1257	2840	741	1859	1134	6651	LS	LS	LS	LS	LS	2	20	1	13	475	3118	1	
SHEET NO.	622 **	202	202	202	202	606	606	606	606	606	606	606	607	607	608	608	608	608	608	626*	626*	626*	626*		
	PORTABLE BARRIER, 32", AS PER PLAN FT	REMOVAL MISC.: FLOWER BED EACH	REMOVAL MISC.: BRICK WALL FT	REMOVAL MISC.: BRICK SY	REMOVAL MISC.: STONE WALKWAY SF	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL EACH	FENCE, TYPE CL T FT	FENCELINE SEEDING AND MULCHING FT	4" CONCRETE WALK SQ FT	6" CONCRETE WALK, AS PER PLAN SQ FT	CURB RAMP, TYPE A1 SQ FT	CURB RAMP, TYPE B1 SQ FT	CURB RAMP, TYPE B2 SQ FT	BARRIER REFLECTOR, TYPE 1, ONE-WAY EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL EACH	BARRIER REFLECTOR, TYPE 3, ONE-WAY EACH	BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL EACH		
43																					14				
168	90																								
171													2972	2972											
172						3400	1	4	7	5	4	1								19	60	11	40		
176		2	120		31																				
185				12																					
188															18626	1827	95	98	1504						
** QUANTITY CARRIED TO MOT GENERAL SUMMARY ON SHEET 53																									
* QUANTITY CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY ON SHEET 378																									
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>	90	2	120	12	31	3400	1	4	7	5	4	1	2972	2972	18626	1827	1697	19	74	11	40				

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

CALCULATED	LTK	CHECKED	CWL
<b>ROADWAY SUBSUMMARY</b>			
<b>SUM - 76 - 5.53</b>			
164 672			

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SHEET NO.	601	601	601	601	601		602		605	605	605	605		611	611	611	611	611	611	611	611	611	611	611						
	TIED CONCRETE BLOCK MAT, TYPE 1	TIED CONCRETE BLOCK MAT, TYPE 2	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER	PAVED GUTTER, TYPE 1-2, AS PER PLAN		CONCRETE MASONRY		6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, 707.31		6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" CONDUIT, TYPE B	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C, 706.02 WITH 706.II JOINTS	15" CONDUIT, TYPE B	15" CONDUIT, TYPE B, 706.02 WITH 706.II JOINTS	15" CONDUIT, TYPE C	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C							
	SY	SY	CY	CY	FT		CY	FT	FT	FT	FT		FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT							
170	168	256	12	3	425																									
173 174							3.4									25	65	655	103	470	299	182	186							
178 179	6								7343 1087	54 23	7958 3863	213		162 50	325 204															
355			1.7				1.1																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>REV. BY</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>RAMP B INTERSECTION</td> <td>CJC</td> <td>2-22-2019</td> </tr> </table>																							NO.	DESCRIPTION	REV. BY	DATE	1	RAMP B INTERSECTION	CJC	2-22-2019
NO.	DESCRIPTION	REV. BY	DATE																											
1	RAMP B INTERSECTION	CJC	2-22-2019																											
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>	174	256	14	3	425		4.5		8430	77	11821	213		212	529	25	65	655	103	470	299	182	186							
SHEET NO.	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611						
	21" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	21" CONDUIT, TYPE C	30" CONDUIT, TYPE A, 706.02	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 8	CATCH BASIN, NO. 2-2B	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE CI	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	PRECAST REINFORCED CONCRETE OUTLET	21" CONDUIT, TYPE B	DITCH EROSION PROTECTION	STORM WATER POLLUTION PREVENTION PLAN	EROSION CONTROL	STORM WATER POLLUTION PREVENTION INSPECTIONS	STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3						
	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	SY	LS	EACH	LS	LS	SY	SY	SY					
168				1	4	1	6			6	4	1	1																	
169 170								3	2					4			1578						2015	205	107					
174	46	54														69														
178															3															
190 355			80															LS	250000	LS	LS									
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>	46	54	80	1	4	1	6	3	2	6	4	1	1	4	3	69	1578	LS	250000	LS	LS	2015	205	107						

<b>EROSION CONTROL AND DRAINAGE SUBSUMMARY</b>				
<b>SUM - 76 - 5.53</b>				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">165</td> <td style="text-align: center;">165</td> </tr> <tr> <td style="text-align: center;">672</td> <td style="text-align: center;">672</td> </tr> </table>	165	165	672	672
165	165			
672	672			





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REF. NO.	SHEET NO.	STATION		SIDE	202		202		611		611		611		611		611		622		
		FROM	TO		MANHOLE ABANDONED	MANHOLE ABANDONED, AS PER PLAN	MANHOLE, NO. 3	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 3	CATCH BASIN, NO. 8	PORTABLE BARRIER, 32", AS PER PLAN						
AB-3	366	13+79.32	(S.R. 619)	RT	1																
AB-4	367	16+86.85	(S.R. 619)	LT	1																
AB-5	367	14+42.11	(S.R. 619)	RT	1																
AB-6	200	312+34.74	(I.R. 76)	LT	1																
AB-11	363	21+06.99	(RAMP B)	RT	1																
AB-12	363	22+62.19	(RAMP B)	LT/RT	1																
AB-13	363	23+47.93	(RAMP B)	RT	1																
AB-14	363	24+12.22	(RAMP B)	LT	1																
AB-15	365	7+78.69	(REL. CENTRAL)	RT	1																
AB-16	365	8+23.11	(REL. CENTRAL)	RT	1																
AB-17	365	9+23.00	(REL. CENTRAL)	RT	1																
AB-19	367	14+84.23	(S.R. 619)	RT			1														
AB-20	366	13+79.77	(S.R. 619)	LT	1																
AB-21	369	84+16.59	(STATE)	RT	1																
B-1	200	312+04.96	(I.R. 76)	312+93.15	(I.R. 76)	LT														90	
D-1	192	292+50.00	(I.R. 76)	LT																	
D-2	196	301+50.00	(I.R. 76)	RT																	
D-3	196	303+88.30	(I.R. 76)	RT																	
D-4	198	304+64.11	(I.R. 76)	RT																	
D-5	198	305+74.11	(I.R. 76)	RT																	
D-6	198	308+57.50	(I.R. 76)	RT																	
D-7	198	309+21.50	(I.R. 76)	LT																	
D-9	194	297+66.67	(I.R. 76)	RT																	
D-10	218	38+25.00	(RAMP C)	LT																	
D-11	222	137+50.00	(RAMP C1)	RT																	
D-12	198	306+50.00	(I.R. 76)	LT																	
D-13	210	130+75.00	(RAMP B1)	LT																	
D-14	224	144+31.62	(RAMP C1)	RT																	
D-15	204	29+25.00	(RAMP B)	RT																	
D-16	210	129+37.50	(RAMP B1)	LT																	
D-17	204	28+50.00	(RAMP B)	RT																	
D-20	228	10+63.54	(REL. CENTRAL)	LT																	
D-21	228	10+81.66	(REL. CENTRAL)	LT																	
D-23	228	10+50.00	(REL. CENTRAL)	RT																	
D-24	210	129+66.64	(RAMP B1)	LT																	
D-25	194	296+60.73	(I.R. 76)	RT																	
D-26	198	304+64.01	(I.R. 76)	RT																	
D-27	192	292+50.00	(I.R. 76)	RT																	
D-28	194	294+50.00	(I.R. 76)	RT																	
<b>TOTALS CARRIED TO SUBSUMMARY ON SHEETS 164.165</b>						13	1			1	6	4	1	6	4	1	1			90	

**ESTIMATED QUANTITIES**

**SUM - 76 - 5.53**

CALCULATED  
LRK  
CHECKED  
CWL

168  
672



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REF. NO.	SHEET NO.	STATION		SIDE	202	202			611	611	611										
		FROM	TO		CATCH BASIN REMOVED	MANHOLE REMOVED	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	MANHOLE ADJUSTED TO GRADE, AS PER PLAN												
					EACH	EACH			EACH	EACH	EACH										
DJ-1	234	137+16.05 (RAMP B1)		RT							1										
DJ-2	233	12+99.71 (S.R. 619)		LT					1												
DJ-3	233	13+34.99 (S.R. 619)		LT					1												
DJ-4	233	13+35.33 (S.R. 619)		RT					1												
DJ-5	234	15+48.45 (S.R. 619)		LT							1										
DJ-6	233	13+35.80 (S.R. 619)		LT							1										
DJ-7	233	9+78.37 (S.R. 619)		LT							1										
DJ-10	200	311+44.48 (I.R. 76)		RT						1											
DJ-11	200	309+86.78 (I.R. 76)		LT						1											
DR-1	192	292+49.81 (I.R. 76)		RT	1																
DR-2	194	295+30.80 (I.R. 76)		RT	1																
DR-3	194	296+32.48 (I.R. 76)		LT	1																
DR-4	196	301+50.31 (I.R. 76)		LT	1																
DR-5	196	301+50.46 (I.R. 76)		LT	1																
DR-6	198	304+50.61 (I.R. 76)		LT	1																
DR-7	198	304+50.90 (I.R. 76)		LT	1																
DR-8	198	306+39.59 (I.R. 76)		LT	1																
DR-9	224	144+59.65 (RAMP C1)		RT	1																
DR-11	226	7+70.24 (REL. CENTRAL)		RT	1																
DR-12	204	25+65.88 (RAMP B)		LT		1															
DR-13	204	25+80.47 (RAMP B)		RT	1																
DR-14	204	25+62.00 (RAMP B)		RT	1																
DR-15	204	26+12.02 (RAMP B)		LT	1																
DR-16	228	9+36.74 (REL. CENTRAL)		RT	1																
DR-17	204	25+77.58 (RAMP B)		LT	1																
DR-18	216	36+60.85 (RAMP C)		LT	1																
DR-19	216	36+95.59 (RAMP C)		RT		1															
DR-20	212	135+81.95 (RAMP B1)		LT	1																
DR-21	212	136+28.50 (RAMP B1)		LT	1																
DR-22	212	135+94.74 (RAMP B1)		LT	1																
DR-23	198	308+57.47 (I.R. 76)		RT	1																
<b>TOTALS CARRIED TO SUBSUMMARY ON SHEETS 164.165</b>					20	2			3	2	4										

CALCULATED LRK CHECKED CWL	<b>ESTIMATED QUANTITIES</b>	<b>SUM - 76 - 5.53</b>	169 672
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REF. NO.	SHEET NO.	STATION		SIDE			601	601	601	601	601		670	836	836	836				
		FROM	TO				ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	PAVED GUTTER, TYPE F-2, AS PER PLAN	TIED CONCRETE BLOCK MAT, TYPE 1	TIED CONCRETE BLOCK MAT, TYPE 2		DITCH EROSION PROTECTION	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3				
							CY	CY	FT	SY	SY		SY	SY	SY	SY				
E-2	196	301+50.00 (I.R. 76)		RT				1.33												
E-3	202	21+00.04 (RAMP B)	23+00.00 (RAMP B)	LT								169								
E-4	198	304+64.11 (I.R. 76)		LT			1.33													
E-5	202 , 208	23+00.00 (RAMP B)	128+25.00 (RAMP B)	LT										432						
E-6	198	308+57.50 (I.R. 76)		RT				1.33												
E-7	208 , 210	128+25.00 (RAMP B)	129+37.50 (RAMP B)	LT								90								
E-8	210 , 212	130+75.00 (RAMP B)	134+42.74 (RAMP B)	LT								307								
E-9	208 , 210	128+47.13 (RAMP B)	129+91.27 (RAMP B)	RT								124								
E-10	210	129+91.27 (RAMP B)	133+00.00 (RAMP B)	RT										263						
E-11	218	38+98.43 (RAMP C)		RT				1.56												
E-12	198	306+50.00 (I.R. 76)		LT			0.89													
E-13	210	130+75.00 (RAMP B)		LT				0.89												
E-14	224	144+17.49 (RAMP C)		RT				0.89												
E-15	204 , 206	30+00.00 (RAMP B)		LT				1.56												
E-16	210 , 212	133+00.00 (RAMP B)	134+29.27 (RAMP B)	RT												107				
E-17	212	134+55.46 (RAMP B)	136+00.00 (RAMP B)	RT								109								
E-18	192,194,196	292+00.00 (I.R. 76)	300+38.11 (I.R. 76)	LT										687						
E-20	192	292+10.00 (I.R. 76)	292+50.00 (I.R. 76)	RT								33								
E-21	212	134+64.19 (RAMP B)	136+50.00 (RAMP B)	LT								161								
E-22	222	137+49.87 (RAMP C)	138+98.64 (RAMP C)	LT								122								
E-23	228	10+50.06 (REL. CENTRAL)		RT				1.33												
E-24	210	130+16.92 (RAMP B)		LT				1.56												
E-25	222	138+98.64 (RAMP C)	141+48.32 (RAMP C)	LT											205					
E-26	222 , 224	141+48.32 (RAMP C)	143+77.50 (RAMP C)	LT							193									
E-27	214	30+50.00 (RAMP C)	33+00.00 (RAMP C)	RT								209								
E-28	216	33+00.00 (RAMP C)	136+00.00 (RAMP C)	RT										253						
E-29	220 , 222	136+00.00 (RAMP C)	137+50.58 (RAMP C)	RT						128										
E-30	222	137+50.58 (RAMP C)	142+00.00 (RAMP C)	RT										380						
E-31	356	308+57.50 (I.R. 76)	309+25.00 (I.R. 76)	RT																
E-32	356	307+61.98 (I.R. 76)	308+57.50 (I.R. 76)	RT							63									
E-33	210	129+37.50 (RAMP B)	129+56.88 (RAMP B)	LT					55				254							
E-34	194	294+74.62 (I.R. 76)	298+38.62 (I.R. 76)	RT					370											
E-36	198	304+64.01 (I.R. 76)		RT				0.89												
E-37	198	304+64.01 (I.R. 76)	304+64.01 (I.R. 76)	RT						40										

ESTIMATED QUANTITIES	170 672
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TOTALS CARRIED TO SUBSUMMARY ON SHEET 165

3 12 425 168 256 1578 2015 205 107

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REF. NO.	SHEET NO.	STATION		SIDE	202	SPECIAL	607	607															
		FROM	TO		FENCE REMOVED FT	FILL AND PLUG EXISTING CONDUIT FT	FENCE, TYPE CLT FT	FENCELINE SEEDING AND MULCHING FT															
F-1	643	20+75.89 (RAMP B)	129+43.36 (RAMP B)	LT			1101	1101															
F-2	643	129+53.99 (RAMP B)	129+66.68 (RAMP B)	LT			14	14															
F-3	643 - 644	30+12.54 (RAMP C)	141+61.62 (RAMP C)	RT			1595	1595															
F-4	644	12+77.44 (S.R. 619)	13+01.02 (S.R. 619)	LT			24	24															
F-5	644	306+55.82 (I.R. 76)	308+12.59 (I.R. 76)	RT			178	178															
F-6	644	312+82.05 (I.R. 76)	313+00.68 (I.R. 76)	LT			60	60															
FP-2	366	AB-20	AB-3	LT/RT		45																	
FP-3	366 - 367	AB-4	AB-20	LT		305																	
FP-4	366 - 367	AB-3	AB-5	RT		100																	
FP-5	367	AB-5	EX. 36" SAN.	RT		25																	
FR-1	643	291+19.02 (I.R. 76)	296+54.82 (I.R. 76)	LT	621																		
FR-2	643	297+73.48 (I.R. 76)	300+88.57 (I.R. 76)	LT	405																		
FR-3	643	30+59.12 (RAMP C)	36+55.40 (RAMP C)	LT/RT	687																		
FR-4	643 - 644	137+61.94 (RAMP C)	141+61.62 (RAMP C)	LT/RT	501																		
FR-5	644	12+77.44 (S.R. 619)	13+79.40 (S.R. 619)	LT	116																		
FR-6	644	307+19.93 (I.R. 76)	308+12.59 (I.R. 76)	RT	189																		
FR-7	644	3+78.38 (KENMORE)	4+03.28 (KENMORE)	RT	30																		
FR-8	643	10+62.86 (EX. CENTRAL)	10+80.88 (EX. CENTRAL)	RT	24																		
FR-9	643	10+48.82 (EX. CENTRAL)	10+67.21 (EX. CENTRAL)	LT	22																		
TOTALS CARRIED TO SUBSUMMARY ON SHEET 164					2595	475	2972	2972															

**ESTIMATED QUANTITIES**

**SUM - 76 - 5.53**

CALCULATED  
LWK  
CHECKED  
CWL

171  
672

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REF. NO.	SHEET NO.	STATION		SIDE	202	606	606	606	606	606	606	606	606	606	626	626	626	626
		FROM	TO		GUARDRAIL REMOVED FT	GUARDRAIL, TYPE MGS FT	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	ANCHOR ASSEMBLY, MGS TYPE B EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL EACH	BARRIER REFLECTOR, TYPE 3, ONE-WAY EACH	BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL EACH		
G-1	194	294+00.22 (I.R. 76)	294+77.12 (I.R. 76)	RT			1											
G-3	194,196,198	37+21.48 (RAMP C)	304+43.07 (I.R. 76)	RT		678.59	1											
G-4	196,198	32+17.63 (RAMP B)	306+27.34 (I.R. 76)	LT		225.00		1										
G-5	198 , 200	307+70.77 (I.R. 76)	311+59.74 (I.R. 76)	RT		368.01	1	1										
G-6	202	87+13.65 (STATE)	20+87.59 (RAMP B)	RT		25.00												
G-7	202 , 204	23+32.57 (RAMP B)	129+21.99 (RAMP B1)	LT		575.00			1									
G-8	210 , 212	130+47.49 (RAMP B1)	135+36.11 (RAMP B1)	LT		412.50	1											
G-9	210 , 212	132+62.50 (RAMP B1)	135+67.50 (RAMP B1)	RT		237.50			1	1								
G-10	214,216,218	84+81.88 (STATE)	38+32.21 (RAMP C)	RT/LT		790.33			1									
G-11	222	137+46.81 (RAMP C1)	138+21.81 (RAMP C1)	LT		62.50			1									
G-12	214	83+58.08 (STATE)	30+66.97 (RAMP C)	RT		18.75	1											
G-13	222	12+84.08 (CENTRAL)		RT/LT		6.25			2									
REFLECTORS																		
	192 - 200	I.R. 76 MEDIAN BARRIER		LT/RT														
	194	G-1	298+38.62 (I.R. 76)	RT										5	44	1		
	194 - 200	G-3	G-5	RT										3		9	4	
	198 - 200	G-4	312+81.42 (I.R. 76)	LT										8		1	2	
	202	G-6		RT														3
	202 - 204, 210 - 212	G-7	G-8	LT												1		13
	210 - 212	G-9		RT														4
	214 - 218	G-10		LT														10
	214, 220 - 224	G-12	144+00.00 (RAMP C1)	RT														1
	222	G-11		LT														3
	200	B-1		LT										3				
GR-3	194	295+18.48 (I.R. 76)	296+43.42 (I.R. 76)	LT	124													
GR-4	194	295+02.25 (I.R. 76)	296+52.17 (I.R. 76)	RT	152													
GR-5	196 , 198	299+23.70 (I.R. 76)	305+51.75 (I.R. 76)	RT	639													
GR-6	196 , 198	300+36.68 (I.R. 76)	305+29.69 (I.R. 76)	LT	484													
GR-7	198	304+81.19 (I.R. 76)	305+92.57 (I.R. 76)	RT	112													
GR-8	198 , 200	307+89.95 (I.R. 76)	309+77.25 (I.R. 76)	RT	190													
GR-9	198 , 200	309+07.67 (I.R. 76)	312+92.68 (I.R. 76)	LT	383													
GR-10	208,210,212	2+23.43 (EX. RAMP C)	12+14.22 (EX. RAMP C)	RT	1020													
GR-11	210	6+17.23 (EX. RAMP C)	9+56.89 (EX. RAMP C)	LT/RT	351													
GR-12	198,210,212	4+82.56 (EX. RAMP D)	12+40.79 (EX. RAMP D)	RT	722													
GR-13	198 , 210	6+07.84 (EX. RAMP D)	9+39.11 (EX. RAMP D)	LT	375													
GR-14	222 , 224	137+73.47 (RAMP C1)	143+28.14 (RAMP C1)	LT/RT	553													
GR-15	222 , 224	139+77.72 (RAMP C1)	143+31.95 (RAMP C1)	LT/RT	362													
GR-16	352	2+57.20 (EX. RAMP F)	6+95.95 (EX. RAMP F)	LT	426													
GR-17	352	2+51.90 (EX. RAMP F)	8+79.25 (EX. RAMP F)	RT	629													
GR-18	237	83+88.26 (STATE ST)	84+39.00 (STATE ST)	RT	51													
GR-19	237	84+74.04 (STATE ST)	84+81.88 (STATE ST)	RT	14													
GR-20	202	87+13.65 (STATE ST)	20+44.58 (RAMP B)	RT	39													
GR-21	214	32+57.70 (RAMP C)	32+82.33 (RAMP C)	RT	25													
<b>TOTALS CARRIED TO SUBSUMMARY ON SHEET 164</b>					6651	3400	5	4	7	4	1	1		19	60	11	40	

**ESTIMATED QUANTITIES**

**SUM - 76 - 5.53**

CALCULATED  
 LRK  
 CHECKED  
 CWL

172  
 672

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REF. NO.	SHEET NO.	STATION		SIDE	202	602														
		FROM	TO		HEADWALL REMOVED EACH	CONCRETE MASONRY CU YD														
HW-2	196	301+50.00 (I.R. 76)		RT		0.27														
HW-4	198	304+64.11 (I.R. 76)		LT		0.27														
HW-6	198	308+57.50 (I.R. 76)		RT		0.39														
HW-11	218	38+98.43 (RAMP C)		RT		0.33														
HW-12	198	306+50.00 (I.R. 76)		LT		0.27														
HW-13	210	130+75.00 (RAMP B1)		LT		0.27														
HW-14	224	144+17.49 (RAMP C1)		RT		0.27														
HW-15	204 , 206	30+00.00 (RAMP B)		LT		0.33														
HW-23	228	10+50.06 (REL. CENTRAL AVE)		RT		0.27														
HW-24	210	130+16.92 (RAMP B1)		LT		0.39														
HW-26	198	304+64.01 (I.R. 76)		RT		0.27														
HR-1	194	293+36.42 (I.R. 76)		RT	1															
HR-2	194	296+37.83 (I.R. 76)		RT	1															
HR-3	196	301+50.68 (I.R. 76)		RT	1															
HR-4	198	304+50.13 (I.R. 76)		LT	1															
HR-5	198	308+53.58 (I.R. 76)		RT	1															
HR-6	224	144+32.80 (RAMP C1)		RT	1															
HR-7	210	131+59.43 (RAMP B1)		RT	1															
HR-8	210	132+88.14 (RAMP B1)		RT	1															
HR-9	204	26+44.94 (RAMP B)		RT	1															
HR-10	222	137+46.35 (RAMP C1)		LT	1															
HR-11	212	135+51.82 (RAMP B1)		LT	1															
HR-12	212	135+77.02 (RAMP B1)		LT	1															
HR-13	212	135+53.77 (RAMP B1)		LT	1															
HR-14	198	306+49.64 (I.R. 76)		LT	1															
HR-15	233	12+86.11 (S.R. 619)		LT	1															
HR-16	233	13+05.09 (S.R. 619)		LT	1															
<b>TOTALS CARRIED TO SUBSUMMARY ON SHEETS 164.165</b>					16	3.4														

CALCULATED	LRK	CHECKED	CWL
ESTIMATED QUANTITIES			
SUM - 76 - 5.53			
173			
672			

Table with columns: REF. NO., SHEET NO., STATION (FROM, TO), SIDE, and various conduit types (12" through 21"). Includes a summary row at the bottom: TOTALS CARRIED TO SUBSUMMARY ON SHEET 165.

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ESTIMATED QUANTITIES
CALCULATED LRK CHECKED CWL
SUM - 76 - 5.53
174
672



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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202		
		FROM	TO		PAVEMENT REMOVED SY	PAVEMENT REMOVED, ASPHALT SY	STEPS REMOVED FT	FENCE REMOVED FT	WALK REMOVED SF	REMOVAL MISC.: PRIVATE LIGHT POLE EACH	REMOVAL MISC.: FLOWER BED EACH	REMOVAL MISC.: BRICK WALL FT	REMOVAL MISC.: STONE WALKWAY SF	BUILDING DEMOLISHED, PARCEL 7, 1 STORY FRAME, GARAGE LS	BUILDING DEMOLISHED, PARCEL 8, 2 STORY FRAME, DECK, STEPS LS	BUILDING DEMOLISHED, PARCEL 38, GARAGE, SHED, FLOWER BED LS	BUILDING DEMOLISHED, PARCEL 43, GARAGE, SHED LS	BUILDING DEMOLISHED, PARCEL 45, SHED LS				
R-7	237	83+22.54 (STATE)		LT												LS						
R-8	237	83+37.55 (STATE)		RT	6	44		21		1						LS						
R-11	237	83+74.47 (STATE)		RT	27																	
R-13	220	6+44.24 (ROMIG)		LT/RT	52																	
		6+47.68 (ROMIG)	6+53.84 (ROMIG)	LT				29														
		133+18.53 (RAMP C1)	134+56.98 (RAMP C1)	RT			150															
R-15	220	134+56.98 (RAMP C1)	134+58.25 (RAMP C1)	RT				2														
R-16	220	134+58.25 (RAMP C1)	135+40.48 (RAMP C1)	RT				98														
R-17	220	11+79.47 (CENTRAL)	12+09.18 (CENTRAL)	RT									40									
		12+12.95 (CENTRAL)	12+35.88 (CENTRAL)	RT									23									
		12+11.18 (CENTRAL)	4 TREAD	RT			14															
R-18	220	12+35.88 (CENTRAL)	12+58.21 (CENTRAL)	RT									28									
		12+61.30 (CENTRAL)	12+76.08 (CENTRAL)	RT									29									
R-19	222	12+33.90 (CENTRAL)	2 TREAD	LT			6															
R-23	233, 234	13+86.63 (S.R. 619)		RT		1907																
R-24	202	88+39.35 (STATE)		RT	158																	
R-25	226	7+15.44 (REL CENTRAL)	4 TREAD	RT			12	11														
R-26	208	7+51.37 (REL CENTRAL)		RT	121																	
R-35	228	10+68.62 (REL CENTRAL)	10+96.67 (REL CENTRAL)	RT				95														
R-38	222	138+55.07 (RAMP C1)		RT	78			40							LS							
R-43	222	140+36.69 (RAMP C1)		RT	15			41										LS				
R-44	222	140+53.62 (RAMP C1)	140+57.80 (RAMP C1)	RT				35														
		140+96.57 (RAMP C1)	140+97.96 (RAMP C1)	RT				29														
R-45	222	141+33.65 (RAMP C1)		RT				10		1	31									LS		
R-67	220	134+64.55 (RAMP C1)	134+66.04 (RAMP C1)	RT				22														
R-68	220	134+80.09 (RAMP C1)		RT						1												
		135+18.84 (RAMP C1)	135+20.42 (RAMP C1)	RT				47														
		135+39.48 (RAMP C1)	135+40.30 (RAMP C1)	RT				58														
R-80	194	294+91.90 (I.R. 76)	295+93.07 (I.R. 76)	LT	39																	
<b>TOTALS CARRIED TO SUBSUMMARY ON SHEET 164</b>					496	1951	32	523	165	1	2	120	31		LS	LS	LS	LS	LS			

**ESTIMATED QUANTITIES**

**SUM - 76 - 5.53**

CALCULATED  
LRK  
CHECKED  
CWL

176  
672



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REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	611	611	611			611	611	611	611						
		FROM	TO		PIPE REMOVED, 24" AND UNDER	PIPE REMOVED, OVER 24"	MANHOLE REMOVED	CONDUIT, MISC.: 8" SANITARY SEWER, 707.45	CONDUIT, MISC.: 10" SANITARY SEWER, 706.08	CONDUIT, MISC.: 10" SANITARY SEWER, 707.45	MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY)	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (SANITARY)	MANHOLE, NO. 3, AS PER PLAN (SANITARY)	MANHOLE, MISC.: AKRON S-1.3								
SA-1	363	20+50.00 (RAMP B)		LT											1							
SA-2	363	22+50.00 (RAMP B)		LT											1							
SA-3	363	24+00.00 (RAMP B)		LT											1							
SA-4	363	7+66.56 (REL. CENTRAL)		RT											1							
SA-5	365	10+03.26 (REL. CENTRAL)		RT											1							
SA-6	368	12+96.10 (EX. CENTRAL)		RT											1							
SA-7	366	13+84.49 (S.R. 619)		RT												1						
SA-8	200	312+75.00 (I.R. 76)		LT											1							
SJ-1	226	3+69.55 (REL. CENTRAL)		LT									1									
SJ-2	226	5+56.11 (REL. CENTRAL)		RT									1									
SJ-3	363	7+22.81 (REL. CENTRAL)		RT									1									
SJ-4	365	10+94.75 (REL. CENTRAL)		LT									1									
SJ-5	365	11+16.74 (REL. CENTRAL)		LT									1									
SJ-6	367	18+01.83 (S.R. 619)		RT									1									
SJ-7	367	17+78.33 (S.R. 619)		LT									1									
SJ-8	367	16+59.62 (S.R. 619)		RT										1								
SJ-9	235	3+24.89 (KENMORE)		LT									1									
SJ-10	236	5+49.28 (KENMORE)		LT									1									
SJ-11	366	11+49.11 (S.R. 619)		LT									1									
SJ-12	369	5+41.83 (ROMIG)		RT									1									
SP-1	363	SA-1	SA-2	LT			202															
SP-2	363	SA-2	SA-3	LT						161												
SP-3	363	SA-3	SA-4	LT						116												
SP-4	363 - 365	SA-4	SA-5	LT/RT						242												
SP-5	365	SA-5	10+08.00 (REL. CENTRAL)	RT						5												
SP-6	368	SA-6	13+01.10 (EX. CENTRAL)	RT						5												
SP-101	363	20+01.77 (RAMP B)	SA-1	LT			52															
SP-104	363	7+62.52 (REL. CENTRAL)	SA-4	RT						5												
SR-1	363	7+62.52 (REL. CENTRAL)	7+66.56 (REL. CENTRAL)	RT	5																	
SR-2	365	AB-17	10+08.00 (REL. CENTRAL)	RT	91																	
SR-3	368	137+14.57 (RAMP CI)		RT																		
SR-4	368	SR-3	SA-6	RT	97																	
SR-62	369	6+36.07 (ROMIG)		LT																		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					193		2	254	10	524			11	1	7	1						

**SANITARY SEWER ESTIMATED QUANTITIES**

**SUM - 76 - 5.53**

CALCULATED  
LRK  
CHECKED  
CWL

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REF. NO.	SHEET NO.	STATION		SIDE	BENDS & BRANCHES - FOR INFORMATION ONLY																	
		FROM	TO		601 TIED CONCRETE BLOCK MAT, TYPE 1 SY	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT	611 6" CONDUIT, TYPE B FT	611 PRECAST REINFORCED CONCRETE OUTLET EACH	6" X 6" TEE EACH	6" PLUG EACH	6" - 90° BEND EACH	6" X 6" CROSS EACH							
U-1	359	292+00.00 (I.R. 76)	U-4	LT				827								1						
U-2	359	292+00.00 (I.R. 76)	U-4	LT			829								1							
U-3	359	292+00.00 (I.R. 76)	U-4	LT			201															
U-4	359	294+00.23 (I.R. 76)	D-15	LT				634		8	48							1				
U-5	359	292+00.00 (I.R. 76)	D-1	CL				40		10								2				
U-6	359,360	292+55.00 (I.R. 76)	D-2	CL				885		10								1				
U-7	359	292+00.00 (I.R. 76)	U-8	RT			158												1			
U-8	359,360	293+57.60 (I.R. 76)	U-11	RT				800							1				1			
U-9	359	292+00.00 (I.R. 76)	D-9	RT				561		10									1			
U-10	359	297+71.67 (I.R. 76)	U-11	RT				68							1				1			
U-11	359,360	298+38.62 (I.R. 76)	D-2	RT				317											2			
U-12	359,360	20+46.20 (RAMP B)	D-13	BL			1040												1			
U-13	359,360	27+44.04 (RAMP B)	OUTLET	BL	2		555			22	8	1		2	1				1			
U-14	359	30+17.87 (RAMP C)	D-11	BL			737								1				1			
U-15	359	137+55.00 (RAMP C1)	U-16	BL			20								1				1			
U-16	359	137+74.58 (RAMP C1)	U-17	LT			240												2			
U-17	359,360	140+16.78 (RAMP C1)	U-58	BL			415												1			
U-18	359	35+71.57 (RAMP C)	U-19	BL			116								1				1			
U-19	359	36+87.63 (RAMP C)	D-10	LT			137												2			
U-20	359	38+30.00 (RAMP C)	U-11	LT			270								1				1			
U-21	359	27+57.18 (ELMWOOD)	28+09.83 (ELMWOOD)	LT																		
U-22	359	6+31.44 (ROMIG)	U-23	LT					54						1				1			
U-23	359	5+77.54 (ROMIG)	EXISTING UD	RT				134							1							
U-24	359	14+97.44 (ROMIG LT)	U-23	LT				72											1			
U-25	359	84+01.86 (STATE)	EXISTING UD	RT				102											1			
U-26	359	4+55.44 (ROMIG)	U-23	LT/RT				59														
U-27	360	144+36.62 (RAMP C1)	EXISTING UD	RT			78												1			
U-28	359,360	300+43.14 (I.R. 76)	U-43	LT				417							1				1			
U-29	359	6+75.00 (CENTRAL)	D-20	LT				365		10												
U-30	359	8+62.52 (CENTRAL)	D-23	RT				181		10									1			
U-31	359	10+77.89 (CENTRAL)	D-20	LT				8		10									1			
U-32	359	2+15.00 (GRAND)	D-21	RT				41		10												
U-33	359	10+55.00 (CENTRAL)	EXISTING UD	RT				129											1			
U-34	359	2+15.00 (GRAND)	EXISTING UD	LT				134														
U-35	359,360	292+00.00 (I.R. 76)	U-11	RT			953								1							
U-36	360	130+80.00 (RAMP B1)	OUTLET	BL	2		283												1			
U-37	360	133+62.72 (RAMP B1)	OUTLET	RT	2		206								1							
U-38	360	136+54.91 (RAMP B1)	U-37	RT			127															
U-39	360	29+94.07 (RAMP B)	U-13	LT				303											1			
U-40	360	306+39.70 (I.R. 76)	U-13	LT				206														
U-41	360	306+97.31 (I.R. 76)	D-12	LT				36		10												
U-42	359,360	300+43.20 (I.R. 76)	U-28	LT			412												1			
U-43	360	306+88.45 (I.R. 76)	U-13	LT			255															
U-44	360	306+64.08 (I.R. 76)	U-28	LT				196							1							
U-45	360	306+40.32 (I.R. 76)	U-28	LT				175														
U-46	360	301+55.00 (I.R. 76)	D-3	CL				223		10												
U-47	360	301+55.00 (I.R. 76)	U-49	RT			311												1			
U-48	360	301+55.00 (I.R. 76)	U-49	RT				313											1			
U-49	360	301+55.00 (I.R. 76)	D-4	RT				315							1							
U-50	360	301+00.15 (I.R. 76)	D-26	RT				364		10												
<b>TOTALS CARRIED TO SUBSUMMARY ON SHEET 165</b>					6		7343		54		7958			162	325	3		13	29	19		4

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

**UNDERDRAIN ESTIMATED QUANTITIES**

**SUM - 76 - 5.53**

CALCULATED  
TMT  
CHECKED  
CWL

178  
672

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REF. NO.	SHEET NO.	STATION		SIDE			605	605	605	605	611	611	BENDS & BRANCHES - FOR INFORMATION ONLY															
		6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC				6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, 707.31	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" CONDUIT, TYPE B	6" X 6" TEE	6" PLUG	6" - 90° BEND	6" - 45° BEND	6" X 6" CROSS													
		FROM	TO				FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH											
U-51	360	303+93.30 (I.R. 76)	D-4	CL						61		10						1										
U-52	360	305+69.11 (I.R. 76)	D-4	CL						95		10						1										
U-53	360	306+15.73 (I.R. 76)	D-5	CL						32		10						1										
U-54	360	306+02.97 (I.R. 76)	U-49	RT			140											1										
U-55	360	305+81.16 (I.R. 76)	U-49	RT						119								1										
U-56	360	305+69.77 (I.R. 76)	U-49	RT						108								1										
U-57	360	305+48.26 (I.R. 76)	D-26	RT						76		10						1										
U-58	360	145+06.12 (RAMP C1)	D-14	LT			75						22			1												
U-59	360	308+98.01 (I.R. 76)	U-78	LT					23									1										
U-61	360	309+16.42 (I.R. 76)	U-75	LT						46								1										
U-62	360	312+79.92 (I.R. 76)	U-78	LT						357								1										
U-63	360	312+96.16 (I.R. 76)	U-62	LT			297						4			1												
U-64	360	312+87.12 (I.R. 76)	U-78	LT						364								1										
U-65	360	312+43.52 (I.R. 76)	U-78	LT			71						12			1												
U-66	360	308+52.50 (I.R. 76)	U-75	CL						39								1										
U-67	360	308+52.52 (I.R. 76)	U-75	RT						54								1										
U-68	360	308+52.57 (I.R. 76)	U-75	RT						80								1										
U-69	360	308+52.62 (I.R. 76)	U-75	RT						115								1										
U-70	360	312+28.11 (I.R. 76)	D-6	CL						361		10						1										
U-71	360	312+20.72 (I.R. 76)	U-74	RT			364											1										
U-72	360	310+66.26 (I.R. 76)	U-74	RT						211								1										
U-73	360	311+69.35 (I.R. 76)	U-72	RT			103						18					1										
U-74	360	311+64.65 (I.R. 76)	D-6	RT						311			67					1										
U-75	360	307+40.54 (I.R. 76)	U-59	RT/LT								213						1										
U-76	360	309+16.26 (I.R. 76)	U-75	LT						73								1										
U-77	360	300+43.23 (I.R. 76)	U-13	LT						67			27					1										
U-78	360	311+72.61 (I.R. 76)	D-7	LT						250			54					2										
U-80	359	294+00.00 (I.R. 76)	U-4	LT						630								1										
U-81	359,360	300+43.18 (I.R. 76)	U-28	LT						414								1										
U-90	359	87+95.87 (STATE)	EXISTING UD	RT			37											1										
TOTALS CARRIED TO SUBSUMMARY ON SHEET 165							1087		23			3863		213		50		204		10		24		12		1		2

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

CALCULATED	TMT	CHECKED	CWL
<b>UNDERDRAIN ESTIMATED QUANTITIES</b>			
<b>SUM - 76 - 5.53</b>			
179			
672			

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REF. NO.	SHEET NO.	STATION		SIDE	638	638	SPECIAL	638	638	SPECIAL	SPECIAL	638	638	FOR INFORMATION ONLY								
		FROM	TO											VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	FIRE HYDRANT ADJUSTED TO GRADE	6" FIRE HYDRANT (BARBERTON)	6" GATE VALVE AND VALVE BOX	6" CUTTING-IN SLEEVE	6" WATER MAIN DIP CLASS 53, MECHANICAL JOINTS AND FITTINGS (BARBERTON)	12" WATER MAIN DIP CLASS 53, MECHANICAL JOINTS AND FITTINGS (BARBERTON)	WATER WORK, MISC.: 18" STEEL PIPE ENCASUREMENT, OPEN CUT	WATER WORK, MISC.: 24" STEEL PIPE ENCASUREMENT, OPEN CUT
W-1	363	7+16.57 (CENTRAL)		LT																		
W-2	365	7+87.48 (REL. CENTRAL)	9+86.22 (REL. CENTRAL)	RT						1				10								
W-3	365	8+62.25 (REL. CENTRAL)		RT										208								
W-4	365	8+52.25 (REL. CENTRAL)		RT																		
W-5	368	12+96.98 (EX. CENTRAL)	8+40.98 (EX. CENTRAL)	RT/LT										480								
W-6	368	12+52.00 (EX. CENTRAL)	8+60.45 (EX. CENTRAL)	RT/LT																		
W-7	363	20+22.84 (RAMP B)		LT																		
W-8	369	4+47.77 (ROMIG)		LT										410								
W-51	365	7+87.48 (REL. CENTRAL)		RT																		
W-52	365	9+86.22 (REL. CENTRAL)		RT																		
W-53	368	12+96.98 (EX. CENTRAL)		LT																		
WJ-1	363	7+27.69 (REL. CENTRAL)		LT																		
WJ-2	365	10+78.36 (REL. CENTRAL)		LT																		
WJ-3	365	10+90.58 (REL. CENTRAL)		LT																		
WJ-4	365	10+80.97 (REL. CENTRAL)		LT																		
WJ-5	365	11+22.72 (REL. CENTRAL)		RT																		
WJ-6	367	18+88.37 (S.R. 619)		RT																		
WJ-7	367	17+83.52 (S.R. 619)		RT																		
WJ-8	367	17+78.69 (S.R. 619)		RT																		
WJ-9	367	17+69.91 (S.R. 619)		RT																		
WJ-10	366	13+42.13 (S.R. 619)		RT																		
WJ-11	366	12+23.07 (S.R. 619)		RT																		
WJ-13	366	10+43.39 (S.R. 619)		RT																		
WJ-14	236	4+30.36 (KENMORE)		LT																		
WJ-15	236	4+34.83 (KENMORE)		RT																		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					13	1	2	5	3	756			410				5	1				
ALTERNATE 2																						
W-5	368	12+96.98	8+40.98	RT										70		410						2
W-6	368	12+52.00	8+60.45	RT																		410
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>										346			410		410		2					2

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

**WATER WORK ESTIMATED QUANTITIES**

**SUM - 76 - 5.53**

CALCULATED  
LTK  
CHECKED  
CWL

180  
672

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REF. NO.	SHEET NO.	STATION		SIDE	202	202	638	FOR INFORMATION ONLY													
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH	FIRE HYDRANT REMOVED EACH														
WR-1	363	20+16.35 (RAMP B)		LT		1															
WR-2	363	20+50.12 (RAMP B)		LT			1														
WR-3	363	20+49.70 (RAMP B)		LT		1															
WR-4	363	22+38.01 (RAMP B)		LT		1															
WR-5	363	24+97.02 (RAMP B)		LT		1															
WR-6	363	7+26.03 (REL. CENTRAL)		RT		1															
WR-7	365	8+23.44 (REL. CENTRAL)		RT		1															
WR-8	365	8+27.71 (REL. CENTRAL)		RT			1														
WR-9	365	8+47.14 (REL. CENTRAL)		RT		1															
WR-10	365	8+54.20 (REL. CENTRAL)		RT		1															
WR-11	365	9+04.38 (REL. CENTRAL)		RT		1															
WR-12	365	9+76.28 (REL. CENTRAL)		RT		1															
WR-13	365	8+31.63 (REL. CENTRAL)	9+86.22 (REL. CENTRAL)	RT	170																
WR-14	368	12+96.98 (EX CENTRAL)	7+94.43 (EX CENTRAL)	LT	504																
WR-15	368	11+05.25 (EX CENTRAL)		LT		1															
WR-16	368	12+71.56 (EX CENTRAL)		LT		1															
WR-17	369	6+48.46 (ROMIG)		LT			1														
WR-18	369	6+00.25 (ROMIG)		LT		1															
WR-19	369	5+93.46 (ROMIG)		LT		1															
WR-20	369	15+60.21 (ROMIG LT)		RT		1															
WR-21	369	4+65.14 (ROMIG)		RT		1															
WR-30	369	4+47.80 (ROMIG)	6+43.55 (ROMIG)	LT/RT	202																
WR-31	369	84+72.05 (STATE)		RT			1														
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					876		16	4													

<b>WATER WORK ESTIMATED QUANTITIES</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">CALCULATED</td> <td style="width: 50%; text-align: center;">LWK</td> </tr> <tr> <td style="width: 50%; text-align: center;">CHECKED</td> <td style="width: 50%; text-align: center;">CWL</td> </tr> </table>	CALCULATED	LWK	CHECKED	CWL
CALCULATED	LWK				
CHECKED	CWL				
<b>SUM - 76 - 5.53</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">181</td> <td style="width: 50%; text-align: center;">672</td> </tr> </table>	181	672		
181	672				

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STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202	202											203	659
						PAVEMENT REMOVED, ASPHALT SY	PAVEMENT REMOVED SY												
<b>PAVEMENT</b> I.R. 76																			
292+00.00			296+35.05	RT	2270.16	253													
292+00.00			296+36.48	RT	15283.81		1699												
292+00.00			296+38.01	RT	3987.61	444													
297+99.67			305+78.39	RT	3560.56	396													
297+99.73			305+65.98	RT	18114.46		2013												
297+99.82			305+50.32	RT	10093.48	1122													
308+09.58			311+35.89	RT	4591.08	511													
308+30.16			312+04.49	RT	9013.59		1002												
308+45.19			312+23.97	RT	2009.27	224													
292+00.00			296+30.51	LT	4750.34	528													
292+00.00			296+31.77	LT	13825.72		1537												
292+00.00			296+33.02	LT	2108.16	235													
297+99.54			306+10.33	LT	18704.37		2079												
297+99.61			305+98.53	LT	4802.74	534													
298+31.27			306+23.69	LT	9283.70	1032													
308+60.14			312+36.63	LT	2014.42	224													
308+83.10			312+64.17	LT	13556.50		1507												
309+08.40			312+93.46	LT	4409.31	490													
<b>RAMP B</b>																			
20+21.41			20+58.14	LT/RT	1289.39		144												
<b>EXISTING RAMP C</b>																			
0+33.67			12+03.64	LT/RT	26064.26		2897												
1+58.86			10+44.40	LT	1846.51	206													
1+78.86			12+03.01	RT	5102.89	567													
<b>EXISTING RAMP D</b>																			
4+97.91			13+69.12	RT	6938.73	771													
5+07.77			14+78.90	LT/RT	21318.60		2369												
6+12.58			13+85.25	LT	2864.36	319													
9+56.19			11+21.88	LT/RT	8278.59												256	920	
<b>EXISTING RAMP E</b>																			
7+06.72			13+67.44	LT	1765.30	197													
7+07.99			14+25.12	LT	14279.60		1587												
7+09.53			13+67.01	RT	1453.57	162													
<b>EXISTING RAMP F</b>																			
1+14.46			9+00.53	LT	14289.95		1588												
1+56.73			8+59.63	LT	1882.85	210													
1+47.93			8+85.17	RT	3453.84	384													
1+22.17			4+14.73	LT/RT															
5+97.94			6+89.35	LT/RT													320	799	
<b>EXISTING CENTRAL AVE.</b>																	73	264	
2+95.92			6+75.00	LT	1363.78	152													
2+97.56			6+75.00	RT	1610.25	179													
6+75.00			12+84.08	LT/RT	16746.28	1861													
<b>SUBTOTALS CARRIED TO SHEET 185</b>						11001	18422											649	1983

**REMOVAL CALCULATIONS**

**SUM - 76 - 5.53**

CALCULATED  
LRK  
CHECKED  
CWL

182  
672

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STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A = L x W	CADD AREAS	202	202			202				202	202		
						PAVEMENT REMOVED, ASPHALT SY	PAVEMENT REMOVED SY			CURB REMOVED FT			CONCRETE BARRIER REMOVED FT	CONCRETE MEDIAN REMOVED SY			
EXISTING GOODRICH AVE.																	
0+11.16		3+75.00	LT/RT		7970.36	886											
EXISTING GRAND BLVD.																	
12+15.00		12+92.62	LT/RT		2123.58		236										
EXISTING ROMIG AVE.																	
4+53.16		6+59.00	LT/RT		5053.55	562											
STATE ST.																	
83+94.59		84+69.82	RT	75.23	2.00	150.46		17									
S.R. 619																	
10+10.98		10+48.11	LT	37.13	2.00	74.26		9									
12+69.36		16+06.63	LT	337.27	2.00	674.54		75									
12+27.82		16+88.71	RT	460.89	2.00	921.78		103									
ROADWAY MISC.																	
I.R. 76																	
296+28.40		296+40.31	RT	11.91						12							
308+44.20		308+99.36	RT	55.16									56				
296+15.09		296+31.63	LT	16.54						17							
297+87.96		306+01.80	LT	813.84									814				
308+44.12		308+99.36	LT	55.24									56				
309+20.26		309+32.54	LT	12.28						13							
312+70.20		312+93.63	LT	23.43						24							
308+99.36		312+30.12	LT/RT	330.76									331				
EXISTING RAMP C																	
0+41.79		1+01.84	RT	201.70						202							
0+82.09		1+78.86	RT	183.53						184							
11+83.13		12+04.37	RT	21.24						22							
0+32.49		1+58.71	LT	129.98						130							
3+53.46		5+49.93	LT	196.47		417.78				197				47			
EXISTING RAMP D																	
4+97.28		5+23.69	RT	26.41						27							
13+87.42		14+83.55	RT	150.88						151							
9+96.04		11+62.78	LT	166.74						167							
13+85.25		14+71.73	LT	91.78						92							
14+60.45		14+77.11	LT/RT	55.84						56							
<b>SUBTOTALS CARRIED TO SHEET 185</b>																	
						1448	440			1294				1257	47		

**REMOVAL CALCULATIONS**

**SUM - 76 - 5.53**

CALCULATED  
LTK  
CHECKED  
CWL

183  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CC007.dgn Sheet 11/20/2018 9:44:31 AM cluzier

STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202	202			202	202	202	202		202		
						PAVEMENT REMOVED, ASPHALT SY	PAVEMENT REMOVED SY			CURB REMOVED FT	CURB AND GUTTER REMOVED FT	CONCRETE SLOPE PROTECTION REMOVED SY	WALK REMOVED SF		CONCRETE MEDIAN REMOVED SY		
<b>EXISTING RAMP E</b>																	
7+09.02		7+20.12	RT	11.10													
13+67.01		14+01.13	RT	73.33						12							
14+11.09		14+22.23	RT		106.66					74						12	
13+67.45		14+26.62	LT	59.52						60							
<b>EXISTING RAMP F</b>																	
1+13.95		1+48.19	RT	36.58						37							
8+54.62		8+78.60	RT	23.98						24							
1+29.27		1+56.72	LT	50.08						51							
<b>EXISTING CENTRAL AVE.</b>																	
2+97.56		7+43.49	RT		2117.04									2118			
6+96.31		7+43.54	RT		109.79		13										
7+87.85		12+84.08	RT		2371.79									2372			
9+09.31		12+84.08	RT	374.77							375						
11+64.63		11+81.49	RT		46.21			6									
12+73.69		12+84.08	RT		29.44			4									
2+95.92		8+74.39	LT		2778.67									2779			
7+92.27		8+12.12	LT		127.52		15										
8+12.12		8+60.78	LT	48.66						49							
9+18.13		12+84.08	LT	365.95							366						
7+34.59	LT				4.98									5			
SUM-076-0563L/R LT/RT																	
<b>EXISTING GOODRICH AVE.</b>																	
0+64.20		0+89.89	RT		139.09					16							
0+67.11		0+78.97	LT		76.41					9							
1+03.15		1+18.91	LT		62.46					7							
1+49.52		1+65.48	LT		61.06					7							
<b>ROMIG AVE.</b>																	
4+55.18		4+64.34	RT	14.60							15						
4+55.58		4+77.35	RT		197.42									198			
6+00.00		6+21.59	RT		216.29									217			
4+54.94		4+64.54	LT	20.38							21						
4+55.60		4+77.88	LT		172.67									173			
5+50.00		6+32.96	LT		480.45									481			
5+14.63 (DV-19)			LT		99.66		12							100			
<b>STATE ST.</b>																	
83+00.43		84+69.82	RT	169.39							170						
83+00.43		84+69.82	RT		913.37									914			
87+25.70		87+49.15	RT	47.29							48						
87+73.89		88+09.19	RT	56.80							57						
88+65.05		88+99.54	RT	34.49							35						
88+65.05		88+99.54	RT		189.33									190			
83+38.64		83+69.25	LT	30.61							31						
83+38.64		83+69.25	LT		156.36									157			
88+70.05		88+94.67	LT	24.62							25						
88+70.05		88+94.67	LT		126.99			15									
<b>SUBTOTALS CARRIED TO SHEET 185</b>							79	25			709	741	1134	9704		12	

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">CALCULATED</td> <td style="text-align: center;">LRK</td> <td style="text-align: center;">CHECKED</td> <td style="text-align: center;">CWL</td> </tr> </table>	CALCULATED	LRK	CHECKED	CWL	REMOVAL CALCULATIONS	SUM - 76 - 5.53	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">184</td> </tr> <tr> <td style="text-align: center;">672</td> </tr> </table>	184	672
CALCULATED	LRK	CHECKED	CWL						
184									
672									



STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202	202			202	202	202	202	202	202	202	* 203	* 659	
						PAVEMENT REMOVED, ASPHALT SY	PAVEMENT REMOVED SY			CURB REMOVED FT	CURB AND GUTTER REMOVED FT	CONCRETE SLOPE PROTECTION REMOVED SY	WALK REMOVED SF	CONCRETE BARRIER REMOVED FT	CONCRETE MEDIAN REMOVED SY	REMOVAL MISC.: BRICK SY	EMBANKMENT (14" DEEP) CY	SEEDING & MULCHING SY	
S.R. 619																			
11+61.68				11+76.06	89.71									90					
12+07.19	RT			16+88.71	2634.44									2635					
12+27.89	RT		460.82	16+88.71															
10+10.98	LT		37.13	10+48.11						461									
10+10.98	LT			10+48.11	183.99					38									
10+89.47	LT			11+15.48	122.38									184					
11+66.68	LT			11+74.29	72.88									123					
12+71.27	LT			16+79.87	2221.06									73					
12+71.27	LT		337.17	16+08.44										2222					
16+88.38	LT			17+03.91	81.90					338				82					
16+88.38	LT			17+03.91	69.21												8		
17+34.55	LT			17+62.12	93.91									94					
17+34.55	LT			17+62.12	32.47												4		
17+90.35	LT			18+53.04	304.57									305					
18+99.52	LT			19+22.58	107.89									108					
KENMORE BLVD																			
1+14.63	RT			3+88.33	1392.81									1393					
RELOCATED CENTRAL AVE.																			
3+29.03 (DV-1)	RT				90.09														
3+74.01 (DV-4)	RT				56.20					7									
4+14.17 (DV-6)	RT				60.34					7									
4+61.26 (DV-8)	RT				85.75					10									
5+05.23 (DV-10)	RT				42.25					5									
5+54.91 (DV-11)	RT				40.58					5									
6+10.48 (DV-14)	RT				65.50					8									
6+62.70 (DV-16)	RT				35.95					4									
3+45.54 (DV-2)	LT				163.52					19									
4+06.91 (DV-5)	LT				104.90					12									
4+57.20 (DV-7)	LT				93.51					11									
4+90.57 (DV-9)	LT				69.68					8									
5+56.46 (DV-12)	LT				85.82					10									
5+98.35 (DV-13)	LT				110.72					13									
6+45.34 (DV-15)	LT				75.96					9									
6+81.65 (DV-17)	LT				62.34					7									
7+50.17 (DV-18)	LT				118.35					14									
11+68.53 (DV-21)	LT				58.43					7									
* QUANTITY CARRIED TO EARTHWORK SUBSUMMARY ON SHEET 167																			
<b>SUBTOTALS THIS SHEET</b>							156	11			837			7309			12		
<b>SUBTOTALS SHEET 182</b>							11001	18422									649	1983	
<b>SUBTOTALS SHEET 183</b>							1448	438			1294			1257	47				
<b>SUBTOTALS SHEET 184</b>							79	25			709	741	1134	9704	12				
<b>TOTALS CARRIED TO SUBSUMMARY ON SHEETS 164</b>							12684	18896			2840	741	1134	17013	1257	59	12	649	1983

CALCULATED	LRK	CHECKED	CWL		
<b>REMOVAL CALCULATIONS</b>					
<b>SUM - 76 - 5.53</b>					
<table border="1"> <tr> <td>185</td> </tr> <tr> <td>672</td> </tr> </table>				185	672
185					
672					

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O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C0001.dgn Sheet 3/26/2019 3:57:26 PM ccox

STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	608		608		608		608		608	
						4" CONCRETE WALK SQ FT	6" CONCRETE WALK, AS PER PLAN SQ FT	CURB RAMP, TYPE A1 SQ FT	CURB RAMP, TYPE B1 SQ FT	CURB RAMP, TYPE B2 SQ FT					
<b>RAMP B</b>															
88+30.62 (STATE)	88+03.08 (STATE)	RT			176.23		176.23								
20+48.64	CURB RAMP	LT			125.12							125.12			
20+53.52	20+56.69	LT			32.20		32.20								
<b>RAMP BI</b>															
136+50.00	136+78.43	LT	28.43	7.00	199.01		199.01								
136+86.69	CURB RAMP	LT			114.24							114.24			
136+43.90	136+52.92	RT			129.55		129.55								
136+54.98	CURB RAMP	RT			125.12							125.12			
<b>RAMP C</b>															
84+69.81 (STATE)	84+61.27 (STATE)	RT			46.07		46.07								
30+41.63	CURB RAMP	LT			99.73							99.73			
30+49.01	30+52.45	LT			18.45		18.45								
30+27.29	CURB RAMP	RT			117.94							117.94			
<b>RAMP CI</b>															
144+92.76	CURB RAMP	LT			136.11							136.11			
145+01.26	145+05.90	LT			22.98		22.98								
144+62.26	144+75.45	RT			138.36		138.36								
144+79.00	CURB RAMP	RT			125.12							125.12			
11+01.34 (WOOSTER)	10+89.65 (WOOSTER)	LT			71.12		71.12								
<b>ROMIG AVE.</b>															
22+49.20 (ELMWOOD)	22+54.20 (ELMWOOD)	LT			21.48		21.48								
4+59.93	CURB RAMP	LT			206.46							206.46			
4+72.88	4+77.88	LT			22.78		22.78								
23+19.47 (ELMWOOD)	23+14.69 (ELMWOOD)	LT			31.81		31.81								
4+59.04	CURB RAMP	RT			209.46							209.46			
4+72.36	4+77.35	RT			23.25		23.25								
<b>STATE ST.</b>															
83+38.64	83+59.61	LT	20.97	5.50	115.34		115.34								
83+59.61	83+69.12	LT			48.49		48.49								
83+00.43	83+01.88	RT	1.45	4.96	7.19		7.19								
83+01.88	83+94.87	RT	92.99	5.50	511.45		511.45								
83+94.87	84+06.93	RT	12.06	6.25	75.37		75.37								
88+65.05	88+99.54	RT	34.49	5.50	189.70		189.70								
<b>SUBTOTALS CARRIED TO SHEET 188</b>							1911					1373			

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

CALCULATED LRK CHECKED CWL	WALK CALCULATIONS	SUM - 76 - 5.53
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STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A = L x W	CADD AREAS											
						608 4" CONCRETE WALK SQ FT	608 6" CONCRETE WALK, AS PER PLAN SQ FT	608 CURB RAMP, TYPE A1 SQ FT	608 CURB RAMP, TYPE B1 SQ FT	608 CURB RAMP, TYPE B2 SQ FT						
RELOCATED CENTRAL AVE.																
2+95.92	3+29.43	LT			165.56	165.56										
3+29.43	3+80.01	LT			241.39		241.39									
3+80.01	3+95.38	LT			69.20	69.20										
3+95.38	4+18.42	LT			102.47		102.47									
4+18.42	4+47.39	LT			137.80	137.80										
4+47.39	4+67.14	LT			88.65		88.65									
4+67.14	4+82.49	LT			71.37	71.37										
4+82.49	4+99.12	LT			80.62		80.62									
4+99.12	5+46.65	LT			225.49	225.49										
5+46.65	5+66.26	LT			78.00		78.00									
5+66.26	5+84.97	LT			86.94	86.94										
5+84.97	6+11.95	LT			117.11		117.11									
6+11.95	6+35.03	LT			103.20	103.20										
6+35.03	6+55.42	LT			103.90		103.90									
6+55.42	6+73.08	LT			97.05	97.05										
6+73.08	6+90.07	LT			89.07		89.07									
6+90.07	7+44.45	LT			266.87	266.87										
7+44.45	7+66.33	LT			90.94		90.94									
7+66.33	8+21.99	LT			235.33	235.33										
8+21.99	9+66.99	LT	145.00	5.00	725.00	725.00										
9+66.99	10+66.59	LT			499.43	499.43										
10+73.13	CURB RAMP	LT			74.52			97.11								
2+97.56	3+18.70	RT			108.36	108.36										
3+18.70	3+39.37	RT			102.99		102.99									
3+39.37	3+64.35	RT			120.66	120.66										
3+64.35	3+83.76	RT			92.35		92.35									
3+83.76	4+04.41	RT			97.32	97.32										
4+04.41	4+23.84	RT			89.02		89.02									
4+23.84	4+49.59	RT			121.19	121.19										
4+49.59	4+72.98	RT			113.20		113.20									
4+72.98	4+92.81	RT			88.61	88.61										
4+92.81	5+17.33	RT			117.77		117.77									
5+17.33	5+43.68	RT			123.79	123.79										
5+43.68	5+66.34	RT			120.86		120.86									
5+66.34	6+00.28	RT			161.69	161.69										
6+00.28	6+20.83	RT			102.87		102.87									
6+20.83	6+52.38	RT			141.35	141.35										
6+52.38	6+72.97	RT			95.76		95.76									
6+72.97	7+00.00	RT			116.42	116.42										
KENMORE BLVD.																
1+14.63	2+43.22	RT	128.59	5.00	642.95	642.95										
2+43.22	3+88.33	RT			807.01	807.01										
SUBTOTALS CARRIED TO SHEET 188						5213	1827			98						

**WALK CALCULATIONS**

CALCULATED	LRK
CHECKED	CWL

SUM - 76 - 5.53

187  
672

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STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	608		608		608		608		608	
						4" CONCRETE WALK SQ FT	6" CONCRETE WALK, AS PER PLAN SQ FT	CURB RAMP, TYPE A1 SQ FT	CURB RAMP, TYPE B1 SQ FT	CURB RAMP, TYPE B2 SQ FT					
S.R. 619															
10+10.98	10+15.98	LT	5.00	5.20	25.98		25.98								
10+15.98	10+48.11	LT	32.13	5.00	160.65		160.65								
12+71.27	12+95.00	LT	23.73	7.27	172.52		172.52								
12+95.00	13+20.00	LT	25.00	11.01	275.25		275.25								
13+20.00	16+30.00	LT				4464.19	4464.19								
16+30.00	16+46.17	LT	16.17	7.00	113.19		113.19								
16+54.69	CURB RAMP	LT				130.19				130.19					
16+62.93	16+73.97	LT				77.52	77.52								
17+83.08	17+94.24	LT				73.83	73.83								
17+94.24	19+07.73	LT	113.49	7.00	794.43		794.43								
19+07.73	19+22.59	LT	14.86	6.02	89.46		89.46								
11+58.71	11+61.45	RT				8.05	8.05								
11+61.45	14+00.00	RT	238.55	5.00	1192.75		1192.75								
14+00.00	14+25.00	RT	25.00	10.00	249.88		249.88								
14+25.00	16+63.71	RT				3548.77	3548.77								
16+54.31	CURB RAMP	RT				94.02		94.02							
16+63.71	16+88.71	RT	25.00	10.19	254.63		254.63								
SUBTOTALS THIS SHEET							11502			95		131			
SUBTOTALS SHEET 186							1911					1373			
SUBTOTALS SHEET 187							5213	1827		98					
TOTALS CARRIED TO SUBSUMMARY ON SHEET 164							18626	1827		95	98	1504			

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

CALCULATED LRK CHECKED CWL	WALK CALCULATIONS	SUM - 76 - 5.53	188 672
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STATION TO STATION	SIDE	AREA 1 (APRONS) (SF)											452										
													6" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC MS										
												SQ YD											
CENTRAL AVE. / RELOCATED CENTRAL AVE.																							
DV-1	3+29.03	RT	82.78																				
DV-2	3+45.54	LT	170.88																				
DV-3	3+68.10	LT	101.65																				
DV-4	3+74.01	RT	65.09																				
DV-5	4+06.91	LT	109.35																				
DV-6	4+14.17	RT	81.38																				
DV-7	4+57.20	LT	90.04																				
DV-8	4+61.26	RT	127.30																				
DV-9	4+90.57	LT	62.97																				
DV-10	5+05.23	RT	98.97																				
DV-11	5+54.91	RT	75.80																				
DV-12	5+56.46	LT	91.52																				
DV-13	5+98.35	LT	154.71																				
DV-14	6+10.48	RT	84.18																				
DV-15	6+45.34	LT	92.72																				
DV-16	6+62.70	RT	67.15																				
DV-17	6+81.65	LT	65.12																				
DV-18	7+50.17	LT	55.10																				
DV-21	11+68.53	LT	51.17																				
ROMIG AVE.																							
DV-19	5+14.63	LT	107.45																				
DV-20	5+51.94	RT	301.60																				
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>												238											

**DRIVE CALCULATIONS**

CALCULATED	
L/RK	
CHECKED	
CWL	
















**SUM - 76 - 5.53**

189
672

# PROJECT DESCRIPTION

PROJECT CONSISTS OF THE ADDITION OF A THIRD AND FOURTH LANE WESTBOUND AND A THIRD LANE EASTBOUND FOR I.R. 76 AND THE RECONSTRUCTION/RECONFIGURATION OF THE I.R. 76 INTERCHANGE ACCESSING WOOSTER ROAD/EAST AVENUE/STATE STREET IN SUMMIT COUNTY. PROJECT ALSO INCLUDES THE REMOVAL OF THE BRIDGE OVER CENTRAL AVENUE, CONSTRUCTION OF A NEW BRIDGE OVER WOOSTER ROAD, NEW CULVERT ON MUD RUN UNDER ONE OF THE NEW RAMPS, AND EXTENSION OF THE CULVERT UNDER I.R. 76.

## LEGEND

-  CATCH BASIN No. 2-2B
-  CATCH BASIN No. 3A
-  CATCH BASIN No. 3
-  CATCH BASIN No. 8
-  MANHOLE No. 3
-  INLET No. 3
-  INLET No. 3D
-  ITEM 670 - DITCH EROSION PROTECTION
-  ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
-  ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2
-  ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 3
-  ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1
-  ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2
-  ITEM 659 - 4" TOPSOIL
-  ITEM 670 - SLOPE EROSION PROTECTION

## BMP'S

POST-CONSTRUCTION STORM WATER BEST MANAGEMENT PRACTICES (BMP) FOR NEW CONSTRUCTION PROJECTS UTILIZING VEGETATED BIOFILTERS & VEGETATED FILTER STRIPS REQUIRE WATER QUALITY TREATMENT.

TREATMENT AREA REQUIRED = 0.20 x 26.4 EDA ACRES = 5.28 ACRES

PROPOSED VEGETATED BIOFILTERS & VEGETATED FILTER STRIPS TREAT A TOTAL AREA OF 5.48 ACRES OF CONTRIBUTING ODOT DRAINAGE AREA.

SEE SHEET 191 FOR BMP LOCATION TABLE.  
SEE SHEET 191 FOR PROJECT DATA.

USGS QUADRANT NO. 41081-A5-TF-024  
AKRON WEST, OHIO

LONGITUDE: W 81°34'50"\*  
LATITUDE: N 41°02'10"\*

\* APPROX. CENTER OF PROJECT

- ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN = LS
- ITEM 832 - EROSION CONTROL = 250,000 EACH
- ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS = LS
- ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE = LS

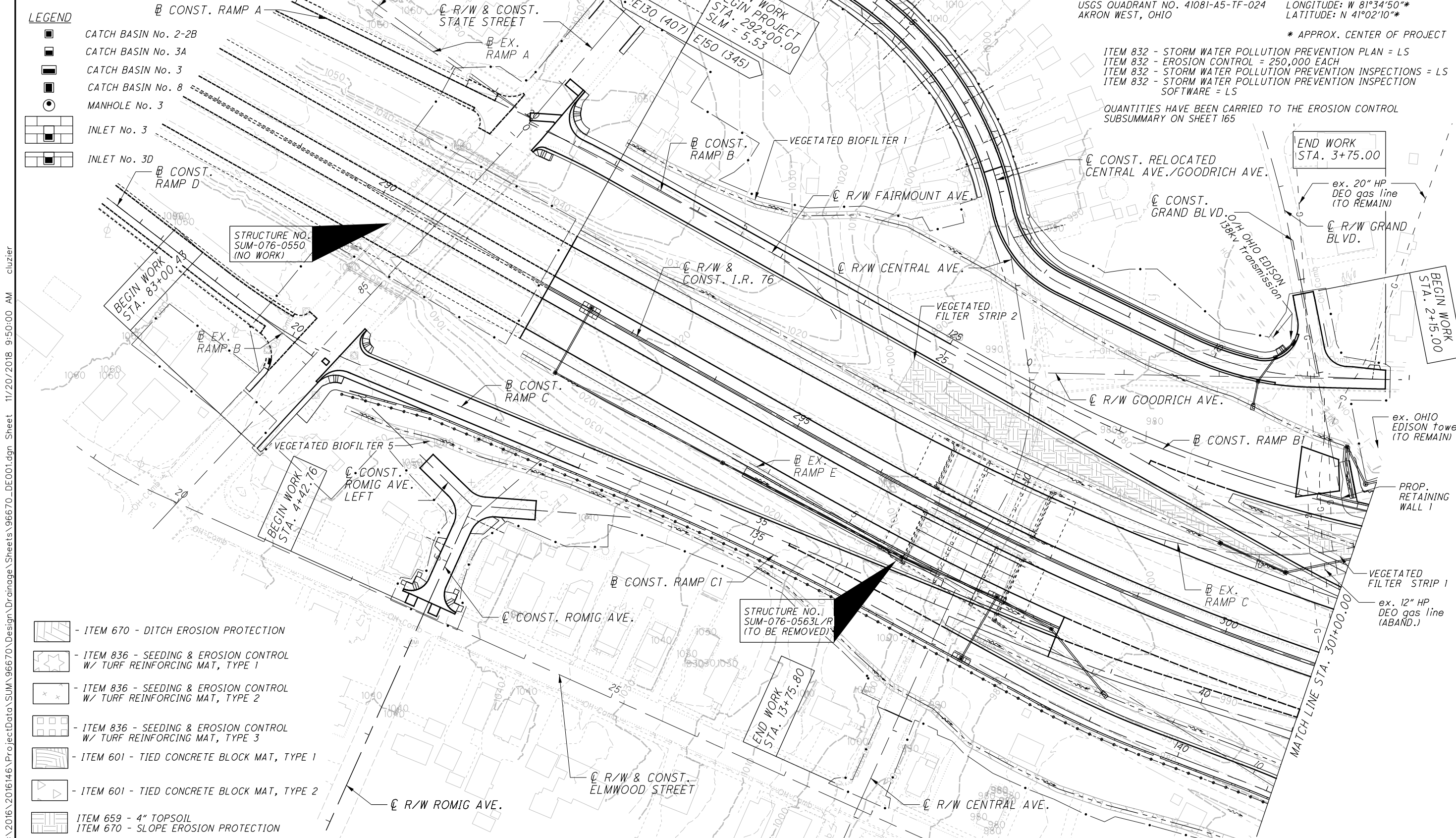
QUANTITIES HAVE BEEN CARRIED TO THE EROSION CONTROL SUBSUMMARY ON SHEET 165



# PROJECT SITE PLAN

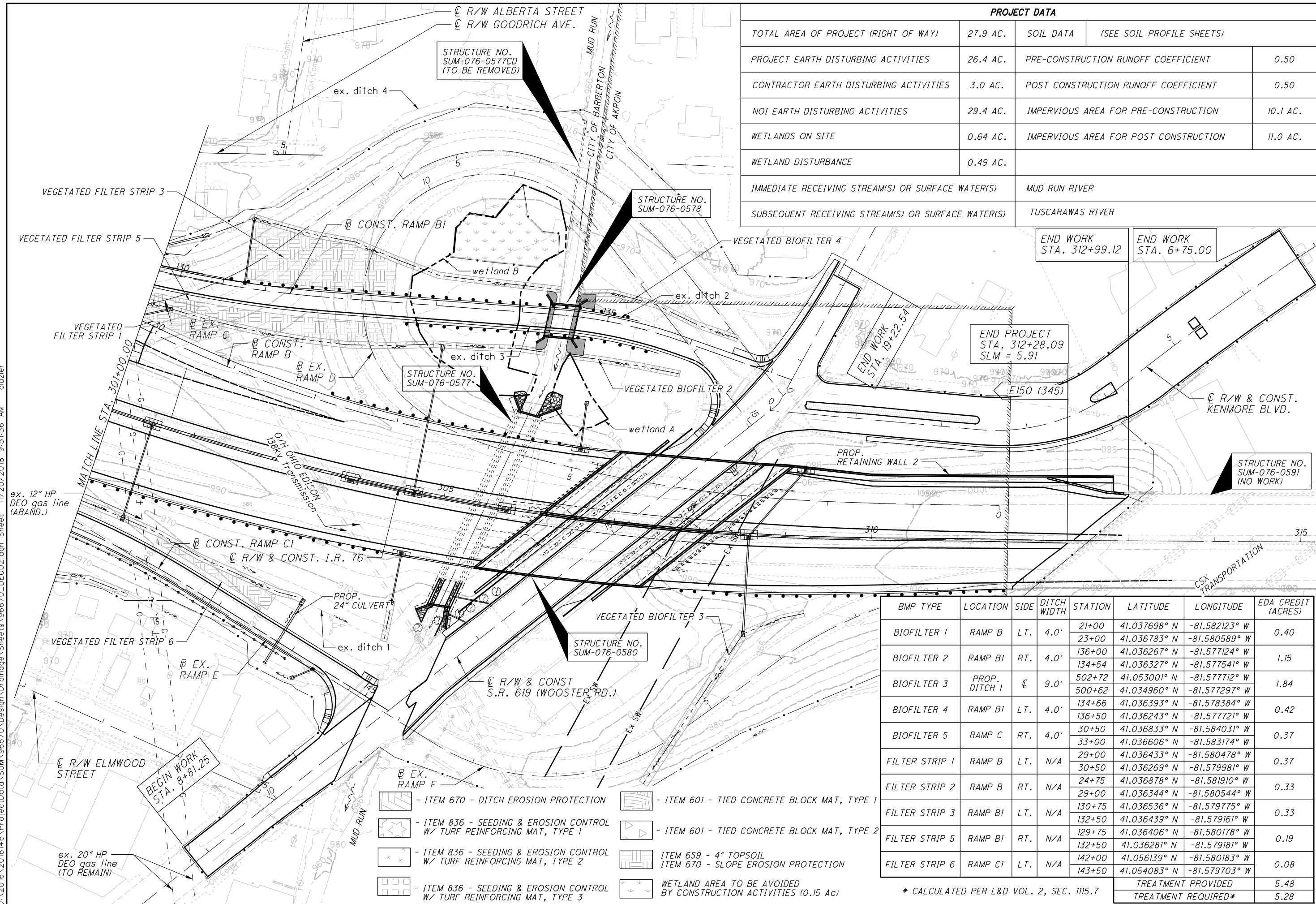
## SUM-76-5.53

190  
672

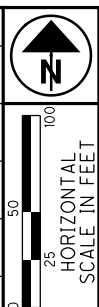


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PROJECT DATA			
TOTAL AREA OF PROJECT (RIGHT OF WAY)	27.9 AC.	SOIL DATA	(SEE SOIL PROFILE SHEETS)
PROJECT EARTH DISTURBING ACTIVITIES	26.4 AC.	PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.50
CONTRACTOR EARTH DISTURBING ACTIVITIES	3.0 AC.	POST CONSTRUCTION RUNOFF COEFFICIENT	0.50
NOI EARTH DISTURBING ACTIVITIES	29.4 AC.	IMPERVIOUS AREA FOR PRE-CONSTRUCTION	10.1 AC.
WETLANDS ON SITE	0.64 AC.	IMPERVIOUS AREA FOR POST CONSTRUCTION	11.0 AC.
WETLAND DISTURBANCE	0.49 AC.		
IMMEDIATE RECEIVING STREAM(S) OR SURFACE WATER(S)	MUD RUN RIVER		
SUBSEQUENT RECEIVING STREAM(S) OR SURFACE WATER(S)	TUSCARAWAS RIVER		



**PROJECT SITE PLAN**

BMP TYPE	LOCATION	SIDE	DITCH WIDTH	STATION	LATITUDE	LONGITUDE	EDA CREDIT (ACRES)
BIOFILTER 1	RAMP B	LT.	4.0'	21+00	41.037698° N	-81.582123° W	0.40
				23+00	41.036783° N	-81.580589° W	
BIOFILTER 2	RAMP B1	RT.	4.0'	136+00	41.036267° N	-81.577124° W	1.15
				134+54	41.036327° N	-81.577541° W	
BIOFILTER 3	PROP. DITCH 1	C	9.0'	502+72	41.053001° N	-81.577712° W	1.84
				500+62	41.034960° N	-81.577297° W	
BIOFILTER 4	RAMP B1	LT.	4.0'	134+66	41.036393° N	-81.578384° W	0.42
				136+50	41.036243° N	-81.577721° W	
BIOFILTER 5	RAMP C	RT.	4.0'	30+50	41.036833° N	-81.584031° W	0.37
				33+00	41.036606° N	-81.583174° W	
FILTER STRIP 1	RAMP B	LT.	N/A	29+00	41.036433° N	-81.580478° W	0.37
				30+50	41.036269° N	-81.579981° W	
FILTER STRIP 2	RAMP B	RT.	N/A	24+75	41.036878° N	-81.581910° W	0.33
				29+00	41.036344° N	-81.580544° W	
FILTER STRIP 3	RAMP B1	LT.	N/A	130+75	41.036536° N	-81.579775° W	0.33
				132+50	41.036439° N	-81.579161° W	
FILTER STRIP 5	RAMP B1	RT.	N/A	129+75	41.036406° N	-81.580178° W	0.19
				132+50	41.036281° N	-81.579181° W	
FILTER STRIP 6	RAMP C1	LT.	N/A	142+00	41.056139° N	-81.580183° W	0.08
				143+50	41.054083° N	-81.579703° W	
TREATMENT PROVIDED							5.48
TREATMENT REQUIRED*							5.28

\* CALCULATED PER L&D VOL. 2, SEC. 1115.7

**SUM-76-5.53**



ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

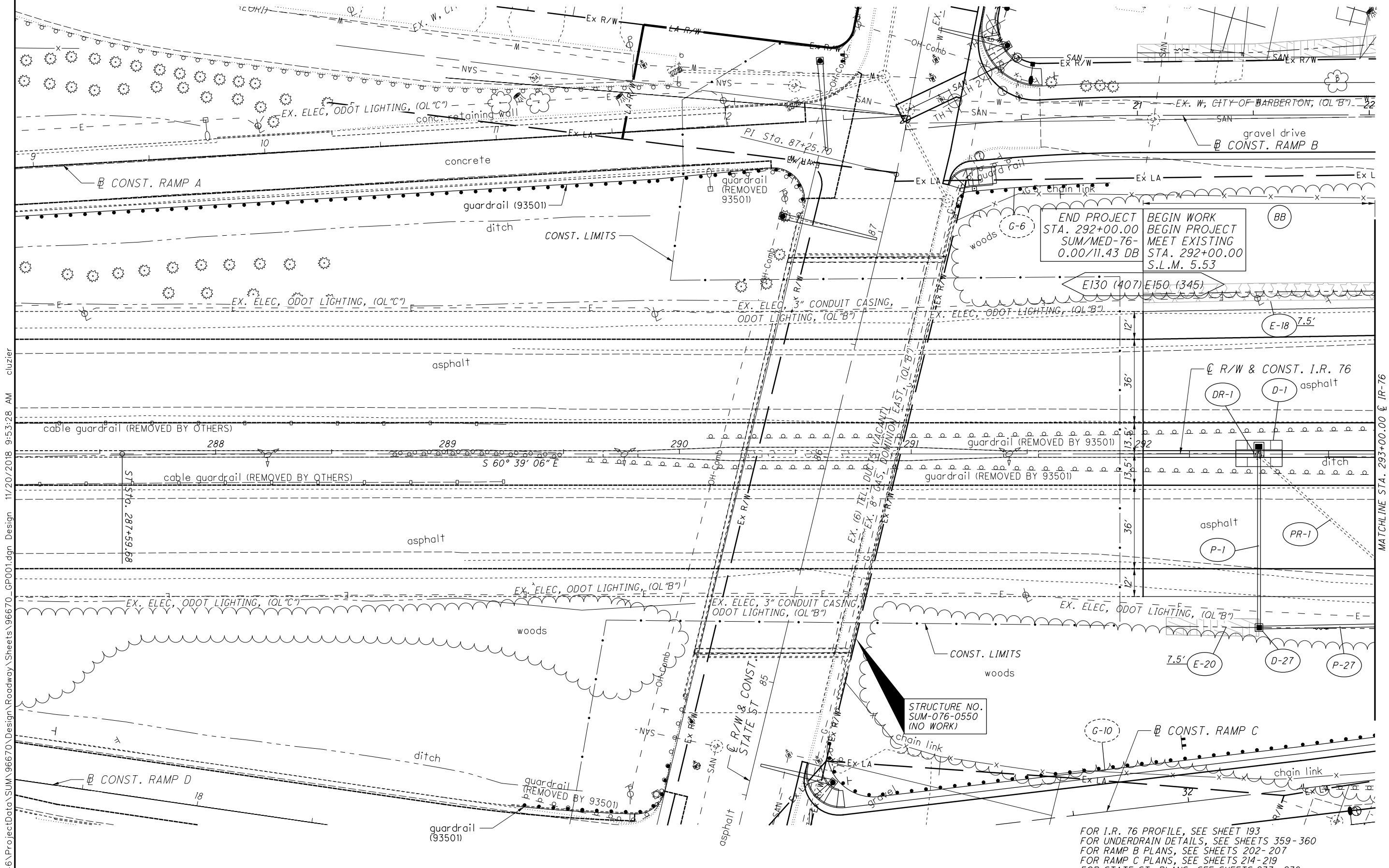
ITEM 670 - DITCH EROSION PROTECTION

SEE PROJECT SUM/MED-76-0.00/11.43 DB (PID 93501)



0 20 40  
HORIZONTAL SCALE IN FEET

CALCULATED CJC CHECKED CWL



END PROJECT STA. 292+00.00  
SUM/MED-76-0.00/11.43 DB

BEGIN WORK STA. 292+00.00  
MEET EXISTING STA. 292+00.00  
S.L.M. 5.53

E130 (407) E150 (345)

STRUCTURE NO. SUM-076-0550 (NO WORK)

FOR I.R. 76 PROFILE, SEE SHEET 193  
FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
FOR RAMP B PLANS, SEE SHEETS 202-207  
FOR RAMP C PLANS, SEE SHEETS 214-219  
FOR STATE ST. PLANS, SEE SHEETS 237-238  
FOR PIPE PROFILES, SEE SHEETS 193, 241  
FOR FENCE PLANS, SEE SHEETS 643-645  
FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
FOR LIGHTING PLANS, SEE SHEETS 482-495  
FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
FOR ITS PLANS, SEE SHEETS 475-481

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PLAN - I.R. 76  
BEGIN TO STA. 293+00.00

SUM-76-5.53

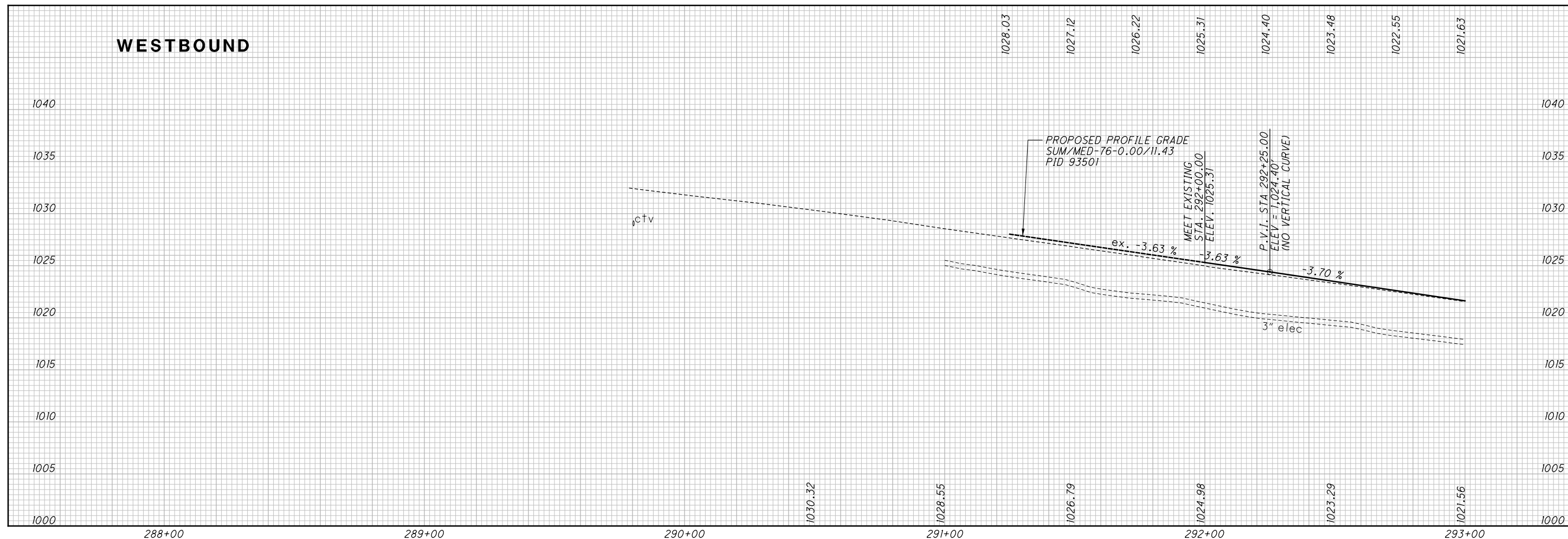
TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BB	292+00.00	I.R. 76 299+20.00	I.R. 76	LT PAVEMENT	36.00'	48.00'	60:1

192  
672

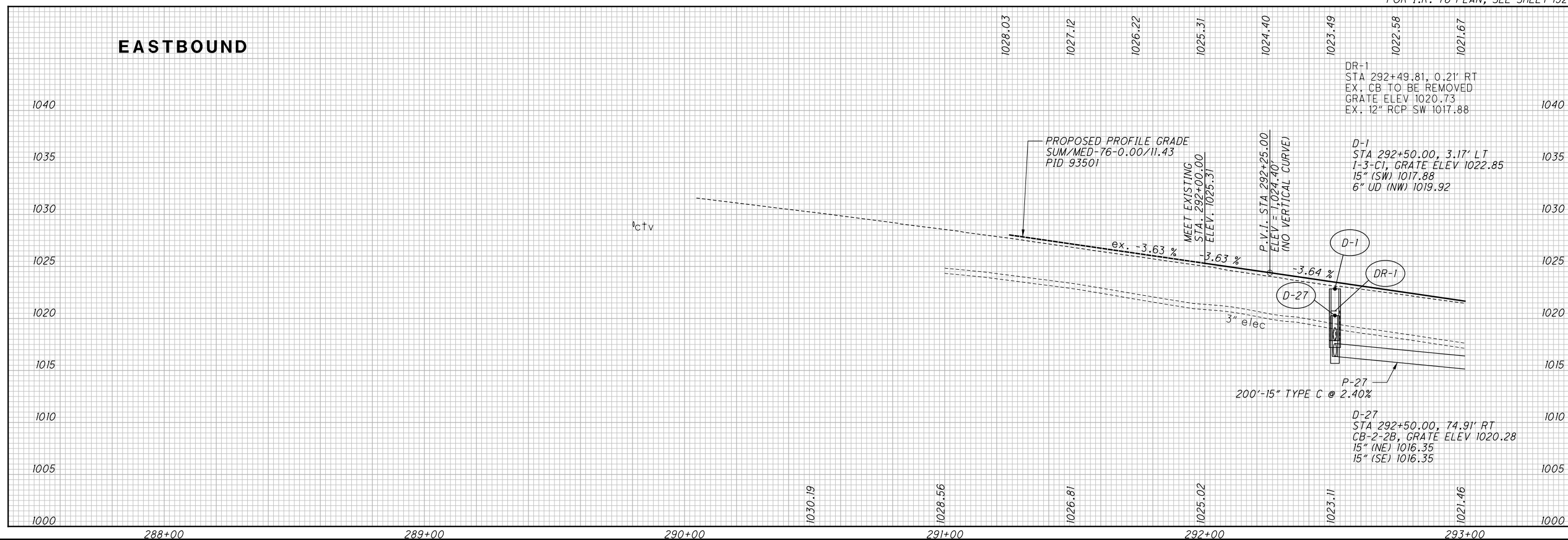


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### WESTBOUND



### EASTBOUND



FOR I.R. 76 PLAN, SEE SHEET 192

CALCULATED  
CJC  
CHECKED  
CWL

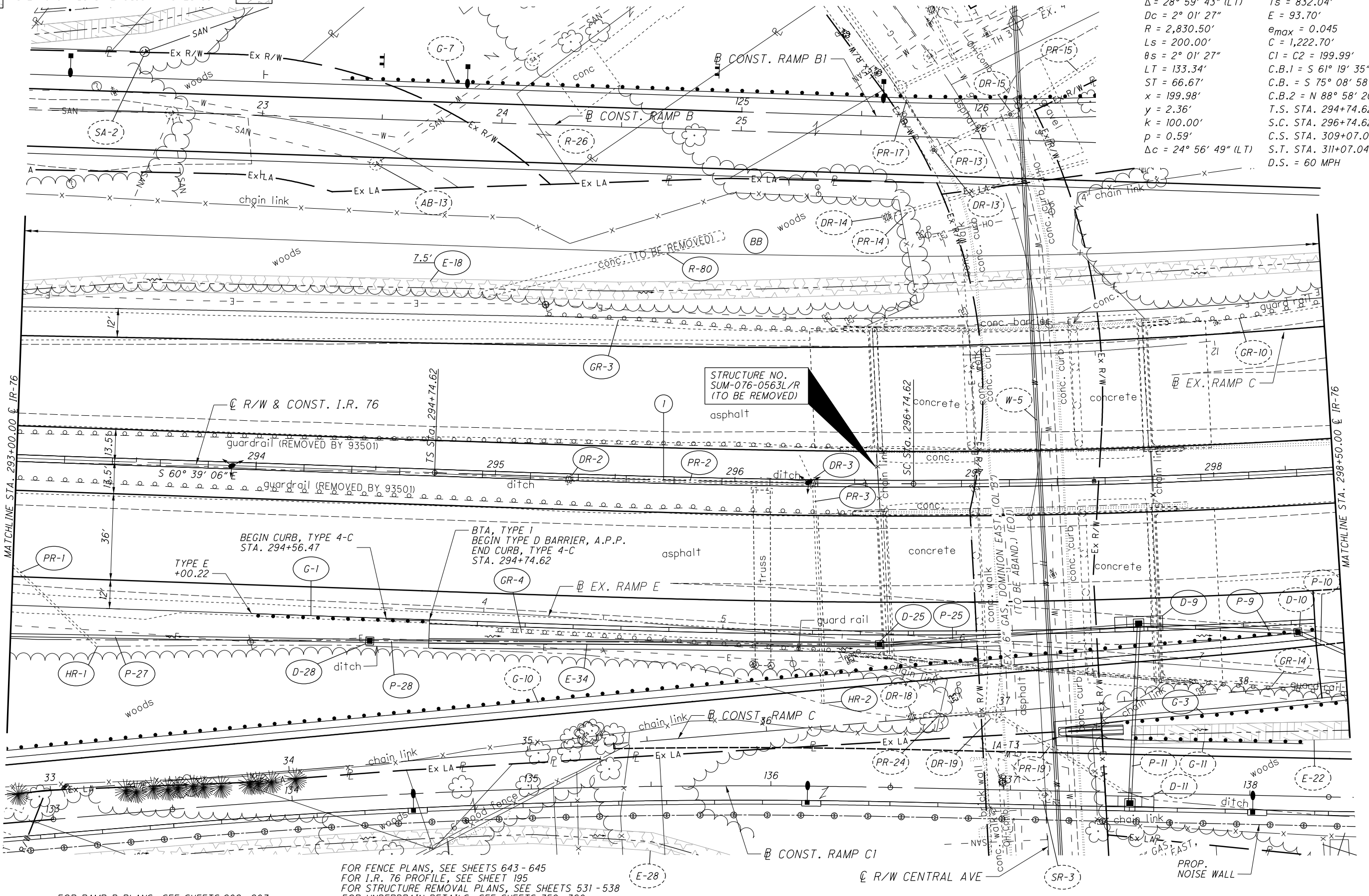
PROFILE - I.R. 76  
BEGIN TO STA. 293+00.00

SUM-76-5.53

193  
672

ITEM 670 - DITCH EROSION PROTECTION  
 ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

1  $\text{C R/W \& CONST. I.R. 76}$   
 P.I. Sta. 303+06.66  $L_c = 1,232.42'$   
 $\Delta = 28^\circ 59' 43''$  (LT)  $T_s = 832.04'$   
 $D_c = 2^\circ 01' 27''$   $E = 93.70'$   
 $R = 2,830.50'$   $\theta_{max} = 0.045$   
 $L_s = 200.00'$   $C = 1,222.70'$   
 $\theta_s = 2^\circ 01' 27''$   $C1 = C2 = 199.99'$   
 $LT = 133.34'$   $C.B.1 = S 61^\circ 19' 35'' E$   
 $ST = 66.67'$   $C.B.2 = S 75^\circ 08' 58'' E$   
 $x = 199.98'$   $C.B.2 = N 88^\circ 58' 20'' W$   
 $y = 2.36'$   $T.S. STA. 294+74.62$   
 $k = 100.00'$   $S.C. STA. 296+74.62$   
 $p = 0.59'$   $C.S. STA. 309+07.04$   
 $\Delta c = 24^\circ 56' 49''$  (LT)  $S.T. STA. 311+07.04$   
 $D.S. = 60$  MPH



FOR RAMP B PLANS, SEE SHEETS 202 - 207  
 FOR RAMP B1 PLANS, SEE SHEETS 208 - 213  
 FOR RAMP C PLANS, SEE SHEETS 214 - 219  
 FOR RAMP C1 PLANS, SEE SHEETS 220 - 225  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR LIGHTING PLANS, SEE SHEETS 482 - 495

FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR I.R. 76 PROFILE, SEE SHEET 195  
 FOR STRUCTURE REMOVAL PLANS, SEE SHEETS 531 - 538  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
 FOR GORE DETAILS, SEE SHEET 342  
 FOR PIPE PROFILES, SEE SHEETS 195, 245, 287  
 FOR RELOCATED CENTRAL AVE. PLANS, SEE SHEETS 226 - 229  
 FOR ITS PLANS, SEE SHEETS 475 - 481

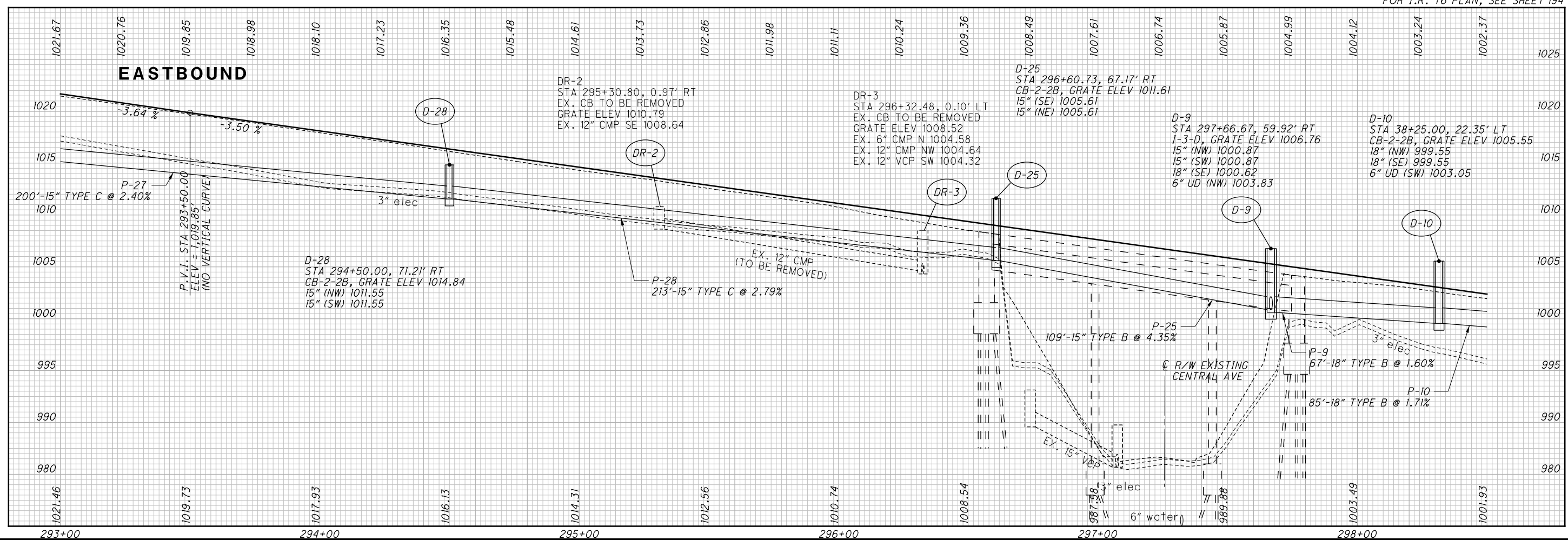
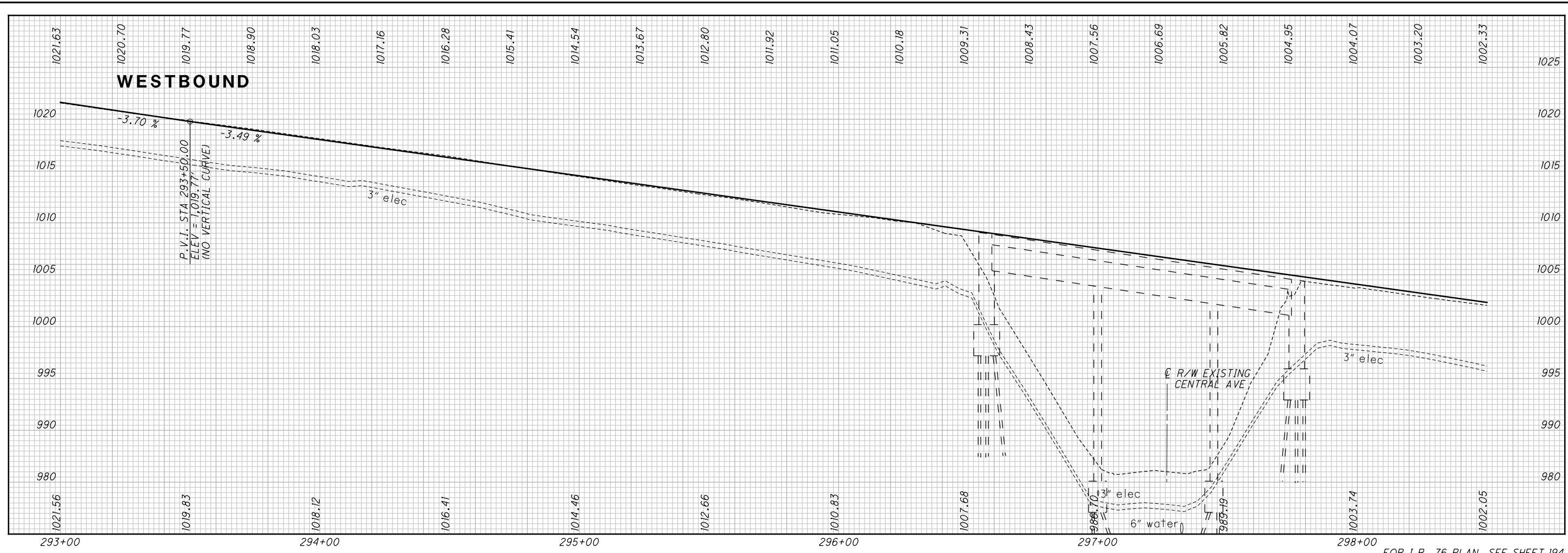
TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BB	292+00.00	I.R. 76	I.R. 76	PAVEMENT	36.00'	48.00'	60:1

PLAN - I.R. 76  
 STA. 293+00.00 TO STA. 298+50.00

SUM-76-5.53  
 194  
 672

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FOR I.R. 76 PLAN, SEE SHEET 194

CALCULATED  
CJC  
CHECKED  
CWL

PROFILE - I.R. 76  
STA. 293+00.00 TO STA. 298+50.00

SUM - 76 - 5.53

195  
672

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2

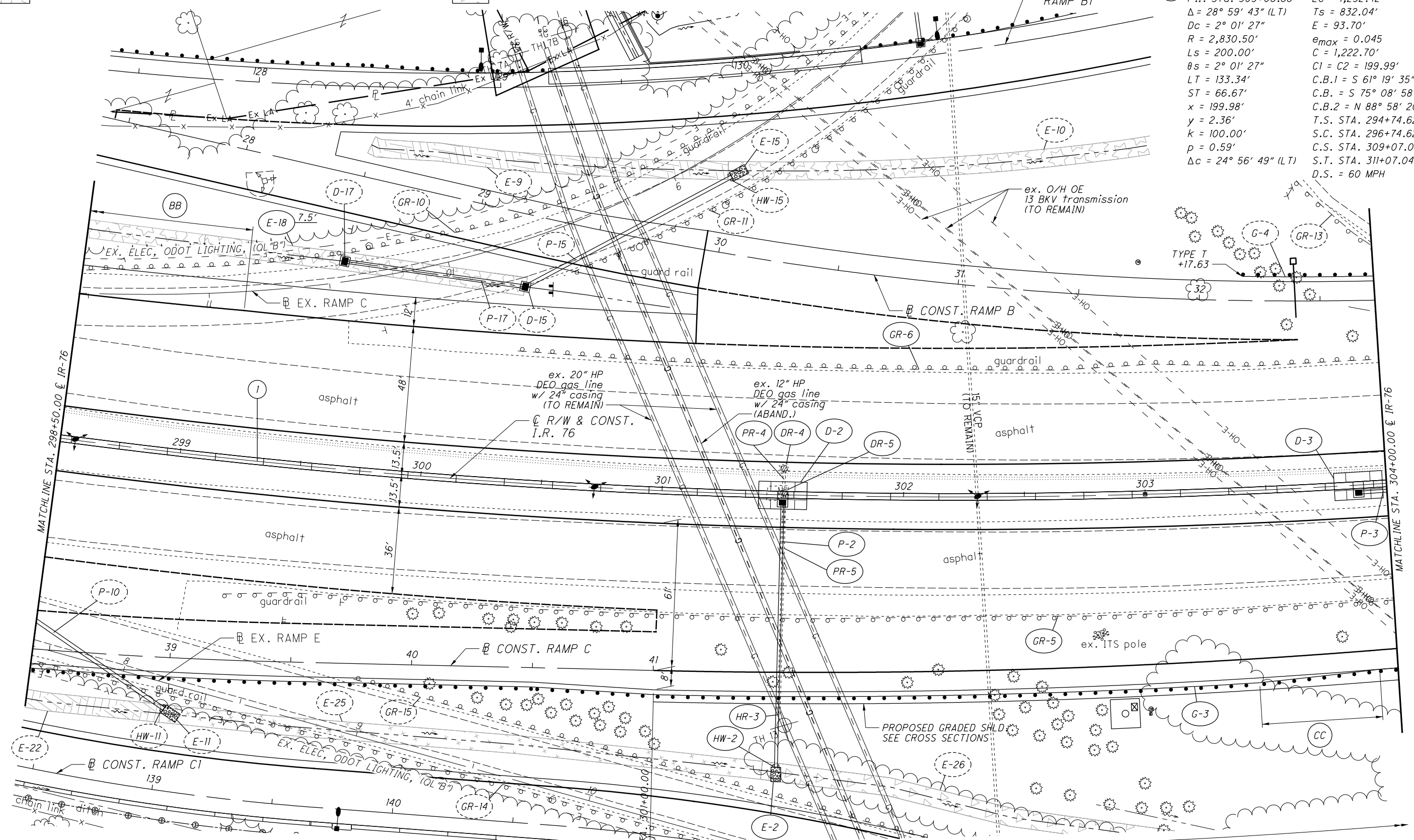
1 @ R/W & CONST. I.R. 76  
 P.I. Sta. 303+06.66 Lc = 1,232.42'  
 Δ = 28° 59' 43" (LT) Ts = 832.04'  
 Dc = 2° 01' 27" E = 93.70'  
 R = 2,830.50' e<sub>max</sub> = 0.045  
 Ls = 200.00' C1 = C2 = 199.99'  
 θs = 2° 01' 27" C.B.1 = S 61° 19' 35" E  
 LT = 133.34' C.B. = S 75° 08' 58" E  
 ST = 66.67' C.S. STA. 294+74.62  
 x = 199.98' C.S. STA. 309+07.04  
 y = 2.36' S.T. STA. 311+07.04  
 k = 100.00' D.S. = 60 MPH  
 p = 0.59'  
 Δc = 24° 56' 49" (LT)



CALCULATED CJC CHECKED CWL  
 PLAN - I.R. 76  
 STA. 298+50.00 TO STA. 304+00.00

SUM-76-5.53

196  
672

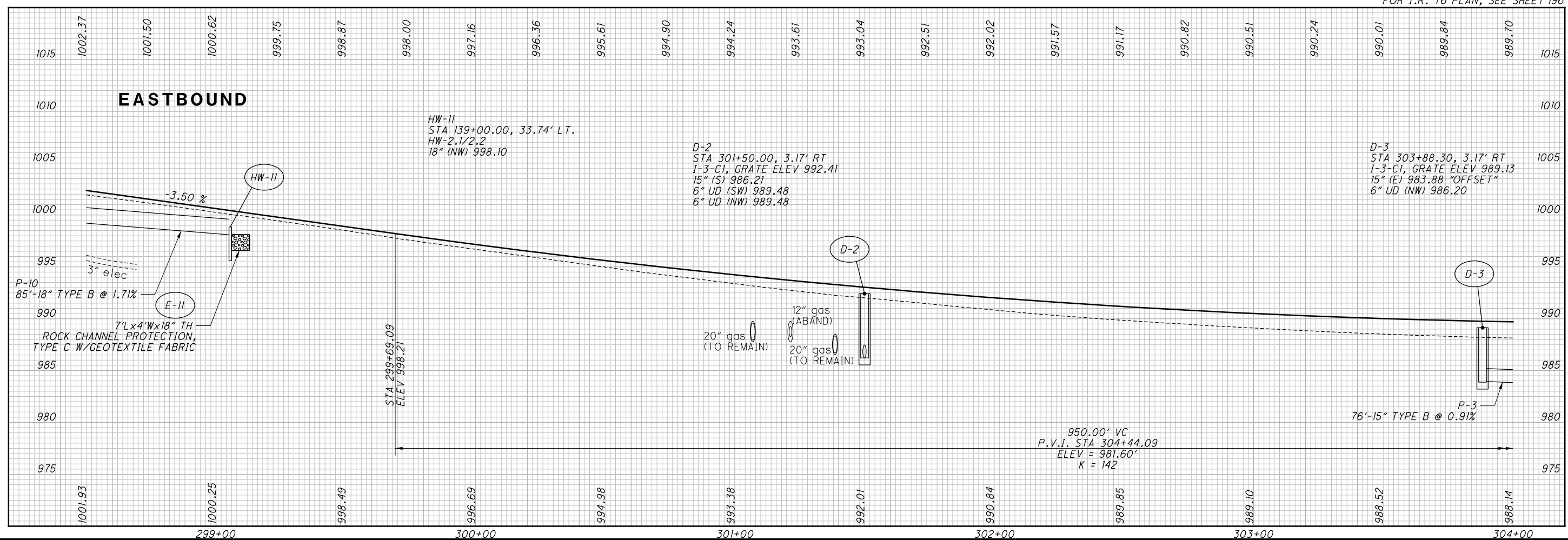
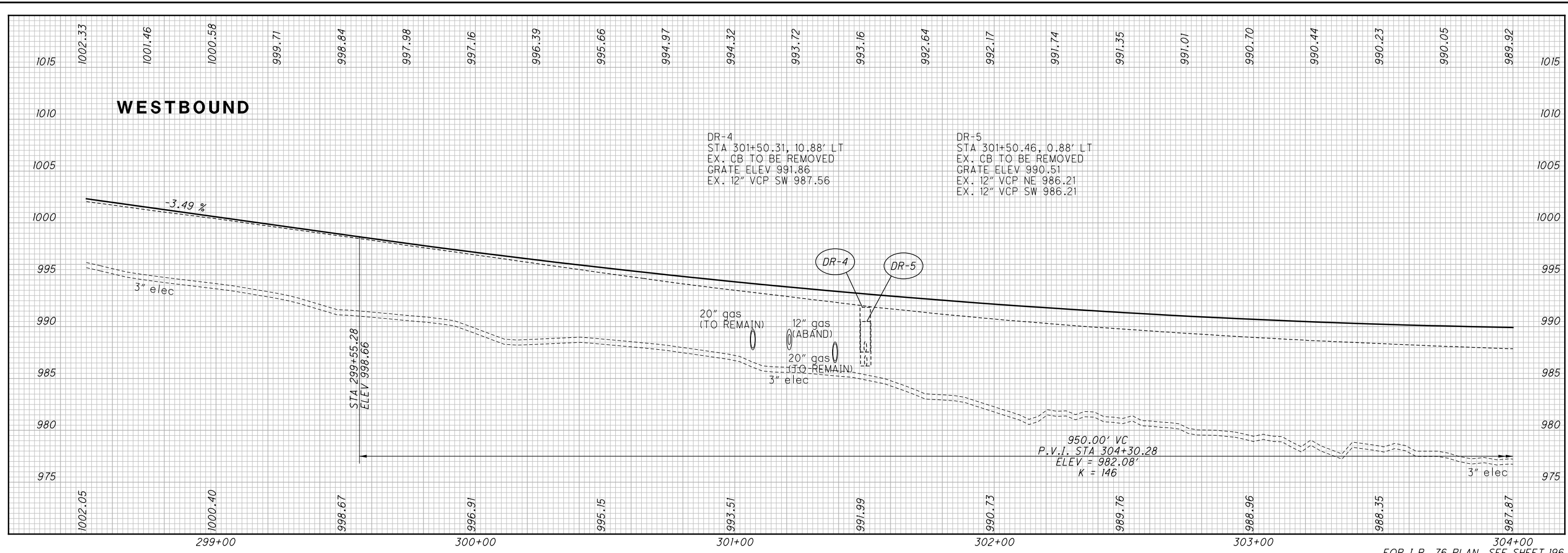


TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
G	301+00.00	I.R. 76	311+70.74	I.R. 76	RT	PAVEMENT	61.00' 39.59' 50:1
BB	292+00.00	I.R. 76	299+20.00	I.R. 76	LT	PAVEMENT	36.00' 48.00' 60:1
CC	303+43.97	I.R. 76	303+92.55	I.R. 76	RT	GUARDRAIL	10.00' 8.00' 24:1

FOR I.R. 76 PROFILE, SEE SHEET 197  
 FOR RAMP B PLANS, SEE SHEETS 202-207  
 FOR RAMP B1 PLANS, SEE SHEETS 208-213  
 FOR RAMP C PLANS, SEE SHEETS 214-219  
 FOR RAMP C1 PLANS, SEE SHEETS 220-225  
 FOR GORE DETAILS, SEE SHEETS 340, 342  
 FOR PIPE PROFILES, SEE SHEETS 197, 248, 296  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR LIGHTING PLANS, SEE SHEETS 482-495  
 FOR ITS PLANS, SEE SHEETS 475-481

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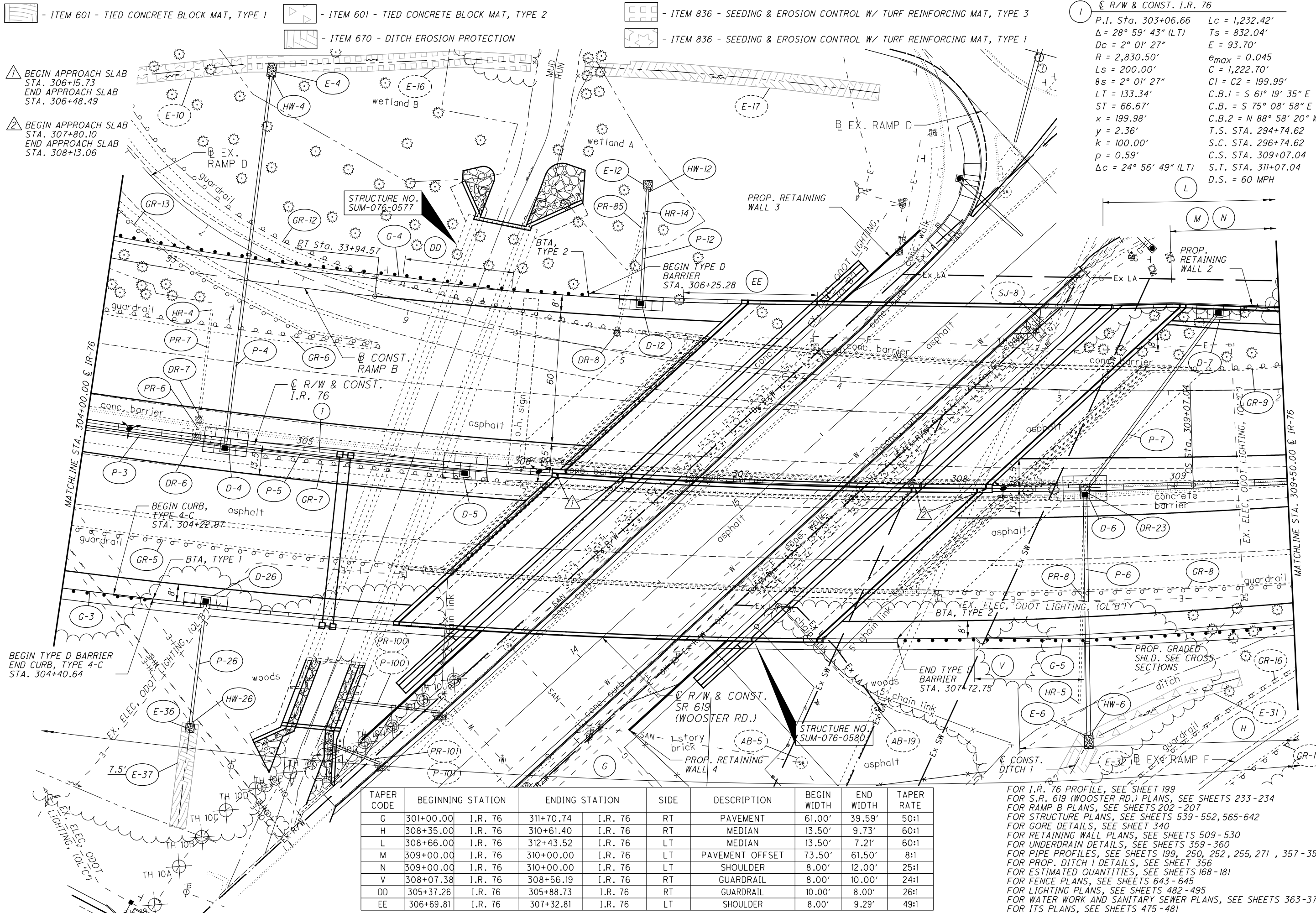


CALCULATED  
 CJC  
 CHECKED  
 CWL

**PROFILE - I.R. 76**  
**STA. 298+50.00 TO STA. 304+00.00**

**SUM-76-5.53**

197  
 672



① C/R/W & CONST. I.R. 76

P.I. Sta. 303+06.66	Lc = 1,232.42'
$\Delta = 28^\circ 59' 43''$ (LT)	Ts = 832.04'
Dc = 2° 01' 27"	E = 93.70'
R = 2,830.50'	$e_{max} = 0.045$
Ls = 200.00'	C = 1,222.70'
$\theta s = 2^\circ 01' 27''$	C1 = C2 = 199.99'
LT = 133.34'	C.B.1 = S 61° 19' 35" E
ST = 66.67'	C.B.2 = S 75° 08' 58" E
x = 199.98'	T.S. STA. 294+74.62
y = 2.36'	S.C. STA. 296+74.62
k = 100.00'	G.S. STA. 309+07.04
p = 0.59'	S.T. STA. 311+07.04
$\Delta c = 24^\circ 56' 49''$ (LT)	D.S. = 60 MPH



PLAN - I.R. 76  
STA. 304+00.00 TO STA. 309+50.00

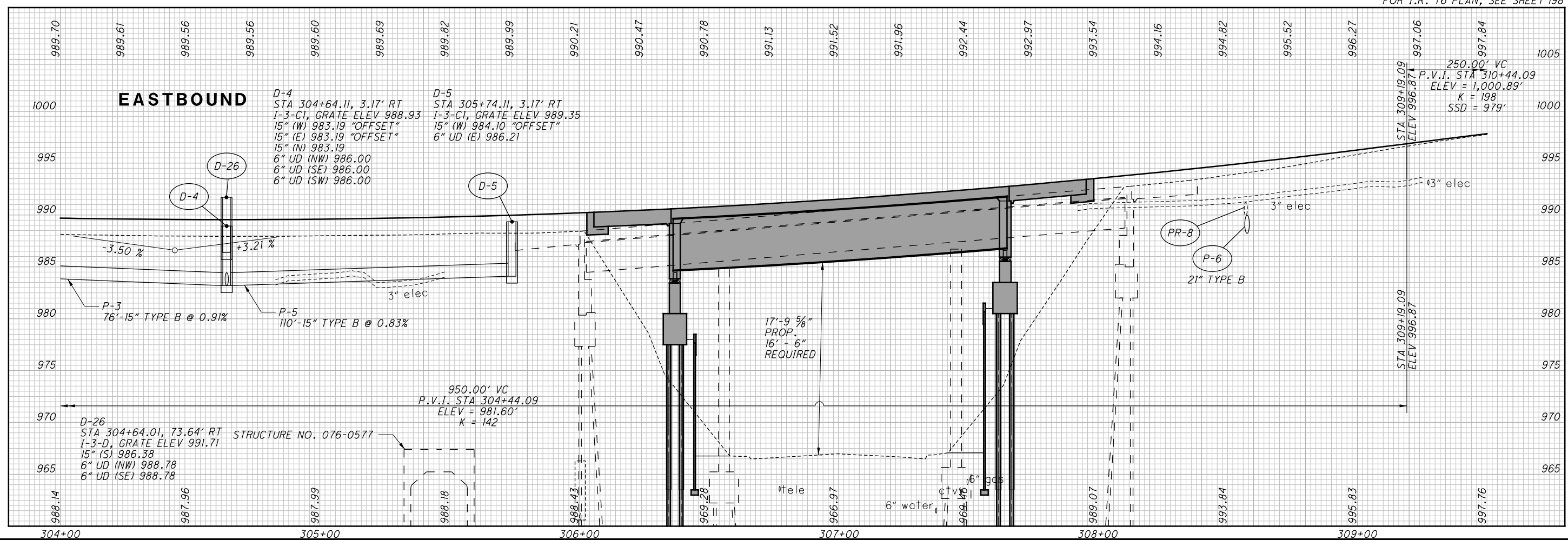
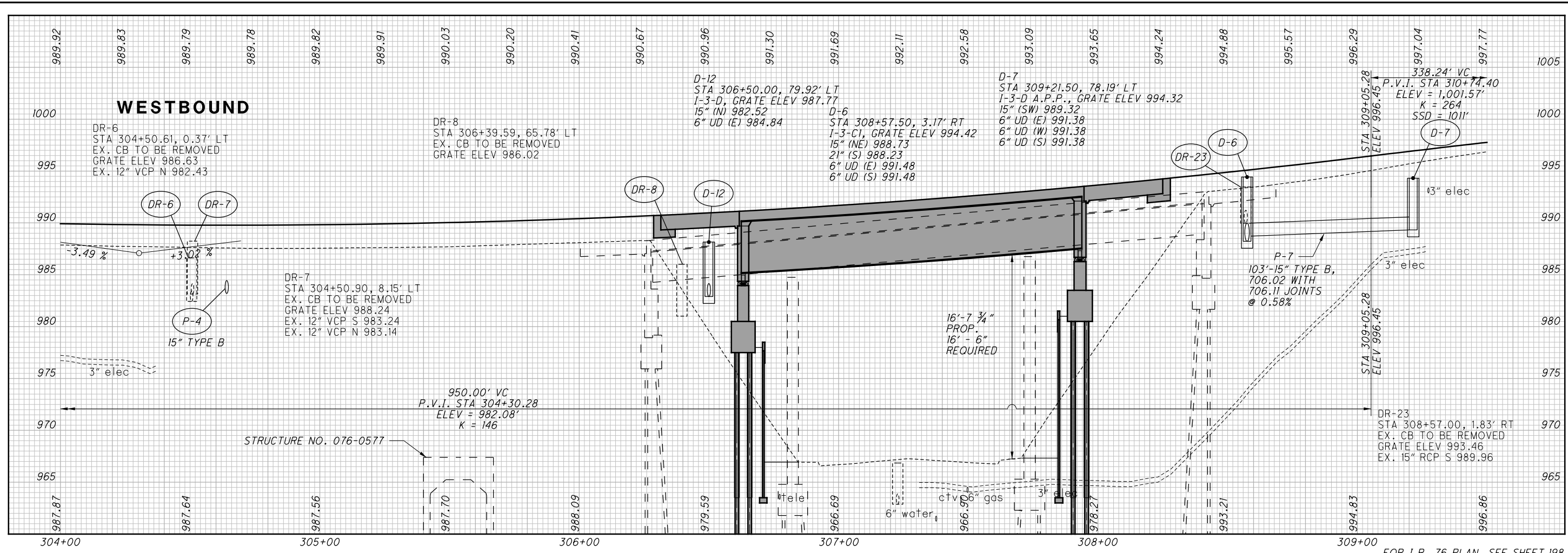
SUM-76-5.53

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
G	301+00.00	I.R. 76 311+70.74	I.R. 76	RT PAVEMENT	61.00'	39.59'	50:1
H	308+35.00	I.R. 76 310+61.40	I.R. 76	RT MEDIAN	13.50'	9.73'	60:1
L	308+66.00	I.R. 76 312+43.52	I.R. 76	LT MEDIAN	13.50'	7.21'	60:1
M	309+00.00	I.R. 76 310+00.00	I.R. 76	LT PAVEMENT OFFSET	73.50'	61.50'	8:1
N	309+00.00	I.R. 76 310+00.00	I.R. 76	LT SHOULDER	8.00'	12.00'	25:1
V	308+07.38	I.R. 76 308+56.19	I.R. 76	RT GUARDRAIL	8.00'	10.00'	24:1
DD	305+37.26	I.R. 76 305+88.73	I.R. 76	RT GUARDRAIL	10.00'	8.00'	26:1
EE	306+69.81	I.R. 76 307+32.81	I.R. 76	LT SHOULDER	8.00'	9.29'	49:1

FOR I.R. 76 PROFILE, SEE SHEET 199  
 FOR S.R. 619 (WOOSTER RD.) PLANS, SEE SHEETS 233-234  
 FOR RAMP B PLANS, SEE SHEETS 202-207  
 FOR STRUCTURE PLANS, SEE SHEETS 539-552, 565-642  
 FOR GORE DETAILS, SEE SHEET 340  
 FOR RETAINING WALL PLANS, SEE SHEETS 509-530  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
 FOR PIPE PROFILES, SEE SHEETS 199, 250, 252, 255, 271, 357-358  
 FOR PROP. DITCH 1 DETAILS, SEE SHEET 356  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR LIGHTING PLANS, SEE SHEETS 482-495  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
 FOR ITS PLANS, SEE SHEETS 475-481

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CALCULATED  
CJC  
CHECKED  
CWL

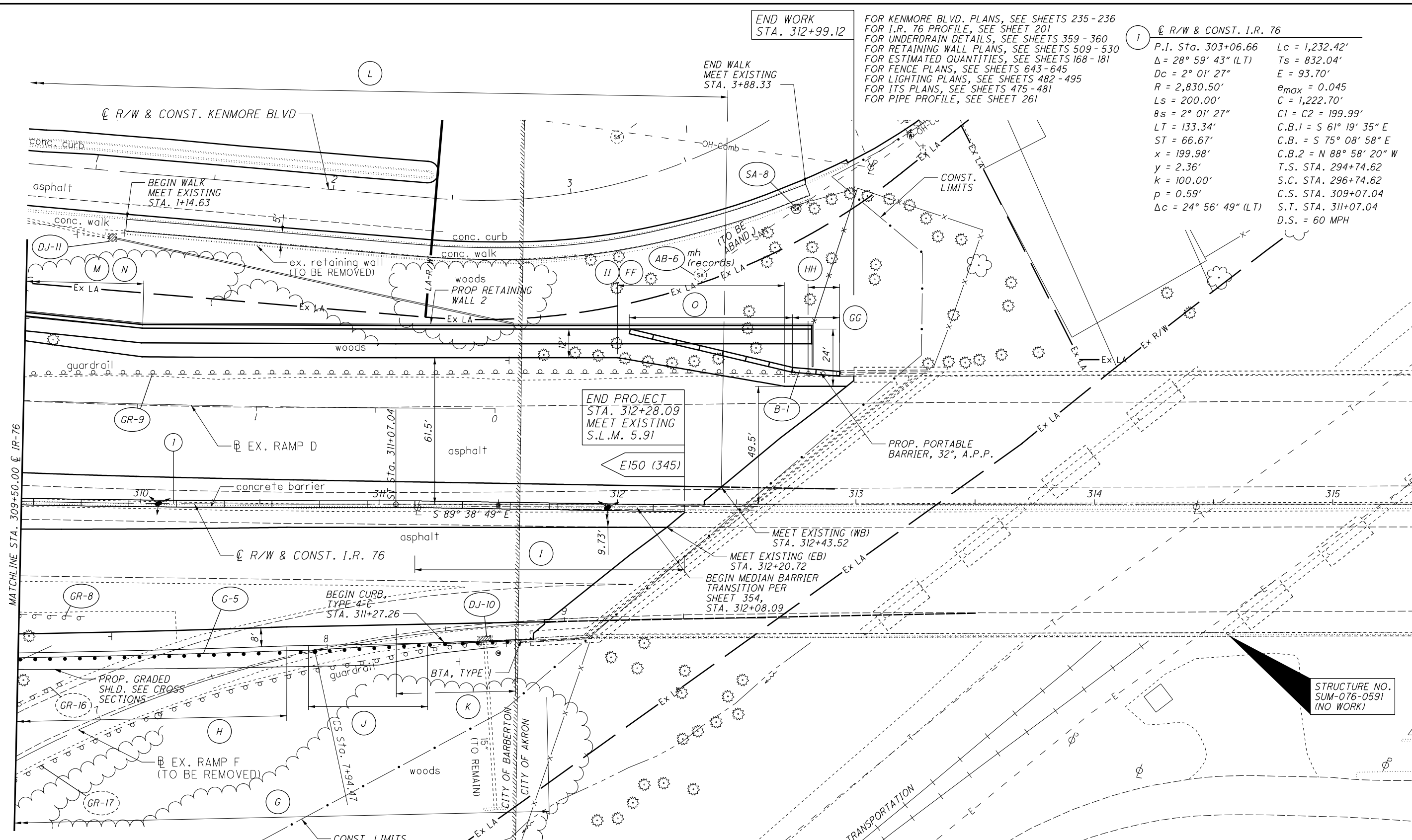
PROFILE - I.R. 76  
STA. 304+00.00 TO STA. 309+50.00

SUM - 76 - 5.53

199  
672

FOR I.R. 76 PLAN, SEE SHEET 198

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END WORK  
STA. 312+99.12

FOR KENMORE BLVD. PLANS, SEE SHEETS 235 - 236  
 FOR I.R. 76 PROFILE, SEE SHEET 201  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
 FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR LIGHTING PLANS, SEE SHEETS 482 - 495  
 FOR ITS PLANS, SEE SHEETS 475 - 481  
 FOR PIPE PROFILE, SEE SHEET 261

①  $\hat{C}$  R/W & CONST. I.R. 76

P.I. Sta. 303+06.66	Lc = 1,232.42'
$\Delta = 28^\circ 59' 43''$ (LT)	Ts = 832.04'
Dc = 2° 01' 27"	E = 93.70'
R = 2,830.50'	$e_{max} = 0.045$
Ls = 200.00'	C = 1,222.70'
$\theta_s = 2^\circ 01' 27''$	CI = C2 = 199.99'
LT = 133.34'	C.B.1 = S 61° 19' 35" E
ST = 66.67'	C.B.2 = N 88° 58' 20" W
x = 199.98'	T.S. STA. 294+74.62
y = 2.36'	S.C. STA. 296+74.62
k = 100.00'	C.S. STA. 309+07.04
p = 0.59'	S.T. STA. 311+07.04
$\Delta c = 24^\circ 56' 49''$ (LT)	D.S. = 60 MPH



PLAN - I.R. 76  
 STA. 309+50.00 TO END

SUM-76-5.53

200  
672

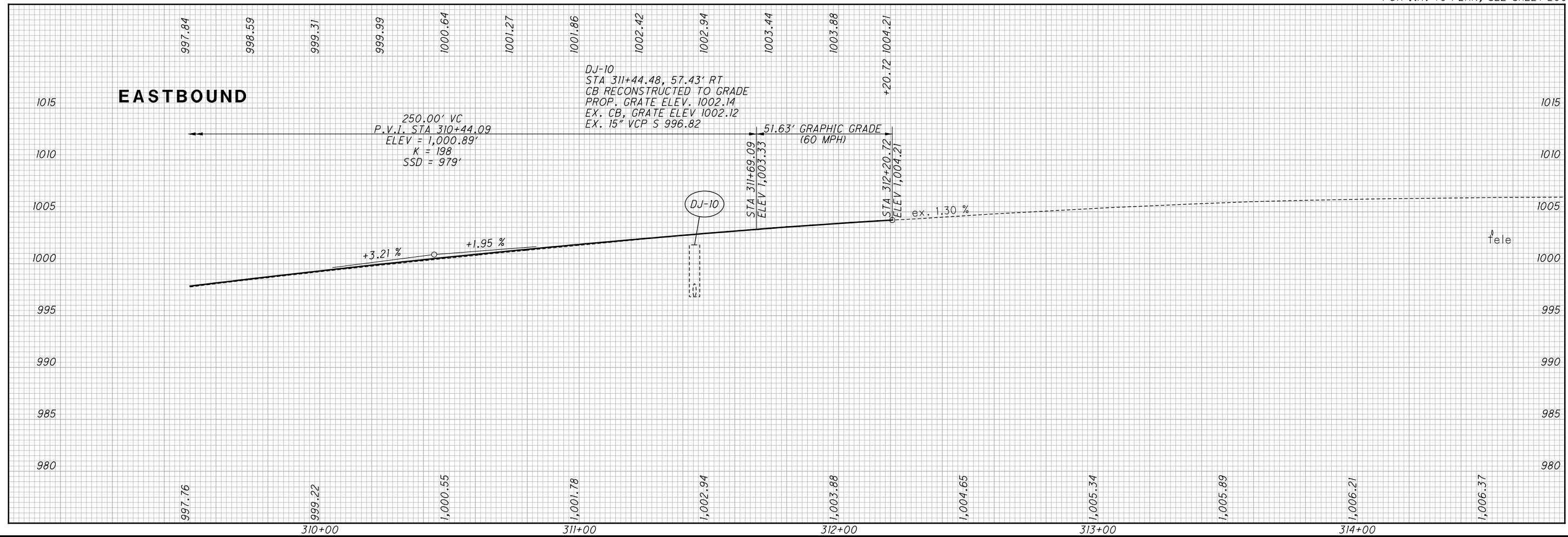
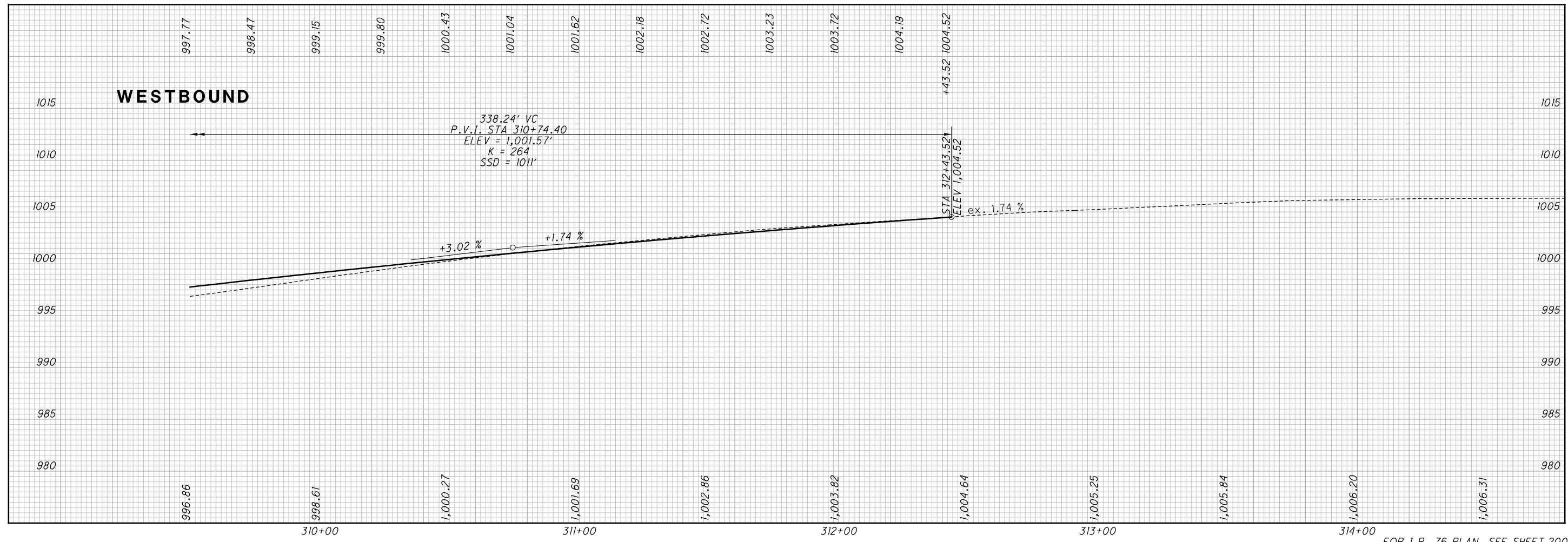
TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
G	301+00.00	I.R. 76 311+70.74	RT	PAVEMENT	61.00'	39.59'	50:1
H	308+35.00	I.R. 76 310+61.40	RT	MEDIAN	13.50'	9.73'	60:1
I	311+15.00	I.R. 76 312+28.09	RT	BARRIER	0.00'	1.77'	64:1
J	310+70.54	I.R. 76 311+20.37	RT	GUARDRAIL	10.00'	7.93'	24:1
K	311+07.20	I.R. 76 311+57.24	RT	SHOULDER	8.00'	7.29'	70:1
L	308+66.00	I.R. 76 312+43.52	LT	MEDIAN	13.50'	7.21'	60:1
M	309+00.00	I.R. 76 310+00.00	LT	PAVEMENT OFFSET	73.50'	61.50'	8:1
N	309+00.00	I.R. 76 310+00.00	LT	SHOULDER	8.00'	12.00'	25:1
O	312+04.96	I.R. 76 312+73.22	LT	PB	10.88'	5.88'	14:1

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
FF	312+00.00	I.R. 76 312+70.00	LT	PAVEMENT OFFSET	61.50'	49.50'	6:1
GG	312+73.22	I.R. 76 312+93.15	LT	PB	5.88'	4.21'	12:1
HH	312+79.92	I.R. 76 312+93.15	LT	SHOULDER	5.32'	4.21'	12:1
II	312+00.00	I.R. 76 312+70.00	LT	SHOULDER	12.00'	24.00'	6:1

STRUCTURE NO.  
SUM-076-0591  
(NO WORK)



o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Design\96670\_CG005.dgn Design 8/17/2018 2:34:16 PM orolland



FOR I.R. 76 PLAN, SEE SHEET 200



CALCULATED  
CJC  
CHECKED  
CWL

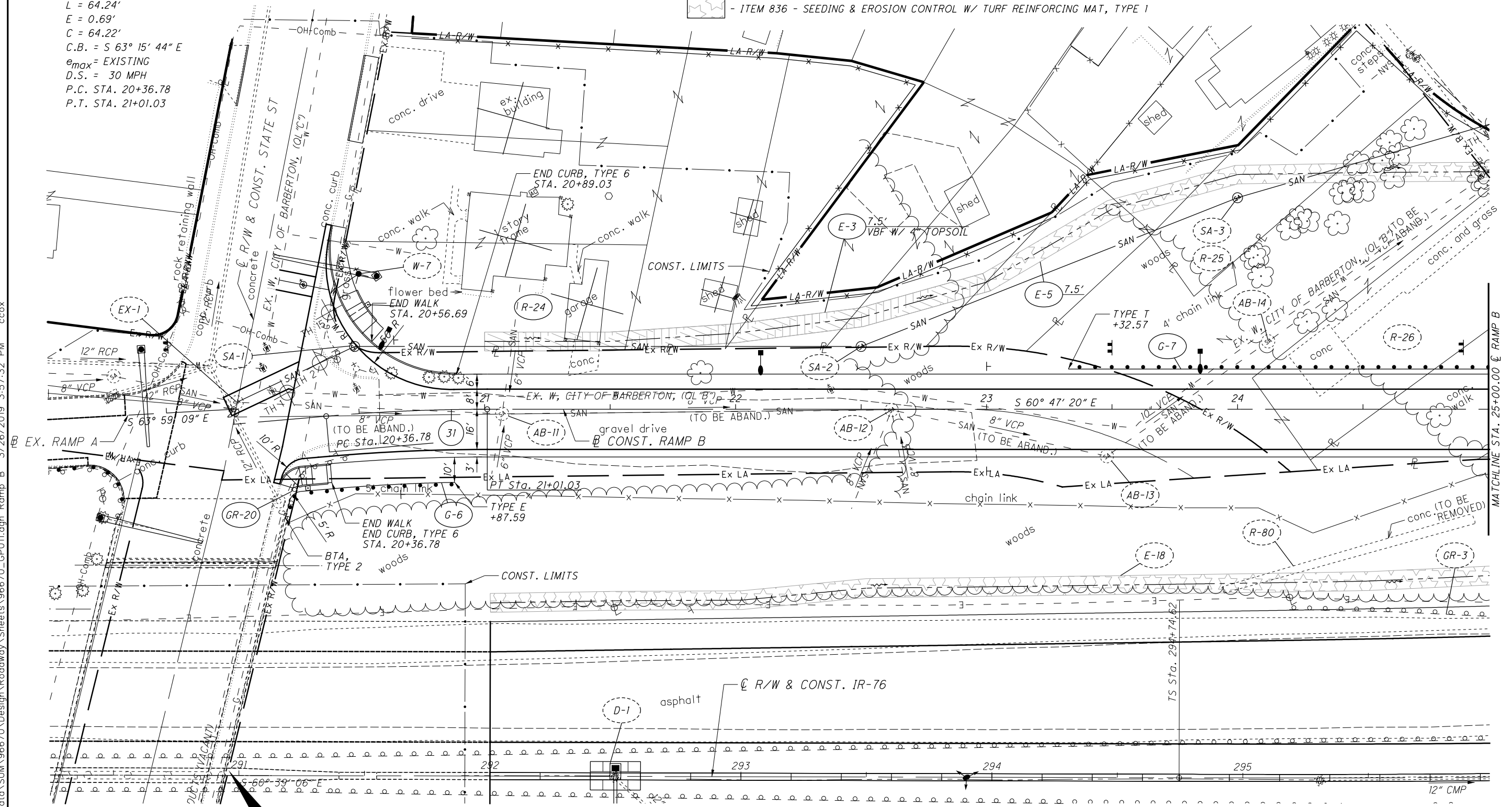
PROFILE - I.R. 76  
STA. 309+50.00 TO END

SUM - 76 - 5.53

201  
672

31 CONST. RAMP B  
 P.I. Sta. 20+68.92  
 $\Delta = 4^\circ 56' 48''$  (RT)  
 $D_c = 7^\circ 42' 00''$   
 $R = 744.10'$   
 $T = 32.14'$   
 $L = 64.24'$   
 $E = 0.69'$   
 $C = 64.22'$   
 $C.B. = S 63^\circ 15' 44'' E$   
 $\theta_{max} = \text{EXISTING}$   
 $D.S. = 30 \text{ MPH}$   
 $P.C. \text{ STA. } 20+36.78$   
 $P.T. \text{ STA. } 21+01.03$

 - ITEM 670 - DITCH EROSION PROTECTION  
 - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1



STRUCTURE NO.  
 SUM-076-0550  
 (NO WORK)

FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR LIGHTING PLANS, SEE SHEETS 482 - 495  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR STATE ST. PLANS, SEE SHEETS 237 - 238  
 FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
 FOR RAMP B PROFILE, SEE SHEET 203  
 FOR INTERSECTION DETAILS, SEE SHEET 334  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
 FOR PAVEMENT JOINT DETAILS, SEE SHEET 346

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019



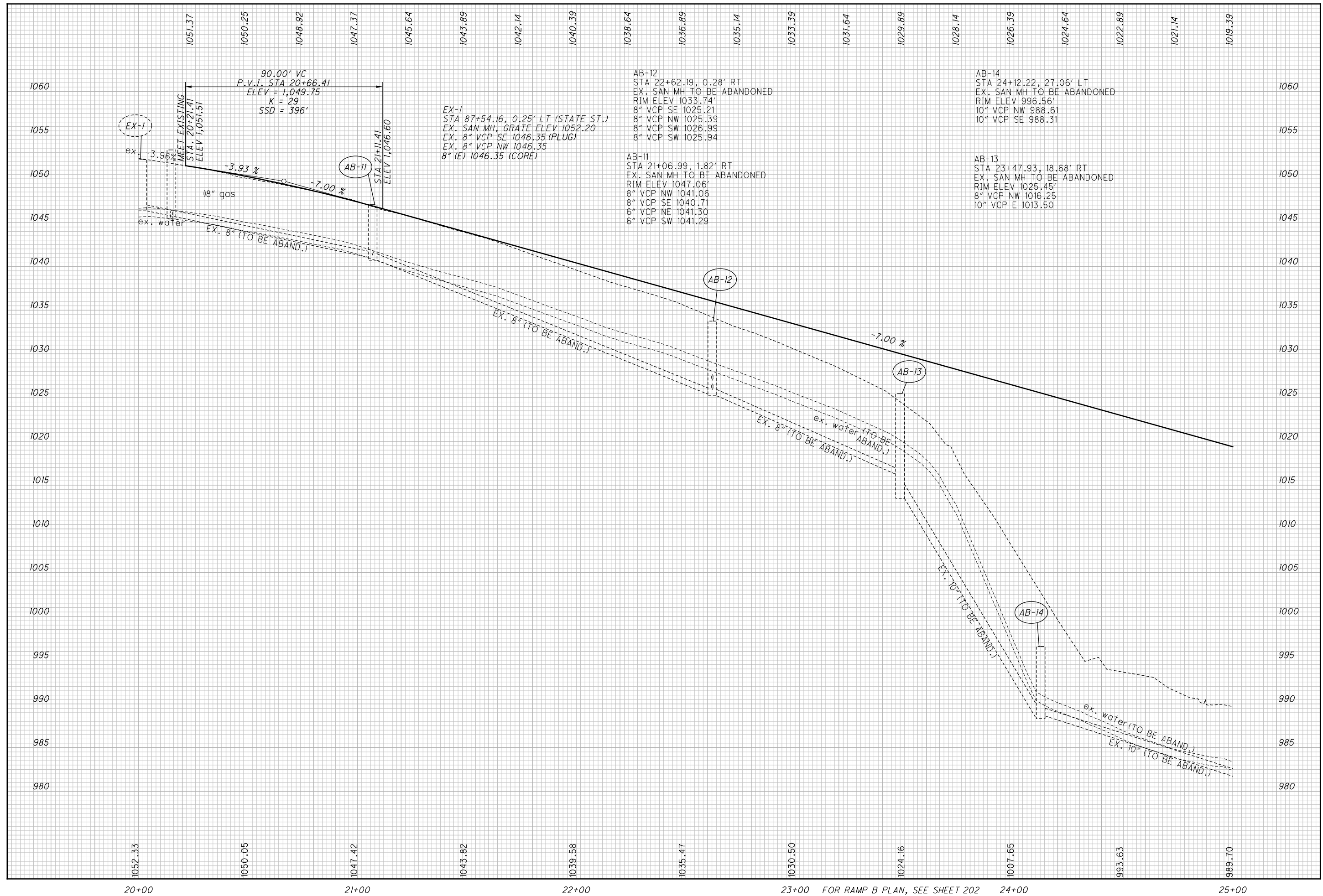
CALCULATED ATR CHECKED CWL  
**PLAN - RAMP B**  
**BEGIN TO STA. 25+00.00**

**SUM-76-5.53**

202  
 672

O:\2016\2016146\ProjectData\SUM\96670\Roadway\Design\Roadway\GP011.dgn Ramp B 3/26/2019 3:57:32 PM ccox

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CF011.dgn Ramp B 8/20/2018 9:54:59 AM oroland



CALCULATED  
ATR  
CHECKED  
CWL

PROFILE - RAMP B  
BEGIN TO STA. 25+00.00

SUM - 76 - 5.53

203  
672



0 20 40  
 HORIZONTAL SCALE IN FEET

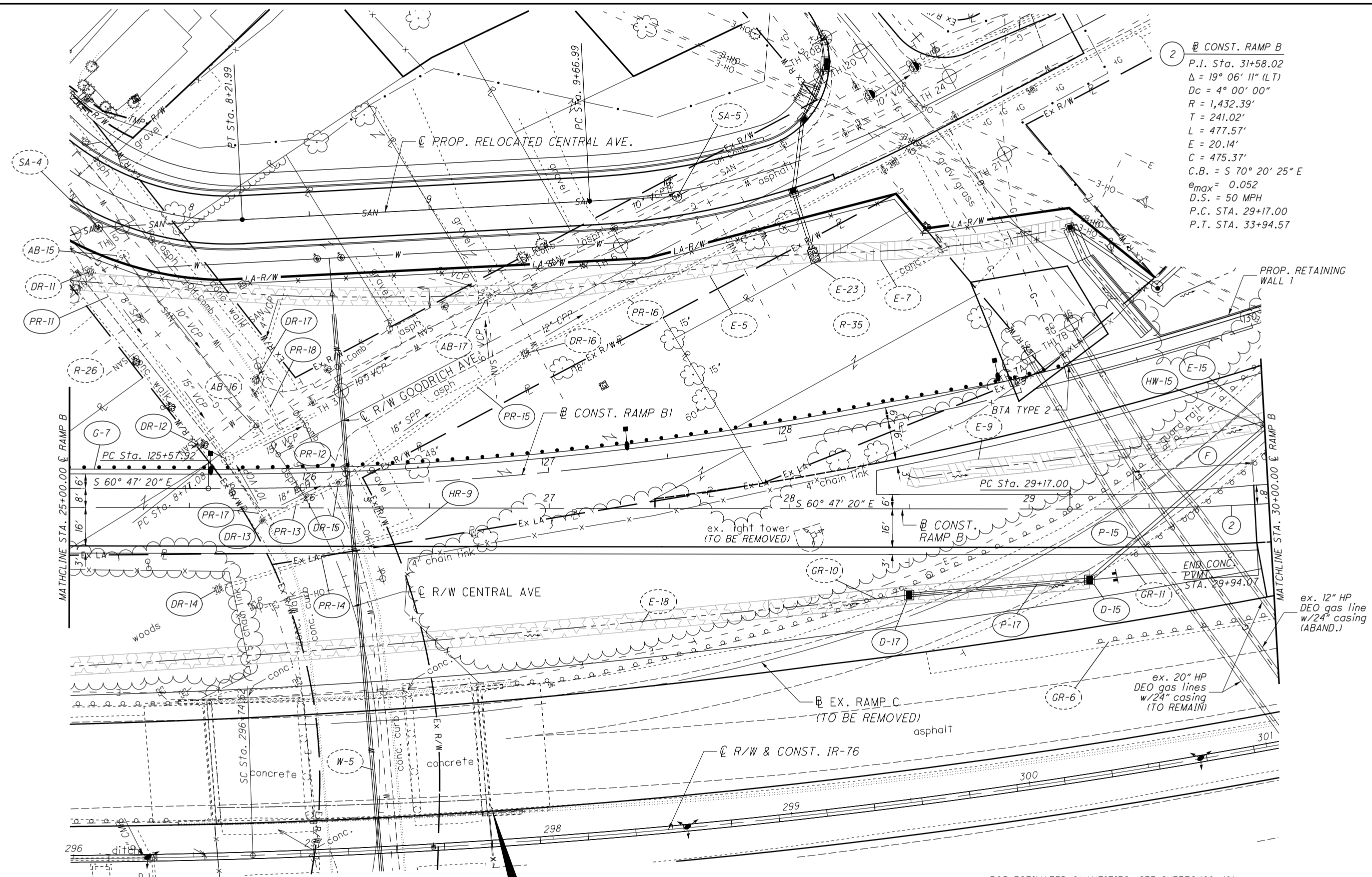
CALCULATED  
 ATR  
 CHECKED  
 CWL

PLAN - RAMP B  
 STA. 25+00.00 TO STA. 30+00.00

SUM-76-5.53

204  
 672

2 @ CONST. RAMP B  
 P.I. Sta. 31+58.02  
 $\Delta = 19^\circ 06' 11''$  (LT)  
 $D_c = 4^\circ 00' 00''$   
 $R = 1,432.39'$   
 $T = 241.02'$   
 $L = 477.57'$   
 $E = 20.14'$   
 $C = 475.37'$   
 $C.B. = S 70^\circ 20' 25'' E$   
 $e_{max} = 0.052$   
 $D.S. = 50$  MPH  
 P.C. STA. 29+17.00  
 P.T. STA. 33+94.57



-  - ITEM 670 - DITCH EROSION PROTECTION
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

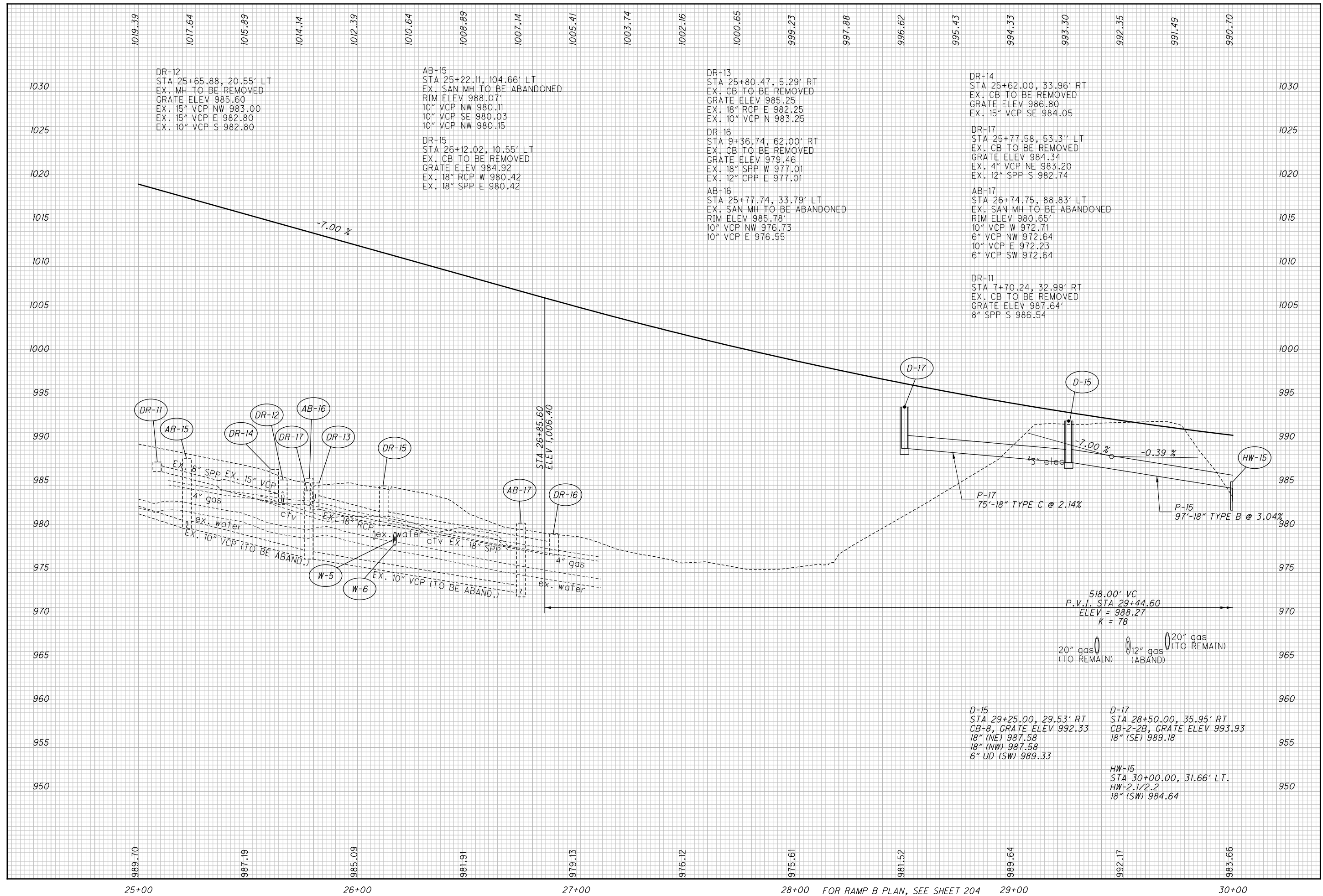
STRUCTURE NO.  
 SUM-076-0563 L/R  
 (TO BE REMOVED)

FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR LIGHTING PLANS, SEE SHEETS 482-495  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR PIPE PROFILES, SEE SHEET 268  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
 FOR STRUCTURE REMOVAL PLANS, SEE SHEETS 531-538  
 FOR RETAINING WALL PLANS, SEE SHEETS 509-530  
 FOR RAMP B1 PLANS, SEE SHEETS 208-213  
 FOR I.R. 76 PLANS, SEE SHEETS 192-201  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
 FOR GORE DETAILS, SEE SHEETS 340,341  
 FOR RAMP B PROFILE, SEE SHEET 205  
 FOR PAVEMENT JOINT DETAILS, SEE SHEET 344

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
F	29+44.07	RAMP B 29+94.07	RAMP B	LT SHOULDER	6.00'	8.00'	25:1

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\96670\_GP012.dgn Ramp B 8/20/2018 9:56:48 AM arolland

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C\012.dgn Ramp B 8/20/2018 9:58:30 AM arolland



1019.39 1017.64 1015.89 1014.14 1012.39 1010.64 1008.89 1007.14 1005.41 1003.74 1002.16 1000.65 999.23 997.88 996.62 995.43 994.33 993.30 992.35 991.49 990.70

**DR-12**  
 STA 25+65.88, 20.55' LT  
 EX. MH TO BE REMOVED  
 GRATE ELEV 985.60  
 EX. 15" VCP NW 983.00  
 EX. 15" VCP E 982.80  
 EX. 10" VCP S 982.80

**AB-15**  
 STA 25+22.11, 104.66' LT  
 EX. SAN MH TO BE ABANDONED  
 RIM ELEV 988.07'  
 10" VCP NW 980.11  
 10" VCP SE 980.03  
 10" VCP NW 980.15

**DR-13**  
 STA 25+80.47, 5.29' RT  
 EX. CB TO BE REMOVED  
 GRATE ELEV 985.25  
 EX. 18" RCP E 982.25  
 EX. 10" VCP N 983.25

**DR-14**  
 STA 25+62.00, 33.96' RT  
 EX. CB TO BE REMOVED  
 GRATE ELEV 986.80  
 EX. 15" VCP SE 984.05

**DR-15**  
 STA 26+12.02, 10.55' LT  
 EX. CB TO BE REMOVED  
 GRATE ELEV 984.92  
 EX. 18" RCP W 980.42  
 EX. 18" SPP E 980.42

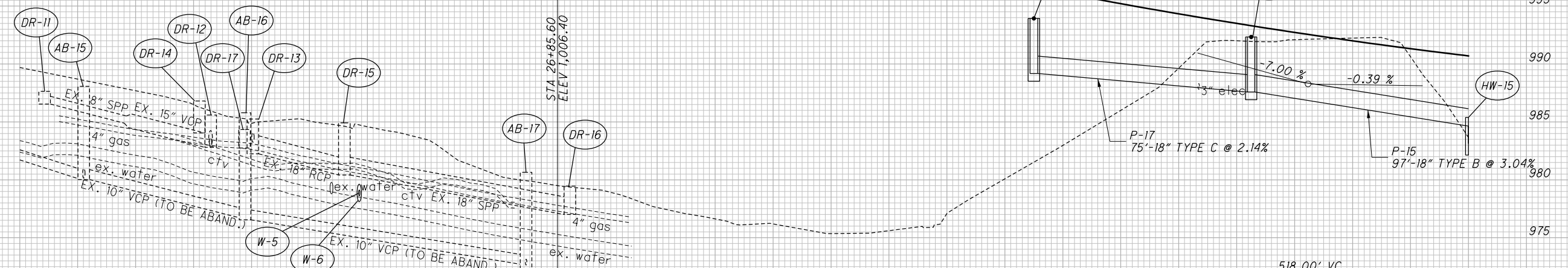
**DR-16**  
 STA 9+36.74, 62.00' RT  
 EX. CB TO BE REMOVED  
 GRATE ELEV 979.46  
 EX. 18" SPP W 977.01  
 EX. 12" CPP E 977.01

**AB-16**  
 STA 25+77.74, 33.79' LT  
 EX. SAN MH TO BE ABANDONED  
 RIM ELEV 985.78'  
 10" VCP NW 976.73  
 10" VCP E 976.55

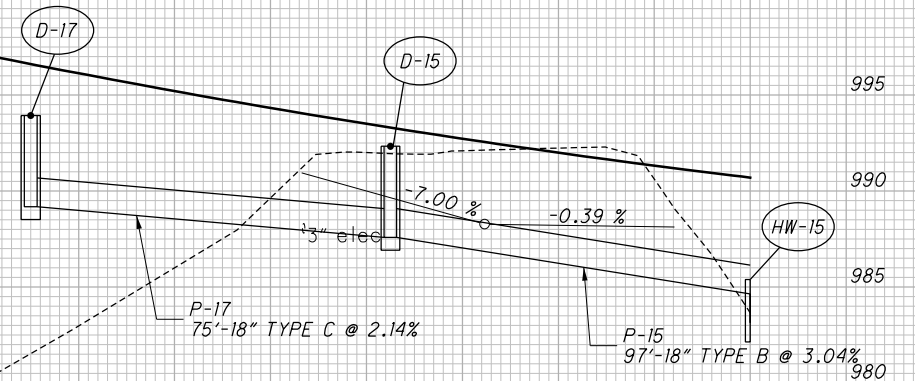
**DR-17**  
 STA 25+77.58, 53.31' LT  
 EX. CB TO BE REMOVED  
 GRATE ELEV 984.34  
 EX. 4" VCP NE 983.20  
 EX. 12" SPP S 982.74

**AB-17**  
 STA 26+74.75, 88.83' LT  
 EX. SAN MH TO BE ABANDONED  
 RIM ELEV 980.65'  
 10" VCP W 972.71  
 6" VCP NW 972.64  
 10" VCP E 972.23  
 6" VCP SW 972.64

**DR-11**  
 STA 7+70.24, 32.99' RT  
 EX. CB TO BE REMOVED  
 GRATE ELEV 987.64'  
 8" SPP S 986.54



STA 26+85.60  
 ELEV 1,006.40



518.00' VC  
 P.V.I. STA 29+44.60  
 ELEV = 988.27  
 K = 78

20" gas (TO REMAIN), 12" gas (ABAND), 20" gas (TO REMAIN)

**D-15**  
 STA 29+25.00, 29.53' RT  
 CB-8, GRATE ELEV 992.33  
 18" (NE) 987.58  
 18" (NW) 987.58  
 6" UD (SW) 989.33

**D-17**  
 STA 28+50.00, 35.95' RT  
 CB-2-2B, GRATE ELEV 993.93  
 18" (SE) 989.18

**HW-15**  
 STA 30+00.00, 31.66' LT.  
 HW-2.1/2.2  
 18" (SW) 984.64

989.70 987.19 985.09 981.91 979.13 976.12 975.61 981.52 989.64 992.17 983.66



25+00 26+00 27+00 28+00 FOR RAMP B PLAN, SEE SHEET 204 29+00 30+00

CALCULATED ATR CHECKED CWL

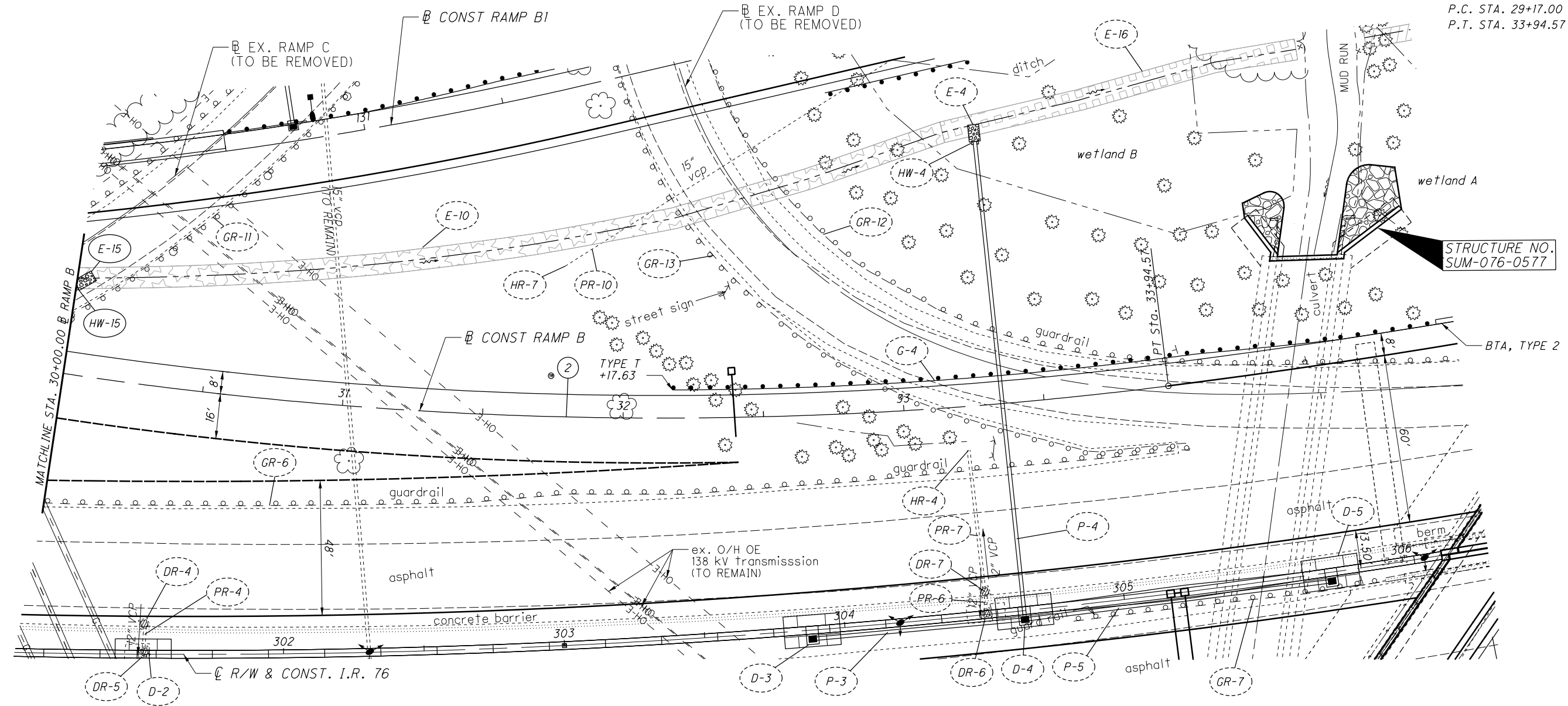
**PROFILE - RAMP B**  
**STA. 25+00.00 TO STA. 30+00.00**

**SUM-76-5.53**

205  
 672

-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 3

2 CONST. RAMP B  
 P.I. Sta. 31+58.02  
 $\Delta = 19^{\circ} 06' 11''$  (LT)  
 $D_c = 4^{\circ} 00' 00''$   
 $R = 1,432.39'$   
 $T = 241.02'$   
 $L = 477.57'$   
 $E = 20.14'$   
 $C = 475.37'$   
 $C.B. = S 70^{\circ} 20' 25'' E$   
 $e_{max} = 0.052$   
 $D.S. = 50$  MPH  
 P.C. STA. 29+17.00  
 P.T. STA. 33+94.57



STRUCTURE NO.  
SUM-076-0577

PLAN - RAMP B  
 STA. 30+00.00 TO END

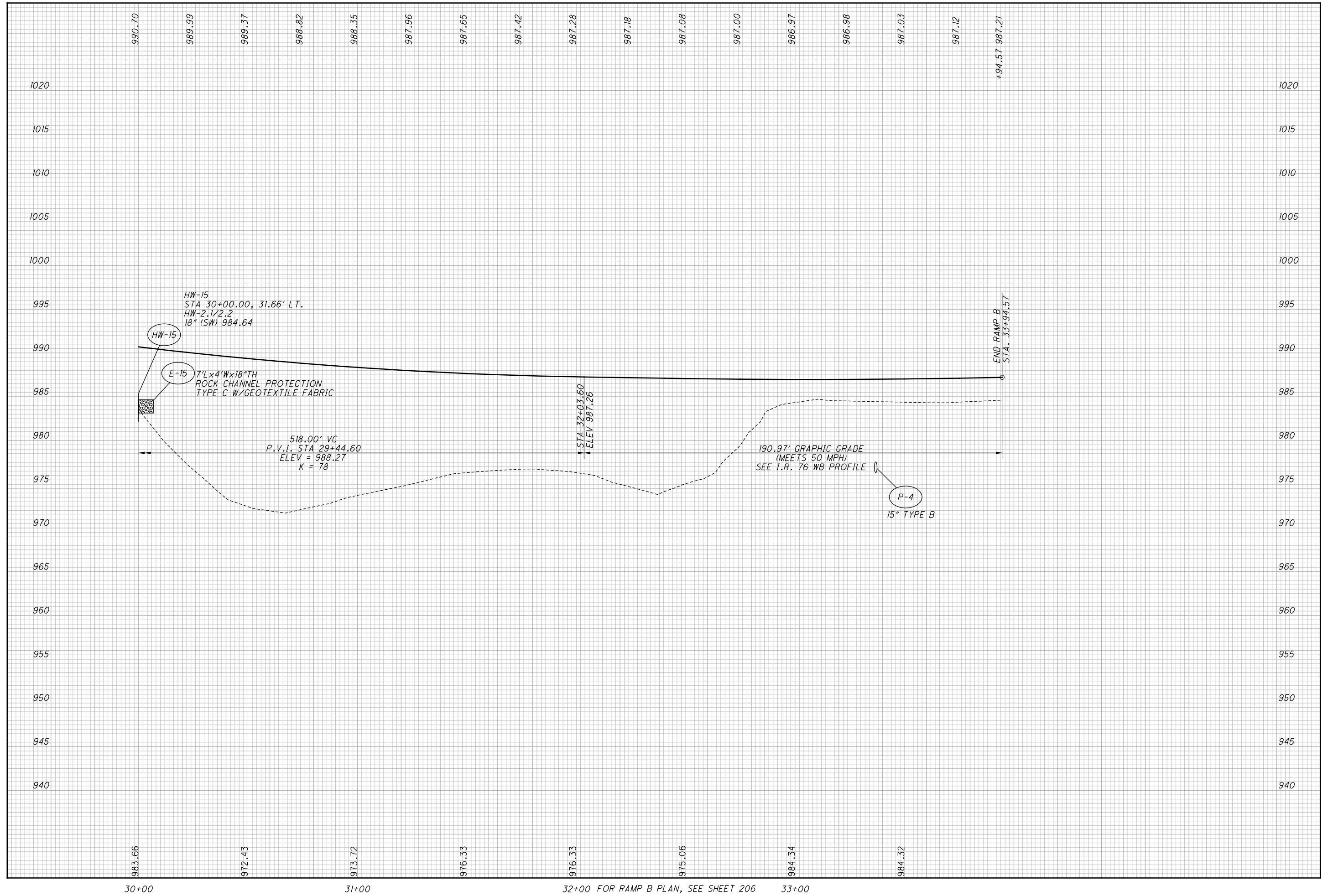
SUM-76-5.53

FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR LIGHTING PLANS, SEE SHEETS 482-495  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR PIPE PROFILES, SEE SHEETS 250, 268, 271  
 FOR STRUCTURE PLANS, SEE SHEETS 539-552  
 FOR RAMP B1 PLANS, SEE SHEETS 208-213  
 FOR I.R. 76 PLANS, SEE SHEETS 192-201  
 FOR RAMP B PROFILE, SEE SHEET 207  
 FOR GORE DETAILS, SEE SHEET 340  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
 FOR ITS PLANS, SEE SHEETS 475-481

206  
672

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CALCULATED  
ATR  
CHECKED  
CWL

**PROFILE - RAMP B  
STA. 30+00.00 TO END**

**SUM - 76 - 5.53**

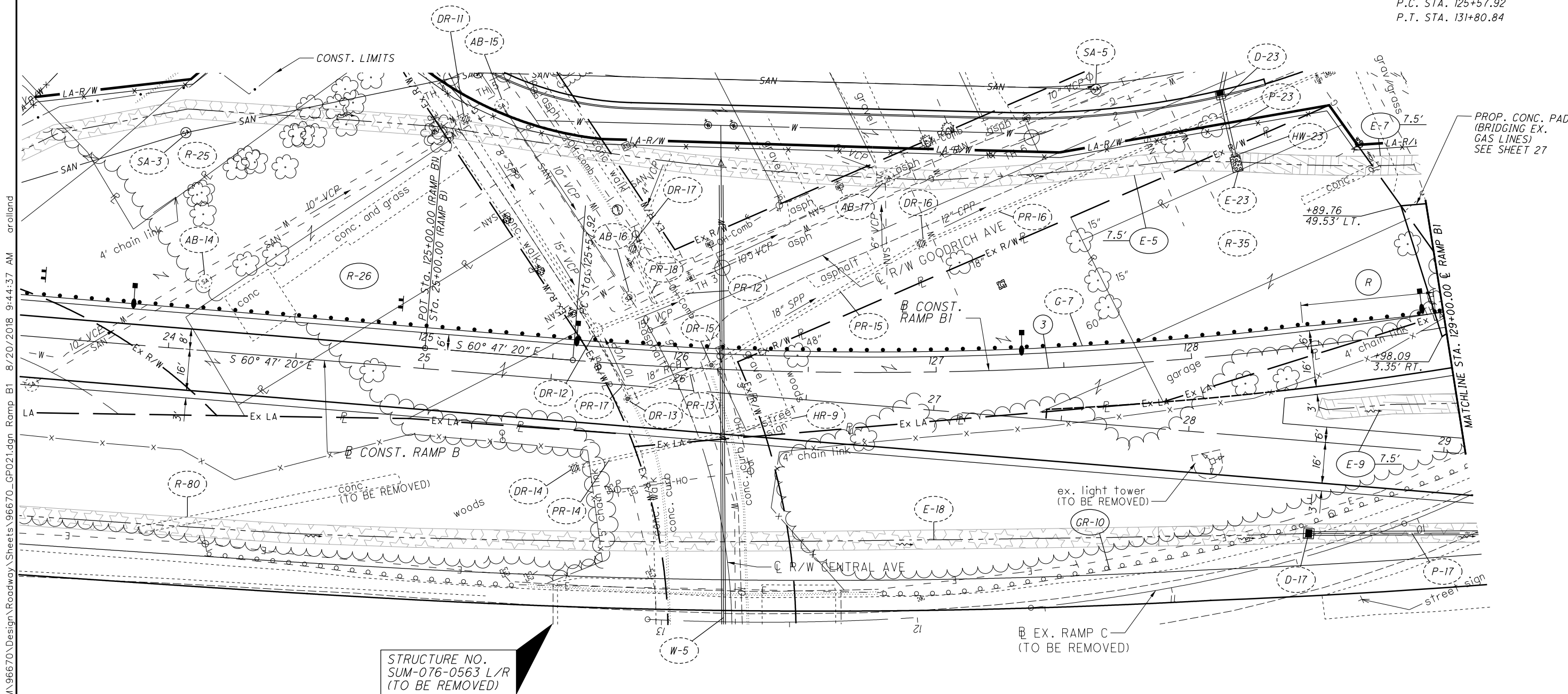
207  
672

-  - ITEM 670 - DITCH EROSION PROTECTION
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

3 @ CONST. RAMP B1  
 P.I. Sta. 128+74.38  
 $\Delta = 24^\circ 55' 00''$  (LT)  
 $D_c = 4^\circ 00' 00''$   
 $R = 1,432.39'$   
 $T = 316.46'$   
 $L = 622.92'$   
 $E = 34.54'$   
 $C = 618.02'$   
 $C.B. = S 73^\circ 14' 50'' E$   
 $\theta_{max} = 0.028$   
 $D.S. = 30$  MPH  
 P.C. STA. 125+57.92  
 P.T. STA. 131+80.84

CALCULATED TMT CHECKED MRG

0 20 40  
 HORIZONTAL SCALE IN FEET



STRUCTURE NO.  
 SUM-076-0563 L/R  
 (TO BE REMOVED)

PLAN - RAMP B1  
 BEGIN TO STA. 129+00.00

SUM-76-5.53

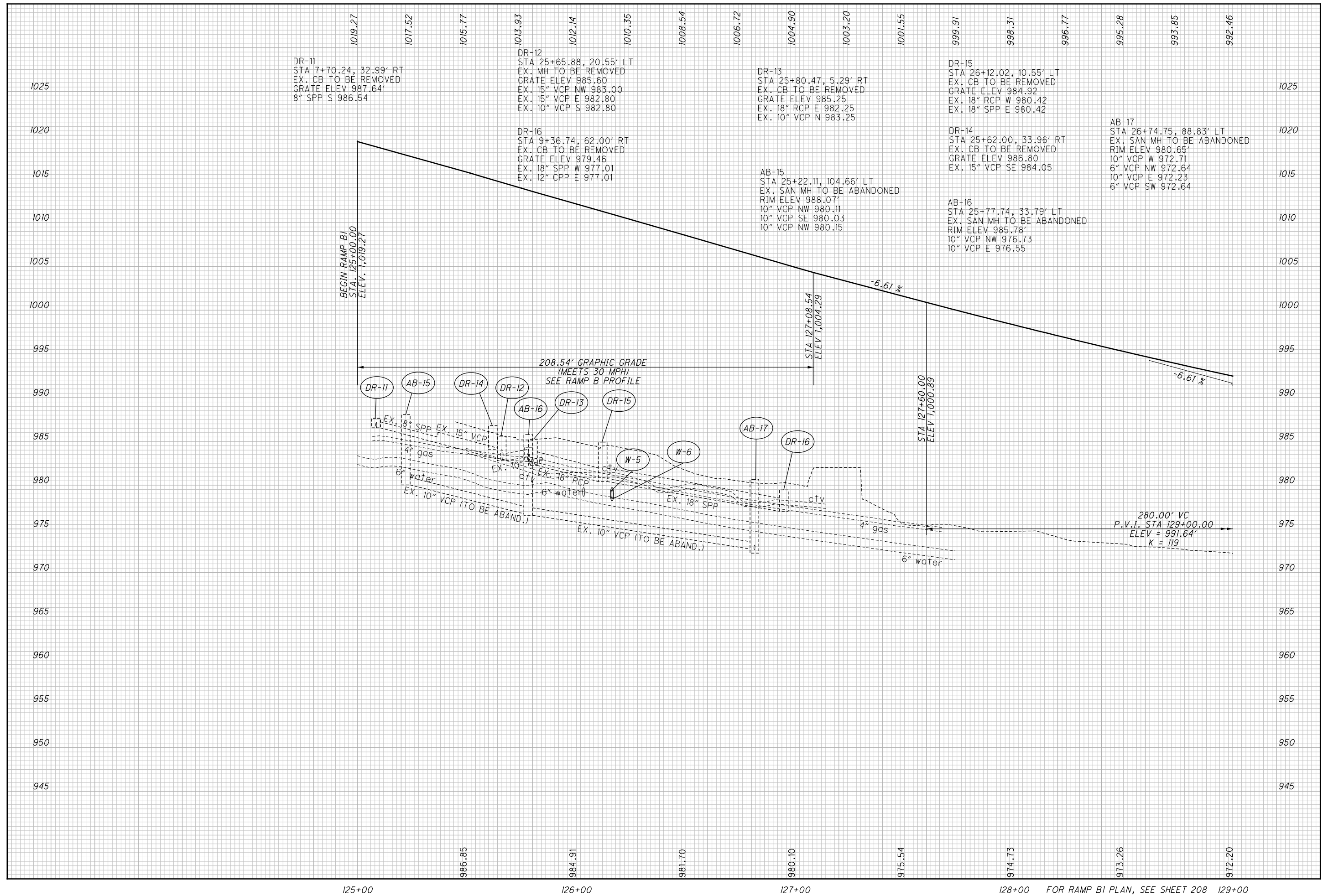
208  
 672

FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
 FOR RELOCATED CENTRAL AVE. PLANS, SEE SHEETS 226 - 229  
 FOR STRUCTURE REMOVAL PLANS, SEE SHEETS 531 - 538  
 FOR RAMP B PLANS, SEE SHEETS 202 - 207  
 FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
 FOR RAMP B1 PROFILE, SEE SHEET 209  
 FOR GORE DETAILS, SEE SHEET 341  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
 FOR LIGHTING PLANS, SEE SHEETS 482 - 495  
 FOR PAVEMENT JOINT DETAILS, SEE SHEET 344

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
R	128+44.67 RAMP B1	128+96.89 RAMP B1	LT	GUARDRAIL	8.00'	6.00'	26:1

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




CALCULATED
TMT
CHECKED
MRC

**PROFILE - RAMP B1  
BEGIN TO STA. 129+00.00**

**SUM - 76 - 5.53**

-  - ITEM 670 - DITCH EROSION PROTECTION
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 3
-  - WETLAND AREA NOT TO BE DISTURBED

FOR RAMP B PLANS, SEE SHEETS 202 - 207  
 FOR PIPE PROFILES, SEE SHEETS 211, 276, 278  
 FOR RAMP B1 PROFILE, SEE SHEET 211  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
 FOR LIGHTING PLANS, SEE SHEETS 482 - 495  
 FOR RELOCATED CENTRAL AVE. PLANS, SEE SHEETS 226 - 229  
 FOR ITS PLANS, SEE SHEETS 475 - 481

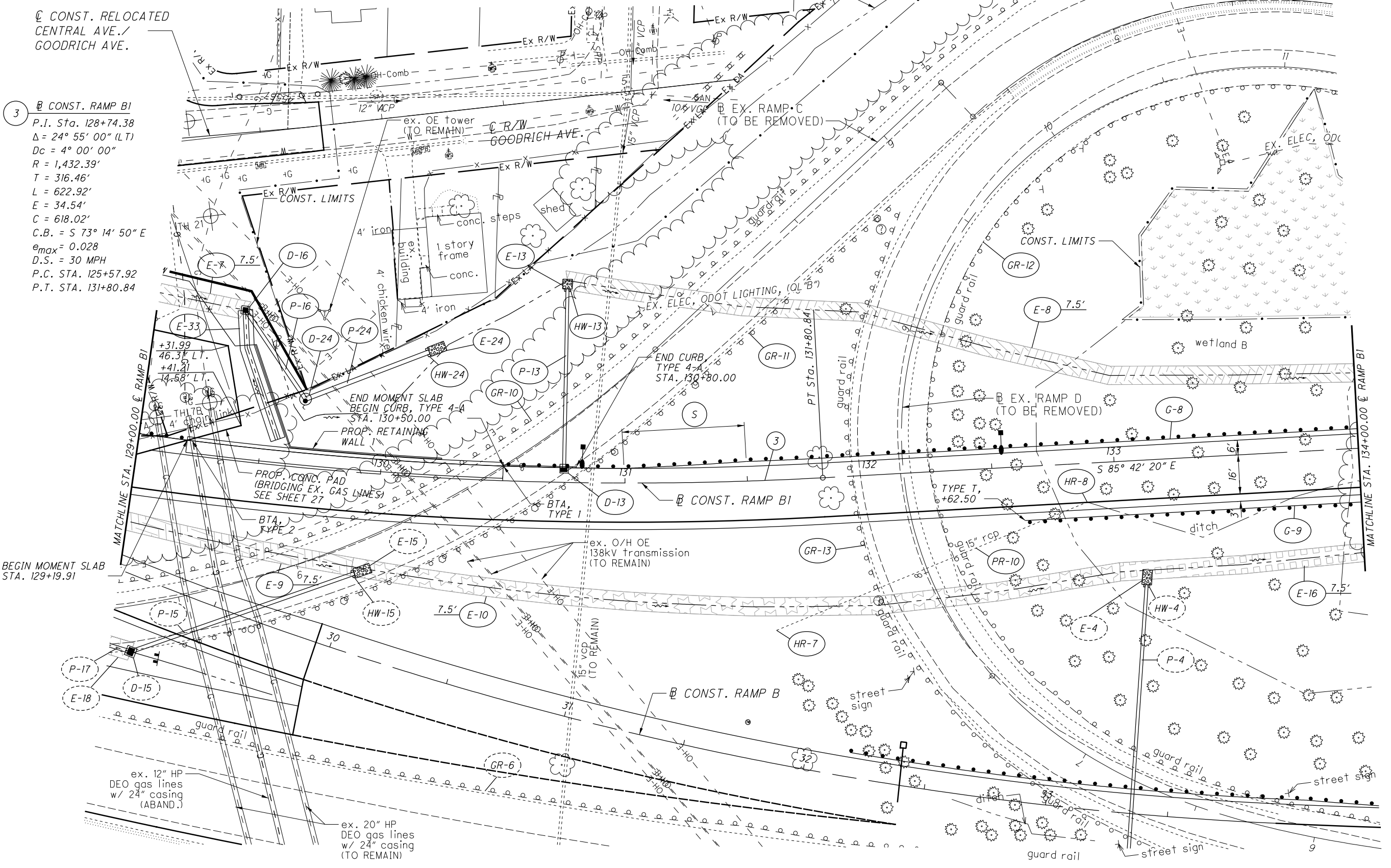
TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE		
S	130+99.60	RAMP B1	131+49.81	RAMP B1	LT	GUARDRAIL	6.00'	8.00'	25:1

CALCULATED  
TMT  
CHECKED  
MRG

0 20 40  
10  
HORIZONTAL  
SCALE IN FEET

CONST. RELOCATED  
CENTRAL AVE./  
GOODRICH AVE.

3 B CONST. RAMP B1  
 P.I. Sta. 128+74.38  
 $\Delta = 24^\circ 55' 00''$  (LT)  
 $D_c = 4^\circ 00' 00''$   
 $R = 1,432.39'$   
 $T = 316.46'$   
 $L = 622.92'$   
 $E = 34.54'$   
 $C = 618.02'$   
 C.B. =  $S 73^\circ 14' 50'' E$   
 $e_{max} = 0.028$   
 D.S. = 30 MPH  
 P.C. STA. 125+57.92  
 P.T. STA. 131+80.84



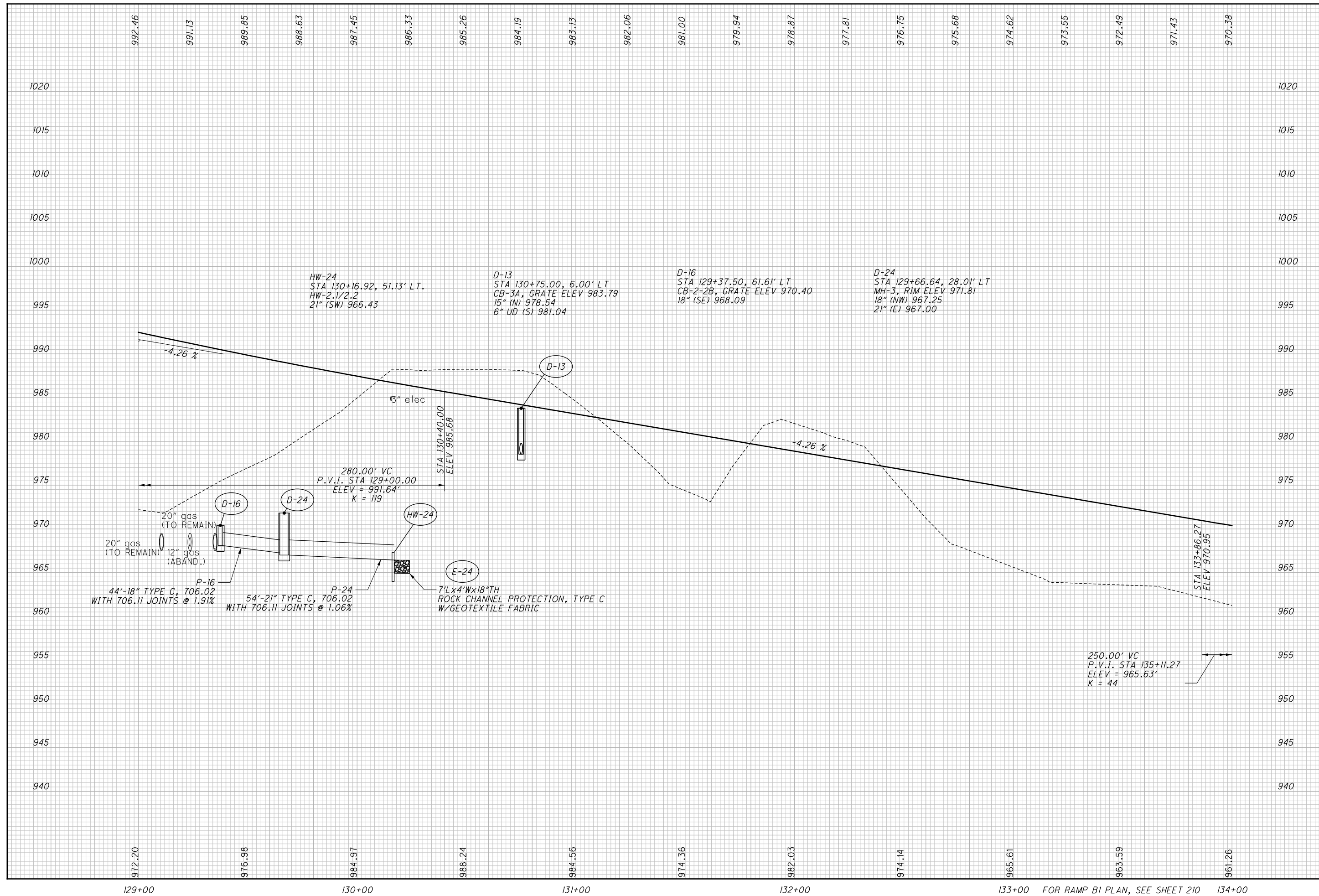
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PLAN - RAMP B1  
STA. 129+00.00 TO STA. 134+00.00

SUM-76-5.53

210  
672

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992.46	991.13	989.85	988.63	987.45	986.33	985.26	984.19	983.13	982.06	981.00	979.94	978.87	977.81	976.75	975.68	974.62	973.55	972.49	971.43	970.38
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

972.20	976.98	984.97	988.24	984.56	974.36	982.03	974.14	965.61	963.59	961.26
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129+00	130+00	131+00	132+00	133+00	134+00
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CALCULATED TMT	<b>PROFILE - RAMP B1</b> <b>STA. 129+00.00 TO STA. 134+00.00</b>		
CHECKED MRC			
<b>SUM - 76 - 5.53</b>			
<table border="1" style="border-collapse: collapse; width: 40px; height: 40px; margin: auto;"> <tr><td style="text-align: center;">211</td></tr> <tr><td style="text-align: center;">672</td></tr> </table>	211	672	
211			
672			

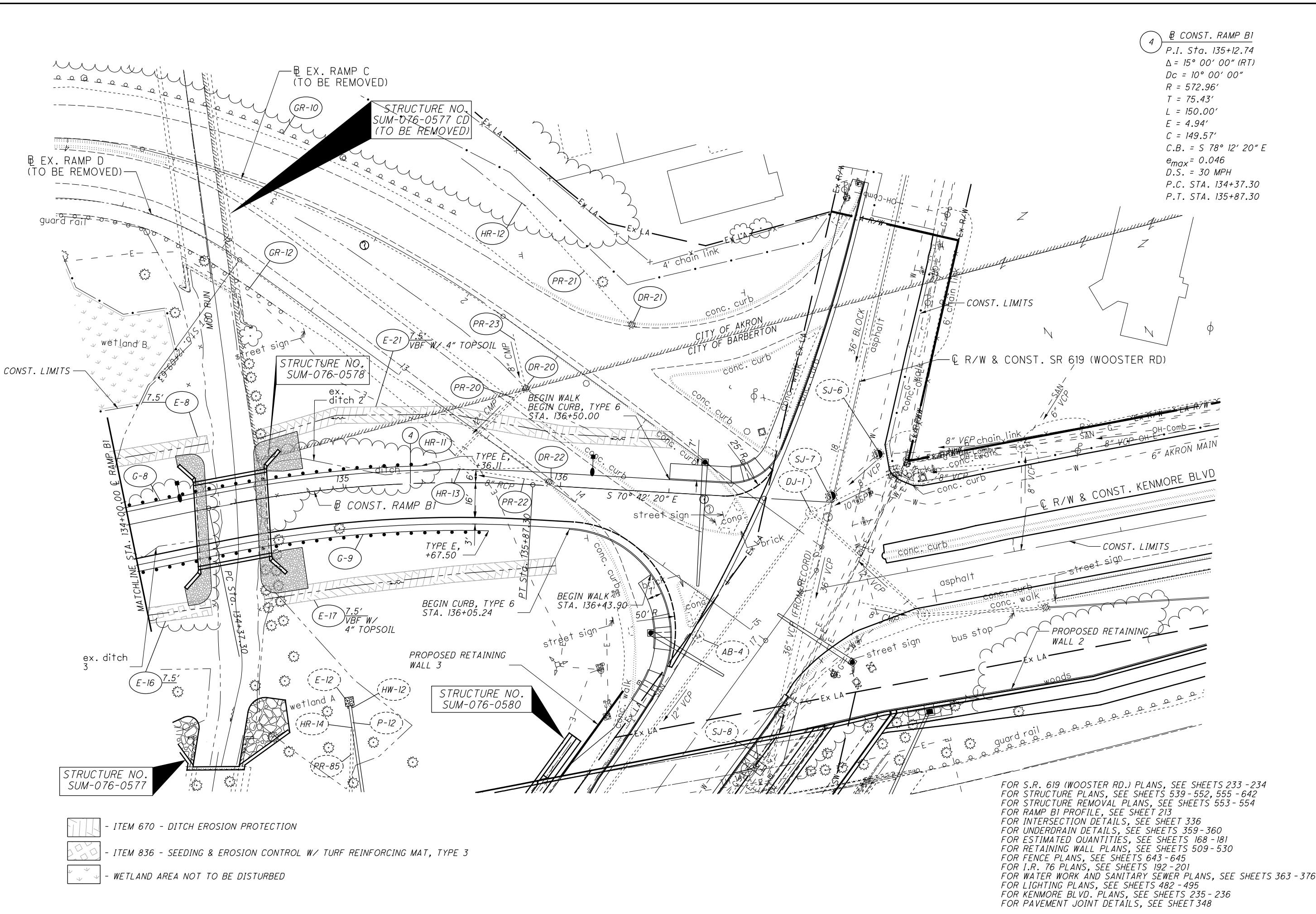





0 20 40  
HORIZONTAL  
SCALE IN FEET

CALCULATED TMT CHECKED MRG

4 @ CONST. RAMP B1  
P.I. Sta. 135+12.74  
 $\Delta = 15^\circ 00' 00''$  (RT)  
 $D_c = 10^\circ 00' 00''$   
 $R = 572.96'$   
 $T = 75.43'$   
 $L = 150.00'$   
 $E = 4.94'$   
 $C = 149.57'$   
 $C.B. = S 78^\circ 12' 20'' E$   
 $e_{max} = 0.046$   
 $D.S. = 30$  MPH  
P.C. STA. 134+37.30  
P.T. STA. 135+87.30

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-  - ITEM 670 - DITCH EROSION PROTECTION
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 3
-  - WETLAND AREA NOT TO BE DISTURBED

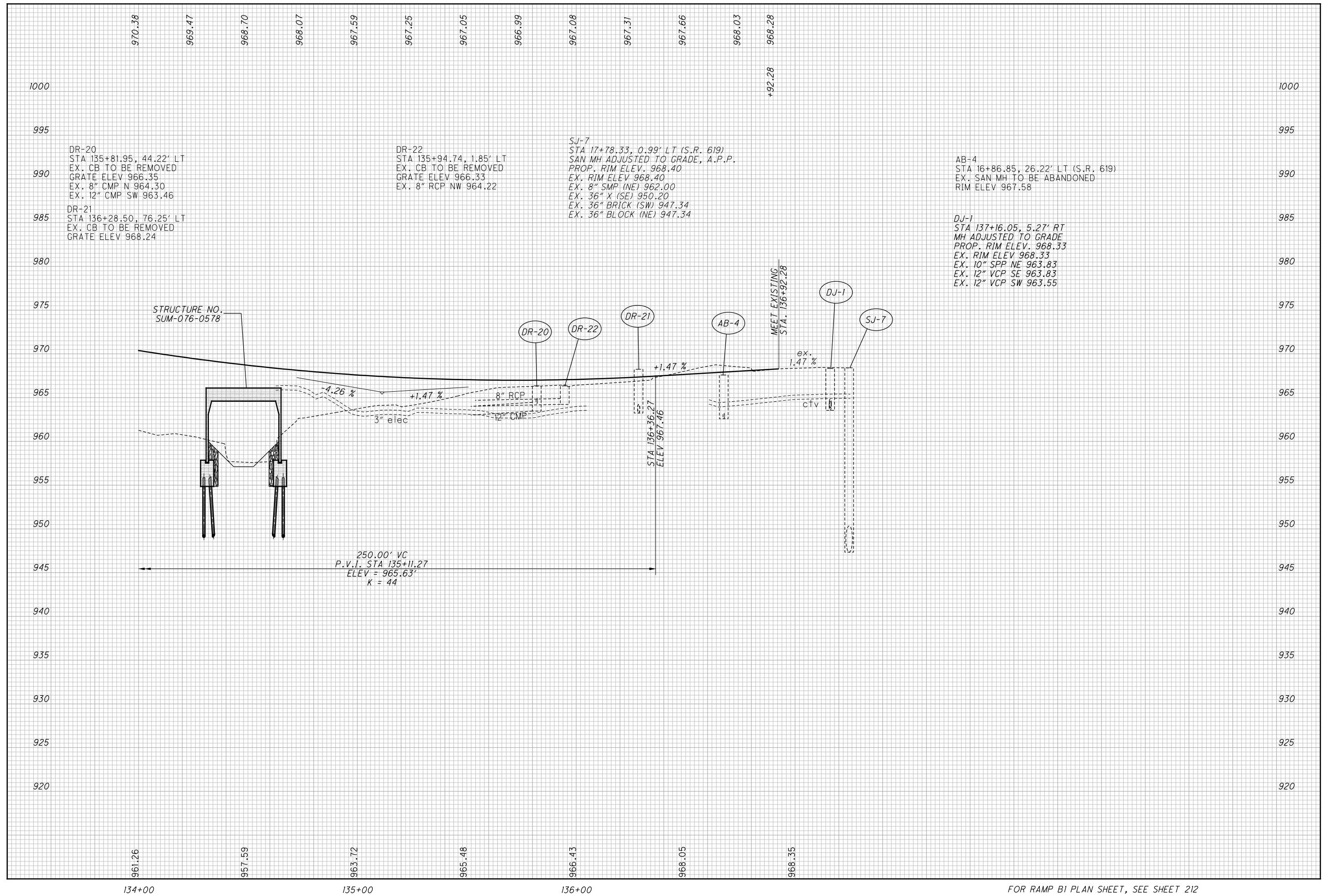
FOR S.R. 619 (WOOSTER RD.) PLANS, SEE SHEETS 233 - 234  
FOR STRUCTURE PLANS, SEE SHEETS 539 - 552, 555 - 642  
FOR STRUCTURE REMOVAL PLANS, SEE SHEETS 553 - 554  
FOR RAMP B1 PROFILE, SEE SHEET 213  
FOR INTERSECTION DETAILS, SEE SHEET 336  
FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
FOR FENCE PLANS, SEE SHEETS 643 - 645  
FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
FOR LIGHTING PLANS, SEE SHEETS 482 - 495  
FOR KENMORE BLVD. PLANS, SEE SHEETS 235 - 236  
FOR PAVEMENT JOINT DETAILS, SEE SHEET 348

PLAN - RAMP B1  
STA. 134+00.00 TO END

SUM-76-5.53

212  
672

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CALCULATED  
TMT  
CHECKED  
MRC

**PROFILE - RAMP B1**  
**STA. 134+00.00 TO END**

**SUM-76-5.53**

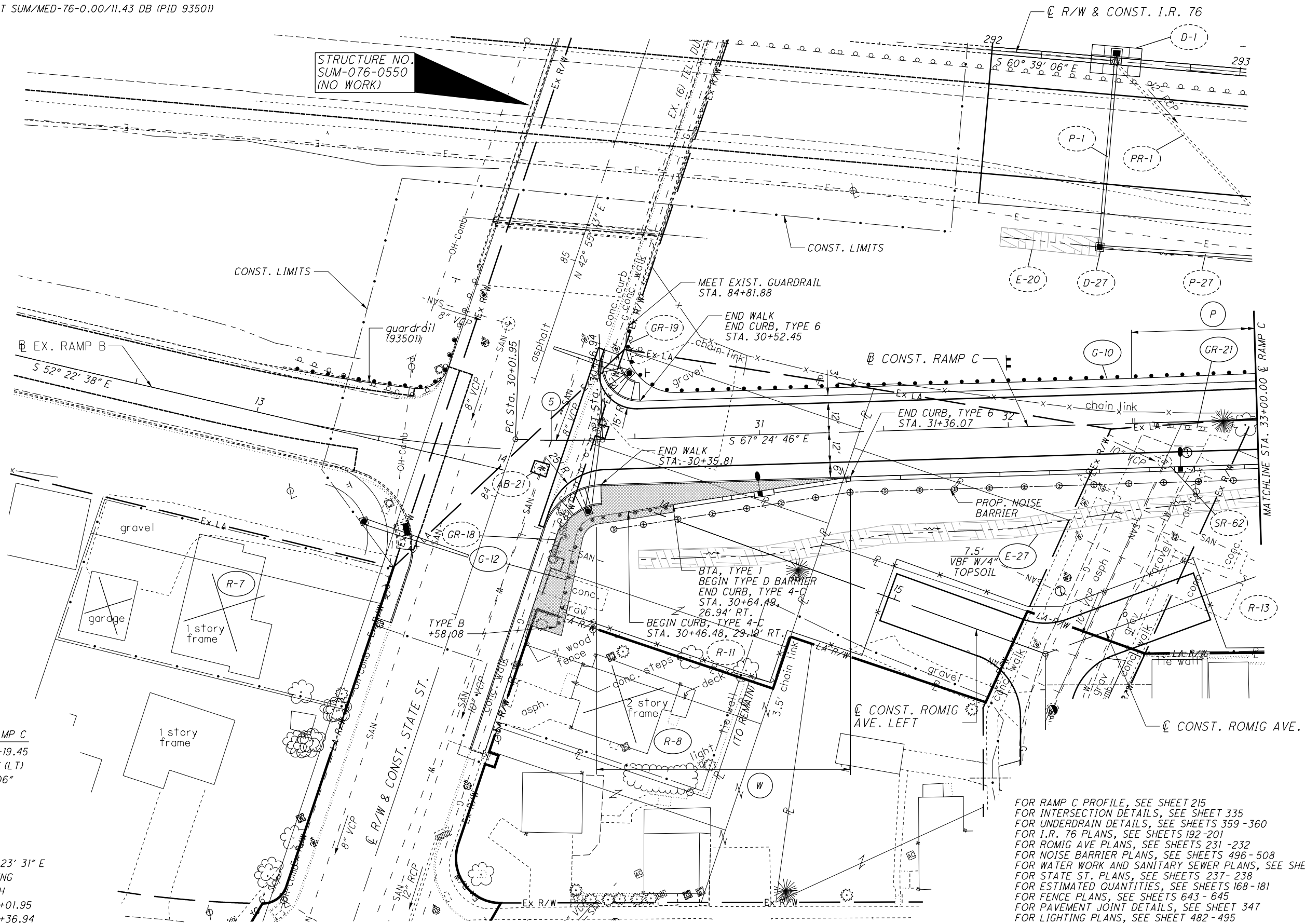
213  
672

FOR RAMP B1 PLAN SHEET, SEE SHEET 212

-  - ITEM 670 - DITCH EROSION PROTECTION
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
-  ITEM 441 - 2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), A.P.P.

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
P	32+50.00	RAMP C	36+98.20	RAMP C	LT	PAVEMENT	12.00' 16.00' 112:1
W	30+33.78	RAMP C	31+36.07	RAMP C	RT	G-RAIL/BARRIER	30.81' 18.00' 8:1

----- SEE PROJECT SUM/MED-76-0.00/11.43 DB (PID 93501)



STRUCTURE NO.  
SUM-076-0550  
(NO WORK)

5 **CONST. RAMP C**  
 P.I. Sta. 30+19.45  
 $\Delta = 4^\circ 02' 31''$  (LT)  
 $D_c = 11^\circ 33' 06''$   
 $R = 496.00'$   
 $T = 17.50'$   
 $L = 34.99'$   
 $E = 0.31'$   
 $C = 34.98'$   
 $C.B. = S 65^\circ 23' 31'' E$   
 $\theta_{max} =$  EXISTING  
 $D.S. = 30$  MPH  
 P.C. STA. 30+01.95  
 P.T. STA. 30+36.94

FOR RAMP C PROFILE, SEE SHEET 215  
 FOR INTERSECTION DETAILS, SEE SHEET 335  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
 FOR I.R. 76 PLANS, SEE SHEETS 192-201  
 FOR ROMIG AVE PLANS, SEE SHEETS 231-232  
 FOR NOISE BARRIER PLANS, SEE SHEETS 496-508  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
 FOR STATE ST. PLANS, SEE SHEETS 237-238  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR PAVEMENT JOINT DETAILS, SEE SHEET 347  
 FOR LIGHTING PLANS, SEE SHEET 482-495



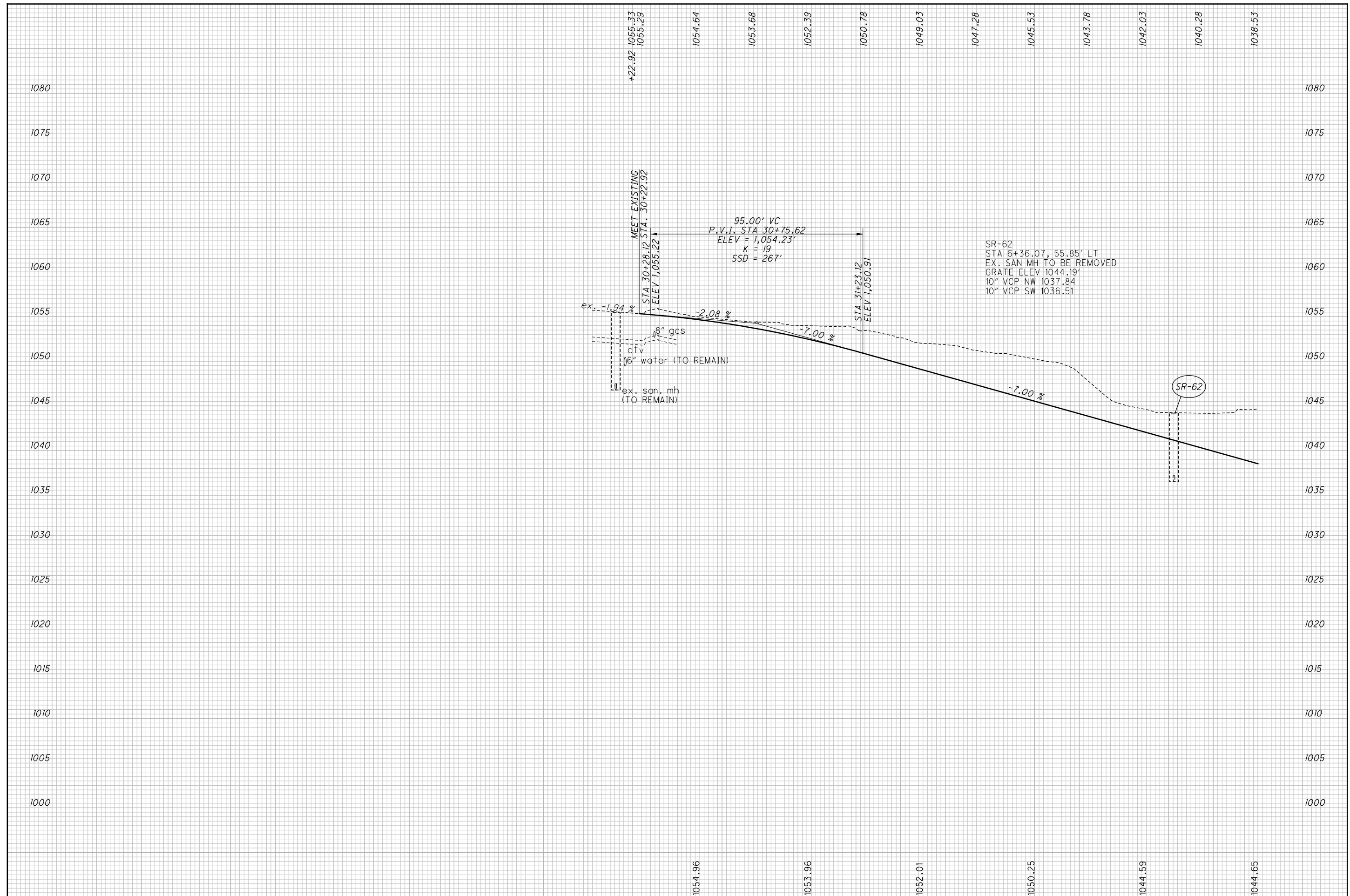
PLAN - RAMP C  
 BEGIN TO STA. 33+00.00

SUM-76-5.53

214  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_GP031.dgn Ramp C 11/20/2018 10:01:55 AM cluzier

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FOR RAMP C PLAN, SEE SHEET 214

31+00

32+00

33+00

CALCULATED  
ATR  
CHECKED  
CWL

**PROFILE - RAMP C  
BEGIN TO STA. 33+00.00**

**SUM - 76 - 5.53**

215  
672

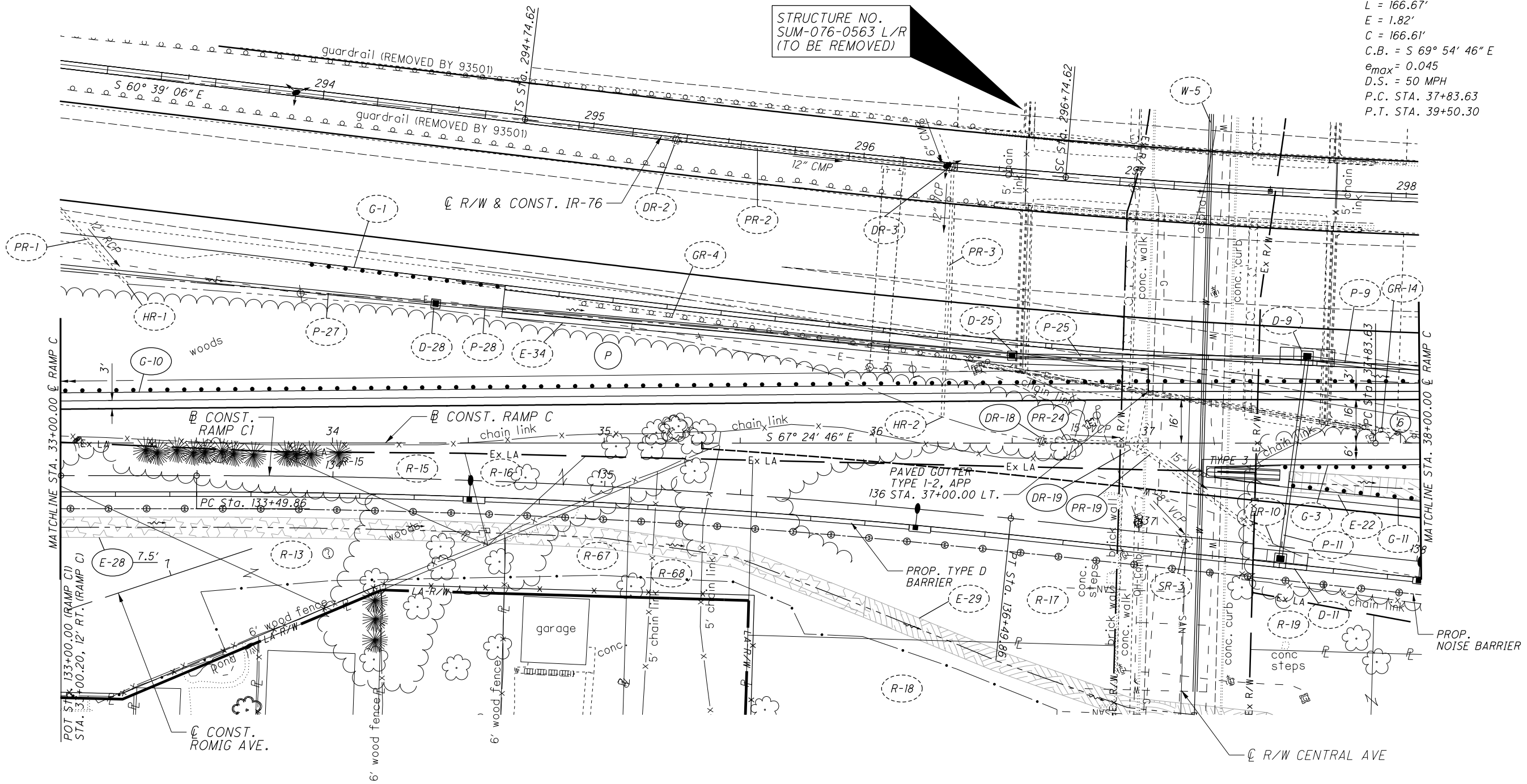
O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Design\96670\_GP032.dgn Ramp C 11/20/2018 10:03:30 AM cuzier



0 20 40  
HORIZONTAL SCALE IN FEET  
CALCULATED ATR CHECKED CWL

6 CONST. RAMP C  
P.I. Sta. 38+67.02  
 $\Delta = 5^\circ 00' 00''$  (LT)  
 $D_c = 3^\circ 00' 00''$   
 $R = 1,909.86'$   
 $T = 83.39'$   
 $L = 166.67'$   
 $E = 1.82'$   
 $C.B. = S 69^\circ 54' 46'' E$   
 $e_{max} = 0.045$   
 $D.S. = 50$  MPH  
P.C. STA. 37+83.63  
P.T. STA. 39+50.30

STRUCTURE NO.  
SUM-076-0563 L/R  
(TO BE REMOVED)



PLAN - RAMP C  
STA. 33+00.00 TO STA. 38+00.00

SUM-76-5.53

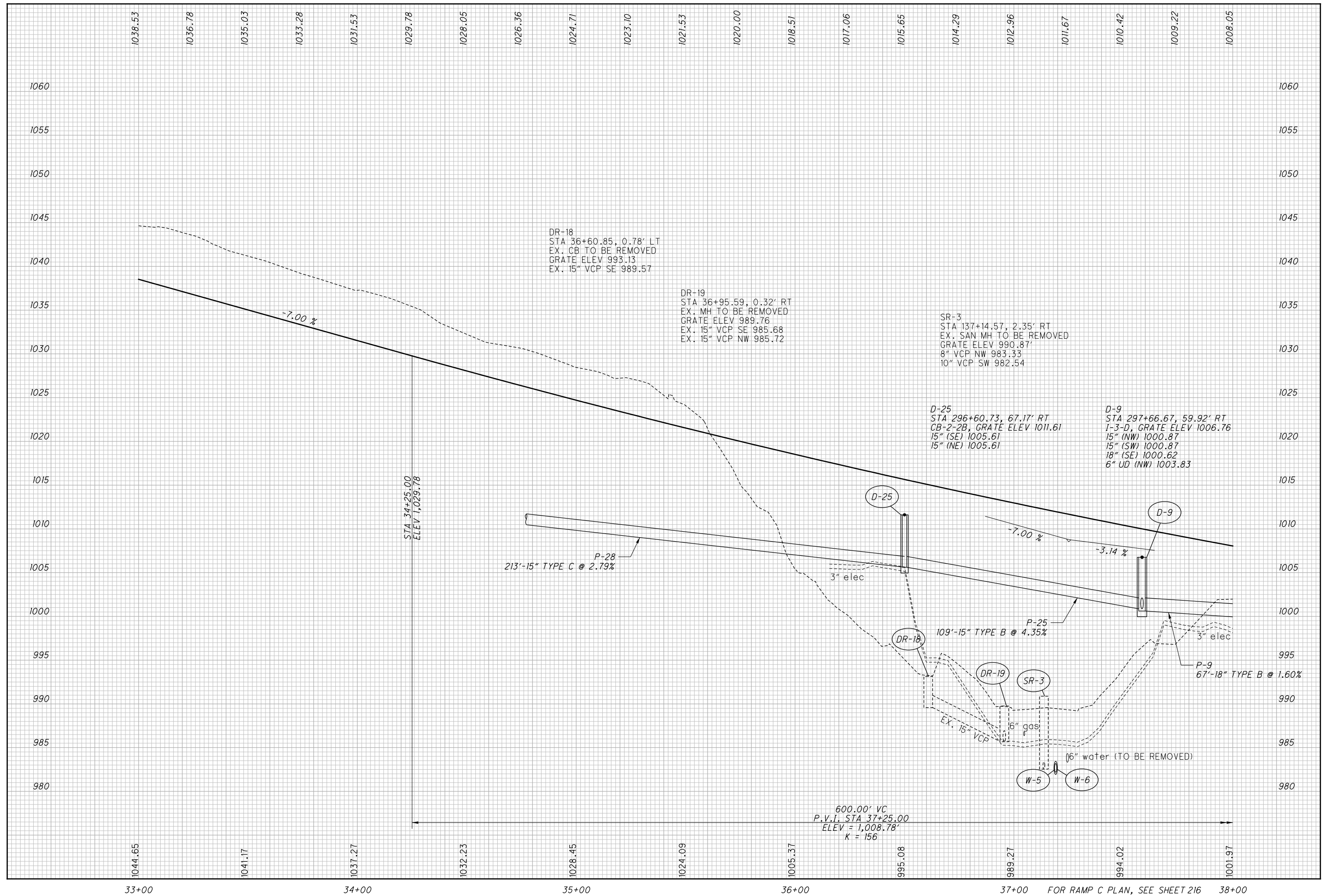
- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
P	32+50.00	36+98.20	RAMP C	LT	PAVEMENT	12.00'	16.00'

FOR RAMP C PROFILE, SEE SHEET 217  
FOR GORE DETAILS, SEE SHEET 343  
FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
FOR ROMIG AVE PLANS, SEE SHEETS 231 - 232  
FOR NOISE BARRIER PLANS, SEE SHEETS 496 - 508  
FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
FOR RAMP C1 PLANS, SEE SHEETS 220 - 225  
FOR PIPE PROFILES, SEE SHEETS 217, 245, 287, 294  
FOR STRUCTURE REMOVAL PLANS, SEE SHEETS 531 - 538  
FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
FOR FENCE PLANS, SEE SHEETS 643 - 645  
FOR PAVEMENT JOINT DETAILS, SEE SHEET 345  
FOR LIGHTING PLANS, SEE SHEETS 482 - 495



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CALCULATED  
ATR  
CHECKED  
CWL

PROFILE - RAMP C  
STA. 33+00.00 TO STA. 38+00.00

SUM-76-5.53

217  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_GP033.dgn Ramp C 11/20/2018 10:13:25 AM cluzier

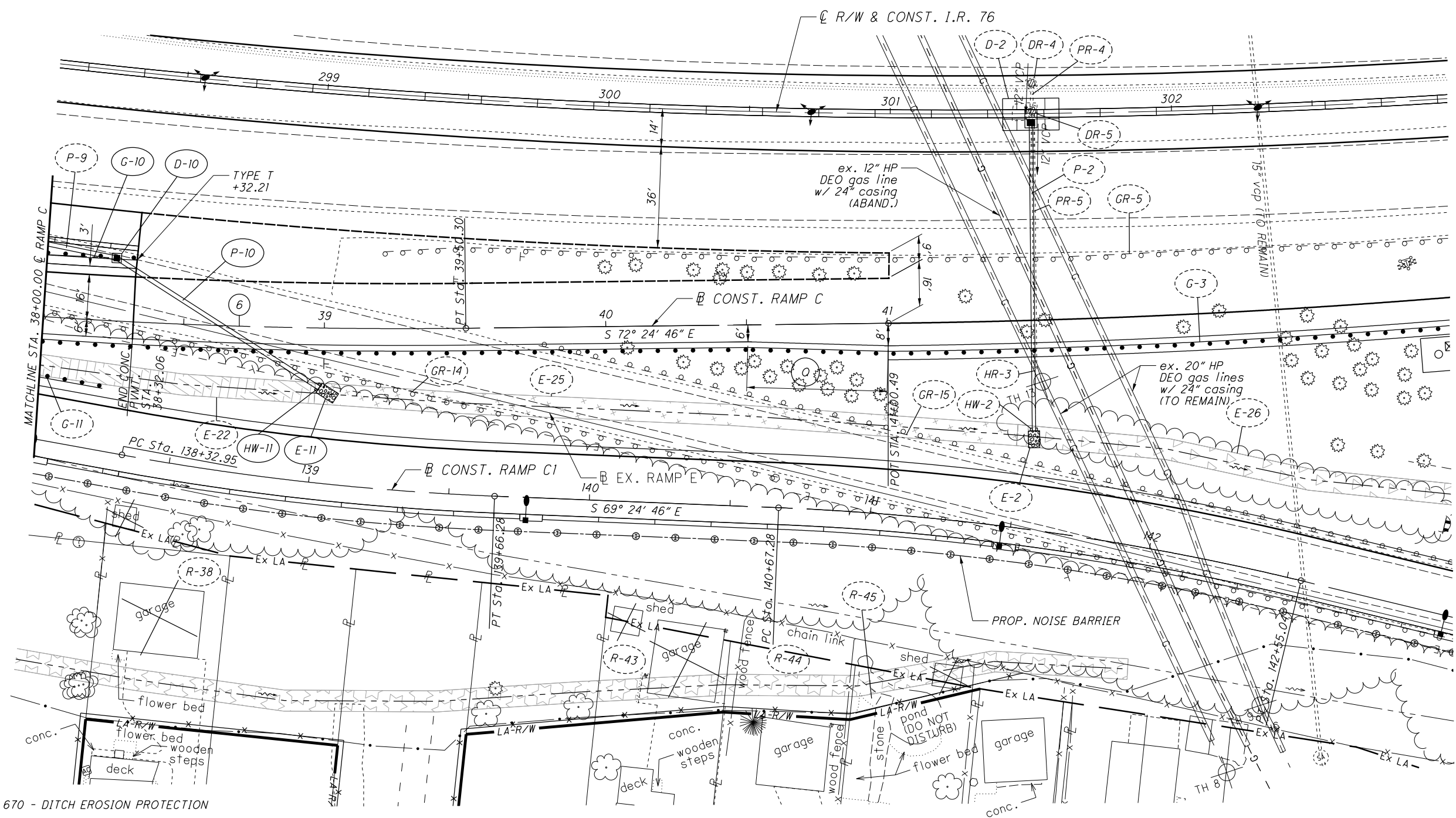
FOR NOISE BARRIER PLANS, SEE SHEETS 496-508  
 FOR RAMP C PROFILE, SEE SHEETS 219  
 FOR GORE DETAILS, SEE SHEET 342  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
 FOR PIPE PROFILES, SEE SHEET 219  
 FOR RAMP C1 PLANS, SEE SHEETS 220-225  
 FOR I.R. 76 PLANS, SEE SHEETS 192-201  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR LIGHTING PLANS, SEE SHEETS 482-495  
 FOR ITS PLANS, SEE SHEETS 475-481  
 FOR PAVEMENT JOINT DETAILS, SEE SHEET 345

6 @ CONST. RAMP C  
 P.I. Sta. 38+67.02  
 $\Delta = 5^{\circ} 00' 00''$  (LT)  
 $D_c = 3^{\circ} 00' 00''$   
 $R = 1,909.86'$   
 $T = 83.39'$   
 $L = 166.67'$   
 $E = 1.82'$   
 $C = 166.61'$   
 $C.B. = S 69^{\circ} 54' 46'' E$   
 $e_{max} = 0.045$   
 $D.S. = 50$  MPH  
 P.C. STA. 37+83.63  
 P.T. STA. 39+50.30



**PLAN - RAMP C**  
**STA. 38+00.00 TO END**

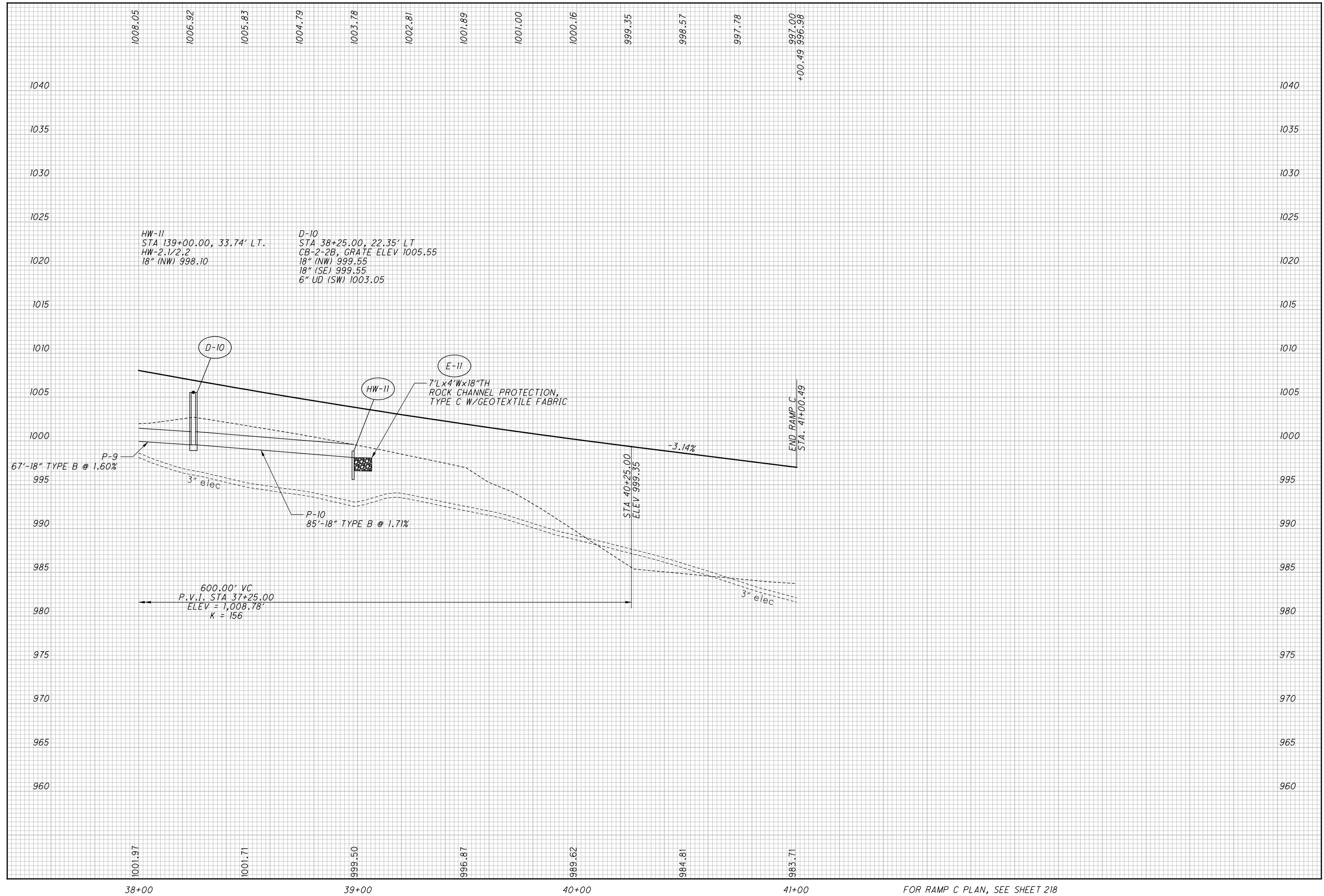
**SUM-76-5.53**



- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2
- ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
Q	40+50.49	RAMP C	41+00.49	RAMP C	RT	SHOULDER	6.00' 8.00' 25:1

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FOR RAMP C PLAN, SEE SHEET 218

CALCULATED  
ATR  
CHECKED  
CWL

**PROFILE - RAMP C**  
**STA. 38+00.00 TO END**

**SUM - 76 - 5.53**

219  
672



0 20 40  
HORIZONTAL SCALE IN FEET

CALCULATED  
ATR  
CHECKED  
CWL

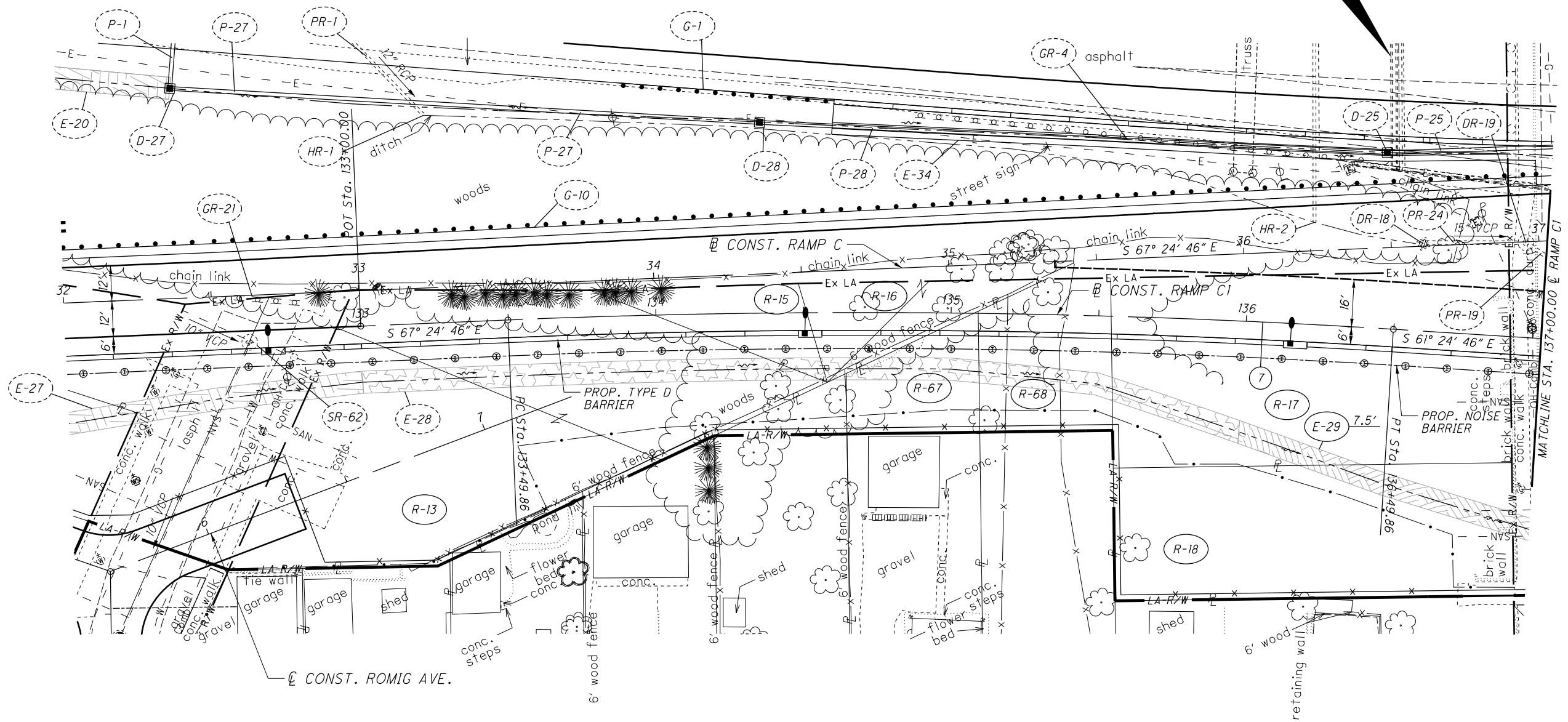
PLAN - RAMP C1  
BEGIN TO STA. 137+00.00




SUM-76-5.53

220  
672

7 CONST. RAMP C1  
P.I. Sta. 135+00.00  
 $\Delta = 6^\circ 00' 00''$  (RT)  
 $D_c = 2^\circ 00' 00''$   
 $R = 2,864.79'$   
 $T = 150.14'$   
 $L = 300.00'$   
 $E = 3.93'$   
 $C = 299.86'$   
 $C.B. = S 64^\circ 24' 46'' E$   
 $e_{max} = 0.016$   
 $D.S. = 30$  MPH  
P.C. STA. 133+49.86  
P.T. STA. 136+49.86

STRUCTURE NO.  
SUM-076-0563 L/R  
(TO BE REMOVED)



-  - ITEM 670 - DITCH EROSION PROTECTION
-  - ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
-  - ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1

FOR PAVEMENT JOINT DETAILS, SEE SHEET 345  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
 FOR I.R. 76 PLANS, SEE SHEETS 192-201  
 FOR LIGHTING PLANS, SEE SHEETS 482-495  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR STRUCTURE REMOVAL PLANS, SEE SHEETS 531-538  
 FOR RAMP C PLANS, SEE SHEETS 214-219  
 FOR ROMIG AVE. PLAN, SEE SHEETS 231-232  
 FOR NOISE BARRIER PLAN, SEE SHEETS 496-508  
 FOR RAMP C1 PROFILE, SEE SHEET 221  
 FOR GORE DETAILS, SEE SHEET 343  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360

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CALCULATED
ATR
CHECKED
CWL

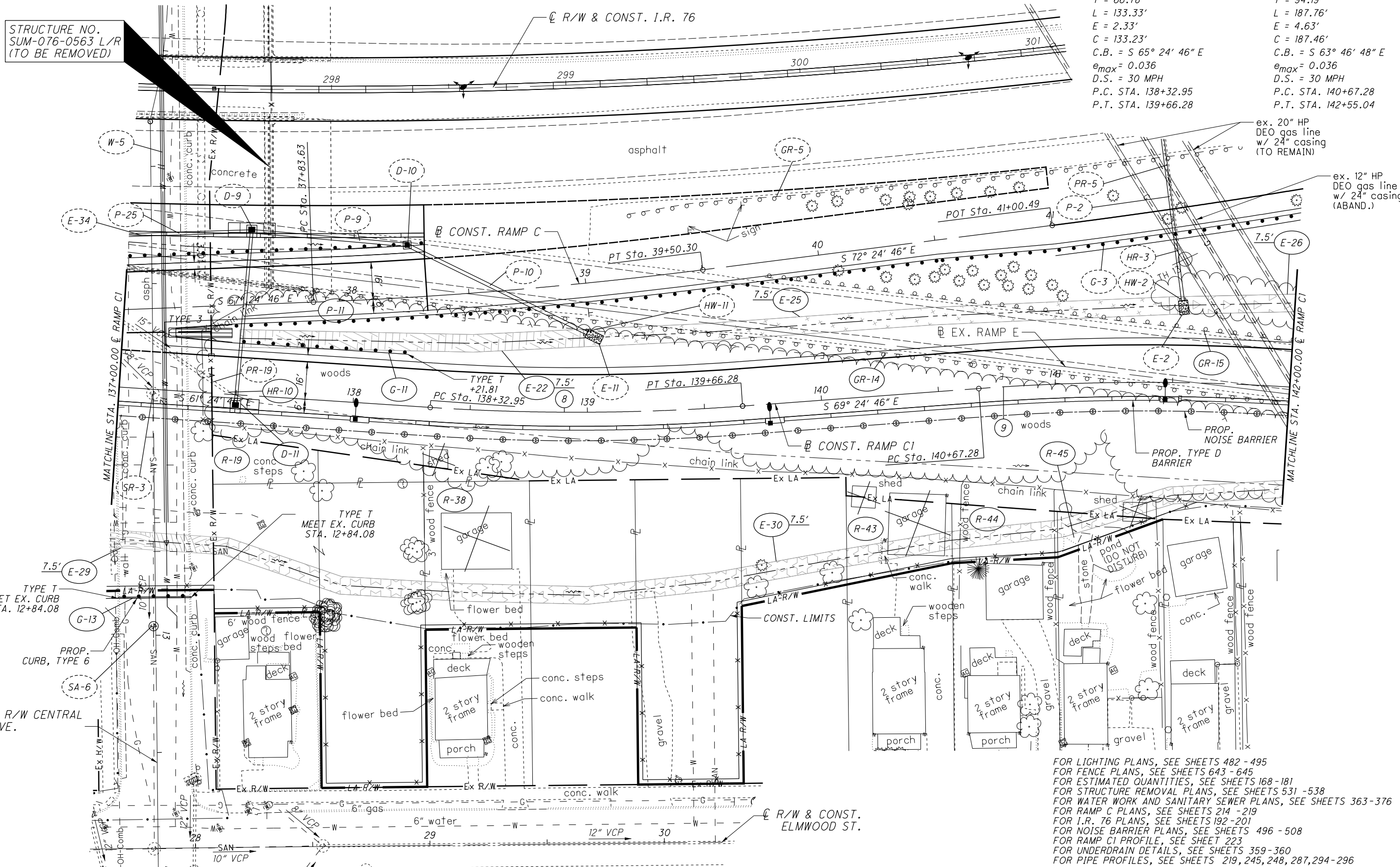
**PROFILE - RAMP C1  
BEGIN TO STA. 137+00.00**

**SUM - 76 - 5.53**

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
- ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1
- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2

STRUCTURE NO. SUM-076-0563 L/R (TO BE REMOVED)



8 CONST. RAMP C1  
 P.I. Sta. 138+99.73  
 $\Delta = 8^\circ 00' 00''$  (LT)  
 $D_c = 6^\circ 00' 00''$   
 $R = 954.93'$   
 $T = 66.78'$   
 $L = 133.33'$   
 $E = 2.33'$   
 $C = 133.23'$   
 $C.B. = S 65^\circ 24' 46'' E$   
 $e_{max} = 0.036$   
 $D.S. = 30$  MPH  
 P.C. STA. 138+32.95  
 P.T. STA. 139+66.28

9 CONST. RAMP C1  
 P.I. Sta. 141+61.47  
 $\Delta = 11^\circ 15' 57''$  (RT)  
 $D_c = 6^\circ 00' 00''$   
 $R = 954.93'$   
 $T = 94.19'$   
 $L = 187.76'$   
 $E = 4.63'$   
 $C = 187.46'$   
 $C.B. = S 63^\circ 46' 48'' E$   
 $e_{max} = 0.036$   
 $D.S. = 30$  MPH  
 P.C. STA. 140+67.28  
 P.T. STA. 142+55.04



PLAN - RAMP C1  
 STA. 137+00.00 TO STA. 142+00.00

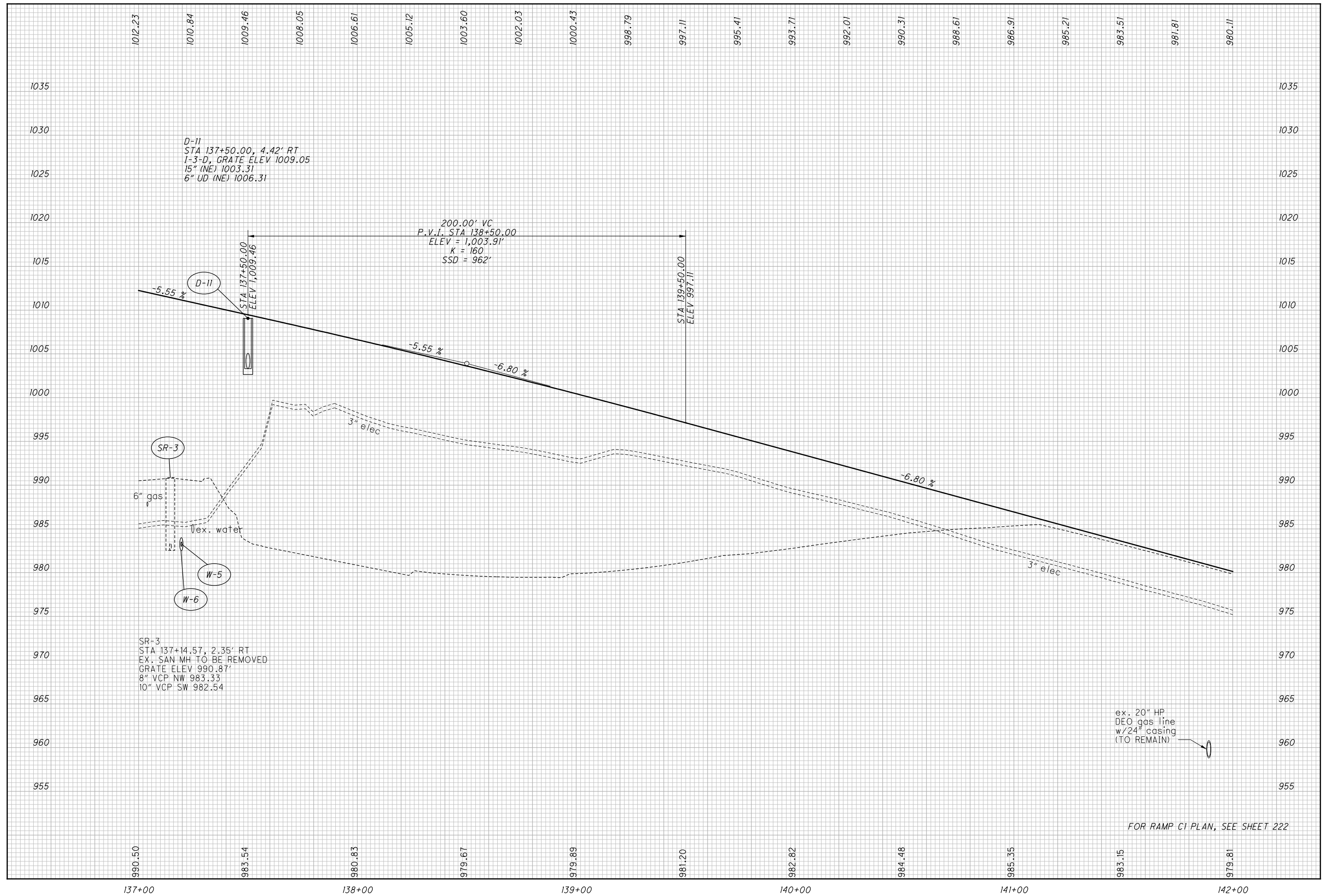
SUM-76-5.53

222  
672

FOR LIGHTING PLANS, SEE SHEETS 482 - 495  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR STRUCTURE REMOVAL PLANS, SEE SHEETS 531 - 538  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
 FOR RAMP C PLANS, SEE SHEETS 214 - 219  
 FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
 FOR NOISE BARRIER PLANS, SEE SHEETS 496 - 508  
 FOR RAMP C1 PROFILE, SEE SHEET 223  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
 FOR PIPE PROFILES, SEE SHEETS 219, 245, 248, 287, 294 - 296

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CALCULATED  
ATR  
CHECKED  
CWL

**PROFILE - RAMP C1**  
**STA. 137+00 TO 142+00.00**

**SUM - 76 - 5.53**

223  
672

ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2

STRUCTURE NO. SUM-076-0577

9 CONST. RAMP C1  
 P.I. Sta. 141+61.47  
 $\Delta = 11^\circ 15' 57''$  (RT)  
 $D_c = 6^\circ 00' 00''$   
 $R = 954.93'$   
 $T = 94.19'$   
 $L = 187.76'$   
 $E = 4.63'$   
 $C = 187.46'$   
 $C.B. = S 63^\circ 46' 48'' E$   
 $e_{max} = 0.036$   
 $D.S. = 30$  MPH  
 P.C. STA. 140+67.28  
 P.T. STA. 142+55.04

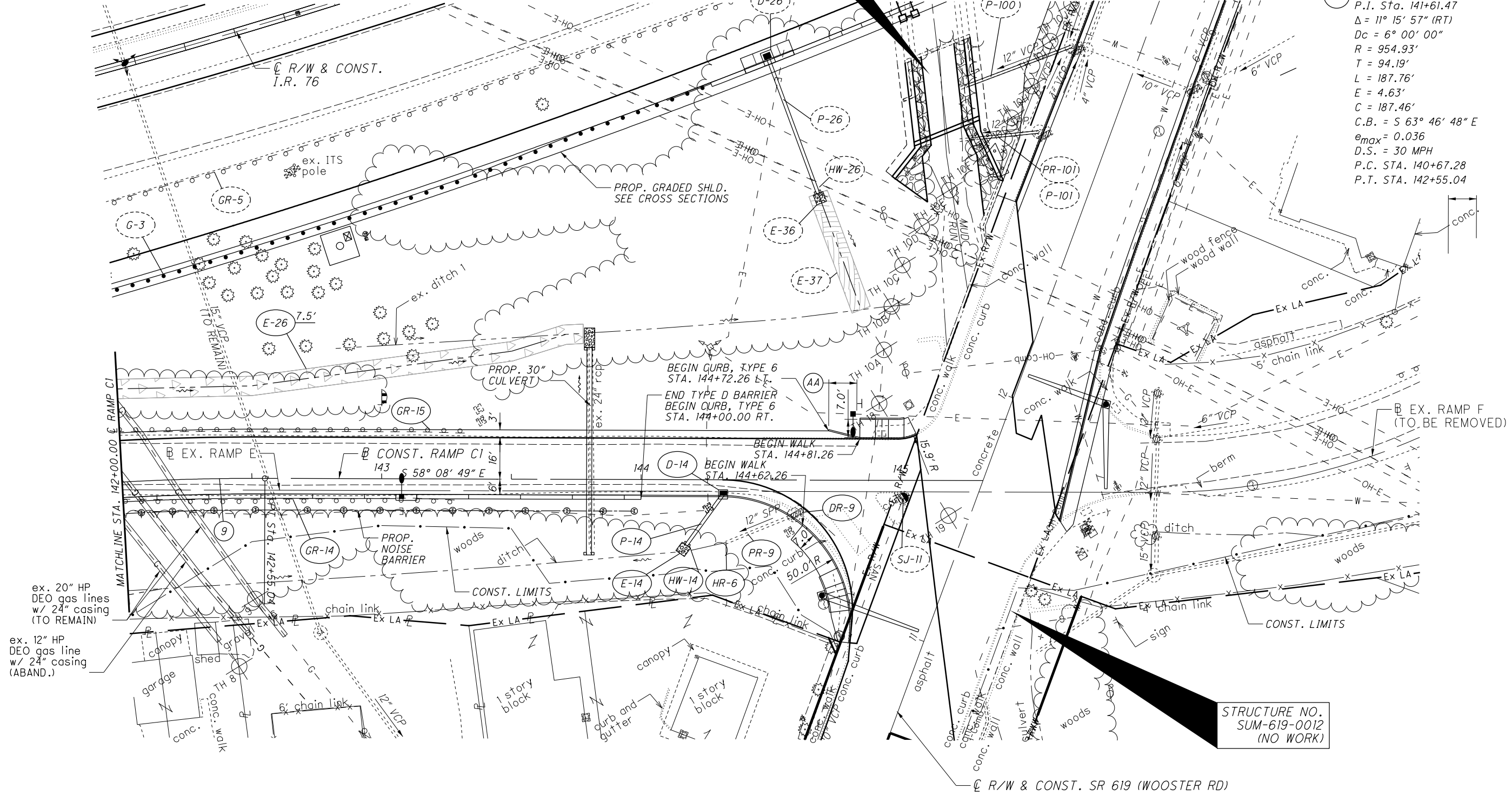


PLAN - RAMP C1  
 STA. 142+00.00 TO END

SUM-76-5.53

224  
672

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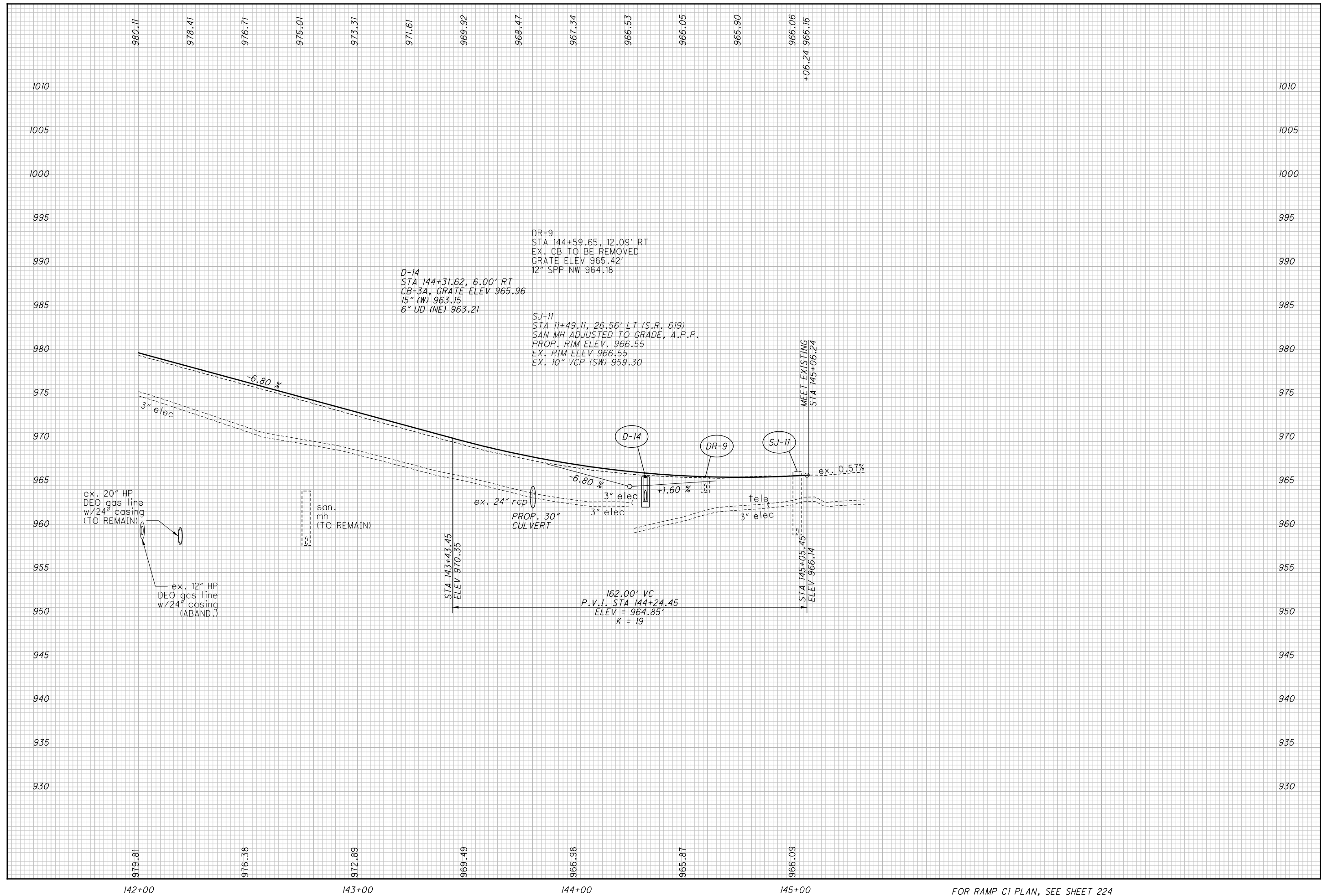


TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AA	144+72.26	RAMP C1	144+84.26	RAMP C1	RT	SHOULDER	3.00' 0.00' 4:1

FOR PIPE PROFILES, SEE SHEET 298  
 FOR PAVEMENT JOINT DETAILS, SEE SHEET 349  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
 FOR FENCE PLANS, SEE SHEETS 643-645  
 FOR LIGHTING PLANS, SEE SHEETS 482-495  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR I.R. 76 PLANS, SEE SHEETS 192-201  
 FOR NOISE BARRIER PLANS, SEE SHEETS 496-508  
 FOR CULVERT DETAILS, SEE SHEET 355  
 FOR S.R. 619 (WOOSTER RD.) PLANS, SEE SHEETS 233-234  
 FOR RAMP C1 PROFILE, SEE SHEET 225  
 FOR INTERSECTION DETAILS, SEE SHEET 337  
 FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
 FOR ITS PLANS, SEE SHEETS 475-481  
 FOR STRUCTURE PLANS, SEE SHEETS 539-552



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980.11  
978.41  
976.71  
975.01  
973.31  
971.61  
969.92  
968.47  
967.34  
966.53  
966.05  
965.90  
966.06  
+06.24 966.16

1010  
1005  
1000  
995  
990  
985  
980  
975  
970  
965  
960  
955  
950  
945  
940  
935  
930

D-14  
STA 144+31.62, 6.00' RT  
CB-3A, GRATE ELEV 965.96  
15" (W) 963.15  
6" UD (NE) 963.21

DR-9  
STA 144+59.65, 12.09' RT  
EX. CB TO BE REMOVED  
GRATE ELEV 965.42'  
12" SPP NW 964.18

SJ-11  
STA 11+49.11, 26.56' LT (S.R. 619)  
SAN MH ADJUSTED TO GRADE, A.P.P.  
PROP. RIM ELEV. 966.55  
EX. RIM ELEV 966.55  
EX. 10" VCP (SW) 959.30

ex. 20" HP DEO gas line w/24" casing (TO REMAIN)

ex. 12" HP DEO gas line w/24" casing (ABAND.)

san. mh (TO REMAIN)

STA 143+43.45  
ELEV 970.35

PROP. 30" CULVERT

162.00' VC  
P.V.I. STA 144+24.45  
ELEV = 964.85'  
K = 19

STA 145+05.45  
ELEV 966.14

MEET EXISTING STA 145+06.24

142+00  
143+00  
144+00  
145+00

FOR RAMP C1 PLAN, SEE SHEET 224

CALCULATED  
ATR  
CHECKED  
CWL

PROFILE - RAMP C1  
STA. 142+00.00 TO END

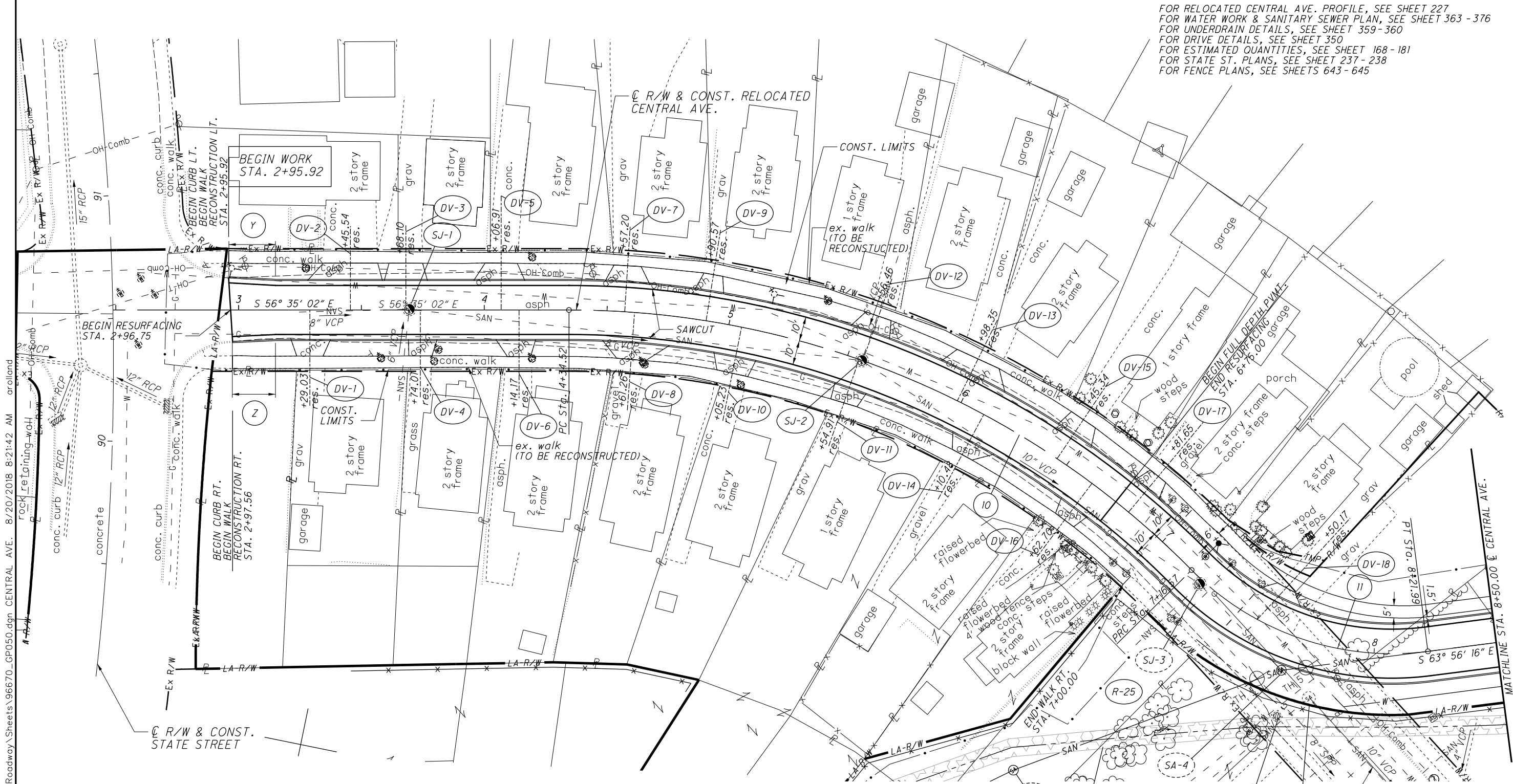
SUM - 76 - 5.53

225  
672

FOR RELOCATED CENTRAL AVE. PROFILE, SEE SHEET 227  
 FOR WATER WORK & SANITARY SEWER PLAN, SEE SHEET 363 - 376  
 FOR UNDERDRAIN DETAILS, SEE SHEET 359 - 360  
 FOR DRIVE DETAILS, SEE SHEET 350  
 FOR ESTIMATED QUANTITIES, SEE SHEET 168 - 181  
 FOR STATE ST. PLANS, SEE SHEET 237 - 238  
 FOR FENCE PLANS, SEE SHEETS 643 - 645

CALCULATED  
 ATR  
 CHECKED  
 TMT

0 20 40  
 HORIZONTAL  
 SCALE IN FEET



PLAN - RELOCATED CENTRAL AVE.  
 BEGIN TO STA. 8+50.00

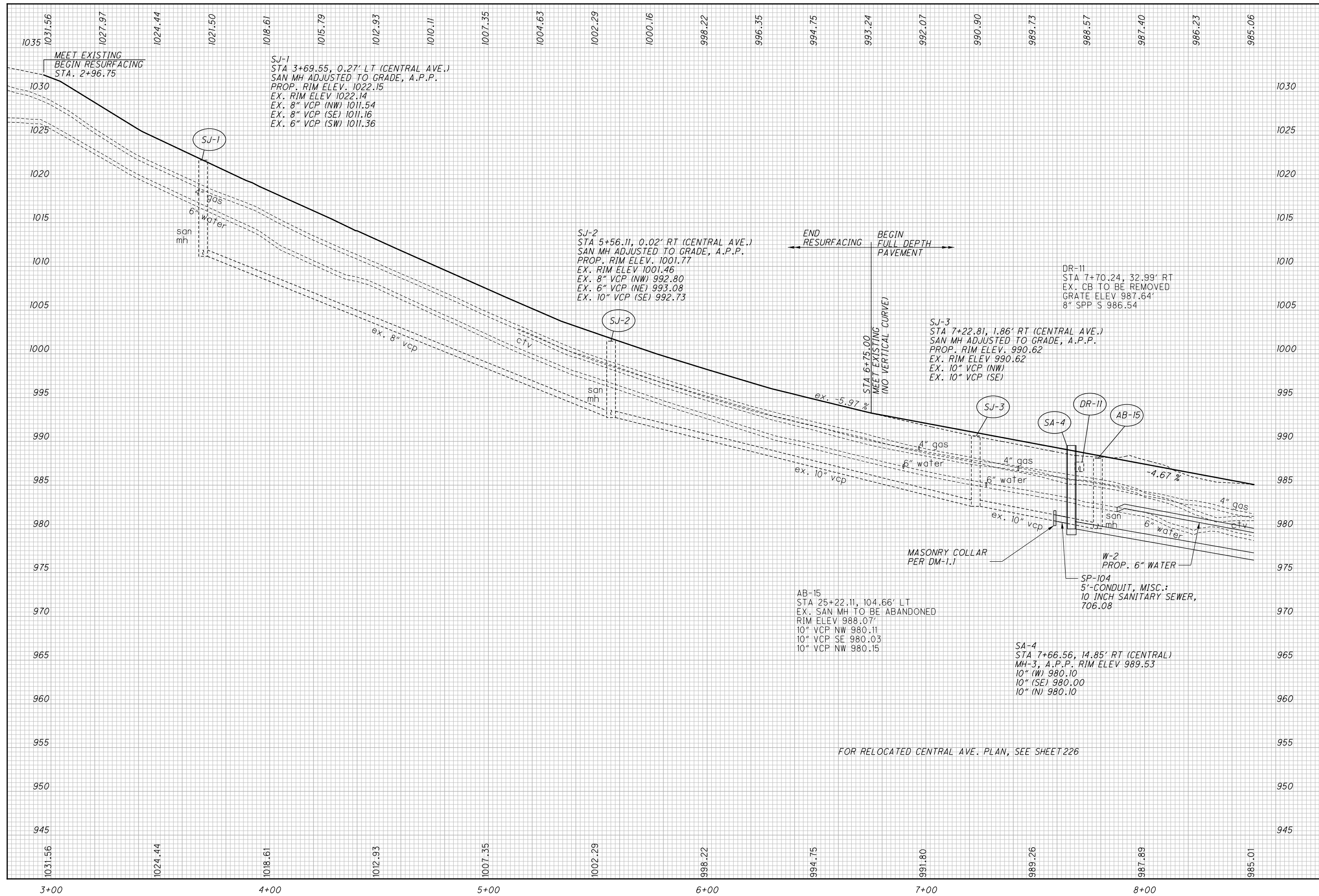
O:\2016\2016146\ProjectData\Design\Roadway\96670\GP050.dgn CENTRAL AVE. 8/20/2018 8:21:42 AM orolland

- ⑩ ☉ CONST. RELOCATED CENTRAL AVE.  
 P.I. Sta. 5+83.40  
 $\Delta = 45^\circ 21' 20''$  (RT)  
 $D_c = 16^\circ 04' 51''$   
 $R = 356.30'$   
 $T = 148.88'$   
 $L = 282.05'$   
 $E = 29.85'$   
 $C = 274.74'$   
 C.B. =  $S 33^\circ 54' 16'' E$   
 $e_{max} = \text{EXISTING}$   
 D.S. = 30 MPH  
 P.C. STA. 4+34.52  
 P.R.C. STA. 7+16.57
- ⑪ ☉ CONST. RELOCATED CENTRAL AVE.  
 P.I. Sta. 7+73.34  
 $\Delta = 52^\circ 42' 40''$  (LT)  
 $D_c = 50^\circ 00' 00''$  (NDC =  $22^\circ 45'$ )  
 $R = 114.59'$   
 $T = 56.77'$   
 $L = 105.42'$   
 $E = 13.29'$   
 $C = 101.74'$   
 C.B. =  $S 37^\circ 34' 56'' E$   
 $e_{max} = 0.04$   
 D.S. = 30 MPH  
 P.R.C. STA. 7+16.57  
 P.T. STA. 8+21.99

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
Y	2+96.05	CENTRAL 3+15.00	CENTRAL	LT PAVEMENT	11.05'	10.00'	18:1
Z	2+97.44	CENTRAL 3+15.00	CENTRAL	RT PAVEMENT	10.82'	10.00'	21:1

ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_Cf050.dgn CENTRAL AVE 8/20/2018 8:22:19 AM arolland



CALCULATED  
ATR  
CHECKED  
CWL

**PROFILE - RELOCATED CENTRAL AVE.  
BEGIN TO STA. 8+50.00**

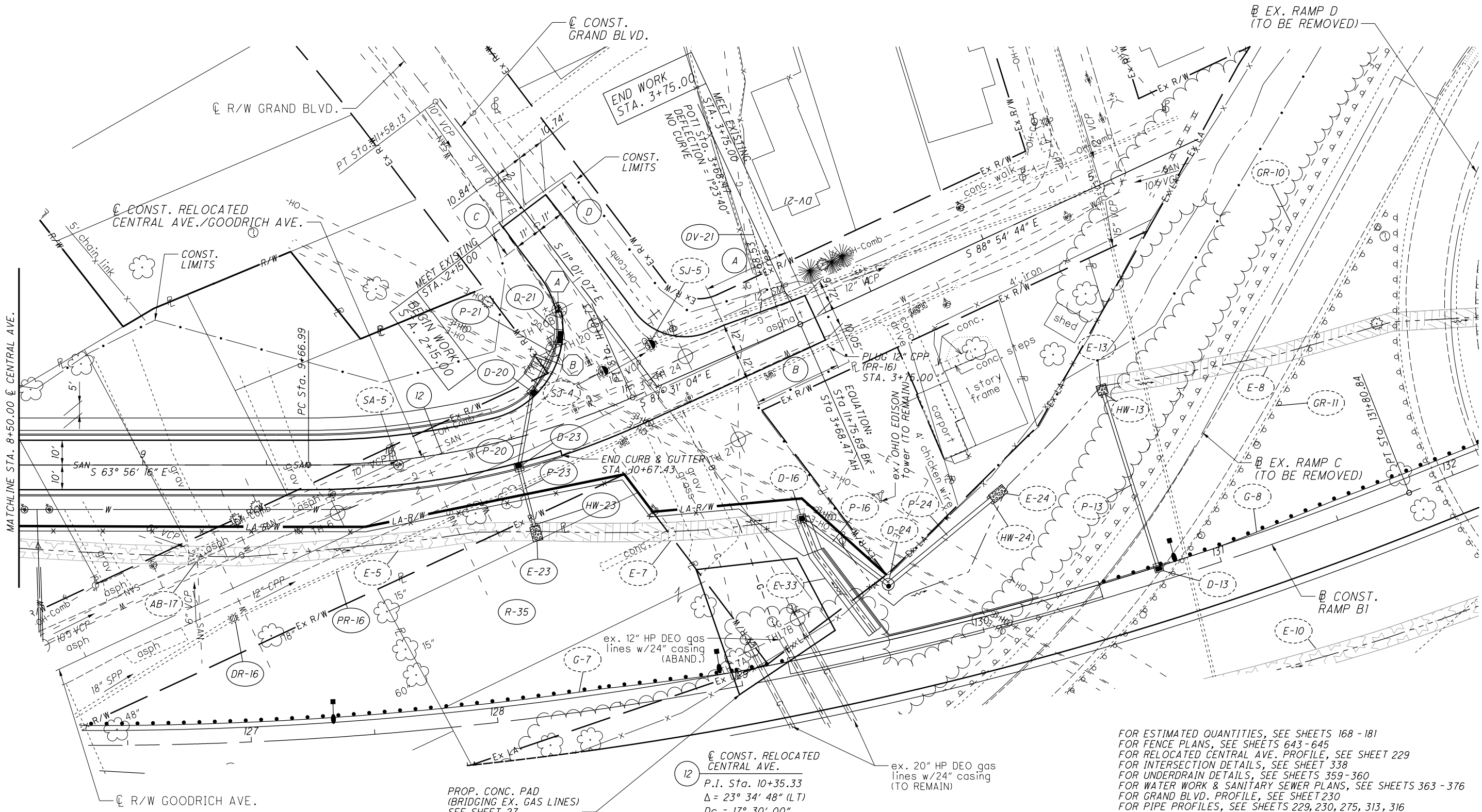
**SUM-76-5.53**

227  
672

O:\2016\146\ProjectData\SUM\96670\Design\Roadway\Roadway\96670\_CP051.dgn CENTRAL AVE. 8/20/2018 8:28:02 AM oroland

**A** END CURB & GUTTER  
STA. 2+55.53

**B** END WALK  
STA. 10+75.71



- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I

**12** **CONST. RELOCATED CENTRAL AVE.**  
P.I. Sta. 10+35.33  
 $\Delta = 23^\circ 34' 48''$  (LT)  
 $D_c = 17^\circ 30' 00''$   
 $R = 327.40'$   
 $T = 68.34'$   
 $L = 134.74'$   
 $E = 7.06'$   
 $C = 133.79'$   
C.B. = S 75° 43' 40" E  
 $e_{max} = N.C.$   
D.S. = 30 MPH  
P.C. STA. 9+66.99  
P.T. STA. 11+01.73

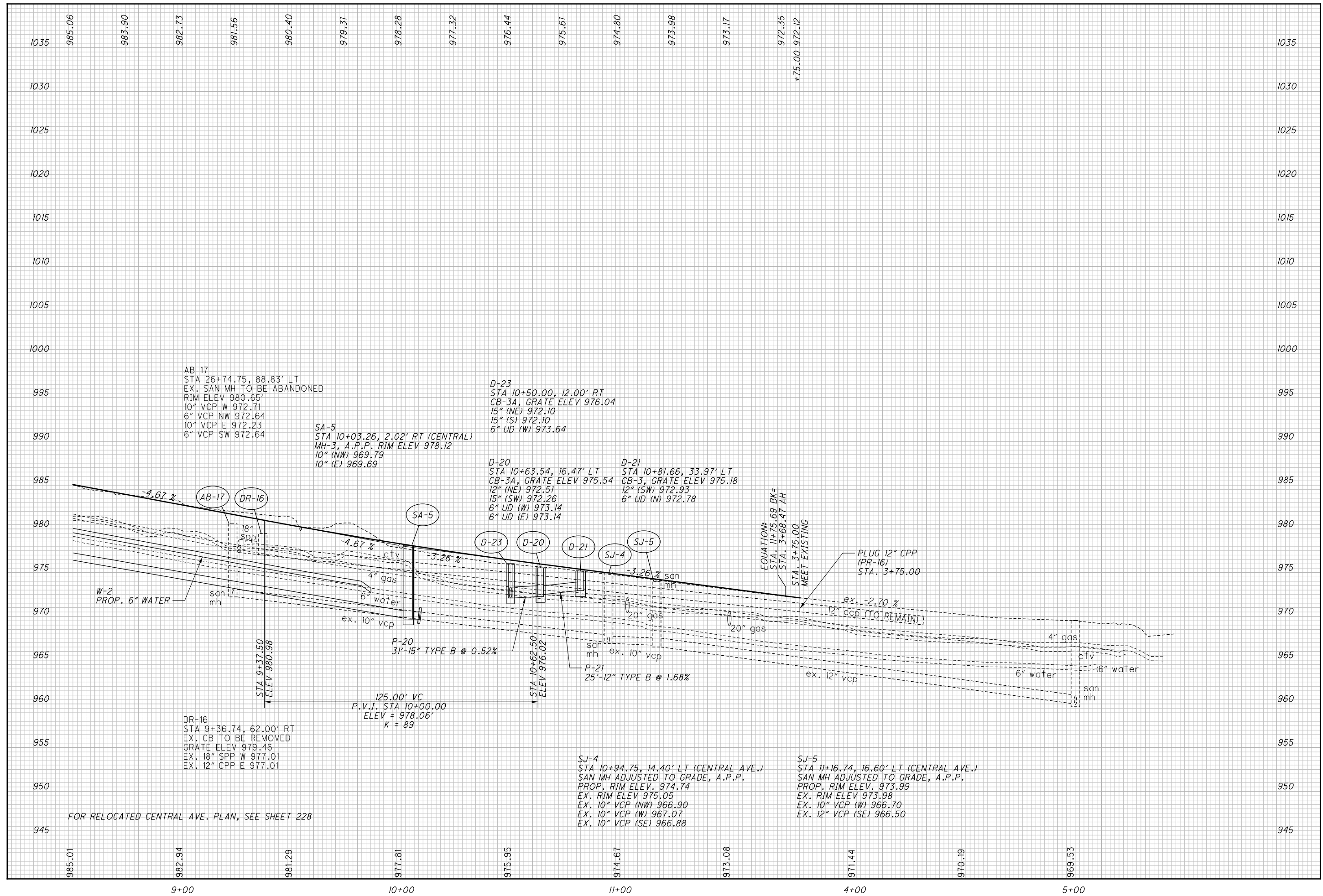
FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
FOR FENCE PLANS, SEE SHEETS 643 - 645  
FOR RELOCATED CENTRAL AVE. PROFILE, SEE SHEET 229  
FOR INTERSECTION DETAILS, SEE SHEET 338  
FOR UNDERDRAIN DETAILS, SEE SHEETS 359 - 360  
FOR WATER WORK & SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
FOR GRAND BLVD. PROFILE, SEE SHEET 230  
FOR PIPE PROFILES, SEE SHEETS 229, 230, 275, 313, 316  
FOR RAMP B1 PLANS, SEE SHEETS 208 - 213  
FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
FOR LIGHTING PLANS, SEE SHEETS 482 - 495

TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE		
A	11+47.22	CENTRAL	CENTRAL	LT	PAVEMENT	12.00'	9.72'	15:1	
B	11+47.22	CENTRAL	3+75.00	CENTRAL	RT	PAVEMENT	12.00'	10.05'	18:1
C	2+15.00	GRAND	2+25.00	GRAND	RT	PAVEMENT	10.84'	11.00'	62:1
D	2+15.00	GRAND	2+25.00	GRAND	LT	PAVEMENT	10.74'	11.00'	38:1

**PLAN - RELOCATED CENTRAL AVE.**  
**STA. 8+50.00 TO END**

**SUM-76-5.53**

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FOR RELOCATED CENTRAL AVE. PLAN, SEE SHEET 228

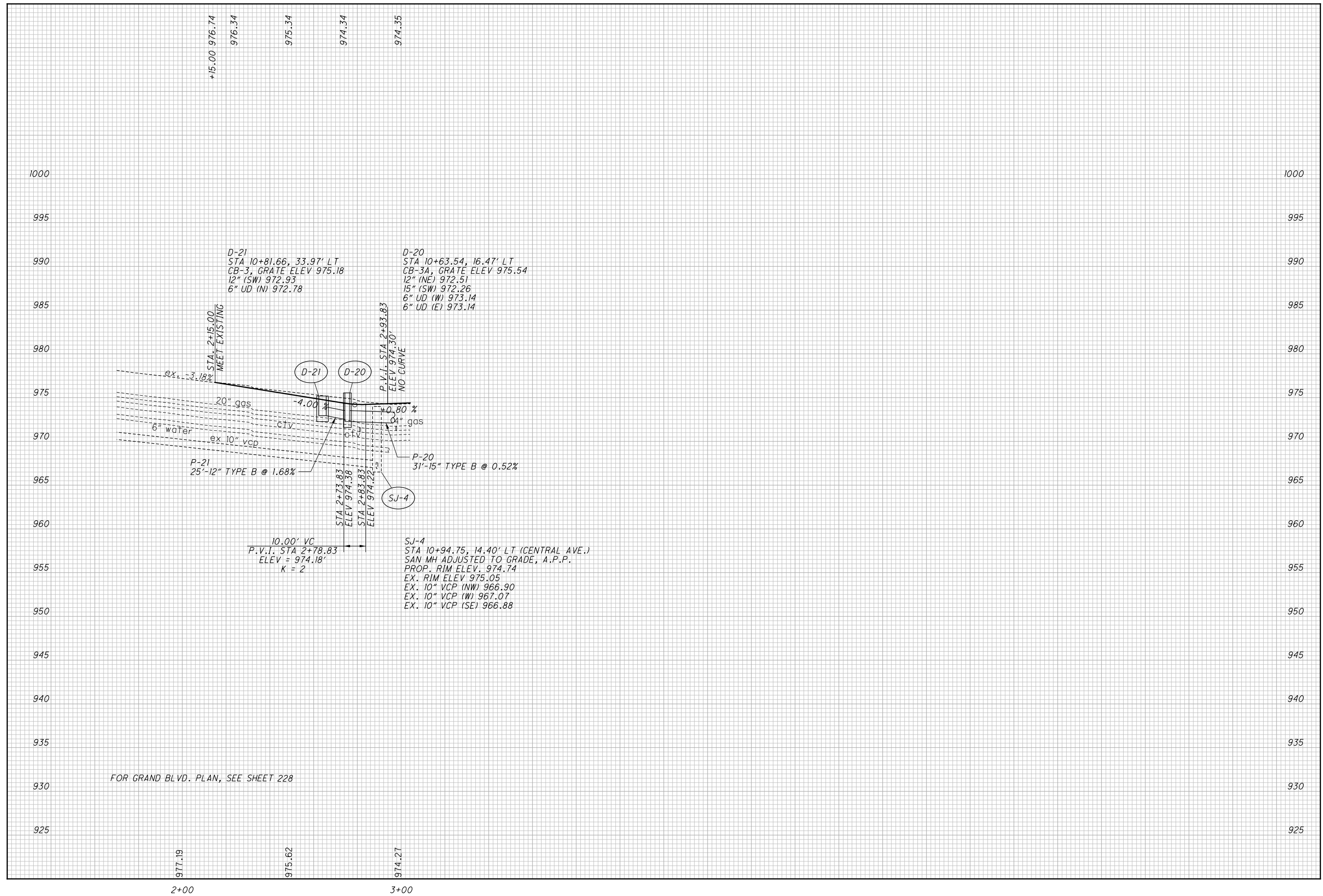
CALCULATED  
A TR  
CHECKED  
CWL

PROFILE - RELOCATED CENTRAL AVE.  
STA. 8+50.00 TO END

SUM-76-5.53

229  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_Cf052.dgn GRAND BLVD. 8/17/2018 3:29:36 PM arolland



FOR GRAND BLVD. PLAN, SEE SHEET 228

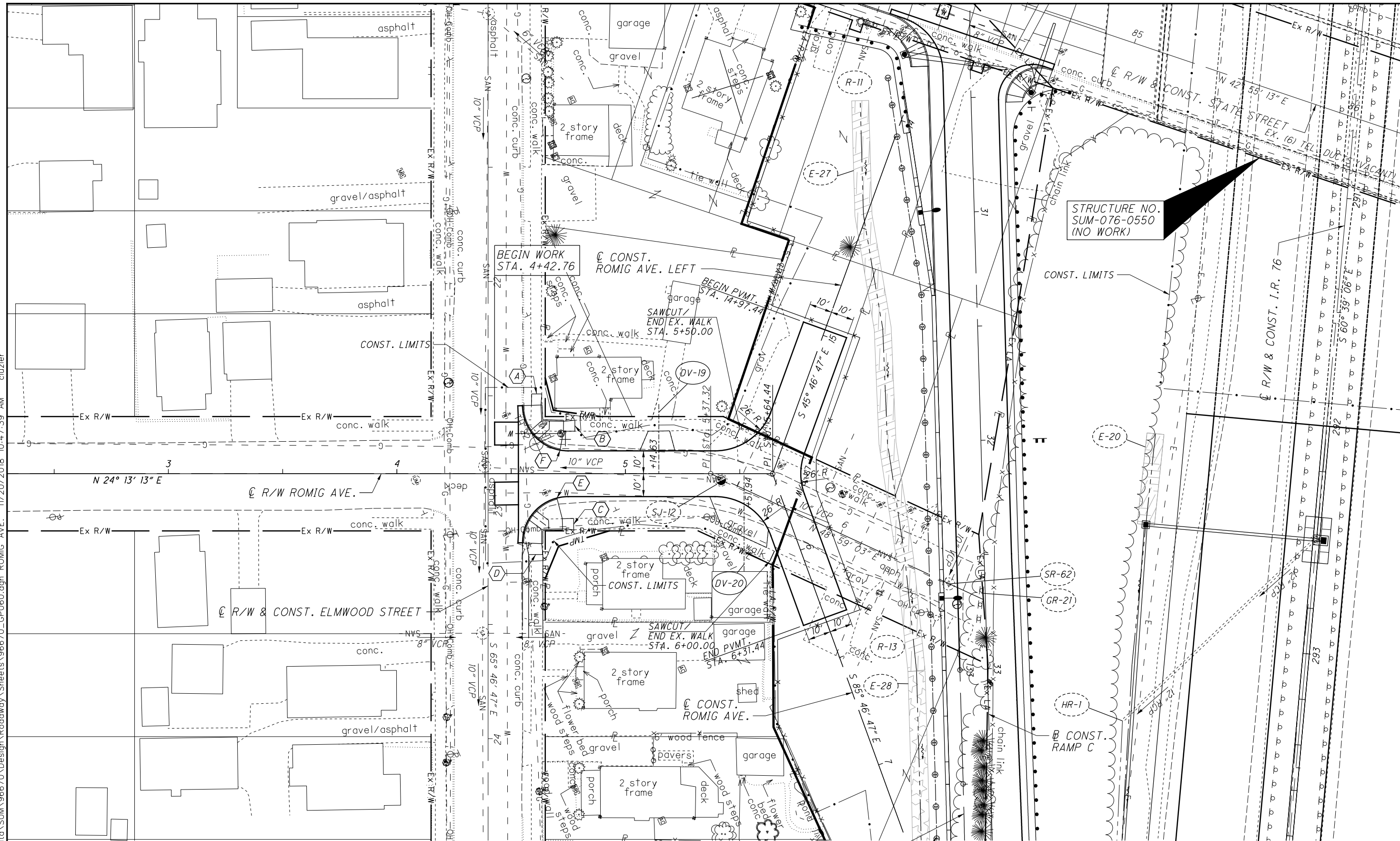
CALCULATED
ATR
CHECKED
CWL

PROFILE - GRAND BLVD.  
STA. 2+15.00 TO END

SUM-76-5.53

230  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CP060.dgn ROMIG AVE. 11/20/2018 10:47:39 AM cluzier



CALCULATED  
ATR  
CHECKED  
CWL

0 20 40  
10'  
HORIZONTAL  
SCALE IN FEET

**PLAN - ROMIG AVENUE**

**SUM-76-5.53**

231  
672

STRUCTURE NO.  
SUM-076-0550  
(NO WORK)

BEGIN WORK  
STA. 4+42.76

CONST.  
ROMIG AVE. LEFT

BEGIN PVMT.  
STA. 14+97.44

SAWCUT/  
END EX. WALK  
STA. 5+50.00

SAWCUT/  
END EX. WALK  
STA. 6+00.00

END PVMT.  
STA. 6+31.44

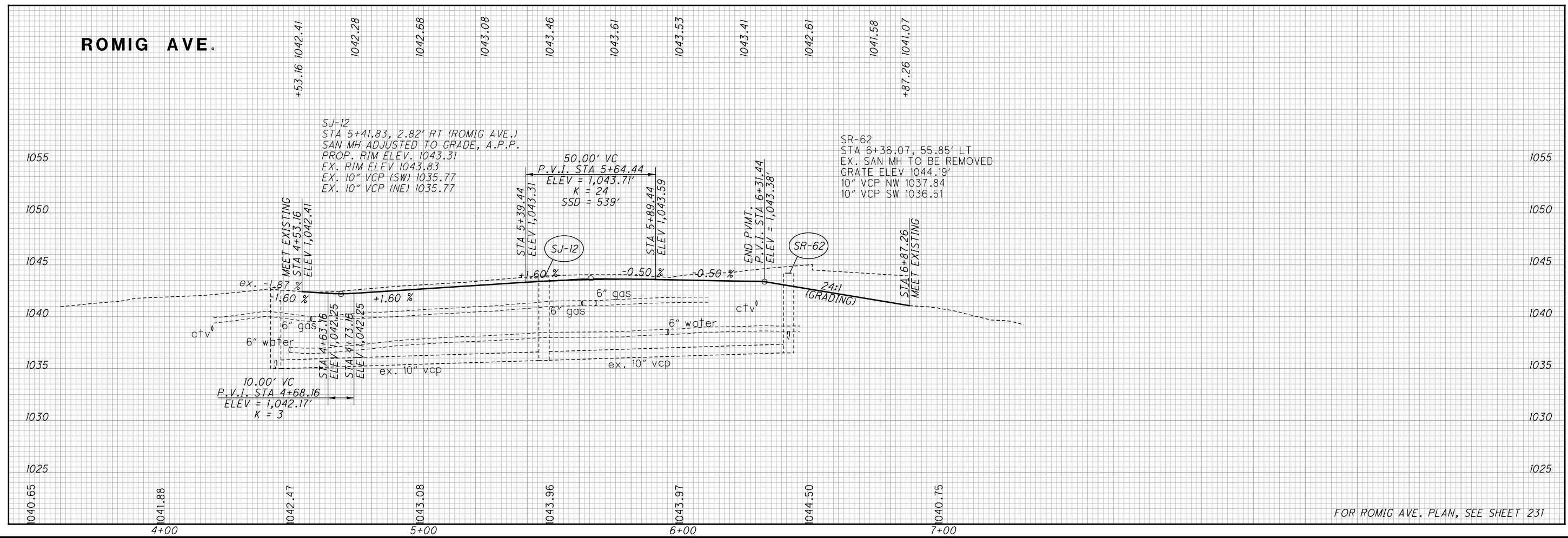
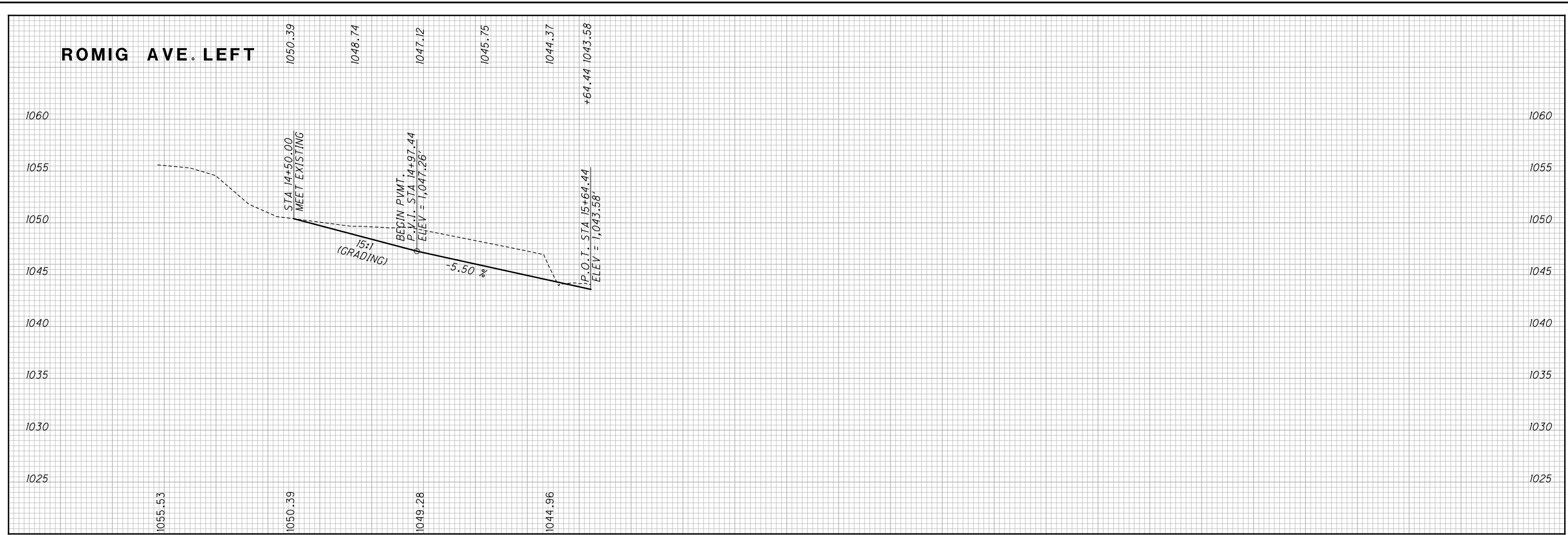
- (A) MEET EX. WALK  
STA. 22+49.20 LT. (ELMWOOD)
- (B) MEET EX. WALK  
STA. 4+77.88 LT. (ROMIG)
- (C) MEET EX. WALK  
STA. 4+77.35 RT. (ROMIG)
- (D) MEET EX. WALK  
STA. 23+19.47 LT. (ELMWOOD)
- (E) END CURB, TYPE 6  
STA. 4+70.02 (ROMIG)
- (F) END CURB, TYPE 6  
STA. 4+71.40 (ROMIG)

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

FOR LIGHTING PLANS, SEE SHEETS 482-495  
FOR FENCE PLANS, SEE SHEETS 643 - 645  
FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
FOR ROMIG AVE. PROFILES, SEE SHEET 232  
FOR INTERSECTION DETAILS, SEE SHEET 339  
FOR UNDERDRAIN DETAILS, SEE SHEETS 359-360  
FOR RAMP C PLANS, SEE SHEETS 214 - 219  
FOR RAMP C1 PLANS, SEE SHEETS 220 - 225  
FOR DRIVE DETAILS, SEE SHEET 350  
FOR I.R. 76 PLANS, SEE SHEETS 192-201  
FOR STATE ST. PLANS, SEE SHEETS 237-238  
FOR NOISE BARRIER PLANS, SEE SHEET 496 - 508

FOR ESTIMATED QUANTITIES, SEE SHEET 168 - 181

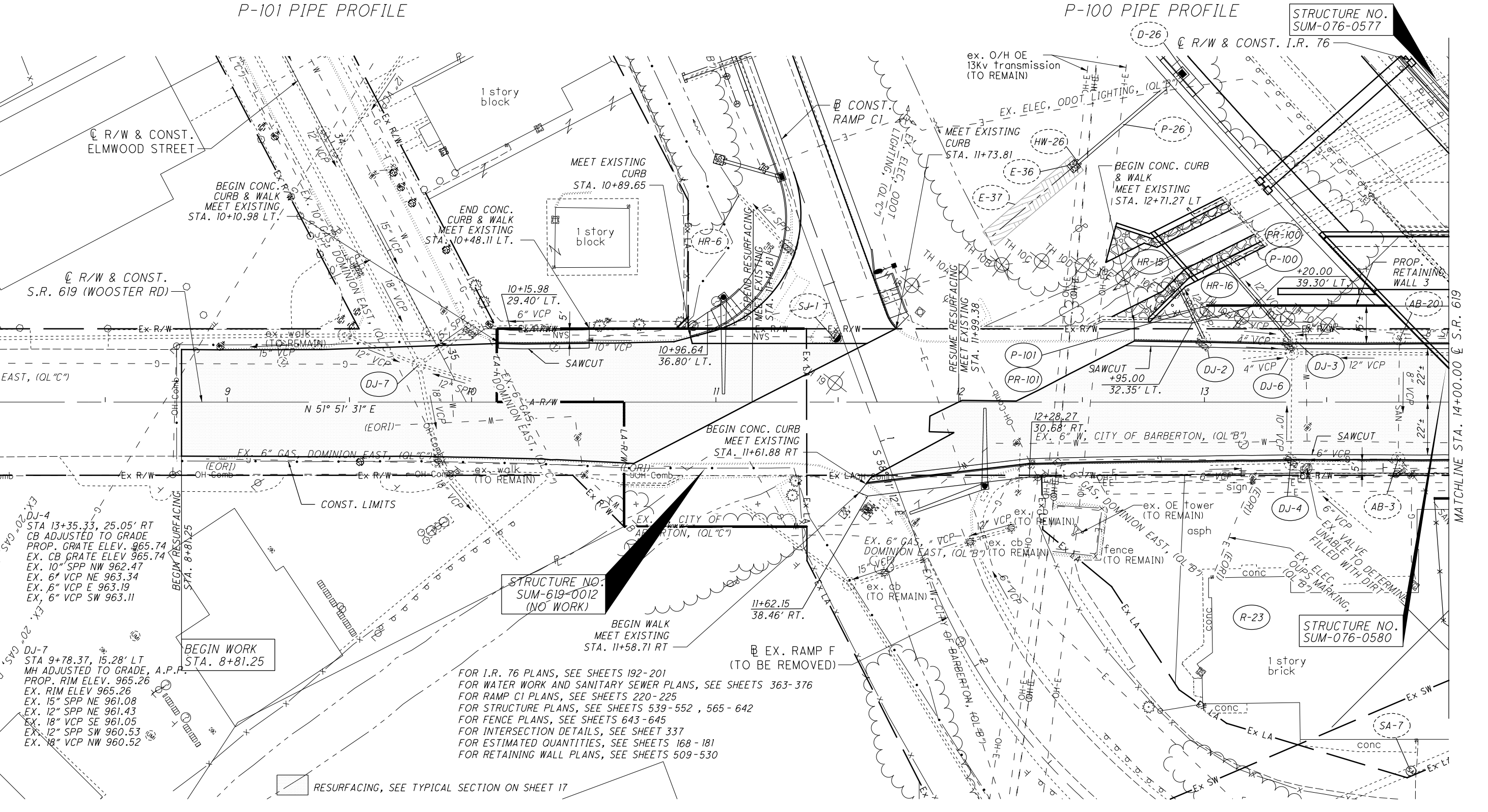
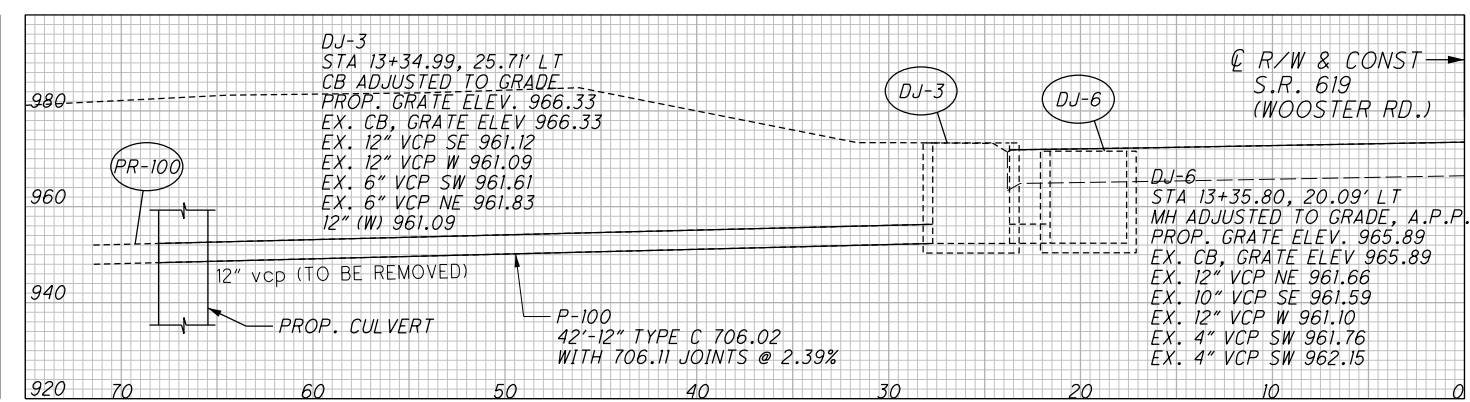
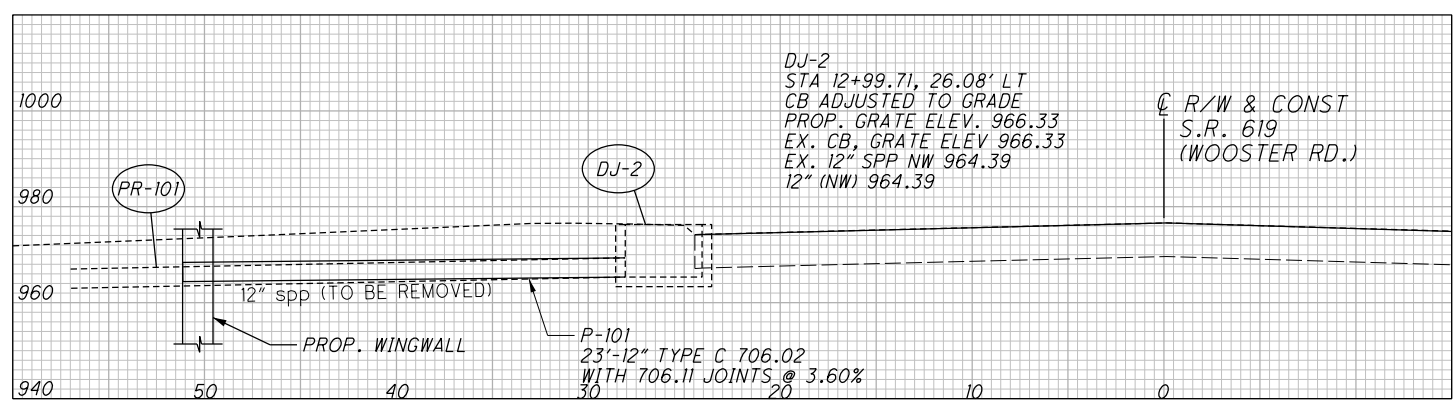
o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_Cf060.dgn ROMIG AVE. 8/17/2018 3:45:14 PM arolland



FOR ROMIG AVE. PLAN, SEE SHEET 231

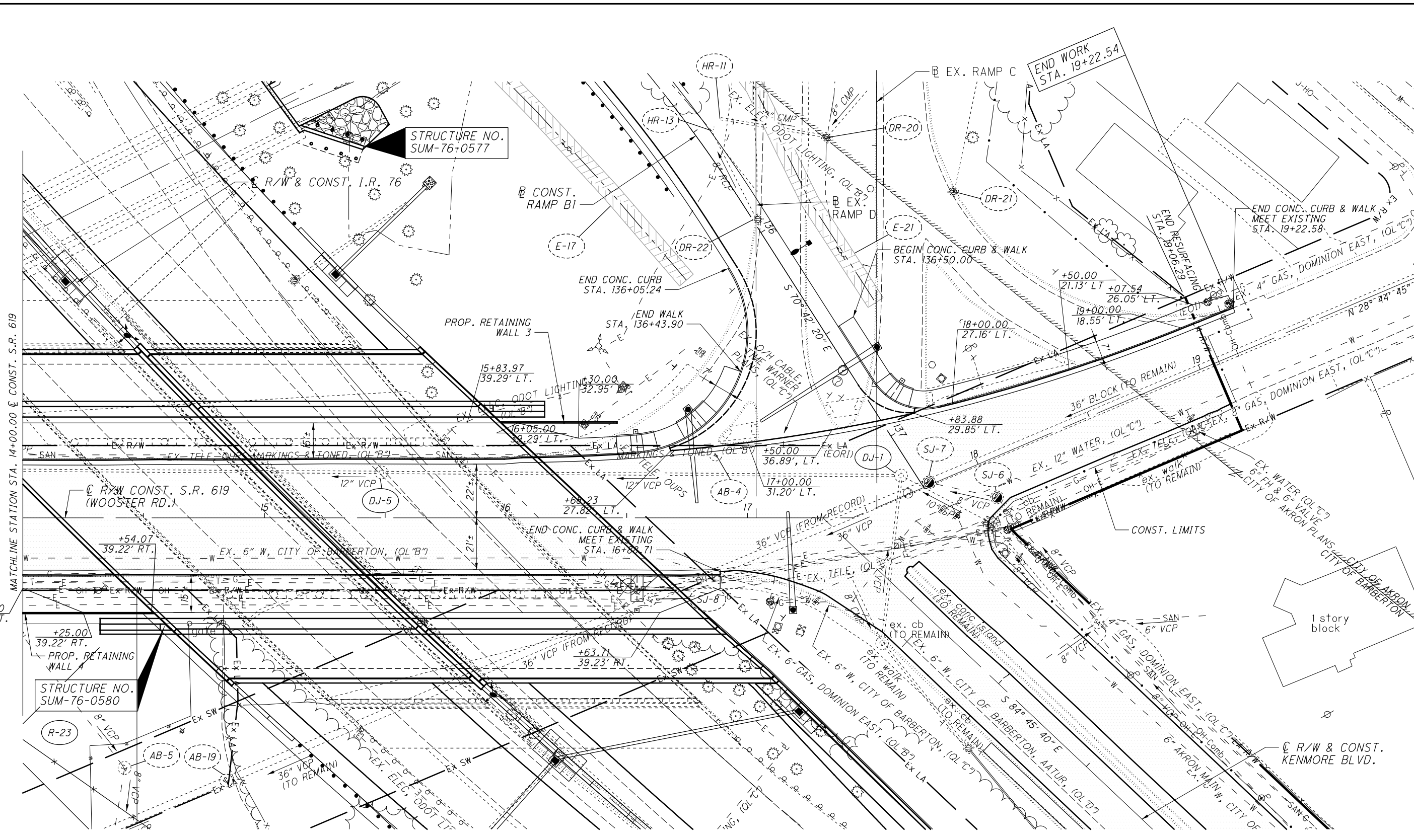


O:\2016\2016146\ProjectData\SUM-619-0012\Roadway\Design\Roadway\Sheets\96670\_GP080.dgn SR 619 11/20/2018 10:50:59 AM cluzier



PLAN - S.R. 619 (WOOSTER ROAD)

SUM-76-5.53

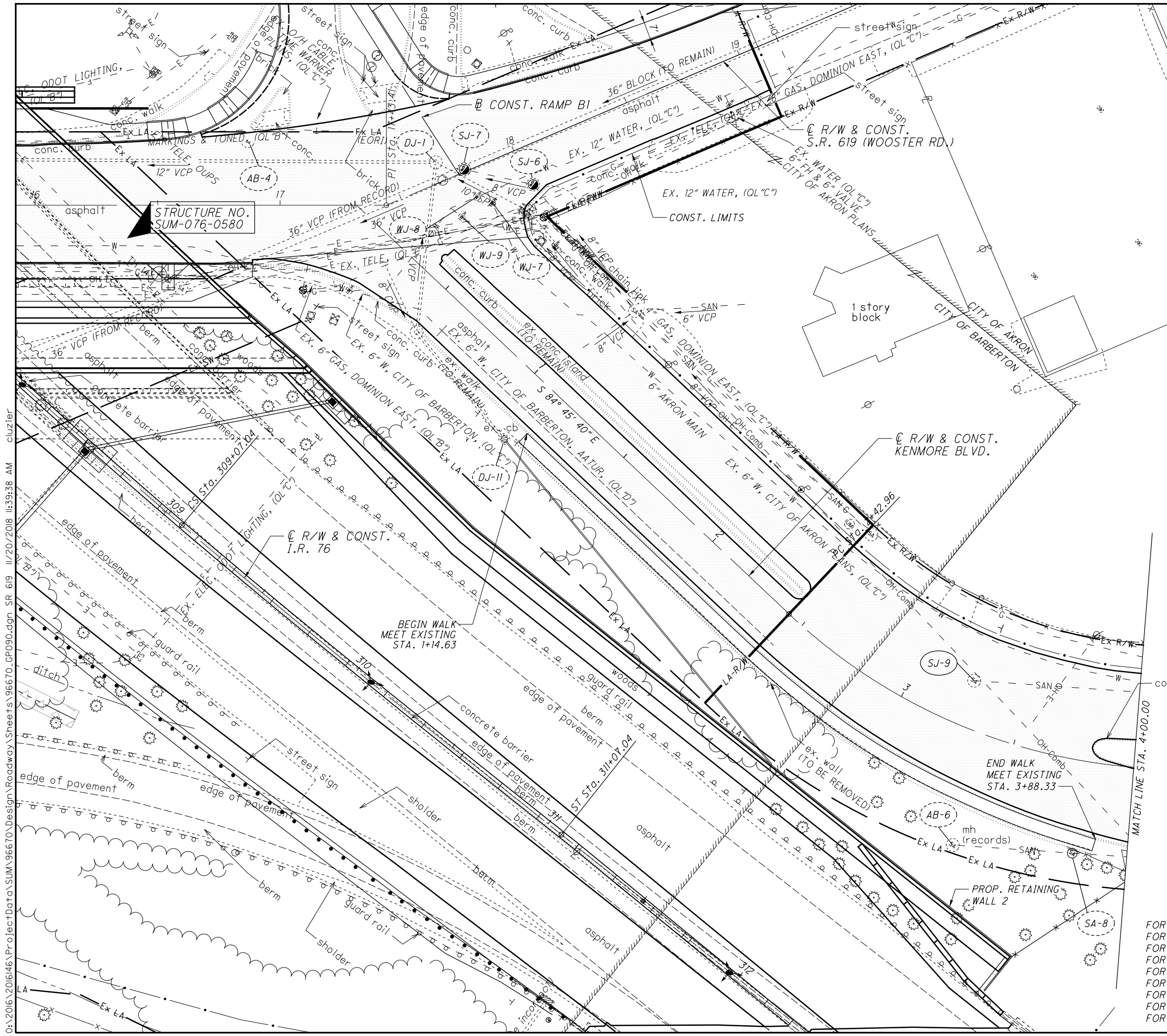


FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
 FOR INTERSECTION DETAILS, SEE SHEET 336  
 FOR RAMP BI PLANS, SEE SHEETS 208 - 213  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR STRUCTURE PLANS, SEE SHEETS 539-552 , 565 - 642  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
 FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
 FOR KENMORE BLVD. PLANS, SEE SHEETS 235 - 236

DJ-5  
 STA 15+48.45, 18.83' LT  
 MH ADJUSTED TO GRADE  
 PROP. RIM ELEV. 966.85  
 EX. RIM ELEV. 966.85  
 EX. 12" VCP NE 962.95  
 EX. 12" VCP SE 962.87

 RESURFACING, SEE TYPICAL SECTION ON SHEET 17

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_GPO81.dgn SR\_619 11/20/2018 10:53:41AM cluzier



SJ-9  
 STA 3+24.89, 18.97' LT (KENMORE)  
 SAN MH ADJUSTED TO GRADE, A.P.P.  
 PROP. RIM ELEV. 968.85  
 EX. RIM ELEV. 969.85  
 EX. 8" X (NE) 963.95

RESURFACING, SEE TYPICAL SECTION ON SHEET 19

FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
 FOR LIGHTING PLANS, SEE SHEETS 482 - 495  
 FOR RAMP B1 PLANS, SEE SHEETS 208 - 213  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR STRUCTURE PLANS, SEE SHEETS 565 - 642  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363 - 376  
 FOR RETAINING WALL PLANS, SEE SHEETS 509 - 530  
 FOR S.R. 619 (WOOSTER RD.) PLANS, SEE SHEETS 233 - 234

CALCULATED TMT CHECKED CWL

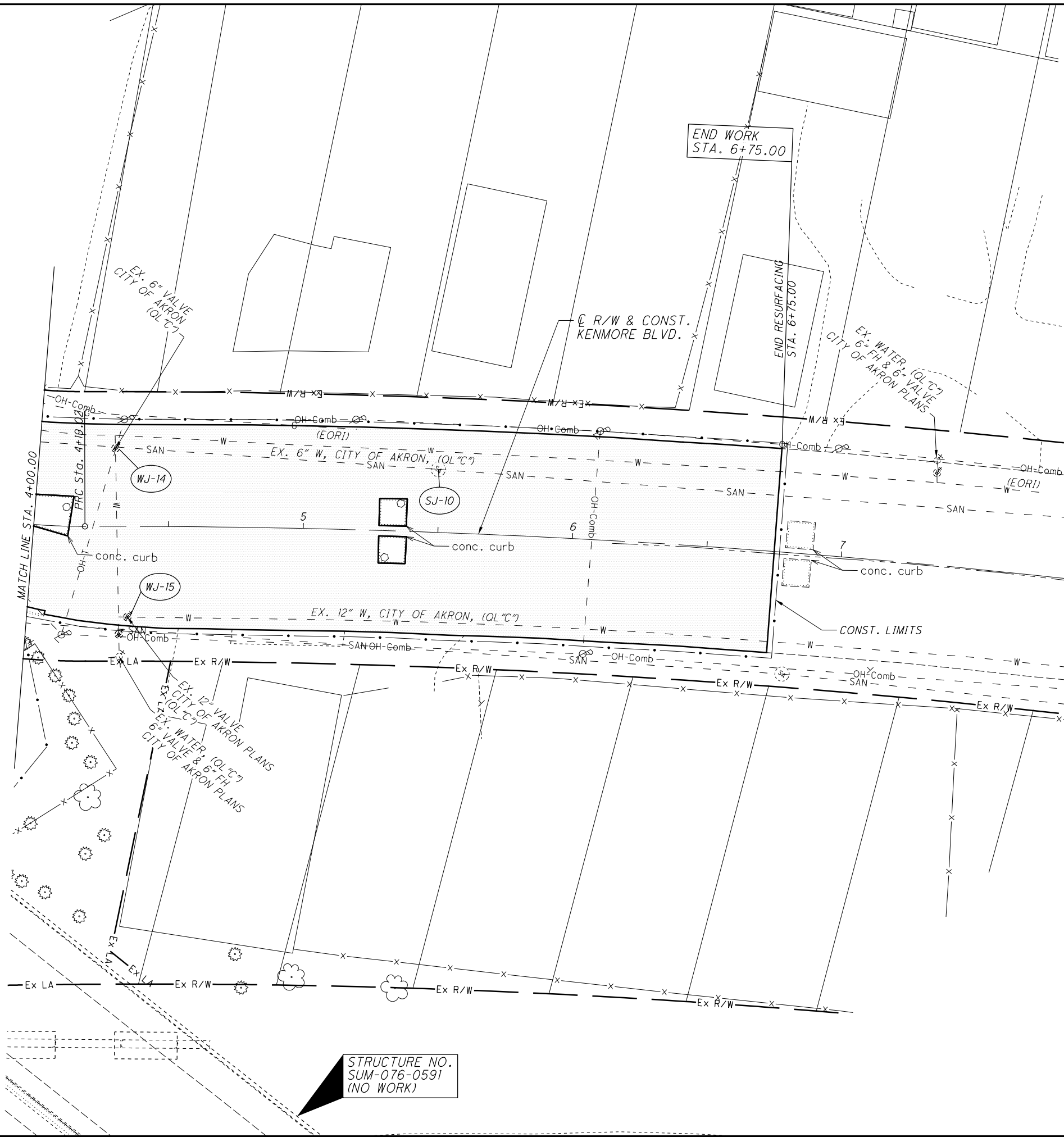
0 20 40  
 HORIZONTAL SCALE IN FEET

PLAN - KENMORE BLVD.  
 BEGIN TO STA. 4+00.00

SUM-76-5.53

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670.GPO90.dgn SR 619 11/20/2018 11:39:38 AM cluzier

O:\2016\2016146\Project\Dat\SUM\96670\Design\Roadway\Sheets\96670\_GPO91.dgn KENMORE 8/17/2018 3:57:19 PM arolland



RESURFACING, SEE TYPICAL SECTION ON SHEET 19

END WORK  
STA. 6+75.00

END RESURFACING  
STA. 6+75.00

SJ-10  
 STA 5+49.28, 23.39' LT (KENNMORE)  
 SAN MH ADJUSTED TO GRADE, A.P.P.  
 PROP. RIM ELEV. 970.52  
 EX. RIM ELEV. 970.52  
 EX. 8" X NE 962.82

STRUCTURE NO.  
 SUM-076-0591  
 (NO WORK)

FOR I.R. 76 PLANS, SEE SHEETS 192-201  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376

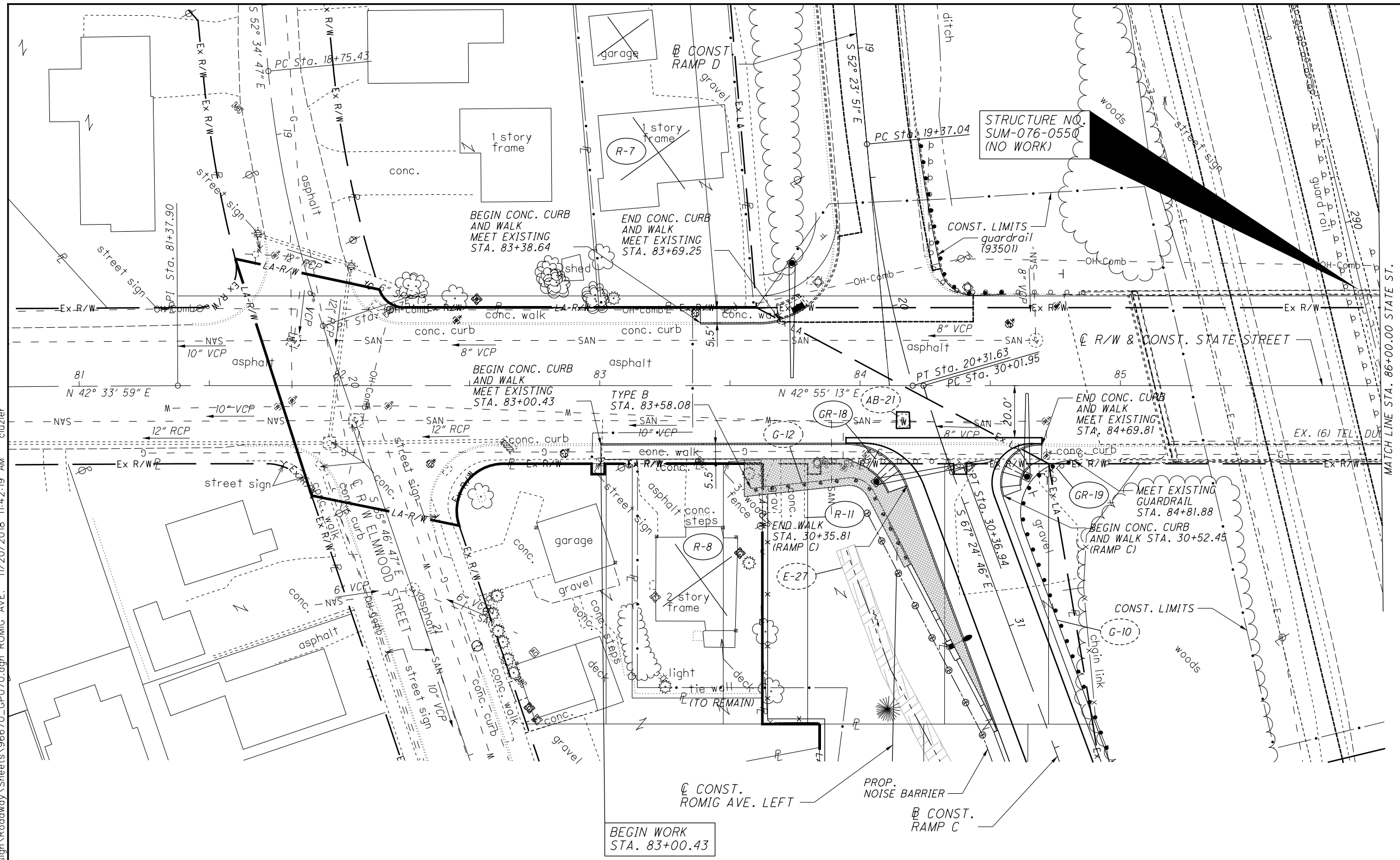
CALCULATED TMT CHECKED CWL

0 20 40  
 HORIZONTAL SCALE IN FEET

**PLAN - KENMORE BLVD.**  
**STA. 4+00.00 TO STA. 6+75.00**

**SUM-76-5.53**

O:\2016\2016146\ProjectData\SUM\96670\Roadway\Design\Roadway\96670.dgn ROMIG AVE. 11/20/2018 11:42:19 AM cluzier





CALCULATED TMT CHECKED MRG

0 20 40  
HORIZONTAL SCALE IN FEET

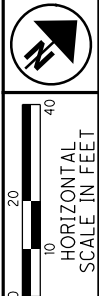
**PLAN - STATE STREET  
BEGIN TO STA. 86+00.00**

**SUM-76-5.53**

-  - ITEM 670 - DITCH EROSION PROTECTION
-  ITEM 441 - 2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), A.P.P.

--- SEE PROJECT SUM/MED-76-0.00/11.43 DB (PID 93501)

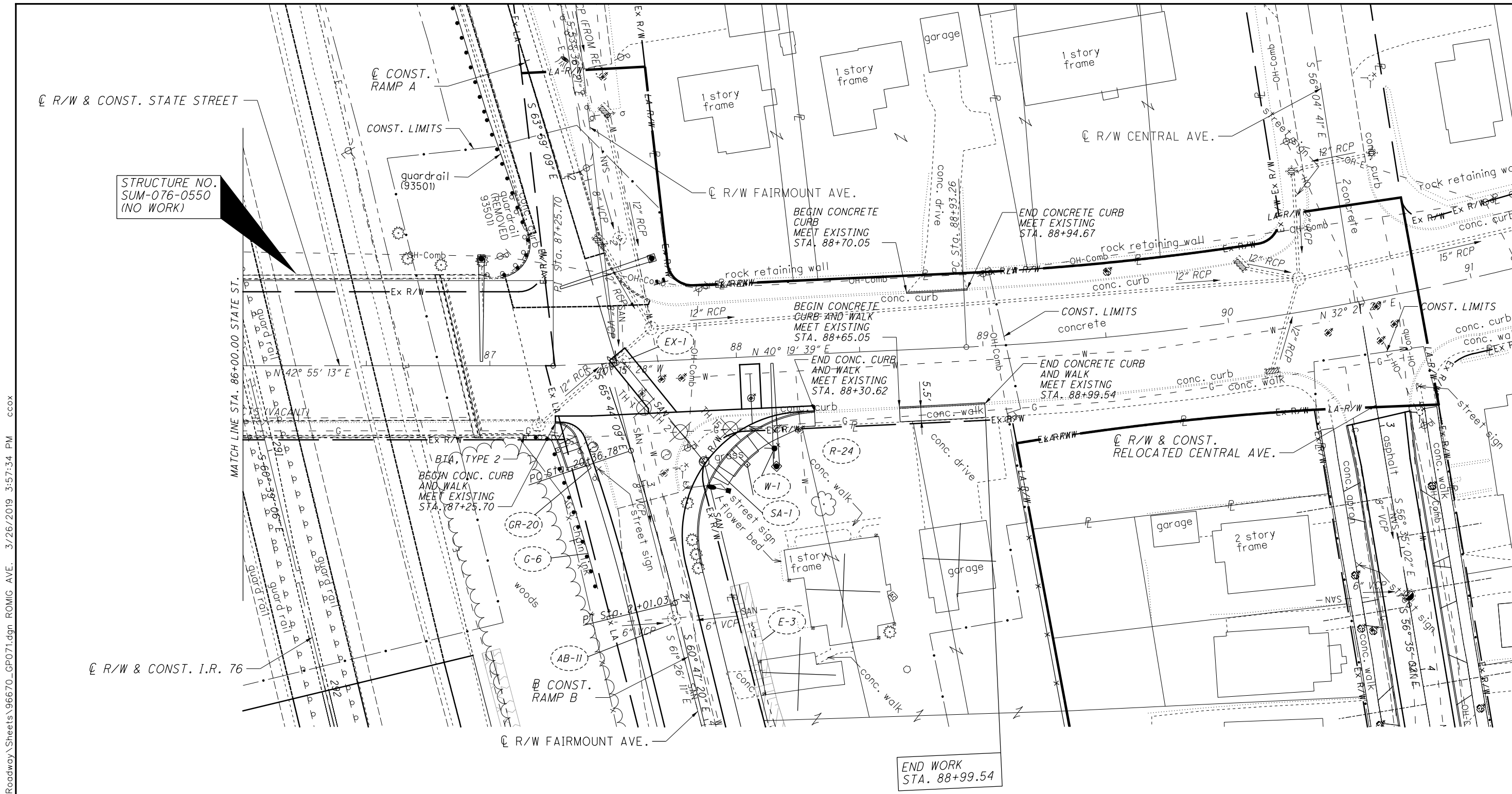
FOR ROMIG PLANS, SEE SHEETS 231 - 232  
 FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
 FOR FENCE PLANS, SEE SHEETS 643 - 645  
 FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
 FOR I.R. 76 PLANS, SEE SHEETS 192 - 201  
 FOR RAMP C PLANS, SEE SHEETS 214 - 219  
 FOR INTERSECTION DETAILS, SEE SHEET 335  
 FOR NOISE BARRIER PLANS, SEE SHEETS 496 - 508



CALCULATED TMT CHECKED MRG

PLAN - STATE STREET  
STA. 86+00.00 TO END

SUM-76-5.53



END WORK  
STA. 88+99.54

--- SEE PROJECT  
SUM/MED-76-0.00/11.43  
DB (PID 93501)

- ITEM 670 - DITCH EROSION PROTECTION

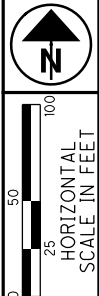
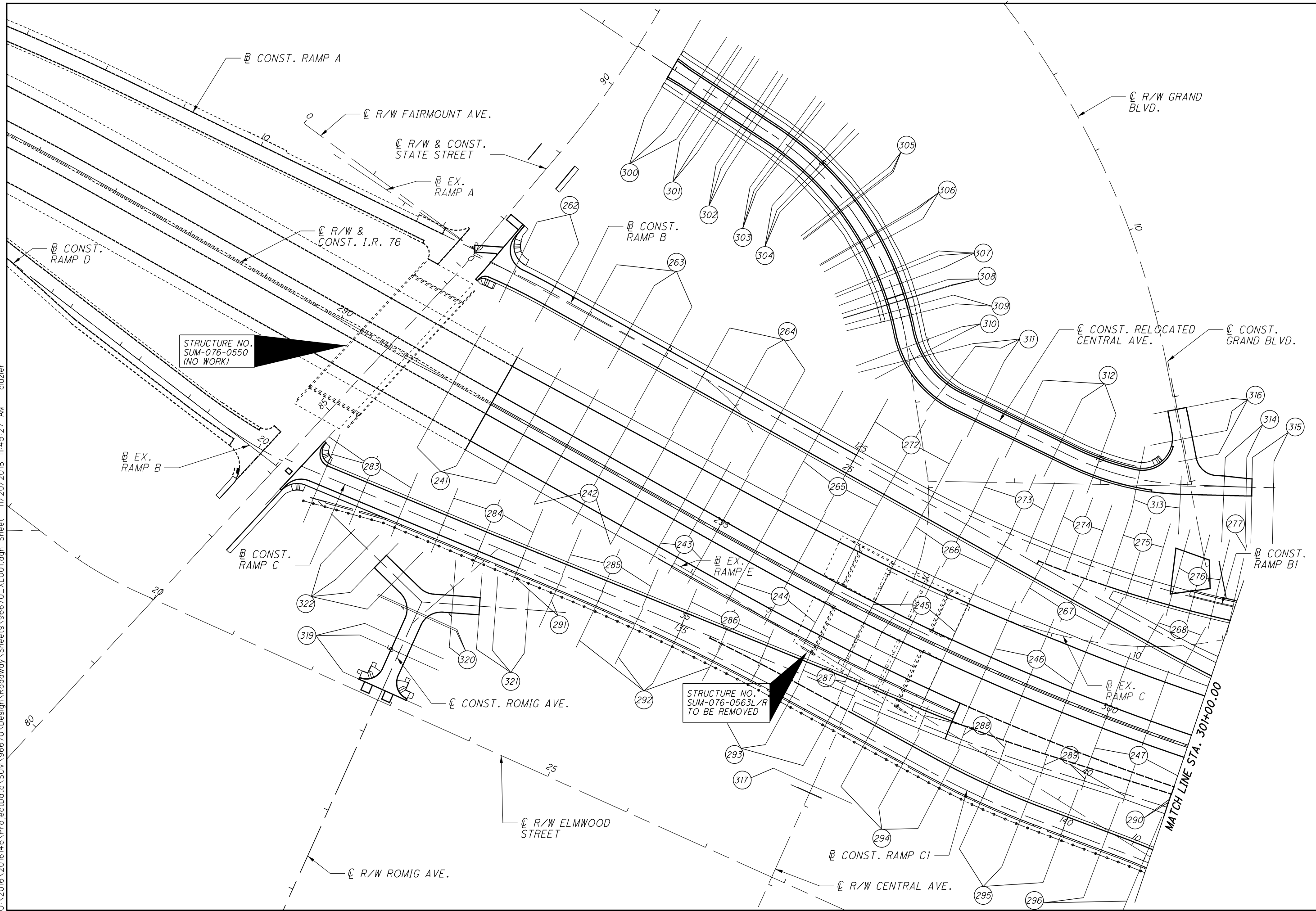
FOR ESTIMATED QUANTITIES, SEE SHEET 168-181  
FOR FENCE PLANS, SEE SHEETS 643-645  
FOR I.R. 76 PLANS SEE SHEETS 192-201  
FOR WATER WORK AND SANITARY SEWER PLANS, SEE SHEETS 363-376  
FOR RAMP B PLANS, SEE SHEETS 202-207  
FOR INTERSECTION DETAILS, SEE SHEET 334  
FOR RELOCATED CENTRAL AVE. PLANS, SEE SHEETS 226 - 229

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

O:\2016\2016146\ProjectData\SUM\96670\GP071.dgn ROMIG AVE. 3/26/2019 3:57:34 PM ccox

STRUCTURE NO.  
SUM-076-0550  
(NO WORK)

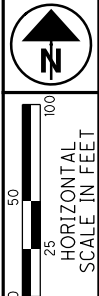
C:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XL001.dgn Sheet 11/20/2018 11:45:27 AM cluzier



CROSS SECTION LAYOUT

SUM-76-5.53

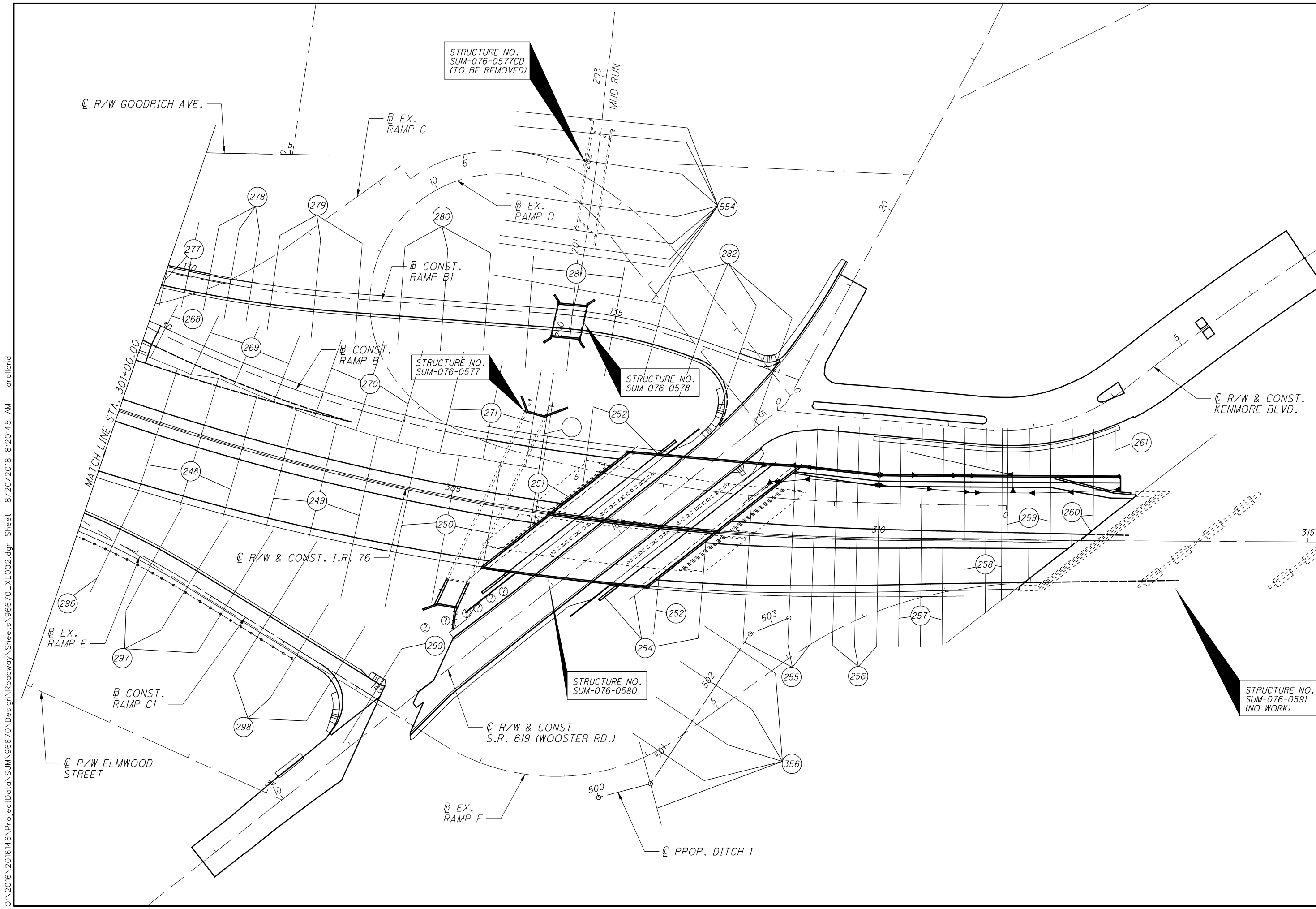
239  
672



CROSS SECTION LAYOUT

SUM-76-5.53

240  
672



STRUCTURE NO.  
SUM-076-0577CD  
(TO BE REMOVED)

STRUCTURE NO.  
SUM-076-0577

STRUCTURE NO.  
SUM-076-0578

STRUCTURE NO.  
SUM-076-0580

STRUCTURE NO.  
SUM-076-0591  
(NO WORK)

☐ R/W GOODRICH AVE.

☐ EX.  
RAMP C

☐ EX.  
RAMP D

☐ CONST.  
RAMP B1

☐ CONST.  
RAMP B

☐ EX.  
RAMP E

☐ CONST.  
RAMP C1

☐ R/W ELMWOOD  
STREET

☐ R/W & CONST. I.R. 76

☐ R/W & CONST  
S.R. 619 (WOOSTER RD.)

☐ EX.  
RAMP F

☐ PROP. DITCH 1

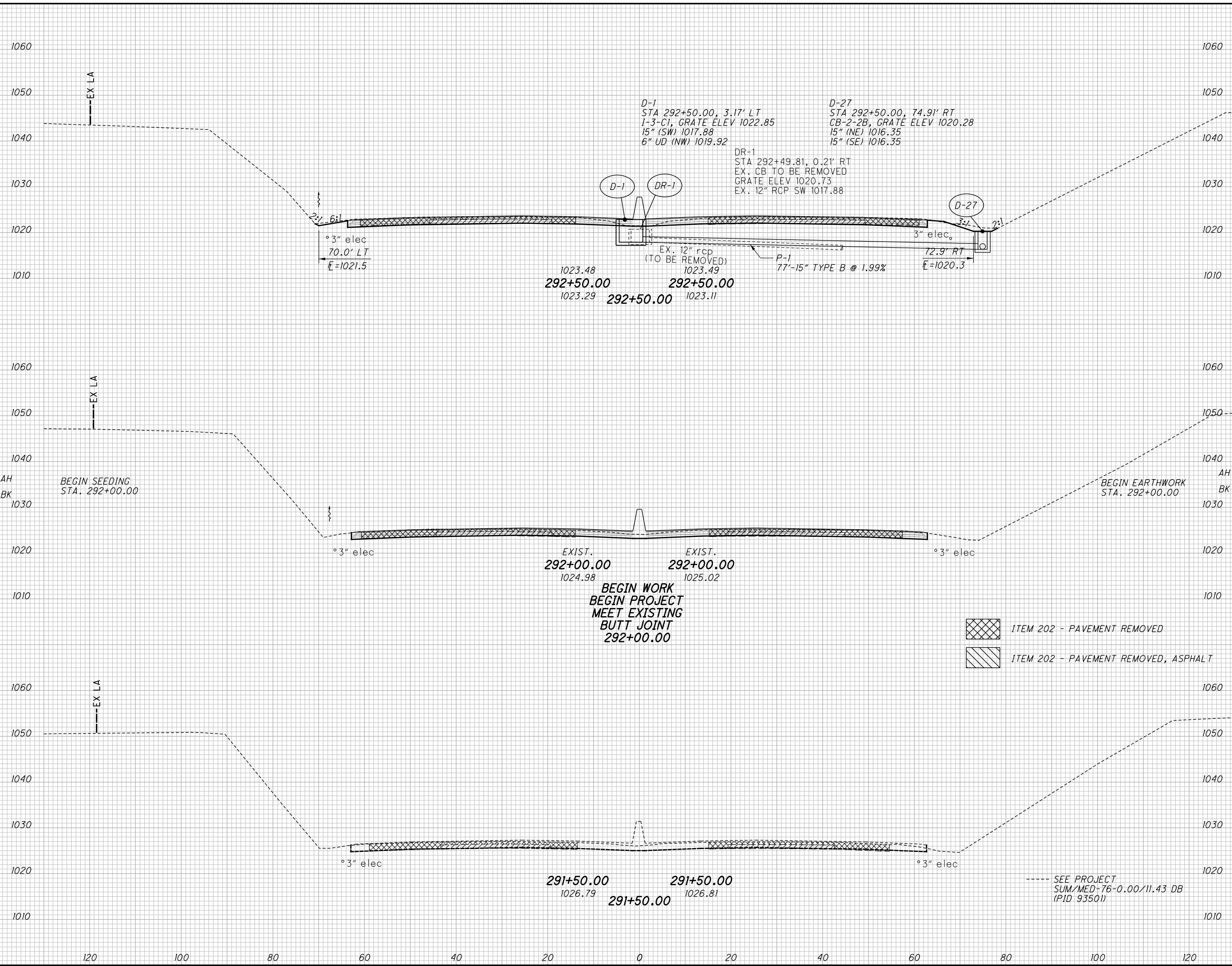
☐ R/W & CONST.  
KENMORE BLVD.

C:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XL002.dgn Sheet 8/20/2018 8:20:45 AM arolland



o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:52:36 AM J.Bumgarner

SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
92			100	5		
15						
42			88	8		
0						
0						
134			188	13		

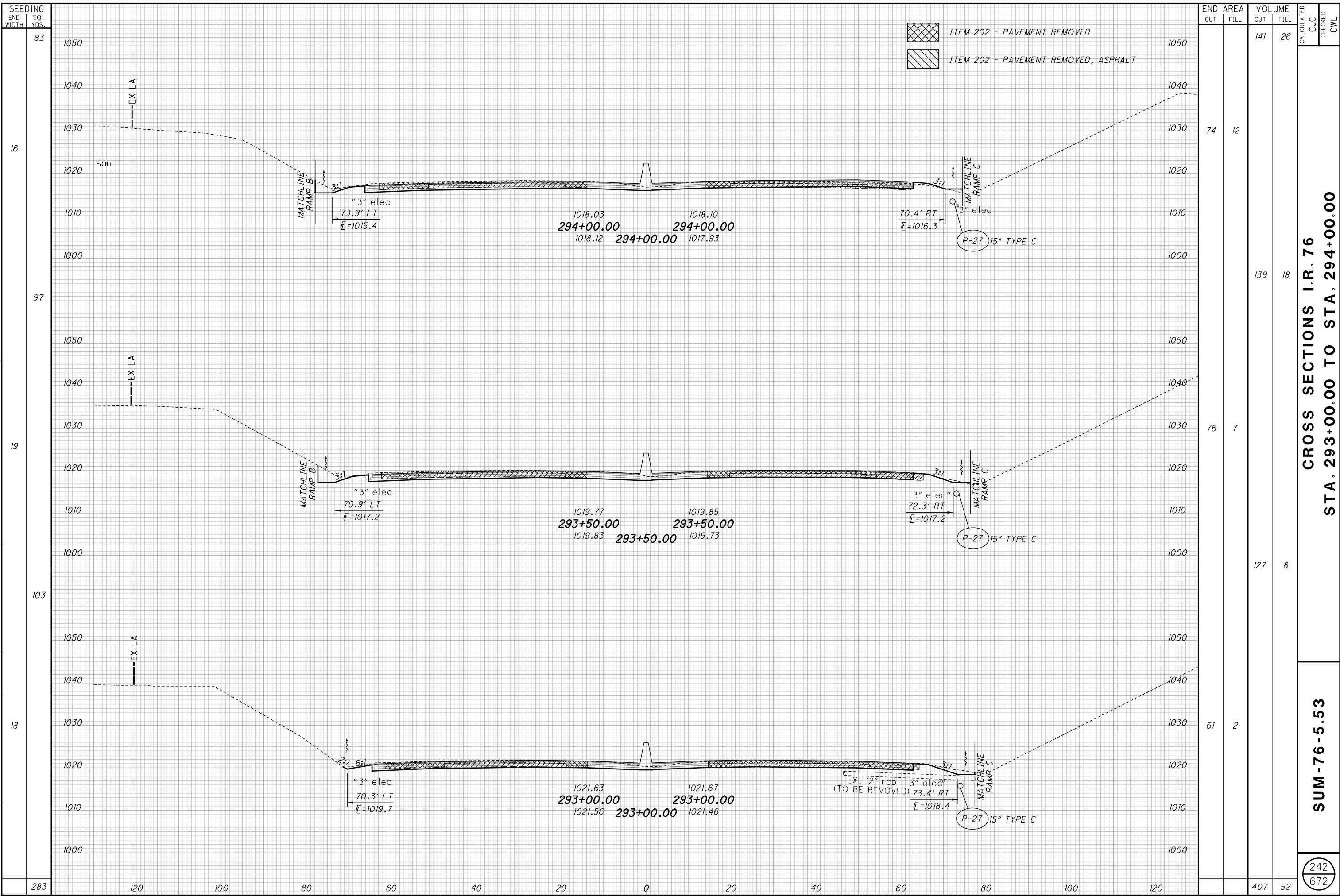


**CROSS SECTIONS I.R. 76  
STA. 291+50.00 TO STA. 292+50.00**

**SUM - 76 - 5.53**

241  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:52:46 AM JBumgarner



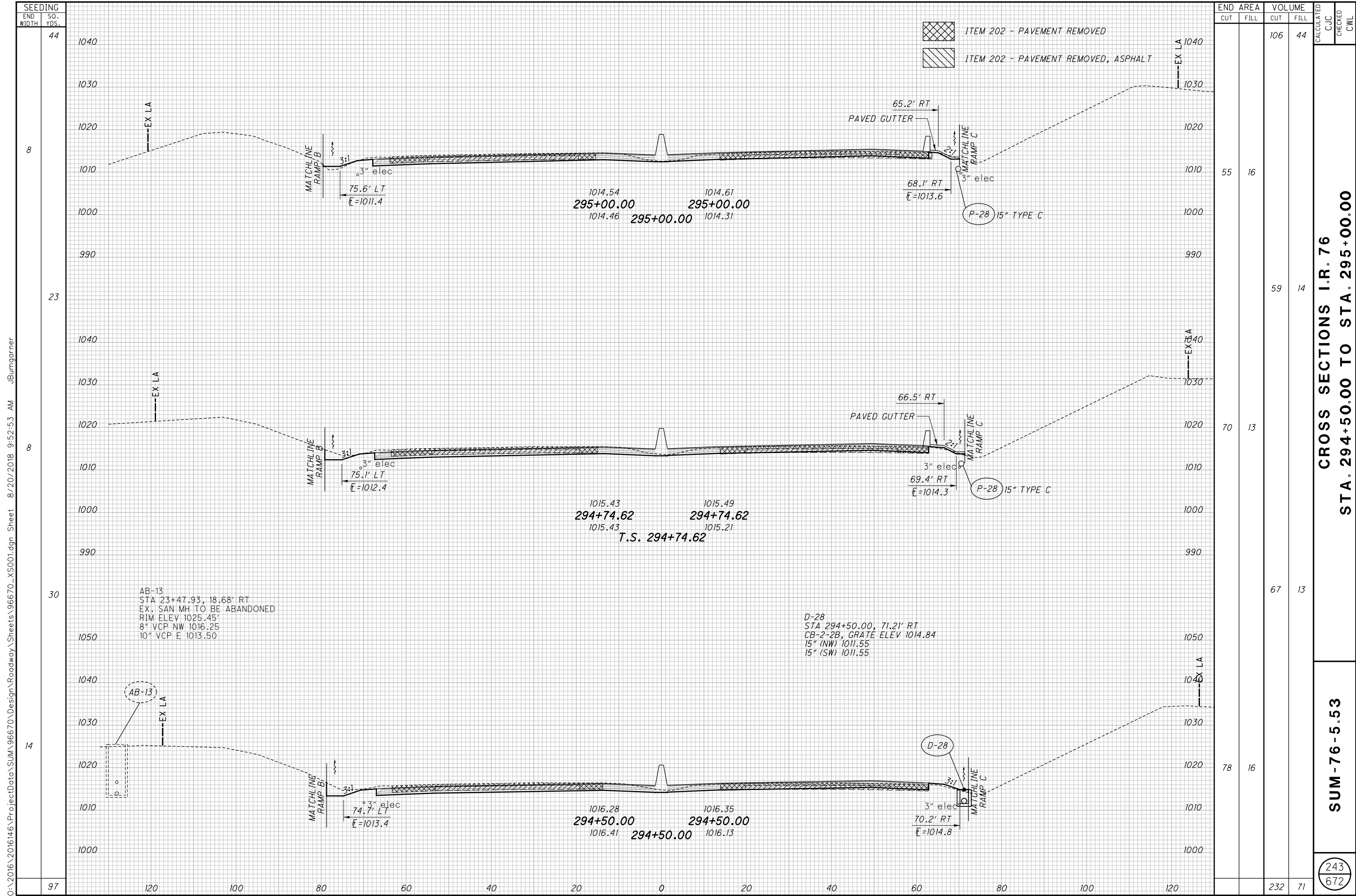
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT

SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
83			141	26		
16	74	12				
97			139	18		
19	76	7				
103			127	8		
18	61	2				
283			407	52		

**CROSS SECTIONS I.R. 76**  
**STA. 293+00.00 TO STA. 294+00.00**

**SUM - 76 - 5.53**

242  
672



**CROSS SECTIONS I.R. 76**  
**STA. 294+50.00 TO STA. 295+00.00**

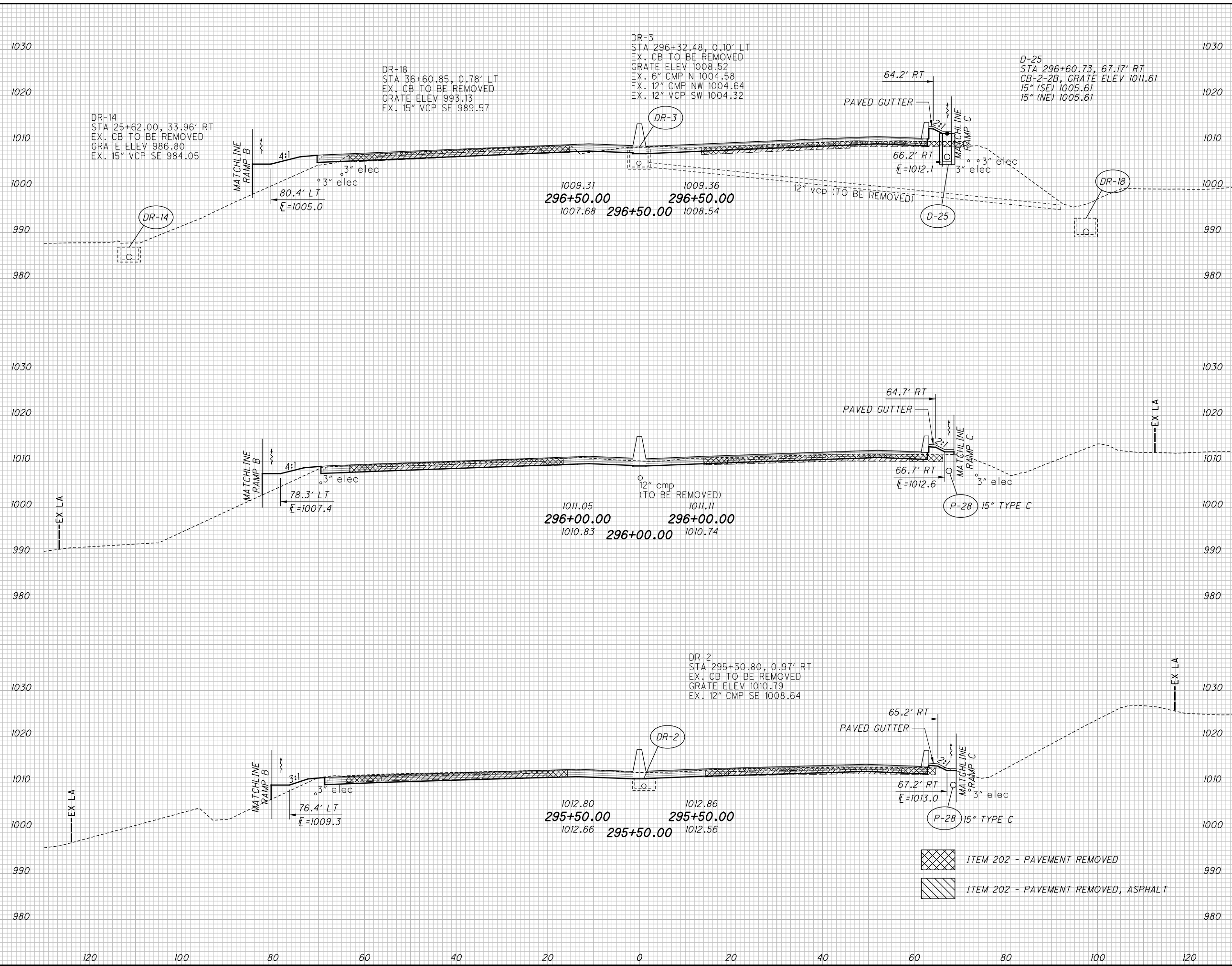
**SUM - 76 - 5.53**

243  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:52:53 AM JBurmgarner

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:21:40 PM aralland

SEEDING	END	
	WIDTH	SO. YDS.
64	120	1030
56	100	1020
9	80	1010
47	60	1000
8	40	990
167	20	980



END	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
25	116		23	2731	CJC	CWL
65				169		
45	66					
97				90		
60	31					
185	2990					

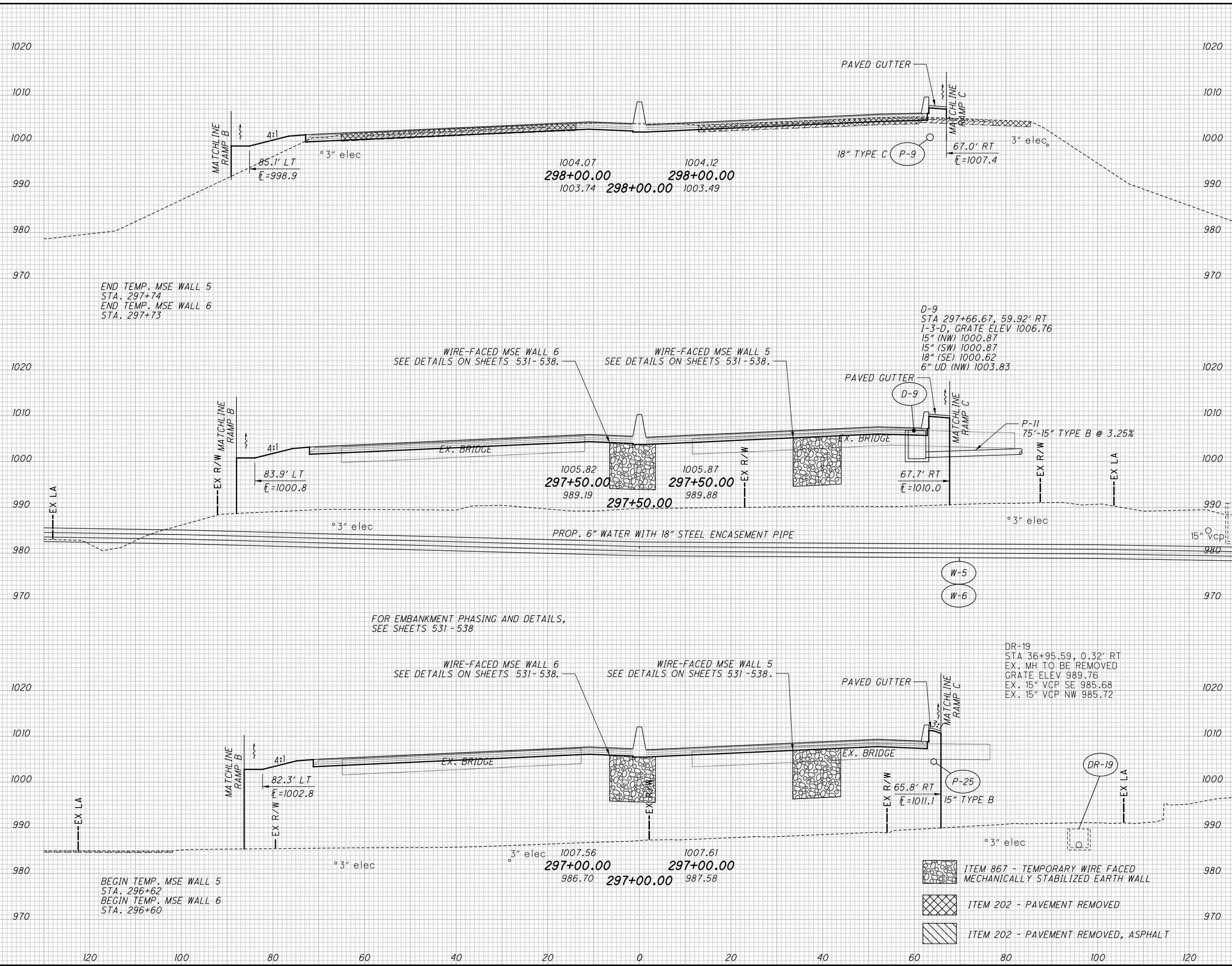
**CROSS SECTIONS I.R. 76**  
**STA. 295+50.00 TO STA. 296+50.00**

**SUM - 76 - 5.53**

244  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:22:08 PM oroland

SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
69			81	196		
13						
72						
13						
69						
12						
210			125	704	245	672



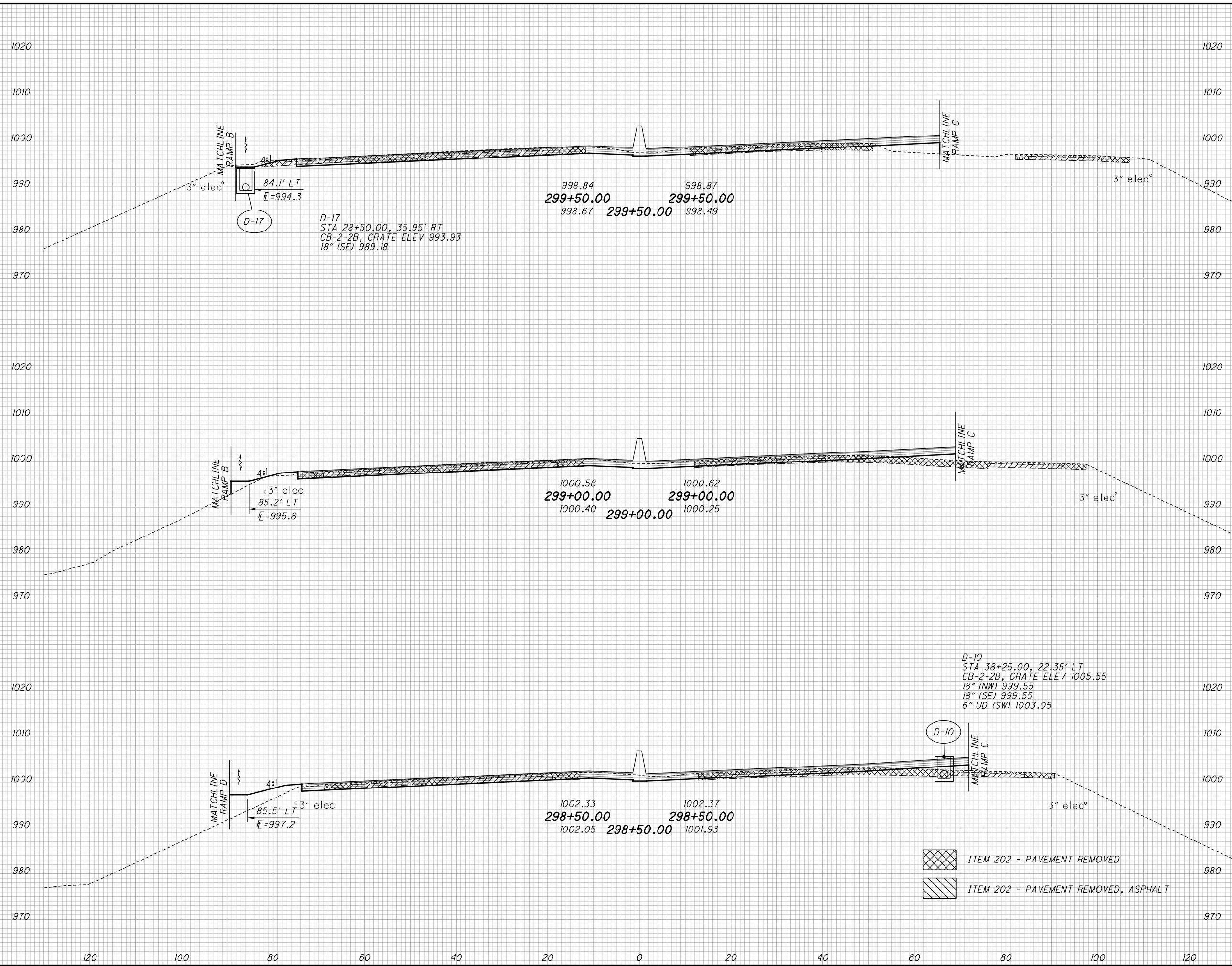
**CROSS SECTIONS I.R.76**  
**STA. 297+00.00 TO STA. 298+00.00**

**SUM - 76 - 5.53**

245  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:53:19 AM JBumgarner

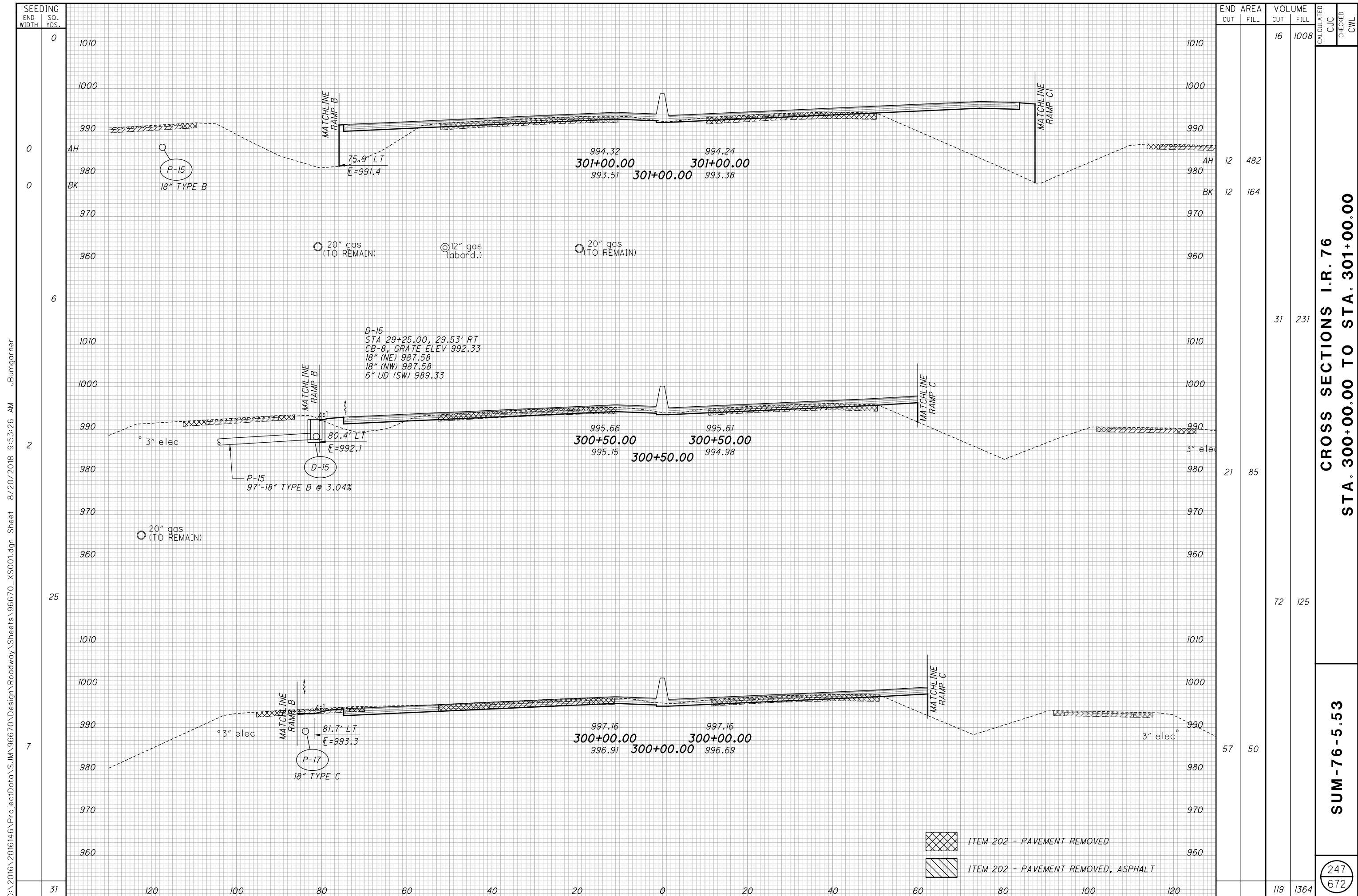
SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
47			88	89		
58			69	99		
64			71	146		
12			40	97		
169			228	334		



**CROSS SECTIONS I.R. 76**  
**STA. 298+50.00 TO STA. 299+50.00**

**SUM - 76 - 5.53**

246  
 672



END STA	AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
0			16	1008		
12	482					
12		164				
31			31	231		
21	85					
72		125				
57	50					
119		1364				

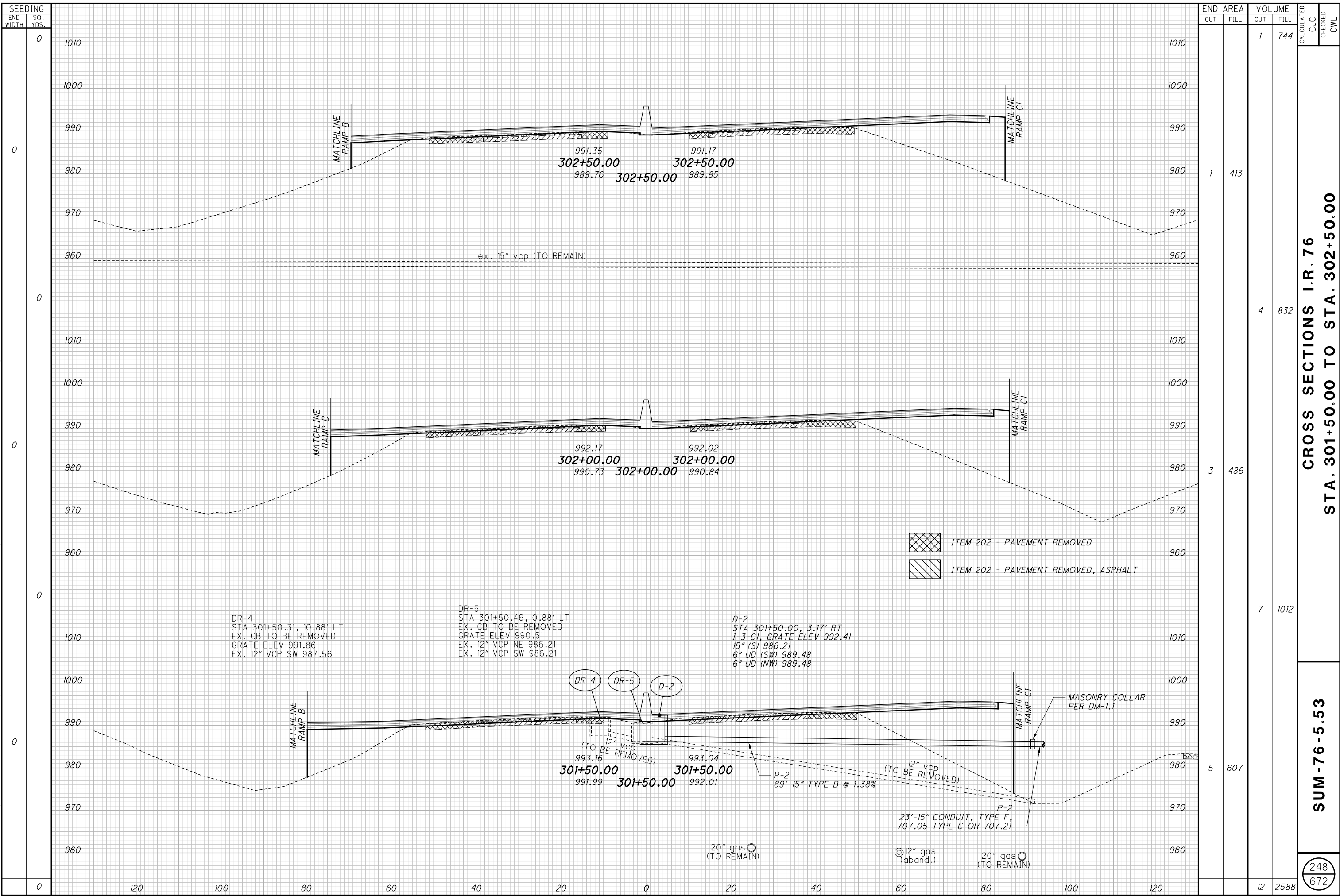
**CROSS SECTIONS I.R. 76**  
**STA. 300+00.00 TO STA. 301+00.00**

**SUM - 76 - 5.53**

247  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:53:26 AM JBurmgarner

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:53:54 AM J Bumgarner



SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
0			1	744		
1	413					
4			4	832		
3	486					
7			7	1012		
5	607					
0	120	100	12	2588		

**CROSS SECTIONS I.R. 76**  
**STA. 301+50.00 TO STA. 302+50.00**

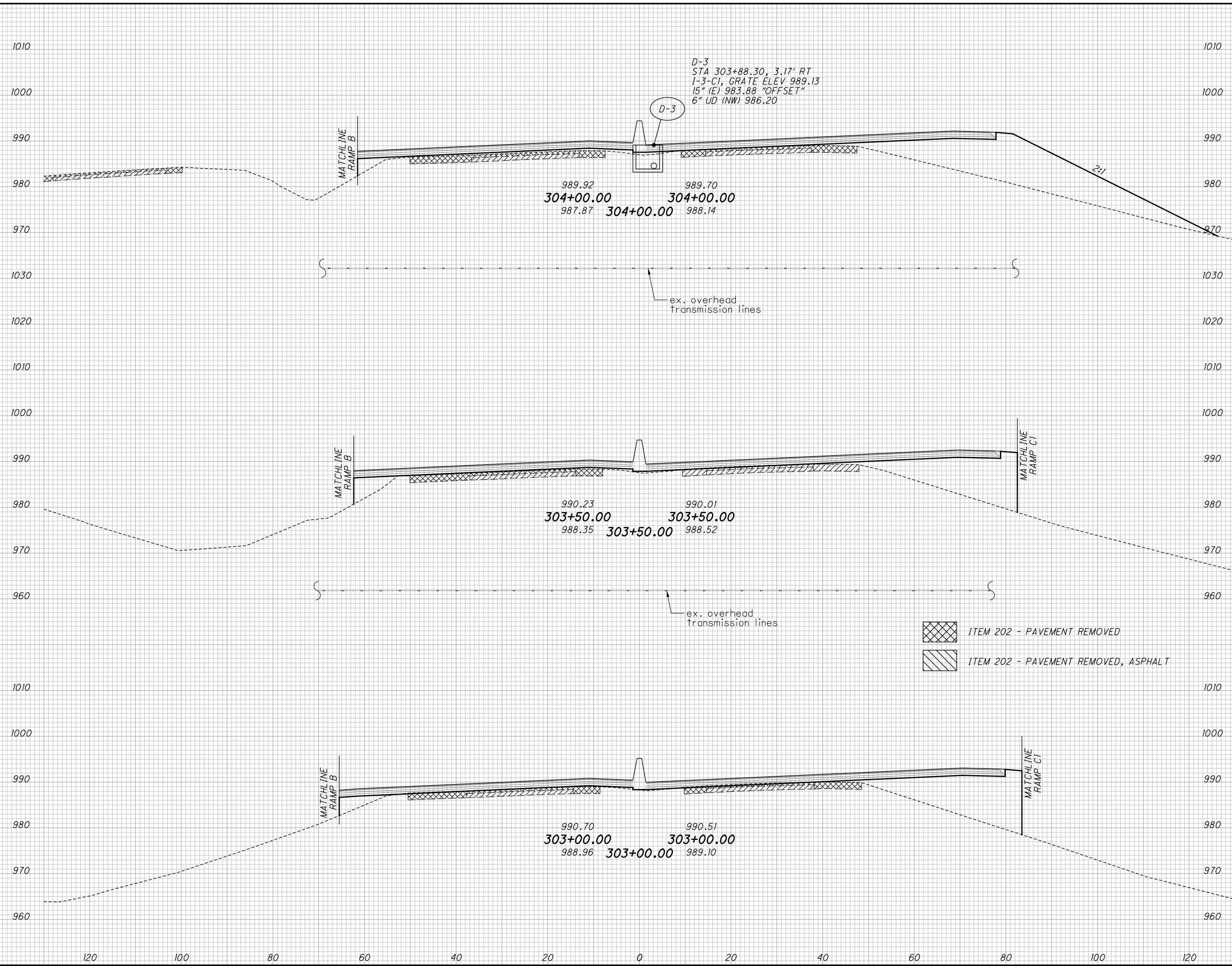
**SUM - 76 - 5.53**

248  
672



o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:22:39 PM orolland

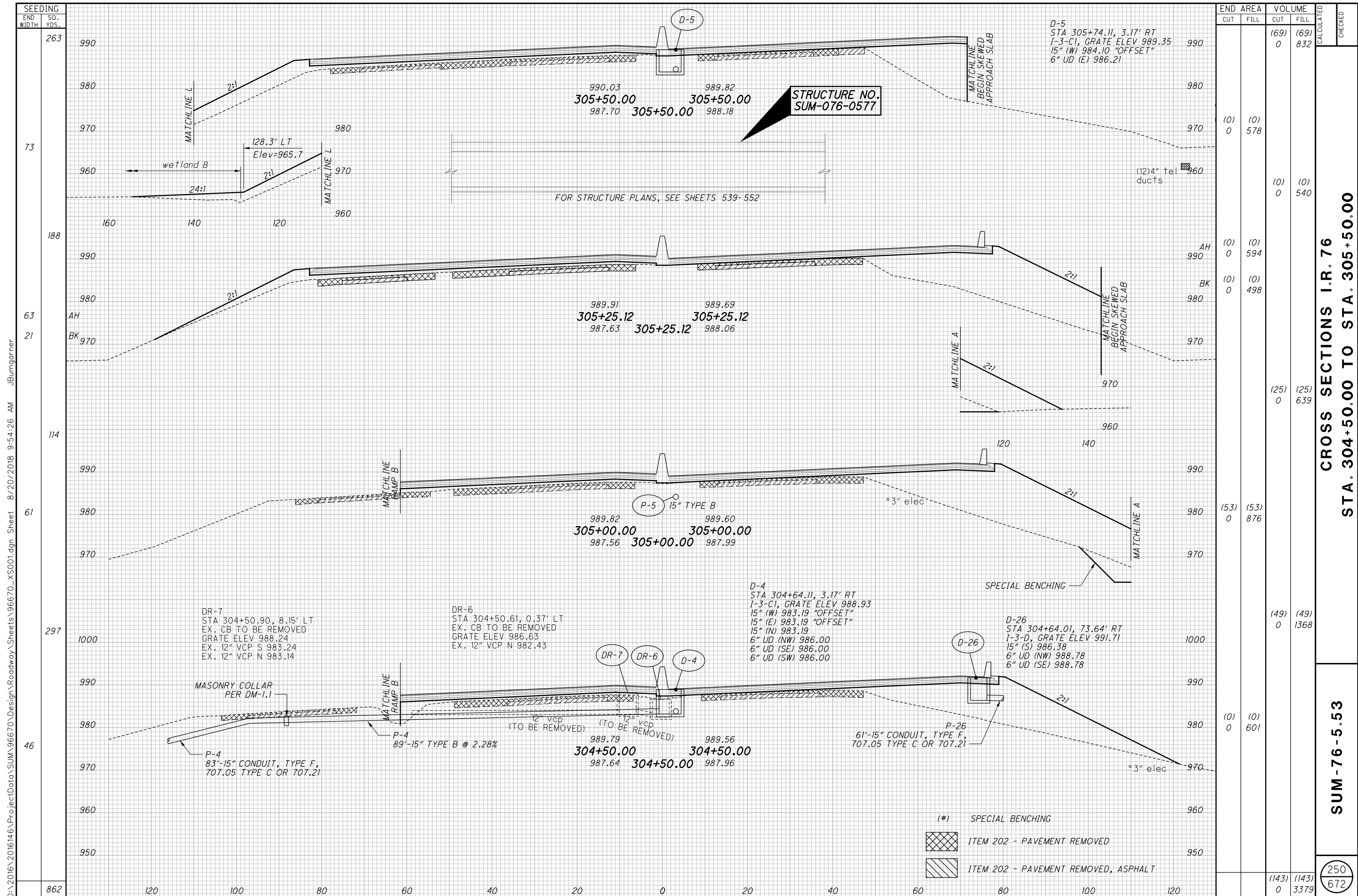
SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
267	1	603	1	1115		
139	0	387	0	917		
0	0	720	0	720		
406	1	2752	1	2752		



**CROSS SECTIONS I.R. 76  
 STA. 303+00.00 TO STA. 304+00.00**

**SUM - 76 - 5.53**

249  
672



END AREA	VOLUME	CALCULATED	CHECKED				
				CUT	FILL	CUT	FILL
				(69)	(69)		
				0	832		
(10)	(10)			0	578		
				(10)	(10)		
				0	540		
				(10)	(10)		
				0	594		
				(10)	(10)		
				0	498		
				(25)	(25)		
				0	639		
(53)	(53)			0	876		
				(49)	(49)		
				0	1368		
(10)	(10)			0	601		
				(143)	(143)		
				0	3379		

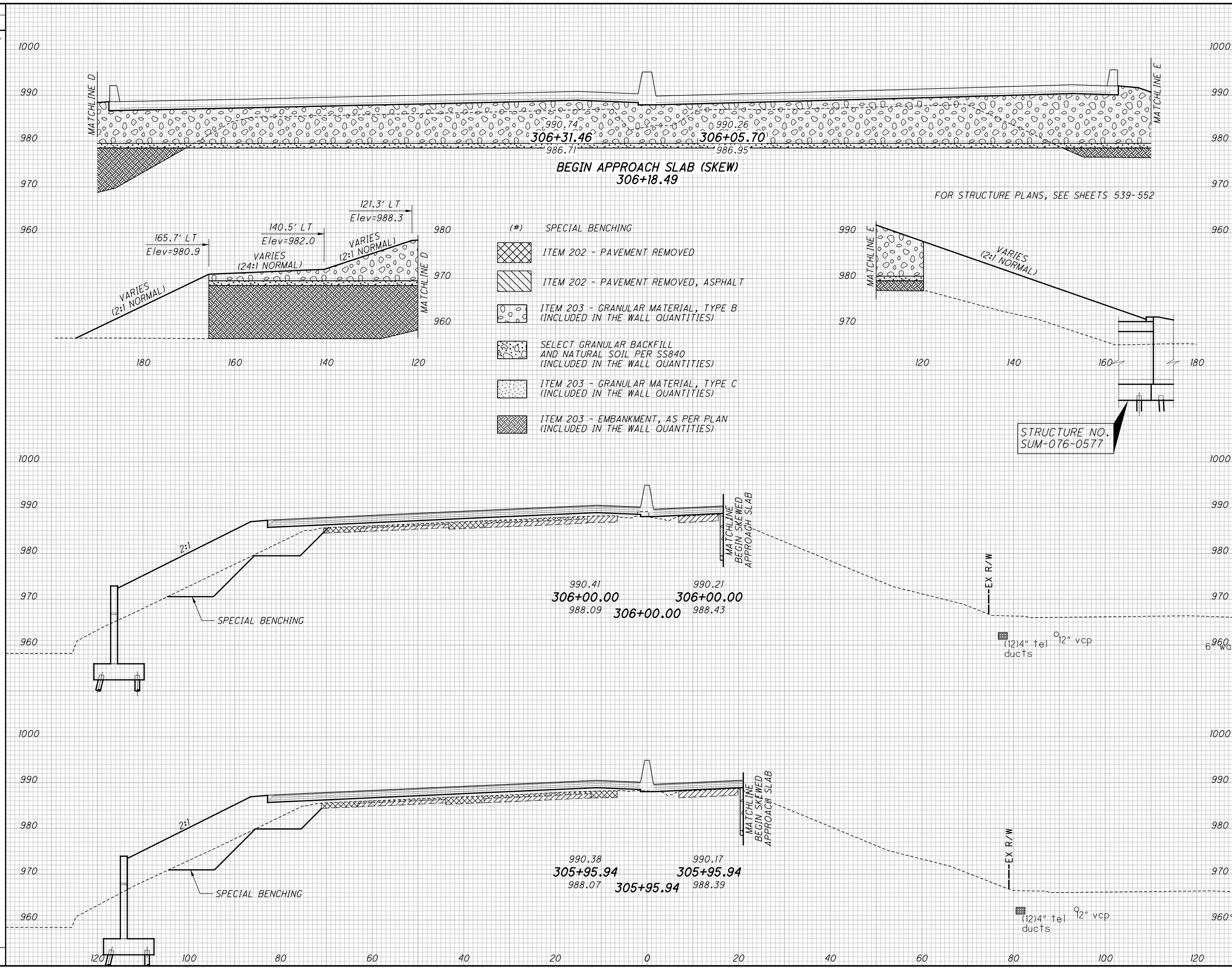
**CROSS SECTIONS I.R. 76**  
**STA. 304+50.00 TO STA. 305+50.00**

**SUM - 76 - 5.53**

(250)  
 (672)

o:\2016\2016146\ProjectData\SUM\96670\Roadway\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:54:26 AM jBumgarner

SEEDING  
END WIDTH SO. YDS.  
233  
N/A  
33  
14  
30  
247

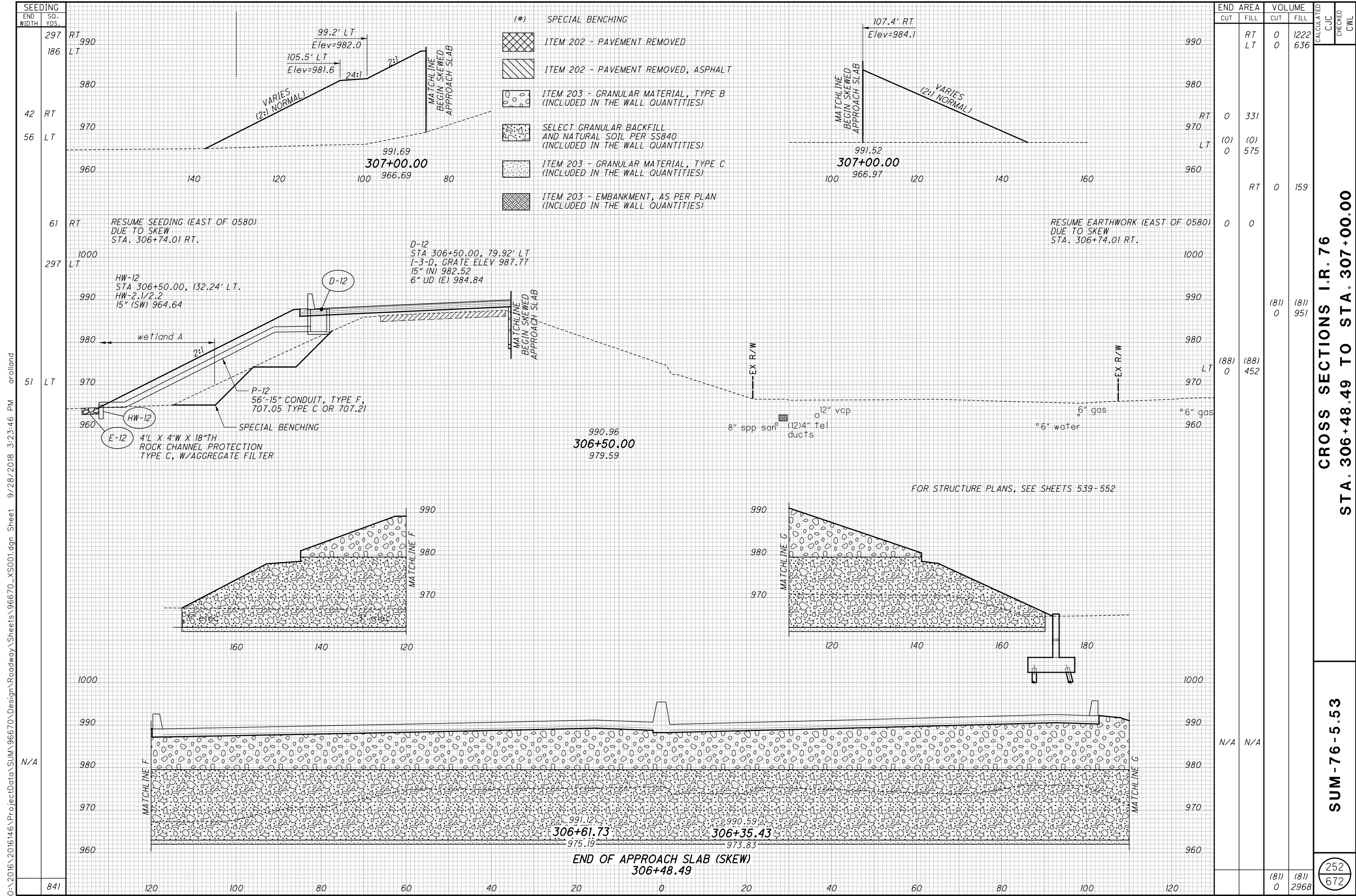


END AREA	VOLUME	CALCULATED		CHECKED	
		CUT	FILL	C/JC	C/WL
N/A	N/A	(164) 2	(164) 805		
(89) 2	(89) 417				
(13) 0	(13) 61				
(81) 0	(81) 400				
(177) 2	(177) 866				
		(251) 672			

CROSS SECTIONS I.R.76  
STA. 305+95.94 TO STA. 306+18.49

SUM - 76 - 5.53

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:23:16 PM arolland



END STA.	AREA	VOLUME		CHECKED	CWL
		CUT	FILL		
990	RT 0	0	1222		
186	LT 0	0	636		
980					
970	RT 0	331			
56	LT (0)	(0)	575		
960					
61	RT 0	0	159		
1000					
297	LT (81)	(81)	951		
990					
980					
51	LT (88)	(88)	452		
970					
960					
306+50.00					
990					
980					
1000					
306+61.73					
306+35.43					
306+48.49					
960					
841		(81)	(81)		
		0	2968		

CROSS SECTIONS I.R. 76  
 STA. 306+48.49 TO STA. 307+00.00

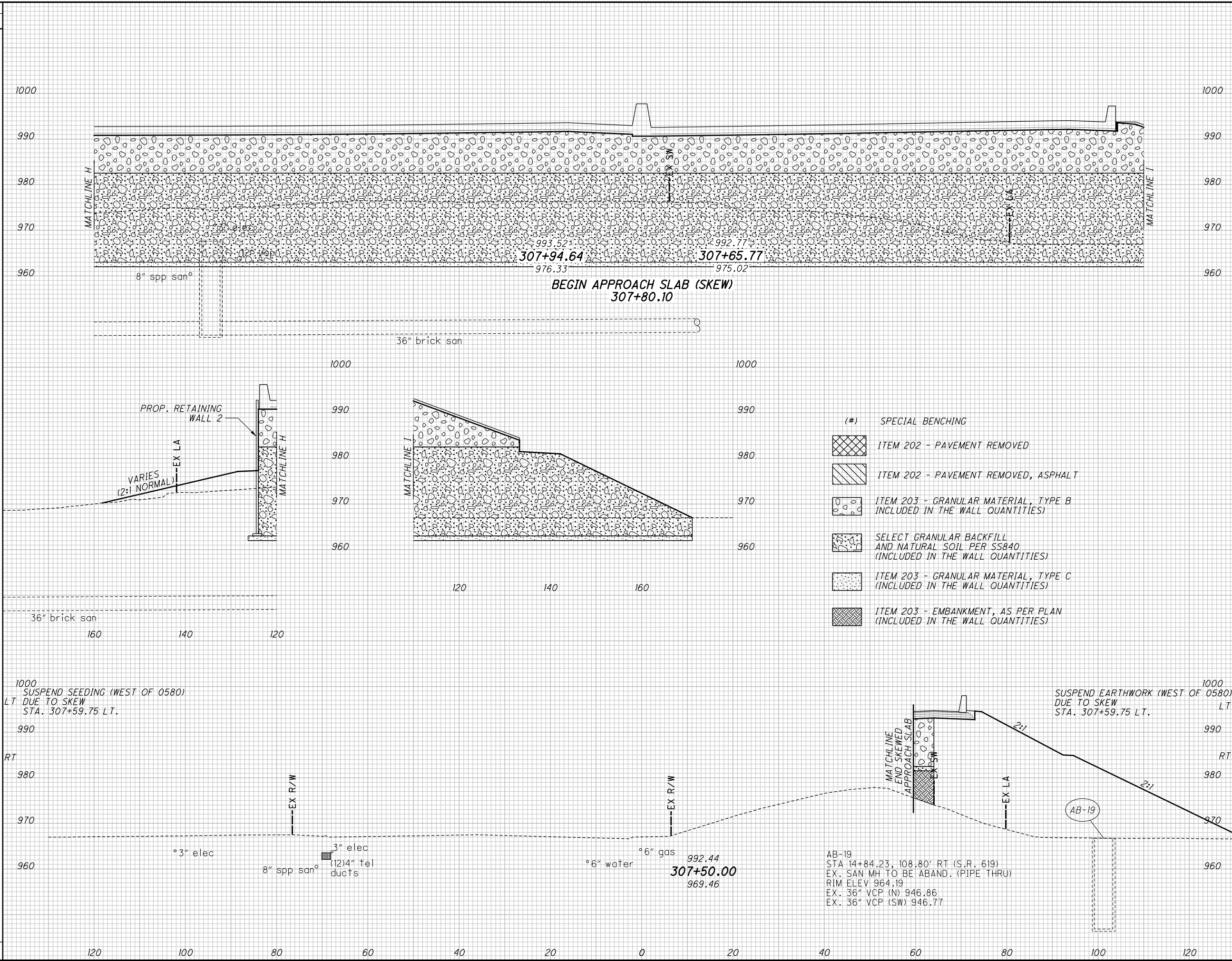
SUM - 76 - 5.53

252  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:23:46 PM oroland

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:24:10 PM aralland

SEEDING	
END WIDTH	SO. YDS.
N/A	356
120	356



END AREA		VOLUME		CALCULATED		CHECKED	
CUT	FILL	CUT	FILL	CJC	CJC	CWL	CWL
N/A	N/A	(117)	(117)				
		2	1541				
		(117)	(117)				
		2	1541				

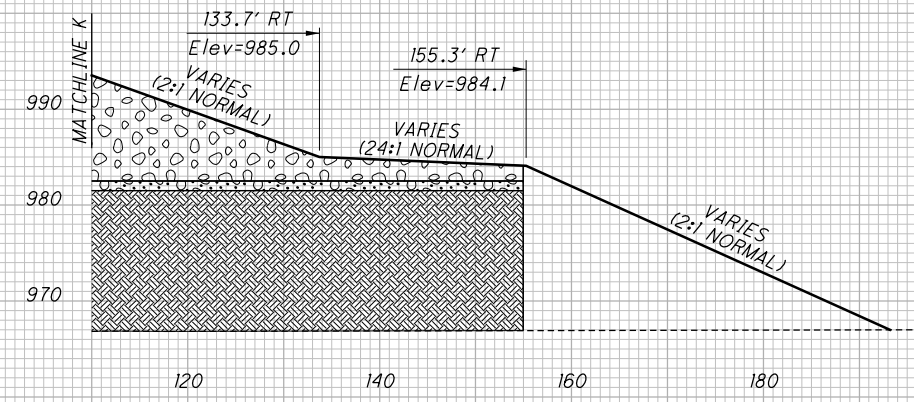
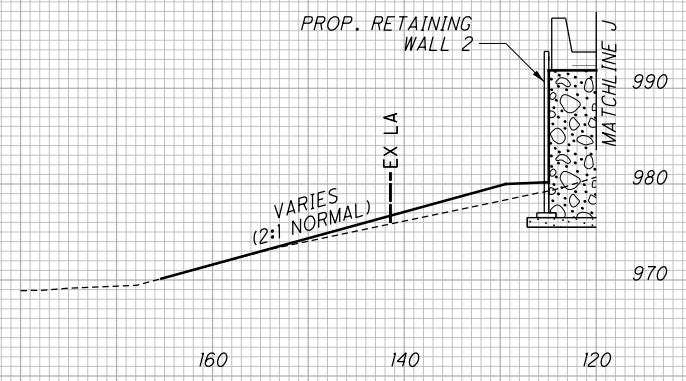
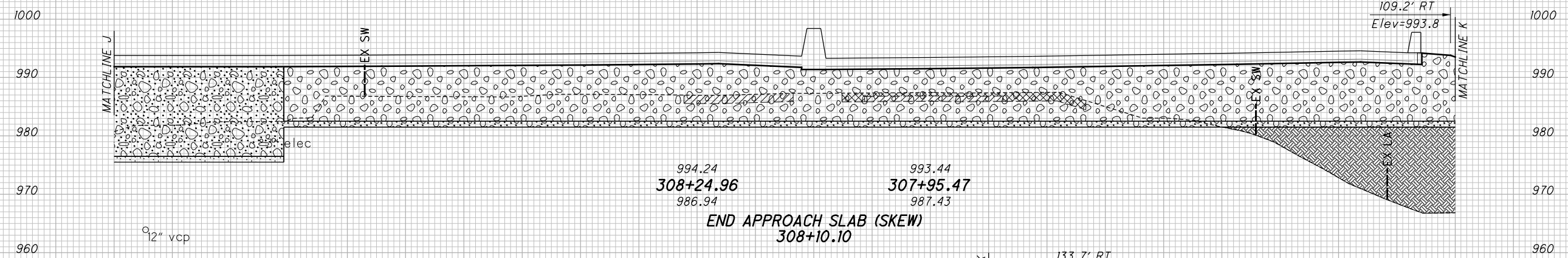
**CROSS SECTIONS I.R.76  
STA. 307+50.00 TO STA. 307+80.10**

**SUM - 76 - 5.53**

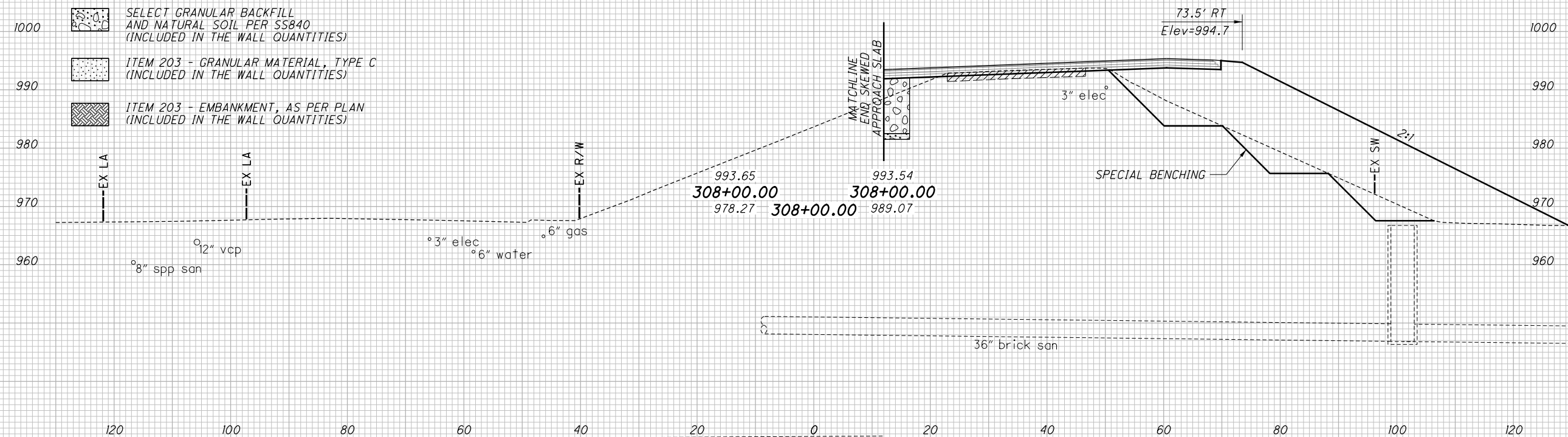
253  
672

SEEDING	
END WIDTH	SO. YDS.
N/A	314

END AREA		VOLUME		CALCULATED		CHECKED	
CUT	FILL	CUT	FILL	C/JC	C/JC	C/WL	C/WL
N/A	N/A	(243)	(243)				
		7	1161				



- (#) SPECIAL BENCHING
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT
- ITEM 203 - GRANULAR MATERIAL, TYPE B (INCLUDED IN THE WALL QUANTITIES)
- SELECT GRANULAR BACKFILL AND NATURAL SOIL PER SS840 (INCLUDED IN THE WALL QUANTITIES)
- ITEM 203 - GRANULAR MATERIAL, TYPE C (INCLUDED IN THE WALL QUANTITIES)
- ITEM 203 - EMBANKMENT, AS PER PLAN (INCLUDED IN THE WALL QUANTITIES)



END AREA		VOLUME		CALCULATED		CHECKED	
CUT	FILL	CUT	FILL	C/JC	C/JC	C/WL	C/WL
N/A	N/A	(126)	(126)				
		2	675				
		(243)	(243)				
		7	1161				

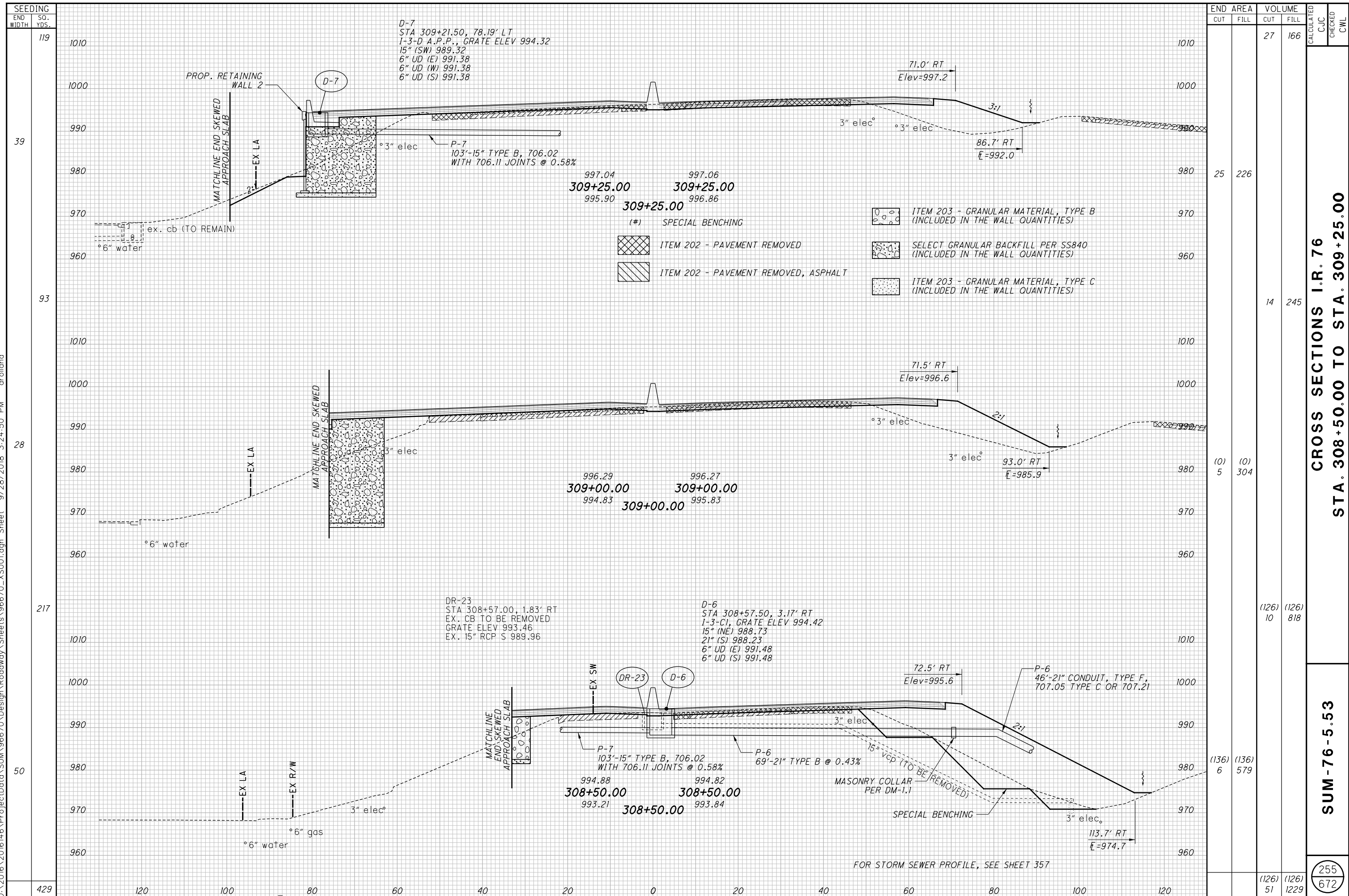
CROSS SECTIONS I.R. 76  
STA. 308+00.00 TO STA. 308+10.10

SUM - 76 - 5.53

254  
672

O:\2016\2016146\ProjectData\SUM\96670\Roadway\Design\Roadway\96670\_XS001.dgn Sheet 8/20/2018 9:56:59 AM jBumgarner

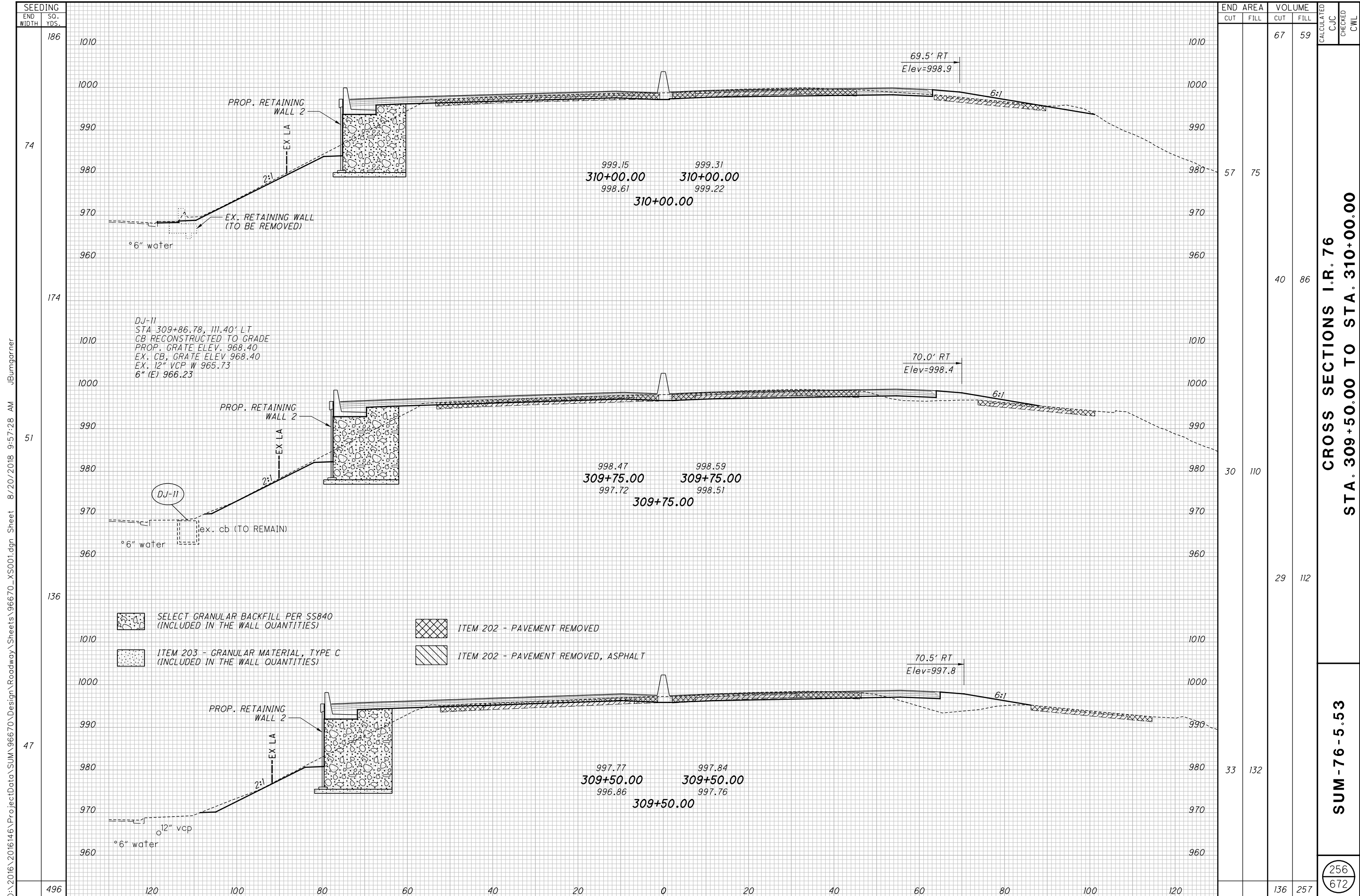
o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:24:50 PM oroland



SEEDING	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
			CUT	FILL	CUT	FILL		
	39	119			27	166		
	93		25	226				
	28		(0)	(0)	5	304		
	217		(126)	(126)	10	818		
	50		(136)	(136)	6	579		
	429		(126)	(126)	51	1229		
<b>SUM - 76 - 5.53</b>								(255) 672

**CROSS SECTIONS I.R. 76  
STA. 308+50.00 TO STA. 309+25.00**

FOR STORM SEWER PROFILE, SEE SHEET 357



END AREA	VOLUME	CALCULATED	CHECKED				
				CUT	FILL	CUT	FILL
57	75	67	59				
30	110	40	86				
29	112						
33	132						
		136	257				

**CROSS SECTIONS I.R. 76**

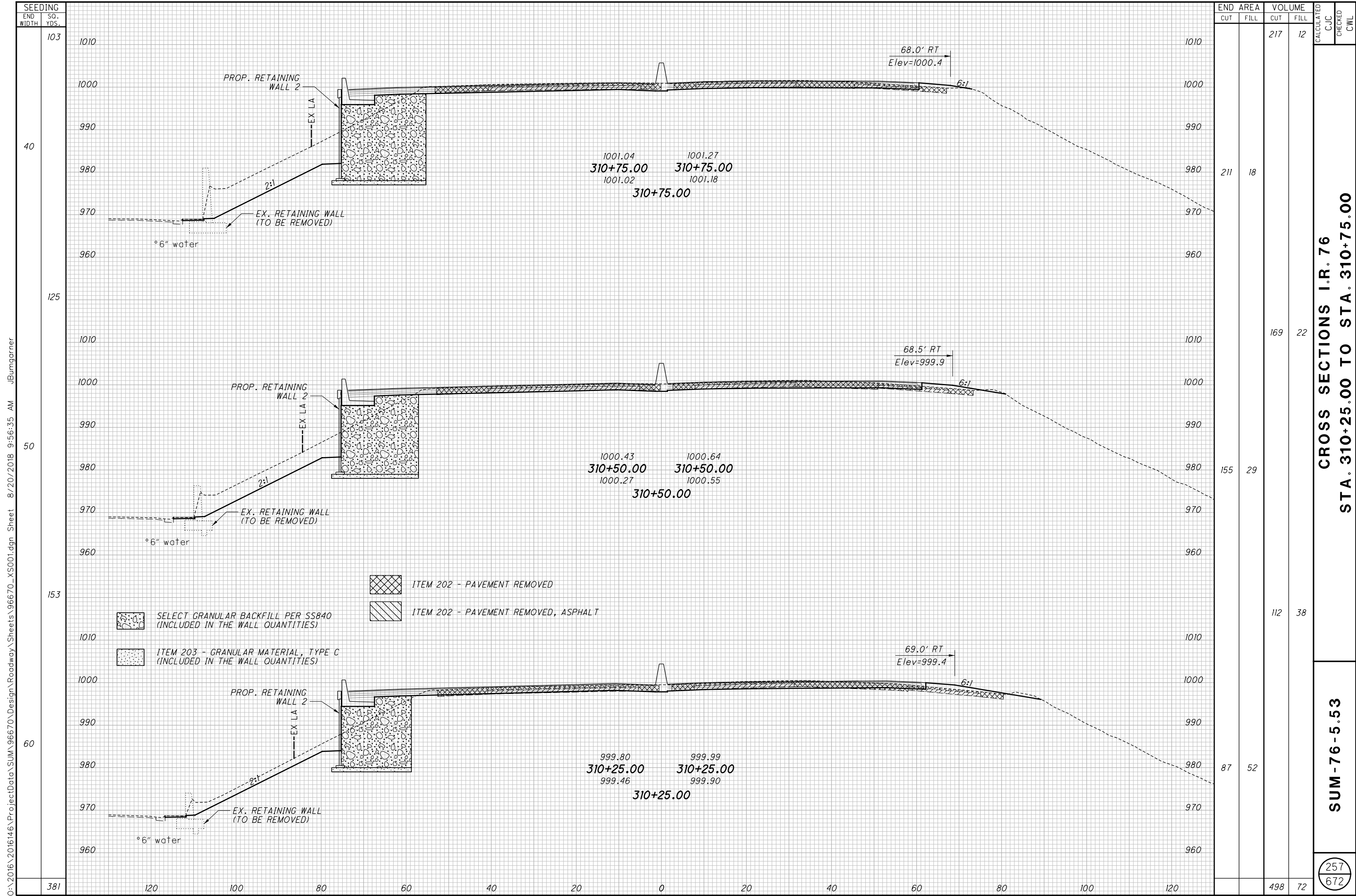
**STA. 309+50.00 TO STA. 310+00.00**

**SUM - 76 - 5.53**

256  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:57:28 AM jBumgarner



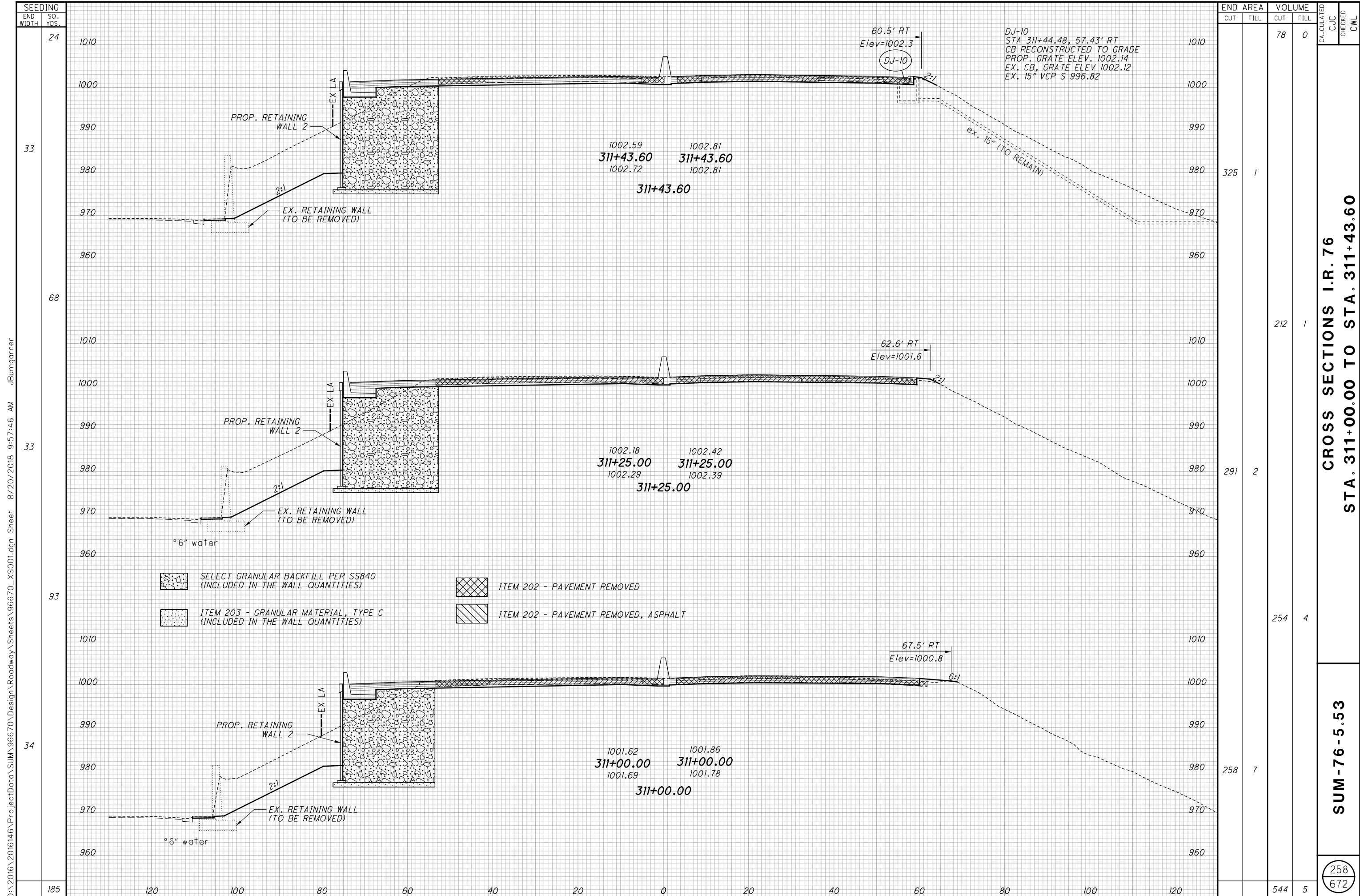


**CROSS SECTIONS I.R. 76**  
**STA. 310+25.00 TO STA. 310+75.00**

**SUM - 76 - 5.53**

257  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:56:35 AM JBurgarner



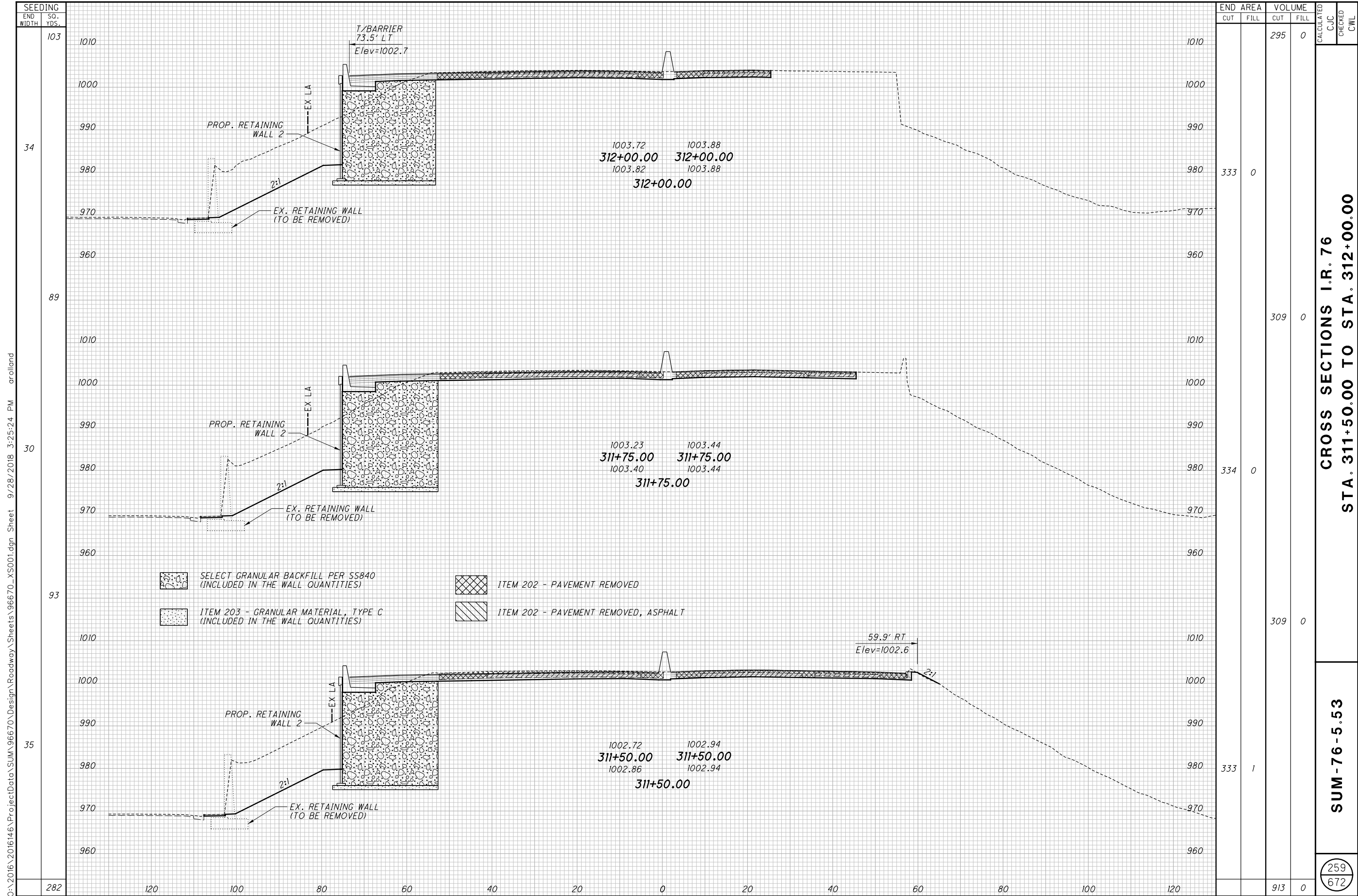
END STA	AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
311+43.60	325	1	78	0		
311+25.00	291	2	212	1		
311+00.00	254	4	258	7		
<b>SUM</b>	<b>870</b>	<b>11</b>	<b>544</b>	<b>8</b>		

**CROSS SECTIONS I.R. 76  
 STA. 311+00.00 TO STA. 311+43.60**

**SUM - 76 - 5.53**

258  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 8/20/2018 9:57:46 AM JBurmgarner

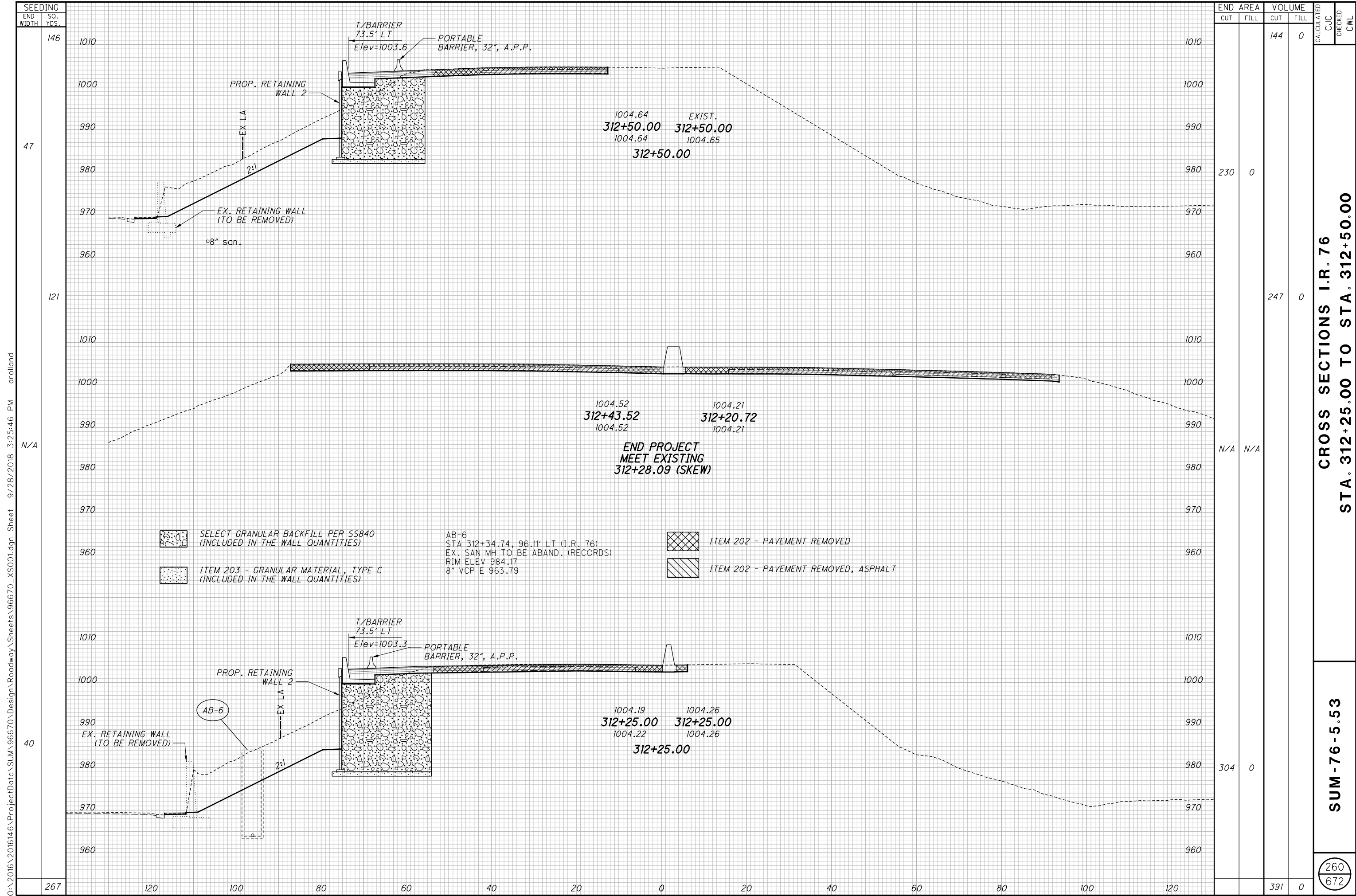


**CROSS SECTIONS I.R. 76**  
**STA. 311+50.00 TO STA. 312+00.00**

**SUM - 76 - 5.53**

259  
 672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:25:24 PM oroland



**CROSS SECTIONS I.R. 76**  
**STA. 312+25.00 TO STA. 312+50.00**

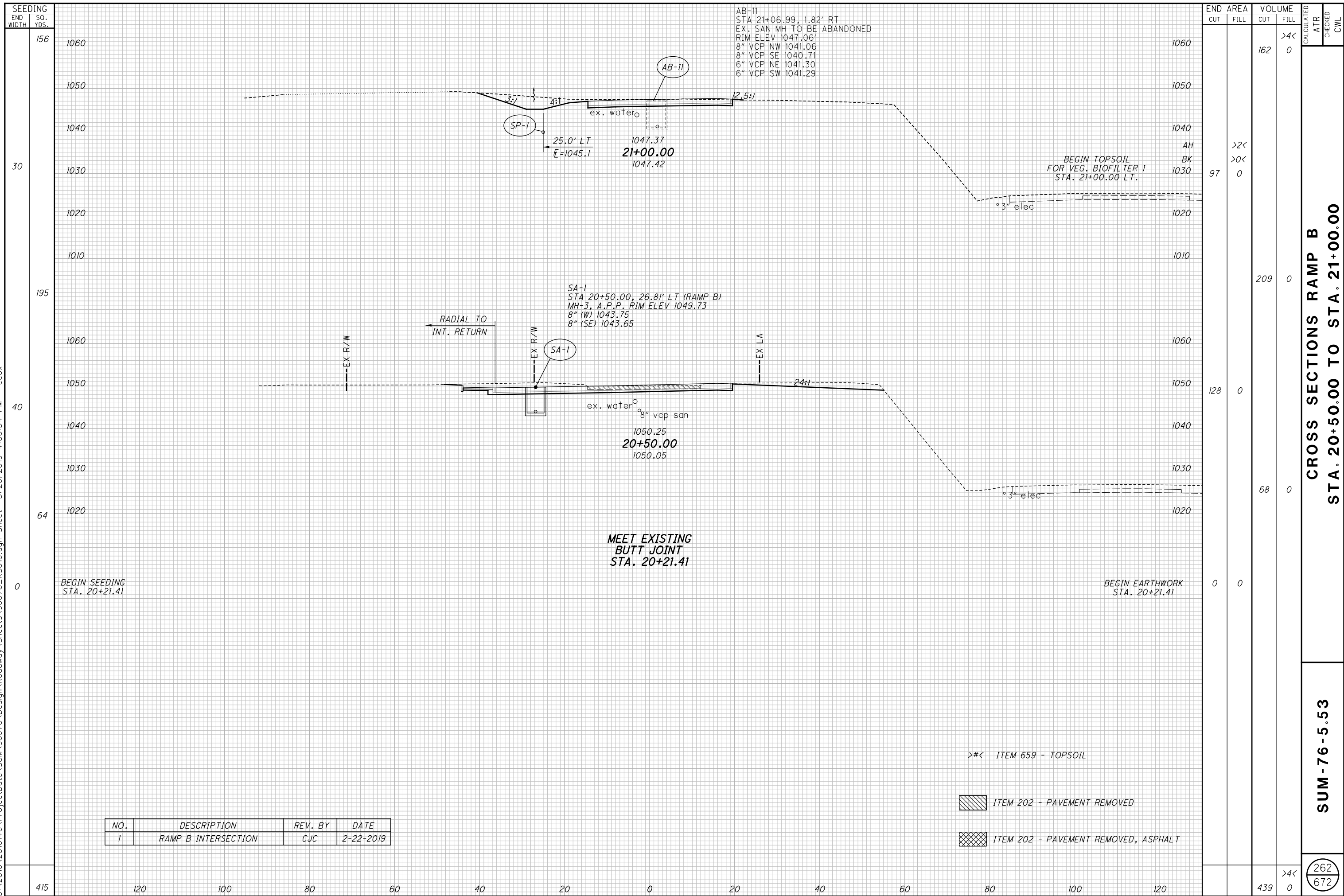
**SUM - 76 - 5.53**

260  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS001.dgn Sheet 9/28/2018 3:25:46 PM oroland



o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 3/26/2019 4:06:54 PM ccox



AB-11  
 STA 21+06.99, 1.82' RT  
 EX. SAN MH TO BE ABANDONED  
 RIM ELEV 1047.06'  
 8" VCP NW 1041.06  
 8" VCP SE 1040.71  
 6" VCP NE 1041.30  
 6" VCP SW 1041.29

SA-1  
 STA 20+50.00, 26.81' LT (RAMP B)  
 MH-3, A.P.P. RIM ELEV 1049.73  
 8" (W) 1043.75  
 8" (SE) 1043.65

END STA	AREA		VOLUME		CALCULATED ATR	CHECKED CWL
	CUT	FILL	CUT	FILL		
156					>4<	
1060			162	0		
1050						
1040						
1030	97				>2<	
1020					>0<	
1010						
195			209	0		
1060						
1050	128					
1040						
1030						
1020			68	0		
0						
415			439	0	>4<	

**CROSS SECTIONS RAMP B**  
**STA. 20+50.00 TO STA. 21+00.00**

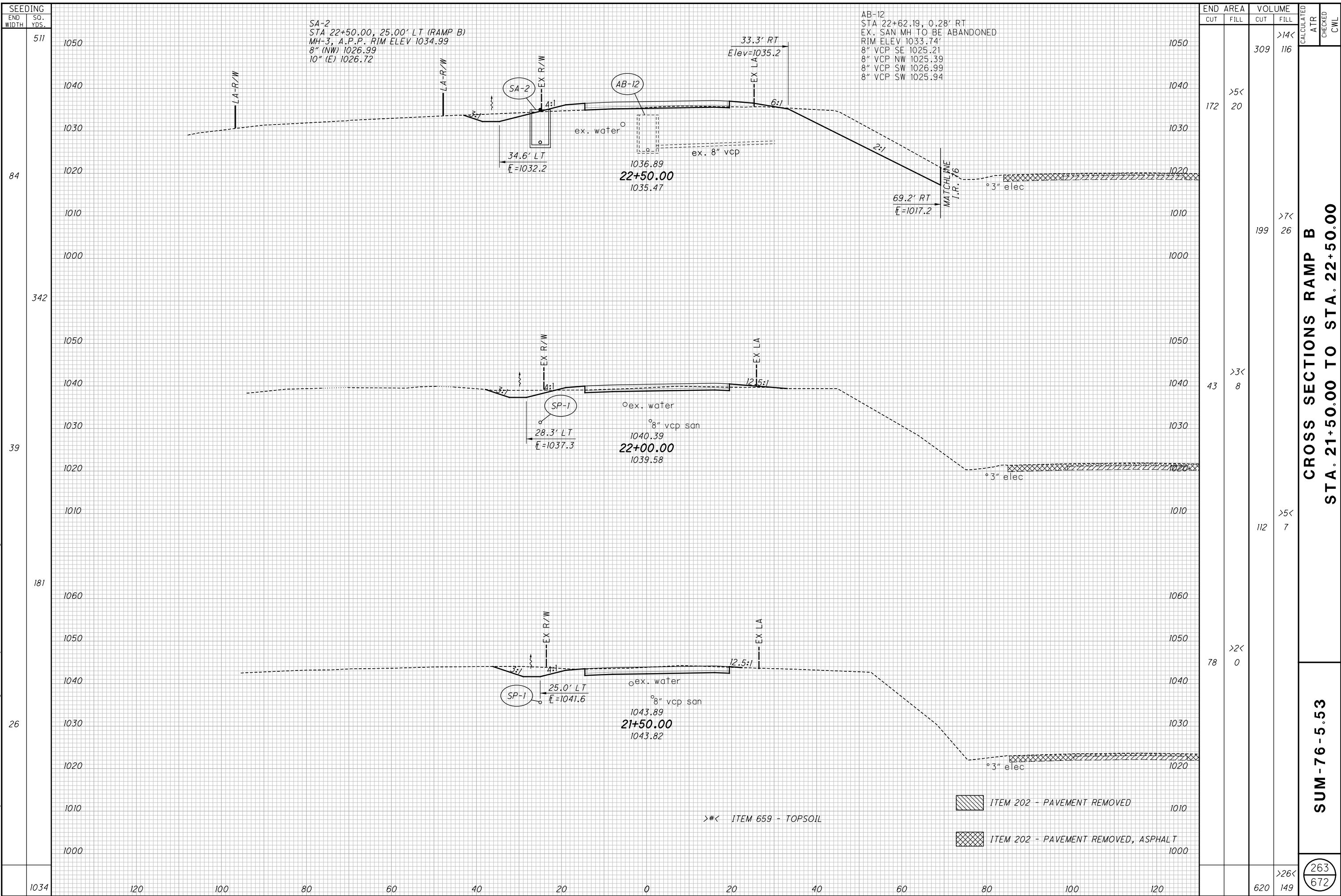
**SUM - 76 - 5.53**

262  
 672

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

- >#< ITEM 659 - TOPSOIL
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT

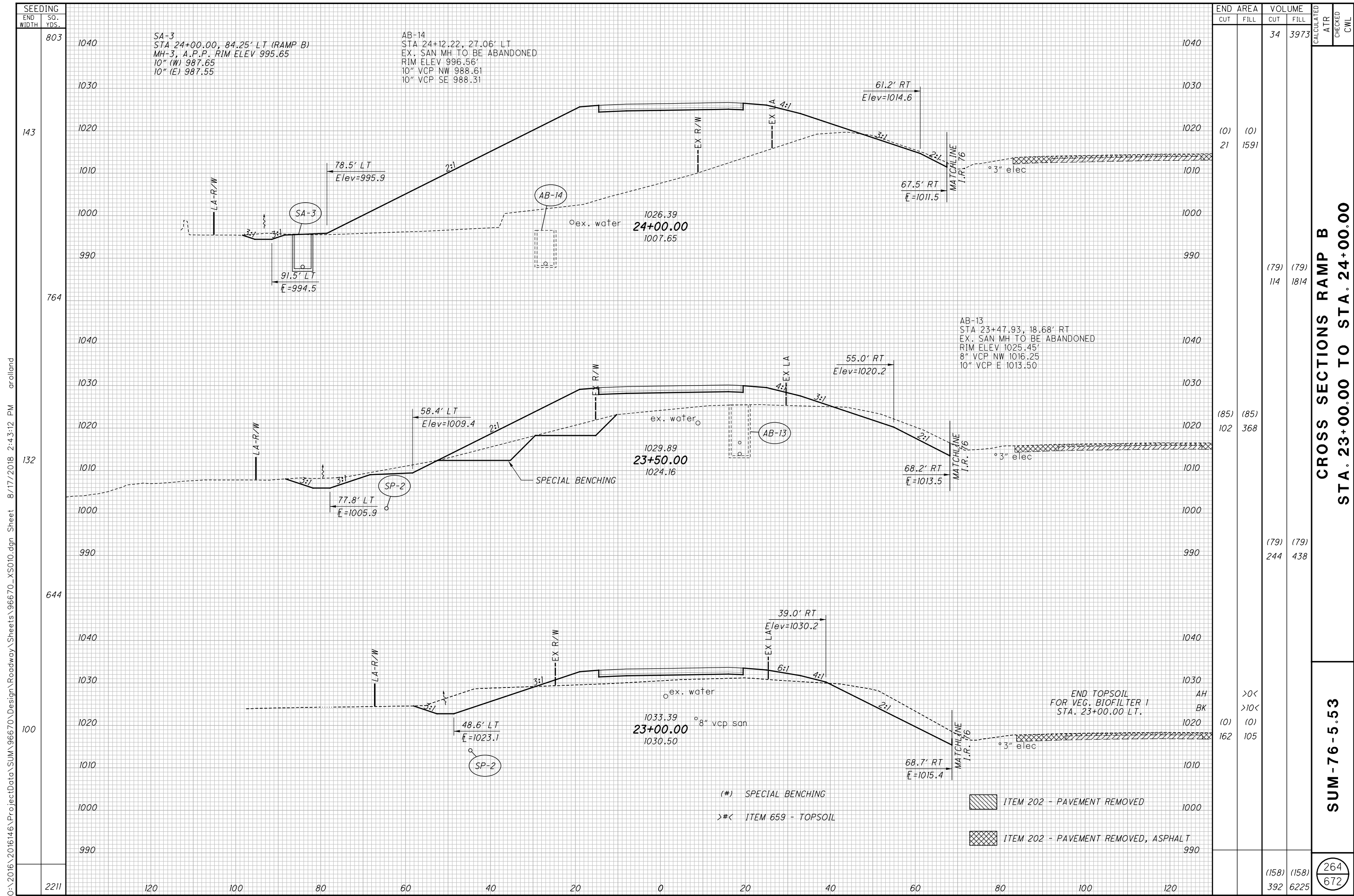
o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 8/17/2018 2:42:54 PM arolland



**CROSS SECTIONS RAMP B  
STA. 21+50.00 TO STA. 22+50.00**

**SUM - 76 - 5.53**

263  
672



END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
(0)	(0)				
21	1591				
(79)	(79)				
114	1814				
(85)	(85)				
102	368				
(79)	(79)				
244	438				
>0<					
>10<					
(0)	(0)				
162	105				
(158)	(158)				
392	6225				

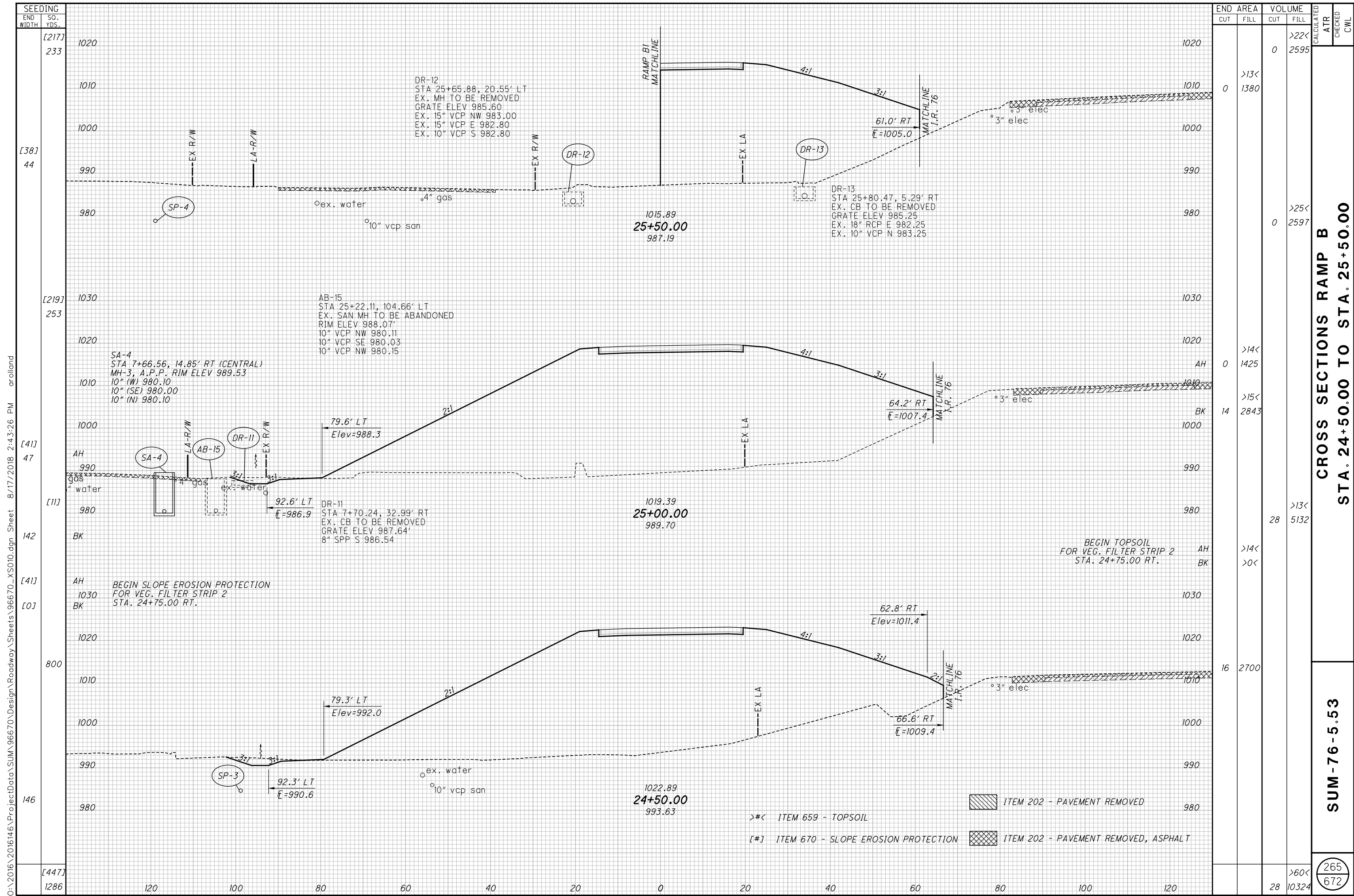
**CROSS SECTIONS RAMP B**  
**STA. 23+00.00 TO STA. 24+00.00**

**SUM - 76 - 5.53**

264  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 8/17/2018 2:43:12 PM arolland





END STA.	AREA	VOLUME		CALCULATED ATR	CHECKED CWL
		CUT	FILL		
[217] 233	1020			>22<	
		0	2595		
[387] 44	1010	>13<	1380		
	1000	0			
	990			>25<	
	980	0	2597		
[219] 253	1030			>14<	
	1020	0	1425		
	1010	>15<	2843		
	1000	14			
[417] 47	990			>13<	
	980	28	5132		
[417] 101	1030	>14<			
	1020	>0<			
	1010				
	1000	16	2700		
	990				
	980				
[447] 1286	120			>60<	
	100	28	10324		

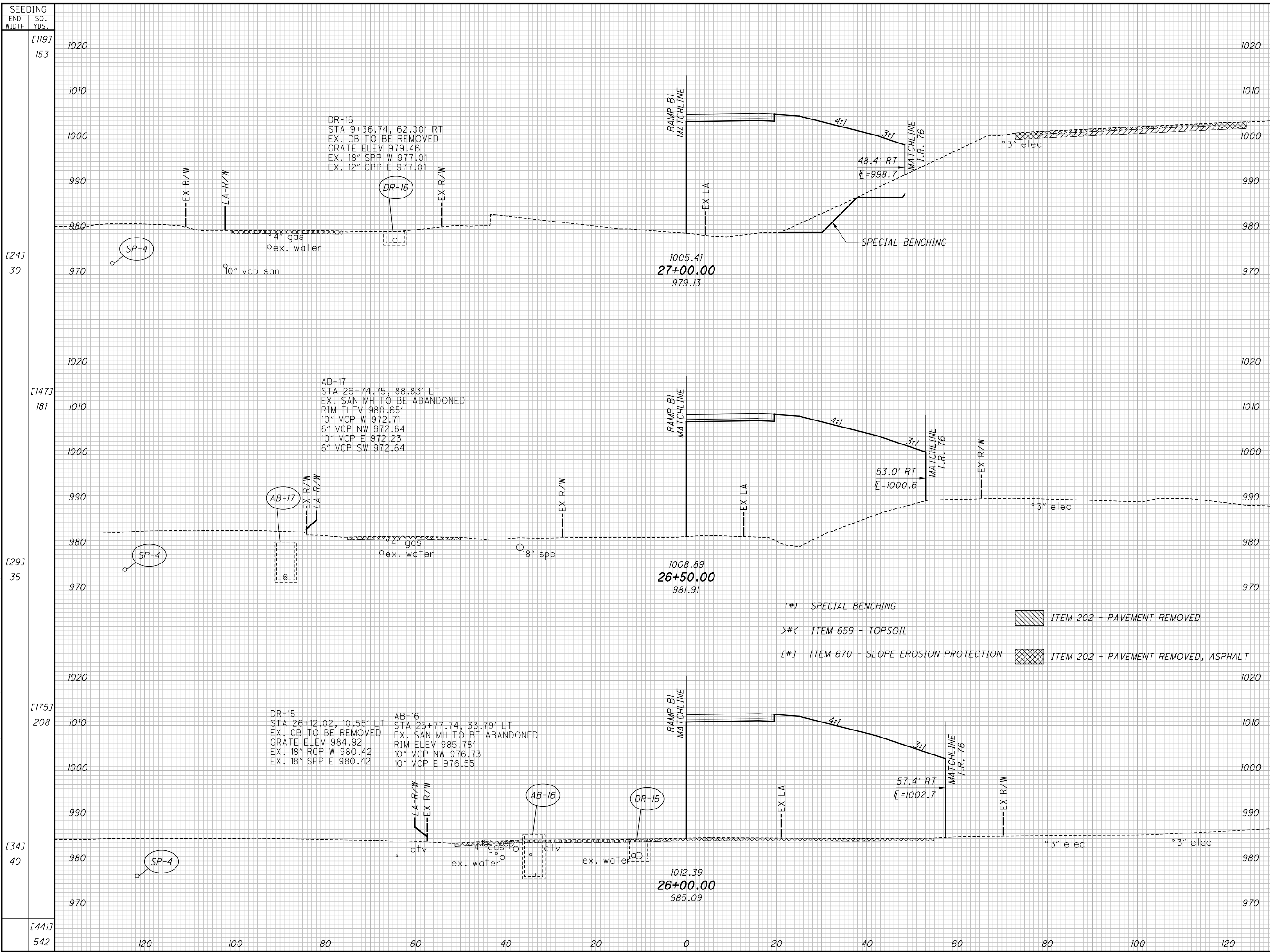
**CROSS SECTIONS RAMP B  
STA. 24+50.00 TO STA. 25+50.00**

**SUM - 76 - 5.53**

265  
672

o:\2016\2016146\ProjectData\SUM\96670\Roadway\Design\96670\_XS010.dgn Sheet 8/17/2018 2:43:26 PM aralland

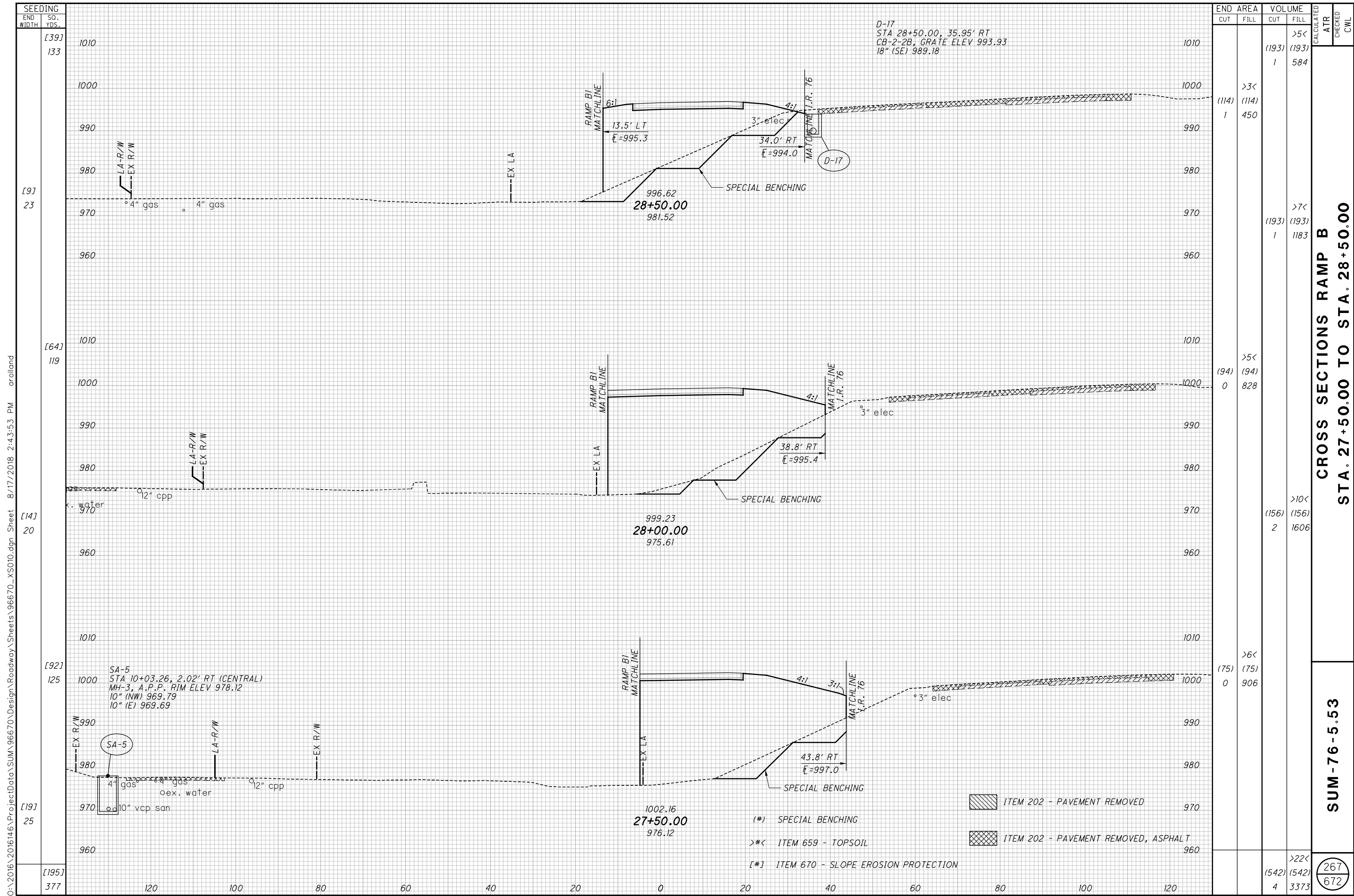
o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 9/28/2018 3:27:00 PM oroland



SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
[119] 153			>13<	(127)	(127)	
[24] 30			>8<	(62)	(62)	
[147] 181			>10<	(10)	(10)	
[29] 35			>19<	0	2430	
[175] 208			>11<	0	1423	
[34] 40			>49<	(184)	(184)	
[44] 542				0	6219	
<b>SUM - 76 - 5.53</b>						<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 12px;">266</span>  <span style="font-size: 12px;">672</span> </div>

**CROSS SECTIONS RAMP B**  
**STA. 26+00.00 TO STA. 27+00.00**

- (#) SPECIAL BENCHING
- >#< ITEM 659 - TOPSOIL
- [#] ITEM 670 - SLOPE EROSION PROTECTION
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT



D-17  
 STA 28+50.00, 35.95' RT  
 CB-2-2B, GRATE ELEV 993.93  
 18" (SE) 989.18

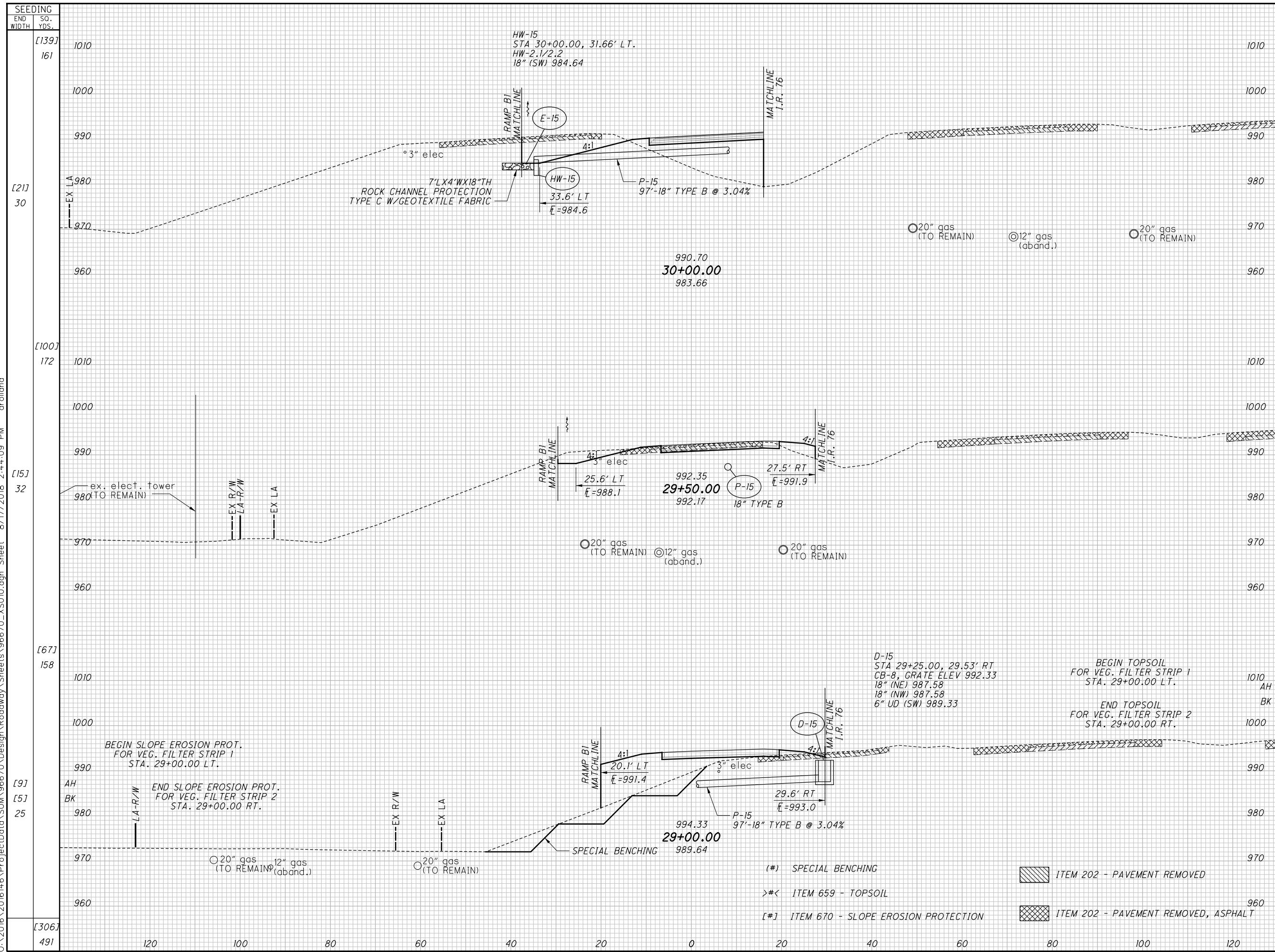
SEEDING	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
			CUT	FILL	CUT	FILL		
[39]	133	1010			>5<	(193)	(193)	
		1000	(114)	>3<	(114)	1	584	
[9]	23	970			>7<	(193)	(193)	
		960	(114)	>3<	(114)	1	450	
[64]	119	1010			>5<	(94)	(94)	
		1000	(94)	>5<	(94)	0	828	
[14]	20	970			>10<	(156)	(156)	
		960	(156)	>10<	(156)	2	1606	
[92]	125	1010			>6<	(75)	(75)	
		1000	(75)	>6<	(75)	0	906	
[19]	25	970						
		960						
[195]	377				>22<	(542)	(542)	(267)
						4	3373	(672)

**CROSS SECTIONS RAMP B**  
**STA. 27+50.00 TO STA. 28+50.00**

**SUM - 76 - 5.53**

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 8/17/2018 2:43:53 PM arolland

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SEEDING END WIDTH SO. YDS.	ELEVATION	END AREA CUT FILL	VOLUME CUT FILL	CALCULATED ATR	CHECKED CWL
[139] 161	1010		>16<		
[21] 30	970	76	>7<	169	
[100] 172	960	104	>11<	181	
[15] 32	970	36	>5<	27	
[67] 158	960	(87)	>7<	(87)	
[9] 15	970	0	>3<	181	
[306] 491	960	(87)	>34<	(87)	
		225		1065	

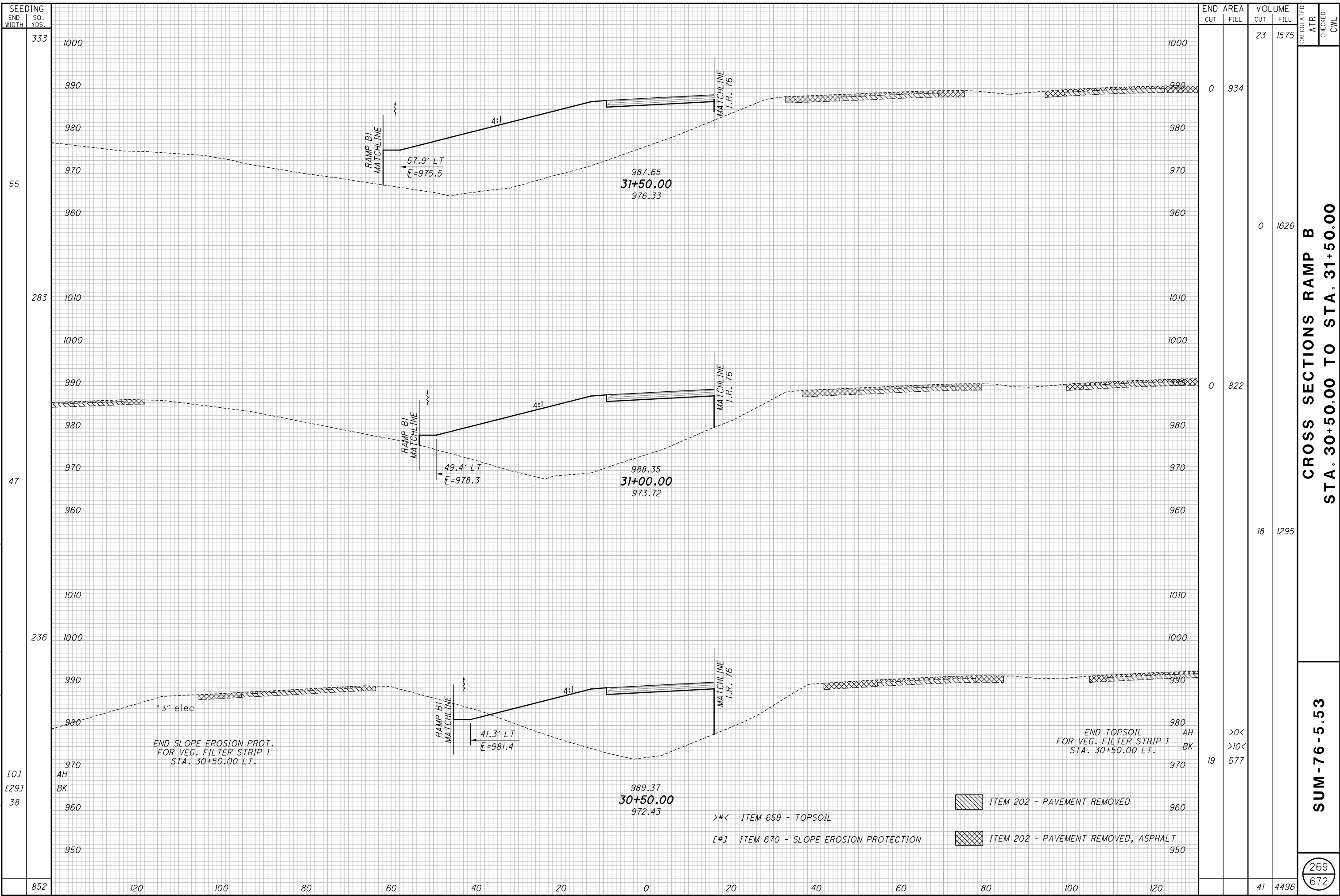
**CROSS SECTIONS RAMP B  
STA. 29+00.00 TO STA. 30+00.00**

**SUM - 76 - 5.53**

268  
672

- (#) SPECIAL BENCHING
- >#< ITEM 659 - TOPSOIL
- [#] ITEM 670 - SLOPE EROSION PROTECTION
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 8/17/2018 2:44:22 PM arolland



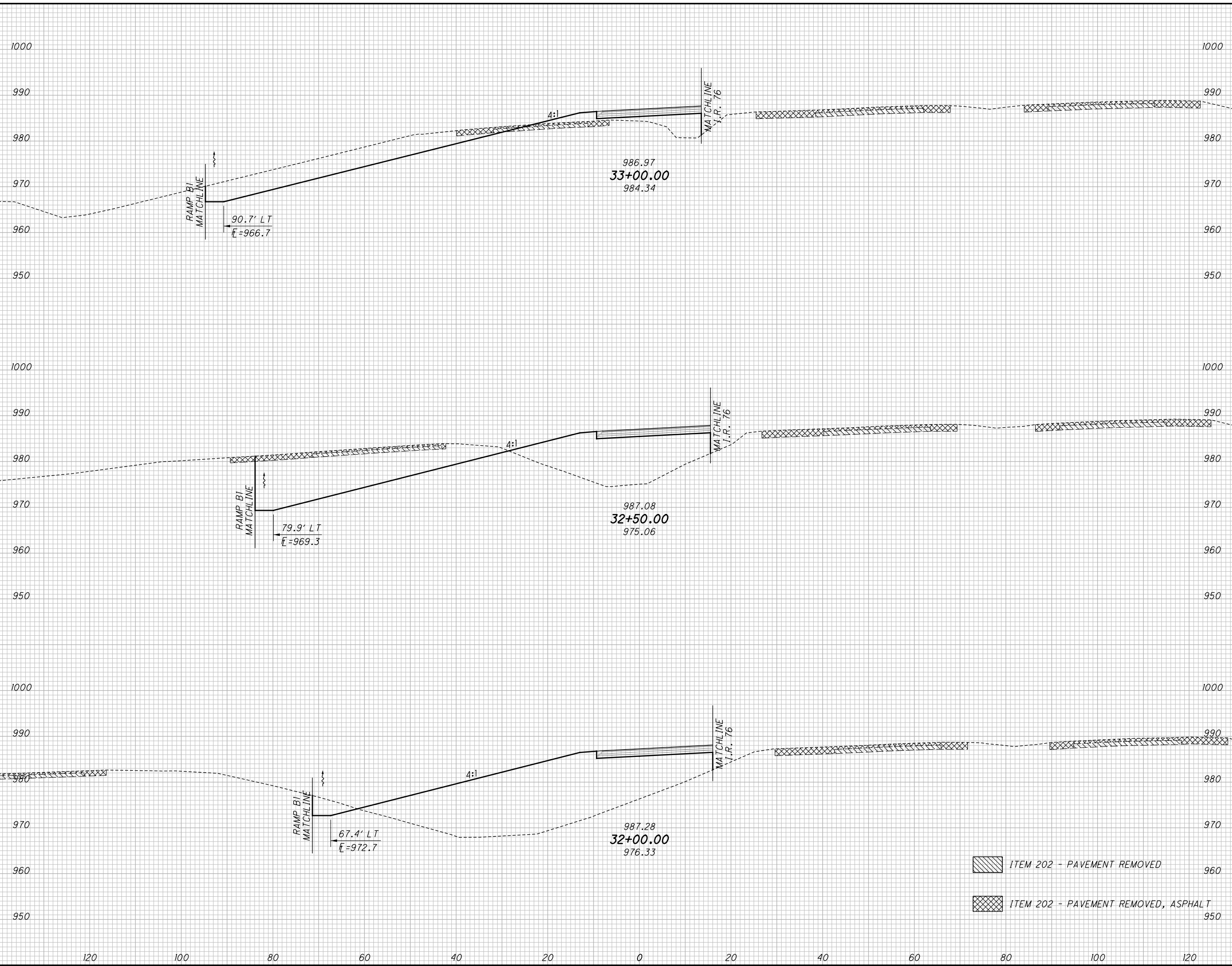
**CROSS SECTIONS RAMP B  
STA. 30+50.00 TO STA. 31+50.00**

**SUM - 76 - 5.53**

269  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 8/17/2018 2:44:37 PM arolland

SEEDING	SO. YDS.	END WIDTH	END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
			CUT	FILL	CUT	FILL		
522					219	306		
89					555	393		
464					364	331		
78					360	1017		
397					25	767		
65								
1383					1134	1716		



ITEM 202 - PAVEMENT REMOVED

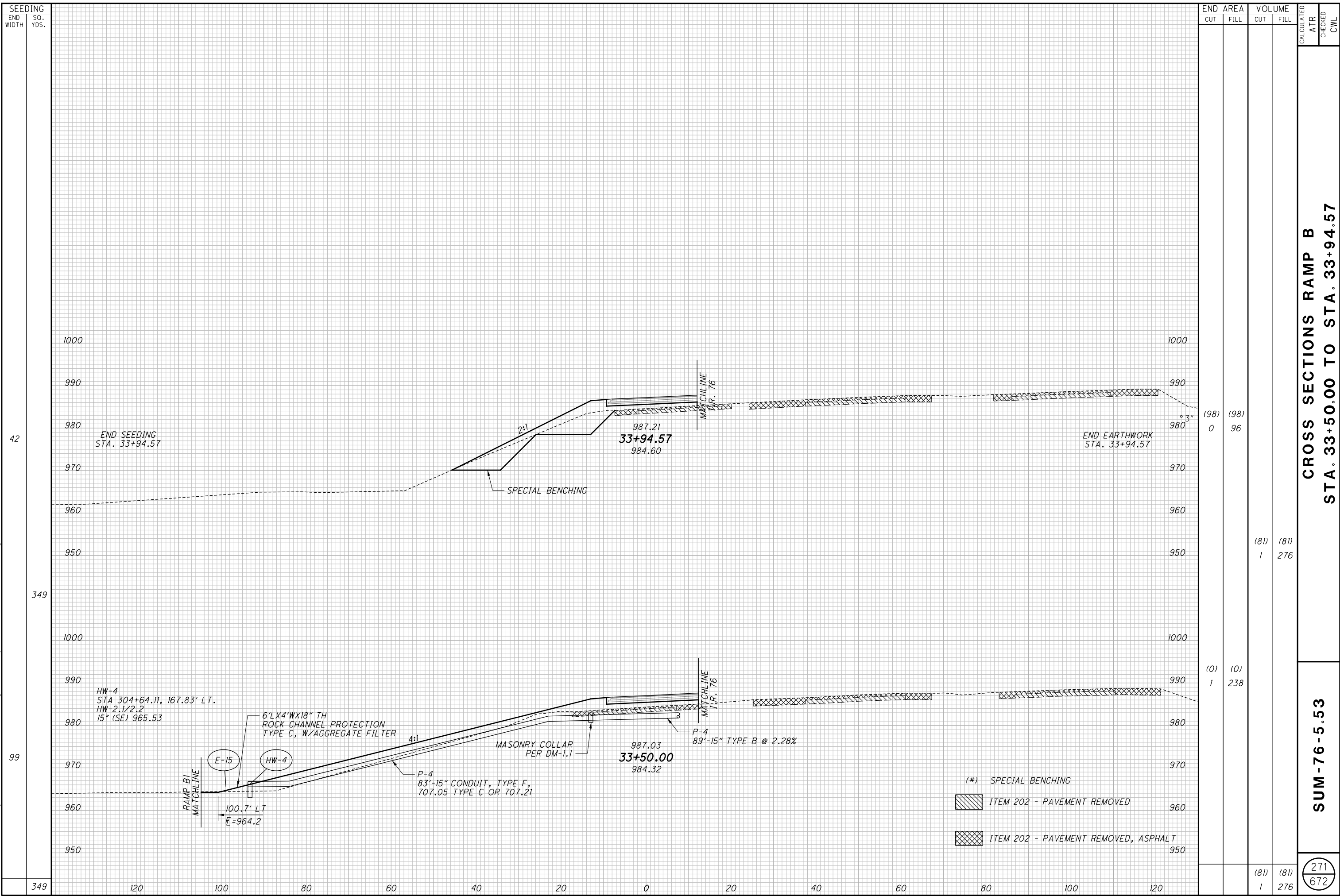
ITEM 202 - PAVEMENT REMOVED, ASPHALT

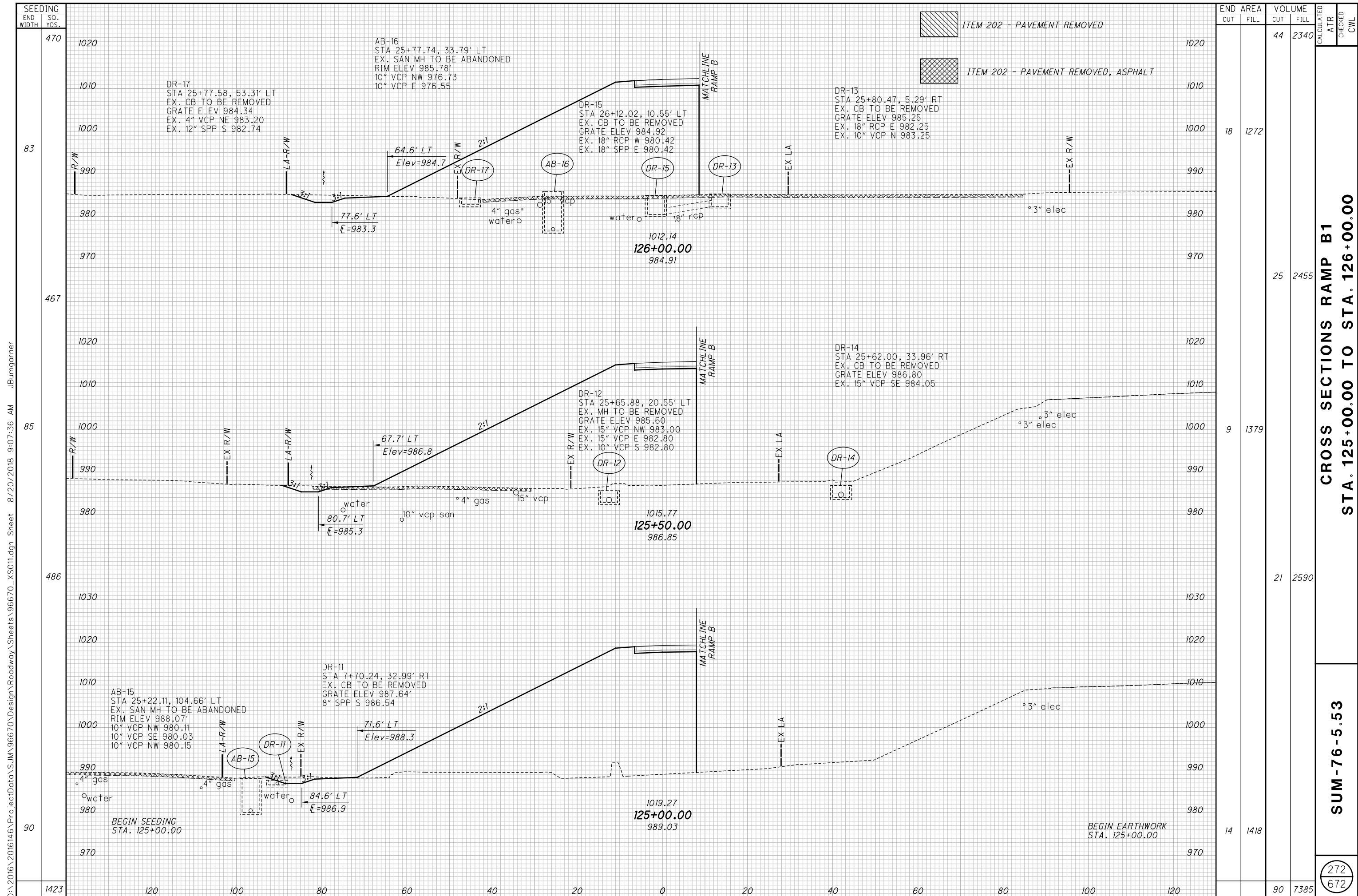
**CROSS SECTIONS RAMP B  
STA. 32+00.00 TO STA. 33+00.00**

**SUM - 76 - 5.53**

270  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS010.dgn Sheet 8/17/2018 2:44:50 PM arolland





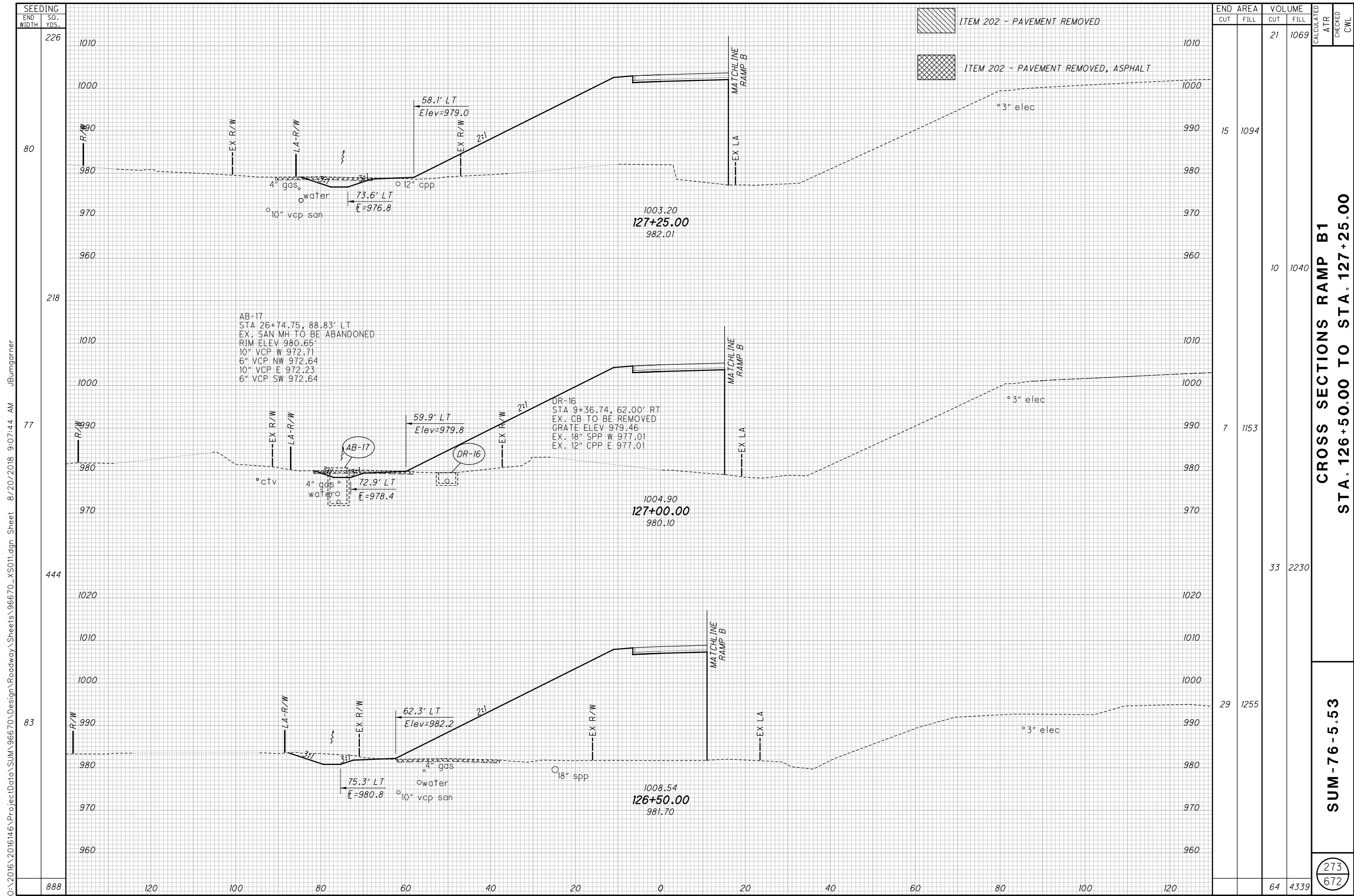
**CROSS SECTIONS RAMP B1  
STA. 125+00.00 TO STA. 126+00.00**



**SUM - 76 - 5.53**

(272)  
672

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 ITEM 202 - PAVEMENT REMOVED  
 ITEM 202 - PAVEMENT REMOVED, ASPHALT

END STA	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
1010			21	1069		
15	1094					
10		1040				
7	1153					
33		2230				
29	1255					
64		4339				

**CROSS SECTIONS RAMP B1**  
**STA. 126+50.00 TO STA. 127+25.00**

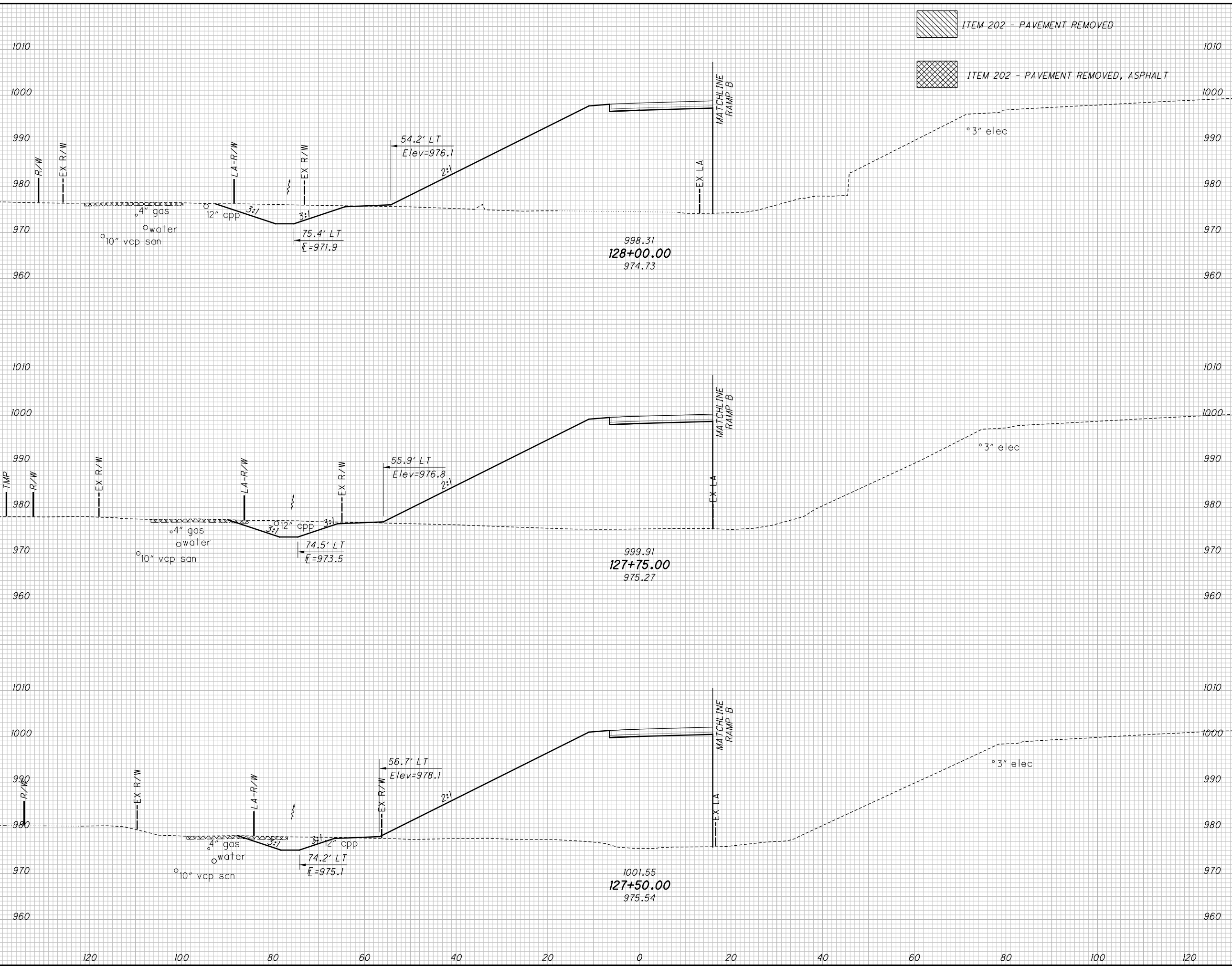
**SUM - 76 - 5.53**

273  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:07:44 AM JBumgarner

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:07:51 AM jBumgarner

SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
238	69	1119	56	1007		
240	55	1068				
233	38	1112				
711	149	3187				

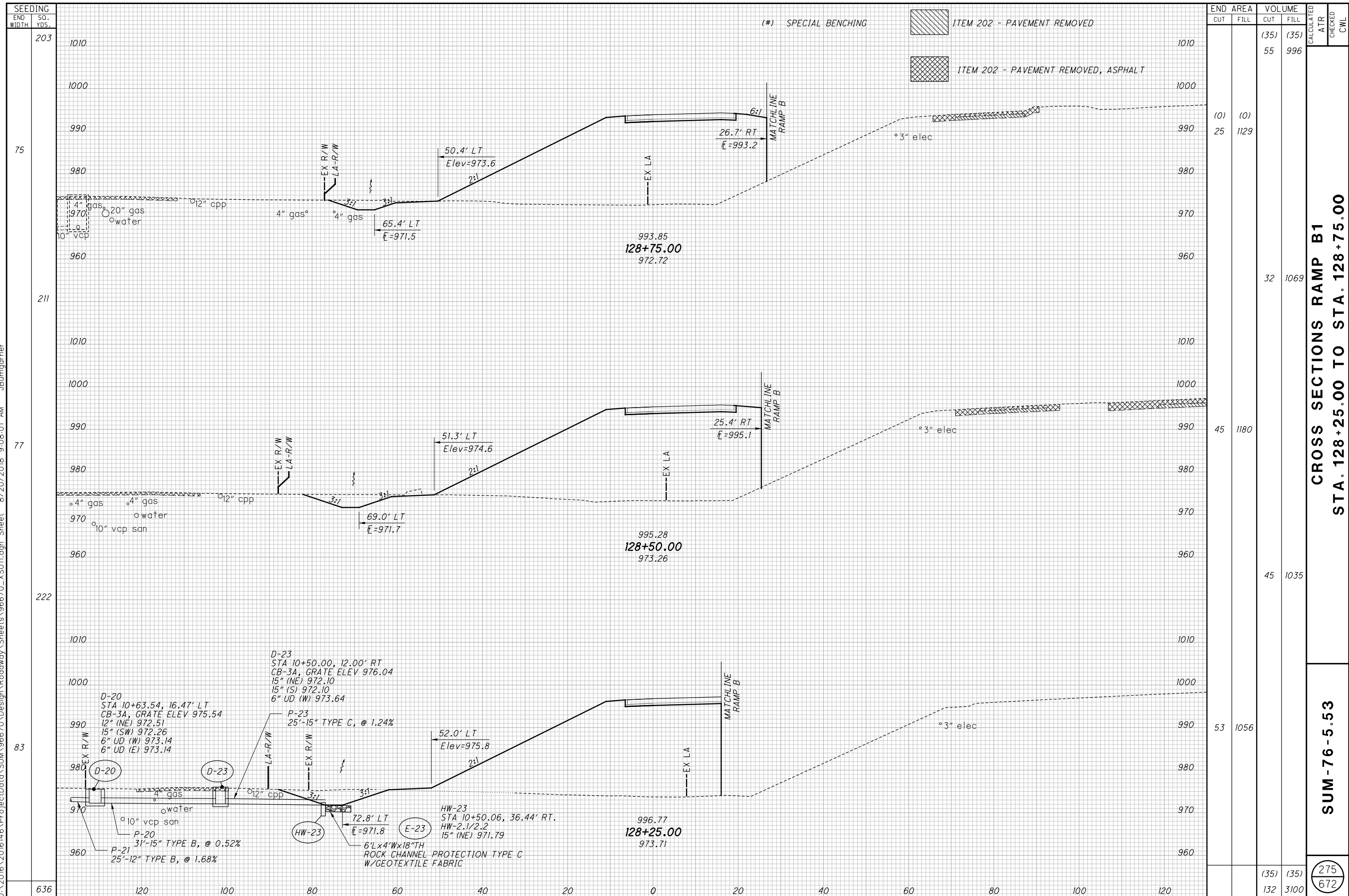


**CROSS SECTIONS RAMP B1  
STA. 127+50.00 TO STA. 128+00.00**

**SUM - 76 - 5.53**

274  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:08:01 AM jBurmgarner

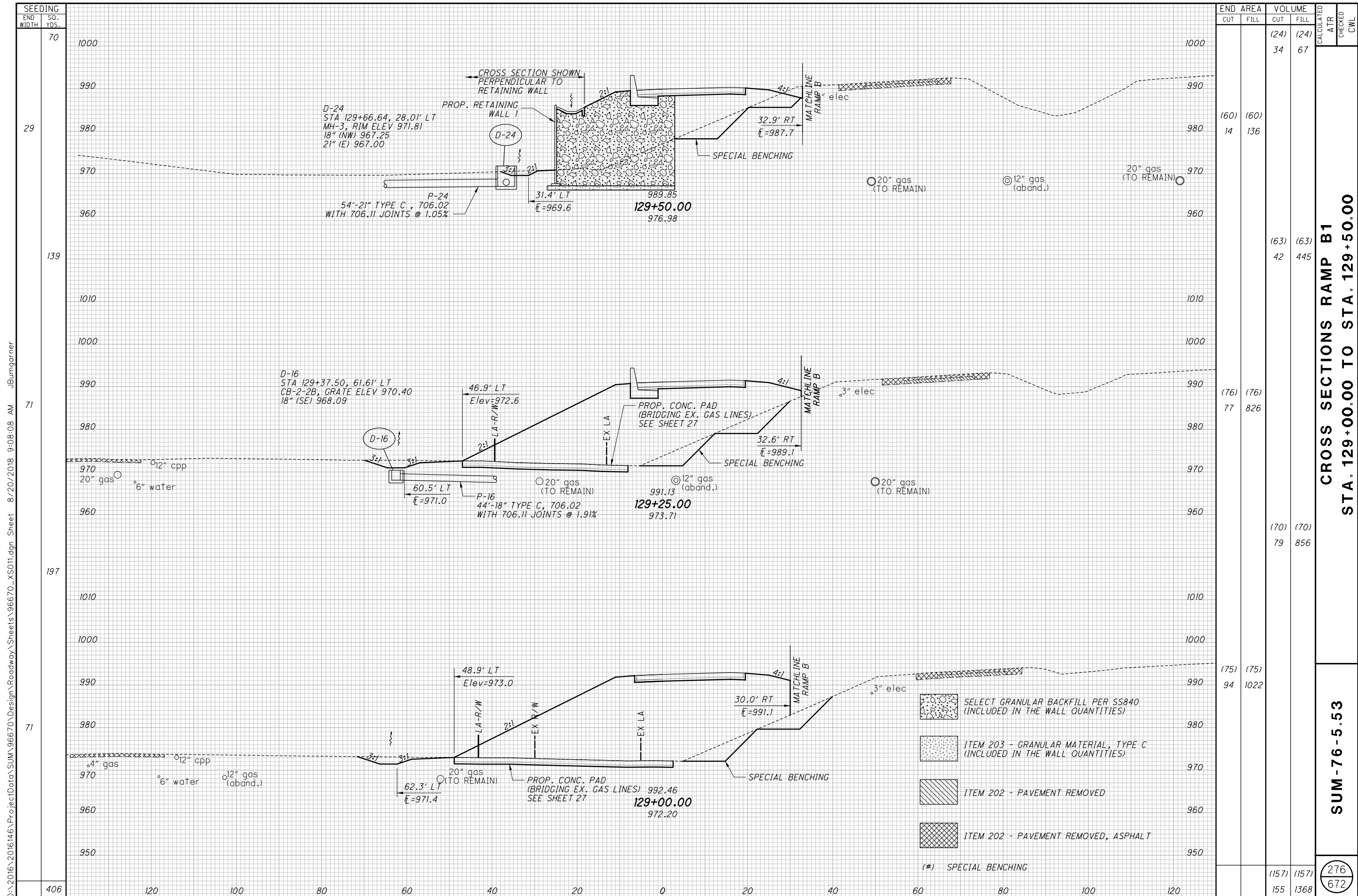


SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
203	(0)	(0)	(35)	(35)	ATR	CWL
75	25	1129	55	996		
211			32	1069		
77	45	1180				
222			45	1035		
83	53	1056				
636	132	3100	(35)	(35)		

**CROSS SECTIONS RAMP B1**  
**STA. 128+25.00 TO STA. 128+75.00**

**SUM - 76 - 5.53**

(275)  
 (672)



SEEDING	
END WIDTH	SO. YDS.
70	1000
29	990
	980
	970
	960
139	1010
	1000
	990
71	980
	970
	960
197	1010
	1000
	990
71	980
	970
	960
	950
406	120
	100
	80
	60
	40
	20
	0
	20
	40
	60
	80
	100
	120

END AREA		VOLUME		CALCULATED		CHECKED	
CUT	FILL	CUT	FILL	ATR	CWL	ATR	CWL
		(24)	(24)				
		34	67				
(60)	(60)						
14	136						
		(63)	(63)				
		42	445				
(76)	(76)						
77	826						
		(70)	(70)				
		79	856				
(75)	(75)						
94	1022						
		(157)	(157)				
		155	1368				
				276			
				672			

**CROSS SECTIONS RAMP B1**  
**STA. 129+00.00 TO STA. 129+50.00**

**SUM - 76 - 5.53**

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:08:08 AM JBumgarner

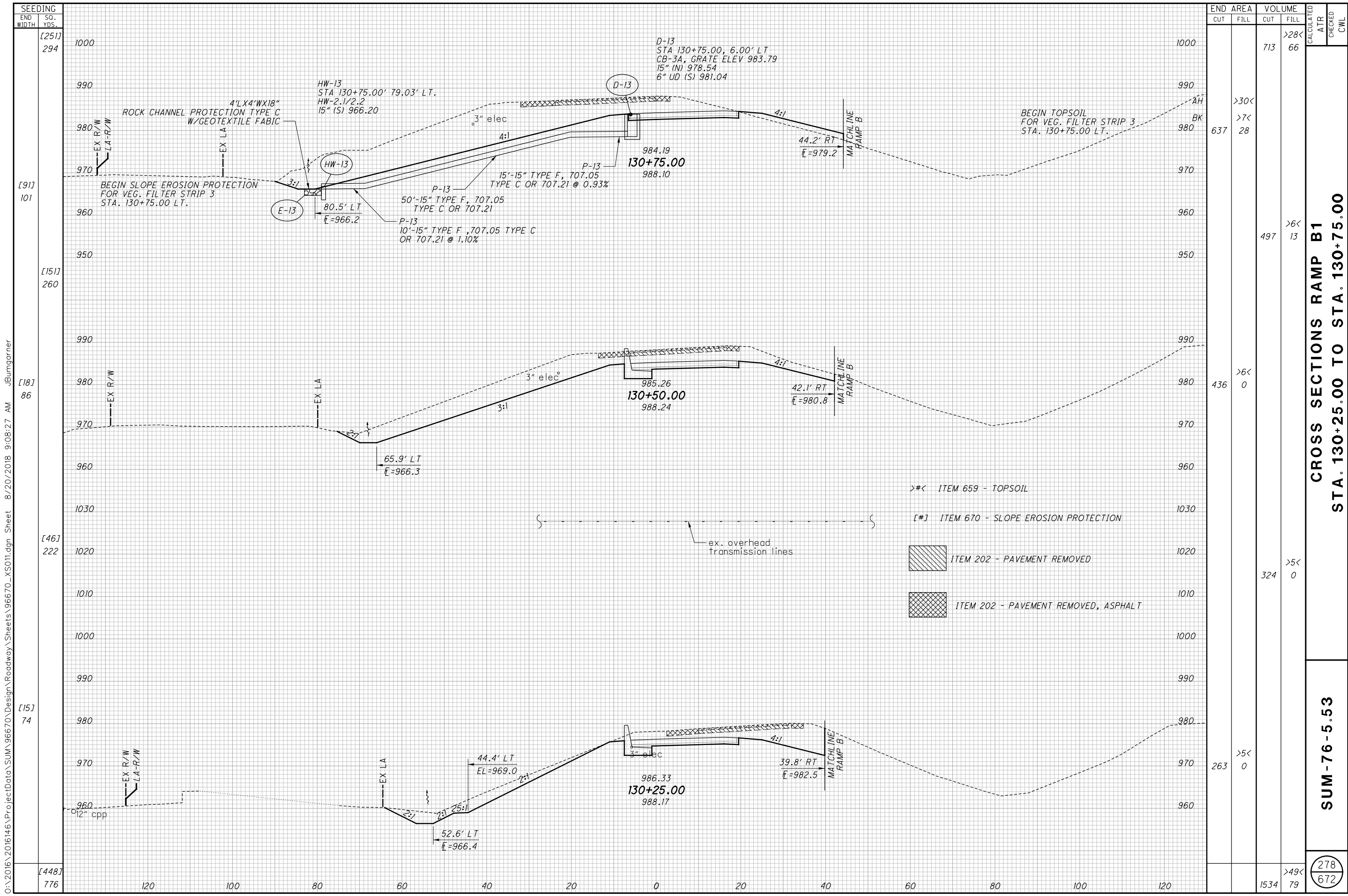


SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
[39] 167			239	0	>3<	A TR CWL
[13] 46			254	0	>4<	
[32] 107			157	10	>3<	
[10] 31			85	21	>3< >0<	
11			9	3		
29			70	29		
[7] 285			405	13	>3<	(277) (672)

**CROSS SECTIONS RAMP B1**  
**STA. 129+71.80 TO STA. 130+00.00**

**SUM - 76 - 5.53**

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:08:19 AM jBumgarner



SEEDING	END WIDTH		SO. YDS.
	END WIDTH	SO. YDS.	
[251]	294	1000	1000
[917]	101	970	970
[151]	260	950	950
[187]	86	970	970
[466]	222	1020	1020
[157]	74	980	980
[448]	776	960	960

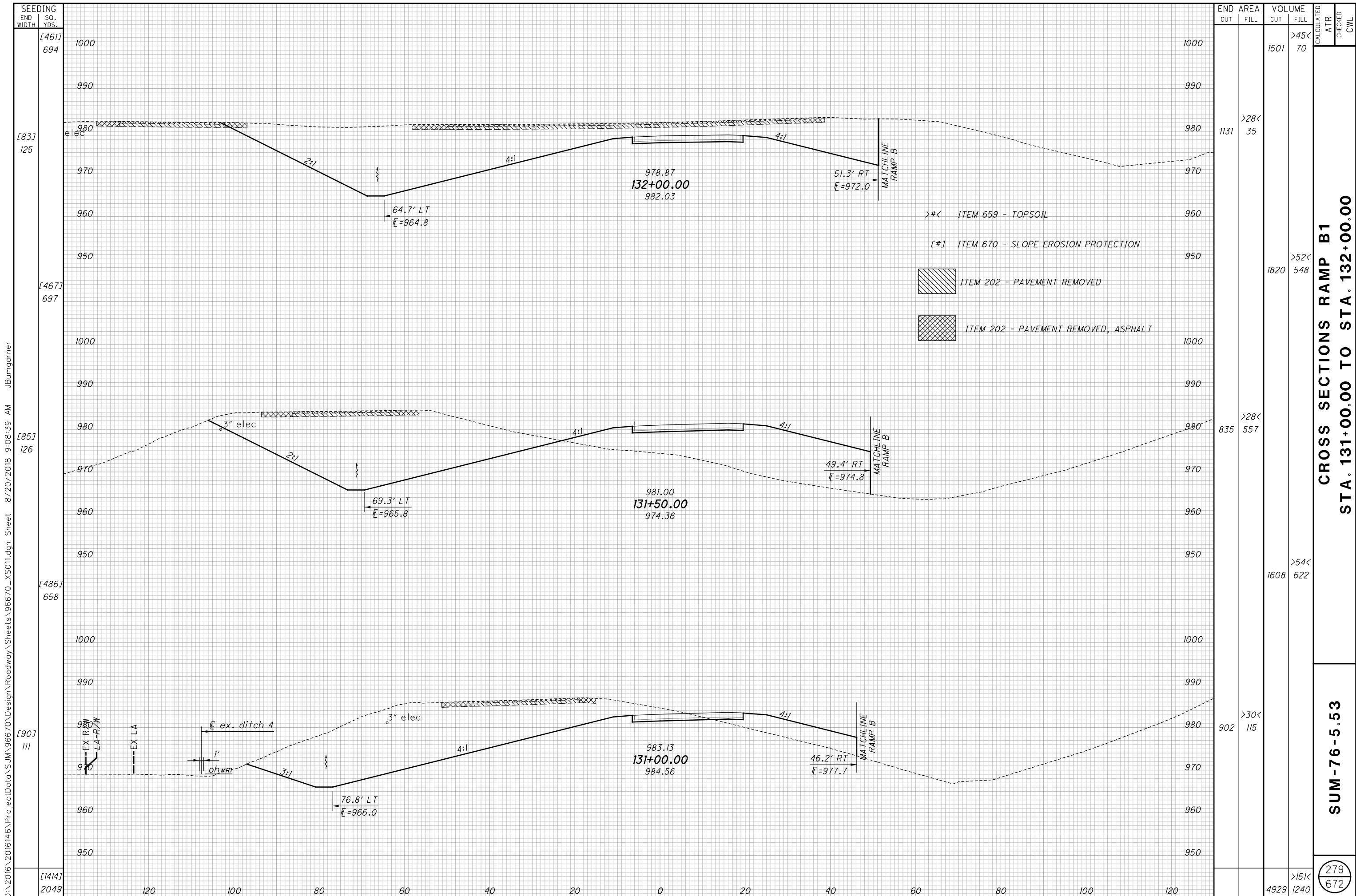
END AREA	VOLUME		CALCULATED	CHECKED	
	CUT	FILL			CUT
637	>30<	>7<	713	66	>28<
436	>6<	0	497	13	>6<
263	>5<	0	324	0	>5<
	>5<	0	1534	79	>49<

**CROSS SECTIONS RAMP B1  
STA. 130+25.00 TO STA. 130+75.00**

**SUM - 76 - 5.53**

(278 / 672)

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:08:27 AM JBumgarner



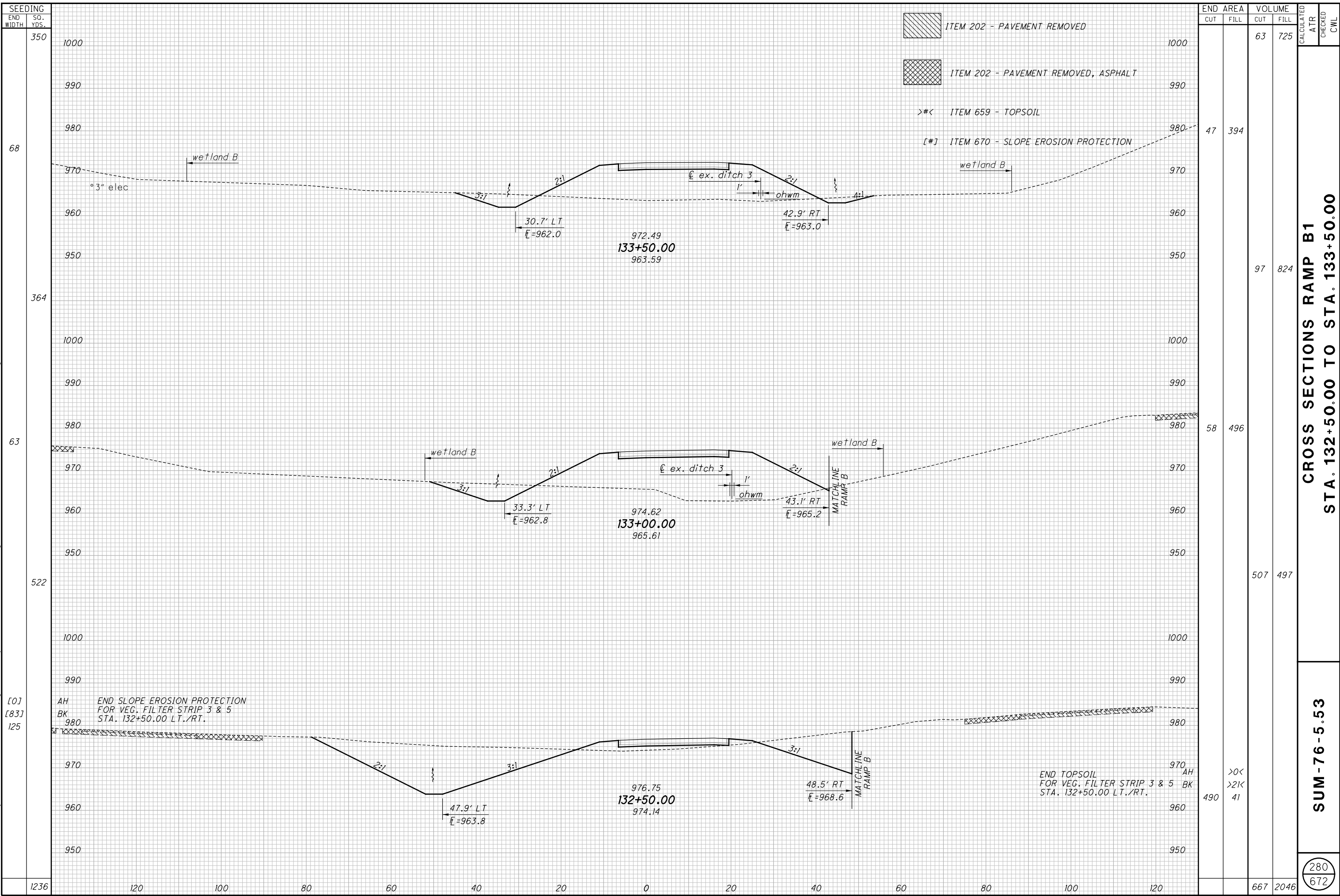
**CROSS SECTIONS RAMP B1  
STA. 131+00.00 TO STA. 132+00.00**

**SUM - 76 - 5.53**

(279 / 672)

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:08:39 AM JBumgarner

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:08:50 AM JBumgarner



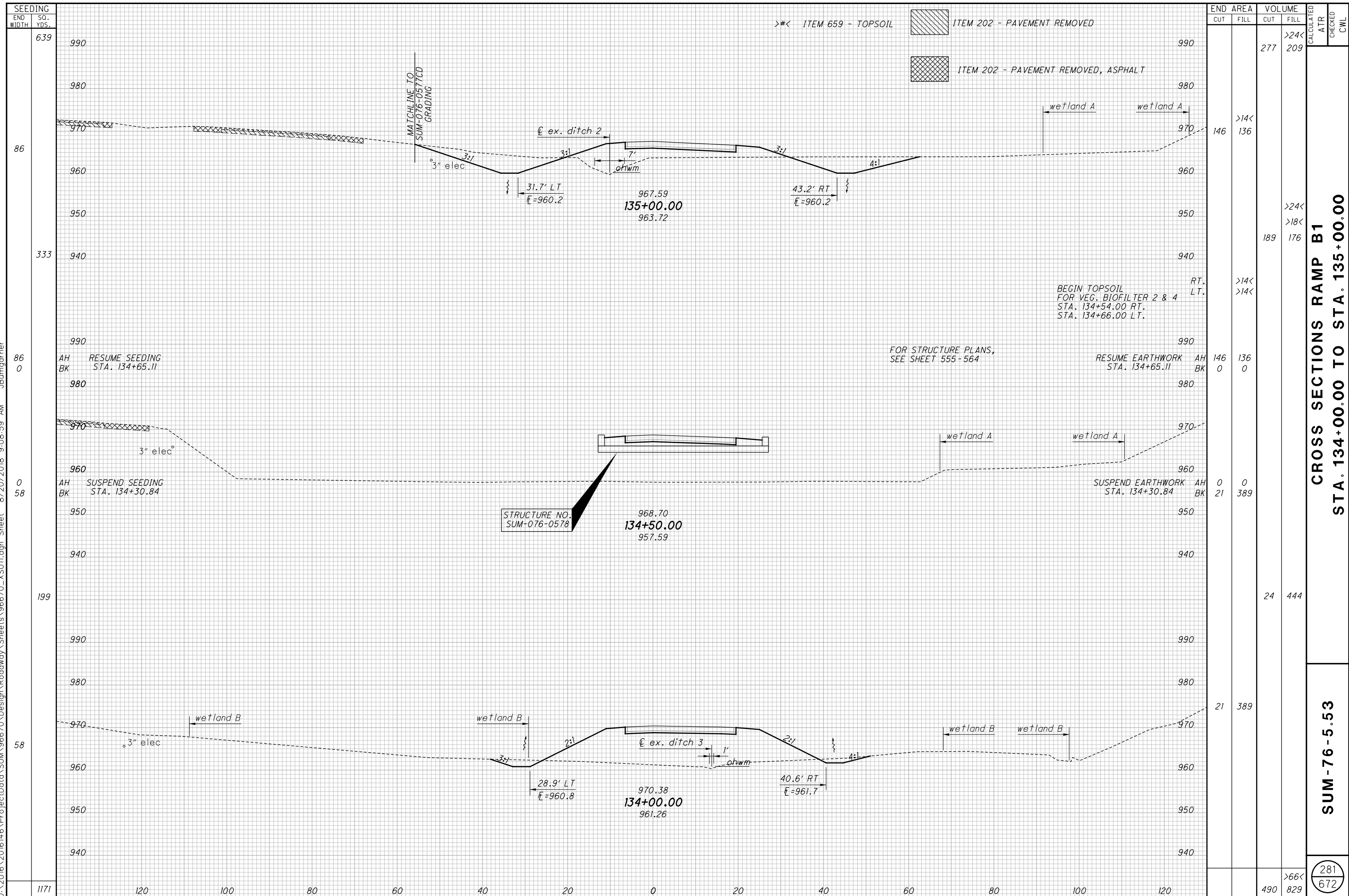
**CROSS SECTIONS RAMP B1  
 STA. 132+50.00 TO STA. 133+50.00**

**SUM - 76 - 5.53**

280  
672



o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:08:59 AM JBumgarner

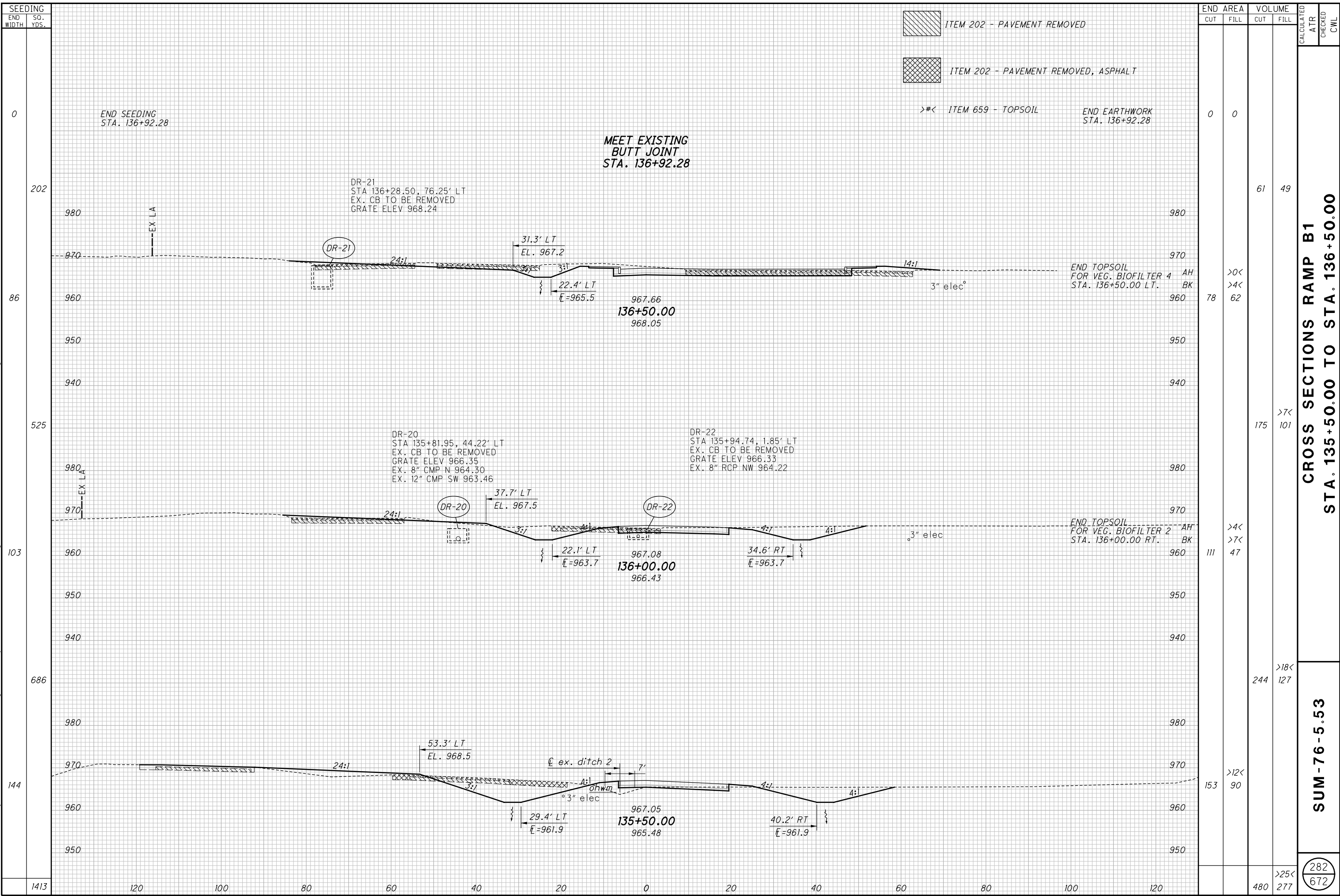


**CROSS SECTIONS RAMP B1**  
**STA. 134+00.00 TO STA. 135+00.00**

**SUM-76-5.53**

281  
 672

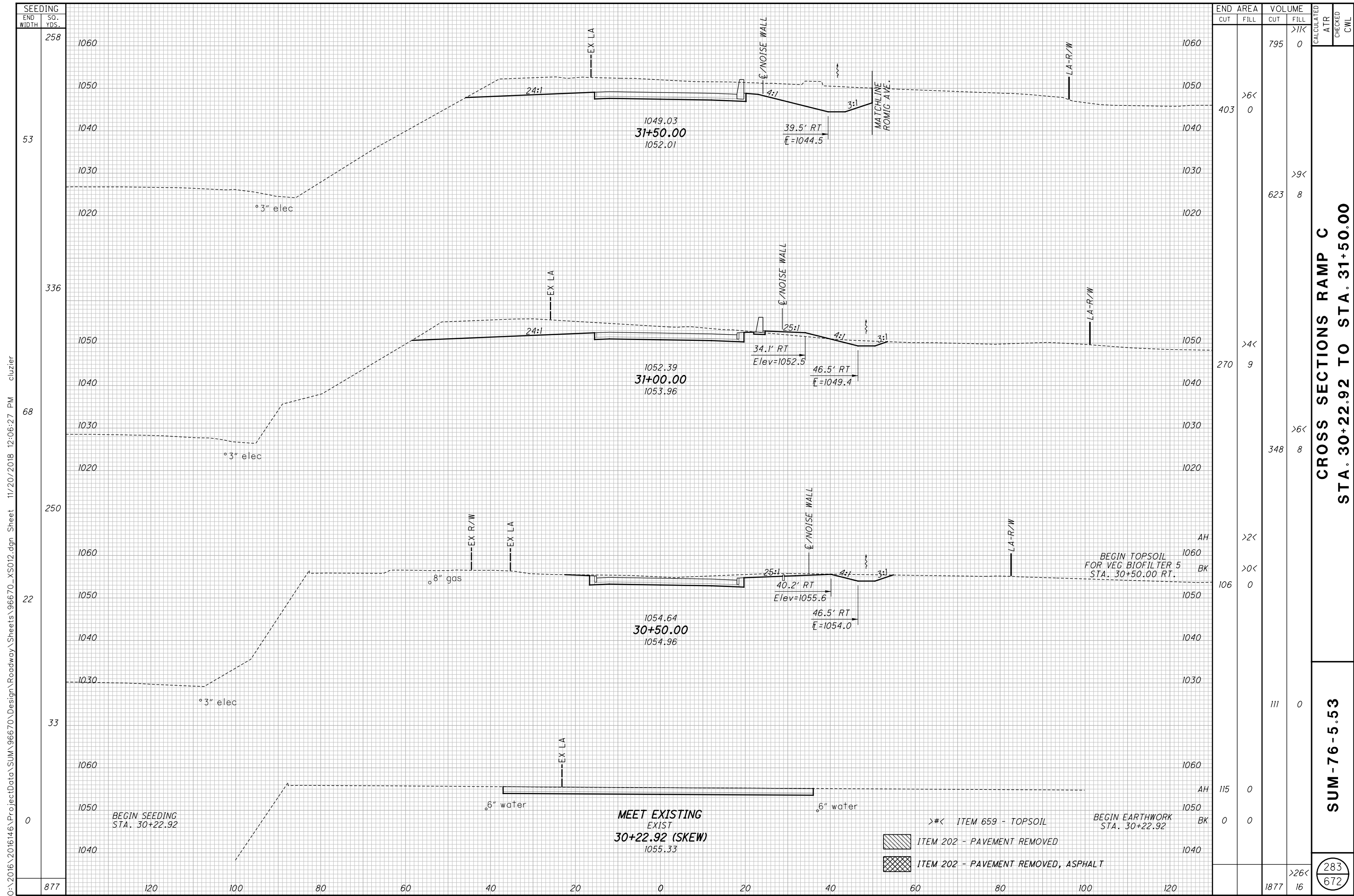
o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS011.dgn Sheet 8/20/2018 9:09:07 AM JBumgarner



**CROSS SECTIONS RAMP B1**  
**STA. 135+50.00 TO STA. 136+50.00**

**SUM - 76 - 5.53**

282  
672



SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
258			795	0	>17<	
53	403	>6<			0	
336			623	8	>9<	
68	270	>4<			9	
250			348	8	>6<	
22	106	>2<			0	
33			111	0	>0<	
0	115	>26<			0	
877			1877	16	>26<	

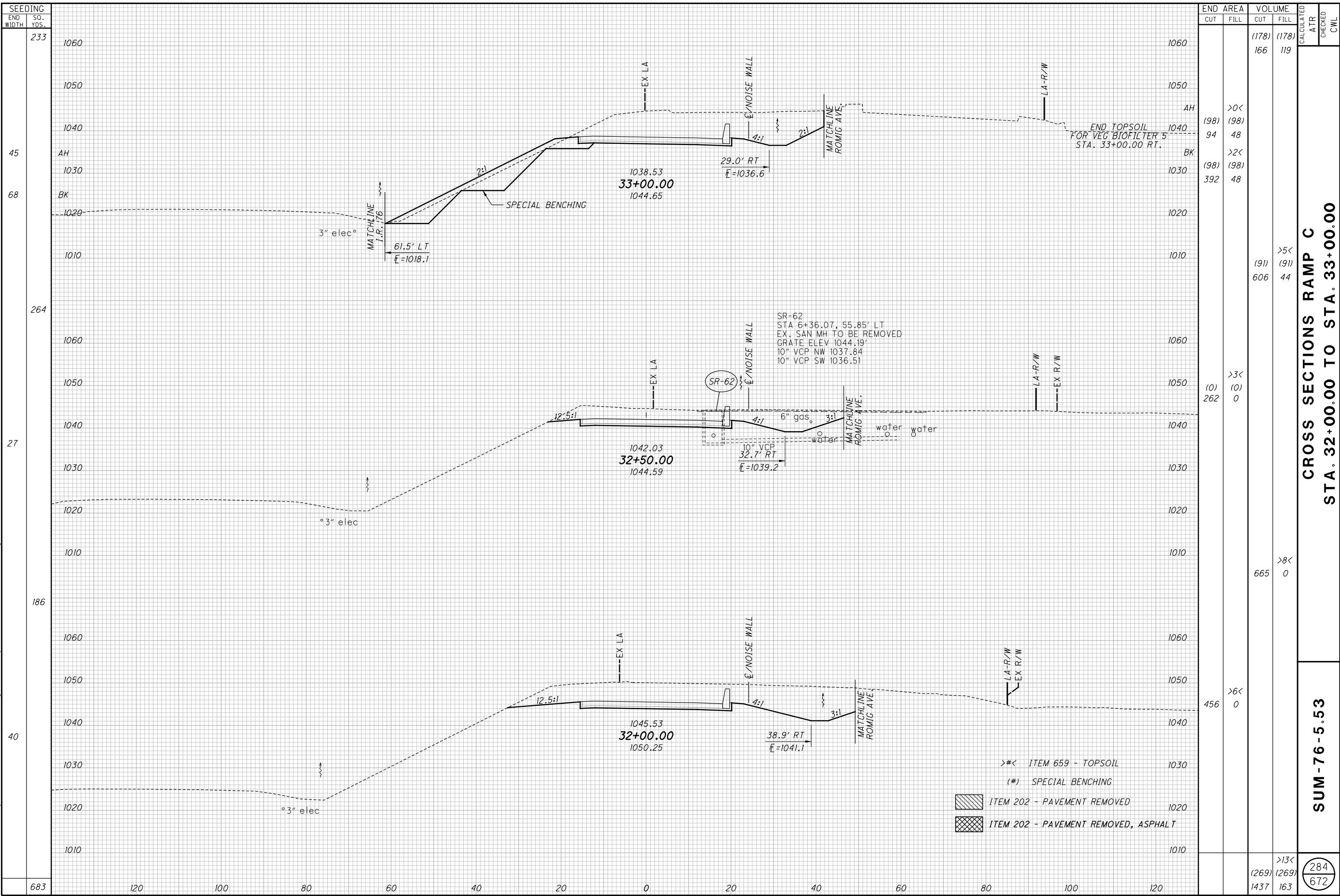
**CROSS SECTIONS RAMP C**  
**STA. 30+22.92 TO STA. 31+50.00**

**SUM - 76 - 5.53**

(283 / 672)

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS012.dgn Sheet 11/20/2018 12:06:27 PM cluzier

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS012.dgn Sheet 11/20/2018 12:06:53 PM cluzier

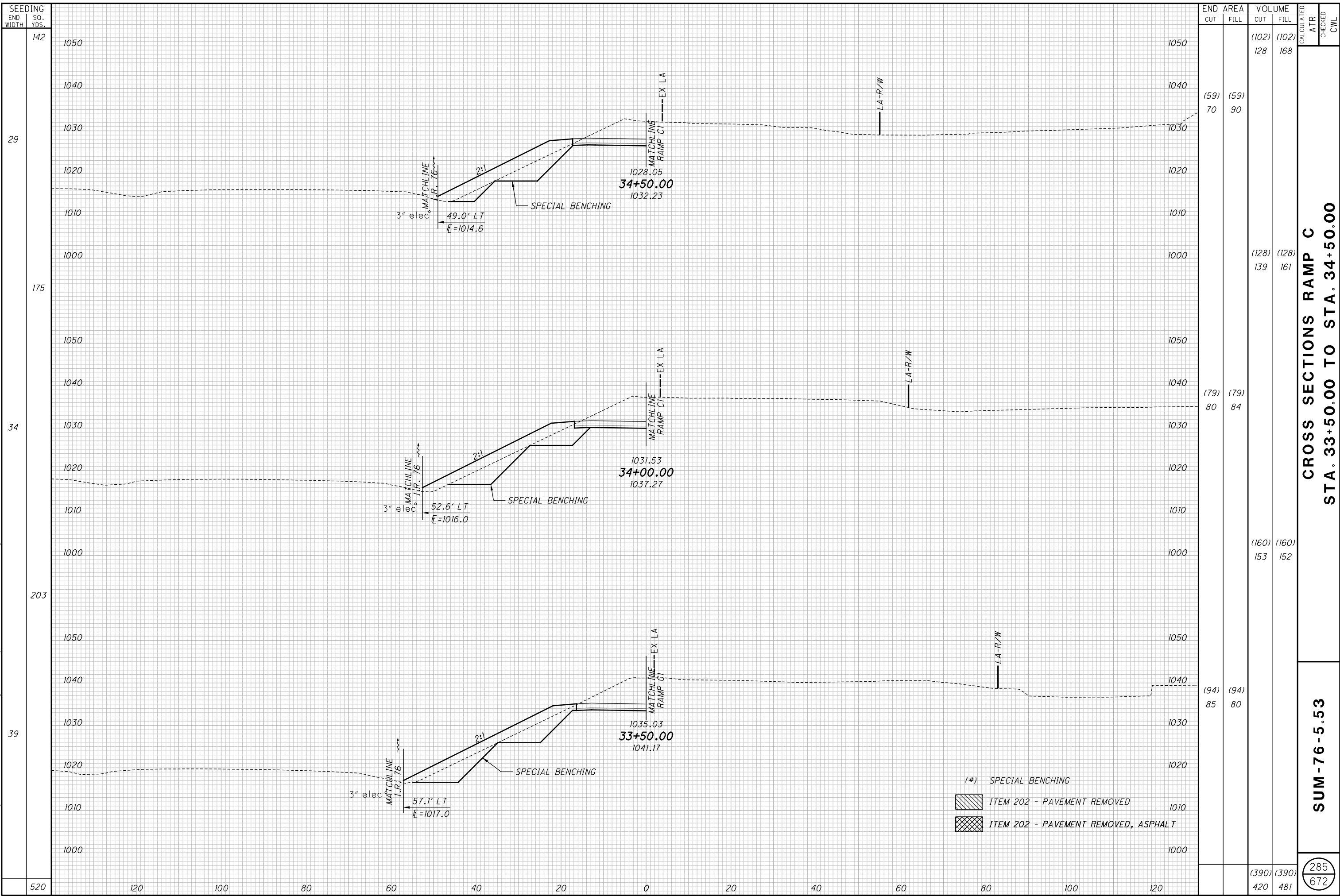


**CROSS SECTIONS RAMP C**  
**STA. 32+00.00 TO STA. 33+00.00**

**SUM - 76 - 5.53**

284  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS012.dgn Sheet 11/20/2018 12:07:24 PM cluzier

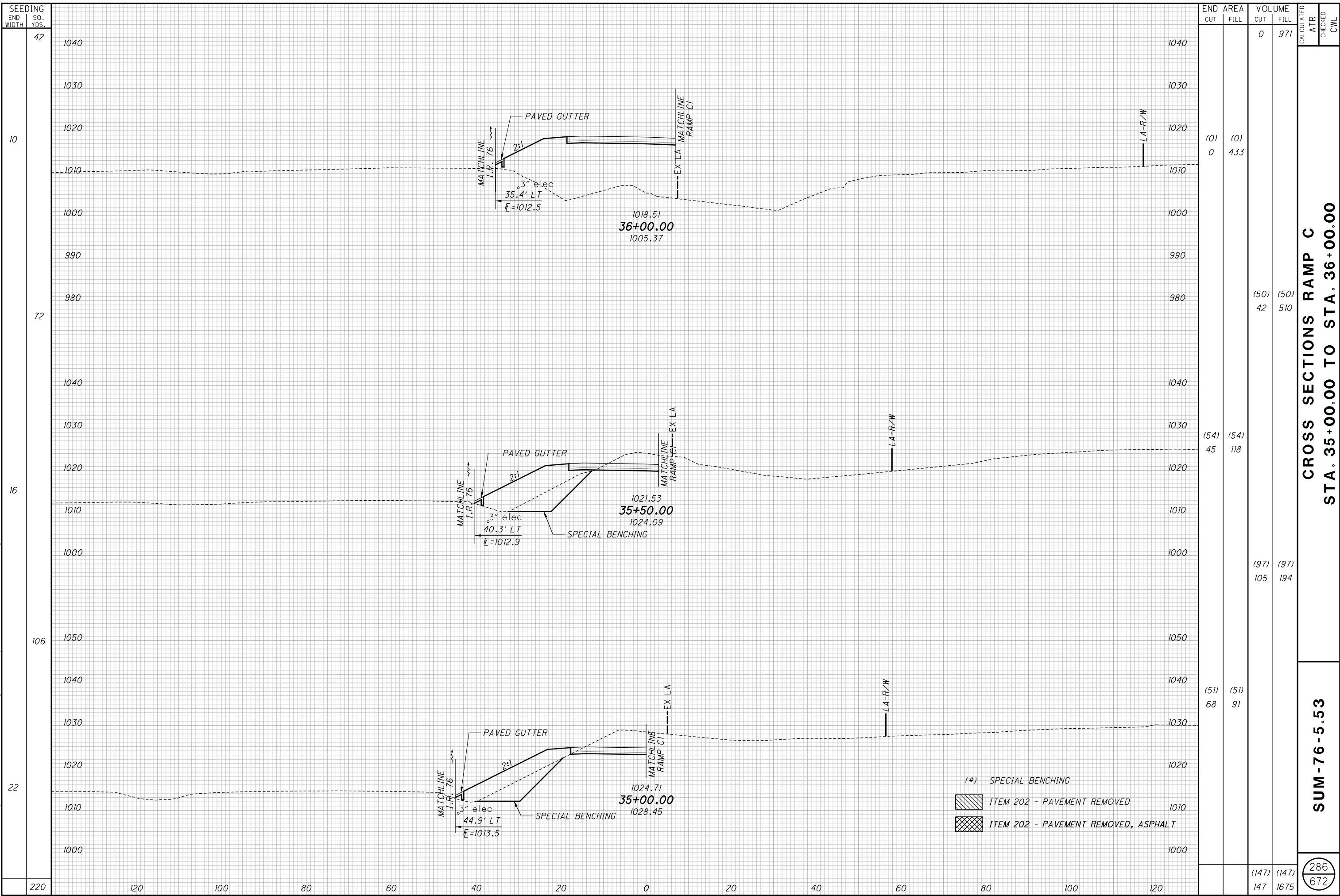


**CROSS SECTIONS RAMP C  
STA. 33+50.00 TO STA. 34+50.00**

**SUM - 76 - 5.53**

285  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS012.dgn Sheet 11/20/2018 12:07:50 PM cluzier

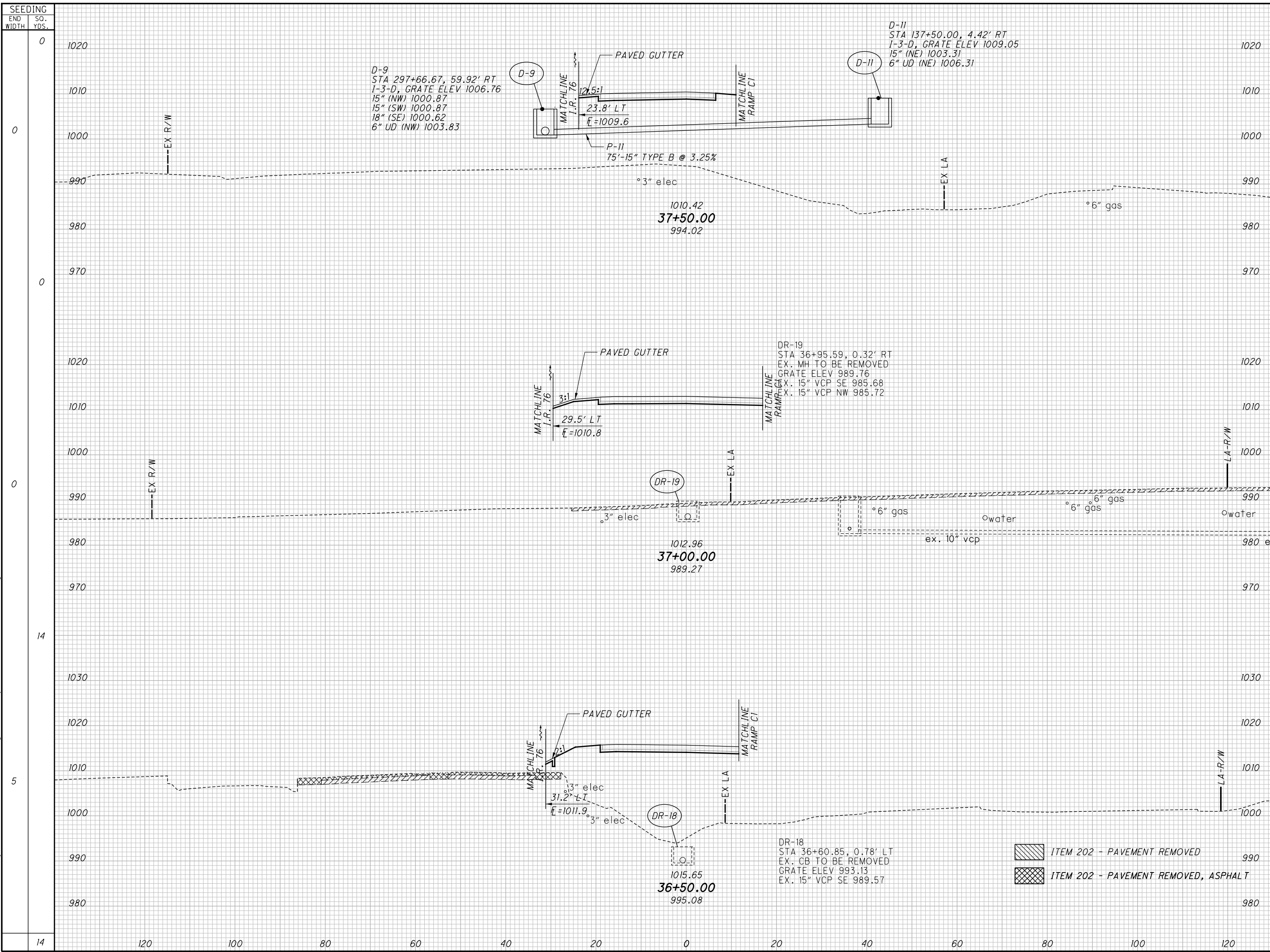


- (#) SPECIAL BENCHING
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT

END AREA	VOLUME		CALCULATED ATR	CHECKED CWL
	CUT	FILL		
(0)	(0)	0	971	
0	433			
(50)	(50)	(50)	42	510
(54)	(54)	(54)	45	118
			(97)	(97)
			105	194
(51)	(51)	(51)	68	91
			(147)	(147)
			147	1675
<b>SUM - 76 - 5.53</b>				(286) 672

**CROSS SECTIONS RAMP C  
STA. 35+00.00 TO STA. 36+00.00**

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS012.dgn Sheet 11/20/2018 12:08:12 PM cluzier



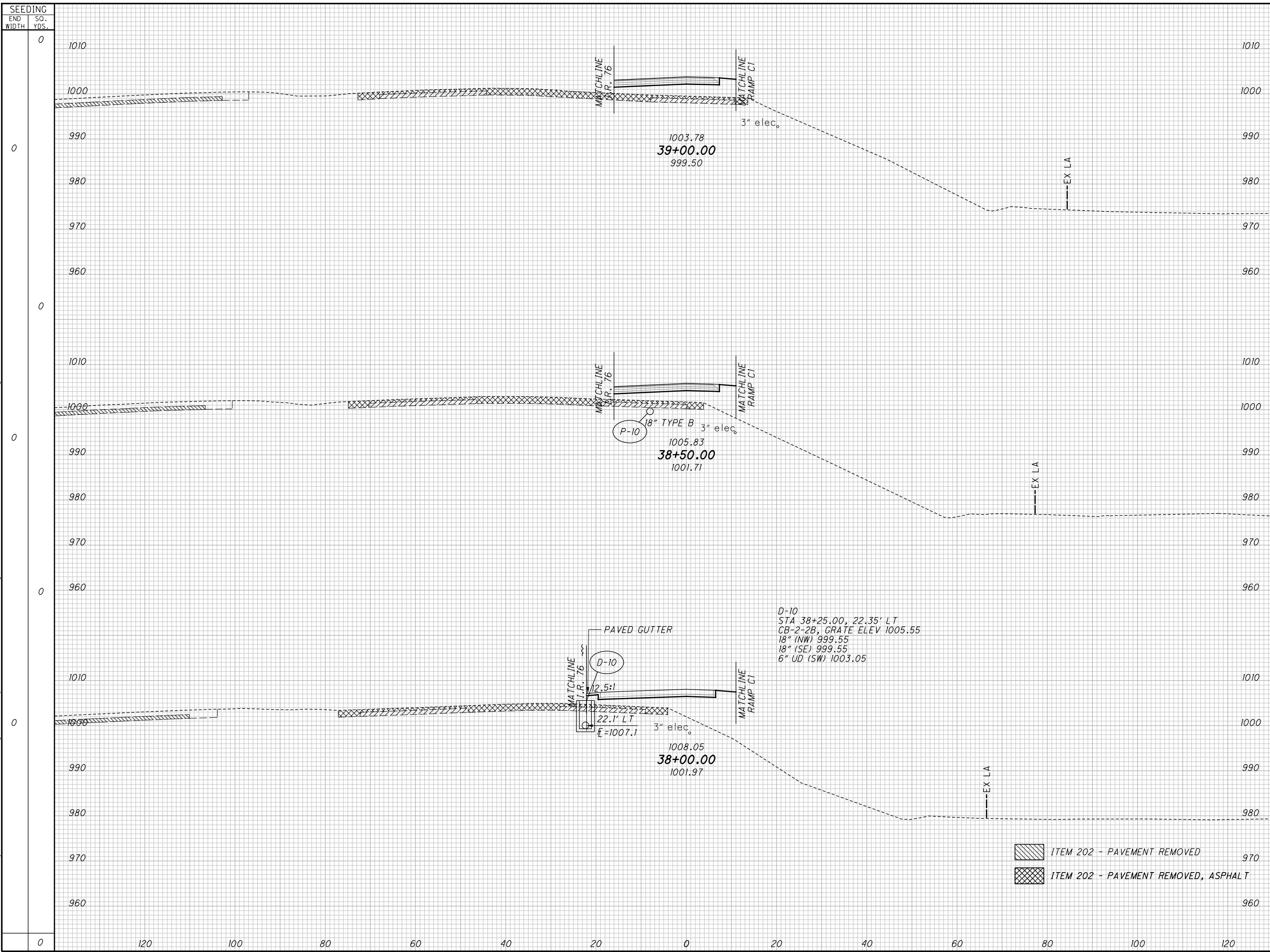
SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
0	0	531	0	637		
0	0	1480	0	1067		
14	0	1558	0	616		
14	0	3675	0	3675		

**CROSS SECTIONS RAMP C  
STA. 36+50.00 TO STA. 37+50.00**

**SUM - 76 - 5.53**

287  
672

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END AREA	VOLUME		CALCULATED ATR	CHECKED CWL
	CUT	FILL		
0	0	204		
0	108			
0	197			
0	105			
0	243			
0	157			
0	644			

**CROSS SECTIONS RAMP C  
STA. 38+00.00 TO STA. 39+00.00**

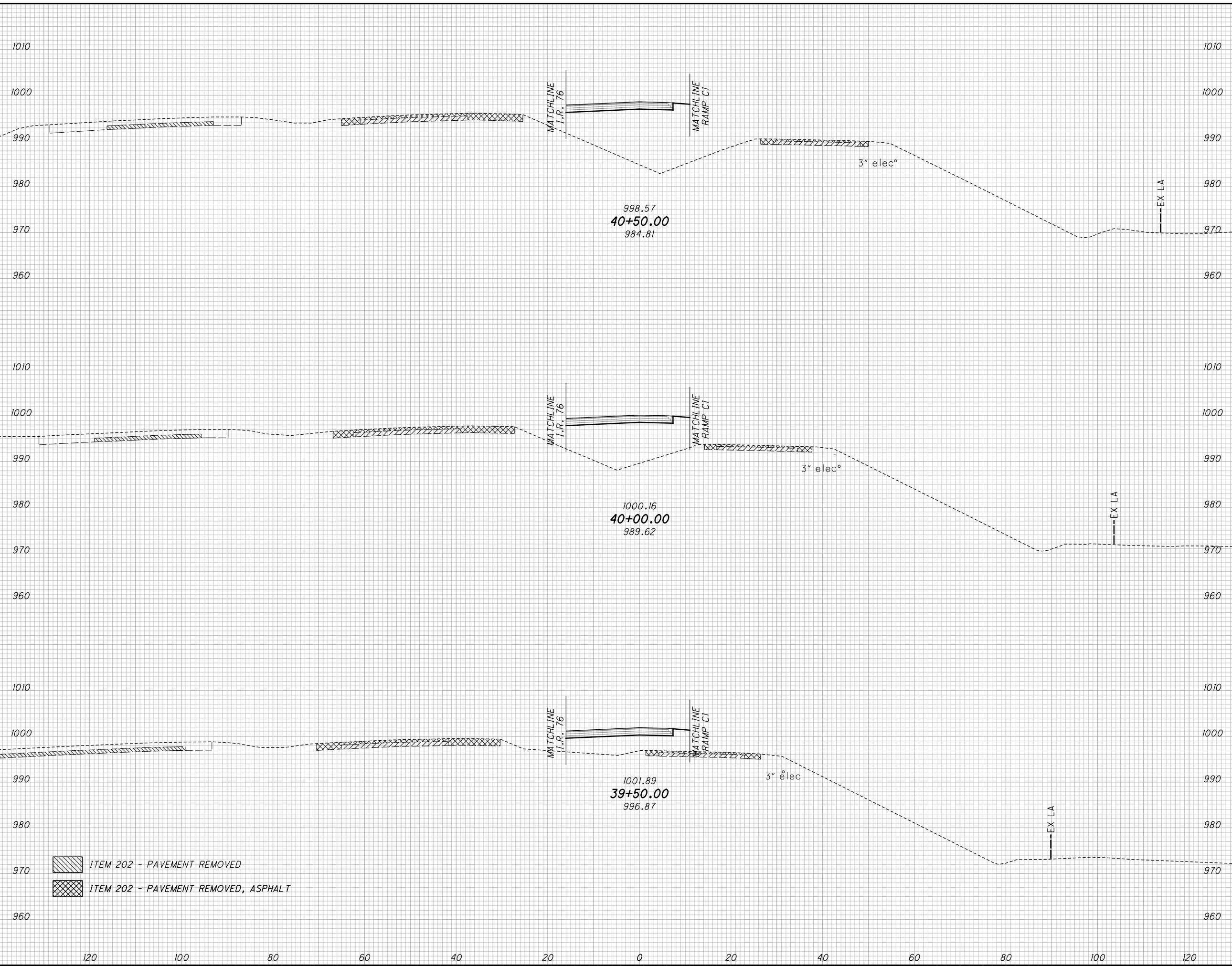
**SUM - 76 - 5.53**

(288 / 672)



O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS012.dgn Sheet 8/20/2018 9:04:12 AM J.Bumgarner

SEEDING	
END WIDTH	SO. YDS.
0	1010
0	1000
0	990
0	980
0	970
0	960
0	1010
0	1000
0	990
0	980
0	970
0	960
0	1010
0	1000
0	990
0	980
0	970
0	960



END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	ATR	CWL
0	280	0	553		
0	215	0	458		
0	303	0	303		
0	112	0	1314		

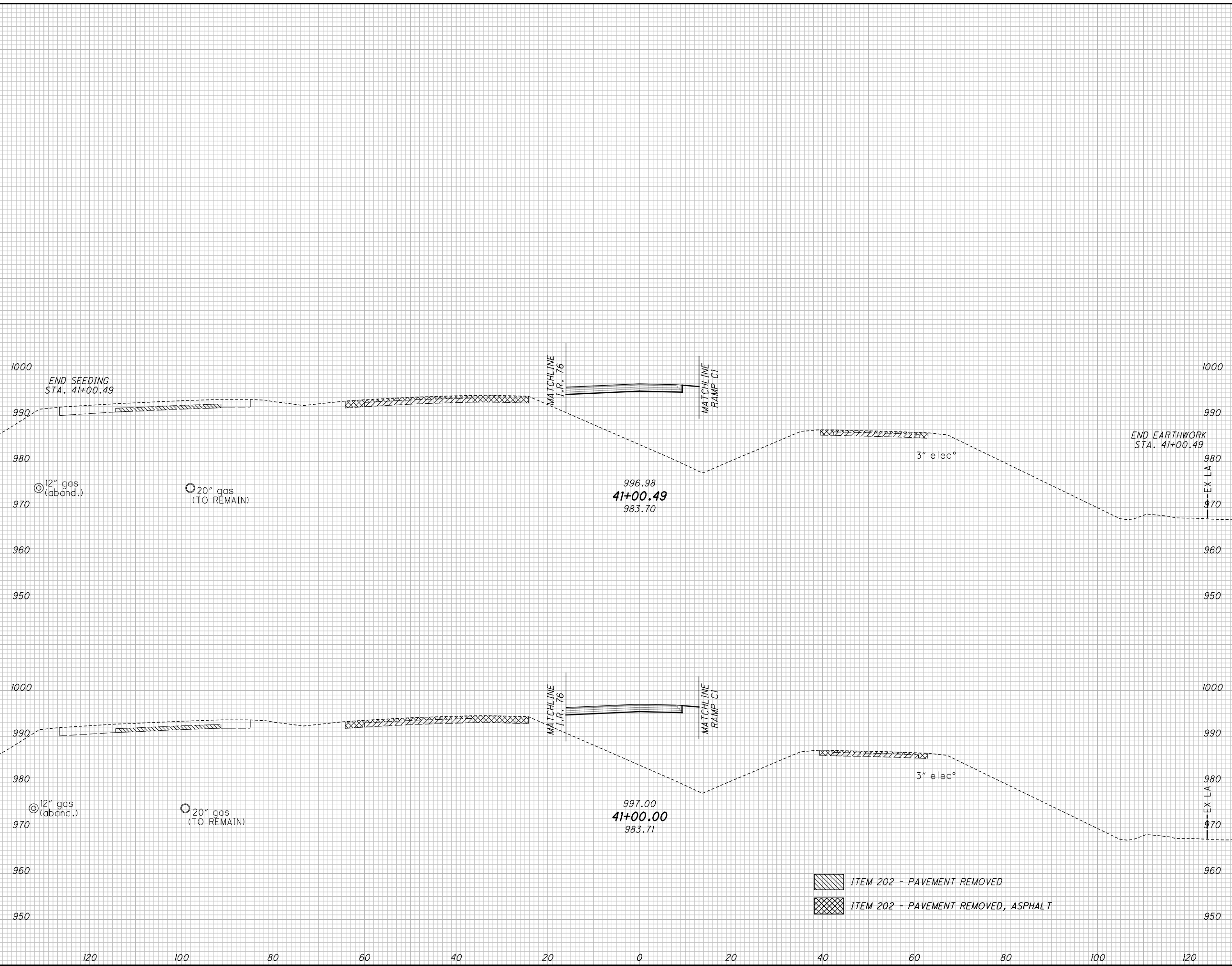
**CROSS SECTIONS RAMP C**  
**STA. 39+50.00 TO STA. 40+50.00**

**SUM - 76 - 5.53**

289  
672

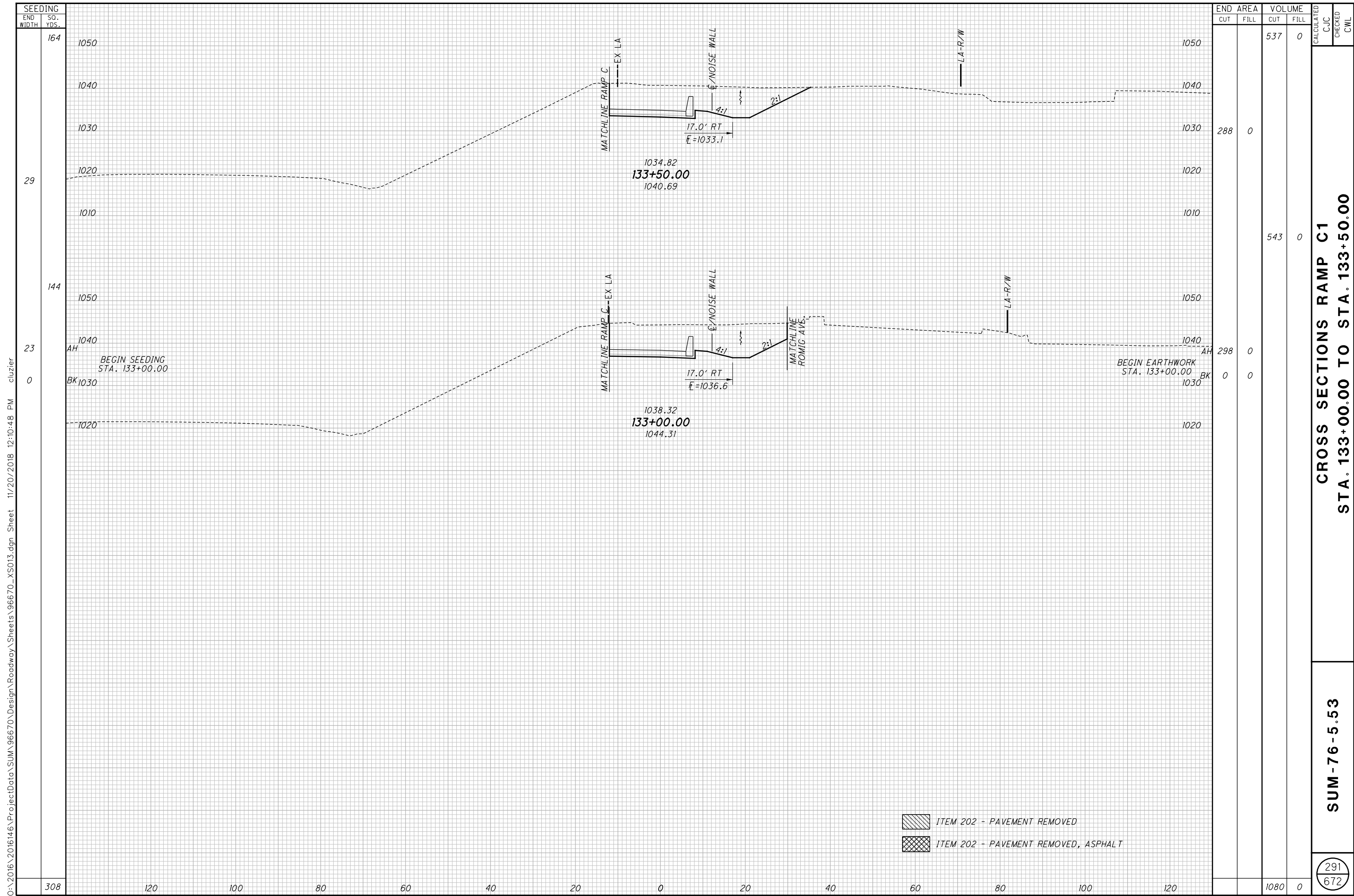
O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS012.dgn Sheet 8/20/2018 9:04:22 AM JBurgnar

SEEDING	
END WIDTH	SO. YDS.
0	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	318	0	6
0	317	0	6

**CROSS SECTIONS RAMP C**  
**STA. 41+00.00 TO STA. 41+00.49**  
**SUM - 76 - 5.53**  
 CALCULATED ATR 290  
 CHECKED CWL 672

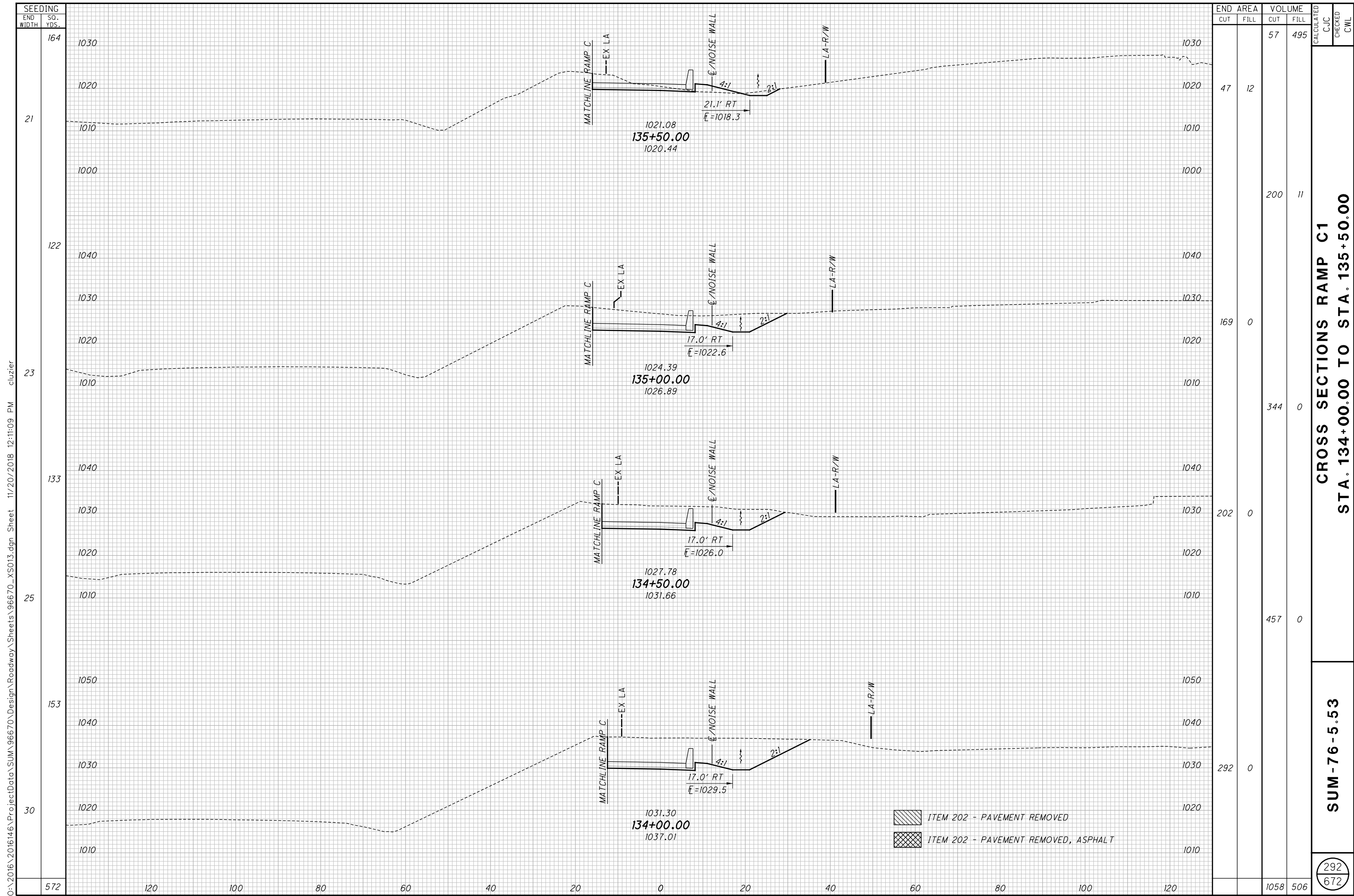


**CROSS SECTIONS RAMP C1**  
**STA. 133+00.00 TO STA. 133+50.00**

**SUM - 76 - 5.53**

291  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS013.dgn Sheet 11/20/2018 12:10:48 PM cluzier



**CROSS SECTIONS RAMP C1  
 STA. 134+00.00 TO STA. 135+50.00**

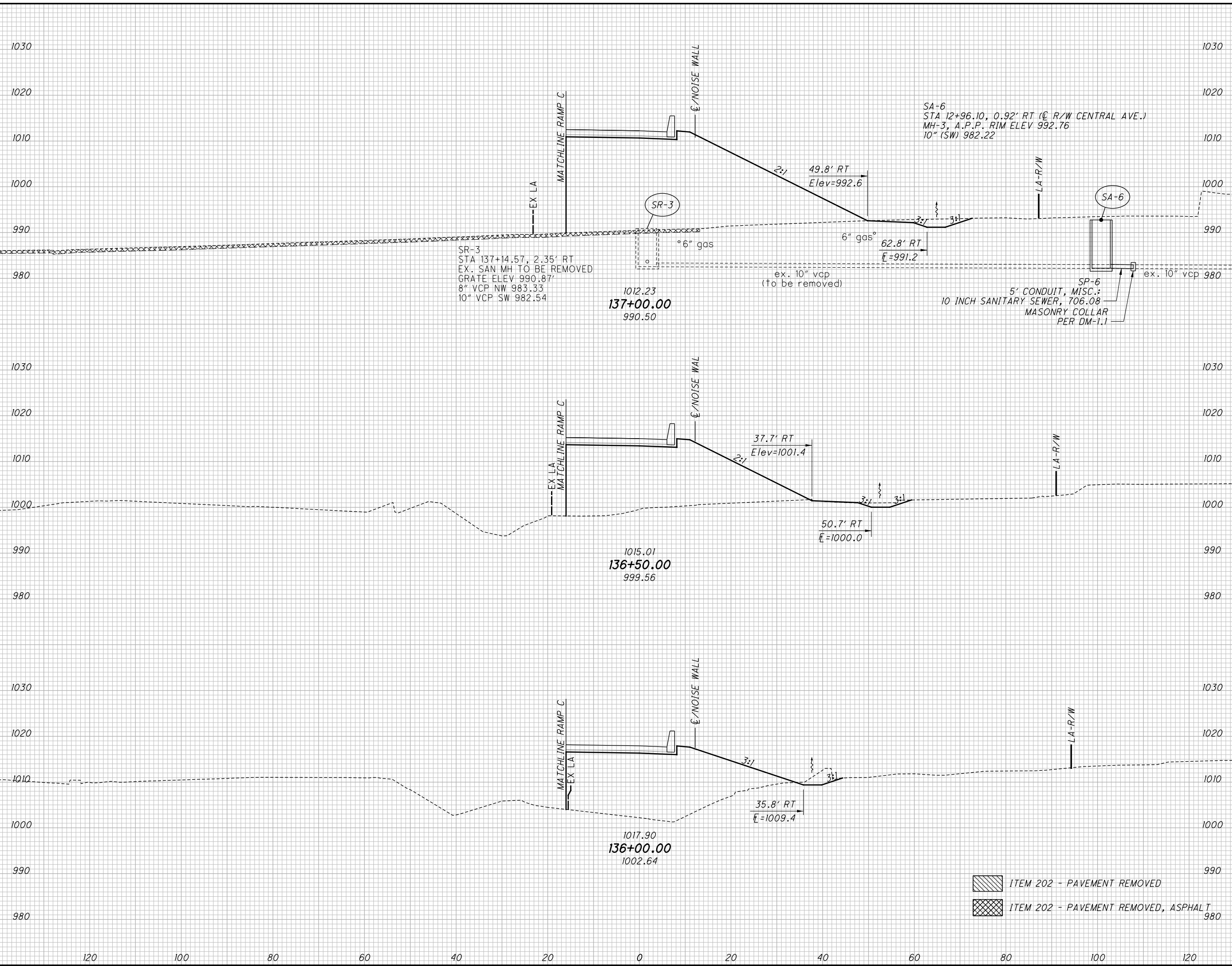
**SUM - 76 - 5.53**

292  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS013.dgn Sheet 11/20/2018 12:11:09 PM cluzier

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS013.dgn Sheet 11/20/2018 12:11:35 PM cluzier

SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
414			34	2127		
72						
353			25	1443		
55						
258			21	1021		
38						
1025			80	4591		



SR-3  
 STA 137+14.57, 2.35' RT  
 EX. SAN MH TO BE REMOVED  
 GRATE ELEV 990.87'  
 8" VCP NW 983.33  
 10" VCP SW 982.54

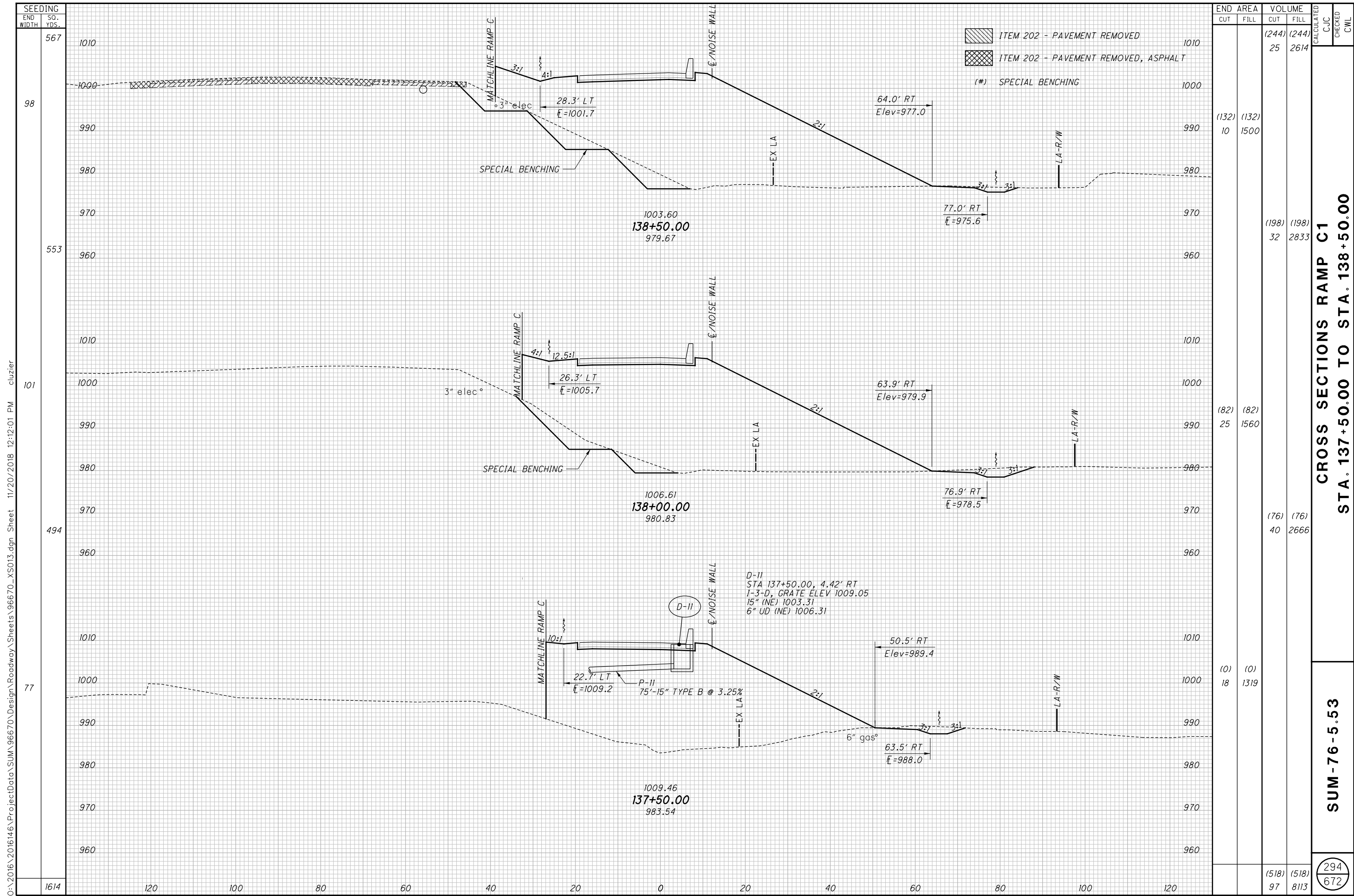
SA-6  
 STA 12+96.10, 0.92' RT (@ R/W CENTRAL AVE.)  
 MH-3, A.P.P. RIM ELEV 992.76  
 10" (SW) 982.22

SP-6  
 5' CONDUIT, MISC.:  
 10 INCH SANITARY SEWER, 706.08  
 MASONRY COLLAR  
 PER DM-1.1

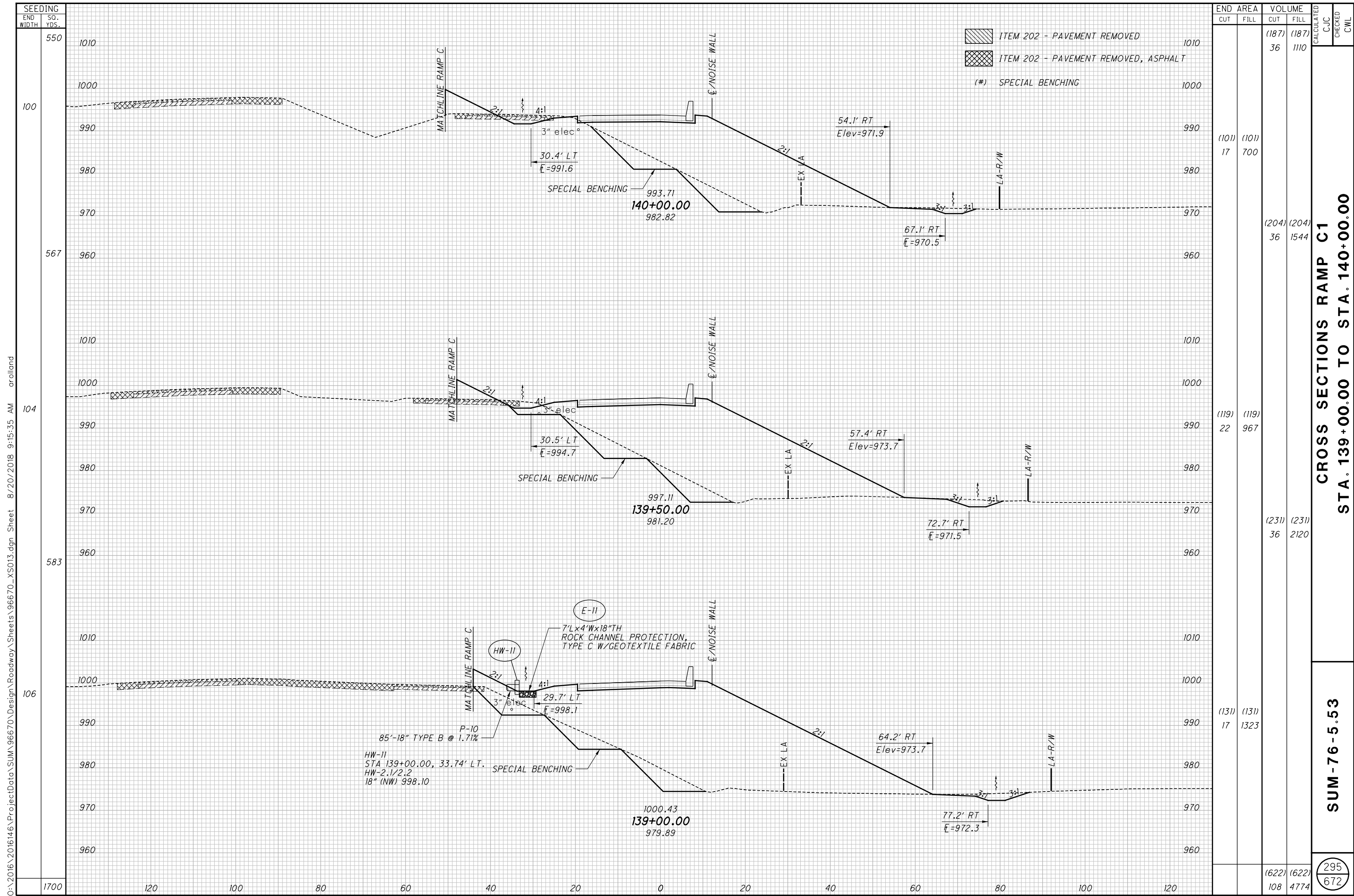
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT

**CROSS SECTIONS RAMP C1**  
**STA. 136+00.00 TO STA. 137+00.00**

**SUM - 76 - 5.53**



o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS013.dgn Sheet 11/20/2018 12:12:01 PM cluzier



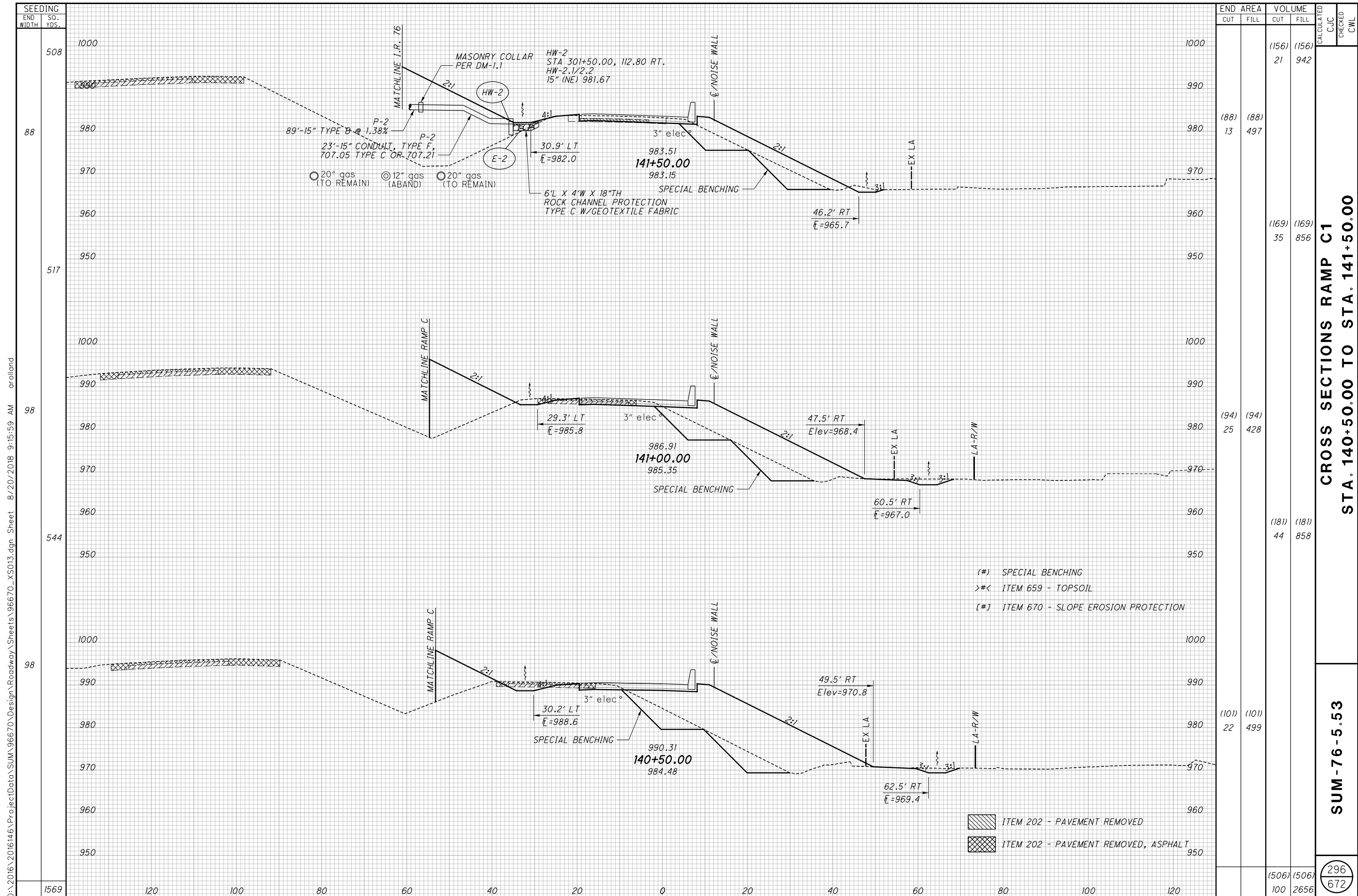
SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
550	(101)	(101)	(187)	(187)		
100	17	700	36	1110		
567			(204)	(204)		
104			36	1544		
583	(119)	(119)				
106	22	967				
			(231)	(231)		
			36	2120		
1700	(131)	(131)				
	17	1323				
			(622)	(622)		
			108	4774		

**CROSS SECTIONS RAMP C1**  
**STA. 139+00.00 TO STA. 140+00.00**

**SUM - 76 - 5.53**

295  
672

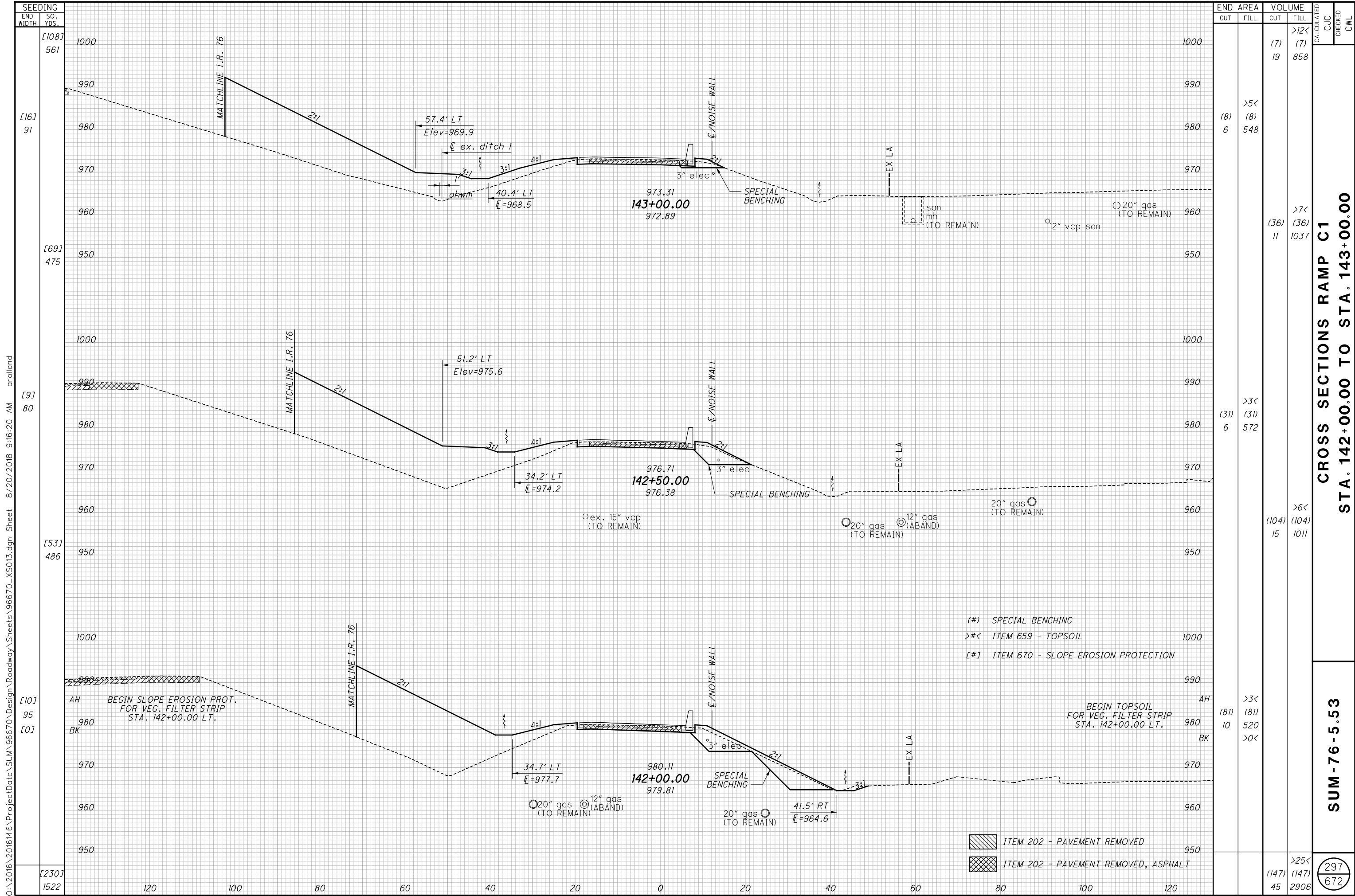
o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS013.dgn Sheet 8/20/2018 9:15:35 AM arolland

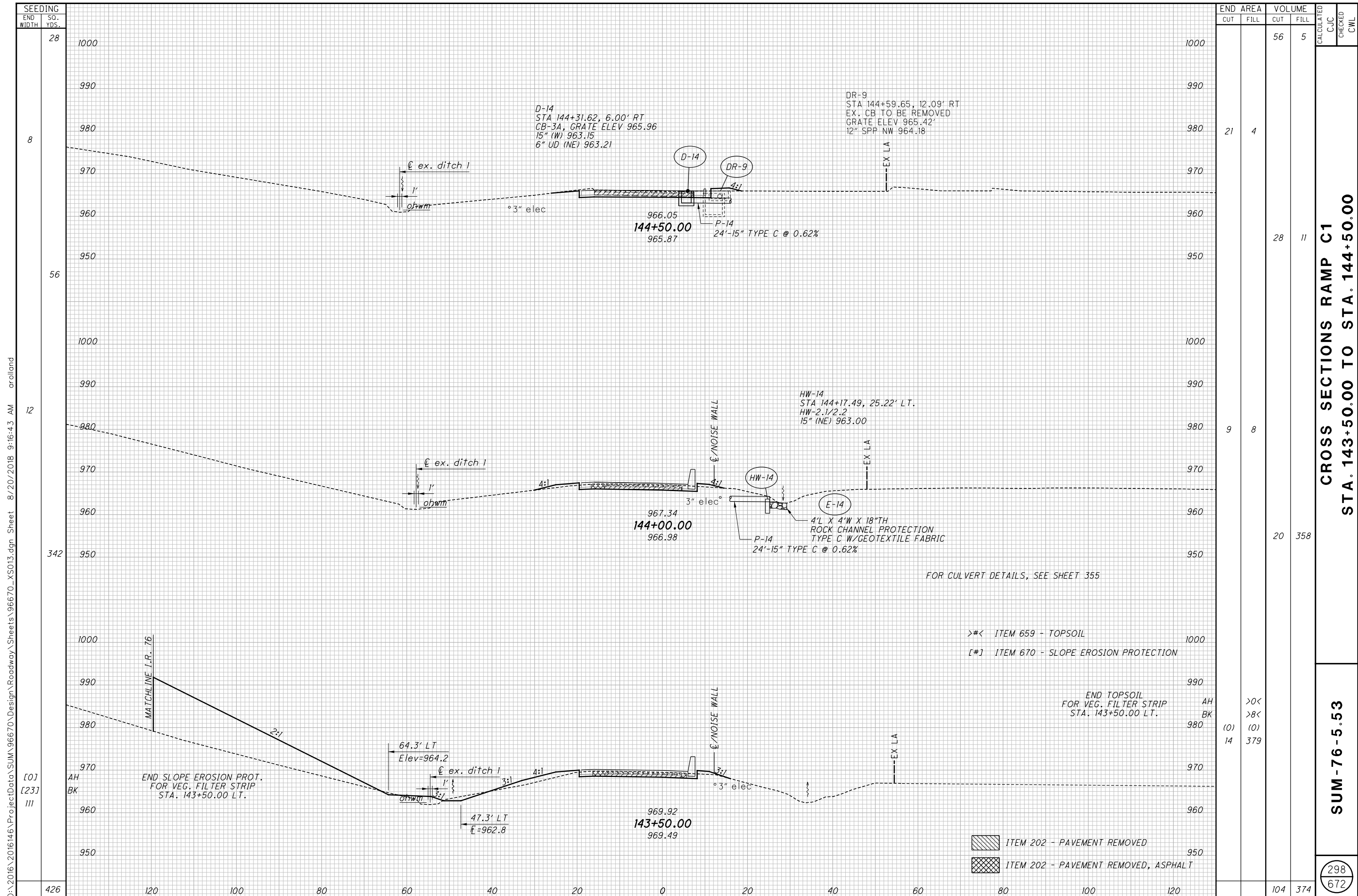


o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS013.dgn Sheet 8/20/2018 9:15:59 AM arolland

SEEDING	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
			CUT	FILL	CUT	FILL		
508	1000				(156)	(156)		
88	980		(88)	(88)	21	942		
517	950				(169)	(169)		
98	990		(94)	(94)	35	856		
544	950				(181)	(181)		
98	990		(101)	(101)	44	858		
1569	950		(106)	(106)	100	2656		







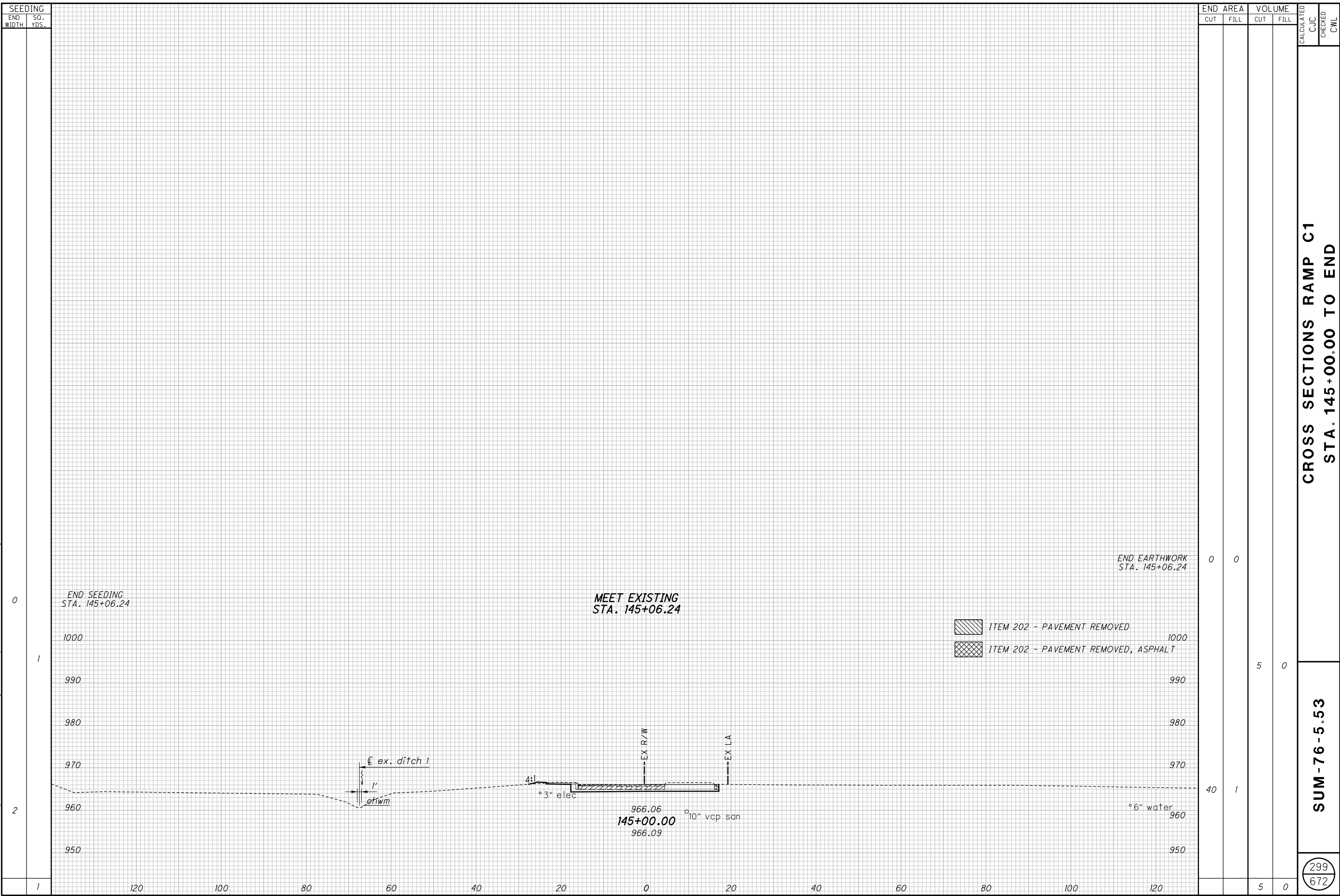
SEEDING	END AREA		VOLUME		CALCULATED CJC	CHECKED CWL
	CUT	FILL	CUT	FILL		
28			56	5		
8			21	4		
56			28	11		
12			9	8		
342			20	358		
[01] [23] 111			14	379		
426			104	374		

**CROSS SECTIONS RAMP C1  
STA. 143+50.00 TO STA. 144+50.00**

**SUM - 76 - 5.53**

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O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Design\96670\_XS013.dgn Sheet 8/20/2018 9:17:04 AM arolland



END EARTHWORK  
STA. 145+06.24

END SEEDING  
STA. 145+06.24

MEET EXISTING  
STA. 145+06.24

- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT

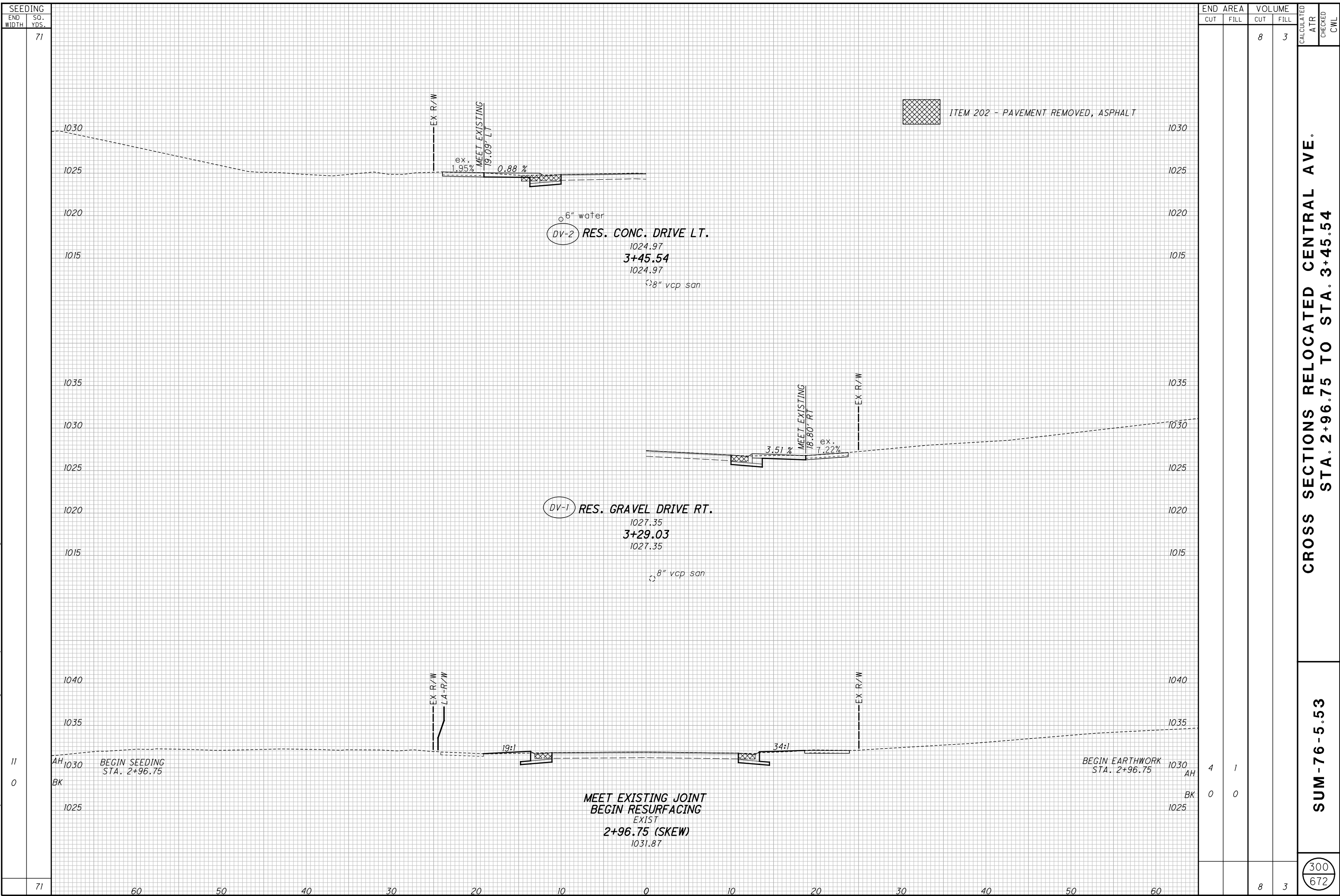
SEEDING		END AREA		VOLUME		CALCULATED		CHECKED			
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	CJC	CWL	CJC	CWL		
0		0	0								
1		40	1	5	0						
2		40	1	5	0						
1		120	100	80	60	40	20	0	0		
		5	0								

**CROSS SECTIONS RAMP C1  
STA. 145+00.00 TO END**

**SUM - 76 - 5.53**

299  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:56:46 AM oroland



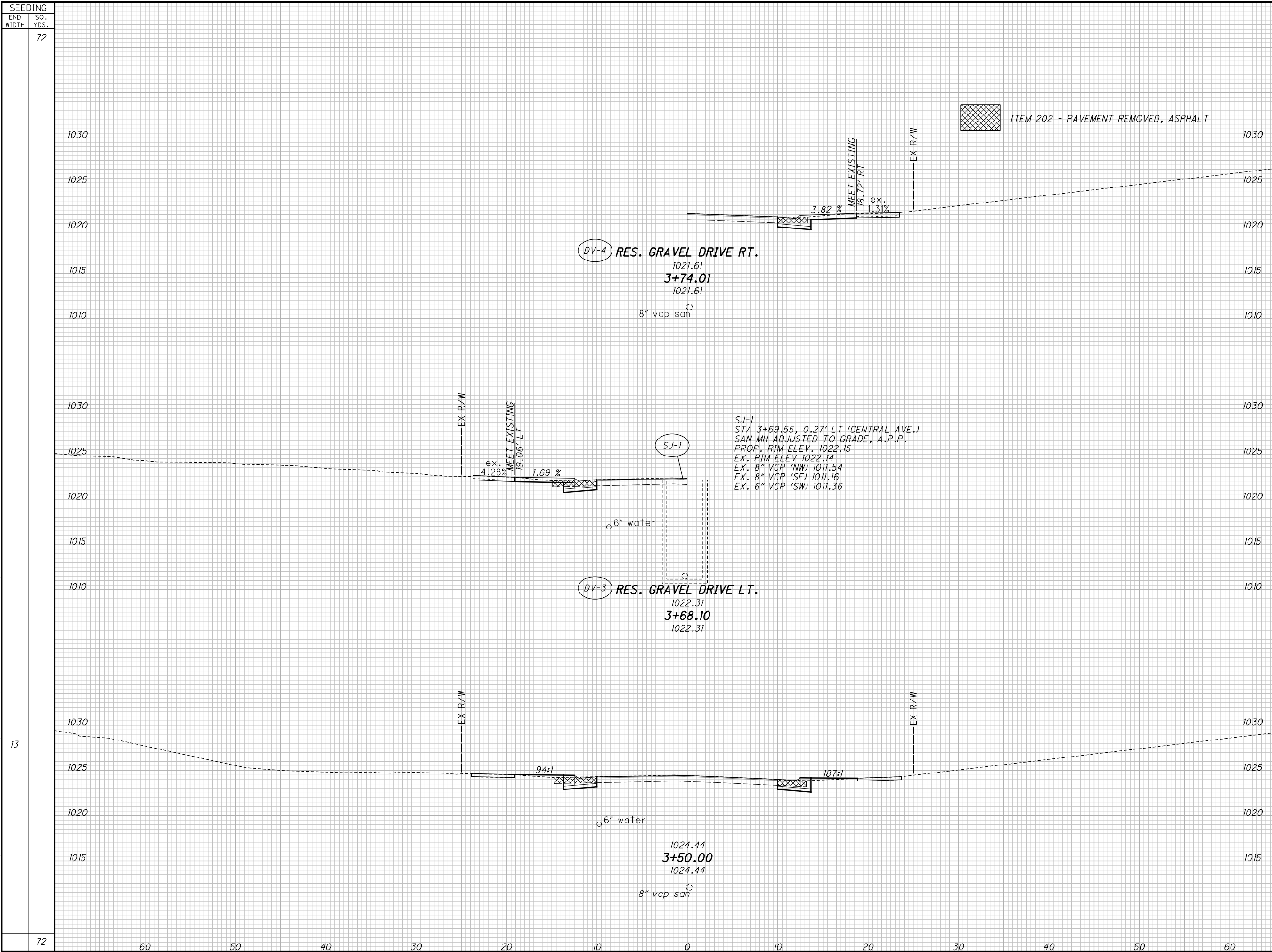
SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	ATR	CWL
71				8	3		
11		4	1				
0		0	0				
71				8	3		

**CROSS SECTIONS RELOCATED CENTRAL AVE.  
STA. 2+96.75 TO STA. 3+45.54**

**SUM - 76 - 5.53**

300  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:57:04 AM orolland



SEEDING		END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL		
72	72			7	4		
13		4	2				
72				7	4		

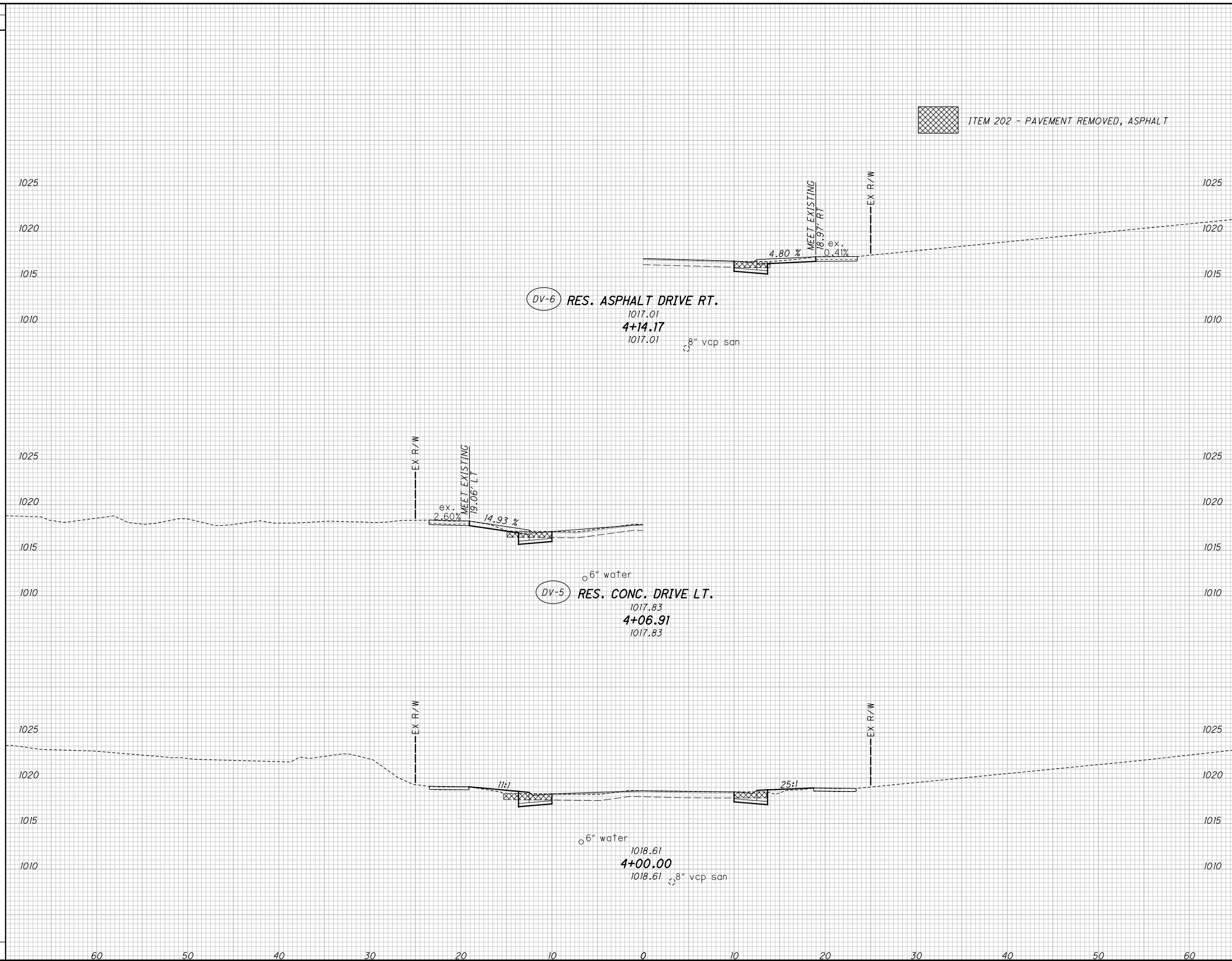
**CROSS SECTIONS RELOCATED CENTRAL AVE.  
STA. 3+50.00 TO STA. 3+74.01**

**SUM -76 -5.53**

301  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:57:23 AM orolland

SEEDING	
END WIDTH	SO. YDS.
72	72
13	
72	

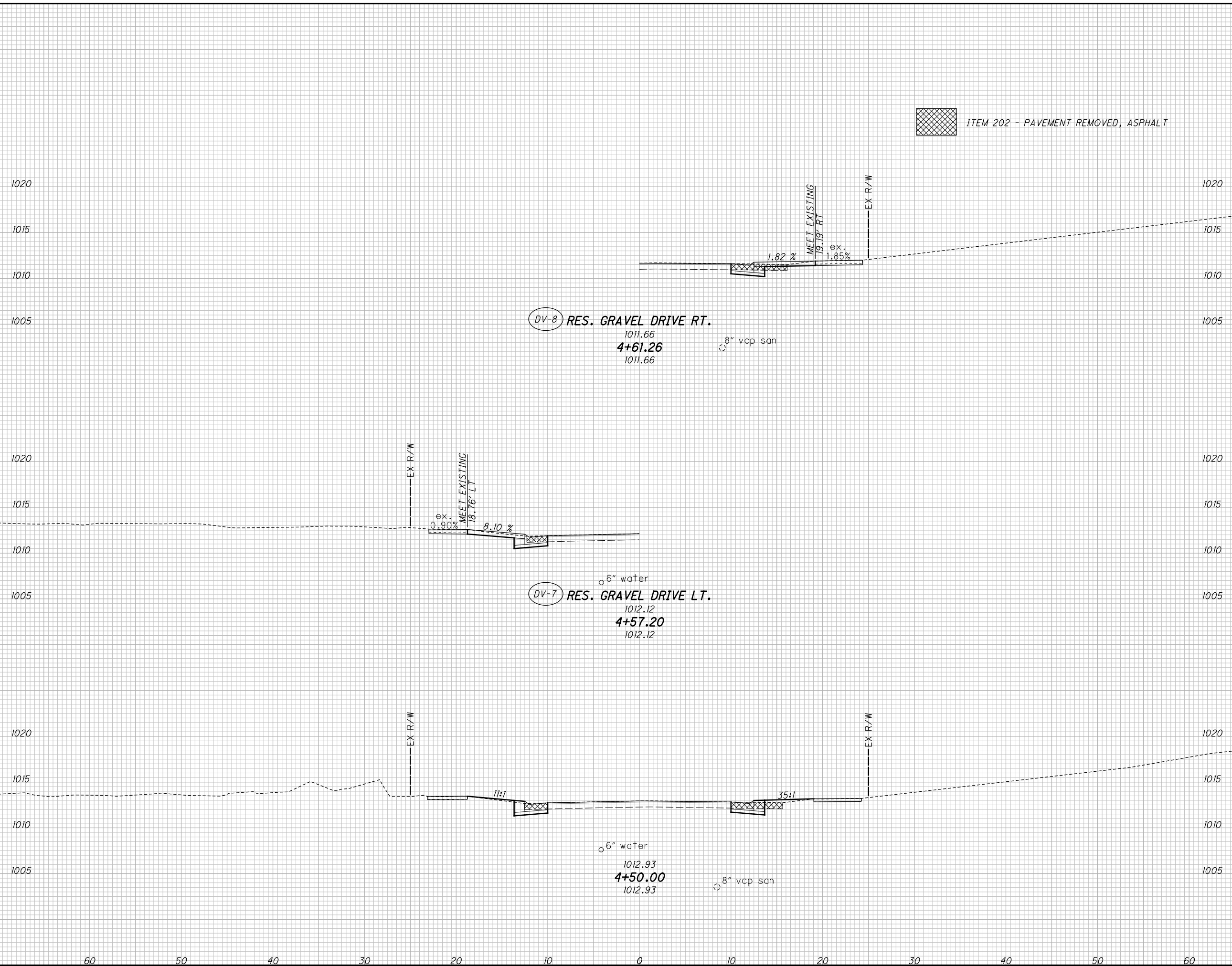


END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
CUT	FILL	CUT	FILL		
		8	5		
4	2				
		8	5		
<b>SUM - 76 - 5.53</b>					
(302 / 672)					

**CROSS SECTIONS RELOCATED CENTRAL AVE.  
STA. 4+00.00 TO STA. 4+14.17**

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SEEDING	
END WIDTH	SO. YDS.
72	72
13	
72	



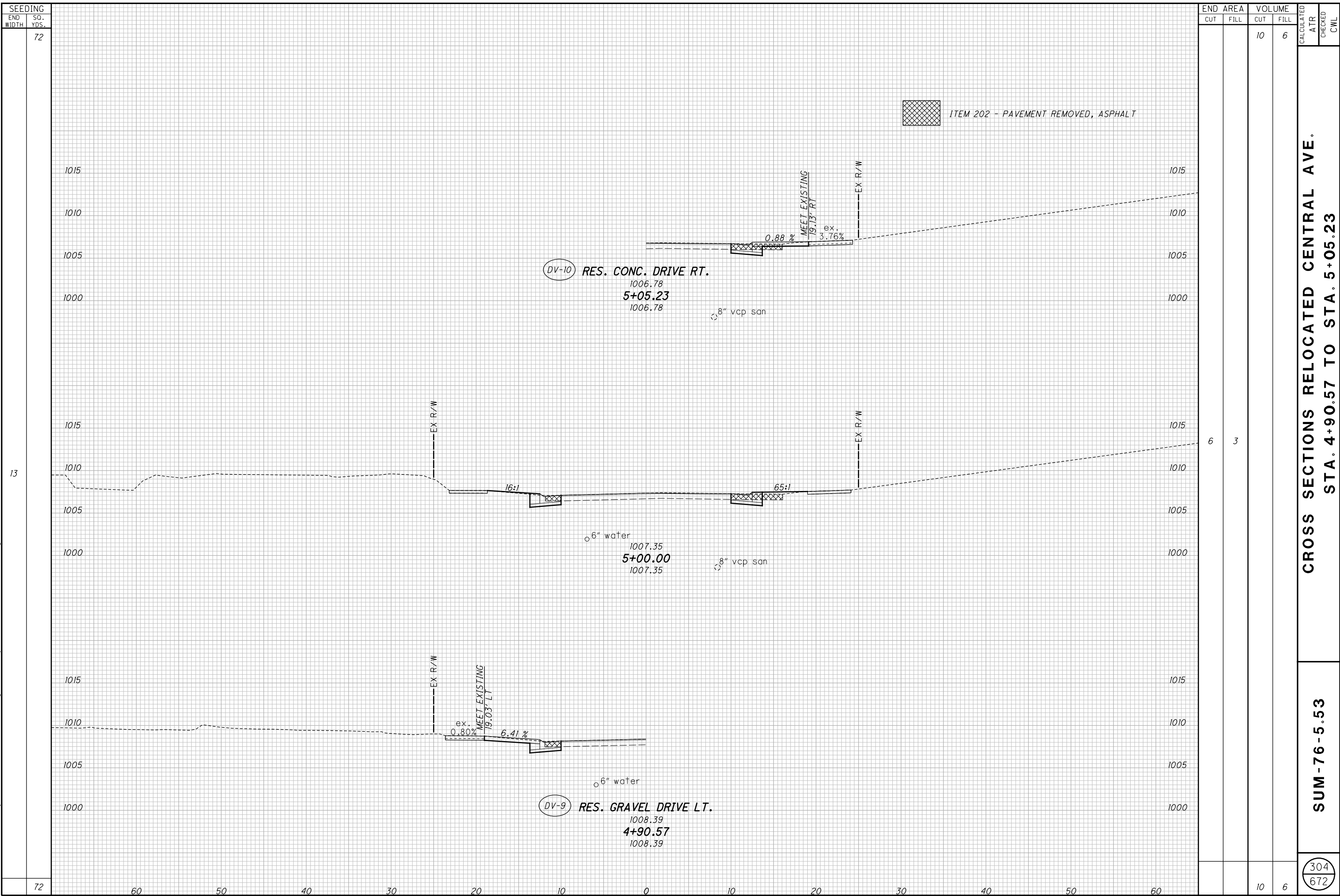
END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
CUT	FILL	CUT	FILL		
		10	6		
5	3				
		10	6		

**CROSS SECTIONS RELOCATED CENTRAL AVE.**  
**STA. 4+50.00 TO STA. 4+61.26**

**SUM - 76 - 5.53**

303  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:58:02 AM orolland



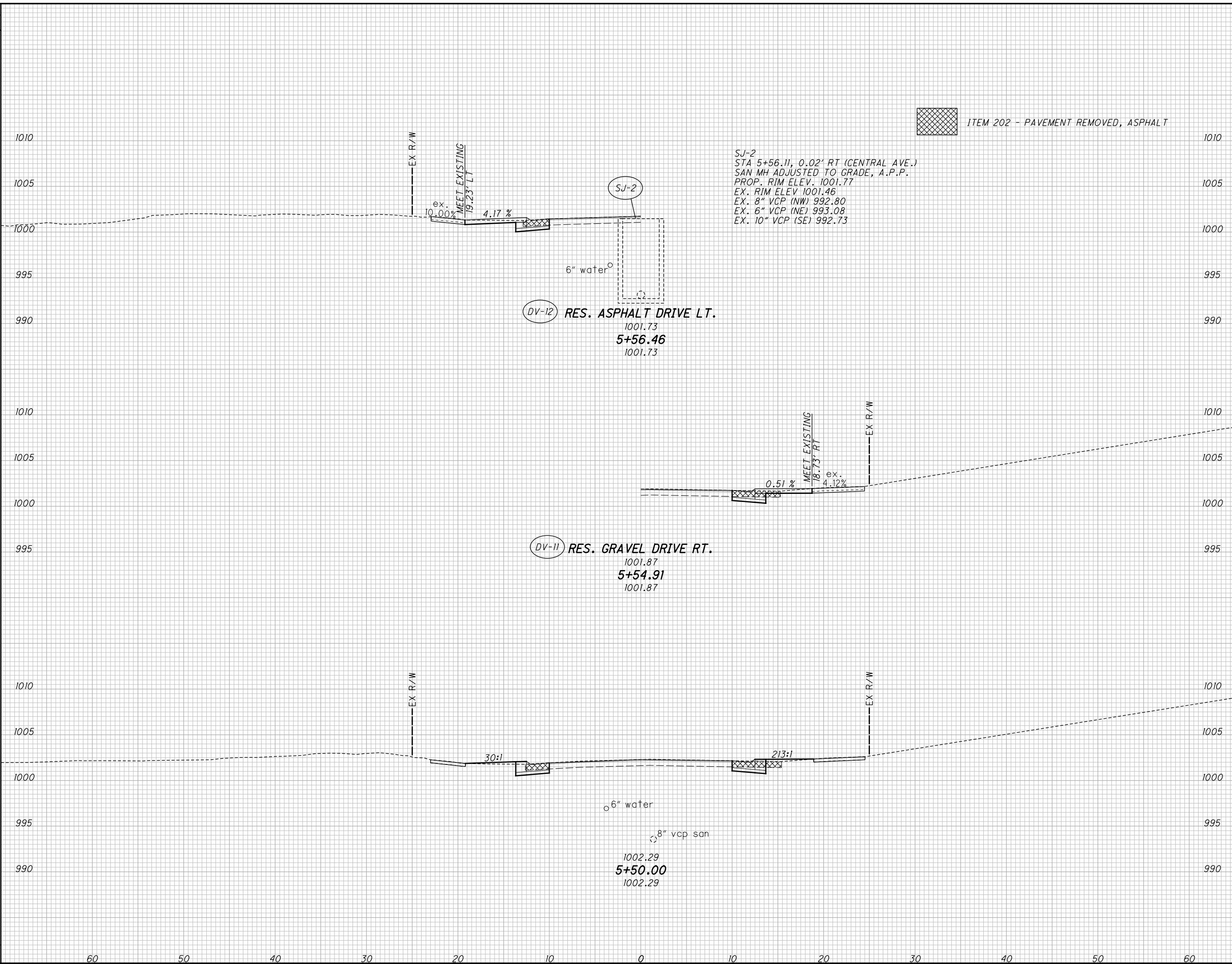
**CROSS SECTIONS RELOCATED CENTRAL AVE.  
 STA. 4+90.57 TO STA. 5+05.23**

**SUM - 76 - 5.53**



o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:58:23 AM oroland

SEEDING	
END WIDTH	SO. YDS.
72	72
13	
72	



END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
CUT	FILL	CUT	FILL		
		8	5		
5	3				
		8	5		

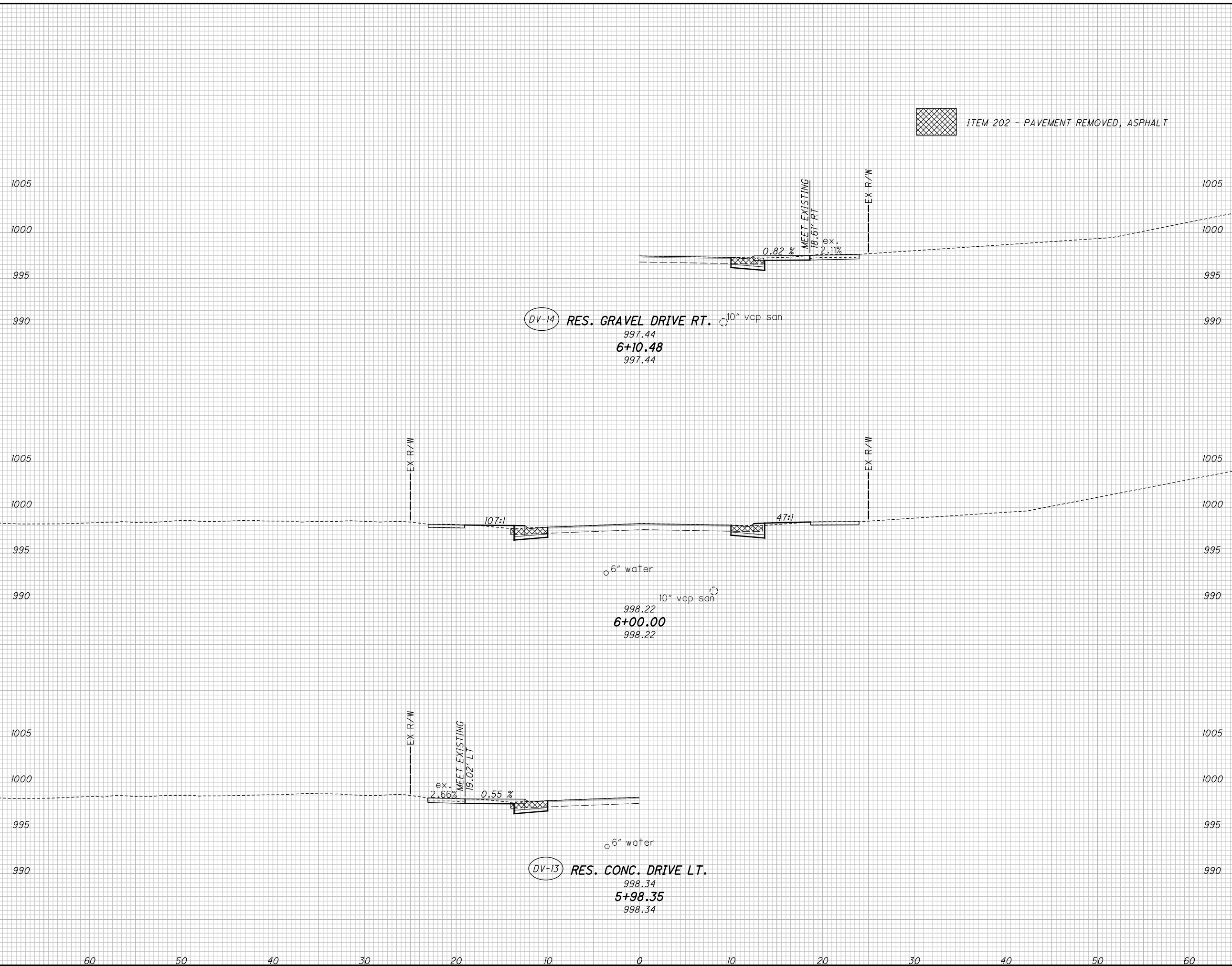
**CROSS SECTIONS RELOCATED CENTRAL AVE.  
STA. 5+50.00 TO STA. 5+56.46**

**SUM - 76 - 5.53**

305  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:58:44 AM orolland

SEEDING	
END WIDTH	SO. YDS.
72	72
72	72

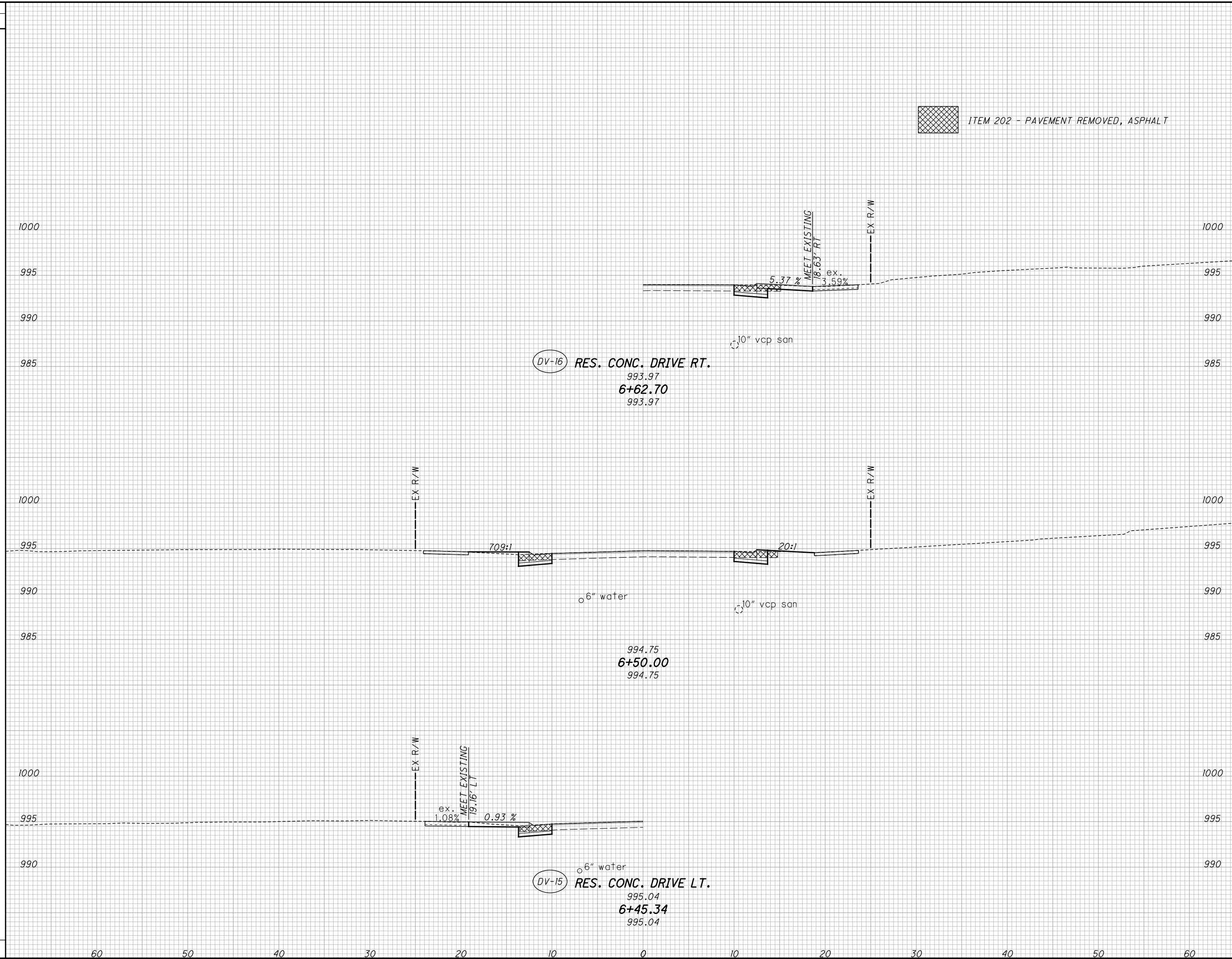


END AREA		VOLUME	
CUT	FILL	CUT	FILL
		7	4
4	2		
		7	4

**CROSS SECTIONS RELOCATED CENTRAL AVE.**  
**STA. 5+98.35 TO STA. 6+10.48**  
**SUM - 76 - 5.53**  
306  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:59:04 AM orolland

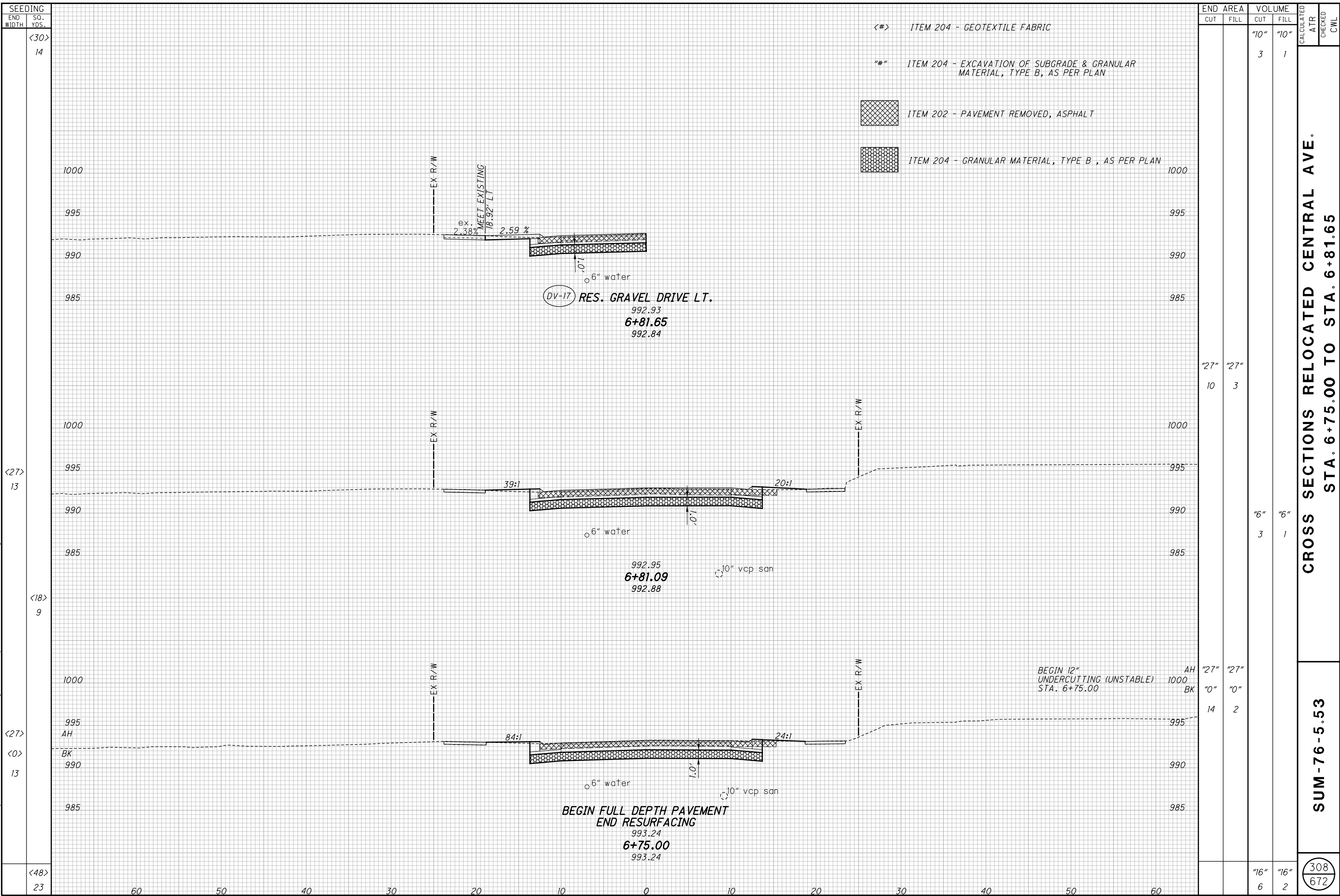
SEEDING	
END WIDTH	SO. YDS.
	36
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	
36	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		8	2
4	2		
		8	2

**CROSS SECTIONS RELOCATED CENTRAL AVE.**  
**STA. 6+45.34 TO STA. 6+62.70**  
**SUM - 76 - 5.53**  
 (307 / 672)

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:59:29 AM orolland



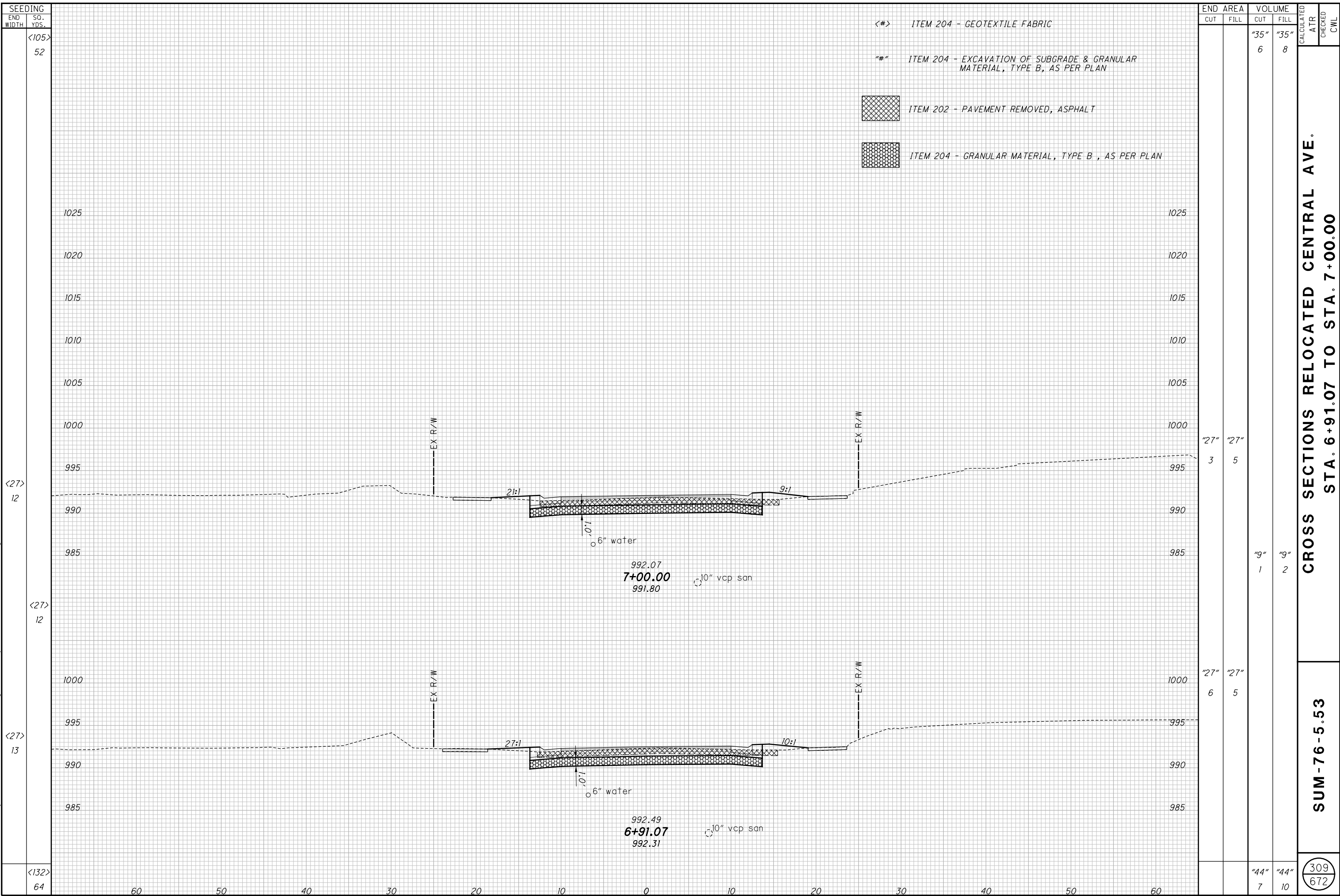
- <#> ITEM 204 - GEOTEXTILE FABRIC
- "#" ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B, AS PER PLAN
- [Cross-hatched box] ITEM 202 - PAVEMENT REMOVED, ASPHALT
- [Dotted box] ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

SEEDING	END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
	CUT	FILL	CUT	FILL		
<30> 14			"10"	"10"		
			3	1		
<27> 13	"27"	"27"	10	3		
			"6"	"6"		
			3	1		
<18> 9						
			"27"	"27"		
			14	2		
<27> <0> 13						
			"16"	"16"		
			6	2		
<48> 23						
					308	672

**CROSS SECTIONS RELOCATED CENTRAL AVE.  
 STA. 6+75.00 TO STA. 6+81.65**

**SUM - 76 - 5.53**

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 7:59:50 AM orolland



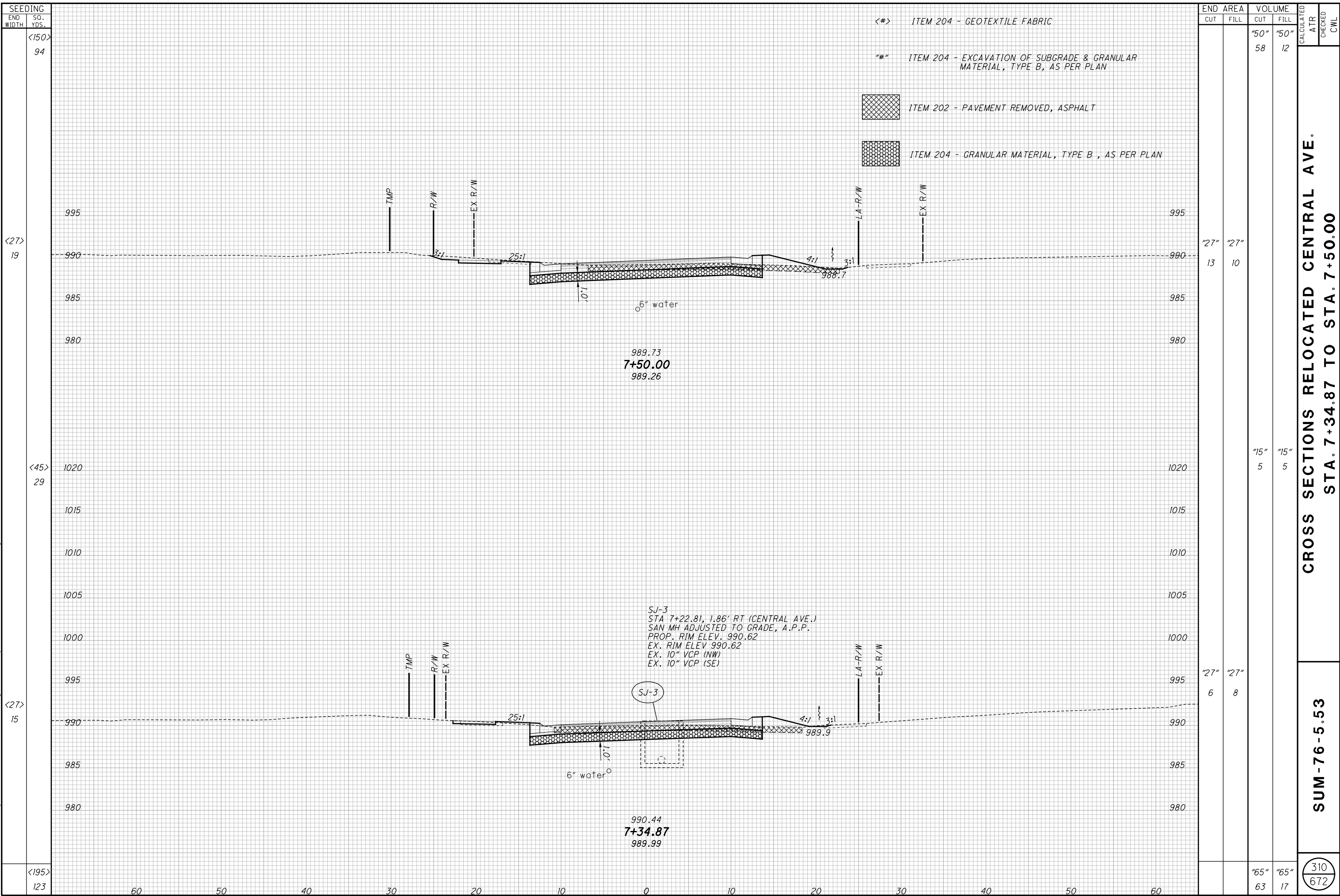
- <#> ITEM 204 - GEOTEXTILE FABRIC
- "#" ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B, AS PER PLAN
- [Cross-hatched pattern] ITEM 202 - PAVEMENT REMOVED, ASPHALT
- [Dotted pattern] ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

SEEDING	END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
	CUT	FILL	CUT	FILL		
<105> 52			"35"	"35"		
			6	8		
<27> 12	"27"	"27"	3	5		
			"9"	"9"		
			1	2		
<27> 12	"27"	"27"	6	5		
<27> 13			"44"	"44"		
			7	10		
<132> 64						
					309	672

**CROSS SECTIONS RELOCATED CENTRAL AVE.  
STA. 6+91.07 TO STA. 7+00.00**

**SUM - 76 - 5.53**

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 8:00:21 AM aralland

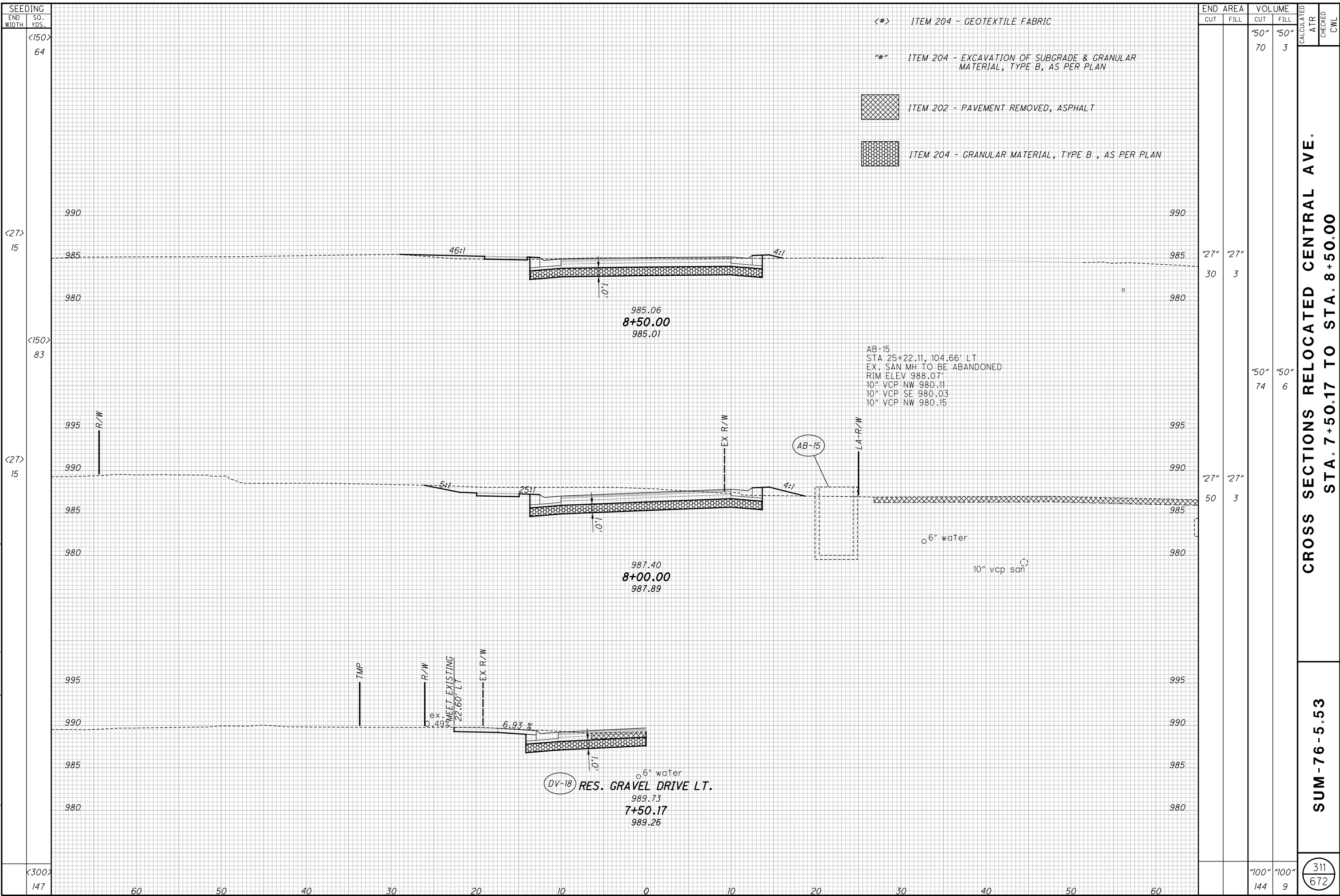


CROSS SECTIONS RELOCATED CENTRAL AVE.  
STA. 7+34.87 TO STA. 7+50.00

SUM - 76 - 5.53

310  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 8:00:37 AM orolland

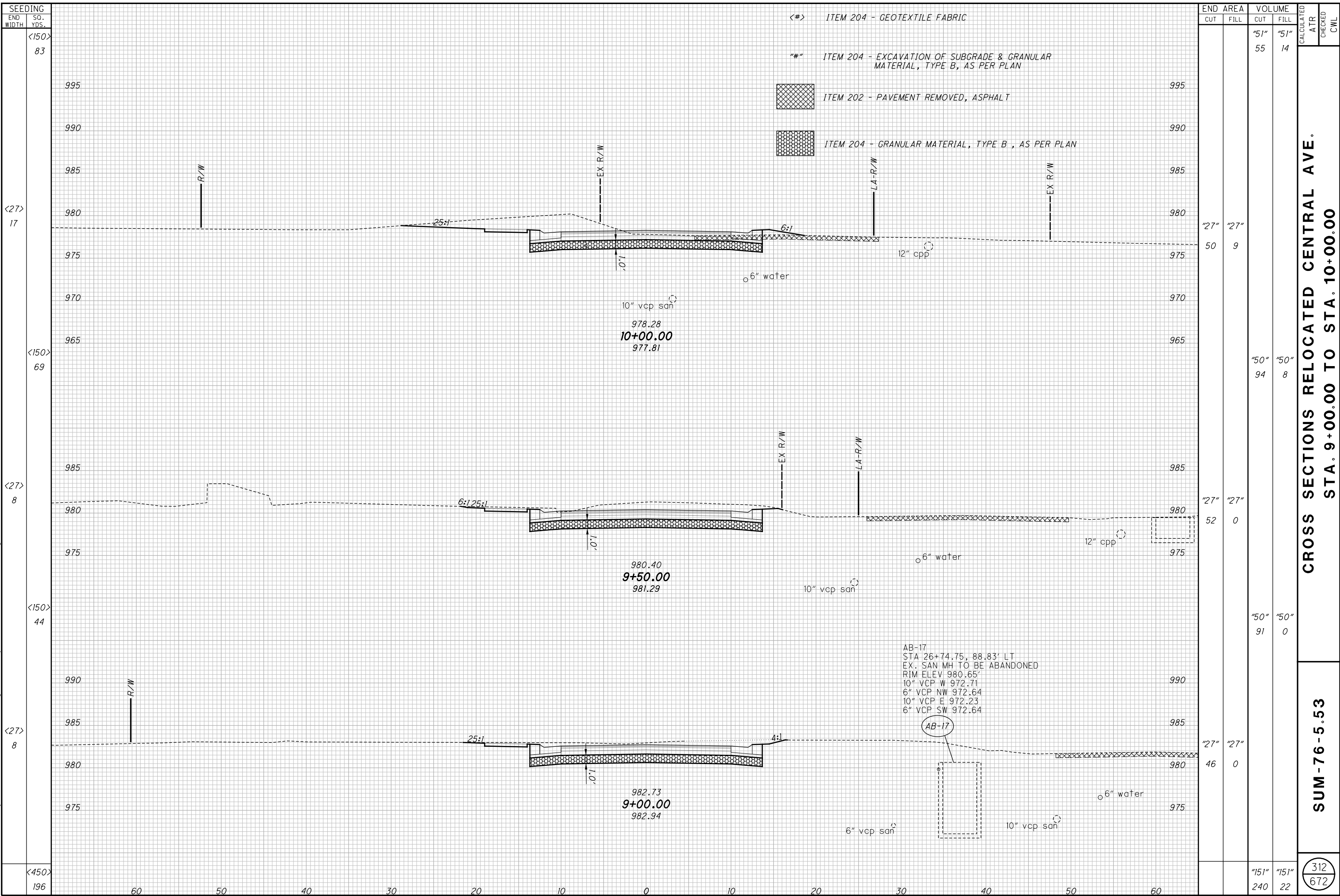


- <#> ITEM 204 - GEOTEXTILE FABRIC
- "#" ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B, AS PER PLAN
- [Cross-hatch pattern] ITEM 202 - PAVEMENT REMOVED, ASPHALT
- [Dotted pattern] ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

SEEDING	END AREA		VOLUME		CALCULATED ATR	CHECKED CWL		
	CUT	FILL	CUT	FILL				
<150> 64			"50"	"50"				
			70	3				
<27> 15			"27"	"27"				
			30	3				
<150> 83			"50"	"50"				
			74	6				
<27> 15			"27"	"27"				
			50	3				
<300> 147			"100"	"100"				
			144	9				
<b>SUM - 76 - 5.53</b>						<table border="1"> <tr> <td>311</td> </tr> <tr> <td>672</td> </tr> </table>	311	672
311								
672								

**CROSS SECTIONS RELOCATED CENTRAL AVE.  
 STA. 7+50.17 TO STA. 8+50.00**

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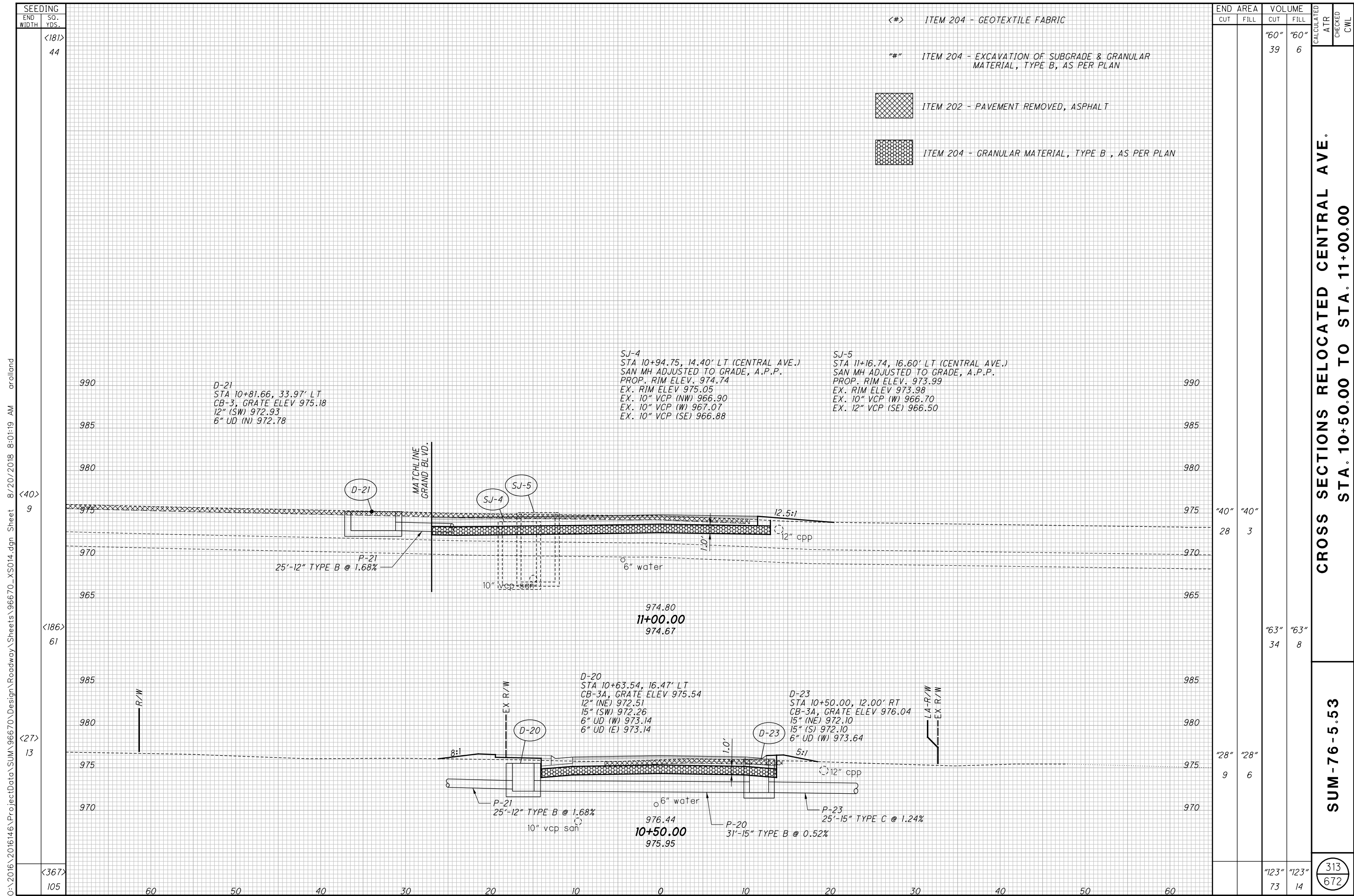
SEEDING		SO. YDS.	END WIDTH
END WIDTH	SO. YDS.		
<150>	83		
<27>	17		
<150>	69		
<27>	8		
<150>	44		
<27>	8		
<450>	196		

END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
CUT	FILL	CUT	FILL		
		"51"	"51"		
		55	14		
"27"	"27"				
50	9				
"50"	"50"				
94	8				
"27"	"27"				
52	0				
"50"	"50"				
91	0				
"27"	"27"				
46	0				
"151"	"151"				
240	22				
		(312 / 672)			

**CROSS SECTIONS RELOCATED CENTRAL AVE.  
 STA. 9+00.00 TO STA. 10+00.00**

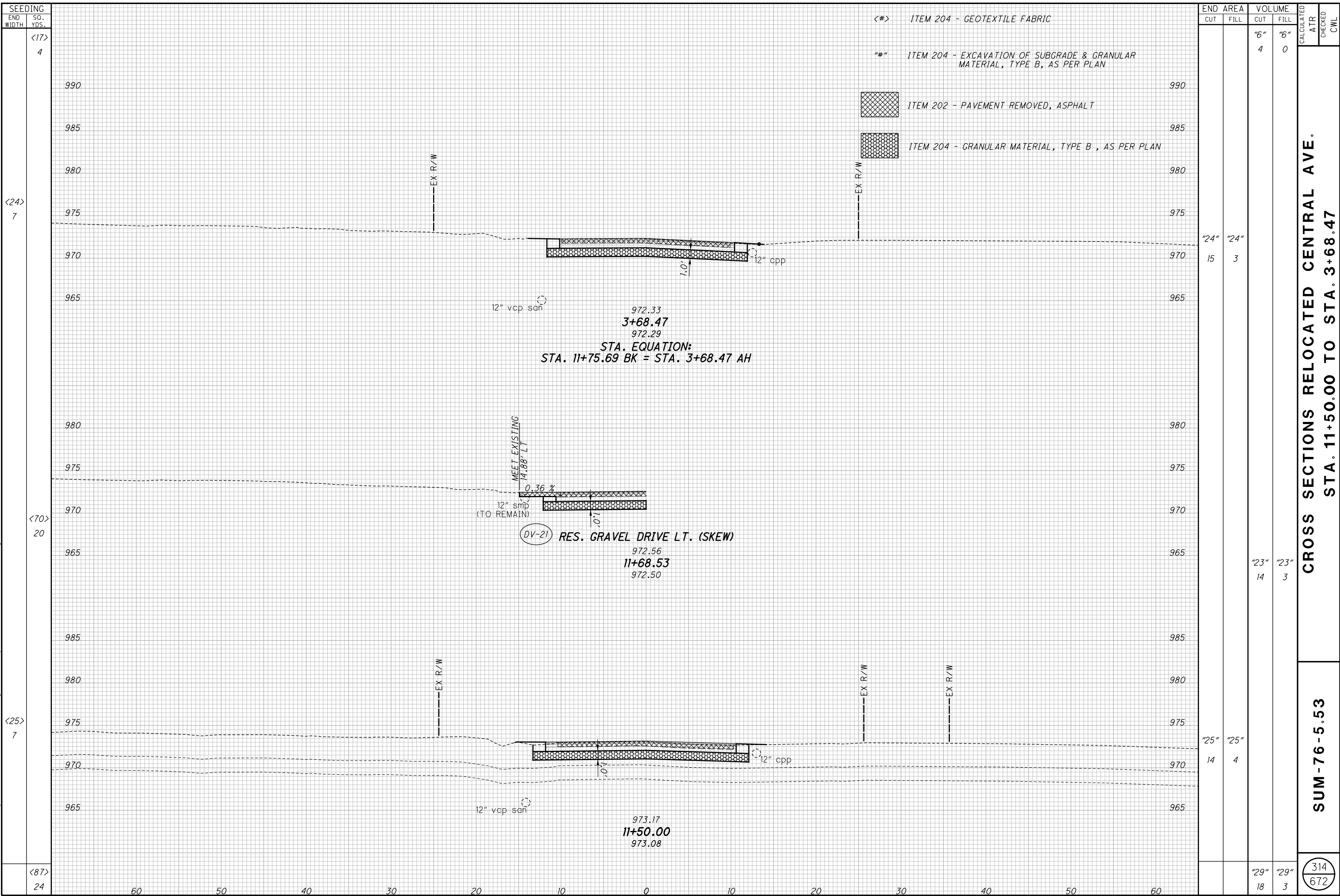
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o:\2016\2016146\ProjectData\SUM\96670\Roadway\Design\Roadway\S014.dgn Sheet 8/20/2018 8:01:19 AM arolland

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 8:01:38 AM aralland



- <#> ITEM 204 - GEOTEXTILE FABRIC
- "#" ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B, AS PER PLAN
- [Cross-hatched box] ITEM 202 - PAVEMENT REMOVED, ASPHALT
- [Dotted box] ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

END AREA	VOLUME	CALCULATED	CHECKED				
				CUT	FILL	CUT	FILL
		"6"	"6"				
		4	0				
"24"	"24"	15	3				
"23"	"23"	14	3				
"25"	"25"	14	4				
"29"	"29"	18	3				
<b>SUM - 76 - 5.53</b>							
<table border="1" style="margin: auto;"> <tr> <td style="border: none;">314</td> </tr> <tr> <td style="border: none;">672</td> </tr> </table>				314	672		
314							
672							

**CROSS SECTIONS RELOCATED CENTRAL AVE.**  
**STA. 11+50.00 TO STA. 3+68.47**

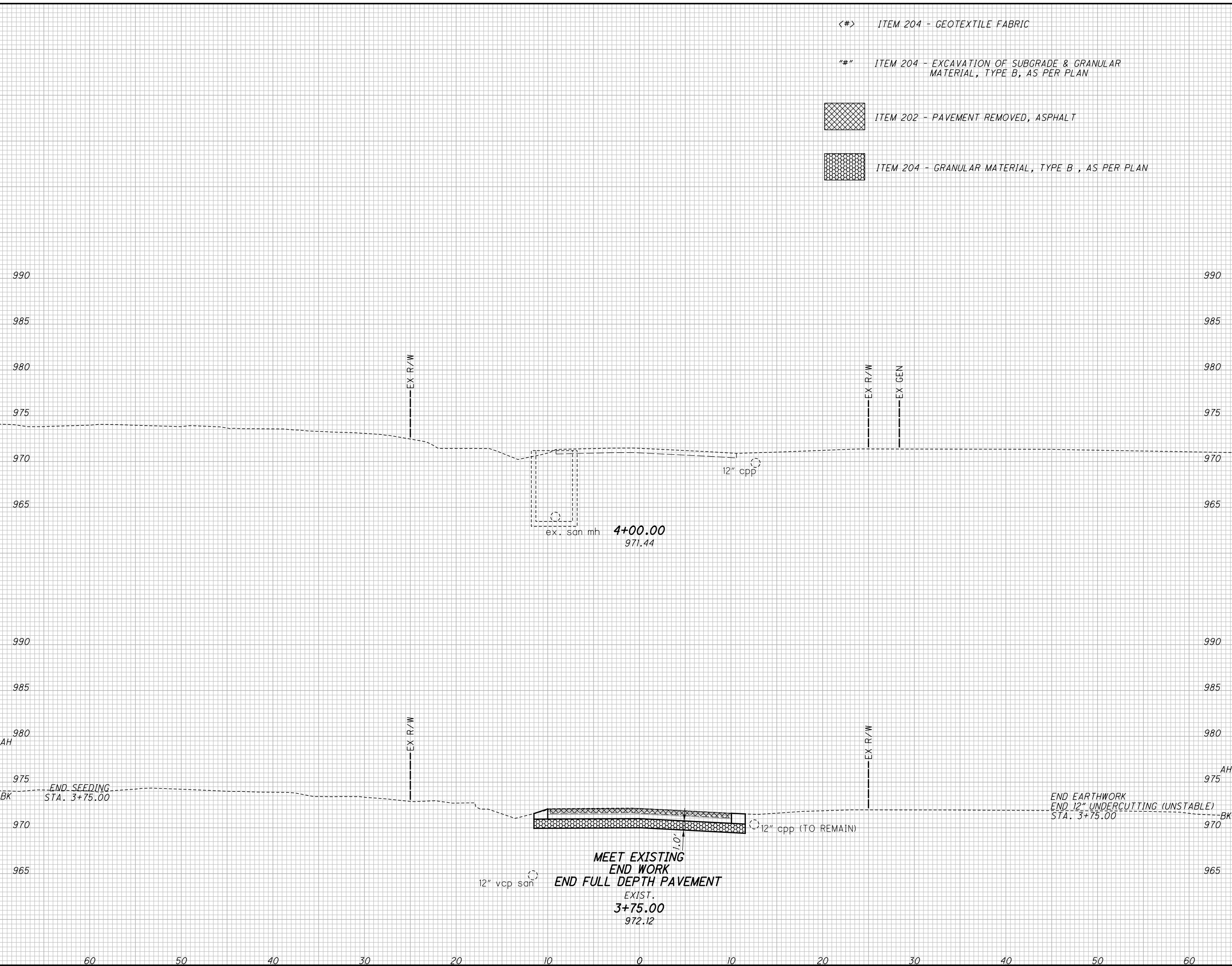
972.33  
**3+68.47**  
 972.29  
**STA. EQUATION:**  
**STA. 11+75.69 BK = STA. 3+68.47 AH**

972.56  
**11+68.53**  
 972.50  
**RES. GRAVEL DRIVE LT. (SKEW)**

973.17  
**11+50.00**  
 973.08

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XS014.dgn Sheet 8/20/2018 8:01:56 AM arolland

SEEDING	
END WIDTH	SO. YDS.
<0> 0	
<23> 3	
<0> 0	



- <#> ITEM 204 - GEOTEXTILE FABRIC
- "#" ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B, AS PER PLAN
- [Cross-hatched box] ITEM 202 - PAVEMENT REMOVED, ASPHALT
- [Dotted box] ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

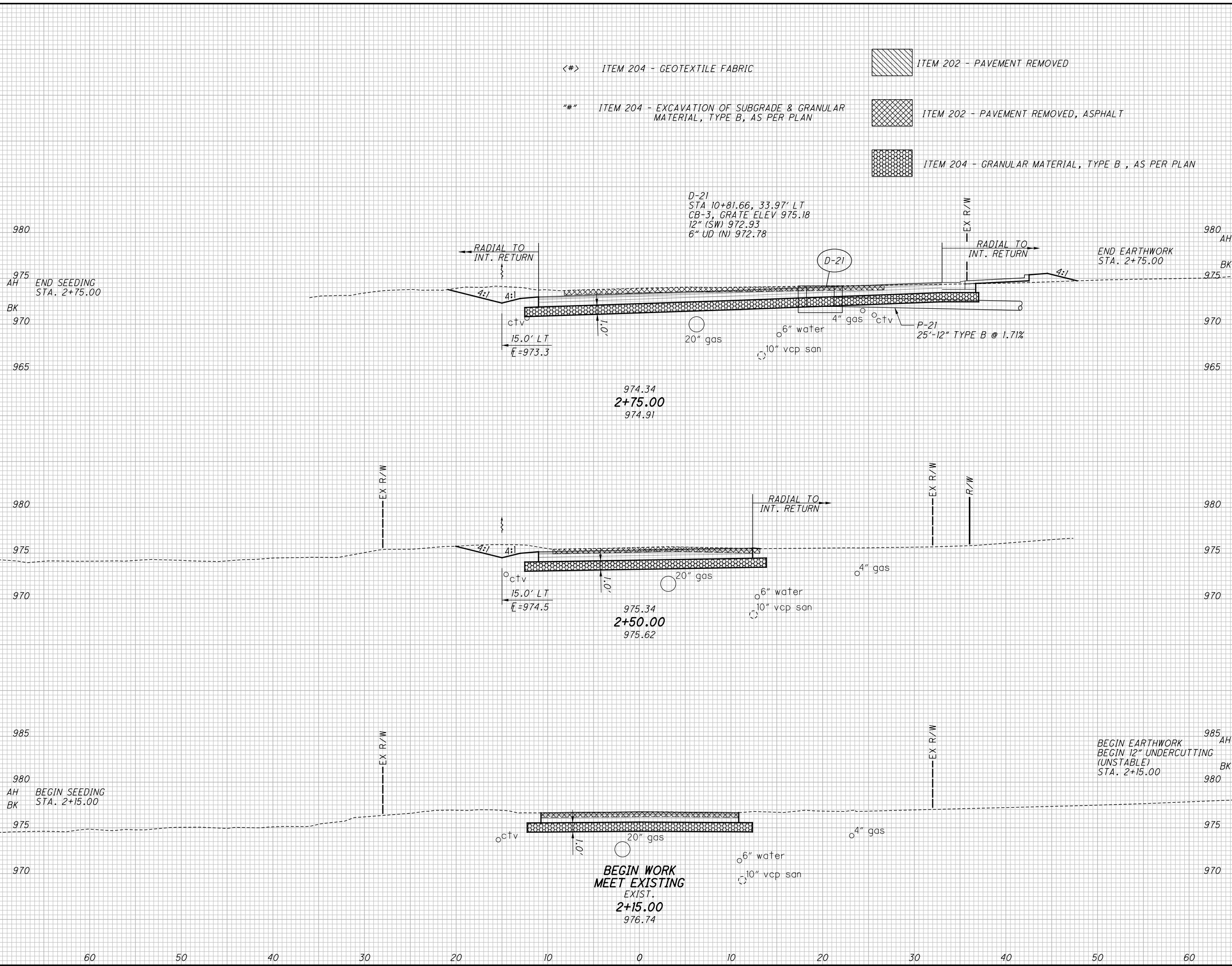
END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
CUT	FILL	CUT	FILL		
"0"	"0"				
0	0				
"23"	"23"	16	1		
		"0"	"0"	315	672

**CROSS SECTIONS RELOCATED CENTRAL AVE.  
STA. 3+75.00 TO STA. 4+00.00**

**SUM - 76 - 5.53**

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SEEDING	
END WIDTH	SO. YDS.
<0>	0
<50>	15
<106>	35
<26>	10
<99>	19
<25>	0
<205>	54



- <#> ITEM 204 - GEOTEXTILE FABRIC
- "#" ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B, AS PER PLAN
- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT
- ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

END AREA		VOLUME		CALCULATED ATR	CHECKED CWL
CUT	FILL	CUT	FILL		
0	0	0	0		
59	4				
		"35"	"35"		
		40	2		
		"26"	"26"		
		28	0		
		"33"	"33"		
		27	0		
		"25"	"25"		
		13	0		
		"0"	"0"		
		0	0		
		"68"	"68"		
		67	2		

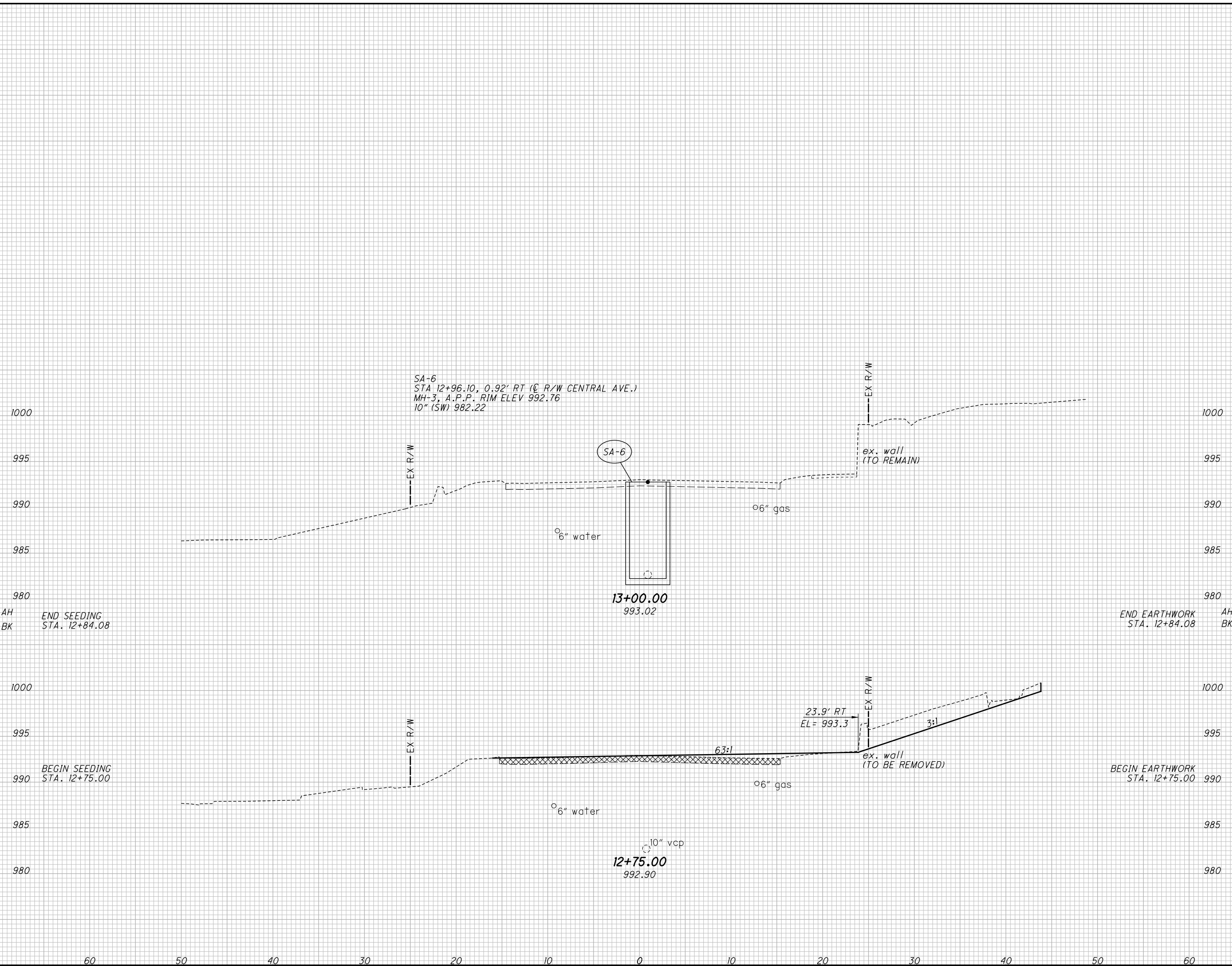
**CROSS SECTIONS GRAND BLVD.  
STA. 2+15.00 TO STA. 2+75.00**

**SUM - 76 - 5.53**

316  
672

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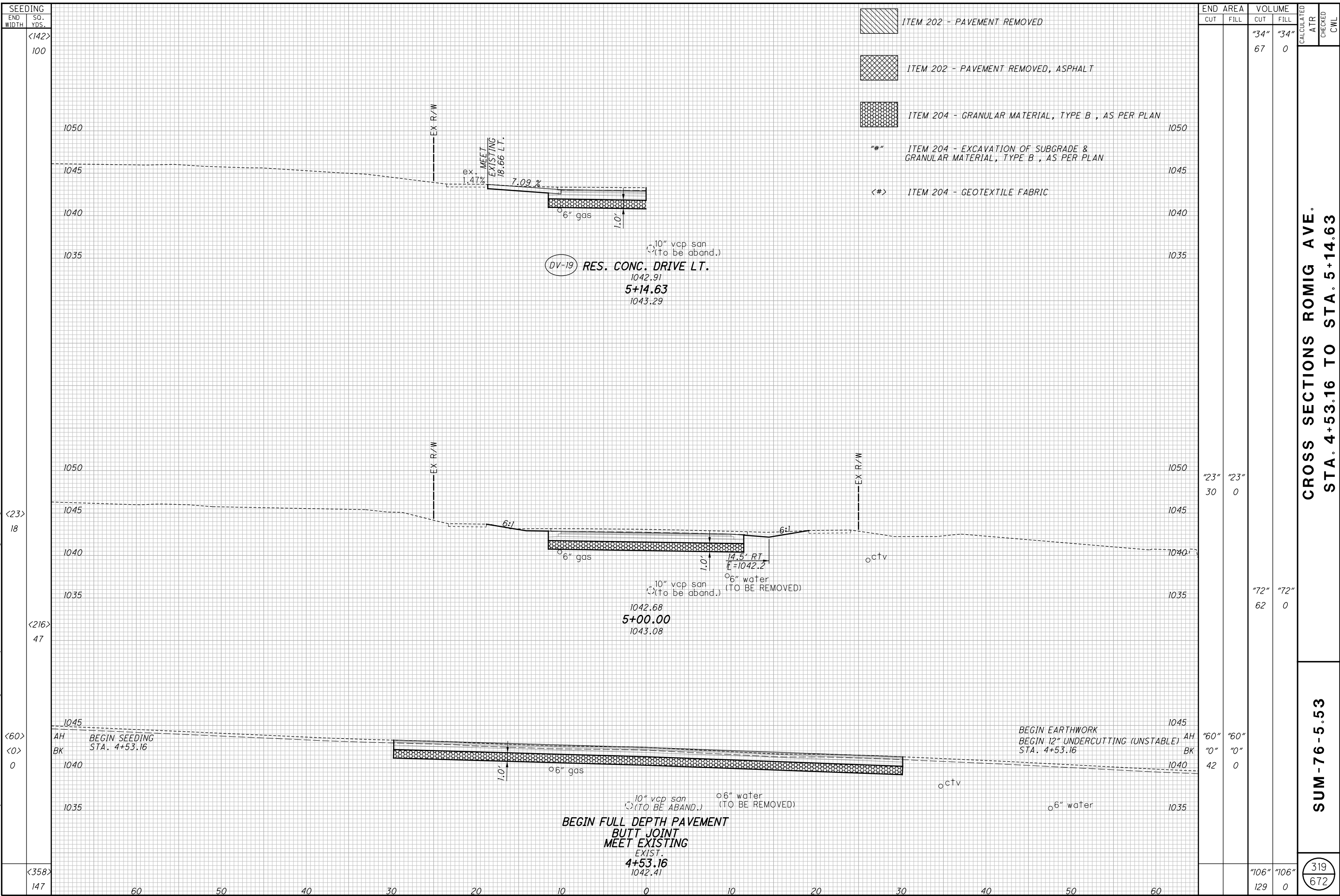
SEEDING	
END WIDTH	SO. YDS.
62	
61	
62	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
31	27	10	9
0	0		

**CROSS SECTIONS CENTRAL AVE.**  
**STA. 12+75.00 TO STA. 12+84.08**  
**SUM - 76 - 5.53**  
 317  
 672

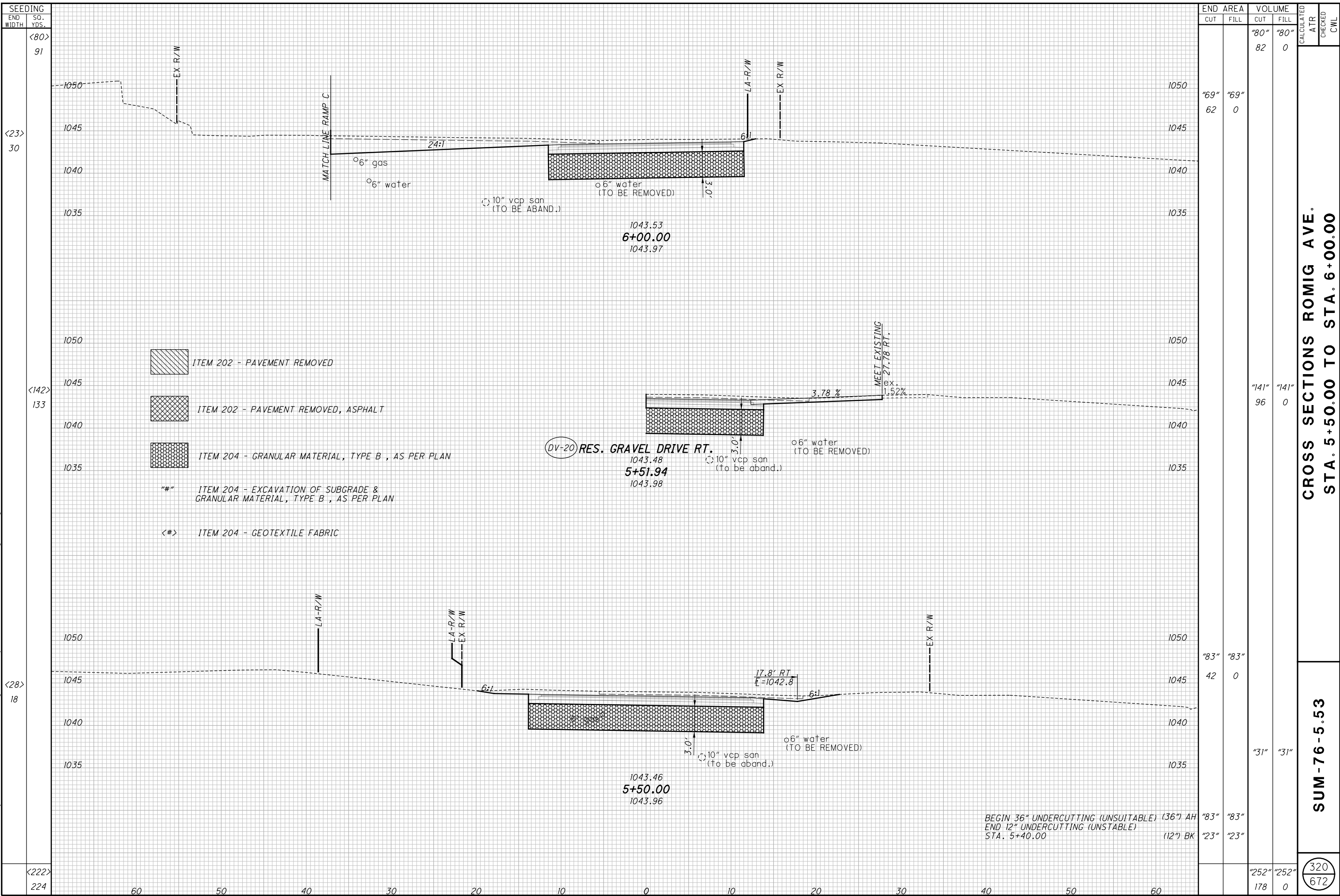
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**CROSS SECTIONS ROMIG AVE.  
STA. 4+53.16 TO STA. 5+14.63**

**SUM - 76 - 5.53**

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**CROSS SECTIONS ROMIG AVE.  
STA. 5+50.00 TO STA. 6+00.00**

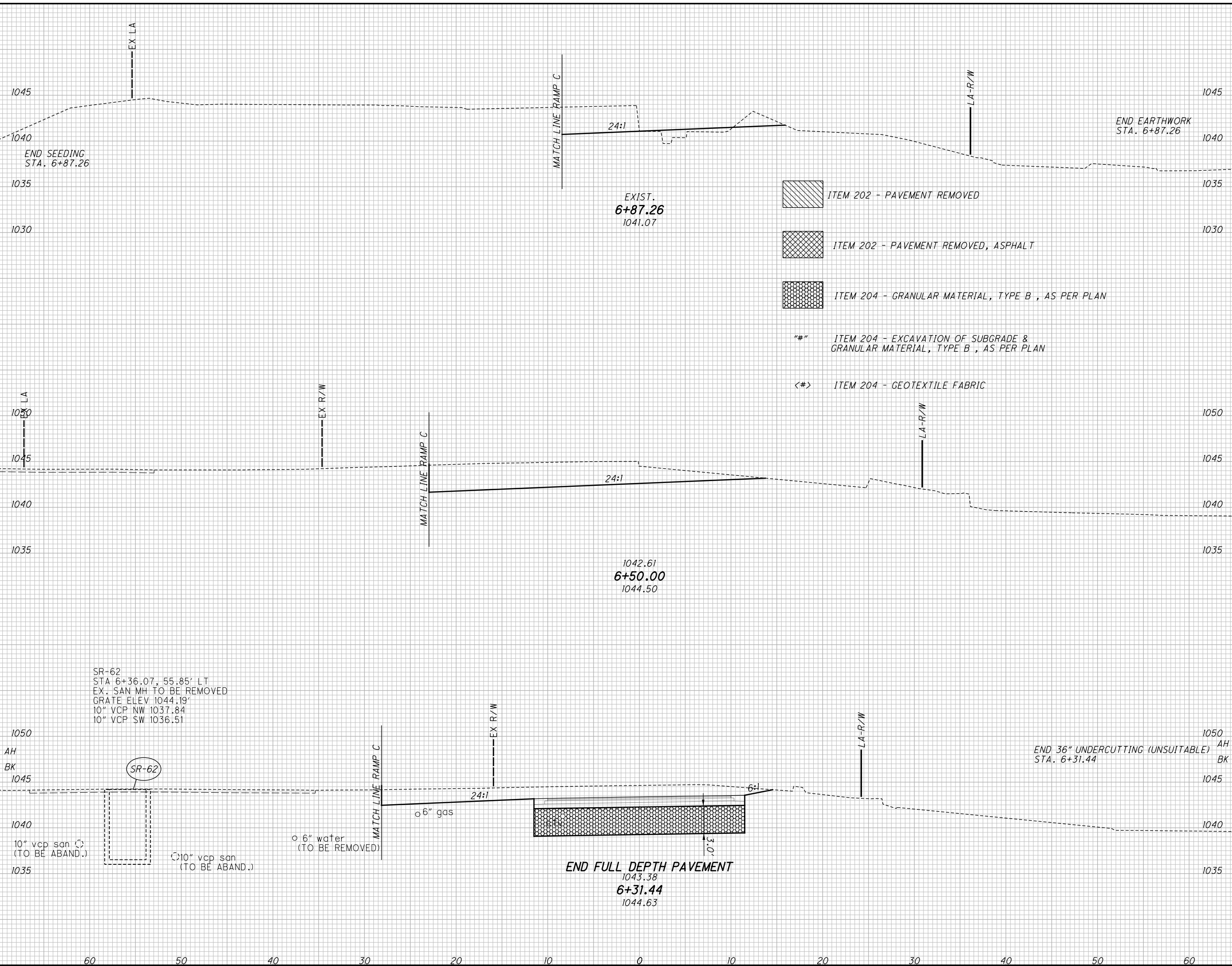
**SUM - 76 - 5.53**

320  
672

BEGIN 36" UNDERCUTTING (UNSUITABLE) (36") AH  
END 12" UNDERCUTTING (UNSTABLE) (12") BK  
STA. 5+40.00

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SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
24	29	5				
126			72	3		
37	76	0				
61			53	0		
<0>	0	0				
<23>	69	69				
22	79	0				
187			125	3		



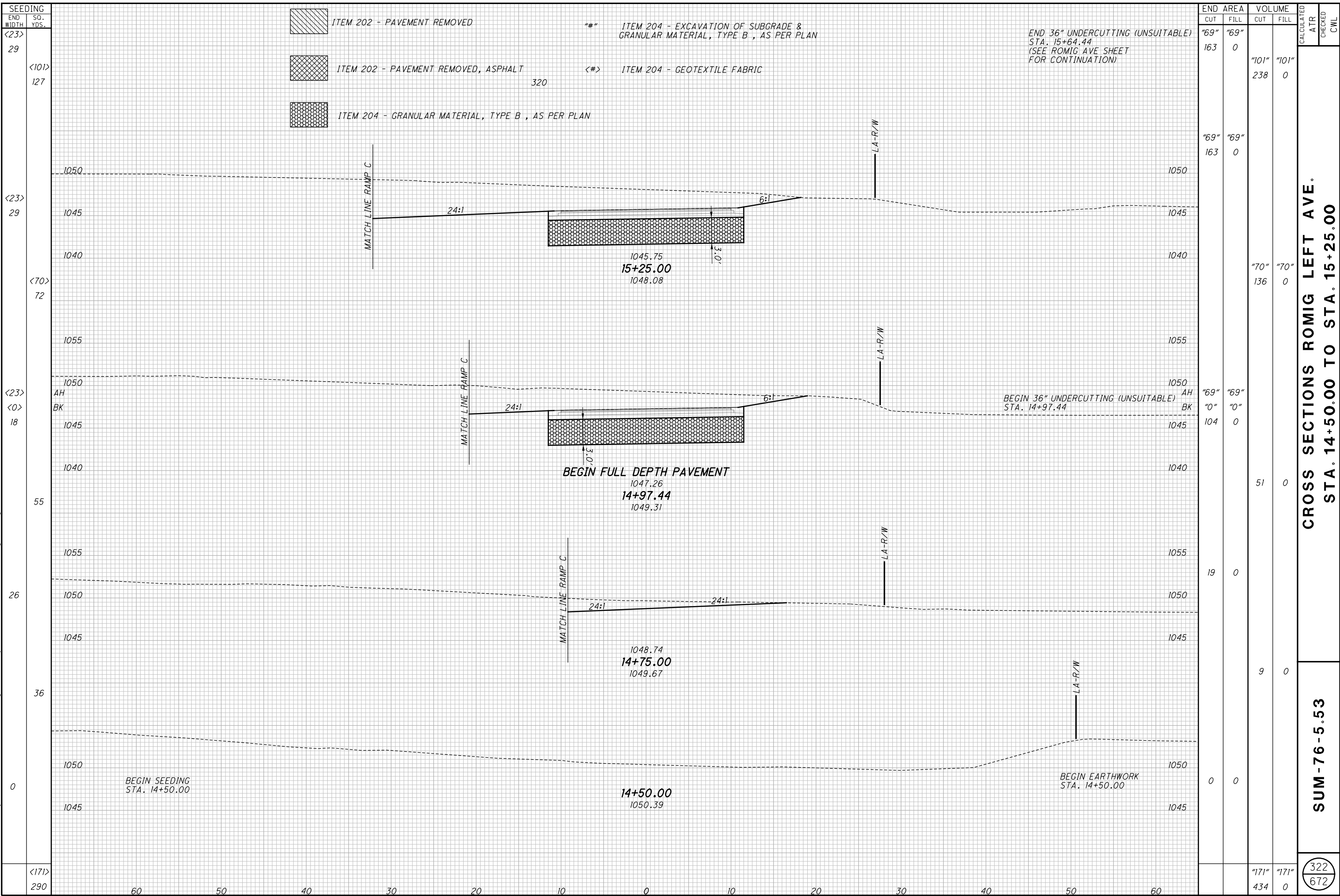
**CROSS SECTIONS ROMIG AVE.  
STA. 6+31.44 TO STA. 6+87.26**

**SUM - 76 - 5.53**

321  
672



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- ITEM 202 - PAVEMENT REMOVED
- ITEM 202 - PAVEMENT REMOVED, ASPHALT
- ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN
- "#" ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B, AS PER PLAN
- <#> ITEM 204 - GEOTEXTILE FABRIC

END 36" UNDERCUTTING (UNSUITABLE)  
STA. 15+64.44  
(SEE ROMIG AVE SHEET FOR CONTINUATION)

BEGIN 36" UNDERCUTTING (UNSUITABLE)  
STA. 14+97.44

BEGIN FULL DEPTH PAVEMENT

BEGIN SEEDING  
STA. 14+50.00

BEGIN EARTHWORK  
STA. 14+50.00

END STA.	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
171	69"	69"	171"	171"	322	
127	163	0	434	0	672	
127						
127						
29	69"	69"	70"	70"		
29	163	0	136	0		
29						
29						
72						
72						
72						
18	69"	69"	51	0		
18	104	0	19	0		
18						
18						
55						
55						
55						
26						
26						
26						
36						
36						
36						
0	0	0	9	0		
0						
0						
290						

**CROSS SECTIONS ROMIG LEFT AVE.  
STA. 14+50.00 TO STA. 15+25.00**

**SUM - 76 - 5.53**





**SUPERELEVATION TABLE**

RAMP B @ STATE STREET

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
EXIST.					20+21.41	1051.51					EXIST.	EXIST.
1050.83	304	-0.25	-0.0308	8.00	20+32.00	1051.08	16.00	0.0308	0.49	152	1051.57	
1050.06		-0.19	-0.0234	8.00	20+50.00	1050.25	16.00	0.0234	0.37		1050.62	
1049.18		-0.13	-0.0160	8.00	20+67.99	1049.31	16.00	0.0160	0.26		1049.57	N.C.
1048.79		-0.13	-0.0160	8.00	20+75.00	1048.92	16.00	0.0160	0.26		1049.18	
1047.24		-0.13	-0.0160	8.00	21+00.00	1047.37	16.00	0.0160	0.26		1047.63	

**CURVE 2 - SUPERELEVATION TABLE**

P.I. Sta. 31+58.02

Dc = 4° 00' 00"

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
					28+57.16	996.27	16.00	0.0160	0.26	200	996.53	N.C.
					28+75.00	995.43	16.00	0.0216	0.35		995.78	
					29+00.00	994.33	16.00	0.0294	0.47		994.80	
					29+17.00	993.62	16.00	0.0347	0.56		994.18	P.C.
					29+25.00	993.30	16.00	0.0372	0.60		993.90	
					29+50.00	992.35	16.00	0.0450	0.72		993.07	
					29+72.36	991.58	16.00	0.0520	0.83		992.41	F.S.
					29+75.00	991.49	16.00	0.0520	0.83		992.32	
					30+00.00	990.70	16.00	0.0520	0.83		991.53	
					30+25.00	989.99	16.00	0.0520	0.83		990.82	
					30+50.00	989.37	16.00	0.0520	0.83	990.20		
					30+75.00	988.82	16.00	0.0520	0.83	989.65		
					31+00.00	988.35	16.00	0.0520	0.83	989.18		
					31+25.00	987.96	16.00	0.0520	0.83	988.79		
					31+50.00	987.65	16.00	0.0520	0.83	988.48		
					31+75.00	987.42	16.00	0.0520	0.83	988.25		
					32+00.00	987.28	16.00	0.0520	0.83	988.11		
					32+25.00	987.18	16.00	0.0520	0.83	988.01		
					32+40.53	987.12	16.00	0.0520	0.83	987.95		
					32+50.00	987.08	15.52	0.0520	0.81	987.89		
					32+75.00	987.00	14.41	0.0520	0.75	987.75		
					32+94.57	986.98	13.68	0.0520	0.71	987.69	F.S.	
					33+00.00	986.97	13.51	0.0516	0.70	987.67		
					33+25.00	986.98	12.82	0.0499	0.64	987.62		
					33+50.00	987.03	12.34	0.0481	0.59	987.62		
					33+75.00	987.12	12.07	0.0464	0.56	987.68		
					33+94.57	987.21	12.00	0.0450	0.54	987.75	P.T.	

CALCULATED  
TMT  
CHECKED  
CWL

**SUPERELEVATION TABLE - RAMP B**

**SUM - 76 - 5.53**

325  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CE003.dgn Sheet 8/20/2018 8:08:38 AM orolland

**CURVE 3 - SUPERELEVATION TABLE**

P.I. Sta. 128+74.38

Dc = 4° 00' 00"

LEFT SIDE						BASELINE CONTROL		RIGHT SIDE						REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	REMARKS		
					125+51.43	1015.67	8.00	0.0160	0.13	297	1015.80	N.C.		
					125+57.92	1015.19	8.00	0.0187	0.15		1015.34	P.C.		
					125+75.00	1013.93	8.10	0.0257	0.21		1014.14			
					125+80.62	1013.51	8.18	0.0280	0.23		1013.74	F.S.		
					126+00.00	1012.14	8.62	0.0280	0.24		1012.38			
					126+25.00	1010.35	9.58	0.0280	0.27		1010.62			
					126+50.00	1008.54	10.98	0.0280	0.31		1008.85			
					126+75.00	1006.72	12.83	0.0280	0.36		1007.08			
					127+00.00	1004.90	15.12	0.0280	0.42		1005.32			
					127+08.54	1004.29	16.00	0.0280	0.45		1004.74			
					127+25.00	1003.20	16.00	0.0280	0.45	1003.65				
					127+50.00	1001.55	16.00	0.0280	0.45	1002.00				
					127+75.00	999.91	16.00	0.0280	0.45	1000.36				
					128+00.00	998.31	16.00	0.0280	0.45	998.76				
					128+25.00	996.77	16.00	0.0280	0.45	997.22				
					128+50.00	995.28	16.00	0.0280	0.45	995.73				
					128+75.00	993.85	16.00	0.0280	0.45	994.30				
					129+00.00	992.46	16.00	0.0280	0.45	992.91				
					129+25.00	991.13	16.00	0.0280	0.45	991.58				
					129+50.00	989.85	16.00	0.0280	0.45	990.30				
					129+75.00	988.63	16.00	0.0280	0.45	989.08				
					130+00.00	987.45	16.00	0.0280	0.45	987.90				
					130+25.00	986.33	16.00	0.0280	0.45	986.78				
					130+50.00	985.26	16.00	0.0280	0.45	985.71				
					130+75.00	984.19	16.00	0.0280	0.45	984.64				
					131+00.00	983.13	16.00	0.0280	0.45	983.58				
					131+25.00	982.06	16.00	0.0280	0.45	982.51				
					131+50.00	981.00	16.00	0.0280	0.45	981.45				
					131+58.14	980.65	16.00	0.0280	0.45	981.10	F.S.			
					131+75.00	979.94	16.00	0.0211	0.34	980.28				
					131+80.84	979.69	16.00	0.0187	0.30	979.99	P.T.			
					131+87.32	979.41	16.00	0.0160	0.26	979.67	N.C.			

**CURVE 4 - SUPERELEVATION TABLE**

P.I. Sta. 135+12.74

Dc = 10° 00' 00"

LEFT SIDE						BASELINE CONTROL		RIGHT SIDE						REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	REMARKS		
					133+23.81	973.60	16.00	0.0160	0.26	152	973.86	N.C.		
					133+50.00	972.49	16.00	0.0052	0.08		972.57			
					133+62.72	971.95	16.00	0.0000	0.00		971.95	FLAT		
					133+75.00	971.43	16.00	-0.0050	-0.08		971.35			
					134+00.00	970.38	16.00	-0.0153	-0.24		970.14			
					134+01.63	970.32	16.00	-0.0160	-0.26		970.06			
					134+25.00	969.47	16.00	-0.0256	-0.41		969.06			
					134+37.30	969.07	16.00	-0.0307	-0.49		968.58	P.C.		
					134+50.00	968.70	16.00	-0.0359	-0.57		968.13			
					134+74.59	968.08	16.00	-0.0460	-0.74		967.34	F.S.		
					134+75.00	968.07	16.00	-0.0460	-0.74	967.33				
					135+00.00	967.59	16.00	-0.0460	-0.74	966.85				
					135+25.00	967.25	16.00	-0.0460	-0.74	966.51				
					135+50.00	967.05	16.00	-0.0460	-0.74	966.31				
					135+50.01	967.05	16.00	-0.0460	-0.74	966.31	F.S.			
					135+75.00	966.99	16.00	-0.0357	-0.57	966.42				
					135+87.30	967.02	16.00	-0.0307	-0.49	966.53	P.T.			
					136+00.00	967.08	16.00	-0.0254	-0.41	966.67				
					136+22.97	967.29	16.00	-0.0160	-0.26	967.03	N.C.			
					136+25.00	967.31	16.00	-0.0160	-0.26	967.05				
					136+50.00	967.66	16.00	-0.0160	-0.26	967.40				
					136+58.25	967.78	16.00	-0.0160	-0.26	967.52	N.C.			
					136+75.00	968.03	16.00	-0.0091	-0.15	967.88				
					136+85.00	968.18	16.00	-0.0050	-0.08	968.10				
					136+92.28	968.28				EXIST.	EXIST.			

SUPERELEVATION TABLE - RAMP B1

SUM - 76 - 5.53

326  
672

CALCULATED  
TMT  
CHECKED  
CWL

**SUPERELEVATION TABLE**

RAMP C @ STATE STREET

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
EXIST.					30+22.92	1055.33						EXIST.
1055.31	167	0.13	0.0110	12.00	30+30.00	1055.18	12.00	-0.0110	-0.13	167	1055.05	N.C.
1055.13		0.19	0.0160	12.00	30+40.00	1054.94	12.00	-0.0160	-0.19		1054.75	
1054.83		0.19	0.0160	12.00	30+50.00	1054.64	12.00	-0.0160	-0.19		1054.45	
1053.87		0.19	0.0160	12.00	30+75.00	1053.68	12.00	-0.0160	-0.19		1053.49	

**CURVE 6 - SUPERELEVATION TABLE**

P.I. Sta. 38+67.02

Dc = 3° 00' 00"

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1016.66		0.25	0.0160	15.45	36+36.43	1016.41						N.C.
1015.83		0.18	0.0118	15.57	36+50.00	1015.65						
1014.35		0.06	0.0039	15.79	36+75.00	1014.29						
1013.61		0.00	0.0000	15.91	36+87.63	1013.61						FLAT
1013.00		-0.05	-0.0033	16.00	36+98.20	1013.05						
1012.90		-0.06	-0.0039	16.00	37+00.00	1012.96						
1011.77		-0.16	-0.0101	16.00	37+19.87	1011.93						
1011.48	200	-0.19	-0.0117	16.00	37+25.00	1011.67						
1010.71		-0.26	-0.0160	16.00	37+38.83	1010.97						
1010.11		-0.31	-0.0195	16.00	37+50.00	1010.42						
1008.78		-0.44	-0.0273	16.00	37+75.00	1009.22						
1008.33		-0.48	-0.0300	16.00	37+83.63	1008.81						P.C.
1007.49		-0.56	-0.0351	16.00	38+00.00	1008.05						
1006.23		-0.69	-0.0429	16.00	38+25.00	1006.92						
1005.91		-0.72	-0.0450	16.00	38+31.63	1006.63						F.S.
1005.11		-0.72	-0.0450	16.00	38+50.00	1005.83						
1004.07		-0.72	-0.0450	16.00	38+75.00	1004.79						
1003.06		-0.72	-0.0450	16.00	39+00.00	1003.78						
1002.09		-0.72	-0.0450	16.00	39+25.00	1002.81						
1001.17		-0.72	-0.0450	16.00	39+50.00	1001.89						
1001.16		-0.72	-0.0450	16.00	39+50.30	1001.88						P.T.
1000.28		-0.72	-0.0450	16.00	39+75.00	1001.00						
999.44		-0.72	-0.0450	16.00	40+00.00	1000.16						
998.63		-0.72	-0.0450	16.00	40+25.00	999.35						
997.85		-0.72	-0.0450	16.00	40+50.00	998.57						
997.06		-0.72	-0.0450	16.00	40+75.00	997.78						
996.28		-0.72	-0.0450	16.00	41+00.00	997.00						
996.26		-0.72	-0.0450	16.00	41+00.49	996.98						P.O.T./IR 76

CALCULATED  
TMT  
CHECKED  
CWL

**SUPERELEVATION TABLE - RAMP C**

**SUM - 76 - 5.53**

327  
672

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**CURVE 8 - SUPERELEVATION TABLE**

P.I. Sta. 138+97.16

Dc = 6° 00' 00"

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1010.51		0.26	0.0160	16.00	137+35.67	1010.25						N.C.
1009.62		0.16	0.0101	16.00	137+50.00	1009.46						
1008.08		0.00	0.0000	16.00	137+74.58	1008.08						FLAT
1008.05		0.00	-0.0002	16.00	137+75.00	1008.05						
1006.44	152	-0.17	-0.0105	16.00	138+00.00	1006.61						
1004.79		-0.33	-0.0207	16.00	138+25.00	1005.12						
1004.26		-0.38	-0.0240	16.00	138+32.95	1004.64						P.C.
1003.10		-0.50	-0.0310	16.00	138+50.00	1003.60						
1002.26		-0.58	-0.0360	16.00	138+62.13	1002.84						F.S.
1001.45		-0.58	-0.0360	16.00	138+75.00	1002.03						
999.85		-0.58	-0.0360	16.00	139+00.00	1000.43						
998.21		-0.58	-0.0360	16.00	139+25.00	998.79						
997.93		-0.58	-0.0360	16.00	139+29.23	998.51						F.S.
996.67		-0.44	-0.0275	16.00	139+50.00	997.11						
995.67	152	-0.33	-0.0208	16.00	139+66.28	996.00						P.T.
995.13		-0.28	-0.0172	16.00	139+75.00	995.41						
993.60		-0.11	-0.0069	16.00	140+00.00	993.71						
992.57		0.00	0.0000	16.00	140+16.78	992.57						FLAT

**CURVE 9 - SUPERELEVATION TABLE**

P.I. Sta. 141+61.47

Dc = 6° 00' 00"

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS	
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION		
992.57		0.00	0.0000	16.00	140+16.78	992.57							FLAT
992.06		0.05	0.0034	16.00	140+25.00	992.01							
990.53		0.22	0.0137	16.00	140+50.00	990.31							
989.46	152	0.33	0.0208	16.00	140+67.28	989.13							P.C.
988.99		0.38	0.0239	16.00	140+75.00	988.61							
987.46		0.55	0.0342	16.00	141+00.00	986.91							
987.20		0.58	0.0360	16.00	141+04.33	986.62							F.S.
985.79		0.58	0.0360	16.00	141+25.00	985.21							
984.09		0.58	0.0360	16.00	141+50.00	983.51							
982.39		0.58	0.0360	16.00	141+75.00	981.81							
980.69		0.58	0.0360	16.00	142+00.00	980.11							
978.99		0.58	0.0360	16.00	142+25.00	978.41							
978.93		0.58	0.0360	16.00	142+25.86	978.35							F.S.
977.13	152	0.42	0.0261	16.00	142+50.00	976.71							
976.75		0.38	0.0240	16.00	142+55.04	976.37							P.T.
975.30		0.26	0.0160	16.00	142+74.50	975.04							N.C.
975.27		0.26	0.0160	16.00	142+75.00	975.01							
973.57		0.26	0.0160	16.00	143+00.00	973.31							
971.87		0.26	0.0160	16.00	143+25.00	971.61							
970.18		0.26	0.0160	16.00	143+50.00	969.92							
968.73		0.26	0.0160	16.00	143+75.00	968.47							
967.60		0.26	0.0160	16.00	144+00.00	967.34							
966.82		0.26	0.0160	16.00	144+23.93	966.56							N.C.
966.78	152	0.25	0.0156	16.00	144+25.00	966.53							
966.13		0.08	0.0053	16.00	144+50.00	966.05							
965.82		-0.08	-0.0050	16.00	144+75.00	965.90							
965.92		-0.08	-0.0050	16.00	144+95.00	966.00							
EXIST.					145+06.24	966.16							EXIST.

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CALCULATED TMT CHECKED CWL  
**SUPERELEVATION TABLE - RAMP C1**  
**SUM - 76 - 5.53**  
 328  
 672

**CURVE 11 - SUPERELEVATION TABLE**

P.I. Sta. 7+73.34

Dc = 50° 00' 00"

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
992.93		-0.31	-0.0312	10.00	6+75.00	993.24	10.00	-0.0037	-0.04		993.20	EXIST.
992.70	152	-0.28	-0.0275	10.00	6+80.62	992.97	10.00	0.0000	0.00		992.97	1/2 FLAT
992.00		-0.16	-0.0160	10.00	6+98.10	992.16	10.00	0.0115	0.12		992.28	
991.91		-0.16	-0.0160	10.00	7+00.00	992.07	10.00	0.0127	0.13		992.20	
991.68		-0.16	-0.0160	10.00	7+04.94	991.84	10.00	0.0160	0.16	152	992.00	R.C.
991.06	152	-0.24	-0.0237	10.00	7+16.57	991.30	10.00	0.0237	0.24		991.54	P.R.C.
990.61		-0.29	-0.0292	10.00	7+25.00	990.90	10.00	0.0292	0.29		991.19	
989.74		-0.40	-0.0400	10.00	7+41.42	990.14	10.00	0.0400	0.40		990.54	F.S.
989.33		-0.40	-0.0400	10.00	7+50.00	989.73	10.00	0.0400	0.40		990.13	
988.17		-0.40	-0.0400	10.00	7+75.00	988.57	10.00	0.0400	0.40		988.97	
987.00		-0.40	-0.0400	10.00	8+00.00	987.40	10.00	0.0400	0.40		987.80	
986.92		-0.40	-0.0400	10.00	8+01.72	987.32	10.00	0.0400	0.40		987.72	F.S.
986.10	152	-0.27	-0.0267	10.00	8+21.99	986.37	10.00	0.0267	0.27		986.64	P.T.
985.98		-0.25	-0.0247	10.00	8+25.00	986.23	10.00	0.0247	0.25		986.48	
985.46		-0.16	-0.0160	10.00	8+38.20	985.62	10.00	0.0160	0.16	152	985.78	R.C.
984.90		-0.16	-0.0160	10.00	8+50.00	985.06	10.00	0.0082	0.08		985.14	
984.32		-0.16	-0.0160	10.00	8+62.52	984.48	10.00	0.0000	0.00		984.48	1/2 FLAT
983.74		-0.16	-0.0160	10.00	8+75.00	983.90	10.00	-0.0082	-0.08		983.82	
983.18		-0.16	-0.0160	10.00	8+86.84	983.34	10.00	-0.0160	-0.16		983.18	N.C.
982.57		-0.16	-0.0160	10.00	9+00.00	982.73	10.00	-0.0160	-0.16		982.57	
981.40		-0.16	-0.0160	10.00	9+25.00	981.56	10.00	-0.0160	-0.16		981.40	
980.24		-0.16	-0.0160	10.00	9+50.00	980.40	10.00	-0.0160	-0.16		980.24	
979.49		-0.16	-0.0160	10.00	9+66.99	979.65	10.00	-0.0160	-0.16		979.49	P.C.
979.15		-0.16	-0.0160	10.00	9+75.00	979.31	10.00	-0.0160	-0.16		979.15	
978.12		-0.16	-0.0160	10.00	10+00.00	978.28	10.00	-0.0160	-0.16		978.12	
977.16		-0.16	-0.0160	10.00	10+25.00	977.32	10.00	-0.0160	-0.16		977.16	
976.28		-0.16	-0.0160	10.00	10+50.00	976.44	10.00	-0.0160	-0.16		976.28	
975.70		-0.16	-0.0160	10.00	10+67.43	975.86	12.00	-0.0160	-0.19		975.67	
975.45		-0.16	-0.0160	10.00	10+75.00	975.61	11.87	-0.0160	-0.19		975.42	
974.64		-0.16	-0.0160	10.00	11+00.00	974.80	11.45	-0.0160	-0.18		974.62	
974.58		-0.16	-0.0160	10.00	11+01.73	974.74	11.42	-0.0160	-0.18		974.56	P.T.
973.79		-0.19	-0.0160	12.00	11+25.00	973.98	11.02	-0.0160	-0.18		973.80	
973.71		-0.19	-0.0160	12.00	11+27.50	973.90	10.98	-0.0160	-0.18		973.72	N.C.
973.31		-0.16	-0.0133	12.00	11+40.77	973.47	10.75	-0.0247	-0.27		973.20	
973.12		-0.14	-0.0120	12.00	11+47.22	973.26	10.64	-0.0290	-0.31		972.95	
973.03	497	-0.14	-0.0115	11.82	11+50.00	973.17	10.60	-0.0308	-0.33	152	972.84	
972.28		-0.07	-0.0065	10.19	11+75.00	972.35	10.17	-0.0473	-0.48		971.87	
972.27		-0.06	-0.0063	10.16	11+75.69	972.33	10.16	-0.0477	-0.48		971.85	STATION EQUATION
972.27		-0.06	-0.0063	10.16	3+68.47	972.33	10.16	-0.0477	-0.48		971.85	
972.07		-0.05	-0.0050	9.72	3+75.00	972.12	10.05	-0.0520	-0.52		971.60	EXIST.

CALCULATED  
TMT  
CHECKED  
CWL

**SUPERELEVATION TABLE - REL. CENTRAL AVE. / GOODRICH AVE.**

**SUM - 76 - 5.53**

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### PAVEMENT ELEVATION TABLE

GRAND BOULEVARD

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
976.65		-0.09	-0.0085	10.84	2+15.00	976.74	10.74	-0.0059	-0.06		976.68	EXIST.
976.25		-0.09	-0.0085	11.00	2+25.00	976.34	11.00	0.0007	0.01		976.35	
975.77		-0.09	-0.0085	11.00	2+36.89	975.86	11.00	0.0085	0.09		975.95	
975.15	152	-0.19	-0.0171	11.00	2+50.00	975.34	11.00	0.0171	0.19	152	975.53	
973.97		-0.37	-0.0336	11.00	2+75.00	974.34	11.00	0.0336	0.37		974.71	
973.87		-0.39	-0.0355	11.00	2+77.93	974.26	11.00	0.0355	0.39		974.65	

CALCULATED	TMT
	CHECKED
	CWL

**PAVEMENT ELEVATION TABLE - GRAND BLVD.**

**SUM - 76 - 5.53**

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**PAVEMENT ELEVATION TABLE**

ROMIG AVENUE

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
EXIST.					4+53.16	1042.41					EXIST.	EXIST.
1042.64	152	0.34	0.0335	10.00	4+60.00	1042.30	10.00	-0.0335	-0.34	152	1041.97	
1042.52		0.24	0.0236	10.00	4+75.00	1042.28	10.00	-0.0236	-0.24		1042.04	
1042.63		0.16	0.0160	10.00	4+86.60	1042.47	10.00	-0.0160	-0.16		1042.31	
1042.84		0.16	0.0160	10.00	5+00.00	1042.68	10.00	-0.0160	-0.16		1042.52	
1043.24		0.16	0.0160	10.00	5+25.00	1043.08	10.00	-0.0160	-0.16		1042.92	
1043.47		0.16	0.0160	10.00	5+39.23	1043.31	10.00	-0.0160	-0.16		1043.15	
SEE INTERSECTION DETAIL ON SHEET 339												
1043.43		-0.16	-0.0160	10.00	5+89.65	1043.59	10.00	0.0160	0.16		1043.75	
1043.37		-0.16	-0.0160	10.00	6+00.00	1043.53	10.00	0.0160	0.16		1043.69	
1043.25		-0.16	-0.0160	10.00	6+25.00	1043.41	10.00	0.0160	0.16		1043.57	
1043.22		-0.16	-0.0160	10.00	6+31.44	1043.38	10.00	0.0160	0.16		1043.54	

**PAVEMENT ELEVATION TABLE**

ROMIG AVENUE LT.

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1047.10		-0.16	-0.0160	10.00	14+97.44	1047.26	10.00	0.0160	0.16		1047.42	
1046.96		-0.16	-0.0160	10.00	15+00.00	1047.12	10.00	0.0160	0.16		1047.28	
1045.59		-0.16	-0.0160	10.00	15+25.00	1045.75	10.00	0.0160	0.16		1045.91	
1044.81		-0.16	-0.0160	10.00	15+39.23	1044.97	10.00	0.0160	0.16		1045.13	

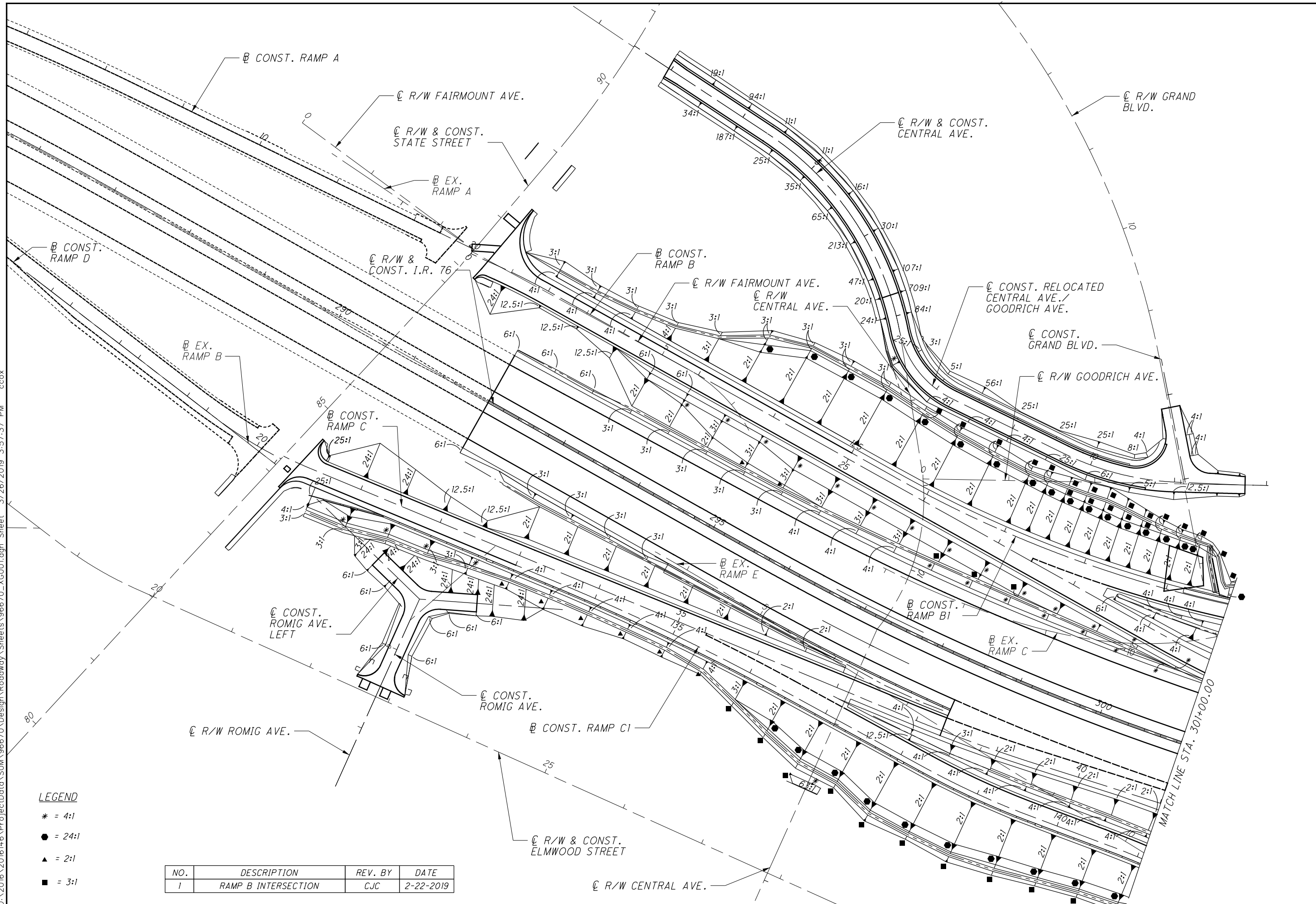
o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CE009.dgn Sheet 8/20/2018 8:13:01 AM arolland



**GRADING PLAN**

**SUM - 76 - 5.53**

332  
672



**LEGEND**

- \* = 4:1
- = 24:1
- ▲ = 2:1
- = 3:1

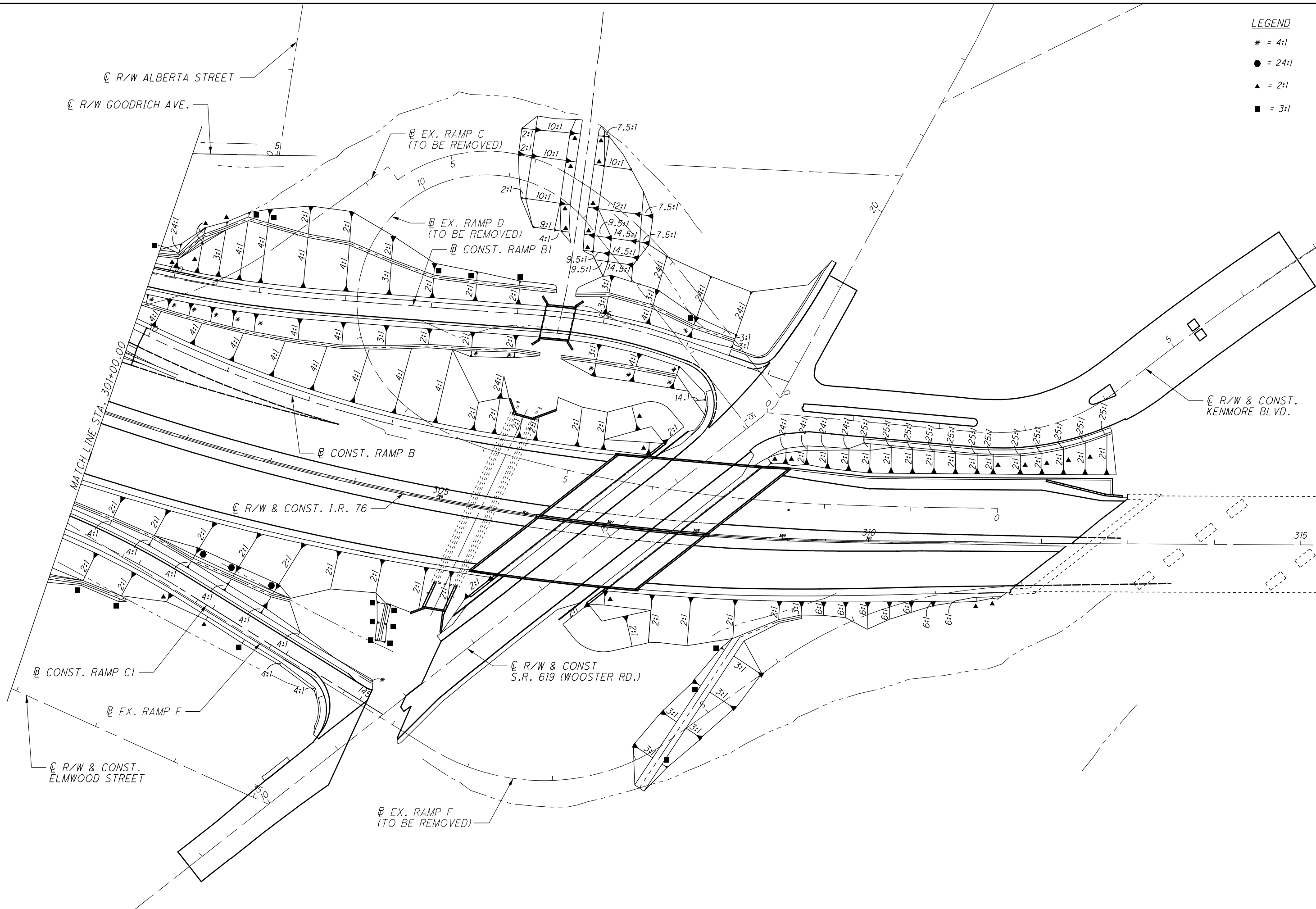
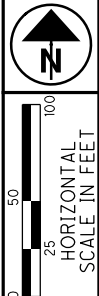
NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Design\96670\_XG001.dgn Sheet 3/26/2019 3:57:37 PM ccox

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_XG002.dgn Sheet 8/17/2018 3:25:04 PM orolland

LEGEND

- \* = 4:1
- = 24:1
- ▲ = 2:1
- = 3:1

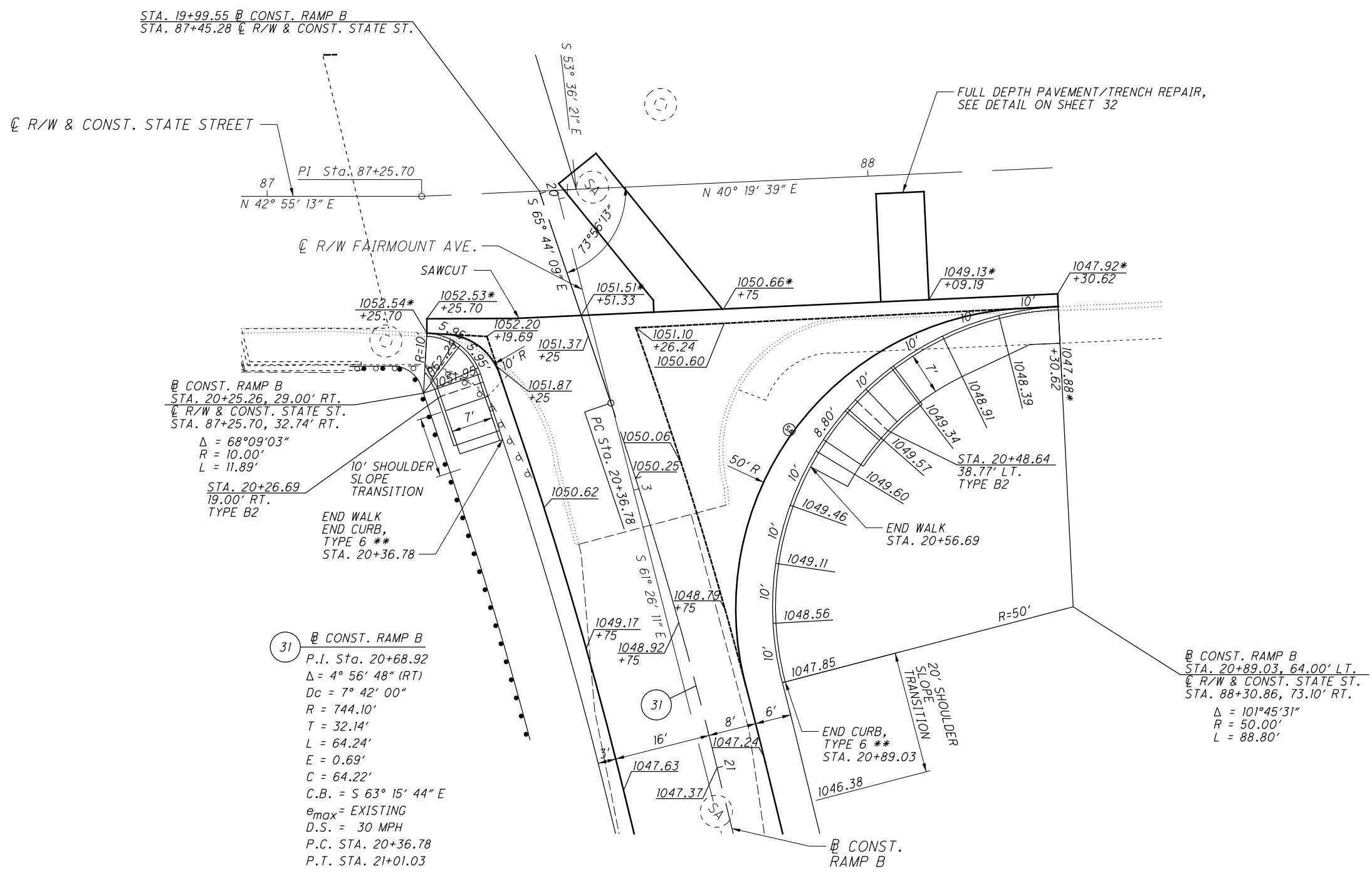


GRADING PLAN

SUM-76-5.53

INTERSECTION DETAIL  
RAMP B AT STATE STREET

SUM-76-5.53



**CONST. RAMP B**  
 STA. 20+25.26, 29.00' RT.  
 R/W & CONST. STATE ST.  
 STA. 87+25.70, 32.74' RT.  
 $\Delta = 68^{\circ}09'03''$   
 $R = 10.00'$   
 $L = 11.89'$   
 10' SHOULDER  
 SLOPE TRANSITION  
 END WALK  
 END CURB,  
 TYPE 6 \*\*  
 STA. 20+36.78

**CONST. RAMP B**  
 P.I. Sta. 20+68.92  
 $\Delta = 4^{\circ}56'48''$  (RT)  
 $D_c = 7^{\circ}42'00''$   
 $R = 744.10'$   
 $T = 32.14'$   
 $L = 64.24'$   
 $E = 0.69'$   
 $C = 64.22'$   
 $C.B. = S 63^{\circ}15'44'' E$   
 $e_{max} = \text{EXISTING}$   
 $D.S. = 30 \text{ MPH}$   
 P.C. STA. 20+36.78  
 P.T. STA. 21+01.03

- NOTES:
1. ALL ELEVATIONS NOTED ARE ON PAVEMENT SURFACE OR BOTTOM OF FACE OF CURB.
  2. TOP OF CURB IS TO MEET EXISTING WALK WHERE THE PROPOSED CURB ENDS.
  3. RADII LISTED FOR CURVES ARE REFERENCED TO THE EDGE OF PAVEMENT.
  4. FOR PAVEMENT ELEVATION TABLES, SEE SHEETS 323 - 331

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

\* CONSTRUCTED ELEVATIONS ARE TO BE VERIFIED IN FIELD  
 \*\* CURB HEIGHT TRANSITION 0" TO 6" IN 10' L.F.

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CALCULATED TMT CHECKED ATR

INTERSECTION DETAIL  
RAMP C AT STATE STREET

SUM-76-5.53

335  
672

**NOTES:**  
1. ALL ELEVATIONS ARE ON PAVEMENT SURFACE OR BOTTOM OF FACE OF CURB.  
2. TOP OF CURB IS TO MEET EXISTING WALK WHERE PROPOSED CURB ENDS.  
3. RADII LISTED FOR CURVES ARE REFERENCED TO THE EDGE OF PAVEMENT.  
FOR PAVEMENT ELEVATION TABLES, SEE SHEETS 323- 331

5 **B CONST. RAMP C**  
P.I. Sta. 30+19.45  
 $\Delta = 4^\circ 02' 31''$  (LT)  
 $D_c = 11^\circ 33' 06''$   
 $R = 496.00'$   
 $T = 17.50'$   
 $L = 34.99'$   
 $E = 0.31'$   
 $C = 34.98'$   
C.B. = S 65° 23' 31" E  
 $e_{max}$  = EXISTING  
D.S. = 30 MPH  
P.C. STA. 30+01.95  
P.T. STA. 30+36.94

**B CONST. RAMP D**  
SUM/MED-76-0.00/11.43  
PID 93501

STA. 30+01.95 **B CONST. RAMP C**  
STA. 84+24.37 **CL R/W & CONST. STATE ST.**

PC Sta. 30+01.95

N 42° 55' 13" E

**B CONST. RAMP C**  
STA. 30+35.86, 43.00' RT.  
**CL R/W & CONST. STATE ST.**  
STA. 83+94.64, 47.05' RT.  
 $\Delta = 69^\circ 46' 02''$   
 $R = 25.00'$   
 $L = 30.44'$

STA. 30+27.29  
19.72' RT.  
TYPE B2

BEGIN CURB, TYPE 4-C  
STA. 30+46.48, 29.19' RT.

BEGIN TYPE D BARRIER  
END CURB, TYPE 4-C  
STA. 30+64.49, 26.94' RT.

STA. 30+41.63  
19.62' LT.  
**B CONST. RAMP C**  
STA. 30+52.45, 30.00' LT.  
**CL R/W & CONST. STATE ST.**  
STA. 84+68.89, 37.33' RT.  
 $\Delta = 111^\circ 18' 02''$   
 $R = 15.00'$   
 $L = 29.14'$

END WALK  
END CURB, TYPE 6  
STA. 30+52.45

\* CONSTRUCTED ELEVATIONS ARE TO BE VERIFIED IN FIELD

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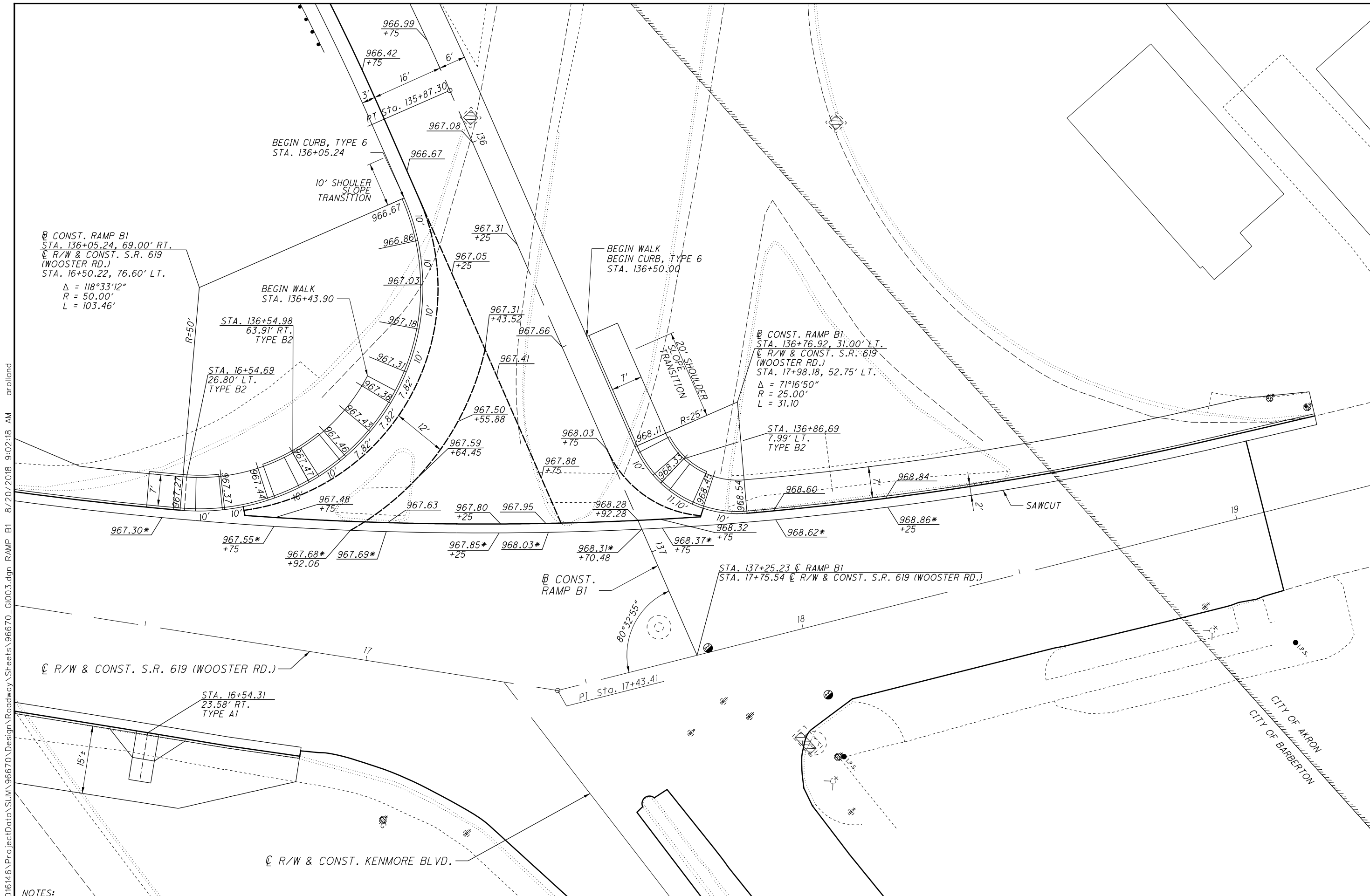


CALCULATED TMT  
CHECKED ATR

**INTERSECTION DETAIL  
RAMP B1 AT WOOSTER RD. (S.R. 619)**

**SUM-76-5.53**

336  
672





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- NOTES:**
1. ALL ELEVATIONS NOTED ARE ON PAVEMENT SURFACE OR BOTTOM OF FACE OF CURB.
  2. TOP OF CURB IS TO MEET EXISTING WALK WHERE THE PROPOSED CURB ENDS ON STATE ST.
  3. RADII LISTED FOR CURVES ARE REFERENCED TO THE EDGE OF PAVEMENT.
  4. FOR PAVEMENT ELEVATION TABLES, SEE SHEETS 323- 331

\* CONSTRUCTED ELEVATIONS ARE TO BE VERIFIED IN FIELD

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C1004.dgn RAMP C1 3/26/2019 3:57:41 PM ccox

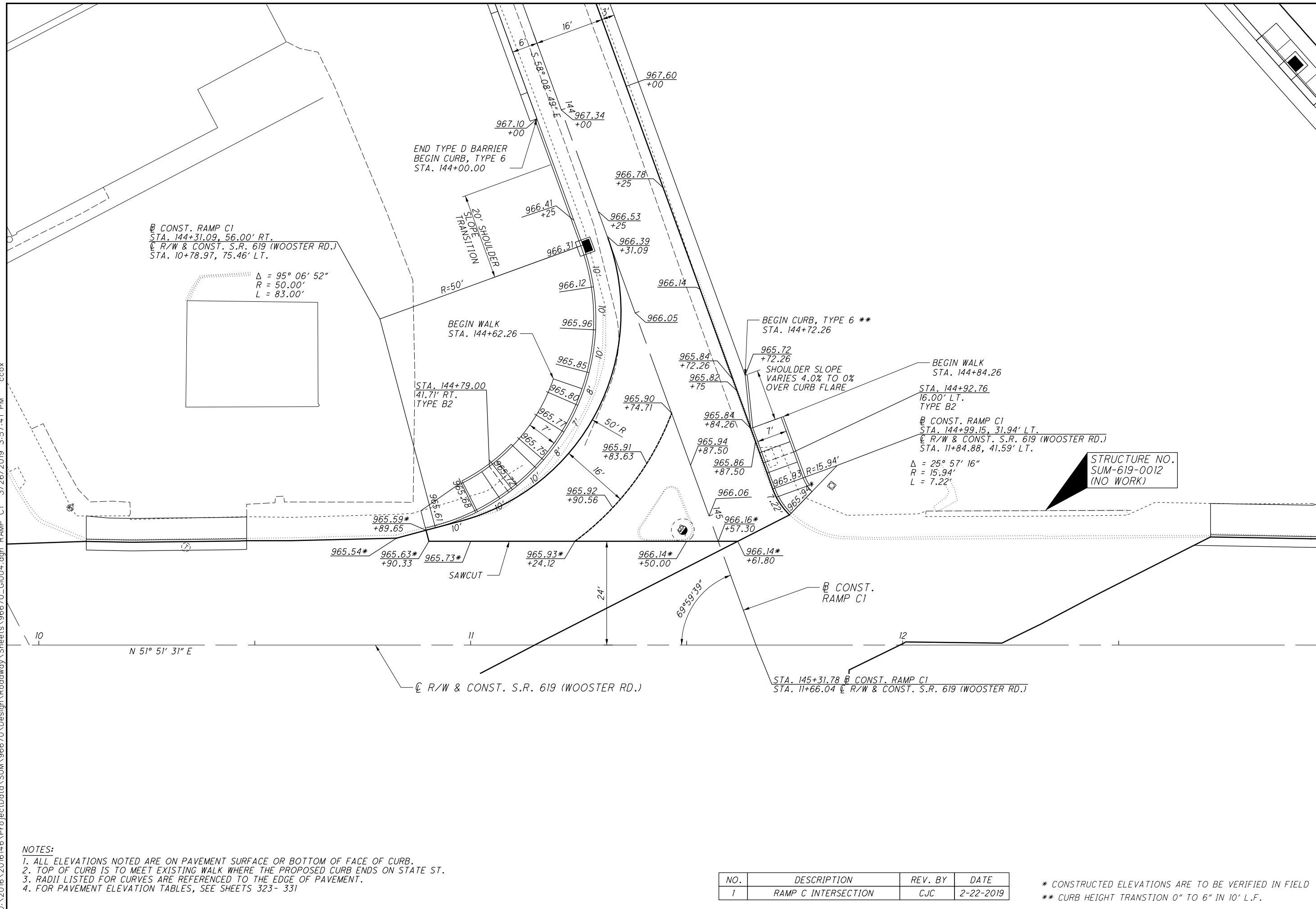

  

  
 HORIZONTAL SCALE IN FEET

CALCULATED	ATR	CHECKED	TMT
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**INTERSECTION DETAIL  
RAMP C1 AT WOOSTER ROAD (S.R. 619)**

**SUM-76-5.53**

337  
672



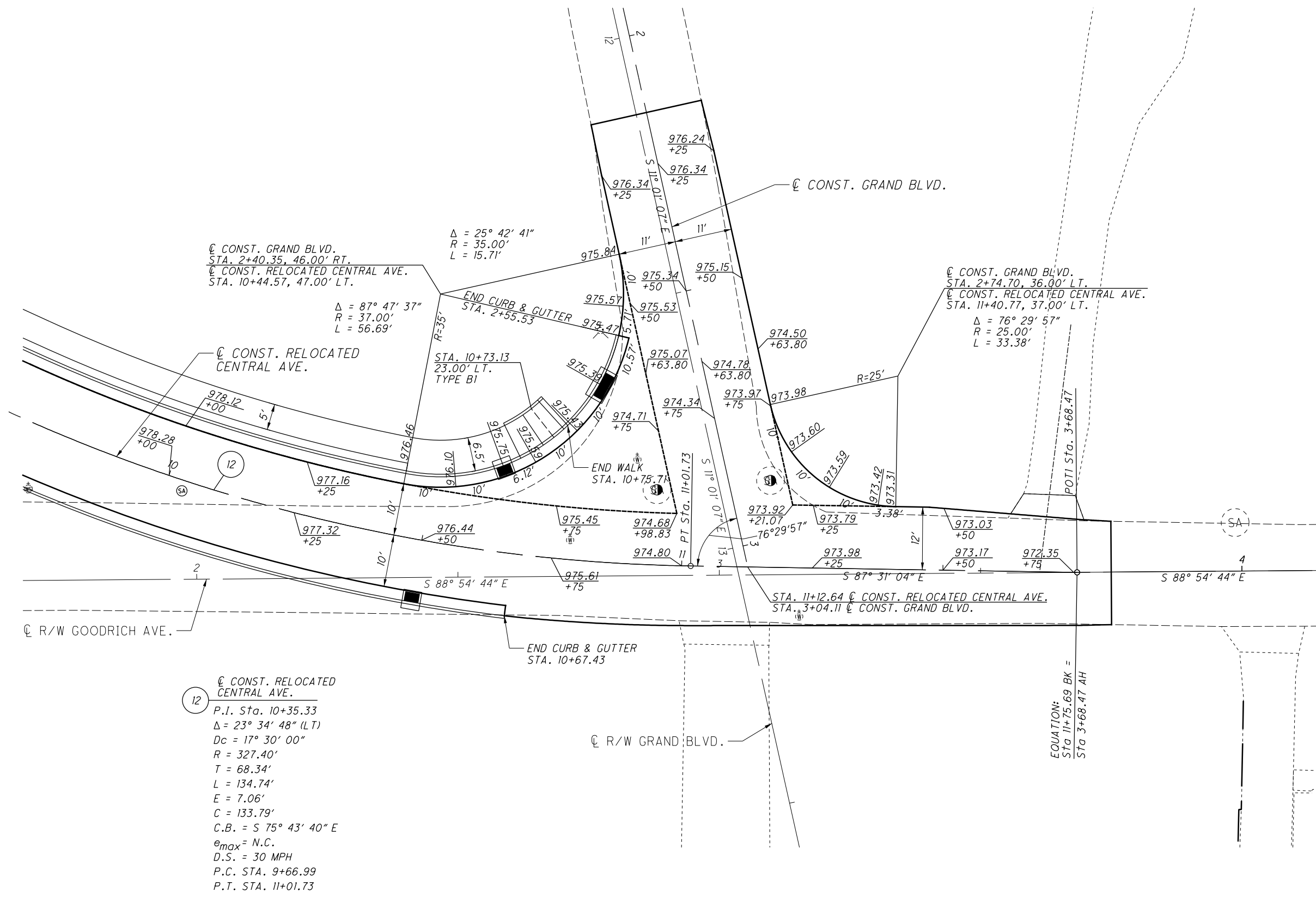
- NOTES:**
1. ALL ELEVATIONS NOTED ARE ON PAVEMENT SURFACE OR BOTTOM OF FACE OF CURB.
  2. TOP OF CURB IS TO MEET EXISTING WALK WHERE THE PROPOSED CURB ENDS ON STATE ST.
  3. RADII LISTED FOR CURVES ARE REFERENCED TO THE EDGE OF PAVEMENT.
  4. FOR PAVEMENT ELEVATION TABLES, SEE SHEETS 323- 331

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP C INTERSECTION	CJC	2-22-2019

\* CONSTRUCTED ELEVATIONS ARE TO BE VERIFIED IN FIELD  
 \*\* CURB HEIGHT TRANSITION 0" TO 6" IN 10' L.F.



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12  
 C. CONST. RELOCATED  
 CENTRAL AVE.  
 P.I. Sta. 10+35.33  
 $\Delta = 23^\circ 34' 48''$  (LT)  
 $D_c = 17^\circ 30' 00''$   
 $R = 327.40'$   
 $T = 68.34'$   
 $L = 134.74'$   
 $E = 7.06'$   
 $C = 133.79'$   
 $C.B. = S 75^\circ 43' 40'' E$   
 $e_{max} = N.C.$   
 $D.S. = 30$  MPH  
 P.C. STA. 9+66.99  
 P.T. STA. 11+01.73

- NOTES:
1. ALL ELEVATIONS NOTED ARE ON PAVEMENT SURFACE OR FACE OF GUTTER.
  2. RADII LISTED FOR CURVES ARE REFERENCED TO THE EDGE OF PAVEMENT OR FACE OF GUTTER.
  3. FOR PAVEMENT ELEVATION TABLES, SEE SHEETS 323 - 331
  4. FOR CURVE DATA, SEE SHEET 7

CALCULATED  
 XXX  
 CHECKED  
 XXX

0 5 10 20  
 HORIZONTAL  
 SCALE IN FEET

INTERSECTION DETAIL  
 RELOCATED CENTRAL AVE. AT GRAND BLVD.

SUM-76-5.53

o:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_C1006.dgn ROMIG AVE 8/20/2018 9:08:39 AM arolland

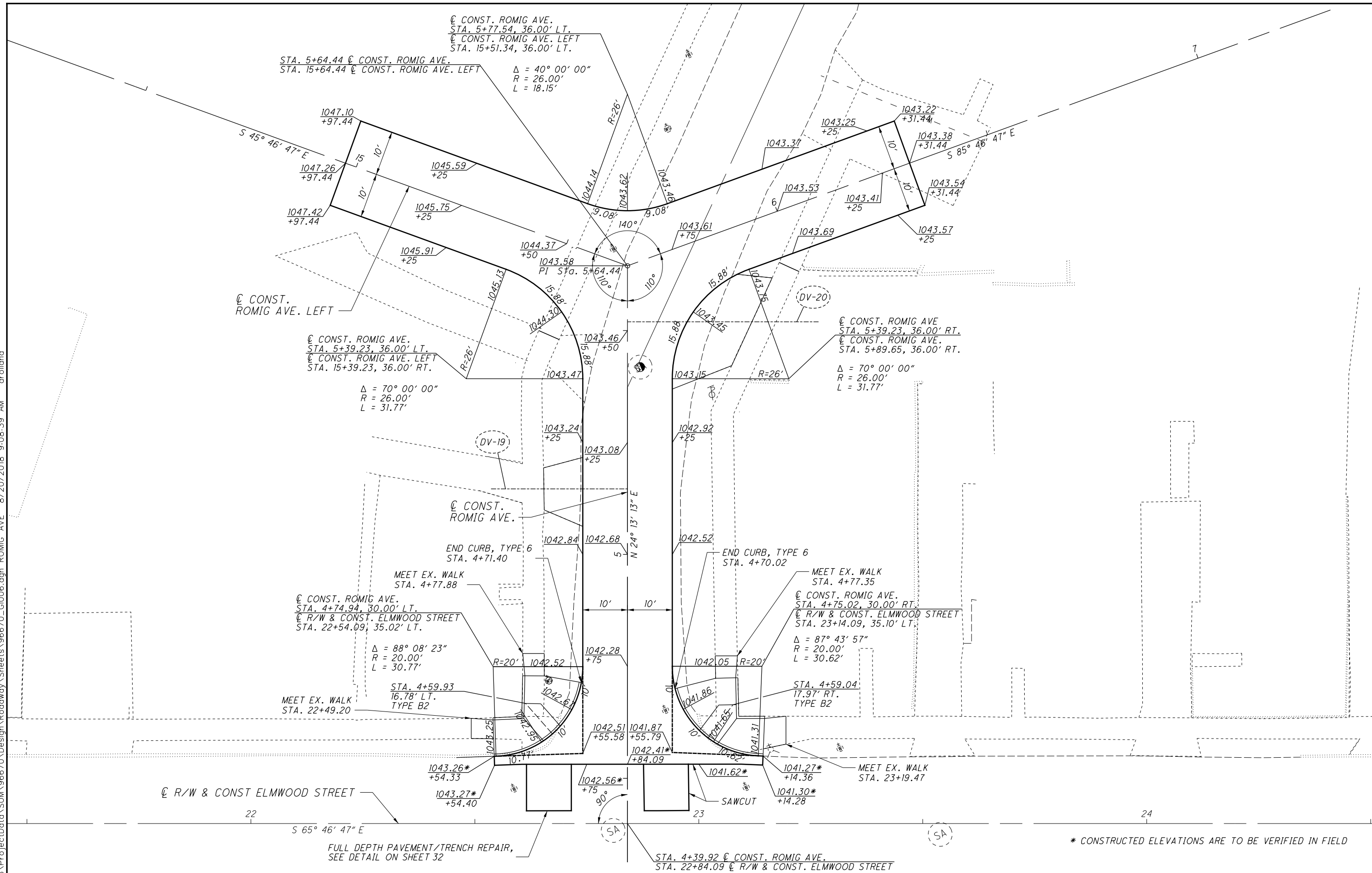
  
 HORIZONTAL SCALE IN FEET

CALCULATED  
 ATR  
 CHECKED  
 TMT

**INTERSECTION DETAIL**  
**ROMIG AVENUE**

**SUM-76-5.53**

339  
672



\* CONSTRUCTED ELEVATIONS ARE TO BE VERIFIED IN FIELD

**NOTES:**

1. ALL ELEVATIONS NOTED ARE ON PAVEMENT SURFACE OR BOTTOM OF FACE OF CURB.
2. RADII LISTED FOR CURVES ARE REFERENCED TO THE EDGE OF PAVEMENT.
3. FOR PAVEMENT ELEVATION TABLES, SEE SHEETS 323- 331

**\* GORE SLOPE INFORMATION**

(READ FROM I.R. 76 E/P TO RAMP B E/P)

STA. 301+95.21, 13.20' @ -0.0339  
 STA. 302+21.03, 10.62' @ -0.0440  
 STA. 302+46.84, 8.24' @ -0.0540  
 STA. 302+72.66, 6.08' @ -0.0640  
 STA. 302+98.47, 4.13' @ -0.0740  
 STA. 303+24.28, 2.38' @ -0.0760  
 STA. 303+50.08, 0.85' @ -0.0660

STA. 303+75.91, 15.52' @ -0.0520  
 STA. 304+01.76, 14.41' @ -0.0520  
 STA. 304+27.58, 13.51' @ -0.0516  
 STA. 304+53.38, 12.82' @ -0.0499  
 STA. 304+79.17, 12.34' @ -0.0481  
 STA. 305+04.94, 12.07' @ -0.0464  
 STA. 305+25.12, 12.00' @ -0.0450

1 **⊕ R/W & CONST. I.R. 76**  
 P.I. Sta. 303+06.66 Lc = 1,232.42'  
 Δ = 28° 59' 43" (LT) Ts = 832.04'  
 Dc = 2° 01' 27" E = 93.70'  
 R = 2,830.50' e<sub>max</sub> = 0.045  
 Ls = 200.00' C = 1,222.70'  
 θs = 2° 01' 27" C1 = C2 = 199.99'  
 LT = 133.34' C.B.1 = S 61° 19' 35" E  
 ST = 66.67' C.B. = S 75° 08' 58" E  
 x = 199.98' C.B.2 = N 88° 58' 20" W  
 y = 2.36' T.S. STA. 294+74.62  
 k = 100.00' S.C. STA. 296+74.62  
 p = 0.59' C.S. STA. 309+07.04  
 Δc = 24° 56' 49" (LT) S.T. STA. 311+07.04  
 D.S. = 60 MPH

2 **⊕ CONST. RAMP B**  
 P.I. Sta. 31+58.02  
 Δ = 19° 06' 11" (LT)  
 Dc = 4° 00' 00"  
 R = 1,432.39'  
 T = 241.02'  
 L = 477.57'  
 E = 20.14'  
 C = 475.37'  
 C.B. = S 70° 20' 25" E  
 e<sub>max</sub> = 0.052  
 D.S. = 50 MPH  
 P.C. STA. 29+17.00  
 P.T. STA. 33+94.57

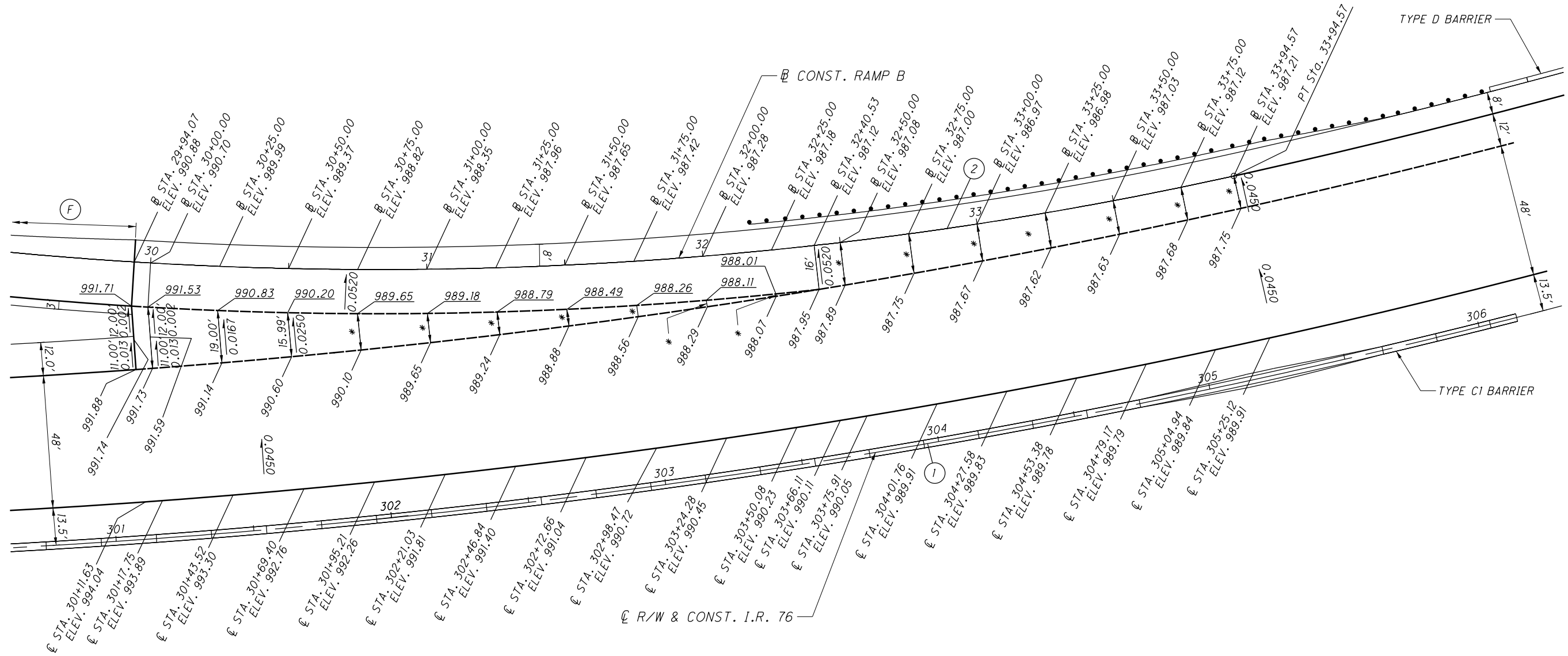


CALCULATED CJC CHECKED CWL

**RAMP GORE DETAILS  
 RAMP B AT I.R. 76**

**SUM-76-5.53**

340  
672



O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CM003.dgn Sheet 9/28/2018 3:41:25 PM arolland

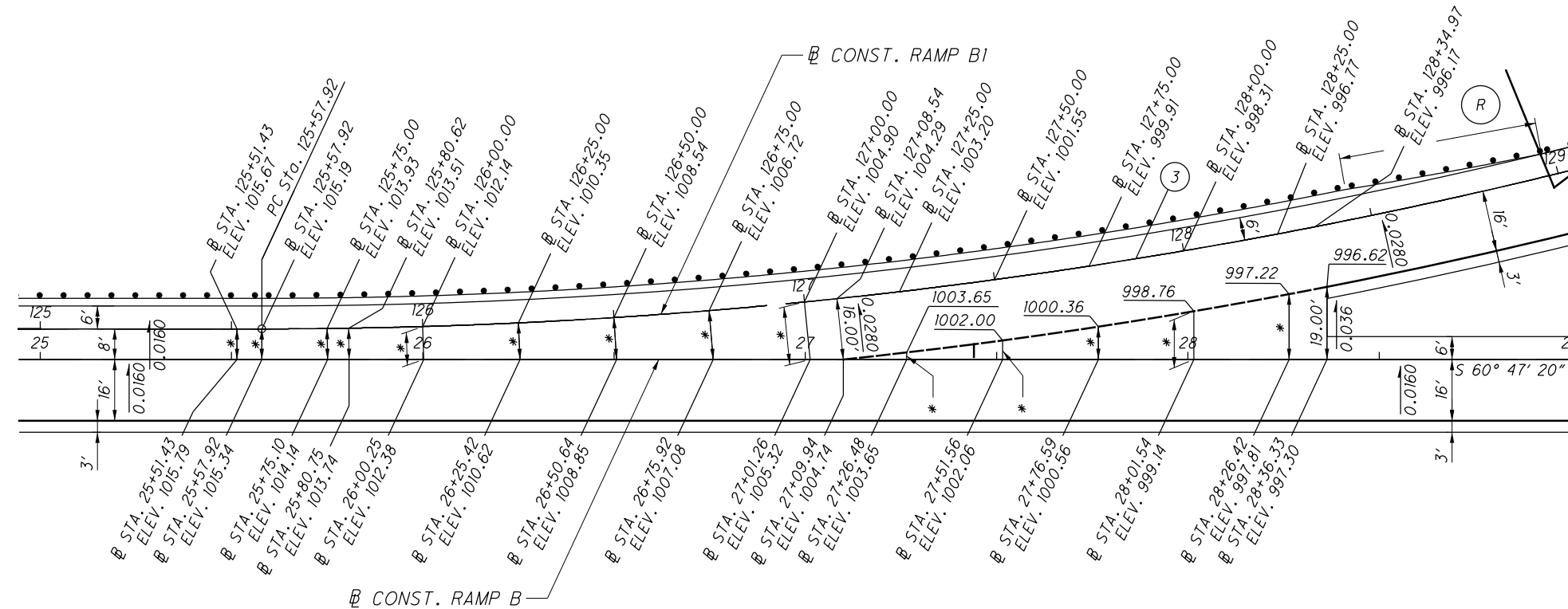
TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
F	29+44.07	RAMP B 29+94.07	RAMP B	LT SHOULDER	6.00'	8.00'	25:1

FOR SUPERELEVATION TABLES, SEE SHEETS 323 - 325  
 FOR I.R. 76 PROFILE, SEE SHEETS 197, 199  
 FOR RAMP B PROFILE, SEE SHEETS 205, 207

**\* GORE SLOPE INFORMATION**  
(READ FROM RAMP B E/P TO RAMP B1 E/P)

STA. 25+51.43, 8.00' @ -0.0160  
 STA. 25+57.92, 8.00' @ -0.0187  
 STA. 25+75.10, 8.10' @ -0.0257  
 STA. 25+80.75, 8.18' @ -0.0280  
 STA. 26+00.25, 8.62' @ -0.0280  
 STA. 26+25.42, 9.58' @ -0.0280  
 STA. 26+50.64, 10.98' @ -0.0280  
 STA. 26+75.92, 12.83' @ -0.0280  
 STA. 27+01.26, 15.12' @ -0.0280  
  
 STA. 27+26.48, 1.84' @ 0.0000  
 STA. 27+51.56, 5.00' @ -0.0130  
 STA. 27+76.59, 8.60' @ -0.0240  
 STA. 28+01.54, 12.64' @ -0.0300  
 STA. 28+26.42, 17.11' @ -0.0340

3 @ CONST. RAMP B1  
 P.I. Sta. 128+74.38  
 $\Delta = 24^\circ 55' 00''$  (LT)  
 $D_c = 4^\circ 00' 00''$   
 $R = 1,432.39'$   
 $T = 316.46'$   
 $L = 622.92'$   
 $E = 34.54'$   
 $C = 618.02'$   
 $C.B. = S 73^\circ 14' 50'' E$   
 $e_{max} = 0.028$   
 $D.S. = 30$  MPH  
 P.C. STA. 125+57.92  
 P.T. STA. 131+80.84



**RAMP GORE DETAILS**  
**RAMP B1 AT RAMP B**

**SUM - 76 - 5.53**

341  
672

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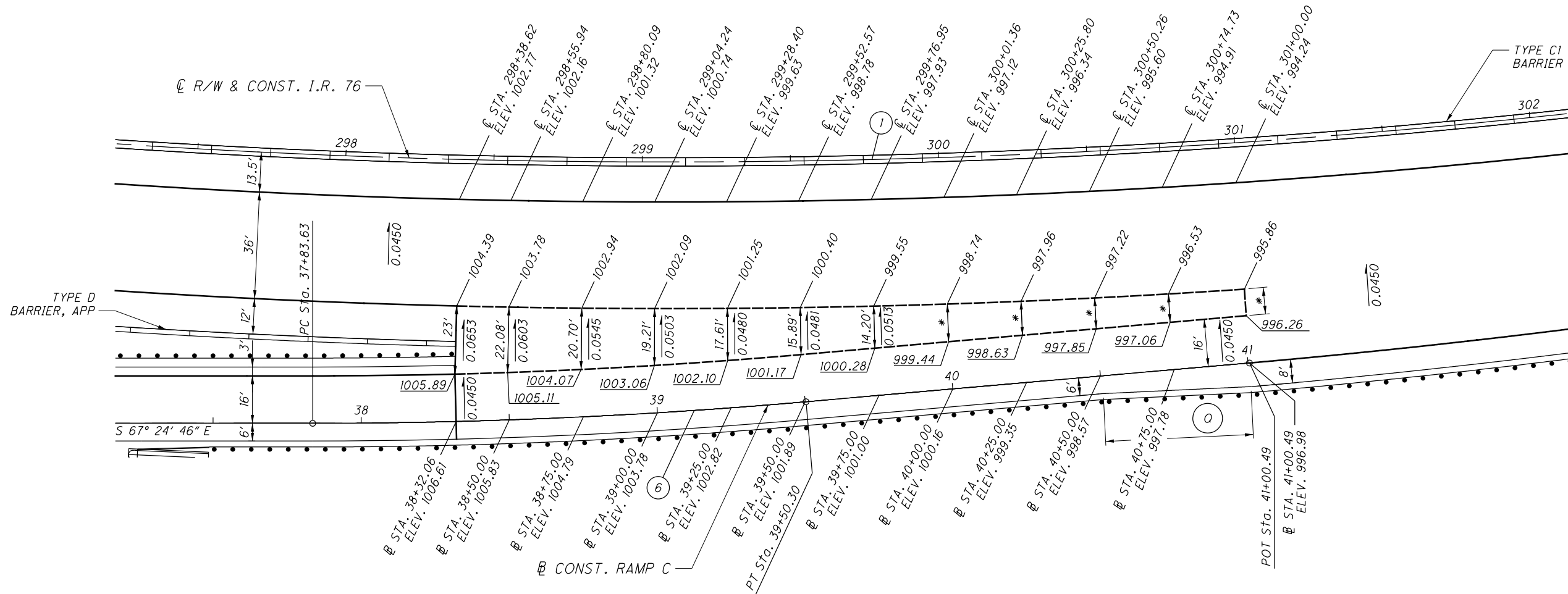
TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
R	128+44.67	RAMP B1	128+96.89	RAMP B1	LT	GUARDRAIL	8.00' 6.00' 26:1

FOR SUPERELEVATION TABLES, SEE SHEETS 325, 326  
 FOR RAMP B PROFILE, SEE SHEET 205  
 FOR RAMP B1 PROFILE, SEE SHEET 209

**\* GORE SLOPE INFORMATION**

(READ FROM I.R. 76 E/P TO RAMP C E/P)

STA. 300+01.36, 12.74 @ 0.0551  
 STA. 300+25.80, 11.48' @ 0.0587  
 STA. 300+50.26, 10.44' @ 0.0598  
 STA. 300+74.73, 9.62' @ 0.0554  
 STA. 301+00.00, 9.00' @ 0.0450



**1** R/W & CONST. I.R. 76  
 P.I. Sta. 303+06.66 Lc = 1,232.42'  
 Δ = 28° 59' 43" (LT) Ts = 832.04'  
 Dc = 2° 01' 27" E = 93.70'  
 R = 2,830.50' e<sub>max</sub> = 0.045  
 Ls = 200.00' C = 1,222.70'  
 θs = 2° 01' 27" C1 = C2 = 199.99'  
 LT = 133.34' C.B.1 = S 61° 19' 35" E  
 ST = 66.67' C.B. = S 75° 08' 58" E  
 x = 199.98' C.B.2 = N 88° 58' 20" W  
 y = 2.36' T.S. STA. 294+74.62  
 k = 100.00' S.C. STA. 296+74.62  
 p = 0.59' C.S. STA. 309+07.04  
 Δc = 24° 56' 49" (LT) S.T. STA. 311+07.04  
 D.S. = 60 MPH

**6** CONST. RAMP C  
 P.I. Sta. 38+67.02  
 Δ = 5° 00' 00" (LT)  
 Dc = 3° 00' 00"  
 R = 1,909.86'  
 T = 83.39'  
 L = 166.67'  
 E = 1.82'  
 C = 166.61'  
 C.B. = S 69° 54' 46" E  
 e<sub>max</sub> = 0.045  
 D.S. = 50 MPH  
 P.C. STA. 37+83.63  
 P.T. STA. 39+50.30

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TAPER CODE	BEGINNING STATION	ENDING STATION	SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
0	40+50.49	RAMP C	41+00.49	RAMP C	RT	SHOULDER	6.00' 8.00' 25:1

FOR SUPERELEVATION TABLES, SEE SHEETS 323, 327  
 FOR I.R. 76 PROFILE, SEE SHEETS 195, 197  
 FOR RAMP C PROFILE, SEE SHEET 219

CALCULATED CJC CHECKED CWL

0 20 40  
 HORIZONTAL SCALE IN FEET

**RAMP GORE DETAILS  
 RAMP C AT I.R. 76**

**SUM-76-5.53**

**\* GORE SLOPE INFORMATION**

(READ FROM RAMP C1 E/P TO RAMP C E/P)

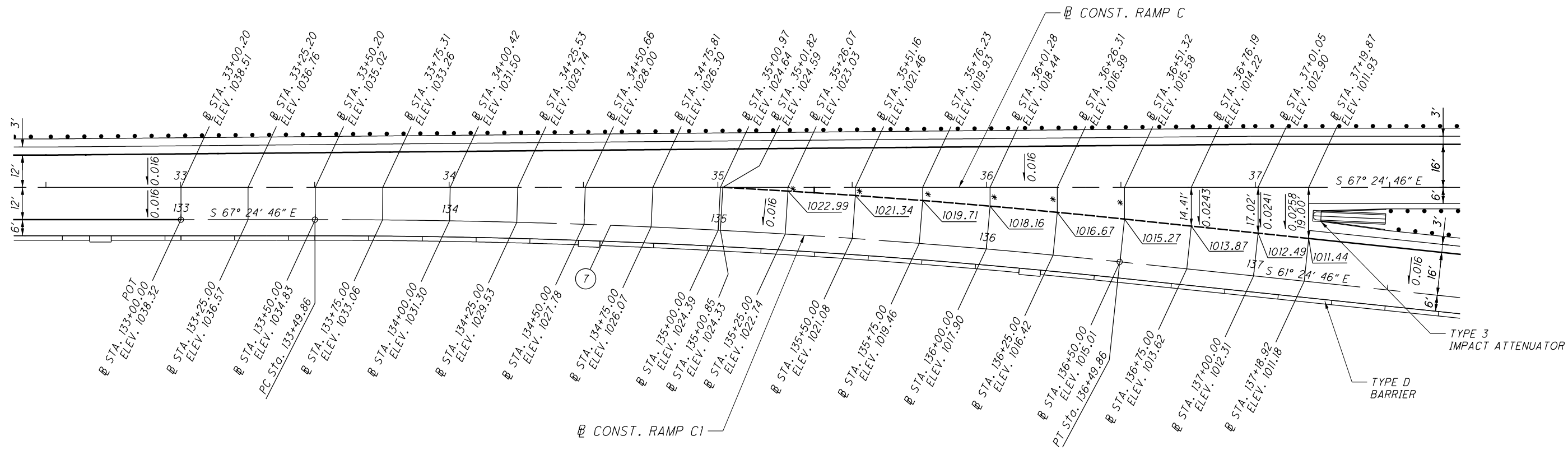
STA. 135+25.00, 1.38' @ 0.0290  
 STA. 135+50.00, 3.03' @ 0.0396  
 STA. 135+75.00, 4.89' @ 0.0450  
 STA. 136+00.00, 6.97' @ 0.0401  
 STA. 136+25.00, 9.28' @ 0.0345  
 STA. 136+50.00, 11.80' @ 0.0263

7 CONST. RAMP C1  
 P.I. Sta. 135+00.00  
 $\Delta = 6^\circ 00' 00''$  (RT)  
 $D_c = 2^\circ 00' 00''$   
 $R = 2,864.79'$   
 $T = 150.14'$   
 $L = 300.00'$   
 $E = 3.93'$   
 $C = 299.86'$   
 C.B. =  $S 64^\circ 24' 46'' E$   
 $\theta_{max} = 0.016$   
 D.S. = 30 MPH  
 P.C. STA. 133+49.86  
 P.T. STA. 136+49.86

CALCULATED CJC CHECKED CWL

HORIZONTAL SCALE IN FEET

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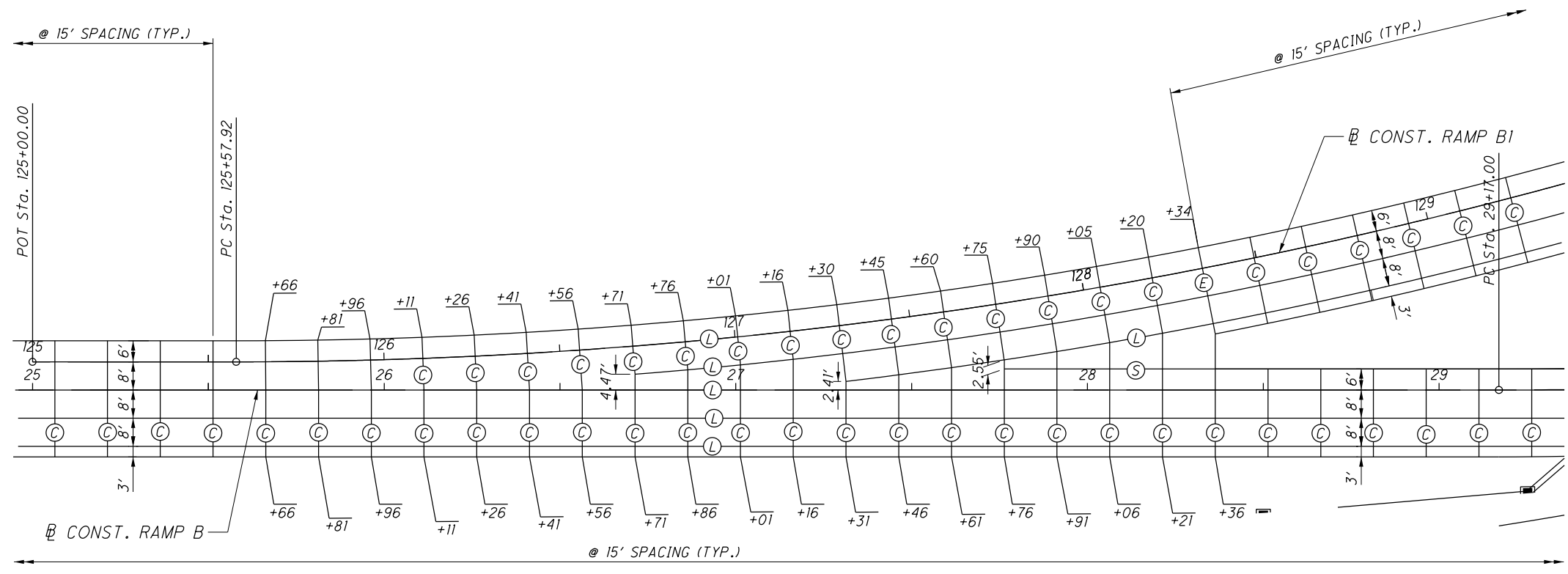


**RAMP GORE DETAILS  
 RAMP C1 AT RAMP C**

**SUM-76-5.53**

FOR SUPERELEVATION TABLES, SEE SHEETS 327, 328  
 FOR RAMP C PROFILE, SEE SHEETS 215, 217  
 FOR RAMP C1 PROFILE, SEE SHEET 221

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- JOINT LEGEND**
- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
  - (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
  - (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
  - (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
  - (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 341

CALCULATED  
TMT  
CHECKED  
CWL

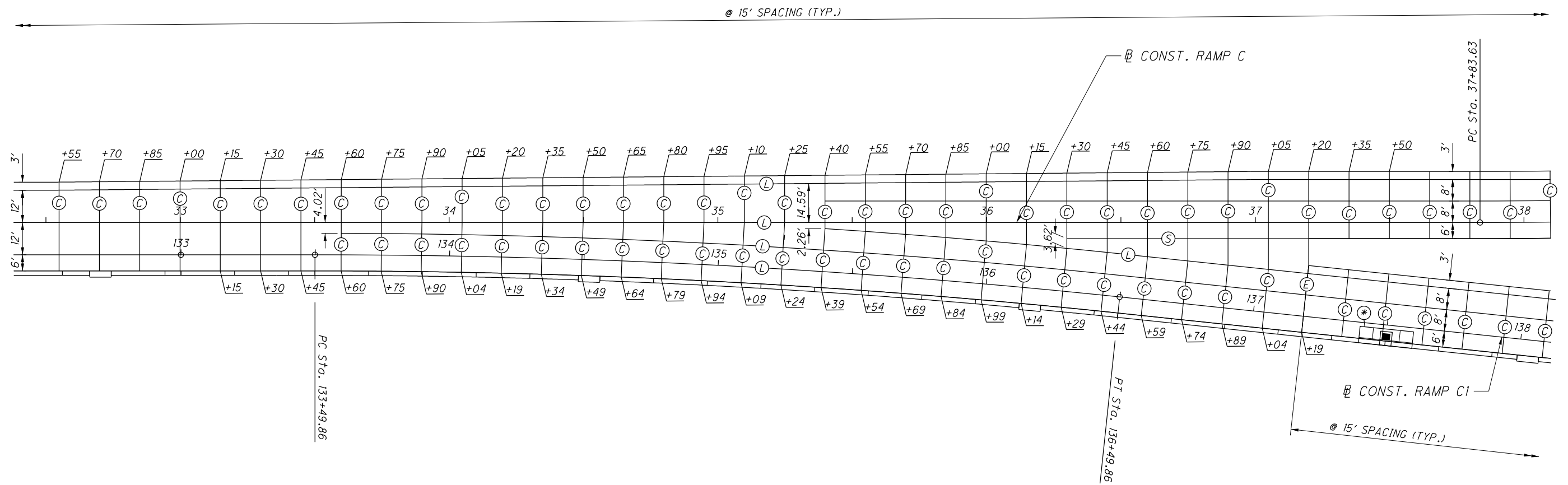
0 20 40  
HORIZONTAL  
SCALE IN FEET

**PAVEMENT JOINT DETAILS  
RAMP B1 AT RAMP B**

**SUM-76-5.53**

344  
672

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- JOINT LEGEND**
- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
  - (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
  - (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
  - (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
  - (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)
  - (\*) JOINT PER STANDARD CONSTRUCTION DRAWINGS.

FOR GORE DETAILS, SEE SHEET 343

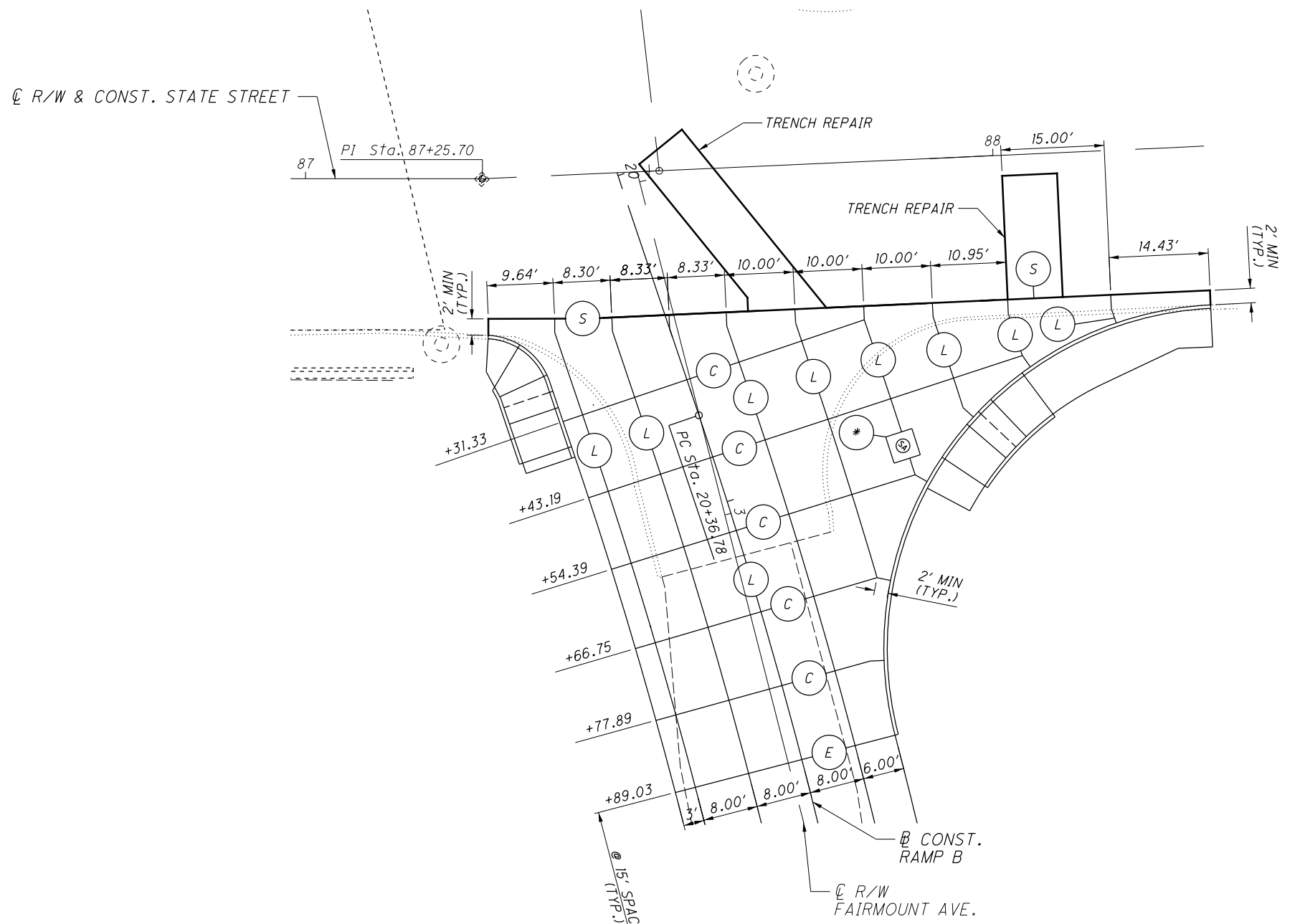
CALCULATED  
TMT  
CHECKED  
CWL

0 20 40  
HORIZONTAL  
SCALE IN FEET

**PAVEMENT JOINT DETAILS  
RAMP C1 AT RAMP C**

**SUM-76-5.53**





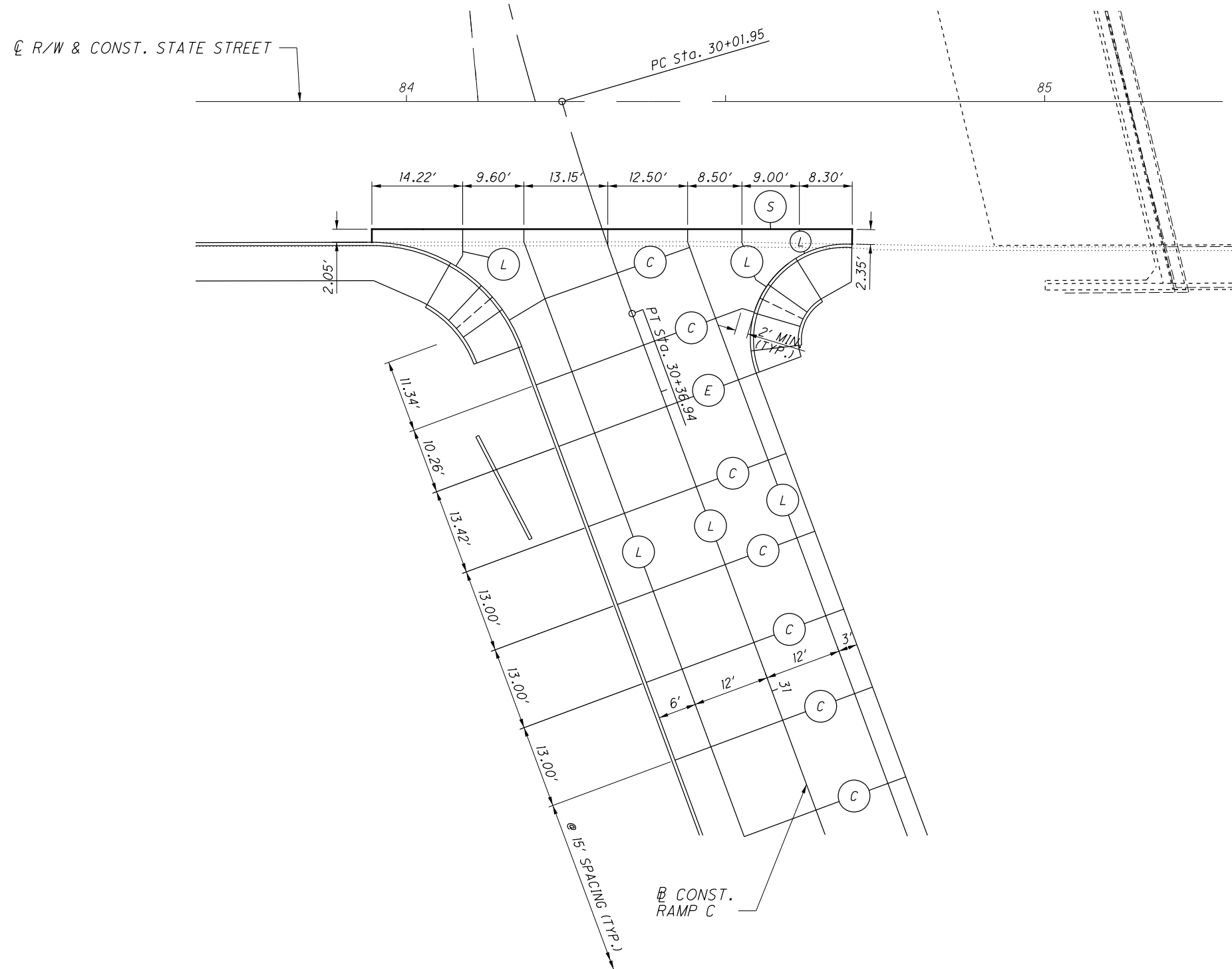
- JOINT LEGEND**
- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
  - (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
  - (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
  - (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
  - (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)
  - (\*) JOINT PER STANDARD CONSTRUCTION DRAWINGS

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

FOR INTERSECTION DETAILS, SEE SHEET 334

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_GA003.dgn RAMP B 3/26/2019 3:57:42 PM ccox

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_GA004.dgn\_RAMP C 11/20/2018 12:53:22 PM cluzier



- JOINT LEGEND**
- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
  - (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
  - (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
  - (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
  - (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR INTERSECTION DETAILS, SEE SHEET 335

CALCULATED  
TMT  
CHECKED  
ATR

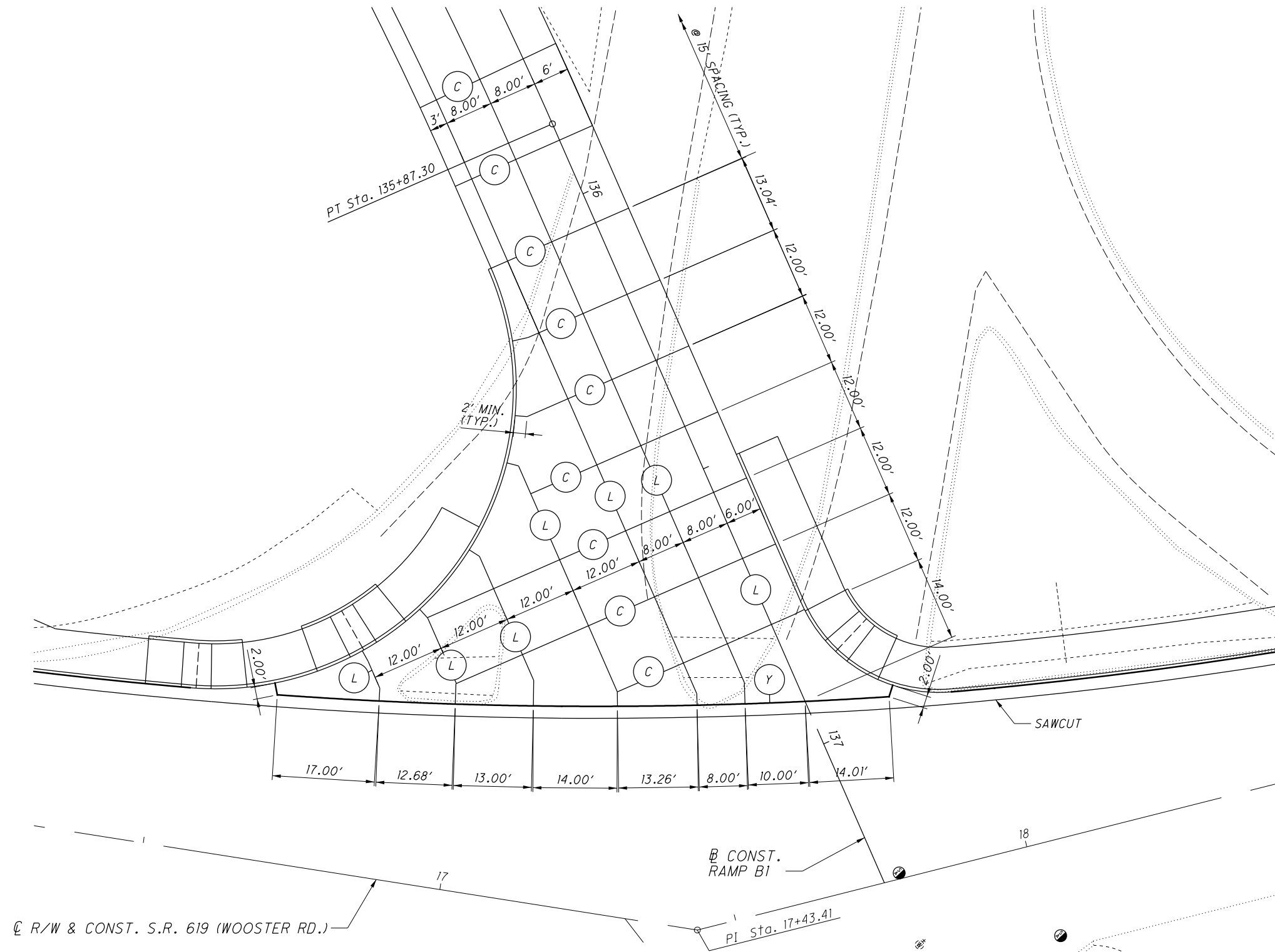
0 5 10 20  
HORIZONTAL  
SCALE IN FEET

**PAVEMENT JOINT DETAILS  
RAMP C AT STATE STREET**

**SUM-76-5.53**

347  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CA005.dgn RAMP B1 8/17/2018 3:06:30 PM arolland



**JOINT LEGEND**

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR INTERSECTION DETAILS, SEE SHEET 336



CALCULATED	TMT
CHECKED	ATR

**PAVEMENT JOINT DETAILS**  
**RAMP B1 AT WOOSTER RD. (S.R. 619)**

**SUM-76-5.53**

348
672

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CALCULATED  
TMT  
CHECKED  
CWL

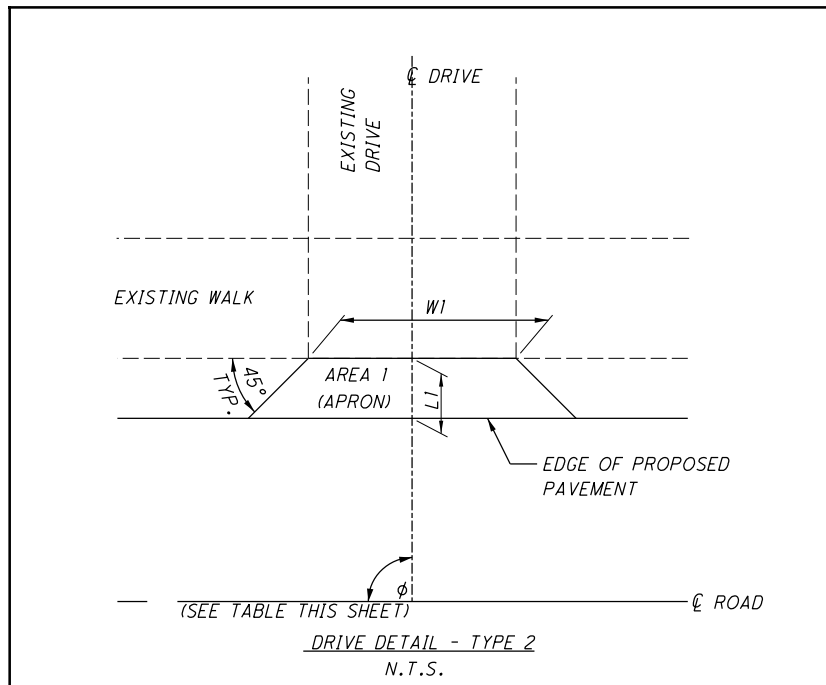
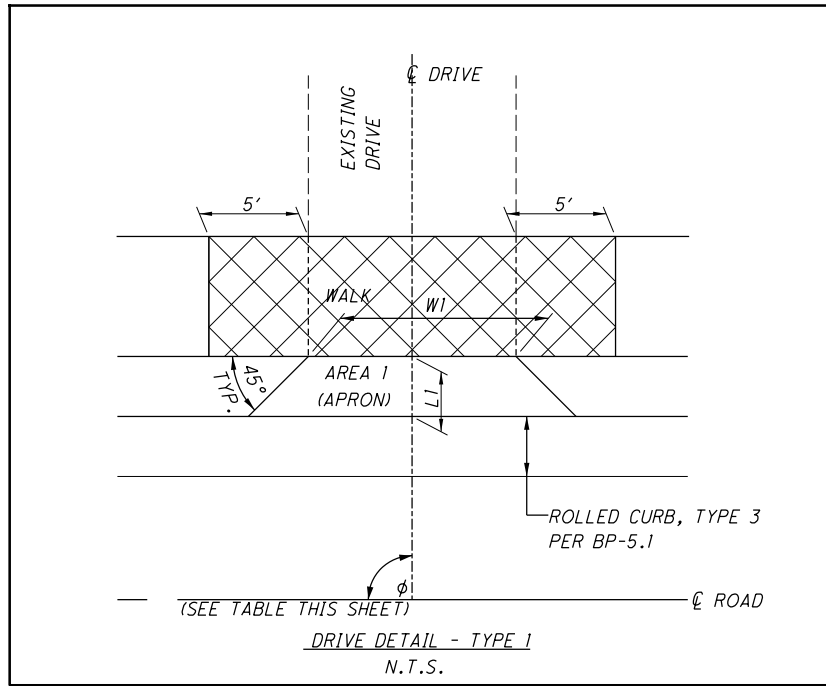
0 5 10 20  
HORIZONTAL  
SCALE IN FEET

**PAVEMENT JOINT DETAILS**  
**RAMP C1 AT WOOSTER ROAD (S.R. 619)**

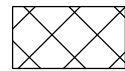
- JOINT LEGEND**
- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
  - (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
  - (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
  - (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
  - (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)
  - (\*) JOINT PER STANDARD CONSTRUCTION DRAWINGS.

FOR INTERSECTION DETAILS, SEE SHEET 337.

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheets\96670\_CD001.dgn DRIVE DETAILS 8/17/2018 3:10:02 PM arolland



EXISTING MATERIALS	USAGE	INSIDE LIMITS OF APRON (AREA 1)	OUTSIDE LIMITS OF APRON (AREA 2)
GRAVEL	RESIDENTIAL	6" ITEM 452 NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	8" ITEM 304 AGGREGATE BASE, AS PER PLAN
ASPHALT			2" ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS) ITEM 408 PRIME COAT (0.40 GAL/S.Y.) 6" ITEM 304 AGGREGATE BASE, AS PER PLAN
CONCRETE			SAME COMPOSITION AS AREA 1



WALK THICKNESS SHALL BE 6" AT RESIDENTIAL APRONS.  
NOTE: CONCRETE WALK SHALL BE QC MS WITHIN HATCHED DRIVE LIMITS AS SHOWN

SHEET NO.	REFERENCE NO.	STATION	SIDE	USAGE	TYPE	EXISTING MATERIAL	APRON LENGTH "L"		INTERSECTING ANGLE WITH CENTERLINE
							FT.	FT.	
226	DV-1	3+29.03 (CENTRAL)	RT	RES.	1	GRAVEL	6.30	EXIST.	90°
226	DV-2	3+45.54 (CENTRAL)	LT	RES.	1	CONC.	6.59	EXIST.	90°
226	DV-3	3+68.10 (CENTRAL)	LT	RES.	1	GRAVEL	6.57	EXIST.	90°
226	DV-4	3+74.01 (CENTRAL)	RT	RES.	1	GRAVEL	6.22	EXIST.	90°
226	DV-5	4+06.91 (CENTRAL)	LT	RES.	1	CONC.	6.56	EXIST.	90°
226	DV-6	4+14.17 (CENTRAL)	RT	RES.	1	ASPH.	6.47	EXIST.	90°
226	DV-7	4+57.20 (CENTRAL)	LT	RES.	1	GRAVEL	6.26	EXIST.	90°
226	DV-8	4+61.26 (CENTRAL)	RT	RES.	1	GRAVEL	6.69	EXIST.	90°
226	DV-9	4+90.57 (CENTRAL)	LT	RES.	1	GRAVEL	6.53	EXIST.	90°
226	DV-10	5+05.23 (CENTRAL)	RT	RES.	1	CONC.	6.63	EXIST.	90°
226	DV-11	5+54.91 (CENTRAL)	RT	RES.	1	GRAVEL	6.23	EXIST.	90°
226	DV-12	5+56.46 (CENTRAL)	LT	RES.	1	ASPH.	6.73	EXIST.	90°
226	DV-13	5+98.35 (CENTRAL)	LT	RES.	1	CONC.	6.52	EXIST.	90°
226	DV-14	6+10.48 (CENTRAL)	RT	RES.	1	GRAVEL	6.11	EXIST.	90°
226	DV-15	6+45.34 (CENTRAL)	LT	RES.	1	CONC.	6.66	EXIST.	90°
226	DV-16	6+62.70 (CENTRAL)	RT	RES.	1	CONC.	6.13	EXIST.	90°
226	DV-17	6+81.65 (CENTRAL)	LT	RES.	1	GRAVEL	6.42	EXIST.	90°
226	DV-18	7+50.17 (REL CENTRAL)	LT	RES.	1	GRAVEL	4.53	EXIST.	90°
231	DV-19	5+14.63 (ROMIG)	LT	RES.	2	CONC.	8.66	EXIST.	90°
231	DV-20	5+51.94 (ROMIG)	RT	RES.	2	GRAVEL	14.46	EXIST.	90°
228	DV-21	11+68.53 (REL CENTRAL)	LT	RES.	2	GRAVEL	4.28	EXIST.	83°45'53"

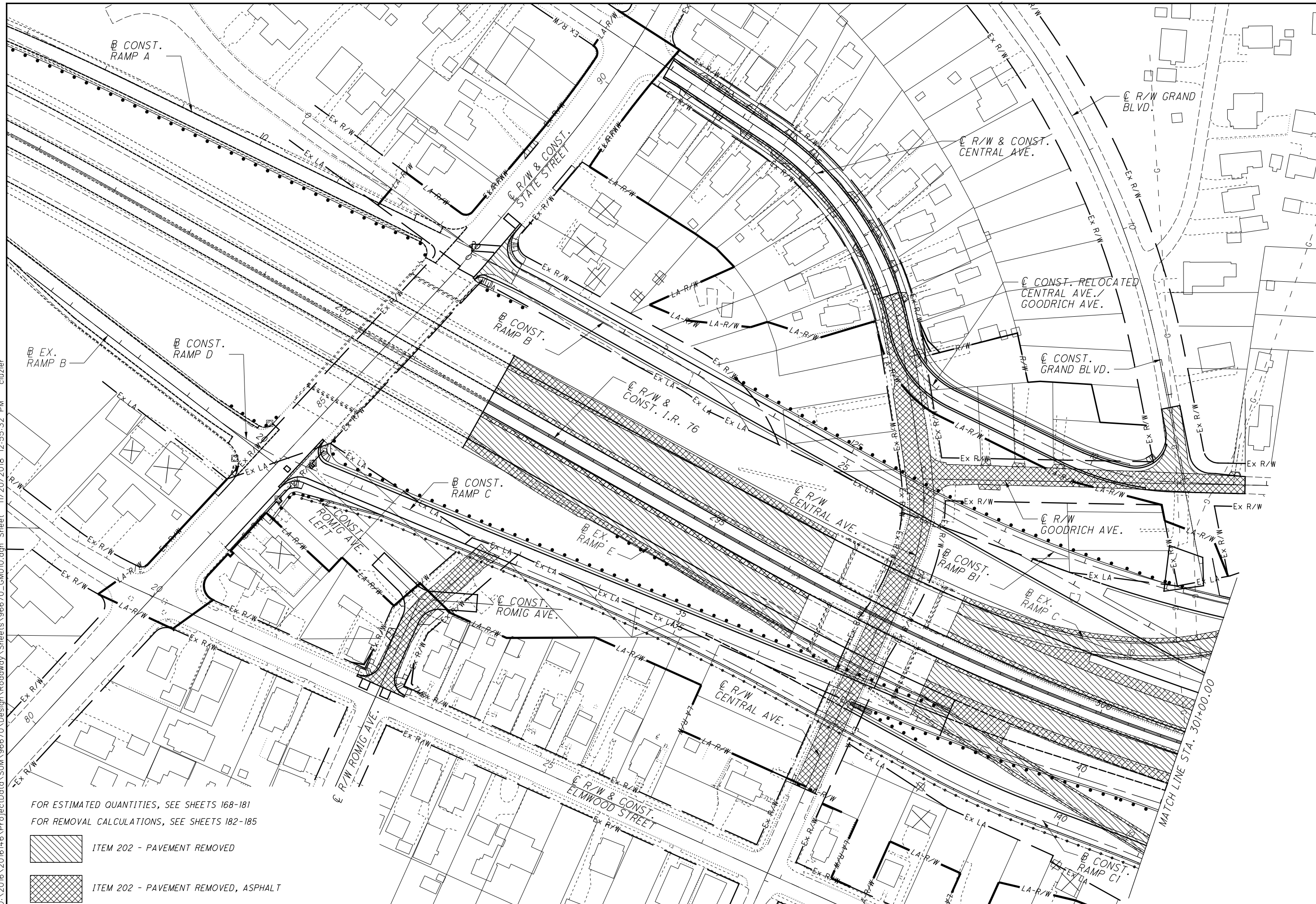
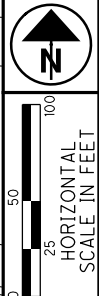
FOR DRIVE PROFILES, SEE ROADWAY CROSS SECTIONS

CALCULATED  
ATR  
CHECKED  
CWL



DRIVE DETAILS

SUM - 76 - 5.53

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FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
FOR REMOVAL CALCULATIONS, SEE SHEETS 182-185

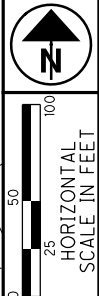
-  ITEM 202 - PAVEMENT REMOVED
-  ITEM 202 - PAVEMENT REMOVED, ASPHALT

**PAVEMENT REMOVAL PLAN**

**SUM-76-5.53**

351  
672

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☉ R/W ALBERTA STREET  
☉ R/W GOODRICH AVE.

MATCH LINE STA. 301+00.00

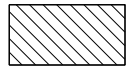
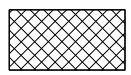
☉ R/W & CONST. I.R. 76  
☉ CONST. RAMP C1

☉ R/W & CONST. ELMWOOD STREET

☉ R/W & CONST S.R. 619 (WOOSTER RD.)

☉ R/W & CONST. KENMORE BL VD.

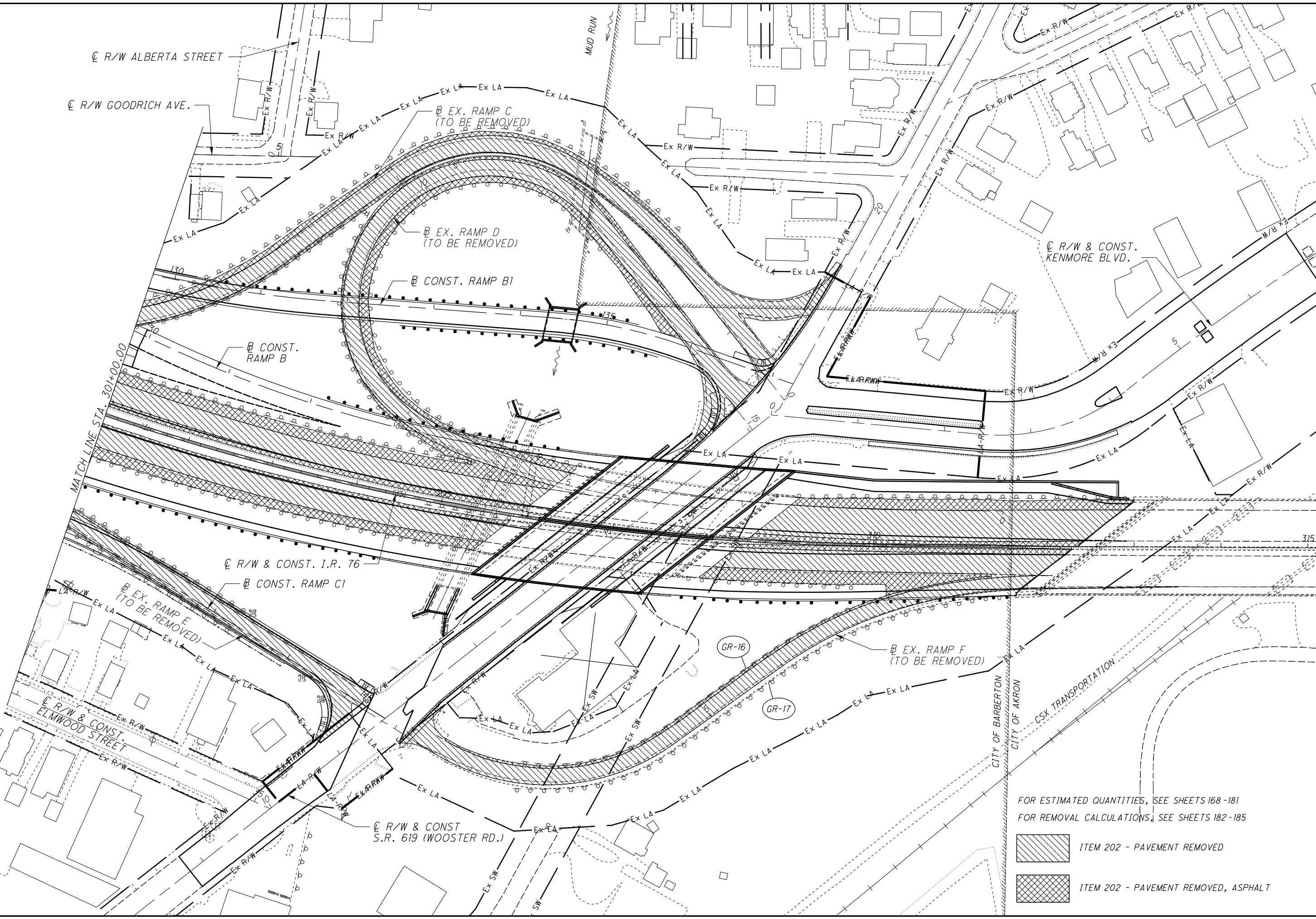
FOR ESTIMATED QUANTITIES, SEE SHEETS 168 -181  
FOR REMOVAL CALCULATIONS, SEE SHEETS 182-185

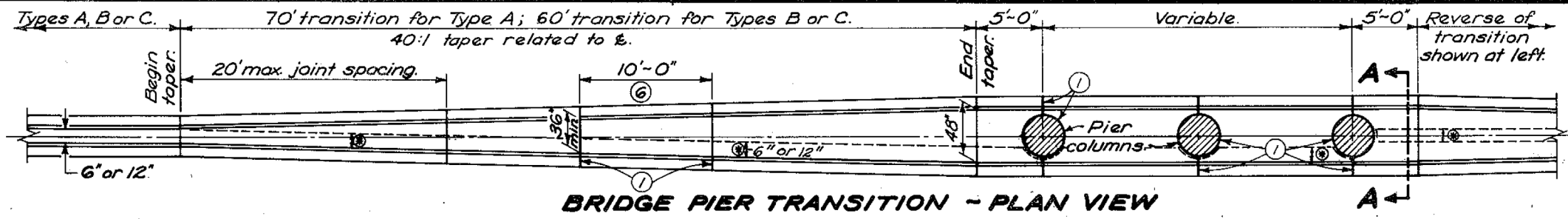
-  ITEM 202 - PAVEMENT REMOVED
-  ITEM 202 - PAVEMENT REMOVED, ASPHALT

**PAVEMENT REMOVAL PLAN**

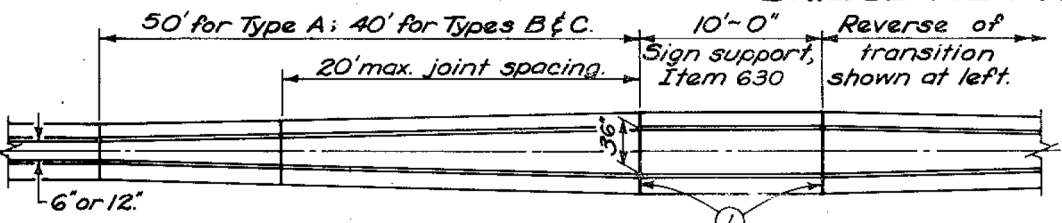
**SUM-76-5.53**

352  
672



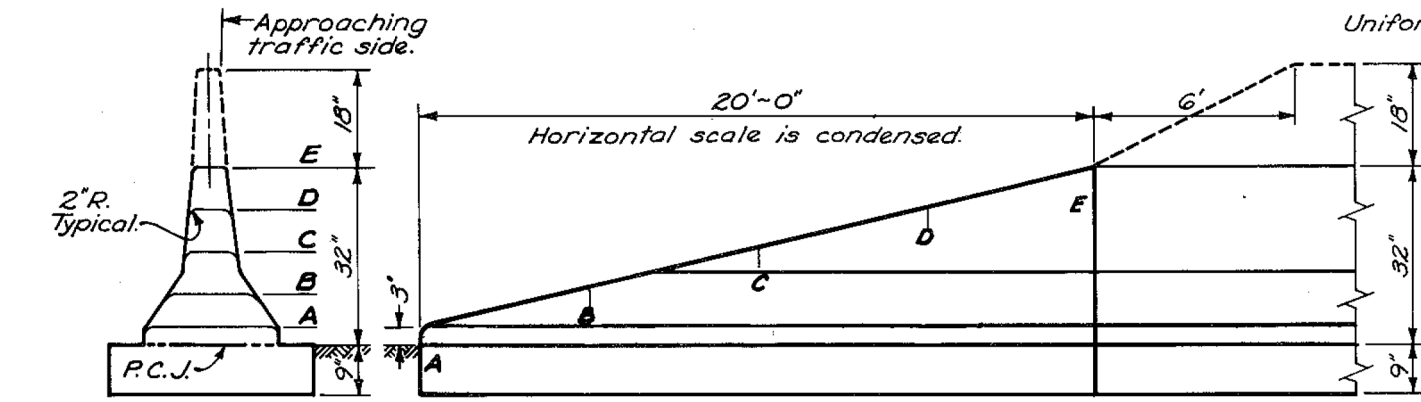


**BRIDGE PIER TRANSITION - PLAN VIEW**

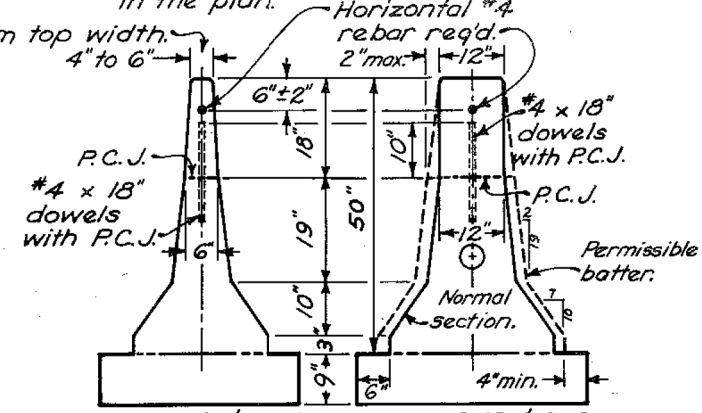


**SIGN SUPPORT TRANSITION - PLAN VIEW**  
(For 50" barriers the upper 18" varies from 6" or 12" to 36" width)

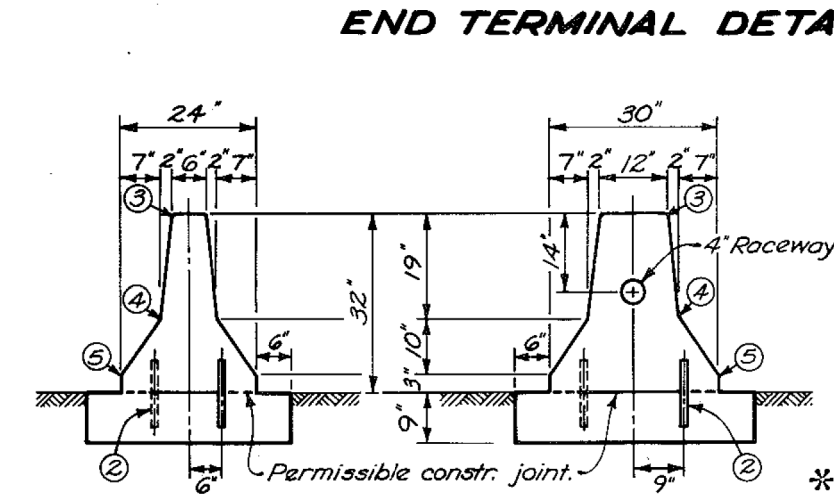
- LEGEND**
- ① Expansion joint, 3/4" min. Preformed Filler 705.03.
  - ② No. 8 deformed steel bars, 12" long, spaced on staggered (except Type D) 4' centers. The End Terminal will require shorter dowel between points A & B. Omit dowels when top is constructed integral with the base.
  - ③ 1" Radius or 3/4" chamfer.
  - ④ Permissible 10" radius.
  - ⑤ Permissible 1" radius.
  - ⑥ 630 Overhead Sign Support Foundation, if specified in the plan.



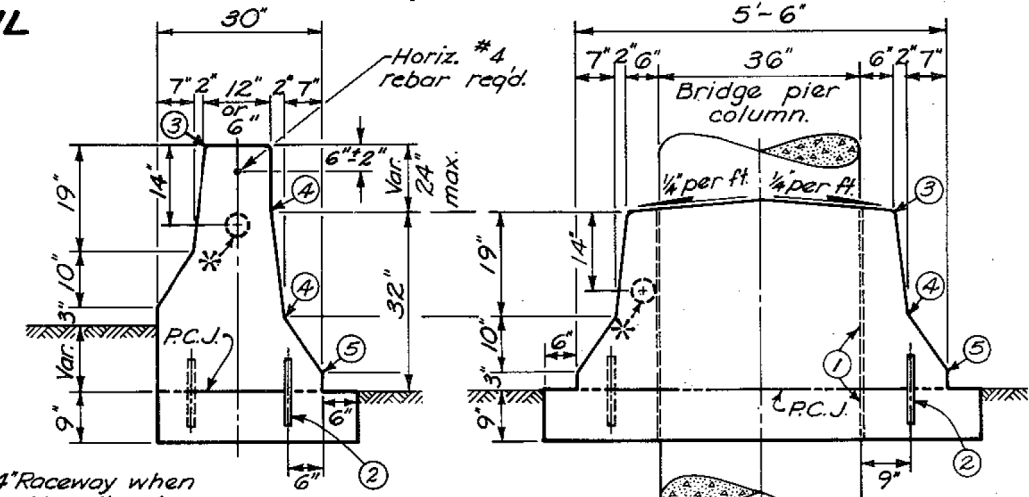
**END VIEW**      **PROFILE VIEW**  
**END TERMINAL DETAIL**



**50" BARRIERS**



**TYPE A**      **TYPE B**  
**NORMAL SECTIONS**



**SECTION A-A**

**NOTES**

**JOINTS:** Unsealed contraction joints spaced at 20' max. shall be constructed throughout the run of Concrete Barrier except that expansion joints shall be used at the center line of and around each bridge pier column and on either side of overhead sign supports, inlets and light pole foundations. If inlet top is slip formed the expansion joints adjacent to it may be omitted. Contraction joints may be constructed with metal inserts inside the forms, preformed full width joint filler, a grooving tool, or by sawing. Inserts or tooled or sawed joints shall have a 1 1/2" min. depth. All joints shall be constructed for the full height of the barrier including the base.

**MEASUREMENT:** 622 Concrete Barrier, including transitions and end terminals and pier sections, is paid for in linear feet as one of the four types (A, B, C or D) or as Type A50, B50, etc. (for 50" high barrier), with appropriate deductions for other items such as:

- 604 I-3 Median inlet ----- 20 Lin. Ft.
- 625 Light pole foundation or pullbox ----- 25 Lin. Ft.
- 630 Overhead sign support foundation ----- 10 Lin. Ft.
- 630 Barrier wall assembly ----- 10 Lin. Ft.

**50 INCH HIGH BARRIER** shall be built where specified on the plan, with the same bottom 32" slopes and 9" foundation as the standard Type specified. The upper 18" may be constructed integral with the bottom, or separately with #4 rebar dowels at 4' max. spacing. Start and end dowels 6" from barrier vertical joints.

On variable width (i.e. pier transition) barrier sections not having sign support foundations, the upper 18" may be built with a 6" or 12" top width (per Type specified) on the E or along one face of the barrier. At End Terminals taper the upper 18" to 0" in 6".

**RACEWAY:** The Contractor shall insure that the electrical raceway is clear of internal obstructions. Cost of the 4" polyvinyl chloride raceway and No. 10 AWG copper-clad or aluminum-clad pull wire if needed for future installation of circuits shall be included in the unit price bid per linear for 622 Concrete Barrier.

**STATION MARKING** shall be impressed in the "green" concrete on both sides at the top of the barrier if specified in the plans which cost shall be incidental to the unit cost per linear foot bid for 622 Concrete Barrier.

**BUREAU OF LOCATION AND DESIGN**  
**OHIO DEPARTMENT OF TRANSPORTATION**

**CONCRETE BARRIER**

**STANDARD CONSTRUCTION DRAWING MC-9**

APPROVED: *[Signature]* ENGR. L. S. D.

DATE: 1-1-74  
11-1-77  
1-30-84

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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. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transition should contain horizontal reinforcing steel similar 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.

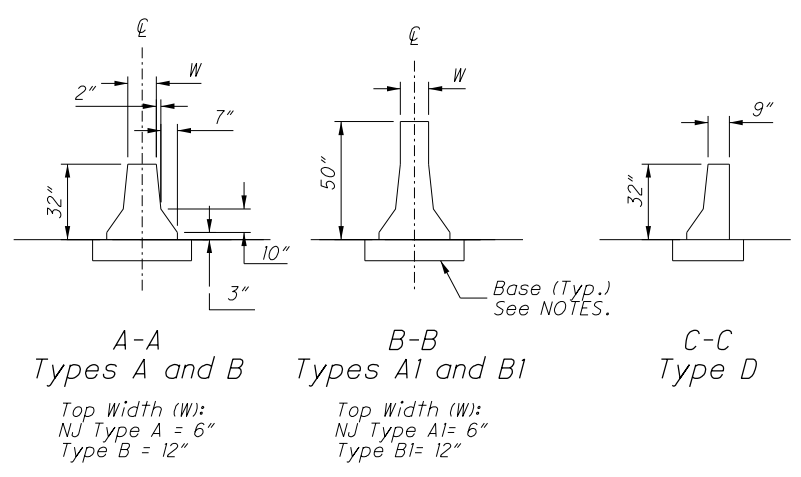
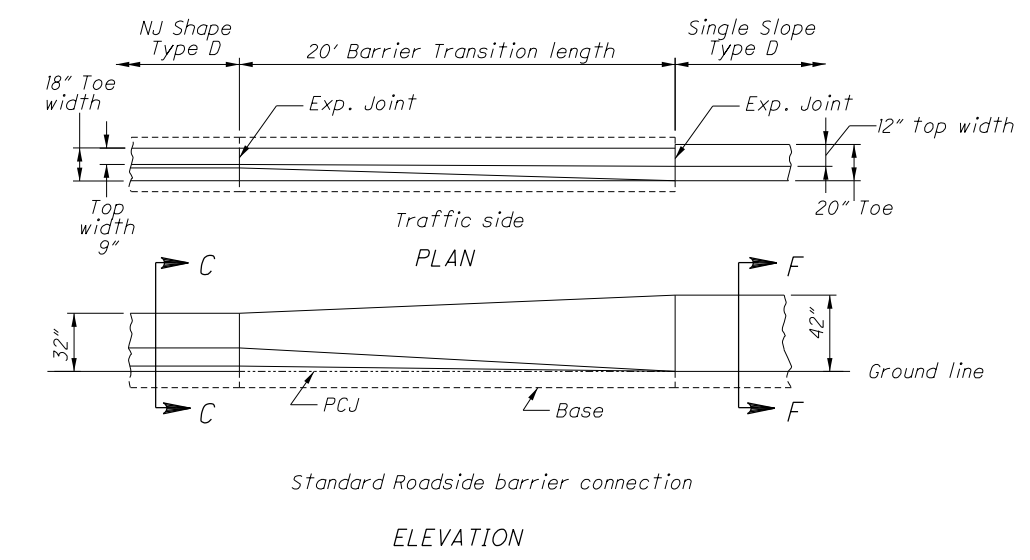
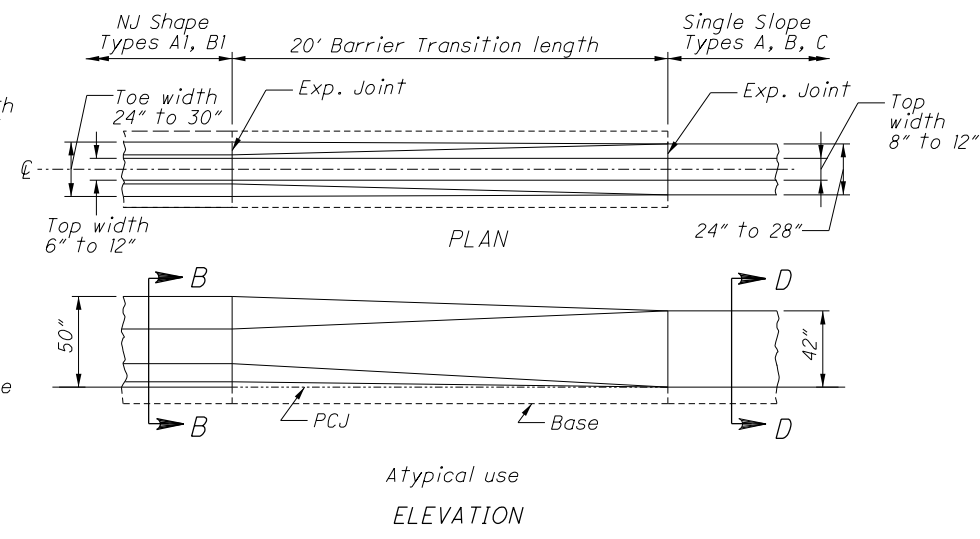
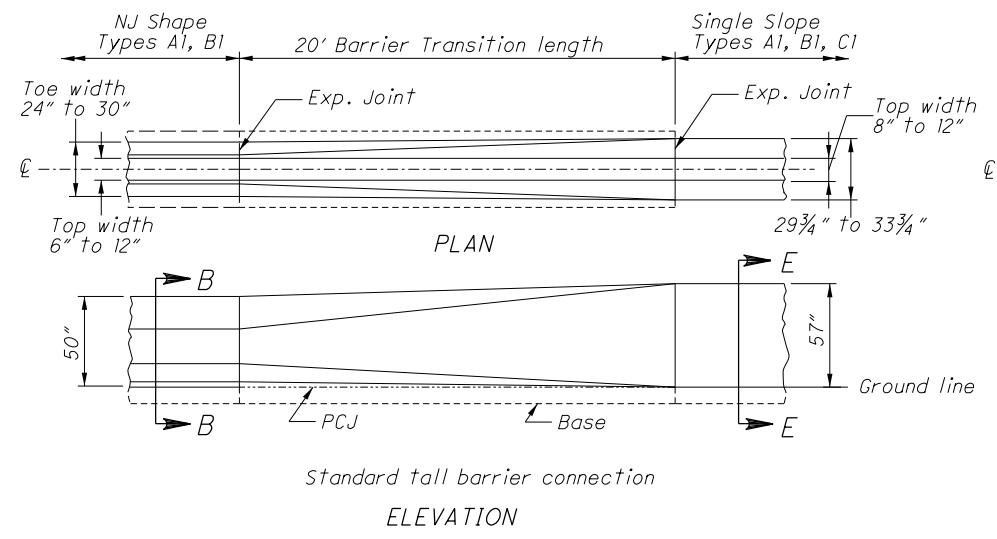
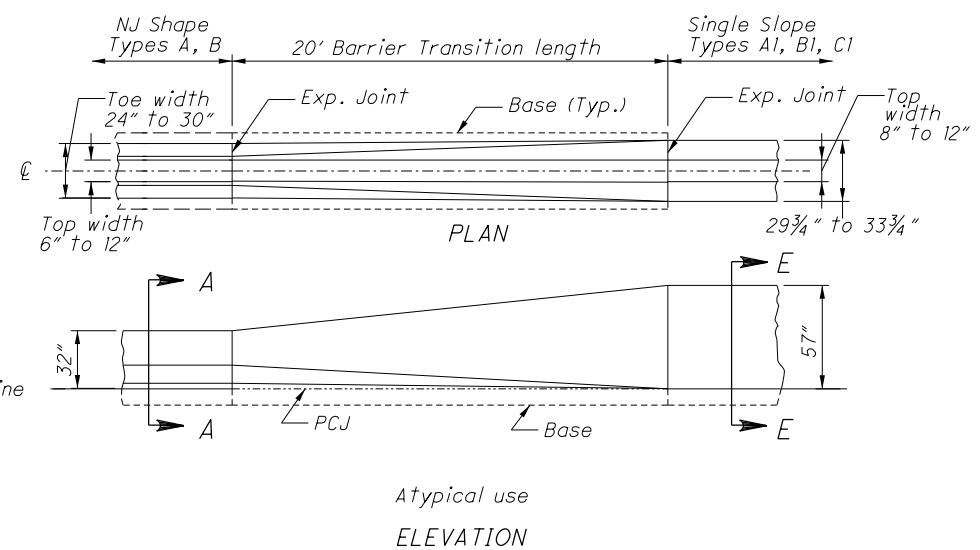
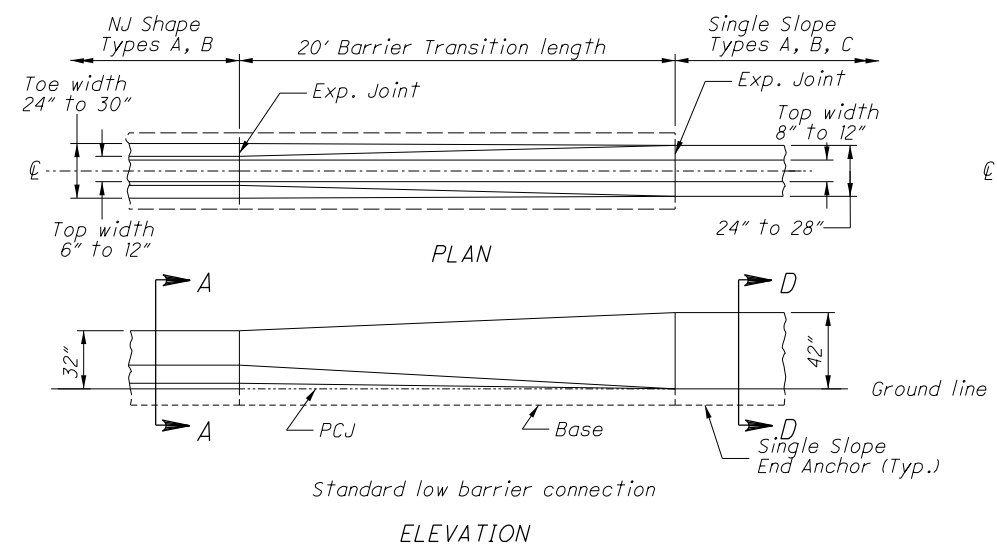
**CONCRETE BASE:** Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

**JOINTS:** Construct joints as shown on respective barrier drawings.

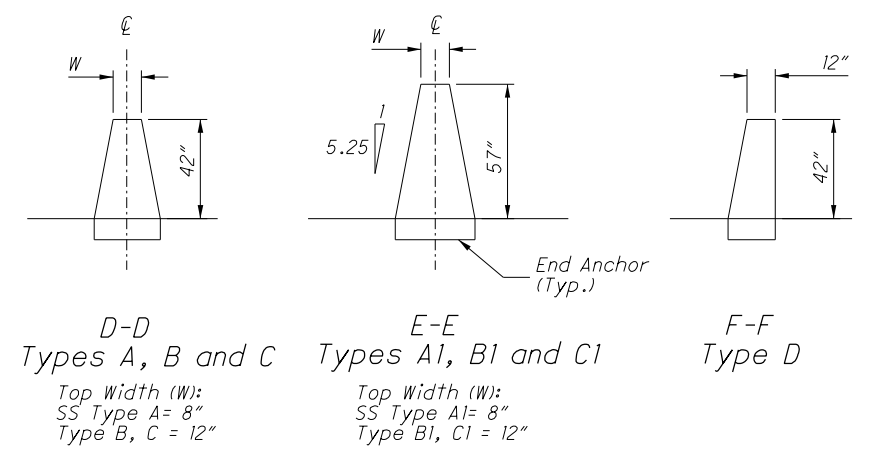
**RACEWAYS:** When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

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

**PAYMENT:** This Barrier Transition 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.



**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.

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**ESTIMATED QUANTITIES**  
CARRIED TO SUBSUMMARY ON SHEETS 164, 165

ITEM	QUANTITY	UNIT	DESCRIPTION
202	80	FT.	PIPE REMOVED, 24" AND UNDER
202	2	EACH	HEADWALL REMOVED
601	1.7	CU. YD.	ROCK CHANNEL PROTECTION TYPE C W/ GEOTEXTILE FABRIC
602	1.1	CU. YD.	CONCRETE MASONRY
611	80	FT.	30" CONDUIT, TYPE A, 706.02

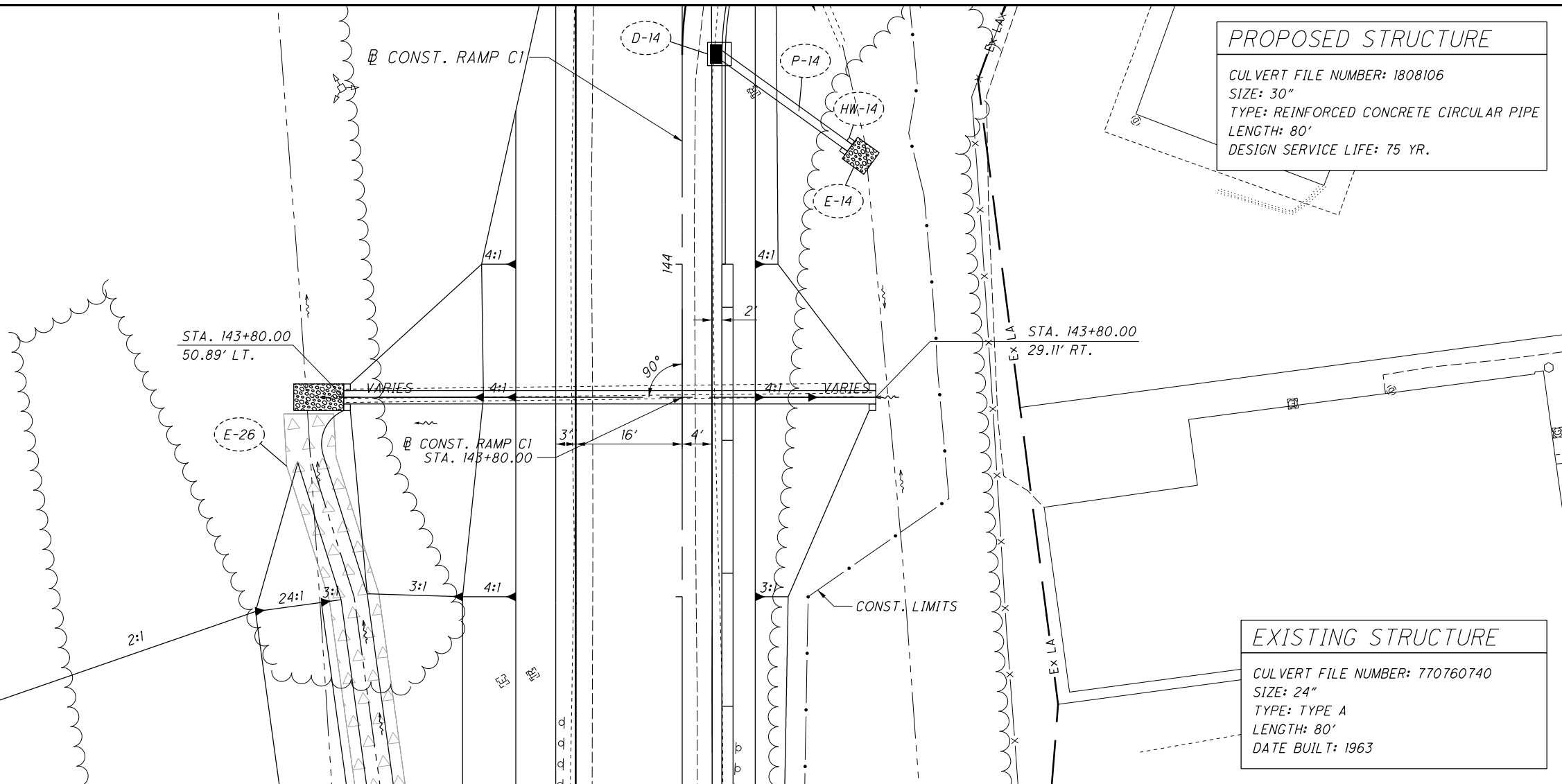
**PROPOSED STRUCTURE**

CULVERT FILE NUMBER: 1808106  
 SIZE: 30"  
 TYPE: REINFORCED CONCRETE CIRCULAR PIPE  
 LENGTH: 80'  
 DESIGN SERVICE LIFE: 75 YR.



**HYDRAULIC DESIGN DATA**

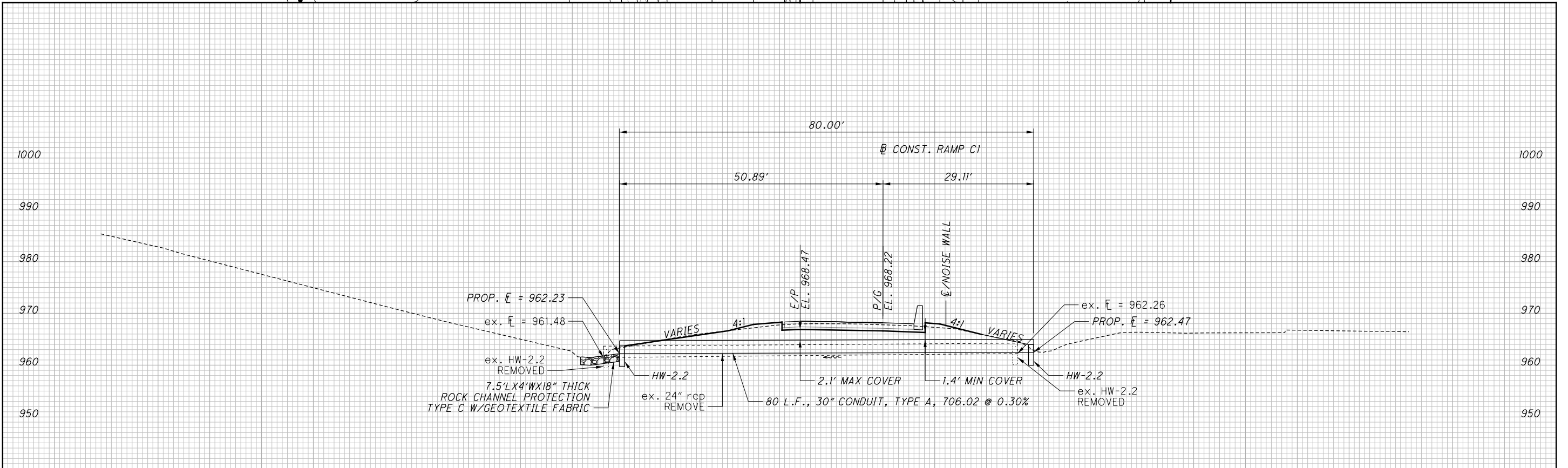
DRAINAGE AREA: 2.9 ACRES  
 STREAM pH: 7.6  
 ABRASIVE OR NON-ABRASIVE: NON ABRASIVE  
 Q(25): 9.99 CFS      Q(100): 11.80 CFS  
 HW(25): 964.15 FT.      HW(100): 964.34 FT.  
 V(25): 5.46 FPS      V(100): 5.80 FPS



**EXISTING STRUCTURE**

CULVERT FILE NUMBER: 770760740  
 SIZE: 24"  
 TYPE: TYPE A  
 LENGTH: 80'  
 DATE BUILT: 1963

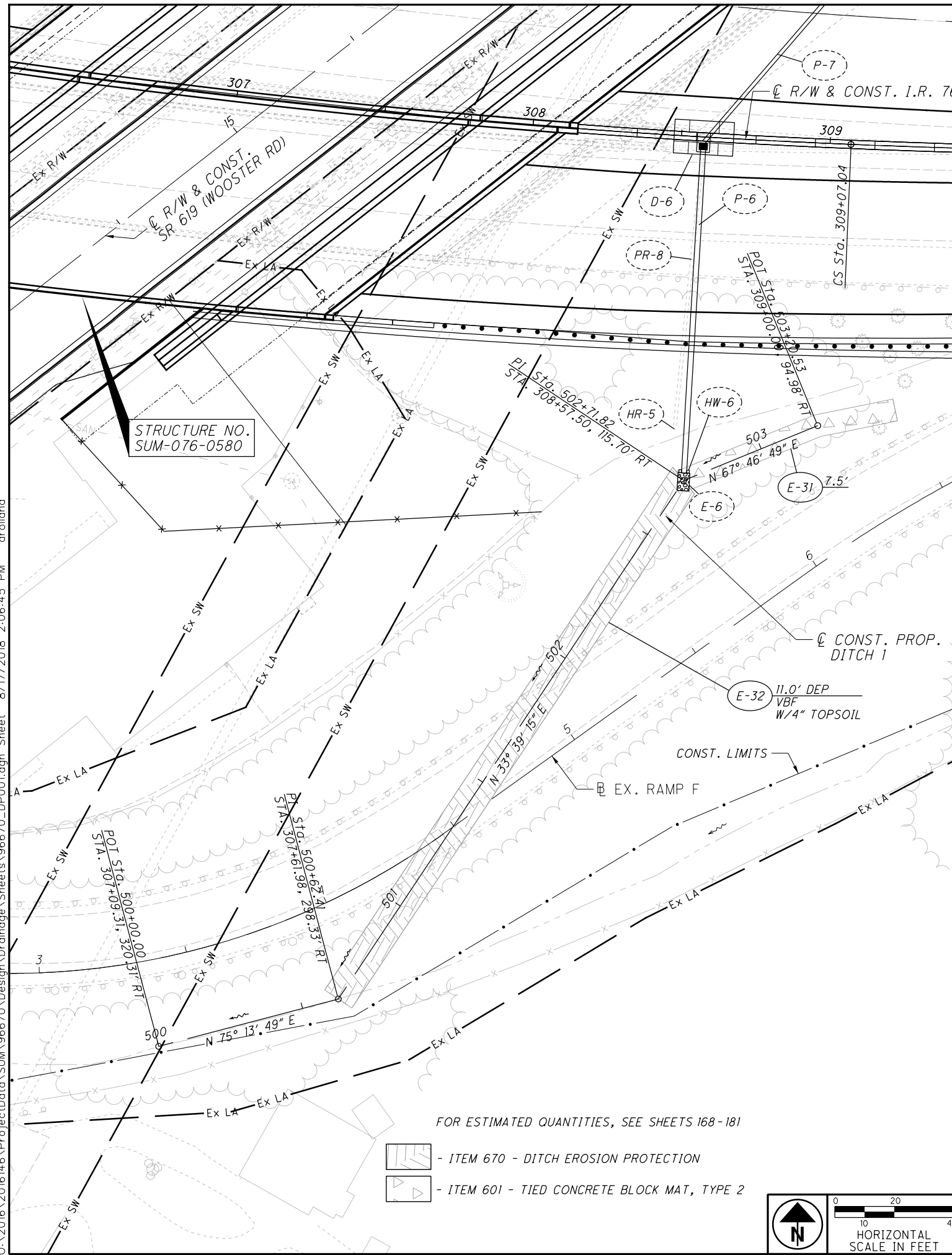
**CULVERT DETAIL**  
**STA. 143+80.00**



**SUM - 76 - 5.53**

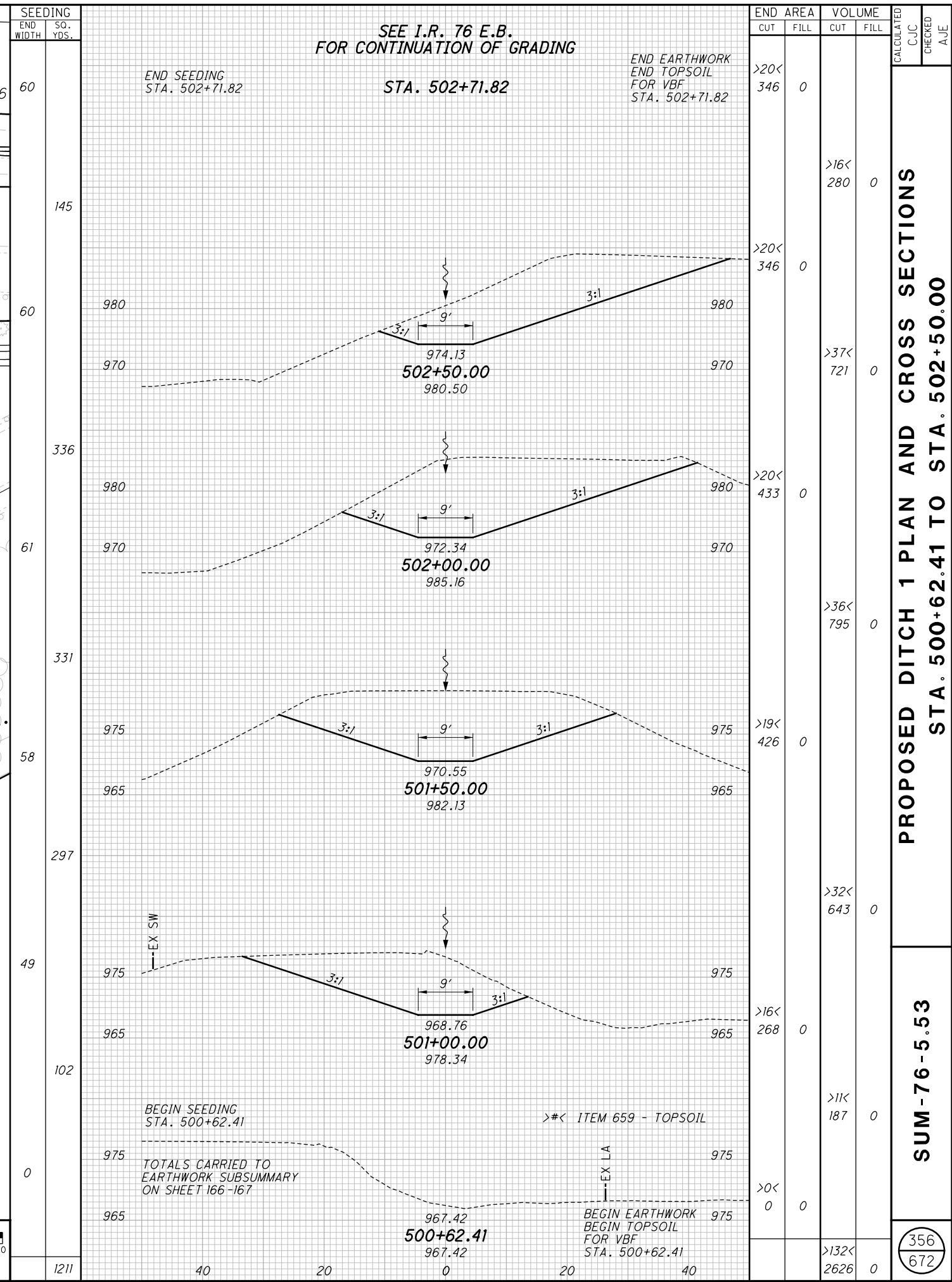
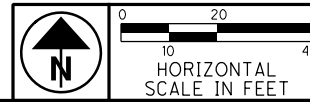
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FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2



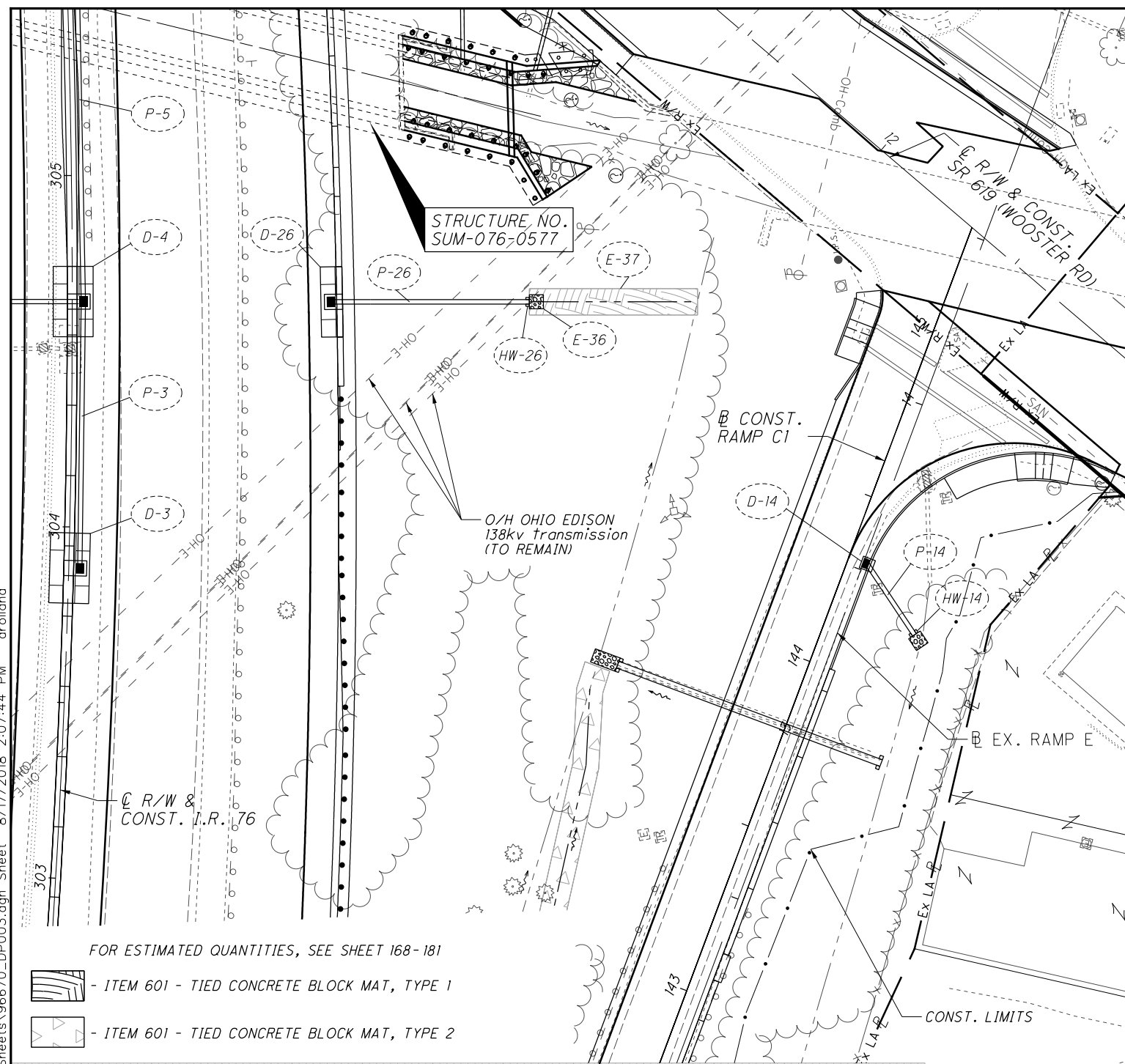
**PROPOSED DITCH 1 PLAN AND CROSS SECTIONS**

**STA. 500+62.41 TO STA. 502+50.00**

**SUM - 76 - 5.53**

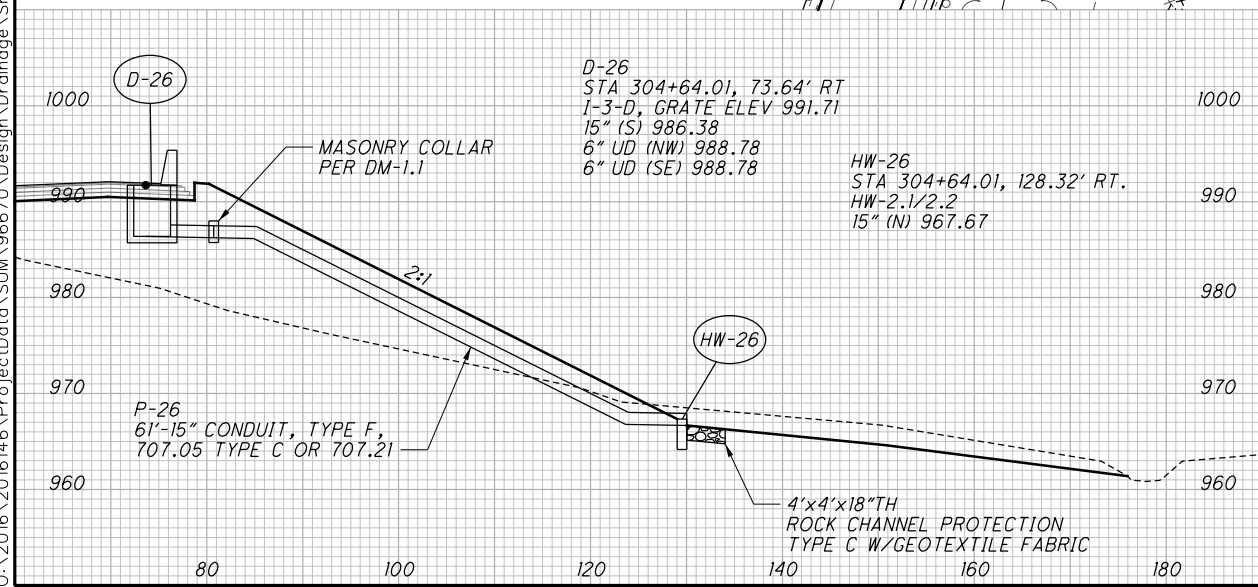
356  
672

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FOR ESTIMATED QUANTITIES, SEE SHEET 168-181

- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1
- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2



STATION	SEEDING		END AREA		VOLUME		CALCULATED C/JC	CHECKED A/E
	END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL		
17					22	0		
37						14	0	
12					12	0		
28						9	0	
13					12	0		
3						1	0	
68					0	0		
TOTALS					68	0		

STATION	END SEEDING	END EARTHWORK
17	970	970
37	970	970
12	970	970
28	970	970
13	970	970
3	970	970
68	960	960

STATION	SEEDING	EARTHWORK
17	130.03' RT.	966.66 (top), 968.52 (bottom)
12	152.85' RT.	964.62 (top), 966.30 (bottom)
13	173.22' RT.	961.41 (top), 962.94 (bottom)
68	177.85' RT.	960.82 (top), 960.82 (bottom)

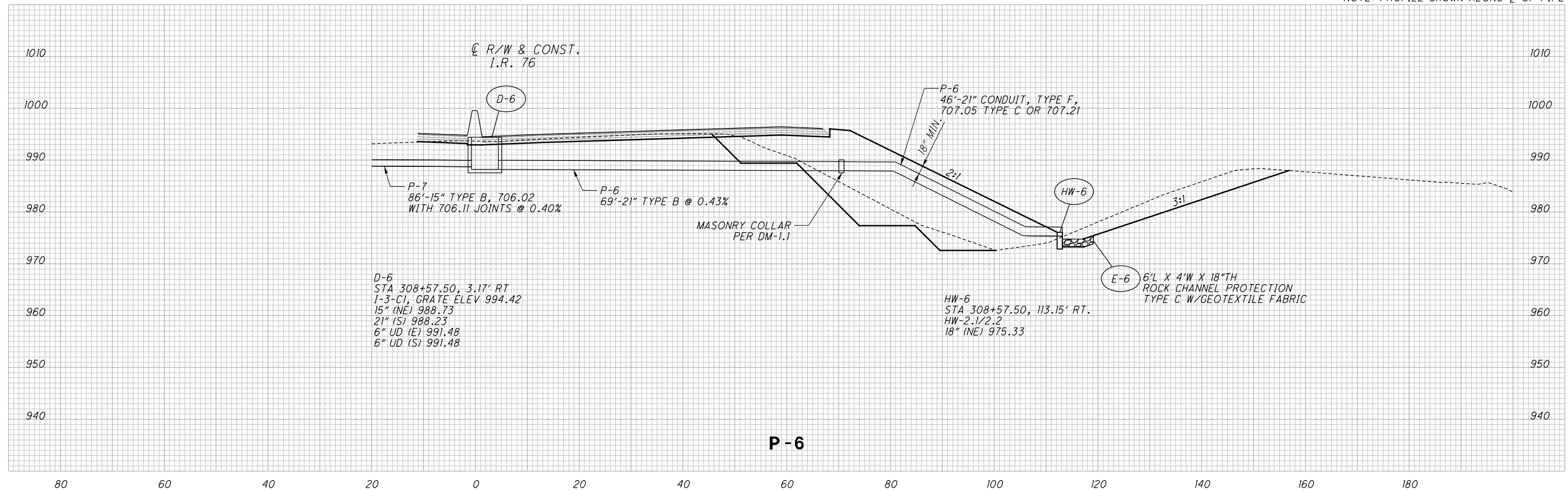
  

STATION	END SEEDING	END EARTHWORK	BEGIN SEEDING	BEGIN EARTHWORK
17	970	970	970	970
37	970	970	970	970
12	970	970	970	970
28	970	970	970	970
13	970	970	970	970
3	970	970	970	970
68	960	960	960	960

**STORM SEWER PROFILE AND DITCH CROSS SECTIONS**

**SUM-76-5.53**

NOTE: PROFILE SHOWN ALONG  $\bar{C}$  OF PIPE



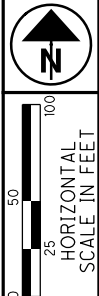
CALCULATED	ATR	CHECKED	CWL



**STORM SEWER PROFILES**

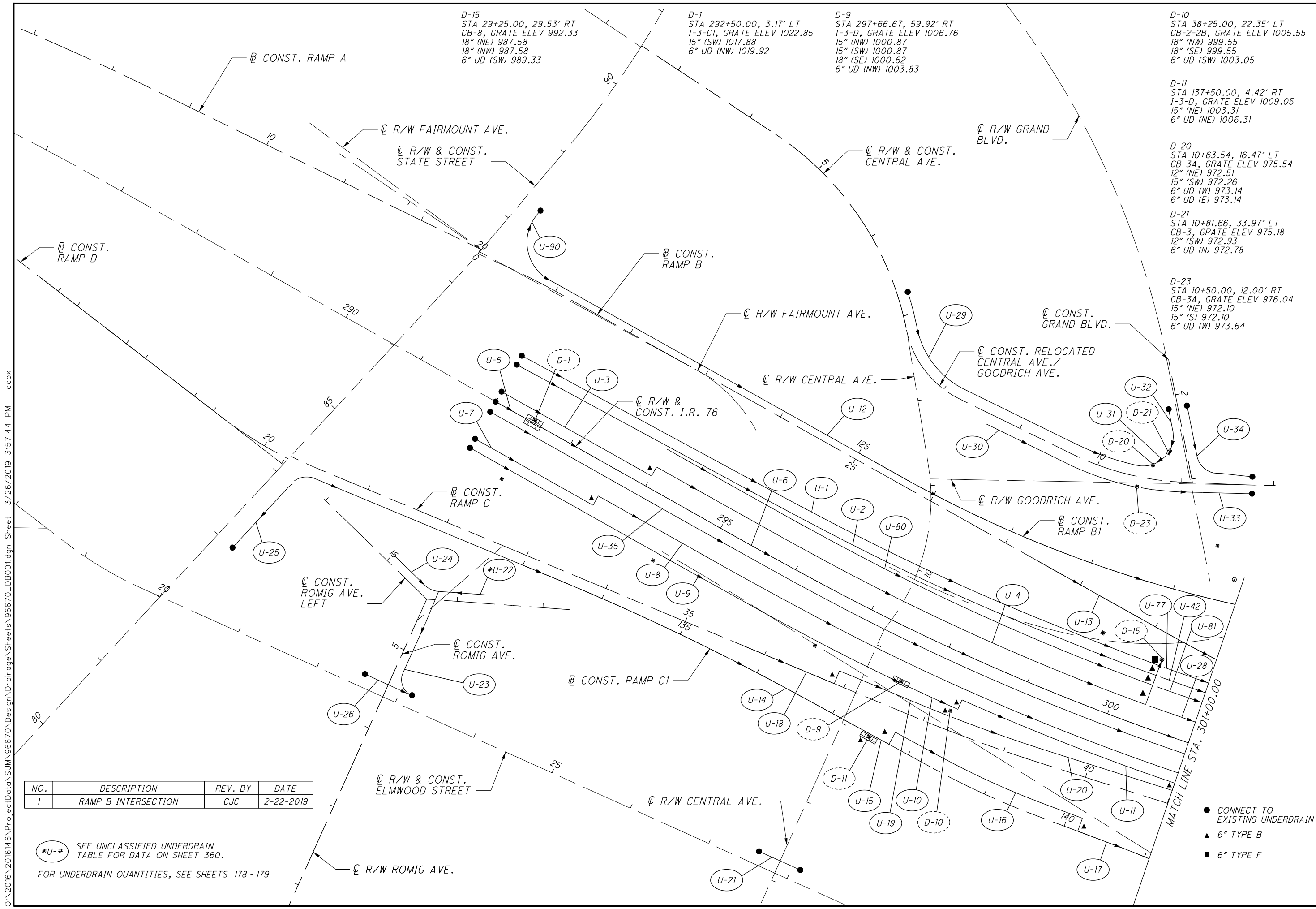
**SUM - 76 - 5.53**

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**UNDERDRAIN DETAILS**

**SUM-76-5.53**



D-15  
STA 29+25.00, 29.53' RT  
CB-8, GRATE ELEV 992.33  
18" (NE) 987.58  
18" (NW) 987.58  
6" UD (SW) 989.33

D-1  
STA 292+50.00, 3.17' LT  
I-3-C1, GRATE ELEV 1022.85  
15" (SW) 1017.88  
6" UD (NW) 1019.92

D-9  
STA 297+66.67, 59.92' RT  
I-3-D, GRATE ELEV 1006.76  
15" (NW) 1000.87  
15" (SW) 1000.87  
18" (SE) 1000.62  
6" UD (NW) 1003.83

D-10  
STA 38+25.00, 22.35' LT  
CB-2-2B, GRATE ELEV 1005.55  
18" (NW) 999.55  
18" (SE) 999.55  
6" UD (SW) 1003.05

D-11  
STA 137+50.00, 4.42' RT  
I-3-D, GRATE ELEV 1009.05  
15" (NE) 1003.31  
6" UD (NE) 1006.31

D-20  
STA 10+63.54, 16.47' LT  
CB-3A, GRATE ELEV 975.54  
12" (NE) 972.51  
15" (SW) 972.26  
6" UD (W) 973.14  
6" UD (E) 973.14

D-21  
STA 10+81.66, 33.97' LT  
CB-3, GRATE ELEV 975.18  
12" (SW) 972.93  
6" UD (N) 972.78

D-23  
STA 10+50.00, 12.00' RT  
CB-3A, GRATE ELEV 976.04  
15" (NE) 972.10  
15" (S) 972.10  
6" UD (W) 973.64

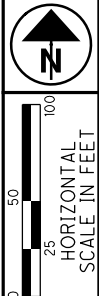
NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

\*U-# SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON SHEET 360.

FOR UNDERDRAIN QUANTITIES, SEE SHEETS 178 - 179

- CONNECT TO EXISTING UNDERDRAIN
- ▲ 6" TYPE B
- 6" TYPE F

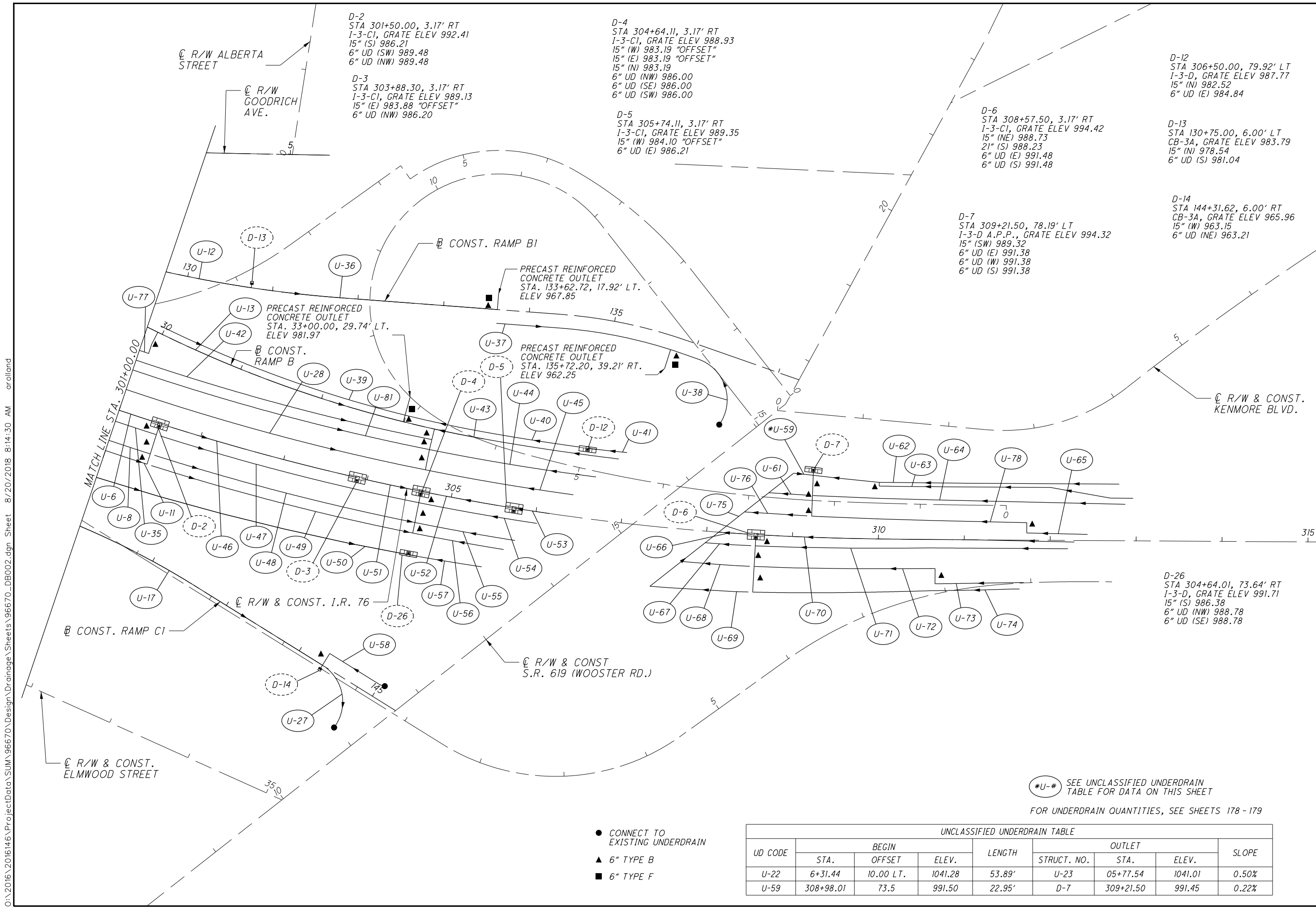
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**UNDERDRAIN DETAILS**

**SUM-76-5.53**

360  
672



D-2  
STA 301+50.00, 3.17' RT  
1-3-C1, GRATE ELEV 992.41  
15" (S) 986.21  
6" UD (SW) 989.48  
6" UD (NW) 989.48

D-3  
STA 303+88.30, 3.17' RT  
1-3-C1, GRATE ELEV 989.13  
15" (E) 983.88 "OFFSET"  
6" UD (NW) 986.20

D-4  
STA 304+64.11, 3.17' RT  
1-3-C1, GRATE ELEV 988.93  
15" (W) 983.19 "OFFSET"  
15" (E) 983.19 "OFFSET"  
15" (N) 983.19  
6" UD (NW) 986.00  
6" UD (SE) 986.00  
6" UD (SW) 986.00

D-5  
STA 305+74.11, 3.17' RT  
1-3-C1, GRATE ELEV 989.35  
15" (W) 984.10 "OFFSET"  
6" UD (E) 986.21

D-12  
STA 306+50.00, 79.92' LT  
1-3-D, GRATE ELEV 987.77  
15" (N) 982.52  
6" UD (E) 984.84

D-13  
STA 130+75.00, 6.00' LT  
CB-3A, GRATE ELEV 983.79  
15" (N) 978.54  
6" UD (S) 981.04

D-14  
STA 144+31.62, 6.00' RT  
CB-3A, GRATE ELEV 965.96  
15" (W) 963.15  
6" UD (NE) 963.21

D-6  
STA 308+57.50, 3.17' RT  
1-3-C1, GRATE ELEV 994.42  
15" (NE) 988.73  
21" (S) 988.23  
6" UD (E) 991.48  
6" UD (W) 991.48  
6" UD (S) 991.48

D-7  
STA 309+21.50, 78.19' LT  
1-3-D A.P.P., GRATE ELEV 994.32  
15" (SW) 989.32  
6" UD (E) 991.38  
6" UD (W) 991.38  
6" UD (S) 991.38

D-26  
STA 304+64.01, 73.64' RT  
1-3-D, GRATE ELEV 991.71  
15" (S) 986.38  
6" UD (NW) 988.78  
6" UD (SE) 988.78

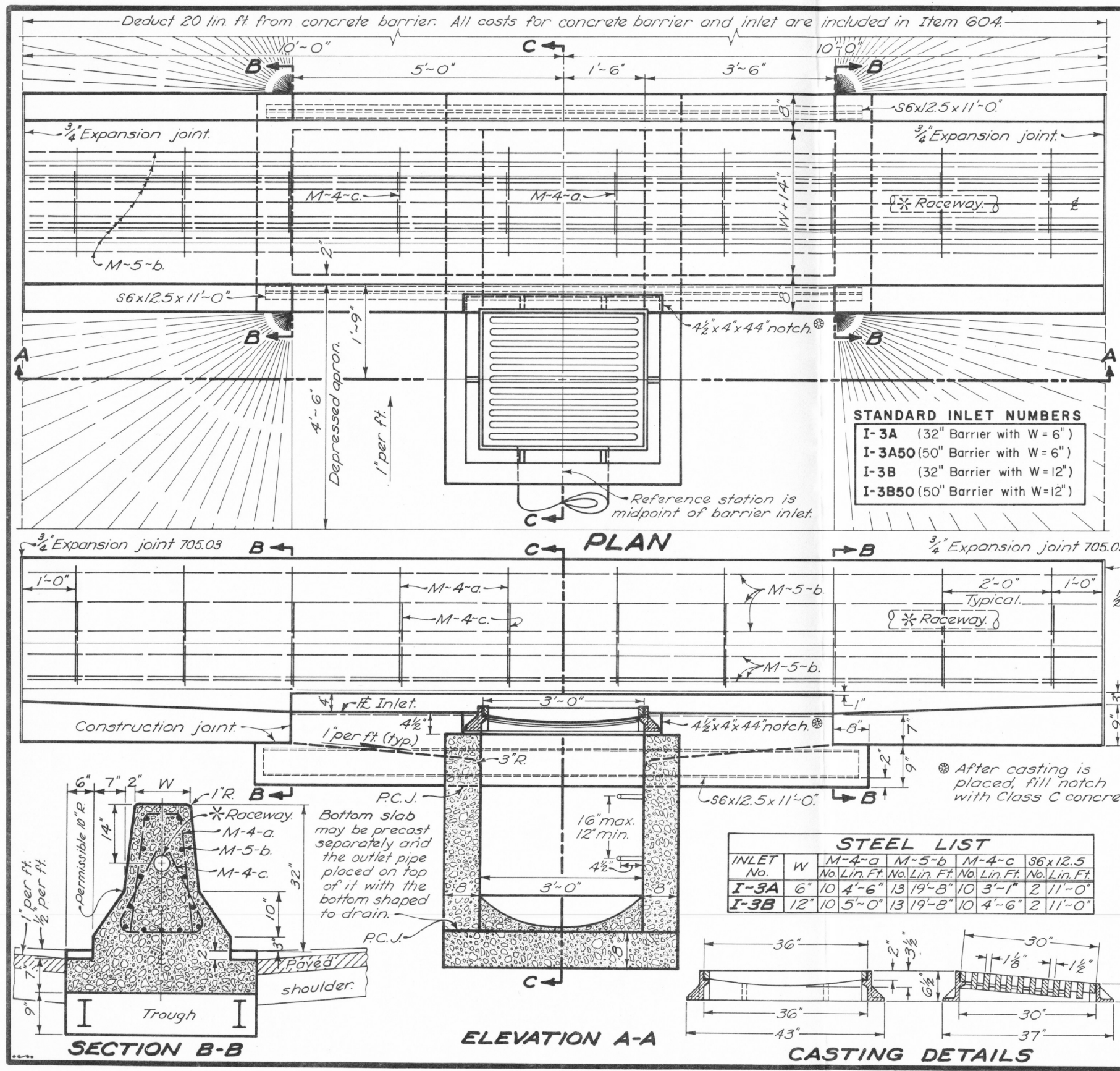
\*U-# SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET

FOR UNDERDRAIN QUANTITIES, SEE SHEETS 178 - 179

- CONNECT TO EXISTING UNDERDRAIN
- ▲ 6" TYPE B
- 6" TYPE F

UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCT. NO.	STA.	ELEV.	
U-22	6+31.44	10.00 LT.	1041.28	53.89'	U-23	05+77.54	1041.01	0.50%
U-59	308+98.01	73.5	991.50	22.95'	D-7	309+21.50	991.45	0.22%

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**THE WALLS** between the bottom slab and the upper permissible construction joint may be built of brick, concrete block or cast-in-place concrete, 8" nominal thickness for depths of 12' or less. Precast walls shall have a minimum thickness of 6" and be reinforced sufficiently to permit shipping and handling without damage. The unit above the upper permissible construction joint may be precast or cast-in-place. **HEIGHT:** When placed in 50" high barrier the 32" height shall be made 50" per details on MC-9. **CONCRETE,** cast-in-place, to be Class C. All precast concrete shall meet the requirements of 706.13 with 6 ± 2% air void content in the hardened concrete. Required markings shall include the inlet number.

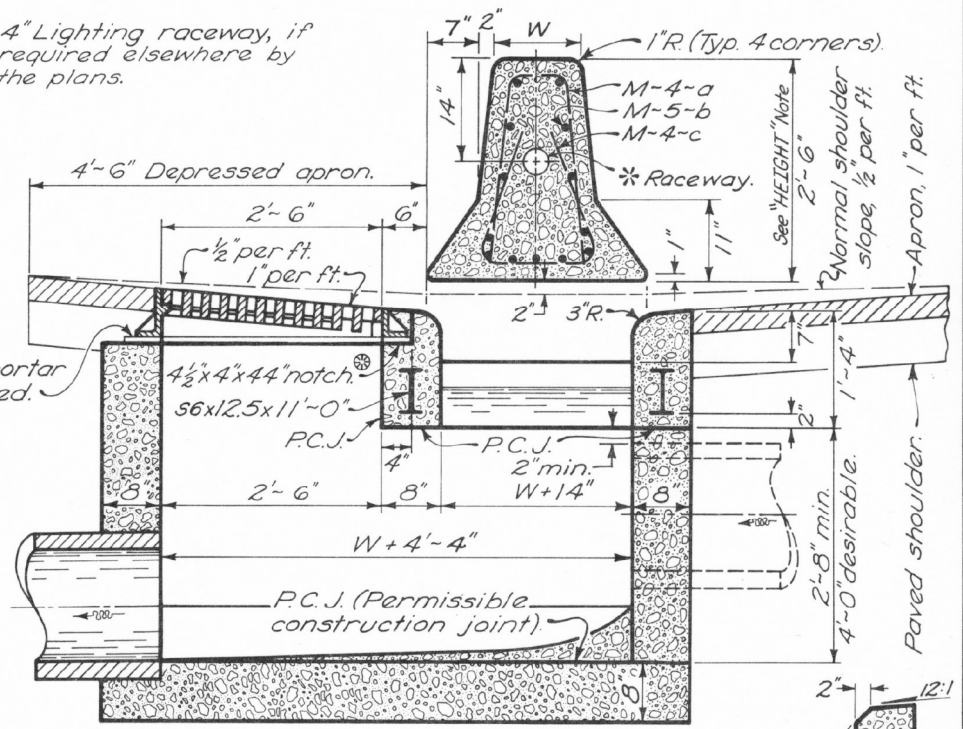
**STEPS** shall be in accordance with Standard Drawing MH-1. Minimum weight of frame and cover shall be 540 pounds.

**GRATE LOCATION:** In super-elevated curves or at other locations where there is unequal discharge from the directional roadways, the inlet grating shall be located in the roadway which discharges the major flow.

**INLETS OVER 12 FEET IN DEPTH** shall be precast or cast-in-place concrete, reinforced with No. 4 bars on 12" centers both vertically and horizontally with 2" clearance from inside wall face.

**OPENINGS** for pipes shall be O.D.+2" when prefabricated or field cut.

\* 4" Lighting raceway, if required elsewhere by the plans.



BUREAU OF LOCATION AND DESIGN  
OHIO DEPARTMENT OF TRANSPORTATION

**BARRIER  
MEDIAN INLETS**

STANDARD  
CONSTRUCTION  
DRAWING  
I-3A & B

APPROVED *M. J. Cunningham* ENGR. L. & D.

DATE  
1-20-70  
11-1-77  
5-1-79  
4-1-80

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**QUALITY LEVEL A DATA SUMMARY**

TEST HOLE #	UTILITY SIZE & TYPE	NORTHING	EASTING	GROUND ELEVATION (FT)	TOP OF UTILITY ELEVATION (FT)	DEPTH (FT)	STATION & OFFSET	NOTES
1	WATER LINE	500851.0880	2221621.8300	1051.3930	1047.1480	4.24	(1) - STA. 87+61.68, 18.79'R	
2	8" GAS LINE	500855.2070	2221638.9870	1050.4100	1048.4270	1.98	(1) - STA. 87+75.93, 29.23'R	
3	4" GAS LINE	500599.0800	222159.1000	983.7140	980.7930	2.92	(2) - STA. 297+20.73, 191.97'L	
4	3" GAS LINE	500710.5740	2222093.5680	988.5700	986.2190	2.35	(2) - STA. 296+02.77, 260.55'R	
5	10" WATER LINE	500703.3440	2222112.6310	988.1510	983.5410	4.61	(2) - STA. 296+24.00, 263.68'L	
6	POSSIBLE 4" GAS LINE	500595.2370	2222290.1780	978.6460	976.1710	2.47	(4) - STA. 1+66.86, 9.66'L	
7a	20" GAS LINE	500471.9890	2222416.1420	971.9120	967.6860	4.22	(2) - STA. 300+27.18, 176.84'L	
7b	20" GAS LINE	500475.2670	2222438.416	971.7740	968.2210	3.55	(2) - STA. 300+48.36, 187.53'L	
8	20" GAS LINE	500021.8280	2222464.0050	965.6490	960.4590	5.19	(2) - STA. 302+12.19, 235.70'R	
9	20" GAS LINE	500040.7170	2222482.8370	965.0710	960.3050	4.76	(2) - STA. 302+24.02, 212.28'R	
10a	TELECOM DUCT	499995.2470	2222739.4830	964.2070	962.8530	1.35	(3) - STA. 12+00.20, 53.17'L	
10b	TELECOM DUCT	500007.9010	2222750.8590	960.5620	959.5140	1.04	(3) - STA. 12+16.97, 56.09'L	
10c	TELECOM DUCT	500019.2740	2222762.7490	963.0360			(3) - STA. 12+33.34, 57.70'L	UNABLE TO DIG DUE TO BOULDERS & CONCRETE
10d	TELECOM DUCT	500028.1830	2222776.9730	961.4270			(3) - STA. 12+50.03, 55.92'L	UNABLE TO DIG DUE TO BOULDERS & CONCRETE
10e	TELECOM DUCT	500034.4060	2222793.2410	962.5420			(3) - STA. 12+66.67, 50.77'L	UNABLE TO DIG DUE TO CREEK LOCATION
10f	TELECOM DUCT	500041.1620	2222809.3730	962.5420			(3) - STA. 12+83.53, 46.12'L	UNABLE TO DIG DUE TO CREEK LOCATION
10g	TELECOM DUCT	500045.5810	2222828.2940	966.2220	960.7020	5.52	(3) - STA. 13+00.08, 41.30'L	
10h	TELECOM DUCT	500051.7990	2222841.3940	966.3670	961.9000	4.46	(3) - STA. 13+15.28, 34.71'L	
10i	TELECOM DUCT	500062.8460	2222856.5290	966.3230	963.0600	3.26	(3) - STA. 13+34.01, 34.05'L	
10j	TELECOM DUCT	500071.0500	2222871.1360	966.2860	962.6550	3.63	(3) - STA. 13+50.56, 31.48'L	
13	20" GAS LINE	500174.2620	2222445.2750	965.6490	960.0170	5.63	(2) - STA. 301+53.07, 95.44'R	UNABLE TO CLEARLY VIEW PIPE DUE TO WATER
14	8" GAS LINE	500209.4160	2223144.0310	968.1020	964.5440	6.55	(3) - STA. 16+50.65, 28.24'R	
15	8" GAS LINE	500870.9250	2221651.9180	1050.3970	1047.9080	2.48	(1) - STA. 87+96.28, 28.92'R	
18	TELECOM DUCT	499978.6000	2222727.1130	966.3040	965.2310	1.07	(3) - STA. 11+80.19, 47.72'L	
19	8" GAS LINE	499927.8060	2222810.4800	965.8640	962.2920	3.57	(3) - STA. 11+48.82, 7.77'L	
20	20" GAS LINE	500617.6860	2222416.8660	975.3280	972.1030	3.22	(4) - STA. 2+93.10, 34.52'L	
21	20" GAS LINE	500550.8300	2222448.6710	973.0580	970.3190	2.73	(4) - STA. 3+26.17, 31.73'R	
22	8" GAS LINE	500359.9650	2221483.1480	1042.7600	1040.0820	2.67	(5) - STA. 4+61.09, 12.93'L	
23	4" GAS LINE	500616.4300	2222397.5490	975.5420	972.9290	2.67	(4) - STA. 2+73.81, 32.89'L	
24	4" GAS LINE	500590.3530	2222444.2020	973.7350	971.4190	2.31	(4) - STA. 3+20.95, 7.71'L	
20B	WATER LINE	500629.6570	2222406.7320	975.4540	968.5330		(4) - STA. 2+82.74, 46.29'L	

**LEGEND**

- (1) - C R/W & CONST. STATE ST.
- (2) - C R/W & CONST. IR-76
- (3) - C R/W & CONST. S.R. 619 (WOOSTER RD.)
- (4) - C R/W GOODRICH AVE.
- (5) - C CONST. ROMIG AVE.

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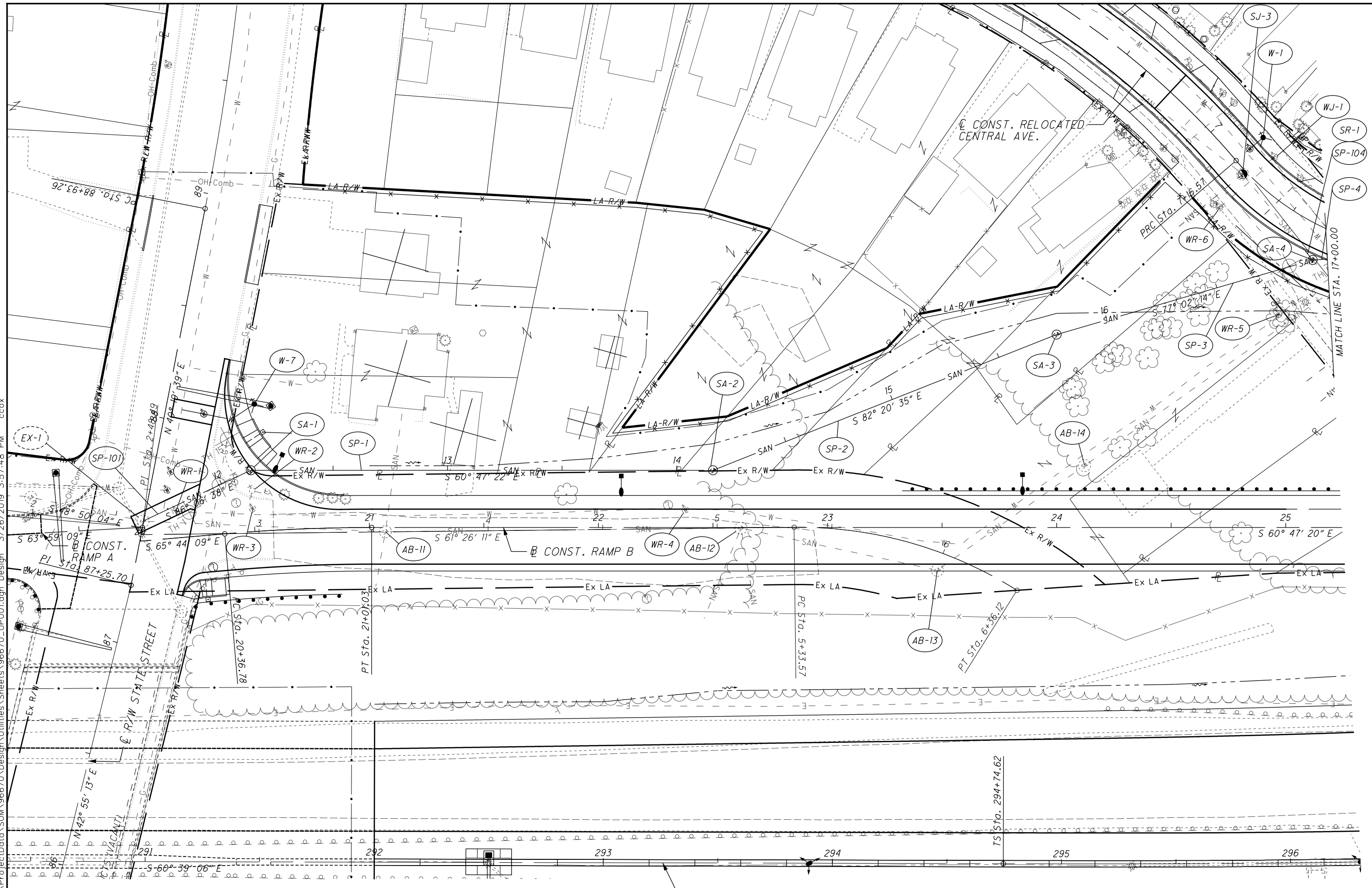
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ATR  
CHECKED  
CWL

**SUBSURFACE UTILITY MATRIX**

**SUM - 76 - 5.53**

362  
672

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CALCULATED  
 ATR  
 CHECKED  
 MDG

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**PLAN - WATER WORK & SANITARY SEWER RAMP B**

**SUM-76-5.53**

363  
 672

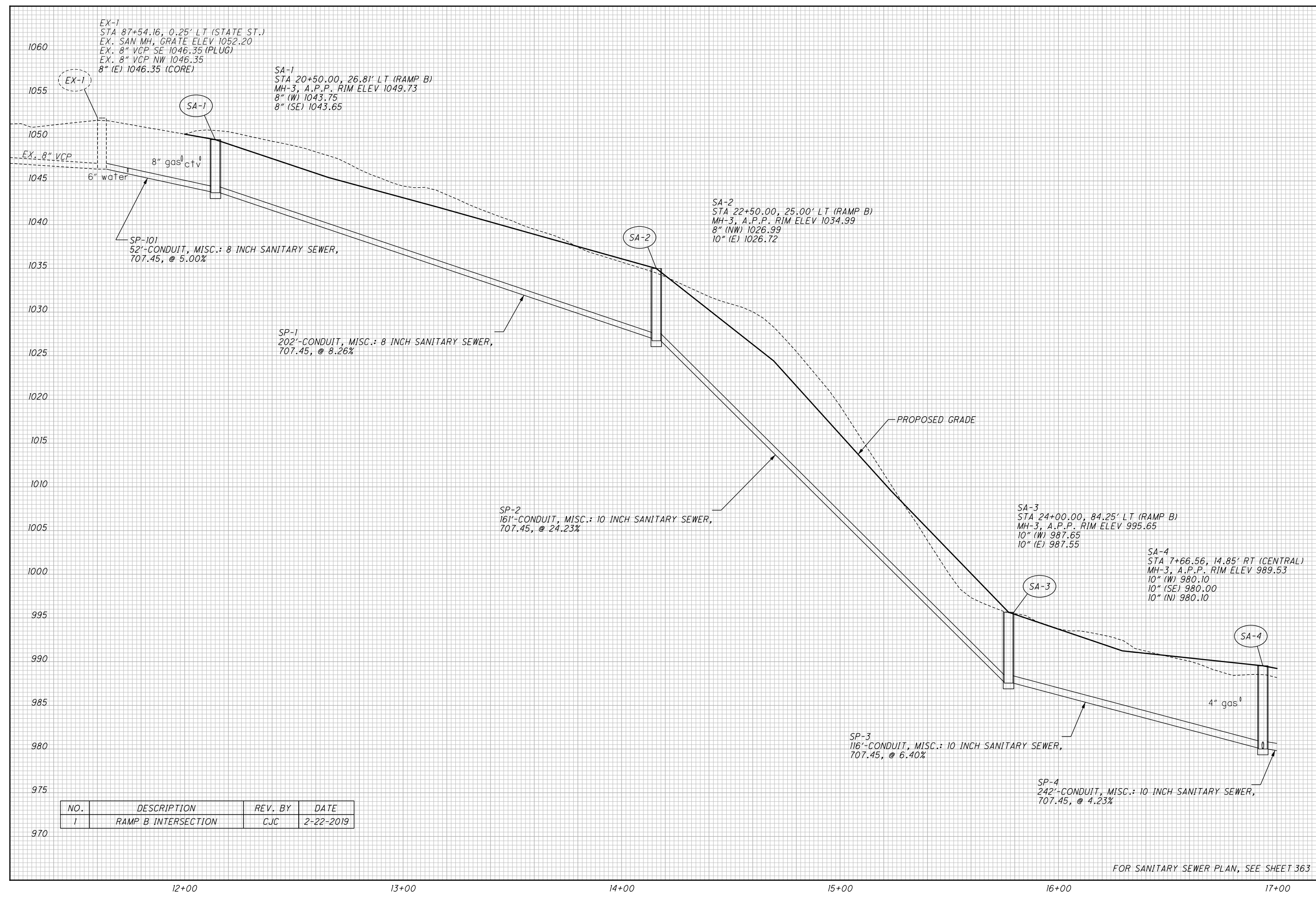
W-1  
 STA. 7+16.57, 15.50' RT. (CENTRAL)  
 6 INCH FIRE HYDRANT

W-7  
 STA. 88+05.19, 33.16' RT. (STATE)  
 6 INCH FIRE HYDRANT

— R/W & CONST. I.R. 76

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-7-2019

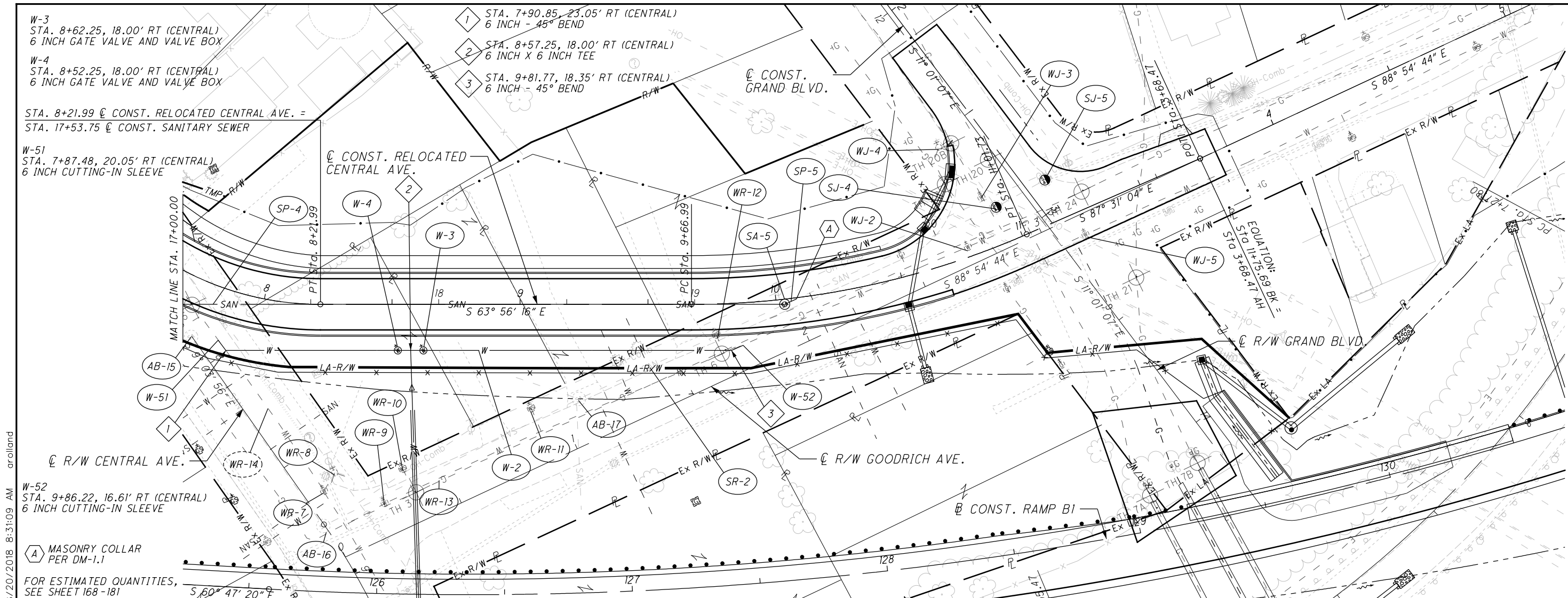
FOR PIPE PROFILES, SEE SHEET 227, 364  
 FOR ESTIMATED QUANTITIES, SEE SHEET 168 - 181



NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	CJC	2-22-2019

FOR SANITARY SEWER PLAN, SEE SHEET 363

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W-3  
STA. 8+62.25, 18.00' RT (CENTRAL)  
6 INCH GATE VALVE AND VALVE BOX

W-4  
STA. 8+52.25, 18.00' RT (CENTRAL)  
6 INCH GATE VALVE AND VALVE BOX

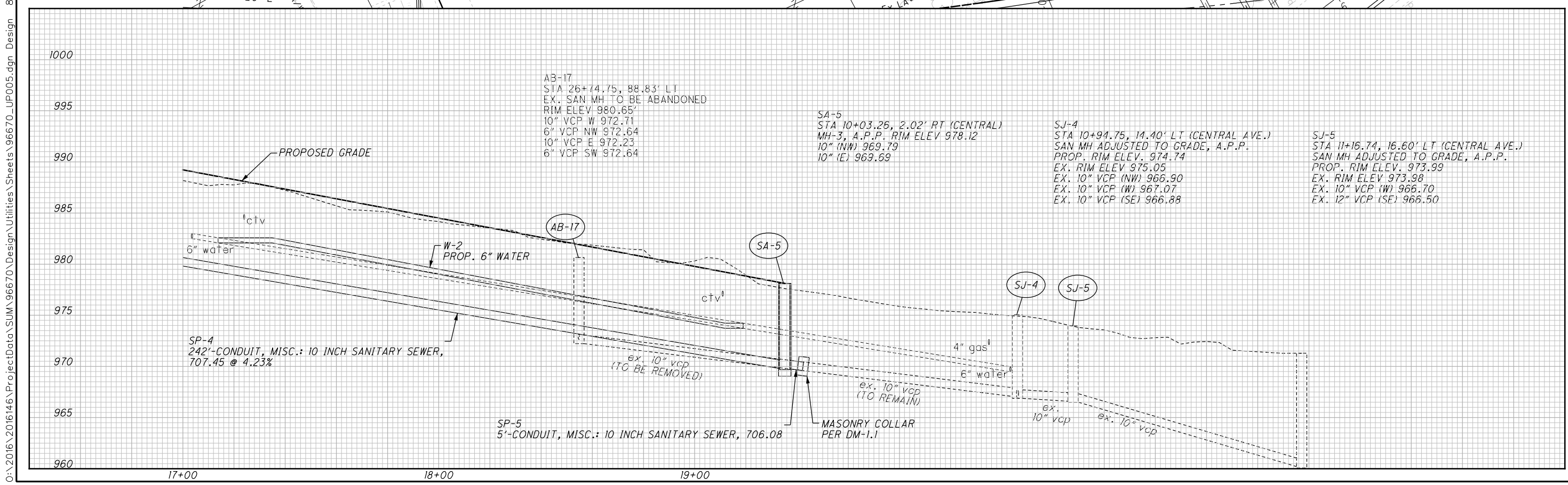
STA. 8+21.99 @ CONST. RELOCATED CENTRAL AVE. =  
STA. 17+53.75 @ CONST. SANITARY SEWER

W-51  
STA. 7+87.48, 20.05' RT (CENTRAL)  
6 INCH CUTTING-IN SLEEVE

W-52  
STA. 9+86.22, 16.61' RT (CENTRAL)  
6 INCH CUTTING-IN SLEEVE

△ MASONRY COLLAR  
PER DM-1.1

FOR ESTIMATED QUANTITIES,  
SEE SHEET 168-181

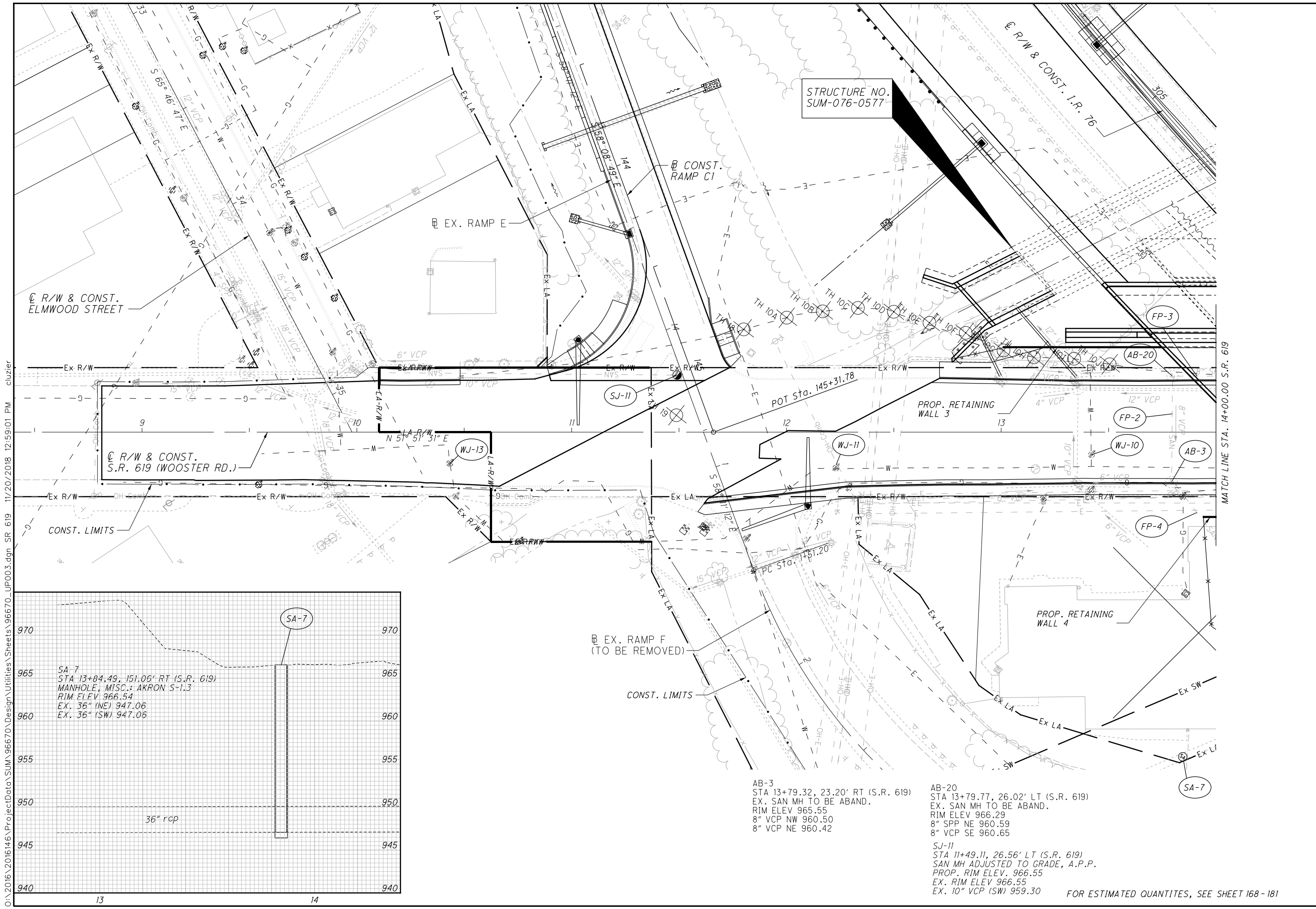


PLAN & PROFILE - WATER WORK & SANITARY SEWER  
CENTRAL AVENUE

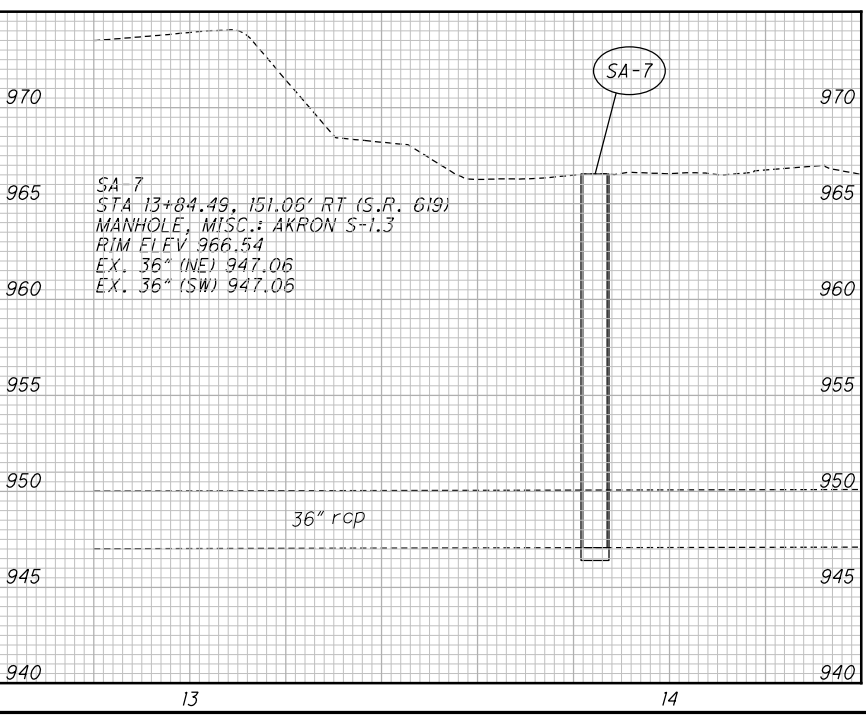
SUM-76-5.53

365  
672

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AB-3  
 STA 13+79.32, 23.20' RT (S.R. 619)  
 EX. SAN MH TO BE ABAND.  
 RIM ELEV 965.55  
 8" VCP NW 960.50  
 8" VCP NE 960.42

AB-20  
 STA 13+79.77, 26.02' LT (S.R. 619)  
 EX. SAN MH TO BE ABAND.  
 RIM ELEV 966.29  
 8" SPP NE 960.59  
 8" VCP SE 960.65

SJ-II  
 STA 11+49.11, 26.56' LT (S.R. 619)  
 SAN MH ADJUSTED TO GRADE, A.P.P.  
 PROP. RIM ELEV. 966.55  
 EX. RIM ELEV 966.55  
 EX. 10" VCP (SW) 959.30

FOR ESTIMATED QUANTITIES, SEE SHEET 168 - 181



**PLAN - WATER WORK & SANITARY SEWER**  
**S.R. 619 (WOOSTER RD.)**

**SUM-76-5.53**  
 366  
 672

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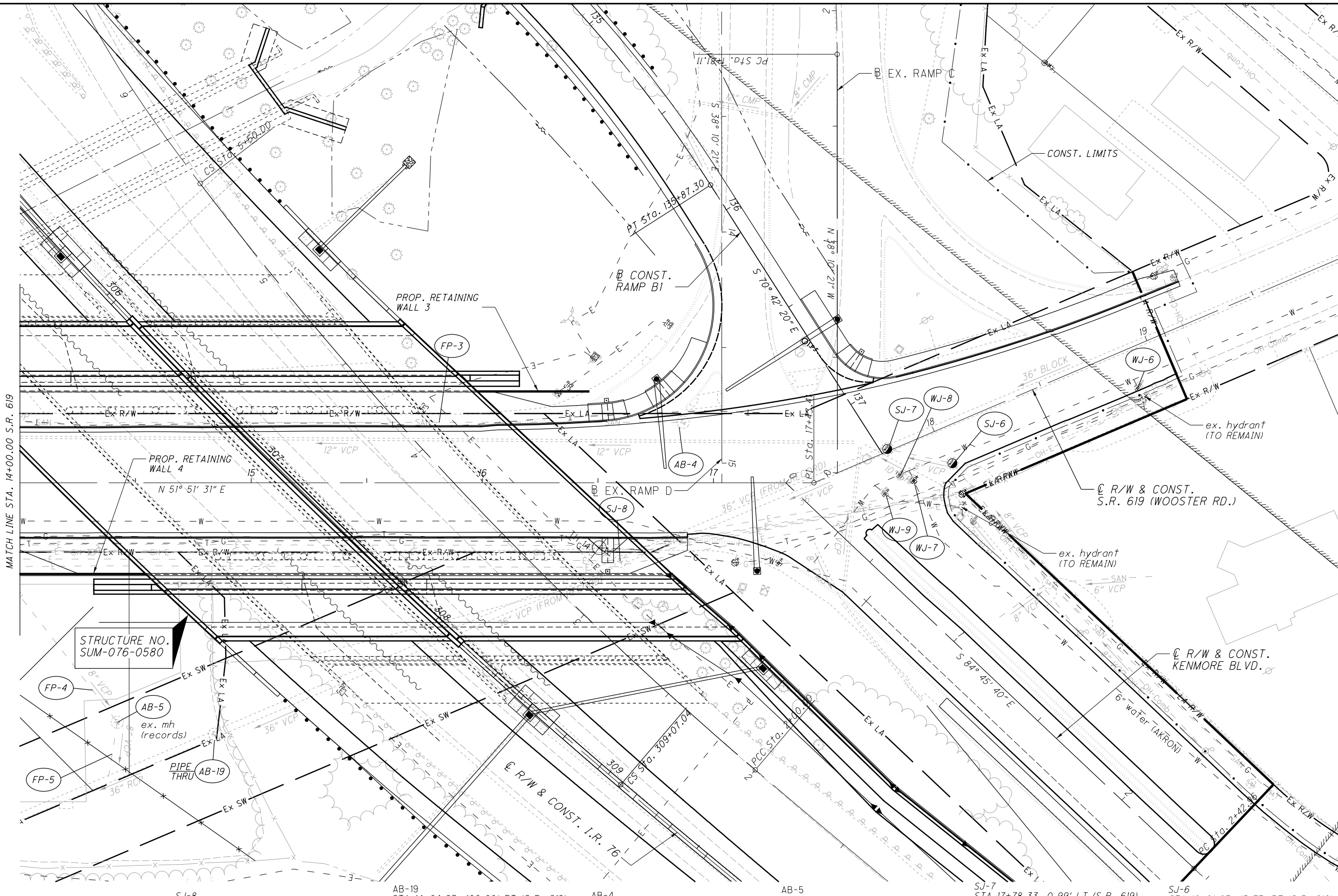
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ATR  
CHECKED  
MDG

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HORIZONTAL  
SCALE IN FEET

**PLAN - WATER WORK & SANITARY SEWER  
S.R. 619 (WOOSTER RD.)**

**SUM-76-5.53**

367  
672



STRUCTURE NO.  
SUM-076-0580

SJ-8  
STA 16+59.62, 33.94' RT (S.R. 619)  
SAN MH RECONSTRUCTED TO GRADE, A.P.P.  
PROP. RIM ELEV. 968.59  
EX. SAN MH, RIM ELEV 967.62  
EX. 36" BRICK (NE) 947.03  
EX. 36" BRICK (SW) 947.03

AB-19  
STA 14+84.23, 108.80' RT (S.R. 619)  
EX. SAN MH TO BE ABAND., A.P.P.  
(PIPE THRU)  
RIM ELEV 964.19  
EX. 36" VCP (N) 946.86  
EX. 36" VCP (SW) 946.77

AB-4  
STA 16+86.85, 26.22' LT (S.R. 619)  
EX. SAN MH TO BE ABANDONED  
RIM ELEV 967.58

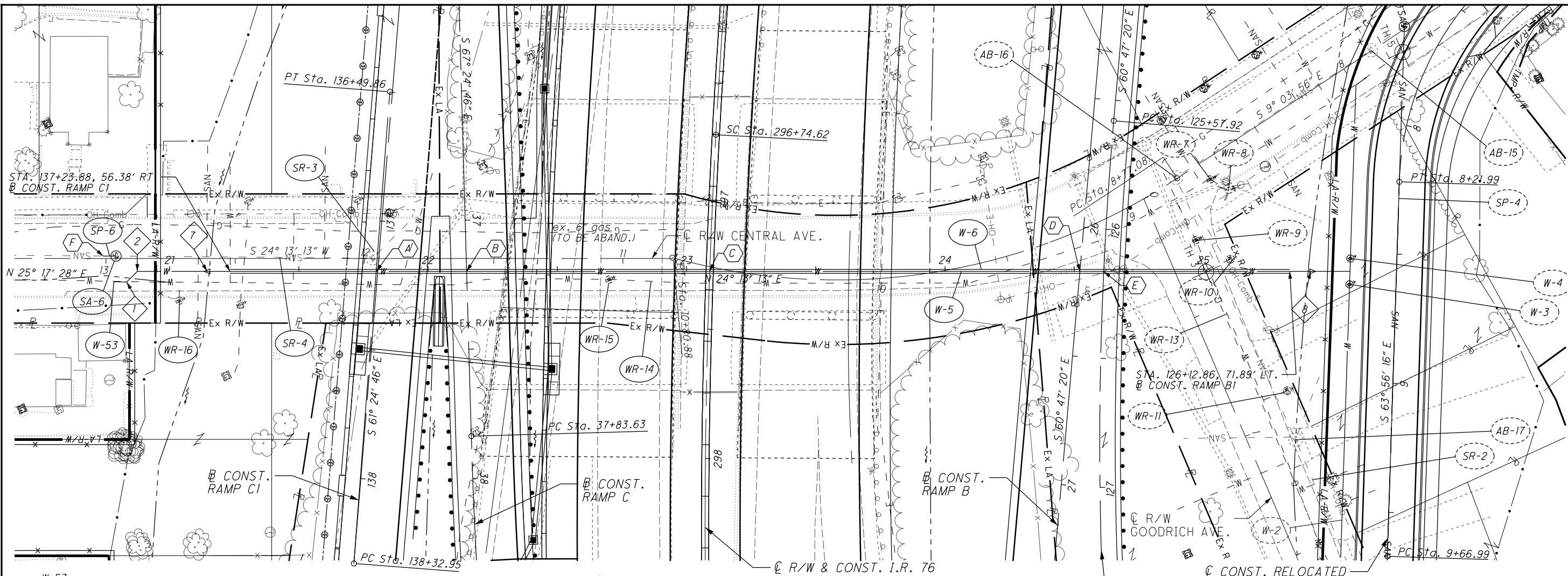
AB-5  
STA 14+42.11, 103.58' RT (S.R. 619)  
EX. SAN MH TO BE ABAND. (RECORDS)  
RIM ELEV 966.87  
8" VCP W 963.55  
8" VCP SE 959.59

SJ-7  
STA 17+78.33, 0.99' LT (S.R. 619)  
SAN MH ADJUSTED TO GRADE, A.P.P.  
PROP. RIM ELEV. 968.40  
EX. RIM ELEV 968.40  
EX. 8" SMP (NE) 962.00  
EX. 36" X (SE) 950.20  
EX. 36" BRICK (SW) 947.34  
EX. 36" BLOCK (NE) 947.34

SJ-6  
STA 18+01.83, 15.73' RT (S.R. 619)  
SAN MH ADJUSTED TO GRADE, A.P.P.  
PROP. RIM ELEV. 968.13  
EX. RIM ELEV 968.13  
EX. 8" VCP (W) 962.23  
EX. 8" VCP (SE) 962.38

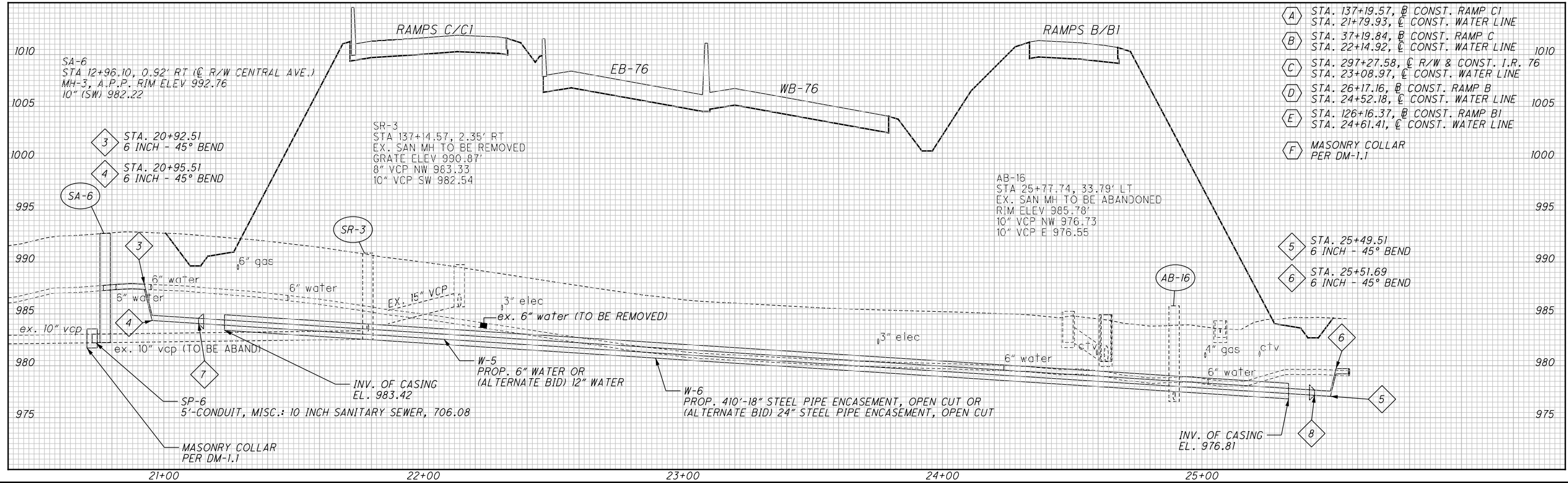
FOR ESTIMATED QUANTITIES, SEE SHEET 168-181

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- W-53 STA. 12+96.98, 9.01' LT. 6 INCH CUTTING-IN SLEEVE
- 1 STA. 12+91.98, 9.10' LT. 6 INCH - 45° BEND
- 2 STA. 12+87.88, 5.00' LT. 6 INCH - 45° BEND
- 7 STA. 12+62.00, 5.00' LT. 12" X 6" REDUCER (ALTERNATE BID)
- 8 STA. 25+43.38 12" X 6" REDUCER (ALTERNATE BID)

FOR ESTIMATED QUANTITIES, SEE SHEET 168-181



- A STA. 137+19.57, CONST. RAMP C1
- B STA. 21+79.93, CONST. WATER LINE
- C STA. 37+19.84, CONST. RAMP C
- D STA. 22+14.92, CONST. WATER LINE
- E STA. 297+27.58, R/W & CONST. I.R. 76
- F STA. 23+08.97, CONST. WATER LINE
- G STA. 26+17.16, CONST. RAMP B
- H STA. 24+52.18, CONST. WATER LINE
- I STA. 126+16.37, CONST. RAMP BI
- J STA. 24+61.41, CONST. WATER LINE
- K MASONRY COLLAR PER DM-1.1

- 5 STA. 25+49.51 6 INCH - 45° BEND
- 6 STA. 25+51.69 6 INCH - 45° BEND

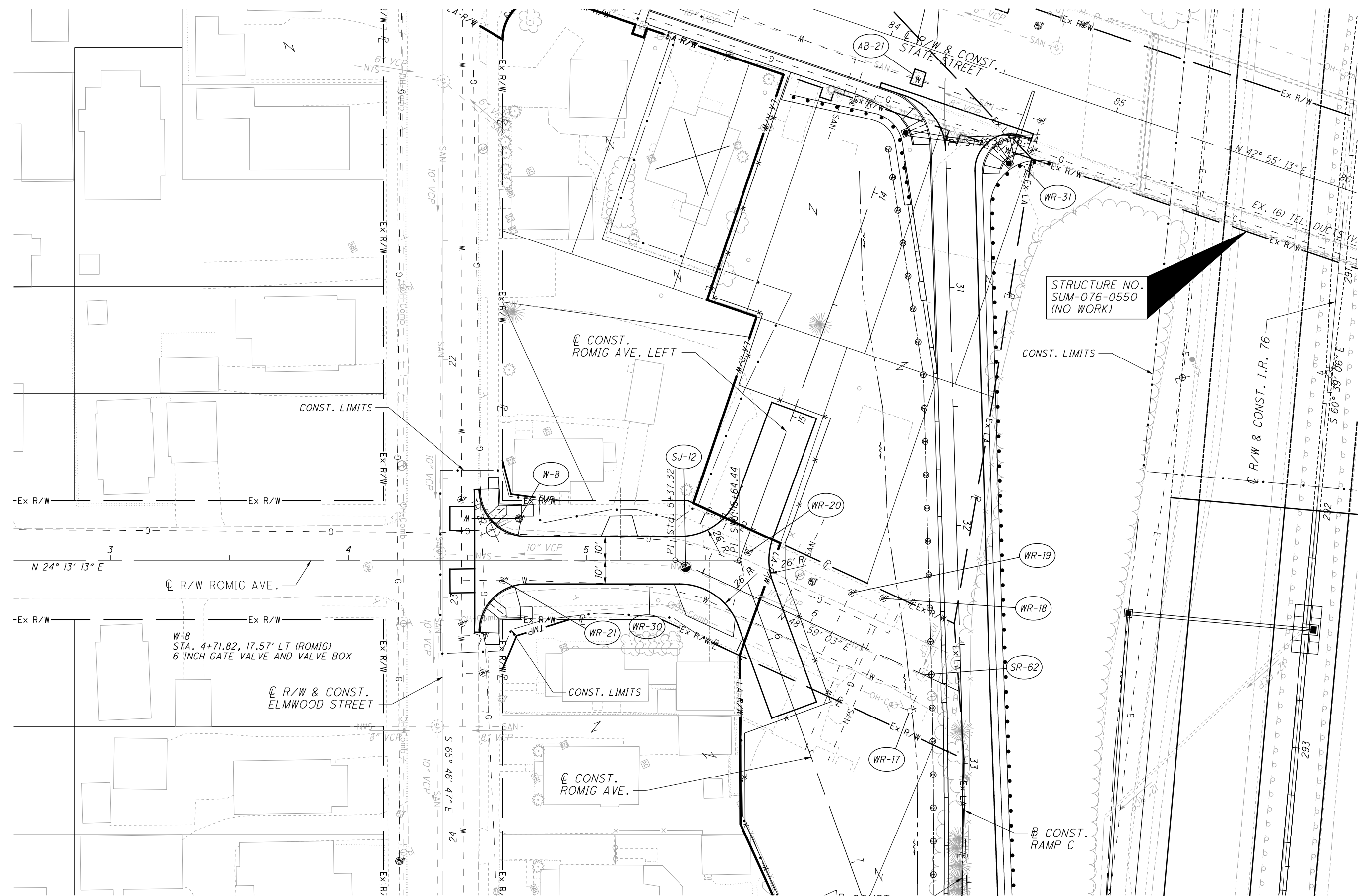


CALCULATED  
ATR  
CHECKED  
MDG

**PLAN & PROFILE - WATER WORK & SANITARY SEWER EXISTING CENTRAL AVENUE**

**SUM-76-5.53**

O:\2016\2016146\ProjectData\SUM\96670\Design\Utilities\Sheets\96670\_UP004.dgn ROMIG AVE. 9/28/2018 3:46:19 PM arolland



STRUCTURE NO.  
SUM-076-0550  
(NO WORK)

SJ-12  
STA 5+41.83, 2.82' RT (ROMIG AVE.)  
SAN MH ADJUSTED TO GRADE, A.P.P.  
PROP. RIM ELEV. 1043.31  
EX. RIM ELEV 1043.83  
EX. 10" VCP (SW) 1035.77  
EX. 10" VCP (NE) 1035.77

SR-62  
STA 6+36.07, 55.85' LT  
EX. SAN MH TO BE REMOVED  
GRATE ELEV 1044.19'  
10" VCP NW 1037.84  
10" VCP SW 1036.51

AB-21  
STA 84+16.59, 13.47' RT (STATE ST.)  
EX. SAN MH TO BE ABAND.  
RIM ELEV 1055.43  
8" VCP NE 1046.83  
10" VCP SW 1046.78

FOR ESTIMATED QUANTITIES, SEE SHEET 168-181

CALCULATED  
ATR  
CHECKED  
MDG

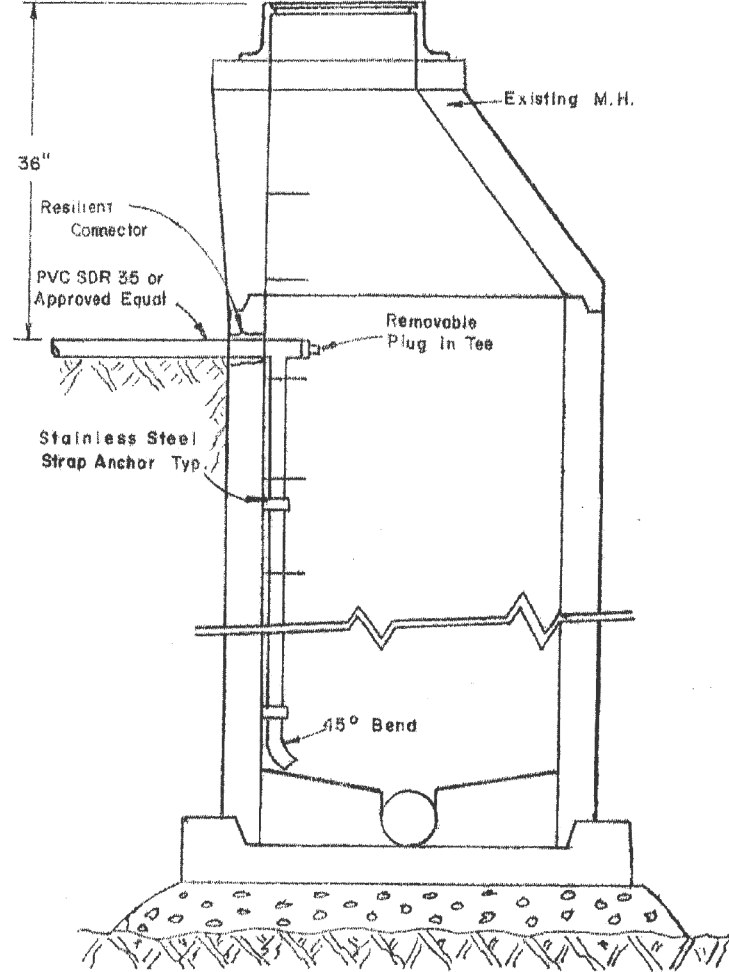
0 20 40  
HORIZONTAL  
SCALE IN FEET

PLAN - WATER WORK & SANITARY SEWER  
ROMIG AVENUE

SUM-76-5.53



NOTES:  
1. PRIOR APPROVAL REQUIRED FROM CITY ENGINEER OR HIS DESIGNEE BEFORE CONSTRUCTION.



**STANDARD FOR  
SANITARY DROP  
IN AN EXISTING  
MANHOLE**

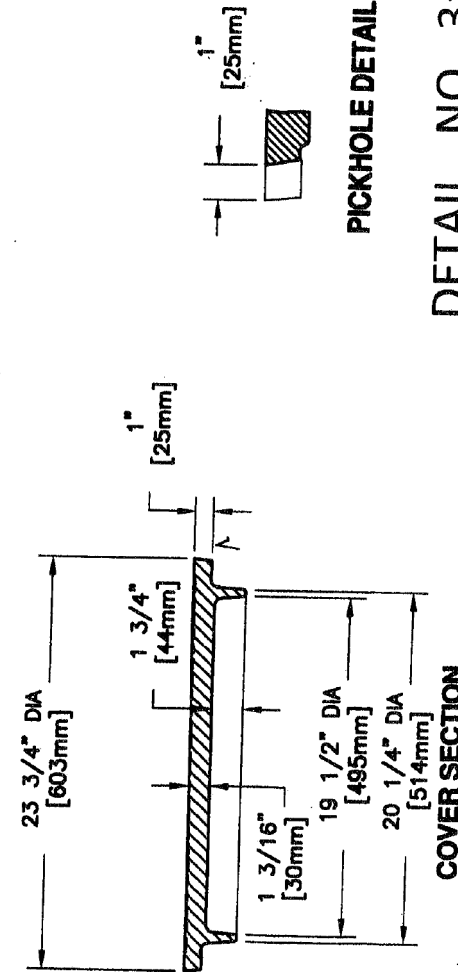
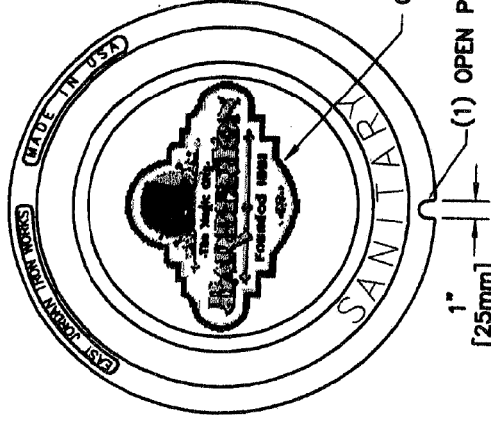
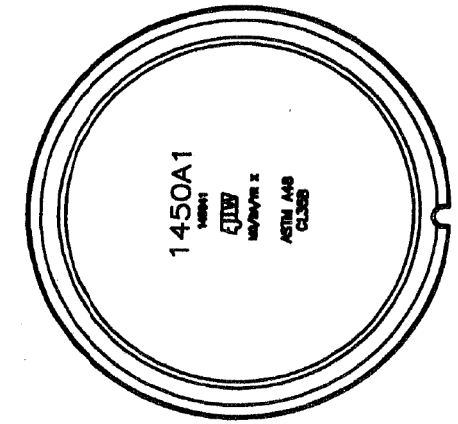
REVISIONS	DATE

**DETAIL NO. 28**

**BARBERTON**  
DEPARTMENT OF ENGINEERING  
576 W. PARK AVE  
BARBERTON, OH 44203

SCALE: No Scale    DRAWN BY: L.A.W.    DATE: 11-15-02

<b>EJW EAST JORDAN</b> IRON WORKS EST. 1983 800-626-4653 www.ejiw.com MADE IN USA	
PRODUCT NUMBER	<b>NCR07-1220A</b>
CATALOG NUMBER	<b>1450A1</b>
<b>COVER</b>	
LOAD RATING	<b>HEAVY DUTY</b>
COATING	<b>DIPPED</b>
ESTIMATED WEIGHT	COVER: 132 LBS 60kg
MATERIAL SPECIFICATION	COVER - GRAY IRON ASTM A48 CL35B
OPEN AREA	N/A
DESIGNATES MACHINE SURFACE	
DRAWN DEW	DATE: 05/30/07
LAST REVISED	DATE
REFERENCE INFORMATION	001450A1

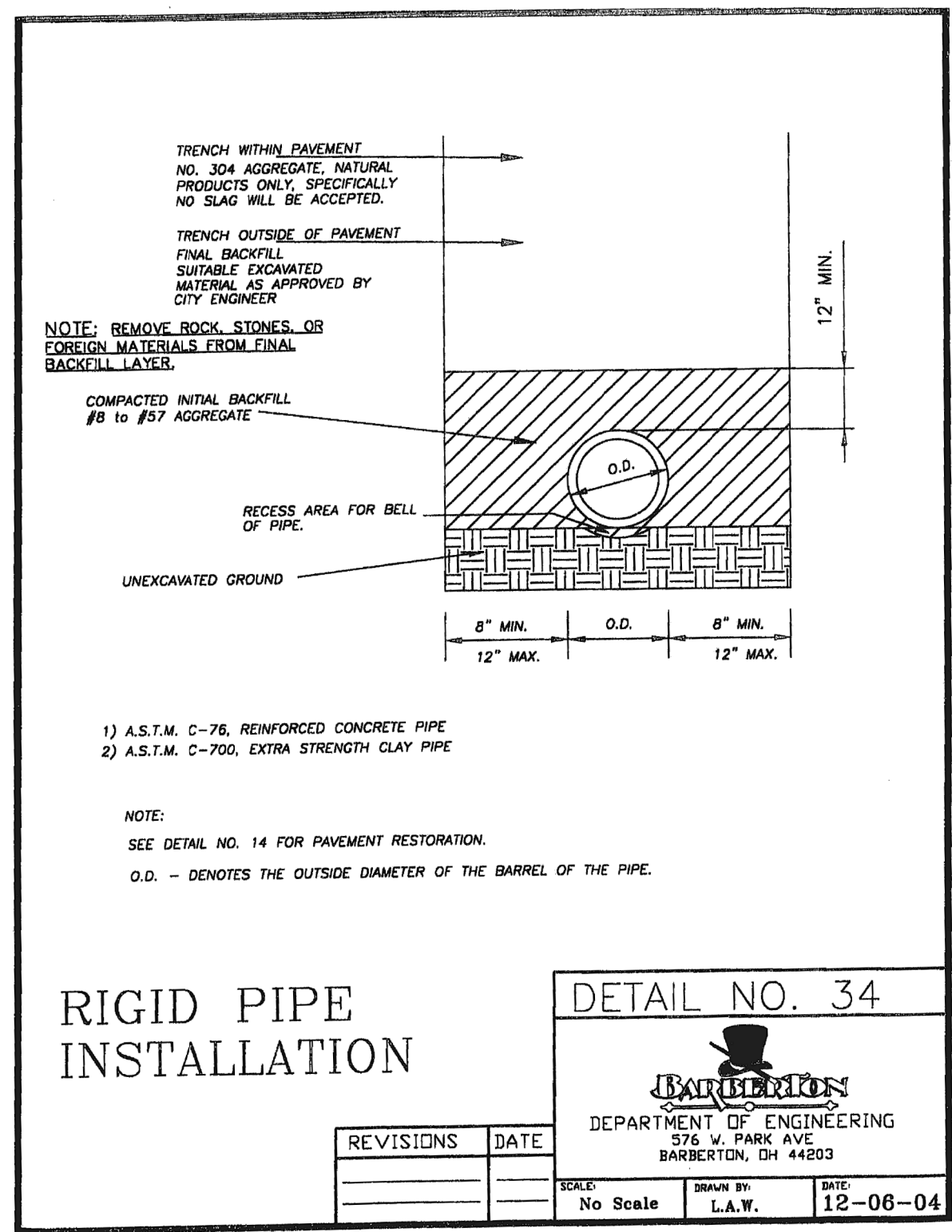
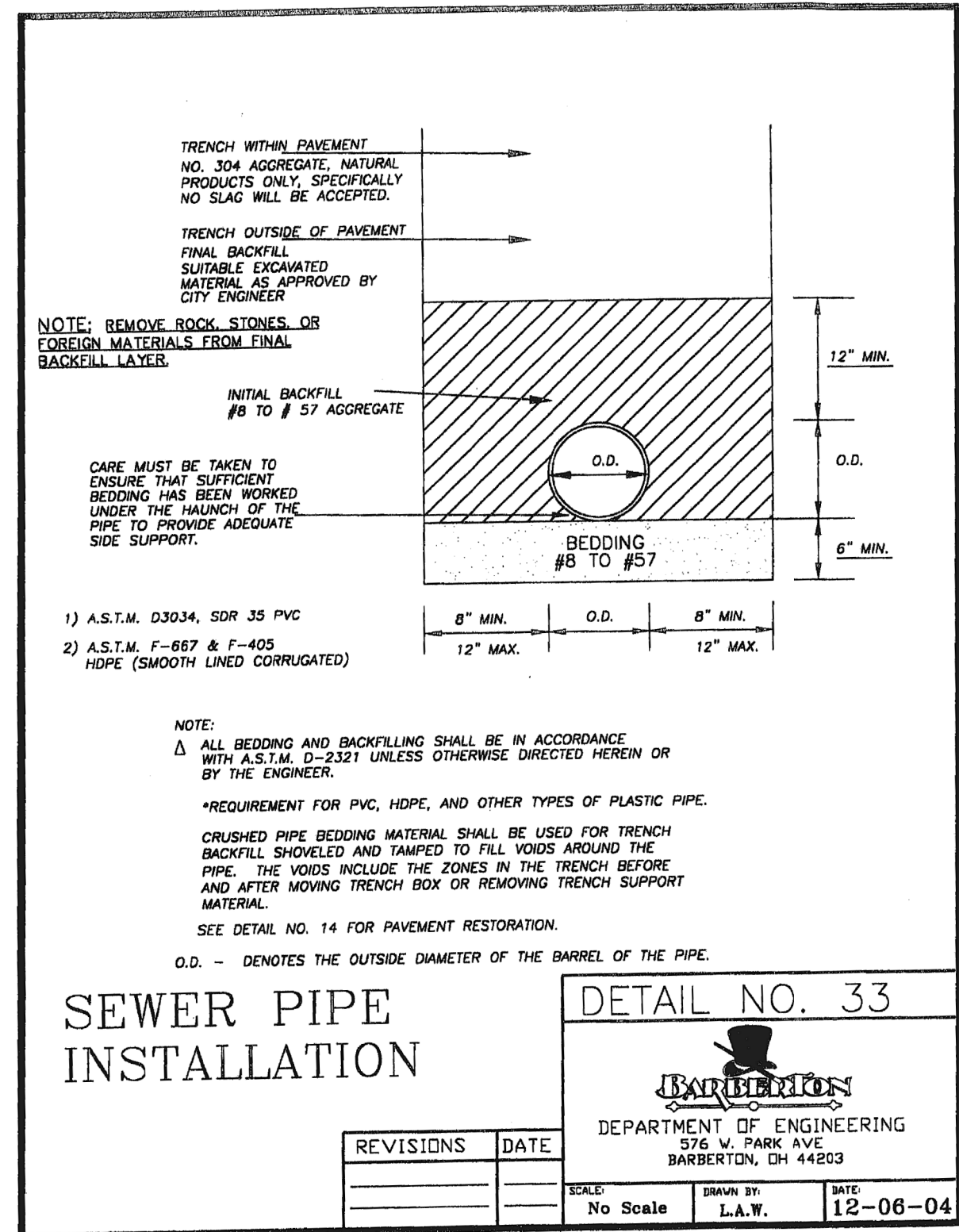


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CALCULATED  
CJC  
CHECKED  
CWL

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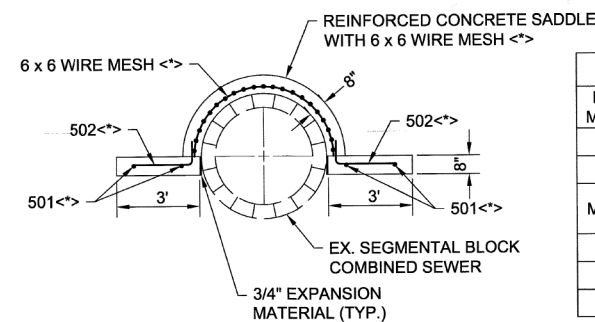
CALCULATED  
 CJC  
 CHECKED  
 CWL



SANITARY SEWER DETAILS

SUM-76-5.53

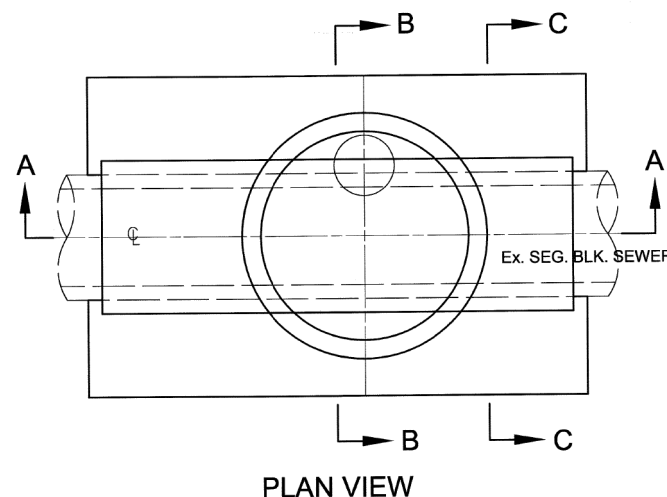
371  
 672



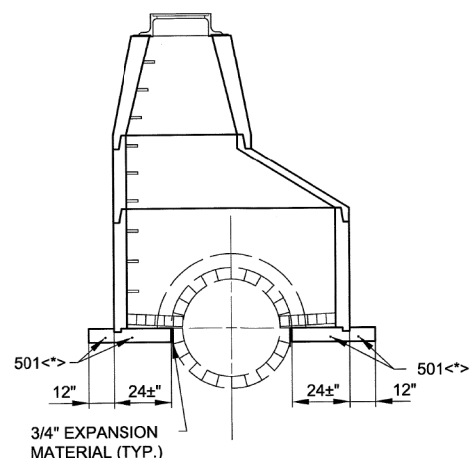
REINFORCING SCHEDULE				
BAR MARK	SIZE	QUAN.	LENGTH	POSITION
501	5/8"	4	19'-6"	LONGITUDINAL BARS IN FOOTER
502	5/8"	48		VERTICAL BARS IN FOOTER TO SADDLE
MESH	6 x 6 W2.9xW2.9	2	5'x13.6'± (2 PIECES)	MESH OVER CROWN
503	5/8"	6		CASTING PAD
504	5/8"	5		CASTING PAD

SECTION C-C

1. MANHOLE STEPS ARE TO BE REINFORCED PROPYLENE PLASTIC MANHOLE STEPS AS PER 711.31, 12" C/C.
2. THE OPENING IN THE SLAB TOP OF THE PRECAST MANHOLE IS TO BE OFF CENTER AND IS TO BE IN LINE WITH THE PROPOSED STEPS IN THE MANHOLE.
3. ALL CONCRETE IS TO BE CLASS 'C' CONCRETE.
4. ALL REINFORCING STEEL IS TO BE No. 5 EPOXY COATED STEEL BARS AND SHALL HAVE A YIELD STRENGTH OF 60,000 PSI.
5. THE MINIMUM COVER ON THE STEEL BARS IS TO BE 3" OF CONCRETE.
6. THE SADDLE SHALL BE CONSTRUCTED AS PER ITEM 509 AND ITEM 511. PAYMENT SHALL BE INCLUDED IN ITEM 562 MANHOLE VAULT ON EXISTING SEGMENTAL BLOCK SEWER. QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR IS TO CONSTRUCT THE FOOTER AND SADDLE BEFORE CUTTING THE OPENING IN THE SEGMENTAL BLOCK SEWER AND BEFORE SETTING THE VAULT SECTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
7. WHERE THE SYMBOL <-> IS SHOWN ON THIS SHEET NEXT TO THE REBAR MARK(S), THE REVIEWER SHALL REFER TO THE REINFORCING SCHEDULE ON THIS SHEET FOR REBAR DATA.

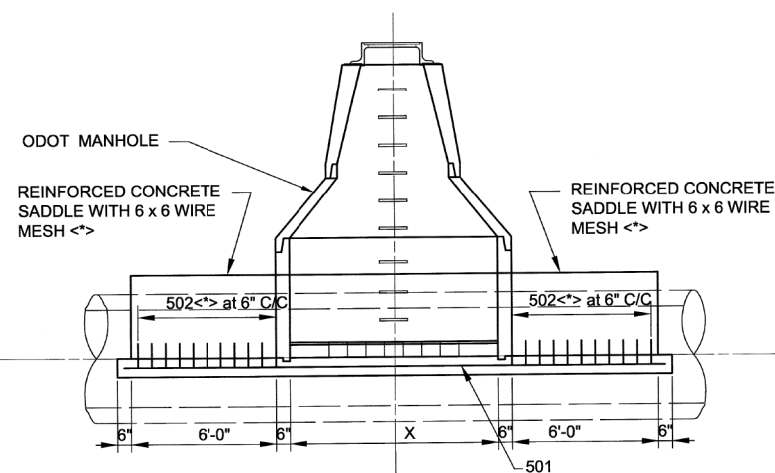


PLAN VIEW

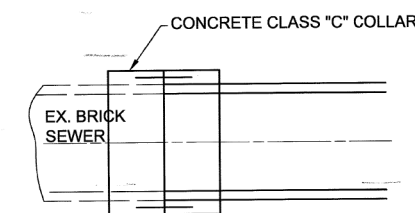


SECTION B - B

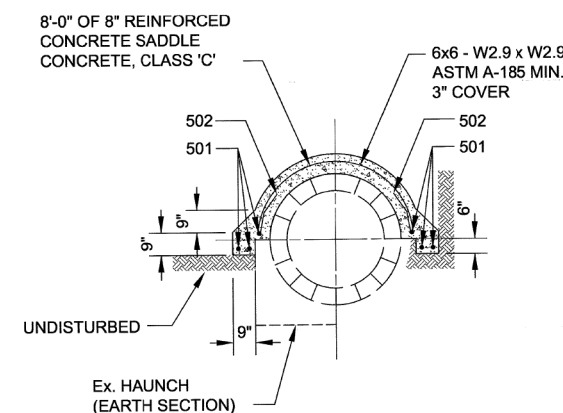
MANHOLE ON EXISTING SEGMENTAL  
BLOCK OR BRICK PIPE



SECTION A - A

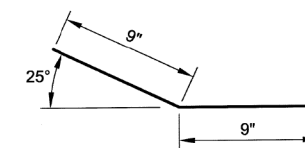


PLAN VIEW



REINFORCED CONCRETE SADDLE DETAIL

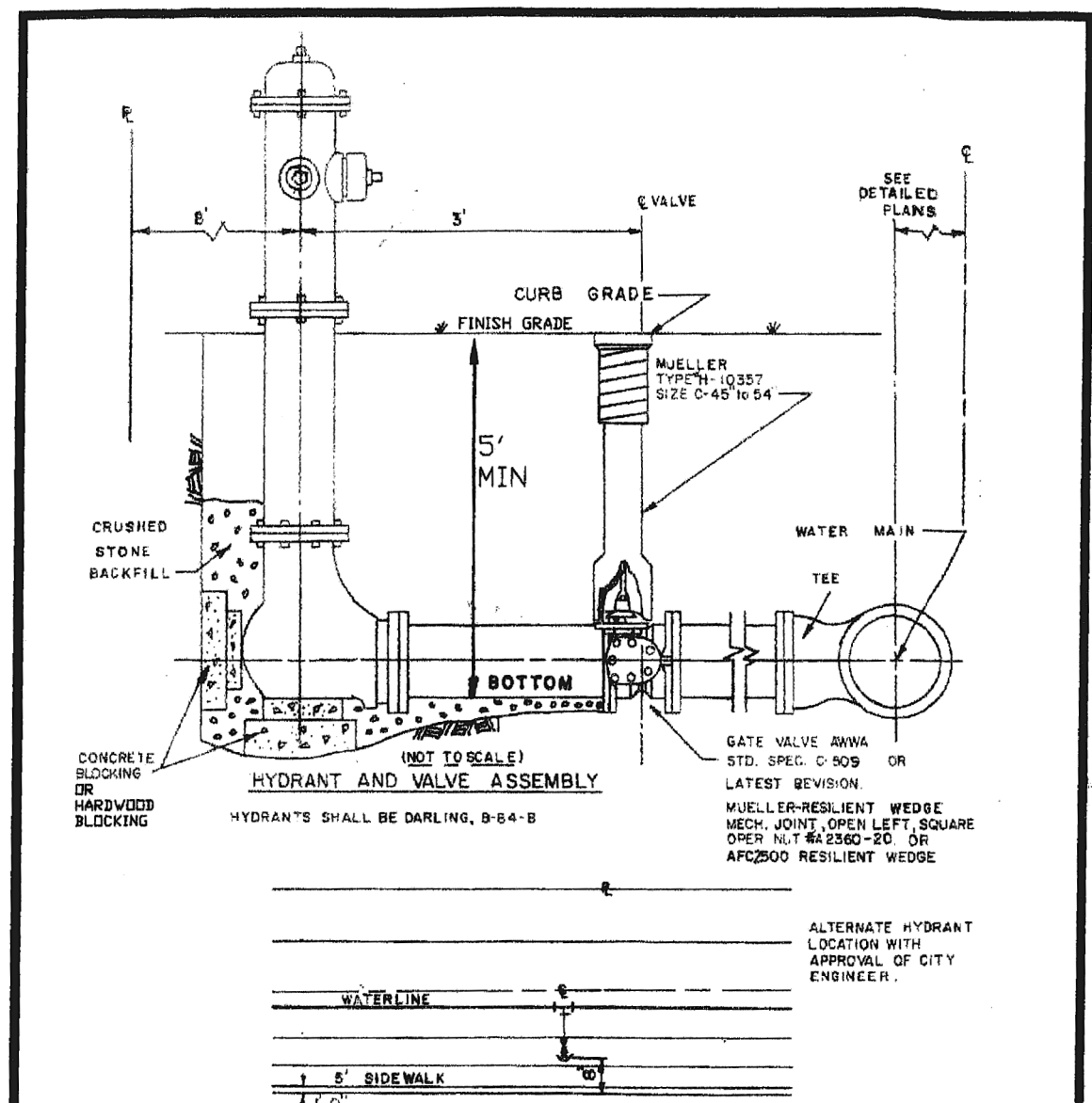
REINFORCING SCHEDULE (TWO SADDLES)							
BAR MARK	SIZE	No.	LENGTH	POSITION	TYPE	WEIGHT	SPACING
501	5/8"	12	7'-6"	LONGITUDINAL BARS NEAR SPRINGLINE	STRAIGHT	93.8 #	AS SHOWN
502	5/8"	64	1'-6"	CORNER BENT BAR, VERTICAL	BENT	100.2 #	6" C/C
			8'-0"	MESH OVER CROWN, 10'-6" WIDE		70.6 #	
						TOTAL	264.6 #



BAR 502

DO NOT SCALE - USE DIMENSIONS ONLY

CITY OF AKRON BUREAU OF ENGINEERING	CONSTRUCTION STANDARD DWG. No. <b>S - 1.3</b>
<p>DESIGN DIVISION MANAGER</p> <p>CONSTRUCTION DIVISION MANAGER</p> <p>CITY ENGINEER</p>	<p>NEW MANHOLE ON EXISTING BRICK OR SEGMENTAL BLOCK SEWER AND REINFORCED CONCRETE SADDLE DETAILS</p> <p>October 16, 2018</p> <p>REVISIONS:</p>



**TYPICAL HYDRANT LOCATION  
IN RIGHT-OF-WAY**

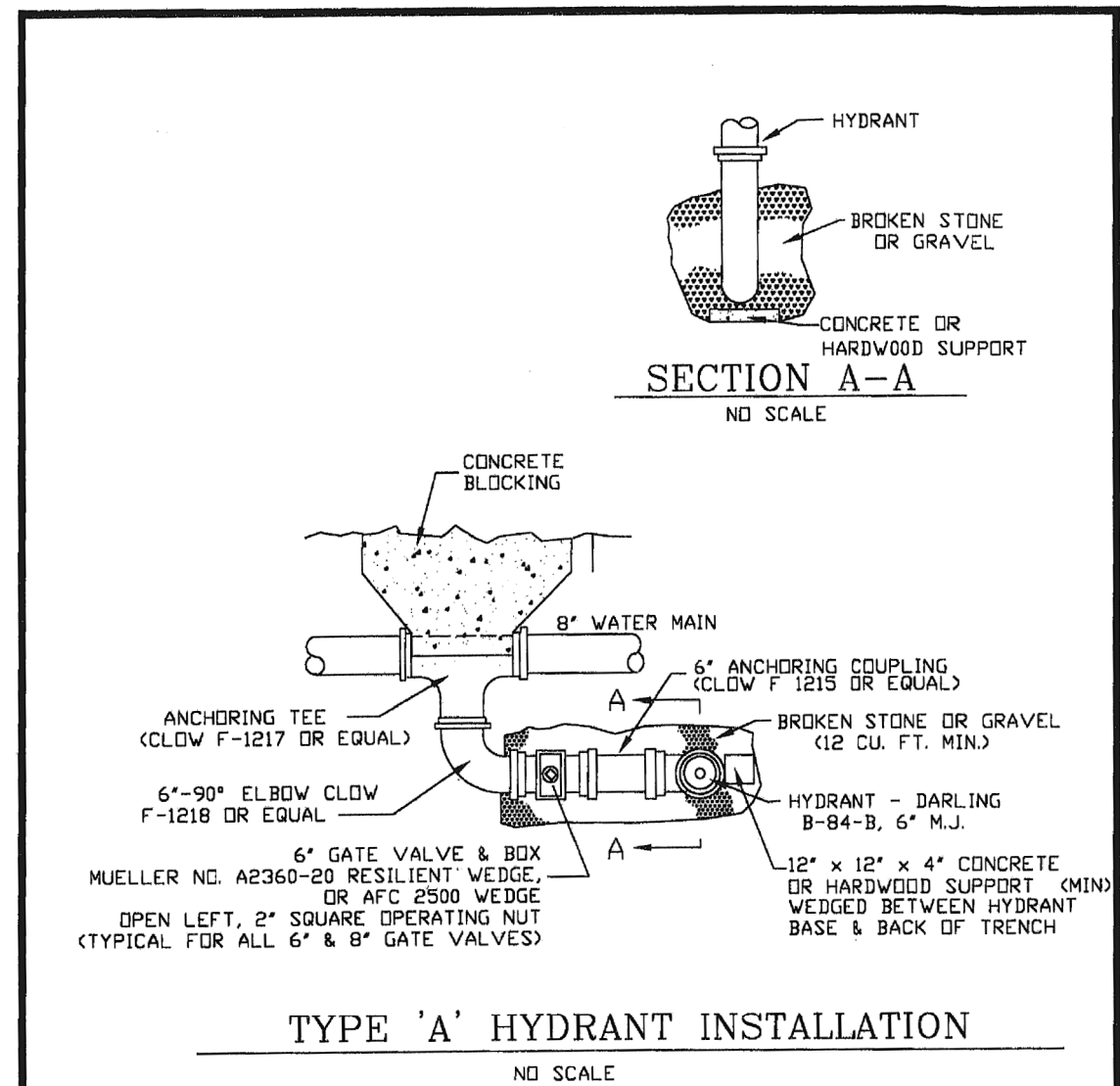
STANDARD HYDRANT AND VALVE  
SPECIFICATIONS

REVISIONS	DATE
B-2-10	

**DETAIL NO. 16**

DEPARTMENT OF ENGINEERING  
576 W. PARK AVE  
BARBERTON, OH 44203

SCALE: No Scale  
DRAWN BY: L.A.W.  
DATE: 1-09-07



**TYPE 'A' HYDRANT INSTALLATION**

NO SCALE

**DETAIL NO. 16a**

DEPARTMENT OF ENGINEERING  
576 W. PARK AVE  
BARBERTON, OH 44203

SCALE: No Scale  
DRAWN BY: L.A.W.  
DATE: 12-06-04

REVISIONS	DATE

FITTING	MINIMUM BEARING AREA ON UNDISTURBED TRENCH WALL IN FT. <sup>2</sup> *					
	SIZE OF PIPE					
	6"	8"	10", 12"	16"	20"	24"
A	0.50	0.80	1.75	3.50	5.0	7.0
B	0.90	1.60	3.50	6.25	9.75	14.0
C	2.20	5.0	7.0	12.0	19.0	27.6
D	3.20	5.80	12.8	22.7	36.0	51.0
E	2.25	4.20	9.0	16.0	25.6	36.5
F	3.20	5.80	12.8	22.7	36.0	51.0
G	2.25	4.20	9.0	16.0	25.6	36.5
THE CITY OF BARBERTON, OHIO STANDARD BLOCKING DETAIL 19						12-02-02

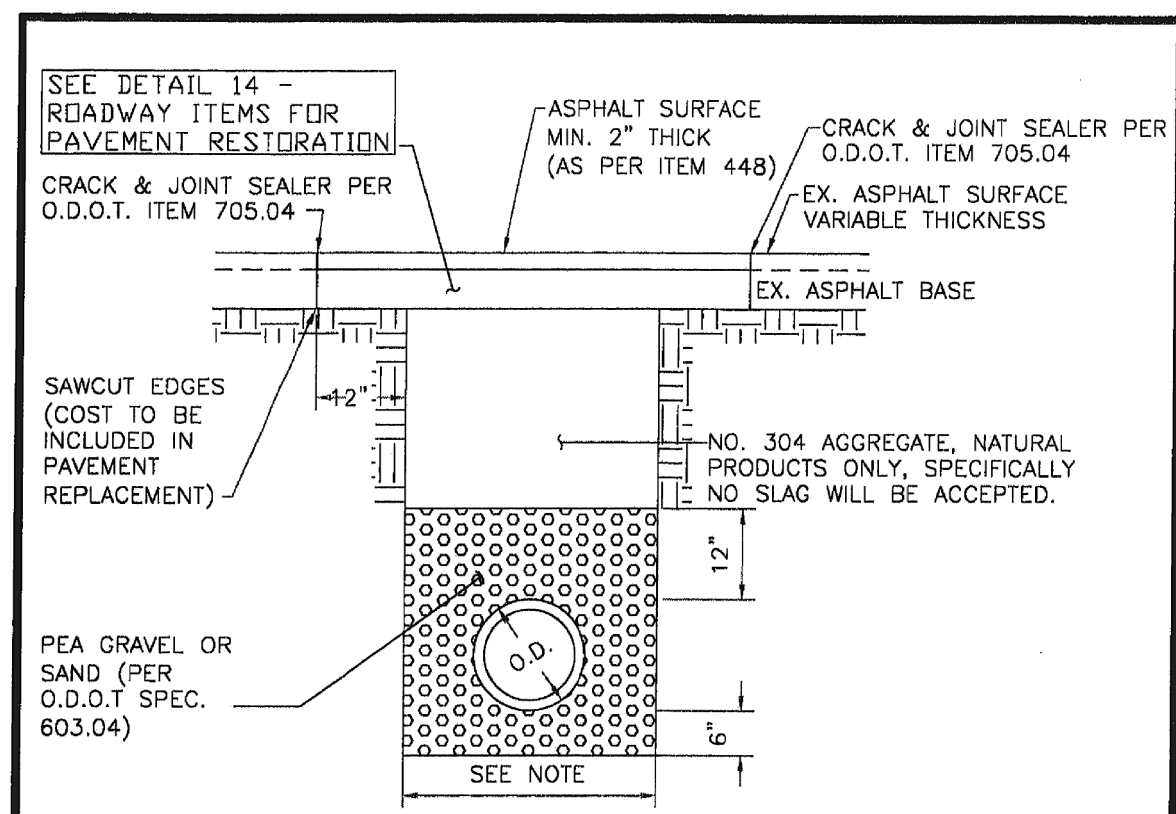
\* NOTE BASED ON AN ALLOWABLE SOIL PRESSURE OF 1.25 TONS/SQ.FT. THE CITY ENGINEER MAY INCREASE BACKING AREA FOR POOR SOIL CONDITIONS IF HE SO DETERMINES.

THRUST BLOCKING TABLE  
STANDARD BLOCKING

SCALE: No Scale DATE: 1/16/74

DETAIL NO. 19






NOTE:  
THE WIDTH OF THE TRENCH SHALL BE AT LEAST 12" AND NOT EXCEED 24" GREATER THAN THE OUTSIDE DIAMETER OF THE PIPE. THE WATERLINE SHALL BE LOCATED IN THE CENTER OF TRENCH TO ALLOW FOR A MINIMUM OF 6" CLEARANCE FROM TRENCH WALLS.  
CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL BACKFILL REQUIRED TO MAINTAIN PROPER LEVEL IN TRENCH.

**WATER MAIN**  
**TRENCH WITHIN PAVEMENT**  
SCALE: NONE

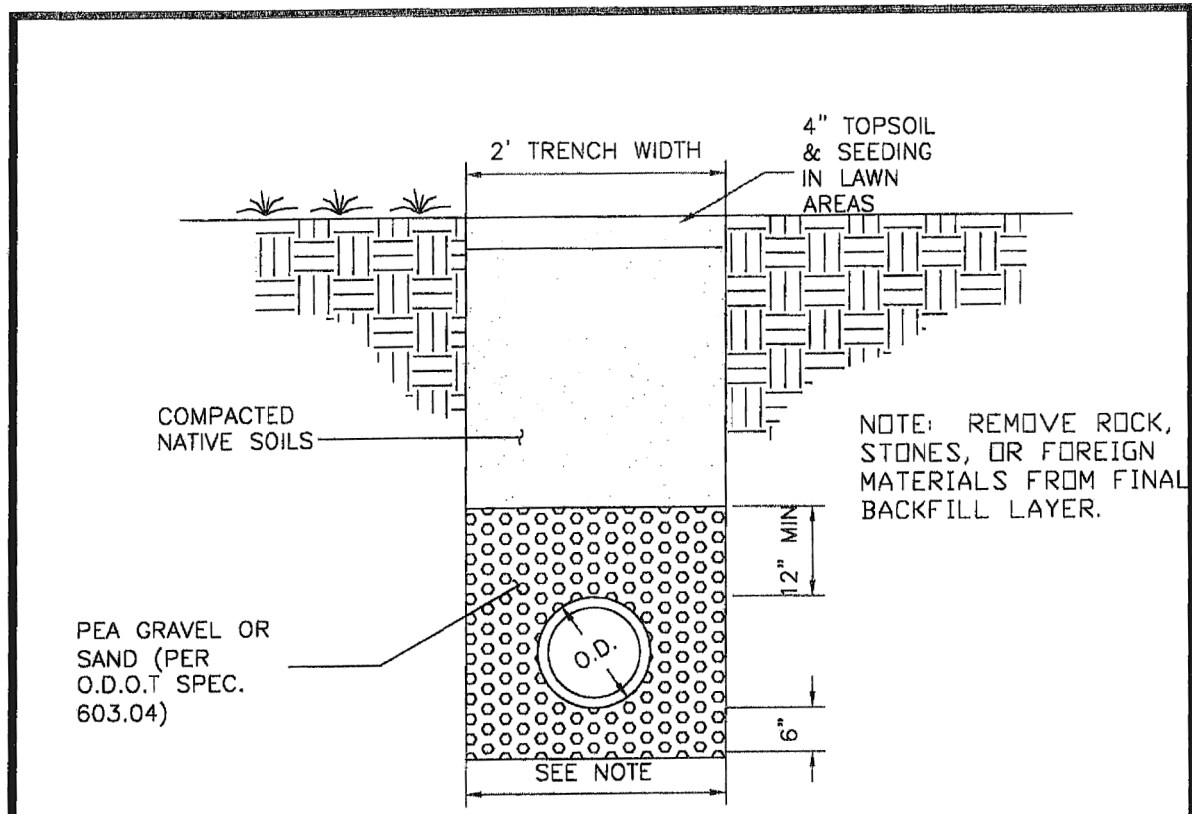
REVISIONS		DATE

**DETAIL NO. 31**



**DEPARTMENT OF ENGINEERING**  
576 W. PARK AVE  
BARBERTON, OH 44203

SCALE: No Scale	DRAWN BY: L.A.W.	DATE: 12-06-04
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NOTE:  
THE WIDTH OF THE TRENCH SHALL BE AT LEAST 12" AND NOT EXCEED 24" GREATER THAN THE OUTSIDE DIAMETER OF THE PIPE. THE WATERLINE SHALL BE LOCATED IN THE CENTER OF TRENCH TO ALLOW FOR A MINIMUM OF 6" CLEARANCE FROM TRENCH WALLS.  
CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL BACKFILL REQUIRED TO MAINTAIN PROPER LEVEL IN TRENCH.

**WATER MAIN**  
**TRENCH OUTSIDE OF RIGHT-OF-WAY**  
SCALE: NONE

REVISIONS		DATE

**DETAIL NO. 31a**

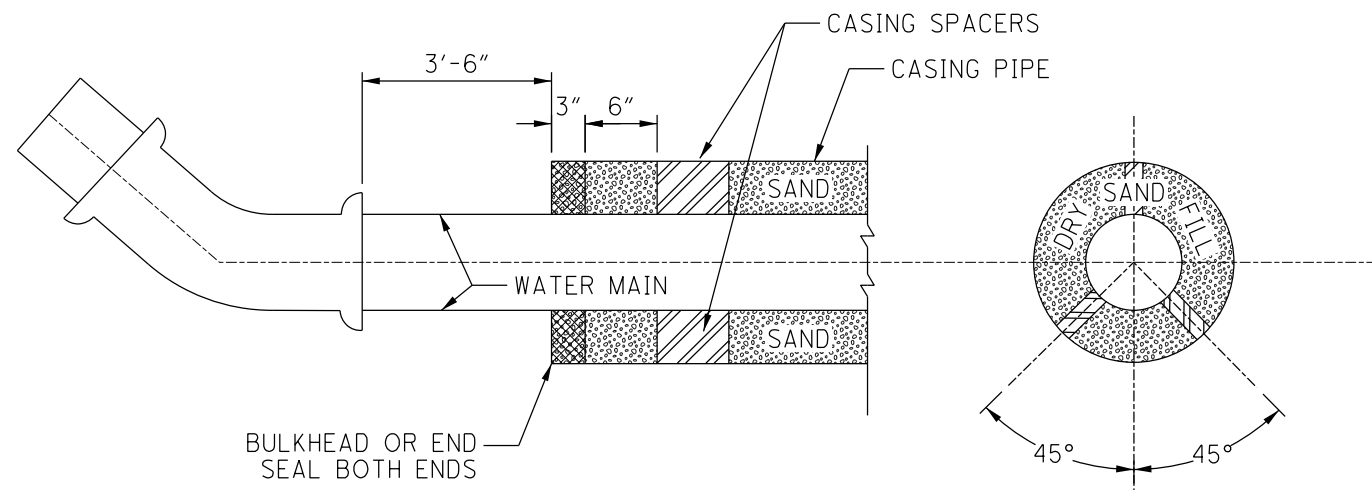


**DEPARTMENT OF ENGINEERING**  
576 W. PARK AVE  
BARBERTON, OH 44203

SCALE: No Scale	DRAWN BY: L.A.W.	DATE: 12-06-04
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NOTE: AFTER WATER MAIN HAS BEEN INSTALLED, DRY SAND SHALL BE BLOWN IN FROM BOTH END.

NOTE: STEEL CASING SLEEVE SHALL BE INSTALLED AS TO PREVENT FORMATION OF A WATERWAY UNDER THE CHANNEL BED AND WITH AN EVEN BEARING THROUGHOUT ITS LENGTH AND SLOPED TO ONE END. THE CASING PIPE JOINTS ARE TO BE WELDED WATER TIGHT.

NOTE: STEEL CASING PIPE, SPACERS, AND DRY SAND ARE TO BE INCLUDED IN UNIT PRICE BID FOR ITEM 638 - STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN

CALCULATED
CJC
CHECKED
CWL

**WATER WORK DETAILS**

**SUM - 76 - 5.53**

376
672

**ITEM 630 - REMOVAL OF MISC. TRAFFIC CONTROL ITEM, GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION**

A CONTINGENCY QUANTITY HAS BEEN PROVIDED FOR THIS WORK TO BE USED FOR REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATIONS, AS DIRECTED BY THE ENGINEER, WHEREVER NEEDED THROUGHOUT THE PROJECT. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 630 - REMOVAL OF MISC. TRAFFIC CONTROL	<u>4</u>	EACH
ITEM, GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION		

**SIGN PLACEMENT**

THE ELEVATIONS SHOWN IN THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE EXACT LOCATIONS OF SIGNS ARE TO BE STAKED. THE ENGINEER WILL REVIEW THE LOCATIONS PRIOR TO POST FABRICATION TO INSURE CLEARANCE OF DRIVES, ROADWAYS AND OTHER OBSTACLES. IF THERE ARE ANY CONFLICTS, THEY WILL BE ADJUSTED AS DIRECTED BY THE ENGINEER. UPON ACCEPTANCE OF THE LOCATIONS BY THE ENGINEER AND PRIOR TO POST FABRICATION, THE CONTRACTOR WILL VERIFY THE REQUIRED LENGTH OF THE SIGN POSTS. PAYMENT FOR THIS IS INCIDENTAL TO ALL 630 ITEMS.

**REFERENCE SIGN LOCATIONS**

THE LOCATION OF REFERENCE LOCATION SIGNS ON THE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF THE PLANNED DATE OF REFERENCE LOCATION SIGN INSTALLATION. THE ENGINEER WILL CONTACT THE DISTRICT 4 GIS COORDINATOR AT 330-786-3142 WHICH WILL LOCATE THE LONGITUDINAL POSITION OF REFERENCE LOCATION SIGNS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET REFERENCE LOCATION SIGNS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 50 FEET OF A REFERENCE LOCATION SIGN SHALL BE OMITTED.

**OBJECT MARKERS AND STRUCTURE/CULVERT IDENTIFICATION SIGNS**

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5' IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

- SUM-76-0580 (2 APPROACHES)
- SUM-76-0591 (1 APPROACH)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT

**ITEM 630 - GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN**

NO. 4 GROUND MOUNTED SIGN SUPPORTS SHALL BE SQUARE SHAPED. NO U-CHANNEL POSTS SHALL BE USED.

**ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN**

FLAT SHEET SIGNS SHALL BE RIGIDLY ATTACHED TO TRAFFIC SIGNAL MAST ARMS WITH THE SIGN CENTERED VERTICALLY WITH THE ARM, USING THE SIGN BRACKET DETAIL ON STANDARD CONSTRUCTION DRAWING TC-16.21, OR ANOTHER METHOD OF RIGID ATTACHMENT AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ENSURE THAT THE SIGN FACE IS MOUNTED PERPENDICULAR (90 DEGREES) TO THE DIRECTION OF TRAFFIC.

PAYMENT FOR "ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ALL PARTS NECESSARY TO ATTACH ONE SIGN.

**ITEM 630 - OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5, AS PER PLAN**

OSS-8

THIS INSTALLATION SHALL CONSIST OF A TC-12.30, DESIGN 5 SUPPORT POLE (28.0') WITH A TC-81.21, DESIGN 2 SIGNAL ARM (31.0') AND A TC-12.30, DESIGN 5 SIGN SUPPORT ARM (13.0'). ALL SIGNAL SUPPORT ITEMS REQUIRED BY C&MS ITEM 632 AND ALL SIGN SUPPORT ITEMS REQUIRED BY C&MS ITEM 630 SHALL BE INCLUDED AS PART OF THIS SUPPORT. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR THE FURNISHED SUPPORT, IN PLACE, COMPLETE AND ACCEPTED.

OSS-12

THIS INSTALLATION SHALL CONSIST OF A TC-12.30, DESIGN 5 SUPPORT POLE (28.0') WITH A TC-81.21, DESIGN 4 SIGNAL ARM (38.0') AND A TC-12.30, DESIGN 5 SIGN SUPPORT ARM (12.0'). ALL SIGNAL SUPPORT ITEMS REQUIRED BY C&MS ITEM 632 AND ALL SIGN SUPPORT ITEMS REQUIRED BY C&MS ITEM 630 SHALL BE INCLUDED AS PART OF THIS SUPPORT. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR THE FURNISHED SUPPORT, IN PLACE, COMPLETE AND ACCEPTED.

**ITEM 630 - OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 9, AS PER PLAN**

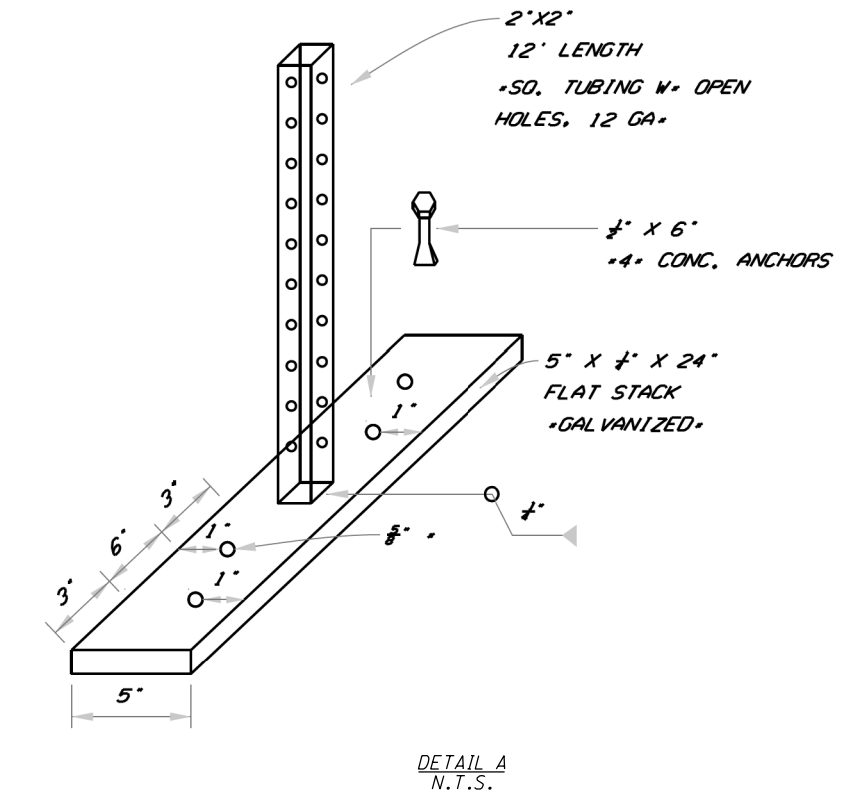
OSS-10

THIS INSTALLATION SHALL CONSIST OF A TC-12.30, DESIGN 9 SUPPORT POLE (30.0') WITH A TC-81.21, DESIGN 11 SIGNAL ARM (41.0') AND A TC-12.30, DESIGN 9 SIGN SUPPORT ARM (22.0'). ALL SIGNAL SUPPORT ITEMS REQUIRED BY C&MS ITEM 632 AND ALL SIGN SUPPORT ITEMS REQUIRED BY C&MS ITEM 630 SHALL BE INCLUDED AS PART OF THIS SUPPORT. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR THE FURNISHED SUPPORT, IN PLACE, COMPLETE AND ACCEPTED.

**ITEM 630 - SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN**

THE CONTRACTOR SHALL USE CONCRETE BARRIER MOUNTED SIGN SUPPORTS, AS PER DETAIL A BELOW.

THE ABOVE WORK SHALL BE PAID FOR UNDER ITEM 630 - SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN AND SHALL INCLUDE ALL LABOR, BRACKETS, EQUIPMENT, AND MATERIALS REQUIRED TO COMPLETE THE WORK.



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TRAFFIC CONTROL GENERAL NOTES

SUM-76-5.53



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Table with columns: SHEETS (164-395), PARTICIPATION (01/IMS/PV, 10/IMS/PV, 02/IMS/BR, 11/IMS/BR), ITEM, ITEM EXT., GRAND TOTAL, UNIT, DESCRIPTION, SEE SHEET NO., CALCULATED, CHECKED, TJR.

NO. DESCRIPTION REV. BY DATE
1 RAMP B INTERSECTION, QUANTITY UPDATE AKF 2-22-2019

TRAFFIC CONTROL GENERAL SUMMARY

SUM-76-5.53

ITEM 621 - RAISED PAVEMENT MARKER SUBSUMMARY

ROADWAY	SHEET NO.	STATION TO STATION	SIDE	INTERVAL	1-WAY WHITE	2-WAY WH/RED	2-WAY YEL/RED	RAISED PAVEMENT MARKER REMOVED
I.R. 76								
	413	292+00	293+00	LT	120	1		
		292+00	293+00	LT	120	1		
		292+00	293+00	RT	120	1		
		292+00	293+00	RT	120	1		
	414	293+00	298+00	LT	120	4		
		293+00	298+00	LT	120	4		
		293+00	298+00	RT	120	4		
		293+00	298+00	RT	120	4		
	415	298+00	303+00	LT	120	4		
		298+00	303+00	LT	120	4		
		298+00	303+00	RT	120	4		
		298+00	303+00	RT	120	4		
		301+12	303+00	LT	40		5	
		301+12	303+00	LT	40		5	
		298+39	301+94	RT	40		10	
	416	303+00	308+00	LT	120	4		
		303+00	308+00	LT	120	4		
		303+00	308+00	RT	120	5		
		303+00	308+00	RT	120	5		
		303+00	308+00	LT	40		12	
		303+00	308+00	LT	40		12	
	417	308+00	312+28	LT	120	4		
		308+00	312+28	LT	120	4		
		308+00	312+28	RT	120	3		
		308+00	312+28	RT	120	3		
		308+00	308+55	LT	40		2	
		308+00	308+55	LT	40		1	
RAMP C								
	423	31+00	35+00	LT	80		5	
	414	35+00	37+91	LT	80		4	
	414	35+34	37+20	RT	40		5	
RAMP C1								
	414	135+36	137+19	LT	40		4	
		136+00	138+00	CEN	80	3		
	424	138+00	140+00	LT	80		2	
		138+00	140+00	CEN	80	2		
		140+00	144+00	LT	40		9	
		140+00	144+00	CEN	40		10	
	432	144+00	144+50	LT	40		2	
		144+00	144+50	CEN	40		1	
RAMP B								
	415	29+00	29+94	RT	80		1	
	426	24+00	25+00	RT	40		2	
	426	25+00	29+00	RT	80		5	
	426	27+10	28+36	CEN	40	4		
	426	24+00	25+00	RT	40	2		
	426	24+00	25+00	LT	40	2		
	426	25+00	27+10	RT	80	2		
	425	21+00	24+00	LT	40	7		
	425	21+00	24+00	RT	40	7		
	425	21+00	24+00	RT	40		7	
	431	20+47	21+00	LT	40	2		
	431	20+47	21+00	RT	40	2		
	431	20+47	21+00	RT	40		2	
RAMP B1								
	426	127+09	128+35	RT	40	3		
		125+00	129+00	CEN	80	5		
	427	129+00	136+00	RT	80		9	
TOTALS					78	97	49	
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY					224		110	

CALCULATED  
SLB  
CHECKED  
TJR

RAISED PAVEMENT MARKER SUBSUMMARY

SUM - 76 - 5.53

379  
672

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SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	646	646	646	646	646	646	646	646	646	646	646													
			EDGE LINE, 6", WHITE	EDGE LINE, 6", YELLOW		LANE LINE, 4"	LANE LINE, 6"	CENTER LINE, DOUBLE SOLID	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 12"	STOP LINE	CROSSWALK LINE	LANE ARROW	WRONG WAY ARROW	DOTTED LINE, 6", WHITE	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
			FROM	TO																									
410	EW	I.R. 76	273+00	278+00	RT	500																							
410	EW	I.R. 76	273+00	276+00	LT	300																							
410	EY	I.R. 76	273+00	278+00	RT		500																						
410	EY	I.R. 76	273+00	278+00	LT		500																						
410	LL	I.R. 76	273+00	278+00	RT				500																				
410	LL	I.R. 76	273+00	278+00	RT				500																				
410	LL	I.R. 76	273+00	278+00	LT				500																				
410	LL	I.R. 76	273+00	278+00	LT				500																				
410	CH	I.R. 76	276+00	278+00	LT						200																		
410	DW	I.R. 76	276+25	278+00	RT																					175			
410	DW	I.R. 76	273+00	276+00	LT																					300			
411	EW	I.R. 76	278+00	283+00	RT	500																							
411	EW	I.R. 76	281+52	283+00	LT	148																							
411	EY	I.R. 76	278+00	283+00	RT		500																						
411	EY	I.R. 76	278+00	283+00	LT		500																						
411	LL	I.R. 76	278+00	283+00	RT				500																				
411	LL	I.R. 76	278+00	283+00	RT				500																				
411	LL	I.R. 76	278+00	283+00	LT				500																				
411	LL	I.R. 76	278+00	283+00	LT				500																				
411	CH	I.R. 76	281+31	283+00	RT						169																		
411	CH	I.R. 76	281+31	283+00	RT						169																		
411	CH	I.R. 76	278+00	281+52	LT						352																		
411	DW	I.R. 76	278+00	281+31	RT																					331			
412	EW	I.R. 76	283+00	283+85	RT	85																							
412	EW	I.R. 76	283+85	288+00	RT	415																							
412	EW	I.R. 76	283+00	288+00	LT	500																							
412	EY	I.R. 76	283+00	288+00	RT		500																						
412	EY	I.R. 76	283+00	288+00	LT		500																						
412	LL	I.R. 76	283+00	288+00	RT				500																				
412	LL	I.R. 76	283+00	288+00	RT				500																				
412	LL	I.R. 76	283+00	288+00	LT				500																				
412	LL	I.R. 76	283+00	288+00	LT				500																				
412	CH	I.R. 76	283+00	283+85	RT						85																		
412	CH	I.R. 76	283+00	283+85	RT						85																		
413	EW	I.R. 76	288+00	293+00	RT	500																							
413	EW	I.R. 76	288+00	293+00	LT	500																							
413	EY	I.R. 76	288+00	293+00	RT		500																						
413	EY	I.R. 76	288+00	293+00	LT		500																						
413	LL	I.R. 76	288+00	293+00	RT				500																				
413	LL	I.R. 76	288+00	293+00	RT				500																				
413	LL	I.R. 76	288+00	293+00	LT				500																				
413	LL	I.R. 76	288+00	293+00	LT				500																				
TOTAL						7448		8000		1060		806																	
TOTAL MILES						1.42		1.52																					
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY						1.42		1.52		1060		806																	

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SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	646	646	646	646	646	646	646	646	646	646	646														
			EDGE LINE, 6", WHITE	EDGE LINE, 6", YELLOW		LANE LINE, 4"	LANE LINE, 6"	CENTER LINE, DOUBLE SOLID	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 12"	STOP LINE	CROSSWALK LINE	LANE ARROW	WRONG WAY ARROW	DOTTED LINE, 6", WHITE	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
			FROM	TO		FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	FT													
414	EW	I.R. 76	293+00	298+00	RT	500																								
414	EW	I.R. 76	293+00	298+00	LT	500																								
414	EY	I.R. 76	293+00	298+00	RT		500																							
414	EY	I.R. 76	293+00	298+00	LT		500																							
414	LL	I.R. 76	293+00	298+00	RT				500																					
414	LL	I.R. 76	293+00	298+00	RT				500																					
414	LL	I.R. 76	293+00	298+00	LT				500																					
414	LL	I.R. 76	293+00	298+00	LT				500																					
414	EW	RAMP C	37+20	37+91	CEN	71																								
414	EY	RAMP C	35+00	37+91	LT		291																							
414	CH	RAMP C	35+34	37+20	RT/CEN						186																			
414	EW	RAMP C1	135+00	138+00	LT/CEN	300																								
414	EY	RAMP C1	137+19	138+00	LT		81																							
414	CH	RAMP C1	135+36	137+19	LT						183																			
415	EW	I.R. 76	298+00	298+39	RT	39																								
415	EW	I.R. 76	298+00	303+00	RT	500																								
415	EW	I.R. 76	298+00	301+12	LT	312																								
415	EY	I.R. 76	298+00	298+39	RT		39																							
415	EY	I.R. 76	298+00	303+00	RT		500																							
415	EY	I.R. 76	298+00	303+00	LT		500																							
415	LL	I.R. 76	298+00	303+00	RT				500																					
415	LL	I.R. 76	298+00	303+00	RT				500																					
415	LL	I.R. 76	298+00	303+00	LT				500																					
415	LL	I.R. 76	298+00	303+00	LT				500																					
415	CH	I.R. 76	298+39	302+94	RT						455																			
415	CH	I.R. 76	298+39	302+94	RT						455																			
415	CH	I.R. 76	301+12	303+00	LT						188																			
415	DW	I.R. 76	301+94	303+00	RT												106													
415	EW	RAMP B	29+00	31+76	CEN	276																								
415	EY	RAMP B	29+00	29+94	RT		94																							
415	CH	RAMP B	29+94	31+76	RT						182																			
416	EW	I.R. 76	303+00	308+00	RT	500																								
416	EW	I.R. 76	303+00	308+00	LT	500																								
416	EY	I.R. 76	303+00	308+00	RT		500																							
416	EY	I.R. 76	303+00	308+00	LT		500																							
416	LL	I.R. 76	303+00	308+00	RT				500																					
416	LL	I.R. 76	303+00	308+00	RT				500																					
416	LL	I.R. 76	303+00	308+00	LT				500																					
416	LL	I.R. 76	303+00	308+00	LT				500																					
416	CH	I.R. 76	303+00	308+00	LT						500																			
416	CH	I.R. 76	303+00	308+00	LT						500																			
416	DW	I.R. 76	303+00	308+00	RT												500													
TOTAL							7003		6000			2649					606													
TOTAL MILES							1.33		1.14																					
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							1.33		1.14			2649					606													









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SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	646	646	646	646	646	646	646	646	646	646																	
			EDGE LINE, 6", WHITE	EDGE LINE, 6", YELLOW		LANE LINE, 4"	LANE LINE, 6"	CENTER LINE, DOUBLE SOLID	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 12"	STOP LINE	CROSSWALK LINE	LANE ARROW	WRONG WAY ARROW	DOTTED LINE, 6", WHITE	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
			FROM	TO																												
433	LL	WOOSTER ROAD	14+00	16+42	LT			242																								
433	CDS	WOOSTER ROAD	14+00	19+00	LT/RT					500																						
433	CH	WOOSTER ROAD	14+00	16+42	RT						242																					
433	CH	WOOSTER ROAD	18+01	19+00	LT						99																					
433	SL	WOOSTER ROAD	16+44		LT/RT																											
433	SL	WOOSTER ROAD	17+99		LT																											
433	CW	WOOSTER ROAD	16+59		LT/RT																											
433	LA	WOOSTER ROAD	14+36		RT																											
433	LA	WOOSTER ROAD	15+02		RT																											
433	LA	WOOSTER ROAD	15+68		RT																											
433	LA	WOOSTER ROAD	16+34		RT																											
433	LA	WOOSTER ROAD	18+09		LT																											
433	LA	WOOSTER ROAD	18+75		CEN																											
433	EW	RAMP B1	136+00	136+75	CEN	75																										
433	EY	RAMP B1	136+00	136+07	RT		7																									
433	CW	RAMP B1	136+88		LT/RT																											
433	CH	KENMORE BOULEVARD	+66	1+00	LT																											
433	SL	KENMORE BOULEVARD	+64		LT																											
433	LA	KENMORE BOULEVARD	+74		LT																											
434	CDS	WOOSTER ROAD	19+00	19+99	RT					99																						
434	CH	WOOSTER ROAD	19+00	19+23	LT						23																					
435	LL	KENMORE BOULEVARD	1+00	6+75	RT			575																								
435	LL	KENMORE BOULEVARD	3+27	6+75	LT			348																								
435	CH	KENMORE BOULEVARD	1+00	3+27	LT					227																						
435	LA	KENMORE BOULEVARD	1+40		LT																											
435	LA	KENMORE BOULEVARD	2+06		LT																											
435	LA	KENMORE BOULEVARD	2+72		LT																											
439	EW	RAMP B (BARBER RD)	4+91	10+47	CEN/RT	556																										
439	EY	RAMP B (BARBER RD)	4+91	10+47	LT		556																									
439	SL	RAMP B (BARBER RD)	10+49		LT/RT							31																				
TOTAL							1194	1165		599	625		103	264	10																	
TOTAL MILES							0.23	0.23		0.12																						
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							0.23	0.23		0.12	625		103	264	10																	

CALCULATED SLB CHECKED TJR	<b>PAVEMENT MARKING SUBSUMMARY - SHEET 7 OF 7</b>
<b>SUM - 76 - 5.53</b>	
<span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px;">386</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px;">672</span>	

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE	630	630	630	630	630	630	630	630	630					
							REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH				
396	R-1	I.R. 76		LT	D14-H4		1			2										
396	R-2	I.R. 76		RT	E1-H5P SPECIAL E1-H5P SPECIAL								1							
396	R-3	I.R. 76		RT	E1-H5P SPECIAL								1							
396	R-4	I.R. 76		RT	E1-H5P SPECIAL E1-H5P SPECIAL								1							
396	R-5	I.R. 76		RT	E1-H5P SPECIAL						1		1							
396	R-6	STATE STREET		LT	SPECIAL SPECIAL								1		1					
396	R-7	CENTRAL AVENUE		RT	S1-1 SPECIAL		1		1				1							
396	R-8	FAIRMOUNT AVENUE		LT	R1-1		1		1											
396	R-9	FAIRMOUNT AVENUE		RT	W14-2		1		1											
396	R-10	STATE STREET		RT	SPECIAL								1		1					
396	R-73	I.R. 76		RT	E5-H1a															
396	R-74	RAMP D		RT	R3-H8bd R5-1a										1	1				
396	R-75	STATE STREET		LT	SPECIAL								1							
396	R-76	STATE STREET		LT	SPECIAL															
396	R-84	ROMIG AVENUE		LT	R1-1		1		1											
396	R-85	ROMIG AVENUE		LT	SPECIAL		1		1											
396	R-86	ROMIG AVENUE		RT	W14-2		1		1											
396	R-89	RAMP D		LT	R5-1a		1		1											
396	R-91	RAMP D		LT	D3-H5 D3-H3a					1										
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							9	3	1	9	6	2	14	2	2					

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE	630	630	630	630	630	630	630	630	630	630					
							REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH					
397	R-11	I.R. 76		CEN	D10-4		1			1											
					D10-4		1														
397	R-12	I.R. 76		LT	OM-3R		1			1											
					I-H25a		1														
397	R-13	I.R. 76		LT	OM-3L		1			1											
397	R-14	I.R. 76		LT	R1-2		1			1											
397	R-15	I.R. 76		LT	W4-1R		1			2											
397	R-16	I.R. 76		RT	W13-2		1			2											
397	R-17	I.R. 76		RT	SPECIAL								1						1		
					SPECIAL								1								
					E1-H5P								1								
					SPECIAL								1								
397	R-18	I.R. 76		RT	OM-3L		1			1											
397	R-19	I.R. 76		RT	OM-3R		1			1											
					I-H25a		1														
397	R-20	I.R. 76		RT	E5-H1a			1			2										
397	R-21	I.R. 76		RT	M4-1		1			1											
					M1-1-2		1														
					M6-3		1														
397	R-22	I.R. 76		RT	R2-1		1			2											
397	R-23	I.R. 76		RT	R2-1		1			2											
397	R-24	RAMP D		LT	W1-6R		1			2											
397	R-25	RAMP E		RT	W7-1		1			1											
397	R-26	RAMP E		RT	W3-3		1			1											
397	R-27	RAMP E		RT	D10-H5a		1			1											
397	R-28	RAMP E		RT	SPECIAL			1			2										
					R5-1a		1														
397	R-29	RAMP E		LT	R5-1a		1			1											
397	R-30	CENTRAL AVENUE		LT	R2-1									1							
					SPECIAL									1							
397	R-31	GOODRICH AVENUE		LT	R1-1		1			1											
397	R-32	CENTRAL AVENUE		LT	SPECIAL		1			1											
					SPECIAL		1														
397	R-33	CENTRAL AVENUE		RT	SPECIAL		1			1											
					SPECIAL		1														
					R1-1		1														
397	R-34	GRAND BOULEVARD		RT	R1-1		1			1											
397	R-35	GRAND BOULEVARD		LT	D3-1		1			1											
					D3-1		1														
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							31	2		26	4		4	2		1					

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE	630	630	630	630	630	630	630	630	630					
							REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH				
398	R-36	I.R. 76		LT	SPECIAL															
					E1-H5P															
					SPECIAL															
398	R-37	I.R. 76		LT	OM-3R		1				1									
398	R-38	I.R. 76		CEN	OM-3L		1				1									
398	R-39	I.R. 76		LT	1-H2a			1												
398	R-40	I.R. 76		CEN	OM-3L		1				1									
398	R-41	I.R. 76		RT	1-H25a		1				1									
398	R-42	I.R. 76		RT	R2-4a		1				2									
398	R-43	I.R. 76		CEN	D10-4		1				1									
					D10-4		1													
398	R-44	I.R. 76		RT	OM-3R		1				1									
					1-H25a		1													
					1-H25a		1													
398	R-45	I.R. 76		RT	OM-3L		1				1									
398	R-46	I.R. 76		LT	1-H25a		1				1									
398	R-47	I.R. 76		LT	W13-2		1				2									
398	R-48	I.R. 76		LT	E5-H1a			1												
398	R-49	RAMP D		RT	D10-H5a		1				1									
398	R-50	RAMP D		RT	R5-1a		1				2									
398	R-51	RAMP C		RT	D10-H5a		1				1									
398	R-52	RAMP C		RT	R5-H10d		1				1									
398	R-53	WOOSTER ROAD		LT	R1-2		1				1									
398	R-54	RAMP E		RT	R5-1															
					R6-1L															
					R6-1R															
398	R-55	WOOSTER ROAD		LT	R5-1															
					R6-1L															
					R6-1R															
398	R-56	I.R. 76		RT	W4-3R		1				2									
398	R-57	I.R. 76		RT	1-H2a			1												
398	R-58	WOOSTER ROAD		LT	SPECIAL															
					SPECIAL															
398	R-59	RAMP C		LT	R4-7b		1				1									
398	R-60	RAMP D		LT	SPECIAL		1				1									
					SPECIAL		1													
					SPECIAL		1													
398	R-61	RAMP D		RT	R5-1		1				1									
398	R-62	WOOSTER ROAD		LT	M3-2		1				1									
					M1-1-2		1													
					M1-4-3		1													
					M5-1L		1													
398	R-63	WOOSTER ROAD		CEN	R3-1															
398	R-64	WOOSTER ROAD		CEN	R3-2															
398	R-65	RAMP F		RT	D9-2															
					SPECIAL															
398	R-66	WOOSTER ROAD		RT	SPECIAL															
					SPECIAL															
398	R-67	WOOSTER ROAD		CEN	R10-12															
398	R-68	WOOSTER ROAD		CEN	SPECIAL															
398	R-69	I.R. 76		LT	E1-H5P															
					SPECIAL															
398	R-70	I.R. 76		LT	SPECIAL															
398	R-71	I.R. 76		LT	E1-H5P															
					SPECIAL															
398	R-72	I.R. 76		LT	E1-H5P															
					SPECIAL															
					SPECIAL															
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							28	3			24	6			18	8	3	1		

o:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670ts024.dgn Sheet 10/2/2018 8:10:35 AM bbinsley

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE	630	630	630	630	630	630	630	630	630					
							REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH				
398	R-77	KENMORE BOULEVARD		LT	M3-4 M1-1-2 M6-2R M3-4 M1-4-3 M6-2R															
398	R-78	KENMORE BOULEVARD		RT	M3-2 M1-5-3 M6-1R D9-2 SPECIAL		1		1											
398	R-79	WOOSTER ROAD		RT	M2-1 M1-1-2 M1-4-3		1		1											
398	R-80	WOOSTER ROAD		RT	R3-H8bb SPECIAL											1				
398	R-81	WOOSTER ROAD		RT	SPECIAL											1				
398	R-82	WOOSTER ROAD		LT	M2-1 M1-1-2 M1-4-3											1				
398	R-83	KENMORE BOULEVARD		LT	M2-1 M1-1-2 M1-4-3											1				
398	R-87	RAMP F		RT	R5-H10d		1		1											
398	R-88	RAMP F		RT	D10-H5a		1		1											
398	R-90	I.R. 76		CEN	D10-4 D10-4		2		1											
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							12			5						15				

o:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670ts031.dgn Sheet 10/2/2018 8:10:35 AM bbinsley

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630	630	630	630	630	630	630	630	630	630	630	630	630	630	
							GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	GROUND MOUNTED SUPPORT, NO. 4 POST	GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 3 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN	SIGN, FLAT SHEET	SIGN, GROUND MOUNTED EXTRUSHEET			
							FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	SF	SF			
408	S-30	I.R. 76	255+83	CEN	D10-5-18 D10-5-18	18" X 60" 18" X 60"	6.3										1	7.5			
414	S-31	I.R. 76	296+55	CEN	D10-5-18 D10-5-18	18" X 60" 18" X 60"	6.3										1	7.5			
414	S-32	I.R. 76	297+42	RT	W4-1-48	48" X 48"		16.2/16.2										16.0			
415	S-33	RAMP C	39+00	RT	D10-H5A-30	30" X 30"	10.0											6.3			
416	S-37	I.R. 76	306+18	CEN	OM-3L-12	12" X 36"											1				
417	S-38	I.R. 76	308+63	CEN	D10-5-18 D10-5-18	18" X 60" 18" X 60"	6.3										1	7.5			
417	S-39	I.R. 76	308+10	CEN	OM-3R-12	12" X 36"											1	7.5			
417	S-40	I.R. 76	309+05	LT	OM-3L-12	12" X 36"											1				
417	S-42	I.R. 76	311+58	RT	I-H25A-12 I-H2A-72	12" X 12" 72" X 36"		13.5/15.5												18.0	
417	S-44	I.R. 76	312+29	CEN	OM-3L-12	12" X 36"											1				
418	S-45	I.R. 76	316+85	RT	R2-1-48	48" X 60"									1			20.0			
418	S-81	I.R. 76	319+19	CEN	D10-5-18 D10-5-18	18" X 60" 18" X 60"	6.3										1	7.5			
424	S-80	RAMP C1	143+00	RT	R5-1A-42 R5-1A-42	42" X 30" 42" X 30"		13.5/13.5					4					8.8			
425	S-46	RAMP B	23+00	LT	R5-1A-42 R5-1A-42	42" X 30" 42" X 30"		13.5/13.5					4					8.8			
425	S-47	RAMP B	23+00	RT	R5-1A-42 R5-1A-42	42" X 30" 42" X 30"		13.5/13.5					4					8.8			
426	S-48	RAMP B	25+84	LT	R3-H8bh-36	36" X 30"		13.0													
426	S-49	RAMP B	28+50	RT	D10-H5A-30	30" X 30"	10.0											6.3			
428	S-50	RAMP D	17+35	RT	R3-H8bj-36 R5-1A-42 R5-1A-42	36" X 30" 42" X 30" 42" X 30"		13.5/13.5					4					7.5			
428	S-51	RAMP D	17+35	LT	R5-1A-42 R5-1A-42	42" X 30" 42" X 30"		13.5/13.5					4					8.8			
429	S-82	STATE STREET	80+75	RT	M2-1-21 M1-1-24-2 M1-4-24-3	21" X 15" 24" X 24" 30" X 24"			15.9									2.2			
																		4.0			
																			5.0		
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							45.2	209.4	15.9				20		1	8	215.3	18.0			

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630	630	630	630	630	630	630	630	630	630	630	630	630	630	
							GROUND MOUNTED SUPPORT, NO. 2 POST FT	GROUND MOUNTED SUPPORT, NO. 3 POST FT	GROUND MOUNTED SUPPORT, NO. 4 POST FT	GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN FT	ONE WAY SUPPORT, NO. 3 POST FT	STREET NAME SIGN SUPPORT, NO. 3 POST FT	SIGN POST REFLECTOR EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	SIGN, FLAT SHEET SF	SIGN, GROUND MOUNTED EXTRUSHEET SF			
430	S-29	STATE STREET	84+78	LT	M4-5-30 M1-5-24-3 M6-1-21 D3-H6A-72 D3-H6A-72	24" X 12" 30" X 24" 21" X 15" 72" X 12" 72" X 12"				12.6/12.6										2.0 5.0 2.2 6.0 6.0	
430	S-53	RAMP C	30+55	LT	M3-2-36 M1-1-36-2 M1-4-36-3 M6-3-30	36" X 18" 36" X 36" 45" X 36" 30" X 21"			17.0											4.5 9.0 11.3 4.4	
430	S-54	SP-1			R3-1-36	36" X 36"								1						9.0	
430	S-55	SP-2			R3-2-36	36" X 36"								1						9.0	
430	S-56	SP-3			D3-1-84	84" X 24"								1						14.0	
431	S-57	RAMP B	20+65	RT	R6-IL-54 R6-IR-54 R5-1-36	54" X 18" 54" X 18" 36" X 36"		13.5		15.1		2								6.8 6.8 9.0	
431	S-58	RAMP B	20+65	LT	R6-IL-54 R6-IR-54 R5-1-36	54" X 18" 54" X 18" 36" X 36"		13.5		15.1		2								6.8 6.8 9.0	
431	S-59	STATE STREET	94+50	LT	M2-1-21 M1-1-24-2 M1-4-24-3	21" X 15" 24" X 24" 30" X 24"				15.9										2.2 4.0 5.0	
431	S-60	SP-1			R3-2-36	36" X 36"								1						9.0	
431	S-61	SP-3			R3-1-36	36" X 36"								1						9.0	
431	S-62	SP-2			D3-1-84	84" X 24"								1						14.0	
432	S-64	WOOSTER ROAD	11+45	RT	M1-5-24-3 M6-IR-21 D9-2-24 IM6-IR-21	30" X 24" 21" X 15" 24" X 24" 21" X 15"				17.3										5.0 2.2 4.0 2.2	
432	S-21	WOOSTER ROAD	13+15	RT	M2-H3-72 (MOD)	72" X 60"				15.5/15.5											30.0
432	S-66	WOOSTER ROAD	13+73	RT	R3-H8bh-36	36" X 30"		13.5/13.5												7.5	
432	S-63	SP-1			R6-IL-54 R6-IR-54 R5-1-36	54" X 18" 54" X 18" 36" X 36"								1						6.8 6.8 9.0	
432	S-65	RAMP C1	144+85	LT	R6-IL-54 R6-IR-54 R5-1-36	54" X 18" 54" X 18" 36" X 36"		13.5		15.1		2			1					6.8 6.8 9.0	
432	S-67	SP-1			R3-1-36	36" X 36"								1						9.0	
432	S-68	SP-2			R3-2-36	36" X 36"								1						9.0	
432	S-69	SP-2			D3-1-108	108" X 24"								1						18.0	
433	S-70	SP-2			M4-5-24 M1-1-24-2 M1-4-24-3 M6-2R-21	24" X 12" 24" X 24" 30" X 24" 21" X 15"									1					2.0 4.0 5.0 2.2	
433	S-71	WOOSTER ROAD	17+95	RT	M4-5-24 M1-1-24-2 M1-4-24-3 M6-1-21	24" X 12" 24" X 24" 30" X 24" 21" X 15"				17.0					1					2.0 4.0 5.0 2.2	
433	S-72	SP-3			D3-1-156	156" X 24"								1						26.0	
433	S-73	SP-2			SPECIAL	144" X 24"								1						24.0	
433	S-74	SP-1			SPECIAL	132" X 48"								1						22.0	
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY								67.5	73.2	50.2	45.3		6	12	7					371.3	30.0

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630	630	630	630	630	630	630	630	630	630	630	630	630	630		
							GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	GROUND MOUNTED SUPPORT, NO. 4 POST	GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 3 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN	SIGN, FLAT SHEET	SIGN, GROUND MOUNTED EXTRUSHEET				
							FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	SF	SF				
434	S-75	WOOSTER ROAD	19+22	LT	R3-H8bh-36	36" X 30"																
434	S-20	WOOSTER ROAD	21+50	LT	M4-5-24	24" X 12"		13.5/13.5		17.0											7.5	
					M1-1-24-2	24" X 24"															2.0	
					M1-4-24-3	30" X 24"															4.0	
					M5-1R-21	21" X 15"															5.0	
																					2.2	
435	S-76	KENMORE BOULEVARD	3+28	LT	R3-H8bj-36	36" X 30"															7.5	
435	S-22	KENMORE BOULEVARD	7+30	LT	M4-5-24	24" X 12"		13.5/13.5		17.0											2.0	
					M1-1-24-2	24" X 24"															4.0	
					M1-4-24-3	30" X 24"															5.0	
					M6-3-21	21" X 15"															2.2	
437	S-77	CENTRAL AVENUE	7+00	LT	R2-1-24	24" X 30"	13.0														5.0	
437	S-79	GRAND BOULEVARD	2+62	RT	R1-1-30	30" X 30"		13.0						1							6.3	
437	S-23	GRAND BOULEVARD	2+80	LT	D3-1-60	60" X 12"							12.6								5.0	
					D3-1-60	60" X 12"															5.0	
					D3-1-54	54" X 12"															4.5	
					D3-1-54	54" X 12"															4.5	
438	S-25	ROMIG AVENUE	4+73	LT	D3-1-60	60" X 12"							15.2	1							5.0	
					D3-1-60	60" X 12"															5.0	
					D3-1-54	54" X 12"															4.5	
					D3-1-54	54" X 12"															4.5	
					R1-1-30	30" X 30"															6.3	
438	S-78	ROMIG AVENUE	4+76	RT	W14-2-30	30" X 30"			14.1												6.3	
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							13.0	81.1	34.0				27.8	2								103.3



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SHEET NO.	REFERENCE NO.	LOCATION	SIDE	DETAIL PAGE	STATION	625	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630		
						GROUND ROD	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	BREAKAWAY STRUCTURAL BEAM CONNECTION	OVERHEAD SIGN SUPPORT, TYPE TC-12-30, DESIGN 5, AS PER PLAN	OVERHEAD SIGN SUPPORT, TYPE TC-12-30, DESIGN 9, AS PER PLAN	OVERHEAD SIGN SUPPORT, TYPE TC-12-30, DESIGN 10	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	SIGN ATTACHMENT ASSEMBLY	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	SIGN, GROUND MOUNTED EXTRUSHEET	SIGN, OVERHEAD EXTRUSHEET	CONCRETE BARRIER MEDIUM OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	RIGID OVERHEAD SIGN SUPPORT FOUNDATION								
						EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SF	SF	SF	EACH	EACH	EACH								
406	OSS-1	I.R. 76	RT	440	242+75												6								209.5						
408	OSS-2	I.R. 76	RT	441	257+50												3								125.5						
409	S-1	I.R. 76	RT	442	268+11			22.0/18.0			2										101.5						2				
411	OSS-3	I.R. 76	RT	443	281+50												5								247.5						
412	S-4	I.R. 76	RT	442	284+50		17.3/16.4				2														30.0			2			
415	S-2	I.R. 76	LT	446	300+50		17.1/16.8				2														30.0			2			
416	OSS-7	I.R. 76	LT	444	303+66	1								1					1	20.0				137.5				1			
416	OSS-14	I.R. 76	RT	450	305+19.11	2																		290.0	1			1			
418	OSS-6	I.R. 76	LT	445	319+52												3								125.5			2			
418	S-3	I.R. 76	LT	446	323+00					19.9/17.7	2										101.5							2			
421	OSS-5	I.R. 76	LT	447	343+00												3								125.5						
422	OSS-4	I.R. 76	LT	453	339+64												3								125.5						
423	S-9	RAMP C	LT	448	32+00					19.4/17.8	2													44.0				2			
																				4.5											
																				9.0											
																				11.3											
																				4.4											
																				3.2											
																				11.3											
																				4.4											
424	S-5	RAMP C1	LT	448	143+00					20.5/18.8	2													32.0				2			
																				8.8											
																				8.8											
																				11.3											
																				4.4											
425	S-7	RAMP B	LT	449	23+50					19.8/23.7	2													44.0				2			
																				3.2											
																				11.3											
																				4.4											
426	S-6	RAMP B	LT	449	24+90			19.3/22.2			2													32.0				2			
																				3.2											
																				4.5											
																				9.0											
																				11.3											
																				4.4											
																				4.5											
																				9.0											
																				11.3											
																				4.4											
428	S-8	RAMP D	LT	451	16+10			22.7/25.3			2													64.0				2			
																				3.2											
																				11.3											
																				4.4											
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY						3	67.6	81.5	48.0	157.6	18				1	1	23	1	200.8	479.0	1386.5	1	18	2							

OVERHEAD AND BEAM MOUNTED SUBSUMMARY

SUM - 76 - 5.53

394  
672

CALCULATED SLB CHECKED TJR

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SHEET NO.	REFERENCE NO.	LOCATION	SIDE	DETAIL PAGE	STATION	625	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	
						GROUND ROD	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	BREAKAWAY STRUCTURAL BEAM CONNECTION	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5, AS PER PLAN	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 9, AS PER PLAN	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	SIGN ATTACHMENT ASSEMBLY	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	SIGN, GROUND MOUNTED EXTRUSHEET	SIGN, OVERHEAD EXTRUSHEET	CONCRETE BARRIER MEDIUM OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	RIGID OVERHEAD SIGN SUPPORT FOUNDATION				
						EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
430	OSS-8	STATE STREET	RT	454	84+64	1						1													124.0		1
431	OSS-10	STATE STREET	LT	455	86+97	1							1												124.0		1
431	OSS-15	STATE STREET	LT	452	93+20											4								72.0			
431	S-28	RAMP A	LT	451	12+52					18.5/17.7	2												54.0			2	
																		3.2									
																		11.3									
																		4.4									
433	OSS-12	S.R. 619	LT	456	16+75	1						1												98.0		1	
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY						3				36.2	2	2	1			4		18.9	54.0	418.0			2	3			

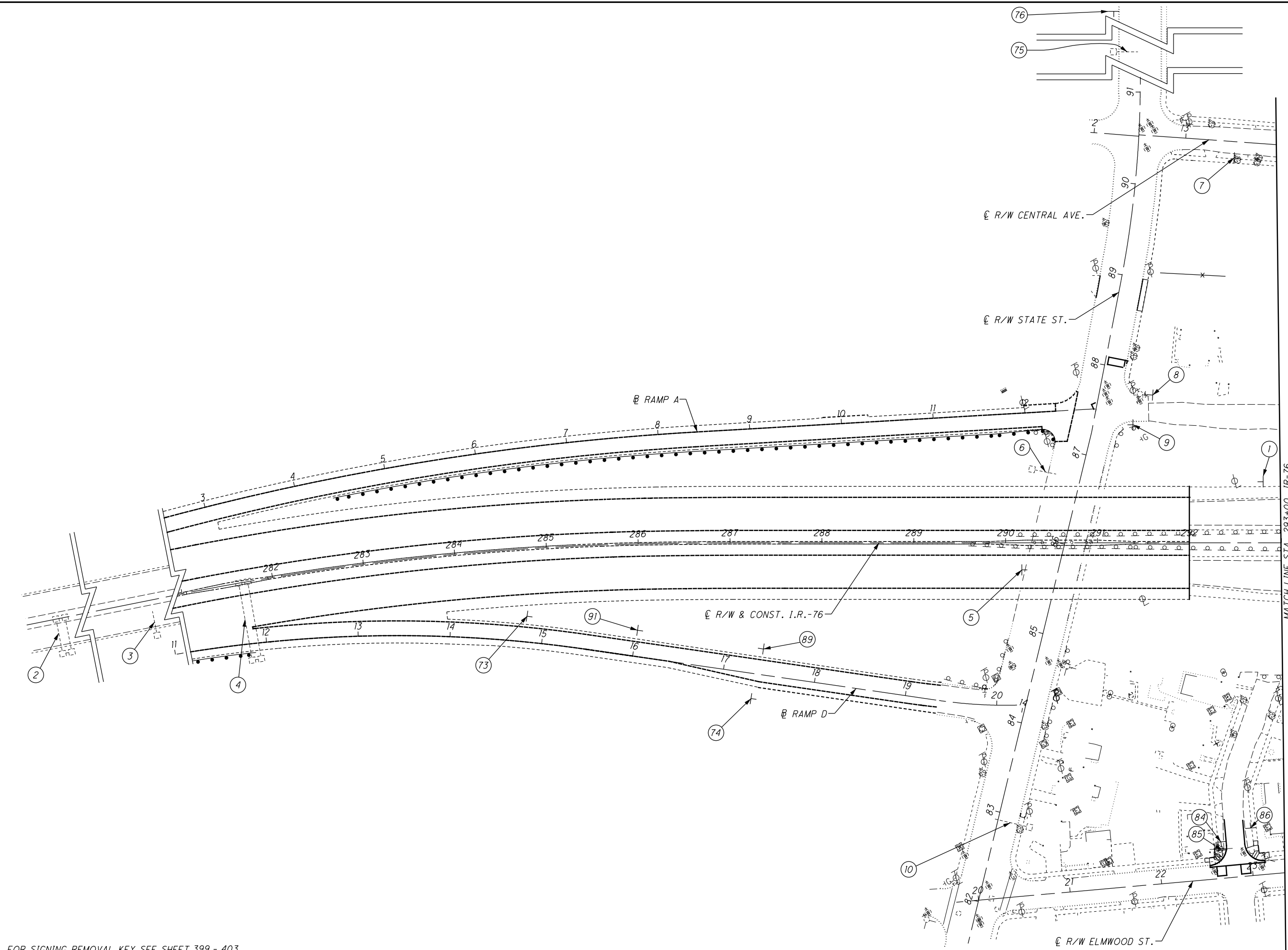
**OVERHEAD AND BEAM MOUNTED SUBSUMMARY SHEET 2 OF 2**

**SUM - 76 - 5.53**

CALCULATED  
SLB  
CHECKED  
TJR

395  
672

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FOR SIGNING REMOVAL KEY SEE SHEET 399 - 403.

CALCULATED  
BEB  
CHECKED  
TJR

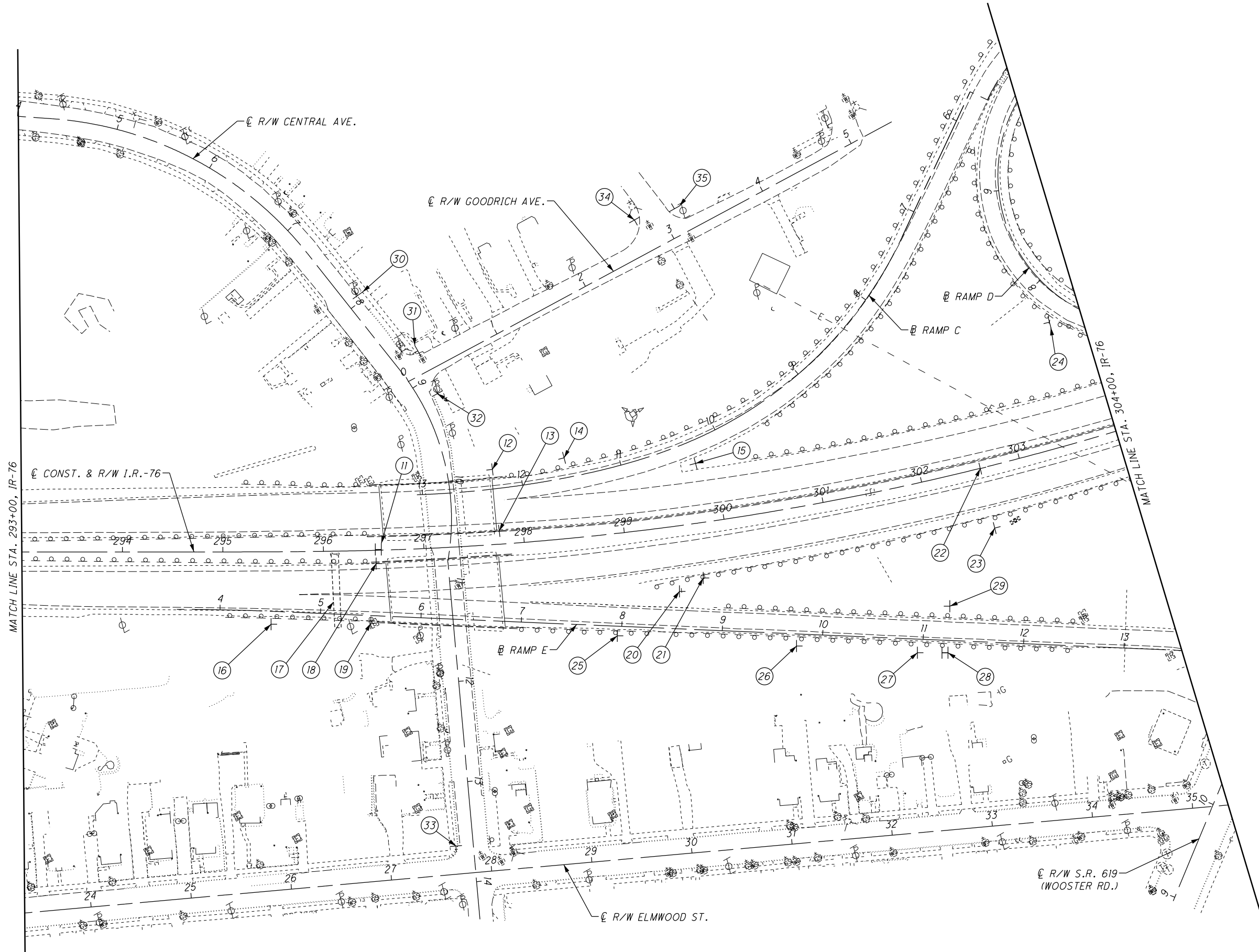
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HORIZONTAL  
SCALE IN FEET

**SIGNING REMOVAL PLAN  
BEGIN TO STA. 293+00**

**SUM-76-5.53**

396  
672

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CALCULATED	BEB	CHECKED	TJR

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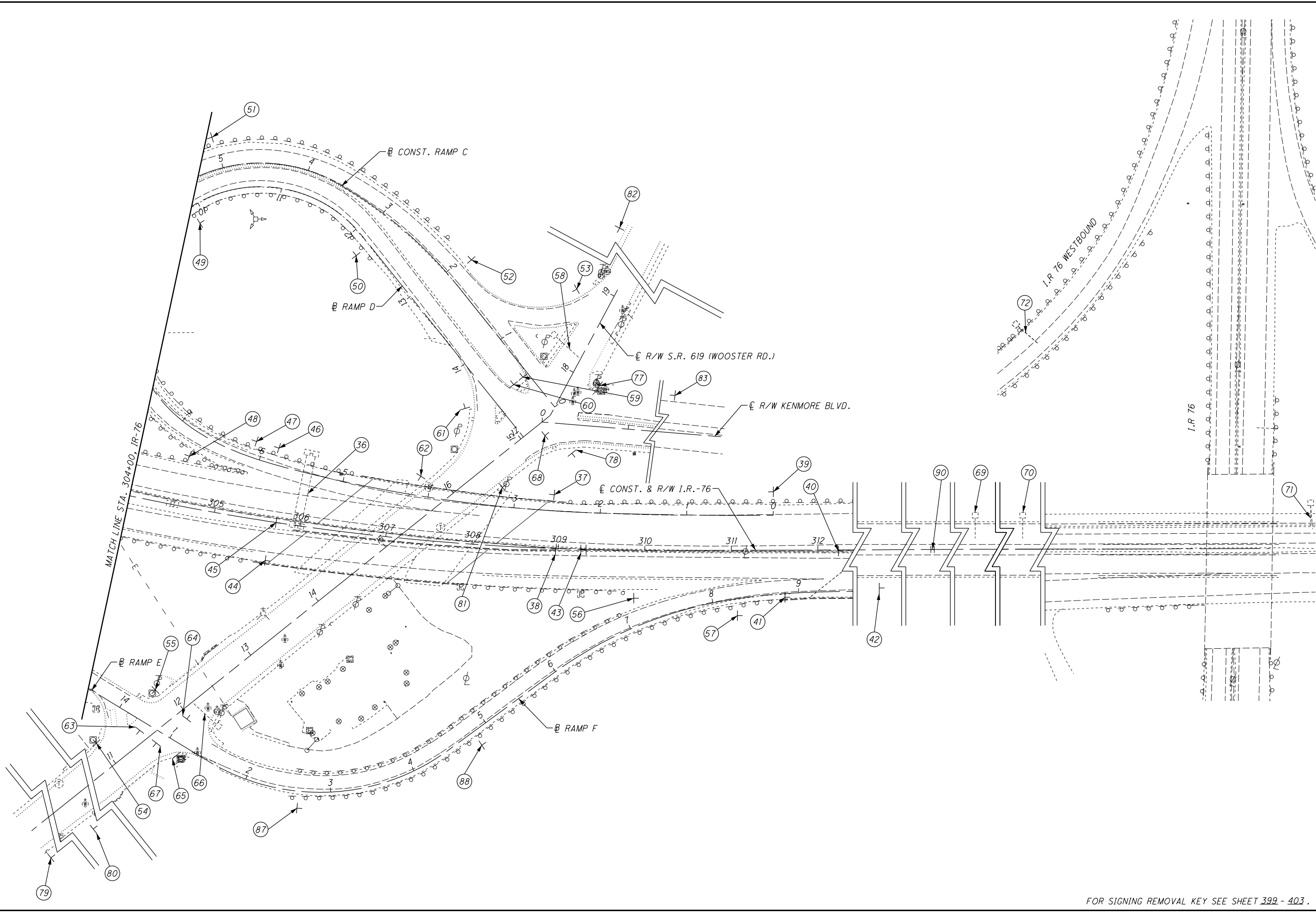
**SIGNING REMOVAL PLAN**  
**STA. 293+00 TO STA. 304+00**

**SUM-76-5.53**

397  
672

FOR SIGNING REMOVAL KEY SEE SHEET 399 - 403.

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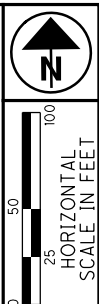


CALCULATED	
BEB	
CHECKED	TJR

**SIGNING REMOVAL PLAN**  
**STA. 304+00 TO END**


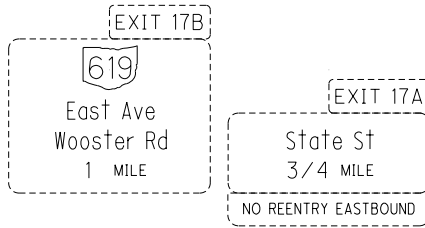
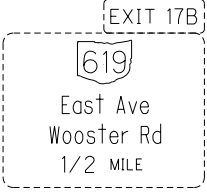
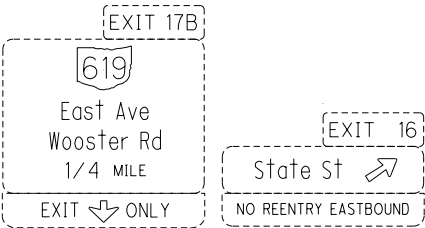

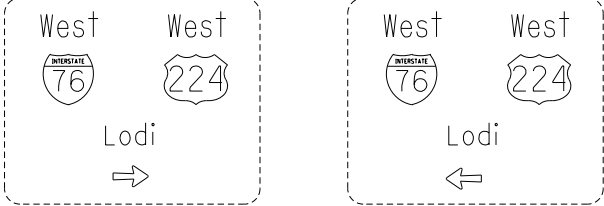




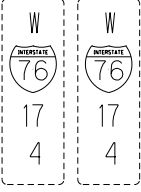



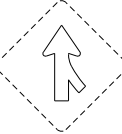
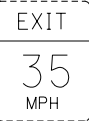
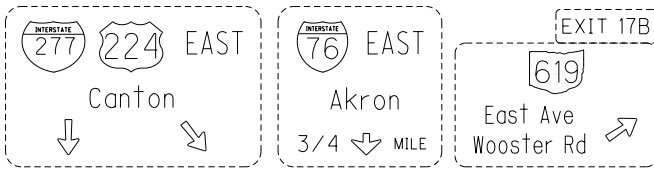

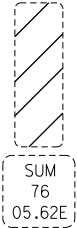

**SUM-76-5.53**

398  
672



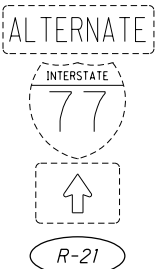


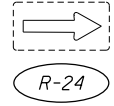
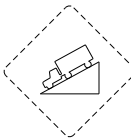
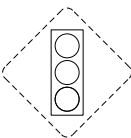






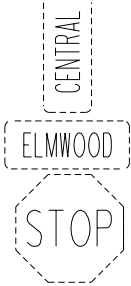

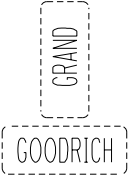
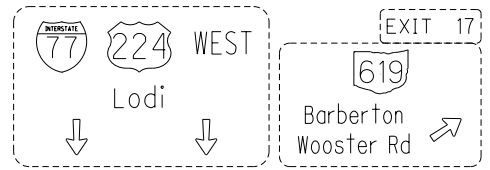
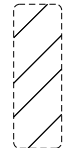
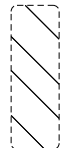


FOR SIGNING REMOVAL KEY SEE SHEET 399 - 403.

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 <p>R-1</p> <p>1</p>	 <p>EXISTING TRUSS SUPPORT TO REMAIN AT STA. 242+75</p> <p>R-2</p> <p>2</p>	 <p>EXISTING CANTILEVER SUPPORT TO REMAIN AT STA. 257+50</p> <p>R-3</p> <p>3</p>	 <p>EXISTING TRUSS SUPPORT TO REMAIN AT STA. 281+50</p> <p>R-4</p> <p>4</p>
 <p>R-5</p> <p>5</p>	 <p>EXISTING SIGNS MOUNTED BACK TO BACK ON SINGLE SUPPORT</p> <p>R-6</p> <p>6</p>	 <p>R-7</p> <p>7</p>	 <p>R-8</p> <p>8</p>
 <p>R-9</p> <p>9</p>	 <p>R-10</p> <p>10</p>	 <p>EXISTING SIGNS MOUNTED BACK TO BACK ON SINGLE SUPPORT</p> <p>R-11</p> <p>11</p>	 <p>R-12</p> <p>12</p>
 <p>R-13</p> <p>13</p>	 <p>R-14</p> <p>14</p>	 <p>R-15</p> <p>15</p>	 <p>R-16</p> <p>16</p>
 <p>R-17</p> <p>17</p>	 <p>R-18</p> <p>18</p>	 <p>R-19</p> <p>19</p>	 <p>R-20</p> <p>20</p>




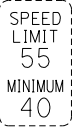


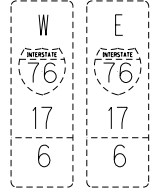






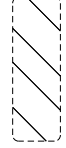





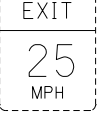














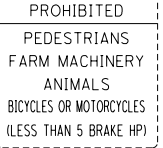





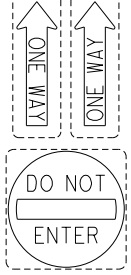


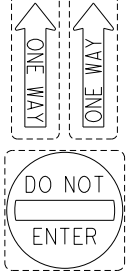


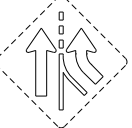














CALCULATED	BEB	CHECKED	TJR
<b>SIGNING REMOVAL KEY</b>			
<b>SUM - 76 - 5.53</b>			
399		672	

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 <p>(21)</p>	 <p>(22)</p>	 <p>(23)</p>	 <p>(24)</p>
 <p>(25)</p>	 <p>(26)</p>	 <p>(27)</p>	 <p>EXISTING SIGNS MOUNTED BACK TO BACK ON SAME SUPPORTS</p> <p>(28)</p>
 <p>(29)</p>	 <p>(30)</p>	 <p>(31)</p>	 <p>(32)</p>
 <p>(33)</p>	 <p>(34)</p>	 <p>(35)</p>	 <p>(36)</p>
 <p>(37)</p>	 <p>(38)</p>	 <p>(39)</p>	 <p>(40)</p>

CALCULATED	BEB	CHECKED	TJR
<b>SIGNING REMOVAL KEY</b>			
<b>SUM - 76 - 5.53</b>			
400		672	

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  	  	 <p>EXISTING SIGNS MOUNTED BACK TO BACK ON SINGLE SUPPORT</p>  	   
  	  	  	  
  	  	  	  
  	  	  	  
  	 <p>EXISTING SIGNS MOUNTED BACK TO BACK ON SINGLE SUPPORT</p>  	  	  

CALCULATED BEB	CHECKED TJR
<b>SIGNING REMOVAL KEY</b>	
<b>SUM - 76 - 5.53</b>	
401	672



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<p>R-61 61</p>	<p>R-62 62</p>	<p>R-63 63</p>	<p>R-64 64</p>
<p>R-65 65</p>	<p>EXISTING SIGNS MOUNTED BACK TO BACK ON SINGLE SUPPORT</p> <p>R-66 66</p>	<p>R-67 67</p>	<p>R-68 68</p>
<p>R-69 69</p>	<p>EXISTING CANTILEVER SUPPORT TO REMAIN AT STA. 319+52</p> <p>R-70 70</p>	<p>EXISTING CANTILEVER SUPPORT TO REMAIN AT STA. 343+00</p> <p>R-71 71</p>	<p>EXISTING CANTILEVER SUPPORT TO REMAIN AT STA. 339+64, 258' LT. (KENMORE LEG OFF RAMP)</p> <p>R-72 72</p>
<p>R-73 73</p>	<p>EXISTING SIGNS MOUNTED BACK TO BACK ON SAME POLE SUPPORT</p> <p>R-74 74</p>	<p>EXISTING CANTILEVER SUPPORT TO REMAIN AT STA. 93+20</p> <p>R-75 75</p>	<p>R-76 76</p>
<p>R-77 77</p>	<p>R-78 78</p>	<p>R-79 79</p>	<p>R-80 80</p>

CALCULATED	BEB	CHECKED	TJR
<b>SIGNING REMOVAL KEY</b>			
<b>SUM - 76 - 5.53</b>			
402 672			

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RIGHT LANE  
MUST  
TURN RIGHT  
EXCEPT  
BUSES

R-81

81

JCT  
INTERSTATE  
76  
224

R-82

82

JCT  
INTERSTATE  
76  
224

R-83

83

STOP

R-84

84

ELMWOOD

R-85

85

NO  
OUTLET

R-86

86

PROHIBITED  
PEDESTRIANS  
FARM MACHINERY  
ANIMALS  
BICYCLES OR MOTORCYCLES  
(LESS THAN 5 BRAKE HP)

R-87

87

RAMP  
WOOSTER  
TO  
E76

R-88

88

WRONG  
WAY

R-89

89

W E  
76 76  
18 18  
0 0

EXISTING SIGNS MOUNTED  
BACK TO BACK ON  
SINGLE SUPPORT

R-90

90

\*EXISTING SIGN TO BE REMOVED AND REERECTED

State St \*  
← NORTH SOUTH →  
← Romig Rd

R-91

91

CALCULATED  
BEB  
CHECKED  
TJR

SIGNING REMOVAL KEY

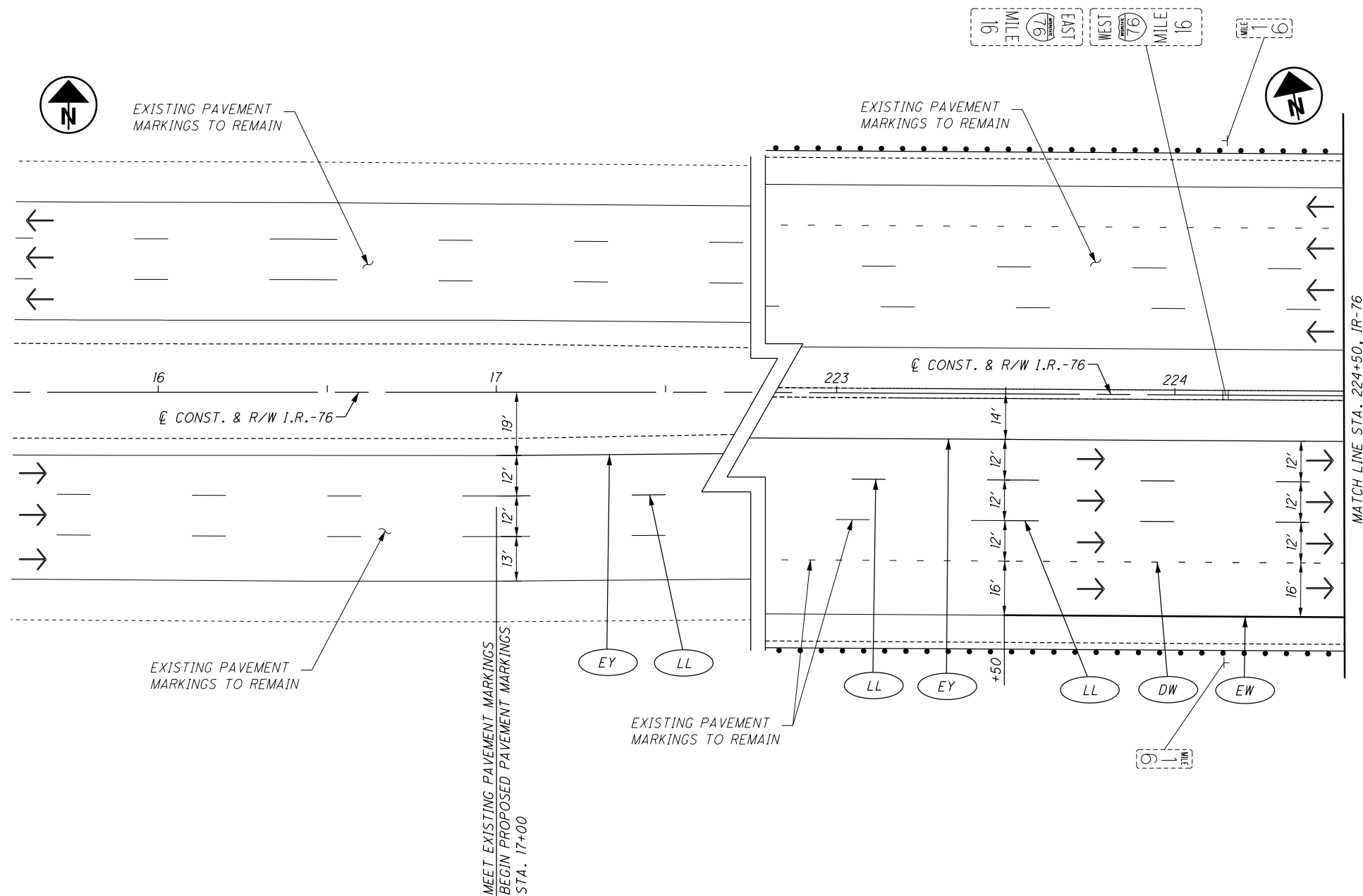
SUM - 76 - 5.53

403  
672

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TRAFFIC CONTROL LEGEND

	TRAFFIC FLOW		EXISTING SIGN TO BE REMOVED		CROSSWALK LINE
	PROPOSED SIGN		PROPOSED SIGN		LANE ARROW
	EXISTING SIGN TO REMAIN		OVERHEAD SIGN SUPPORT		WRONG WAY ARROW
	EXISTING SIGN TO BE REMOVED		EDGE LINE, WHITE		DOTTED LINE, WHITE
	SIGN SUPPORT		EDGE LINE, YELLOW		RPM (RAISED PAVEMENT MARKER)
	BEAM SUPPORT		LANE LINE		
	PROPOSED CANTILEVER SIGN SUPPORT		CENTER LINE, DOUBLE SOLID		
	EXISTING TRUSS SIGN SUPPORT		CHANNELIZING LINE		
	EXISTING CANTILEVER SIGN SUPPORT		STOP LINE		



SEE PLAN



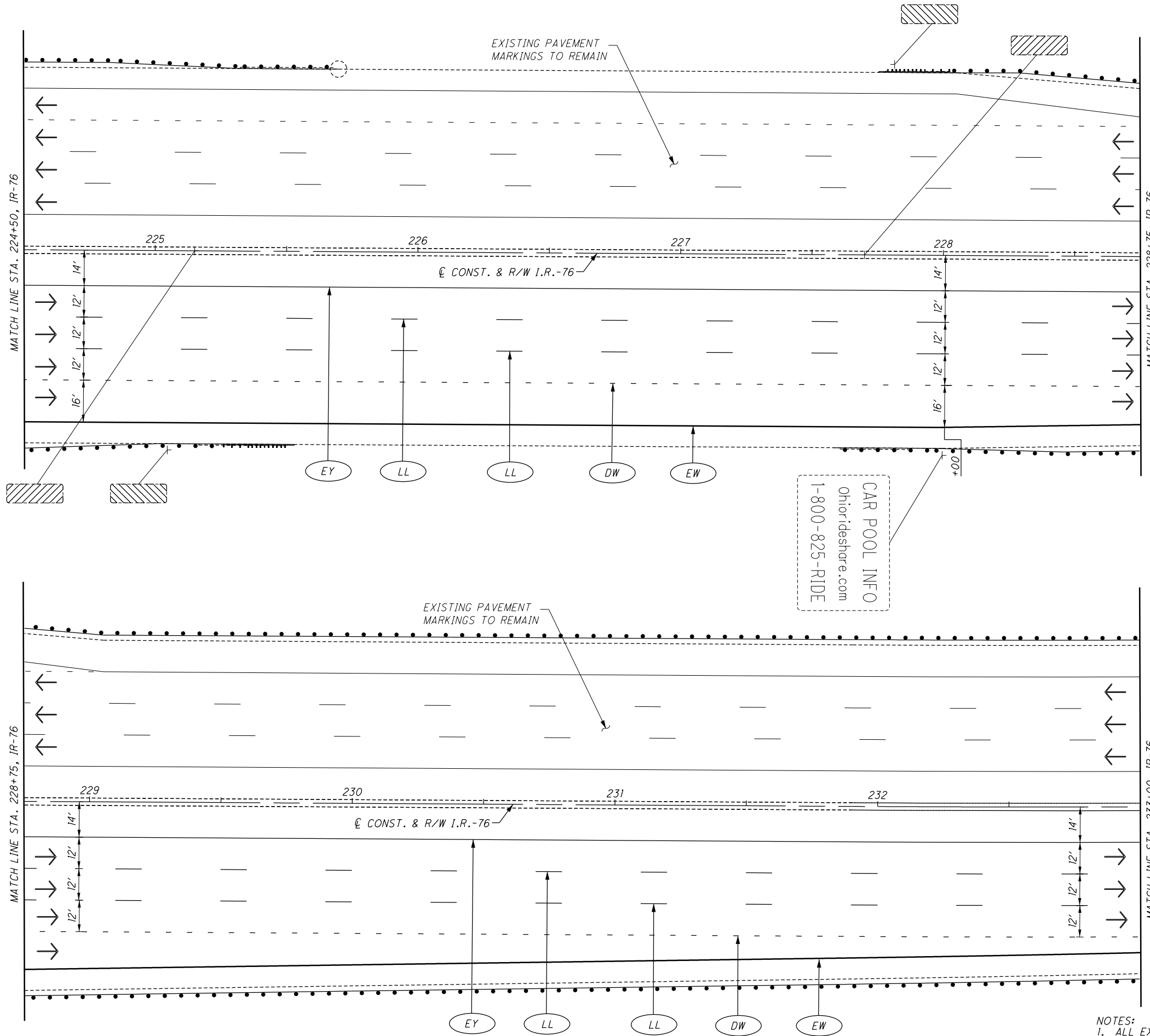
CALCULATED	BEB	CHECKED	TJR

TRAFFIC CONTROL - I.R. 76  
BEGIN TO STA. 224+50

SUM-76-5.53

NOTES:  
1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.

404
672



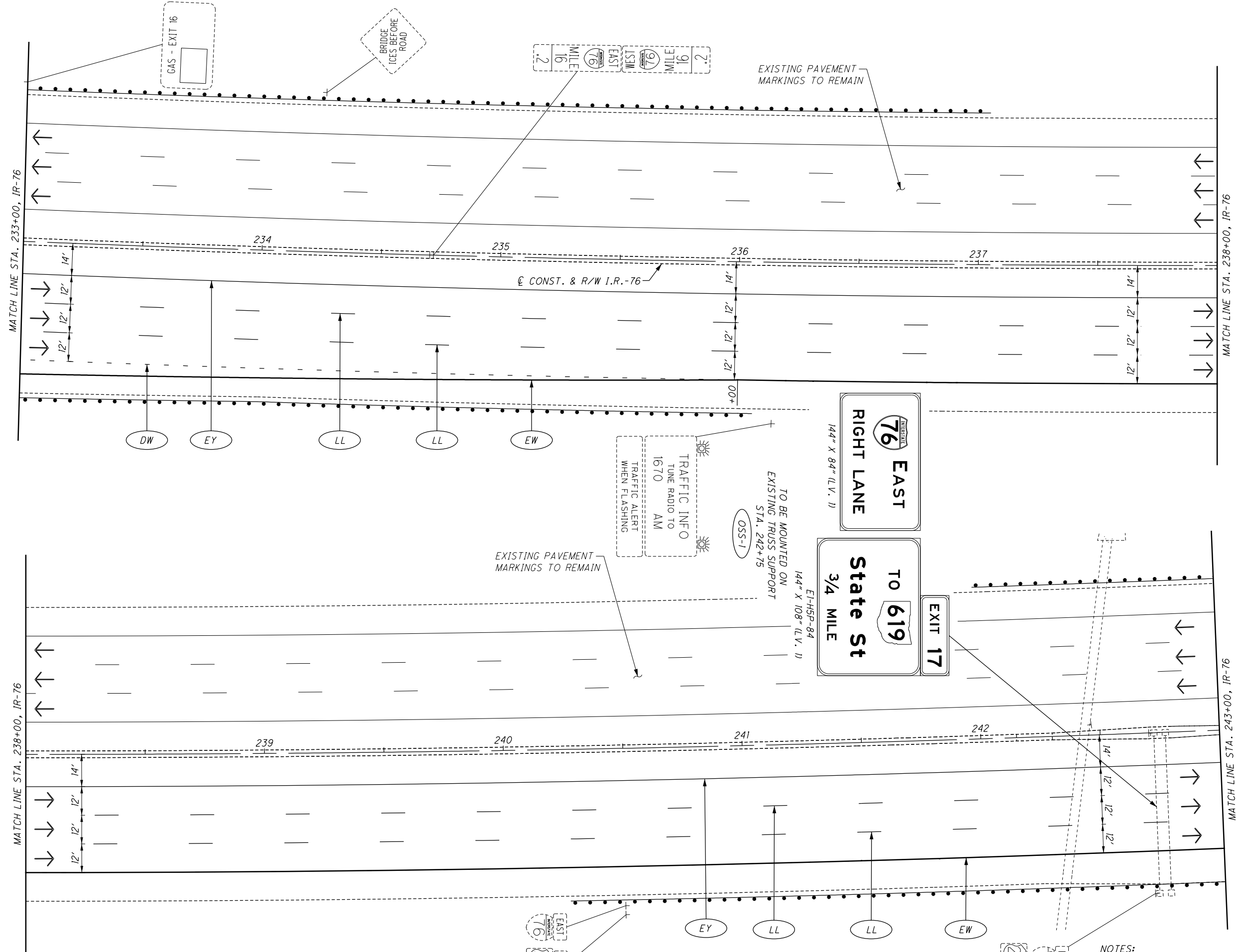
CALCULATED  
BEB  
CHECKED  
TJR

0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 224+50 TO STA. 233+00**

**SUM-76-5.53**

- NOTES:  
1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

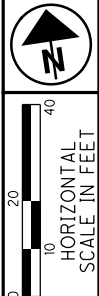


NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

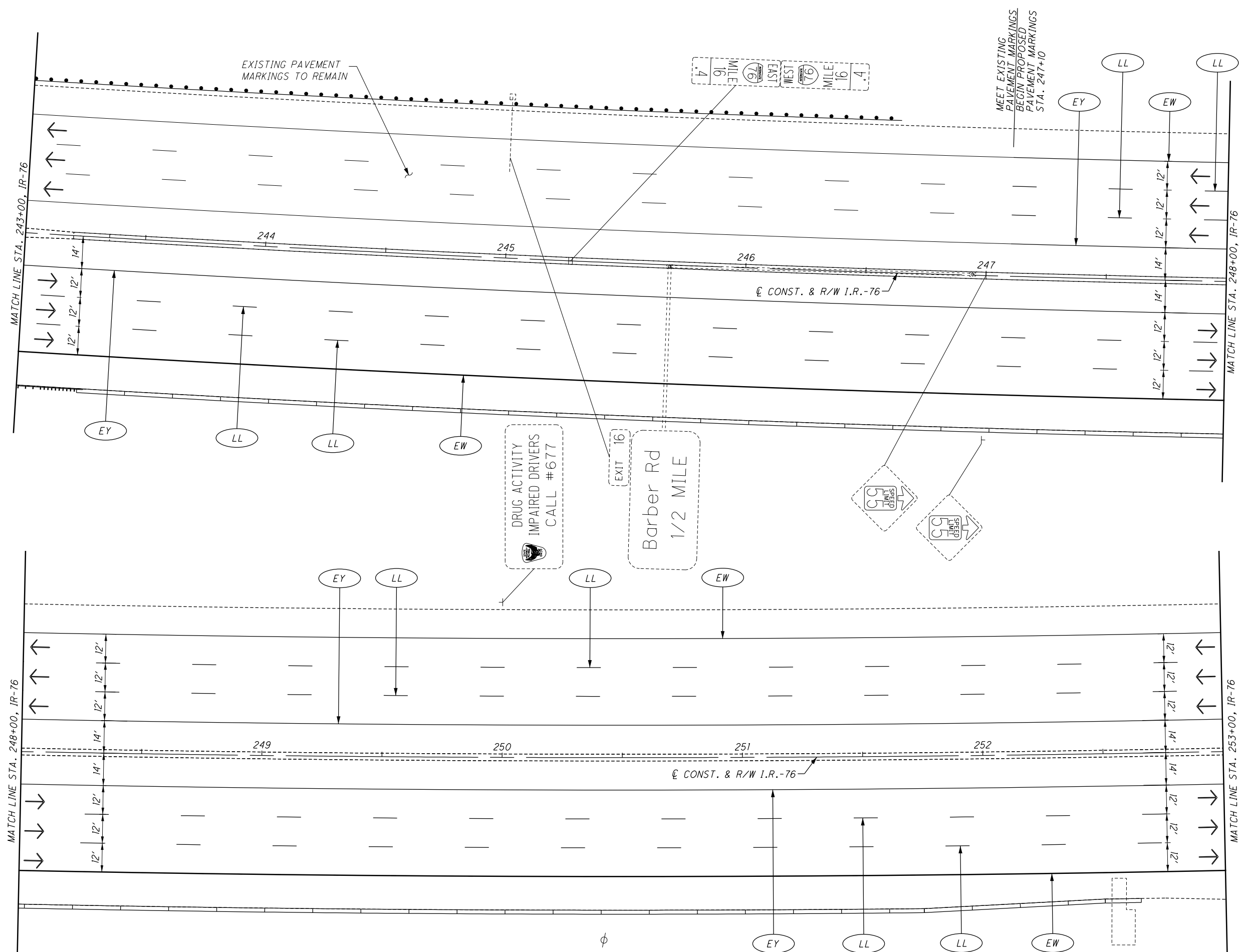
CALCULATED  
 BEB  
 CHECKED  
 TJR

**TRAFFIC CONTROL - I.R. 76  
 STA. 233+00 TO STA. 243+00**

**SUM-76-5.53**



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NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

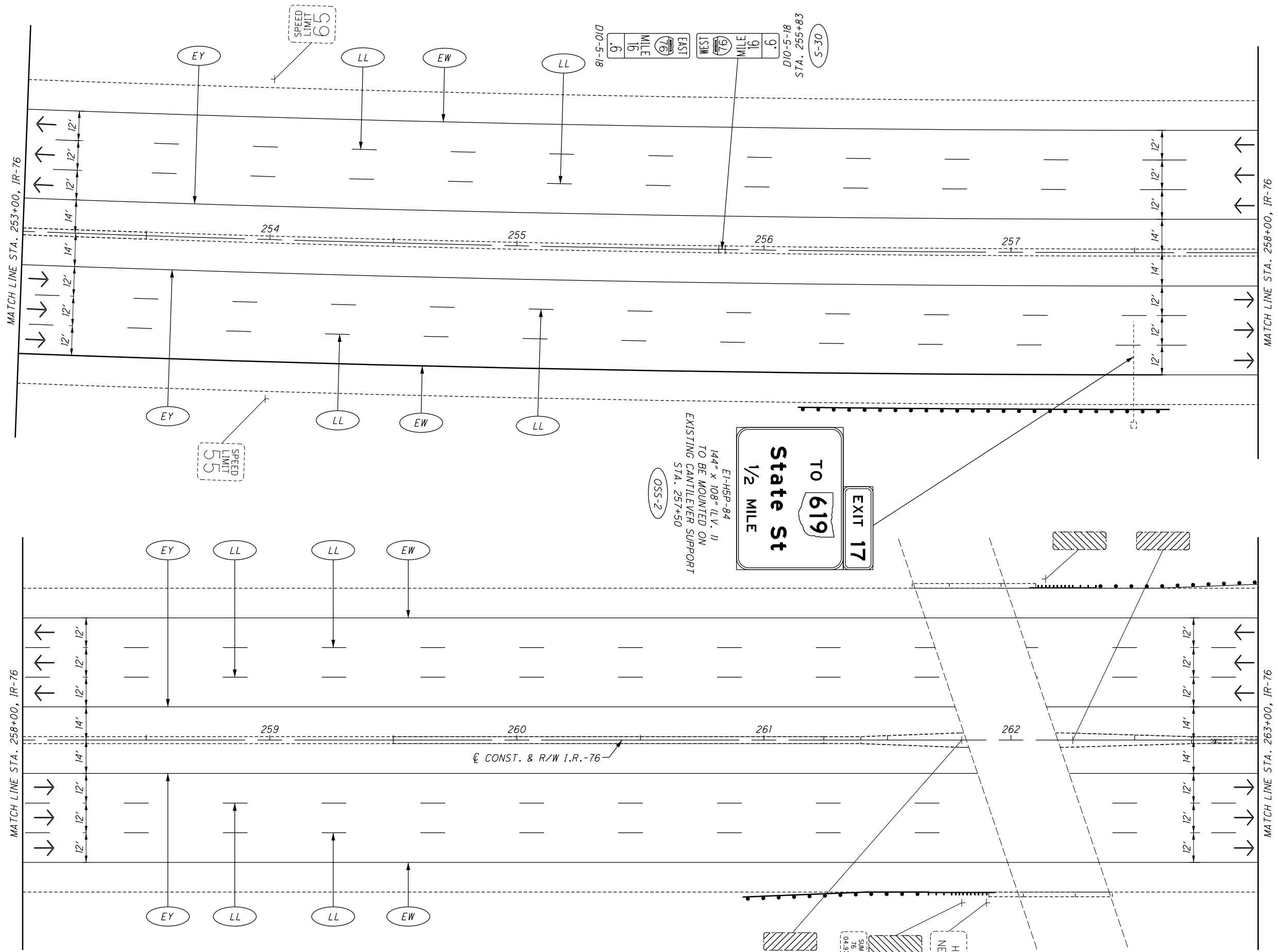
CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 243+00 TO STA. 253+00**

**SUM-76-5.53**

407  
 672



NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

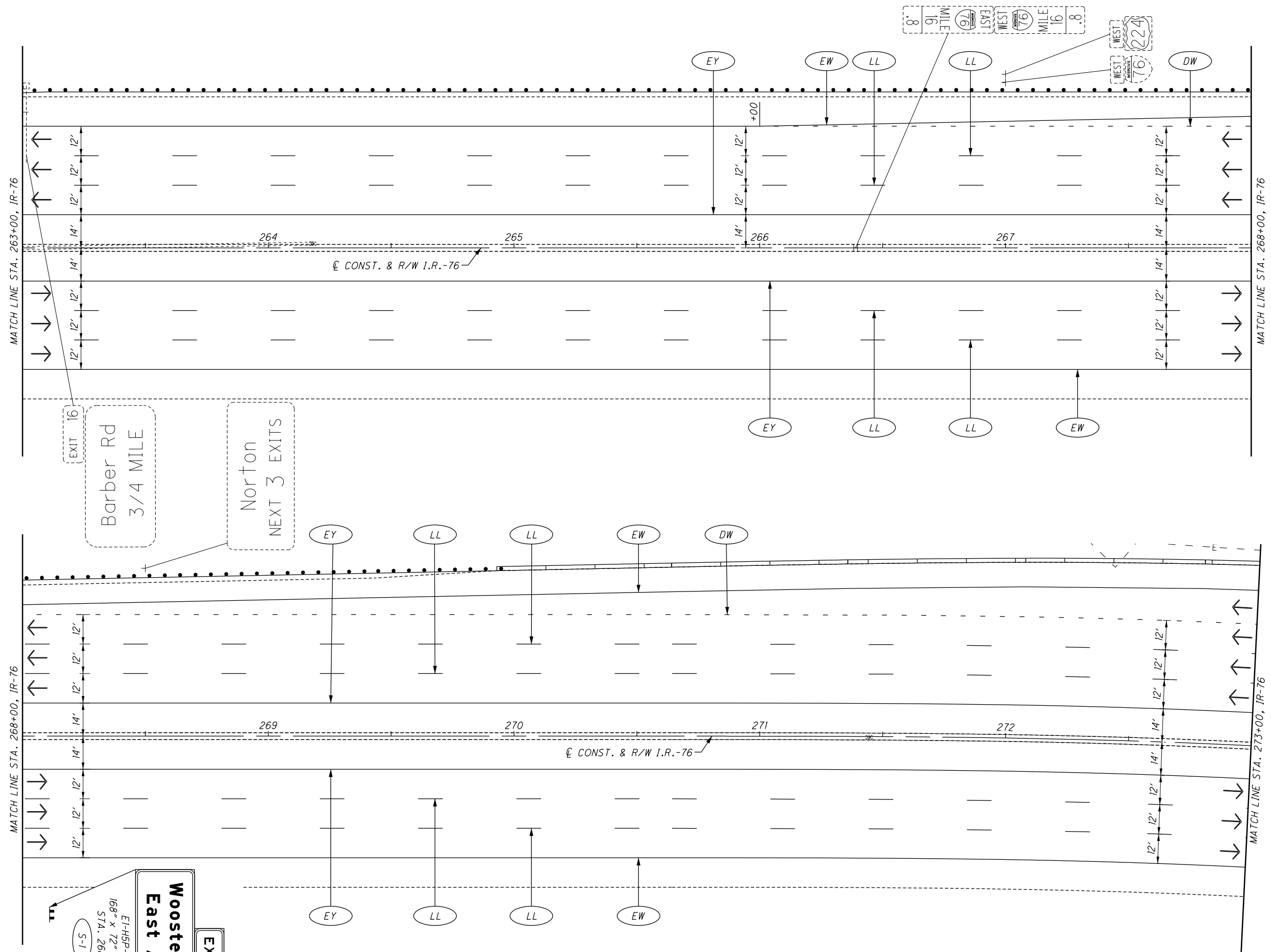
CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

↑

**TRAFFIC CONTROL - I.R. 76**  
**STA. 253+00 TO STA. 263+00**

**SUM-76-5.53**

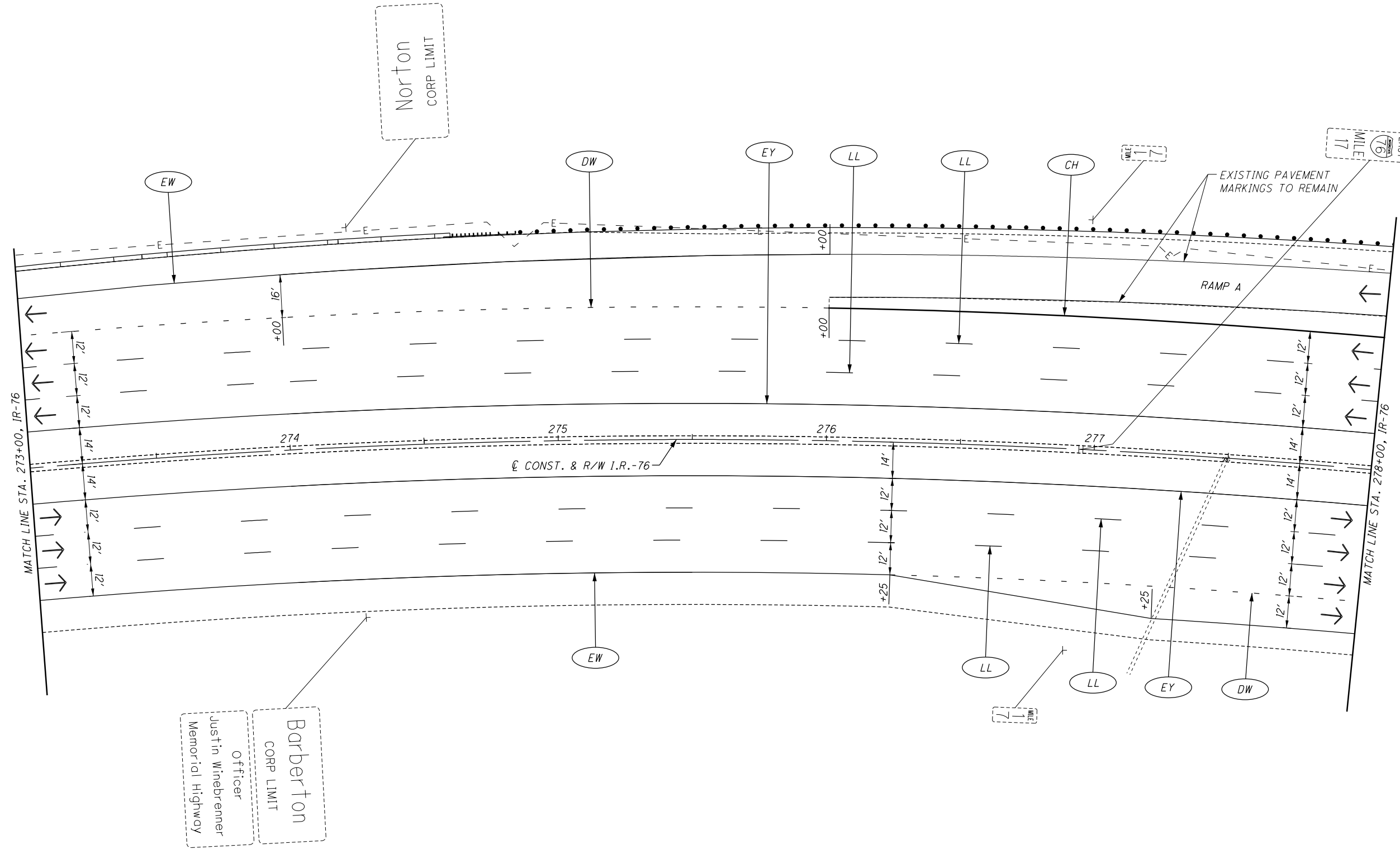


NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

<p><b>SUM-76-5.53</b></p>	<p><b>TRAFFIC CONTROL - I.R. 76</b>  <b>STA. 263+00 TO STA. 273+00</b></p>
<p>409 672</p>	<p>CALCULATED BEB CHECKED TJR</p>



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Barberton  
CORP LIMIT  
Officer  
Justin Winebrenner  
Memorial Highway

Norton  
CORP LIMIT

NOTES:  
1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

CALCULATED  
BEB  
CHECKED  
TJR

0 20 40  
HORIZONTAL  
SCALE IN FEET

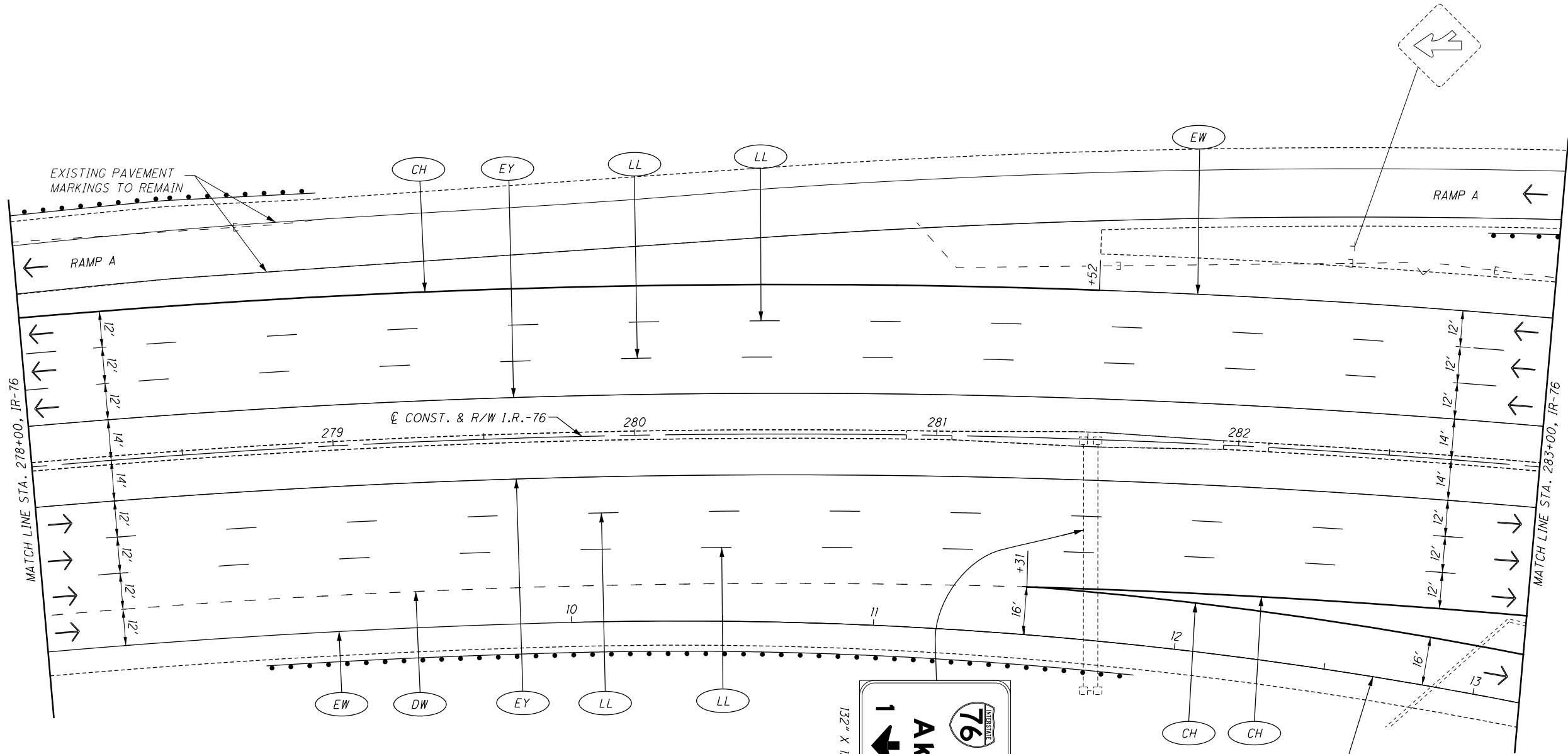
17 MILE EAST 76 17 MILE WEST 76 17

TRAFFIC CONTROL - I.R. 76  
STA. 273+00 TO STA. 278+00

SUM-76-5.53

410  
672

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EXISTING PAVEMENT MARKINGS TO REMAIN

RAMP A

RAMP A

CH

EY

LL

LL

EW

MATCH LINE STA. 278+00, IR-76

MATCH LINE STA. 283+00, IR-76

EW

DW

EY

LL

LL

CH

CH

132" X 120" (L.V. 1)  
**76 EAST**  
**AKRON**  
**1 MILE**

**EXIT 17**  
**TO 619**  
**State St**

TO BE MOUNTED ON EXISTING TRUSS SUPPORT AT STA. 281+50

OSS-3

E1-HSP-84 180" X 96" (L.V. 1)

CONST. RAMP D EB

NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

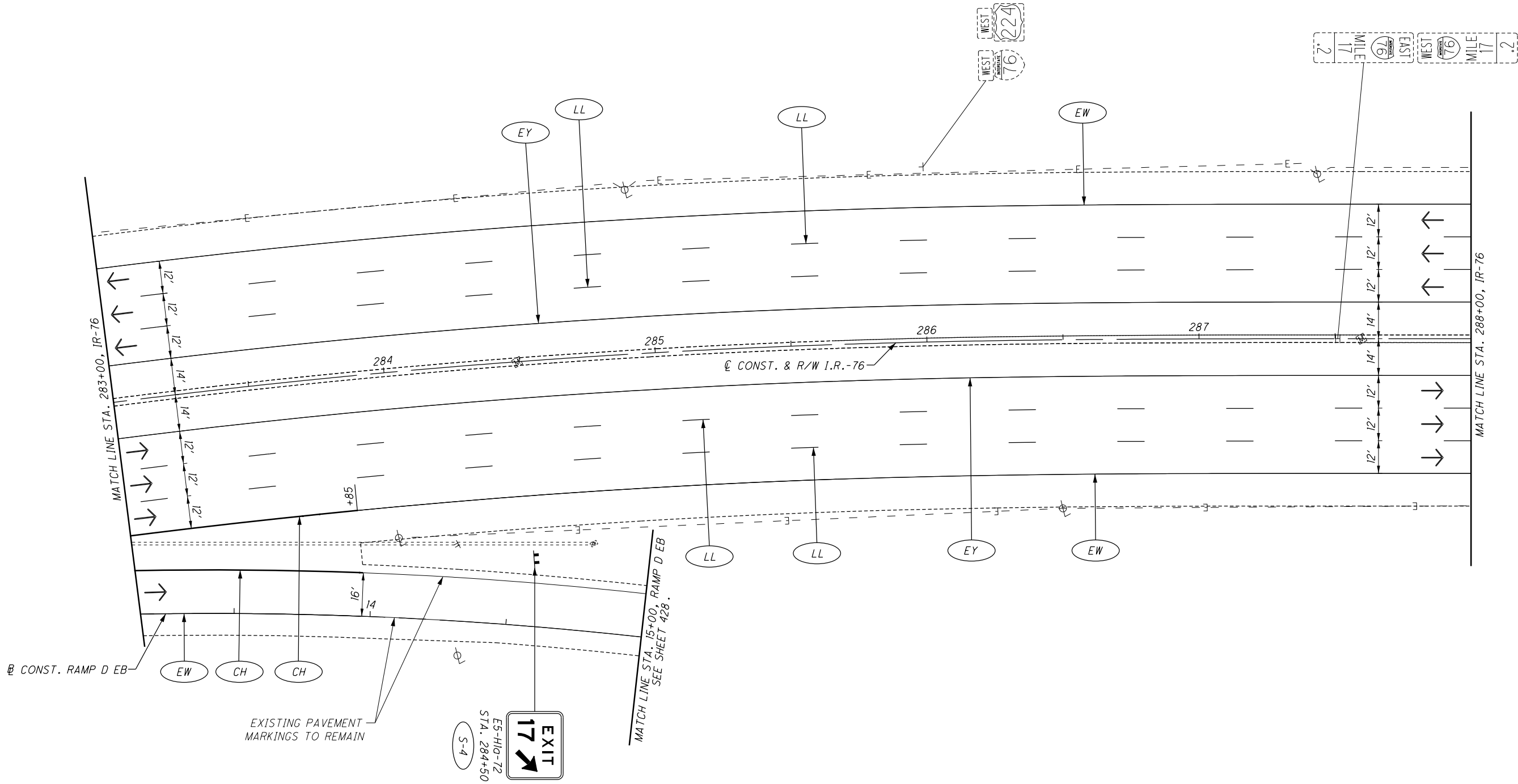
CALCULATED  
 BEB  
 CHECKED  
 TJR

0 10 20 40  
 HORIZONTAL SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 278+00 TO STA. 283+00**

**SUM-76-5.53**

411  
672



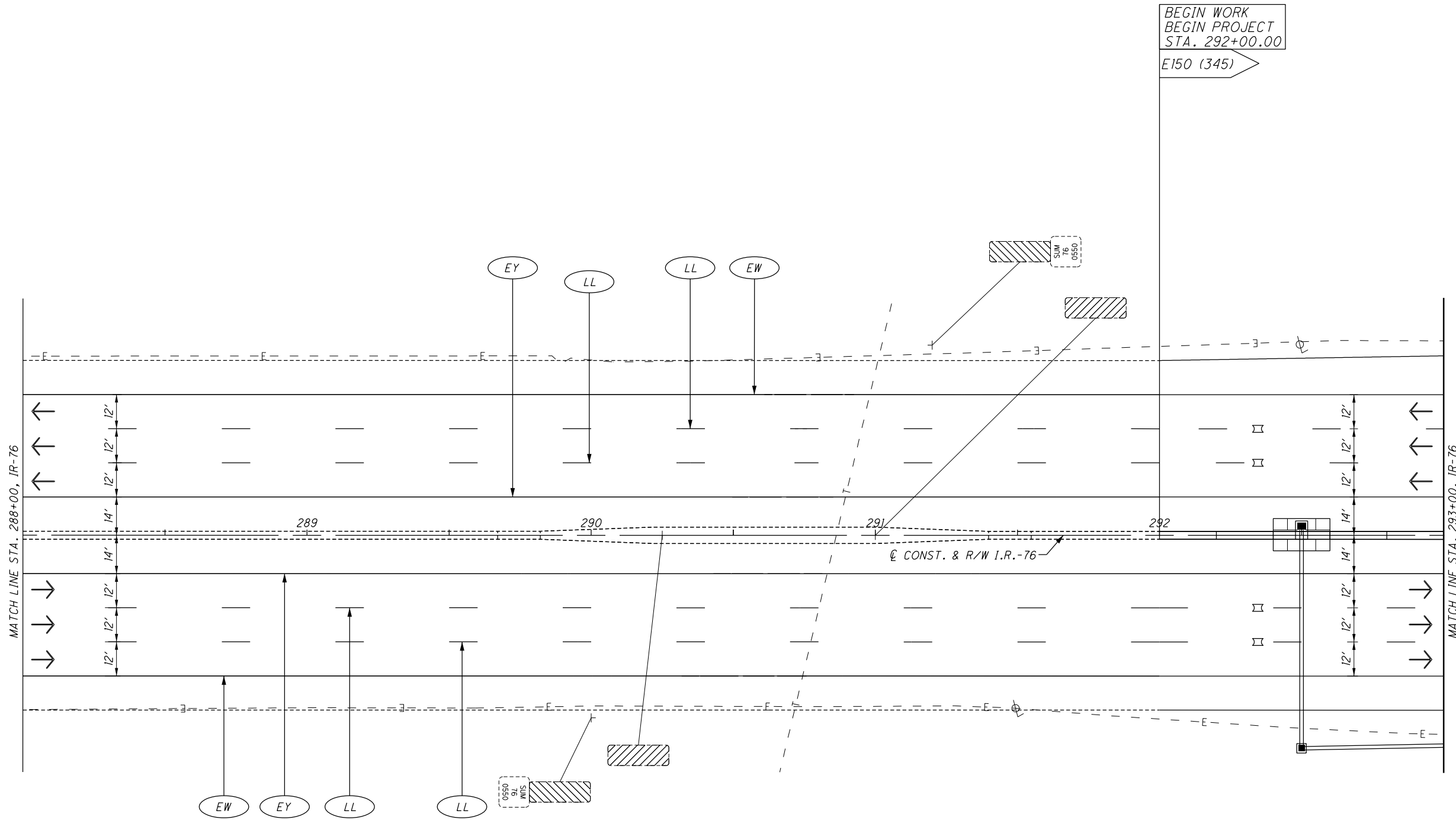
NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 283+00 TO STA. 288+00**

**SUM-76-5.53**



BEGIN WORK  
 BEGIN PROJECT  
 STA. 292+00.00  
 E150 (345)

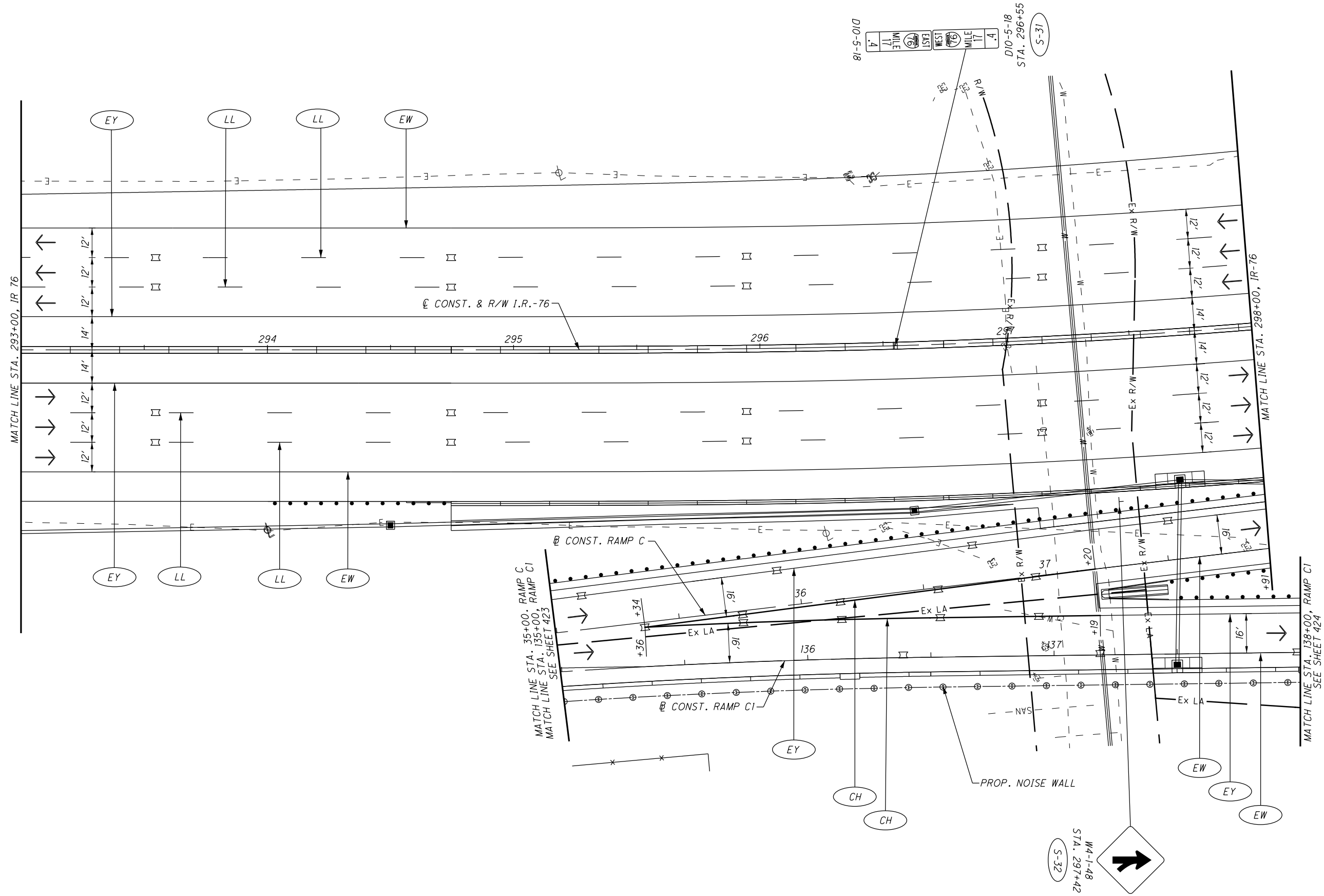
CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 288+00 TO STA. 293+00**

**SUM-76-5.53**

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



CALCULATED  
BEB  
CHECKED  
TJR

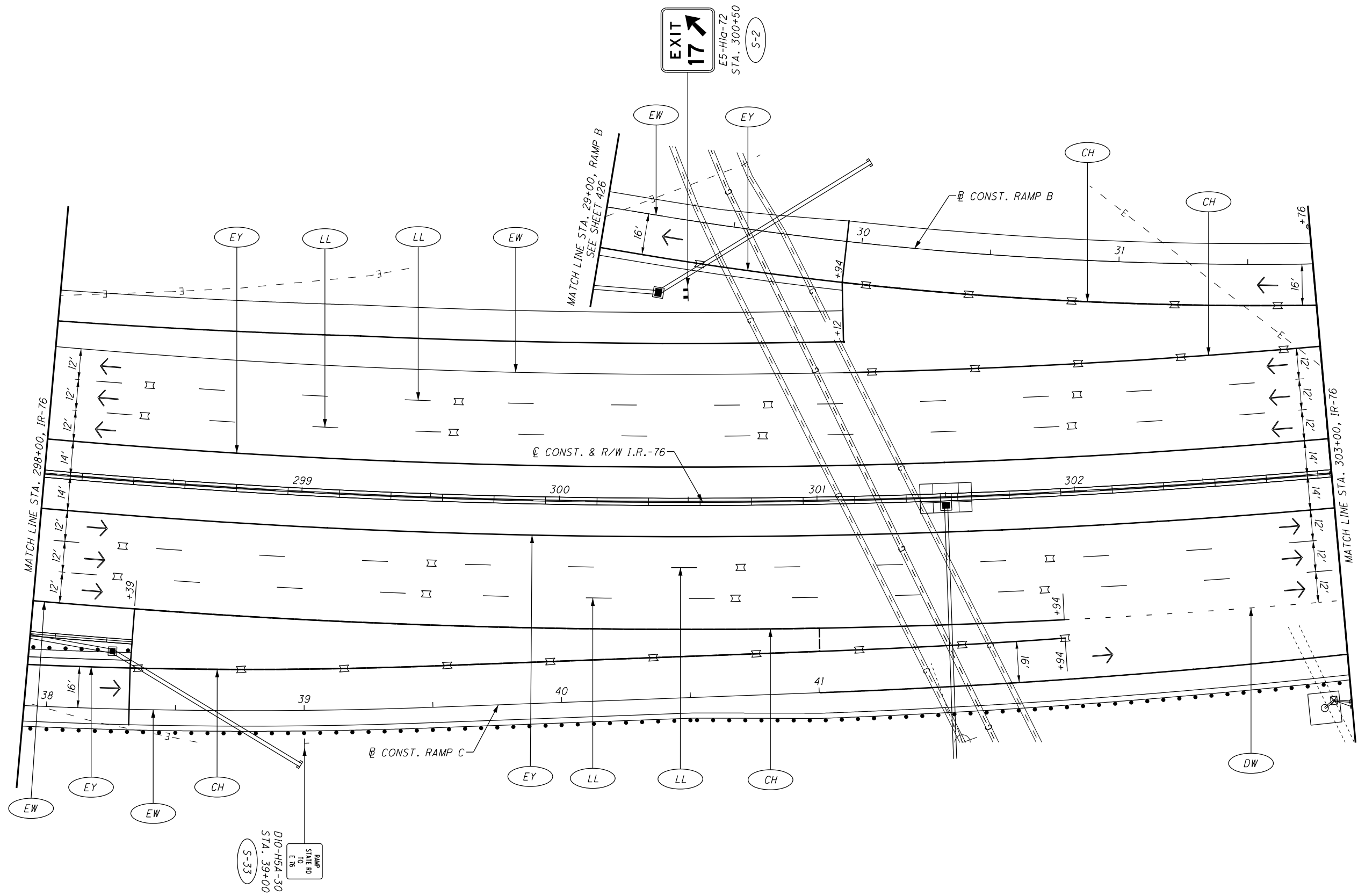
0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 293+00 TO STA. 298+00**

**SUM-76-5.53**

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

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CALCULATED  
BEB  
CHECKED  
TJR

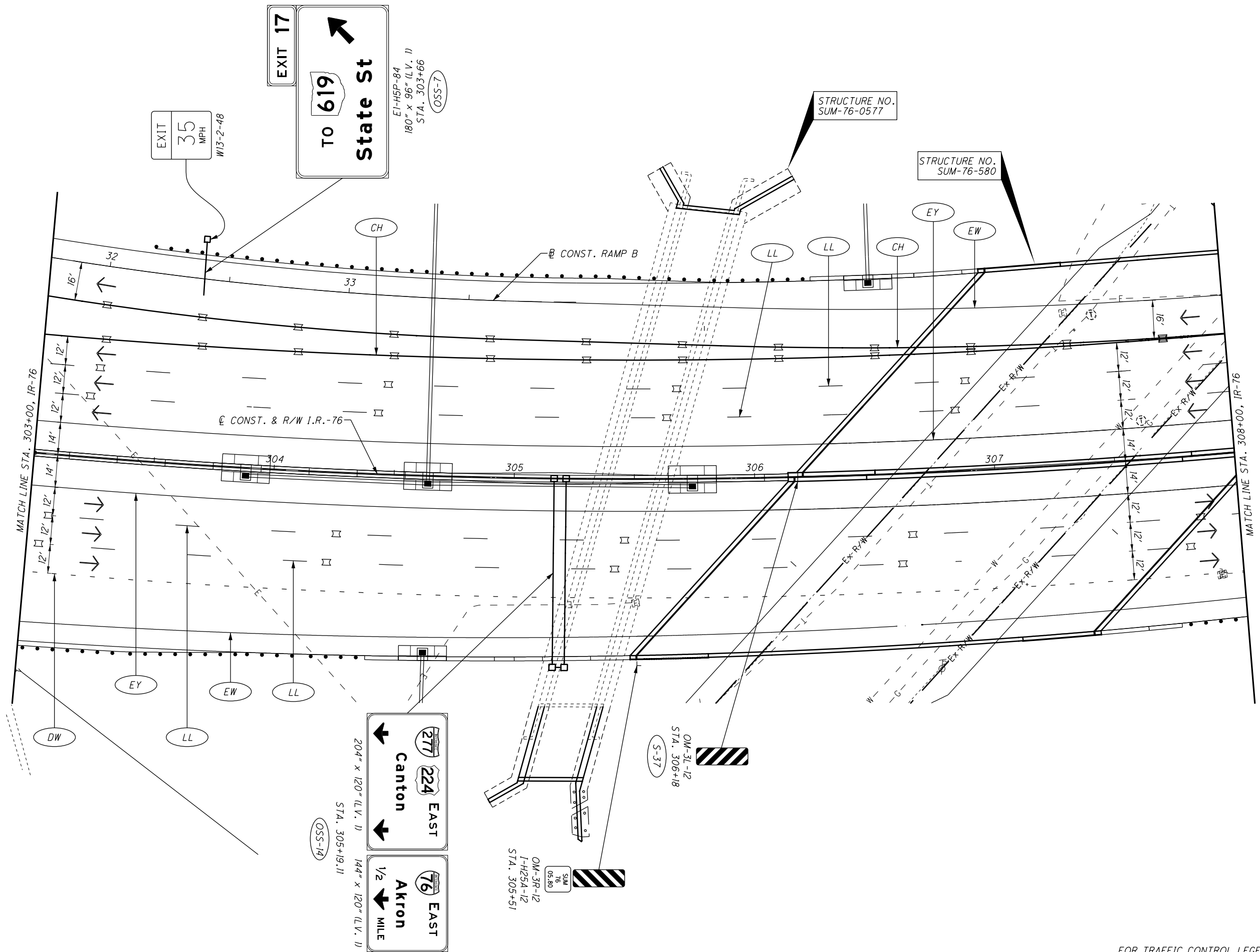
0 20 40  
10  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 298+00 TO STA. 303+00**

**SUM-76-5.53**

415  
672

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



CALCULATED  
BEB  
CHECKED  
TJR

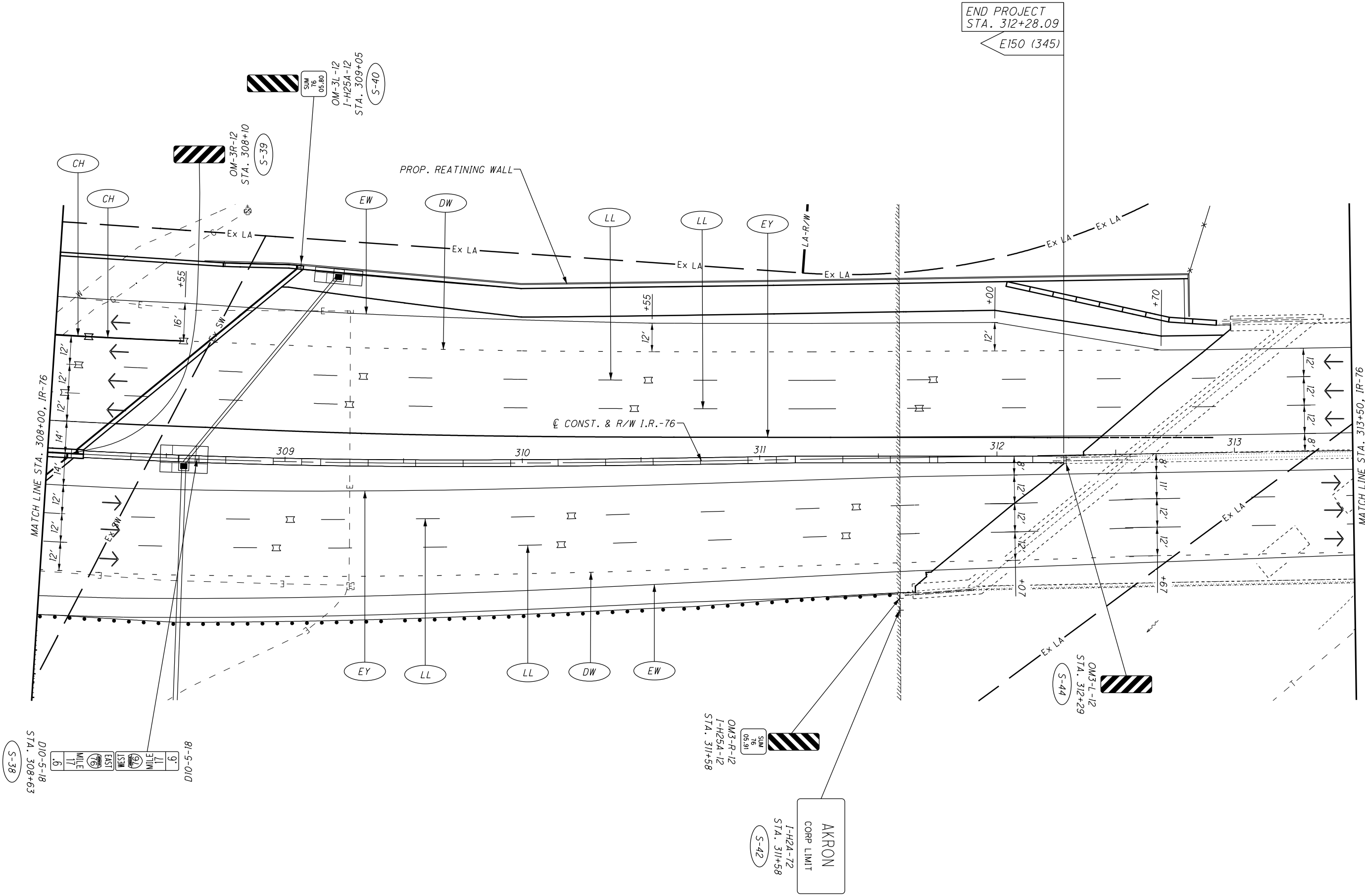
0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 303+00 TO STA. 308+00**

**SUM-76-5.53**

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

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S-38  
 D10-5-18  
 STA. 308+63  
 81-5-01D  

9'
MILE
WEST
EAST
MILE
17'
11'
6'

S-39  
 OM-3R-12  
 STA. 308+10  
 S-40  
 OM-3L-12  
 I-H25A-12  
 STA. 309+05

S-42  
 I-H2A-72  
 STA. 311+58  
 S-44  
 OM3-R-12  
 I-H25A-12  
 STA. 311+58  
 S-44  
 OM3-L-12  
 STA. 312+29

AKRON  
 CORP LIMIT

END PROJECT  
 STA. 312+28.09  
 E150 (345)

CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

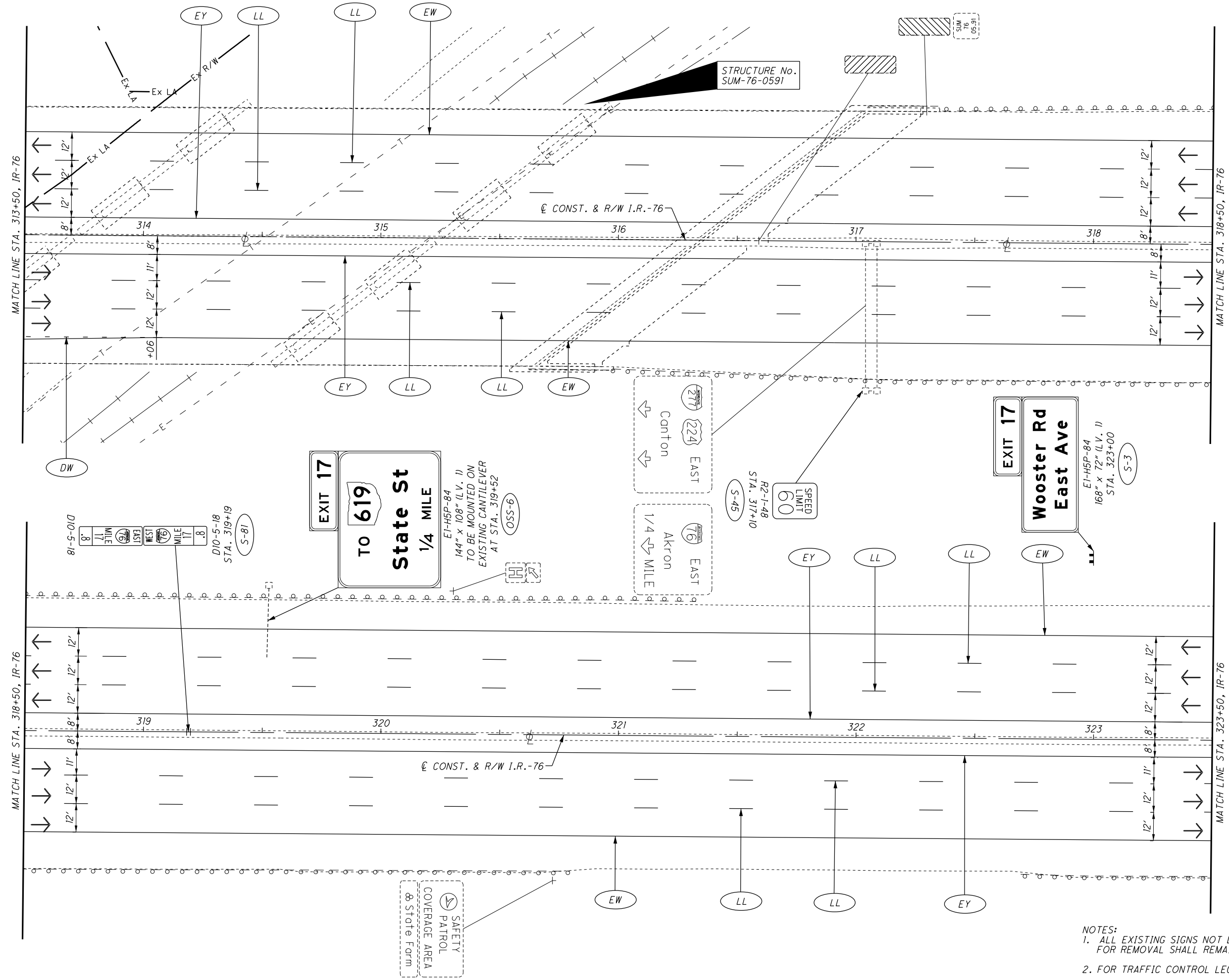
TRAFFIC CONTROL - I.R. 76  
 STA. 308+00 TO STA. 313+50

SUM-76-5.53

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



O:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670ip006.dgn Design 10/2/2018 8:11:09 AM bbinsley



NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

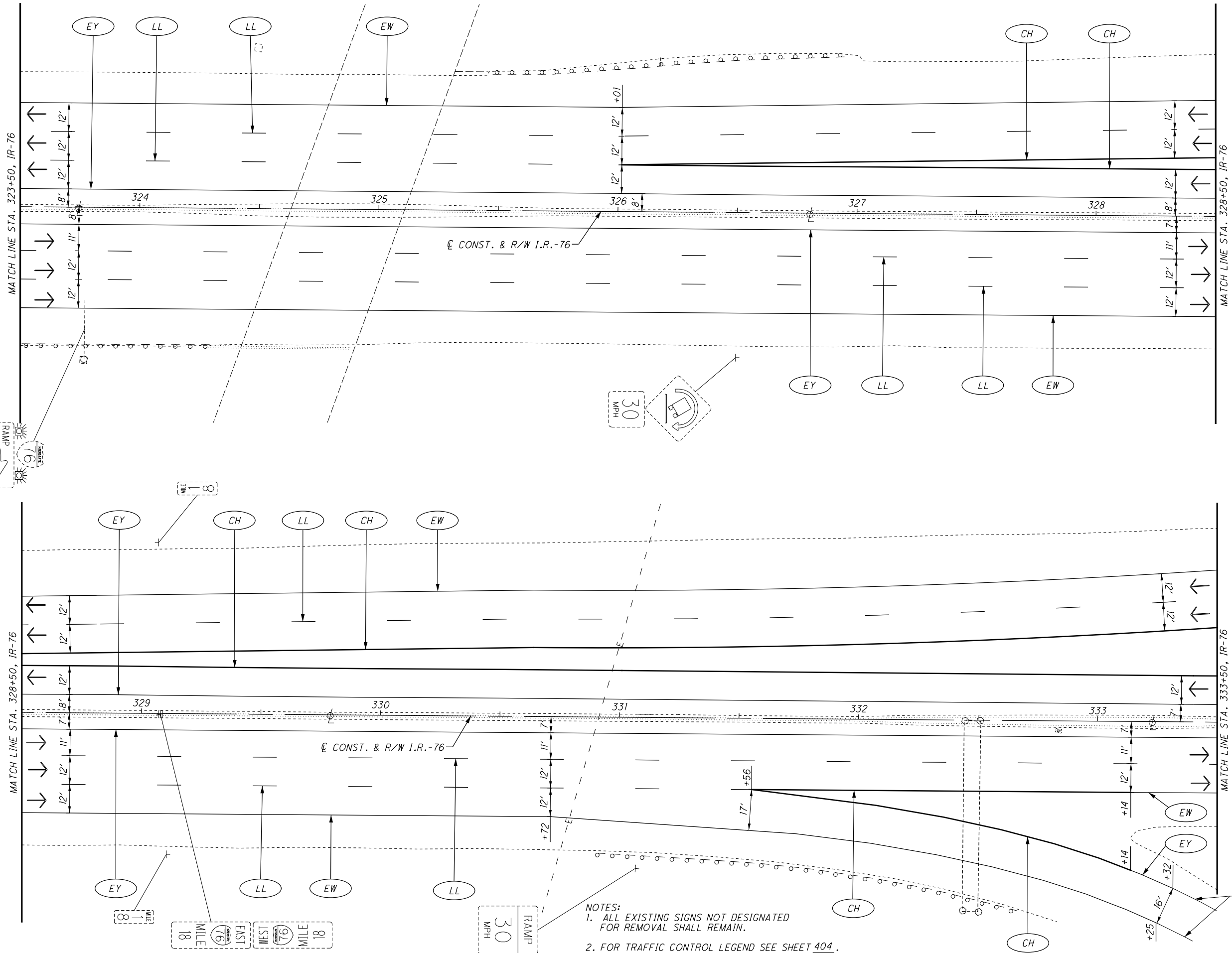
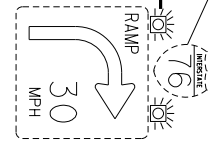
CALCULATED  
 BEB  
 CHECKED  
 TJR

**TRAFFIC CONTROL - I.R. 76  
 STA. 313+50 TO STA. 323+50**

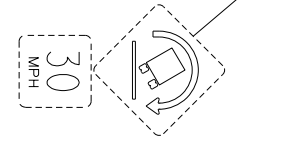
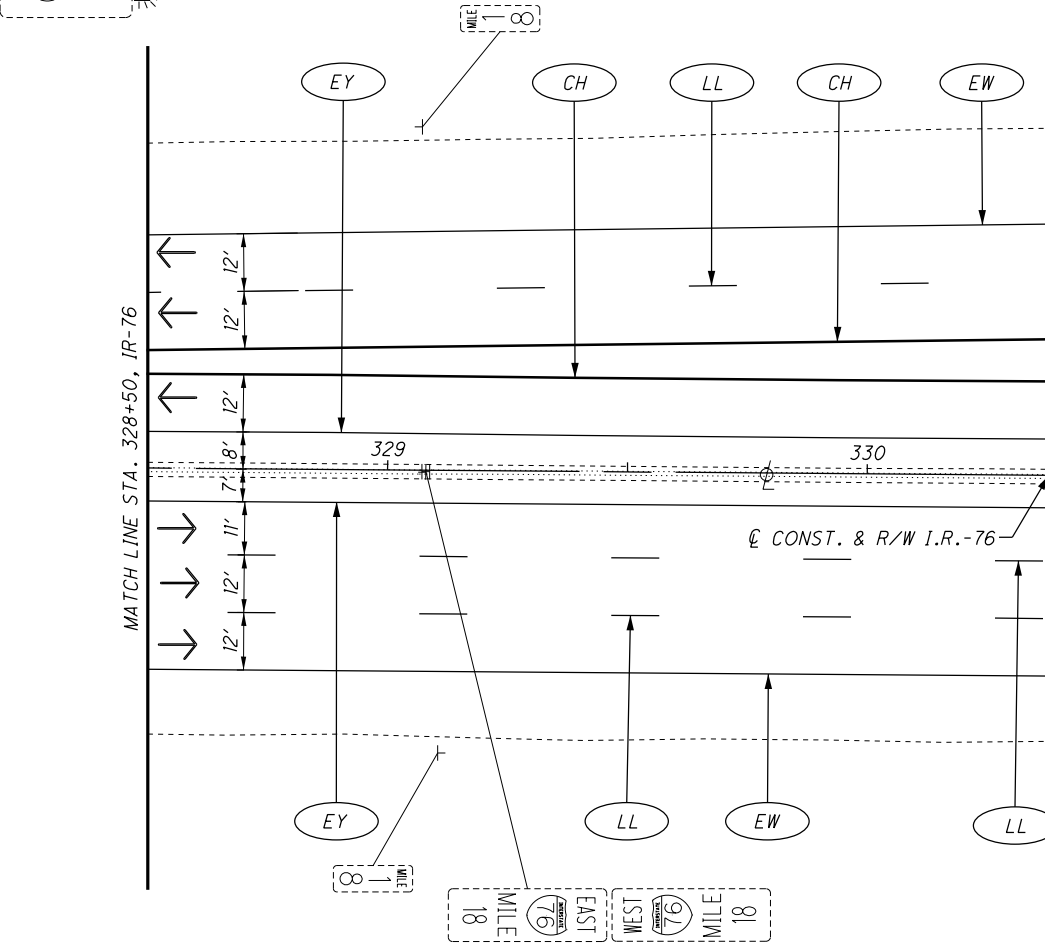
**SUM-76-5.53**

418  
 672

o:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670ip006A.dgn Design 10/2/2018 8:11:10 AM bbinsley



NOTES:  
1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



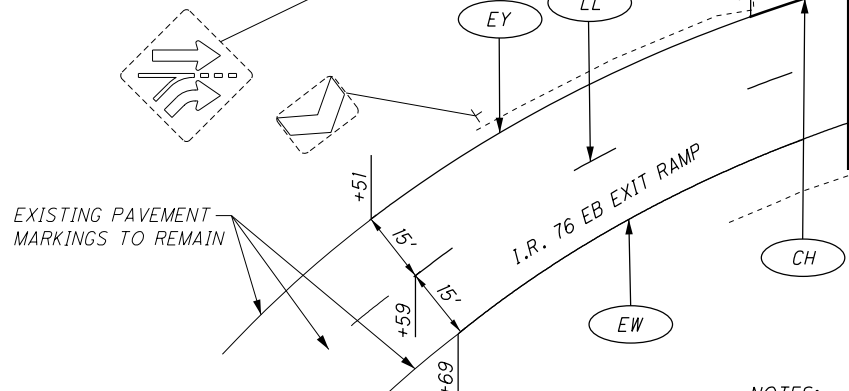
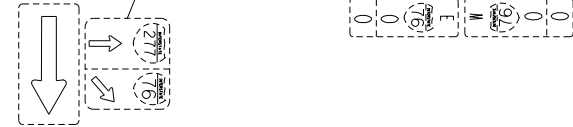
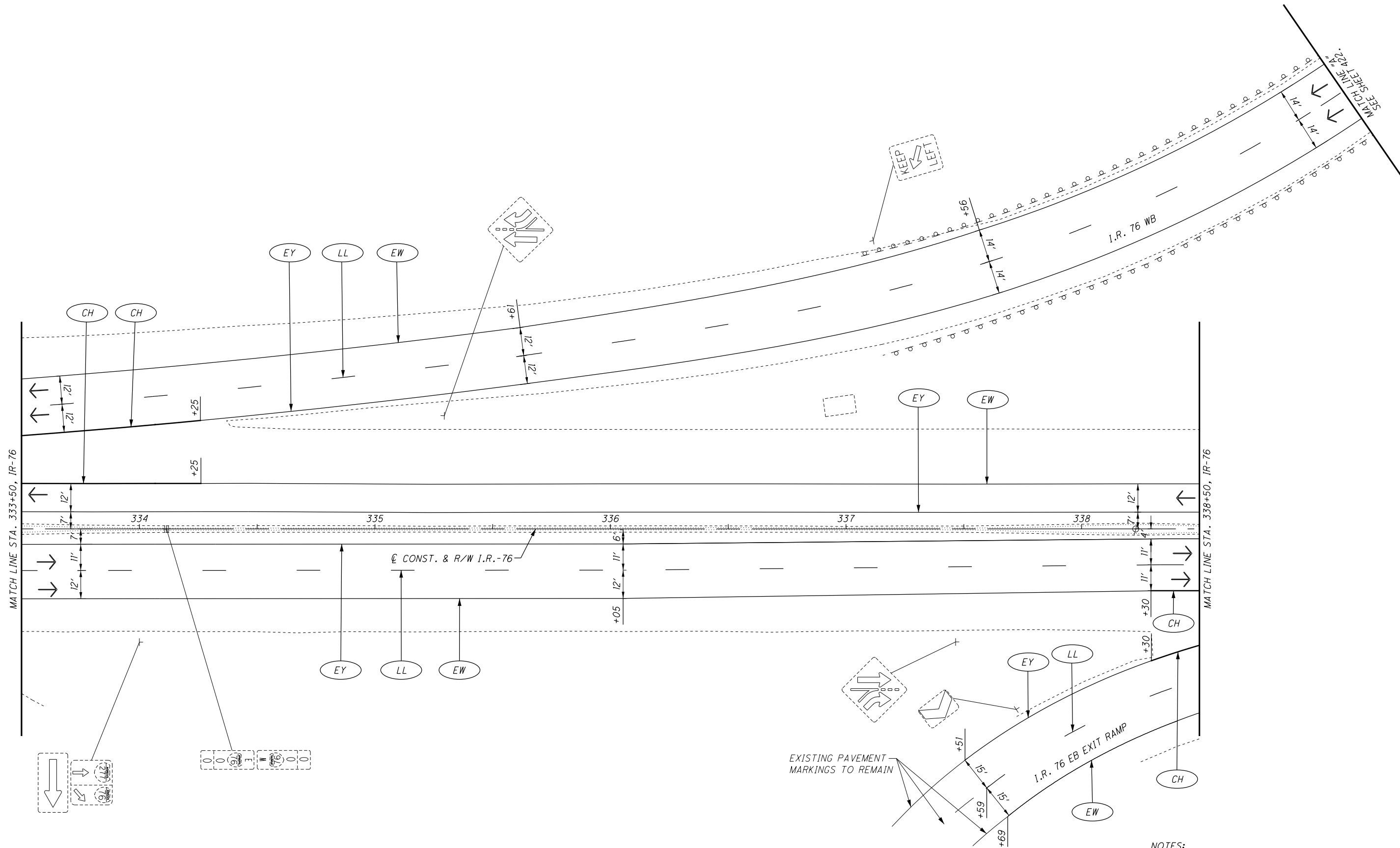
CALCULATED  
BEB  
CHECKED  
TJR

**TRAFFIC CONTROL - I.R. 76**  
**STA. 323+50 TO STA. 333+50**

**SUM-76-5.53**

419  
672

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NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

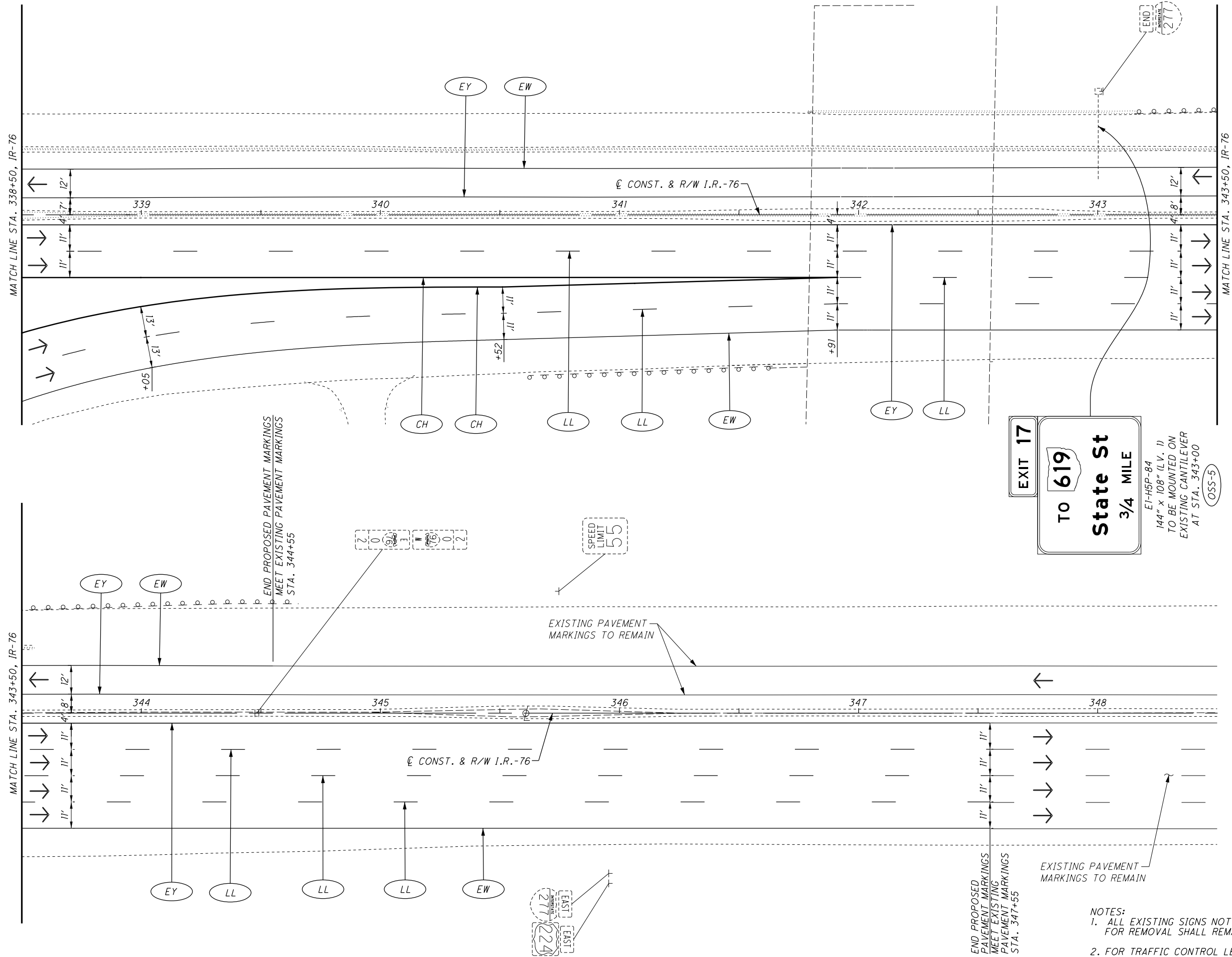
CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**TRAFFIC CONTROL - I.R. 76**  
**STA. 333+50 STA. 338+50**

**SUM-76-5.53**

420  
 672



NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

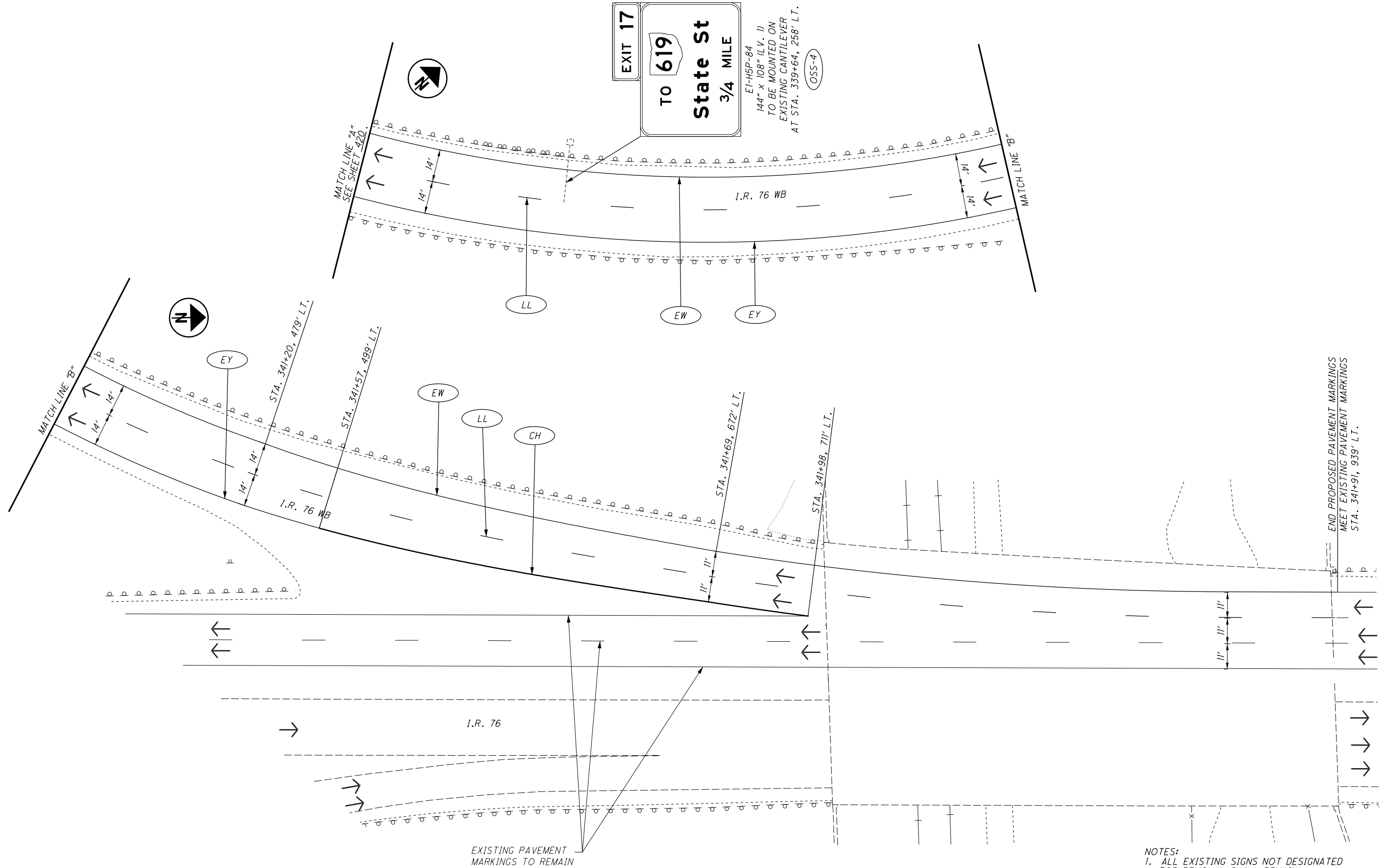
CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

END  
 277

**TRAFFIC CONTROL - I.R. 76**  
**STA. 338+50 TO END**

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SEE PLAN

0 20 40  
HORIZONTAL SCALE IN FEET

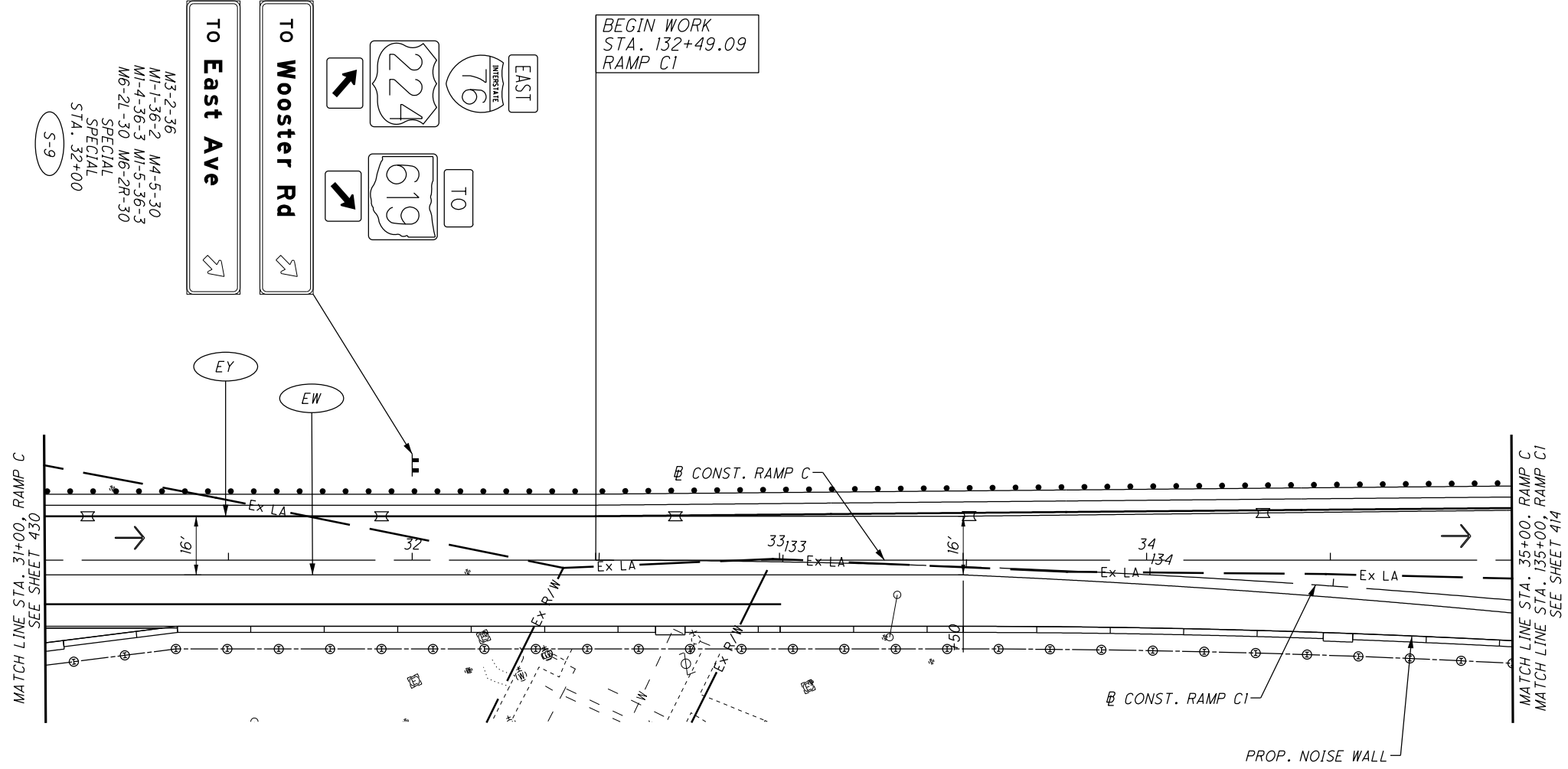
CALCULATED	BEB	CHECKED	TJR
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**TRAFFIC CONTROL - I.R. 76 W.B. OFF RAMP**  
**MATCH LINE "A" TO END**

**SUM-76-5.53**

422  
672

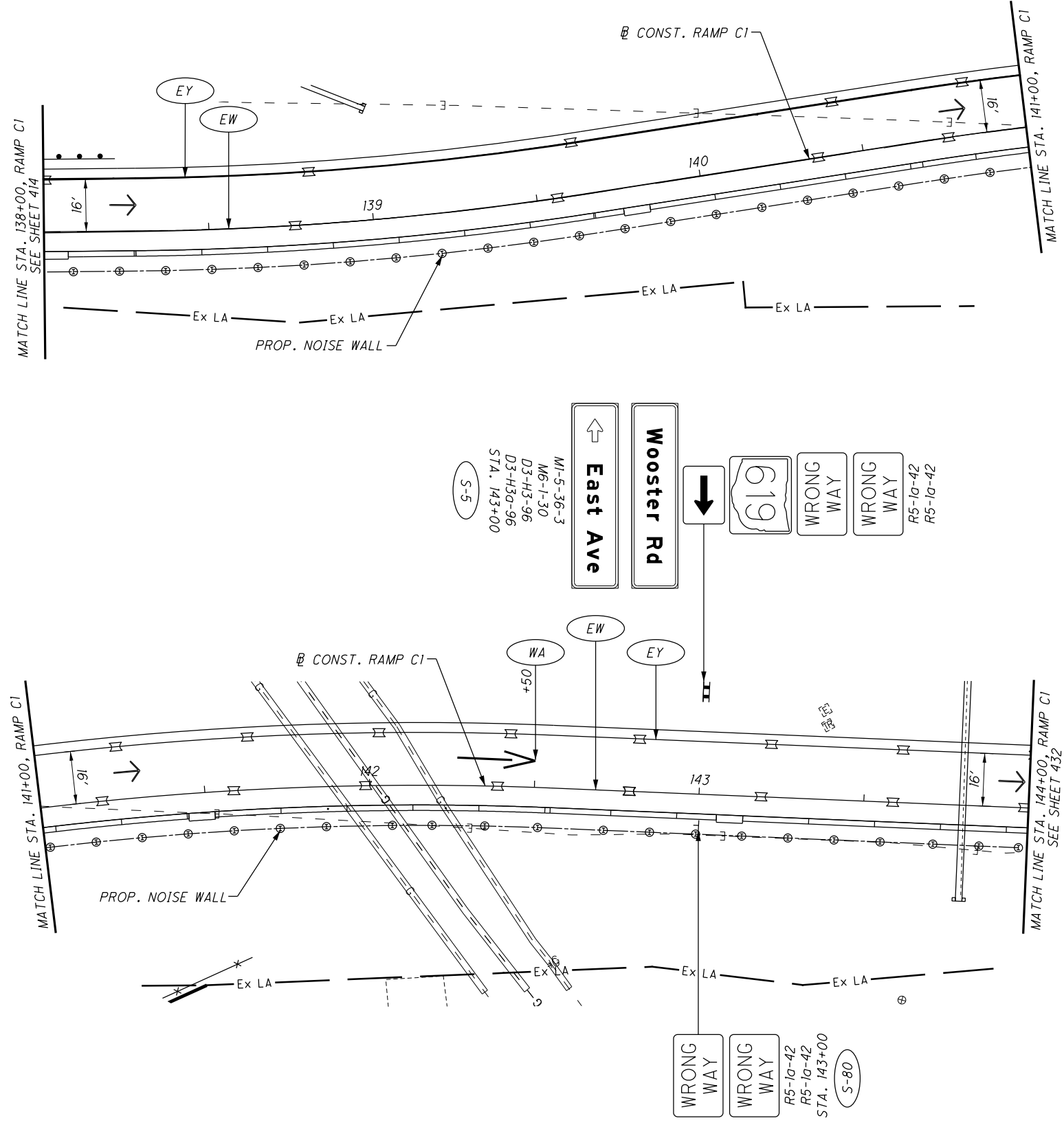
NOTES:  
 1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
 2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



CALCULATED	BEB
CHECKED	TJR

**TRAFFIC CONTROL - RAMP C & RAMP C1**  
**STA. 31+00 TO 35+00 & BEGIN TO 135+00**

**SUM-76-5.53**



CALCULATED  
BEB  
CHECKED  
TJR

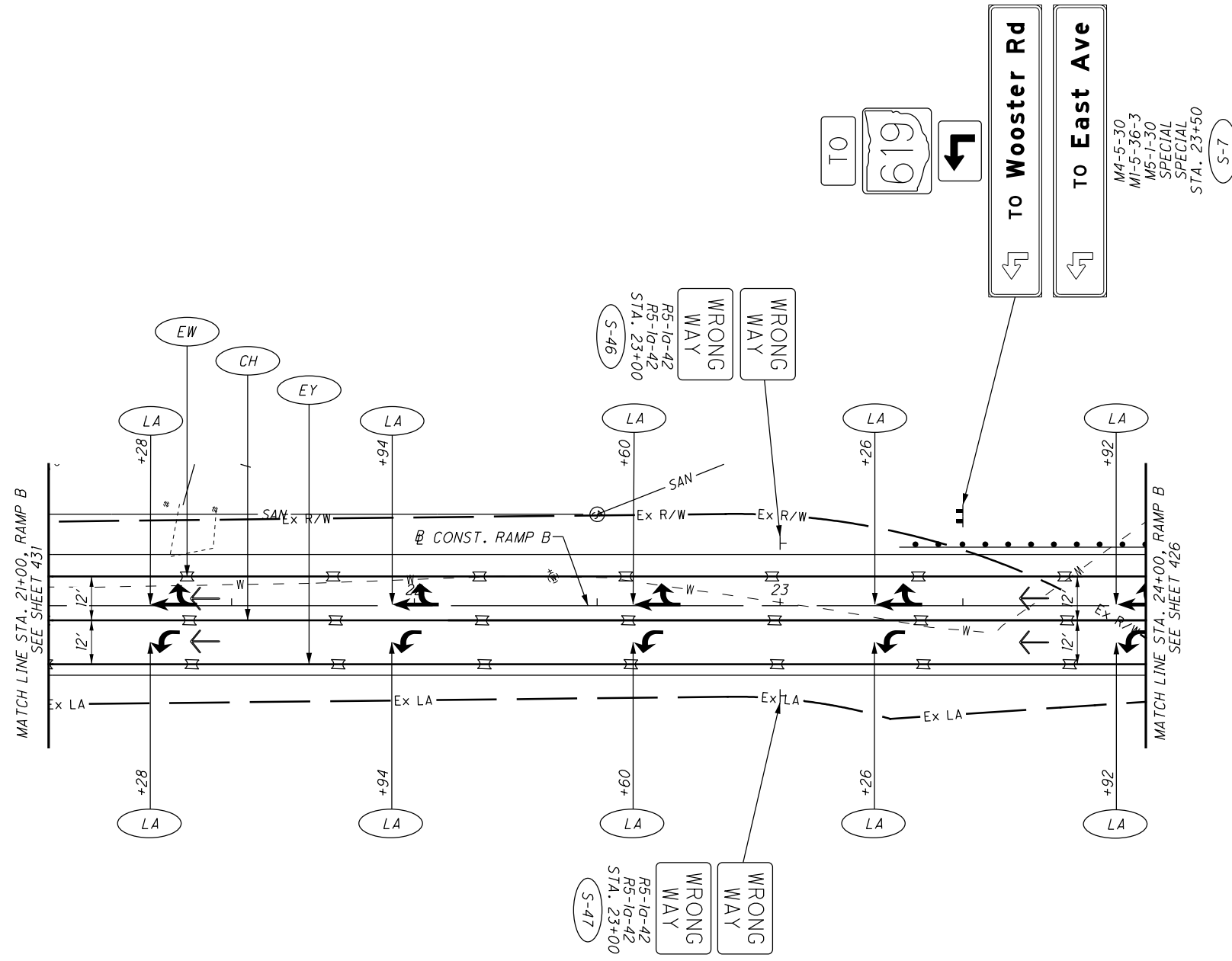
0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - RAMP C1  
STA. 138+00 TO STA. 144+00**

**SUM-76-5.53**

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NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	AKF	2-22-2019

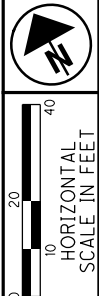


425  
672

SUM-76-5.53

TRAFFIC CONTROL - RAMP B  
STA. 21+00 TO STA. 24+00

CALCULATED  
BEB  
CHECKED  
TJR

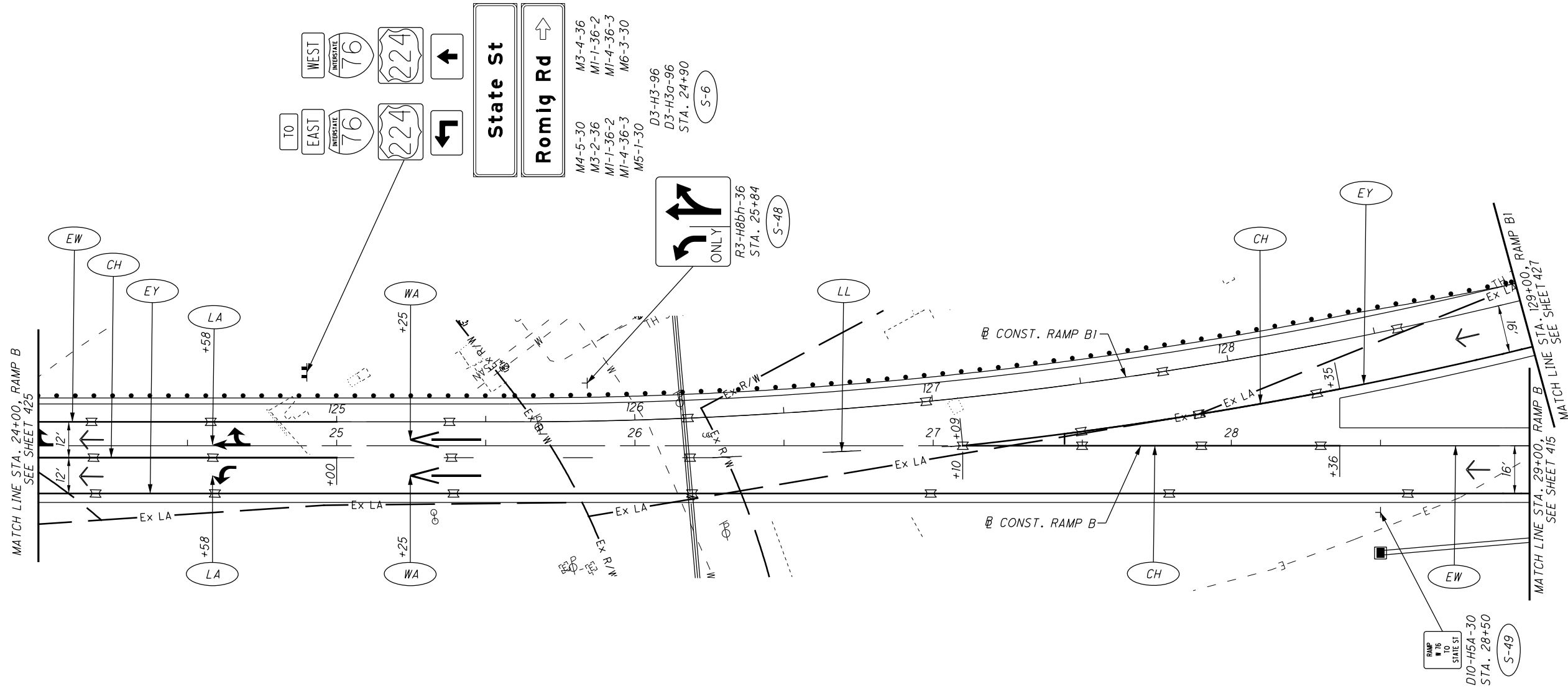


FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



o:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670ip201.dgn Design 2/28/2019 7:49:42 AM atord

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	AKF	2-22-2019



CALCULATED  
BEB  
CHECKED  
TJR

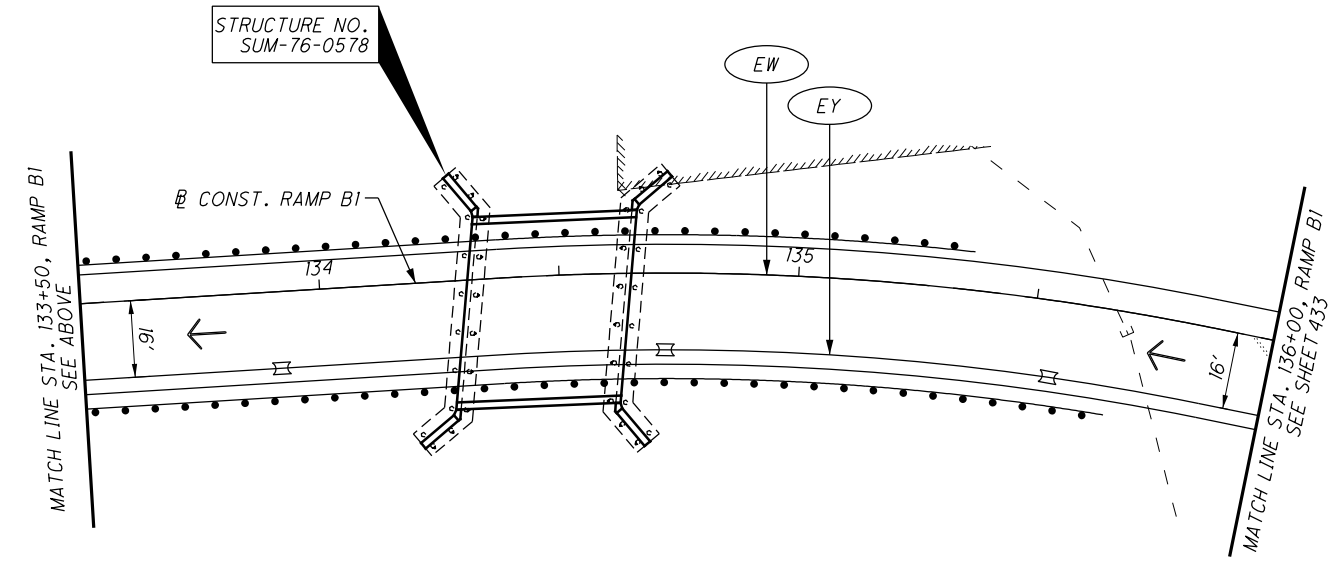
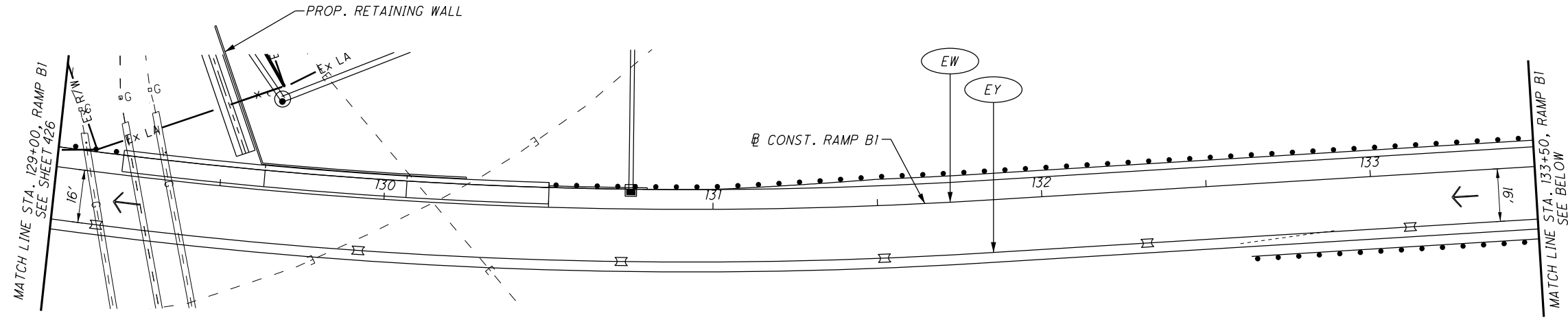
0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - RAMP B**  
**STA. 24+00 TO STA. 29+00**

**SUM-76-5.53**

426  
672

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



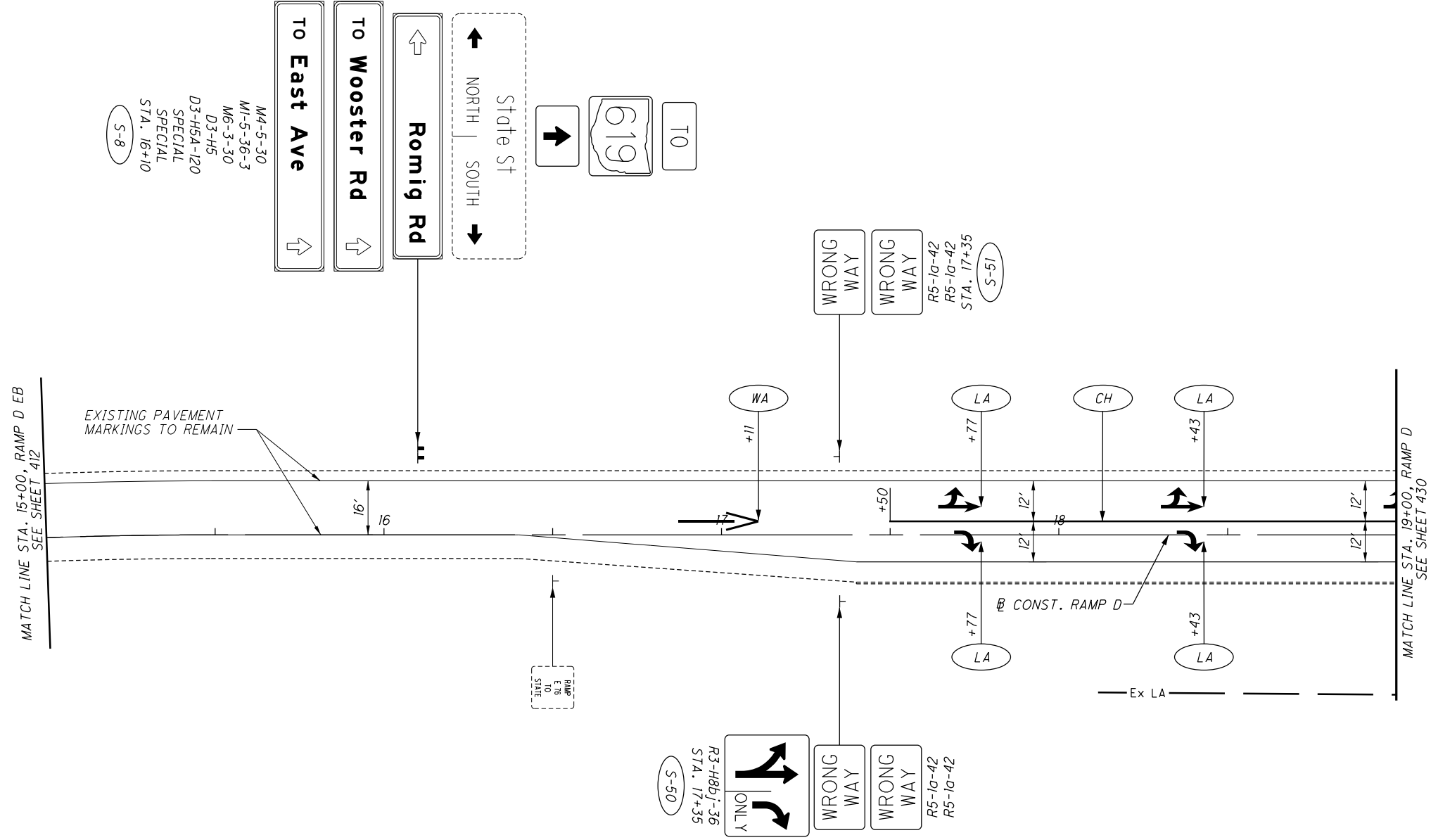
CALCULATED  
BEB  
CHECKED  
TJR

0 20 40  
10  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - RAMP B1**  
**STA. 129+00 TO STA. 136+00**

**SUM-76-5.53**

427  
672



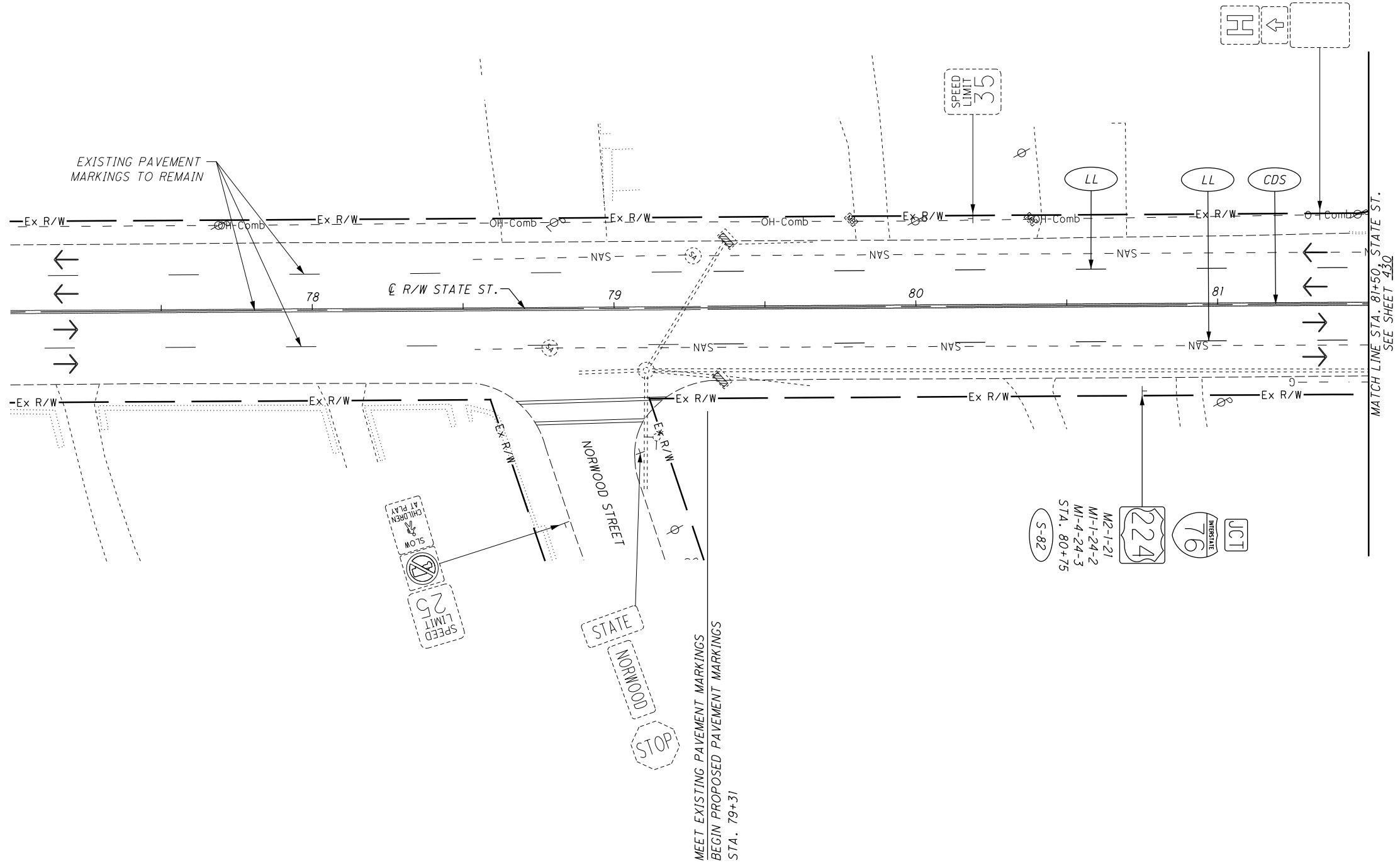
CALCULATED  
 BEB  
 CHECKED  
 TJR

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**TRAFFIC CONTROL - RAMP D**  
**SYA. 15+00 TO STA. 19+00**

**SUM-76-5.53**

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



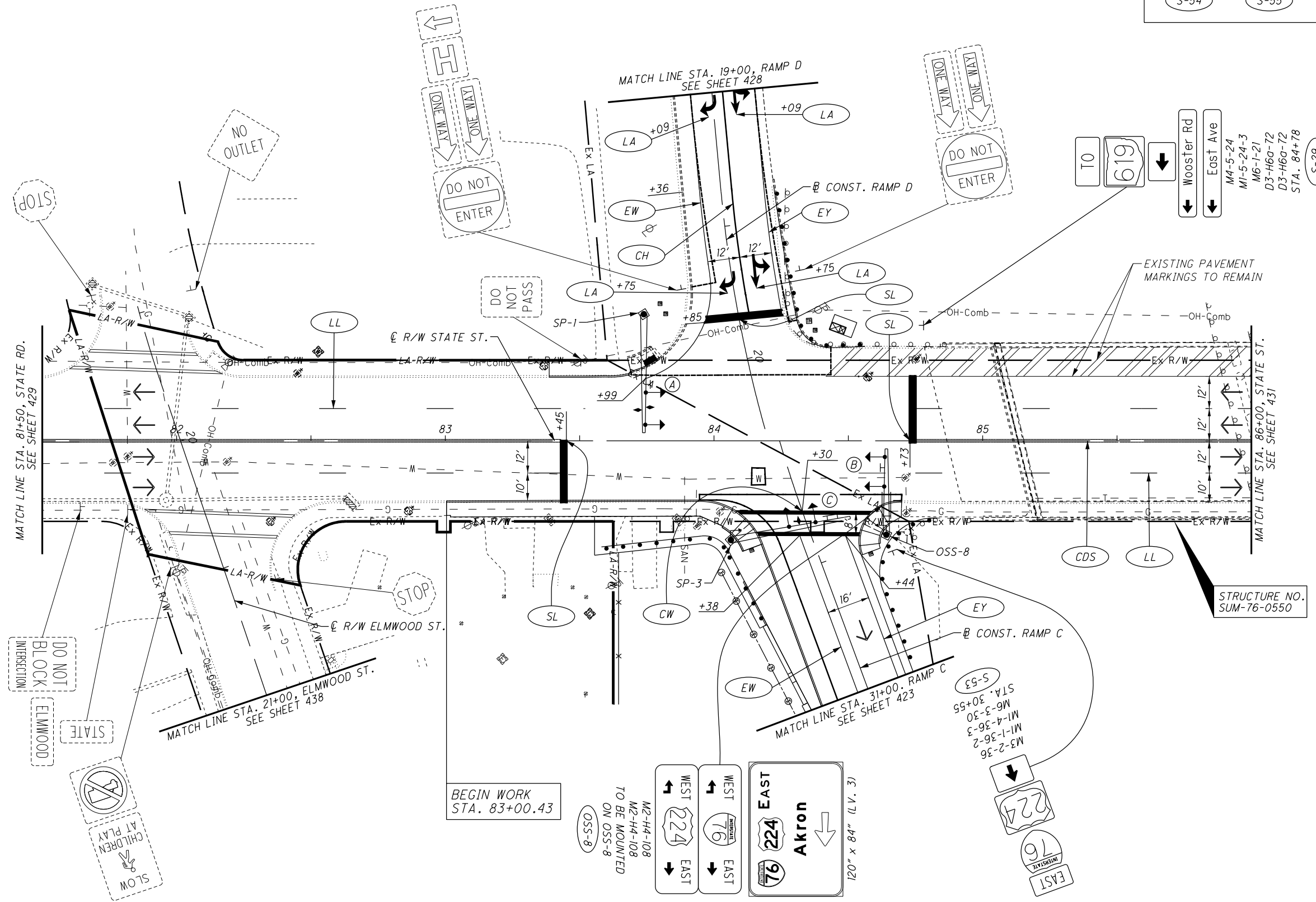
CALCULATED	
BEB	
CHECKED	TJR

0 20 40  
HORIZONTAL SCALE IN FEET

**TRAFFIC CONTROL - STATE ST.  
BEGIN TO STA. 81+50**

**SUM-76-5.53**

429  
672



**MAST ARM SIGNAGE**

R3-1-36 (A)	R3-2-36 (B)	D3-1-84 (C)
S-54	S-55	S-56

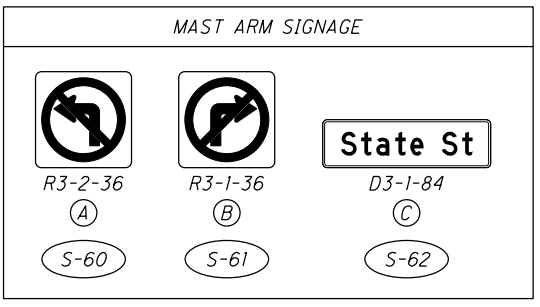
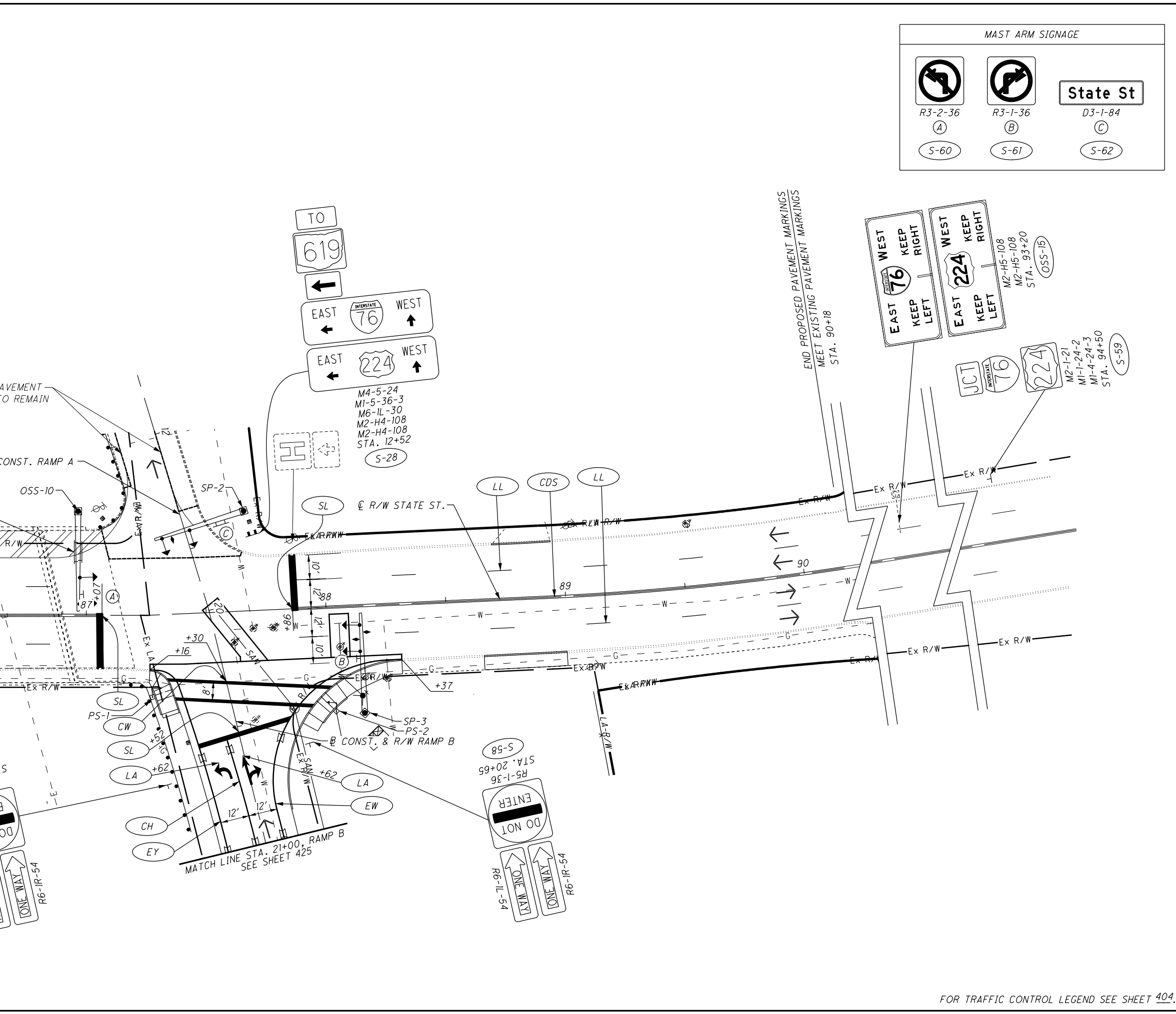
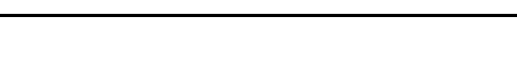
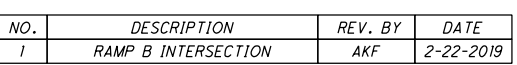
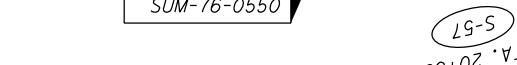
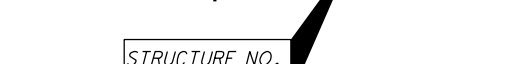
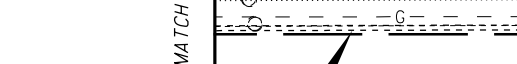
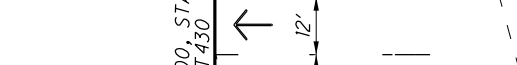
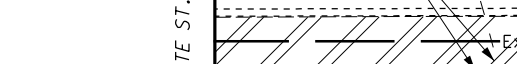
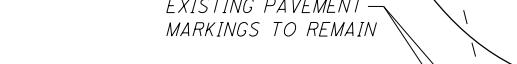
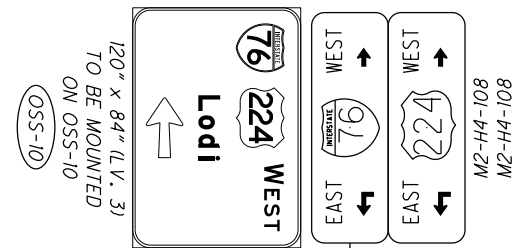
CALCULATED  
BEB  
CHECKED  
TJR

0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - STATE ST.  
STA. 81+50 TO STA. 86+00**

**SUM-76-5.53**

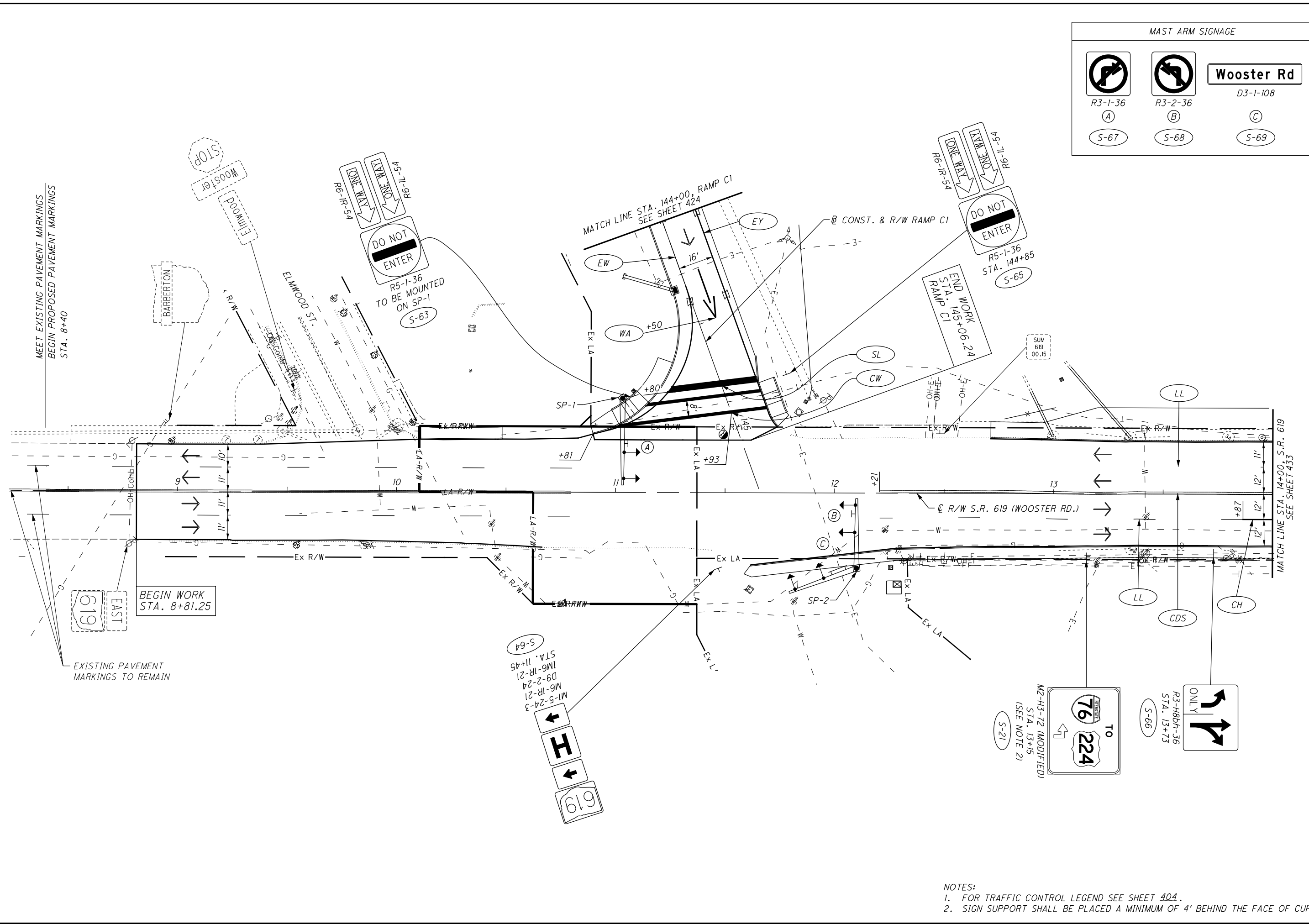
NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION	AKF	2-22-2019



TRAFFIC CONTROL - STATE ST.  
STA. 86+00 TO END

SUM-76-5.53

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MAST ARM SIGNAGE		
R3-1-36 (A)	R3-2-36 (B)	D3-1-108 (C)
S-67	S-68	S-69



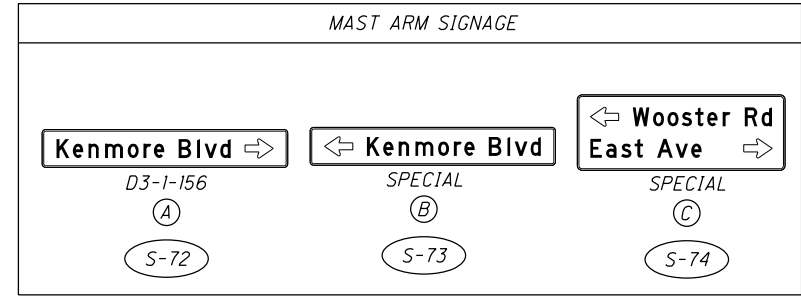
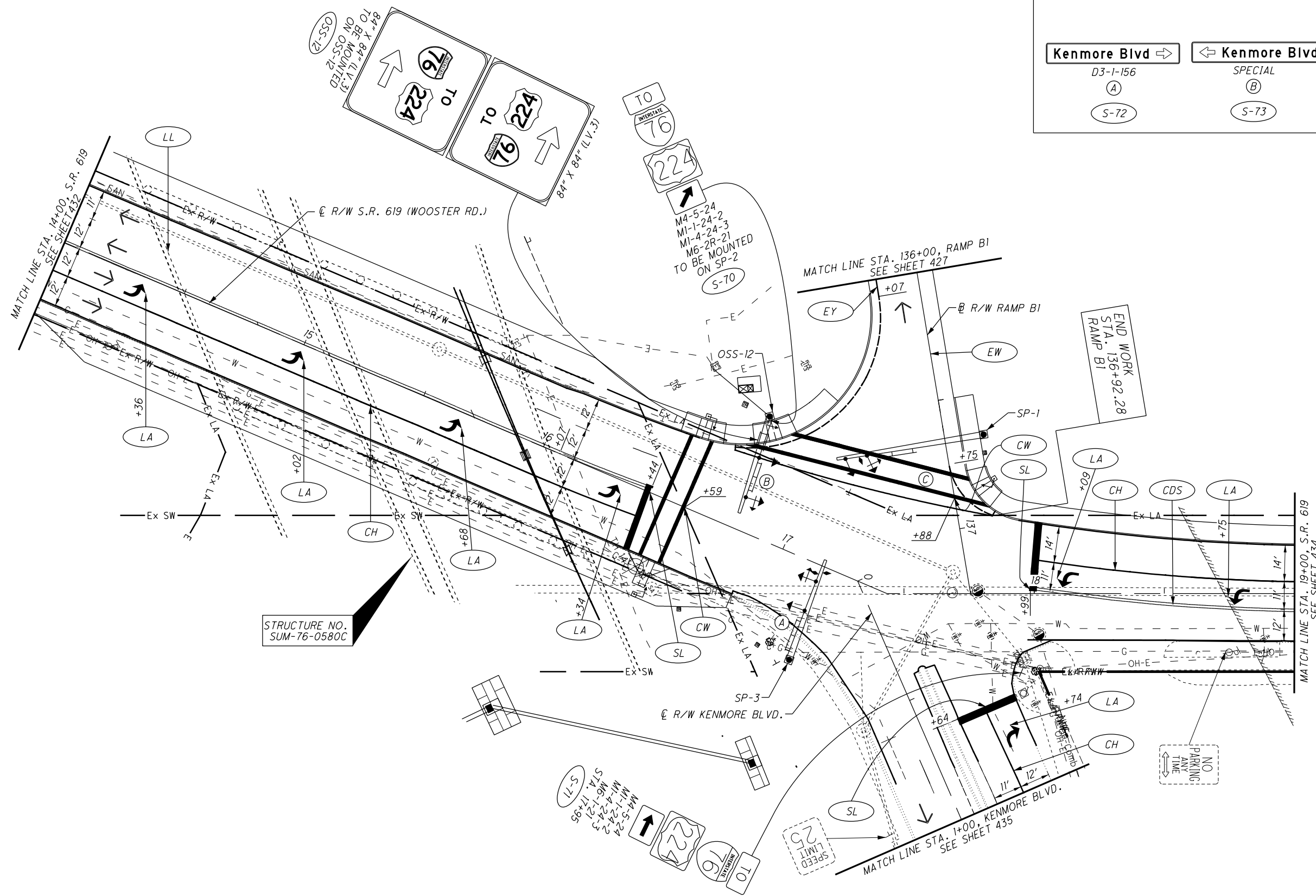
TRAFFIC CONTROL - S.R. 619 (WOOSTER ST.)  
BEGIN TO STA. 14+00

SUM-76-5.53

432  
672

- NOTES:
- FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.
  - SIGN SUPPORT SHALL BE PLACED A MINIMUM OF 4' BEHIND THE FACE OF CURB.

O:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670ip401.dgn Design 10/2/2018 8:11:32 AM bbinsley



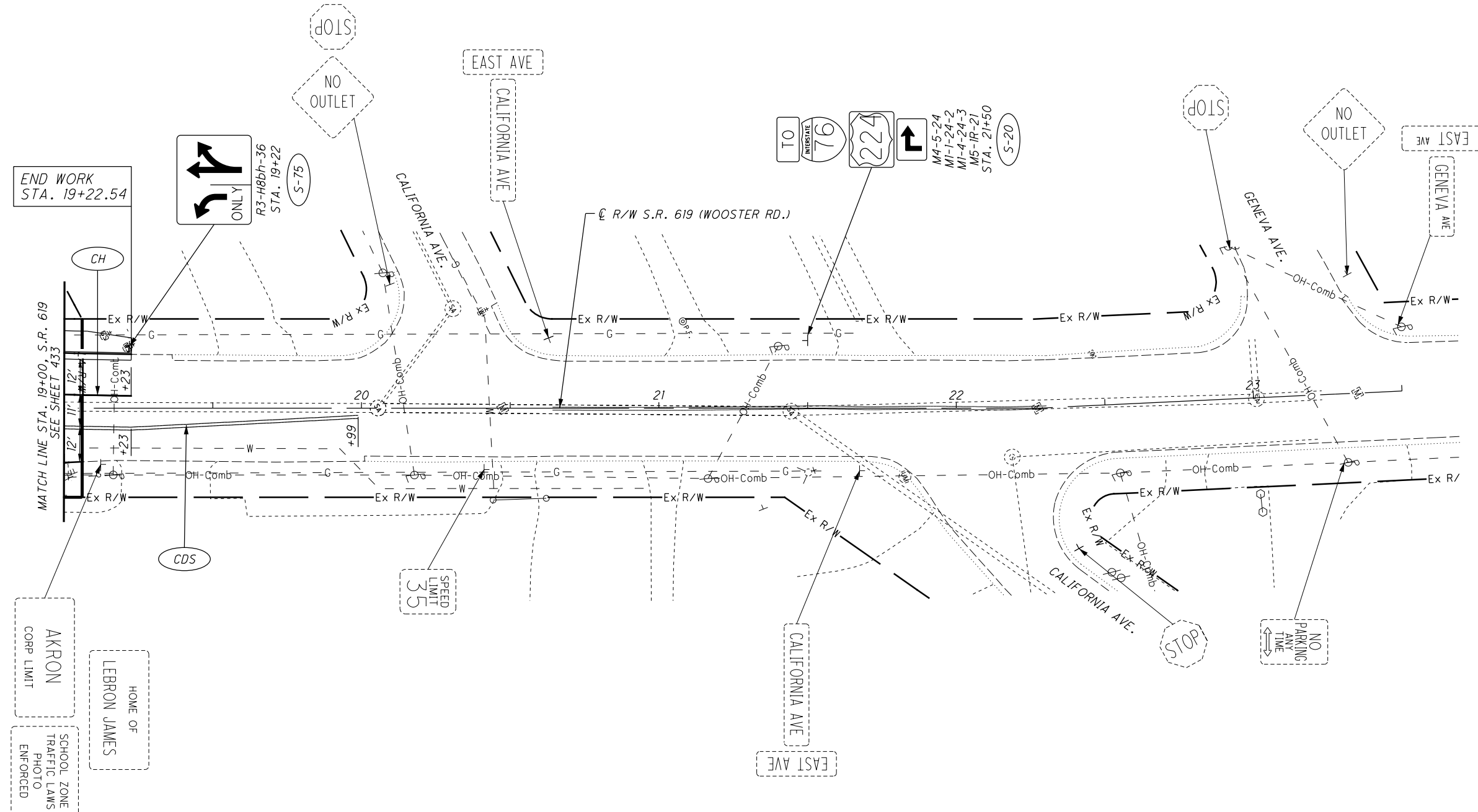
**TRAFFIC CONTROL - S.R. 619 (WOOSTER ST.) STA. 14+00 TO STA. 19+00**

**SUM-76-5.53**

433  
672

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.





CALCULATED  
BEB  
CHECKED  
TJR

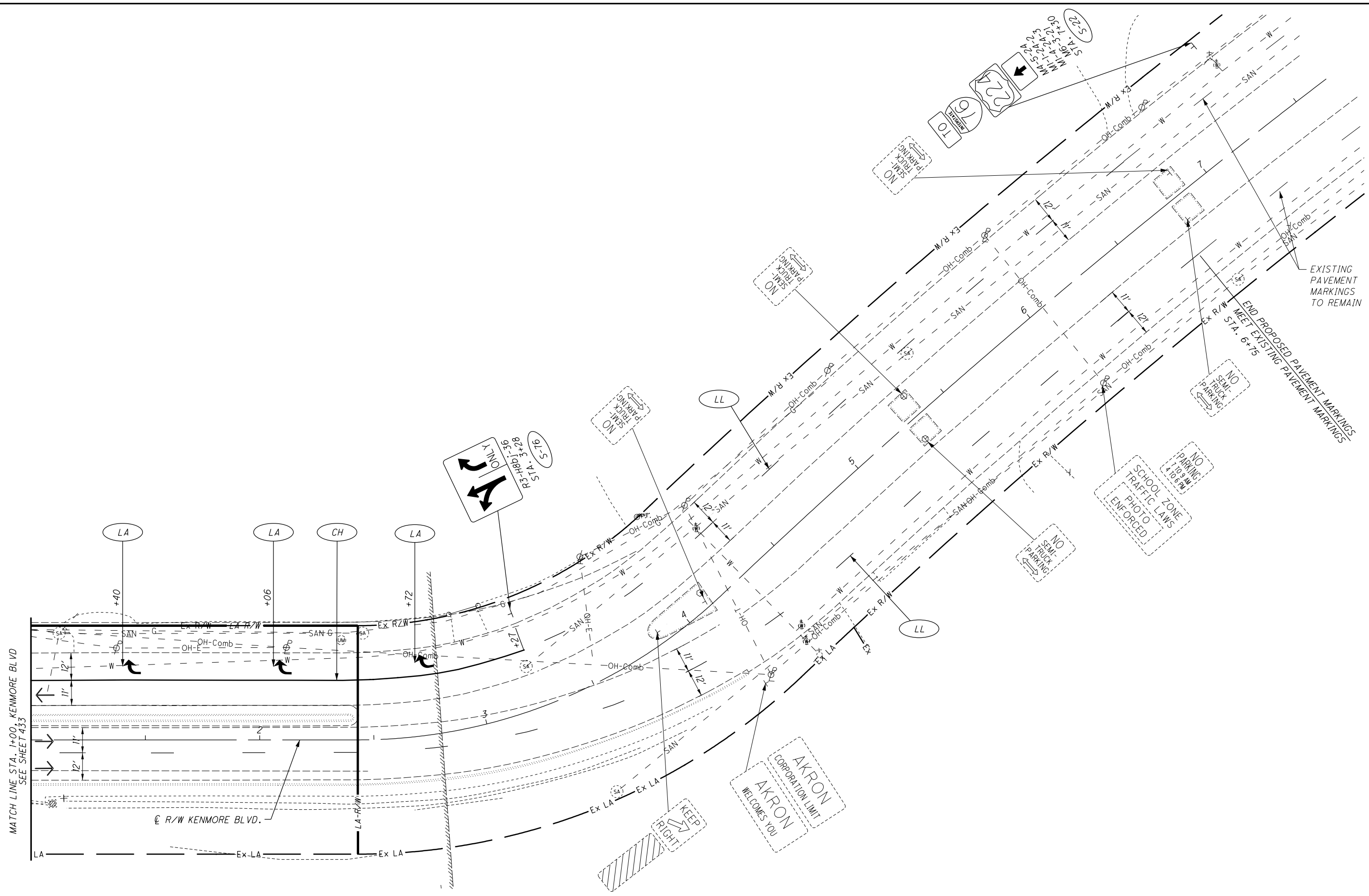
0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - S.R. 619 (WOOSTER RD.)  
STA. 19+00 TO END**

**SUM-76-5.53**

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.

O:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670\p500.dgn Design 10/2/2018 8:11:36 AM bbinsley



CALCULATED  
BEB  
CHECKED  
TJR

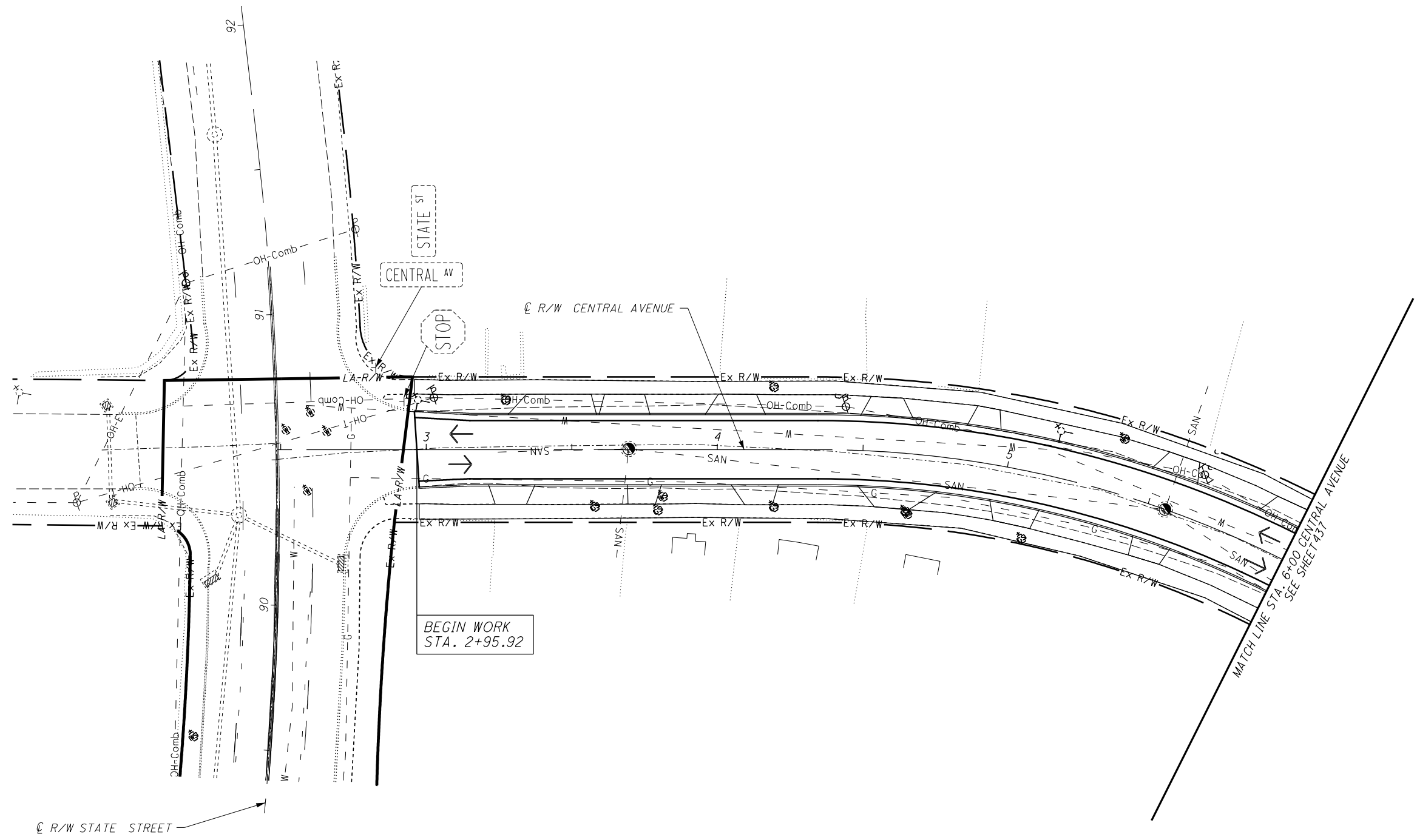
0 20 40  
10  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - KENMORE BLVD.  
STA. 1+00 TO END**

**SUM-76-5.53**

435  
672

- NOTES:
1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.
  2. FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



CALCULATED	BEB	CHECKED	TJR

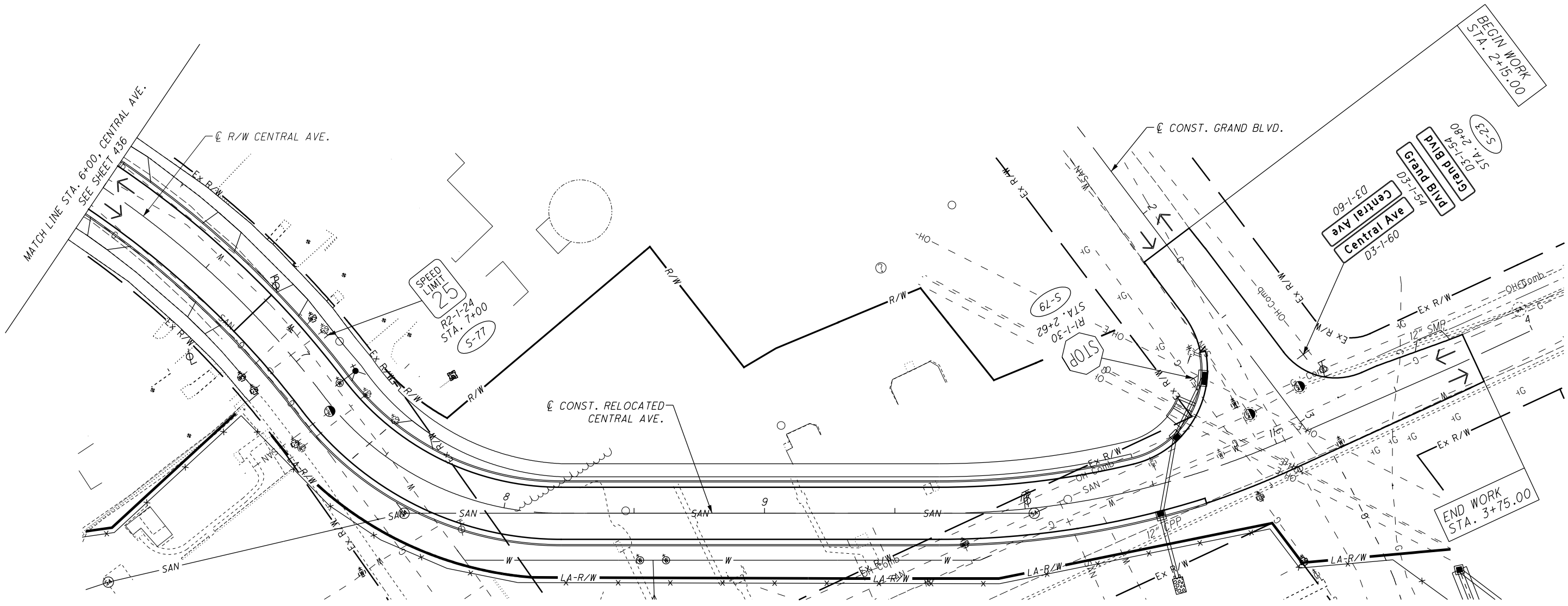
0 20 40  
HORIZONTAL SCALE IN FEET

**TRAFFIC CONTROL - CENTRAL AVE.  
BEGIN TO STA. 6+00**

**SUM-76-5.53**

436  
672

o:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670ip601.dgn Design 10/2/2018 8:11:39 AM bbinsley



CALCULATED  
BEB  
CHECKED  
TJR

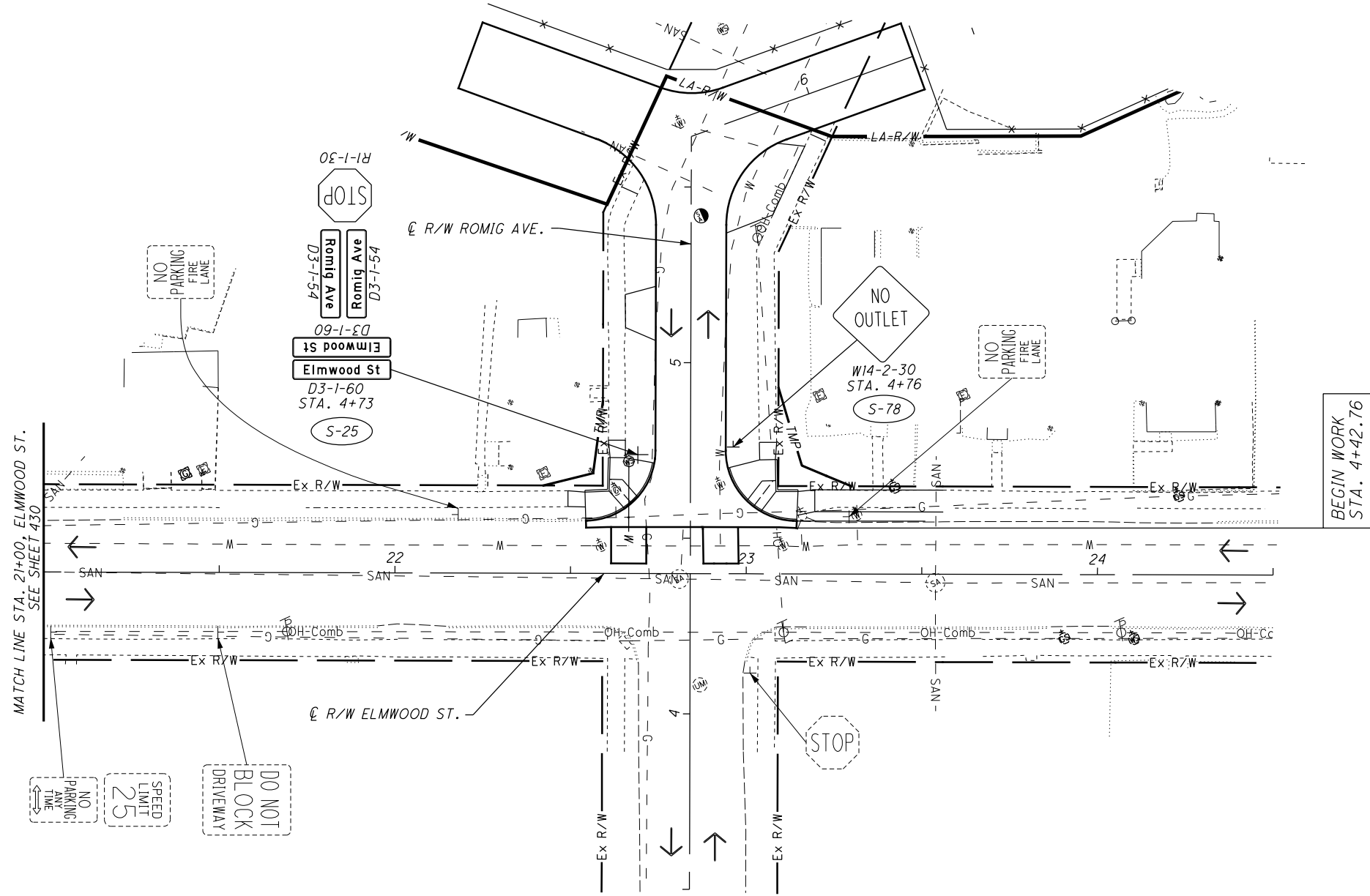
0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - CENTRAL AVE.  
STA. 6+00 TO END**

**SUM-76-5.53**

437  
672

FOR TRAFFIC CONTROL LEGEND SEE SHEET 404.



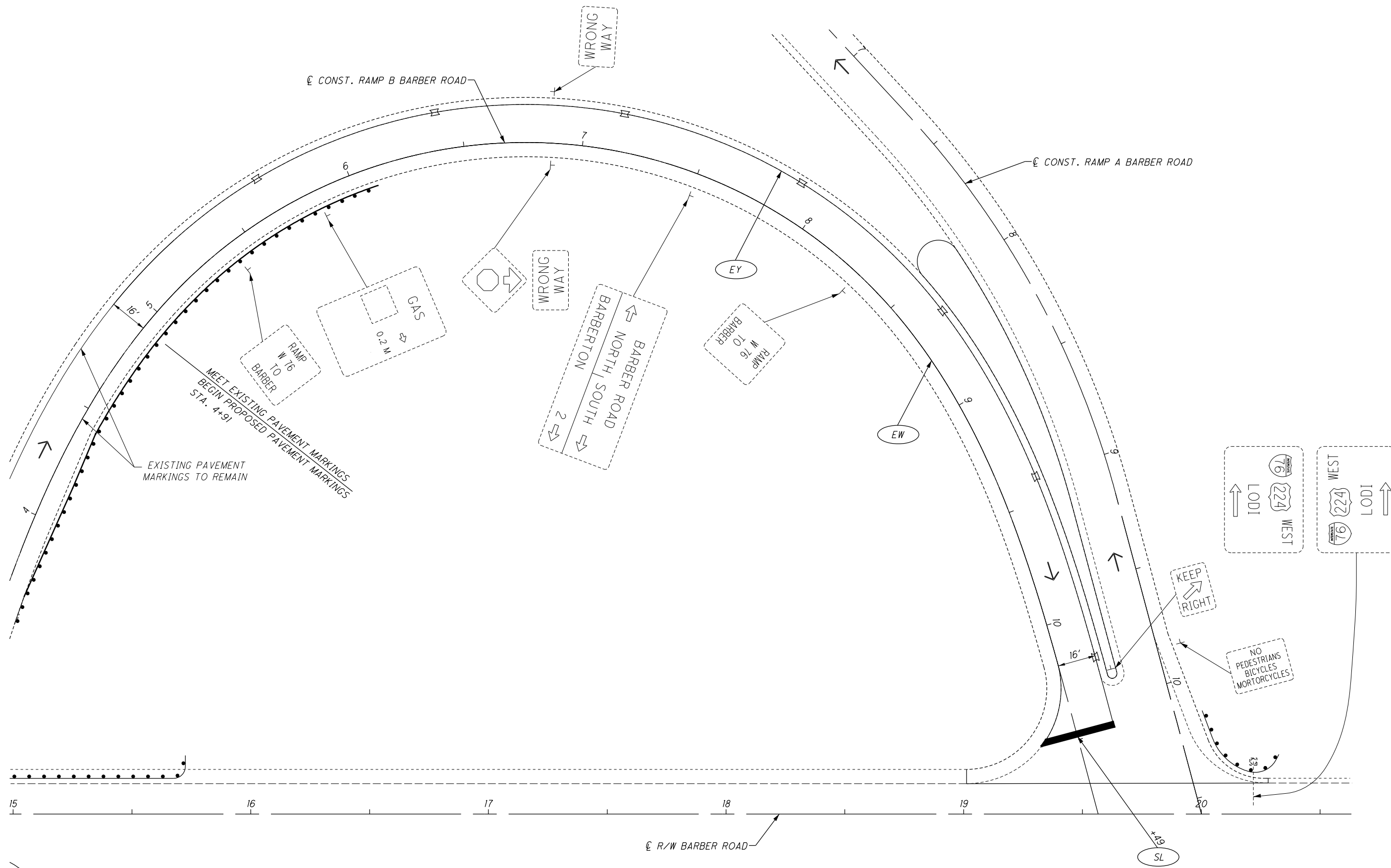
CALCULATED  
BEB  
CHECKED  
TJR

0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL - ROMIG AVE.  
BEGIN TO END**

**SUM-76-5.53**

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CALCULATED  
BEB  
CHECKED  
TJR

0 20 40  
HORIZONTAL  
SCALE IN FEET

N

TRAFFIC CONTROL - RAMP B BARBER RD.  
BEGIN TO END

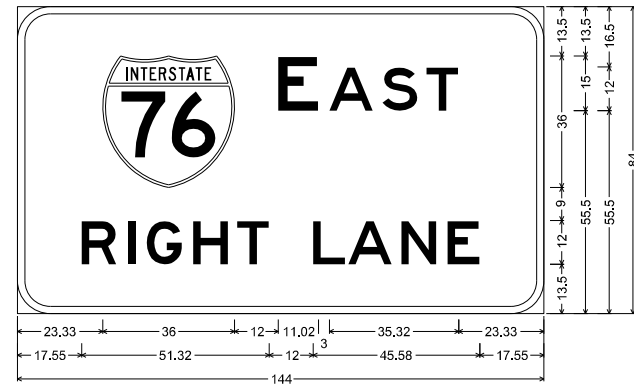
SUM-76-5.53

439  
672

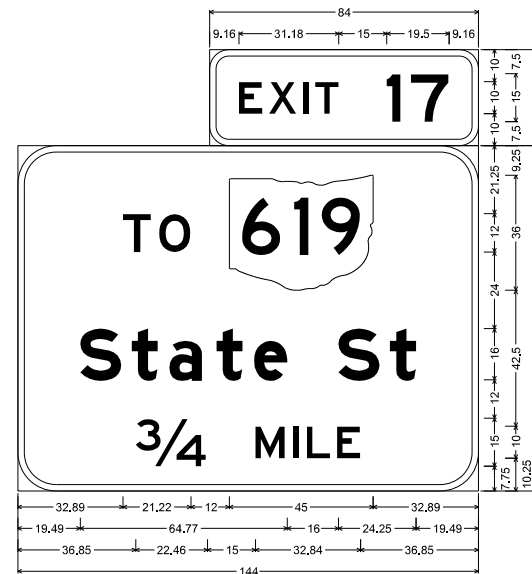
NOTE:  
1. ALL EXISTING SIGNS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.  
2. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 404.

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PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	12' X 7'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	12' X 9'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	209.5 SQ. FT.
TOTAL SPAN LENGTH:	70.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 6

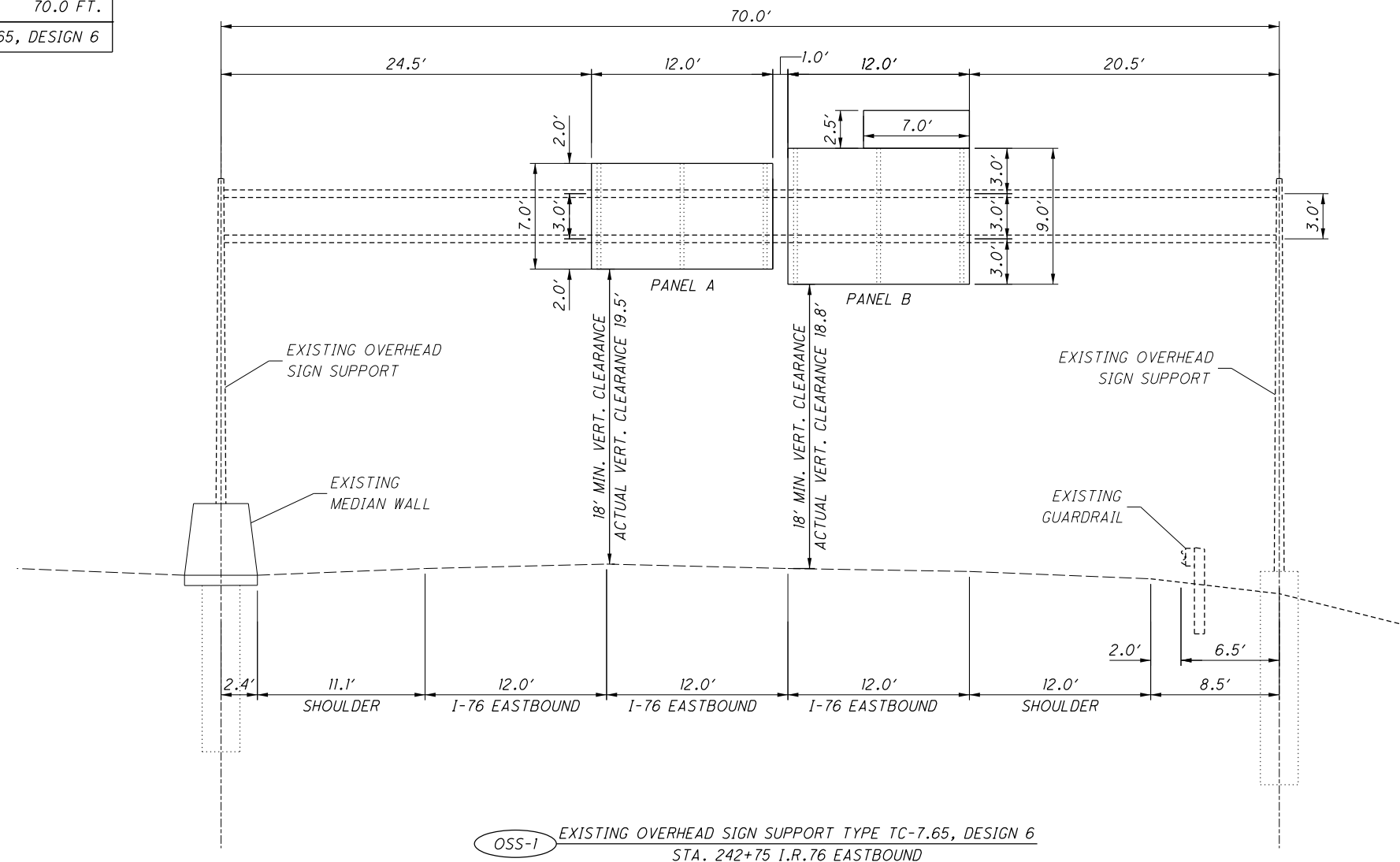
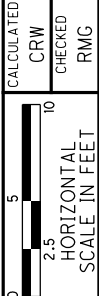


PANEL A  
N.T.S.



PANEL B  
N.T.S.

- NOTES: 1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CALCULATED CLEARANCES BASED ON EXISTING PLAN INFORMATION. CLEARANCE SHALL BE FIELD VERIFIED.



OSS-1 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 6  
STA. 242+75 I.R.76 EASTBOUND

OVERHEAD SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76

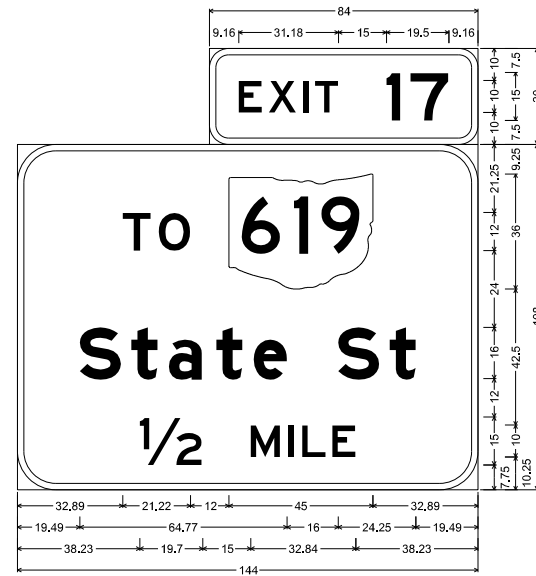
SUM-76-5.53

440  
672

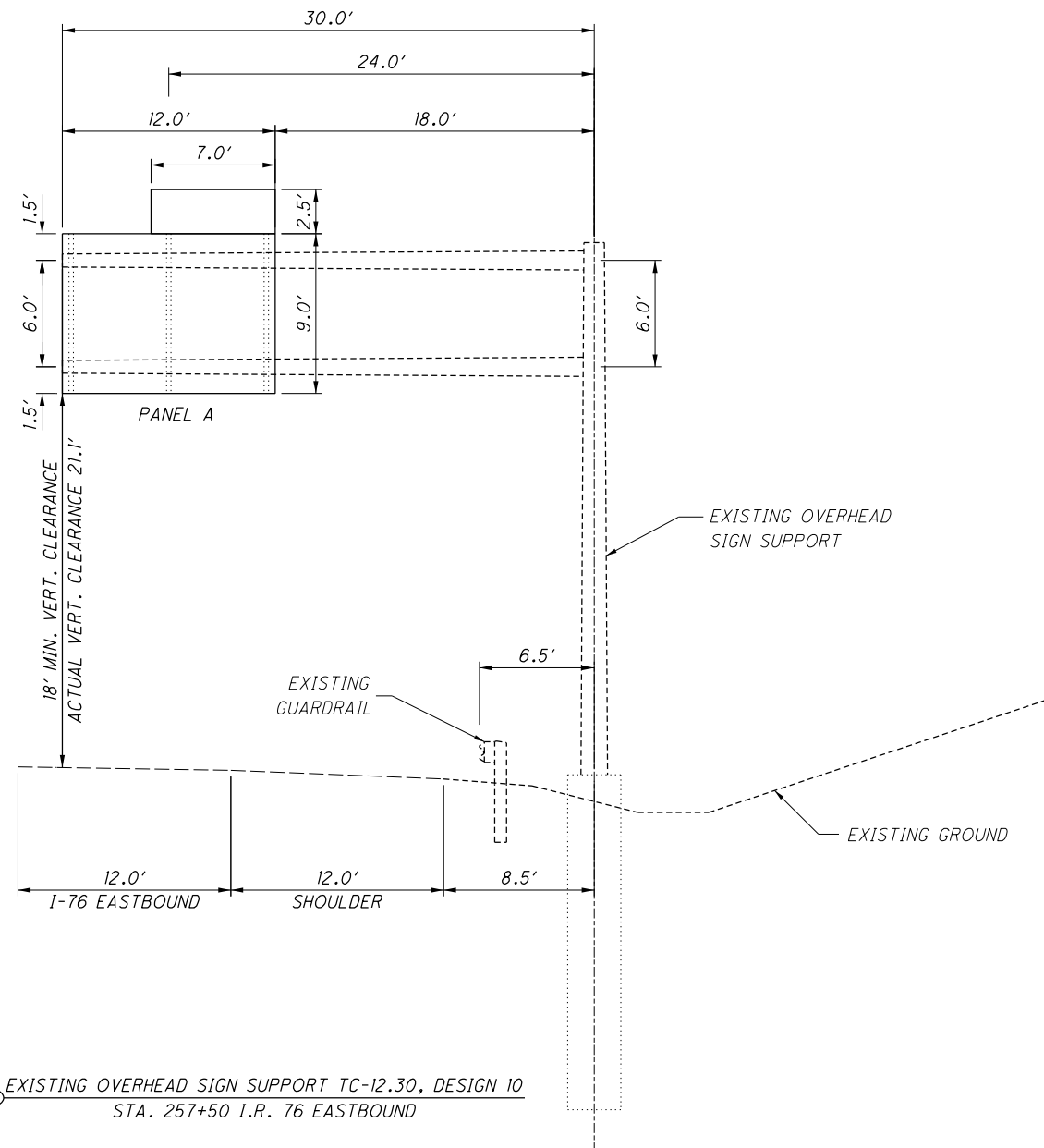
SEE SHEET 406 FOR PLAN VIEW.

O:\2016\2016146\Project+Data\SUM 96670\Design\Traffic\Sheets\96670\te002.dgn Sheet 10/2/2018 8:11:45 AM bbinsley

PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	12' X 9'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	125.5 SQ. FT.
TOTAL $\phi$ TO $\phi$ LENGTH:	24.0 FT.
DESIGN TYPE:	TC-12.30, DESIGN 10



PANEL A  
N.T.S.



OSS-2 EXISTING OVERHEAD SIGN SUPPORT TC-12.30, DESIGN 10  
STA. 257+50 I.R. 76 EASTBOUND

- NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
  2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
  3. CALCULATED CLEARANCES BASED ON EXISTING PLAN INFORMATION. CLEARANCE SHALL BE FIELD VERIFIED.

CALCULATED	CRW	CHECKED	RMG

2.5' HORIZONTAL SCALE IN FEET

OVERHEAD SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76

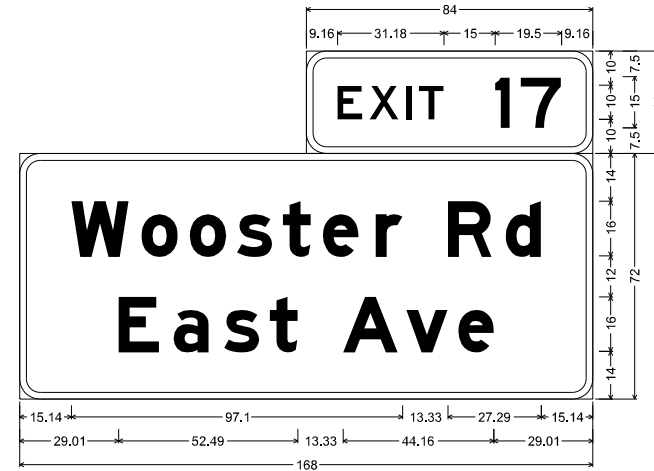
SUM-76-5.53

441  
672

SEE SHEET 408 FOR PLAN VIEW.



PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	14' X 6'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	101.5 SQ. FT.
DESIGN TYPE:	W8X18
SIZE:	8-1/8" X 5-1/4"
FOUNDATION INFORMATION	
DIAMETER:	2.5'
DEPTH:	6.0'

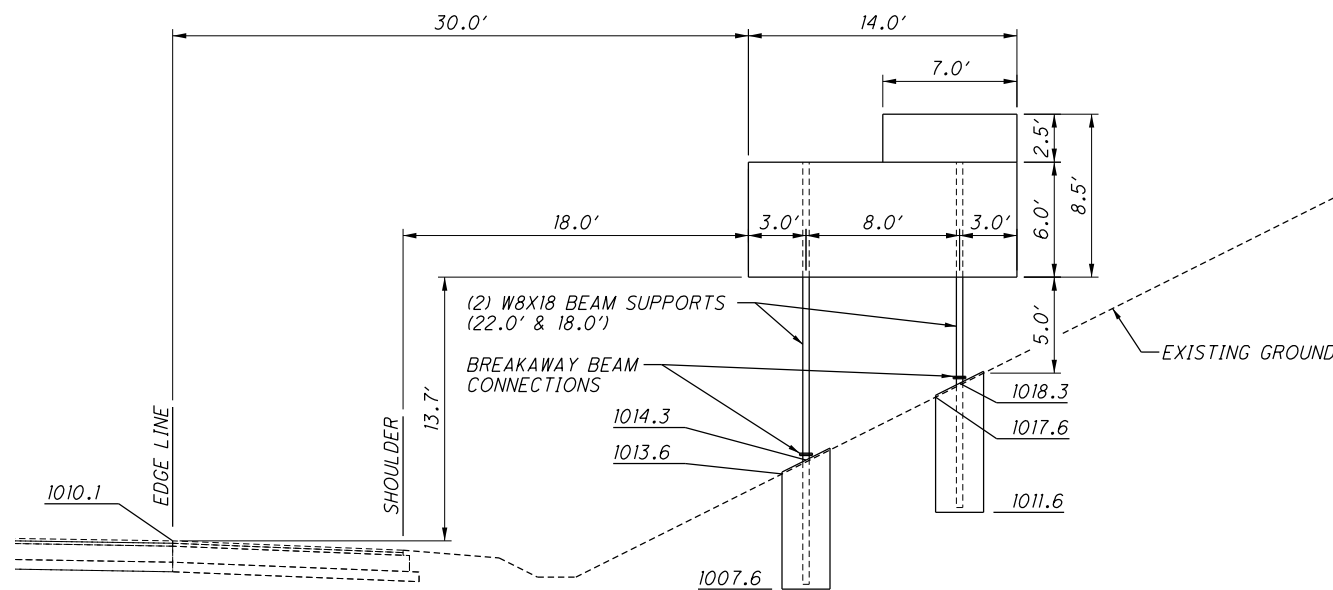


PANEL A  
N.T.S.

PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	30.0 SQ. FT.
DESIGN TYPE:	S4X7.7
SIZE:	4" X 2-5/8"
FOUNDATION INFORMATION	
DIAMETER:	1.5'
DEPTH:	4.0'

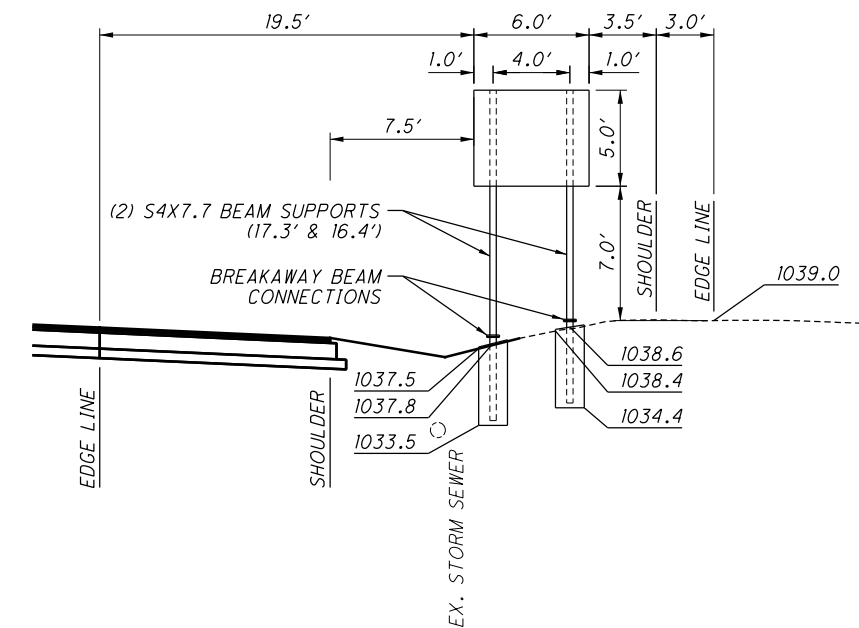


E5-H1a-72



S-1 BEAM SUPPORT TYPE W8X18  
STA. 268+11 I.R. 76 EASTBOUND

- NOTES: 1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



S-4 BEAM SUPPORT TYPE S4X7.7  
STA. 284+50 I.R. 76 EASTBOUND

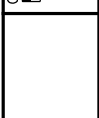
- NOTES: 1. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

SEE SHEET 412 FOR PLAN VIEW.

SEE SHEET 409 FOR PLAN VIEW.

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CALCULATED  
CRW  
CHECKED  
RMG



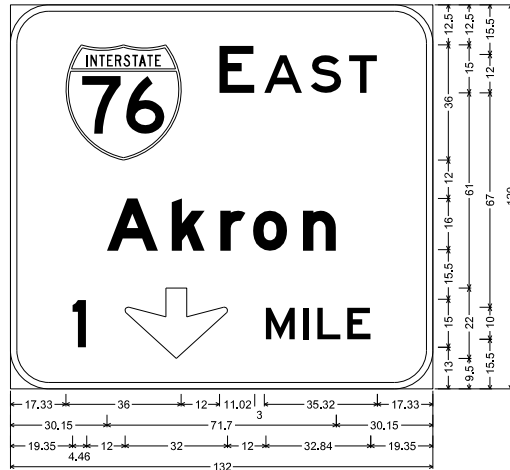
BEAM MOUNTED SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76

SUM-76-5.53

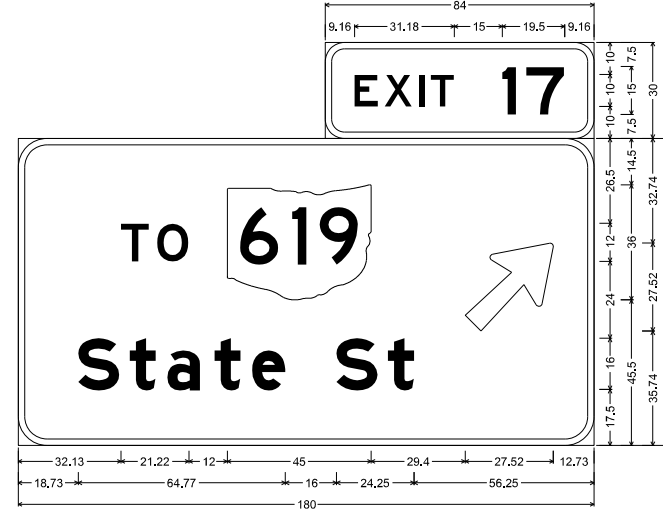
442  
672

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PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	11' X 10'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	2
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	15' X 8'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	247.5 SQ. FT.
TOTAL SPAN LENGTH:	83.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 8

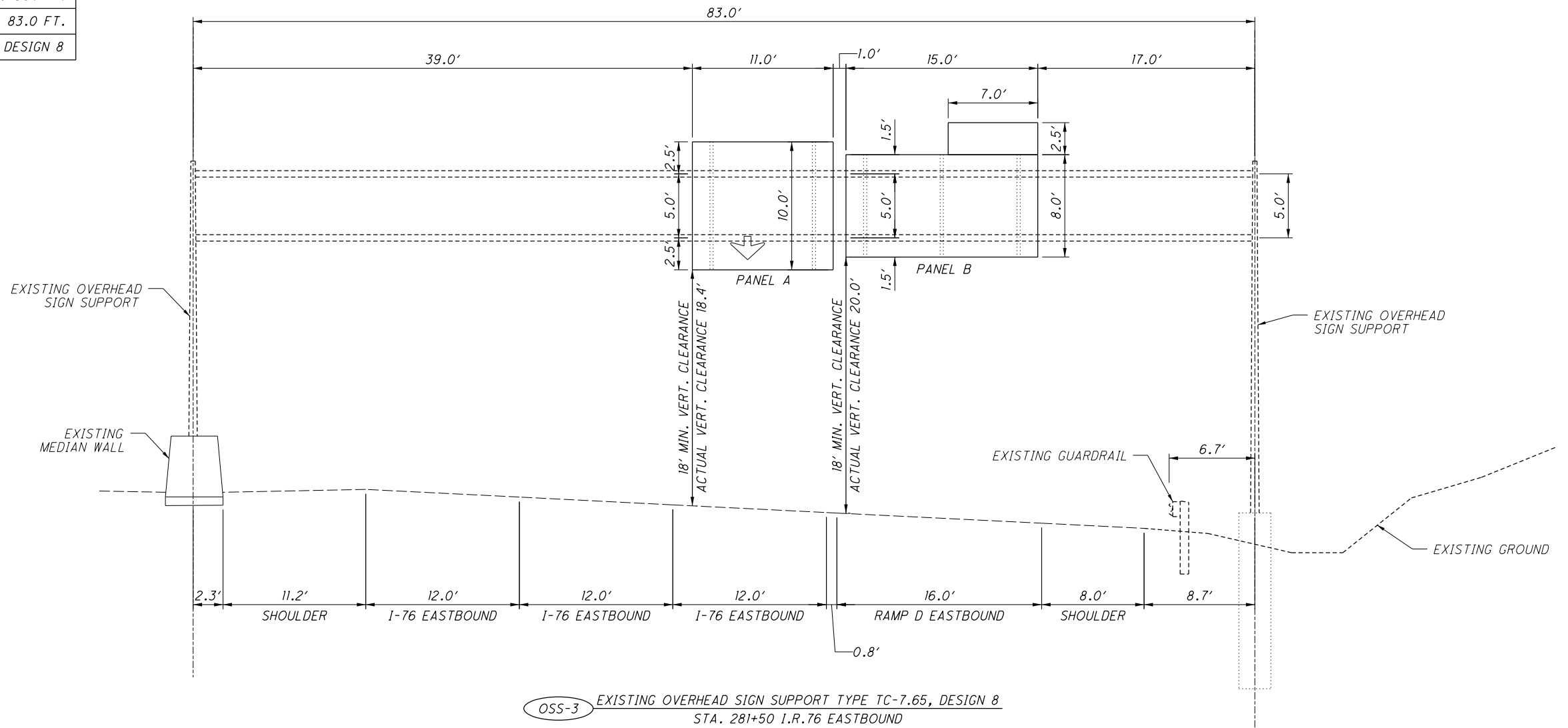
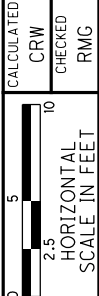


PANEL A  
N.T.S.



PANEL B  
N.T.S.

- NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
  2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
  3. CALCULATED CLEARANCES BASED ON EXISTING PLAN INFORMATION. CLEARANCE SHALL BE FIELD VERIFIED.



OSS-3 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8  
STA. 281+50 I.R. 76 EASTBOUND

OVERHEAD SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76

SUM-76-5.53

443  
672

SEE SHEET 411 FOR PLAN VIEW.

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SUPPORT FOUNDATION INFORMATION			
SUPPORT TYPE	DESIGN NUMBER	FOUNDATION DEPTH	FOUNDATION DIAMETER
TC-12.30	10	17.0'	42"

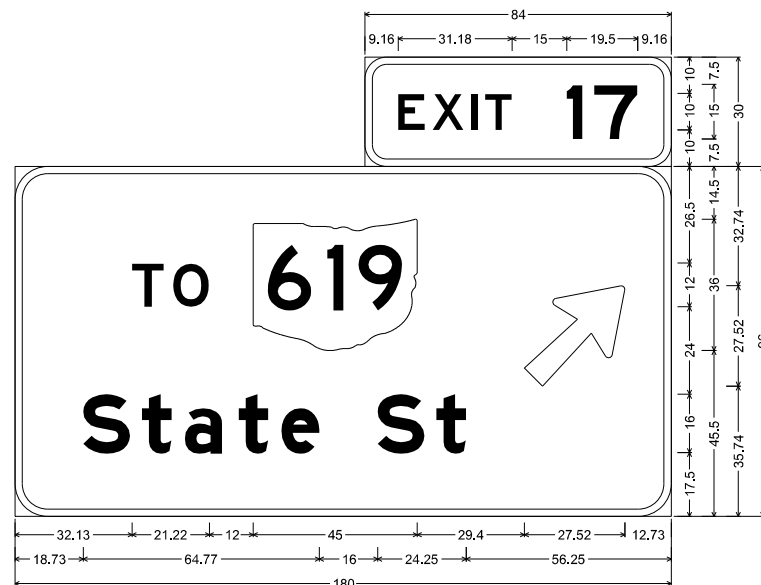
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	157.5 SQ. FT.
TOTAL $\emptyset$ TO $\emptyset$ LENGTH:	22.5 FT.
DESIGN TYPE:	TC-12.30, DESIGN 10

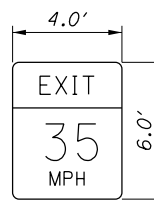
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	15' X 8'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3

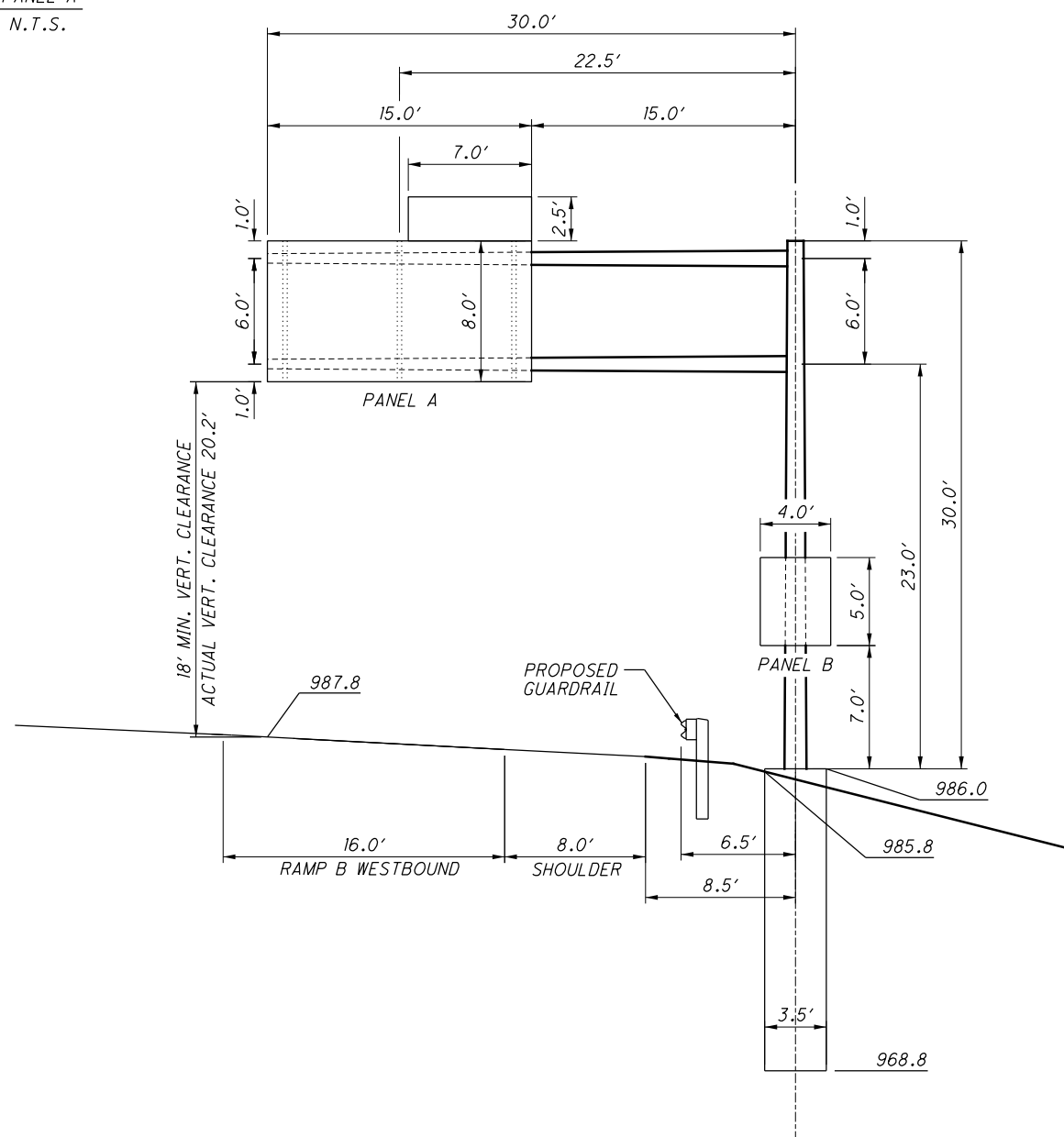
PANEL B	
SIGN DESIGNATION:	W13-2-48
PANEL SIZE:	4' X 5'
BACKGROUND:	YELLOW
FILL COLOR:	BLACK



PANEL A  
N.T.S.



PANEL B  
N.T.S.



OSS-7 OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 10  
STA. 303+66 I.R. 76 WESTBOUND

NOTES: 1. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.  
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

CALCULATED	CRW	CHECKED	RMG

2.5' HORIZONTAL SCALE IN FEET

OVERHEAD SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76

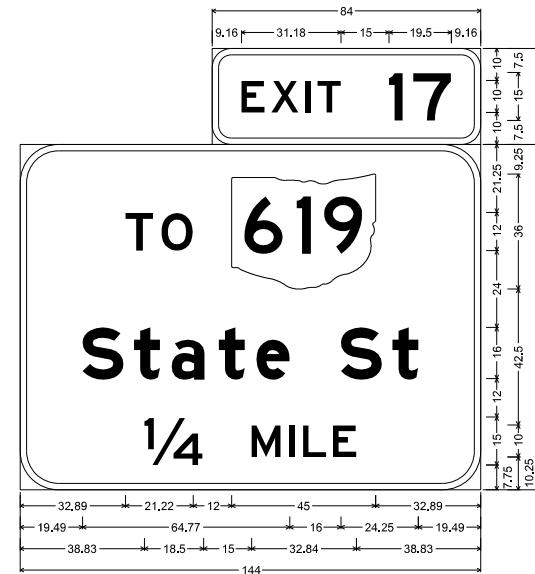
SUM-76-5.53

444  
672

SEE SHEET 416 FOR PLAN VIEW.

O:\2016\2016146\Project+Data\SUM\96670\Design\Traffic\Sheets\96670\te006.dgn Sheet 10/2/2018 8:11:47 AM bbinsley

PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	12' X 9'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	125.5 SQ. FT.
TOTAL $\phi$ TO $\phi$ LENGTH:	24.0 FT.
DESIGN TYPE:	TC-12.30, DESIGN 10

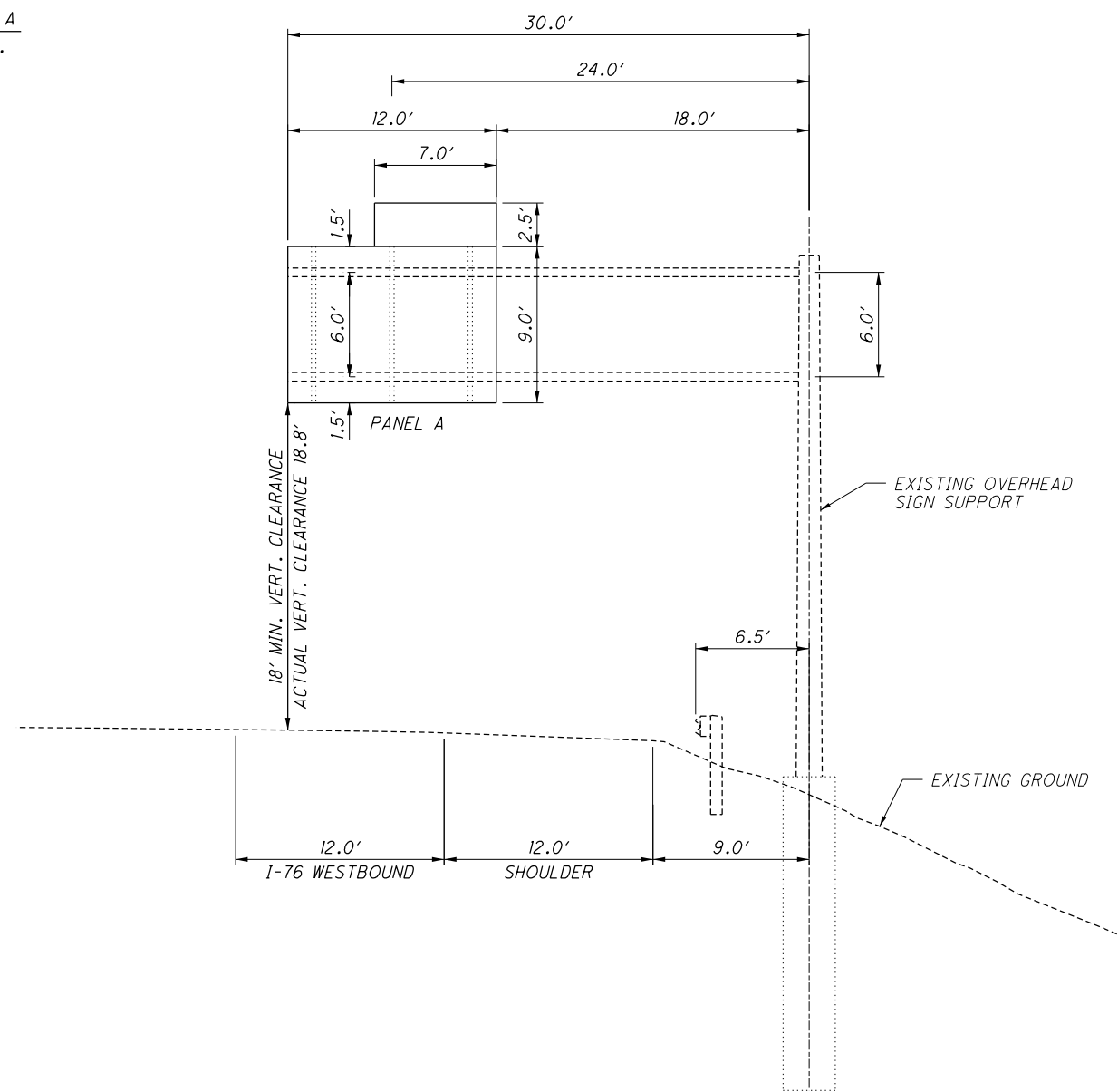


PANEL A  
N.T.S.

- NOTES: 1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CALCULATED CLEARANCES BASED ON EXISTING PLAN INFORMATION. CLEARANCE SHALL BE FIELD VERIFIED.

CALCULATED	CRW	CHECKED	RMG

2.5' HORIZONTAL SCALE IN FEET



OSS-6 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 10  
STA. 319+52 I.R. 76 WESTBOUND

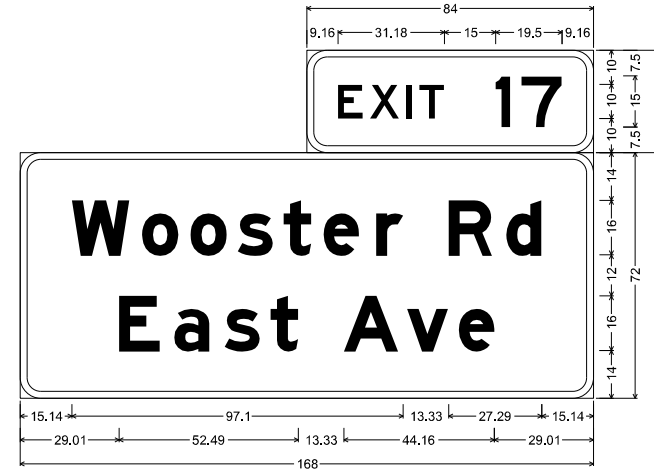
OVERHEAD SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76

SUM-76-5.53

445  
672

SEE SHEET 418 FOR PLAN VIEW.

PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	14' X 6'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	101.5 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8" X 4"
FOUNDATION INFORMATION	
DIAMETER:	2.5'
DEPTH:	6.0'



PANEL A  
N.T.S.

PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	30.0 SQ. FT.
DESIGN TYPE:	S4X7.7
SIZE:	4" X 2-5/8"
FOUNDATION INFORMATION	
DIAMETER:	1.5'
DEPTH:	4.0'

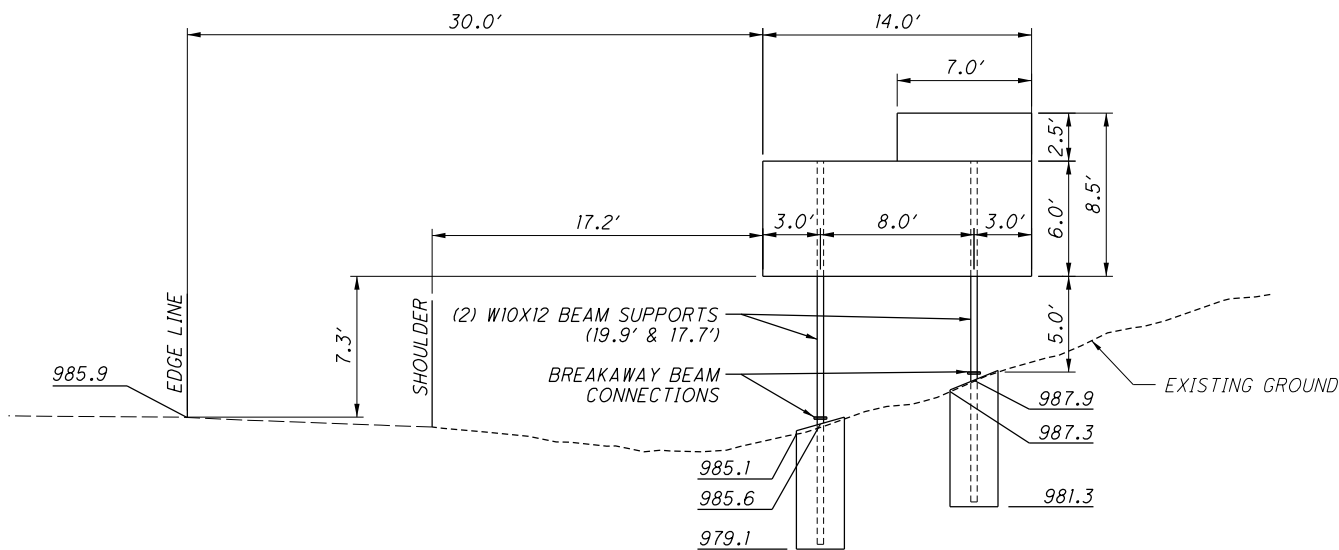


E5-H1a-72

CALCULATED  
CRW  
CHECKED  
RMG

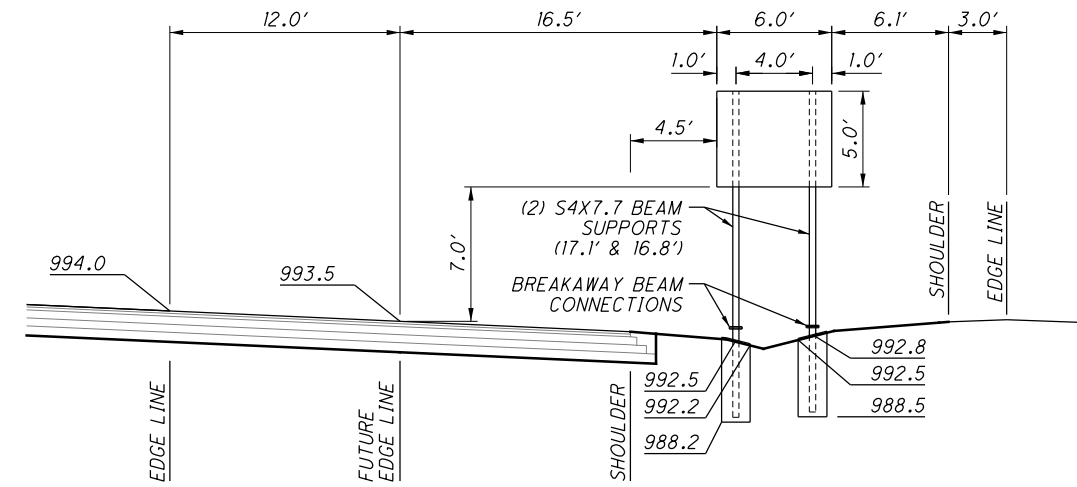
0 5 10  
2.5' HORIZONTAL  
SCALE IN FEET

BEAM MOUNTED SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76



S-3 BEAM SUPPORT TYPE W10X12  
STA. 323+00 I.R. 76 WESTBOUND

- NOTES: 1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



S-2 BEAM SUPPORT TYPE S4X7.7  
STA. 300+50 I.R. 76 WESTBOUND

- NOTES: 1. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

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SEE SHEET 418 FOR PLAN VIEW.

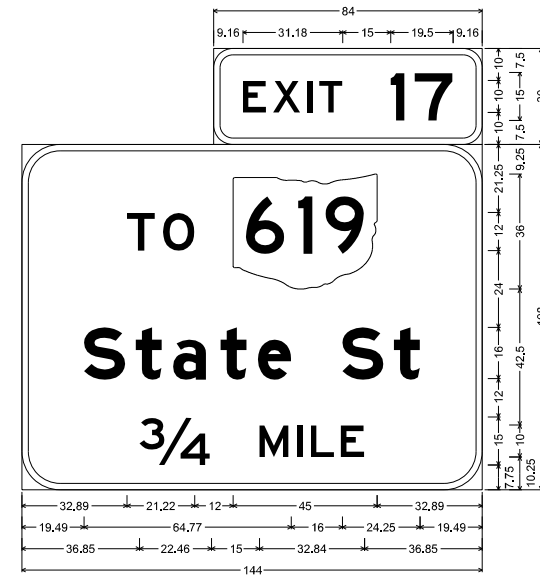
SEE SHEET 415 FOR PLAN VIEW.

SUM-76-5.53

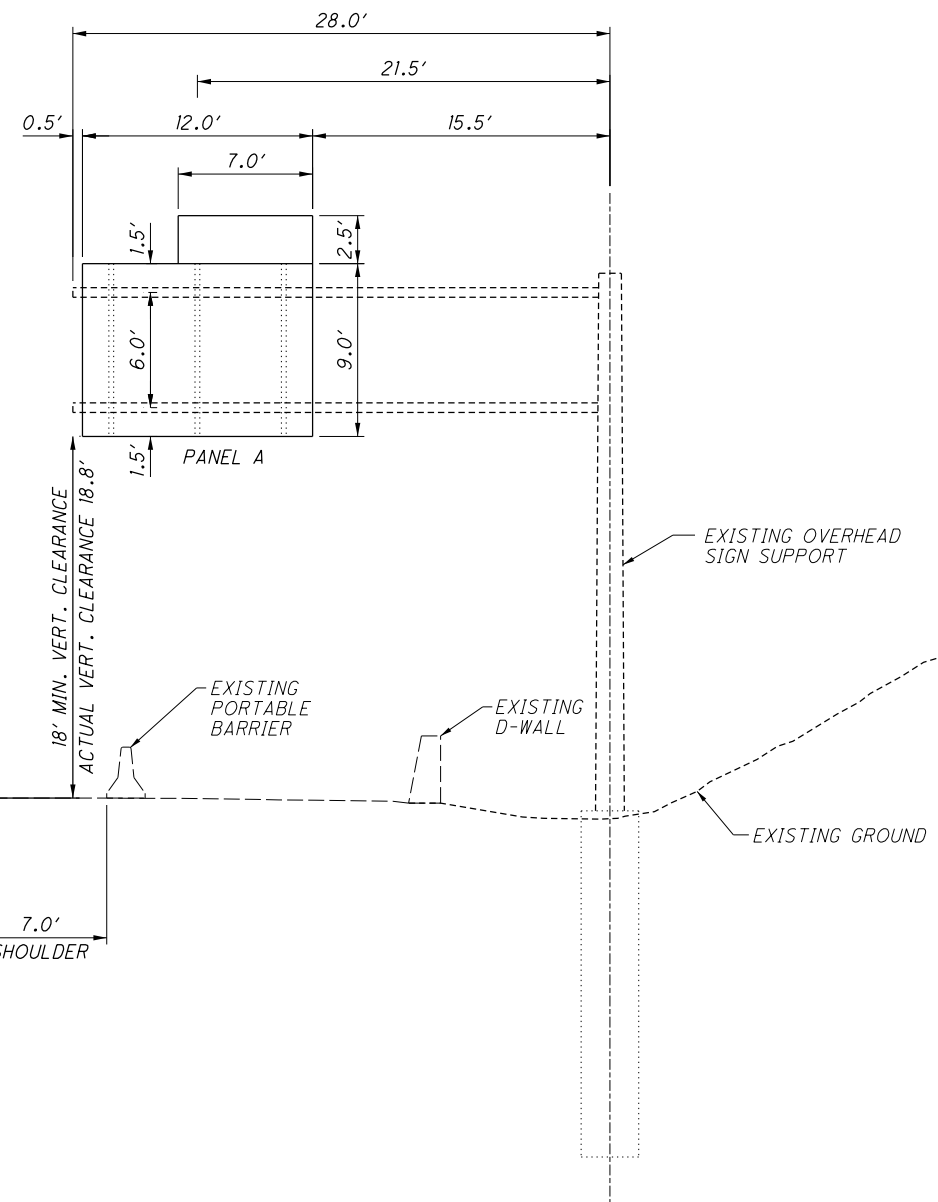
446  
672

O:\2016\2016146\Project+Data\SUM\96670\Design\Traffic\Sheets\96670\008.dgn Sheet 10/2/2018 8:11:49 AM bbinsley

PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	12' X 9'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	125.5 SQ. FT.
TOTAL $\phi$ TO $\phi$ LENGTH:	21.5 FT.
DESIGN TYPE:	TC-12.30, DESIGN 8



PANEL A  
N.T.S.



OSS-5 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 8  
STA. 343+00 I.R. 76 WESTBOUND

NOTES: 1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.  
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.

CALCULATED	CRW	CHECKED	RMG

2.5' HORIZONTAL SCALE IN FEET

**OVERHEAD SIGN SUPPORT DETAILS  
INTERSTATE ROUTE 76**

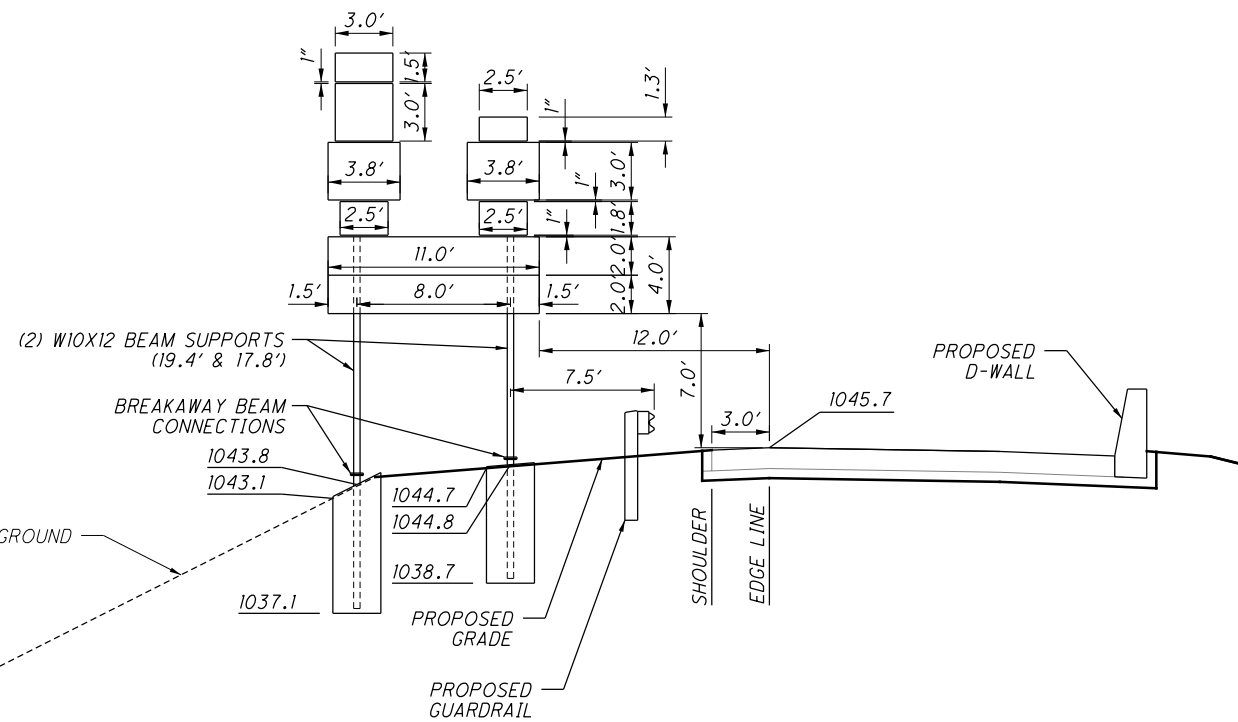
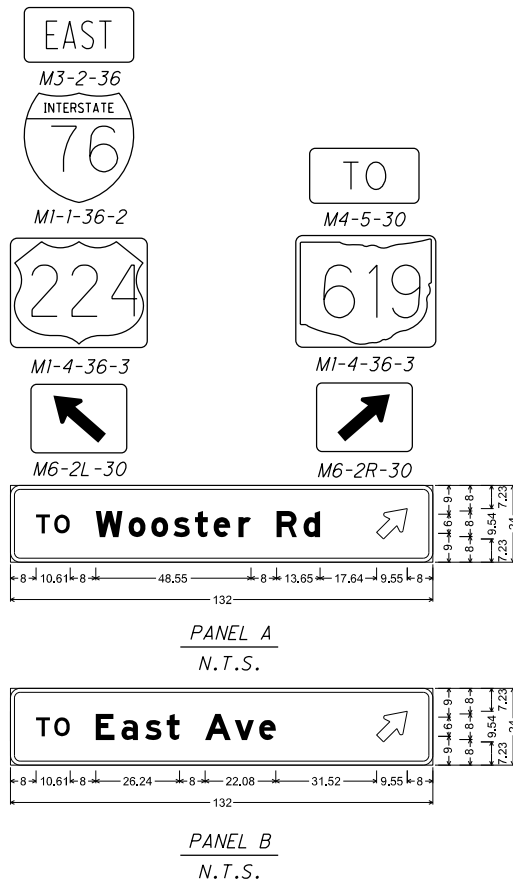
**SUM-76-5.53**

447  
672

SEE SHEET 422 FOR PLAN VIEW.

O:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670e009.dgn Sheet 10/2/2018 8:11:49 AM bbinsley

PANEL A	
SIGN DESIGNATION:	SPECIAL
TEXT FONT:	SERIES E(M)
PANEL SIZE:	11' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL B	
SIGN DESIGNATION:	SPECIAL
TEXT FONT:	SERIES E(M)
PANEL SIZE:	11' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	91.89 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8" X 4"
FOUNDATION INFORMATION	
DIAMETER:	2.5'
DEPTH:	6.0'

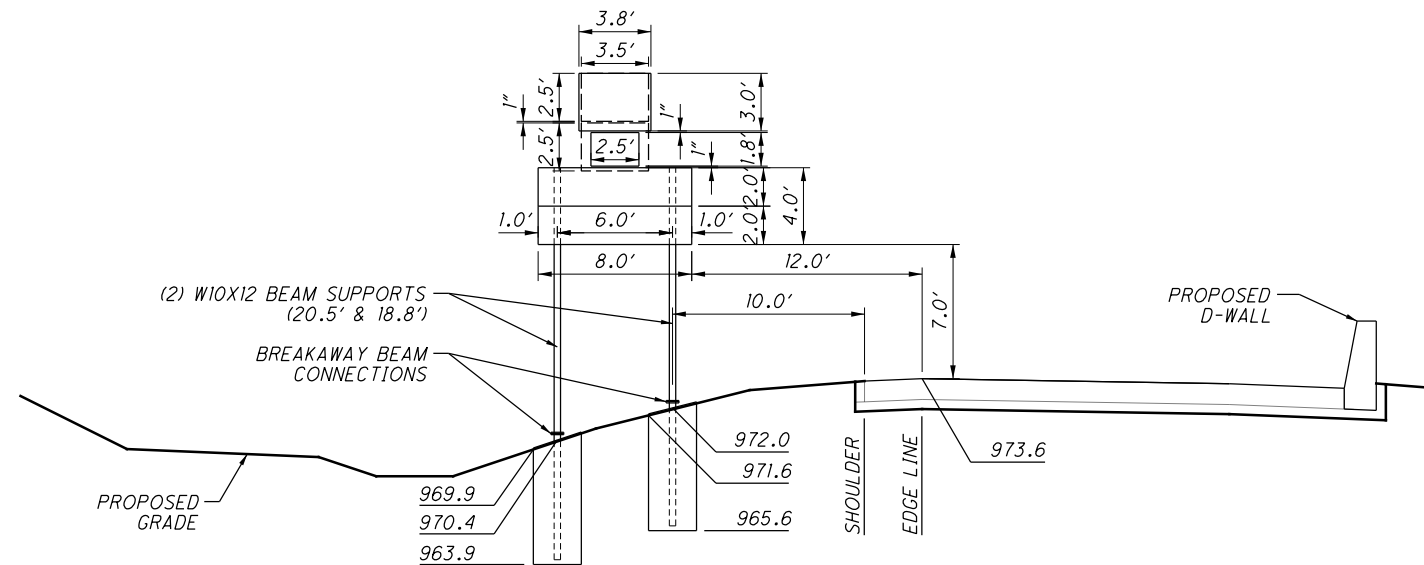
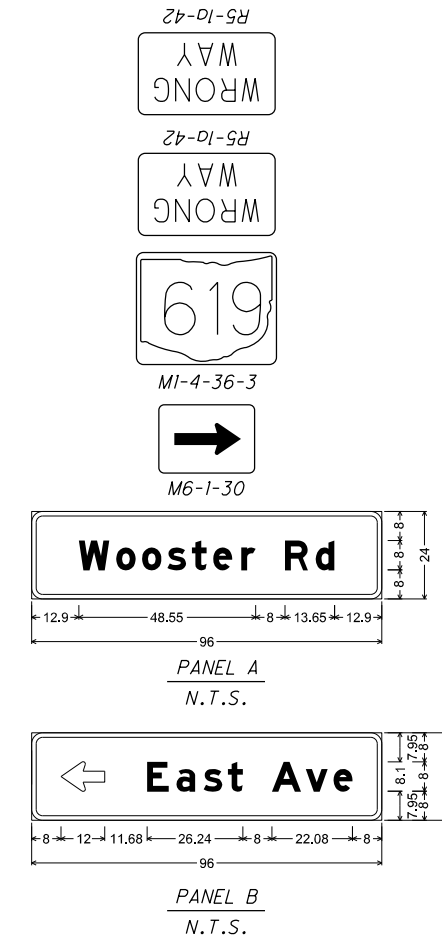


S-9 BEAM SUPPORT TYPE W10X12  
STA. 32+00 RAMP C EASTBOUND

- NOTES: 1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.  
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.  
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

SEE SHEET 423 FOR PLAN VIEW.

PANEL A	
SIGN DESIGNATION:	D3-H3-96
TEXT FONT:	SERIES E(M)
PANEL SIZE:	8' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL B	
SIGN DESIGNATION:	D3-H3a-96
TEXT FONT:	SERIES E(M)
PANEL SIZE:	8' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	65.13 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8" X 4"
FOUNDATION INFORMATION	
DIAMETER:	2.5"
DEPTH:	6.0'



S-5 BEAM SUPPORT TYPE W10X12  
STA. 143+00 RAMP C-1 EASTBOUND

- NOTES: 1. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.  
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

SEE SHEET 424 FOR PLAN VIEW.

CALCULATED  
CRW  
CHECKED  
RMG

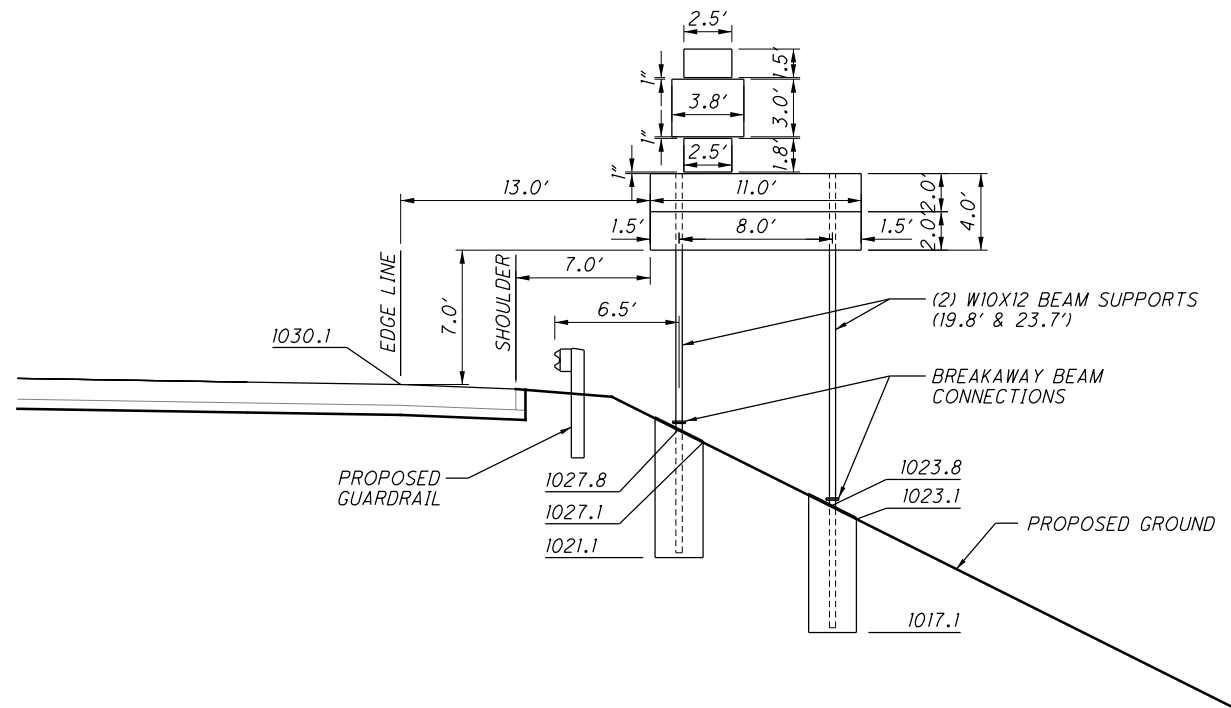
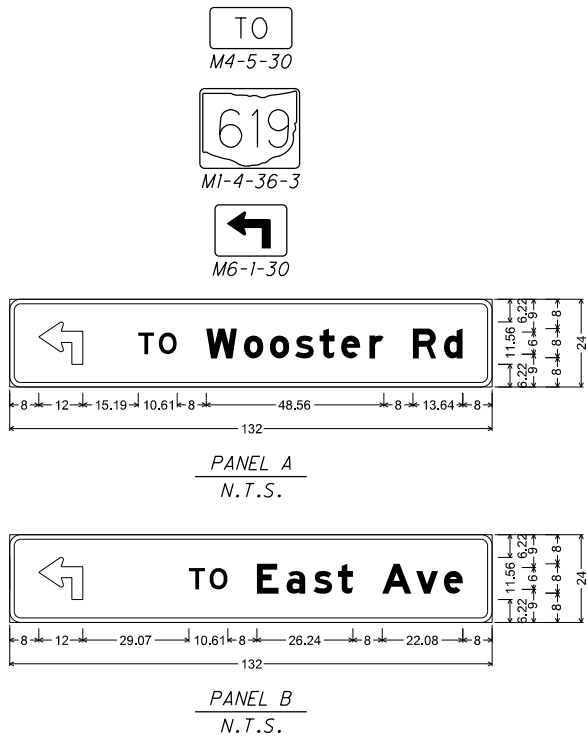
BEAM MOUNTED SIGN SUPPORT DETAILS  
RAMP C & RAMP C-1

SUM-76-5.53

448  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670\to0.dgn\_Sheet 10/2/2018 8:11:50 AM bbinsley

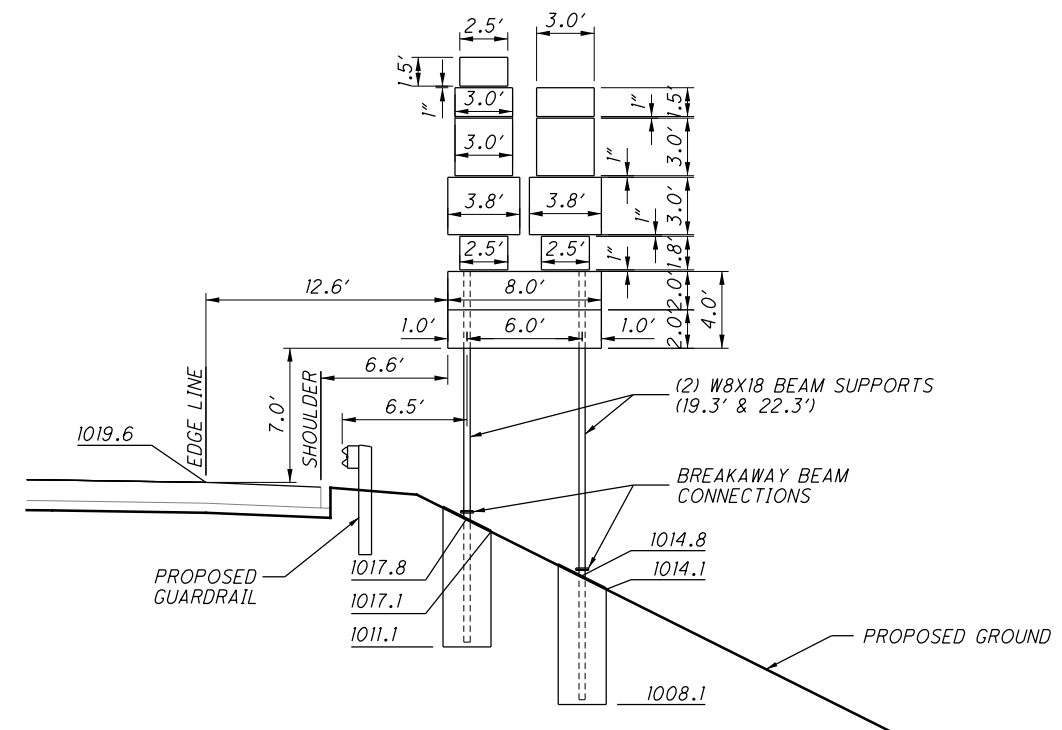
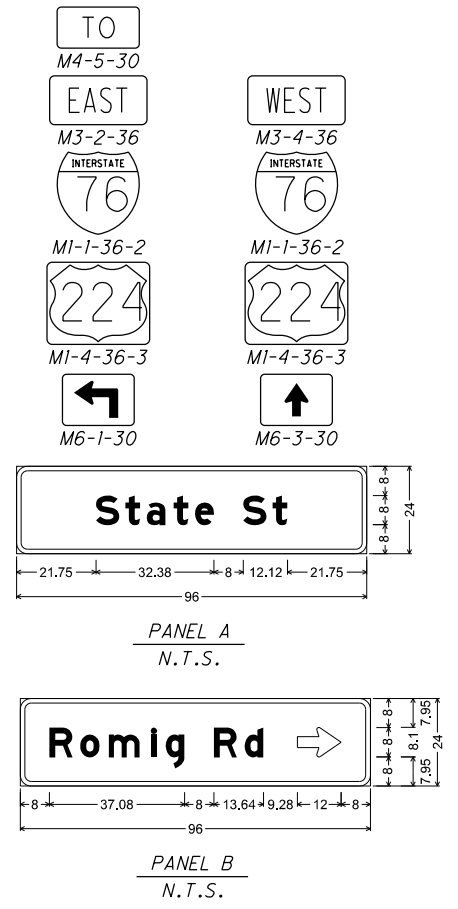
PANEL A	
SIGN DESIGNATION:	D3-H3a-132
TEXT FONT:	SERIES E(M)
PANEL SIZE:	11' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL B	
SIGN DESIGNATION:	D3-H3a-132
TEXT FONT:	SERIES E(M)
PANEL SIZE:	11' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	63.63 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8" X 4"
FOUNDATION INFORMATION	
DIAMETER:	2.5'
DEPTH:	6.0'



S-7 BEAM SUPPORT TYPE W10X12  
STA. 23+50 RAMP B WESTBOUND

NOTES: 1. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.  
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

PANEL A	
SIGN DESIGNATION:	D3-H3-96
TEXT FONT:	SERIES E(M)
PANEL SIZE:	8' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL B	
SIGN DESIGNATION:	D3-H3a-96
TEXT FONT:	SERIES E(M)
PANEL SIZE:	8' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	94.0 SQ. FT.
DESIGN TYPE:	W18X18
SIZE:	8-1/8" X 5-1/4"
FOUNDATION INFORMATION	
DIAMETER:	2.5'
DEPTH:	6.0'



S-6 BEAM SUPPORT TYPE W8X18  
STA. 24+90 RAMP B WESTBOUND

NOTES: 1. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.  
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

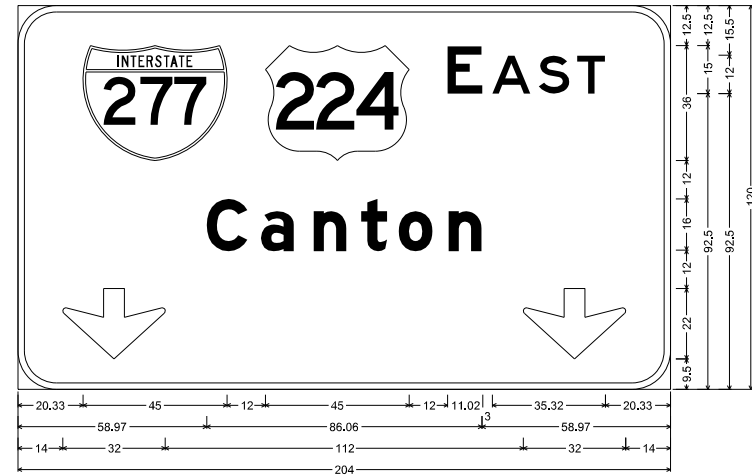
SEE SHEET 426 FOR PLAN VIEWS.

SEE SHEET 425 FOR PLAN VIEW.

CALCULATED CRW CHECKED RMG  
 2.5' HORIZONTAL SCALE IN FEET  
 BEAM MOUNTED SIGN SUPPORT DETAILS  
 RAMP B  
 SUM-76-5.53  
 449  
 672



PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	17' x 10'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	12' X 10'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	290.0 SQ. FT.
TOTAL SPAN LENGTH:	78.6 FT.
DESIGN TYPE:	TC-7.65, DESIGN 8



PANEL A  
N.T.S.

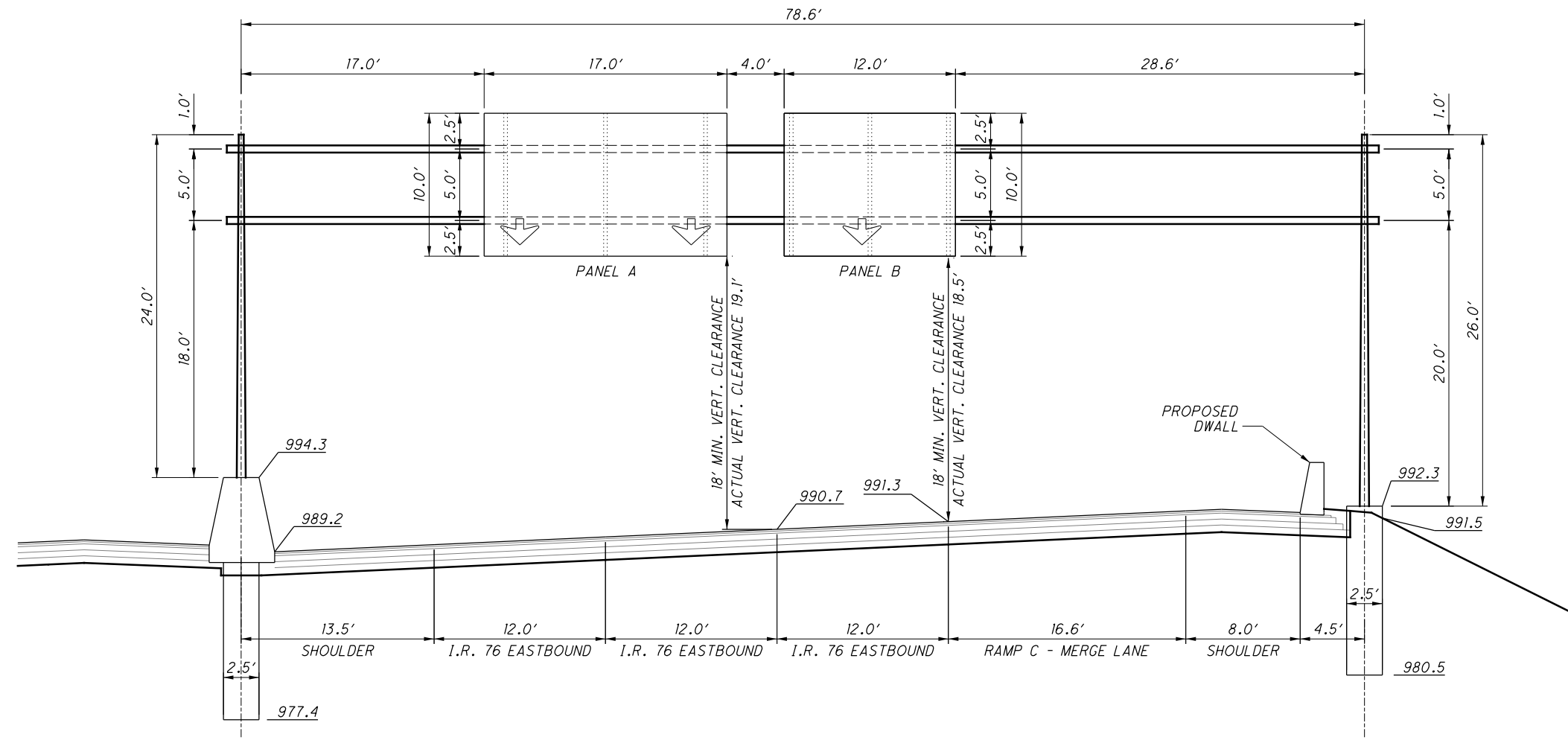


PANEL B  
N.T.S.

- NOTES: 1. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.  
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

CALCULATED  
CRW  
CHECKED  
RMG

2.5' HORIZONTAL SCALE IN FEET



OSS-14 OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8  
STA. 305+19.11 I.R. 76 EASTBOUND

OVERHEAD SIGN SUPPORT DETAIL  
INTERSTATE ROUTE 76

SUM-76-5.53

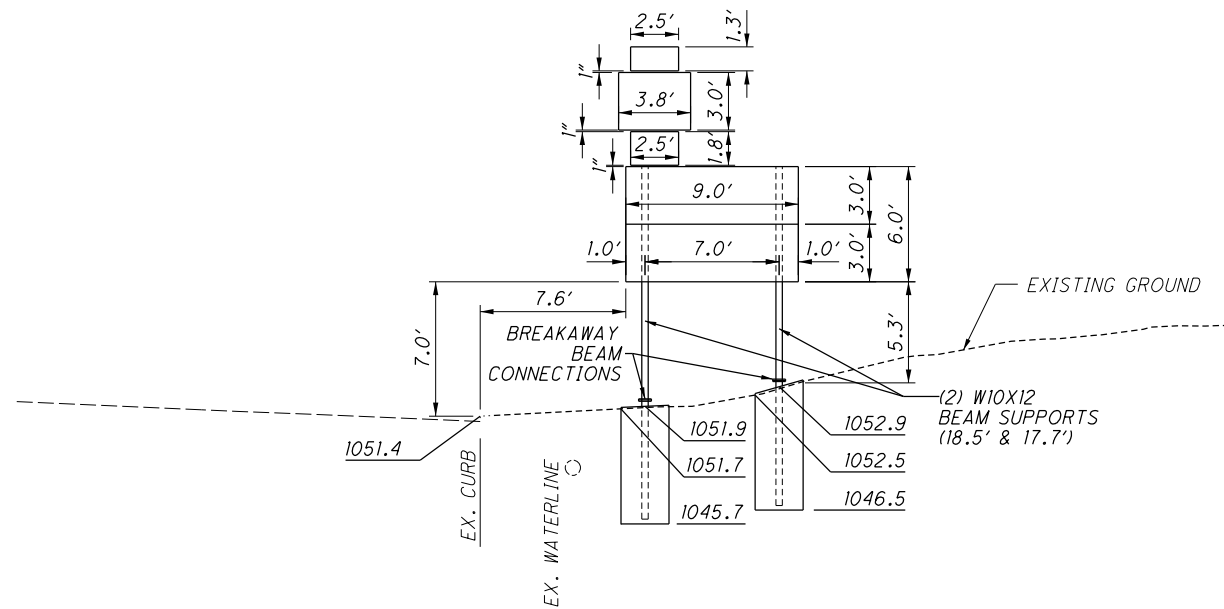
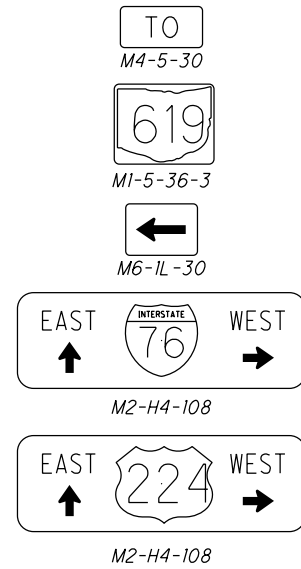
450  
672

SEE SHEET 416 FOR PLAN VIEW.

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O:\2016\2016146\ProjectData\SUM\96670\Design\Traffic\Sheets\96670\2.dgn Sheet 10/2/2018 8:11:52 AM bbinsley

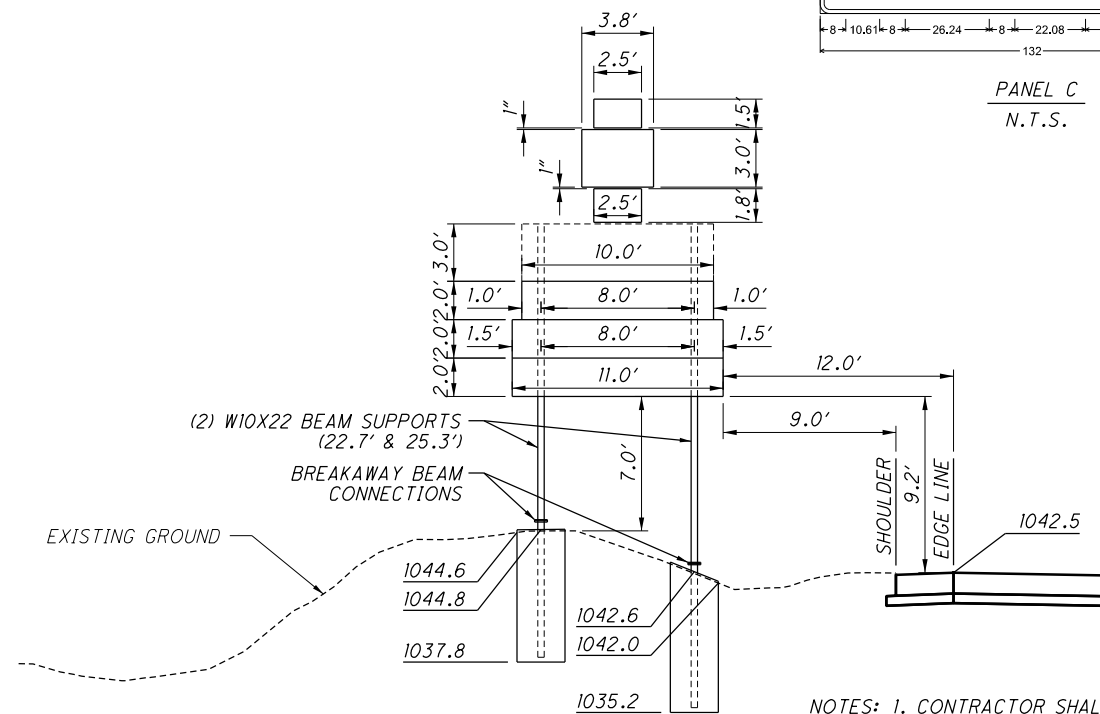
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	72.75 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8" X 4"
FOUNDATION INFORMATION	
DIAMETER:	2.5'
DEPTH:	6.0'



S-28 BEAM SUPPORT TYPE W10X12  
STA. 12+52 RAMP A WESTBOUND

- NOTES:
- CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
  - ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
  - CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

PANEL A	
SIGN DESIGNATION:	D3-H5A-120
TEXT FONT:	E MOD
PANEL SIZE:	10' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL B	
SIGN DESIGNATION:	SPECIAL
TEXT FONT:	E MOD
PANEL SIZE:	11' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL C	
SIGN DESIGNATION:	SPECIAL
TEXT FONT:	E MOD
PANEL SIZE:	11' X 2'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	112.75 SQ. FT.
DESIGN TYPE:	W10X22
SIZE:	10-1/8" X 5-3/4"
FOUNDATION INFORMATION	
DIAMETER:	2.5'
DEPTH:	6.75'

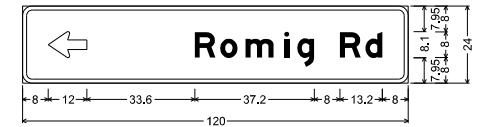
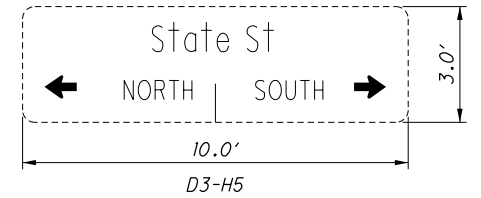


S-8 BEAM SUPPORT TYPE W10X22  
STA. 16+10 RAMP D EASTBOUND

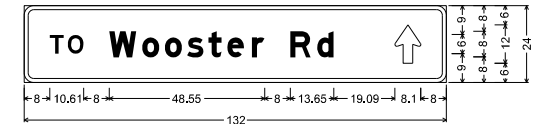
- NOTES:
- CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
  - ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
  - CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

SEE SHEET 428 FOR PLAN VIEW.

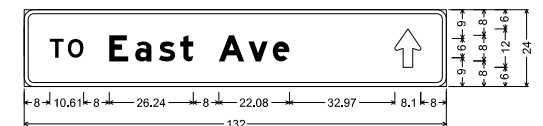
SEE SHEET 431 FOR PLAN VIEW.



PANEL A  
N.T.S.



PANEL B  
N.T.S.



PANEL C  
N.T.S.

BEAM MOUNTED SIGN SUPPORT DETAILS  
RAMP A & RAMP D

SUM-76-5.53

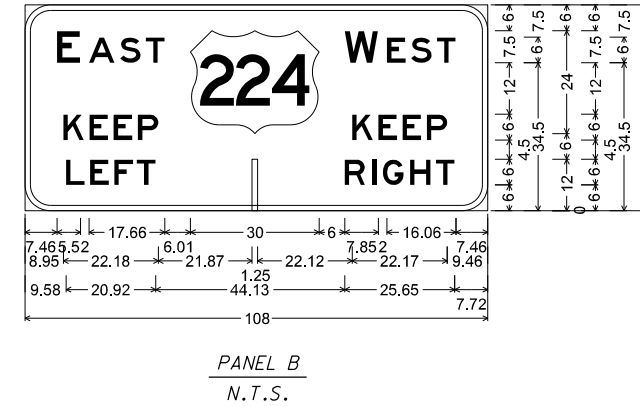
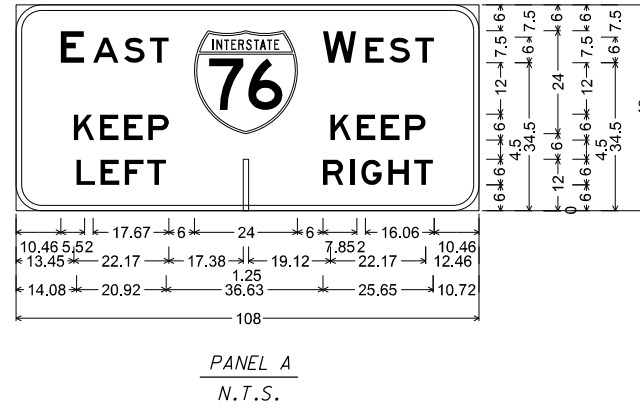
451  
672

CALCULATED  
CRW  
CHECKED  
RMG

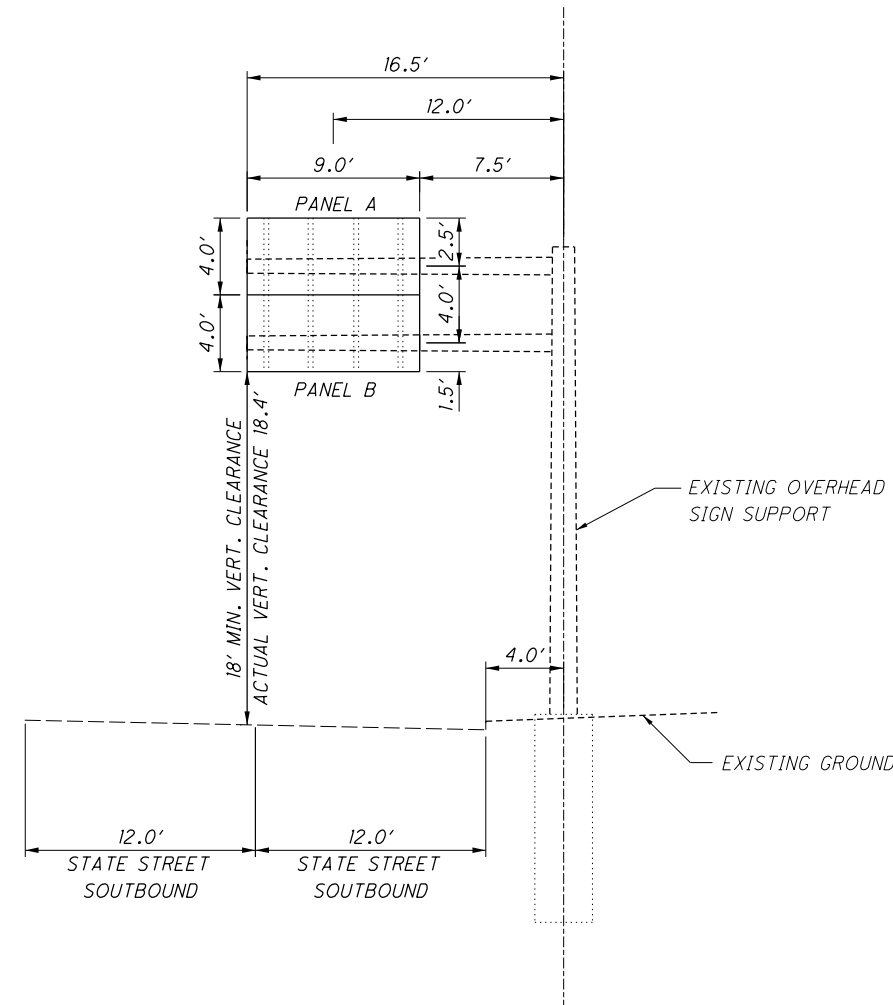
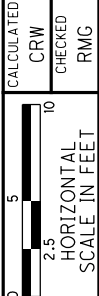
2.5'  
HORIZONTAL  
SCALE IN FEET

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PANEL A	
SIGN DESIGNATION:	M2-H5-108
PANEL SIZE:	9' X 4'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL B	
SIGN DESIGNATION:	M2-H5-108
PANEL SIZE:	9' X 4'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	72.0 SQ. FT.
TOTAL C TO C LENGTH:	12.0 FT.
DESIGN TYPE:	TC-12.30, DESIGN 3
NUMBER OF BRACKETS:	4



- NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
  2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
  3. CALCULATED CLEARANCES BASED ON EXISTING PLAN INFORMATION. CLEARANCE SHALL BE FIELD VERIFIED.
  4. PANEL A AND PANEL B SHALL BE RAISED 0.5' FROM THE CENTER OF CANTILEVER ARMS TO ACHIEVE A MINIMUM CLEARANCE OF 18.0'.



OSS-15 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 3  
STA. 93+20 STATE STREET SOUTHBOUND

**OVERHEAD SIGN SUPPORT DETAILS  
STATE STREET**

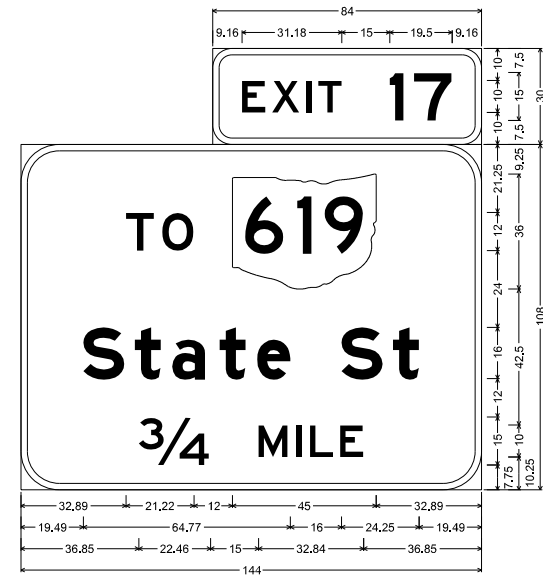
**SUM - 76 - 5.53**

452  
672

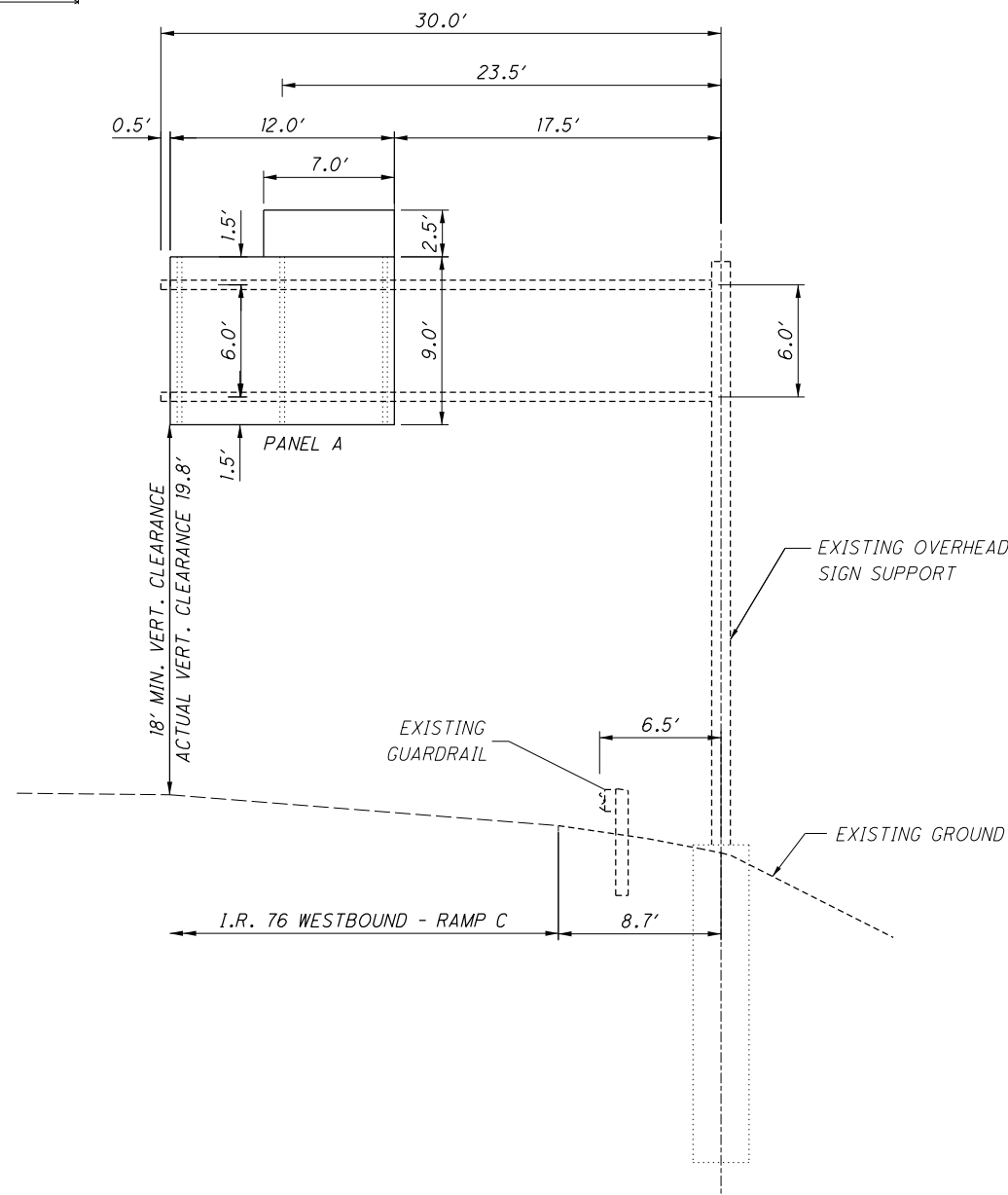
SEE SHEET 431 FOR PLAN VIEW.

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PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	SERIES E(M)
PANEL SIZE:	12' X 9'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	7' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	125.5 SQ. FT.
TOTAL $\phi$ TO $\phi$ LENGTH:	24.3 FT.
DESIGN TYPE:	TC-12.30, DESIGN 10



PANEL A  
N.T.S.



OSS-4 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 10  
I.R. 76 WESTBOUND - RAMP C

- NOTES: 1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.  
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.

CALCULATED	CRW	CHECKED	RMG

2.5' HORIZONTAL SCALE IN FEET

**OVERHEAD SIGN SUPPORT DETAILS**  
**I.R. 76 WESTBOUND - RAMP C**

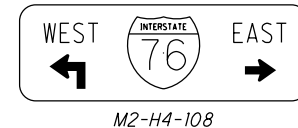
**SUM-76-5.53**

453  
672

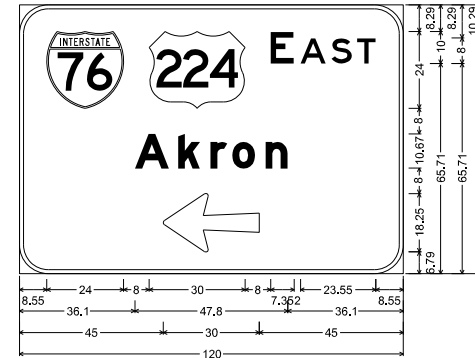
SEE SHEET 421 FOR PLAN VIEW.

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PANEL A	
DESIGN LEVEL:	3
TEXT FONT:	SERIES E(M)
PANEL SIZE:	10' X 7'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
SIGN SUPPORT INFORMATION	
NUMBER OF BRACKETS:	4
TOTAL SIGN AREA:	133.0 SQ. FT.
DESIGN TYPE:	TC-12.30, DESIGN 5



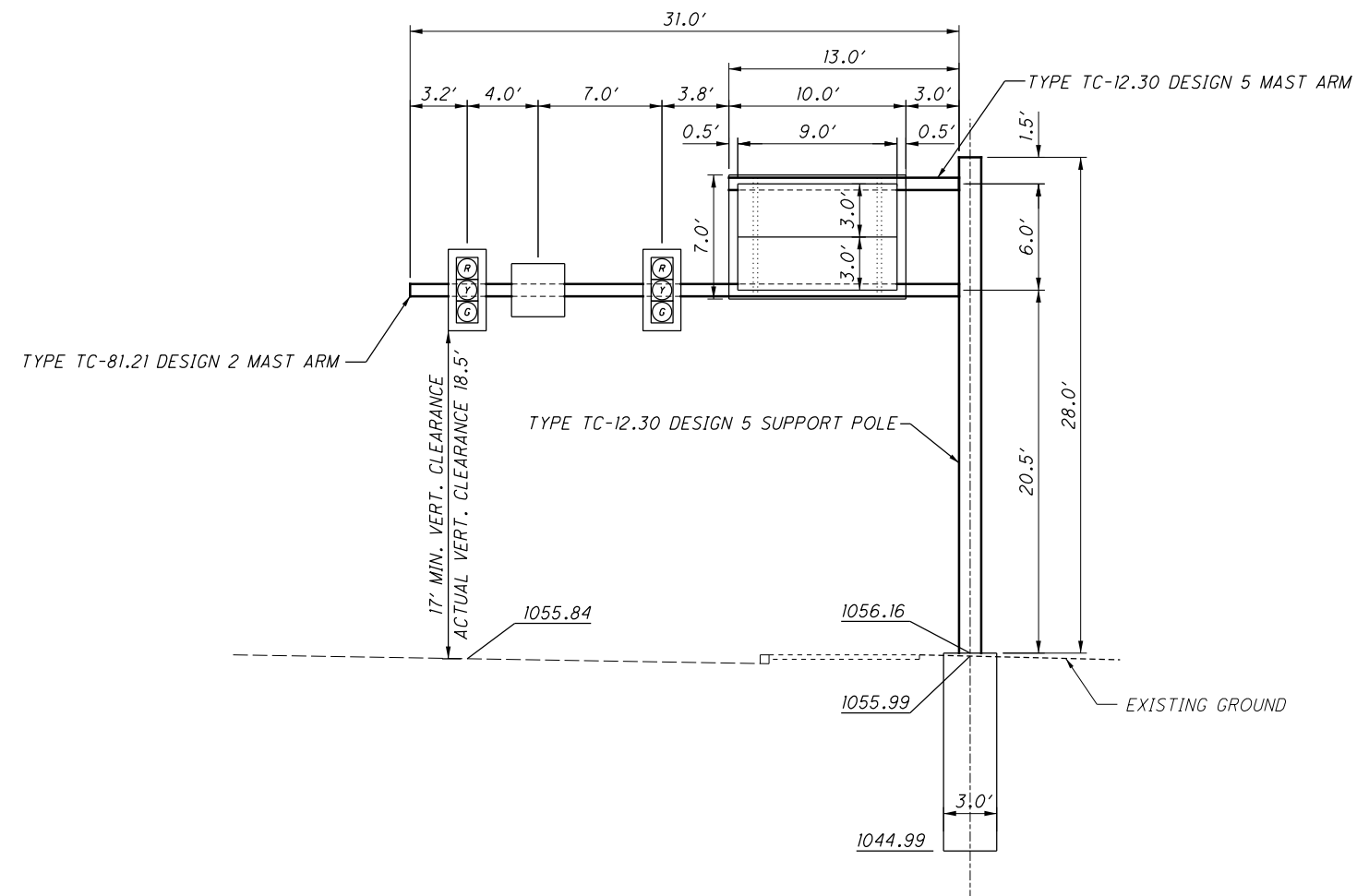
\*FACING NORTHBOUND TRAFFIC



PANEL A  
N.T.S.

\*FACING SOUTHBOUND TRAFFIC

NOTES: 1. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-8 OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 5  
STA. 84+64, STATE STREET

OVERHEAD SIGN SUPPORT DETAILS  
STATE STREET

SUM - 76 - 5.53

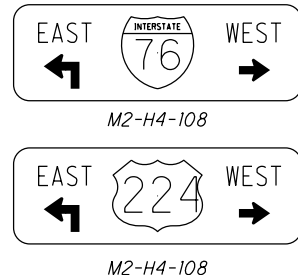
CALCULATED	CRW	CHECKED	RMG
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454  
672

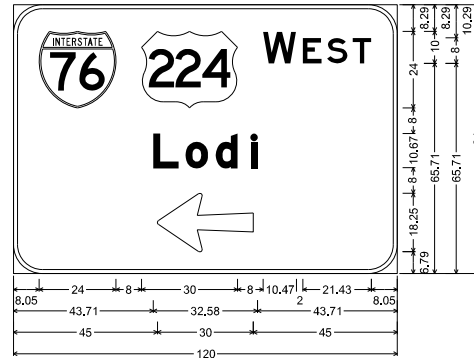
SEE SHEET 430 FOR PLAN VIEW.  
SEE SHEET 464 FOR ADDITIONAL MAST ARM INFORMATION.

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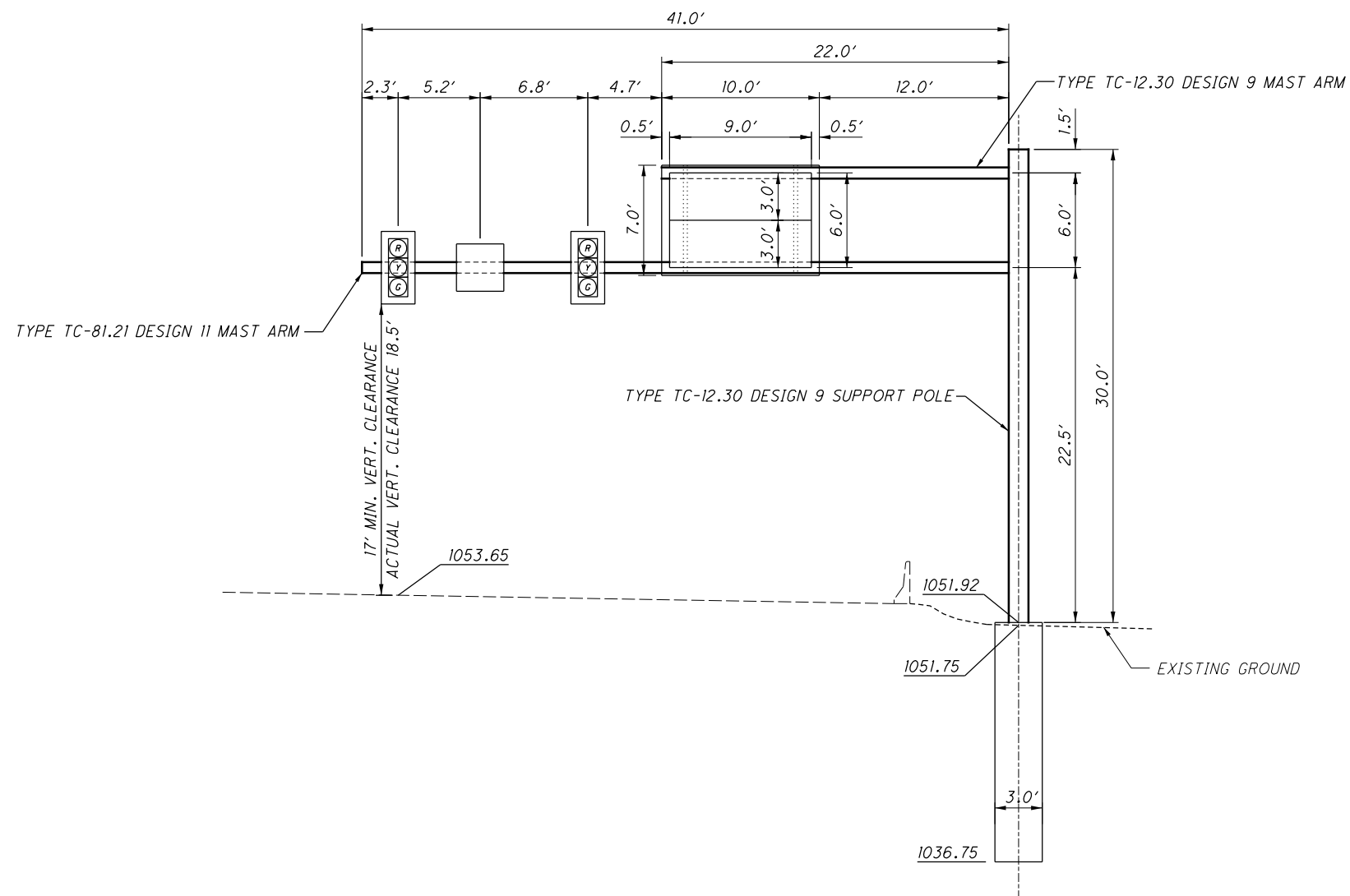
PANEL A	
DESIGN LEVEL:	3
TEXT FONT:	SERIES E(M)
PANEL SIZE:	10' X 7'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
SIGN SUPPORT INFORMATION	
NUMBER OF BRACKETS:	4
TOTAL SIGN AREA:	133.0 SQ. FT.
DESIGN TYPE:	TC-12.30, DESIGN 9



\*FACING SOUTHBOUND TRAFFIC



\*FACING NORTHBOUND TRAFFIC



OSS-10 OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 9  
STA. 86+97, STATE STREET

NOTES: 1. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

CALCULATED	CRW	CHECKED	RMG
2.5 HORIZONTAL SCALE IN FEET			

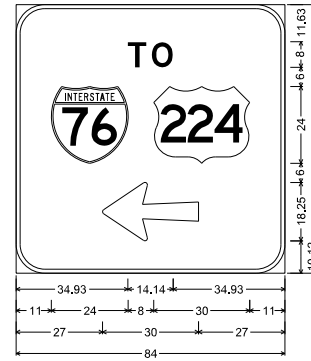
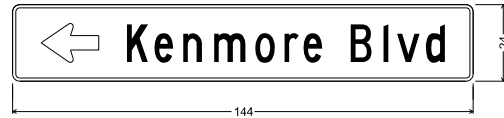
**OVERHEAD SIGN SUPPORT DETAILS  
STATE STREET**

**SUM - 76 - 5.53**

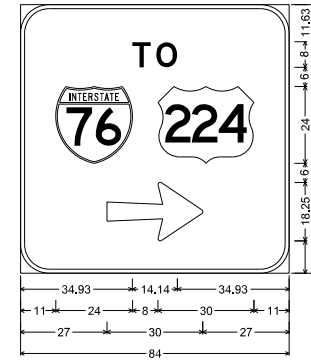
SEE SHEET 431 FOR PLAN VIEW.  
SEE SHEET 467 FOR ADDITIONAL MAST ARM INFORMATION.

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PANEL A	
DESIGN LEVEL:	3
TEXT FONT:	SERIES E(M)
PANEL SIZE:	7' X 7'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	2
PANEL B	
DESIGN LEVEL:	3
TEXT FONT:	SERIES E(M)
PANEL SIZE:	7' X 7'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	2
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	98.0 SQ. FT.
DESIGN TYPE:	TC-12.30, DESIGN 5



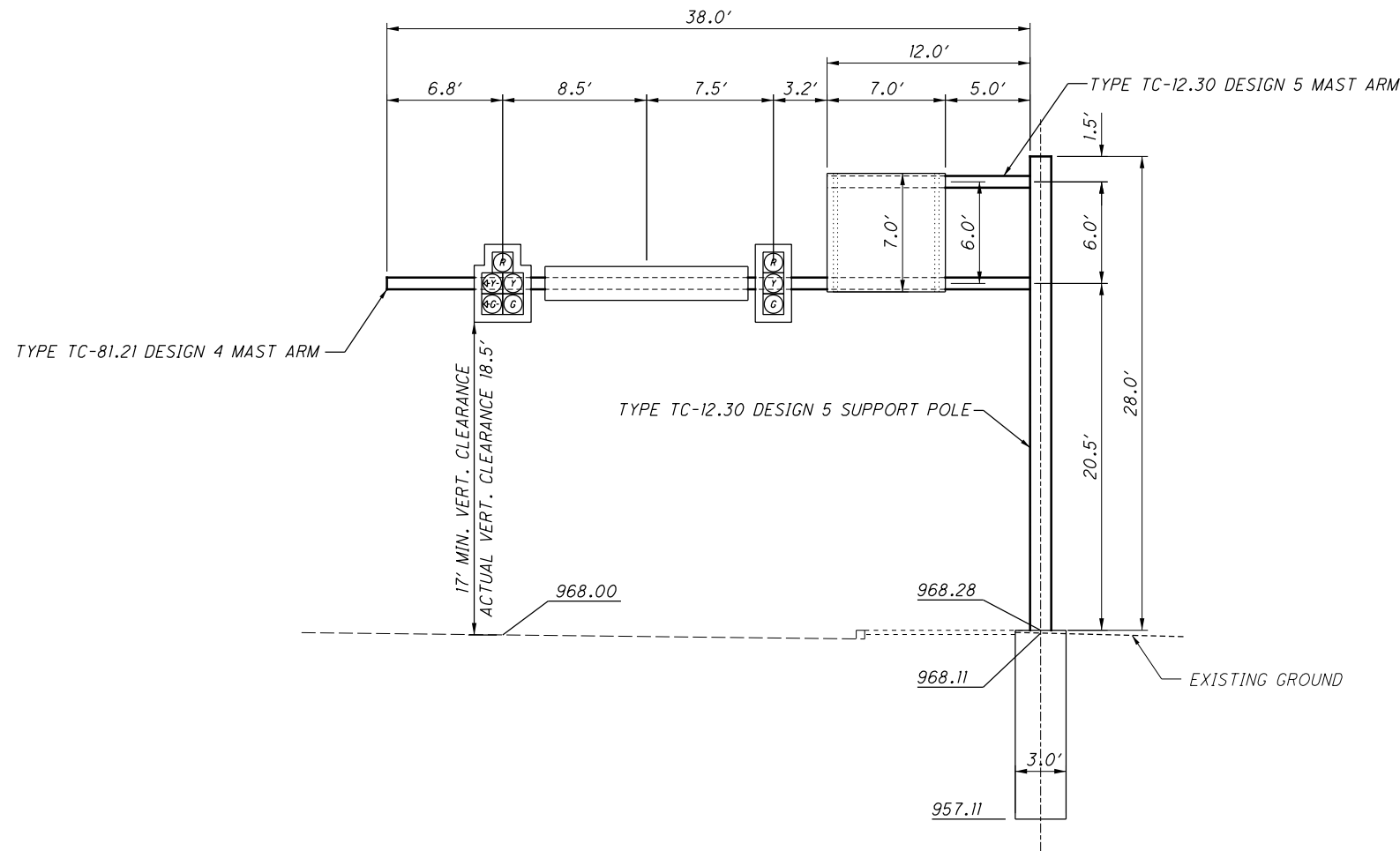
PANEL A  
N.T.S.



PANEL B  
N.T.S.

\*FACING NORTHBOUND TRAFFIC

\*FACING SOUTHBOUND TRAFFIC



OSS-12 OVERHEAD SIGN SUPPORT TYPE TC-12.30, DESIGN 5  
STA. 16+75, S.R. 619 (WOOSTER ROAD)

NOTES: 1. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

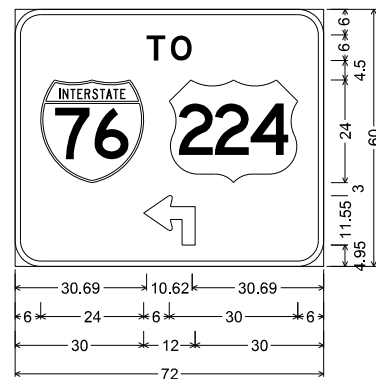
CALCULATED  
CRW  
CHECKED  
RMG

**OVERHEAD SIGN SUPPORT DETAILS**  
**S.R. 619 (WOOSTER ROAD)**

**SUM-76-5.53**

SEE SHEET 433 FOR PLAN VIEW.  
SEE SHEET 473 FOR ADDITIONAL MAST ARM INFORMATION.

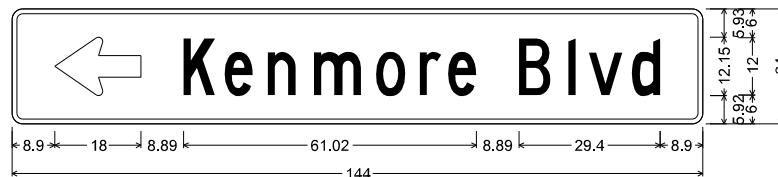
456  
672



Identifier : S-21; M2-H3-72 Modified;  
 6.00" Radius, 1.25" Border, White on Green;  
 [TO] E; Interstate 76 M1-1;  
 US 224 M1-4;  
 90 Deg Advance Turn Arrow Custom 12.00" X 11.55";  
 Table of letter and object lefts.

T	O
30.69	36.34
6.00	36.00
30.00	

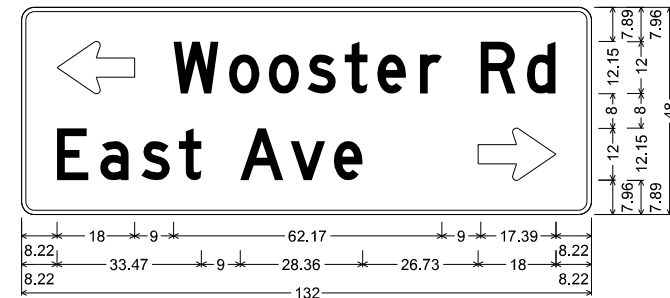
NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES.



Identifier : D3-1-144Φ;  
 2.25" Radius, 1.00" Border, White on Green;  
 Standard Arrow Custom 18.00" X 12.15" 180°; [Kenmore] C; [Blvd] C;  
 Table of letter and object lefts.

←	K	e	n	m	o	r	e	B	l	v	d
8.90	35.79	44.34	53.32	62.98	75.87	85.01	90.93	105.70	115.79	120.24	129.22

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES.



Identifier : S-74, D3-1-132;  
 3.00" Radius, 1.00" Border, White on Green;  
 Standard Arrow Custom 18.00" X 12.15" 180°; [Wooster] D; [Rd] D;  
 [East] D; [Ave] D; Standard Arrow Custom 18.00" X 12.15" 0°;  
 Table of letter and object lefts.

←	W	o	o	s	t	e	r	R	d
8.22	35.22	48.09	57.26	66.22	74.90	82.42	92.31	106.39	117.09
E	a	s	t	A	v	e	→		
8.22	18.23	27.78	36.47	50.69	62.33	72.36	105.78		

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES.



TRAFFIC SIGNAL GENERAL NOTES

PLAN AND SPECIFICATION COMPLIANCE

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL DEVICES IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, THE 2016 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ITS SUPPLEMENTAL SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (CURRENT EDITION), AND THE "TC" STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE ODOT OFFICE OF ROADWAY ENGINEERING (SUPPLEMENTS THE PLAN SPECIFICATIONS).

TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL MEET OR EXCEED THE STANDARDS SPECIFIED IN THE FOLLOWING DOCUMENTS:

- A. SPECIFICATIONS LISTED IN THIS PLAN;
- B. APPLICABLE SECTIONS OF NEMA STANDARDS PUBLICATION NO. TS2-1998 AND/OR TS1-1989;
- C. 2016 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS 625, 632, 633, 725, 732, & 733; OTHER ODOT DRAWINGS AND SUPPLEMENTALS.

IN CASE OF CONFLICTING SPECIFICATIONS STATEMENTS, THE SPECIFICATION DOCUMENT HIERARCHY SHALL BE IN THE ORDER LISTED FROM (A), HIGHEST, TO (C), LOWEST.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM OHIO EDISON DISTRIBUTION, 1910 WEST MARKET STREET, BLDG. 1 AKRON, OH 44313 AT THE LOCATIONS INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS AT EACH INTERSECTION SHOWN.

NOTIFICATION

THE CONTRACTOR SHALL GIVE THE ODOT DISTRICT TRAFFIC OFFICE, (330) 786-2267, AND CITY OF BARBERTON, (330)-848-6717, 10 WORKING DAYS NOTICE PRIOR TO THE SIGNAL BEING PLACED IN THE "FLASH" MODE.

THE SIGNAL INSTALLATION SHALL BE INSPECTED BY ODOT DISTRICT TRAFFIC PERSONNEL PRIOR TO BEING PLACED IN THE "STOP-AND-GO" MODE. ALL DEFICIENCIES OF AN OPERATIONALLY CRITICAL NATURE SHALL BE CORRECTED BY THE CONTRACTOR AND APPROVED BY THE DISTRICT TRAFFIC OFFICE BEFORE PLACING THE SIGNAL IN THE "STOP-AND-GO" MODE.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC.). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

ITEMS TO BE STORED FOR ODOT:

ODOT CABINETS (WITH GREEN STICKER) & CONTROLLERS/UPS (AT 76 & 619 SIGNALS)

ITEMS TO BE STORED FOR BARBERTON:

DISCONNECT SWITCH, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS AND SIGNS, PEDESTALS, SPAN OR POLE MOUNTED SIGNS.

ITEMS TO BE DISPOSED:

ALL SIGNAL CABLES, MESSENGER WIRE, STRAIN POLES, PULLBOXES, AND ALL FOUNDATIONS

QUANTITIES OF EACH ARE LISTED ON INTERSECTION PLAN SHEETS.

REMOVED ODOT ITEMS SHALL BE DELIVERED TO ODOT AT:

2088 S ARLINGTON ST  
AKRON, OH 44306  
ATTN: NICK KRATSAS, 330-786-3158

REMOVED CITY OF BARBERTON ITEMS SHALL BE DELIVERED TO THE CITY OF BARBERTON MUNICIPAL BUILDING AT:

576 WEST PARK AVENUE  
BARBERTON, OH 44203.

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE CITY ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NONINTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDON, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND BARBERTON TRAFFIC ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

ITEM 632 VEHICULAR SIGNAL HEAD, (LED), (BY TYPE), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
4. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW MODULE LOCATED IN FRONT OF THE MAST ARM.
5. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE C&MS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER.
6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.
7. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.
8. SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
9. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.
10. BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS OR TETHERED HEADS.

PAYMENT FOR ITEM 632 VEHICULAR SIGNAL HEAD, (LED), (BY TYPE), AS PER PLAN SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

ITEM 632 COVERING OF VEHICULAR SIGNAL HEAD

COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD OF COVERING TO COVER ATTACHMENT AND MATERIALS, INCLUDING BACKPLATES, AS APPROVED BY THE ENGINEER. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED BY THE ENGINEER.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY.

EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, CABINET, UNINTERRUPTIBLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION/ INTERCONNECT EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED
6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 633 CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN

THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUG IN PRINTED CIRCUIT BOARD ASSEMBLY AS DESCRIBED IN PART 14 OF TS-1-1989.

IN ADDITION TO NEMA REQUIREMENTS, THE CONFLICT MONITOR SHALL ALSO HAVE EXTENDED MONITORING OPERATIONAL FOR EACH LOAD SWITCH IN USE (IN ACCORDANCE WITH 733.03.A2). THE MONITOR SHALL MONITOR EACH LOAD SWITCH SEPARATELY. EACH SIGNALIZED APPROACH TO THE SIGNAL SHALL HAVE A SEPARATE LOAD SWITCH. THE DESIGN OF THE MONITOR SHALL USE MICROPROCESSOR ARCHITECTURE.

THE CONTROLLER WILL BE ECONOLITE.

THE MINIMUM NUMBER OF LOAD SWITCH SOCKETS IN THE CABINET FOR 2 THROUGH 4 PHASE CONTROLLERS SHALL BE 8. THE MINIMUM NUMBER OF LOAD SWITCH SOCKETS IN THE CABINET FOR 5, 6, 7 AND 8 PHASE CONTROLLERS SHALL BE 16. DUMMY LOAD SWITCHES SHALL BE PROVIDED ON LEFT TURN PHASES REGARDLESS OF CONTROLLER PROGRAMMING CAPABILITIES. LOOP DETECTOR DELAYS SHALL NOT BE PROGRAMMED INTO THE CONTROLLER. "NO SKIP" WIRES SHALL BE PROVIDED ON THE BACKPANEL WHEN PHASES 1 AND/OR 5 ARE IN USE.

THE CONTROLLER CABINET SHALL NOT BE PAINTED. PRINTED BOARD TYPE BACK PANELS OF THE CONTROLLER CABINET WILL NOT BE ACCEPTABLE. SOLDERED CONNECTIONS WILL BE PERMITTED FOR WIRING ON THE BACK SIDE OF THE BACK PANEL.

ALL SIGNAL CABLE AND LOOP DETECTOR LEADIN CABLE TERMINATIONS IN THE CABINET SHALL HAVE NO MORE THAN FOUR (4) INCHES OF THE OUTER INSULATING JACKET REMOVED.

THE FOUNDATION SHALL BE ORIENTED WITH RESPECT TO THE INTERSECTION IN A MANNER THAT WILL PROVIDE MAINTENANCE PERSONNEL WITH A VIEW OF THE INTERSECTION WHILE WORKING ON THE CONTROLLER.

PAYMENT FOR ITEM 633 CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

CALCULATED  
JML  
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TRAFFIC SIGNAL GENERAL NOTES

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**ITEM 633 PREEMPTION**

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION EQUIPMENT IN THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN IN THE PLANS. THE PREEMPTION SHALL CONFORM TO ODOT SPECIFICATION 633 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PRIORITY VEHICLE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED PREEMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.

THE COMMUNICATIONS MEDIUM SHALL EMPLOY OPTIC DETECTION TECHNIQUES TO DETERMINE AND LOG THE PRESENCE OF THE EMERGENCY VEHICLE. THE SYSTEM SHALL DETECT THE PRESENCE OF THE VEHICLE THROUGH AN EMITTING DEVICE LOCATED ON THE EMERGENCY VEHICLE. THE SYSTEM SHALL ACTIVATE THE PREEMPTION SEQUENCE BY APPLYING A SIGNAL TO ONE OF THE CONTROLLER'S PREEMPT DISCRETE INPUTS. THE SYSTEM SHALL BE COMPLETELY COMPATIBLE WITH THE CONTROLLER.

THE EQUIPMENT SHALL BE SHELF OR RACK MOUNTED AND EASILY REMOVABLE AND REPLACEABLE WITHIN THE CABINET. SUPPLY EQUIPMENT COMPLETELY WIRED IN THE CONTROLLER CABINET AND TESTED. THE SYSTEM SHALL BE CAPABLE OF PREEMPTING AND RECEIVING PRIORITY FOR EACH APPROACH TO THE INTERSECTION. IT SHALL BE POSSIBLE TO DETECT THE EMERGENCY VEHICLE UP TO 1200 FEET FROM THE INTERSECTION.

SUPPLY EACH INTERSECTION SHOWN IN THE PLANS WITH THE FOLLOWING COMPONENTS, EACH BID SEPARATELY:

1. PREEMPT RECEIVING UNIT.
2. PREEMPT DETECTOR CABLE.
3. PREEMPT PHASE SELECTOR ASSEMBLY AND INTERFACE WIRING PANEL.
4. CONFIRMATION LIGHT.

FOR A LIGHT-ACTIVATED SYSTEM, THE CONTRACTOR SHALL INVENTORY THE CITY'S EXISTING EMITTERS TO DETERMINE COMPATIBILITY WITH THE PROPOSED SYSTEM. IF EXISTING EMITTERS ARE FOUND TO BE NOT COMPATIBLE, THEN THE CITY SHALL BE SUPPLIED (AT COSTS INCIDENTAL TO THE SYSTEM) WITH THE EMITTERS, TRANSMITTERS, SWITCHES, WIRING AND ALL REQUIRED VEHICLE EQUIPMENT FOR THE FOLLOWING EMERGENCY VEHICLES. THE CITY SHALL BE RESPONSIBLE FOR INSTALLING VEHICLE EQUIPMENT. THE MODEL SUPPLIED SHALL BE OPTICOM IR-BASED EVP SYSTEM MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES LLC PER THE PROPRIETARY PRODUCT APPROVAL REQUEST SUBMITTED.

THE CITY SHALL BE SUPPLIED WITH SOFTWARE REQUIRED TO CALIBRATE, LOG, AND OPERATE THE SYSTEM. THE SOFTWARE SHALL BE CAPABLE OF OPERATING UNDER WINDOWS 7, 32-BIT OPERATING SYSTEM. TWO (2) OPERATING AND INSTRUCTION MANUALS SHALL BE SUPPLIED WITH THE SOFTWARE.

THE CONTRACTOR SHALL THOROUGHLY TEST THE INSTALLED SYSTEM. AS A MINIMUM, THE CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINETS. THE CONTRACTOR SHALL CHECK THAT THE RANGE SETTING IS PROPER FOR EACH INTERSECTION. THE CONTRACTOR SHALL DETERMINE THAT ALL PHASE SELECTORS ARE SELECTING THE PROPER PHASE AND TIMING ACCURATELY. THE CONTRACTOR SHALL VERIFY THAT ALL VEHICLE EMITTERS ARE BEING PROPERLY DETECTED.

PAYMENT FOR ITEM 633 "PREEMPTION" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PREEMPTION IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS, EXCEPT FOR THOSE ITEMS BID SEPARATELY.

**ITEM 633 PREEMPTION RECEIVING UNIT**

RECEIVING UNITS SHALL CONSIST OF A LIGHTWEIGHT, WEATHERPROOF AND DIRECTIONAL ASSEMBLY. EACH RECEIVING UNIT SHALL BE 360 DEGREE ADJUSTABLE. THE RECEIVING UNIT SHALL BE CAPABLE OF SENDING THE PROPER ELECTRICAL SIGNAL TO THE TRAFFIC SIGNAL CONTROLLER VIA THE PREEMPTION DETECTOR CABLE. RECEIVING UNITS SHALL BE SUPPLIED WITH MAST ARM MOUNTING HARDWARE AS SHOWN IN THE PLANS.

FURNISH PREEMPTION RECEIVING UNITS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

PAYMENT FOR ITEM 633 "PREEMPTION RECEIVING UNIT" SHALL BE AT THE CONTRACT UNIT PRICE FOR EACH RECEIVING UNIT IN PLACE, COMPLETELY INSTALLED AT THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

**ITEM 633 PREEMPTION DETECTOR CABLE**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION DETECTOR HOME RUN CABLE IN THE LOCATIONS SHOWN IN THE PLANS. IT SHALL CONNECT THE PREEMPT RECEIVING UNITS TO THE PHASE SELECTORS IN THE LOCAL CONTROLLER CABINET.

PREEMPTION DETECTOR CABLE SHALL CONFORM TO ODOT SPECIFICATION 632. ONLY ONE EXTERNAL SPLICE SHALL BE PERMITTED BETWEEN PREEMPTION RECEIVER UNIT AND CONTROLLER CABINET. THIS SPLICE SHALL MEET THE REQUIREMENTS OF C&MS 632.23 USING A WATERPROOF EPOXY SPLICE KIT. THE CABLE SHALL BE APPROVED FOR BOTH OVERHEAD AND UNDERGROUND USE. THE JACKET SHALL WITHSTAND EXPOSURE TO SUNLIGHT AND ATMOSPHERIC TEMPERATURES AND STRESSES REASONABLY EXPECTED IN NORMAL INSTALLATIONS.

PAYMENT FOR ITEM 633 "PREEMPTION DETECTOR CABLE" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT FOR THE CABLE FURNISHED, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

**ITEM 633 PREEMPT PHASE SELECTOR**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPT PHASE SELECTORS INCLUDING WIRING INTERFACE PANELS IN THE LOCAL CONTROLLER CABINET AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT PHASE SELECTORS COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE THE EXTRA CABINET SPACE NECESSARY TO BE LOCATED IN THE LOCAL CONTROLLER CABINETS WHERE INDICATED IN THE PLANS.

THE PHASE SELECTORS SHALL CONSIST OF A MODULE OR MODULES THAT WILL PROVIDE THE NECESSARY INPUTS TO THE CONTROLLER. PHASE SELECTORS SHALL BE SUPPLIED WITH SUFFICIENT QUANTITIES OF CHANNELS TO PROVIDE PREEMPTION FOR ALL APPROACHES TO THE INTERSECTION SEPARATELY. POWER SHALL BE OBTAINED FROM THE PHASE SELECTOR OR PHASE SELECTOR POWER SUPPLY AND NOT FROM THE LOCAL CONTROLLER TIMER.

THE PHASE SELECTORS SHALL HAVE FRONT PANEL INDICATORS FOR ACTIVE PREEMPT CHANNEL STATUS. IT SHALL HAVE TEST SWITCHES TO ACTIVATE ALL PREEMPT CHANNELS.

FURNISH PREEMPT PHASE SELECTORS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

PAYMENT FOR ITEM 633 "PREEMPT PHASE SELECTOR" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PHASE SELECTOR IN PLACE, COMPLETELY INSTALLED IN THE LOCAL CONTROLLER SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

**ITEM 633 PREEMPT CONFIRMATION LIGHT, LED**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPT CONFIRMATION LIGHTS INCLUDING HARDWARE AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT CONFIRMATION LIGHT COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS.

A CONFIRMATION LIGHT SHALL BE SUPPLIED FOR EACH INTERSECTION TO INDICATE THAT THE EMERGENCY VEHICLE HAS ACHIEVED CONTROL OF THE TRAFFIC SIGNAL.

THE CONFIRMATION LIGHT SHALL BE A VAPOR TIGHT ALUMINUM LIGHTING FIXTURE. IT SHALL BE SUPPLIED WITH A CLEAR GLOBE, LED LAMP AND MOUNTING HARDWARE TO ATTACH TO THE TRAFFIC SIGNAL MAST ARM. THE CONFIRMATION LIGHT SHALL BE POWERED BY A LOAD SWITCH IN THE TRAFFIC SIGNAL CONTROLLER. SIGNAL CABLE CONFORMING TO 732.19 SHALL BE USED FOR CONFIRMATION LIGHTS. A MINIMUM OF 4-CONDUCTOR CABLE SHALL BE USED WITH THE GREEN WIRE SERVING AS THE SAFETY GROUND CONDUCTOR.

PAYMENT FOR ITEM 633 "PREEMPT CONFIRMATION LIGHT, LED" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH LIGHT IN PLACE, COMPLETELY INSTALLED IN THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

**GROUNDING AND BONDING**

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.

A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.

B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.

C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

**GROUNDING AND BONDING (CONT.)**

3. WIRE FOR GROUNDING AND BONDING.

A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.

II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.

A. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIP. GROUND	EQUIP. GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/ BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.

A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

CALCULATED  
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TRAFFIC SIGNAL GENERAL NOTES

SUM - 76 - 5.53

459  
672

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**ITEM 633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, POLE ATTACHMENT HARDWARE WILL BE INCLUDED FOR POLE-MOUNTED CABINETS, AND A CABINET RISER (8 INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE DISTRICT TRAFFIC ENGINEER AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSES OVER THE POWER CORD.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED MODULE SHOULD BE PLACED AND CENTERED ON THE TOP SURFACE OF THE UPS CABINET AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY," WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

**ITEM 632 SIGNAL SUPPORT FOUNDATION, AS PER PLAN**

WITHIN TWO (2) WEEKS OF RECEIVING A SIGNED CONTRACT, THE CONTRACTOR SHALL LAYOUT THE PERIMETER OF EACH FOUNDATION THEN CONTACT OUPS (1-800-362-2764) AND OGPUPS (1-800-925-0988). A MEETING BETWEEN THE CONTRACTOR, ENGINEER AND A REPRESENTATIVE FROM THE MAINTAINING AGENCY WILL BE HELD ON SITE NO LATER THAN TWO (2) WEEKS AFTER THE OUPS NOTIFICATION. BASED UPON THE PRIORITIES DETERMINED AT THIS MEETING, THE CONTRACTOR WILL CONSTRUCT FOUNDATIONS BEGINNING WITH THE HIGHEST PRIORITY FIRST.

IF A UTILITY OR OTHER CONFLICT EXISTS WHICH REQUIRES THAT A SIGNAL SUPPORT BE CONSTRUCTED AT A LOCATION OTHER THAN WHAT IS INDICATED IN THE PLAN, THE MAINTAINING AGENCY AND THE ENGINEER SHALL DETERMINE WHETHER THE SPECIFIED MAST ARM LENGTH IS APPROPRIATE. IF A LONGER ARM IS REQUIRED, WITHIN TEN (10) WORKING DAYS, THE MAINTAINING AGENCY WILL PROVIDE THE CONTRACTOR WITH REVISED POLE AND ARM DATA. THE CONTRACTOR SHALL NOT ORDER THE POLES PRIOR TO RECEIVING THIS DATA. SUPPORT FOUNDATION LOCATIONS SHALL BE ADJUSTED ONLY WHEN APPROVED BY THE ENGINEER.

THE CONTRACTOR IS ADVISED TO LOCATE AND CONSTRUCT THE SIGNAL SUPPORT FOUNDATIONS AS SOON AS POSSIBLE IN ORDER TO PROVIDE AMPLE LEAD TIME TO ORDER THE SIGNAL SUPPORTS AND THEIR ASSOCIATED MAST ARMS. ALL FOUNDATIONS SHALL BE HAND EXCAVATED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. NO TIME EXTENSIONS SHALL BE GRANTED FOR DELAYS WHICH ARE CAUSED BY THE CONTRACTOR'S FAILURE TO PLAN FOUNDATION WORK AS SOON AS POSSIBLE IN THE CONTRACTOR'S PROGRESS SCHEDULE.

FOUNDATIONS THAT HAVE BEEN CONSTRUCTED SHALL BE PROTECTED AS PER SECTION 107.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PAYMENT FOR ITEM 632 SIGNAL SUPPORT FOUNDATION, AS PER PLAN SHALL BE MADE AT THE UNIT CONTRACT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO EXCAVATE AND BUILD THE FOUNDATION SYSTEM, COMPLETE IN PLACE AND ACCEPTED.

**MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

- EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
- NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF BELPRE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 8 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7 AM TO 11 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS. ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

**MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONT.)**

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

- TIME OF NOTIFICATION OF MALFUNCTION;
- TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
- ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
- A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
- TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

**SIGNAL OPERATION CHANGED**

CONCURRENT WITH THE ACTUATION OF ANY NEW SIGNAL OPERATION WHICH ALTERS THE SEQUENCE OF THE SIGNAL DISPLAYS FROM THE EXISTING OPERATION, A SIGNAL OPERATION CHANGED SIGN (W23-H2B) SHALL BE INSTALLED. THE SIGNS SHALL BE DISPLAYED FOR A MINIMUM OF FOURTEEN DAYS AND A MAXIMUM OF THIRTY DAYS. THE SIGN SHALL BE INSTALLED ON ALL APPROACHES TO AN INTERSECTION AND SHALL BE INSTALLED ON THE SPAN WIRE OR MAST ARM ADJACENT TO THE SIGNAL HEADS.



W23-H2B

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

**ITEM 625 POWER SERVICE, AS PER PLAN**

POWER SERVICE SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC-83.10 WITH THE FOLLOWING EXCEPTIONS: 1) THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. 2) THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES. 3) ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS. 4) THE POWER SERVICE BLIND HALF COUPLING SHALL BE TWENTY-SEVEN (27) INCHES ABOVE THE BOTTOM OF THE STRAIN POLE BASE PLATE AND SHALL BE WELDED TO THE STRAIN POLE. 5) CONDUIT FROM THE BOTTOM OF THE DISCONNECT SWITCH ENCLOSURE INTO THE BOTTOM OF THE CONTROLLER CABINET WILL NOT BE PERMITTED. POWER SERVICE WIRES FROM THE DISCONNECT SWITCH ENCLOSURE TO THE CONTROLLER CABINET SHALL BE ROUTED THROUGH THE STRAIN POLE.

DISCONNECT SWITCH ENCLOSURES FURNISHED SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE MAINTAINING AGENCY.

**SIGNALIZATION, MISC.: CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TSI, AS PER PLAN**

THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUG IN PRINTED CIRCUIT BOARD ASSEMBLY AS DESCRIBED IN PART 14 OF TS-1-1989.

IN ADDITION TO NEMA REQUIREMENTS, THE CONFLICT MONITOR SHALL ALSO HAVE EXTENDED MONITORING OPERATIONAL FOR EACH LOAD SWITCH IN USE (IN ACCORDANCE WITH 733.03.A2). THE MONITOR SHALL MONITOR EACH LOAD SWITCH SEPARATELY. EACH SIGNALIZED APPROACH TO THE SIGNAL SHALL HAVE A SEPARATE LOAD SWITCH. THE DESIGN OF THE MONITOR SHALL USE MICROPROCESSOR ARCHITECTURE.

THE CONTROLLER WILL BE MANUFACTURED BY SIEMENS PER THE PROPRIETARY PRODUCT APPROVAL FROM ODOT. THE CONTRACTOR SHOULD ENSURE THE MOST CURRENT MODEL IS PROVIDED.

THE MINIMUM NUMBER OF LOAD SWITCH SOCKETS IN THE CABINET FOR 2 THROUGH 4 PHASE CONTROLLERS SHALL BE 8. THE MINIMUM NUMBER OF LOAD SWITCH SOCKETS IN THE CABINET FOR 5, 6, 7 AND 8 PHASE CONTROLLERS SHALL BE 16. DUMMY LOAD SWITCHES SHALL BE PROVIDED ON LEFT TURN PHASES REGARDLESS OF CONTROLLER PROGRAMMING CAPABILITIES. LOOP DETECTOR DELAYS SHALL NOT BE PROGRAMMED INTO THE CONTROLLER. "NO SKIP" WIRES SHALL BE PROVIDED ON THE BACKPANEL WHEN PHASES 1 AND/OR 5 ARE IN USE.

THE CONTROLLER CABINET SHALL NOT BE PAINTED. PRINTED BOARD TYPE BACK PANELS OF THE CONTROLLER CABINET WILL NOT BE ACCEPTABLE. SOLDERED CONNECTIONS WILL BE PERMITTED FOR WIRING ON THE BACK SIDE OF THE BACK PANEL.

ALL SIGNAL CABLE AND LOOP DETECTOR LEADIN CABLE TERMINATIONS IN THE CABINET SHALL HAVE NO MORE THAN FOUR (4) INCHES OF THE OUTER INSULATING JACKET REMOVED.

THE FOUNDATION SHALL BE ORIENTED WITH RESPECT TO THE INTERSECTION IN A MANNER THAT WILL PROVIDE MAINTENANCE PERSONNEL WITH A VIEW OF THE INTERSECTION WHILE WORKING ON THE CONTROLLER.

PAYMENT FOR SIGNALIZATION MISC.: CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TSI, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

**TRAFFIC SIGNAL GENERAL NOTES**

**SUM - 76 - 5.53**

CALCULATED  
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ITEM 809 STOP-LINE RADAR DETECTION

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CAL- TRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

ITEM 633 COMMUNICATIONS, AS PER PLAN

FURNISH A CELLULAR MODEM, ONE 3-ANTENNA ASSEMBLY (PART # 6001136), AND A 10' ETHERNET CABLE FOR REMOTE WIRELESS CELLULAR COMMUNICATION.

FOR NETWORK CONSISTENCY CELLULAR MODEMS SHALL BE THE SIERRA WIRELESS:

MODEM, AIRLINK MP70 ETHERNET WITH AC TO DC POWER CABLE - MODEL 1102709KIT

THIS ITEM SHALL INCLUDE FURNISHING A MOUNTING BRACKET FOR THE ANTENNA WITH ALL NECESSARY HARDWARE INCLUDING BUT NOT LIMITED TO SPRING NUTS, WASHERS, AND BOLTS THAT INSTALL TO THE MOUNTING CHANNEL ON THE SIDE OF THE SIGNAL CABINET.

THE CELLULAR MODEM EQUIPMENT SHALL BE DELIVERED TO ODOT DISTRICT 4 TRAFFIC FOR PROGRAMMING AND INSTALLATION.

ODOT DISTRICT 4 TRAFFIC  
ATTN: NICK KRATSAS  
2088 S ARLINGTON ST  
AKRON, OH 44306

THE CONTRACTOR SHALL PROVIDE THE MODEM SERIAL NUMBERS AND NECESSARY ESN NUMBERS FOR ODOT TO ESTABLISH WIRELESS SERVICE.

THE DEPARTMENT WILL MEASURE "COMMUNICATIONS, AS PER PLAN" BY THE NUMBER OF COMPLETE UNITS FURNISHED, RECEIVED, AND ACCEPTED BY ODOT DISTRICT 4 TRAFFIC.

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

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TRAFFIC SIGNAL GENERAL NOTES

SUM - 76 - 5.53

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672

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SHEET NUMBER					FUNDING				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
462	465	468	471	01/IMS/PV	10/IMS/PV	02/IMS/BR	11/IMS/BR							
109	177	282	230		263	535		625	25500	798	FT	CONDUIT, 3", 725.04		
203	162	116	83		186	378		625	25902	564	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"		
99	161	244	224		240	488		625	29000	728	FT	TRENCH		
5	3	5	3		5	11		625	30700	16	EACH	PULL BOX, 725.08, 18"		
1	1	1	1		1	3		625	30706	4	EACH	PULL BOX, 725.08, 24"		
3	5	3	6		6	11		625	32000	17	EACH	GROUND ROD		
99	161	244	224		240	488		625	36000	728	FT	PLASTIC CAUTION TAPE		
0	0	6	0		2	4		632	04803	6	EACH	VEHICULAR SIGNAL HEAD, (LED), YELLOW, 1-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	458	
6	6	0	3		5	10		632	05007	15	EACH	VEHICULAR SIGNAL HEAD, (LED), YELLOW, 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	458	
0	0	0	3		1	2		632	05087	3	EACH	VEHICULAR SIGNAL HEAD, (LED), YELLOW, 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	458	
2	2	0	4		3	5		632	20731	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	458	
6	6	6	6		8	16		632	25000	24	EACH	COVERING OF VEHICULAR SIGNAL HEAD		
2	2	0	4		3	5		632	25010	8	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD		
0	0	0	2		1	1		632	26000	2	EACH	PEDESTRIAN PUSHBUTTON		
542	414	0	640		527	1069		632	40400	1596	FT	SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG		
660	739	676	449		833	1691		632	40500	2524	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		
156	114	0	506		256	520		632	40700	776	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		
2	2	2	2		3	5		632	64011	8	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	460	
0	2	0	3		2	3		632	64020	5	EACH	PEDESTAL FOUNDATION		
0	0	0	173		57	116		632	65300	173	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG		
117	37	51	46		83	168		632	69300	251	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG		
1	1	1	1		1	3		632	70001	4	EACH	POWER SERVICE, AS PER PLAN	460	
0	0	1	0		0	1		632	75022	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 4 POLE, WITH MAST ARMS TC-81.21 DESIGN 2 AND DESIGN 2		
0	1	0	0		0	1		632	80402	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4		
2	1	1	1		2	3		632	80502	5	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11		
0	0	0	1		0	1		632	80620	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 13		
0	2	0	3		2	3		632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE		
1	0	1	1		1	2		632	90100	3	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
1	1	0	0		1	1		633	01581	2	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TSI, AS PER PLAN	458	
1	1	1	1		1	3		633	67100	4	EACH	CABINET FOUNDATION		
1	1	1	1		1	3		633	67200	4	EACH	CONTROLLER WORK PAD		
1	0	0	0		0	1		633	67300	1	EACH	PREEMPTION		
3	3	0	3		3	6		633	67310	9	EACH	PREEMPTION RECEIVING UNIT		
542	414	0	640		527	1069		633	67320	1596	FT	PREEMPTION DETECTOR CABLE		
1	1	0	1		1	2		633	67350	3	EACH	PREEMPTION PHASE SELECTOR		
3	3	0	3		3	6		633	67400	9	EACH	PREEMPTION CONFIRMATION LIGHT		
1	1	1	1		1	3		633	75001	4	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	460	
0	0	0	1		0	1		816	30000	1	EACH	VIDEO DETECTION SYSTEM		
0	0	1	1		1	1		632	90400	2	EACH	SIGNALIZATION, MISC.:CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TSI, AS PER PLAN	460	
1	1	0	0		1	1		633	68511	2	EACH	COMMUNICATIONS, AS PER PLAN	460A	
1	1	0	0		1	1		809	69100	2	EACH	STOP LINE RADAR DETECTION		

**TRAFFIC SIGNAL GENERAL SUMMARY**

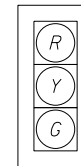
**SUM-76-5.53**

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	83+80	LT	51.1	18
2	84+35	LT	44.7	24
3	84+58	RT	42.3	18
4	84+14	RT	40.7	18
5	83+82	LT	47.3	18
6	84+38	LT	41.2	18
-	-	-	-	-
-	-	-	-	-

SIGNAL HEADS



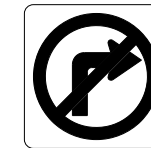
2A, 2B, 4A, 4B, 6A, 6B



PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)

ALL VEHICULAR SIGNAL HEADS SHALL BE 12" LED WITH BACKPLATES WITH CUTAWAY VISORS AND COLORED YELLOW

SIGNS



R3-1-36

(A)



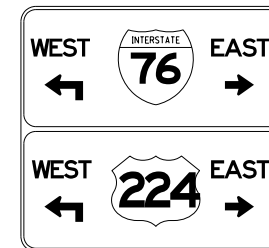
R3-2-36

(B)



D3-1-84\*

(C)



M2-H4-108\*  
M2-H4-108\*  
TO BE MOUNTED ON OSS-8

(D)



E1-H3-120\*  
TO BE MOUNTED ON OSS-8

(E)

\*SEE TRAFFIC CONTROL SHEETS 404 - 457 FOR DETAILS

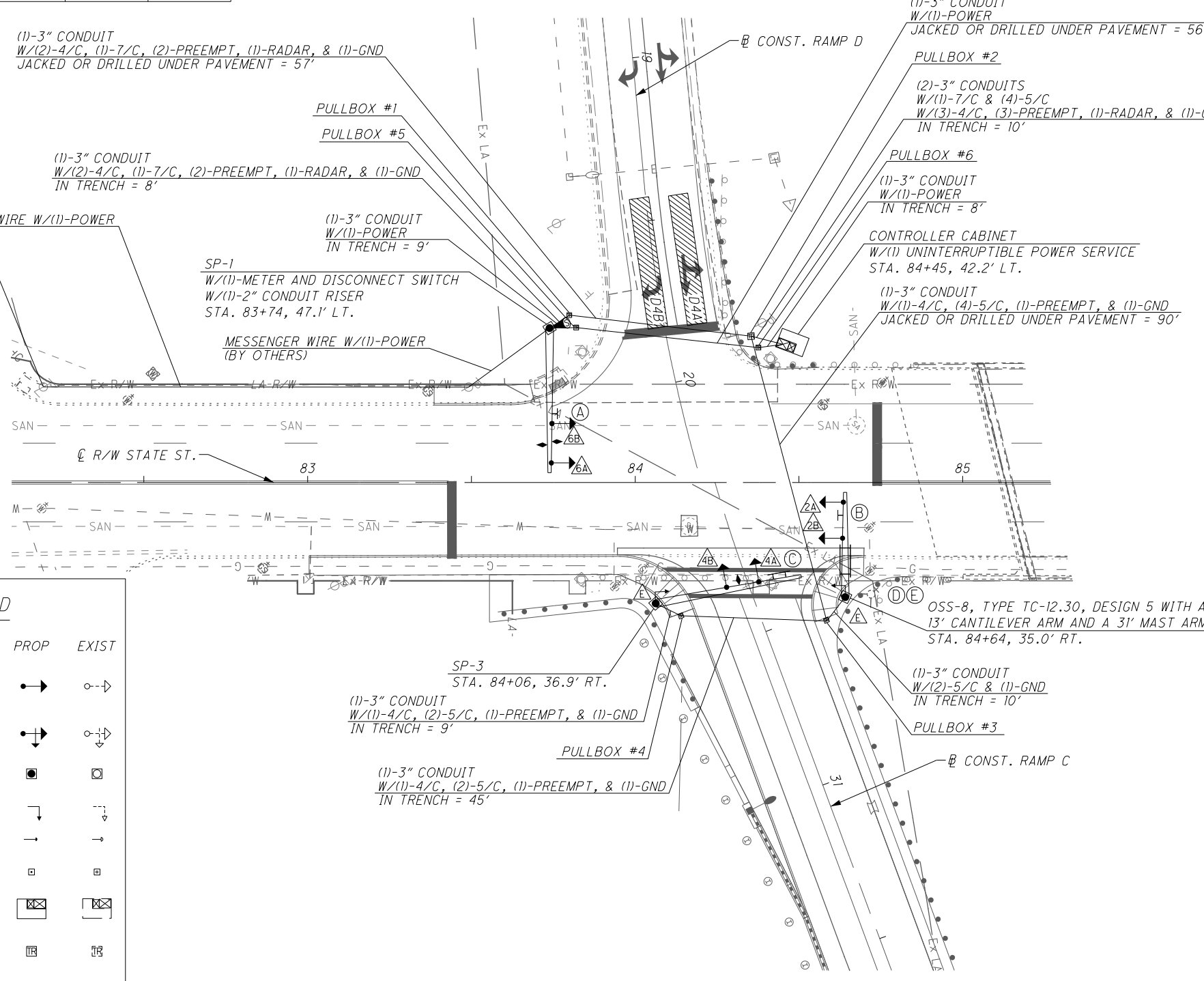
NOTES

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING GRADING, PROPOSED SIGNAL FOUNDATION ELEVATION, AND PROPOSED SIGNAL POLE HEIGHT PRIOR TO ORDERING ANY MATERIALS TO ACCOUNT FOR ADJACENT PROJECT.

TRAFFIC SIGNAL REMOVAL CHART

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
1	CABINET W/CONTROLLER EQUIPMENT	X	
1	DISCONNECT SWITCH	X	
LUMP	SIGNAL CABLE AND MESSENGER WIRE		X
6	VEHICULAR SIGNAL HEAD	X	
4	STRAIN POLE		X
4	POLE FOUNDATION		X

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019



LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSHBUTTON		
PEDESTAL SUPPORT		
CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC PULL BOX		
STOP-LINE RADAR DETECTION UNIT		
DETECTION ZONE		
PREEMPTION RECEIVER AND CONFIRMATION LIGHT		

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SIGNAL TIMING CHART

INTERSECTION: STATE STREET AT I-76 EB RAMP MAINTAINING AGENCY: CITY OF BARBERTON								
START UP	DUAL ENTRY:	YES	PHASES:				2 & 6, 4	
	REST IN RED:		RING 1		RING 2			
	OVERLAP		A	B	C	D		
START IN:	YELLOW/RED FLASH							
TIME FOR FLASH OR ALL RED:	5							
FIRST PHASE(S):	2 & 6							
COLOR DISPLAYED:	GREEN							
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	-	NB	-	EB	-	SB	-	-
MINIMUM GREEN (INITIAL) (SEC.)	-	33	-	10	-	33	-	-
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	-	-	-	4	-	-	-	-
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	-	33	-	16	-	33	-	-
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	-	4.1	-	4.6	-	4.1	-	-
ALL RED CLEARANCE (SEC.)	-	1.3	-	1.3	-	1.3	-	-
WALK (SEC.)	-	7	-	-	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)	-	6	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	OFF	-	OFF	-	OFF	-
	MINIMUM (ON/OFF)	-	ON	-	OFF	-	ON	-
	PEDESTRIAN (ON/OFF)	-	ON	-	OFF	-	OFF	-
MEMORY (ON/OFF)	-	OFF	-	OFF	-	OFF	-	-

\*VOLUME DENSITY CONTROLS

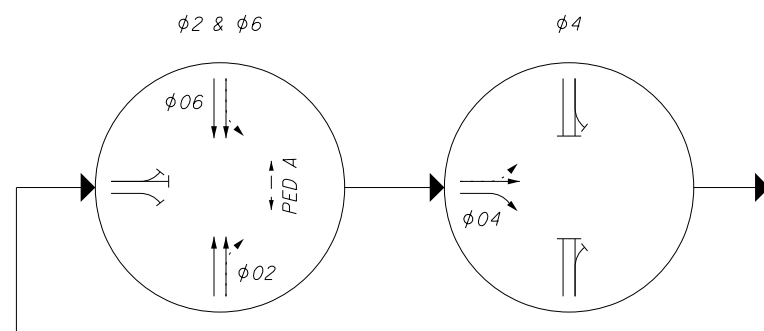
NOTES:

- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

RADAR DETECTION CHART

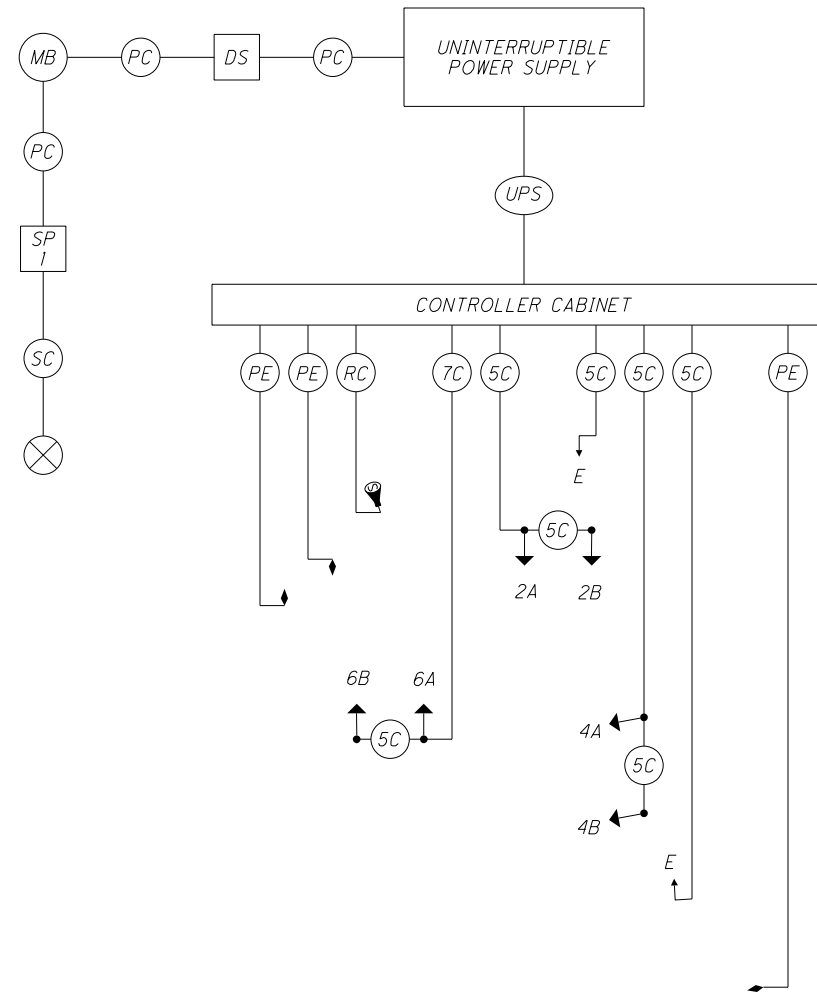
DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D4A	EB THRU	PRESENCE	4	0	0	4	CALL/EXTEND PHASE 4	40
D4B	EB RT	PRESENCE	4	10	0	4	CALL/EXTEND PHASE 4	40

PHASING DIAGRAM (TYPICAL)



LEGEND	
VEHICLE $\phi$	
PERMITTED $\phi$	
PEDESTRIAN $\phi$	

WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A, 2B (NB)	R	$\Phi 2 R$	Y
	Y	$\Phi 2 Y$	
	G	$\Phi 2 G$	
4A, 4B (EB)	R	$\Phi 4 R$	R
	Y	$\Phi 4 Y$	
	G	$\Phi 4 G$	
6A, 6B (SB)	R	$\Phi 6 R$	Y
	Y	$\Phi 6 Y$	
	G	$\Phi 6 G$	
PEDESTRIAN MOVEMENTS			
A	W	$\Phi 2$ PED/LS 10 G	OUT
EAST	DW	$\Phi 2$ PED/LS 10 R	

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

LEGEND

	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		RADAR DETECTION CABLE
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		PREEMPTION CABLE, 3 CONDUCTOR, NO. 20 AWG AND CONFIRMATION LIGHT CABLE, 4 CONDUCTOR, NO. 14 AWG
	PEDESTRIAN SIGNAL HEAD		POWER SOURCE
	PEDESTRIAN PUSH BUTTON		SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
	PREEMPTION RECEIVER AND CONFIRMATION LIGHT		POWER CABLE, 3 CONDUCTOR, NO. 4 AWG
	STOP-LINE RADAR DETECTION UNIT		SIGNAL SUPPORT POLE
	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		METER BASE
	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		SIGNAL DISCONNECT SWITCH
	2 CONDUCTOR, NO. 14 AWG (LEAD-IN CABLE)		UNINTERRUPTIBLE POWER SUPPLY CABLE

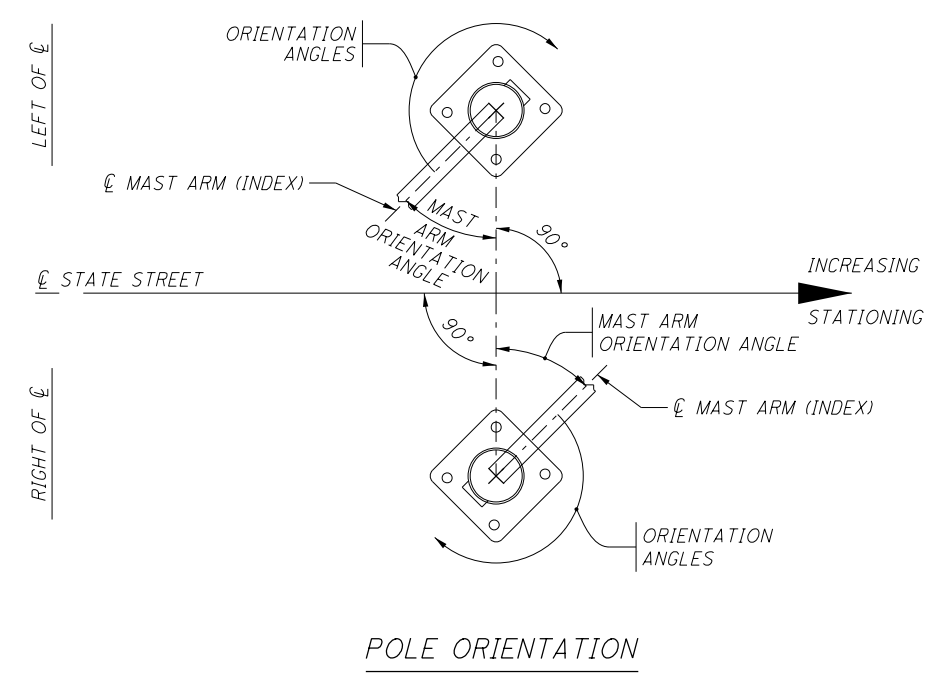
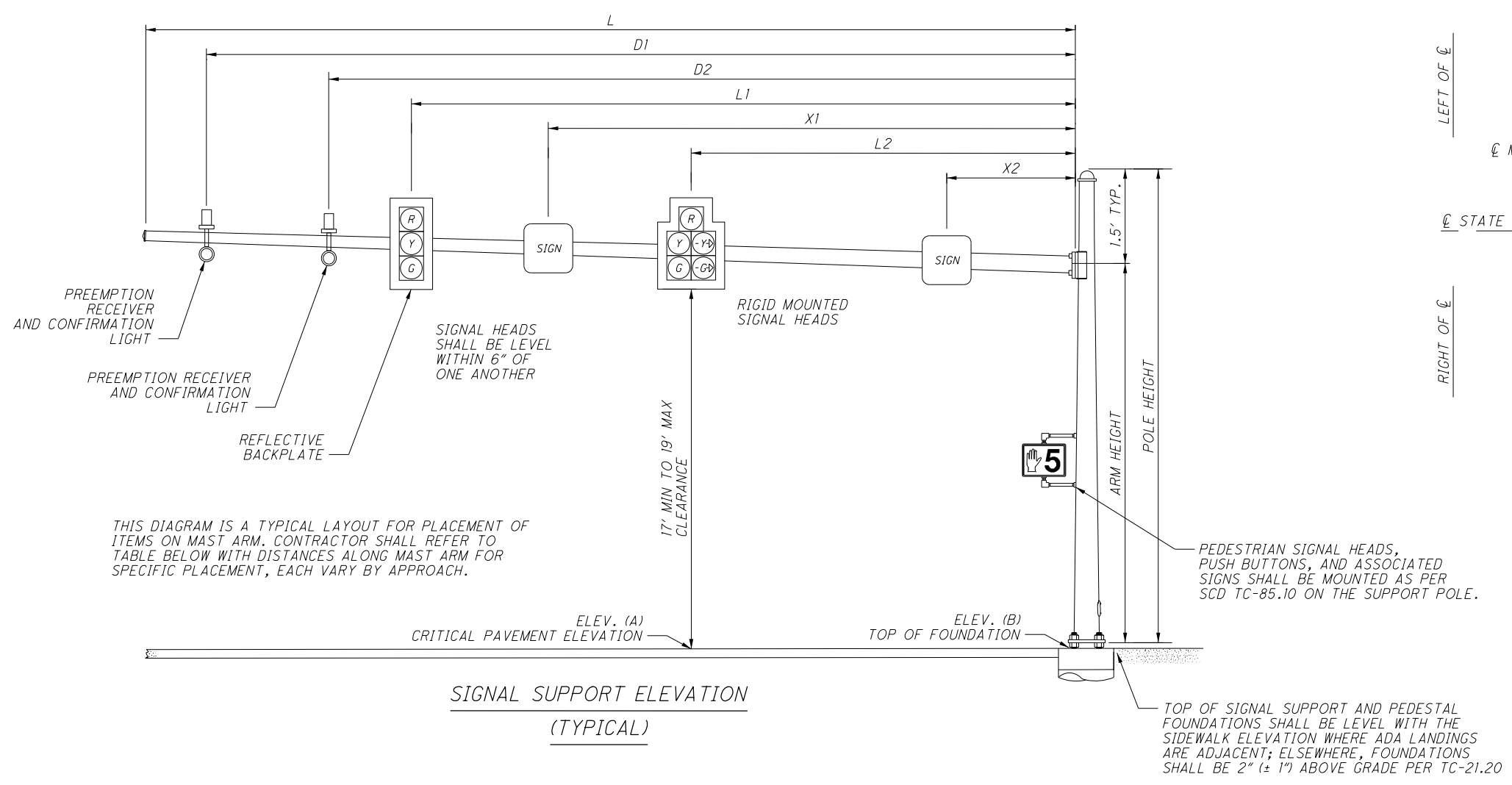
CALCULATED  
JML  
CHECKED  
MRG

TRAFFIC SIGNAL PLAN DETAILS  
STATE STREET AT RAMP D / RAMP C

SUM-76-5.53

463  
672

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SIGNAL SUPPORT ELEVATION  
(TYPICAL)

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS										ORIENTATION ANGLES FROM MAST ARM										
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	D1	D2	X1	X2	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP	
			FT	FT																					FT
SP-1	83+74	47.1' LT	1055.38	1057.05	TC-81.21	11	20	18.5	43	39.94	27.94	34.44	33.44	-	24.91	0	-	-	-	75	-	-	-	180	-
OSS-8	84+64	35.0' RT	1055.84	1056.16	TC-12.30	5	28	20.5	31	27.77	16.77	-	-	23.77	9.8	0	-	0	-	-	-	-	180	-	
SP-3	84+06	36.9' RT	1055.03	1055.88	TC-81.21	11	21	19.5	44	30.97	-	24.92	-	37.48	-	75	-	275	-	-	-	-	180	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

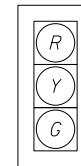
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PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	87+07	LT	40.4	18
2	87+70	LT	37.1	18
3	88+04	RT	56.0	24
4	87+40	RT	53.9	18
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

SIGNAL HEADS



2A, 2B, 6A, 6B, 8A, 8B

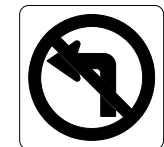
ALL VEHICULAR SIGNAL HEADS SHALL BE 12" LED WITH BACKPLATES WITH CUTAWAY VISORS AND COLORED YELLOW



PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)

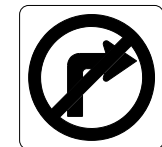


SIGNS



R3-2-36

(A)



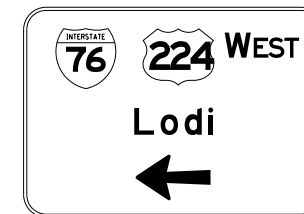
R3-1-36

(B)



State St

(C)



E1-H3-120\* TO BE MOUNTED ON OSS-10

(D)



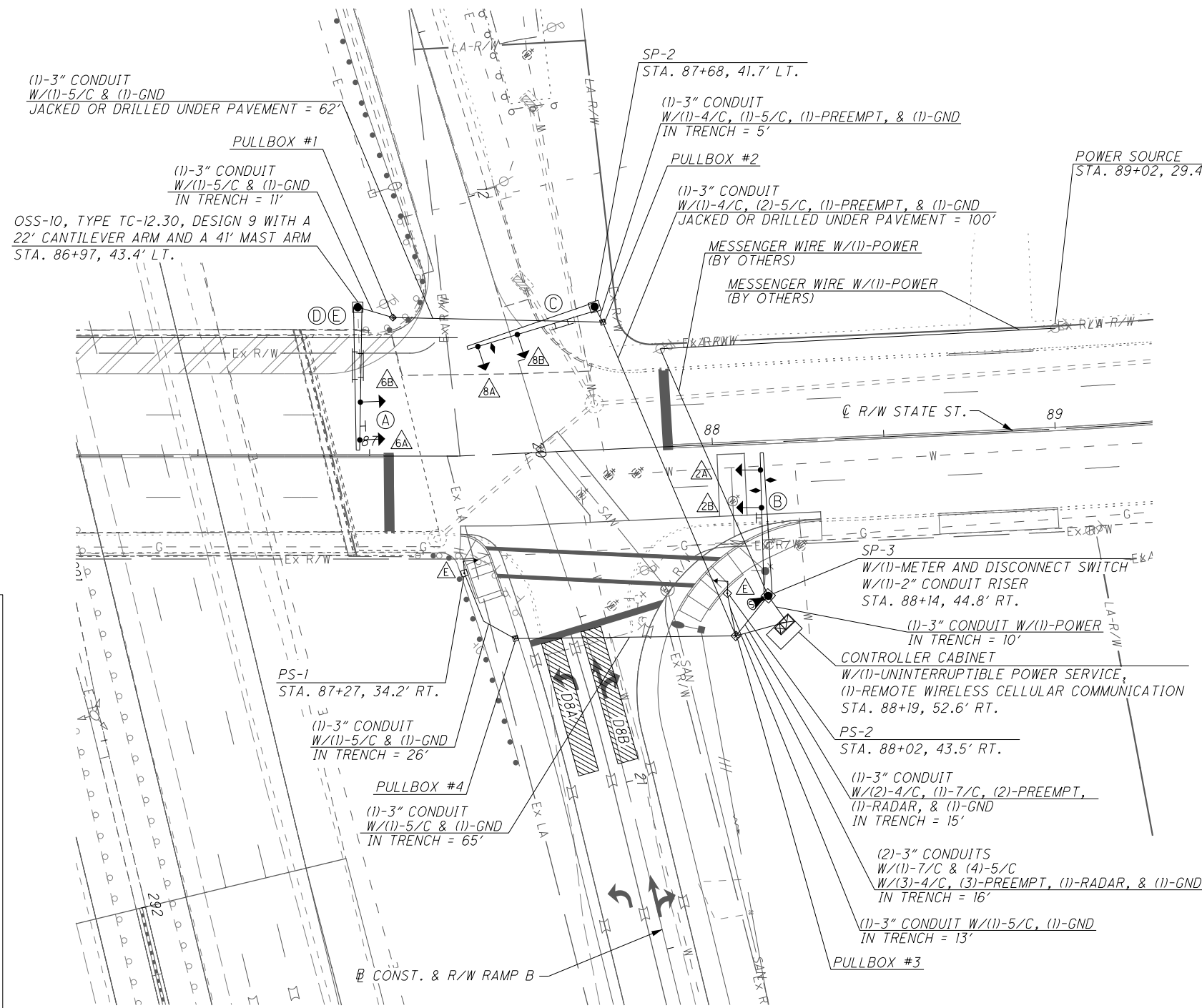
M2-H4-108\* TO BE MOUNTED ON OSS-10

(E)

\*SEE TRAFFIC CONTROL SHEETS 404 - 457 FOR DETAILS

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSHBUTTON		
PEDESTAL SUPPORT		
CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC PULL BOX		
STOP-LINE RADAR DETECTION UNIT		
DETECTION ZONE		
PREEMPTION RECEIVER AND CONFIRMATION LIGHT		



NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

TRAFFIC SIGNAL PLAN  
STATE STREET AT RAMP B

SUM-76-5.53

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SIGNAL TIMING CHART

INTERSECTION: STATE STREET AT I-76 WB RAMPS MAINTAINING AGENCY: CITY OF BARBERTON									
START UP START IN: YELLOW/RED FLASH TIME FOR FLASH OR ALL RED: 5 FIRST PHASE(S): 2 & 6 COLOR DISPLAYED: GREEN	DUAL ENTRY: YES		PHASES: 2 & 6, 8						
	REST IN RED:		RING 1 -		RING 2 -				
	OVERLAP		A	B	C	D			
	PHASES		-	-	-	-			
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		-	NB	-	-	-	SB	-	WB
MINIMUM GREEN (INITIAL) (SEC.)		-	28	-	-	-	28	-	10
ADDED INITIAL *(SEC./ACTUATION)		-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)		-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)		-	-	-	-	-	-	-	4
TIME BEFORE REDUCTION *(SEC.)		-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)		-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)		-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)		-	28	-	-	-	28	-	22
MAXIMUM GREEN II (SEC.)		-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)		-	4.1	-	-	-	4.1	-	4.1
ALL RED CLEARANCE (SEC.)		-	1	-	-	-	1	-	1
WALK (SEC.)		-	8	-	-	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)		-	11	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	OFF	-	-	-	OFF	-	OFF
	MINIMUM (ON/OFF)	-	ON	-	-	-	ON	-	OFF
	PEDESTRIAN (ON/OFF)	-	ON	-	-	-	OFF	-	OFF
MEMORY (ON/OFF)	-	OFF	-	-	-	OFF	-	OFF	

\*VOLUME DENSITY CONTROLS

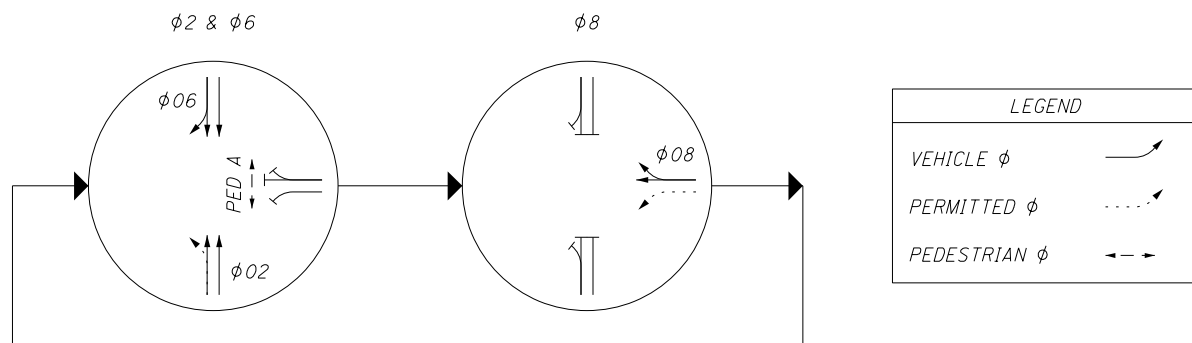
NOTES:

- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

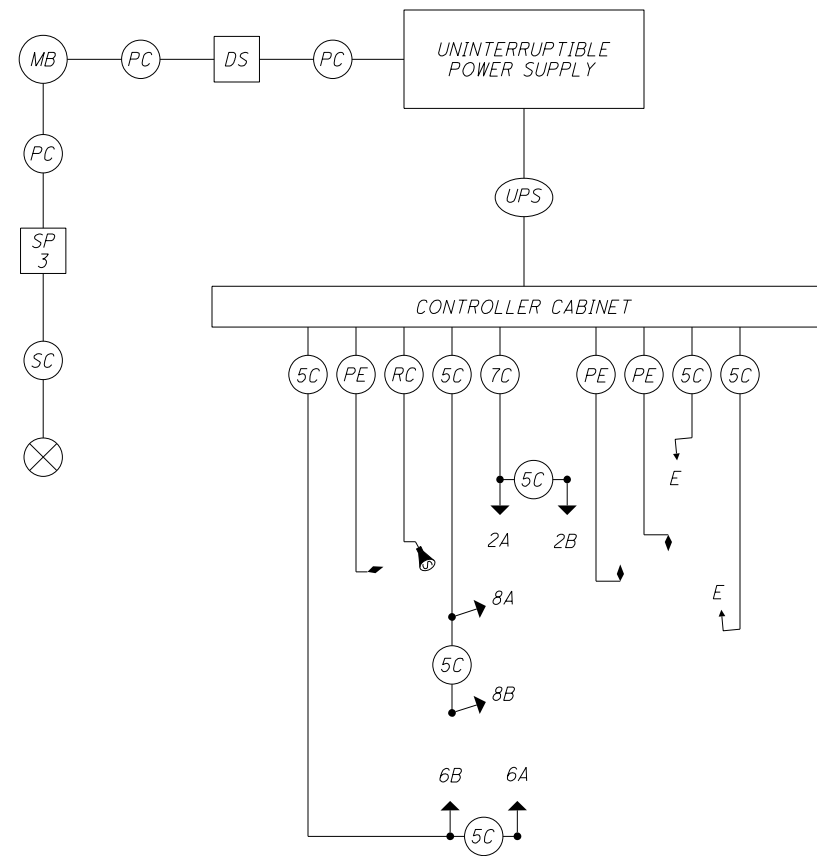
RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D8A	WB LT	PRESENCE	8	0	0	8	CALL/EXTEND PHASE 8	40
D8B	WB THRU	PRESENCE	8	10	0	8	CALL/EXTEND PHASE 8	40

PHASING DIAGRAM (TYPICAL)



WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A, 2B (NB)	R	Φ2 R	Y
	Y	Φ2 Y	
	G	Φ2 G	
6A, 6B (SB)	R	Φ6 R	Y
	Y	Φ6 Y	
	G	Φ6 G	
8A, 8B (WB)	R	Φ8 R	R
	Y	Φ8 Y	
	G	Φ8 G	
PEDESTRIAN MOVEMENTS			
A EAST	W DW	Φ2 PED/LS 10 G Φ2 PED/LS 10 R	OUT

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

LEGEND

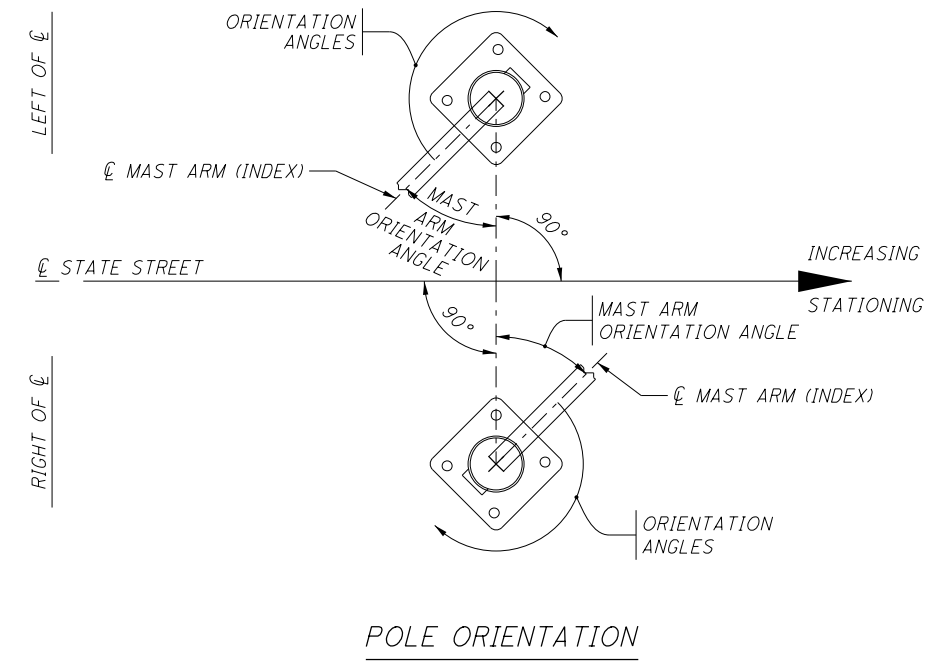
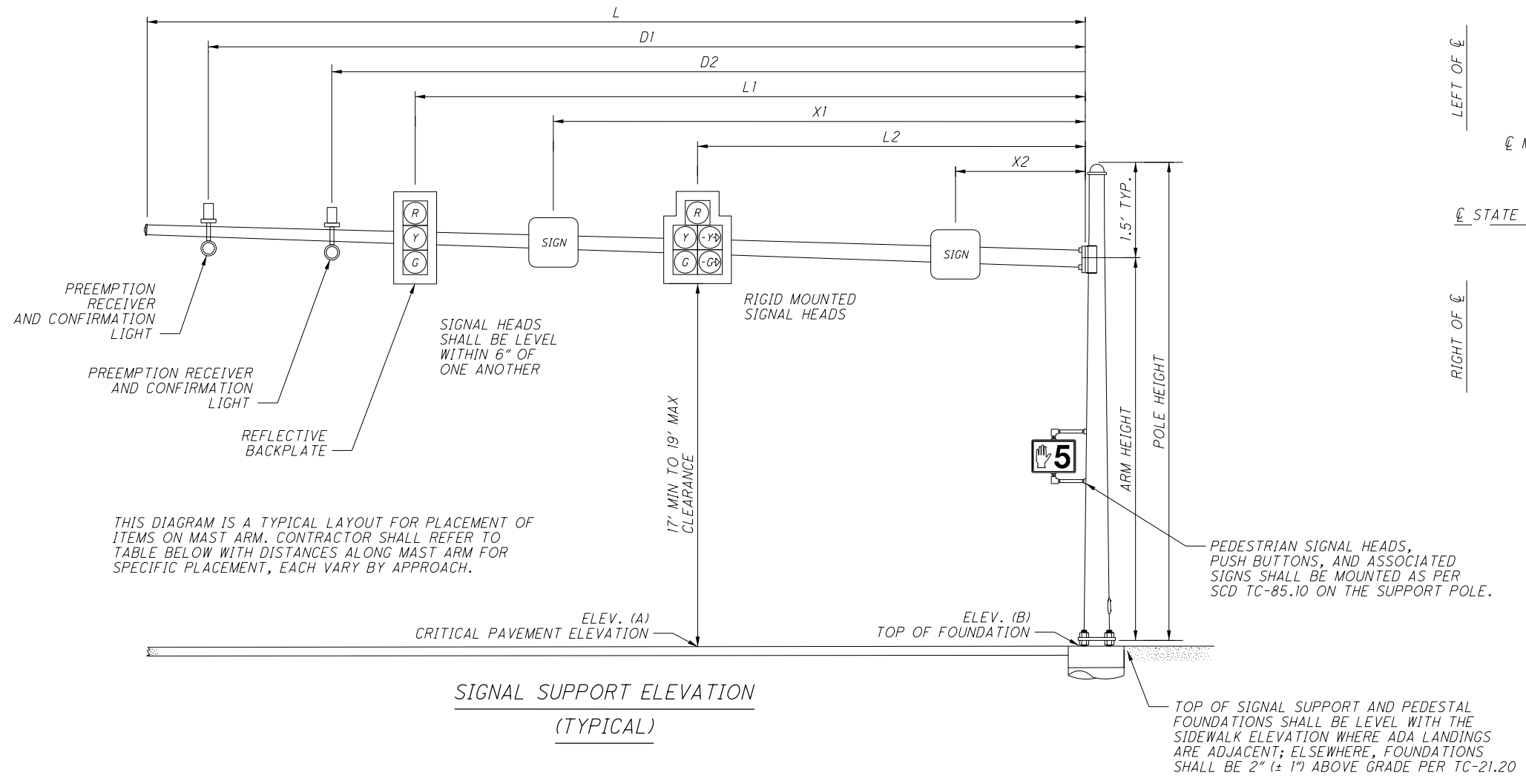
	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		RADAR DETECTION CABLE
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		PREEMPTION CABLE, 3 CONDUCTOR, NO. 20 AWG AND CONFIRMATION LIGHT CABLE, 4 CONDUCTOR, NO. 14 AWG
	PEDESTRIAN SIGNAL HEAD		POWER SOURCE
	PEDESTRIAN PUSH BUTTON		SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
	PREEMPTION RECEIVER AND CONFIRMATION LIGHT		POWER CABLE, 3 CONDUCTOR, NO. 4 AWG
	STOP-LINE RADAR DETECTION UNIT		SIGNAL SUPPORT POLE
	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		METER BASE
	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		SIGNAL DISCONNECT SWITCH
	2 CONDUCTOR, NO. 14 AWG (LEAD-IN CABLE)		UNINTERRUPTIBLE POWER SUPPLY CABLE

CALCULATED  
JML  
CHECKED  
MRG

TRAFFIC SIGNAL PLAN DETAILS  
STATE STREET AT RAMP B

SUM-76-5.53

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672



MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS										ORIENTATION ANGLES FROM MAST ARM									
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	D1	D2	X1	X2	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
			FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
OSS-10	86+97	43.4' LT	1053.65	1051.92	TC-12.30	9	30	22.5	41	38.7	26.68	-	-	33.5	15.8	0	-	-	-	-	-	-	180	-
SP-2	87+68	41.7' LT	1051.93	1053.64	TC-81.21	4	20	18.5	38	34.74	22.74	31.74	-	-	9.54	75	-	-	-	-	-	-	180	-
SP-3	88+14	44.8' RT	1049.11	1050.40	TC-81.21	11	20	18.5	41	35.5	24.5	32.6	29.6	-	21.6	0	-	-	90	-	-	-	180	-
PS-1	87+27	34.2' RT	-	1052.56	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-	180	-
PS-2	88+02	43.5' RT	-	1050.21	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	180	-

NO.	DESCRIPTION	REV. BY	DATE
1	RAMP B INTERSECTION EDITS & SIGNAL OWNERSHIP CHANGE.	MLV	02-22-2019

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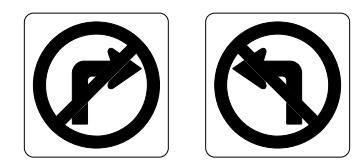
SIGNAL HEADS



4A, 4B      2A, 2B, 6A, 6B

ALL VEHICULAR SIGNAL HEADS SHALL BE 12" LED WITH BACKPLATES WITH CUTAWAY VISORS AND COLORED YELLOW AND OPERATE IN FLASH MODE

SIGNS



R3-1-36      R3-2-36

(A)

(B)

**Wooster Rd**

D3-1-108\*

(C)

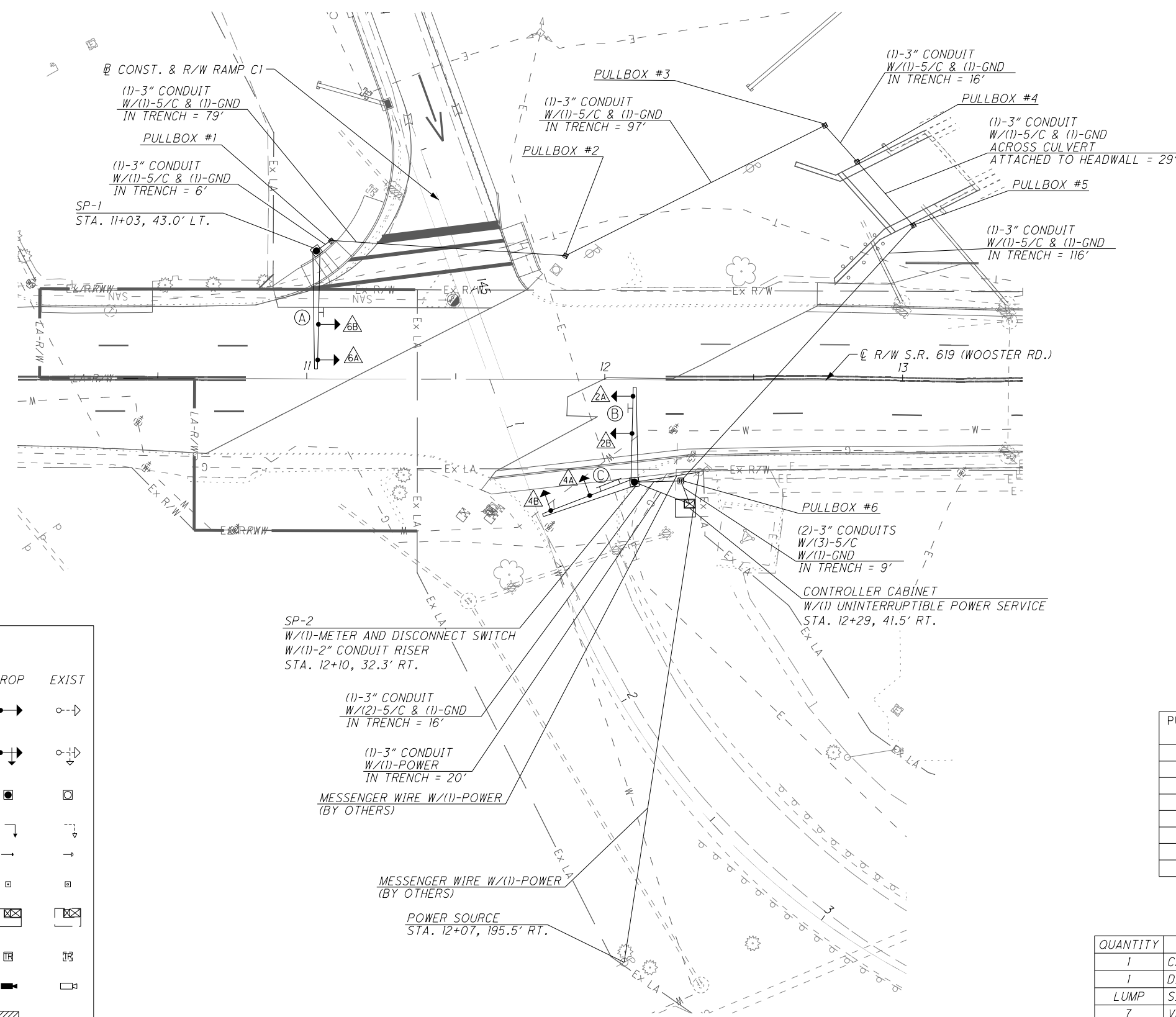
\*SEE TRAFFIC CONTROL SHEETS 404 - 457 FOR DETAILS

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	11+08	LT	46.5	18
2	11+87	LT	41.6	18
3	12+74	LT	85.6	18
4	12+84	LT	73.6	18
5	13+04	LT	51.9	18
6	12+26	RT	33.9	24
-	-	-	-	-
-	-	-	-	-

TRAFFIC SIGNAL REMOVAL CHART

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
1	CABINET W/CONTROLLER EQUIPMENT	X	
1	DISCONNECT SWITCH	X	
LUMP	SIGNAL CABLE AND MESSENGER WIRE		X
7	VEHICULAR SIGNAL HEAD	X	
3	STRAIN POLE		X
3	POLE FOUNDATION		X



LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSHBUTTON		
PEDESTAL SUPPORT		
CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC PULL BOX		
VIDEO DETECTION CAMERA		
DETECTION ZONE		
PREEMPTION RECEIVER AND CONFIRMATION LIGHT		



CALCULATED JML  
CHECKED MRG

TRAFFIC SIGNAL PLAN  
S.R. 619 (WOOSTER RD) AT RAMP C1

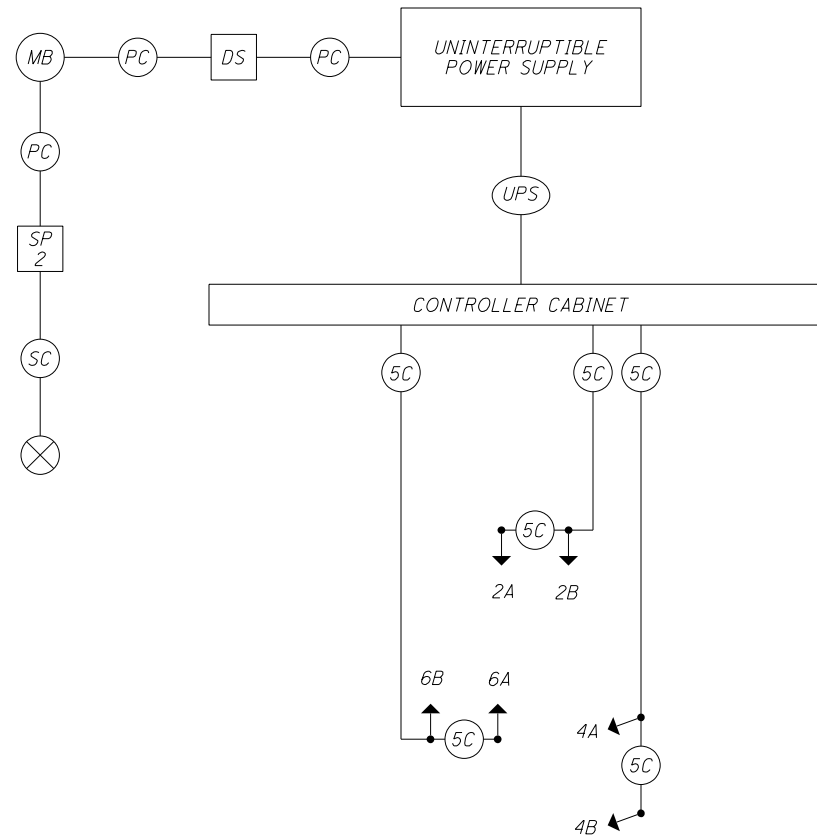
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FIELD WIRING HOOK-UP CHART

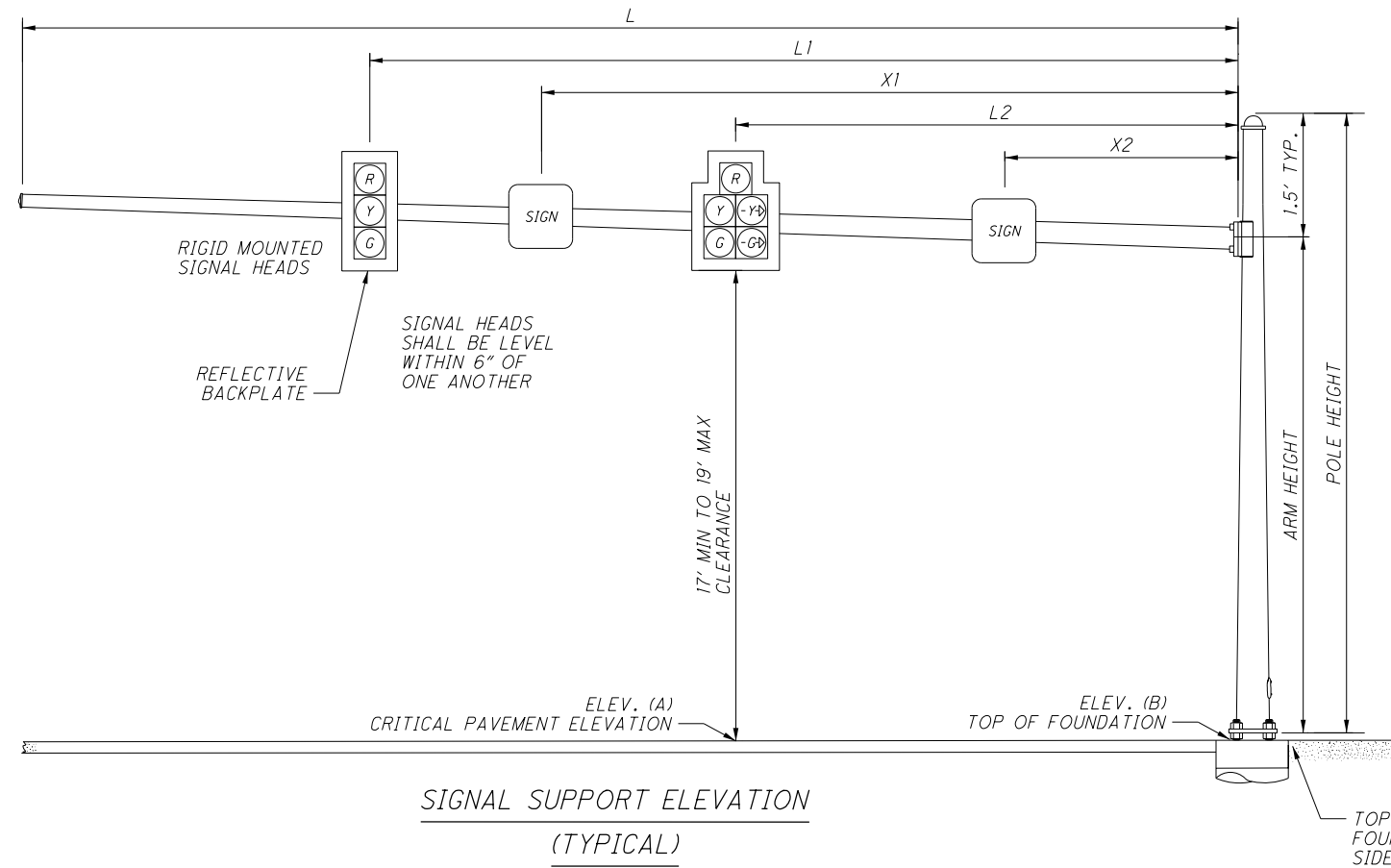
SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A, 2B (NB)	Y	Φ2 Y	Y
4A, 4B (EB)	R	R	
6A, 6B (SB)	Y	Φ6 Y	Y

WIRING DIAGRAM



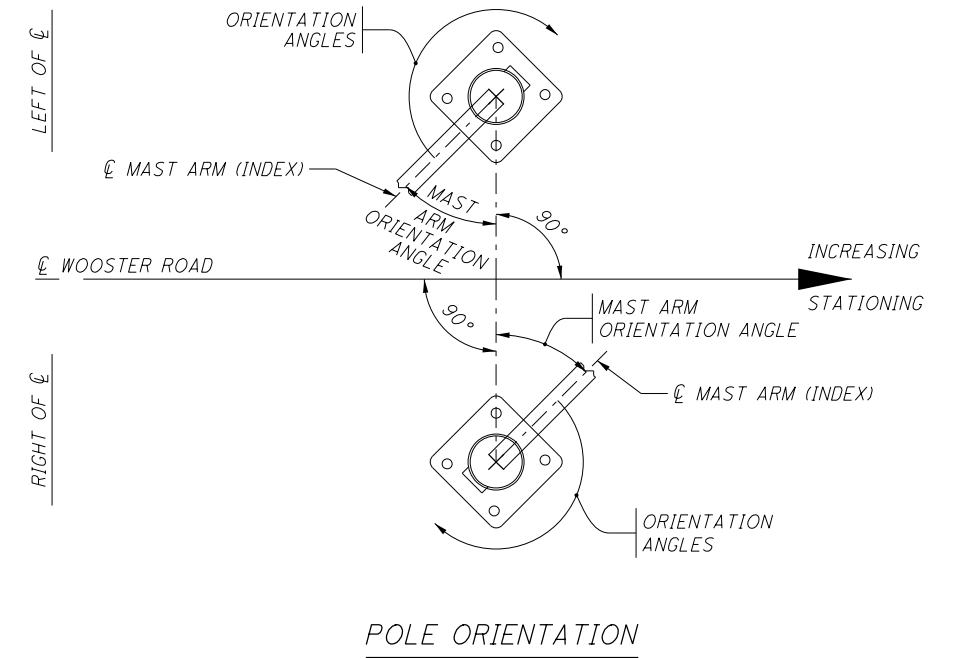
LEGEND

	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		VIDEO CAMERA CABLE
	1 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		PREEMPTION CABLE, 3 CONDUCTOR, NO. 20 AWG AND CONFIRMATION LIGHT CABLE, 4 CONDUCTOR, NO. 14 AWG
	PEDESTRIAN SIGNAL HEAD		POWER SOURCE
	PEDESTRIAN PUSH BUTTON		SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
	PREEMPTION RECEIVER AND CONFIRMATION LIGHT		POWER CABLE, 3 CONDUCTOR, NO. 4 AWG
	VIDEO DETECTION CAMERA		SIGNAL SUPPORT POLE
	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		METER BASE
	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		SIGNAL DISCONNECT SWITCH
	2 CONDUCTOR, NO. 14 AWG (LEAD-IN CABLE)		UNINTERRUPTIBLE POWER SUPPLY CABLE



SIGNAL SUPPORT ELEVATION  
(TYPICAL)

TOP OF SIGNAL SUPPORT AND PEDESTAL FOUNDATIONS SHALL BE LEVEL WITH THE SIDEWALK ELEVATION WHERE ADA LANDINGS ARE ADJACENT; ELSEWHERE, FOUNDATIONS SHALL BE 2" (± 1") ABOVE GRADE PER TC-21.20



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		DESIGN TYPE	DESIGN NO.	SIGNAL SUPPORT DETAILS						ORIENTATION ANGLES FROM MAST ARM														
			A	B			POLE HEIGHT	ARM HEIGHT	L	L1	L2	X1	X2	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP					
			FT	FT			FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG					
SP-1	11+03	43.0' LT	966.11	966.53	TC-81.21	11	21	19.5	39	35.41	23.46	-	19.5	0	-	-	-	-	-	-	-	-	-	-	-	-	-
SP-2A	12+10	32.3' RT	966.15	966.81	TC-81.21	4	21	19.5	31	27.63	15.13	23.7	-	0	-	-	-	90	-	-	-	-	-	-	-	-	-
SP-2B	12+10	32.3' RT	965.94	966.81	TC-81.21	4	21	19.5	32	28.44	14.44	-	7.0	-	255	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**PULLBOX TABLE**

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	17+05	RT	37.6	18
2	16+72	RT	36.6	18
3	16+65	LT	45.4	24
4	17+81	LT	54.1	18
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

CONTROLLER CABINET  
W/(1) UNINTERRUPTIBLE POWER SERVICE  
STA. 16+62, 50.6' LT.

MESSENGER WIRE W/(1)-POWER  
(BY OTHERS)

POWER SOURCE  
STA. 16+48, 53.3' LT.

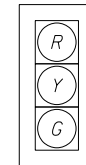
(2)-3" CONDUITS  
W/(2)-2/C, (4)-5/C, & (3)-VIDEO  
W/(3)-4/C, (3)-7/C, (3)-PREEMPT, & (1)-GND  
IN TRENCH = 6'

(1)-3" CONDUIT  
W/(1)-POWER  
IN TRENCH = 15'

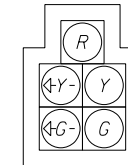
(1)-3" CONDUIT  
W/(1)-7/C, (1)-5/C, (1)-VIDEO, & (1)-GND  
IN TRENCH = 11'

OSS-12, TYPE TC-12.30, DESIGN 5  
WITH A 12' CANTILEVER ARM  
AND A 38' MAST ARM  
W/(1)-METER AND DISCONNECT SWITCH  
W/(1)-2" CONDUIT RISER  
STA. 16+75, 44.9' LT.

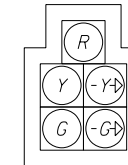
**SIGNAL HEADS**



2B, 6B, 8A



2A, 6A



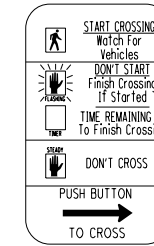
8B

ALL VEHICULAR SIGNAL HEADS SHALL BE 12" LED WITH BACKPLATES WITH CUTAWAY VISORS AND COLORED YELLOW



PEDESTRIAN HEADS  
(LED, COUNTDOWN,  
TYPE D2)

**SIGNS**



R10-3E  
9' X 15"  
1 - LEFT ARROWS  
1 - RIGHT ARROWS



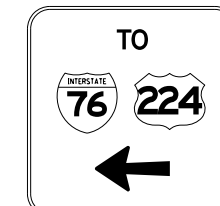
156" X 24"  
SPECIAL\*



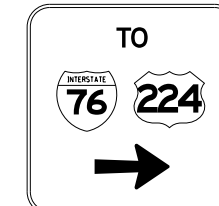
144" X 24"  
SPECIAL\*



132" X 48"  
SPECIAL\*



E1-H3-84\*  
TO BE MOUNTED  
ON OSS-12



E1-H3-84\*  
TO BE MOUNTED  
ON OSS-12

\*SEE TRAFFIC CONTROL SHEETS 404 - 457 FOR DETAILS

**TRAFFIC SIGNAL REMOVAL CHART**

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
1	CABINET W/CONTROLLER EQUIPMENT	X	
1	DISCONNECT SWITCH	X	
LUMP	SIGNAL CABLE AND MESSENGER WIRE		X
9	VEHICULAR SIGNAL HEAD	X	
4	STRAIN POLE		X
4	POLE FOUNDATION		X

**LEGEND**

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSHBUTTON		
PEDESTAL SUPPORT		
CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC PULL BOX		
VIDEO DETECTION CAMERA		
DETECTION ZONE		
PREEMPTION RECEIVER AND CONFIRMATION LIGHT		

PS-3  
STA. 16+54, 38.3' RT.

(1)-3" CONDUIT  
W/(1)-5/C, (1)-2/C, & (1)-GND  
IN TRENCH = 18'

(1)-3" CONDUIT  
W/(2)-4/C, (1)-7/C, (1)-5/C, (1)-2/C,  
(2)-PREEMPT, (1)-VIDEO, & (1)-GND  
JACKED OR DRILLED UNDER PAVEMENT = 83'

(1)-3" CONDUIT  
W/(2)-4/C, (1)-7/C,  
(2)-PREEMPT, (1)-VIDEO, & (1)-GND  
IN TRENCH = 33'

(1)-3" CONDUIT  
W/(2)-4/C, (1)-7/C,  
(2)-PREEMPT, (1)-VIDEO, & (1)-GND  
IN TRENCH = 14'

SP-3  
STA. 17+19, 38.2' RT.

(1)-3" CONDUIT  
W/(1)-4/C, (1)-7/C, (1)-5/C,  
(1)-PREEMPT, (1)-VIDEO, & (1)-GND  
IN TRENCH = 94'

SP-1  
STA. 17+81, 61.1' LT.

(1)-3" CONDUIT  
W/(1)-4/C, (1)-7/C  
(1)-PREEMPT, (1)-VIDEO, & (1)-GND  
IN TRENCH = 7'

PULLBOX #4  
(1)-3" CONDUIT  
W/(1)-5/C, & (1)-GND  
IN TRENCH = 11'

PS-1  
STA. 17+85, 44.1' LT.

TRAFFIC SIGNAL PLAN  
S.R. 619 (WOOSTER RD) AT RAMP B1/KENMORE BLVD.

SUM-76-5.53

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SIGNAL TIMING CHART

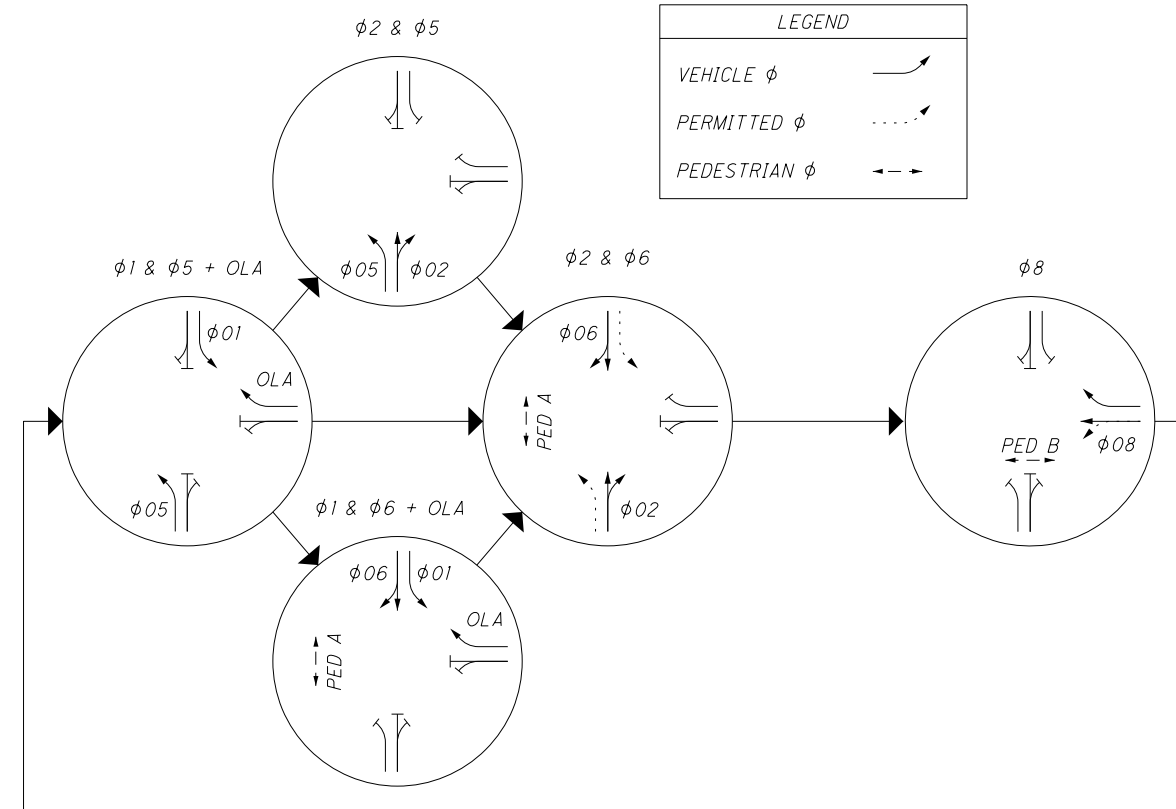
INTERSECTION: WOOSTER ROAD AT KENMORE BOULEVARD									
MAINTAINING AGENCY: CITY OF BARBERTON									
START UP		DUAL ENTRY: YES		PHASES: 2 & 6, 8					
START IN: YELLOW/RED FLASH		REST IN RED:		RING 1		RING 2			
TIME FOR FLASH OR ALL RED: 5		OVERLAP		A	B	C	D		
FIRST PHASE(S): 2 & 6		PHASES		1	-	-	-		
COLOR DISPLAYED: GREEN									
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		SB LT	NB	-	-	NB LT	SB	-	WB
MINIMUM GREEN (INITIAL) (SEC.)		11	20	-	-	11	20	-	10
ADDED INITIAL *(SEC./ACTUATION)		-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)		-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)		-	4	-	-	-	4	-	4
TIME BEFORE REDUCTION *(SEC.)		-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)		-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)		-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)		11	36	-	-	11	35	-	21
MAXIMUM GREEN II (SEC.)		-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)		3.2	4.1	-	-	3.2	4.1	-	4.1
ALL RED CLEARANCE (SEC.)		1.3	1.6	-	-	2.7	1.6	-	1.2
WALK (SEC.)		-	-	-	-	-	9	-	11
PEDESTRIAN CLEARANCE (SEC.)		-	-	-	-	-	20	-	12
RECALL	MAXIMUM (ON/OFF)	OFF	OFF	-	-	OFF	OFF	-	OFF
	MINIMUM (ON/OFF)	OFF	ON	-	-	OFF	ON	-	OFF
	PEDESTRIAN (ON/OFF)	OFF	OFF	-	-	OFF	OFF	-	ON
MEMORY (ON/OFF)	OFF	OFF	-	-	OFF	OFF	-	OFF	

\*VOLUME DENSITY CONTROLS

NOTES:

- ENABLE  $\phi 1$  &  $\phi 5$  DETECTOR SWITCHING TO ALLOW  $\phi 1$  &  $\phi 5$  TO EXTEND  $\phi 2$  &  $\phi 6$  WHEN ALLOCATED GREEN TIME FOR LEFT TURN PHASES ARE EXHAUSTED.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ENABLE ANTI-BACKUP FEATURES. IMPLEMENT LEFT TURN PHASE OMITTS DURING OPPOSING THROUGH MOVEMENT PHASES TO AVOID YELLOW TRAP AS FOLLOWS:  
 OMIT PHASE 1 DURING PHASE 2 ON  
 OMIT PHASE 5 DURING PHASE 6 ON

PHASING DIAGRAM (TYPICAL)



Lanham, Joy

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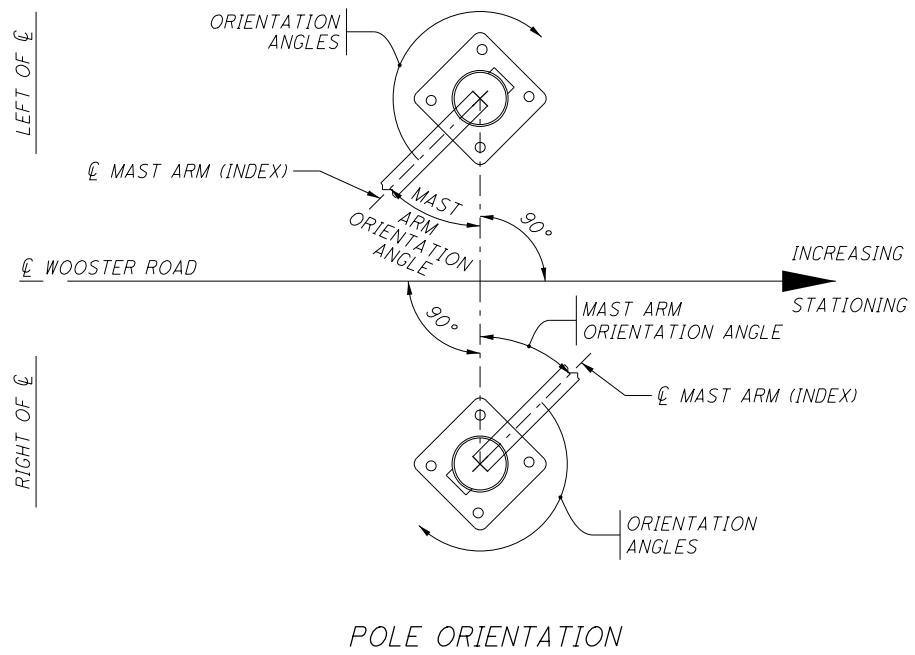
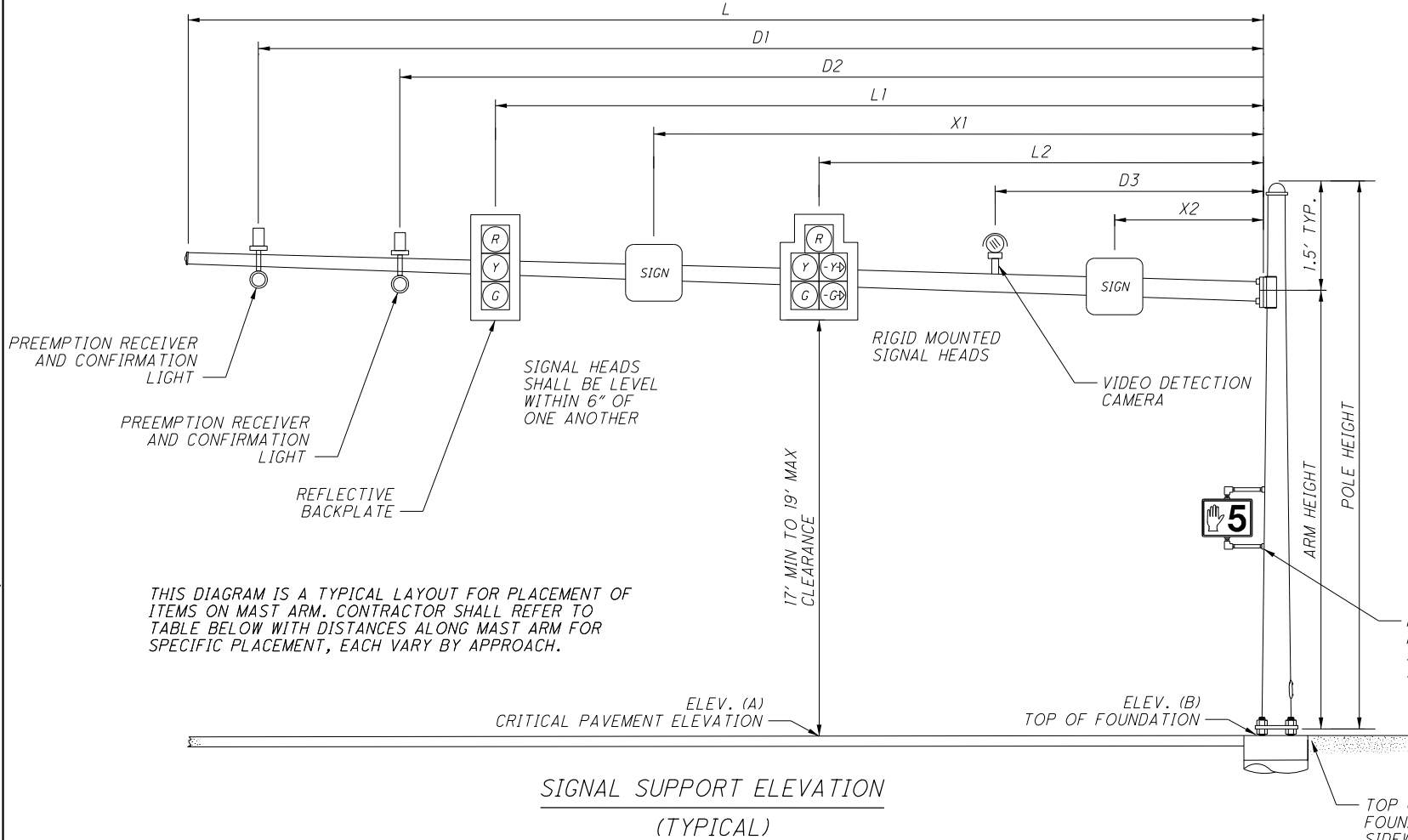
CALCULATED  
JML  
CHECKED  
MRG

TRAFFIC SIGNAL PLAN DETAILS  
S.R. 619 (WOOSTER RD) AT RAMP B1/KENMORE BLVD.

SUM-76-5.53

472  
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THIS DIAGRAM IS A TYPICAL LAYOUT FOR PLACEMENT OF ITEMS ON MAST ARM. CONTRACTOR SHALL REFER TO TABLE BELOW WITH DISTANCES ALONG MAST ARM FOR SPECIFIC PLACEMENT, EACH VARY BY APPROACH.

PEDESTRIAN SIGNAL HEADS, PUSH BUTTONS, AND ASSOCIATED SIGNS SHALL BE MOUNTED AS PER SCD TC-85.10 ON THE SUPPORT POLE.

TOP OF SIGNAL SUPPORT AND PEDESTAL FOUNDATIONS SHALL BE LEVEL WITH THE SIDEWALK ELEVATION WHERE ADA LANDINGS ARE ADJACENT; ELSEWHERE, FOUNDATIONS SHALL BE 2" (± 1") ABOVE GRADE PER TC-21.20

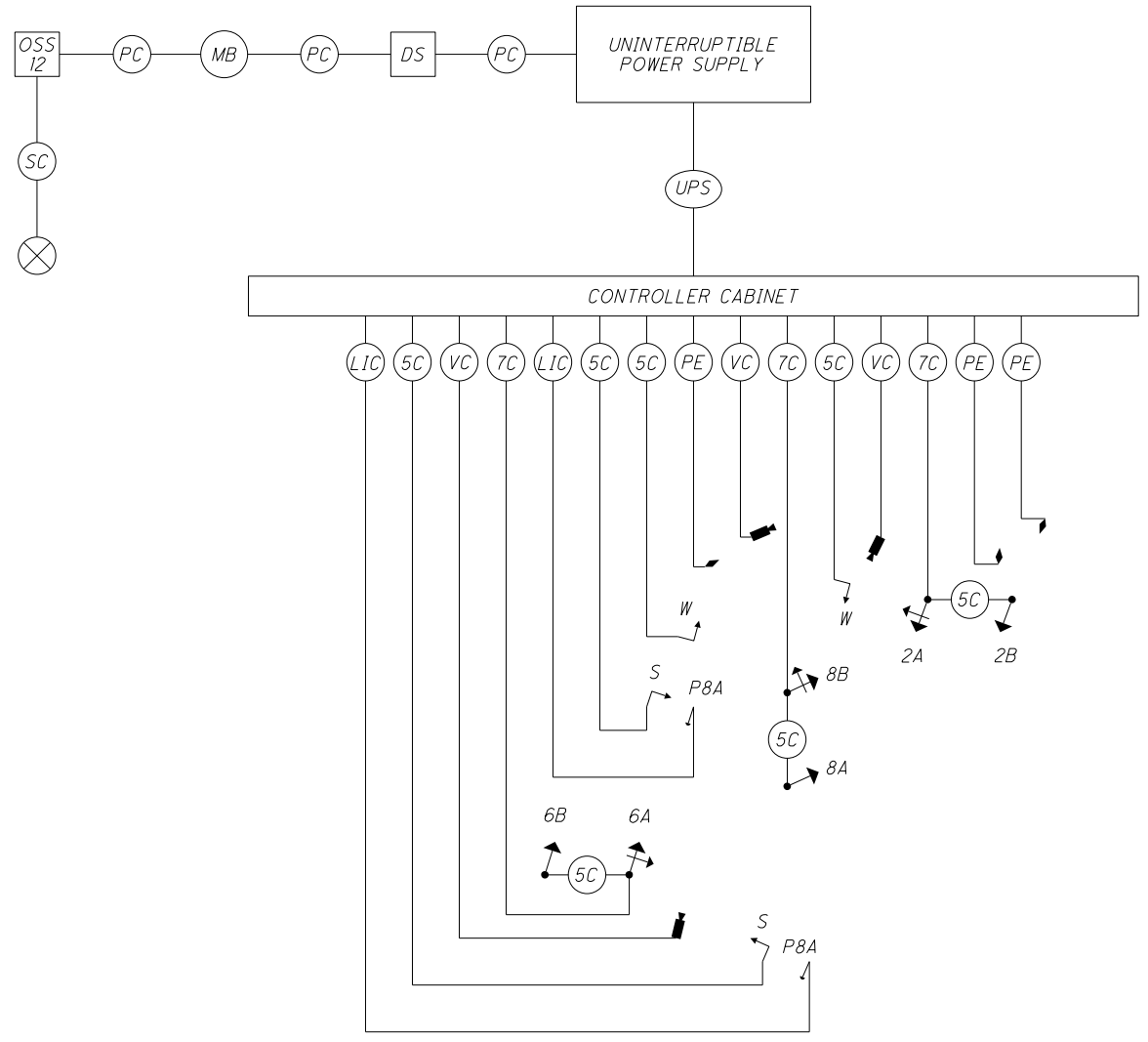
SIGNAL SUPPORT ELEVATION  
(TYPICAL)

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		DESIGN TYPE	DESIGN NO.	SIGNAL SUPPORT DETAILS								ORIENTATION ANGLES FROM MAST ARM														
			A	B			POLE HEIGHT	ARM HEIGHT	L	L1	L2	D1	D2	D3	X1	X2	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP				
			FT	FT			FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG				
SP-1	17+81	61.1' LT	967.66	968.78	TC-81.21	13	21	19.5	56	52.66	44.32	47.55	-	41.19	-	29.1	75	-	-	-	-	-	-	-	-	-	-	-	-
OSS-12	16+75	44.9' LT	968.00	968.28	TC-12.30	5	27	20	38	31.16	15.16	-	-	34.15	22.66	8.1	0	-	350	-	105	-	-	-	-	-	-	-	-
SP-3	17+19	38.2' RT	968.40	969.81	TC-81.21	11	21	19.5	40	30.6	18.6	34.6	33.6	27.6	8.1	-	0	-	-	-	-	-	-	-	-	-	-	-	-
PS-1	17+85	44.1' LT	-	968.99	-	-	-	-	-	-	-	-	-	-	-	-	15	-	0	-	-	-	-	-	-	-	-	-	-
PS-2	16+54	35.7' LT	-	967.94	-	-	-	-	-	-	-	-	-	-	-	-	270	-	0	180	-	-	-	-	-	-	-	-	-
PS-3	16+54	38.3' RT	-	968.10	-	-	-	-	-	-	-	-	-	-	-	-	90	-	0	180	-	-	-	-	-	-	-	-	-

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A (NB LT)	R	Φ2 R	Y	8A (WB)	R	Φ8 R	R
	Y	Φ2 Y			Y	Φ8 Y	
	G	Φ2 G			G	Φ8 G	
	<-Y--	Φ5 Y		8B (WB RT)	R	Φ8 R	R
<-G--	Φ5 G	Y	Φ8 Y				
2B (NB)	R	Φ2 R	Y	G	Φ8 G	R	
	Y	Φ2 Y			--Y-->		
	G	Φ2 G			--G-->		Φ1 G/LS 12 G
	PEDESTRIAN MOVEMENTS						
6A (SB LT)	R	Φ6 R	Y	A	W	Φ6 PED/LS 10 G	OUT
	Y	Φ6 Y		WEST	DW	Φ6 PED/LS 10 R	
	G	Φ6 G		B	W	Φ8 PED/LS 11 G	OUT
	<-Y--	Φ1 Y		SOUTH	DW	Φ8 PED/LS 11 R	
6B (SB)	R	Φ6 R	Y	OVERLAPS			
	Y	Φ6 Y		OLA	--Y-->	Φ1 Y/LS 12 Y	OUT
	G	Φ6 G		--G-->	Φ1 G/LS 12 G		
	LS = LOAD SWITCH						

LEGEND

	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		VIDEO CAMERA CABLE
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		PREEMPTION CABLE, 3 CONDUCTOR, NO. 20 AWG AND CONFIRMATION LIGHT CABLE, 4 CONDUCTOR, NO. 14 AWG
	PEDESTRIAN SIGNAL HEAD		POWER SOURCE
	PEDESTRIAN PUSH BUTTON		SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
	PREEMPTION RECEIVER AND CONFIRMATION LIGHT		POWER CABLE, 3 CONDUCTOR, NO. 4 AWG
	VIDEO DETECTION CAMERA		SIGNAL SUPPORT POLE
	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		METER BASE
	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		SIGNAL DISCONNECT SWITCH
	2 CONDUCTOR, NO. 14 AWG (LEAD-IN CABLE)		UNINTERRUPTIBLE POWER SUPPLY CABLE

**ITEM 625 - POWER SERVICE, AS PER PLAN**

THE EXISTING POWER SERVICE DROP AND COMMUNICATIONS SERVICE DROP ARE LOCATED ON A WOODEN UTILITY POLE AT STA. 11+94.8, 42.3' LT., S.R. 619 AND INSTALLED PER ITS-13.10 AND ITS-15.11. THE PROJECT IS NOT EXPECTED TO DISTURB THIS UTILITY POLE OR THE TWO (2) ADJACENT PULL BOXES SERVING THE INSTALLATION. BEFORE REMOVING ANY OF THE EXISTING EQUIPMENT, THE CONTRACTOR SHALL DISCONNECT ALL POWER AND COMMUNICATION CABLES WITHIN THE ITS AND COMMUNICATION CABINETS AND PULL BACK TO THE PULL BOXES LOCATED ADJACENT TO THIS UTILITY POLE. UPON INSTALLING THE NEW ITS EQUIPMENT AND CONDUIT WHERE NEEDED, THE POWER CABLE SHALL BE REROUTED BACK TO THE NEW ITS INSTALLATION AND RECONNECTED WITHIN THE ITS CABINET. THE EXISTING COMMUNICATION SERVICE WILL NO LONGER BE USED. ANY COMMUNICATIONS CABLES SHALL REMAIN COILED IN THE EXISTING PULL BOX ADJACENT TO THE SERVICE DROP.

PAYMENT FOR ITEM 625 - POWER SERVICE, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROVIDE POWER TO THE PROPOSED ITS CABINET.

**ITEM 625 - CONDUIT, MISC.: CONDUIT 4" MULTICELL SCHEDULE 40 & SCHEDULE 80, 725.20**

**DESCRIPTION**

THIS CONDUIT IS INTENDED FOR THE USE IN UNDERGROUND SITUATIONS REQUIRING MORE THAN ONE SINGLE CONDUIT. THIS INCLUDES THE MAIN CONDUIT RACEWAY ALONG THE FREEWAY, CONNECTION FROM PULL BOXES TO THE ROAD SIDE CABINETS AND FOR RUNS OF CONDUIT FOR MULTIPLE PURPOSES. THE CONTRACTOR SHALL PLUG ALL UNUSED CELLS WITH CONDUIT CAPS TO ASSURE AIR AND WATER INTEGRITY OF EACH INDIVIDUAL INNERDUCT.

**MATERIALS**

THE TRAFFIC SURVEILLANCE RACEWAY SHALL CONSIST OF A FACTORY-ASSEMBLED SYSTEM OF FOUR (4) INNERDUCTS ASSEMBLED WITHIN A PROTECTIVE OUTER DUCT. THE INNERDUCTS SHALL BE NOMINAL 1.25 INCH INSIDE DIAMETER, TYPE DB PVC PER NEMA TC-8 WITH A BELL INSERTION DEPTH OF 1.75 INCHES MINIMUM. THE OUTER DUCT SHALL BE NOMINAL 4 INCH (INSIDE DIAMETER), SCHEDULE 40 PVC. CARLON TYPE SCHEDULE 40 AND 80 OR APPROVED EQUIVALENT. THE COUPLING SHALL BE DESIGNED IN A MANNER TO PERMIT EASY FIELD ASSEMBLY. THE COUPLING SHALL BE MARKED OR KEYED IN A MANNER TO ENSURE THE INNERDUCTS ARE PROPERLY ALIGNED, ANY COLOR CODES ARE CONTINUED AND THE ADJOINING SECTION IS INSERTED TO THE PROPER DEPTH IN THE BELL. ALL KEYS AND/OR MARKINGS SHALL BE VISIBLE AFTER ASSEMBLY TO ALLOW THE INSPECTION OF EACH JOINT FOR PROPER ASSEMBLY BEFORE BURIAL. THE SEALING SYSTEM SHALL BE DESIGNED TO ASSURE AIR INTEGRITY OF EACH INDIVIDUAL INNERDUCT AND WATER INTEGRITY OF THE ENTIRE SYSTEM.

WHERE INNERDUCT(S) WITHIN A MULTICELL DUCT ARE TO REMAIN EMPTY, ONE 1/4-INCH NYLON ROPE SHALL BE INSTALLED IN EACH OF THE OPEN INNERDUCTS, THE ROPE WILL REMAIN TO BE USED FOR A FUTURE CABLE INSTALLATION. ALSO, EACH INNERDUCT SHALL BE PLUGGED TO MAINTAIN THE AIR AND WATER INTEGRITY. IN ADDITION, THE OUTER DUCT SHALL BE CAPPED TO MAINTAIN THE AIR AND WATER INTEGRITY OF THE ENTIRE SYSTEM.

INSTALLED IN TRENCH INSTALLATION WILL BE IN 30-INCH DEEP TRENCH, EXCEPT AS NOTED ON THE PLANS. ALL JOINTS WILL BE JOINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, IN ORDER TO PROVIDE AN AIR-TIGHT ENCLOSURE OF THE INTERIOR DUCTS AND A WATER-TIGHT ENCLOSURE OF THE OUTER DUCT. ALL MULTI-CELL CONDUIT INSTALLED OUTSIDE OF THE ROADWAY IN TRENCH SHALL BE SCHEDULE 40 UNLESS DIRECTED BY THE ODOT ENGINEER TO USE SCHEDULE 80 FOR USE IN WELL-TRAVELED VEHICULAR AREAS.

**ITEM 625 - CONDUIT, MISC.: CONDUIT 4" MULTICELL SCHEDULE 40 & SCHEDULE 80, 725.20 (CONTINUED)**

INSTALLED UNDER ROADWAY  
INSTALLATION WILL BE AT LEAST 30 INCHES DEEP JACKED OR DRILLED UNDER PAVEMENT, EXCEPT AS NOTED ON THE PLANS. ALL JOINTS WILL BE JOINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, IN ORDER TO PROVIDE AN AIR-TIGHT ENCLOSURE OF THE INTERIOR DUCTS AND A WATER-TIGHT ENCLOSURE OF THE OUTER DUCT. ALL MULTICELL CONDUIT INSTALLED UNDER THE ROADWAY SHALL BE SCHEDULE 80.

**METHOD OF MEASUREMENT**

THE CONDUIT WILL BE MEASURED BY THE AMOUNT OF CONDUIT IN FEET FURNISHED AND INSTALLED OF EACH TYPE SCHEDULE 40 OR 80 MEASURED FROM CENTER-TO-CENTER OF PULL BOXES, FOUNDATION, ETC., AND WILL INCLUDE ALL FITTINGS AND APPURTENANCES, JOINTS, BENDS, GROUNDS AND CONCRETE ENCASEMENT WHERE SPECIFIED. THE TRENCH WILL BE MEASURED BY THE NUMBER OF FEET OF TRENCH COMPLETED AS PER C&MS 625.21.

**BASIS OF PAYMENT**

THE PAYMENT FOR THESE ITEMS WILL BE MADE FOR THE ACCEPTED LINEAR FOOT QUANTITIES AT THE CONTRACT BID PRICE.

**ITEM 625 - MEDIAN JUNCTION BOX, AS PER PLAN**

THE CONTRACTOR SHALL SUPPLY THE MEDIAN PULL BOX THAT MEETS THE FOLLOWING SPECIFICATIONS:

SHALL BE OF TYPE POLYMER-CONCRETE  
SIZE: 17 INCHES (HEIGHT) X 30 INCHES (LENGTH)  
MINIMUM WALL THICKNESS: 0.5 INCH  
MINIMUM LID THICKNESS: 2 INCHES  
ANSI TIER 22 RATING WITH A MINIMUM DESIGN LOAD OF 22,000 POUNDS  
LID SHALL BE MARKED "TRAFFIC."

THE MEDIAN JUNCTION BOX SHALL BE SECURED IN THE MEDIAN BARRIER WALL USING DOWELS. (NON-SHRINK GROUT MAY BE USED WHEN NECESSARY). SEE DETAIL ON SHEET 481.

**ITEM 625 - PULL BOX, 725.08, 32" AS PER PLAN**

PULL BOXES SHALL BE FURNISHED AND INSTALLED AS PER STANDARD CONSTRUCTION DRAWING ITS-14.11

**ITEM 809 - ETHERNET CABLE, OUTDOOR-RATED**

**GENERAL DESCRIPTION**

THE CONTRACTOR SHALL FURNISH AND INSTALL A CATEGORY 5E OUTSIDE PLANET ETHERNET CABLE THAT MEETS THE FOLLOWING MINIMUM SPECIFICATIONS:

- FOOTAGE MARKINGS: EVERY 3 FEET
- ARMOR: HELICALLY APPLIED 12MM ALUMINUM WITH INNER JACKET
- CONDUCTOR INSULATION: POLYOLEFIN
- JACKET: UV AND ABRASION RESISTANT POLYETHYLENE
- CONDUCTORS: 24 AWG SOLID BARE ANNEALED COPPER
- CABLE DIAMETER: MAXIMUM 0.35 INCHES
- FLOODING COMPOUND: WATERPROOF GEL
- MINIMUM BEND RADIUS: 1.0 INCH
- MAXIMUM PULLING FORCE: 25 POUNDS
- SHIELDED
- TEMPERATURE RATING
  - INSTALLATION: -30 TO +60 C
  - OPERATION: -45 TO +80 C
- COLOR CODE
  - PAIR 1: BLUE-WHITE/BLUE
  - PAIR 2: ORANGE-WHITE/ORANGE
  - PAIR 3: GREEN-WHITE/GREEN
  - PAIR 4: BROWN-WHITE/BROWN

**ITEM 809 - ETHERNET CABLE, OUTDOOR-RATED**

THE CONTRACTOR SHALL INSTALL CABLE AS SHOWN IN THE PLANS, OR AS DIRECTED BY THE ENGINEER, LEAVING 10 FEET OF SLACK IN EACH PULL BOX. THE CABLE SHALL BE TERMINATE WITH RJ-45 CONNECTORS AND WIRED PER TIA/EIA 568-B.

PAYMENT FOR ITEM 809 - ETHERNET CABLE, OUTDOOR-RATED WILL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT FOR CABLE FURNISHED AND INSTALLED IN PLACE, COMPLETE AND ACCEPTED BY THE ENGINEER.

**ITEM 633 - CONTROLLER WORK PAD, AS PER PLAN**

THE CONTROLLER WORK PAD SHALL BE FURNISHED AND INSTALLED AS PER STANDARD CONSTRUCTION DRAWING ITS-50.12.

**CCTV INSTALLATIONS**

THE CONTRACTOR SHALL FURNISH AND INSTALL THIS ITEM ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 809, AS WELL AS ANY STANDARD CONSTRUCTION DRAWINGS NOTED IN THE PLANS.

**FIBER OPTIC CABLE AND HARDWARE**

FIBER OPTIC CABLE AND HARWARE SHALL BE PROVIDED AND INSTALLED PER ODOT SUPPLEMENTAL SPECIFICATIONS 804 AND 809.

**TRACER WIRE**

TRACER WIRE SHALL BE INSTALLED IN ONE OF THE MULTICELL INNERDUCTS IN ALL CONDUIT RUNS. TRACER WIRE SHALL BE NO SMALLER THAN #12 AWG WIRE. THE WIRE SHALL BE HDPE INSULATED, ORANGE IN COLOR, AND CONSTRUCTED OF COPPER CLAD STEEL. APPROXIMATELY 10 FEET OF SLACK OF THE TRACER WIRE SHALL BE LEFT INSIDE THE ADJACENT PULL BOXES CONNECTING THE CONDUIT RUNS. IN SITUATIONS WHERE A TYPE 2 FIBER OPTIC CABLE MARKER IS TO BE INSTALLED IN CONJUNCTION WITH THE TRACER WIRE, THE TRACER WIRE SHALL BE RUN THROUGH THE MARKER AND CONNECTED TO TERMINALS AT THE TOP OF THE MARKER.

PAYMENT FOR ALL TRACER WIRE SHALL BE INCLUDED IN THE BID ITEM FOR THE FIBER OPTIC CABLE PAY ITEM.

**FIBER OPTIC CABLE MARKER**

FIBER OPTIC CABLE MARKERS SHALL BE INSTALLED AS DIRECTED BY THE ODOT ENGINEER AND/OR AT EVERY PULL BOX CONTAINING FIBER OPTIC CABLE AND SHALL BE ONE OF THE FOLLOWING MODELS:

COTT BIGFINK, FRICK TESTPOST, OR RHINODOME TEST STATION

THE FIBER OPTIC CABLE MARKERS SHALL BE 6 FEET IN LENGTH AND SHALL BE SECURELY PLACED IN THE GROUND AT A DEPTH OF 2 FEET. CARE SHALL BE TAKEN DURING INSTALLATION NOT TO DAMAGE ANY UNDERGROUND CONDUIT IN THE VICINITY. THE CONTRACTOR SHALL USE A TYPE 2 MARKER WHEN THE PATH OF THE FIBER CROSSES UNDERNEATH A ROADWAY AND WHEN CAPABLE SHALL PLACE A MARKER ON BOTH SIDES OF THE ROADWAY AT CROSSING. THE CONTRACTOR SHALL CONNECT TRACER WIRE TO TERMINAL AT TOP OF TYPE 2 MARKER. TYPE 1 MARKERS SHALL ONLY BE PLACED ON STRAIGHT FIBER RUNS BETWEEN PULL BOXES IN THE SHOULDER, AND THE CONTRACTOR SHALL BE LIMITED TO THE USE OF TYPE 1 MARKERS SO THAT A TYPE 2 MARKER SHALL BE PLACED BETWEEN ANY TWO TYPE 1 MARKERS. TYPE 1 MARKERS SHALL NOT BE PLACED IN SUCCESSION DOWN A FIBER PATH. THE MARKERS SHALL BE ORANGE IN COLOR AND SHALL HAVE THE FOLLOWING INFORMATION LOCATED ON THE UPPER PORTION OF THE MARKER IN A READABLE FORMAT:

WARNING CONTACT OUPS 48 HRS BEFORE DIGGING ODOT ITS FIBER OPTIC CABLE (614-387-4113)

PAYMENT FOR ALL FIBER OPTIC CABLE MARKERS SHALL BE INCLUDED IN THE BID ITEM FOR THE FIBER OPTIC CABLE PAY ITEM.

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ITS NOTES

SUM - 76 - 5.53

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**ITEM 809 - ITS DEVICE, MISC.: REMOVAL OF EXISTING ITS INSTALLATION**

THE EXISTING CCTV CAMERA INSTALLATION, INCLUDING POLE, CAMERA, LOWERING UNIT, CABINET, ETC. SHALL BE REMOVED IN ITS ENTIRETY AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE BY ODOT. THE CONTRACTOR SHALL CONTACT THE CENTRAL OFFICE ITS DIVISION AT (614) 387-4113 TO ARRANGE A MUTUALLY AGREEABLE TIME TO DELIVER THE EQUIPMENT TO A LOCATION AS DIRECTED BY THE ITS DIVISION.

ITEMS TO BE REUSED:  
CCTV CAMERA POLE

ITEMS TO BE STORED:  
CCTV CAMERA  
CAMERA LOWERING UNIT  
POLE MOUNTED CABINET

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR DELIVERY TO ODOT ARE NOT ACCEPTED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

**ITEM 809 - ITS DEVICE, MISC.: REUSE OF EXISTING ITS EQUIPMENT**

WHILE REMOVING THE EXISTING CCTV CAMERA INSTALLATION, THE CONTRACTOR SHALL TAKE GREAT CARE AS TO NOT DAMAGE THE EXISTING CAMERA POLE AS IT IS THE INTENT OF THE PROJECT TO REUSE THE POLE. THE CONTRACTOR SHALL DOCUMENT, IN WRITING, ANY MALFUNCTIONING EQUIPMENT, PRIOR TO EQUIPMENT REMOVAL.

IF THE ENGINEER HAS DETERMINED THE CAMERA POLE HAS BEEN DAMAGED, THE CONTRACTOR SHALL REPLACE THE EQUIPMENT IN LIKE KIND AS APPROVED BY THE ENGINEER, AT THE CONTRACTOR'S COST.

PAYMENT FOR ITEM 809 - ITS DEVICE, MISC.: REUSE OF EXISTING ITS EQUIPMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO RELOCATE THE CAMERA POLE.

**ITEM 809 - ITS DEVICE, MISC.: CONCRETE POLE FOUNDATION**

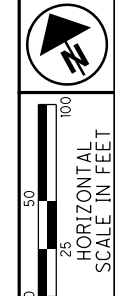
THE POLE FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH SCD ITS-12.10 AND SUPPLEMENTAL SPECIFICATION 809. THE CONTRACTOR SHALL OBTAIN SOIL SAMPLES AND HAVE FOUNDATION/POLE EMBEDMENT SIGNED BY A LICENSED GEOTECHNICAL ENGINEER FOR APPROVAL. SUBMIT TO ODOT FOR ACCEPTANCE.

SHEET NUMBER			PARTICIPATION				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	KMG CHECKED	RMG
477	478	479	01/IMS/PV	10/IMS/PV	02/IMS/BR	11/IMS/BR									
	222		73	149			625	25410	222	FT	CONDUIT, 2", 725.052				
	8		3	5			625	25506	8	FT	CONDUIT, 3", 725.052				
	214		71	143			625	25606	214	FT	CONDUIT, 4", 725.052				
1400	2014	656	1343	2727			625	25920	4070	FT	CONDUIT, MISC.: CONDUIT 4" MULTICELL SCHEDULE 40, 725.20	475			
	370	125	163	332			625	25920	495	FT	CONDUIT, MISC.: CONDUIT 4" MULTICELL SCHEDULE 80, 725.20	475			
	233		77	156			625	29000	233	FT	TRENCH				
1	1	1	1	2			625	29931	3	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	475			
	1			1			625	30700	1	EACH	PULL BOX, 725.08, 18"				
	2	1	1	2			625	30711	3	EACH	PULL BOX, 725.08, 32", AS PER PLAN	475			
	2		1	1			625	32000	2	EACH	GROUND ROD				
	1			1			625	34001	1	EACH	POWER SERVICE, AS PER PLAN	475			
	233		77	156			625	36000	233	FT	PLASTIC CAUTION TAPE				
	244		81	163			632	67300	244	FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG				
	1			1			633	67100	1	EACH	CABINET FOUNDATION				
	1			1			633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN				
792	1192	313	758	1539			804	15020	2297	FT	FIBER OPTIC CABLE, 48 FIBER				
	1			1			804	34030	1	EACH	FIBER TERMINATION PANEL, 48 FIBER				
	1	1	1	1			804	36000	2	EACH	SLACK INSTALLATION				
1				1			804	37000	1	EACH	SPLICE ENCLOSURE, BUTT STYLE				
	1			1			809	60000	1	EACH	CCTV IP-CAMERA SYSTEM, DOME-TYPE				
	1			1			809	61090	1	EACH	CCTV LOWERING UNIT				
	130		43	87			809	64550	130	FT	ETHERNET CABLE, OUTDOOR-RATED				
	1			1			809	65000	1	EACH	ITS CABINET - GROUND MOUNTED				
	1			1			809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF EXISTING ITS INSTALLATION	476			
	1			1			809	65990	1	EACH	ITS DEVICE, MISC.: REUSE OF EXISTING ITS EQUIPMENT	476			
	1			1			809	65990	1	EACH	ITS DEVICE, MISC.: CONCRETE POLE FOUNDATION	476			

**ITS NOTES & GENERAL SUMMARY**

**SUM - 76 - 5.53**

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672

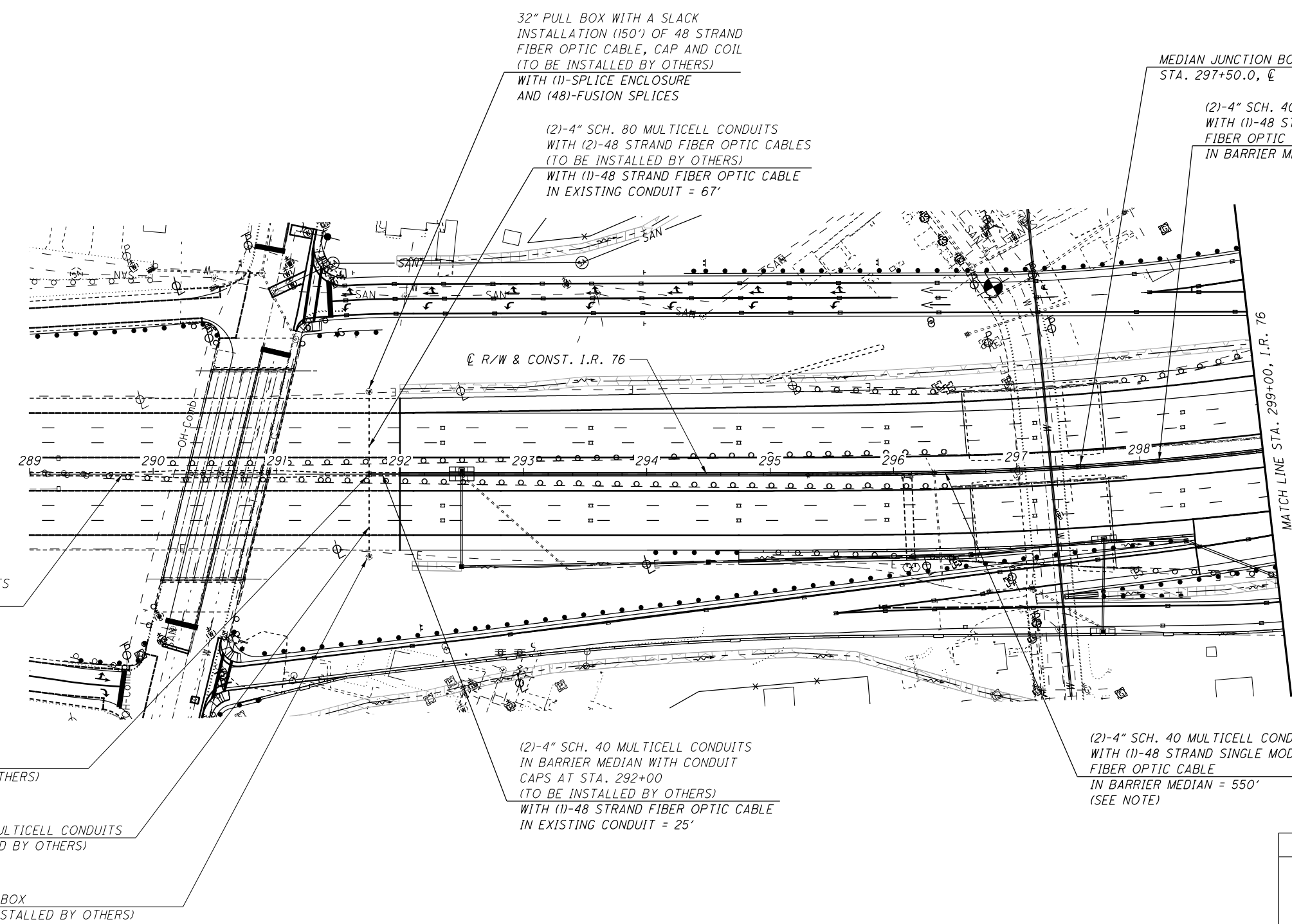


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ITS PLAN  
BEGIN TO STA. 299+00

SUM-76-5.53

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32" PULL BOX WITH A SLACK  
INSTALLATION (150') OF 48 STRAND  
FIBER OPTIC CABLE, CAP AND COIL  
(TO BE INSTALLED BY OTHERS)  
WITH (1)-SPLICE ENCLOSURE  
AND (48)-FUSION SPLICES

(2)-4" SCH. 80 MULTICELL CONDUITS  
WITH (2)-48 STRAND FIBER OPTIC CABLES  
(TO BE INSTALLED BY OTHERS)  
WITH (1)-48 STRAND FIBER OPTIC CABLE  
IN EXISTING CONDUIT = 67'

MEDIAN JUNCTION BOX, AS PER PLAN,  
STA. 297+50.0, ☐

(2)-4" SCH. 40 MULTICELL CONDUITS  
WITH (1)-48 STRAND SINGLE MODE  
FIBER OPTIC CABLE  
IN BARRIER MEDIAN = 150'

☐ R/W & CONST. I.R. 76

MATCH LINE STA. 299+00, I.R. 76

(2)-4" SCH. 40 MULTICELL CONDUITS  
IN BARRIER MEDIAN  
(TO BE INSTALLED BY OTHERS)

MEDIAN JUNCTION BOX  
(TO BE INSTALLED BY OTHERS)

(2)-4" SCH. 80 MULTICELL CONDUITS  
(TO BE INSTALLED BY OTHERS)

32" PULL BOX  
(TO BE INSTALLED BY OTHERS)

(2)-4" SCH. 40 MULTICELL CONDUITS  
IN BARRIER MEDIAN WITH CONDUIT  
CAPS AT STA. 292+00  
(TO BE INSTALLED BY OTHERS)  
WITH (1)-48 STRAND FIBER OPTIC CABLE  
IN EXISTING CONDUIT = 25'

(2)-4" SCH. 40 MULTICELL CONDUITS  
WITH (1)-48 STRAND SINGLE MODE  
FIBER OPTIC CABLE  
IN BARRIER MEDIAN = 550'  
(SEE NOTE)

NOTE: CONTRACTOR SHALL CONNECT PROPOSED CONDUIT TO  
THE EXISTING CAPPED CONDUIT LOCATED AT STA. 292+00  
THAT IS TO BE INSTALLED WITH THE SUM/MED-76-0.00/11.43DB  
PROJECT (PID 93501).

LEGEND	
EXISTING MEDIAN JUNCTION BOX	☐
PROPOSED MEDIAN JUNCTION BOX	☐
EXISTING 32" PULL BOX	⊕
PROPOSED 32" PULL BOX	⊕
EXISTING ITS CONDUIT	----
PROPOSED ITS CONDUIT	—
ITS CONTROLLER CABINET AND WORK PAD	☐
EXISTING CCTV CAMERA POLE	•

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ITS PLAN  
STA. 299+00 TO STA. 309+00

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NOTES:

1. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF THE EXISTING PULL BOXES. EXISTING POWER CABLE AND COMMUNICATIONS CABLES SHALL BE DISCONNECTED FROM THE EXISTING CCTV CAMERA INSTALLATION AND PULLED BACK TO THE EXISTING PULL BOXES. 244' OF POWER CABLE HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THE CONTRACTOR'S USE; HOWEVER THE EXISTING POWER CABLE SHOULD BE INSPECTED AND REUSED IF APPROVED BY THE ENGINEER. THE COMMUNICATIONS CABLE SHALL BE COILED AND LEFT IN THE EXISTING PULL BOX.

(2)-3" SCH. 40 CONDUITS WITH (1)-3/C NO. 8 POWER CABLE IN TRENCH = 4'

WORK PAD (SLOPED AREA)

RELOCATED CCTV CAMERA POLE INSTALL NEW CCTV IP-CAMERA SYSTEM, DOME TYPE AND LOWERING UNIT WITH 130 FT. OF COMPOSITE CABLE STA. 302+90.4, 90.0' RT.

(2)-4" SCH. 40 MULTICELL CONDUITS WITH (2)-48 STRAND SINGLE MODE FIBER OPTIC CABLES IN TRENCH = 7'

PULL BOX, 725.08, 32", AS PER PLAN WITH A SLACK INSTALLATION (150') OF 48 STRAND SINGLE MODE FIBER OPTIC CABLE STA. 303+00.0, 89.0' RT.

(1)-2" SCH. 40 CONDUIT WITH (1)-3/C NO. 8 POWER CABLE IN TRENCH = 8'

ELECTRICAL PULL BOX, 18" STA. 302+99.9, 90.9' RT.

334 ITS CABINET AND FOUNDATION, GROUND MOUNTED, AS PER SS 809 WITH CCTV IP-CAMERA LOCAL CONTROL UNIT AND COMMUNICATIONS EQUIPMENT (1) FIBER CONNECTOR HOUSING (8) CONNECTOR MODULES (4) SPLICE TRAYS STA. 302+93.3, 87.9' RT.

NOTE: CONDUITS ENTERING CABINET FOUNDATION SHALL BE AS PER SS 809.09.

DETAIL 'A'  
(N.T.S.)

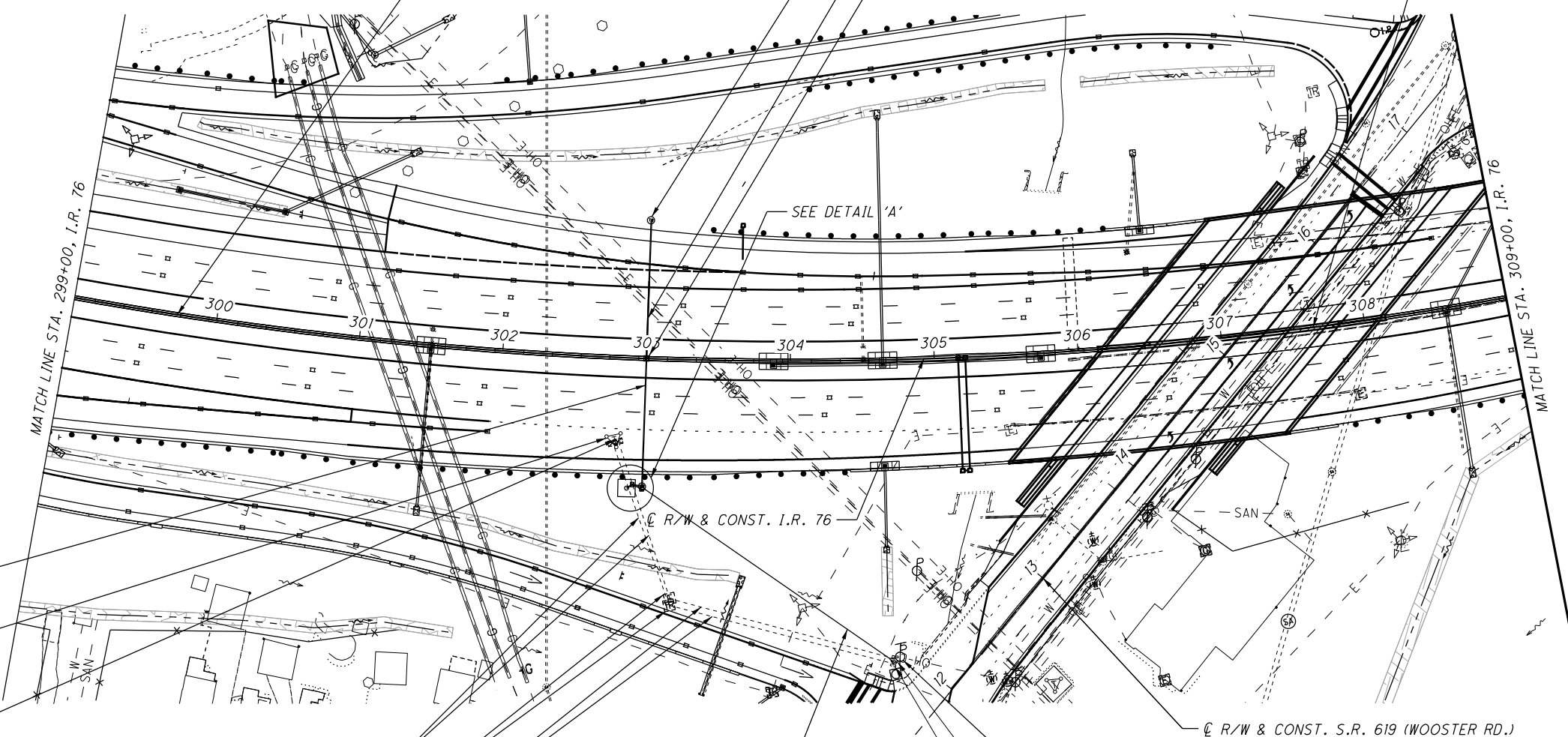
(2)-4" SCH. 40 MULTICELL CONDUITS WITH (1)-48 STRAND SINGLE MODE FIBER OPTIC CABLE IN MEDIAN BARRIER = 400'

PULL BOX, 725.08, 32", AS PER PLAN STA. 303+00, 96.0' LT.

(2)-4" SCH. 80 MULTICELL CONDUITS JACKED OR DRILLED = 96'

MEDIAN JUNCTION BOX, AS PER PLAN STA. 303+00, 0

(2)-4" SCH. 40 MULTICELL CONDUITS WITH (1)-48 STRAND SINGLE MODE FIBER OPTIC CABLE IN MEDIAN BARRIER = 600'



(2)-4" SCH. 80 MULTICELL CONDUITS WITH (2)-48 STRAND SINGLE MODE FIBER OPTIC CABLES JACKED OR DRILLED = 89'

EXISTING ITS INSTALLATION TO BE REMOVED

EXISTING CCTV CAMERA POLE TO BE RELOCATED STA. 302+80.4, 57.6' RT.

EXISTING CONDUITS TO BE ABANDONED

EXISTING PULL BOXES TO BE REMOVED

EXISTING CONDUITS TO BE ABANDONED

(1)-2" SCH. 40 CONDUIT WITH (1)-3/C NO. 8 POWER CABLE (1)-4" SCH. 40 CONDUIT WITH PULL STRING (FOR FUTURE USE BY OTHERS) IN TRENCH = 214'

EXISTING POWER SOURCE STA. 11+94.8, 42.3' LT.

EXISTING ELECTRICAL PULL BOX (SEE NOTE 1)

EXISTING TRAFFIC PULL BOX (SEE NOTE 1)

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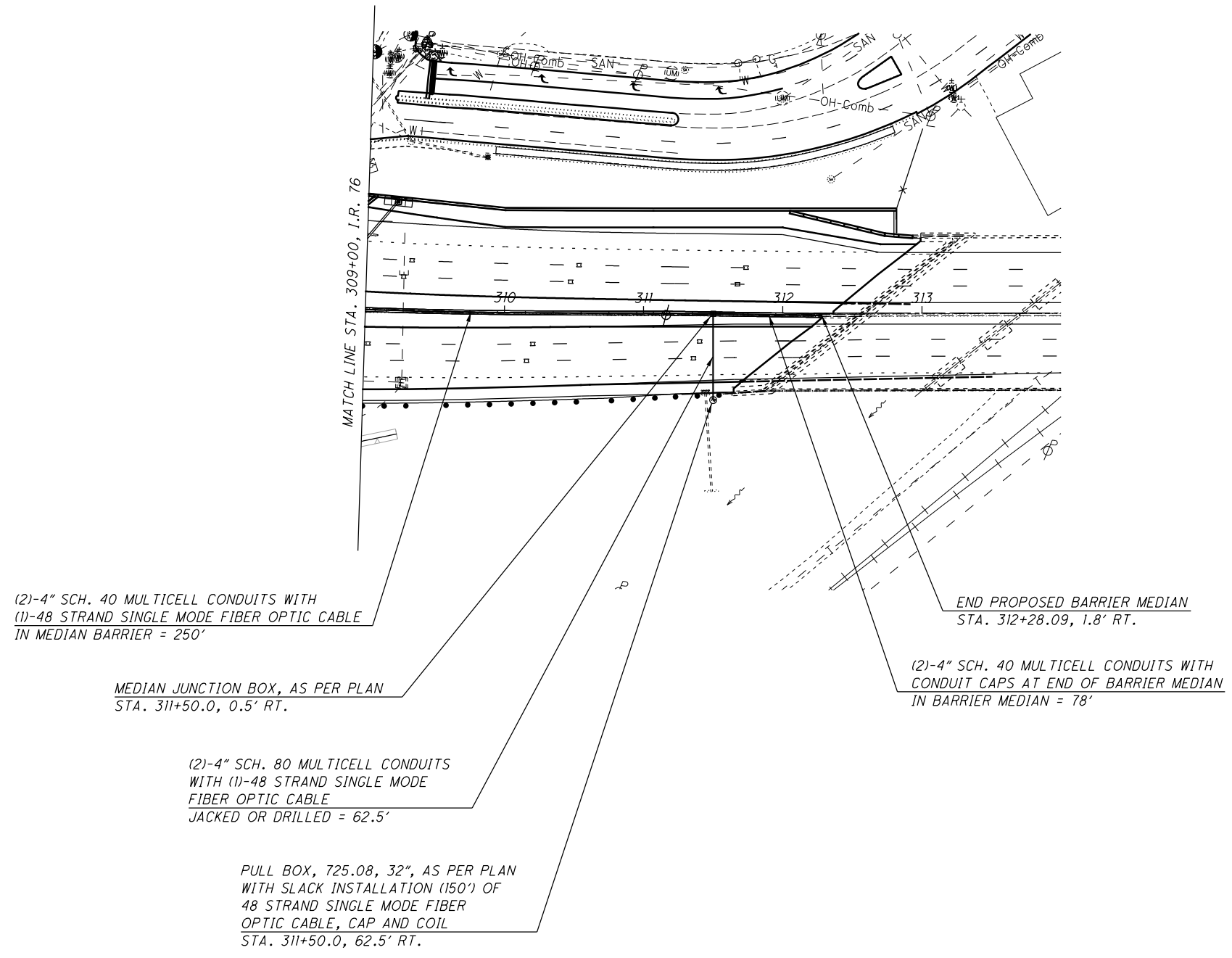


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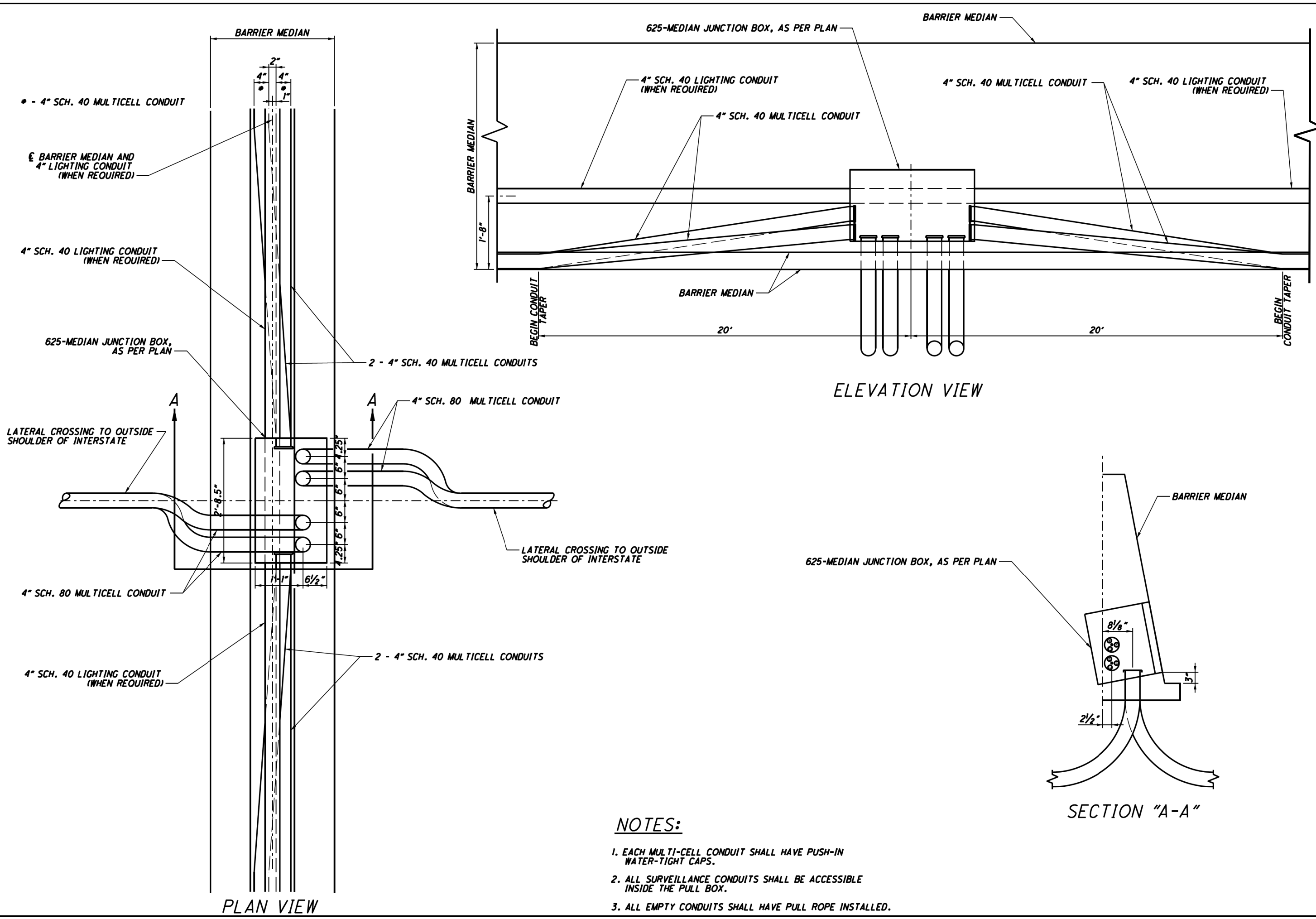
ITS PLAN  
STA. 309+00 TO END

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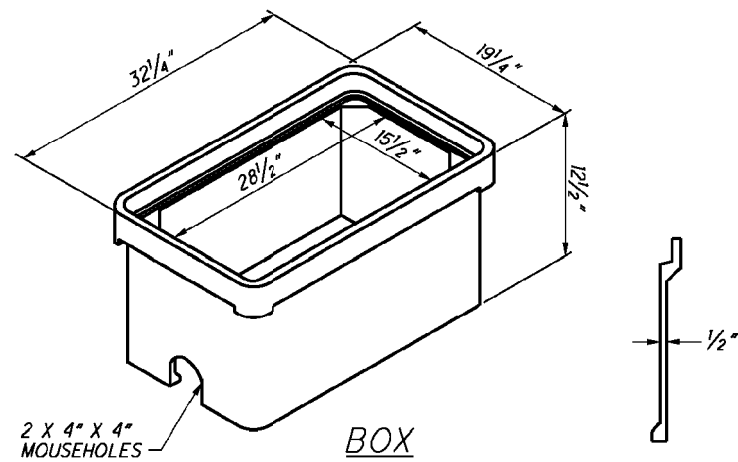
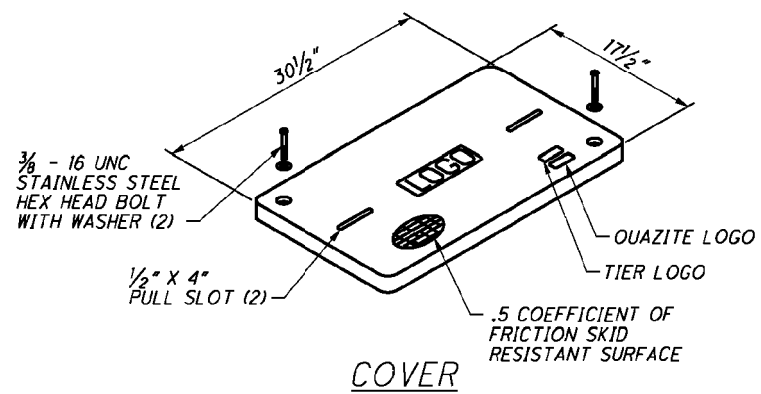


**NOTES:**

1. EACH MULTI-CELL CONDUIT SHALL HAVE PUSH-IN WATER-TIGHT CAPS.
2. ALL SURVEILLANCE CONDUITS SHALL BE ACCESSIBLE INSIDE THE PULL BOX.
3. ALL EMPTY CONDUITS SHALL HAVE PULL ROPE INSTALLED.



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**POLYMER CONCRETE ASSEMBLY**  
**625-MEDIAN JUNCTION BOX, AS PER PLAN**

**NOTES:**

1. ALL ITS CONDUIT SHALL BE ACCESSIBLE INSIDE THE PULL BOX.
2. EACH INNERDUCT OF MULTICELL CONDUITS SHALL HAVE PUSH-IN CAPS.
3. THE LID LOGO SHALL BE "TRAFFIC".
4. USE OUAZITE 17" X 30" STYLE POLYMERCONCRETE (STACKABLE) ASSEMBLY, PART NO. PG1730DA12 AND PG1730HH00.
5. SEE ITEM 625 - MEDIAN JUNCTION BOX, AS PER PLAN NOTE ON SHEET 475 FOR ADDITIONAL DETAILS.

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**TRAFFIC CONTROL PULL BOX AND CONDUIT DETAIL**

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ITEM 625 - LUMINAIRE, CONVENTIONAL, AS PER PLAN: 200W, LED, 480V

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATION, LUMINAIRES SHALL BE:

LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS WITH AN IES M-SC DISTRIBUTION, 3000K CCT, AND 200 WATT (EQUIVALENT) LED LAMPS. LUMINAIRES SHALL BE AMERICAN ELECTRIC AUTOBAHN SERIES ATBM-H-480-R2-4B-3K-GRAY (164 WATTS), COOPER NAVION NVN-AE-03-E-8-T3R-10K-7030 (157 WATTS), GE EVOLVE ERHM-01-5-VM-7-30-N-1-4B-GRAY-R (82 WATTS), OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "LUMINAIRE, CONVENTIONAL, AS PER PLAN", WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, LOW MAST, AS PER PLAN: 400W, LED, 480V  
THE LUMINAIRE SHALL BE 3000K CCT, 400 WATTS (EQUIVALENT). THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN CMS 725.11 ARE HEREBY WAIVED. INSTEAD, THE LUMINAIRES FOR LOW-MAST LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS:

LUMINAIRES FOR LOW MAST LIGHTING UNITS WITH SYMMETRIC DISTRIBUTION SHALL BE HOLOPHANE HMLD-09-3K-AH-G-AW (376 WATTS), CAROLINA HIGH MAST "CONDOR" CLED2-8C-G-20-70-SO-B-5W (431 WATTS), GENERAL ELECTRIC "EVOLVE" ERHM-01-5-50-VM-7-30-N-1-4B-GRAY-R (445 WATTS), OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "LUMINAIRE, LOW MAST, AS PER PLAN", WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, UNDERPASS, AS PER PLAN: LED, TYPE III, 240 VOLT

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS, LUMINAIRES FOR UNDERPASS LIGHTING SHALL BE AS FOLLOWS: LUMINAIRES SHALL BE GE EVOLVE EWNB-3-7-30-1-N-GRAY-FR, EATON/COOPER GALLEON GWC-AF-01-LED-EI-T4FT-AP--703 OR EQUAL AS APPROVED BY THE ENGINEER.

IES DISTRIBUTION OF THE LUMINAIRE SHALL BE TYPE III. LUMINAIRES SHALL BE WALL-MOUNT, THE THRU-WIRING REQUIREMENT OF 725.11.F BEING WAIVED FOR THIS UNDERPASS APPLICATION; TOP-ENTRY SHALL BE THE WIRING METHOD USED, UNLESS SHOWN OTHERWISE IN THE PLAN DETAILS.

LUMINAIRE LED DRIVERS SHALL BE COMPATIBLE WITH 240VAC INPUT AS SHOWN IN THE PLANS, MODULAR, HAVE THE MANUFACTURER NAME AND PART NUMBER CLEARLY MARKED ON THE DRIVER ENCLOSURE, AND SHALL CARRY A MINIMUM 5-YEAR REPLACEMENT WARRANTY. EACH LUMINAIRE SHALL INCLUDE AN INTEGRAL LINE FUSE.

THE LED EMITTER ASSEMBLY SHALL CARRY A MINIMUM 5-YEAR REPLACEMENT WARRANTY, 10-YEAR STANDARD MANUFACTURER LIMITED WARRANTY. THE LUMINAIRE ENCLOSURE SHALL BE RATED IP65, MINIMUM, AS PER IEC 60529, AND SHALL CARRY A MINIMUM 5-YEAR REPLACEMENT WARRANTY WITH 10-YEAR STANDARD MANUFACTURER LIMITED WARRANTY.

A WRITTEN WARRANTY STATEMENT, SPARE PARTS LIST, AND MANUAL FROM THE LED SUPPLIER SHALL BE SUPPLIED TO THE ENGINEER BEFORE LUMINAIRES SHALL BE ACCEPTED BY ODOT.

SURGE PROTECTION SHALL BE 10KV/5KA MINIMUM, PER ANSI C62.41.2, AND THE MODULAR PACKAGE SHALL BE CLEARLY MARKED WITH THE MANUFACTURER AND PART NUMBER. COLOR TEMPERATURE SHALL BE 3000K +/- 400K UNLESS APPROVED OTHERWISE BY THE ENGINEER. THE FIXTURE SHALL PROVIDE 7,000 TO 9,000 INITIAL LUMENS.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE, UNDER CMS ITEM 625, "LUMINAIRE, UNDERPASS, AS PER PLAN: LED, TYPE III", (WITH TYPE III DISTRIBUTION) FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED. THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY - OHIO EDISON COMPANY  
ADDRESS - 1910 WEST MARKET STREET, BLDG 1, AKRON, OHIO 44313  
PHONE NUMBER - 330-436-4055  
CONTACT NAME - DAVID L. MILLER

THE CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY EARLY IN THE PROJECT, TO ARRANGE POWER SERVICE A MINIMUM OF SIX WEEKS PRIOR TO THE ENERGIZATION OF THE POWER SERVICE.

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CONDUIT EXPANSION AND DEFLECTION

EXPANSION FITTINGS SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XJG, APPLETON TYPE AX, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL PROVIDE EITHER 4 OR 8 INCHES TOTAL MOVEMENT AS SPECIFIED BY THE PLAN DETAILS AND SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

DEFLECTION COUPLINGS SHALL BE OZ TYPE DX, CROUSE HINDS TYPE XD, APPLETON TYPE DF, OR EQUAL APPROVED BY THE ENGINEER. EACH DEFLECTION COUPLING SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

ITEM 625 - CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD, AND DEBRIS SO THAT NEW CABLE MAY BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. IN ADDITION, THIS ITEM WILL ALSO INCLUDE REPAIRS TO EXISTING CONDUIT, WHEN NECESSARY TO PROVIDE A SECURE CONNECTION. ALL CABLE AND DEBRIS SHALL BE PROPERLY REMOVED FROM THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED".

ITEM 625 - LIGHT POLE REMOVED FOR REUSE, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE AND RELOCATING THE LIGHT POLE TO A NEW FOUNDATION. THE CONTRACTOR SHALL ENSURE THAT THE ANCHOR BOLT PATTERN ON THE PROPOSED FOUNDATION IS COMPATIBLE WITH THE BOLT PATTERN OF THE EXISTING LIGHT POLE.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 625, "LIGHT POLE REMOVED FOR REUSE, AS PER PLAN".

LIGHT POLE REMOVED

REMOVAL OF THE LUMINAIRE SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED WITH REMOVAL OF LIGHT POLES FOR REUSE OR STORAGE.

ITEM 625 - SERVICE TO UNDERPASS LIGHTING, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL SERVICE, EXCEPT FOR LUMINAIRES, FOR AN UNDERPASS LIGHTING SYSTEM. THE WORK SHALL INCLUDE DISCONNECT SWITCH, CONDUITS, FITTINGS, WIRING, AND ALL INCIDENTALS NECESSARY TO PROVIDE A COMPLETE UNDERPASS LIGHTING SYSTEM, IN PLACE, TESTED AND ACCEPTED.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE, UNDER CMS ITEM 625, "SERVICE TO UNDERPASS LIGHTING, AS PER PLAN" FOR EACH LIGHTED UNDERPASS, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING, MISC.: REMOVAL OF UNDERPASS LIGHTING

THIS ITEM SHALL CONSIST OF THE REMOVAL OF AN EXISTING UNDERPASS LIGHTING SYSTEM. THE WORK SHALL INCLUDE REMOVAL OF THE DISCONNECT SWITCH, CONDUITS, FITTINGS, WIRING, FIXTURES AND ALL RELATED APPURTENANCES.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE, UNDER CMS ITEM 625, "LIGHTING, MISC.: REMOVAL OF UNDERPASS LIGHTING" FOR EACH UNDERPASS WITH LIGHTING REMOVED, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

PADLOCKS AND KEYS

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

EXISTING CABLE AND CONDUIT

THE LOCATION OF EXISTING CIRCUIT CABLE, AS SHOWN IN THIS PLAN, WERE APPROXIMATED FROM EXISTING DESIGN PLANS. PRIOR TO INITIATING ANY NEW TRENCHING, THE CONTRACTOR SHALL FIELD LOCATE ALL EXISTING CIRCUITS, AND VERIFY THE ASSUMED CIRCUIT INFORMATION.

IT IS ALSO ASSUMED THAT PROPOSED FOUNDATION LOCATIONS AND PROPOSED TRENCH LOCATIONS MAY IMPACT EXISTING CIRCUITS. IF CONSTRUCTION PROCEDURES WILL IMPACT ENERGIZATION OF AN EXISTING LIGHTING UNIT FOR MORE THAN TWENTY-FOUR HOURS, THAN TEMPORARY CIRCUITS SHALL BE PROVIDED, PER "ITEM 625 SPECIAL, MAINTAIN EXISTING LIGHTING". THE CONTRACTOR SHALL NOT ADJUST PROPOSED FOUNDATION OR TRENCH LOCATIONS, WITHOUT APPROVAL IN WRITING FROM THE ENGINEER.

EXISTING CIRCUITS WHICH HAVE BEEN ABANDONED, AS INDICATED IN THE PLAN (OR AS A RESULT OF THE FIELD REVIEW/CONFIRMATION), MAY BE ABANDONED IN PLACE OR REMOVED. REMOVED CIRCUIT CABLE SHALL BE DISPOSED OF BY THE CONTRACTOR. THE REMOVAL OR ABANDONMENT OF THESE CIRCUITS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS LIGHTING BID ITEMS.

REMOVAL OF CIRCUITS IN EXISTING UNDERGROUND OR BARRIER CONDUITS TO BE REUSED: WORK IS INCLUDED UNDER ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED".

LUMINAIRE REMOVED, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING A LUMINAIRE FROM AN EXISTING LIGHT POLE WHICH IS DESIGNATED FOR REUSE. IN ADDITION TO REMOVING THE LUMINAIRE, THE CONTRACTOR SHALL ALSO REMOVE THE EXISTING POLE AND BRACKET CABLE, AND PROPERLY DISPOSE OF THE CABLE OFF OF THE PROJECT SITE.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 625, "LUMINAIRE REMOVED, AS PER PLAN".

LIGHTING GENERAL NOTES

SUM - 76 - 5.53

482  
672

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**ITEM 625 - 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.

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

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

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

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

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES (13 LUX) WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET (9 METERS), AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET (6 METERS).

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.

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, MATERIAL AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

**GROUNDING AND BONDING**

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE HL AND TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
  - A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
2. CONDUITS.
  - A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
  - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
  - C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
  - D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
3. WIRE FOR GROUNDING AND BONDING.
  - A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
    - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
    - II. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
  - B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.
4. GROUND ROD.
  - A. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
  - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.
5. PAYMENT.
  - A. ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED.
  - B. WORK ON BRIDGES MAY BE INCLUDED IN THE BID ITEM FOR "ITEM 625, STRUCTURE GROUNDING."
  - C. IN A 3-WIRE HIGHWAY LIGHTING SYSTEM, THE THIRD CONDUCTOR OF THE DUCT CABLE OR DISTRIBUTION CABLE WILL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR AND MAY AS SUCH BE PART OF THE CABLE BID ITEM.

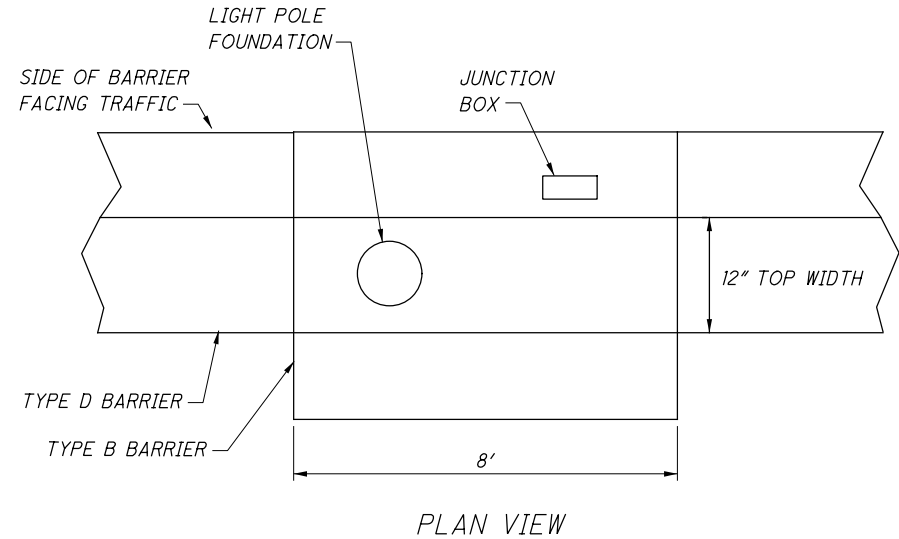
**UNDERDRAINS FOR PULL BOXES**

REFERENCE IS MADE TO STANDARD CONSTRUCTION DRAWINGS FOR DETAILS ON DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET. AN ESTIMATED QUANTITY OF 40 LINEAR FEET OF ITEM 611 - 4" CONDUIT, TYPE E, IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

**ITEM 625 - LIGHT POLE FOUNDATION, MISC.: ON TYPE B BARRIER**

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EIGHT FOOT SECTION OF TYPE B BARRIER IN CONFORMANCE WITH STANDARD DRAWING RM-4.3. THE SECTION OF BARRIER SHALL INCLUDE INSTALLATION OF THE LIGHT POLE FOUNDATION AND JUNCTION BOX, IN CONFORMANCE WITH STANDARD DRAWING HL-20.13.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "MEDIAN LIGHT POLE FOUNDATION, 8' DEEP, AS PER PLAN" FOR EACH POLE FOUNDATION INSTALLED, WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.



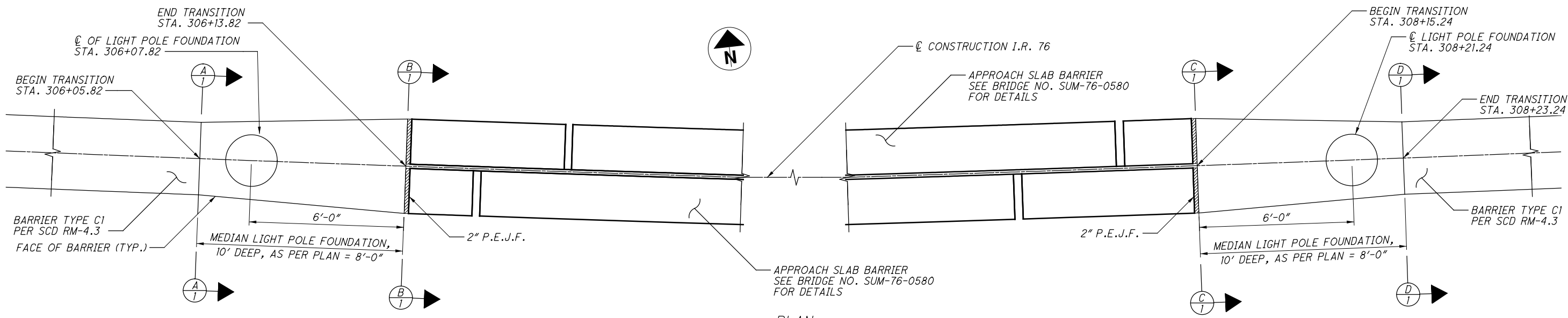
**ITEM 625 - MEDIAN LIGHT POLE FOUNDATION, AS PER PLAN**

THIS ITEM SHALL CONSIST OF PROVIDING A MEDIAN LIGHT POLE FOUNDATION AS SHOWN IN THE DETAILS PROVIDED ON THE NEXT SHEET. TO AVOID DRILLING THROUGH THE TEMPORARY WIRE-FACED MSE RETAINING WALLS, THE FOUNDATION LOCATION SHALL BE SLEEVED DURING CONSTRUCTION OF THE TEMPORARY RETAINING WALL (SEE MAINTENANCE OF TRAFFIC PLANS). THE FOUNDATION SHALL BE Poured INTO THE SLEEVE DURING CONSTRUCTION OF THE BARRIER.

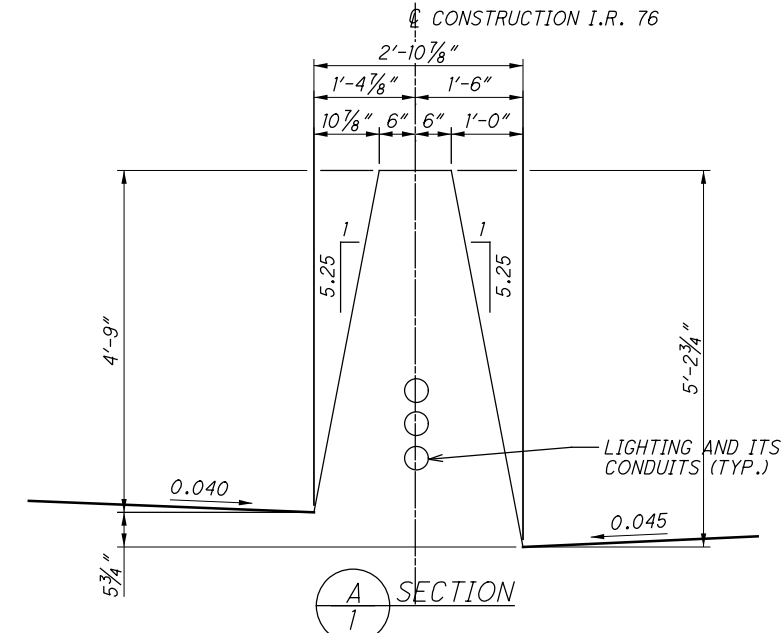
PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 625, "MEDIAN LIGHT POLE FOUNDATION, AS PER PLAN".

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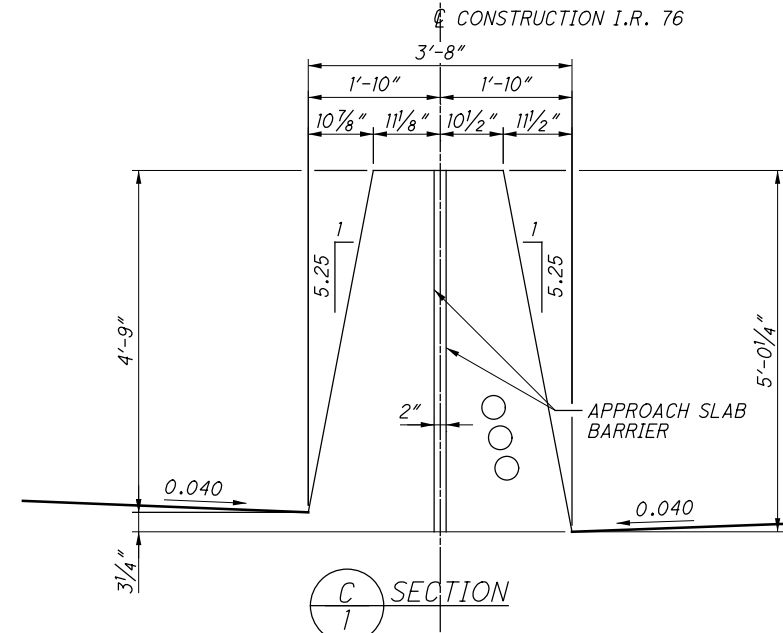
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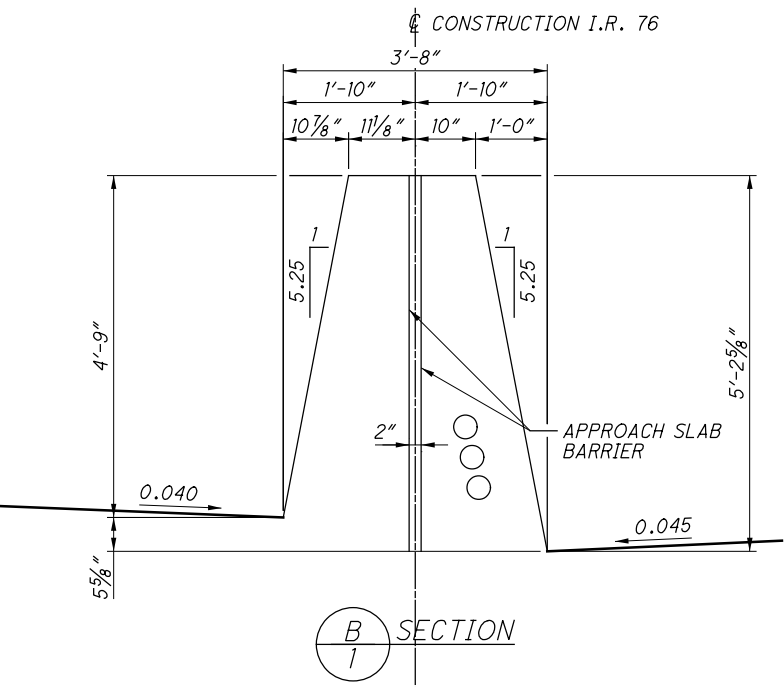
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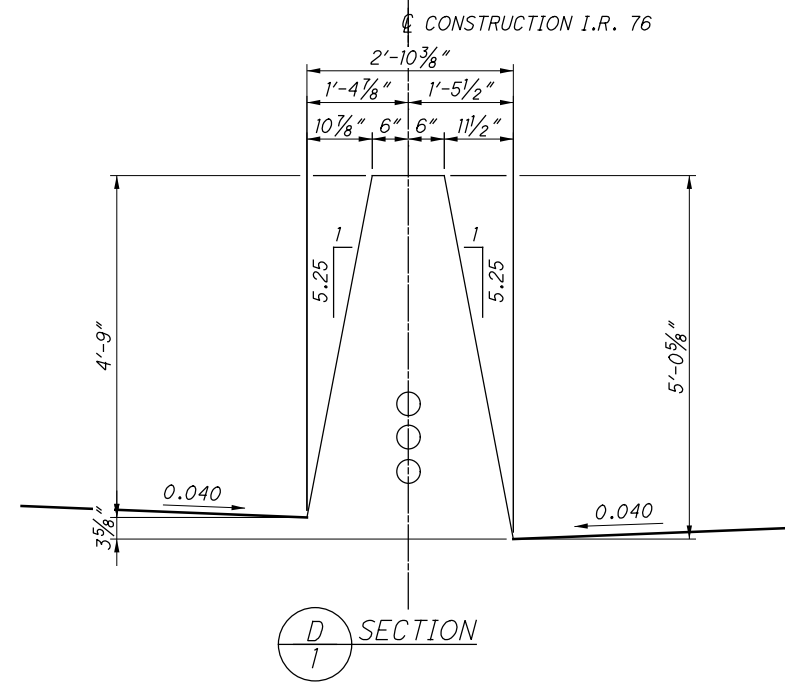
A SECTION



C SECTION



B SECTION



D SECTION

NOTES

1. THE MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN SHALL BE 8' IN LENGTH AND TRANSITION FROM A STANDARD BASE WIDTH AND TOP TO A BASE WIDTH AND TOP MATCHING THE APPROACH SLAB BARRIER.
2. ALL MEASUREMENTS AND NOTES SPECIFIED BY SCDS, RM-4.3 AND HL-20.13 APPLY AND ARE SUPPLEMENTED BY THE ADDITIONAL INFORMATION PROVIDED IN THESE DETAILS. REINFORCING SHALL BE AS PER SCD, WITH THE DIMENSIONS ADJUSTED FOR THE SHAPE OF THE MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN.
3. APPROXIMATE LOCATIONS:  
306+05.82 TO 306+13.82  
308+15.24 TO 308+23.24
4. ADJUST Y401 VERTICAL REINFORCING BARS AS NEEDED.
5. TO AVOID DRILLING THROUGH THE TEMPORARY WIRE-FACED MSE RETAINING WALLS, THE FOUNDATION LOCATION SHALL BE SLEEVED DURING CONSTRUCTION OF THE TEMPORARY RETAINING WALL (SEE MAINTENANCE OF TRAFFIC PLANS). THE FOUNDATION SHALL BE POURED INTO THE SLEEVE DURING CONSTRUCTION OF THE BARRIER.
6. PROVIDE A TRANSITION JUNCTION BOX PER HL-30.33, IN LIEU OF A STANDARD JUNCTION BOX PER HL-20.13.

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**SUM-76-5.53**  
 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN  
 484  
 672

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SHEET NUMBER FROM LIGHTING PLAN										PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
483	486	487	488	01/IMS/PV	10/IMS/PV													
										<b>LIGHTING</b>								
	40				13	27				611	00400	40	FT	4" CONDUIT, TYPE E				
		40	30		23	47				625	00450	70	EACH	CONNECTION, FUSED PULL APART				
		6	9		5	10				625	00480	15	EACH	CONNECTION, UNFUSED PERMANENT				
			2		1	1				625	10490	2	EACH	LIGHT POLE, CONVENTIONAL, DESIGN A4B40				
			2		1	1				625	10490	2	EACH	LIGHT POLE, CONVENTIONAL, DESIGN A6B40				
			4		1	3				625	10490	4	EACH	LIGHT POLE, CONVENTIONAL, DESIGN A8B40				
			1		0	1				625	10490	1	EACH	LIGHT POLE, CONVENTIONAL, DESIGN AT10B40				
		10			3	7				625	10490	10	EACH	LIGHT POLE, CONVENTIONAL, DESIGN AT15B40				
		10			3	7				625	10494	10	EACH	LIGHT POLE, LOW MAST, DESIGN ALM50				
		10	1		4	7				625	14100	11	EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP				
		8	2		3	7				625	14306	10	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP				
		2			1	1				625	14307	2	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN	483			
			8		3	5				625	14600	8	EACH	LIGHT POLE FOUNDATION, MISC.: ON TYPE B BARRIER	483			
		6417	10107		5,453	11,071				625	23200	16,524	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE				
		3150	2526		1,873	3,803				625	23400	5,676	FT	NO. 10 AWG POLE AND BRACKET CABLE				
		1837	339		718	1,458				625	24320	2,176	FT	1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES				
		223	94		105	212				625	25400	317	FT	CONDUIT, 2", 725.04				
		56	32		29	59				625	25500	88	FT	CONDUIT, 3", 725.04				
			1209		399	810				625	25602	1,209	FT	CONDUIT, 4", 725.05				
		84	81		54	111				625	25900	165	FT	CONDUIT, JACKED OR DRILLED: 3"				
			1783		588	1,195				625	25910	1,783	FT	CONDUIT CLEANED AND CABLES REMOVED				
		10	21		10	21				625	26251	31	EACH	LUMINAIRE, CONVENTIONAL, AS PER PLAN: 200W, LED, 480V	482			
		10			3	7				625	26271	10	EACH	LUMINAIRE, LOW MAST, AS PER PLAN: 400W, LED, 480V	482			
			8		3	5				625	27501	8	EACH	LUMINAIRE, UNDERPASS, AS PER PLAN: LED, TYPE III, 240 VOLT	482			
		1803	445		742	1,506				625	29002	2,248	FT	TRENCH, 24" DEEP				
		3			1	2				625	29910	3	EACH	TRANSITION JUNCTION BOX				
		1	4		2	3				625	30700	5	EACH	PULL BOX, 725.08, 18"				
		1			0	1				625	30706	1	EACH	PULL BOX, 725.08, 24"				
				12	4	8				625	31510	12	EACH	PULL BOX REMOVED				
		20	11		10	21				625	32000	31	EACH	GROUND ROD				
		1			0	1				625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM				
		1	1		1	1				625	34001	2	EACH	POWER SERVICE, AS PER PLAN	482			
		1803	445		742	1,506				625	36000	2,248	FT	PLASTIC CAUTION TAPE				
			1		0	1				625	37101	1	EACH	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	482			
			LS		LS	LS				SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	483			
				5	2	3				625	75350	5	EACH	LIGHT TOWER REMOVED				
				3	1	2				625	75400	3	EACH	LIGHT POLE REMOVED				
				2	1	1				625	75411	2	EACH	LIGHT POLE REMOVED FOR REUSE, AS PER PLAN	482			
				5	2	3				625	75500	5	EACH	LIGHT POLE FOUNDATION REMOVED				
				6	2	4				625	75507	6	EACH	LUMINAIRE REMOVED, AS PER PLAN	482			
				2	1	1				625	75510	2	EACH	POWER SERVICE REMOVED				
				5	2	3				625	75540	5	EACH	LIGHT TOWER FOUNDATION REMOVED				
				2	1	1				625	98000	2	EACH	LIGHTING, MISC.: REMOVAL OF UNDERPASS LIGHTING	482			

LIGHTING GENERAL SUMMARY

SUM - 76 - 5.53

CALCULATED  
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CHECKED  
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NO.	DESCRIPTION	REV. BY	DATE
1	P&B LENGTHS CORRECTED	MJH	2-27-19

485  
672

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Main table with columns: NO., DESCRIPTION, REV. BY, DATE, REFERENCE NUMBER, SHEET NO., SIDE, ROADWAY, STATION TO STATION, and various connection types (EACH, FT).

CALCULATED  
MJH  
CHECKED  
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LIGHTING SUBSUMMARY

SUM-76-5.53

(486  
672)

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NO.		DESCRIPTION			REV. BY	DATE	625																										
1		P&B LENGTH CORRECTED			MJH	2-27-19	CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, A4B40	LIGHT POLE, CONVENTIONAL, A6B40	LIGHT POLE, CONVENTIONAL, A8B40	LIGHT POLE, CONVENTIONAL, A710B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	LIGHT POLE FOUNDATION, MISC. ON TYPE B BARRIER	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	NO 10 AWG POLE AND BRACKET CABLE	1½" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	CONDUIT, 2", 725.04	CONDUIT, 3", 725.04	CONDUIT, 4", 725.05	CONDUIT, JACKED OR DRILLED: 3"	CONDUIT CLEANED AND CABLES REMOVED	LUMINAIRE, CONVENTIONAL, AS PER PLAN, 200W, LED, 480 VOLT	LUMINAIRE, UNDERPASS, AS PER PLAN: LED, TYPE II, 240 VOLT	TRENCH, 24" DEEP	PULL BOX, 725.08, 18"	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	MAINTAIN EXISTING LIGHTING	
REFERENCE NUMBER	SHEET NO.	SIDE	ROADWAY	STATION TO STATION TO STATION	CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, A4B40	LIGHT POLE, CONVENTIONAL, A6B40	LIGHT POLE, CONVENTIONAL, A8B40	LIGHT POLE, CONVENTIONAL, A710B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	LIGHT POLE FOUNDATION, MISC. ON TYPE B BARRIER	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	NO 10 AWG POLE AND BRACKET CABLE	1½" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	CONDUIT, 2", 725.04	CONDUIT, 3", 725.04	CONDUIT, 4", 725.05	CONDUIT, JACKED OR DRILLED: 3"	CONDUIT CLEANED AND CABLES REMOVED	LUMINAIRE, CONVENTIONAL, AS PER PLAN, 200W, LED, 480 VOLT	LUMINAIRE, UNDERPASS, AS PER PLAN: LED, TYPE II, 240 VOLT	TRENCH, 24" DEEP	PULL BOX, 725.08, 18"	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	MAINTAIN EXISTING LIGHTING			
PB-B4 TO B11	492	☺	IR 76	312+24 TO 314+44										690								220											
B11		☺	IR 76	314+44	2										210							2											
B11 TO B12		☺	IR 76	314+44 TO 317+64										1005								320											
B12		☺	IR 76	317+64	2										210							2											
B12 TO B13		☺	IR 76	317+64 TO 320+85										993								321											
B13		☺	IR 76	320+85	2							1			210							2				1							
B13 TO B14		☺	IR 76	320+85 TO 323+98										969								313											
B14		☺	IR 76	323+98	2							1			210							2				1							
B14 TO B15		☺	IR 76	323+98 TO 327+10										966								312											
B15		☺	IR 76	327+10	2										210							2											
B15 TO B16		☺	IR 76	327+10 TO 330+07										921								297											
B16		☺	IR 76	330+07	2										210							2											
B17	490	RT	RAMP C	30+99	2			1						1	144							1				1							
B17 TO B18		RT	RAMP C	30+99 TO 32+69										540							170						1						
B18		RT	RAMP C	32+69	2		1								132							1					1						
B18 TO B19		RT	RAMP C	32+69 TO 134+52										579								183						1					
B19		RT	RAMP C	134+52	2		1								132							1					1						
B19 TO B20		RT	RAMP C	134+52 TO 136+15										519								163						1					
B20		RT	RAMP C	136+15	2			1							138							1					1						
B20 TO B21		RT	RAMP C	136+15 TO 138+01										588								186						1					
B21		RT	RAMP C1	138+01	2			1							144							1					1						
B21 TO B22	490-491	RT	RAMP C1	138+01 TO 139+88										591								187						1					
B22	491	RT	RAMP C1	139+88	2			1							144							1					1						
B22 TO B23		RT	RAMP C1	139+88 TO 141+47										507								159						1					
B23		RT	RAMP C1	141+47	2			1							144							1					1						
B23 TO B24		RT	RAMP C1	141+47 TO 143+08										513								161						1					
B24		RT	RAMP C1	143+08	2			1							138							1					1						
B24 TO PB-B3		RT&LT	RAMP C1	143+08 TO 143+12										126				32						32				32					
PB-B3		LT	RAMP C1	143+12		3																											
PB-B3 TO B25		LT	RAMP C1	143+12 TO 144+82												180								170									
B25		LT	RAMP C1	144+82	2				1	1					150							1				1							
PB-B3 TO PB-B2		LT	RAMP C1	143+12 TO 304+16												159								149									
PB-B2		RT	IR 76	304+16		3																											
PB-B2 TO B6		RT&☺	IR 76	304+16 TO 304+20											273																		
CC-UP	495	LT	WOOSTER	16+52																									1				
CC-UP TO PB-UP1		LT	WOOSTER	16+52 TO 16+55												111									27				27				
PB-UP1		LT	WOOSTER	16+55																						1							
PB-UP1 TO PB-UP2		LT	WOOSTER	16+55 TO 15+84												216										67			67				
PB-UP2		LT	WOOSTER	15+84		3																	8			1							1
TOTALS TO LIGHTING GENERAL SUMMARY					30	9	2	2	4	1	1	2	8	10107	2526	339	94	32	1209	81	1783	21	8	445	4	11	1	445	1	LUMP			

**LIGHTING SUBSUMMARY**

SUM - 76 - 5.53

CALCULATED  
MJH  
CHECKED  
KAE














(487)  
672

REFERENCE NUMBER	SHEET NO.	SIDE	ROADWAY	STATION	625												
					PULL BOX REMOVED EACH	LIGHT TOWER REMOVED EACH	LIGHT POLE REMOVED EACH	LIGHT POLE REMOVED FOR REUSE, AS PER PLAN EACH	LIGHT POLE FOUNDATION REMOVED EACH	LUMINAIRE REMOVED, AS PER PLAN EACH	POWER SERVICE REMOVED EACH	LIGHT TOWER FOUNDATION REMOVED EACH	LIGHTING, MISC.: REMOVAL OF UNDERPASS LIGHTING EACH				
R-1	493	106' LT	IR 76	296+73							1						
R-2		104' LT	IR 76	296+88	1												
R-3		68' LT	IR 76	296+90	1												
R-4		69' LT	IR 76	296+37	1												
R-5		73' LT	IR 76	295+18			1		1								
R-6		2' RT	IR 76	297+00	1												
R-7		LT&RT	IR 76	297+07										1			
R-8		114' LT	IR 76	299+20		1							1				
R-9		434' LT	IR 76	304+36	1												
R-10		342' LT	IR 76	304+76		1							1				
R-11		135' LT	IR 76	307+50		1							1				
R-12		130' LT	IR 76	307+69	1												
R-13		69' LT	IR 76	307+31	1												
R-14		96' RT	IR 76	297+00							1						
R-15		90' RT	IR 76	296+91	1												
R-16		74' RT	IR 76	296+50	1												
R-17		75' RT	IR 76	296+26			1		1								
R-18		89' RT	IR 76	297+07	1												
R-19		230' RT	IR 76	303+87	1												
R-20		172' RT	IR 76	304+08		1							1				
R-21		155' RT	IR 76	308+03		1							1				
R-22		52' RT	IR 76	309+29	1												
R-23		LT&RT	IR 76	306+93										1			
R-24		€	IR 76	311+17			1		1								
R-25		€	IR 76	314+44						1							
R-26		€	IR 76	317+64						1							
R-27		€	IR 76	320+63				1	1	1							
R-28		€	IR 76	323+75				1	1	1							
R-29		€	IR 76	326+80						1							
R-30	▼	€	IR 76	329+79						1							
TOTALS TO LIGHTING GENERAL SUMMARY					12	5	3	2	5	6	2	5	2				

<b>LIGHTING SUBSUMMARY</b>	<b>SUM - 76 - 5.53</b>
CALCULATED MJH CHECKED KAE	488 672

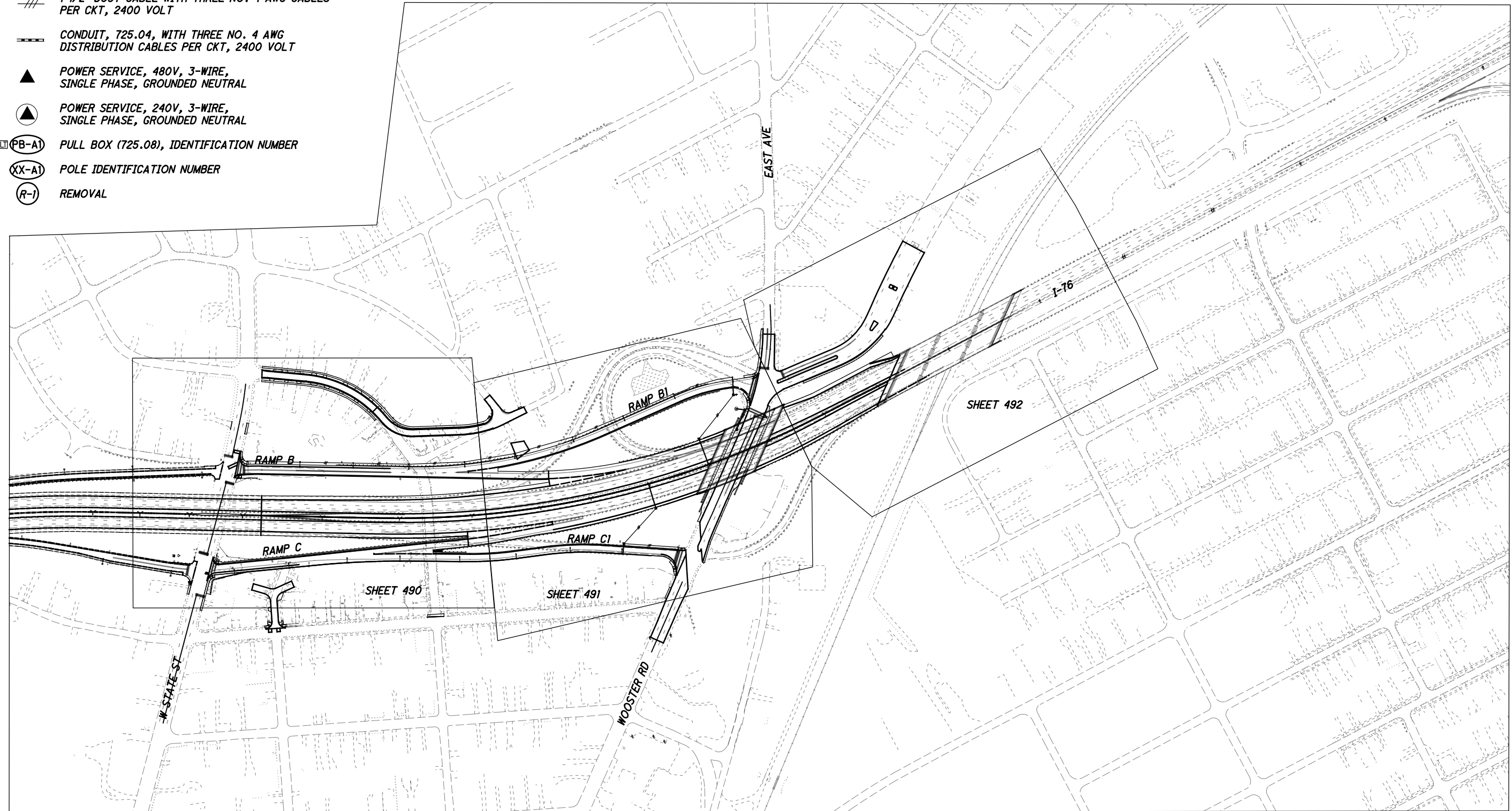


**PLAN LEGEND**

-  PROPOSED LIGHT POLE, CONVENTIONAL, WITH 200 WATT LED LUMINAIRE
-  LIGHT POLE, LOW MAST W/1-400 WATT LED LUMINAIRE. TYPE V (SYMMETRICAL)
-  EXISTING UNDERPASS LUMINAIRE
-  LIGHT POLE, CONVENTIONAL, WITH 200 WATT LED LUMINAIRE MOUNTED AT 40°
-  EXISTING LIGHT TOWER (SYMMETRICAL)
-  EXISTING LIGHT TOWER (ASYMMETRICAL)
-  1-1/2" DUCT CABLE WITH THREE NO. 4 AWG CABLES PER CKT, 2400 VOLT
-  CONDUIT, 725.04, WITH THREE NO. 4 AWG DISTRIBUTION CABLES PER CKT, 2400 VOLT
-  POWER SERVICE, 480V, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL
-  POWER SERVICE, 240V, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL
-  (PB-A) PULL BOX (725.08), IDENTIFICATION NUMBER
-  (XX-A) POLE IDENTIFICATION NUMBER
-  (R-1) REMOVAL

**POLE LEGEND**

STATION, OFFSET	CURRENT	POLE
LIGHT POLE DESIGN NUMBER	NUMBER	NUMBER



CALCULATED MJH CHECKED KAE

0 120 240  
60  
HORIZONTAL SCALE IN FEET

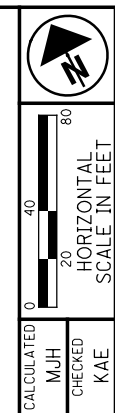
**LIGHTING PLAN SCHEMATIC**

**SUM-76-5.53**

489  
672

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NOTE:  
 1) PAYMENT FOR THE 4" BARRIER RACEWAY IS INCIDENTAL TO AND INCLUDED WITH PAYMENT FOR THE CENTER BARRIER, PER THE "RACEWAY" PLAN NOTE ON STANDARD DRAWING RM-4.3.

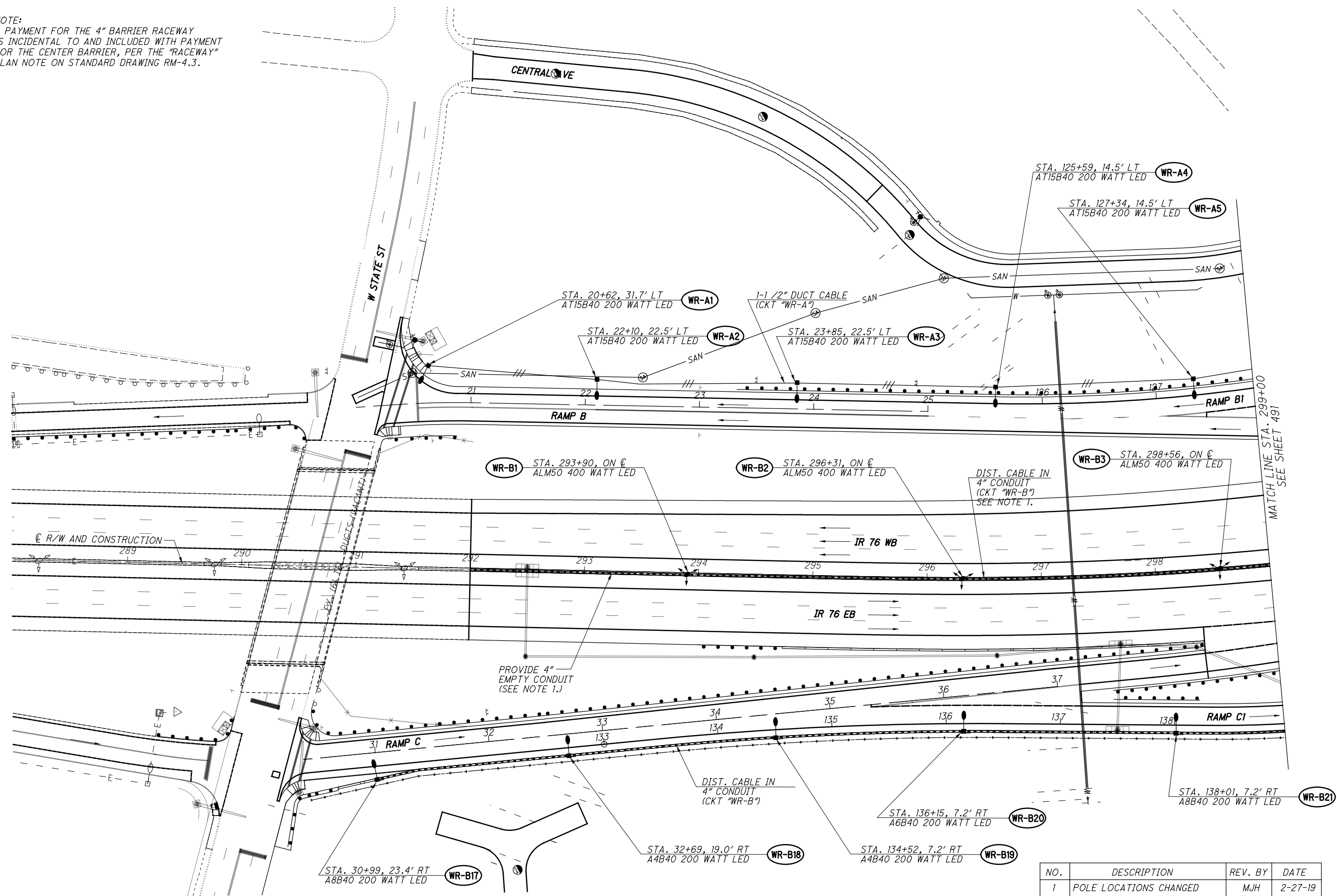


CALCULATED  
 MJH  
 CHECKED  
 KAE

LIGHTING PLAN  
 STA 288+00 TO STA 299+00

SUM-76-5.53

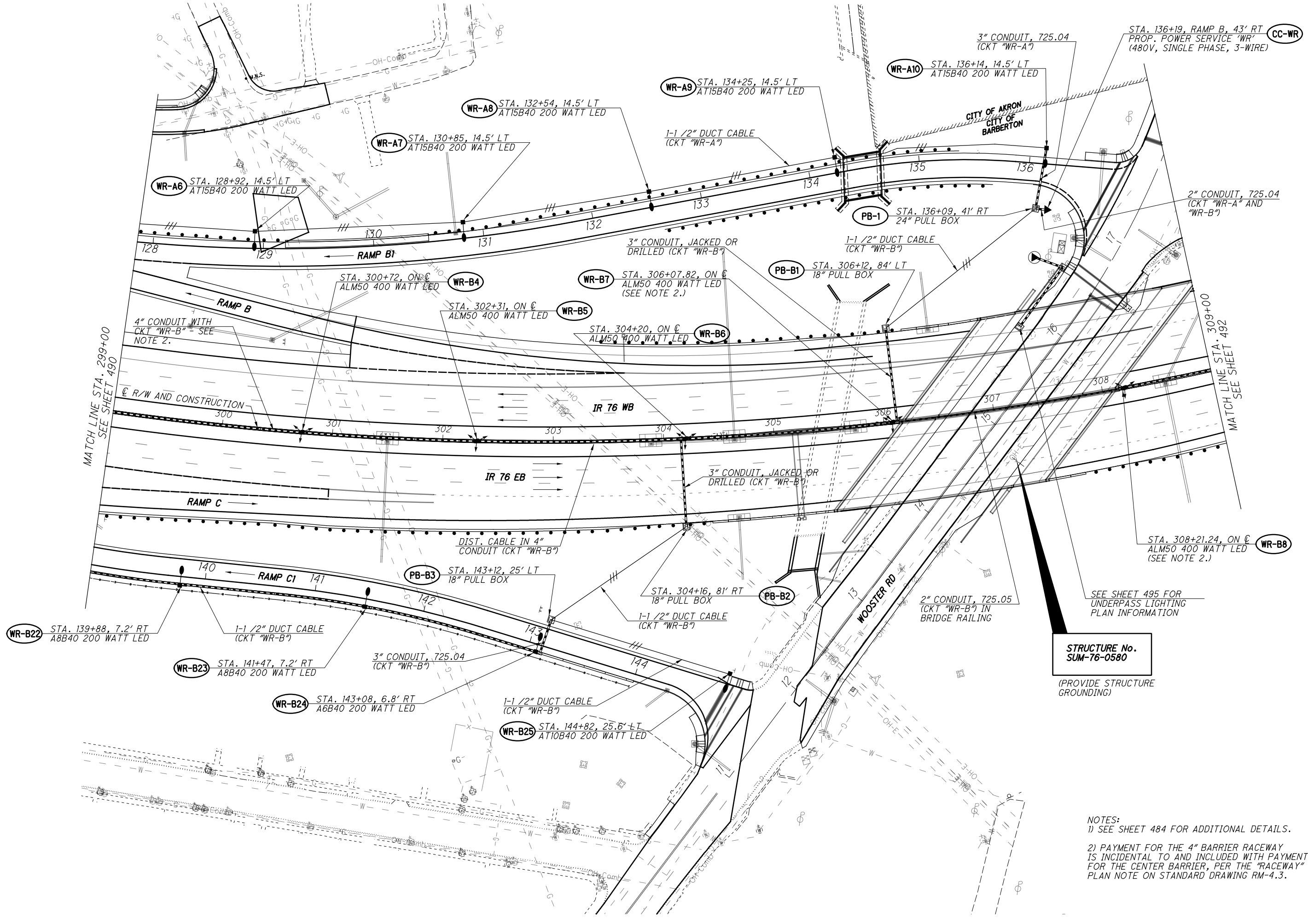
490  
 672



NO.	DESCRIPTION	REV. BY	DATE
1	POLE LOCATIONS CHANGED	MJH	2-27-19

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**LIGHTING PLAN**  
**STA 299+00 TO STA 309+00**

**STRUCTURE No.**  
**SUM-76-0580**  
  
(PROVIDE STRUCTURE  
GROUNDING)

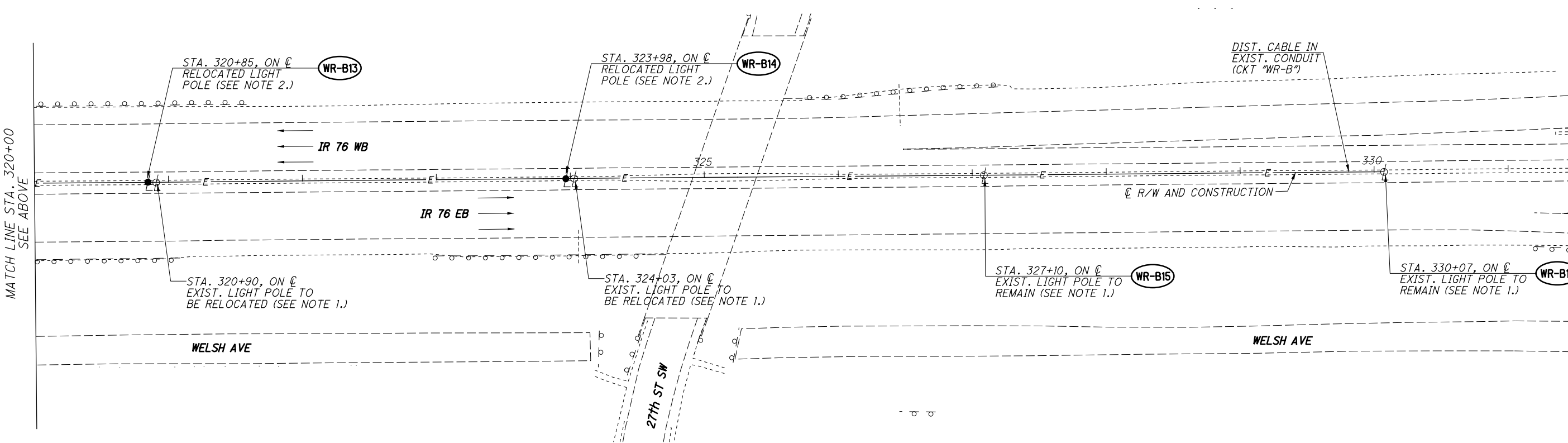
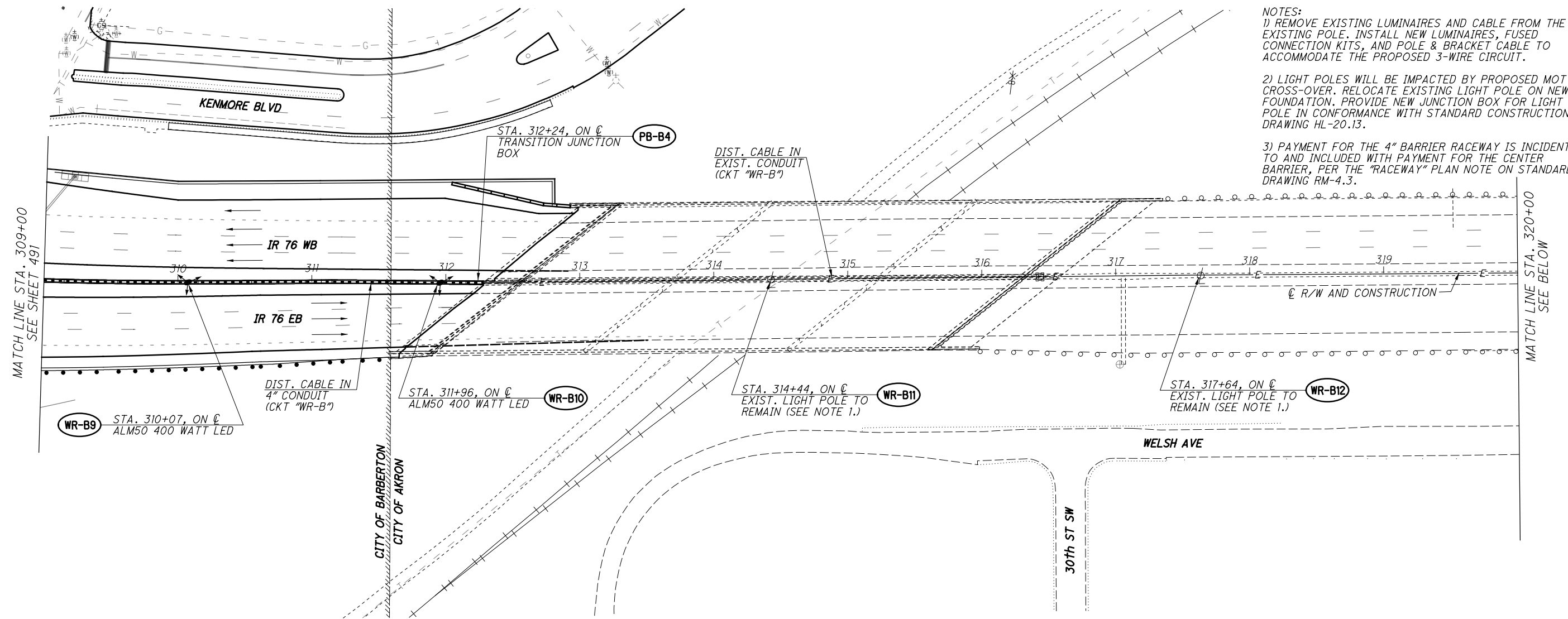
- NOTES:  
1) SEE SHEET 484 FOR ADDITIONAL DETAILS.  
2) PAYMENT FOR THE 4" BARRIER RACEWAY IS INCIDENTAL TO AND INCLUDED WITH PAYMENT FOR THE CENTER BARRIER, PER THE "RACEWAY" PLAN NOTE ON STANDARD DRAWING RM-4.3.

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NOTES:  
 1) REMOVE EXISTING LUMINAIRES AND CABLE FROM THE EXISTING POLE. INSTALL NEW LUMINAIRES, FUSED CONNECTION KITS, AND POLE & BRACKET CABLE TO ACCOMMODATE THE PROPOSED 3-WIRE CIRCUIT.  
 2) LIGHT POLES WILL BE IMPACTED BY PROPOSED MOT CROSS-OVER. RELOCATE EXISTING LIGHT POLE ON NEW FOUNDATION. PROVIDE NEW JUNCTION BOX FOR LIGHT POLE IN CONFORMANCE WITH STANDARD CONSTRUCTION DRAWING HL-20.13.  
 3) PAYMENT FOR THE 4" BARRIER RACEWAY IS INCIDENTAL TO AND INCLUDED WITH PAYMENT FOR THE CENTER BARRIER, PER THE "RACEWAY" PLAN NOTE ON STANDARD DRAWING RM-4.3.

CALCULATED  
 MJH  
 CHECKED  
 KAE

0 20 40 80  
 HORIZONTAL  
 SCALE IN FEET



**LIGHTING PLAN**  
**STA 309+00 TO STA 331+50**

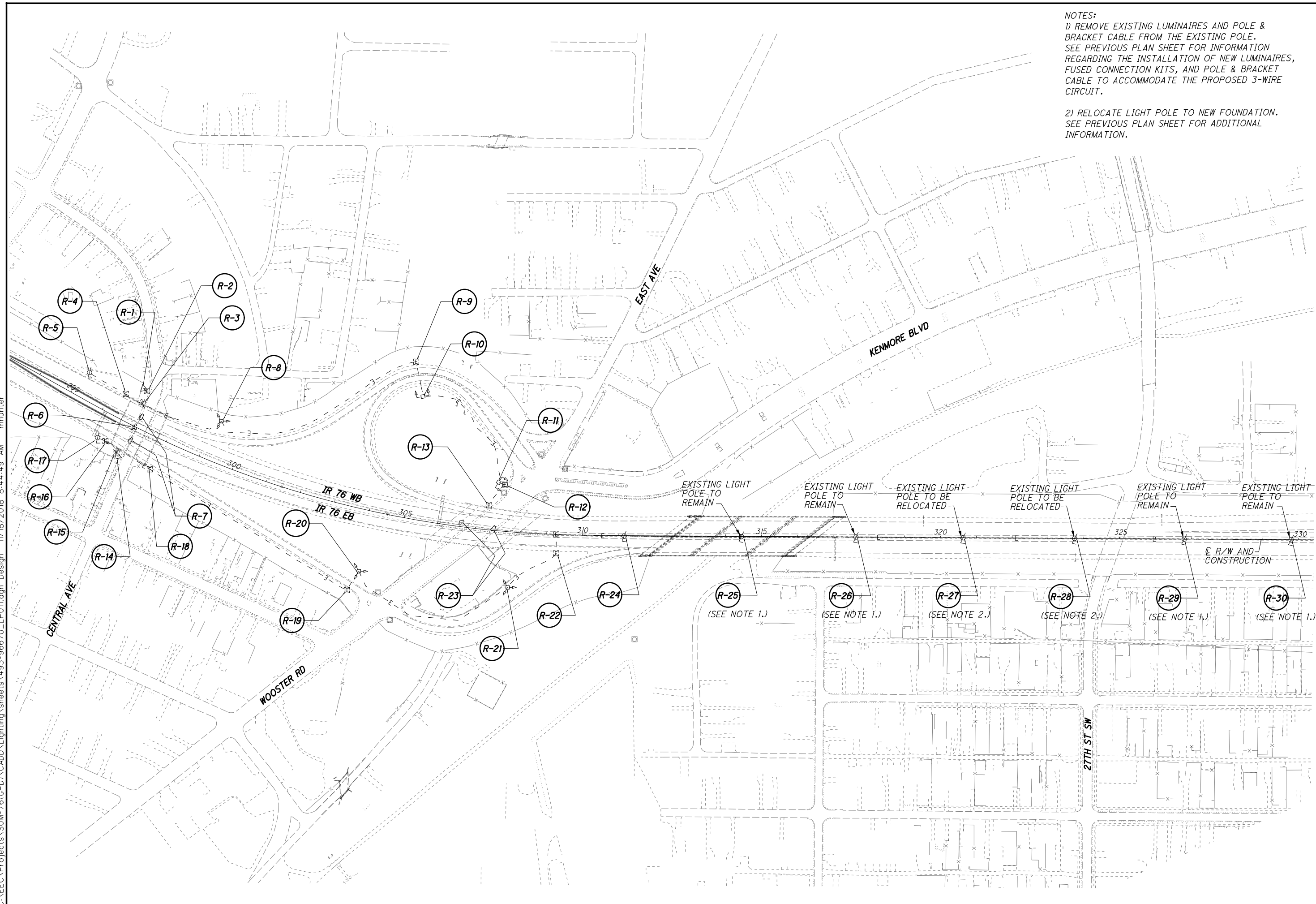
**SUM-76-5.53**

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NOTES:  
1) REMOVE EXISTING LUMINAIRES AND POLE & BRACKET CABLE FROM THE EXISTING POLE. SEE PREVIOUS PLAN SHEET FOR INFORMATION REGARDING THE INSTALLATION OF NEW LUMINAIRES, FUSED CONNECTION KITS, AND POLE & BRACKET CABLE TO ACCOMMODATE THE PROPOSED 3-WIRE CIRCUIT.  
2) RELOCATE LIGHT POLE TO NEW FOUNDATION. SEE PREVIOUS PLAN SHEET FOR ADDITIONAL INFORMATION.

CALCULATED MJH  
CHECKED KAE

0 120 240  
60  
HORIZONTAL SCALE IN FEET

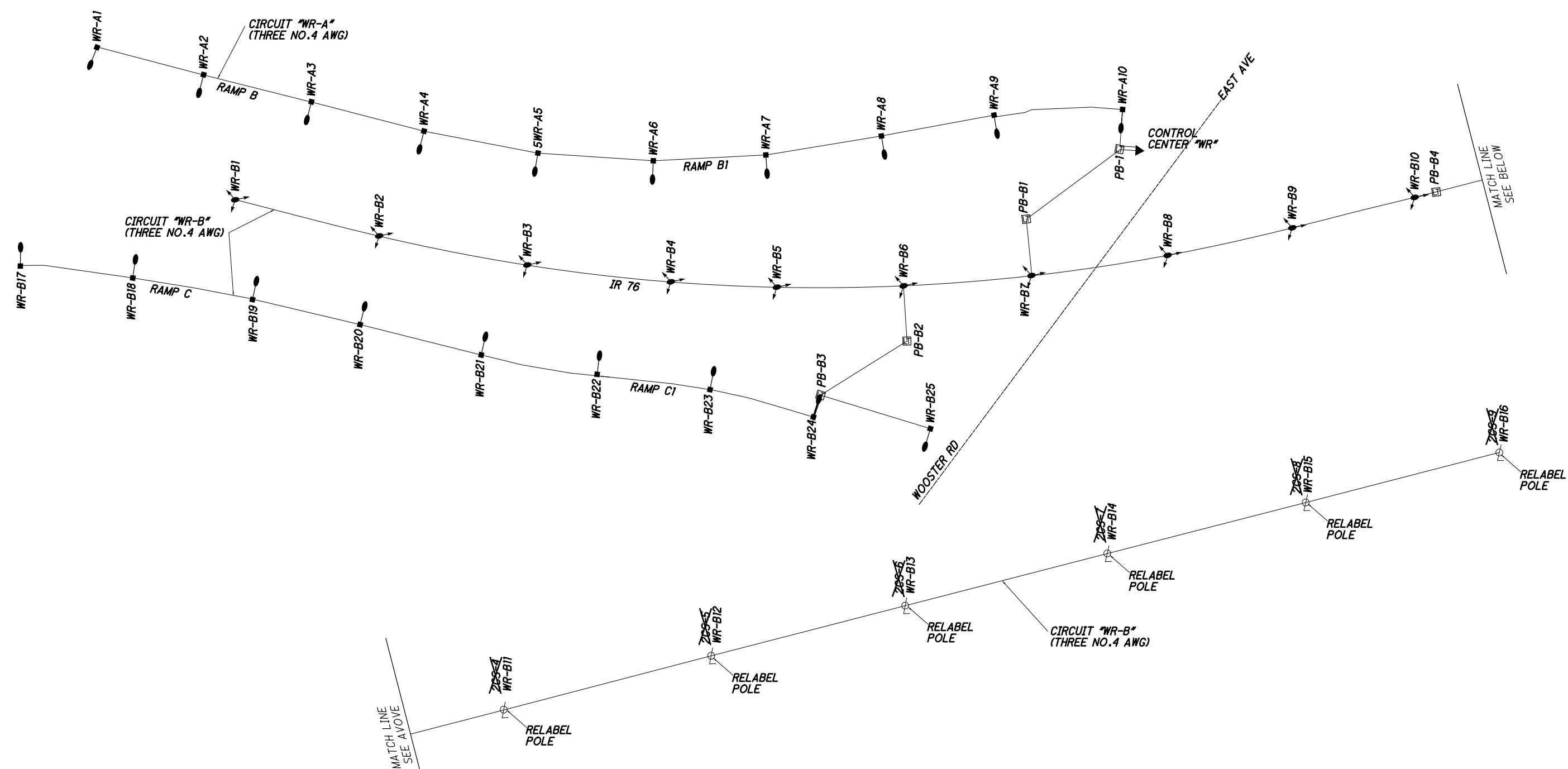


LIGHTING REMOVAL PLAN  
BEGIN PROJECT TO STA 330+00

SUM-76-5.53

493  
672

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**LEGEND**

- LIGHT POLE, CONVENTIONAL, WITH 200 WATT LED LUMINAIRE
- LIGHT POLE, LOW MAST W/1-400 WATT LED LUMINAIRE. TYPE V (SYMMETRICAL)
- PULL BOX/JUNCTION BOX
- POWER SERVICE, 480V, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL
- THREE NO. 4 AWG CABLES PER CKT, 2400 VOLT
- EXISTING LIGHT POLE (TO REMAIN)

POWER SERVICE DATA									
POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
PS-WR	480	10.55	4	60	A	3.8	10	4	ODOT
					B	18.2	40	4	
					SPARE		30		

CALCULATED MJH  
 CHECKED KAE

0 40 80 160  
 HORIZONTAL SCALE IN FEET

**IR-76 LIGHTING CIRCUIT DIAGRAM**

**SUM-76-5.53**

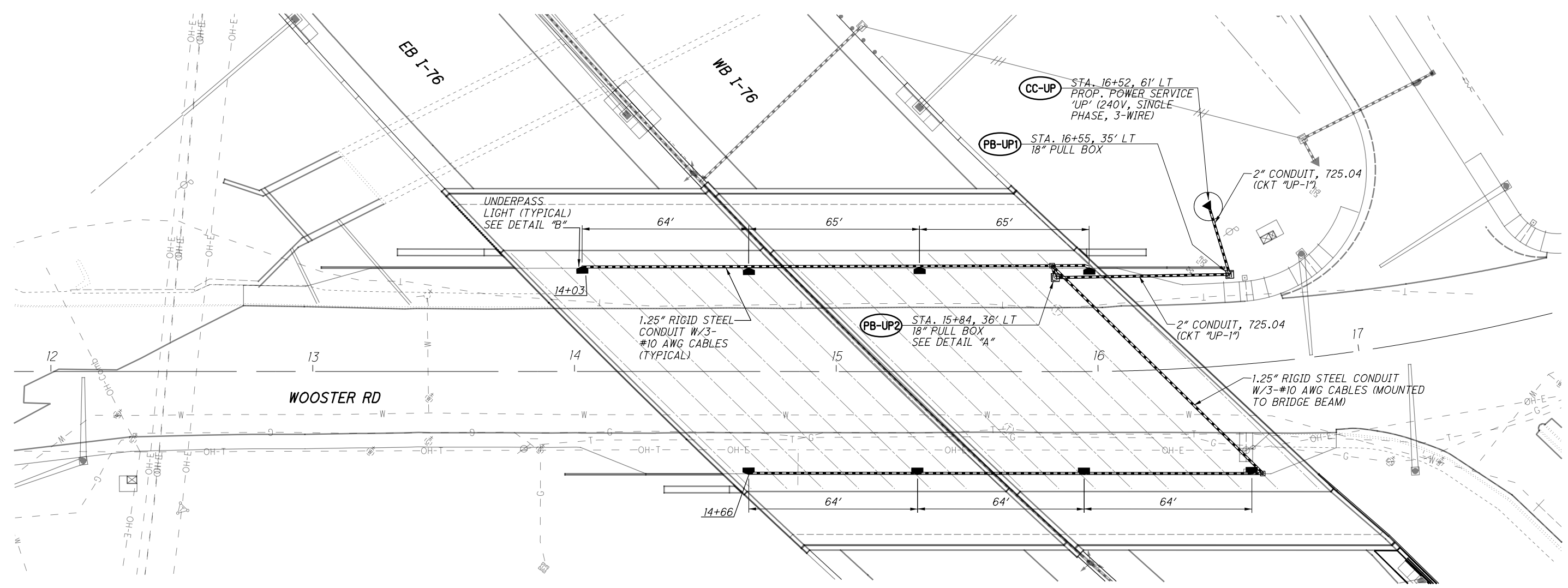


CALCULATED  
M/JH  
CHECKED  
K/AE

**UNDERPASS LIGHTING PLAN  
I-76 OVER WOOSTER RD**

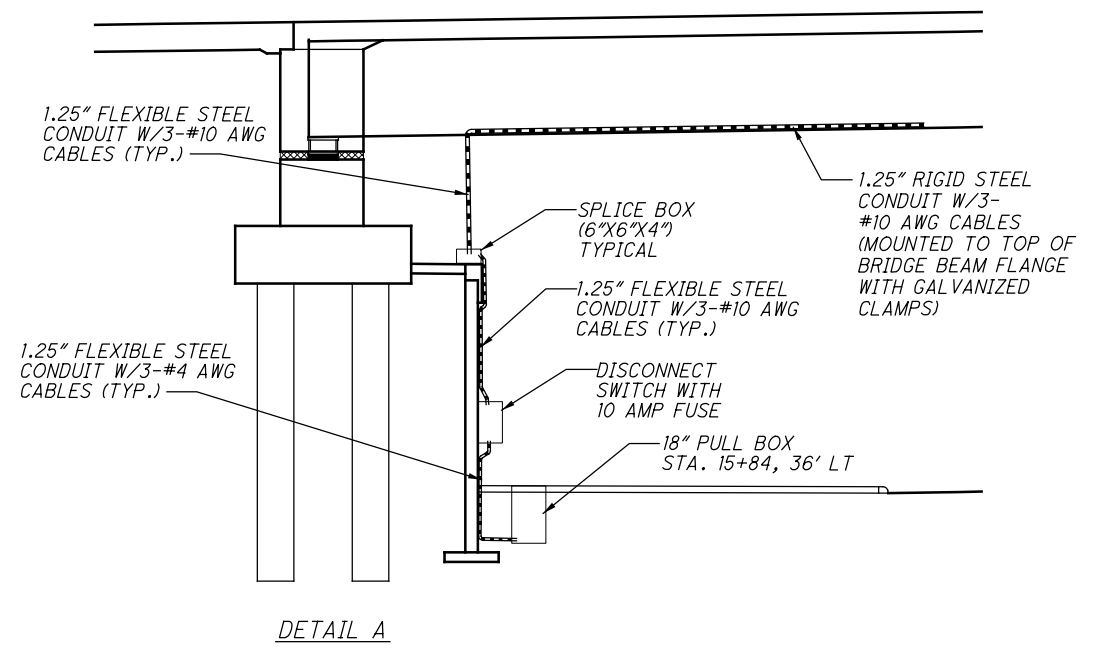
**SUM-76-5.53**

495  
672

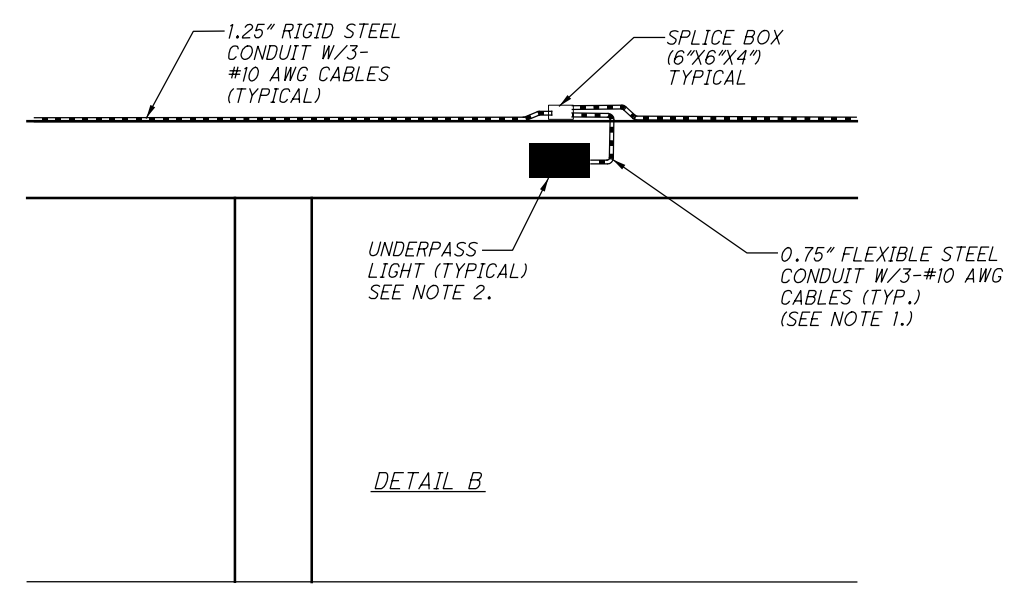


POWER SERVICE DATA

POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
PS-UP	240	0.5	4	60	A	2.1	10	4	CITY OF BARBERTON
					SPARE	-	30	-	



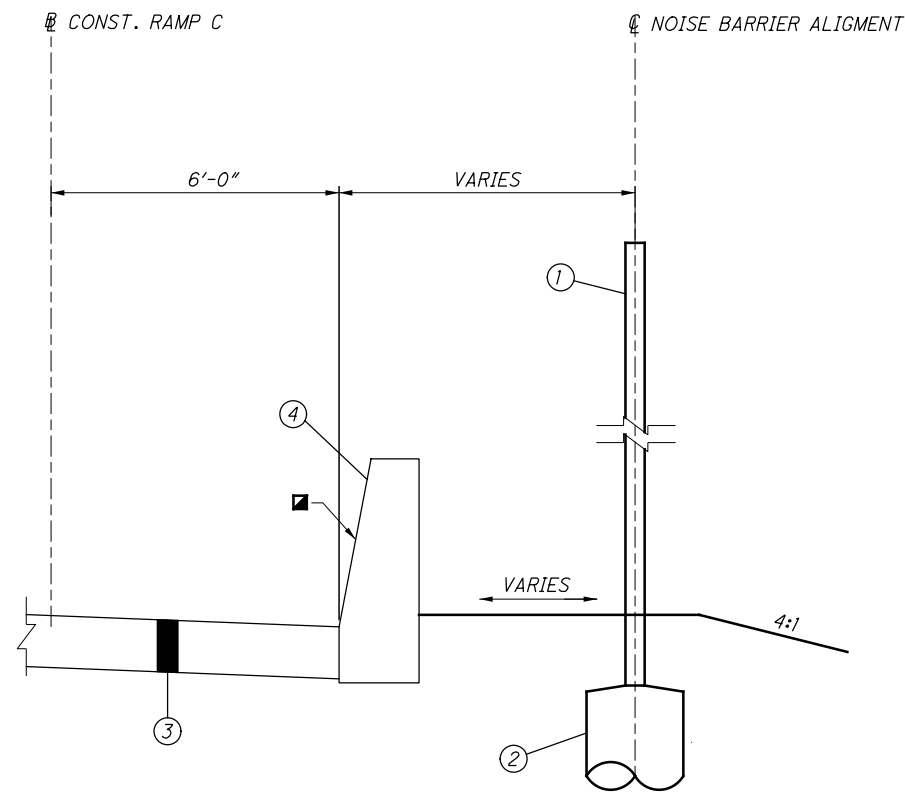
- NOTES:**
- 1) PROVIDE 0.75" PVC-COATED (SEALTIGHT) FLEXIBLE STEEL CONDUIT FROM SPLICE BOX TO UNDERPASS LIGHTING FIXTURE.
  - 2) MOUNT UNDERPASS LIGHT IN THE CENTER OF THE RETAINING WALL COPING.
  - 3) MOUNT DISCONNECT SWITCH ON THE FACE OF THE MSE RETAINING WALL.



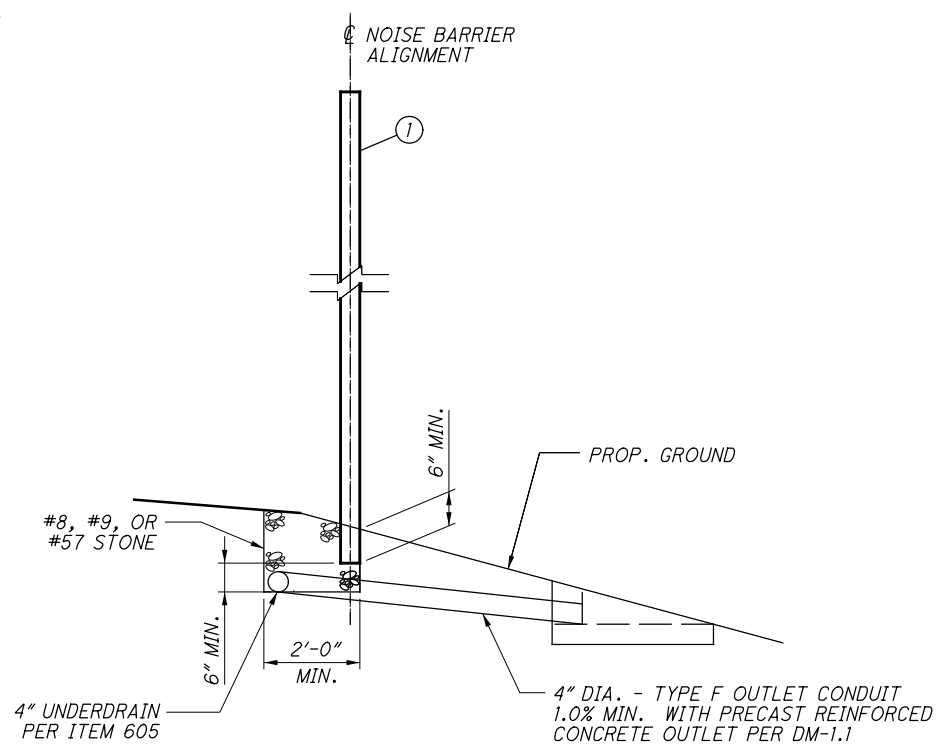
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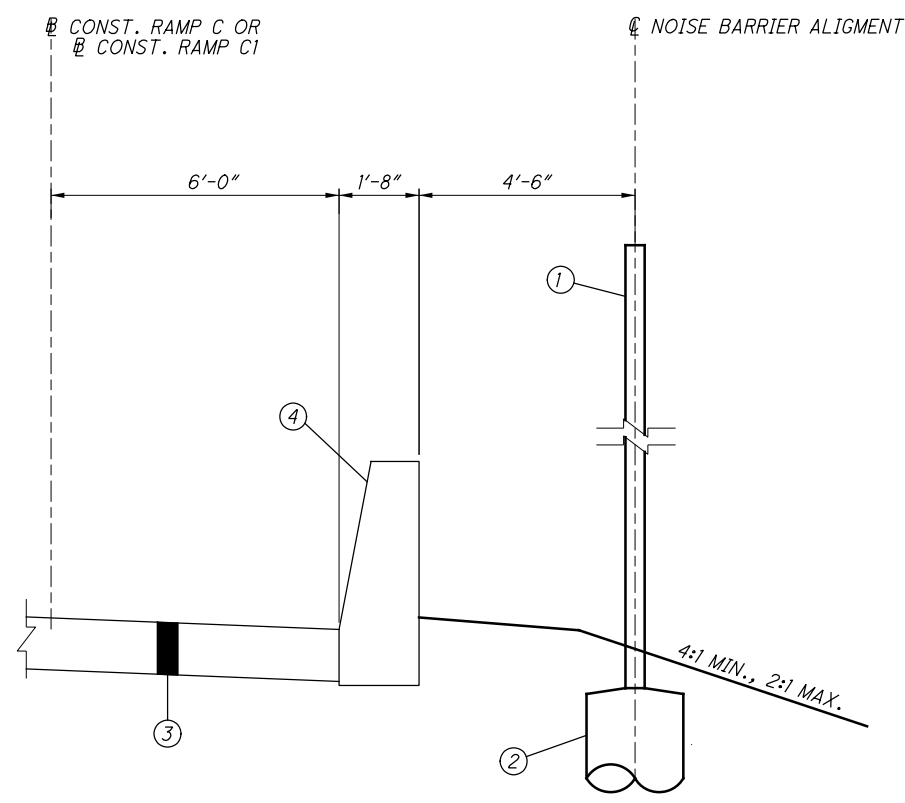




**TYPICAL SECTION**  
STA. 10+00.00 TO STA. 10+96.00



**TYPICAL NOISE BARRIER SECTION**



**TYPICAL SECTION**  
STA. 10+96.00 TO STA. 23+56.00

**NOTES:**

1. CONSTRUCT A TRENCH WITH A MINIMUM LONGITUDINAL SLOPE OF 1.0% UNDER THE NOISE BARRIER PANELS AS SHOWN IN THE TYPICAL ELEVATION.
2. PROVIDE UNDERDRAIN SLOPE OF 1.0% MINIMUM OR AS SPECIFIED IN PROJECT PLANS. INSTALL IN ACCORDANCE WITH ITEM 605.
3. OUTLET CONDUIT TO BE SPACED AT 500' MAX.; INSTALL IN ACCORDANCE WITH ITEM 605.
4. CONSTRUCT A TRENCH UNDERDRAIN UNDER THE NOISE BARRIER PANELS AS SHOWN. THE BOTTOM OF THE TRENCH SHALL COINCIDE WITH THE UNDERDRAIN INVERT ELEVATION AS SHOWN IN THE NOISE BARRIER PROFILES. TRENCH EXCAVATION, AGGREGATE BACKFILL, UNDERDRAIN, TYPE F OUTLET CONDUIT AND PRECAST OUTLET ARE INCLUDED WITH "ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE)", FOR PAYMENT.

**LEGEND:**

- ① ITEM SPECIAL - NOISE BARRIER
- ② ITEM 524 - DRILLED SHAFT
- ③ PROPOSED PAVEMENT (PAID UNDER ROADWAY ITEMS)
- ④ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D (PAID UNDER ROADWAY ITEMS)
- BARRIER BEGINS AT STA. 10+24.32

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11/26/2018 9:08:11 AM  
800FY81STD\_USER

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STA.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STA.	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606	606	606	606						
											SPECIAL - NOISE BARRIER (REFLECTIVE), 10' HEIGHT AND UNDER	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 14' TO 20' HEIGHT	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 20' TO 25' HEIGHT						
											SF	SF	SF	SF						
1	1	B-16"	10+00.00	2	A-16"	10+12.00	1061.50	1054.50	12	7.00	84									
2	2	A-16"	10+12.00	3	A-16"	10+26.00	1066.00	1053.50	14	12.50		175								
3	3	A-16"	10+26.00	4	A-16"	10+40.00	1070.50	1053.00	14	17.50			245							
4	4	A-16"	10+40.00	5	A-16"	10+54.00	1070.00	1052.00	14	18.00			252							
5	5	A-16"	10+54.00	6	A-16"	10+68.00	1069.50	1051.00	14	18.50			259							
6	6	A-16"	10+68.00	7	A-16"	10+82.00	1069.00	1050.00	14	19.00			266							
7	7	A-16"	10+82.00	8	A-16"	10+96.00	1068.00	1048.50	14	19.50			273							
8	8	A-16"	10+96.00	9	A-16"	11+10.00	1067.00	1047.50	14	19.50			273							
9	9	A-16"	11+10.00	10	A-16"	11+24.00	1066.50	1046.50	14	20.00			280							
10	10	A-16"	11+24.00	11	A-16"	11+38.00	1065.50	1046.00	14	19.50			273							
11	11	A-16"	11+38.00	12	A-16"	11+52.00	1065.00	1045.00	14	20.00			280							
12	12	A-16"	11+52.00	13	A-16"	11+66.00	1064.00	1044.00	14	20.00			280							
13	13	A-16"	11+66.00	14	A-16"	11+80.00	1063.00	1043.00	14	20.00			280							
14	14	A-16"	11+80.00	15	A-16"	11+94.00	1062.00	1042.00	14	20.00			280							
15	15	A-16"	11+94.00	16	A-16"	12+08.00	1061.00	1041.00	14	20.00			280							
16	16	A-16"	12+08.00	17	A-16"	12+22.00	1060.00	1040.00	14	20.00			280							
17	17	A-16"	12+22.00	18	A-16"	12+36.00	1059.00	1039.00	14	20.00			280							
18	18	A-16"	12+36.00	19	A-16"	12+50.00	1058.00	1038.00	14	20.00			280							
19	19	A-16"	12+50.00	20	A-16"	12+64.00	1057.00	1037.00	14	20.00			280							
20	20	A-16"	12+64.00	21	A-16"	12+78.00	1056.00	1036.00	14	20.00			280							
21	21	A-16"	12+78.00	22	A-16"	12+92.00	1055.00	1035.00	14	20.00			280							
22	22	A-16"	12+92.00	23	A-16"	13+06.00	1054.00	1034.00	14	20.00			280							
23	23	A-16"	13+06.00	24	A-16"	13+20.00	1053.00	1033.00	14	20.00			280							
24	24	A-16"	13+20.00	25	A-16"	13+34.00	1052.00	1032.00	14	20.00			280							
25	25	A-16"	13+34.00	26	A-16"	13+48.00	1051.00	1031.00	14	20.00			280							
26	26	A-16"	13+48.00	27	A-16"	13+62.00	1050.00	1030.00	14	20.00			280							
27	27	A-16"	13+62.00	28	A-16"	13+76.00	1049.00	1029.00	14	20.00			280							
28	28	A-16"	13+76.00	29	A-16"	13+90.00	1048.00	1028.00	14	20.00			280							
29	29	A-16"	13+90.00	30	A-16"	14+04.00	1047.00	1027.00	14	20.00			280							
30	30	A-16"	14+04.00	31	A-16"	14+18.00	1046.00	1026.00	14	20.00			280							
31	31	A-16"	14+18.00	32	A-16"	14+32.00	1045.00	1025.00	14	20.00			280							
32	32	A-16"	14+32.00	33	A-16"	14+46.00	1044.00	1024.00	14	20.00			280							
33	33	A-16"	14+46.00	34	A-16"	14+60.00	1043.00	1023.00	14	20.00			280							
34	34	A-16"	14+60.00	35	A-16"	14+74.00	1042.00	1022.00	14	20.00			280							
35	35	A-16"	14+74.00	36	A-16"	14+88.00	1041.00	1021.00	14	20.00			280							
36	36	A-16"	14+88.00	37	A-16"	15+02.00	1040.00	1020.50	14	19.50			273							
37	37	A-16"	15+02.00	38	A-16"	15+16.00	1039.00	1019.50	14	19.50			273							
38	38	A-16"	15+16.00	39	A-16"	15+30.00	1038.00	1018.50	14	19.50			273							
39	39	A-16"	15+30.00	40	A-16"	15+44.00	1037.00	1017.50	14	19.50			273							
40	40	A-16"	15+44.00	41	A-16"	15+58.00	1036.00	1016.50	14	19.50			273							
41	41	A-16"	15+58.00	42	A-16"	15+72.00	1035.50	1015.50	14	20.00			280							
42	42	A-16"	15+72.00	43	A-16"	15+86.00	1034.50	1015.00	14	19.50			273							
43	43	A-16"	15+86.00	44	A-16"	16+00.00	1033.50	1014.00	14	19.50			273							
44	44	A-16"	16+00.00	45	A-16"	16+14.00	1033.00	1013.00	14	20.00			280							
45	45	A-16"	16+14.00	46	A-16"	16+28.00	1032.00	1012.50	14	19.50			273							
46	46	A-16"	16+28.00	47	A-16"	16+42.00	1031.00	1011.50	14	19.50			273							
47	47	A-16"	16+42.00	48	A-16"	16+56.00	1030.50	1011.00	14	19.50			273							
48	48	A-16"	16+56.00	49	A-16"	16+70.00	1029.50	1010.00	14	19.50			273							
49	49	A-16"	16+70.00	50	A-16"	16+84.00	1028.50	1009.50	14	19.00			266							
50	50	A-16"	16+84.00	51	A-16"	16+98.00	1028.00	1008.50	14	19.50			273							

**NOTE:**  
 FOR TOTALS, SEE SHT. NO.  $\frac{500}{672}$ .

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 96670\_003\_MF001.DGN

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STA.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STA.	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606	606	606	606						
											SPECIAL - NOISE BARRIER (REFLECTIVE), 10' HEIGHT AND UNDER	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 14' TO 20' HEIGHT	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 20' TO 25' HEIGHT						
											SF	SF	SF	SF						
51	51	A-16"	16+98.00	52	A-16"	17+12.00	1027.50	1007.50	14	20.00			280							
52	52	A-16"	17+12.00	53	A-16"	17+26.00	1026.50	1007.00	14	19.50			273							
53	53	A-16"	17+26.00	54	A-16"	17+40.00	1026.00	1006.00	14	20.00			280							
54	54	A-16"	17+40.00	55	A-16"	17+54.00	1025.50	1005.50	14	20.00			280							
55	55	A-16"	17+54.00	56	A-16"	17+68.00	1024.50	1004.50	14	20.00			280							
56	56	A-16"	17+68.00	57	A-16"	17+82.00	1023.50	1003.50	14	20.00			280							
57	57	A-16"	17+82.00	58	A-16"	17+96.00	1022.50	1003.00	14	19.50			273							
58	58	A-16"	17+96.00	59	A-16"	18+10.00	1021.50	1002.00	14	19.50			273							
59	59	A-16"	18+10.00	60	A-16"	18+24.00	1020.50	1001.50	14	19.00			266							
60	60	A-16"	18+24.00	61	A-16"	18+38.00	1019.50	1000.50	14	19.00			266							
61	61	A-16"	18+38.00	62	A-16"	18+52.00	1018.50	999.50	14	19.00			266							
62	62	A-16"	18+52.00	63	A-16"	18+66.00	1018.00	998.50	14	19.50			273							
63	63	A-16"	18+66.00	64	A-16"	18+80.00	1017.00	997.50	14	19.50			273							
64	64	A-16"	18+80.00	65	A-16"	18+94.00	1016.00	996.50	14	19.50			273							
65	65	A-16"	18+94.00	66	A-16"	19+08.00	1015.00	995.50	14	19.50			273							
66	66	A-16"	19+08.00	67	A-16"	19+22.00	1014.50	995.00	14	19.50			273							
67	67	A-16"	19+22.00	68	A-16"	19+36.00	1013.50	994.00	14	19.50			273							
68	68	A-16"	19+36.00	69	A-16"	19+50.00	1012.50	993.00	14	19.50			273							
69	69	A-16"	19+50.00	70	A-16"	19+64.00	1012.00	992.00	14	20.00			280							
70	70	A-16"	19+64.00	71	A-16"	19+78.00	1011.00	991.00	14	20.00			280							
71	71	A-16"	19+78.00	72	A-16"	19+92.00	1010.00	990.00	14	20.00			280							
72	72	A-16"	19+92.00	73	A-16"	20+06.00	1009.00	989.00	14	20.00			280							
73	73	A-16"	20+06.00	74	A-16"	20+20.00	1008.00	988.00	14	20.00			280							
74	74	A-16"	20+20.00	75	A-16"	20+34.00	1007.00	987.00	14	20.00			280							
75	75	A-16"	20+34.00	76	A-16"	20+48.00	1006.00	986.00	14	20.00			280							
76	76	A-16"	20+48.00	77	A-16"	20+62.00	1005.00	985.00	14	20.00			280							
77	77	A-16"	20+62.00	78	A-16"	20+76.00	1004.00	984.50	14	19.50			273							
78	78	A-16"	20+76.00	79	A-16"	20+90.00	1003.00	983.50	14	19.50			273							
79	79	A-16"	20+90.00	80	A-16"	21+04.00	1002.00	982.50	14	19.50			273							
80	80	A-16"	21+04.00	81	A-16"	21+18.00	1001.00	981.50	14	19.50			273							
81	81	A-16"	21+18.00	82	A-16"	21+32.00	1000.00	980.50	14	19.50			273							
82	82	A-16"	21+32.00	83	A-20"	21+46.00	999.00	979.50	14	19.50			273							
83	83	A-20"	21+46.00	84	A-20"	21+66.00	998.00	978.00	20	20.00			400							
84	84	A-20"	21+66.00	85	A-16"	21+78.00	997.00	977.00	12	20.00			240							
85	85	A-16"	21+78.00	86	A-16"	21+94.00	996.00	976.00	16	20.00			320							
86	86	A-16"	21+94.00	87	A-20"	22+10.00	995.00	975.00	16	20.00			320							
87	87	A-20"	22+10.00	88	A-20"	22+30.00	994.00	973.50	20	20.50				410						
88	88	A-20"	22+30.00	89	A-16"	22+44.00	993.00	972.50	14	20.50			287							
89	89	A-16"	22+44.00	90	A-16"	22+58.00	992.00	972.00	14	20.00			280							
90	90	A-16"	22+58.00	91	A-16"	22+72.00	991.00	971.00	14	20.00			280							
91	91	A-16"	22+72.00	92	A-16"	22+86.00	990.00	970.00	14	20.00			280							
92	92	A-16"	22+86.00	93	A-16"	23+00.00	989.00	969.00	14	20.00			280							
93	93	A-16"	23+00.00	94	A-16"	23+14.00	988.00	968.50	14	19.50			273							
94	94	A-16"	23+14.00	95	A-16"	23+30.00	987.00	967.50	16	19.50			312							
95	95	A-16"	23+30.00	96	A-16"	23+44.00	981.50	967.00	14	14.50			203							
96	96	A-16"	23+44.00	97	B-16"	23+56.00	976.00	966.00	12	10.00	120									
<b>TOTALS</b>											204	175	25217	697						

**NOTE:**  
 ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY SHT. (163/672)

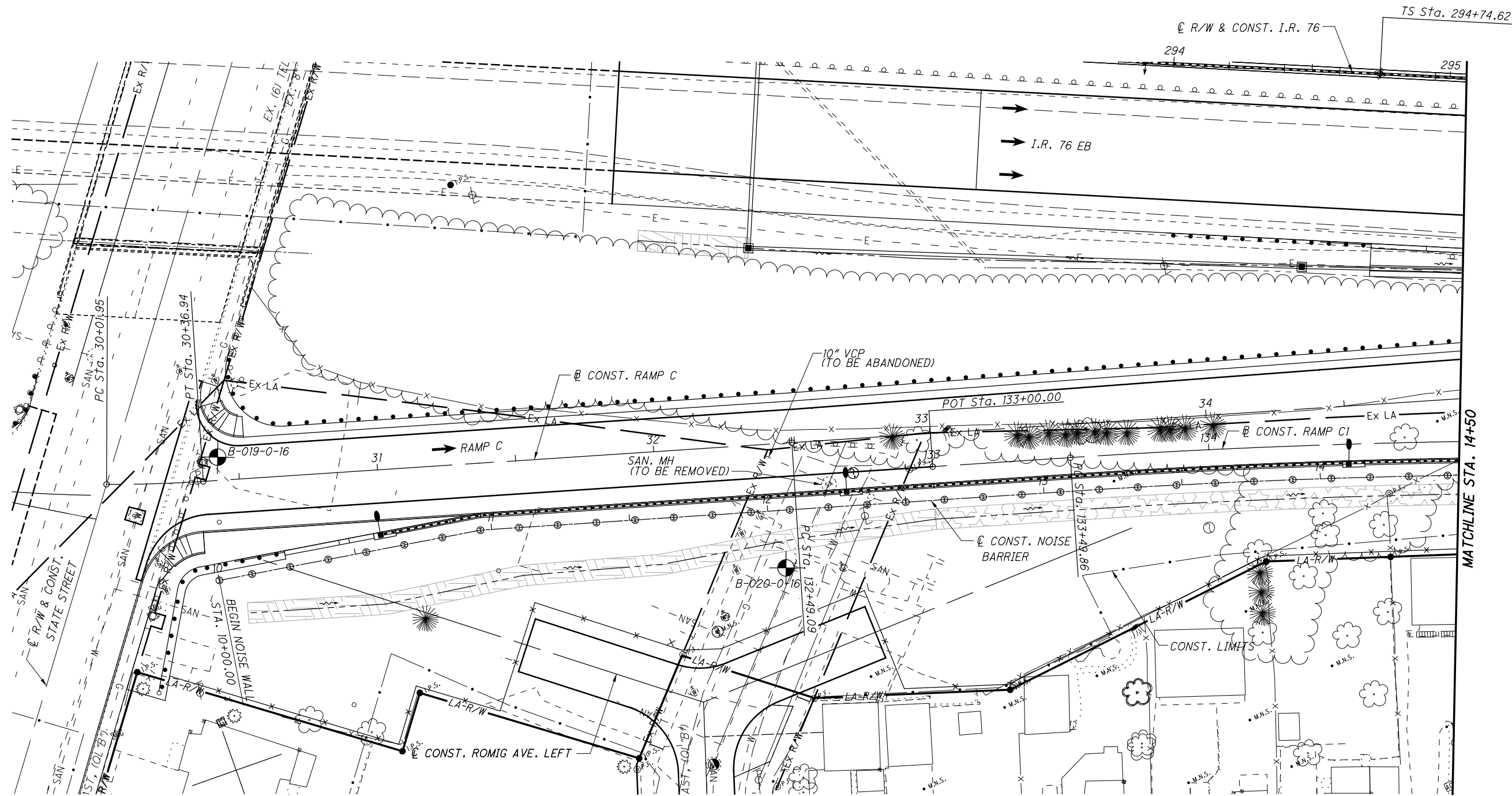
**NOISE BARRIER CALCULATIONS & SUBSUMMARY**

**SUM - 76 - 5.53**




CALCULATED  
RPR  
CHECKED  
RHC

500  
672

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**LEGEND:**

-  SOIL BORING LOCATION
-  ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
-  ITEM 670 - DITCH EROSION PROTECTION

CALCULATED RPR CHECKED RHC

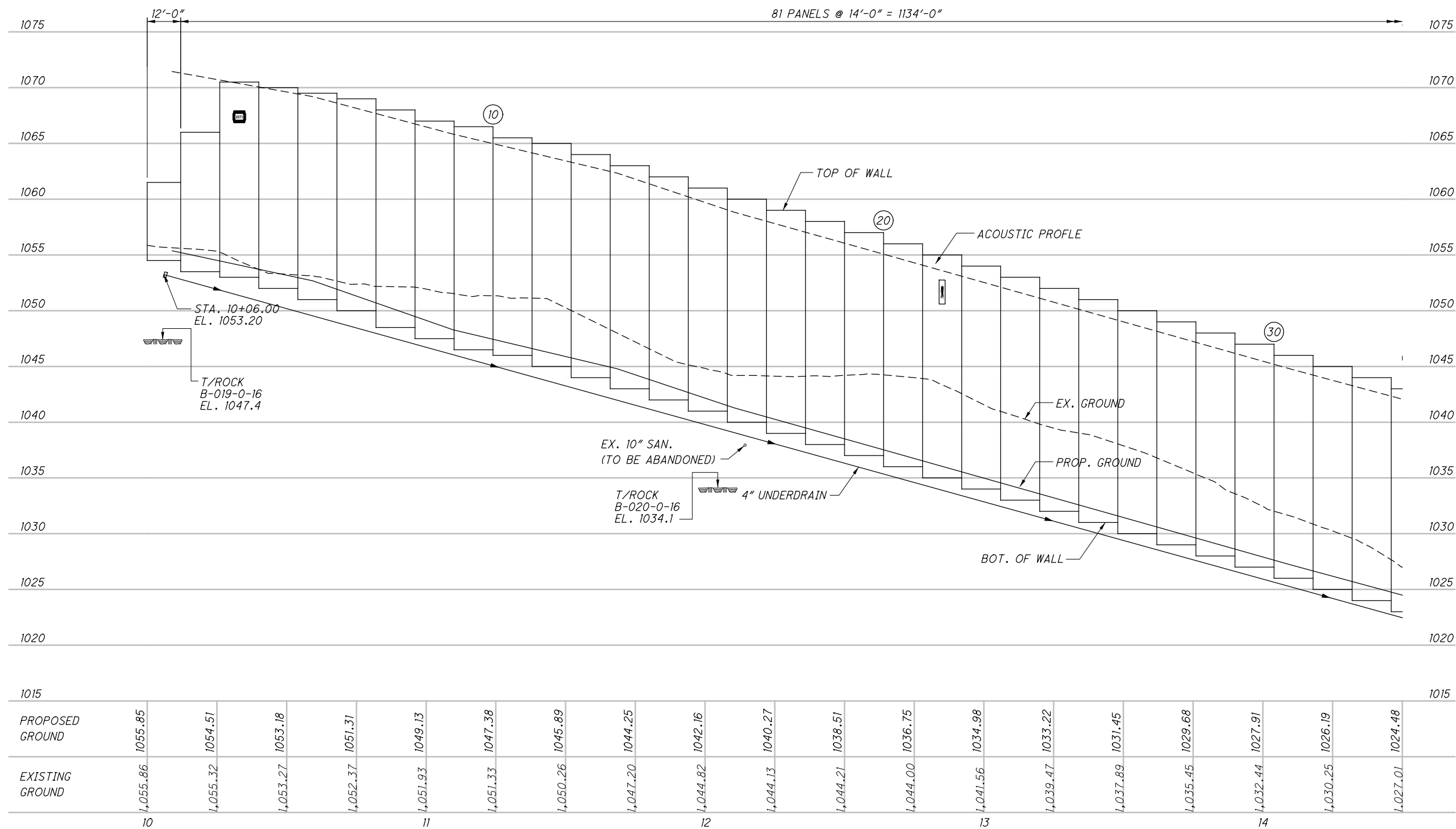
HORIZONTAL SCALE IN FEET

**PLAN - NOISE BARRIER NSA 1  
 BEGIN TO 14+50**

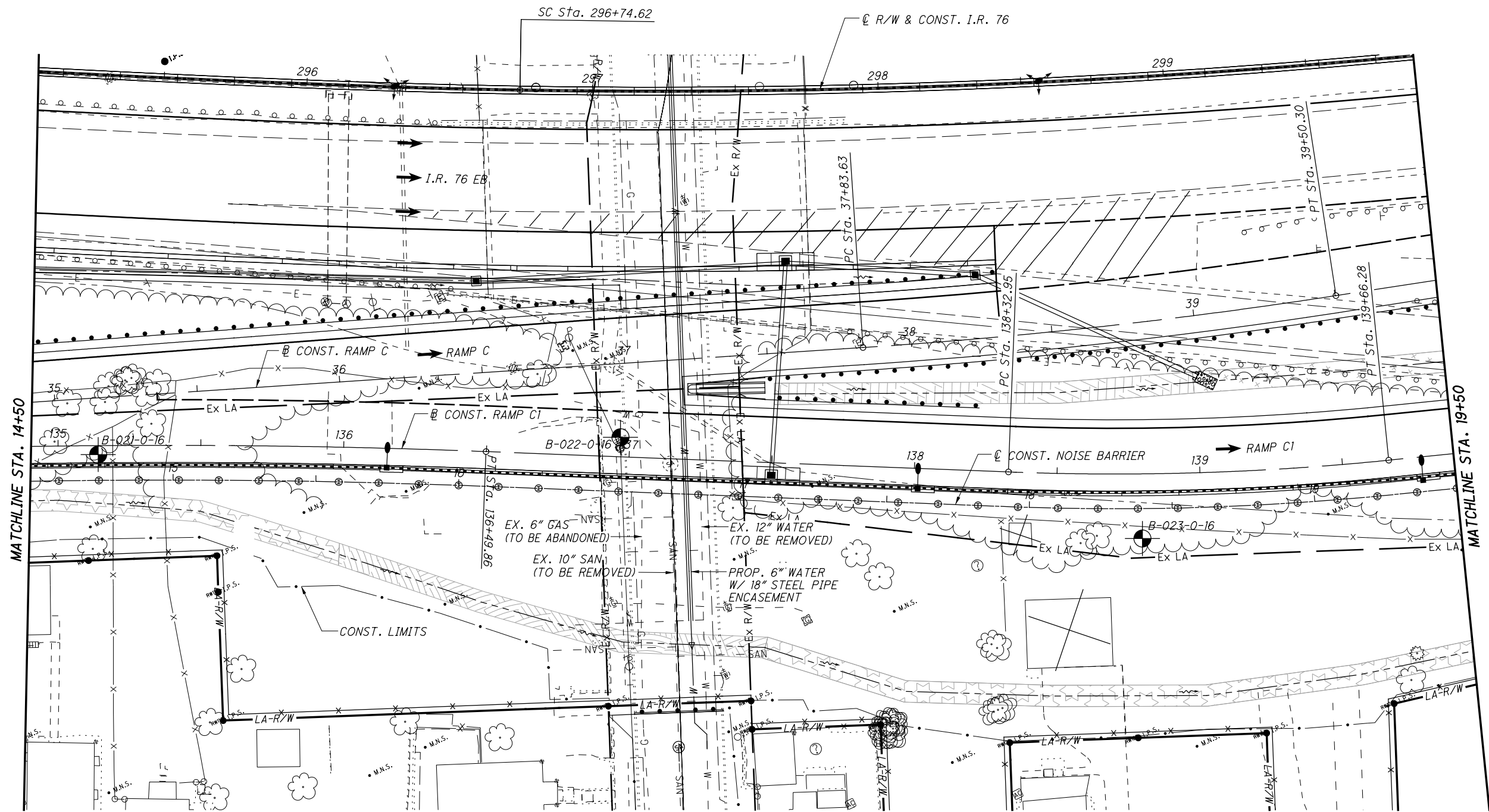
**SUM-76-5.53**

501  
672

TOP OF NOISE BARRIER ELEVATION	1061.50	1066.00	1070.50	1070.00	1069.50	1069.00	1068.00	1067.00	1066.50	1065.50	1065.00	1064.00	1063.00	1062.00	1061.00	1060.00	1059.00	1058.00	1057.00	1056.00	1055.00	1054.00	1053.00	1052.00	1051.00	1050.00	1049.00	1048.00	1047.00	1046.00	1045.00	1044.00
ACOUSTIC PROFILE ELEVATION	1070.86	1070.31	1069.76	1069.21	1068.52	1067.75	1066.99	1066.22	1065.45	1064.68	1063.91	1063.14	1062.13	1061.06	1059.99	1058.92	1057.85	1056.79	1055.70	1054.58	1053.45	1052.33	1051.20	1050.08	1048.96	1047.85	1046.87	1045.88	1044.90	1043.91	1042.93	1041.95
BOTTOM OF NOISE BARRIER ELEVATION	1054.50	1053.50	1053.00	1052.00	1051.00	1050.00	1048.50	1047.50	1046.50	1046.00	1045.00	1044.00	1043.00	1042.00	1041.00	1040.00	1039.00	1038.00	1037.00	1036.00	1035.00	1034.00	1033.00	1032.00	1031.00	1030.00	1029.00	1028.00	1027.00	1026.00	1025.00	1024.00
PANEL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32



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




CALCULATED RPR CHECKED RHC

0 10 20 40  
 HORIZONTAL SCALE IN FEET

PLAN - NOISE BARRIER NSA 1  
 STA. 14+50 TO 19+50

**LEGEND:**

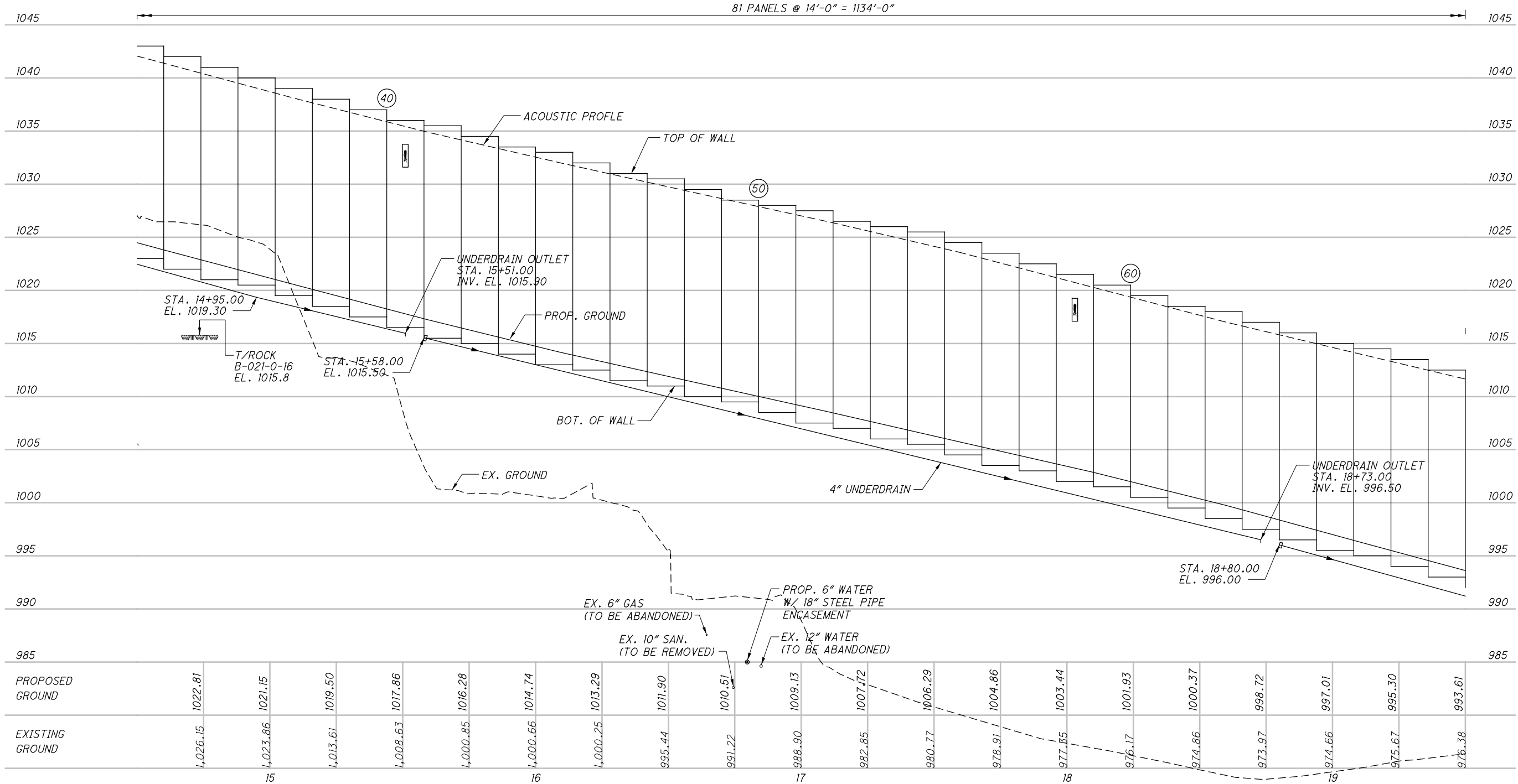
-  SOIL BORING LOCATION
-  ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
-  ITEM 670 - DITCH EROSION PROTECTION

SUM-76-5.53

503  
672

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 11/26/2018  
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TOP OF NOISE BARRIER ELEVATION	1043.00	1042.00	1041.00	1040.00	1039.00	1038.00	1037.00	1036.00	1035.50	1034.50	1033.50	1033.00	1032.00	1031.00	1030.50	1029.50	1028.50	1028.00	1027.50	1026.50	1026.00	1025.50	1024.50	1023.50	1022.50	1021.50	1020.50	1019.50	1018.50	1018.00	1017.00	1016.00	1015.00	1014.50	1013.50	1012.50	
ACOUSTIC PROFILE ELEVATION	1040.97	1040.13	1039.28	1038.44	1037.60	1036.76	1035.91	1035.07	1034.23	1033.39	1032.55	1031.71	1030.87	1030.03	1029.19	1028.46	1027.76	1027.06	1026.36	1025.66	1024.96	1024.26	1023.56	1022.86	1022.16	1021.46	1020.76	1019.50	1018.53	1017.56	1016.65	1015.82	1014.98	1014.15	1013.31	1012.48	1011.65
BOTTOM OF NOISE BARRIER ELEVATION	1023.00	1022.00	1021.00	1020.50	1019.50	1018.50	1017.50	1016.50	1015.50	1015.00	1014.00	1013.00	1012.50	1011.50	1011.00	1010.00	1009.50	1008.50	1007.50	1007.00	1006.00	1005.50	1004.50	1003.50	1003.00	1002.00	1001.50	1000.50	999.50	998.50	997.50	996.50	995.50	995.00	994.00	993.00	
PANEL NO.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	

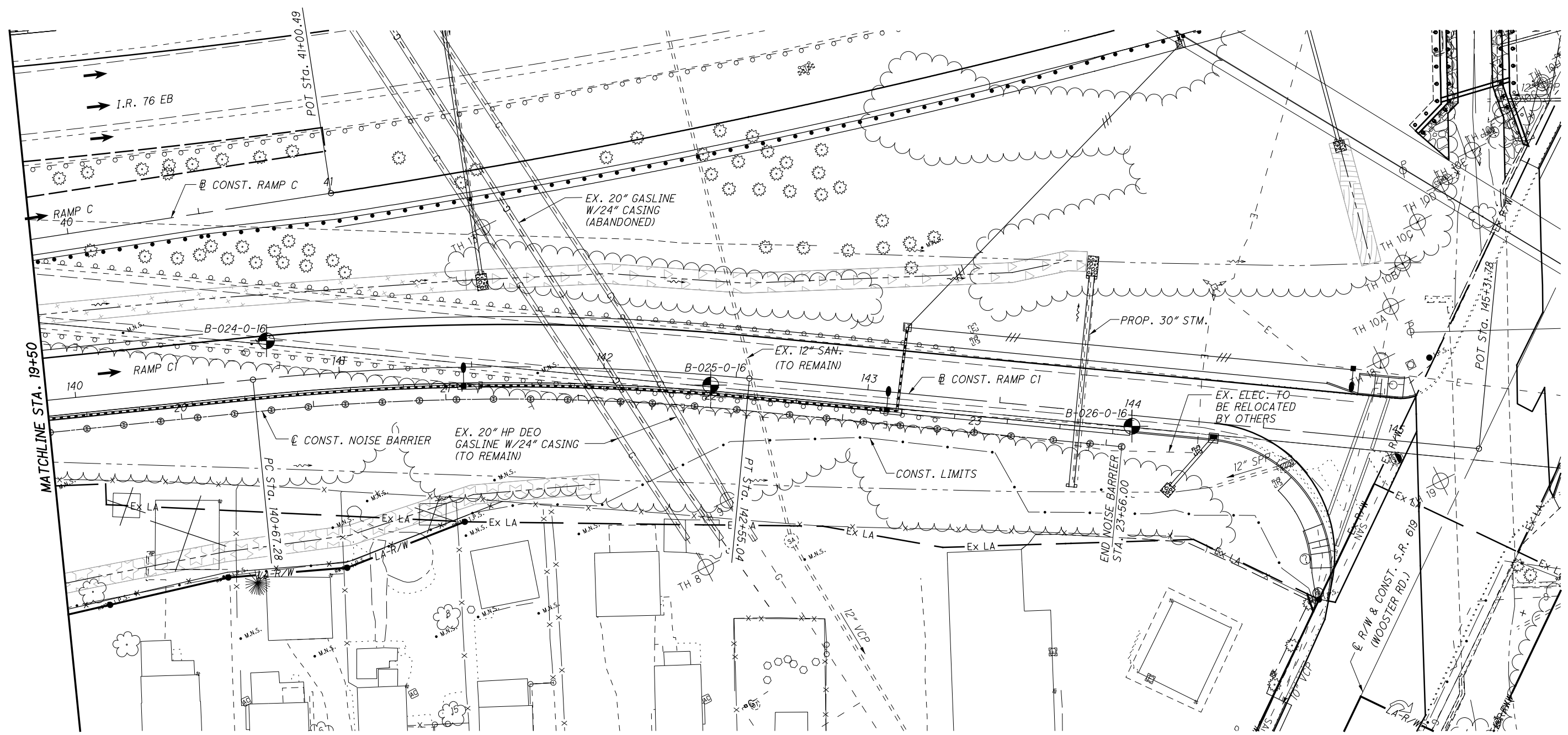





CALCULATED  
 RPR  
 CHECKED  
 RHC

**PROFILE - NOISE BARRIER NSA1**  
**STA. 14+50 TO 19+50**

**SUM-76-5.53**

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- LEGEND:**
-  SOIL BORING LOCATION
  -  ITEM 836 - SEEDING & EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
  -  ITEM 670 - DITCH EROSION PROTECTION

CALCULATED  
RPR  
CHECKED  
RHC

0 20 40  
HORIZONTAL  
SCALE IN FEET

**PLAN - NOISE BARRIER NSA 1**  
**STA. 19+50 TO END**

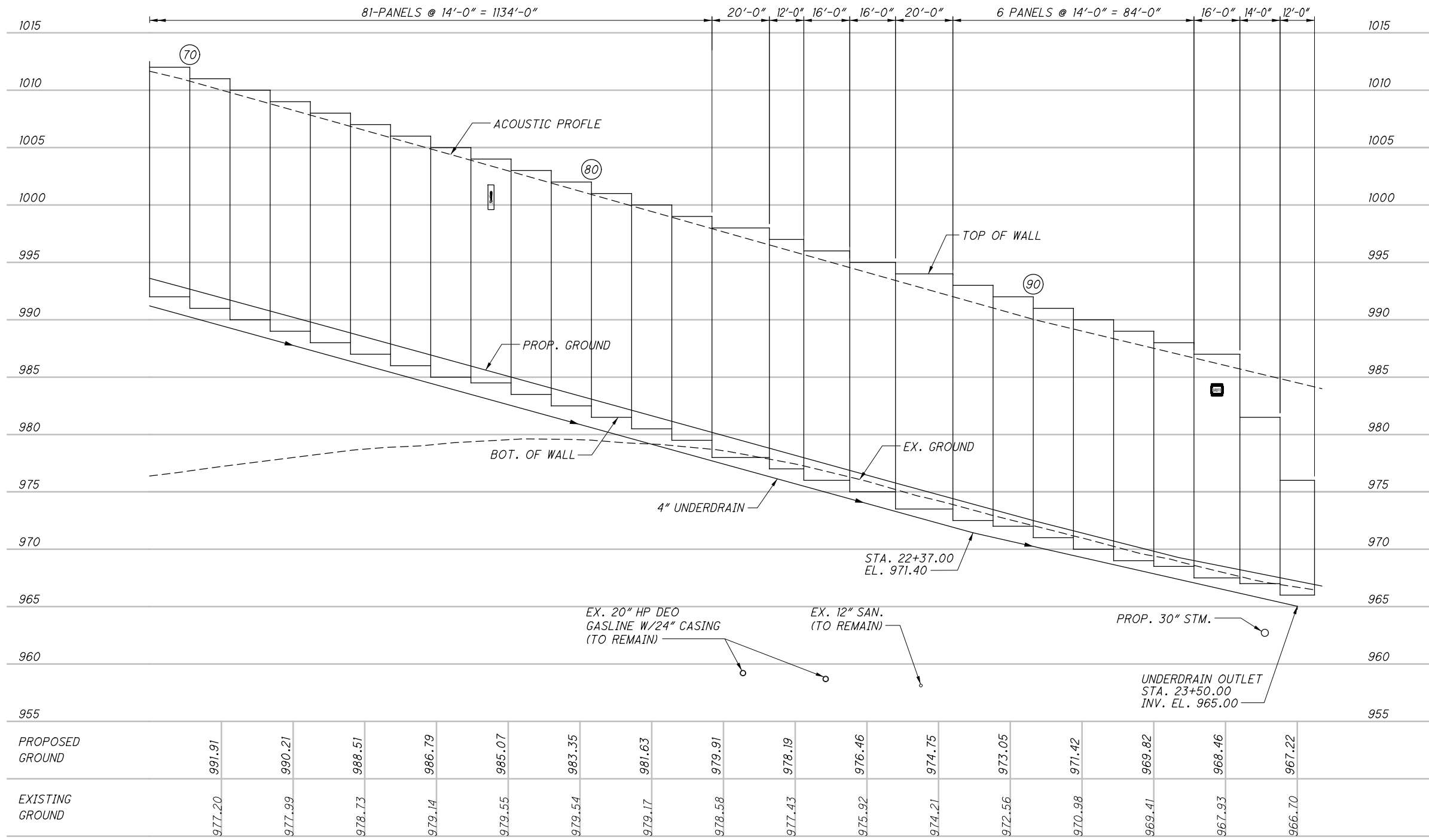
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672



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TOP OF NOISE BARRIER ELEVATION	1012.00	1011.00	1010.00	1009.00	1008.00	1007.00	1006.00	1005.00	1004.00	1003.00	1002.00	1001.00	1000.00	999.00	998.00	997.00	996.00	995.00	994.00	993.00	992.00	991.00	990.00	989.00	988.00	987.00	981.50	976.00
ACOUSTIC PROFILE ELEVATION	1010.79	1009.80	1008.82	1007.83	1006.85	1005.86	1004.88	1003.90	1002.90	1001.91	1000.92	999.92	998.93	997.94	996.53	995.68	994.55	993.42	992.01	991.03	990.04	989.19	988.35	987.51	986.67	985.71	984.87	984.15
BOTTOM OF NOISE BARRIER ELEVATION	992.00	991.00	990.00	989.00	988.00	987.00	986.00	985.00	984.50	983.50	982.50	981.50	980.50	979.50	978.00	977.00	976.00	975.00	973.50	972.50	972.00	971.00	970.00	969.00	968.50	967.50	967.00	966.00
PANEL NO.	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96



PROPOSED GROUND	991.91	990.21	988.51	986.79	985.07	983.35	981.63	979.91	978.19	976.46	974.75	973.05	971.42	969.82	968.46	967.22
EXISTING GROUND	977.20	977.99	978.73	979.14	979.55	979.54	979.17	978.58	977.43	975.92	974.21	972.56	970.98	969.41	967.93	966.70
		20					21				22			23		

CALCULATED  
RPR  
CHECKED  
RHC

**PROFILE - NOISE BARRIER NSA1**  
**STA. 19+50 TO END**

**SUM-76-5.53**

506  
672

NOISE WALL NSA 1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (Feet)
1	10+00.00	1054.19	6.00
2	10+12.00	1053.22	8.00
3	10+26.00	1052.58	11.50
4	10+40.00	1051.58	12.00
5	10+54.00	1050.58	13.00
6	10+68.00	1049.58	11.50
7	10+82.00	1048.08	11.50
8	10+96.00	1047.08	11.50
9	11+10.00	1046.08	11.50
10	11+24.00	1045.58	11.50
11	11+38.00	1044.58	11.50
12	11+52.00	1043.58	11.50
13	11+66.00	1042.58	11.50
14	11+80.00	1041.58	11.50
15	11+94.00	1040.58	11.50
16	12+08.00	1039.58	11.50
17	12+22.00	1038.58	11.50
18	12+36.00	1037.58	11.50
19	12+50.00	1036.58	11.50
20	12+64.00	1035.58	11.50
21	12+78.00	1034.58	11.50
22	12+92.00	1033.58	11.50
23	13+06.00	1032.58	11.50
24	13+20.00	1031.58	10.50
25	13+34.00	1030.58	10.50
26	13+48.00	1029.58	10.50
27	13+62.00	1028.58	10.50
28	13+76.00	1027.58	10.50
29	13+90.00	1026.58	10.50
30	14+04.00	1025.58	10.50
31	14+18.00	1024.58	10.50
32	14+32.00	1023.58	10.50
33	14+46.00	1022.58	10.50
34	14+60.00	1021.58	10.50
35	14+74.00	1020.58	10.50
36	14+88.00	1020.08	13.00
37	15+02.00	1019.08	13.00
38	15+16.00	1018.08	13.00
39	15+30.00	1017.08	13.00
40	15+44.00	1016.08	13.00
41	15+58.00	1015.08	13.00
42	15+72.00	1014.58	10.00
43	15+86.00	1013.58	10.00
44	16+00.00	1012.58	10.00
45	16+14.00	1012.08	10.00
46	16+28.00	1011.08	10.00
47	16+42.00	1010.58	10.00
48	16+56.00	1009.58	10.00
49	16+70.00	1009.08	10.00
50	16+84.00	1008.08	10.00

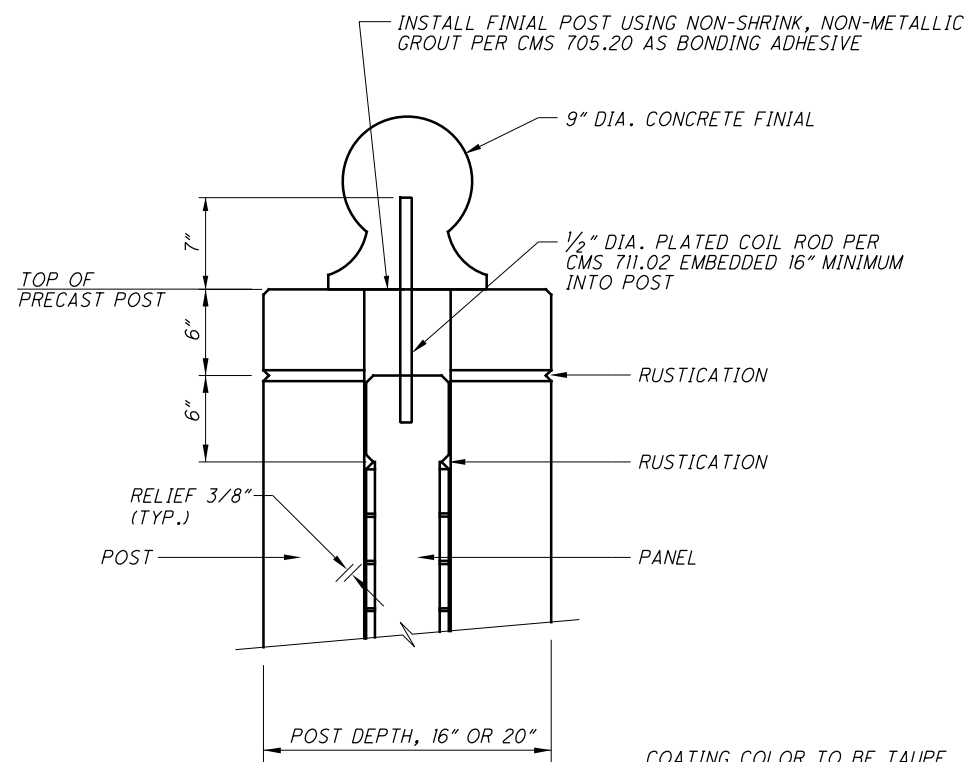
NOISE WALL NSA 1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (Feet)
51	16+98.00	1007.08	10.00
52	17+12.00	1006.58	10.00
53	17+26.00	1005.58	10.00
54	17+40.00	1005.08	10.00
55	17+54.00	1004.08	10.00
56	17+68.00	1003.08	10.00
57	17+82.00	1002.58	10.00
58	17+96.00	1001.58	10.00
59	18+10.00	1001.08	10.00
60	18+24.00	1000.08	10.00
61	18+38.00	999.08	10.00
62	18+52.00	998.08	10.00
63	18+66.00	997.08	10.00
64	18+80.00	996.08	10.00
65	18+94.00	995.08	10.00
66	19+08.00	994.58	10.00
67	19+22.00	993.58	10.00
68	19+36.00	992.58	10.00
69	19+50.00	991.58	10.00
70	19+64.00	990.58	10.00
71	19+78.00	989.58	10.00
72	19+92.00	988.58	10.00
73	20+06.00	987.58	10.00
74	20+20.00	986.58	10.00
75	20+34.00	985.58	10.00
76	20+48.00	984.58	10.00
77	20+62.00	984.08	10.00
78	20+76.00	983.08	10.00
79	20+90.00	982.08	10.00
80	21+04.00	981.08	10.00
81	21+18.00	980.08	10.00
82	21+32.00	979.08	15.00
83	21+46.00	977.55	15.00
84	21+60.00	976.55	15.00
85	21+74.00	975.58	15.00
86	21+94.00	974.58	15.00
87	22+10.00	973.05	15.00
88	22+30.00	972.05	15.00
89	22+44.00	971.58	15.00
90	22+58.00	970.58	15.00
91	22+72.00	969.58	15.00
92	22+86.00	968.58	9.00
93	23+00.00	968.08	9.00
94	23+14.00	967.08	9.00
95	23+30.00	966.58	9.00
96	23+44.00	965.58	7.00
97	23+56.00	965.77	7.00

**NOTE:**

DRILLED SHAFTS ARE TO BE INCLUDED FOR PAYMENT WITH ITEM SPECIAL - NOISE BARRIER.

NO.	DESCRIPTION	REV. BY	DATE
5	NOISE WALL COATING	TMT	4-26-2019

CALCULATED  
RPR  
CHECKED  
DGN



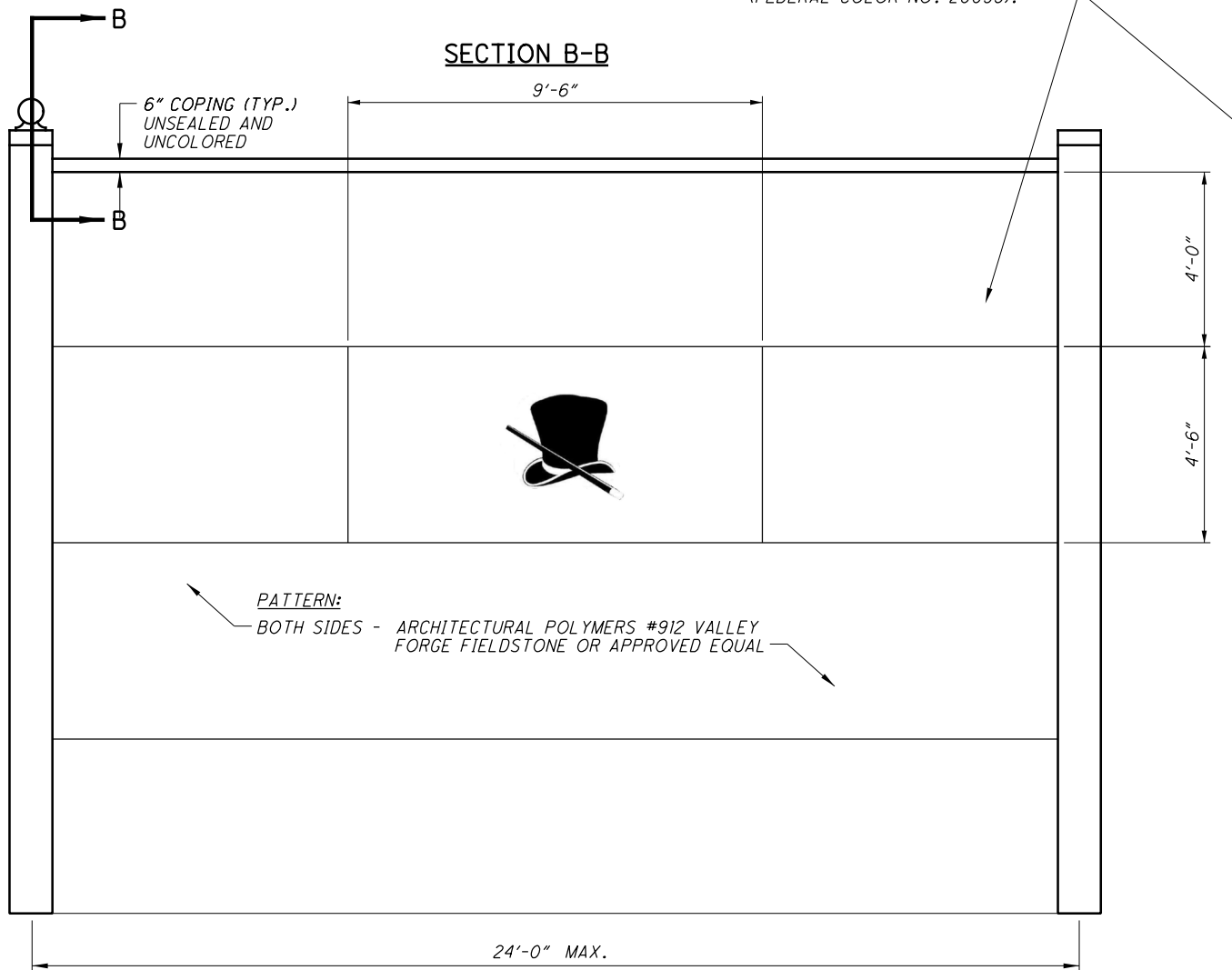
**NOTES:**

1. NOISE WALL CONSTRUCTION SHALL ADHERE TO NSB-I-09 (REV. 0-19-18), UNLESS OTHERWISE NOTED.
2. THE PANEL DESIGN OF THE NOISE WALL MUNICIPALITY NAMEPLATE SHALL MATCH THE STANDARD DESIGN FOR MUNICIPALITY NAME (SEE BELOW IMAGE), AS APPROPRIATE. THE TEXT FONT OF THE NOISE WALL MUNICIPALITY NAMEPLATE SHALL ALSO MATCH THE TEXT FONT OF THE STANDARD DESIGN FOR MUNICIPALITY NAME,
3. ALL CONCRETE SURFACES OF THE NOISE WALL MUNICIPALITY NAMEPLATE/NOISE WALL ICON AREA SHALL BE SEALED WITH FEDERAL COLOR NUMBER 36559 GRAY. THE OUTERMOST CONCRETE SURFACES OF THE NOISE WALL MUNICIPALITY NAMEPLATE RELIEF/NOISE WALL ICON RELIEF SHALL BE SEALED WITH FEDERAL COLOR NUMBER 27925 WHITE.
4. THE NOISE WALL MUNICIPALITY NAMEPLATE SHALL BE POSITIONED AT THE FIRST FULL-HEIGHT CONCRETE NOISE WALL PANEL, THE LAST FULL-HEIGHT CONCRETE NOISE WALL PANEL AND REPEATED AT A MINIMUM OF EVERY 1500 FEET, DEPENDENT UPON THE OVERALL LENGTH OF THE NOISE WALL.
5. ICON PANELS SHALL BE INSTALLED NO CLOSER THAN 250 FEET APART.
6. COLOR SHALL NOT BE APPLIED TO ANY OF THE NOISE WALL COPING, POSTS, POST CAPS OR FINIALS. THESE FEATURES SHALL MAINTAIN THEIR NATURAL GRAY COLOR.

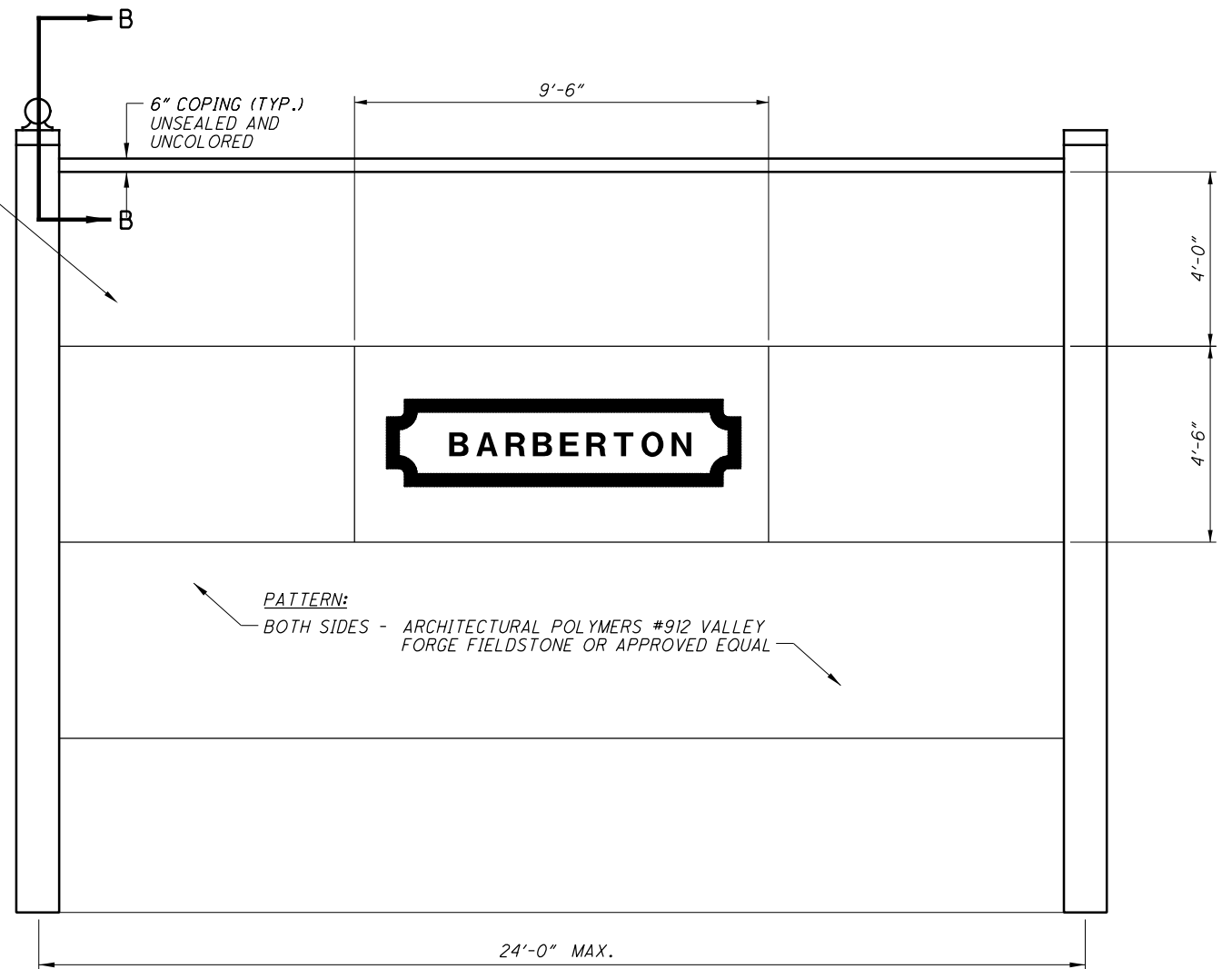
**NOTES CONT'D:**

7. THE FINIALS SHALL BE ATTACHED TO THE TOP OF THE CONCRETE POST CAPS OF THE FOLLOWING NOISE WALL POSTS:
  - FIRST CONCRETE NOISE WALL POSTS;
  - LAST CONCRETE NOISE WALL POSTS;
  - FIRST CONCRETE NOISE WALL POST AT THE FIRST FULL-HEIGHT CONCRETE NOISE WALL PANEL;
  - LAST CONCRETE NOISE WALL POST AT THE LAST FULL-HEIGHT CONCRETE NOISE WALL PANEL; AND
  - CONCRETE NOISE WALL POSTS AT 250± FOOT INTERVALS ALONG THE LENGTH OF THE CONCRETE NOISE WALL.
 THE DEPARTMENT WILL PAY FOR FURNISHING AND INSTALLING THE FINIALS UNDER "ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE)".
8. THE 6" RUSTICATION GROOVE ON THE POST SHALL MEET THE TOP OF THE HIGHEST ADJACENT PANEL CAP.
9. CONCRETE POSTS SHALL NOT BE SEALED. USE A CONCRETE WATERPROOFING ADMIXTURE FOR ALL CONCRETE POSTS. PENETRON AND BASF MASTERLIFE 300D ARE APPROVED SUPPLIERS.
10. THE TOP OF THE ICON BORDER SHALL NOT BE A HORIZONTAL JOINT LINE.
11. SEE SHT. NOS. (502/672), (504/672) AND (506/672) FOR THE LOCATION OF THE ICON AND MUNICIPALITY NAMEPLATE.

COATING COLOR TO BE TAUPE (FEDERAL COLOR NO. 20095).



**NOISE BARRIER ICON LAYOUT**



**NOISE BARRIER MUNICIPALITY NAMEPLATE LAYOUT**

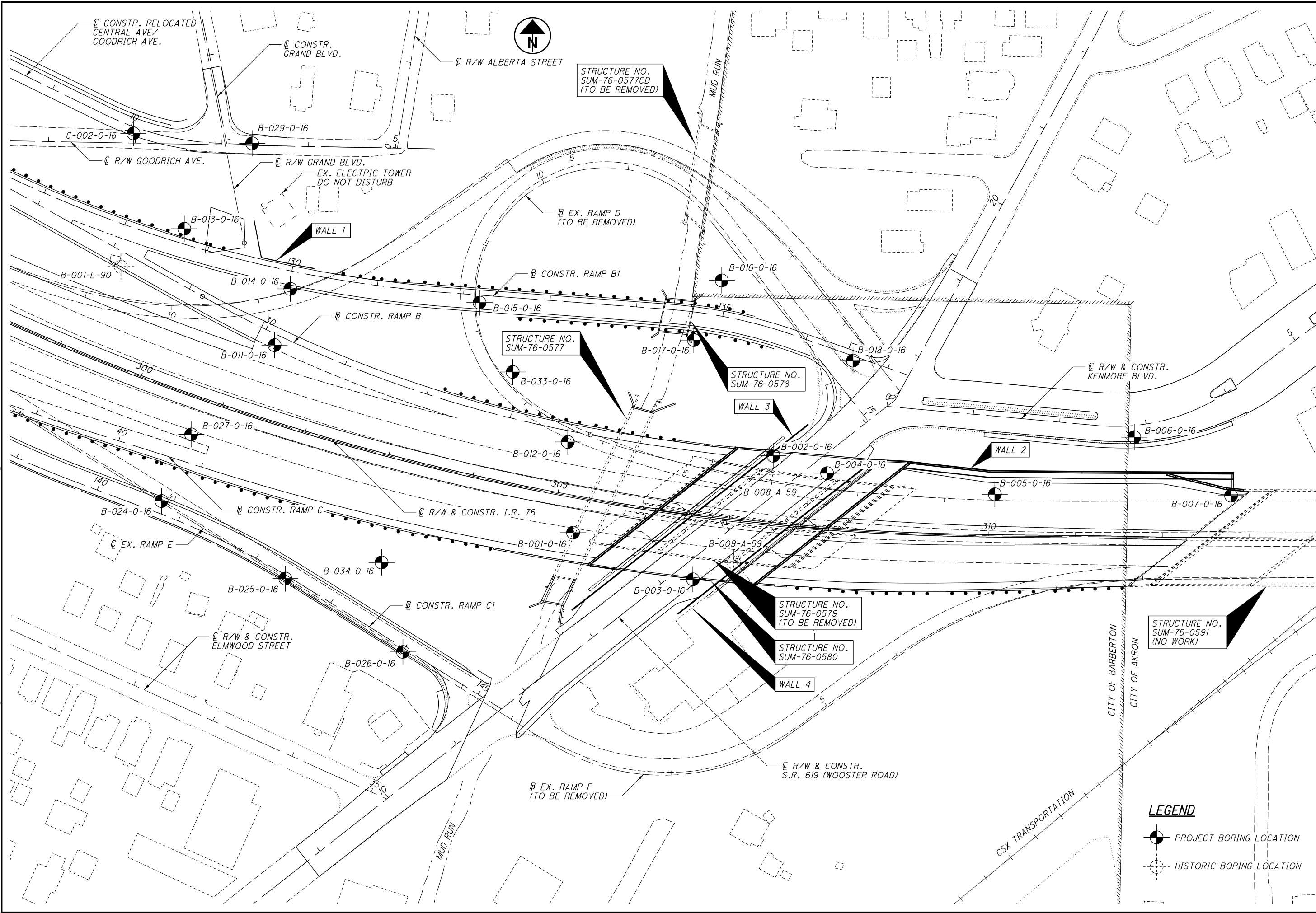
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MISCELLANEOUS NOISE BARRIER DETAILS

SUM - 76 - 5.53

(508/672)

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING:

SBR-1-13 DATED 7-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

SS800-2016 DATED 10-19-2018  
 SS832 DATED 1-17-2014  
 SS840 DATED 7-20-2018  
 SS878 DATED 4-21-2017

**DESIGN SPECIFICATIONS:** THESE STRUCTURES CONFORM TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**LRFD LOAD MODIFIERS:**

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.05 HAS BEEN ASSUMED FOR THE DESIGN OF THESE STRUCTURES IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DESIGN LOADING:**

LIVE LOAD SURCHARGE - 2'-0" EQUIVALENT HEIGHT OF SOIL

**DESIGN DATA:**

CONCRETE CLASS OC1 - COMPRESSIVE STRENGTH 4.0 KSI (COPING AND LEVELING PAD)

CONCRETE CLASS OC2 WITH OC/OA - COMPRESSIVE STRENGTH 4.5 KSI (MOMENT SLAB AND PARAPET)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

**MSE WALL FOUNDATION BEARING RESISTANCE:**

THE FACTORED BEARING RESISTANCE AT THE BASE OF THE REINFORCED SOIL MASS IS LISTED IN THE TABLE BELOW:

FACTORED BEARING RESISTANCE (KSF)			
MSE WALL NUMBER	WALL LIMITS		
	FROM STA.	TO STA.	
1	10+00	10+34	10.7
1	10+34	10+44	8.9
1	10+44	11+06	8.7
2	20+00	20+11	17.1
2	20+11	20+18	15.3
2	20+18	20+36	11.5
2	20+36	20+87	6.1
2	20+87	21+29	6.5
2	21+29	21+95	8.4
2	21+95	22+45	9.6
2	22+45	23+15	10.1
2	23+15	23+45	10.0
2	23+45	24+33	8.0
3	30+00	31+77	9.3
3	31+77	33+45	11.7
4	40+00	41+24	10.5
4	41+24	42+88	12.4

STATIONING IS ALONG BASELINE OF RETAINING WALL

**PROPRIETARY RETAINING WALL DATA:**

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURE OF 1.9 K/FT APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN DESIGN CALCULATIONS.

THE WALL SUPPLIER SHALL PROVIDE SLIP JOINTS AS REQUIRED TO ACCOUNT FOR LONG TERM SETTLEMENT DESCRIBED IN THE GEOTECHNICAL REPORT ASSOCIATED WITH THESE WALLS.

**UNDERPASS LIGHTING ON MSE WALLS:**

MSE WALLS DO NOT SHOW THE LOCATIONS OF THE CONDUITS, DEVICES AND LUMINARIES FOR UNDERPASS LIGHTING. REFER TO THE UNDERPASS LIGHTING DETAIL SHEETS TO COORDINATE THE LOCATIONS OF THESE LIGHTING ELEMENTS WITH THE MSE WALLS.

**HORIZONTAL ABUTMENT LOADS:**

THE WALL MANUFACTURER SHALL PROVIDE SOIL REINFORCEMENT STRAPS EMBEDDED INTO THE BACK OF THE ABUTMENT FOR THE SUM-76-0580 BRIDGE LOCATED ON TOP OF MSE WALLS. THE STRAPS SHALL BE DESIGNED TO RESIST THE SUPERSTRUCTURE LOADS LISTED IN THE PROPRIETARY WALL NOTES ON THIS SHEET IN ADDITION TO EARTH PRESSURE AND LIVE LOAD SURCHARGE. THE STRAPS MAY BE DISTRIBUTED EVENLY FROM THE BOTTOM OF THE ABUTMENT FOOTING TO THE TOP OF THE BEAM SEAT WITH A MINIMUM OF ONE ROW PROVIDED. THE COST OF ALL LABOR AND MATERIALS REQUIRED TO INSTALL THESE STRAPS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WALL.

**MINIMUM SOIL REINFORCEMENT LENGTHS:**

PROVIDE MINIMUM 8 FOOT OR 0.7 X H SOIL REINFORCEMENT LENGTHS ACCORDING TO SUPPLEMENTAL SPECIFICATION 840.04 EXCEPT AS FOLLOWS:

MINIMUM SOIL REINFORCEMENT LENGTHS			
MSE WALL	WALL LIMITS		MINIMUM STRAP LENGTH
	FROM STA.	TO STA.	
2	310+36.00	312+82.00	0.8 X H

H = THE WALL HEIGHT AS DETERMINED ACCORDING TO SUPPLEMENTAL SPECIFICATION 840.04.

**PILE DRIVING CONSTRAINTS:**

PRIOR TO DRIVING ABUTMENT PILES TO THE ULTIMATE BEARING VALUE (UBV), CONSTRUCT THE MSE WALL AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENT UP TO THE BOTTOM OF THE FOOTING FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. THE CONTRACTOR MAY PRE-DRIVE ABUTMENT PILES BEFORE CONSTRUCTING MSE WALLS. PRE-DRIVING CONSISTS OF INSTALLING THE ABUTMENT PILES INTO THE SOIL ONLY AS FAR AS NECESSARY SO THAT THE PILES WILL REMAIN VERTICAL DURING MSE WALL CONSTRUCTION. IF PRE-DRIVING PILES, INSTALL PILE SLEEVES AROUND PILES BEFORE CONSTRUCTING THE MSE WALL. AT LEAST THREE FEET OF PILE MUST EXTEND ABOVE THE TOP OF THE PILE SLEEVE TO MEET THE REQUIREMENTS OF C&MS 507.09 REGARDING SPLICES. DO NOT DRIVE ABUTMENT PILES TO THE UBV UNTIL AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED. AFTER THE MSE WALL HAS BEEN CONSTRUCTED TO THE BOTTOM OF FOOTING, DRIVE ABUTMENT PILES TO THE UBV. IN ORDER TO REMOVE ANY NEGATIVE SKIN FRICTION THAT HAS DEVELOPED DURING THE WAITING PERIOD, DRIVE EACH ABUTMENT PILE A DISTANCE OF AT LEAST 0.5 INCH.

IF NOT PRE-DRIVING ABUTMENT PILES, INSTALL THE ABUTMENT PILES THROUGH PILE SLEEVES AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND THE SPECIFIED WAITING PERIOD HAS ELAPSED.

**ITEM 203 EMBANKMENT, AS PER PLAN:**

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT IN THE LIMITS OF THE MSE WALL PAYMENT QUANTITIES.

**ITEM 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET:**

ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE MOMENT SLABS ALONG THE MSE WALLS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE, MISC. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL JOINT MATERIALS AND BOND BREAKERS IN CONTACT WITH THE MOMENT SLAB. ALL REINFORCING STEEL EMBEDDED IN THE MOMENT SLAB SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL FOR PAYMENT.

**ITEM 840 CONCRETE COPING, AS PER PLAN**

CLASS OC1 CONCRETE, EPOXY COATED REINFORCING STEEL IN THE COPING, P-E.J.F. BETWEEN COPING AND BARRIER, AND EXPANSION JOINTS SHALL BE INCLUDED IN THE UNIT BID PRICE PER FOOT FOR THIS ITEM.

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DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	N/A
DATE	5-8-17		

GENERAL NOTES  
 RETAINING WALLS

SUM-76-5.53  
 PID No. 96670

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RETAINING WALL 1 ESTIMATED QUANTITIES							DESIGN: ERK DATE: 8/16/18	CHECK: GDJ DATE: 8/16/18
ITEM	EXTENSION	PHASE 3	TOTAL 01/IMS/PV	TOTAL 10/IMS/PV	TOTAL	UNIT	DESCRIPTION	SHEET #
509	10000	10178	3359	6819	10178	LB	EPOXY COATED REINFORCING STEEL	
511	53012	92	30	62	92	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET	2/22
512	10100	256	84	172	256	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
*** 611	01500	14	5	9	14	FT	6" CONDUIT, TYPE F	
840	20000	1563	516	1047	1563	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	599	198	401	599	CY	WALL EXCAVATION	
840	22000	202	67	135	202	SY	FOUNDATION PREPARATION	
840	23000	912	301	611	912	CY	SELECT GRANULAR BACKFILL	
840	23050	19	6	13	19	CY	NATURAL SOIL	
840	25010	224	74	150	224	FT	6" DRAINAGE PIPE, PERFORATED	
840	26001	110	36	74	110	FT	CONCRETE COPING, AS PER PLAN	2/22
840	27000	1	1	1	1	DAY	ON-SITE ASSISTANCE	
840	28000	LS	LS	LS	LS	-	SGB INSPECTION AND COMPACTION TESTING	

RETAINING WALL 2 ESTIMATED QUANTITIES							DESIGN: ERK DATE: 8/16/18	CHECK: GDJ DATE: 8/16/18
ITEM	EXTENSION	PHASE 3	TOTAL 01/IMS/PV	TOTAL 10/IMS/PV	TOTAL	UNIT	DESCRIPTION	SHEET #
202	11200	LS		LS	LS	-	PORTIONS OF STRUCTURE REMOVED	
503	11100	LS		LS	LS	-	COFFERDAMS AND EXCAVATION BRACING	
509	10000	28934	9548	19386	28934	LB	EPOXY COATED REINFORCING STEEL	
511	53012	199	66	133	199	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET	2/22
512	10100	1158	382	776	1158	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
*** 611	01500	171	56	115	171	FT	6" CONDUIT, TYPE F	
840	20000	9051	2987	6064	9051	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	5184	1711	3473	5184	CY	WALL EXCAVATION	
840	22000	981	324	657	981	SY	FOUNDATION PREPARATION	
840	23000	6373	2103	4270	6373	CY	SELECT GRANULAR BACKFILL	
840	25010	839	277	562	839	FT	6" DRAINAGE PIPE, PERFORATED	
840	26001	434	143	291	434	FT	CONCRETE COPING, AS PER PLAN	2/22
840	27000	2	1	1	2	DAY	ON-SITE ASSISTANCE	
840	28000	LS	LS	LS	LS	-	SGB INSPECTION AND COMPACTION TESTING	

RETAINING WALL 3 ESTIMATED QUANTITIES								DESIGN: ERK DATE: 8/16/18	CHECK: GDJ DATE: 8/16/18	
ITEM	EXTENSION	PHASE 1	PHASE 2	PHASE 3	TOTAL 02/IMS/BR	TOTAL 11/IMS/BR	TOTAL	UNIT	DESCRIPTION	SHEET #
* 203	20001	25		198	74	149	223	CY	EMBANKMENT, AS PER PLAN	
* 203	35110	673	388	910	650	1321	1971	CY	GRANULAR MATERIAL, TYPE B	
512	10100	185	89	266	178	362	540	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
** 601	21001	22	12	31	21	44	65	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	20/22
*** 611	01500	2			1	1	2	FT	6" CONDUIT, TYPE F	
840	20000	1720	783	2403	1619	3287	4906	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	1064	634	1322	997	2023	3020	CY	WALL EXCAVATION	
840	22000	286	138	415	277	562	839	SY	FOUNDATION PREPARATION	
840	23000	1301	669	1934	1288	2616	3904	CY	SELECT GRANULAR BACKFILL	
840	23050	14		15	10	19	29	CY	NATURAL SOIL	
840	25010	258	105	350	235	478	713	FT	6" DRAINAGE PIPE, PERFORATED	
840	26001	127	53	172	116	236	352	FT	CONCRETE COPING, AS PER PLAN	2/22
840	27000	3	2	1	2	4	6	DAY	ON-SITE ASSISTANCE	
840	28000	LS	LS	LS	LS	LS	LS	-	SGB INSPECTION AND COMPACTION TESTING	

RETAINING WALL 4 ESTIMATED QUANTITIES								DESIGN: ERK DATE: 8/16/18	CHECK: GDJ DATE: 8/16/18	
ITEM	EXTENSION	PHASE 1	PHASE 2	PHASE 3	TOTAL 02/IMS/BR	TOTAL 11/IMS/BR	TOTAL	UNIT	DESCRIPTION	SHEET #
* 203	20001	140		1	47	94	141	CY	EMBANKMENT, AS PER PLAN	
* 203	35110	602	422	710	572	1162	1734	CY	GRANULAR MATERIAL, TYPE B	
512	10100	229	112	214	183	372	555	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
** 601	21001	21	13	24	19	39	58	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	20/22
*** 611	01500	60			20	40	60	FT	6" CONDUIT, TYPE F	
840	20000	2095	988	1896	1643	3336	4979	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	509	776	1457	905	1837	2742	CY	WALL EXCAVATION	
840	22000	324	154	287	252	513	765	SY	FOUNDATION PREPARATION	
840	23000	1754	896	1664	1424	2890	4314	CY	SELECT GRANULAR BACKFILL	
840	23050	30			10	20	30	CY	NATURAL SOIL	
840	25010	280	110	197	194	393	587	FT	6" DRAINAGE PIPE, PERFORATED	
840	26001	131	55	105	96	195	291	FT	CONCRETE COPING, AS PER PLAN	2/22
840	27000	2	3	1	2	4	6	DAY	ON-SITE ASSISTANCE	
840	28000	LS	LS	LS	LS	LS	LS	-	SGB INSPECTION AND COMPACTION TESTING	

**LEGEND**

- \* - PAID FOR UNDER THE ROADWAY QUANTITIES. SEE THE ROADWAY GENERAL SUMMARY.
- \*\* - PAID FOR UNDER EROSION CONTROL QUANTITIES. SEE THE EROSION CONTROL GENERAL SUMMARY.
- \*\*\* - PAID FOR UNDER DRAINAGE QUANTITIES. SEE THE DRAINAGE GENERAL SUMMARY.

DESIGN AGENCY

CARPENTER

TRANSPORTATION

DATE

5-8-17

REVIEWED

WHM

DRAWN

ERK

CHECKED

GDJ

STRUCTURE FILE NUMBER

N/A

ESTIMATED QUANTITIES

RETAINING WALLS

SUM-76-5.53

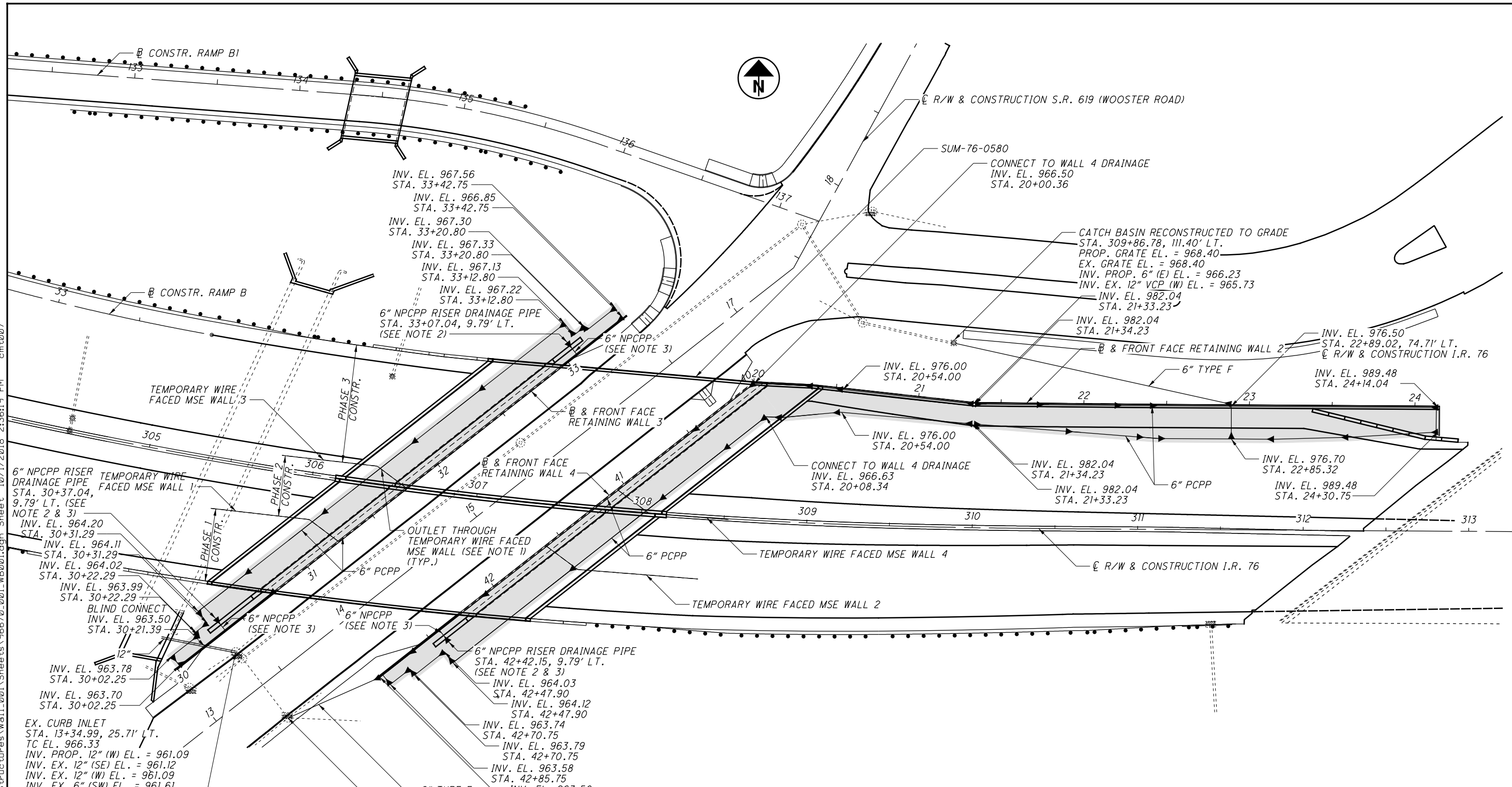
PID No. 96670

3/22

511

672

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PLAN

**NOTES**

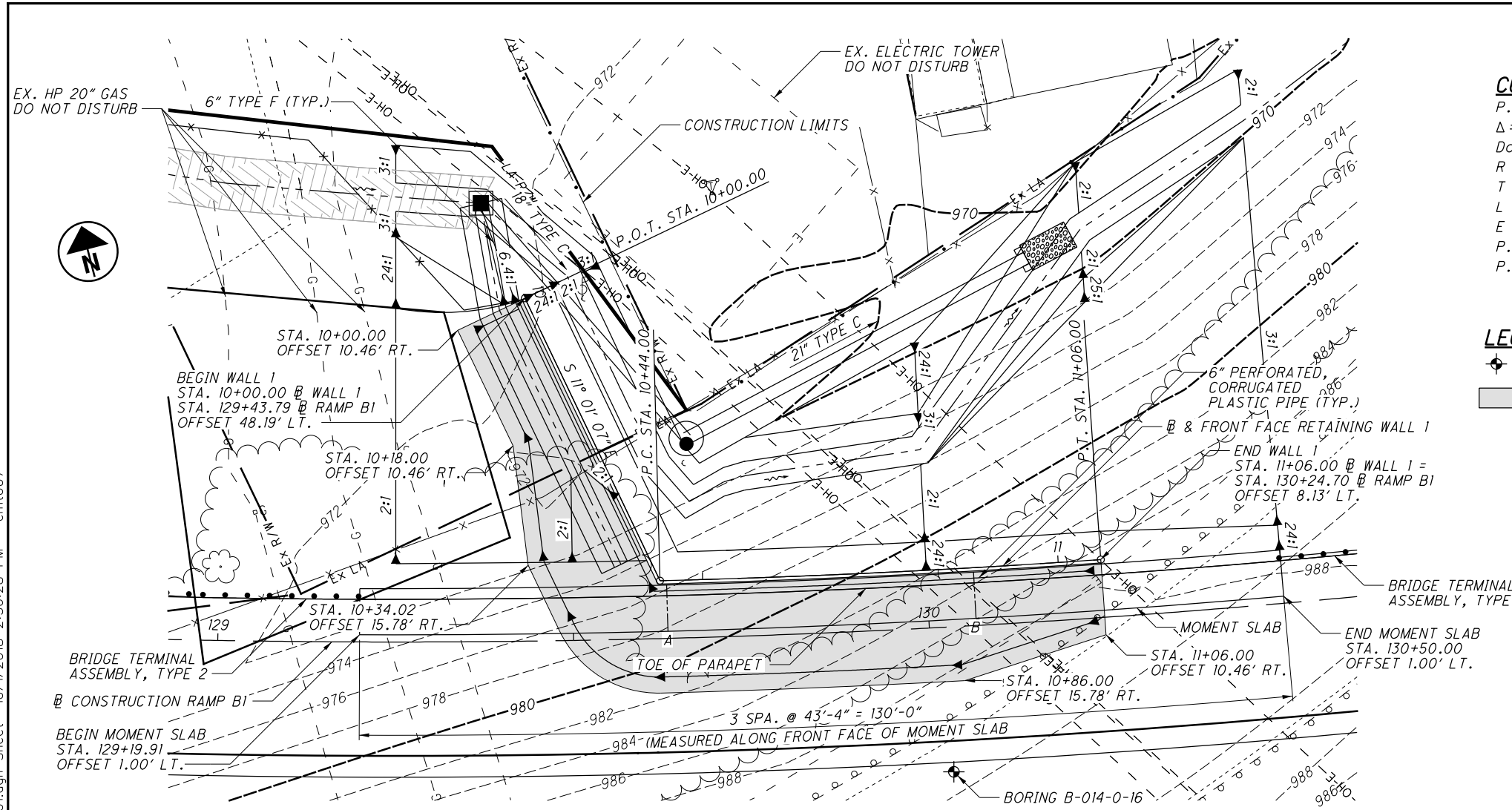
1. DRAINAGE PIPES SHALL CONNECT THROUGH THE TEMPORARY WIRE FACED MSE WALLS FOR EACH SUBSEQUENT PHASE.
2. FOR VERTICAL RISER DRAINAGE PIPE DETAILS, SEE SUM-76-0580.
3. 6" NPCPP VERTICAL RISER AND 6" NPCPP FROM SUM-76-0580 ABUTMENTS INCLUDED WITH SUM-76-0580 FOR PAYMENT.

**LEGEND**

- LIMITS OF MSE WALL PAY QUANTITIES
- PCPP - PERFORATED CORRUGATED PLASTIC PIPE
- NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE

	DESIGN AGENCY <b>CARPENTER MARTY</b> <small>TRANSPORTATION ENGINEERING &amp; CONSTRUCTION, INC.</small>
DESIGNED ERK CHECKED GDJ	DRAWN ERK REVISED N/A
REVIEWED WHM	DATE 5-8-17
STRUCTURE FILE NUMBER N/A	N/A
<b>DRAINAGE PLAN</b> RETAINING WALLS	
<b>SUM-76-5.53</b> PID No. 96670	
4 / 22	
512 672	

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**CURVE DATA - B CONSTRUCTION RAMP B1**

P.I. STA. 128+74.38  
 $\Delta = 24^\circ 55' 00''$  (LT)  
 $D_c = 4^\circ 00' 00''$   
 $R = 1,432.39'$   
 $T = 316.46'$   
 $L = 622.92'$   
 $E = 34.54'$   
P.C. STA. 125+57.92  
P.T. STA. 131+80.84

**LEGEND**

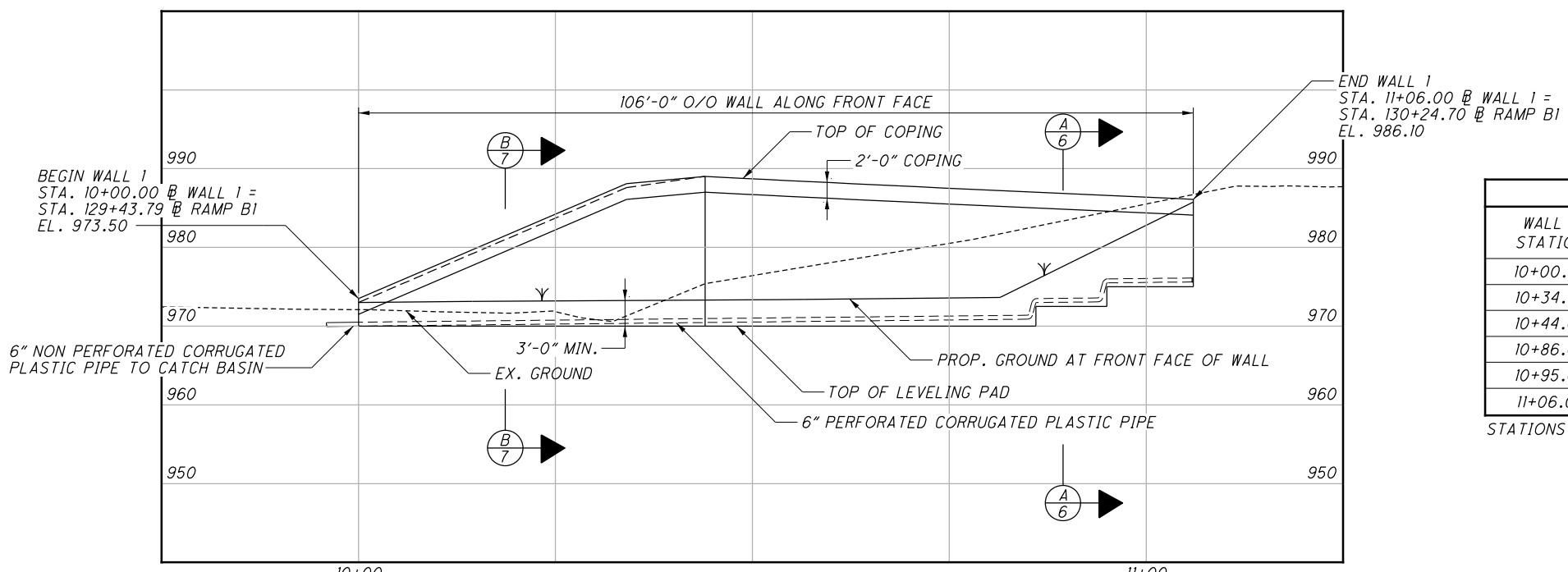
- ⊕ - PROJECT BORING LOCATION
- ▭ - LIMITS OF MSE WALL PAY QUANTITIES

**CURVE DATA - B WALL 1**

P.I. STA. 10+75.00  
 $\Delta = 2^\circ 29' 39''$  (LT)  
 $D_c = 4^\circ 01' 22''$   
 $R = 1,424.27'$   
 $T = 31.00'$   
 $L = 62.00'$   
 $E = 0.34'$

MOMENT SLAB EXPANSION JOINT GEOMETRY				
	BEGIN MOMENT SLAB	JOINT A	JOINT B	END MOMENT SLAB
STATION	129+19.91	129+63.27	130+06.64	130+50.00
OFFSET (FT.)	1.00' LT.	1.00' LT.	1.00' LT.	1.00' LT.

STATIONS AND OFFSETS TAKEN AT THE FRONT FACE OF MOMENT SLAB



**RETAINING WALL 1 ELEVATION**

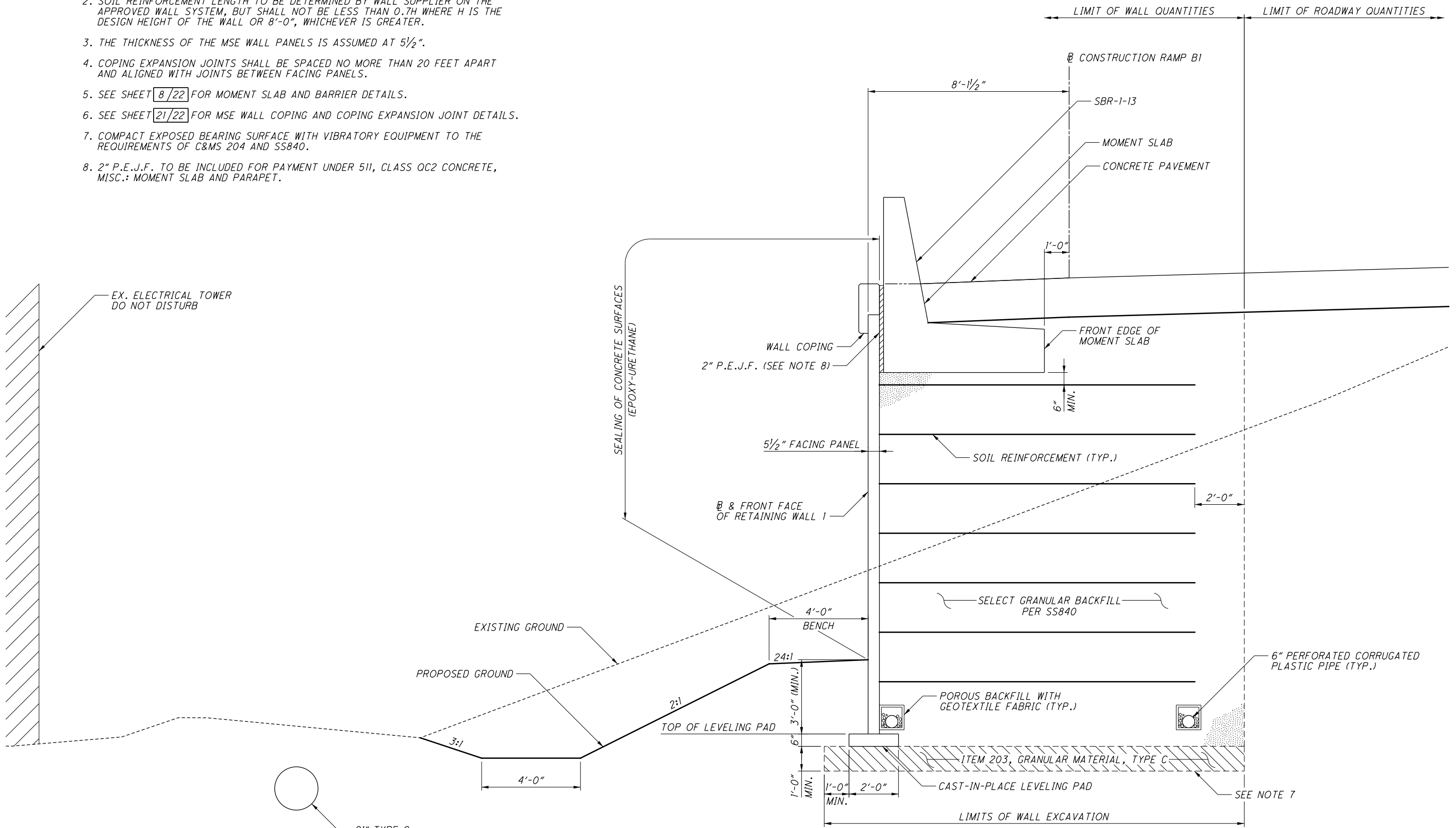
MSE WALL ELEVATIONS					
WALL 1 STATION	RAMP B1 STATION	OFFSET (FT.)	TOP OF COPING	PROPOSED GROUND AT FRONT FACE OF WALL	TOP OF LEVELING PAD
10+00.00	129+43.79	48.19 LT.	973.50	973.00	970.00
10+34.02	129+58.23	17.24 LT.	988.09	973.26	970.00
10+44.00	129+62.35	8.13 LT.	989.00	973.31	970.00
10+86.00	130+04.58	8.13 LT.	987.00	975.88	972.50
10+95.00	130+13.64	8.13 LT.	986.59	980.33	975.00
11+06.00	130+24.70	8.13 LT.	986.10	985.77	975.00

STATIONS AND OFFSETS TAKEN AT THE FRONT FACE OF THE WALL



**NOTES**

1. ALL DIMENSIONS PERPENDICULAR TO MSE WALL.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER ON THE APPROVED WALL SYSTEM, BUT SHALL NOT BE LESS THAN 0.7H WHERE H IS THE DESIGN HEIGHT OF THE WALL OR 8'-0", WHICHEVER IS GREATER.
3. THE THICKNESS OF THE MSE WALL PANELS IS ASSUMED AT 5 1/2".
4. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
5. SEE SHEET [8/22] FOR MOMENT SLAB AND BARRIER DETAILS.
6. SEE SHEET [21/22] FOR MSE WALL COPING AND COPING EXPANSION JOINT DETAILS.
7. COMPACT EXPOSED BEARING SURFACE WITH VIBRATORY EQUIPMENT TO THE REQUIREMENTS OF C&MS 204 AND SS840.
8. 2" P.E.J.F. TO BE INCLUDED FOR PAYMENT UNDER 511, CLASS OC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET.

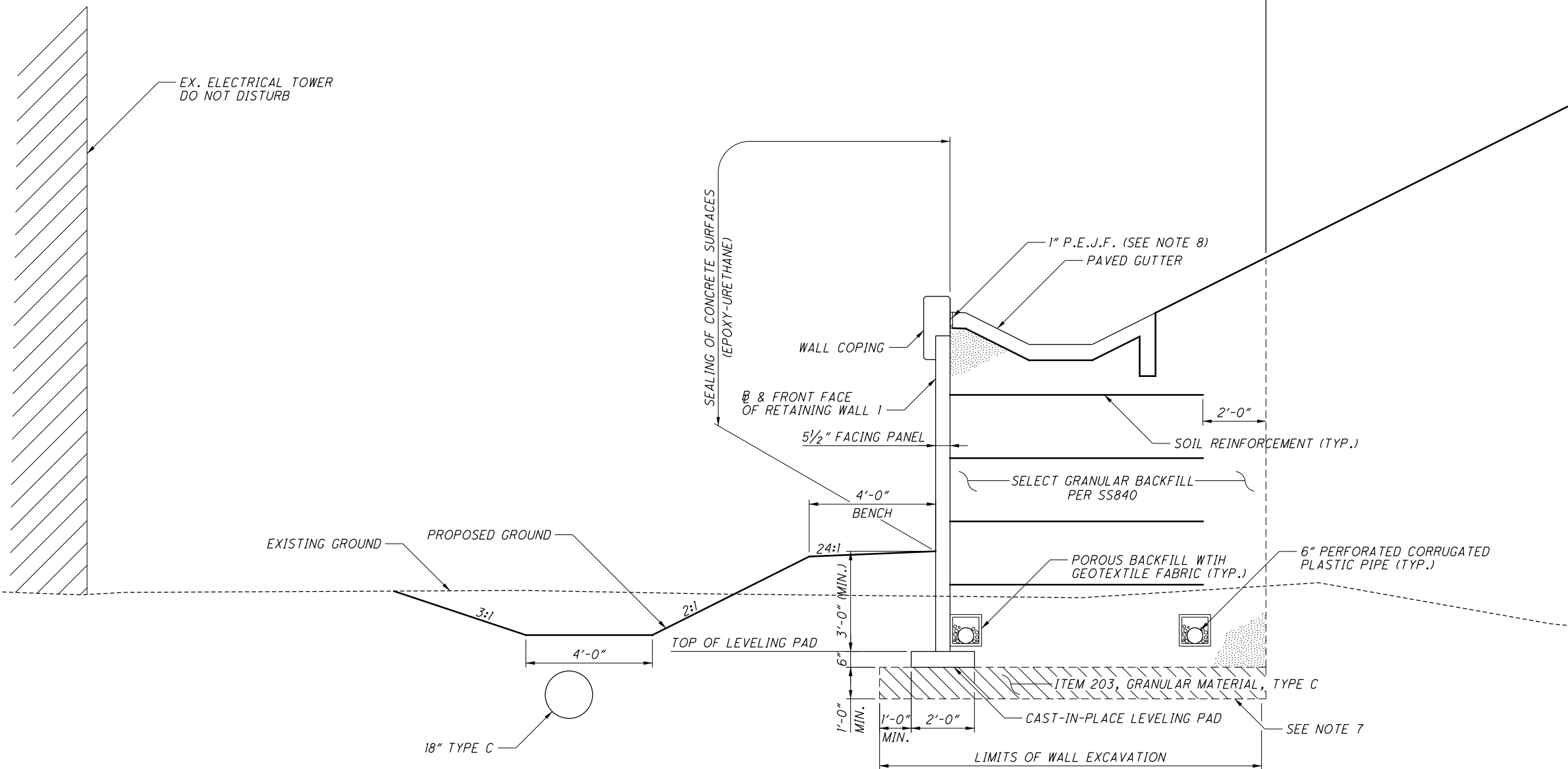


**A**  
**5** MSE WALL 1 TYPICAL SECTION  
STATION 10+44 THRU 11+06

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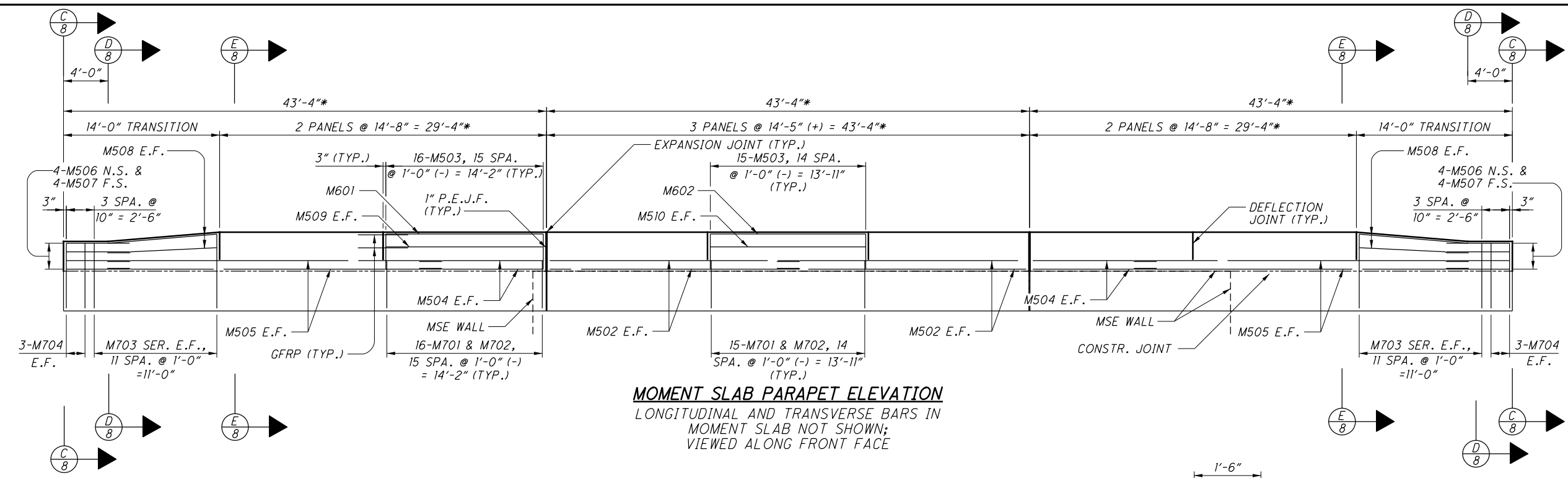
**NOTES**

1. ALL DIMENSIONS PERPENDICULAR TO MSE WALL.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER ON THE APPROVED WALL SYSTEM, BUT SHALL NOT BE LESS THAN 0.7H WHERE H IS THE DESIGN HEIGHT OF THE WALL OR 8'-0", WHICHEVER IS GREATER.
3. THE THICKNESS OF THE MSE WALL PANELS IS ASSUMED AT 5½".
4. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
5. SEE SHEET **8/22** FOR MOMENT SLAB AND BARRIER DETAILS.
6. SEE SHEET **21/22** FOR MSE WALL COPING AND COPING EXPANSION JOINT DETAILS.
7. COMPACT EXPOSED BEARING SURFACE WITH VIBRATORY EQUIPMENT TO THE REQUIREMENTS OF C&MS 204 AND SS840.
8. 1" P.E.J.F. TO BE INCLUDED FOR PAYMENT UNDER ITEM 840, CONCRETE COPING, AS PER PLAN.

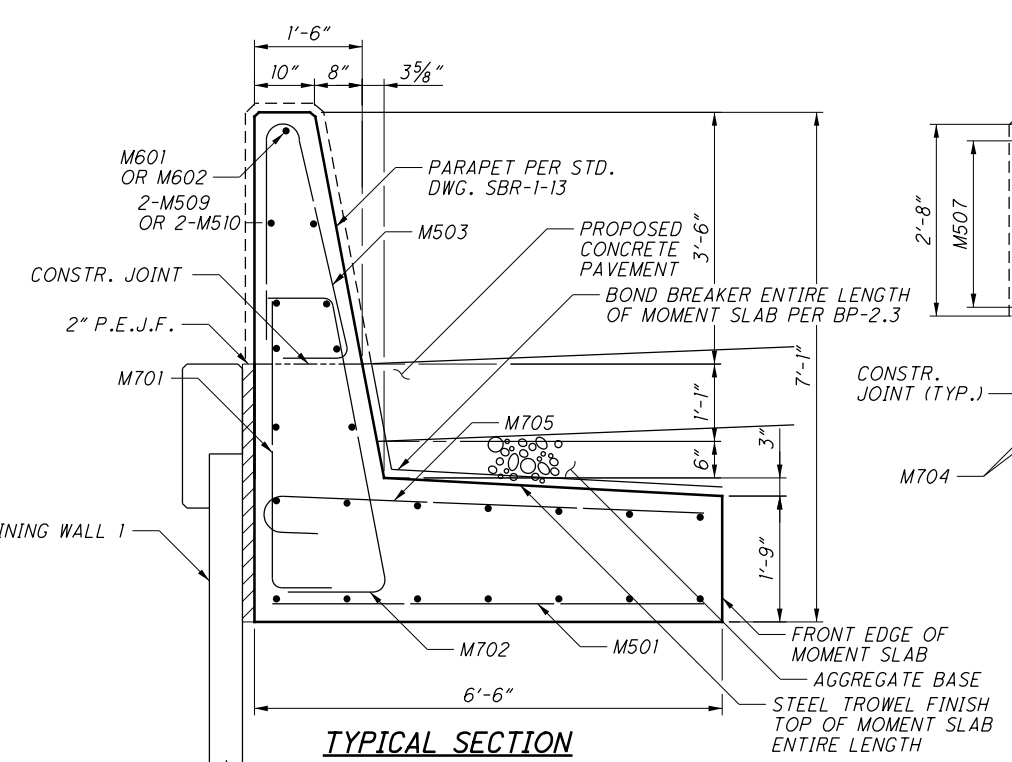


**B**  
**5** MSE WALL 1 TYPICAL SECTION  
STATION 10+00 THRU 10+44

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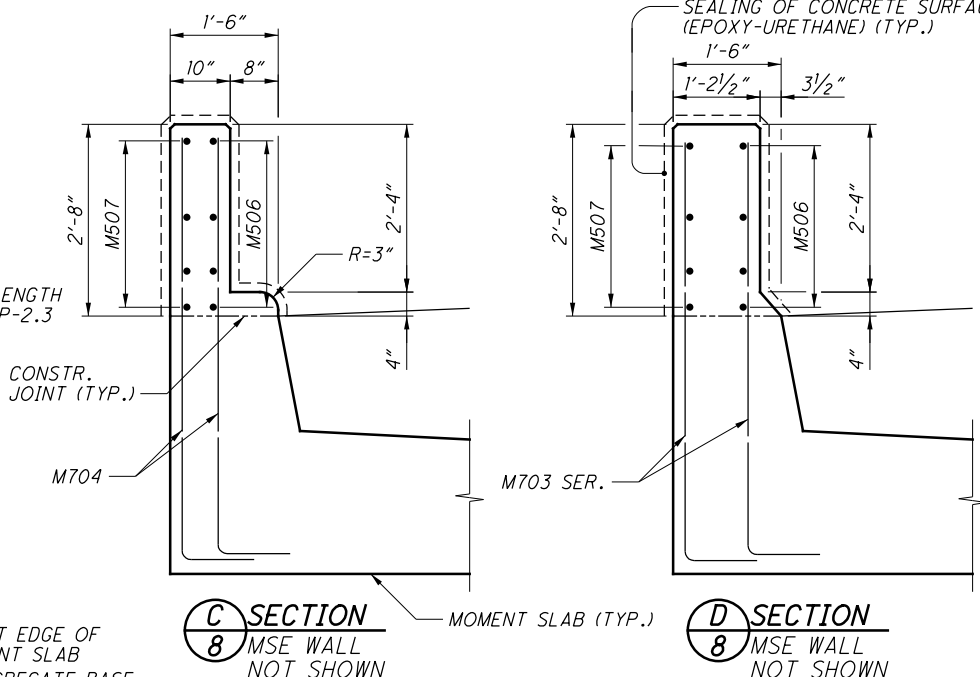


**MOMENT SLAB PARAPET ELEVATION**  
 LONGITUDINAL AND TRANSVERSE BARS IN  
 MOMENT SLAB NOT SHOWN;  
 VIEWED ALONG FRONT FACE



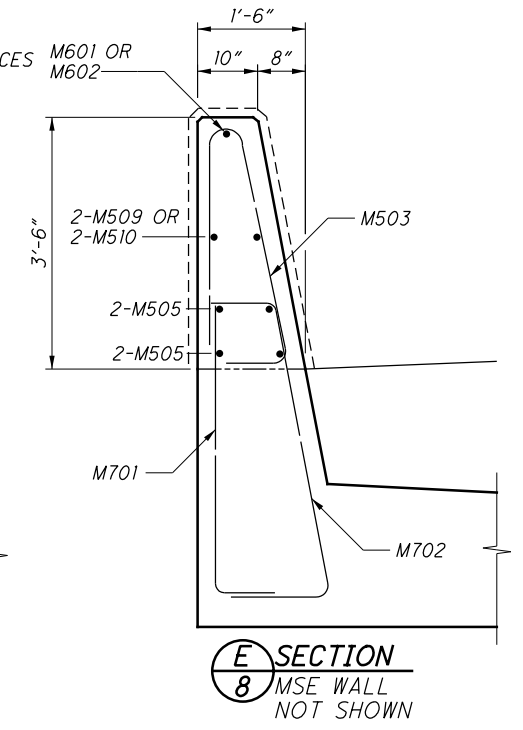
**TYPICAL SECTION**

BARS NOT LABELED ARE  
 M502 OR M504 OR M505

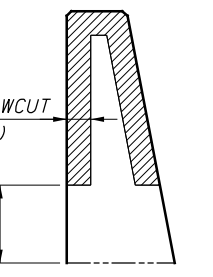


**SECTION C**  
 MSE WALL NOT SHOWN

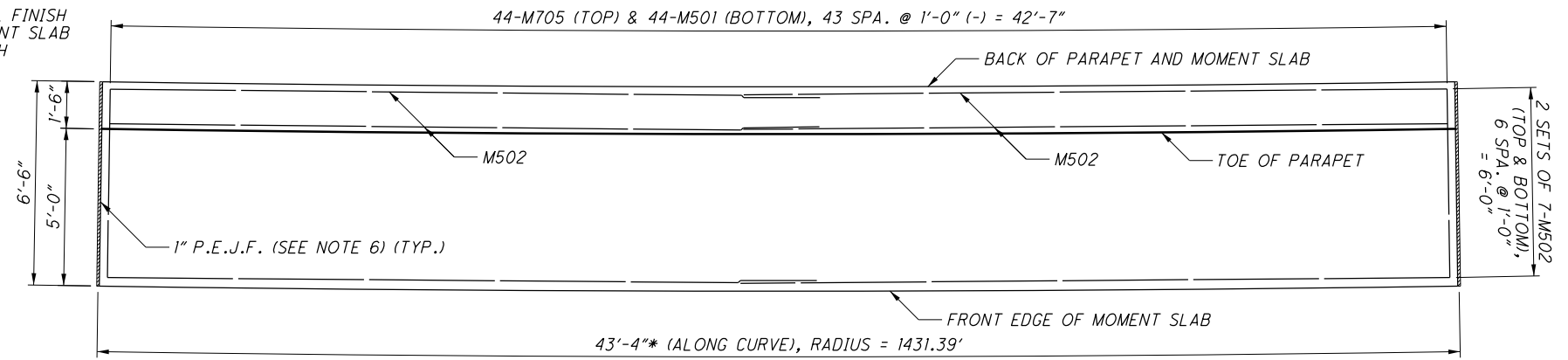
**SECTION D**  
 MSE WALL NOT SHOWN



**SECTION E**  
 MSE WALL NOT SHOWN



**DEFLECTION JOINT DETAIL**



**TYPICAL MOMENT SLAB PLAN**

**NOTES**

1. MEASUREMENTS TAKEN ALONG FRONT EDGE OF MOMENT SLAB.
2. MINIMUM LAP LENGTH:  
 #5 BAR = 25 INCHES
3. REFER TO STD. DWG. SBR-1-13 FOR ADDITIONAL PARAPET NOTES AND DETAILS.
4. 1/2" φ GLASS FIBER REINFORCED POLYMER TO BE INCLUDED FOR PAYMENT UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.
5. SEE REINFORCING TABLE ON SH. [22/22].
6. 1" P.E.J.F. AND 2" P.E.J.F. TO BE INCLUDED FOR PAYMENT UNDER 511, CLASS OC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET.

**LEGEND**



- \* - DIMENSIONED TO CENTER OF P.E.J.F. ALONG FRONT EDGE OF MOMENT SLAB
- GFRP - GLASS FIBER REINFORCED POLYMER
- E.F. - EACH FACE
- F.S. - FAR SIDE
- N.S. - NEAR SIDE

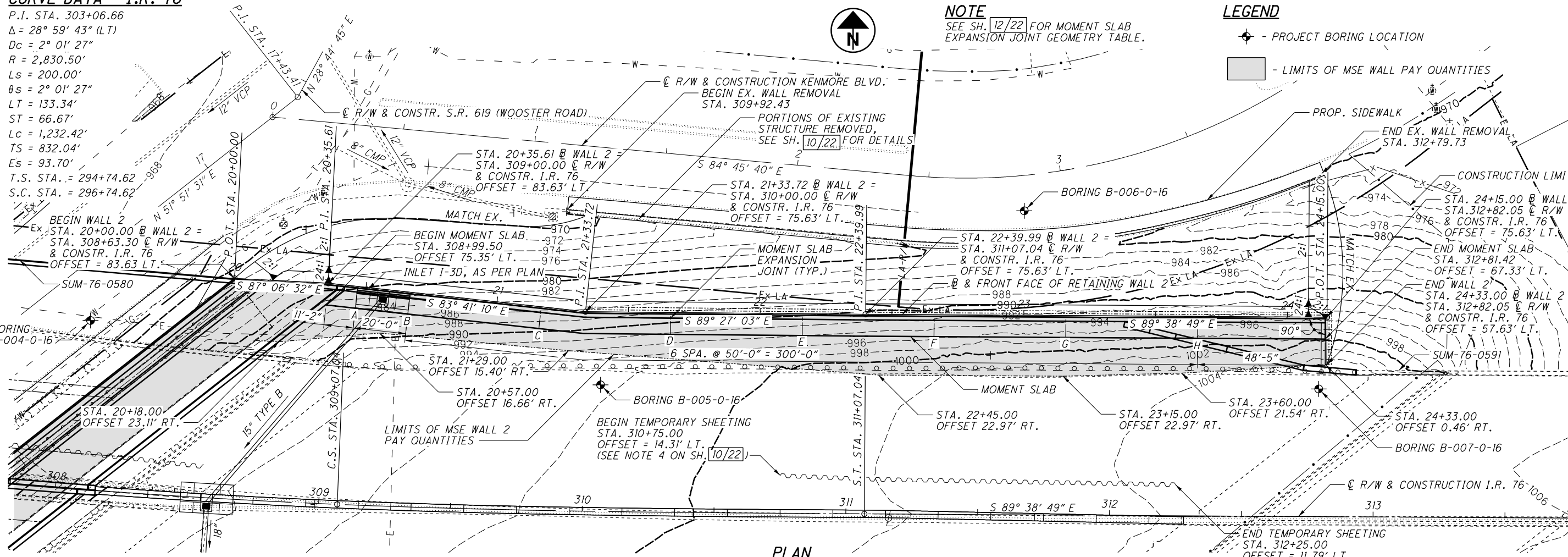
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**CURVE DATA - I.R. 76**

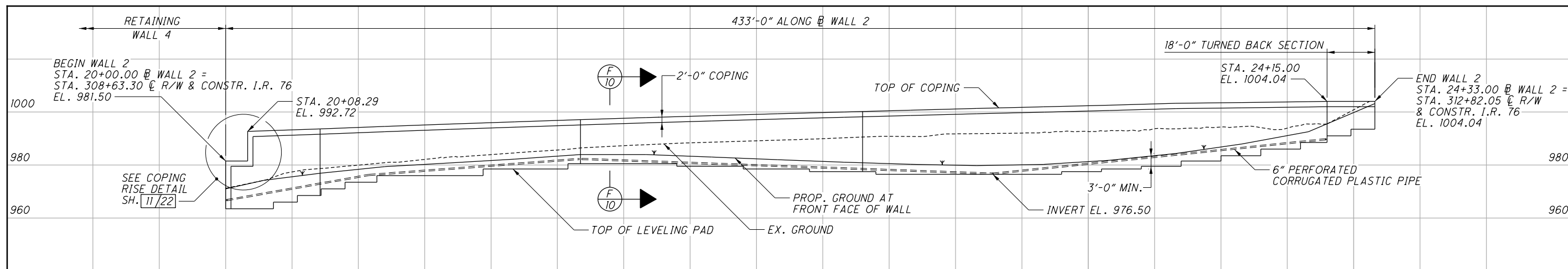
P.I. STA. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $D_c = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $L_s = 200.00'$   
 $\theta_s = 2^\circ 01' 27''$   
 $LT = 133.34'$   
 $ST = 66.67'$   
 $L_c = 1,232.42'$   
 $TS = 832.04'$   
 $Es = 93.70'$   
 $T.S. STA. = 294+74.62$   
 $S.C. STA. = 296+74.62$

**NOTE**  
 SEE SH. 12/22 FOR MOMENT SLAB  
 EXPANSION JOINT GEOMETRY TABLE.

**LEGEND**  
 - PROJECT BORING LOCATION  
 - LIMITS OF MSE WALL PAY QUANTITIES



**PLAN**



**ELEVATION**

VIEWED ALONG BACK FACE OF WALL

**MSE WALL ELEVATIONS**

WALL 2 STATION	I.R. 76 STATION	OFFSET (FT.)	TOP OF COPING	PROPOSED GROUND AT FRONT FACE OF WALL	TOP OF LEVELING PAD	WALL 2 STATION	I.R. 76 STATION	OFFSET (FT.)	TOP OF COPING	PROPOSED GROUND AT FRONT FACE OF WALL	TOP OF LEVELING PAD	WALL 2 STATION	I.R. 76 STATION	OFFSET (FT.)	TOP OF COPING	PROPOSED GROUND AT FRONT FACE OF WALL	TOP OF LEVELING PAD
20+00.00	308+63.30	83.63 LT.	981.50	971.00	963.50	21+29.00	309+95.24	76.07 LT.	996.99	983.64	980.50	23+45.00	312+12.05	75.63 LT.	1002.94	983.04	979.50
20+09.33	308+72.92	83.67 LT.	992.71	973.45	963.50	21+33.72	310+00.00	75.63 LT.	997.15	983.97	980.50	23+60.00	312+27.05	75.63 LT.	1003.35	984.67	981.50
20+18.00	308+81.85	83.68 LT.	993.01	974.69	966.00	21+70.00	310+36.72	75.76 LT.	998.25	983.53	979.50	23+75.00	312+42.05	75.63 LT.	1003.50	986.84	983.50
20+27.00	308+91.13	83.67 LT.	993.32	975.81	968.50	21+95.00	310+61.91	75.75 LT.	998.98	982.54	978.50	23+90.00	312+57.05	75.63 LT.	1003.68	989.28	986.00
20+35.61	309+00.00	83.63' LT.	993.62	976.88	968.50	22+20.00	310+87.02	75.69 LT.	999.68	981.56	977.50	24+05.00	312+72.05	75.63 LT.	1003.90	992.04	988.50
20+36.00	309+00.40	83.60 LT.	993.64	976.92	971.00	22+39.99	311+07.04	75.63 LT.	1000.22	980.83	977.50	24+15.00	312+82.05	75.63 LT.	1004.04	995.56	991.00
20+45.00	309+09.65	82.99 LT.	993.98	977.85	973.50	22+45.00	311+12.05	75.63 LT.	1000.35	980.68	976.50	24+24.00	312+82.05	66.63 LT.	1004.04	1000.33	993.50
20+54.00	309+18.89	82.35 LT.	994.33	978.78	976.00	23+15.00	311+82.05	75.63 LT.	1002.13	980.66	977.50	24+33.00	312+82.05	57.63 LT.	1004.04	1004.04	993.50
20+87.00	309+52.62	79.77 LT.	995.55	980.94	978.50	23+30.00	311+97.05	75.63 LT.	1002.51	981.61	978.50						

STATIONS AND OFFSETS TAKEN AT THE FRONT FACE OF THE WALL.

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DESIGN AGENCY  
**CARPENTER MARTY**  
TRANSPORTATION

DATE  
5-8-17

REVIEWED  
WHM

DRAWN  
ERK

DESIGNED  
ERK

CHECKED  
GDJ

STRUCTURE FILE NUMBER  
N/A

PLAN AND ELEVATION  
RETAINING WALL 2

SUM-76-5.53  
PID No. 96670

9/22

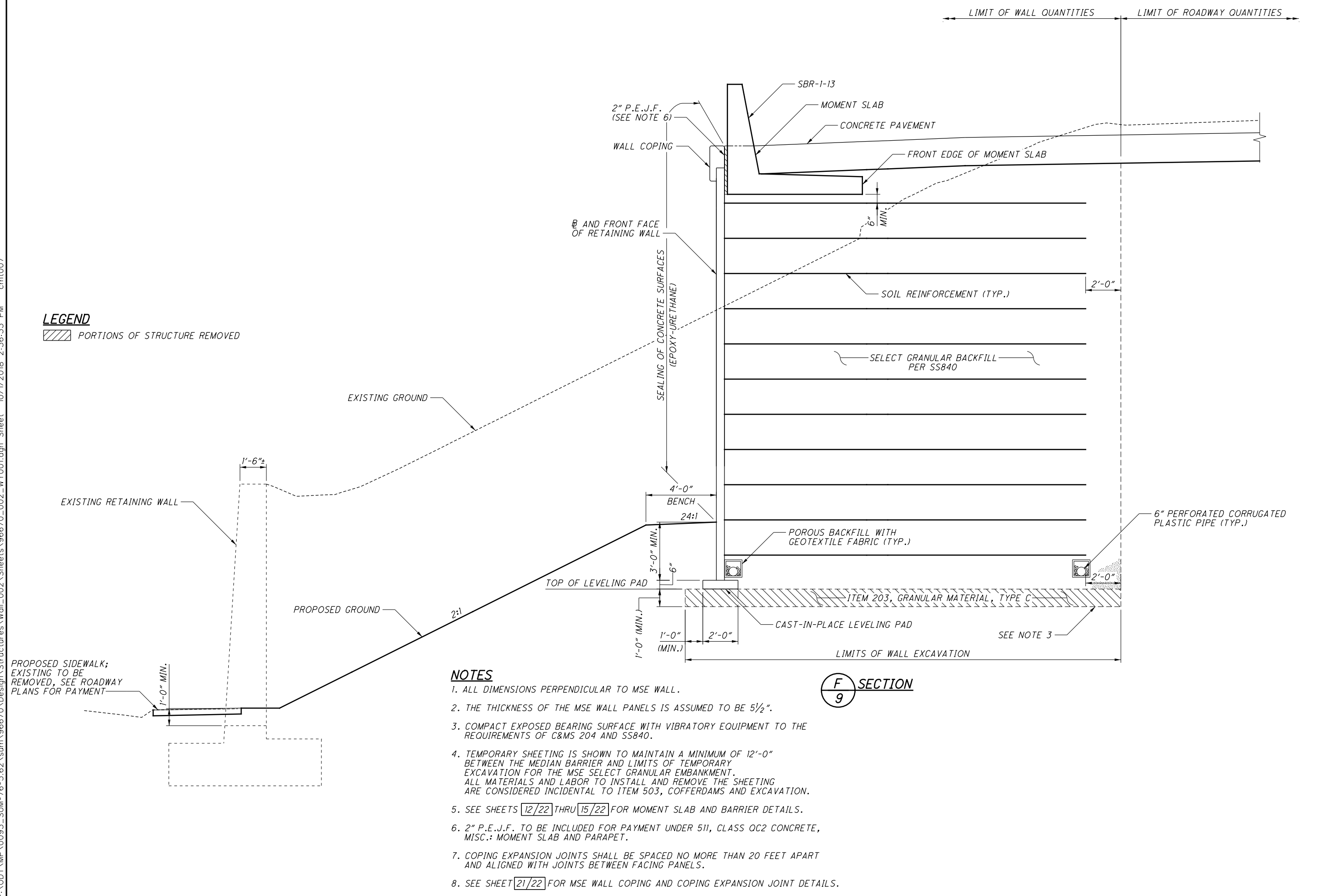
517  
672

P:\ODT\MP\0093\_SUM-76-5.62\sum\96670\Design\Structures\Wall\_002\_Sheets\96670\_002\_WY001.dgn Sheet 10/1/2018 2:36:33 PM cmt007

DESIGNED	AMR	CHECKED	GDJ
DRAWN	AMR	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	N/A
DATE	5-8-17		

**MSE WALL TYPICAL SECTION**  
 RETAINING WALL 2

**SUM-76-5.53**  
 PID No. 96670

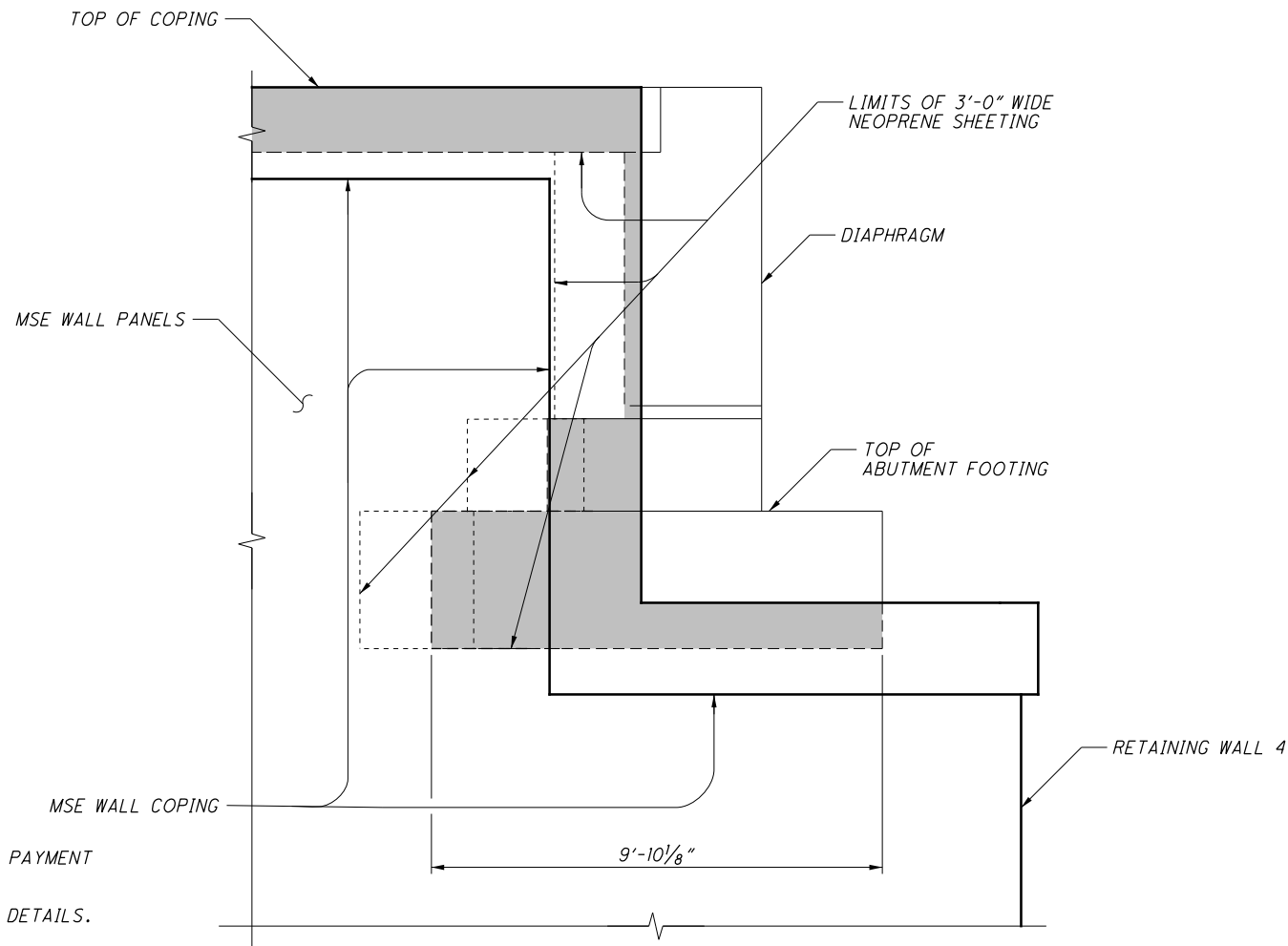
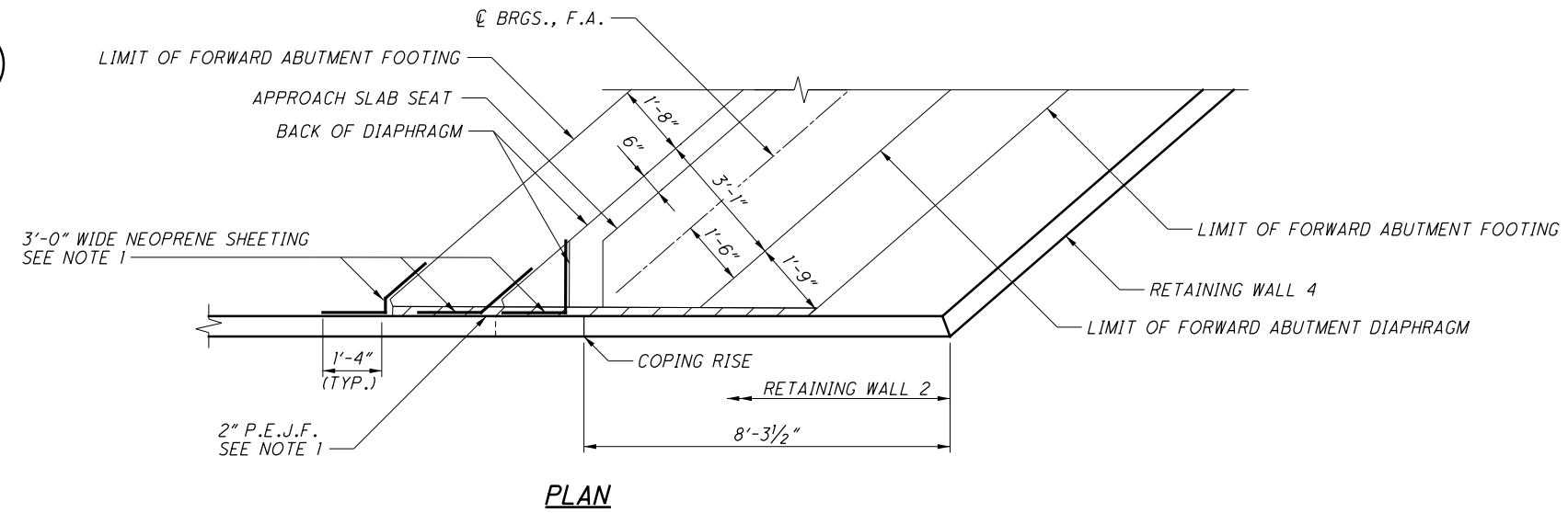


**LEGEND**  
 [Hatched Box] PORTIONS OF STRUCTURE REMOVED

- NOTES**
1. ALL DIMENSIONS PERPENDICULAR TO MSE WALL.
  2. THE THICKNESS OF THE MSE WALL PANELS IS ASSUMED TO BE 5½".
  3. COMPACT EXPOSED BEARING SURFACE WITH VIBRATORY EQUIPMENT TO THE REQUIREMENTS OF C&MS 204 AND SS840.
  4. TEMPORARY SHEETING IS SHOWN TO MAINTAIN A MINIMUM OF 12'-0" BETWEEN THE MEDIAN BARRIER AND LIMITS OF TEMPORARY EXCAVATION FOR THE MSE SELECT GRANULAR EMBANKMENT. ALL MATERIALS AND LABOR TO INSTALL AND REMOVE THE SHEETING ARE CONSIDERED INCIDENTAL TO ITEM 503, COFFERDAMS AND EXCAVATION.
  5. SEE SHEETS [12/22] THRU [15/22] FOR MOMENT SLAB AND BARRIER DETAILS.
  6. 2" P.E.J.F. TO BE INCLUDED FOR PAYMENT UNDER 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET.
  7. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
  8. SEE SHEET [21/22] FOR MSE WALL COPING AND COPING EXPANSION JOINT DETAILS.

**F SECTION**  
 9

P:\ODT\MP\0093\_SUM-76-5.62\sum\96670\Design\Structures\Wall\_002\_Sheets\96670\_002\_WD001.dgn Sheet 10/1/2018 2:36:34 PM cmt007



**NOTES**

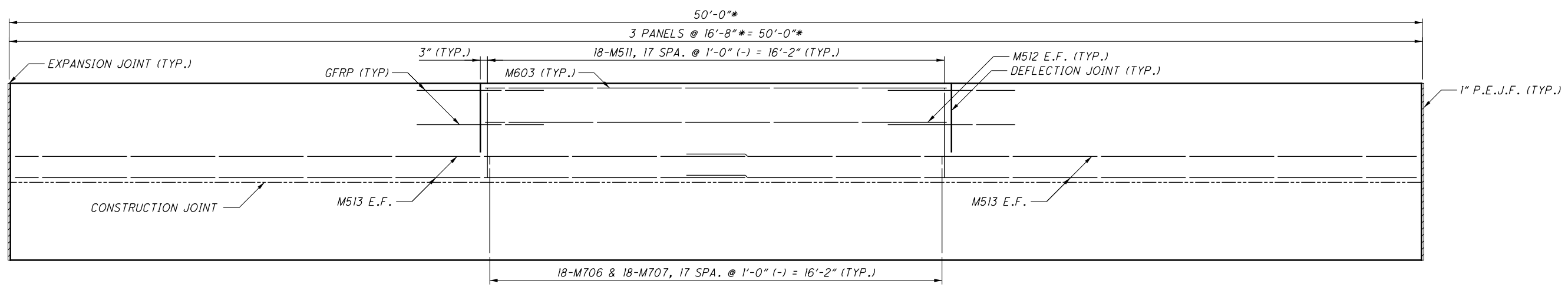
1. 2" P.E.J.F. & 3'-0" WIDE NEOPRENE SHEETING TO BE INCLUDED FOR PAYMENT UNDER ITEM 840, CONCRETE COPING, AS PER PLAN.
2. SEE SHEET [21/22] FOR COPING REINFORCING AND EXPANSION JOINT DETAILS.

**LEGEND**

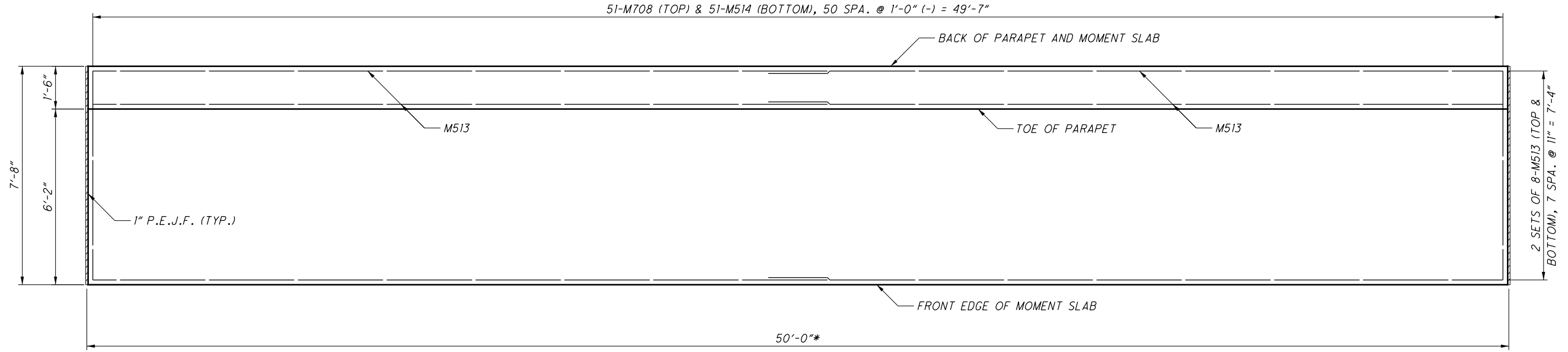
LIMITS OF 2" P.E.J.F. - BETWEEN ABUTMENT CONCRETE AND COPING

**COPING RISE DETAIL**  
VIEWED ALONG FRONT FACE,  
PILES NOT SHOWN FOR CLARITY

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**TYPICAL MOMENT SLAB PARAPET ELEVATION**  
LONGITUDINAL AND TRANSVERSE BARS IN MOMENT SLAB NOT SHOWN; VIEWED ALONG FRONT FACE



**TYPICAL MOMENT SLAB PLAN**

MOMENT SLAB EXPANSION JOINT GEOMETRY										
	BEGIN MOMENT SLAB	JOINT A	JOINT B	JOINT C	JOINT D	JOINT E	JOINT F	JOINT G	JOINT H	END MOMENT SLAB
STATION	308+99.50	309+10.94	309+31.39	309+82.17	310+32.70	310+82.99	311+33.03	311+83.03	312+33.03	312+81.42
OFFSET (FT.)	75.35' LT.	74.59' LT.	73.12' LT.	68.93' LT.	67.47' LT.	67.41' LT.	67.33' LT.	67.33' LT.	67.33' LT.	67.33' LT.

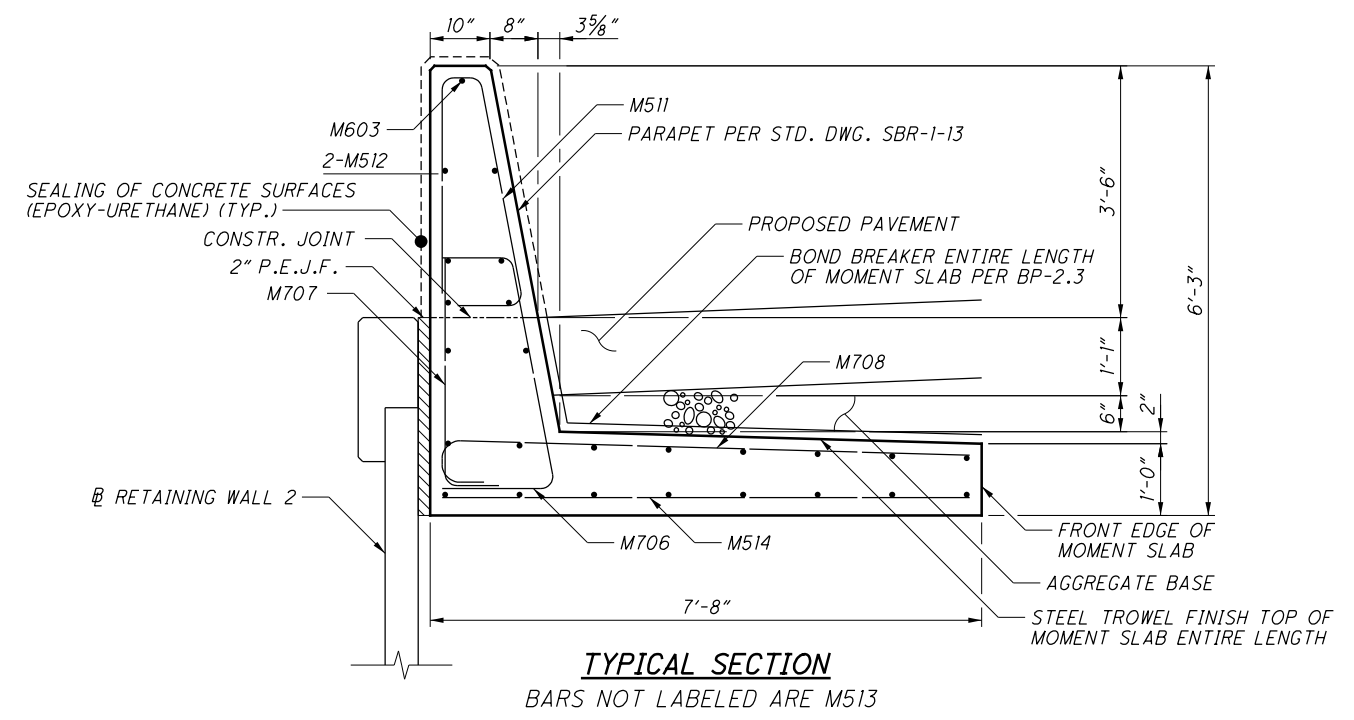
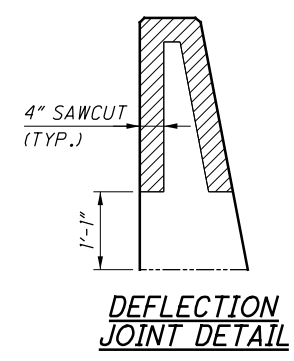
STATIONS AND OFFSETS TAKEN AT THE FRONT EDGE OF MOMENT SLAB

**NOTES**

1. MEASUREMENTS TAKEN ALONG FRONT EDGE OF MOMENT SLAB.
2. MINIMUM LAP LENGTH:  
#5 BAR = 25 INCHES
3. REFER TO STD. DWG. SBR-1-13 FOR ADDITIONAL PARAPET NOTES AND DETAILS.
4. 1/2" φ GLASS FIBER REINFORCED POLYMER TO BE INCLUDED FOR PAYMENT UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.
5. SEE REINFORCING TABLE ON SH. 22/22.
6. 1" P.E.J.F. AND 2" P.E.J.F. TO BE INCLUDED FOR PAYMENT UNDER 511, CLASS OC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET.

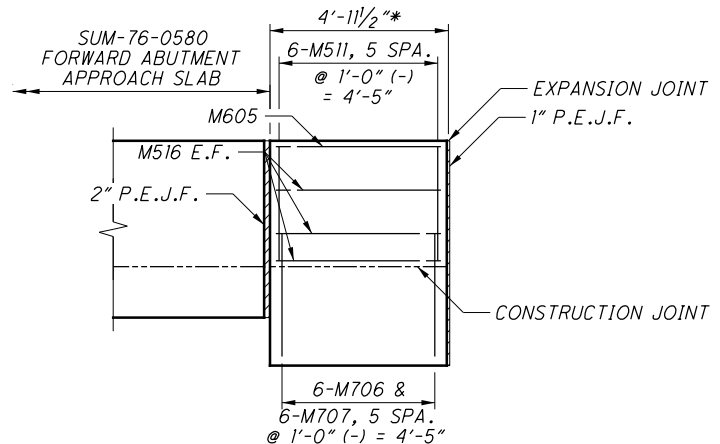
**LEGEND**

- \* - DIMENSIONED TO CENTER OF P.E.J.F. ALONG FRONT EDGE OF MOMENT SLAB
- GFRP - GLASS FIBER REINFORCED POLYMER
- E.F. - EACH FACE

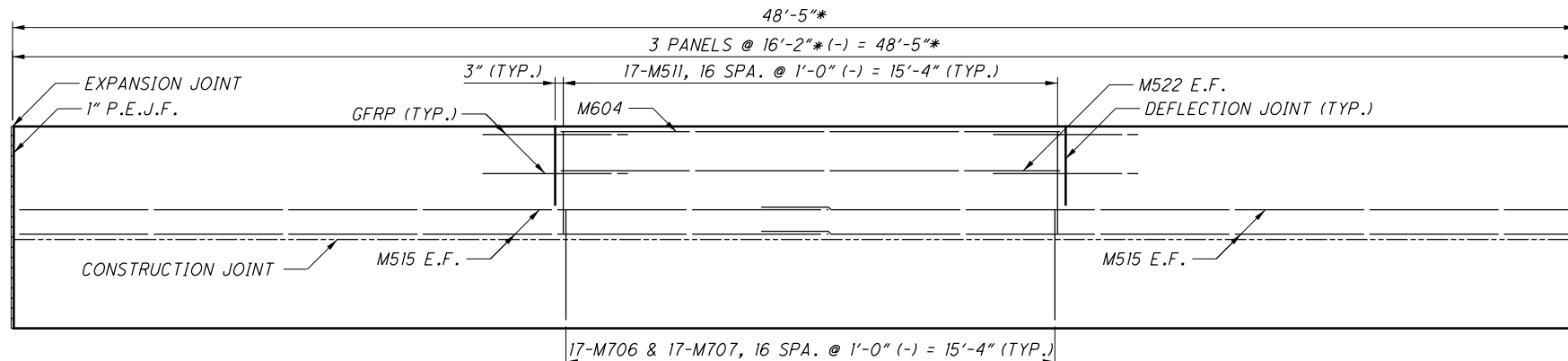


**TYPICAL SECTION**  
BARS NOT LABELED ARE M513

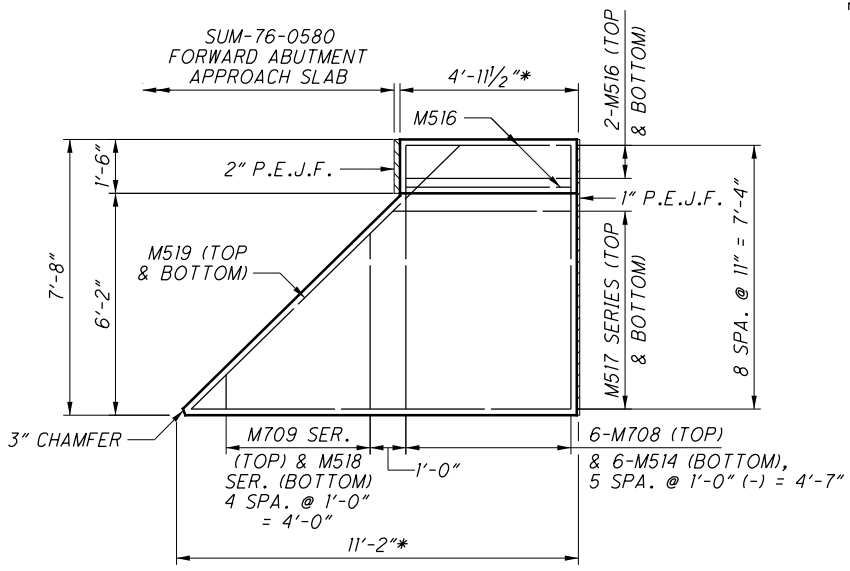
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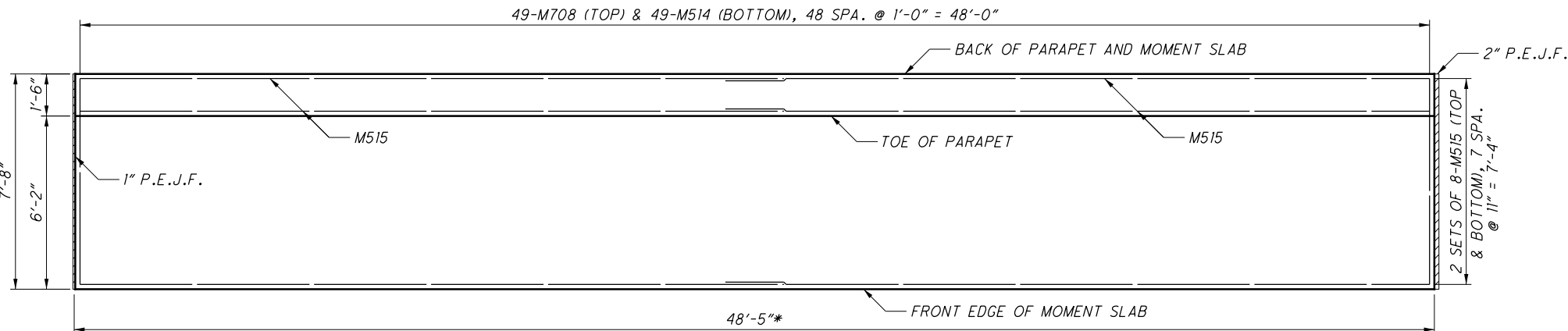
**BEGIN SECTION MOMENT SLAB PARAPET ELEVATION**  
LONGITUDINAL AND TRANSVERSE BARS IN MOMENT SLAB NOT SHOWN; VIEWED ALONG FRONT FACE



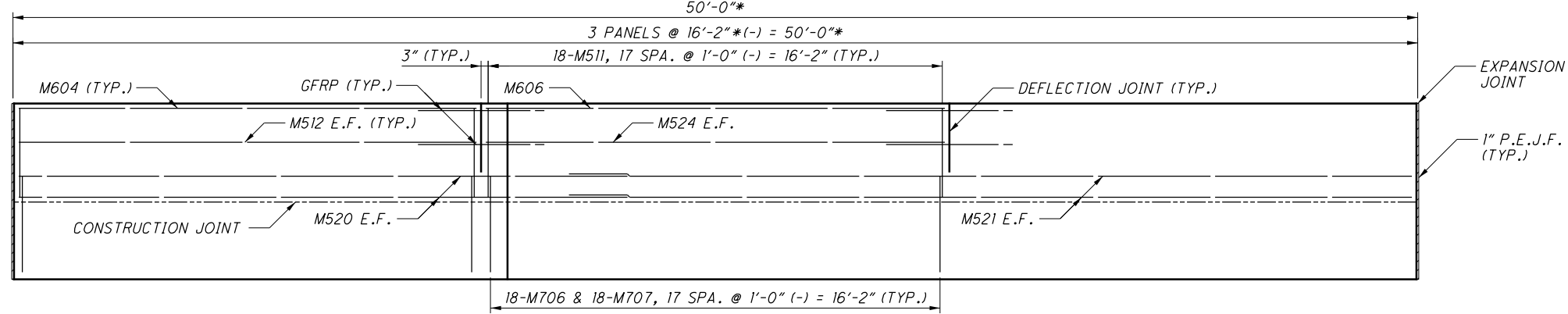
**END SECTION MOMENT SLAB PARAPET ELEVATION**  
LONGITUDINAL AND TRANSVERSE BARS IN MOMENT SLAB NOT SHOWN; VIEWED ALONG FRONT FACE



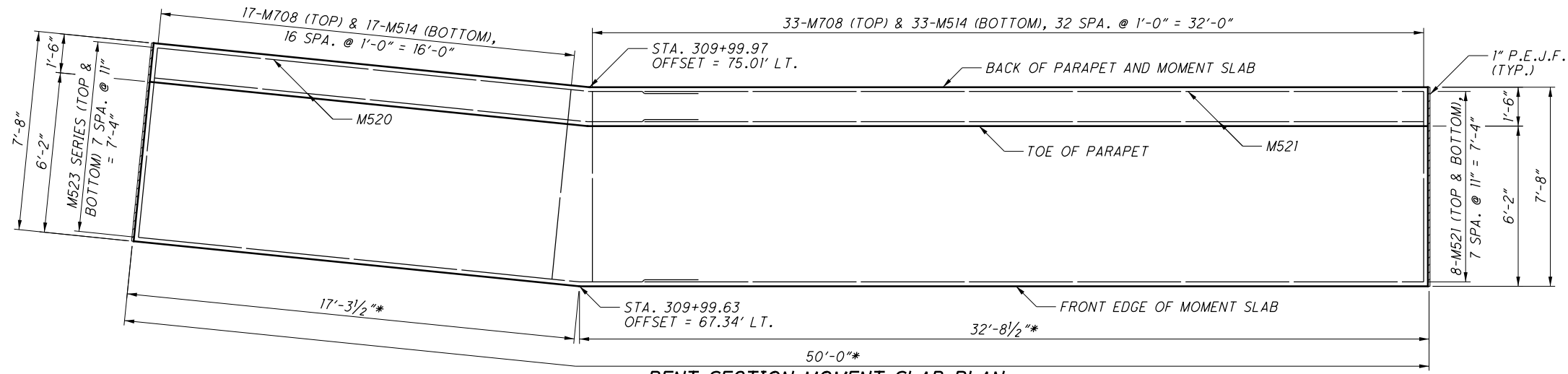
**BEGIN SECTION MOMENT SLAB PLAN**



**END SECTION MOMENT SLAB PLAN**



**BENT SECTION MOMENT SLAB PARAPET ELEVATION**  
LONGITUDINAL AND TRANSVERSE BARS IN MOMENT SLAB NOT SHOWN; VIEWED ALONG FRONT FACE



**BENT SECTION MOMENT SLAB PLAN**

**NOTES**

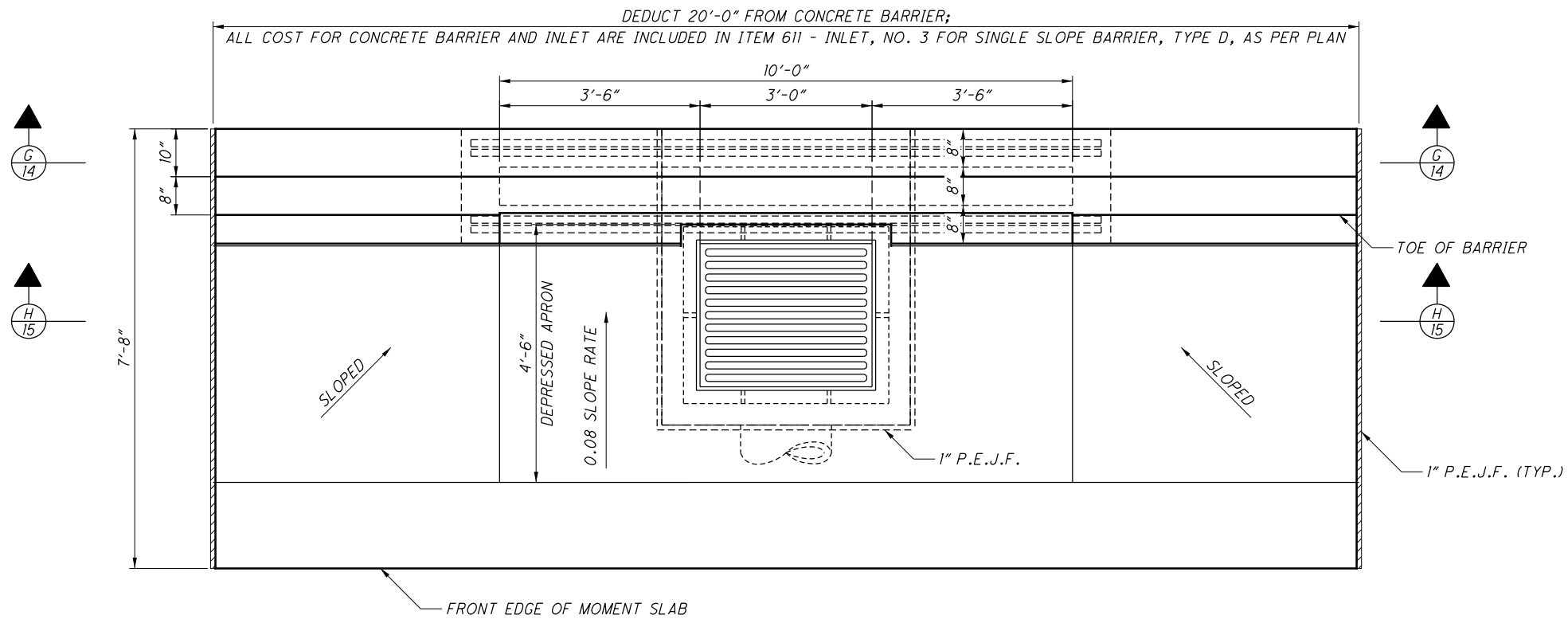
1. MEASUREMENTS TAKEN ALONG FRONT EDGE OF MOMENT SLAB.
2. MINIMUM LAP LENGTH:  
#5 BAR = 25 INCHES
3. REFER TO STD. DWG. SBR-1-13 FOR ADDITIONAL PARAPET NOTES AND DETAILS.
4. 1/2" φ GLASS FIBER REINFORCED POLYMER TO BE INCLUDED FOR PAYMENT UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.
5. SEE REINFORCING TABLE ON SH. 22/22.
6. SEE SH. 12/22 FOR DEFLECTION JOINT DETAIL.
7. 1" P.E.J.F. TO BE INCLUDED FOR PAYMENT UNDER 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET.

**LEGEND**

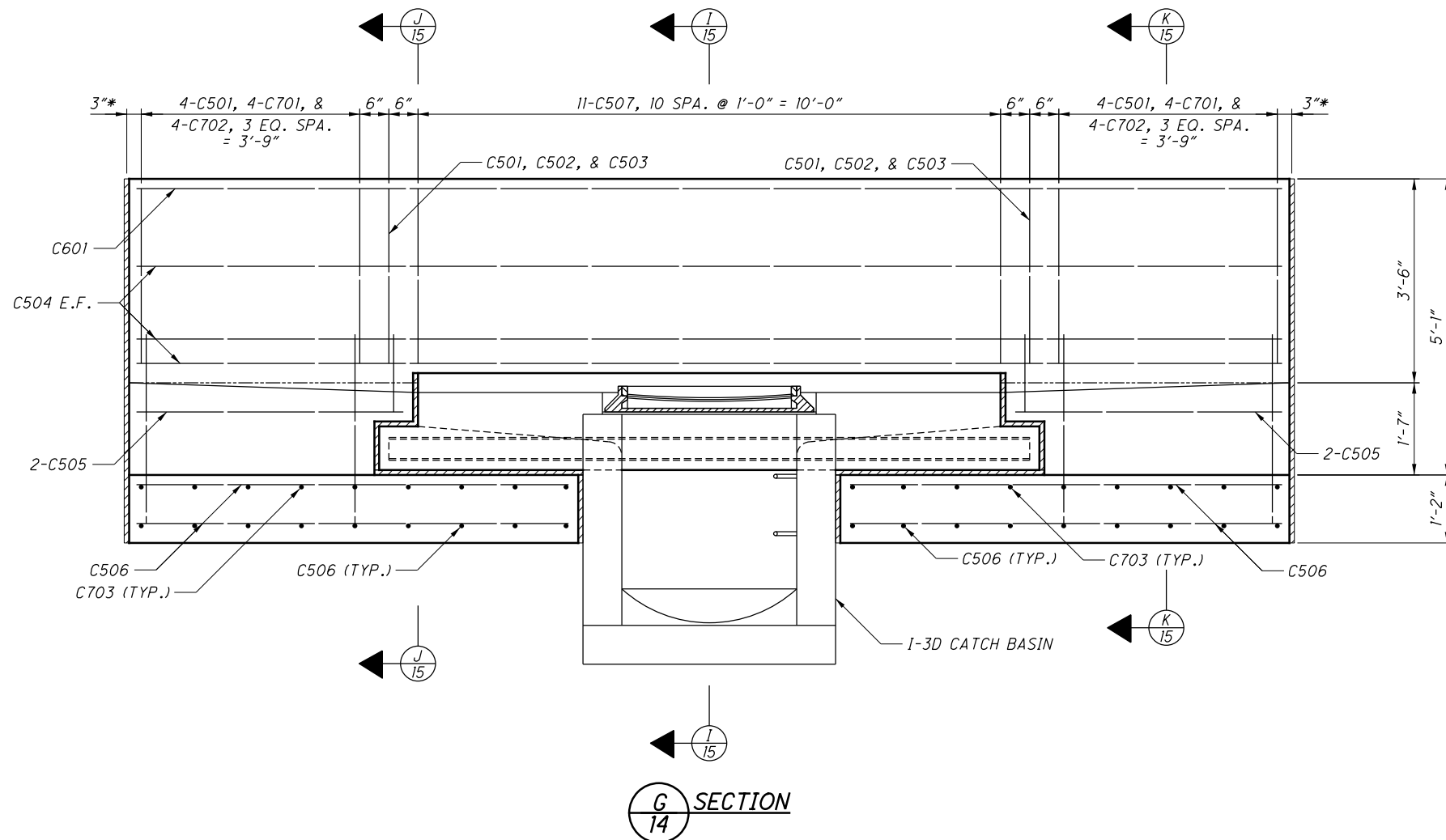
\* - DIMENSIONED TO CENTER OF 1" P.E.J.F. ALONG FRONT EDGE OF MOMENT SLAB  
GFRP - GLASS FIBER REINFORCED POLYMER  
E.F. - EACH FACE



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PLAN VIEW



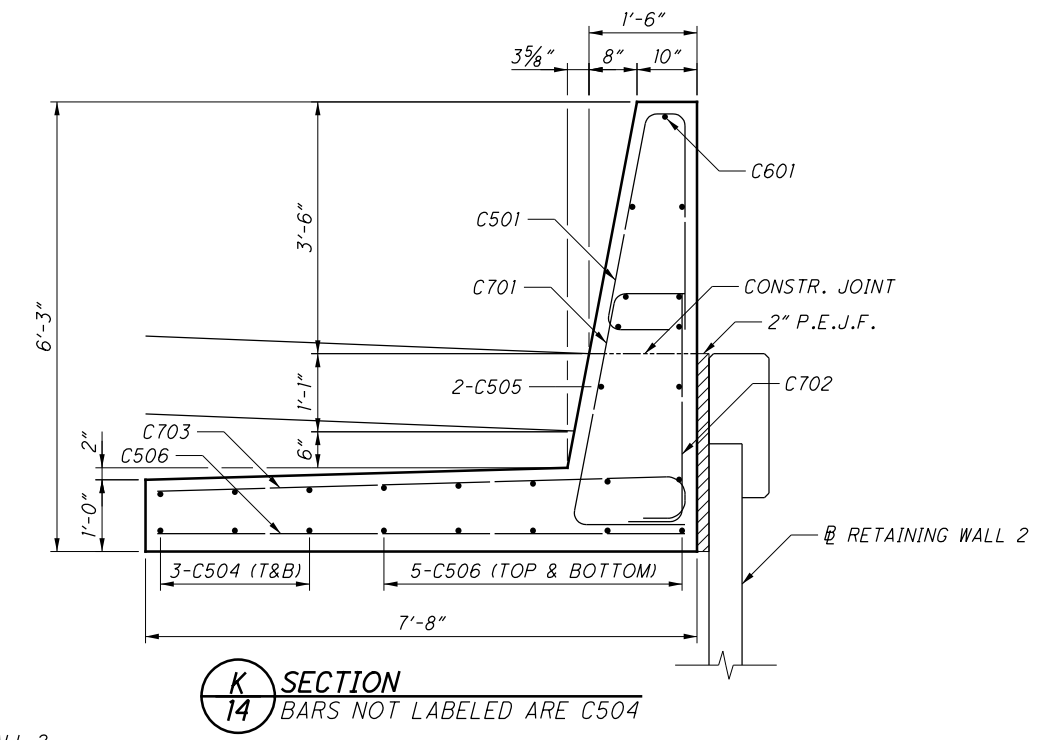
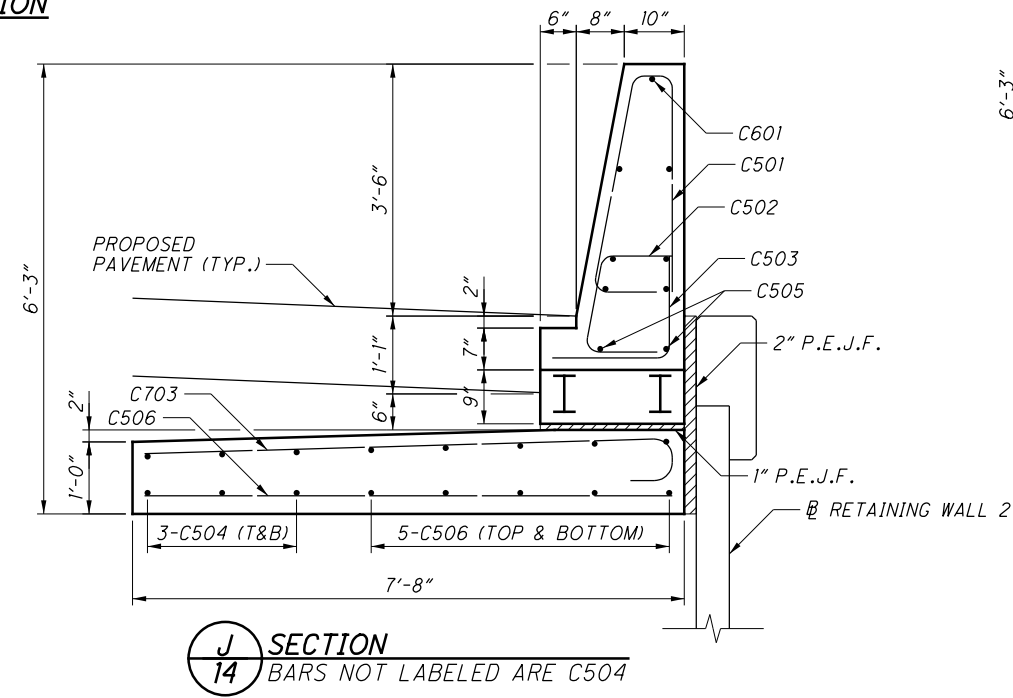
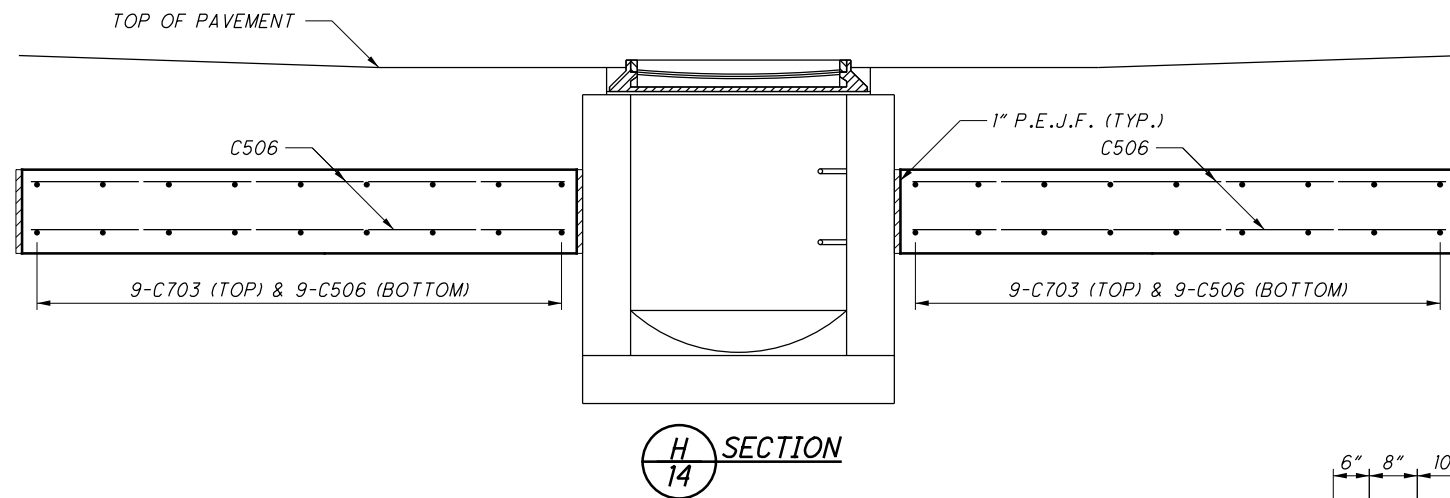
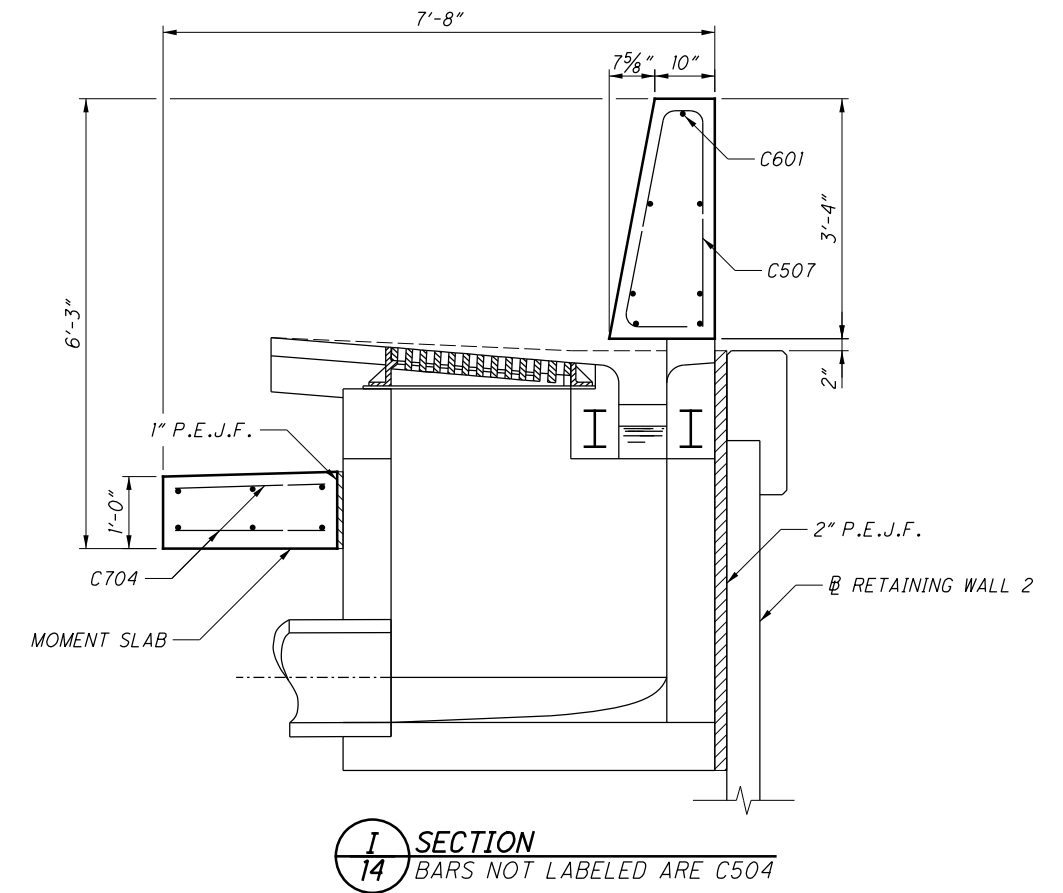
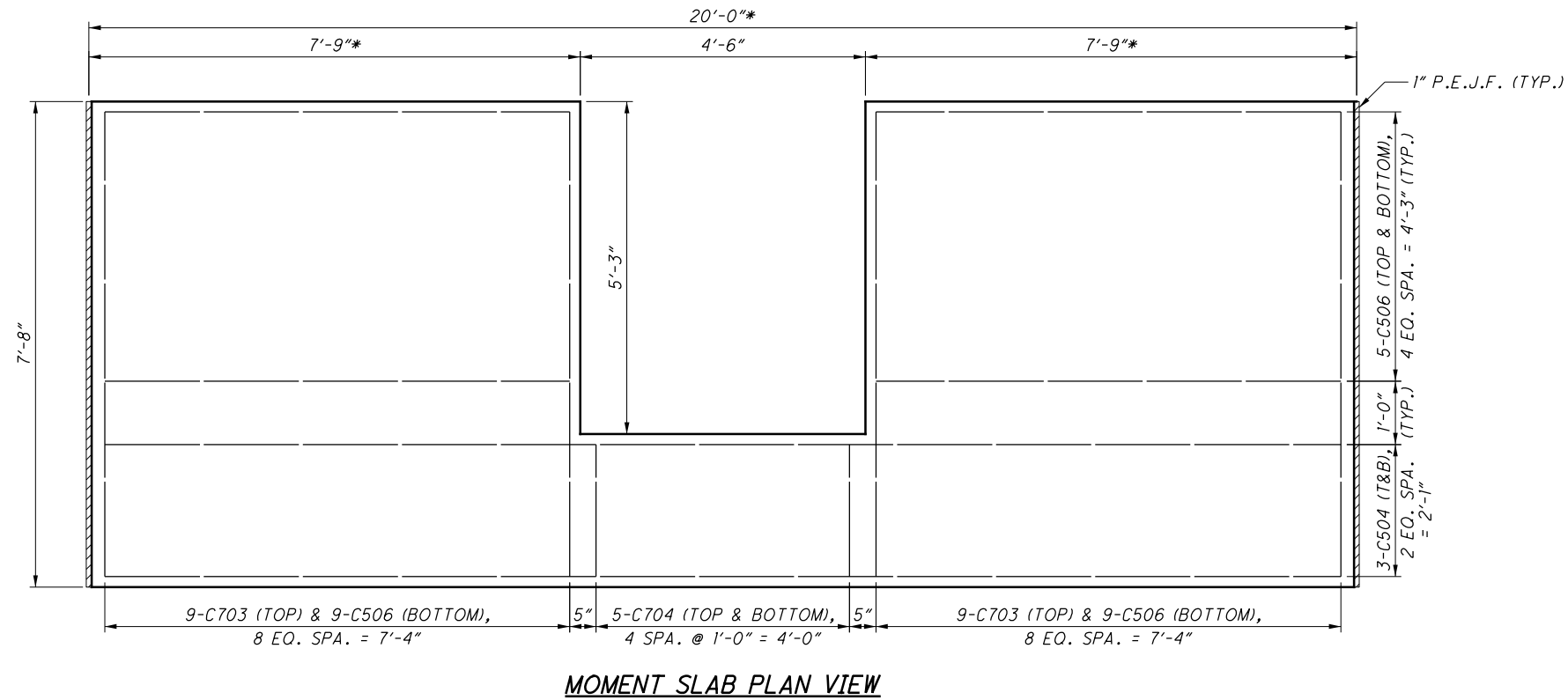
G SECTION

**LEGEND**

\* - DIMENSIONED TO CENTER OF P.E.J.F.

**NOTES**

1. SEE ROADWAY STD. DWG. 1-2.3 FOR ADDITIONAL NOTES AND DETAILS.
2. SEE ROADWAY GENERAL NOTES FOR PAYMENT.
3. SEE REINFORCING TABLE ON SH. 22/22.



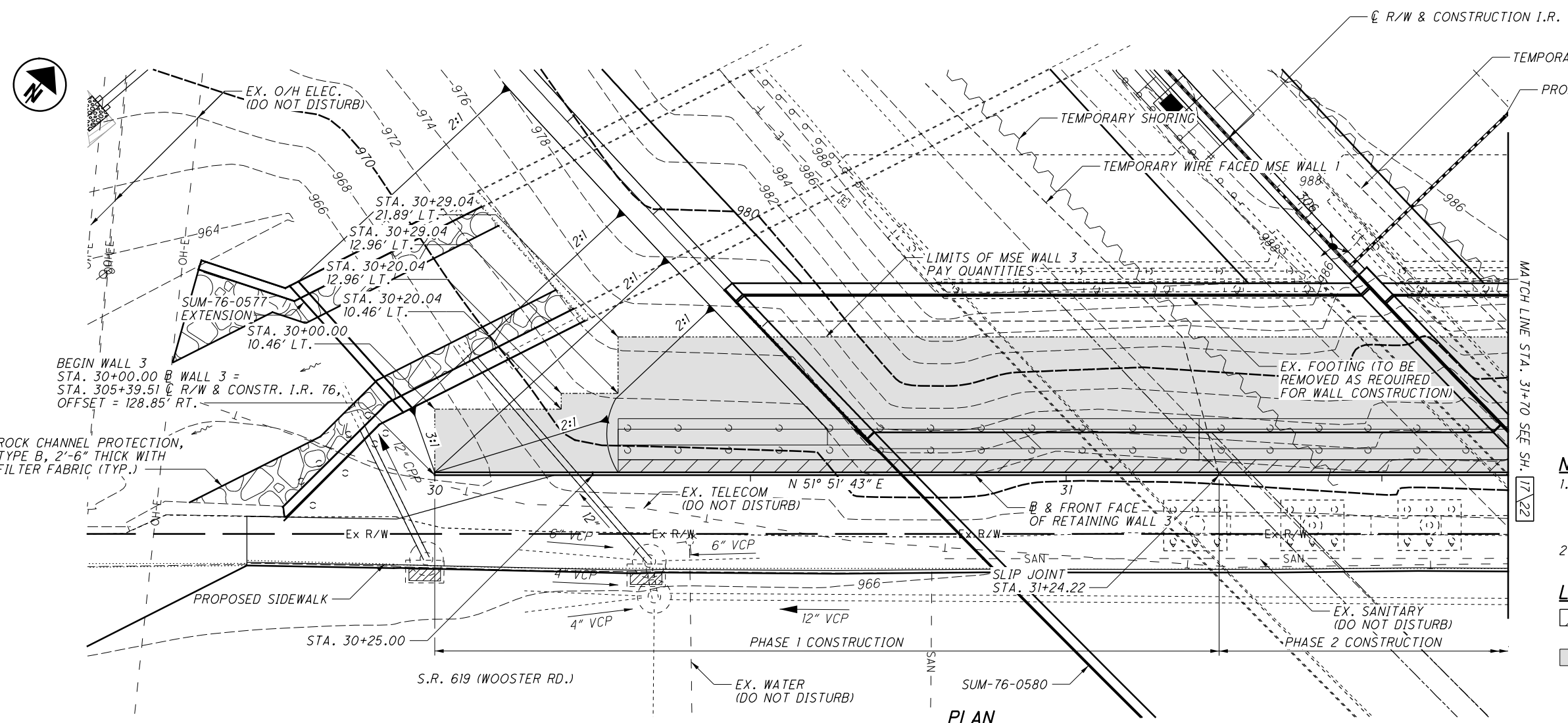
**LEGEND**

\* - DIMENSIONED TO CENTER OF P.E.J.F.

T&B = TOP & BOTTOM

**NOTES**

1. SEE ROADWAY STD. DWG. 1-2.3 FOR ADDITIONAL NOTES AND DETAILS.
2. SEE ROADWAY GENERAL NOTES FOR PAYMENT.
3. SEE REINFORCING TABLE ON SH. 22/22.



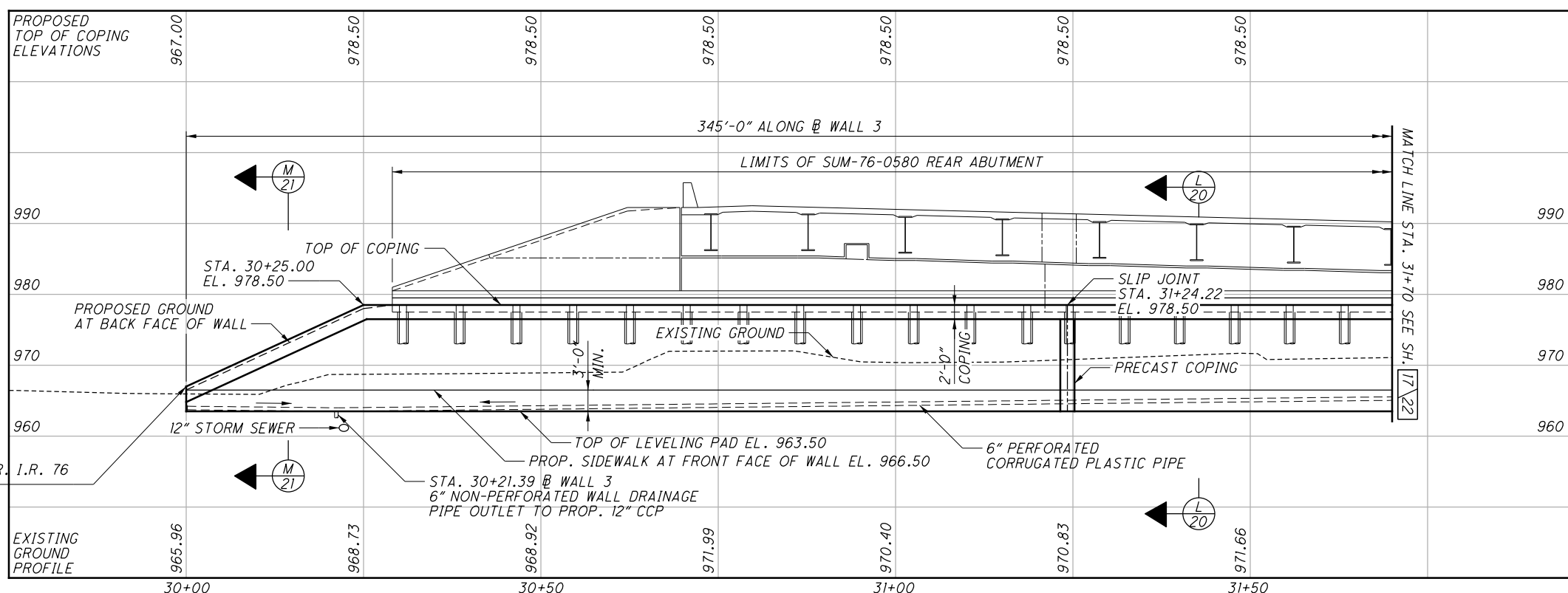
**CURVE DATA - I.R. 76**

P.I. STA.	303+06.66
$\Delta$	28° 59' 43" (LT)
Dc	2° 01' 27"
R	2,830.50'
Ls	200.00'
bs	2° 01' 27"
LT	133.34'
ST	66.67'
Lc	1,232.42'
Ts	832.04'
Es	93.70'
T.S. STA.	294+74.62
S.C. STA.	296+74.62
C.S. STA.	309+07.04
S.T. STA.	311+07.04

- NOTES**
- PERMANENT WALL MANUFACTURER SHALL ADJUST & ARRANGE THE SOIL REINFORCEMENT IN THE PHASE CONSTRUCTION DIVISION AREA FOR PROPER ENGAGEMENT OF THE SOIL MASS.
  - SEE SHEET **(495/672)** FOR UNDERPASS LIGHTING.

**LEGEND**

	LIMITS OF CONCRETE SLOPE PROTECTION
	LIMITS OF MSE WALL PAY QUANTITIES



P:\DDT\MP\0093\_SUM-76-5.62\sum\96670\Design\Structures\Wall\_003\Sheets\076\_0580C\_SR000B.dgn Sheet 10/1/2018 2:36:39 PM cmt007

**CURVE DATA - I.R. 76**

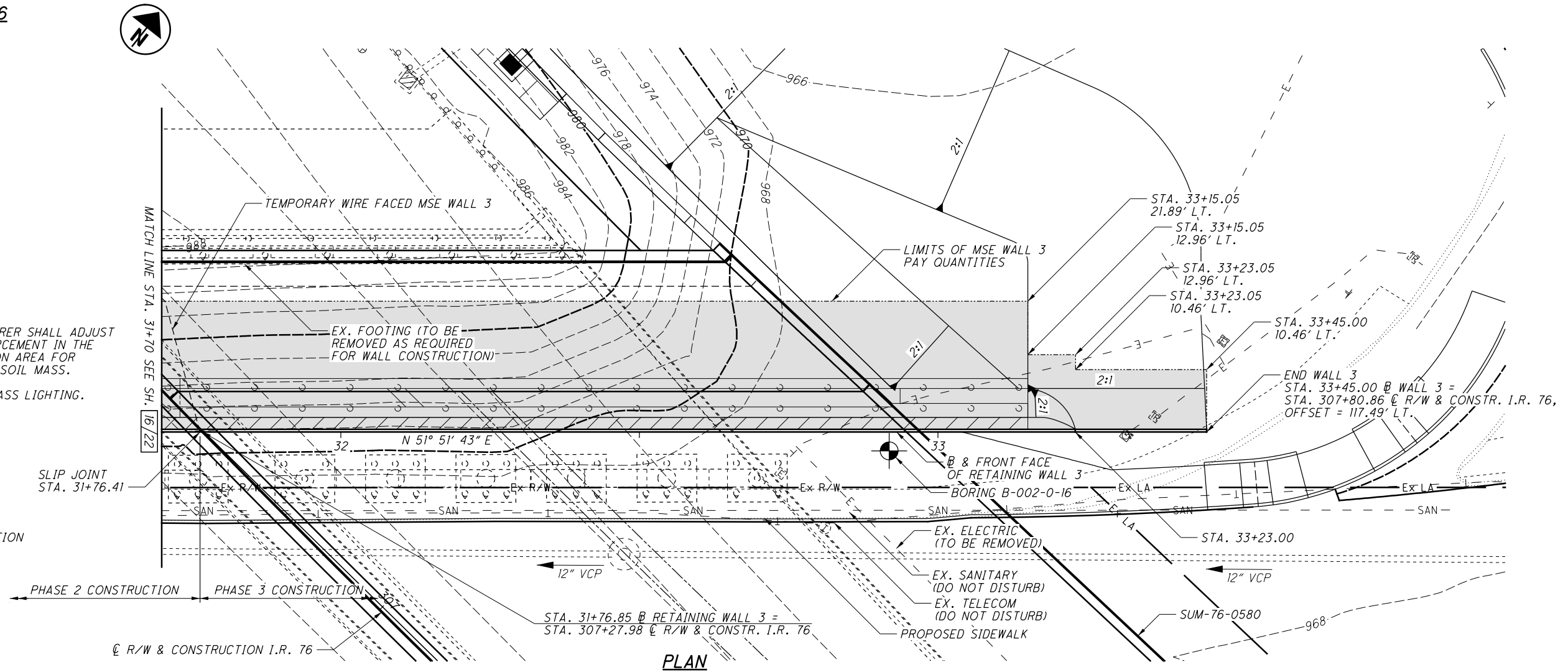
P.I. STA. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $D_c = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $L_s = 200.00'$   
 $\theta_s = 2^\circ 01' 27''$   
 $LT = 133.34'$   
 $ST = 66.67'$   
 $L_c = 1,232.42'$   
 $T_s = 832.04'$   
 $E_s = 93.70'$   
 T.S. STA. = 294+74.62  
 S.C. STA. = 296+74.62  
 C.S. STA. = 309+07.04  
 S.T. STA. = 311+07.04

**NOTES**

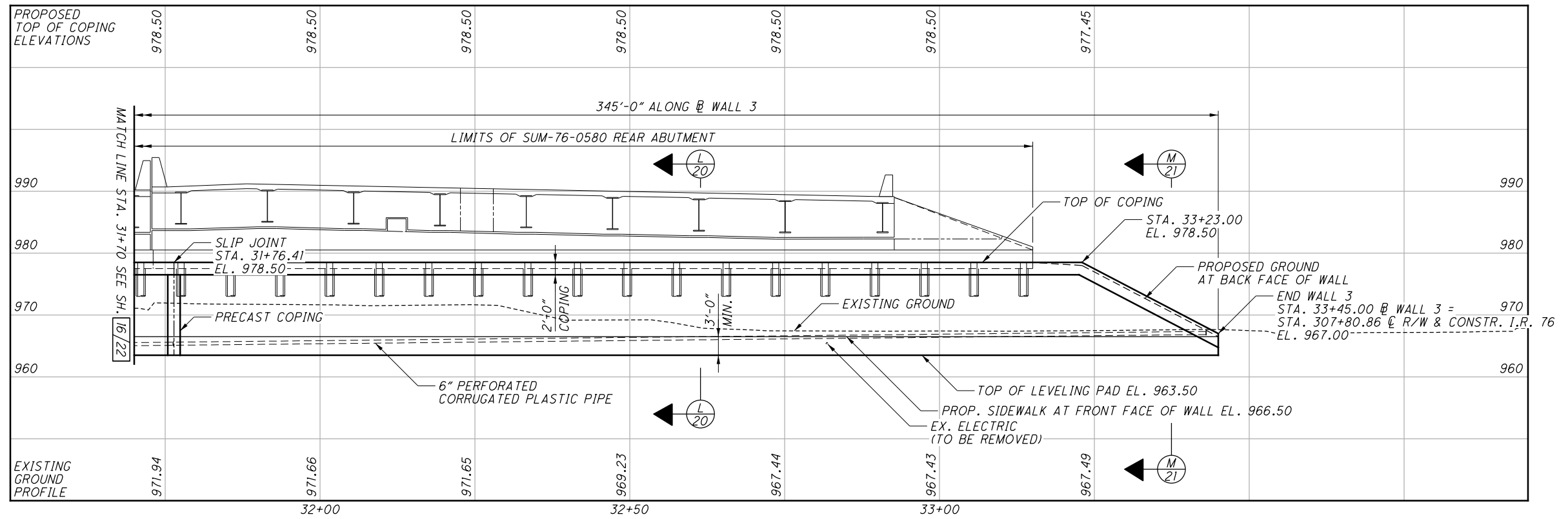
- PERMANENT WALL MANUFACTURER SHALL ADJUST & ARRANGE THE SOIL REINFORCEMENT IN THE PHASE CONSTRUCTION DIVISION AREA FOR PROPER ENGAGEMENT OF THE SOIL MASS.
- SEE SHEET  $\frac{495}{672}$  FOR UNDERPASS LIGHTING.

**LEGEND**

- LIMITS OF CONCRETE SLOPE PROTECTION
- LIMITS OF MSE WALL PAY QUANTITIES
- PROJECT BORING LOCATION
- SLIP JOINT STA. 31+76.41



**PLAN**



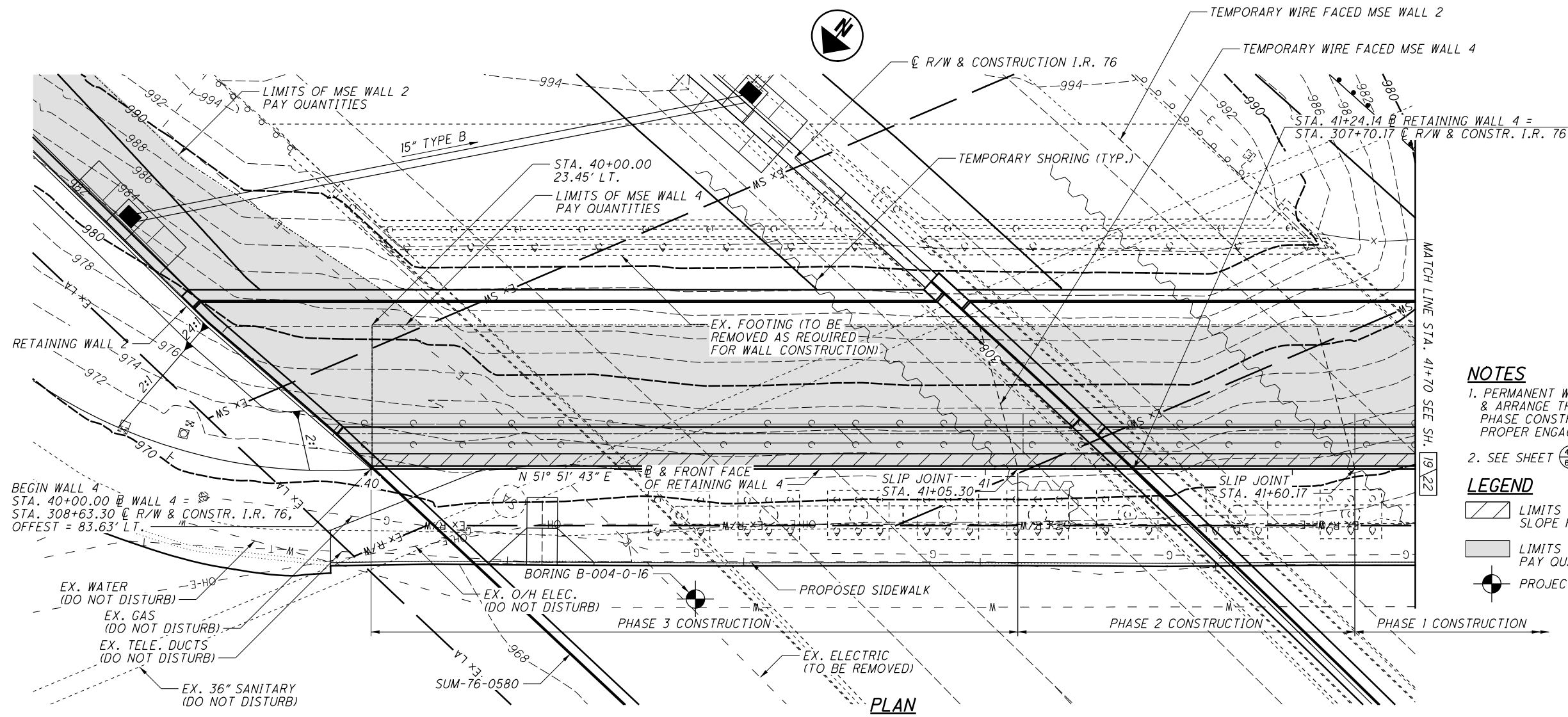
**ELEVATION**

(ALONG @ WALL 3 LOOKING WEST)

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DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	N/A
DATE	5-8-17		

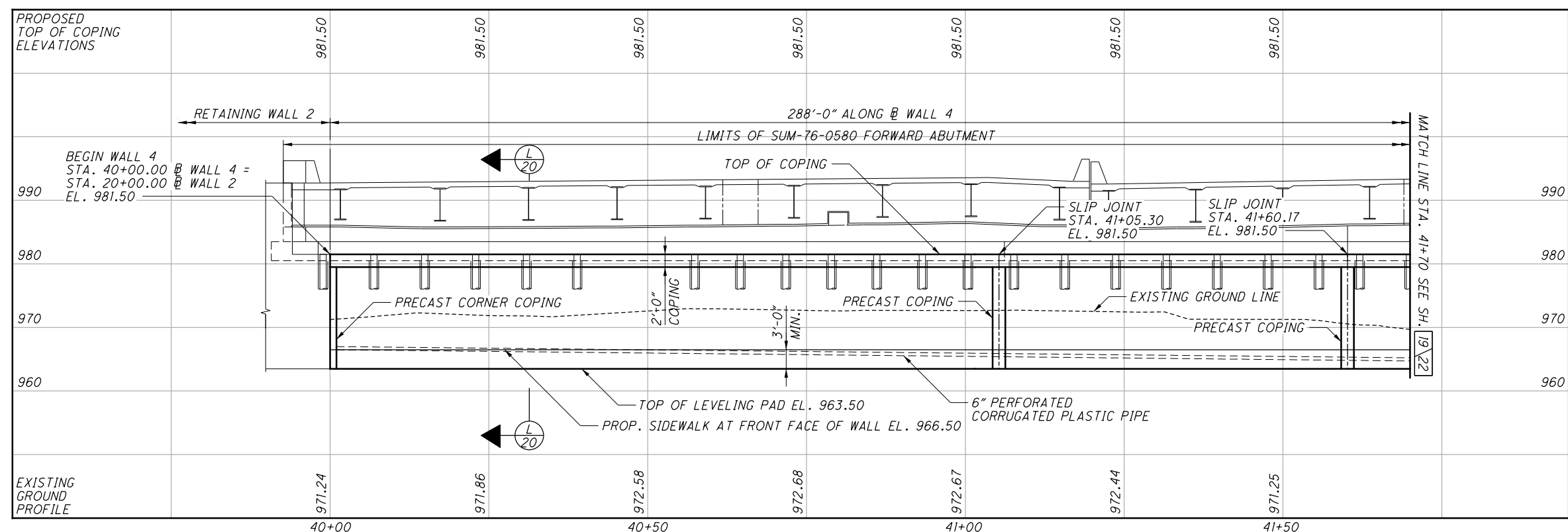
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**CURVE DATA - I.R. 76**  
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 $D_c = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $L_s = 200.00'$   
 $\theta_s = 2^\circ 01' 27''$   
 $LT = 133.34'$   
 $ST = 66.67'$   
 $L_c = 1,232.42'$   
 $T_s = 832.04'$   
 $E_s = 93.70'$   
 T.S. STA. = 294+74.62  
 S.C. STA. = 296+74.62  
 C.S. STA. = 309+07.04  
 S.T. STA. = 311+07.04

- NOTES**
- PERMANENT WALL MANUFACTURER SHALL ADJUST & ARRANGE THE SOIL REINFORCEMENT IN THE PHASE CONSTRUCTION DIVISION AREA FOR PROPER ENGAGEMENT OF THE SOIL MASS.
  - SEE SHEET (495/672) FOR UNDERPASS LIGHTING.

- LEGEND**
- LIMITS OF CONCRETE SLOPE PROTECTION
  - LIMITS OF MSE WALL PAY QUANTITIES
  - PROJECT BORING LOCATION



DESIGN AGENCY  
**CARPENTER MARTY**  
 TRANSPORTATION

DATE 5-8-17  
 REVIEWED WHM  
 DRAWN ERK  
 CHECKED GDU  
 DESIGNED ERK

STRUCTURE FILE NUMBER N/A

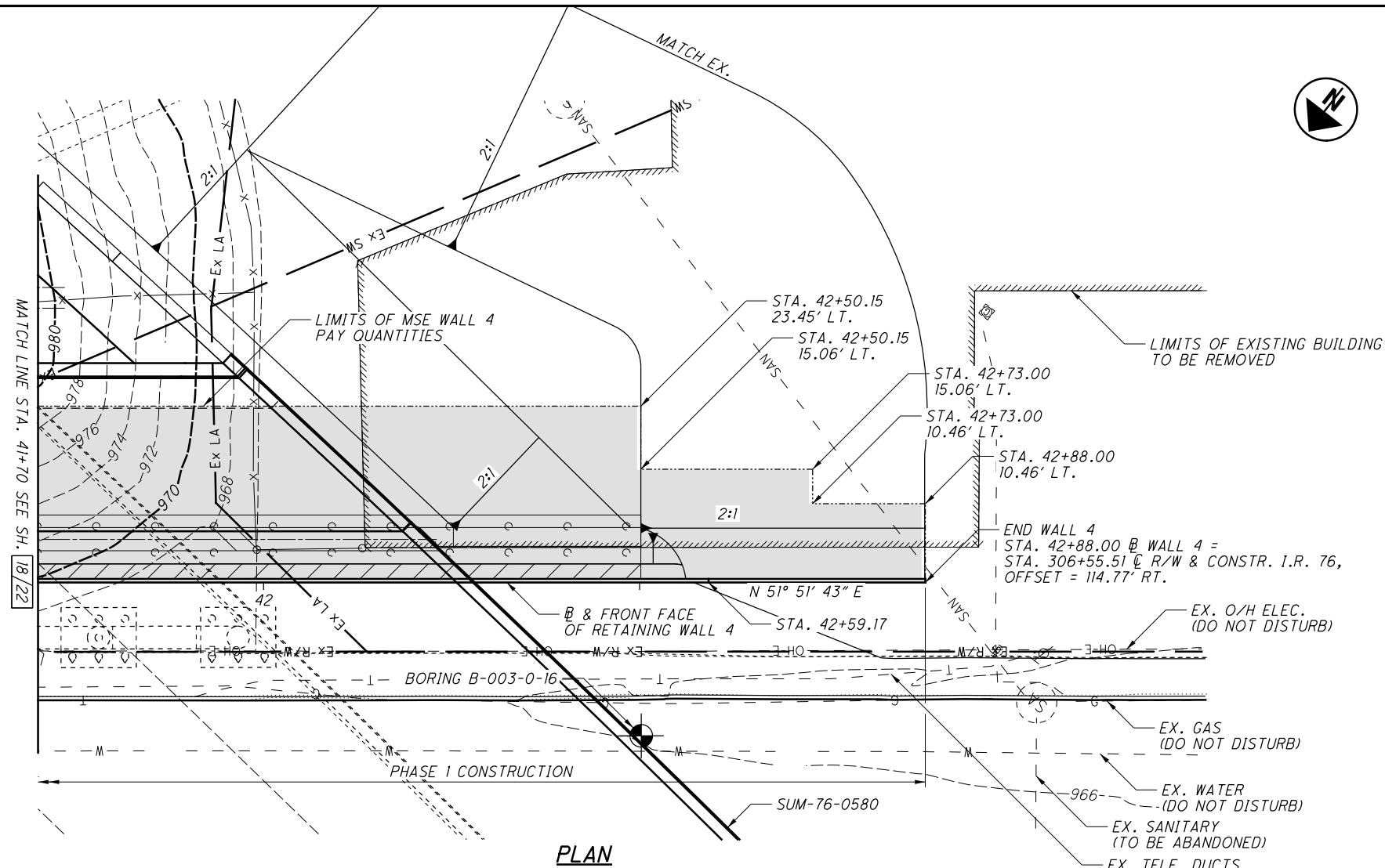
PLAN AND ELEVATION  
 RETAINING WALL 4

SUM-76-5.53  
 PID No. 96670

18/22

526  
 672

P:\DDT\MP\0093\_SUM-76-5.62\96670\Design\Structures\Wall\_004\_Sheets\076\_0580C\_SF006.dgn Sheet 10/30/2018 8:57:37 AM cmt026



PLAN

**CURVE DATA - I.R. 76**

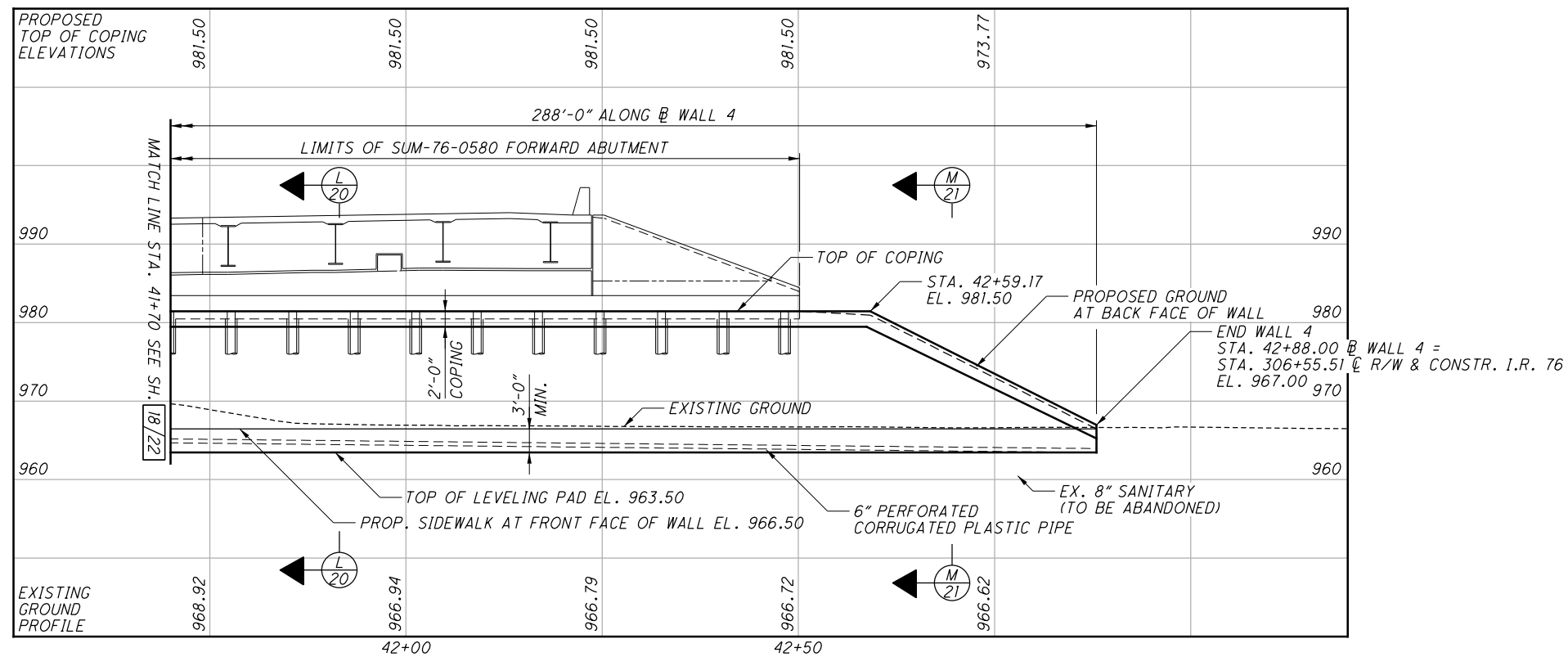
P.I. STA. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $Dc = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $Ls = 200.00'$   
 $\theta s = 2^\circ 01' 27''$   
 $LT = 133.34'$   
 $ST = 66.67'$   
 $Lc = 1,232.42'$   
 $Ts = 832.04'$   
 $Es = 93.70'$   
 T.S. STA. = 294+74.62  
 S.C. STA. = 296+74.62  
 C.S. STA. = 309+07.04  
 S.T. STA. = 311+07.04

**LEGEND**

- LIMITS OF CONCRETE SLOPE PROTECTION
- LIMITS OF MSE WALL PAY QUANTITIES
- PROJECT BORING LOCATION

**NOTES**

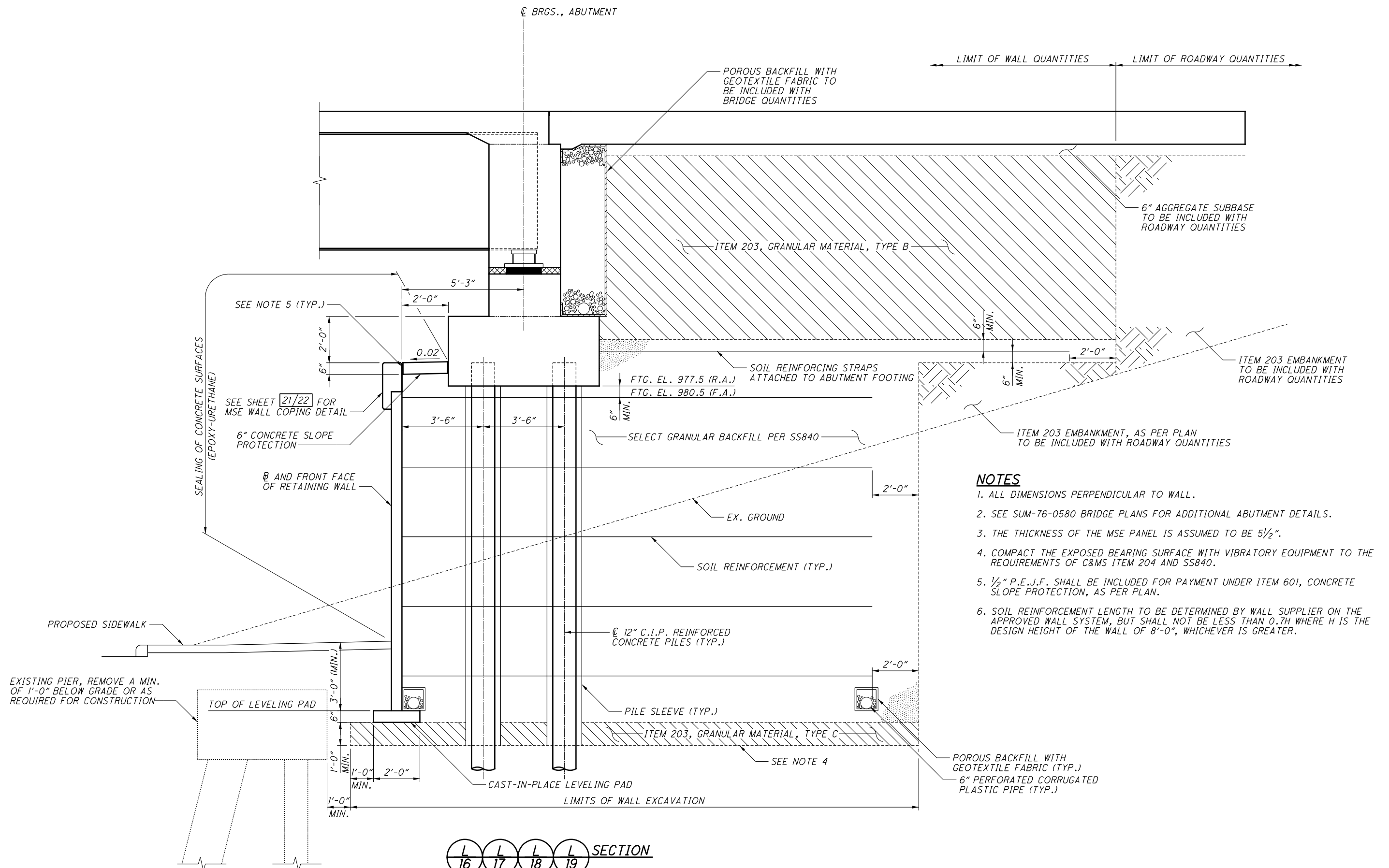
1. PERMANENT WALL MANUFACTURER SHALL ADJUST & ARRANGE THE SOIL REINFORCEMENT IN THE PHASE CONSTRUCTION DIVISION AREA FOR PROPER ENGAGEMENT OF THE SOIL MASS.
2. SEE SHEET FOR UNDERPASS LIGHTING.



ELEVATION

(ALONG B WALL 4 LOOKING EAST)

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- NOTES**
1. ALL DIMENSIONS PERPENDICULAR TO WALL.
  2. SEE SUM-76-0580 BRIDGE PLANS FOR ADDITIONAL ABUTMENT DETAILS.
  3. THE THICKNESS OF THE MSE PANEL IS ASSUMED TO BE 5/2".
  4. COMPACT THE EXPOSED BEARING SURFACE WITH VIBRATORY EQUIPMENT TO THE REQUIREMENTS OF C&MS ITEM 204 AND SS840.
  5. 1/2" P.E.J.F. SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 601, CONCRETE SLOPE PROTECTION, AS PER PLAN.
  6. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER ON THE APPROVED WALL SYSTEM, BUT SHALL NOT BE LESS THAN 0.7H WHERE H IS THE DESIGN HEIGHT OF THE WALL OF 8'-0", WHICHEVER IS GREATER.

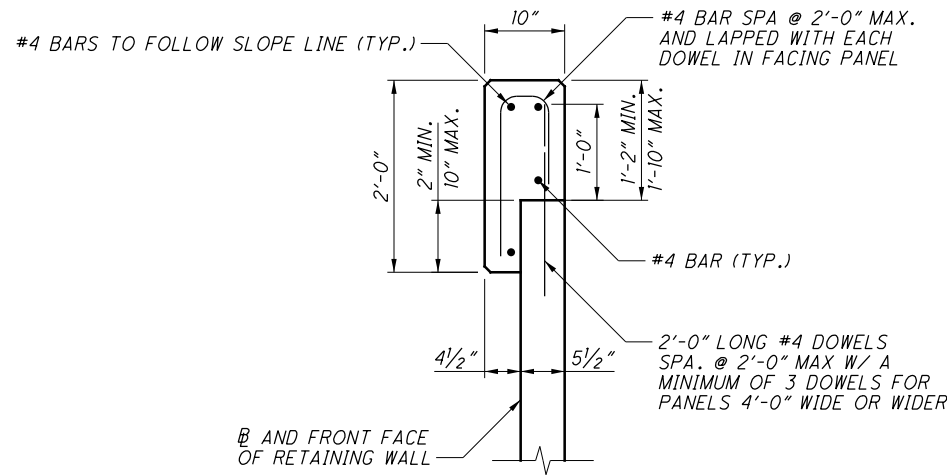
L L L L SECTION  
16 17 18 19

DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	N/A
DATE	5-8-17		

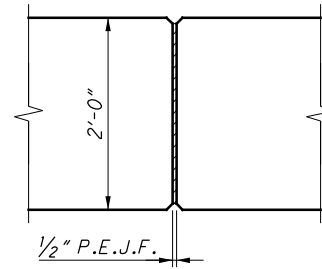
**MSE WALL TYPICAL SECTION**  
RETAINING WALL 3 & 4

SUM-76-5.53  
PID No. 96670

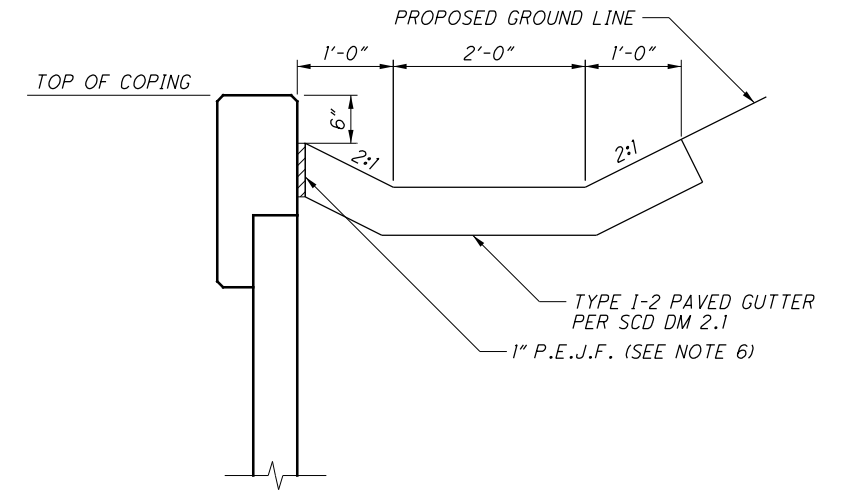
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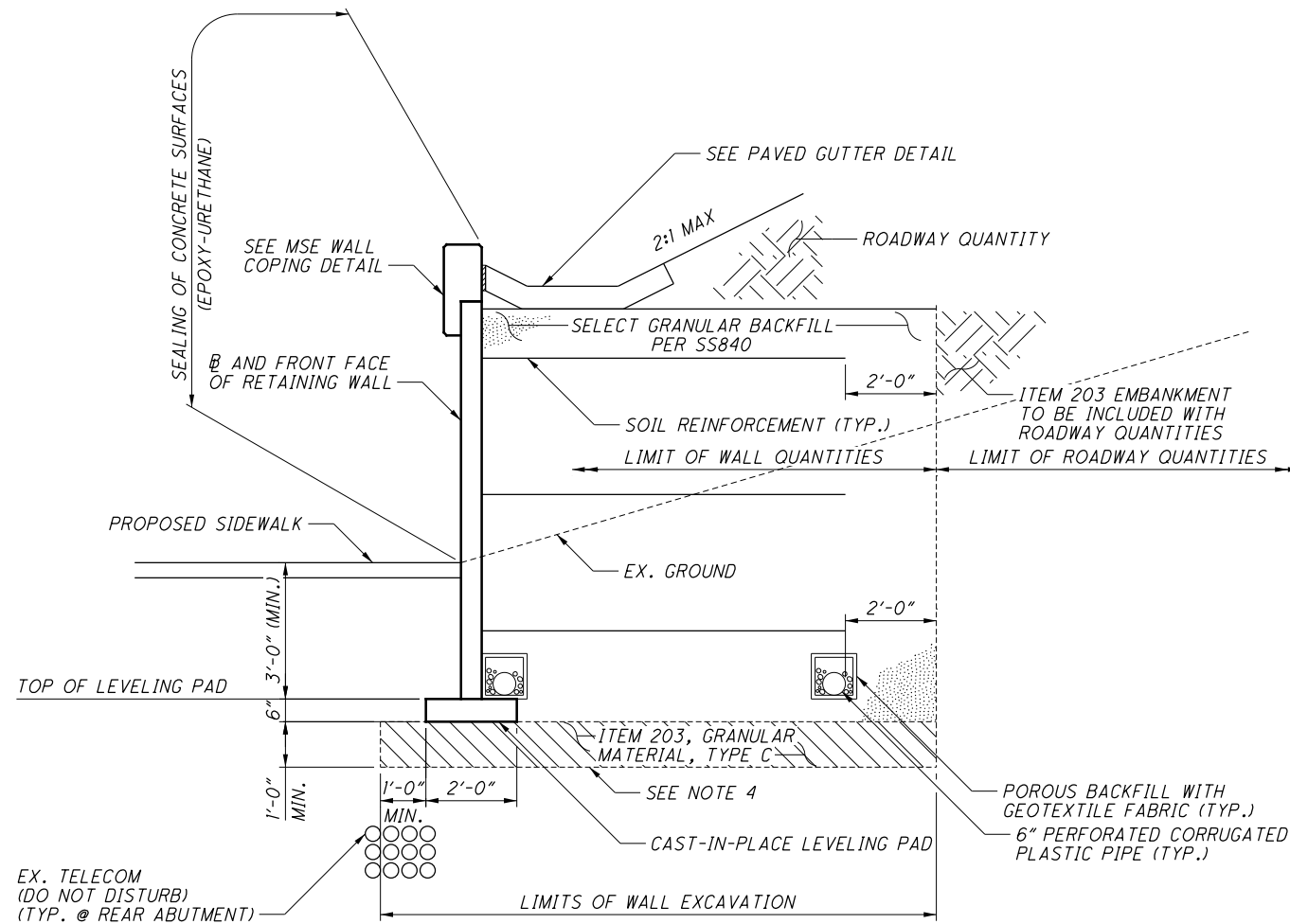
**MSE WALL COPING**



**COPING EXPANSION JOINT**  
SEE NOTE 3 FOR COPING LOCATIONS



**PAVED GUTTER**



**M M M SECTION**  
16 17 19

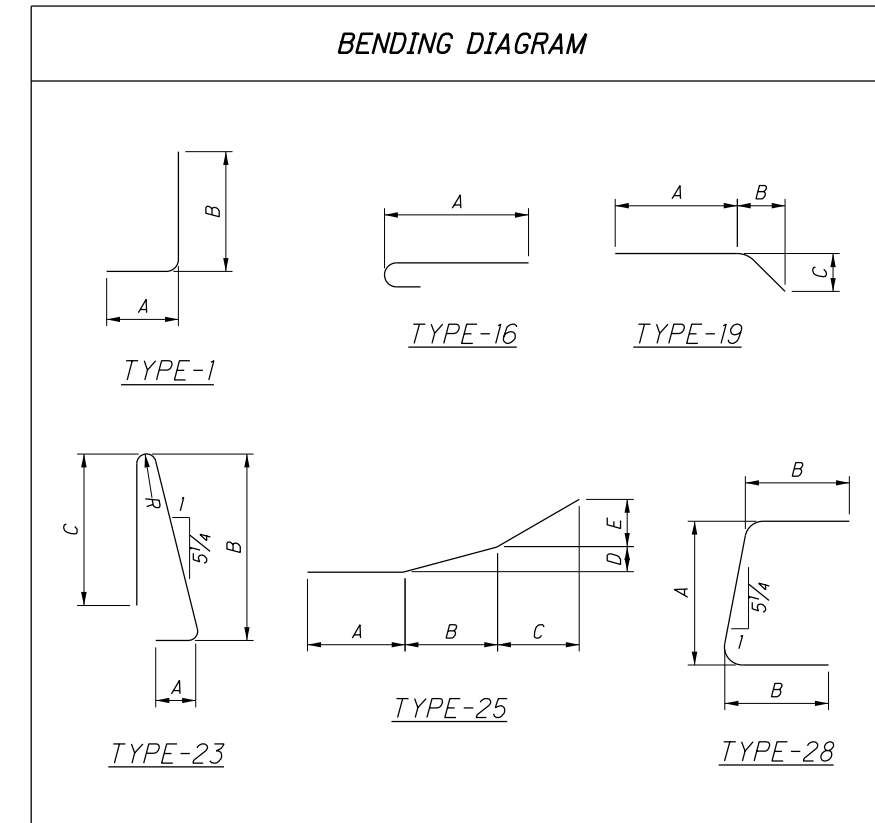
**NOTES**

1. ALL DIMENSIONS ARE PERPENDICULAR TO WALL.
2. THE THICKNESS OF THE MSE PANELS IS ASSUMED TO BE 5 1/2".
3. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
4. COMPACT EXPOSED BEARING SURFACE WITH VIBRATORY EQUIPMENT TO THE REQUIREMENTS OF C&MS 204 AND SS840.
5. PAVED GUTTER SHALL BE LOCATED OUTSIDE THE LIMITS OF THE ABUTMENT FOOTING AND SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 840, MECHANICALLY STABILIZED EARTH WALL.
6. 1" P.E.J.F. SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 840, MECHANICALLY STABILIZED EARTH WALL.
7. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER ON THE APPROVED WALL SYSTEM, BUT SHALL NOT BE LESS THAN 0.7H WHERE H IS THE DESIGN HEIGHT OF THE WALL OF 8'-0", WHICHEVER IS GREATER.



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MARK	NUMBER	LENGTH	PHASE 3 WEIGHT	TYPE	DIMENSIONS						
	PHASE 3 TOTAL				A	B	C	D	E	R	INC.
<b>MOMENT SLABS, RETAINING WALL 1</b>											
M501	132	6'-2"	850	STR							
M502	104	22'-6"	2441	STR							
M503	109	7'-4"	834	23	11"	3'-3"	3'-0"				2 3/4"
M504	8	11'-5"	96	STR							
M505	8	30'-0"	251	STR							
M506	8	5'-8"	48	25	1'-10"	2'-5"	1'-4"	1 1/2"	5"		
M507	8	5'-8"	48	STR							
M508	8	10'-0"	84	STR							
M509	8	14'-1"	118	STR							
M510	6	13'-11"	88	STR							
M601	4	14'-1"	85	STR							
M602	3	13'-11"	63	STR							
M701	109	5'-1"	1133	1	1'-0"	4'-3"					
M702	109	5'-11"	1319	28	4'-3"	1'-0"					
M703	4 SERIES OF 12	6'-7" TO 7'-6"	691	1	1'-0"	5'-9" TO 6'-8"					1"
M704	12	6'-7"	162	1	1'-0"	5'-9"					
M705	132	6'-11"	1867	16	6'-2"						
		<b>SUB-TOTAL</b>	<b>10178</b>								



MARK	NUMBER	LENGTH	PHASE 3 WEIGHT	TYPE	DIMENSIONS				
	PHASE 3 TOTAL				A	B	C	R	INC.
<b>MOMENT SLABS, RETAINING WALL 2</b>									
M511	381	7'-4"	2915	23	11"	3'-3"	3'-0"		2 3/4"
M512	34	16'-2"	574	STR					
M513	220	25'-10"	5928	STR					
M514	360	7'-4"	2754	STR					
M515	44	25'-1"	1152	STR					
M516	12	4'-4"	55	STR					
M517	2 SERIES OF 7	4'-11" TO 10'-6"	113	STR					11" (+)
M518	1 SERIES OF 5	1'-0" TO 4'-11"	16	STR					1'-0" (-)
M519	2	10'-6"	22	STR					
M520	6	21'-0"	132	19	16'-9"	4'-3"	5"		
M521	22	30'-0"	689	STR					
M522	6	15'-7"	98	STR					
M523	2 SERIES OF 8	20'-10" TO 21'-7"	355	19	16'-8" TO 17'-1"	4'-2" TO 4'-6"	5"		1" (+)
M524	2	16'-7"	35	19	15'-8"	11"	1"		
M603	15	16'-2"	365	STR					
M604	5	15'-7"	118	STR					
M605	1	4'-4"	7	STR					
M606	1	16'-7"	25	19	15'-8"	11"	1"		
M706	381	5'-1"	3959	28	3'-5"	1'-0"			
M707	381	4'-8"	3635	1	1'-5"	3'-5"			
M708	360	8'-1"	5949	16	7'-4"				
M709	1 SERIES OF 5	1'-9" TO 5'-8"	38	16	1'-0" TO 4'-11"				1'-0" (-)
		<b>SUB-TOTAL</b>	<b>28934</b>						

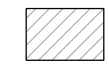
MARK	NUMBER	LENGTH	PHASE 3 WEIGHT	TYPE	DIMENSIONS			
	PHASE 3 TOTAL				A	B	C	R
<b>INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN</b>								
C501	10	7'-4"	77	23	11"	3'-3"	3'-0"	2 3/4"
C502	2	3'-3"	7	28	1'-6"	1'-0"		
C503	2	3'-0"	7	1	1'-8"	1'-6"		
C504	12	19'-5"	244	STR				
C505	4	4'-6"	19	STR				
C506	38	7'-4"	291	STR				
C507	11	7'-0"	81	23	11"	3'-1"	2'-10"	2 3/4"
C601	1	19'-5"	30	STR				
C701	8	5'-1"	84	28	3'-5"	1'-0"		
C702	8	4'-8"	77	1	1'-5"	3'-5"		
C703	18	8'-1"	298	16	7'-4"			
C704	10	2'-1"	43	STR				
		<b>SUB-TOTAL</b>	<b>1258</b>					

**NOTES**

- THE BAR NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
- ALL REINFORCING STEEL TO BE EPOXY COATED.
- NO. 3 INLET (TYPE D), AS PER PLAN REBAR SHALL INCULDED FOR PAYMENT UNDER ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN.

**ESTIMATED QUANTITIES**

ITEM	EXT.	TOTAL	PARTICIPATION				UNITS	DESCRIPTION	BRIDGE NO.		SEE SHEET NUMBER
			01/IMS/PV	10/IMS/PV	02/IMS/BR	11/IMS/BR			SUM-76-0563L (SFN 7705379)	SUM-76-0563R (SFN 7705409)	
202	11203	LS				LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS	LS	531
202	22900	654			218	436	SY	APPROACH SLAB REMOVED	291	363	
867	00100	LS		LS				TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (TEMPORARY WIRE FACED MSE WALL 5)		LS	
867	00100	LS		LS				TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (TEMPORARY WIRE FACED MSE WALL 6)		LS	

 INDICATES EXISTING STRUCTURES TO BE REMOVED, ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

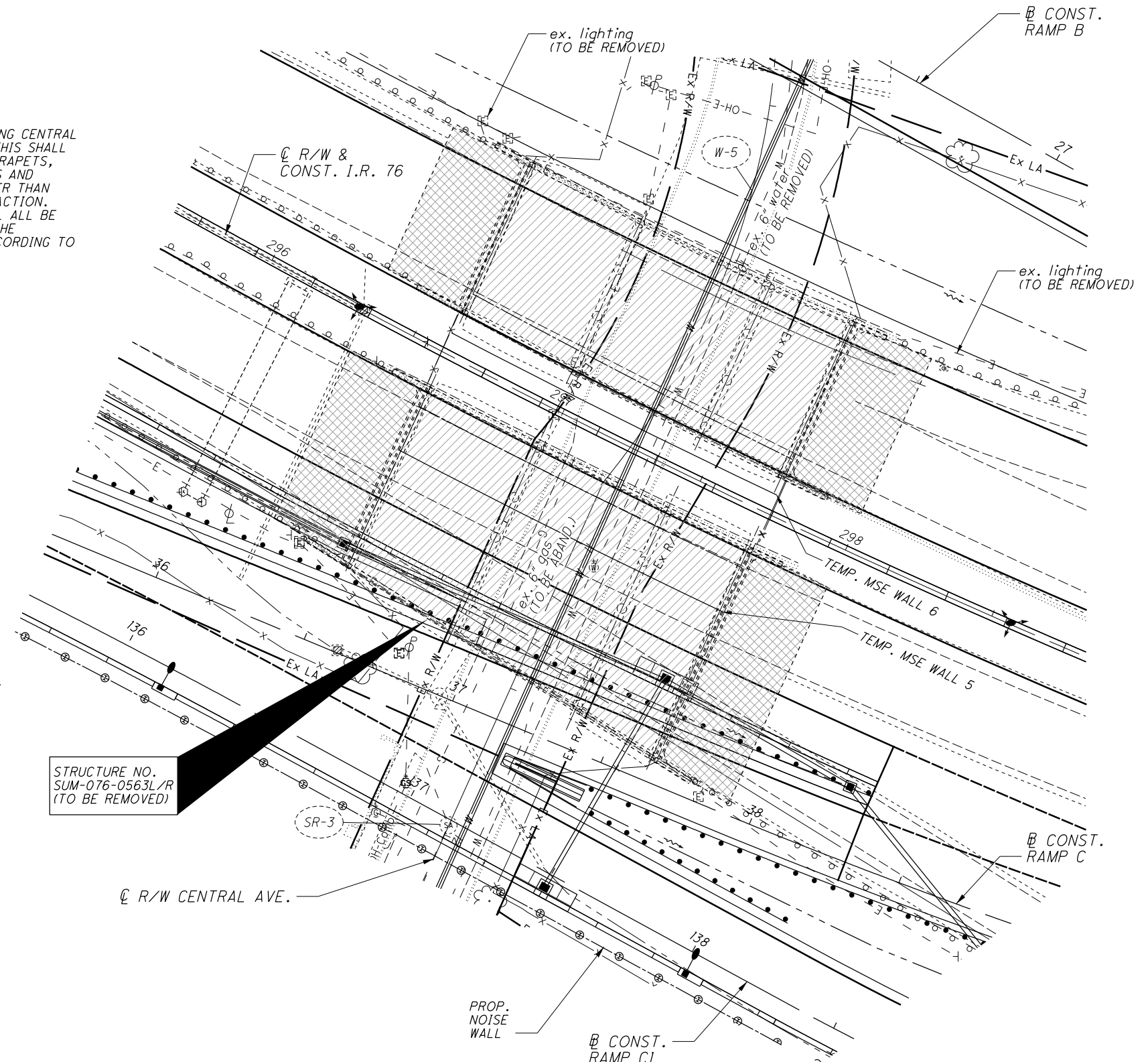
 ITEM 202 APPROACH SLAB REMOVED



FOR EMBANKMENT CONSTRUCTION AND GEOTECHNICAL NOTES, SEE SHEET 36  
FOR TEMP. WIRE FACED MSE WALL PLANS AND DETAILS, SEE SHEETS 534 - 538  
FOR MOT PHASE DETAILS, SEE SHEETS 81, 107, 133

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

THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE TWO (2) EXISTING STRUCTURES OVER EXISTING CENTRAL AVE. THAT ARE HIGHER THAN ONE (1) FOOT BELOW THE PROPOSED SUBGRADE OF THE NEW EMBANKMENT. THIS SHALL INCLUDE THE REMOVAL OF THE EXISTING SUPERSTRUCTURE ELEMENTS, INCLUDING THE CONCRETE DECK, PARAPETS, BEARINGS, EXPANSION JOINTS, SCUPPERS AND THEIR ATTACHMENTS, STEEL BEAMS/GIRDERS, CROSSFRAMES AND THEIR ATTACHMENTS, AND PORTIONS OF THE EXISTING PIERS, PIER CAPS AND ABUTMENTS THAT ARE HIGHER THAN ONE (1) FOOT BELOW THE PROPOSED SUBGRADE OF THE NEW EMBANKMENT AS DESCRIBED IN THE ROADWAY PLANS. SEE THE EMBANKMENT CONSTRUCTION NOTE ON SHEET 36. SUBMIT REMOVAL PLANS ACCORDING TO 501.05.



**EXISTING STRUCTURE**

TYPE: 3-SPAN COMPOSITE, CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE ON STUB ABUTMENTS AND CAP & COLUMN PIERS

SPANS: 38'-0" ±, 45'-0" ±, 28'-0" ±

ROADWAY: LEFT VARIES  
RIGHT VARIES

LOADING: HS20-44 & ALT. MIL. LOADING

WEARING SURFACE: MONOLITHIC CONCRETE

SKEW: 1°42' 14" ±

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

STRUCTURAL FILE NUMBER: 7705379 (WB) / 7705409 (EB)

DATE BUILT: 1962; RECONSTRUCTED 1998

DISPOSITION: TO BE REMOVED

STRUCTURE NO.  
SUM-076-0563L/R  
(TO BE REMOVED)

PLAN

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DESIGN AGENCY  
**GPD GROUP**  
Glenn Pyle, Schoner, Burns & DeWayne, Inc.  
200 South Main Street, Suite 2511, Akron, Ohio 44311 330.572.1100  
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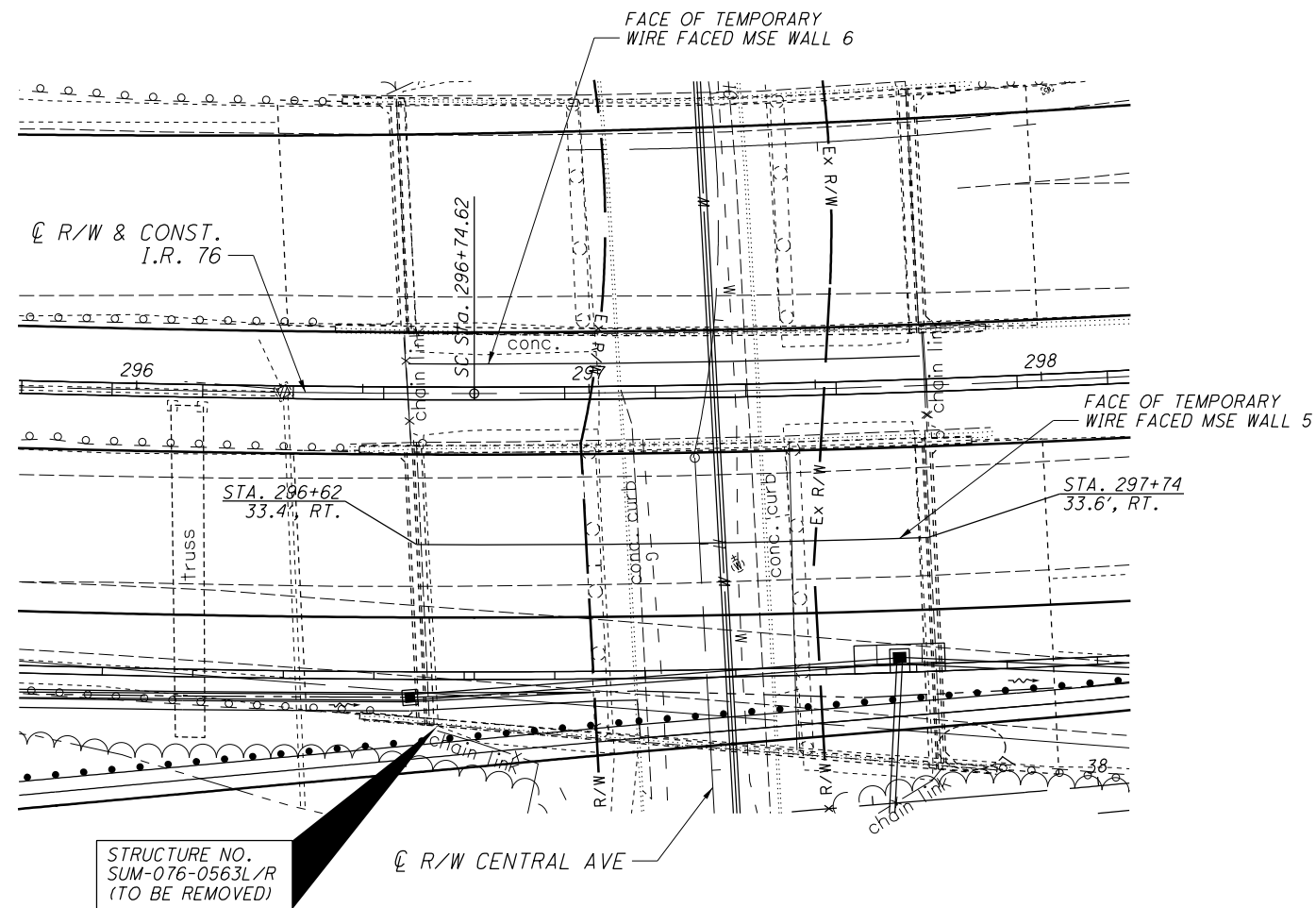
REVIEWED DATE 12-7-17  
DGN FILE NUMBER 7705379/7705409  
DRAWN ATR  
CHECKED CWL

STRUCTURE REMOVAL PLAN  
STRUCTURE NO. SUM-076-0563L/R

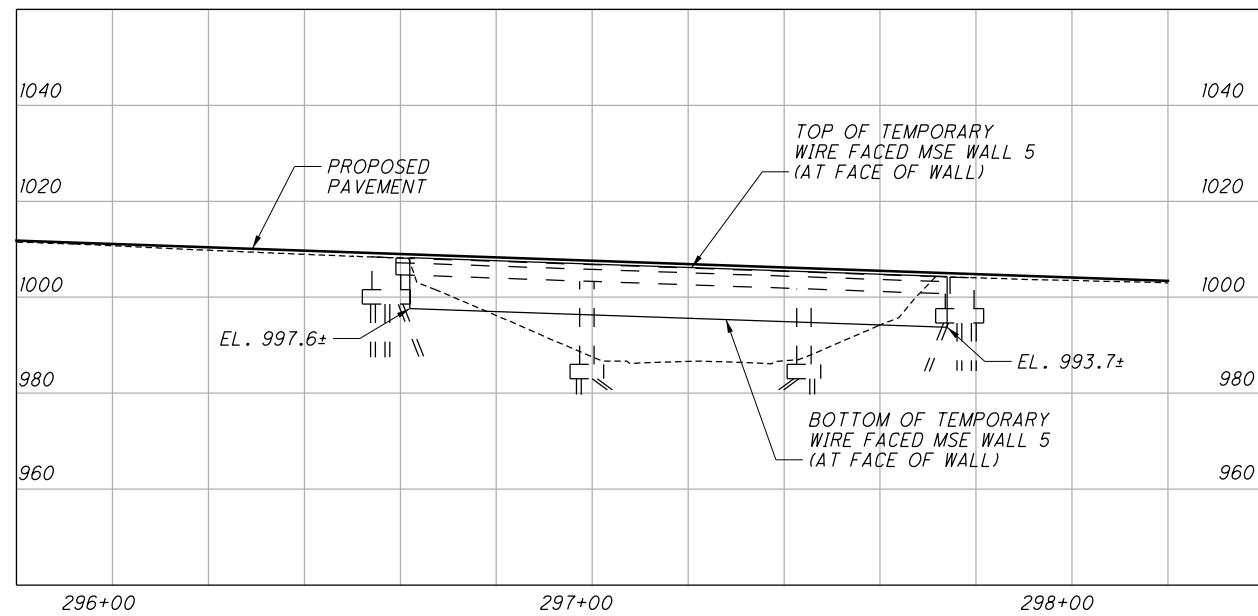
SUM-76-5.53  
PID No. 96670

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531  
672

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**PLAN**



**ELEVATION**  
ALONG FACE OF WALL

FOR EMBANKMENT CONSTRUCTION AND GEOTECHNICAL NOTES, SEE SHEET 36  
 FOR TEMP. WIRE FACED MSE WALL DETAILS, SEE SHEET 534  
 FOR EMBANKMENT PHASING DETAILS, SEE SHEET 535 - 538  
 FOR MOT PHASE DETAILS AND PORTABLE BARRIER LOCATIONS, SEE SHEET 81, 107, 133

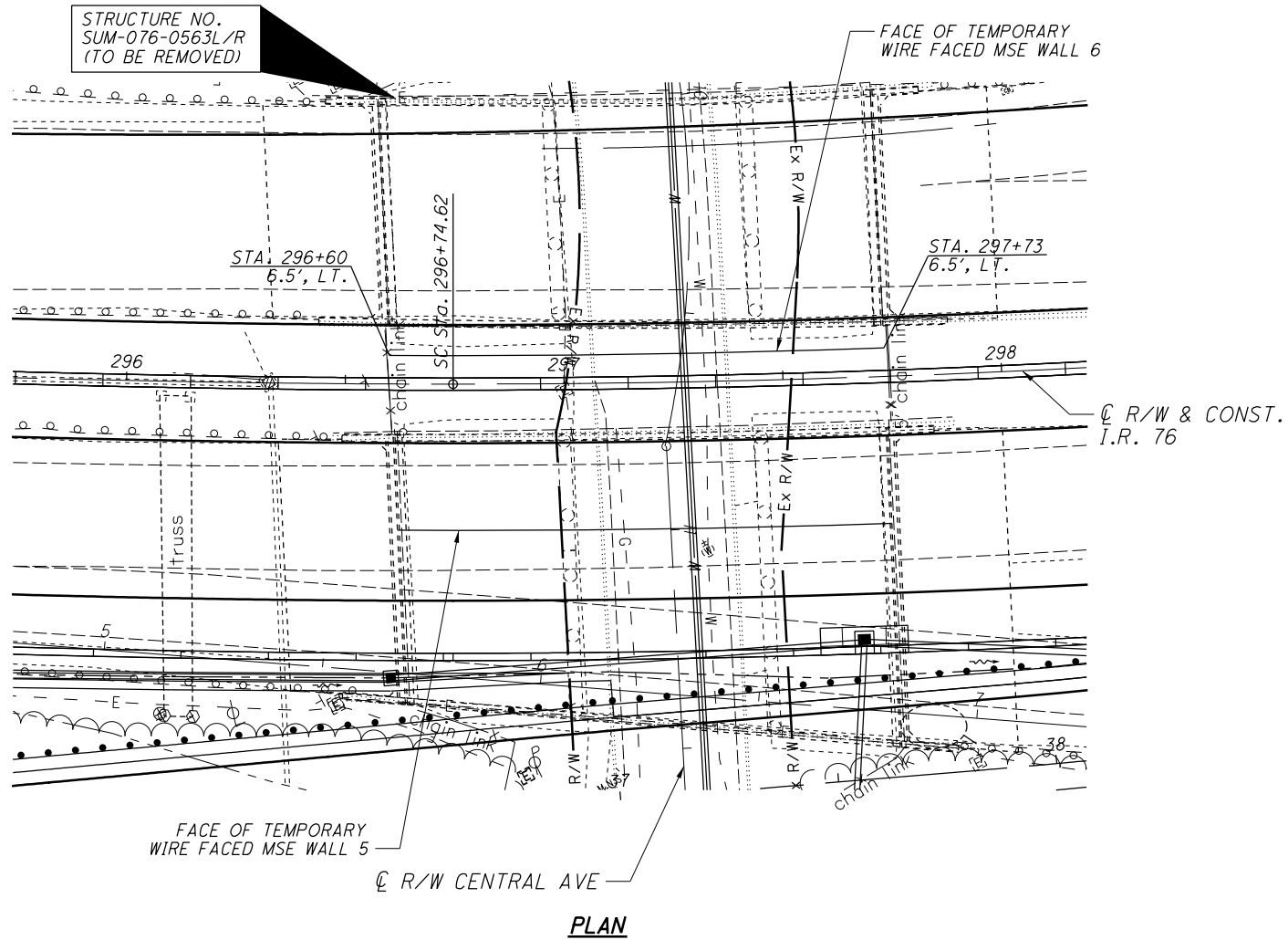
**NOTES**

1. THE TEMPORARY WIRE FACED MSE WALL SHALL BE DESIGNED BY THE SUPPLIER TO CONTAIN MOT PHASE 1 EMBANKMENT.
2. APPROXIMATE WALL HEIGHT = 10.6'

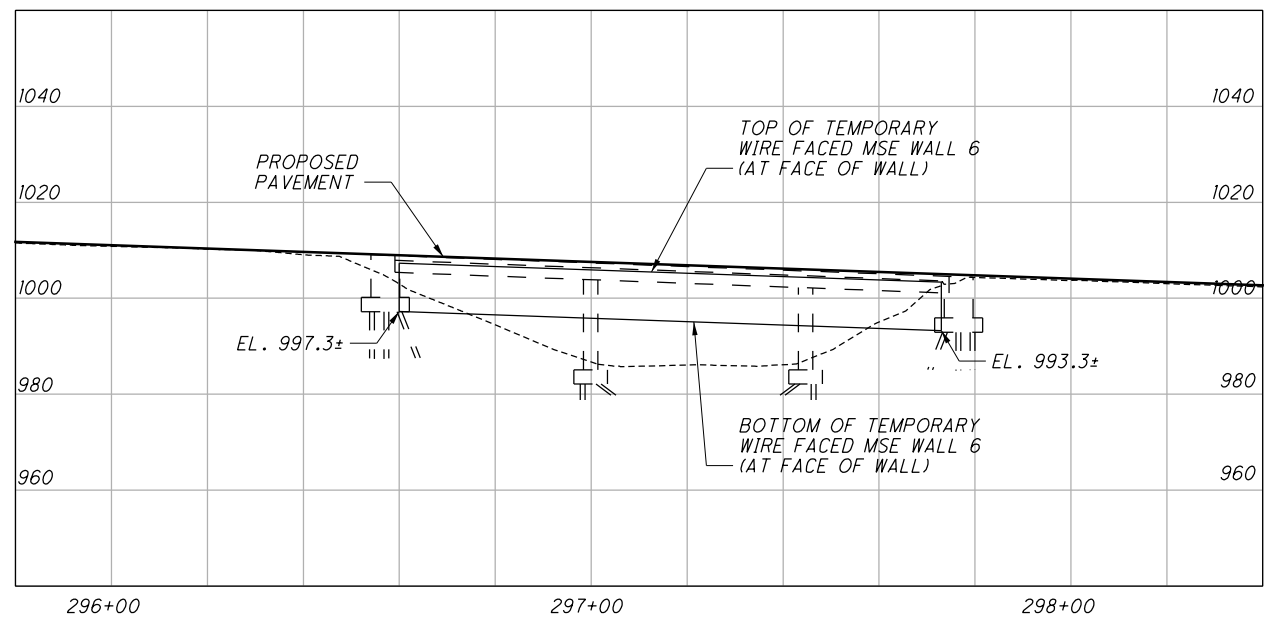


 DESIGN AGENCY <b>GPD GROUP</b> <small>Glenn Pyle, Schorner, Burns &amp; Dehaven, Inc.                  330 South Main Street, Suite 2511, Akron, Ohio 44311 330.572.2100                  Copyright © 2015, Glenn Pyle, Schorner, Burns &amp; Dehaven, Inc.</small>	DATE 12-7-17	REVIEWED DGN	DRAWN ATR	DESIGNED ATR	STRUCTURE FILE NUMBER 7705379/7705409
<b>TEMPORARY WIRE FACED MSE WALL 5</b> BRIDGE NO. SUM-76-0563 OVER S.R. 619 (WOOSTER ROAD)					
<b>SUM-76-5.53</b> PID No. 96670					
2 / 8					
532 672					

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**PLAN**



**ELEVATION**  
ALONG FACE OF WALL

FOR EMBANKMENT CONSTRUCTION AND GEOTECHNICAL NOTES, SEE SHEET 36  
 FOR TEMP. WIRE FACED MSE WALL DETAILS, SEE SHEET 534  
 FOR EMBANKMENT PHASING DETAILS, SEE SHEET 535 - 538  
 FOR MOT PHASE DETAILS AND PORTABLE BARRIER LOCATIONS, SEE SHEET 81, 107, 133

**NOTES**

1. THE TEMPORARY WIRE FACED MSE WALL SHALL BE DESIGNED BY THE SUPPLIER TO CONTAIN MOT PHASE 2 EMBANKMENT.
2. APPROXIMATE WALL HEIGHT = 10.1'



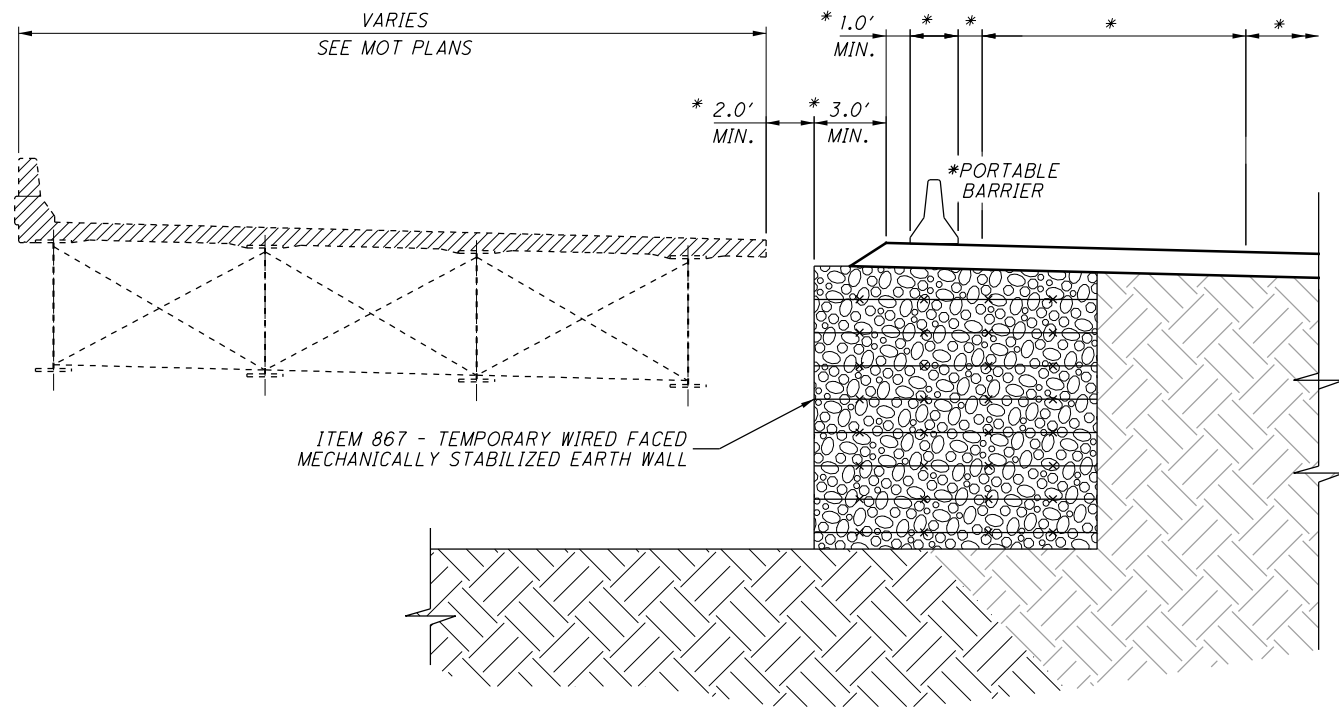
DESIGN AGENCY  
**GPD GROUP**  
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DESIGNED	ATR	CWL
DRAWN	ATR	REVISED
REVIEWED	DGN	STRUCTURE FILE NUMBER
DATE	12-7-17	7705379/7705409

**TEMPORARY WIRE FACED MSE WALL 6**  
 BRIDGE NO. SUM-76-0563  
 OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
**PID No. 96670**

O:\2016\2016146\ProjectData\SUM\96670\Design\Roadway\Sheet\96670\_GM005.dgn Design 8/17/2018 3:17:55 PM arolland



\* FOR ACTUAL DIMENSIONS AND PORTABLE BARRIER LOCATIONS (ANCHORED OR UNANCHORED), SEE MOT PHASE SHEETS 81 , 107, 133  
 FOR EMBANKMENT CONSTRUCTION AND GEOTECHNICAL NOTES, SEE SHEET 36.

**TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH (TWMSE) WALL BEARING RESISTANCE**  
 THE FACTORED BEARING RESISTANCE FOR THE SUPPORTING EMBANKMENT FILL AT TEMPORARY MSE WALLS 5 AND 6 IS 6.9 KIPS PER SQAURE FOOT (KSF).

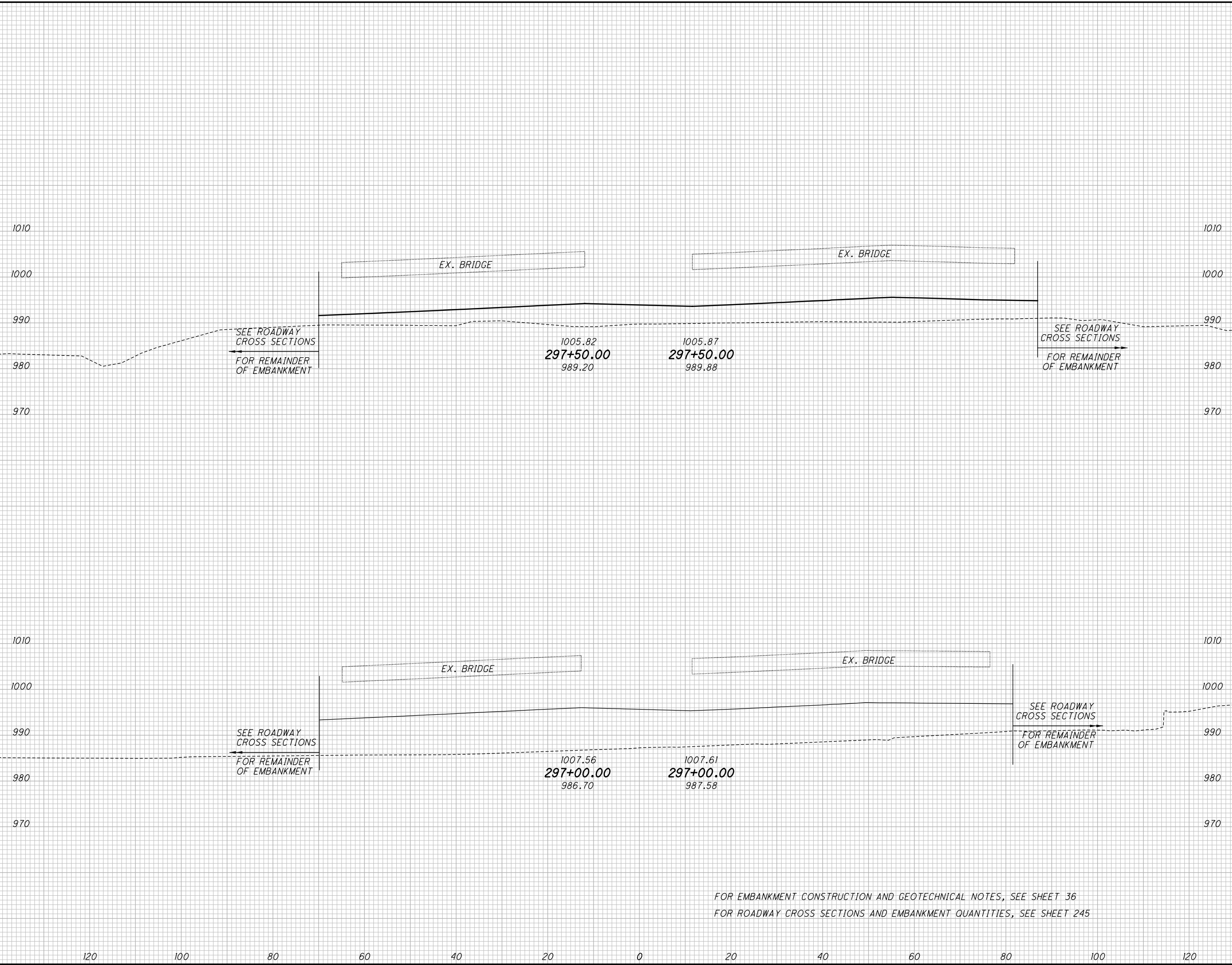
**WIRE FACED MSE WALL - PHASED EMBANKMENT CONSTRUCTION**  
 N.T.S.

SEE EMBANKMENT PHASING CROSS SECTIONS FOR LOCATIONS OF TEMP. WIRE FACED MSE WALLS 5 AND 6

 DESIGN AGENCY <b>GPD GROUP</b> <small>Glenn P. Schoner, Barry &amp; DeWaters, Inc.                  330 South Main Street, Suite 2131, Akron, Ohio 44311 330.572.2100                  Copyright © 2015, Glenn P. Schoner, Barry &amp; DeWaters, Inc.</small>	DATE 12-7-17 STRUCTURE FILE NUMBER 7705379/7705409	REVIEWED DGN STRUCTURE FILE NUMBER 7705379/7705409	DRAWN ATR REVISED	DESIGNED ATR CHECKED CWL
SUM-076-0563L/R REMOVAL EMBANKMENT PHASING DETAILS				
SUM-76-5.53 PID No. 96670				
4 / 8				
534 672				

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SEEDING	
END WIDTH	SO. YDS.



FOR EMBANKMENT CONSTRUCTION AND GEOTECHNICAL NOTES, SEE SHEET 36  
 FOR ROADWAY CROSS SECTIONS AND EMBANKMENT QUANTITIES, SEE SHEET 245

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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REVIEWED DATE 12-7-17  
 DGN FILE NUMBER 7705379/7705409

DRAWN ATR  
 CHECKED CWL  
 REVISED

SUM-076-0563L/R REMOVAL-EMBANKMENT PHASING-PRE PHASE  
 STA. 297+00.00 TO STA. 297+50.00

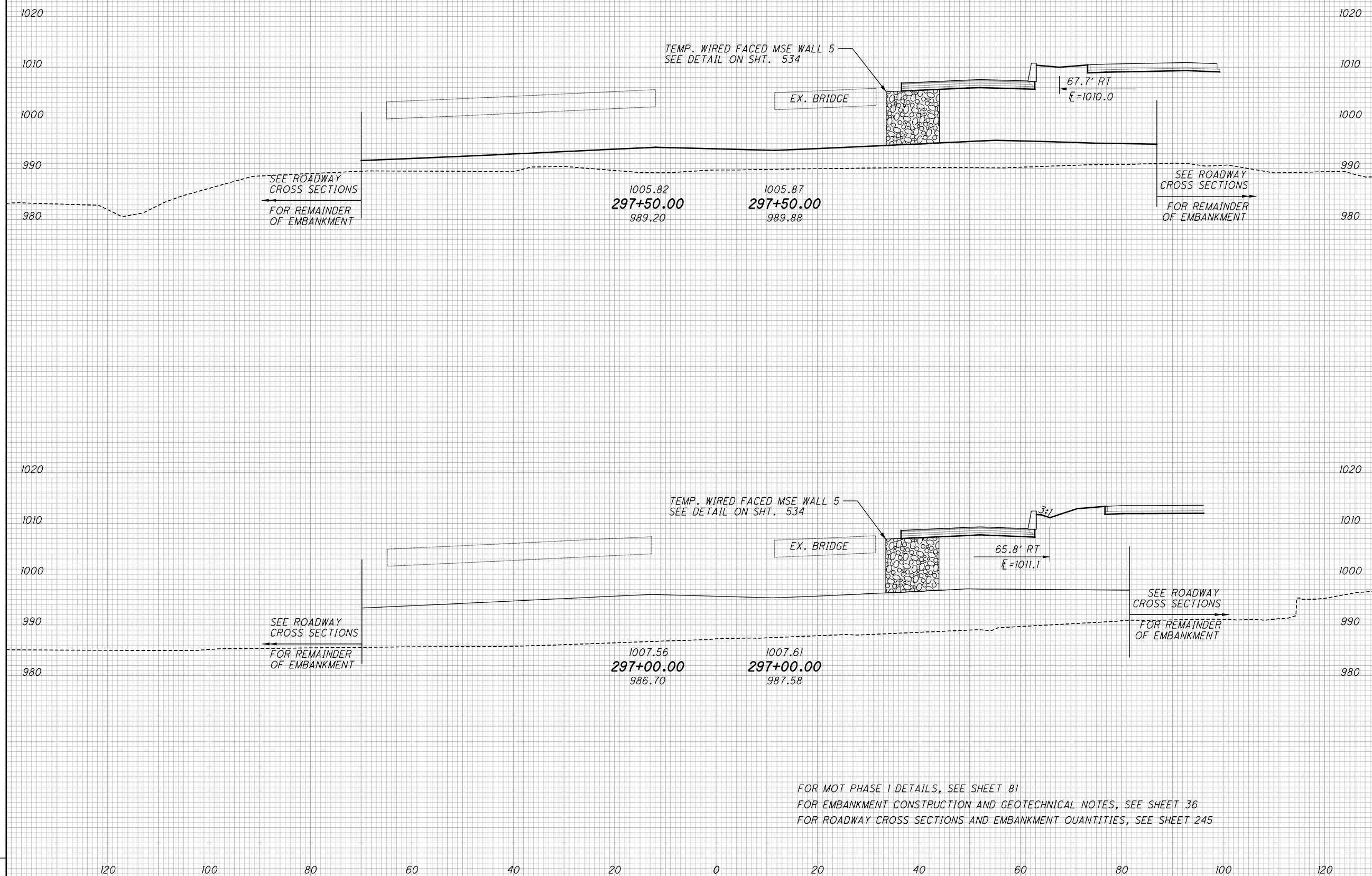
SUM-76-5.53  
 PID No. 96670

5/8

535  
 672

SEEDING  
END WIDTH SO. YDS.

ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL



END AREA		VOLUME	
CUT	FILL	CUT	FILL

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DATE 12-7-17  
REVIEWED DGN STRUCTURE FILE NUMBER 7705379/7705409

DRAWN ATR  
CHECKED CWL  
REVISED

**SUM-076-0563L/R REMOVAL-EMBANKMENT PHASING-PHASE 1**  
STA. 297+00.00 TO STA. 297+50.00

**SUM-76-5.53**  
PID No. 96670

6/8

536  
672

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SEEDING  
END SO.  
WIDTH YDS.



ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL

END AREA  
CUT FILL  
VOLUME  
CUT FILL

DESIGN AGENCY  
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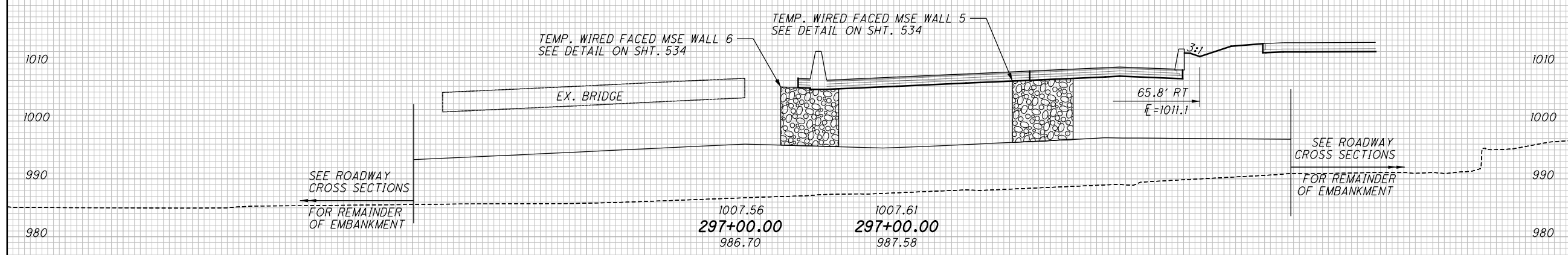
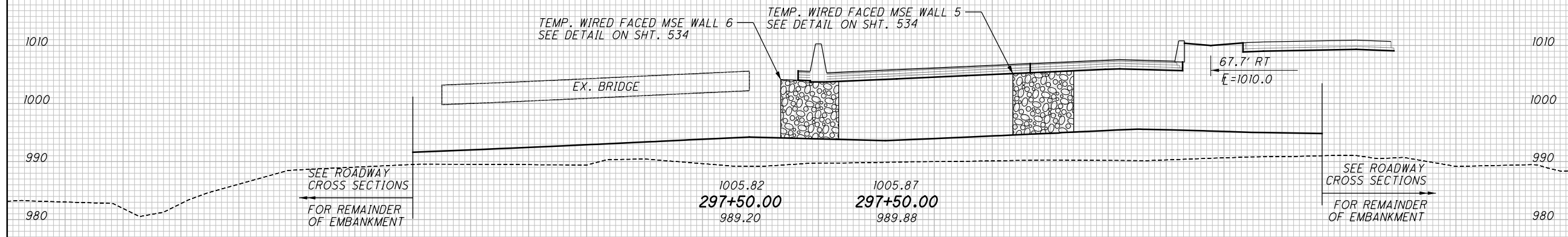
REVIEWED DATE  
DGN 12-7-17  
STRUCTURE FILE NUMBER  
7705379/7705409

DRAWN ATR  
CHECKED CWL  
REVISER

SUM-076-0563L/R REMOVAL-EMBANKMENT PHASING-PHASE 2  
STA. 297+00.00 TO STA. 297+50.00

SUM-76-5.53  
PID No. 96670

7/8  
537  
672



FOR MOT PHASE 2 DETAILS, SEE SHEET 107  
FOR EMBANKMENT CONSTRUCTION AND GEOTECHNICAL NOTES, SEE SHEET 36  
FOR ROADWAY CROSS SECTIONS AND EMBANKMENT QUANTITIES, SEE SHEET 245

120 100 80 60 40 20 0 20 40 60 80 100 120



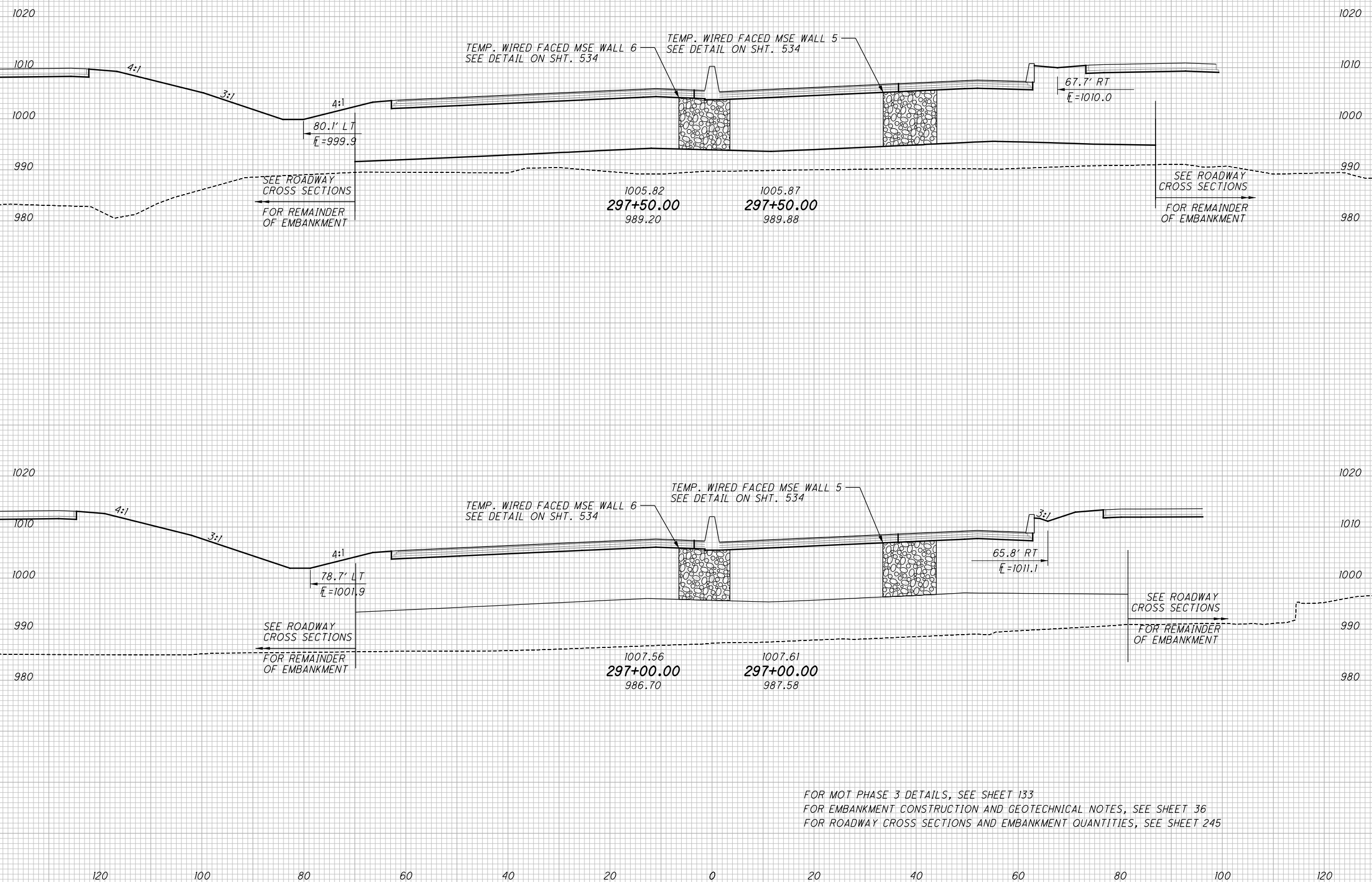
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SEEDING  
END SO.  
WIDTH YDS.



ITEM 867 - TEMPORARY WIRE FACED  
MECHANICALLY STABILIZED EARTH WALL

END AREA VOLUME  
CUT FILL CUT FILL



FOR MOT PHASE 3 DETAILS, SEE SHEET 133  
FOR EMBANKMENT CONSTRUCTION AND GEOTECHNICAL NOTES, SEE SHEET 36  
FOR ROADWAY CROSS SECTIONS AND EMBANKMENT QUANTITIES, SEE SHEET 245

DESIGN AGENCY  
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DATE 12-7-17  
REVIEWED DGN STRUCTURE FILE NUMBER 7705379/7705409

DRAWN ATR REVISED  
DESIGNED ATR CHECKED CWL

SUM-076-0563L/R REMOVAL-EMBANKMENT PHASING-PHASE 3  
STA. 297+00.00 TO STA. 297+50.00

SUM-76-5.53  
PID No. 96670

8/8

538  
672

PROP. GRADE	989.79	989.78	989.82	989.91	990.03	990.20	990.41	990.67	990.96
-------------	--------	--------	--------	--------	--------	--------	--------	--------	--------

BENCHMARK DATA	
POINT NO. 127	NORTHING 500241.4000 EASTING 2222922.7000 CUT IN SOUTHEAST BOLT ON OVERHEAD SIGN EL. 984.87
POINT NO. 128	NORTHING 499938.4000 EASTING 2222812.8000 CUT IN WEST BOLT ON CANTILEVER SIGN EL. 967.26

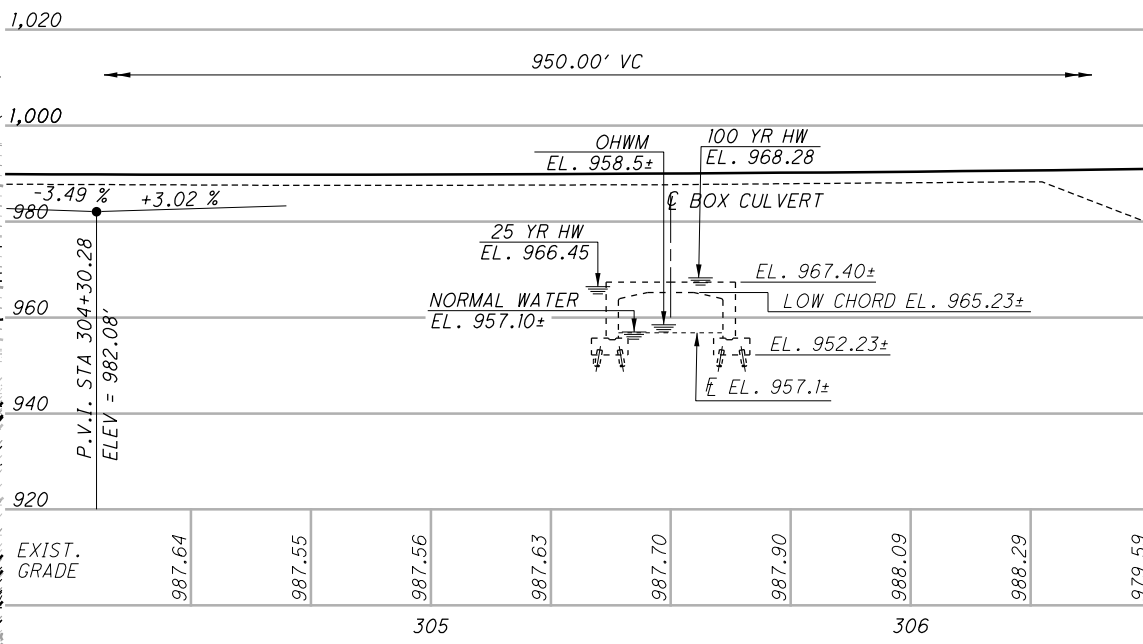
FOR ADDITIONAL BENCHMARK INFORMATION SEE ROADWAY PLAN SHEET  $\frac{8}{672}$

**DESIGN TRAFFIC:**  
 2020 ADT = 77,700 2020 ADTT = 11,655  
 2040 ADT = 98,000 2040 ADTT = 14,700  
 DIRECTIONAL DISTRIBUTION = 0.57

**HYDRAULIC DATA:**  
 DRAINAGE AREA = 3.70 SQ. MI.  
 HW<sub>25</sub> = EL. 966.45  
 Q<sub>25</sub> = 755 CFS  
 V<sub>25</sub> = 4.65 FPS  
 HW<sub>100</sub> = EL. 968.28  
 Q<sub>100</sub> = 990 CFS  
 V<sub>100</sub> = 5.62 FPS

STRUCTURE DOES NOT CLEAR THE 25 YEAR HIGH WATER ELEVATION

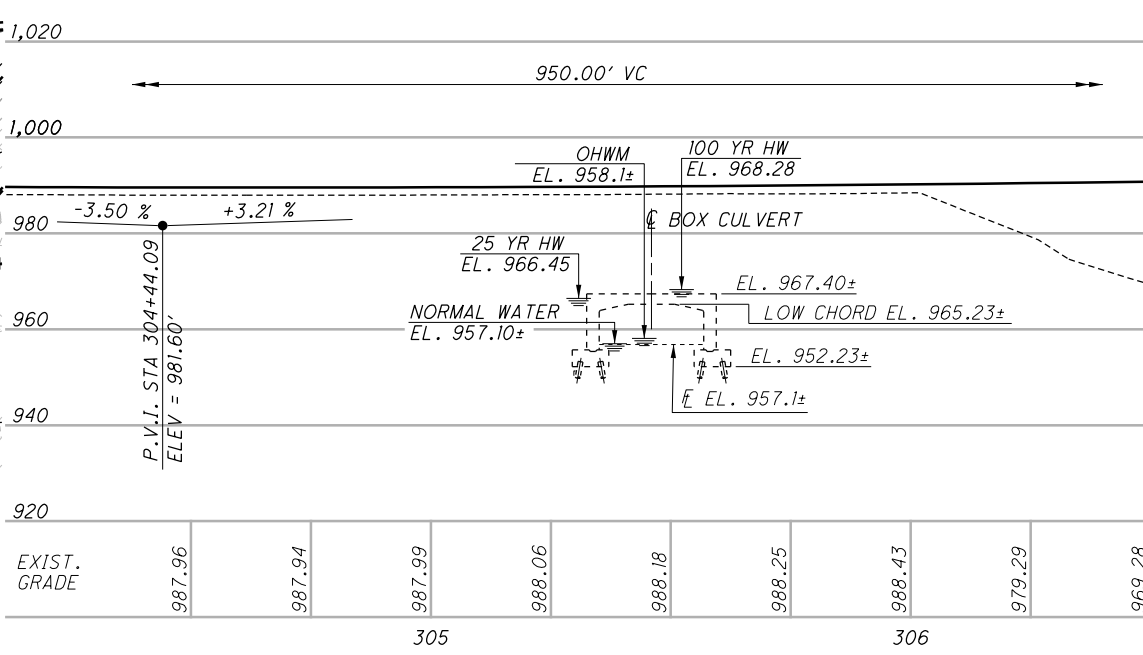
- LEGEND:**
- SOIL BORING LOCATION
  - INDICATES MEASURED TO LOCAL TANGENT
  - INDICATES TO REMAIN
  - \*\* QUANTITY INCLUDED IN THE ROADWAY GENERAL SUMMARY



**PROFILE ALONG W.B IR-76**  
 (TAKEN ALONG THE SOUTHERN EDGE OF PAVEMENT OF WB LANES)

ESTIMATED PILE LENGTHS  
 12" DIA. C.I.P. PILES  
 INLET & OUTLET & EXTENSION = 75'

PROP. GRADE	989.56	989.56	989.60	989.69	989.82	989.99	990.21	990.47	990.78
-------------	--------	--------	--------	--------	--------	--------	--------	--------	--------



**PROFILE ALONG E.B IR-76**  
 (TAKEN ALONG THE NORTHERN EDGE OF PAVEMENT OF EB LANES)

NOTE: EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

**EXISTING STRUCTURE**

TYPE: CAST-IN-PLACE REINFORCED CONCRETE 3-SIDED BOX CULVERT ON PILE SUPPORTED FOOTINGS

SPAN: 21'-9 $\frac{3}{8}$ "± CLEAR SPAN

ROADWAY: 123'-1"± F/F GUARDRAIL

LOADING: H20

SKEW: 15°28'25" LF

APPROACH SLABS: NONE

ALIGNMENT: CURVE LT.

SUPERELEVATION: VARIES

STRUCTURE FILE NUMBER: 7705468

DATE BUILT: 1962

DISPOSITION: TO REMAIN

**PROPOSED STRUCTURE**

TYPE: CAST-IN-PLACE REINFORCED CONCRETE 3-SIDED BOX CULVERT ON PILE SUPPORTED FOOTINGS

SPAN: 21'-9 $\frac{3}{8}$ "± CLEAR SPAN

ROADWAY: 148'-9"± FACE OF GUARDRAIL TO FACE OF BARRIER

LOADING: H20 (EXISTING)  
 HL-93 (CULVERT EXTENSION AND INLET & OUTLET DESIGN-ONLY)

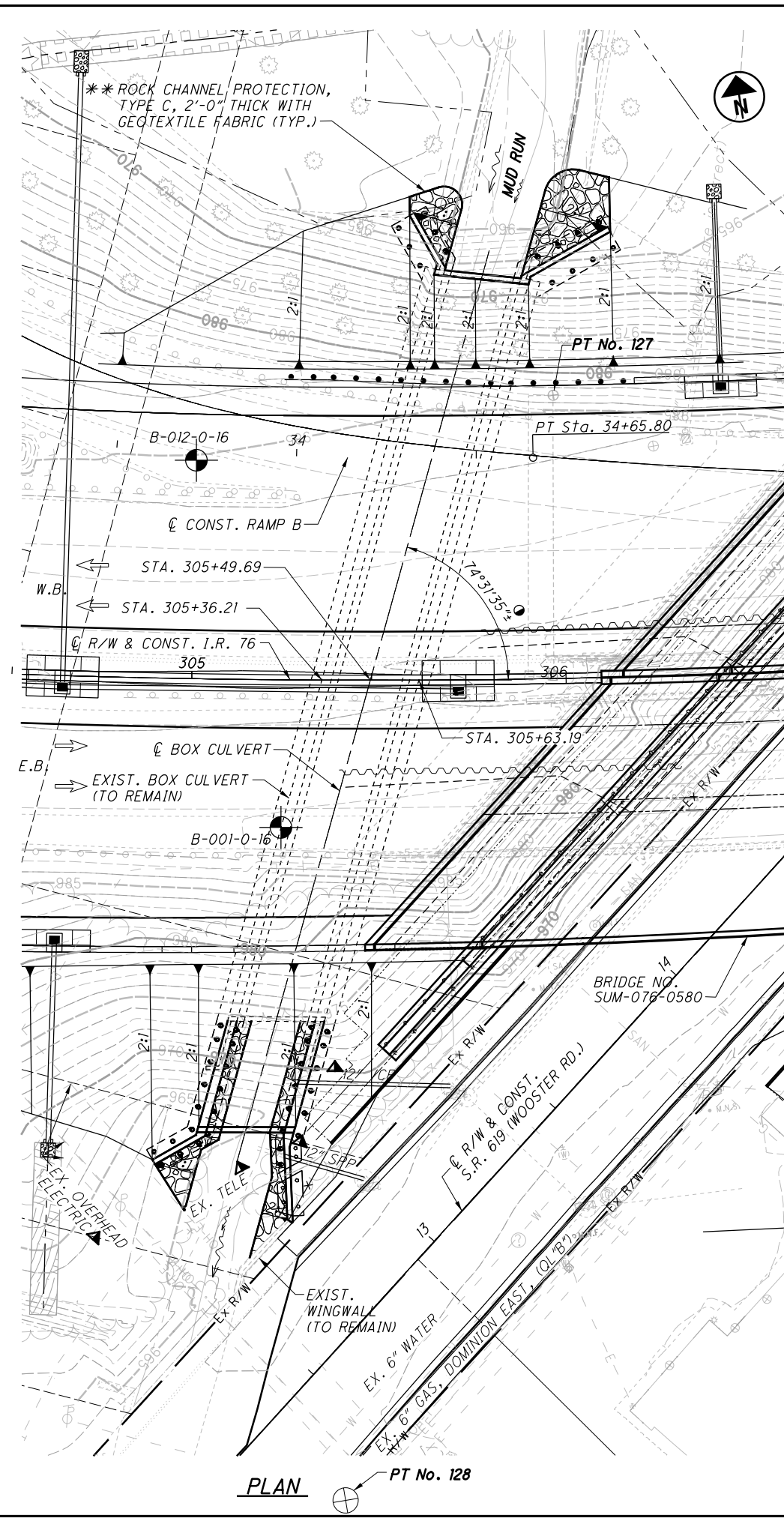
SKEW: 15°28'25" LF

APPROACH SLABS: NONE

ALIGNMENT: CURVE LT.

SUPERELEVATION: 0.016 FT/FT

COORDINATES: LATITUDE N 41° 02' 09.06"  
 LONGITUDE W 81° 34' 41.10"



**PLAN** PT No. 128

#FILES 5  
 #DATES 5  
 #TIMES 5  
 2016146\ProjectData\SUM\96670\Design\Structures\SUM076\_0577C\Sheets\076\_0577C.dgn Sheet 8/20/2018 1:36:12 PM rrymer

DESIGN AGENCY: **GPD GROUP**  
 300 South Main Street, Suite 2311, Akron, Ohio 44311 330.572.2100  
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DATE: 8-14-18  
 DGN: 7705468  
 STRUCTURE FILE NUMBER: 7705468

DESIGNED: RHC  
 CHECKED: DJC

SUMMIT COUNTY  
 STA. 305+36.21  
 STA. 305+63.19

**SITE PLAN**  
 BRIDGE NO. SUM-076-0577  
 IR 76 OVER MUD RUN

**SUM-76-5.63**  
 PID No. 96670

1 / 14

$\frac{539}{672}$

#FILES #DAYS #TIMES #BASE# 2016146\ProjectData\SUM96670\Design\Structures\SUM076\_0577C\Sheets\076\_0577C\_EQ001.dgn\_Sheet 1/9/2019 3:20:11 PM dcastronova

**ESTIMATED QUANTITIES**

CALCULATED: DJC DATE: 12/5/17  
 CHECKED: RPR DATE: 12/6/17

**DESIGN SPECIFICATIONS**

THIS WORK PROPOSED ON THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATION" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014, INCLUDING THE 2015 & 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DESIGN DATA**

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DESIGN LOADING**

DESIGN LOADING: HL-93 (CULVERT EXTENSION AND INLET & OUTLET DESIGN)

**PILE DESIGN LOADS (ULTIMATE BEARING VALUE)**

THE ULTIMATE BEARING VALUE IS 324 KIPS PER PILE FOR THE FOOTING PILES.

FOOTING PILES (12" DIAMETER):  
 51 PILES 80 FEET LONG, ORDER LENGTH  
 1 DYNAMIC LOAD TESTING ITEM

**DESIGN STRESSES**

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI  
 (FOUNDATION CULVERT EXTENSION, & WINGWALLS)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

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

THIS ITEM CONSISTS OF THE REMOVAL OF THE EXISTING HEADWALLS AT THE NORTH AND SOUTH ENDS OF THE CULVERT, AND THE REMOVAL OF THE EXISTING WINGWALLS DOWN TO THE BOTTOM OF THE EXISTING FOOTINGS AT BOTH ENDS OF THE CULVERT AS SHOWN IN THE PLANS.

**ITEM 511 - CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL**

NOT INCLUDING FOOTING, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE CONCRETE FOR THE NEW SEGMENT OF THE CAST-IN-PLACE CONCRETE CULVERT, INCLUDING THE TOP SLAB, VERTICAL WALLS, NEW HEADWALL & NEW WINGWALLS. THE FOOTING CONCRETE SHALL BE PAID FOR UNDER A SEPARATE ITEM.

**WORK AT TELEPHONE DUCT BANK**

THE TELEPHONE DUCT SHOWN ON THE PLANS IS BASED ON SUE LEVEL "B" AND RECORD PLAN INFORMATION. THE CONTRACTOR SHALL CAREFULLY EXPOSE THE TELEPHONE DUCT PRIOR TO FOOTER EXCAVATION AND PILE DRIVING TO POSITIVELY IDENTIFY THE SIZE, LOCATION AND ELEVATION OF THE DUCT.

**EXISTING STRUCTURE VERIFICATION**

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

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

**RESTRIKE**

THE CONTRACTOR SHOULD ANTICIPATE 5 DAYS BETWEEN THE END OF THE PILE DRIVING OPERATION AND THE RESTRIKE. THE CONTRACTOR WILL SHOW THE 5 DAYS WAITING PERIOD IN HIS CPM SCHEDULE.

ITEM	EXT.	TOTAL	PARTICIPATION	UNITS	DESCRIPTION	FOOTINGS	WALLS	EXTENSION	A.P.P. REFERENCE SHT. NO.
			13/IMS/BR						
202	11203	LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				2
503	11100	LS	LS		COFFERDAMS AND EXCAVATION BRACING				
503	21100	265	265	CY	UNCLASSIFIED EXCAVATION	265			
505	11100	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION				
507	00500	3825	3825	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	3825			
507	00550	4080	4080	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	4080			
509	10000	35614	35614	LB	EPOXY COATED REINFORCING STEEL	12223	7071	16320	
510	10000	199	199	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	52	147		
511	46013	234	234	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN		234		2
511	46512	156	156	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	156			
512	10100	150	150	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		150		
512	33000	215	215	SY	TYPE 2 WATERPROOFING			215	
516	13600	172	172	SF	1" PREFORMED EXPANSION JOINT FILLER		172		
518	21200	40	40	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		40		
523	20000	1	1	EACH	DYNAMIC LOAD TESTING	1			
** 601	32204	128	128	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC				

\*\* INCLUDED FOR PAYMENT WITH THE EROSION CONTROL QUANTITIES - SEE THE GENERAL SUMMARY

ABBREVIATIONS

ABUT.	ABUTMENT	N.P.C.P.P.	NON-PERFORATED CORRUGATED PLASTIC PIPE
ADDIT.	ADDITIONAL	N.S.	NEAR SIDE
A.P.P.	AS PER PLAN	P.C.P.P.	PERFORATED CORRUGATED PLASTIC PIPE
BOT.	BOTTOM	P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
BRG.	BEARING	R.A.	REAR ABUTMENT
B.S.	BOTH SIDES	SER.	SERIES
BTWN.	BETWEEN	SHT.	SHEET
CLR.	CLEAR	SPA.	SPACES OR SPACED
COLS.	COLUMNS	SPL.	SPLICE
CONST. JT.	CONSTRUCTION JOINT	SR	SERIES (REINFORCING STEEL LIST SHEETS)
DIM.	DIMENSION	STD.	STANDARD
DWG.	DRAWING	T.B.R.	TO BE REMOVED
EA.	EACH	TYP.	TYPICAL
EQ.	EQUAL OR EQUALLY		
F.A.	FORWARD ABUTMENT		
FRWD.	FORWARD		
F.S.	FAR SIDE		
MIN.	MINIMUM		
NO.	NUMBER		

GENERAL NOTES & ESTIMATED QUANTITIES

BRIDGE NO. SUM-076-0577  
 IR 76 OVER MUD RUN

SUM-76-5.63  
 PID No. 96670

2 / 14

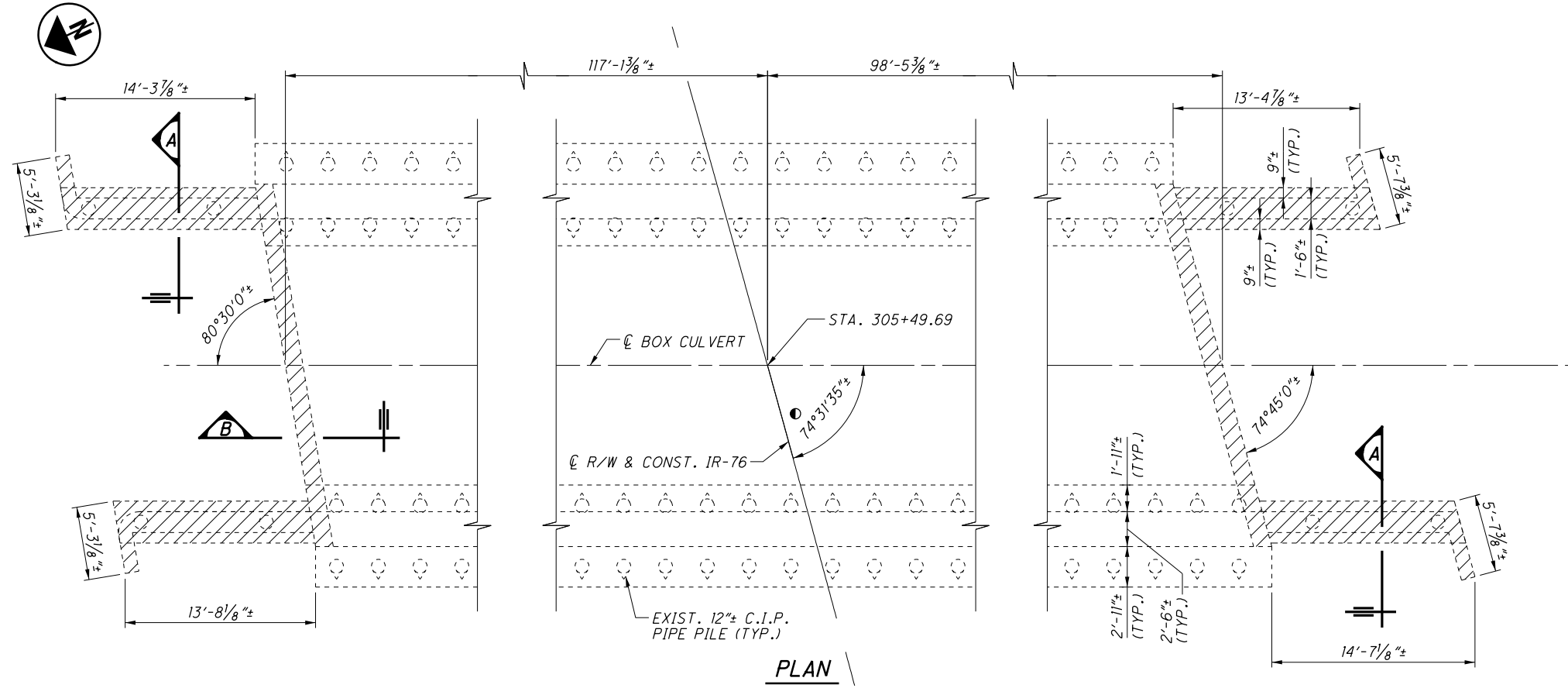
540  
 672

DESIGN AGENCY  
**GPD GROUP**  
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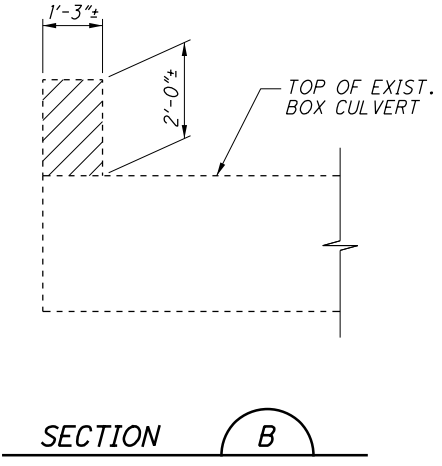
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 CHECKED DJC

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PLAN

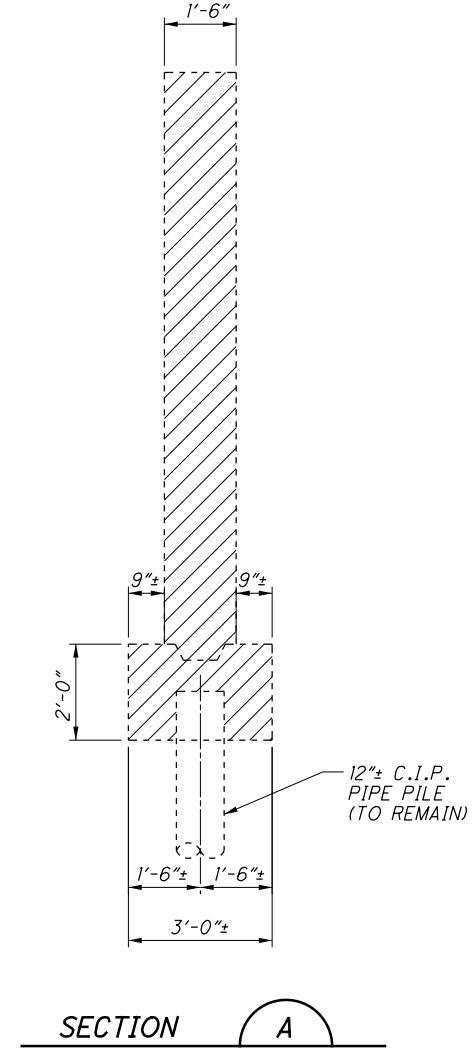


SECTION B

LEGEND:

 INDICATES PORTION OF STRUCTURE TO BE REMOVED

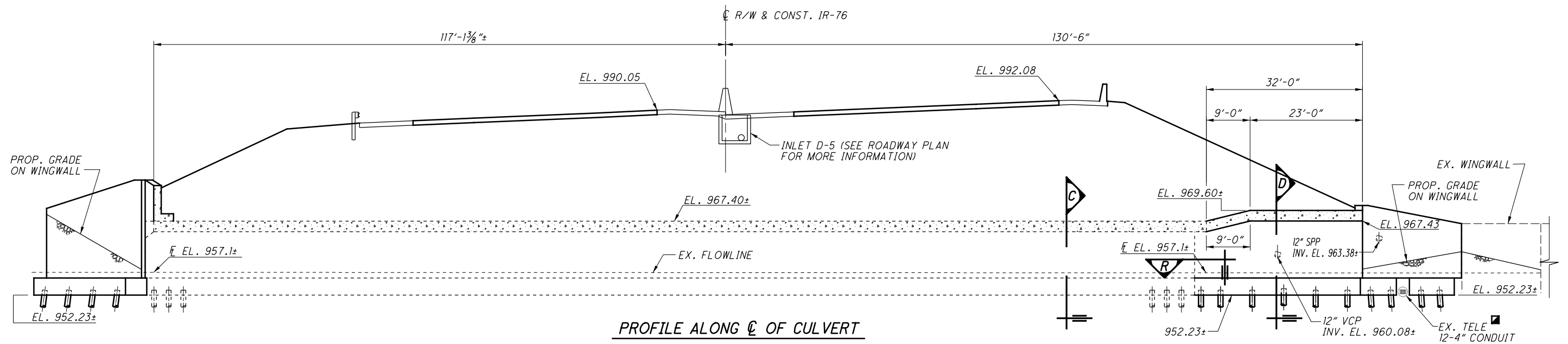
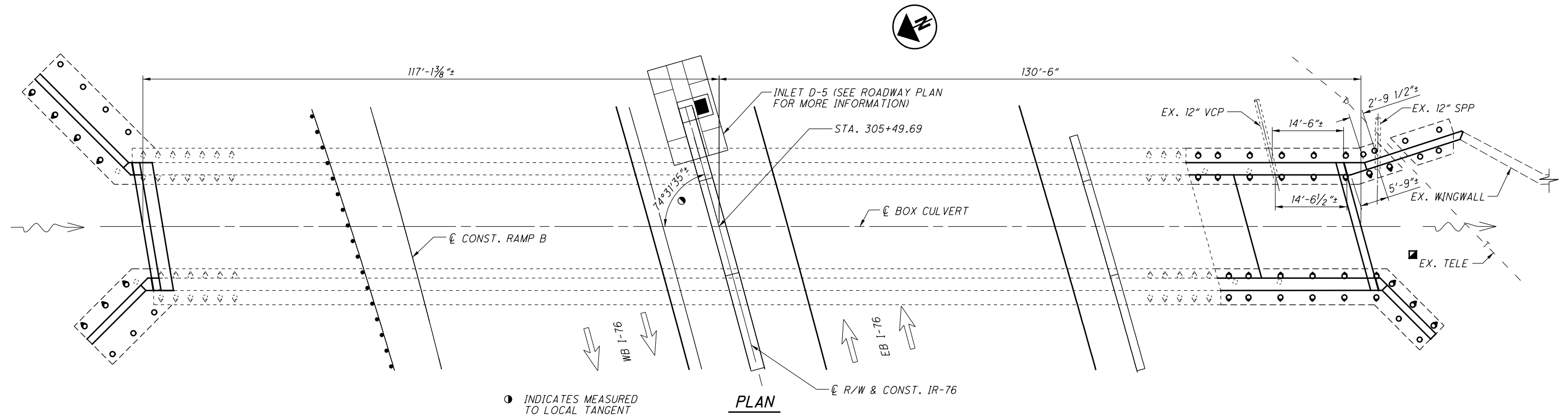
 INDICATES MEASURED TO LOCAL TANGENT



SECTION A

DESIGN AGENCY <b>GPD GROUP</b> <small>Glenn, Pyle, Schorer, Burns &amp; Delaney, Inc.          320 South Main Street, Suite 2531, Akron, Ohio 44311 330.572.2100          Copyright Glenn, Pyle, Schorer, Burns &amp; Delaney, Inc. 2015</small>	DATE 8-14-18
	STRUCTURE FILE NUMBER 7705468
REVIEWED DGN	DRAWN RPR
DESIGNED RHC	CHECKED DUC
STRUCTURE REMOVAL DETAILS BRIDGE NO. SUM-076-0577 IR 76 OVER MUD RUN	
SUM-76-5.63 PID No. 96670	3 / 14
541 672	

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 #DAYS  
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**NOTES:**

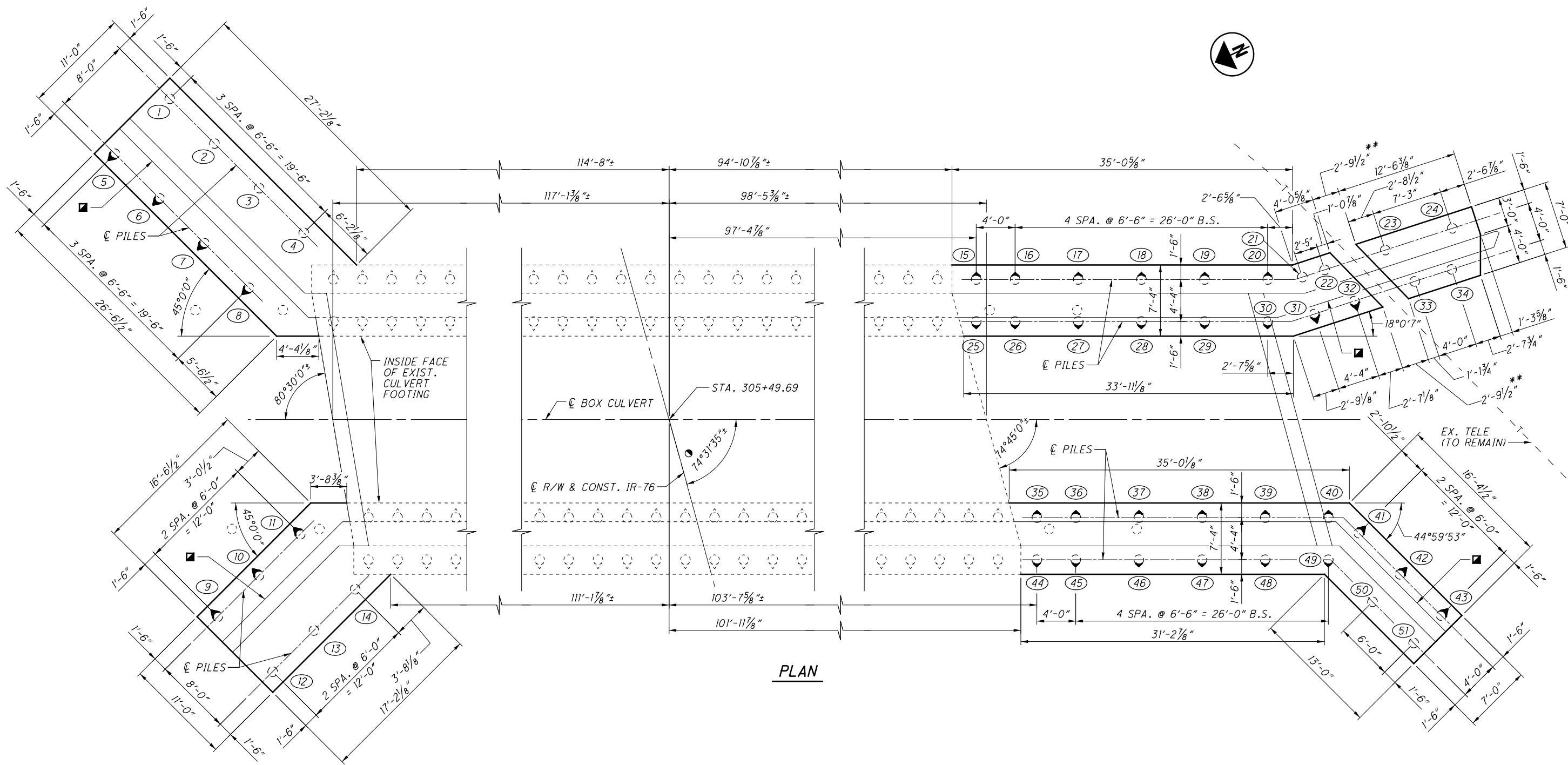
- FOR INLET DETAILS, SEE SHT. NO. [8/14].
- FOR OUTLET DETAILS, SEE SHT. NO. [9/14].
- FOR SECTIONS C, D & R SEE SHT. NO. [7/14].

**LEGEND:**

■ DO NOT DISTURB

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	REVIEWED	DGN	7705468
	DRAWN	RPR	REVISED
	DESIGNED	RPR	CHECKED
<b>CULVERT PLAN AND PROFILE</b> BRIDGE NO. SUM-076-0577 IR 76 OVER MUD RUN			
SUM-76-5.63 PID No. 96670			
4 / 14 542 672			

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**LEGEND:**

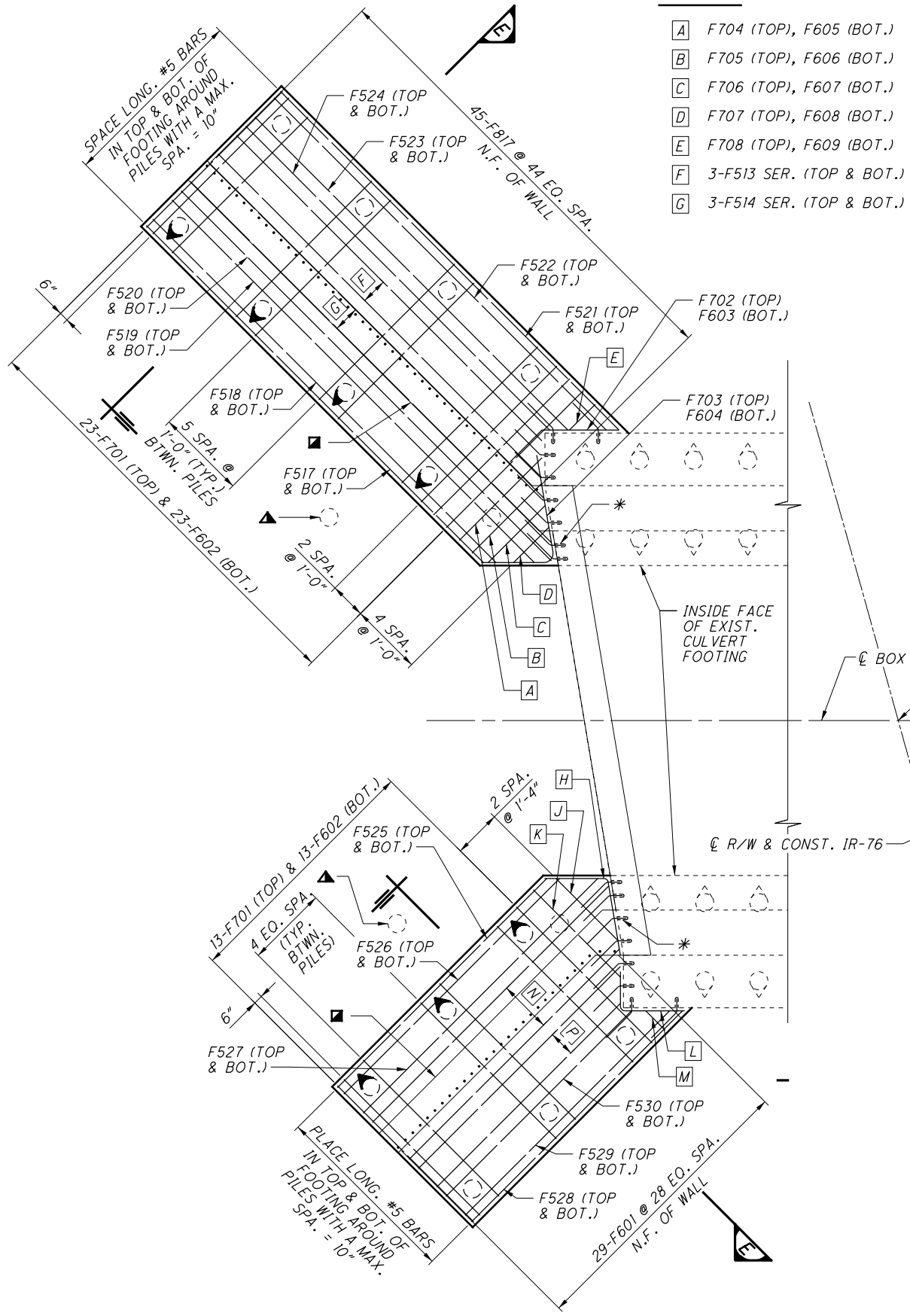
- INDICATES MEASURED TO LOCAL TANGENT
- EXIST. 12"± DIA. C.I.P. REINFORCED CONC. PILE
- EXIST. 12"± DIA. C.I.P. REINFORCED CONC. PILE (BATTERED 1:6)
- PROP. 12" DIA. C.I.P. REINFORCED CONC. PILE
- PROP. 12" DIA. C.I.P. REINFORCED CONC. PILE (BATTERED 1:4)
- ⊕ PROPOSED PILE NUMBER
- \*\* OPENING IN FOOTING FOR EXISTING TELEPHONE LINES TO REMAIN
- FRONT FACE OF PROPOSED CULVERT WINGWALL

**NOTES:**

1. EXISTING CULVERT IS AS SHOWN AFTER REMOVAL OF THE EXISTING WINGWALLS AND WINGWALL FOOTINGS AT BOTH THE INLET AND OUTLET ENDS. SEE SHT. NO. 3/14 FOR REMOVAL DETAILS.
2. PROPOSED PILES MAY BE SHIFTED UP TO 1'-0" ALONG THE CENTERLINE OF PILES TO AVOID INTERFERENCE WITH EXISTING PILES SHOWN TO REMAIN AT THE OUTLET END.

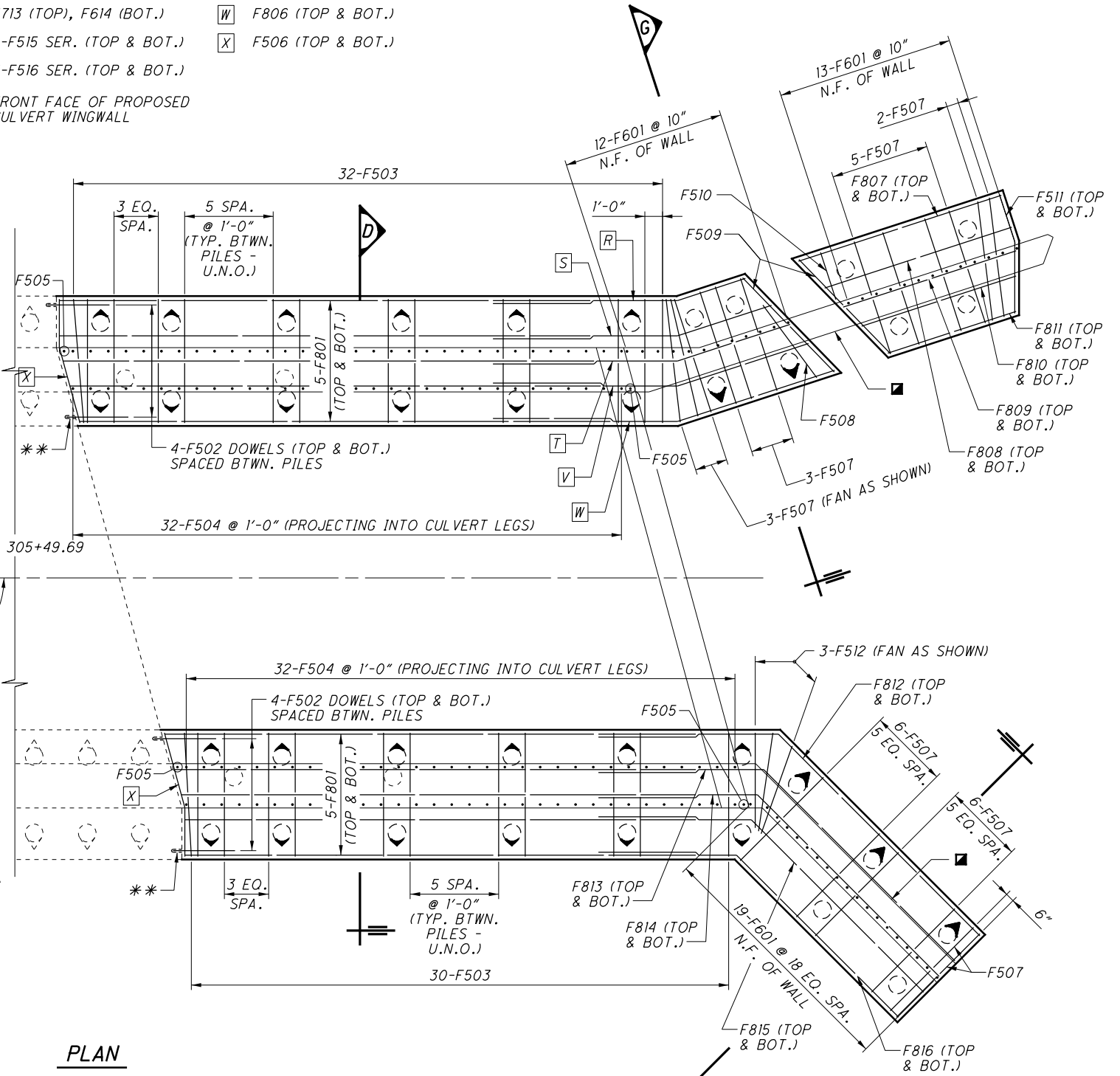
<b>FOUNDATION PLAN &amp; PILE LAYOUT</b> BRIDGE NO. SUM-076-0577 IR 76 OVER MUD RUN	DESIGN AGENCY <b>GPD GROUP</b> <small>Glenn Pyle, Schoner, Burns &amp; Delaney, Inc.          320 South Main Street, Suite 2511, Akron, Ohio 44311 330.572.2100          Copyright © Glenn Pyle, Schoner, Burns &amp; Delaney, Inc. 2015</small>	DATE 8-14-18	REVISIONS DGN STRUCTURE FILE NUMBER 7705468	DRAWN RFV	CHECKED DUC
<b>SUM-76-5.63</b> PID No. 96670	5 / 14				
543 672					

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 C:\Users\rymer\Documents\Projects\Sum076\0577C\_Sheets\076\_0577C\_MD007.dgn Sheet



**LEGEND:**

- |                            |                            |                     |
|----------------------------|----------------------------|---------------------|
| A F704 (TOP), F605 (BOT.)  | H F709 (TOP), F610 (BOT.)  | R F802 (TOP & BOT.) |
| B F705 (TOP), F606 (BOT.)  | J F710 (TOP), F611 (BOT.)  | S F803 (TOP & BOT.) |
| C F706 (TOP), F607 (BOT.)  | K F711 (TOP), F612 (BOT.)  | T F804 (TOP & BOT.) |
| D F707 (TOP), F608 (BOT.)  | L F712 (TOP), F613 (BOT.)  | V F805 (TOP & BOT.) |
| E F708 (TOP), F609 (BOT.)  | M F713 (TOP), F614 (BOT.)  | W F806 (TOP & BOT.) |
| F 3-F513 SER. (TOP & BOT.) | N 5-F515 SER. (TOP & BOT.) | X F506 (TOP & BOT.) |
| G 3-F514 SER. (TOP & BOT.) | P 3-F516 SER. (TOP & BOT.) |                     |
- FRONT FACE OF PROPOSED CULVERT WINGWALL
- ▲ EXISTING WINGWALL PILE ABANDONED AND LEFT IN PLACE



**PLAN**

**LEGEND:**

- \* F501 DOWELS (TOP & BOT. - TYP. OF 8 IN EACH FOOTING) (SEE SECTION R ON SHT. NO. 7/14) FOR DEPTH OF THE DOWELS)
- \*\* F502 DOWELS (TOP & BOT. - TYP. OF 5 IN EACH FOOTING) (SEE SECTION R ON SHT. NO. 7/14) FOR DEPTH OF THE DOWELS)
- FRONT FACE OF PROPOSED CULVERT WINGWALL
- ▲ EXISTING WINGWALL PILE ABANDONED AND LEFT IN PLACE

**NOTES:**

1. MINIMUM LAP LENGTH SHALL BE AS FOLLOWS: #8 BARS = 5'-6"
2. FOR SECTION D, SEE SHT. NO. 7/14.
3. FOR SECTION E, SEE SHT. NO. 10/14.
4. FOR SECTION G, SEE SHT. NO. 11/14.

**DESIGN AGENCY**  
**GPD GROUP**  
 Glenn Pyle, Schorer, Burns & Delaney, Inc.  
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**FOUNDATION REINFORCING PLAN**  
 BRIDGE NO. SUM-076-0577  
 IR 76 OVER MUD RUN

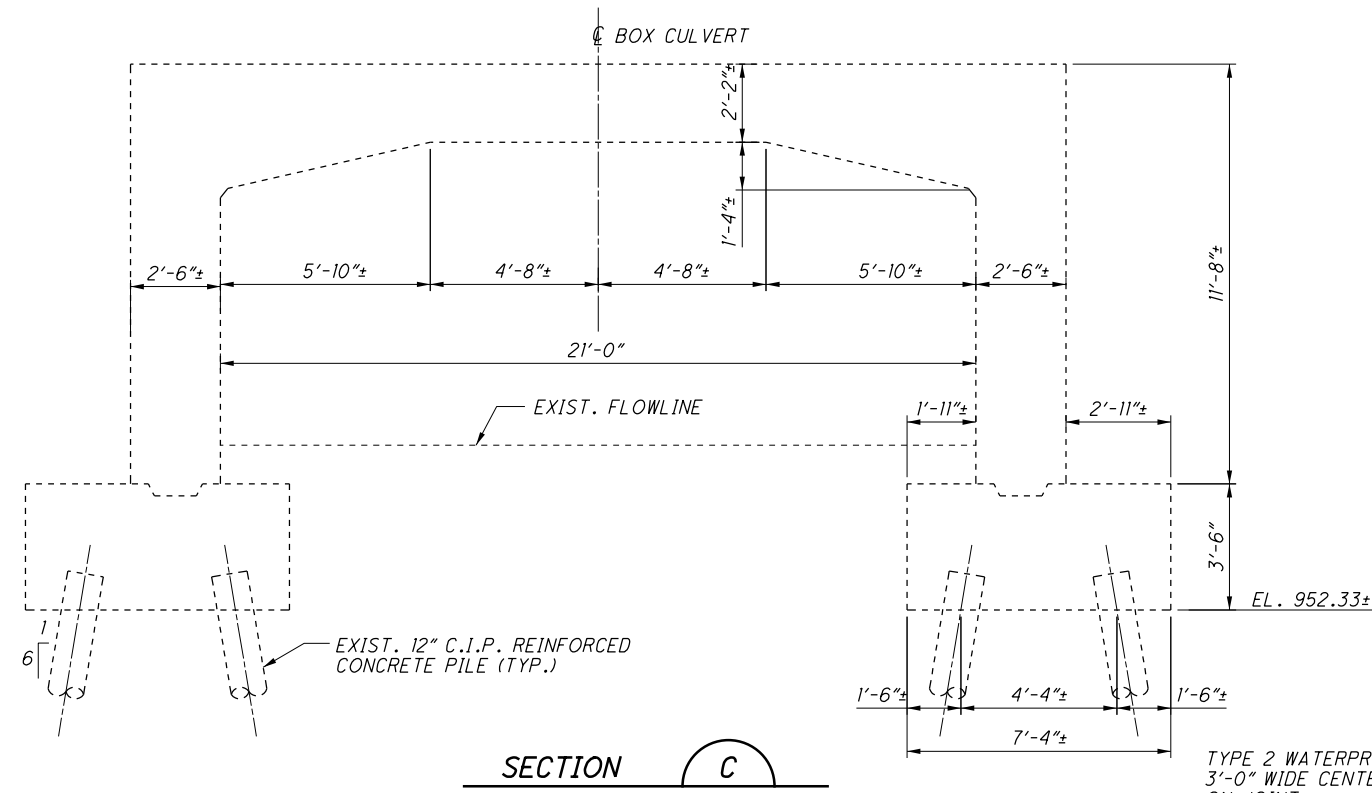
DESIGNED	RHC	CHECKED	DUC
DRAWN	RFV	REVISED	
REVIEWED	DGN	DATE	8-14-18
STRUCTURE FILE NUMBER	7705468		

**SUM-76-5.63**  
**PID No. 96670**

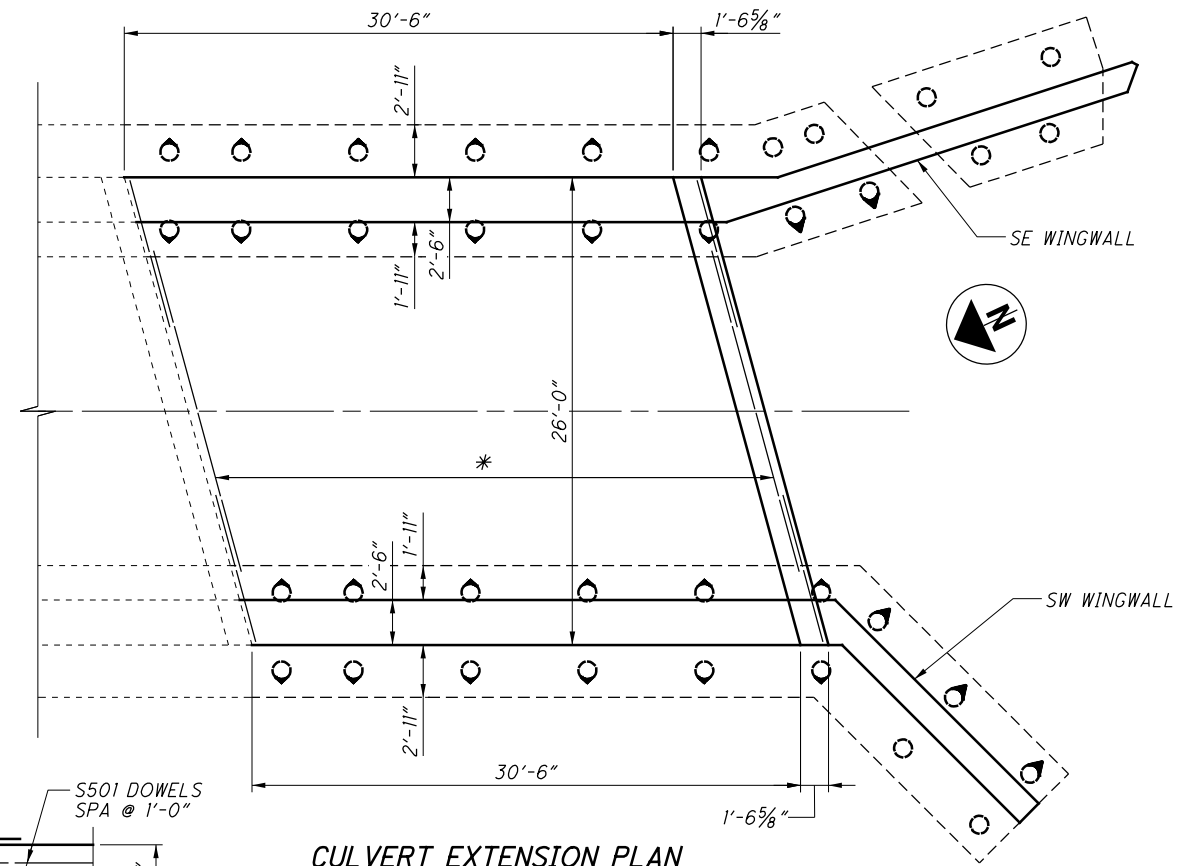
6/14

544  
672

8/20/2018 1:26:38 PM rrymer  
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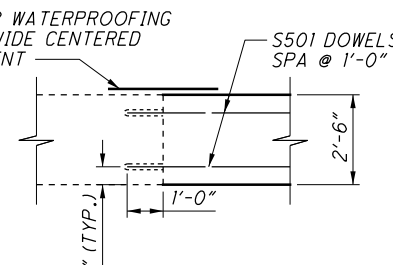
SECTION C



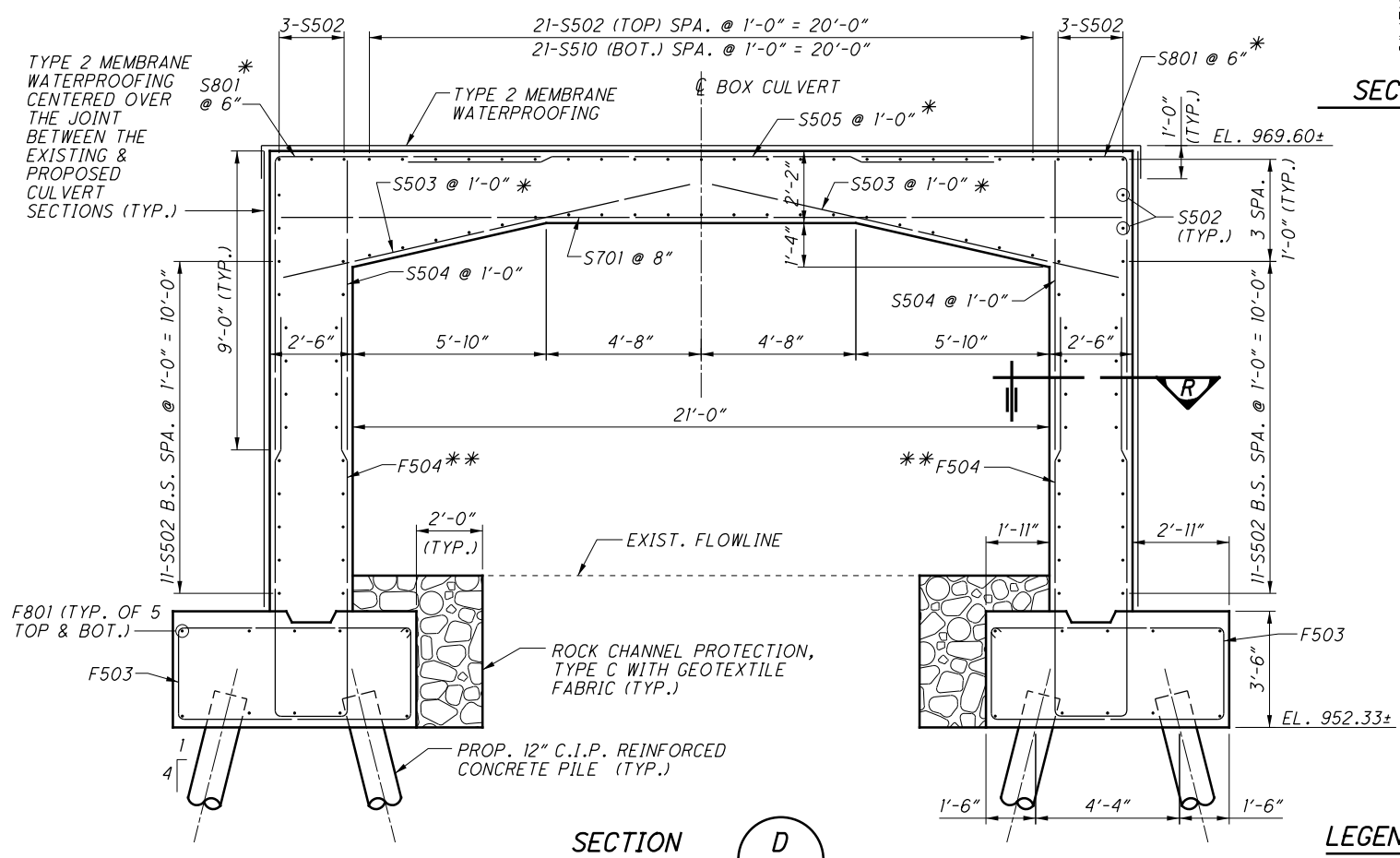
CULVERT EXTENSION PLAN

NOTES:

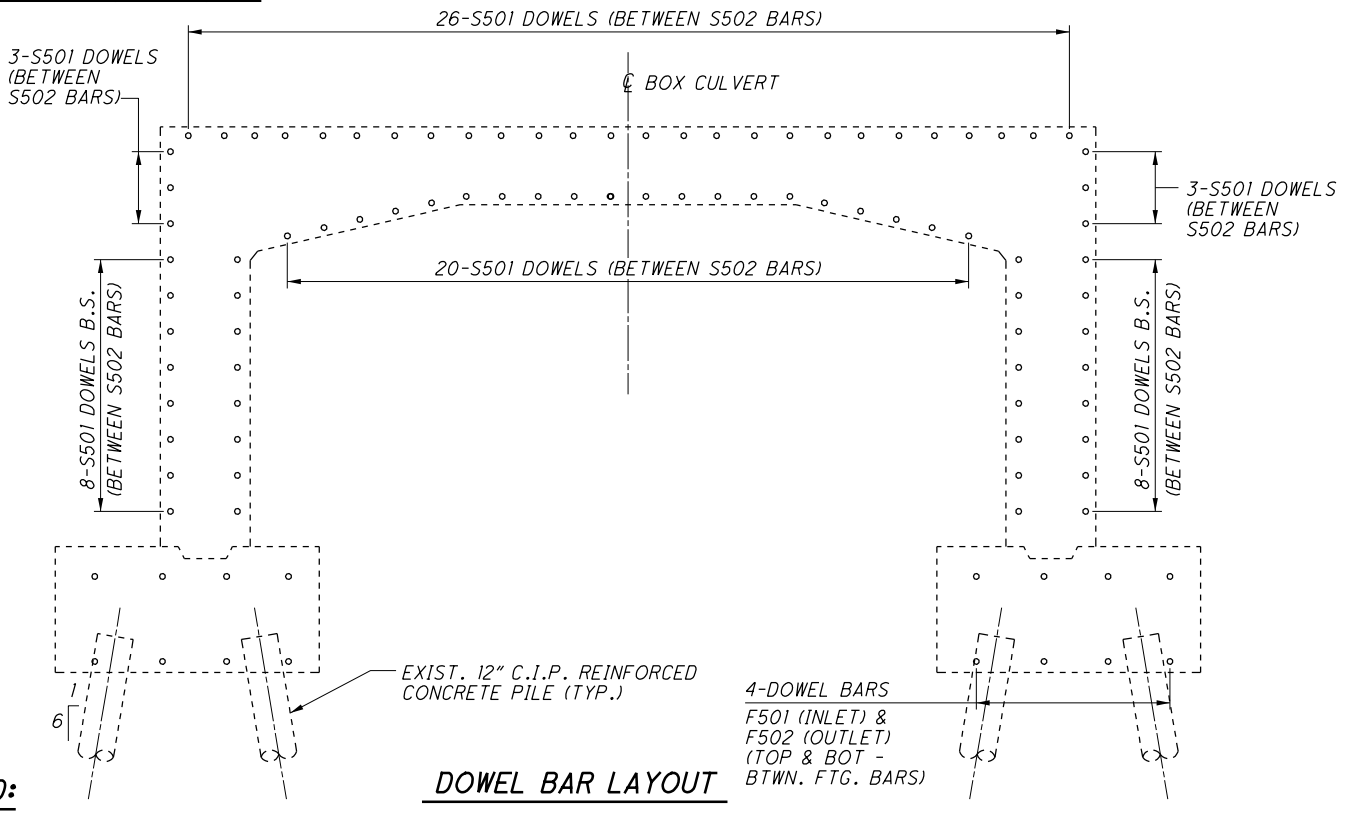
1. FOR FOUNDATION DETAILS, SEE SH. NO. [6/14].
2. FOR LOCATION OF SECTIONS C & D, SEE SH. NOS. [4/14] & [6/14].
3. THE PROPOSED VERTICAL REINFORCING IN THE CULVERT EXTENSION (F504, S504 & S801 BARS) SHALL BE SHIFTED AS NEEDED AROUND THE 12" VCP PIPE THAT WILL EXTEND THRU THE SIDE WALLS.



SECTION R



SECTION D



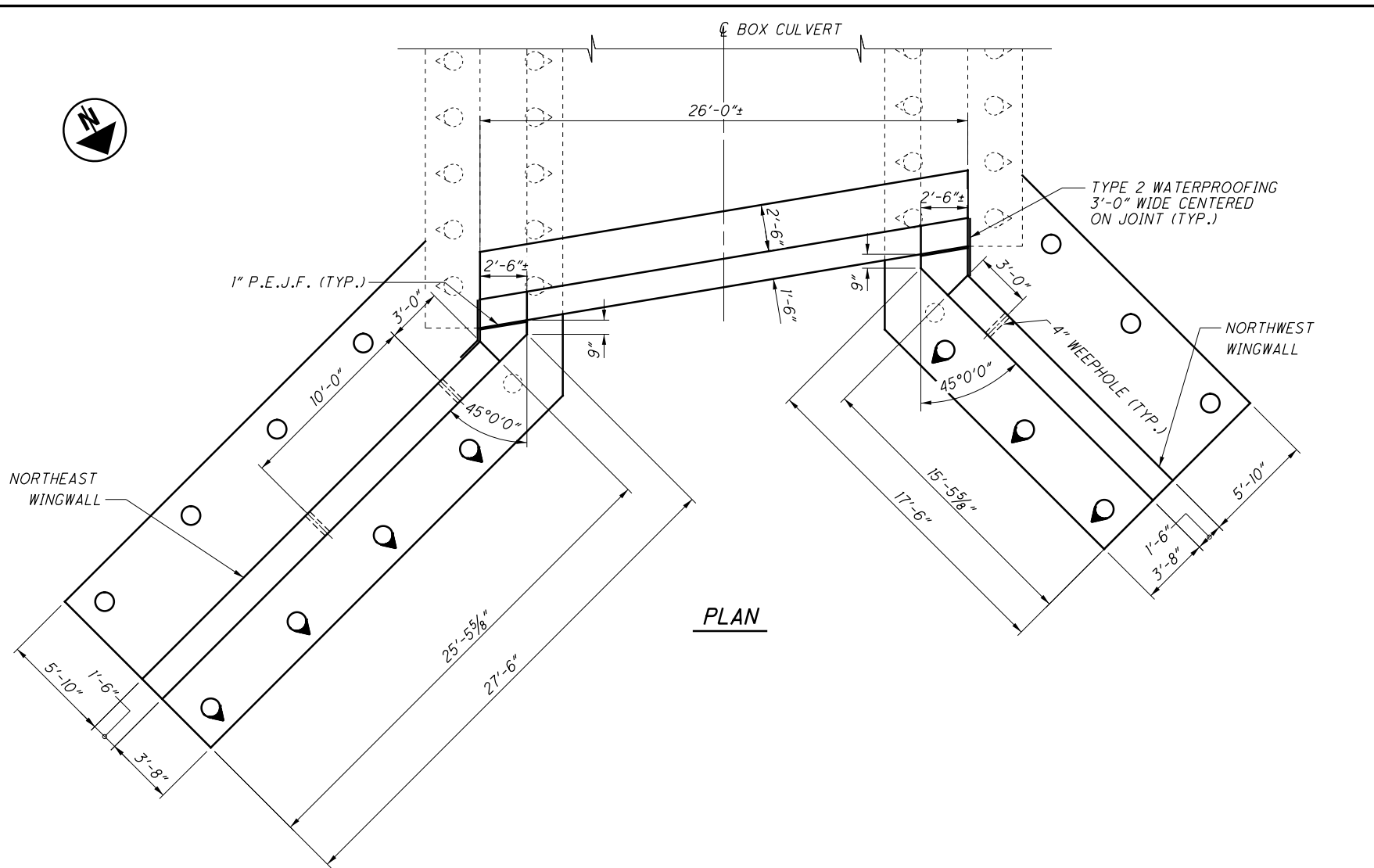
DOWEL BAR LAYOUT

LEGEND:

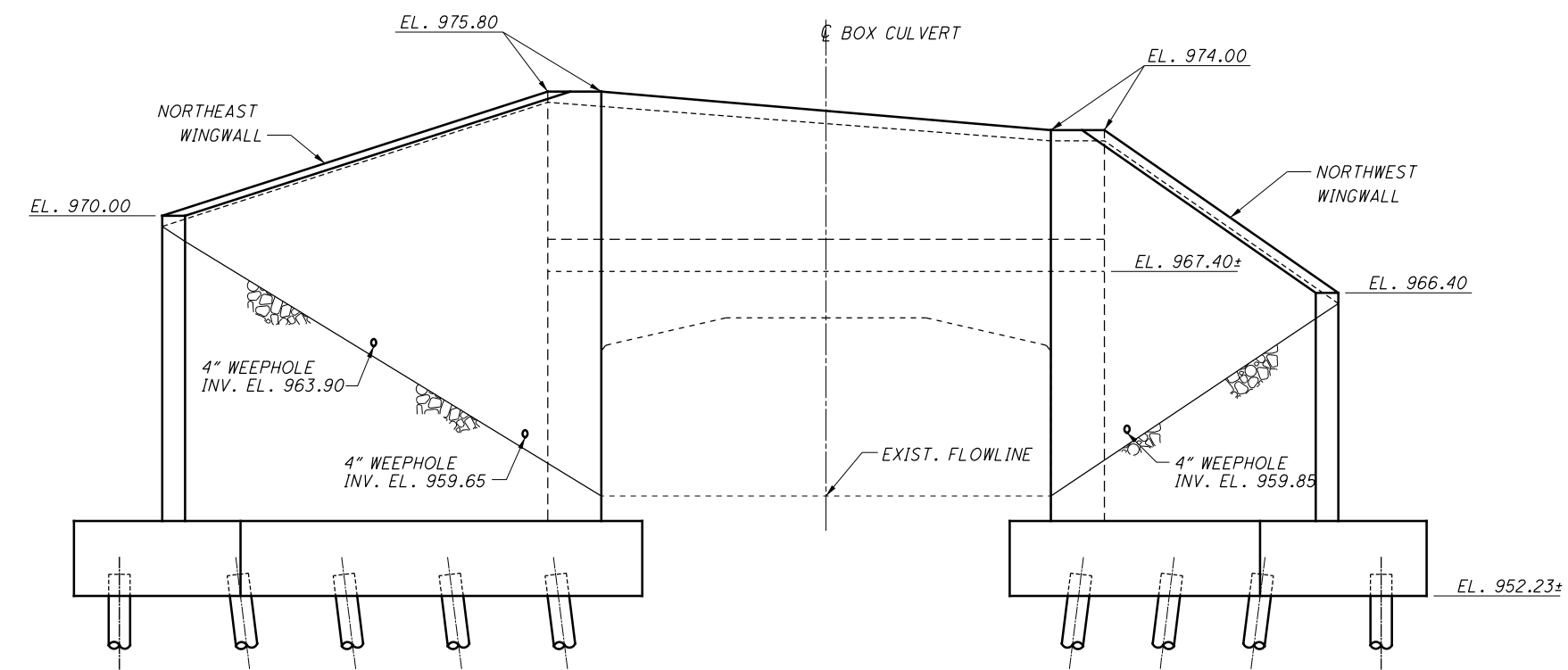
- \* ORIENT NEW CULVERT TOP SLAB BARS PARALLEL TO THE ENDS OF THE CULVERT
- \*\* LAP WITH EVERY OTHER S801 TOP SLAB BAR



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 #TIMES  
 #BASES  
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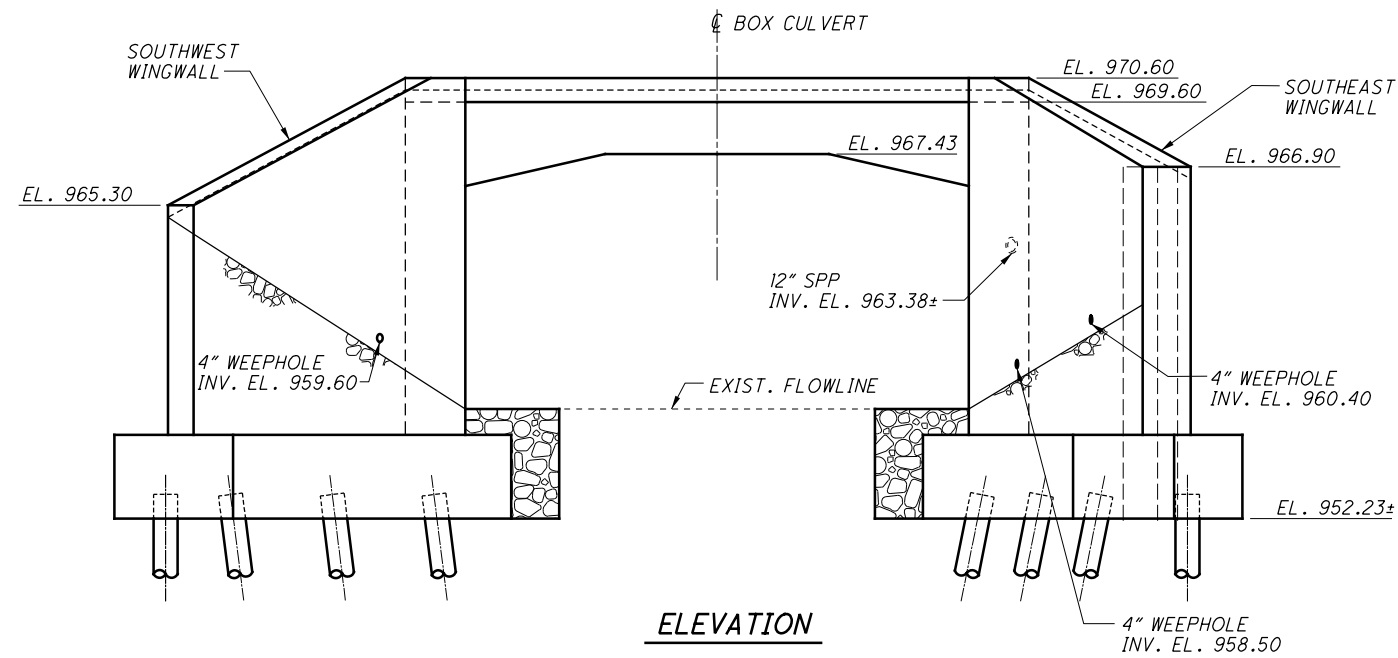
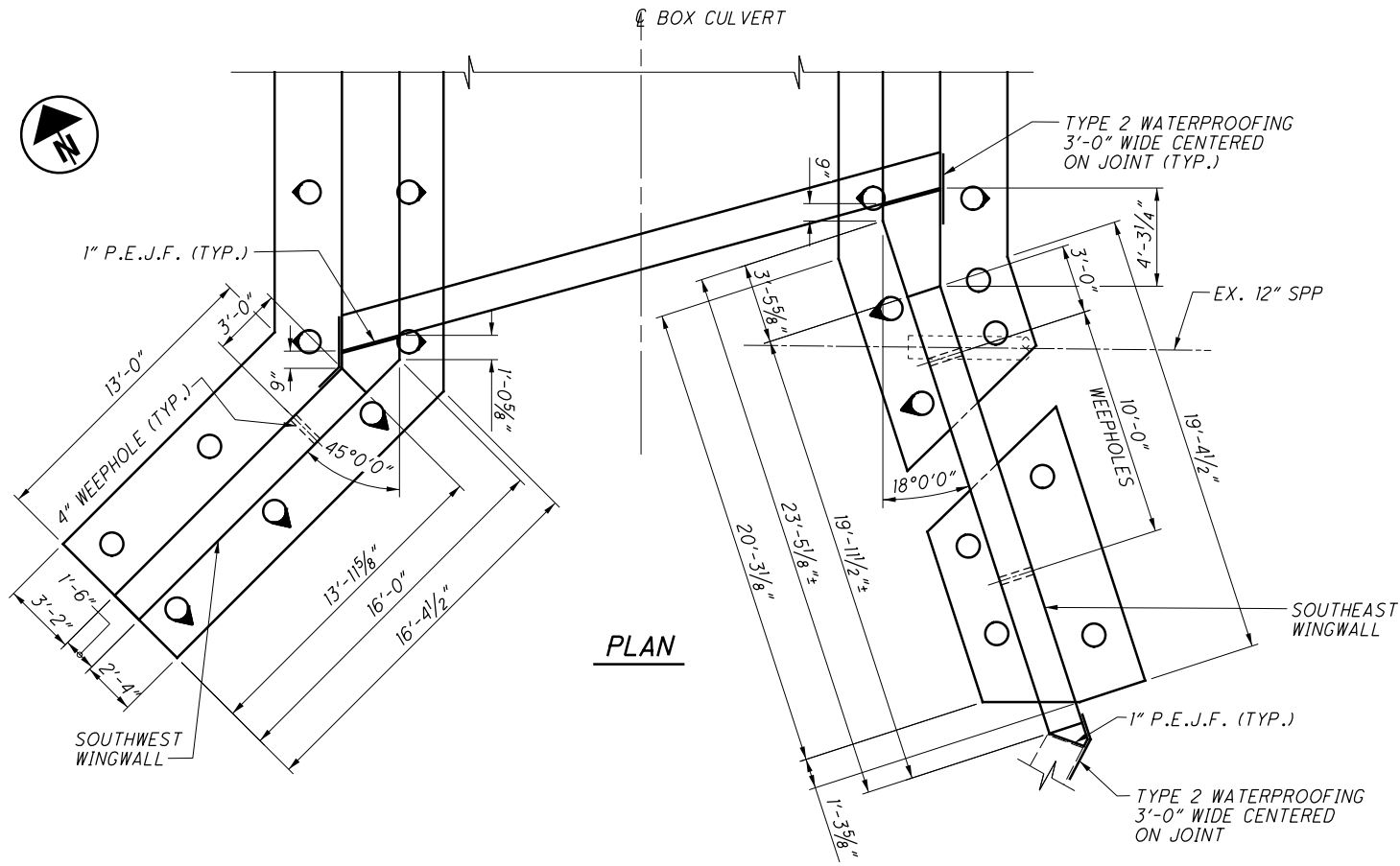
**PLAN**



**ELEVATION**

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DATE 8-14-18	STRUCTURE FILE NUMBER 7705468
REVIEWED DGN	DRAWN RPR
DESIGNED T.J.W.	CHECKED DUC
<b>INLET WINGWALL DETAILS</b> BRIDGE NO. SUM-076-0577 IR 76 OVER MUD RUN	
<b>SUM-76-5.63</b> PID No. 96670	
8 / 14	
546 672	

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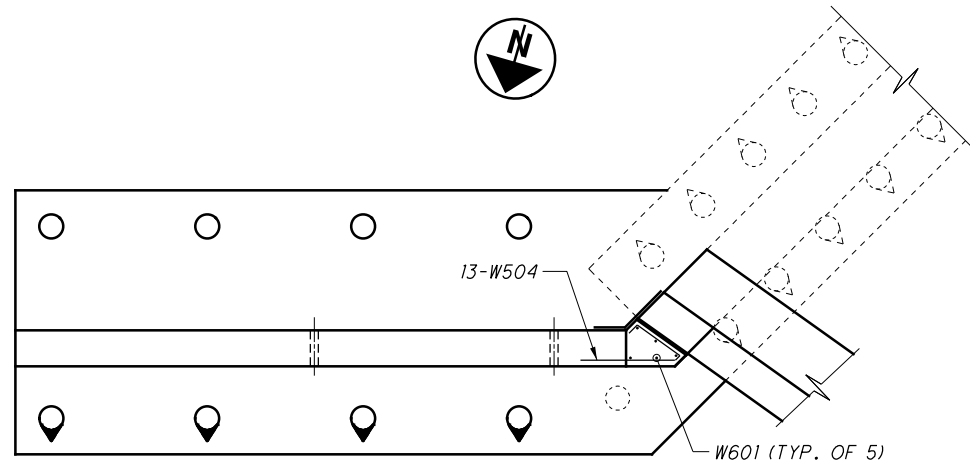


DESIGNED	DRAWN	REVIEWED	DATE
TJW	RPR	DGN	8-14-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJC		7705468	

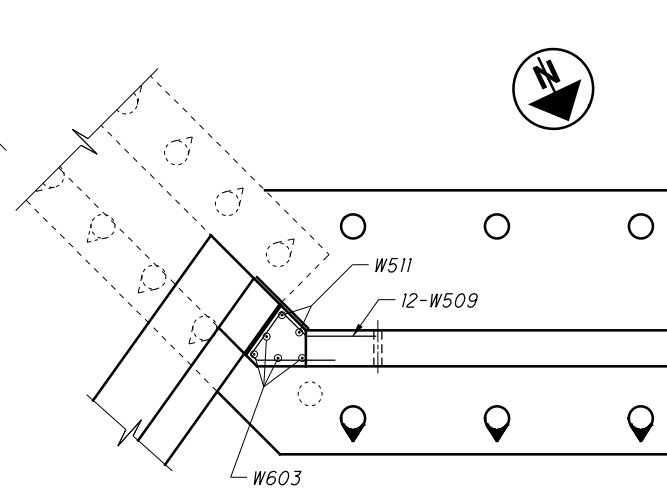
**OUTLET WINGWALL DETAILS**  
 BRIDGE NO. SUM-076-0577  
 IR 76 OVER MUD RUN

**SUM-76-5.63**  
**PID No. 96670**

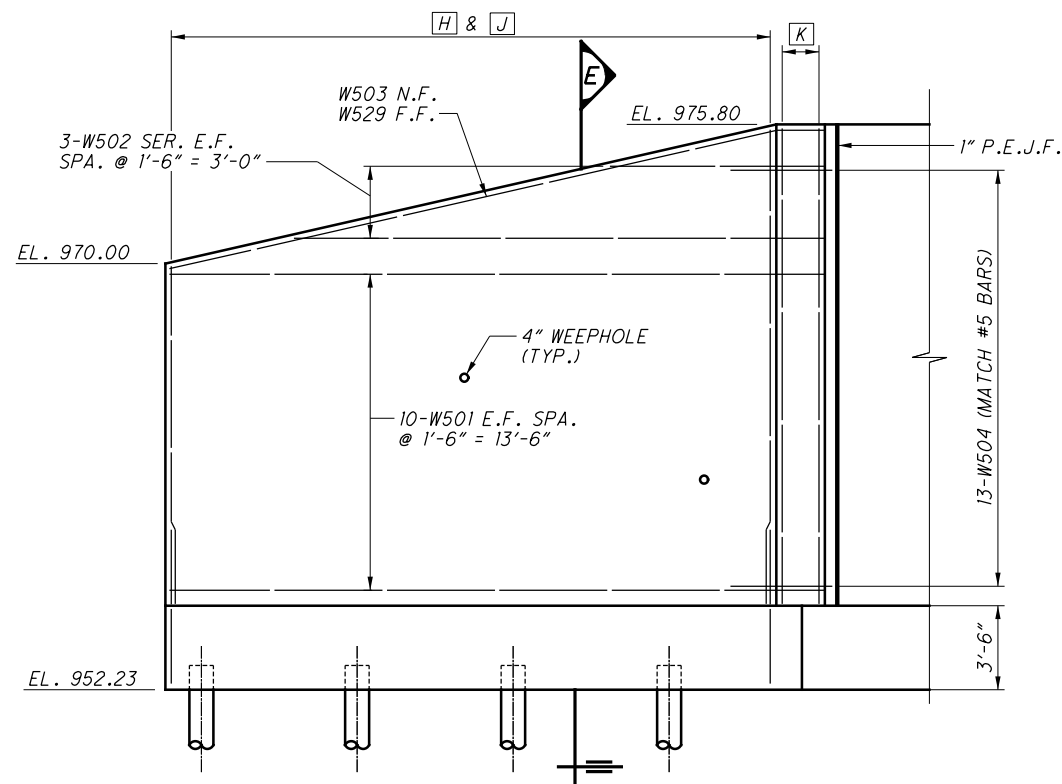
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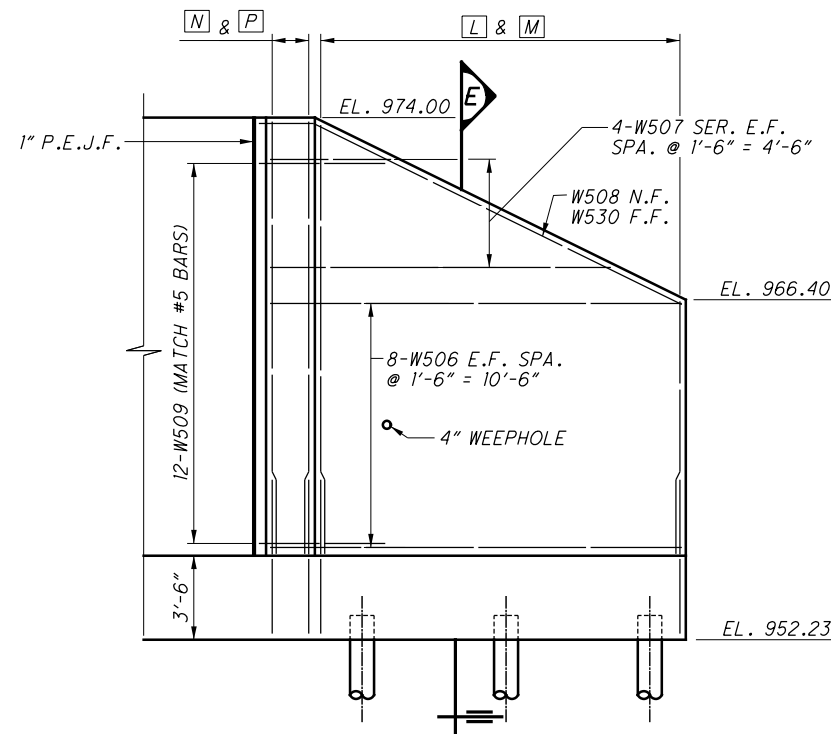
**NORTHEAST WINGWALL PLAN**



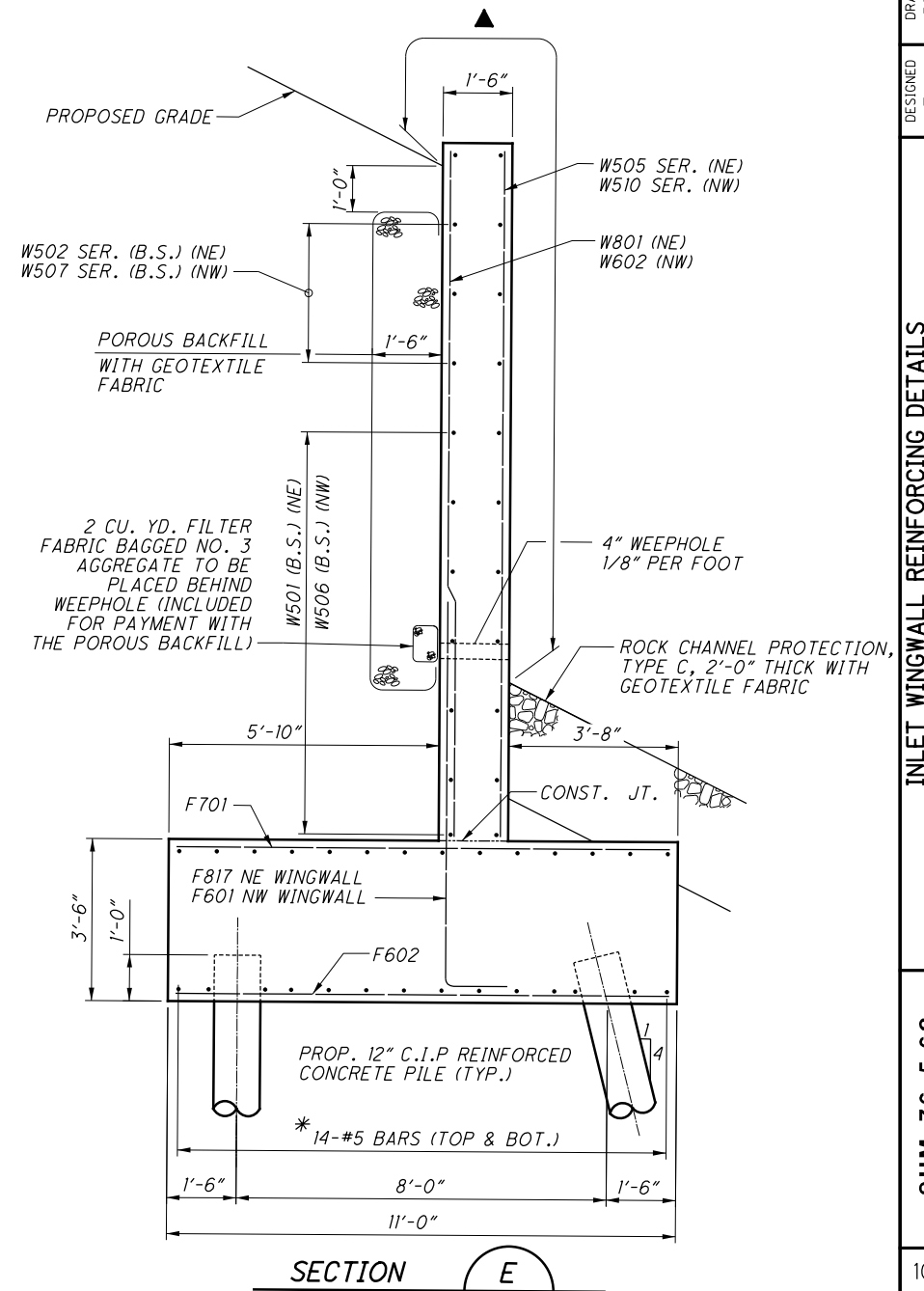
**NORTHWEST WINGWALL PLAN**



**NORTHEAST WINGWALL ELEVATION**



**NORTHWEST WINGWALL ELEVATION**



NOTE: SEE ROADWAY PLANS FOR PAYMENT OF ROCK CHANNEL PROTECTION

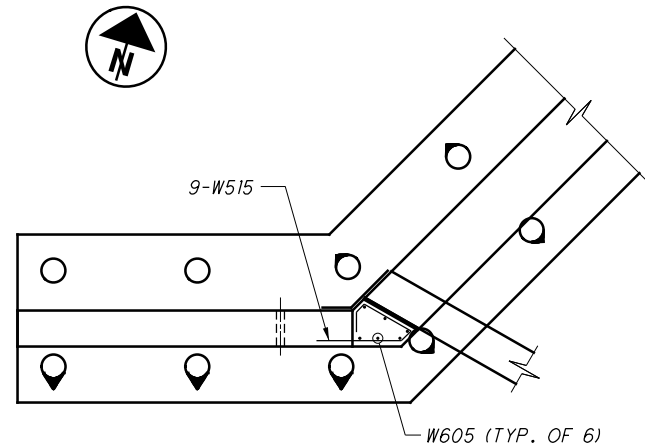
**LEGEND**

- [H] 44-W801 SER. @ 43 EQ. SPA. = 25'-0" (F.F.)
- [J] 18-W505 SER. @ 17 EQ. SPA. = 25'-0" (N.F.)
- [K] 3-W601 (B.F.)
- [L] 27-W602 SER. @ 26 EQ. SPA. = 15'-0" (F.F.)
- [M] 11-W510 SER. SPA. @ 1'-6" = 15'-0" (N.F.)
- [N] 2-W511 (F.F.)
- [P] 4-W603

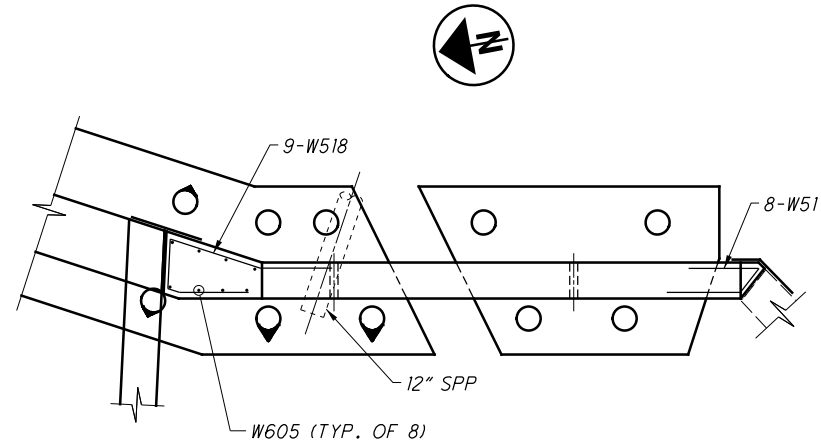
- ▲ INDICATES LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- \* SEE FOUNDATION REINFORCING PLAN FOR FOOTING BAR DESIGNATIONS

 <small>Glenn P. Schoner, Barry &amp; Dehaven, Inc.          330 South Main Street, Suite 2531, Akron, Ohio 44311          330.572.2100          Copyright © 2015, Glenn P. Schoner, Barry &amp; Dehaven, Inc.</small>	DESIGN AGENCY <b>GPD GROUP</b>	DATE 8-14-18	REVIEWED DGN 7705468	DRAWN RPR REVISED	DESIGNED T.J.W. CHECKED DUC	<b>INLET WINGWALL REINFORCING DETAILS</b> BRIDGE NO. SUM-076-0577 IR 76 OVER MUD RUN	<b>SUM-76-5.63</b> PID No. 96670	10 / 14 548 672
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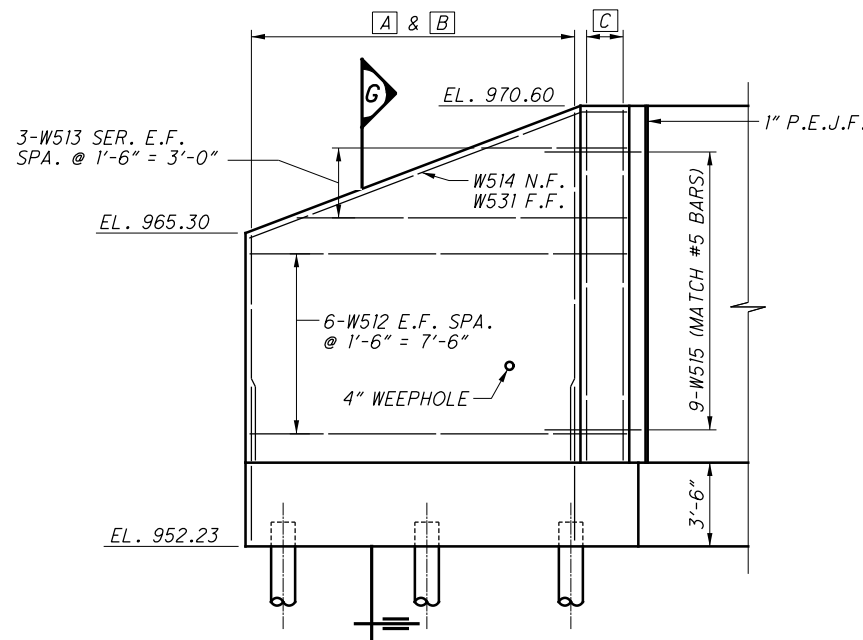
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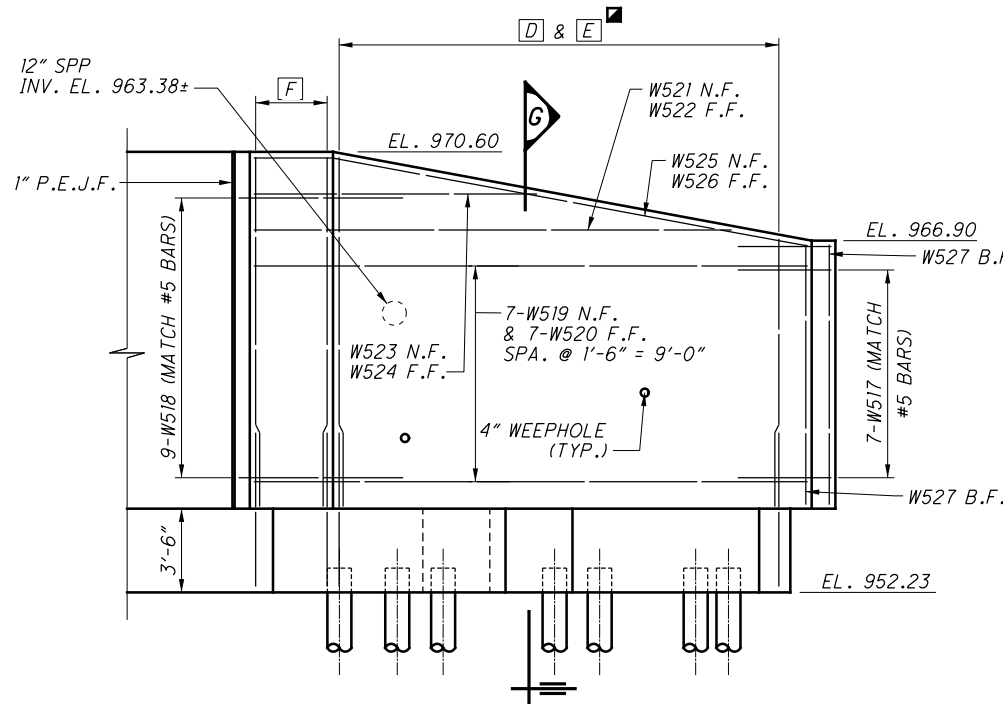
**SOUTHWEST WINGWALL PLAN**



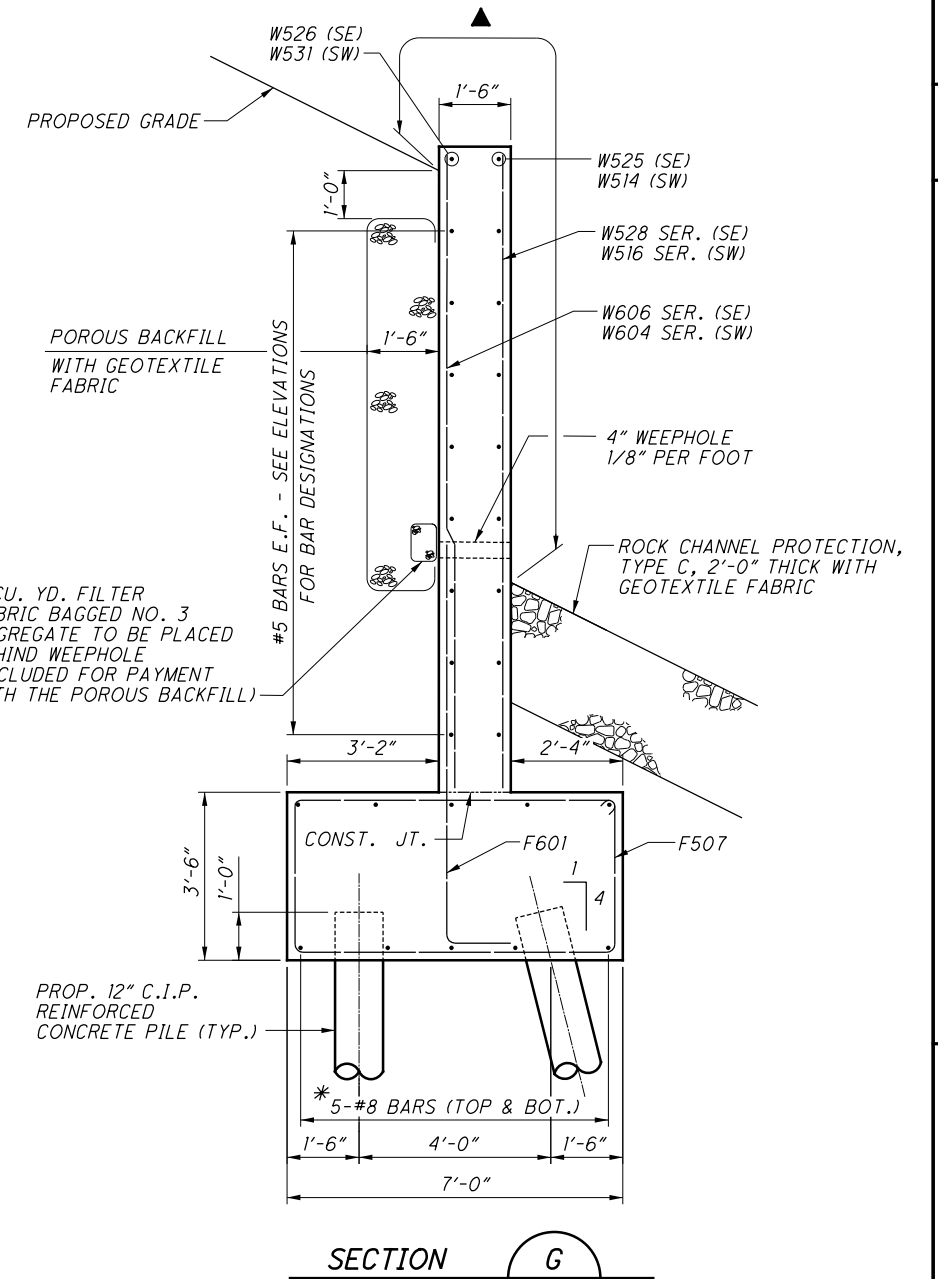
**SOUTHEAST WINGWALL PLAN**



**SOUTHWEST WINGWALL ELEVATION**



**SOUTHEAST WINGWALL ELEVATION**



**SECTION G**

**LEGEND**

- [A] 18-W604 SER. @ 17 EQ. SPA. = 13'-7" (F.F.)
- [B] 11-W516 SER. @ 10 EQ. SPA. = 13'-7" (N.F.)
- [C] 3-W605 (B.F.)
- [D] 23-W606 SER. SPA. @ 10" = 18'-4" (F.F.)
- [E] 14-W528 SER. @ 13 EQ. SPA. = 18'-4" (N.F.)
- [F] 4-W605 SPA. @ 10" = 3'-4" (B.F.)
- ▲ INDICATES LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- \* SEE FOUNDATION REINFORCING PLAN FOR FOOTING BAR DESIGNATIONS
- SHIFT VERTICAL WALL REINFORCING AS NECESSARY TO AVOID INTERFERENCE WITH 12" SPP THRU THE SOUTHEAST WINGWALL

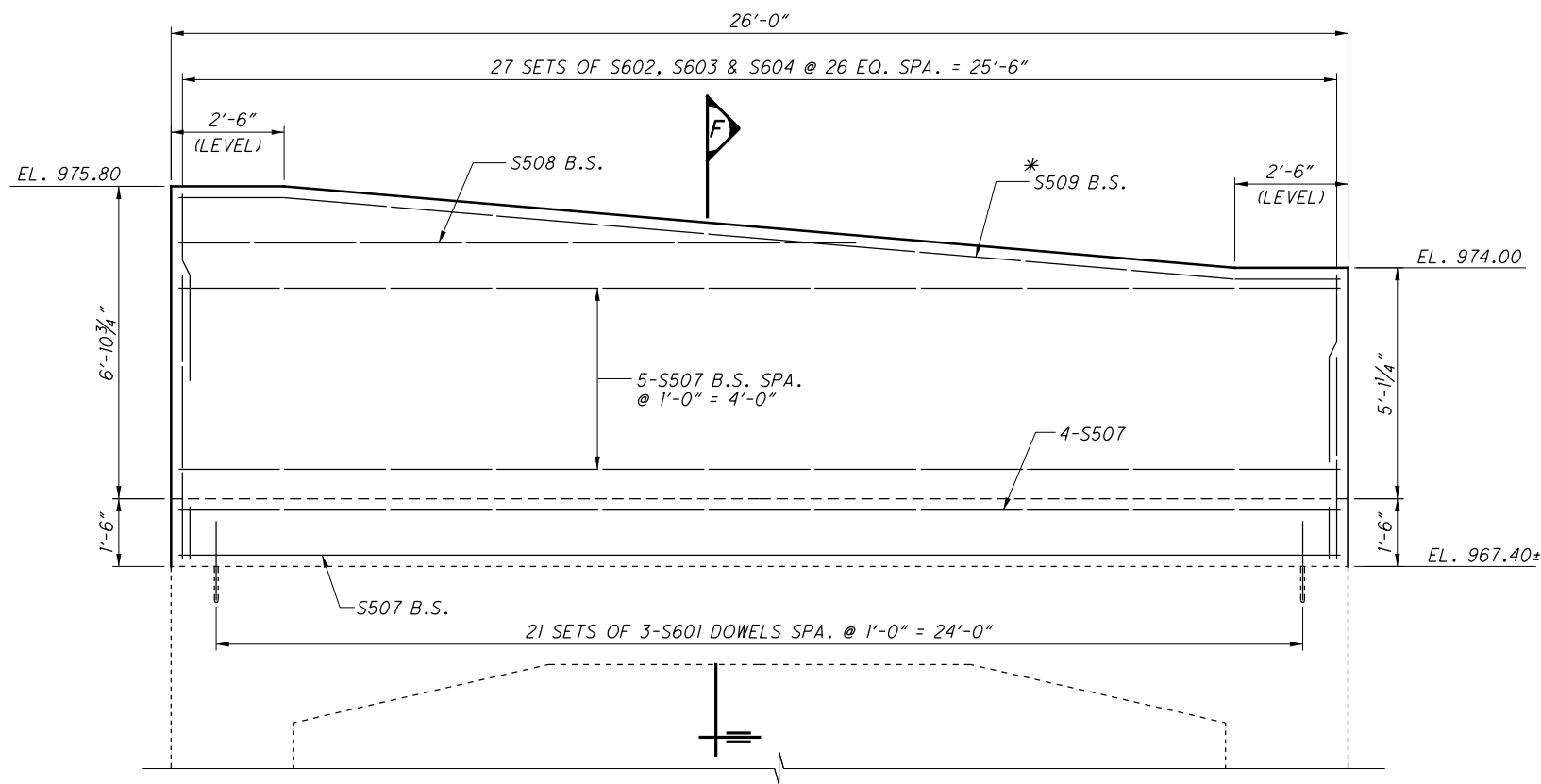
2 CU. YD. FILTER FABRIC BAGGED NO. 3 AGGREGATE TO BE PLACED BEHIND WEEPHOLE (INCLUDED FOR PAYMENT WITH THE POROUS BACKFILL)

PROP. 12" C.I.P. REINFORCED CONCRETE PILE (TYP.)

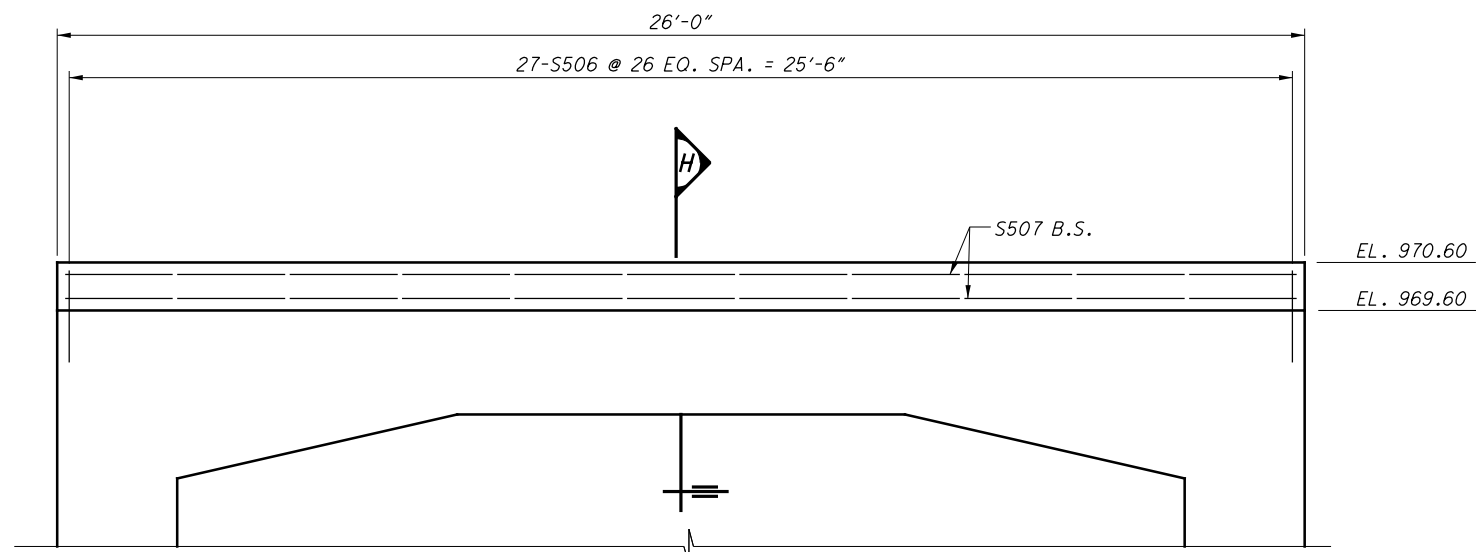
NOTE: SEE ROADWAY PLANS FOR PAYMENT OF ROCK CHANNEL PROTECTION

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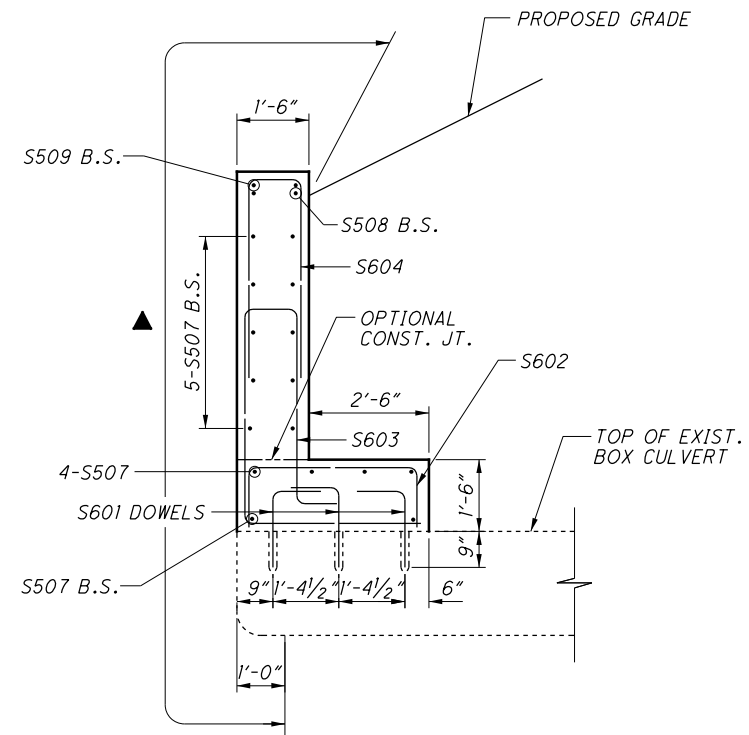
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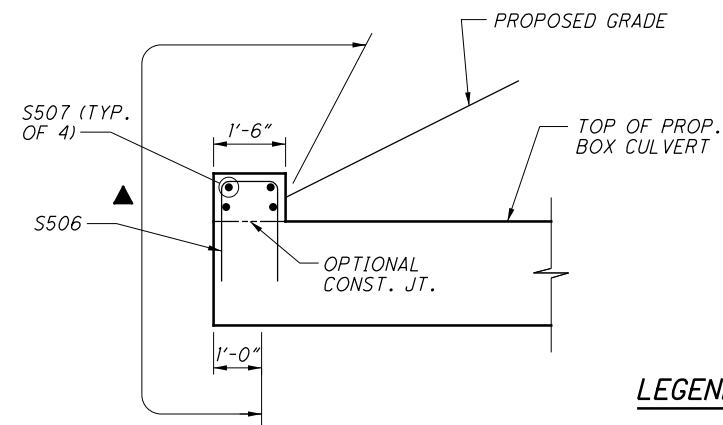
**INLET HEADWALL DETAIL**



**OUTLET HEADWALL DETAIL**



**SECTION F**



**SECTION H**

**LEGEND:**

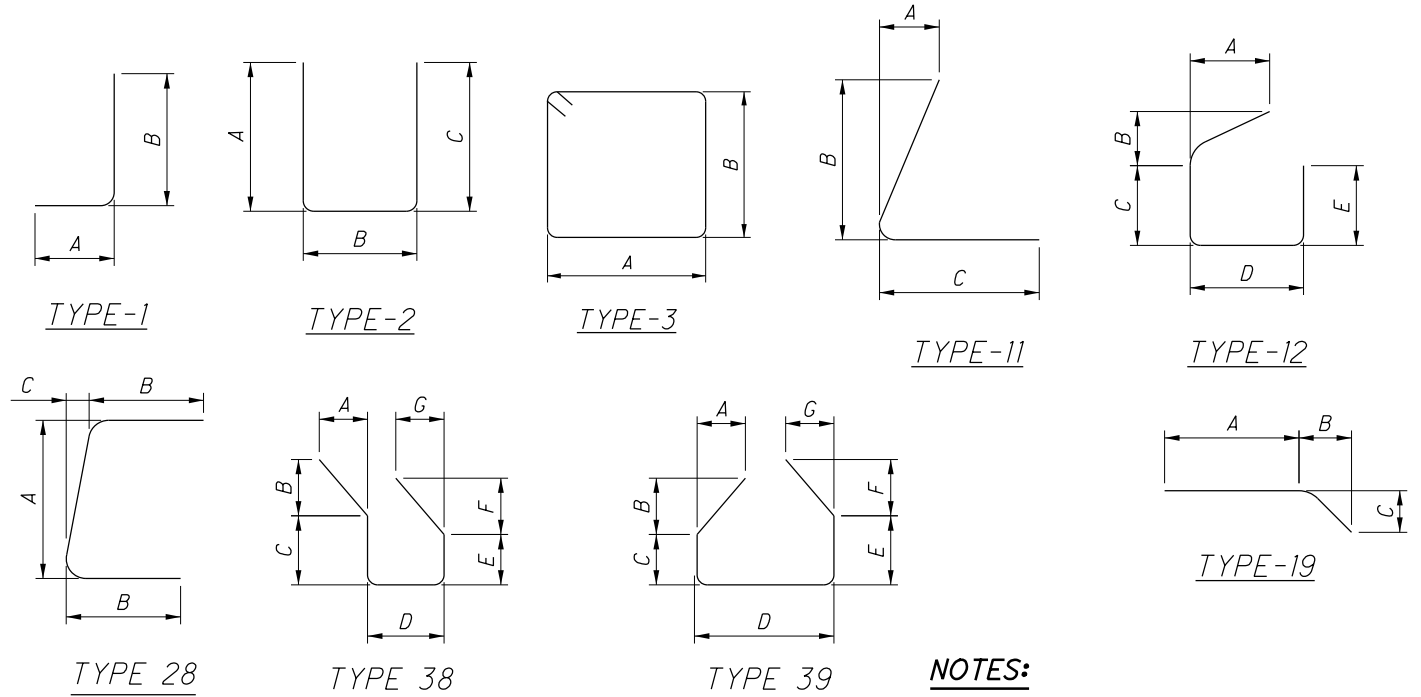
- ▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"
- \* FIELD BEND AS NECESSARY AT ENDS NEAR THE LEVEL TOP OF HEADWALL SECTIONS

<b>HEADWALL REINFORCING DETAILS</b> BRIDGE NO. SUM-076-0577 IR 76 OVER MUD RUN	DESIGN AGENCY <b>GPD GROUP</b> <small>Glenn P. Schorer, Barry &amp; Dehaven, Inc.          320 South Main Street, Suite 2531, Akron, Ohio 44311 330.572.2100          Copyright © 2015, Glenn P. Schorer, Barry &amp; Dehaven, Inc.</small>
DESIGNED T J W CHECKED DUC	DRAWN RPR REVISED
REVIEWED DGN STRUCTURE FILE NUMBER 7705468	DATE 8-14-18
SUM-76-5.63 PID No. 96670	
12 / 14	
550 672	

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
FOOTINGS											
F501	32	3'-3"	108	19	1'-3"	1'-5"	1'-5"				
F502	20	4'-0"	83	STR							
F503	62	20'-2"	1304	3	7'-0"	2'-9"					
F504	64	25'-11"	1730	2	12'-0"	2'-2"	12'-0"				
F505	4	12'-8"	53	1	0'-10"	12'-0"					
F506	4	7'-2"	30	19	2'-9"	4'-3"	1'-2"				
F507	27	20'-2"	568	3	6'-8"	3'-1"					
F508	1	17'-2"	18	3	5'-2"	3'-1"					
F509	2	21'-8"	45	3	7'-5"	3'-1"					
F510	1	12'-6"	13	3	2'-10"	3'-1"					
F511	2	6'-9"	14	19	2'-9"	3'-10"	1'-3"				
F512	3	17'-8"	55	3	5'-5"	3'-1"					
	2 SR	23'-11"									
F513	OF	TO	154	STR							0'-8 1/2"
	3	25'-4"									
	2 SR	26'-3"									
F514	OF	TO	171	STR							1'-0"
	3	28'-3"									
	2 SR	16'-6"									
F515	OF	TO	183	STR							0'-6"
	5	18'-6"									
	2 SR	14'-4"									
F516	OF	TO	94	STR							0'-9"
	3	15'-10"									
F517	2	26'-4"	55	STR							
F518	2	26'-10"	56	STR							
F519	2	28'-4"	59	STR							
F520	2	29'-0"	60	STR							
F521	2	26'-6"	55	STR							
F522	2	26'-0"	54	STR							
F523	2	24'-6"	51	STR							
F524	2	23'-9"	50	STR							
F525	2	16'-4"	34	STR							
F526	2	16'-10"	35	STR							
F527	2	18'-4"	38	STR							
F528	2	16'-6"	34	STR							
F529	2	16'-0"	33	STR							
F530	2	14'-6"	30	STR							
F601	73	9'-4"	1023	1	1'-0"	8'-6"					
F602	36	10'-8"	577	STR							
F603	1	6'-9"	10	19	4'-4"	1'-9"	1'-9"				
F604	1	9'-11"	15	11	1'-0"	6'-0"	4'-1"				
F605	1	6'-6"	10	STR							
F606	1	5'-6"	8	STR							
F607	1	4'-6"	7	STR							
F608	1	2'-9"	4	STR							
F609	1	2'-0"	3	STR							
F610	1	7'-8"	12	19	3'-6"	0'-9"	4'-3"				
F611	1	4'-10"	7	STR							
F612	1	6'-10"	10	STR							
F613	1	5'-6"	8	1	3'-6"	2'-2"					
F614	1	1'-6"	2	STR							
F701	36	10'-8"	785	STR							
F702	1	6'-9"	14	19	4'-4"	1'-9"	1'-9"				
F703	1	9'-11"	20	11	1'-0"	6'-0"	4'-1"				
F704	1	6'-6"	13	STR							
F705	1	5'-6"	11	STR							
F706	1	4'-6"	9	STR							
F707	1	2'-9"	6	STR							
F708	1	2'-0"	4	STR							
F709	1	7'-8"	16	19	3'-6"	0'-9"	4'-3"				
F710	1	4'-10"	10	STR							
F711	1	6'-10"	14	STR							
F712	1	5'-6"	11	1	3'-6"	2'-2"					
F713	1	1'-6"	3	STR							

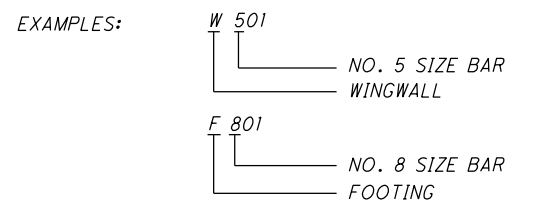
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
FOOTINGS (CONT.)											
F801	20	30'-0"	1602	STR							
F802	2	14'-5"	77	19	10'-5"	3'-10"	1'-3"				
F803	2	16'-0"	85	19	10'-5"	5'-4"	1'-9"				
F804	2	17'-1"	91	19	10'-5"	6'-4"	2'-1"				
F805	2	18'-2"	97	19	10'-5"	7'-5"	2'-5"				
F806	2	19'-8"	105	19	10'-5"	8'-10"	2'-10"				
F807	2	12'-0"	64	STR							
F808	2	11'-2"	60	STR							
F809	2	10'-3"	55	STR							
F810	2	9'-2"	49	STR							
F811	2	7'-7"	40	STR							
F812	2	26'-2"	140	19	10'-2"	11'-4"	11'-4"				
F813	2	24'-7"	131	19	9'-4"	10'-10"	10'-10"				
F814	2	23'-5"	125	19	9'-0"	10'-3"	10'-3"				
F815	2	22'-5"	120	19	8'-8"	9'-9"	9'-9"				
F816	2	20'-9"	111	19	7'-10"	9'-2"	9'-2"				
F817	45	11'-7"	1392	1	1'-4"	10'-6"					
FOOTINGS TOTAL =			12,223	LBS							

STANDARD BAR TYPES



NOTES:

1. BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES STANDARD BEND.
4. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.



MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	F	
WINGWALLS											
W501	20	26'-3"	548	STR							
	2 SR	8'-0"									
W502	OF	TO	91	STR							6'-7"
	3	21'-2"									
W503	1	28'-0"	29	19	2'-0"	25'-4"	5'-9"				
W504	13	6'-8"	90	12	3'-3"	2'-3"	0'-4"	2'-2"	0'-6"		
	1 SR	14'-0"									
W505	OF	TO	317	STR							0'-4"
	18	19'-9"									
W506	16	17'-0"	284	STR							
	2 SR	4'-10"									
W507	OF	TO	79	STR							3'-0 3/4"
	4	14'-0"									
W508	1	19'-1"	20	19	2'-0"	15'-4"	7'-6"				
W509	12	9'-10"	123	38	1'-8"	2'-4"	1'-6"	2'-2"	4"	2'-8"	1'-11"
	1 SR	10'-6"									
W510	OF	TO	163	STR							0'-8 3/4"
	11	17'-10"									
W511	2	18'-0"	38	STR							
W512	12	15'-3"	191	STR							
	2 SR	5'-6"									
W513	OF	TO	59	STR							3'-10 1/2"
	3	13'-3"									
W514	1	16'-9"	17	19	2'-0"	13'-10"	5'-3"				
W515	9	7'-6"	70	39	3'-1"	1'-9"	7"	2'-3"	6"	9"	5"
	1 SR	9'-4"									
W516	OF	TO	137	STR							0'-6 1/4"
	11	14'-6"									
W517	7	7'-0"	51	28	1'-1"	3'-1"	0'-10"				
W518	9	12'-1"	113	38	11"	2'-10"	3'-11"	2'-1"	6"	2'-9"	11"
W519	7	23'-3"	170	STR							
W520	7	24'-7"	179	STR							
W521	1	20'-1"	21	STR							
W522	1	20'-6"	21	STR							
W523	1	12'-0"	13	STR							
W524	1	12'-5"	13	STR							
W525	1	23'-7"	25	19	3'-6"	19'-9"	3'-8"				
W526	1	24'-11"	26	19	3'-11"	20'-8"	3'-10"				
W527	4	10'-10"	45	STR							
	1 SR	11'-2"									
W528	OF	TO	188	STR							0'-3 1/4"
	14	14'-7"									
W529	1	27'-0"	28	19	1'-0"	25'-4"	5'-9"				
W530	1	18'-9"	20	19	1'-8"	15'-4"	7'-6"				
W531	1	16'-2"	17	19	1'-5"	13'-10"	5'-3"				
W601	5	19'-9"	148	STR							
	1 SR	10'-6"									
W602	OF	TO	575	STR							0'-3 1/2"
	27	17'-10"									
W603	4	18'-0"	108	STR							
	1 SR	9'-4"									
W604	OF	TO	322	STR							0'-3 3/4"
	18	14'-6"									
W605	14	14'-6"	305	STR							
	1 SR	11'-2"									
W606	OF	TO	445	STR							0'-1 3/4"
	23	14'-7"									
	1 SR	14'-0"									
W801	OF	TO	1982	STR							0'-1 1/2"
	44	19'-9"									
WINGWALLS TOTAL =			7071	LBS							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
CULVERT EXTENSION											
S501	84	3'-0"	263	STR							
S502	75	31'-8"	2477	STR							
S503	66	13'-0"	895	STR							
S504	66	9'-0"	620	STR							
S505	33	18'-6"	637	STR							
S506	27	5'-7"	157	2	2'-4"	1'-2"	2'-4"				
S507	20	25'-8"	535	STR							
S508	2	15'-0"	31	STR							
S509	2	25'-11"	54	STR							
S510	21	31'-11"	699	19	22'-10"	8'-10"	2'-2"				
S601	63	2'-5"	229	1	0'-10"	1'-9"					
S602	27	5'-10"	237	2	1'-3"	3'-8"	1'-3"				
S603	27	17'-2"	696	93	1'-2"	5'-9"	6'-3"	10"	3'-8"		
S604	27	9'-2"	372	2	4'-2"	1'-2"	4'-2"				
S701	49	26'-4"	2637	STR							
S801	128	16'-11"	5781	1	8'-4"	8'-10"					
CULVERT EXTENSION TOTAL =			16,320	LBS							

SUM - 76 - 5.63

PID No. 96670

REINFORCING STEEL LIST

BRIDGE NO. SUM-076-0577

IR 76 OVER MUD RUN

DESIGNED  
DUC  
CHECKED  
RHC

DRAWN  
RPR  
REVISED

REVIEWED  
DGN  
STRUCTURE FILE NUMBER

DATE  
8-14-18

7705468

DESIGN AGENCY  
GPD GROUP

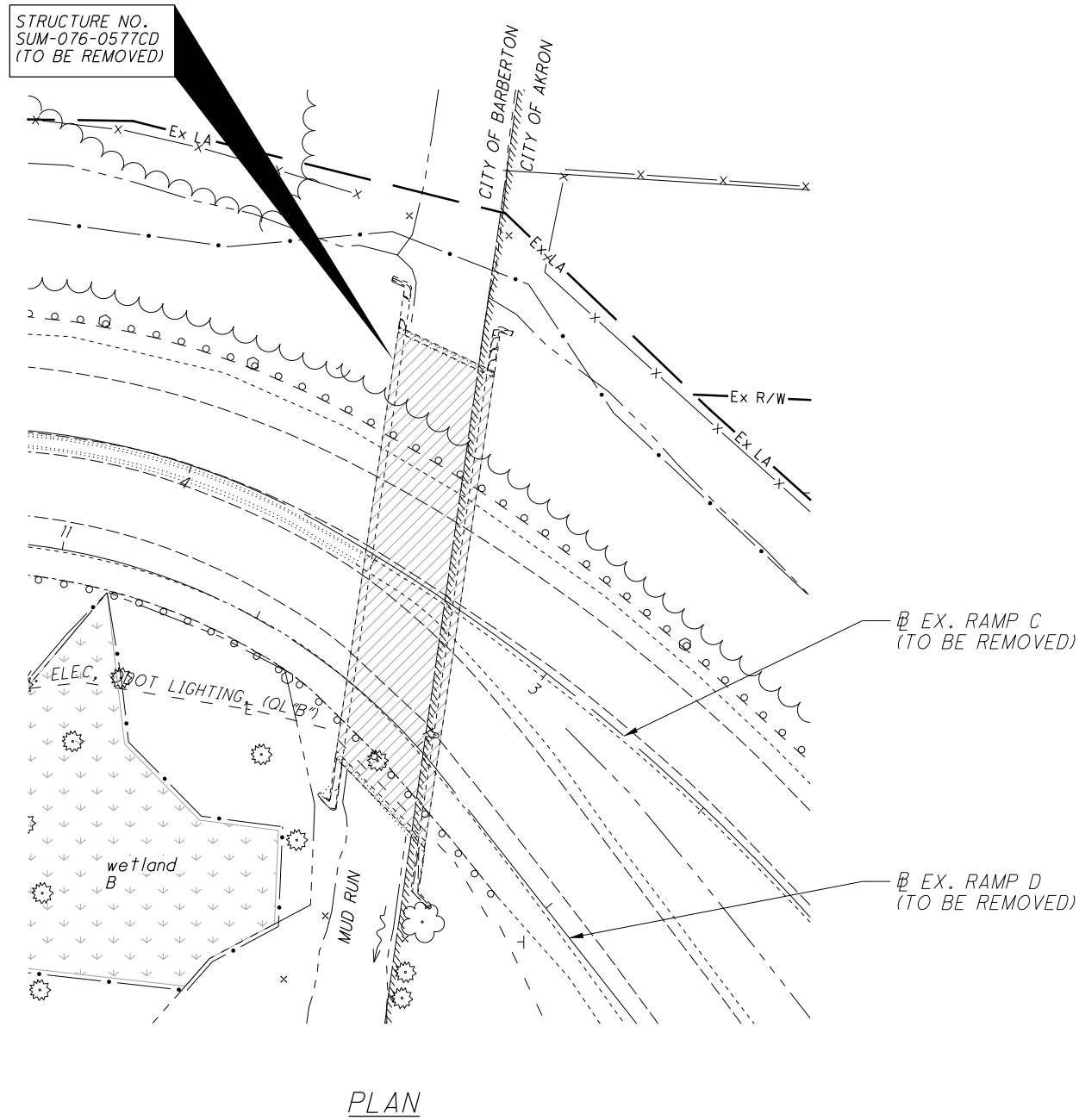
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**ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN**

THIS WORK CONSISTS OF THE REMOVAL OF THE EXISTING SUM-076-0577CD STRUCTURE OVER MUD RUN. THIS SHALL INCLUDE THE REMOVAL OF THE 3-SIDED BOX AND WINGWALLS. THE PROVISIONS OF ITEM 202 SHALL APPLY



STRUCTURE NO.  
SUM-076-0577CD  
(TO BE REMOVED)

PLAN

- WETLAND AREA NOT TO BE DISTURBED
- INDICATES EXISTING STRUCTURES TO BE REMOVED TO A MINIMUM 1'-0" BELOW FINISHED GRADE

FOR GRADING PLAN AND CROSS SECTIONS, SEE SHEET 554

EXISTING STRUCTURE	
TYPE & SIZE: CAST-IN-PLACE REINFORCED CONCRETE 3-SIDED BOX CULVERT ON PIPE SUPPORTED FOOTINGS	
SPAN: 21.0' ± CLEAR SPAN	
LOADING: HS20-44	
SKEW: 35°53' 33" ±	
TOTAL LENGTH: 108'	
APPROACH SLABS: NONE	
STRUCTURAL FILE NUMBER: 7705433	
DATE BUILT: 1962	
DISPOSITION: TO BE REMOVED	

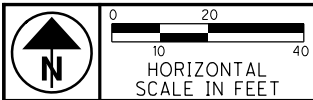
NOTE: SEE ROADWAY PLANS FOR REMOVAL OF EXISTING PAVEMENT, GUARDRAIL, ETC.

**ESTIMATED QUANTITIES**

ITEM	EXT.	TOTAL	PARTICIPATION		UNITS	DESCRIPTION	BRIDGE NO.	SEE SHEET NUMBER
			02 / IMS / BR	11 / IMS / BR			SUM-76-0577CD (SFN 7705433)	553
202	11003	LS		LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS	553

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<b>STRUCTURE REMOVAL PLAN</b> <b>STRUCTURE NO. SUM-076-0577CD</b>								
<b>SUM-76-5.53</b> <b>PID No. 96670</b>								
1 / 2								
553 672								

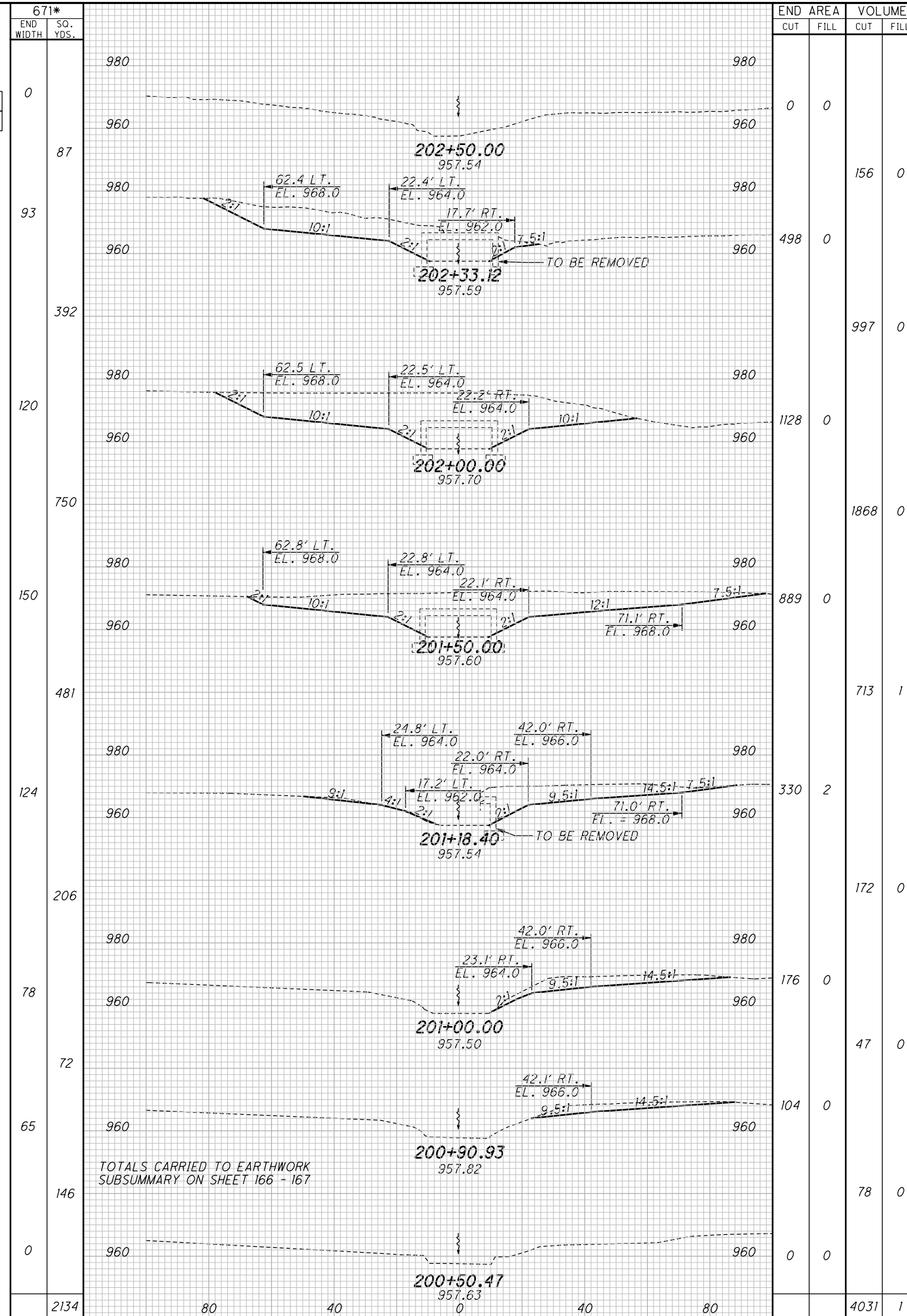
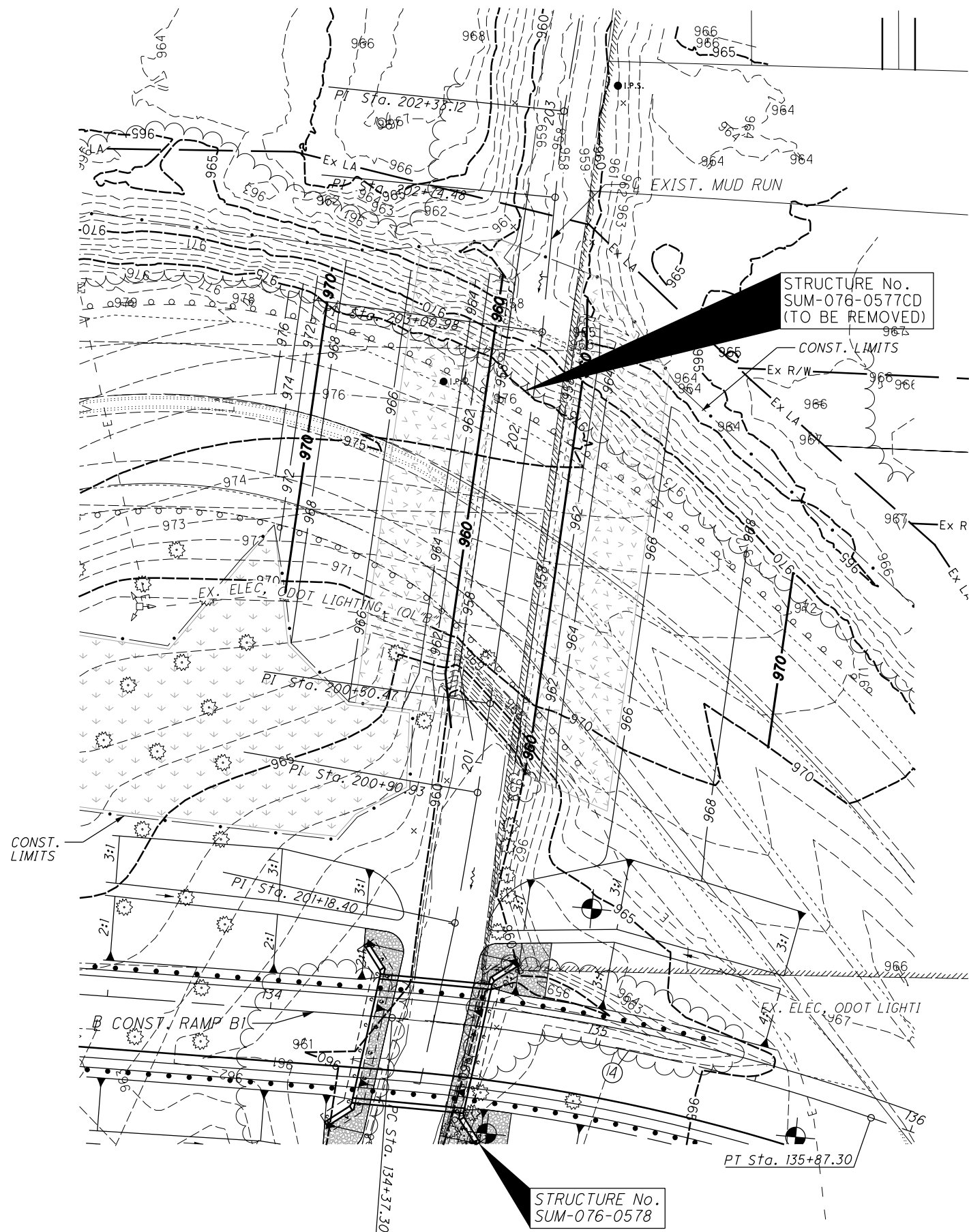




TREE PLANTING  
SEE SHEET 38  
 WETLAND AREA  
NOT TO BE DISTURBED

\* ITEM 671 - EROSION CONTROL MAT, TYPE E

NO.	DESCRIPTION	REV. BY	DATE
1	STREAM RESTORATION	CJC	2-22-2019



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DATE: 12-7-17  
 REVIEWED: DGN  
 DRAWN: ATR  
 CHECKED: CWL  
 STRUCTURE FILE NUMBER: 7705379

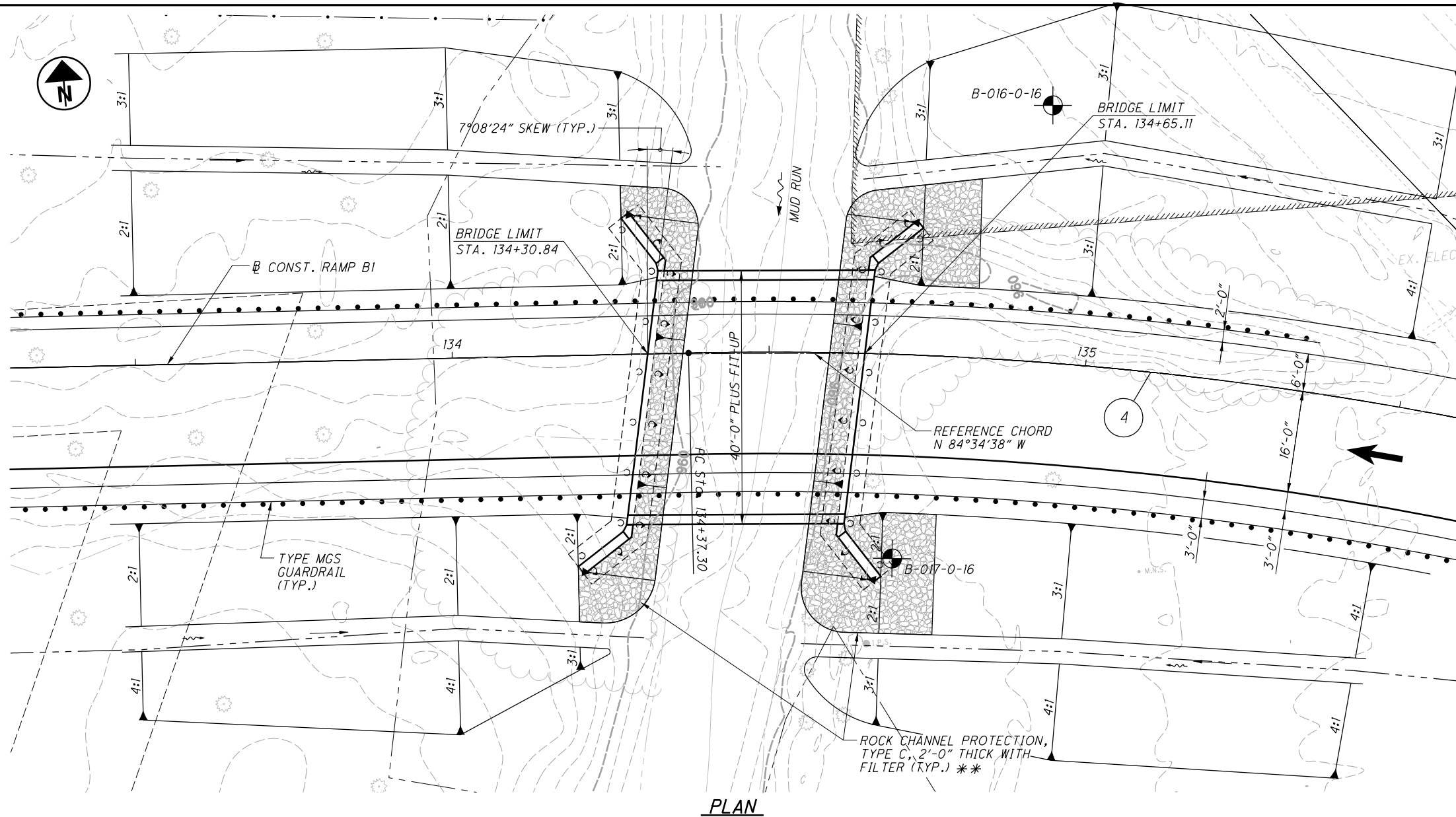
**SUM-076-0577CD REMOVAL**  
**GRADING PLAN AND CROSS SECTIONS**

**SUM-76-5-53**  
 PID No. 96670

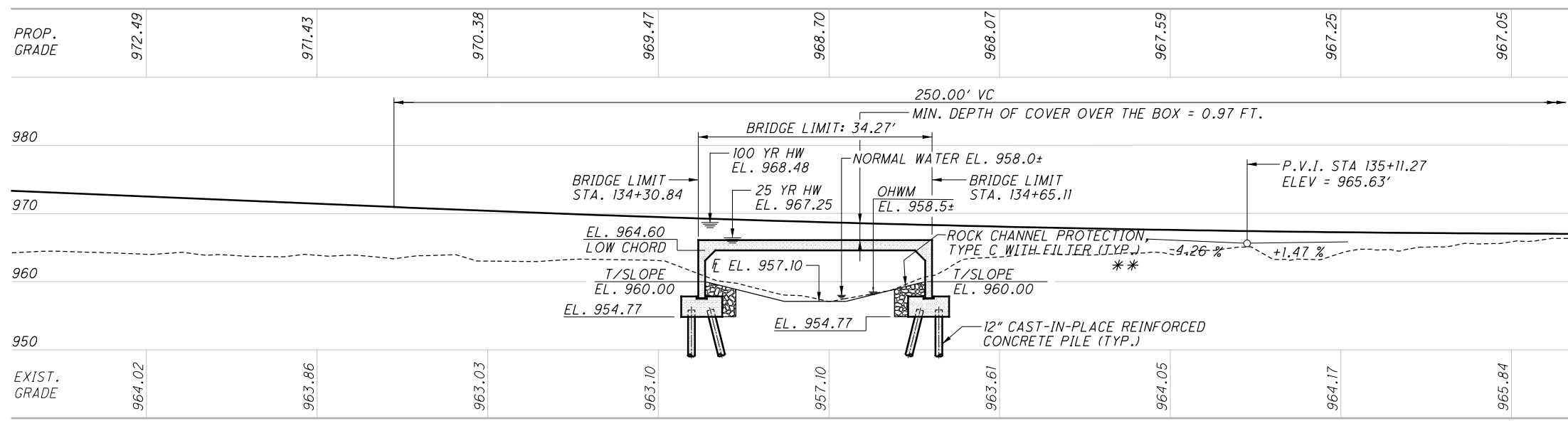
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 554 / 672

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**PLAN**



**PROFILE ALONG B CONST. RAMP B1**

**BENCHMARK DATA**

POINT NO. CP8	NORTHING 500606.3000	EASTING 2222613.5400
3/4" X 30" REBAR WITH RED PROJECT CONTROL CAP EL. 969.64		
POINT NO. CP10	NORTHING 500297.3800	EASTING 2223571.2500
5/8" X 30" REBAR IN CONCRETE MONUMENT SET EL. 970.40		
POINT NO. 127	NORTHING 500241.4000	EASTING 2222922.7000
CUT IN SOUTHEAST BOLT ON OVERHEAD SIGN EL. 984.87		

FOR ADDITIONAL BENCHMARK INFORMATION SEE ROADWAY PLAN SHEET **8/672**

**HYDRAULIC DATA:**

DRAINAGE AREA = 3.7 SQ. MI.

HW <sub>25</sub>	=	EL. 967.25
Q <sub>25</sub>	=	755 CFS
V <sub>25</sub>	=	3.24 FPS
HW <sub>100</sub>	=	EL. 968.48
Q <sub>100</sub>	=	990 CFS
V <sub>100</sub>	=	2.24 FPS

**DESIGN TRAFFIC:**

2020 ADT = 2100	2020 ADTT = 126
2040 ADT = 2400	2040 ADTT = 144

**LEGEND**

- SOIL BORING LOCATION
- \*\* QUANTITY INCLUDED IN THE ROADWAY GENERAL SUMMARY

**4** CONST. RAMP B1  
 P.I. Sta. 135+12.74  
 Δ = 15° 00' 00" (RT)  
 Dc = 10° 00' 00"  
 R = 572.96'  
 T = 75.43'  
 L = 150.00'  
 E = 4.94'  
 C = 149.57'  
 C.B. = S 78° 12' 20" E  
 e<sub>max</sub> = 0.046  
 D.S. = 30 MPH  
 P.C. STA. 134+37.30  
 P.T. STA. 135+87.30

**NOTES:**

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- ESTIMATED PILE LENGTH = 45 FT.

**PROPOSED STRUCTURE**

TYPE: PRECAST REINFORCED CONCRETE 3-SIDED BOX CULVERT ON REINFORCED CONCRETE FOOTINGS ON PILES  
 SPANS: 32'-3" CLEAR SPAN (MEASURED ALONG REFERENCE CHORD) x 8'-3" RISE (32'-0" CLEAR SPAN PERPENDICULAR)  
 ROADWAY: 30'-0" F/F RAIL  
 LOADING: HL-93  
 0.060 KSF FUTURE WEARING SURFACE  
 SKEW: 7°08'24" LF (TO REFERENCE CHORD)  
 APPROACH SLABS: NONE  
 ALIGNMENT: CURVE RT.  
 SUPERELEVATION: VARIES (STA. 133+23.81 TO STA. 136+22.97)  
 COORDINATES: LATITUDE N 41° 02' 11.22"  
 LONGITUDE W 81° 34' 39.90"

**DESIGN AGENCY:** GPD GROUP  
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DATE	8-14-18
REVIEWED	DGN
DRAWN	RPR
DESIGNED	DJC
CHECKED	RHC
SUMMIT COUNTY	STA. 134+30.84
SITE PLAN	BRIDGE NO. SUM-076-0578
PID No. 96670	RAMP B1 OVER MUD RUN
1/10	
555/672	

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**ESTIMATED QUANTITIES**

CALCULATED: DJC DATE: 12/6/17  
 CHECKED: RHC DATE: 12/7/17

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATION" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014, INCLUDING THE 2015 & 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DESIGN DATA**

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DESIGN LOADING**

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT

THE PRECAST CULVERT SECTION AND THE CAST-IN-PLACE WINGWALLS, AS WELL AS THE FOOTINGS FOR BOTH THE PRECAST SECTION AND THE WINGWALLS, SHALL BE DESIGNED FOR A LATERAL EARTH PRESSURE ASSUMING A UNIT WEIGHT OF SOIL = 120 PCF AND AN INTERNAL FRICTION ANGLE OF 30 DEGREES.

**PILE DESIGN LOADS (ULTIMATE BEARING VALUE)**

THE ULTIMATE BEARING VALUE IS 165 KIPS PER PILE FOR THE FOOTING PILES.

FOOTING PILES (12" DIAMETER):  
 36 PILES 50 FEET LONG, ORDER LENGTH  
 1 DYNAMIC LOAD TESTING ITEM

**DESIGN STRESSES**

CAST-IN-PLACE SEGMENTS:

CONCRETE CLASS OCI - COMPRESSIVE STRENGTH 4.0 KSI (FOUNDATION & WINGWALLS)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

PRECAST STRUCTURE:

CONCRETE - COMPRESSIVE STRENGTH 5.0 KSI

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

PRECAST THREE-SIDED STRUCTURE SHALL BE IN ACCORDANCE WITH CMS 611 AND 706.051

**ITEM 511 - CLASS OCI CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN**

THIS ITEM SHALL CONSIST OF THE CONCRETE FOR THE CAST-IN-PLACE CONCRETE HEADWALL & NEW WINGWALLS. THE FOOTING CONCRETE SHALL BE PAID FOR UNDER A SEPARATE ITEM.

**THREE SIDED CULVERT WALL AND TOP SLAB THICKNESS**

THE WALL AND TOP SLAB THICKNESS SHOWN ON THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP SLAB THICKNESS OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED FOR ACCEPTANCE WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

**RESTRIKE**

THE CONTRACTOR SHOULD ANTICIPATE 5 DAYS BETWEEN THE END OF THE PILE DRIVING OPERATION AND THE RESTRIKE. THE CONTRACTOR WILL SHOW THE 5 DAYS WAITING PERIOD IN HIS CPM SCHEDULE.

ITEM	EXT.	TOTAL	PARTICIPATION	UNITS	DESCRIPTION	FOOTINGS	WALLS	PRECAST	A.P.P. REFERENCE SHT. NO.
			12/BRO/BR						
503	11100	LS	LS		COFFERDAMS AND EXCAVATION BRACING				
503	21100	220	220	CY	UNCLASSIFIED EXCAVATION	220			
505	11100	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION				
507	00500	1620	1620	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1620			
507	00550	1800	1800	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1800			
509	10000	8664	8664	LB	EPOXY COATED REINFORCING STEEL	6104	2560		
511	46011	29	29	CY	CLASS OCI CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN		29		2
511	46510	90	90	CY	CLASS OCI CONCRETE, FOOTING	90			
512	10100	84	84	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		70	14	
512	33000	254	254	SY	TYPE 2 WATERPROOFING			254	
516	13200	42	42	SF	1/2" PREFORMED EXPANSION JOINT FILLER		42		
518	21200	15	15	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		15		
518	40000	35	35	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		35		
518	40010	15	15	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		15		
523	20000	1	1	EACH	DYNAMIC LOAD TESTING	1			
** 601	32204	147	147	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC				
611	70000	40.5	40.5	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT, 32'-0" SPAN x 8'-3" RISE			40.5	

\*\* INCLUDED WITH EROSION CONTROL QUANTITIES FOR PAYMENT - SEE THE GENERAL SUMMARY

**ABBREVIATIONS**

ABUT.	ABUTMENT	N.P.C.P.P.	NON-PERFORATED CORRUGATED PLASTIC PIPE
ADDIT.	ADDITIONAL	N.S.	NEAR SIDE
A.P.P.	AS PER PLAN	P.C.P.P.	PERFORATED CORRUGATED PLASTIC PIPE
BOT.	BOTTOM	P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
BRG.	BEARING	R.A.	REAR ABUTMENT
B.S.	BOTH SIDES	SER.	SERIES
BTWN.	BETWEEN	SHT.	SHEET
CLR.	CLEAR	SPA.	SPACES OR SPACED
COLS.	COLUMNS	SPL.	SPLICE
CONST. JT.	CONSTRUCTION JOINT	SR	SERIES (REINFORCING STEEL LIST SHEETS)
DIM.	DIMENSION	STD.	STANDARD
DWG.	DRAWING	T.B.R.	TO BE REMOVED
EA.	EACH	TYP.	TYPICAL
EQ.	EQUAL OR EQUALLY		
F.A.	FORWARD ABUTMENT		
FRWD.	FORWARD		
F.S.	FAR SIDE		
MIN.	MINIMUM		
NO.	NUMBER		

**GENERAL NOTES & ESTIMATED QUANTITIES**

BRIDGE NO. SUM-076-0578  
 RAMP B1 OVER MUD RUN

**SUM-76-5.53**  
**PID No. 96670**

2 / 10

556  
672

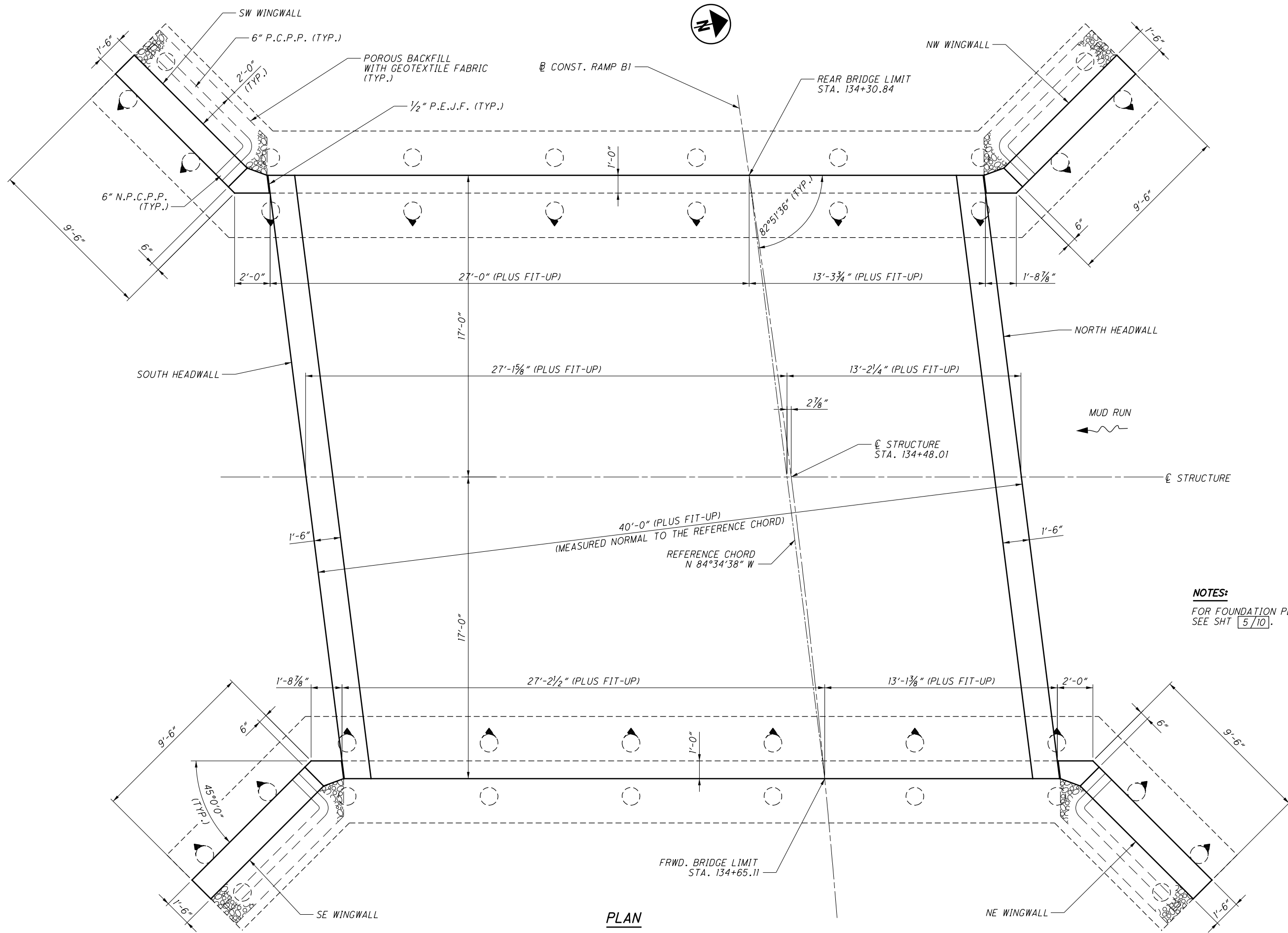
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REVIEWED DATE 8-14-18  
 DGN 7705435  
 STRUCTURE FILE NUMBER

DESIGNED DJC  
 CHECKED RHC

DRAIN RPR  
 REVISED

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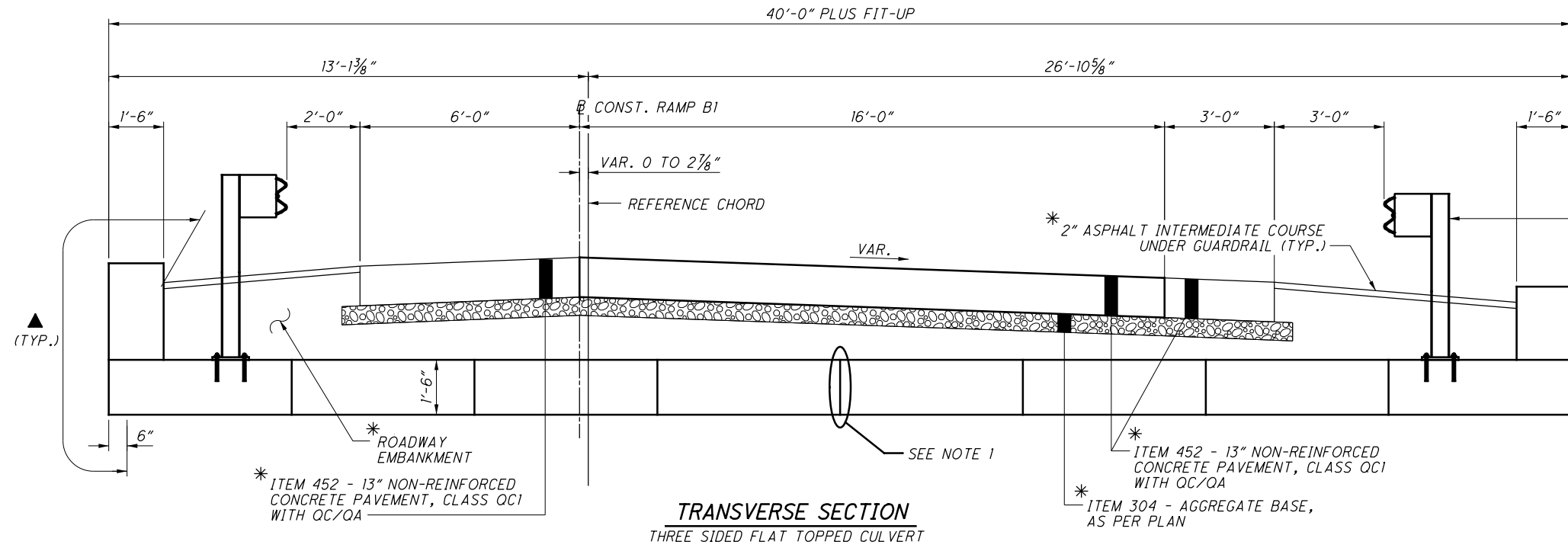


PLAN

**NOTES:**  
 FOR FOUNDATION PLAN,  
 SEE SHT 5/10.

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	REVIEWED DGN 8-14-18 STRUCTURE FILE NUMBER 7705435
DRAWN RPR	REVISIONS REVISED
DESIGNED DJC	CHECKED RHC
<b>STRUCTURE GENERAL PLAN</b> BRIDGE NO. SUM-076-0578 RAMP B1 OVER MUD RUN	
<b>SUM-76-5.53</b> PID No. 96670	
3 / 10	
557 672	

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**TRANSVERSE SECTION**  
THREE SIDED FLAT TOPPED CULVERT

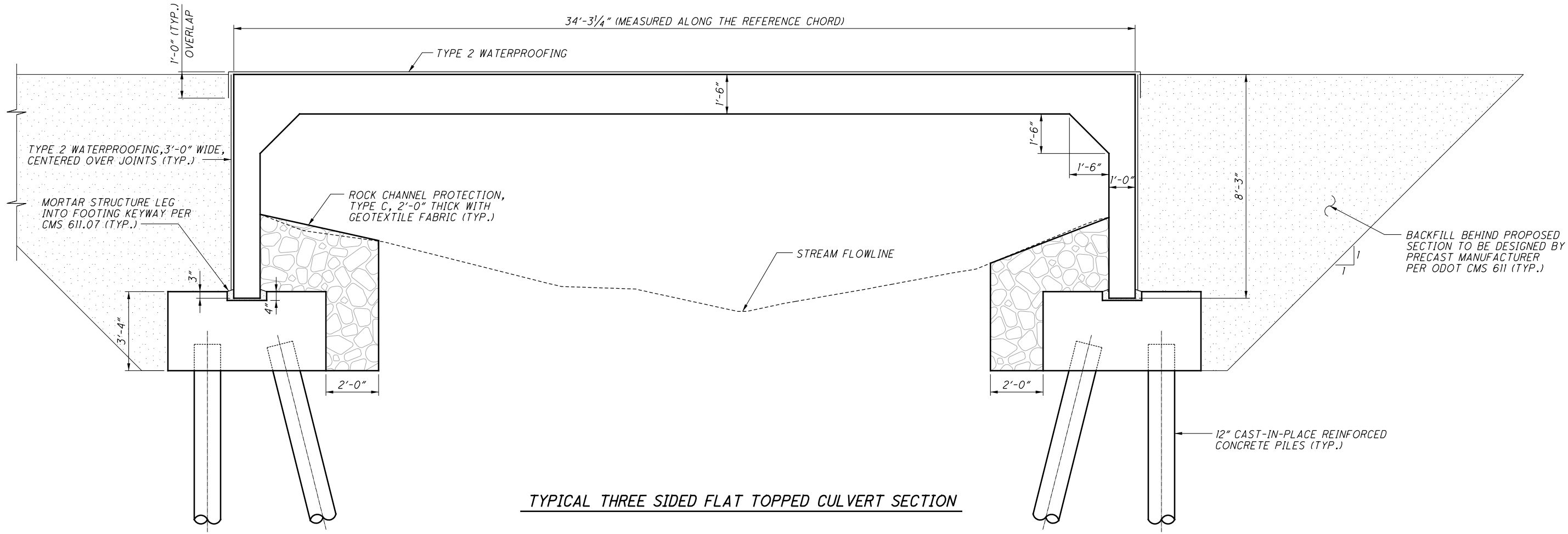
GUARDRAIL, TYPE MGS - MOUNTED TO THE TOP OF THE CULVERT SECTION (TYP. EACH END) - SEE ODOT STD. DWG. MGS-1.1, SHEET 2/3, FOOTING ANCHOR DETAIL. QUANTITY IS INCLUDED FOR PAYMENT IN THE GENERAL SUMMARY ON SHEET 159 / 672

**LEGEND:**

- ▲ INDICATES LIMIT OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"
- \* SEE ROADWAY PLANS - TYPICAL SECTIONS ON SHT. NOS. 13 / 672 AND 20 / 672

**NOTE:**

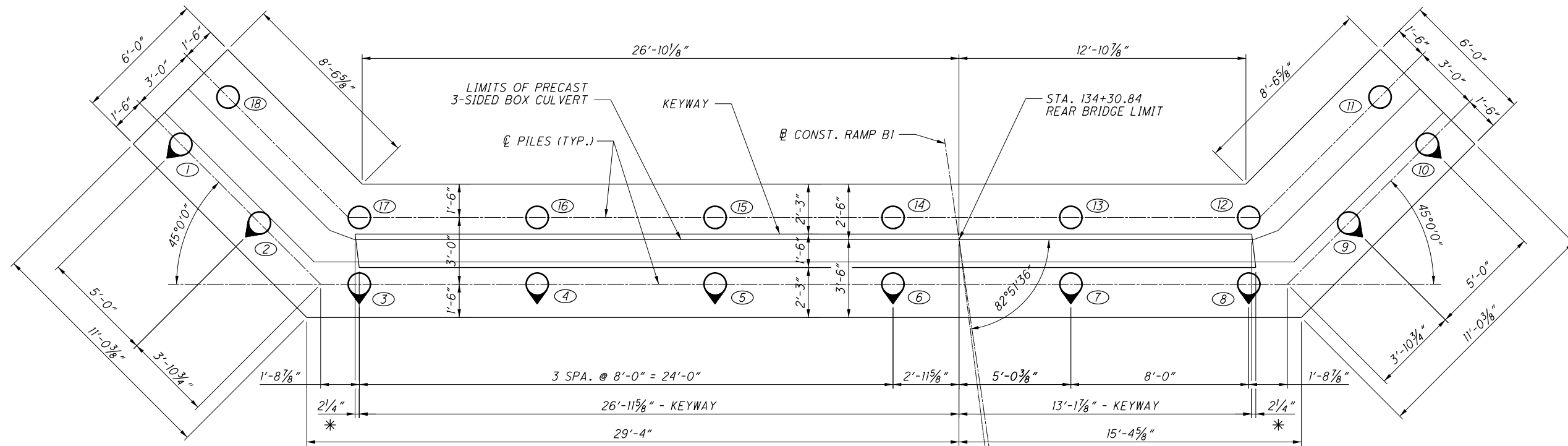
1. DETAILS FOR JOINTS BETWEEN PRECAST SECTIONS SHALL BE IN ACCORDANCE WITH CMS 706.051 AND BE SHOWN ON THE SHOP DRAWINGS.



**TYPICAL THREE SIDED FLAT TOPPED CULVERT SECTION**

<p style="font-size: 8px;">             DESIGN AGENCY  <b>GPD GROUP</b>              Glenn Pyle, Schoner, Burns &amp; DeLaney, Inc.              320 South Main Street, Suite 2131, Akron, Ohio 44311 330.572.2100              Copyright © 2018, Glenn Pyle, Schoner, Burns &amp; DeLaney, Inc.           </p>	<p>DATE: 8-14-18</p> <p>REVIEWED: DGN</p> <p>DRAWN: RPR</p> <p>DESIGNED: DJC</p>	<p>STRUCTURE FILE NUMBER: 7705435</p> <p>REVISIONS:</p> <p>13 / 672</p> <p>20 / 672</p>	<p><b>STRUCTURE DETAILS</b></p> <p>BRIDGE NO. SUM-076-0578</p> <p>RAMP B1 OVER MUD RUN</p>
<p><b>SUM-76-5.53</b></p> <p>PID No. 96670</p>		<p>4 / 10</p> <p style="border: 1px solid black; border-radius: 50%; padding: 2px;">558</p> <p style="border: 1px solid black; border-radius: 50%; padding: 2px;">672</p>	

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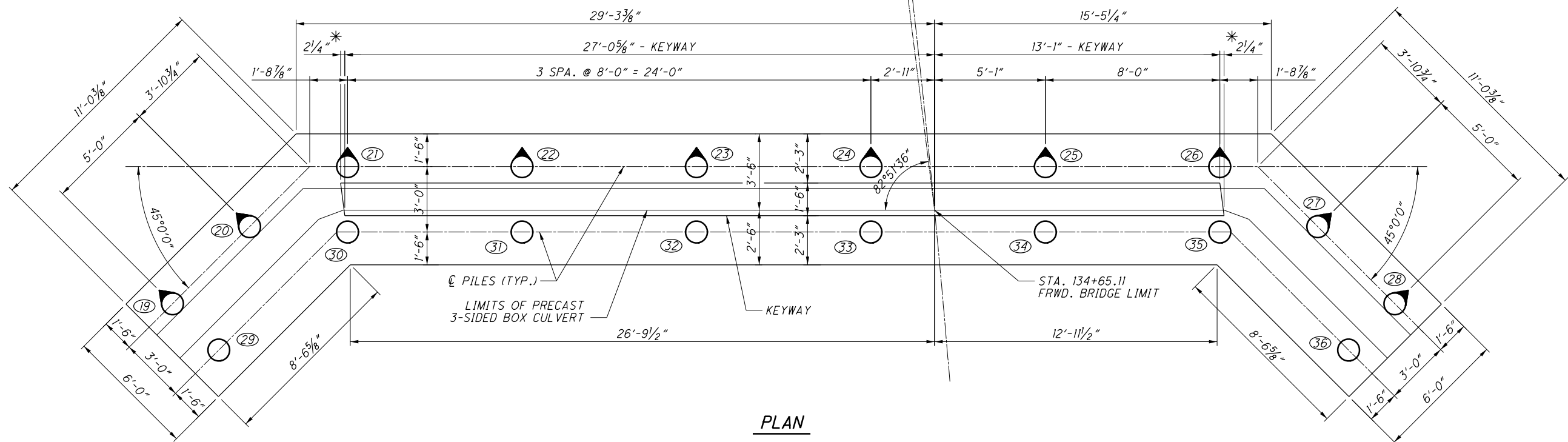


**LEGEND:**


- (XX) INDICATES PILE NUMBER
- INDICATES 12" DIAMTER CAST-IN-PLACE REINFORCED CONCRETE PILE
- ◐ INDICATES BATTERED 12" DIAMTER CAST-IN-PLACE REINFORCED CONCRETE PILE AND THE DIRECTION OF BATTER (BATTERED 1:4)
- \* KEYWAY DIMENSION

**NOTE:**

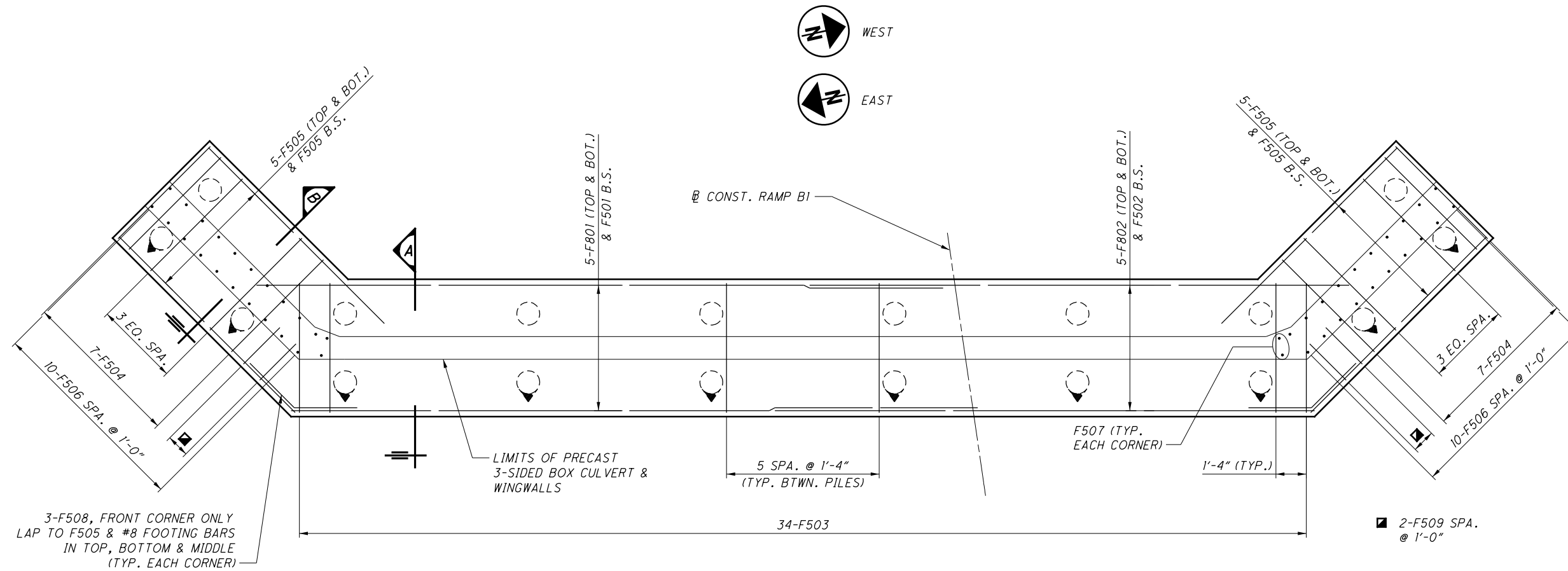
FOR FOUNDATION REINFORCEMENT PLAN, SEE SHT 6/10.



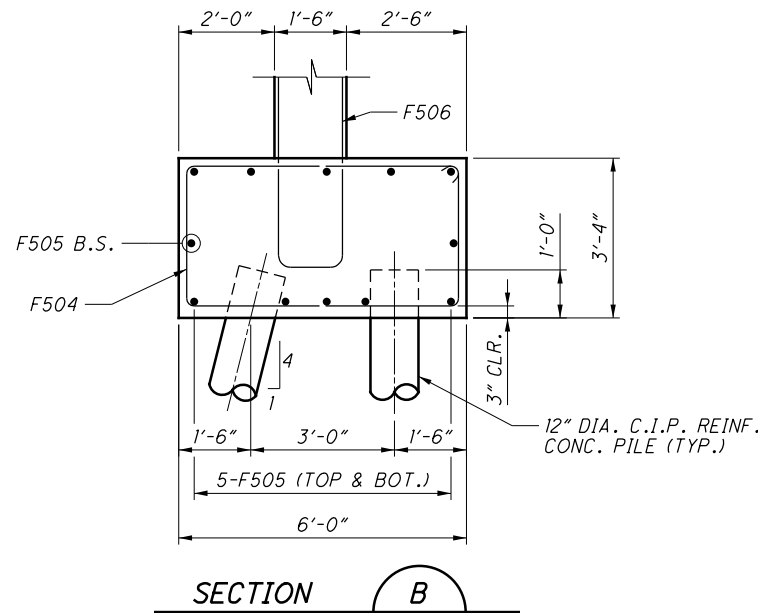
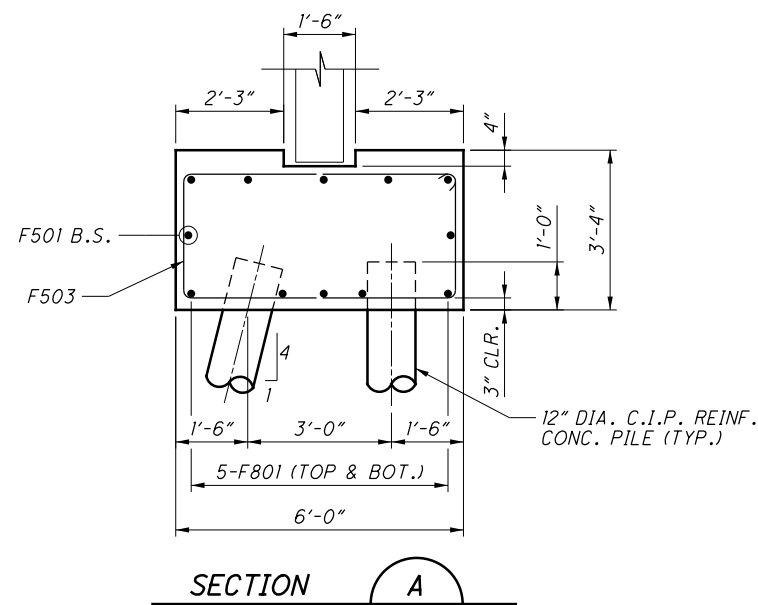
**PLAN**

 <b>GPD GROUP</b> <small>Clare, Pa. Schone, Burns &amp; Delaney, Inc.        320 South Main Street, Suite 211, Akron, Ohio 44311 330.572.2100        Copyright © 2018, P.E. Schone, Burns &amp; Delaney, Inc. 2015</small>	DESIGN AGENCY <b>GPD GROUP</b>	DATE 8-14-18	REVIEWED DGN 8-14-18	STRUCTURE FILE NUMBER 7705435
DESIGNED DJC	DRAWN RPR	CHECKED RHC	REVISED	RHC
<b>FOUNDATION PLAN</b> BRIDGE NO. SUM-076-0578 RAMP BI OVER MUD RUN				
<b>SUM-76-5.53</b> PID No. 96670				
5 / 10				
559 672				

8/20/2018 1:44:15 PM rrymer  
 \ProjectData\SUM\_96670\Design\Structures\SUM076\_0578P\_Sheets\076\_0578P\_SD003.dgn Sheet



**FOOTING PLAN**  
 TYP. BOTH WEST & EAST FOOTING



**NOTE:**

- MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:  
 #5 BARS 2'-9"  
 #8 BARS 5'-10"

**FOUNDATION REINFORCING PLAN**

BRIDGE NO. SUM-076-0578  
 RAMP B1 OVER MUD RUN

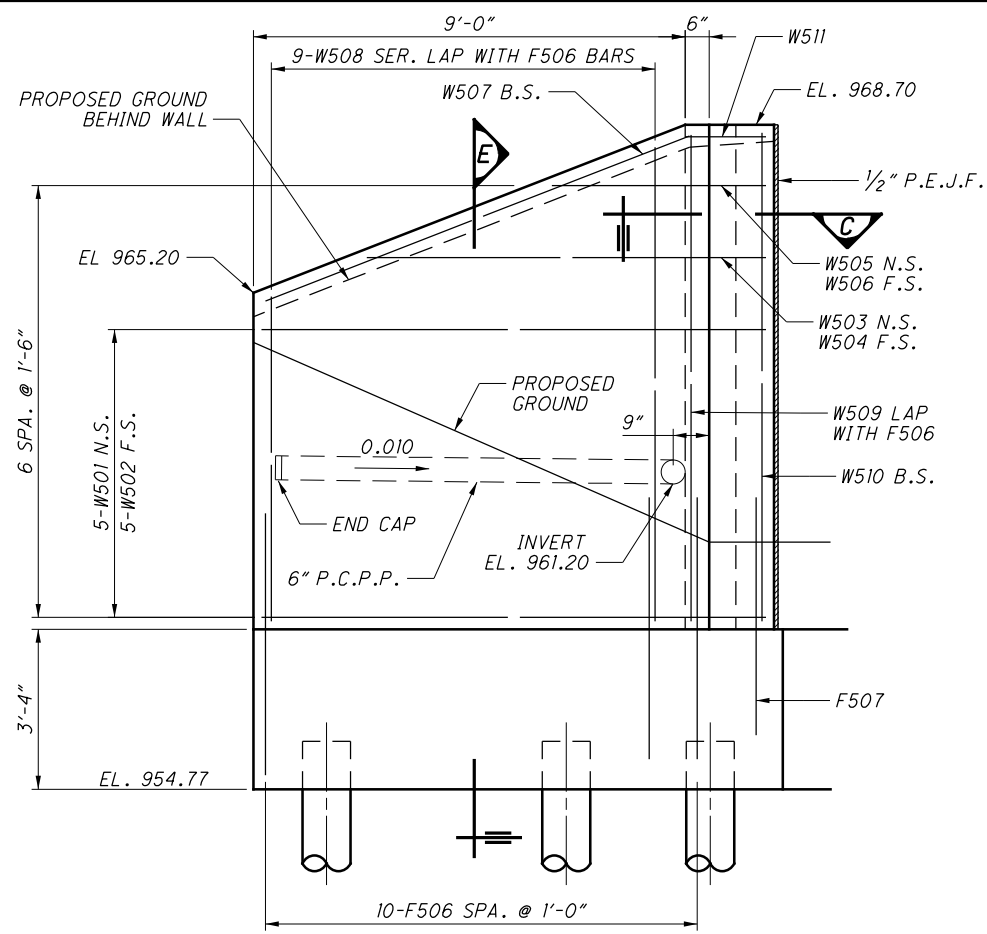
SUM-76-5.53  
 PID No. 96670

6 / 10

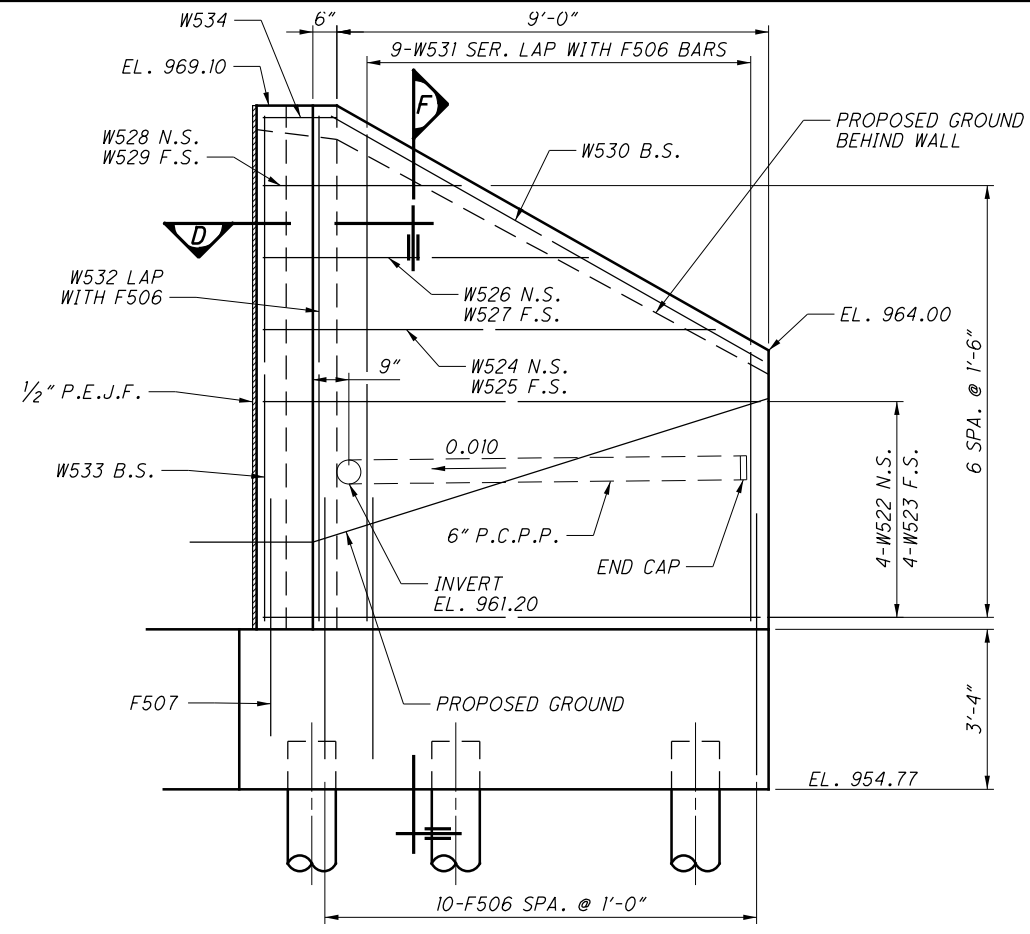
560  
 672

DESIGNED	DRAWN	REVIEWED	DATE
DJC	RPR	DGN	8-14-18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		7705435	

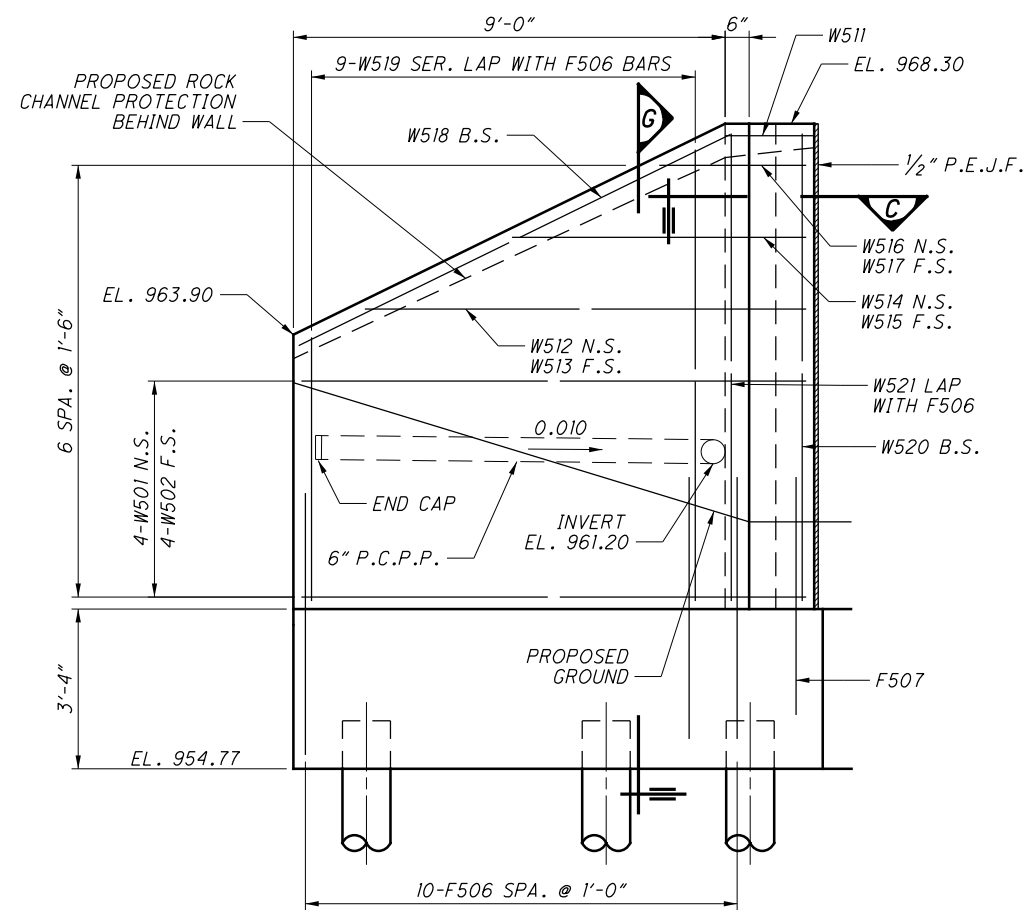
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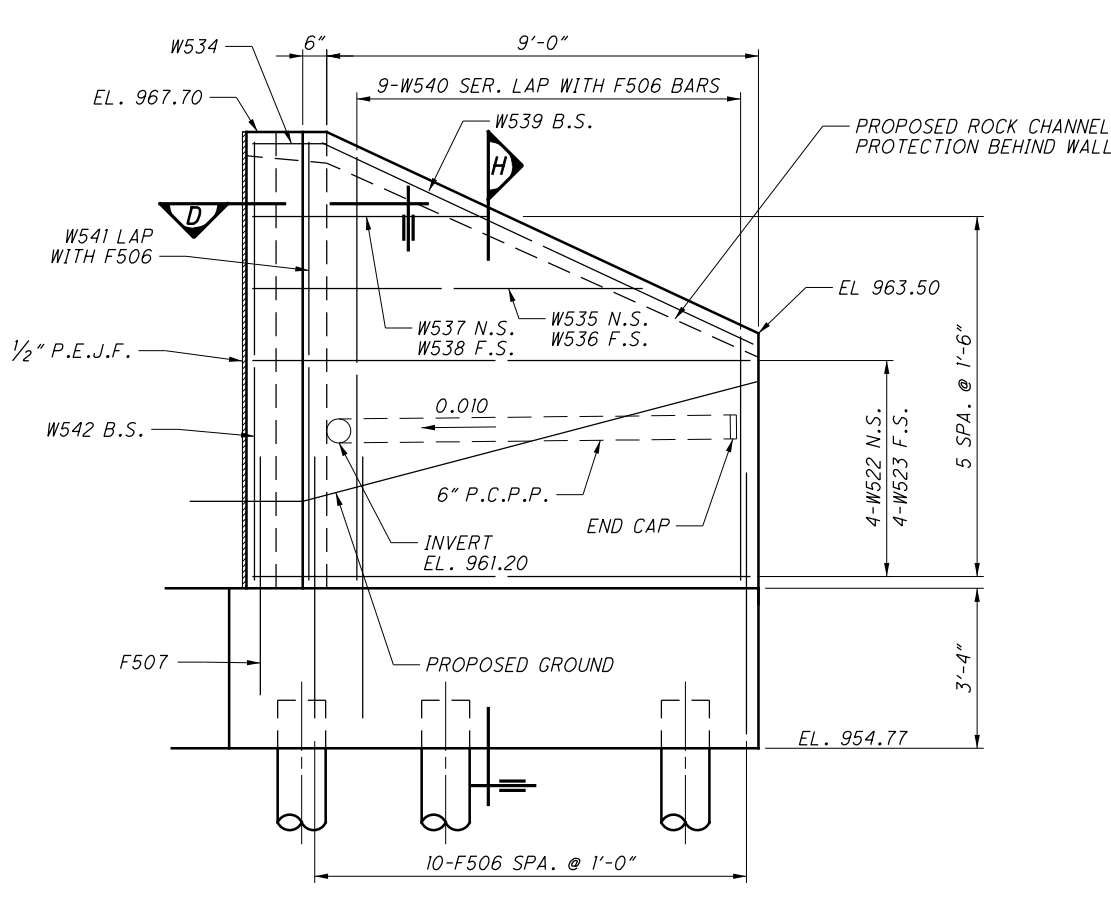
**SOUTHWEST WINGWALL ELEVATION**



**NORTHWEST WINGWALL ELEVATION**



**NORTHEAST WINGWALL ELEVATION**



**SOUTHEAST WINGWALL ELEVATION**

**NOTE:**

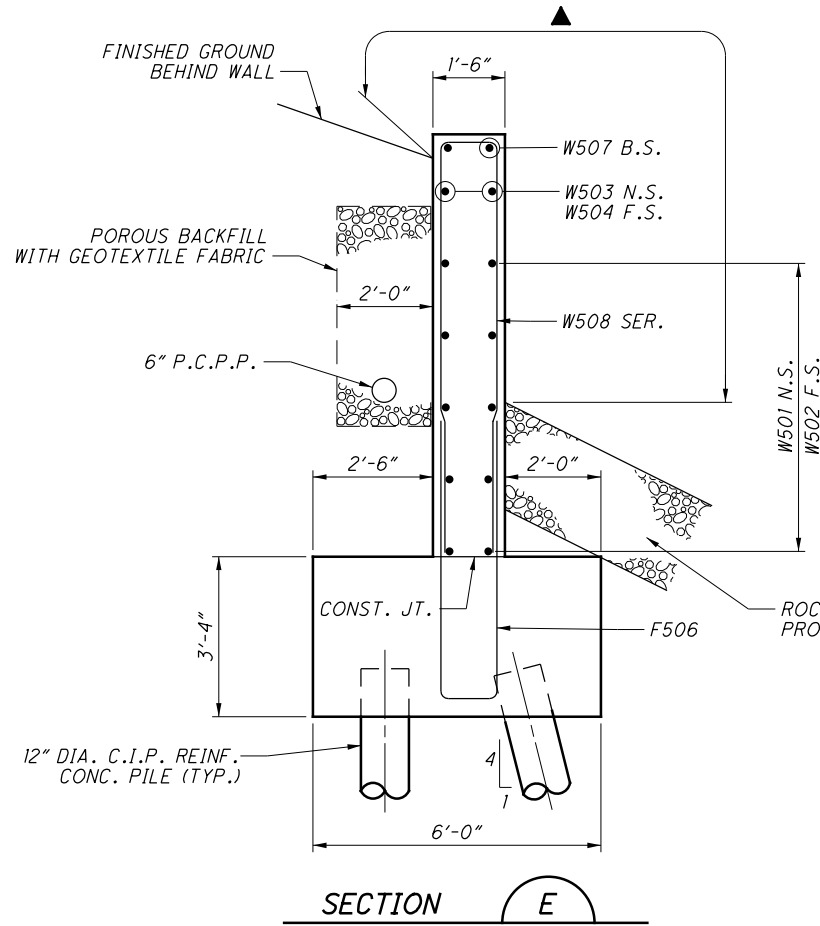
1. FOR SECTIONS C, D, E, F, G & H, SEE SHT. NO. 8/10.
2. FOR FOOTING REINFORCING PLAN, SEE SHT. NO. 6/10.
3. FOR STRUCTURAL GENERAL PLAN, SEE SHT. NO. 3/10.
4. MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:

#5 BARS 2'-9"

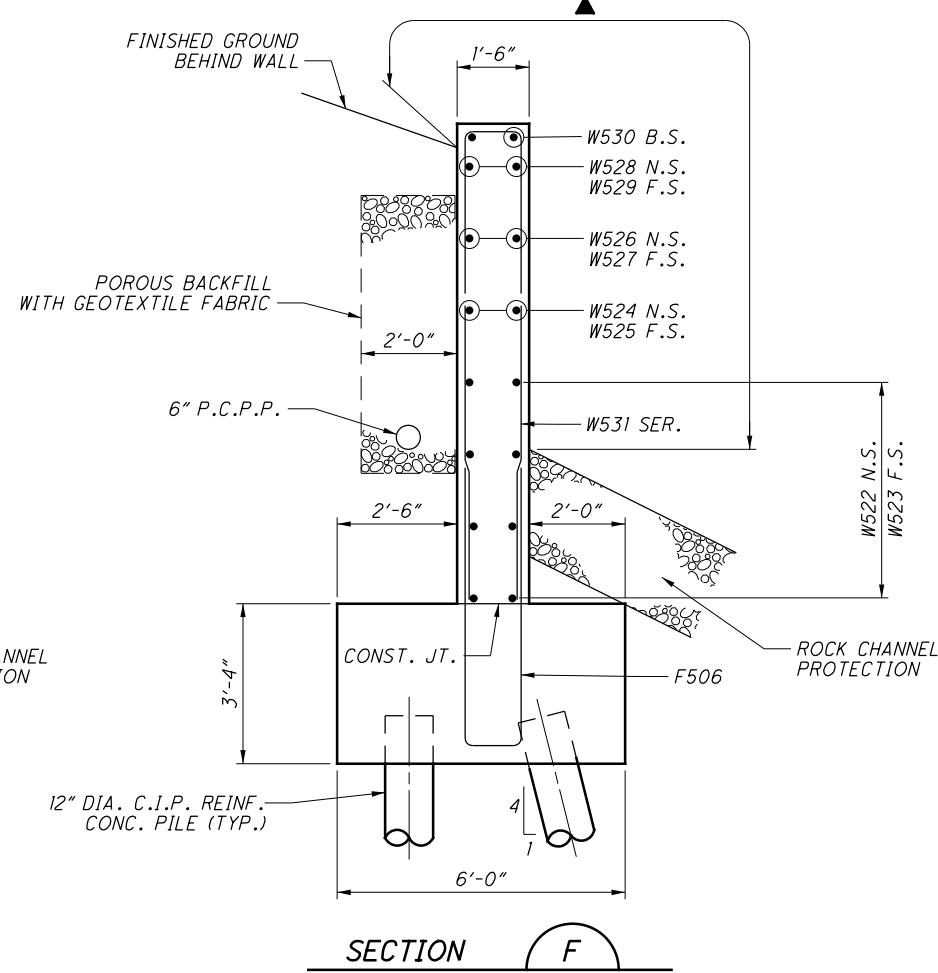
<b>WINGWALL ELEVATIONS</b> BRIDGE NO. SUM-076-0578 RAMP B1 OVER MUD RUN	<b>SUM-76-5.53</b> <b>PID No. 96670</b>	DESIGN AGENCY <b>GPD GROUP</b> <small>Glenn P. Schorer, Barry &amp; Dehaven, Inc.          320 South Main Street, Suite 2531, Akron, Ohio 44311 330.572.7100          Copyright © Glenn P. Schorer, Barry &amp; Dehaven, Inc. 2015</small>	DATE 8-14-18 REVIEWED DGN STRUCTURE FILE NUMBER 7705435	DRAWN RPR REVISIONS DESIGNED DJC CHECKED RHC
7/10		<span style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">561</span> <span style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">672</span>		



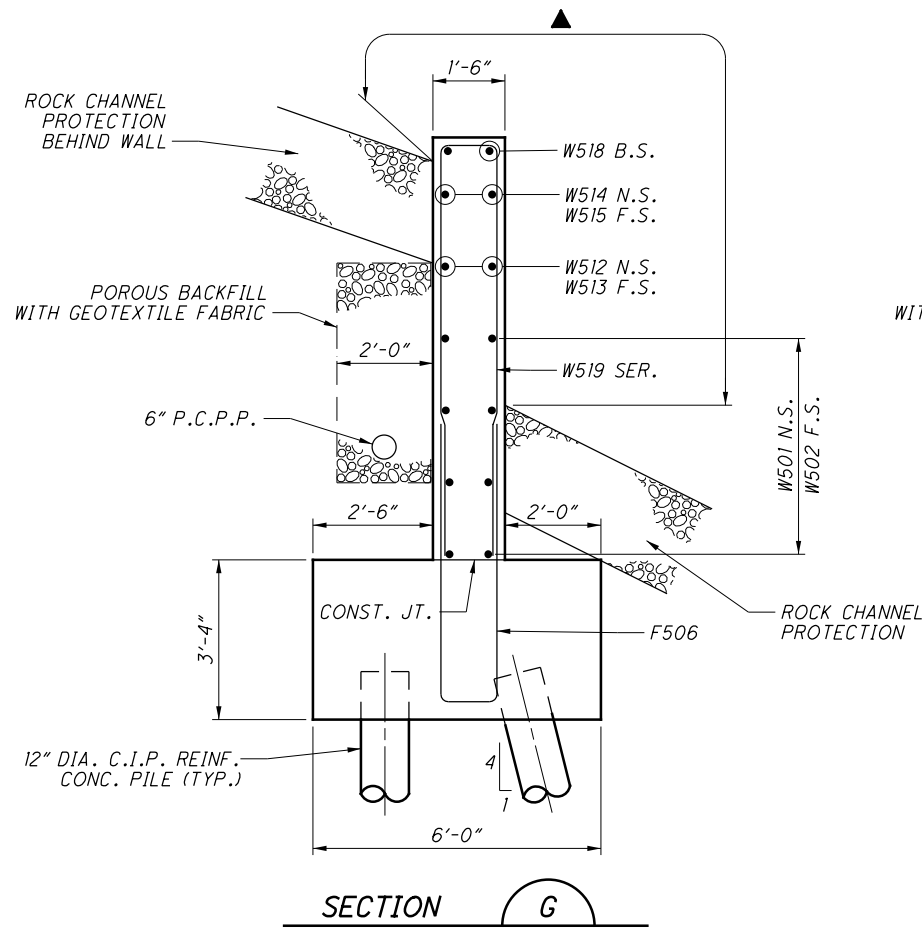
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 #DAYS 5  
 #TIMES 6  
 #BASE 90



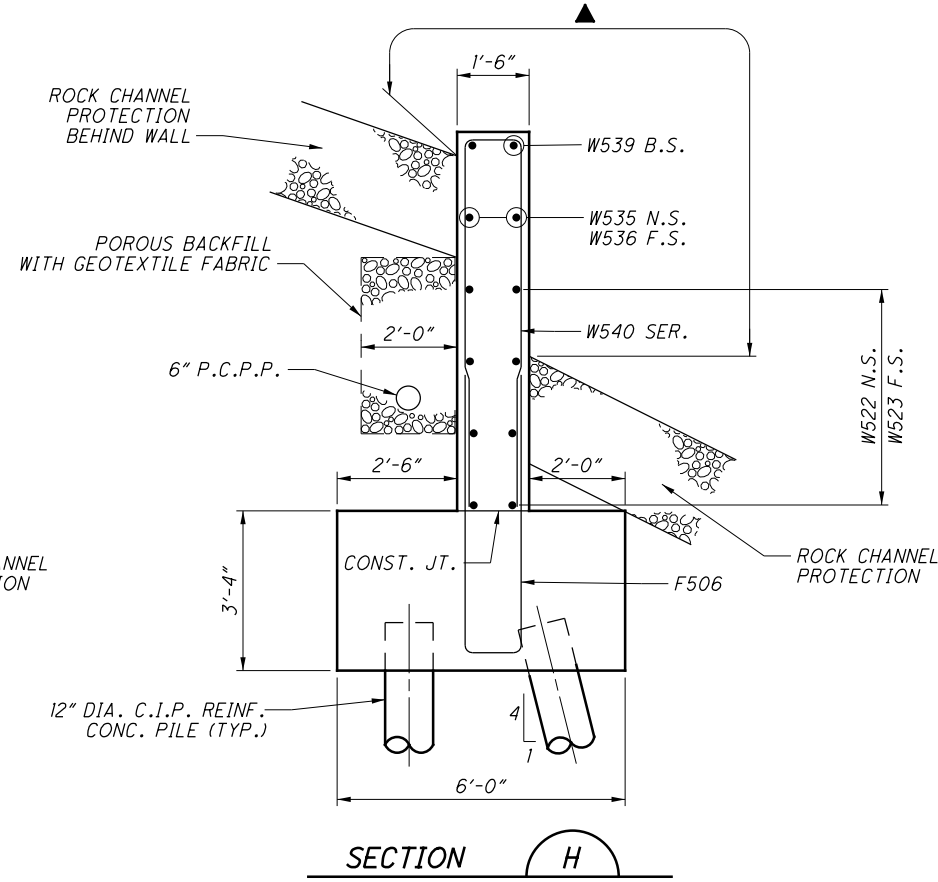
SECTION E



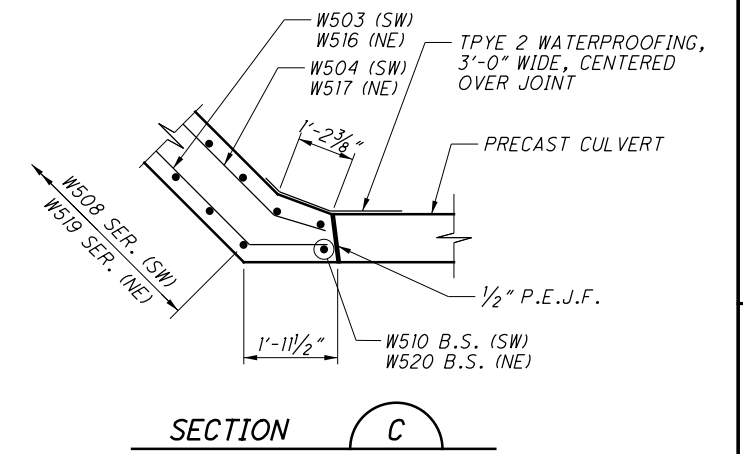
SECTION F



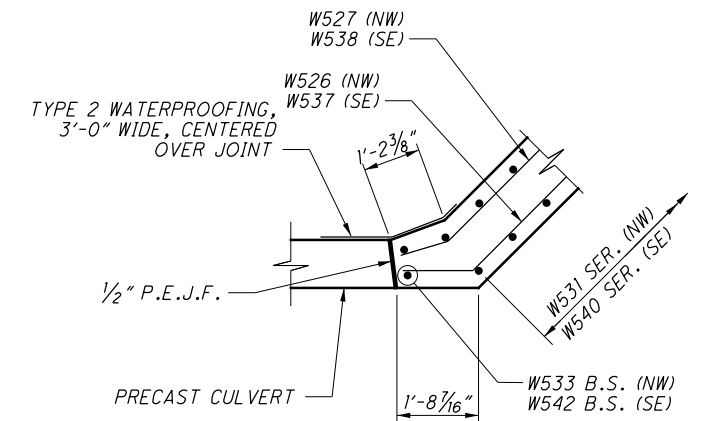
SECTION G



SECTION H



SECTION C



SECTION D

**LEGEND:**

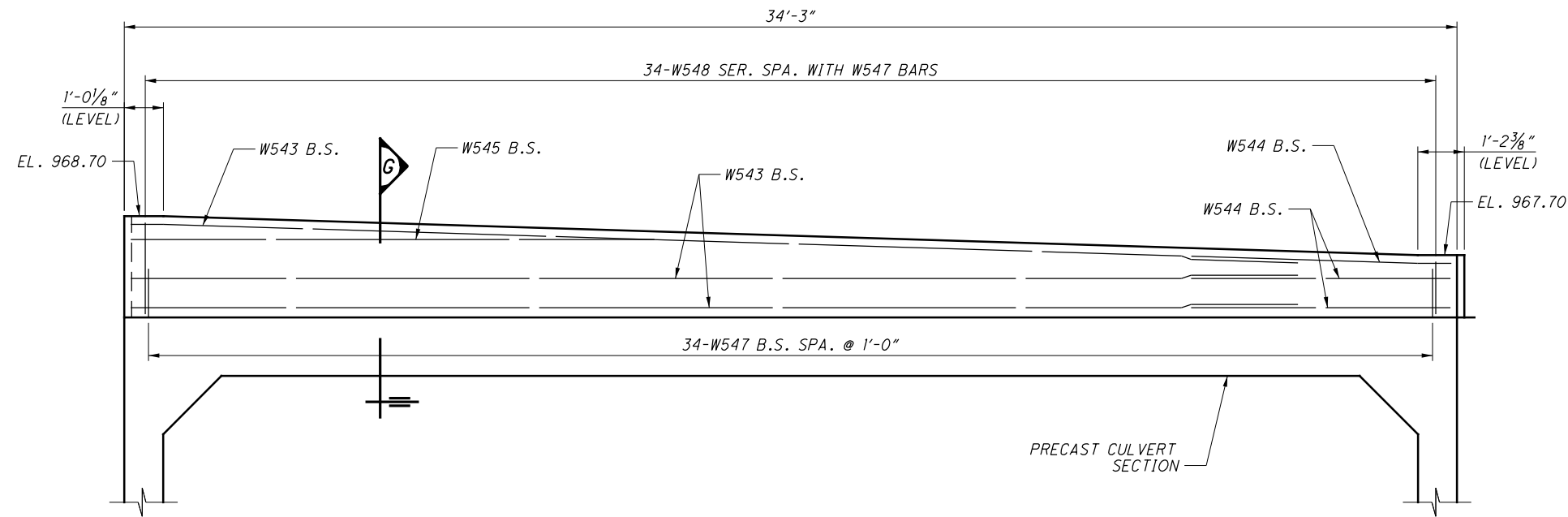
- ▲ INDICATES LIMIT OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"
- NE NORTHEAST WINGWALL
- NW NORTHWEST WINGWALL
- SE SOUTHEAST WINGWALL
- SW SOUTHWEST WINGWALL

**NOTE:**

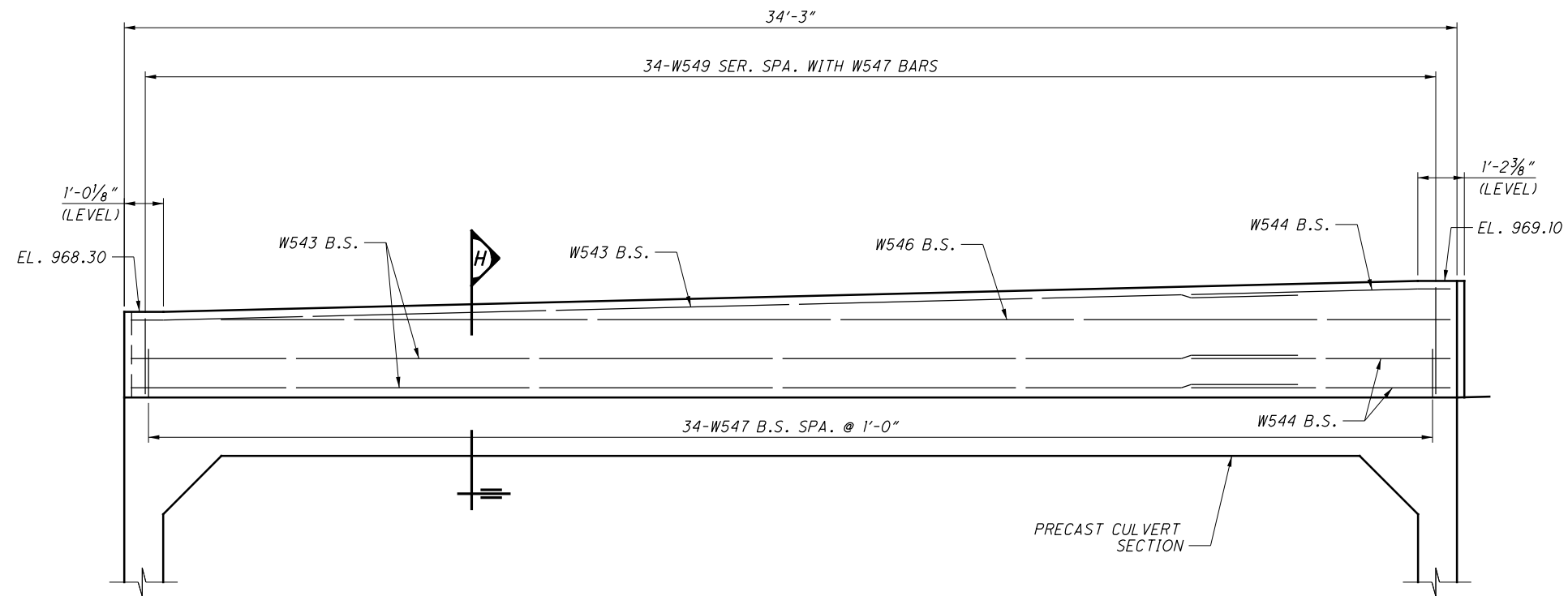
1. FOR FOOTING REINFORCING DETAILS, SEE SHT. NO. 6/10.
2. FOR THE LOCATION OF SECTIONS C, D, E, F, G & H, SEE SHT. NO. 7/10.
3. MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:  
#5 BARS 2'-9"

 GPD GROUP <small>Glenn, Pyle, Schorer, Burns &amp; Dehaven, Inc.          320 South Main Street, Suite 2131, Akron, Ohio 44311 330.572.2100          Copyright Glenn, Pyle, Schorer, Burns &amp; Dehaven, Inc. 2015</small>	DESIGN AGENCY <b>GPD GROUP</b>	DATE 8-14-18	STRUCTURE FILE NUMBER 7705435
REVIEWED DGN	DRAWN RPR	CHECKED DJC	REVISION REVISED RHC
<b>WINGWALL DETAILS</b> BRIDGE NO. SUM-076-0578 RAMP B1 OVER MUD RUN			
<b>SUM-76-5.53</b>		<b>PID No. 96670</b>	
8 / 10		<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 10px;">562</span>  <span style="font-size: 10px;">672</span> </div>	

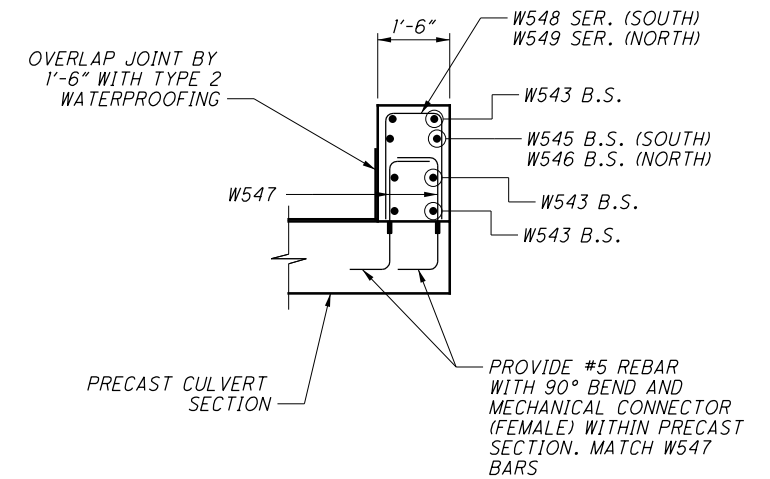
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 #DATES \$  
 #TIMES \$  
 #SHEET \$  
 2016146\ProjectData\SUM\96670\Design\Structures\SUM076\_0578P\_Sheets\076\_0578P\_SD006.dgn Sheet 8/20/2018 1:46:52 PM rrymer



**SOUTH HEADWALL ELEVATION**  
 MECHANICAL CONNECTORS INSIDE THE PRECAST SECTION NOT SHOWN



**NORTH HEADWALL ELEVATION**  
 MECHANICAL CONNECTORS INSIDE THE PRECAST SECTION NOT SHOWN



**SECTION G**  
 SECTION H IS SIMILAR

**LEGEND:**

MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:  
 #5 BARS 2'-9"

<b>DESIGN AGENCY</b>  <small>Glenn, Pyle, Schorer, Burns &amp; Delaney, Inc.          920 South Main Street, Suite 2531, Akron, Ohio 44311 330.572.2100          Copyright © 2018, Glenn, Pyle, Schorer, Burns &amp; Delaney, Inc.</small>	<b>DATE</b> 8-14-18	<b>REVIEWED</b> DGN	<b>STRUCTURE FILE NUMBER</b> 7705435
<b>DRAWN</b> RPR	<b>CHECKED</b> DJC	<b>DESIGNED</b> DJC	<b>REVISER</b> RHC
<b>HEADWALL ELEVATIONS</b> BRIDGE NO. SUM-076-0578 RAMP B1 OVER MUD RUN			
<b>SUM-76-5.53</b> <b>PID No. 96670</b>			
9 / 10			

PROJECT: 2016146\ProjectData\SUM\96670\Design\Structures\SUM076\_0578P\_Sheets\076\_0578P\_Sheet\_8/20/2018 1:41:24 PM rrymer

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
FOOTINGS											
F501	4	30'-0"	125	STR							
F502	4	18'-0"	75	STR							
F503	68	17'-2"	1218	3	5'-8"	2'-7"					
F504	28	17'-10"	521	3	5'-8"	2'-11"					
F505	48	11'-0"	551	STR							
F506	40	12'-11"	539	2	6'-0"	1'-2"	6'-0"				
F507	4	12'-6"	52	2	6'-0"	0'-9"	6'-0"				
F508	12	5'-7"	70	19	2'-9"	2'-0"	2'-0"				
F509	8	11'-0"	92	3	2'-3"	2'-11"					
F801	20	30'-0"	1602	STR							
F802	20	23'-7"	1259	STR							
FOOTINGS TOTAL =			6104	LBS							

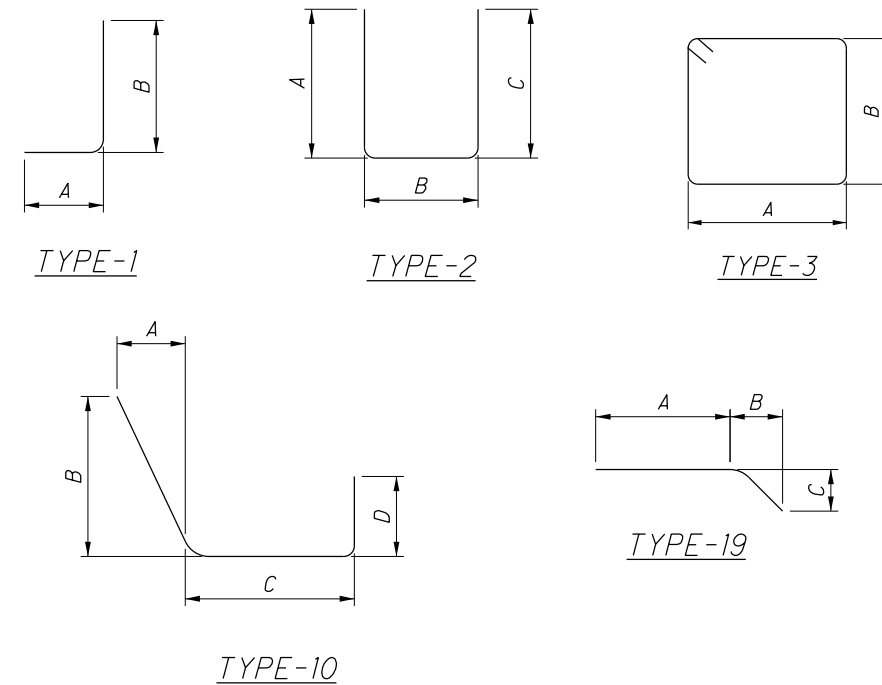
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
WINGWALLS & HEADWALLS											
W501	9	10'-10"	102	19	9'-3"	1'-2"	1'-2"				
W502	9	10'-1"	95	19	8'-11"	1'-1"	0'-6"				
W503	1	8'-8"	9	19	7'-1"	1'-2"	1'-2"				
W504	1	7'-11"	8	19	6'-9"	1'-1"	0'-6"				
W505	1	4'-10"	5	19	3'-3"	1'-2"	1'-2"				
W506	1	4'-1"	4	19	2'-11"	1'-1"	0'-6"				
W507	2	9'-6"	20	STR							
	1 SR	14'-5"			6'-9"		6'-9"				
W508	OF	TO	165	2	TO	1'-2"	TO				0'-4 3/4"
	9	20'-9"			9'-11"		9'-11"				
W509	1	21'-3"	22	2	10'-2"	1'-2"	10'-2"				
W510	2	10'-2"	21	STR							
W511	2	3'-2"	7	10	0'-6"	1'-0"	0'-7"	1'-8"			
W512	1	9'-6"	10	19	7'-11"	1'-2"	1'-2"				
W513	1	8'-9"	9	19	7'-7"	1'-1"	0'-6"				
W514	1	6'-5"	7	19	4'-10"	1'-2"	1'-2"				
W515	1	5'-8"	6	19	4'-6"	1'-1"	0'-6"				
W516	1	3'-4"	3	19	1'-9"	1'-2"	1'-2"				
W517	1	2'-7"	3	19	1'-5"	1'-1"	0'-6"				
W518	2	10'-0"	21	STR							
	1 SR	11'-0"			5'-6"		5'-6"				
W519	OF	TO	140	19	TO	1'-2"	TO				0'-5 7/8"
	9	18'-10"			9'-5"		9'-5"				
W520	2	9'-9"	20	STR							
W521	1	20'-5"	21	2	9'-9"	1'-2"	9'-9"				
W522	8	10'-8"	89	19	9'-3"	1'-0"	1'-0"				
W523	8	10'-0"	83	19	8'-11"	1'-0"	0'-6"				
W524	1	9'-9"	10	19	8'-4"	1'-0"	1'-0"				
W525	1	9'-1"	9	19	8'-0"	1'-0"	0'-6"				
W526	1	7'-1"	7	19	5'-8"	1'-0"	1'-0"				
W527	1	6'-5"	7	19	5'-4"	1'-0"	0'-6"				
W528	1	4'-5"	5	19	3'-0"	1'-0"	1'-0"				
W529	1	3'-9"	4	19	2'-8"	1'-0"	0'-6"				
W530	2	10'-4"	22	STR							
	1 SR	12'-1"			5'-7"		5'-7"				
W531	OF	TO	156	2	TO	1'-2"	TO				0'-6 1/8"
	9	21'-3"			10'-2"		10'-2"				
W532	1	21'-11"	23	2	10'-6"	1'-2"	10'-6"				
W533	2	10'-6"	22	STR							
W534	2	3'-0"	6	10	0'-5"	1'-0"	0'-7"	1'-6"			
W535	1	8'-5"	9	19	7'-0"	1'-0"	1'-0"				
W536	1	7'-9"	8	19	6'-8"	1'-0"	0'-6"				
W537	1	5'-2"	5	19	3'-9"	1'-0"	1'-0"				
W538	1	4'-6"	5	19	3'-5"	1'-0"	0'-6"				
W539	2	9'-11"	21	STR							
	1 SR	11'-1"			5'-1"		5'-1"				
W540	OF	TO	139	2	TO	1'-2"	TO				0'-5 1/2"
	9	18'-7"			8'-10"		8'-10"				
W541	1	19'-3"	20	2	9'-2"	1'-2"	9'-2"				

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
WINGWALLS & HEADWALLS (CONT.)											
W542	2	9'-2"	19	STR							
W543	12	30'-0"	375	STR							
W544	12	7'-0"	88	STR							
W545	2	13'-6"	28	STR							
W546	2	31'-8"	66	STR							
**	W547	136	1'-11"	272	1	0'-10"	1'-3"				
		1 SR	3'-7"			1'-4"	1'-4"				
■	W548	OF	TO	163	2	TO	1'-2"	TO			0'-0 1/4"
		34	5'-7"			2'-4"	2'-4"				
		1 SR	4'-11"			2'-0"	2'-0"				
■	W549	OF	TO	201	2	TO	1'-2"	TO			0'-0 1/4"
		34	6'-5"			2'-9"	2'-9"				
WW & HEADWALLS TOTAL =			2560	LBS							

\*\* MECHANICAL CONNECTOR WITH MALE END @ END OF 1'-3" LONG LEG

■ THE REBAR FABRICATOR HAS THE OPTION TO PROVIDE ONE LENGTH OF BAR FOR THESE SERIES BARS. THE CONTRACTOR WILL THEN BE REQUIRED TO FIELD TRIM THE LEGS TO FIT THE BARS INTO THE PROPOSED HEADWALLS.

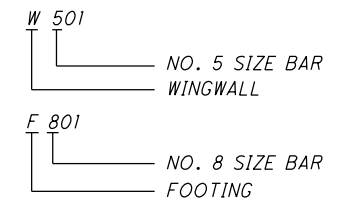
STANDARD BAR TYPES



NOTES:

1. BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES STANDARD BEND.
4. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.

EXAMPLES:



DESIGN AGENCY: GPD GROUP, LLC  
 330 S. 25th St., Akron, Ohio 44311  
 330.572.1100  
 Copyright © 2015, GPD Group, LLC

DATE: 8-14-18  
 FILE NUMBER: 7705435

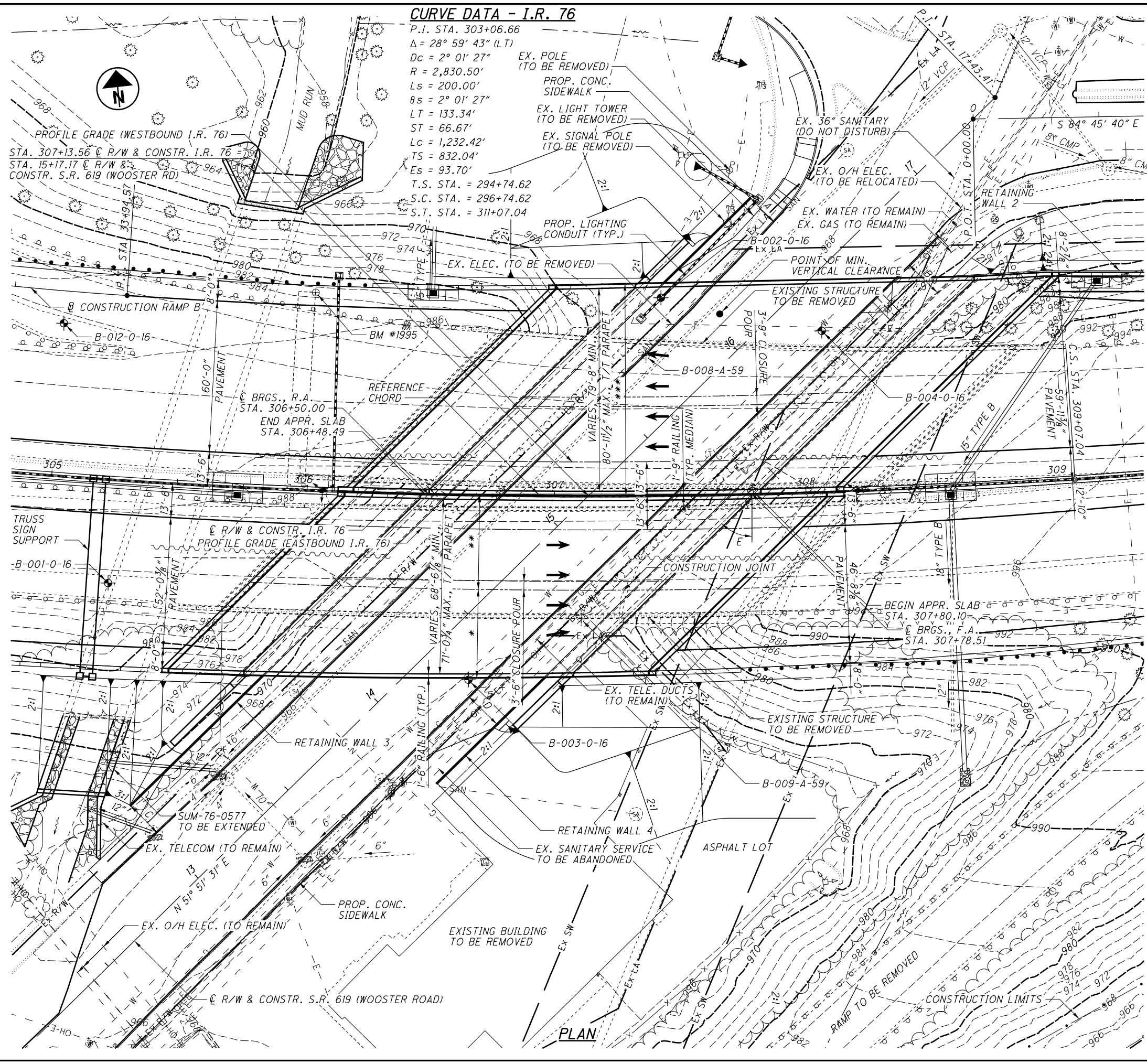
REVIEWED: DGN  
 DRAWN: RPR  
 CHECKED: RHC

REINFORCING STEEL LIST  
 BRIDGE NO.: SUM-076-0578  
 RAMP B1 OVER MUD RUN

SUM-76-5.53  
 PID No. 96670

10/10  
 564  
 672

P:\DDT\MP\0093\_SUM-76-5.62\96670\Design\Structures\SUM076\_05800\Sheets\076\_05800.dgn Sheet 10/30/2018 8:53:51 AM cmt026



**CURVE DATA - I.R. 76**

P.I. STA. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $D_c = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $L_s = 200.00'$   
 $\theta_s = 2^\circ 01' 27''$   
 $LT = 133.34'$   
 $L_c = 1,232.42'$   
 $TS = 832.04'$   
 $ES = 93.70'$   
 $T.S. STA. = 294+74.62$   
 $S.C. STA. = 296+74.62$   
 $S.T. STA. = 311+07.04$

BENCHMARK DATA		
BM #1995	STA. 306+02.10,	EL. 984.87, OFFSET 78.68' LT.

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEETS 8/672 AND 9/672

**NOTES**

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE, ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- SEE SHEET 2/78 FOR PROFILES AND REFERENCE CHORD DIAGRAM.

**DESIGN TRAFFIC:**  
 2020 ADT = 77,400    2020 ADTT = 11,610  
 2040 ADT = 98,000    2040 ADTT = 14,700  
 DIRECTIONAL DISTRIBUTION = 57%

- LEGEND**
- BORING LOCATION
  - ⊕ BENCHMARK
  - \* - PHASE 1 CONSTRUCTION = VARIES (34'-6 7/8" MIN., 37'-0 3/4" MAX.)
  - \*\* - PHASE 2 CONSTRUCTION = 37'-5"
  - \*\*\* - PHASE 3 CONSTRUCTION = VARIES (83'-1" MIN., 84'-4 1/2" MAX.)
  - 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE  
 16'-7 3/4" ACTUAL MINIMUM VERTICAL CLEARANCE
  - A: ACTUAL HORIZONTAL CLEARANCE = 13'-0 3/8"  
 REQUIRED HORIZONTAL CLEARANCE = 6'-0"
  - B: ACTUAL HORIZONTAL CLEARANCE = 15'-6 1/4"  
 REQUIRED HORIZONTAL CLEARANCE = 6'-0"
  - C: ACTUAL HORIZONTAL CLEARANCE = 14'-10 1/4"  
 REQUIRED HORIZONTAL CLEARANCE = 6'-0"
  - D: ACTUAL HORIZONTAL CLEARANCE = 15'-5 5/8"  
 REQUIRED HORIZONTAL CLEARANCE = 6'-0"
  - E: 45°34'57" SKEW L.F. W/RESPECT TO REF. CHORD (TYP.)

**EXISTING STRUCTURE**

TYPE: 3 SPAN CONTINUOUS ROLLED STEEL BEAM BRIDGES WITH COMPOSITE REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 54'-0"±, 90'-0"±, 63'-0"± (MEASURED ALONG EXISTING REFERENCE CHORD)

ROADWAY: VARIES WITH RAMP (WB) & 41'-0"± (EB) T/T PARAPET

LOADING: HS-20 WITH ALT. MIL. (SUPERSTRUCTURE), C.F. 2000 (SUBSTRUCTURE)

WEARING SURFACE: 1" MONOLITHIC CONCRETE

SKEW: 45°15'44"± L.F. WITH RESPECT TO REFERENCE CHORD

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

STRUCTURAL FILE NUMBER: 7705492 (WB) / 7705522 (EB)

DATE BUILT: 1962; REHABILITATED 1997

DISPOSITION: TO BE REPLACED

**PROPOSED STRUCTURE**

TYPE: SINGLE SPAN COMPOSITE GALVANIZED STEEL (ASTM A709) PLATE GIRDER BRIDGE ON SEMI-INTEGRAL ABUTMENTS WITH MSE WALLS

SPAN: 128'-6" MEASURED ALONG REFERENCE CHORD

ROADWAY: VAR. (79'-8" MIN., 80'-11 1/2" MAX.) (WB) & VAR. (68'-6 7/8" MIN., 71'-0 3/4" MAX.) WITH RAMP (EB) T/T PARAPET

LOADING: HL-93

WEARING SURFACE: 1" MONOLITHIC CONCRETE

FUTURE WEARING SURFACE: 0.06 KSF

SKEW: 45°34'57" L.F. WITH RESPECT TO REFERENCE CHORD

APPROACH SLABS: 30'-0" LONG (AS-1-15 & AS-2-15) TYPE C

ALIGNMENT: 2°01'27" CURVE LEFT

SUPERELEVATION: VARIES

COORDINATES: LATITUDE 41°02'09.05" N  
 LONGITUDE 81°34'42.30" W

DESIGN AGENCY: **CARPENTER MARTY** TRANSPORTATION

DATE: 5/4/2017

REVIEWED: WHM

DRAWN: ERK

DESIGNED: ERK

SUMMIT COUNTY

BRIDGE NO. SUM-76-0580

OVER S.R. 619 (WOOSTER ROAD)

SITE PLAN

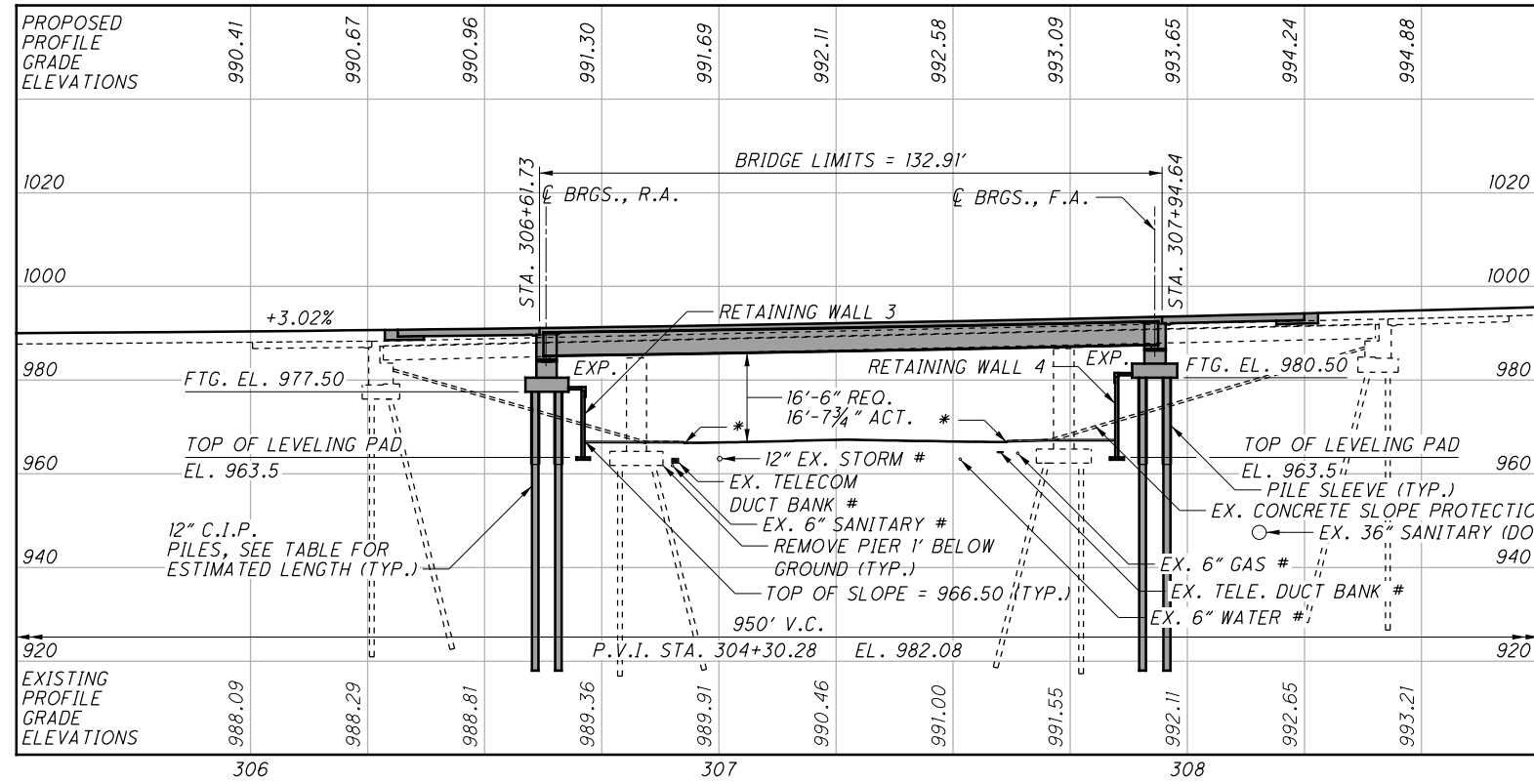
SUM-76-5.53

PID No. 96670

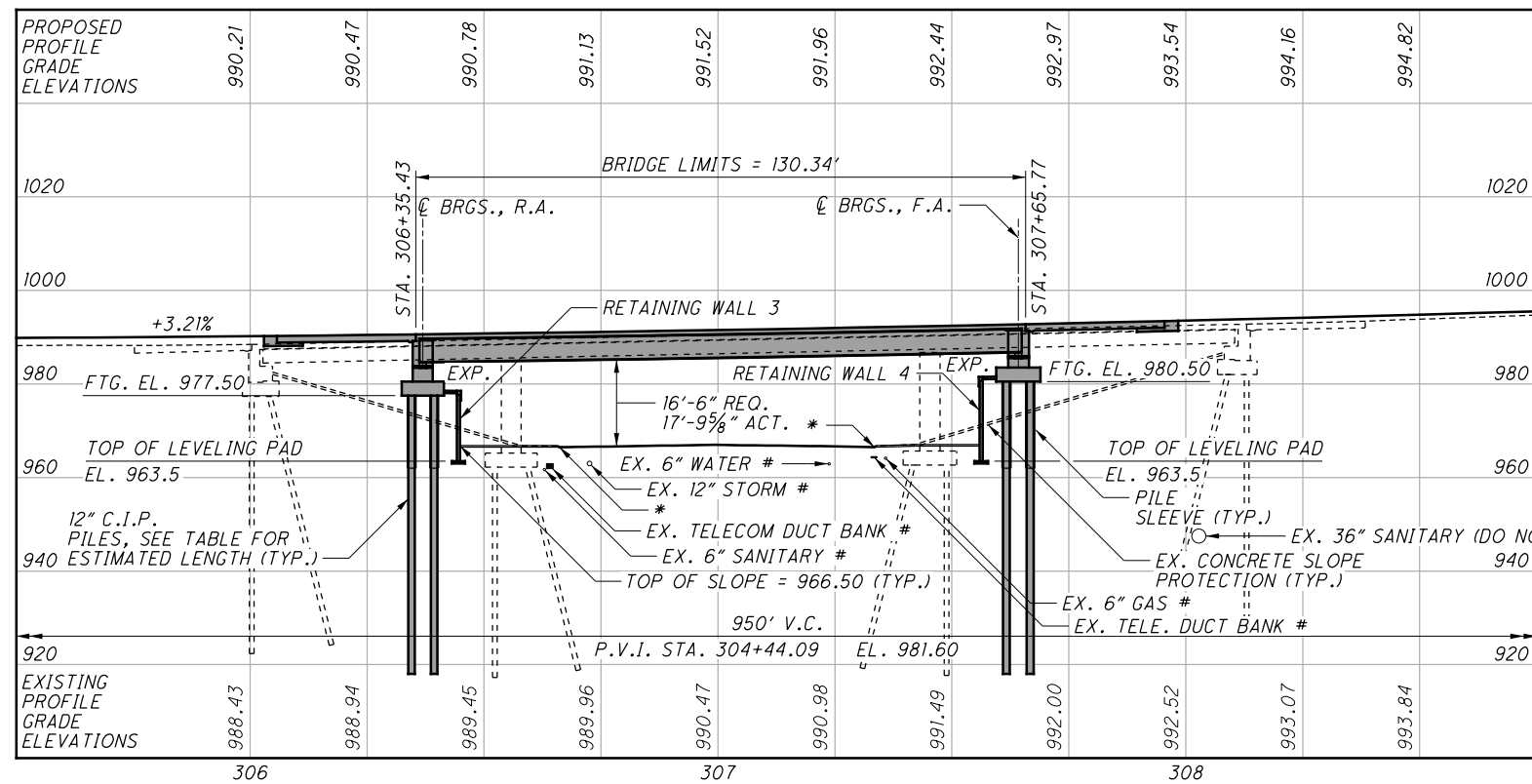
1/78

565/672

P:\DDT\MP\0093\_SUM-76-5.62\96670\Design\Structures\SUM076\_0580C\_Sheets\Revisions\076\_0580C\_SP002\_clean.dgn Sheet 4/2/2019 5:57:53 PM cmt007

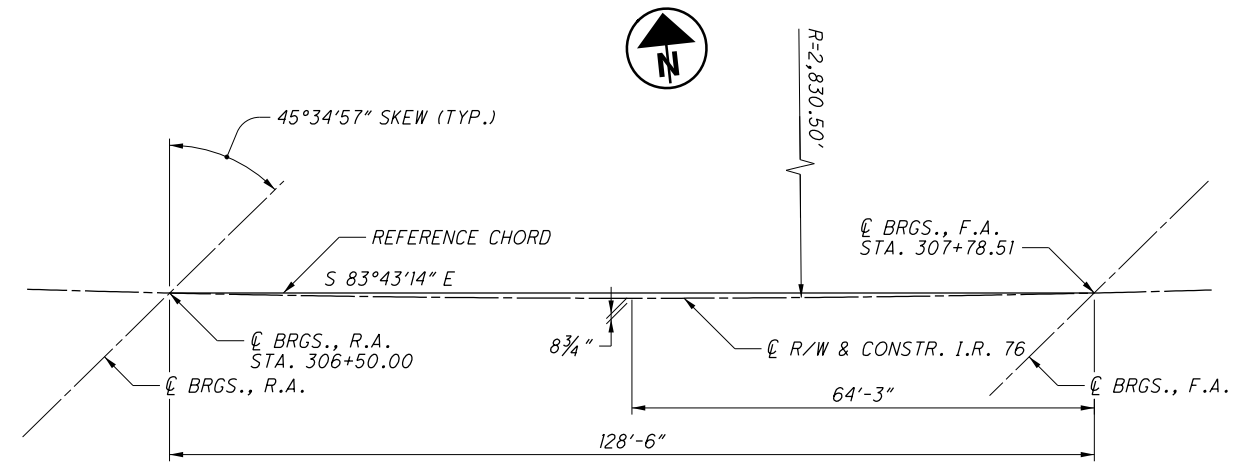


PROFILE ALONG PROFILE GRADE (WESTBOUND I.R. 76)



PROFILE ALONG PROFILE GRADE (EASTBOUND I.R. 76)

ESTIMATED PILE LENGTH		
PILE NUMBER ON SHEETS	ESTIMATED LENGTH	QUANTITY
25/78 & 26/78		
1-24, 49-62	60 FEET	38
77-112	65 FEET	36
113-118, 121-124, 125-129, 132-136	70 FEET	20
119-120, 130-131	80 FEET	4
25-48, 63-76	85 FEET	38



REFERENCE CHORD DIAGRAM

**LEGEND**  
 \* - EDGE OF PAVEMENT  
 # - UTILITY TO REMAIN

DESIGN AGENCY: **CARPENTER MARTY** Transportation

DATE: 5/4/2017

REVIEWED: WHM

DRAWN: ERK

DESIGNED: ERK

CHECKED: GDU

REVISED: GDU

STRUCTURE FILE NUMBER: 7705493

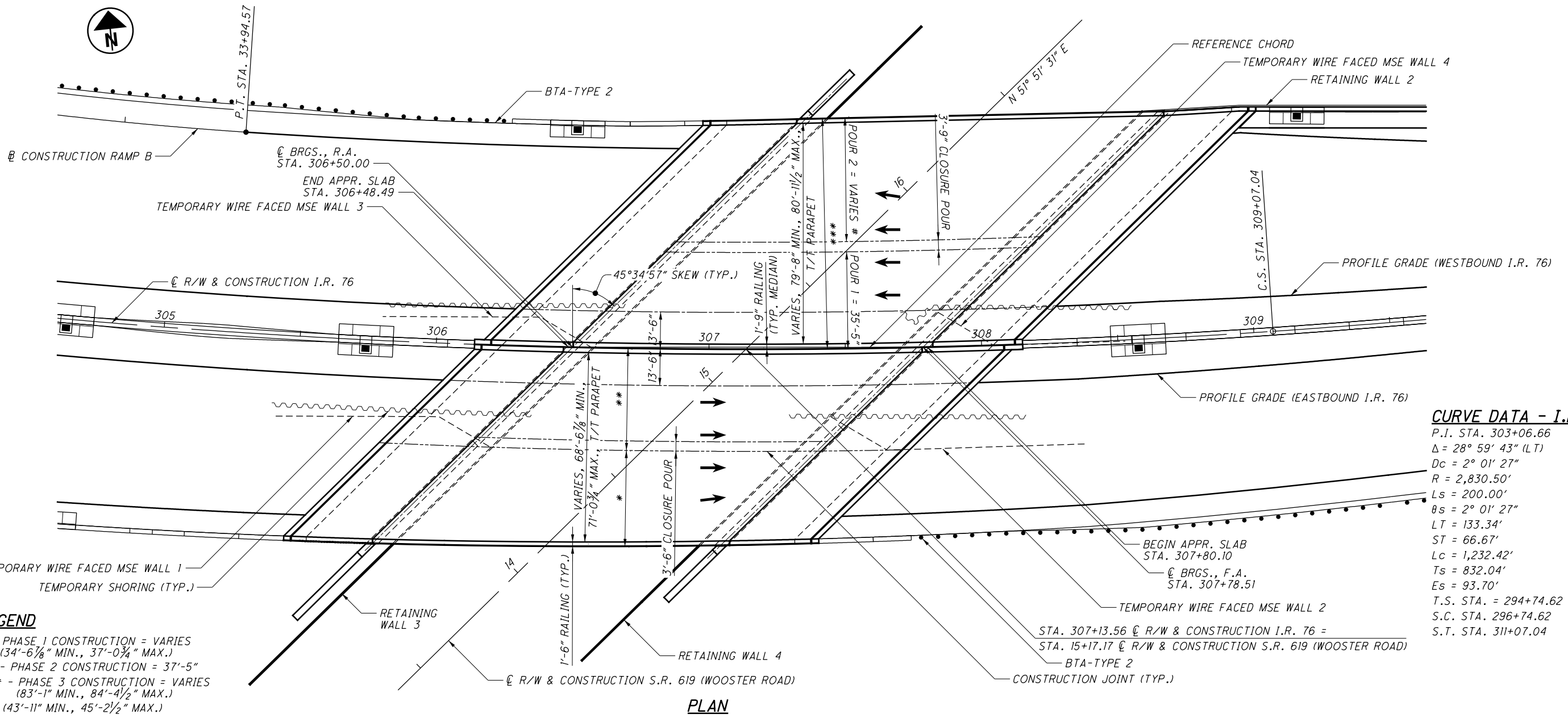
SUMMIT COUNTY  
 STA. 306+48.49  
 STA. 307+80.10

**PROFILES**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

SUM-76-5.53  
 PID No. 96670

2 / 78

566  
 672



**CURVE DATA - I.R. 76**

P.I. STA. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $D_c = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $L_s = 200.00'$   
 $\theta_s = 2^\circ 01' 27''$   
 $LT = 133.34'$   
 $ST = 66.67'$   
 $L_c = 1,232.42'$   
 $T_s = 832.04'$   
 $E_s = 93.70'$   
 $T.S. STA. = 294+74.62$   
 $S.C. STA. 296+74.62$   
 $S.T. STA. 311+07.04$

**PLAN**

**LEGEND**

- \* - PHASE 1 CONSTRUCTION = VARIES (34'-6 1/8" MIN., 37'-0 3/4" MAX.)
- \*\* - PHASE 2 CONSTRUCTION = 37'-5"
- \*\*\* - PHASE 3 CONSTRUCTION = VARIES (83'-1" MIN., 84'-4 1/2" MAX.)
- # - (43'-11" MIN., 45'-2 1/2" MAX.)

**ITEM 506 - STATIC LOAD TEST, AS PER PLAN:**

PERFORM STATIC LOAD TESTING ACCORDING TO CMS SECTION 506, EXCEPT AS MODIFIED BY THIS NOTE.

THE PRODUCTION PILES AT BRIDGE SUM-76-0580 ARE LOCATED WITHIN PROPOSED MSE WALL FILL. THEREFORE, CHOOSE ONE OF THE FOLLOWING TWO OPTIONS FOR PERFORMING THE STATIC LOAD TEST.

1. PERFORM THE STATIC LOAD TEST ON A NON-PRODUCTION PILE LOCATED WITHIN THE INFIELD OF EXISTING RAMP D AND WITHIN 50 FEET OF EITHER BRIDGE SUM-76-0577, SUM-76-0578, OR SUM-76-0580. PERFORM THE STATIC LOAD TEST BEFORE DRIVING PILES AT BRIDGE SUM-76-0580.
2. PERFORM THE STATIC LOAD TEST ON A PRODUCTION PILE AT BRIDGE SUM-76-0577 OR SUM-76-0578 BUT BEFORE DRIVING THE PILES AT BRIDGE SUM-76-0580.

IF PERFORMING THE STATIC LOAD TEST ON A PRODUCTION PILE FOR SUM-76-0577, USE AN ULTIMATE BEARING VALUE OF 324 KIPS FOR THE STATIC LOAD TEST PILE, OTHERWISE USE AN ULTIMATE BEARING VALUE OF 254 KIPS FOR THE STATIC LOAD TEST PILE. IF PERFORMING THE STATIC LOAD TEST ON A NON-PRODUCTION PILE, USE A 12-INCH DIAMETER PILE. INCLUDE ALL COSTS ASSOCIATED WITH FURNISHING AND DRIVING NON-PRODUCTION PILES IN THE CONTRACT LUMP SUM PRICE FOR STATIC LOAD TEST.

NOTIFY THE ENGINEER AND THE OFFICE OF GEOTECHNICAL ENGINEERING AT LEAST TWO WEEKS BEFORE BEGINNING PILE DRIVING. DO NOT DRIVE THE TEST PILE BEYOND THE ESTIMATED PILE LENGTH UNLESS DIRECTED OTHERWISE BY THE ENGINEER. DRIVE THREE ADDITIONAL PILES TO THE SAME UBV AS THE TEST PILE AND PERFORM DYNAMIC TESTING ON ALL FOUR PILES. THESE ADDITIONAL PILES CAN BE ANCHOR PILES USED FOR THE STATIC LOAD TEST. DRIVE ONE ADDITIONAL PILE WITHOUT DYNAMIC LOAD TESTING FOR THE PURPOSE OF WARMING UP THE PILE HAMMER ON THE RESTRIKE TESTS. INSTALL SISTER BAR STRAIN GAUGES IN THE STATIC LOAD TEST PILE AS DESCRIBED BELOW AND THEN FILL THE TEST PILE WITH CONCRETE. ALLOW THE CONCRETE TO CURE FOR 3 DAYS BEFORE PERFORMING THE STATIC LOAD TEST. DO NOT PERFORM ANY PILE DRIVING OPERATIONS DURING THE CURING PERIOD AND WHILE PERFORMING THE STATIC LOAD TEST. AFTER COMPLETION OF THE STATIC LOAD TEST, PERFORM PILE RESTRIKES ON THE FOUR PILES (TWO RESTRIKE TEST ITEMS) ON WHICH DYNAMIC TESTING WAS PERFORMED BEFORE THE STATIC LOAD TEST. PERFORM THE RESTRIKE TESTS NOT MORE THAN 24 HOURS AFTER THE COMPLETION OF THE STATIC LOAD TEST. IMMEDIATELY AFTER THE RESTRIKE TESTS, PROVIDE THE ENGINEER DRIVING CRITERIA FOR THE PILES. PILE DRIVING OPERATIONS MAY RESUME AT THIS POINT. WITHIN FOUR DAYS OF COMPLETING THE STATIC LOAD TEST, SUBMIT A DRAFT REPORT TO THE ENGINEER WHICH CONTAINS

THE INFORMATION REQUIRED IN CMS ITEM 506. PERFORM ADDITIONAL RESTRIKES ON THE FOUR DYNAMIC TEST PILES 7 DAYS AND 14 DAYS AFTER THE PILES WERE DRIVEN. DO NOT CUT OFF PILES (EXCEPT AS REQUIRED TO PERFORM THE STATIC LOAD TEST) UNTIL DIRECTED BY THE ENGINEER. WITHIN FOUR DAYS OF COMPLETING THE 14 DAY RESTRIKES, UPDATE THE REPORT WITH THE RESTRIKE TEST RESULTS AND SUBMIT THE FINAL REPORT TO THE ENGINEER. SUBMIT ALL REPORTS, TEST RESULTS, AND RECORDED DATA TO THE ENGINEER AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

FURNISH AND INSTALL EIGHT (8) SISTER BAR STRAIN GAUGES WITHIN THE STATIC LOAD TEST PILE. ATTACH THE SISTER BAR STRAIN GAUGES TO A LENGTH OF REINFORCING STEEL (SIZE NO. 4 OR 5) THAT EXTENDS FOR THE FULL LENGTH OF THE PILE. LOCATE ONE STRAIN GAUGE APPROXIMATELY 18 INCHES FROM THE PILE TIP, ONE STRAIN GAUGE WITHIN 24 INCHES OF THE PILE TOP, AND EVENLY DISTRIBUTE THE REMAINING SIX STRAIN GAUGES ALONG THE LENGTH OF THE TEST PILE. MEASURE AND REPORT THE LOCATION OF EACH STRAIN GAUGE RELATIVE TO THE TOP OF THE TEST PILE. LABEL THE END OF THE SIGNAL CABLES WITH THE STRAIN GAUGE NUMBER IN CONSECUTIVE ORDER STARTING FROM THE TOP. USE CENTRALIZERS ON THE LENGTH OF REINFORCING STEEL TO ENSURE THE STRAIN GAUGES ARE LOCATED IN THE CENTER OF THE TEST PILE. SPACE THE CENTRALIZERS NO MORE THAN 10 FEET APART. PLACE THE REINFORCING STEEL AND STRAIN GAUGES IN THE TEST PILE AND SUPPORT THEM IN PLACE. CUT A HOLE IN THE SIDE OF THE TEST PILE BELOW THE PILE CUTOFF ELEVATION AND RUN THE SIGNAL CABLES FROM THE STRAIN GAUGES THROUGH THE HOLE AND OUTSIDE OF THE PILE. FILL THE TEST PILE WITH CONCRETE WITHOUT DISTURBING THE STRAIN GAUGES. DURING THE STATIC LOAD TEST, RECORD THE STRAIN GAUGE READINGS BEFORE STARTING THE TEST AND DURING THE TEST WHENEVER RECORDING READINGS OF TIME, LOAD, AND MOVEMENT. REPORT THE MEASUREMENTS IN UNITS OF MICROSTRAIN.

- FURNISH AND INSTALL STRAIN GAUGES FROM ONE OF THE MANUFACTURERS LISTED BELOW.
- GEOKON, INC.: VIBRATING WIRE REBAR STRAIN METER "SISTER BAR", MODEL 4911, WWW.GEOKON.COM
  - GEO-INSTRUMENTS: SISTER BAR STRAIN GAUGE, PART NUMBER PGISBSG002, WWW.GEO-INSTRUMENTS.COM
  - RST INSTRUMENTS LTD.: VIBRATING WIRE SISTER BAR, ITEM NO. VW5000-15, RSTINSTRUMENTS.COM
  - ROCTEST: IRHP INSTRUMENTED SISTER BAR, MODEL IRCL-0500, WWW.ROCTEST.COM

IF DIRECTED BY THE ENGINEER, REMOVE NON-PRODUCTION TEST PILES AND ANCHOR PILES TO AT LEAST TWO FEET BELOW THE PROPOSED GROUND SURFACE.

**SUPERELEVATION TRANSITION TABLE**

STATION	WB CROSS SLOPE	EB CROSS SLOPE
306+25.00	-0.0450	0.0450
306+50.00	-0.0450	0.0450
306+75.00	-0.0450	0.0450
307+00.00	-0.0450	0.0450
307+25.00	-0.0450	0.0450
307+49.24	-0.0450	0.0450
307+50.00	-0.0450	0.0449
307+75.00	-0.0450	0.0418
308+00.00	-0.0450	0.0386
308+20.96	-0.0450	0.0360
308+25.00	-0.0446	0.0355
308+35.00	-0.0437	0.0343
308+50.00	-0.0423	0.0324
308+66.00	-0.0408	0.0304
308+75.00	-0.0399	0.0293
309+00.00	-0.0376	0.0261
309+07.04	-0.0369	0.0253

DESIGN AGENCY: **CARPENTER MARTY** TRANSPORTATION CONSULTANTS

DATE: 5/4/2017

REVIEWED: WHM

DRAWN: ERK

DESIGNED: ERK

CHECKED: GDU

STRUCTURE FILE NUMBER: 7705493

GENERAL PLAN

BRIDGE NO. SUM-76-0580

OVER S.R. 619 (WOOSTER ROAD)

SUM-76-5.53

PID No. 96670

3 / 78

567

672

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ESTIMATED QUANTITIES										DESIGN: GDJ	CHECK: ERK		
										DATE: 8/14/18	DATE: 8/14/18		
ITEM	EXTENSION	PHASE 1	PHASE 2	PHASE 3	TOTAL 02/IMS/BR	TOTAL 11/IMS/BR	TOTAL	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.	SHEET #
202	11003	LS	LS	LS		LS	LS	-	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS	18/78
202	22900	133	175	285	196	397	593	SY	APPROACH SLAB REMOVED			593	
202	32800	370	547	659	520	1056	1576	SY	CONCRETE SLOPE PROTECTION REMOVED			1576	
503	11101	LS	LS			LS	LS	-	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN			LS	4/78
505	11100	LS	LS	LS		LS	LS	-	PILE DRIVING EQUIPMENT MOBILIZATION	LS			
506	11101	LS				LS	LS	-	STATIC LOAD TEST, AS PER PLAN	LS			3/78 AND 4/78
507	00500	3480	2030	4060	3158	6412	9570	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	9570			
507	00551	3720	2170	4360	3382	6868	10250	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	10250			4/78
507	92201			84	28	56	84	FT	PREBORED HOLES, AS PER PLAN	84			4/78
509	10000	63523	55053	137475	84497	171554	256051	LB	EPOXY COATED REINFORCING STEEL	43031	213020		
511	21522	219	231		148	302	450	CY	CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE		450		
511	21523			526	174	352	526	CY	CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE, AS PER PLAN		526		4/78
511	33500	2		2	1	3	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		4		
511	34450	21	31	50	34	68	102	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET)		102		
511	43512	217	108	259	193	391	584	CY	CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING	584			
512	10100	460	258	680	461	937	1398	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	471	721	206	
512	33000		8	8	5	11	16	SY	TYPE 2 WATERPROOFING			16	
513	10281	255900	263300	585500	364551	740149	1104700	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN		1104700		4/78 5/78 36/78
513	20000	1344	1344	3024	1885	3827	5712	EACH	WELDED STUD SHEAR CONNECTORS		5712		
516	10010	96	105	240	146	295	441	FT	ARMORLESS PREFORMED JOINT SEAL			441	
516	13600	9	13	21	14	29	43	SF	1" PREFORMED EXPANSION JOINT FILLER		43		
516	13900	90	13	563	220	446	666	SF	2" PREFORMED EXPANSION JOINT FILLER			666	
516	14020	131	106	261	164	334	498	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL		498		
516	44200	8	8	18	11	23	34	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (18" X 22" X 3.374" WITH A 19" X 23" X 2" LOAD PLATE)		34		
518	21200	80	59	157	98	198	296	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC			296	
518	40000	169	120	256	180	365	545	FT	6" PERFORATED CORRUGATED PLASTIC PIPE			545	
518	40010	55		26	27	54	81	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS			81	
523	20001	2			1	1	2	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2			4/78
523	20501	6			2	4	6	EACH	RESTRIKE, AS PER PLAN	6			4/78
526	30011	235	248	566	346	703	1049	SY	REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17"), AS PER PLAN			1049	62/78 THRU 70/78
526	90030	96	105	240	146	295	441	FT	TYPE C INSTALLATION			441	
607	39900	126		130	84	172	256	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			256	
867	00100	LS				LS	LS	-	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (TEMPORARY WIRE FACED MSE WALL 1)			LS	
867	00100	LS				LS	LS	-	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (TEMPORARY WIRE FACED MSE WALL 2)			LS	
867	00100		LS			LS	LS	-	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (TEMPORARY WIRE FACED MSE WALL 3)			LS	
867	00100		LS			LS	LS	-	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (TEMPORARY WIRE FACED MSE WALL 4)			LS	

\* - PAID FOR UNDER THE ROADWAY QUANTITIES. SEE THE ROADWAY GENERAL SUMMARY.

REVISIONS	NUMBER	DATE	DESCRIPTION
	△	4/2/19	REVISED QUANTITIES
	△	4/25/19	REMOVED PAY ITEMS

**ESTIMATED QUANTITIES**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
PID No. 96670

6/78

570  
672

DESIGN AGENCY  
**CARPENTER MARTY**  
TRANSPORTATION CONSULTANTS

DATE  
5/8/2017

REVIEWED  
WHM

DRAWN  
ERK

DESIGNED  
ERK

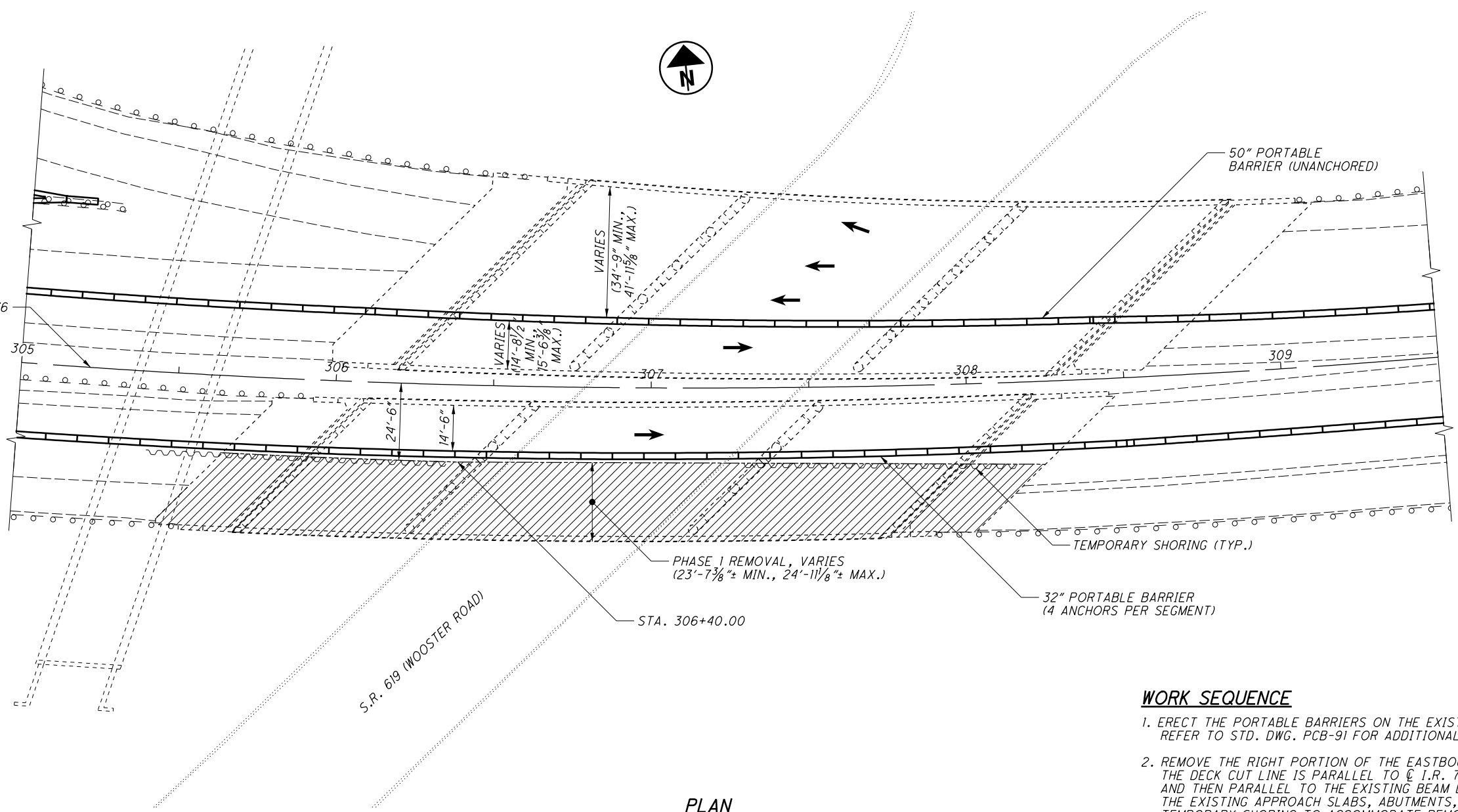
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7705493

REVISION  
GDJ

CHECKED  
GDJ

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CL R/W & CONSTRUCTION I.R. 76



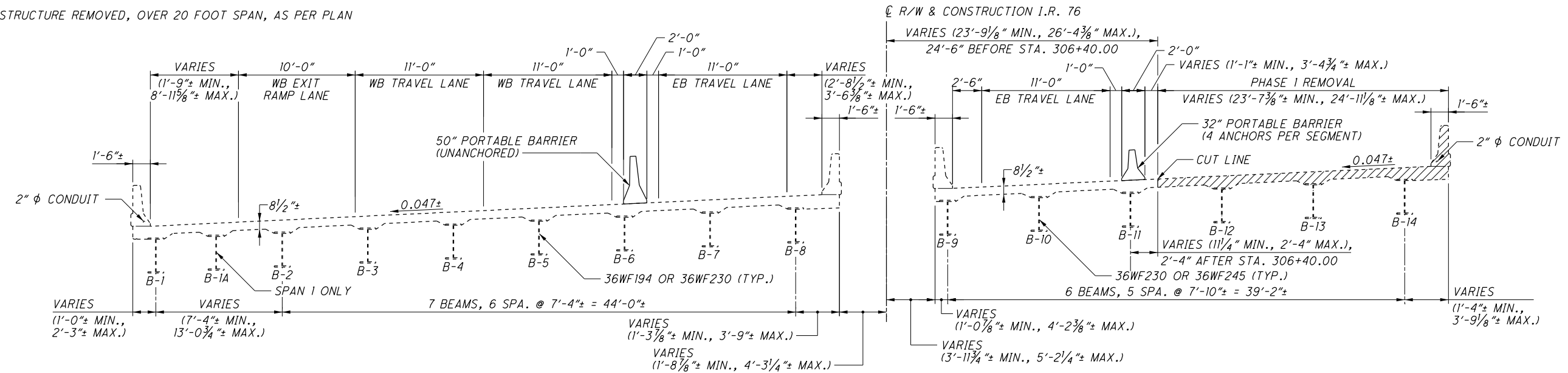
**PLAN**

**WORK SEQUENCE**

1. ERECT THE PORTABLE BARRIERS ON THE EXISTING STRUCTURES AS SHOWN. REFER TO STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.
2. REMOVE THE RIGHT PORTION OF THE EASTBOUND SUPERSTRUCTURE. THE DECK CUT LINE IS PARALLEL TO CL I.R. 76 UNTIL STA. 306+40.00 AND THEN PARALLEL TO THE EXISTING BEAM LINE. REMOVE PORTIONS OF THE EXISTING APPROACH SLABS, ABUTMENTS, AND PIERS. PROVIDE TEMPORARY SHORING TO ACCOMMODATE REMOVAL OF THE EXISTING SUBSTRUCTURES & PHASE 1 CONSTRUCTION.

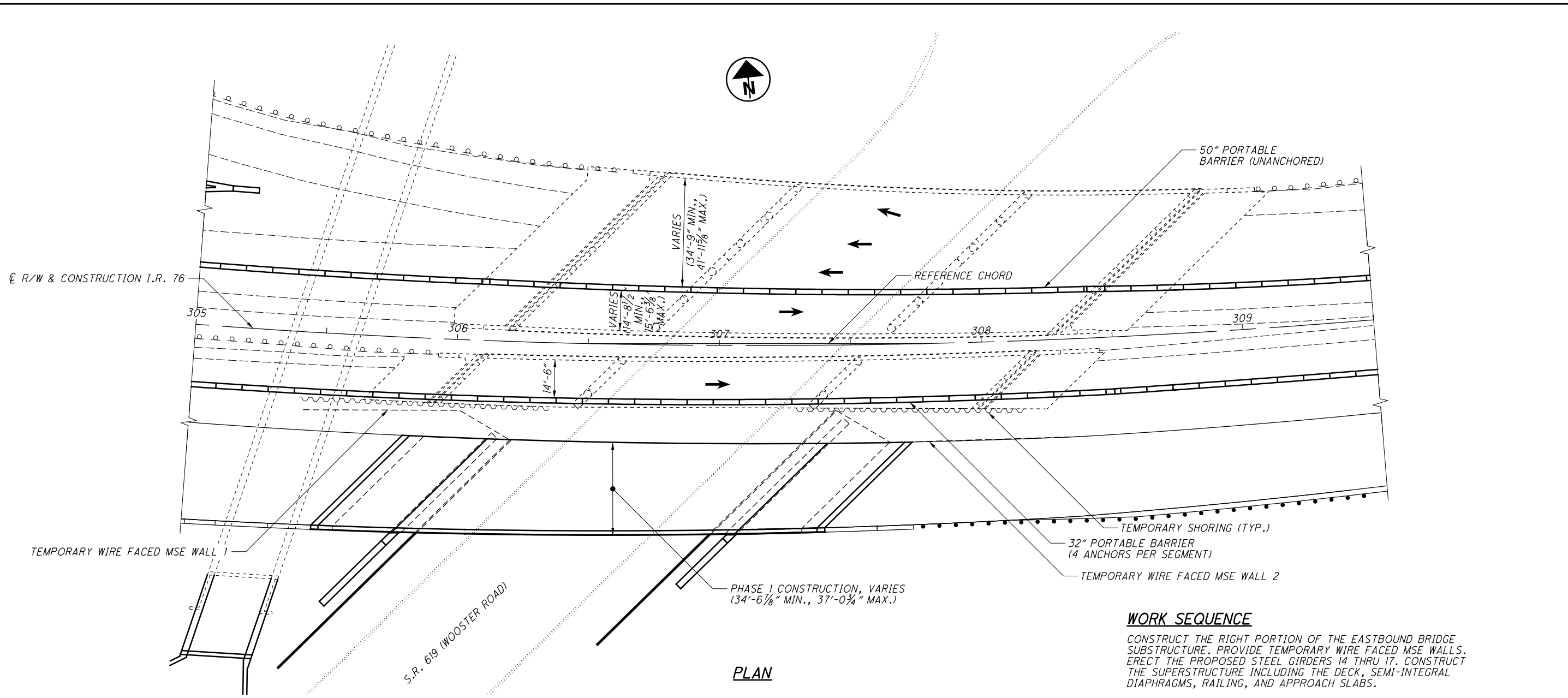
**LEGEND**

STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN



**PHASE 1 MAINTENANCE OF TRAFFIC AND REMOVAL**  
CROSS FRAMES NOT SHOWN

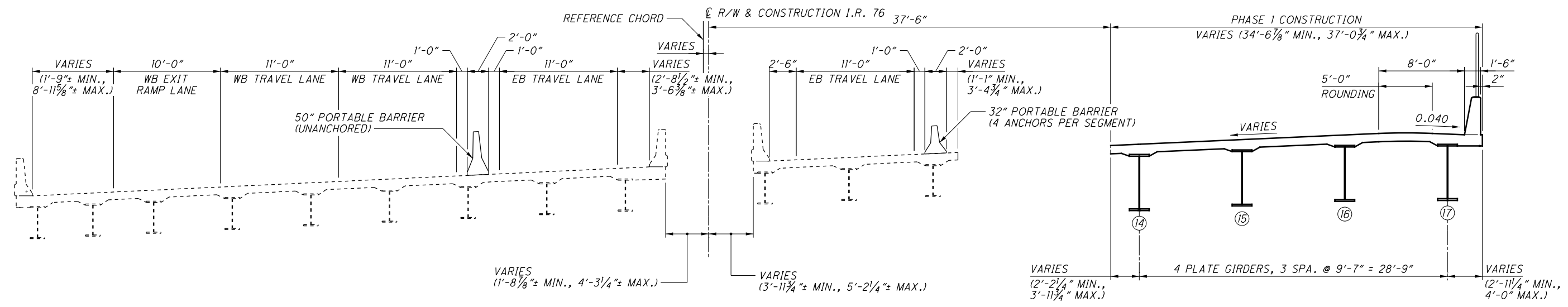
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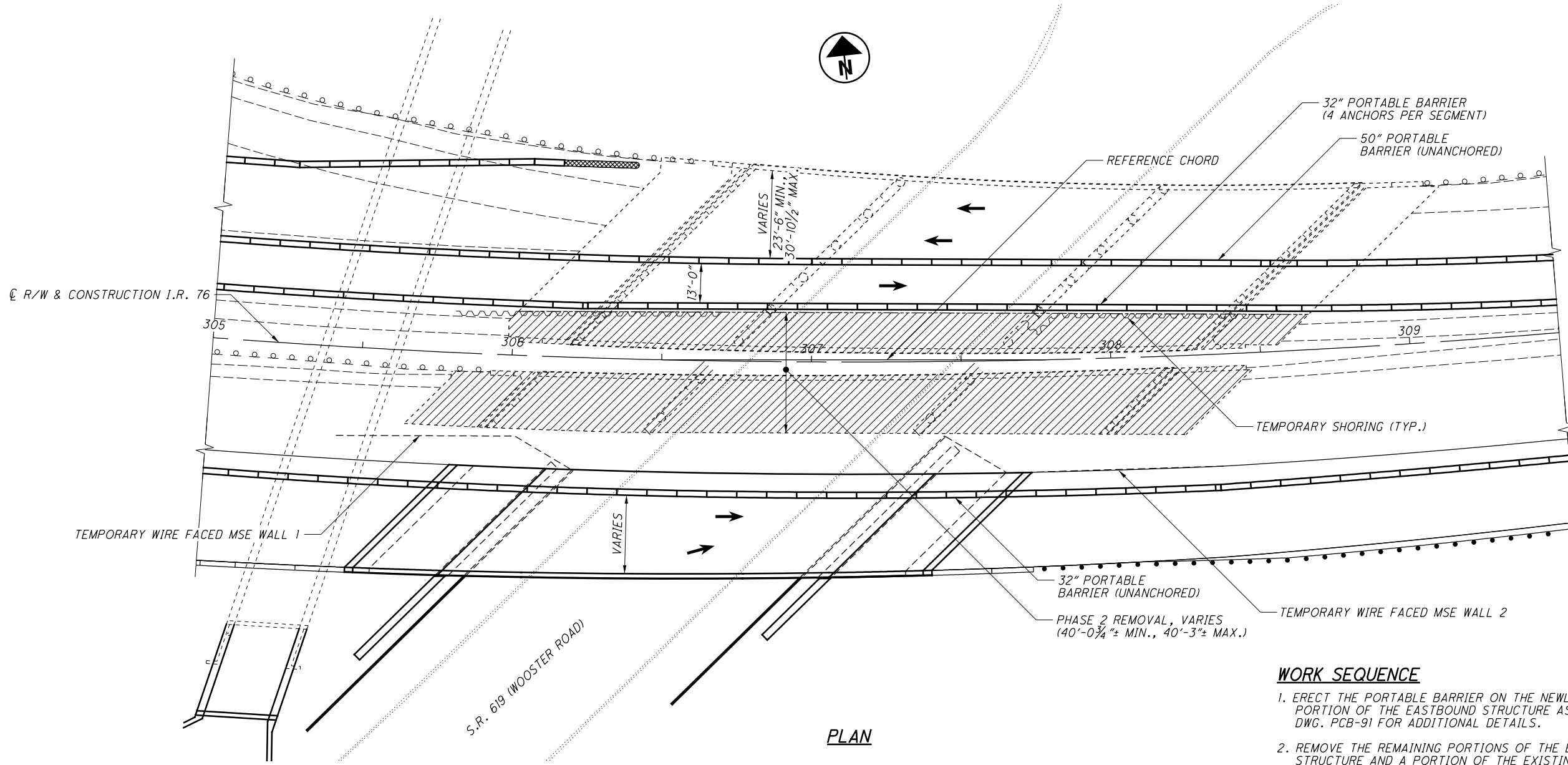
**PLAN**

**WORK SEQUENCE**

CONSTRUCT THE RIGHT PORTION OF THE EASTBOUND BRIDGE SUBSTRUCTURE. PROVIDE TEMPORARY WIRE FACED MSE WALLS. ERECT THE PROPOSED STEEL GIRDERS 14 THRU 17. CONSTRUCT THE SUPERSTRUCTURE INCLUDING THE DECK, SEMI-INTEGRAL DIAPHRAGMS, RAILING, AND APPROACH SLABS.



**PHASE 1 CONSTRUCTION**  
 CROSS FRAMES NOT SHOWN

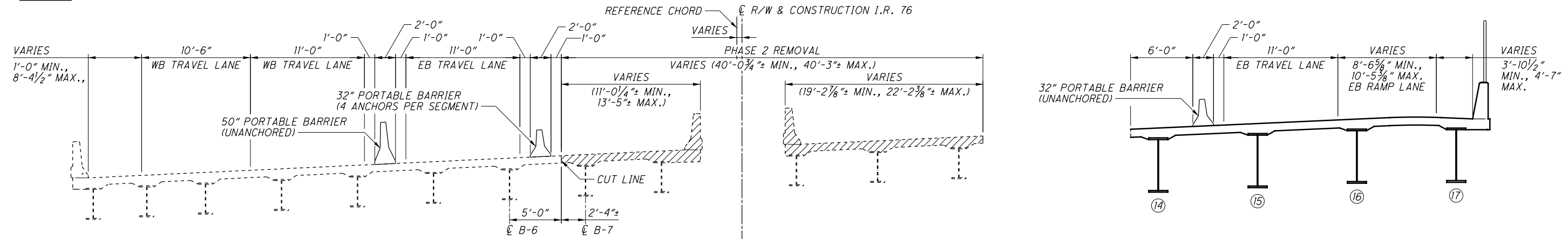


**PLAN**

**LEGEND**  
 STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

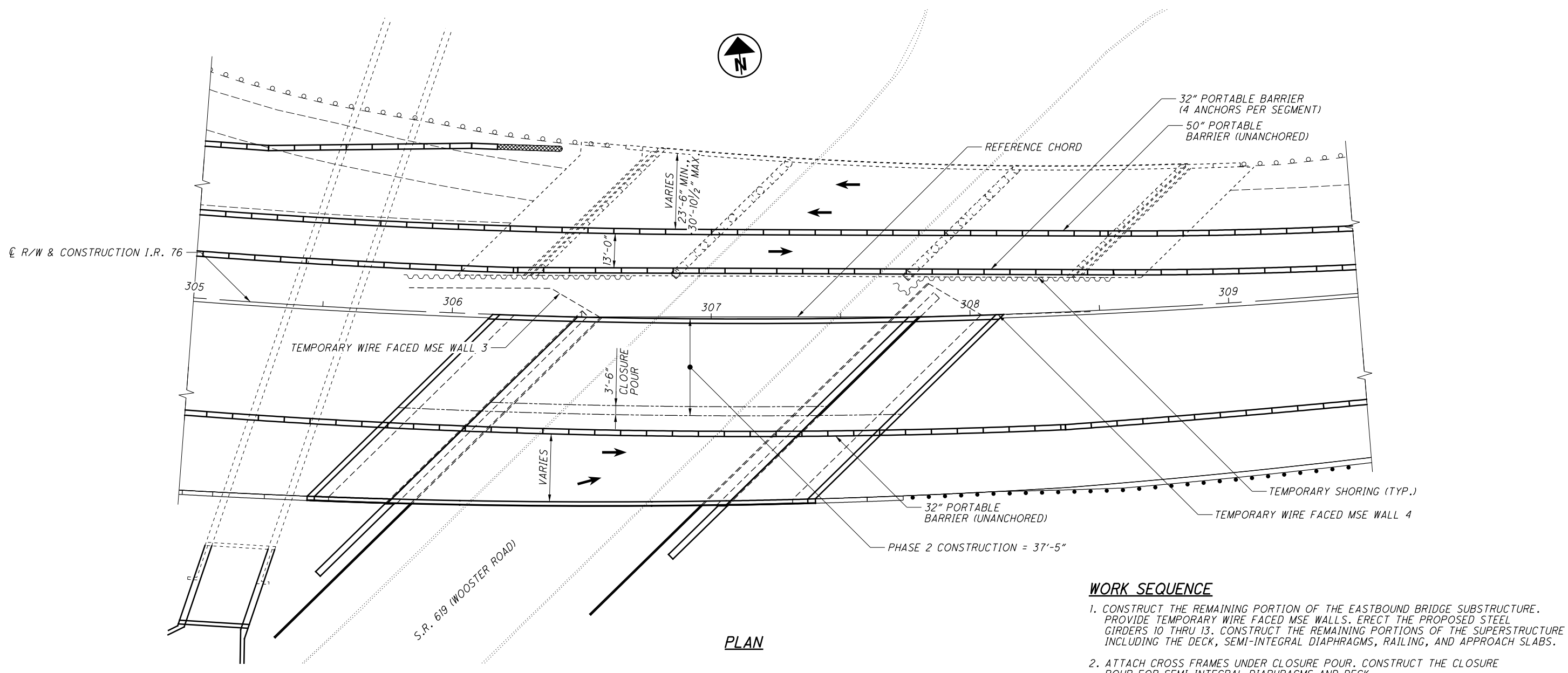
**WORK SEQUENCE**

1. ERECT THE PORTABLE BARRIER ON THE NEWLY CONSTRUCTED RIGHT PORTION OF THE EASTBOUND STRUCTURE AS SHOWN. REFER TO STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.
2. REMOVE THE REMAINING PORTIONS OF THE EXISTING EASTBOUND STRUCTURE AND A PORTION OF THE EXISTING WESTBOUND STRUCTURE. THE CUT LINE IS PARALLEL TO THE BEAM. PROVIDE TEMPORARY SHORING TO ACCOMMODATE REMOVAL OF THE EXISTING SUBSTRUCTURES AND PHASE 2 CONSTRUCTION.



**PHASE 2 MAINTENANCE OF TRAFFIC AND REMOVAL**  
 CROSS FRAMES NOT SHOWN

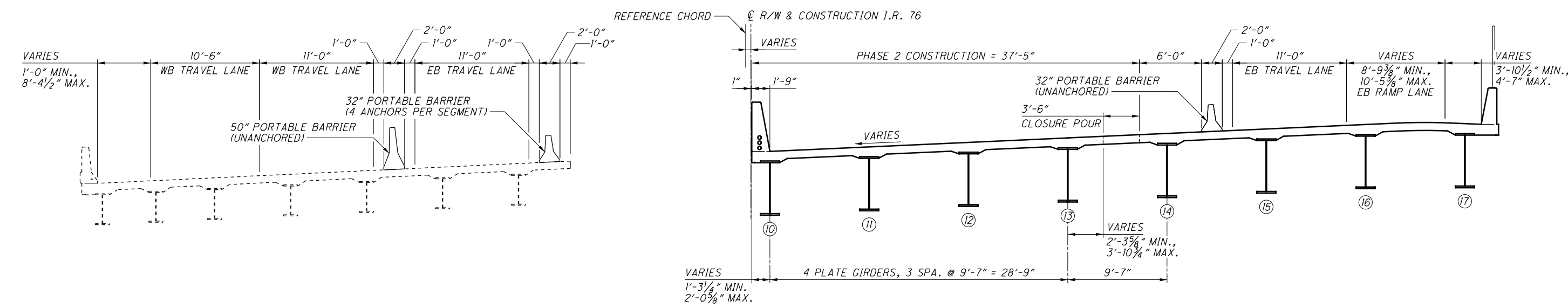
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**PLAN**

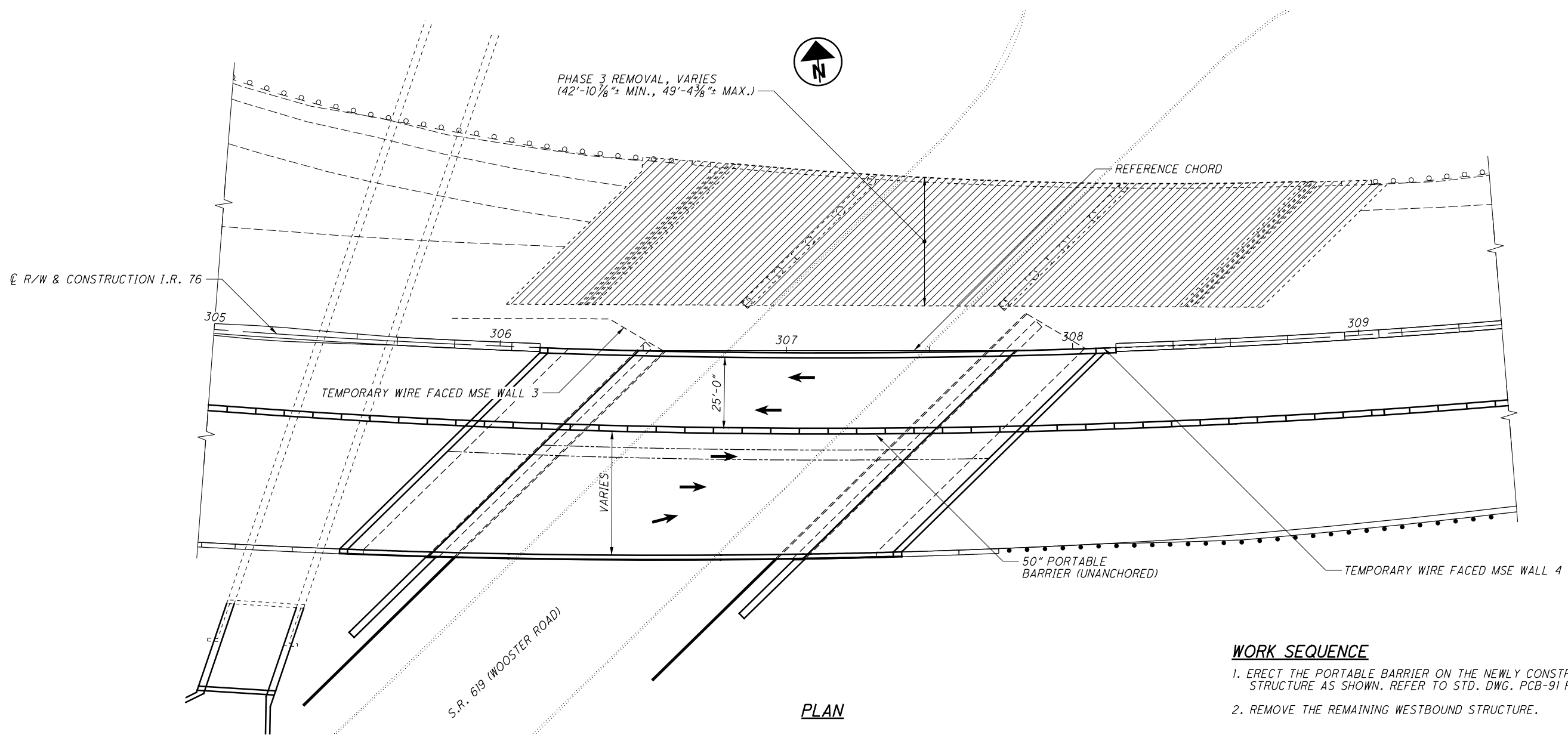
**WORK SEQUENCE**

1. CONSTRUCT THE REMAINING PORTION OF THE EASTBOUND BRIDGE SUBSTRUCTURE. PROVIDE TEMPORARY WIRE FACED MSE WALLS. ERECT THE PROPOSED STEEL GIRDERS 10 THRU 13. CONSTRUCT THE REMAINING PORTIONS OF THE SUPERSTRUCTURE INCLUDING THE DECK, SEMI-INTEGRAL DIAPHRAGMS, RAILING, AND APPROACH SLABS.
2. ATTACH CROSS FRAMES UNDER CLOSURE POUR. CONSTRUCT THE CLOSURE POUR FOR SEMI-INTEGRAL DIAPHRAGMS AND DECK.



**PHASE 2 CONSTRUCTION**  
CROSS FRAMES NOT SHOWN

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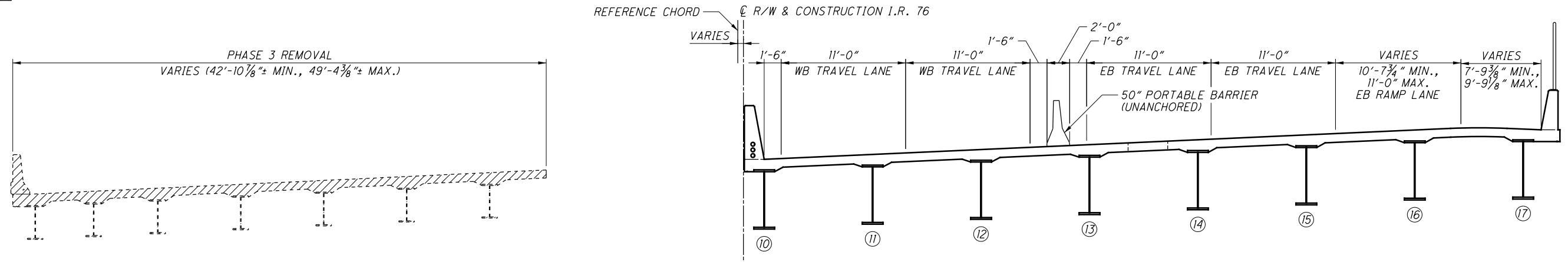


**WORK SEQUENCE**

1. ERECT THE PORTABLE BARRIER ON THE NEWLY CONSTRUCTED EASTBOUND STRUCTURE AS SHOWN. REFER TO STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.
2. REMOVE THE REMAINING WESTBOUND STRUCTURE.

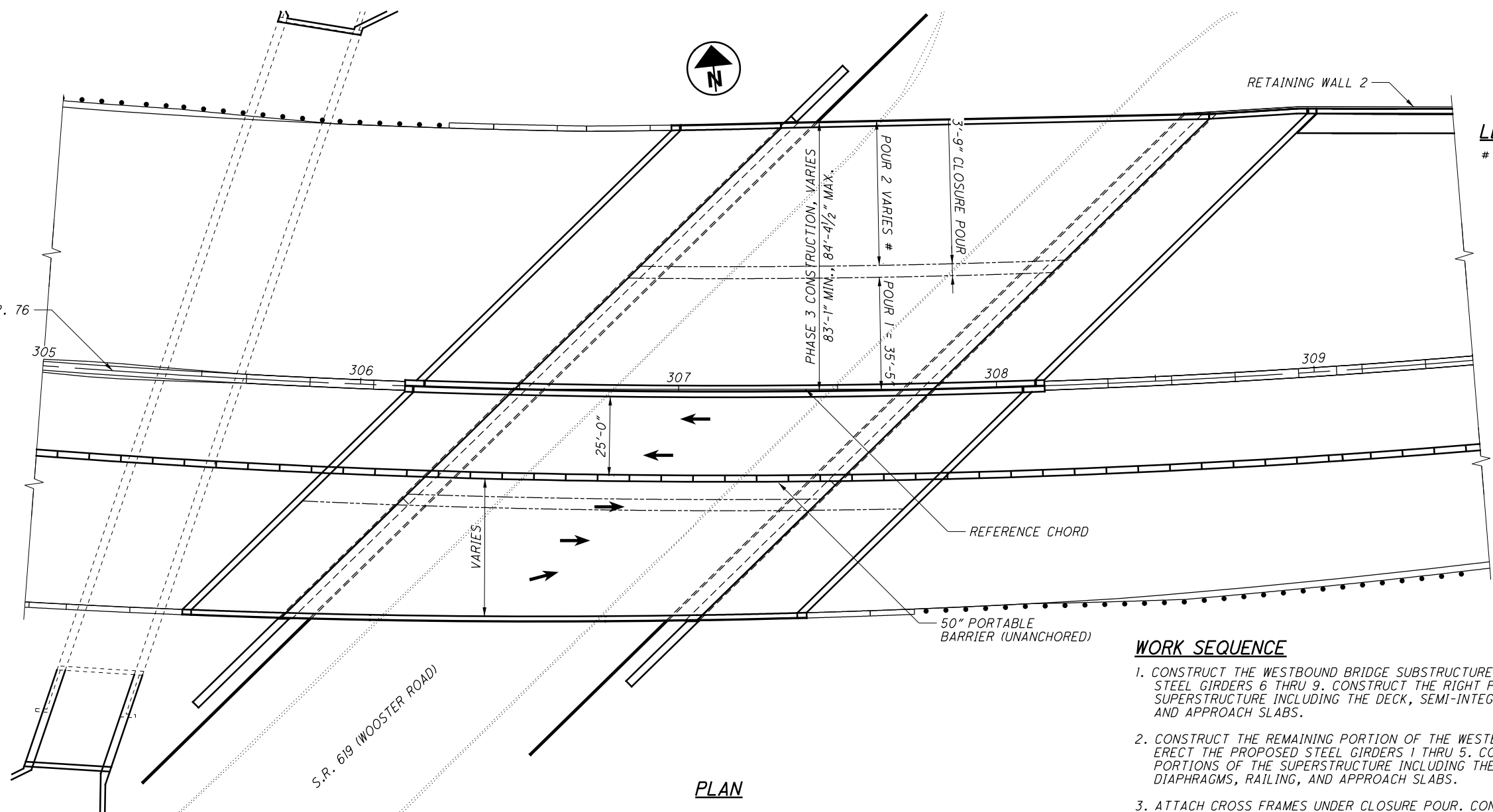
**LEGEND**

STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN



**PHASE 3 MAINTENANCE OF TRAFFIC AND REMOVAL**  
 CROSS FRAMES NOT SHOWN

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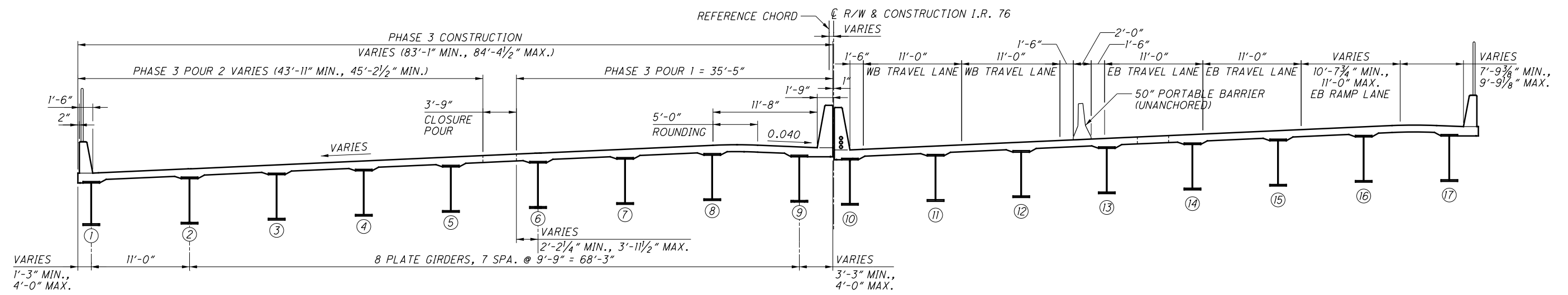


**LEGEND**  
# - (43'-11" MIN., 45'-2 1/2" MAX.)

**WORK SEQUENCE**

1. CONSTRUCT THE WESTBOUND BRIDGE SUBSTRUCTURE. ERECT THE PROPOSED STEEL GIRDERS 6 THRU 9. CONSTRUCT THE RIGHT PORTION OF THE WESTBOUND SUPERSTRUCTURE INCLUDING THE DECK, SEMI-INTEGRAL DIAPHRAGMS, RAILING, AND APPROACH SLABS.
2. CONSTRUCT THE REMAINING PORTION OF THE WESTBOUND BRIDGE SUPERSTRUCTURE. ERECT THE PROPOSED STEEL GIRDERS 1 THRU 5. CONSTRUCT THE REMAINING PORTIONS OF THE SUPERSTRUCTURE INCLUDING THE DECK, SEMI-INTEGRAL DIAPHRAGMS, RAILING, AND APPROACH SLABS.
3. ATTACH CROSS FRAMES UNDER CLOSURE POUR. CONSTRUCT THE CLOSURE POUR FOR SEMI-INTEGRAL DIAPHRAGMS AND DECK.
4. REMOVE THE PORTABLE BARRIER AND OPEN COMPLETED BRIDGE TO TRAFFIC. PERFORM MISCELLANEOUS TASKS SUCH AS SEALING CONCRETE SURFACES.

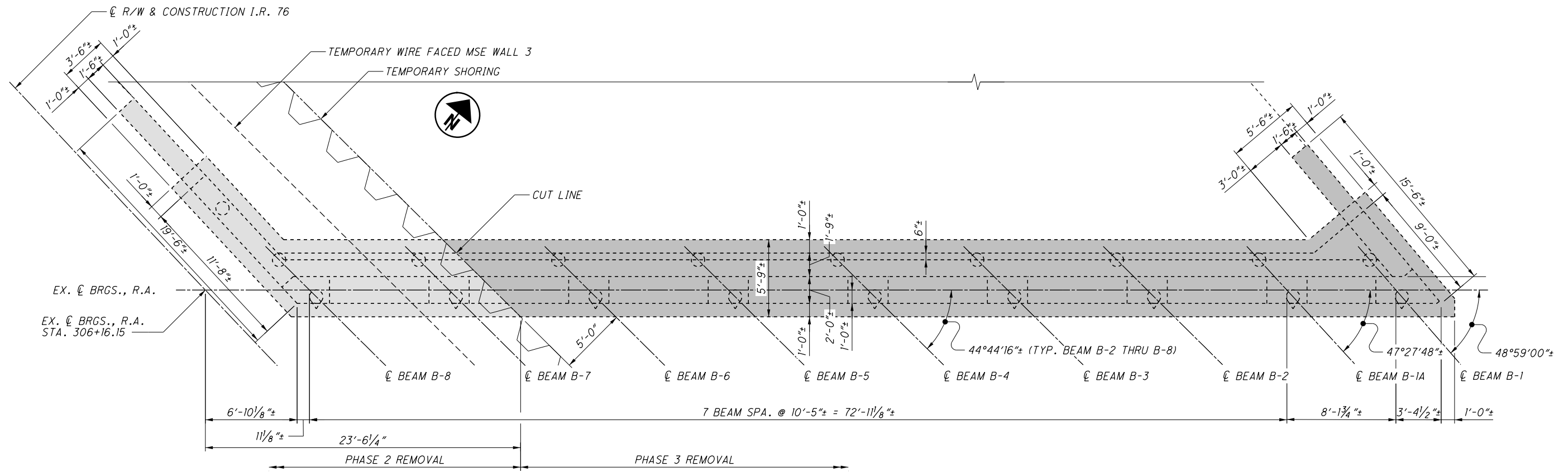
**PLAN**



**PHASE 3 CONSTRUCTION**  
CROSS FRAMES NOT SHOWN

	DESIGNED	DATE
	ERK	5/4/2017
PHASE 3 CONSTRUCTION BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)	REVIEWED	STRUCTURE FILE NUMBER
	WHM	7705493
SUM-76-5.53 PID No. 96670	DRAWN	
	ERK	
12 / 78 576 672	CHECKED	
	GDJ	

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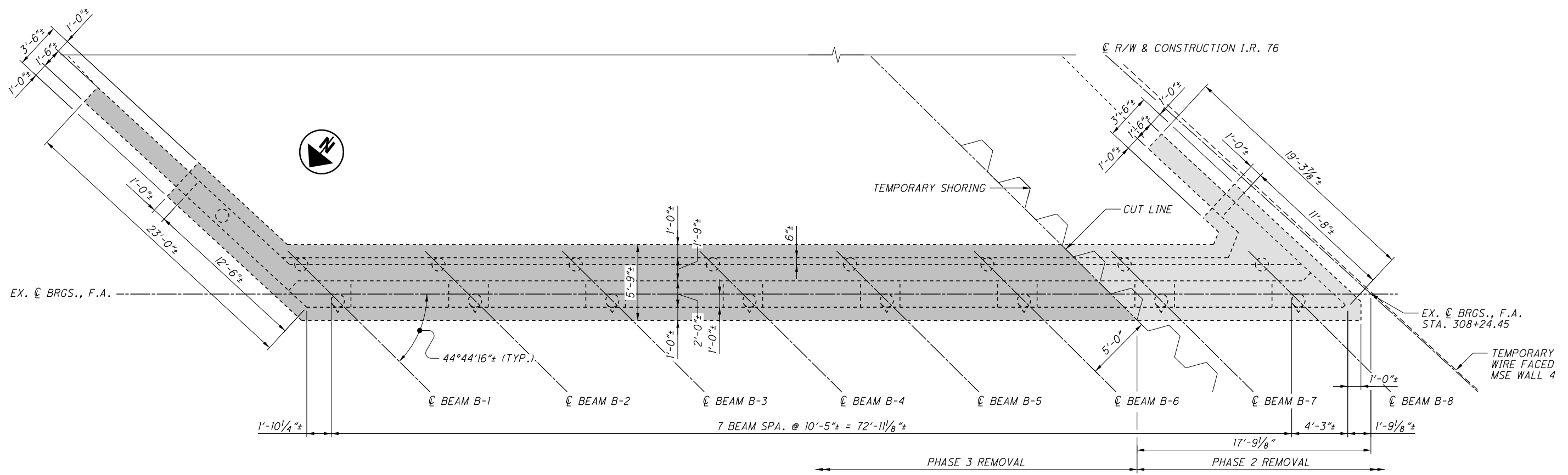
**LEGEND**

- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 2
- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 3

**PLAN - REAR ABUTMENT**

**NOTES**

1. SEE SHEETS 18/78 AND 20/78 FOR TEMPORARY SHORING DETAILS.
2. SEE SHEETS 23/78 AND 24/78 FOR TEMPORARY WIRE FACED MSE WALL DETAILS.

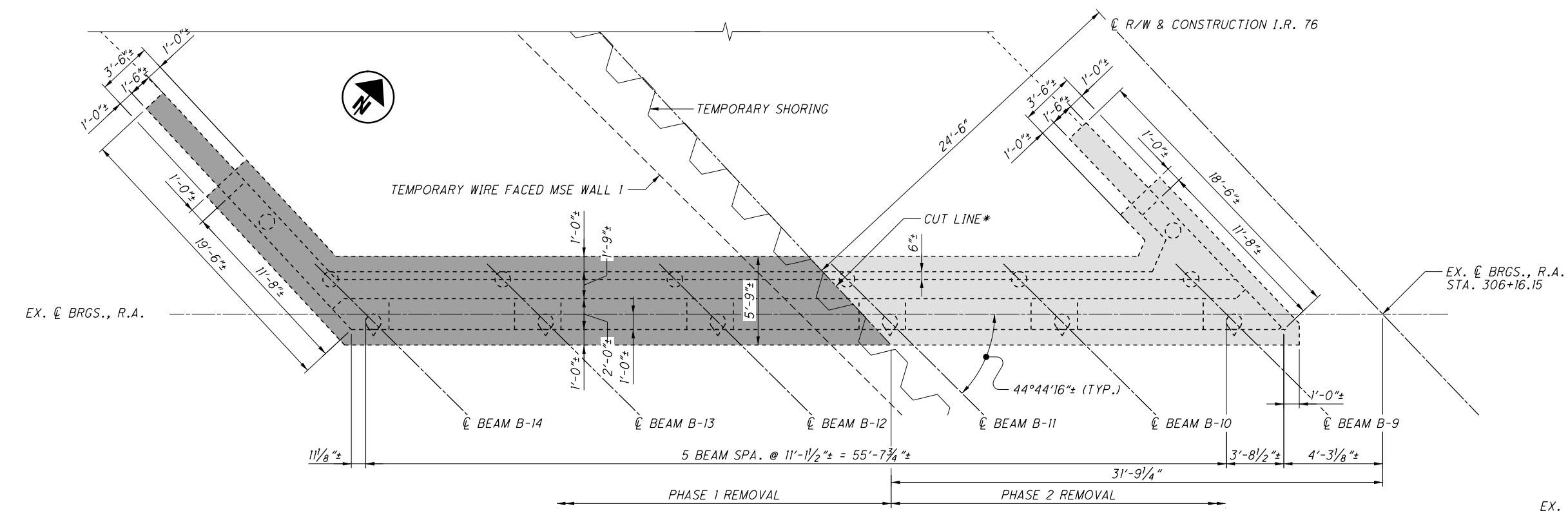


**PLAN - FORWARD ABUTMENT**

<b>DESIGN AGENCY</b> <b>CARPENTER MARTY</b> <small>TRANSPORTATION</small>
DATE: 5/4/2017 REVIEWED: WHM STRUCTURE FILE NUMBER: 7705493
DRAWN: ERK CHECKED: GDU REVISIONS:
<b>ABUTMENT REMOVAL DETAILS (WESTBOUND)</b> BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)
<b>SUM-76-5.53</b> PID No. 96670
13 / 78
577 672



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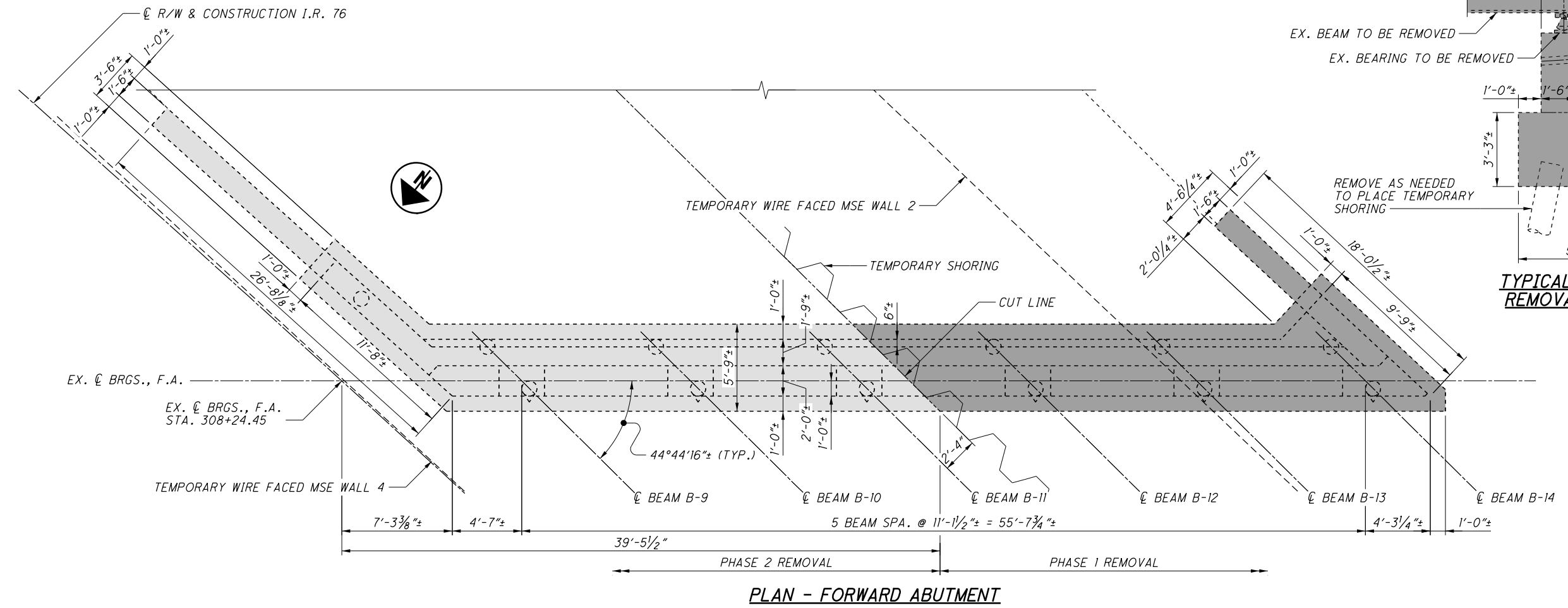


**LEGEND**

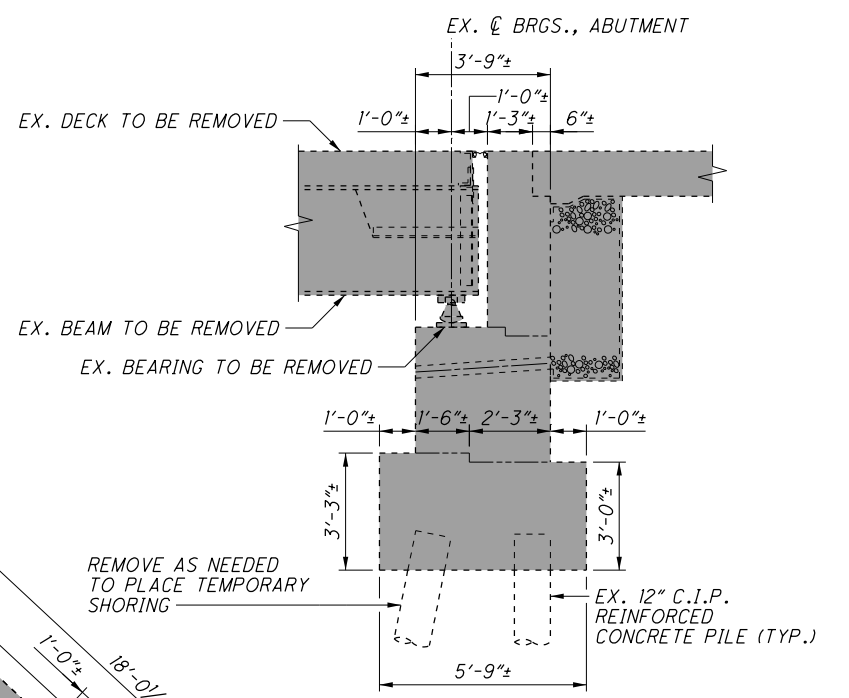
- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 1
- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 2
- \* CUT LINE PARALLEL TO THE CENTERLINE

**NOTES**

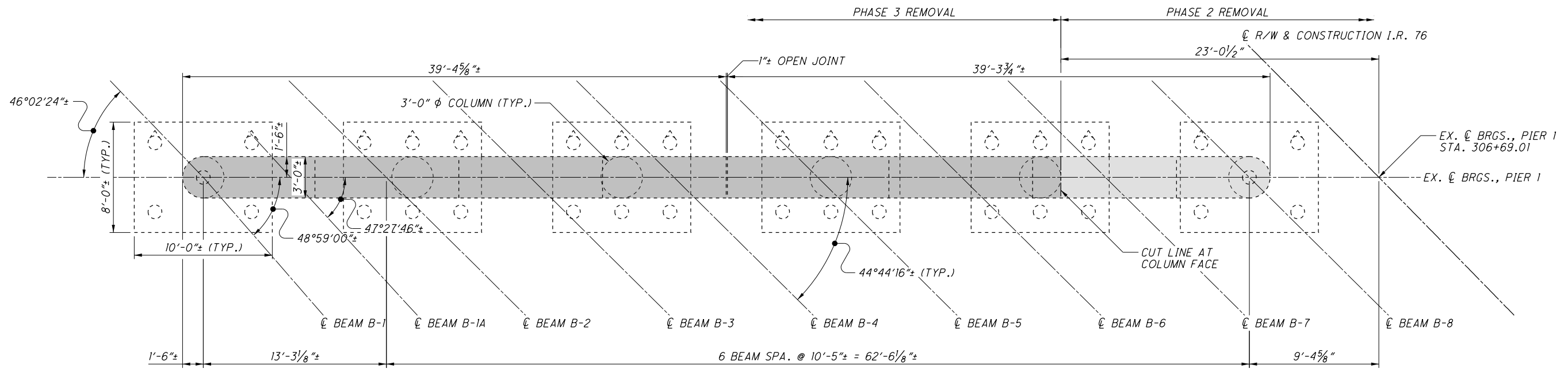
1. SEE SHEETS 17/78 AND 19/78 FOR TEMPORARY SHORING DETAILS.
2. SEE SHEETS 21/78 AND 22/78 FOR TEMPORARY WIRE FACED MSE WALL DETAILS.



**TYPICAL ABUTMENT REMOVAL SECTION**



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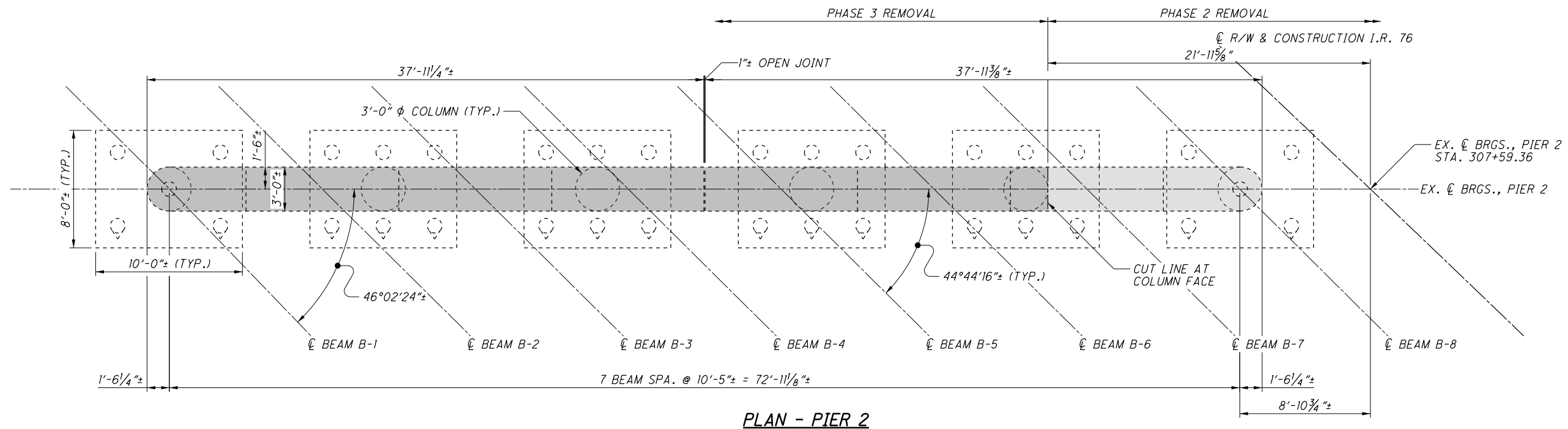


**LEGEND**

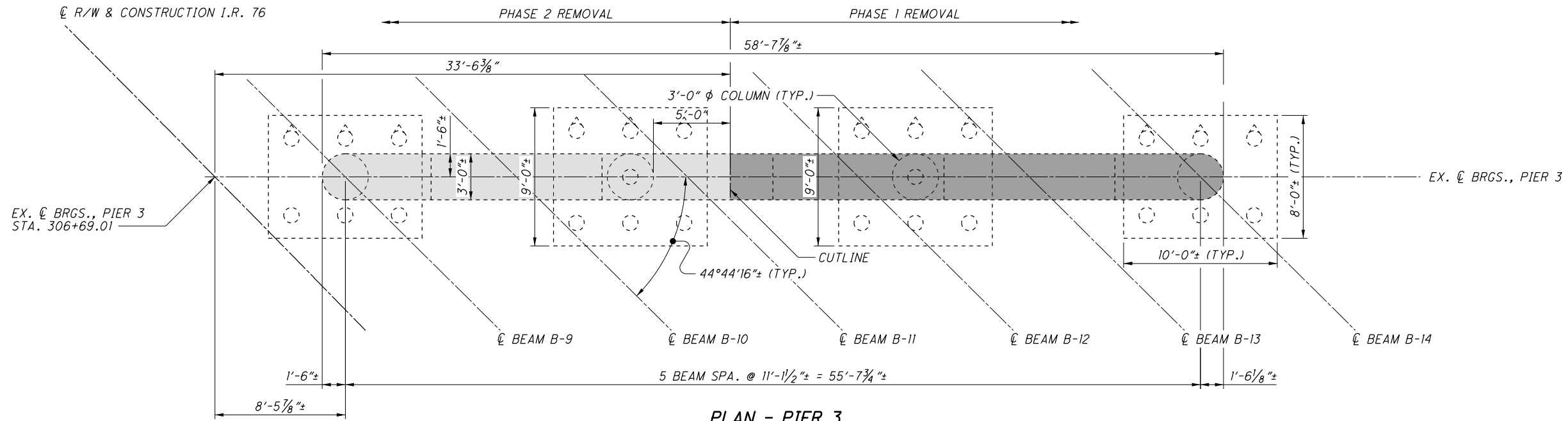
- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 2
- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 3

**NOTE**

REMOVE COLUMN FOOTINGS AS NEEDED TO FACILITATE CONSTRUCTION OF MSE WALLS.



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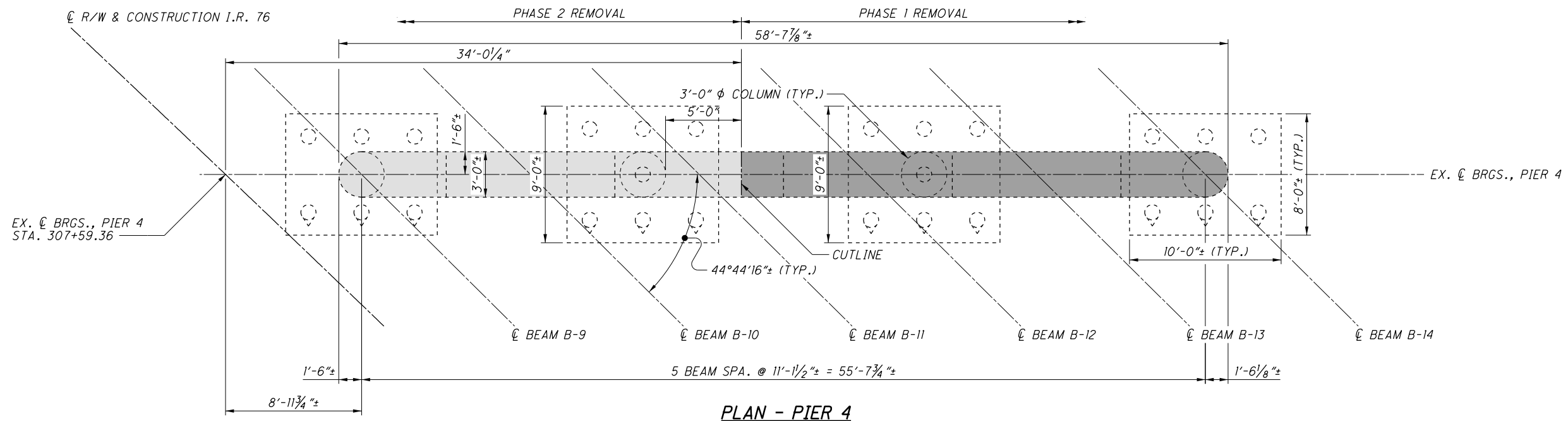
**PLAN - PIER 3**

**LEGEND**

- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 1
- STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 2

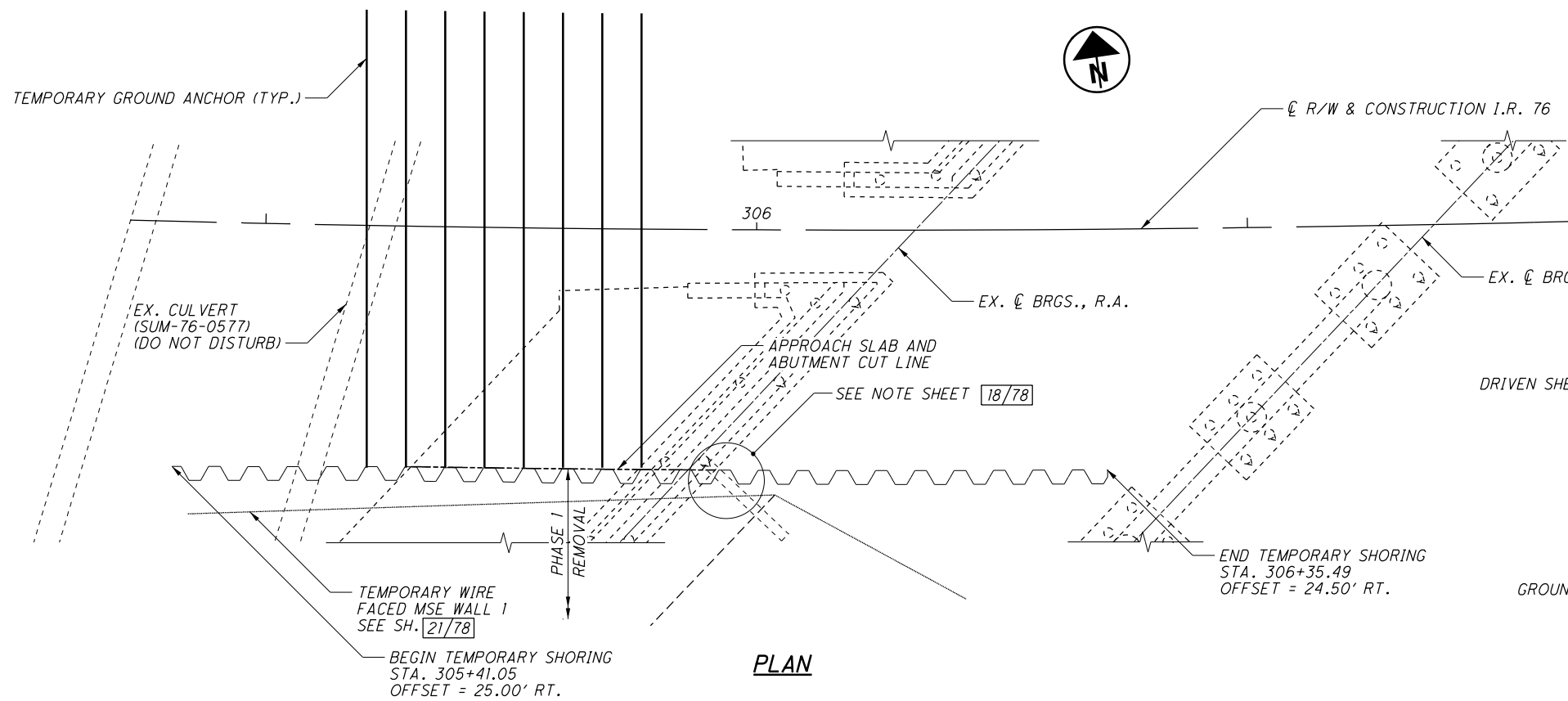
**NOTE**

REMOVE COLUMN FOOTINGS AS NEEDED TO FACILITATE CONSTRUCTION OF MSE WALLS.

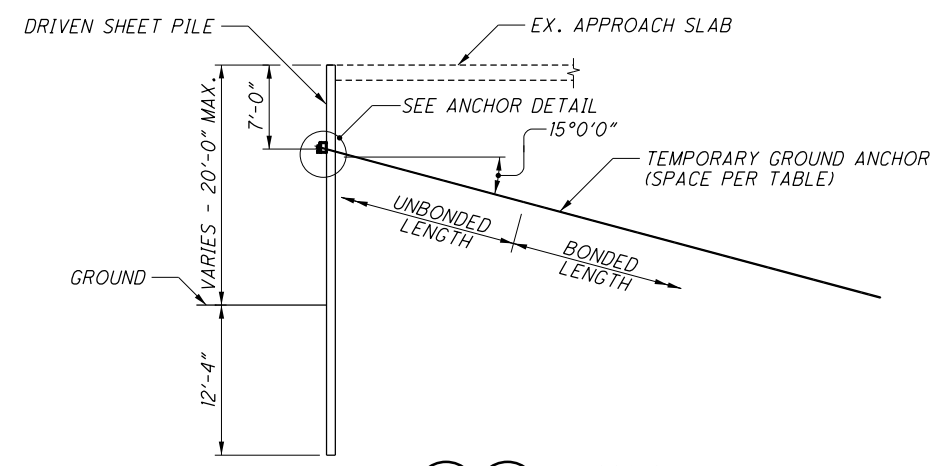


**PLAN - PIER 4**

P:\DDT\MP\0093\_SUM-76-5.62\SUM-76-5.62\Design\Structures\SUM076\_0580C\_Sheets\076\_0580C\_SH005.dgn Sheet 10/1/2018 2:09:01 PM cmt007

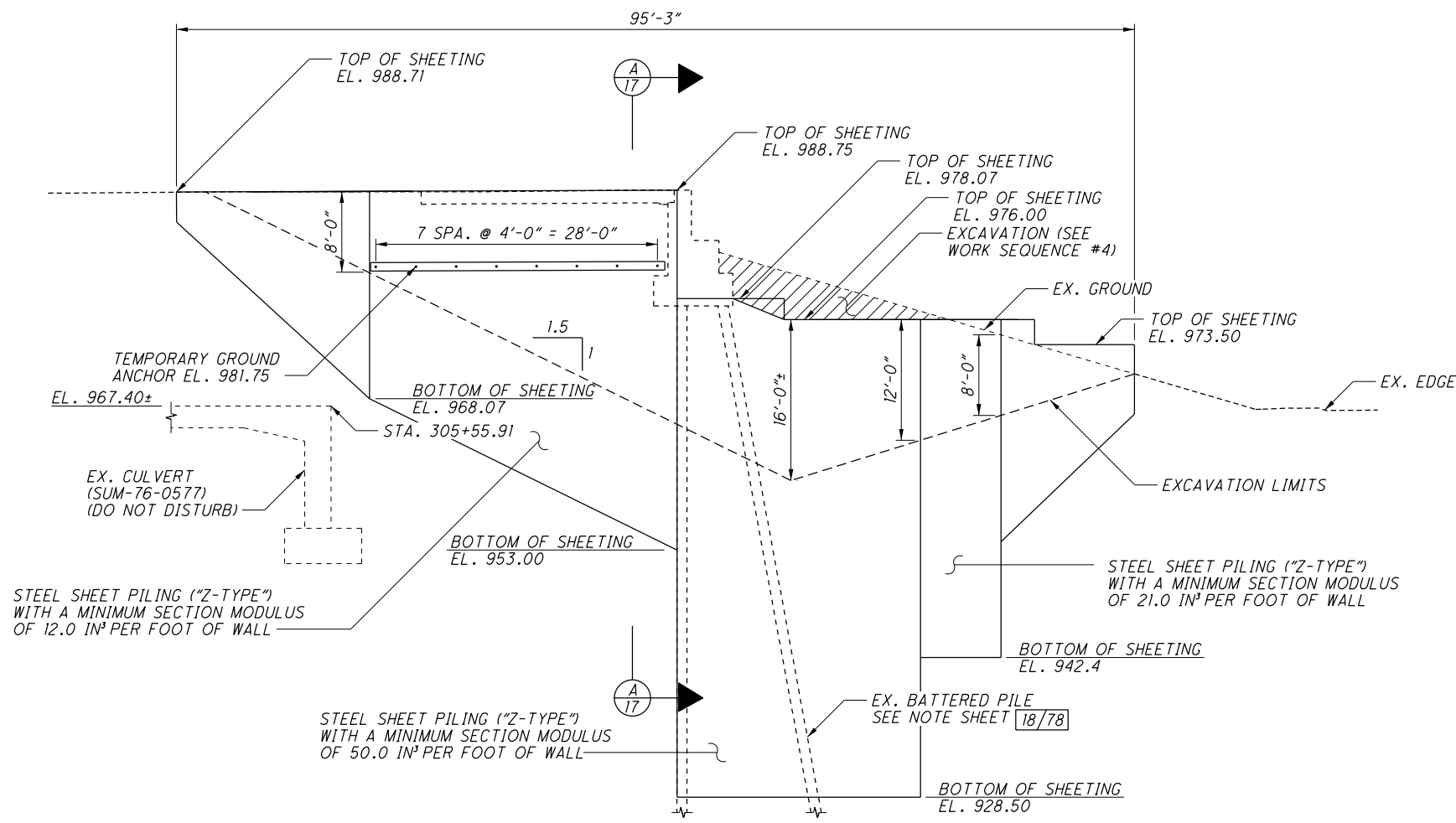


**PLAN**

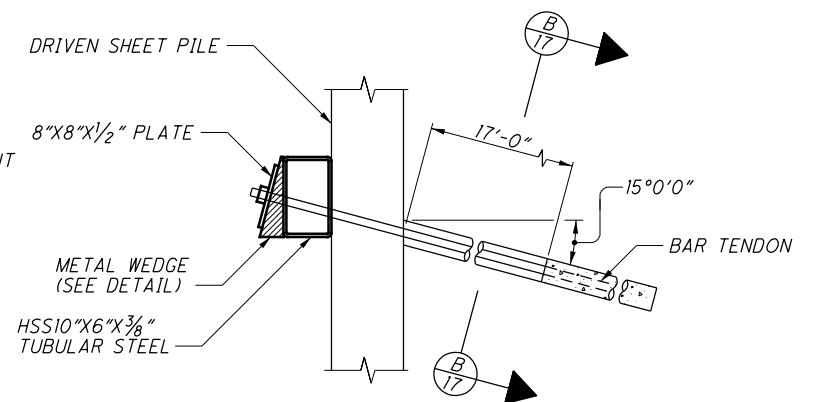


**A A SECTION**  
17 18

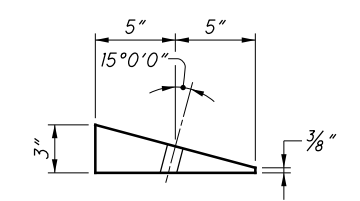
TABLE: GROUND ANCHOR				
SPACING (FT.)	DEPTH (FT.)	MAXIMUM TEST LOAD (KIPS)	UNBONDED LENGTH (FT.)	LOCK-OFF LOAD (KIPS)
4	12.3	69.1	17	47.0



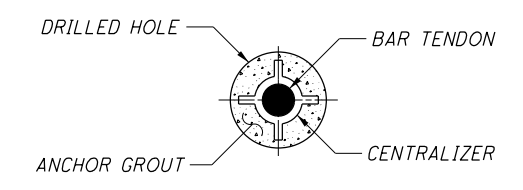
**ELEVATION**  
ALONG FRONT FACE



**TEMPORARY GROUND ANCHOR DETAIL**



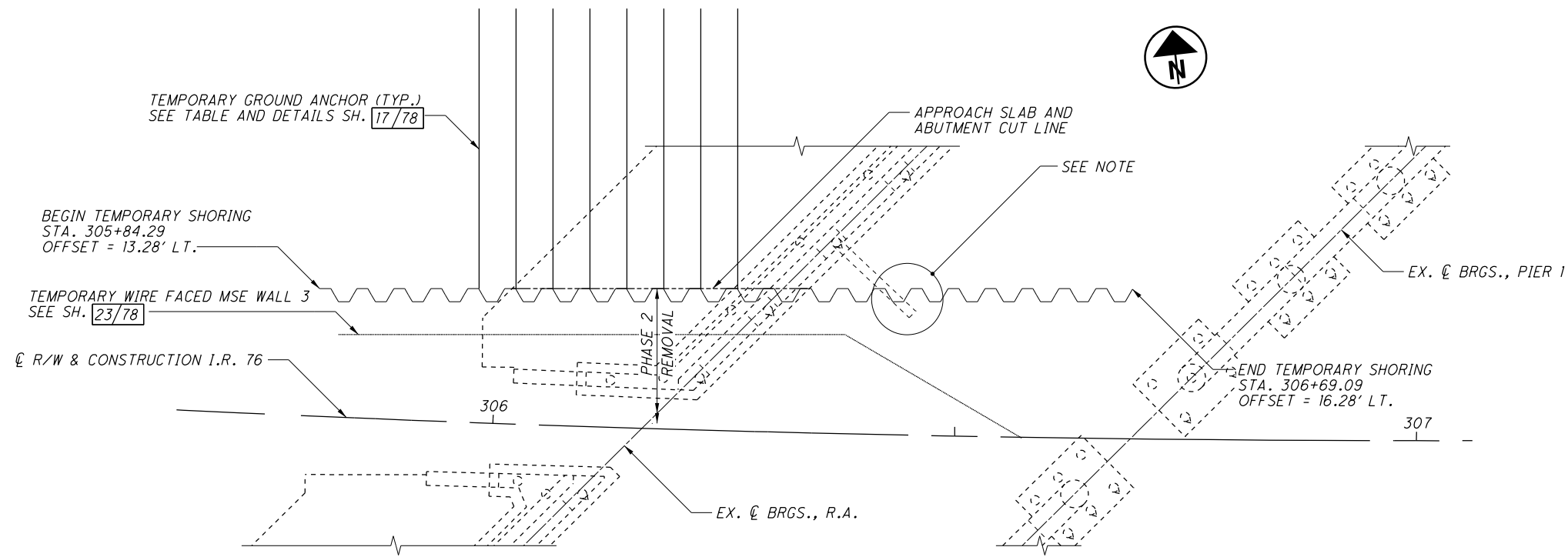
**TAPERED METAL WEDGE**



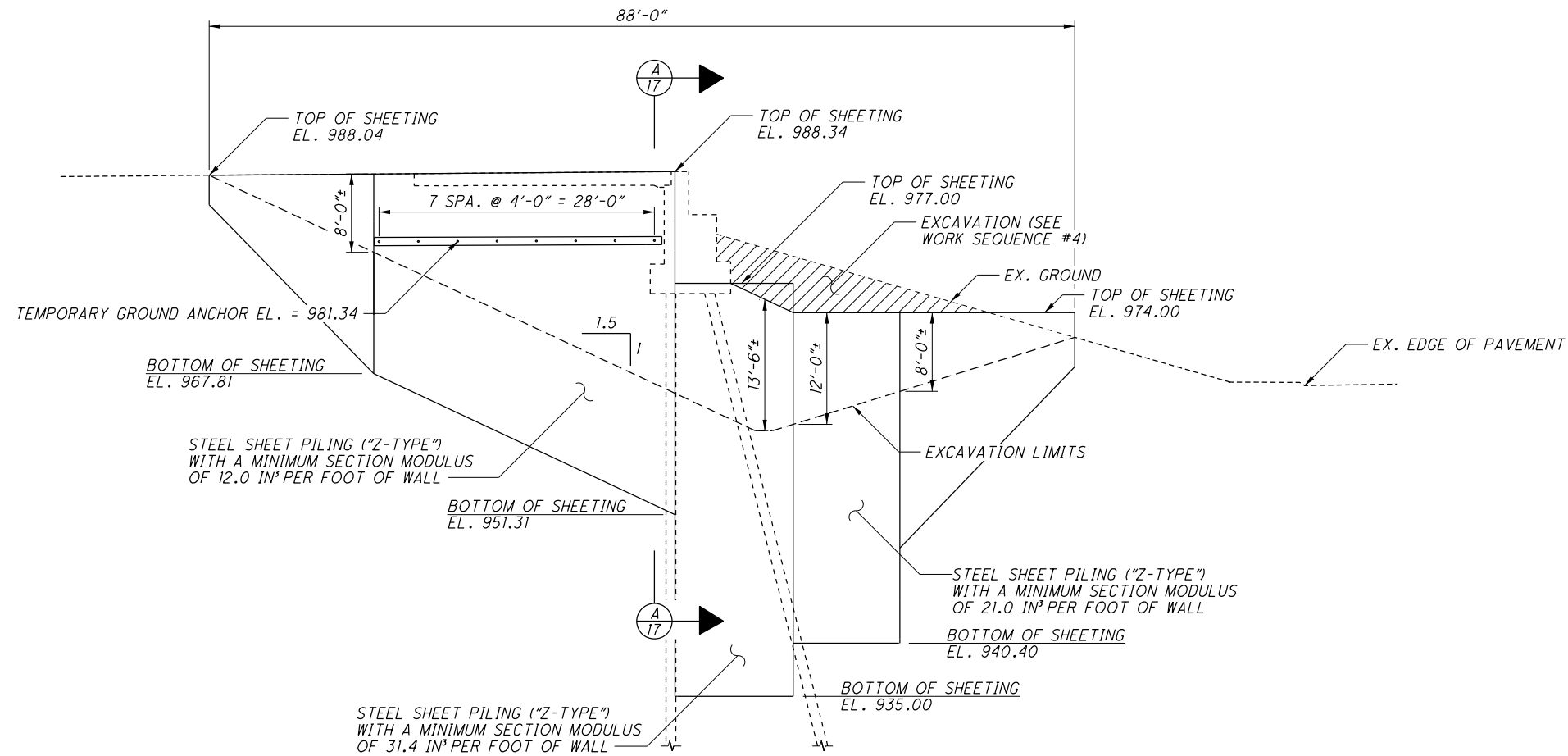
**B B SECTION**  
17

**NOTE**  
SEE WORK SEQUENCE ON SHEET 18/78

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**PLAN**



**ELEVATION**  
ALONG FRONT FACE

**WORK SEQUENCE:**

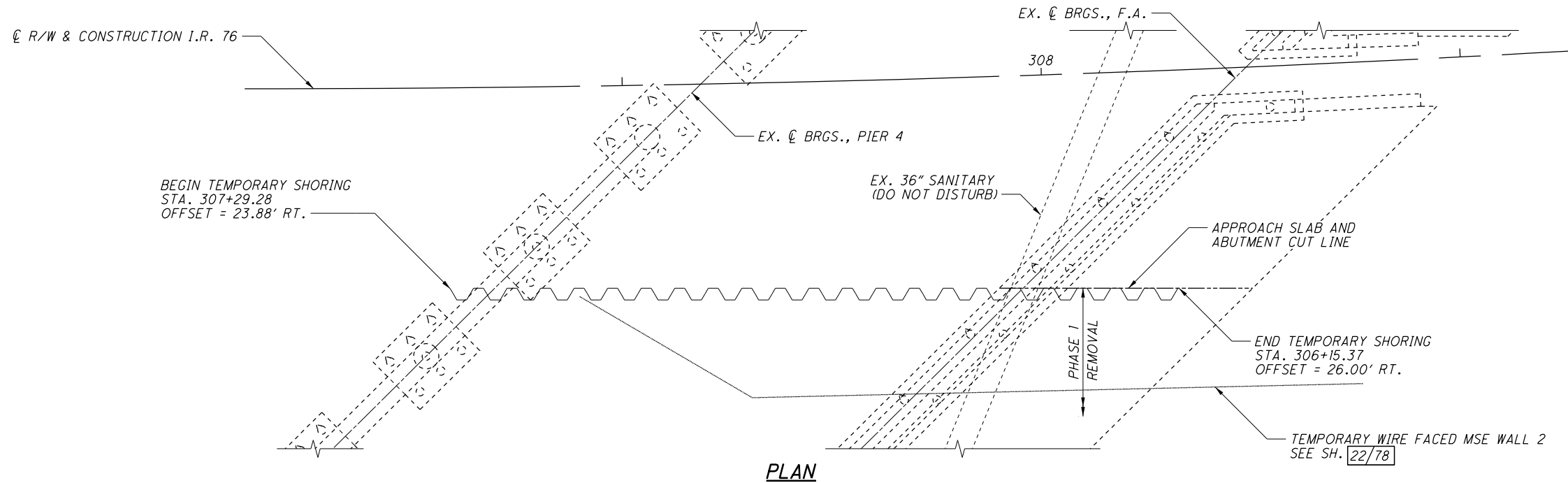
**REAR ABUTMENT**

1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT, DECK AND EMBANKMENT TO ALLOW INSTALLATION OF SHORING.
2. INSTALL SHORING BEHIND ABUTMENT.
3. INSTALL TEMPORARY GROUND ANCHORS.
4. EXCAVATE EXISTING GROUND.
5. INSTALL SHORING ADJACENT TO AND IN FRONT OF ABUTMENT.
6. COMPLETE EXCAVATION.
7. REMOVE SHEETING AND ANCHORS TO CONSTRUCT SUBSEQUENT PHASE.

**NOTE**

PRIOR TO DRIVING SHORING, EXPOSE AND REMOVE EX. BATTERED PILE TO LIMITS SUFFICIENT TO FACILITATE SHORING INSTALLATION. ALL LABOR, MATERIALS AND INCIDENTALS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202, STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

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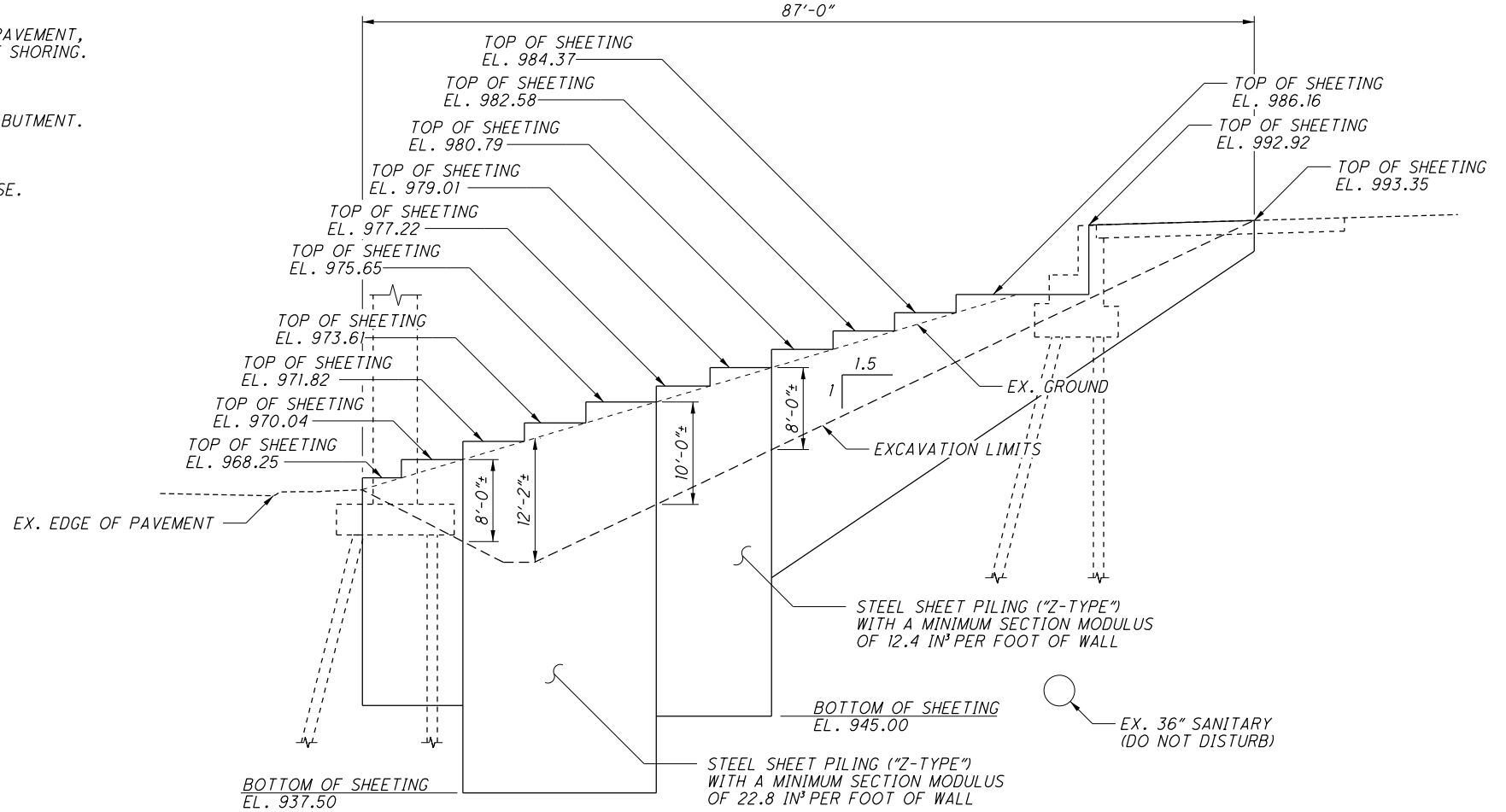


**PLAN**

**WORK SEQUENCE:**

**FORWARD ABUTMENT**

1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT, DECK AND EMBANKMENT TO ALLOW INSTALLATION OF SHORING.
2. INSTALL SHORING BEHIND ABUTMENT.
3. INSTALL SHORING ADJACENT TO AND IN FRONT OF ABUTMENT.
4. COMPLETE EXCAVATION.
5. REMOVE SHEETING TO CONSTRUCT SUBSEQUENT PHASE.

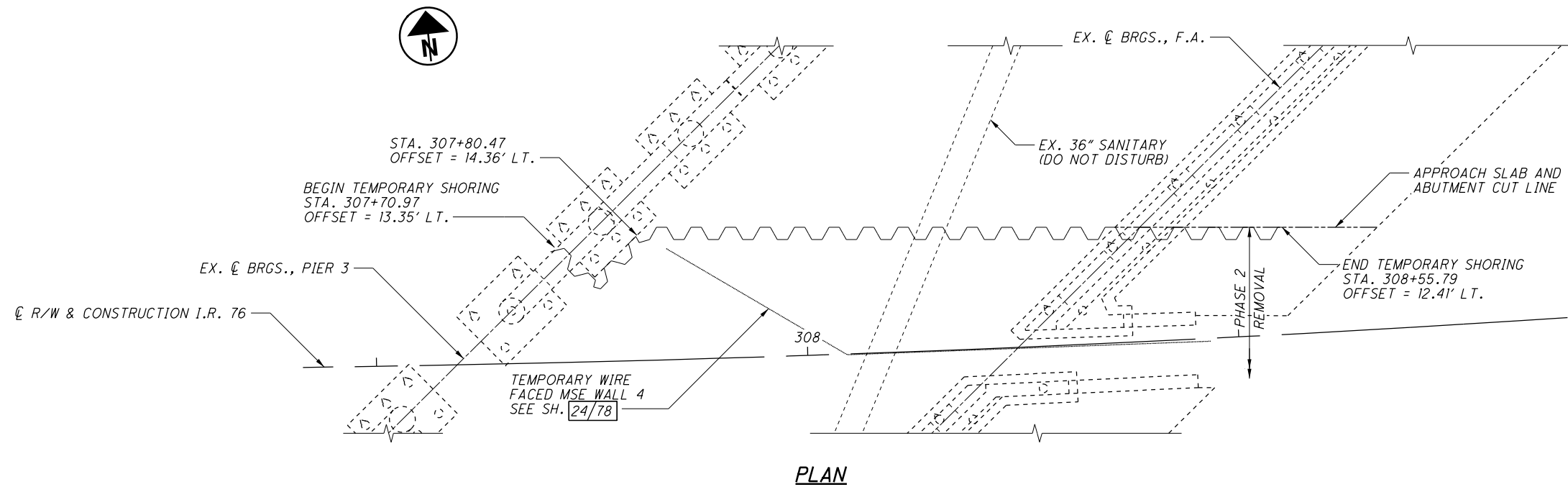


**ELEVATION**  
ALONG FRONT FACE

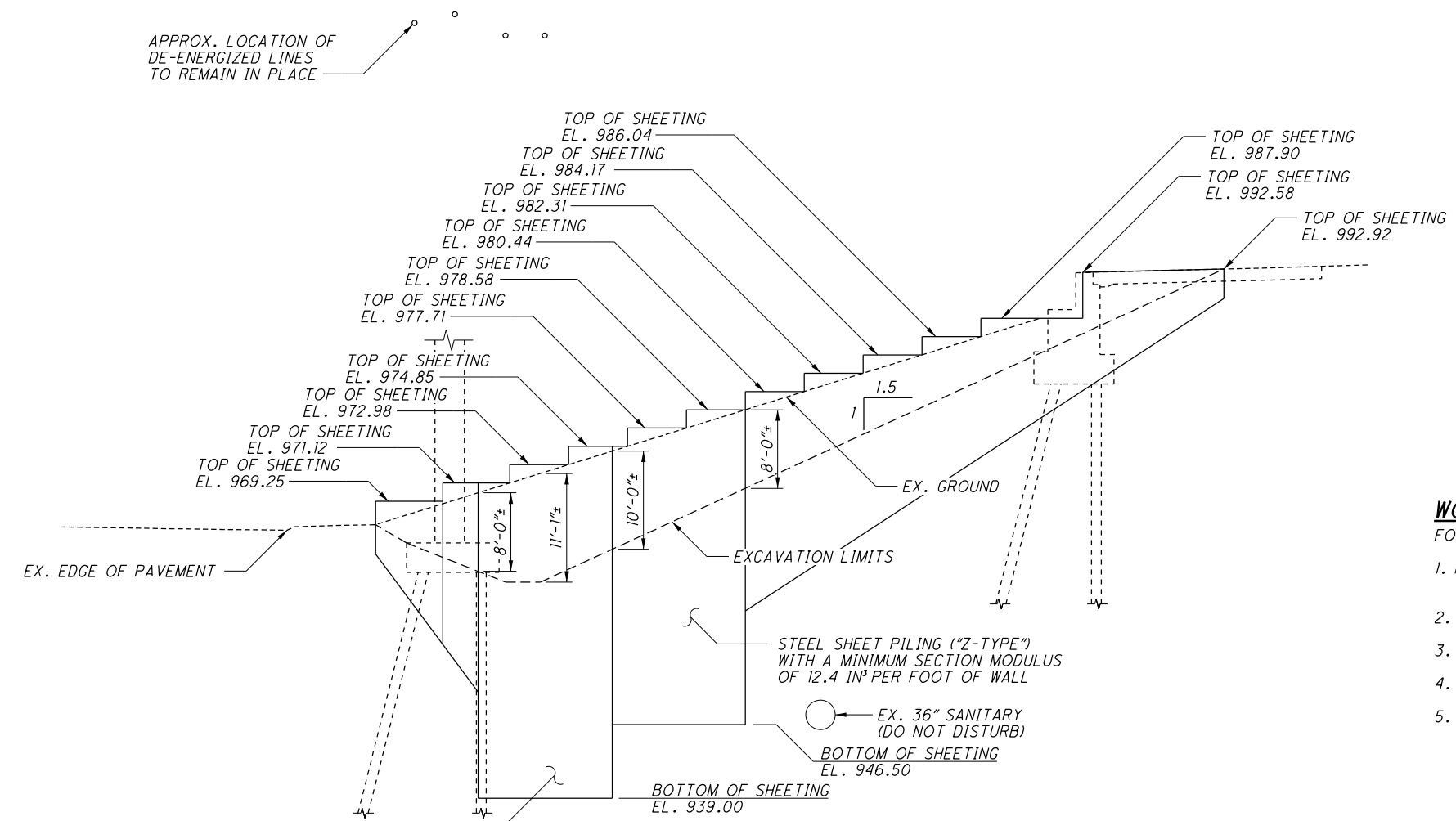
**NOTE**

TOP OF SHEETING TO BE A MINIMUM OF 6" ABOVE EXISTING GROUND LINE.

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PLAN



ELEVATION  
ALONG FRONT FACE

**WORK SEQUENCE:**

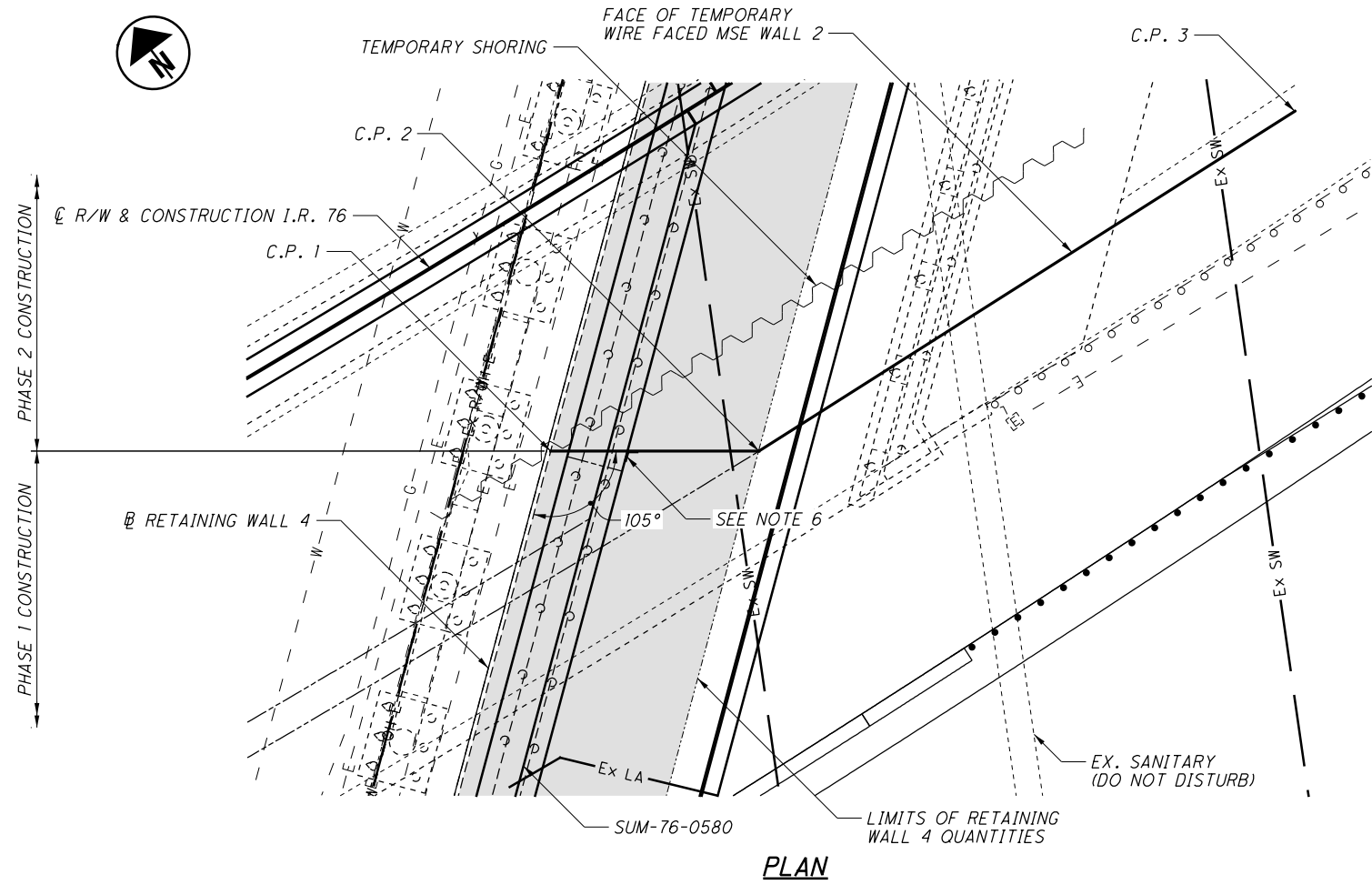
- FORWARD ABUTMENT
1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT, DECK AND EMBANKMENT TO ALLOW INSTALLATION OF SHORING.
  2. INSTALL SHORING BEHIND ABUTMENT.
  3. INSTALL SHORING ADJACENT TO AND IN FRONT OF ABUTMENT.
  4. COMPLETE EXCAVATION.
  5. REMOVE SHEETING TO CONSTRUCT SUBSEQUENT PHASE.

**NOTE**  
TOP OF SHEETING TO BE A MINIMUM OF 6" ABOVE EXISTING GROUND LINE.

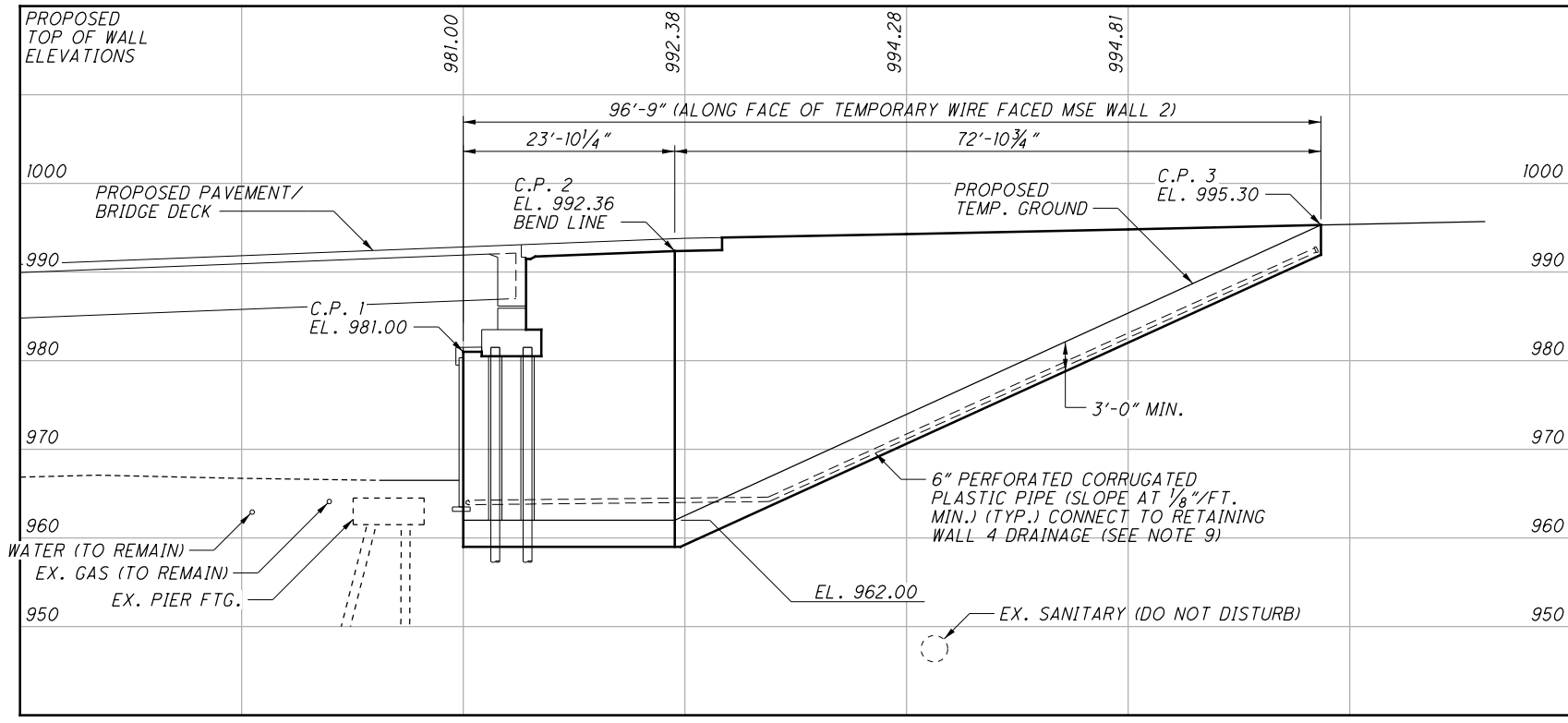




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C.P. NUMBER	STA. @ RET. WALL 4	OFFSET	STA. R/W & C CONSTR. I.R. 76	OFFSET
1	41+60.05	0.46' RT.	307+44.57	25.07' RT.
2	41+53.87	23.50' RT.	307+64.71	37.50' RT.
3	41+00.25	72.85' LT.	308+36.64	37.44' RT.



**ELEVATION**  
ALONG FACE OF WALL

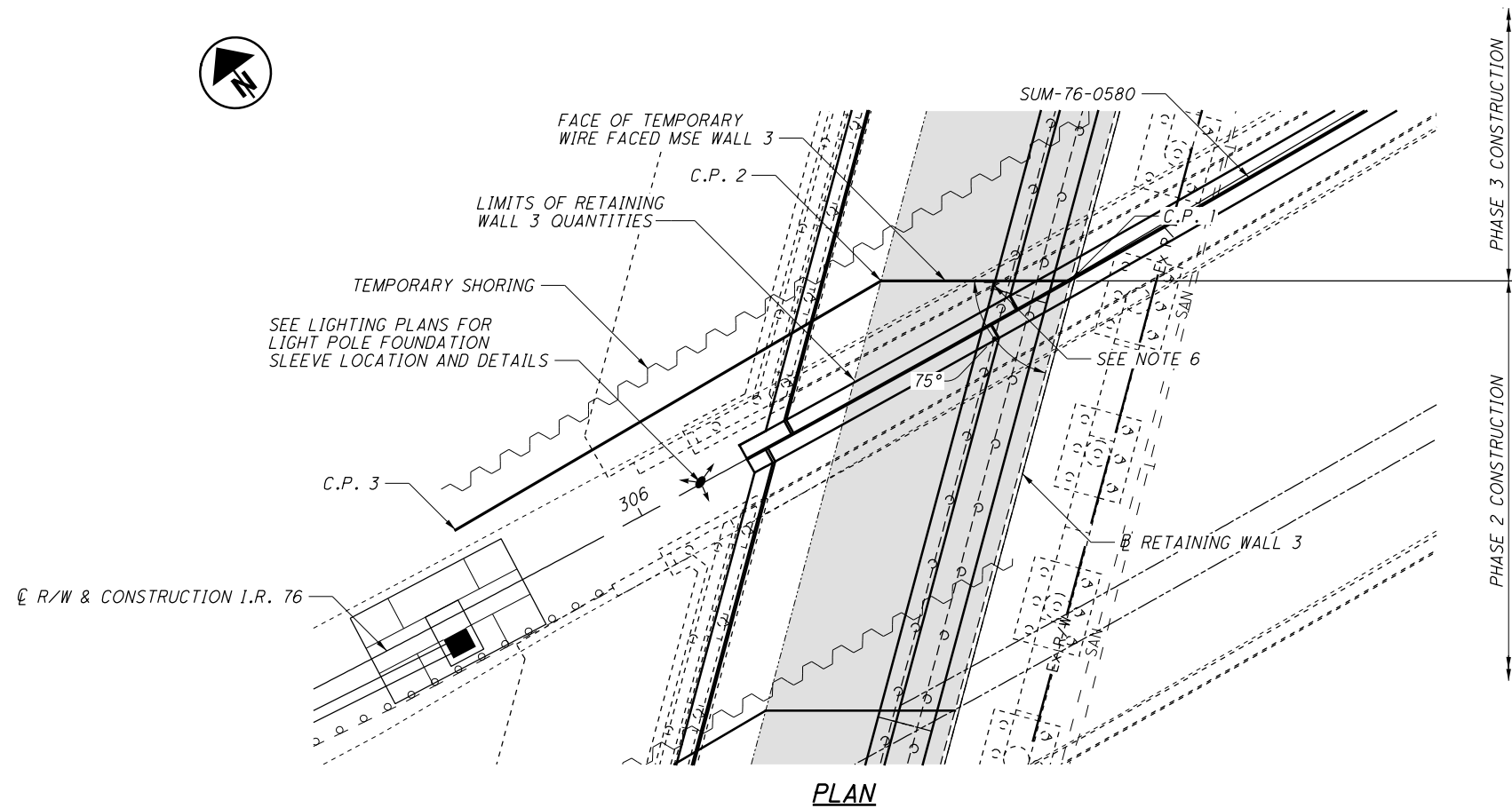
**NOTES**

1. THE MINIMUM DISTANCE FROM THE PROPOSED TEMPORARY GROUND SURFACE TO THE BOTTOM OF THE TEMPORARY WIRE FACED MSE WALL IS BASED ON A FROST DEPTH OF 3.0 FT.
2. THE RETAINING WALL 4 BASELINE IS LOCATED AT THE FRONT FACE OF THE WALL.
3. PERMANENT WALL MANUFACTURER SHALL ADJUST AND ARRANGE THE SOIL REINFORCEMENT IN THE PHASE CONSTRUCTION DIVISION AREA FOR PROPER ENGAGEMENT OF THE SOIL MASS.
4. SEE SHEET 19/78 FOR TEMPORARY SHORING DETAILS.
5. TOP OF WALL ELEVATIONS OUTSIDE OF THE PROPOSED BRIDGE LIMITS ARE SHOWN AT THE APPROXIMATE TOP OF PAVEMENT ELEVATION.
6. THE TEMPORARY WIRE FACED MSE WALL SHALL BE DESIGNED BY THE SUPPLIER TO CONTAIN PHASE 1 EMBANKMENT AND ALLOW ACCESS TO TIE PHASE 2 BRIDGE CONSTRUCTION WITH PHASE 1.
7. SEE RETAINING WALL PLAN SHEETS 526/617 & 527/612 FOR RETAINING WALL 4 DETAILS.
8. THE FACTORED BEARING RESISTANCE AT THE BASE OF THE REINFORCED SOIL MASS IS 10.5 KSF FOR TEMPORARY WIRE FACED MSE WALL 2.
9. 6" PERFORATED CORRUGATED PLASTIC PIPE TO BE PAID FOR WITH ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL.

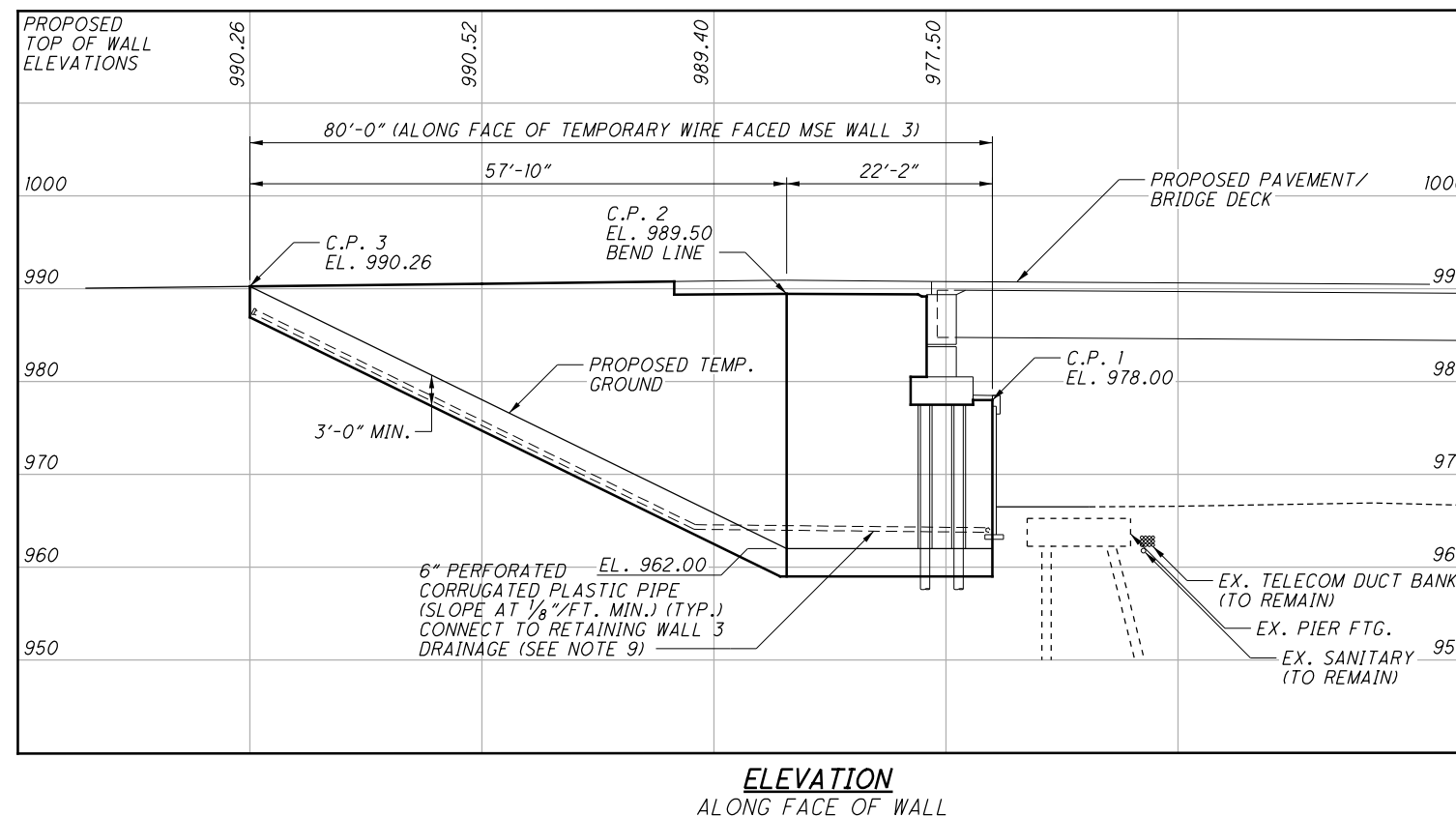
**LEGEND**

LIMITS OF RETAINING WALL 4 EXCAVATION

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TEMPORARY WIRE FACED MSE WALL 3 CONTROL POINTS				
C.P. NUMBER	STA. @ RET. WALL 3	OFFSET	STA. R/W & @ CONSTR. I.R. 76	OFFSET
1	31+76.29	0.46' LT.	306+57.26	0.08' RT.
2	31+70.55	21.88' LT.	306+37.87	10.75' LT.
3	31+29.39	62.51' LT.	305+79.88	8.82' LT.



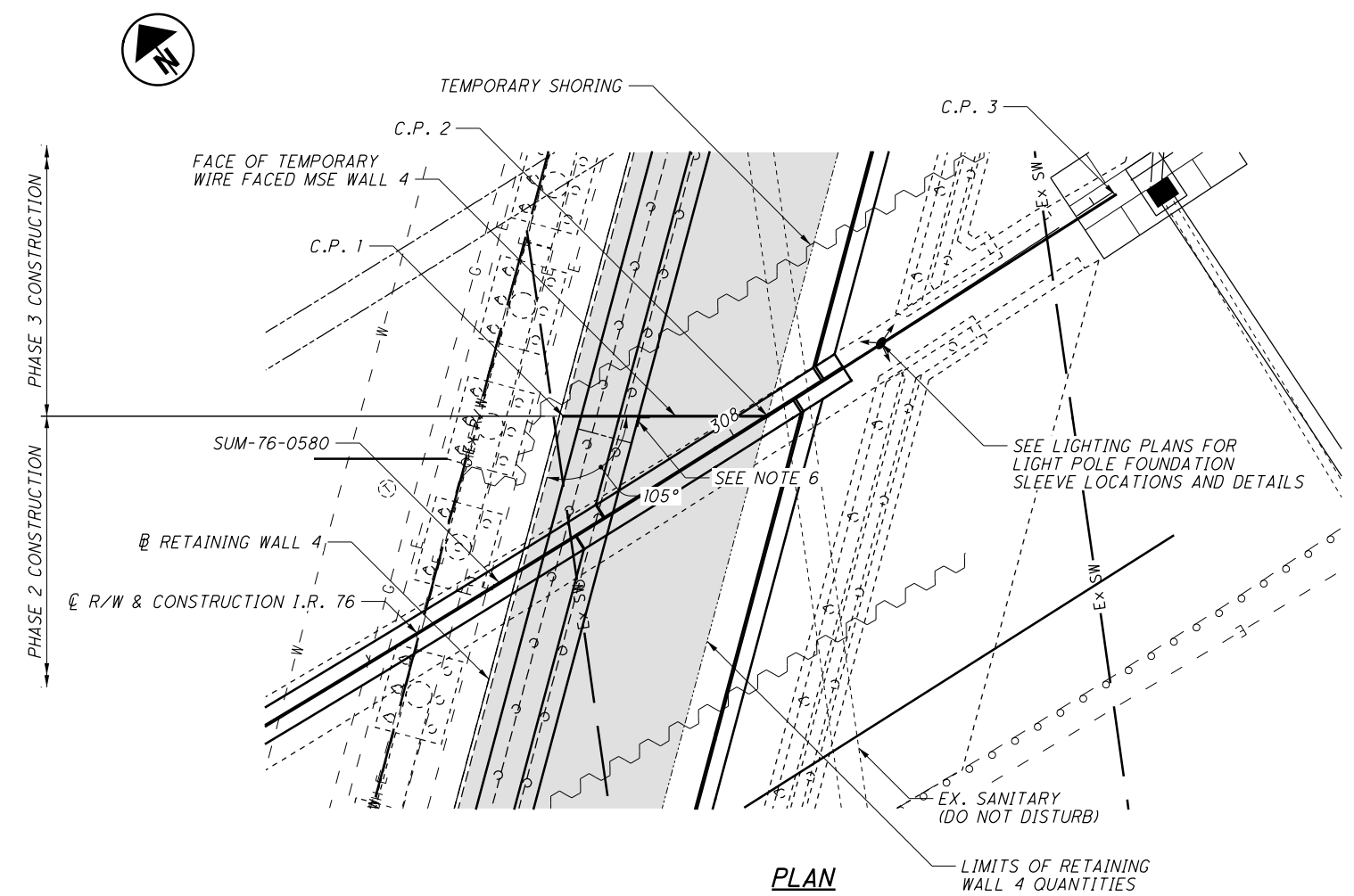
**NOTES**

1. THE MINIMUM DISTANCE FROM THE PROPOSED TEMPORARY GROUND SURFACE TO THE BOTTOM OF THE TEMPORARY WIRE FACED MSE WALL IS BASED ON A FROST DEPTH OF 3.0 FT.
2. THE RETAINING WALL 3 BASELINE IS LOCATED AT THE FRONT FACE OF THE WALL.
3. PERMANENT WALL MANUFACTURER SHALL ADJUST AND ARRANGE THE SOIL REINFORCEMENT IN THE PHASE CONSTRUCTION DIVISION AREA FOR PROPER ENGAGEMENT OF THE SOIL MASS.
4. SEE SHEET [18/78] FOR TEMPORARY SHORING DETAILS.
5. TOP OF WALL ELEVATIONS OUTSIDE OF THE PROPOSED BRIDGE LIMITS ARE SHOWN AT THE APPROXIMATE TOP OF PAVEMENT ELEVATION.
6. THE TEMPORARY WIRE FACED MSE WALL SHALL BE DESIGNED BY THE SUPPLIER TO CONTAIN PHASE 2 EMBANKMENT AND ALLOW ACCESS TO TIE PHASE 3 BRIDGE CONSTRUCTION WITH PHASE 2.
7. SEE RETAINING WALL PLAN SHEETS (524/672) & (525/672) FOR RETAINING WALL 3 DETAILS.
8. THE FACTORED BEARING RESISTANCE AT THE BASE OF THE REINFORCED SOIL MASS IS 9.3 KSF FOR TEMPORARY WIRE FACED MSE WALL 3.
9. 6" PERFORATED CORRUGATED PLASTIC PIPE TO BE PAID FOR WITH ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL.

**LEGEND**

▭ LIMITS OF RETAINING WALL 3 EXCAVATION

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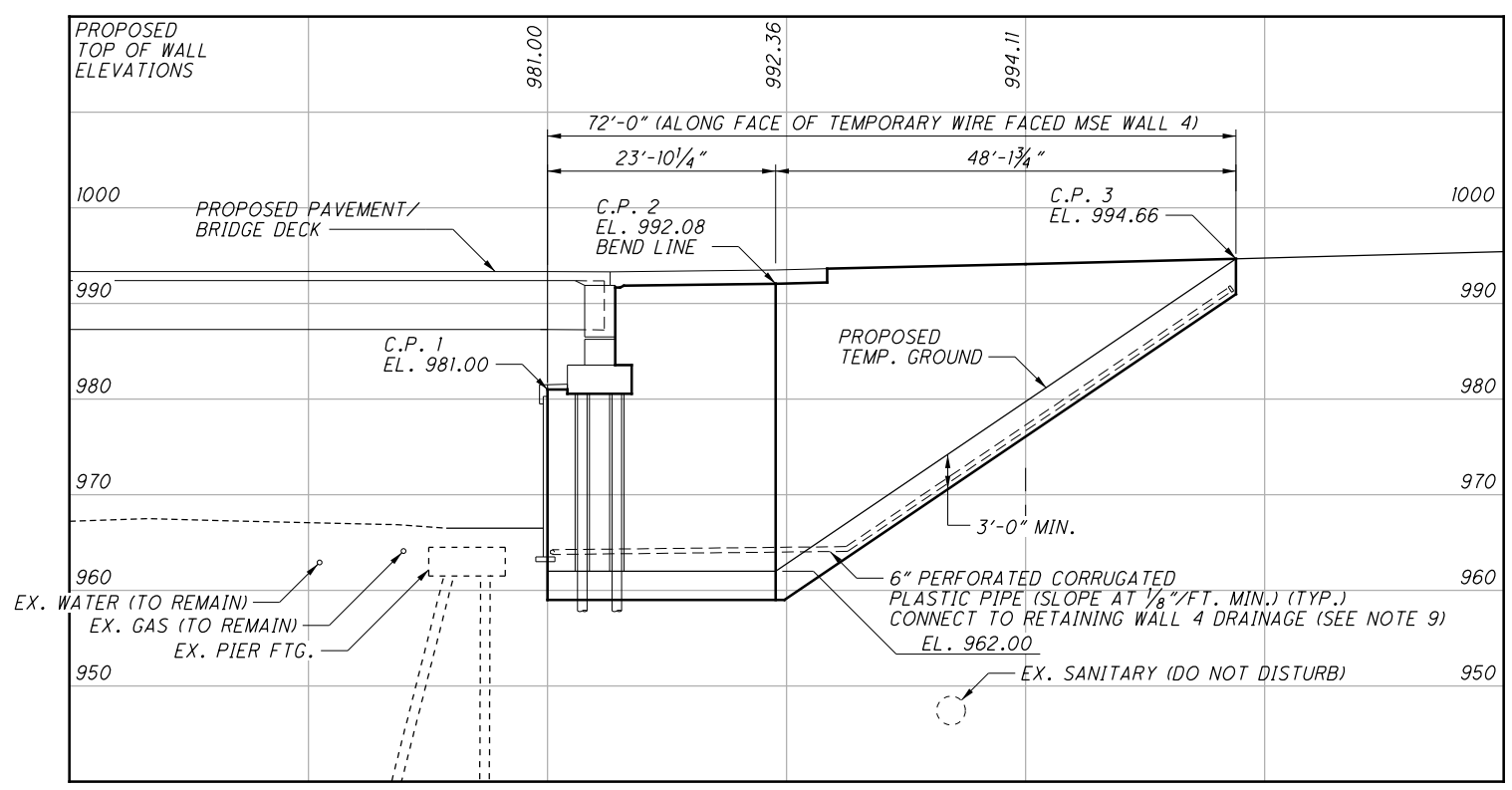
TEMPORARY WIRE FACED MSE WALL 4 CONTROL POINTS				
C.P. NUMBER	STA. @ RET. WALL 4	OFFSET	STA. @ R/W & CONSTR. I.R. 76	OFFSET
1	41+05.18	0.46' LT.	307+84.35	12.63' LT.
2	40+99.00	23.50' LT.	308+04.58	0.08' RT.
3	40+63.51	56.03' LT.	308+52.72	0.42' RT.

**NOTES**

1. THE MINIMUM DISTANCE FROM THE PROPOSED TEMPORARY GROUND SURFACE TO THE BOTTOM OF THE TEMPORARY WIRE FACED MSE WALL IS BASED ON A FROST DEPTH OF 3.0 FT.
2. THE RETAINING WALL 4 BASELINE IS LOCATED AT THE FRONT FACE OF THE WALL.
3. PERMANENT WALL MANUFACTURER SHALL ADJUST AND ARRANGE THE SOIL REINFORCEMENT IN THE PHASE CONSTRUCTION DIVISION AREA FOR PROPER ENGAGEMENT OF THE SOIL MASS.
4. SEE SHEET [20/78] FOR TEMPORARY SHORING DETAILS.
5. TOP OF WALL ELEVATIONS OUTSIDE OF THE PROPOSED BRIDGE LIMITS ARE SHOWN AT THE APPROXIMATE TOP OF PAVEMENT ELEVATION.
6. THE TEMPORARY WIRE FACED MSE WALL SHALL BE DESIGNED BY THE SUPPLIER TO CONTAIN PHASE 2 EMBANKMENT AND ALLOW ACCESS TO TIE PHASE 3 BRIDGE CONSTRUCTION WITH PHASE 2.
7. SEE RETAINING WALL PLAN SHEETS [525/672] & [526/672] FOR RETAINING WALL 4 DETAILS.
8. THE FACTORED BEARING RESISTANCE AT THE BASE OF THE REINFORCED SOIL MASS IS 10.5 KSF FOR TEMPORARY WIRE FACED MSE WALL 4.
9. 6" PERFORATED CORRUGATED PLASTIC PIPE TO BE PAID FOR WITH ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL.

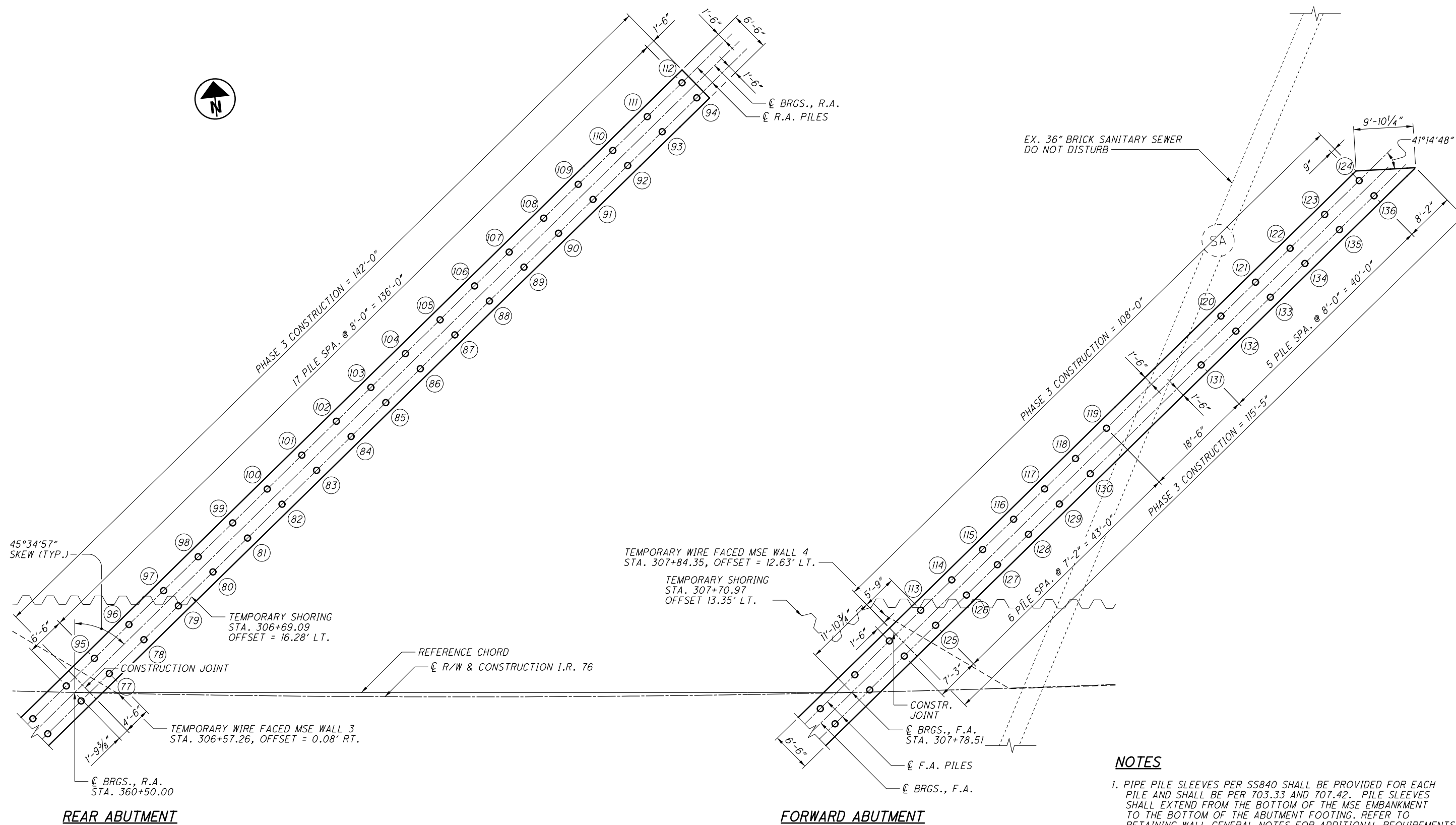
**LEGEND**

▭ LIMITS OF RETAINING WALL 4 EXCAVATION



**ELEVATION**  
 ALONG FACE OF WALL

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**LEGEND**

- ① PILE NUMBER
- 12" C.I.P. REINFORCED CONCRETE PILE WITH PILE SLEEVE

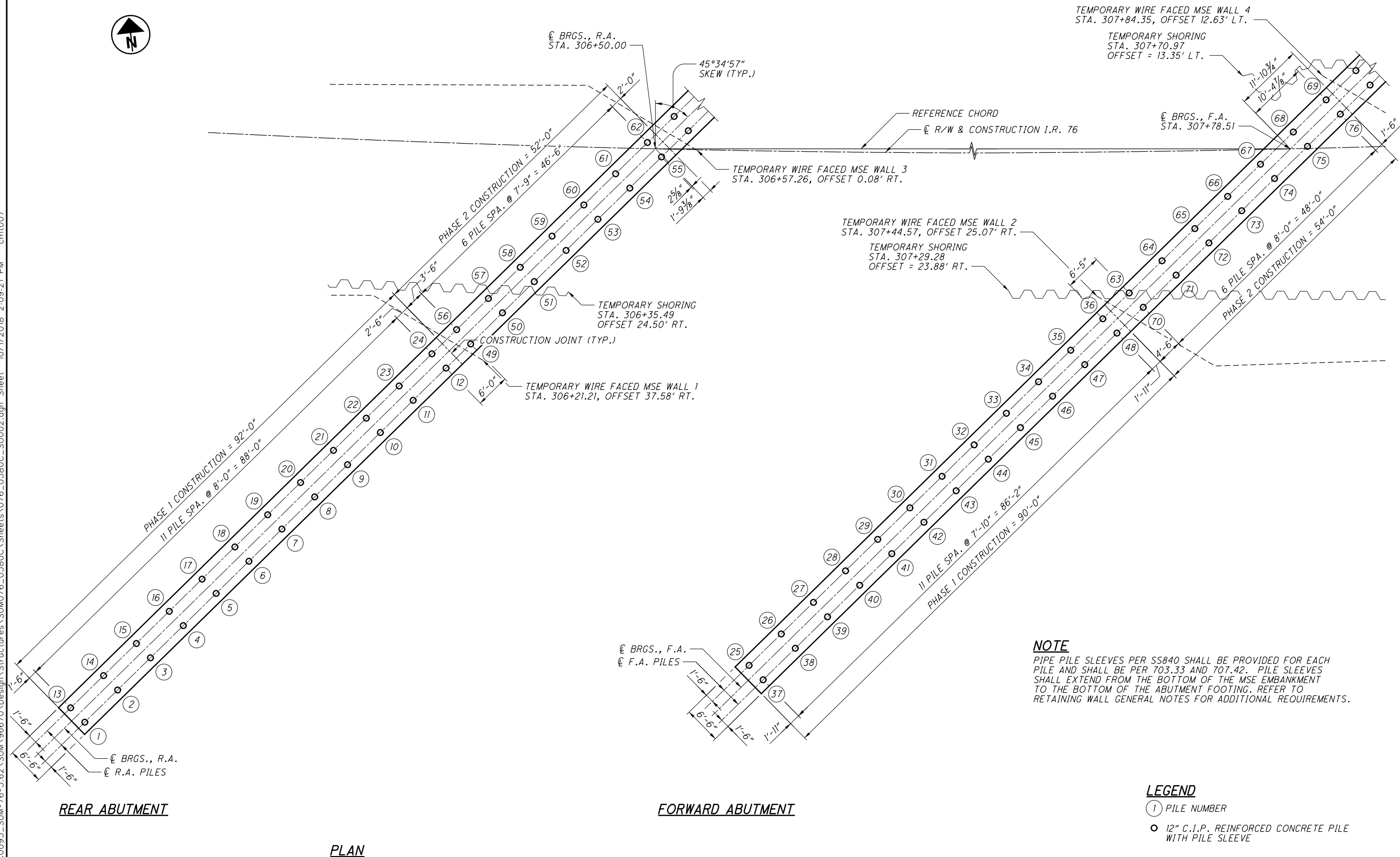
**PLAN**

**NOTES**

1. PIPE PILE SLEEVES PER SS840 SHALL BE PROVIDED FOR EACH PILE AND SHALL BE PER 703.33 AND 707.42. PILE SLEEVES SHALL EXTEND FROM THE BOTTOM OF THE MSE EMBANKMENT TO THE BOTTOM OF THE ABUTMENT FOOTING. REFER TO RETAINING WALL GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. PREBORE PILE NUMBERS 119, 120, 130, AND 131 TO A MINIMUM OF 5 FEET BELOW THE BOTTOM OF THE BRICK SANITARY SEWER. THE APPROXIMATE BOTTOM OF BRICK SANITARY SEWER IS EL. 946.0±. PREBORED HOLES SHALL BE PER C&MS 507.II.
3. PROVIDE 3" CHAMFER AT ACUTE CORNERS.

DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	DATE	4/26/2017
STRUCTURE FILE NUMBER			7705493

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**NOTE**  
 PIPE PILE SLEEVES PER SS840 SHALL BE PROVIDED FOR EACH PILE AND SHALL BE PER 703.33 AND 707.42. PILE SLEEVES SHALL EXTEND FROM THE BOTTOM OF THE MSE EMBANKMENT TO THE BOTTOM OF THE ABUTMENT FOOTING. REFER TO RETAINING WALL GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.

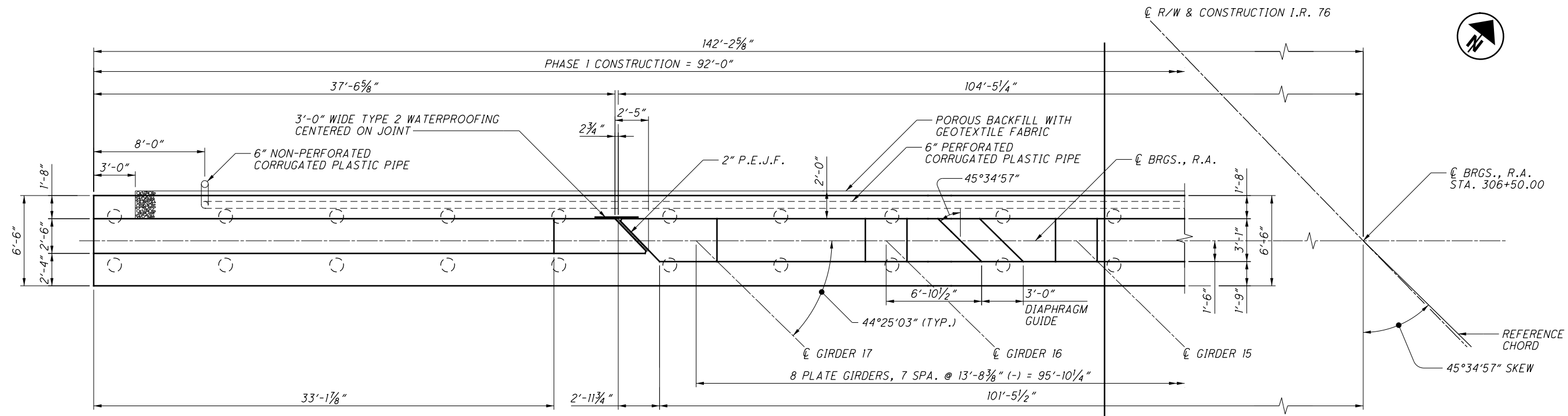
- LEGEND**
- ① PILE NUMBER
  - 12" C.I.P. REINFORCED CONCRETE PILE WITH PILE SLEEVE

DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	DATE	4/26/2017
STRUCTURE FILE NUMBER			7705493

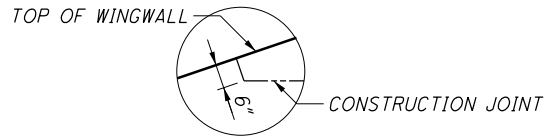
**FOUNDATION PLAN (EASTBOUND)**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
**PID No. 96670**

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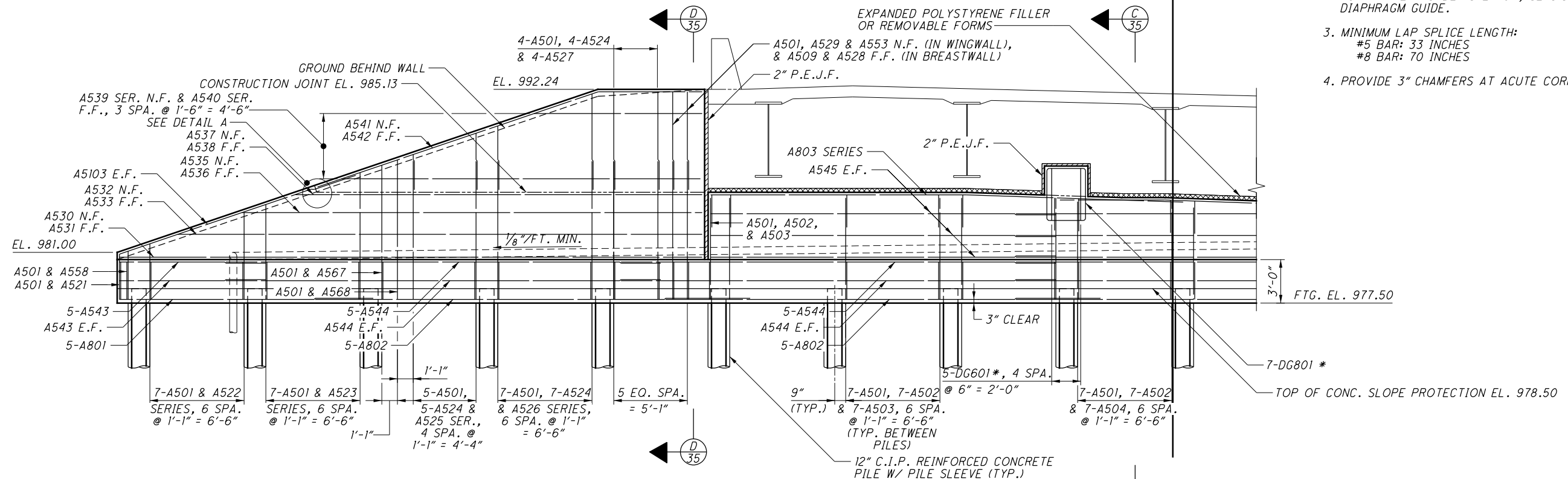
PLAN



DETAIL A

**LEGEND**  
\* - SEE NOTE 2

- NOTES**
- SEE STD. DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
  - SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
  - MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 33 INCHES  
#8 BAR: 70 INCHES
  - PROVIDE 3" CHAMFERS AT ACUTE CORNERS.

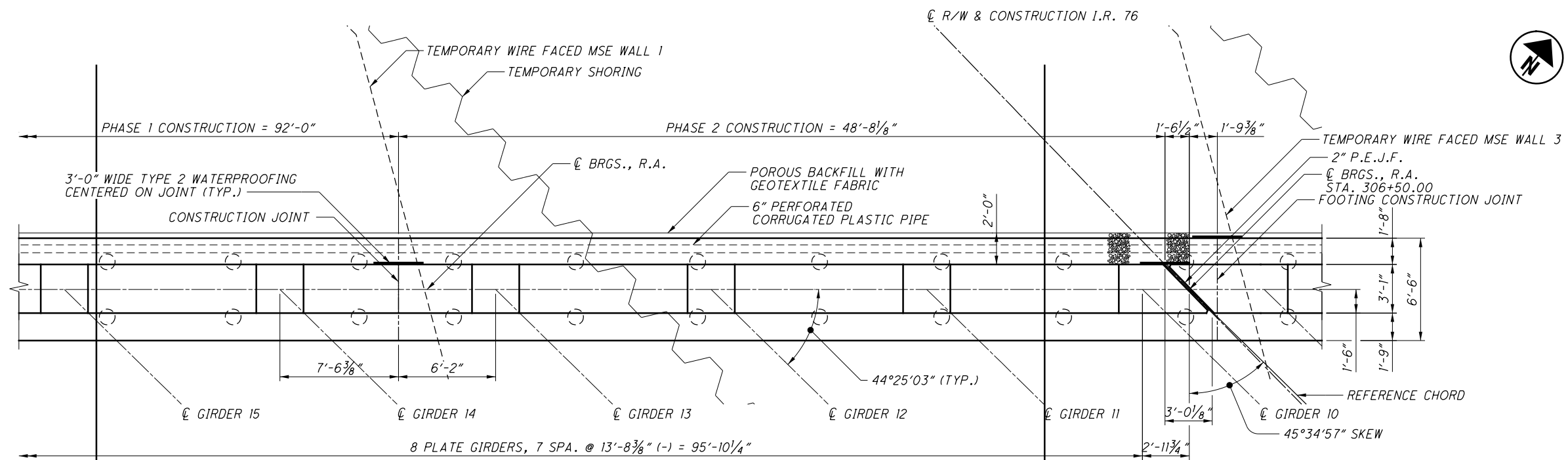


ELEVATION

MSE WALL NOT SHOWN

GIRDER SEAT ELEVATIONS (FT.)		
GIRDER 15	GIRDER 16	GIRDER 17
984.75	985.12	985.13

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**PLAN**

MATCH LINE  
SEE SHEET 27/78

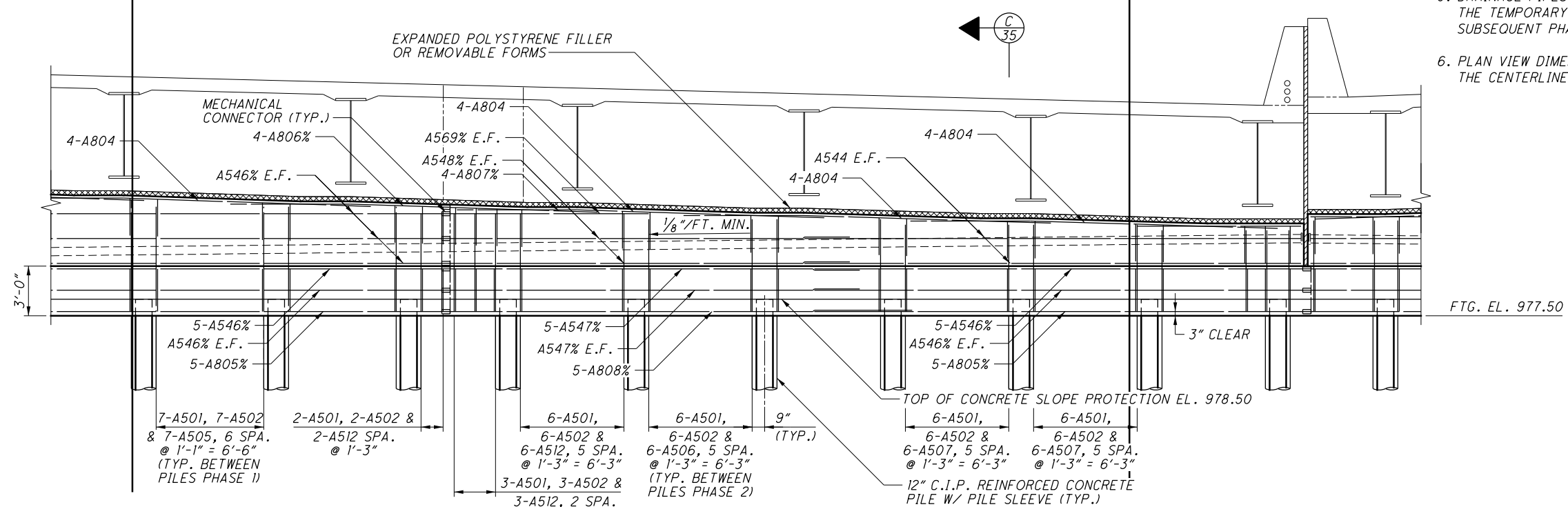
MATCH LINE  
SEE SHEET 29/78

**NOTES**

- SEE STD. DWG. SICD-1-96 FOR ADDITIONAL NOTES AND DETAILS.
- SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM TOP OF FOOTING TO THE BRIDGE SEAT.
- MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 33 INCHES  
#8 BAR: 70 INCHES
- PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
- DRAINAGE PIPES SHALL CONNECT THROUGH THE TEMPORARY MSE WALLS FOR EACH SUBSEQUENT PHASE.
- PLAN VIEW DIMENSIONS ARE MEASURED TO THE CENTERLINE OF THE JOINT.

**LEGEND**

% - BAR TO UTILIZE A MECHANICAL CONNECTOR



**ELEVATION**

MSE WALL NOT SHOWN

GIDER SEAT ELEVATIONS (FT.)			
GIRDER 11	GIRDER 12	GIRDER 13	GIRDER 14
983.38	983.71	984.05	984.40



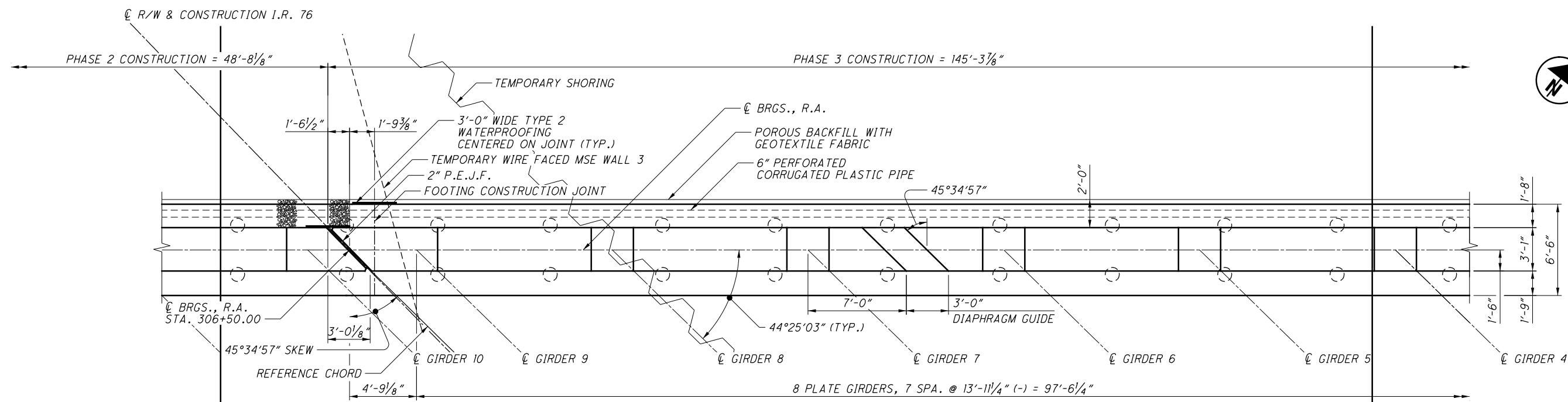
DESIGNED	ERK	CHECKED	GDU
DRAWN	ERK	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	7705493
DATE	4/26/2017		

**REAR ABUTMENT DETAILS (EASTBOUND)**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

SUM-76-5.53  
 PID No. 96670

28 / 78

592 / 672

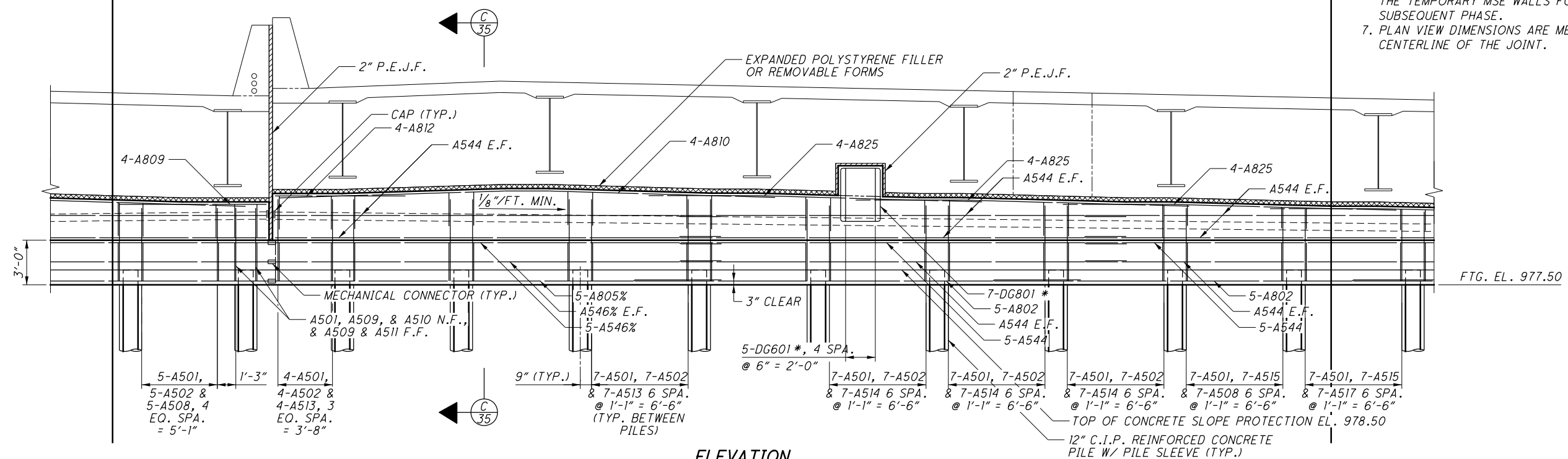


**PLAN**

**LEGEND**  
 % - BAR TO UTILIZE A MECHANICAL CONNECTOR  
 \* - SEE NOTE 3

**NOTES**

- SEE STD. DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
- SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM TOP OF FOOTING TO THE BRIDGE SEAT.
- SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
- MINIMUM LAP SPLICE LENGTH:  
 #5 BAR: 33 INCHES  
 #8 BAR: 70 INCHES
- PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
- DRAINAGE PIPES SHALL CONNECT THROUGH THE TEMPORARY MSE WALLS FOR EACH SUBSEQUENT PHASE.
- PLAN VIEW DIMENSIONS ARE MEASURED TO THE CENTERLINE OF THE JOINT.



**ELEVATION**

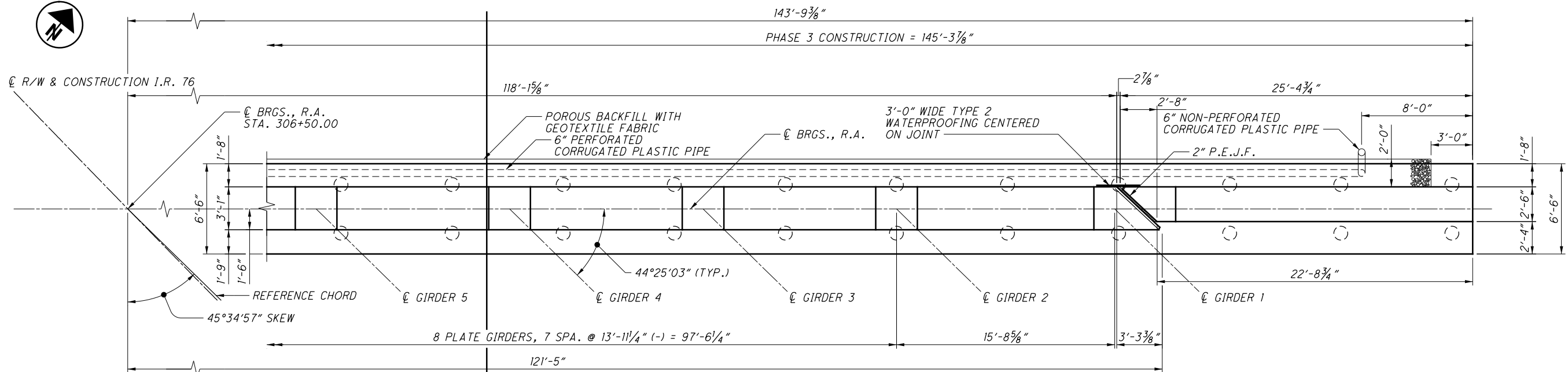
MSE WALL NOT SHOWN

GIRDER SEAT ELEVATIONS (FT.)					
GIRDER 5	GIRDER 6	GIRDER 7	GIRDER 8	GIRDER 9	GIRDER 10
983.07	983.36	983.66	983.97	983.64	983.06

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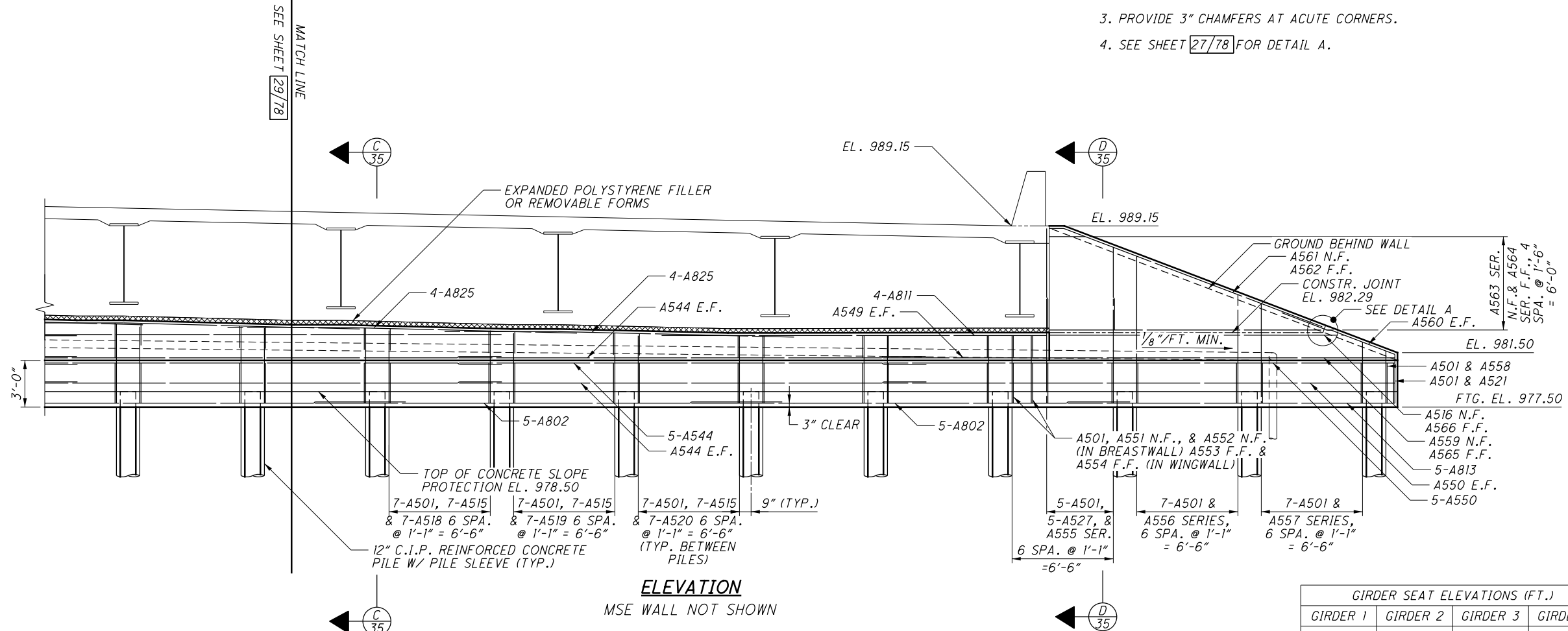


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**NOTES**

- SEE STD. DWG. SICD-1-96 FOR ADDITIONAL NOTES AND DETAILS.
- MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 33 INCHES  
#8 BAR: 70 INCHES
- PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
- SEE SHEET 27/78 FOR DETAIL A.



GIRDER SEAT ELEVATIONS (FT.)			
GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4
982.29	982.25	982.51	982.78

DESIGN AGENCY  
**CARPENTER MARTY** Transportation  
 14466524 • CMTTRAN.COM

BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
**PID No. 96670**

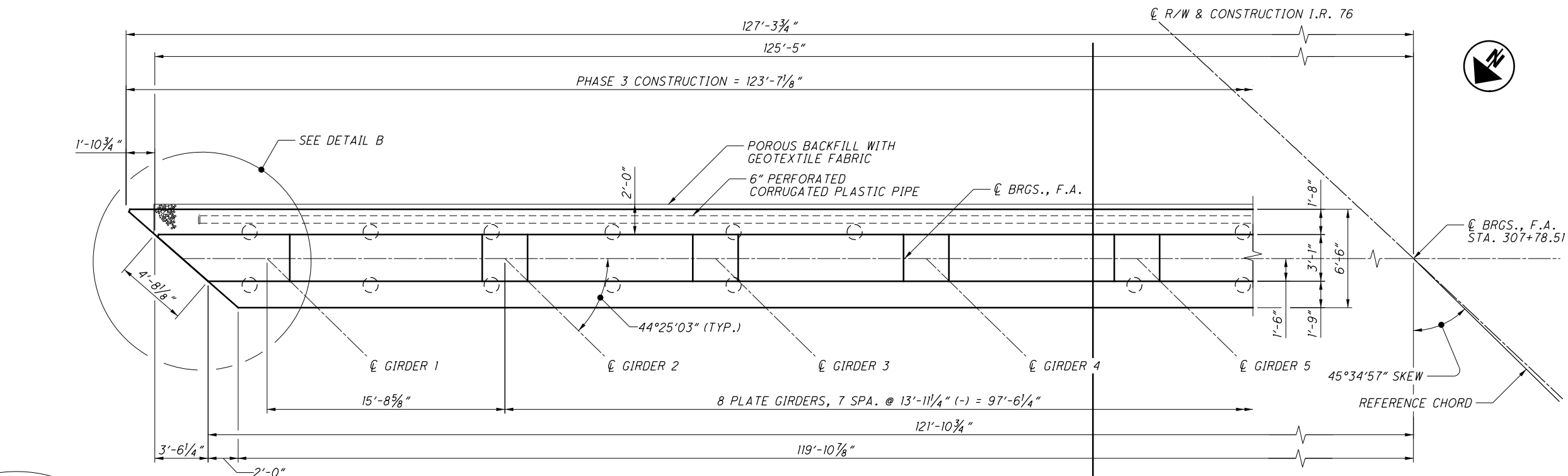
REAR ABUTMENT DETAILS (WESTBOUND)

DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	DATE	4/26/2017
STRUCTURE FILE NUMBER	7705493		

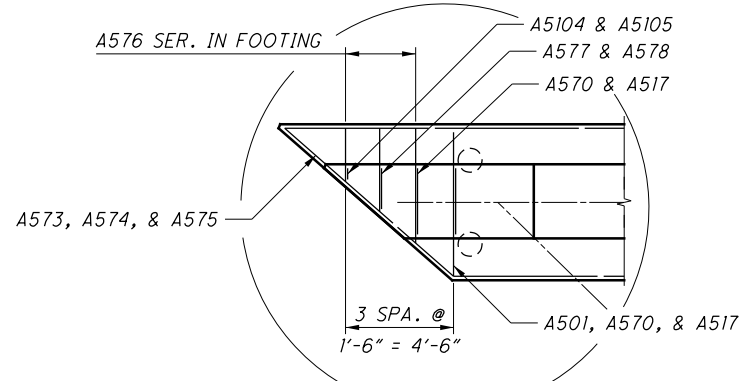
30 / 78

(594)  
 (672)

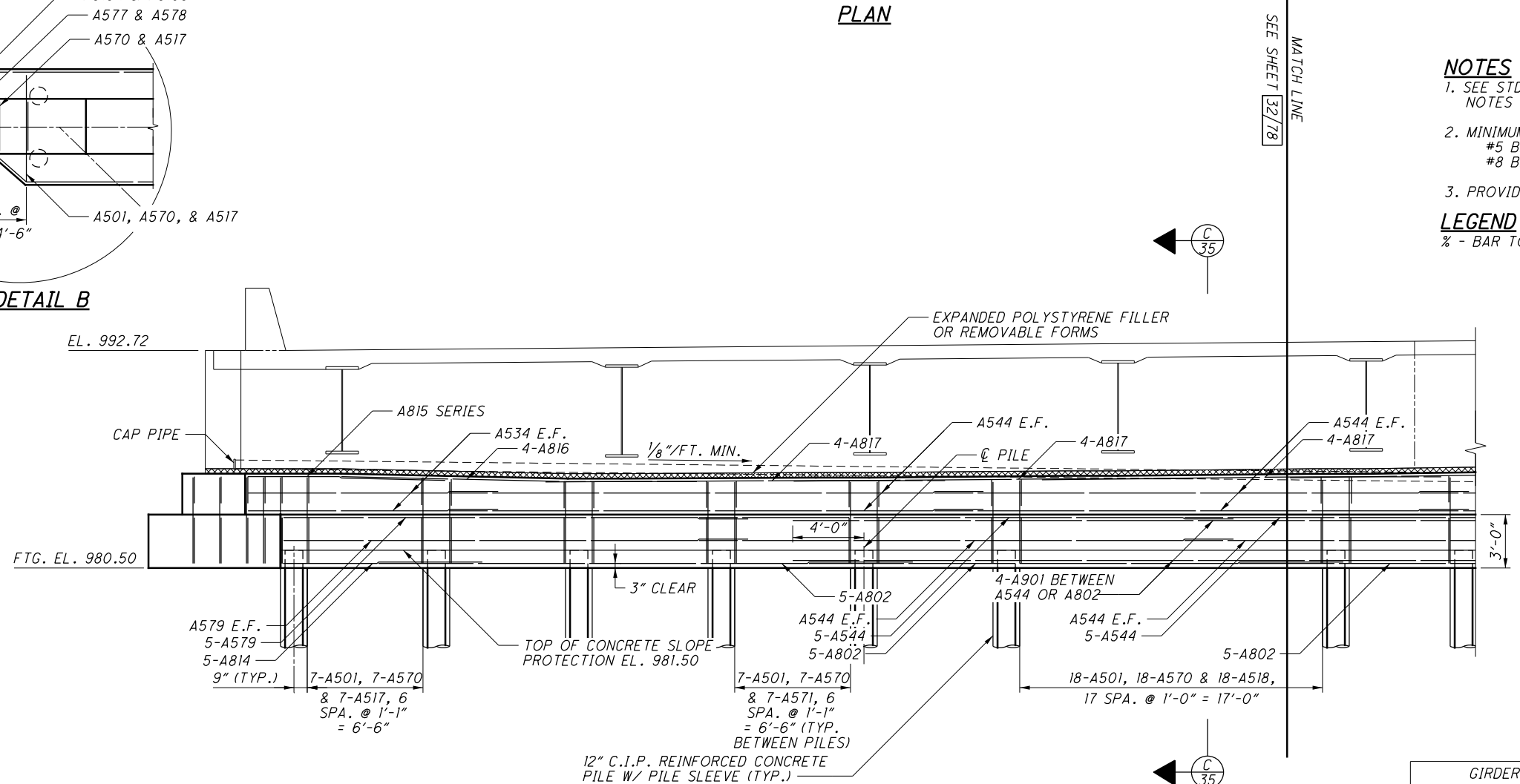
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**PLAN**



**DETAIL B**



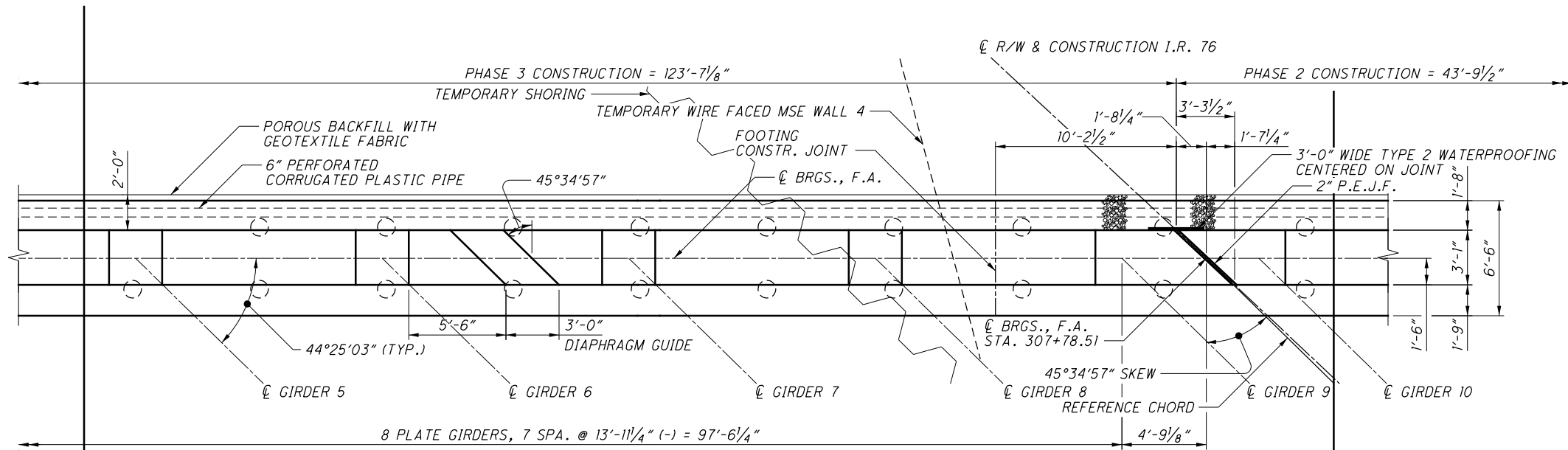
**ELEVATION**

MSE WALL NOT SHOWN

- NOTES**
- SEE STD. DWG. SICD-1-96 FOR ADDITIONAL NOTES AND DETAILS.
  - MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 33 INCHES  
#8 BAR: 70 INCHES
  - PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
- LEGEND**
- % - BAR TO UTILIZE A MECHANICAL CONNECTOR

GIRDER SEAT ELEVATIONS (FT.)			
GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4
985.80	985.52	985.58	985.66

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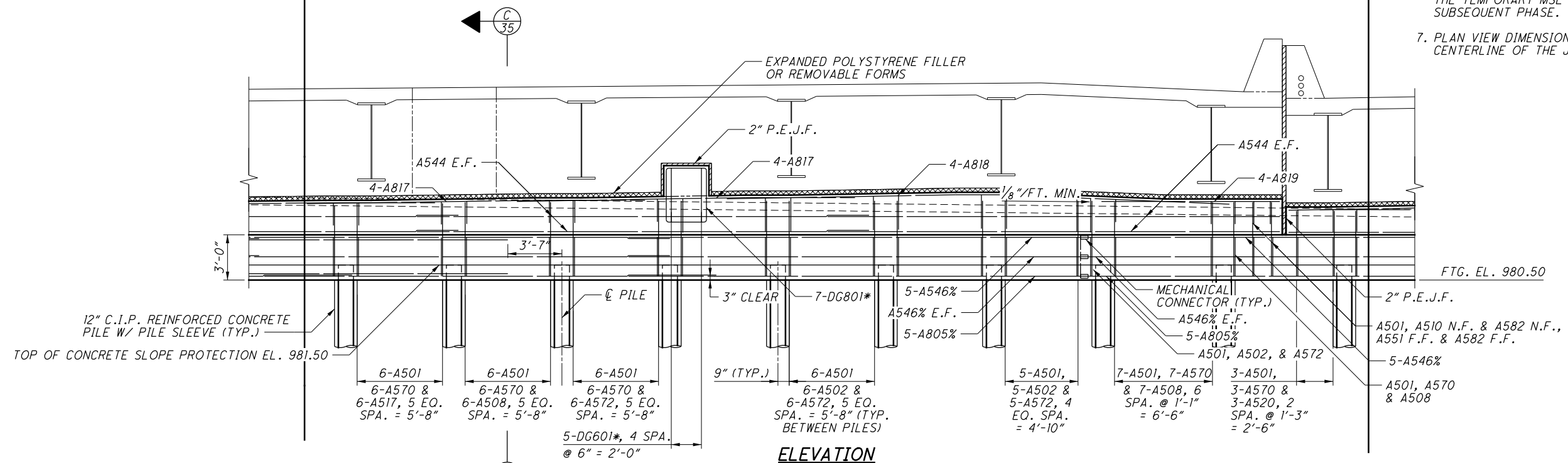
**PLAN**

**LEGEND**

- % - BAR TO UTILIZE A MECHANICAL CONNECTOR
- \* - SEE NOTE 3

**NOTES**

1. SEE STD. DWG. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
2. SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM TOP OF FOOTING TO THE BRIDGE SEAT.
3. SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
4. MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 33 INCHES  
#8 BAR: 70 INCHES
5. PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
6. DRAINAGE PIPES SHALL CONNECT THROUGH THE TEMPORARY MSE WALLS FOR EACH SUBSEQUENT PHASE.
7. PLAN VIEW DIMENSIONS ARE MEASURED TO THE CENTERLINE OF THE JOINT.



**ELEVATION**

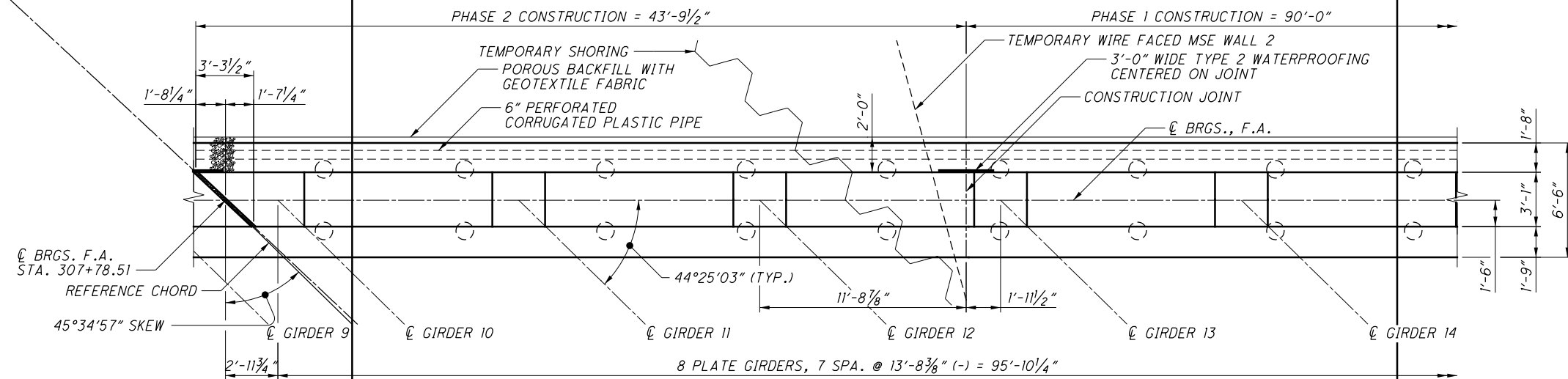
MSE WALL NOT SHOWN

GIRDER SEAT ELEVATIONS (FT.)

GIRDER 5	GIRDER 6	GIRDER 7	GIRDER 8	GIRDER 9	GIRDER 10
985.78	985.96	986.13	986.32	985.86	985.34

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℄ R/W & CONSTRUCTION I.R. 76



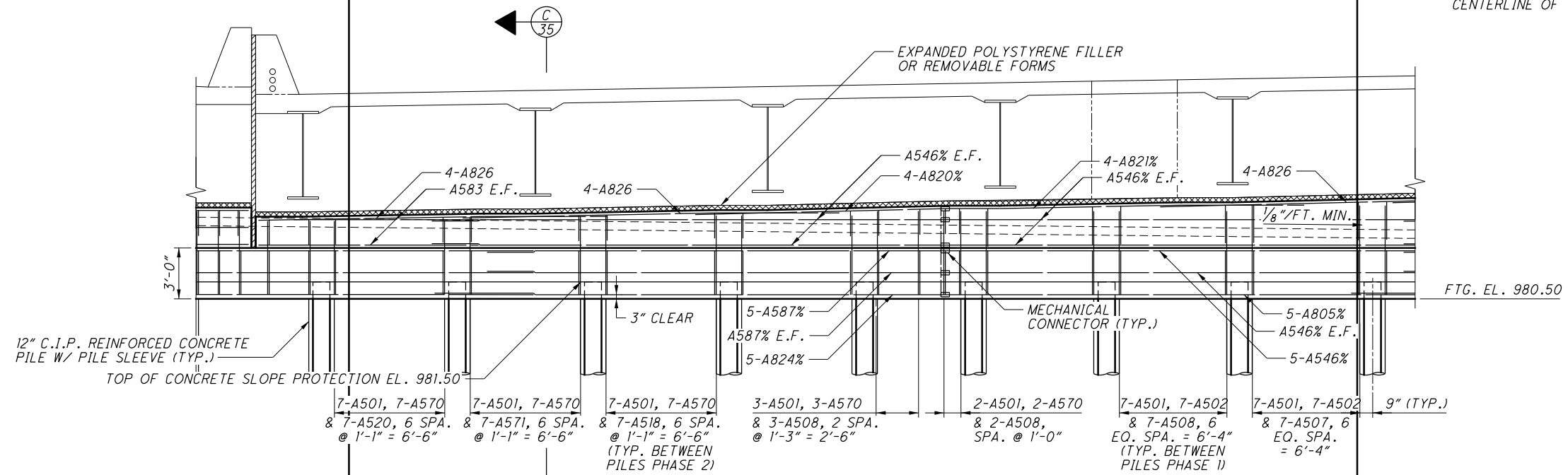
**PLAN**

**LEGEND**

℄ - BAR TO UTILIZE A MECHANICAL CONNECTOR

**NOTES**

1. SEE STD. DWG. SICD-1-96 FOR ADDITIONAL NOTES AND DETAILS.
2. SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM TOP OF FOOTING TO THE BRIDGE SEAT.
3. MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 33 INCHES  
#8 BAR: 70 INCHES
4. PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
5. DRAINAGE PIPES SHALL CONNECT THROUGH THE TEMPORARY MSE WALLS FOR EACH SUBSEQUENT PHASE.
6. PLAN VIEW DIMENSIONS ARE MEASURED TO THE CENTERLINE OF THE JOINT.

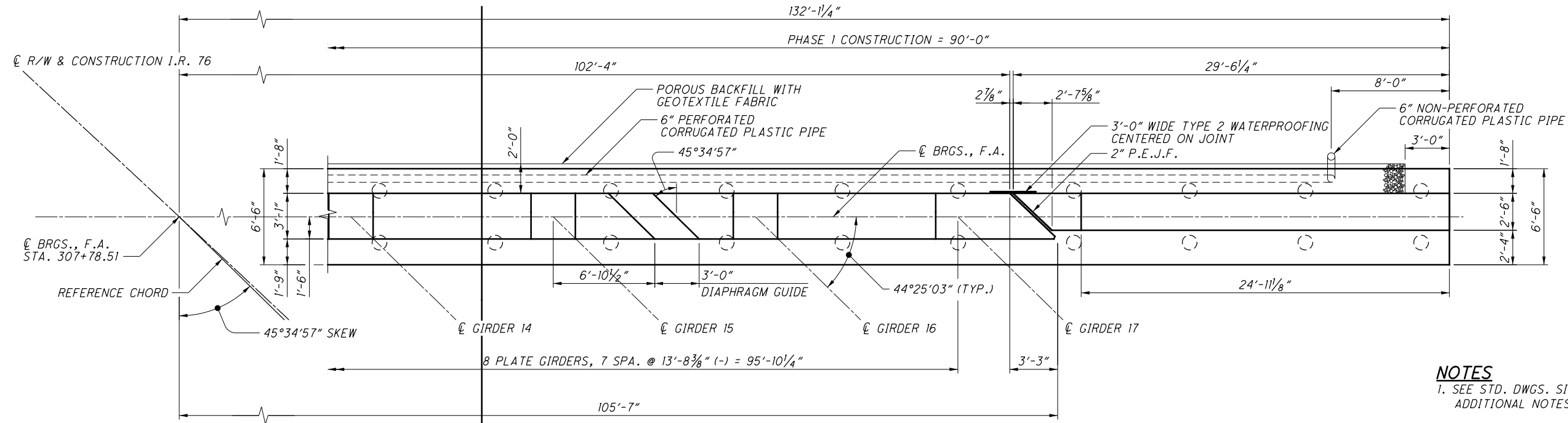


**ELEVATION**

MSE WALL NOT SHOWN

GIRDER SEAT ELEVATIONS (FT.)

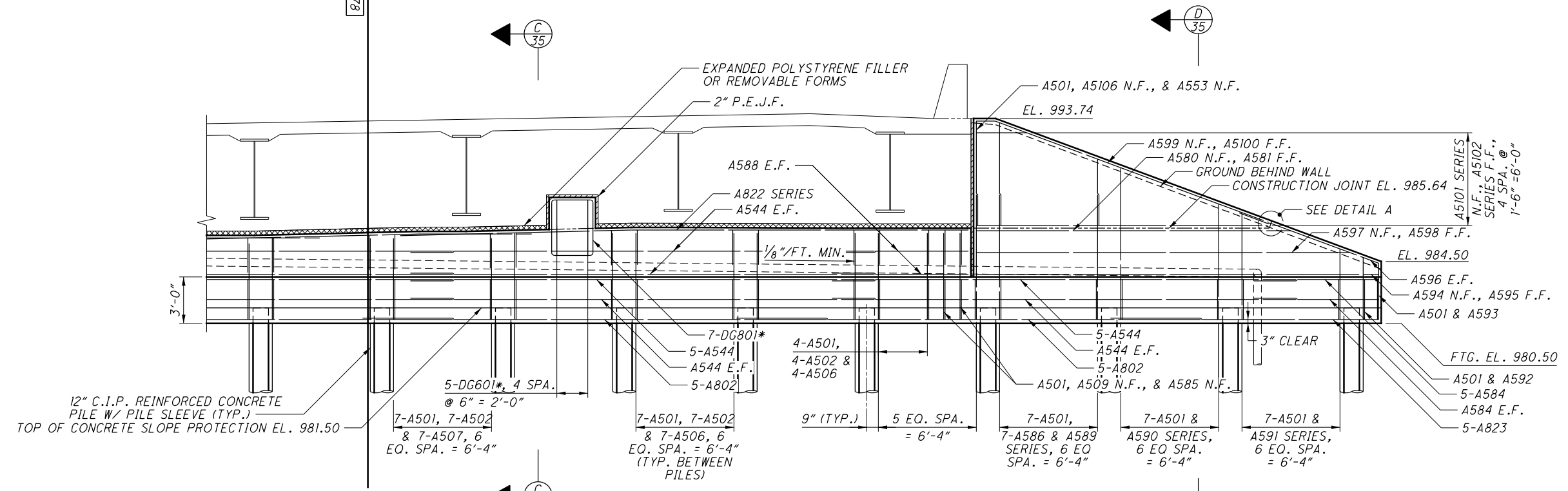
GIRDER 11	GIRDER 12	GIRDER 13	GIRDER 14
985.51	985.71	985.95	986.18



**PLAN**

- NOTES**
- SEE STD. DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
  - SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
  - MINIMUM LAP SPLICE LENGTH:  
 #5 BAR: 33 INCHES  
 #8 BAR: 70 INCHES
  - PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
  - SEE SHEET 27/78 FOR DETAIL A.

**LEGEND**  
 % - BAR TO UTILIZE A MECHANICAL CONNECTOR  
 \* - SEE NOTE 2

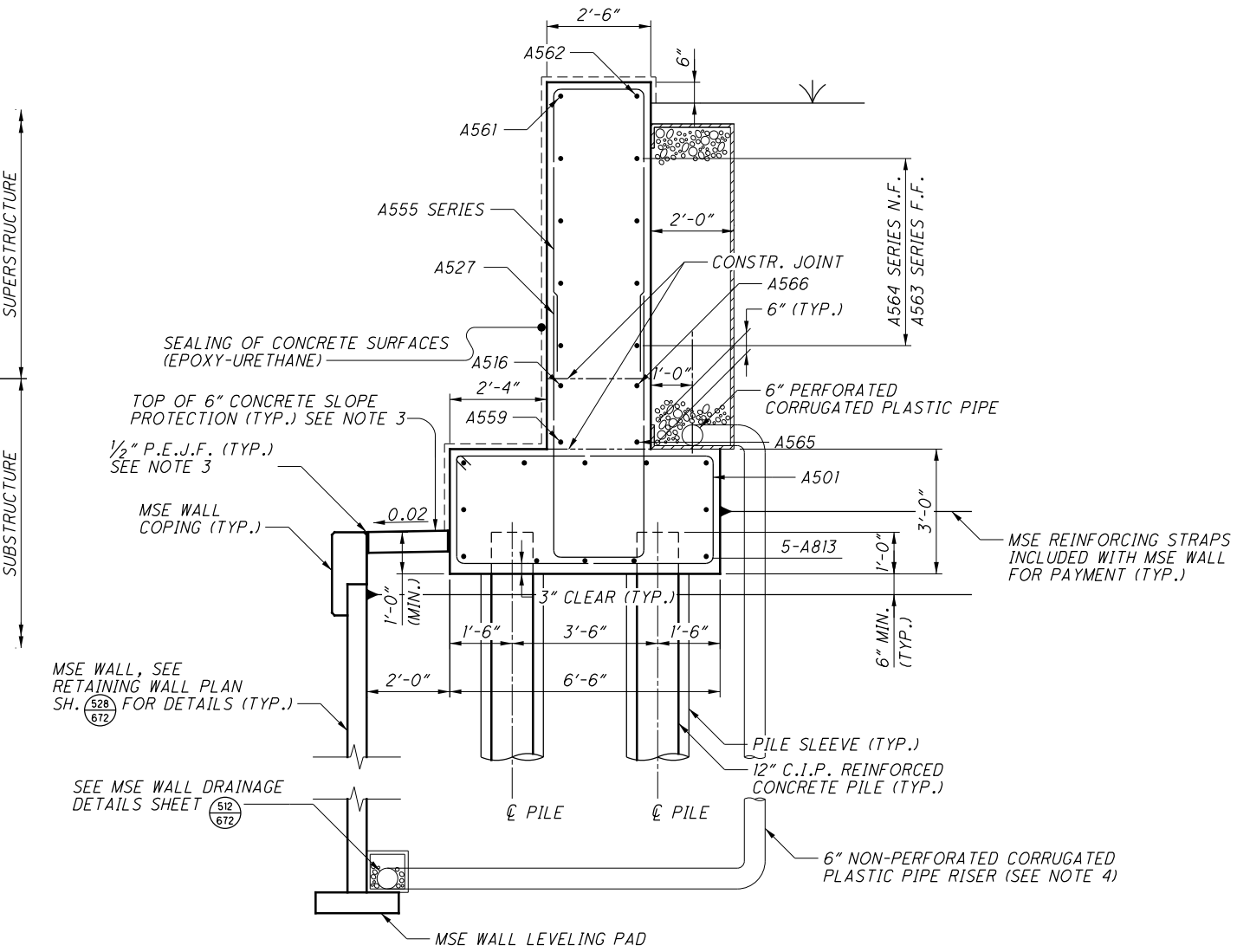
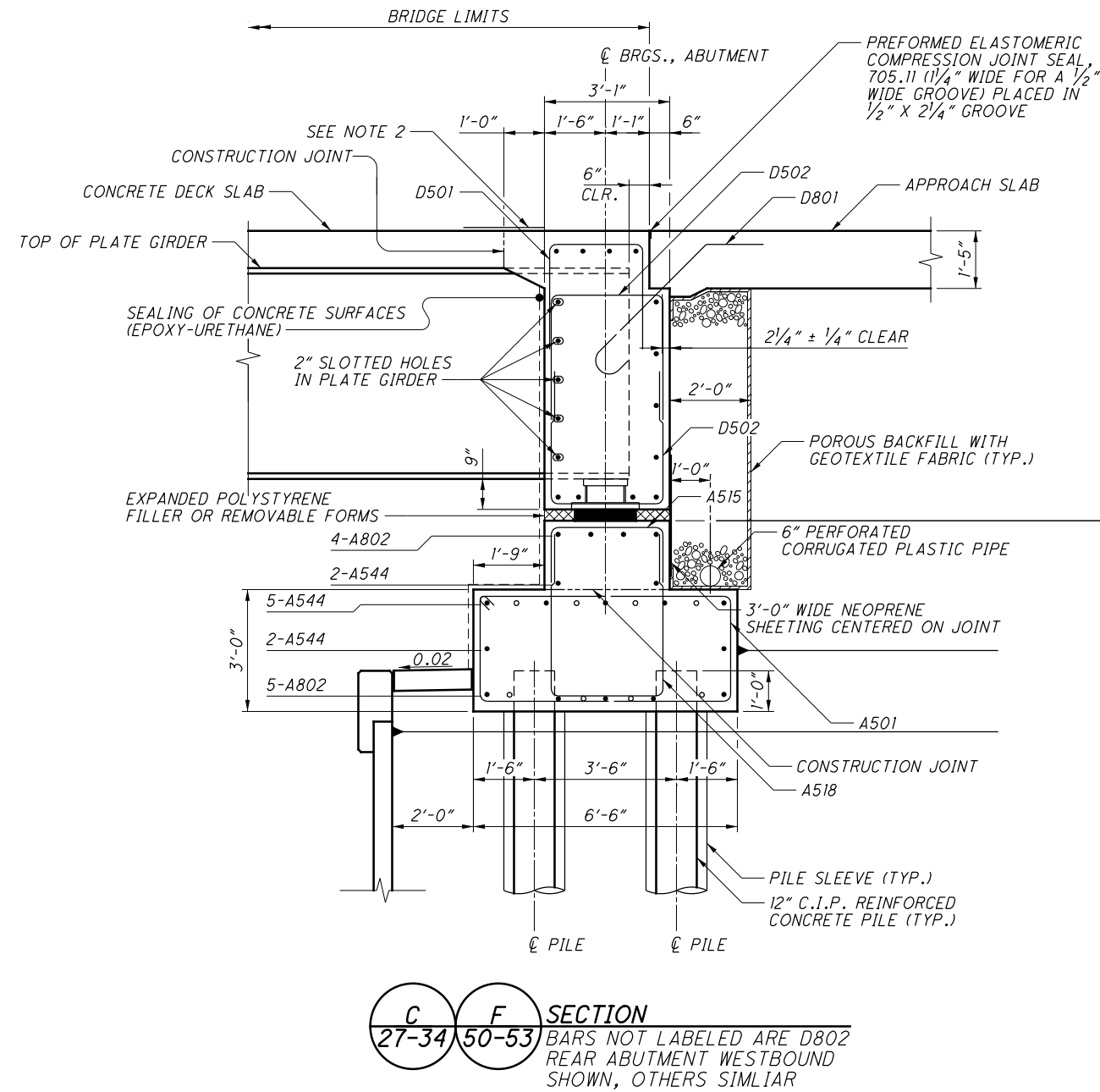


**ELEVATION**  
 MSE WALL NOT SHOWN

GIRDER SEAT ELEVATIONS (FT.)		
GIRDER 15	GIRDER 16	GIRDER 17
986.43	986.68	986.64

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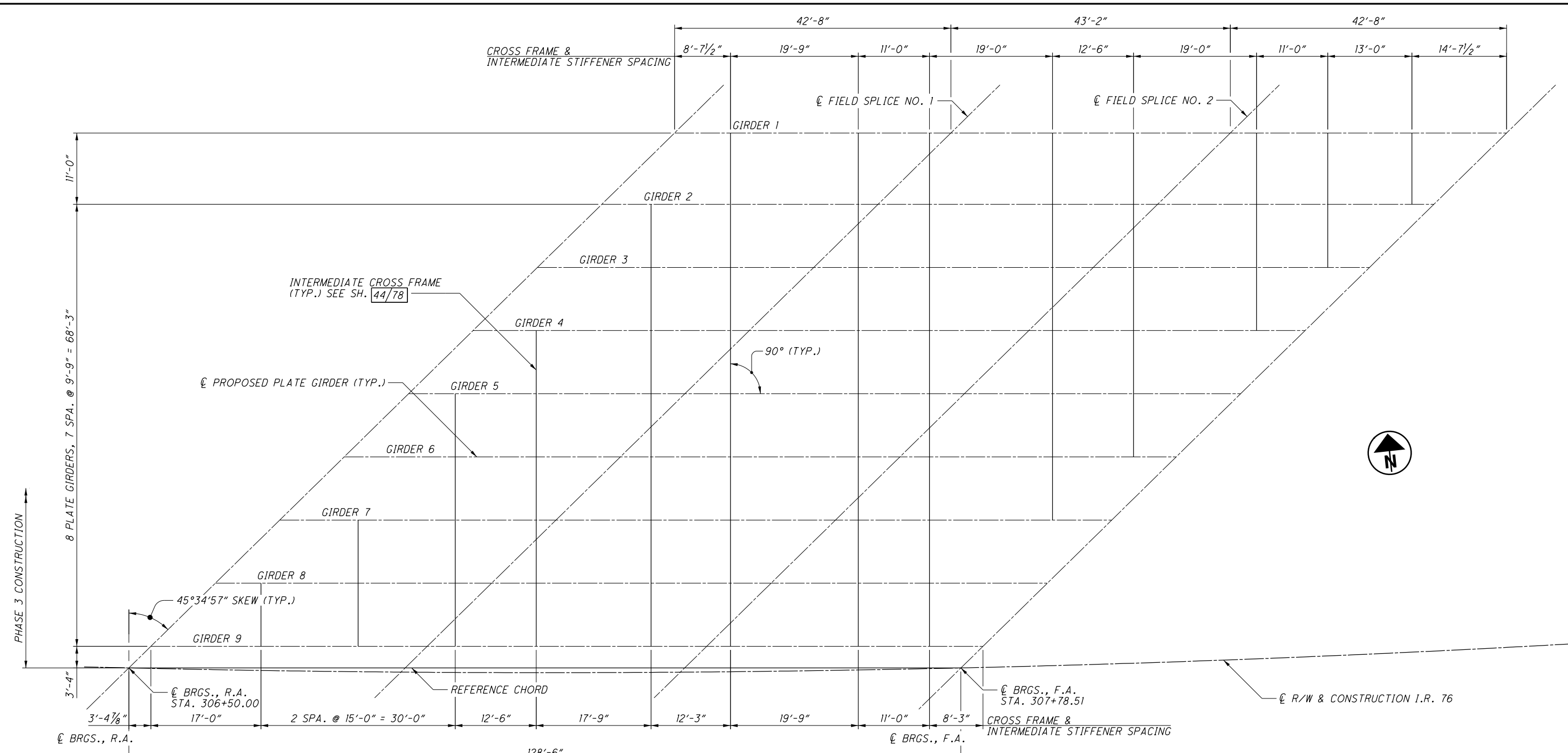
**LEGEND**

o - A901 - SEE SHEETS 31/78 & 32/78 FOR LOCATIONS OVER TOP OF BRICK SANITARY.

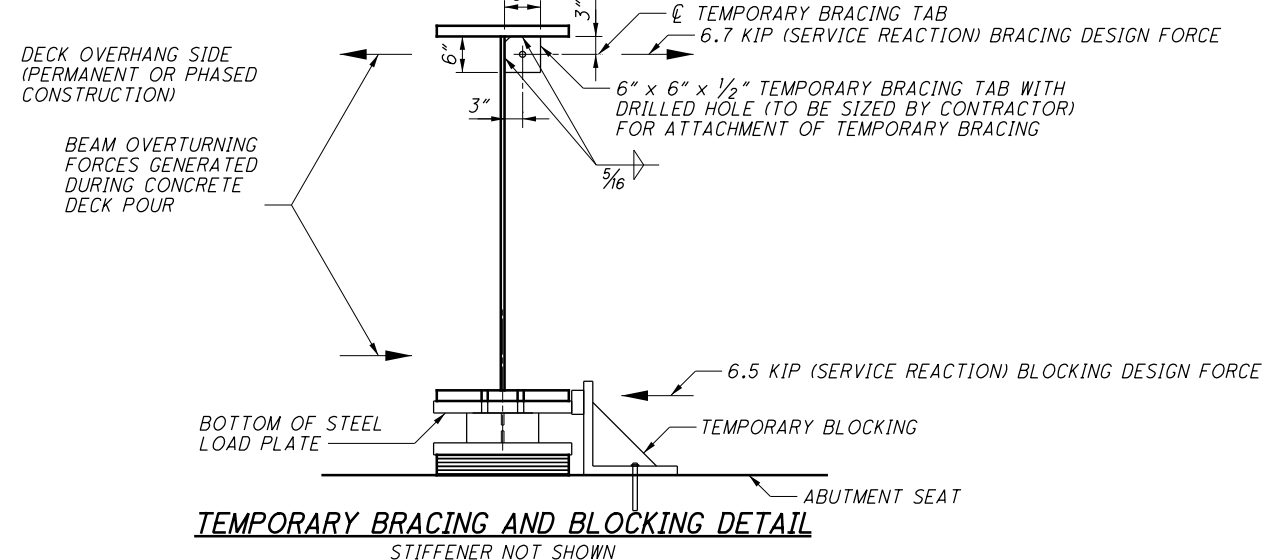
**NOTES**

- SEE STD. DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
- 2'-0" WIDE HMWM RESIN CENTERED ON CONSTRUCTION JOINT. PAYMENT SHALL BE INCLUDED WITH ITEM 511, CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE, AS PER PLAN.
- 1/2" P.E.J.F. AND 6" CONCRETE SLOPE PROTECTION SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 601, CONCRETE SLOPE PROTECTION, AS PER PLAN. SEE SHEET 528/672.
- 6" NON-PERFORATED CORRUGATED PLASTIC PIPE RISER AND 6" NON-PERFORATED CORRUGATED PLASTIC PIPE INCLUDED WITH BRIDGE FOR PAYMENT.

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**PLAN**



**NOTES**

1. ATTACH CROSS FRAMES BETWEEN GIRDERS 5 AND 6 AFTER THE SECOND DECK POUR BUT PRIOR TO CONSTRUCTING THE CLOSURE POUR FOR THE DECK.
2. DETAILS AT LOCATIONS OF TEMPORARY BRACING AND BLOCKING SHALL BE CONTRACTOR DESIGNED INCLUDING TOP FLANGE BRACING, BOTTOM LOAD PLATE BLOCKING, AND BE CAPABLE OF RESISTING A HORIZONTAL LOAD OF 6.7 KIPS (SERVICE REACTION) (PERPENDICULAR TO THE BEAM) AT GIRDERS 1, 5, 6, 9, 10, 13, 14, AND 17. THESE FORCES ARE A RESULT OF THE CONCRETE DECK OVERHANG POUR AS SHOWN IN TEMPORARY BRACING AND BLOCKING DETAIL. THIS BRACING AND BLOCKING SHALL BE DETAILED TO PREVENT BEAM ROTATION AND TRANVERSE DEFORMATION OF THE ELASTOMERIC BEARINGS. THE DESIGN CALCULATIONS FOR THIS BRACING AND BLOCKING SYSTEM SHALL BE PREPARED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER AND SHALL BE SUBMITTED TO THE DEPARTMENT AT LEAST 7 DAYS PRIOR TO INSTALLATION. DEPARTMENT ACCEPTANCE IS NOT REQUIRED.

THE BRACING AND BLOCKING SYSTEM SHALL BE INSTALLED PRIOR TO THE CONCRETE DECK POUR AND SHALL BE REMOVED PRIOR TO THE CONCRETE DIAPHRAGM POUR. THE TEMPORARY BRACING TAB SHALL BE FABRICATED WITH THE BEAMS AND SHALL NOT BE REMOVED. ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY FOR THE COMPLETE DESIGN, INSTALLATION, AND REMOVAL OF THE TEMPORARY BRACING AND BLOCKING SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE COST OF ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN.

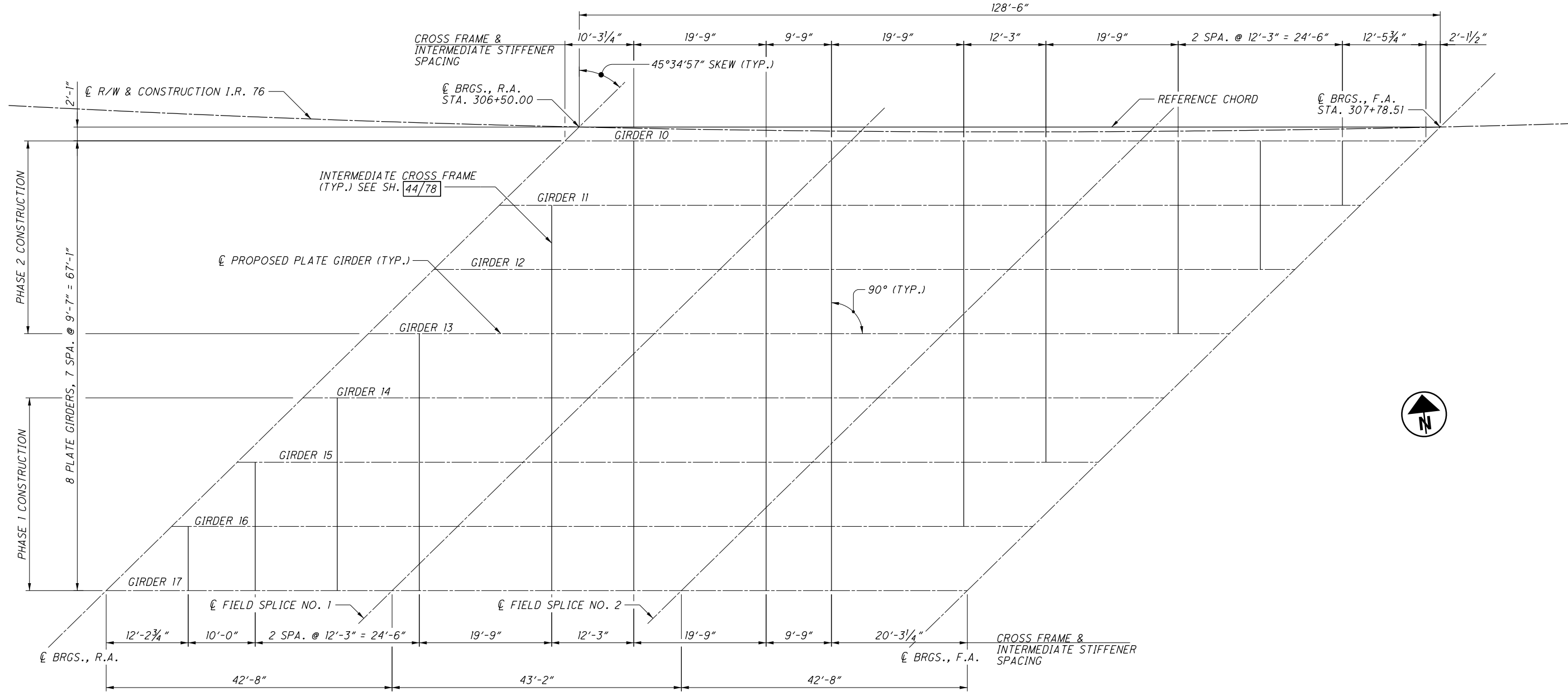
DESIGN AGENCY  
**CARPENTER MARTY** Transportation  
14486242 • CMTMAN.COM

DESIGNED	DRAWN	REVIEWED	DATE
ERK	ERK	WHM	4/28/2017
CHECKED	REVISED	STRUCTURE FILE NUMBER	FILE NUMBER
GDJ		7705493	

**SUM-76-5.53**  
PID No. 96670

36 / 78  
600  
672

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**PLAN**

**NOTES**

1. ATTACH CROSS FRAMES BETWEEN GIRDERS 13 AND 14 PRIOR TO CONSTRUCTING THE CLOSURE POUR FOR THE DECK.
2. SEE SH. 36/78 FOR TEMPORARY BRACING AND BLOCKING NOTES AND DETAILS.

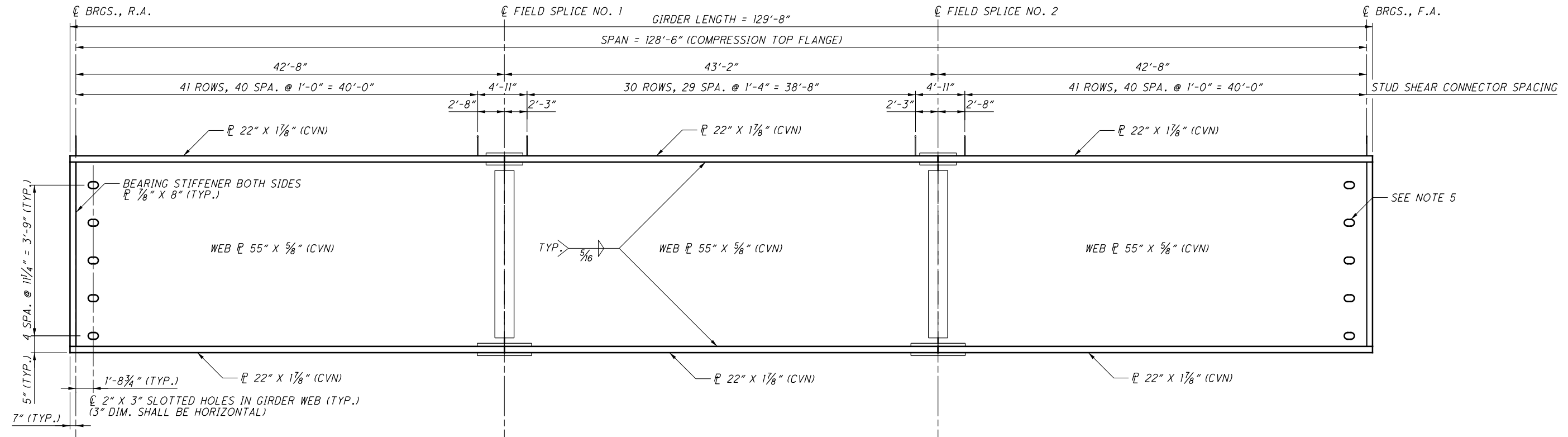
DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	DATE	4/28/2017
STRUCTURE FILE NUMBER	7705493		

**FRAMING PLAN (EASTBOUND)**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

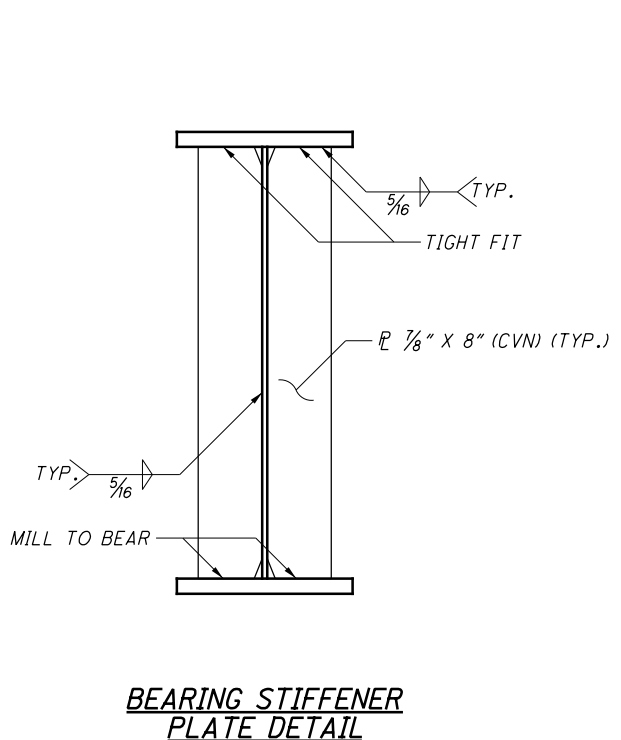
**SUM-76-5.53**  
**PID No. 96670**



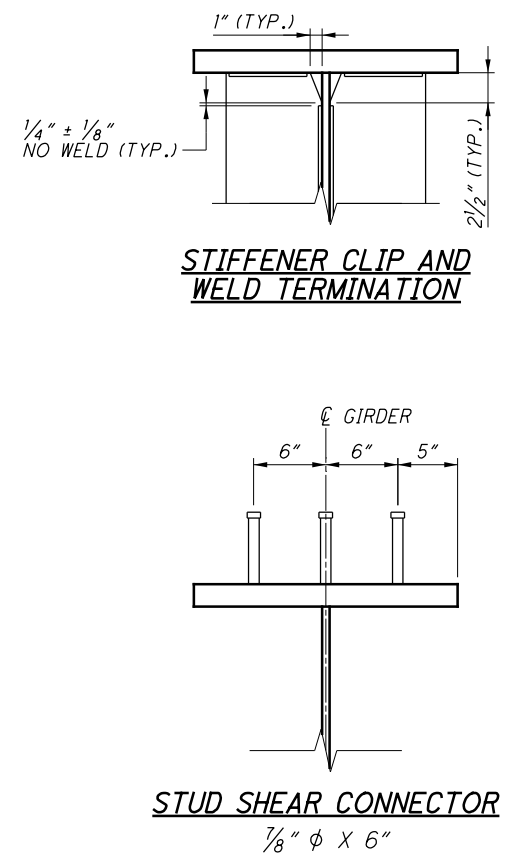
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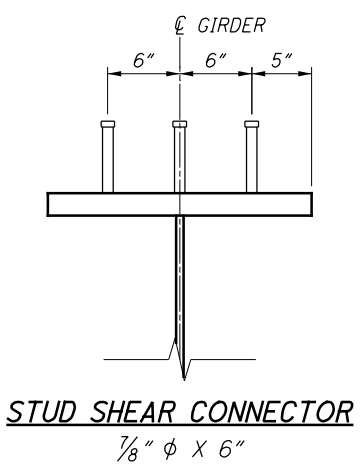
**ELEVATION**  
VERTICAL SCALE EXAGGERATED  
INTERMEDIATE STIFFENERS NOT SHOWN



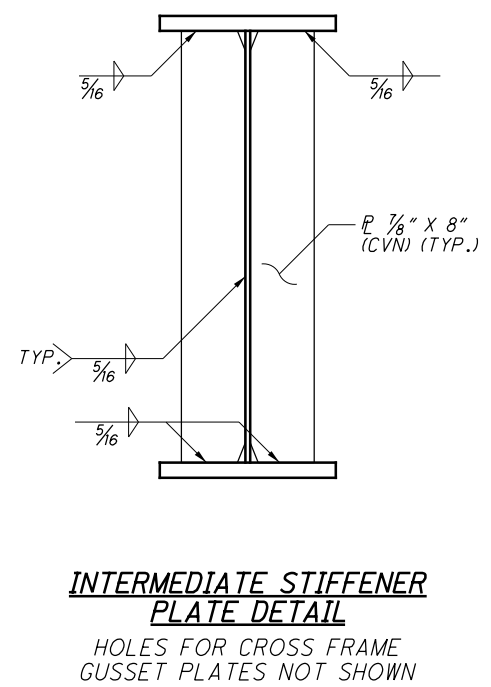
**BEARING STIFFENER  
PLATE DETAIL**



**STIFFENER CLIP AND  
WELD TERMINATION**



**STUD SHEAR CONNECTOR**  
7/8" φ X 6"



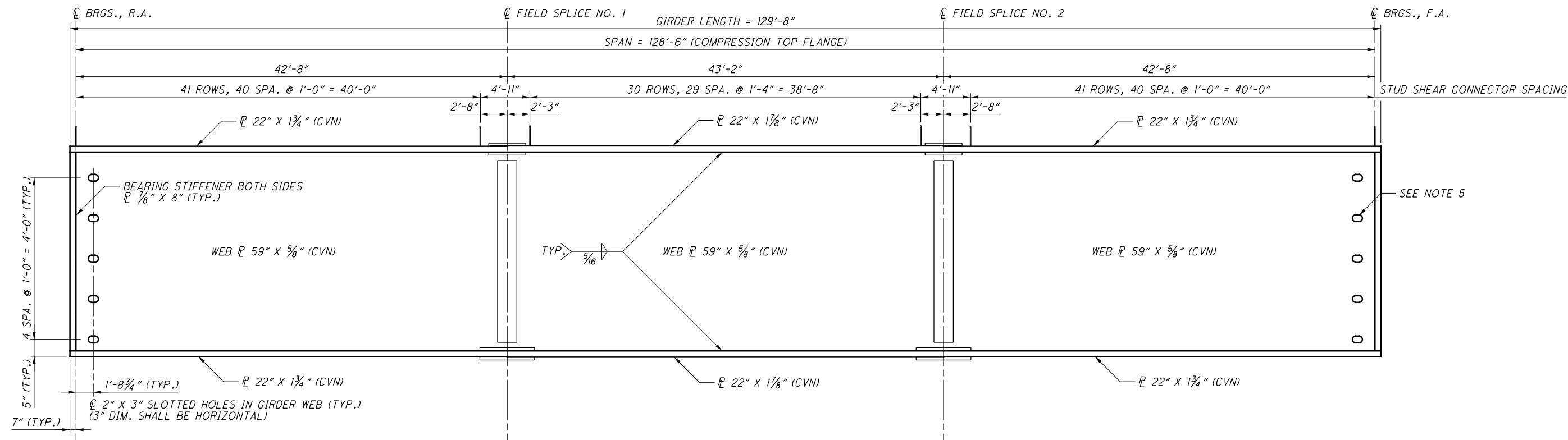
**INTERMEDIATE STIFFENER  
PLATE DETAIL**

HOLES FOR CROSS FRAME  
GUSSET PLATES NOT SHOWN

**NOTES**

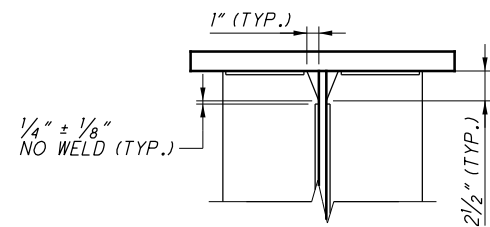
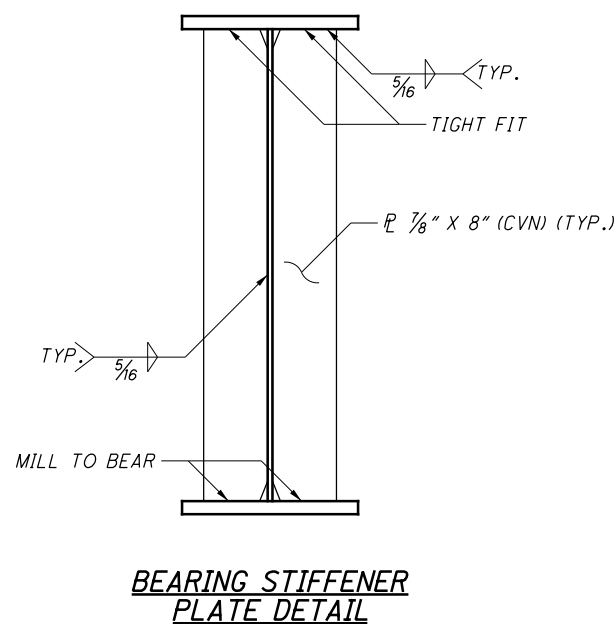
1. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.
2. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. SEE SHEET 45/78 FOR VENT HOLE LOCATIONS IN BOTTOM FLANGE.
4. SEE SHEET 44/78 FOR TOP FLANGE CLIP DETAIL AND INTERMEDIATE CROSS FRAME DETAIL.
5. DRILL HOLES IN GIRDERS PRIOR TO GALVANIZING. DRILLING OF HOLES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN.
6. WELD STIFFENERS TO GIRDERS PRIOR TO GALVANIZING.

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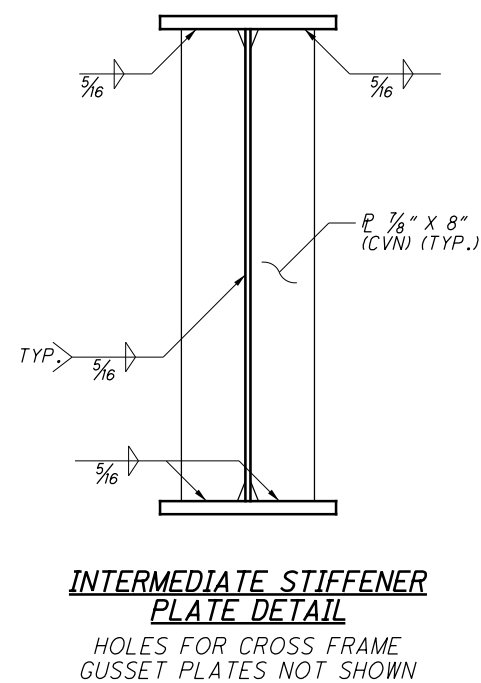
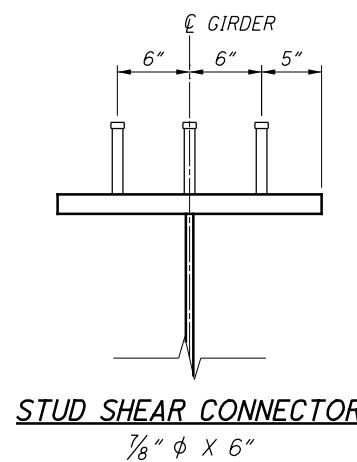


**ELEVATION**

VERTICAL SCALE EXAGGERATED  
INTERMEDIATE STIFFENERS NOT SHOWN



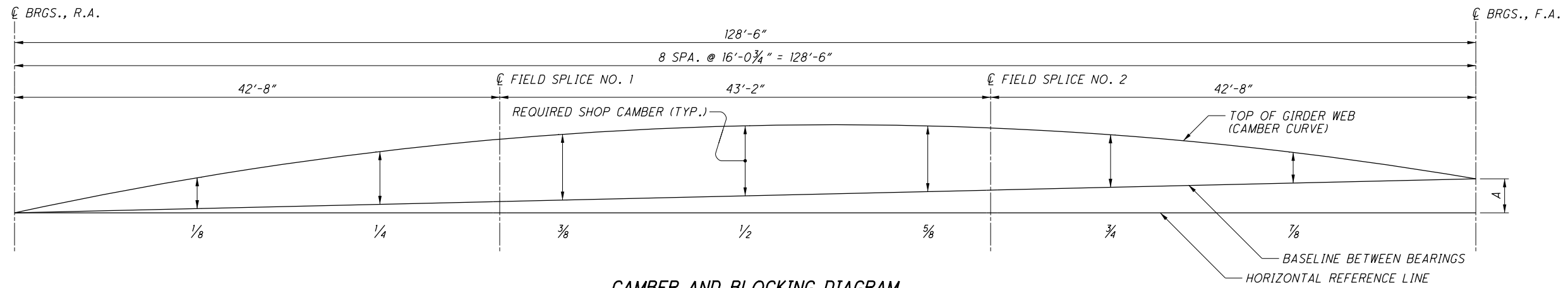
**STIFFENER CLIP AND  
WELD TERMINATION**



**NOTES**

- WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.
- WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
- SEE SHEET 45/78 FOR VENT HOLE LOCATIONS IN BOTTOM FLANGE.
- SEE SHEET 44/78 FOR TOP FLANGE CLIP DETAIL AND INTERMEDIATE CROSS FRAME DETAIL.
- DRILL HOLES IN GIRDERS PRIOR TO GALVANIZING. DRILLING OF HOLES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN.
- WELD STIFFENERS TO GIRDERS PRIOR TO GALVANIZING.

DESIGN AGENCY <b>CARPENTER MARTY</b> <small>TRANSPORTATION</small> <small>14400 S. 100TH AVE. SUITE 100 CLAYTON, MO 63044</small>	
DATE 4/28/2017	STRUCTURE FILE NUMBER 7705493
REVIEWED WHM	STRUCTURE FILE NUMBER 7705493
DRAWN ERK	REVISED
DESIGNED ERK	CHECKED GDJ
<b>GIRDER 2-17 ELEVATION AND SECTIONS</b> BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)	
<b>SUM-76-5.53</b>	<b>PID No. 96670</b>
39/78	603 672



**CAMBER AND BLOCKING DIAGRAM**

GIRDER 1 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	3/16	1/16	15/16	13/8	1/2	13/8	1/4	1/16	3/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	13/8	2 1/2	3 1/16	3 1/4	3 9/16	3 1/4	3	2 1/16	1 3/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1 3/8	-2 1/2	-3 1/16	-3 3/16	-3 3/8	-4 1/8	-4	-3 3/16	-1 5/8	0
REQUIRED SHOP CAMBER	0	3/16	1/16	15/16	15/16	1 3/16	1/2	1/4	5/16	5/16	0

GIRDER 2 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	15/16	1 1/8	1 3/16	1 5/16	1 1/4	1 1/8	1 5/16	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 1/4	2 1/4	2 3/4	2 15/16	3 3/16	2 5/16	2 3/4	2 5/16	1 1/4	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1 1/4	-2 3/16	-2 5/8	-2 13/16	-3 1/4	-3 3/8	-3 3/8	-3 3/16	-1 3/4	0
REQUIRED SHOP CAMBER	0	1/2	1	1 1/4	1 5/16	1 1/4	1 3/16	1/2	1/16	0	0

GIRDER 3 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	1 1/8	1 1/16	1 1/8	1 1/4	1 1/8	1 1/16	1 1/8	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 3/16	2 1/8	2 5/8	2 13/16	3 1/16	2 13/16	2 5/8	2 3/16	1 3/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1 1/8	-1 15/16	-2 5/16	-2 1/2	-2 3/4	-2 13/16	-2 3/4	-2 9/16	-1 5/8	0
REQUIRED SHOP CAMBER	0	3/16	1/16	1 3/8	1 1/16	1 1/16	1 1/8	1 5/16	1/2	1/16	0

GIRDER 4 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/8	1 1/16	1 1/8	1 3/16	1 1/8	1 1/16	1/8	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 3/16	2 1/8	2 9/16	2 3/4	3	2 3/4	2 9/16	2 1/8	1 3/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1	-1 3/4	-2 1/16	-2 1/4	-2 1/16	-2 3/8	-2 1/4	-2	-1 3/8	0
REQUIRED SHOP CAMBER	0	5/8	1 1/4	1 9/16	1 5/8	1 3/4	1 1/2	1 3/8	1	5/16	0

GIRDER 5 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1 3/16	1	1 1/8	1 3/16	1 1/8	1	1 3/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 1/8	2 1/8	2 9/16	2 3/4	3	2 3/4	2 9/16	2 1/8	1 1/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1 5/16	-1 5/8	-1 15/16	-2 1/16	-2 3/16	-2 1/16	-1 15/16	-1 5/8	-1	0
REQUIRED SHOP CAMBER	0	5/8	1 5/16	1 5/8	1 13/16	2	1 13/16	1 5/8	1 5/16	5/8	0

GIRDER 6 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1 3/16	1	1 1/8	1 3/16	1 1/8	1	1 3/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 1/8	2 1/8	2 9/16	2 3/4	3	2 3/4	2 9/16	2 1/8	1 3/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1 5/16	-1 5/8	-1 15/16	-2	-2 1/8	-2	-1 5/8	-1 5/8	-1 5/16	0
REQUIRED SHOP CAMBER	0	5/8	1 5/16	1 11/16	1 7/8	2 1/16	1 7/8	1 11/16	1 5/16	1 1/16	0

GIRDER 7 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	1 1/8	1 1/16	1 1/8	1 3/16	1 1/8	1 1/16	1/8	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 3/16	2 3/16	2 5/8	2 13/16	3 1/16	2 13/16	2 5/8	2 3/16	1 3/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1 5/16	-1 9/16	-1 7/8	-2	-2 1/8	-2	-1 7/8	-1 9/16	-1 5/16	0
REQUIRED SHOP CAMBER	0	3/4	1 1/2	1 7/8	1 15/16	2 1/8	1 15/16	1 7/8	1 1/2	3/4	0

BLOCKING TABLE	
LOCATION	DIMENSION "A"
GIRDER 1	3'-6 1/8"
GIRDER 2	3'-3 1/4"
GIRDER 3	3'-0 3/4"
GIRDER 4	2'-10 5/8"
GIRDER 5	2'-8 5/8"
GIRDER 6	2'-7 1/8"
GIRDER 7	2'-5 3/4"
GIRDER 8	2'-4 3/8"
GIRDER 9	2'-2 3/4"
GIRDER 10	2'-3 1/2"
GIRDER 11	2'-1 5/8"
GIRDER 12	2'-0 1/8"
GIRDER 13	1'-10 7/8"
GIRDER 14	1'-9 1/2"
GIRDER 15	1'-8 1/8"
GIRDER 16	1'-6 1/8"
GIRDER 17	1'-6 1/4"

**CAMBER SIGN CONVENTION**

+ POSITIVE UPWARD  
- NEGATIVE DOWNWARD

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GIRDER 8 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	1/8	1/8	13/16	1/4	13/16	1/16	1/8	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	25/16	213/16	3	3/4	3	23/4	2/4	1/4	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-15/16	-19/16	-1/8	-2	-2/8	-2	-1/8	-19/16	-15/16	0
REQUIRED SHOP CAMBER	0	13/16	15/8	2/16	23/16	23/8	23/16	15/16	19/16	13/16	0

GIRDER 9 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	1	13/16	1/4	13/8	15/8	13/16	1	9/8	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	13/8	21/2	31/16	3/4	39/16	35/16	3/8	29/16	13/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-9/16	-1	-13/16	-1/4	-19/8	-1/4	-13/16	-1	-9/16	0
REQUIRED SHOP CAMBER	0	15/16	21/2	3/16	3/4	39/16	33/8	3/8	29/16	13/8	0

GIRDER 10 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	3/16	1	13/16	1/4	13/8	1/4	13/16	15/16	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	13/16	23/16	211/16	213/16	3/16	213/16	25/8	2/8	13/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-1	-13/4	-21/16	-23/16	-23/8	-23/16	-23/16	-119/16	-1/8	0
REQUIRED SHOP CAMBER	0	3/4	17/16	113/16	1/8	2/16	13/4	15/8	1/8	9/16	0

GIRDER 11 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	1/8	1/16	13/16	1/4	13/16	1/8	1/8	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	21/16	2/2	211/16	215/16	211/16	2/2	2/16	1/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-15/16	-15/8	-1/8	-2	-2/8	-2	-13/16	-15/8	-1	0
REQUIRED SHOP CAMBER	0	1/16	15/16	1/16	1/8	2/16	1/8	1/16	15/16	5/8	0

GIRDER 12 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/8	1/16	1/8	13/16	1/8	1/16	1/8	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	21/16	2/2	25/8	2/8	25/8	2/2	2/16	1/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-15/16	-19/16	-1/8	-115/16	-2/16	-115/16	-13/16	-1/2	-3/8	0
REQUIRED SHOP CAMBER	0	5/8	13/8	11/16	113/16	2	113/16	13/4	1/16	3/4	0

GIRDER 13 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	13/16	1	1/16	13/16	1/16	1	13/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	21/16	2/2	25/8	2/8	25/8	2/2	2/16	1/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-15/16	-19/16	-1/8	-2	-2/8	-2	-1/8	-13/16	-15/16	0
REQUIRED SHOP CAMBER	0	5/8	15/16	15/8	11/16	115/16	11/16	15/8	15/16	5/8	0

GIRDER 14 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	13/16	1	1/16	13/16	1/16	1	13/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	21/16	2/2	211/16	215/16	211/16	2/2	2/16	1/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-15/16	-19/16	-1/8	-115/16	-2/16	-115/16	-1/8	-13/16	-15/16	0
REQUIRED SHOP CAMBER	0	5/8	15/16	15/8	113/16	2/16	113/16	15/8	15/16	5/8	0

GIRDER 15 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	1/8	1/16	1/8	13/16	1/8	1/16	1/8	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	13/16	2/8	25/8	23/4	3	23/4	29/16	2/8	13/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-15/16	-19/16	-1/8	-115/16	-2/16	-115/16	-1/8	-13/16	-15/16	0
REQUIRED SHOP CAMBER	0	3/4	1/16	113/16	115/16	2/8	115/16	13/4	1/16	1/16	0

GIRDER 16 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	1/8	1/8	13/16	1/4	13/16	1/16	1/8	1/2	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	2/4	23/4	215/16	33/16	215/16	23/4	2/4	1/4	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-3/8	-19/16	-13/16	-115/16	-2/16	-115/16	-13/16	-19/16	-3/8	0
REQUIRED SHOP CAMBER	0	1/8	19/16	2/16	23/16	23/8	23/16	2	19/16	1/8	0

GIRDER 17 - DEFLECTION AND CAMBER TABLE (INCHES)											
LOCATION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/2	15/16	13/16	1/4	13/8	15/16	13/16	1	9/8	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	15/16	27/16	3	33/16	3/2	33/4	33/16	2/2	13/8	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	-9/16	-1	-13/16	-1/4	-15/16	-1/4	-13/16	-1	-9/16	0
REQUIRED SHOP CAMBER	0	1/4	23/8	3	33/16	39/16	35/16	3/16	2/2	13/8	0

**CAMBER SIGN CONVENTION**

+ POSITIVE UPWARD  
- NEGATIVE DOWNWARD

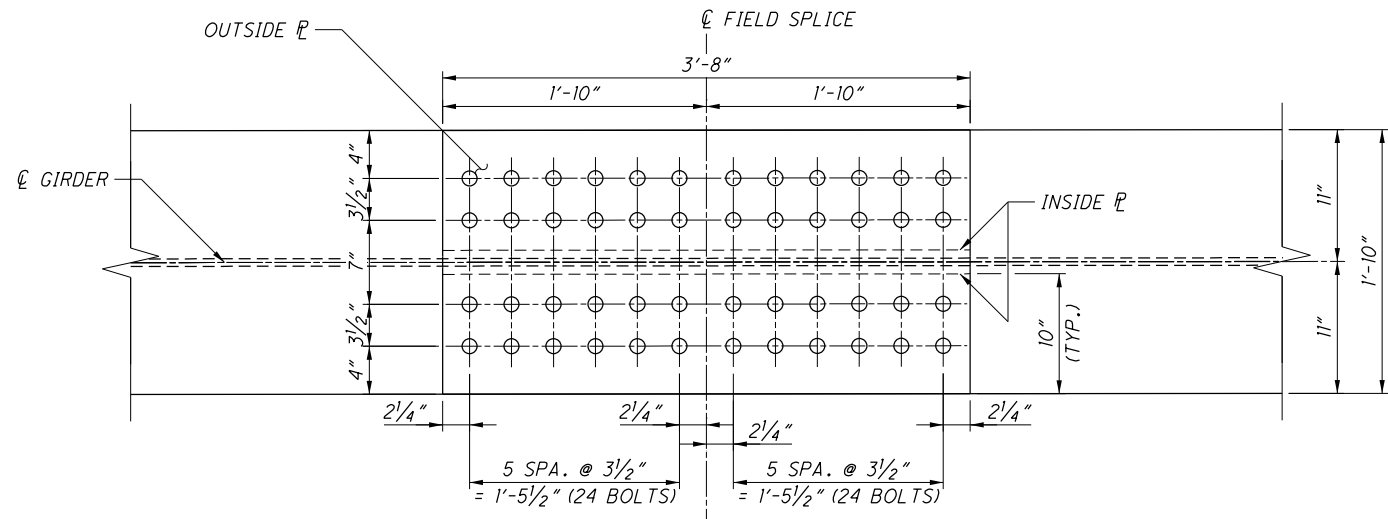


DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	DATE	4/28/2017
STRUCTURE FILE NUMBER	7705493		

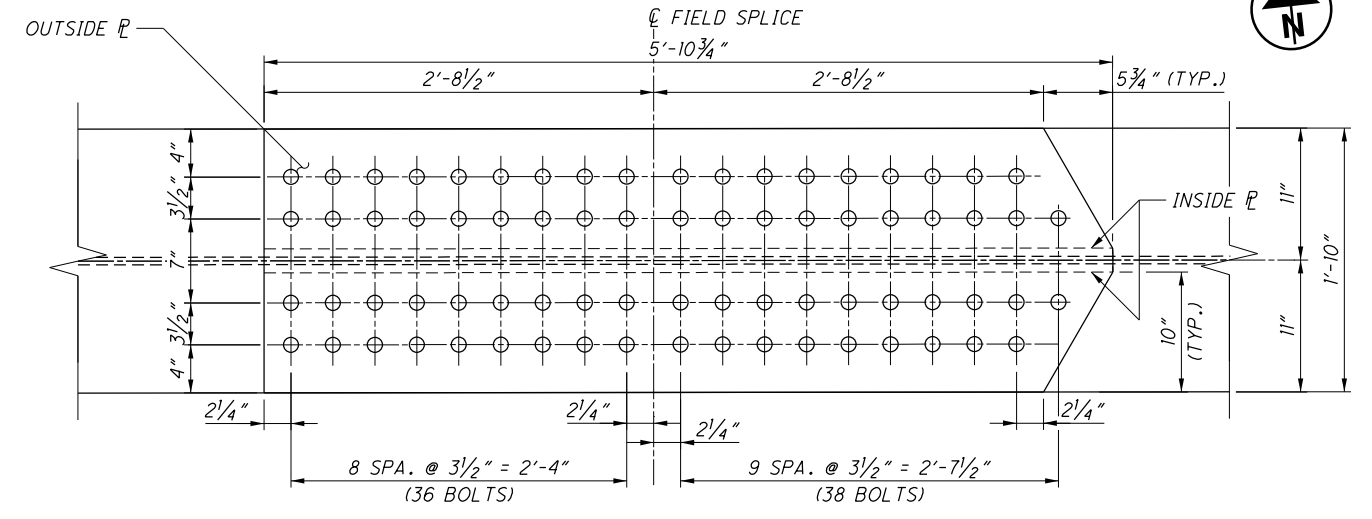
**CAMBER DETAILS**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

SUM-76-5.53  
PID No. 96670

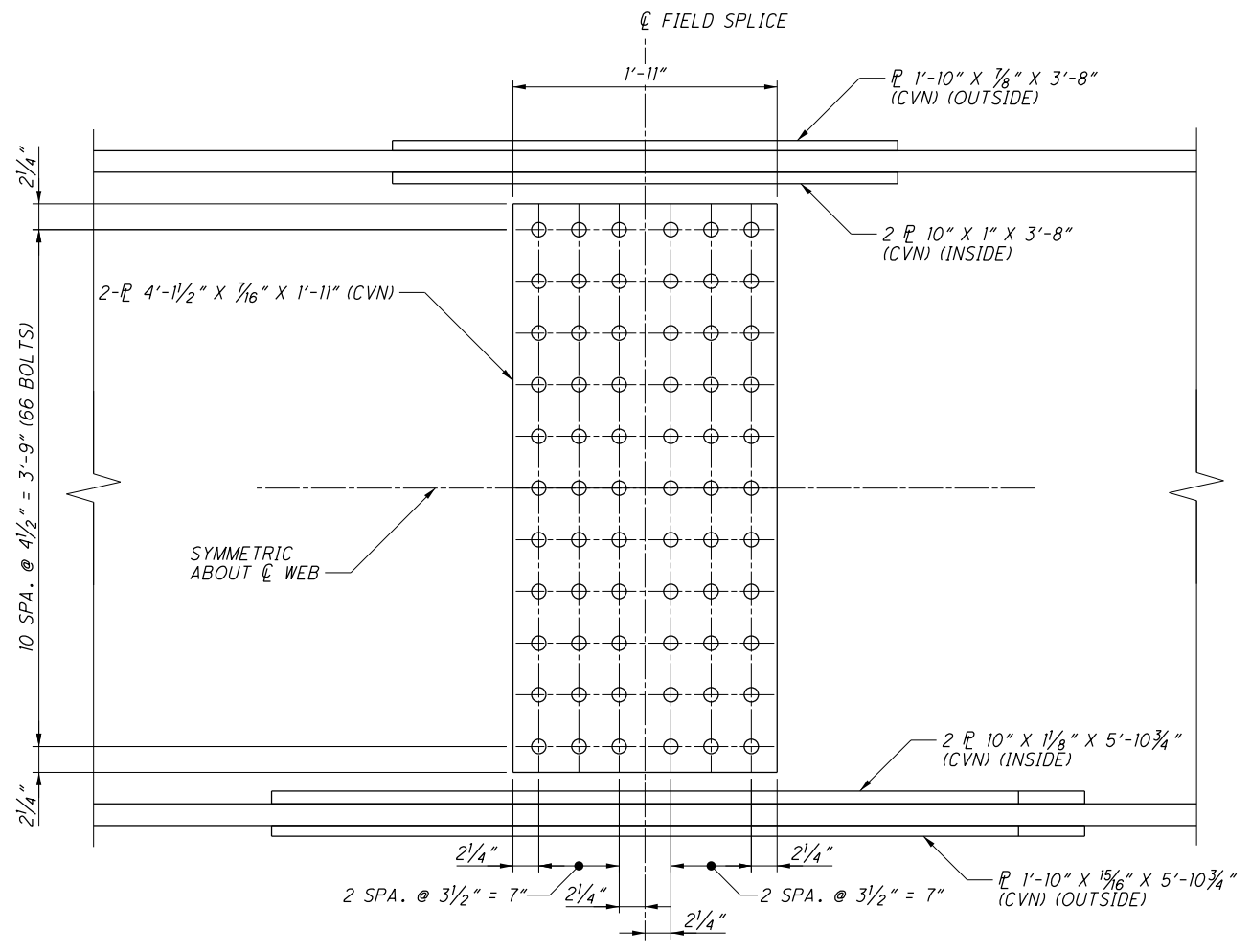
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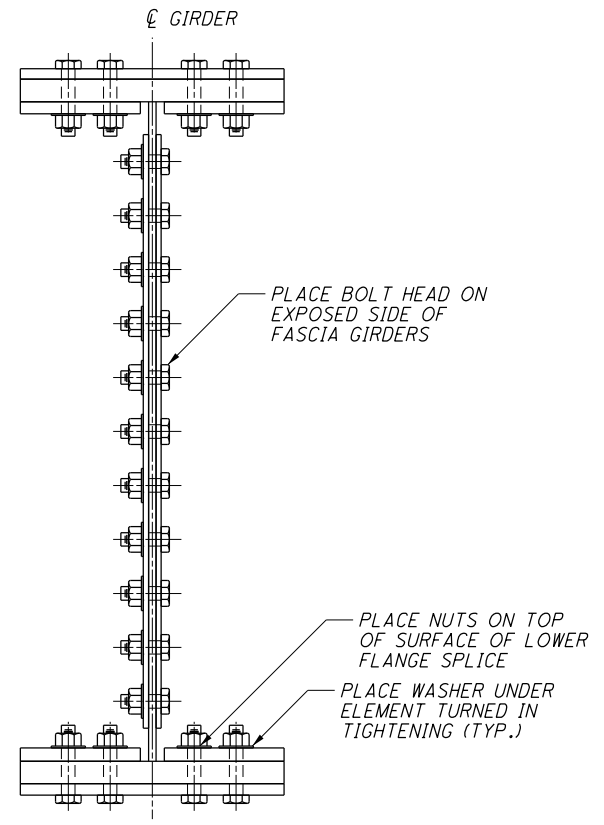
**PLAN - TOP FLANGE SPLICE**



**PLAN - BOTTOM FLANGE SPLICE**



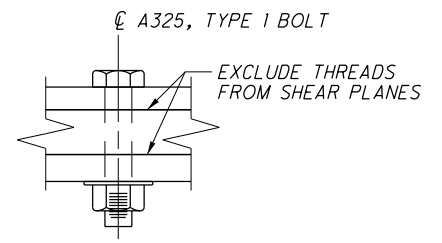
**ELEVATION**



**SECTION**

**NOTES**

1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. HIGH STRENGTH BOLTS SHALL BE 1/8" DIAMETER A325, TYPE I GALVANIZED 1/4" DIAMETER HOLES.
3. ALL BOLTS SHALL BE SIZED TO EXCLUDE THREADS FROM SHEAR PLANES. SEE BOLT DETAIL.

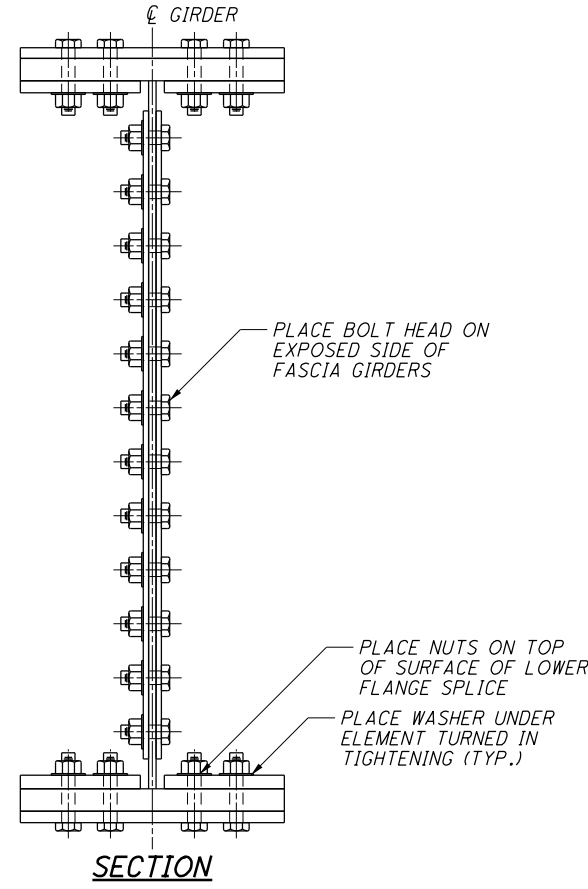
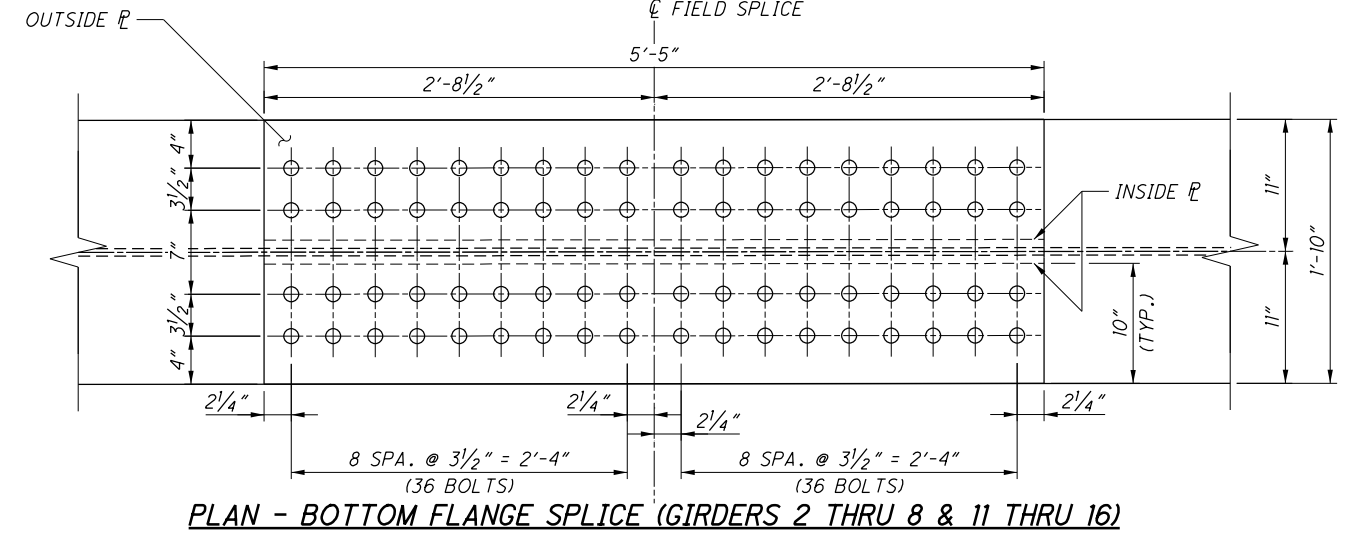
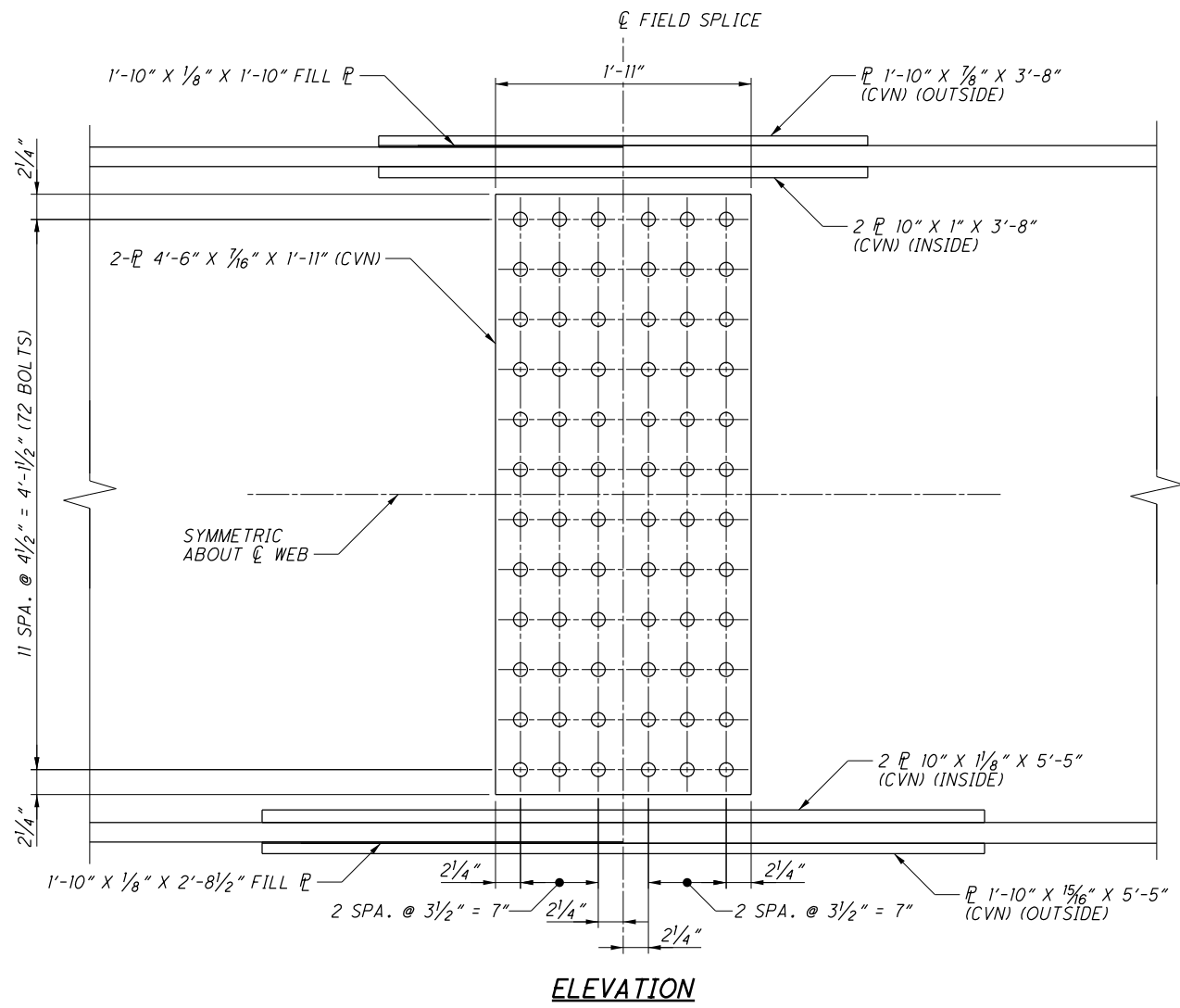
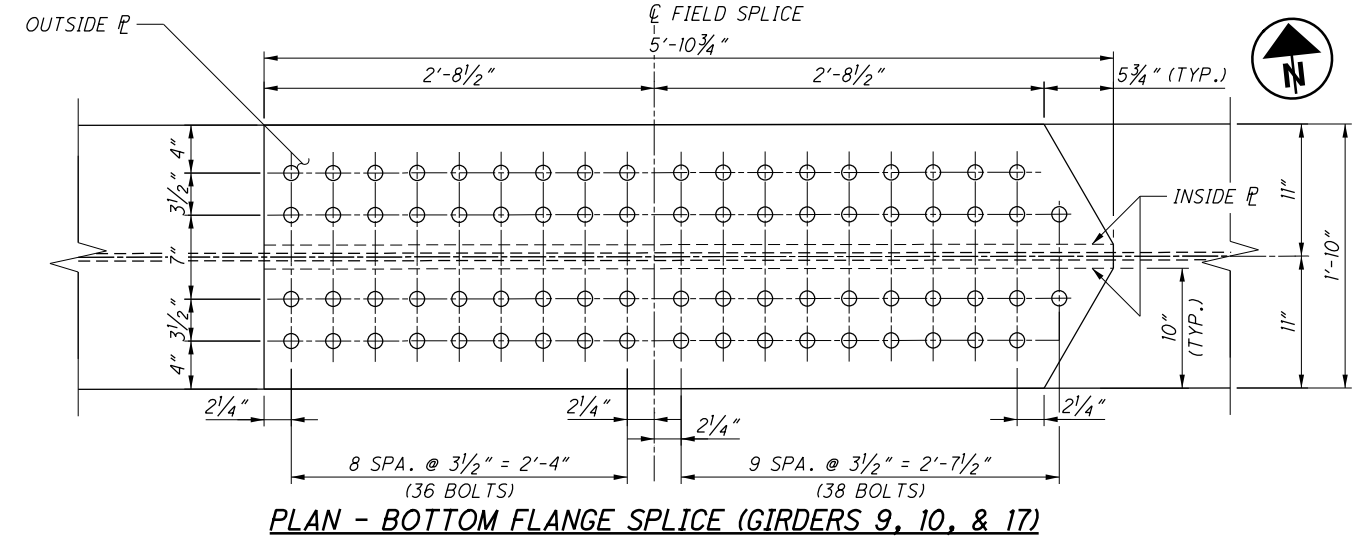
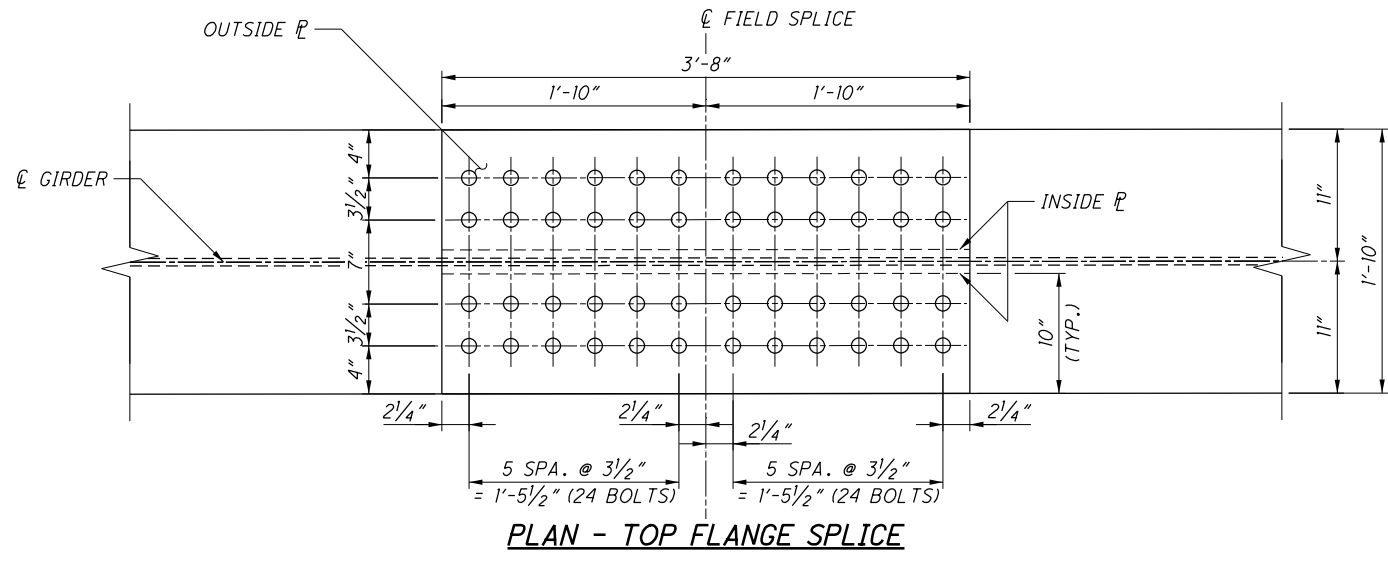


**BOLT DETAIL**

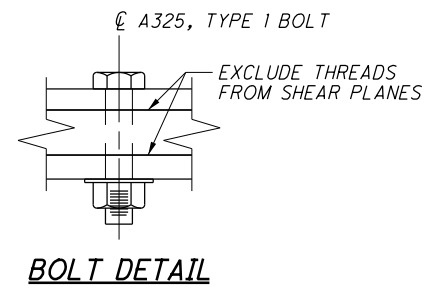


DESIGN AGENCY <b>CARPENTER MARTY</b> TRANSPORTATION CONSULTANTS	
REVIEWED WHM	DATE 4/28/2017
DRAWN ERK	STRUCTURE FILE NUMBER 7705493
DESIGNED ERK	CHECKED GDJ
<b>GIRDER 1 SPLICE DETAILS</b>	
BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)	
<b>SUM-76-5.53</b>	<b>PID No. 96670</b>
42/78	606 672

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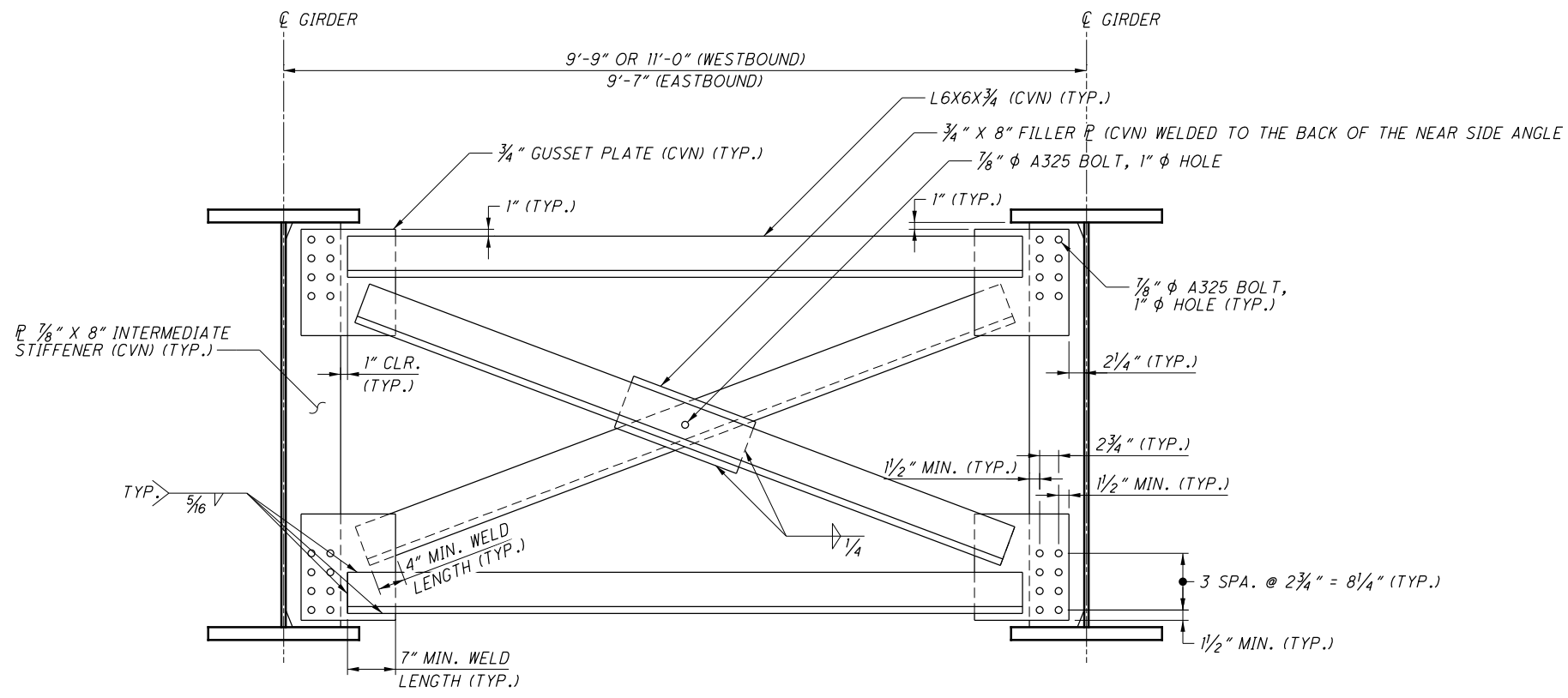
- NOTES**
1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
  2. HIGH STRENGTH BOLTS SHALL BE 1/8" DIAMETER A325, TYPE 1 GALVANIZED 1/4" DIAMETER HOLES.
  3. ALL BOLTS SHALL BE SIZED TO EXCLUDE THREADS FROM SHEAR PLANES. SEE BOLT DETAIL.



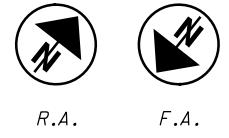
GIRDERS 2 THRU 8 & 11 THRU 16 SHOWN, 9, 10, & 17 SIMILAR SPLICE 1 SHOWN, SPLICE 2 OPPOSITE HAND

DESIGN AGENCY <b>CARPENTER MARTY</b> TRANSPORTATION	DATE	4/28/2017
	REVIEWED	WHM
BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)	STRUCTURE FILE NUMBER	7705493
	DRAWN	ERK
GIRDERS 2-17 SPLICE DETAILS	CHECKED	GDJ
	DESIGNED	ERK
SUM-76-5.53	PID No. 96670	
43/78		
607		
672		

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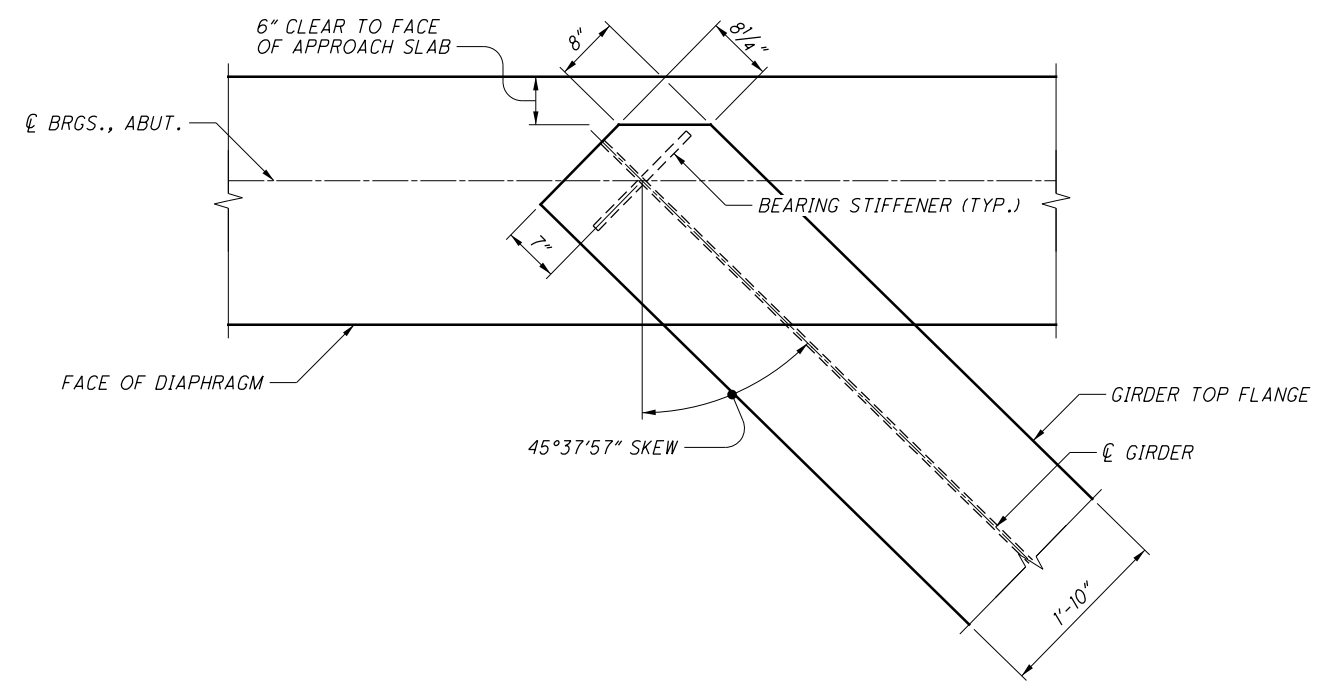


**INTERMEDIATE CROSS FRAME**



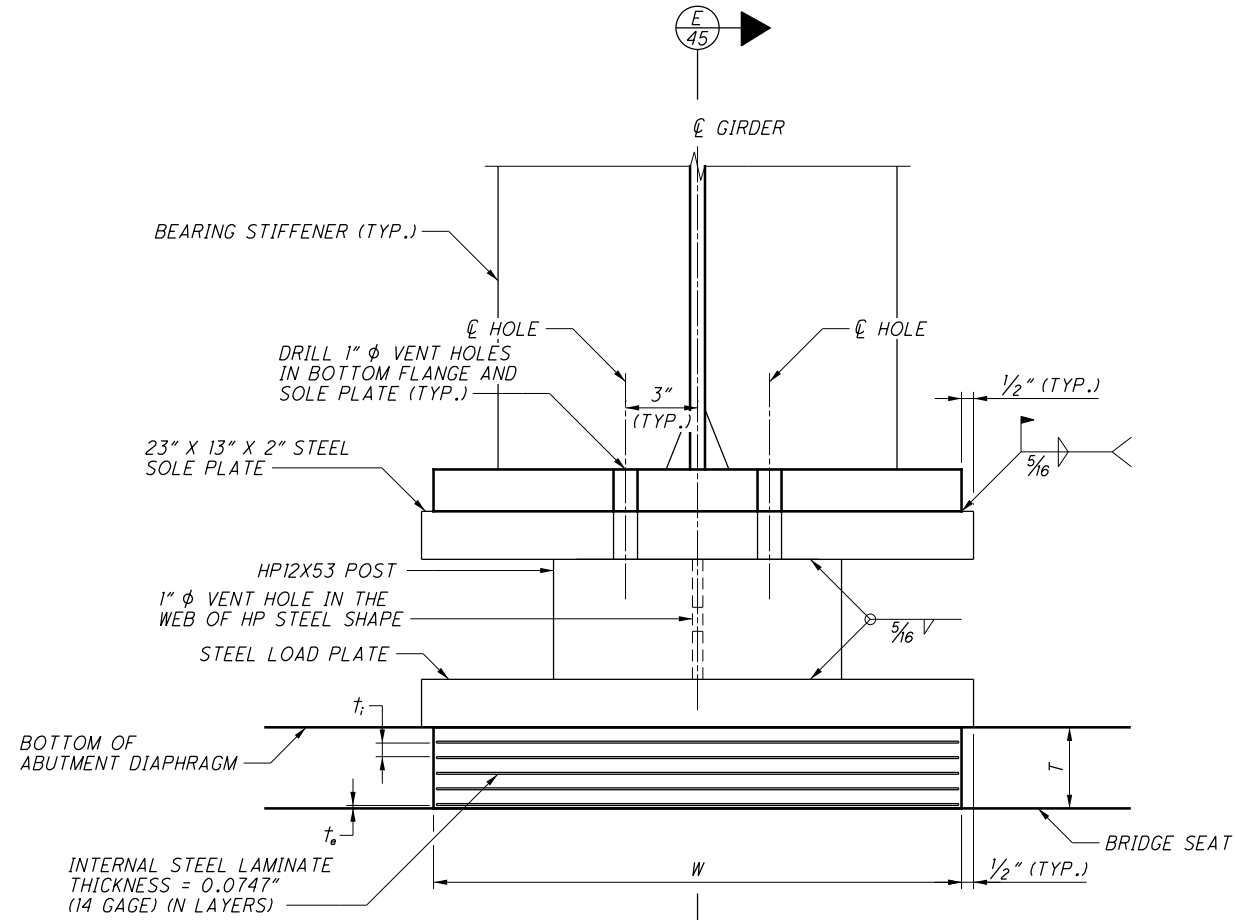
**NOTES**

1. HIGH STRENGTH BOLTS SHALL BE A325, TYPE 1 GALVANIZED.
2. ALL BOLTS SHALL BE SIZED TO EXCLUDE THREADS FROM SHEAR PLANES. SEE BOLT DETAIL ON SHEET 42/78.
3. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
4. ALL MEMBERS SHALL BE WELDED PRIOR TO GALVANIZING.

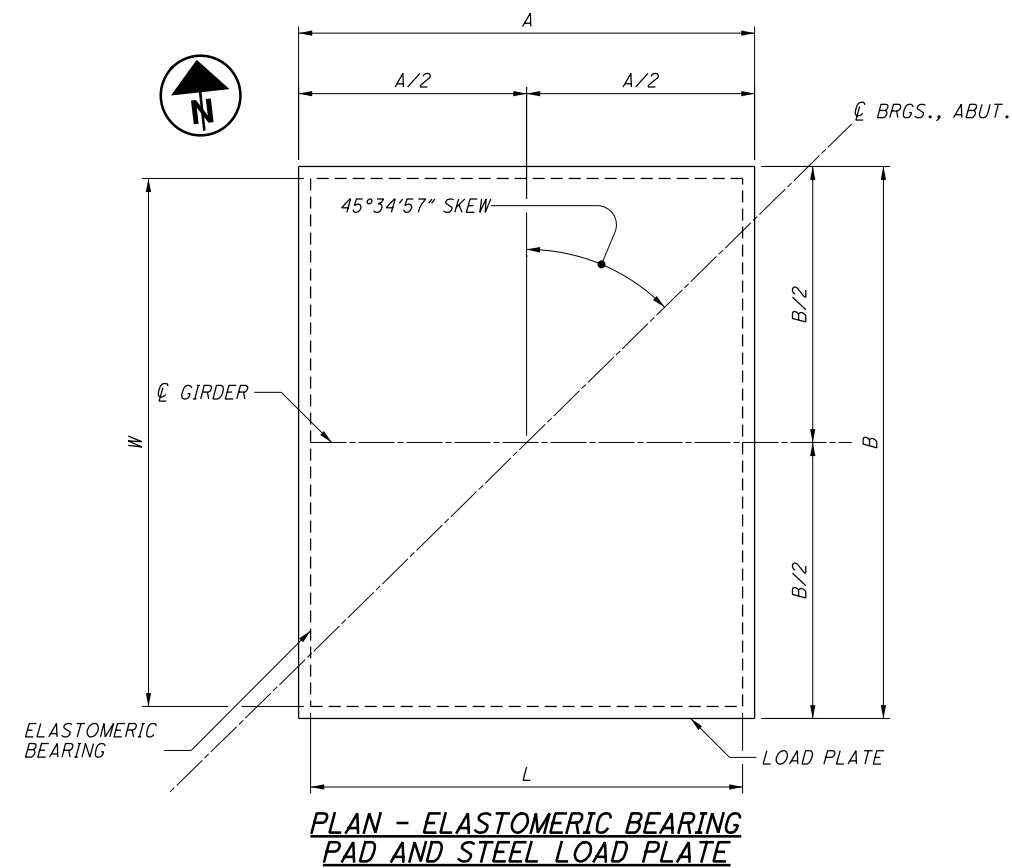


**TOP FLANGE CLIP DETAIL**

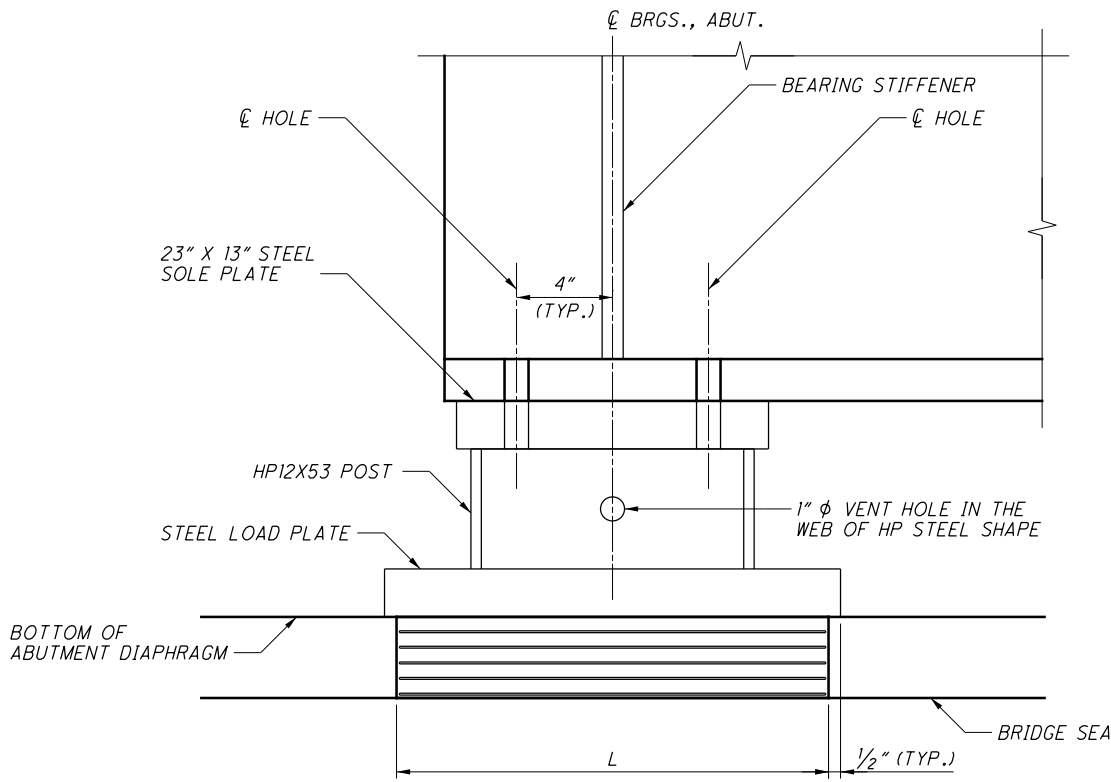
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**LAMINATED ELASTOMERIC EXPANSION BEARING**



**PLAN - ELASTOMERIC BEARING PAD AND STEEL LOAD PLATE**



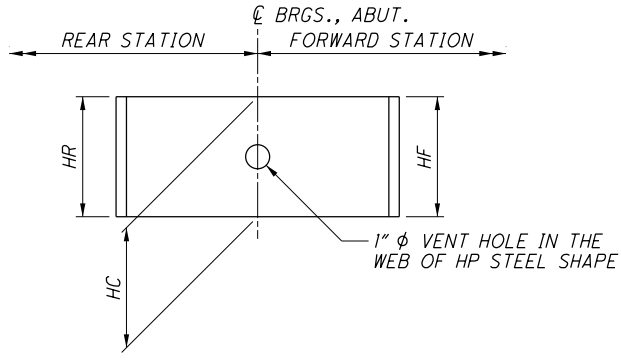
**E SECTION**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGN IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. THE STEEL PLATES AND HP12X53 SHALL BE ASTM A709 GRADE 50 AND BE SIMILARLY COATED AS THE STRUCTURAL STEEL. GALVANIZING SHALL BE DONE IN THE SHOP AND BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER BEARING IS INSTALLED.

**LEGEND**

- $t_i$  - THICKNESS OF INTERNAL LAYERS
- $t_e$  - THICKNESS OF EXTERNAL LAYERS
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF INTERNAL LAYERS
- N - NUMBER OF STEEL LAMINATES  
INTERNAL STEEL LAMINATE THICKNESS - 0.0747" (14 GAGE)
- \* - REACTIONS SHOWN ARE WITH NO LOAD FACTOR OR DYNAMIC LOAD ALLOWANCE INCLUDED



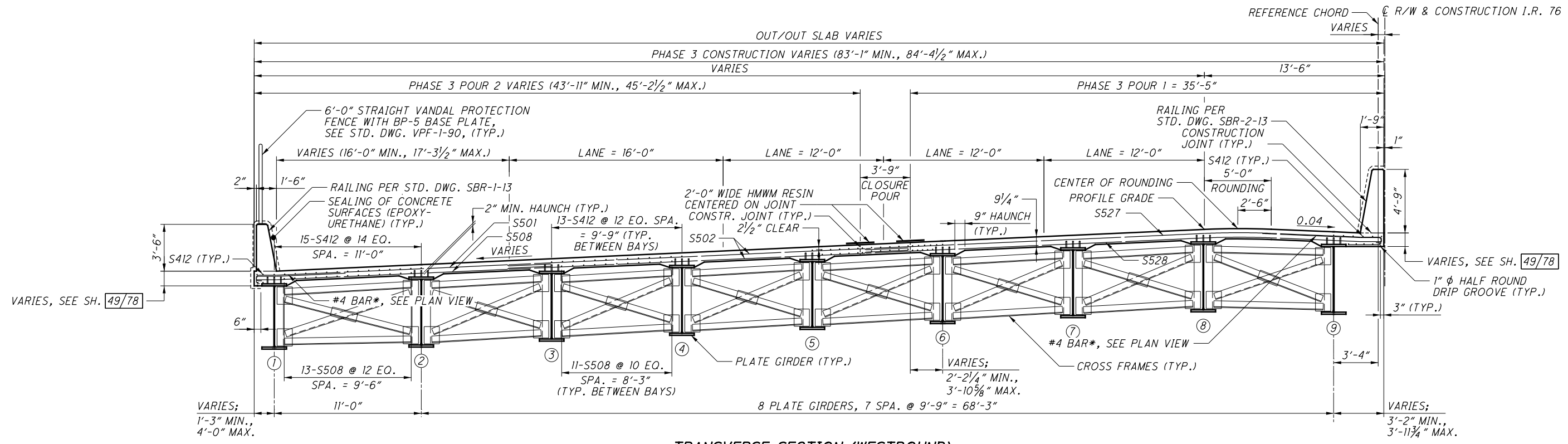
**BEVELED HP 12X53 DETAIL**

	HP 12X53 POST HEIGHT (H)											
	GIRDER	LOCATION			GIRDER	LOCATION						
		HR (IN.)	HC (IN.)	HF (IN.)		HR (IN.)	HC (IN.)	HF (IN.)				
REAR ABUTMENT	1	4 7/8	5	5 1/8	FORWARD ABUTMENT	1	4 13/16	5	5 3/16			
	2	4 7/8	5	5 1/8		2	4 13/16	5	5 3/16			
	3	4 7/8	5	5 1/8		3	4 13/16	5	5 3/16			
	4	4 7/8	5	5 1/8		4	4 13/16	5	5 3/16			
	5	4 7/8	5	5 1/8		5	4 13/16	5	5 3/16			
	6	4 7/8	5	5 1/8		6	4 13/16	5	5 3/16			
	7	4 7/8	5	5 1/8		7	4 13/16	5	5 3/16			
	8	4 7/8	5	5 1/8		8	4 13/16	5	5 3/16			
	9	4 7/8	5	5 1/8		9	4 13/16	5	5 3/16			
	10	4 7/8	5	5 1/8		10	4 13/16	5	5 3/16			
	11	4 7/8	5	5 1/8		11	4 13/16	5	5 3/16			
	12	4 7/8	5	5 1/8		12	4 7/8	5	5 1/8			
	13	4 7/8	5	5 1/8		13	4 7/8	5	5 1/8			
	14	4 15/16	5	5 1/16		14	4 7/8	5	5 1/8			
	15	4 15/16	5	5 1/16		15	4 7/8	5	5 1/8			
	16	4 15/16	5	5 1/16		16	4 7/8	5	5 1/8			
	17	4 15/16	5	5 1/16		17	4 7/8	5	5 1/8			

ELASTOMERIC BEARINGS												
BEARING DIMENSIONS						STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD	
L	W	$t_i$	$t_e$	T	N	A	B	THICKNESS	DL	LL		
18"	22"	0.575"	0.125"	3.374"	5	19"	23"	2"	264 K	102 K	366 K	



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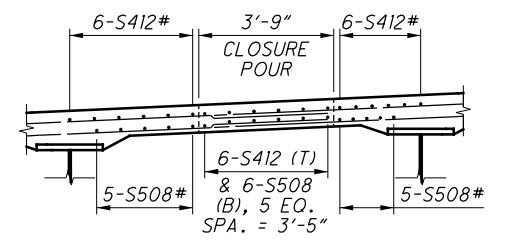
TRANSVERSE SECTION (WESTBOUND)

**NOTES**

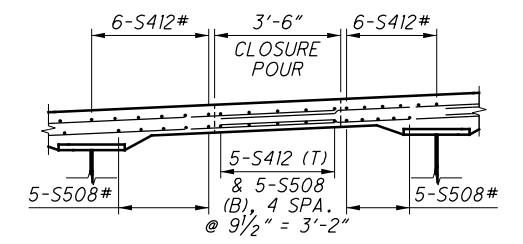
- 2'-0" WIDE HMWM RESIN CENTERED ON CONSTRUCTION JOINT. INCLUDE FOR PAYMENT UNDER ITEM 511, CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE.
- ATTACH CROSS FRAMES UNDER CLOSURE POUR PRIOR TO CONSTRUCTING THE CLOSURE POUR FOR THE DECK.
- SEE SH. 49/78 FOR OVERHANG DETAILS.

**LEGEND**

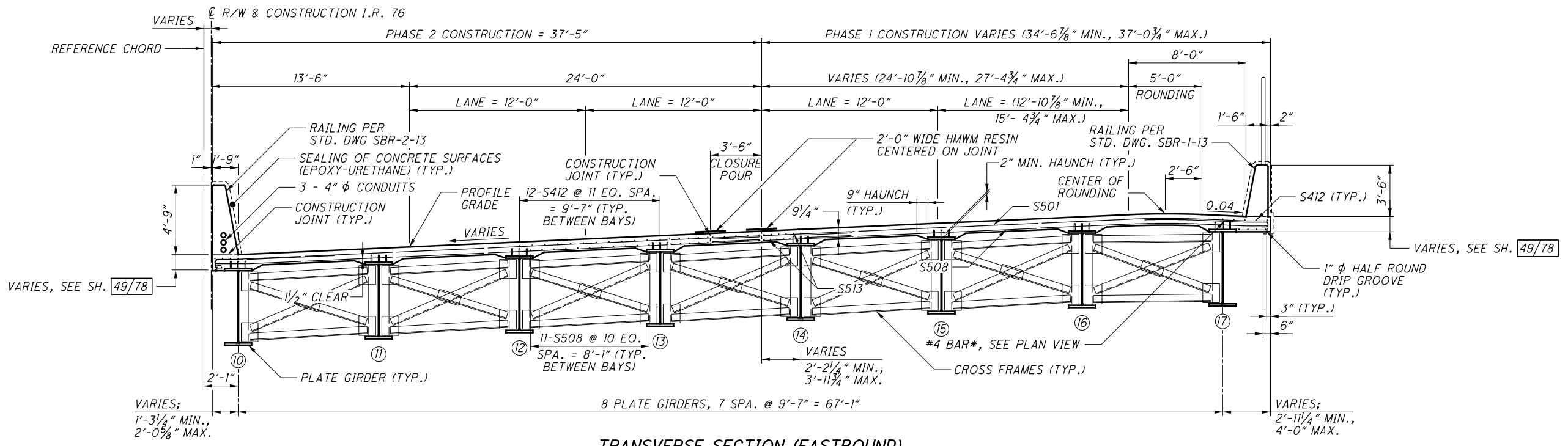
- \* - BUNDLED WITH TOP NO. 5 BAR
- T - TOP
- B - BOTTOM
- # - SPACING VARIES



WESTBOUND CLOSURE POUR DETAIL



EASTBOUND CLOSURE POUR DETAIL

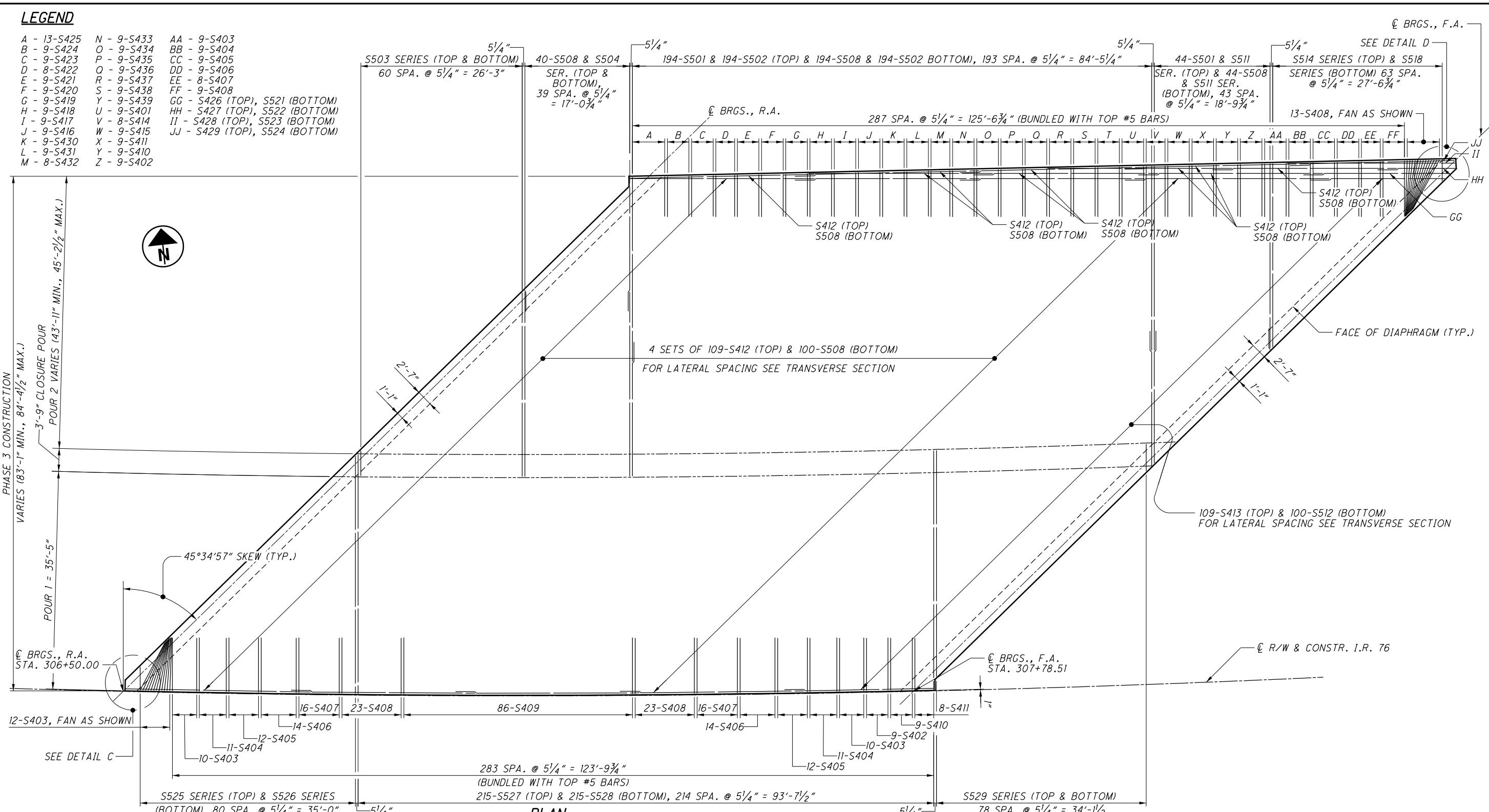


TRANSVERSE SECTION (EASTBOUND)

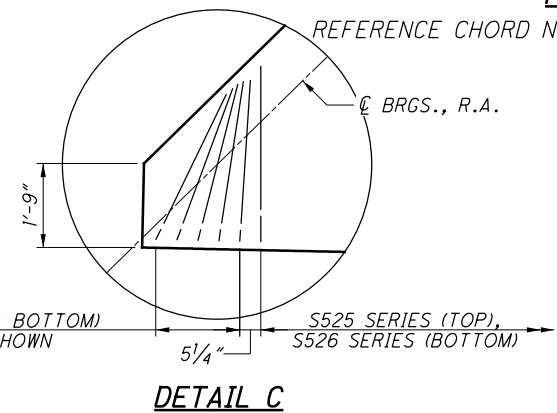
**LEGEND**

A - 13-S425	N - 9-S433	AA - 9-S403
B - 9-S424	O - 9-S434	BB - 9-S404
C - 9-S423	P - 9-S435	CC - 9-S405
D - 8-S422	Q - 9-S436	DD - 9-S406
E - 9-S421	R - 9-S437	EE - 8-S407
F - 9-S420	S - 9-S438	FF - 9-S408
G - 9-S419	Y - 9-S439	GG - S426 (TOP), S521 (BOTTOM)
H - 9-S418	U - 9-S401	HH - S427 (TOP), S522 (BOTTOM)
I - 9-S417	V - 8-S414	II - S428 (TOP), S523 (BOTTOM)
J - 9-S416	W - 9-S415	JJ - S429 (TOP), S524 (BOTTOM)
K - 9-S430	X - 9-S411	
L - 9-S431	Y - 9-S410	
M - 8-S432	Z - 9-S402	

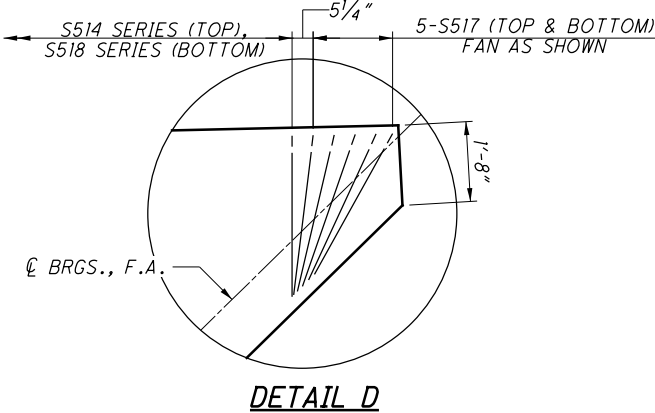
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**PLAN**



**DETAIL C**



**DETAIL D**

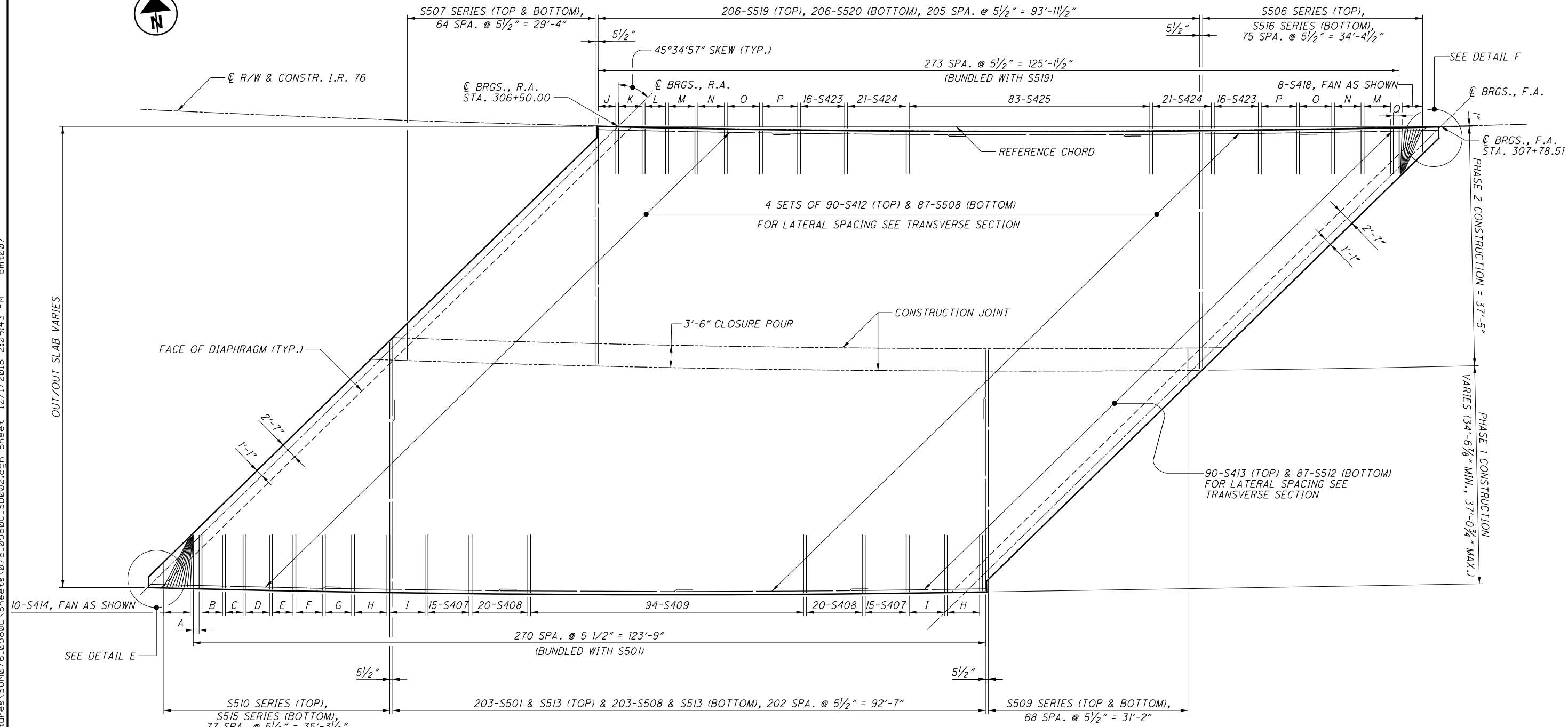
**NOTES**

- DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES AN AVERAGE HAUNCH THICKNESS OF 3/8 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE IS ±3 INCHES.
- THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
- MINIMUM LAP SPLICE LENGTHS:  
#4 BAR: 31 INCHES  
#5 BAR: 38 INCHES
- TRANSVERSE BARS PLACED PERPENDICULAR TO REFERENCE CHORD.
- SEE SHEET [49/78] FOR SLAB OVERHANG DIAGRAM.

DESIGN AGENCY: CARPENTER MARTY DATE: 4/30/2017 REVIEWED: WHM DRAWN: ERK CHECKED: GDU STRUCTURE FILE NUMBER: 7705493
<b>DECK PLAN (WESTBOUND)</b> BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)
<b>SUM-76-5.53</b> PID No. 96670
47 / 78
611 672

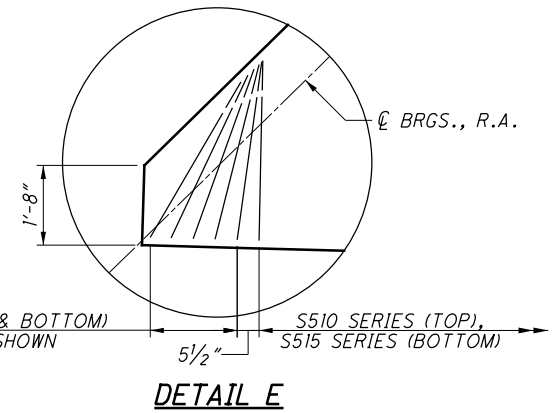


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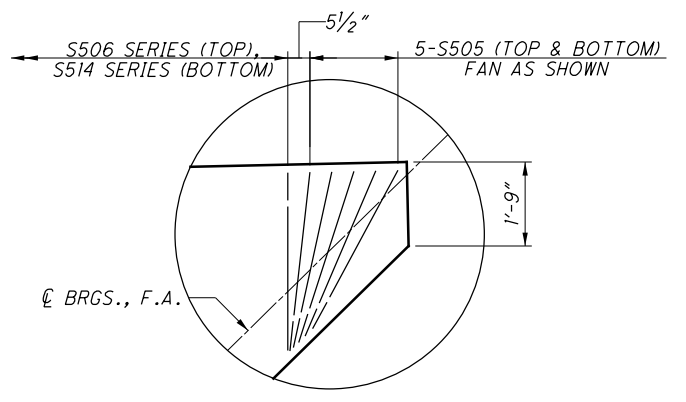


**PLAN**

- LEGEND**
- A - 3-S414
  - B - 8-S415
  - C - 7-S411
  - D - 9-S410
  - E - 8-S402
  - F - 10-S403
  - G - 10-S404
  - H - 12-S405
  - I - 13-S406
  - J - 7-S416
  - K - 9-S417
  - L - 8-S418
  - M - 10-S419
  - N - 10-S420
  - O - 12-S421
  - P - 13-S422
  - Q - 3-S418



**DETAIL E**



**DETAIL F**

**NOTES**

1. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES AN AVERAGE HAUNCH THICKNESS OF 3/8 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE IS ±3 INCHES.  
  
THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
2. MINIMUM LAP SPLICE LENGTHS:  
#4 BAR: 31 INCHES  
#5 BAR: 38 INCHES
3. TRANSVERSE BARS PLACED PERPENDICULAR TO REFERENCE CHORD.
4. SEE SHEET 49/78 FOR SLAB OVERHANG DIAGRAM.

DESIGN AGENCY  
**CARPENTER MARTY**  
TRANSPORTATION  
INCORPORATED  
14484524 • CANTON, OH

DESIGNED	AMR	CHECKED	GDJ
DRAWN	AMR	REVISED	
REVIEWED	WHM	DATE	4/30/2017
STRUCTURE FILE NUMBER			7705493

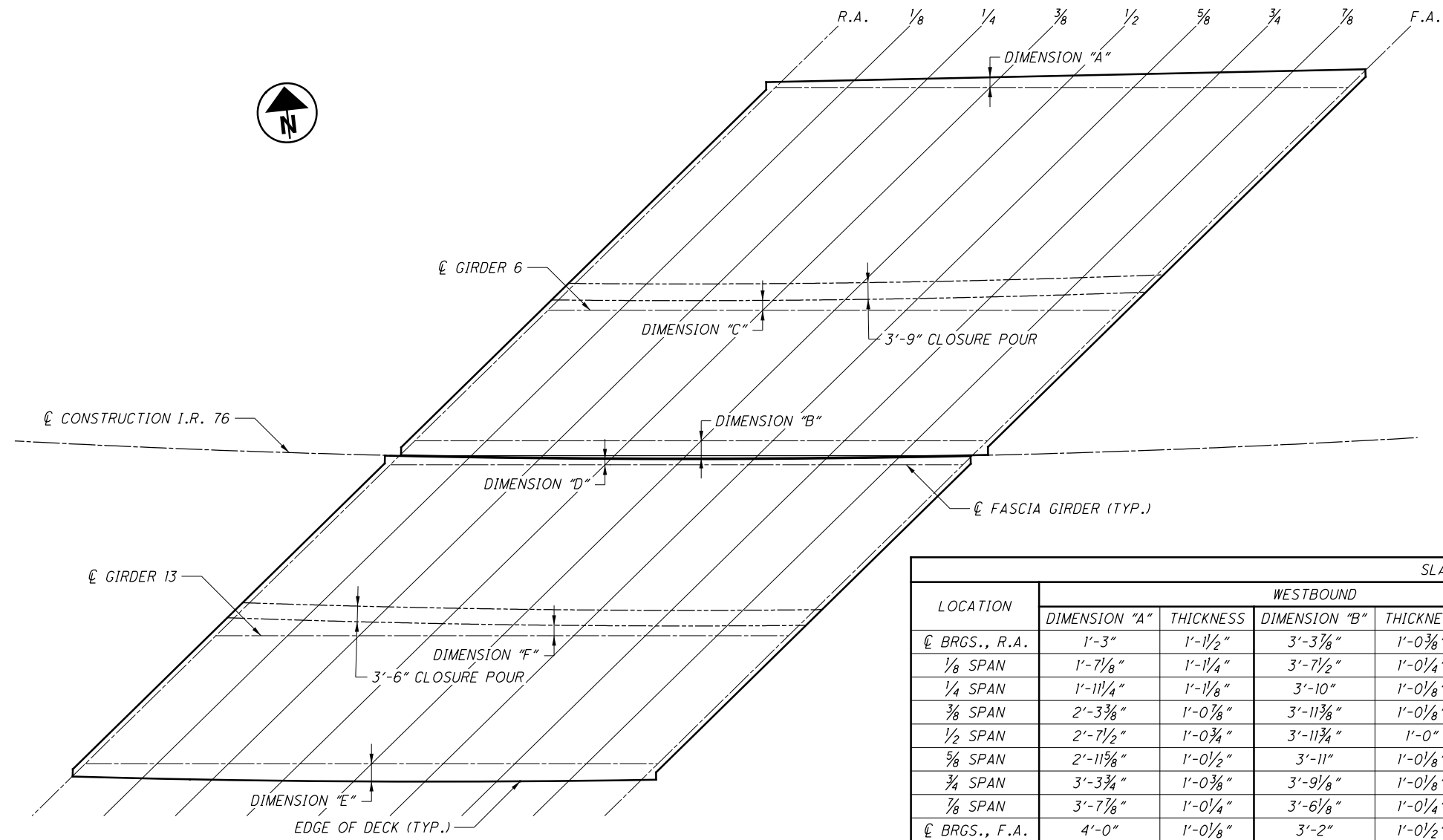
**DECK PLAN (EASTBOUND)**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
PID No. 96670

48/78

612  
672

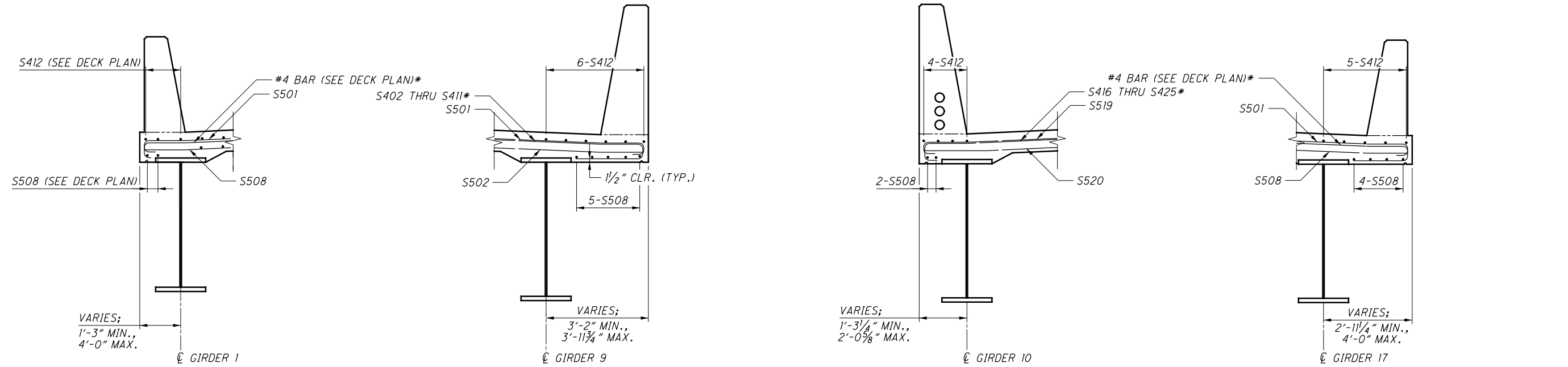
P:\DDT\MP\0093\_SUM-76-5.62\SUM-76-5.62\SUM-96670\Design\Structures\SUM076\_0580C\_Sheets\076\_0580C\_SS007.dgn Sheet 10/1/2018 2:09:44 PM cmt007



**LEGEND**  
\* - BUNDLED WITH TOP NO. 5 BAR

LOCATION	SLAB OVERHANG DIMENSIONS									
	WESTBOUND					EASTBOUND				
	DIMENSION "A"	THICKNESS	DIMENSION "B"	THICKNESS	DIMENSION "C"	DIMENSION "D"	THICKNESS	DIMENSION "E"	THICKNESS	DIMENSION "F"
CL BRGS., R.A.	1'-3"	1'-1/2"	3'-3 7/8"	1'-0 3/8"	2'-4 1/4"	2'-0 5/8"	1'-1"	2'-11 1/4"	1'-0 1/2"	3'-11 3/4"
1/8 SPAN	1'-7 1/8"	1'-1 1/4"	3'-7 1/2"	1'-0 1/4"	2'-2 3/4"	1'-8 5/8"	1'-1 1/8"	3'-4"	1'-0 3/8"	3'-5 5/8"
1/4 SPAN	1'-11 1/4"	1'-1 1/8"	3'-10"	1'-0 1/8"	2'-2 1/4"	1'-5 3/4"	1'-1 1/4"	3'-7 5/8"	1'-1 1/8"	3'-0 1/2"
3/8 SPAN	2'-3 3/8"	1'-0 3/8"	3'-11 3/8"	1'-0 1/8"	2'-2 7/8"	1'-4"	1'-1 3/8"	3'-10 1/8"	1'-1 1/8"	2'-8 1/2"
1/2 SPAN	2'-7 1/2"	1'-0 3/4"	3'-11 3/4"	1'-0"	2'-4 5/8"	1'-3 1/4"	1'-1 3/8"	3'-11 1/2"	1'-0"	2'-5 3/8"
5/8 SPAN	2'-11 5/8"	1'-0 1/2"	3'-11"	1'-0 1/8"	2'-7 1/2"	1'-3 5/8"	1'-1 3/8"	4'-0"	1'-0"	2'-3 3/8"
3/4 SPAN	3'-3 3/4"	1'-0 3/8"	3'-9 1/8"	1'-0 1/8"	2'-11 3/8"	1'-5 1/8"	1'-1 1/4"	3'-11 1/4"	1'-0"	2'-2 3/8"
7/8 SPAN	3'-7 7/8"	1'-0 1/4"	3'-6 1/8"	1'-0 1/4"	3'-4 1/2"	1'-7 3/4"	1'-1 1/8"	3'-9 1/2"	1'-0 1/8"	2'-2 3/8"
CL BRGS., F.A.	4'-0"	1'-0 1/8"	3'-2"	1'-0 1/2"	3'-10 5/8"	1'-11 1/2"	1'-1"	3'-6 3/4"	1'-0 1/4"	2'-3 3/8"

**SLAB OVERHANG DIAGRAM**



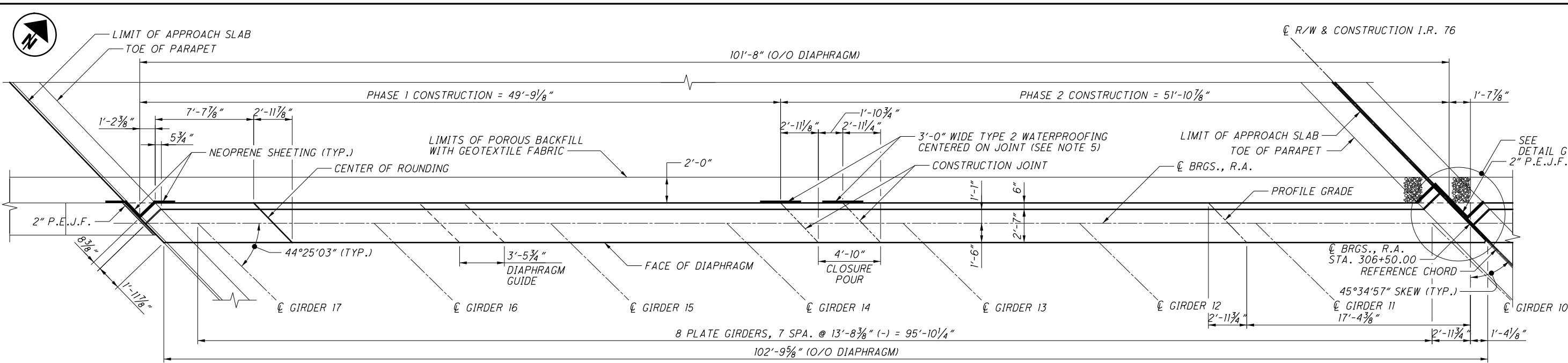
**WESTBOUND BRIDGE LEFT SLAB OVERHANG**

**WESTBOUND BRIDGE RIGHT SLAB OVERHANG**

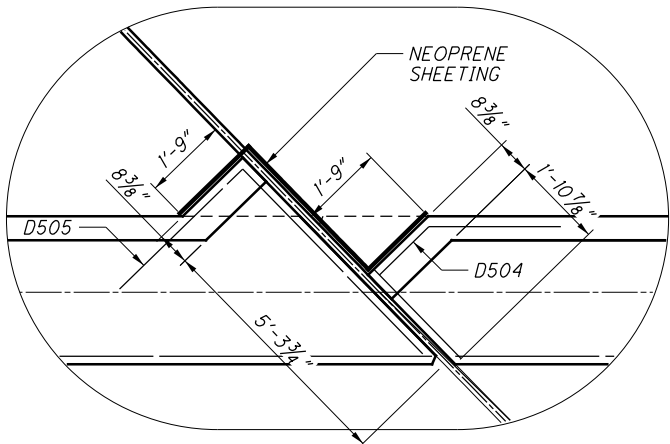
**EASTBOUND BRIDGE LEFT SLAB OVERHANG**

**EASTBOUND BRIDGE RIGHT SLAB OVERHANG**

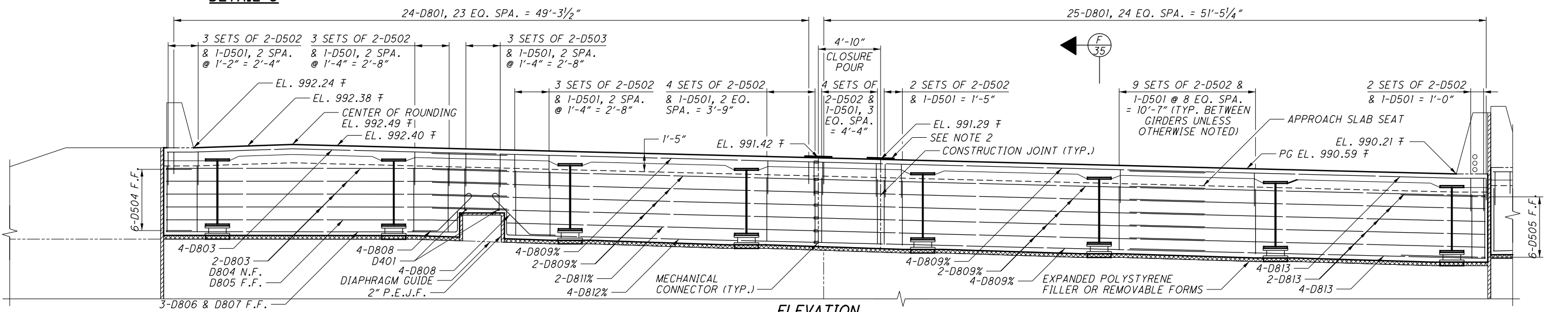
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**PLAN**  
ABUTMENT BREASTWALL & FOOTING NOT SHOWN



**DETAIL G**



**ELEVATION**

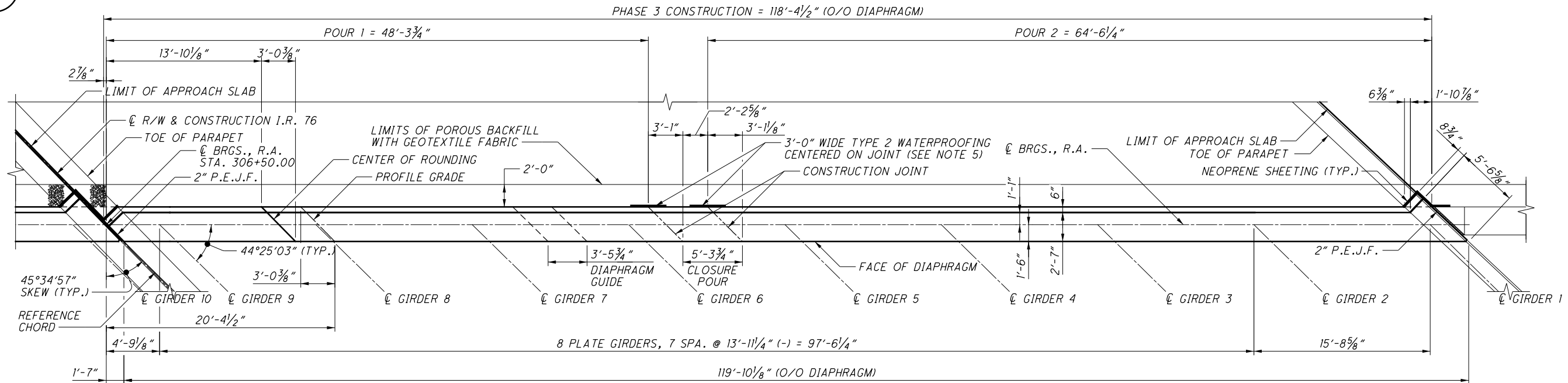
**NOTES**

- SEE STD DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
- 2'-0" WIDE HMWM RESIN CENTERED ON CONSTRUCTION JOINT. INCLUDE FOR PAYMENT UNDER ITEM 511, CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE.
- SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
- S527, S528, S529, & D801 BARS TO BE PLACED PARALLEL TO  $\text{C}$  GIRDERS.
- SEAL VERTICAL PHASE CONSTRUCTION JOINT FOR THE ENTIRE LENGTH OF THE JOINT.
- ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
- MINIMUM LAP SPLICE LENGTH:  
#8 BAR: 70 INCHES
- PROVIDE 3" CHAMFERS AT ACUTE CORNERS.

**LEGEND**

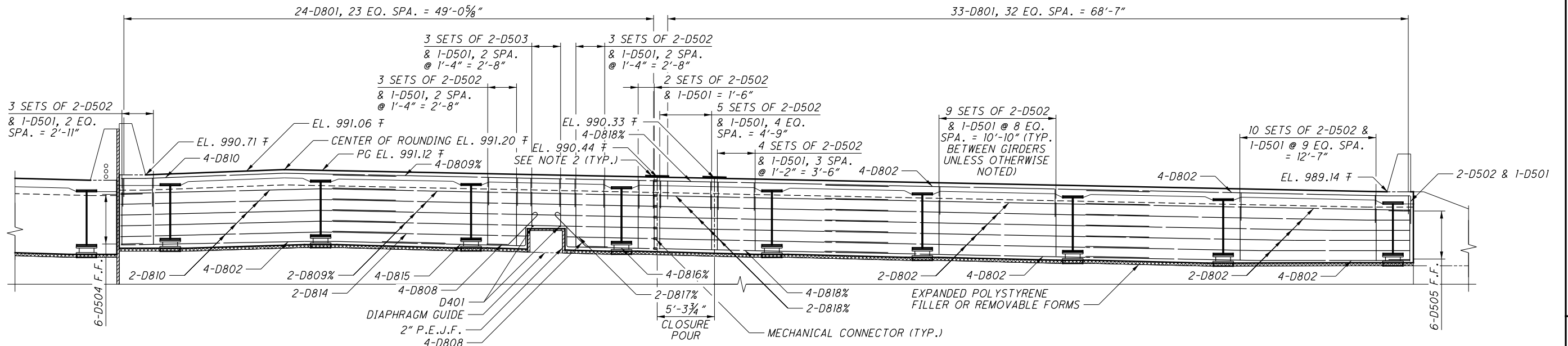
F - ELEVATION TAKEN AT BRIDGE LIMITS  
% - BAR TO UTILIZE A MECHANICAL CONNECTOR

	DESIGN AGENCY	DATE	REVIEWED	DRAWN	DESIGNED
	CARPENTER MARTY	4/27/2017	WHM	ERK	ERK
	TRANSPORTATION	STRUCTURE FILE NUMBER	7705493	REVISED	CHECKED
	744646242 - CANTON, OH			GDJ	GDJ
<b>REAR ABUTMENT DIAPHRAGM DETAILS (EASTBOUND)</b>					
BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)					
<b>SUM-76-5.53</b> PID No. 96670					
50/78					
614 672					



**PLAN**

ABUTMENT BREASTWALL & FOOTING NOT SHOWN



**ELEVATION**

**NOTES**

1. SEE STD DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
2. 2'-0" WIDE HMWM RESIN CENTERED ON CONSTRUCTION JOINT. INCLUDE FOR PAYMENT UNDER ITEM 511, CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE, AS PER PLAN.
3. SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
4. D501, D502, D503, & D801 BARS TO BE PLACED PARALLEL TO GIRDERS.
5. SEAL VERTICAL CONSTRUCTION JOINT FOR THE ENTIRE LENGTH OF THE JOINT.
6. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
7. MINIMUM LAP SPLICE LENGTH:  
#8 BAR: 70 INCHES
8. PROVIDE 3" CHAMFERS AT ACUTE CORNERS.

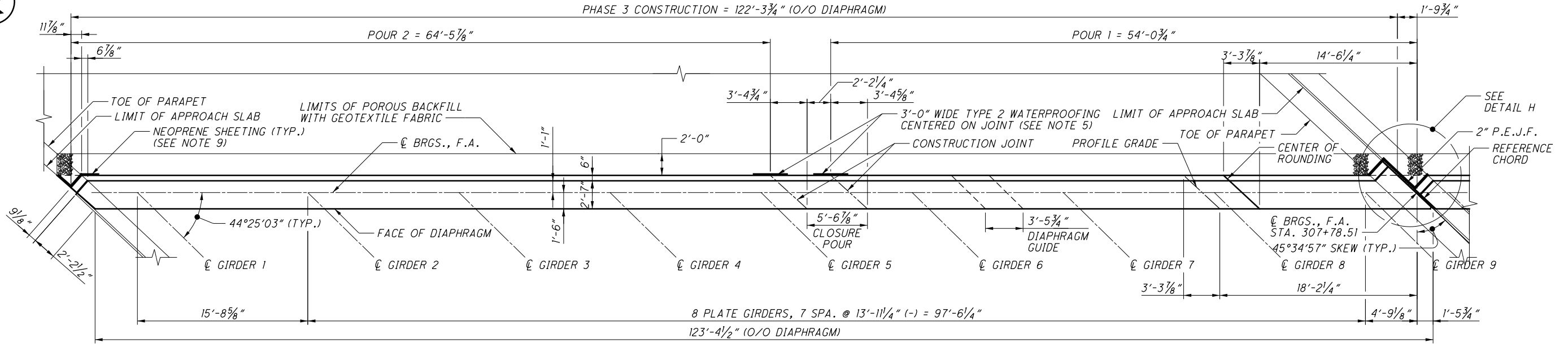
**LEGEND**

ƒ - ELEVATION TAKEN AT BRIDGE LIMITS  
% - BAR TO UTILIZE A MECHANICAL CONNECTOR

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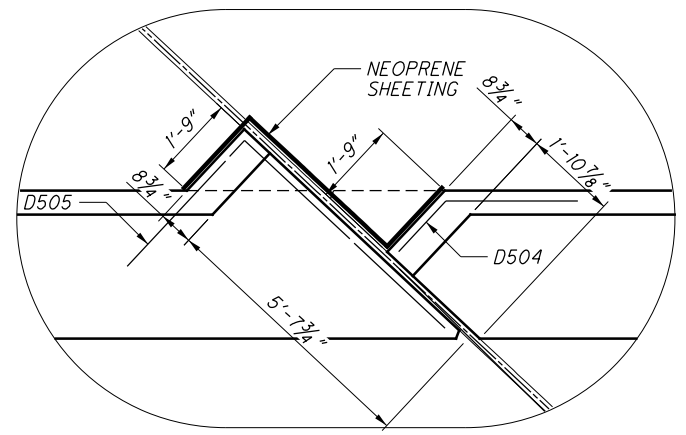


PHASE 3 CONSTRUCTION = 122'-3 3/4" (O/O DIAPHRAGM)

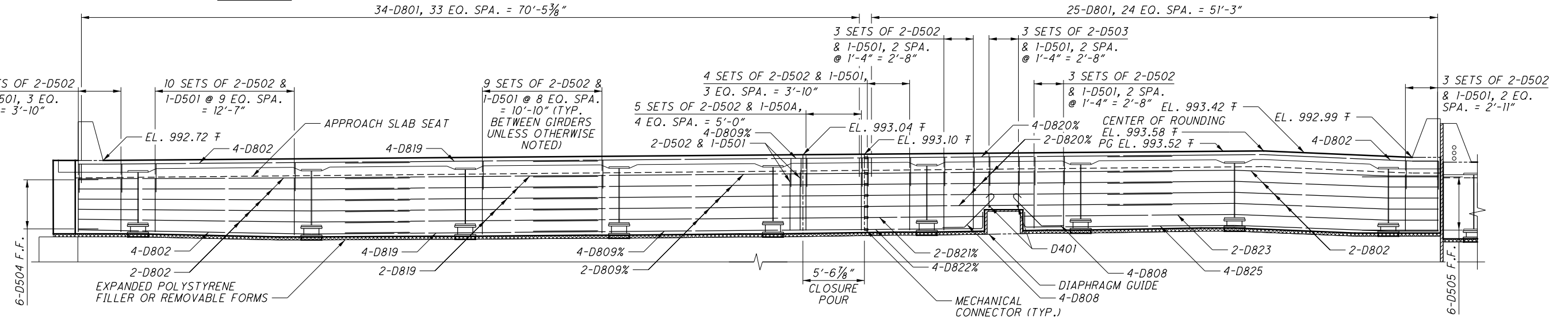


**PLAN**

ABUTMENT BREASTWALL & FOOTING NOT SHOWN



**DETAIL H**



**NOTES**

1. SEE STD DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
2. 2'-0" WIDE HMWM RESIN CENTERED ON CONSTRUCTION JOINT. INCLUDE FOR PAYMENT UNDER ITEM 511, CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE, AS PER PLAN.
3. SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
4. D501, D502, D503, & D801 BARS TO BE PLACED PARALLEL TO GIRDERS.
5. SEAL VERTICAL CONSTRUCTION JOINT FOR THE ENTIRE LENGTH OF THE JOINT.

6. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
7. MINIMUM LAP SPLICE LENGTH: #8 BAR: 70 INCHES
8. PROVIDE 3" CHAMFERS AT ACUTE CORNERS.
9. SEE RETAINING WALL 2 SHEET (519/672) FOR PAYMENT.

**LEGEND**

ƒ - ELEVATION TAKEN AT BRIDGE LIMITS  
% - BAR TO UTILIZE A MECHANICAL CONNECTOR

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DESIGN AGENCY  
**CARPENTER MARTY**  
TRANSPORTATION  
14455 S. 200th St.  
Burien, WA 98148

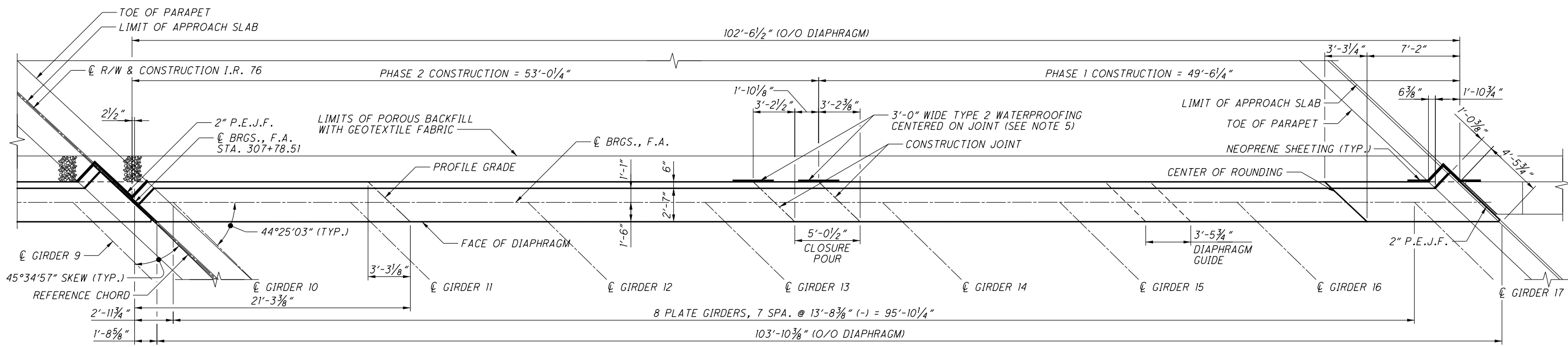
DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	7705493
DATE	4/27/2017		

**FORWARD ABUTMENT DIAPHRAGM DETAILS (WESTBOUND)**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

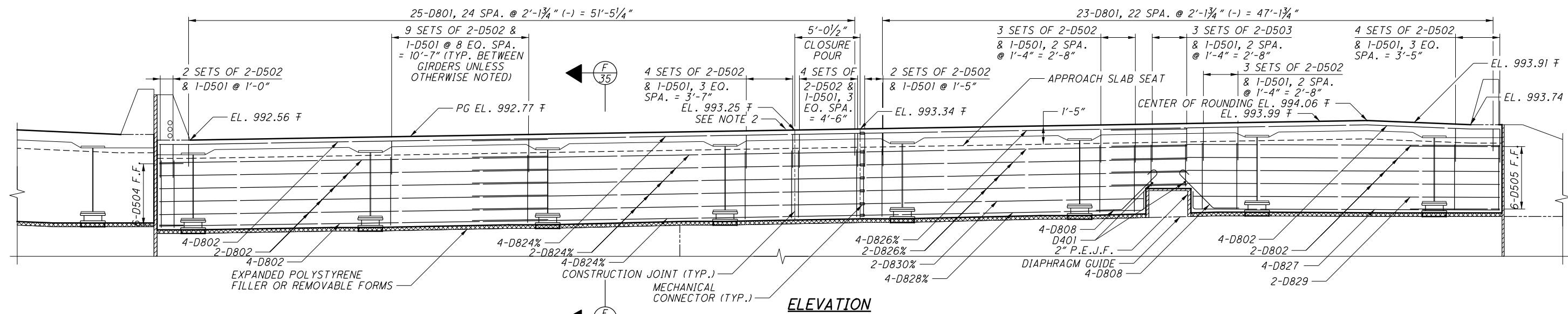
**SUM-76-5.53**  
**PID No. 96670**

52/78

616  
672



**PLAN**  
ABUTMENT BREASTWALL & FOOTING NOT SHOWN



**ELEVATION**

- NOTES**
- SEE STD DWGS. SICD-1-96 AND SICD-2-14 FOR ADDITIONAL NOTES AND DETAILS.
  - 2'-0" WIDE HMMW RESIN CENTERED ON CONSTRUCTION JOINT. INCLUDE FOR PAYMENT UNDER ITEM 511, CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE.
  - SEMI-INTEGRAL DIAPHRAGM GUIDE AND ALL RELATED APPURTENANCES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.
  - S527, S528, S529, & D801 BARS TO BE PLACED PARALLEL TO  $\text{C}$  GIRDERS.
  - SEAL VERTICAL PHASE CONSTRUCTION JOINT FOR THE ENTIRE LENGTH OF THE JOINT.

- ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
- MINIMUM LAP SPLICE LENGTH:  
#8 BAR: 70 INCHES
- PROVIDE 3" CHAMFERS AT ACUTE CORNERS.

- LEGEND**
- F - ELEVATION TAKEN AT BRIDGE LIMITS
  - % - BAR TO UTILIZE A MECHANICAL CONNECTOR

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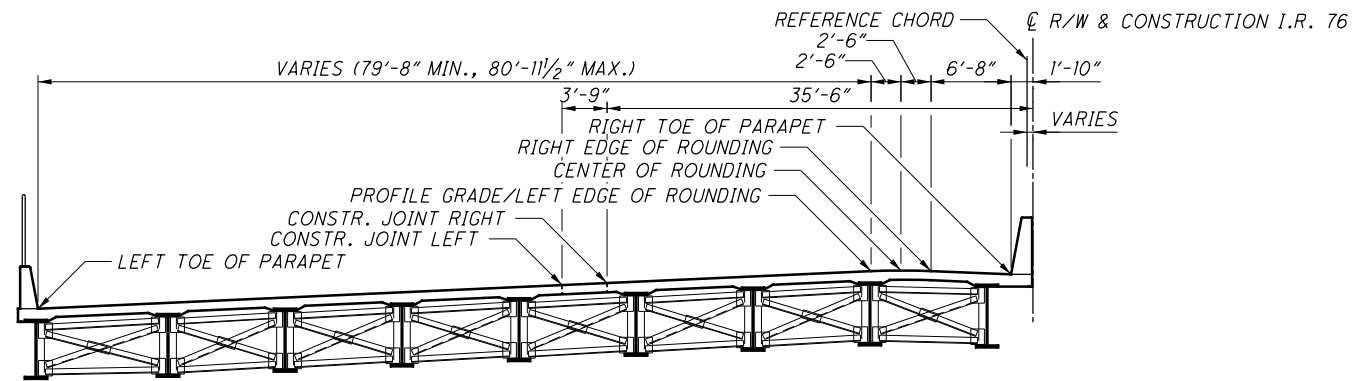


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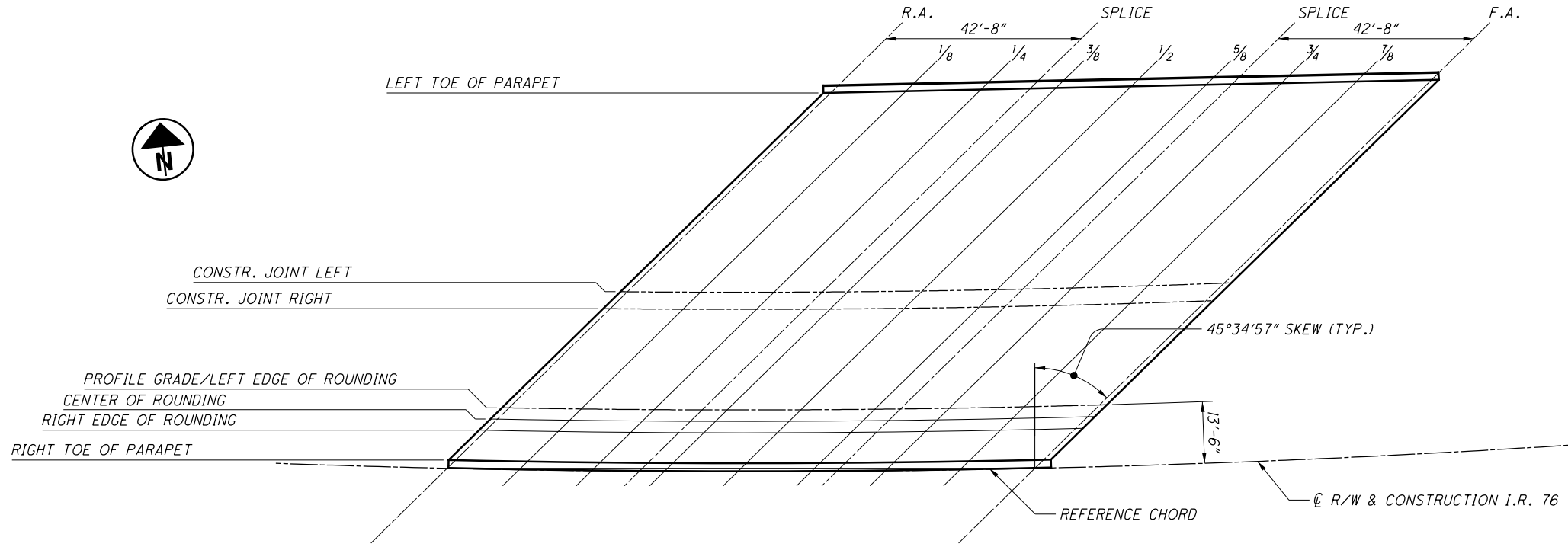
SCREED ELEVATIONS TABLE (FT.)												
LOCATION	DESCRIPTION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
LEFT TOE OF PARAPET	STATION	307+34.44	307+51.36	307+68.28	307+79.39	307+85.20	308+02.13	308+19.05	308+24.86	308+35.96	308+52.87	308+69.78
	ELEVATION	989.17	989.59	990.03	990.31	990.45	990.86	991.25	991.41	991.72	992.19	992.66
CONSTR. JOINT LEFT	STATION	306+89.08	307+05.27	307+21.55	307+32.29	307+37.93	307+54.41	307+70.99	307+76.72	307+87.68	308+04.47	308+21.37
	ELEVATION	990.36	990.71	991.07	991.30	991.42	991.76	992.08	992.18	992.38	992.69	993.00
CONSTR. JOINT RIGHT	STATION	306+85.28	307+01.42	307+17.66	307+28.37	307+34.00	307+50.43	307+66.96	307+72.67	307+83.60	308+00.34	308+17.19
	ELEVATION	990.47	990.82	991.17	991.40	991.51	991.85	992.16	992.27	992.46	992.76	993.06
PROFILE GRADE/ LEFT EDGE OF ROUNDING	STATION	306+63.26	306+79.15	306+95.14	307+05.68	307+11.21	307+27.38	307+43.65	307+49.26	307+60.01	307+76.47	307+93.04
	ELEVATION	991.14	991.47	991.80	992.01	992.12	992.43	992.71	992.80	992.97	993.23	993.49
CENTER OF ROUNDING	STATION	306+60.79	306+76.66	306+92.61	307+03.13	307+08.66	307+24.80	307+41.03	307+46.64	307+57.37	307+73.80	307+90.33
	ELEVATION	991.22	991.55	991.87	992.08	992.19	992.49	992.77	992.86	993.03	993.28	993.54
RIGHT EDGE OF ROUNDING	STATION	306+58.33	306+74.17	306+90.09	307+00.59	307+06.11	307+22.22	307+38.43	307+44.02	307+54.73	307+71.13	307+87.63
	ELEVATION	991.08	991.41	991.73	991.94	992.05	992.35	992.62	992.71	992.88	993.13	993.38
RIGHT TOE OF PARAPET	STATION	306+51.79	306+67.56	306+83.41	306+93.86	306+99.35	307+15.38	307+31.51	307+37.07	307+47.73	307+64.05	307+80.47
	ELEVATION	990.73	991.06	991.38	991.59	991.69	991.99	992.25	992.34	992.50	992.73	992.96

**NOTES**

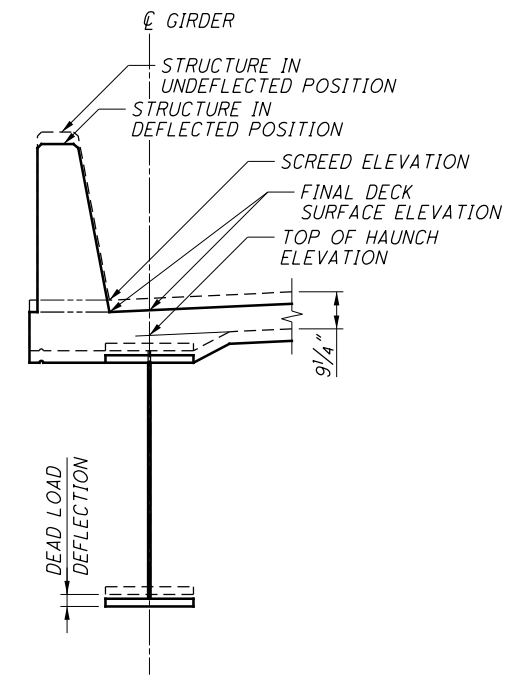
1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. CENTER OF ROUNDING ELEVATION IS THE THEORETICAL INTERSECTION OF THE TRANSVERSE SLOPES.



**TRANSVERSE SECTION**



**PLAN**



**ELEVATION LOCATIONS**

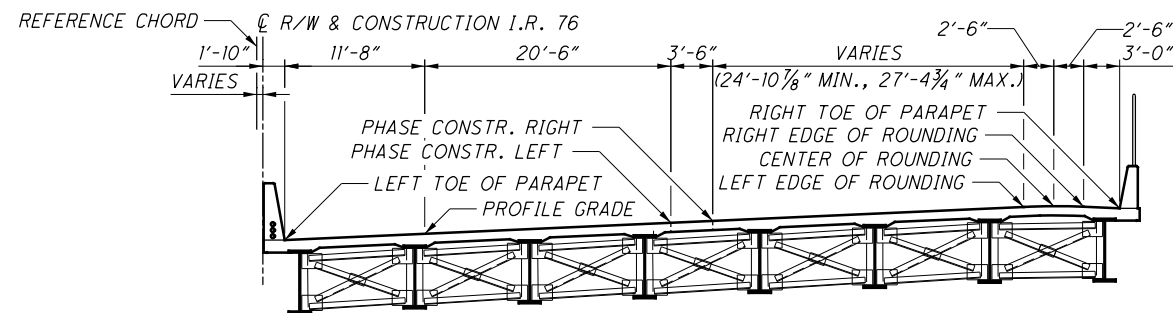


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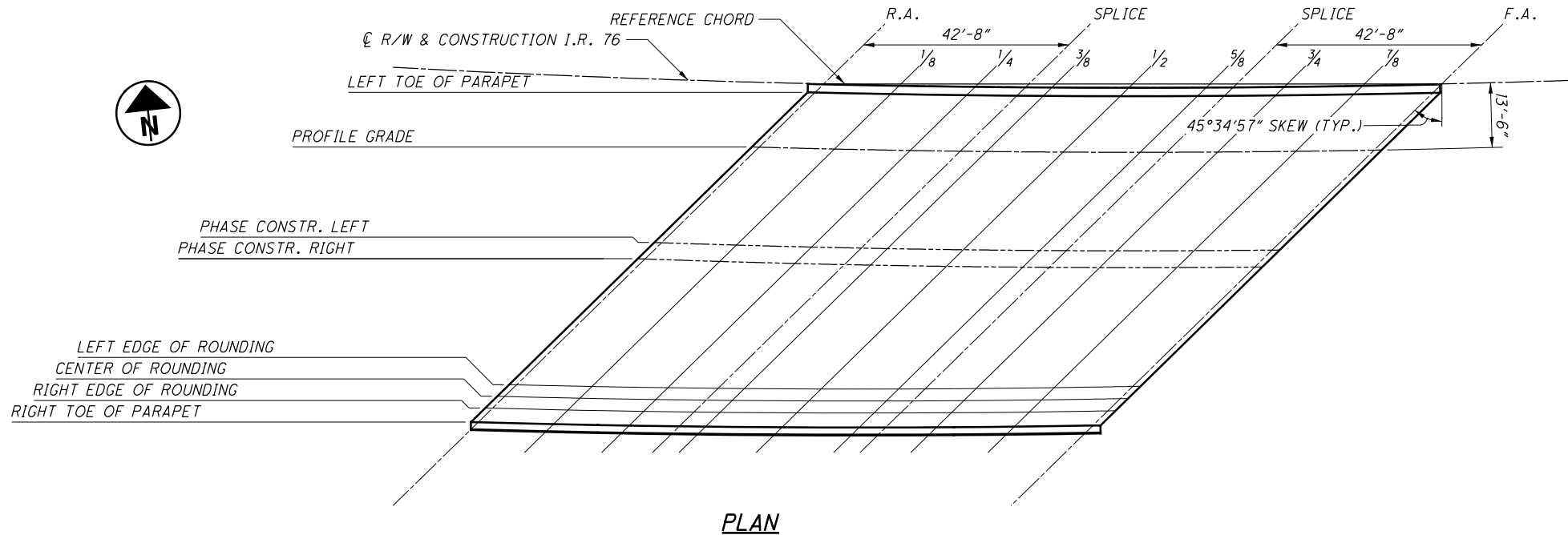
SCREED ELEVATIONS TABLE (FT.)												
LOCATION	DESCRIPTION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
LEFT TOE OF PARAPET	STATION	306+48.21	306+63.94	306+79.75	306+90.18	306+95.65	307+11.64	307+27.73	307+33.28	307+43.91	307+60.18	307+76.56
	ELEVATION	990.23	990.54	990.86	991.06	991.16	991.45	991.72	991.81	991.98	992.24	992.52
PROFILE GRADE	STATION	306+36.93	306+52.53	306+68.21	306+78.55	306+83.98	306+99.84	307+15.79	307+21.29	307+31.83	307+47.97	307+64.20
	ELEVATION	990.61	990.90	991.20	991.39	991.49	991.76	992.02	992.10	992.26	992.50	992.74
PHASE CONSTRUCTION LEFT	STATION	306+17.42	306+32.80	306+48.27	306+58.46	306+63.82	306+79.45	306+95.17	307+00.59	307+10.98	307+26.88	307+42.87
	ELEVATION	991.31	991.58	991.85	992.02	992.11	992.36	992.59	992.66	992.80	993.01	993.22
PHASE CONSTRUCTION RIGHT	STATION	306+14.13	306+29.48	306+44.91	306+55.08	306+60.42	306+76.01	306+91.69	306+97.10	307+07.46	307+23.32	307+39.27
	ELEVATION	991.43	991.70	991.96	992.13	992.22	992.47	992.69	992.76	992.90	993.10	993.31
LEFT EDGE OF ROUNDING	STATION	305+88.93	306+04.29	306+19.73	306+29.92	306+35.26	306+50.88	306+66.59	306+72.01	306+82.39	306+98.28	307+14.27
	ELEVATION	992.41	992.65	992.88	993.03	993.10	993.30	993.48	993.54	993.65	993.80	993.96
CENTER OF ROUNDING	STATION	305+86.61	306+01.94	306+17.36	306+27.53	306+32.86	306+48.45	306+64.13	306+69.54	306+79.90	306+95.77	307+11.72
	ELEVATION	992.51	992.74	992.98	993.13	993.21	993.41	993.59	993.65	993.75	993.89	994.03
RIGHT EDGE OF ROUNDING	STATION	305+84.29	305+99.60	306+14.99	306+25.14	306+30.47	306+46.03	306+61.68	306+67.08	306+77.42	306+93.26	307+09.19
	ELEVATION	992.39	992.62	992.86	993.01	993.08	993.28	993.46	993.51	993.61	993.75	993.89
RIGHT TOE OF PARAPET	STATION	305+81.52	305+96.80	306+12.16	306+22.28	306+27.60	306+43.13	306+58.75	306+64.14	306+74.46	306+90.26	307+06.15
	ELEVATION	992.25	992.48	992.71	992.86	992.92	993.13	993.30	993.35	993.45	993.58	993.72

**NOTES**

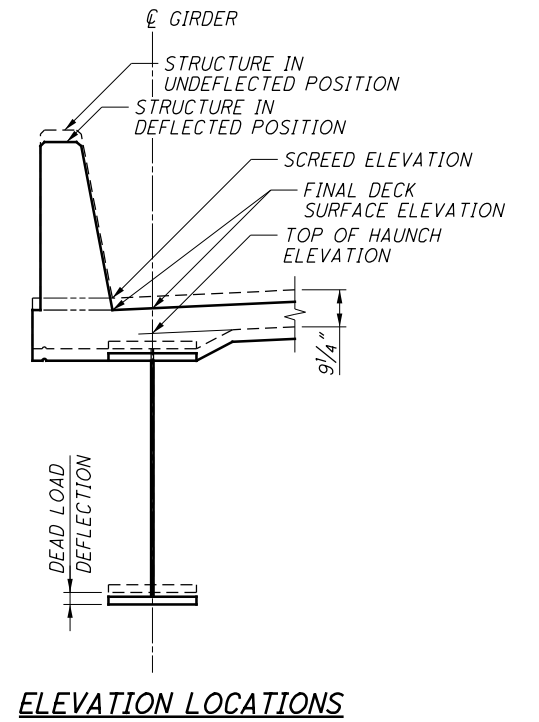
1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. CENTER OF ROUNDING ELEVATION IS THE THEORETICAL INTERSECTION OF THE TRANSVERSE SLOPES.



**TRANSVERSE SECTION**



**PLAN**



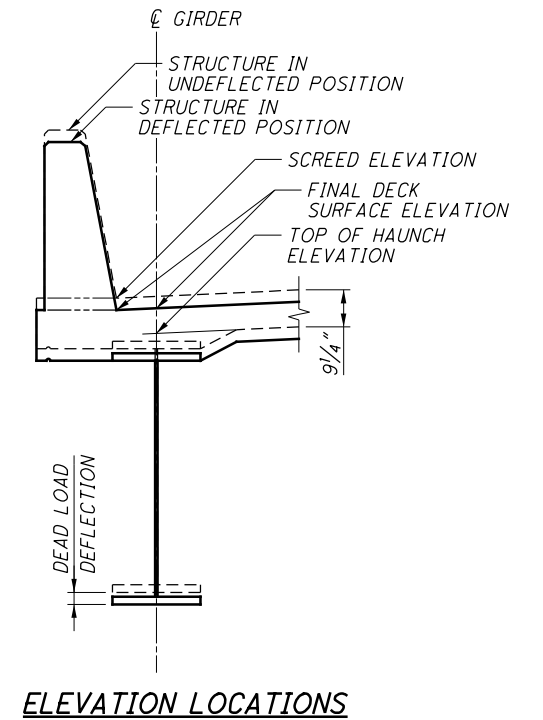
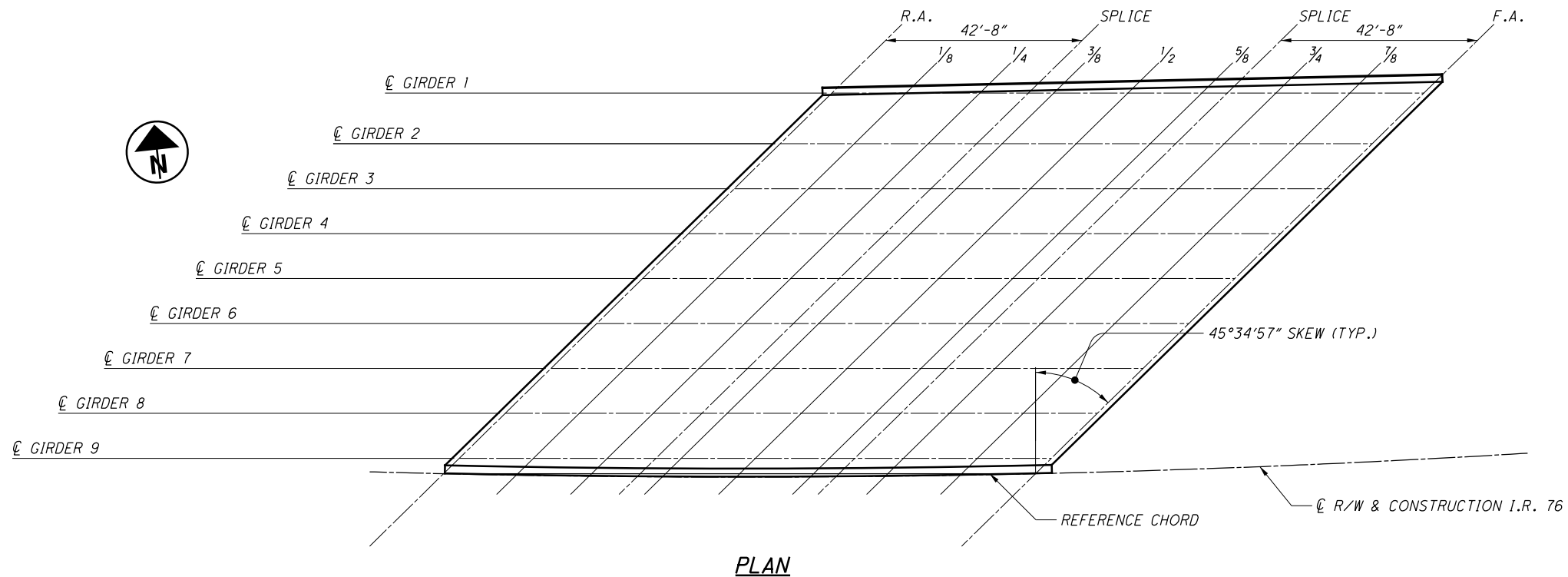
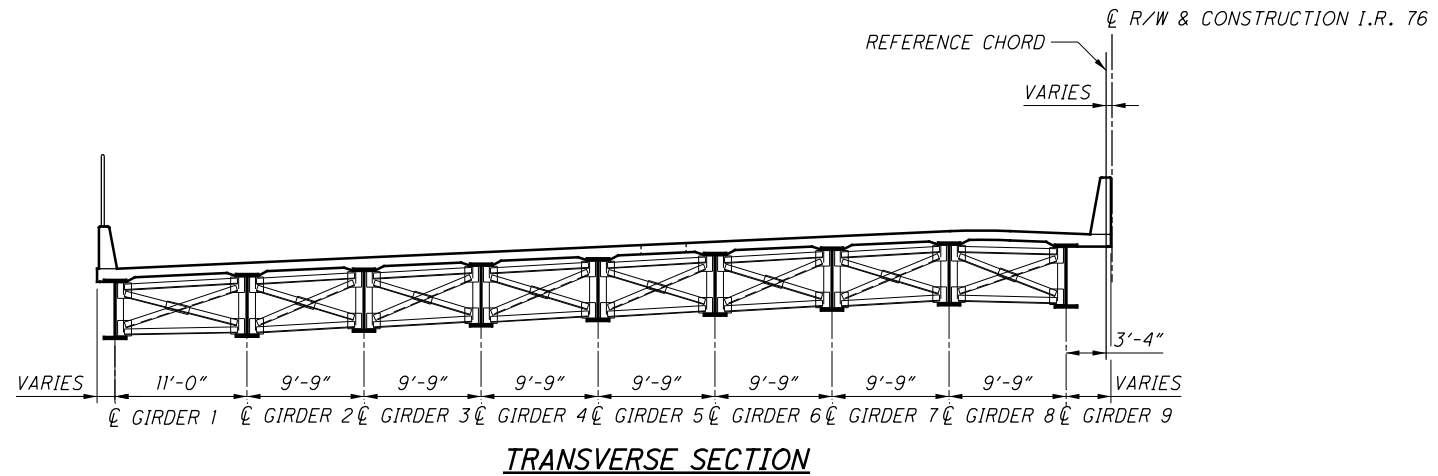
**ELEVATION LOCATIONS**

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		TOP OF HAUNCH ELEVATIONS (FT.)										
LOCATION	DESCRIPTION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
GIRDER 1	STATION	307+34.89	307+51.44	307+67.99	307+78.84	307+84.53	308+01.06	308+17.60	308+23.28	308+34.12	308+50.63	308+67.14
	ELEVATION	988.38	988.82	989.26	989.55	989.70	990.11	990.50	990.65	990.96	991.43	991.89
GIRDER 2	STATION	307+23.29	307+39.77	307+56.25	307+67.07	307+72.73	307+89.21	308+05.68	308+11.34	308+22.14	308+38.60	308+55.04
	ELEVATION	988.67	989.07	989.49	989.76	989.90	990.30	990.67	990.80	991.04	991.48	991.93
GIRDER 3	STATION	307+13.08	307+29.51	307+45.93	307+56.71	307+62.36	307+78.77	307+95.19	308+00.83	308+11.60	308+28.00	308+44.40
	ELEVATION	988.93	989.32	989.71	989.97	990.10	990.48	990.84	990.97	991.19	991.57	991.99
GIRDER 4	STATION	307+02.95	307+19.32	307+35.68	307+46.42	307+52.05	307+68.41	307+84.77	307+90.39	308+01.13	308+17.48	308+33.82
	ELEVATION	989.20	989.57	989.95	990.19	990.32	990.69	991.03	991.15	991.37	991.70	992.08
GIRDER 5	STATION	306+92.88	307+09.19	307+25.50	307+36.21	307+41.81	307+58.12	307+74.43	307+80.03	307+90.73	308+07.02	308+23.31
	ELEVATION	989.48	989.83	990.20	990.43	990.56	990.90	991.24	991.35	991.56	991.87	992.20
GIRDER 6	STATION	306+82.89	306+99.14	307+15.40	307+26.06	307+31.65	307+47.90	307+64.15	307+69.74	307+80.40	307+96.64	308+12.88
	ELEVATION	989.77	990.11	990.46	990.68	990.80	991.14	991.45	991.56	991.76	992.06	992.36
GIRDER 7	STATION	306+72.97	306+89.16	307+05.36	307+15.99	307+21.56	307+37.75	307+53.95	307+59.51	307+70.14	307+86.33	308+02.51
	ELEVATION	990.06	990.40	990.73	990.95	991.06	991.38	991.68	991.78	991.97	992.26	992.54
GIRDER 8	STATION	306+63.11	306+79.25	306+95.39	307+05.98	307+11.53	307+27.67	307+43.81	307+49.36	307+59.95	307+76.09	307+92.22
	ELEVATION	990.37	990.70	991.02	991.23	991.34	991.65	991.93	992.02	992.20	992.46	992.73
GIRDER 9	STATION	306+53.33	306+69.41	306+85.49	306+96.05	307+01.58	307+17.66	307+33.75	307+39.28	307+49.83	307+65.91	307+81.99
	ELEVATION	990.04	990.39	990.73	990.94	991.05	991.34	991.61	991.69	991.85	992.06	992.28

**NOTE**

TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

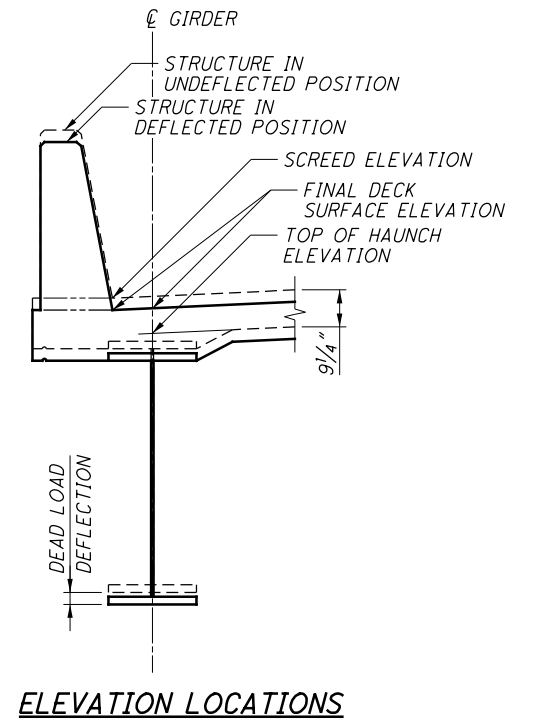
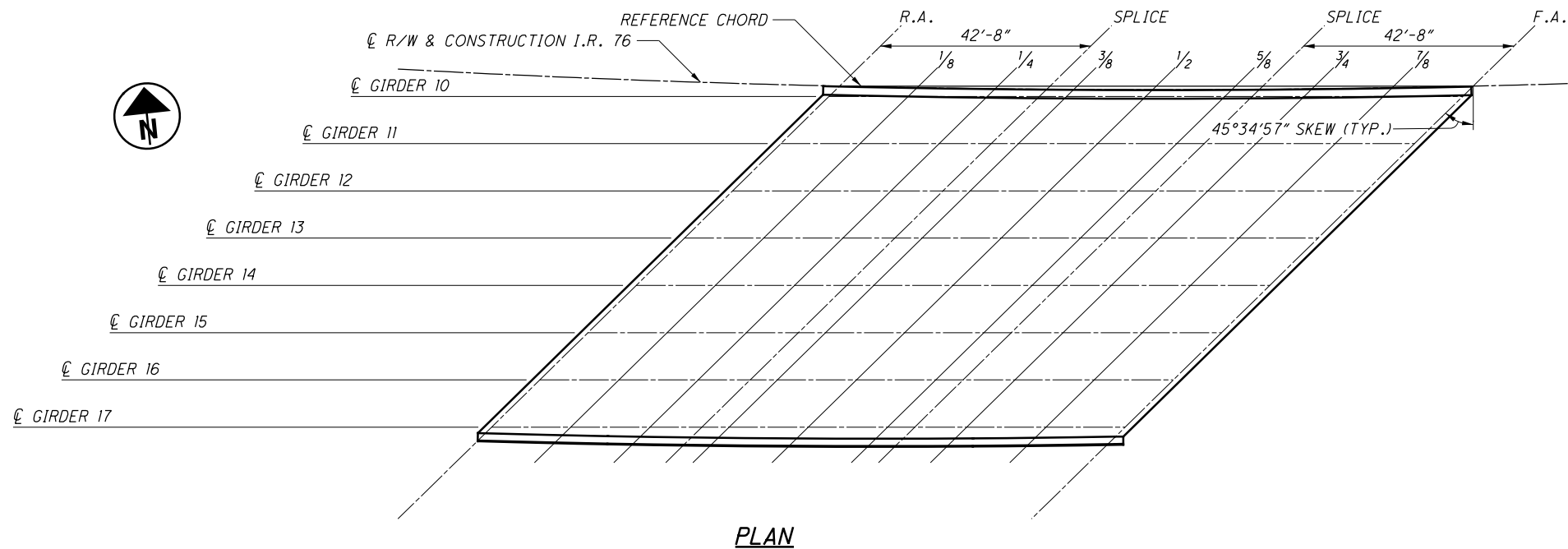
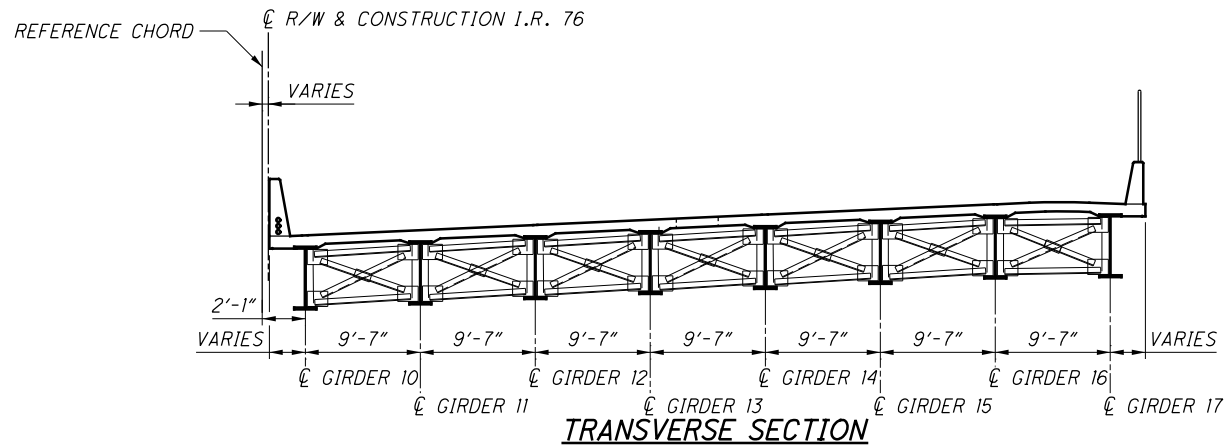


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		TOP OF HAUNCH ELEVATIONS (FT.)										
LOCATION	DESCRIPTION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
GIRDER 10	STATION	306+47.92	306+63.97	306+80.02	306+90.56	306+96.08	307+12.13	307+28.19	307+33.70	307+44.24	307+60.29	307+76.34
	ELEVATION	989.47	989.77	990.08	990.28	990.38	990.67	990.94	991.03	991.20	991.47	991.75
GIRDER 11	STATION	306+38.41	306+54.40	306+70.40	306+80.90	306+86.40	307+02.40	307+18.40	307+23.90	307+34.40	307+50.40	307+66.39
	ELEVATION	989.79	990.07	990.36	990.55	990.65	990.92	991.18	991.27	991.43	991.67	991.92
GIRDER 12	STATION	306+28.96	306+44.90	306+60.84	306+71.30	306+76.78	306+92.73	307+08.67	307+14.15	307+24.62	307+40.57	307+56.51
	ELEVATION	990.12	990.39	990.66	990.84	990.93	991.19	991.43	991.52	991.67	991.90	992.13
GIRDER 13	STATION	306+19.58	306+35.46	306+51.34	306+61.77	306+67.23	306+83.12	306+99.01	307+04.48	307+14.91	307+30.80	307+46.69
	ELEVATION	990.46	990.71	990.97	991.14	991.23	991.48	991.70	991.78	991.92	992.14	992.36
GIRDER 14	STATION	306+10.26	306+26.09	306+41.91	306+52.30	306+57.75	306+73.58	306+89.42	306+94.86	307+05.26	307+21.10	307+36.94
	ELEVATION	990.81	991.05	991.30	991.46	991.54	991.77	991.99	992.06	992.19	992.39	992.60
GIRDER 15	STATION	306+01.01	306+16.78	306+32.55	306+42.90	306+48.33	306+64.11	306+79.89	306+85.32	306+95.68	307+11.46	307+27.25
	ELEVATION	991.16	991.39	991.63	991.78	991.86	992.08	992.28	992.35	992.47	992.65	992.84
GIRDER 16	STATION	305+91.82	306+07.53	306+23.25	306+33.57	306+38.97	306+54.70	306+70.43	306+75.83	306+86.16	307+01.89	307+17.63
	ELEVATION	991.52	991.75	991.98	992.12	992.20	992.41	992.59	992.65	992.76	992.93	993.10
GIRDER 17	STATION	305+82.70	305+98.35	306+14.01	306+24.29	306+29.68	306+45.35	306+61.02	306+66.41	306+76.70	306+92.38	307+08.07
	ELEVATION	991.54	991.79	992.04	992.19	992.27	992.48	992.65	992.71	992.80	992.93	993.05

**NOTE**

TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.



**TOP OF HAUNCH ELEVATIONS (EASTBOUND)**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

DESIGNED ERK	DRAWN ERK	REVIEWED WHM	DATE 5/3/2017
CHECKED GDU	REVISED	STRUCTURE FILE NUMBER 7705493	

**SUM-76-5.53**  
PID No. 96670

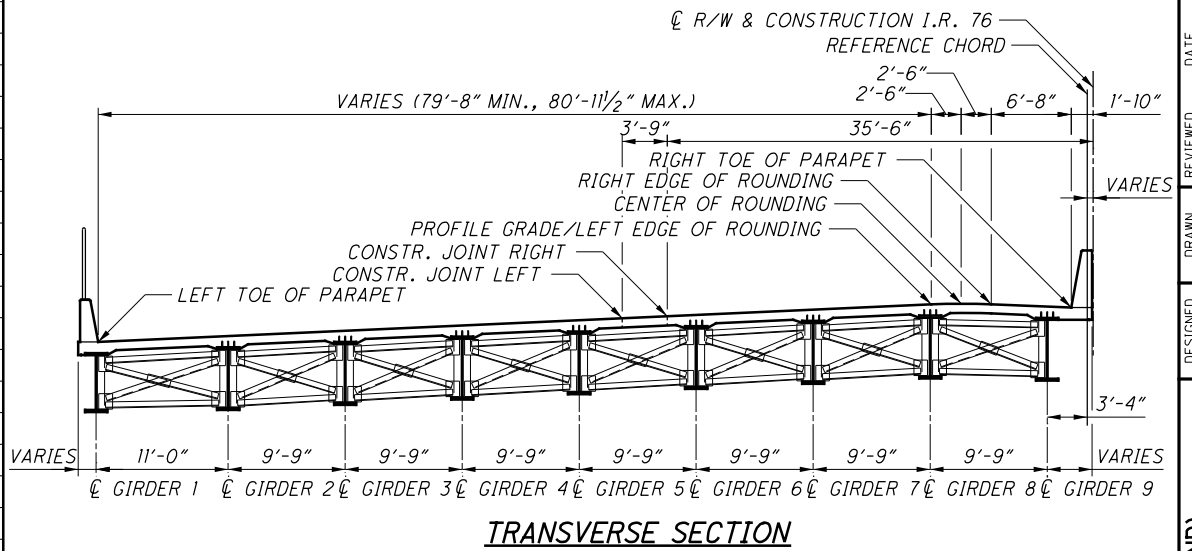
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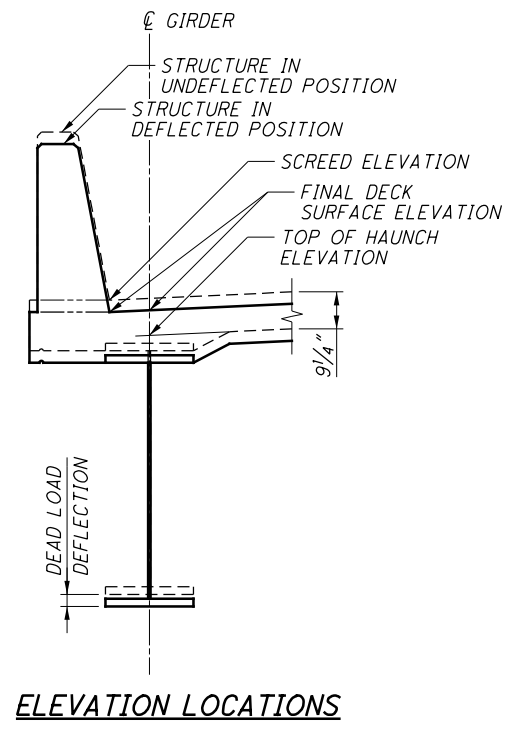
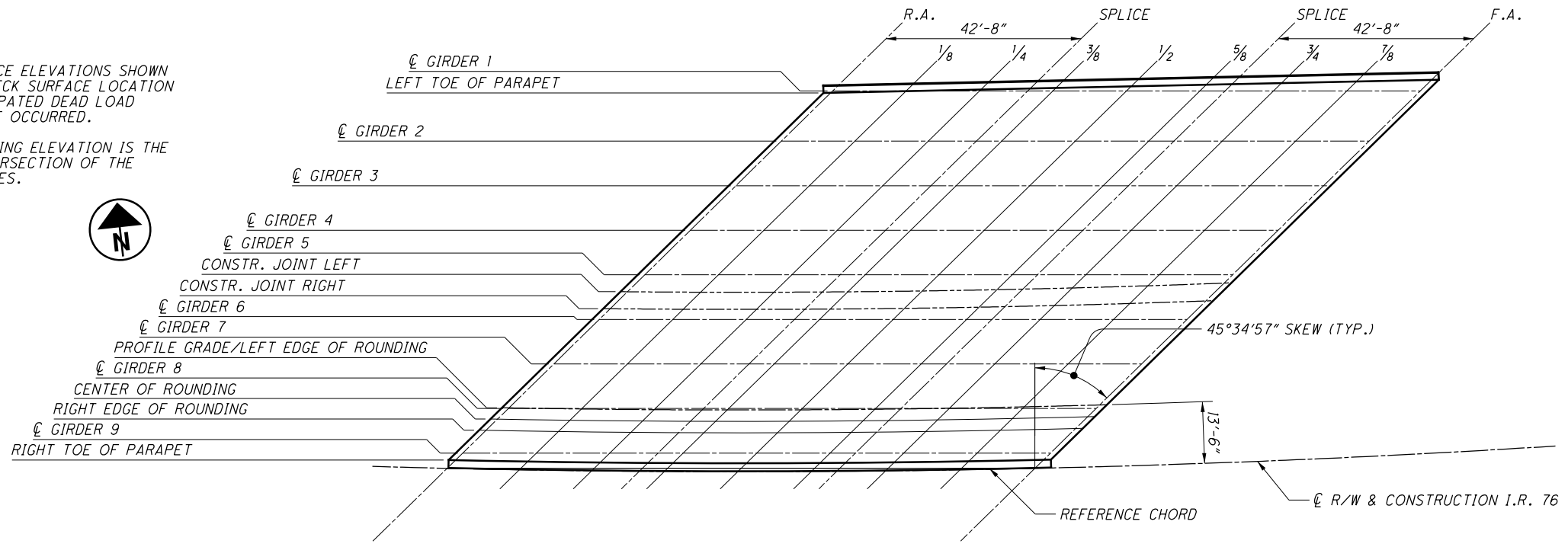
FINAL DECK SURFACE ELEVATIONS TABLE (FT.)

LOCATION	DESCRIPTION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
LEFT TOE OF PARAPET	STATION	307+34.44	307+51.36	307+68.28	307+79.39	307+85.20	308+02.13	308+19.05	308+24.86	308+35.96	308+52.87	308+69.78
	ELEVATION	989.17	989.48	989.82	990.06	990.18	990.57	990.98	991.16	991.51	992.08	992.66
GIRDER 1	STATION	307+34.89	307+51.44	307+67.99	307+78.84	307+84.53	308+01.06	308+17.60	308+23.28	308+34.12	308+50.63	308+67.14
	ELEVATION	989.15	989.48	989.83	990.07	990.20	990.59	991.00	991.17	991.52	992.09	992.66
GIRDER 2	STATION	307+23.29	307+39.77	307+56.25	307+67.07	307+72.73	307+89.21	308+05.68	308+11.34	308+22.14	308+38.60	308+55.04
	ELEVATION	989.44	989.74	990.07	990.30	990.42	990.80	991.20	991.34	991.62	992.15	992.70
GIRDER 3	STATION	307+13.08	307+29.51	307+45.93	307+56.71	307+62.36	307+78.77	307+95.19	308+00.83	308+11.60	308+28.00	308+44.40
	ELEVATION	989.70	989.99	990.30	990.52	990.64	991.00	991.38	991.52	991.78	992.24	992.76
GIRDER 4	STATION	307+02.95	307+19.32	307+35.68	307+46.42	307+52.05	307+68.41	307+84.77	307+90.39	308+01.13	308+17.48	308+33.82
	ELEVATION	989.97	990.24	990.54	990.75	990.86	991.21	991.57	991.70	991.96	992.37	992.85
GIRDER 5	STATION	306+92.88	307+09.19	307+25.50	307+36.21	307+41.81	307+58.12	307+74.43	307+80.03	307+90.73	308+07.02	308+23.31
	ELEVATION	990.25	990.51	990.79	990.99	991.10	991.43	991.78	991.90	992.15	992.55	992.97
CONSTR. JOINT LEFT	STATION	306+89.08	307+05.27	307+21.55	307+32.29	307+37.93	307+54.41	307+70.99	307+76.72	307+87.68	308+04.47	308+21.37
	ELEVATION	990.36	990.61	990.89	991.09	991.19	991.51	991.85	991.97	992.21	992.59	993.00
CONSTR. JOINT RIGHT	STATION	306+85.28	307+01.42	307+17.66	307+28.37	307+34.00	307+50.43	307+66.96	307+72.67	307+83.60	308+00.34	308+17.19
	ELEVATION	990.47	990.72	990.99	991.18	991.29	991.60	991.93	992.05	992.29	992.66	993.06
GIRDER 6	STATION	306+82.89	306+99.14	307+15.40	307+26.06	307+31.65	307+47.90	307+64.15	307+69.74	307+80.40	307+96.64	308+12.88
	ELEVATION	990.54	990.78	991.05	991.24	991.34	991.66	991.99	992.11	992.35	992.73	993.13
GIRDER 7	STATION	306+72.97	306+89.16	307+05.36	307+15.99	307+21.56	307+37.75	307+53.95	307+59.51	307+70.14	307+86.33	308+02.51
	ELEVATION	990.84	991.07	991.32	991.50	991.60	991.90	992.22	992.33	992.56	992.93	993.31
GIRDER 8	STATION	306+63.11	306+79.25	306+95.39	307+05.98	307+11.53	307+27.67	307+43.81	307+49.36	307+59.95	307+76.09	307+92.22
	ELEVATION	991.14	991.36	991.60	991.77	991.86	992.15	992.45	992.56	992.78	993.13	993.50
PROFILE GRADE/ LEFT EDGE OF ROUNDING	STATION	306+63.26	306+79.15	306+95.14	307+05.68	307+11.21	307+27.38	307+43.65	307+49.26	307+60.01	307+76.47	307+93.04
	ELEVATION	991.14	991.36	991.61	991.78	991.87	992.16	992.46	992.57	992.78	993.12	993.49
CENTER OF ROUNDING	STATION	306+60.79	306+76.66	306+92.61	307+03.13	307+08.66	307+24.80	307+41.03	307+46.64	307+57.37	307+73.80	307+90.33
	ELEVATION	991.22	991.44	991.68	991.85	991.94	992.22	992.52	992.63	992.84	993.18	993.54
RIGHT EDGE OF ROUNDING	STATION	306+58.33	306+74.17	306+90.09	307+00.59	307+06.11	307+22.22	307+38.43	307+44.02	307+54.73	307+71.13	307+87.63
	ELEVATION	991.08	991.30	991.54	991.71	991.80	992.08	992.37	992.48	992.69	993.02	993.38
GIRDER 9	STATION	306+53.33	306+69.41	306+85.49	306+96.05	307+01.58	307+17.66	307+33.75	307+39.28	307+49.83	307+65.91	307+81.99
	ELEVATION	990.82	991.04	991.29	991.46	991.55	991.82	992.10	992.21	992.40	992.72	993.05
RIGHT TOE OF PARAPET	STATION	306+51.79	306+67.56	306+83.41	306+93.86	306+99.35	307+15.38	307+31.51	307+37.07	307+47.73	307+64.05	307+80.47
	ELEVATION	990.73	990.94	991.17	991.33	991.42	991.69	991.98	992.08	992.28	992.61	992.96



**NOTES**

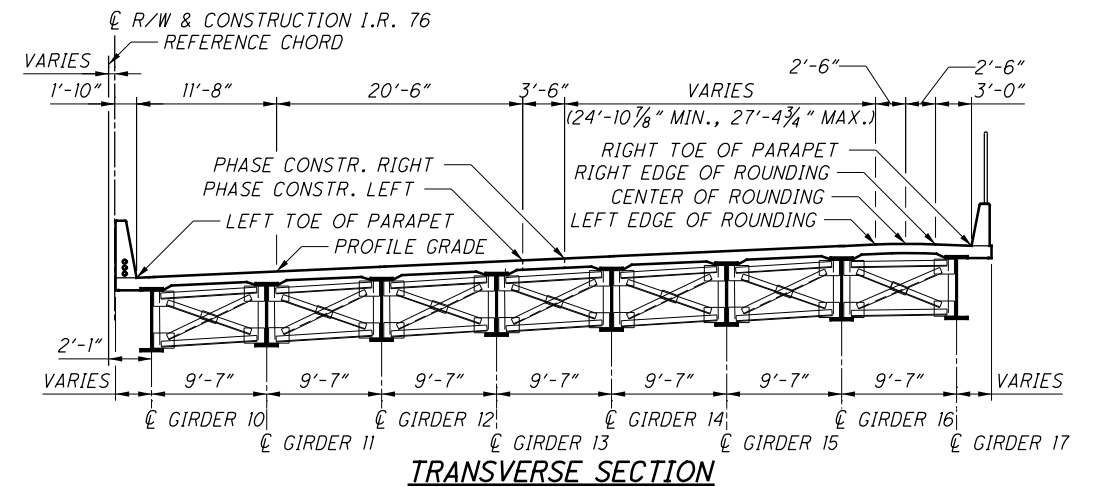
- FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
- CENTER OF ROUNDING ELEVATION IS THE THEORETICAL INTERSECTION OF THE TRANSVERSE SLOPES.



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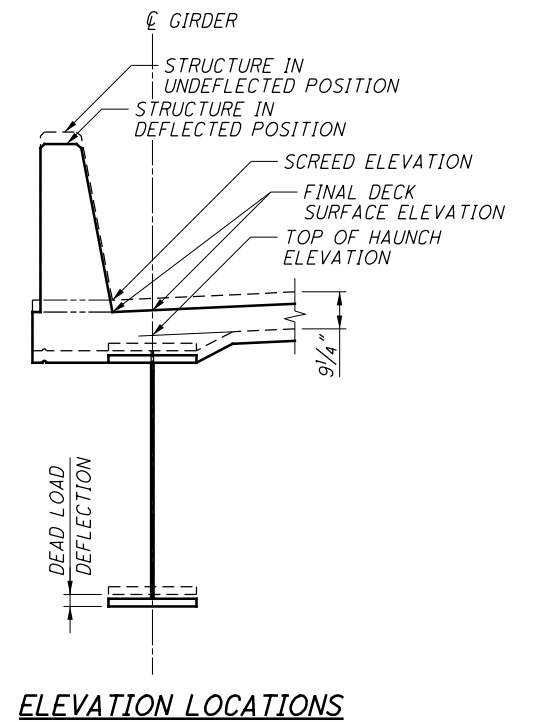
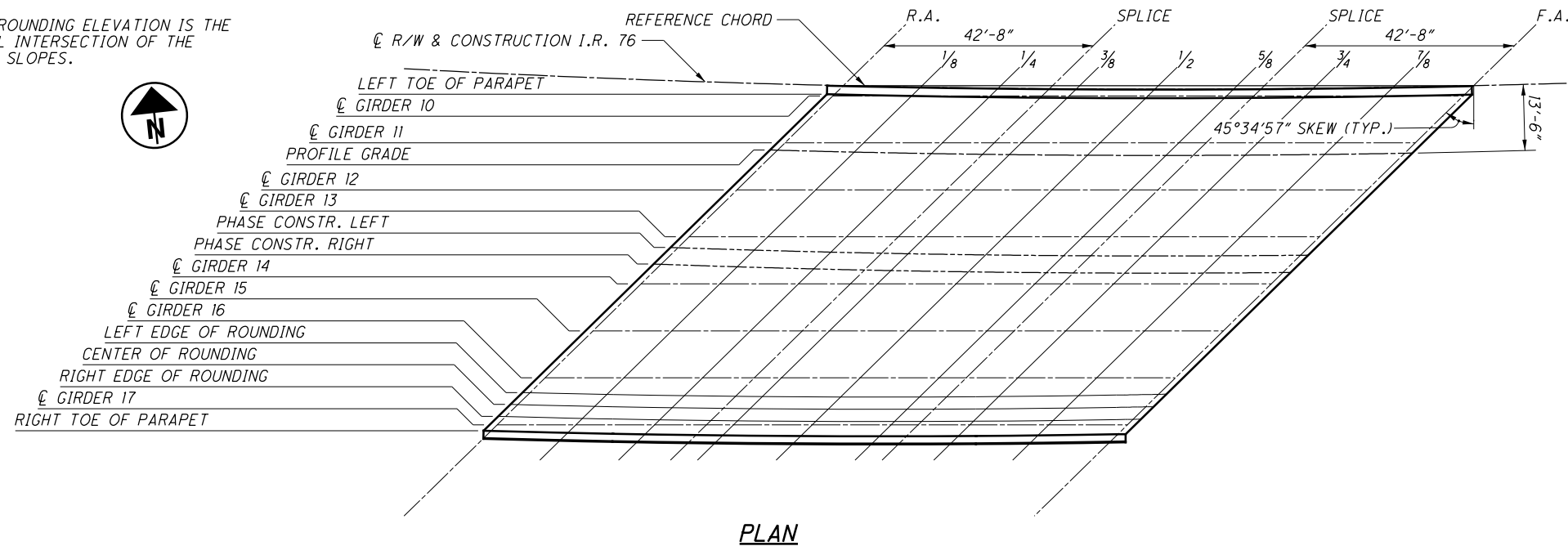
P:\DDT\MP\0093\_SUM-76-5.62\SUM-76-5.62\SUM-76-5.62\Structures\SUM076-0580C\_Sheets\076-0580C\_SS002.dgn Sheet 10/1/2018 2:09:51 PM cmt007

FINAL DECK SURFACE ELEVATIONS TABLE (FT.)												
LOCATION	DESCRIPTION	R.A.	1/8	1/4	SPLICE	3/8	1/2	5/8	SPLICE	3/4	7/8	F.A.
LEFT TOE OF PARAPET	STATION	306+48.21	306+63.94	306+79.75	306+90.18	306+95.65	307+11.64	307+27.73	307+33.28	307+43.91	307+60.18	307+76.56
	ELEVATION	990.23	990.44	990.67	990.84	990.93	991.20	991.49	991.59	991.80	992.14	992.52
GIRDER 10	STATION	306+47.92	306+63.97	306+80.02	306+90.56	306+96.08	307+12.13	307+28.19	307+33.70	307+44.24	307+60.29	307+76.34
	ELEVATION	990.24	990.44	990.67	990.83	990.91	991.18	991.48	991.58	991.79	992.14	992.52
GIRDER 11	STATION	306+38.41	306+54.40	306+70.40	306+80.90	306+86.40	307+02.40	307+18.40	307+23.90	307+34.40	307+50.40	307+66.39
	ELEVATION	990.56	990.75	990.96	991.11	991.19	991.45	991.73	991.83	992.03	992.35	992.70
PROFILE GRADE	STATION	306+36.93	306+52.53	306+68.21	306+78.55	306+83.98	306+99.84	307+15.79	307+21.29	307+31.83	307+47.97	307+64.20
	ELEVATION	990.61	990.81	991.03	991.18	991.26	991.52	991.79	991.89	992.09	992.40	992.74
GIRDER 12	STATION	306+28.96	306+44.90	306+60.84	306+71.30	306+76.78	306+92.73	307+08.67	307+14.15	307+24.62	307+40.57	307+56.51
	ELEVATION	990.89	991.07	991.26	991.40	991.48	991.72	991.99	992.08	992.27	992.58	992.90
GIRDER 13	STATION	306+19.58	306+35.46	306+51.34	306+61.77	306+67.23	306+83.12	306+99.01	307+04.48	307+14.91	307+30.80	307+46.69
	ELEVATION	991.23	991.39	991.57	991.71	991.78	992.01	992.25	992.35	992.53	992.82	993.13
PHASE CONSTR. LEFT	STATION	306+17.42	306+32.80	306+48.27	306+58.46	306+63.82	306+79.45	306+95.17	307+00.59	307+10.98	307+26.88	307+42.87
	ELEVATION	991.31	991.48	991.68	991.81	991.89	992.12	992.37	992.45	992.63	992.92	993.22
PHASE CONSTR. RIGHT	STATION	306+14.13	306+29.48	306+44.91	306+55.08	306+60.42	306+76.01	306+91.69	306+97.10	307+07.46	307+23.32	307+39.27
	ELEVATION	991.43	991.60	991.79	991.92	992.00	992.22	992.47	992.55	992.73	993.01	993.31
GIRDER 14	STATION	306+10.26	306+26.09	306+41.91	306+52.30	306+57.75	306+73.58	306+89.42	306+94.86	307+05.26	307+21.10	307+36.94
	ELEVATION	991.58	991.72	991.89	992.02	992.09	992.30	992.53	992.62	992.79	993.07	993.37
GIRDER 15	STATION	306+01.01	306+16.78	306+32.55	306+42.90	306+48.33	306+64.11	306+79.89	306+85.32	306+95.68	307+11.46	307+27.25
	ELEVATION	991.93	992.07	992.22	992.34	992.40	992.60	992.82	992.90	993.06	993.33	993.61
GIRDER 16	STATION	305+91.82	306+07.53	306+23.25	306+33.57	306+38.97	306+54.70	306+70.43	306+75.83	306+86.16	307+01.89	307+17.63
	ELEVATION	992.30	992.42	992.56	992.66	992.72	992.91	993.12	993.19	993.35	993.60	993.87
LEFT EDGE OF ROUNDING	STATION	305+88.93	306+04.29	306+19.73	306+29.92	306+35.26	306+50.88	306+66.59	306+72.01	306+82.39	306+98.28	307+14.27
	ELEVATION	992.41	992.54	992.69	992.80	992.85	993.04	993.24	993.31	993.46	993.70	993.96
CENTER OF ROUNDING	STATION	305+86.61	306+01.94	306+17.36	306+27.53	306+32.86	306+48.45	306+64.13	306+69.54	306+79.90	306+95.77	307+11.72
	ELEVATION	992.51	992.63	992.78	992.88	992.94	993.12	993.32	993.39	993.54	993.77	994.03
RIGHT EDGE OF ROUNDING	STATION	305+84.29	305+99.60	306+14.99	306+25.14	306+30.47	306+46.03	306+61.68	306+67.08	306+77.42	306+93.26	307+09.19
	ELEVATION	992.39	992.51	992.65	992.76	992.81	992.99	993.19	993.26	993.40	993.64	993.89
GIRDER 17	STATION	305+82.70	305+98.35	306+14.01	306+24.29	306+29.68	306+45.35	306+61.02	306+66.41	306+76.70	306+92.38	307+08.07
	ELEVATION	992.31	992.45	992.60	992.71	992.77	992.96	993.15	993.22	993.36	993.59	993.83
RIGHT TOE OF PARAPET	STATION	305+81.52	305+96.80	306+12.16	306+22.28	306+27.60	306+43.13	306+58.75	306+64.14	306+74.46	306+90.26	307+06.15
	ELEVATION	992.25	992.37	992.51	992.61	992.65	992.84	993.03	993.10	993.24	993.47	993.72

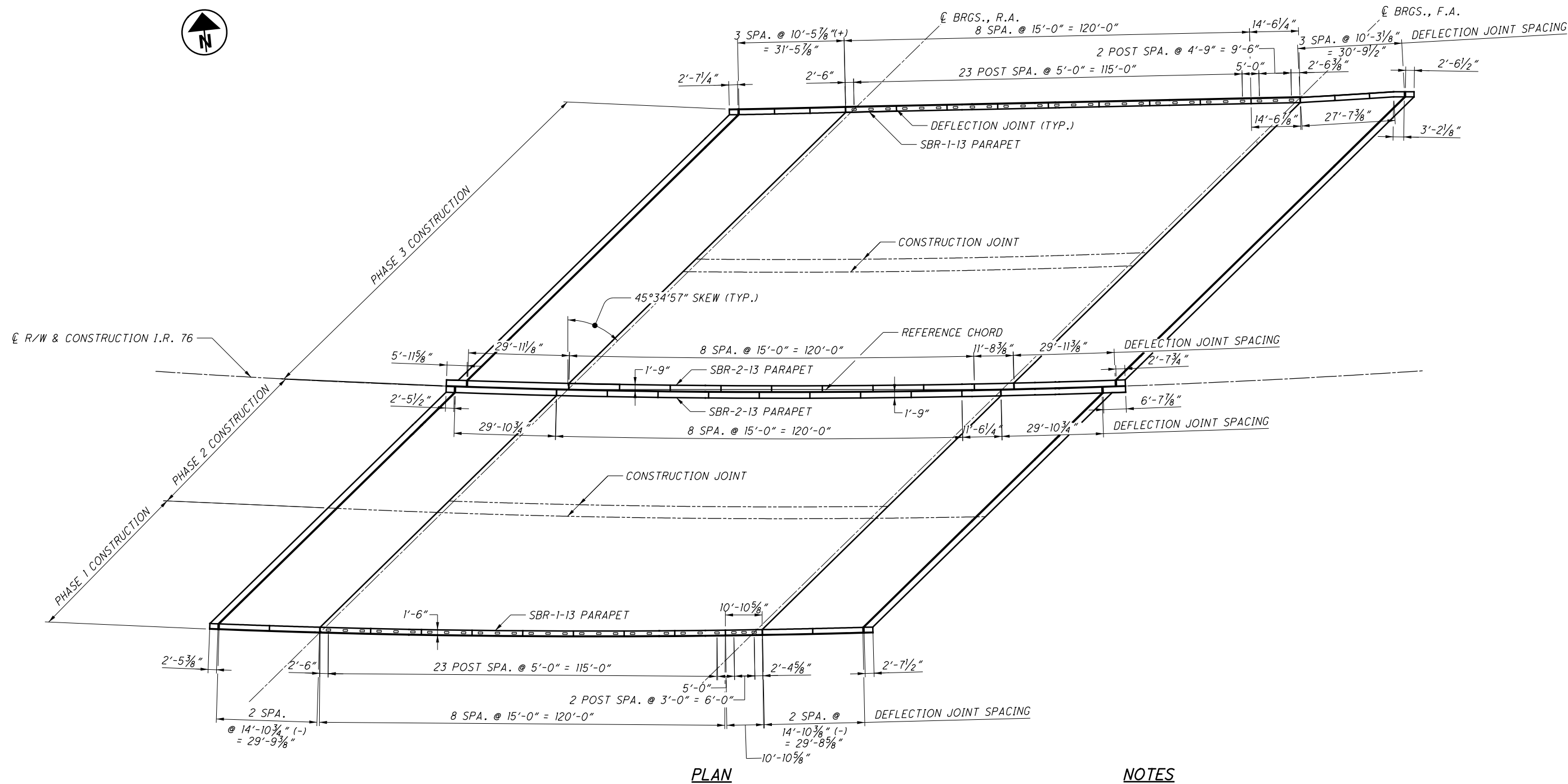


**NOTES**

- FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
- CENTER OF ROUNDING ELEVATION IS THE THEORETICAL INTERSECTION OF THE TRANSVERSE SLOPES.



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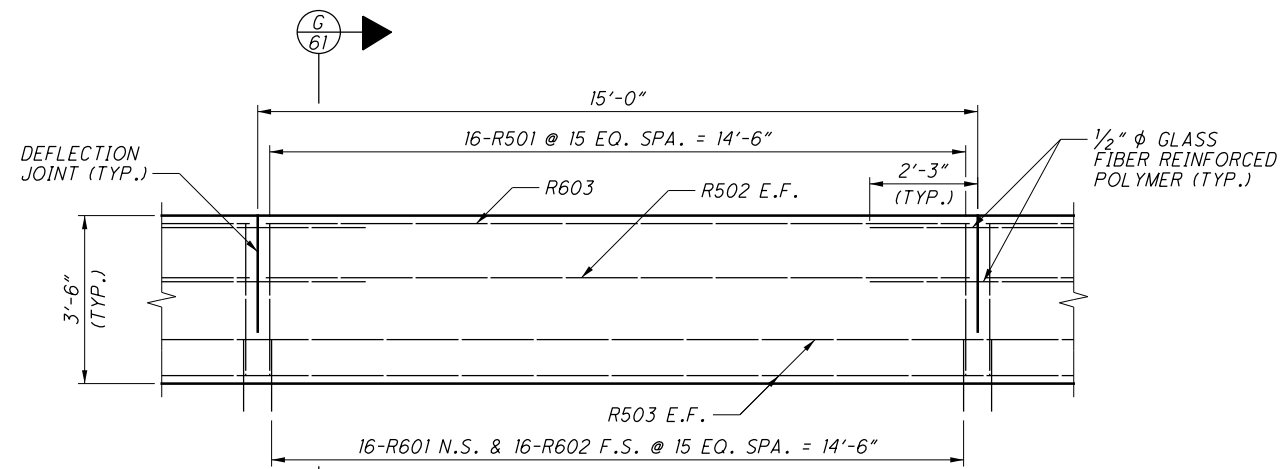


**PLAN**

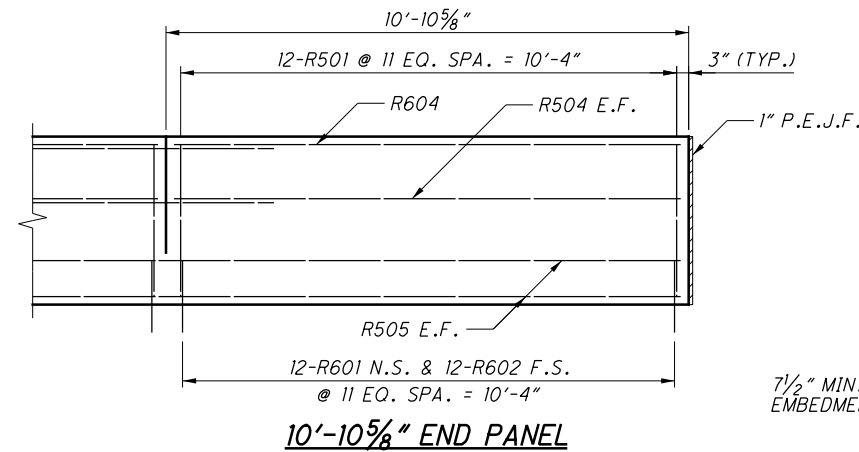
**NOTES**

1. DEFLECTION JOINTS ARE MEASURED ALONG THE INSIDE FACE OF THE PARAPET.
2. RAILING POSTS ARE MEASURED ALONG THE CENTERLINE OF THE BASE PLATE.
3. REFER TO STD. DWGS. SBR-1-13, SBR-2-13 & VPF-1-90 FOR ADDITIONAL NOTES AND DETAILS.
4. REFER TO SH. 61/78 FOR PARAPET AND MEDIAN DETAILS ON THE BRIDGE.
5. REFER TO SH. 69/78 & 70/78 FOR PARAPET AND MEDIAN DETAILS ON APPROACH SLABS.

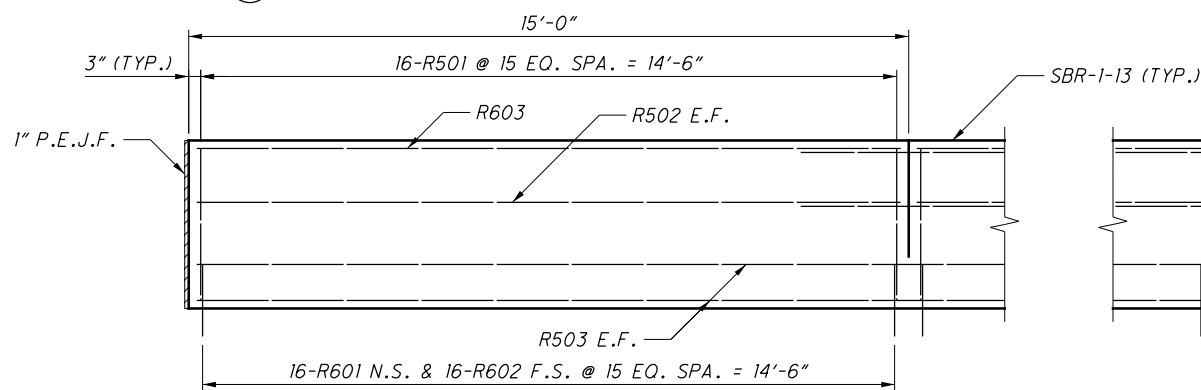
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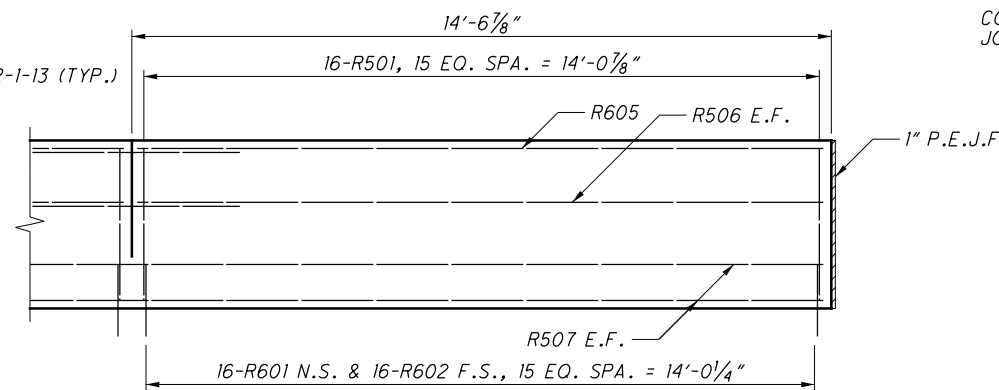
**TYPICAL 15'-0" PANEL**



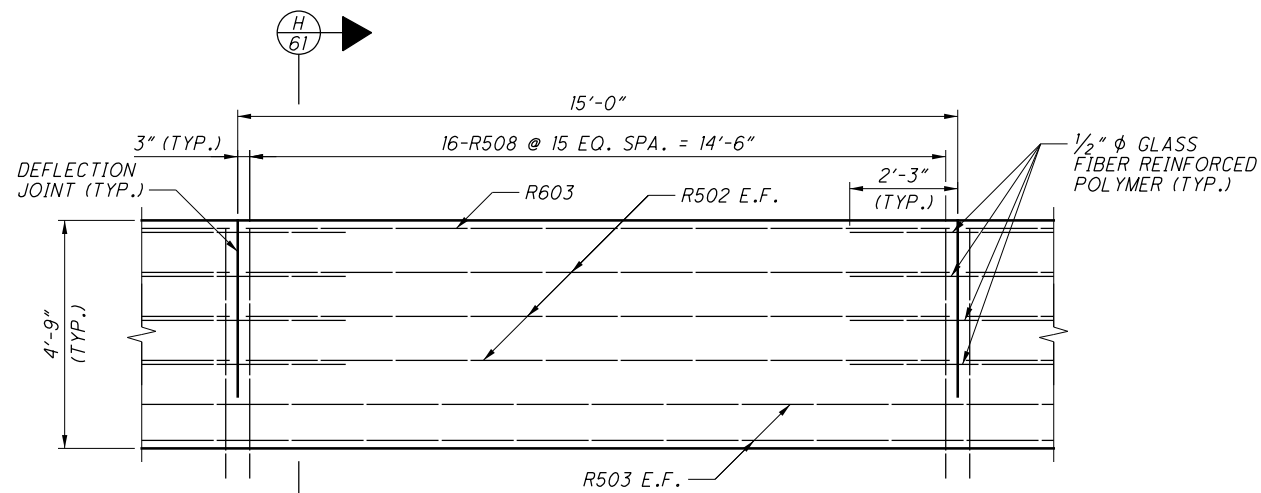
**10'-10 5/8" END PANEL**



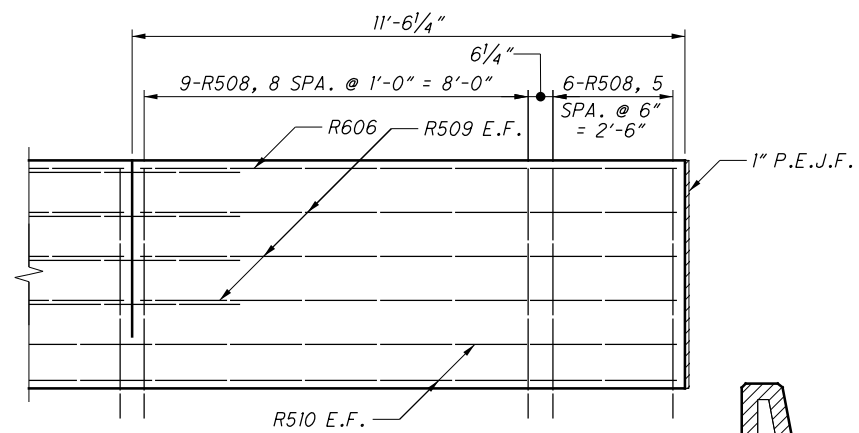
**TYPICAL 15'-0" END PANEL**



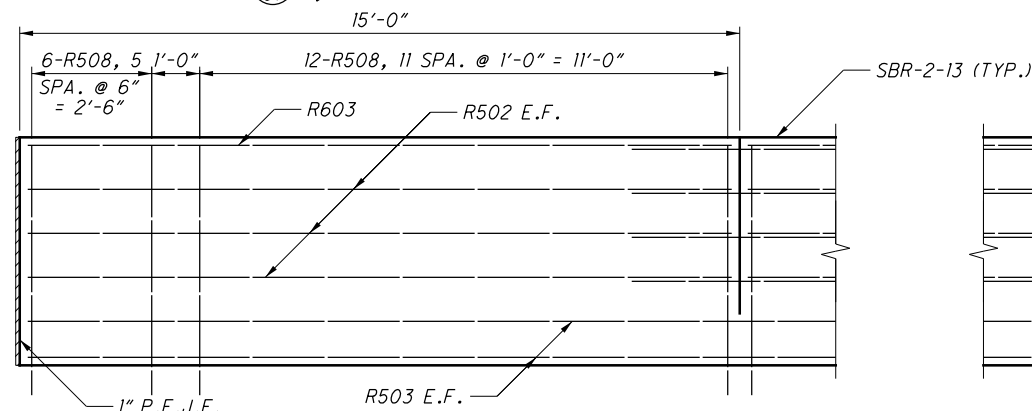
**14'-6 7/8" END PANEL**



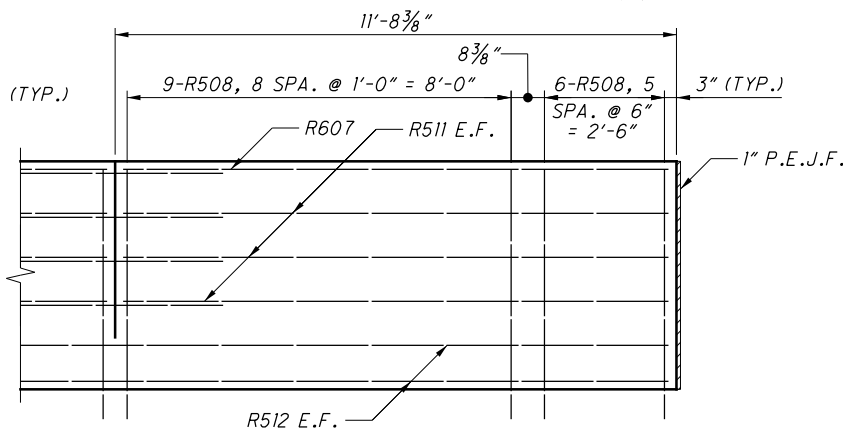
**TYPICAL 15'-0" PANEL**



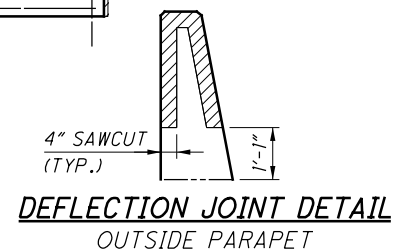
**11'-6 1/4" END PANEL**



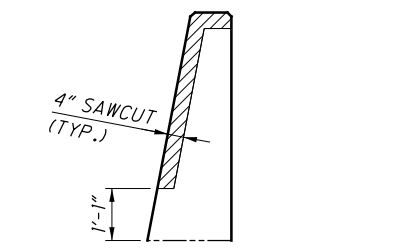
**TYPICAL 15'-0" END PANEL**



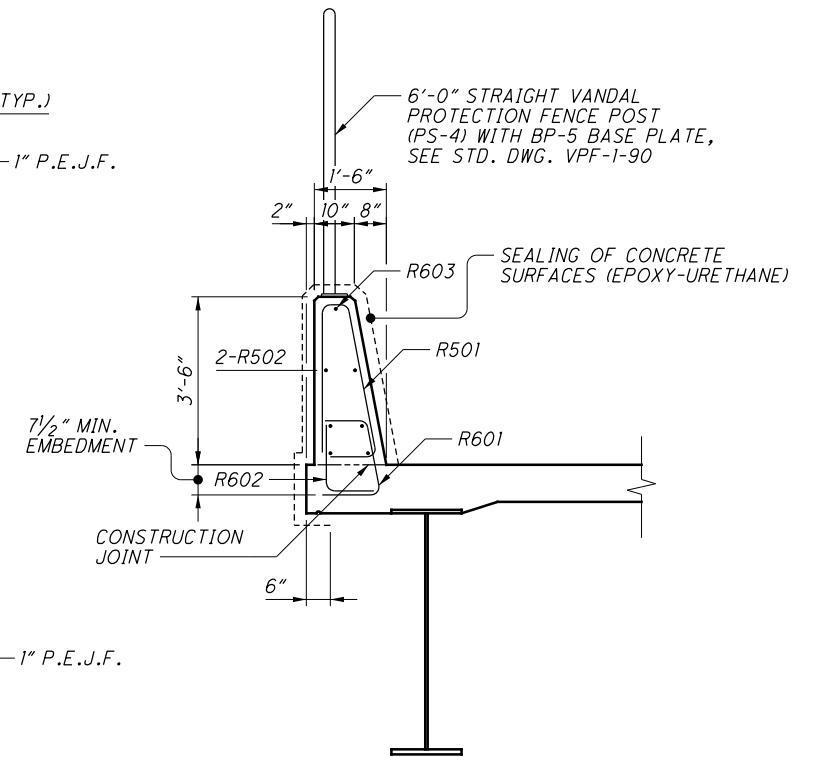
**11'-8 3/8" END PANEL**



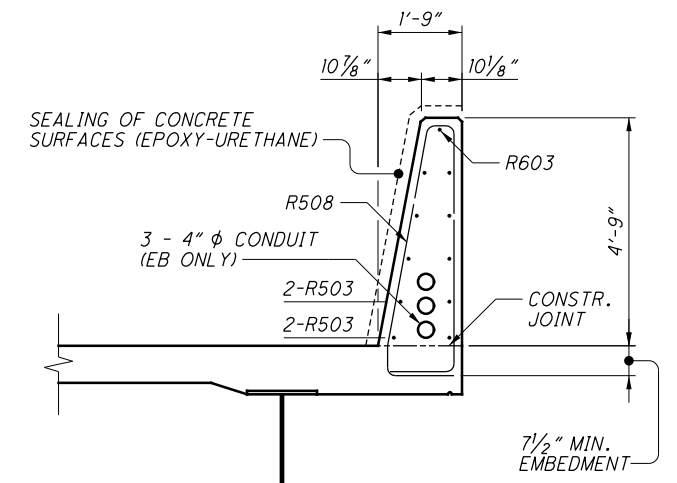
**DEFLECTION JOINT DETAIL  
OUTSIDE PARAPET**



**DEFLECTION JOINT DETAIL  
MEDIAN PARAPET**



**G SECTION  
61 BARS NOT LABELED  
ARE R503**



**H SECTION  
61 BARS NOT LABELED  
ARE R502**

**NOTES**

1. PARAPET ELEVATIONS ARE DIMENSIONED ALONG INSIDE FACE.
2. SEE STD. DWGS. SBR-1-13, SBR-2-13, AND VPF-1-90 FOR ADDITIONAL NOTES AND DETAILS.
3. MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 25 INCHES
4. 1/2" diameter GLASS FIBER REINFORCED POLYMER TO BE INCLUDED FOR PAYMENT UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.

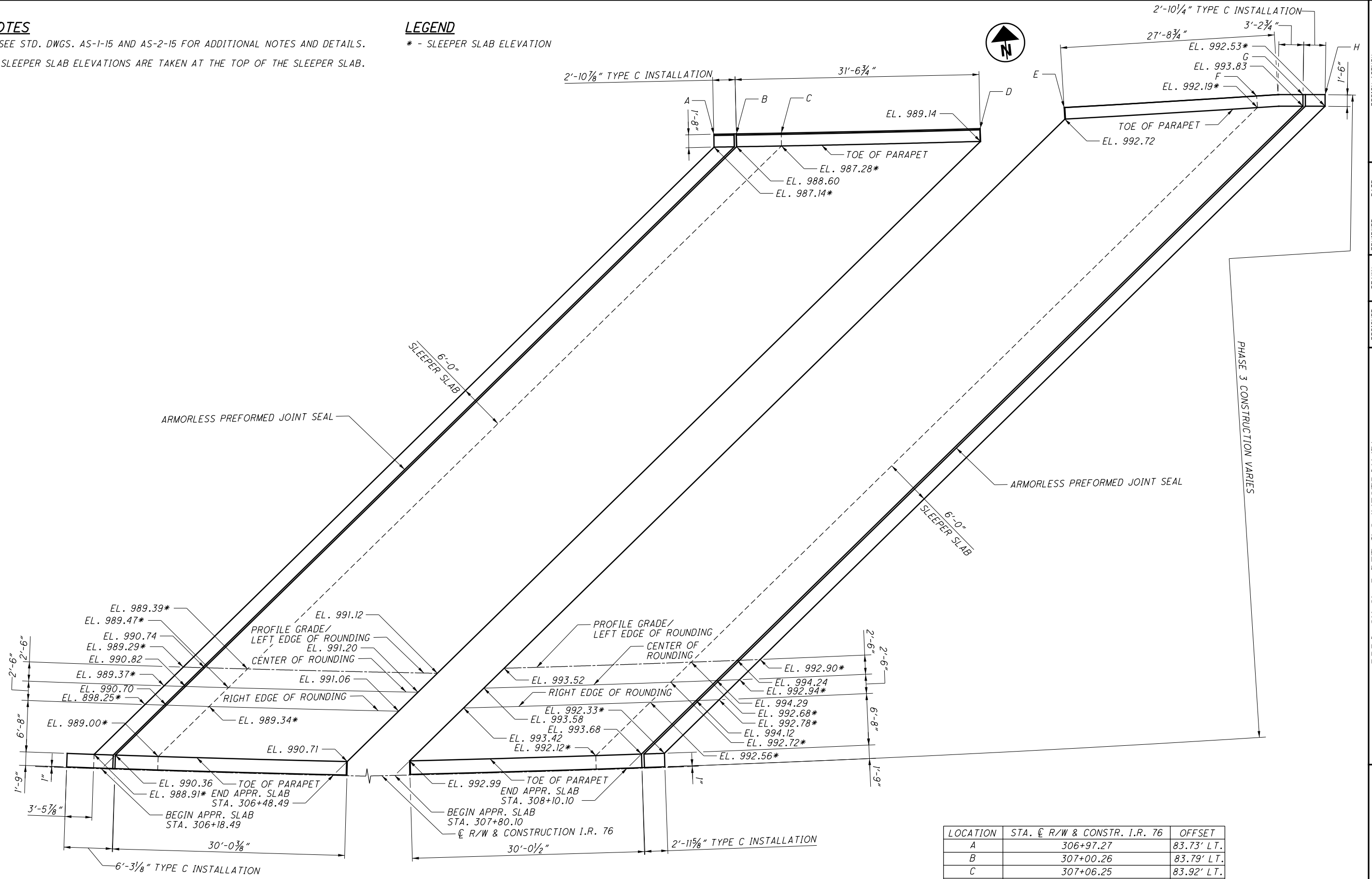


**NOTES**

1. SEE STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.
2. SLEEPER SLAB ELEVATIONS ARE TAKEN AT THE TOP OF THE SLEEPER SLAB.

**LEGEND**

\* - SLEEPER SLAB ELEVATION



**PLAN**

LOCATION	STA. @ R/W & CONSTR. I.R. 76	OFFSET
A	306+97.27	83.73' LT.
B	307+00.26	83.79' LT.
C	307+06.25	83.92' LT.
D	307+32.79	84.46' LT.
E	308+71.41	83.00' LT.
F	308+97.13	83.00' LT.
G	309+03.30	82.78' LT.
H	309+06.33	82.59' LT.

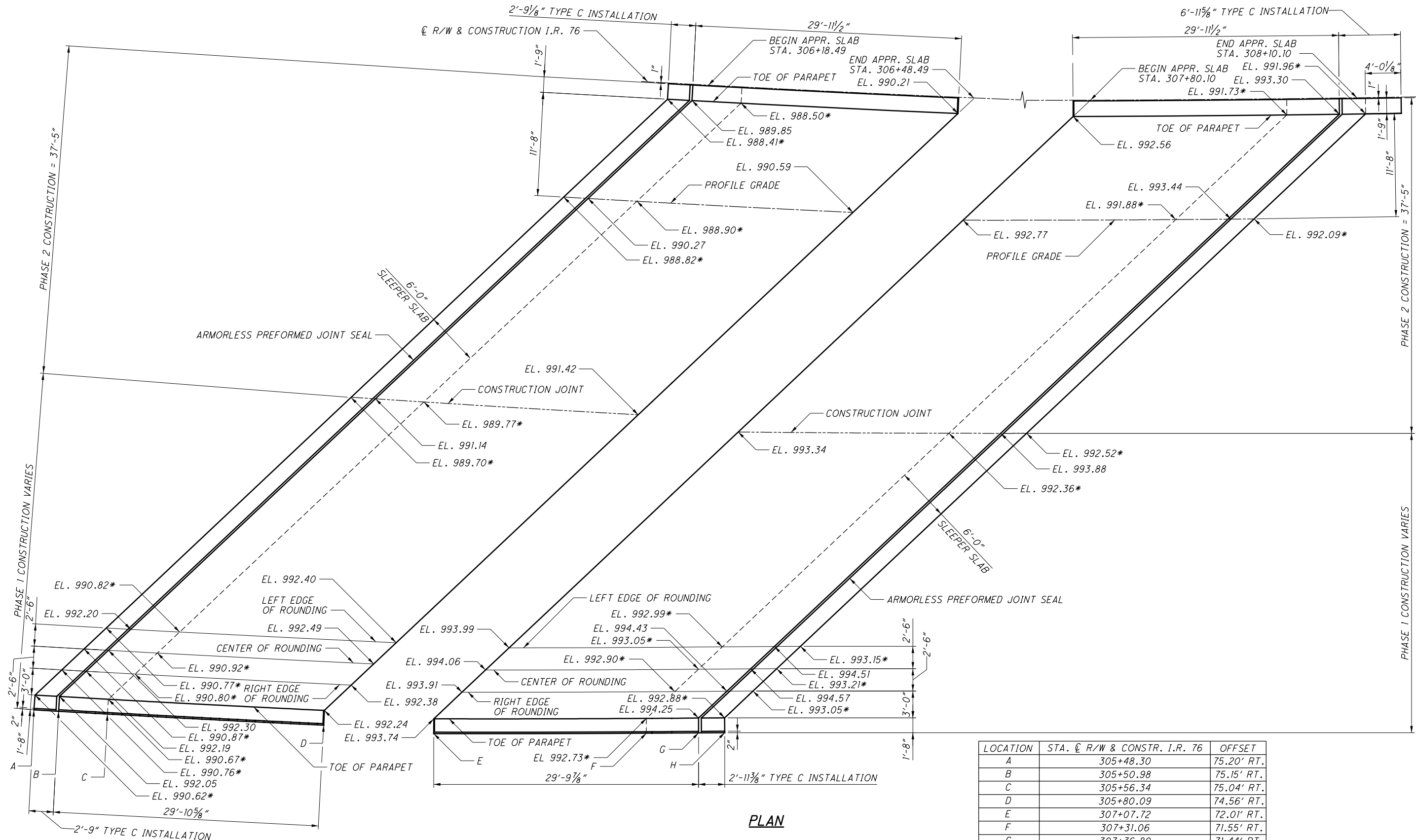
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**NOTES**

1. SEE STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.
2. SLEEPER SLAB ELEVATIONS ARE TAKEN AT THE TOP OF THE SLEEPER SLAB.

**LEGEND**

\* - SLEEPER SLAB ELEVATION

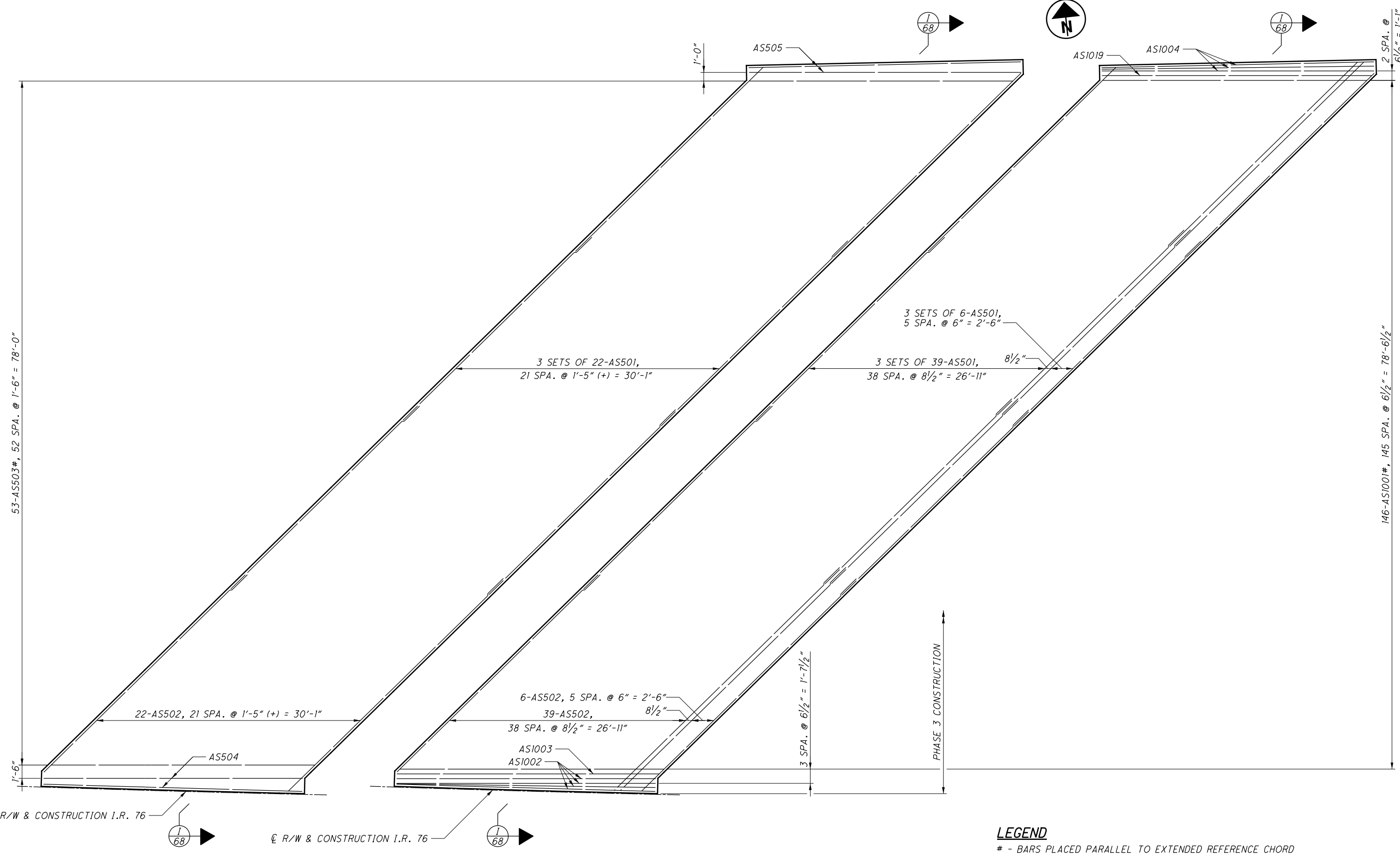


**PLAN**

LOCATION	STA. @ R/W & CONSTR. I.R. 76	OFFSET
A	305+48.30	75.20' RT.
B	305+50.98	75.15' RT.
C	305+56.34	75.04' RT.
D	305+80.09	74.56' RT.
E	307+07.72	72.01' RT.
F	307+31.06	71.55' RT.
G	307+36.80	71.44' RT.
H	307+39.67	71.38' RT.

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**PLAN - TOP REINFORCING**

**PLAN - BOTTOM REINFORCING**

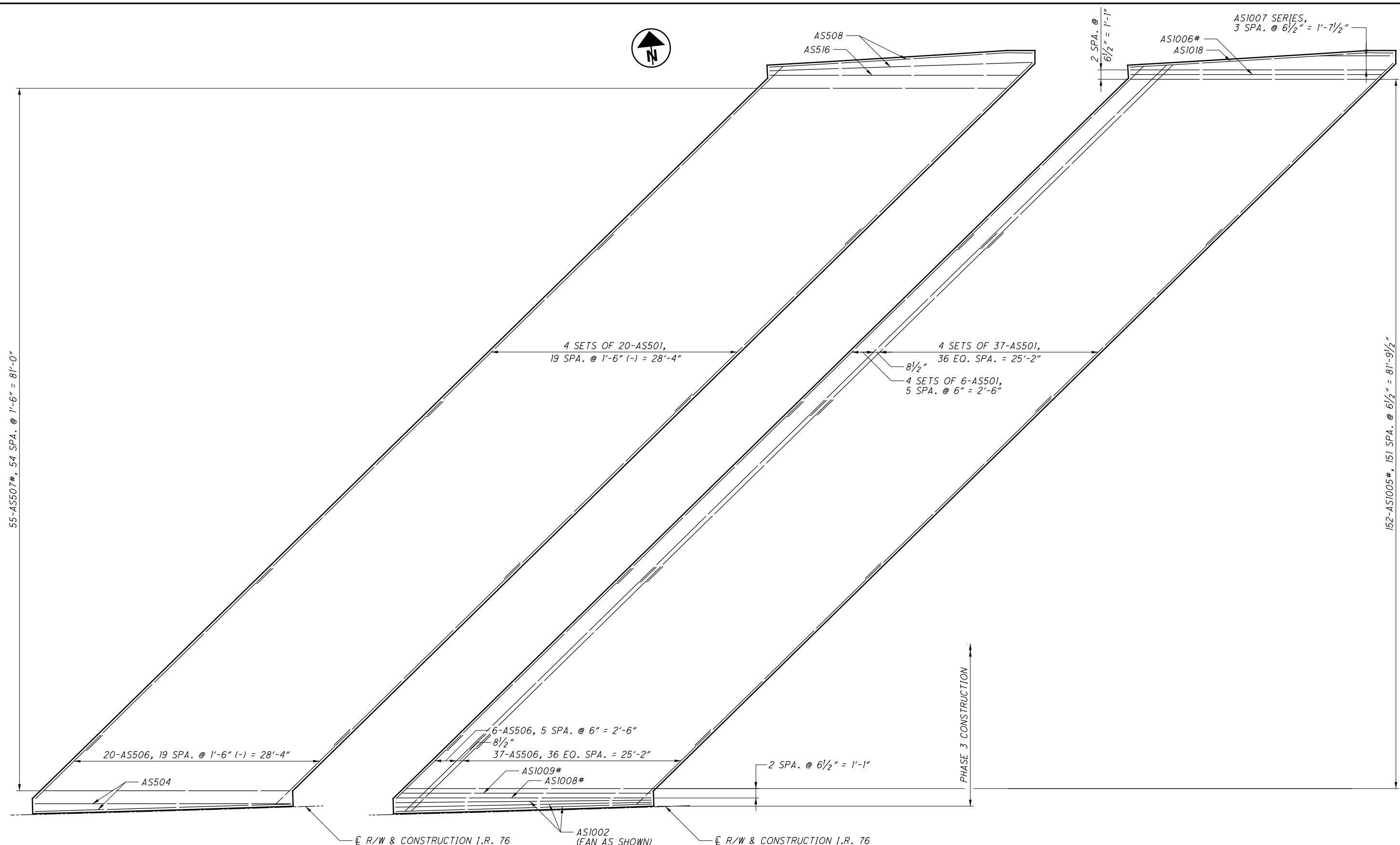
**LEGEND**

# - BARS PLACED PARALLEL TO EXTENDED REFERENCE CHORD

**NOTES**

- SEE STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.
- MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 30 INCHES

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**PLAN - TOP REINFORCING**

**PLAN - BOTTOM REINFORCING**

**LEGEND**

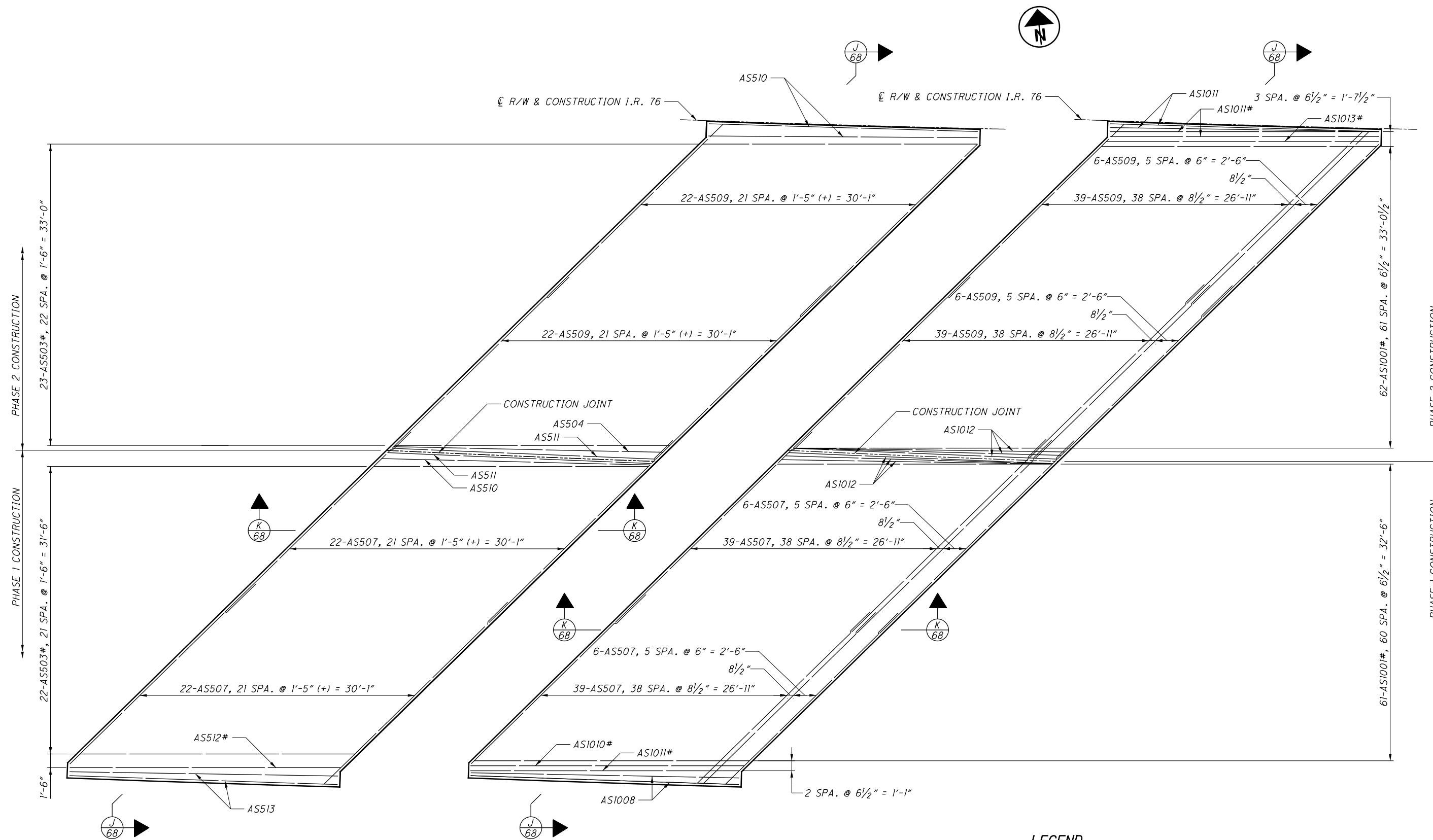
# - BARS PLACED PARALLEL TO EXTENDED REFERENCE CHORD

**NOTES**

1. SEE STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.
2. MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 30 INCHES

DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	7705493
DATE	5/3/2017		
<b>FORWARD APPROACH SLAB DETAILS (WESTBOUND)</b> BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)			
<b>SUM-76-5.53</b> PID No. 96670		65/78 629 672	

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PLAN - TOP REINFORCING

PLAN - BOTTOM REINFORCING

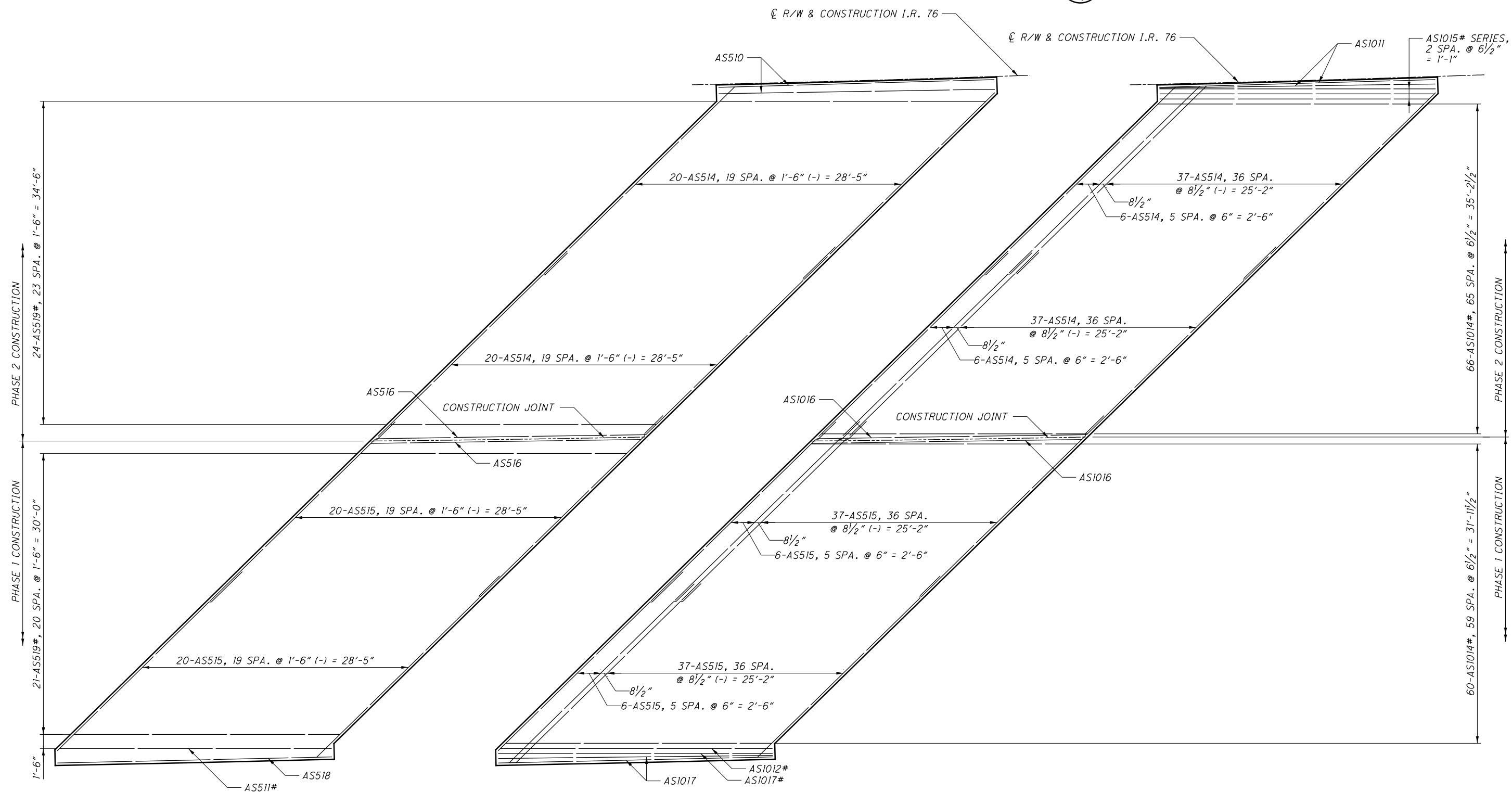
**LEGEND**

# - BARS PLACED PARALLEL TO EXTENDED REFERENCE CHORD

**NOTES**

1. SEE STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.
2. MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 30 INCHES

<p>DESIGNED ERK</p> <p>CHECKED GDJ</p>	<p>DATE 5/3/2017</p> <p>STRUCTURE FILE NUMBER 7705493</p>
<p><b>REAR APPROACH SLAB DETAILS (EASTBOUND)</b></p> <p>BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)</p>	
<p>SUM-76-5.53 PID No. 96670</p>	
<p>66/78</p>	
<p>630 672</p>	



**PLAN - TOP REINFORCING**

**PLAN - BOTTOM REINFORCING**

**LEGEND**

# - BARS PLACED PARALLEL TO EXTENDED REFERENCE CHORD

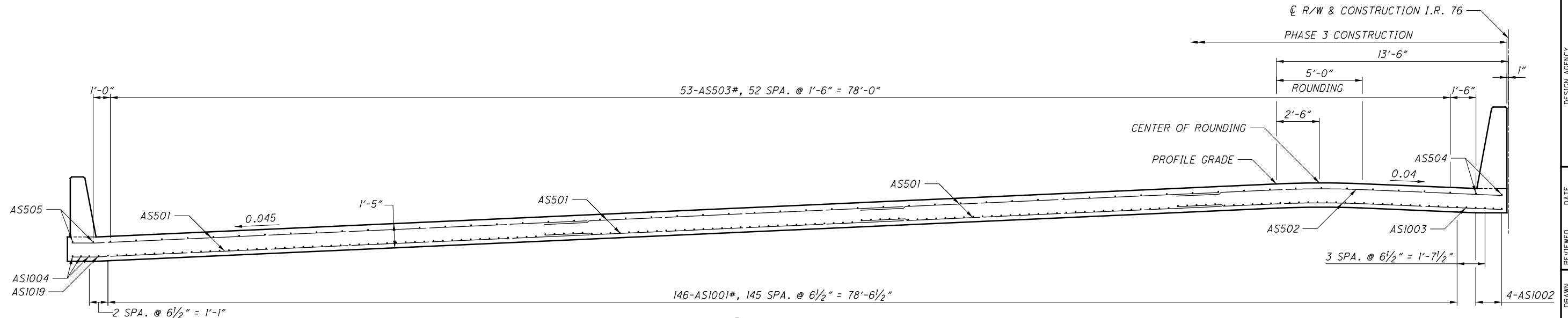
**NOTES**

1. SEE STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.
2. MINIMUM LAP SPLICE LENGTH:  
#5 BAR: 30 INCHES

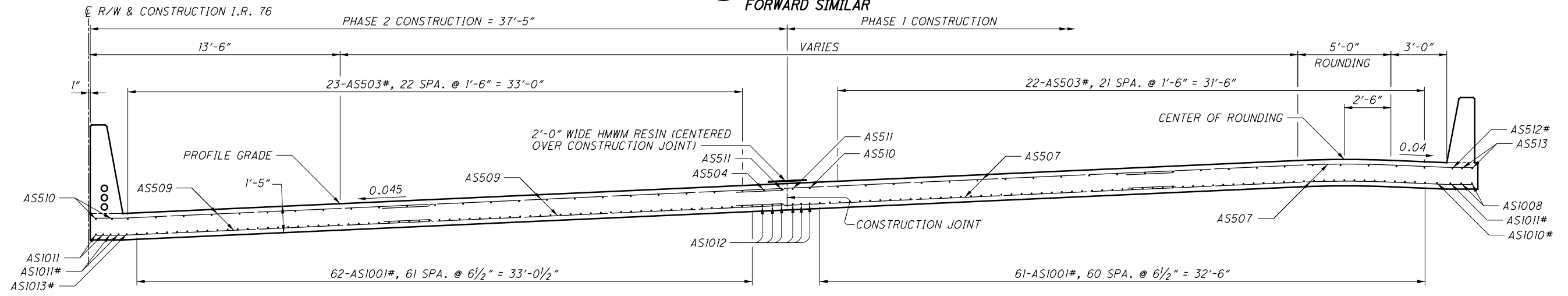
**FORWARD APPROACH SLAB DETAILS (EASTBOUND)**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
PID No. 96670

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**I** WESTBOUND SECTION  
**64** REAR APPROACH SLAB SHOWN,  
 FORWARD SIMILAR



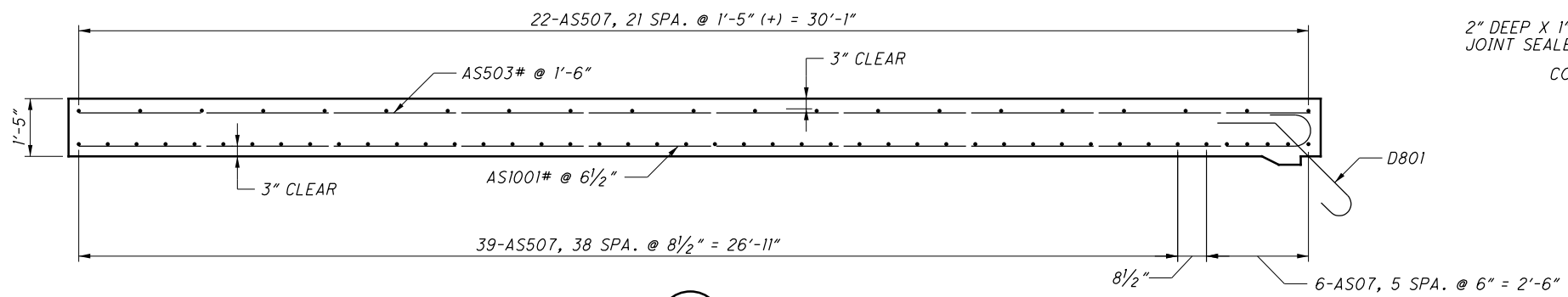
**J** EASTBOUND SECTION  
**66** REAR APPROACH SLAB SHOWN,  
 FORWARD SIMILAR

**NOTES**

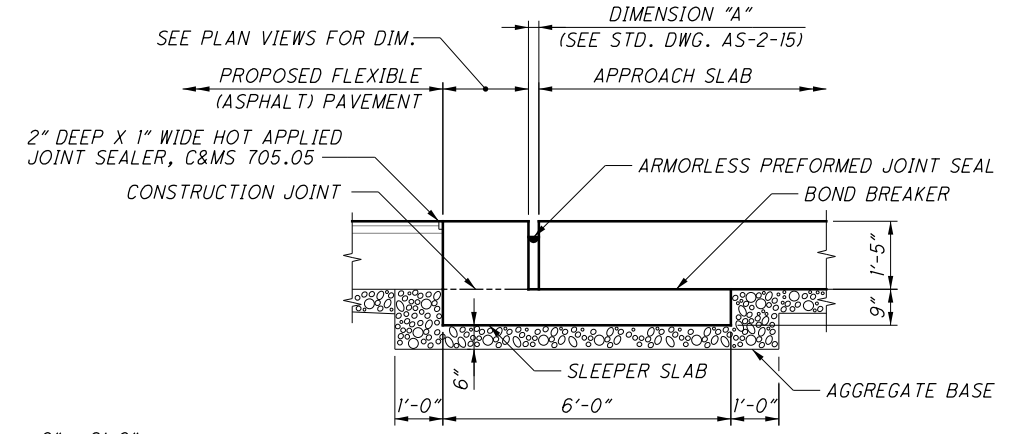
- 2'-0" WIDE HMWM RESIN CENTERED ON JOINTS TO BE INCLUDED FOR PAYMENT UNDER ITEM 526, REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17"), AS PER PLAN.
- SEE STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES, DETAILS AND REINFORCING OF SLEEPER SLABS AND TYPE C INSTALLATION.
- MINIMUM LAP SPLICE LENGTH:  
 #5 BAR: 30 INCHES

**LEGEND**

# - BARS PLACED PARALLEL TO EXTENDED REFERENCE CHORD



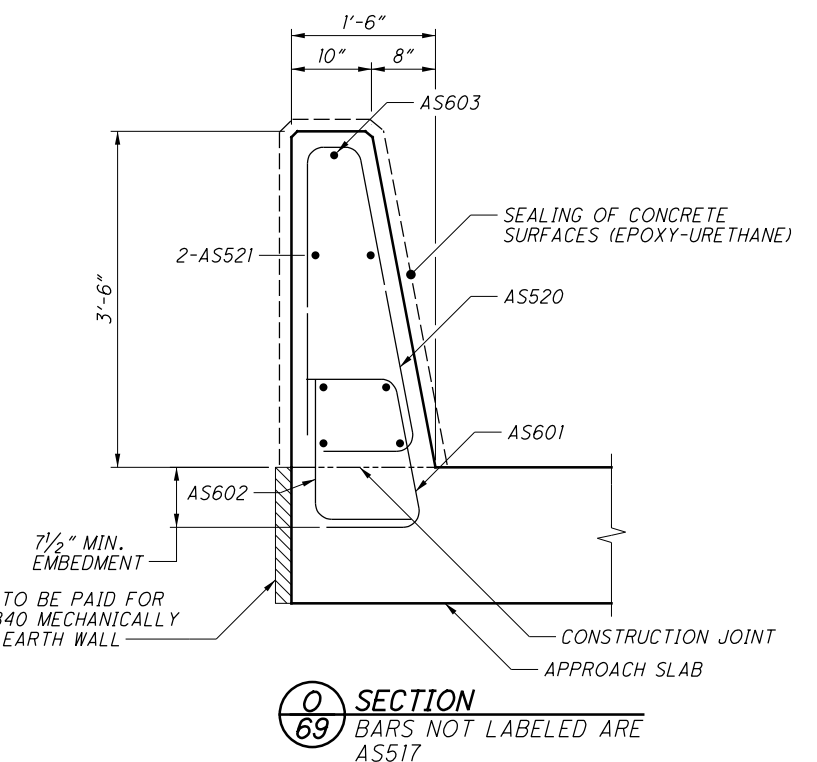
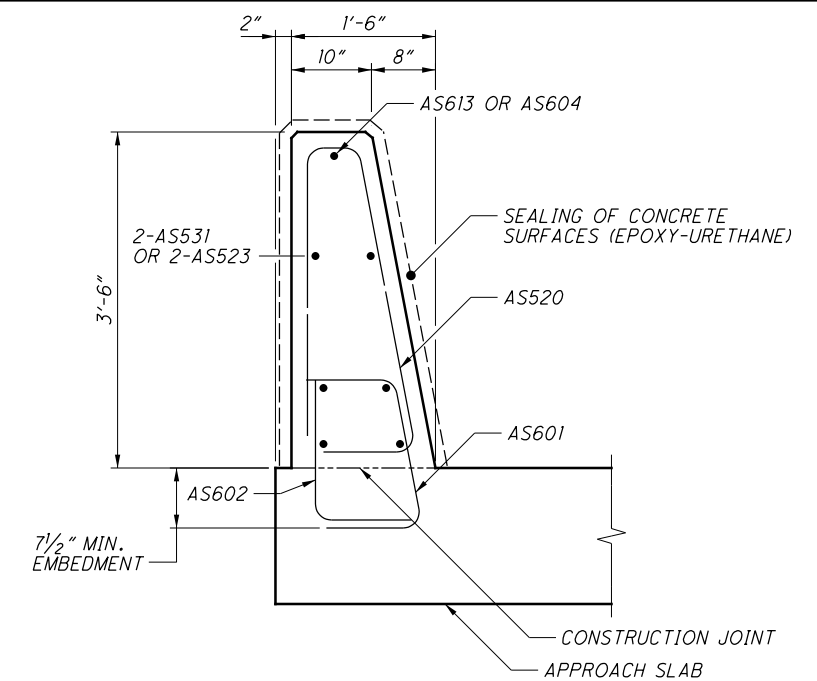
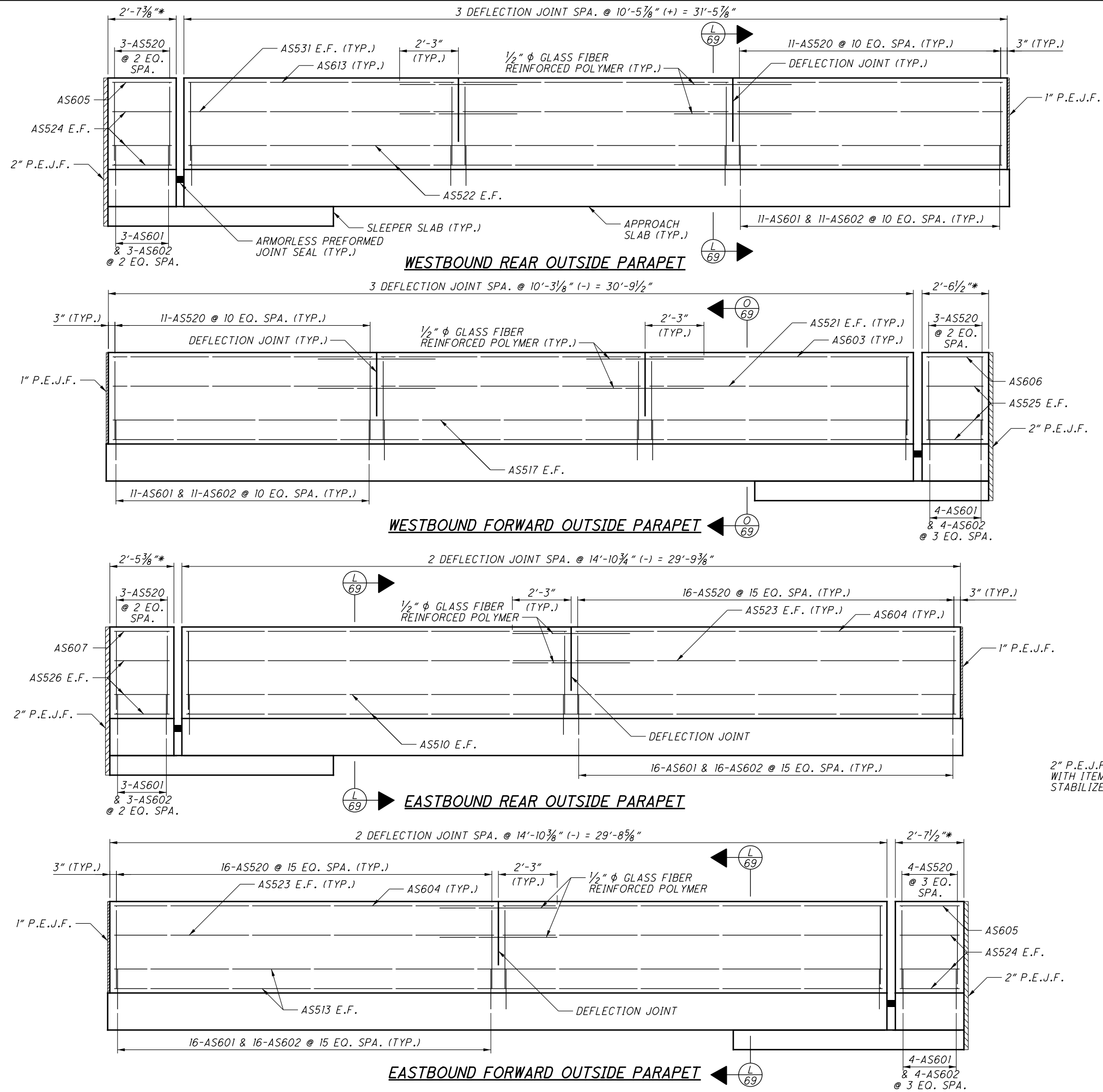
**K** SECTION  
**66**



**TYPE C INSTALLATION DETAIL**

DESIGN AGENCY <b>CARPENTER MARTY</b> TRANSPORTATION & CONSTRUCTION	
DATE 5/3/2017	REVIEWED WHM
STRUCTURE FILE NUMBER 7705493	DRAWN ERK
DESIGNED ERK	CHECKED GDU
APPROACH SLAB DETAILS	
BRIDGE NO. SUM-76-0580	
OVER S.R. 619 (WOOSTER ROAD)	
SUM-76-5.53	PID No. 96670
68/78	632 672

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**LEGEND**

\* - WIDTH IS BASED ON THE JOINT OPENING AT A TEMPERATURE OF 60° F. ADJUST OPENING BASED ON ACTUAL TEMPERATURE AT TIME OF CONSTRUCTION. SEE TABLE 1 ON STD. DWG. AS-2-15

**NOTES**

1. PARAPET ELEVATIONS DIMENSIONED ALONG INSIDE FACE.
2. SEE STD. DWGS. AS-2-15 & SBR-1-13 FOR ADDITIONAL NOTES AND DETAILS.
3. 1/2" φ GLASS FIBER REINFORCED POLYMER TO BE INCLUDED FOR PAYMENT UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.
4. CONCRETE PARAPET AND REINFORCING STEEL ON THE APPROACH SLABS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 526, REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17"), AS PER PLAN.
5. SEE SHEET 61/78 FOR DEFLECTION JOINT DETAIL.

DESIGN AGENCY  
**CARPENTER MARTY**  
 TRANSPORTATION  
 10000 W. 10TH AVE. SUITE 100  
 DENVER, CO 80231

DESIGNED	ERK	CHECKED	STK
DRAWN	ERK	REVISED	
REVIEWED	WHM	DATE	5/3/2017
STRUCTURE FILE NUMBER	7705493		

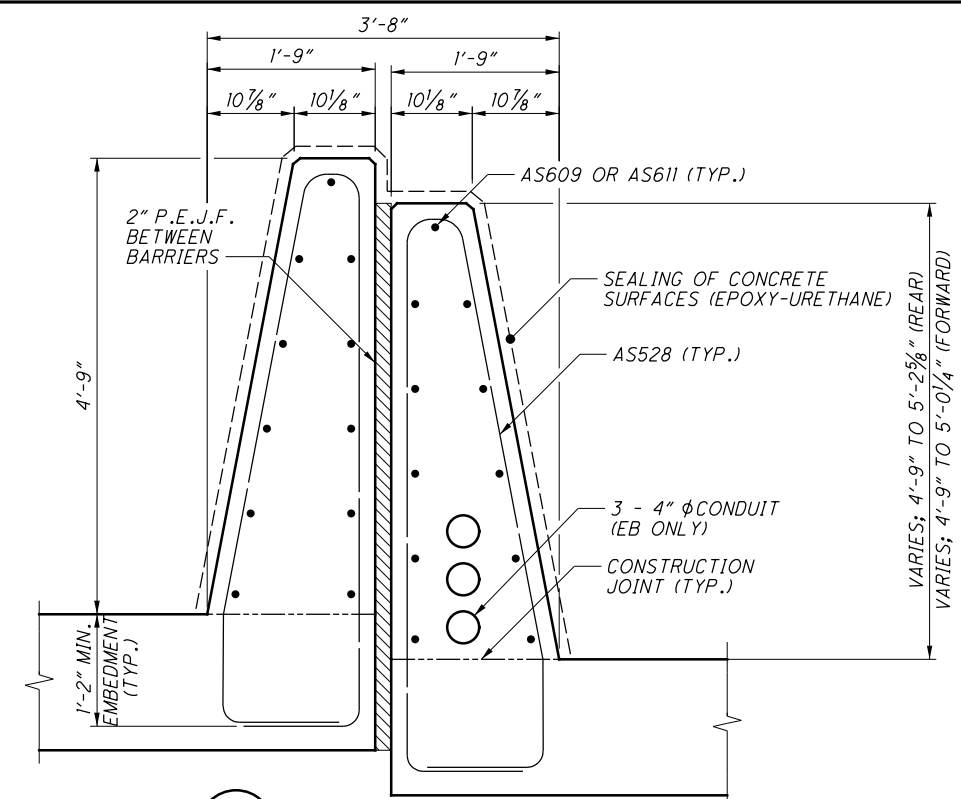
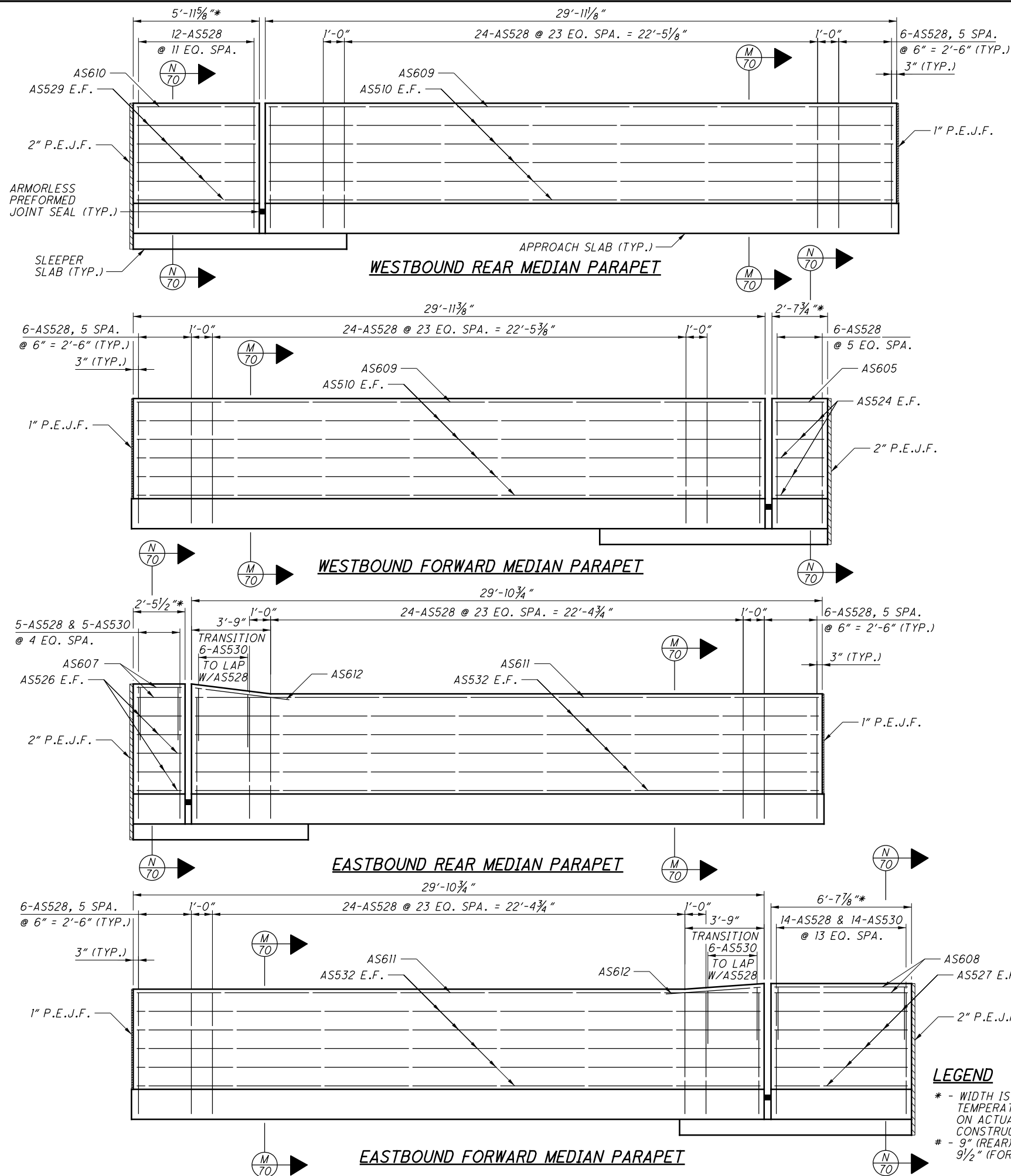
**APPROACH SLAB PARAPET DETAILS**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
 PID No. 96670

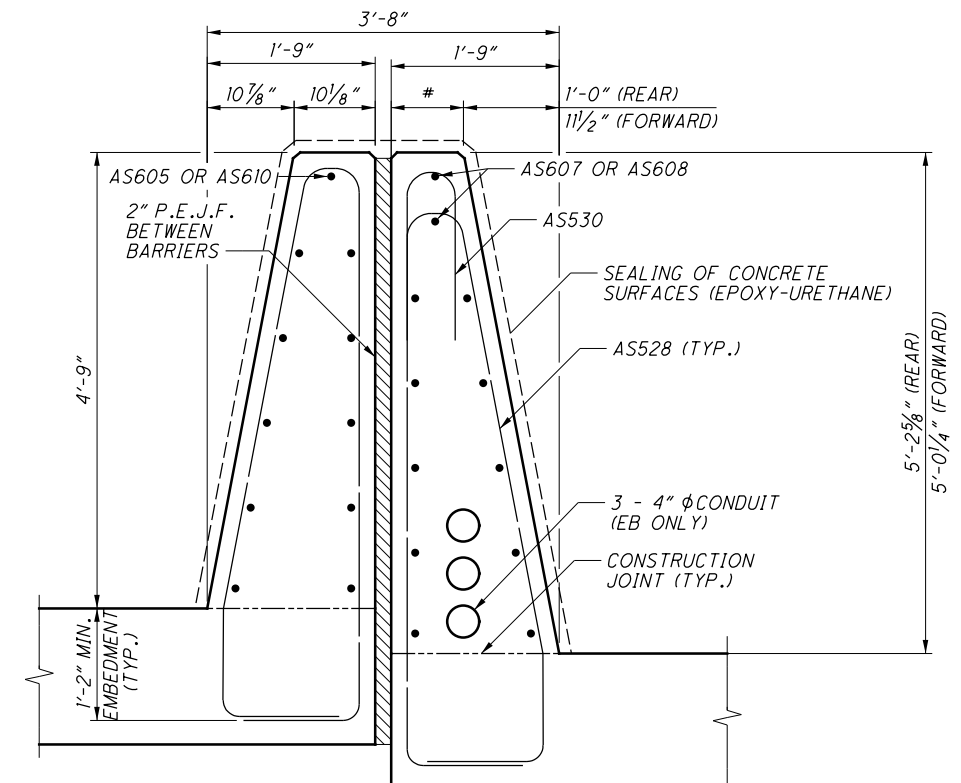
69/78  
 633  
 672



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**M SECTION**  
BARS NOT LABELED ARE AS510 OR AS532



**N SECTION**  
BARS NOT LABELED ARE AS510 OR AS532

**LEGEND**

- \* - WIDTH IS BASED ON THE JOINT OPENING AT A TEMPERATURE OF 60° F. ADJUST OPENING BASED ON ACTUAL TEMPERATURE AT TIME OF CONSTRUCTION. SEE TABLE 1 ON STD. DWG. AS-2-15.
- # - 9" (REAR)  
9 1/2" (FORWARD)

**NOTES**

1. PARAPET ELEVATIONS DIMENSIONED ALONG INSIDE FACE.
2. SEE STD. DWGS. AS-2-15 & SBR-2-15 FOR ADDITIONAL NOTES AND DETAILS.
3. 1/2" φ GLASS FIBER REINFORCED POLYMER TO BE INCLUDED FOR PAYMENT UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.
4. CONCRETE PARAPET AND REINFORCING STEEL ON THE APPROACH SLABS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 526, REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (I=17"), AS PER PLAN.

DESIGNED ERK	DATE 5/3/2017
DRAWN ERK	STRUCTURE FILE NUMBER 7705493
CHECKED STK	REVISIONS 7705493
<b>APPROACH SLAB MEDIAN PARAPET DETAILS</b> BRIDGE NO. SUM-76-0580 OVER S.R. 619 (WOOSTER ROAD)	
<b>SUM-76-5.53</b> PID No. 96670	
70/78 634 672	

P:\DDT\MP\0093\_SUM-76-5.62\SUM-76-5.62\SUM-96670\Design\Structures\SUM076\_0580C\Sheets\076\_0580C.dgn Sheet 10/1/2018 2:09:58 PM cmt007

MARK	NUMBER						TOTAL	LENGTH	WEIGHT				TYPE	DIMENSIONS					
	R.A.			F.A.					PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	D	E	INC.
	PHASE 1	PHASE 2	PHASE 3	PHASE 1	PHASE 2	PHASE 3													
ABUTMENTS																			
A501	81	40	125	81	45	95	467	18'-2"	3070	1611	4169	8850	3	6'-2"	2'-7"				
A502	45	38	53	46		24	206	7'-0"	665	278	563	1506	2	2'-3"	2'-9"	2'-3"			
A503	22						22	16'-6"	379			379	2	7'-0"	2'-9"	7'-0"			
A504	7						7	16'-0"	117			117	2	6'-9"	2'-9"	6'-9"			
A505	14						14	15'-2"	222			222	2	6'-4"	2'-9"	6'-4"			
A506		12		25			37	13'-8"	357	172		529	2	5'-7"	2'-9"	5'-7"			
A507		12		14			26	13'-0"	190	163		353	2	5'-3"	2'-9"	5'-3"			
A508		5	7	16	11	6	45	12'-4"	206	206	168	580	2	4'-11"	2'-9"	4'-11"			
A509	2	2	2	2			8	5'-10"	25	13	13	51	1	3'-9"	2'-3"				
A510		2				2	4	5'-9"			12	24	1	4'-11"	1'-0"				
A511		2					2	6'-4"			14	14	1	5'-6"	1'-0"				
A512	2	9					11	14'-4"	30	135		165	2	5'-11"	2'-9"	5'-11"			
A513			32				32	13'-6"			451	451	2	5'-6"	2'-9"	5'-6"			
A514			21				21	12'-8"			278	278	2	5'-1"	2'-9"	5'-1"			
A515			49				49	5'-4"			273	273	2	1'-5"	2'-9"	1'-5"			
A516			1				1	19'-3"			21	21	STR						
A517			7			15	22	12'-2"			280	280	2	4'-10"	2'-9"	4'-10"			
A518			7		14	18	39	11'-10"		173	309	482	2	4'-8"	2'-9"	4'-8"			
A519			7				7	11'-6"			84	84	2	4'-6"	2'-9"	4'-6"			
A520			21		10		31	11'-2"		117	245	362	2	4'-4"	2'-9"	4'-4"			
A521	1		1				2	11'-2"	12		12	24	3	3'-1"	2'-2"				
A522	1 SERIES OF 7						1 SERIES OF 7	12'-8" TO 17'-0"	109			109	3	3'-10" TO 6'-0"	2'-2"			9" (-)	
A523	1 SERIES OF 7						1 SERIES OF 7	18'-2" TO 22'-6"	149			149	3	6'-7" TO 8'-9"	2'-2"			9" (-)	
A524	16						16	21'-1"	352			352	2	9'-7"	2'-2"	9'-7"			
A525	1 SERIES OF 5						1 SERIES OF 5	6'-9" TO 9'-9"	44			44	2	2'-5" TO 3'-11"	2'-2"	2'-5" TO 3'-11"		9"	
A526	1 SERIES OF 7						1 SERIES OF 7	10'-9" TO 15'-1"	95			95	2	4'-5" TO 6'-7"	2'-2"	4'-5" TO 6'-7"		9" (-)	
A527	4		5				9	15'-5"	65		81	146	2	6'-9"	2'-2"	6'-9"			
A528	2						2	7'-10"	17			17	1	7'-0"	1'-0"				
A529	2						2	12'-6"	27			27	1	9'-7"	3'-1"				
A530	1						1	39'-4"	42			42	STR						
A531	1						1	37'-4"	39			39	STR						
A532	1						1	35'-4"	37			37	STR						
A533	1						1	33'-4"	35			35	STR						
A534						4	4	14'-2"			60	60	STR						
A535	1						1	30'-11"	33			33	STR						
A536	1						1	28'-11"	31			31	STR						
A537	1						1	27'-3"	29			29	STR						
A538	1						1	25'-3"	27			27	STR						
A539	1 SERIES OF 4						1 SERIES OF 4	10'-9" TO 24'-0"	73			73	STR					4'-4"	
A540	1 SERIES OF 4						1 SERIES OF 4	8'-9" TO 22'-0"	65			65	STR					4'-4"	
A541	1						1	26'-9"	28			28	19	6'-4"	19'-4"	6'-7"			
A542	1						1	24'-9"	26			26	19	4'-4"	19'-4"	6'-7"			
A543	7						7	10'-1"	74			74	STR						
A544	14	4	35	18		30	101	30'-0"	1002	126	2034	3162	STR						
A545	6						6	26'-7"	167			167	STR						
A546%	13	7	7	11	11	7	56	30'-0"	751	564	439	1754	STR						
A547%		7					7	24'-9"		181		181	STR						
A548%		4					4	23'-11"		100		100	STR						
A549			2				2	10'-4"			22	22	STR						
A550			7				7	32'-10"			240	240	STR						
A551			2		2		4	5'-2"		11	11	22	1	4'-4"	1'-0"				
A552			2				2	5'-0"			11	11	1	3'-9"	1'-5"				
A553	2		2	1			5	9'-8"	31		21	52	1	6'-9"	3'-1"				
A554			2				2	9'-5"			20	20	1	6'-6"	3'-1"				

**LEGEND**

% - BARS TO UTILIZE A MECHANICAL CONNECTOR BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

**NOTES**

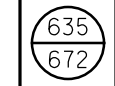
- SEE SHEET 78/78 FOR BENDING DIAGRAM AND NOTES.
- SEE SHEET 73/78 FOR MECHANICAL CONNECTOR TABLE.



DESIGNED	ERK	CHECKED	STK
DRAWN	ERK	REVISED	
REVIEWED	WHM	STRUCTURE FILE NUMBER	7705493
DATE	5/3/2017		

**REINFORCING STEEL LIST**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
**PID No. 96670**



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MARK	NUMBER						TOTAL	LENGTH	WEIGHT				TYPE	DIMENSIONS					
	R.A.			F.A.					PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	D	E	INC.
	PHASE 1	PHASE 2	PHASE 3	PHASE 1	PHASE 2	PHASE 3													
ABUTMENTS (CONTINUED)																			
A555			1 SERIES OF 5				1 SERIES OF 5	12'-7" TO 14'-11"			72	72	2	5'-4" TO 6'-6"	2'-2"	5'-4" TO 6'-6"		7"	
A556			1 SERIES OF 7				1 SERIES OF 7	19'-0" TO 23'-10"			157	157	3	7'-0" TO 9'-5"	2'-2"			9" (+)	
A557			1 SERIES OF 7				1 SERIES OF 7	12'-10" TO 17'-10"			112	112	3	3'-11" TO 6'-5"	2'-2"			10"	
A558	1		1				2	11'-8"	13		13	26	3	3'-4"	2'-2"				
A559			1				1	22'-6"			24	24	STR						
A560			2				2	7'-9"			17	17	STR						
A561			1				1	19'-1"			20	20	19	1'-4"	16'-7"	6'-4"			
A562			1				1	21'-2"			23	23	19	3'-5"	16'-7"	6'-4"			
A563			1 SERIES OF 5				1 SERIES OF 5	2'-8" TO 17'-10"			54	54	STR					3'-9 1/2"	
A564			1 SERIES OF 5				1 SERIES OF 5	4'-10" TO 20'-0"			65	65	STR					3'-9 1/2"	
A565			1				1	24'-9"			26	26	STR						
A566			1				1	21'-6"			23	23	STR						
A567	1						1	23'-6"	25		25	25	3	9'-3"	2'-2"				
A568	1						1	24'-2"	26		26	26	3	9'-7"	2'-2"				
A569%		2					2	12'-0"		26	26	26	STR						
A570				2	34	81	117	5'-6"	12	196	465	673	2	1'-6"	2'-9"	1'-6"			
A571					7	28	35	11'-8"		86	341	427	2	4'-7"	2'-9"	4'-7"			
A572					1	29	30	12'-6"		14	379	393	2	5'-0"	2'-9"	5'-0"			
A573						1	1	24'-6"			26	26	3	9'-4"	2'-7"				
A574						1	1	13'-7"			15	15	2	4'-10"	4'-2"	4'-10"			
A575						1	1	7'-9"			9	9	2	1'-11"	4'-2"	1'-11"			
A576						1 SERIES OF 3	1 SERIES OF 3	10'-4" TO 15'-6"			41	41	3	2'-3" TO 4'-10"	2'-7"			2'-7"	
A577						1	1	11'-3"			12	12	2	4'-10"	1'-10"	4'-10"			
A578						1	1	5'-5"			6	6	2	1'-11"	1'-10"	1'-11"			
A579						7	7	33'-3"			243	243	STR						
A580			1				1	21'-0"	22		22	22	STR						
A581			1				1	23'-2"	25		25	25	STR						
A582				2	2		4	5'-1"		11	11	22	1	3'-9"	1'-6"				
A583				4			4	16'-0"		67	67	67	STR						
A584			7				7	8'-1"	60		60	60	STR						
A585			2				2	6'-5"	14		14	14	1	5'-7"	1'-0"				
A586			7				7	18'-1"	133		133	133	2	8'-1"	2'-2"	8'-1"			
A587%				7			7	26'-9"		196	196	196	STR						
A588			4				4	8'-7"	36		36	36	STR						
A589			1 SERIES OF 7				1 SERIES OF 7	10'-7" TO 15'-1"	94		94	94	2	4'-4" TO 6'-7"	2'-2"	4'-4" TO 6'-7"		9"	
A590			1 SERIES OF 7				1 SERIES OF 7	19'-10" TO 24'-6"	162		162	162	3	7'-5" TO 9'-9"	2'-2"			9" (+)	
A591			1 SERIES OF 7				1 SERIES OF 7	14'-0" TO 18'-8"	120		120	120	3	4'-6" TO 6'-10"	2'-2"			9" (+)	
A592			1				1	13'-0"	14		14	14	3	4'-0"	2'-2"				
A593			1				1	12'-2"	13		13	13	3	3'-7"	2'-2"				
A594			1				1	26'-8"	28		28	28	STR						
A595			1				1	28'-10"	31		31	31	STR						
A596			2				2	9'-8"	21		21	21	STR						
A597			1				1	24'-10"	26		26	26	STR						
A598			1				1	27'-0"	29		29	29	STR						
A599			1				1	20'-10"	22		22	22	19	2'-0"	17'-8"	6'-6"			
A5100			1				1	22'-11"	24		24	24	19	4'-1"	17'-8"	6'-6"			
A5101			1 SERIES OF 5				1 SERIES OF 5	3'-11" TO 19'-6"	62		62	62	STR					3'-10" (-)	
A5102			1 SERIES OF 5				1 SERIES OF 5	6'-1" TO 21'-8"	73		73	73	STR					3'-10" (-)	
A5103	2						2	17'-2"	36		36	36	STR						

**LEGEND**

% - BARS TO UTILIZE A MECHANICAL CONNECTOR BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

**NOTES**

- SEE SHEET 78/78 FOR BENDING DIAGRAM AND NOTES.
- SEE SHEET 73/78 FOR MECHANICAL CONNECTOR TABLE.



DESIGNED BY: ERK  
 CHECKED BY: STK  
 DRAWN BY: ERK  
 REVISED BY:  
 REVIEWED BY: WHM  
 DATE: 5/3/2017  
 STRUCTURE FILE NUMBER: 7705493

**REINFORCING STEEL LIST**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
**PID No. 96670**

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MARK	NUMBER						TOTAL	LENGTH	WEIGHT				TYPE	DIMENSIONS														
	R.A.			F.A.					PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	D	E	INC.									
	PHASE 1	PHASE 2	PHASE 3	PHASE 1	PHASE 2	PHASE 3																						
ABUTMENTS (CONTINUED)																												
A5104						1	1	9'-11"			11	11	2	4'-10"	6"	4'-10"												
A5105						1	1	4'-1"			5	5	2	1'-11"	6"	1'-11"												
A5106				1			1	11'-0"	12			12	1	8'-1"	3'-1"													
A801	5						5	19'-4"	259			259	STR															
A802	10		20	10		15	55	30'-0"	1602		2804	4406	STR															
A803	1 SERIES OF 4						1 SERIES OF 4	32'-9" TO 35'-3"	364			364	19	17'-10" TO 20'-4"	14'-11"	6"		10"										
A804	4	12					16	22'-2"	237	711		948	19	7'-3"	14'-11"	6"												
A805%	5	5	5	5	5	5	30	30'-0"	801	801	801	2403	STR															
A806%	4						4	13'-3"	142			142	19	7'-3"	6'-0"	3"												
A807%		4					4	8'-11"		96		96	STR															
A808%		5					5	27'-10"		372		372	STR															
A809		4					4	9'-11"		106		106	STR															
A810			4				4	33'-4"			356	356	20	5"	15'-2"	3'-0"	15'-2"	5"										
A811			4				4	24'-9"			265	265	STR															
A812			4				4	11'-6"			123	123	STR															
A813			5				5	21'-0"			281	281	STR															
A814					5		5	18'-4"			245	245	STR															
A815					1 SERIES OF 4		1 SERIES OF 4	11'-3" TO 14'-3"			137	137	19	5'-5" TO 8'-5"	5'-10"	1"		1'-0"										
A816					4		4	19'-11"			213	213	19	7'-3"	12'-8"	2"												
A817					20		20	22'-5"			1198	1198	19	7'-3"	15'-2"	1"												
A818					4		4	33'-4"			356	356	20	3"	15'-2"	3'-0"	15'-2"	7"										
A819					4		4	11'-10"			127	127	STR															
A820%				4			4	14'-6"		155		155	STR															
A821%				4			4	21'-5"	229			229	19	7'-3"	14'-2"	2"												
A822				1 SERIES OF 4			1 SERIES OF 4	33'-8" TO 36'-5"	375			375	19	18'-9" TO 21'-6"	14'-11"	4"		11"										
A823				5			5	17'-4"	232			232	STR															
A824%					5		5	29'-10"		399		399	STR															
A825			20				20	22'-5"			1198	1198	19	7'-3"	15'-2"	5"												
A826				4	8		12	22'-2"	237	474		711	19	7'-3"	14'-11"	4"												
A901						8	8	41'-3"			1122	1122	STR															
SUB-TOTAL																												

MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS					
	PHASE 1	PHASE 2	PHASE 3	TOTAL		PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	D	R	INC.
APPROACH SLABS																
AS501			453	453	30'-0"			14175	14175	STR						
AS502			67	67	36'-4"			2540	2540	STR						
AS503	22	23	53	98	30'-1"	691	722	1663	3076	STR						
AS504		1	4	5	29'-6"		31	124	155	STR						
AS505			2	2	31'-0"			65	65	STR						
AS506			63	63	13'-11"			915	915	STR						
AS507	134		55	189	28'-4"	3960		1626	5586	STR						
AS508			2	2	30'-4"			64	64	STR						
AS509		134		134	27'-0"		3774		3774	STR						
AS510	5	4	20	29	29'-5"	154	123	614	891	STR						
AS511	2	1		3	28'-11"	61	31	92	92	STR						
AS512	1			1	29'-8"	31		31	31	STR						
AS513	6			6	29'-3"	184		184	184	STR						
AS514		126		126	28'-5"		3735		3735	STR						
AS515	126			126	27'-3"	3582			3582	STR						
AS516	1	1	1	3	28'-10"	31	31	31	93	STR						
AS517			4	4	30'-3"			127	127	STR						
AS518	1			1	29'-4"	31		31	31	STR						
AS519	21	24		45	28'-5"	623	712		1335	STR						
AS520	71		72	143	7'-4"	544		551	1095	23	11"	3'-3"	3'-0"		2 3/4"	

MECHANICAL CONNECTORS		
LOCATION	BAR SIZE	TOTAL
ABUTMENTS	5	38
	8	28

**LEGEND**

% - BARS TO UTILIZE A MECHANICAL CONNECTOR BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

**NOTE**

SEE SHEET 78/78 FOR BENDING DIAGRAM AND NOTES.



DESIGNED BY ERK  
 CHECKED BY STK  
 DRAWN BY ERK  
 REVISIONS  
 WHM 5/3/2017  
 STRUCTURE FILE NUMBER 7705493

REINFORCING STEEL LIST  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

SUM-76-5.53  
 PID No. 96670

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MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS					
	PHASE 1	PHASE 2	PHASE 3	TOTAL		PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	D	R	INC.
APPROACH SLABS (CONTINUED)																
AS521			6	6	9'-9"			62	62	STR						
AS522			4	4	31'-0"			130	130	STR						
AS523	8			8	14'-4"	120			120	STR						
AS524	6		16	22	2'-1"	14		35	49	STR						
AS525			6	6	2'-0"			13	13	STR						
AS526	6	10		16	1'-11"	12	20		32	STR						
AS527		10		10	6'-2"		65		65	STR						
AS528		91	90	181	14'-1"		1337	1323	2660	35	1'-2"	1'-5"	1'-0"	4'-7"	3"	
AS529			10	10	5'-6"			58	58	STR						
AS530		31		31	5'-9"		186		186	24	6"	2'-6"			3"	
AS531			6	6	9'-11"			63	63	STR						
AS532		20			29'-5"		614		614	STR						
AS601	71		73	144	3'-3"	347		357	704	28	1'-7"	1'-0"				
AS602	71		73	144	2'-5"	258		265	523	1	1'-0"	1'-7"				
AS603			3	3	9'-9"			44	44	STR						
AS604	4			4	14'-4"	87			87	STR						
AS605	1		2	3	2'-1"	4		7	11	STR						
AS606			1	1	2'-0"			4	4	STR						
AS607	1	2		3	1'-11"	3	6		9	STR						
AS608		2		2	6'-2"		19		19	STR						
AS609			2	2	29'-5"			89	89	STR						
AS610			1	1	5'-6"			9	9	STR						
AS611		2		2	29'-5"		89		89	STR						
AS612		2		2	4'-6"		14		14	STR						
AS613			3	3	9'-11"			45	45	STR						
ASI001	61	62	146	269	31'-6"	8269	8404	19790	36463	16	30'-1"					
ASI002			7	7	30'-11"			932	932	16	29'-6"					
ASI003			1	1	31'-4"			135	135	16	29'-11"					
ASI004			3	3	32'-5"			419	419	16	31'-0"					
ASI005			152	152	29'-9"			19459	19459	16	28'-4"					
ASI006			1	1	30'-4"			131	131	16	28'-11"					
ASI007			1 SERIES OF 4	1 SERIES OF 4	9'-10" TO 30'-11"			351	351	16	8'-4" TO 29'-6"				7'-0" (+)	
ASI008	2		1	3	30'-9"	265		133	398	16	29'-4"					
ASI009			1	1	30'-2"			130	130	16	28'-9"					
ASI010	1			1	31'-5"	136			136	16	30'-0"					
ASI011	1	6		7	30'-10"	133	797		930	16	29'-5"					
ASI012	4	3		7	30'-5"	524	393		917	16	29'-0"					
ASI013		1		1	31'-3"		135		135	16	29'-10"					
ASI014	60	66		126	29'-10"	7703	8473		16176	16	28'-5"					
ASI015		1 SERIES OF 3		1 SERIES OF 3	30'-2" TO 30'-11"		395		395	16	28'-9" TO 29'-6"				4 1/2"	
ASI016	1	1		2	30'-3"	131	131		262	16	28'-10"					
ASI017	3			3	30'-9"	397			397	16	29'-4"					
ASI018			1	1	31'-10"			137	137	16	30'-5"					
ASI019			1	1	32'-2"			139	139	16	30'-9"					
SUB-TOTAL									125287							

MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS			
	PHASE 1	PHASE 2	PHASE 3	TOTAL		PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	INC.
SLAB														
S401			9	9	10'-3"			62	62	2	8'-2"	7"	1'-8"	
S402	8		18	26	11'-0"	59		133	192	2	8'-7"	7"	2'-1"	
S403	10		41	51	11'-3"	76		309	385	2	8'-8"	7"	2'-2"	
S404	10		31	41	11'-4"	76		235	311	2	8'-9"	7"	2'-3"	
S405	24		33	57	11'-6"	185		254	439	2	8'-10"	7"	2'-4"	
S406	26		37	63	11'-8"	203		289	492	2	8'-11"	7"	2'-5"	
S407	30		40	70	11'-10"	238		317	555	2	9'-0"	7"	2'-6"	
S408	40		68	108	12'-0"	321		546	867	2	9'-1"	7"	2'-7"	

**NOTE**  
SEE SHEET [78/78] FOR BENDING DIAGRAM AND NOTES.



DESIGNED BY: GDU  
 CHECKED BY: GDU  
 DRAWN BY: ERK  
 ERK REVISIONS  
 REVIEWED BY: STK  
 STK STRUCTURE FILE NUMBER: 7705493  
 DATE: 6/14/2018

**REINFORCING STEEL LIST**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
**PID No. 96670**

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MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS			
	PHASE 1	PHASE 2	PHASE 3	TOTAL		PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	INC.
SLAB (CONTINUED)														
S409	94		86	180	12'-3"	770		704	1474	2	9'-2"	7"	2'-8"	
S410	9		18	27	10'-10"	66		131	197	2	8'-6"	7"	2'-0"	
S411	7		17	24	10'-8"	50		122	172	2	8'-5"	7"	1'-11"	
S412	172	188	445	805	30'-0"	3447	3768	8918	16133	STR				
S413	43	47	109	199	22'-8"	652	712	1651	3015	STR				
S414	13		8	21	10'-4"	90		56	146	2	8'-3"	7"	1'-9"	
S415	8		9	17	10'-6"	57		64	121	2	8'-4"	7"	1'-10"	
S416		7	9	16	8'-4"		39	51	90	2	7'-3"	7"	9"	
S417		9	9	18	8'-3"		50	50	100	2	7'-2"	7"	8"	
S418		11	9	20	8'-0"		59	49	108	2	7'-1"	7"	7"	
S419		20	9	29	7'-10"		105	48	153	2	7'-0"	7"	6"	
S420		20	9	29	7'-8"		103	47	150	2	6'-11"	7"	5"	
S421		24	9	33	7'-6"		121	46	167	2	6'-10"	7"	4"	
S422		26	8	34	7'-4"		128	40	168	2	6'-9"	7"	3"	
S423		32	9	41	7'-3"		155	44	199	2	6'-8"	7"	2"	
S424		42	9	51	7'-0"		197	43	240	2	6'-7"	7"	1"	
S425		83	13	96	7'-0"		389	61	450	1	6'-6"	7"		
S426			1	1	22'-2"			15	15	STR				
S427			1	1	11'-6"			8	8	STR				
S428			1	1	27'-3"			19	19	STR				
S429			1	1	24'-7"			17	17	STR				
S430			9	9	8'-6"			52	52	2	7'-4"	7"	10"	
S431			9	9	8'-9"			53	53	2	7'-5"	7"	11"	
S432			8	8	8'-10"			48	48	2	7'-6"	7"	1'-0"	
S433			9	9	9'-0"			55	55	2	7'-7"	7"	1'-1"	
S434			9	9	9'-3"			56	56	2	7'-8"	7"	1'-2"	
S435			9	9	9'-4"			57	57	2	7'-9"	7"	1'-3"	
S436			9	9	9'-6"			58	58	2	7'-10"	7"	1'-4"	
S437			9	9	9'-9"			59	59	2	7'-11"	7"	1'-5"	
S438			9	9	9'-10"			60	60	2	8'-0"	7"	1'-6"	
S439			9	9	10'-0"			61	61	2	8'-1"	7"	1'-7"	
S501	203		238	441	30'-7"	6476		7592	14068	16	30'-0"			
S502			388	388	21'-10"			8836	8836	STR				
S503			2 SERIES OF 61	2 SERIES OF 61	4'-1" TO 29'-11"			2164	2164	STR				5" (+)
S504			2 SERIES OF 40	2 SERIES OF 40	3'-6" TO 20'-2"			988	988	STR				5" (+)
S505	10	10		20	3'-9"	40	40		80	STR				
S506		1 SERIES OF 76		1 SERIES OF 76	4'-3" TO 37'-6"		1659		1659	16	3'-8" TO 36'-11"			5 1/2" (-)
S507		2 SERIES OF 65		2 SERIES OF 65	5'-7" TO 35'-2"		2763		2763	STR				5 1/2" (+)
S508	371	180	727	1278	30'-0"	11609	5633	22748	39990	STR				
S509	2 SERIES OF 69			2 SERIES OF 69	5'-3" TO 35'-8"	2945			2945	STR				5 1/2" (-)
S510	1 SERIES OF 78			1 SERIES OF 78	4'-3" TO 39'-7"	1784			1784	16	3'-8" TO 39'-0"			5 1/2" (+)
S511			2 SERIES OF 44	2 SERIES OF 44	3'-6" TO 21'-6"		1148		1148	STR				5" (+)
S512	42	45	100	187	25'-3"	1107	1186	2634	4927	STR				
S513	406			406	12'-8"	5364			5364	STR				
S514			1 SERIES OF 64	1 SERIES OF 64	4'-1" TO 30'-6"			1158	1158	16	3'-6" TO 29'-11"			5" (+)
S515	1 SERIES OF 78			1 SERIES OF 78	3'-8" TO 39'-0"	1736			1736	STR				5 1/2" (+)
S516		1 SERIES OF 76		1 SERIES OF 76	3'-8" TO 36'-11"		1609		1609	STR				5 1/2" (-)
S517			20	20	3'-4"			70	70	STR				
S518			1 SERIES OF 64	1 SERIES OF 64	3'-6" TO 29'-11"			1116	1116	STR				5" (+)
S519		206		206	37'-8"		8093		8093	16	37'-1"			
S520		206		206	37'-1"		7968		7968	STR				

**NOTE**  
SEE SHEET **78/78** FOR BENDING DIAGRAM AND NOTES.



DESIGNED BY: ERK  
CHECKED BY: GDU  
DRAWN BY: ERK  
ERK REVISOR  
REVIEWED BY: STK  
STK  
DATE: 6/14/2018  
STRUCTURE FILE NUMBER: 7705493

**REINFORCING STEEL LIST**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
PID No. 96670

75 / 78

639  
672

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MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS			
	PHASE 1	PHASE 2	PHASE 3	TOTAL		PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	INC.
SLAB (CONTINUED)														
S521			1	1	23'-11"			25	25	STR				
S522			1	1	12'-8"			14	14	STR				
S523			1	1	27'-4"			29	29	STR				
S524			1	1	26'-11"			29	29	STR				
S525			1 SERIES OF 81	1 SERIES OF 81	4'-4" TO 39'-3"			1845	1845	16	3'-9" TO 38'-8"			5" (+)
S526			1 SERIES OF 81	1 SERIES OF 81	3'-9" TO 38'-8"			1792	1792	STR				5" (+)
S527			215	215	39'-5"			8839	8839	16	38'-10"			
S528			215	215	38'-10"			8709	8709	STR				
S529			2 SERIES OF 79	2 SERIES OF 79	4'-5" TO 36'-9"			3393	3393	STR				5" (-)
SUB-TOTAL									160145					

MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS				
	PHASE 1	PHASE 2	PHASE 3	TOTAL		PHASE 1	PHASE 2	PHASE 3	TOTAL		A	B	C	D	R
RAILING															
R501	140		144	284	7'-4"	1071		1102	2173	23	11"	3'-3"	3'-0"		2 3/4"
R502	16	48	64	128	14'-6"	242	726	968	1936	STR					
R503	16	16	32	64	30'-0"	501	501	1002	2004	STR					
R504	2			2	10'-4"	22			22	STR					
R505	4			4	18'-9"	79			79	STR					
R506			2	2	14'-1"			30	30	STR					
R507			4	4	22'-7"			95	95	STR					
R508		145	145	290	13'-1"		1979	1979	3958	35	8"	1'-5"	1'-0"	4'-7"	3"
R509		6		6	11'-0"		69		69	STR					
R510		4		4	19'-5"		82		82	STR					
R511			6	6	11'-2"			70	70	STR					
R512			4	4	19'-8"			83	83	STR					
R601	140		144	284	3'-3"	684		703	1387	28	1'-7"	1'-0"			
R602	140		144	284	2'-5"	509		523	1032	1	1'-0"	1'-7"			
R603	8	8	16	32	14'-6"	175	175	349	699	STR					
R604	1			1	10'-4"	16			16	STR					
R605			1	1	14'-0"			22	22	STR					
R606		1		1	11'-0"		17		17	STR					
R607			1	1	11'-2"			17	17	STR					
SUB-TOTAL									13791						

**NOTE**  
SEE SHEET 78/78 FOR BENDING DIAGRAM AND NOTES.

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MARK	NUMBER						LENGTH	WEIGHT				TYPE	DIMENSIONS					
	R.A.			F.A.				TOTAL	PHASE 1	PHASE 2	PHASE 3		TOTAL	A	B	C		
	PHASE 1	PHASE 2	PHASE 3	PHASE 1	PHASE 2	PHASE 3												
DIAPHRAGM GUIDES																		
DG601	5		5	5		5	20	15'-11"	240		240	480	3	3'-10"	3'-8 1/2"			
DG801	7		7	7		7	28	13'-8"	511		511	1022	5	2'-8"	3'-7"	2'-4"		
SUB-TOTAL															1502			

MARK	NUMBER						LENGTH	WEIGHT				TYPE	DIMENSIONS					
	R.A.			F.A.				TOTAL	PHASE 1	PHASE 2	PHASE 3		TOTAL	A	B	C		
	PHASE 1	PHASE 2	PHASE 3	PHASE 1	PHASE 2	PHASE 3												
DIAPHRAGM																		
D401	2		2	2		2	8	3'-11"	11		11	22	STR					
D501	34	35	79	33	37	82	300	8'-1"	565	608	1358	2531	2	2'-7"	3'-2"	2'-7"		
D502	62	70	152	60	74	158	576	13'-2"	1676	1978	4258	7912	2	4'-9"	3'-11"	4'-9"		
D503	6		6	6		6	24	10'-0"	126		126	252	2	3'-2"	3'-11"	3'-2"		
D504	6		6	6		6	24	4'-2"	27	27	53	107	19	2'-9"	1'-0"	1'-0"		
D505		6	6	6		6	24	8'-10"	56	56	111	223	1	3'-8"	5'-4"			
D801	24	25	57	23	25	59	213	6'-2"	774	824	1910	3508	18	4'-0"	1'-0"	1'-0"		
D802			40	12	18	30	100	30'-0"	962	1442	5607	8011	STR					
D803	12						12	26'-6"	850			850	STR					
D804	1						1	22'-6"	61			61	STR					
D805	1						1	20'-4"	55			55	STR					
D806	3						3	24'-0"	193			193	1	22'-6"	1'-8"			
D807	1						1	21'-10"	59			59	1	1'-8"	20'-4'			
D808	8		8	8		8	32	6'-10"	292		292	584	18	4'-1"	1'-5"	1'-5"		
D809%	12	18	12			18	60	30'-0"	962	1442	2403	4807	STR					
D810			14				14	25'-5"			951	951	STR					
D811%	2						2	24'-2"	130			130	STR					
D812%	4						4	25'-8"	275			275	1	24'-2"	1'-8"			
D813		18					18	27'-7"		1326		1326	STR					
D814			2				2	17'-9"			95	95	STR					
D815			4				4	14'-9"			158	158	1	13'-3"	1'-8"			
D816%			4				4	9'-9"			105	105	1	8'-3"	1'-8"			
D817%			2				2	8'-3"			45	45	STR					
D818%			18				18	21'-7"			1038	1038	STR					
D819						18	18	22'-8"			1090	1090	STR					
D820%						12	12	27'-10"			892	892	STR					
D821%						2	2	10'-7"			57	57	STR					
D822%						4	4	12'-0"			129	129	1	10'-7"	1'-8"			
D823						2	2	37'-3"			199	199	STR					
D824%						18	18	29'-11"		1438		1438	STR					
D825						4	4	38'-9"			414	414	1	37'-3"	1'-8"			
D826%				12			12	25'-2"	807			807	STR					
D827				4			4	25'-0"	267			267	1	23'-6"	1'-8"			
D828%				4			4	23'-4"	250			250	1	21'-10"	1'-8"			
D829				2			2	23'-6"	126			126	STR					
D830%				2			2	21'-10"	117			117	STR					
SUB-TOTAL															39084			

MECHANICAL CONNECTORS		
LOCATION	BAR SIZE	TOTAL
DIAPHRAGM	8	72

**LEGEND**

% - BARS TO UTILIZE A MECHANICAL CONNECTOR BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

**NOTE**

SEE SHEET 78/78 FOR BENDING DIAGRAM AND NOTES.



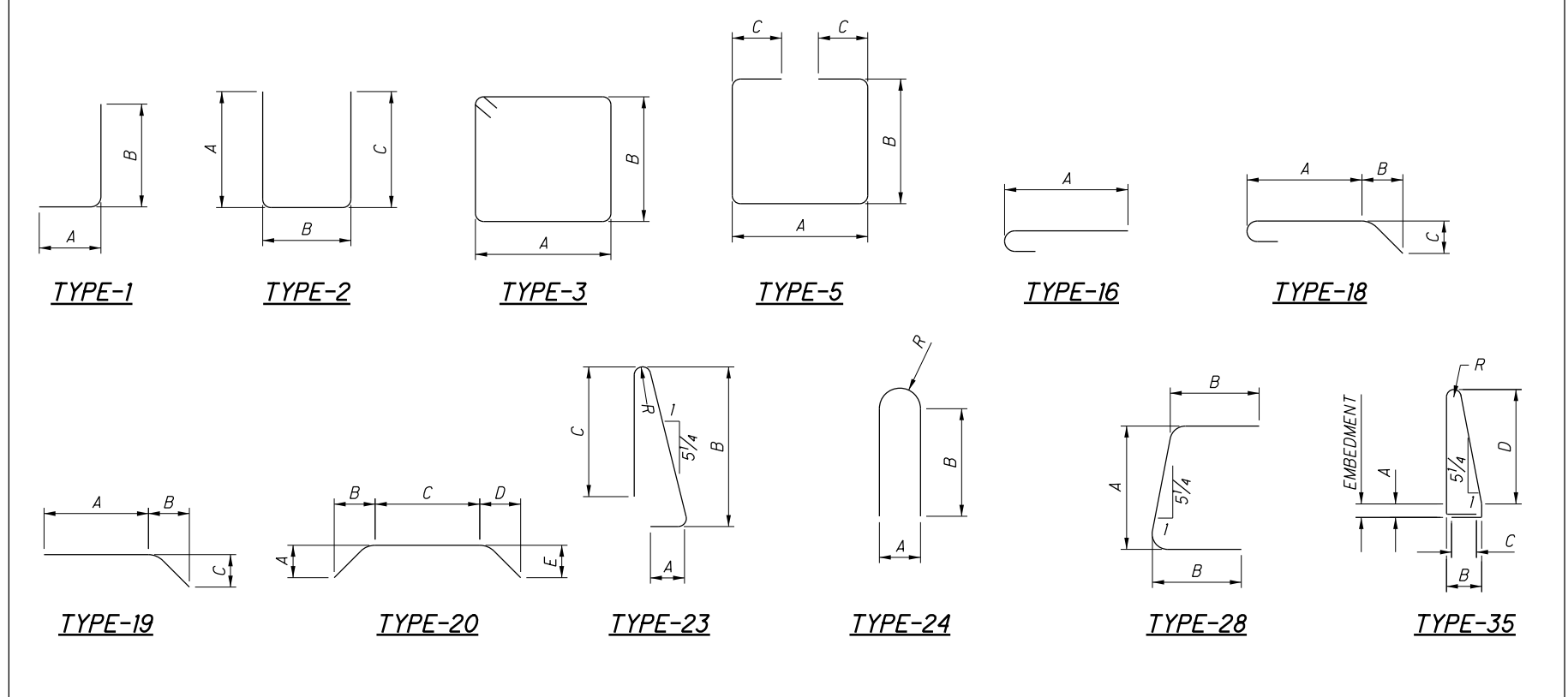
DESIGNED BY: GDU  
 CHECKED BY: GDU  
 DRAWN BY: ERK  
 REVISIONS: ERK  
 REVIEWED BY: STK  
 DATE: 6/14/2018  
 STRUCTURE FILE NUMBER: 7705493

**REINFORCING STEEL LIST**  
 BRIDGE NO. SUM-76-0580  
 OVER S.R. 619 (WOOSTER ROAD)

SUM-76-5.53  
 PID No. 96670



**BENDING DIAGRAM**



**NOTES**

1. THE BAR NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
2. ALL REINFORCING STEEL IS TO BE EPOXY COATED.
3. MECHANICAL CONNECTORS TO BE INCLUDED FOR PAYMENT UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL.
4. APPROACH SLAB REINFORCING STEEL SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 526, REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN.
5. DIAPHRAGM GUIDE REINFORCING STEEL SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 511, SEMI-INTEGRAL DIAPHRAGM GUIDE.

DESIGNED	ERK	CHECKED	GDJ
DRAWN	ERK	REVISED	
REVIEWED	STK	STRUCTURE FILE NUMBER	7705493
DATE	6/14/2018		

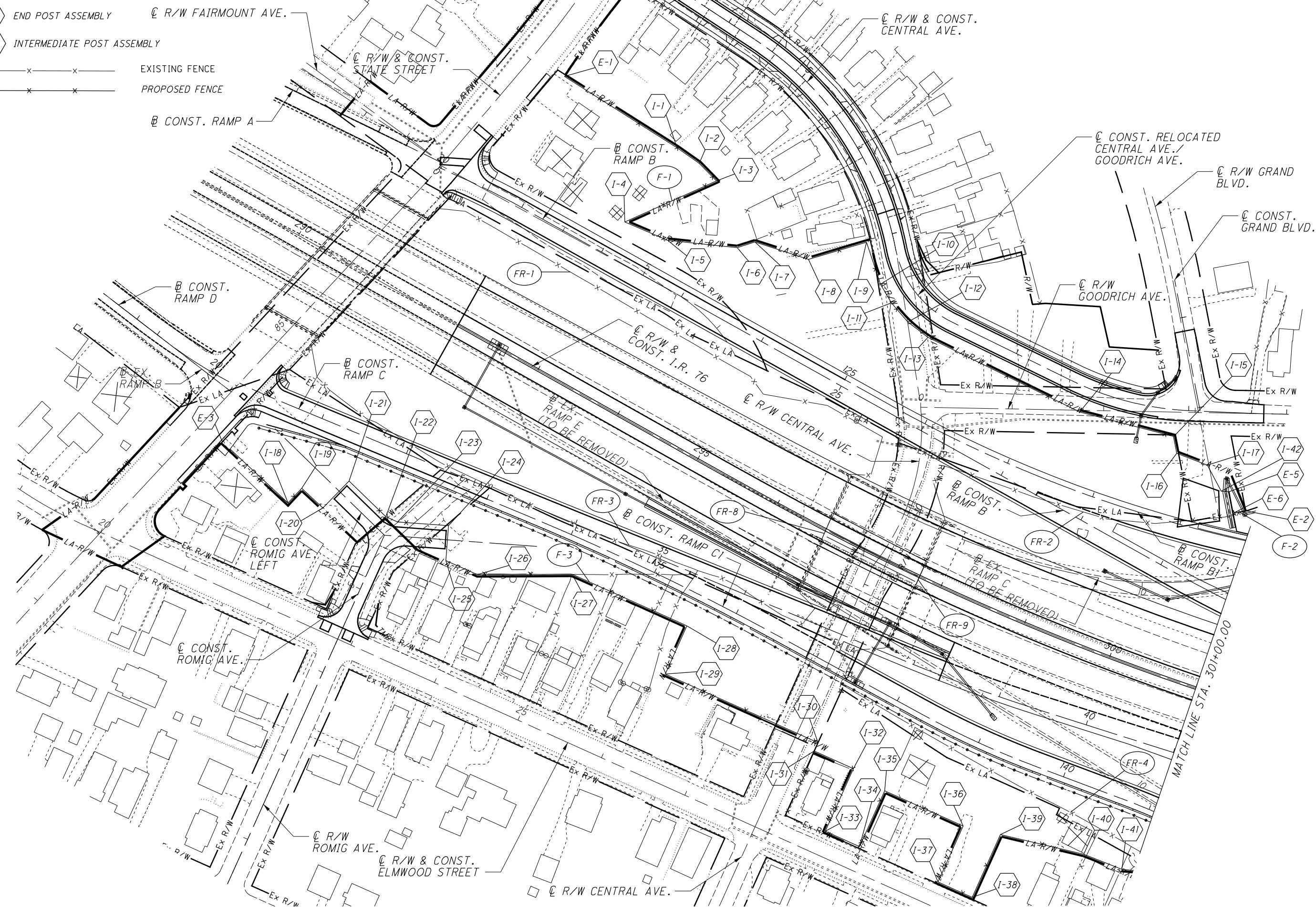
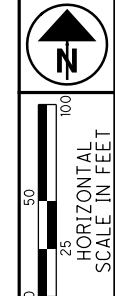
**REINFORCING STEEL LIST**  
BRIDGE NO. SUM-76-0580  
OVER S.R. 619 (WOOSTER ROAD)

**SUM-76-5.53**  
PID No. 96670

FENCE LEGEND

- E-# END POST ASSEMBLY
- I-# INTERMEDIATE POST ASSEMBLY
- x—x— EXISTING FENCE
- x—x— PROPOSED FENCE

FOR ESTIMATED QUANTITIES, SEE SHEETS 168 - 181  
FOR FENCE LEGEND TABLE, SEE SHEET 645

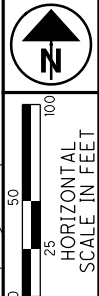


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FENCE PLAN

SUM-76-5.53

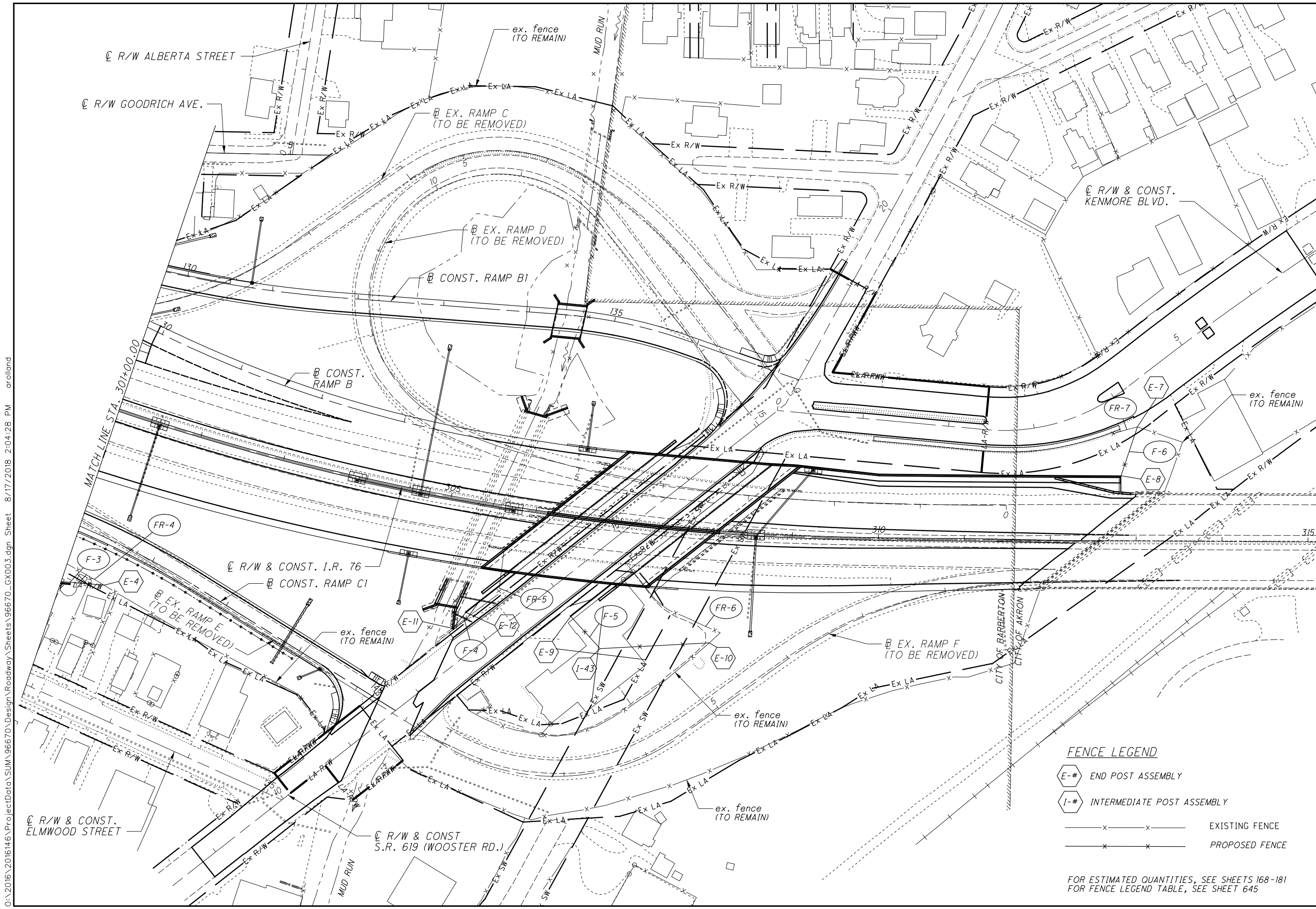
643  
672



FENCE PLAN

SUM-76-5.53

644  
672



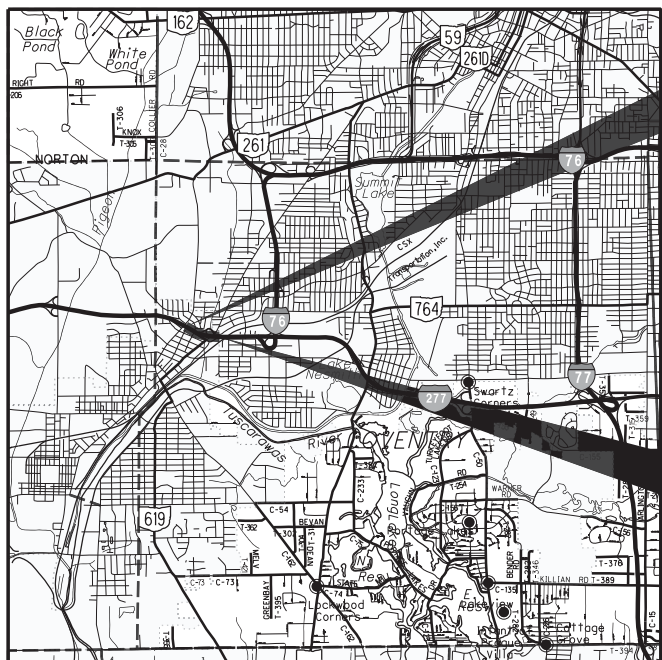
FENCE LEGEND

- END POST ASSEMBLY
- INTERMEDIATE POST ASSEMBLY
- EXISTING FENCE
- PROPOSED FENCE

FOR ESTIMATED QUANTITIES, SEE SHEETS 168-181  
FOR FENCE LEGEND TABLE, SEE SHEET 645

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FENCE LEGEND TABLE			
I-1 STA. 22+16.21 139.82' LT RAMP B	I-16 STA. 128+74.50 73.65' LT RAMP B1	I-31 STA. 137+46.63 91.63' RT RAMP C1	E-1 STA. 20+75.89 148.28' LT RAMP B
I-2 STA. 22+45.82 136.77' LT RAMP B	I-17 STA. 129+12.16 70.45' LT RAMP B1	I-32 STA. 137+93.49 88.05' RT RAMP C1	E-2 STA. 129+66.68 32.03' LT RAMP B1 MEET EXISTING FENCE
I-3 STA. 22+71.67 129.17' LT RAMP B	I-18 STA. 31+01.17 99.44' RT RAMP C	I-33 STA. 137+99.20 162.83' RT RAMP C1	E-3 STA. 30+12.54 66.02' RT RAMP C
I-4 STA. 22+06.09 41.14' LT RAMP B	I-19 STA. 31+08.82 78.81' RT RAMP C	I-34 STA. 138+39.06 159.73' RT RAMP C1	E-4 STA. 141+61+62 50.79' RT RAMP C1 MEET EXISTING FENCE
I-5 STA. 22+56.75 46.55' LT RAMP B	I-20 STA. 31+38.45 89.81' RT RAMP C	I-35 STA. 138+34.80 92.90' RT RAMP C1	E-5 STA. 129+43.36 48.00' LT RAMP B1
I-6 STA. 23+27.06 76.66' LT RAMP B	I-21 STA. 31+53.60 51.61' RT RAMP C	I-36 STA. 139+20.57 90.14' RT RAMP C1	E-6 STA. 129+53.99 26.46' LT RAMP B1
I-7 STA. 23+40.88 91.42' LT RAMP B	I-22 STA. 32+05.56 72.22' RT RAMP C	I-37 STA. 139+19.68 157.13' RT RAMP C1	E-7 STA. 313+00.68 132.62' LT I.R. 76 MEET EXISTING FENCE
I-8 STA. 24+01.25 103.35' LT RAMP B	I-23 STA. 32+19.58 72.62' RT RAMP C	I-38 STA. 139+54.85 158.49' RT RAMP C1	E-8 STA. 312+82.05 75.63' LT I.R. 76
I-9 STA. 24+47.36 150.76' LT RAMP B	I-24 STA. 32+72.63 55.01' RT RAMP C	I-39 STA. 139+58.41 83.28' RT RAMP C1	E-9 STA. 306+55.82 115.09' RT I.R. 76
I-10 STA. 24+83.06 118.14' LT RAMP B	I-25 STA. 32+84.70 91.36' RT RAMP C	I-40 STA. 140+50.42 71.42' RT RAMP C1	E-10 STA. 308+12.59 129.36' RT I.R. 76
I-11 STA. 125+03.41 98.16' LT RAMP B1	I-26 STA. 133+22.28 80.26' RT RAMP C1	I-41 STA. 140+97.60 71.82' RT RAMP C1	E-11 STA. 12+77.44 34.06' LT S.R. 619
I-12 STA. 125+29.39 88.65' LT RAMP B1	I-27 STA. 134+18.55 39.28' RT RAMP C1	I-42 STA. 129+34.93 46.60' LT RAMP B1	E-12 STA. 13+01.02 39.31' LT S.R. 619
I-13 STA. 125+56.74 84.73' LT RAMP B1	I-28 STA. 135+57.81 36.56' RT RAMP C1	I-43 STA. 306+92.69 148.08' RT I.R. 76	
I-14 STA. 127+52.87 81.91' LT RAMP B1	I-29 STA. 135+60.44 94.24' RT RAMP C1		
I-15 STA. 128+65.19 90.33' LT RAMP B1	I-30 STA. 137+45.87 81.65' RT RAMP C1		



**LOCATION MAP**

LATITUDE: N41°02'10" LONGITUDE: W81°34'50"

SCALE IN MILES



**UTILITIES**

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

**AKRON SEWER MAINTENANCE**  
 ATTN: JOE HARBESON  
 1055 HOME AVENUE  
 AKRON, OH 44310  
 (330) 375-2666  
 jharbenson@akronohio.gov

**OHIO EDISON DISTRIBUTION**  
 ATTN: DAVID MILLER  
 1910 WEST MARKET STREET, BLDG. 1  
 AKRON, OH 44313  
 (330) 436-4055  
 millerdl@firstenergycorp.com

**CITY OF AKRON TRAFFIC DIVISION**  
 ATTN: DAVID GASPER  
 1420 TRIPPLETT BLVD, BUILDING 2  
 AKRON, OH 44306  
 (330) 375-2851  
 dgasper@akronohio.gov

**OHIO EDISON TRANSMISSION**  
 ATTN: BRYAN HUNSCH  
 1910 WEST MARKET STREET, BLDG. 1  
 AKRON, OH 44313  
 (330) 384-5180  
 bhunsch@firstenergycorp.com

**AKRON WATER DISTRIBUTION**  
 ATTN: TONY PUGLIA  
 1460 TRIPPLETT BLVD.  
 AKRON, OH 44306  
 (330) 375-2420  
 tpuglia@akronohio.gov

**SPRINT COMMUNICATIONS**  
 ATTN: JOE THOMAS  
 11370 ENTERPRISE DRIVE  
 SHARONVILLE, OH 45241  
 (440) 447-6163  
 joseph.j.thomas@sprint.com

**AT&T OHIO**  
 ATTN: JASON HONEYCUTT  
 50 WEST BOWERY STREET, 6TH FLOOR  
 AKRON, OH 44308  
 (330) 384-9643  
 jh2817@att.com

**TIME WARNER CABLE**  
 ATTN: DREW FETTERMAN  
 530 SOUTH MAIN STREET, SUITE 1751  
 AKRON, OH 44311  
 (330) 633-9203 ext. 3305553087  
 drew.fetterman@charter.com

**METROPOLITAN COMMUNICATIONS GROUP (AT&T TRANSMISSION)**  
 ATTN: BILL HARKNESS  
 155 COMMERCE PARK DRIVE, SUITE 1  
 WESTERVILLE, OH 43082  
 (770) 316-5309  
 bill.harkness@mcgfiber.com

**TIME WARNER CABLE**  
 ATTN: LISA LAW  
 750 CANYON DRIVE  
 COPPELL, TX 75019  
 (800) 362-2767  
 west-engineering-relo@twcable.com

**CITY OF BARBERTON/WATER**  
 ATTN: DENNY WEAVER  
 576 WEST PARK AVENUE  
 BARBERTON, OH 44203  
 (330) 848-6713  
 dweaver@cityofbarberton.com

**MCI WORLDCOM/VERIZON BUSINESS**  
 ATTN: AL GUEST  
 120 RAVINE STREET  
 AKRON, OH 44303  
 (330) 253-8267  
 allan.guest@verizon.com

**CITY OF BARBERTON - STORMWATER**  
 ATTN: CAROLINE KNORR  
 576 WEST PARK AVENUE  
 BARBERTON, OH 44203  
 (330) 861-7298  
 cknorr@cityofbarberton.com

**ALFRED BENESCH & COMPANY**  
 ATTN: LARRY J. SHAW, P.E.  
 201 N. ILLINOIS ST. 16TH FLOOR  
 SOUTH TOWER  
 INDIANAPOLIS, IN 46204  
 (317) 610-3241  
 lshaw@benesch.com

**DOMINION EAST OHIO**  
 ATTN: BRYAN D. DAYTON  
 320 SPRINGSIDE DRIVE, SUITE 320  
 AKRON, OH 44333  
 (330) 664-2409  
 relocation@dom.com

**ODOT DISTRICT 4**  
 ATTN: DAVID KONEVAL  
 2088 SOUTH ARLINGTON ROAD  
 AKRON, OH 44306  
 (330) 786-3146  
 dave.koneval@dot.ohio.gov

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY USING A SUBSURFACE UTILITY ENGINEERING COMPANY (SUEI). IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT STEVE JONES, DISTRICT UTILITY COORDINATOR 330-786-4818, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED.

# RIGHT OF WAY LEGEND SHEET SUM-76-5.53

SUMMIT COUNTY  
CITY OF BARBERTON  
CITY OF AKRON

**INDEX OF SHEETS**

LEGEND SHEET	1
CENTERLINE PLAT	2-3
PROPERTY MAP	4-5
SUMMARY OF ADDITIONAL R/W	6-11
R/W TOPOGRAPHY SHEETS	12-26 (EVENS)
R/W BOUNDARY SHEETS	13-27 (ODDS)

**CONVENTIONAL SYMBOLS**

County Line	-----	Ditch / Creek (Ex)	-----
Township Line	-----	Ditch / Creek (Pr)	-----
Section Line	-----	Tree Line (Ex)	-----
Corporation Line	-----	Ownership Hook Symbol	-----
Fence Line (Ex)	-----	Property Line Symbol	-----
Center Line	-----	Break Line Symbol	-----
Right of Way (Ex)	-----	Tree (Pr)	-----
Right of Way (Pr)	-----	Tree (Remove)	-----
Standard Highway Ease.(Ex)	-----	Evergreen (Ex)	-----
Temporary Right of Way	-----	Evergreen (Remove)	-----
Channel Ease. (Pr)	-----	Wetland (Pr)	-----
Utility Ease. (Ex)	-----	Post (Ex)	-----
Railroad	-----	Light (Ex)	-----
Guardrail (Ex)	-----	Fire Hydrant (Ex)	-----
Construction Limits	-----	Water Valve (Ex)	-----
Edge of Pavement (Ex)	-----	Telephone Pole (Ex)	-----
Edge of Pavement (Pr)	-----	Light Pole (Ex)	-----
Edge of Shoulder (Ex)	-----		
Edge of Shoulder (Pr)	-----		

**PROJECT DESCRIPTION**

PROJECT CONSISTS OF THE ADDITION OF A THIRD LANE IN EACH DIRECTION OF I.R. 76 AND THE RECONSTRUCTION AND RECONFIGURATION OF THE I.R. 76 INTERCHANGE ACCESSING WOOSTER ROAD/EAST AVENUE/STATE STREET IN SUMMIT COUNTY. PROJECT ALSO INCLUDES THE REMOVAL OF THE BRIDGE OVER CENTRAL AVENUE, CONSTRUCTION OF A NEW BRIDGE OVER WOOSTER ROAD, NEW CULVERT ON MUD RUN UNDER ONE OF THE NEW RAMPS, AND EXTENSION OF THE CULVERT UNDER I.R. 76.

**PLANS PREPARED BY**



R/W DESIGNER: NATHAN L. CONNER  
 R/W REVIEWER: TRAVIS D. McCARTY, P.S.  
 FIELD REVIEWER: JUD DANIELS  
 PRELIMINARY FIELD REVIEW DATE: \_\_\_\_\_  
 TRACINGS FIELD REVIEW DATE: 3/3/2017  
 OWNERSHIP UPDATED BY: NATHAN L. CONNER  
 DATE COMPLETED: 3/7/2017  
 PLAN COMPLETION DATE: 3/15/2017

TYPES OF TITLE LEGEND:  
 WL = FEE SIMPLE WITH LIMITATION OF ACCESS  
 WD = WARRANTY DEED  
 T = TEMPORARY EASEMENT  
 PRW = PROPERTY RIGHTS

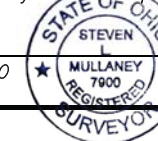
**STRUCTURE KEY**

	RESIDENTIAL
	COMMERCIAL
	OUT-BUILDING

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

I, Steven Mullaney, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation in August, 2016. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System, North Zone on NAD 83 (2011) datum. The Project Coordinates (US Survey feet) are relative to State Plane Grid Coordinates (US Survey feet) by a Project Adjustment Factor multiplier of 0.999989638. As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

*Steven Mullaney*  
 Steven Mullaney, Professional Land Surveyor No. 7900



03/13/17  
Date

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**MONUMENT LEGEND**

- ☐ EXISTING R/W MONUMENT BOX
- ▣ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⚡ RAILROAD SPIKE FOUND
- ⚡ RAILROAD SPIKE SET
- I.R.F. 5/8" REBAR FOUND
- I.R.F. 5/8" REBAR FOUND W/ ID CAP
- I.R.S. 5/8" REBAR SET W/ ID CAP "GPD"
- ⊙ I.P.F. IRON PIPE FOUND
- ⊙ I.P.S. IRON PIPE SET
- ⊙ P.K.F. P.K. NAIL FOUND
- ⊙ P.K.S. P.K. NAIL SET

**SUM-76-5.62**

SUMMIT COUNTY  
CITY OF BARBERTON  
CITY OF AKRON

**BASIS FOR BEARINGS:**

BEARINGS ARE BASED ON GRID NORTH, OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD83 (2011).

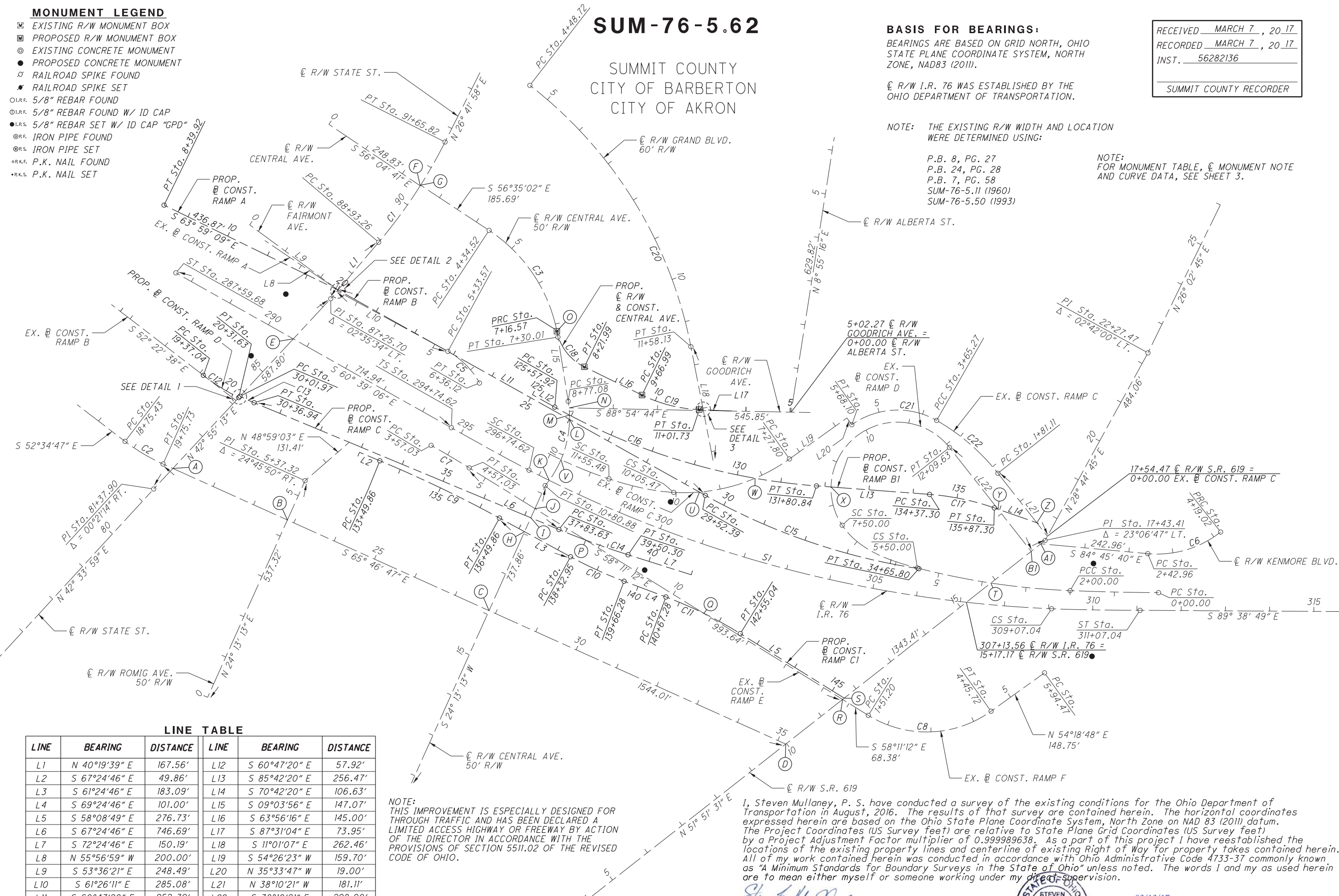
☐ R/W I.R. 76 WAS ESTABLISHED BY THE OHIO DEPARTMENT OF TRANSPORTATION.

RECEIVED MARCH 7, 2017  
RECORDED MARCH 7, 2017  
INST. 56282136  
SUMMIT COUNTY RECORDER

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING:

- P.B. 8, PG. 27
- P.B. 24, PG. 28
- P.B. 7, PG. 58
- SUM-76-5.11 (1960)
- SUM-76-5.50 (1993)

NOTE: FOR MONUMENT TABLE, ☐ MONUMENT NOTE AND CURVE DATA, SEE SHEET 3.



**LINE TABLE**

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	N 40°19'39" E	167.56'	L12	S 60°47'20" E	57.92'
L2	S 67°24'46" E	49.86'	L13	S 85°42'20" E	256.47'
L3	S 61°24'46" E	183.09'	L14	S 70°42'20" E	106.63'
L4	S 69°24'46" E	101.00'	L15	S 09°03'56" E	147.07'
L5	S 58°08'49" E	276.73'	L16	S 63°56'16" E	145.00'
L6	S 67°24'46" E	746.69'	L17	S 87°31'04" E	73.95'
L7	S 72°24'46" E	150.19'	L18	S 11°01'07" E	262.46'
L8	N 55°56'59" W	200.00'	L19	S 54°26'23" W	159.70'
L9	S 53°36'21" E	248.49'	L20	N 35°33'47" W	19.00'
L10	S 61°26'11" E	285.08'	L21	N 38°10'21" W	181.11'
L11	S 60°47'20" E	952.39'	L22	S 38°10'21" E	298.90'

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

I, Steven Mullaney, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation in August, 2016. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System, North Zone on NAD 83 (2011) datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (US Survey Feet) by a Project Adjustment Factor multiplier of 0.999989638. As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

*Steven Mullaney*  
Steven Mullaney, Professional Land Surveyor No. 7900

03/13/17  
Date



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CENTERLINE PLAT

SUM-76-5.53

2 / 27

647  
672

R/W DESIGNER: NLC  
R/W REVIEWER: TDM

PID NO. 96670

**ALIGNMENT CURVE DATA**

CURVE	P.I. STATION	ALIGNMENT	DELTA	DEGREE	RADIUS	TANGENT	CURVE LENGTH	CHORD BEARING	CHORD LENGTH
C1	90+30.19	℄ R/W STATE ST.	13°37'47"	05°00'00"	1145.92'	136.93'	272.56'	N 38°22'09" W	271.92'
C2	19+25.80	℄ R/W ELMWOOD ST.	13°12'00"	13°09'37"	435.37'	50.37'	100.30'	S 59°10'47" E	100.08'
C3	5+91.36	℄ R/W CENTRAL AVE.	47°31'00"	16°04'51"	356.30'	156.84'	295.49'	S 32°49'26" E	295.49'
C4	9+85.59	℄ R/W CENTRAL AVE.	48°41'26"	23°53'25"	239.83'	108.52'	203.81'	S 15°16'47" W	197.73'
C5	5+86.30	℄ R/W CENTRAL AVE.	32°54'04"	32°05'03"	178.58'	52.73'	102.55'	S 44°59'07" E	101.14'
C6	3+35.49	℄ R/W KENMORE BLVD.	43°33'00"	24°44'13"	231.62'	92.52'	176.05'	N 73°27'50" E	171.85'
C7	4+07.04	EX. ℄ CONST. RAMP E	02°30'00"	02°30'00"	2291.83'	50.01'	100.00'	S 59°26'12" E	99.99'
C8	3+18.24	EX. ℄ CONST. RAMP F	67°30'00"	22°55'06"	250.00'	167.04'	294.52'	N 88°03'48" E	99.99'
C9	135+00.00	PROP. ℄ CONST. RAMP C1	06°00'00"	02°00'00"	2864.79'	150.14'	300.00'	S 64°24'46" E	299.86'
C10	138+99.73	PROP. ℄ CONST. RAMP C1	08°00'00"	06°00'00"	954.93'	66.78'	133.33'	S 65°24'46" E	133.23'
C11	141+61.47	PROP. ℄ CONST. RAMP C1	11°15'57"	06°00'00"	954.93'	94.19'	187.76'	S 63°46'48" E	133.23'
C12	19+84.48	PROP. ℄ CONST. RAMP D	10°50'30"	11°27'33"	500.00'	47.45'	94.61'	S 57°49'06" E	133.23'
C13	30+19.46	PROP. ℄ CONST. RAMP C	04°02'22"	11°33'06"	496.00'	17.49'	34.97'	S 65°23'35" E	34.96'
C14	38+67.02	PROP. ℄ CONST. RAMP C	05°00'00"	03°00'00"	1909.86'	83.39'	166.67'	S 69°54'46" E	166.61'
C15	32+11.88	PROP. ℄ CONST. RAMP B	20°32'12"	04°00'00"	1432.39'	259.49'	513.41'	S 71°03'26" E	510.67'
C16	128+74.38	PROP. ℄ CONST. RAMP B1	24°55'00"	04°00'00"	1432.39'	316.46'	622.92'	S 73°14'50" E	618.02'
C17	135+12.74	PROP. ℄ CONST. RAMP B1	15°00'00"	10°00'00"	572.96'	75.43'	150.00'	S 78°12'20" E	149.57'
C18	7+73.34	PROP. ℄ R/W & CONST. CENTRAL AVE.	52°42'40"	50°00'00"	114.59'	56.77'	105.42'	S 37°34'56" E	101.74'
C19	10+35.33	PROP. ℄ R/W & CONST. CENTRAL AVE.	23°34'48"	17°30'00"	327.40'	68.34'	134.74'	S 75°43'40" E	133.79'
C20	8+19.58	℄ R/W GRAND AVE.	41°15'00"	05°48'53"	985.37'	370.87'	709.42'	S 31°38'37" E	694.19'
C21	4+79.30	EX. ℄ CONST. RAMP C	65°17'19"	32°11'19"	178.00'	114.03'	202.83'	S 87°05'02" W	192.03'
C22	2+74.35	EX. ℄ CONST. RAMP C	22°05'57"	12°00'00"	477.46'	93.24'	184.16'	N 49°13'20" W	183.02'

SI  
 ℄ R/W I.R. 76  
 P.I. Sta. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $D_c = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $L_s = 200.00'$   
 $\theta_s = 2^\circ 01' 27''$   
 $LT = 133.34'$   
 $ST = 66.67'$   
 $x = 199.98'$   
 $y = 2.36'$   
 $k = 100.00'$   
 $p = 0.59'$   
 $\Delta_c = 24^\circ 56' 49''$  (LT)  
 $L_c = 1,232.42'$   
 $T_s = 832.04'$   
 $E_s = 93.70'$   
 $C = 1,222.70'$   
 $C1 = C2 = 199.99'$   
 $C.B.1 = S 61^\circ 19' 35'' E$   
 $C.B. = S 75^\circ 08' 58'' E$   
 $C.B.2 = N 88^\circ 58' 20'' W$

- (A) 20+00.00 ℄ R/W ELMWOOD ST. = 82+01.41, ℄ R/W STATE ST.
- (B) 22+84.09 ℄ R/W ELMWOOD ST. = 4+39.92 ℄ R/W ROMIG AVE.
- (C) 27+84.09 ℄ R/W ELMWOOD ST. = 14+90.88 ℄ R/W CENTRAL AVE.
- (D) 35+19.74 ℄ R/W ELMWOOD AVE. = 9+97.81 ℄ R/W S.R. 619
- (E) 290+64.47 ℄ R/W I.R. 76 = 86+01.56 ℄ R/W STATE ST.
- (F) 2+48.83 ℄ R/W CENTRAL AVE. = 90+51.92 ℄ R/W STATE ST.
- (G) 2+48.83 ℄ R/W CENTRAL AVE. = 90+53.48 ℄ R/W STATE ST.
- (H) 11+95.08 ℄ R/W CENTRAL AVE. = 137+14.56 PROP. ℄ CONST. C1
- (I) 11+60.61 ℄ R/W CENTRAL AVE. = 37+14.84 PROP. ℄ CONST. C
- (J) 11+37.79 ℄ R/W CENTRAL AVE. = 6+31.96 EX. ℄ CONST. RAMP E
- (K) 297+25.79 ℄ R/W I.R. 76 = 10+65.94 ℄ R/W CENTRAL AVE.
- (L) 9+18.28 ℄ R/W CENTRAL AVE. = 26+00.61 PROP. ℄ CONST. RAMP B
- (M) 9+08.51 ℄ R/W CENTRAL AVE. = 125+95.79 PROP. ℄ CONST. RAMP B1
- (N) 8+92.27 ℄ R/W CENTRAL AVE. = 0+00.00 ℄ R/W GOODRICH AVE.
- (O) 7+16.57 ℄ R/W CENTRAL AVE. = 7+16.57 PROP. ℄ R/W & CONST. CENTRAL AVE.
- (P) 7+67.24 EX. ℄ CONST. RAMP E = 38+49.03 PROP. ℄ CONST. RAMP C
- (Q) 10+81.57 EX. ℄ CONST. RAMP E = 141+60.93 PROP. ℄ CONST. RAMP C1
- (R) 11+61.38 ℄ R/W S.R. 619 = 14+50.67 EX. ℄ CONST. RAMP E = 0+82.82 EX. ℄ CONST. RAMP F
- (S) 11+66.04 ℄ R/W S.R. 619 = 145+29.84 PROP. ℄ CONST. RAMP C1
- (T) 15+87.65 ℄ R/W S.R. 619 = 3+80.20 EX. ℄ CONST. RAMP D
- (U) 29+37.26 PROP. ℄ CONST. RAMP B = 9+47.29 EX. ℄ CONST. RAMP C
- (V) 10+11.86 ℄ R/W CENTRAL AVE. = 14+02.27 EX. ℄ CONST. RAMP C
- (W) 130+40.93 PROP. ℄ CONST. RAMP B1 = 8+17.11 EX. ℄ CONST. RAMP C
- (X) 132+13.88 PROP. ℄ CONST. RAMP B1 = 8+41.70 EX. ℄ CONST. RAMP D
- (Y) 135+96.32 PROP. ℄ CONST. RAMP B1 = 13+87.31 EX. ℄ CONST. RAMP D
- (Z) 136+89.19 PROP. ℄ CONST. RAMP B1 = 0+38.65 EX. ℄ CONST. RAMP C
- (A1) 17+31.23 ℄ R/W S.R. 619 = 0+00.00 ℄ R/W KENMORE BLVD.
- (B1) 17+03+58 ℄ R/W S.R. 619 = 15+08.53 EX. ℄ CONST. RAMP D

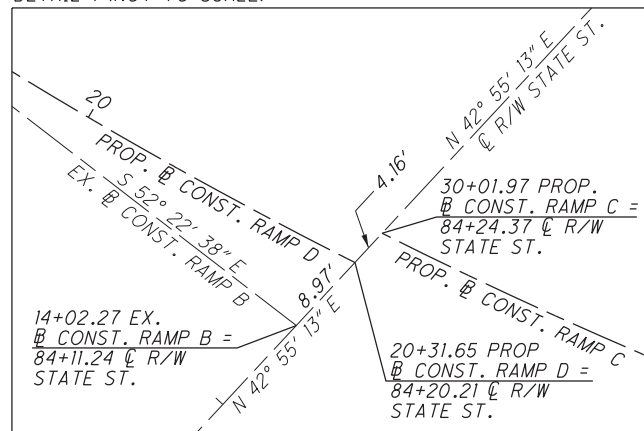


PID NO. **96670**  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM

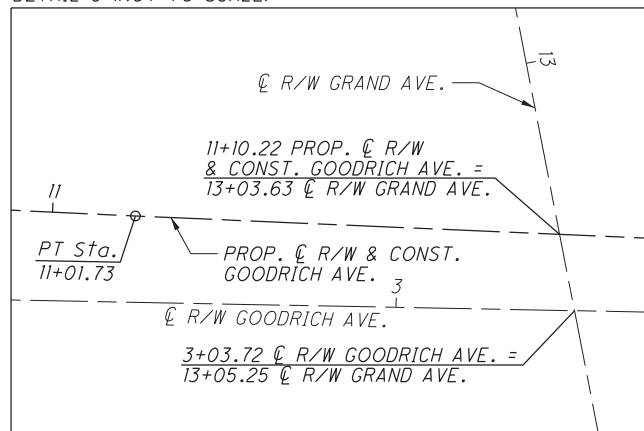
**CENTERLINE PLAT**

**SUM-76-5.53**

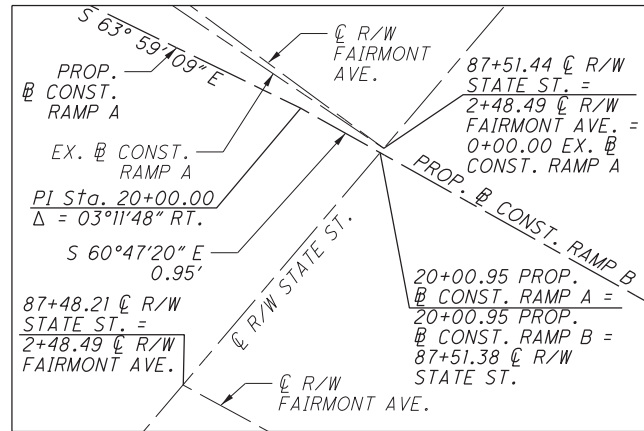
DETAIL 1 (NOT TO SCALE)



DETAIL 3 (NOT TO SCALE)



DETAIL 2 (NOT TO SCALE)



MONUMENT TABLE							
ALIGNMENT	STATION	OFFSET	PROJECT COORDINATES SEE SURVEY CERTIFICATION		MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON. EXPECTED TO BE DISTURBED
			NORTH (Y)	EAST (X)	MON. ASSY.	REF. MON.	
℄ R/W I.R. 76	290+00.00	80.00' LT.	500846.2561	2221482.6734		1	
	290+00.00	80.00' RT.	500706.7911	2221404.2546		1	
	300+00.00	65.00' LT.	500376.3002	2222352.6621		1	
	300+00.00	100.00' RT.	500221.9932	2222294.2387		1	
	310+00.00	105.00' LT.	500236.9860	2223309.1310		1	
PROP. ℄ R/W & CONST. GOODRICH/CENTRAL AVE.	310+00.00	105.00' RT.	500027.0138	2223305.7125		1	
	7+16.57	℄	500762.2683	2222095.7056	1		
	8+21.99	℄	500681.6386	2222157.7588	1		
	9+66.99	℄	500617.9336	2222288.0136	1		
	11+01.73	℄	500584.9492	2222417.6784	1		
TOTAL CARRIED TO GENERAL SUMMARY SHEET					4	6	

SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.

RECEIVED MARCH 7, 2017  
 RECORDED MARCH 7, 2017  
 INST. 56282136  
 SUMMIT COUNTY RECORDER

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SUMMIT COUNTY  
CITY OF BARBERTON  
CITY OF AKRON

NOTE:  
FOR OWNER NAMES AND AUDITOR'S  
PARCEL NUMBERS, SEE SHEET 5



PID NO.  
**96670**

R/W DESIGNER  
NLC  
R/W REVIEWER  
TDM

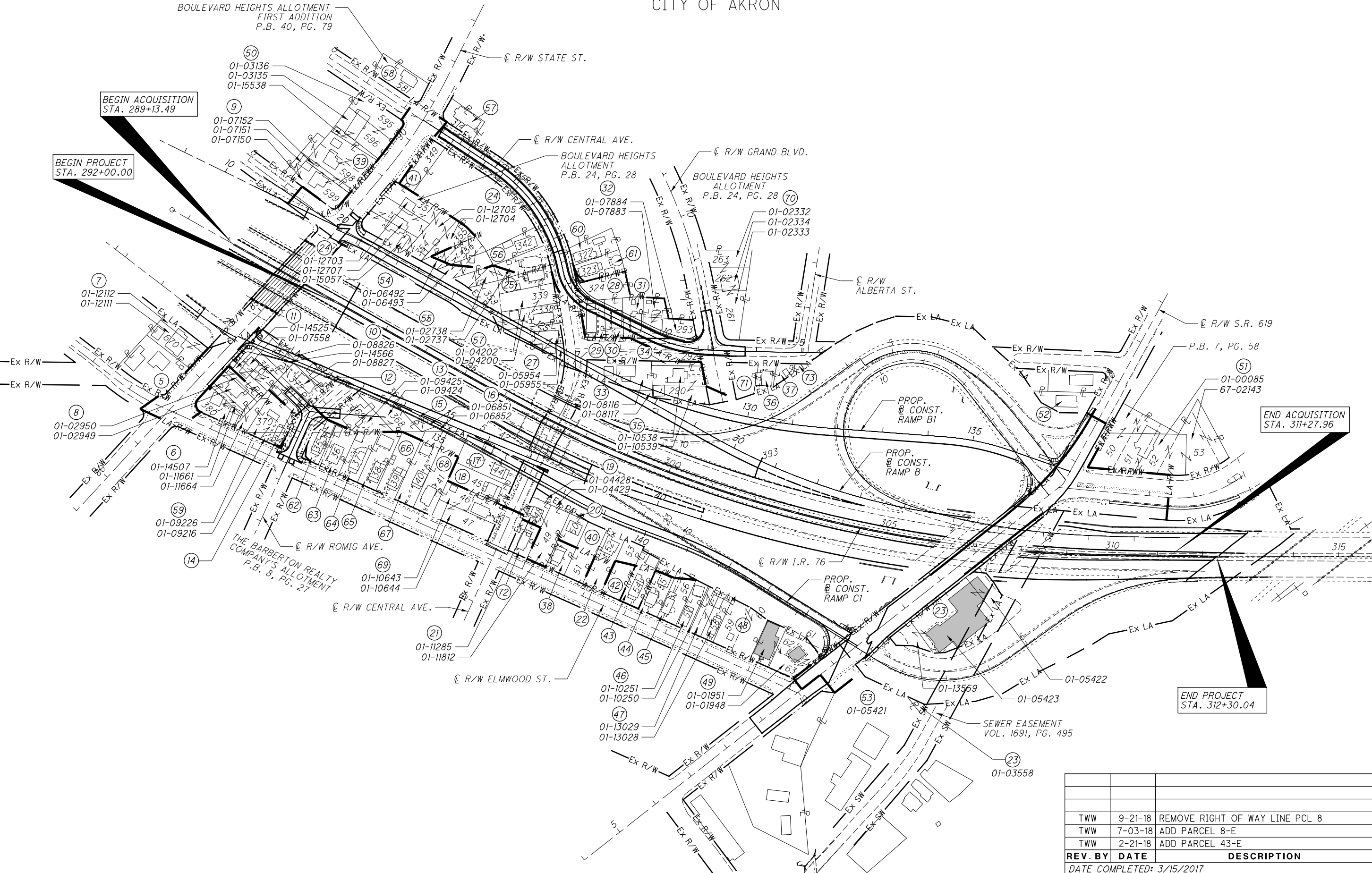
**PROPERTY MAP**

**SUM-76-5.53**

4 / 27

649  
672

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REV. BY	DATE	DESCRIPTION
TWW	9-21-18	REMOVE RIGHT OF WAY LINE PCL 8
TWW	7-03-18	ADD PARCEL 8-E
TWW	2-21-18	ADD PARCEL 43-E
DATE COMPLETED: 3/15/2017		



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**OWNER TABLE**

NO.	OWNER	AUDITOR'S PARCEL NO.
1-4	NOT USED	
5	LEONARD D. POWELL & CYNTHIA POWELL	01-09169
6	DOUGLAS SHANE KING	SEE MAP
7	DANA RACHTEN	SEE MAP
8	CHRISTINE R. KERWIN & KENNETH KERWIN	SEE MAP
9	GARY F. DWYER & VICKI L. LISTON	SEE MAP
10	JOSEPH M. GEORGE & MELODIE A. GEORGE	SEE MAP
11	KAREN J. CARNEAL	SEE MAP
12	DANIEL D. WILSON & CAROL L. WILSON	01-07445
13	CRAIG L. DOMERS	SEE MAP
14	MATTHEW BURKETT	01-08398
15	MICHAEL A. KING	01-10674
16	EVERETT LOWRY	SEE MAP
17	THOMAS MARTIN FOYLE & DEBRA JEAN FOYLE	01-03688
18	SCOTT WHITED	01-06318
19	ALVA O. GWINN	SEE MAP
20	STATE OF OHIO	01-03834
21	KEVIN M. SUBOTICKI	SEE MAP
22	GREG A. EMMONS	01-02241
23	SEVILLE SELF-SERVE PROPERTIES, LLC, AN OHIO LIMITED LIABILITY COMPANY	SEE MAP
24	STEPHEN L. WILMOTH & CECIL L. WILMOTH	SEE MAP
25	STATE OF OHIO DEPARTMENT OF TRANSPORTATION	01-09146
26	NEIGHBORHOOD CONSERVATION SERVICES OF BARBERTON, INC.	SEE MAP
27	ELEANOR M. KING	SEE MAP
28	COY LEE PATTERSON & MELISSA A. PATTERSON	01-04201
29	LEROY R. MORLAN & BETTY J. MORLAN	01-07970
30	RICHARD WILLIAM ALFORD	01-00100
31	BARBARA J. ROBERTS	01-05730
32	ROSALEE I. STINE & AMY CLEMENTS	SEE MAP
33	DANIEL D. RACIN	SEE MAP
34	CITY OF BARBERTON	01-02157
35	HARLEY R. SPURLOCK & LORI J. SPURLOCK	SEE MAP
36	BRENDA K. BANKS	01-08794
37	JOSEPH TYLICKI	01-07171
38	MATTHEW G. MCKINNEY & VICKI M. MCKINNEY	01-04431
39	ANNE MARTIN, TRUSTEE, OR ANY SUCCESSOR TRUSTEE OF THE ANNE MARTIN TRUST, U/A/D APRIL 26, 2007	01-16665
40	MATT MCKINNEY & VICKI MCKINNEY	01-01219
41	CITY OF BARBERTON	01-15836
42	CITY OF BARBERTON, AN OHIO MUNICIPAL CORPORATION	01-11439
43	JOSEPH DUKES	01-03100
44	ANTHONY W. PARKS, JR.	01-06938
45	KEVIN M. PARK & MICHELLE L. PARK	01-01920
46	ROBERT ALLEN SANDERSON & LAUREEN BRIGID SANDERSON	SEE MAP
47	BRADFORD M. LIKENS & ALTA L. LIKENS, TRUSTEES OF THE BRADFORD M. LIKENS & ALTA M. LIKENS TRUST	SEE MAP
48	THE EAST OHIO GAS COMPANY, A CORPORATION OF CLEVELAND, OHIO	01-13546
49	GREGORY L. NORTH & DANA L. NORTH	SEE MAP
50	DANIEL MICHAEL SPIKER	SEE MAP

**OWNER TABLE**

NO.	OWNER	AUDITOR'S PARCEL NO.
51	REEM QANDEEL NKA REEM YASSIN	SEE MAP
52	REEM QANDEEL NKA REEM YASSIN	68-42794
53	ANDREW SANYO	01-05421
54	GORDON R. LANGHAM, AKA GORDON RONALD LANGHAM, ANDREA M. LANGHAM, T.O.D.	SEE MAP
55	ROBERT ASH & RUBY A. ASH	SEE MAP
56	JAMES L. SLAUGHTER & LAUREL A. SLAUGHTER	01-05345
57	FELICIA L. BENEDEM	01-14517
58	SHIRLEY M. BARE	01-00617
59	MICHAEL T. SCHMIDT & KATHRYN A. SCHMIDT	SEE MAP
60	RODNEY W. CLINGERMAN & TAMMY R. CLINGERMAN	01-08099
61	LAURA MASSARO & RICHARD MASSARO	01-05886
62	MICHAEL V. SALOMONE	01-06403
63	CATHY S. COPEN	01-15481
64	TIFFANY P. SHELTON	01-05481
65	TIMOTHY W. CALLIHAN & JEANETTE M. CALLIHAN	01-02606
66	TRANT C. HOLT	01-01054
67	DARRELL A. THOMPSON	01-04762
68	NICHOL M. NERUDA	01-04761
69	MARSHA S. WATSON	SEE MAP
70	ANDREW G. FRANKLIN	SEE MAP
71	OHIO EDISON COMPANY, AN OHIO CORPORATION	01-13627
72	MARIE L. WELCH	01-08477
73	JEWISH COMMUNITY FEDERATION	01-06682



PID NO.  
**96670**

R/W DESIGNER  
NLC  
R/W REVIEWER  
TDM

**PROPERTY MAP**

**SUM-76-5.53**

650  
672

REV. BY	DATE	DESCRIPTION
DATE COMPLETED: 3/15/2017		

**TOTAL NUMBER OF :**

50 OWNERSHIPS      25 TOTAL TAKES  
 41 PARCELS        24 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
 ALL AREAS IN ACRES  
 (c) = CALCULATED AREA

\* DENOTES RIGHT OF WAY ENCROACHMENT

**GRANTEE:**

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF  
 STATE OF OHIO, DEPARTMENT OF TRANSPORTATION  
 UNLESS OTHERWISE SHOWN.

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PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
											LEFT	RIGHT			
1-4	NOT USED														
5-PRW	LEONARD D. POWELL & CYNTHIA POWELL	4, 12-13	INST. 54712826	01-09169	0.2495(c)	0.0000				NO			STATE	REMOVING ACCESS	
6-PRW	DOUGLAS SHANE KING	4, 12-13	INST. 55788209	01-11661	0.0309(c)	0.0000				NO				REMOVING ACCESS	
				01-11663	0.0034(c)	0.0000									
				01-11664	0.0474(c)	0.0000									
				01-14507	0.1054(c)	0.0000									
	TOTAL				0.1871	0.0000									
7-PRW	DANA RACHTEN	4, 12-13	INST. 55129262	01-12111	0.1235(c)	0.0000				NO				REMOVING ACCESS	
				01-12112	0.0426(c)	0.0000									
	TOTAL				0.1661	0.0000									
7-E							0.1661	0.0000	0.1661					UNECONOMIC REMNANT	
8-PRW	CHRISTINE R. KERWIN & KENNETH KERWIN	4, 12-13	INST. 54094345	01-02949	0.0723(c)	0.0000				NO				REMOVING ACCESS	
				01-02950	0.0310(c)	0.0000									
	TOTAL				0.1033	0.0000									
8-E							0.1033	0.0000	0.1033					UNECONOMIC REMNANT	
9-PRW	GARY F. DWYER & VICKI L. LISTON	4, 22-23	INST. 54219248	01-07150	0.1373(c)	0.0000				NO				REMOVING ACCESS	
				01-07151	0.0274(c)	0.0000									
				01-07152	0.0275(c)	0.0000									
	TOTAL				0.1922(c)	0.0000									
10-WL	JOSEPH M. GEORGE & MELODIE A. GEORGE	4, 12-13	D.B. 6446, PG. 828	01-08826	0.0818(c)	0.0000	0.0818	0.0000	0.0818	YES				TOTAL TAKE; EARLY ACQUISITION	
				01-08827	0.0195	0.0000	0.0195	0.0000	0.0195						
				01-14566	0.0914	0.0000	0.0914	0.0000	0.0914						
	TOTAL				0.1927(c)	0.0000	0.1927	0.0000	0.1927						
11-WL	KAREN J. CARNEAL	4, 12-13	INST. 55192273	01-07558	0.0918	0.0000	0.0918	0.0000	0.0918	YES				TOTAL TAKE; EARLY ACQUISITION	
				01-14525	0.0684	0.0000	0.0684	0.0000	0.0684						
	TOTAL				0.1602(c)	0.0000	0.1602	0.0000	0.1602						
12-WL	DANIEL D. WILSON & CAROL L. WILSON	4, 12-13	INST. 54525371	01-07445	0.0692(c)	0.0000	0.0692	0.0000	0.0692	YES				TOTAL TAKE; EARLY ACQUISITION	
13-WL	CRAIG L. DOMERS	4, 12-15	INST. 54013518	01-09424	0.1163	0.0000	0.1163	0.0000	0.1163	YES			STATE	TOTAL TAKE; EARLY ACQUISITION	
				01-09425	0.1506	0.0000	0.1325	0.0000	0.1325						
	TOTAL (13-WL)				0.2669	0.0000	0.2488	0.0000	0.2488						

NOTE: ALL TEMPORARY PARCELS TO BE OF 18 MONTHS DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

TYPES OF TITLE LEGEND:  
 WL = FEE SIMPLE WITH LIMITATION OF ACCESS  
 WD = WARRANTY DEED  
 T = TEMPORARY EASEMENT  
 PRW = PROPERTY RIGHTS

REV. BY	DATE	DESCRIPTION
TWW	7/03/18	ADD PARCEL 8-E
TWW	8/14/17	ADD PARCEL 7-E
NLC	5/1/17	UPDATED 8-PRW
AJR	3/31/17	RIGHT OF WAY ENCROACHMENT NOTE
FIELD REVIEW BY: JD		DATE: 3/3/2017
OWNERSHIP VERIFIED BY: NLC		DATE: 3/7/2017
DATE COMPLETED: 3/15/2017		

FEDERAL PROJECT NO. **E150345**  
 PID NO. **96670**  
 STATE JOB NO. **44191**  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM  
**SUMMARY OF ADDITIONAL RIGHT OF WAY**  
**SUM-76-5.53**  
 6 / 27  
 651  
 672

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
 ALL AREAS IN ACRES  
 (c) = CALCULATED AREA

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
											LEFT	RIGHT			
14-WL	MATTHEW BURKETT	4, 12-13	INST. 54731376	01-08398	0.0779(c)	0.0000	0.0779	0.0000	0.0779	YES			STATE	TOTAL TAKE; EARLY ACQUISITION	
15-WL	MICHAEL A. KING	4, 12-15	INST. 54515022 O.R. 1650, PG. 236	01-10674	0.0256(c)	0.0000	0.0256	0.0000	0.0256					TOTAL TAKE; EARLY ACQUISITION	
16-WL	EVERETT LOWRY	4, 14-15	D.B. 3247, PG. 199	01-06851 01-06852	0.0160(c) 0.0125(c)	0.0000	0.0160 0.0125	0.0000	0.0160 0.0125	NO				TOTAL TAKE; TITLE DEFECT; EARLY ACQUISITION	
	TOTAL				0.0285	0.0000	0.0285	0.0000	0.0285						
17-WL	THOMAS MARTIN FOYLE & DEBRA JEAN FOYLE	4, 14-15	INST. 55816808	01-03688	0.2005(c)	0.0000	0.2005	0.0000	0.2005	YES				TOTAL TAKE; EARLY ACQUISITION	
18-WL	SCOTT WHITED	4, 14-15	INST. 56157321	01-06318	0.1395(c)	0.0000	0.1395	0.0000	0.1395	YES				TOTAL TAKE; EARLY ACQUISITION	
19-WL	ALVA O. GWINN	4, 14-15	O.R. 2006, PG. 125	01-04428 01-04429	0.0181(c) 0.0108(c)	0.0000	0.0181 0.0108	0.0000	0.0181 0.0108	YES				TOTAL TAKE, TITLE DEFECT	
	TOTAL				0.0289	0.0000	0.0289	0.0000	0.0289						
20	STATE OF OHIO	4, 14-15	J.E. 2206, PG. 400	01-03834	0.0036(c)	0.0000	0.0036	0.0000	0.0036					NO TAKE FROM THIS AUDITOR'S PARCEL	
21-WL	KEVIN M. SUBOTICKI	4, 14-15	INST. 55777084 INST. 55899778	01-11285 01-11812	0.0568(c) 0.1343(c)	0.0000	0.0568 0.0651	0.0000	0.0568 0.0651	YES				TOTAL TAKE; EARLY ACQUISITION	
	TOTAL				0.1911	0.0000	0.1219	0.0000	0.1219						
22-WL	GREG A. EMMONS	4, 16-17	INST. 55800428	01-02241	0.1343(c)	0.0000	0.1343	0.0000	0.1343	YES				TOTAL TAKE; EARLY ACQUISITION	
23-WL	SEVILLE SELF-SERVE PROPERTIES, LLC, AN OHIO LIMITED LIABILITY COMPANY	4, 18-21	INST. 56023175	01-05422 01-13559 01-05423 01-13558	0.0776(c) 0.0651(c) 0.3954(c) 0.0127(c)	0.0000	0.0776 0.0651 0.3954 0.0000	0.0000	0.0776 0.0651 0.3954 0.0000	YES				TOTAL TAKE; EARLY ACQUISITION	
	TOTAL				0.5508	0.0000	0.5381	0.0000	0.5381					NO TAKE FROM THIS AUDITOR'S PARCEL	
24-WL	STEPHEN L. WILMOTH & CECIL L. WILMOTH	4, 22-25	INST. 56254122	01-12703 01-12704 01-12705 01-12707 01-15057	0.1088(c) 0.0768(c) 0.1101(c) 0.1155(c) 0.1165(c)	0.0000	0.0000 0.0024 0.0181 0.0000 0.0756	0.0000	0.0000 0.0024 0.0181 0.0000 0.0756	YES				TOTAL TAKE; EARLY ACQUISITION	
	TOTAL				0.5277	0.0000	0.0961	0.0000	0.0961				STATE		

FEDERAL PROJECT NO. E150345  
 PID NO. 96670  
 STATE JOB NO. 44191  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM  
**SUMMARY OF ADDITIONAL RIGHT OF WAY**  
 SUM-76-5.53

CIS	1/5/18	GROSS TAKE AREA FOR 15-WL & 16WL	7 / 27
<b>REV. BY</b>	<b>DATE</b>	<b>DESCRIPTION</b>	
FIELD REVIEW BY: JD	DATE: 3/3/2017		
OWNERSHIP VERIFIED BY: NLC	DATE: 3/7/2017		
DATE COMPLETED: 3/15/2017			

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672

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
**ALL AREAS IN ACRES**  
 (c) = CALCULATED AREA

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
											LEFT	RIGHT			
25-WL	STATE OF OHIO	4, 24-25	INST. 56242139	01-09146	0.0967(c)	0.0000	0.0967	0.0000	0.0967	YES			STATE	TOTAL TAKE; EARLY ACQUISITION	
26-WL	NEIGHBORHOOD CONSERVATION SERVICES OF BARBERTON, INC.	4, 24-25	INST. 55860253	01-04202	0.2000(c)	0.0000	0.2000	0.0000	0.2000	YES				TOTAL TAKE; EARLY ACQUISITION	
			INST. 55860252	01-04200	0.1216(c)	0.0000	0.1216	0.0000	0.1216						
			TOTAL		INST. 55860251		0.3216	0.0000	0.3216	0.0000	0.3216				
27-WL	ELEANOR M. KING	4, 24-25	INST. 54705691	01-05954	0.0974(c)	0.0000	0.0974	0.0000	0.0974	YES				TOTAL TAKE; EARLY ACQUISITION	
			TOTAL		D.B. 5117, PG. 678	01-05955	0.0388(c)	0.0000	0.0388	0.0000	0.0388				
28-WL	COY LEE PATTERSON & MELISSA A. PATTERSON	4, 24-25	INST. 54721331	01-04201	0.1260(c)	0.0000	0.1260	0.0000	0.1260	NO				TOTAL TAKE; EARLY ACQUISITION	
			TOTAL		INST. 55328965		0.1362	0.0000	0.1362	0.0000	0.1362				
29-WL	LEROY R. MORLAN & BETTY J. MORLAN	4, 24-27	D.B. 6565, PG. 131	01-07970	0.0934(c)	0.0000	0.0416	0.0000	0.0416	YES				TOTAL TAKE; EARLY ACQUISITION	
			TOTAL		D.B. 4828, PG. 122										
30-WL	RICHARD WILLIAM ALFORD	4, 26-27	O.R. 2306, PG. 467	01-00100	0.0788(c)	0.0000	0.0148	0.0000	0.0148	YES				TOTAL TAKE; EARLY ACQUISITION	
31-WL	BARBARA J. ROBERTS	4, 26-27	O.R. 8, PG. 149	01-05730	0.0950(c)	0.0000	0.0011	0.0000	0.0011	YES				TOTAL TAKE; EARLY ACQUISITION	
32-WL	ROSALEE I. STINE & AMY CLEMENTS	4, 26-27	INST. 55300925	01-07884	0.1152(c)	0.0000	0.1152	0.0000	0.1152	YES				TOTAL TAKE; EARLY ACQUISITION	
			TOTAL		INST. 55178114	01-07883	0.0597(c)	0.0000	0.0597	0.0000	0.0597				
33-WL	DANIEL D. RACIN	4, 26-27	INST. 55990692	01-08116	0.1757(c)	0.0000	0.1757	0.0000	0.1757	YES				TOTAL TAKE; EARLY ACQUISITION	
			TOTAL			01-08117	0.0080(c)	0.0000	0.0080	0.0000	0.0080				
34-WL	THE CITY OF BARBERTON	4, 26-27	D.B. 1928, PG. 638	01-02157	0.0241(c)	0.0000	0.0241	0.0000	0.0241	NO			STATE	TOTAL TAKE; EARLY ACQUISITION	

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FEDERAL PROJECT NO. **E150345**  
 PID NO. **96670**  
 STATE JOB NO. **44191**  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM  
**SUMMARY OF ADDITIONAL RIGHT OF WAY**  
**SUM-76-5.53**  
 8 / 27  
 (653)  
 (672)

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY: JD DATE: 3/3/2017  
 OWNERSHIP VERIFIED BY: NLC DATE: 3/7/2017  
 DATE COMPLETED: 3/15/2017

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
 ALL AREAS IN ACRES  
 (c) = CALCULATED AREA

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
											LEFT	RIGHT			
35-WL	HARLEY R. SPURLOCK & LORI J. SPURLOCK	4, 26-27	INST. 55334721	01-10538	0.1174	(c) 0.0000	0.1174	0.0000	0.1174	YES			STATE	TOTAL TAKE; EARLY ACQUISITION	
				01-10539	0.0926	(c) 0.0000	0.0926	0.0000	0.0926						
	TOTAL				0.2100	0.0000	0.2100	0.0000	0.2100						
36	BRENDA K. BANKS	4, 26-27	D.B. 7286, PG. 196	01-08794	0.0559	(c) 0.0000	-	-	-	NO				NO TAKE FROM THIS AUDITOR'S PARCEL	
37	JOSEPH TYLICKI	4, 26-27	O.R. 92, PG. 79	01-07171	0.0341	(c) 0.0000	-	-	-	NO				NO TAKE FROM THIS AUDITOR'S PARCEL	
38-WL	MATTHEW G. MCKINNEY & VICKI M. MCKINNEY	4, 14-15	D.B. 6917, PG. 31	01-04431	0.1343	(c) 0.0000	0.0651	0.0000	0.0651	YES		0.0692		*16' FENCE, GARAGE, 15' FENCE, FLOWER BED	
39-PRW	ANNE MARTIN, TRUSTEE, OR ANY SUCCESSOR TRUSTEE OF THE ANNE MARTIN TRUST U/A/D APRIL 26, 2007	4, 22-23	INST. 55438047	01-16665	0.2765	(c) 0.0000	-	-	-	NO				REMOVING ACCESS	
40-WL	MATT MCKINNEY & VICKI MCKINNEY	4, 14-17	INST. 56102794	01-01219	0.1343	(c) 0.0000	0.0651	0.0000	0.0651	NO		0.0692		58' FENCE	
41-PRW	CITY OF BARBERTON	4, 22-23	D.B. 1373, PG. 851	01-15836	0.0950	(c) 0.0000	-	-	-	NO				REMOVING ACCESS	
42-WL	CITY OF BARBERTON, AN OHIO MUNICIPAL CORPORATION	4, 16-17	INST. 56060079	01-11439	0.1343	(c) 0.0000	0.0517	0.0000	0.0517	NO		0.0826		2 TREES, BUSH	
43-WL	JOSEPH DUKES	4, 16-17	INST. 55144516	01-03100	0.1243	(c) 0.0000	0.0327	0.0000	0.0327	YES		0.0916		GARAGE, SHED (PARTIALLY ENCROACHING), CONC. WALK	
44-WL	ANTHONY W. PARKS, JR.	4, 16-17	INST. 55757909	01-06938	0.1203	(c) 0.0000	0.0232	0.0000	0.0232	NO		0.0971		48' FENCE	
45-WL	KEVIN M. PARK & MICHELLE L. PARK	4, 16-17	O.R. 201, PG. 652	01-01920	0.1163	(c) 0.0000	0.0101	0.0000	0.0101	YES		0.1062		*SHED, POND, STONE WALKWAY, PART OF FLOWER BED	
46	ROBERT ALLEN SANDERSON & LAUREEN BRIGID SANDERSON	4, 16-17	D.B. 7565, PG. 720	01-10250	0.0075	0.0000	-	-	-	NO				NO TAKE FROM THIS AUDITOR'S PARCEL	
				01-10251	0.0757	(c) 0.0000	-	-	-					NO TAKE FROM THIS AUDITOR'S PARCEL	
	TOTAL				0.0832	0.0000									
47	BRADFORD M. LIKENS & ALTA L. LIKENS, TRUSTEES OF THE BRADFORD M. LIKENS & ALTA L. LIKENS TRUST	4, 16-17	INST. 55989785	01-13028	0.0737	0.0000	-	-	-				STATE	NO TAKE FROM THIS AUDITOR'S PARCEL	
				01-13029	0.0672	(c) 0.0000	-	-	-					NO TAKE FROM THIS AUDITOR'S PARCEL	
	TOTAL				0.1409	0.0000									

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FEDERAL PROJECT NO. E150345  
 PID NO. 96670  
 STATE JOB NO. 44191  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM  
**SUMMARY OF ADDITIONAL RIGHT OF WAY**  
 SUM-76-5.53  
 9 / 27

REV. BY	DATE	DESCRIPTION
NLC	5/1/17	UPDATED 39-PRW
FIELD REVIEW BY: JD DATE: 3/3/2017		
OWNERSHIP VERIFIED BY: NLC DATE: 3/7/2017		
DATE COMPLETED: 3/15/2017		

654  
672

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
 ALL AREAS IN ACRES  
 (c) = CALCULATED AREA

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
											LEFT	RIGHT			
48	THE EAST OHIO GAS COMPANY, A CORPORATION OF CLEVELAND, OHIO	4, 16-17	D.B. 1467, PG. 145	01-13546	0.2110 (c)	0.0000	-	-	-				STATE	NO TAKE FROM THIS AUDITOR'S PARCEL	
49-PRW 49-T	GREGORY L. NORTH & DANA L. NORTH	4, 16-19	INST. 55331454	01-01948	0.1653 (c)	0.0000	0.0000	0.0000	0.0000	NO				REMOVING ACCESS GRADING	
				01-01951	0.0973 (c)	0.0000	0.0000	0.0000	0.0000					NO TAKE FROM THIS AUDITOR'S PARCEL	
	TOTAL				0.0973	0.0000	0.0003	0.0000	0.0003						
50-PRW	DANIEL MICHAEL SPIKER	4, 22-23	INST. 56003939 O.R. 1650, PG. 236	01-03135 01-03136 01-15538	0.1391 (c) 0.1263 (c) 0.0232 (c)	0.0000	-	-	-	NO				REMOVING ACCESS	
	TOTAL				0.2886	0.0000	-	-	-						
51-PRW	REEM QANDEEL n.k.a. REEM YASSIN	4, 20-21	INST. 55730996	01-00085 67-02143	0.2992 (c) 0.1223 (c)	0.0000	-	-	-	NO				REMOVING ACCESS	
	TOTAL				0.4215	0.0000	-	-	-						
52	REEM QANDEEL n.k.a. REEM YASSIN	4	INST. 55730994	68-42794	0.1486 (c)	0.0000	-	-	-					NO TAKE FROM THIS AUDITOR'S PARCEL	
53-PRW	ANDREW SANYO	4, 18-19	INST. 56267156	01-05421	1.4900	0.0000	-	-	-					REMOVING ACCESS	
54-WL	GORDON R. LANGHAM, AKA GORDON RONALD LANGHAM, ANDREA M. LANGHAM, T.O.D.	4, 24-25	INST. 55559092 INST. 55688050 INST. 55582797	01-06492 01-06493 01-06494	0.1001 (c) 0.0775 (c) 0.1240 (c)	0.0000	0.0204 0.0364 0.0000	0.0000	0.0204 0.0364 0.0000	NO	0.0797 0.0411 0.1240				
	TOTAL		INST. 55363008		0.3016	0.0000	0.0568	0.0000	0.0568		0.2448				
55-WL	ROBERT ASH & RUBY A. ASH	4, 24-25	D.B. 6785, PG. 531	01-02737 01-02738	0.1103 (c) 0.0596 (c)	0.0000	0.0197 0.0596	0.0000	0.0197 0.0596	NO	0.0906 0.0000				
	TOTAL				0.1699	0.0000	0.0793	0.0000	0.0793		0.0906				
56	JAMES L. SLAUGHTER & LAUREL A. SLAUGHTER	4, 24-25	INST. 55847028	01-05345	0.1105 (c)	0.0000	-	-	-	NO				NO TAKE FROM THIS AUDITOR'S PARCEL	
57	FELICIA L. BENEDUM	4, 22-23	INST. 55013189	01-14517	0.0958 (c)	0.0000	-	-	-					NO TAKE FROM THIS AUDITOR'S PARCEL	
58	SHIRELY M. BARE	4, 22-23	D.B. 7287, PG. 251	01-00617	0.1371 (c)	0.0000	-	-	-					NO TAKE FROM THIS AUDITOR'S PARCEL	
59-T	MICHAEL T. SCHMIDT & KATHRYN A. SCHMIDT	4, 12-13	INST. 55667105	01-09216 01-09226	0.0364 (c) 0.1266 (c)	0.0000	0.0014 0.0000	0.0000	0.0014 0.0000	NO			STATE	GRADING	
	TOTAL				0.1630	0.0000	0.0014	0.0000	0.0014						

FEDERAL PROJECT NO. E150345  
 PID NO. 96670  
 STATE JOB NO. 441191  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM  
**SUMMARY OF ADDITIONAL RIGHT OF WAY**  
 SUM-76-5.53  
 10/27  
 655  
 672

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REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY: JD	DATE: 3/3/2017	
OWNERSHIP VERIFIED BY: NLC	DATE: 3/7/2017	
DATE COMPLETED: 3/15/2017		

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
 ALL AREAS IN ACRES  
 (c) = CALCULATED AREA

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
											LEFT	RIGHT			
60	RODNEY W. CLINGERMAN & TAMMY R. CLINGERMAN	4, 24-25	O.R. 1716, PG. 1201	01-08099	0.1076(c)	0.0000	-	-	-				STATE	NO TAKE FROM THIS AUDITOR'S PARCEL	
61-WD 61-T	LAURA MASSARO & RICHARD MASSARO	4, 24-25 4, 24-25	INST. 55109087	01-05886	0.1120(c)	0.0000	0.0023 0.0035	0.0000 0.0000	0.0023 0.0035	NO	0.1097			SIDEWALK CONSTRUCTION	
62-T	MICHAEL V. SALOMONE	4, 12-13	INST. 55075751	01-06403	0.0850(c)	0.0000	0.0035	0.0000	0.0035	NO				GRADING	
63	CATHY S. COPEN	4, 12-13	INST. 55644447	01-15481	0.1146(c)	0.0000	-	-	-	NO				NO TAKE FROM THIS AUDITOR'S PARCEL	
64	TIFFANY P. SHELTON	4, 12-13	INST. 55586625	01-05425	0.1157(c)	0.0000	-	-	-					NO TAKE FROM THIS AUDITOR'S PARCEL	
65	TIMOTHY W. CALLIHAN & JEANETTE M. CALLIHAN	4, 12-13	D.B. 1976, PG. 1945	01-02606	0.1369(c)	0.0000	-	-	-					NO TAKE FROM THIS AUDITOR'S PARCEL	
66-WL	TRANT C. HOLT	4, 14-15	INST. 55804940	01-01054	0.1605(c)	0.0000	0.0131	0.0000	0.0131	NO	0.1474			2 TREES, 63' FENCE	
67-WL	DARRELL A. THOMPSON	4, 14-15	INST. 55907821	01-04762	0.1817(c)	0.0000	0.0342	0.0000	0.0342	NO	0.1475			60' FENCE	
68-WL	NICHOL M. NERUDA	4, 14-15	INST. 55968245	01-04761	0.1991(c)	0.0000	0.0516	0.0000	0.0516	NO	0.1475			2 TREES, 124' FENCE	
69	MARSHA S. WATSON	4, 14-15	O.R. 70, PG. 297	01-10643 01-10644	0.1395(c) 0.1240(c)	0.0000	- -	- -	- -	NO				NO TAKE FROM THIS AUDITOR'S PARCEL NO TAKE FROM THIS AUDITOR'S PARCEL	
	TOTAL				0.2635	0.0000									
70	ANDREW G. FRANKLIN	4	INST. 56063276	01-02333 01-02334 01-02332	0.1264(c) 0.0881(c) 0.0848(c)	0.0000	- - -	- - -	- - -	NO				NO TAKE FROM THIS AUDITOR'S PARCEL NO TAKE FROM THIS AUDITOR'S PARCEL NO TAKE FROM THIS AUDITOR'S PARCEL	
	TOTAL				0.2993	0.0000									
71	OHIO EDISON COMPANY, AN OHIO CORPORATION	4, 26-27	D.B. 1740, PG. 301 D.B. 1640, PG. 113	01-13627	0.0895(c)	0.0000	0.0895	0.0000	0.0895	NO				NO TAKE FROM THIS AUDITOR'S PARCEL	
72	MARIE L. WELCH	4, 14-15	INST. 54858156	01-08477	0.0775(c)	0.0000	-	-	-	NO				NO TAKE FROM THIS AUDITOR'S PARCEL	
73	JEWISH COMMUNITY FEDERATION	4, 26-27	D.B. 6444, PG. 395	01-06682	0.0063(c)	0.0000	-	-	-	NO			STATE	NO TAKE FROM THIS AUDITOR'S PARCEL	

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FEDERAL PROJECT NO. E150345  
 PID NO. 96670  
 STATE JOB NO. 441191  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM  
**SUMMARY OF ADDITIONAL RIGHT OF WAY**  
 SUM-76-5.53

CIS	1/5/18	TAKE AREA AND REMARKS FOR 66-WL, 67-WL AND 68-WL
REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY: JD	DATE: 3/3/2017	
OWNERSHIP VERIFIED BY: NLC	DATE: 3/7/2017	
DATE COMPLETED: 3/15/2017		

11/27  
 656  
 672

SUMMIT COUNTY  
CITY OF BARBERTON

© R/W ELMWOOD ST.  
P.I. Sta. 19+25.80  
 $\Delta = 13^\circ 12' 00''$  (LT)  
 $D_c = 13^\circ 09' 37''$   
 $R = 435.37'$   
 $T = 50.37'$   
 $L = 100.30'$   
 $E = 2.90'$   
 $C = 100.08'$   
C.B. =  $S 59^\circ 10' 47'' E$

PROP. & CONST. RAMP C  
P.I. Sta. 30+19.46  
 $\Delta = 4^\circ 02' 22''$  (LT)  
 $D_c = 11^\circ 33' 06''$   
 $R = 496.00'$   
 $T = 17.49'$   
 $L = 34.97'$   
 $E = 0.31'$   
 $C = 34.96'$   
C.B. =  $S 65^\circ 23' 35'' E$

6  
DOUGLAS SHANE KING  
143 ELMWOOD AVE.  
RESIDENTIAL

11  
KAREN J. CARNEAL  
381 W. STATE ST.  
RESIDENTIAL

14  
MATTHEW BURKETT  
01-08398  
1196 ROMIG AVE.  
RESIDENTIAL

62  
MICHAEL V. SALOMONE  
01-06403  
125 ELMWOOD AVE.  
RESIDENTIAL

65  
TIMOTHY W. CALLIHAN &  
JEANETTE M. CALLIHAN  
01-02606  
111 ELMWOOD AVE.  
RESIDENTIAL

8  
CHRISTINE R. KERWIN &  
KENNETH KERWIN  
377 W. STATE ST.  
RESIDENTIAL

12  
DANIEL D. WILSON &  
CAROL L. WILSON  
01-07445  
1204 ROMIG AVE.  
RESIDENTIAL

15  
MICHAEL A. KING  
01-10674  
FAIRMONT AVE.  
VACANT

63  
CATHY S. COPEN  
01-15481  
121 ELMWOOD AVE.  
RESIDENTIAL

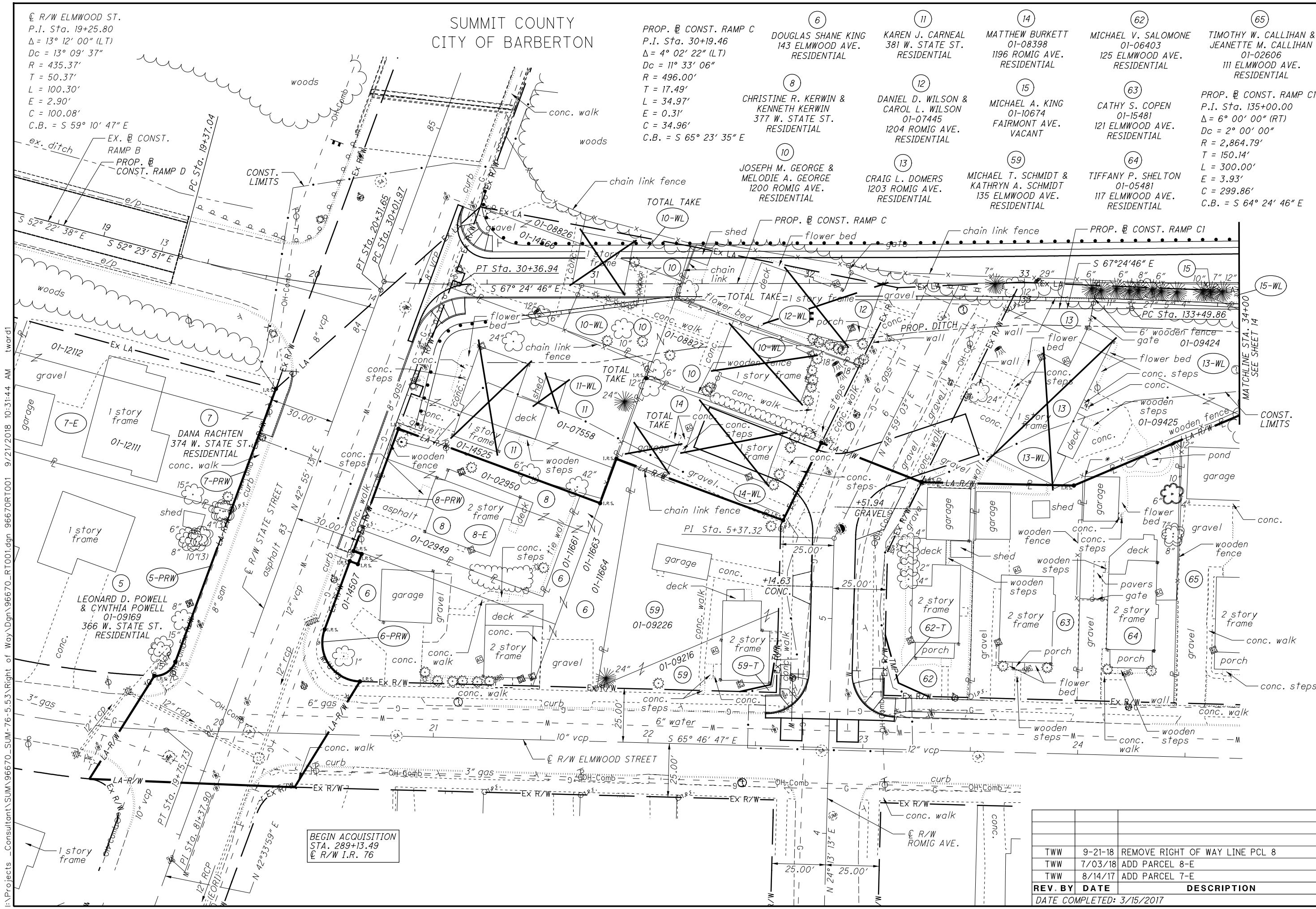
PROP. & CONST. RAMP C1  
P.I. Sta. 135+00.00  
 $\Delta = 6^\circ 00' 00''$  (RT)  
 $D_c = 2^\circ 00' 00''$   
 $R = 2,864.79'$   
 $T = 150.14'$   
 $L = 300.00'$   
 $E = 3.93'$   
 $C = 299.86'$   
C.B. =  $S 64^\circ 24' 46'' E$

10  
JOSEPH M. GEORGE &  
MELODIE A. GEORGE  
1200 ROMIG AVE.  
RESIDENTIAL

13  
CRAIG L. DOMERS  
1203 ROMIG AVE.  
RESIDENTIAL

59  
MICHAEL T. SCHMIDT &  
KATHRYN A. SCHMIDT  
135 ELMWOOD AVE.  
RESIDENTIAL

64  
TIFFANY P. SHELTON  
01-05481  
117 ELMWOOD AVE.  
RESIDENTIAL



BEGIN ACQUISITION  
STA. 289+13.49  
© R/W I.R. 76

REV. BY	DATE	DESCRIPTION
TWW	9-21-18	REMOVE RIGHT OF WAY LINE PCL 8
TWW	7/03/18	ADD PARCEL 8-E
TWW	8/14/17	ADD PARCEL 7-E
DATE COMPLETED: 3/15/2017		

HORIZONTAL SCALE IN FEET  
 PID NO. **96670**  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM  
**RIGHT OF WAY TOPOGRAPHY SHEET**  
**RAMP C - BEGIN TO STA. 34+00**  
**SUM-76-5.53**  
 12 / 27  
 (657)  
 (672)

I:\Projects\_Consultant\SUM\_96670\_SUM-76-5.53\Right of Way\Dgn\96670RT001.dgn 9/21/2018 10:31:44 AM twardl



SUMMIT COUNTY  
CITY OF BARBERTON

© R/W ELMWOOD ST.  
P.I. Sta. 19+25.80  
 $\Delta = 13^\circ 12' 00''$  (LT)  
 $D_c = 13^\circ 09' 37''$   
 $R = 435.37'$   
 $T = 50.37'$   
 $L = 100.30'$   
 $E = 2.90'$   
 $C = 100.08'$   
C.B. = S 59° 10' 47" E

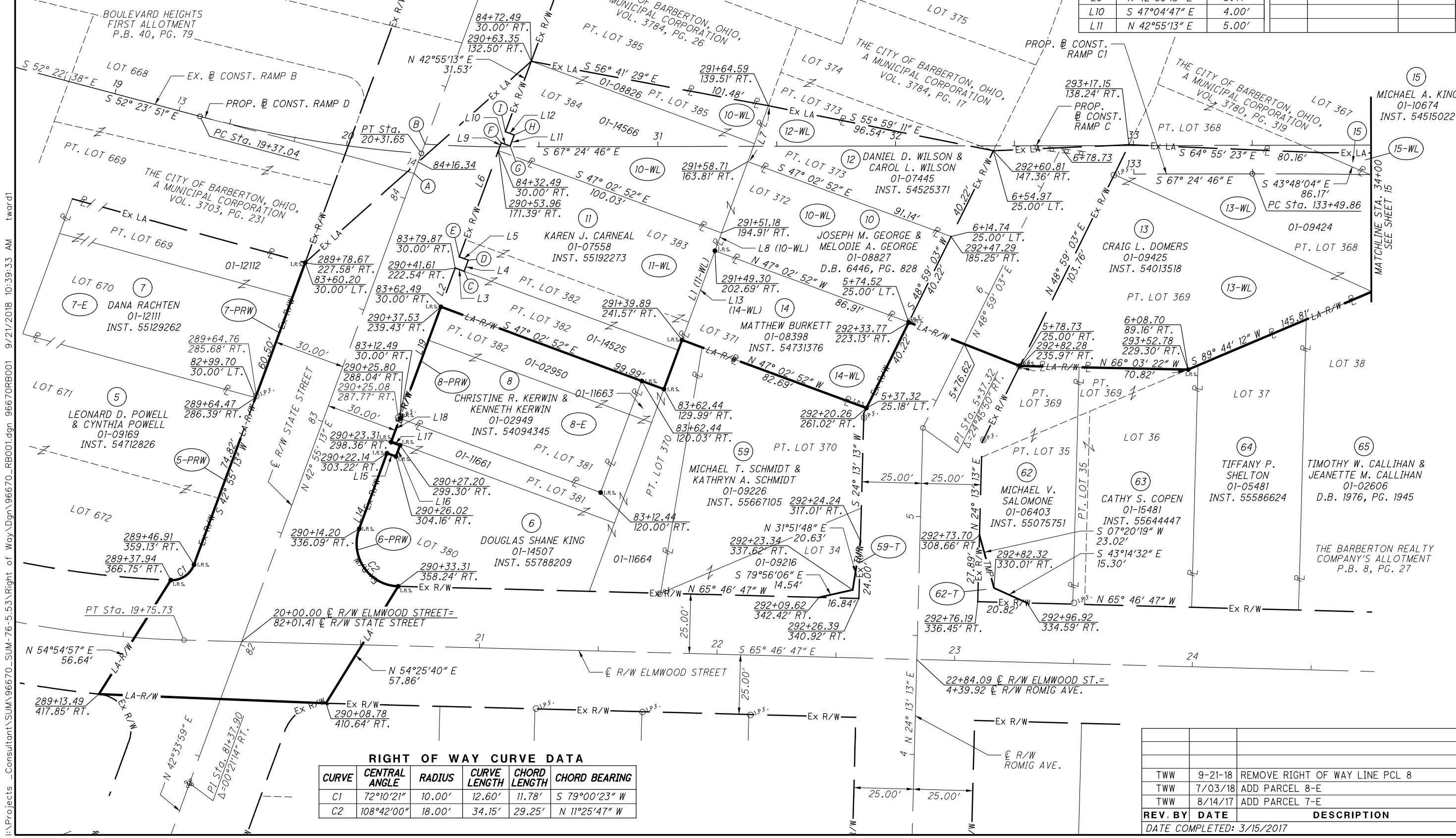
- (A) 14+02.27 EX. B CONST. RAMP B = 84+11.24 © R/W STATE ST.
- (B) 30+01.97 PROP. B CONST. RAMP C = 84+24.38 © R/W STATE ST.
- (C) 290+45.50, 223.48' RT. © R/W I.R. 76 = 83+79.87, 34.00' RT. © R/W STATE ST.
- (D) 290+46.67, 218.61' RT. © R/W I.R. 76 = 83+84.87, 34.00' RT. © R/W STATE ST.
- (E) 290+42.79, 217.68' RT. © R/W I.R. 76 = 83+84.87, 30.00' RT. © R/W STATE ST.

- (F) 290+54.77, 168.01' RT. © R/W I.R. 76 = 84+35.96, 30.00' RT. © R/W STATE ST.
- (G) 290+58.66, 168.95' RT. © R/W I.R. 76 = 84+35.96, 34.00' RT. © R/W STATE ST.
- (H) 290+59.84, 164.09' RT. © R/W I.R. 76 = 84+40.96, 34.00' RT. © R/W STATE ST.
- (I) 290+55.95, 163.15' RT. © R/W I.R. 76 = 84+40.96, 30.00' RT. © R/W STATE ST.

PROP. B CONST. RAMP C1  
P.I. Sta. 135+00.00  
 $\Delta = 6^\circ 00' 00''$  (RT)  
 $D_c = 2^\circ 00' 00''$   
 $R = 2,864.79'$   
 $L = 300.00'$   
 $E = 3.93'$   
 $C = 299.86'$   
C.B. = S 64° 24' 46" E

LINE TABLE

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	S 42°57'08" W	70.00'	L12	N 47°04'47" W	4.00'
L2	N 42°55'13" E	17.38'	L13	N 42°57'08" E	40.00'
L3	S 47°04'47" E	4.00'	L14	N 42°55'13" E	33.82'
L4	N 42°55'13" E	5.00'	L15	S 47°04'47" E	4.00'
L5	N 47°04'47" W	4.00'	L16	N 42°55'13" E	5.00'
L6	N 42°55'13" E	47.62'	L17	N 47°04'47" W	4.00'
L7	S 42°57'08" W	25.00'	L18	N 42°55'13" E	10.62'
L8	N 42°57'08" W	8.00'	L19	N 42°55'13" E	50.00'
L9	N 42°55'13" E	3.47'			
L10	S 47°04'47" E	4.00'			
L11	N 42°55'13" E	5.00'			



RIGHT OF WAY CURVE DATA

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	72°10'21"	10.00'	12.60'	11.78'	S 79°00'23" W
C2	108°42'00"	18.00'	34.15'	29.25'	N 11°25'47" W

REV. BY	DATE	DESCRIPTION
TWW	9-21-18	REMOVE RIGHT OF WAY LINE PCL 8
TWW	7/03/18	ADD PARCEL 8-E
TWW	8/14/17	ADD PARCEL 7-E

DATE COMPLETED: 3/15/2017

RIGHT OF WAY BOUNDARY SHEET  
RAMP C - BEGIN TO STA. 34+00

SUM-76-5.53

PID NO. 96670

R/W DESIGNER: NLC  
R/W REVIEWER: TDM

MICHAEL A. KING  
01-10674  
INST. 54515022

CRAIG L. DOMERS  
01-09425  
INST. 54013518

TIMOTHY W. CALLIHAN & JEANETTE M. CALLIHAN  
01-02606  
D.B. 1976, PG. 1945

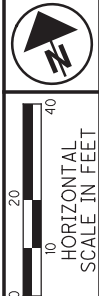
THE BARBERTON REALTY COMPANY'S ALLOTMENT  
P.B. 8, PG. 27

13 / 27

(658)  
(672)

**SUMMIT COUNTY  
CITY OF BARBERTON**

13	CRAIG L. DOMERS 01-09424 1203 ROMIG AVE. RESIDENTIAL	17	THOMAS MARTIN FOYLE & DEBRA JEAN FOYLE 01-03688 1202 CENTRAL AVE. RESIDENTIAL	18	SCOTT WHITED 01-06318 1196 CENTRAL AVE. RESIDENTIAL	20	STATE OF OHIO 01-03834 CENTRAL AVE. VACANT	26	TIMOTHY W. CALLIHAN & JEANETTE M. CALLIHAN 01-02606 111 ELMWOOD AVE. RESIDENTIAL	27	MICHAEL A. KING 01-10674 FAIRMONT AVE. VACANT	38	MATTHEW G. MCKINNEY & VICKI M. MCKINNEY 01-04431 65 ELMWOOD AVE. RESIDENTIAL	66	TRANT C. HOLT 01-01054 107 ELMWOOD AVE. RESIDENTIAL	68	NICHOL M. NERUDA 01-04761 99 ELMWOOD AVE. RESIDENTIAL	72	MARIE L. WELCH 01-08477 75 ELMWOOD AVE. RESIDENTIAL
16	EVERETT LOWRY FAIRMONT AVE. VACANT	19	ALVA O. GWINN CENTRAL AVE. RESIDENTIAL (VACANT)	21	KEVIN M. SUBOTICKI 1195 CENTRAL AVE. RESIDENTIAL	40	MATT MCKINNEY & VICKI MCKINNEY 01-01219 61 ELMWOOD AVE. RESIDENTIAL	67	DARRELL A. THOMPSON 01-04762 103 ELMWOOD AVE. RESIDENTIAL	69	MARSHA S. WATSON 1192 CENTRAL AVE. RESIDENTIAL								

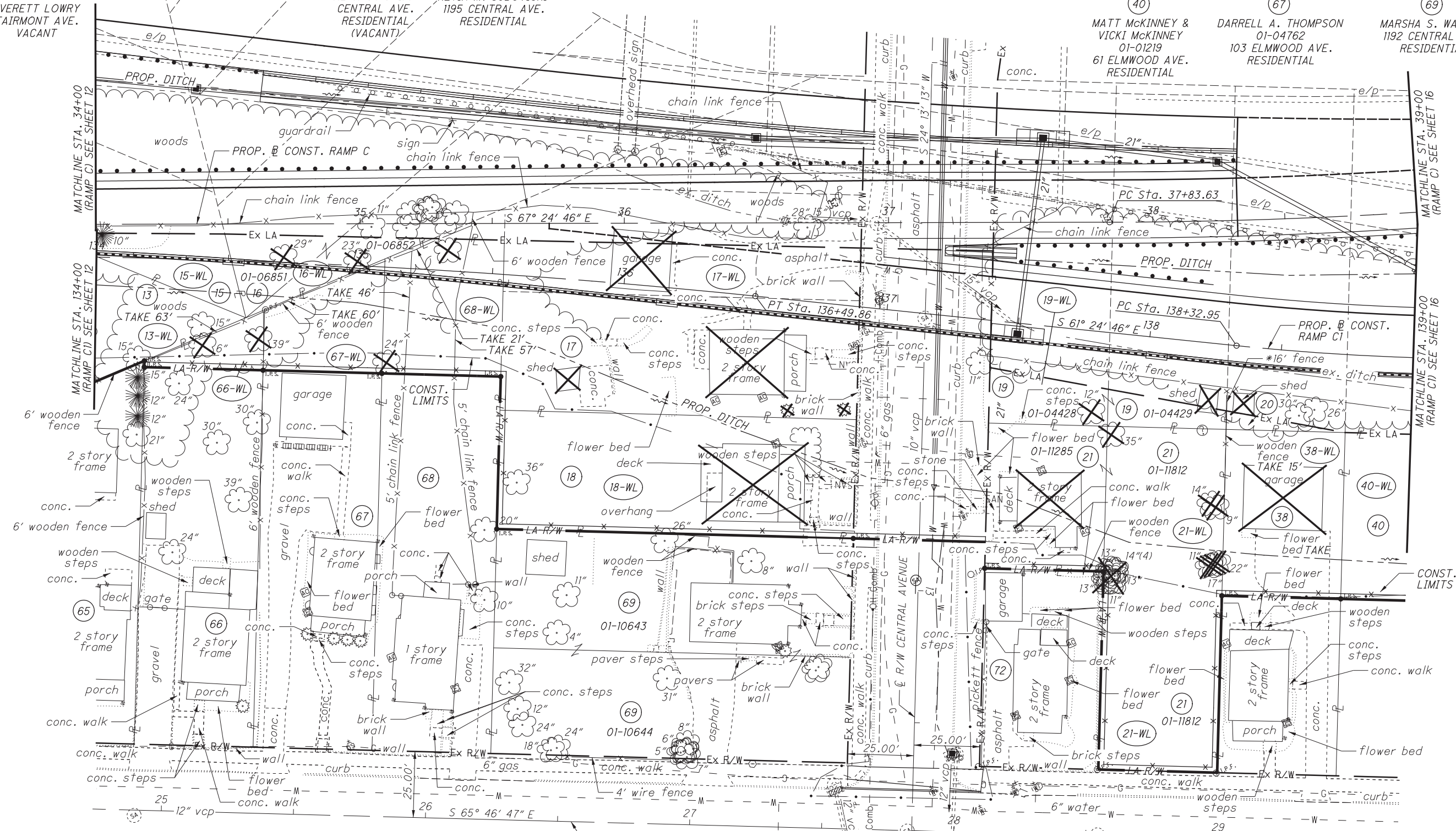


PID NO. **96670**  
R/W DESIGNER NLC  
R/W REVIEWER TDM

**RIGHT OF WAY TOPOGRAPHY SHEET**  
**RAMP C - STA. 34+00 TO STA. 39+00**

**SUM-76-5.53**

14 / 27  
659  
672



<b>PROP. &amp; CONST. RAMP C1</b> P.I. Sta. 138+99.73 $\Delta = 8^\circ 00' 00''$ (LT) $Dc = 6^\circ 00' 00''$ $R = 954.93'$ $T = 66.78'$ $L = 133.33'$ $E = 2.33'$ $C = 133.23'$ $C.B. = S 65^\circ 24' 46'' E$	<b>PROP. &amp; CONST. RAMP C1</b> P.I. Sta. 135+00.00 $\Delta = 6^\circ 00' 00''$ (RT) $Dc = 2^\circ 00' 00''$ $R = 2,864.79'$ $T = 150.14'$ $L = 300.00'$ $E = 3.93'$ $C = 299.86'$ $C.B. = S 64^\circ 24' 46'' E$	<b>PROP. &amp; CONST. RAMP C</b> P.I. Sta. 38+67.02 $\Delta = 5^\circ 00' 00''$ (LT) $Dc = 3^\circ 00' 00''$ $R = 1,909.86'$ $T = 83.39'$ $L = 166.67'$ $E = 1.82'$ $C = 166.61'$ $C.B. = S 69^\circ 54' 46'' E$
---	--	---

CIS	1/5/18	REVISED 13-WL, 15-WL, 16-WL, 66-WL, 67-WL, AND 68-WL
<b>REV. BY</b>	<b>DATE</b>	<b>DESCRIPTION</b>
DATE COMPLETED: 3/15/2017		

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13 CRAIG L. DOMERS 01-09424 INST. 54013518  
 15 MICHAEL A. KING 01-10674 INST. 54515022  
 16 EVERETT LOWRY D.B. 3247, PG. 199  
 19 ALVA O. GWINN D.B. 2006, PG. 125  
 20 STATE OF OHIO 01-03834 J.E. 2206, PG. 400

SUMMIT COUNTY  
 CITY OF BARBERTON

- (A) 11+95.08 @ R/W CENTRAL AVE.= 137+14.56 PROP. @ CONST. RAMP C1
- (B) 11+60.61 @ R/W CENTRAL AVE.= 37+14.84 PROP. @ CONST. RAMP C
- (C) 294+78.77, 155.19' RT. @ R/W I.R. 76

LINE	BEARING	DISTANCE
L1	S 08°37'10" W	32.70'
L2	N 89°44'12" E	49.45'
L3	S 65°46'47" E	45.00'
L4	N 24°13'13" E	2.39'



10 HORIZONTAL SCALE IN FEET

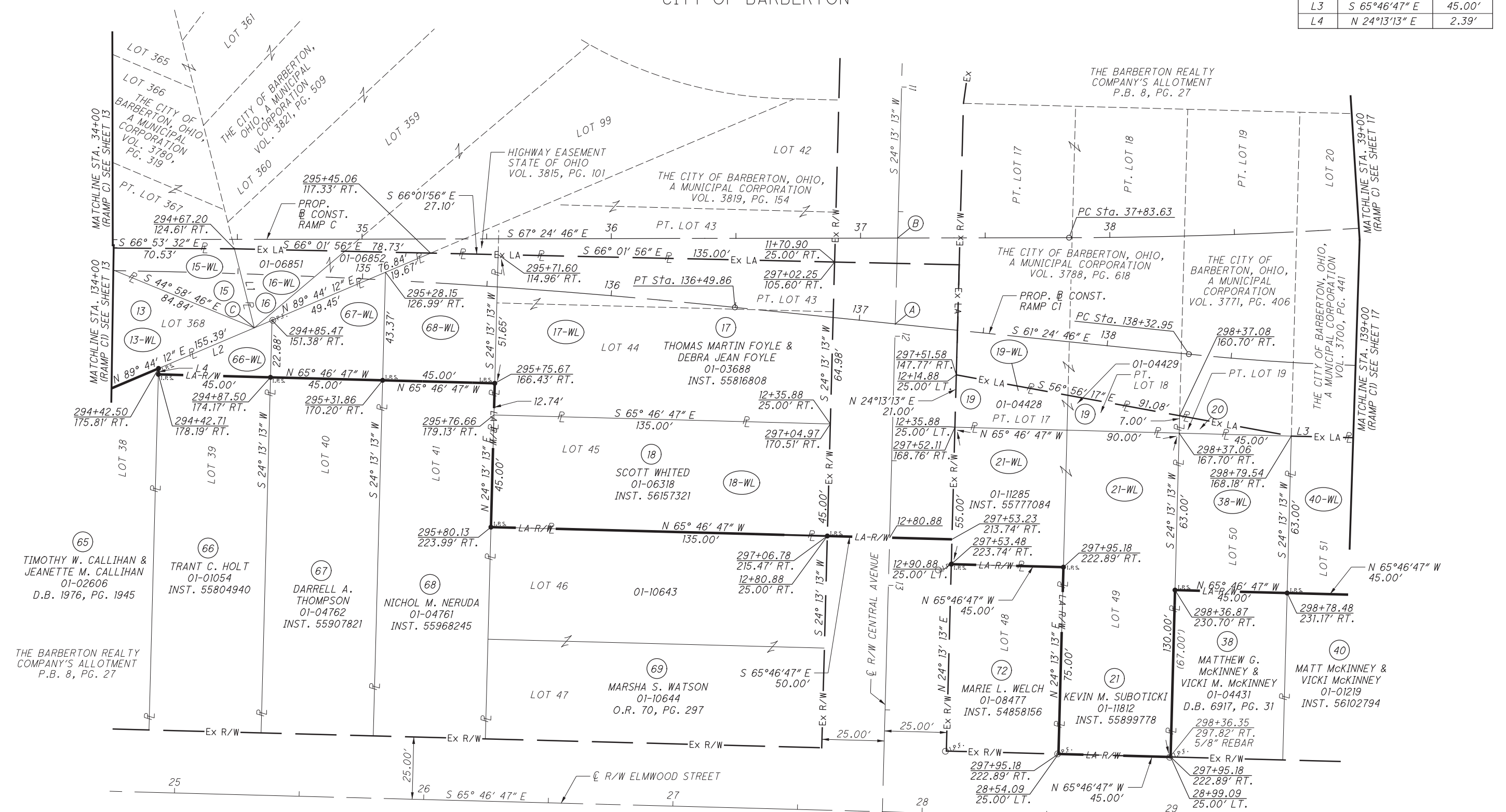
PID NO. 96670

R/W DESIGNER NLC  
 R/W REVIEWER TDM

RIGHT OF WAY BOUNDARY SHEET  
 RAMP C - STA. 34+00 TO STA. 39+00

SUM-76-5.53

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PROP. @ CONST. RAMP C1 P.I. Sta. 138+99.73 Δ = 8° 00' 00" (LT) Dc = 6° 00' 00" R = 954.93' T = 66.78' L = 133.33' E = 2.33' C = 133.23' C.B. = S 65° 24' 46" E	PROP. @ CONST. RAMP C1 P.I. Sta. 135+00.00 Δ = 6° 00' 00" (RT) Dc = 2° 00' 00" R = 2,864.79' T = 150.14' L = 300.00' E = 3.93' C = 299.86' C.B. = S 64° 24' 46" E	PROP. @ CONST. RAMP C P.I. Sta. 38+67.02 Δ = 5° 00' 00" (LT) Dc = 3° 00' 00" R = 1,909.86' T = 83.39' L = 166.67' E = 1.82' C = 166.61' C.B. = S 69° 54' 46" E
---	--	---

REV. BY	DATE	DESCRIPTION
CIS	1/5/18	REVISED 13-WL, 15-WL, 16-WL, 66-WL, 67-WL, AND 68-WL

DATE COMPLETED: 3/15/2017



SCALE  
10  
HORIZONTAL  
SCALE IN FEET

PID NO.  
**96670**

R/W DESIGNER  
NLC  
R/W REVIEWER  
TDM

**RIGHT OF WAY TOPOGRAPHY SHEET**  
**RAMP C1 - STA. 139+00 TO STA. 144+00**

**SUM-76-5.53**

16 / 27

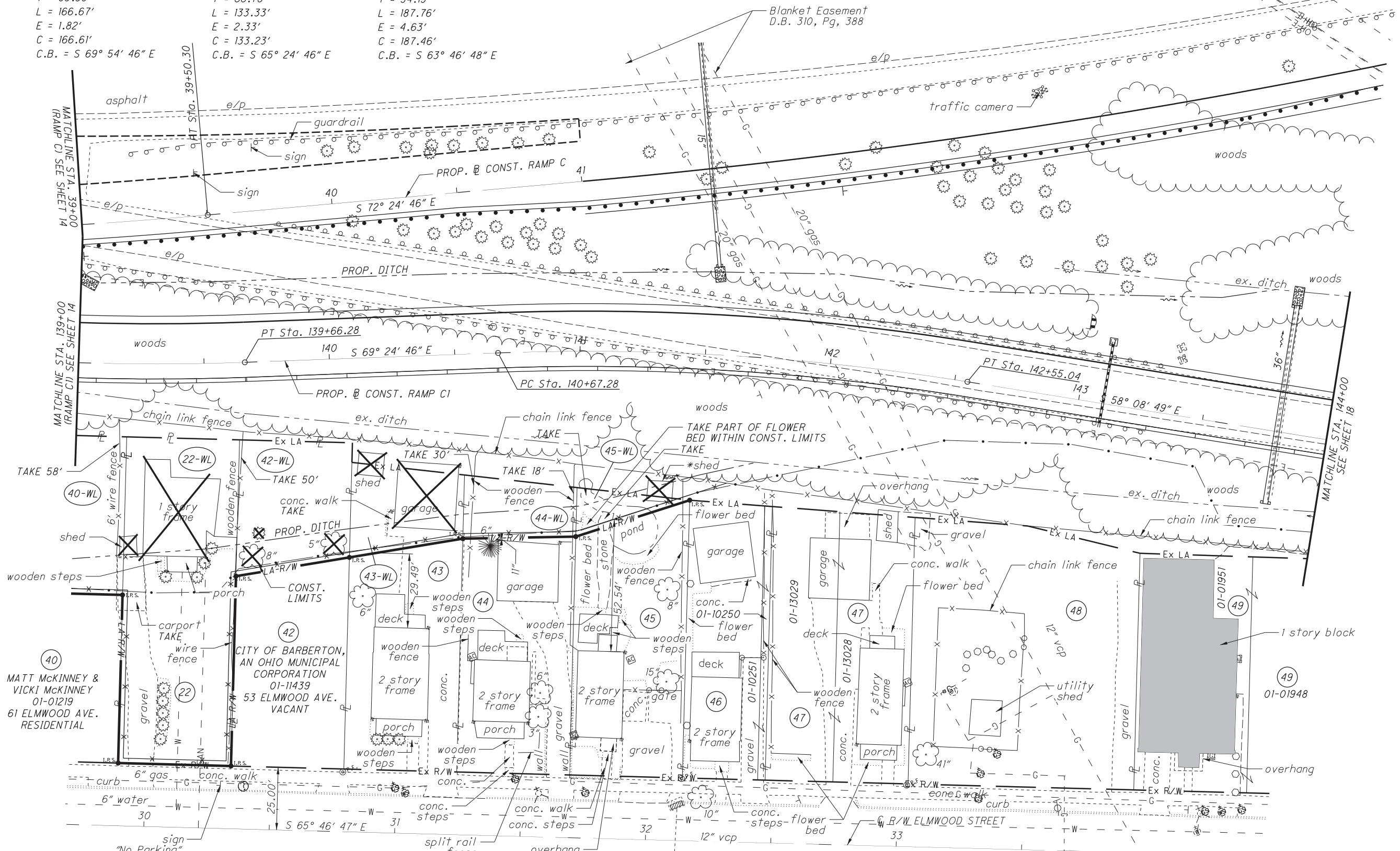
(661)  
(672)

**SUMMIT COUNTY  
CITY OF BARBERTON**

**PROP. ▯ CONST. RAMP C**  
P.I. Sta. 38+67.02  
Δ = 5° 00' 00" (LT)  
Dc = 3° 00' 00"  
R = 1,909.86'  
T = 83.39'  
L = 166.67'  
E = 1.82'  
C = 166.61'  
C.B. = S 69° 54' 46" E

**PROP. ▯ CONST. RAMP C1**  
P.I. Sta. 138+99.73  
Δ = 8° 00' 00" (LT)  
Dc = 6° 00' 00"  
R = 954.93'  
T = 66.78'  
L = 133.33'  
E = 2.33'  
C = 133.23'  
C.B. = S 65° 24' 46" E

**PROP. ▯ CONST. RAMP C1**  
P.I. Sta. 141+61.47  
Δ = 11° 15' 57" (RT)  
Dc = 6° 00' 00"  
R = 954.93'  
T = 94.19'  
L = 187.76'  
E = 4.63'  
C = 187.46'  
C.B. = S 63° 46' 48" E



(22) GREG A. EMMONS  
01-02241  
57 ELMWOOD AVE.  
RESIDENTIAL

(43) JOSEPH DUKES  
01-03100  
47 ELMWOOD AVE.  
RESIDENTIAL

(44) ANTHONY W. PARKS, JR.  
01-06938  
43 ELMWOOD AVE.  
RESIDENTIAL

(45) KEVIN M. PARK & MICHELLE L. PARK  
01-01920  
39 ELMWOOD AVE.  
RESIDENTIAL

(46) ROBERT ALLEN SANDERSON & LAUREN BRIGID SANDERSON  
35 ELMWOOD AVE.  
RESIDENTIAL

(47) BRADFORD M. LIKENS & ALTA L. LIKENS, TRUSTEES OF THE BRADFORD M. LIKENS & ALTA L. LIKENS TRUST  
29 ELMWOOD AVE.  
RESIDENTIAL

(48) THE EAST OHIO GAS COMPANY, A CORPORATION OF CLEVELAND, OHIO  
01-13546  
25 ELMWOOD AVE.  
COMMERCIAL UTILITY

(49) GREGORY L. NORTH & DANA L. NORTH  
1206 WOOSTER RD.  
COMMERCIAL

REV. BY	DATE	DESCRIPTION
AJR	3/31/17	ADD REMOVAL X TO SHED ON PARCEL 45
DATE COMPLETED: 3/15/2017		

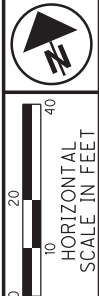
O:\2016\2016146\ProjectData\SUM\96670\Design\Drawings\96670-RT003.dgn 7/25/2017 12:32:22 PM nconner

PROP. CONST. RAMP C1  
P.I. Sta. 138+99.73  
 $\Delta = 8^\circ 00' 00''$  (LT)  
 $D_c = 6^\circ 00' 00''$   
 $R = 954.93'$   
 $T = 66.78'$   
 $L = 133.33'$   
 $E = 2.33'$   
 $C = 133.23'$   
C.B. = S 65° 24' 46" E

SUMMIT COUNTY  
CITY OF BARBERTON

PROP. CONST. RAMP C1  
P.I. Sta. 141+61.47  
 $\Delta = 11^\circ 15' 57''$  (RT)  
 $D_c = 6^\circ 00' 00''$   
 $R = 954.93'$   
 $T = 94.19'$   
 $L = 187.76'$   
 $E = 4.63'$   
 $C = 187.46'$   
C.B. = S 63° 46' 48" E

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 65°46'47" E	45.00'
L2	N 68°19'29" W	45.04'
L3	S 60°54'39" E	45.16'
L4	N 85°00'47" W	47.66'
L5	N 76°40'52" W	45.83'

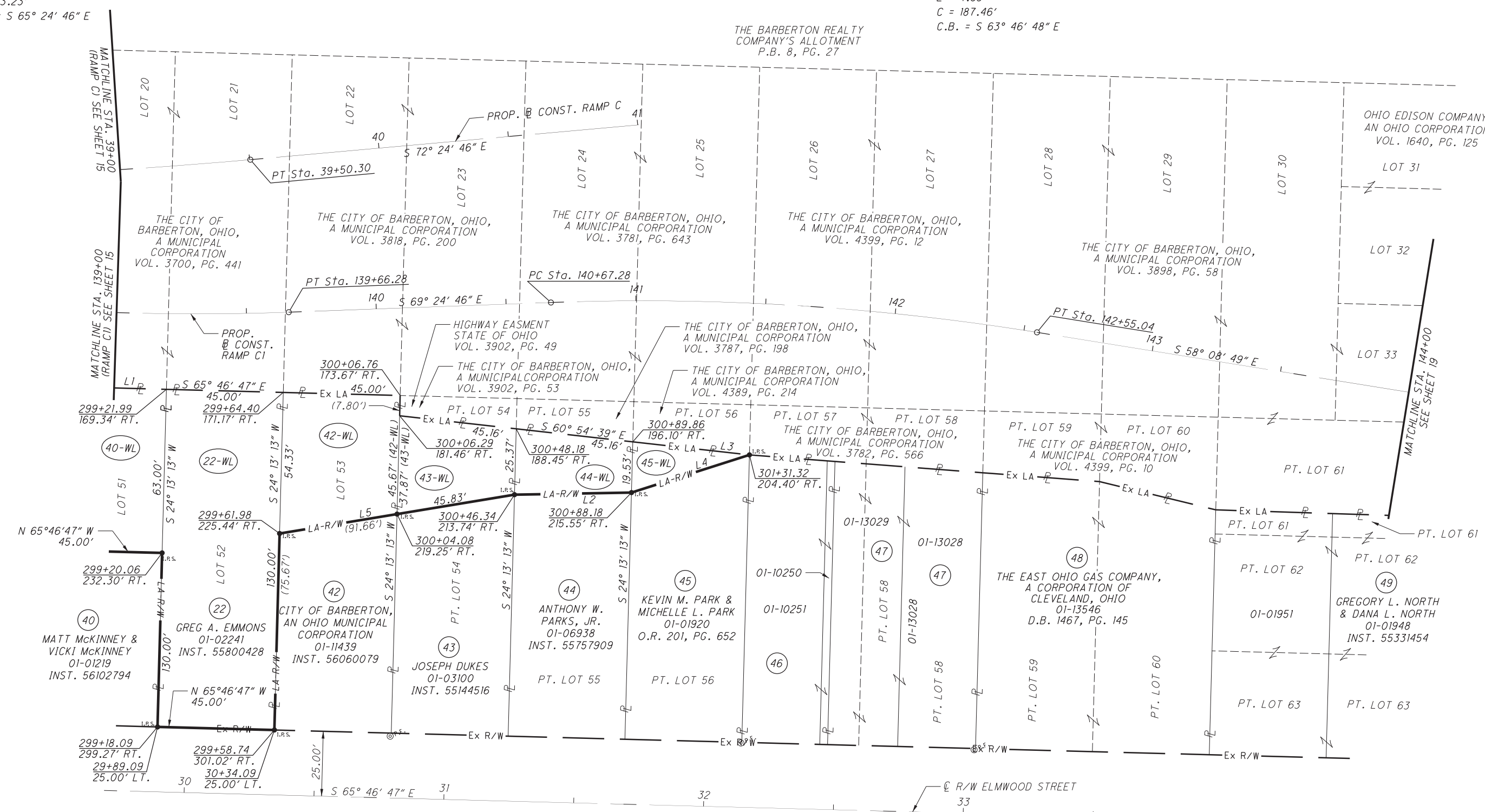


PID NO. **96670**  
R/W DESIGNER NLC  
R/W REVIEWER TDM

**RIGHT OF WAY BOUNDARY SHEET**  
**RAMP C1 - STA. 139+00 TO STA. 144+00**

**SUM-76-5.53**  
17 / 27  
662  
672

O:\2016\2016146\ProjectData\SUM\96670\Design\RW\Sheets\96670\_RB003.dgn 7/25/2017 12:32:24 PM ncomer



(46) ROBERT ALLEN SANDERSON & LAUREEN BRIGID SANDERSON D.B. 7565, PG. 720  
(47) BRADFORD M. LIKENS & ALTA L. LIKENS, TRUSTEES OF THE BRADFORD M. LIKENS & ALTA L. LIKENS TRUST INST. 55989785

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 3/15/2017

SUMMIT COUNTY  
CITY OF BARBERTON

C R/W I.R. 76  
 P.I. Sta. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $Dc = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $Ls = 200.00'$   
 $LT = 133.34'$   
 $ST = 66.67'$   
 $x = 199.98'$   
 $y = 2.36'$   
 $k = 100.00'$   
 $p = 0.59'$   
 $\Delta c = 24^\circ 56' 49''$  (LT)  
 $Lc = 1,232.42'$   
 $Ts = 832.04'$   
 $E = 93.70'$   
 $C = 1,222.70'$   
 $C1 = C2 = 199.99'$   
 $C.B.1 = S 61^\circ 19' 35'' E$   
 $C.B.2 = S 75^\circ 08' 58'' E$   
 $C.B.2 = N 88^\circ 58' 20'' W$



10  
 HORIZONTAL  
 SCALE IN FEET

PID NO.  
**96670**

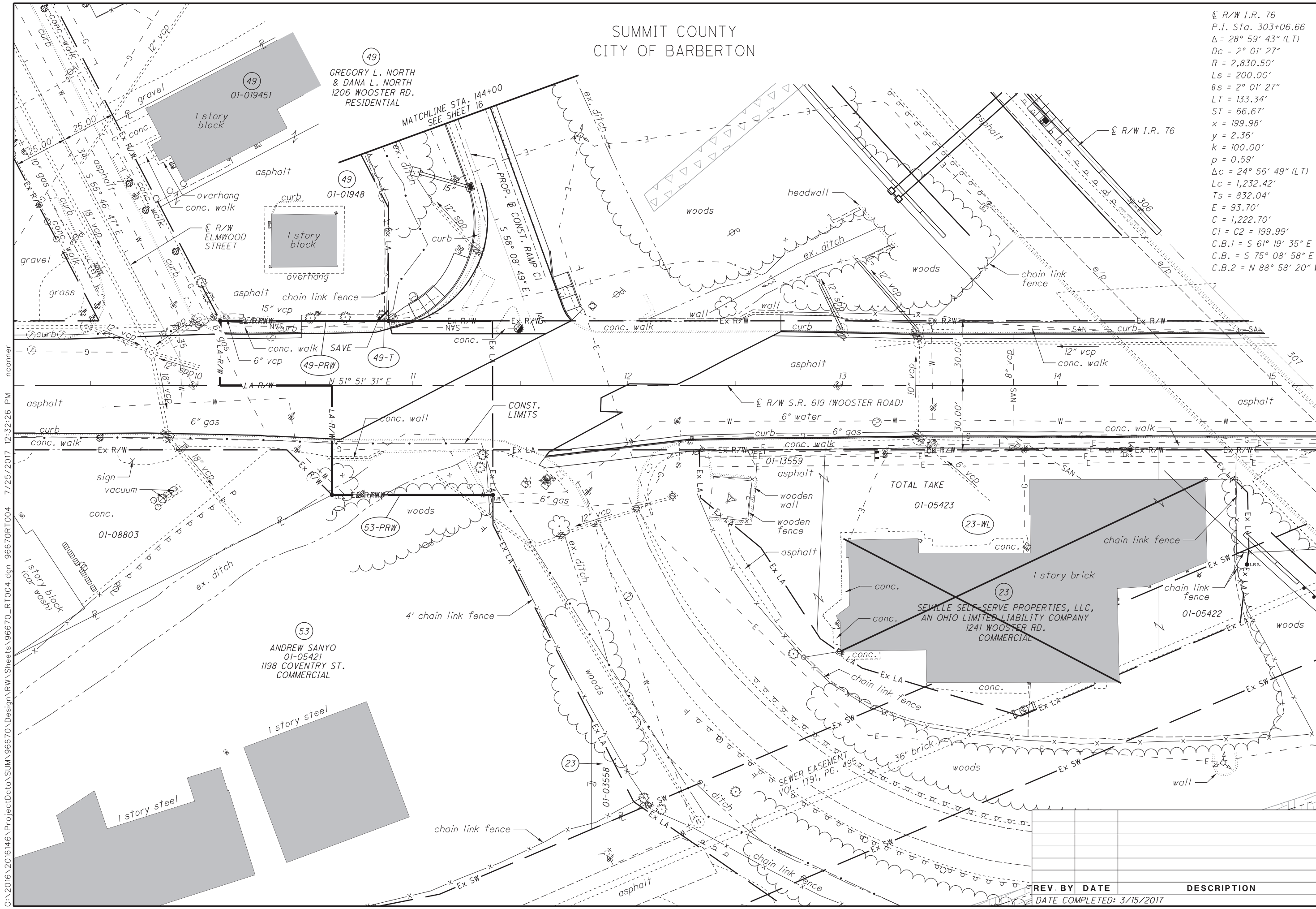
R/W DESIGNER  
 NLC  
 R/W REVIEWER  
 TDM

RIGHT OF WAY TOPOGRAPHY SHEET  
**WOOSTER ROAD**

SUM-76-5.53

18 / 27

663  
 672



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REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 3/15/2017

SUMMIT COUNTY  
CITY OF BARBERTON

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 39°33'30" E	25.74'
L2	S 31°36'34" E	35.19'
L3	S 38°08'29" E	30.00'
L4	N 51°51'31" E	52.04'
L5	S 38°08'29" E	50.97'

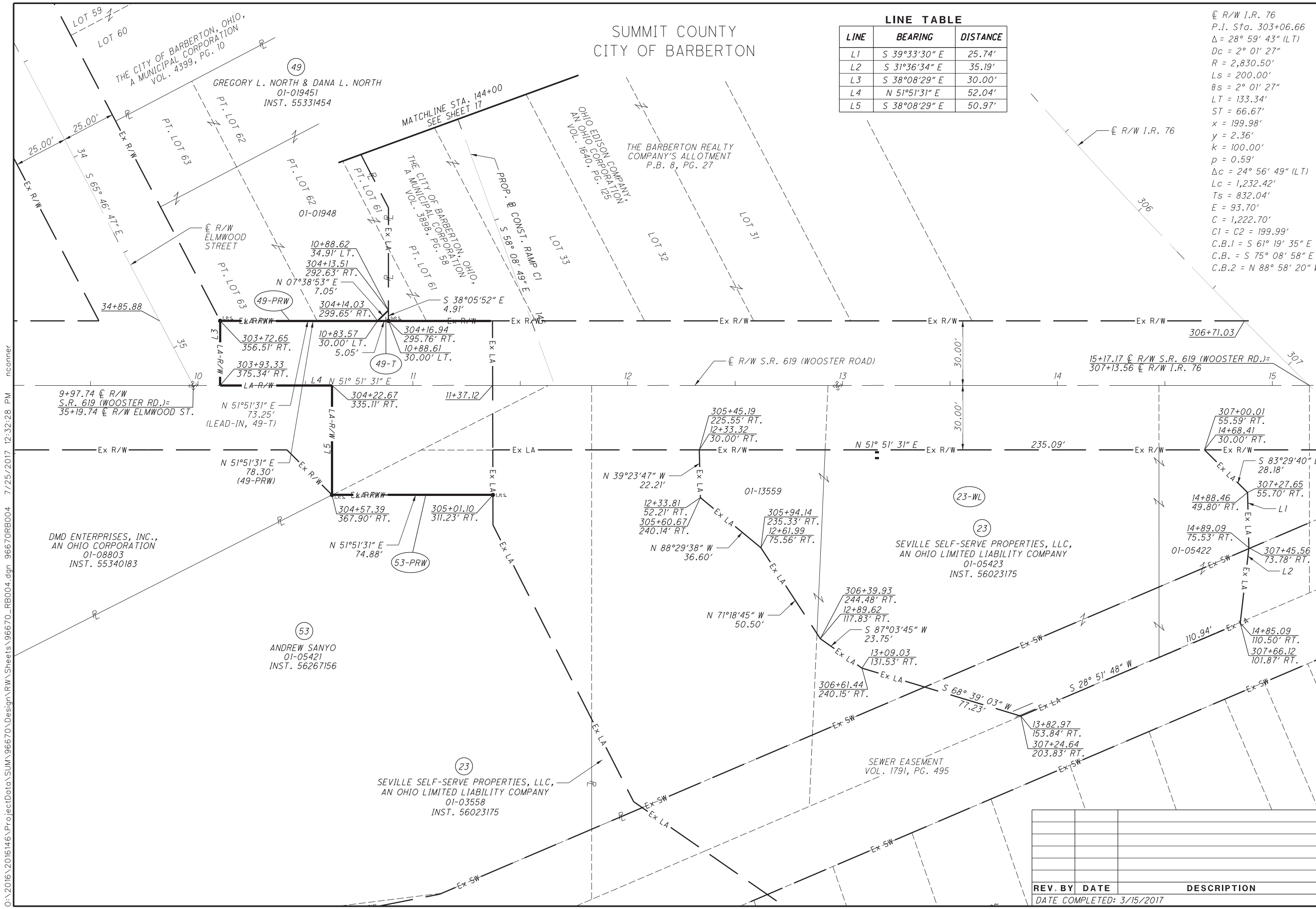
C R/W I.R. 76  
 P.I. Sta. 303+06.66  
 $\Delta = 28^\circ 59' 43''$  (LT)  
 $Dc = 2^\circ 01' 27''$   
 $R = 2,830.50'$   
 $Ls = 200.00'$   
 $LT = 133.34'$   
 $\theta s = 2^\circ 01' 27''$   
 $ST = 66.67'$   
 $x = 199.98'$   
 $y = 2.36'$   
 $k = 100.00'$   
 $p = 0.59'$   
 $\Delta c = 24^\circ 56' 49''$  (LT)  
 $Lc = 1,232.42'$   
 $Ts = 832.04'$   
 $E = 93.70'$   
 $C = 1,222.70'$   
 $C1 = C2 = 199.99'$   
 $C.B.1 = S 61^\circ 19' 35'' E$   
 $C.B. = S 75^\circ 08' 58'' E$   
 $C.B.2 = N 88^\circ 58' 20'' W$



PID NO. **96670**  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM

RIGHT OF WAY BOUNDARY SHEET  
 WOOSTER ROAD

SUM-76-5.53



REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 3/15/2017

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SUMMIT COUNTY  
CITY OF BARBERTON

SUMMIT COUNTY  
CITY OF AKRON

(A) 17+31.23 @ R/W S.R. 619 =  
0+00.00 @ R/W KENMORE BLVD.



PID NO.  
**96670**

R/W DESIGNER  
NLC

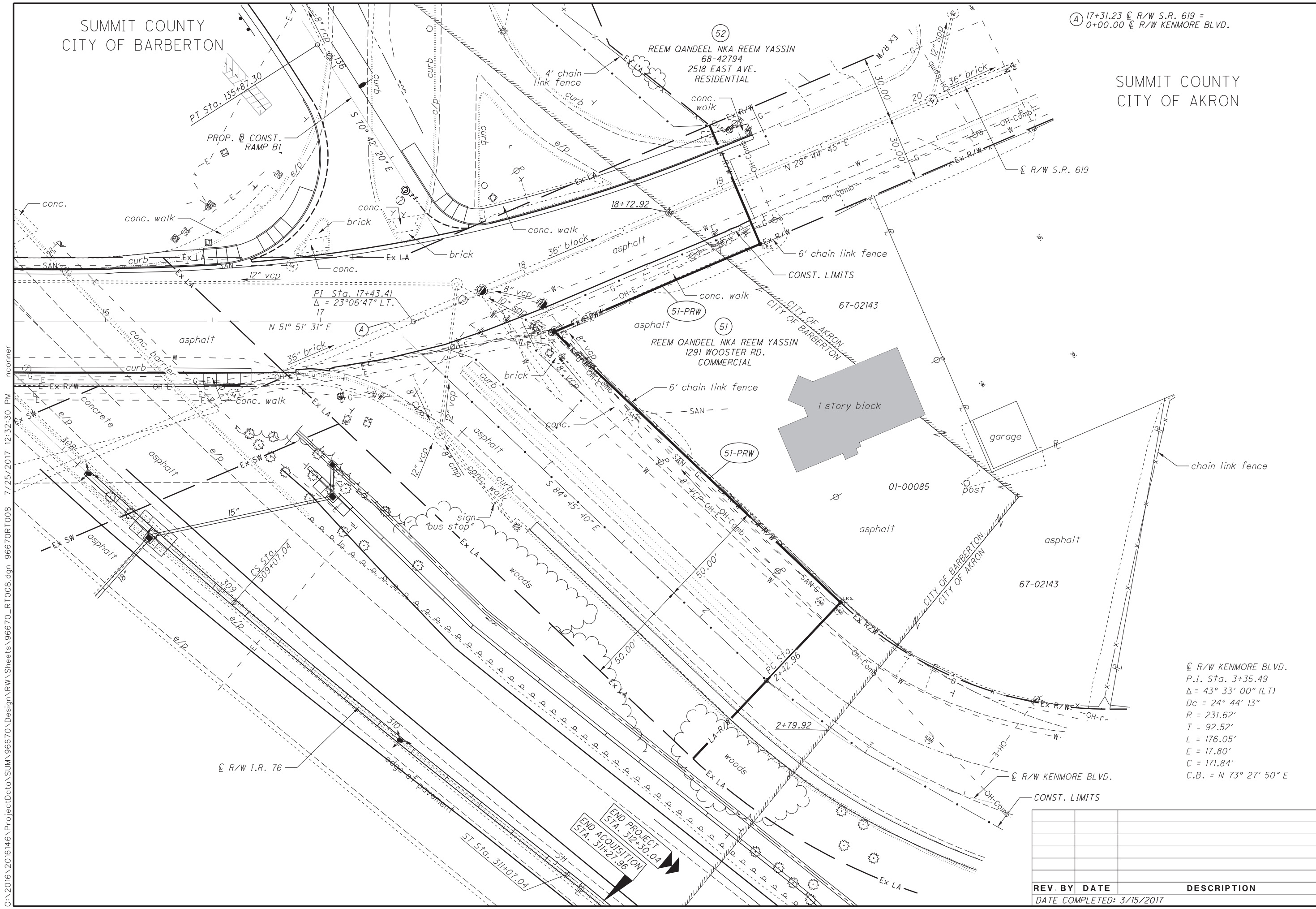
R/W REVIEWER  
TDM

**RIGHT OF WAY TOPOGRAPHY SHEET**  
**WOOSTER ROAD**

**SUM-76-5.53**

20/27

665  
672



@ R/W KENMORE BLVD.  
P.I. Sta. 3+35.49  
 $\Delta = 43^\circ 33' 00''$  (LT)  
Dc = 24° 44' 13"  
R = 231.62'  
T = 92.52'  
L = 176.05'  
E = 17.80'  
C = 171.84'  
C.B. = N 73° 27' 50" E

END PROJECT  
STA. 312+50.04

END ACQUISITION  
STA. 311+27.96

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 3/15/2017

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SUMMIT COUNTY  
CITY OF BARBERTON

Ⓐ 17+31.23 @ R/W S.R. 619 =  
0+00.00 @ R/W KENMORE BLVD.

SUMMIT COUNTY  
CITY OF AKRON



PID NO.  
**96670**

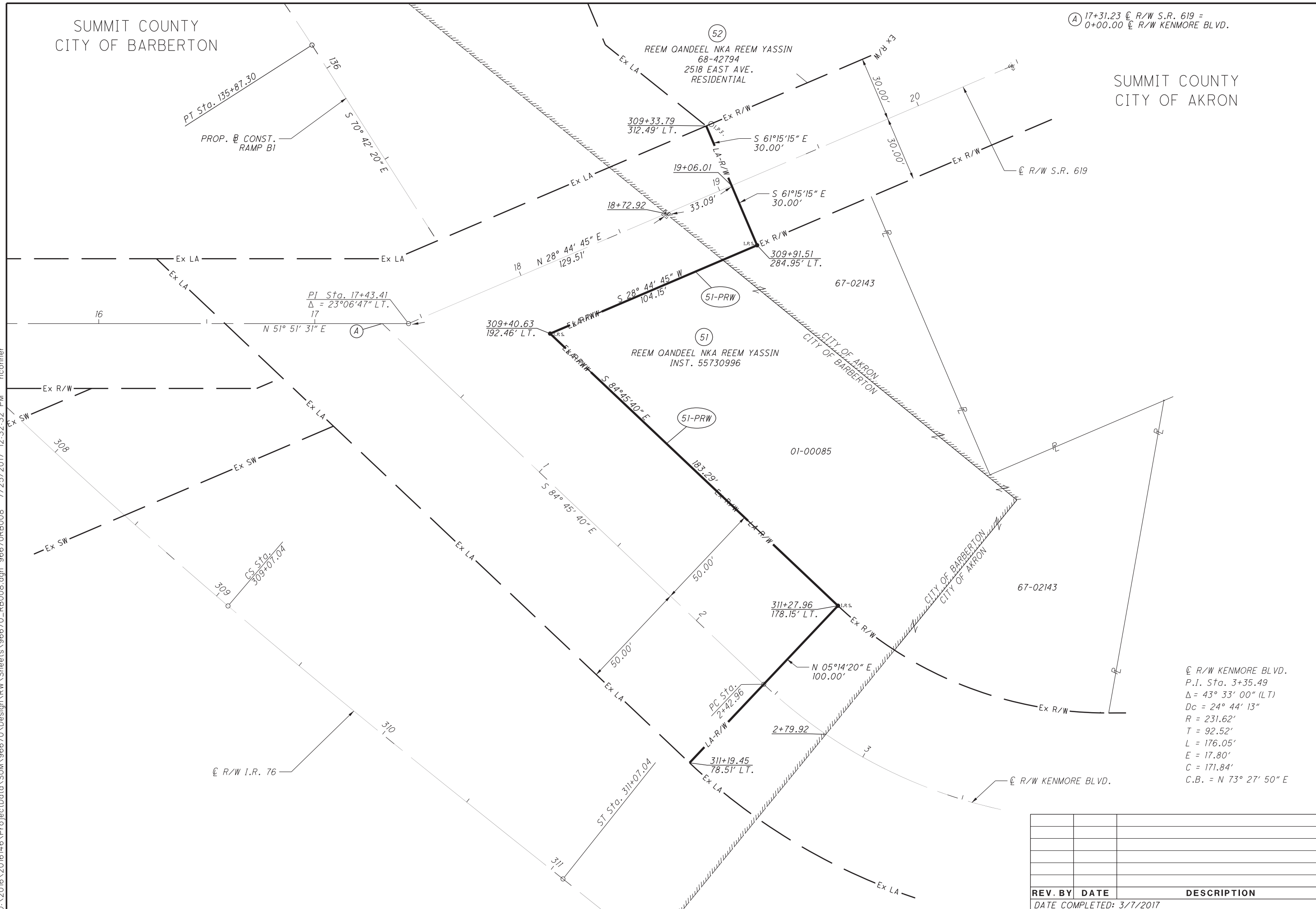
R/W DESIGNER  
NLC  
R/W REVIEWER  
TDM

**RIGHT OF WAY BOUNDARY SHEET  
WOOSTER ROAD**

**SUM-76-5.53**

666  
672

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@ R/W KENMORE BLVD.  
P.I. Sta. 3+35.49  
Δ = 43° 33' 00" (LT)  
Dc = 24° 44' 13"  
R = 231.62'  
T = 92.52'  
L = 176.05'  
E = 17.80'  
C = 171.84'  
C.B. = N 73° 27' 50" E

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 3/7/2017

SUMMIT COUNTY  
CITY OF BARBERTON

© R/W WEST STATE STREET  
P.I. Sta. 90+30.19  
 $\Delta = 13^\circ 37' 41''$  (LT)  
 $Dc = 5^\circ 00' 00''$   
 $R = 1,145.92'$   
 $T = 136.93'$   
 $L = 272.56'$   
 $E = 8.15'$   
 $C = 271.92'$   
C.B. =  $N 33^\circ 30' 48'' E$



PID NO. **96670**  
R/W DESIGNER NLC  
R/W REVIEWER TDM

**RIGHT OF WAY TOPOGRAPHY SHEET**  
**WEST STATE STREET**

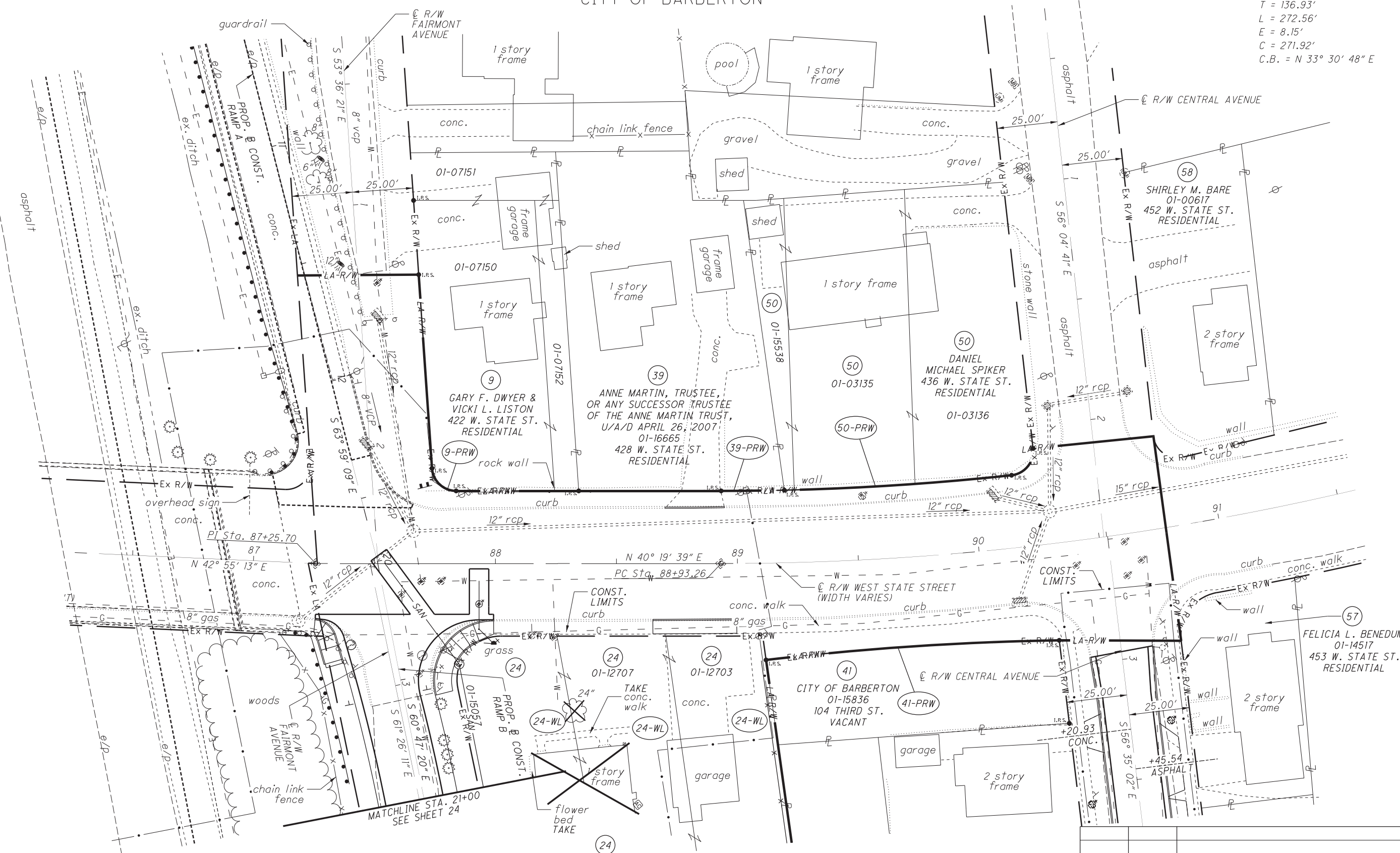
**SUM-76-5.53**

22 / 27

667  
672

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 3/15/2017



STEPHEN L. WILMOTH & CECIL L. WILMOTH  
427 W. STATE ST.  
RESIDENTIAL

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SUMMIT COUNTY  
CITY OF BARBERTON

- (A) 291+55.53, 168.56' LT. C R/W I.R. 76=  
87+84.50, 51.67' RT. C R/W W. STATE ST.=  
3+06.47, 25.00' LT. C R/W FAIRMONT AVE.
- (B) 291+37.61, 189.99' LT. C R/W I.R. 76=  
88+02.12, 30.00' RT. C R/W W. STATE ST.=  
2+88.85, 46.67' LT. C R/W FAIRMONT AVE.

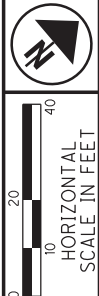
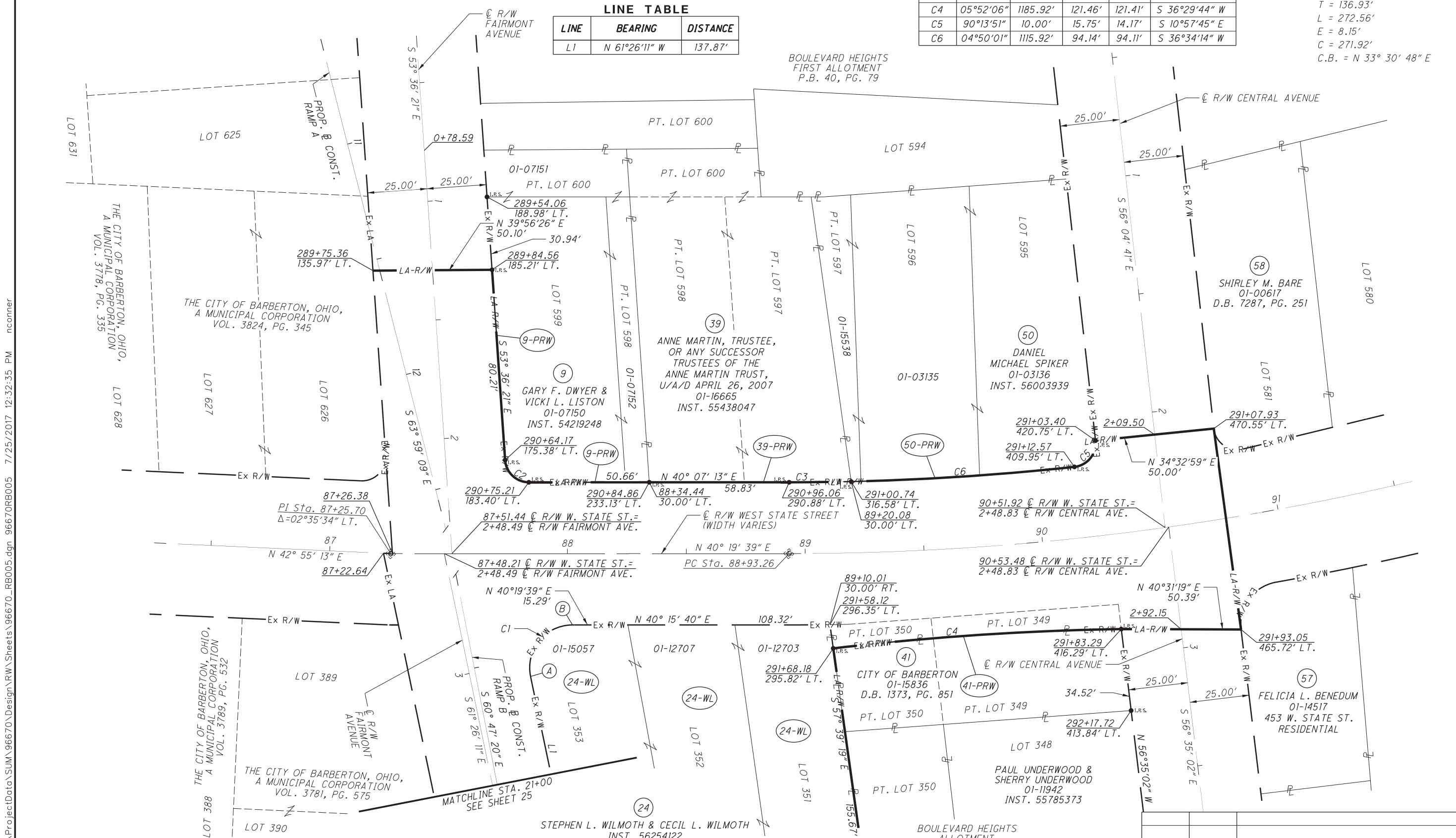
RIGHT OF WAY CURVE DATA

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	101°45'49"	18.00'	31.97'	27.93'	N 10°33'16" W
C2	86°03'58"	10.00'	15.02'	13.65'	N 83°21'40" E
C3	01°20'27"	1115.92'	26.12'	26.12'	N 39°39'12" E
C4	05°52'06"	1185.92'	121.46'	121.41'	S 36°29'44" W
C5	90°13'51"	10.00'	15.75'	14.17'	S 10°57'45" E
C6	04°50'01"	1115.92'	94.14'	94.11'	S 36°34'14" W

C R/W WEST STATE STREET  
P.I. Sta. 90+30.19  
Δ = 13° 37' 41" (LT)  
Dc = 5° 00' 00"  
R = 1,145.92'  
T = 136.93'  
L = 272.56'  
E = 8.15'  
C = 271.92'  
C.B. = N 33° 30' 48" E

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 61°26'11" W	137.87'



PID NO. 96670  
R/W DESIGNER NLC  
R/W REVIEWER TDM

RIGHT OF WAY BOUNDARY SHEET  
WEST STATE STREET

SUM-76-5.53

23/27

668  
672

REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 3/15/2017

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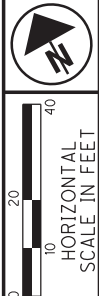
@ R/W CENTRAL AVENUE  
 P.I. Sta. 5+91.36  
 $\Delta = 47^\circ 31' 00''$  (RT)  
 $Dc = 16^\circ 04' 51''$   
 $R = 356.30'$   
 $T = 156.84'$   
 $L = 295.49'$   
 $E = 32.99'$   
 $C = 287.09'$   
 $C.B. = S 32^\circ 49' 26'' E$

@ R/W CENTRAL AVENUE  
 P.I. Sta. 9+85.59  
 $\Delta = 48^\circ 41' 26''$  (RT)  
 $Dc = 23^\circ 53' 25''$   
 $R = 239.83'$   
 $T = 108.52'$   
 $L = 203.81'$   
 $E = 23.41'$   
 $C = 197.73'$   
 $C.B. = S 15^\circ 16' 47'' W$

(60) RODNEY W. CLINGERMAN & TAMMY R. CLINGERMAN  
 01-08099  
 1253 CENTRAL AVE.  
 RESIDENTIAL

(61) LAURA MASSARO & RICHARD MASSARO  
 01-05886  
 1249 CENTRAL AVE.  
 RESIDENTIAL

SUMMIT COUNTY  
CITY OF BARBERTON



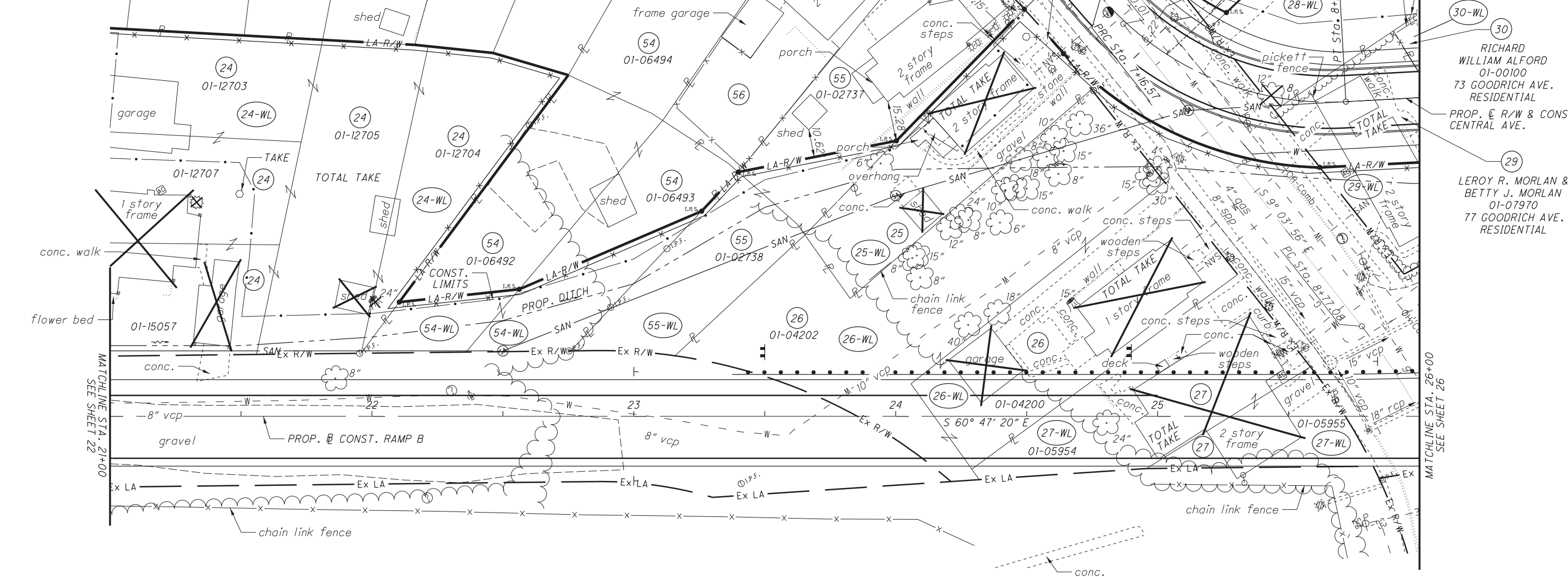
PROP. @ R/W & CONST.  
 CENTRAL AVENUE  
 P.I. Sta. 7+73.34  
 $\Delta = 52^\circ 42' 40''$  (LT)  
 $Dc = 50^\circ 00' 00''$   
 $R = 114.59'$   
 $T = 56.77'$   
 $L = 105.42'$   
 $E = 13.29'$   
 $C = 101.74'$   
 $C.B. = S 37^\circ 34' 56'' E$

PID NO. 96670  
 R/W DESIGNER NLC  
 R/W REVIEWER TDM

(28) COY LEE PATTERSON & MELISSA A. PATTERSON  
 01-04201  
 1245 CENTRAL AVE.  
 RESIDENTIAL

(30) RICHARD WILLIAM ALFORD  
 01-00100  
 73 GOODRICH AVE.  
 RESIDENTIAL

(29) LEROY R. MORLAN & BETTY J. MORLAN  
 01-07970  
 77 GOODRICH AVE.  
 RESIDENTIAL



(24) STEPHEN L. WILMOTH & CECIL L. WILMOTH  
 427 W. STATE ST.  
 RESIDENTIAL

(54) GORDON R. LANGHAM, AKA GORDON RONALD LANGHAM, ANDREA M. LANGHAM, T.O.D.  
 1266 CENTRAL AVE.  
 RESIDENTIAL

(55) ROBERT ASH & RUBY A. ASH  
 1254 CENTRAL AVE.  
 RESIDENTIAL

(56) JAMES L. SLAUGHTER & LAUREL A. SLAUGHTER  
 01-05345  
 1258 CENTRAL AVE.  
 RESIDENTIAL

(26) NEIGHBORHOOD CONSERVATION SERVICES OF BARBERTON, INC.  
 1240 CENTRAL AVE.  
 RESIDENTIAL

(25) STATE OF OHIO DEPARTMENT OF TRANSPORTATION  
 01-09146  
 1250 CENTRAL AVE.  
 RESIDENTIAL

(27) ELEANOR M. KING  
 1236 CENTRAL AVE.  
 RESIDENTIAL

REV. BY	DATE	DESCRIPTION
NLC	7/25/17	REVISED L/A SOUTH OF CENTRAL AVE.
DATE COMPLETED: 3/15/2017		

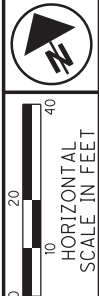
RIGHT OF WAY TOPOGRAPHY SHEET  
 RAMP B - STA. 21+00 TO STA. 26+00

SUM-76-5.53

24/27  
 (669)  
 (672)

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SUMMIT COUNTY  
CITY OF BARBERTON



PID NO.  
**96670**

R/W DESIGNER  
NLC

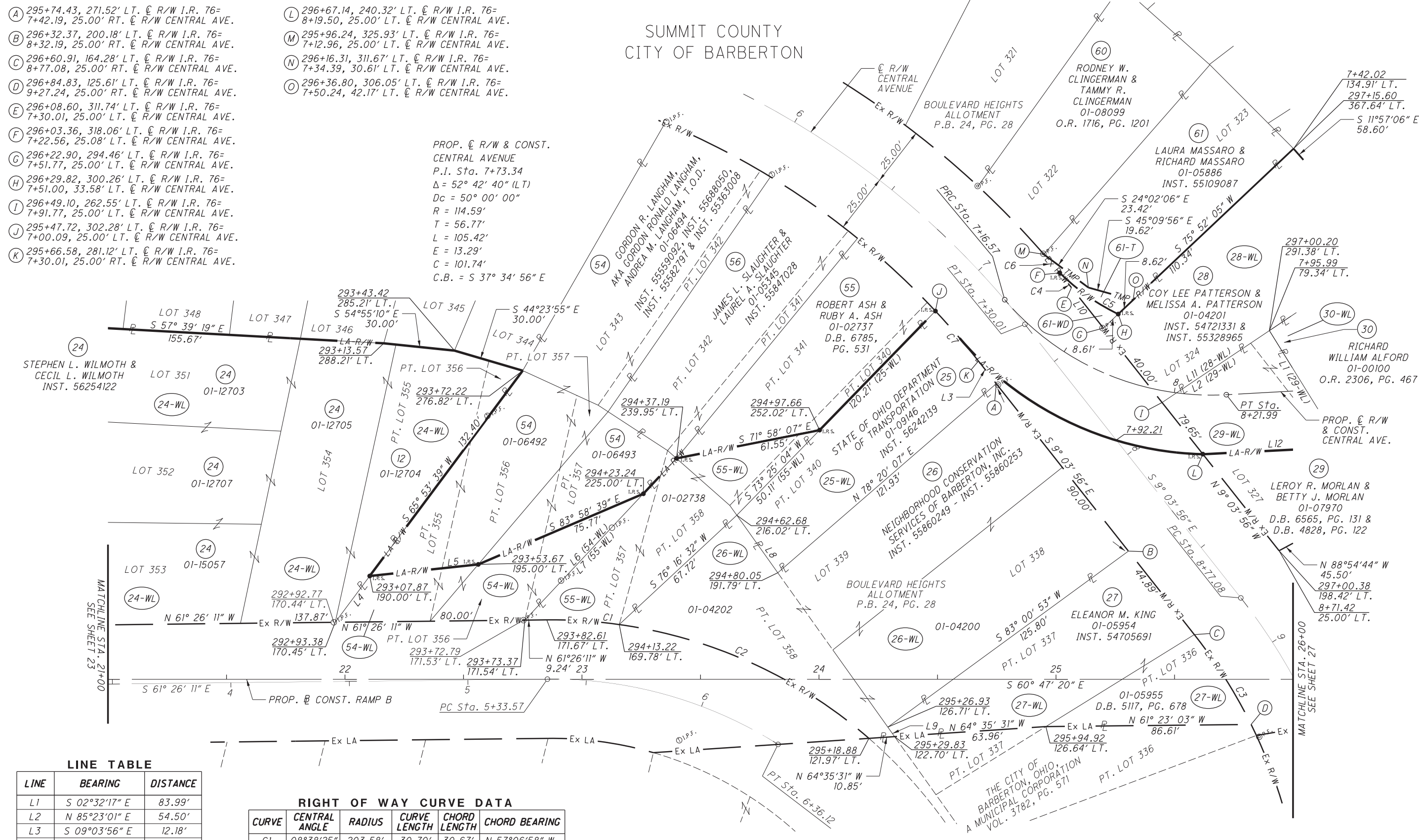
R/W REVIEWER  
TDM

**RIGHT OF WAY BOUNDARY SHEET**  
**RAMP B - STA. 21+00 TO STA. 26+00**

**SUM-76-5.53**

25 / 27

670  
672



- (A) 295+74.43, 271.52' LT. @ R/W I.R. 76=7+42.19, 25.00' RT. @ R/W CENTRAL AVE.
- (B) 296+32.37, 200.18' LT. @ R/W I.R. 76=8+32.19, 25.00' RT. @ R/W CENTRAL AVE.
- (C) 296+60.91, 164.28' LT. @ R/W I.R. 76=8+77.08, 25.00' RT. @ R/W CENTRAL AVE.
- (D) 296+84.83, 125.61' LT. @ R/W I.R. 76=9+27.24, 25.00' RT. @ R/W CENTRAL AVE.
- (E) 296+08.60, 311.74' LT. @ R/W I.R. 76=7+30.01, 25.00' LT. @ R/W CENTRAL AVE.
- (F) 296+03.36, 318.06' LT. @ R/W I.R. 76=7+22.56, 25.08' LT. @ R/W CENTRAL AVE.
- (G) 296+22.90, 294.46' LT. @ R/W I.R. 76=7+51.77, 25.00' LT. @ R/W CENTRAL AVE.
- (H) 296+29.82, 300.26' LT. @ R/W I.R. 76=7+51.00, 33.58' LT. @ R/W CENTRAL AVE.
- (I) 296+49.10, 262.55' LT. @ R/W I.R. 76=7+91.77, 25.00' LT. @ R/W CENTRAL AVE.
- (J) 295+47.72, 302.28' LT. @ R/W I.R. 76=7+00.09, 25.00' LT. @ R/W CENTRAL AVE.
- (K) 295+66.58, 281.12' LT. @ R/W I.R. 76=7+30.01, 25.00' RT. @ R/W CENTRAL AVE.
- (L) 296+67.14, 240.32' LT. @ R/W I.R. 76=8+19.50, 25.00' RT. @ R/W CENTRAL AVE.
- (M) 295+96.24, 325.93' LT. @ R/W I.R. 76=7+12.96, 25.00' LT. @ R/W CENTRAL AVE.
- (N) 296+16.31, 311.67' LT. @ R/W I.R. 76=7+34.39, 30.61' LT. @ R/W CENTRAL AVE.
- (O) 296+36.80, 306.05' LT. @ R/W I.R. 76=7+50.24, 42.17' LT. @ R/W CENTRAL AVE.

PROP. @ R/W & CONST.  
CENTRAL AVENUE  
P.I. Sta. 7+73.34  
Δ = 52° 42' 40" (LT)  
Dc = 50° 00' 00"  
R = 114.59'  
T = 56.77'  
L = 105.42'  
E = 13.29'  
C = 101.74'  
C.B. = S 37° 34' 56" E

**LINE TABLE**

LINE	BEARING	DISTANCE
L1	S 02°32'17" E	83.99'
L2	N 85°23'01" E	54.50'
L3	S 09°03'56" E	12.18'
L4	S 65°53'39" W	24.34'
L5	S 66°52'56" E	46.07'
L6	S 72°21'35" W	73.11'
L7	N 72°21'35" E	93.55'
L8	S 06°15'52" E	29.81'
L9	S 06°15'52" E	4.93'
L10	N 09°03'56" W	21.76'
L11	S 85°23'01" W	113.20'
L12	S 63°43'15" E	119.90'

**RIGHT OF WAY CURVE DATA**

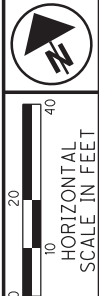
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	08°38'25"	203.58'	30.70'	30.67'	N 57°06'58" W
C2	33°02'17"	203.58'	117.39'	115.77'	N 36°16'37" W
C3	11°59'05"	214.83'	44.94'	44.86'	S 03°04'23" E
C4	01°11'48"	381.30'	7.96'	7.96'	N 09°03'56" E
C5	18°53'54"	92.00'	30.34'	30.21'	S 25°34'06" E
C6	01°32'41"	381.30'	10.28'	10.28'	N 11°29'52" W
C7	04°48'41"	331.30'	27.82'	27.81'	S 11°28'16" E

@ R/W FAIRMONT AVENUE P.I. Sta. 5+86.30 Δ = 32° 54' 04" (RT) Dc = 32° 05' 03" R = 178.58' T = 52.73' L = 102.55' E = 7.62' C = 101.14' C.B. = S 44° 59' 07" E	@ R/W CENTRAL AVENUE P.I. Sta. 5+91.36 Δ = 47° 31' 00" (RT) Dc = 16° 04' 51" R = 356.30' T = 156.84' L = 295.49' E = 32.99' C = 287.09' C.B. = S 32° 49' 26" E	@ R/W CENTRAL AVENUE P.I. Sta. 9+85.59 Δ = 48° 41' 26" (RT) Dc = 23° 53' 25" R = 239.83' T = 108.52' L = 203.81' E = 23.41' C = 197.73' C.B. = S 15° 16' 47" W
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REV. BY	DATE	DESCRIPTION
NLC	7/25/17	REVISED L/A SOUTH OF CENTRAL AVE.
DATE COMPLETED: 3/15/2017		

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SUMMIT COUNTY  
CITY OF BARBERTON



PID NO. **96670**  
R/W DESIGNER: NLC  
R/W REVIEWER: TDM

**RIGHT OF WAY TOPOGRAPHY SHEET**  
**RAMP B - STA. 26+00 TO STA. 31+00**

**SUM-76-5-53**

26/27  
671  
672

29 LEROY R. MORLAN & BETTY J. MORLAN 01-07970 77 GOODRICH AVE. RESIDENTIAL

30 RICHARD WILLIAM ALFORD 01-00100 73 GOODRICH AVE. RESIDENTIAL

31 BARBARA J. ROBERTS 01-05730 67 GOODRICH AVE. RESIDENTIAL

32 ROSALEE I. STINE & AMY CLEMENTS 63 GOODRICH AVE. RESIDENTIAL

33 DANIEL D. RACIN 72 GOODRICH AVE. RESIDENTIAL

35 HARLEY R. SPURLOCK & LORI J. SPURLOCK 1228 GRAND BLVD. RESIDENTIAL

37 JOSEPH TYLICKI 01-07171 GOODRICH AVE. RESIDENTIAL

73 JEWISH COMMUNITY FEDERATION 01-06682 GOODRICH AVE. VACANT

34 CITY OF BARBERTON 01-02157 104 THIRD ST. VACANT

36 BRENDA K. BANKS 01-08794 40 GOODRICH AVE. RESIDENTIAL

71 OHIO EDISON COMPANY, AN OHIO CORPORATION 01-13627 GOODRICH AVE. COMMERCIAL UTILITY

PROP. C R/W & CONST. CENTRAL AVE.  
P.I. Sta. 10+35.33  
 $\Delta = 23^\circ 34' 48''$  (LT)  
Dc = 17° 30' 00"  
R = 327.40'  
T = 68.34'  
L = 134.74'  
E = 7.06'  
C = 133.79'  
C.B. = S 75° 43' 40" E

PROP. B CONST. RAMP B  
P.I. Sta. 128+74.38  
 $\Delta = 24^\circ 55' 00''$  (LT)  
Dc = 4° 00' 00"  
R = 1,432.39'  
T = 316.46'  
L = 622.92'  
E = 34.54'  
C = 618.02'  
C.B. = S 73° 14' 50" E

PROP. B CONST. RAMP B  
P.I. Sta. 32+11.88  
 $\Delta = 20^\circ 32' 12''$  (LT)  
Dc = 4° 00' 00"  
R = 1,432.39'  
T = 259.49'  
L = 513.41'  
E = 23.31'  
C = 510.67'  
C.B. = S 71° 03' 26" E

REV. BY	DATE	DESCRIPTION
NLC	7/25/17	REVISED L/A SOUTH OF CENTRAL AVE.
DATE COMPLETED: 3/15/2017		

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SUMMIT COUNTY  
CITY OF BARBERTON

(29) LEROY R. MORLAN & BETTY J. MORLAN 01-07970 D.B. 6565, PG. 131 & D.B. 4828, PG. 122

(30) RICHARD WILLIAM ALFORD 01-00100 O.R. 2306, PG. 467

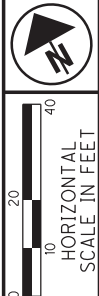
(31) BARBARA J. ROBERTS 01-05730 O.R. 8, PG. 149

(32) ROSALEE I. STINE & AMY CLEMENTS INST. 55300925

(34) CITY OF BARBERTON 01-02157 104 THIRD ST. VACANT

(37) JOSEPH TYLICKI 01-07171 O.R. 92, PG. 79

(73) JEWISH COMMUNITY FEDERATION 01-06682 D.B. 6444, PG. 395



PID NO. 96670

R/W DESIGNER NLC

R/W REVIEWER TDM

**LINE TABLE**

LINE	BEARING	DISTANCE
L1	S 02°02'17" E	80.55'
L2	N 02°02'17" W	70.60'
L3	N 88°54'44" W	45.50'
L4	N 02°02'17" W	9.95'
L5	S 21°52'28" E	46.13'

**RIGHT OF WAY CURVE DATA**

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	06°39'02"	264.83'	30.74'	30.72'	N 03°55'33" E

PROP.  $\text{\textcircled{C}}$  R/W & CONST. CENTRAL AVE.  
 P.I. Sta. 10+35.33  
 $\Delta = 23^\circ 34' 48''$  (LT)  
 $D_c = 17^\circ 30' 00''$   
 $R = 327.40'$   
 $T = 68.34'$   
 $L = 134.74'$   
 $E = 7.06'$   
 $C = 133.79'$   
 $C.B. = S 75^\circ 43' 40'' E$

- (A) 297+28.23, 155.47' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 0+26.54, 25.00' RT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.
- (B) 298+67.12, 212.61' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 1+68.40, 25.00' RT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.
- (C) 297+44.79, 217.84' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 0+66.91, 25.00' LT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.
- (D) 297+83.88, 234.17' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 1+06.41, 25.00' LT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.
- (E) 297+98.20, 239.98' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 1+20.76, 25.00' LT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.
- (F) 298+29.00, 252.17' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 1+51.41, 25.00' LT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.
- (G) 299+78.85, 252.41' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 2+78.40, 25.00' RT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.= 13+24.39, 30.00' RT.  $\text{\textcircled{C}}$  R/W GRAND BLVD.

- (H) 299+84.22, 244.62' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 2+80.33, 34.00' RT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.= 13+33.59, 30.00' RT.  $\text{\textcircled{C}}$  R/W GRAND BLVD.
- (I) 299+21.90, 331.80' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 2+58.60, 67.29' LT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.= 12+29.99, 30.00' RT.  $\text{\textcircled{C}}$  R/W GRAND BLVD.
- (J) 299+48.44, 295.55' LT.  $\text{\textcircled{C}}$  R/W I.R. 76= 2+67.67, 25.00' LT.  $\text{\textcircled{C}}$  R/W GOODRICH AVE.= 12+73.25, 30.00' RT.  $\text{\textcircled{C}}$  R/W GRAND BLVD.

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RIGHT OF WAY BOUNDARY SHEET  
RAMP B - STA. 26+00 TO STA. 31+00

SUM-76-5.53

27/27

672  
672

NLC	7/25/17	REVISED L/A SOUTH OF CENTRAL AVE.
<b>REV. BY</b>	<b>DATE</b>	<b>DESCRIPTION</b>
DATE COMPLETED: 3/15/2017		

**PROJECT DESCRIPTION**

THE SUM-76-5.53 WIDENING AND IMPROVEMENT PROJECT CONSISTS OF THE ADDITION OF A THIRD LANE IN BOTH DIRECTIONS OF I.R. 76 AND THE RECONSTRUCTION/ RECONFIGURATION OF THE I.R. 76 INTERCHANGE ACCESSING WOOSTER ROAD/EAST AVENUE/STATE STREET IN SUMMIT COUNTY. THE PROJECT ALSO INCLUDES THE REOMVAL OF THE BRIDGE OVER CENTRAL AVENUE, CONSTRUCTION OF A NEW BRIDGE OVER WOOSTER ROAD, NEW CULVERT ON MUD RUN UNDER RAMP B1, AND EXTENSION OF THE CULVERT UNDER I.R. 76.

**HISTORIC RECORDS**

THE FOLLOWING HISTORICAL STRUCTURE FOUNDATION INVESTIGATIONS AND BORINGS WERE RELIED UPON:

- SUM-224-5.11, 1959
- SUM-224-5.73, OVER CENTRAL AVE., 1959
- SUM-224-5.73, OVER WOOSTER RD/SR 619, 1959
- SUM-224-5.90, OVER ERIE PENN B&O RR, 1960
- SUM-76-5.35 LIGHT TOWERES AT SR 619 INTERCHANGE, 1991

**GEOLOGY**

THE PROJECT SITE IS LOCATED WITHIN THE AKRON-CANTON INTERLOBATE PLATEAU, PART OF THE GLACIATED ALLEGHENY PLATEAUS PHYSIOGRAPHIC REIGON. THIS IS A MODERATE RELIEF, HUMMOCKY AREA BETEEN TWO CONVERGING GLACIAL LOBES DOMINATED BY KAMES, KAME TERRACES, ESKERS, KETTLES, KETTLE LAKES, AND BOGS/FENS. SOILS IN THIS REGION ARE CHARACTERISTICALLY SANDY WISCONSINAN-AGE CLAY TO LOAM TILL OVER MISSISSIPPIAN AND PENNSYLVANIAN-AGE SHALES, SANDSTONES, CONGLOMERATES AND COALS. THE BEDROCK ELEVATION WITHIN THE PROJECT LIMITS RANGES FROM 1050 TO 850 FT ABOVE MEAN SEA LEVEL (AMSL), WEST TO EAST (ODNR, 2004).

**RECONNAISSANCE**

FIELD RECONNANCE WAS COMPLETED ON JUNE 29, 2016 AND JUNE 30, 2016 BY BARR ENGINEERING, INC. (BEI) STAFF. DURING THE FIELD RECONNAISSANCE THE PAVEMENT WAS NOTED AS BEING IN FAIR TO GOOD CONDITION. THE APPROACH EMBANKMENTS TO THE BRIDGES APPEAR TO BE IN GOOD CONDITION WITH NO SIGNS OF INSTABILITY WITH THE EXCEPTION OF THE NORTH SIDE OF THE EXISTING REAR ABUTMENT EMBANKMENT SLOPE OF BRIDGE SUM-76-0579 WHICH SHOWED SIGNS OF LOCAL INSTABILTIY AND POSSIBLE REMEDIATION. CATTAILS ARE FOUND WITHIN THE INFIELD OF EXISTING RAMPS C AND D, AS WELL AS ALONG MUD RUN ON THE SOUTH SIDE OF IR-76 AND THE NORTH SIDE OF PROPOSED RAMP B. ROCK OUTCROPS WERE OBSERVED ALONG EITHER SIDE OF IR-76 AT THE WESTERN END OF THE PROJECT LIMITS. LAND USE AT THIS LOCATION IS PRIMARILY COMMERCIAL AND RESIDENTIAL ALONG THE WESTERN AND EASTERN LIMITS OF THE PROJECT SITE, RESPECTIVELY. THE STRUCTURES OVER WOOSTER RD/SR 619 (SUM-76-0579 L&R) AND CENTRAL AVE (SUM-76-0563 L&R) WERE NOTED BEING IN GOOD CONDITION. NO GEOTECHNICAL CONCERNS WERE VISIBLE IN THIS AREA.

**SUBSURFACE EXPLORATION**

THE SUBSURFACE EXPLORATIONS WERE CONDUCTED BETWEEN JUNE 27 AND SEPTEMBER 13, 2016 AND INCLUDED 34 BORINGS DRILLED BETWEEN 6.4 FT AND 110.2 FT BELOW GROUND SURFACE (BGS).

BORINGS WERE DRILLED BY BEI USING CME-55 (TRUCK-MOUNTED) AND CME-55X (ATV-MOUNTED) ROTARY DRILL RIGS UTILIZING 3.25-INCH DIAMETER HOLLOW STEM AUGERS. STANDARD PENETRATION TESTS WERE CONDUCTED USING A CME AUTO-HAMMERS CALIBRATED DECEMBER 8, 2015 AS 81.8% AND 88.1% EFFICIENT AS INDICATED ON THE BORING LOGS.

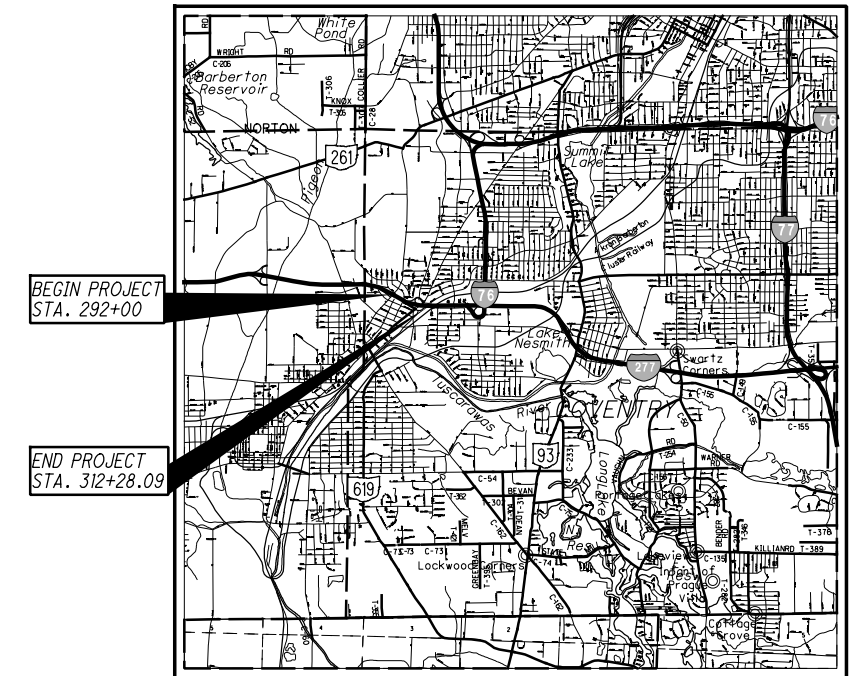
DISTURBED SOIL SAMPLES WERE OBTAINED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (SPT) (AASHTO T206) AND COLLECTED CONTINUOUSLY FOR ROADWAY BORINGS AND AT VARYING INTERVALS (I.E., 2.5-FT AND 5.0-FT INTERVALS) FOR STRUCTURE BORINGS. IN GENERAL SOIL SAMPLES DRILLED FOR THE STRUCTURES WERE RECOVERED AT 2.5-FT INTERVALS FROM THE SURFACE TO 30-40 FT AND AT 5.0-FT INTERVALS THEREAFTER. WHEN BEDROCK WAS ENCOUNTERED, CORE SAMPLES WERE COLLECTED IN 10.0-FT INCREMENTS USING NQ2, TRIPLE TUBE, CORE BARREL, WITH WATER AS THE CIRCULATION FLUID.

SPLIT SPOON SAMPLES COLLECTED AS PART OF THE SPT WERE PLACED IN SEALED GLASS CONTAINERS AND TRANSPORTED TO BEI'S GEOTECHNICAL LABORATORY IN COLUMBUS, OH. THE BORINGS WERE BACKFILLED OR SEALED ACCORDING TO ODOT REQUIREMENTS. FIELD BORING LOGS WERE PREPARED BY DRILLING PERSONNEL, AND INCLUDED A LITHOLOGICAL DESCRIPTION OF THE SOILS AND ROCK ENCOUNTERED, SPT TEST RESULTS RECORDED AS BLOWS PER 6-INCH INCREMENT OF PENETRATION, AND ESTIMATED UNCONFINED SHEAR STRENGTH VALUES ON SPECIMENS EXHIBITING COHESION (ESTIMATED BY MEANS OF HAND PENETROMETER). GROUNDWATER RELATED OBSERVATIONS WERE RECORDED AS APPROPRIATE.

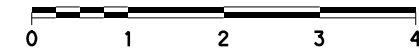
- RECON.** - KA 06/29/16
- DRILLING** - CA 06/27/16-06/29/16, 09/12/16-09/13/16
- DRAWN** - KA 11/03/16-10/24/17
- REVIEWED** - BPA 05/04/17

**LEGEND**

	ODOT CLASS	CLASSIFIED MECH./VISUAL	
	A-1-a	0	2
	A-1-b	12	43
	A-2-4	9	4
	A-2-6	0	1
	A-3	19	42
	A-3a	29	86
	A-4a	32	46
	A-4b	47	47
	A-6a	24	35
	A-6b	6	17
	A-7-6	8	2
	<b>TOTAL</b>	<b>186</b>	<b>325</b>
	VISUAL		
	VISUAL		
	VISUAL		
	VISUAL		
	EXPLORATION LOCATION - PLAN VIEW		
	HISTORIC BORING LOCATION - PLAN VIEW		
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
<b>WC</b>	INDICATES WATER CONTENT IN PERCENT.		
	INDICATES FREE WATER ELEVATION.		
	INDICATES STATIC WATER ELEVATION.		
<b>N</b>	INDICATES STANDARD PENETRATION RESISTANCE.		
<b>N<sub>60</sub></b>	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
<b>X/Y/Z</b>	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.		
<b>X/Y/D"</b>	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.		
	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.		
<b>*</b>	INDICATES A SAMPLE TAKEN WITHING 3 FT OF PROPOSED GRADE.		
<b>SS</b>	INDICATES A SPLIT-SPOON SAMPLE.		
<b>ST</b>	INDICATES A SHELBY TUBE SAMPLE.		
<b>NP</b>	INDICATES A NON-PLASTIC SAMPLE.		
<b>TR</b>	INDICATES THE TOP OF ROCK.		
<b>NQ2</b>	INDICATES TRIPLE TUBE, CORE BARREL.		



LOCATION MAP  
SCALE IN MILES



**PARTICLE SIZE DEFINITIONS**

BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm	
	No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE			

HISTORIC BORING DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	A-1-a	0	0
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	18	2
GRAVEL AND/OR ST. FRAGS. WITH SAND AND SILT	A-2-4	5	0
GRAVEL AND/OR ST. FRAGS. WITH SAND, SILT AND CLAY	A-2-6	2	0
FINE SAND	A-3	51	7
COARSE AND FINE SAND	A-3a	32	2
SANDY SILT	A-4a	26	0
SILT	A-4b	44	1
SILT AND CLAY	A-6a	1	0
SILTY CLAY	A-6b	2	0
CLAY	A-7-6	2	0
	<b>TOTAL</b>	<b>183</b>	<b>12</b>
SHALE	VISUAL		
SANDSTONE	VISUAL		

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DESIGN AGENCY  
BARR ENGINEERING INC.  
5710 WESTBOURNE AVE  
COLUMBUS, OH 43213 (614) 892-0162

PID NO.  
**96670**

**SOIL PROFILE - PART 2 OUT OF 2**

**SUM-76-5.53**





EXPLORATION FINDINGS

BRIDGE SUM-76-0580 L&R (OVER WOOSTER RD/SR 619)

THE SUBSURFACE PROFILE AT THE BRIDGE SITE IS GENERALLY CONSISTENT WITH THE GEOLOGICAL MODEL FOR THE PROJECT IN REGARDS TO THE MATERIALS ENCOUNTERED. THE SUBSURFACE PROFILE WITHIN THE PROPOSED PROJECT AREA CONSISTS OF SURFICIAL MATERIALS COMPRISED OF EITHER TOPSOIL OR EXISTING PAVEMENT, GENERALLY UNDERLAIN BY INTERMIXED COHESIVE AND NON-COHESIVE EMBANKMENT FILL SOIL AND/OR NATURAL OVERBURDEN SOILS PREDOMINANTLY CONSISTING OF GLACIALLY DEPOSITED, COARSE TO FINE-GRAINED NONCOHESIVE SOIL. THE EXCEPTION BEING AN APPROXIMATE 12 TO 14 FT THICK LAYER OF COHESIVE SILT ENCOUNTERED ABOUT 7 FT BGS. THE NATURAL OVERBURDEN SOIL PROFILE GENERALLY CONSISTS OF VERY SOFT TO MEDIUM STIFF SILT OVER LOOSE TO DENSE MIXTURES OF SAND, GRAVEL, STONE FRAGMENTS, AND/OR SILT ALL OVER LOOSE TO VERY DENSE, FINE-GRAINED SILTY SOILS. BEDROCK WAS NOT ENCOUNTERED WITHIN DEPTHS OF THE BORINGS PERFORMED.

BRIDGE SUM-76-0563 L&R (OVER CENTRAL AVE)

THE SUBSURFACE PROFILE AT THE BRIDGE SITE IS GENERALLY CONSISTENT WITH THE GEOLOGICAL MODEL FOR THE PROJECT IN REGARDS TO THE MATERIALS ENCOUNTERED. IN GENERAL, THE OVERBURDEN SOILS CONSIST OF BOTH EMBANKMENT FILL AND NATURAL SOILS WITH A TOTAL OVERBURDEN THICKNESS THAT RANGES FROM 16.5 TO 50.5 FT WITHIN THE PROJECT LIMITS AND BEDROCK ELEVATIONS THAT RANGE FROM 973.5 TO 953.6 FT AMSL. ABOVE AN ELEVATION OF ABOUT 983.5 FT AMSL, SOILS ALONG THE CENTERLINE OF CENTRAL AVE (BELOW THE IR-76 OVERPASS) GENERALLY CONSIST OF EMBANKMENT FILL SOIL PREDOMINANTLY COMPRISED OF SILTY CLAY (A-6B) WITH SOME AREAS OF COARSE AND FINE SAND (A-3A) OR SANDY SILT (A-4A). BELOW AN ELEVATION OF 983.5 FT AMSL, THE UNDERLYING NATURAL SOILS VARY ALONG THE PROJECT LENGTH WITH THE NATURAL OVERBURDEN MADE UP OF PREDOMINANTLY FINE-GRAINED SOILS ON THE SOUTH END OF THE PROJECT LIMITS AND PREDOMINANTLY COARSEGRAINED SOILS ON THE NORTH END OF THE PROJECT. FURTHERMORE, VARYING THICKNESSES OF INTERBEDDED LAYERS AND SEAMS OF FINE AND COARSE-GRAINED SOILS WERE ENCOUNTERED THROUGHOUT THE PROJECT SECTION. THE COHESIVE SOILS ENCOUNTERED AT THE SITE ARE CLASSIFIED ON THE LOGS AS A-4A, A-4B, A-6A, A-6B, AND A76, WHILE THE GRANULAR SOILS ARE CLASSIFIED AS A-1-A, A-1-B, A-2-4, A-3, A-3A, A-4A, AND A-4B. THE BEDROCK ENCOUNTERED IS COMPRISED PREDOMINANTLY OF SANDSTONE WITH SOME INTERBEDDED LAYERS OF SHALE.

CULVERT SUM-76-0578 (RAMP B1 OVER MUD RUN)

AT THE CULVERT SITE, THE SOIL PROFILE GENERALLY CONSISTS OF A THIN SURFICIAL TOPSOIL LAYER UNDERLAIN BY GLACIAL OUTWASH COMPRISED OF BOTH COARSE (SAND AND GRAVEL) AND FINE GRAINED (SILT AND CLAY) SOILS ATOP GLACIAL TILLS PRIMARILY CONSISTING OF FINE GRAINED SOILS. THE NATURAL GLACIAL OUTWASH SOILS AT THE SITE ARE COMPRISED OF MEDIUM DENSE SANDY SILT TO A DEPTH OF 6 TO 7 FT BGS (APPROXIMATELY 956 TO 958.5 FT AMSL) OVER SOFT TO STIFF SILT AND CLAY MIXTURES TO A DEPTH OF 10 TO 15 FT BGS (APPROXIMATELY 955 TO 948 FT AMSL), FOLLOWED BY VARYING COARSE GRAINED SANDS AND GRAVELS TO A DEPTH OF 42 TO 45 FT BGS (APPROXIMATELY 920 TO 921 FT AMSL) AT WHICH THE NATURAL GLACIAL TILL SOILS ARE ENCOUNTERED. THE GLACIAL TILL SOILS ENCOUNTERED ARE COMPRISED PRIMARILY OF SILT VARYING IN BOTH COMPOSITION (I.E., SAND, GRAVEL AND CLAY CONTENT) AND PLASTICITY. THE SOILS ENCOUNTERED AT THE SITE CAN BE CHARACTERIZED AS HAVING A CONSISTENCY OF VERY STIFF TO HARD AND A RELATIVE COMPACTNESS OF MEDIUM DENSE TO VERY DENSE FOR THE ENCOUNTERED COHESIVE AND NON-COHESIVE SOILS, RESPECTIVELY. BEDROCK WAS NOT ENCOUNTERED WITHIN DEPTHS OF THE BORINGS PERFORMED.

RETAINING WALL 1

THE SUBSURFACE PROFILE AT THE RETAINING WALL 1 SITE IS GENERALLY CONSISTENT WITH THE GEOLOGICAL MODEL FOR THE PROJECT IN REGARDS TO THE MATERIALS ENCOUNTERED. THE SUBSURFACE PROFILE WITHIN THE PROPOSED PROJECT AREA CONSISTS OF SURFICIAL MATERIALS COMPRISED OF EITHER TOPSOIL OR EXISTING PAVEMENT GENERALLY UNDERLAIN BY EITHER COHESIVE EMBANKMENT FILL SOIL (ALONG THE EAST END OF THE WALL) AND/OR COMPACT NATURAL OVERBURDEN SOILS, PREDOMINANTLY CONSISTING OF GLACIALLY DEPOSITED, LOOSE TO VERY DENSE GRANULAR SOILS. THE NATURAL OVERBURDEN SOILS WERE GENERALLY COMPRISED OF NON-COHESIVE, MIXTURES OF GRAVEL, STONE FRAGMENTS, SAND AND/OR SILT WITH THE EXCEPTION OF A 2.5 TO 5 FT THICK LAYER OF NATURAL COHESIVE SOIL ENCOUNTERED AT APPROXIMATE ELEVATIONS 963 TO 957 FT AMSL. BEDROCK WAS NOT ENCOUNTERED WITHIN DEPTHS OF THE BORINGS PERFORMED.

RETAINING WALL 2

THE SUBSURFACE PROFILE AT THE RETAINING WALL 2 SITE IS GENERALLY CONSISTENT WITH THE GEOLOGICAL MODEL FOR THE PROJECT IN REGARDS TO THE MATERIALS ENCOUNTERED. THE SUBSURFACE PROFILE WITHIN THE PROPOSED PROJECT AREA CONSISTS OF AN EXISTING PAVEMENT SECTION GENERALLY UNDERLAIN BY NON-COHESIVE, GRANULAR EMBANKMENT FILL SOIL OVER COMPACT NATURAL OVERBURDEN SOILS PREDOMINANTLY CONSISTING OF GLACIALLY DEPOSITED, COARSE TO FINE GRAINED GRANULAR SOIL. THE NATURAL OVERBURDEN SOILS WERE GENERALLY COMPRISED OF LOOSE TO VERY DENSE MIXTURES OF GRAVEL, STONE FRAGMENTS, SAND AND/OR SILT WITH THE EXCEPTION OF AN APPROXIMATE 5 FT THICK LAYER OF VERY SOFT TO SOFT NATURAL COHESIVE SOIL ENCOUNTERED AT AN APPROXIMATE ELEVATION OF 955 FT AMSL. BEDROCK WAS NOT ENCOUNTERED WITHIN DEPTHS OF THE BORINGS PERFORMED.

EXPLORATION FINDINGS (CONTINUED)

NOISE WALL 1

THE SUBSURFACE PROFILE AT THE NOISE WALL 1 SITE IS GENERALLY CONSISTENT WITH THE GEOLOGICAL MODEL FOR THE PROJECT IN REGARDS TO THE MATERIALS ENCOUNTERED. THE SUBSURFACE PROFILE ALONG THE PROPOSED NOISE WALL CONSISTS OF SURFICIAL MATERIALS COMPRISED OF EITHER TOPSOIL OR EXISTING PAVEMENT OVERLYING TWO DIFFERENT GENERAL PROFILES. SOIL BORINGS PERFORMED ALONG THE PROPOSED ALIGNMENT OF NW1 CAN GENERALLY BE GROUPED INTO THE FOLLOWING TWO GENERAL SOIL PROFILES: 1) 8 TO 10 FT OF NATURAL RESIDUAL SOILS (CONSISTING OF COARSE- AND FINE-GRAINED SOILS) OVERLYING SANDSTONE BEDROCK (START OF NW1 TO STA 136+00 [RAMP C1]); AND, 2) EXISTING EMBANKMENT FILL SOIL OVERLYING COMPACT NATURAL OVERBURDEN SOILS, PREDOMINANTLY CONSISTING OF GLACIALLY DEPOSITED, LOW TO MODERATE PLASTICITY FINE-GRAINED SOIL (STA 136+00 [RAMP C1] TO END OF NW1). REFER TO THE FOLLOWING SECTIONS FOR FURTHER DETAILS.

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 2013, JANUARY 2015, AND JANUARY 2016.

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 1980 WEST BROAD STREET.

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PID NO. 96670

SOIL PROFILE - PART 2 OUT OF 2

SUM-76-5.53

2/86



DESIGN AGENCY  
BARR ENGINEERING INC.  
5710 WESTBOURNE AVE  
COLUMBUS, OH 43213 (614) 892-0162

SUM-76-5.53		
BORING ID	PLAN VIEW SHEET	PROFILE VIEW SHEET
B-001-B-59	16,20	17
B-003-B-59	16,20	17
B-007-B-59	8,18,22,28,30,32,34	10
B-008-A-59	13,20,22	14
B-008-B-59	8,18,22,28,30,34	10
B-009-A-59	13,20,22	15
B-009-B-59	8,18,22,28,30,32,34	9
B-001-0-90	8,18,22,30,32	19
B-002-0-90	11,20,22,30	31
B-003-0-90	13,20,22	23
B-004-0-90	11,20,22	23
B-005-0-90	13,20,22	15
B-001-0-13	8,18,22,28,30,32,34	9
B-001-1-13	8,18,22,28,30,32,34	10
B-002-0-13	8,18,22,28,30,32,34	9
B-002-1-13	8,18,22,28,30,32,34	10
B-002-2-13	8,18,22,28,30,34	10
B-003-0-13	8,18,22,28,30,32,34	9
B-001-0-16	11,13,20,22,30	12,15
B-002-0-16	13,20,22	14
B-003-0-16	13,20,22	15
B-004-0-16	13,16,20,22	14
B-005-0-16	13,16,20	14,17
B-006-0-16	16,20	17
B-007-0-16	16,20	17
B-008-0-16	18,28,32	19
B-009-0-16	18,28,30,32,34	19
B-010-0-16	8,18,22,28,30,32,34	19
B-011-0-16	18,22,28,30,32	19
B-012-0-16	11,13,20,22,30	12,21
B-013-0-16	18,22,24,28,30,32	23,25
B-014-0-16	18,22,24,28,30,32	23,25
B-015-0-16	18,22,30,32	23
B-016-0-16	11,20,22,26	12,23,27
B-017-0-16	11,20,22,26,30	12,27
B-018-0-16	20,22	23
B-019-0-15	28	29
B-020-0-15	18,28,34	29,35
B-021-0-15	8,18,28,30,34	29,31
B-022-0-15	8,18,22,28,30,34	29,31
B-023-0-15	8,18,22,28,30,34	31
B-024-0-15	18,22,28,30	31
B-025-0-15	18,22,28,30	31
B-026-0-15	20,22,30	31
B-027-0-16	18,22,28,30,32	29
B-028-0-15	18,22,28,30,32,34	33
B-029-0-16	18,22,28,30,32	33
B-030-0-15	18,28,34	35
B-031-0-16	BORING NOT PERFORMED	
B-032-0-16	18,28,32	19
B-033-0-16	11,20,22,30,32	21
B-034-0-16	18,22,30,32	31

INDEX OF SHEETS							
SUMMARY OF SOIL TEST DATA, SHEETS 4 & 5							
LOCATION		PLAN VIEW SHEET	PROFILE SHEET	CUT MAX.	FILL EMB. MAX.	STRUCTURES INCLUDED	
FROM STA.	TO STA.					BRIDGE NO.	SFN
I.R. 76							
294+50	299+50	8	9-10	<1 FT	21.5 FT	SUM-76-0563L/R	-
305+00	310+00	13	14-15	<1 FT	2 FT	SUM-76-0580	7705493
RAMP B							
20+00	32+50	18	19	- FT	30 FT		
32+50	34+65.80	20	21	- FT	9 FT		
RAMP B1							
125+00	137+25.23	22	23	4 FT	29 FT		
RAMP C							
30+01.95	41+00.49	28	29	6.5 FT	23.5 FT		
RAMP C1							
133+00	145+31.78	30	31	7 FT	23.5 FT		
CENTRAL AVE							
2+48.83	5+45.85	32	33	1.5 FT	<1 FT		
ROMIG ST							
0+00	7+31.44	34	35	3 FT	- FT		
RETAINING WALL 1							
10+00	11+99	24	25	-	-		
RETAINING WALL 2							
20+00	24+15	16	17	-	-		
CULVERT							
		11	12	-	-	SUM-76-0577	7705468
CULVERT							
		26	27	-	-	SUM-76-0578P	TBD
BORING LOGS, SHEETS 36 - 86							

NOTES:

1. SEGMENT OF SUBGRADE BORINGS WERE DRILLED BY OTHERS AND ARE INCLUDED IN SOIL PROFILE SHEETS PART 1.
2. FOR SOIL INFORMATION BETWEEN STATIONS 292+00 THROUGH 294+50; SEE SOIL PROFILE SHEETS PART 1.
3. FOR SOIL INFORMATION BETWEEN STATIONS 299+50 THROUGH 305+00; SEE SOIL PROFILE SHEETS PART 1.
4. FOR SOIL INFORMATION BETWEEN STATIONS 310+00 THROUGH 312+28.09; SEE SOIL PROFILE SHEETS PART 1.

DRAWN  
KCA  
CHECKED  
BPA

SOIL PROFILE  
INDEX OF SHEETS

SUM-76-5.53



SUMMARY OF SOIL TEST DATA  
PROJECT BORINGS - RAMP B

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N	REC	% HP	tsf	GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-008-0-16 STA. 20+43, 13' LT. LATITUDE = 41.037739 LONGITUDE = -81.582335	2.50 - 4.00	4.00 - 4.75	SS-1 SS-2 SS-3 SS-4	37 39/50/3" 50/2" 50/2"	100 89 100 100	- - - -	- - - -	1 0	3 3	82 76	9 12	5 9	NP NP NP NP	NP NP NP NP	NP NP NP NP	7 5 5 3	A-3a (VISUAL) A-3a (O) A-3a (O) A-3a (VISUAL)	807
B-009-0-16 STA. 22+84, 14' RT. LATITUDE = 41.037350 LONGITUDE = -81.581620	0.00 - 1.50	1.50 - 3.00	SS-1 SS-2 SS-3 SS-4 SS-5	56 16 18 6/11/50/4" 50/5"	56 78 78 75 100	- - - - -	3.25-4.5+ - - - -	16 8 3	8 7	32 68	33 16	11 6	NP NP NP NP NP	NP NP NP NP NP	NP NP NP NP NP	- 14 14 9 10	- A-4a (VISUAL) A-4a (2) A-3a (O) A-3a (VISUAL)	-
B-011-0-16 STA. 30+35, 85' LT. LATITUDE = 41.036362 LONGITUDE = -81.579302	0.00 - 1.50	1.50 - 3.00	SS-1 SS-2 SS-3 SS-4 SS-5 SS-6 SS-7 SS-8 SS-9 SS-10 SS-11 SS-12 SS-13	7 6 1 13 25 7 12 6 9 6 6 7 12	100 100 100 100 100 22 100 100 100 100 100 100 56	1.25-1.5 1.25-1.75 0.75-1.0 3.25-4.5+ 4.5+ - 2.0-2.25 - - - - - -	5 5 3 3 3 26 5 26 0 7	4 15 3 3 3 21 17 16 45 80	3 4 3 3 3	16 52 52 52 52 31 31 45 11 21 17	26 24 26 26 26 26 26 26 26 26 26 26	NP NP NP NP NP NP NP NP NP NP NP NP NP	NP NP NP NP NP NP NP NP NP NP NP NP NP	NP NP NP NP NP NP NP NP NP NP NP NP NP	26 19 23 17 17 20 22 10 12 34 30 24 29	A-6a (VISUAL) A-4b (8) A-4b (VISUAL) A-6a (8) A-6a (VISUAL) A-7-6 (VISUAL) A-7-6 (10) A-3a (O) A-3a (VISUAL) A-3a (VISUAL) A-3a (O) A-3a (VISUAL) A-3a (VISUAL)	<100	

FOR BORING B-005-0-16 SEE BORING LOG ON SHEET 44

SUMMARY OF SOIL TEST DATA  
PROJECT BORINGS - RAMP B1

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N60	REC	% HP	tsf	GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-015-0-16 STA. 132+19, 9' RT. LATITUDE = 41.036551 LONGITUDE = -81.577430	2.50 - 4.00	4.00 - 5.50	SS-1 SS-2A SS-2B SS-3 SS-4 SS-5 SS-6	40 11 11 12 44 29 22	89 78 78 100 72 67 11	- - - - - -	3.25-4.5+ - - - - -	5 5	7 17	48 23	26 26	23 26	NP NP NP NP NP NP NP	NP NP NP NP NP NP NP	NP NP NP NP NP NP NP	10 4 15 18 14 11 13	A-3a (VISUAL) A-3a (VISUAL) A-4a (VISUAL) A-4a (7) A-2-4 (VISUAL) A-4a (4) A-4a (VISUAL)	627

FOR BORING B-016-0-16 SEE BORING LOG ON SHEETS 52 TO 53

SUMMARY OF SOIL TEST DATA  
PROJECT BORINGS - RAMP C

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N60	REC	% HP	tsf	GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-027-0-16 STA. 40+77, 32' LT. LATITUDE = 41.036082 LONGITUDE = -81.579654	2.50 - 3.30	3.30 - 4.00	SS-1A SS-1B SS-2 SS-3A SS-3B SS-4	35 35 52 - 15 20	100 100 89 78 78 83	4.5+ 4.5+ - - 2.25-4.5+ 4.0-4.5+	18 14	13 4	22 11	33 50	14 21	14 26	20 26	15 19	5 7	12 12	A-4a (2) A-4b (7) A-1-b (VISUAL) A-1-b (VISUAL) A-6a (VISUAL) A-4a (VISUAL)	<100

FOR BORING B-001-0-16 SEE BORING LOG ON SHEETS 36 TO 37

FOR BORINGS B-019-0-15 AND B-020-0-15 SEE BORING LOGS ON SHEETS 56 TO 57

FOR BORING B-021-0-15 SEE BORING LOGS ON SHEET 58

SUMMARY OF SOIL TEST DATA  
PROJECT BORINGS - RAMP C1

FOR BORINGS B-024-0-15 THROUGH B-026-0-15 SEE BORING LOGS ON SHEETS 61 TO 63

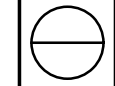
SUMMARY OF SOIL TEST DATA  
PROJECT BORINGS - CENTRAL AVENUE

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-028-0-15	1.50 - 3.00	SS-1	11	78	2.5												640
STA. 7+53, 2' RT.	3.00 - 4.50	SS-2	11	39	-	33	11	36	14	6	NP	NP	NP	NP	15	A-6a (VISUAL)*	
LATITUDE = 41.037402	4.50 - 6.00	SS-3	11	83	-										11	A-2-4 (O)	
LONGITUDE = -81.580655	6.00 - 7.50	SS-4	10	100	-	0	0	4	82	14	NP	NP	NP	NP	25	A-1-b (VISUAL)	
B-029-0-16	1.00 - 2.50	SS-1	8	56	4.0-4.5+												1940
STA. 11+42, 2' LT.	2.50 - 4.00	SS-2	10	6	3.6	22	20	20	26	12	22	17	5	8	12	A-4a (VISUAL)*	
LATITUDE = 41.037001	4.00 - 5.50	SS-3	8	67	-										8	A-4a (1)*	
LONGITUDE = -81.579387	5.50 - 7.00	SS-4	7	83	-										14	A-4a (VISUAL)	
	7.00 - 8.50	SS-5	7	61	-	5	34	18	39	4	NP	NP	NP	NP	15	A-4a (2)	

SUMMARY OF SOIL TEST DATA  
PROJECT BORINGS - ROMIG STREET

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-030-0-15	2.50 - 4.00	SS-1	4	67	-												840
STA. 4+63, 1' RT.	4.00 - 5.50	SS-2	3	89	-	1	21	54	15	9	NP	NP	NP	NP	12	A-3a (VISUAL)*	
LATITUDE = 41.036401	5.50 - 7.00	SS-3	3	78	-										11	A-3a (O)	
LONGITUDE = -81.582879	7.00 - 8.50	SS-4	7	78	-	2	4	13	64	17	23	19	4	19	11	A-3a (VISUAL)	

FOR BORING B-020-0-16 SEE BORING LOG ON SHEET 57



**Consolidated-Undrained Triaxial Compression Test (AASHTO T 297-94 / ASTM D4767)**

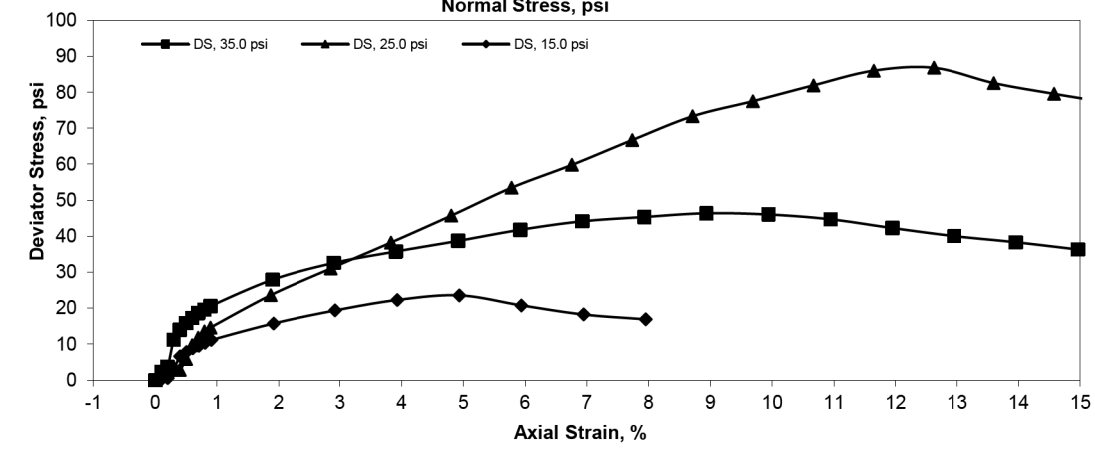
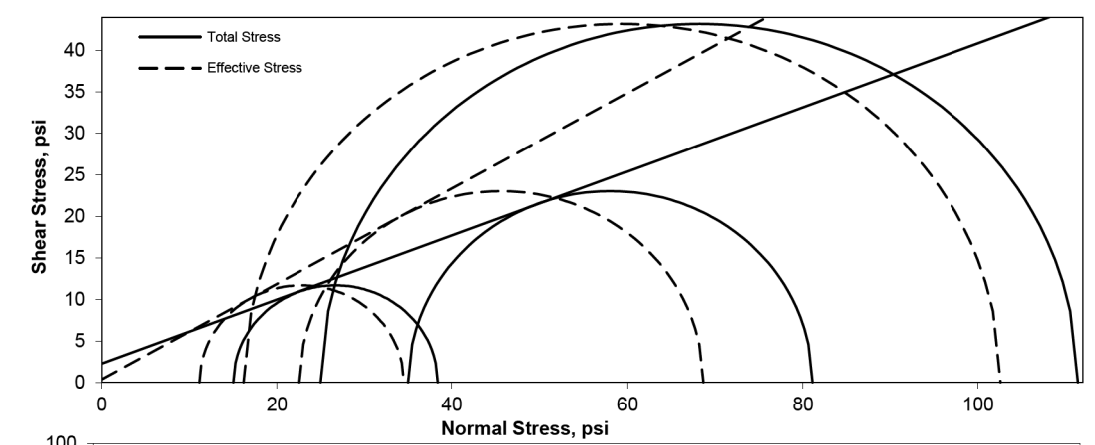
Project: SUM-76-5.53 Project ID: 96670  
 Sample ID: B-003-0-16, ST-4, 10.0 - 12.0' Page: 1/2  
 Description: Loose, brown mottled with black Silt, little sand, little gravel, trace clay, wet

Sample No.	Height (in)	Diameter (in)	Moisture (%)	Bulk Density (pcf)	Dry Density (pcf)	Void Ratio
1	5.62	2.88	25.4%	129.0	102.9	0.619
2	5.73	2.87	24.9%	127.8	102.4	0.628
3	5.71	2.85	25.2%	127.1	101.5	0.641

Liquid Limit: 27 Plastic Limit: 21

Failure Criterion: Maximum Deviator Stress

	Total	Effective
C, psi	2.27	0.37
φ, deg	21.11	29.90
Tan (φ)	0.39	0.58



Assumed Specific Gravity  $G_s = 2.67$ .

**Consolidated-Undrained Triaxial Compression Test (AASHTO T 297-94 / ASTM D4767)**

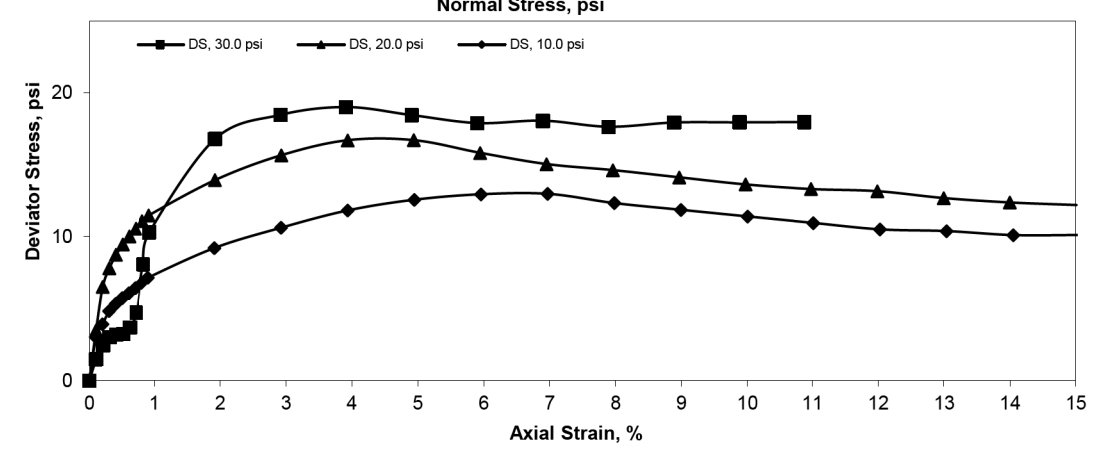
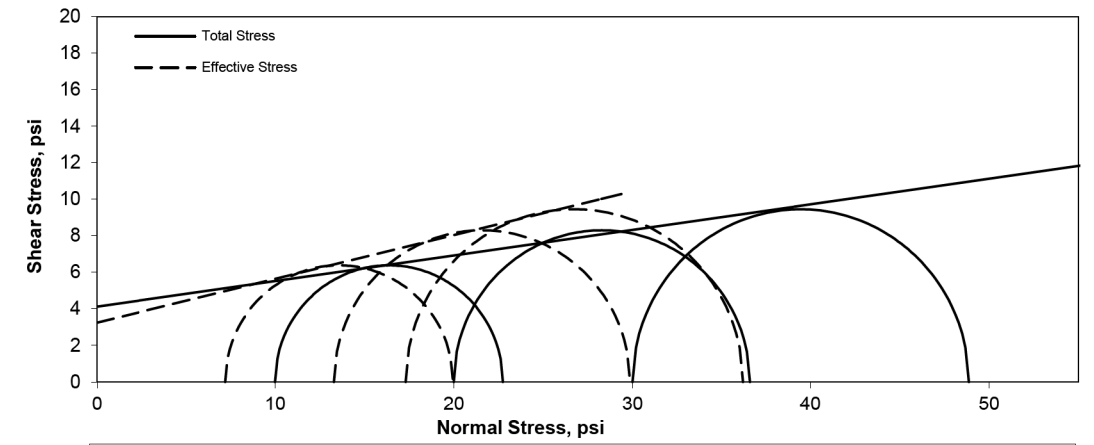
Project: SUM-76-5.53 Project ID: 96670  
 Sample ID: B-006-0-16, ST-1, 14.0 - 16.0' Page: 1/2  
 Description: Very soft, Gray Silt and Clay, Trace Sand, Trace Gravel, Wet

Sample No.	Height (in)	Diameter (in)	Moisture (%)	Bulk Density (pcf)	Dry Density (pcf)	Void Ratio
1	5.71	2.85	31.0%	121.4	92.7	0.798
2	5.68	2.84	32.1%	121.6	92.0	0.810
3	5.71	2.85	32.0%	121.4	92.0	0.811

Liquid Limit: 32 Plastic Limit: 21

Failure Criterion: Maximum Deviator Stress

	Total	Effective
C, psi	4.12	3.24
φ, deg	7.96	13.45
Tan (φ)	0.14	0.24



Assumed Specific Gravity  $G_s = 2.67$ .

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## Consolidation Test

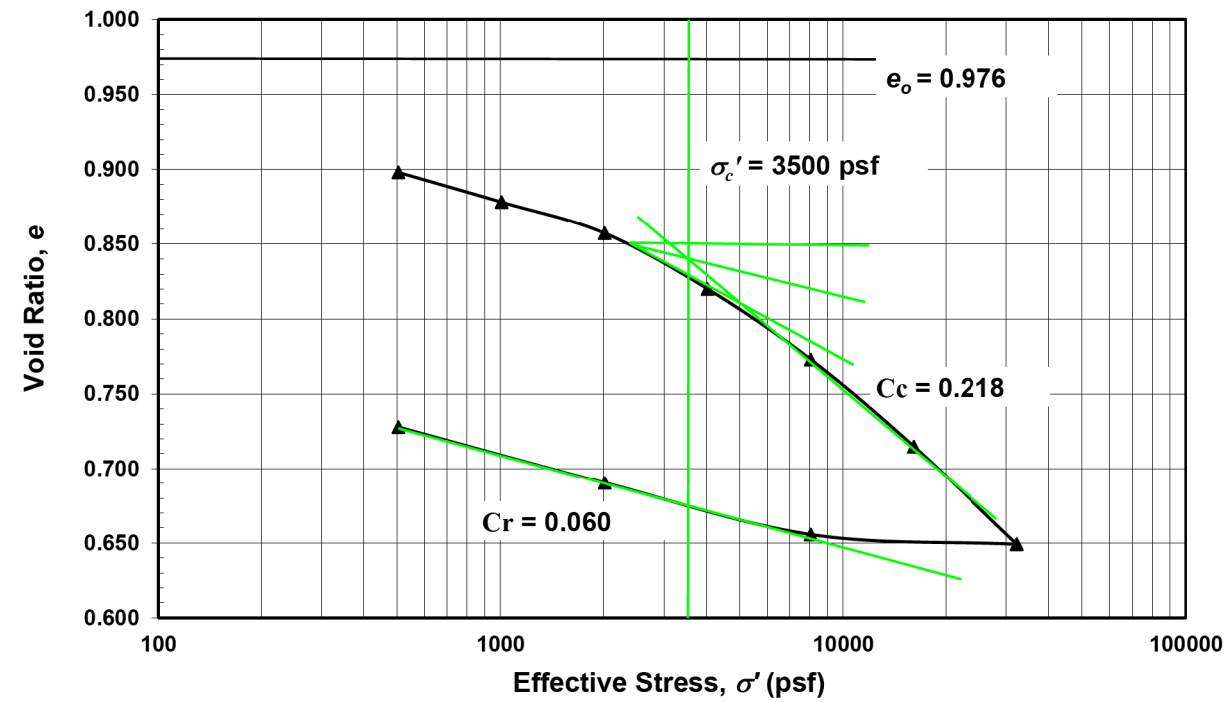
Project Name: SUM-76-5.53 Prepared by: ZL  
 Source: B-006-0-16 ST-2 16' to 18' Checked by: CH  
 Description: Gray, SILT & CLAY, no fines recorded in sieving-sand or gravel, moist. Date: 9/15/2016

Test Specification: ASTM D 2435-04  
 Initial Void Ratio: 0.976 Initial Bulk Unit Weight (lb/ft<sup>3</sup>): 114  
 In-situ Vertical Effective Stress: 2038 psf Dry Unit Weight (lb/ft<sup>3</sup>): 85

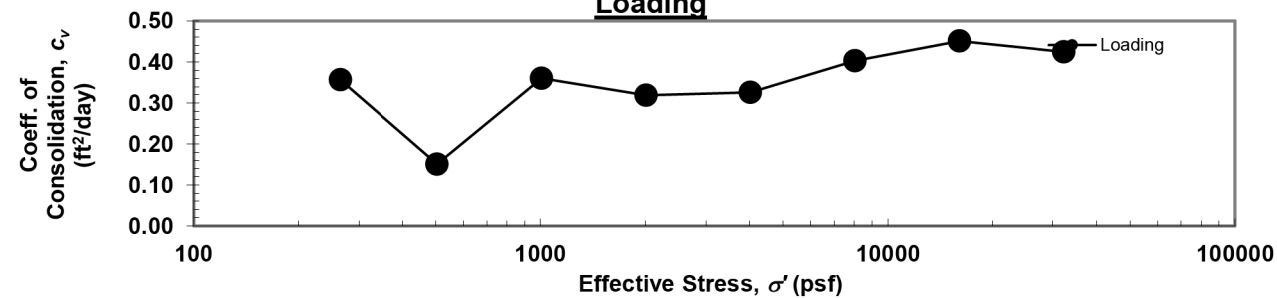
### Compression and Swelling Index

Compression Index ( $C_c$ ): 0.218 Preconsolidation Pressure ( $\sigma'_c$ ): 3500 psf  
 Recompression Index ( $C_r$ ): 0.060 Over-Consolidation Ratio (OCR): 2

### Consolidation Curve



### Loading



P:\16-0034 (96670 SUM-76-5.62)\96670\geotechnical\sheets\96670\0005.dgn 10/24/2017 10:35:22 AM korrens

DRAWN  
KCA  
CHECKED  
BPA

SOIL PROFILE  
LABORATORY TEST DATA

SUM-76-5.53





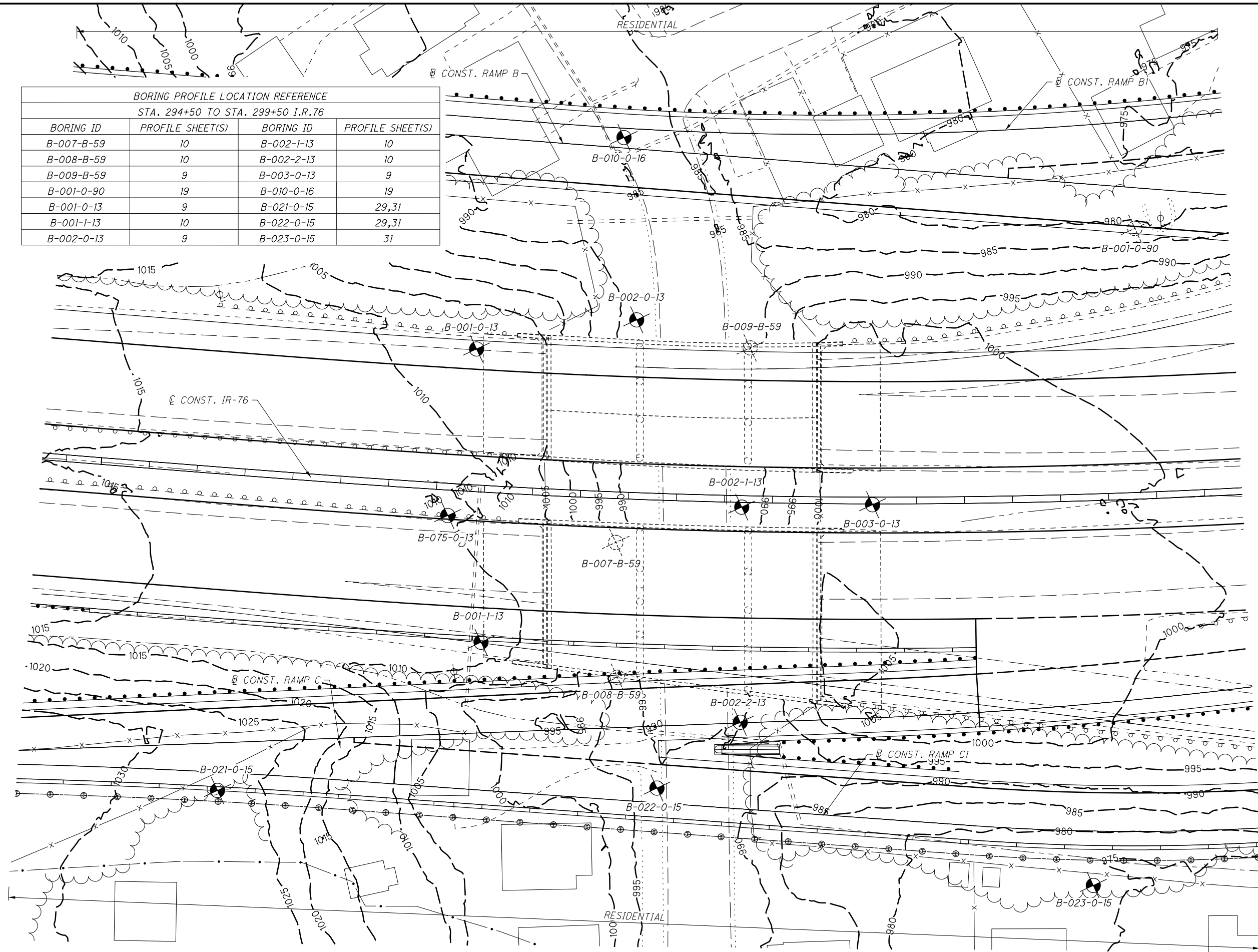
DRAWN KCA  
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION  
BR. NO. SUM-76-0536 L&R OVER CENTRAL AVE

SUM-76-5.53



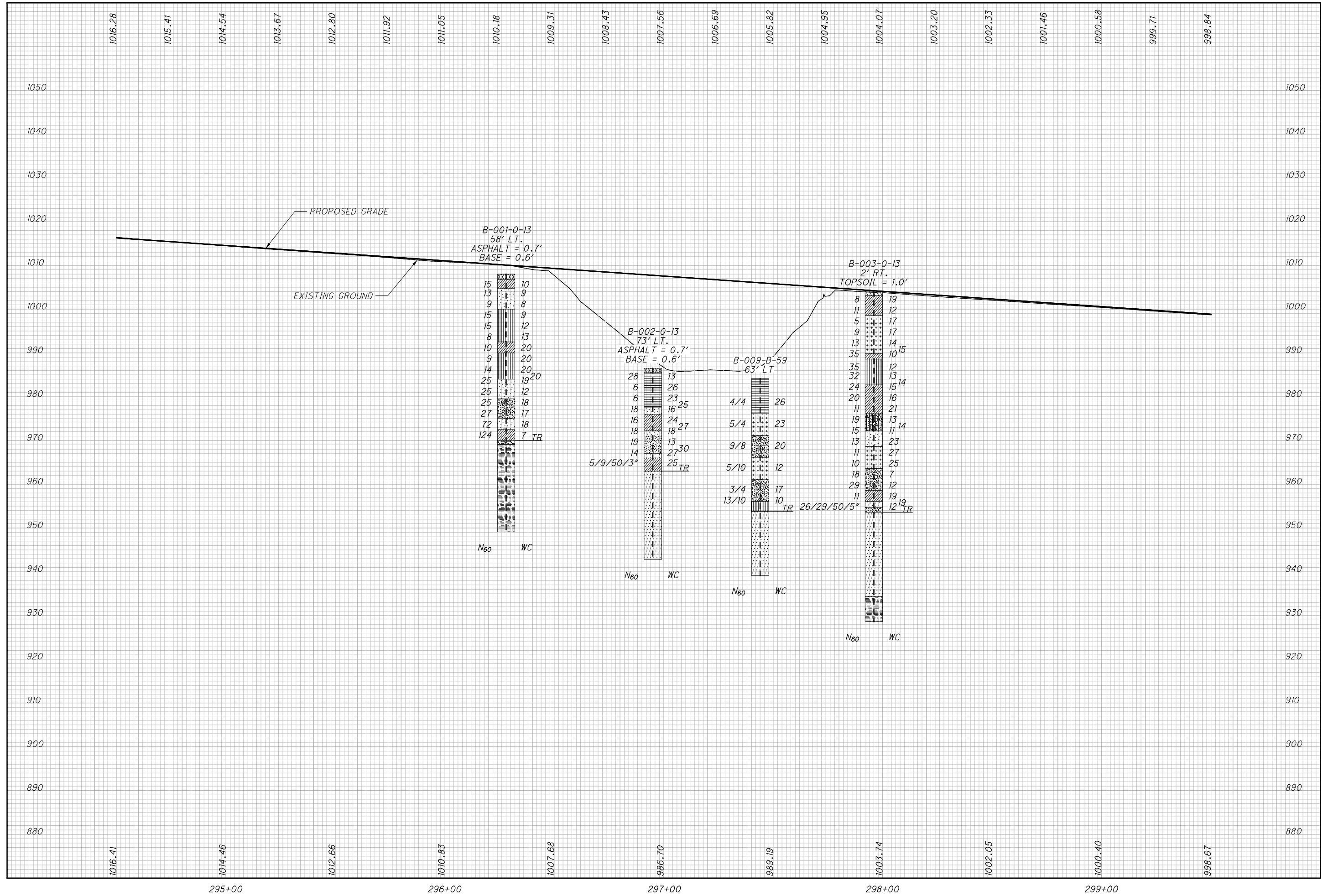
BORING PROFILE LOCATION REFERENCE			
STA. 294+50 TO STA. 299+50 I.R.76			
BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-007-B-59	10	B-002-1-13	10
B-008-B-59	10	B-002-2-13	10
B-009-B-59	9	B-003-0-13	9
B-001-0-90	19	B-010-0-16	19
B-001-0-13	9	B-021-0-15	29,31
B-001-1-13	10	B-022-0-15	29,31
B-002-0-13	9	B-023-0-15	31



NOTE: BORING B-075-0-13 PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.

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P:\16-0034 (96670 SUM-76-5.62)\96670\geotechnical\sheets\96670\F001.dgn 10/24/2017 10:35:38 AM karens



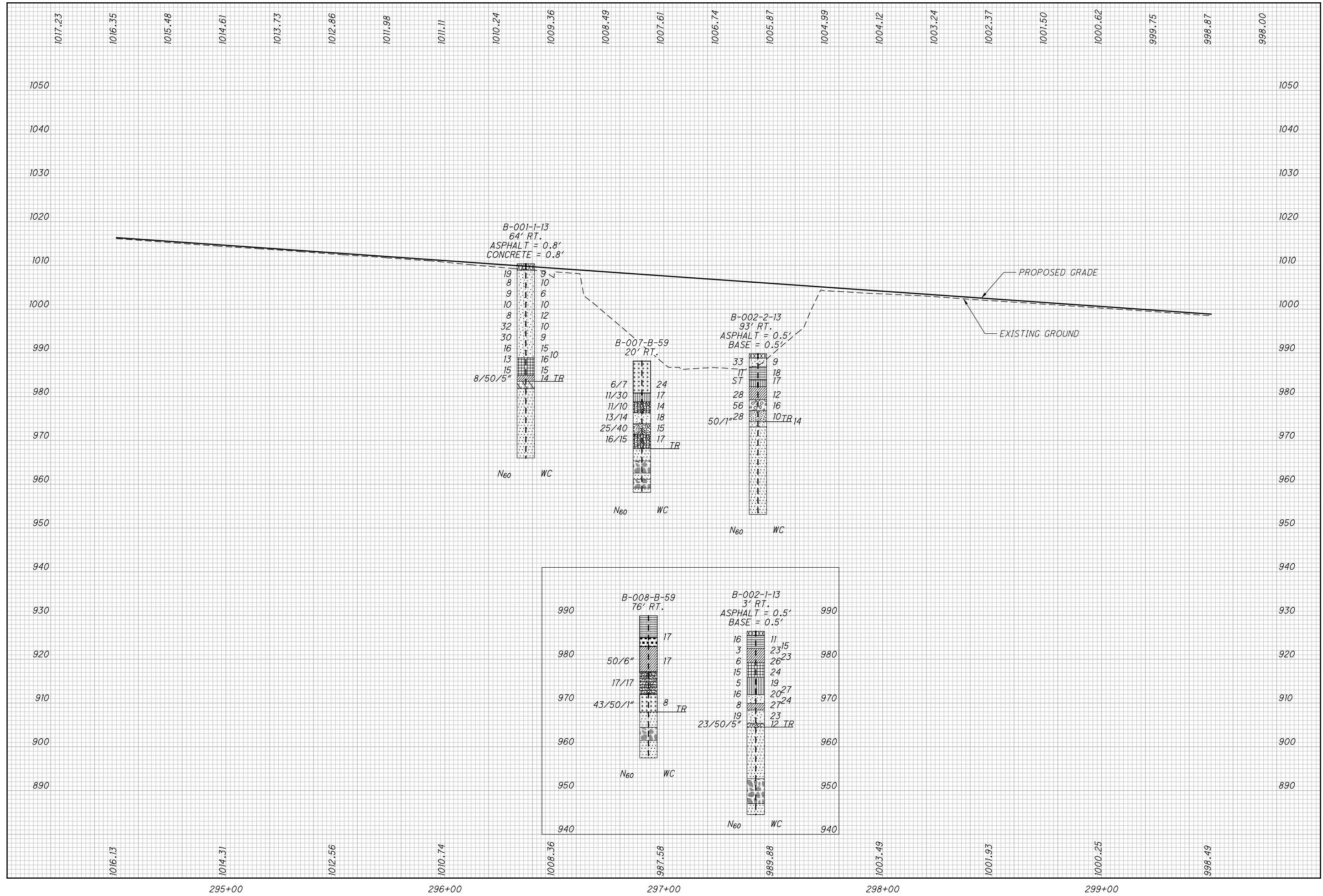
DRAWN: KCA  
CHECKED: BPA

**STRUCTURE FOUNDATION EXPLORATION**  
BR. NO. SUM-76-0563 L&R OVER CENTRAL AVE - WESTBOUND I.R. 76

**SUM-76-5.53**  
9/86



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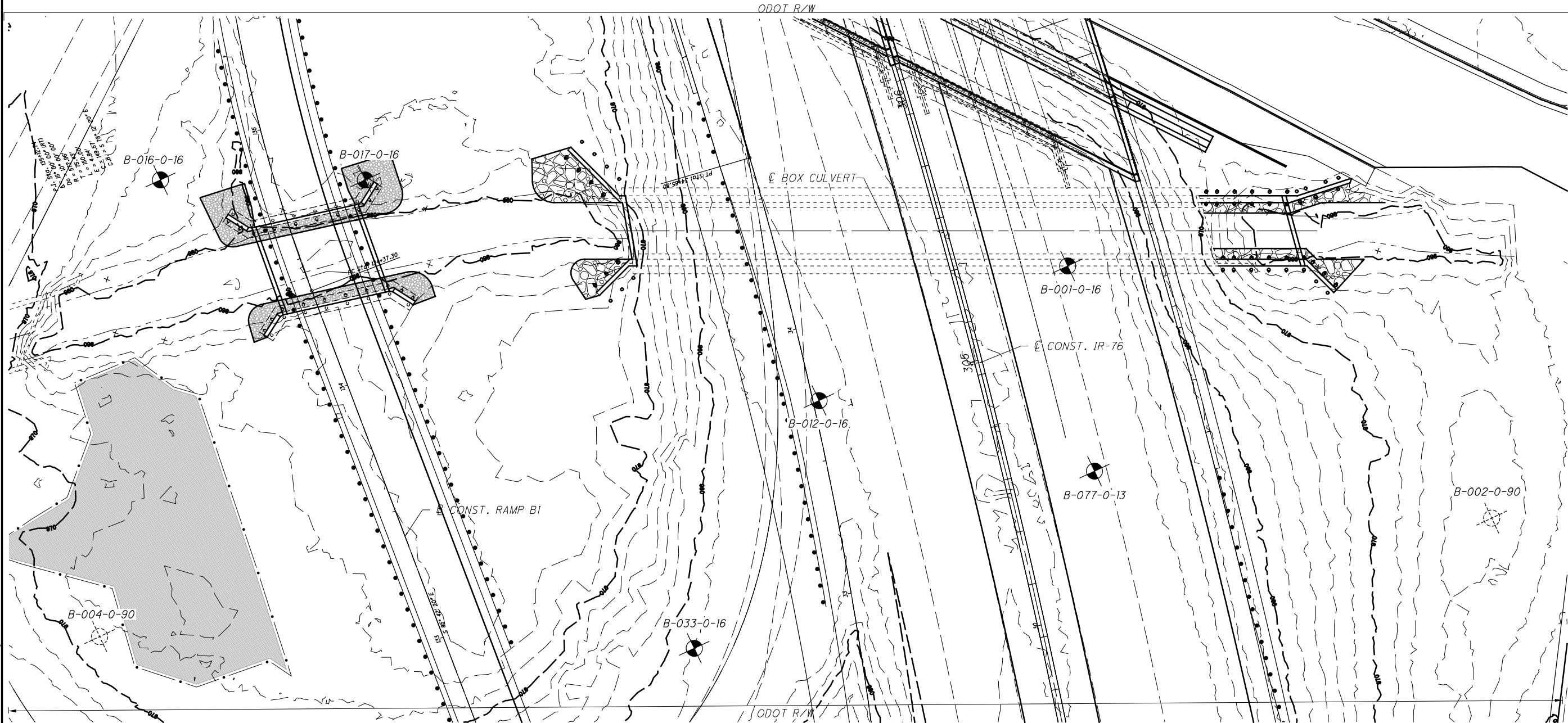
DRAWN: KCA  
 CHECKED: BPA

**STRUCTURE FOUNDATION EXPLORATION**  
 BR. NO. SUM-76-0563 L&R OVER CENTRAL AVE - EASTBOUND I.R. 76

**SUM-76-5.53**

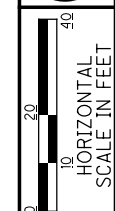


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BORING PROFILE LOCATION REFERENCE	
CULVERT SUM-76-0577	
BORING ID	PROFILE SHEET(S)
B-002-0-90	31
B-004-0-90	23
B-001-0-16	12,15
B-012-0-16	12,21
B-016-0-16	12,23,27
B-017-0-16	12,27
B-033-0-16	21

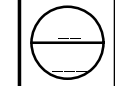
NOTE: BORING B-077-0-13 IS PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.



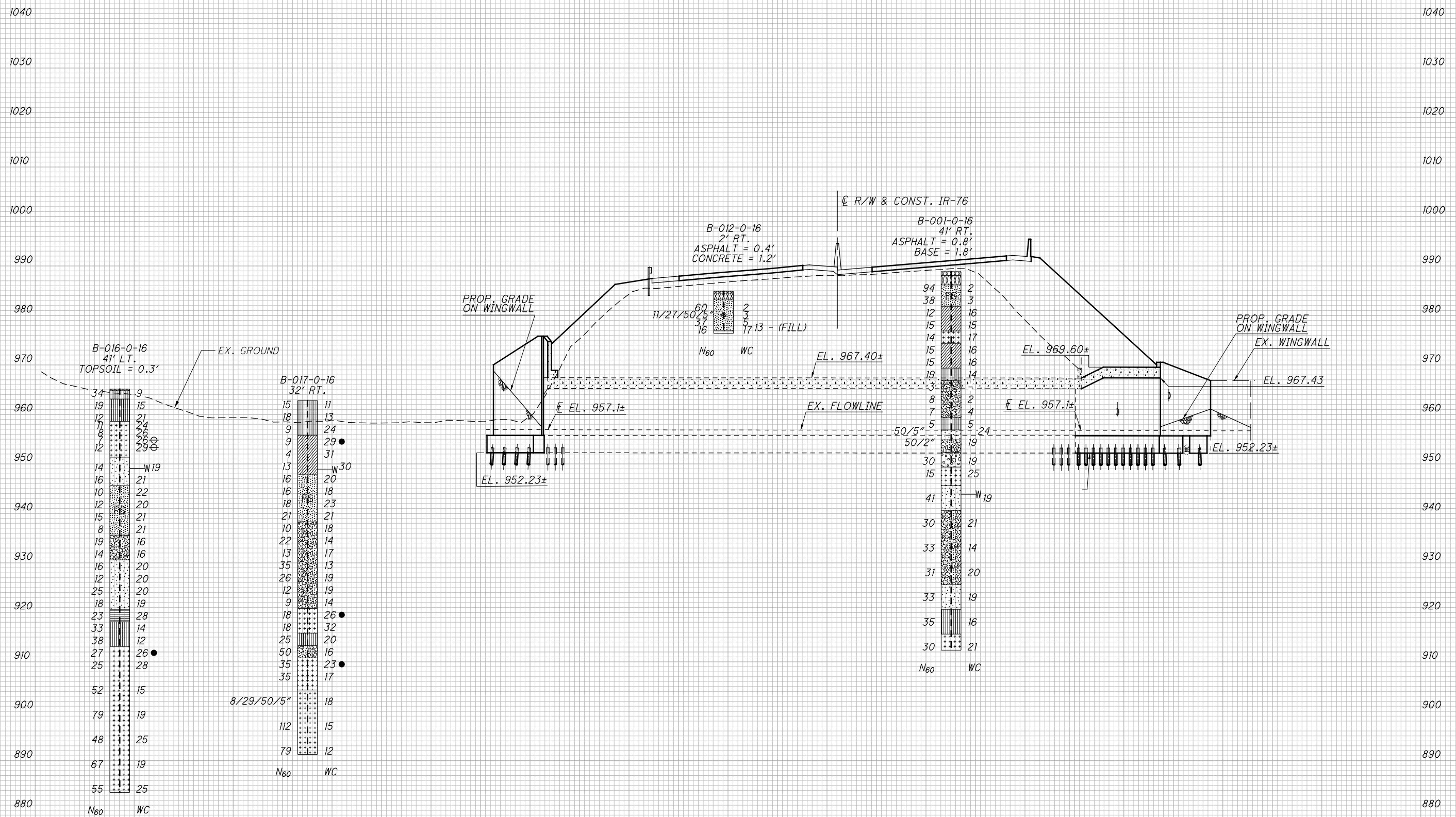
DRAWN: KCA  
CHECKED: BPA

**STRUCTURE FOUNDATION EXPLORATION**  
**CULVERT NO. SUM-76-0577 OVER MUD RUN**

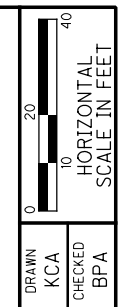
**SUM-76-5.53**



P:\16-0034 (96670 SUM-76-5.62)\96670\geotechnical\sheets\96670ZF004.dgn 10/24/2017 10:35:57 AM karens



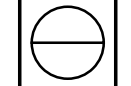
PROFILE ALONG C OF CULVERT



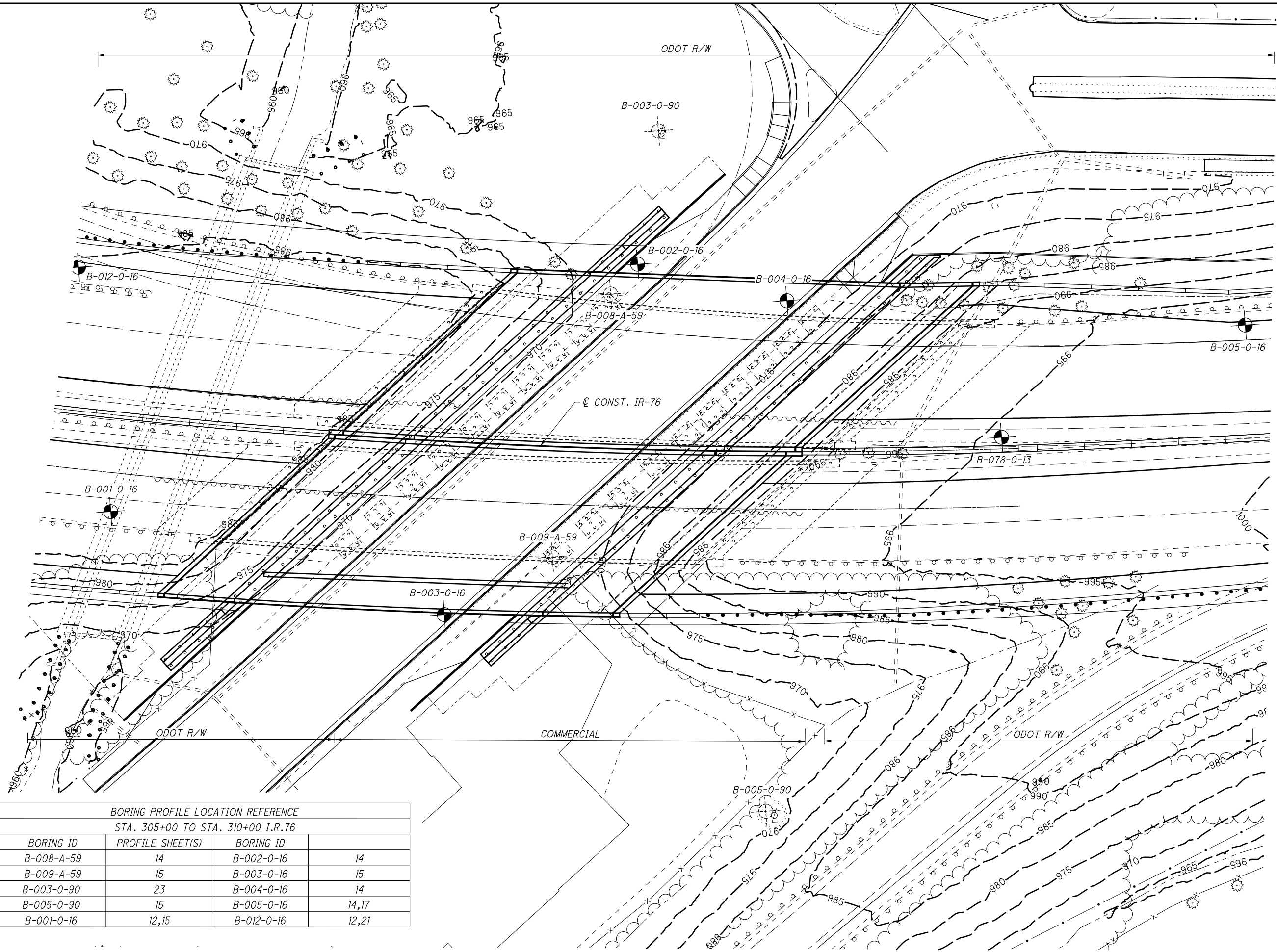
DRAWN	KCA
CHECKED	BPA

**STRUCTURE FOUNDATION EXPLORATION  
CULVERT NO. SUM-76-0577 OVER MUD RUN**

**SUM-76-5.53**



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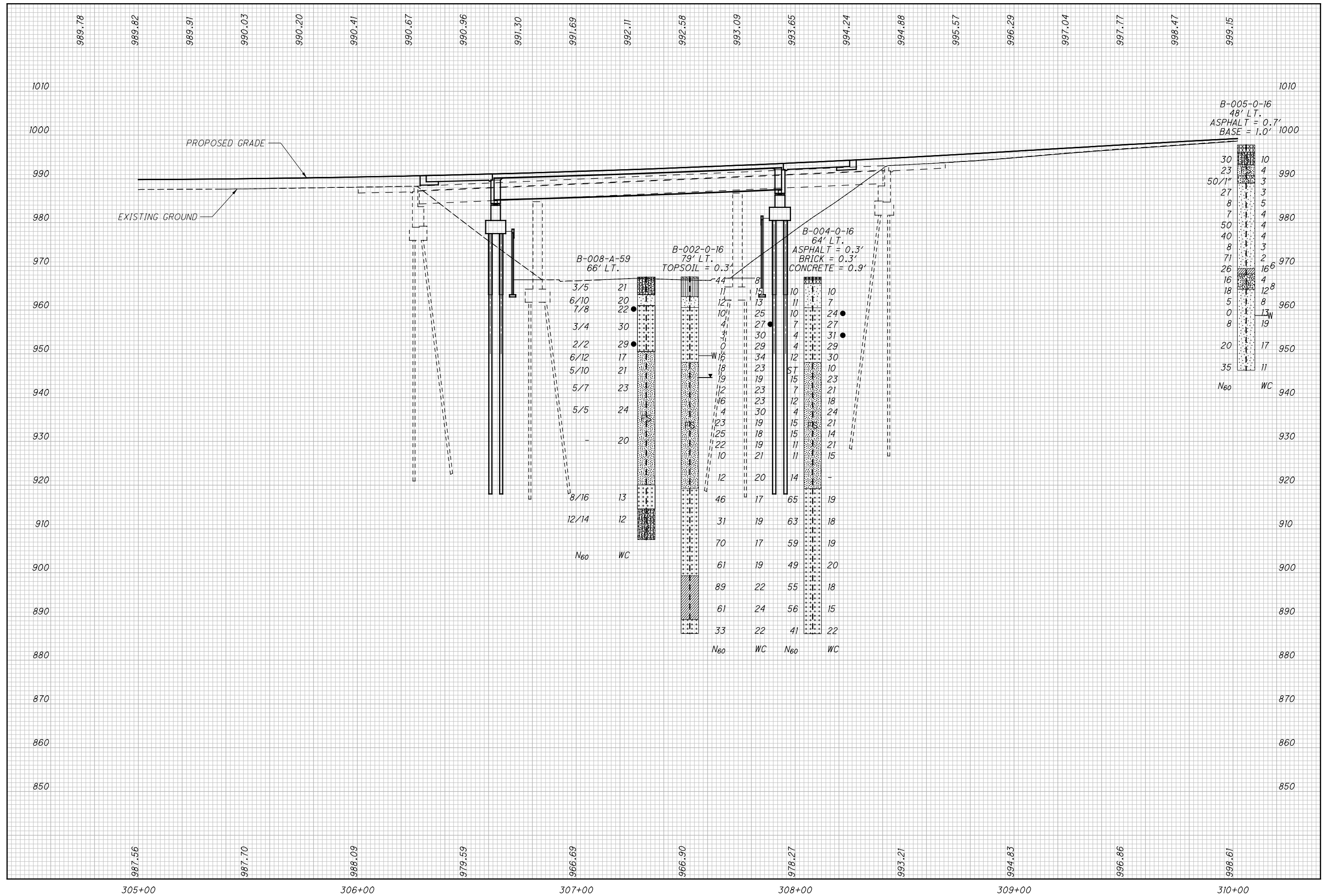
BORING PROFILE LOCATION REFERENCE			
STA. 305+00 TO STA. 310+00 I.R.76			
BORING ID	PROFILE SHEET(S)	BORING ID	
B-008-A-59	14	B-002-0-16	14
B-009-A-59	15	B-003-0-16	15
B-003-0-90	23	B-004-0-16	14
B-005-0-90	15	B-005-0-16	14,17
B-001-0-16	12,15	B-012-0-16	12,21

NOTE: BORING B-078-0-13 PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.

  
  
 HORIZONTAL SCALE IN FEET  
 DRAWN: KCA  
 CHECKED: BPA

**STRUCTURE FOUNDATION EXPLORATION**  
**BR. NO. SUM-76-0580 L&R OVER S.R. 619**

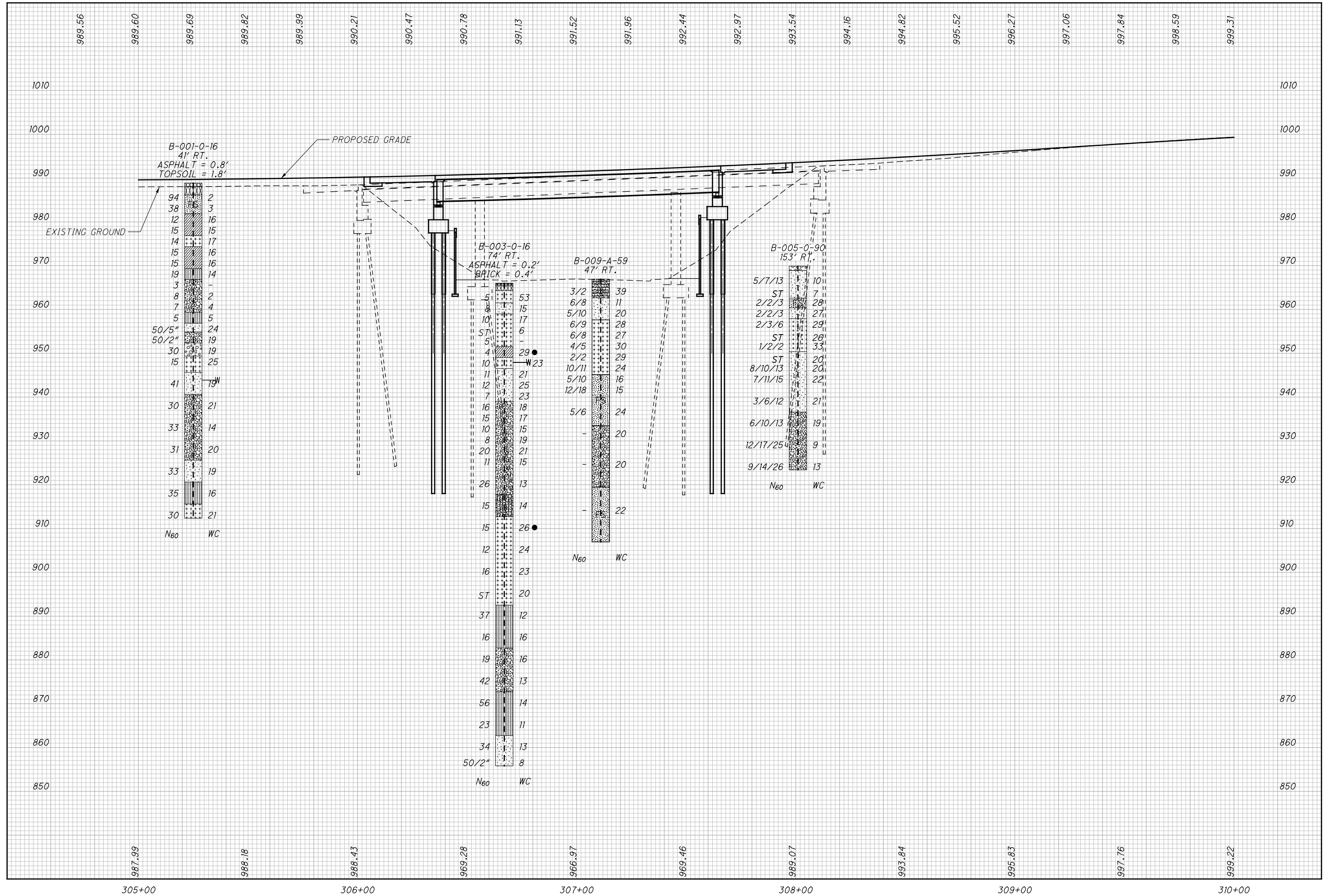
**SUM-76-5.53**



DRAWN: KCA  
 CHECKED: BPA

**STRUCTURE FOUNDATION EXPLORATION**  
**BR. NO. SUM-76-0580 L&R OVER S.R. 619 - WESTBOUND I.R. 76**

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DRAWN: KCA  
CHECKED: BPA

**STRUCTURE FOUNDATION EXPLORATION**  
BR. NO. SUM-76-0580 L&R OVER S.R. 619 - EASTBOUND I.R. 76

**SUM-76-5.53**

15 / 86



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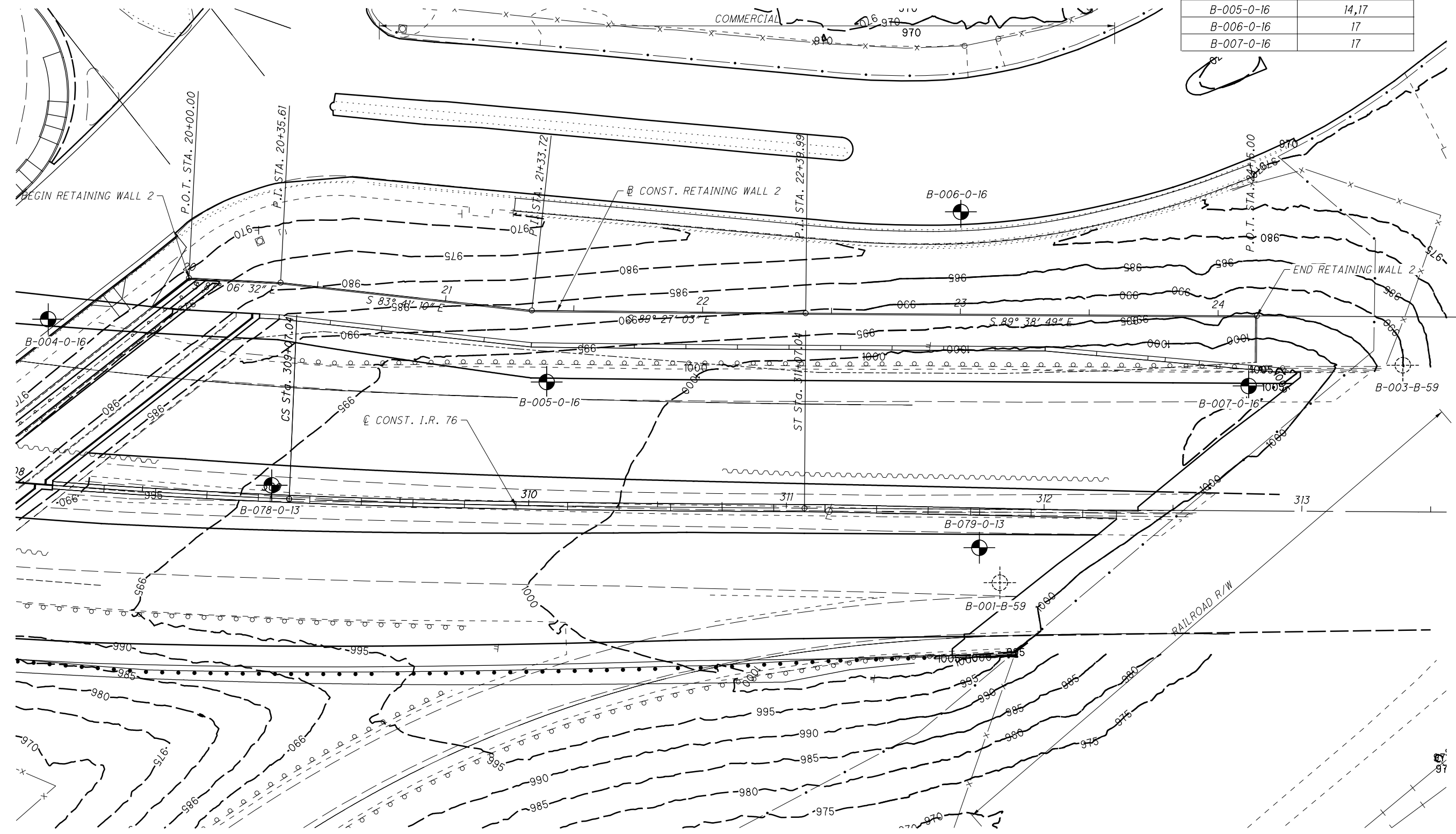
BORING PROFILE LOCATION REFERENCE	
RETAINING WALL 2	
BORING ID	PROFILE SHEET(S)
B-001-B-59	17
B-003-B-59	17
B-004-0-16	14
B-005-0-16	14,17
B-006-0-16	17
B-007-0-16	17

  
 HORIZONTAL SCALE IN FEET

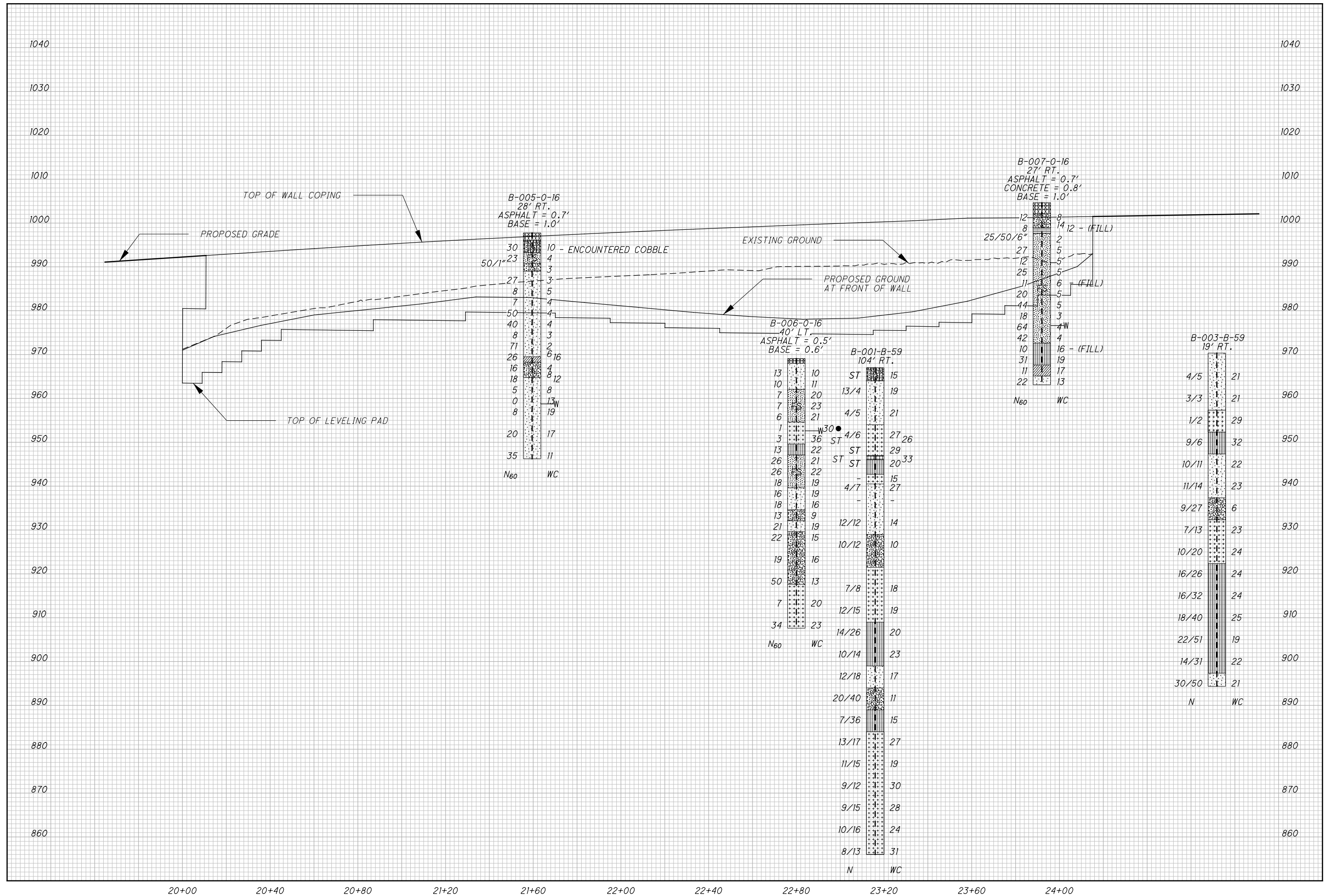
**STRUCTURE FOUNDATION EXPLORATION**  
**RETAINING WALL 2**

**SUM-76-5.53**



NOTE: BORINGS B-078-0-13 AND B-079-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.

P:\16-0034 (96670 SUM-76-5.62)\96670\geotechnical\sheets\96670ZF002.dgn 10/24/2017 10:36:25 AM karens



0 10 20 40  
HORIZONTAL SCALE IN FEET  
DRAWN: KCA  
CHECKED: BPA

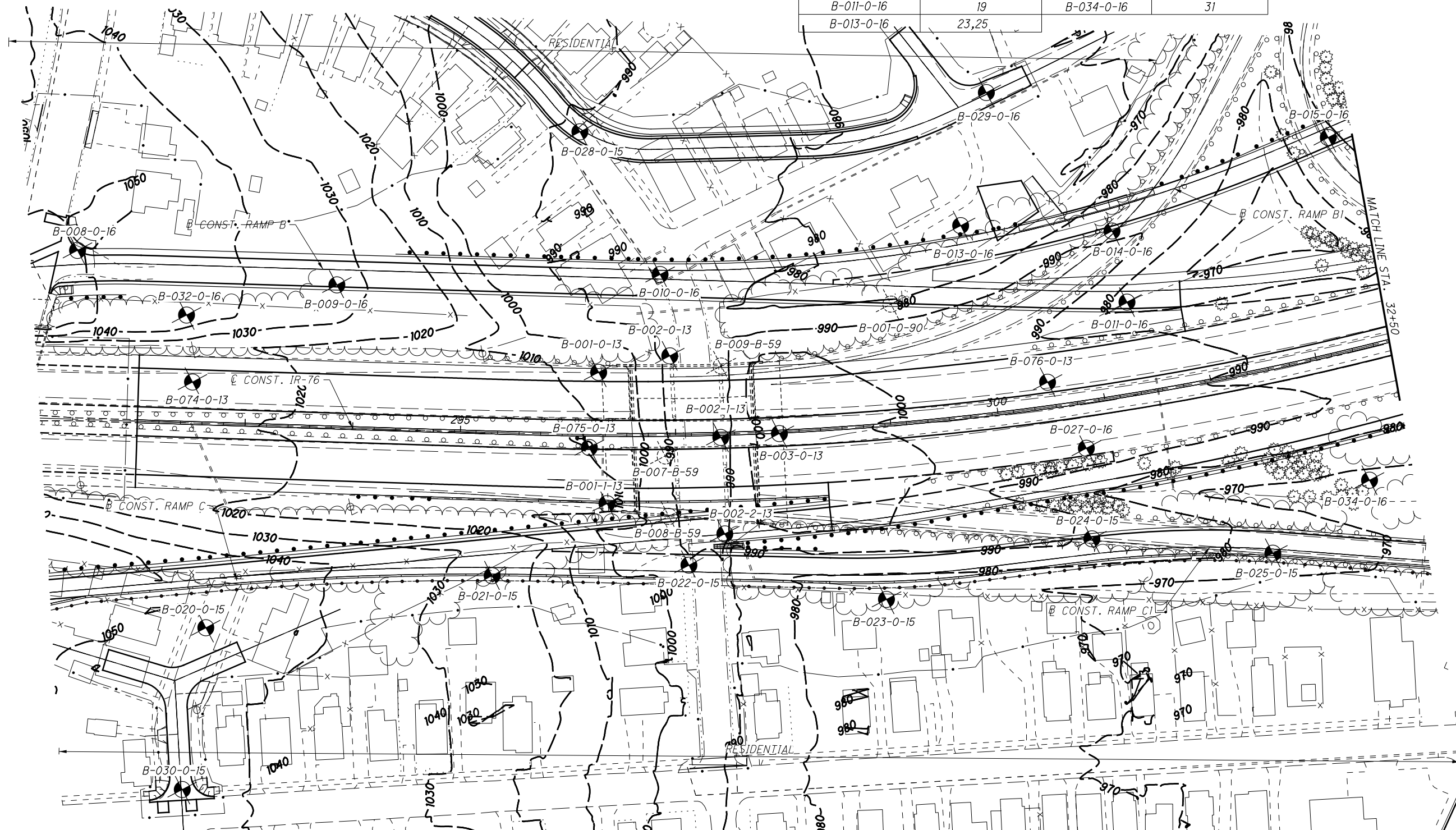
**STRUCTURE FOUNDATION EXPLORATION  
RETAINING WALL 2**

**SUM-76-5.53**



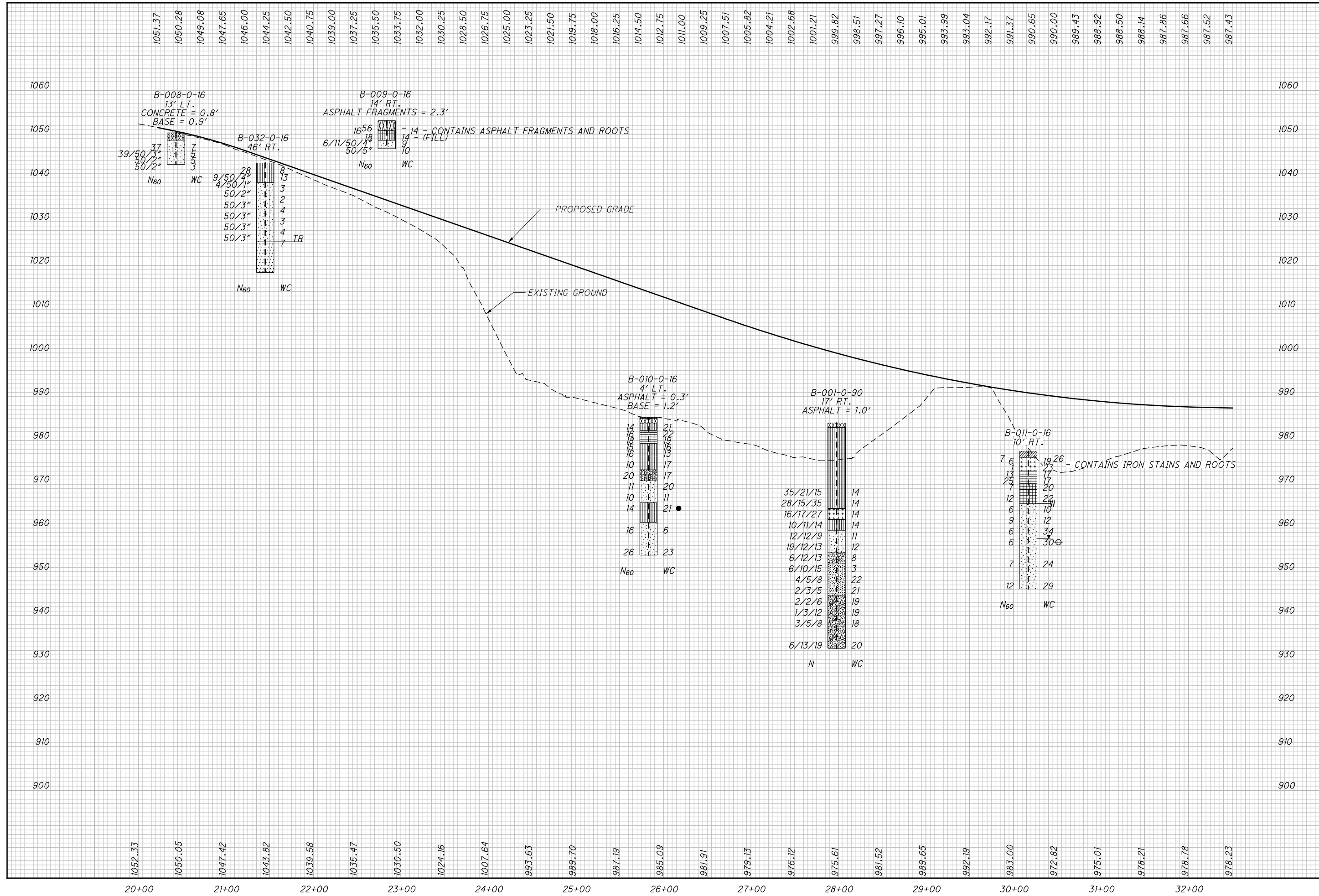
NOTE: BORINGS B-074-0-13, B-075-0-13, AND B-076-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.

BORING PROFILE LOCATION REFERENCE			
STA. 20+00 TO STA. 32+50 RAMP B			
BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-007-B-59	10	B-014-0-16	23,25
B-008-B-59	10	B-015-0-16	23
B-009-B-59	9	B-020-0-15	29,35
B-001-0-90	19	B-021-0-15	29,31
B-001-0-13	9	B-022-0-15	29,31
B-001-1-13	10	B-023-0-15	31
B-002-0-13	9	B-024-0-15	31
B-002-1-13	10	B-025-0-15	31
B-002-2-13	10	B-027-0-16	29
B-003-0-13	9	B-028-0-15	33
B-008-0-16	19	B-029-0-16	33
B-009-0-16	19	B-030-0-15	35
B-010-0-16	19	B-032-0-16	19
B-011-0-16	19	B-034-0-16	31
B-013-0-16	23,25		



DRAWN: KCA  
 CHECKED: BPA  
**SOIL PROFILE**  
**STA. 20+00 TO STA. 32+50 RAMP B**

**SUM-76-5.53**



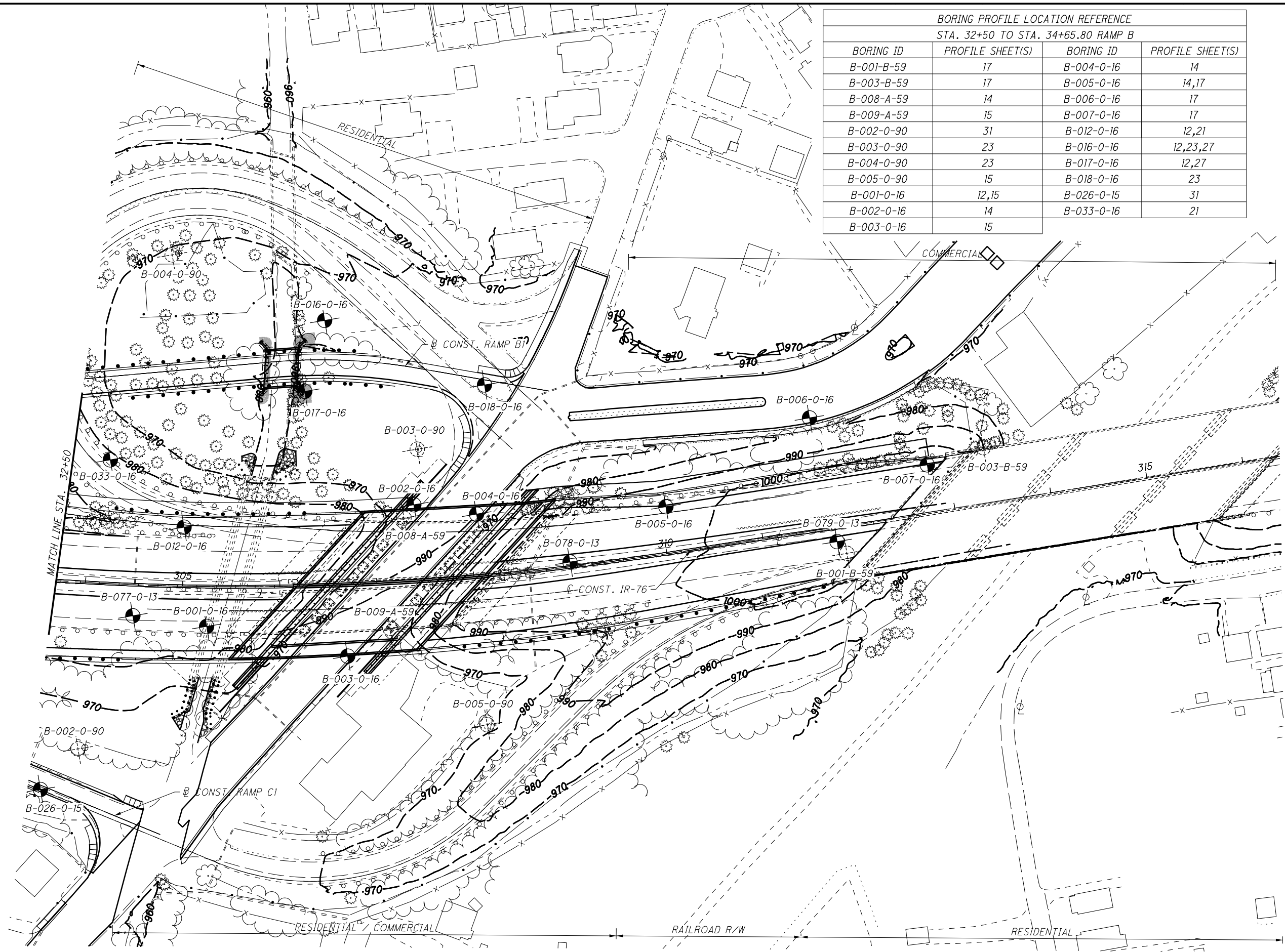
DRAWN: KCA  
CHECKED: BPA

**SOIL PROFILE**  
**STA. 20+00 TO STA. 32+50 RAMP B**

**SUM-76-5.53**



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BORING PROFILE LOCATION REFERENCE			
STA. 32+50 TO STA. 34+65.80 RAMP B			
BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-001-B-59	17	B-004-0-16	14
B-003-B-59	17	B-005-0-16	14,17
B-008-A-59	14	B-006-0-16	17
B-009-A-59	15	B-007-0-16	17
B-002-0-90	31	B-012-0-16	12,21
B-003-0-90	23	B-016-0-16	12,23,27
B-004-0-90	23	B-017-0-16	12,27
B-005-0-90	15	B-018-0-16	23
B-001-0-16	12,15	B-026-0-15	31
B-002-0-16	14	B-033-0-16	21
B-003-0-16	15		

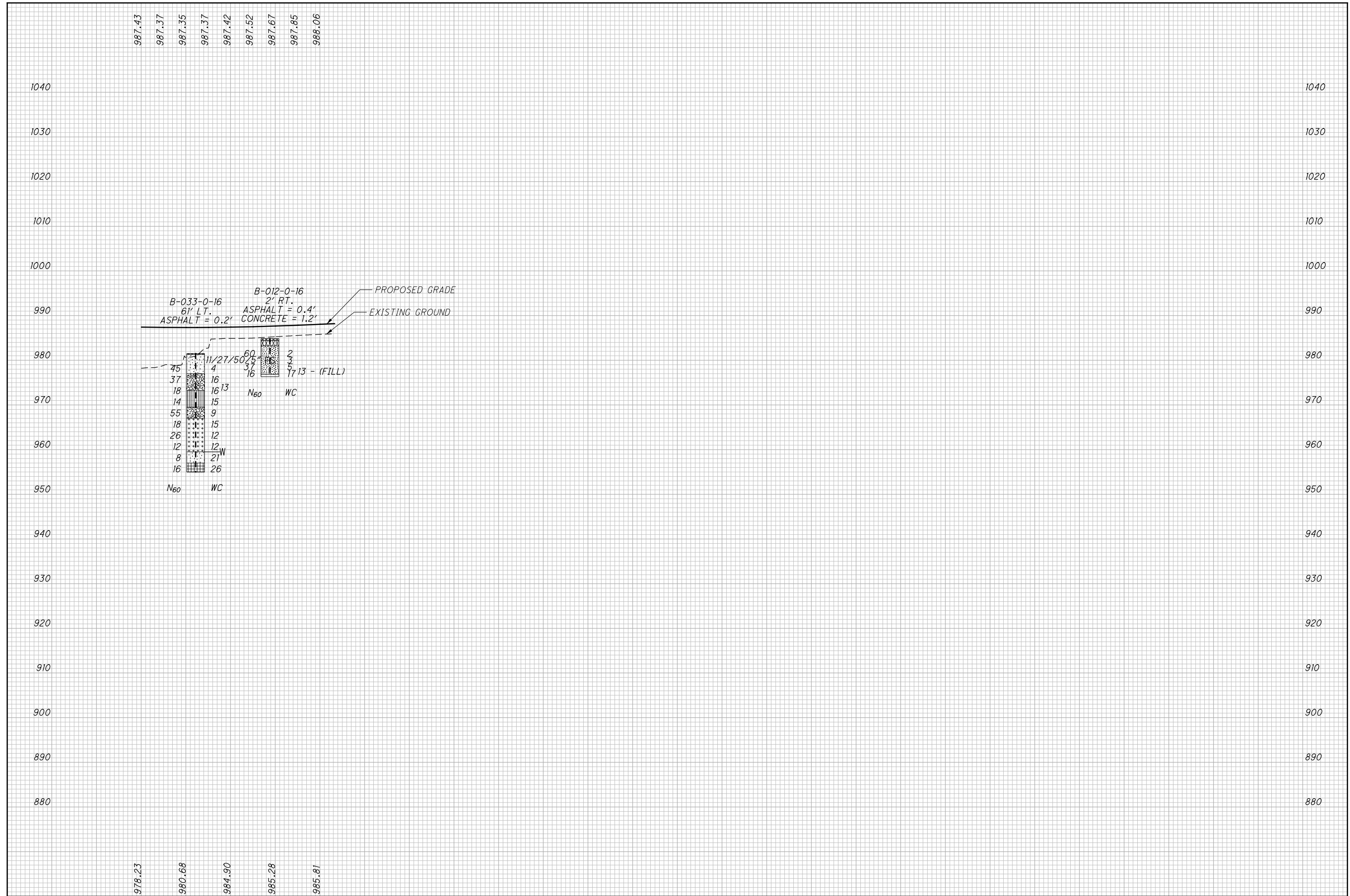

  

  
 HORIZONTAL SCALE IN FEET

**SUM-76.5.53**  
**SOIL PROFILE**  
**STA. 32+50 TO STA. 34+65.80 RAMP B**

DRAWN: KCA  
 CHECKED: BPA  
 20/86

NOTE: BORINGS B-077-0-13, B-078-0-13, AND B-079-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.



987.43  
 987.37  
 987.35  
 987.37  
 987.42  
 987.52  
 987.67  
 987.85  
 988.06

978.23  
 980.68  
 984.90  
 985.28  
 985.81

33+00      34+00



DRAWN: KCA  
 CHECKED: BPA

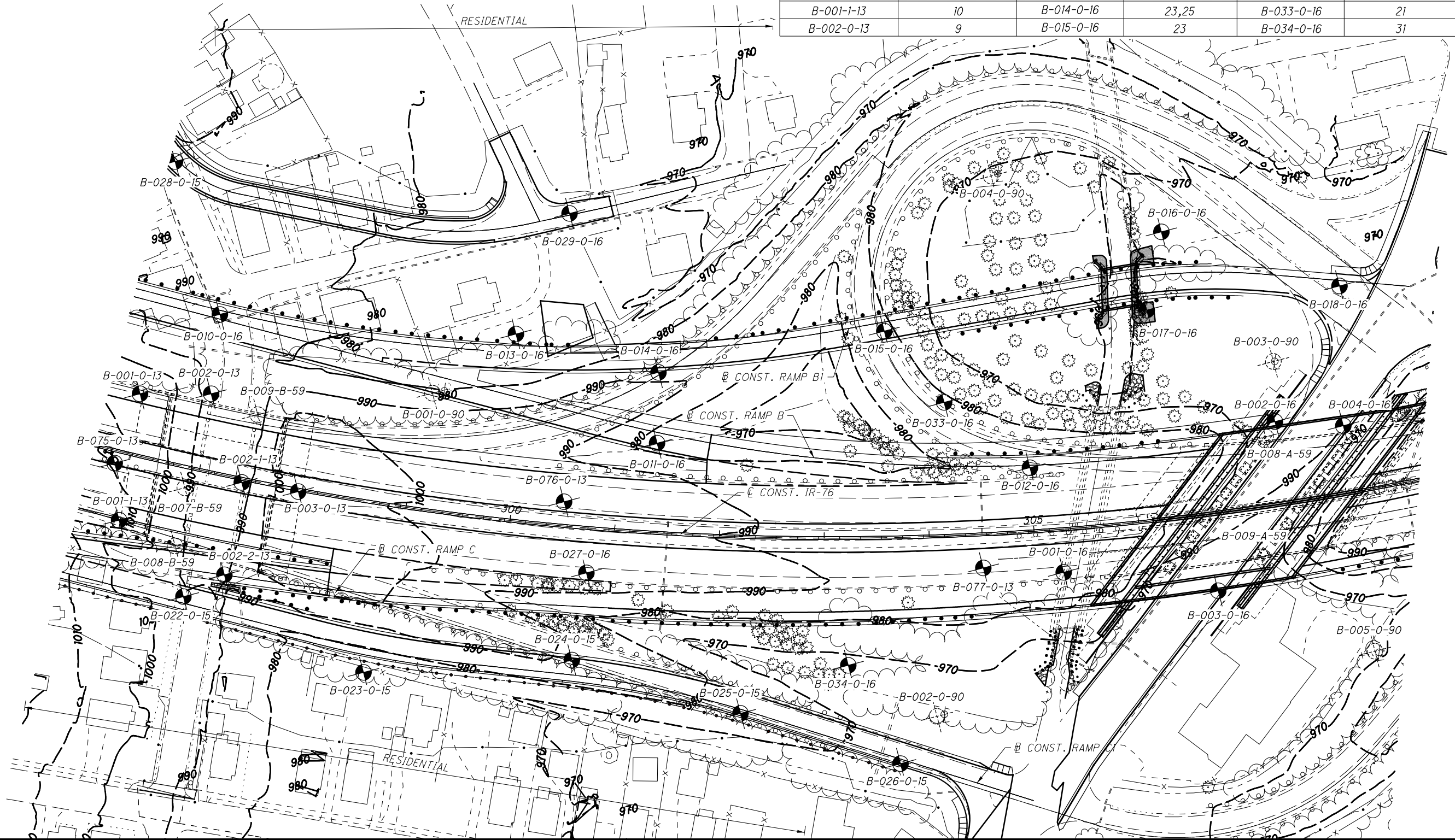
**SOIL PROFILE**  
**STA. 32+50 TO STA. 34+65.80 RAMP B**

**SUM-76-5.53**



NOTE: BORINGS B-075-0-13, B-076-0-13, AND B-077-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.

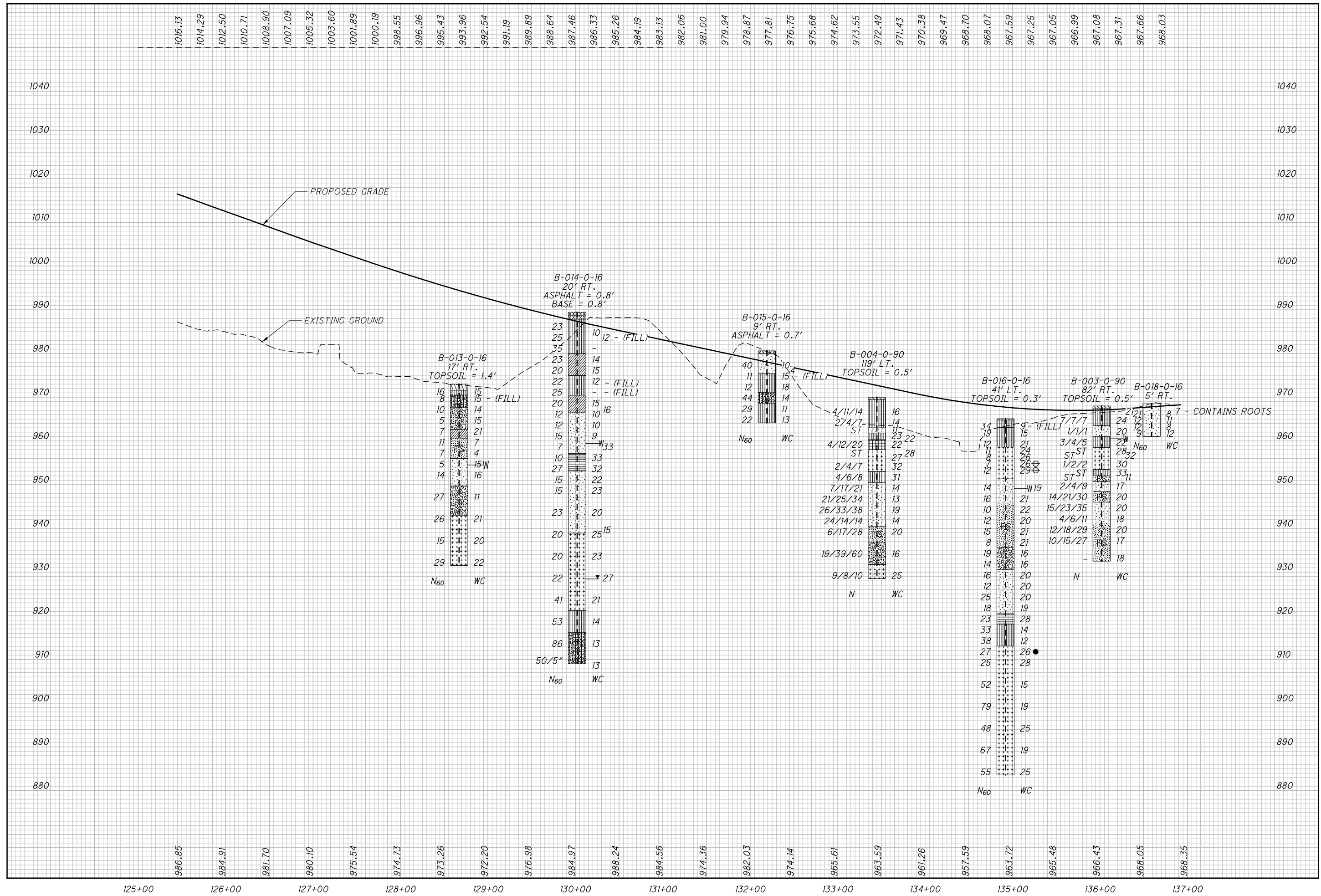
BORING PROFILE LOCATION REFERENCE					
STA. 125+00 TO STA. 137+25.23 RAMP B1					
BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-007-B-59	10	B-002-1-13	10	B-016-0-16	12,23,27
B-008-A-59	14	B-002-2-13	10	B-017-0-16	12,27
B-008-B-59	10	B-003-0-13	9	B-018-0-16	23
B-009-A-59	15	B-001-0-16	12,15	B-022-0-15	29,31
B-009-B-59	9	B-002-0-16	14	B-023-0-15	31
B-001-0-90	19	B-003-0-16	15	B-024-0-15	31
B-002-0-90	31	B-004-0-16	14	B-025-0-15	31
B-003-0-90	23	B-010-0-16	19	B-026-0-15	31
B-004-0-90	23	B-011-0-16	19	B-027-0-16	29
B-005-0-90	15	B-012-0-16	12,21	B-028-0-15	33
B-001-0-13	9	B-013-0-16	23,25	B-029-0-16	33
B-001-1-13	10	B-014-0-16	23,25	B-033-0-16	21
B-002-0-13	9	B-015-0-16	23	B-034-0-16	31



SOIL PROFILE  
STA. 125+00 TO STA. 137+25.23 RAMP B1

SUM-76-5.53

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**SOIL PROFILE**  
**STA. 125+00 TO STA. 137+25.23 RAMP B1**



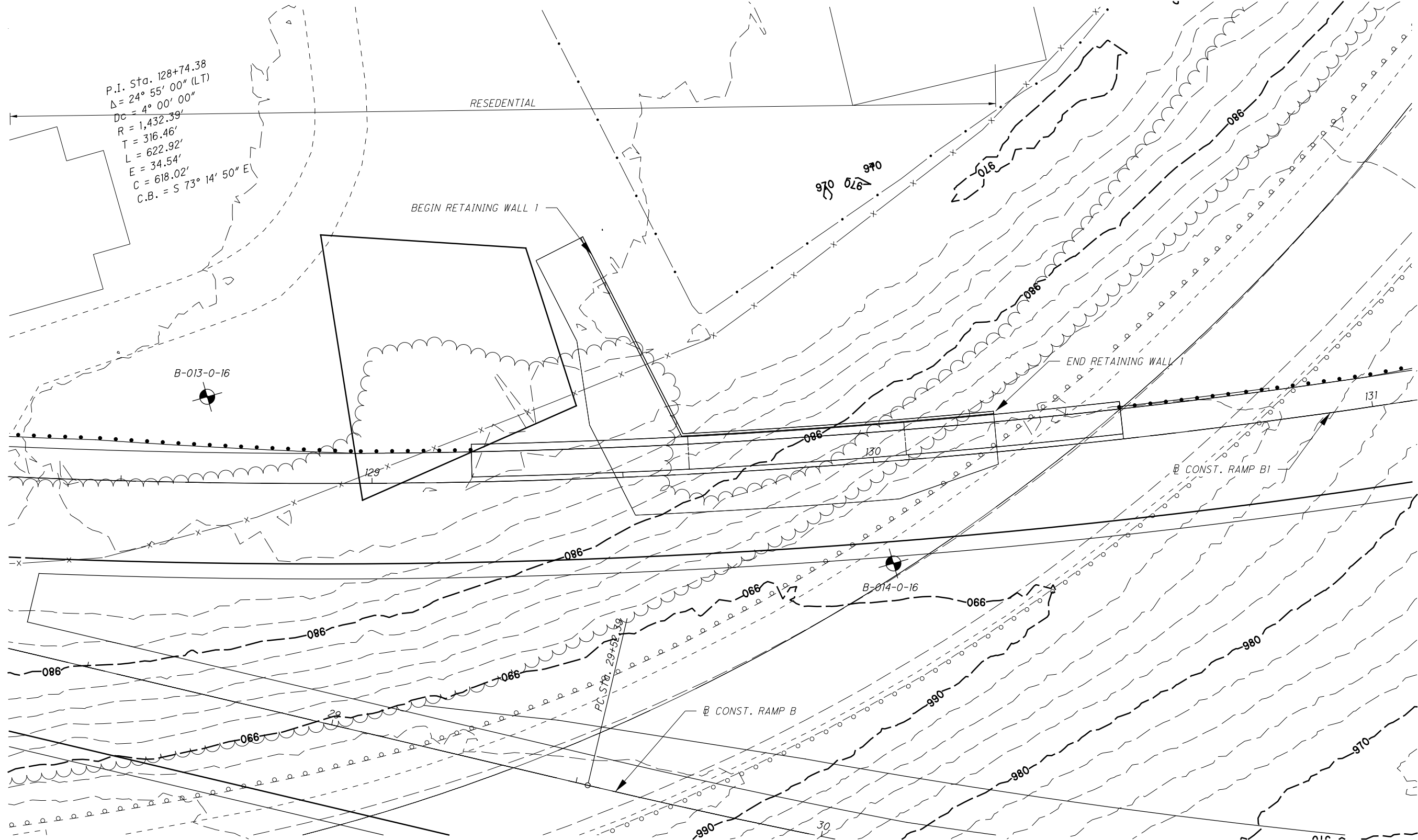
DRAWN: KCA  
CHECKED: BPA

# STRUCTURE FOUNDATION EXPLORATION RETAINING WALL 1

SUM-76-5.53

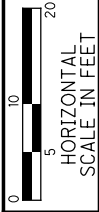
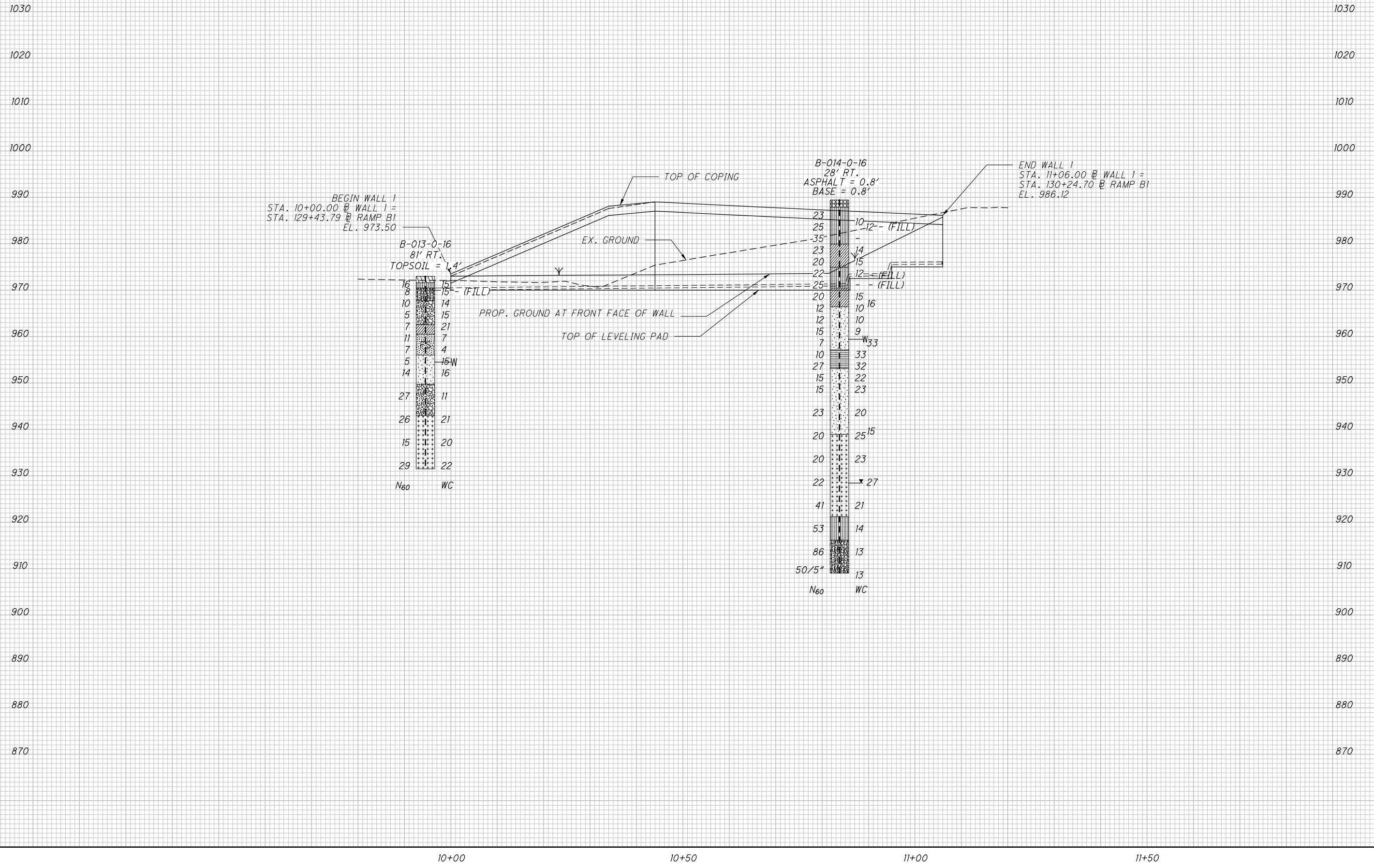


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P.I. Sta. 128+74.38  
 $\Delta = 24^\circ 55' 00''$  (LT)  
 $\Delta C = 4^\circ 00' 00''$   
 $R = 1,432.39'$   
 $T = 316.46'$   
 $L = 622.92'$   
 $E = 34.54'$   
 $C = 618.02'$   
C.B. = S  $73^\circ 14' 50''$  E

BORING PROFILE LOCATION REFERENCE	
RETAINING WALL 1	
BORING ID	PROFILE SHEET(S)
B-013-0-16	23,25
B-014-0-16	23,25



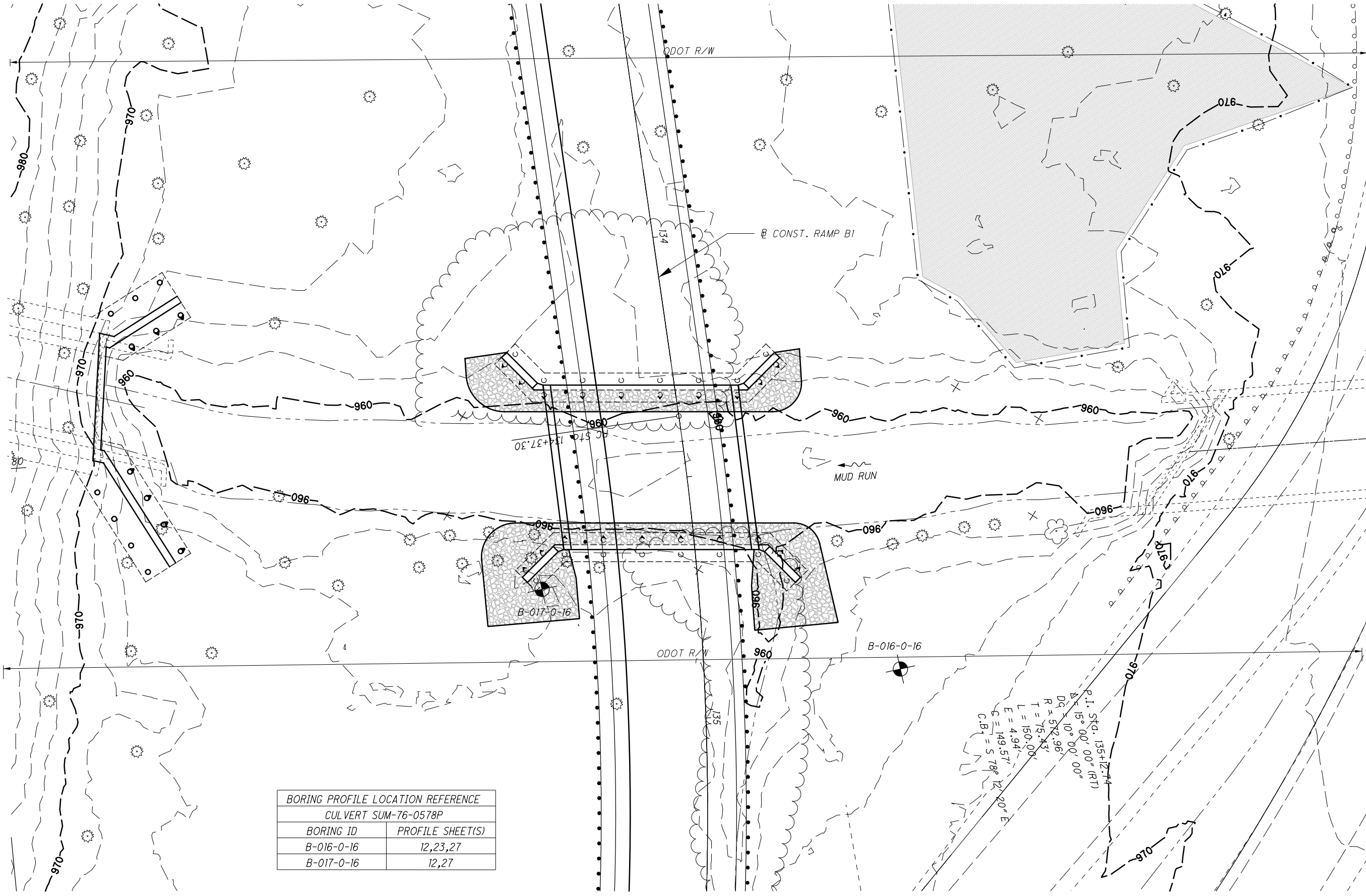
DRAWN: KCA  
 CHECKED: BPA

**STRUCTURE FOUNDATION EXPLORATION  
 RETAINING WALL 1**

**SUM-76-5.53**







BORING PROFILE LOCATION REFERENCE CULVERT SUM-76-0578P	
BORING ID	PROFILE SHEET(S)
B-016-0-16	12,23,27
B-017-0-16	12,27

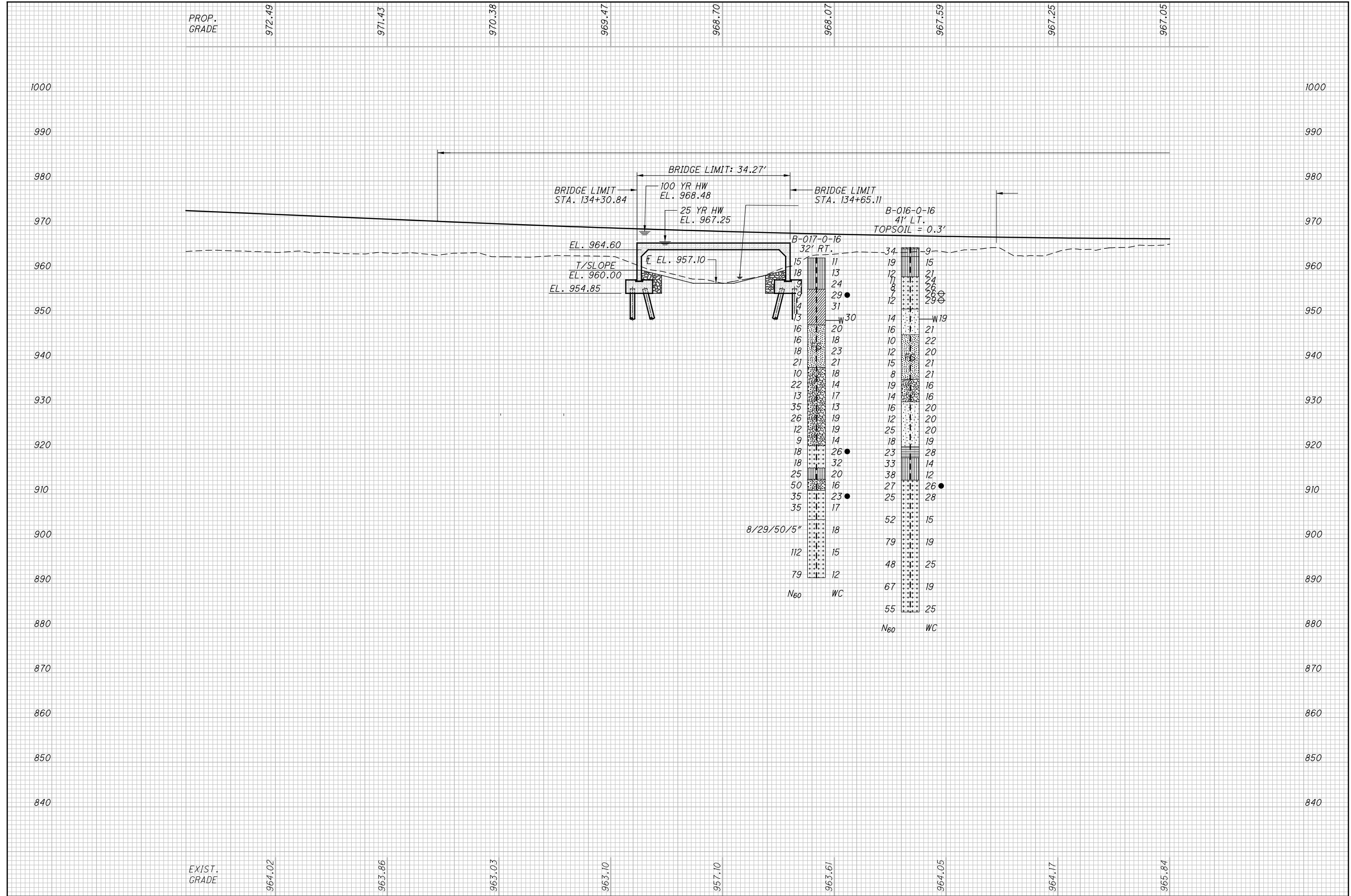
DRAWN: KCA  
 CHECKED: BPA  
 HORIZONTAL SCALE IN FEET  
 0 5 10 20

**STRUCTURE FOUNDATION EXPLORATION**  
**CULVERT NO. SUM-76-0578 OVER MUD RUN**

SUM-76-5.53



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**STRUCTURE FOUNDATION EXPLORATION  
CULVERT NO. SUM-76-0578 OVER MUD RUN**

**SUM-76-5.53**

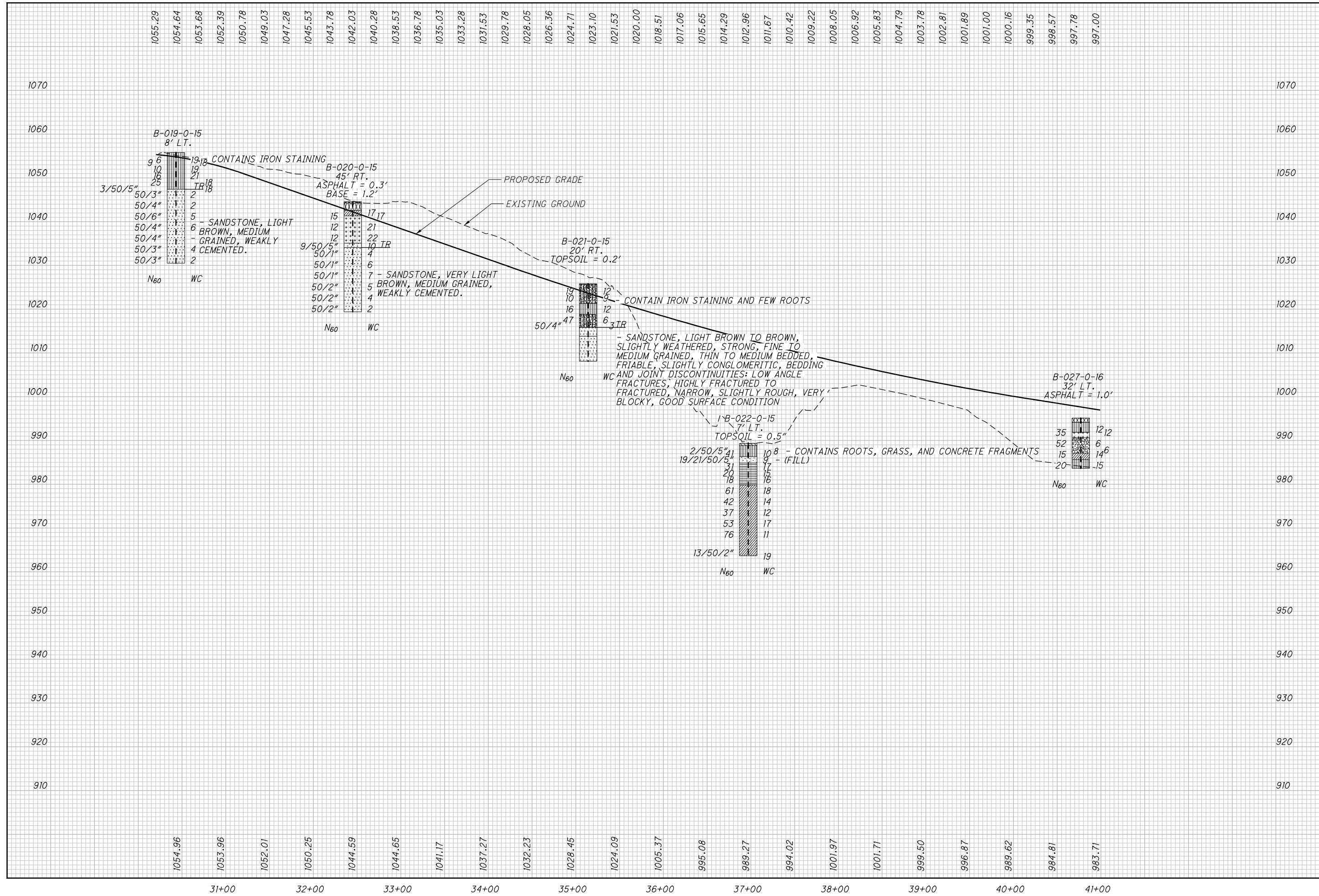




**BORING PROFILE LOCATION REFERENCE**  
STA. 30+01.95 TO STA. 41+00.49 RAMP C

BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-007-B-59	10	B-013-0-16	23,25
B-008-B-59	10	B-014-0-16	23,25
B-009-B-59	9	B-019-0-15	29
B-001-0-90	19	B-020-0-15	29,35
B-001-0-13	9	B-021-0-15	29,31
B-001-1-13	10	B-022-0-15	29,31
B-002-0-13	9	B-023-0-15	31
B-002-1-13	10	B-024-0-15	31
B-002-2-13	10	B-025-0-15	31
B-003-0-13	9	B-027-0-16	29
B-008-0-16	19	B-028-0-15	33
B-009-0-16	19	B-029-0-16	33
B-010-0-16	19	B-030-0-15	35
B-011-0-16	19	B-032-0-16	19

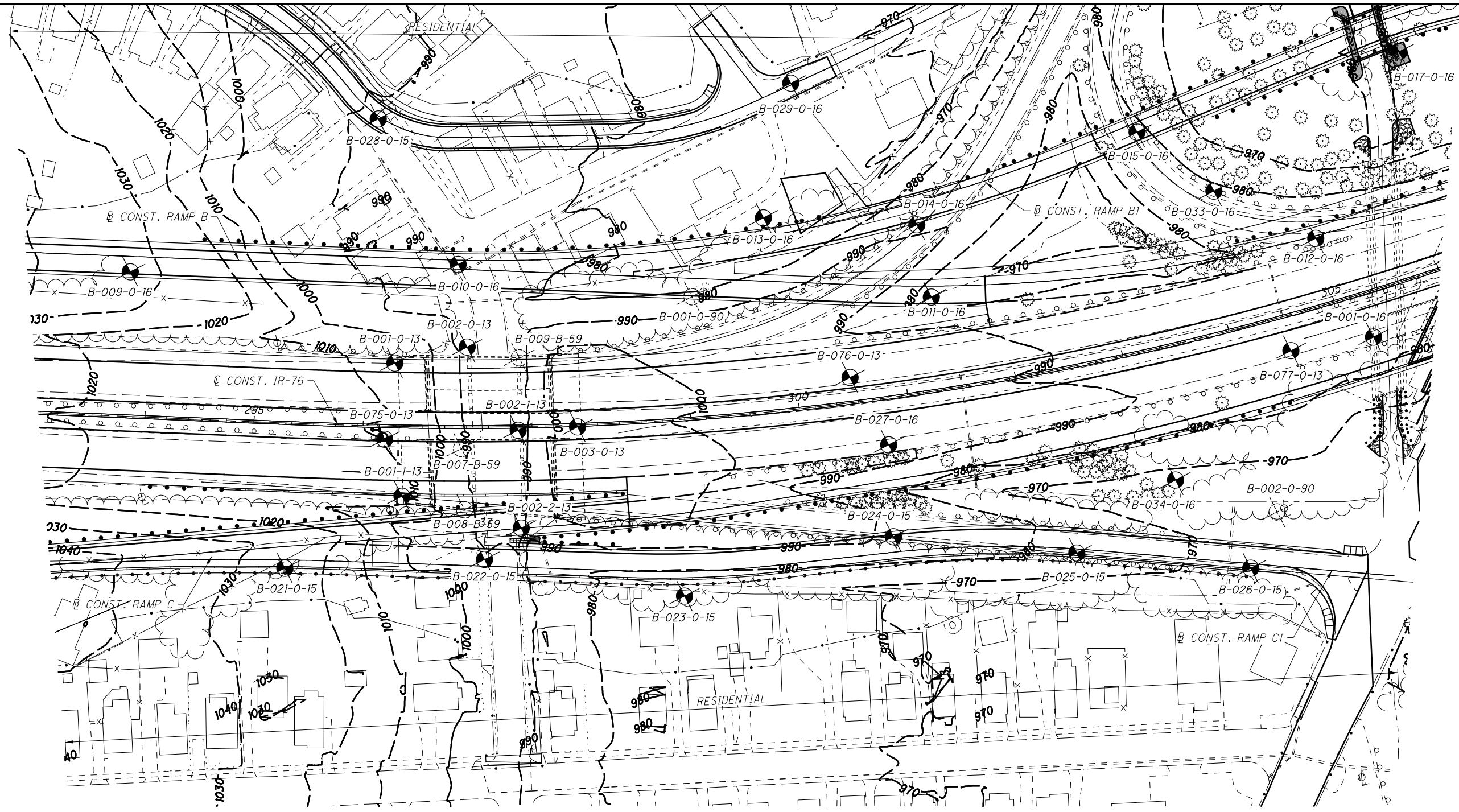
NOTE: BORINGS B-074-0-13, B-075-0-13, AND B-076-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.



**SOIL PROFILE**  
**STA. 30+01.95 TO STA. 41+00.49 RAMP C**

**SUM-76-5.53**

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BORING PROFILE LOCATION REFERENCE					
STA. 133+00 TO STA. 145+31.78 RAMP C1					
BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-007-B-59	10	B-001-0-16	12,15	B-022-0-15	29,31
B-008-B-59	10	B-009-0-16	19	B-023-0-15	31
B-009-B-59	9	B-010-0-16	19	B-024-0-15	31
B-001-0-90	19	B-011-0-16	19	B-025-0-15	31
B-002-0-90	31	B-012-0-16	12,21	B-026-0-15	31
B-001-0-13	9	B-013-0-16	23,25	B-027-0-16	29
B-001-1-13	10	B-014-0-16	23,25	B-028-0-15	33
B-002-0-13	9	B-015-0-16	23	B-029-0-16	33
B-002-1-13	10	B-017-0-16	12,27	B-033-0-16	21
B-002-2-13	10	B-021-0-15	29,31	B-034-0-16	31
B-003-0-13	9				

NOTE: BORINGS B-075-0-13, B-076-0-13, AND B-077-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.

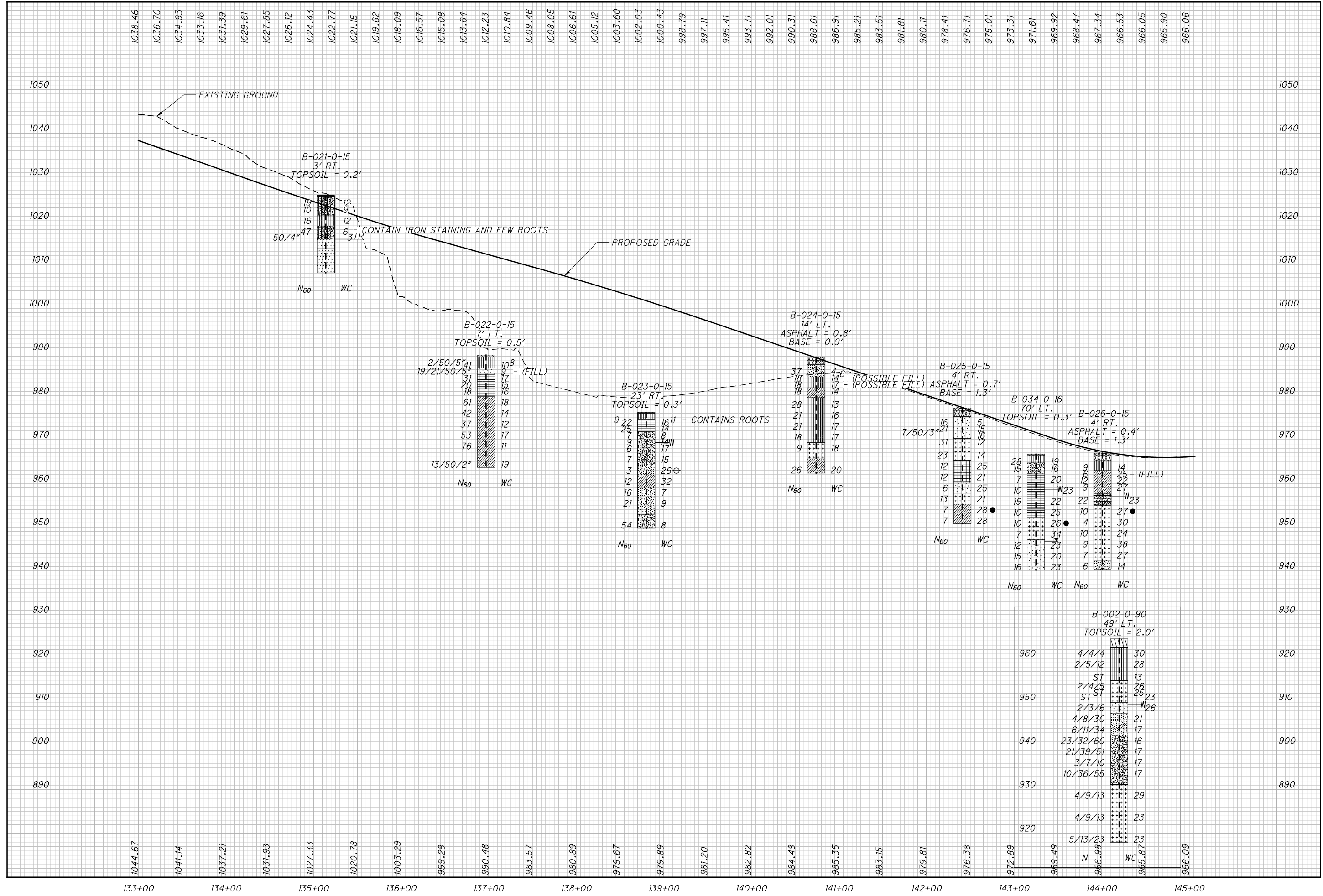


DRAWN: KCA  
CHECKED: BPA

**SOIL PROFILE**  
**STA. 133+00 TO STA. 145+31.78 RAMP C1**

**SUM-76-5.53**

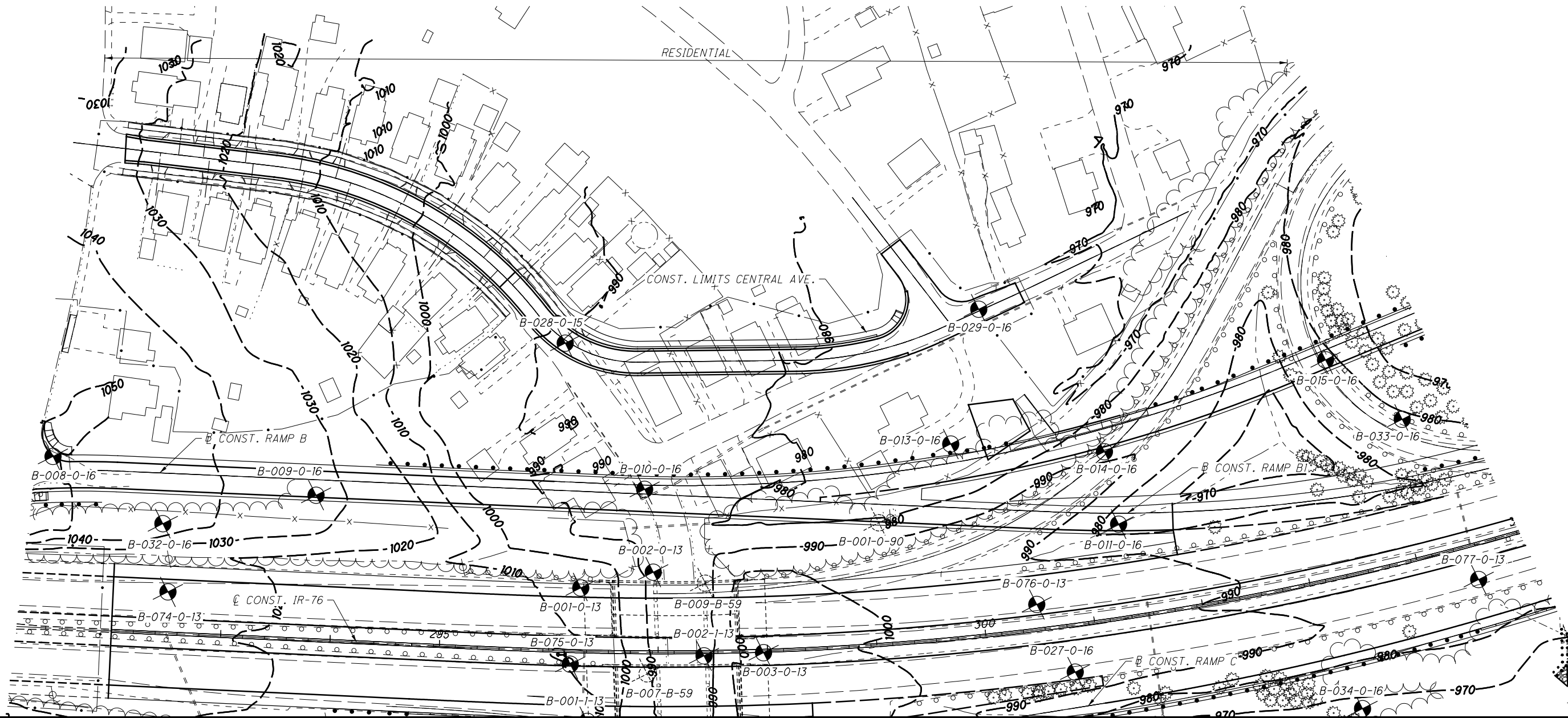




**SOIL PROFILE**  
**STA. 133+00 TO STA. 145+31.78 RAMP C1**

BORING PROFILE LOCATION REFERENCE			
STA. 2+48.83 TO STA. 5+45.85 CENTRAL AVE.			
BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-007-B-59	10	B-011-0-16	19
B-009-B-59	9	B-013-0-16	23,25
B-001-0-90	19	B-014-0-16	23,25
B-001-0-13	9	B-015-0-16	23
B-001-1-13	10	B-027-0-16	29
B-002-0-13	9	B-028-0-15	33
B-002-1-13	10	B-029-0-16	33
B-003-0-13	9	B-032-0-16	19
B-008-0-16	19	B-033-0-16	21
B-009-0-16	19	B-034-0-16	31
B-010-0-16	19		

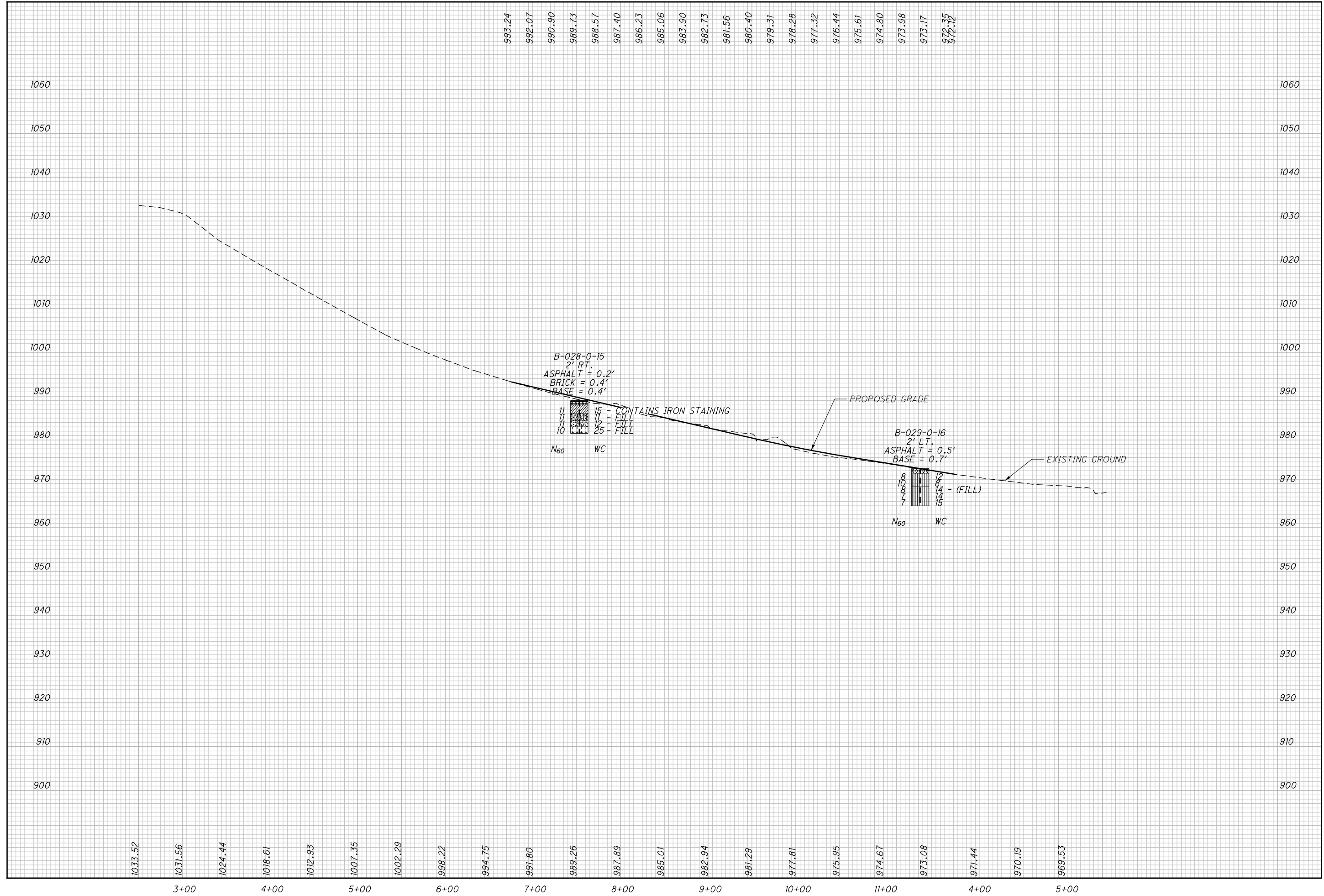
NOTE: BORINGS B-074-0-13, B-075-0-13, B-076-0-13, AND B-077-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.



DRAWN: KCA  
CHECKED: BPA

**SOIL PROFILE**  
**STA. 2+48.83 TO STA. 5+45.85 CENTRAL AVE**

**SUM-76-5.53**



**SOIL PROFILE**  
**STA. 2+48.83 TO STA. 5+45.85 CENTRAL AVE**

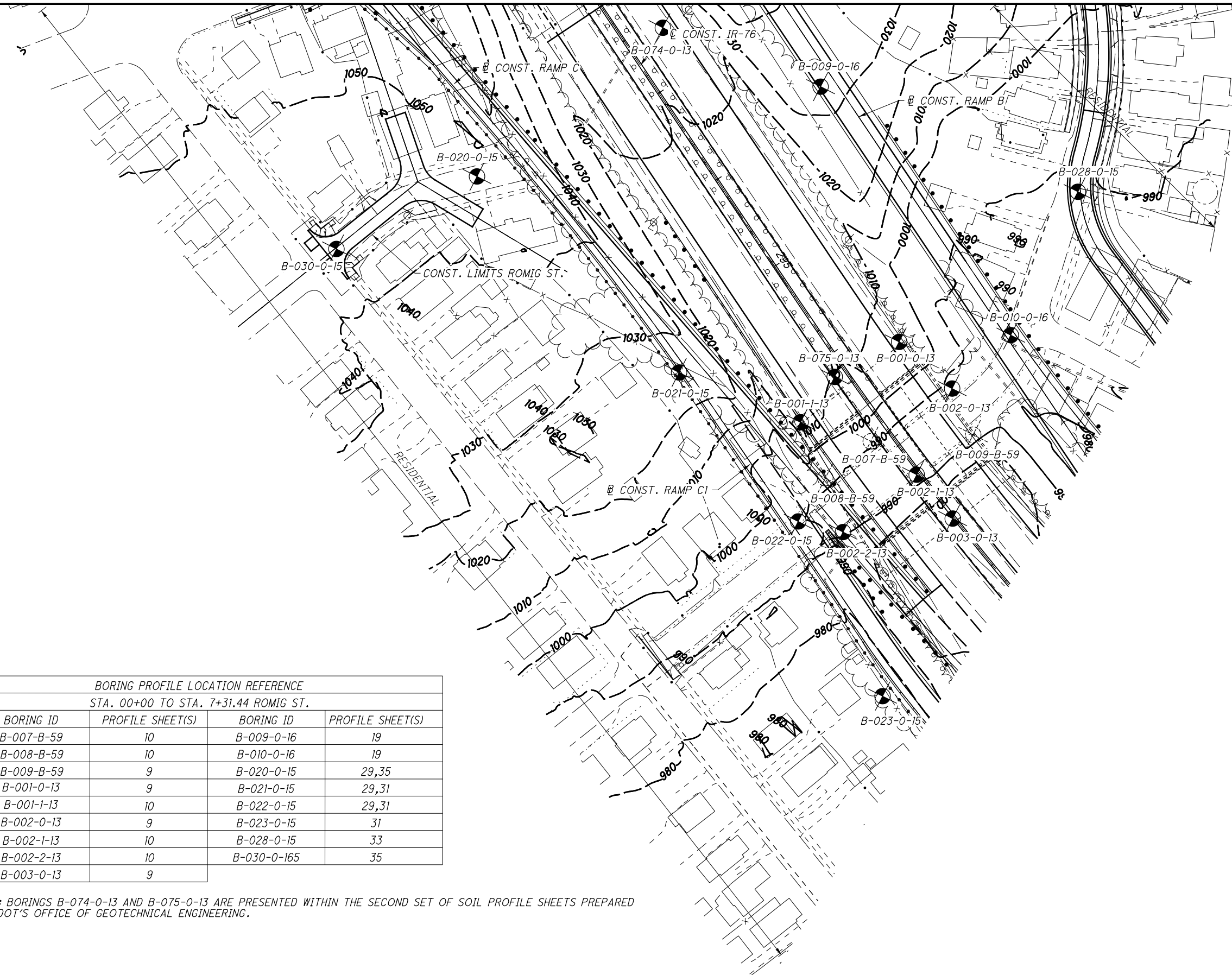
**SUM-76-5.53**





BORING PROFILE LOCATION REFERENCE			
STA. 00+00 TO STA. 7+31.44 ROMIG ST.			
BORING ID	PROFILE SHEET(S)	BORING ID	PROFILE SHEET(S)
B-007-B-59	10	B-009-0-16	19
B-008-B-59	10	B-010-0-16	19
B-009-B-59	9	B-020-0-15	29,35
B-001-0-13	9	B-021-0-15	29,31
B-001-1-13	10	B-022-0-15	29,31
B-002-0-13	9	B-023-0-15	31
B-002-1-13	10	B-028-0-15	33
B-002-2-13	10	B-030-0-165	35
B-003-0-13	9		

NOTE: BORINGS B-074-0-13 AND B-075-0-13 ARE PRESENTED WITHIN THE SECOND SET OF SOIL PROFILE SHEETS PREPARED BY ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING.

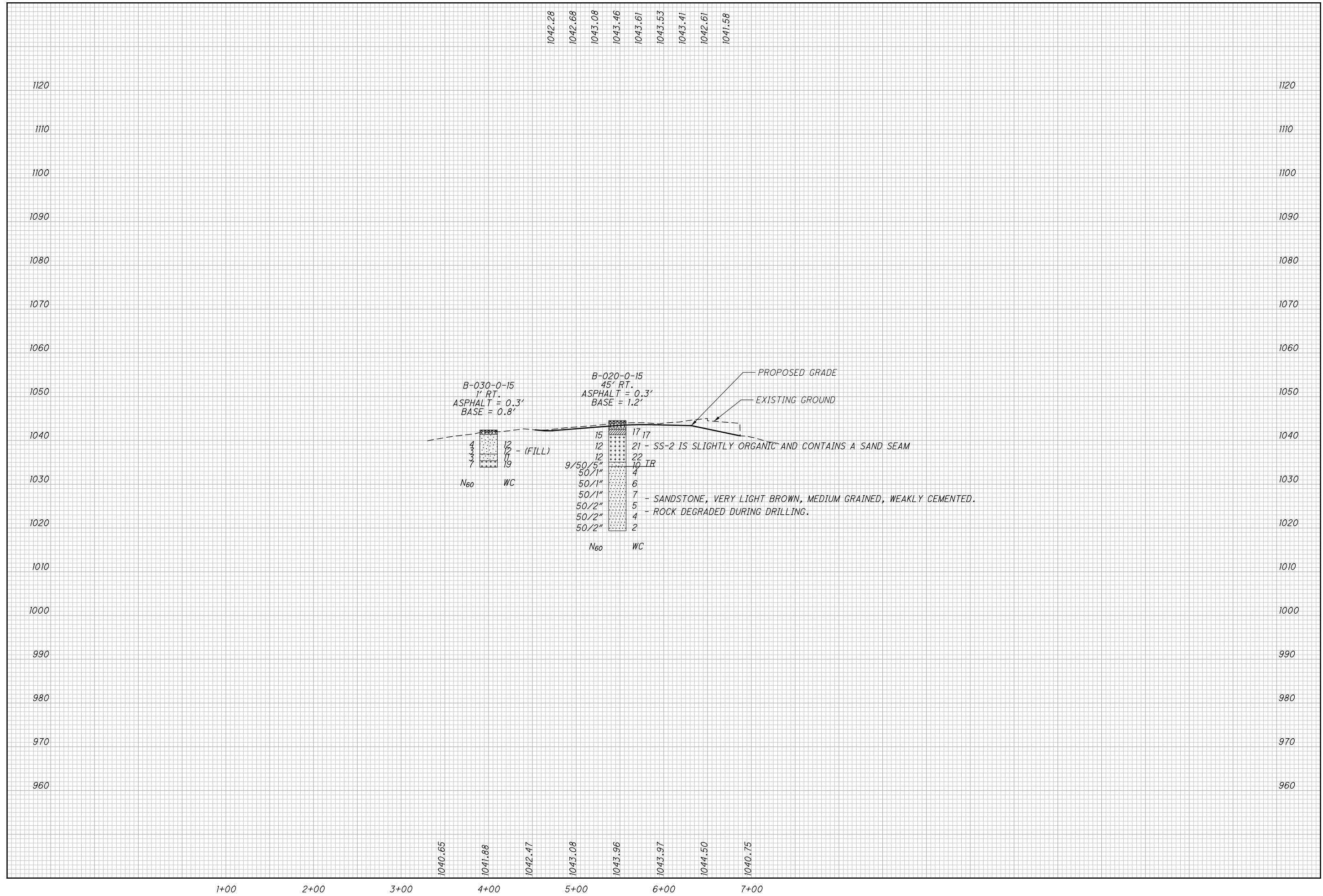


  
  
 HORIZONTAL SCALE IN FEET  
 DRAWN: KCA  
 CHECKED: BPA

**SOIL PROFILE**  
**STA. 0+00 TO STA. 7+31.44 ROMIG ST**

**SUM-76-5.53**





DRAWN: KCA  
 CHECKED: BPA

**SOIL PROFILE**  
**STA. 0+00 TO STA. 7+31.44 ROMIG ST**

**SUM-76-5.53**



PROJECT: SUM-76-05.53		DRILLING FIRM / OPERATOR: BEI / ASHBAUGH		DRILL RIG: CME 55		STATION / OFFSET: 305+25.41' RT.		EXPLORATION ID										
TYPE: BRIDGE		SAMPLING FIRM / LOGGER: BEI / K. BAME		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-001-0-16										
PID: 96670 SFN:		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 988.9 (MSL) EOB: 76.5 ft.		PAGE										
START: 9/12/16 END: 9/13/16		SAMPLING METHOD: SPT		ENERGY RATIO (%): 81.8		LAT / LONG: 41.035758, -81.578062		1 OF 2										
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (G)	HOLE SEALED	
10.0" ASPHALT	988.1	1																
21.5" GRANULAR BASE	986.2	2																
DENSE TO VERY DENSE, YELLOWISH BROWN AND VERY LIGHT BROWN, FINE SAND, SOME COARSE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, GRAVEL IS FRIABLE SANDSTONE FRAGMENTS, DRY (FILL)	FS	3	9	39	94	83	SS-1	-	-	-	-	-	-	-	2	A-3 (V)		
		4		30														
		5																
		6	6	11	38	72	SS-2	-	24	60	5	2	NP	NP	3	A-3 (O)		
		7		17														
		8	11	4	12	67	SS-3	4.5+	-	-	-	-	-	-	16	A-6a (V)		
		9		5														
		10	4	5	15	50	SS-4	4.5+	-	-	-	-	-	-	15	A-6a (V)		
		11		6														
		12																
		13	3	4	14	56	SS-5	4.5+	4	5	11	54	26	27	19	8	A-4b (8)	
		14		6														
		15	2	4	15	72	SS-6	4.5+	-	-	-	-	-	-	16	A-6a (V)		
		16		7														
		17																
		18	4	4	15	61	SS-7	3.0-4.5+	5	5	14	48	28	29	11	16	A-6a (8)	
		19		7														
		20	4	6	19	83	SS-8	3.75-4.5+	15	6	13	43	23	27	17	10	A-4a (6)	
		21		8														
		22																
		23	1	1	3	0	SS-9	-	-	-	-	-	-	-	-	-	-	
		24																
		25																
		26	6	5	8	39	SS-10	-	-	-	-	-	-	-	2	A-1-b (V)		
		27		1														
		28	6	2	7	17	SS-11	-	-	-	-	-	-	-	4	A-1-b (V)		
		29		3														
		30																
		31	2	3	5	22	SS-12	-	-	-	-	-	-	-	5	A-4a (V)		
		32		1														
		33	50/5"			100	SS-13	-	13	18	48	12	9	NP	NP	24	A-3a (O)	
		34																
		35	60/2"			100	SS-14	-	-	-	-	-	-	-	19	A-1-b (V)		
		36																
		37																
		38	8	10	30	11	SS-15	-	-	-	-	-	-	-	19	A-1-a (V)		
		39		12														
		40																
		41	3	4	15	100	SS-16	0.75-1.25	0	0	1	54	45	31	21	10	25	A-4b (8)
		42		7														
		43																
		44																
		45	6	12	41	100	SS-17	-	-	-	-	-	-	-	19	A-3a (V)		
		46		18														
		47																
		48																
		49																
		50	7	8	30	39	SS-18	-	39	31	24	4	2	NP	NP	21	A-1-b (O)	
		51		14														
		52																
		53																
		54																
		55																
		56	8	12	33	50	SS-19	-	-	-	-	-	-	-	14	A-1-b (V)		
		57		12														
		58																
		59																

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 1208 - \VOLCUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ

PID: 96670	SFN:	PROJECT: SUM-76-05.53	STATION / OFFSET: 305+25.41' RT.	START: 9/12/16	END: 9/13/16	PG 2 OF 2		B-001-0-16										
						ODOT CLASS (G)	SEAL											
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	HP (tsf)	GRADATION (%)			ATTERBERG			HOLE CLASS (G)	SEAL			
								GR	CS	FS	SI	CL	LL	PL	PI	WC		
MEDIUM DENSE TO DENSE, GRAY, GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, MOIST TO WET (continued)		928.9	61	11	31	83	-	-	-	-	-	-	-	-	-	-	20	A-1-b (V)
			62	12														
DENSE, GRAY, COARSE AND FINE SAND LITTLE SILT, TRACE GRAVEL, TRACE CLAY, MOIST		925.6	63															
			64															
DENSE, GRAY, SANDY SILT, SOME GRAVEL, TRACE CLAY, MOIST		920.6	65	10	33	89	-	-	-	-	-	-	-	-	-	-	19	A-3a (V)
			66	11														
DENSE, GRAY, SANDY SILT, SOME GRAVEL, TRACE CLAY, MOIST		920.6	67	13														
			68															
MEDIUM STIFF TO VERY STIFF, GRAY, SILT, LITTLE SAND, LITTLE CLAY, MOIST		915.6	69															
			70	21	35	67	-	30	6	20	40	4	NP	NP	NP	16	A-4a (2)	
			71	14														
			72	12														
			73															
			74															
			75	5	30	100	0.5-2.5											
			76	12														

EOB

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:08 - \COLUMBUSLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 45.0' DURING DRILLING.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 1 BAG ASPHALT PATCH; PUMPED 100 GAL. BENTONITE GROUT; POURED 1 BAG HOLE PLUG

PROJECT: SUM-76-05.53 TYPE: BRIDGE	DRILLING FIRM / OPERATOR: BEI / ASHBAUGH	DRILL RIG: CME 55	STATION / OFFSET:		EXPLOSION ID													
			307+43.79' LT.	B-002-0-16														
PID: 96670 SFN:	SAMPLING FIRM / LOGGER: BEI / K. BAME	HAMMER: CME AUTOMATIC	ALIGNMENT:		PAGE													
START: 6/27/16 END: 6/27/16	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/8/15	IR-76			1 OF 2												
SAMPLING METHOD: SPT		ENERGY RATIO (%): 81.8	ELEVATION: 967.6 (MSL) EOB: 81.5 ft.		HOLE													
MATERIAL DESCRIPTION AND NOTES		REC SAMPLE ID	LAT / LONG: 41.035995, -81.577222			SEAL												
3.0" TOPSOIL VERY STIFF TO HARD, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, SS-1 CONTAINS GRASS, ROOTS, AND CONCRETE FRAGMENTS, DAMP TO MOIST (FILL) @2.5'; SS-2 CHANGES TO VERY STIFF	ELEV. 967.6 967.3	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)			ATTERBERG	WC	ODOT CLASS (G)						
							GR	CS	FS				SI	CL	LL	PL		
MEDIUM DENSE, BROWN, COARSE AND FINE SAND TRACE SILT, TRACE CLAY, MOIST	963.1	3	11	39	SS-2	3.0- 3.5	-	-	-	-	-	-						
													0	2	80	10	8	NP
MEDIUM STIFF TO VERY STIFF, GRAY, SILT, SOME CLAY, TRACE SAND, WET	960.6	1	4	100	SS-5	2.0- 2.5	0	1	71	28	19	6						
													0	0	1	71	28	19
VERY LOOSE TO MEDIUM DENSE BROWN, FINE SAND, LITTLE TO SOME COARSE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, WET	948.1	1	5	16	100	SS-8	0.50	-	-	-	-	-						
													6	15	70	6	3	NP
@22.5'; SS-10 BECOMES DARK BROWN	948.1	3	6	19	100	SS-10	-	-	-	-	-	-						
													4	12	100	SS-11	-	-
@25.0'; SS-11 TO SS-13 BECOME GRAYISH BROWN	948.1	10	6	16	100	SS-12	-	-	-	-	-	-						
													3	4	11	SS-13	-	-
@32.5'; SS-14 TO SS-16 BECOME GRAY	948.1	11	10	23	50	SS-14	-	-	-	-	-	-						
													17	11	7	SS-15	-	-
@40.0'; SS-17 AND SS-18 BECOME DARK GRAY	948.1	5	7	22	100	SS-16	-	9	35	50	4	2						
													3	2	10	100	SS-17	-
DENSE TO VERY DENSE, GRAY, SILT, LITTLE SAND, LITTLE CLAY, MOIST	919.3	5	15	46	100	SS-19	-	0	12	74	14	NP						
													6	31	56	SS-20	-	-
1	4	20	44	50	SS-1	-	-	-	-	-	-	8	A-4a (V)					
2	3	3	11	39	SS-2	3.0-3.5	-	-	-	-	-	15	A-4a (V)					
3	3	4	12	61	SS-3	-	0	2	80	10	8	NP	NP	NP	13	A-3a (0)		
4	3	3	10	50	SS-4	2.25-3.25	-	-	-	-	-	-	-	-	-	25	A-4b (V)	
5	1	1	4	100	SS-5	2.0-2.5	0	0	1	71	28	19	6	-	-	-	27	A-4b (8)
6	WOH	1	3	100	SS-6	1.00	-	-	-	-	-	-	-	-	-	-	30	A-4b (V)
7	WOH	0	0	100	SS-7	0.5-1.5	-	-	-	-	-	-	-	-	-	-	29	A-4b (V)
8	WOH	1	5	16	100	SS-8	0.50	-	-	-	-	-	-	-	-	-	34	A-4b (V)
9	WOH	6	6	18	100	SS-9	-	6	15	70	6	3	NP	NP	NP	23	A-3 (0)	
10	WOH	3	6	19	100	SS-10	-	-	-	-	-	-	-	-	-	-	19	A-3 (V)
11	WOH	4	4	12	100	SS-11	-	-	-	-	-	-	-	-	-	-	23	A-3 (V)
12	WOH	10	6	16	100	SS-12	-	-	-	-	-	-	-	-	-	-	23	A-3 (V)
13	WOH	3	2	4	11	SS-13	-	-	-	-	-	-	-	-	-	-	30	A-3 (V)
14	WOH	11	10	23	50	SS-14	-	-	-	-	-	-	-	-	-	-	19	A-3 (V)
15	WOH	17	11	25	67	SS-15	-	-	-	-	-	-	-	-	-	-	18	A-3 (V)
16	WOH	5	7	22	100	SS-16	-	9	35	50	4	2	NP	NP	NP	19	A-3 (0)	
17	WOH	3	2	10	100	SS-17	-	-	-	-	-	-	-	-	-	-	21	A-3 (V)
18	WOH	4	4	12	100	SS-18	-	-	-	-	-	-	-	-	-	-	20	A-3 (V)
19	WOH	5	15	46	100	SS-19	-	0	12	74	14	NP	NP	NP	17	A-4b (8)		
20	WOH	6	31	56	SS-20	-	-	-	-	-	-	-	-	-	-	-	19	A-4b (V)

PID: 96670	SFN:	PROJECT: SUM-76-05.53	STATION / OFFSET: 307+43.79' L.T.	START: 6/27/16	END: 6/27/16	PG 2 OF 2		B-002-0-16												
						GR	CS		FS	SI	CL	LL	PL	PI	WC					
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GRADATION (%)			ATTERBERG			ODOT CLASS (G)	HOLE SEALED					
DENSE TO VERY DENSE, GRAY, SILT, LITTLE SAND, LITTLE CLAY, MOIST (continued) @60.0'; SS-21 BECOMES DARK GRAY		907.6	61	13	70	83	SS-21	0	0	16	69	15	NP	NP	NP	17	A-4b (8)			
			62	24																
			63	27																
			64																	
			65																	
			66	16	61	100	SS-22	-	-	-	-	-	-	-	-	-	-	19	A-4b (V)	
			67	21																
			68	24																
			69																	
			70																	
			71	13	89	100	SS-23	4.5+	2	1	2	56	39	30	19	11	22	A-6a (8)		
			72	31																
			73	34																
74																				
75																				
76	6	61	100	SS-24	4.5+	-	-	-	-	-	-	-	-	24	A-6a (V)					
77	11																			
78	34																			
79																				
80	6	33	100	SS-25	4.5+	1	0	3	69	27	27	21	6	22	A-4b (8)					
81	11																			
81	13																			
			EOB																	

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:08 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\11 ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 18.0' DURING DRILLING, 23.0' UPON COMPLETION. HEAVED AT 22.5'. PUMPED IN WATER. CAVE DEPTH 41.5'.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 65 GAL. BENTONITE GROUT; POURED 1 BAG HOLE PLUG

PROJECT: SUM-76-05.53 DRILLING FIRM / OPERATOR: BEI / ASHBAUGH STATION / OFFSET: 306+67, 74' RT. EXPLORATION ID B-003-0-16  
 TYPE: BRIDGE SAMPLING FIRM / LOGGER: BEI / K. BAME HAMMER: CME 55 ALIGNMENT: IR-76  
 PID: 96670 SFN: DRILLING METHOD: 3.25" HSA CALIBRATION DATE: 12/8/15 ELEVATION: 966.0 (MSL) EOB: 110.2 ft. PAGE 1 OF 2  
 START: 6/28/16 END: 6/28/16 SAMPLING METHOD: SPT ENERGY RATIO (%): 81.8 LAT / LONG: 41.035606, -81.577563

MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTH	SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	HOLE SEALED
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2.0" ASPHALT	966.0	1																
5.0" BRICK	965.8 / 965.4 / 964.3	2																
13.0" CONCRETE		3																
LOOSE, BROWN MOTTLED WITH BLACK SILT, LITTLE SAND, LITTLE GRAVEL, TRACE CLAY, WET (FILL)		4																
LOOSE, BROWNISH GRAY, COARSE AND FINE SAND SOME SILT, TRACE GRAVEL, TRACE CLAY, WET (FILL)	961.5	5																
MEDIUM STIFF TO STIFF, BROWN MOTTLED WITH GRAY AND BLACK SILT, SOME CLAY, TRACE GRAVEL, TRACE SAND, DAMP (FILL)	959.0	6																
@10.0'; ST-4 PUSHED 24.0" AT 425 - 500PSI		7																
@12.5'; SS-5 NO RECOVERY		8																
MEDIUM STIFF TO STIFF, GRAY, SILT AND CLAY TRACE SAND, WET	951.5	9																
LOOSE, BROWN SILT, "AND" SAND, TRACE CLAY, TRACE GRAVEL, WET	949.0	10																
LOOSE TO MEDIUM DENSE, BROWN, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, WET	946.5	11																
@25.0'; SS-10 BECOMES GRAYISH BROWN		12																
LOOSE TO MEDIUM DENSE, GRAYISH BROWN, GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, MOIST TO WET	939.0	13																
@37.5'; SS-15 TO SS-17 BECOME DARK GRAY		14																
MEDIUM DENSE, DARK GRAY, GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP	917.7	15																
VERY STIFF, GRAY, SILT, SOME CLAY, TRACE TO LITTLE SAND, MOIST TO WET	912.7	16																

GRADATION (%)		GR	CS	FS	SI	CL	LL	PL	PI	WC
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STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:09 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\14 ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

PID: 96670	SFN:	PROJECT:	SUM-76-05.53	STATION / OFFSET:	306+67.74 RT	START:	6/28/16				END:	6/28/16	PG 2 OF 2	B-003-0-16			
							GRADATION (%)										
MATERIAL DESCRIPTION AND NOTES				SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GRADATION (%)				WC	HOLE CLASS (G)	SEAL			
								GR	CS	FS	SI				CL	LL	PL
VERY STIFF, GRAY, SILT, SOME CLAY, TRACE TO LITTLE SAND, MOIST TO WET (continued)				61	4	100	2.0	-	-	-	-	-	-	24	A-4b (V)		
@65.0'; SS-21 AND ST-22 BECOME STIFF				62	5	100	2.25	-	-	-	-	-	-	-	-		
@70.0'; ST-22 PUSHED 24.0" AT 450 - 750PSI				63													
Dry Unit Weight: 111.2 lbs/ft @ 19.9%				64													
VERY STIFF TO HARD, GRAY, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, DAMP TO MOIST				65	3	100	1.25	-	-	-	-	-	-	23	A-4b (V)		
				66	6	100	1.25	-	-	-	-	-	-	-	-		
				67													
				68													
				69													
				70													
				71		100	1.25	0	4	7	55	34	24	17	7	20	A-4b (8)
				72													
				73													
				74													
				75	11	100	4.5+	10	7	18	48	17	18	14	4	12	A-4a (6)
				76	13	37											
				77	14												
				78													
				79													
				80	5	100	2.00	-	-	-	-	-	-	-	16	A-4a (V)	
				81	7	16											
				82													
				83													
				84													
MEDIUM DENSE TO DENSE, GRAY, GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST TO WET				85	7	100	-	16	60	9	12	3	NP	NP	NP	16	A-1-b (0)
				86	7	19											
				87													
				88													
				89													
				90	8	100	-	-	-	-	-	-	-	-	13	A-1-b (V)	
				91	15	42											
				92	16												
				93													
				94													
VERY DENSE, GRAY, SANDY SILT, SOME GRAVEL, TRACE CLAY, DAMP				95	16	61	-	29	6	7	49	9	NP	NP	NP	14	A-4a (5)
				96	26	56											
				97	15												
				98													
				99													
				100	9	100	-	-	-	-	-	-	-	-	11	A-4a (V)	
@100.0'; SS-28 BECOMES MEDIUM DENSE				101	6	23											
				102	11												
				103													
				104													
DENSE TO VERY DENSE, DARK BROWN, COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, DAMP TO MOIST				105	9	100	-	10	12	52	19	7	NP	NP	NP	13	A-3a (0)
				106	10	34											
				107	15												
				108													
				109													
				110	60	100									8	A-3a (V)	

NOTES: GROUNDWATER ENCOUNTERED AT 18.0' DURING DRILLING. HOLE DID NOT CAVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; PUMPED 100 GAL. BENTONITE GROUT



PROJECT: SUM-76-05.53 TYPE: BRIDGE	DRILLING FIRM / OPERATOR: BEI / ASHBAUGH SAMPLING FIRM / LOGGER: BEI / K. BAME	DRILL RIG: CME 55 HAMMER: CME AUTOMATIC	STATION / OFFSET: 308+08.64' L.T.			EXPLORATION ID B-004-0-16	
			ALIGNMENT: IR-76	IR-76	IR-76		IR-76
PID: 96670 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/8/15	ELEVATION: 967.5 (MSL) EOB: 81.5 ft.	ELEVATION: 967.5 (MSL) EOB: 81.5 ft.	ELEVATION: 967.5 (MSL) EOB: 81.5 ft.	PAGE	
START: 6/29/16 END: 6/29/16	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.8	LAT / LONG:	LAT / LONG:	LAT / LONG:	1 OF 2	
MATERIAL DESCRIPTION AND NOTES	ELEV. 967.5	REC SAMPLE ID	GRADATION (%)			BACK FILL	
			GR	CS	FS		SI
4.0" ASPHALT							
4.0" BRICK	967.2						
11.0" CONCRETE	966.9						
LOOSE TO MEDIUM DENSE, BROWN, COARSE AND FINE SAND, LITTLE SILT, LITTLE CLAY, TRACE GRAVEL, DAMP	966.0						
LOOSE, GRAY, SILT, SOME CLAY, TRACE SAND, WET	960.5						
@12.5'; SS-5 TO SS-7 BECOME MEDIUM STIFF TO STIFF, "AND" CLAY							
LOOSE TO MEDIUM DENSE, BROWN TO GRAYISH BROWN, FINE SAND, TRACE TO LITTLE COARSE SAND, TRACE SILT, TRACE GRAVEL, TRACE CLAY, DAMP TO WET	948.0						
@32.5'; SS-13 TO SS-16 BECOME SOME COARSE SAND, LITTLE GRAVEL							
@37.5'; SS-15 AND SS-16 BECOME DARK GRAY							
@45.0'; SS-17 NO RECOVERY							
DENSE TO VERY DENSE, GRAY, SILT, LITTLE CLAY, TRACE TO LITTLE SAND, WET	919.2						
	1						
	2						
	3						
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STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:09 - \COLLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\14 ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.63 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

PID: 96670	SFN:	PROJECT: SUM-76-05.53	STATION / OFFSET:	308+08.64 L.T.	START: 6/29/16	END: 6/29/16	PG 2 OF 2		B-004-0-16										
							GR	CS		FS	SI	CL	LL	PL	PI	WC			
<b>MATERIAL DESCRIPTION AND NOTES</b> DENSE TO VERY DENSE, GRAY, SILT, LITTLE CLAY. TRACE TO LITTLE SAND, WET (continued)			ELEV. 907.5	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GRADATION (%)			ATTERBERG		ODOT CLASS (G)	BACK FILL				
@75.0': SS-23 AND SS-24 BECOME HARD, SOME CLAY, TRACE GRAVEL, DAMP TO MOIST			886.0	61	15	59	100	SS-20	-	-	-	-	-	-	19	A-4b (V)			
				62	19	24													
				63															
				64															
				65	14	49	100	SS-21	-	-	-	-	-	-	-	-	-	20	A-4b (V)
				66	15	21													
				67															
				68															
				69															
				70															
				71	15	55	100	SS-22	-	0	13	74	13	NP	NP	NP	18	A-4b (8)	
				72	19	21													
				73															
				74															
				75	16	56	100	SS-23	4.5+	3	4	10	56	27	25	18	7	15	A-4b (8)
				76	16	25													
77																			
78																			
79																			
80	11	41	100	SS-24	4.5+	-	-	-	-	-	-	-	-	22	A-4b (V)				
81	14	16																	
			886.0	EOB															

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:09 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\YEAR2016 ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; POURED 1 BAG HOLE PLUG; SHOVELED SOIL CUTTINGS



PROJECT:	SUM-76-05.53	DRILLING FIRM / OPERATOR:	BEI / ASHBAUGH	DRILL RIG:	CME 55	STATION / OFFSET:	310+06.48' LT.	EXPLORATION ID									
TYPE:	RETAINING WALL	SAMPLING FIRM / LOGGER:	BEI / Z.JEWELL	HAMMER:	CME AUTOMATIC	ALIGNMENT:	IR-76	B-005-0-16									
PID:	96670 SFN:	DRILLING METHOD:	3.25" HSA	CALIBRATION DATE:	12/8/15	ELEVATION:	997.8 (MSL) EOB:	51.5 ft.									
START:	8/25/16	END:	8/25/16	ENERGY RATIO (%):	81.8	LAT / LONG:	41.035865, -81.576297	PAGE									
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (G)	HOLE SEALED
8.0" ASPHALT	997.8	1															
12.0" GRANULAR BASE	997.1	2															
MEDIUM DENSE, BROWN AND DARK BROWN, GRAVEL WITH SAND AND SILT LITTLE CLAY, ENCOUNTERED COBBLE, DAMP	996.1	3		11	30	22	-	31	9	32	16	12	NP	NP	NP	10	A-2-4 (0)
MEDIUM DENSE, LIGHT BROWN AND WHITE, FINE SAND, "AND" COARSE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, COMPOSED OF PULVERIZED FRIABLE WEAK SANDSTONE, DRY	993.3	4															
VERY DENSE, LIGHT BROWN, GRAVEL WITH SAND TRACE SILT, TRACE CLAY, COMPOSED OF PULVERIZED FRIABLE WEAK SANDSTONE, DRY	990.8	5		11	23	83	-	6	39	53	-	2	NP	NP	NP	4	A-3 (0)
LOOSE TO DENSE, LIGHT BROWN, COARSE AND FINE SAND, LITTLE TO SOME GRAVEL, TRACE SILT, TRACE CLAY, COMPOSED OF PULVERIZED FRIABLE WEAK SANDSTONE, DRY TO DAMP	989.0	6		8	9												
		7		30	100	100	-									3	A-1-b (V)
		8		13	27	100	-									3	A-3a (V)
		9															
		10		4	8	100	-	16	11	62	7	4	NP	NP	NP	5	A-3a (0)
		11		3	2	7	100	-								4	A-3a (V)
		12															
		13		10	50	100	-									4	A-3a (V)
		14		20	17												
		15		10	13	40	100	-								4	A-3a (V)
		16		13	16												
		17		11	2	8	100	-								3	A-3a (V)
		18		2	4												
		19		11	23	71	100	-								2	A-3a (V)
		20		29													
		21		10	6	26	100	-								6	A-3a (V)
		22		13	13											16	A-6a (V)
		23		3	4	16	100	-								4	A-1-b (V)
		24		4	8												
		25		4	6	18	100	-								8	A-1-b (V)
		26		6	7			5	11	49	23	12	NP	NP	NP	12	A-3a (0)
		27		3	2	5	100	-								8	A-3a (V)
		28		3	2												
		29		1	0	17	SS-15	-	7	20	59	8	NP	NP	NP	13	A-3a (0)
		30		WOH													
		31		WOH													
		32		2	3	8	SS-16	-								19	A-3a (V)
		33		3													
		34															
		35															
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		39															
		40															
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		43															
		44															
		45															
		46		4	6	20	100	-	17	24	27	21	NP	NP	NP	17	A-3a (0)
		47															
		48															
		49															
		50															
		51		16	11	35	100	-								11	A-3a (V)
				15													

EOB

NOTES: GROUNDWATER ENCOUNTERED AT 39.0' DURING DRILLING. CAVE DEPTH 43.0'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; PUMPED 65 GAL. BENTONITE GROUT

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:09 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE\SUM-76-5.63 (ODOT)\GINT FILES\SUM-76-5.63.GPJ

PROJECT: SUM-76-05.53 TYPE: RETAINING WALL		DRILLING FIRM / OPERATOR: BEI / J. HODGES		DRILL RIG: CME 55X		STATION / OFFSET: 311+67.115' LT.		EXPLORATION ID			
PID: 96670 SFN: 8/16/16		SAMPLING FIRM / LOGGER: BEI / J. HODGES		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-006-0-16			
START: 8/16/16 END: 8/16/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 969.1 (MSL) EOB: 61.5 ft.		PAGE			
SAMPLING METHOD: SPT		SPT		ENERGY RATIO (%): 88.1		LAT / LONG: 41.036042, -81.575712		1 OF 2			
MATERIAL DESCRIPTION AND NOTES		ELEV.		REC SAMPLE ID		GRADATION (%)		ATTERBERG		BACK FILL	
		969.1		HP (tsf)		GR CS FS SI CL		LL PL PI		WC	
		968.6		N <sub>60</sub> (%)		GR CS FS SI CL		LL PL PI		WC	
		968.0		SPT		GR CS FS SI CL		LL PL PI		WC	
		962.1		RQD		GR CS FS SI CL		LL PL PI		WC	
		954.6		SPT		GR CS FS SI CL		LL PL PI		WC	
		949.6		SPT		GR CS FS SI CL		LL PL PI		WC	
		947.1		SPT		GR CS FS SI CL		LL PL PI		WC	
		939.6		SPT		GR CS FS SI CL		LL PL PI		WC	
		934.6		SPT		GR CS FS SI CL		LL PL PI		WC	
		932.1		SPT		GR CS FS SI CL		LL PL PI		WC	
		929.6		SPT		GR CS FS SI CL		LL PL PI		WC	
		917.6		SPT		GR CS FS SI CL		LL PL PI		WC	
6.0" ASPHALT	1										
7.0" GRANULAR BASE	2										
LOOSE TO MEDIUM DENSE, BROWN, COARSE AND FINE SAND, TRACE SILT, TRACE CLAY, TRACE GRAVEL, DAMP TO MOIST	3										
	4										
@5.0'; SS-2 CONTAINS IRON STAINING	5										
	6										
	7										
LOOSE, ORANGISH BROWN BECOMING BROWNISH GRAY, FINE SAND, LITTLE COARSE SAND, TRACE SILT, TRACE GRAVEL, TRACE CLAY, SS-3 CONTAINS IRON STAINING, MOIST TO WET	8										
	9										
	10										
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	12										
	13										
	14										
VERY SOFT, GRAY, SILT, "AND" CLAY, TRACE SAND, WET	15										
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@50.0'; SS-18 CONTAINS A 1.0" GRAY SILT SEAM	52										
	53										
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	57										
	58										
	59										

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:09 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\14 ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ

PID: 96670	SFN:	PROJECT:	SUM-76-05.53	STATION / OFFSET:	311+67.115' LT.	START:	8/16/16	END:	8/16/16	PG 2 OF 2	B-006-0-16					
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	909.1	DEPTHS		REC SAMPLE ID	HP (tsf)	GRADATION (%)			BACK FILL					
LOOSE, DARK GRAY, SILT, LITTLE CLAY, TRACE TO LITTLE SAND, WET (continued)						N <sub>60</sub>		GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (GI)
@60.0'; SS-20 BECOMES DENSE		907.6	61	7	12	34	100	SS-20	-	-	-	-	-	-	23	A-4p (V)
		+++ +++ +++ +++	EOB		11											<L> <V> <L> <V> <L> <V>

NOTES: GROUNDWATER ENCOUNTERED AT 16.5' DURING DRILLING. CAVE DEPTH 32.5'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:09 - \COLUMBUSLAB\AB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\11ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ



PROJECT: SUM-76-05.53 TYPE: RETAINING WALL PID: 96670 SFN: START: 8/25/16 END: 8/25/16	DRILLING FIRM / OPERATOR: BEI / ASHBAUGH SAMPLING FIRM / LOGGER: BEI / ZJEWELL DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT	DRILL RIG: CME 55 HAMMER: CME AUTOMATIC CALIBRATION DATE: 12/8/15 ENERGY RATIO (%): 81.8	STATION / OFFSET: 312+79.48' LT. ALIGNMENT: IR-76 ELEVATION: 1004.6 (MSL) EOB: 41.5 ft. LAT / LONG: 41.035853, -81.575310										EXPLORATION ID B-007-0-16					
			SPT/ RQD	N <sub>60</sub> (%)	REC SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL		PL	WC			
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS										HOLE CLASS (G)					
8.0" ASPHALT		1004.6	1															
10.0" CONCRETE		1003.9	2															
12.0" GRANULAR BASE		1003.1	3	4	12	11	SS-1	-	-	-	-	-	-	-	-	8	A-1-b (V)	
MEDIUM DENSE, DARK GRAY, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, GRAVEL IS SUBANGULAR LIMESTONE FRAGMENTS, DAMP TO MOIST @2.5'; SS-1 IS POSSIBLE GRANULAR BASE MATERIAL (FILL)		1002.1	4	5	4													
MEDIUM STIFF, BROWN MIXED WITH ORANGISH BROWN AND GRAY, SILTY CLAY, SOME SAND, SOME GRAVEL, MOIST (FILL)		998.9	5	3	8	28	SS-2A	-	-	-	-	-	-	-	-	14	A-1-b (V)	
MEDIUM DENSE TO VERY DENSE, LIGHT BROWN AND WHITE CHANGING TO LIGHT YELLOWISH BROWN, FINE SAND, LITTLE TO SOME COARSE SAND, LITTLE TO SOME GRAVEL, TRACE SILT, TRACE CLAY, COMPOSED OF PULVERIZED FRIABLE SANDSTONE, DRY TO DAMP (FILL)		997.6	6	3	3	0.75- 1.0	SS-2B	-	-	-	-	-	-	-	-	12	A-6b (V)	
@17.5'; SS-7 CONTAINS SILTSTONE AND SANDSTONE FRAGMENTS			7	25	50/6"	61	SS-3	-	14	12	69	-	5	-	NP	NP	2	A-3 (0)
@20.0'; SS-8 CONTAINS SILT AND CLAY LUMPS			8	7														
@22.5'; SS-9 CHANGES TO YELLOWISH BROWN WITH WHITE			9	8														
@27.5'; SS-11 CHANGES TO LIGHT YELLOWISH BROWN WITH REDDISH BROWN AND WHITE			10	12														
STIFF TO VERY STIFF, BROWN AND GRAY CHANGING TO BROWN AND GRAY WITH BLACK, SANDY SILT, LITTLE TO SOME CLAY, TRACE GRAVEL, DAMP TO MOIST (FILL) @32.5'; SS-13 CONTAINS FEW COAL FRAGMENTS AND OCCASIONAL IRON STAINING @35.0'; SS-14 CONTAINS CINDERS		972.6	11	27	100	100	SS-4	-	-	-	-	-	-	-	-	5	A-3 (V)	
STIFF TO VERY STIFF, ORANGISH BROWN MOTTLED WITH GRAY, SILT AND CLAY "AND" SAND, TRACE GRAVEL, MOIST		967.6	12	4	12	56	SS-5	-	31	14	54	-	1	-	NP	NP	5	A-3 (0)
MEDIUM DENSE, GRAYISH BROWN, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, MOIST		965.1	13	4	11	100	SS-15	1.75- 2.25	8	13	27	32	20	27	16	11	17	A-6a (4)
		963.1	14	4	8	100	SS-16	-	-	-	-	-	-	-	-	-	13	A-3a (V)

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 28.0'.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 1 BAG ASPHALT PATCH; PUMPED 40 GAL. BENTONITE GROUT



PROJECT: SUM-76-05.53		DRILLING FIRM / OPERATOR: BEI / ASHBAUGH		DRILL RIG: CME 55		STATION / OFFSET: 296+87.149' LT.		EXPLORATION ID											
TYPE: EMBANKMENT		SAMPLING FIRM / LOGGER: BEI / K. BAME		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-010-0-16											
PID: 96670 SFN:		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 985.3 (MSL) EOB: 31.5 ft.		PAGE											
START: 6/30/16 END: 6/30/16		SAMPLING METHOD: SPT		ENERGY RATIO (%): 81.8		LAT / LONG: 41.036985, -81.580644		1 OF 1											
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
4.0" ASPHALT	985.3	1																	
14.0" AGGREGATE BASE	983.8	2		4	14	72	3.25									21	A-4a (V)		
VERY STIFF BROWN WITH BLACK, REDDISH BROWN AND GRAY, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, MOIST	982.3	3		5															
STIFF TO VERY STIFF, LIGHT BROWN MOTTLED WITH REDDISH BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST		4		2	16	100	2.0, 2.25	0	1	19	49	31	40	17	23	22	A-6b (13)		
@4.5'; SS-3 BECOMES REDDISH BROWN	979.3	5		4	18	83	1.25, 2.0									19	A-6b (V)		
MEDIUM DENSE, DARK BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, MOIST		6		3	15	100		7	5	52	24	12	NP	NP	NP	16	A-4a (0)		
		7		5	6														
@10.0'; SS-6 BECOMES LOOSE, BROWN		8		3	16	94										13	A-4a (V)		
		9		6	6														
MEDIUM DENSE, BROWN, GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST	973.3	10		3	10	72										17	A-4a (V)		
		11		3	4														
LOOSE TO MEDIUM DENSE, BROWN, COARSE AND FINE SAND, LITTLE GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, DAMP TO MOIST	970.8	12		3	20	100		36	8	40	9	7	NP	NP	NP	17	A-2-4 (0)		
		13		7	8														
		14																	
MEDIUM DENSE, REDDISH BROWN, MOTTLED WITH GRAYISH BROWN, SANDY SILT, LITTLE CLAY, WET	965.8	15		1	4	61										20	A-3a (V)		
		16		4	4														
		17																	
		18		2	3	10										11	A-3a (V)		
		19		3	4														
		20		3	4	14	0.5, 0.75	0	0	37	46	17	19	17	2	21	A-4a (6)		
		21		4	6														
		22																	
		23																	
		24																	
MEDIUM DENSE, BROWN, COARSE AND FINE SAND, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, DAMP TO WET	961.3	25		2	7	44										6	A-3a (V)		
		26		5	16														
		27																	
		28																	
		29																	
		30		4	6	26										23	A-3a (V)		
(CONTINUED FROM ABOVE)	953.8	31		13	78														

EOB

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; POURED 1 BAG HOLE PLUG; SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 8/8/17 17:15 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ACTIVE PROJECTS\ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 GDT (DOT)\GINT FILES\SUM-76-5.53.GPJ

PROJECT: SUM-76-05.53 TYPE: RETAINING WALL		DRILLING FIRM / OPERATOR: BEI / ASHBAUGH		DRILL RIG: CME 55		STATION / OFFSET: 299+85.177' LT.		EXPLORATION ID										
PID: 96670 SFN: 6/30/16		SAMPLING FIRM / LOGGER: BEI / K. BAME		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-013-0-16										
START: 6/30/16 END: 6/30/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 973.0 (MSL) EOB: 41.5 ft.		PAGE										
SAMPLING METHOD: SPT		SPT		ENERGY RATIO (%): 81.8		LAT / LONG: 41.036733, -81.579674		1 OF 1										
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (GI)	BACK FILL	
17.0" TOPSOIL	973.0	1	4	6	16	28	SS-1	-	-	-	-	-	-	-	15	A-4a (V)	↖ ↗ ↘ ↙ ↕	
MEDIUM DENSE, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, CONTAINS ROOTS AND CONCRETE, DAMP (FILL)	971.6	2															↖ ↗ ↘ ↙ ↕	
LOOSE GRAYISH BROWN, GRAVEL WITH SAND AND SILT, LITTLE CLAY, DAMP	970.5	3	2	3	8	67	SS-2	-	19	26	21	23	11	26	17	9	A-2-4 (0)	↖ ↗ ↘ ↙ ↕
LOOSE, GRAYISH BROWN, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, WET	967.7	4															↖ ↗ ↘ ↙ ↕	
		5	2	3	10	100	SS-3	-	7	42	31	12	8	NP	NP	NP	A-1-b (0)	↖ ↗ ↘ ↙ ↕
		6															↖ ↗ ↘ ↙ ↕	
		7															↖ ↗ ↘ ↙ ↕	
		8	2	2	5	67	SS-4	-	-	-	-	-	-	-	-	15	A-1-b (V)	↖ ↗ ↘ ↙ ↕
		9															↖ ↗ ↘ ↙ ↕	
		10	1	2	7	72	SS-5	3.75 - 4.0	0	2	1	60	37	25	12	21	A-6a (9)	↖ ↗ ↘ ↙ ↕
VERY STIFF, BROWN, SILT AND CLAY, TRACE SAND, DAMP	962.6	11															↖ ↗ ↘ ↙ ↕	
		12															↖ ↗ ↘ ↙ ↕	
LOOSE TO MEDIUM DENSE, LIGHT BROWN, FINE SAND, SOME COARSE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	960.5	13	3	4	11	78	SS-6	-	7	28	55	7	3	NP	NP	7	A-3 (0)	↖ ↗ ↘ ↙ ↕
		14															↖ ↗ ↘ ↙ ↕	
		15	1	2	7	100	SS-7	-	-	-	-	-	-	-	-	4	A-3 (V)	↖ ↗ ↘ ↙ ↕
		16															↖ ↗ ↘ ↙ ↕	
		17															↖ ↗ ↘ ↙ ↕	
LOOSE TO MEDIUM DENSE, BROWN, COARSE AND FINE SAND, LITTLE GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, MOIST	956.0	18	3	2	5	50	SS-8	-	-	-	-	-	-	-	-	15	A-3a (V)	↖ ↗ ↘ ↙ ↕
		19															↖ ↗ ↘ ↙ ↕	
		20															↖ ↗ ↘ ↙ ↕	
		21	1	4	14	61	SS-9	-	-	-	-	-	-	-	-	16	A-3a (V)	↖ ↗ ↘ ↙ ↕
		22															↖ ↗ ↘ ↙ ↕	
		23															↖ ↗ ↘ ↙ ↕	
		24															↖ ↗ ↘ ↙ ↕	
		25															↖ ↗ ↘ ↙ ↕	
MEDIUM DENSE, BROWN, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, MOIST	949.7	26	7	12	27	100	SS-10	-	47	29	10	11	3	NP	NP	11	A-1-b (0)	↖ ↗ ↘ ↙ ↕
		27															↖ ↗ ↘ ↙ ↕	
		28															↖ ↗ ↘ ↙ ↕	
		29															↖ ↗ ↘ ↙ ↕	
		30															↖ ↗ ↘ ↙ ↕	
MEDIUM DENSE, GRAY, SILT, LITTLE SAND, TRACE CLAY, TRACE SILT, WET	943.0	31	8	10	26	100	SS-11	-	3	6	7	75	9	NP	NP	21	A-4b (8)	↖ ↗ ↘ ↙ ↕
		32															↖ ↗ ↘ ↙ ↕	
		33															↖ ↗ ↘ ↙ ↕	
		34															↖ ↗ ↘ ↙ ↕	
		35	4	4	15	83	SS-12	-	-	-	-	-	-	-	-	20	A-4b (V)	↖ ↗ ↘ ↙ ↕
		36															↖ ↗ ↘ ↙ ↕	
		37															↖ ↗ ↘ ↙ ↕	
		38															↖ ↗ ↘ ↙ ↕	
		39															↖ ↗ ↘ ↙ ↕	
		40	7	12	29	72	SS-13	-	-	-	-	-	-	-	-	22	A-4b (V)	↖ ↗ ↘ ↙ ↕
		41															↖ ↗ ↘ ↙ ↕	

EOB

NOTES: GROUNDWATER ENCOUNTERED AT 18.5' DURING DRILLING. HOLE DID NOT CAVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED AUGER CUTTINGS; SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:12 - \COLUMBUSLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\14 ARCHIVE\YEAR2016 ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ



PROJECT: SUM-76-05.53 TYPE: RETAINING WALL		DRILLING FIRM / OPERATOR: BEI / ASHBAUGH		DRILL RIG: CME 55		STATION / OFFSET: 301+32.153' LT.		EXPLORATION ID									
PID: 96670 SFN: 8/24/16		SAMPLING FIRM / LOGGER: BEI / E.ROLLER		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-014-0-16									
START: 8/24/16 END: 8/24/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 989.4 (MSL) EOB: 80.4 ft.		PAGE									
SAMPLING METHOD:		SPT		ENERGY RATIO (%): 81.8		LAT / LONG: 41.036539, -81.579233		1 OF 2									
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTH	SPT / RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)			ATTERBERG			ODOT CLASS (G)	HOLE			
							GR	CS	FS	SI	CL	LL	PL	WC	SEALED		
10.0" ASPHALT		989.4	1														
9.0" GRANULAR BASE		988.6	2														
VERY STIFF TO HARD. BROWN WITH GRAY, SANDY SILT, LITTLE TO SOME CLAY, TRACE TO SOME GRAVEL, DAMP (FILL)		987.8	3	5	78	4.5+								10	A-4a (V)		
			4	8													
			5	9													
@5.0'; SS-2 CONTAINS FEW IRON STAINS			6	9	67	2.75-3.3	26	12	13	30	19	27	17	10	12	A-4a (3)	
			7														
@7.5'; SS-3 NO RECOVERY			8	11	35	0											
			9	15													
VERY STIFF TO HARD. BROWN WITH GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, CONTAINS DECAYED ORGANICS, DAMP (FILL)		979.9	10	5	23	56	6	7	16	41	30	29	18	11	14	A-6a (8)	
			11	8													
			12	7	20	56									15	A-6a (V)	
			13	8													
			14	7													
VERY STIFF TO HARD. BROWN AND GRAY, SANDY SILT, LITTLE CLAY, TRACE GRAVEL (SANDSTONE), CONTAINS SILT LENSES AND DECAYED ORGANICS, DAMP (FILL)		974.9	15	3	22	61	9	8	20	44	19	23	17	6	12	A-4a (6)	
			16	8													
			17														
@17.5'; SS-7 NO RECOVERY			18	9	25	0											
			19	9													
VERY STIFF TO HARD. BROWN MOTTLED WITH GRAY, SILT AND CLAY SOME SAND, TRACE GRAVEL, CONTAINS 1/2" SILT LENSE, DAMP		970.4	20	2	72	3.5-4.5+									15	A-6a (V)	
			21	7													
			22	8													
			23	4	12	72									16	A-6a (V)	
MEDIUM DENSE, GRAYISH BROWN, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, MOIST		966.4	24	4											10	A-3a (V)	
			25	5													
@25.0'; SS-10 TO SS-11 BECOME BROWN			26	5	12	61		14	38	21	18	9	23	19	4	10	A-3a (0)
			27	4													
@27.5'; SS-11 CONTAINS SILTY CLAY LUMPS AND IRON STAINS			28	5	15	78										9	A-3a (V)
			29	6													
@29.0'; SS-12 BECOMES LOOSE, BROWN, CONTAINS 1" SILT LENSE, WET			30	3	7	89										33	A-3a (V)
			31	2													
MEDIUM STIFF TO VERY STIFF, GRAY, SILTY CLAY, TRACE SAND, MOIST		957.1	32	4	10	61	0.25									33	A-6b (V)
			33	3													
			34	4													
MEDIUM DENSE, BROWN, COARSE AND FINE SAND LITTLE SILT, TRACE CLAY, TRACE GRAVEL, WET		953.1	35	1	27	100	0.50	0	1	4	29	66	40	22	18	32	A-6b (11)
			36	7													
			37	13													
@40.0'; SS-16 BECOMES BROWN AND GRAY, CONTAINS IRON STAINING			38	4	15	78										22	A-3a (V)
			39	6													
			40	5													
			41	7	15	94										23	A-3a (V)
			42	4													
			43	5													
			44	12													
			45	4	23	56										20	A-3a (V)
			46	5													
			47														
			48														
			49														
			50	3													
@50.0'; SS-18A BECOMES MOIST		938.9	51	5	20	100										15	A-3a (V)
MEDIUM DENSE TO DENSE, GRAY, SILT, LITTLE TO SOME SAND, TRACE TO LITTLE CLAY, WET			52	10												25	A-4b (V)
			53														
			54														
			55														
			56	6	20	94		2	6	10	73	9	NP	NP	NP	23	A-4b (8)
			57	7													
			58	8													
			59														

STANDARD ODOT BORING LOG (11 X 17) - OH DPT GDT - 3/15/17 12:12 - \COLLUMBUS\LAB\ACTIVE PROJECTS\14 ARCHIVE\YEAR2016 ARCHIVE\SUM-76-5.63 (ODOT)GINT FILES\SUM-76-5.63.GPJ

PID: 96670	SFN:	PROJECT: SUM-76-05.53	STATION / OFFSET: 301+32.153' LT.	START: 8/24/16	END: 8/24/16	PG 2 OF 2		B-014-0-16											
						GR	CS		FS	SI	CL	LL	PL	PI	WC				
MATERIAL DESCRIPTION AND NOTES			SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GRADATION (%)			ATTERBERG			ODOT CLASS (G)	HOLE SEALED					
			DEPTHS	ID			GR	CS	FS	SI	CL	LL	PL	PI	WC				
MEDIUM DENSE TO DENSE, GRAY, SILT, LITTLE TO SOME SAND, TRACE TO LITTLE CLAY, WET (continued) @60.0'; SS-20 TO SS-21 CONTAINS TRACE TO LITTLE SAND, LITTLE CLAY			5	22	100	-	-	-	-	-	-	-	-	-	-	27			
			8	8															
			61																
			62																
			63																
			64																
			65																
			66																
			67																
			68																
VERY DENSE, GRAY, SANDY SILT, TRACE TO LITTLE CLAY, LITTLE GRAVEL, MOIST			9	41	100	-	-	-	-	-	-	-	-	-	-	21	A-4b (V)		
			12	18															
			69																
			70																
			71																
			72																
			73																
			74																
			75																
			76																
VERY DENSE, GRAY, GRAVEL WITH SAND AND SILT TRACE CLAY, DAMP			10	53	89	-	-	-	-	-	-	-	-	-	-	14	A-4a (V)		
			16	23															
			77																
			78																
			79																
			80																
			EOB																
			909.0																
			916.1																
			921.2																
929.4																			

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:12 - \COLUMBUSLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\11 ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 30.0' DURING DRILLING, 61.0' UPON COMPLETION. CAVE DEPTH 44.0'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; PUMPED 100 GAL. BENTONITE GROUT; SHOVELED SOIL CUTTINGS

PROJECT: SUM-76-05.53 TYPE: CULVERT		DRILLING FIRM / OPERATOR: BEI / ASHBAUGH		DRILL RIG: CME 55		STATION / OFFSET: 306+55.273' LT.		EXPLORATION ID								
PID: 96670 SFN: 9/2/16		SAMPLING FIRM / LOGGER: BEI / K. BAME		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-016-0-16								
START: 9/1/16 END: 9/2/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 965.1 (MSL) EOB: 81.5 ft.		PAGE								
MATERIAL DESCRIPTION AND NOTES		SAMPLING METHOD: SPT		ENERGY RATIO (%): 81.8		LAT / LONG: 41.036551, -81.577430		1 OF 2								
ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	HOLE SEALED
965.1	1	4	9	34	83	-	-	-	-	-	-	-	-	-	9	A-4a (V)
964.8	2	16														
963.1	3	4	6	19	44	-	9	13	22	29	27	NP	NP	15	A-4a (4)	
	4	8														
958.6	5	3	4	12	100	-	0	1	45	47	7	NP	NP	21	A-4a (4)	
	6	5														
	7	3	3	11	100	3.0-4.25	0	0	0	70	30	28	23	5	A-4b (8)	
	8	2	2	8	83	1.75-2.5	0	0	0	60	40	30	21	9	A-4b (8)	
	9	2	4													
	10	3	2	7	100	-	0	0	0	73	27	NP	NP	26	A-4b (8)	
	11	3	4	12	100	-	0	0	0	62	38	NP	NP	29	A-4b (8)	
	12	5														
	13	5	14	78	SS-8	-	-	-	-	-	-	-	-	19	A-3a (V)	
	14															
	15	2	6	16	83	-	-	-	-	-	-	-	-	21	A-3a (V)	
	16	6														
	17															
	18	4	3	10	67	SS-10	-	-	-	-	-	-	-	22	A-3 (V)	
	19	6														
	20	1	7	12	100	SS-11	-	5	29	56	7	3	NP	NP	20	A-3 (0)
	21	3	4													
	22															
	23	7	6	15	56	SS-12	-	-	-	-	-	-	-	21	A-3 (V)	
	24	3	5	6												
	25															
	26	3	2	8	11	SS-13	-	-	-	-	-	-	-	21	A-3 (V)	
	27	2	4													
	28	8	18	19	56	SS-14	-	-	-	-	-	-	-	16	A-1-b (V)	
	29	6														
	30															
	31	7	4	14	67	SS-15	-	48	33	14	4	1	NP	NP	16	A-1-b (0)
	32	4	6													
	33															
	34	5	5	16	61	SS-16	-	-	-	-	-	-	-	20	A-3a (V)	
	35	7	5	7												
	36															
	37	5	4	12	44	SS-17	-	-	-	-	-	-	-	20	A-3a (V)	
	38	4	5													
	39															
	40	5	11	25	67	SS-18	-	-	-	-	-	-	-	20	A-3a (V)	
	41	7	7													
	42															
	43	14	7	18	83	SS-19	-	-	-	-	-	-	-	19	A-3a (V)	
	44	6														
	45															
	46	4	7	23	100	SS-20	0.75-1.0	-	-	-	-	-	-	28	A-6b (V)	
	47	10														
	48	7	11	33	100	SS-21	2.0-2.75	14	24	17	31	14	20	14	A-4a (2)	
	49	13														
	50															
	51	7	12	38	100	SS-22	2.0-2.75	-	-	-	-	-	-	12	A-4a (V)	
	52	16														
	53	3	7	27	89	SS-23	1.5-2.25	1	3	56	39	28	21	7	A-4b (8)	
	54	13														
	55	4	9	25	100	SS-24	-	-	-	-	-	-	-	28	A-4b (V)	
	56	9														
	57															
	58															
	59															

STANDARD ODOT BORING LOG (11 X 17) - GH DOT GDT - 3/15/17 12-12 - I:\COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE\SUM-76-5.63 (ODOT)\GINT FILES\SUM-76-5.63.GPJ

DRAWN  
KCA  
CHECKED  
BPA

STRUCTURE FOUNDATION EXPLORATION  
CULVERT NO. SUM-76-0578 OVER MUD RUN  
BORING LOG B-016-0-16

SUM-76-5.53

PID: 96670	SFN:	PROJECT: SUM-76-05.53	STATION / OFFSET: 306+55.273' LT.	START: 9/1/16	END: 9/2/16	PG 2 OF 2		B-016-0-16					
						GR	CS		FS	SI	CL	LL	PL
<b>MATERIAL DESCRIPTION AND NOTES</b> STIFF TO VERY STIFF, GRAYISH BROWN, SILT, "AND" CLAY, TRACE SAND, TRACE GRAVEL, WET (continued)			ELEV. 905.1	HP (tsf)	GRADATION (%)	ATTERBERG	ODOT CLASS (G)	HOLE SEALED					
			DEPTHS	ID	GR	CS	FS	SI	CL	LL	PL	PL	WC
				SS-25	7	2	23	57	11	NP	NP	NP	15
			61	3.5									
			62	4.25									
			63										
			64										
			65										
			66	3.25									
			67	3.5									19
			68										
			69										
			70										
			71	2.50									25
			72										
			73										
			74										
			75										
			76	2.50									19
			77										
			78										
			79										
			80	3.25									
			81	4.5									25
			883.6										
			EOB										

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:12 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 16.0' DURING DRILLING. HOLE DID NOT CAVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 100 GAL. BENTONITE GROUT

PROJECT: SUM-76-05.53 CULVERT	DRILLING FIRM / OPERATOR: BEI / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET:		EXPLOSION ID B-017-0-16														
			306+31.200' LT.	IR-76															
PID: 96670	SFN: 7/13/16	END: 7/13/16	ALIGNMENT: ELEVATION: 962.8 (MSL) EOB: 71.5 ft.		PAGE 1 OF 2														
START: 7/13/16	END: 7/13/16	END: 7/13/16	LAT / LONG: 41.036364, -81.577549																
MATERIAL DESCRIPTION AND NOTES			GRADATION (%)																
ELEV. 962.8			GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)							
DEPTHS			SPT/RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)		
VERY STIFF, DARK BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, CONTAINS ROOTS, DAMP	1	2	4	15	78	SS-1	-	-	-	-	-	-	-	-	-	11	A-4a (V)		
	2																		
	3	8	6	18	100	SS-2	3.25 3.75	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
	4																		
	5	3	3	9	78	SS-3	-	0	43	42	15	NP	NP	NP	NP	24	A-4a (4)		
	6																		
	7																		
	8	1	2	9	100	SS-4	0.50	0	1	0	55	44	30	19	11	29	A-6a (8)		
	9																		
	10	1	1	4	100	SS-5	0.50	-	-	-	-	-	-	-	-	31	A-6a (V)		
	11																		
	12																		
	13	WOH	4	13	78	SS-6	0.50	-	-	-	-	-	-	-	-	30	A-6a (V)		
	14																		
15																			
16	4	5	16	100	SS-7	-	-	-	-	-	-	-	-	-	20	A-3 (V)			
17																			
18	4	5	16	67	SS-8	-	2	10	80	4	4	NP	NP	NP	18	A-3 (0)			
19																			
20	3	5	18	67	SS-9	-	-	-	-	-	-	-	-	-	23	A-3 (V)			
21																			
22																			
23	8	7	21	78	SS-10	-	-	-	-	-	-	-	-	-	21	A-3 (V)			
24																			
25																			
26	4	4	10	78	SS-11	-	-	-	-	-	-	-	-	-	18	A-1-b (V)			
27																			
28	12	9	22	78	SS-12	-	-	-	-	-	-	-	-	-	14	A-1-b (V)			
29																			
30	2	3	13	67	SS-13	-	26	56	13	3	2	NP	NP	NP	17	A-1-b (0)			
31																			
32																			
33	28	16	35	78	SS-14	-	-	-	-	-	-	-	-	-	13	A-1-b (V)			
34																			
35	9	9	26	100	SS-15	-	-	-	-	-	-	-	-	-	19	A-1-b (V)			
36																			
37																			
38	3	3	12	78	SS-16	-	-	-	-	-	-	-	-	-	19	A-1-b (V)			
39																			
40	1	2	9	17	SS-17	-	-	-	-	-	-	-	-	-	14	A-1-b (V)			
41																			
42																			
43	6	5	18	67	SS-18	-	1	2	73	23	25	21	4	26	A-4b (8)				
44																			
45	4	6	18	89	SS-19	-	-	-	-	-	-	-	-	32	A-4b (V)				
46																			
47																			
48	4	5	25	100	SS-20	-	7	6	8	49	30	24	17	7	20	A-4a (8)			
49																			
50	9	18	50	78	SS-21	-	-	-	-	-	-	-	-	16	A-1-b (V)				
51																			
52																			
53	7	10	35	78	SS-22	-	2	2	6	68	22	18	4	23	A-4b (8)				
54																			
55	4	10	35	78	SS-23	-	-	-	-	-	-	-	-	17	A-4b (V)				
56																			
57																			
58																			
59																			

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GPT - 3/15/17 12-12 - I:\COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ

PID: 96670	SFN:	PROJECT:	SUM-76-05.53	STATION / OFFSET:	306+31.200' LT.	START:	7/13/16	END:	7/13/16	PG 2 OF 2	B-017-0-16										
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	902.8	DEPTHS		SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GRADATION (%)			ATTERBERG			ODOT CLASS (GI)	BACK FILL				
VERY DENSE, GRAY, SILT, SOME CLAY, LITTLE SAND, TRACE GRAVEL, WET (continued)  @70.0': SS-26 CONTAINS "AND" GRAVEL				61	8	29 50/5'	-	82	SS-24	0	0	19	72	9	NP	NP	NP	18	A-4b (8)		
				62																	
				63																	
				64																	
				65																	
				66																	
				67																	
				68																	
				69																	
				70																	
				71																	
				891.3		71	11	19	79	89	SS-26	-	-	-	-	-	-	-	-	12	A-4b (V)

EOB

NOTES: GROUNDWATER ENCOUNTERED AT 14.0' DURING DRILLING. CAVE DEPTH 19.0'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:12 - \COLUMBUSLAB\AB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

PROJECT:	SUM-76-05.53	DRILLING FIRM / OPERATOR:	BEI / J. HODGES	DRILL RIG:	CME 55X	STATION / OFFSET:	292+43.100' LT.	EXPLORATION ID
TYPE:	LIGHT TOWER	SAMPLING FIRM / LOGGER:	BEI / J. HODGES	HAMMER:	CME AUTOMATIC	ALIGNMENT:	IR-76	B-032-0-16
PID:	96670 SFN:	DRILLING METHOD:	3.25" HSA / NQ2	CALIBRATION DATE:	12/8/15	ELEVATION:	1043.4 (MSL) EOB: 25.0 ft.	PAGE
START:	7/14/16	SAMPLING METHOD:	SPT / NQ2	ENERGY RATIO (%):	88.1	LAT / LONG:	41.037463, -81.582114	1 OF 1
<b>MATERIAL DESCRIPTION AND NOTES</b>								
VERY STIFF TO HARD, LIGHT BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP	ELEV. DEPTHS							
	1043.4							
@2.5'; SS-2 CONTAINS ROOTS	1038.9							
VERY DENSE, LIGHT TAN, COARSE AND FINE SAND LITTLE GRAVEL, TRACE SILT, TRACE CLAY, DRY								
@7.5'; SS-4 TO SS-5 BECOME WHITE								
@12.5'; SS-6 BECOMES VERY LIGHT TO LIGHT BROWN								
@17.5'; SS-8 BECOMES DAMP	1025.4		TR					
<b>SANDSTONE</b> VERY LIGHT BROWN AND OFF WHITE. MODERATELY WEATHERED. STRONG, FINE TO MEDIUM GRAINED. VERY THIN TO THIN BEDDED. FRIABLE. CONTAINS VERY COARSE SAND LENSES, TRACE ROUNDED QUARTZITE GRAVEL, CROSS BEDDED. BEDDING DISCONTINUITIES: LOW ANGLE FRACTURES, HIGHLY FRACTURED TO MODERATELY FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY. DISINTTEGRATED FROM 19.0' TO 19.5'. FAIR SURFACE CONDITION; RQD 29.3%; REC 77.9%.								
	1018.4		EOB-25					

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:16 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\YEAR2016 ARCHIVE\SUM-76-5.63 (ODOT)GINT FILES\SUM-76-5.63.dgn

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



**SUM-76-5.53**

**STRUCTURE FOUNDATION EXPLORATION  
 LIGHT TOWER  
 BORING LOG B-032-0-16**

PROJECT:	SUM-76-05.53	DRILLING FIRM / OPERATOR:	BEI / ASHBAUGH	DRILL RIG:	CME 55	STATION / OFFSET:	304+19.127' LT.	EXPLORATION ID	B-033-0-16								
TYPE:	LIGHT TOWER	SAMPLING FIRM / LOGGER:	BEI / A. TUCKER	HAMMER:	CME AUTOMATIC	ALIGNMENT:	IR-76										
PID:	96670	DRILLING METHOD:	3.25" HSA	CALIBRATION DATE:	12/8/15	ELEVATION:	981.5 (MSL) EOB: 26.5 ft.										
START:	8/25/16	SAMPLING METHOD:	SPT	ENERGY RATIO (%):	81.8	LAT / LONG:	41.036269, -81.578308										
END:	8/25/16																
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (GI)	BACK FILL
2.5" ASPHALT		981.5	1														
MEDIUM DENSE, YELLOWISH BROWN, COARSE AND FINE SAND, "AND" GRAVEL, TRACE SILT, TRACE CLAY, DRY		981.3	2														
			3	10	45	83	-								4	A-3a (V)	
		977.0	4	14													
			5	19													
MEDIUM DENSE, YELLOWISH BROWN WITH GRAYISH BROWN, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, DAMP TO MOIST			6	9	37	56	-								16	A-1-b (V)	
			7	16													
			8	11													
VERY STIFF TO HARD, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL, CONTAIN IRON STAINING, DAMP		973.3	9	10	18	78	-								13	A-1-b (V)	
			10	7			2.25								16	A-4a (V)	
			11	6			3.9										
@10.0'; SS-4 CONTAINS ONE 1/4" ROOT			12	1	14	50	4.5+	4	6	18	47	25	26	18	8	15	A-4a (7)
		969.5	13	4													
VERY DENSE, BROWN, GRAVEL WITH SAND LITTLE SILT, LITTLE CLAY, DAMP			14	8	55	89	-								-	9	A-1-b (V)
		967.0	15	20													
			16	20													
VERY STIFF TO HARD, GRAYISH BROWN MOTTLED WITH ORANGISH BROWN, SILT, SOME SAND, LITTLE TO SOME CLAY, TRACE GRAVEL, CONTAIN IRON STAINING, DAMP			17	4	18	83	4.5+	3	5	17	55	20	26	17	9	15	A-4b (8)
			18	6													
			19	8	26	6	-								-	12	A-4b (V)
			20	11													
			21	4	12	11	4.00	4.00	-	-	-	-	-	-	-	12	A-4b (V)
LOOSE, GRAY, COARSE AND FINE SAND, LITTLE GRAVEL, LITTLE SILT, TRACE CLAY, WET		959.5	22	4	4	5											
			23	4	8	83	-								-	21	A-3a (V)
		957.0	24	4	2												
VERY STIFF, GRAYISH BROWN, CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, MOIST			25	4	16	72	2.50	1	2	4	33	60	42	20	22	26	A-7-6 (13)
		955.0	26	5	7												
			EOB														

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:16 - \COLUMBUS\LAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\YEAR2016 ARCHIVE\YEAR2016 ARCHIVE\SUM-76-5.63 (ODOT)GINT FILES\SUM-76-5.63.dgn

NOTES: GROUNDWATER ENCOUNTERED AT 22.0' DURING DRILLING. CAVE DEPTH 17.0'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS



PROJECT: SUM-76-05.53 TYPE: LIGHT TOWER		DRILLING FIRM / OPERATOR: BEI / J. HODGES		DRILL RIG: CME 55X		STATION / OFFSET: 303+22.121' RT.		EXPLORATION ID							
PID: 96670 SFN: 8/18/16		SAMPLING FIRM / LOGGER: BEI / J. HODGES		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-034-0-16							
START: 8/18/16 END: 8/18/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 966.7 (MSL) EOB: 26.5 ft.		PAGE							
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 88.1		LAT / LONG: 41.035670, -81.578864		1 OF 1							
MATERIAL DESCRIPTION AND NOTES															
ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (GI)	BACK FILL
966.4	1	9	28	100	2.25-3.0								19	A-4a (V)	↖ ↗
964.7	2														↖ ↗
	3	7	19	100	SS-2								16	A-1-b (V)	↖ ↗
962.2	4														↖ ↗
	5														↖ ↗
	6	2	7	67	SS-3	1.5-2.25	2	14	26	32	36	17	19	A-6b (8)	↖ ↗
	7														↖ ↗
	8	1	2	10	SS-4	1.75-3.0							23	A-6b (V)	↖ ↗
	9														↖ ↗
	10														↖ ↗
	11	3	19	100	SS-5	4.5+							22	A-6b (V)	↖ ↗
	12														↖ ↗
952.2	13	5	10	100	SS-6	2.0-3.25							25	A-6b (V)	↖ ↗
	14														↖ ↗
	15														↖ ↗
	16	3	10	100	SS-7	1.0-1.75	1	2	3	52	42	29	21	A-4b (8)	↖ ↗
	17														↖ ↗
	18	1	7	100	SS-8	0.5-0.75							34	A-4b (V)	↖ ↗
	19														↖ ↗
947.2	20														↖ ↗
	21	2	3	12	SS-9								23	A-3a (V)	↖ ↗
	22														↖ ↗
	23	3	5	15	SS-10		1	10	76	8	5	NP	NP	A-3a (0)	↖ ↗
	24														↖ ↗
	25														↖ ↗
940.2	26	5	16	100	SS-11								23	A-3a (V)	↖ ↗
															↖ ↗

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 3/15/17 12:16 - \COLUMBUSLAB\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\YEAR2016 ARCHIVE\SUM-76-5.53 (ODOT)GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 8.0' DURING DRILLING. 20.0' UPON COMPLETION. CAVE DEPTH 14.7'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



PROJECT: SUM-76-05.53 TYPE: NOISE WALL		DRILLING FIRM / OPERATOR: BEI / J. HODGES		DRILL RIG: CME 55X		STATION / OFFSET: 290+62.160' RT.			EXPLORATION ID								
PID: 96670 SFN:		SAMPLING FIRM / LOGGER: BEI / J. HODGES		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76			B-019-0-15								
START: 7/11/16 END: 7/11/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 1055.8 (MSL) EOB: 25.3 ft.			PAGE								
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 88.1		LAT / LONG: 41.037090, -81.583150			1 OF 1								
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	GRADATION (%)			ATTERBERG		BACK			
		1055.8							GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (GI)
VERY STIFF TO HARD, BROWN, SANDY SILT, SOME CLAY, LITTLE GRAVEL, SS-4 CONTAINS IRON STAINING, DAMP TO MOIST			1	5	6	67	2.0-3.75									19	A-4a (V)
			2	3	9	78	3.0-4.25									18	A-4a (V)
			3	3	10	78	2.75-3.75	11	9	11	48	21	29	20	9	19	A-4a (7)
			4	3	16	78	2.4-2.75									21	A-4a (V)
@3.0'; SS-3 THROUGH SS-6 BECOME BROWN PARTIALLY MOTTLED WITH GRAY			5	4	25	100										18	A-4a (V)
			6	7	100	100	2.75-3.0									18	A-4a (V)
			7	10													
		1047.4	8	50/5"													
SANDSTONE LIGHT BROWN, MEDIUM GRAINED, WEAKLY CEMENTED.			9														
ROCK DEGRADED DURING DRILLING.			10	50/3"		100										2	Rock (V)
			11														
			12														
			13	50/4"		75										2	Rock (V)
			14														
			15	50		100										5	Rock (V)
			16														
			17														
			18	50/4"		100										6	Rock (V)
			19														
			20	50/4"		100											
			21														
			22														
			23	50/3"		100										4	Rock (V)
			24														
		1030.5	25	50/3"		100										2	Rock (V)
			EOB														

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 12.0'.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED, SOIL CUTTINGS

PROJECT: SUM-76-05.53	DRILLING FIRM / OPERATOR: BEI / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 292+70.190' RT.	EXPLORATION ID
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: BEI / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-76	B-020-0-15
PID: 96670 SFN: 7/11/16	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/8/15	ELEVATION: 1044.6 (MSL) EOB: 25.2 ft.	PAGE
START: 7/11/16 END: 7/11/16	SAMPLING METHOD: SPT	ENERGY RATIO (%): 88.1	LAT / LONG: 41.036737, -81.582553	1 OF 1
MATERIAL DESCRIPTION AND NOTES				
4.0" ASPHALT	ELEV. 1044.2	SPT/ RQD	GRADATION (%)	ATTERBERG
14.0" GRANULAR BASE	1044.6	N <sub>60</sub>	GR CS FS SI CL LL PI	WC
HARD, BROWN WITH GRAY, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP	1042.6	3 4 6	2 10 53 34 19 14	17 A-6a (10)
STIFF, BROWN MOTTLED WITH BLUISH GRAY AND GRAYISH BROWN BECOMING BROWN AND GRAYISH BROWN, SILT, SOME CLAY, TRACE SAND, TRACE GRAVEL, DAMP TO MOIST	1041.3	3 4 6	- - - - -	17 A-4b (V)
@5.0'; SS-2 IS SLIGHTLY ORGANIC AND CONTAINS A SAND SEAM		3 4 4	- - - - -	21 A-4b (V)
VERY DENSE, GRAYISH BROWN MOTTLED WITH BROWN AND VERY LIGHT BROWN, <b>COARSE AND FINE SAND</b> , SOME SILT, TRACE CLAY, TRACE GRAVEL, DAMP	1035.1	3 3 5	1 1 6 71 21 26 21 5	22 A-4b (8)
<b>SANDSTONE</b> VERY LIGHT BROWN, MEDIUM GRAINED, WEAKLY CEMENTED, ROCK DEGRADED DURING DRILLING.	1034.1	9 50/5"	1 10 54 25 10 NP NP	10 A-3a (0)
@20.0'; SS-8 BECOMES PINKISH BROWN WITH DARK GRAY		50/1"	- - - - -	4 Rock (V)
@22.5'; SS-9 AND SS-10 BECOME VERY LIGHT TAN		50/1"	- - - - -	6 Rock (V)
		50/1"	- - - - -	7 Rock (V)
		50/2"	- - - - -	5 Rock (V)
		50/2"	- - - - -	4 Rock (V)
		50/2"	- - - - -	2 Rock (V)
	1019.4			

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 8/8/17 17:21 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ACTIVE PROJECTS\ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 17.8'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-76-05.53 TYPE: NOISE WALL	DRILLING FIRM / OPERATOR: BEI / J. HODGES SAMPLING FIRM / LOGGER: BEI / J. HODGES	DRILL RIG: CME 55X HAMMER: CME AUTOMATIC	STATION / OFFSET: 295+33.133' RT. ALIGNMENT: IR-76	EXPLORATION ID B-021-0-15								
PID: 96670 SFN: START: 8/17/16 END: 8/17/16	DRILLING METHOD: 3.25" HSA / NQ2 SAMPLING METHOD: SPT / NQ2	CALIBRATION DATE: 12/8/15 ENERGY RATIO (%): 88.1	ELEVATION: 1025.8 (MSL) EOB: 17.7 ft. LAT / LONG: 41.036510, -81.581620	PAGE 1 OF 1								
MATERIAL DESCRIPTION AND NOTES												
2.0" TOPSOIL LOOSE TO MEDIUM DENSE, BROWN, GRAVEL WITH SAND AND SILT LITTLE CLAY, CONTAIN IRON STAINING AND FEW ROOTS, DAMP	ELEV. 1025.8 1025.9	DEPTHS 1-2	SPT / RQD 3 6 7	REC SAMPLE ID SS-1	REC (%) 89	N <sub>60</sub> 19	GR 31	GRADATION (%) FS 19 CS 16	ATTERBERG LL - PL -	WC 12	ODOT CLASS (GI) A-2-4 (V)	BACK FILL
MEDIUM DENSE, BROWN, SANDY SILT, TRACE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING AND TRACE ROOTS, DAMP	ELEV. 1021.3	DEPTHS 3-4	SPT / RQD 5 4 3	REC SAMPLE ID SS-2	REC (%) 94	N <sub>60</sub> 10	GR 31	GRADATION (%) FS 22 CS 16	ATTERBERG LL - PL -	WC 9	ODOT CLASS (GI) A-2-4 (0)	BACK FILL
DENSE, LIGHT BROWN, STONE FRAGMENTS WITH SAND AND SILT, TRACE CLAY, CONTAINS TRACE ROOTS, DAMP	ELEV. 1018.8	DEPTHS 5-6	SPT / RQD 4 5 6	REC SAMPLE ID SS-3	REC (%) 100	N <sub>60</sub> 16	GR -	GRADATION (%) FS - CS -	ATTERBERG LL - PL -	WC 12	ODOT CLASS (GI) A-4a (V)	BACK FILL
SANDSTONE LIGHT BROWN TO BROWN, FRIABLE, FRAGMENTED.	ELEV. 1015.8	DEPTHS 7-9	SPT / RQD 11 14 18	REC SAMPLE ID SS-4	REC (%) 78	N <sub>60</sub> 47	GR 34	GRADATION (%) FS 36 CS 7	ATTERBERG LL - PL -	WC 6	ODOT CLASS (GI) A-2-4 (0)	BACK FILL
SANDSTONE LIGHT BROWN TO BROWN, SLIGHTLY WEATHERED, STRONG, FINE TO MEDIUM GRAINED, THIN TO MEDIUM BEDDED, FRIABLE, SLIGHTLY CONGLOMERATIC, BEDDING AND JOINT DISCONTINUITIES; LOW ANGLE FRACTURES, HIGHLY FRACTURED TO FRACTURED, NARROW, SLIGHTLY ROUGH, VERY BLOCKY, GOOD SURFACE CONDITION; RQD 0%, REC 62.9%.	ELEV. 1013.8	DEPTHS 10-15	SPT / RQD 50/4"	REC SAMPLE ID SS-5	REC (%) 100	N <sub>60</sub> -	GR -	GRADATION (%) FS - CS -	ATTERBERG LL - PL -	WC 3	ODOT CLASS (GI) Rock (V)	BACK FILL
	ELEV. 1008.1	DEPTHS 16-17	SPT / RQD 0	REC SAMPLE ID NQ2-1	REC (%) 63	N <sub>60</sub> -	GR -	GRADATION (%) FS - CS -	ATTERBERG LL - PL -	WC -	ODOT CLASS (GI) CORE	BACK FILL
	ELEV. 1008.1	DEPTHS 17	SPT / RQD -	REC SAMPLE ID -	REC (%) -	N <sub>60</sub> -	GR -	GRADATION (%) FS - CS -	ATTERBERG LL - PL -	WC -	ODOT CLASS (GI) -	BACK FILL

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 8.5'.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-76-05.53 TYPE: NOISE WALL		DRILLING FIRM / OPERATOR: BEI / ASHBAUGH		DRILL RIG: CME 55		STATION / OFFSET: 297+10.121' RT.		EXPLORATION ID								
PID: 96670 SFN: 6/30/16		SAMPLING FIRM / LOGGER: BEI / K. BAME		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-022-0-15								
START: 6/30/16 END: 6/30/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 989.3 (MSL) EOB: 25.67 ft.		PAGE								
		SAMPLING METHOD: SPT		ENERGY RATIO (%): 81.8		LAT / LONG: 41.036297, -81.581019		1 OF 1								
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTH	SPT / RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)			ATTERBERG		BACK				
							GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (GI)	
<b>6.0" TOPSOIL</b>		989.3	1	2 50/5"	-	73	-	-	-	-	-	-	-	-	8	A-4a (V)
DENSE TO VERY DENSE, BROWN AND GRAY, SANDY SILT, LITTLE GRAVEL, TRACE CLAY, CONTAINS ROOTS, GRASS, AND CONCRETE FRAGMENTS, DAMP (FILL)		988.8	2	14	41	17	-	-	-	-	-	-	-	-	10	A-4a (V)
VERY DENSE, REDDISH BROWN, COARSE AND FINE SAND, LITTLE CLAY, LITTLE GRAVEL, TRACE SILT, DAMP		986.3	3	19	-	100	-	-	-	-	-	-	-	-	9	A-3a (0)
HARD, GRAY, SILTY CLAY, TRACE SAND, DAMP		984.8	4	21 50/5"	-	83	18	8	53	7	14	NP	NP	NP	17	A-6b (V)
			5	7	31	83	-	-	-	-	-	-	-	-	-	-
			6	16	20	72	-	-	-	-	-	-	-	-	-	-
			7	5	10	20	5	1	2	34	63	40	19	21	15	A-6b (12)
			8	2	18	78	-	-	-	-	-	-	-	-	16	A-6b (V)
			9	5	8	4.5+	-	-	-	-	-	-	-	-	-	-
STIFF TO VERY STIFF, TAN AND GRAY, SILT AND CLAY SOME TO "AND" GRAVEL, SOME SAND, DAMP		979.8	10	3	61	56	-	-	-	-	-	-	-	-	18	A-6a (V)
			11	24	21	3.50	-	-	-	-	-	-	-	-	-	-
			12	4	42	28	-	-	-	-	-	-	-	-	14	A-6a (V)
			13	20	11	3.50	-	-	-	-	-	-	-	-	-	-
			14	11	-	-	-	-	-	-	-	-	-	-	-	-
			15	30	37	83	1.25	41	4	17	15	23	34	19	15	A-6a (2)
			16	11	16	1.5	-	-	-	-	-	-	-	-	-	-
			17	9	19	89	1.5	2.0	-	-	-	-	-	-	17	A-6a (V)
			18	20	20	2.0	-	-	-	-	-	-	-	-	-	-
			19	19	53	89	-	-	-	-	-	-	-	-	-	-
			20	21	76	89	4.5+	32	5	16	26	21	30	17	11	A-6a (3)
			21	21	35	89	-	-	-	-	-	-	-	-	-	-
			22	-	-	-	-	-	-	-	-	-	-	-	-	-
			23	-	-	-	-	-	-	-	-	-	-	-	-	-
			24	-	-	-	-	-	-	-	-	-	-	-	-	-
			25	13	50/2"	100	SS-12	4.5+	-	-	-	-	-	-	19	A-6b (V)
		963.6	EOB	-	-	-	-	-	-	-	-	-	-	-	-	-

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 8/8/17 17:21 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ACTIVE SOIL PROJECTS\ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS



**SUM - 7 6 - 5 . 5 3**

**STRUCTURE FOUNDATION EXPLORATION  
NOISE WALL 1  
BORING LOG B-022-0-15**

DRAWN  
KCA  
CHECKED  
BPA

PROJECT:	SUM-76-05.53	DRILLING FIRM / OPERATOR:	BEI / J. HODGES	DRILL RIG:	CME 55X	STATION / OFFSET:	298+84.162' RT.	EXPLORATION ID	B-023-0-15										
TYPE:	NOISE WALL	SAMPLING FIRM / LOGGER:	BEI / J. HODGES	HAMMER:	CME AUTOMATIC	ALIGNMENT:	IR-76												
PID:	96670	DRILLING METHOD:	3.25" HSA	CALIBRATION DATE:	12/8/15	ELEVATION:	976.2 (MSL) EOB:	26.5 ft.	PAGE										
START:	8/17/16	SAMPLING METHOD:	SPT	ENERGY RATIO (%):	88.1	LAT / LONG:	41.035983, -81.580487	1 OF 1											
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	DEPTH	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
<b>3.0" TOPSOIL</b>		976.0	1	3	9	100	4.0	-	-	-	-	-	-	-	-	11	A-4a (V)	↖↗	
HARD, BROWN MOTTLED WITH DARK GRAY SANDY SILT, LITTLE CLAY, TRACE GRAVEL, CONTAINS ROOTS, DAMP		974.7	2	4	22	100	4.25	-	-	-	-	-	-	-	-	-	A-4a (V)	↖↗	
HARD, BROWN TO BROWN MOTTLED WITH LIGHT BROWN, SILTY CLAY, LITTLE TO SOME SAND, TRACE GRAVEL, DAMP		971.7	3	7	25	100	4.5+	-	-	-	-	-	-	-	-	-	A-6b (V)	↖↗	
@3.0'; SS-3 CONTAINS ROOT HAIRS			4	5	25	100	4.5+	5	10	12	40	33	39	19	20	14	A-6b (12)	↖↗	
LOOSE, BROWN, GRAVEL WITH SAND TRACE SILT, TRACE CLAY, MOIST TO WET			5	3	7	100	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	↖↗	
@7.5'; SS-6 BECOMES GRAYISH BROWN			6	3	9	100	-	-	41	35	7	8	NP	NP	NP	14	A-1-b (0)	↖↗	
@10.0'; SS-7 BECOMES GRAYISH BROWN WITH BROWN AND BLACK		964.2	7	3	7	100	-	-	-	-	-	-	-	-	-	-	-	↖↗	
VERY LOOSE, BROWN WITH ORANGISH BROWN, FINE SAND, LITTLE COARSE SAND, TRACE CLAY, TRACE SILT, WET		FS	8	2	6	100	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	↖↗	
SOFT TO VERY STIFF, GRAY AND BROWN, SILT AND CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, CONTAINS FINE SILT LENSES, MOIST		959.2	9	2	3	100	-	-	13	50	25	7	5	NP	NP	15	A-1-b (0)	↖↗	
MEDIUM DENSE, LIGHT BROWN WITH ORANGISH BROWN AND GRAY, FINE SAND, TRACE COARSE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP			10	3	2													↖↗	
VERY DENSE, GRAY, GRAVEL WITH SAND LITTLE SILT, TRACE CLAY, MOIST		952.9	11	2	6	100	0.4-3.5	2	0	1	41	56	38	23	15	32	A-6a (10)	↖↗	
			12	1	3	100	-	-	18	73	4	5	NP	NP	NP	26	A-3 (0)	↖↗	
			13	2	12	100	-	-	-	-	-	-	-	-	-	-	-	↖↗	
			14	1	3	100	-	-	0	18	73	4	5	NP	NP	NP	26	A-3 (0)	↖↗
			15	2	6	100	-	-	-	-	-	-	-	-	-	-	-	↖↗	
			16	1	12	100	0.4-3.5	2	0	1	41	56	38	23	15	32	A-6a (10)	↖↗	
			17	1	12	100	-	-	-	-	-	-	-	-	-	-	-	↖↗	
			18	5	16	100	-	-	-	-	-	-	-	-	-	7	A-3 (V)	↖↗	
			19	6	21	100	-	-	-	-	-	-	-	-	-	9	A-3 (V)	↖↗	
			20	5	6	21	-	-	-	-	-	-	-	-	-	-	-	↖↗	
			21	6	8	100	-	-	-	-	-	-	-	-	-	-	-	↖↗	
			22															↖↗	
			23															↖↗	
			24															↖↗	
			25	29	54	100	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	↖↗	
			26	23	14													↖↗	

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NOTES: GROUNDWATER ENCOUNTERED AT 7.0' DURING DRILLING. CAVE DEPTH 14.7'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELLED SOIL CUTTINGS



**SUM - 76 - 5.53**

**STRUCTURE FOUNDATION EXPLORATION  
 NOISE WALL 1  
 BORING LOG B-023-0-15**

PROJECT: SUM-76-05.53 TYPE: NOISE WALL		DRILLING FIRM / OPERATOR: BEI / J. HODGES		DRILL RIG: CME 55X		STATION / OFFSET: 300+70.127 RT.		EXPLORATION ID				
PID: 96670 SFN: 7/12/16		SAMPLING FIRM / LOGGER: BEI / J. HODGES		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-024-0-15				
START: 7/12/16 END: 7/12/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 988.8 (MSL) EOB: 26.5 ft.		PAGE				
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 88.1		LAT / LONG: 41.035872, -81.579781		1 OF 1				
MATERIAL DESCRIPTION AND NOTES		ELEV.		REC SAMPLE ID		GRADATION (%)		ATTERBERG		BACK FILL		
		988.8		HP (tsf)		GR CS FS SI CL		LL PL PI		WC		
		988.0		N <sub>60</sub>		GR CS FS SI CL		LL PL PI		WC		
		987.1		SPT / RQD		GR CS FS SI CL		LL PL PI		WC		
		FS		DEPTH		GR CS FS SI CL		LL PL PI		WC		
		984.3		1		GR CS FS SI CL		LL PL PI		WC		
		981.8		2		GR CS FS SI CL		LL PL PI		WC		
		979.6		3		GR CS FS SI CL		LL PL PI		WC		
				4		GR CS FS SI CL		LL PL PI		WC		
				5		GR CS FS SI CL		LL PL PI		WC		
				6		GR CS FS SI CL		LL PL PI		WC		
				7		GR CS FS SI CL		LL PL PI		WC		
				8		GR CS FS SI CL		LL PL PI		WC		
				9		GR CS FS SI CL		LL PL PI		WC		
				10		GR CS FS SI CL		LL PL PI		WC		
				11		GR CS FS SI CL		LL PL PI		WC		
				12		GR CS FS SI CL		LL PL PI		WC		
				13		GR CS FS SI CL		LL PL PI		WC		
				14		GR CS FS SI CL		LL PL PI		WC		
				15		GR CS FS SI CL		LL PL PI		WC		
				16		GR CS FS SI CL		LL PL PI		WC		
				17		GR CS FS SI CL		LL PL PI		WC		
				18		GR CS FS SI CL		LL PL PI		WC		
				19		GR CS FS SI CL		LL PL PI		WC		
				20		GR CS FS SI CL		LL PL PI		WC		
				21		GR CS FS SI CL		LL PL PI		WC		
				22		GR CS FS SI CL		LL PL PI		WC		
				23		GR CS FS SI CL		LL PL PI		WC		
				24		GR CS FS SI CL		LL PL PI		WC		
				25		GR CS FS SI CL		LL PL PI		WC		
				26		GR CS FS SI CL		LL PL PI		WC		
				EOB		GR CS FS SI CL		LL PL PI		WC		
9.0" ASPHALT		988.8										
11.0" GRANULAR BASE		988.0										
MEDIUM DENSE TO DENSE, LIGHT BROWN, FINE SAND, SOME GRAVEL, TRACE COARSE SAND, TRACE SILT, TRACE CLAY. SS-1 AND SS-2A EACH CONTAIN ONE GRAVEL PIECE GREATER THAN 1.0", DRY (POSSIBLE FILL)		987.1										
VERY STIFF TO HARD, BROWN AND DARK BROWN BECOMING GRAYISH BROWN AND BLACK, SANDY SILT, SOME GRAVEL, LITTLE CLAY. SS-2A CONTAINS IRON STAINING AND TRACE ROOTS, DAMP		984.3										
(POSSIBLE FILL)		981.8										
@5.5'; SS-3 CONTAINS BLACK WOOD FRAGMENTS STIFF TO HARD, ORANGISH BROWN, SILT AND CLAY SOME GRAVEL, SOME SAND, CONTAINS IRON STAINING AND CONCRETION FRAGMENTS, DAMP		979.6										
VERY STIFF TO HARD, BROWN AND GRAYISH BROWN, SANDY SILT, LITTLE TO SOME GRAVEL, LITTLE CLAY, SS-5 CONTAINS IRON STAINING, DAMP												
@12.5'; SS-6 BECOMES BROWN AND ORANGISH BROWN AND CONTAINS MANY IRON STAINS AND ONE GRAVEL PIECE GREATER THAN 1.0"												
STIFF TO VERY STIFF BROWN, SILT, SOME CLAY, LITTLE SAND, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP		969.3										
HARD, BROWNISH GRAY, SILT AND CLAY TRACE SAND, CONTAINS TRACE ROOTS, DAMP		965.6										

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 17.0'.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-76-05.53 TYPE: NOISE WALL		DRILLING FIRM / OPERATOR: BEI / J. HODGES		DRILL RIG: CME 55X		STATION / OFFSET: 302+25.168' RT.		EXPLORATION ID										
PID: 96670 SFN: 7/12/16		SAMPLING FIRM / LOGGER: BEI / J. HODGES		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-025-0-15										
START: 7/12/16 END: 7/12/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 977.2 (MSL) EOB: 26.5 ft.		PAGE										
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 88.1		LAT / LONG: 41.035622, -81.579267		1 OF 1										
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
8.0" ASPHALT	977.2	1																
16.0" GRANULAR BASE	976.6	2																
MEDIUM DENSE, BROWN AND VERY LIGHT BROWN, COARSE AND FINE SAND LITTLE SILT, TRACE GRAVEL, TRACE CLAY, DAMP TO MOIST	975.2	3	4	4	16	78	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
		4	4	7														
		5	4	9	21	67	-	-	-	-	-	-	-	-	-	15	A-3a (V)	
		6	7	50/3"	-	100	-	-	-	-	-	-	-	-	-	16	A-3a (V)	
@5.5'; SS-3 BECOMES VERY DENSE, VERY LIGHT BROWN WITH BLACK	970.2	7	37	10	31	56	4.25-4.5+	4	14	53	25	17	8			12	A-4b (8)	
HARD, BROWN, SILT, SOME CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		8	11															
		9																
		10																
		11	7	8	23	33	4.5+	-	-	-	-	-	-	-	-	14	A-4b (V)	
	965.2	12																
STIFF TO VERY STIFF, DARK GRAY MOTTLED WITH BROWN, CLAY, SOME SILT, LITTLE SAND, LITTLE GRAVEL, DAMP TO MOIST		13	3	3	12	100	2.0-2.25	15	6	12	33	44	22	22		25	A-7-6 (12)	
		14																
		15	2	3	12	100	2.25-2.5	-	-	-	-	-	-	-	-	21	A-7-6 (V)	
		16	5															
LOOSE, DARK GRAYISH BROWN, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, TRACE GRAVEL, MOIST	960.2	17																
		18	2	2	6	100	-	-	-	-	-	-	-	-	-	25	A-3a (V)	
		19																
VERY STIFF, GRAY, SILT, "AND" CLAY, TRACE FINE SAND, MOIST	957.7	20	2	3	13	100	2.5-3.25	0	0	1	61	38	27	17	10	21	A-4b (8)	
		21	6															
		22																
MEDIUM STIFF TO VERY STIFF, GRAY, SILT AND CLAY WET	955.2	23	2	2	7	100	1.0-2.25	0	0	0	56	44	30	19	11	28	A-6a (8)	
		24	3															
		25	1	2	7	100	0.75-2.0	-	-	-	-	-	-	-	-	28	A-6a (V)	
	950.7	26	3															

EOB

STANDARD ODOT SOIL BORING LOG (11 X 17) - 8/8/17 17:21 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ACTIVE PROJECTS\ARCHIVE BY YEAR\2016 ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. CAVE DEPTH 7.9'.  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS



PROJECT: SUM-76-05.53 TYPE: NOISE WALL		DRILLING FIRM / OPERATOR: BEI / J. HODGES		DRILL RIG: CME 55X		STATION / OFFSET: 303+68.216' RT.		EXPLORATION ID			
PID: 96670 SFN: 7/12/16 END: 7/16/16		SAMPLING FIRM / LOGGER: BEI / J. HODGES		HAMMER: CME AUTOMATIC		ALIGNMENT: IR-76		B-026-0-15			
START: 7/12/16 END: 7/16/16		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 12/8/15		ELEVATION: 966.9 (MSL) EOB: 26.5 ft.		PAGE			
SAMPLING METHOD: SPT		SAMPLING METHOD: SPT		ENERGY RATIO (%): 88.1		LAT / LONG: 41.035386, -81.578779		1 OF 1			
MATERIAL DESCRIPTION AND NOTES		ELEV.		REC SAMPLE ID		GRADATION (%)		ATTERBERG		BACK FILL	
		966.9		HP (tsf)		GR CS FS SI CL		LL PL PI		WC	
		966.5		ID		GR CS FS SI CL		LL PL PI		WC	
		965.2		SS-1 0.75		GR CS FS SI CL		LL PL PI		WC	
		962.9		SS-2 1.25		GR CS FS SI CL		LL PL PI		WC	
				SS-3 3.25-4.5+		GR CS FS SI CL		LL PL PI		WC	
				SS-4 1.75-3.0		GR CS FS SI CL		LL PL PI		WC	
		957.6				GR CS FS SI CL		LL PL PI		WC	
		954.9		SS-5 -		GR CS FS SI CL		LL PL PI		WC	
				SS-6 -		GR CS FS SI CL		LL PL PI		WC	
				SS-7 -		GR CS FS SI CL		LL PL PI		WC	
				SS-8 -		GR CS FS SI CL		LL PL PI		WC	
				SS-9 -		GR CS FS SI CL		LL PL PI		WC	
		942.4		SS-10 -		GR CS FS SI CL		LL PL PI		WC	
		940.4		SS-11 -		GR CS FS SI CL		LL PL PI		WC	
5.0" ASPHALT	1										
15.0" GRANULAR BASE	2										
MEDIUM STIFF, BROWN MOTTLED WITH REDDISH BROWN, SANDY SILT, SOME CLAY, SOME GRAVEL, CONTAINS BRICK FRAGMENTS, MOIST (FILL)	3										
MEDIUM STIFF TO HARD, BROWN TO ORANGISH BROWN, SILT AND CLAY AND SAND, TRACE GRAVEL, MOIST	4										
@5.5'; SS-3 TO SS-4 BECOME GRAY TO GRAYISH BROWN	5										
@7.0'; SS-4 BECOMES TRACE SAND	6										
MEDIUM DENSE GRAY, GRAVEL WITH SAND, SILT, AND CLAY, MOIST	7										
STIFF, GRAY, SILT, SOME CLAY, TRACE GRAVEL, WET	8										
@17.5'; SS-8 TO SS-10 BECOME LOOSE	9										
LOOSE, GRAY, FINE SAND, LITTLE COARSE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
	25										
	26										

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 8/8/17 17:22 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\ACTIVE PROJECTS\ARCHIVE\SUM-76-5.53 (ODOT)\GINT FILES\SUM-76-5.53.GPJ

NOTES: GROUNDWATER ENCOUNTERED AT 9.8' DURING DRILLING. CAVE DEPTH 10.0'.  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

S&ME JOB: 1179-13-001L



PROJECT: SUM-76 CENTRAL AVE  
 TYPE: BRIDGE REMOVAL  
 PID: 93501 BR ID: SUM-76-0563  
 START: 9/16/13 END: 9/16/13

DRILLING FIRM / OPERATOR: S&ME / D. GODWIN  
 SAMPLING FIRM / LOGGER: S&ME / K. HARPER  
 DRILLING METHOD: 3.25" HSA / NQ  
 SAMPLING METHOD: SPT / NQ

DRILL RIG: TRUCK 65 (AW)  
 HAMMER: SAFETY HAMMER  
 CALIBRATION DATE: 2/19/13  
 ENERGY RATIO (%): 76

STATION / OFFSET: 296+28.58' LT  
 ALIGNMENT: IR-76 CENTERLINE  
 ELEVATION: 1008.0 (MSL) EOB: 58.9 ft.  
 LAT / LONG: 41.036839 N, 81.580981 W

EXPLORATION ID: B-001-0-13  
 PAGE: 1 OF 2

**MATERIAL DESCRIPTION AND NOTES**  
 ASPHALT - 8 INCHES  
 GRANULAR BASE - 6 INCHES  
 FILL: Stiff (est.) brown SILT AND CLAY, little to some fine sandstone fragments, damp.  
 FILL: Loose to medium-dense brown COARSE AND FINE SAND, some fine to coarse gravel, trace silt, trace clay, contains few fine sand pockets, damp.

FILL: Stiff to very-stiff brown SANDY SILT, some fine to coarse gravel, little clay, contains few wood fragments and sandstone fragments from 8.5' to 10.0', few light brown fine sand pockets, damp.  
 FILL: Encountered possible cobble at 16.0'.  
 FILL: Very-stiff dark brown SILT AND CLAY, little to some fine to coarse sand, trace fine to coarse gravel, contains few sandstone fragments and possible millisand, damp.  
 Very-soft to soft brown SANDY SILT, little clay, trace iron oxide staining, moist.  
 Medium-dense brown SANDY SILT, little fine gravel, trace clay, trace iron oxide staining, contains few gray fine sand pockets, moist to wet.

Medium-dense brown COARSE AND FINE SAND, little fine to coarse gravel, little silt, trace clay, moist to wet.  
 Medium-dense brown GRAVEL WITH SAND, trace clay, trace silt, moist to wet.

DEPTH (ft)	ELEV. (ft)	SPT / RQD	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	HOLE SEALED	
1	1008.0															
2	1007.3	8	15	100	SS-1								10	A-6a (V)		
3	1006.8	7	5													
4	1004.7	8	13	39	SS-2								9	A-3a (V)		
5		6	4													
6		3	2	9	SS-3	27	7	53	8	NP	NP	NP	8	A-3a (0)		
7		2	5													
8	1000.0	4	7	15	SS-4	20							9	A-4a (V)		
9		7	5													
10		8	7	15	SS-5	1.8										
11		7	5	2.0												
12		8	7	15	SS-6	1.8										
13		2	1	8	SS-6	2.6	28	12	24	12	23	16	7	A-4a (0)		
14	992.5	1	5													
15		5														
16	991.1	5	3	100	SS-7A	1.3							21	A-6a (V)		
17	990.0	5	10	100	SS-7B	1.8							20	A-6a (V)		
18		3														
19		4	2	9	SS-8	0.0	0	3	36	43	18	24	16	8	A-4a (5)	
20	987.5	2	5	0.3												
21		2	3	14	SS-9											
22		3	8													
23		6														
24	984.0	11	25	17	SS-10A	13	10	33	34	10	17	15	2	A-4a (2)		
25		9														
26		12	25	100	SS-11	12	15	55	11	7	NP	NP	12	A-3a (0)		
27		11	9													
28		7	10	25	SS-12											
29	979.5	10	5	67												
30		10														

PLATE 5 S&ME (6.5X11) LOG - WITH PLATES - OH DOT GDT - 11/20/15 11:14 - M:\RESOURCES\CS01 - LABORATORY02 - GINT\PROJECTS\1179-13-001L.GPJ

S&ME JOB: 1179-13-001L



PROJECT: SUM-76 CENTRAL AVE  
 BR ID: SUM-76-0563  
 START: 9/16/13 END: 9/16/13  
 PG 2 OF 2

**MATERIAL DESCRIPTION AND NOTES**  
 Medium-dense brown GRAVEL WITH SAND, trace clay, trace silt, moist to wet. (continued)

Very-dense brown COARSE AND FINE SAND, little fine to coarse gravel, little silt, little clay, contains brown silt and silty clay seams, few light brown fine sand pockets, moist.  
 Hard gray SILT AND CLAY, some fine to coarse gravel, some fine to coarse sand, contains few sandstone fragments, damp.

SHALE, brown, severely weathered, damp.  
 Interbedded SHALE (55%) and SANDSTONE (45%) Shale, gray, slightly to moderately weathered, very weak, thin, fractured, narrow, many highly weathered zones, numerous desiccation cracks; Sandstone, gray, slightly weathered, moderately strong, very fine to fine-grained, well-cemented, thin to thick bedded, fractured to slightly fractured, narrow, slightly rough, approximate 45° fracture at 45.8', iron oxide staining and numerous vertical cracks from 41.9' to 43.9'.

- Q<sub>u</sub> on shale from 44.6' to 45.0' = 152 psi.  
 - Q<sub>u</sub> on sandstone and shale from 46.2' to 46.6' = 3796 psi.  
 - Q<sub>u</sub> on shale from 49.6' to 50.4' = 204 psi.

- Q<sub>u</sub> on sandstone from 53.9' to 54.6' = 4023 psi.

DEPTH (ft)	ELEV. (ft)	SPT / RQD	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	HOLE SEALED
31	978.0	11	27	100	SS-13								17	A-1-b (V)	
32		11	10												
33	975.0	12	72	100	SS-14								18	A-3a (V)	
34		25	32												
35	972.5	25	48	100	SS-15	4.5	9	15	22	21	29	17	12	A-6a (2)	
36		48	50												
37	970.0	5													
38	969.1	5													
39															
40		40	92	92	NQ-17										
41															
42															
43															
44															
45															
46		33	95	95	NQ-18										
47															
48															
49															
50															
51		48	73	73	NQ-19										
52															
53															
54															
55															
56		65	98	98	NQ-20										
57															
58	949.1														

NOTES:  
 - No seepage encountered during drilling.  
 - Encountered possible cobble at 16.0'.  
 - Plastic hole plug device placed into borehole during abandonment.

NOTES: NONE  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; 15 LB. BENTONITE POWDER; 94 LB. CEMENT; SOIL CUTTINGS; 35 GAL. WATER

S&ME JOB: 1179-13-001L



PROJECT:	SUM-76 CENTRAL AVE	DRILLING FIRM / OPERATOR:	S&ME / D. GODWIN	DRILL RIG:	TRUCK 65 (AW)	STATION / OFFSET:	296+37, 64' RT	EXPLORATION ID	B-001-1-13								
TYPE:	BRIDGE REMOVAL	SAMPLING FIRM / LOGGER:	S&ME / K. HARPER	HAMMER:	SAFETY HAMMER	ALIGNMENT:	IR-76 CENTERLINE										
PID:	93501 BR ID: SUM-76-0563	DRILLING METHOD:	3.25" HSA / NQ	CALIBRATION DATE:	2/19/13	ELEVATION:	1010.4 (MSL) EOB:	44.4 ft.	PAGE								
START:	9/17/13 END: 9/19/13	SAMPLING METHOD:	SPT / NQ	ENERGY RATIO (%):	76	LAT / LONG:	41.036534 N, 81.581165 W		1 OF 2								
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	HOLE SEALED
ASPHALT - 9 INCHES		1010.4	1														
CONCRETE - 9 INCHES		1009.7	2	4													
FILL: Medium-dense brown COARSE AND FINE SAND, little fine to coarse gravel, trace silt, trace clay, contains few brick and sandstone fragments, damp.		1008.9	3	7	19	100											A-3a (V)
FILL: Loose brown COARSE AND FINE SAND, some fine to coarse gravel, little silt, trace clay, contains few to many sandstone fragments, few stiff to very-stiff silty clay pockets, damp.		1007.1	4	5	8	67	24	12	42	14	8	NP	NP	NP	10		A-3a (0)
- Encountered possible cobbles at 6.5'.			5	2	4												
			6	2	3	9											A-3a (V)
			7	3	4												
			8	4	4	100											A-3a (V)
			9	4	4	100											
			10	4	4	100											A-3a (V)
			11	2	3	8											
			12	3	3	67											A-3a (V)
			13	2	3	3											
		997.4	14	8	13	100											A-3a (V)
FILL: Medium-dense to dense brown mottled with gray COARSE AND FINE SAND, some fine to coarse gravel, trace silt, trace clay, damp to moist.			15	12													
- Encountered possible cobbles at 15.5'.			16	8	12	100											
			17	12	30	100	31	6	49	8	6	NP	NP	NP	9		A-3a (0)
			18														
			19	4	6	67											A-3a (V)
			20	6	7												
			21	4		100											A-3a (0)
		988.9	22	5	13	50	24	21	42	7	6	NP	NP	NP	10		A-3a (0)
			23	5	5	3.5-4.5	2	0	1	37	60	41	25	16	16		A-7-6 (11)
			24	3	4	100											
			25	4	15	100	3	0	3	39	55	43	26	17	15		A-7-6 (11)
		984.9	26	8	50-5"												
Stiff gray SILT AND CLAY, little fine to coarse sand, little fine to coarse gravel, possible severely weathered shale, contains many shale fragments, damp.		983.5	27			100											A-6a (V)
SANDSTONE, interbedded with shale.		981.9	28														
- $Q_u$ on sandstone from 28.9' to 29.4' = 5880 psi.			29														

PLATE 7

S&ME JOB: 1179-13-001L



PID:	93501	BR ID:	SUM-76-0563	PROJECT:	SUM-76 CENTRAL AVE	STATION / OFFSET:	296+37, 64' RT	START:	9/17/13	END:	9/19/13	PG 2 OF 2	B-001-1-13				
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	HOLE SEALED
SANDSTONE, gray, slightly weathered, moderately strong, very fine to fine-grained, thin to medium bedded, moderately fractured, narrow, few interbedded shale layers less than 1" thick, little iron oxide staining on rock core. (continued)		980.4	31	48	77	NQ-12											CORE
- $Q_u$ on sandstone from 33.0' to 33.5' = 6687 psi.			32														
			33														
			34														
			35	27	72	NQ-13											CORE
			36														
		972.9	37														
			38														
			39														
			40		0	--											
			41														
			42														
			43														
		966.0	44		0	--											
			EOB														

NOTES:  
 - No seepage encountered during drilling.  
 - Encountered possible cobbles at 6.5' and 15.5'.  
 - Encountered auger penetration refusal at 28.5'.  
 - A third rock core sample was successfully cored from 37.5' to 43.5' and was left in the rock core barrel until the next core run was completed.  
 - During the fourth rock core sample attempt, the barrel became jammed at a depth of 44.4' and could not be recovered.  
 - Due to this occurrence, the rock core barrel and cored samples from 37.5' to 44.4' were unrecoverable and were abandoned in the borehole.

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; CEMENT MIXED WITH SOIL CUTTINGS; PLASTIC HOLE PLUG DEVICE

PLATE 8

S&ME JOB: 1179-13-001L



<b>PROJECT:</b> SUM-76 CENTRAL AVE	<b>DRILLING FIRM / OPERATOR:</b> S&ME / D. GODWIN	<b>DRILL RIG:</b> TRUCK 65 (AW)	<b>STATION / OFFSET:</b> 296+95.73' LT	<b>EXPLORATION ID</b>
<b>TYPE:</b> BRIDGE REMOVAL	<b>SAMPLING FIRM / LOGGER:</b> S&ME / K. HARPER	<b>HAMMER:</b> SAFETY HAMMER	<b>ALIGNMENT:</b> IR-76 CENTERLINE	<b>B-002-0-13</b>
<b>PID:</b> 93501 BR ID: SUM-76-0563	<b>DRILLING METHOD:</b> 3.25" HSA / NQ	<b>CALIBRATION DATE:</b> 2/19/13	<b>ELEVATION:</b> 986.5 (MSL) EOB: 43.7 ft.	<b>PAGE</b>
<b>START:</b> 9/23/13 END: 9/24/13	<b>SAMPLING METHOD:</b> SPT / NQ	<b>ENERGY RATIO (%):</b> 76	<b>LAT / LONG:</b> 41.036790 N, 81.580744 W	<b>1 OF 2</b>

SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GRADATION (%)				ATTERBERG				WC	HOLE CLASS (G)	SEAL
				GR	CS	FS	SI	CL	LL	PL	PI			
<b>MATERIAL DESCRIPTION AND NOTES</b>														
ASPHALT - 6 INCHES														
GRANULAR BASE - 6 INCHES														
FILL: Hard brown SILTY CLAY, little fine to coarse sand, trace fine to coarse gravel, contains few possible cinders, few brick fragments, damp.														
POSSIBLE FILL: Stiff gray SILTY CLAY, some fine to coarse sand, contains few fine sand pockets, few decayed organic fragments, damp.														
POSSIBLE FILL: Medium-stiff to stiff brown mottled with gray SILTY CLAY, some fine to coarse sand, trace iron oxide staining, contains few gray fine sand pockets, few decayed organic fragments, damp.														
Medium-dense brown COARSE AND FINE SAND, trace fine gravel, little silt, little clay, trace iron oxide staining, contains few sandstone fragments, moist.														
Medium-stiff brown SILT AND CLAY, little fine to coarse sand, trace fine gravel, varved, contains few gray silt layers, damp to moist.														
Medium-dense brown COARSE AND FINE SAND, trace to little fine to coarse gravel, trace silt, trace clay, trace iron oxide staining, damp.														
Medium-dense brown FINE SAND, trace silt, trace clay, trace coarse sand, damp to wet.														
Medium-dense brown SILT, little clay, trace fine to coarse sand, trace iron oxide staining, damp to moist.														
Medium-stiff gray SILT AND CLAY, little fine to coarse sand, damp to moist.														
SANDSTONE, brown, slightly weathered, moderately strong to strong, very fine to medium-grained, medium bedded, conglomeric (<10%), slightly fractured.														
SANDSTONE, gray, interbedded with dark gray, unweathered, moderately strong, very fine to fine-grained, very thick bedded, moderately fractured, tight to open, very rough.														
- Q <sub>u</sub> on sandstone from 28.1' to 28.6' = 5431 psi.														
ELEV.: 986.5														
ELEV.: 985.5														
ELEV.: 983.5														
ELEV.: 981.0														
ELEV.: 977.6														
ELEV.: 976.0														
ELEV.: 972.2														
ELEV.: 971.0														
FS														
ELEV.: 967.0														
ELEV.: 966.0														
ELEV.: 963.0														
ELEV.: 956.5														
ELEV.: 955.5														
Interbedded SANDSTONE (50%) and SHALE (50%). Sandstone, gray, slightly weathered, slightly to moderately strong, very fine to fine-grained, medium bedded, moderately fractured, tight to narrow, approximate 35° fracture at 32.7', laminated bedding from 39.5' to 39.9'. Shale, dark gray, slightly weathered, very weak to weak, thin bedded, friable, numerous desiccation cracks, highly fractured to fractured, tight, highly fractured from 35.8' to 36.2', many vertical fractures from 37.7' to 38.1', highly weathered and highly fractured, approximate 10° bedding angle from 39.5' to 39.9'. - Q <sub>u</sub> on sandstone from 32.8' to 33.5' = 3489 psi.														
- Q <sub>u</sub> on shale from 38.7' to 39.2' = 752 psi.														
- Q <sub>u</sub> on shale from 42.7' to 43.2' = 294 psi.														
ELEV.: 942.8														
EBOB														

S&ME JOB: 1179-13-001L



<b>PID:</b> 93501	<b>BR ID:</b> SUM-76-0563	<b>PROJECT:</b> SUM-76 CENTRAL AVE	<b>STATION / OFFSET:</b> 296+95.73' LT	<b>START:</b> 9/23/13	<b>END:</b> 9/24/13	<b>PG. 2 OF 2</b>	<b>B-002-0-13</b>
<b>MATERIAL DESCRIPTION AND NOTES</b>							

SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GRADATION (%)				ATTERBERG				WC	HOLE CLASS (G)	SEAL
				GR	CS	FS	SI	CL	LL	PL	PI			
<b>MATERIAL DESCRIPTION AND NOTES</b>														
Interbedded SANDSTONE (50%) and SHALE (50%). Sandstone, gray, slightly weathered, slightly to moderately strong, very fine to fine-grained, medium bedded, moderately fractured, tight to narrow, approximate 35° fracture at 32.7', laminated bedding from 39.5' to 39.9'. Shale, dark gray, slightly weathered, very weak to weak, thin bedded, friable, numerous desiccation cracks, highly fractured to fractured, tight, highly fractured from 35.8' to 36.2', many vertical fractures from 37.7' to 38.1', highly weathered and highly fractured, approximate 10° bedding angle from 39.5' to 39.9'. - Q <sub>u</sub> on sandstone from 32.8' to 33.5' = 3489 psi.														
- Q <sub>u</sub> on shale from 38.7' to 39.2' = 752 psi.														
- Q <sub>u</sub> on shale from 42.7' to 43.2' = 294 psi.														
ELEV.: 942.8														
EBOB														

**NOTES:**

- Encountered seepage at 14.0' during drilling.
- Encountered auger penetration refusal at 23.5'.
- Plastic hole plug device placed into borehole during abandonment.

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH: 25 LB. BENTONITE POWDER; 186 LB. CEMENT; CEMENT MIXED WITH SOIL CUTTINGS; WATER

S&ME JOB: 1179-13-001L



PROJECT: SUM-76 CENTRAL AVE  
 TYPE: BRIDGE REMOVAL  
 PID: 93501 BR ID: SUM-76-0563  
 START: 9/24/13 END: 9/24/13

DRILLING FIRM / OPERATOR: S&ME / D. GODWIN  
 SAMPLING FIRM / LOGGER: S&ME / K. HARPER  
 DRILLING METHOD: 3.25" HSA / NQ  
 SAMPLING METHOD: SPT / NQ

DRILL RIG: TRUCK 65 (AW)  
 HAMMER: SAFETY HAMMER  
 CALIBRATION DATE: 2/19/13  
 ENERGY RATIO (%): 76

STATION / OFFSET: 297+42.3' RT  
 ALIGNMENT: IR-76 CENTERLINE  
 ELEVATION: 986.4 (MSL) EOB: 41.9 ft.  
 LAT / LONG: 41.036545 N, 81.580722 W

EXPLORATION ID: B-002-1-13  
 PAGE: 1 OF 2

DEPTH (ft)	ELEV. (ft)	MATERIAL DESCRIPTION	SPT / RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)				ATTERBERG				WC	HOLE CLASS (G)	SEAL		
						GR	CS	FS	SI	CL	LL	PL	PI					
1	986.4	ASPHALT - 6 INCHES	9	16	33	SS-1	-	-	-	-	-	-	-	-	-	-	-	
2	985.4	GRANULAR BASE - 6 INCHES	5	3	42	SS-2B	-	-	-	-	-	-	-	-	-	-	-	
3	982.5		2	100	SS-2A	-	-	-	-	-	-	-	-	-	-	-	-	
4	979.2		1	100	SS-3A	0.5	4	19	48	25	34	20	14	23	A-6a (V)	-	-	
5			2	100	SS-3B	1.0	1	3	60	35	45	23	22	26	A-6a (V)	-	-	
6			3	100	SS-3B	1.3	0	11	60	29	41	21	20	24	A-7-6 (12)	-	-	
7			4	100	SS-4	2.0	0	0	11	60	29	41	21	20	A-7-6 (12)	-	-	
8			5	100	SS-5		2	4	33	49	12	19	16	3	A-4a (5)	-	-	
9			2	100	SS-6A		4	6	16	100	SS-6B	-	-	-	-	A-4a (V)	-	-
10			7	100	SS-7A	3.5	2	2	2	100	SS-7B	-	-	-	-	A-3a (V)	-	-
11			4	100	SS-7C	4.5	2	2	2	100	SS-7C	-	-	-	-	A-6a (V)	-	-
12			3	100	SS-8		3	6	19	100	SS-8	-	-	-	-	A-3a (V)	-	-
13			6	100	SS-9		23	50.5	7	25	11	4	NP	NP	A-1-b (0)	-	-	
14			30	70	NQ-10		23	50.5	7	25	11	4	NP	NP	A-1-b (0)	-	-	
15			18	75	NQ-11		30	70	7	25	11	4	NP	NP	A-1-b (0)	-	-	
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		
25																		
26																		
27																		
28																		
29																		

PLATE 11

S&ME JOB: 1179-13-001L



PID: 93501 BR ID: SUM-76-0563 PROJECT: SUM-76 CENTRAL AVE STATION / OFFSET: 297+42.3' RT START: 9/24/13 END: 9/24/13 PG. 2 OF 2 B-002-1-13

DEPTH (ft)	ELEV. (ft)	MATERIAL DESCRIPTION	SPT / RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)				ATTERBERG				WC	HOLE CLASS (G)	SEAL		
						GR	CS	FS	SI	CL	LL	PL	PI					
31	956.4	Interbedded SANDSTONE (72%) and SHALE (28%). Sandstone, gray, moderately strong, very fine to fine-grained, thin to medium bedded, fractured to moderately fractured, vertical fracture from 30.5' to 30.8', bedding approximately 10° from 30.2' to 33.7'. Shale, gray, slightly weathered, very weak, thin bedded, moderately fractured. (continued)	58	95	NQ-12	-	-	-	-	-	-	-	-	-	-	-	-	-
32																		
33	952.7	- Q <sub>u</sub> on sandstone from 31.2' to 31.8' = 5682 psi. - Q <sub>u</sub> on sandstone from 32.5' to 33.0' = 4325 psi. SHALE, dark gray, slightly weathered, very weak, very thick bedded, fractured, narrow, very rough, highly fractured from 35.7' to 36.6'. - Q <sub>u</sub> on shale interbedded with sandstone from 34.1' to 34.6' = 444 psi.																
34																		
35																		
36																		
37																		
38	947.0	Interbedded SANDSTONE (50%) and SHALE (50%) Sandstone, gray, slightly weathered, moderately strong, very fine to medium-grained, thin bedded, moderately fractured, vertical fracture from 39.4' to 39.9'. Shale, dark gray, very weak, highly weathered, thin bedded, fractured.	34	100	NQ-13	-	-	-	-	-	-	-	-	-	-	-	-	-
39																		
40																		
41	944.5	- Q <sub>u</sub> on shale from 40.0' to 40.4' = 178 psi.																

NOTES:  
 - Encountered seepage at 16.0' during drilling.  
 - Shelby tube sample from 6' to 8' was obtained on 9/25/13 from a boring offset 4' north of B-002-1-13. Offset borehole was sealed with cuttings and a plastic hole plug device was placed into borehole during abandonment.  
 - Laboratory testing results from Shelby Tube sampled are included on this log from SS-3B.  
 - Plastic hole plug device placed into borehole during abandonment.

NOTES: NONE  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; 25 LB. BENTONITE POWDER; 188 LB. CEMENT; CEMENT MIXED WITH SOIL CUTTINGS; WATER

S&ME JOB: 1179-13-001L



PROJECT:	SUM-76 CENTRAL AVE	DRILLING FIRM / OPERATOR:	S&ME / D. GODWIN	DRILL RIG:	TRUCK 65 (AW)	STATION / OFFSET:	297+43.93' RT	EXPLORATION ID	B-002-2-13
TYPE:	BRIDGE REMOVAL	SAMPLING FIRM / LOGGER:	S&ME / K. HARPER	HAMMER:	SAFETY HAMMER	ALIGNMENT:	IR-76 CENTERLINE		
PID:	93501 BR ID: SUM-76-0563	DRILLING METHOD:	3.25" HSA / NQ	CALIBRATION DATE:	2/19/13	ELEVATION:	989.8 (MSL) EOB:		36.7 ft.
START:	9/25/13 END: 9/25/13	SAMPLING METHOD:	SPT / NQ / ST	ENERGY RATIO (%):	76	LAT / LONG:	41.036324 N, 81.580863 W		1 OF 2
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)	ATTERBERG	HOLE CLASS (G)
							GR CS FS SI CL LL PL PI WC		SEAL
ASPHALT - 6 INCHES		989.3	1	9					
GRANULAR BASE - 6 INCHES		988.8	2	10	33	100			A-3a (V)
FILL: Dense brown COARSE AND FINE SAND, trace fine gravel, trace silt, trace clay, possible granular base, damp.		986.8	3	16					
Very-stiff to hard brown SILTY CLAY, little to some fine to coarse sand, contains few roots, few decayed organic fragments, damp.			4	2	11	100			A-6b (V)
- Encountered possible cobbles at 3.0'.			5	3					
Very-stiff brown SANDY SILT, little clay, trace fine gravel, contains many sand seams and pockets, damp.		983.8	6	2	100	20-28	2 3 29 47 19 25 17 8		A-4a (6)
- Encountered possible cobbles from 6.7' to 8.0'.		982.3	7						
Very-stiff (est.) brown SILT AND CLAY, some fine to coarse sand, little fine to coarse gravel, contains few sandstone fragments and light brown sand pockets, damp.		979.3	8	7	28	100			A-6a (V)
Very-dense brown GRAVEL, trace silt, trace clay, possible sandstone cobbles, contains many sandstone fragments, damp.			9	13					
Medium-dense brown FINE SAND, "and" fine to coarse gravel, trace coarse sand, trace silt, trace clay, contains few sandstone fragments, few silty clay seams, damp.		976.8	10	9					
Very-dense brown COARSE AND FINE SAND, possible severely weathered sandstone bedrock, many sandstone fragments, damp.			11	21	56	100			A-1-a (V)
SANDSTONE, orangish brown, slightly weathered, slightly to moderately strong, very fine to medium-grained, thin bedded, narrow, very rough, conglomeritic (<10%), fractured.		973.1	12	33					
SANDSTONE, brown, moderately weathered, slightly to moderately strong, fine to coarse-grained, ferriferous.		972.6	13	11					
SANDSTONE, gray interbedded with brown, slightly weathered, moderately strong, very fine to medium-grained, well cemented, medium bedded, fractured to slightly fractured, interbedded with gray shale, very weak with many vertical fractures with seepage evidence from 24.3' to 24.6'.			14	6	28	100	42 7 41 6 4	NP NP NP	A-3 (0)
- $Q_u$ on sandstone from 22.3' to 22.7' = 4605 psi.		974.3	15	12					
Interbedded SANDSTONE (51%) and SHALE (49%). Sandstone, gray, slightly weathered, moderately strong, very fine to medium-grained, very well cemented, medium to thick bedded, highly fractured to fractured; Shale, dark gray, highly weathered, very weak, thin bedded, slightly weathered from 26.9' to 27.2', slightly weathered from 32.5' to 32.7'.			16	50-1"		100			A-3a (V)
- $Q_u$ on sandstone from 27.8' to 28.4' = 4487 psi.			17						
SANDSTONE, gray interbedded with brown, slightly weathered, moderately strong, very fine to medium-grained, well cemented, medium bedded, fractured to slightly fractured, interbedded with gray shale, very weak with many vertical fractures with seepage evidence from 24.3' to 24.6'.			18	0	33	100			CORE
- $Q_u$ on sandstone from 22.3' to 22.7' = 4605 psi.		968.1	19						
Interbedded SANDSTONE (51%) and SHALE (49%). Sandstone, gray, slightly weathered, moderately strong, very fine to medium-grained, very well cemented, medium to thick bedded, highly fractured to fractured; Shale, dark gray, highly weathered, very weak, thin bedded, slightly weathered from 26.9' to 27.2', slightly weathered from 32.5' to 32.7'.			20						
- $Q_u$ on sandstone from 27.8' to 28.4' = 4487 psi.		964.0	21						
SANDSTONE, gray interbedded dark gray, slightly weathered, moderately strong, very fine to fine-grained, thick bedded, fractured to moderately fractured, narrow, many vertical fractures, iron oxide staining in vertical fracture walls.			22	22	60	100			CORE
- $Q_u$ on sandstone from 32.0' to 32.4' = 6055 psi.			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			EOB						

PLATE 13

S&ME JOB: 1179-13-001L



PID:	93501	BR ID:	SUM-76-0563	PROJECT:	SUM-76 CENTRAL AVE	STATION / OFFSET:	297+43.93' RT	PG 2 OF 2	B-002-2-13
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)	ATTERBERG	HOLE CLASS (G)
							GR CS FS SI CL LL PL PI WC		SEAL
SANDSTONE, gray interbedded dark gray, slightly weathered, moderately strong, very fine to fine-grained, thick bedded, fractured to moderately fractured, narrow, many vertical fractures, iron oxide staining in vertical fracture walls.		959.8	31						
- $Q_u$ on sandstone from 32.0' to 32.4' = 6055 psi.		957.7	32						
			33						
			34						
			35						
			36						
			EOB						

NOTES:  
 - Encountered seepage at 11.5' during drilling.  
 - Encountered possible cobbles at 3.0' and from 6.7' to 8.0'.  
 - Encountered auger penetration refusal at 16.7'.  
 - Plastic hole plug device placed into borehole during abandonment.

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; 15 LB. BENTONITE POWDER; 94 LB. CEMENT; CEMENT MIXED WITH SOIL CUTTINGS: WATER

S&ME JOB: 1179-13-001L



PROJECT:	SUM-76 CENTRAL AVE	DRILLING FIRM / OPERATOR:	S&ME / D. GODWIN	DRILL RIG:	TRUCK 65 (AW)	STATION / OFFSET:	297+96.2' RT	EXPLORATION ID			
TYPE:	BRIDGE REMOVAL	SAMPLING FIRM / LOGGER:	S&ME / K. HARPER	HAMMER:	SAFETY HAMMER	ALIGNMENT:	IR-76 CENTERLINE	B-003-0-13			
PID:	93501 BR ID: SUM-76-0563	DRILLING METHOD:	3.25" HSA / NQ	CALIBRATION DATE:	2/19/13	ELEVATION:	1004.1 (MSL) EOB:	75.5 ft.			
START:	9/26/13 END: 9/27/13	SAMPLING METHOD:	SPT / NQ	ENERGY RATIO (%):	76	LAT / LONG:	41.036484 N, 81.580542 W	PAGE 1 OF 3			
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GR CS FS SI CL LL PL	ATTERBERG	WC	ODOT CLASS (G)	HOLE SEALED
TOPSOIL - 12 INCHES		1004.1	1	3	100	3.5					
FILL: Very-stiff to hard brown SILT AND CLAY, trace to little fine to coarse sand, trace fine gravel, contains few roots, contains few sandstone fragments, damp.		1003.1	2	3	100	4.0				19	A-6a (V)
FILL: Stiff to very-stiff brown SILT, little to some fine to coarse sand, some clay, trace fine gravel, contains slight organic odor in SS-3, few decayed organic fragments from 11.0' to 14.2', few medium-stiff pockets, damp.		998.6	3	6	67	4.5+				12	A-6a (V)
FILL: Very-stiff (est.) brown SILT AND CLAY, little fine to coarse sand, contains few roots, damp.		989.9	4	1	56	0.5					
FILL: Hard brown SANDY SILT, some clay, trace fine gravel, contains few possible slag fragments, damp.		988.6	5	2	100	3.0				14	A-4b (V)
FILL: Hard brown SILT AND CLAY, little fine to coarse sand, trace fine gravel, contains few concrete fragments, damp.		982.7	6	3	100	4.5+				17	A-4b (V)
POSSIBLE FILL: Hard brown SILT AND CLAY, little fine to coarse sand, trace fine to coarse gravel, contains few sandstone fragments, damp.		980.2	7	4	100	4.5+				15	A-4b (V)
Very-stiff dark brown SILT AND CLAY, little fine to coarse sand, trace iron oxide staining, contains few decayed organic fragments, damp.		979.5	8	5	100	2.5				10	A-6a (V)
Very-stiff brown SILT AND CLAY, little fine to coarse sand, trace iron oxide staining, contains few decayed organic fragments, damp.		978.6	9	3	100	4.5+				14	A-4a (V)
		976.1	10	4	100	3.0				15	A-6a (V)
			11	2	100	3.5				21	A-6a (10)
			12	5	100	3.0				13	A-4a (7)
			13	8	100	4.5+				14	A-4a (V)
			14	12	100	2.0				15	A-6a (V)
			15	16	100	3.0				10	A-6a (V)
			16	8	0	2S					
			17	13	35	2S-7					
			18	25	100	4.5+				12	A-4a (V)
			19	6	32	4.5+				13	A-4a (7)
			20	13	100	4.5+				8	A-4a (V)
			21	15	100	4.5+				14	A-4a (V)
			22	7	24	4.5+				15	A-6a (V)
			23	12	100	4.5+				15	A-6a (V)
			24	11	100	4.5+				12	A-6a (V)
			25	9	100	4.5				14	A-6a (V)
			26	7	100	2.5				20	A-6a (V)
			27	4	11	3.0				21	A-6a (10)
			28	5	19	3.5				13	A-2-4 (V)
			29	7	100	3.0					
			30	8	100	3.0					

PLATE 15

S&ME JOB: 1179-13-001L



PID:	93501	BR ID:	SUM-76-0563	PROJECT:	SUM-76 CENTRAL AVE	STATION / OFFSET:	297+96.2' RT	START:	9/26/13	END:	9/27/13	PG 2 OF 3	B-003-0-13
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GR CS FS SI CL LL PL	ATTERBERG	WC	ODOT CLASS (G)	HOLE SEALED		
Medium-dense brown GRAVEL WITH SAND AND SILT, little clay, contains few gray sand pockets, few sandstone fragments, damp. (continued)		974.1	31	3	100	13							
Medium-dense brown COARSE AND FINE SAND, little fine gravel, little silt, little clay, moist to wet.		972.2	32	5	100	18							
			33	7	100	15							
			34	3	100	4.5+							
			35	5	100	4.5+							
Medium-dense brown SILT, trace fine sand, trace clay, moist.		968.6	36	4	100	15A							
Very-stiff gray SILT, some to "and" clay, trace fine sand, moist.		967.4	37	4	100	15B							
			38	5	100	15B							
			39	2	100	3.5							
			40	4	100	3.5							
Medium-dense brown GRAVEL WITH SAND, trace silt, trace clay, damp.		963.6	41	4	100	17							
			42	6	100	17							
			43	8	100	17							
			44	4	78	18							
			45	9	29	35							
			46	2	67	0							
			47	4	11	56							
			48	5	67	43							
			49	26	100	20A							
			50	29	100	20B							
			51	50-5"	100	20B							
SANDSTONE, severely weathered, very poorly cemented, washed away during core run.		953.6	52	0	5	NQ-21						CORE	
			53	0	5	NQ-21						CORE	
			54	0	5	NQ-21						CORE	
			55	0	5	NQ-21						CORE	
			56	0	5	NQ-21						CORE	
Interbedded SANDSTONE (73%) and SHALE (27%). Sandstone, brown, slightly weathered, moderately strong, very fine to medium-grained, well cemented, thin bedded, highly to moderately fractured, broken from 60.5' to 60.8', vertical fractures from 61.1' to 61.6'; Shale, gray, highly weathered, very weak, very thin bedded, friable, argillaceous. - <sub>q</sub> on sandstone from 57.0' to 57.6' = 5353 psi.		948.6	57	12	57	NQ-22						CORE	
- <sub>q</sub> on sandstone from 60.8' to 61.3' = 4311 psi.			58	12	57	NQ-22						CORE	
			59	12	57	NQ-22						CORE	
			60	12	57	NQ-22						CORE	
			61	12	57	NQ-22						CORE	

PLATE 16

SUM-76-5.53

SOIL PROFILE BORING LOG B-003-0-13

DRAWN: KCA  
CHECKED: BPA

72/86

S&ME JOB: 1179-13-001L



PID: 93501	BR ID: SUM-76-0563	PROJECT: SUM-76 CENTRAL AVE	STATION / OFFSET: 297+96.2' RT	START: 9/26/13	END: 9/27/13	PG 3 OF 3	B-003-0-13													
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE ID (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	HOLE SEALED		
Interbedded <b>SHALE</b> (74%) and <b>SANDSTONE</b> (26%), Shale, dark gray, slightly weathered, very weak to weak, medium bedded, many desiccation cracks, highly fractured with many vertical fractures from 63.3' to 64.0'; severely weathered from 67.5' to 67.9' severely weathered; Sandstone, slightly weathered, moderately strong, thin bedded, fractured to moderately fractured, narrow.		942.0		17	70	NQ-23														
		941.6	63																	
			64																	
			65																	
			66																	
			67																	
			68																	
			69																	
			70	934.4	70	12	74	NQ-24												
			71		71															
Interbedded <b>SHALE</b> (70%) and <b>SANDSTONE</b> (30%), Shale, dark gray, highly weathered, very weak, thin bedded, friable; Sandstone, brown, slightly weathered, moderately strong, thin bedded, fractured.		929.4	72																	
		928.6	73																	
			74																	
			75																	
			EOB																	

NOTES: NONE  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; 25 LB. BENTONITE POWDER; 94 LB. CEMENT; CEMENT MIXED WITH SOIL CUTTINGS; WATER



State of Ohio  
Department of Transportation  
Division of Highways  
Testing Laboratory

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LOG OF BORING  
Date Started 12/17/90 Sampler: Type SS Dia. 1 3/8" Water Elev. 372.5-5.5155  
Date Completed 12/17/90 Casing: Length Dia. \_\_\_\_\_  
Project Identification: SUMMIT  
SUM-76-5.62-5

Elev.	Depth	Std. Pen. (N)	Description	ALLOWABLE BEARING CAP. T S F	Field No.	Lab. Nos.	Physical Characteristics				SHTL Class				
							% Agg.	% F.S.	% Silt	% Clay					
	0		ASPHALT AND SUBBASE												
	2														
	4														
	6														
	8		GRAY AND BROWN SANDY SILT WITH CLAY AND GRAVEL (DRILLER'S DESCRIPTION)									VISUAL			
	10														
	12														
	14														
	16	35/21/15	BROWN SANDY GRAVELLY SILT	3.3	1	65068	39	4	12	29	16	27	6	14	A-4A
	18	28/15/35	BROWN GRAVELLY SILT	4.0	2	65069	32	3	11	35	19	29	9	14	A-4A
	20	16/17/27	BROWN SANDY SILT	3.7	3	65070	0	4	18	52	26	27	8	14	A-4B
	22	10/11/14	BROWN GRAVELLY SANDY SILT	2.7	4	65071	25	11	20	32	12	24	6	14	A-4A
	24	12/12/9	BROWN SILTY GRAVELLY SAND	3.3	5	65072	22	31	21	18	8	NP	NP	11	A-3A
	26	19/12/13	BROWN SILTY SAND	4.0	6	65073	0	16	59	15	10	NP	NP	12	A-3A
	28	6/12/13	BROWN SILTY GRAVELLY SAND	4.0	7	65074	36	23	28	11	2	NP	NP	8	A-1-B
	30	6/10/15	LIGHT BROWN SAND	4.0	8	65075	0	4	90	6	0	NP	NP	3	A-3
	32	4/5/8	BROWN SAND	2.7	9	65076	0	13	83	3	1	NP	NP	22	A-3

Pen TE-63 Particle Sizes: Agg. > 2.00mm, Coarse Sand=200-0.42mm, Silt=0.074mm, Fine Sand=0.42-0.074mm, Clay < 0.005mm

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	ALLOWABLE BEARING CAP. T S F	Field No.	Lab. Nos.	Physical Characteristics				SHTL Class				
								% Agg.	% F.S.	% Silt	% Clay					
	38	2/3/5		BROWN SAND	1.7	10	65077	0	17	75	7	1	NP	NP	21	A-3
	40	2/2/6		BROWN GRAVELLY SAND	1.7	11	65078	26	28	41	5	0	NP	NP	19	A-1-B
	42	1/3/12		BROWN SAND	2.9	12	65079	6	35	53	5	1	NP	NP	19	A-3
	44	3/5/8		BROWN SAND (HEAVY SAND)	2.7	13	65080	0	52	42	5	1	NP	NP	18	A-1-B
	46															
	48															
	50															
	52	6/13/19		BROWN SAND	4.7	14	65081	0	51	43	5	1	NP	NP	20	A-1-B

← BOTTOM OF BORING

State of Ohio  
Department of Transportation  
Division of Highways  
Testing Laboratory

3/22

Date Started 11/2/12/90 Sampler Type SS Dia. 1.3/8" Water Elev. FROM 15.0 - 36.0'  
Date Completed 12/13/90 Casing Length Dia.

Project Identification: SUMMIT  
SUM-76-5.35  
LIGHT TOWERS

Elev.	Depth	Std. Pen. (N)	Station & Offset	Description	Allowable Bearing Cap. TSF	Field No.	Lab. Nos.	Physical Characteristics				SHTL Class			
								% Agg.	% F.S.	% Silt	% Clay				
0			30+00, 17.61 FT <td>BROWN AND GRAY SANDY CLAY W/ROOTS (DRILLER'S DESCRIPTION) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </td>	BROWN AND GRAY SANDY CLAY W/ROOTS (DRILLER'S DESCRIPTION) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>											
2					1.6	1	65038	24	7	17	28	27	9	30	A-4A
4	4/4/4			BROWN GRAVELLY SANDY SILT	1.7	2	65029	11	11	17	29	32	8	28	A-4A
6	2/5/12			BROWN SANDY SILT											
8	PRESS														
10				GRAY GRAVELLY SANDY SILT (GRADING ONLY)											
12	2/4/5			GRAY CLAYEY SILT	0.9	4	65031	0	1	60	38	32	8	26	A-4B
14	PRESS			GRAY SILT											
14	PRESS			GRAY SILT											
16	2/3/6			GRAY SILTY SAND (HEAVING SAND)	0.9	6	65032	0	15	61	21	3	NP	26	A-3A
18															
20	4/8/30			GRAY SAND	3.5	7	65033	0	22	71	6	1	NP	21	A-3
22	6/11/34			GRAY SAND	3.8	8	65034	0	21	70	7	2	NP	17	A-3
24	23/32/60			GRAY GRAVELLY SAND	7.0	9	65035	23	43	29	4	1	NP	16	A-1-B
26	21/39/51			GRAY GRAVELLY SAND (HEAVING SAND)	7.0	10	65036	17	47	27	8	1	NP	17	A-1-B
28															
30	3/7/10			GRAY GRAVELLY SAND (HEAVING SAND)	2.0	11	65037	25	47	25	3	0	NP	17	A-1-B
32	10/36/55			GRAY GRAVELLY SAND (HEAVING SAND)	7.0	12	65038	23	30	40	6	1	NP	17	A-1-B
34	6/8/10			NO SAMPLE (SAND HEAVED 2.5' IN FLIGHT)											
36	4/9/13			GRAY SILT	24.2	13	65039	0	0	2	82	16	NP	29	A-4B

Pen TE-83 Particle Sizes: Agg > 2.00mm, Coarse Sand=200-0.42mm, Fine Sand=0.42-0.074mm, Silt=0.074-0.005mm, Clay < 0.005mm

Elev.	Depth	Std. Pen. (N)	Station & Offset	Description	ALLOWABLE BEARING CAP. TSF	Field No.	Lab. Nos.	Physical Characteristics				SHTL Class			
								% Agg.	% F.S.	% Silt	% Clay				
38															
40															
42	4/9/13			GRAY SILT	2.2	14	65040	0	2	4	71	23	NP	23	A-4B
44															
46	5/13/23			GRAY SILT	3.4	15	65041	0	1	4	71	24	NP	23	A-4B
48															
50															
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← BOTTOM OF BORING

State of Ohio  
Department of Transportation  
Division of Highways  
Testing Laboratory

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Date Started 12/12/90 Date Completed 12/12/90  
 Sampler Type SS Dia 1 3/8" Coasting Length Dia  
 Project Identification: SUMMIT  
 SUM-76-5.35  
 LIGHT TOWERS  
 SUBSURFACE INVESTIGATION

Boring No. B-3 Station & Offset 6+40.70

Surface Elev. 70.31  
 Allowable Bearing Cap. TSF  
 Field No.

Elev.	Depth	Std. Pen. (N)	Description	Lab. No.	Physical Characteristics					SHTL Class			
					% Agg.	% F.S.	% Silt	% Clay	L.L.		Pl.	W.C.	
	0		SOD AND TOPSOIL										VISUAL
	2												
	4	7/77	BROWN SANDY SILT	65042	0	7	39	29	25	NP	NP	24	A-4A
	6	1/1/1	BROWNISH GRAY SILTY SAND	65043	0	1	86	11	22	NP	NP	20	A-3A
	8	3/4/5	BROWN AND GRAY SANDY SILT	65044	0	2	43	45	10	NP	NP	22	A-4A
	10		GRAY SILT	65101	0	0	0	65	35	NP	NP	28	A-4B
	12	PRESS	GRAY SILT (GRADING ONLY)	65101A	0	0	0	54	46	NP	NP	32	A-4B
	14	1/2/2	GRAY SILT	65045	0	0	1	71	28	NP	NP	30	A-4B
	16	PRESS	GRAY SILT	65102A	0	0	0	35	65	31	7	33	A-4A
	18	2/4/9	GRAYISH-BROWN SAND (GRADING ONLY)	65103	0	23	68	6	2	NP	NP	11	A-3
	20		BROWN AND GRAY SILTY SAND	65046	0	8	74	16	2	NP	NP	17	A-3A
	22	14/21/30	BROWN AND GRAY SAND (HEAVING SAND)	65047	0	6	86	8	0	NP	NP	20	A-3
	24	15/23/35	BROWN SILTY SAND (HEAVING SAND)	65048	0	11	65	24	0	NP	NP	20	A-3A
	26	4/6/11	GRAY SILTY SAND (HEAVING SAND)	65049	0	20	68	11	0	NP	NP	18	A-3A
	28		GRAY SILTY SAND (HEAVING SAND)	65050	0	17	74	9	0	NP	NP	20	A-3
	30	12/17/29	GRAY SAND (HEAVING SAND)	65051	0	28	62	10	0	NP	NP	17	A-3
	32	10/15/27	GRAY SAND (HEAVING SAND)										
	34												
	36	AUGERED	GRAY SAND (HEAVING SAND)	65052	0	23	70	7	0	NP	NP	18	A-3

Item TE-83 Particle Sizes: Agg > 2.00mm, Coarse Sands=200-0.42mm, Fine Sand=0.42-0.074mm, Silt=0.074-0.005mm, Clay=< 0.005mm

— BOTTOM OF BORING

State of Ohio  
Department of Transportation  
Division of Highways  
Testing Laboratory

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Date Started 12/17/90 Date Completed 12/19/90  
 Sampler Type SS Dia. 1 3/8" Water Elev. 272.5'  
 Casing Length Dia.

Project Identification: SUMMIT  
 SUM-76-5.35

LIGHT BOMBS  
 SUBSURFACE INVESTIGATION

Elev.	Depth	Std. Pen. (N)	Description	Field No.	Lab. Nos.	Physical Characteristics				SHTL Class																
						% Agg.	% S.F.	% Silt	% Clay																	
	0		SOD AND TOPSOIL																							
	2																									
	4	4/11/14	BROWN SILTY SAND	1	65082	13	42	27	10	NP	NP	16													1A-4A	
	6	2/4/7	GRAY AND BLACK SANDY SILT, ORGANIC	2	65083	0	24	46	21	40	9	14													A-4A	
	8	PRESS	GRAY SILTY SAND (GRADING ONLY)	3A	65104	15	23	27	8	NP	NP	11													A-3A	
	10	PRESS	GRAY CLAYEY SILT	3B	65105	0	0	27	73	30	7	22													A-4A	
	12	4/12/20	GRAY AND BROWN SILTY CLAY	4	65084	0	2	1	30	67	45	19	22												A-7-6	
	14	PRESS	GRAY SILT	5A	65107	0	0	0	64	36	NP	NP	28												A-4B	
	16	2/4/7	GRAY SILT	6	65085	0	0	0	62	38	NP	NP	27												A-4B	
	18	4/6/8	GRAY SANDY SILT	7	65086	0	8	27	35	30	20	5	31												1A-4A	
	20																									
	22	7/17/21	GRAY SILTY GRAVELLY SAND	8	65087	28	20	40	12	0	NP	NP	14												A-3A	
	24	21/25/34	GRAY SILTY GRAVELLY SAND	9	65088	25	12	49	14	0	NP	NP	13												A-3A	
	26	26/33/38	GRAY SILTY SAND	10	65089	0	16	68	15	1	NP	NP	19												A-3A	
	28	24/14/14	GRAY SILTY GRAVELLY SAND (HEAVY SAND)	11	65090	18	13	51	16	2	NP	NP	14												1A-3A	
	30																									
	32	6/17/28	GRAY SAND	12	65091	0	32	62	5	1	NP	NP	20												A-3	
	34																									
	36	19/39/60	GRAY GRAVELLY SAND (HEAVY SAND)	13	65092	22	32	41	55	0	NP	NP	16												1A-1-B	

Non TE-83 Particle Size: Agg > 2.00mm, Coarse Sand=200-0.42mm, Fine Sand=0.074-0.005mm, Silt=0.074-0.005mm, Clay < 0.005mm

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Field No.	Lab. Nos.	Physical Characteristics				SHTL Class															
							% Agg.	% S.F.	% Silt	% Clay																
	38																									
	40																									
	42	9/8/10		GRAY SILT	14	65093	13	1	4	72	10	NP	25												A-4B	
	44																									
	46																									
	48																									
	50																									
	52																									
	54																									
	56																									
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← BOTTOM OF BORING

State of Ohio  
Department of Transportation  
Division of Highways  
Testing Laboratory

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Date Started 12/13/90 Sampler Type SS Dia. 1 3/8" Water Elev. 7.57  
Date Completed 12/13/90 Casing Length Dia.

Project Identification: SUMMIT

SUM-76-5.35

LIGHT BOMBS

SUBSURFACE INVESTIGATION

Elev.	Depth	Sgt Pen. (N)	Description	Field No.	Lab. Nos.	Physical Characteristics						SHTL Class		
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.		Pl.	W.C.
	0		GRAVEL											
	2													
	4	5/7/13	BROWN SILTY SAND	1	65053	0	20	53	25	42	NP	NP	10	A-3A
	6	PRESS	BROWN CLAYEY SILT (GRADING ONLY)	2	65098	0	5	82	12	1	NP	NP	7	A-3A
	8	2/2/3	GRAY SAND	3	65054	0	5	89	6	0	NP	NP	28	A-3
	10													
	12	2/2/3	GRAY SILTY SAND	4	65055	0	11	78	11	0	NP	NP	27	A-3A
	14	2/3/6	GRAY SILT	5	65056	0	0	1	79	20	NP	NP	29	A-4B
	16	PRESS	GRAY CLAYEY SILT	6	65099	0	0	1	57	42	32	9	26	A-4B
	18													
	20	1/2/2	GRAY SILT	7	65057	0	1	1	51	47	NP	NP	33	A-4B
	22	PRESS	GRAYISH-BROWN SILT (GRADING ONLY)	8	65058	0	8	76	16	0	NP	NP	20	A-3A
	24	8/10/13	BROWN SILTY SAND (HEAVING SAND)	9	65058	0	8	76	16	0	NP	NP	20	A-3A
	26	7/11/15	BROWN AND GRAY SILTY SAND (HEAVING SAND)	10	65059	0	11	67	22	0	NP	NP	22	A-3A
	28													
	30													
	32	3/6/12	BROWN AND GRAY SILTY SAND (HEAVING SAND)	11	65060	0	14	75	11	0	NP	NP	21	A-3A
	34													
	36	6/10/13	GRAY GRAVELLY SAND (HEAVING SAND)	12	65061	23	45	27	5	0	NP	NP	19	A-1-B

Per TE-63 Particle Size: App. > 2.00mm, Coarse Sand=200-0.42mm, Fine Sand=0.42-0.074mm, Silt=0.074-0.005mm, Clay=< 0.005mm

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.	Physical Characteristics						SHTL Class	
								% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.		Pl.
	38														
	40														
	42	12/17/25			GRAY SILTY GRAVELLY SAND (HEAVING SAND)	13	65062	44	31	14	10	1	NP	NP	9
	44														
	46	9/14/26			GRAY GRAVELLY SAND	14	65063	37	33	22	8	0	NP	NP	13
	48														
	50														
	52														
	54														
	56														
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BOTTOM OF BORING

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State of Ohio  
Department of Highways  
Testing Laboratory

LOG OF BORING

Date Started 12-16-59 Sampler Type SS Dia. 1 3/8" Water Elev: Immediate  
Date Completed 12-23-59 Casing Length 75' Dia. 3 1/2" After Hours

Project Identification: SUMMIT  
SUM-224-5.85  
SUM-224-0592 RR'S.

OVER B. & O., ERIE AND PENNA.

Boring No. 1B Station & Offset 37+76, 29' RT. (REAR ABUTMENT) Surface Elev. 968.0

Elev.	Depth	Sk. Pen. (N)	Description	Lab. Nos.	Physical Characteristics							SHTL W.C. Class.
					% Ag	% C.S.	% F.S.	% Silt	% Clay	LL	PI	
968.0	0	PS	Dark-Gray Silty Gravelly Sand w/Binders & Brick Fragments	41902	29	15	25	24	7	NP	MP	15
963.0	2	13/4	Gray Silty Sand	42177	8	13	62	-17-		NP	NP	19
958.0	4	4/5	Dark-Gray Silty Sand	42178	0	13	75	-12-		NP	NP	21
953.0	6	4/6	Gray Silt	42179	9	3	3	67	18	NP	NP	27
952.0	8	PS	Gray Silt	41903	0	0	0	69	31	NP	NP	26
950.5	10	PS	Gray Clayey Silt	41904	0	0	0	50	50	NP	NP	29
947.5	12	PS	Gray Silty Clay	41905	0	0	0	31	69	NP	NP	33
946.5	14	PS	Brown Sandy Silt	421906	0	5	40	31	24	NP	NP	20
943.0	16		Brown Sandy Silt	42180	0	1	35	55	9	NP	NP	15
941.0	18	4/7	Gray Silty Sand	42181	0	2	68	-30-		NP	NP	27
938.0	20		Gray Silty Sand (Wash Sample)					V	I S U A L			
933.0	22		Gray Silty Sand	42182	6	22	53	-19-		NP	NP	14

Particle Sizes: App. > 200mm, Coarse Sand = 2.00 - 0.42mm, Fine Sand = 0.42 - 0.074mm, Silt = 0.074 - 0.005mm, Clay = < 0.005mm  
PS=PRESS SAMPLE

Elev.	Depth	Std. Pen. (N)	Description	Lab. Nos.	Physical Characteristics							SHTL W.C. Class.
					% Ag	% C.S.	% F.S.	% Silt	% Clay	LL	PI	
928.0	38	10/12	Gray Silty Gravelly Sand	42183	37	23	24	-16-		NP	NP	10
918.0	40		Gray Silty Sand (sand raised 2 feet in casing)					V	I S U A L			
913.0	42	7/8	Gray Silt	42184	0	0	7	84	9	NP	NP	18
908.0	44	12/15	Gray Silt	42185	0	0	18	72	10	NP	NP	19
903.0	46	14/26	Gray Sandy Silt	42186	0	0	59	40	1	NP	NP	20
898.0	48	40/14	Gray Silty Sand	42187	0	0	61	37	2	NP	NP	23
893.0	50	12/18	Gray Silty Sand	42188	15	7	45	24	9	NP	NP	17
	52	20/40	Gray Silty Sandy Gravel	42189	46	10	23	16	5	NP	NP	11

Boring No. 1B Station & Offset 37+76.29 RT. Surface Elev. 968.0 Project: SUM-224-0592

Elev. 888.0	Depth 82	Std Pen. (N)	Description	Field No	Lab Nos	Physical Characteristics				SHTL Class
						% C.S.	% F.S.	% Sif	% Clay	
		47/36	Gray Sandy Silt	14	2190	4	10	46	28	NP 15
883.0	86	13/17	Gray Silt	15	2191	1	0	73	26	NP 27
878.0	90	11/15	Gray Silt	16	2192	3	5	57	35	NP 19
873.0	96	19/12	Gray Silt	17	2193	0	0	51	49	NP 30
868.0	100	18/15	Gray Silt	18	2194	0	1	65	35	NP 28
863.0	106	10/16	Gray Silt	19	2195	0	0	63	37	NP 24
<del>858.0</del> <del>857.0</del>	110	7/13	Gray Silt	20	2196	0	0	69	31	NP 31
	112		BOTTOM OF BORING							
	114									
	116									
	118									
	120									
	122									
	124									

Form FE-21

SHEET 4 of 39 SHEETS

State of Ohio  
Department of Highways  
Testing Laboratory

LOG OF BORING

Date Started 1-19-60 Sampler Type SS Dia. 1 3/8" Water Elev: Immediate  
Date Completed 1-20-60 Casing Length 60' Dia. 3 1/2" After Hours

Project Identification: SUTSMTT

SUM-224-5.85  
SUM-224-0592

RR'S  
COVER B. & O., ERIE AND PENNA.

Boring No. 3B Station & Offset 19+31, 56' LT (REAR ABUTMENT) Surface Elev. 971.0

Elev.	Depth	Std. Pen. (N)	Description	Field No.	Lab. Nos. So.	Physical Characteristics						SHTL W.C. Class.		
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL		Pl.	W.C.
971.0	0													
966.0	2	4/5	Brown Silty Sand	1	44310	0	4	75	10	11	NP	NP	21	
961.0	4	3/3	Gray Silty Sand	2	44311	0	0	86	-14	-	NP	NP	21	
956.0	6	1/2	Gray Silt	3	44312	0	0	0	59	41	26	1	29	
951.0	8	9/6	Gray Sandy Gravelly Silt	4	44313	37	1	20	23	19	NP	NP	32	
946.0	10	10/11	Gray Silty Sand	5	44314	0	10	76	-14	-	NP	NP	22	
941.0	12	11/14	Gray Silty Sand	6	44315	0	23	66	-11	-	NP	NP	23	
936.0	14	9/27	Gray Silty Sandy Gravel	7	44316	39	28	20	-13	-	NP	NP	6	

SHEET 5 of 39 SHEETS

Particle Sizes: Agg. = > 200mm, Coarse Sand = 2.00 - 0.42mm, Fine Sand = 0.42 - 0.074mm, Silt = 0.074 - 0.005mm, Clay = < 0.005mm

(REAR ABUTMENT)

Boring No. 3B Station & Offset 39+31, 56' LT Surface Elev. 971.0

Project: SUM-224-0592

Elev.	Depth	Std. Pen. (N)	Description	Field No.	Lab. Nos. So.	Physical Characteristics						SHTL W.C. Class.		
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL		Pl.	W.C.
931.0	38	7/13	Gray Sandy Silt	8	44317	0	1	33	57	9	NP	NP	23	
926.0	40	10/20	Gray Silt	9	44318	0	0	7	77	16	NP	NP	24	
921.0	42	16/26	Gray Sandy Silt	10	44319	0	0	48	42	10	NP	NP	24	
916.0	44	16/32	Gray Sandy Silt	11	44320	14	1	37	43	5	NP	NP	24	
911.0	46	18/40	Gray Silty Sand	12	44321	0	0	62	35	3	NP	NP	25	
906.0	48	22/51	Gray Sandy Silt	13	44322	0	0	49	45	6	NP	NP	19	
901.0	50	14/31	Gray Sandy Silt	14	44323	0	0	59	31	10	NP	NP	22	
896.0	52	30/50	Gray Silty Sand	15	44324	0	2	64	25	9	NP	NP	21	
895.0	54		BOTTOM OF BORING											

SHEET 6 of 39 SHEETS



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State of Ohio  
Department of Highways  
Testing Laboratory

LOG OF BORING

Date Started 5-19-59 Sampler Type          Dia.          Water Elev: Immediate 988.8 Project Identification: SUMMIT  
 Date Completed 5-20-59 Casing Length          Dia.          After          Hours          SUM-224-5.17  
SUM-224-0560

Boring No. 7B Station & Offset 22+97, 19' RT.-REAR PIER Surface Elev. 988.8 OVER CENTRAL AVE.

Elev.	Depth	Std Pen. (N)	Description	Field No.	Lab. Nos.	Physical Characteristics							SHTL Class.		
						% Agg	% C.S.	% F.S.	% Silt	% Clay	LL	PI		WC	
988.8	0														
	2														
	4														
983.8	6	6/7	Brown Silt	1	20679	0	2	4	60	34	33	9	24		
981.3	8	11/30	Brown Silt	2	20680	5	4	47	30	14	NP	NP	17		
978.8	10	11/10	Brown Silty Gravelly Sand	3	20681	34	9	32	18	7	NP	NP	14		
976.3	12														
973.8	14	13/14	Brown Silty Gravelly Sand	4	20682	17	8	54	16	5	NP	NP	18		
971.3	16	25/40	Brown Silty Sand w/Stone Fragments	5	20683	41	10	27	17	5	NP	NP	15		
	18	16/15	Brown Silty Gravelly Sand	6	20684	33	10	39	13	5	NP	NP	17		
968.8	20	50*	*** TOP OF ROCK												
	22		Sandstone, gray, fine-grained, firm, medium-bedded.												
965.9	24		No Core Loss Shale, gray, siliceous, dense, firm, fissile, broken in part with seams of friable argillaceous shale. Core Loss: 32%												
963.1	26		Sandstone, gray, fine-grained, argillaceous at top, firm. No Core Loss												
961.8	28		Shale, gray, slightly siliceous, medium-firm, with seams of dense siliceous shale. Loss: 5%												
959.8	30		Sandstone, gray, fine-grained, firm, **												
958.8	32		BOTTOM OF BORING												
	34		**with 0.3' shale at base. Core Loss: 10% *Refusal												
	36		***Brown Silty Sandy Gravel												

Particle Sizes: Agg. = > 200mm, Coarse Sand = 2.00 - 0.42mm, Fine Sand = 0.42 - 0.074mm, Silt = 0.074 - 0.005mm, Clay = < 0.005mm

RC

6.16.59

1/25

State of Ohio  
Department of Highways  
Testing Laboratory

LOG OF BORING

Date Started 5-21-59 Sampler Type SS Dia. 1 3/8 Water Elev. Immediate  
Date Completed 5-22-59 Casing Length 50' Dia. 3 1/2 After \_\_\_\_\_ Hours \_\_\_\_\_

Project Identification: SUMMIT

SUM-224-

OVER WOOSTER AVENUE

Boring No. 8A Station & Offset 33+32, 66'LT, REAR PIER Surface Elev. 968.2

Elev.	Depth	Std Pen (N)	Description	Field No.	Lab Nos.	Physical Characteristics							SHTL Class	
						% Agg	% C.S.	% F.S.	% Silt	% Clay	LL	PL		WC
968.2	0													
966.2	2	3/5	Brown Silty Sandy Gravel	1	21567	46	16	17	10	27	10	21		
963.2	4													
961.2	6	6/10	Gray Silty Sand	2	21568	0	9	71	10	10	NP	NP	20	
	8	7/8	Gray Silt	3	21569	0	0	19	50	31	19	4	22	
	10													
957.2	12	3/4	Gray Silt	4	21570	0	0	0	69	31	NP	NP	30	
953.2	14													
950.2	16	2/2	Gray Silt	5	21571	0	0	0	51	49	27	4	29	
	18	6/12	Brown Gravelly Sand	6	21572	28	21	45	-6-	NP	NP	NP	17	
947.2	20													
	22	5/10	Gray Sand	7	21573	6	30	61	-3-	NP	NP	NP	21	
943.2	24													
	26	5/7	Gray Sand	8	21574	0	35	60	-5-	NP	NP	NP	23	
	28													
938.2	30	5/5	Gray Sand (Wash Sample)	9	21575				V	I	S	U	A	L
933.2	32													
	34													
933.2	36	-----	Gray Sand (Wash Sample)											

Particle Sizes: Agg. = > 200mm, Coarse Sand = 2.00 - 0.42mm, Fine Sand = 0.42 - 0.074mm, Silt = 0.074 - 0.005mm, Clay = < 0.005mm

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6-18-59

2/25

Boring No. 8A Station & Offset 33+32, 66'LT, REAR PIER Surface Elev. 968.2 Project: SUM-224-0573 AVENUE

Elev.	Depth	Std Pen (N)	Description	Field No.	Lab Nos.	Physical Characteristics							SHTL Class	
						% Agg	% C.S.	% F.S.	% Silt	% Clay	LL	PL		WC
	38	-----	Gray Sand (Wash Sample)	10	21576				V	I	S	U	A	L
928.2	40	-----	Gray Sand (Wash Sample)											
	42	-----												
923.2	44	-----	Gray Sand (Wash Sample)											
	46	-----												
	48													
918.2	50	8/16	Gray Silt	11	21577	6	2	2	51	39	26	7	13	
	52													
	54													
913.2	56	12/14	Gray Silty Sandy Gravel	12	21578	44	6	21	17	12	NP	NP	12	
	58													
909.2	60	-----	Gray Clay											
	62													
	64													
	66													
	68													
	70													
	72													
	74													
	76													
	78													
	80													

← BOTTOM OF BORING

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State of Ohio  
Department of Highways  
Testing Laboratory

LOG OF BORING

SUMMIT

Project Identification:  
SUM-224-5-17  
SUM-224-0560

Date Started 5-20-59 Sampler Type Dia. Water Elev: Immediate 983.6  
Date Completed 5-20-59 Casing Length Dia. After Hours  
Boring No. 8B Station & Offset 23+00.77' RT.-REAR PIER Surface Elev. 990.6  
OVER CENTRAL AVE.

Elev.	Depth	Std Pen. (N)	Description	Field No.	Lab Nos.	Physical Characteristics						SHTL Class.		
						% Agg.	% C.B.	% F.S.	% Silt	% Clay	LL		PI	WC
990.6	0													
985.6	2		2' Sandstone Boulder (coarse-grained) & Gravelly silty Clay											
980.6	4													
	6													
	8													
975.6	10	50/*	Gray Sandy Silt w/Gravel and Stone Fragts.	1	20693	41	6	11	14	28	34	14	17	
	12													
	14													
970.6	16	17/17	Br & Gr Silty Sandy Gravel & Stone Fragts.	2	20694	48	8	12	10	22	33	15	17	
	18													
970.6	20	43/*	Brown and Gray Silt	3	20695	1	2	8	65	24	28	6	8	
968.6	22		TOP OF ROCK											
	24		Sandstone, gray, fine-to-medium grained, firm, medium-to-thin bedded, jointed below 22.0', with Sh. seams @ 22.0' & 22.4' 3% Loss											
964.9	26		Shale, gray, siliceous, soft in top 0.6', firm in remainder, w/ 0.4' Sandstone stringer at 26.3'. Core Loss: 14%											
962.0	28		Sandstone, gray, fine-grained, firm; interbedded with shale (gray, slightly siliceous to siliceous, medium-firm, broken) in following sequence: 28.0 SS, 29.3 Sh, 30.6 SS, 31.1 Sh, 31.8 SS											
958.1	32		BOTTOM OF BORING											
	34													
	36													

Particle Sizes: Agg. = > 200mm, Course Sand = 2.00-0.42mm, Fine Sand = 0.42-0.074mm, Silt = 0.074-0.005mm, Clay = < 0.005mm

PC  
6-16-59

3/25

State of Ohio  
Department of Highways  
Testing Laboratory

LOG OF BORING

Project Identification: SUNSWIT

Date Started 5-21-59 Sampler Type SS Dia. 1 3/8 Water Elev: Immediate  
Date Completed 5-21-59 Casing Length 55' Dia. 3 1/2 After \_\_\_\_\_ Hours \_\_\_\_\_

SUM-224-0578  
SUM-224-0578

Boring No. 9A Station & Offset 33+13, 46' RT, FORWARD FLIER Surface Elev. 967.6

Elev.	Depth	Std. Pen. (N)	Description	Field No.	Lab Nos.	Physical Characteristics						SHTL Class		
						% Agg.	% C.S.	% FS	% Silt	% Clay	LL		PI	WC
967.6	0													
965.1	2	3/2	Dr. Gr. Sandy Silt w/Trace of Peat	1	21579	33	9	25	16	17	27	11	39	
962.6	4	6/8	Gray Silty Sand	2	21580	14	21	43	15	7	NP	NP	11	
960.1	6	5/10	Gray Silty Sand	3	21581	5	16	68	-11-		NP	NP	20	
957.6	8	6/9	Gray Silt	4	21582	0	0	1	72	27	NP	NP	28	
955.1	10	6/8	Gray Silt	5	21583	0	1	0	76	23	NP	NP	27	
952.6	12	4/5	Gray Silt	6	21584	0	0	0	57	43	26	5	30	
950.1	14	2/2	Gray Silt	7	21585	0	0	0	54	46	30	2	29	
947.6	16	10/11	Brown Sandy Silt	8	21586	0	2	32	60	6	NP	NP	24	
945.1	18	5/10	Brown Sand w/Gravel	9	21587		V	I	S	U	A	L	16	
942.6	20	12/18	Gray Brown Sand	10	21588	13	29	50	-50-		NP	NP	15	
937.6	22	5/6	Gray Sand (Wash Sample)	11	21589	0	13	85	-2-		NP	NP	24	
932.6	24	-----	Gray Sand and Gravel (Wash Sample)	12	21590		V	I	S	U	A	L	20	

Particle Sizes: Agg. > 200mm, Coarse Sand: 2.00 - 0.42mm, Fine Sand=0.42-0.074mm, Silt=0.074-0.005mm, Clay = < 0.005 mm

6/18/59

Elev.	Depth	Std. Pen. (N)	Description	Field No.	Lab Nos.	Physical Characteristics						SHTL Class		
						% Agg.	% C.S.	% FS	% Silt	% Clay	LL		PI	WC
927.6	38	-----	Gray Sand (Wash Sample)	13	21591		V	I	S	U	A	L	20	
922.6	40	-----	Gray Sand and Gravel (Wash Sample)											
922.6	42	-----	Gray Sand and Gravel (Wash Sample)											
922.6	44	-----	Gray Sand (Wash Sample)											
922.6	46	-----	Gray Sand (Wash Sample)											
917.6	48	-----	Gray Sand (Wash Sample)											
917.6	50	-----	Gray Sand (Wash Sample)											
912.6	52	-----	Gray Sand (Wash Sample)											
912.6	54	-----	Gray Sand (Wash Sample)											
912.6	56	-----	Gray Sand (Wash Sample)											
907.6	58	-----	Gray Sand (Wash Sample)											
907.6	60	-----	Gray Sand (Wash Sample)	14	21592		V	I	S	U	A	L	22	
907.6	62	-----	Gray Sand (Wash Sample)											
907.6	64	-----	Gray Sand (Wash Sample)											
907.6	66	-----	Gray Sand (Wash Sample)											
907.6	68	-----	Gray Sand (Wash Sample)											
907.6	70	-----	Gray Sand (Wash Sample)											
907.6	72	-----	Gray Sand (Wash Sample)											
907.6	74	-----	Gray Sand (Wash Sample)											
907.6	76	-----	Gray Sand (Wash Sample)											
907.6	78	-----	Gray Sand (Wash Sample)											
907.6	80	-----	Gray Sand (Wash Sample)											

9/25

Boring No. 9A Station & Offset 33+13, 46' RT Surface Elev 967.6 Project SUM-224-0578 OVER WOOSTER AVE

Bottom of Boring

3/27

State of Ohio  
Department of Highways  
Testing Laboratory

LOG OF BORING

Date Started 5-16-59 Sampler Type        Dia.        Water Elev. Immediate 984.8 Project Identification: SUMMIT  
 Date Completed 5-19-59 Casing Length        Dia.        After        Hours        SUM-224-5.17  
SUM-224-0560  
 Boring No. 9B Station & Offset 23+46.65' LT, -FORWARD PIER Surface Elev. 984.8 OVER CENTRAL AVE.

Elev	Depth	Std Pen. (N)	Description	Field No.	Lab Nos.	Physical Characteristics							SHTL Class.	
						% Agg	% C.S.	% F.S.	% Silt	% Clay	LL	PI		W.C.
984.8	0													
979.8	2		Brown Silty Clay	1	20685	0	2	8	52	38	35	17	26	
974.8	4	4/4												
974.8	6	5/4	Brown Sandy Silt	2	20686	13	4	7	61	15	NP	NP	23	
969.8	8													
969.8	10	9/8	Brown Silty Sandy Gravel	3	20687	51	16	15	12	6	NP	NP	20	
964.8	12													
964.8	14	5/10	Gray Silt	4	20688	0	0	9	64	27	NP	NP	12	
959.8	16													
959.8	18	3/4	Brown Silty Sandy Gravel	5	20689	47	8	26	14	5	NP	NP	17	
957.3	20													
957.3	22	13/10	Gray Silty Sandy Gravel	6	20690	40	12	11	28	9	22	4	10	
954.5	24	50*	TOP OF ROCK											
952.6	26		Sandstone, gray, fine-to-medium grained, firm, medium-bedded.											
949.3	28		Shale, gray, argillaceous, soft. Core Loss: 100%											
	30													
	32													
	34													
	36													

Particle Sizes: Agg. = > 200mm, Coarse Sand: 2.00 - 0.42mm, Fine Sand = 0.42 - 0.074mm, Silt = 0.074 - 0.005mm, Clay = < 0.005mm

RC  
6.16.59

3/27

Boring No. 9B Station & Offset 23+46.65' LT Surface Elev. 984.8 Project: SUM-224-0560

Elev.	Depth	Description
939.8	38	Shale, gray, siliceous to slightly siliceous, firm; interbedded with sandstone (gray, fine-grained, firm) in following sequence: 35.5 Shale 36.4 Sandstone 38.4 Sandstone 41.5 Shale 37.2 Shale 40.0 Sandstone (finely laminated) 44.6 Shale
	40	
	42	
	44	
	46	
	48	
	50	
	52	
	54	
	56	
	58	
	60	
	62	
	64	
	66	
	68	
	70	
	72	
	74	
	76	
	78	
	80	

BOTTOM OF BORING

**PROJECT DESCRIPTION**

PROJECT CONSISTS OF THE ADDITION OF A THIRD LANE IN EACH DIRECTION OF I.R. 76 AND THE RECONSTRUCTION/RECONFIGURATION OF THE I.R. 76 INTERCHANGE ACCESSING WOOSTER ROAD/EAST AVENUE/STATE STREET IN SUMMIT COUNTY. PROJECT ALSO INCLUDES THE REMOVAL OF THE BRIDGE OVER CENTRAL AVENUE, CONSTRUCTION OF A NEW BRIDGE OVER WOOSTER ROAD, NEW CULVERT ON MUD RUN UNDER RAMP B1, AND EXTENSION OF THE CULVERT UNDER I.R. 76.

**HISTORIC RECORDS**

HISTORICAL BORINGS WERE OBTAINED FROM ODOT OFFICE OF GEOTECHNICAL ENGINEERING, FOR MED/SUM-224-17.10/0.00, SUM-224-2.58, SUM-224-5.11 ALL OF WHICH WERE EXPLORATIONS COMPLETED IN THE LATE 1950'S FOR THE ORIGINAL CONSTRUCTION OF THE IR 76/US 224 CORRIDOR. ADDITIONALLY, EXPLORATION AND RECONSTRUCTION PLANS FOR SUM-76-3.62, 4.97, AND 6.31, WERE AVAILABLE. NONE OF THE BORINGS FROM THESE EXPLORATIONS WERE UTILIZED FOR THE CURRENT GEOTECHNICAL EXPLORATION FOR THE ROADWAY REHABILITATION AND UPGRADE, AND ARE NOT SHOWN ON THE PLAN AND PROFILE SHEETS.

THIS SOIL PROFILE IS PART OF A LARGER SOIL PROFILE, SUM-76-0.00 DEVELOPED IN 2015. AN ADDITIONAL SOIL PROFILE, SUM-76-5.62, DEVELOPED BY BARR ENGINEERING (AKA NEAS, INC.) HAS ALSO BEEN DEVELOPED BUT INFORMATION IS NOT SHOWN FOR CLARITY.

**GEOLOGY**

THE PROJECT IS LOCATED WITHIN THE KILLBUCK-GLACIATED PITTSBURGH PLATEAU AND THE AKRON-CANTON INTERLOBE PLATEAU. THE KILLBUCK-GLACIATED PITTSBURGH PLATEAU IS NOTED FOR RIDGES AND FLAT UPLANDS, COVERED WITH THIN DRIFT AND DISSECTED BY STEEP VALLEYS. VALLEY SEGMENTS ALTERNATE BETWEEN BROAD DRIFT-FILLED AND NARROW ROCK-WALLED REACHES. AREAS CONTAINING THIN TO THICK WISCONSINAN-AGE CLAY TO LOAM TILL OVER MISSISSIPPIAN AND PENNSYLVANIAN AGE SHALE, SANDSTONE, CONGLOMERATE, AND/OR COAL MAY ALSO BE ENCOUNTERED WITHIN THE PROJECT LIMITS AND IN THE NEARBY VICINITY.

THE AKRON-CANTON INTERLOBE PLATEAU IS NOTED FOR BEING A HUMMOCKY AREA BETWEEN TWO CONVERGING GLACIAL LOBES DOMINATED BY KAMES, KAME TERRACES, ESKERS, KETTLES, KETTLE LAKES, AND BOGS/FENS, WITH MANY NATURAL LAKES. AREAS CONTAINING SANDY WISCONSINAN-AGED AND OLDER DRIFT OVER DEVONIAN TO PENNSYLVANIAN-AGE SANDSTONE, CONGLOMERATES, AND SHALE MAY BE ENCOUNTERED IN AND NEAR THE PROJECT AREA.

**RECONNAISSANCE**

MULTIPLE SITE RECONNAISSANCE VISITS WERE MADE BY S&ME PERSONNEL BETWEEN MAY 14 AND SEPTEMBER 17, 2013. THE EXISTING I.R. 76 MAINLINE PAVEMENT APPEARS TO BE IN RELATIVELY GOOD OVERALL CONDITION WITH ONLY A FEW LONGITUDINAL CRACKS OBSERVED IN THE PROJECT AREA.

**SUBSURFACE EXPLORATION**

NINE (9) BORINGS, B-074-0-13 THROUGH B-082-0-13, WERE COMPLETED BETWEEN AUGUST 22 AND SEPTEMBER 4, 2013. THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED ROTARY DRILL RIG, USING 4-1/4 INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS INTERVALS TO A DEPTH OF SIX (6) FEET BELOW EXISTING PAVEMENT OR REFUSAL ON BEDROCK. THE HAMMER SYSTEM USED WAS LAST CALIBRATED IN FEBRUARY 19, 2013, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) OF 76%.

**EXPLORATION FINDINGS**

ALL BORINGS WERE DRILLED WITHIN THE PAVEMENT AND ENCOUNTERED BETWEEN 4-3/4 AND 9- 5/8 INCHES OF ASPHALT UNDERLAIN BY CONCRETE RANGING IN THICKNESS BETWEEN 10-1/4 AND 11-1/4 INCHES, EXCEPT FOR B-75 WHICH DID NOT HAVE ANY CONCRETE. SOILS ENCOUNTERED BENEATH THE PAVEMENT WAS PREDOMINATELY NON-COHESIVE AND CONSISTED OF GRAVEL WITH SANDY (A-1-b), FINE SAND (A-3), COARSE AND FINE SAND (A-3a), AND GRAVEL WITH SAND AND SILT (A-2-4) WHICH RANGED FROM MEDIUM DENSE TO VERY DENSE IN COMPACTNESS AND DAMP TO MOIST IN CONDITION. COHESIVE SOIL LAYERS CONSISTING OF SILT AND CLAY (A-6a) RANGING FROM VERY STIFF TO HARD IN CONSISTENCY AND DAMP IN CONDITION WITHIN B-076 AND B-081. SANDY SILT IN VERY STIFF CONSISTENCY AND DAMP TO MOIST CONDITION WAS ENCOUNTERED IN B-078 AND B-081.

SANDSTONE BEDROCK WAS ENCOUNTERED IN B-075 AT A DEPTH OF 5.2 FEET FROM THE GROUND SURFACE.

ALL BORINGS WERE REPORTS AS BEING DRY AT COMPLETION.

SAMPLES WERE TESTED FOR SULFATE BY METHOD TXDOT-145-E. RESULTS OF THE TESTING DID NOT INDICATE SULFATE LEVEL ABOVE 3000 PPM.

**LEGEND**

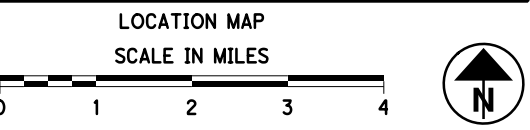
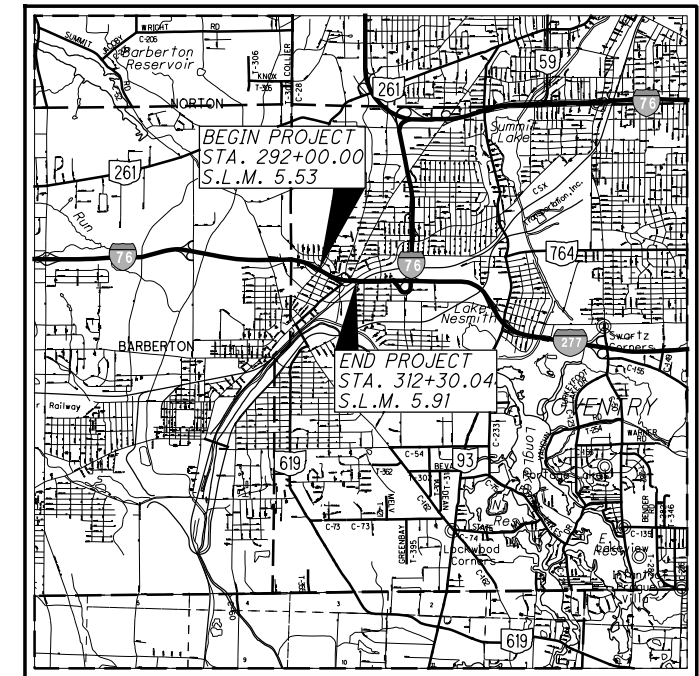
DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	2 -
FINE SAND	A-3	3 -
COARSE AND FINE SAND	A-3a	7 -
GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	A-2-4	1 -
SANDY SILT	A-4a	4 -
SILT AND CLAY	A-6a	3 -
CLAY	A-7-6	1 -
SANDSTONE	VISUAL	
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL	
BORING LOCATION - PLAN VIEW.		
DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
<i>WC</i> INDICATES WATER CONTENT IN PERCENT.		
<i>N<sub>60</sub></i> INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
<i>X/Y/D"</i> 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.		
INDICATES FREE WATER ELEVATION.		
INDICATES STATIC WATER ELEVATION.		
<i>*</i> INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.		
SS INDICATES A SPLIT SPOON SAMPLE.		
NP INDICATES A NON-PLASTIC SAMPLE.		
TR INDICATES TOP OF ROCK.		
<b>TOTAL</b>	<b>21</b>	<b>-</b>

**SPECIFICATIONS**

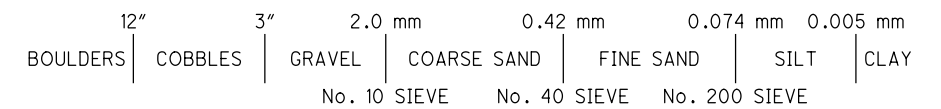
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 20, 2012.

**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 OR THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.



**PARTICLE SIZE DEFINITIONS**



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DESIGN AGENCY  
OHIO DEPARTMENT OF TRANSPORTATION  
OFFICE OF GEOTECHNICAL ENGINEERING  
1980 W. BROAD ST., COLUMBUS, OH 43223

PID NO.  
**96670**

**SOIL PROFILE**

**SUM-76-5.62**

1 / 5



RECON. - S+ME 05/14/13 TO 09/17/13  
DRILLING - S+ME 08/22/13 TO 09/04/13  
DRAWN - GLM 03/2017  
REVIEWED - SAT 03/2017

SUMMARY OF SOIL TEST DATA  
IR 76

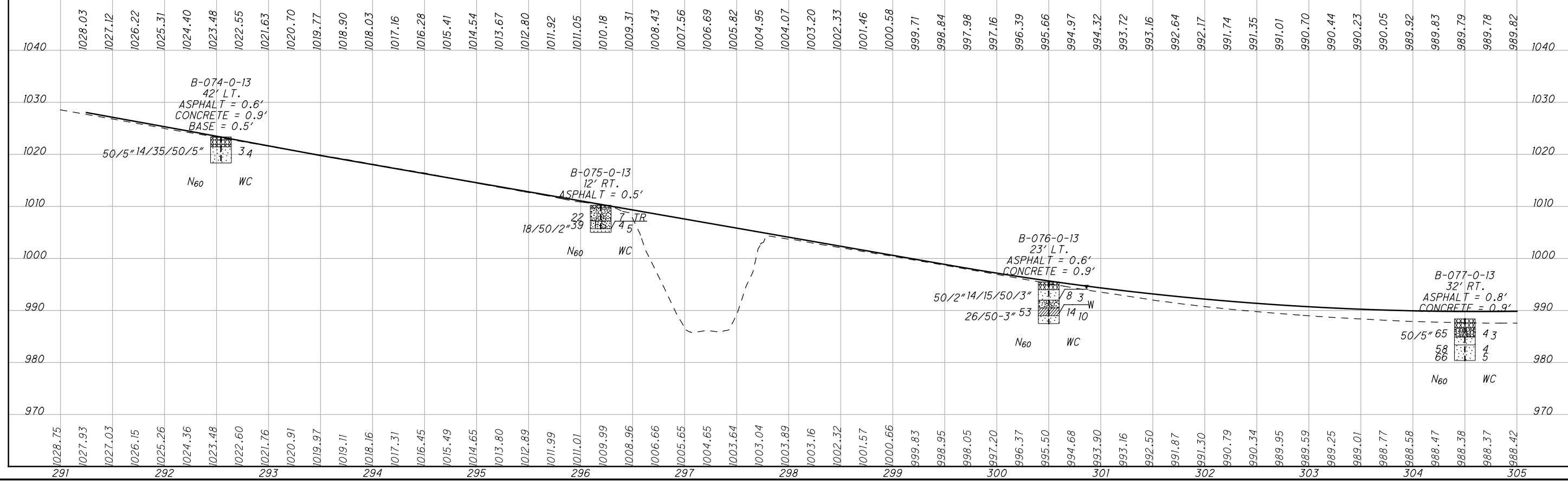
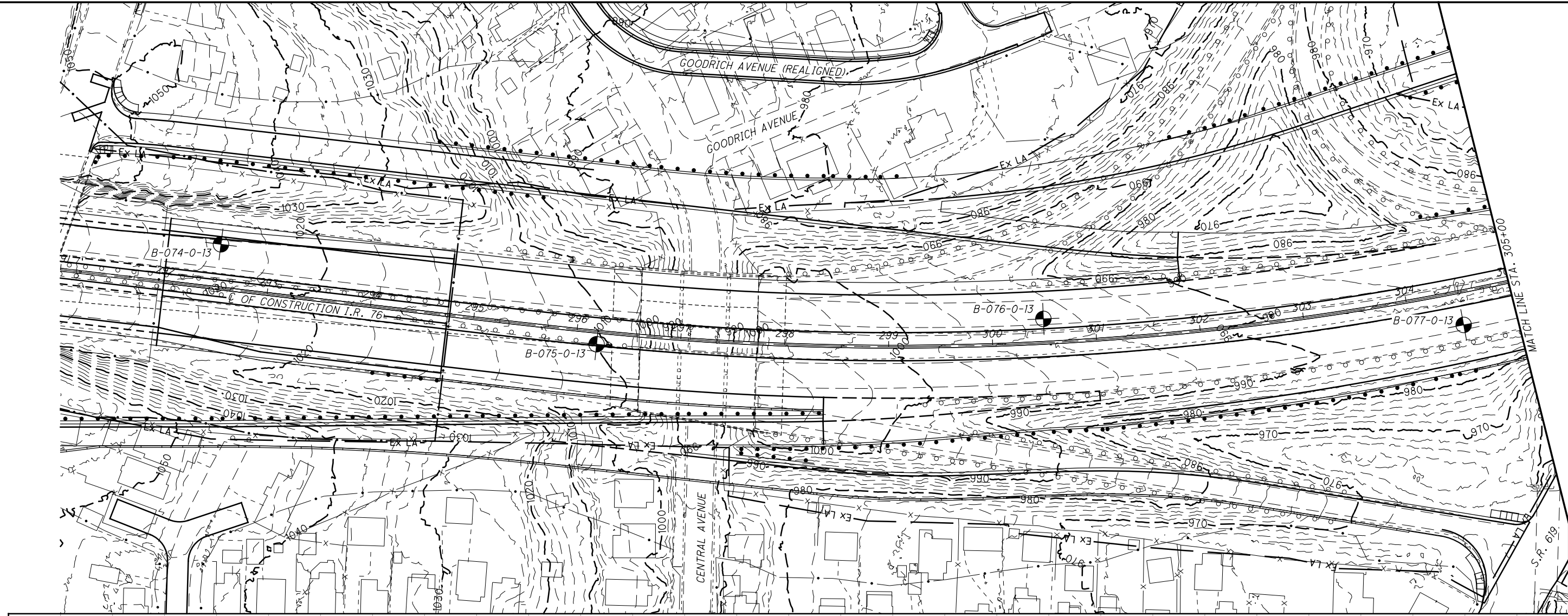
EXPLORATION ID., STATION & OFFSET	FROM - TO	SAMPLE ID	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)
B-074-0-13 STA. 292+50, 42' LT. LATITUDE = 41.037178 LONGITUDE = -81.583030	02.00 - 03.42 03.50 - 03.92	SS-1 SS-2	65 100	- -	10 5	4 3	75 76	6 10	5 6	NP NP	NP NP	NP NP	3 4	A-3a (0) * A-3a (0)
B-075-0-13 STA. 296+20, 12' RT. LATITUDE = 41.036545 LONGITUDE = -81.581965	01.50 - 03.00 03.00 - 04.50 04.50 - 05.17	SS-1 SS-2 SS-3	78 39 100	- - -	45 9	12 8	29 75	9 4	5 4	NP NP	NP NP	NP NP	7 4 5	A-1-b (0) A-3 (0) ROCK (VISUAL)
B-076-0-13 STA. 300+50, 23' LT. LATITUDE = 41.036141 LONGITUDE = -81.580500	02.00 - 03.25 03.50 - 03.67 05.00 - 06.50 06.50 - 07.25	SS-1 SS-2 SS-3 SS-4	53 100 78 100	- - 2.0 -	5 5	12 8	49 26	21 36	13 25	NP NP	NP NP	NP 11	8 3 14 10	A-3a (0) A-1-b (VISUAL) A-6a (6) A-3a (VISUAL)
B-077-0-13 STA. 304+50, 32' RT. LATITUDE = 41.035688 LONGITUDE = -81.579163	02.00 - 03.50 03.50 - 03.92 05.00 - 06.50 06.50 - 08.00	SS-1 SS-2 SS-3 SS-4	56 100 67 100	- - - -	30 9	19 21	25 52	15 11	11 7	18 NP	14 NP	4 NP	4 3 4 5	A-2-4 (0) A-3a (0) A-3a (0) A-3a (VISUAL)
B-078-0-13 STA. 309+00, 15' LT. LATITUDE = 41.035650 LONGITUDE = -81.577521	02.00 - 03.50 03.50 - 04.00 04.00 - 05.00 05.00 - 06.50 06.50 - 08.00	SS-1 SS-2A SS-2B SS-3 SS-4	78 100 83 44 67	2.5 3.5 - - -	11 11	10 6	28 23	32 39	19 21	23 24	15 16	8 8	11 12 3 4 2	A-4a (3) A-4a (5) A-3 (VISUAL) A-3 (0) A-3 (VISUAL)
B-079-0-13 STA. 311+75, 15' RT. LATITUDE = 41.035548 LONGITUDE = -81.576528	01.50 - 03.00 03.00 - 04.50 04.50 - 05.42	SS-1 SS-2 SS-3	72 61 82	- - -	41 10	20 12	21 66	11 8	7 4	NP NP	NP NP	NP NP	6 3 3	A-1-b (0) A-3a (0) A-3a (VISUAL)
B-080-0-13 STA. 317+00, 39' LT. LATITUDE = 41.035670 LONGITUDE = -81.574441	02.00 - 03.50 03.50 - 05.00 05.00 - 06.50 06.50 - 08.00	SS-1 SS-2 SS-3 SS-4	61 94 61 44	3.8 1.5 1.0 1.0	2 2 2	3 2 1	27 29 2	35 36 43	33 31 52	27 26 42	16 16 22	11 10 20	15 16 22 20	A-6a (7) A-4a (6) A-7-6 (12) A-6a (VISUAL)
B-081-0-13 STA. 320+50, 6' RT. LATITUDE = 41.035533 LONGITUDE = -81.573357	02.00 - 03.50 03.50 - 05.00 05.00 - 06.50 06.50 - 08.00	SS-1 SS-2 SS-3 SS-4	67 78 78 89	- 4.0 - -	10 2	9 4	35 30	26 31	20 33	22 30	16 17	6 13	14 14 19 8	A-4a (2) A-6a (7) A-3a (VISUAL) A-3a (VISUAL)
B-082-0-13 STA. 324+50, 13' LT. LATITUDE = 41.035566 LONGITUDE = -81.571906	02.00 - 03.50 03.50 - 05.00 05.00 - 06.50 06.50 - 08.00	SS-1 SS-2 SS-3 SS-4	61 44 67 89	- - - -	4 1	11 1	72 92	7 4	6 2	NP NP	NP NP	NP NP	7 8 6 4	A-3a (0) A-3 (0) A-3 (VISUAL) A-3 (VISUAL)

SUMMARY OF SULFATE TEST DATA  
IR 76

BORING I.D.	SULFATE (PPM)
B-074-0-13	75.4
B-075-0-13	88.2
B-076-0-13	68.4
B-077-0-13	177
B-078-0-13	129
B-079-0-13	204
B-080-0-13	193
B-081-0-13	197
B-082-0-13	42.4

SOIL PROFILE  
SUMMARY OF SOIL TEST AND SULFATE TEST DATA





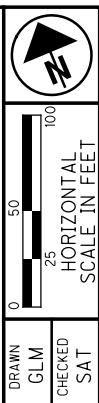
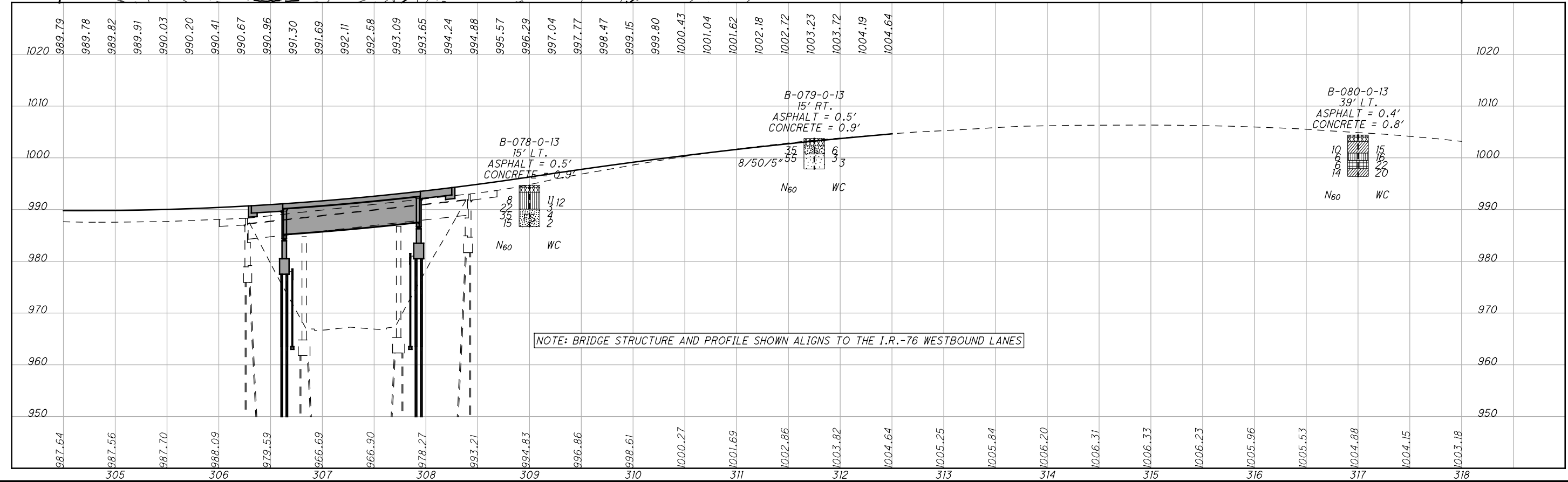
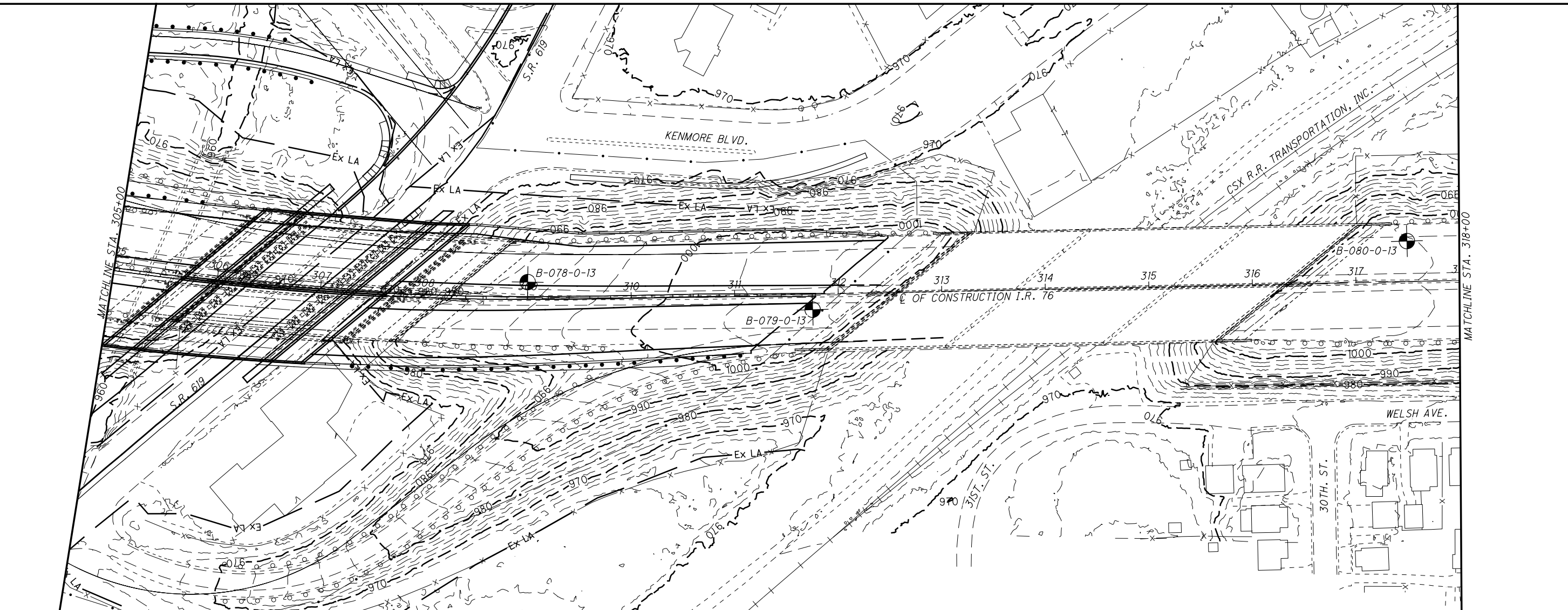
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CHECKED: SAT

**SOIL PROFILE**  
**STA. 291+00 TO STA. 305+00**

**SUM-76-5.62**



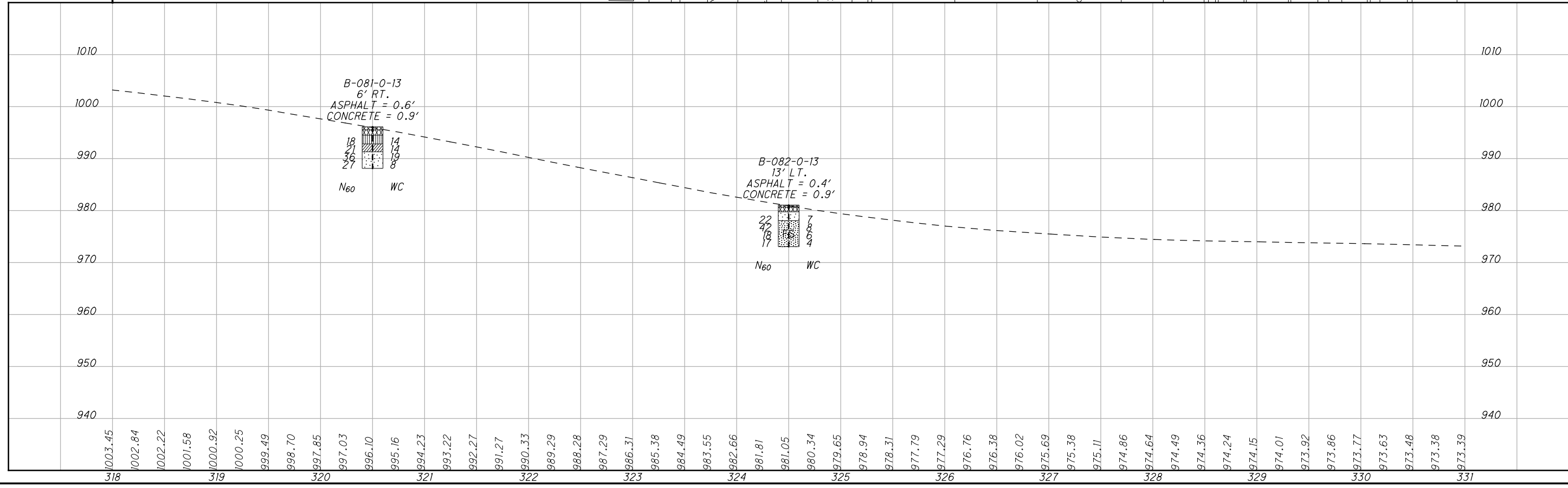
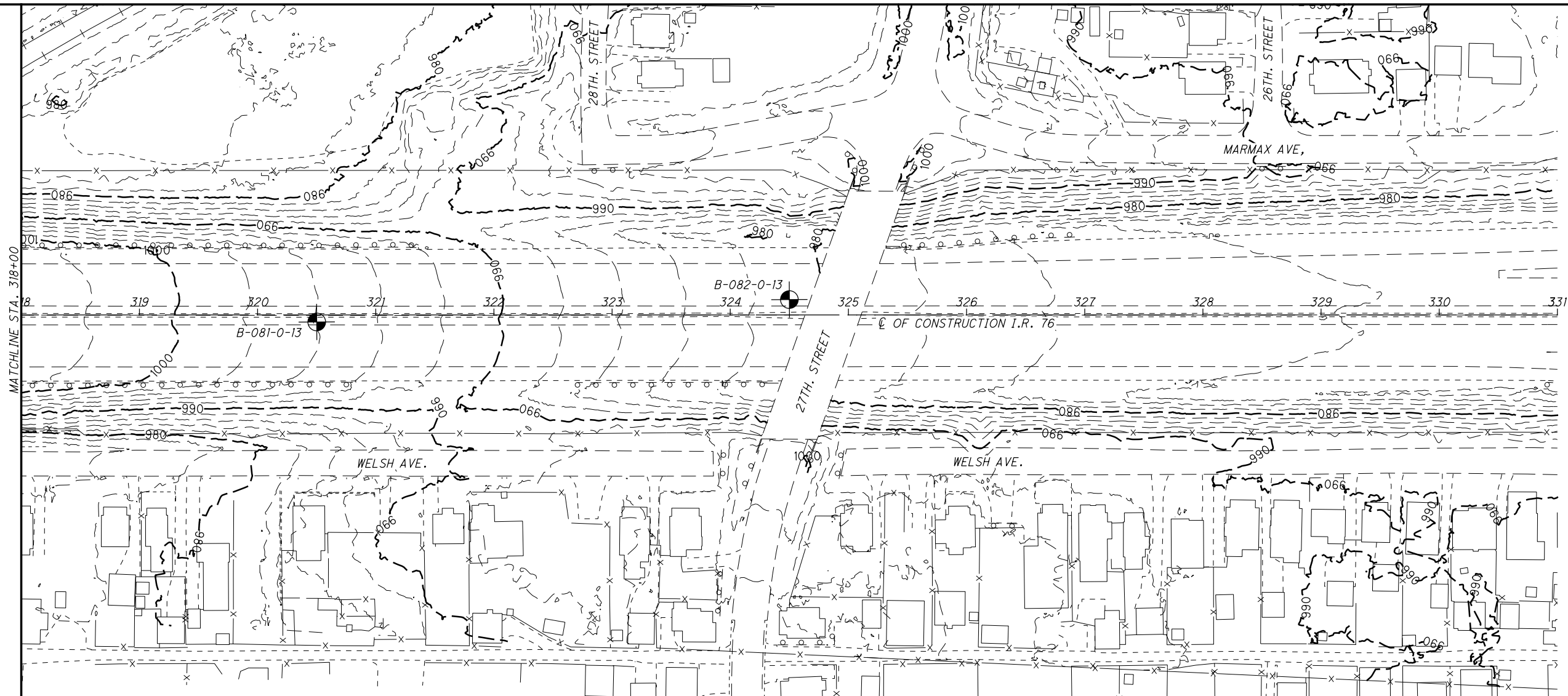
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DRAWN: CLM  
CHECKED: SAT

**SOIL PROFILE  
STA. 305+00 TO STA. 318+00**

**SUM-76-5.62**



HORIZONTAL SCALE IN FEET

DRAWN: GLM  
CHECKED: SAT

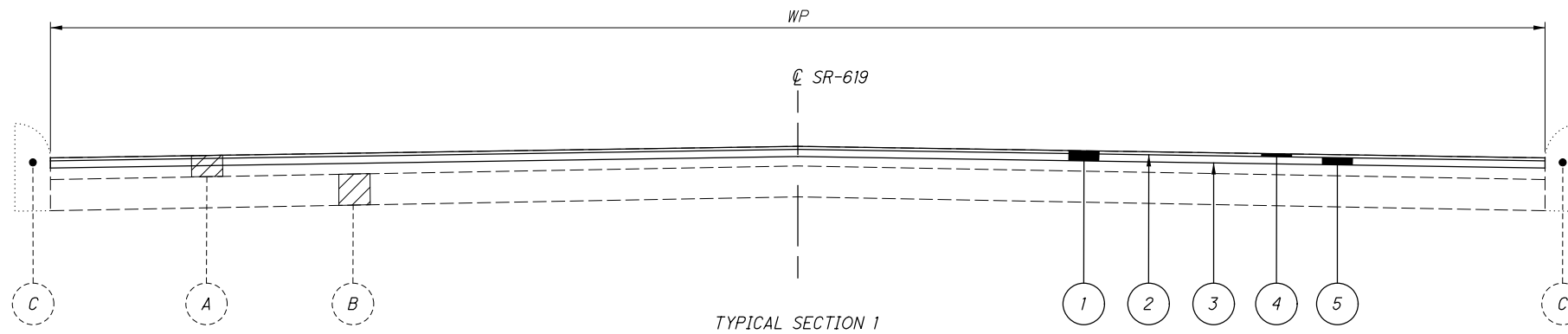
**SUM-76-5.62**

**SOIL PROFILE**

**STA. 318+00 TO STA. 331+00**

5 / 5





SECTION 1 APPLIES SR-619:				
ROUTE	SLM		WP1 (FEET)	LENGTH (MILES)
	FROM	TO		
SR-619	0.16	0.68	44	0.52
SR-619	1.12	1.79	30	0.67

EXISTING BRICK BASE (SLM 0.16-0.68)

LEGEND

- 1 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=2 1/2")
- 2 407, NON-TRACKING TACK COAT @ 0.06 GAL/SY
- 3 407, NON-TRACKING TACK COAT @ 0.09 GAL/SY
- 4 424, FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN (T=3/4") (LESS THAN 1,500 TRUCKS)
- 5 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (T=1 3/4")

- A EXISTING ASPHALT CONCRETE SURFACE
- B EXISTING CONCRETE BASE
- C EXISTING CURB

**UTILITIES**

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)  
 OGPUPS 1-800-925-0988  
 ODOT 330-786-2267 MICHELLE CHANEY

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

**WORK LIMITS**

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

**PAVEMENT MARKING LANE WIDTHS**

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS:

ROUTE	S.L.M. TO	S.L.M.	LANE WIDTH
SR 619	0.16	0.68	11'
SR 619	1.12	1.79	11'

**PAVEMENT MARKING DETAILS**

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

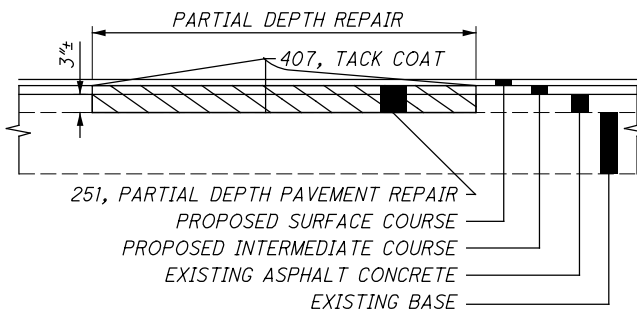
**PROFILE AND ALIGNMENT**

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)**

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 441 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING, OR PRIOR TO PLANING FOR SLM 0.17 TO 0.66. ALSO, THIS ITEM SHALL COMMENCE WITHIN 3 DAYS FOR SLM 0.17 TO 0.66 IF DONE AFTER PLANING OR WITHIN 7 DAYS FOR SLM 1.11 TO 1.79. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

251, PARTIAL DEPTH PAVEMENT REPAIR (441), 1,500 SQ. YD.



**ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN**

703.05 DO NOT USE ANY AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN  
 ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN  
 ITEM 638 - VALVE BOX ADJUSTED TO GRADE, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF CMS 611.10.D FOR MANHOLES, 623.05 FOR MONUMENT BOXES, OR 638.18 FOR VALVE BOXES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE OF THE CASTING) AND ADJUST THE CASTING TO GRADE (ACCORDING TO THE TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN PLACED.

CMS 499 CLASS QCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

REUSE OF THE EXISTING CASTING WILL NOT BE PERMITTED, A NEW CASTING WILL BE SUPPLIED AND THE DISPOSAL OF THE EXISTING CASTING WILL BE INCIDENTAL TO THIS ITEM.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION OF THE NEW CASTING, AND ALL LABOR REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

611, MANHOLE ADJUSTED TO GRADE, APP, 24 EACH  
 623, MONUMENT BOX ADJUSTED TO GRADE, APP, 1 EACH  
 638, VALVE BOX ADJUSTED TO GRADE, APP, 35 EACH

**CURB REPAIR**

THIS ITEM SHALL BE USED TO REPLACE MISSING OR DAMAGED CURB ALONG SR-619 FROM SLM 0.16 TO 1.79. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED SECTION WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAVEMENT SHALL BE BASED UPON THE ACTUAL NUMBER OF FEET OF CURB REPLACED. ANY SAW CUTTING NECESSARY TO REMOVE THE EXISTING CURB SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR ITEM 202, CURB REMOVED.

ITEM 202, CURB REMOVED, 2,225 FT  
 ITEM 609, CURB TYPE 6, 2,225 FT

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GENERAL NOTES

SUM - 619 / 76 - VAR

**MAINTENANCE OF TRAFFIC**

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

1. ON 2 AND 3 LANE SECTIONS: A MINIMUM OF ONE TEN FOOT BIDIRECTIONAL LANE SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

ON 4 OR MORE LANE SECTIONS: A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

4. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO (1) MILE.

5. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

6. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

7. A QUANTITY OF 40 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

8. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

9. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 [BUMPS], W6-3 [TWO-WAY TRAFFIC], W8-H13 [NO EDGE LINES], R4-1 [DO NOT PASS], R4-2 [PASS WITH CARE], W8-11 [UNEVEN LANES]. THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I - PLANED SURFACE - SUM-619:  
 614, WORK ZONE CENTER LINE, CLASS I, 1.19 MILE  
 614, WORK ZONE CHANNELIZING LINE, CLASS I, 12", 200 FEET  
 614, WORK ZONE LANE LINE, CLASS I, 6", 1.04 MILE  
 614, WORK ZONE STOP LINE, CLASS I, 110 FEET

PHASE II - INTERMEDIATE SURFACE - SUM-619:  
 614, WORK ZONE CENTER LINE, CLASS I, 1.19 MILE  
 614, WORK ZONE CHANNELIZING LINE, CLASS I, 12", 200 FEET  
 614, WORK ZONE LANE LINE, CLASS I, 6", 1.04 MILE  
 614, WORK ZONE STOP LINE, CLASS I, 110 FEET

PHASE III - OVERLAY SURFACE - SUM-619:  
 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT, 1.19 MILE  
 614, WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT, 200 FT DAY OF HOLIDAY  
 614, WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT, 1.04 MILE  
 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT, 110 FEET  
 614, WORK ZONE MARKING SIGN (ALL PHASES), 30 EACH

**ADVANCED NOTICE TO PAVE**

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

**TRAFFIC CONTROL INSPECTOR**

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

**INTERIM START DATE SR-619 SLM 0.12 TO SLM 0.68**

ALL WORK ON SR-619 FROM SLM 0.12 TO SLM 0.68 SHALL BEGIN AFTER THE COMPLETION OF THE RAMP/STRUCTURE AT STATE/ WOOSTER INTERCHANGE.

**ITEM 614, MAINTAINING TRAFFIC (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

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:

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$3,000 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

**MILLED SURFACE (SR 619: SLM 0.17 TO SLM 0.66)**

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON ALL PLANED SURFACE ON SR 619 FROM SLM 0.17 TO SLM 0.66 SHALL BE 3 CONSECUTIVE CALENDAR DAYS.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$2,000 FOR EACH DAY THE ABOVE DESCRIBED RESTRICTIONS ARE VIOLATED.

**MILLED SURFACE (SR 619: SLM 1.11 TO SLM 1.79)**

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON ALL PLANED SURFACE ON SR 619 FROM SLM 1.11 TO SLM 1.79 SHALL BE 7 CONSECUTIVE CALENDAR DAYS.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$2,000 FOR EACH DAY THE ABOVE DESCRIBED RESTRICTIONS ARE VIOLATED.

**NOTIFICATION OF TRAFFIC RESTRICTIONS**

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

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL 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 DRIVEABLE PAVEMENT DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD & RAMP CLOSURES	>= 2WEEKS	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	2 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

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

**LANE CLOSURES (I-277)**

ALL LANES OF SHALL BE OPEN TO TRAFFIC FROM 5AM TO 8PM DAILY ON I-277.

SHOULD THE CONTRACTOR FAIL TO MEET ANY THE ABOVE REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF \$7500 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

**PEDESTRIAN TRAFFIC**

ONLY ONE SIDE OF THE SIDEWALK ON STRUCTURES SUM-76-0615 AND SUM-619-0081 CAN BE CLOSED AT A TIME. BOTH SIDES CAN NOT BE CLOSED CONCURRENTLY.

**INTERIM COMPLETION DATE SR-619 SLM 1.12 TO SLM 1.79**

ALL WORK ON SR-619 FROM SLM 1.12 TO SLM 1.79 SHALL BE COMPLETED BY SEPTEMBER 30, 2019. SHOULD THE CONTRACTOR FAIL TO MEET THE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$2,000 PER CALENDAR DAY IF THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

**ITEM 632 - DETECTOR LOOP, AS PER PLAN**

THE CONTRACTOR SHALL CONTACT THE CITY OF BARBERTON (330-848-6662) THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE INTERSECTION OF SR-619 AND:

OAKWOOD/WATERLOO

LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE. THE LOOP DETECTOR WIRE WILL BE CUT INTO THE PAVEMENT AFTER THE PROPOSED SURFACE COURSE HAS BEEN PLACED. ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHALL BE THE POWERHEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS SPECIFIED BELOW. THE LOCATION OF THESE LOOPS SHALL BE SUCH THAT THE POWERHEAD IS LOCATED AT THE STOP LINE, NOT PAST IT. ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10 AND THE LOOP SHALL BE PLACED AT THE SAME LOCATION AS THE EXISTING LOOPS.

THE QUANTITIES LISTED BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX OR THE EXISTING PULLBOX. INCLUDED IN THIS ITEM IS THE POURED EPOXY TYPE CABLE SPLICE KIT (CONFORMING TO T25.15E) THAT MUST BE USED IN MAKING THESE CONNECTIONS. ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIPMENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.

632 DETECTOR LOOP, AS PER PLAN, 5 EACH

SR-619 AND OAKWOOD/WATERLOO:  
2 EACH, 6'x6'  
3 EACH, 6'x30'

**DETOUR NOTIFICATION [ODOT/ CITY OF AKRON]**

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) AND THE CITY OF AKRON (330-375-2079) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

**ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (I-76 RAMPS: A, D, V AND T)**

THE KENMORE LEG (I-76 FROM SLM 6.31 TO SLM 8.58) MAY BE CLOSED FOR A PERIOD NOT TO EXCEED FROM 8PM THURSDAY TO 6AM THE FOLLOWING FRIDAY (TOTAL OF 9 CONSECUTIVE DAYS) AS DETAILED BELOW:

RAMP A (I-76 EAST TO I-76 EAST) AND RAMP D (I-227 WEST TO I-76 EAST) SHALL BE CLOSED SIMULTANEOUSLY FOR A PERIOD NOT TO EXCEED 8PM THURSDAY TO 6AM MONDAY TO COMPLETE ALL WORK ON STRUCTURES SUM-76-0615 AND SUM-76-0658 ON I-76 EASTBOUND (NORTHBOUND DIRECTION OF THE KENMORE LEG). RAMPS A AND D SHALL BE DETOURED AS SHOWN ON SHEET 7. RAMPS A AND D SHALL NOT BE CLOSED CONCURRENTLY WITH RAMPS V AND T.

RAMP V (I-76 WEST/I-77 NORTH TO I-76 WEST) AND RAMP T (I-77 SOUTH TO I-76 WEST) SHALL BE CLOSED SIMULTANEOUSLY FOR A PERIOD NOT TO EXCEED 10 AM MONDAY TO 6AM FRIDAY TO COMPLETE ALL WORK ON STRUCTURES SUM-76-0615 AND SUM-76-0658 ON I-76 WESTBOUND (SOUTHBOUND DIRECTION OF THE KENMORE LEG). RAMPS V AND T SHALL BE DETOURED AS SHOWN ON SHEETS 9-10. RAMPS V AND T SHALL NOT BE CLOSED SIMULTANEOUSLY WITH RAMPS A AND D.

DURING THE SEPERATE CLOSURES OF THE KENMORE LEG NORTH AND SOUTHBOUND , RAMP B (WATERLOO RD TO I-277 WEST) SHALL BE CLOSED AND DETOURED AS SHOWN ON SHEET 8, I-277 WESTBOUND UNDER THE KENMORE LEG SHALL BE INCREASED TO TWO LANES, AND RAMP C (I-76 WEST TO I-76 WEST) SHALL BE REDUCED TO ONE LANE AS SHOWN ON SHEETS 11-16. RAMP B CLOSURE, I-277 WEST INCREASED TO TWO LANES AND RAMP C REDUCED TO ONE LANE SHALL REMAIN IN EFFECT FOR A PERIOD NOT TO EXCEED 7PM THURSDAY TO 10AM THE FOLLOWING FRIDAY. ONCE I-277 WEST IS RETURNED TO ITS NORMAL CONFIGURATION OF ONE THROUGH LANE, THE CONTRACTOR SHALL ERECT 2 PCMS' ALONG I-277 WEST WITH THE FOLLOWING MESSAGES: 1) TRAFFIC PATTERN CHANGE 2) I-277W ONE LANE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE ABOVE REQUIREMENTS A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$5000 FOR EACH HOUR OR PORTION THEREOF THAT THE RAMPS REMAIN CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

**ITS MESSAGE BOARDS**

THE EXISTING ITS MESSAGE BOARDS IN THE VICINITY OF THE PROJECT WILL BE UTILIZED TO PROVIDE SUPPLEMENTAL INFORMATION TO THE TRAVELING PUBLIC. THE CONTRACTOR WILL NOTIFY THE PROJECT ENGINEER ONE [1] WEEK IN ADVANCE OF THE CLOSURE OF RAMPS A,D, V AND T. THE PROJECT ENGINEER WILL COORDINATE WITH BRENT KOVACS AT 330-786-2208 TO GET THE ITS MESSAGE BOARDS ADJUSTED.

**ITEM 614, MAINTAINING TRAFFIC (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.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
ROAD & RAMP	>= 2WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
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.

WILL BE  
CLOSED  
FOR \_\_\_\_\_ DAYS  
INFO: (330)-786-2208

W20-H13-60

**APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTIONS**

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE BEEN APPROVED BY THE PROJECT IMPACT ADVISORY COUNCIL (PIAC) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND THE STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTIONS INCLUDE:  
KENMORE LEG CLOSURES OF RAMPS A, D, V AND T FROM 8PM THURSDAY TO 6AM THE FOLLOWING FRIDAY (TOTAL OF 9 CONSECUTIVE DAYS)

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF [ 30 ] CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE DISTRICT WORK ZONE TRAFFIC MANAGER AND THE CITY OF AKRON AS WELL AS THE CONTRACTOR, WORKSITE TRAFFIC SUPERVISOR (WTS) AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE SO THAT THE PROJECT ENGINEER CAN SEND EMAIL NOTIFICATOIN TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE. REFERENCE "EXCEPTION REQUEST APPROVAL DATED [7/13/2018 ] FOR PID 98482" IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTIONS LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE (MOTEC OR PIAC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO DESIRED IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

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MAINTENANCE OF TRAFFIC

SUM -619 / 76 - VAR

5  
16

**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.

WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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

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

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 300 HOURS

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

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

**ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION RIGHT LANE CLOSURE FOR SUM-619-0081)**

THE RIGHT LANE ON STRUCTURE SUM-619-0081 MAY BE CLOSED AS SHOWN ON SHEET 17 FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE DAYS. A DISCOUNT SHALL BE ASSESSED IN THE AMOUNT OF \$2000 FOR EACH CALENDAR DAY THE LANE REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

**SUM-619-0081 BRIDGE PAINTING WORK ZONE QUANTITIES**

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO USE FOR SUM-619-0081 BRIDGE PAINTING WORK ZONE SHOWN ON SHEET 17.

- 614, WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL), 2 EACH
- 622, PORTABLE BARRIER, 32", 730 FT
- 614, OBJECT MARKER, TWO WAY, 15 EACH
- 614, BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL) 15 EACH
- 614, WORK ZONE EDGE LINE, CLASS I, 6", 740.05, TYPE 1, 0.31 MILE

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN**

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

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

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

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

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

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

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 9 SIGN MONTH

ASSUMING 9 PCMS SIGNS FOR 1 MONTHS

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

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

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

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

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

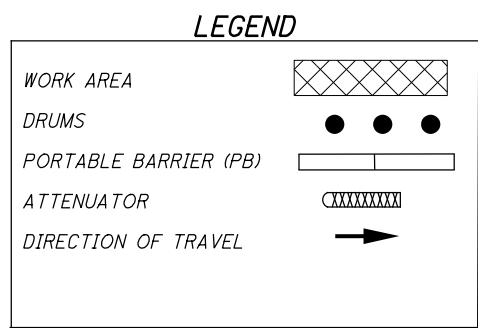
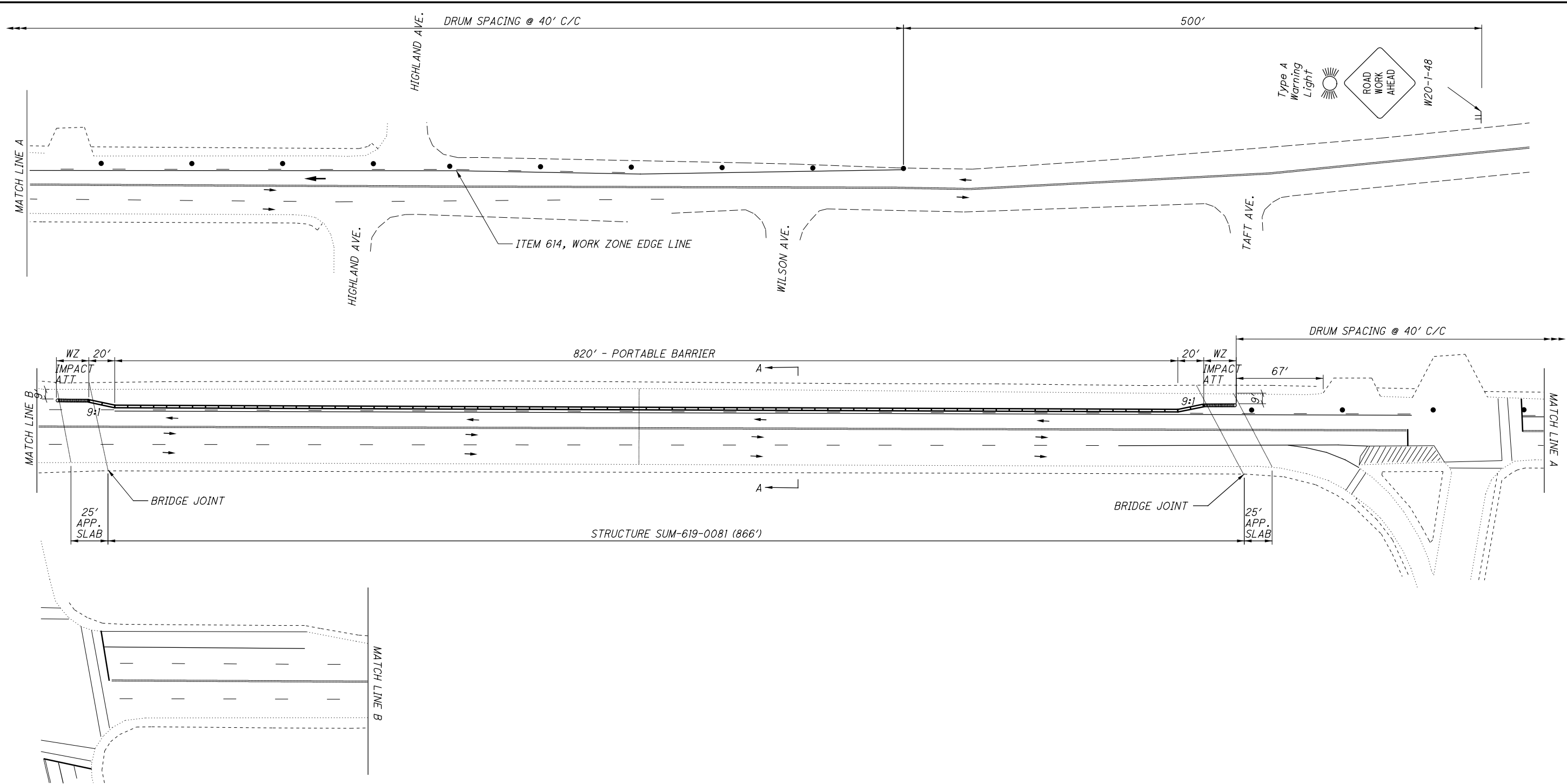
WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

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

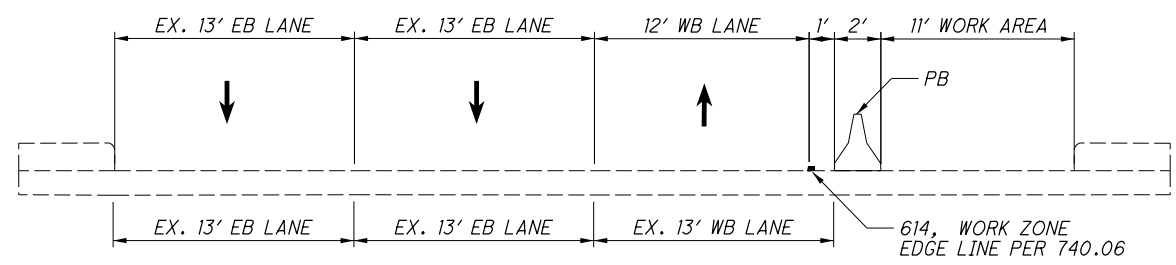
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY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



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**NOTE:**  
 THE CONTRACTOR SHALL MAINTAIN ALL ACCESS TO DRIVEWAYS AND SIDE STREETS DURING THE RIGHT LANE CLOSURE OF SR 619 WESTBOUND.



TYPICAL SECTION A-A



**MAINTENANCE OF TRAFFIC  
 BRIDGE PAINTING WORK ZONE SUM-619-0081**

**SUM-619 / 76 - VAR**

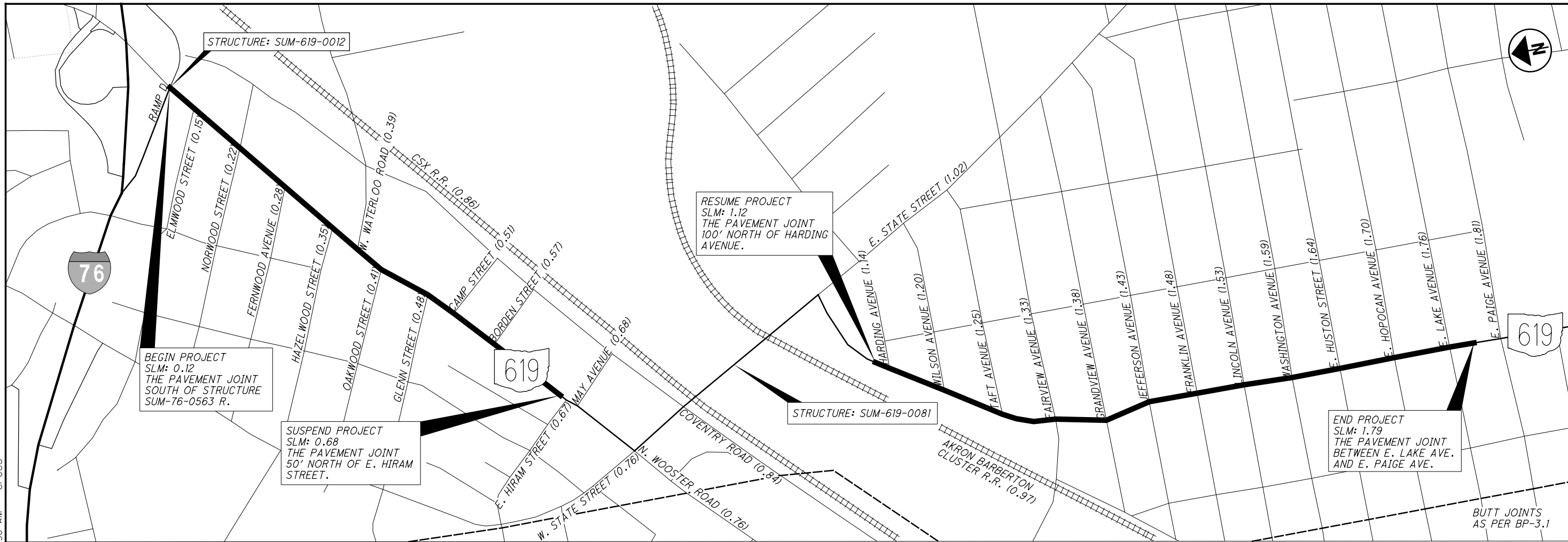
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SHEET NUM.										PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	6	9	10	03/S>2/P V/BARB	04/S>2/P V/BARB	05/S>2/P V/BARB	06/IMS/B R	08/S>2/B R										
<b>ROADWAY</b>																				
2,225						1,113		1,112			202	32000	2,225	FT	CURB REMOVED					
1						1					623	39501	1	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	3				
<b>EROSION CONTROL</b>																				
						1,500		1,500			832	30000	3,000	EACH	EROSION CONTROL					
<b>DRAINAGE</b>																				
24						7		17			611	99655	24	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	3				
<b>PAVEMENT</b>																				
1,500							1,500				251	01000	1,500	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)					
				25,215		13,423		11,792			254	01000	25,215	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=2 1/2")					
				3,783		2,014		1,769			407	20000	3,783	GAL	NON-TRACKING TACK COAT					
				526		280		246			424	10001	526	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN	3				
				1,226		652		574			441	50300	1,226	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)					
2,225						1,113		1,112			609	26000	2,225	FT	CURB, TYPE 6					
<b>WATER WORK</b>																				
35						5		30			638	10801	35	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	3				
<b>TRAFFIC CONTROL</b>																				
				1.04		1.04					644	00204	1.04	MILE	LANE LINE, 6"					
				1.19		0.52		0.67			644	00300	1.19	MILE	CENTER LINE					
				200		170		30			644	00400	200	FT	CHANNELIZING LINE, 8"					
				110		110					644	00500	110	FT	STOP LINE					
				200		200					644	00600	200	FT	CROSSWALK LINE					
				3		3					644	01300	3	EACH	LANE ARROW					
<b>TRAFFIC SIGNALS</b>																				
		5				5					632	26501	5	EACH	DETECTOR LOOP, AS PER PLAN	5				
<b>STRUCTURE REPAIRS</b>																				
															FOR SUM-277-0133 ESTIMATED QUANTITIES	13				
															FOR SUM-619-0012 ESTIMATED QUANTITIES	13				
															FOR SUM-619-0081 ESTIMATED QUANTITIES	13				
															FOR SUM-76-0615 ESTIMATED QUANTITIES	13				
															FOR SUM-76-0657 ESTIMATED QUANTITIES	13				
<b>MAINTENANCE OF TRAFFIC</b>																				
			300			100		50	150		614	11110	300	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE					
		LS	2						LS	2	614	12338	2	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)					
	30					15		15			614	12420	LS		DETOUR SIGNING					
	40					20		20			614	12460	30	EACH	WORK ZONE MARKING SIGN					
											614	13000	40	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC					
			15							15	614	13310	15	EACH	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)					
			15							15	614	13360	15	EACH	OBJECT MARKER, TWO WAY					
			9					9			614	18601	9	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6				
	2.08					2.08					614	20010	2.08	MILE	WORK ZONE LANE LINE, CLASS I, 6"					
	1.04					1.04					614	20560	1.04	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT					
	2.38					1.04		1.34			614	21000	2.38	MILE	WORK ZONE CENTER LINE, CLASS I					
	1.19					0.52		0.67			614	21550	1.19	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT					
			0.31							0.31	614	22010	0.31	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 740.05, TYPE 1					
	400					340		60			614	23010	400	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12"					
	200					170		30			614	23690	200	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT					
	220					220					614	26000	220	FT	WORK ZONE STOP LINE, CLASS I					
	110					110					614	26610	110	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT					
			730							730	622	41000	730	FT	PORTABLE BARRIER, 32"					
<b>INCIDENTALS</b>																				
						LS					614	11000	LS		MAINTAINING TRAFFIC					
						39					619	16021	39	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN					
						LS					623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING					
						LS					624	10000	LS		MOBILIZATION					

**GENERAL SUMMARY**

**SUM - 619 / 76 - VAR**

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SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=2 1/2") 254 SY	NON-TRACKING TACK COAT @ 0.06 GAL/SY 407 GAL	NON-TRACKING TACK COAT @ 0.09 GAL/SY 407 GAL	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN (T=3/4") 424 CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) (T=1 3/4") 441 CY												
<b>SR-619</b>																									
0.16	TO	0.68	1		2745.60	44.00	13422.93		13422.93	805.38	1208.06	279.64	652.50												
1.12	TO	1.79	1		3537.60	30.00	11792.00		11792.00	707.52	1061.28	245.67	573.22												
SUBTOTALS									0.00	25214.93	0.00	1512.90	0.00	2269.34	0.00	525.31	0.00	1225.73	0.00	0.00	0.00	0.00			
TOTALS CARRIED TO GENERAL SUMMARY									0	25215	0	1513	0	2270	0	526	0	1226	0	0	0	0	0	0	0

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**PAVEMENT CALCULATIONS**

**SUM -619 / 76 - VAR**

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**EDGE LINE**

GENERAL SPEC: 640  
MATERIAL TYPE: 644

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE, 6"			YELLOW EDGE LINE, 6"			COMMENTS
						TOTAL	HIGHWAY	RAMP	TOTAL	HIGHWAY	RAMP	
TOTAL						0			0			

**LANE LINE**

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	6" LANE LINE		COMMENTS
							DASHED	SOLID	
SUM	619	0.16	S.R. 619 @ RAMP D	0.68	PAVEMENT JOINT NORTH OF E. HIRAM ST.	1.04	1.04		
TOTAL						1.04	1.04		

**CENTER LINE**

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE		COMMENTS
SUM	619	0.16	S.R. 619 @ RAMP D	0.68	PAVEMENT JOINT NORTH OF E. HIRAM ST.	0.52	1.04		
SUM	619	1.12	PAVEMENT JOINT NORTH OF HARDING AVE.	1.79	PAVEMENT JOINT NORTH OF E. PAIGE AVE.	0.67	1.34		
TOTAL						1.19	2.38		

**AUXILIARY**

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE, 8"	CHANNEL LINE, 12"	STOP LINE	CROSS WALK LINES	TRANSVERSE DIAGONAL LINES		ISLAND MARKING	SYMBOL MARKINGS						LANE ARROWS			WORD ON PVMT ONLY		DOTTED LINES, 6"	COMMENTS
							WHITE	YELLOW		RxR	SCHOOL		TURN LEFT	TURN RIGHT	THRU	COMB.	REDUCT.	72"	96"			
											FT	FT								FT		
							FT	FT		FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT		
SUM	S.R. 619 @ RAMP D	0.120	170		22										3							
SUM	S.R. 619 @ WATERLOO ROAD	0.395			44	100																
SUM	S.R. 619 @ OAKWOOD STREET	0.500			44	100																
SUM	S.R. 619 @ PAIGE AVENUE	1.790	30																			
TOTAL			200		110	200									3							

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PAVEMENT MARKING QUANTITIES

SUM -619 / 76 - VAR

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**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

SS 843 DATED 04/18/03  
SS 856 DATED 04/18/14

**DESIGN SPECIFICATIONS**

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

**EXISTING STRUCTURE VERIFICATION**

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

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

**PROPOSED WORK:**

SUM-76-0615 (UNDER 27TH STREET)  
-PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE  
-SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT  
-REMOVE AND REPLACE EXISTING PRESSURE RELIEF JOINTS AT BOTH ENDS OF THE STRUCTURE  
-REPAIR THE EXISTING CURB  
-REPAIR THE EXISTING SIDEWALK  
-PAINT THE METAL CURB PLATES  
-PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE  
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE DECK EDGE, PARAPETS, SIDEWALKS, ABUTMENTS, WING WALLS AND PIERS WITH EPOXY-URETHANE  
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION  
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-76-0657 (OVER SUM-IR 277-0.17)  
-PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE ON THE APPROACH SLABS (WORK NEEDS TO BE DONE CONCURRENT WITH PART 3)

SUM-277-0133 (OVER SR-93 MANCHESTER ROAD)  
-REMOVE AND REPLACE EXISTING ASPHALT CONCRETE OVERLAY AND WATERPROOFING WITH NEW BRIDGE DECK WATERPROOFING ASPHALT CONCRETE IN THE WESTBOUND DIRECTION ONLY  
-REMOVE AND REPLACE THE POLYMER MODIFIED ASPHALT JOINT SYSTEM IN THE WESTBOUND DIRECTION ONLY

SUM-619-0012 (OVER MUD RUN)  
-PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE  
-SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT  
-PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE  
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE DECK EDGE, PARAPETS, SIDEWALKS, ABUTMENTS AND WING WALLS WITH EPOXY-URETHANE  
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION  
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-619-0081 (OVER TUS R CSXT & ABC RR)  
-PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE  
-REMOVE AND REPLACE EXISTING ASPHALT CONCRETE OVERLAY AND WATERPROOFING WITH NEW BRIDGE DECK WATERPROOFING ASPHALT CONCRETE  
-CLEAN OUT EXISTING SCUPPERS  
-REMOVE AND REPLACE EXISTING PRESSURE RELIEF JOINTS AT BOTH ENDS OF THE STRUCTURE  
-REPAIR EXISTING PARAPETS  
-PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE  
-REMOVE ALL SPALLED AREAS FROM THE BOTTOM OF THE DECK FLOOR AND SEAL WITH EPOXY-URETHANE  
-CLEAN AND PAINT 10 FT OF THE BEAMS AT EACH ABUTMENT AND 10 FT OF THE BEAMS AT THE SEATED HINGES  
-RESET AND REFURBISH THE EXISTING ABUTMENT BEARINGS  
-REPAIR EXISTING STEEL COVER PLATES ON THE SIDEWALKS  
-REPAIR EXISTING CONCRETE SLOPE PROTECTION AT THE REAR LEFT AND RIGHT OF THE STRUCTURE  
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE DECK EDGE, PARAPETS, ABUTMENTS AND WING WALLS WITH EPOXY-URETHANE  
-CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION  
-NEW STRUCTURE IDENTIFICATION SIGNS

**ITEM 202 - WEARING COURSE REMOVED, AS PER PLAN**

REMOVE ALL OF THE ASPHALT CONCRETE ON STRUCTURE(S) SUM-619-0081. THICKNESS VARIES WITH A MINIMUM THICKNESS OF 2 1/2". MILLING OR OTHER MECHANICAL METHOD OF ASPHALT DECK REMOVAL MAY BE PERFORMED TO WITHIN 1/2"± OF THE TOP OF THE ORIGINAL BRIDGE DECK SURFACE. THE LAST 1/2"± OF ASPHALT CONCRETE TO BE REMOVED AND THE WATERPROOFING WILL BE REMOVED USING A NONDESTRUCTIVE METHOD SUCH AS HAND SCRAPING. THE CONTRACTOR WILL USE CAUTION IN REMOVING THE REMAINING ASPHALT AND WATERPROOFING TO ENSURE NO DAMAGE OCCURS TO THE ORIGINAL BRIDGE DECK SURFACE. ANY DAMAGE TO THE ORIGINAL DECK SURFACE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

PAYMENT FOR THIS ITEM WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY INCIDENTALS REQUIRED TO PERFORM THIS WORK. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD FOR ITEM 202, WEARING COURSE REMOVED, AS PER PLAN.

**CLEARING AND GRUBBING**

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

**ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, AS PER PLAN**  
**ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM TYPE B (448), AS PER PLAN**

703.05 DO NOT USE ANY AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE**

THIS ITEM OF WORK WILL CONSIST OF COVERING THE EXISTING METAL EXPANSION PLATE ON THE SIDEWALKS OF STRUCTURE SUM-619-0081. PREPARE THE EXISTING STEEL FOR WELDING A NEW 3/8" x 8 1/2" x 7' GALVANIZED STEEL COVER PLATE AT ALL FOUR CORNERS OF THE STRUCTURE. PERFORM A 5/16 INCH FILLET WELDS ACCORDING TO THE ITEM 513 USING APPROVED ELECTRODES, PROCEDURES, AND WELDERS TO ATTACH THE NEW COVER PLATE. THE NEW COVER PLATE WILL BE FIELD VERIFIED FOR SIZE PRIOR TO ORDERING ANY MATERIAL. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, LABOR, AND ALL INCIDENTALS EXCEPT PATCHING OPERATIONS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC.: SIDEWALK COVER PLATE.

**ITEM 514 - FIELD PAINTING, MISC.: CURB PLATES**

PAINT CURB PLATES OF THE STRUCTURE LISTED BELOW DESIGNATED BY THE PROJECT ENGINEER. CMS 514.22 PROCESS WILL BE USED TO PAINT THESE AREAS.

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALL NECESSARY EQUIPMENT TO INSPECT THIS WORK.

THE AREAS TO BE PAINTED ARE THE CURB PLATES ON THE FOLLOWING STRUCTURE:

SUM-76-0615

THE COLOR FOR THE FINISHED COAT WILL CONFORM TO FEDERAL COLOR NUMBER 10080 (BROWN).

**ITEM 514 - PAINTING OF STRUCTURAL STEEL (SUM-619-0081)**

THIS ITEM OF WORK WILL CONSIST OF PAINTING 10 FT OF BEAMS ENDS AT EACH ABUTMENT INCLUDING THE CROSS FRAMES AND BEARINGS, PAINTING 10 FT AT THE SEATED HINGES, AND PAINTING THE INTERMEDIATE JOINT INCLUDING 10 FT IN EACH DIRECTION FOR THE FOLLOWING STRUCTURE: SUM-619-0081.

THE COLOR FOR THE FINISHED COAT WILL CONFORM TO FEDERAL COLOR NUMBER ----- (GREEN).

**STREAM AVOIDANCE - SUM-619-0012 (OVER MUD RUN) - SUM-619-0081 (OVER TUSCARAWAS RIVER AND OHIO & ERIE CANAL)**

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT MUD RUN AT STRUCTURE SUM-619-0012 OR THE TUSCARAWAS RIVER AND THE OHIO & ERIE CANAL AT STRUCTURE SUM-619-0081. NO EXCAVATION, GRADING OR FILLING OPERATIONS SHALL BE PERFORMED IN MUD RUN, THE TUSCARAWAS RIVER OR THE OHIO & ERIE CANAL. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS IN MUD RUN, THE TUSCARAWAS RIVER OR THE OHIO & ERIE CANAL.

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

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

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

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

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

**ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN**

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN: THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND RE-WELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

**STRUCTURE PAINTING/CONCRETE SEALING OPERATIONS**

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT OR OTHER MATERIALS USED TO REPAIR, CLEAN, PAINT, SEAL OR TREAT ANY STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING	DATE 04/17/18	REVIEWED MAC	DRAWN CMR
	STRUCTURE FILE NUMBER	REVISOR	CMR
STRUCTURE GENERAL NOTES SUM-76-0615, SUM-76-0657, SUM-277-0133, SUM-619-0012, SUM-619-0081, UNDER 27TH STREET, OVER SUM-IR 277-0.17, OVER SR-93 MANCHESTER ROAD, OVER MUD RUN, OVER TUS R CSXT & ABC RR	DESIGNED CMR	CHECKED MAC	
	SUM-619 / 76 - V AR PID No. 98482		
1 / 6		11 / 16	

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**CSXT CONSTRUCTION CLEARANCE (CSX MILEPOST BG-135.55 AT E OF TRACK AND E OF BRIDGE)**

EXISTING MINIMUM VERTICAL CLEARANCE OF 23'-5" SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO ANY TEMPORARY CONSTRUCTION REDUCTION. UNDER NO CIRCUMSTANCES MAY TEMPORARY CONSTRUCTION MINIMUM VERTICAL CLEARANCE BE REDUCED BELOW 22'-0". MINIMUM TEMPORARY CONSTRUCTION HORIZONTAL CLEARANCE OF 13'-0", MEASURED HORIZONTALLY FROM THE CENTERLINE OF TRACK, SHALL BE MAINTAINED THROUGHOUT THE PROJECT DURATION.

**CSXT RIGHT OF WAY (CSX MILEPOST BG-135.55 AT E OF TRACK AND E OF BRIDGE)**

NO TEMPORARY RAILROAD CROSSINGS WILL BE PERMITTED FOR MOTORIZED EQUIPMENT. THE CONTRACTOR SHALL COORDINATE WITH RAILROAD FLAGGERS TO ENSURE PROPER TRACK TIME AND SAFETY. ALL WORK WITHIN SPAN OVER CSX AND EACH ADJACENT SPAN WILL REQUIRE CSX FLAGGER, UNLESS SPECIFICALLY EXCEPTED BY CSX.

**CSXT COORDINATION (CSX MILEPOST BG-135.55 AT E OF TRACK AND E OF BRIDGE)**

ALL WASTE MATERIALS GENERATED BY THIS PROJECT, INCLUDING WASHING WITH WATER, CLEANING SOLVENTS, BLASTING, SCRAPING, BRUSHING AND PAINTING OPERATIONS, SHALL BE THE RESPONSIBILITY OF THE STATE OR ITS CONTRACTOR AND SHALL BE CONTAINED, COLLECTED AND PROPERLY DISPOSED OF BY THE STATE OR ITS CONTRACTOR. THE STATE AND ITS CONTRACTOR AGREE TO FULLY COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS, REGULATIONS, STATUTES AND ORDINANCES AT ALL TIMES.

- MEANS & METHODS OF PERFORMING THE PROPOSED WORK SHALL CONFORM TO CSXT CONSTRUCTION SUBMISSION CRITERIA.

- ALL PROCEDURES TO BE SUBMITTED TO MR. DAVID CLARK, CSXT DIRECTOR CONSTRUCTION ENGINEERING, 500 MEIJER DRIVE, SUITE 305, FLORENCE, KY 41042, OR HIS DESIGNATED ENGINEERING REPRESENTATIVE. SUBMITTALS REQUIRE UP TO 30 DAYS FOR REVIEW AND COMMENT/APPROVAL.

- A MEANS & METHODS SUBMITTAL FOR CLEANING/SEALING CONCRETE, CLEANING/PAINTING STRUCTURAL STEEL, DEMO SHIELD IF REQUIRED FOR PATCHING CONCRETE, CONCRETE SPALL REMOVAL, ETC, OR ANY ACTIVITY THAT WOULD HAVE A "POTENTIAL TO FOUL".

- THE MATERIALS REMOVED DURING THE SURFACE PREPARATION MUST NOT IMPACT THE SURROUNDING AREA INCLUDING GROUND, WATER, OR AIR. MATERIALS MUST NOT BE STORED ON CSX PROPERTY.

**ITEM 518 - SCUPPER MISC.: CLEANOUT**

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

**ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN**

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

**SIDEWALK CORRECTIONS**

THE ITEMS LISTED FOR STRUCTURE SUM-76-0615 SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR THE EXISTING CURB AND SIDEWALK AT THE APPROACHES OF THE STRUCTURE.

SUM-76-0615  
ITEM 202, WALK REMOVED, 120 SF  
ITEM 202, CURB REMOVED, 50 FT  
ITEM 608, 6" CONCRETE WALK, 120 SF  
ITEM 609, CURB, TYPE 7, 50 FT

**SPECIAL - STRUCTURES: CONCRETE SPALL REMOVAL**

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM DECK FLOOR OF STRUCTURE SUM-619-0081 WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY - URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

SUM-619-0081  
SPEC, STRUCTURES: CONCRETE SPALL REMOVAL, 100 SQ YD

**CONCRETE SLOPE PROTECTION REPAIR**

THIS WORK WILL CONSIST OF REMOVING AND REPLACING SLABS OF THE CONCRETE SLOPE PROTECTION AT THE REAR LEFT AND RIGHT OF STRUCTURE SUM-619-0081 WITH ITEM 613, LOW STRENGTH MORTAR BACKFILL AND ITEM 601, CONCRETE SLOPE PROTECTION.

PLACE THE LOW STRENGTH MORTAR BACKFILL TO FILL ALL EROSION UNDER THE OLD CONCRETE SLOPE PROTECTION AND THEN PLACE NEW CONCRETE SLOPE PROTECTION SLABS PER CMS 601.07 AS DIRECTED BY THE PROJECT ENGINEER.

CONCRETE SLOPE PROTECTION REPLACEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601, CONCRETE SLOPE PROTECTION AND ITEM 613, LOW STRENGTH MORTAR BACKFILL. REMOVAL OF EXISTING CONCRETE SLOPE PROTECTION WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202, CONCRETE SLOPE PROTECTION REMOVED. THE PRICE FOR EACH ITEM WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

**TOWPATH TRAIL AVOIDANCE - SUM-619-0081**

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT OR RESTRICT ACCESS TO THE TOWPATH TRAIL UNDER THE SUM-619-0081 BRIDGE. THE CONTRACTOR SHALL NOT STORE OR STAGE CONSTRUCTION EQUIPMENT OR MATERIALS WITHIN THE TOWPATH TRAIL BOUNDARIES.

**STRUCTURE IDENTIFICATION SIGNS**

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

SUM-76-0615 (2 APPROACH)  
SUM-619-0012 (2 APPROACH)  
SUM-619-0081 (2 APPROACH)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT  
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT  
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH  
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

**CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:**

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

STRUCTURE SUM-619-0012 (SFN:7711026) THE EXISTING SIGN SHOWS 0015. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0012.

STRUCTURE SUM-619-0081 (SFN:7711034) THE EXISTING SIGN SHOWS 0077. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0081.

DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING & ENGINEERING	
DATE 04/17/18	STRUCTURE FILE NUMBER
REVIEWED MAC	CMR
DRAWN CMR	REVISOR CMR
DESIGNED CMR	CHECKED MAC
<b>STRUCTURE GENERAL NOTES</b> SUM-76-0615, SUM-76-0657, SUM-277-0133, SUM-619-0012, SUM-619-0081 UNDER 27TH STREET, OVER SUM-IR 277-0.17, OVER SR-93 MANCHESTER ROAD, OVER MUD RUN, OVER TUS R CSXT & ABC RR	
<b>SUM-619 / 76 - VAR</b> PID No. 98482	
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CALC: CMR DATE: 6/19/2018  
 CHECKED: DATE:

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
SUM-76-0615 770581 06/IMS/BR								201	11000		CLEARING AND GRUBBING	
								202	23500	SY	WEARING COURSE REMOVED	
		1485						202	32800	SY	CONCRETE SLOPE PROTECTION REMOVED	2/6
								202	30000	SF	WALK REMOVED	2/6
120												
								202	32000	FT	CURB REMOVED	2/6
50								407	20000	GAL	NON-TRACKING TACK COAT	
		224						424	12001	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, AS PER PLAN	1/6
								442	20051	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN	1/6
		71										
60								SPECIAL	45130000	FT	PRESSURE RELIEF JOINT, TYPE A	
347				60				512	10050	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
779				442	1820			512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
876				602				512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
				503	1720			512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
					28			513	95000	FT	STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE	1/6
					LUMP			514	00100		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
					LUMP			514	00200		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
					LUMP			514	00300		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
					LUMP			514	00400		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
					7			514	00504	MNHR	GRINDING FIN, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
					3			514	10000	EACH	FINAL INSPECTION REPAIR	
445								514	27710	FT	FIELD PAINTING, MISC.: CURB PLATES	
					20			516	45305	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	2/6
					LUMP			516	47001		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	2/6
					34			518	12500	EACH	SCUPPER, MISC.:CLEANOUT	2/6
150				100	200			519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	2/6
10	6			7	57			519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
					100			SPECIAL	53000800	SY	STRUCTURES CONCRETE SPALL REMOVAL	2/6
					89			601	21000	SY	CONCRETE SLOPE PROTECTION	2/6
120								608	13000	SF	6" CONCRETE WALK	2/6
50								609	28000	FT	CURB, TYPE 7	2/6
					1			613	41200	CY	LOW STRENGTH MORTAR BACKFILL	
15				15	15			630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
2				2	2			630	80100	SF	SIGN, FLAT SHEET, 730.20	
2				2	2			630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
2				2	2			630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
50				50				843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	
		46						846	00110	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
		73			202			856	10000	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE	

DESIGN AGENCY: ODOT --- DISTRICT 4  
 PLANNING & ENGINEERING

REVIEWED: DATE: 04/17/18  
 MAC STRUCTURE FILE NUMBER

DRAWN: CMR  
 REVISED: CMR

DESIGNED: CMR  
 CHECKED: MAC

STRUCTURE ESTIMATED QUANTITIES  
 SUM-76-0615, SUM-76-0657, SUM-619-0012, SUM-619-0081  
 UNDER 27TH STREET, OVER SUM-TR 277-0.17, OVER SR-93 MANCHESTER ROAD,  
 OVER MUD RUN, OVER TUS R CSXT & ABC RR

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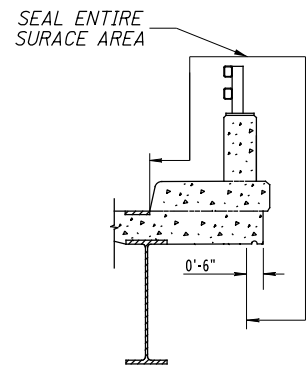
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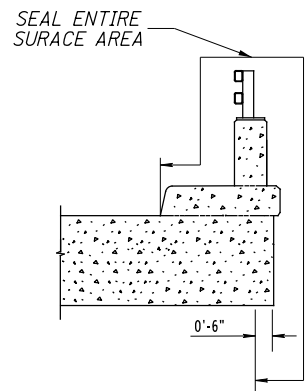




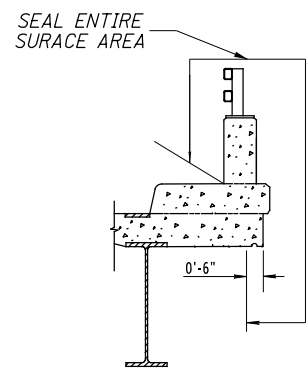
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**DETAIL A**  
CONCRETE DECKS WITH CURBS,  
SIDEWALKS AND PARAPET



**DETAIL B**  
REINFORCED CONCRETE SLAB DECK  
WITH CURBS, SIDEWALKS AND PARAPET



**DETAIL C**  
CONCRETE DECKS WITH CURBS,  
SIDEWALKS AND PARAPET

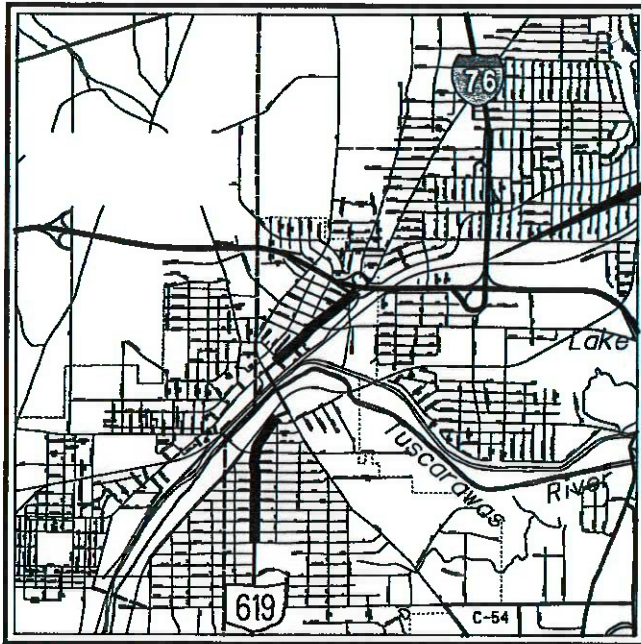
BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
				ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
SUM-76-0615	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL A SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS SEAL SIDEWALK WITH NON-EPOXY	PER CMS	98	314	673	41	1126
SUM-619-0012	SINGLE SPAN CONTINUOUS REINFORCED CONCRETE SLAB	SEAL PARAPETS PER DETAIL B SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL SIDEWALK WITH NON-EPOXY	PER CMS	269		134	99	502
SUM-619-0081	11 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL C SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL SPALLED AREAS	PER CMS	197		1440	183	1820

DESIGN AGENCY: ODOT --- DISTRICT 4  
 DATE: 04/17/18  
 STRUCTURE FILE NUMBER:   
 DESIGNER: CMR  
 CHECKED: MAC  
 DRAWN: CMR  
 REVISED: CMR  
 REVIEWED: MAC  
**STRUCTURE DETAILS**  
 SUM-76-0615, SUM-76-0657, SUM-76-0672, SUM-619-0012, SUM-619-0081  
 UNDER 27TH STREET, OVER SUM-1R 277-0.17, OVER CSX RR,  
 OVER MUD RUN, OVER TUS R CSXT & ABC RR  
**SUM-619 / 76-VAR**  
 PID No. 98482  
 6/6

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**PROJECT DESCRIPTION**

PART 3 PROJECT CONSISTS OF THE REMOVAL AND REPLACEMENT OF THE EXISTING BACKWALLS AND APPROACH SLABS. PROJECT ALSO INCLUDES INCIDENTAL DRAINAGE, TRAFFIC CONTROL, AND PAVEMENT WORK.



**SUM-76-6.72 PART 3**

FOR PART 2 SEE SUM-619/76-VAR  
FOR PART 1 SEE SUM-76-5.53

**CITY OF AKRON  
SUMMIT COUNTY**

PROJECT EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)

**LIMITED ACCESS**

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

**2016 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 REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET , AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS.

**LOCATION MAP**

LATITUDE: 41°01'40" LONGITUDE: 81°35'15"

SCALE IN MILES



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

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**DESIGN DESIGNATION**

DESIGN FUNCTIONAL CLASSIFICATION:  
URBAN INTERSTATE  
NHS PROJECT ..... YES

**DESIGN EXCEPTIONS**

NONE

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection Service  
Call Before You Dig  
1-800-362-2764  
(Non-members must be called directly)

OIL & GAS PRODUCERS  
UNDERGROUND PROTECTION SERVICE  
1-800-925-0988

PLAN PREPARED BY:  
ODOT DISTRICT 4, PLANNING & ENGINEERING  
2088 S. ARLINGTON ROAD  
AKRON, OH 44306

&  
RICHLAND ENGINEERING LIMITED  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

**STRUCTURES ONLY ENGINEERS SEAL:**

SIGNED: Patrick Schwan  
DATE: 11-29-18

**ENGINEERS SEAL:**

SIGNED: Michael Simpson  
DATE: 11-29-18

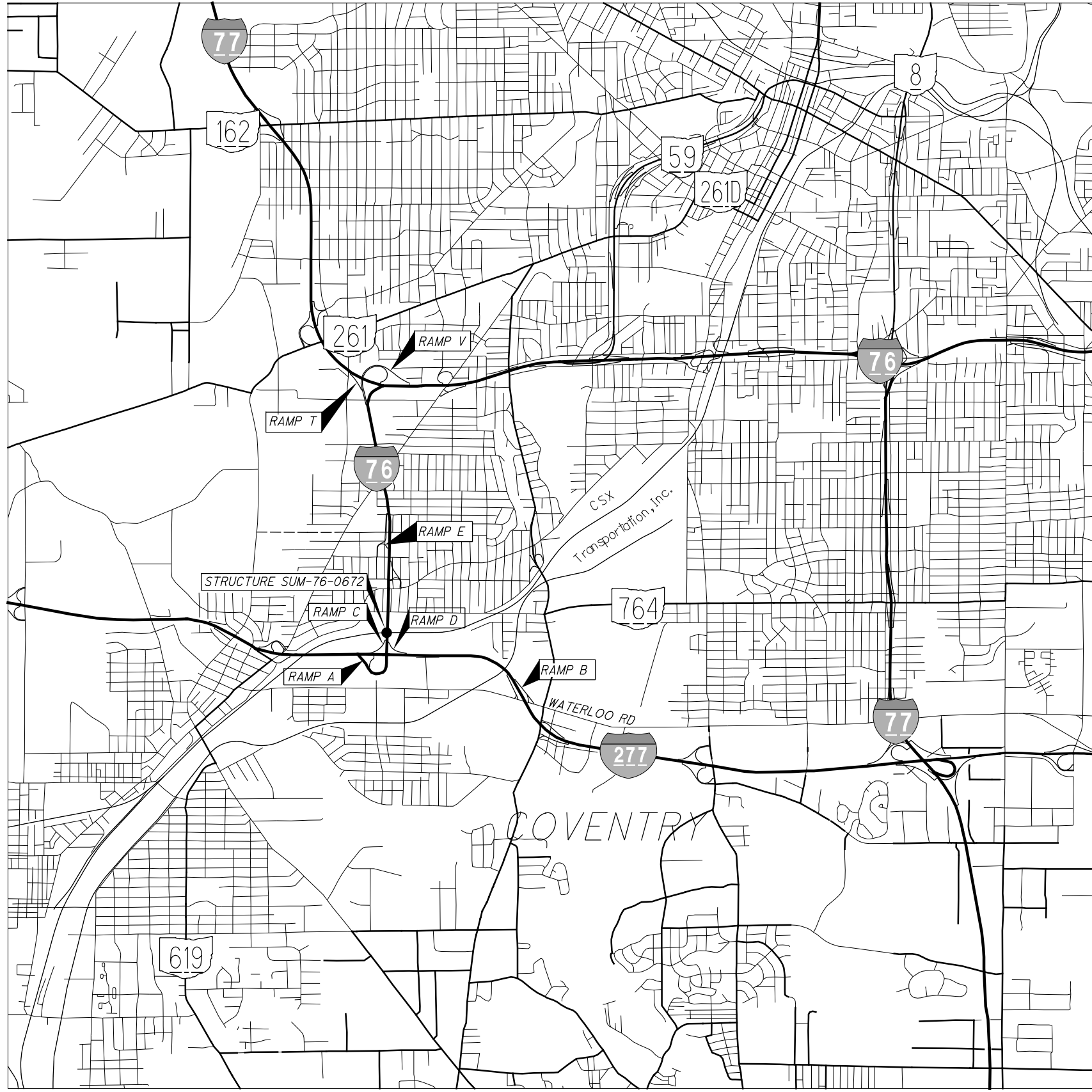
STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
				SEE PART 1	SEE PART 1
			SEE PART 1		

APPROVED \_\_\_\_\_  
DATE 11/29/18 DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

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FEDERAL PROJECT NO. <b>E150(345)</b>
PID NO. <b>96670</b>
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT <b>CSX</b>
<b>AKRON BARBERTON CLUSTER</b>
<b>SUM-76-6.72</b>
<b>1</b> 85



**SCHEMATIC PLAN**

**SUM - 76 - 6.72**

**UTILITIES**

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)  
OGPUPS 1-800-925-0988  
ODOT 330-786-2267 MICHELLE CHANEY

AKRON ENGINEERING BUREAU ENVIRONMENTAL DIVISION S. HIGH ST., ROOM 701 330-375-2495 ATTN: MICHELLE DIFIORE  
DOMINION ENERGY OHIO 320 SPRINGSIDE DRIVE, SUITE 320 AKRON, OHIO 44333 330-664-2409 ATTN: KEVIN BERT

AKRON ENGINEERING BUREAU TRAFFIC ENGINEERING DIVISION 1420 TRIPLET BLVD. #2 AKRON, OHIO 44306 330-375-2861 ATTN: MICHAEL LUPICA  
DOMINION ENERGY OHIO 320 SPRINGSIDE DRIVE, SUITE 320 AKRON, OHIO 44333 330-664-2409 ATTN: KEVIN BERT

OHIO EDISON 1910 W. MARKET STREET AKRON, OHIO 44313 330-436-4055 ATTN: DAVE MILLER  
AT&T OHIO 50 W. BOWERY ST. AKRON, OHIO 44308 330-384-8057 ATTN: SABRENA LAMPLEY-TALBERT

AT&T TRANSMISSION THAYER POWER AND COMM. LINE CONSTRUCTION CO., LLC 950 FREEWAY DRIVE N. COLUMBUS, OHIO 43229 614-431-9292 ATTN: CHRIS McCLESKY  
SPRINT NEXTEL 11370 ENTERPRISE PARK DR. SHERONVILLE, OHIO 45271 513-459-5796 ATTN: STEVEN HUGHES  
CHARTER COMMUNICATIONS 5520 WHIPPLE AVE. N.W. NORTH CANTON, OHIO 44720 330-494-9200 ATTN: STEVE WEAVER

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

**630 OVERHEAD SIGN SUPPORT, INSTALLATION ONLY, AS PER PLAN**

THE OVERHEAD SIGN SUPPORT SHOWN ON SHEET 30 HAS BEEN PRE-ORDERED (SEE PART SHEET 33 FOR THE PLAN VIEW) . THE CONTRACTOR SHALL CONTACT NICK KRATSAS (330)-786-3158 TO ARRANGE A MUTUAL TIME FOR THE CONTRACTOR TO PICK UP THE OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8. EXISITING SIGNS ON EXISITING TRUSS SHALL BE STORED AND RE-ERECTED. THE SIGNS SHALL BE STORED AND THE TRUSS CAN BE PICKED PICKED UP AT THE ODOT KELLY AVE. OUTPOST LOCATED AT:

1240 STARLIGHT DR., AKRON, OHIO 44308

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

ITEM 630 OVERHEAD SIGN SUPPORT, INSTALLATION ONLY, AS PER PLAN 1 EACH

**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.

**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, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7 AM AND 8 PM. 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.

**ITEM 304 - AGGREGATE BASE, AS PER PLAN**

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

**ITEM 642 TRAFFIC PAINT**

THE FOLLOWING QUANTITIES ARE PROVIDED TO REPLACE PAVEMENT MARKING LAYOUT TO WHICH THEY WERE PRIOR TO STARTING CONSTRUCTION:

642 TRANSVERSE LINES, 12"	1631 FT.
642 EDGE LINE, 6"	0.16 MILE
642 LANE LINE, 6"	1.84 MILE
642 CHEVRON MARKING, 6"	254 FT
642 CHANELIZING LINE, 12"	350 FT.

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RGS

**GENERAL NOTES**

**SUM - 76 - 6.72**

**MAINTENANCE OF TRAFFIC**

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

1. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
2. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.
3. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

**TRAFFIC CONTROL INSPECTOR**

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC CONTROL DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

**ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (I-76 RAMPS: A, D, V AND T)**

THE KENMORE LEG (I-76 FROM SLM 6.31 TO SLM 8.58) NORTH AND SOUTH BOUND SHALL BE CLOSED SEPERATELY IN ORDER COMPLETE ALL WORK ON STRUCTURE SUM-76-0672.

DURING THE DETAILED PHASES BELOW I-277 WESTBOUND UNDER THE KENMORE LEG SHALL BE BE INCREASED TO TWO LANES, AND RAMP C (I-76 WEST TO I-76 WEST) SHALL BE REDUCED TO ONE LANE.

**PHASE 1: SINGLE NIGHT CLOSURE OF KENMORE LEG NORTHBOUND**

THE NORTHBOUND RAMP A AND RAMP D ON KENMORE LEG SHALL BE CLOSED SIMULTANEOUSLY FOR A PERIOD NOT TO EXCEED 1 NIGHT (8PM-5AM DAILY) IN ORDER TO INSTALL BARRIER WALL, DRUMS, TEMPORARY SIGNING AND STRIPING ON THE KENMORE LEG NORTHBOUND AS SHOWN ON SHEET 23 OF PHASE 2. RAMPS A AND D SHALL BE DETOURED USING PORTABLE CHANGEABLE MESSAGE BOARDS USING MESSAGES PROVIDED BY THE PROJECT ENGINEER.

**PHASE 2: SOUTHBOUND KENMORE LEG CLOSURE**

RAMP V (I-76 WEST/I-77 NORTH TO I-76 WEST), RAMP T (I-77 SOUTH TO I-76 WEST) and RAMP E (22ND ST TO I-76 WEST) SHALL BE CLOSED SIMULTANEOUSLY FOR A PERIOD NOT TO EXCEED 45 CONSECUTIVE CALENDAR DAYS TO COMPLETE ALL WORK ON STRUCTURE SUM-76-0672 ON THE SOUTHBOUND DIRECTION OF THE KENMORE LEG, INSTALL THE SIDE SLOPE TRUSS FOUNDATION, REMOVE EXISTING OVERHEAD SIGN, AND SET THE SOUTHBOUND DIRECTION INTO PHASE AS SHOWN ON SHEET 23. RAMPS V AND T SHALL BE DETOURED AS SHOWN ON SHEETS 7-14. RAMP E SHALL BE DETOURED AS SHOWN ON SHEET 15. TRAFFIC IN THIS PHASE SHALL BE MAINTAINED AS SHOWN ON SHEETS 7-16.

RAMPS V AND T SHALL NOT BE CLOSED SIMULTANEOUSLY WITH RAMPS A AND D.

**PHASE 3: NORTHBOUND KENMORE LEG CLOSURE**

RAMP A (I-76 EAST TO I-76 EAST), RAMP D (I-227 WEST TO I-76 WEST), AND RAMP B (WATERLOO RD TO I-277 WEST) SHALL BE CLOSED SIMULTANEOUSLY FOR A PERIOD NOT TO EXCEED 45 CONSECUTIVE DAYS IN ORDER TO COMPLETE ALL WORK IN THE NORTHBOUND DIRECTION ON STRUCTURE SUM-76-0672. TRAFFIC IN THIS PHASE SHALL BE MAINTAINED AS SHOWN ON SHEETS 17-22. RAMP A AND D SHALL BE CLOSED TO TRAFFIC AND DETOURED AS SHOWN ON SHEETS 17-21. RAMP B SHALL BE CLOSED TO TRAFFIC AND DETOURED AS SHOWN ON SHEET 22. AFTER THE 45 CONSECUTIVE CALENDAR DAY CLOSURES RAMPS A AND D SHALL REOPEN TO TRAFFIC WITH THE CONFIGURATION SHOWN ON SHEETS 24-27 OF PHASE 3.

RAMPS A, B AND D SHALL NOT BE CLOSED CONCURRENTLY WITH RAMPS V AND T.

**ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (I-76 RAMPS: A, D, V AND T) (CONT'D)**

PHASE 4: REMOVAL OF SOUTHBOUND KENMORE LEG MOT

RAMPS T (I-77 SOUTH TO I-277 EAST), RAMP V (I-76 WEST TO I-76 WEST), AND RAMP E MAY BE CLOSED SIMULTANEOUSLY FOR A PERIOD NOT TO EXCEED 1 NIGHT (8PM-5AM NIGHTLY) IN ORDER TO RETURN THE SOUTHBOUND SIDE TO ITS NORMAL CONFIGURATION AND FOR THE OVERHEAD SIGN INSTALLATION. RAMPS T AND V SHALL BE DETOURED USING PORTABLE CHANGEABLE MESSAGE BOARDS USING MESSAGES PROVIDED BY THE PROJECT ENGINEER.

AT THE END OF THIS PHASE THE CONTRACTOR SHALL ERECT TWO SEPERATE PORTABLE CHANGEABLE MESSAGE BOARDS WITH THE MESSAGE "1. NEW TRAFFIC PATTERN, 2. I76 WEST LEFT LANE ONLY". THE SIGNS SHALL BE ON FOR SEVEN CONSECUTIVE DAYS AFTER TRAFFIC IS RETURNED TO ITS NORMAL PATTERN.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE ABOVE REQUIREMENTS, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$5000 PER CALENDAR DAY THAT ANY RAMP REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

**COOPERATION BETWEEN CONTRACTORS**

THE CONTRACTOR SHALL BE ADVISED THAT PROJECTS SUM/MED-76-0.00/11.43 (PID 93501) AND SUM-76-10.00 (MAIN/BRDWAY) (PID 77269) MAY BE ONGOING IN AN AREA IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECTS. IN ACCORDANCE WITH 105.08, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECIEVE DAILY APPROVALS FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA, OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

**INTERIM COMPLETION**

ALL WORK SHALL BE COMPLETED BY OCTOBER 30, 2019. THIS DATE WILL BE CONSIDERED AN INTERIM COMPLETION DATE AND DISINCENTIVES OF \$5,000 SHALL BE ASSESSED FOR EACH CALENDER DAY THE WORK IS NOT COMPLETED.

**ITS MESSAGE BOARDS**

THE EXISTING ITS MESSAGE BOARDS IN THE VICINITY OF THE PROJECT WILL BE UTILIZED TO PROVIDE SUPPLEMENTAL INFORMATION TO THE TRAVELING PUBLIC. THE CONTRACTOR WILL NOTIFY THE PROJECT ENGINEER ONE (1) WEEK IN ADVANCE OF THE CLOSURE OF RAMPS A,D, V AND T. THE PROJECT ENGINEER WILL COORDINATE WITH BRENT KOVACS AT 330-786-2208 TO GET THE ITS MESSAGE BOARDS ADJUSTED.

**DETOUR NOTIFICATION [ODOT/ CITY OF AKRON]**

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) AND THE CITY OF AKRON (330-375-2079) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

**ITEM 614, MAINTAINING TRAFFIC (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.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
ROAD & RAMP	>= 2WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
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.

WILL BE  
 CLOSED  
 FOR \_\_\_\_\_ DAYS  
 INFO: (330)-786-2208

W20-H13-60

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CALCULATED  
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**MAINTENANCE OF TRAFFIC**

**SUM-76-6.72**

**WORK ZONE PHASE 2 AND 3 QUANTITIES**

ALL EXISTING CONFLICTING PAVEMENT MARKINGS IN PHASE 2 AND PHASE 3 SHALL BE REMOVED OR COVERED PER 614.11G AND BE INCLUDED IN THE LUMP SUM BID ITEM FOR ITEM 614, MAINTAINING TRAFFIC EXCEPT THE CONFLICTING CHEVRON AND TRANSVERSE MARKINGS ON I-277 WESTBOUND. THE TRANSVERSE AND CHEVRON MARKINGS SHALL BE REMOVED AND PAID FOR UNDER THE BID ITEM 642, REMOVAL OF PAVEMENT MARKING.

THE FOLLOWING ITEMS HAVE BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL BE USED IN THEIR RESPECTIVE PHASE AS SHOWN ON SHEETS 24-27.

PHASE 2: KENMORE LEG SOUTHBOUND CLOSED  
 ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS I, 12", 775FT  
 ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6", 0.34 MILES  
 ITEM 614, BARRIER REFLECTORS, TYPE 1 (UNIDIRECTIONAL), 9 EACH  
 ITEM 614, OBJECT MARKERS, ONE-WAY, 9 EACH  
 ITEM 614, WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL) 1 EACH  
 ITEM 622, PORTABLE BARRIER, 32", 440 FT

PHASE 3: KENMORE LEG NORTHBOUND CLOSED  
 ITEM 614, WORK ZONE DOTTED LINE, CLASS I, 1985 FT  
 ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6", 1.50 MILE  
 ITEM 614, WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL) 1 EACH  
 ITEM 614, BARRIER REFLECTORS, TYPE 1 (UNIDIRECTIONAL), 7 EACH  
 ITEM 614, OBJECT MARKERS, ONE-WAY, 7 EACH  
 ITEM 622, PORTABLE BARRIER, 32", 330 FT  
 ITEM 642, REMOVAL OF PAVEMENT MARKER, 1885 FT

**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 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.

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

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD & RAMP 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	2 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

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

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

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

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

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

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

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

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

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

**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.

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

**APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTIONS**

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE BEEN APPROVED BY THE PROJECT IMPACT ADVISORY COUNCIL (PIAC) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND THE STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTIONS INCLUDE:  
 45 CONSECUTIVE DAY CLOSURE OF RAMP V AND T CONCURRENTLY  
 45 CONSECUTIVE DAY CLOSURE OF RAMP A AND D CONCURRENTLY

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF [ 30 ] CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE DISTRICT WORK ZONE TRAFFIC MANAGER AND THE CITY OF AKRON AS WELL AS THE CONTRACTOR, WORKSITE TRAFFIC SUPERVISOR (WTS) AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE SO THAT THE PROJECT ENGINEER CAN SEND EMAIL NOTIFICATION TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE. REFERENCE "EXCEPTION REQUEST APPROVAL DATED [11-7-2018 ] FOR PID 96670" IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTIONS LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE (MOTEC OR PIAC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO DESIRED IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

**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.

WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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

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

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 50 HOURS

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

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

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN**

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

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

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

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

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

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

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 9 SIGN MONTH

ASSUMING 9 PCMS SIGNS FOR 1 MONTHS

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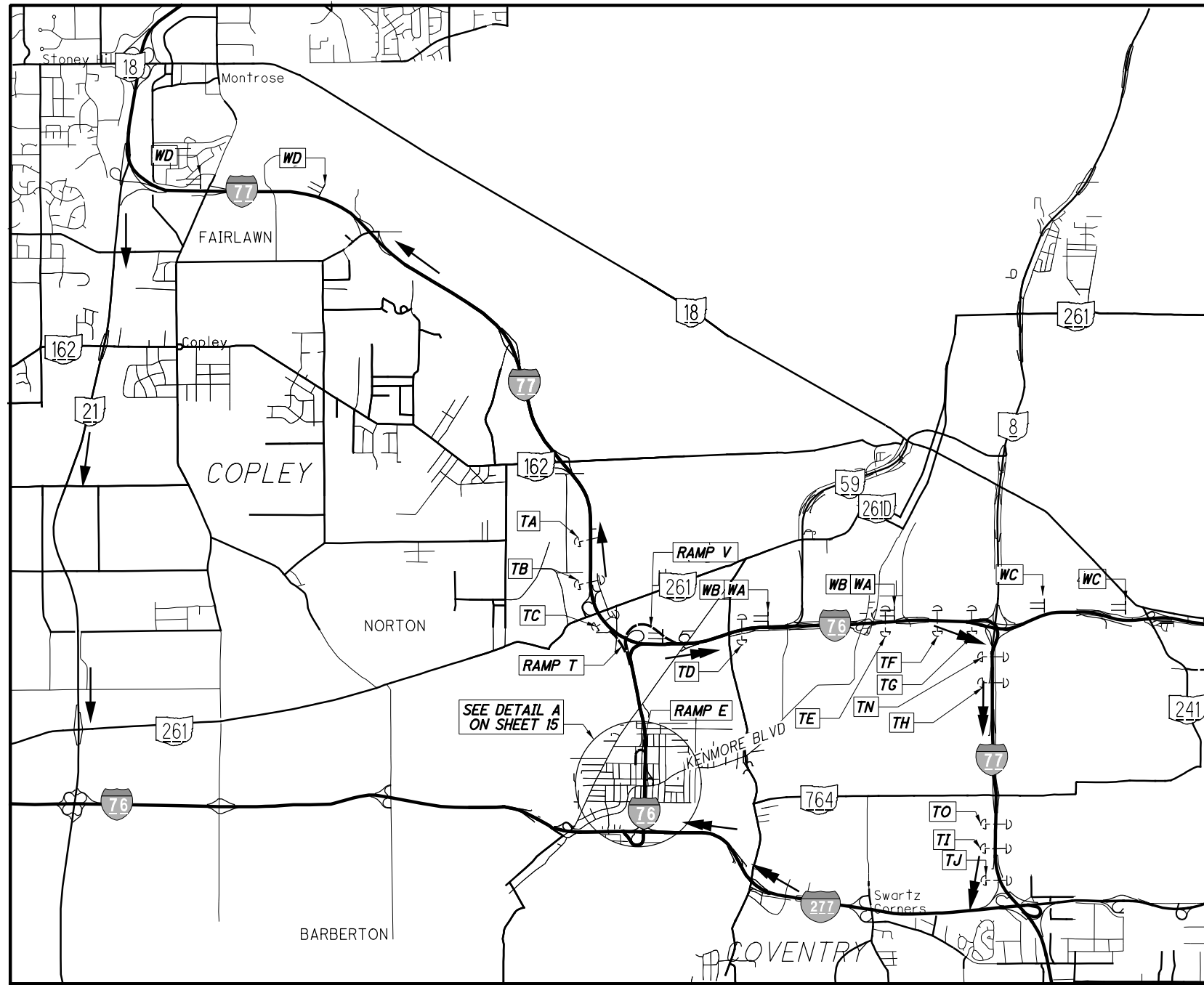
MAINTENANCE OF TRAFFIC

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8.5



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DETOUR PLAN FOR SUM-76 WESTBOUND  
 RAMP V (I-76 WESTBOUND TO I-76 WESTBOUND),  
 RAMP T (I-77 SOUTHBOUND TO I-76 WESTBOUND), AND  
 RAMP E (22ND ST TO I-76 WEST)



- CLOSE RAMPS V AND T PER STD. DWG. MT-98.29
- CLOSE RAMP A PER STD. DWG. MT-101.60
- OFFICIAL DETOUR ROUTE:
- ← RAMP V: I-77 NORTH / SR 21 SOUTH
- ← RAMP T: I-76 EAST / I-77 SOUTH / I-277 WEST

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

NOTE: RAMP T, V, AND E SHALL BE CLOSED SIMULTANEOUSLY

- WA** PORTABLE CHANGEABLE MESSAGE SIGN  
 - PLACE 7 DAYS PRIOR TO CLOSURE AT TWO LOCATIONS  
 MESSAGE: 1: 76 WEST TO 277 TO CLOSE  
 2) <DATES>
- WB** PORTABLE CHANGEABLE MESSAGE SIGN  
 MESSAGE: 1: 76 WEST TO 277 CLOSED  
 2) USE 77 NORTH
- WC** PORTABLE CHANGEABLE MESSAGE SIGN  
 MESSAGE: 1: 76 WEST TO 277 CLOSED  
 2) USE 77 SOUTH
- WD** PORTABLE CHANGEABLE MESSAGE SIGN  
 MESSAGE: 1: 76 WEST TO 277 CLOSED  
 2) USE 21 SOUTH

ALL PORTABLE CHANGEABLE MESSAGE SIGNS USED DURING CLOSURE SHALL BE REMOVED AFTER 7 CONSECUTIVE DAYS OF THE CLOSURE BEING IN PLACE.

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MAINTENANCE OF TRAFFIC DETOUR PLAN I-76 WB (RAMP T)

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**TA**

**EXIT 129**

WEST TO

~~CLOSED~~

W20-H15A-72

Canton

1 MILE

**EXIT 130**

261

Vernon Odom Blvd

3/4 MILE

**TB**

DETOUR  
M4-8-30  
WEST TO  
M3-4-36 M4-5-36  
INTERSTATE INTERSTATE  
76 277  
MI-1-36-2 MI-1-45-3

**EXIT 129**

EAST SOUTH

76 77

Akron

WEST TO

~~CLOSED~~

W20-H15A-72

Canton

EXIT ONLY

**EXIT 130**

261

Vernon Odom Blvd

**TC**

DETOUR  
M4-8-30  
WEST TO  
M3-4-36 M4-5-36  
INTERSTATE INTERSTATE  
76 277  
MI-1-36-2 MI-1-45-3

**EXIT 129**

EAST SOUTH

76 77

Akron

WEST TO

~~CLOSED~~

W20-H15A-72

Canton

EXIT ONLY

**TD**

DETOUR  
M4-8-30  
WEST TO  
M3-4-36 M4-5-36  
INTERSTATE INTERSTATE  
76 277  
MI-1-36-2 MI-1-45-3

**EXIT 21C**

EAST SOUTH

76 77

Youngstown Canton

**EXIT 21B**

59 EAST

Downtown

Lakeshore Blvd  
Bowery St

ONLY

**TE**

DETOUR  
M4-8-30  
WEST TO  
M3-4-36 M4-5-36  
INTERSTATE INTERSTATE  
76 277  
MI-1-36-2 MI-1-45-3

**EXIT 23A**

EAST SOUTH

76 77

Youngstown Canton

1 MILE

**TF**

DETOUR  
M4-8-30  
WEST TO  
M3-4-36 M4-5-36  
INTERSTATE INTERSTATE  
76 277  
MI-1-36-2 MI-1-45-3

**EXIT 23A**

EAST SOUTH

76 77

Youngstown Canton

EXIT ONLY

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MAINTENANCE OF TRAFFIC DETOUR PLAN I-76 WB (RAMP T)

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TG

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2  
TO  
M4-5-36  
INTERSTATE  
277  
MI-1-45-3

EXIT 23A

INTERSTATE 76 EAST  
Youngstown  
↓

INTERSTATE 77 SOUTH  
Canton  
ONLY

TJ

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

EXIT 122A

224 EAST  
Mogadore  
LEFT 1/2 MILE

EXIT 122B

INTERSTATE 277 224 WEST  
Barberton  
1/4 MILE

EXIT 123A

Waterloo Rd  
EXIT ONLY

TH

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2  
TO  
M4-5-36  
INTERSTATE  
277  
MI-1-45-3

INTERSTATE 77 SOUTH  
Canton  
↓

EXIT 124A

Archwood Ave  
Firestone Blvd N  
1/2 MILE

EXIT 124B

Lovers Lane  
Cole Ave

TK

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

INTERSTATE 77 SOUTH  
Akron - Canton  
↓

EXIT 136

21 SOUTH  
Massillon  
3/4 MILE

EXIT 137A

18 EAST  
Fairlawn  
EXIT ONLY

TI

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

EXIT 122A

224 EAST  
Mogadore  
LEFT 3/4 MILE

EXIT 122B

INTERSTATE 277 224 WEST  
Barberton  
1/2 MILE

EXIT 123A

Waterloo Rd  
EXIT ONLY

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

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TL



 SOUTH  
 Akron - Canton  
  

DETOUR  
 M4-8-30  
 WEST  
 M3-4-36  
  
 MI-1-36-2

EXIT 136  
 SOUTH  
 Massillon  
 EXIT  ONLY





TO

DETOUR  
 M4-8-30  
 WEST  
 M3-4-36  
  
 MI-1-36-2




EXITS 122A-B  
   
 Barberton  
 Mogadore  
 $\frac{3}{4}$  MILE

EXIT 123A  
 Waterloo Rd  
 $\frac{1}{2}$  MILE


TM


 SOUTH  
 Akron - Canton  
  



DETOUR  
 M4-8-30  
 WEST  
 M3-4-36  
  
 MI-1-36-2

EXIT 136  
 SOUTH  
 Massillon  
 

TN

DETOUR  
 M4-8-30  
 WEST  
 M3-4-36  
  
 MI-1-36-2

TO  
 M4-5-36  
  
 MI-1-45-3

 SOUTH  


EXIT 124B  
 Lovers Lane  
 Cole Ave  
 KEEP RIGHT

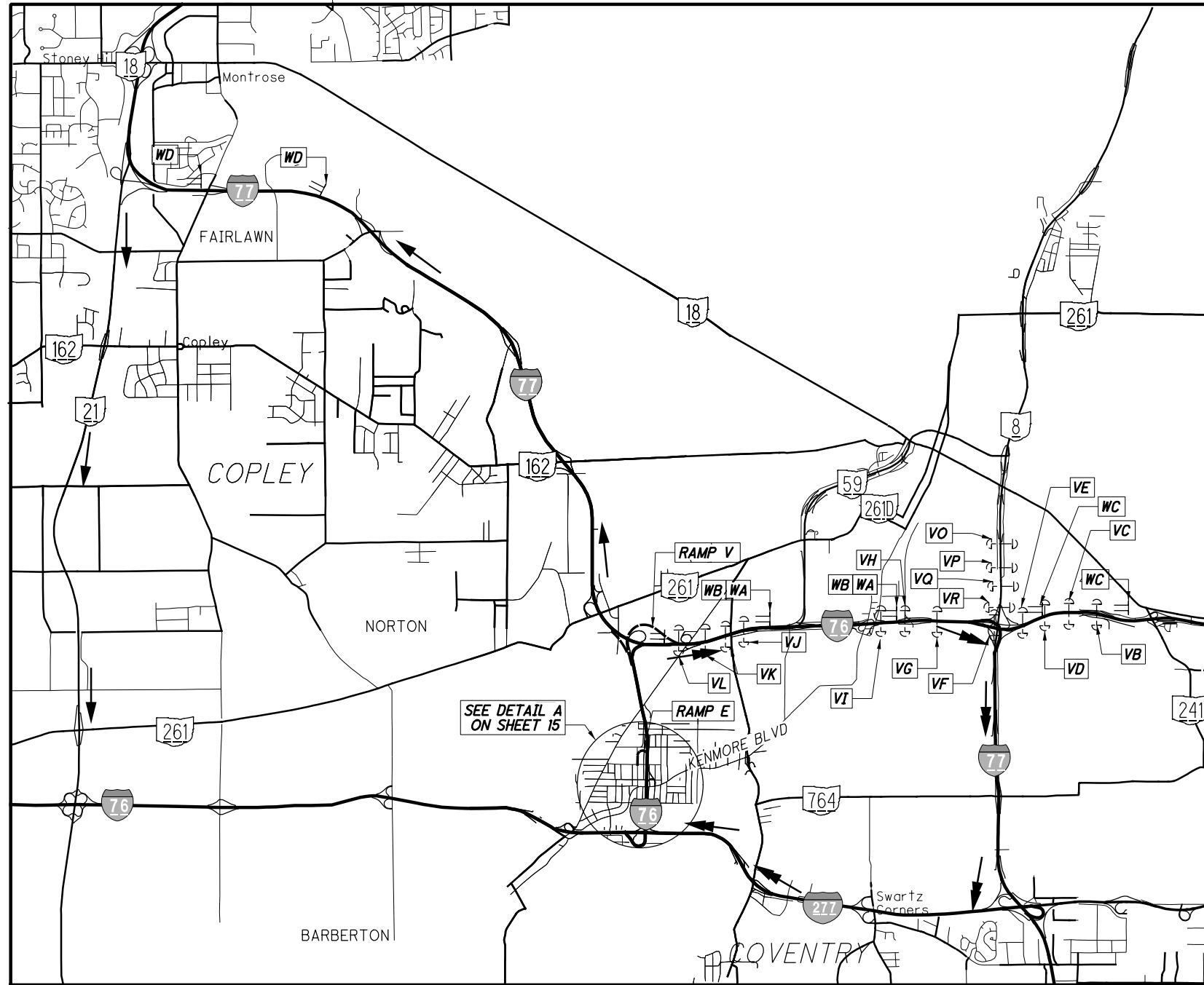
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MAINTENANCE OF TRAFFIC DETOUR PLAN I-76 WB (RAMP T)

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DETOUR PLAN FOR SUM-76 WESTBOUND  
 RAMP V (I-76 WESTBOUND TO I-76 WESTBOUND),  
 RAMP T (I-77 SOUTHBOUND TO I-76 WESTBOUND), AND  
 RAMP E (22ND ST TO I-76 WEST)

- CLOSE RAMP V AND T PER STD. DWG. MT-98.29
- CLOSE RAMP E PER STD. DWG. MT-101.60
- OFFICIAL DETOUR ROUTE:
- ← RAMP V: I-77 NORTH / SR 21 SOUTH
- ← RAMP T: I-76 EAST / I-77 SOUTH / I-277 WEST

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

NOTE: RAMP T, V, AND E SHALL BE CLOSED SIMULTANEOUSLY



NOT TO SCALE

CALCULATED  
 CNC  
 CHECKED  
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MAINTENANCE OF TRAFFIC DETOUR PLAN I-76 (WB RAMP V)

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 85

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VA

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

LEFT  
EXIT 23A

INTERSTATE  
77 SOUTH  
Canton  
LEFT 1 MILE

EXIT 24A  
Inman St  
Johnston St  
1/2 MILE

EXIT 24B  
Arlington St  
EXIT ONLY

VB

INTERSTATE  
76 WEST

INTERSTATE  
77 NORTH  
LEFT 2 LANES

EXIT 23B  
8 NORTH  
Cuyahoga Falls  
EXIT 1/2 MILE

EXIT 24A  
Inman St  
Johnston St  
EXIT ONLY

VC

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

LEFT  
EXIT 23A

INTERSTATE  
77 SOUTH  
Canton  
LEFT 1/2 MILE

EXIT 23B  
8 NORTH  
Cuyahoga Falls  
EXIT ONLY

EXIT 24A  
Inman St  
Johnston St  
EXIT ONLY

VD

EXIT 23B

INTERSTATE  
76 WEST

INTERSTATE  
77 NORTH  
LEFT 2 LANES

8 NORTH  
Cuyahoga Falls  
EXIT ONLY

VE

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

LEFT  
EXIT 23A

INTERSTATE  
77 SOUTH  
Canton  
LEFT 1/4 MILE

EXIT 23B  
8 NORTH  
Cuyahoga Falls  
EXIT ONLY

INTERSTATE  
76 WEST

INTERSTATE  
77 NORTH  
LEFT 2 LANES

VF

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

LEFT  
EXIT 23A

INTERSTATE  
77 SOUTH  
Canton

M6-2-30

CALCULATED  
CNC  
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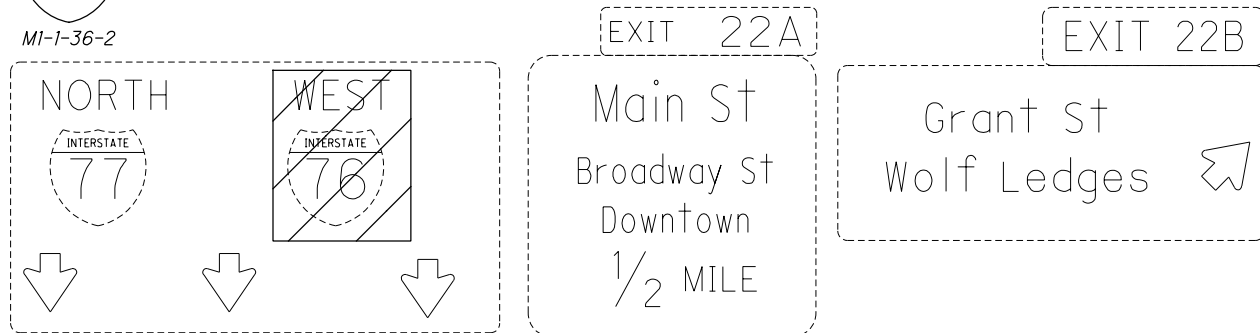
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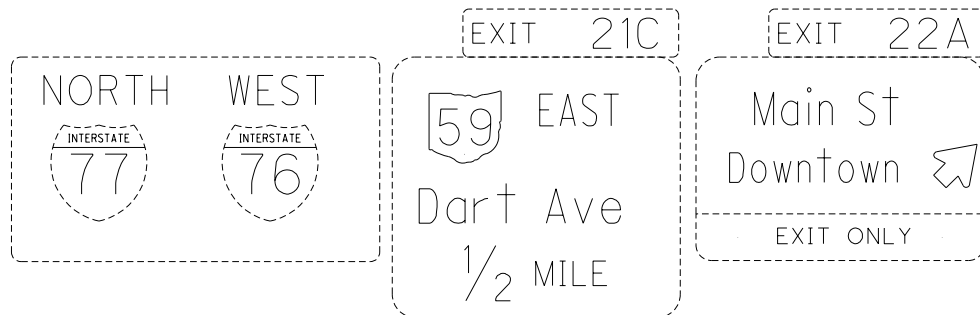
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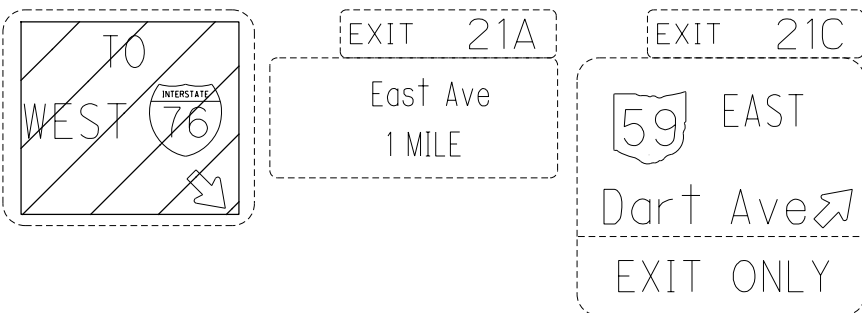
VG  
DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2



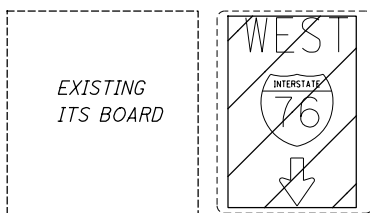
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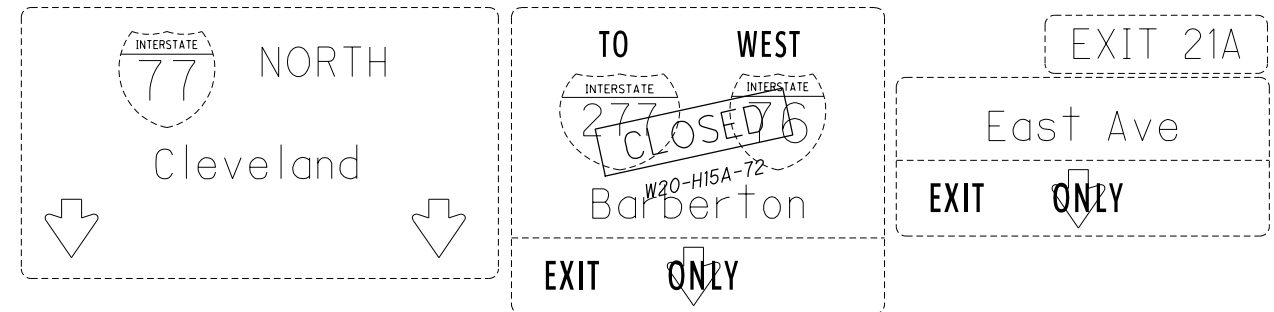
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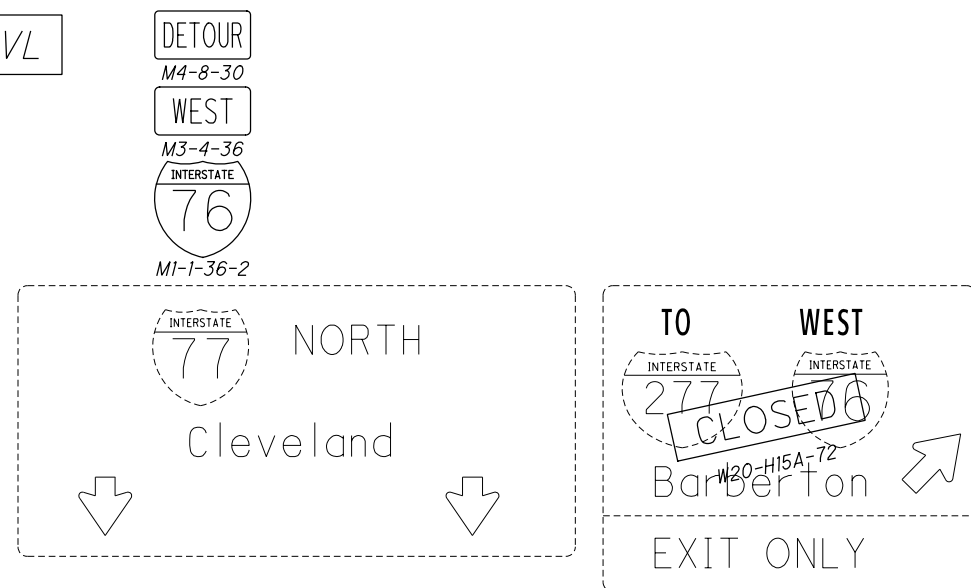
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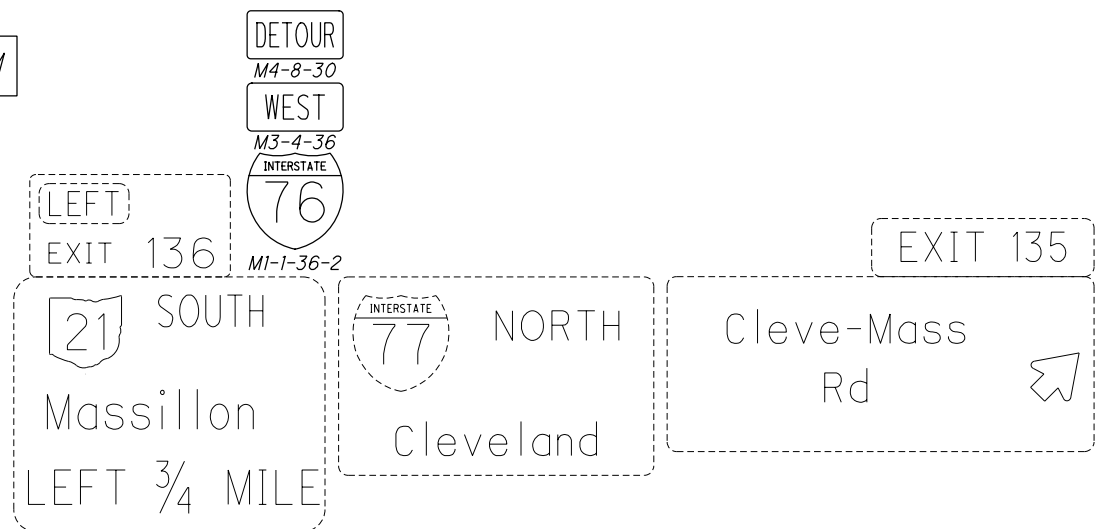
VK  
DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2



VL



VM



CALCULATED  
CNC  
CHECKED  
XXX

MAINTENANCE OF TRAFFIC DETOUR PLAN I-76 (WB RAMP V)

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VN

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

LEFT  
EXIT 136

21 SOUTH  
Massillon  
EXIT ONLY

INTERSTATE 77 NORTH  
Cleveland  
↓ ↓ ↓

VQ

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2

SOUTH END  
INTERSTATE 77 8  
Canton ↓

EAST  
INTERSTATE 76  
Youngstown  
EXIT ONLY

NORTH WEST  
INTERSTATE 77 76  
Barberton  
EXIT ONLY

VO

NORTH WEST  
INTERSTATE 77 76  
Barberton  
3/4 MILE

VR

INTERSTATE 76 EAST  
↓

INTERSTATE 77 NORTH WEST  
76 76

VP

DETOUR  
M4-8-30  
WEST  
M3-4-36  
INTERSTATE  
76  
MI-1-36-2



SOUTH  
INTERSTATE 77  
Canton  
↓ ↓

EAST  
INTERSTATE 76  
Youngstown  
↓

NORTH WEST  
INTERSTATE 77 76  
Barberton  
EXIT ONLY

VS

INTERSTATE 76 EXIT CLOSED  
E5-2A-48

CALCULATED  
CNC  
CHECKED  
XXX

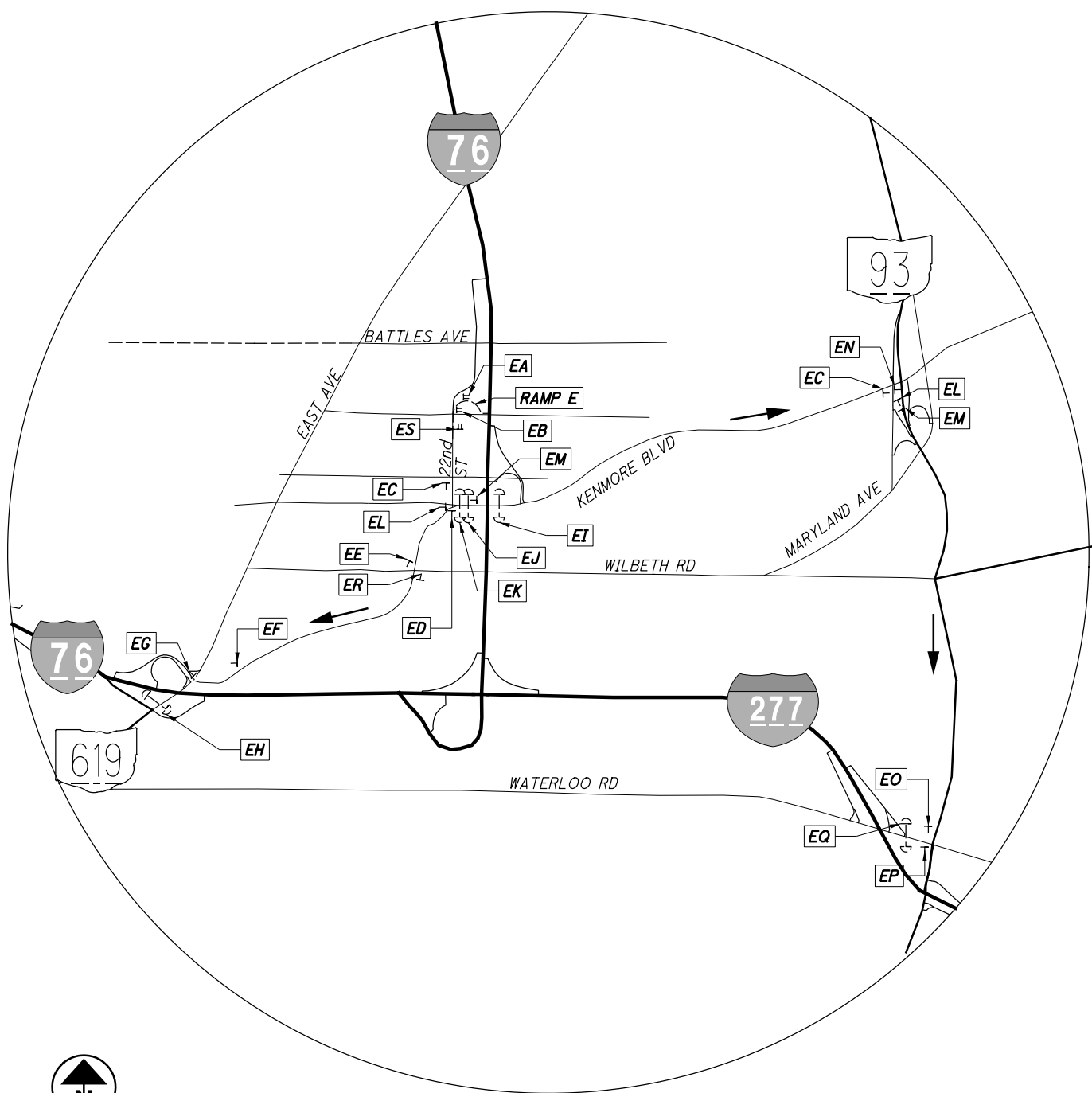
MAINTENANCE OF TRAFFIC DETOUR PLAN I-76 WB (RAMP V)

SUM-76-6.72

14  
85



I:\ProjectData\SUM\08812\_76-6.72\Design\Roadway\Sheets\08812\_MD001.dgn Sheet II DETAIL A RAMP E 2 11/30/2018 9:43:53 AM tsovizra



NOT TO SCALE

DETAIL A

**DETOUR PLAN FOR SUM-76, WESTBOUND,  
RAMP E (22nd ST TO IR-76 EAST)**

--- CLOSE RAMP AS PER STD. DWG. MT-101.60

← OFFICIAL DETOUR ROUTE:

EB KENMORE BLVD:

IR-76 WEST: KENMORE BLVD / SR-93 SOUTH / WATERLOO RD / IR-277 WEST  
IR-277 EAST: KENMORE BLVD / SR-93 SOUTH / WATERLOO RD

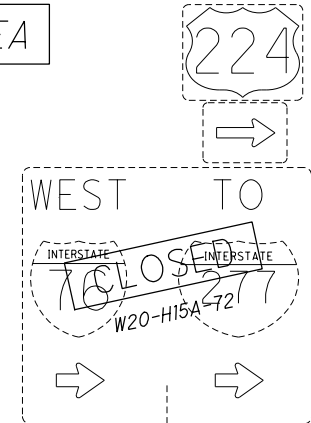
WB KENMORE BLVD:

IR-76 WEST: KENMORE BLVD  
IR-277 EAST: KENMORE BLVD / SR-619

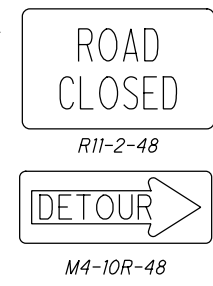
NOTE: RAMP E SHALL BE CLOSED CONCURRENTLY WITH RAMPS V AND T.

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

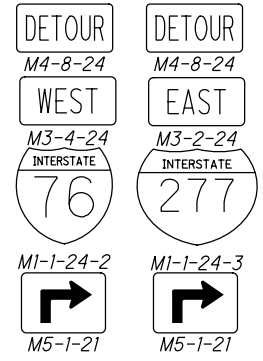
EA



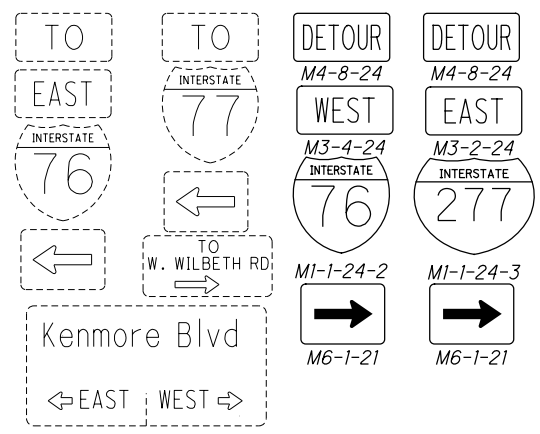
EB #



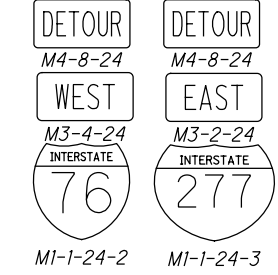
EC



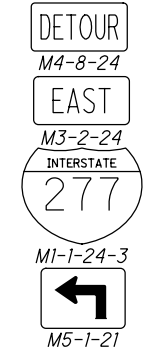
ED



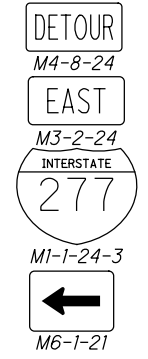
EE



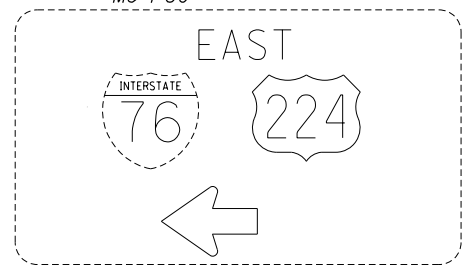
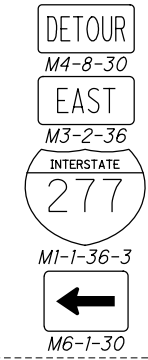
EF



EG



EH



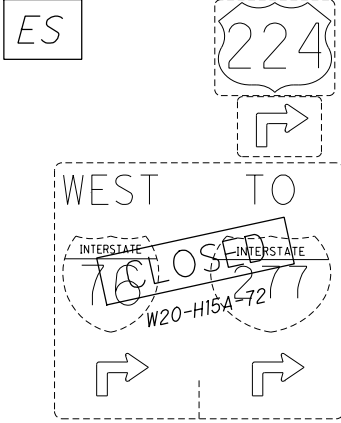
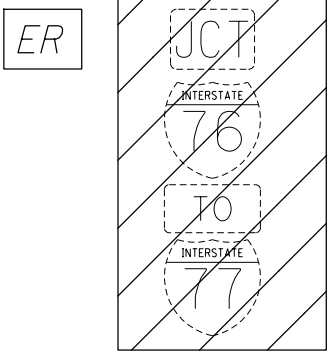
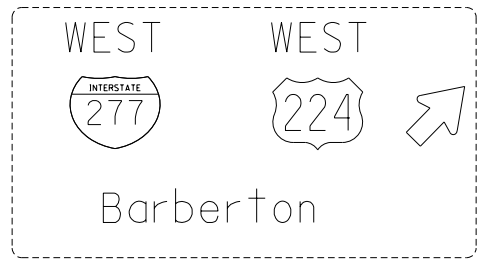
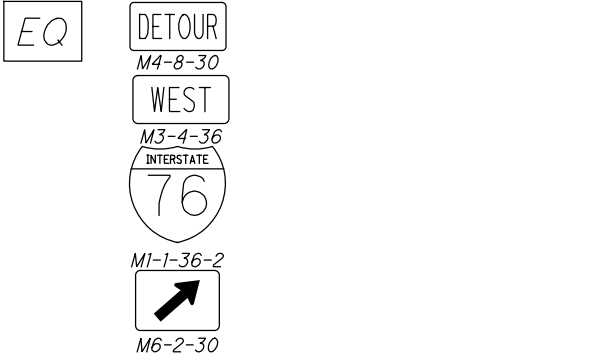
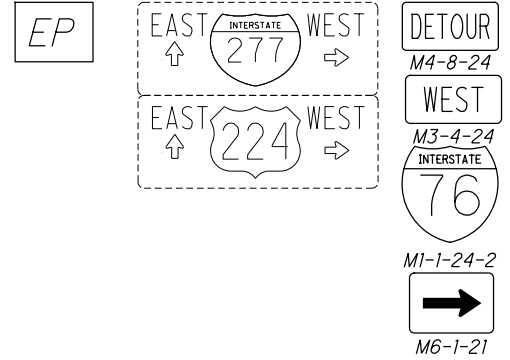
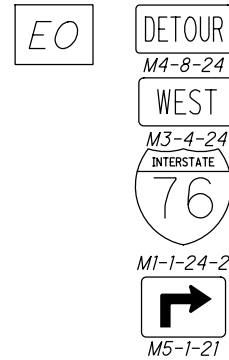
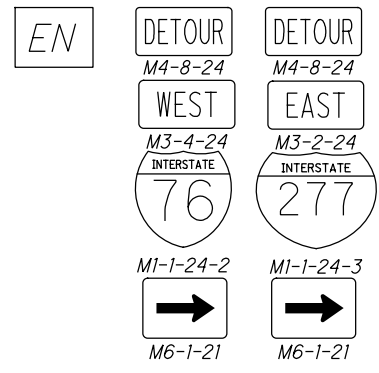
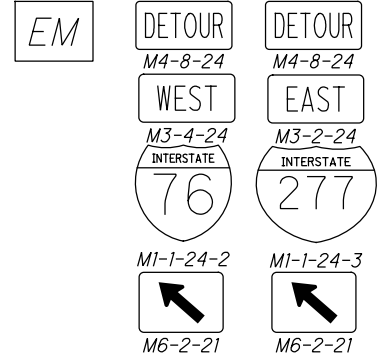
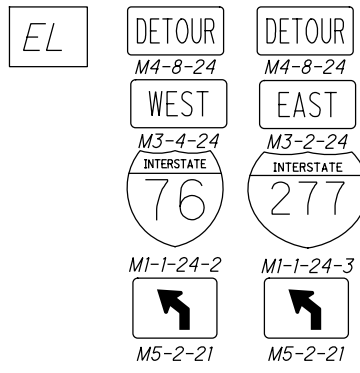
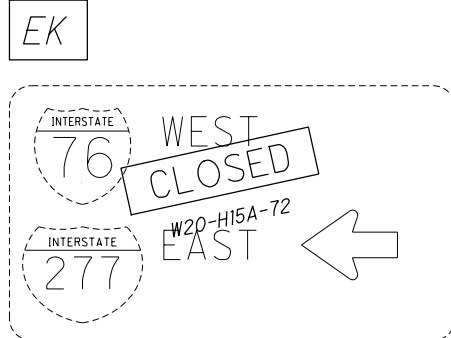
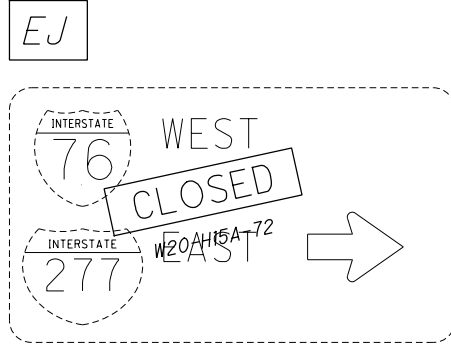
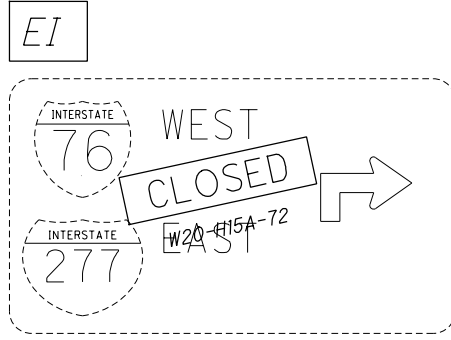
# ON TYPE III BARRICADE WITH TYPE B FLASHER MOUNTED PER MT 101.60

CALCULATED  
CNC  
CHECKED  
XXX

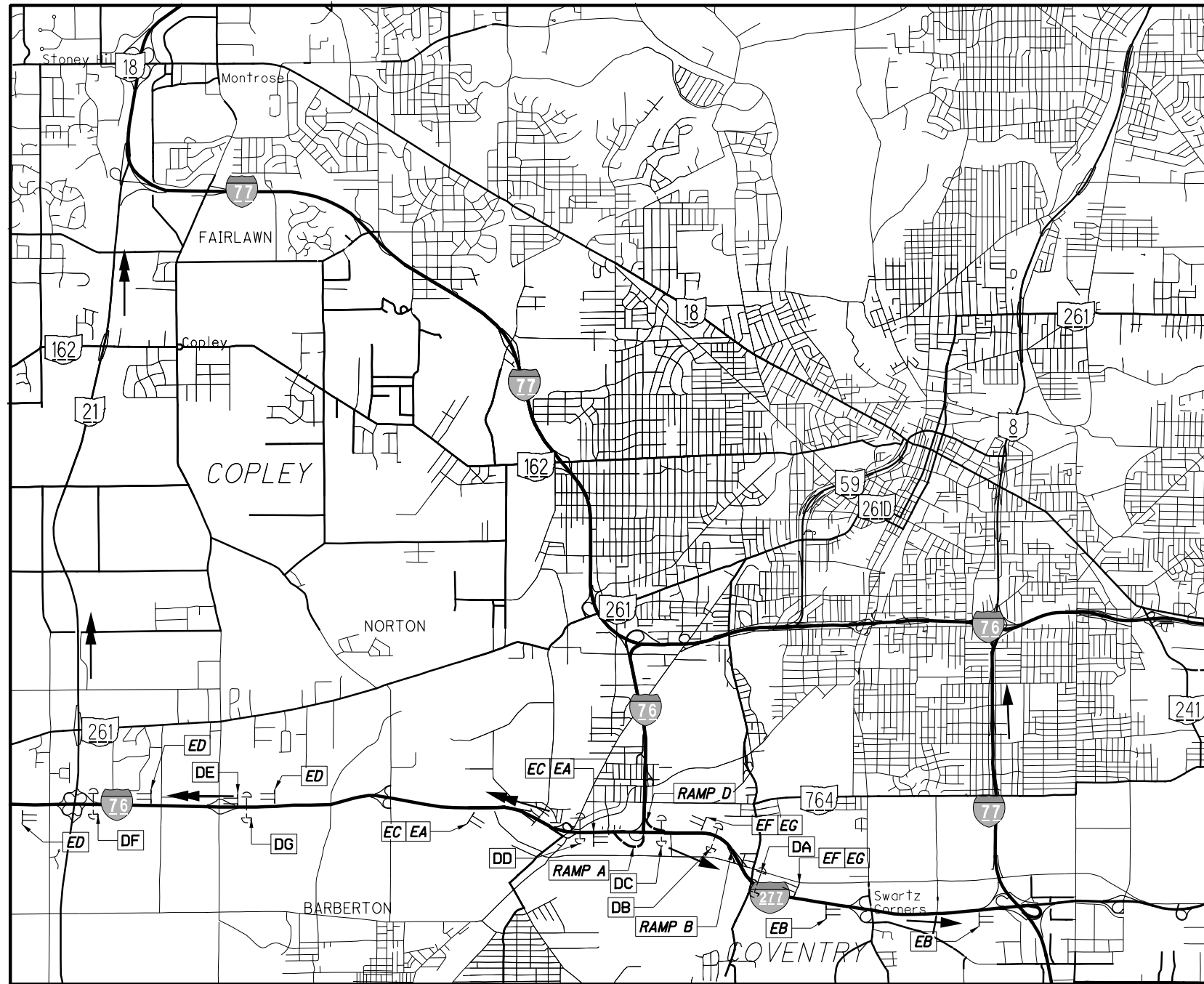
MAINTENANCE OF TRAFFIC DETOUR PLAN I-76 WB (RAMP E)

SUM-76-6.72

15  
85



I:\Project+Data\SUM\08812\_76-6.72\Design\Roadway\Sheets\08812\_MD002.dgn Sheet I Ramp D CLOSURE 11/30/2018 9:43:54 AM tsovizra



DETOUR PLAN FOR SUM-76, EASTBOUND,  
RAMP A (I-76 EASTBOUND TO I-76 EASTBOUND) AND  
RAMP D (I-277 WESTBOUND TO I-76 EASTBOUND)



NOT TO SCALE

--- CLOSE RAMP AS PER STD. DWG. MT-98.29

OFFICIAL DETOUR ROUTE:

← RAMP A:  
I-277 EAST / I-77 NORTH

← RAMP D:  
I-76 WEST / SR 21 NORTH

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC  
CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8),  
FOR SIGN SPACING.

NOTE: RAMP A, B AND D SHALL BE CLOSED SIMULTANEOUSLY

- EA** PORTABLE CHANGEABLE MESSAGE SIGN  
- PLACE 7 DAYS PRIOR TO CLOSURE  
AT TWO LOCATIONS  
  
MESSAGE: 1: 76 EAST  
TO AKRON  
TO CLOSE  
  
2) <DATES>
- EB** PORTABLE CHANGEABLE MESSAGE SIGN  
  
MESSAGE: 1: 76 EAST  
CLOSED  
  
2) USE  
77 NORTH
- EC** PORTABLE CHANGEABLE MESSAGE SIGN  
  
MESSAGE: 1: 76 EAST  
CLOSED  
  
2) USE  
277 EAST
- ED** PORTABLE CHANGEABLE MESSAGE SIGN  
  
MESSAGE: 1: 76 EAST  
TO 77N  
CLOSED  
  
2) USE  
21 NORTH
- EF** PORTABLE CHANGEABLE MESSAGE SIGN  
- PLACE 7 DAYS PRIOR TO CLOSURE  
AT TWO LOCATIONS  
  
MESSAGE: 1: 76 EAST  
TO 77N  
TO CLOSE  
  
2) <DATES>
- EG** PORTABLE CHANGEABLE MESSAGE SIGN  
  
MESSAGE: 1: 76 EAST  
TO 77N  
CLOSED  
  
2) USE  
76 WEST

ALL PORTABLE CHANGEABLE MESSAGE SIGNS USED DURING  
CLOSURE SHALL BE REMOVED AFTER 7 CONSECUTIVE DAYS  
OF THE CLOSURE BEING IN PLACE.

CALCULATED  
CNC  
CHECKED  
XXX

MAINTENANCE OF TRAFFIC DETOUR PLAN (RAMP D)

SUM-76-6.72

I:\ProjectData\SUM\08812\_76-6.72\Design\Roadway\Sheets\08812\_MD002.dgn Sheet 2 Ramp D SIGNS 11/30/2018 9:43:55 AM tsovizra

DA

DETOUR M4-8-30 M4-8-30  
TO TO  
M4-5-36 M4-5-36  
EAST NORTH  
M3-2-36 M3-1-36  
INTERSTATE INTERSTATE  
76 77  
MI-1-36-2 MI-1-36-2

WEST WEST  
76 224  
Barberton  
↓ ↓

EXIT 1  
EAST NORTH  
76 224  
Cleveland  
1/4 MILE  
↓

93  
Manchester Rd  
Waterloo Rd ↗

DB

DETOUR M4-8-30 M4-8-30  
TO TO  
M4-5-36 M4-5-36  
NORTH EAST  
M3-1-36 M3-2-36  
INTERSTATE INTERSTATE  
77 76  
MI-1-36-2 MI-1-36-2

76 224 WEST  
THRU TRAFFIC  
KEEP LEFT

EXIT 1  
EAST NORTH  
76 224  
Cleveland  
EXIT ONLY  
↓

DC

DETOUR M4-8-30 M4-8-30  
TO TO  
M4-5-36 M4-5-36  
NORTH EAST  
M3-1-36 M3-2-36  
INTERSTATE INTERSTATE  
77 76  
MI-1-36-2 MI-1-36-2

76 224 WEST  
BARBERTON  
↓ ↓

EXIT 1  
EAST NORTH  
76 224  
Cleveland  
EXIT ONLY ↗

DD

DETOUR TO  
M4-8-30 M4-5-36  
EAST NORTH  
M3-2-36 M3-1-36  
INTERSTATE INTERSTATE  
76 77  
MI-1-36-2 MI-1-36-2

76 224 WEST  
Lodi  
↓ ↓

EXIT 17  
619  
Barberton  
Wooster Rd ↗

DE

DETOUR M4-8-30  
TO M4-5-36  
EAST NORTH  
M3-2-36 M3-1-36  
INTERSTATE INTERSTATE  
76 77  
MI-1-36-2 MI-1-36-2  
EXIT 13B

21 NORTH  
Cleveland  
NEXT RIGHT

DF

76 224 WEST  
Lodi

EXIT 13A  
21 SOUTH  
Massillon  
1/4 MILE

EXIT 13B  
21 NORTH  
Cleveland ↗

DG

DETOUR M4-8-30 M4-5-36  
TO TO  
EAST NORTH  
M3-2-36 M3-1-36  
INTERSTATE INTERSTATE  
76 77  
MI-1-36-2 MI-1-36-2  
EXIT 13-B

21  
Massillon  
CLEVELAND  
1 MILE

EXIT 14  
CLEVE-MASS Rd ↗  
NORTON

DETOUR M4-8-30 M4-5-36  
TO TO  
EAST NORTH  
M3-2-36 M3-1-36  
INTERSTATE INTERSTATE  
76 77  
MI-1-36-2 MI-1-36-2  
EXIT 13B  
↗ ↗

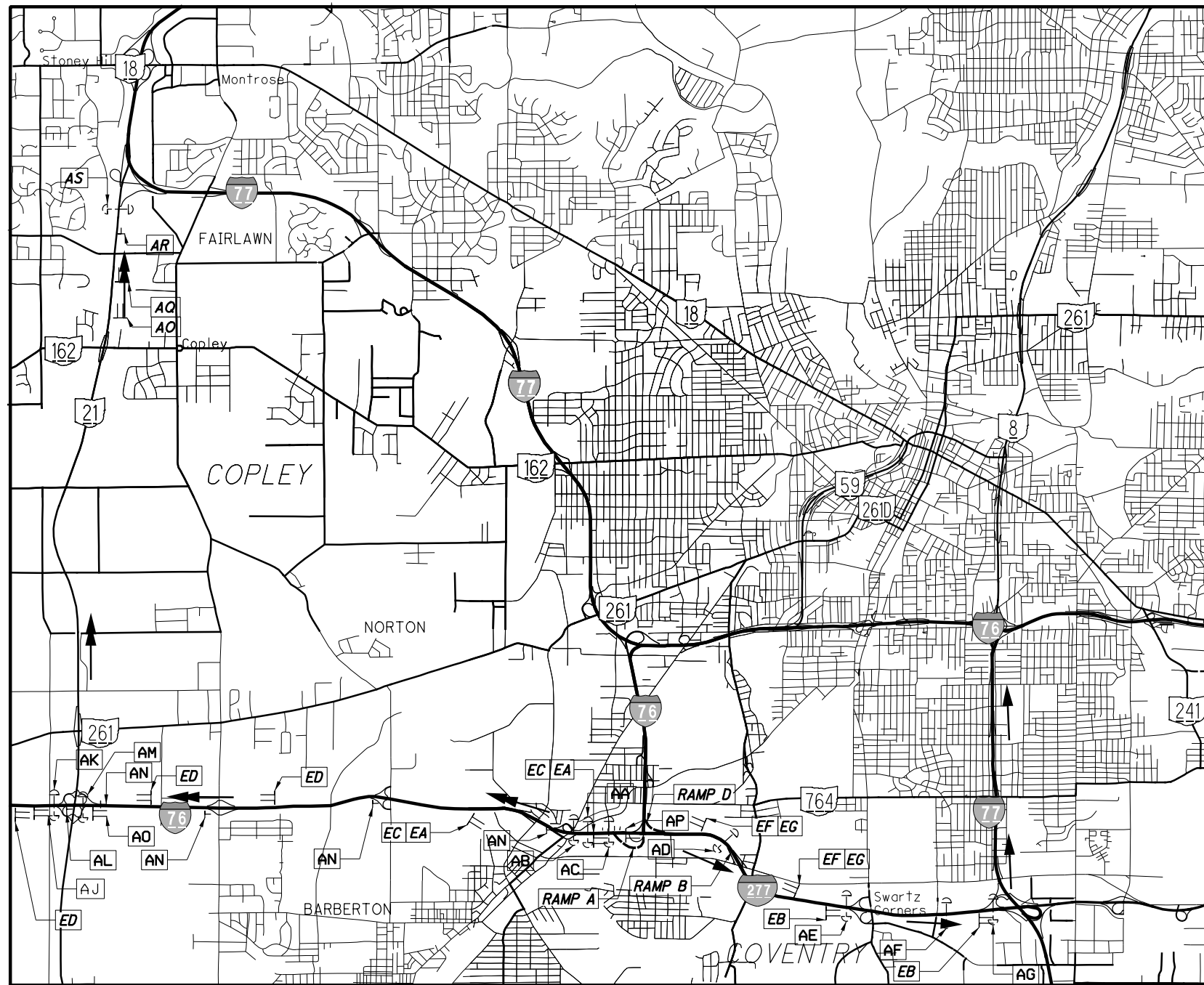
CALCULATED  
CNC  
CHECKED  
XXX

MAINTENANCE OF TRAFFIC DETOUR PLAN (RAMP D)

SUM-76-6.72

18  
85

I:\Project+Data\SUM\08812\_76-6.72\Design\Roadway\Sheets\08812\_MD002.dgn Sheet 3 Ramp A CLOSURE I 11/30/2018 9:43:55 AM tsovizra



DETOUR PLAN FOR SUM-76, EASTBOUND, RAMP A (I-76 EASTBOUND TO I-76 EASTBOUND) AND RAMP D (I-277 WESTBOUND TO I-76 EASTBOUND)



NOT TO SCALE

--- CLOSE RAMP AS PER STD. DWG. MT-98.29

OFFICIAL DETOUR ROUTE:

← RAMP A:  
I-277 EAST / I-77 NORTH

← RAMP D:  
I-76 WEST / SR 21 NORTH

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

NOTE: RAMP A, B AND D SHALL BE CLOSED SIMULTANEOUSLY

**EA** PORTABLE CHANGEABLE MESSAGE SIGN  
- PLACE 7 DAYS PRIOR TO CLOSURE AT TWO LOCATIONS

MESSAGE: 1: 76 EAST TO AKRON TO CLOSE  
2) <DATES>

**EB** PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGE: 1: 76 EAST CLOSED  
2) USE 77 NORTH

**EC** PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGE: 1: 76 EAST CLOSED  
2) USE 277 EAST

**ED** PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGE: 1: 76 EAST TO 77N CLOSED  
2) USE 21 NORTH

**EF** PORTABLE CHANGEABLE MESSAGE SIGN  
- PLACE 7 DAYS PRIOR TO CLOSURE AT TWO LOCATIONS

MESSAGE: 1: 76 EAST TO 77N TO CLOSE  
2) <DATES>

**EG** PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGE: 1: 76 EAST TO 77N CLOSED  
2) USE 76 WEST

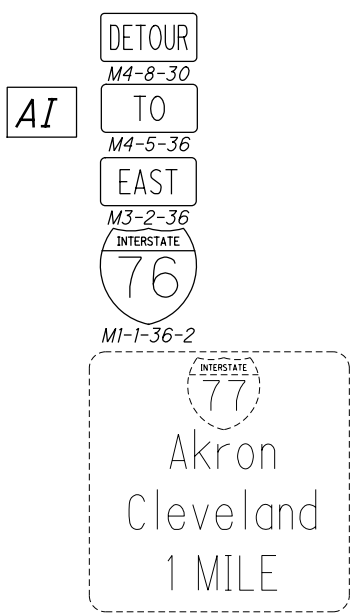
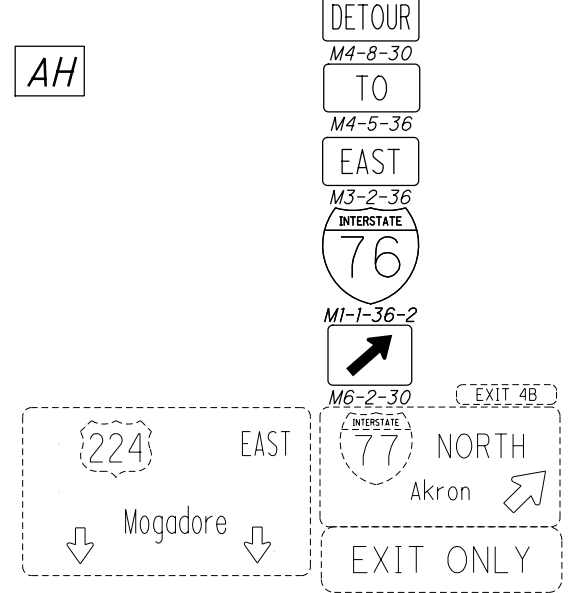
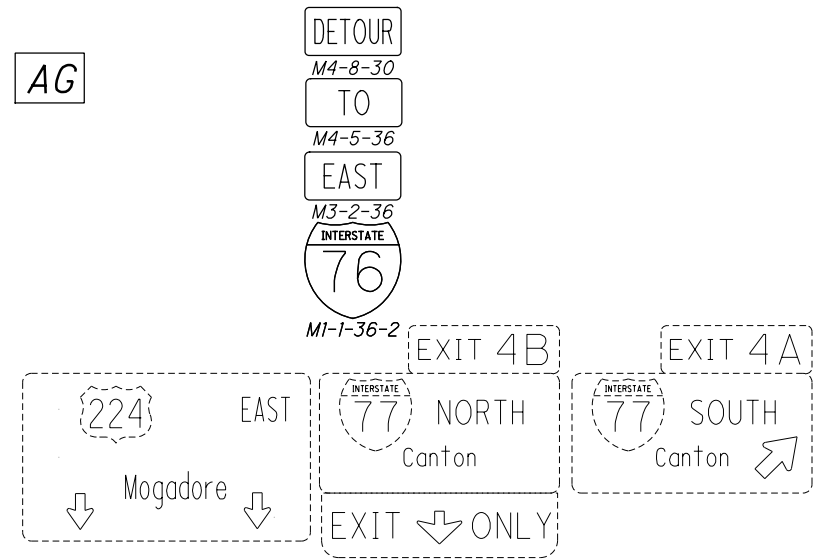
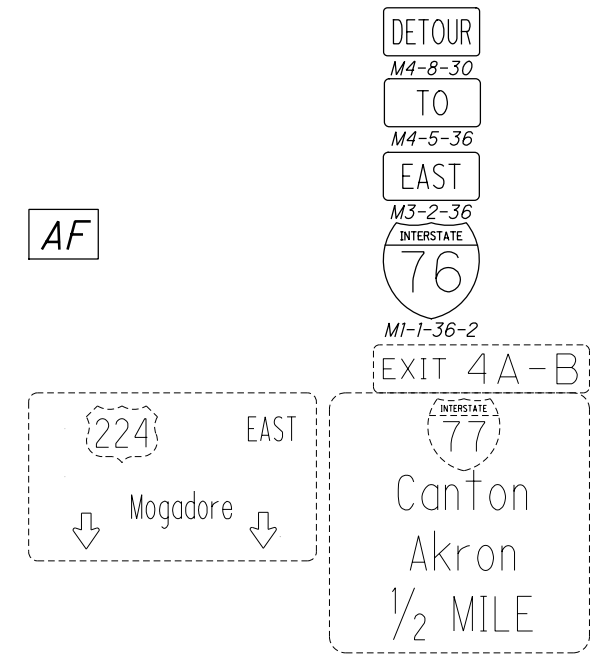
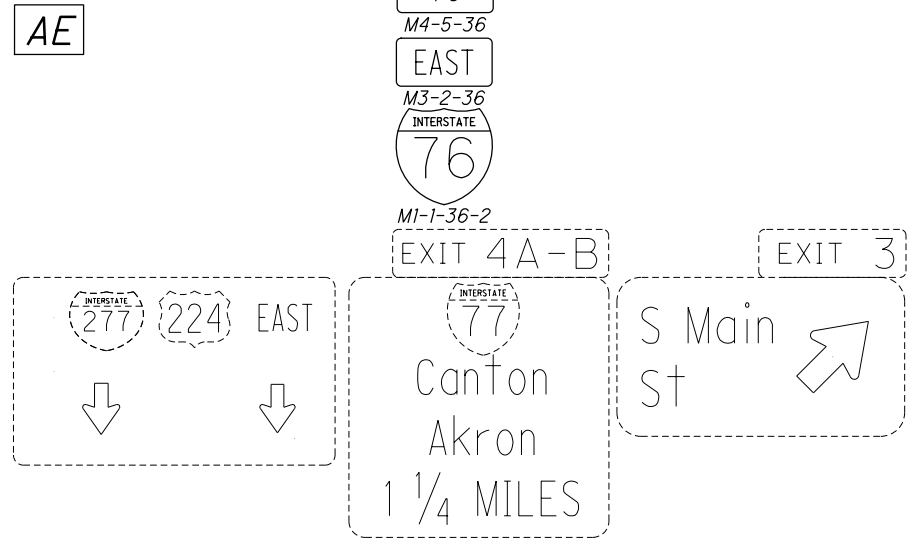
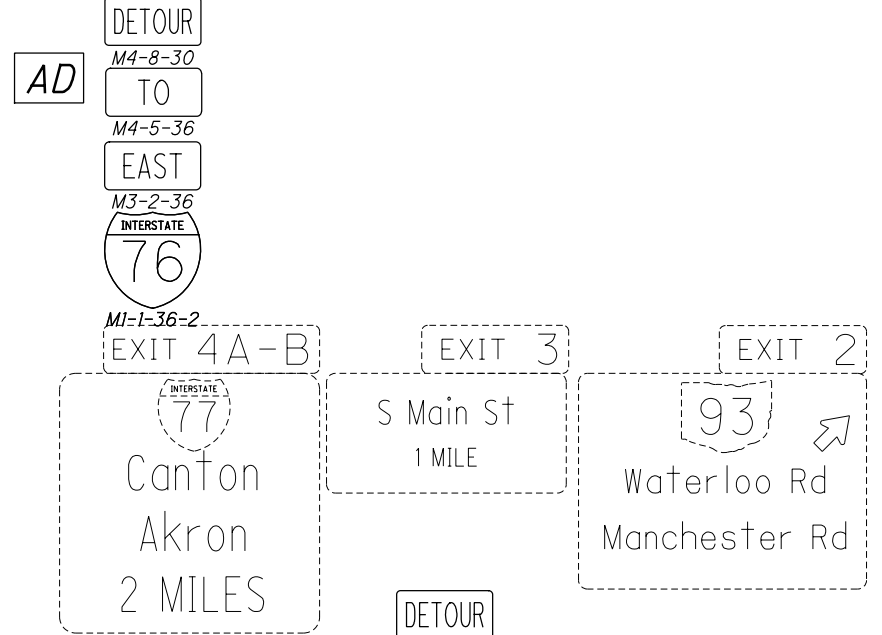
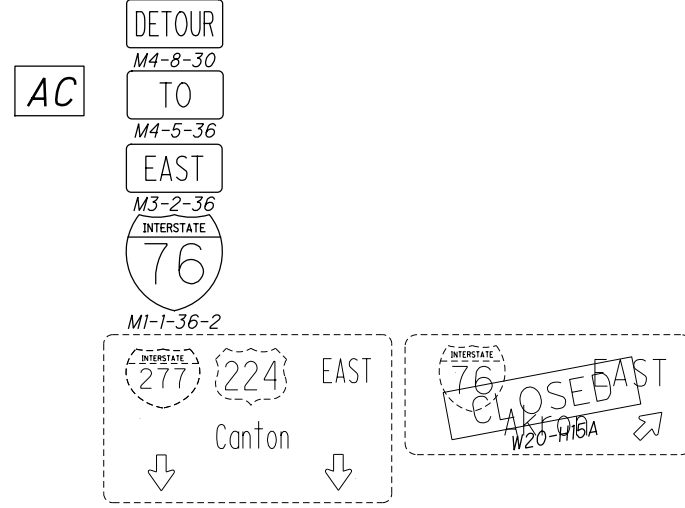
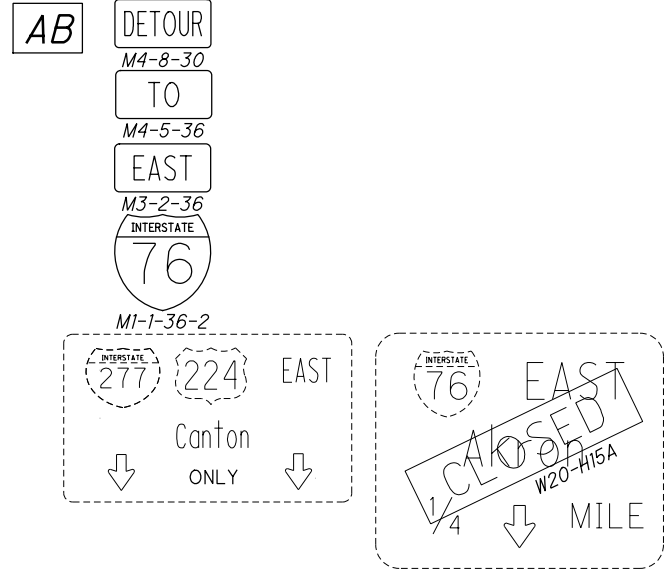
ALL PORTABLE CHANGEABLE MESSAGE SIGNS USED DURING CLOSURE SHALL BE REMOVED AFTER 7 CONSECUTIVE DAYS OF THE CLOSURE BEING IN PLACE.

CALCULATED  
CNC  
CHECKED  
XXX

MAINTENANCE OF TRAFFIC DETOUR PLAN (RAMP A)

SUM-76-6.72

I:\Project+Data\SUM\08812\_76-6.72\Design\Roadway\Sheets\08812\_MD002.dgn Sheet 4 Ramp A SIGNS 11/30/2018 9:43:56 AM tsolvzr



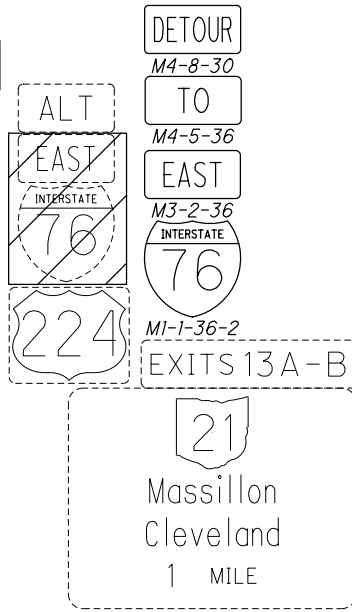
CALCULATED  
CNC  
CHECKED  
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MAINTENANCE OF TRAFFIC DETOUR PLAN (RAMP A)

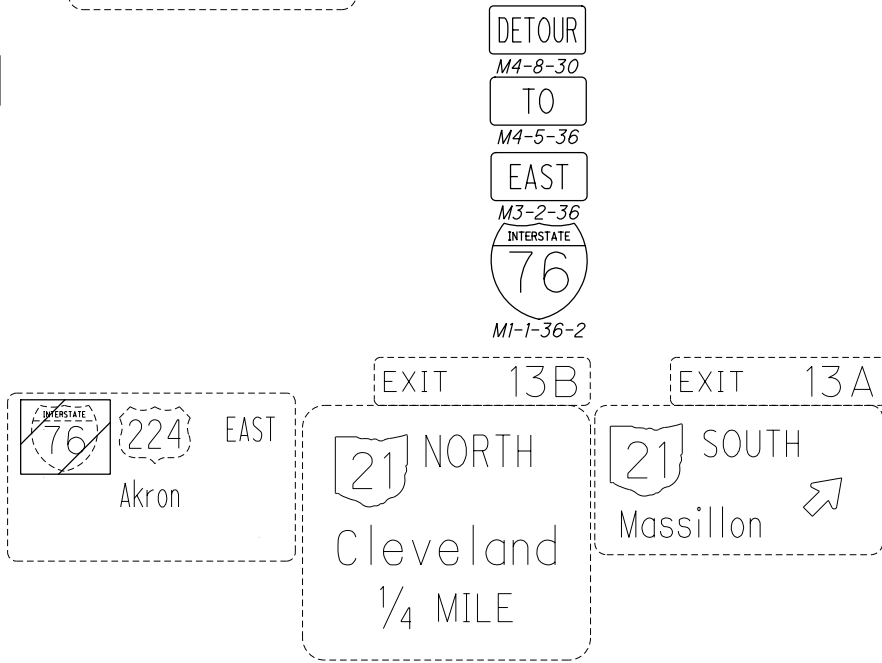
SUM-76-6.72

20  
85

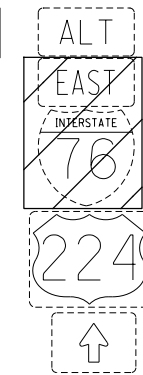
AJ



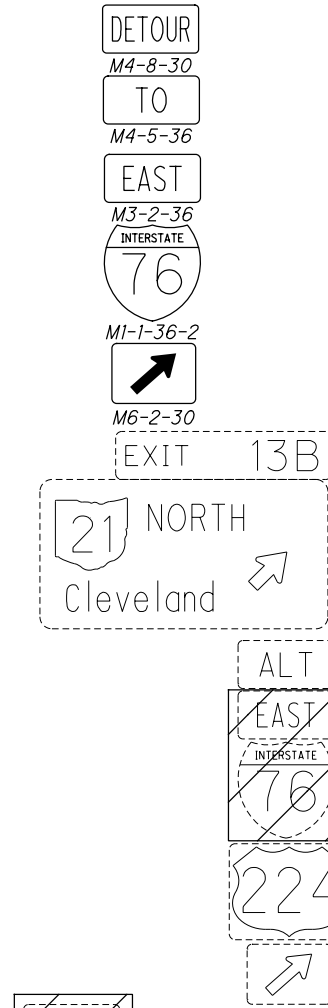
AK



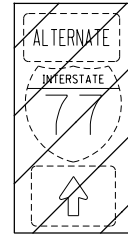
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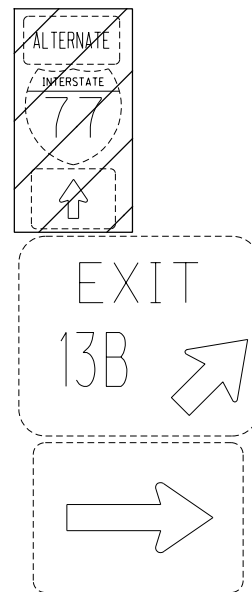
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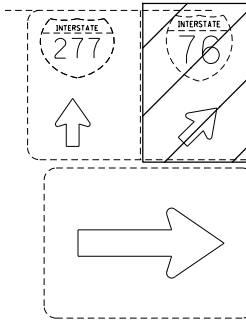
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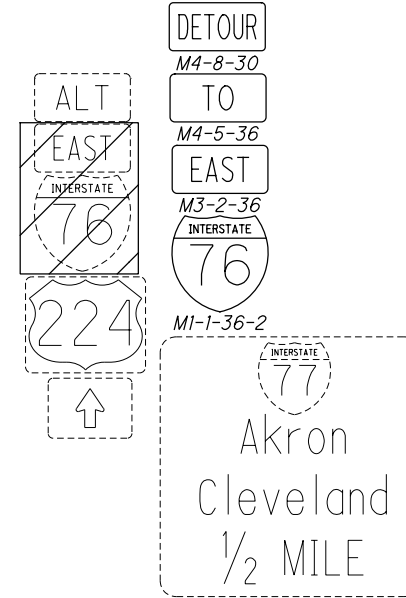
AO



AP



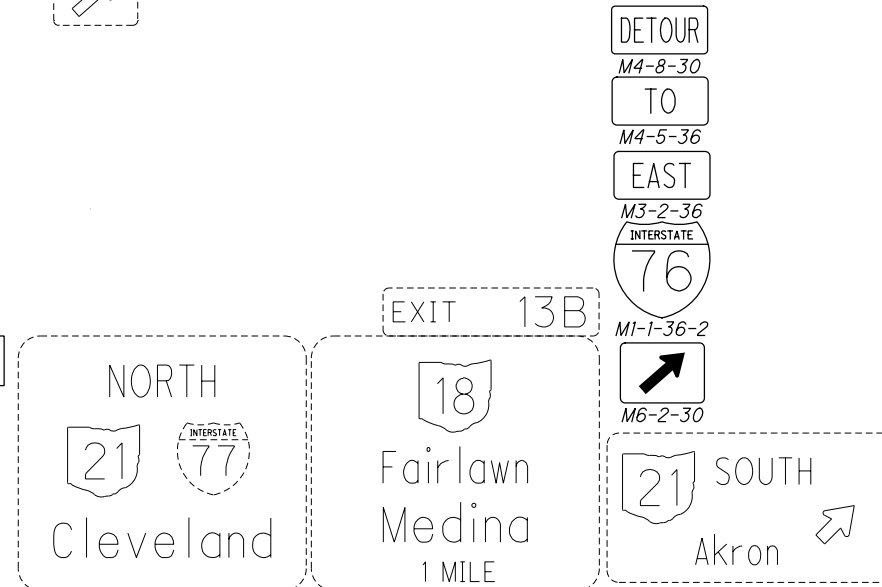
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AR



AS

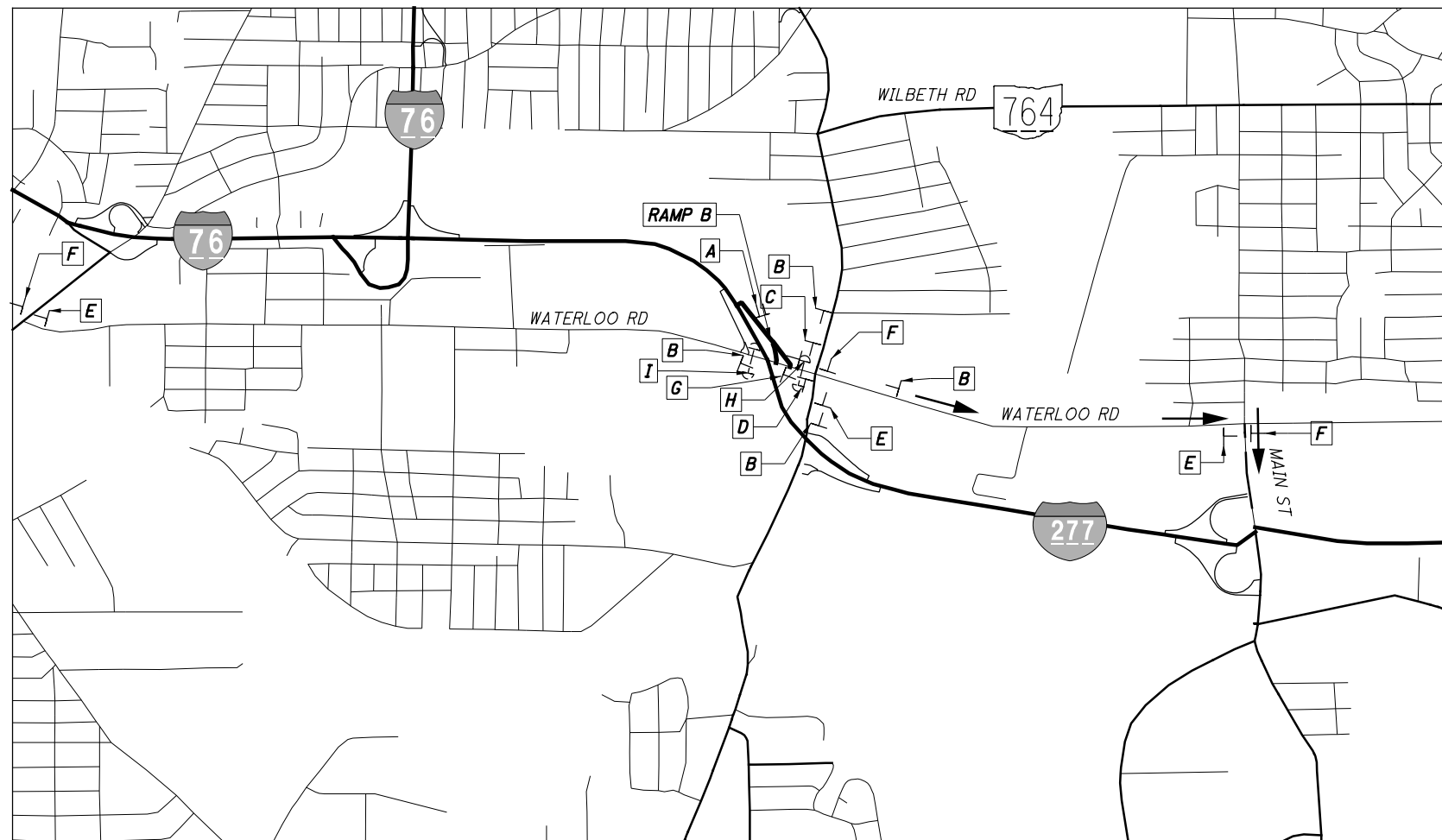


CALCULATED  
CNC  
CHECKED  
XXX

MAINTENANCE OF TRAFFIC DETOUR PLAN (RAMP A)

SUM-76-6.72

I:\ProjectData\SUM\08812\_76-6.72\Design\Roadway\Sheets\08812\_MD002.dgn\_Sheet 6 RAMP B CLOSURE 11/30/2018 9:43:58 AM tsovizrg



DETOUR PLAN RAMP B (WATERLOO RD TO I-277 WEST)

--- CLOSE RAMP AS PER STD. DWG. MT-101.60  
 ← OFFICIAL DETOUR ROUTE: WATERLOO RD / MAIN ST



NOT TO SCALE

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

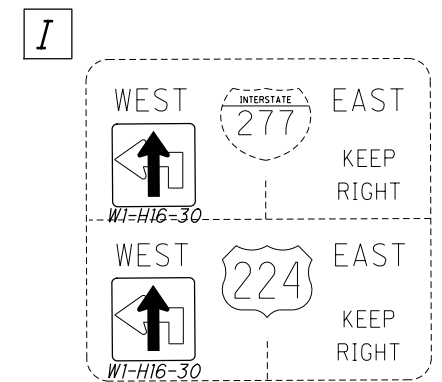
NOTE: RAMP B SHALL BE CLOSED SIMULTANEOUSLY WITH RAMP A AND D

<p><b>A</b> PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES: -PLACE 5 DAYS PRIOR TO CLOSURE</p> <p>1. RAMP TO CLOSE (DATE)</p> <p><b>B</b>  W20-3-36</p>	<p><b>C</b></p> <table border="0"> <tr><td>DETOUR</td><td>DETOUR</td></tr> <tr><td>M4-8-24</td><td>M4-8-24</td></tr> <tr><td>WEST</td><td>WEST</td></tr> <tr><td>M3-4-24</td><td>M3-4-24</td></tr> <tr><td>224</td><td>INTERSTATE 277</td></tr> <tr><td>MI-4-24-3</td><td>MI-1-24-3</td></tr> <tr><td>←</td><td>←</td></tr> <tr><td>M5-1-21</td><td>M5-1-21</td></tr> </table>	DETOUR	DETOUR	M4-8-24	M4-8-24	WEST	WEST	M3-4-24	M3-4-24	224	INTERSTATE 277	MI-4-24-3	MI-1-24-3	←	←	M5-1-21	M5-1-21	<p><b>D</b></p> <table border="0"> <tr><td>DETOUR</td><td>DETOUR</td></tr> <tr><td>M4-8-24</td><td>M4-8-24</td></tr> <tr><td>WEST</td><td>WEST</td></tr> <tr><td>M3-4-24</td><td>M3-4-24</td></tr> <tr><td>224</td><td>INTERSTATE 277</td></tr> <tr><td>MI-4-24-3</td><td>MI-1-24-3</td></tr> <tr><td>←</td><td>←</td></tr> <tr><td>M6-1-21</td><td>M6-1-21</td></tr> </table>	DETOUR	DETOUR	M4-8-24	M4-8-24	WEST	WEST	M3-4-24	M3-4-24	224	INTERSTATE 277	MI-4-24-3	MI-1-24-3	←	←	M6-1-21	M6-1-21	<p><b>E</b></p> <table border="0"> <tr><td>DETOUR</td><td>DETOUR</td></tr> <tr><td>M4-8-24</td><td>M4-8-24</td></tr> <tr><td>WEST</td><td>WEST</td></tr> <tr><td>M3-4-24</td><td>M3-4-24</td></tr> <tr><td>224</td><td>INTERSTATE 277</td></tr> <tr><td>MI-4-24-3</td><td>MI-1-24-3</td></tr> <tr><td>→</td><td>→</td></tr> <tr><td>M5-1-21</td><td>M5-1-21</td></tr> </table>	DETOUR	DETOUR	M4-8-24	M4-8-24	WEST	WEST	M3-4-24	M3-4-24	224	INTERSTATE 277	MI-4-24-3	MI-1-24-3	→	→	M5-1-21	M5-1-21
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<p><b>F</b></p> <table border="0"> <tr><td>DETOUR</td><td>DETOUR</td></tr> <tr><td>M4-8-24</td><td>M4-8-24</td></tr> <tr><td>WEST</td><td>WEST</td></tr> <tr><td>M3-4-24</td><td>M3-4-24</td></tr> <tr><td>224</td><td>INTERSTATE 277</td></tr> <tr><td>MI-4-24-3</td><td>MI-1-24-3</td></tr> <tr><td>→</td><td>→</td></tr> <tr><td>M6-1-21</td><td>M6-1-21</td></tr> </table>	DETOUR	DETOUR	M4-8-24	M4-8-24	WEST	WEST	M3-4-24	M3-4-24	224	INTERSTATE 277	MI-4-24-3	MI-1-24-3	→	→	M6-1-21	M6-1-21	<p><b>G</b></p> <table border="0"> <tr><td>DETOUR</td><td>DETOUR</td></tr> <tr><td>M4-8-24</td><td>M4-8-24</td></tr> <tr><td>WEST</td><td>WEST</td></tr> <tr><td>M3-4-24</td><td>M3-4-24</td></tr> <tr><td>224</td><td>INTERSTATE 277</td></tr> <tr><td>MI-4-24-3</td><td>MI-1-24-3</td></tr> <tr><td>↑</td><td>↑</td></tr> <tr><td>M6-3-21</td><td>M6-3-21</td></tr> </table>	DETOUR	DETOUR	M4-8-24	M4-8-24	WEST	WEST	M3-4-24	M3-4-24	224	INTERSTATE 277	MI-4-24-3	MI-1-24-3	↑	↑	M6-3-21	M6-3-21	<p><b>H</b></p> <table border="0"> <tr><td>DETOUR</td><td>DETOUR</td></tr> <tr><td>M4-8-24</td><td>M4-8-24</td></tr> <tr><td>WEST</td><td>WEST</td></tr> <tr><td>M3-4-24</td><td>M3-4-24</td></tr> <tr><td>224</td><td>INTERSTATE 277</td></tr> <tr><td>MI-4-24-3</td><td>MI-1-24-3</td></tr> <tr><td>↑</td><td>↑</td></tr> <tr><td>M6-3-21</td><td>M6-3-21</td></tr> </table>	DETOUR	DETOUR	M4-8-24	M4-8-24	WEST	WEST	M3-4-24	M3-4-24	224	INTERSTATE 277	MI-4-24-3	MI-1-24-3	↑	↑	M6-3-21	M6-3-21
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TYPE III BARRICADE WITH DETOUR ARROW AT RAMP



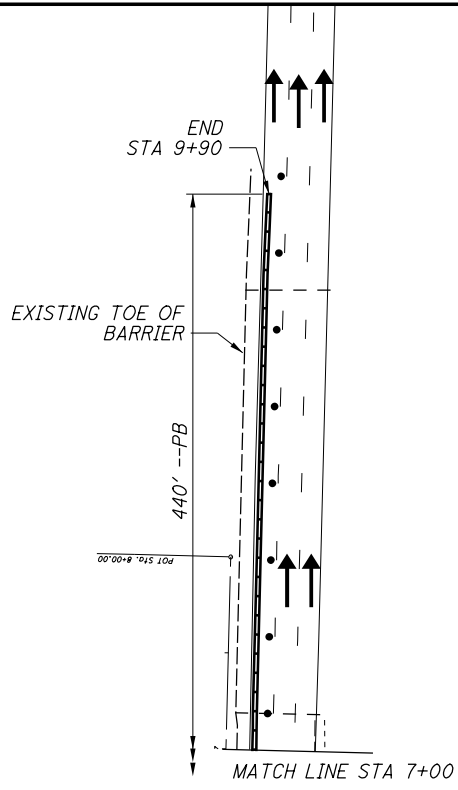
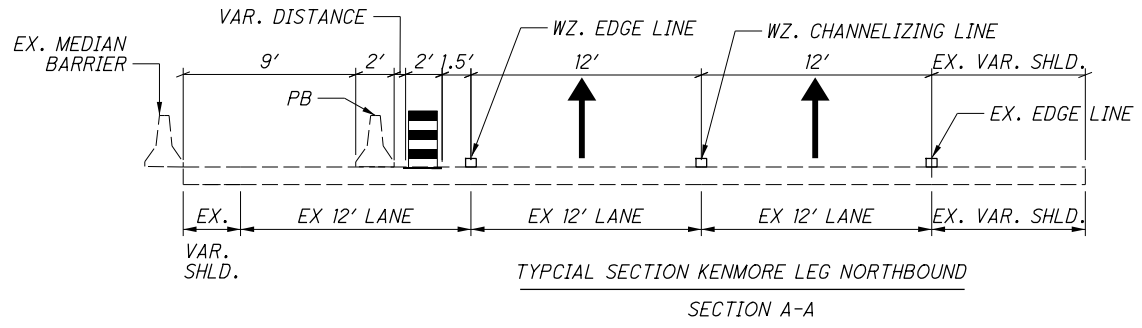
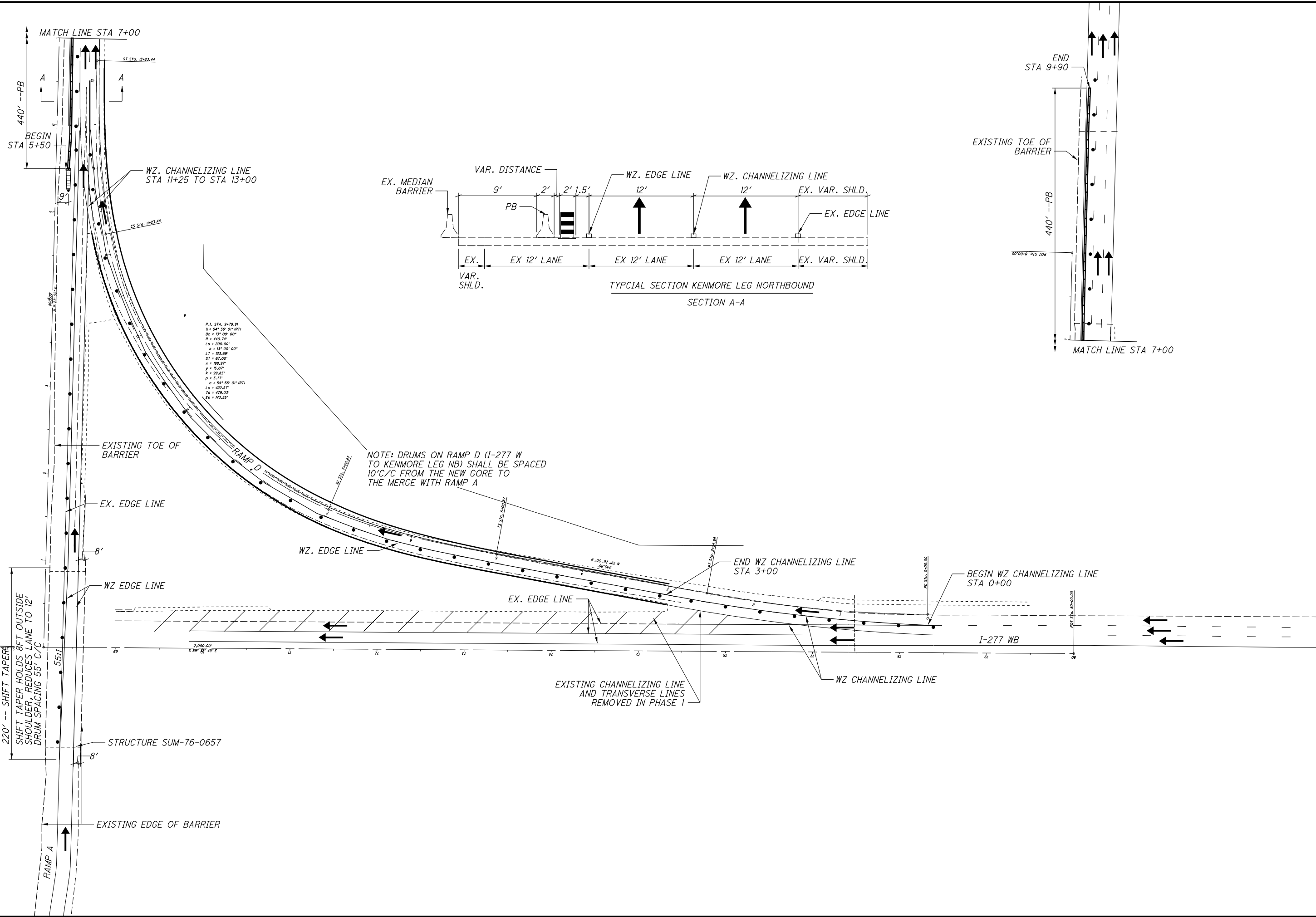
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MAINTENANCE OF TRAFFIC DETOUR PLAN (RAMP B)

SUM-76.6.72

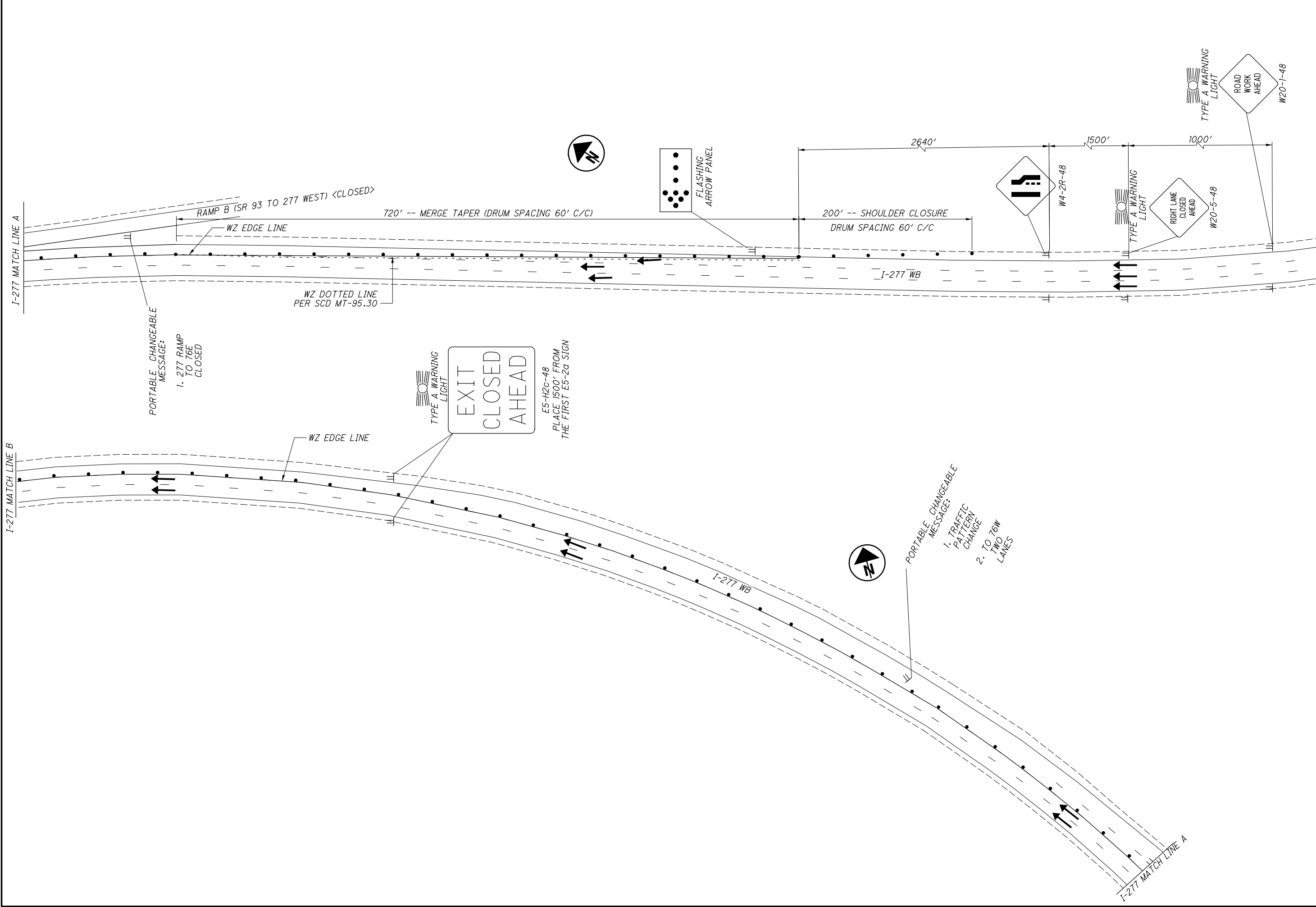


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**MAINTENANCE OF TRAFFIC PLAN  
PHASE 2: KENMORE LEG SB CLOSED**

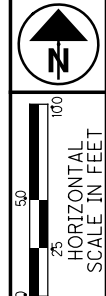
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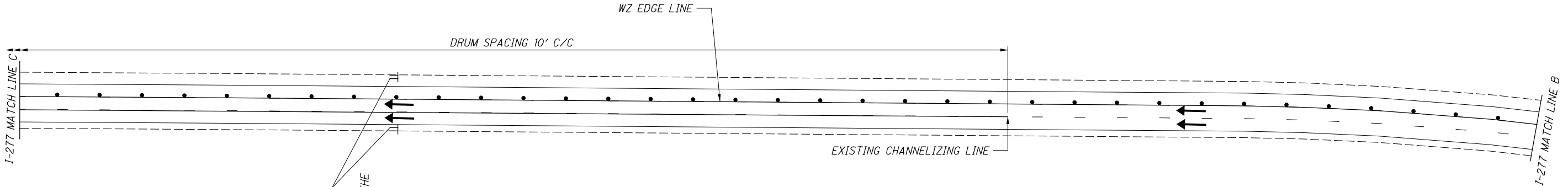
CALCULATED	CNC
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SUM-7.6-6.72

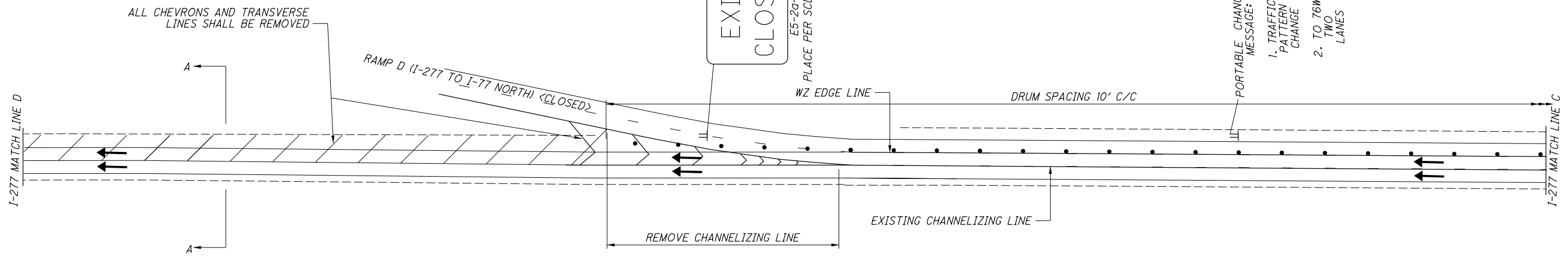


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**EXIT CLOSED**

E5-2a-48  
PLACE 1000' FROM THE  
END OF THE EXITTING  
PAINTED GORE OF  
I-277 AND RAMP D

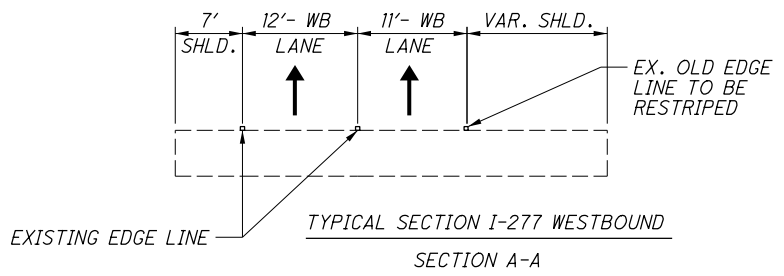


**EXIT CLOSED**

E5-2a-48  
PLACE PER SCD MT-98.29

PORTABLE CHANGEABLE MESSAGE:

1. TRAFFIC PATTERN CHANGE
2. TO 76W TWO LANES



NOTE: THIS PHASING DETAIL SHALL BE IMPLEMENTED WHEN THE KENMORE LEG NORTHBOUND IS CLOSED TO TRAFFIC

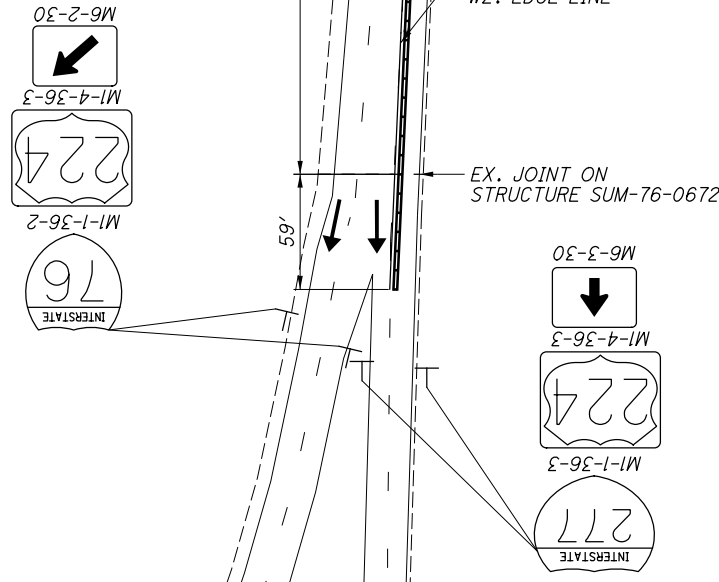
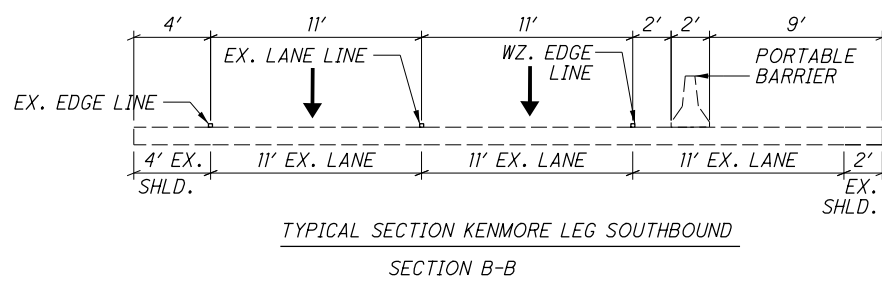
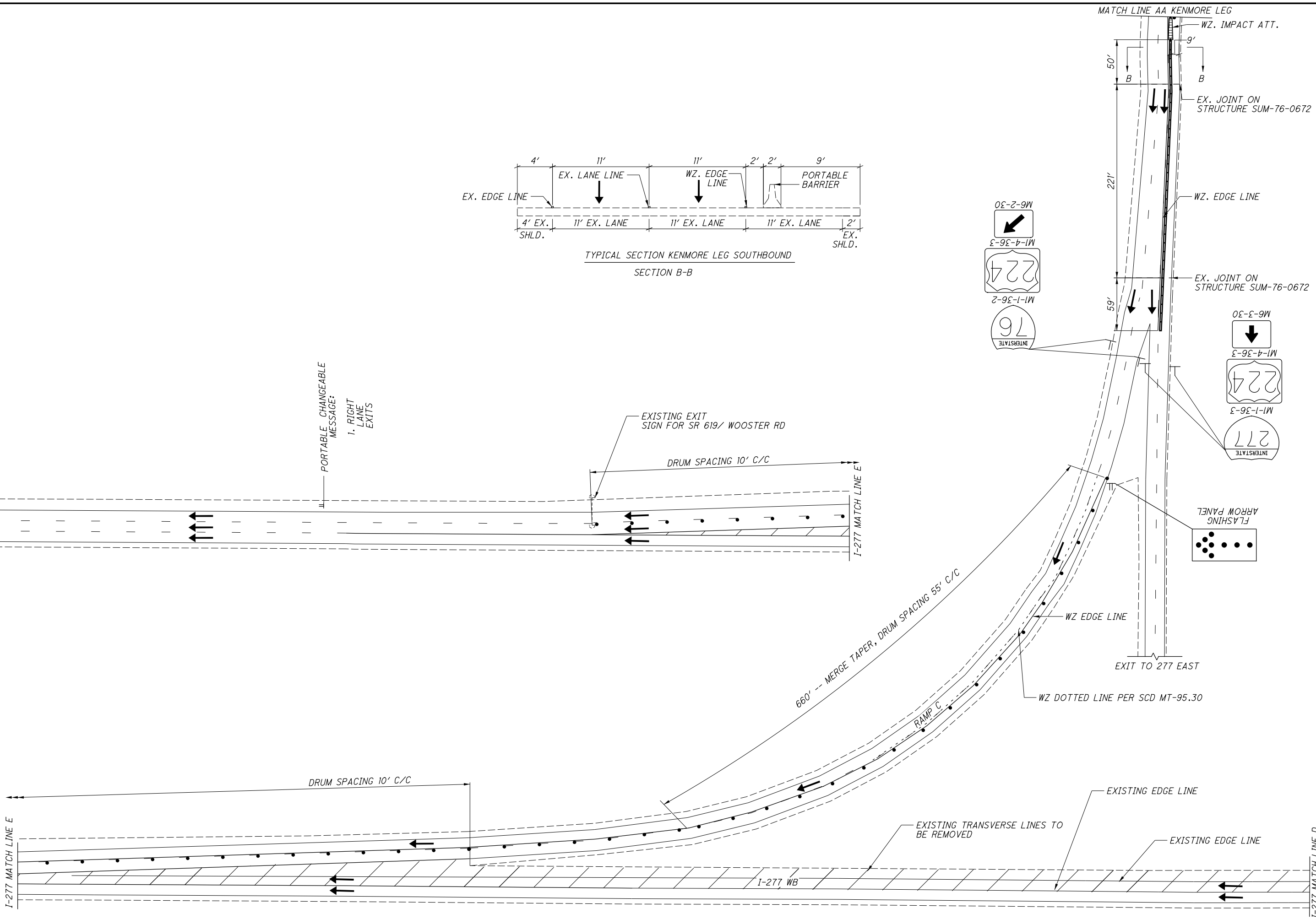
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CHECKED XXX

0 50 100  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN  
PHASE 3: KENMORE LEG NB CLOSED**

**SUM-7.6-6.7.2**

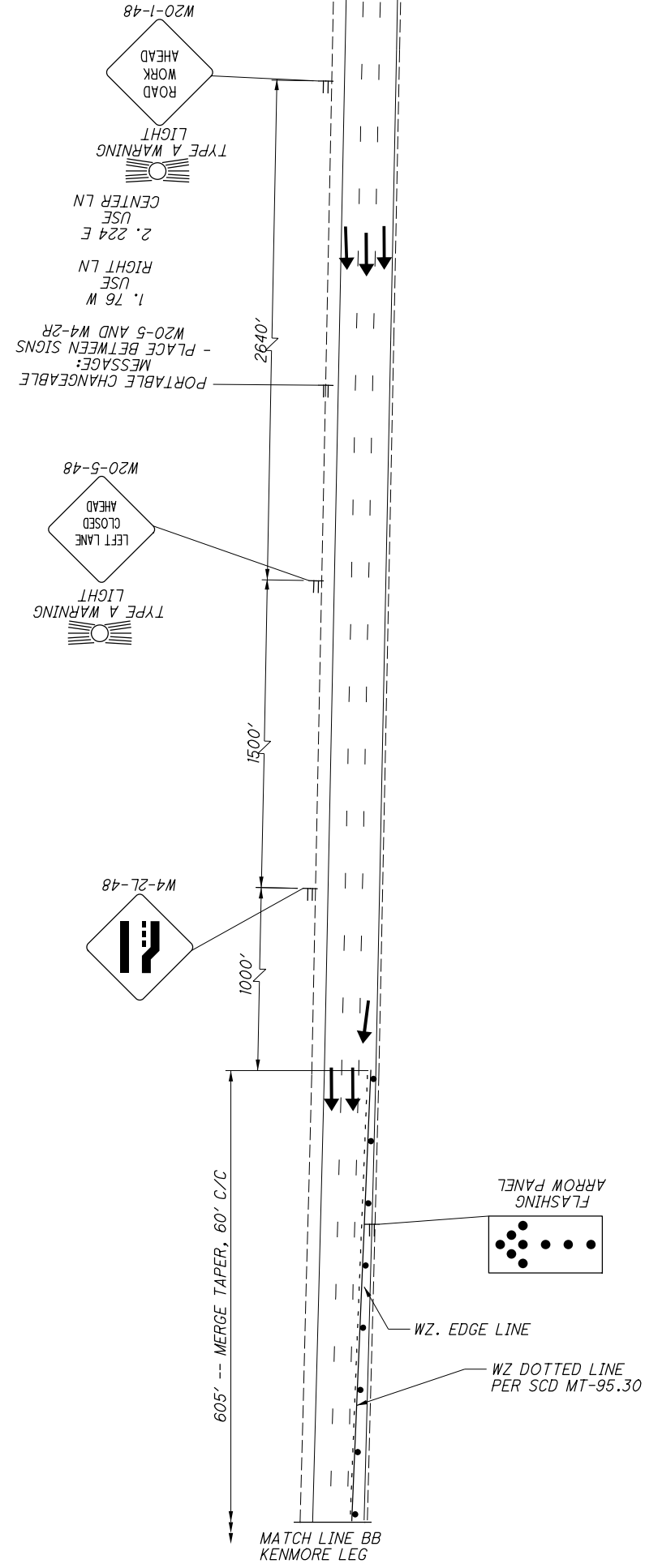
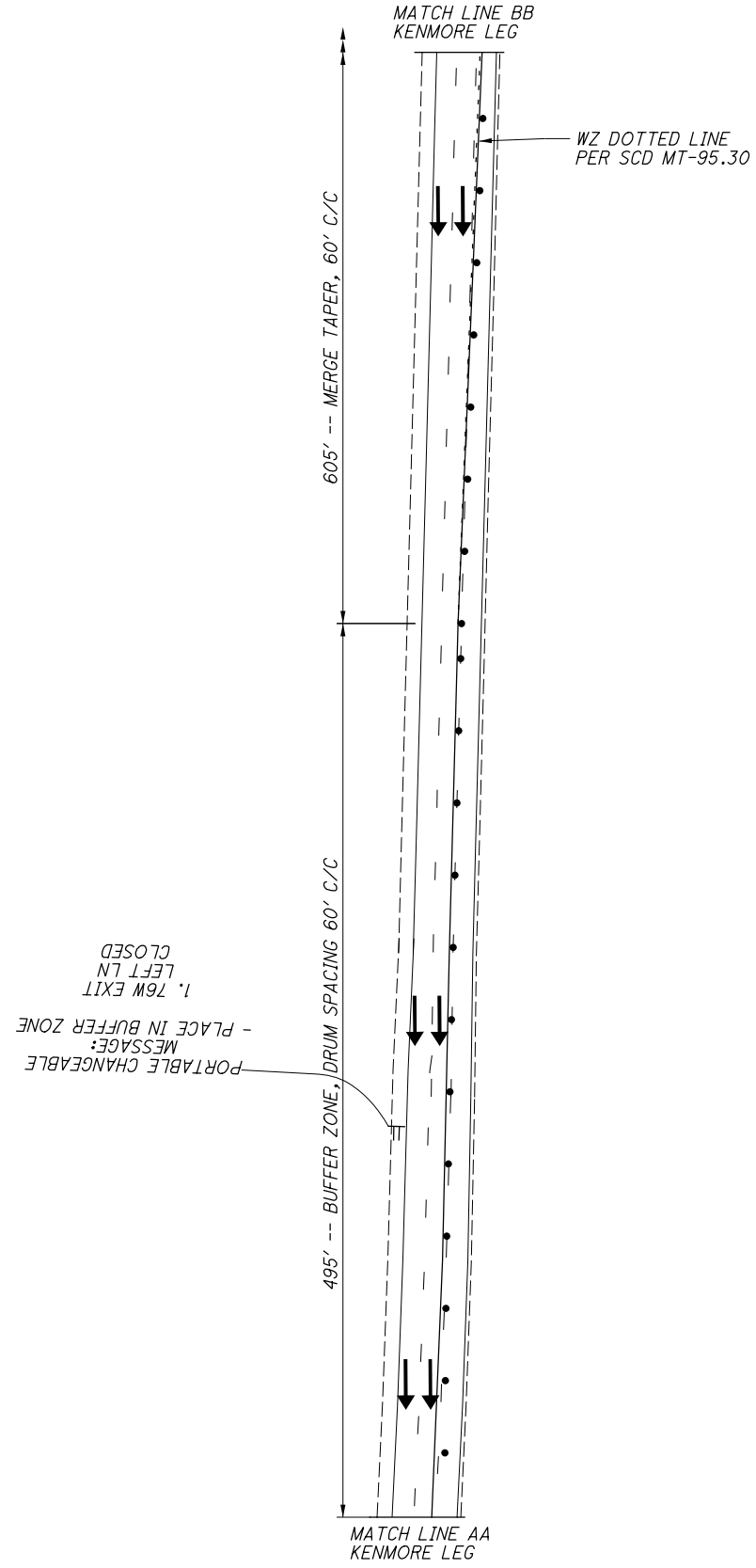
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CALCULATED CNC  
 CHECKED XXX

**MAINTENANCE OF TRAFFIC PLAN**  
**PHASE 3: KENMORE LEG NB CLOSED**

**SUM-76-6.72**  
 26  
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**MAINTENANCE OF TRAFFIC PLAN  
PHASE 3: KENMORE LEG NB CLOSED**

**SUM-7.6-6.7.2**

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SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	5	6	31	32	33	34		6/50	7/50	9/50		01/MS/B R	EXT	TOTAL				
			635									LS	201	11000	LS			CLEARING AND GRUBBING
			156									635	202	23000	635	SY		PAVEMENT REMOVED
				354								156	202	30701	156	FT		CONCRETE BARRIER REMOVED, AS PER PLAN
			254									354	202	35100	354	FT		PIPE REMOVED, 24" AND UNDER
												254	202	38000	254	FT		GUARDRAIL REMOVED
				1								1	202	58200	1	EACH		INLET REMOVED
					2							2	202	62001	2	EACH		JUNCTION BOX REMOVED, AS PER PLAN
								100				100	SPECIAL	20270110	100	FT		PIPE CLEANOUT, 24" AND UNDER
								100				100	203	10000	100	CY		EXCAVATION
								50				50	203	20000	50	CY		EMBANKMENT
			1,316									1,316	204	10000	1,316	SY		SUBGRADE COMPACTION
								50				50	204	13000	50	CY		EXCAVATION OF SUBGRADE
								50				50	204	30010	50	CY		GRANULAR MATERIAL, TYPE B
			1									1	204	45000	1	HR		PROOF ROLLING
								200				200	204	50000	200	SY		GEOTEXTILE FABRIC
			2									2	209	60201	2	STA		LINEAR GRADING, AS PER PLAN
			50									50	606	13000	50	FT		GUARDRAIL, TYPE 5
			12.5									12.5	606	13050	12.5	FT		GUARDRAIL, TYPE 5A
			2									2	606	35000	2	EACH		BRIDGE TERMINAL ASSEMBLY, TYPE 1
			2									2	606	35100	2	EACH		BRIDGE TERMINAL ASSEMBLY, TYPE 2
			275									275	607	98000	275	FT		FENCE, MISC.: CONSTRUCTION FENCE
			26									26	609	24000	26	FT		CURB, TYPE 4-A
			66									66	609	24500	66	FT		CURB, TYPE 4-B
			45									45	622	90000	45	FT		BARRIER, MISC.: CONCRETE MEDIAN BARRIER
			75									75	622	90000	75	FT		BARRIER, MISC.: CONCRETE MEDIAN PARAPET
			28									28	626	00102	28	EACH		BARRIER REFLECTOR, TYPE 1, ONE WAY
			9									9	626	00110	9	EACH		BARRIER REFLECTOR, TYPE 2, ONE WAY
				2								6	601	21050	6	SY		TIED CONCRETE BLOCK MAT, TYPE 1
				6								6	601	32104	6	CY		ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
												2	659	00100	2	EACH		SOIL ANALYSIS TEST
												359	659	00300	359	CY		TOPSOIL
												3,232	659	10000	3,232	SY		SEEDING AND MULCHING
												162	659	14000	162	SY		REPAIR SEEDING AND MULCHING
												162	659	15000	162	SY		INTER-SEEDING
												0.48	659	20000	0.48	TON		COMMERCIAL FERTILIZER
												0.67	659	31000	0.67	ACRE		LIME
												18	659	35000	18	MGAL		WATER
												3,232	670	00500	3,232	SY		SLOPE EROSION PROTECTION
									10,000			10,000	832	30000	10,000	EACH		EROSION CONTROL
				1.02								1.02	511	46610	1.02	CY		CLASS QC1 CONCRETE, HEADWALL
				135								135	605	11110	135	FT		6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
				99				50				149	605	13410	149	FT		6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
				91				50				141	611	00510	141	FT		6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS
				105								105	611	05900	105	FT		15" CONDUIT, TYPE B
												29	611	06100	29	FT		15" CONDUIT, TYPE C
				218								218	611	06700	218	FT		15" CONDUIT, TYPE F
				3								3	611	98150	3	EACH		CATCH BASIN, NO. 3
				1								1	611	99101	1	EACH		INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN
				2								2	611	99115	2	EACH		INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN
												3	611	99710	3	EACH		PRECAST REINFORCED CONCRETE OUTLET
			217									217	304	20001	217	CY		AGGREGATE BASE, AS PER PLAN
			638									638	305	14010	638	SY		10" CONCRETE BASE, CLASS QC1
			49									49	407	13900	49	GAL		TACK COAT, 702.13
			37									37	407	20000	37	GAL		NON-TRACKING TACK COAT

GENERAL SUMMARY

SUM - 7.6 - 6.7.2

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SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	5	6	31	32	33	34	6/50	7/50	9/50		01/IMS/B R	EXT	TOTAL					
			9								9	441	50701	9	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	5/50	
			26								26	442	20000	26	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)		
			30								30	442	20200	30	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)		
			214								214	SPECIAL	45132000	214	FT	PRESSURE RELIEF JOINT, TYPE C	7/50	
																<b>LIGHTING</b>		
					120						120	625	25401	120	FT	CONDUIT, 2", 725.04, AS PER PLAN	7/50	
					2						2	625	29911	2	EACH	TRANSITION JUNCTION BOX, AS PER PLAN	7/50	
					1						1	625	30707	1	EACH	PULL BOX, 725.08, 24", AS PER PLAN	7/50	
					1						1	625	31501	1	EACH	MEDIAN PULL BOX, AS PER PLAN	7/50	
					2						2	625	31511	2	EACH	PULL BOX REMOVED, AS PER PLAN	7/50	
					LS						LS	SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	6/50	
																<b>TRAFFIC CONTROL</b>		
						2					2	625	32000	2	EACH	GROUND ROD		
						1					1	630	55000	1	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-7.65		
						1					1	630	74601	1	EACH	OVERHEAD SIGN SUPPORT, INSTALLATION ONLY, AS PER PLAN	3	
						6					6	630	75000	6	EACH	SIGN ATTACHMENT ASSEMBLY		
						1					1	630	82000	1	EACH	SIGN BACKING ASSEMBLY		
						1					1	630	84010	1	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50		
						1					1	630	84510	1	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION		
						3					3	630	87100	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION		
						1					1	630	89802	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65		
0.16											0.16	642	00094	0.16	MILE	EDGE LINE, 6"		
1.84											1.84	642	00194	1.84	MILE	LANE LINE, 6"		
350											350	642	00394	350	FT	CHANNELIZING LINE, 12"		
1,631											1,631	642	00690	1,631	FT	TRANSVERSE/DIAGONAL LINE		
254											254	642	00720	254	FT	CHEVRON MARKING, TYPE 1		
	1,885										1,885	642	30000	1,885	FT	REMOVAL OF PAVEMENT MARKING		
																<b>STRUCTURE OVER 20 FOOT SPAN (CTY-RTE-SECT or SFN)</b>		
									LS		LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	7/50	
									414		414	202	22901	414	SY	APPROACH SLAB REMOVED, AS PER PLAN	15/50	
									LS		LS	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	8/50	
									LS		LS	503	21300	LS		UNCLASSIFIED EXCAVATION		
											30,261	509	10001	30,261	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	8/50	
									318		318	510	10001	318	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	8/50	
									212		212	511	21520	212	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE		
									4		4	511	33500	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		
									12		12	511	34449	12	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	8/50	
									42		42	511	44110	42	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING		
									343		343	512	10101	343	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	8/50	
									123		123	512	10300	123	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN		
									51		51	513	21599	51	LB	STRUCTURAL STEEL FOR REHABILITATION		
									116		116	513	95030	116	EACH	STRUCTURAL STEEL, MISC.:DRILLING STRUCTURAL STEEL (GIRDERS)	8/50	
									LS		LS	514	00100	LS		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		
									LS		LS	514	00200	LS		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		
									LS		LS	514	00401	LS		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	8/50	
									219		219	516	10010	219	FT	ARMORLESS PREFORMED JOINT SEAL		
									198		198	516	13600	198	SF	1" PREFORMED EXPANSION JOINT FILLER		
									52		52	516	13900	52	SF	2" PREFORMED EXPANSION JOINT FILLER		
									245		245	516	14020	245	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL		
									29		29	516	44201	29	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN,	22/50	
									LS		LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	8/50	
									2		2	518	12301	2	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN	42/50	
									1		1	518	12500	1	EACH	SCUPPER, MISC.:FILL AND PLUG EXISTING SCUPPER AND DOWNSPOUT	8/50	
									4		4	518	12500	4	EACH	SCUPPER, MISC.:SCUPPER AND DOWNSPOUT CLEANOUT	8/50	
									138		138	518	21200	138	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		
									82		82	518	51201	82	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN, (10")	42/50	
									20		20	518	60031	20	FT	PIPE HORIZONTAL CONDUCTOR, AS PER PLAN	42/50	
									174		174	519	11101	174	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	8/50	

GENERAL SUMMARY

SUM - 76 - 6.72

29  
85







STATION TO STATION				202	202	511	601	601	605	605	611	611	611	611	611	611	611	611	611	611								
				PIPE REMOVED, 24" AND UNDER	INLET REMOVED	CLASS GC1 CONCRETE HEADWALL	TIED CONCRETE BLOCK MAT, TYPE 1	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	15" CONDUIT, TYPE F	CATCH BASIN, NO. 3	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	PRECAST REINFORCED CONCRETE OUTLET										
				FT	EACH	CY	SY	CY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH										
9+65.22	TO	9+36.74	SIDE LT	133	1																							
6+57.38	TO	7+10.00	LT	52.62																								
6+67.38	TO	6+95.00	CL	27.62																								
6+67.38	TO	7+10.00	RT	42.62																								
9+70.00	TO	9+88.02	LT	28.02																								
9+64.00	TO	9+88.02	CL	24.02																								
9+42.00	TO	9+88.02	RT	46.02																								
		6+78.12	CL																									
6+78.12	TO	6+80.96	RT																									
9+77.19	TO	9+75.00	LT																									
		9+75.00	CL																									
		9+75.00	LT																									
		6+80.96	RT																									
		6+83.22	LT																									
		6+83.22	RT																									
		6+80.96	LT																									
		9+75.00	LT																									
		7+13.00	LT																									
		6+83.22	RT			0.27		1.39																				
		6+80.96	LT			0.27		1.39																				
		9+75.00	LT			0.27		1.39																				
		7+13.00	LT			0.21		1.39																				
6+57.38	TO	6+79.31	LT						21.93																			
6+83.22	TO	7+17.38	LT						24.16																			
6+57.46	TO	6+74.66	CL						17.2																			
6+78.12	TO	7+17.38	CL						29.26																			
6+67.38	TO	6+76.97	RT						9.59																			
6+80.97	TO	7+17.38	RT						26.41																			
9+38.00	TO	9+75.00	LT																									
9+88.02	TO	9+75.00	LT																									
9+38.00	TO	9+77.19	CL						3.02																			
9+77.19	TO	9+88.02	CL																									
9+38.00	TO	9+75.00	RT				1.78																					
9+88.02	TO	9+75.00	RT																									
TOTALS CARRIED TO GENERAL SUMMARY				354	1	2	2	6	135	99	91	105	29	218	3	1	2											

DRAINAGE SUBSUMMARY	CALCULATED	32
	TES	85
	CHECKED	

SUM - 7.6 - 6.72

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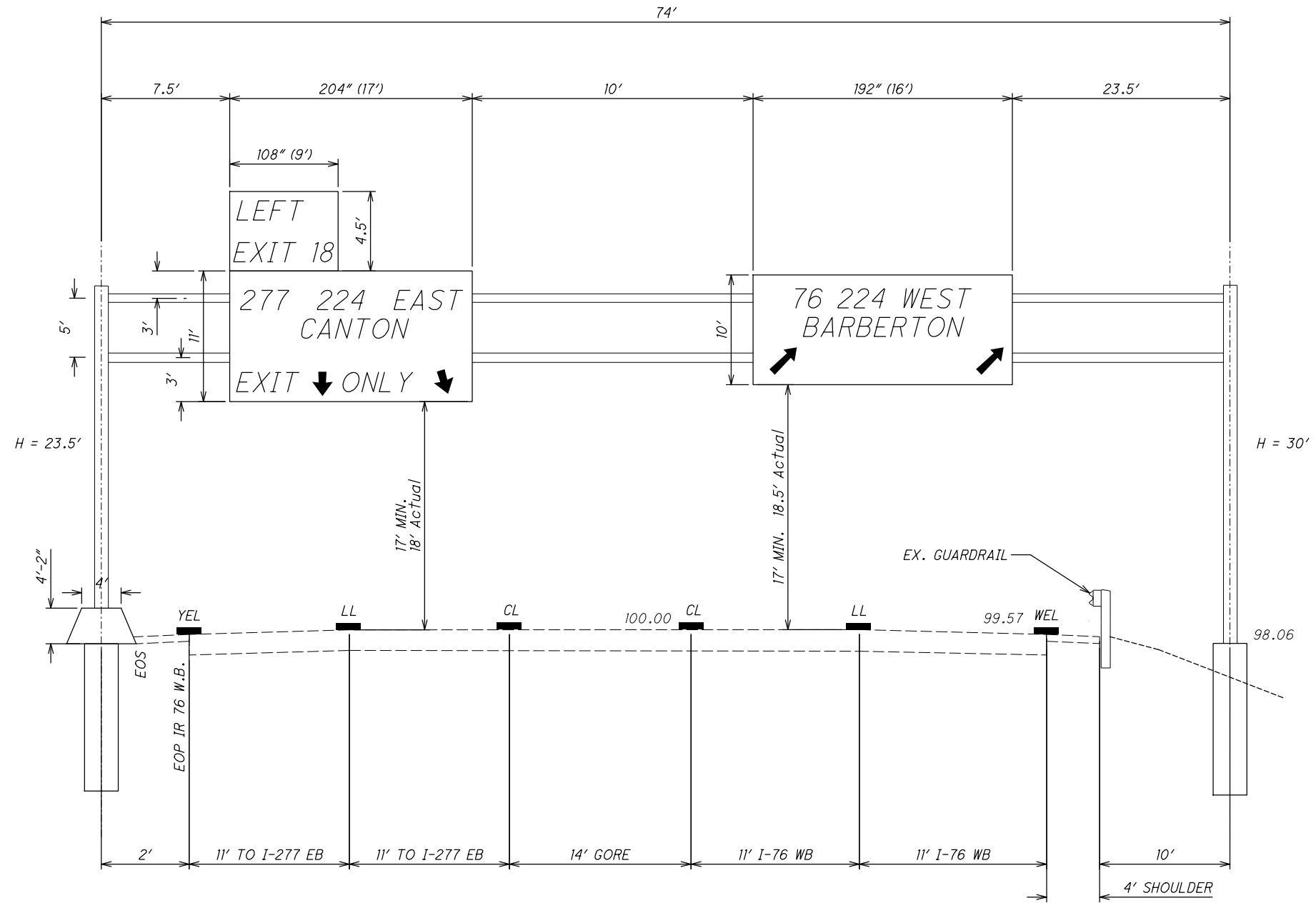
STATION TO STATION	TO	SIDE	202	625	625	625	625	625																													
			JUNCTION BOX REMOVED, AS PER PLAN	CONDUIT, 2", 725.04, AS PER PLAN	TRANSITION JUNCTION BOX, AS PER PLAN	PULL BOX, 725.08, 24", AS PER PLAN	MEDIAN PULL BOX, AS PER PLAN	PULL BOX REMOVED, AS PER PLAN	EACH	FT	EACH	EACH	EACH	EACH																							
	6+89.99	CL								1.00	1.00																										
	6+91.37	LT									1.00	1.00																									
	7+16.53	CL	1.00		1.00																																
	9+39.40	CL	1.00		1.00																																
6+57.38	7+21.88	CL		721.9																																	
9+33.50	9+88.02	CL		988.02																																	
TOTALS CARRIED TO GENERAL SUMMARY			2	1710	2	1	1	2																													

<b>SUM - 7.6 - 6.72</b>	33	85
	CALCULATED TFS	CHECKED RS

**LIGHTING SUB SUMMARY**

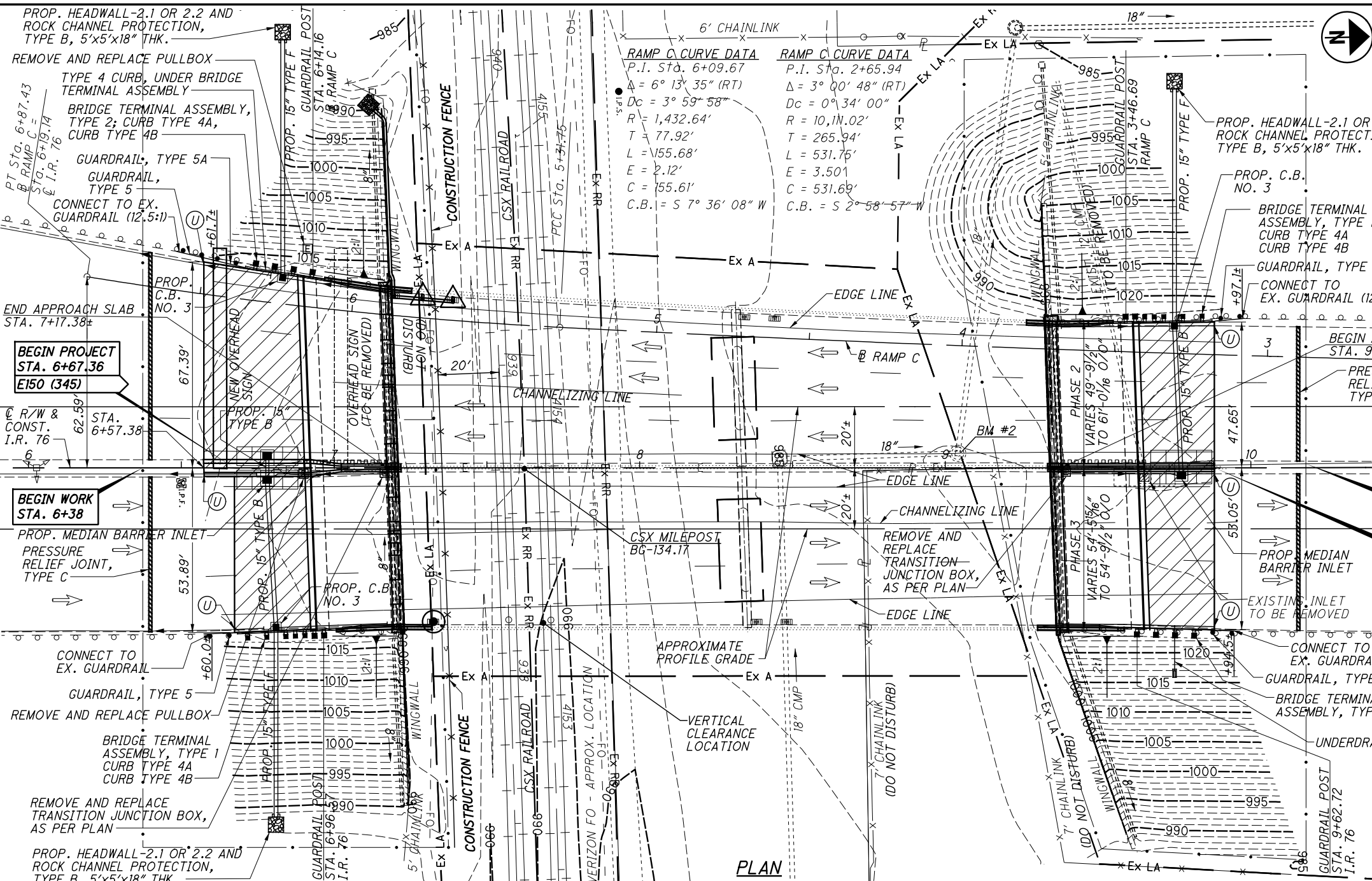
I:\Project+Data\SUM108812\_76-6.72\Design\Roadway\Sheets\108812\_TC001.dgn Sheet 11/30/2018 9:47:48 AM tsovizrg

**LEGEND**  
 LL = LANE LINE  
 YEL = YELLOW EDGE LINE  
 WEL = WHITE EDGE LINE  
 CL = CHANNELIZING LINE  
 EOP = EDGE OF PAVEMENT  
 EOS = EDGE OF SHOULDER



REF NO.	SHEET NO.	SLM	SIDE	CODE *PLYWOOD # YELLOW/GREEN ## WHITE ON BROWN	SIZE (INCHES)	QTY	DESCRIPTION
1			TRUSS			2	GROUND ROD
						1	OVERHEAD SIGN SUPPORT, INSTALLATION ONLY, AS PER PLAN
						1	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-7.65
						6	SIGN ATTACHMENT ASSEMBLY
						1	SIGN BACKING ASSEMBLY
						1	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50
						1	RIGID OVERHEAD SIGN SUPPORT FOUNDATION
						3	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION
						1	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL TYPE TC-7.65

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**BENCHMARK DATA**

BM #1 STA. 1+44.33	ELEV. 1000.80	OFFSET 50.21', RT.
BM #2 STA. 9+05.21	ELEV. 987.24	OFFSET 5.05', LT.
BM #3 STA. 12+23.94	ELEV. 1021.87	OFFSET 62.77', RT.

**NOTES**

EARTHWORK LIMITS SHOWN ARE APPROXIMATE.

DESIGN TRAFFIC:  
2018 ADT = 65,000    2018 ADTT = 9,100  
2038 ADT = 65,000    2038 ADTT = 9,100  
DIRECTIONAL DISTRIBUTION = 58%

- LEGEND**
- - 23.0' REQUIRED MINIMUM VERTICAL CLEARANCE
  - - 22.32' ACTUAL MINIMUM VERTICAL CLEARANCE
  - ▨ PROPOSED FULL DEPTH PAVEMENT
  - △ SCUPPER TO BE REMOVED AND REPLACED.
  - PLUG SCUPPER WITH CONCRETE AND REMOVE CONDUITS
  - ⊕ CONNECT TO EX. UNDERDRAIN INCIDENTAL TO ITEM 605
  - ▬ MOT SHEETING
  - - - CONSTRUCTION LIMITS

**EXISTING STRUCTURE**

TYPE: 2 SPAN CONTINUOUS WELDED PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 113'-6"±, 102'-6"± C/C BEARINGS

ROADWAY: 53'-1 1/2"± O/O NORTHBOUND ( RIGHT ) SLAB, VARIES 48'-0"± TO 59'-5"± SOUTHBOUND ( LEFT ) SLAB

LOADING: HS-20 CASE I AND ALTERNATE MILITARY

SKEW: 2°10'30"±

APPROACH SLABS: 25'-0"± (AS-1-54)

ALIGNMENT: STRAIGHT

WEARING SURFACE: LATEX MODIFIED CONC. OVERLAY

STRUCTURAL FILE NUMBER: 7705646

DATE BUILT: 1964, REHABILITATION 1986

DISPOSITION: JOINT REPAIR AND NEW APPROACH SLABS

**PROPOSED STRUCTURE**

TYPE: 2 SPAN CONTINUOUS WELDED PLATE GIRDER WITH REINFORCED CONCRETE DECK ON SEMI-INTEGRAL ABUTMENTS

PROPOSED WORK: MODIFY PORTIONS OF THE SUPERSTRUCTURE AND CONCRETE ABUTMENTS FOR SEMI-INTEGRAL ABUTMENTS AND REPLACE APPROACH SLABS

SPANS: 113'-6"±, 102'-6"± C/C BEARINGS

ROADWAY: 53'-1 1/2"± O/O NORTHBOUND ( RIGHT ) SLAB, VARIES 48'-0"± TO 59'-5"± SOUTHBOUND ( LEFT ) SLAB

LOADING: HS-20 CASE I AND ALTERNATE MILITARY

SKEW: 2°10'30"±

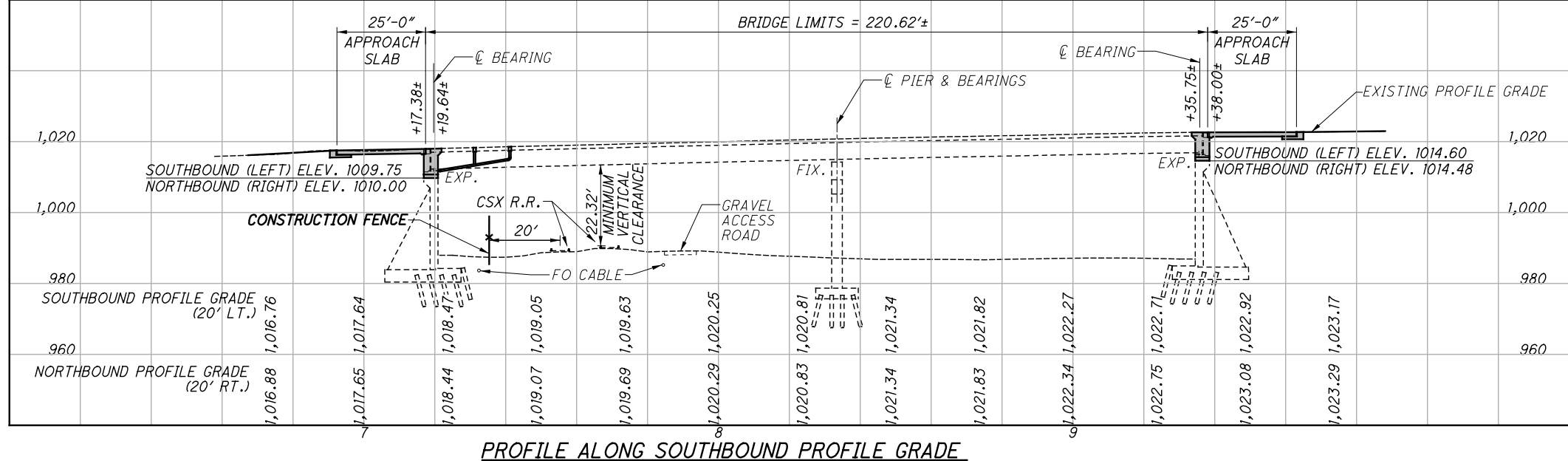
APPROACH SLABS: 25'-0"± (AS-1-15) (TYPE C)

ALIGNMENT: STRAIGHT

WEARING SURFACE: LATEX MODIFIED CONC. OVERLAY

CROWN: MATCH EXISTING 0.016±

LAT: 41°02'14.74" LONG: 81°33'54.92"



**RICHLAND ENGINEERING LIMITED**  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

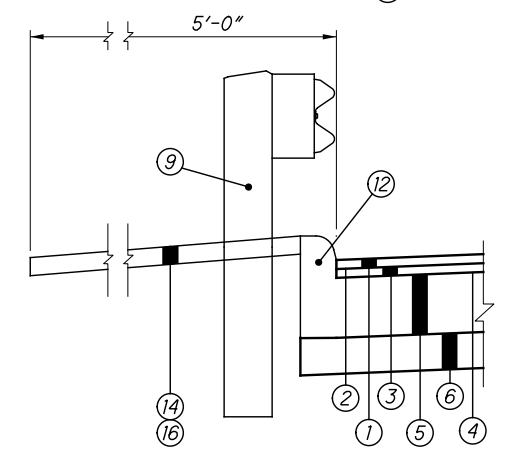
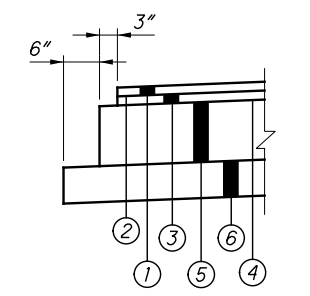
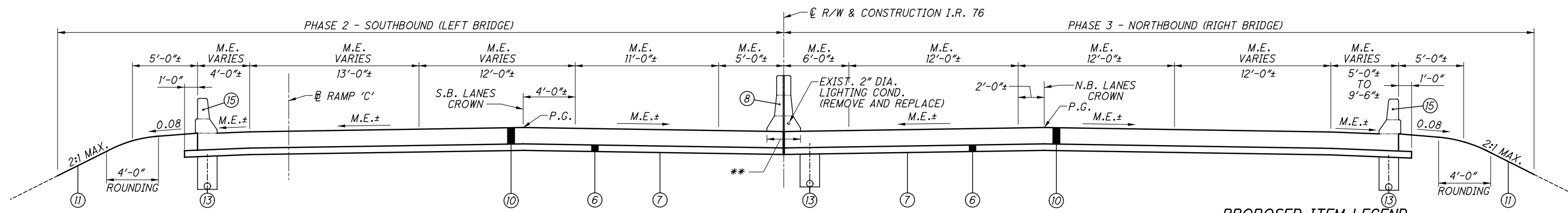
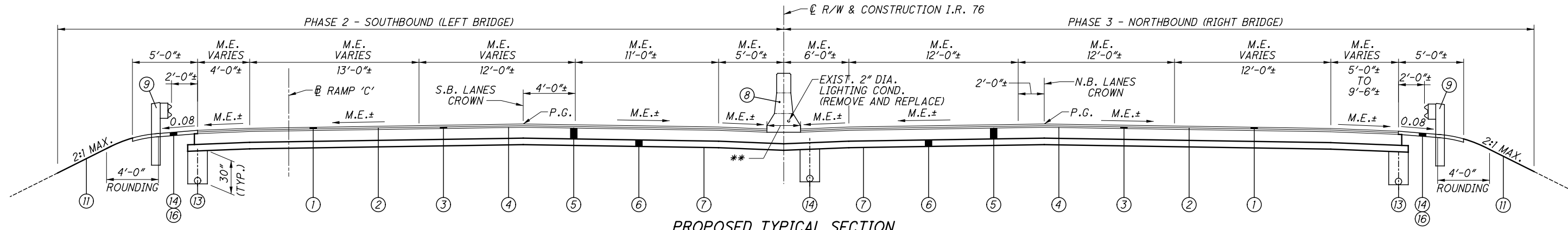
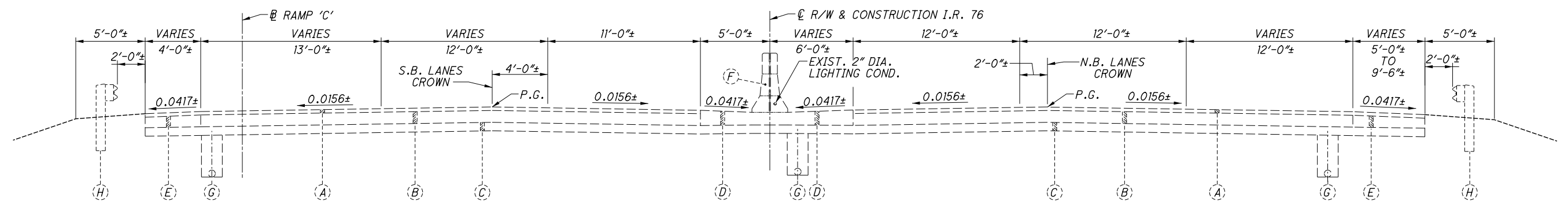
**DATE** 11-1-18  
**REVIEWED** DT  
**DATE** 11-1-18  
**DESIGNED** RWC  
**CHECKED** BLN  
**DRAWN** USB  
**REVISION**

**SUMMIT COUNTY**  
STA. 7+17.39±  
STA. 9+38.00±

**SITE PLAN**  
BRIDGE NO. SUM-76-0672  
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

**SUM-76-6.72**  
**PID No. 96670**

1/50  
35  
85

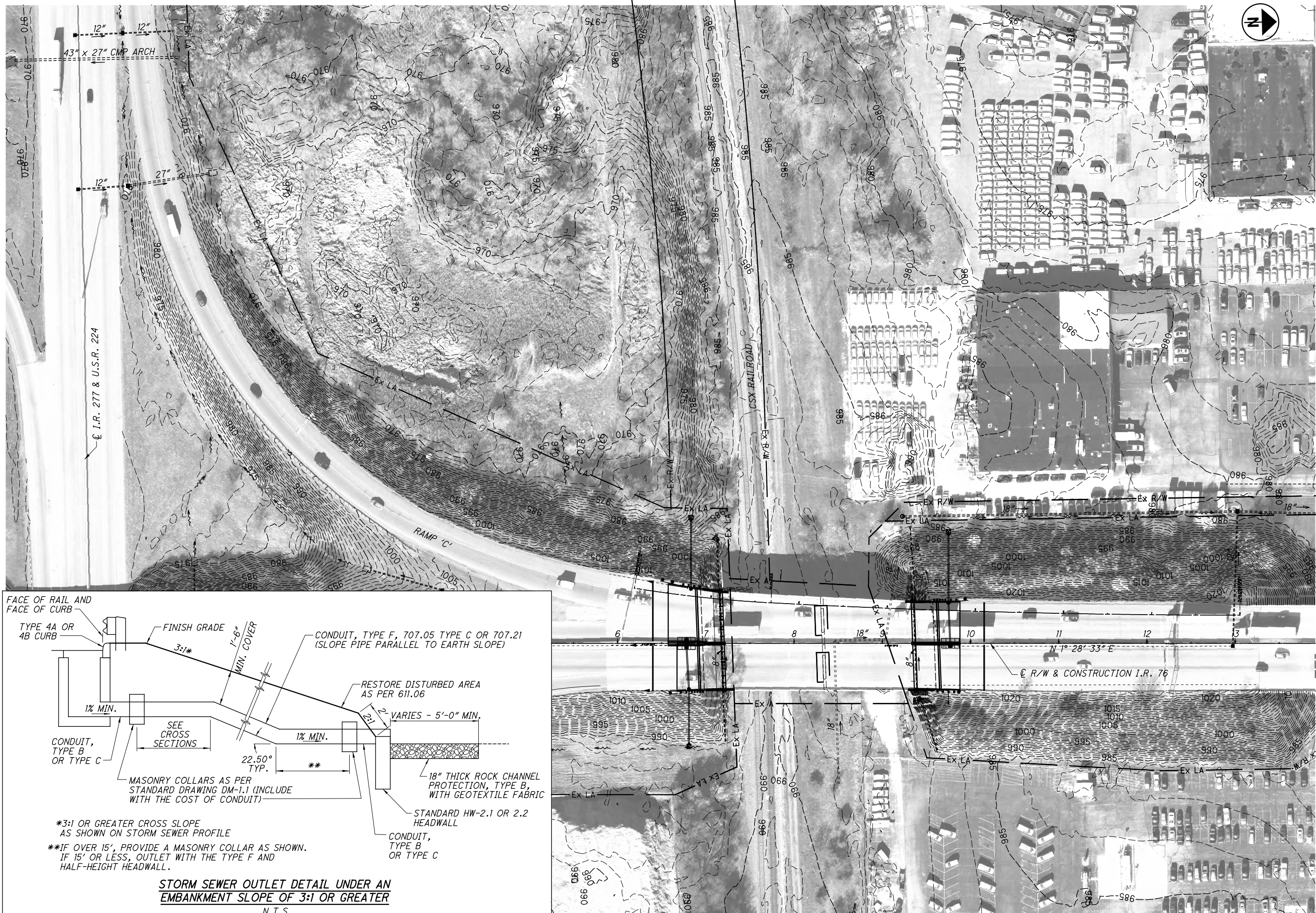


STA. 6+68.35 TO STA. 6+92.35 RT (CURB, TYPE 4B)  
 STA. 6+92.35 TO STA. 7+00.77 RT (CURB, TYPE 4A)  
 STA. 6+70.96 TO STA. 6+88.05 LT (CURB, TYPE 4B)  
 STA. 6+88.05 TO STA. 6+96.86 LT (CURB, TYPE 4A)  
 STA. 9+54.87 TO STA. 9+63.29 LT (CURB, TYPE 4A)  
 STA. 9+63.29 TO STA. 9+87.30 LT (CURB, TYPE 4B)

**NOTE:** M.E. = MATCH EXISTING  
 P.G. = PROFILE GRADE  
 \*\* WIDTH OF BARRIER: FOR ADDITIONAL INFORMATION SEE SHEETS 35/50 THRU 37/50  
 † STATIONING INCLUDES REMOVAL OF EXISTING APPROACH SLAB AND WEARING SURFACE. SEE SHEET 15/50

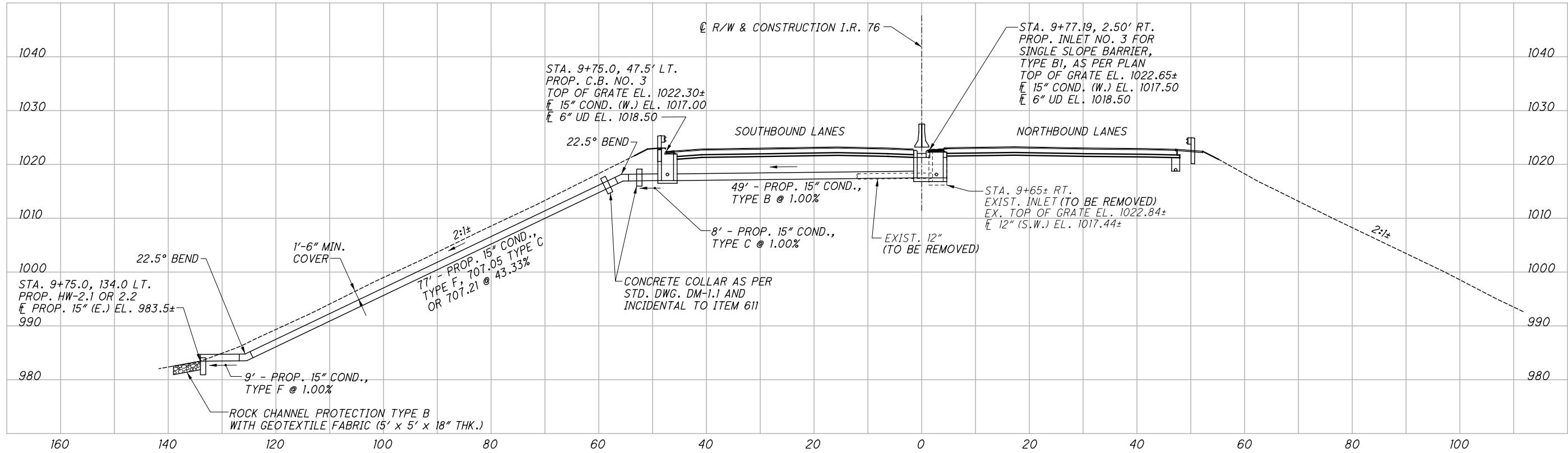
- EXISTING ITEM LEGEND**
- (A) 1/2" ASPHALT CONCRETE SURFACE COURSE
  - (B) 10% REINFORCED CONCRETE PAVEMENT
  - (C) SUBBASE (VAR. DEPTH)
  - (D) PLAIN CONCRETE PAVEMENT (VAR. 13 1/4" MAX TO 9" MIN.)
  - (E) AGGREGATE BASE (VAR. DEPTH)
  - (F) CONCRETE BARRIER
  - (G) 6" PIPE UNDERDRAIN
  - (H) GUARDRAIL

- PROPOSED ITEM LEGEND**
- (1) 442 - 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448)
  - (2) 407 - NON-TRACKING TACK COAT (APPLICATION RATE 0.06 GAL./S.Y.)
  - (3) 442 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)
  - (4) 407 - TACK COAT, 702.13 (APPLICATION RATE 0.08 GAL./S.Y.)
  - (5) 305 - 10" CONCRETE BASE, CLASS QC1
  - (6) 304 - 6" AGGREGATE BASE
  - (7) 204 - SUBGRADE COMPACTION
  - (8) 622 - BARRIER, MISC.: CONCRETE MEDIAN PARAPET/CONCRETE MEDIAN BARRIER; SCD BR-1-13 AND MC-93 (10-30-92)
  - (9) 606 - GUARDRAIL, TYPE 5 OR GUARDRAIL, TYPE 5A; PIS GR-2.1
  - (10) 526 - REINFORCED CONCRETE APPROACH SLABS (T=15")
  - (11) 659 - SEEDING AND MULCHING
  - (12) 609 - CURB, TYPE 4-A (APPROACH SLABS) CURB, TYPE 4-B (ASPHALT PAVEMENT)
  - (13) 605 - 6" SHALLOW PIPE UNDERDRAIN WITH GEOTEXTILE FABRIC WRAP
  - (14) 441 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448), (UNDER GUARDRAIL), AS PER PLAN
  - (15) 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN
  - (16) 209 - LINEAR GRADING, AS PER PLAN

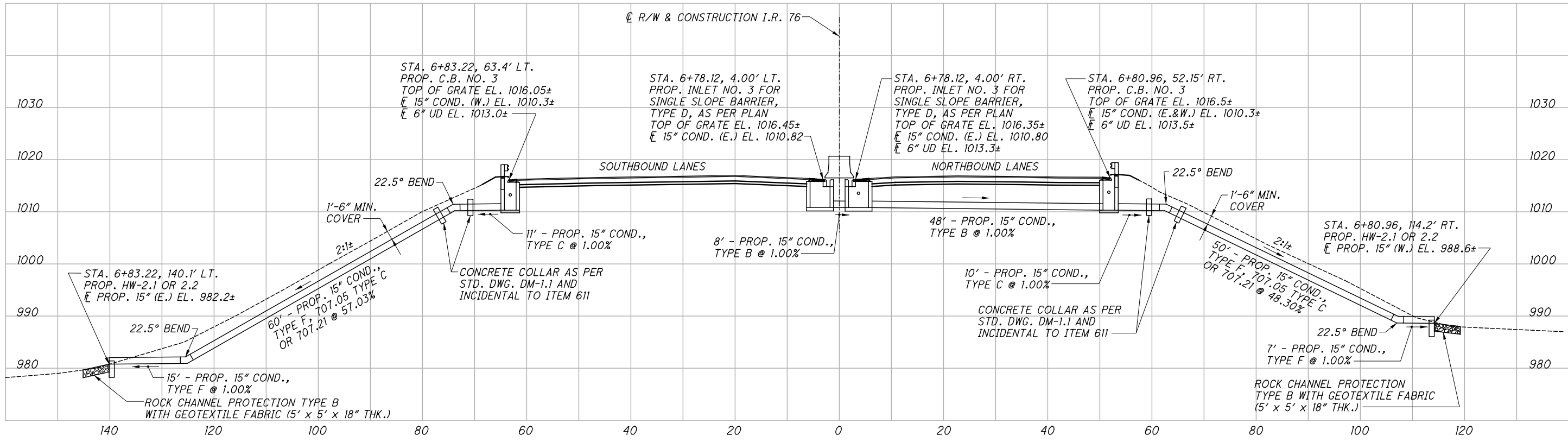


<b>DRAINAGE SCHEMATIC PLAN</b>		<b>DESIGNED</b>	<b>DRAWN</b>	<b>REVIEWED</b>	<b>DATE</b>	<b>RICHLAND ENGINEERING LIMITED</b>
BRIDGE NO. SUM-76-0672		PRS	SCB	DT	11-1-18	29 NORTH PARK STREET
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		CHECKED	REVISED	STRUCTURE FILE NUMBER	7705646	MANSFIELD, OHIO 44902
<b>SUM-76-6.72</b>						
<b>PID No. 96670</b>						
3 / 50						
37						
85						

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**NOTE:**  
1. SEE STORM SEWER OUTLET DETAIL ON SHEET 3/50.



<p><b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902</p>	
<p>DATE: 11-1-18 DT: 11-1-18</p>	<p>STRUCTURE FILE NUMBER: 7705646</p>
<p>DRAWN: SCB REVISOR: BLN</p>	<p>DESIGNED: PRS CHECKED: BLN</p>
<p><b>STORM SEWER PROFILES</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY</p>	
<p><b>SUM-76-6.72</b> PID No. 96670</p>	
<p>4 / 50</p>	
<p>38 / 85</p>	



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**REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:**

- AS-1-15 (REVISED 7-17-2015)
- AS-2-15 (REVISED 1-19-2018)
- SICD-2-14 (DATED 7-18-2014)
- FB-1-82 (REVISED 5-10-1982)
- GSD-1-96 (REVISED 7-19-2002)
- BR-1 (REVISED 5-29-1979)

**AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:**

800 (DATED 1-18-2019)

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO THE 17TH EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 2002 INCLUDING ALL SUBSEQUENT INTERIM SPECIFICATIONS AND THE 2004 ODOT BRIDGE DESIGN MANUAL INCLUDING INTERIMS.

**DESIGN DATA**

DESIGN LOADING - HS25 WITH 100% IMPACT.  
 EXPANSION JOINT STEEL - ASTM A709, GRADE 36  
 CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)  
 CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE WITH SEMI-INTEGRAL ABUTMENT DIAPHRAGM, APPROACH SLABS & PARAPET/MEDIAN)  
 REINFORCING STEEL - ASTM A615 OR A996, GRADE 60 WITH MINIMUM YIELD STRESS OF 60 KSI  
 STRUCTURAL STEEL - ASTM A36, GRADE 36

**DECK PROTECTION METHOD**

EPOXY COATED REINFORCING STEEL AND 2 1/2" CONCRETE COVER.

**EXISTING STRUCTURE VERIFICATION:**

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

BASE CONTRACT BID PRICES UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 4 OFFICE  
2088 S ARLINGTON ROAD  
AKRON, OHIO 44306

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:  
HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/  
CONTRACTS/PAGES/DESIGNFILES.ASPX

**UTILITIES**

SEE ROADWAY GENERAL NOTES FOR UTILITY LIST.

**ASBESTOS NOTIFICATION**

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION: THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM OHIO EPA, DAPC P.O. BOX 1049 COLUMBUS, OH 43216-1049	OR	ASBESTOS PROGRAM OHIO EPA, DAPC 50 W. TOWN ST., SUITE 700 COLUMBUS, OH 43215
--	----	---

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTOR'S NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON ROAD, AKRON, OHIO 44306.

BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON THIS PROJECT. SEE TABLE ON THIS SHEET CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL (ESTABLISHED BY THOMAS FOK & ASSOCIATES, INC.)

ORTHOMETRIC HEIGHT DATUM: NAVD 88  
GEOID: 2012a

**HORIZONTAL POSITIONING**

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)  
 ELLIPSOID: GRS80  
 MAP PROJECTION: LAMBERT CONFORMAL CONIC  
 COORDINATE SYSTEM: OHIO NORTH ZONE (3401)  
 COMBINED SCALE FACTOR (CSF): 0.99989474882  
 PROJECT ADJUSTMENT FACTOR (PAF): 1.00010526226  
 ORIGIN OF COORDINATE SYSTEM: STATE PLANE (0.0)

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

UNITS ARE IN U.S. SURVEY FEET.

**ELEVATION DATUM**

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM - N.A.V.D. 88

**PROJECT BEARINGS**

BEARINGS WERE PROVIDED BY THOMAS FOK & ASSOCIATES INC. AND ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, NAD83(2011), OHIO NORTH ZONE.

**HORIZONTAL DATUM**

PROJECT CONTROL WAS PROVIDED BY THOMAS FOK & ASSOCIATES INC. IN 2018, NAD83(95) BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, OHIO NORTH ZONE.

**VERTICAL DATUM**

PROJECT ELEVATIONS WERE PROVIDED BY THOMAS FOK & ASSOCIATES INC. IN 2018, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.

**WORK LIMITS**

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

**PROTECTION OF RIGHT-OF-WAY LANDSCAPING**

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

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

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER. 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.

**PAVING UNDER GUARDRAIL**

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

**METHOD A:**

1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

**METHOD B:**

1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441 - ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

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

**ASPHALT CONCRETE SURFACE COURSE SEALING REQUIREMENTS:**

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED IN SCD BP-3.1 AND C&MS 401.15, THE CONTRACTOR SHALL SEAL THE FOLLOWING LOCATIONS:

- ALL CASTINGS INCLUDING BUT NOT LIMITED TO MONUMENTS, MANHOLES, WATER VALVES, CATCH BASINS, CURB INLETS.
- BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES.
- BUTT JOINT BETWEEN PAVED SHOULDER AND DRIVEWAY ASPHALT AND THE TAPERED EDGE WHEN FEATHERING TO AN EXISTING ASPHALT DRIVEWAY.
- PERIMETER OF ALL PAVEMENT REPAIRS OR OTHER ASPHALT INLAYS WHEN THE REPAIR/INLAY IS NOT OVERLAID WITH AN ASPHALT CONCRETE SURFACE COURSE.
- ALL COLD LONGITUDINAL JOINTS BETWEEN PAVED SHOULDERS AND GUARDRAIL ASPHALT.

THE MATERIAL USED SHALL BE A CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES. ANY ADDITIONAL COSTS ASSOCIATED WITH THE WORK IDENTIFIED IN THIS NOTE SHALL BE INCLUDED IN THE APPROPRIATE ASPHALT CONCRETE SURFACE COURSE ITEM OF WORK.

**ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE**

PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL ERECT AND MAINTAIN, THROUGHOUT THE DURATION OF THE PROJECT, ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE. THE FENCE SHALL BE ERECTED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DM-4.4 SUPPLEMENTED WITH A PLASTIC/NYLON CONSTRUCTION FENCE AT LOCATIONS SHOWN IN THE PLANS. THE FENCE IS REQUIRED TO PROTECT THE CSX RAILROAD PROPERTIES. PLASTIC NYLON CONSTRUCTION FENCE SHALL BE BRIGHT ORANGE AND SHALL BE SECURELY FASTENED TO THE WOOD STIFFENER STAKES AT NO MORE THAN 6 FOOT SPACING. THE CONSTRUCTION FENCE SHALL BE NOMINALLY 4 FEET HIGH AT THE TOP EDGE AND SHALL NOT SAG BELOW 36 INCHES (12 INCH SAG). THE CONSTRUCTION FENCE SHALL BE MAINTAINED IN GOOD CONDITION AS APPROVED BY THE ENGINEER EXCEPT REPAIR AND MAINTENANCE WILL BE AT NO ADDITIONAL PROJECT COST. SECTIONS OF THE SUPPLEMENTAL CONSTRUCTION FENCE WITH EXTENSIVE BROKEN SLATS OR HOLES GREATER THAN 12" X 12" SHALL BE REPAIRED OR REPLACED AS APPROVED BY THE ENGINEER. THE CONTRACTOR'S EMPLOYEES AND EQUIPMENT WILL NOT BE PERMITTED PAST THE FENCE ON THE OPPOSITE SIDE OF THE PROPOSED CONSTRUCTION. AT THE CONCLUSION OF THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL REMOVE THE FENCE AND WOOD STIFFENER STAKES. ALL MATERIAL, LABOR, EQUIPMENT, COORDINATION AND INCIDENTALS TO PERFORM THIS ITEM OF WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE, FOOT

RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE 11-1-18	FILE NUMBER 7705646
REVIEWED DT	STRUCTURE FILE NUMBER 7705646
DRAWN JSB	REVISED
DESIGNED RWC	CHECKED BLN
GENERAL NOTES BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
SUM-76-6-72 PID No. 96670	
5/50	
39 85	

**EARTHWORK FOR PROJECT TRANSITION**

A CONTINGENCY OF ITEM 203 - EMBANKMENT AND ITEM 203 - EXCAVATION IS BEING PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO TRANSITION THE EARTHWORK INTO THE EXISTING AT THE BEGIN/END OF THE PROJECT.

- ITEM 203 - EXCAVATION 50 CU. YD.
- ITEM 203 - EMBANKMENT 50 CU. YD.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR EXCAVATION BEYOND THE EXISTING PAYMENT REMOVAL TO CONSTRUCT THE PROPOSED PAVEMENT BUILD UP.

- ITEM 203 - EXCAVATION 50 CU. YD.

**ROUNDING**

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

**SEEDING AND MULCHING**

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

- ITEM 659 - SOIL ANALYSIS TEST 2 EACH
- ITEM 659 - TOPSOIL 359 CU. YD.
- ITEM 659 - SEEDING AND MULCHING 3232 SQ. YD.
- ITEM 659 - REPAIR SEEDING AND MULCHING 162 SQ. YD.
- ITEM 659 - INTER-SEEDING 162 SQ. YD.
- ITEM 659 - COMMERCIAL FERTILIZER 0.48 TON
- ITEM 659 - LIME 0.67 ACRES
- ITEM 659 - WATER 18 M. GAL.
- ITEM 670 - SLOPE EROSION PROTECTION 3232 SQ. YD.

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

**ITEM 204 - PROOF ROLLING**

A QUANTITY HAS BEEN ESTIMATED IN THE PAVEMENT CALCULATIONS AND CARRIED TO THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

**ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING**

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.  
  
IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
3. COMPACT THE SUBGRADE ACCORDING TO 204.03.
4. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR THE UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS. PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE FOLLOWING ITEMS AND CONTINGENCY QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO ADDRESS UNSUITABLE SOILS ENCOUNTERED IN THE AREA OF THE PAVEMENT WIDENING.

- ITEM 204 - EXCAVATION OF SUBGRADE 50 CY
- ITEM 204 - GRANULAR MATERIAL, TYPE B 50 CY
- ITEM 204 - GEOTEXTILE FABRIC 200 CY

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

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

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

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

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

**EXISTING UNDERDRAINS**

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

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

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

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

- ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1 4 SQ. YD.
- ITEM 611 - 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS 50 FT.
- ITEM 611 - PRECAST REINFORCED CONCRETE OUTLET 2 EACH
- ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, 707.31 OR 707.41 50 FT.

**ITEM SPECIAL - PIPE CLEANOUT**

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

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE 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, 24" AND UNDER 100 FT.

**EXISTING / PROPOSED PIPE CONNECTIONS**

THE CONTRACTOR SHALL HAVE THE OPTION OF USING A COUPLING BAND TO JOIN EXISTING CORRUGATED METAL PIPE WITH A PROPOSED SECTION OF CORRUGATED METAL PIPE OR PLACING A CONCRETE COLLAR AS PER STANDARD CONSTRUCTION DRAWING DM-1.1. ALL OTHER PIPE CONNECTIONS SHALL HAVE A CONCRETE COLLAR AS PER STANDARD CONSTRUCTION DRAWING DM-1.1 PLACED AT THE JOINING OF EXISTING AND PROPOSED SECTIONS OF PIPE.

ANY EXPOSED METAL FROM THE PIPE CONNECTIONS OF A CORRUGATED METAL PIPE SHALL BE GALVANIZED COATED AS PER CMS SPECIFICATION 711.02 AND INCLUDED IN THE COST OF ITEM 611.

**EXISTING AND PROPOSED DRAINAGE FOR CONSTRUCTION PHASES**

DRAINAGE ITEMS MAY EXTEND THROUGH MULTIPLE CONSTRUCTION PHASES. ALL EXISTING AND PROPOSED DRAINAGE ITEMS SHALL BE PROVIDED WITH A POSITIVE OUTLET AT ALL TIMES AS APPROVED BY THE ENGINEER. ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO PROVIDE THESE TEMPORARY OUTLETS UNTIL THE PLAN DELINEATED OUTLET CAN BE CONSTRUCTED SHALL BE INCLUDED WITH ITEM 614 - MAINTAINING TRAFFIC, AND NO ADDITIONAL PAYMENTS SHALL BE MADE.

**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 APPURTENANCES 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.

**CSXT COORDINATION AND CONSTRUCTION CLEARANCE**

MEANS AND METHODS OF PERFORMING THE PROPOSED WORK SHALL CONFORM TO CSXT CONSTRUCTION SUBMISSION CRITERIA AND CMS 501.

ALL PROCEDURES TO BE SUBMITTED TO MR. DAVID CLARK, CSXT CONSTRUCTION ENGINEERING, 500 MEIJER DRIVE, SUITE 305, FLORENCE, KY. 41042, OR HIS DESIGNATED ENGINEERING REPRESENTATIVE. SUBMITTALS REQUIRE UP TO 30 DAYS FOR REVIEW AND COMMENT/APPROVAL.

A MEANS AND METHODS SUBMITTAL FOR CLEANING/SEALING CONCRETE, CLEANING/PAINING STRUCTURAL STEEL, DEMO SHIELD IF REQUIRED FOR PATCHING CONCRETE, CONCRETE SPALL REMOVAL, ETC, OR ANY ACTIVITY THAT WOULD HAVE A "POTENTIAL TO FOUL".

THE MATERIALS REMOVED DURING THE SURFACE PREPARATION MUST NOT IMPACT THE SURROUNDING AREA INCLUDING GROUND, WATER, OR AIR. MATERIALS MUST NOT BE STORED ON CSXT PROPERTY.

ALL FIXED OR MOVABLE OBSTRUCTIONS ABOVE OR ADJACENT TO TRACKS SHALL PROVIDE HORIZONTAL AND VERTICAL CLEARANCE AS REQUIRED BY APPLICABLE STATE OR LOCAL LAWS OR REGULATIONS, OR BY CSX CURRENT STANDARDS, WHICHEVER IS GREATER.

CSXT HORIZONTAL CLEARANCE: STANDARD HORIZONTAL CLEARANCE FROM CENTERLINE OF THE TRACK TO THE FACE OF THE PIER OR ABUTMENT SHALL TYPICALLY BE 25'-0" OR GREATER, BUT NEVER LESS THAN 18'-0", MEASURED PERPENDICULAR TO THE TRACK.

CSXT VERTICAL CLEARANCE: A STANDARD VERTICAL CLEARANCE OF 23'-0" SHALL BE PROVIDED, MEASURED FROM TOP OF HIGH RAIL TO LOWEST POINT OF STRUCTURE IN THE HORIZONTAL CLEARANCE AREA WHICH EXTENDS 6'-0" EITHER SIDE OF THE CENTERLINE OF TRACK.

TEMPORARY CONSTRUCTION CLEARANCES TO BE USED SHALL BE SUBJECT TO APPROVAL BY CSXT. TYPICALLY, REDUCTIONS IN CLEARANCE FOR CONSTRUCTION ARE NOT PERMITTED.

CONSTRUCTION FENCE SHALL BE PLACED ADJACENT TO THE RAILROAD PRIOR TO CONSTRUCTION AS APPROVED BY THE ENGINEER AND CSX.

**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. ALL EXISTING LIGHTING ELEMENTS, UNLESS OTHERWISE NOTED IN THE PLANS, SHALL REMAIN IN PLACE AND SHALL NOT BE DISTURBED. THE CONTRACTOR SHALL USE EXTREME CARE WHEN REMOVING CONCRETE AROUND THE LIGHTING CONDUIT. THE CONTRACTOR SHALL DISCONNECT THE EXISTING WIRING FROM THE ADJACENT TOWER OR JUNCTION BOX AND PULL THE WIRING BACK TO THE OTHER END OF THE WORK AREA. WHEN NEW MEDIAN IS IN PLACE, THE EXISTING WIRING CAN BE PULLED BACK THROUGH AND RECONNECTED. ANY REPAIRS TO THE DAMAGED LIGHTING SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AS APPROVED BY THE ENGINEER. NEW PULL BOXES SHALL BE COMPATIBLE AND FUNCTION WITH THE EXISTING LIGHTING SYSTEM.

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

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

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

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING CONTINUED ON NEXT SHEET:

<p><b>GENERAL NOTES</b></p> <p>BRIDGE NO. SUM-76-0672</p> <p>I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY</p>	<p>DATE: 11-1-18</p> <p>REVIEWED DT: 7705646</p> <p>DESIGNED RWC</p> <p>CHECKED BLN</p> <p>DRAWN USB</p> <p>REVISOR</p>	<p>RICHLAND ENGINEERING LIMITED</p> <p>29 NORTH PARK STREET</p> <p>MANSFIELD, OHIO 44902</p>
<p>SUM-76-6.72</p> <p>PID No. 96670</p>	<p>6 / 50</p> <p>40</p> <p>85</p>	

**ITEM SPECIAL - MAINTAIN EXISTING LIGHTING (CONT'D.)**

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

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 DISCONNECTING OF THE EXISTING LIGHTING DURING CONSTRUCTION, 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.

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

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

THE LUMP SUM PRICE BID FOR ITEM SPECIAL - MAINTAIN EXISTING LIGHTING SHALL INCLUDE PAYMENT FOR REUSING AND NOT DISTURBING THE EXISTING LIGHTING WIRING, ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING LUMP

**ITEM 202 - JUNCTION BOX REMOVED, AS PER PLAN**

IN ADDITION TO CMS 202 THIS ITEM SHALL REMOVE THE EXISTING TRANSITION JUNCTION BOX AND SHALL NOT DISTURB THE EXISTING WIRE. IF THE WIRE IS DAMAGED IN THE REMOVAL OF THE PULL BOX THE CONTRACTOR SHALL REPLACE THE DAMAGED ITEMS IN KIND AS APPROVED BY THE ENGINEER.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 - JUNCTION BOX REMOVED, AS PER PLAN, EACH.

**ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN**

THIS ITEM SHALL CONFORM TO THE SPECIFICATIONS IN THE CMS AND STANDARD CONSTRUCTION DRAWINGS FOR ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1 WITH THE EXCEPTION THAT THE BARRIER SHALL MATCH THE SHAPE AND DIMENSION OF THE EXISTING MEDIAN BARRIER. ANY ELECTRICAL WIRE IN THE BARRIER SHALL REMAIN. IF THE WIRE IS DAMAGED IN PLACING THE BARRIER, THE CONTRACTOR SHALL REPLACE THE DAMAGED ITEMS IN KIND AS APPROVED BY THE ENGINEER.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN.

**ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN**

THIS ITEM SHALL CONFORM TO THE SPECIFICATIONS IN THE CMS AND STANDARD CONSTRUCTION DRAWINGS FOR ITEM 611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D WITH THE EXCEPTION THAT THE BARRIER SHALL MATCH THE SHAPE AND DIMENSION OF THE EXISTING MEDIAN BARRIER. ANY ELECTRICAL WIRE IN THE BARRIER SHALL REMAIN. IF THE WIRE IS DAMAGED IN PLACING THE BARRIER THE CONTRACTOR SHALL REPLACE THE DAMAGED ITEMS IN KIND AS APPROVED BY THE ENGINEER. ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN.

**ITEM 625 - CONDUIT, 2", 725.04, AS PER PLAN**

IN ADDITION TO CMS 625, THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING CONDUIT AND ALL NECESSARY ITEMS AND MATERIALS TO CONNECT TO EXISTING CONDUIT.

ALL COST INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 625 - CONDUIT, 2", 725.04, AS PER PLAN.

**ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN PARAPET**

IN ADDITION TO CMS 622, THIS ITEM SHALL MATCH THE SHAPE AND DIMENSION OF THE EXISTING CONCRETE MEDIAN PARAPET. ODOT SCD MC-9.3 (10-30-92) CAN BE USED AS A REFERENCE, HOWEVER, THE CONTRACTOR SHALL VERIFY THE EXISTING CONCRETE MEDIAN PARAPET DIMENSIONS PRIOR TO MEDIAN CONSTRUCTION AND THE PARAPET SHALL BE BUILT TO MATCH EXISTING AS APPROVED BY THE ENGINEER. SEE SHEETS [28/50] AND [35/50] THROUGH [37/50] FOR ADDITIONAL DETAILS.

SEE GENERAL NOTE ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN SECTION "CUT LINE CONSTRUCTION JOINT PREPARATION" FOR CONCRETE REMOVAL AND REINFORCING STEEL REQUIREMENTS.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN PARAPET, FOOT.

**ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN BARRIER**

IN ADDITION TO CMS 622, THIS ITEM SHALL MATCH THE SHAPE AND DIMENSION OF THE EXISTING CONCRETE MEDIAN BARRIER. ODOT SCD MC-9.3 (10-30-92) CAN BE USED AS A REFERENCE, HOWEVER, THE CONTRACTOR SHALL VERIFY THE EXISTING CONCRETE MEDIAN BARRIER DIMENSIONS PRIOR TO MEDIAN CONSTRUCTION AND THE BARRIER SHALL BE BUILT TO MATCH EXISTING AS APPROVED BY THE ENGINEER. THE REAR APPROACH RAILING SHAPE SHALL HAVE A 10 FOOT TRANSITION FROM THE EXISTING CONCRETE MEDIAN BARRIER ON THE ROADWAY TO THE CONCRETE MEDIAN PARAPET ON THE BRIDGE AS SHOWN ON THE APPROACH SLAB RAILING DETAILS SHEETS [35/50] THROUGH [37/50].

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN BARRIER, FOOT.

**ITEM 625 - TRANSITION JUNCTION BOX, AS PER PLAN**

IN ADDITION TO CMS 625, THIS ITEM SHALL INCLUDE ALL NECESSARY ITEMS AND MATERIALS TO CONNECT TO THE EXISTING CONDUITS AND WIRING.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 625 - TRANSITION JUNCTION BOX, AS PER PLAN, EACH.

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

IN ADDITION TO CMS 625 THIS ITEM SHALL INCLUDE ALL NECESSARY ITEMS AND MATERIALS TO CONNECT TO THE EXISTING CONDUITS AND WIRING.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 625 - PULL BOX, 725.08, 24", AS PER PLAN, EACH.

**ITEM 625 - MEDIAN PULL BOX, AS PER PLAN**

IN ADDITION TO CMS 625 THIS ITEM SHALL INCLUDE ALL NECESSARY ITEMS AND MATERIALS TO CONNECT TO THE EXISTING CONDUITS AND WIRING.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 625 - MEDIAN PULL BOX, AS PER PLAN, EACH.

**ITEM 625 - PULL BOX REMOVED, AS PER PLAN**

IN ADDITION TO CMS 625 THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF THE EXISTING PULL BOX AND SHALL NOT DISTURB THE EXISTING WIRE. IF THE WIRE IS DAMAGED DURING THE REMOVAL OF THE PULL BOX THE CONTRACTOR SHALL REPLACE THE DAMAGED ITEMS IN KIND AS APPROVED BY THE ENGINEER.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 625 - PULL BOX REMOVED, AS PER PLAN, EACH.

**ITEM 832 - EROSION CONTROL**

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK SUPPLEMENTAL SPECIFICATION 832:

ITEM 832 - EROSION CONTROL 10000 EACH

**ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN**

IN ADDITION TO CMS 202 THE CONTRACTOR SHALL DISCONNECT THE EXISTING WIRING FROM THE ADJACENT TOWER OR JUNCTION BOX AND CAREFULLY PULL THE WIRING BACK TO THE END OF THE WORK AREA. WHEN NEW MEDIAN PARAPET/BARRIER WITH CONDUIT IS IN PLACE, THE EXISTING WIRING CAN BE PULLED BACK THROUGH AND RECONNECTED. EXTREME CARE SHALL BE TAKEN BY THE CONTRACTOR WHEN PERFORMING THIS WORK. IF THE WIRE IS DAMAGED DURING THE REMOVAL OF THE PARAPET/BARRIER, THE CONTRACTOR SHALL REPLACE THE DAMAGED ITEMS IN KIND AS APPROVED BY THE ENGINEER. THE EXISTING LIGHTING SYSTEM SHALL BE FUNCTIONAL AT THE COMPLETION OF THE PROJECT AS APPROVED BY THE ENGINEER. IN ADDITION, THE STEEL PLATES AT THE LOCATION OF THE EXISTING OVERHEAD TRUSS SHALL BE REMOVED AND DISPOSED OF. THIS ITEM SHALL INCLUDE THE REMOVAL OF THE PORTION OF THE EXISTING MEDIAN BARRIER WALL AND PARAPETS ON AND OFF THE BRIDGE AS DETAILED IN THE PLANS.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN, FOOT.

**PROFILE AND ALIGNMENT**

THE INTENT OF THE PROPOSED PAVEMENT IS TO UTILIZE THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT UNLESS OTHERWISE DETAILED IN THE PLANS.

**ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE C**

THIS ITEM SHALL CONFORM TO THE STANDARD CONSTRUCTION DRAWINGS FOR ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE C.

ALL COST INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE C, FOOT.

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

PORTIONS OF STRUCTURE REMOVED INCLUDE BUT ARE NOT LIMITED TO:

PORTIONS OF THE EXISTING DECK ALONG THE ENDS OF BRIDGE

PORTIONS OF THE EXISTING BACKWALL AND EXISTING POROUS BACKFILL ABUTMENT SEATS

REMOVAL OF PORTIONS THE END CROSSFRAMES ABOVE DIAPHRAGM GUIDES

THE CONTRACTOR MAY REMOVE ANY OR ALL OF THE REMAINING END CROSSFRAMES AFTER THE BEAMS ARE SET TO THEIR FINAL LOCATION AT NO ADDITIONAL COST TO THE OWNER.

**REMOVAL LIMITATIONS**

THIS WORK CONSISTS OF THE PARTIAL REMOVAL OF CONCRETE DECKS AND PARAPETS, ABUTMENT SEATS AND DECK JOINTS AT THE ABUTMENTS. THE REMOVAL LIMITS ARE SHOWN IN THE PLANS, AND ARE GENERALLY CONFINED TO THE EXISTING CONCRETE PARAPETS AND CONCRETE BLOCKOUTS ORIGINALLY CONSTRUCTED IN THE DECK AND BACKWALL FOR THE INSTALLATION OF THE JOINTS. THE EXISTING REINFORCING STEEL PROJECTING INTO THESE BLOCKOUT AREAS IS TO BE PRESERVED FOR REUSE AS INDICATED IN THE PLANS.

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

**PROTECTION OF STEEL SUPPORT SYSTEMS**

IT IS NOT ANTICIPATED THAT THE CONCRETE REMOVAL WILL AFFECT THE STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.) AT THE BRIDGE ENDS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05. THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS.

**CUT LINE CONSTRUCTION JOINT PREPARATION**

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

**MISCELLANEOUS CONCRETE REMOVAL**

THE TOP OF THE BACKWALLS EXHIBIT ISOLATED AREAS WITH SPALLING AND DELAMINATION ADJACENT TO THE CONCRETE BLOCKOUTS DESIGNATED FOR REMOVAL. REMOVE THESE DAMAGED AREAS AS PART OF THE CONCRETE REMOVAL AND PREPARE THEM FOR CONCRETE PATCHING IN ACCORDANCE WITH ITEM 519. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE ITEM 202 REMOVAL ITEM.

**MEASUREMENT AND PAYMENT**

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

RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902		DATE 11-1-18	FILE NUMBER 7705646
DESIGNED RWC	CHECKED BLN	REVIEWED DT	STRUCTURE FILE NUMBER 7705646
GENERAL NOTES BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY			
SUM-76-6.72		PID No. 96670	
7/50		41 85	

**ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN**

THE TEMPORARY SUPPORT OF EXCAVATION DESIGNED FOR THE PLANS USE SHEETING WITH A MINIMUM SECTION MODULUS (S) OF 23 IN<sup>3</sup>/FT AND A MINIMUM TOE OF 10 FT.

THIS DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR ITEM 503 - COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

**ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN**

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

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

DOWEL QUANTITY IS FOR NEW REINFORCING STEEL INSTALLED INTO EXISTING CONCRETE AS SHOWN ON THE PLANS.

AN ADDITIONAL QUANTITY OF 10 DOWEL BARS FOR EACH BRIDGE (TOTAL OF 20 DOWELS) HAS BEEN INCLUDED IN THE JOINT REPLACEMENT PLANS TO BE USED AS DIRECTED BY THE ENGINEER TO SECURE REPLACEMENT REINFORCING STEEL BARS IN THE EXISTING CONCRETE BACKWALL, DECK OR PARAPET. THE QUANTITY IS TO BE USED FOR EXISTING BARS DEEMED UNUSABLE BY THE ENGINEER UPON COMPLETION OF CONCRETE REMOVAL AND PREPARATION FOR THE NEW JOINT CONCRETE OPERATIONS.

THIS QUANTITY IS NOT TO BE USED FOR ANCHORING REPLACEMENT REINFORCING STEEL BARS DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS; NOR IS IT TO BE USED FOR THE ANCHORAGE OF THE LOW PROFILE JOINT SYSTEM, WHOSE ANCHOR INSTALLATION IS PAID FOR AS PART OF THE JOINT PAY ITEM.

**ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN**

PARAPET ON THE STRUCTURE AND TRANSITION ON APPROACH SLAB SHALL BE PAID WITH THIS ITEM.

**ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN**

SEAL THE NEW CONCRETE IN THE REBUILT PARAPETS, DECK END BLOCK FASCIA, ABUTMENT CONCRETE AND ABUTMENT PATCHES WITH AN EPOXY-URETHANE SEALER CLOSELY MATCHING THE SEALER COLOR ON THE EXISTING CONCRETE.

A CONTINGENCY QUANTITY OF 26 SQUARE YARDS HAS BEEN ADDED TO THE TOTAL QUANTITY OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE), AS PER PLAN TO ACCOUNT FOR ANY SEALING OF ADDITIONAL PATCHING OF CONCRETE SURFACES ON THE REAR ABUTMENT WALL. SEE SHEET [16/50] FOR REAR ABUTMENT PATCHING DETAIL.

**ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL (GIRDERS)**

THIS WORK CONSISTS OF DRILLING 2-INCH DIMETER HOLES AS FOR THE SEMI-INTEGRAL REINFORCING ON ALL BEAMS AS LOCATED ON SHEET [21/50] OF THE PLANS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THE DRILLING OF BEAM HOLES SHALL BE PAID FOR UNDER ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL (GIRDERS) AS AN EACH ITEM.

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

THIS WORK CONSISTS OF RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. TO PERMIT THE BEARING REMOVAL AND WORK ON ABUTMENT SEAT CONCRETE AND BEARING INSTALLATION. ALL BEARINGS AT AN ABUTMENT IN A SUPERSTRUCTURE UNIT WILL BE LIFTED SIMULTANEOUSLY. THE MAXIMUM LIFT IS EXPECTED TO BE 0.25 INCHES.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL GIRDERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT THE CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COST TO ENSURE FULL SEATING ON BEARINGS.

NO STEEL WORK, INCLUDING; REMOVAL OF THE CROSSFRAMES, DRILLED HOLES OR GIRDER "A" STEEL REPAIR, SHALL BE STARTED UNTIL AFTER THE BRIDGE HAS BEEN PLACED ON TEMPORARY BLOCKING.

ONCE RAISED AND THE BEARINGS ARE REMOVED THE STRUCTURE WILL BE BLOCKED INTO POSITION WHILE THE ABUTMENT SEATS ARE REPAIRED. NO HYDRAULIC PRESSURE WILL BE USED IN THE BLOCKING. THE BLOCKING WILL HOLD TO SUPERSTRUCTURE IN ITS FINAL POSITION.

ONCE THE ABUTMENT SEAT WORK IS COMPLETE, THE JACKS WILL BE ENGAGED RAISING THE STRUCTURE TO REMOVE THE BLOCKING AND PERMIT THE INSTALLATION OF THE BEARING. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING IN BAYS IN WHICH THE LOWER END CROSSFRAME SECTION IS TO BE REMOVED FOR THE PLACEMENT OF SEMI-INTEGRAL DIAPHRAGM GUIDES BEFORE THE CROSSFRAME REMOVAL. ONCE THE STRUCTURE IS FULLY UPON THE ATTACHED BEARINGS THE JACKS AND SUPPORT STRUCTURE WILL BE REMOVED.

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

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

**ITEM 518 - SCUPPER, MISC.: FILL AND PLUG EXISTING SCUPPERS AND DOWNSPOUTS**

IN ADDITION TO CMS 518 THIS ITEM SHALL ALSO CONSIST OF THE CONSTRUCTION OF BULKHEADS IN EXISTING REAR APPROACH BRIDGE SCUPPERS AND FILLING THE AREA SEALED OFF WITH CONCRETE OR OTHER MATERIAL APPROVED BY THE ENGINEER.

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

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE SCUPPER OR DOWNSPOUT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED.

THIS ITEM SHALL ALSO CONSIST OF REMOVING THE EXISTING REAR APPROACH BRIDGE DOWNSPOUTS FROM THE SCUPPERS TO THE ELEVATION OF THE ABUTMENT REPAIR AND BE PLUGGED AS APPROVED BY THE ENGINEER.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 518 - SCUPPER, MISC.: FILL AND PLUG EXISTING SCUPPERS AND DOWNSPOUTS, EACH. FOR LOCATION SEE SHEET [20/50].

**ITEM 518 - SCUPPER, MISC.: SCUPPER AND DOWNSPOUT CLEANOUT**

IN ADDITION TO CMS 518 THIS WORK SHALL ALSO CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING SCUPPERS AND DOWNSPOUTS AT STATIONS 8+34± LT., 8+38± RT., 8+44± LT. AND 8+48± RT. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL DRAINAGE SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE PAID FOR AT THE UNIT PRICE BID EACH, FOR ITEM 518 - SCUPPER, MISC.: SCUPPER AND DOWNSPOUT CLEANOUT, EACH. FOR LOCATION SEE SHEET [20/50].

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

THE SURFACES OF THE CONCRETE ABUTMENT WALLS, SEATS AND BACKWALLS SHALL BE SOUNDED AND REPAIR AREAS WILL BE DETERMINED DURING CONSTRUCTION AS APPROVED BY THE ENGINEER. THIS INCLUDES A REPAIR QUANTITY OF 42 SQUARE FEET ON THE SOUTHBOUND (LEFT) BRIDGE AND 20 SQUARE FEET ON THE NORTHBOUND (RIGHT) BRIDGE REAR ABUTMENT THAT WAS DETERMINED IN 2018 DURING ENGINEER SITE VISIT. IT IS ANTICIPATED THAT THIS WILL INCREASE BY THE TIME OF CONSTRUCTION.

THE REPAIR QUANTITIES LISTED ABOVE SHALL BE AS DIRECTED BY THE ENGINEER.

CENTERLINE REFERENCE						
GROUND COORDINATES		☉ RIGHT OF WAY I.R. 76			DESCRIPTION	
NORTH	EAST	STATION	OFFSET	SIDE		
500,192.375	2,227,232.854	1+00.18	707.06	RT.	T500 ELEV. 976.28 - IPINS #5-REBAR ODOTCAP	
500,317.943	2,226,722.482	2+12.56	193.62	RT.	MNF2 ELEV. 997.01 - IPINS 5/8-FOK	
500,484.658	2,226,577.930	3+75.50	44.82	RT.	T540 ELEV. 1007.11 - IPINS #5-REBAR ODOTCAP	
500,760.097	2,226,545.189	6+50.00	5.00	RT.	MNF17 ELEV. 1015.47 - IPIN MONBOX 3/4	
500,809.208	2,226,596.661	7+00.42	55.19	RT.	MNF12 ELEV. 1016.76 - IPID 5/8-NCI	
500,856.833	2,226,806.893	7+53.44	264.13	RT.	MNF11 ELEV. 990.33 - IPINS 5/8-FOK	
500,906.525	2,226,420.728	7+93.17	123.19	LT.	MNF10 ELEV. 988.31 - IPINS 5/8-FOK	
501,053.007	2,226,496.878	9+41.57	50.84	LT.	MNF19 ELEV. 1021.56 - IPID 5/8-NCI	
501,178.175	2,226,607.287	10+69.54	56.31	RT.	MNF15 ELEV. 1022.93 - IPINS 5/8-FOK	
501,309.906	2,226,559.354	11+99.99	5.00	RT.	MNF18 ELEV. 1023.76 - IPIN MONBOX 3/4	
500,253.428	2,226,577.364	1+44.33	50.21	RT.	BM2001 ELEV. 1000.80 - BM-1 X CUT NEBOLT CANT-SIGN EXIT19 KENMORE BLVD 1/2MI	
501,015.480	2,226,541.717	9+05.21	5.05	LT.	SVT1152 ELEV. 987.24 - BM-3 N RIM SSMH	
501,332.361	2,226,617.719	12+23.94	62.77	RT.	BMC2 ELEV. 1021.87 - BM-2 X CUT-TOPSW BOLT S.CONC.BASE (OVERHEAD TRUSS SIGN)	
500,110.441	2,226,523.450	0+00.00		CL	RE01	
500,999.814	2,226,572.127	18+90.00		CL	RE02	
501,416.195	2,226,525.082	0+00.00	RAMP C	CL	RAMP C CURVE C1 PC	
501,150.348	2,226,518.232	2+64.94	RAMP C		RAMP C CURVE C1 PI	
500,885.229	2,226,497.417	5+31.75	RAMP C	CL	RAMP C CURVE C1 PT	
500,885.229	2,226,497.417	5+31.75	RAMP C	CL	RAMP C CURVE C2 PC	
500,807.549	2,226,491.318	6+09.67	RAMP C		RAMP C CURVE C2 PI	
500,730.990	2,226,476.831	6+87.43	RAMP C	CL	RAMP C CURVE C2 PT	

**GENERAL NOTES**

BRIDGE NO. SUM-76-0672  
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

**SUM-76-6-72**  
PID No. 96670

8 / 50

42  
85

RICHLAND ENGINEERING LIMITED  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

DATE: 11-1-18  
DT: STRUCTURE FILE NUMBER 7705646

DESIGNED: RWC  
CHECKED: BLN

DRAWN: USB  
REVISED:

REVIEWED: DT

F:\2018\118022\_D4\_Bridge Design Review\_PID 106815\_Task 3 - SUM-76-6.72\_SF 7705646\ProjectData\106815\Design\Structures\SUM076\_0672C\Sheets\76\_0672CEQ001.dgn 4/16/19 3:28:13 PM JeremyBur

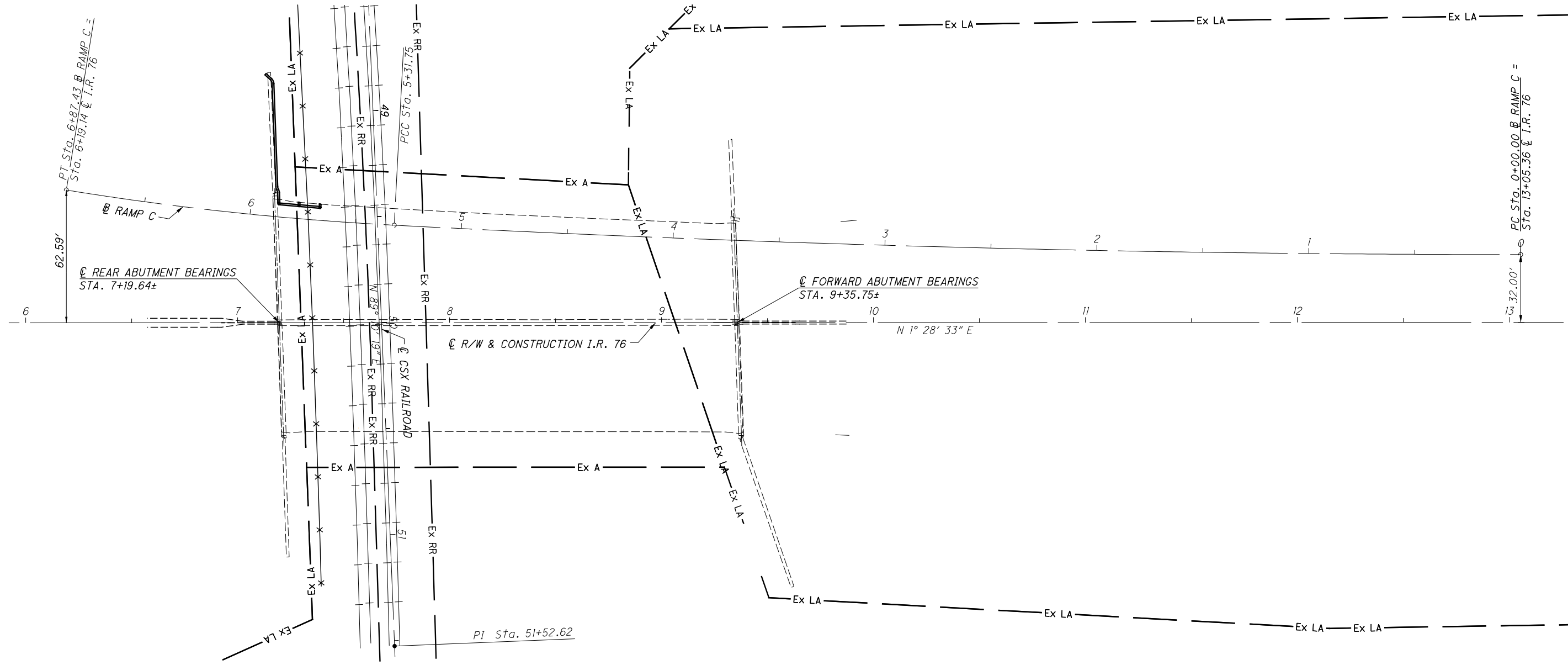
**ESTIMATED QUANTITIES**

CALCULATED TGW DATED 11/18  
 CHECKED RWC DATED 11/18

ITEM	ITEM EXT.	09/IMS/BR			UNIT	DESCRIPTION	SOUTHBOUND (LEFT) BRIDGE				NORTHBOUND (RIGHT) BRIDGE				SEE SHEET
		SOUTH-BOUND (LEFT) BRIDGE TOTAL	NORTH-BOUND (RIGHT) BRIDGE TOTAL	TOTAL			SUPER	ABUTS.	RAIL	GEN'L	SUPER	ABUTS.	RAIL	GEN'L	
202	11203	LS	LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS				7/50
202	22901	213	201	414	SY	APPROACH SLAB REMOVED, AS PER PLAN					213			201	15/50
503	11101	LS	LS	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					LS			LS	8/50
503	21300	LS	LS	LS		UNCLASSIFIED EXCAVATION					LS			LS	
509	10001	15,230	15,031	30,261	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	10,580	2,739	1,911		10,396	2,687	1,948		8/50
510	10001	160	158	318	EACH	DOWEL HOLES WITH NON-SHRINK, NON-METALLIC GROUT, AS PER PLAN		150		10		148		10	8/50
511	21520	107	105	212	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	107				105				
511	33500	2	2	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		2				2			
511	34449	6	6	12	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN			6				6		8/50
511	44110	22	20	42	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING		22				20			
512	10101	177	166	343	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	72	51	54		68	42	56		8/50
512	10300	61	62	123	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	61				62				
513	21599	51		51	LB	STRUCTURAL STEEL FOR REHABILITATION	51								
513	95030	60	56	116	EACH	STRUCTURAL STEEL, MISC: DRILLING STRUCTURAL STEEL (GIRDERS)	60				56				8/50
516	10010	112	107	219	FT	ARMORLESS PREFORMED JOINT SEAL				112				107	
516	13600	72	126	198	SF	1" PREFORMED EXPANSION JOINT FILLER	54		18		108		18		
516	13900	26	26	52	SF	2" PREFORMED EXPANSION JOINT FILLER	26				26				
516	14020	123	122	245	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL		123				122			
516	44201	15	14	29	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)(3.757"x13.5"x16" PAD, 1.5"x13"x17.5" PLATE, 1.5"x14.5"x17" PLATE AND HP10x42 SECTION), AS PER PLAN	15				14				22/50
516	47001	LS	LS	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LS				LS	8/50
518	12301	2		2	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN	2								42/50
518	12500	2	2	4	EACH	SCUPPER MISC.: SCUPPER AND DOWNSPOUT CLEANOUT	2				2				8/50
518	12500		1	1	EACH	SCUPPER MISC.: FILL AND PLUG EXISTING SCUPPER AND DOWNSPOUT					1				8/50
518	21200	69	69	138	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				69				69	
518	51201	82		82	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN (10")				82					42/50
518	60031	20		20	FT	PIPE HORIZONTAL CONDUCTOR, AS PER PLAN				20					42/50
519	11101	109	65	174	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		109				65			8/50
526	25000	304	296	600	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				304				296	
526	90030	112	107	219	FT	TYPE C INSTALLATION				112				107	

RICHLAND ENGINEERING LIMITED  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902  
 DATE 11-1-18  
 REVIEWED DT  
 STRUCTURE FILE NUMBER 7705646  
 DRAWN RB  
 REVISION  
 DESIGNED RWC  
 CHECKED BLN  
 ESTIMATED QUANTITIES  
 BRIDGE NO. SUM-76-0672  
 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY  
 SUM-76-6.72  
 PID No. 96670  
 9/50  
 43  
 85

**NOTES**  
 QUANTITIES CARRIED TO GENERAL SUMMARY  
 PLAN SHEET, SEE SHEET 28-30.



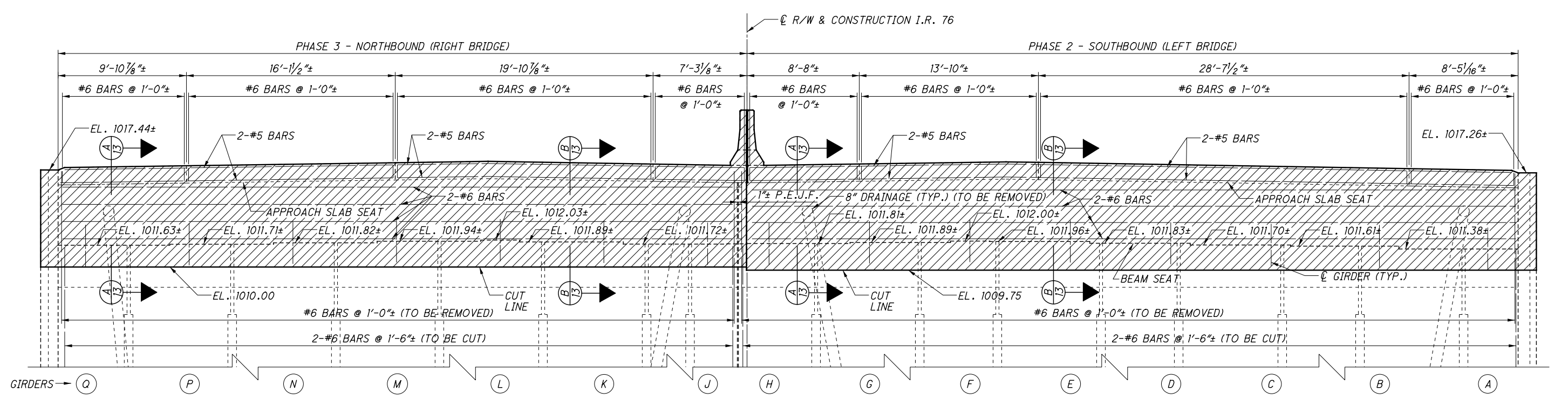
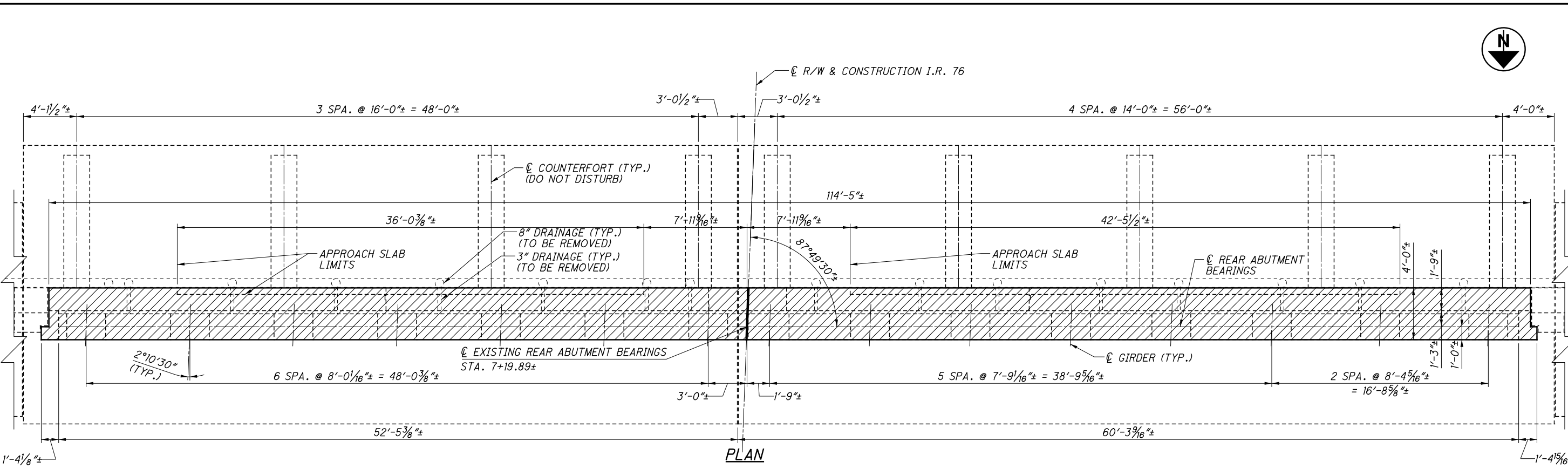
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 $E = 2.12'$   
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 C.B. = S  $7^\circ 36' 08''$  W

RAMP C CURVE DATA  
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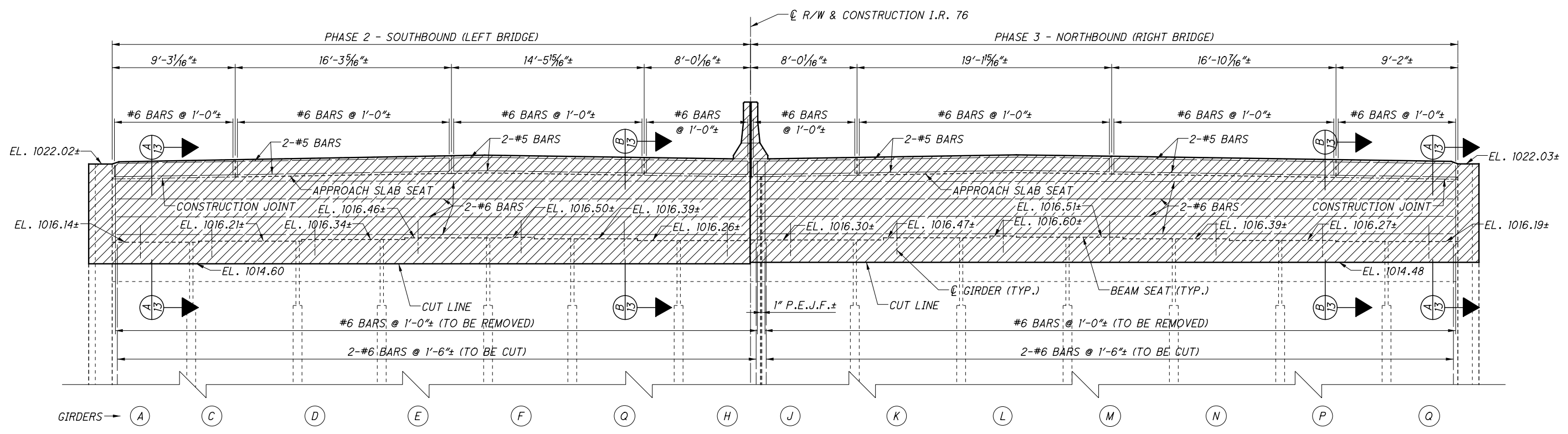
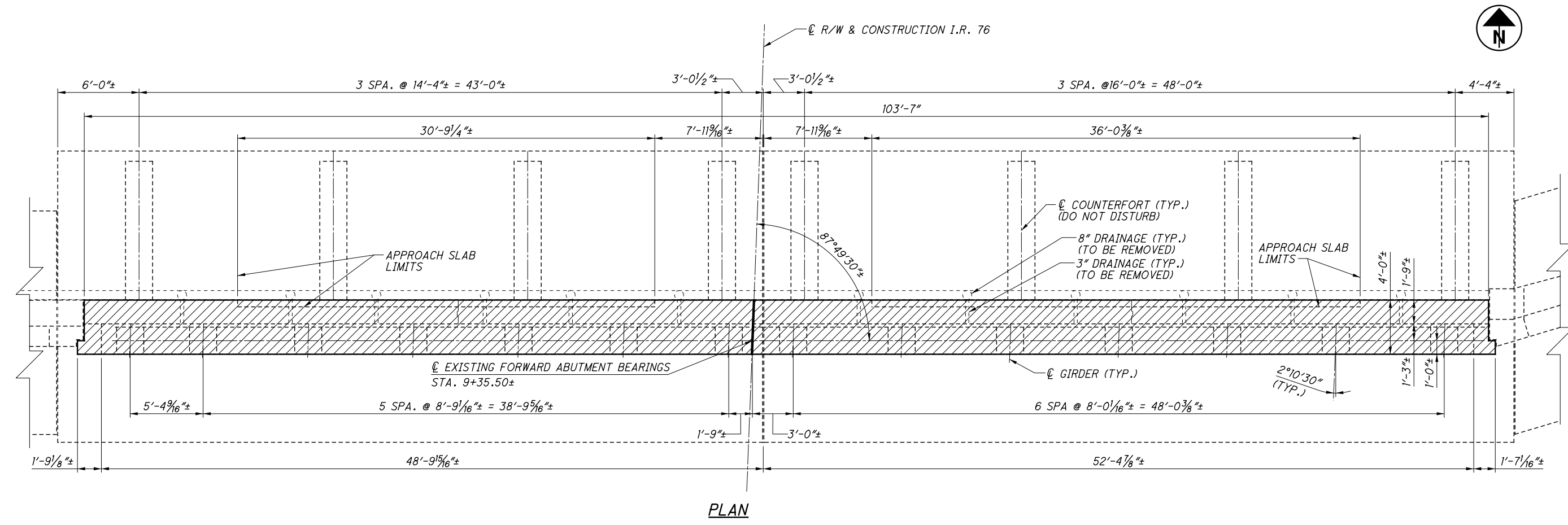
<b>SUM-76-6.72</b> PID No. 96670	GEOMETRIC LAYOUT BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		DESIGNED PRS	DRAWN JSB	REVIEWED DT	DATE 11-1-18	STRUCTURE FILE NUMBER 7705646
	10/50	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902		CHECKED BLN	REVISED	FILE NUMBER	7705646

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**LEGEND**  
 - TO BE REMOVED

**NOTES**  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER



**LEGEND**

- TO BE REMOVED

**NOTES**  
 NOTATIONS: P.E.J.F. - PREFORMED EXPANSION JOINT FILLER

**RICHLAND ENGINEERING LIMITED**  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902

DATE: 11-1-18  
 DT: DT  
 STRUCTURE FILE NUMBER: 7705646

DRAWN: USB  
 CHECKED: BLN

DESIGNED: RWC

**FORWARD ABUTMENT REMOVAL**  
 BRIDGE NO. SUM-76-0672  
 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

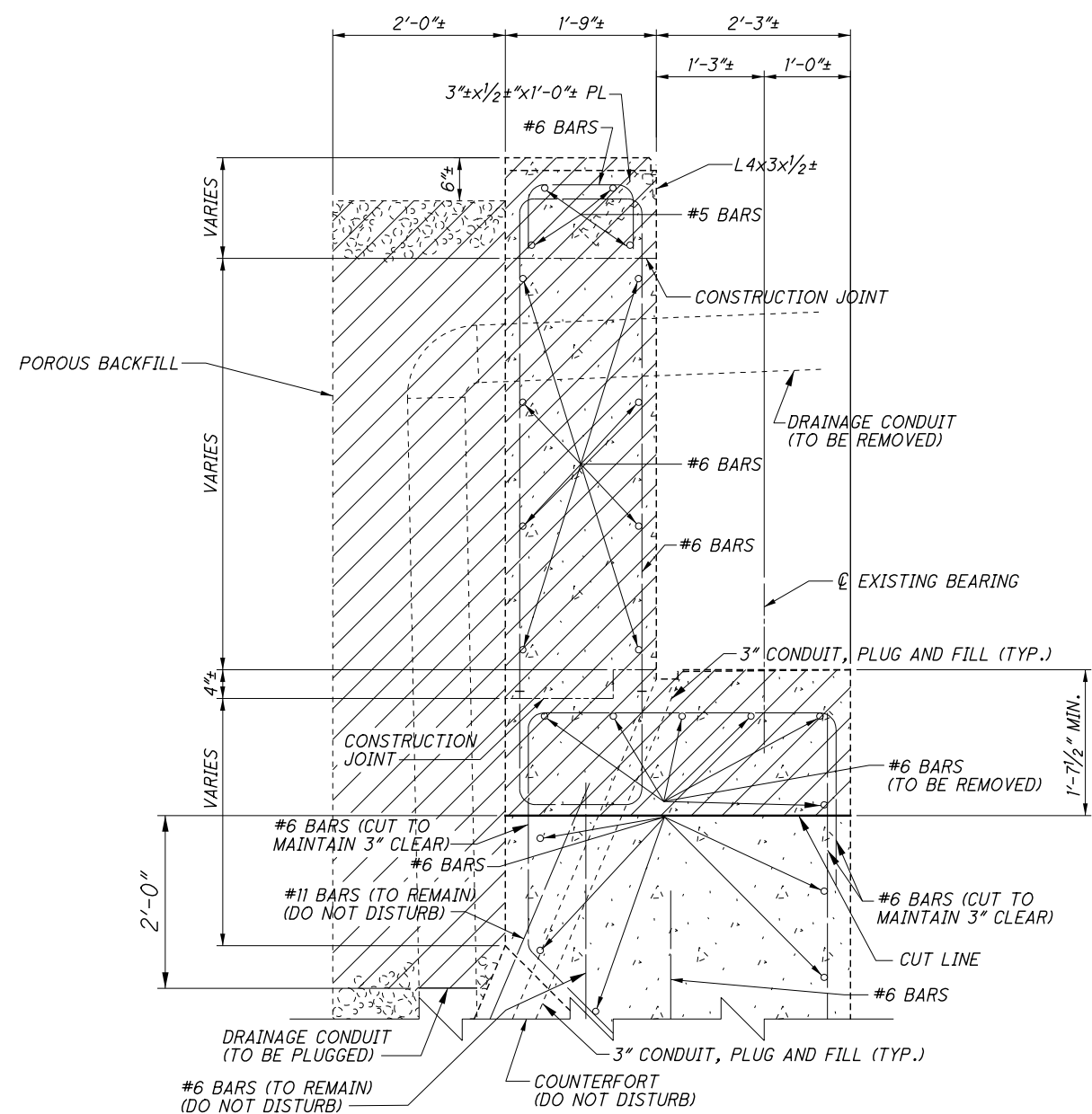
**SUM-76-6.72**  
 PID No. 96670

12/50

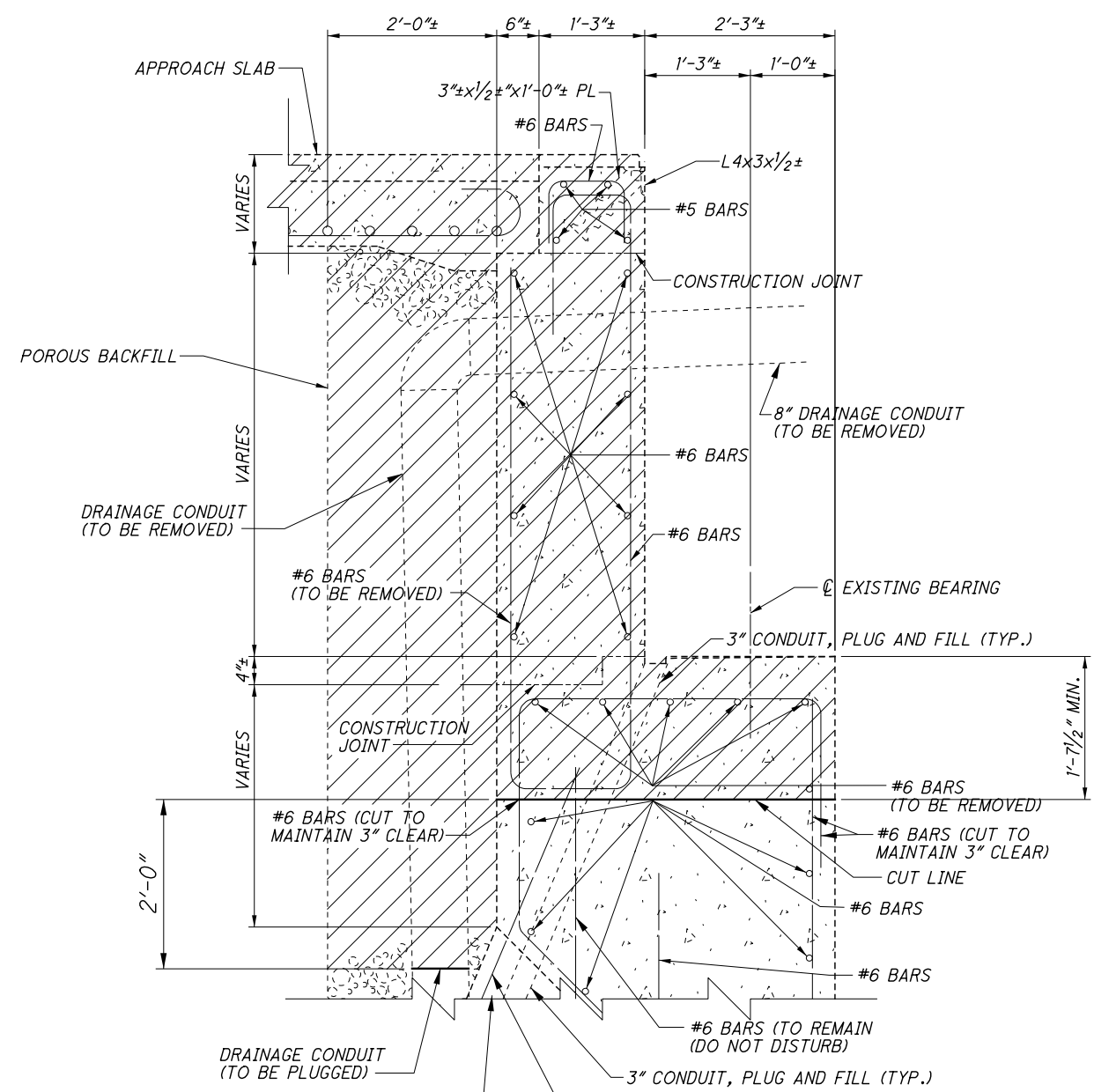
46  
85



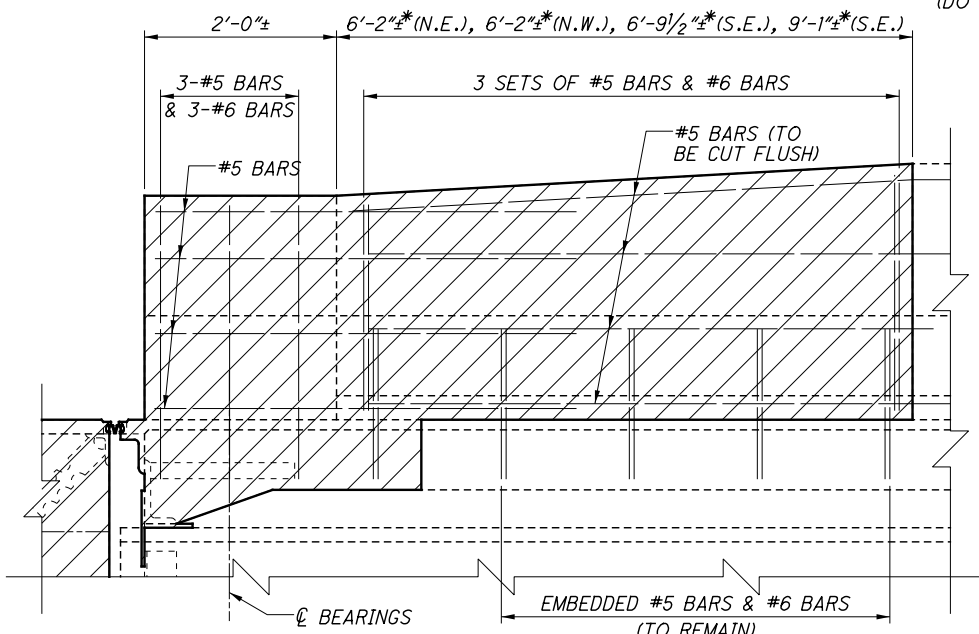
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**SECTION A-A**



**SECTION B-B**



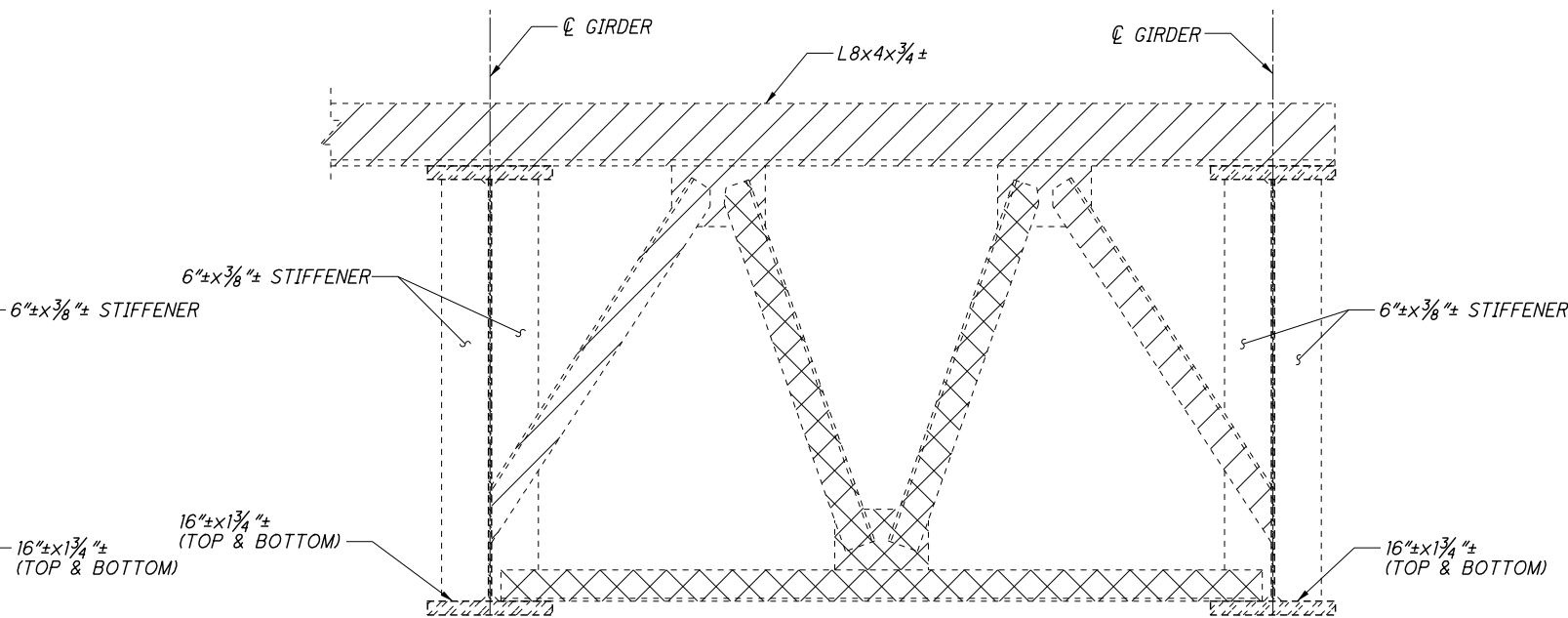
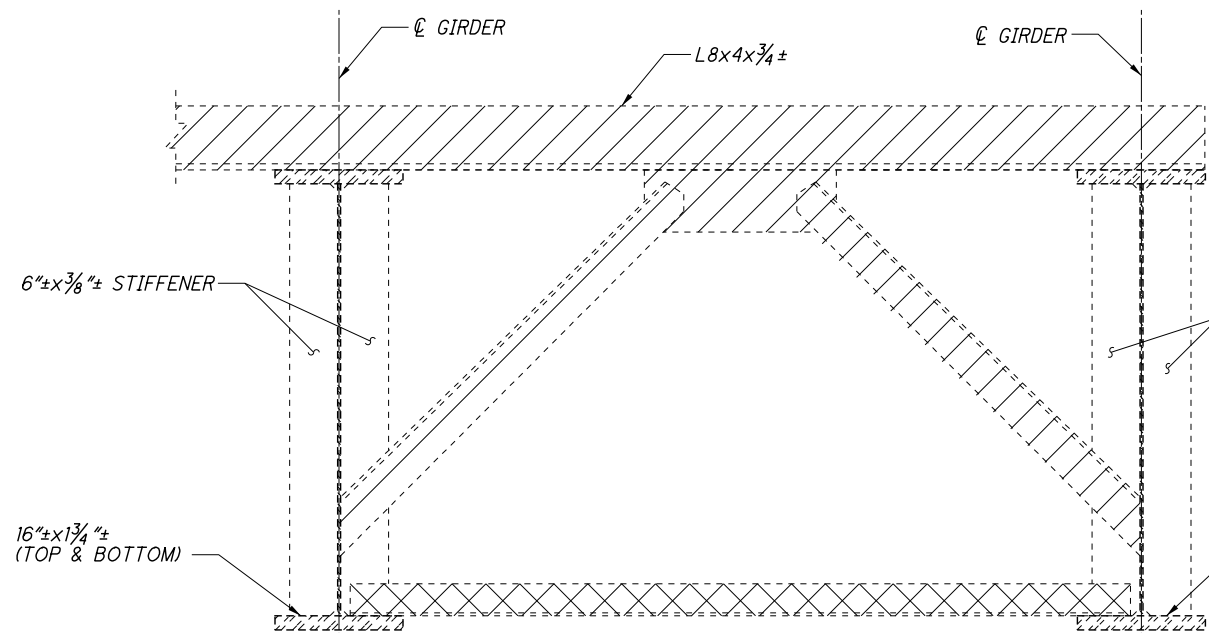
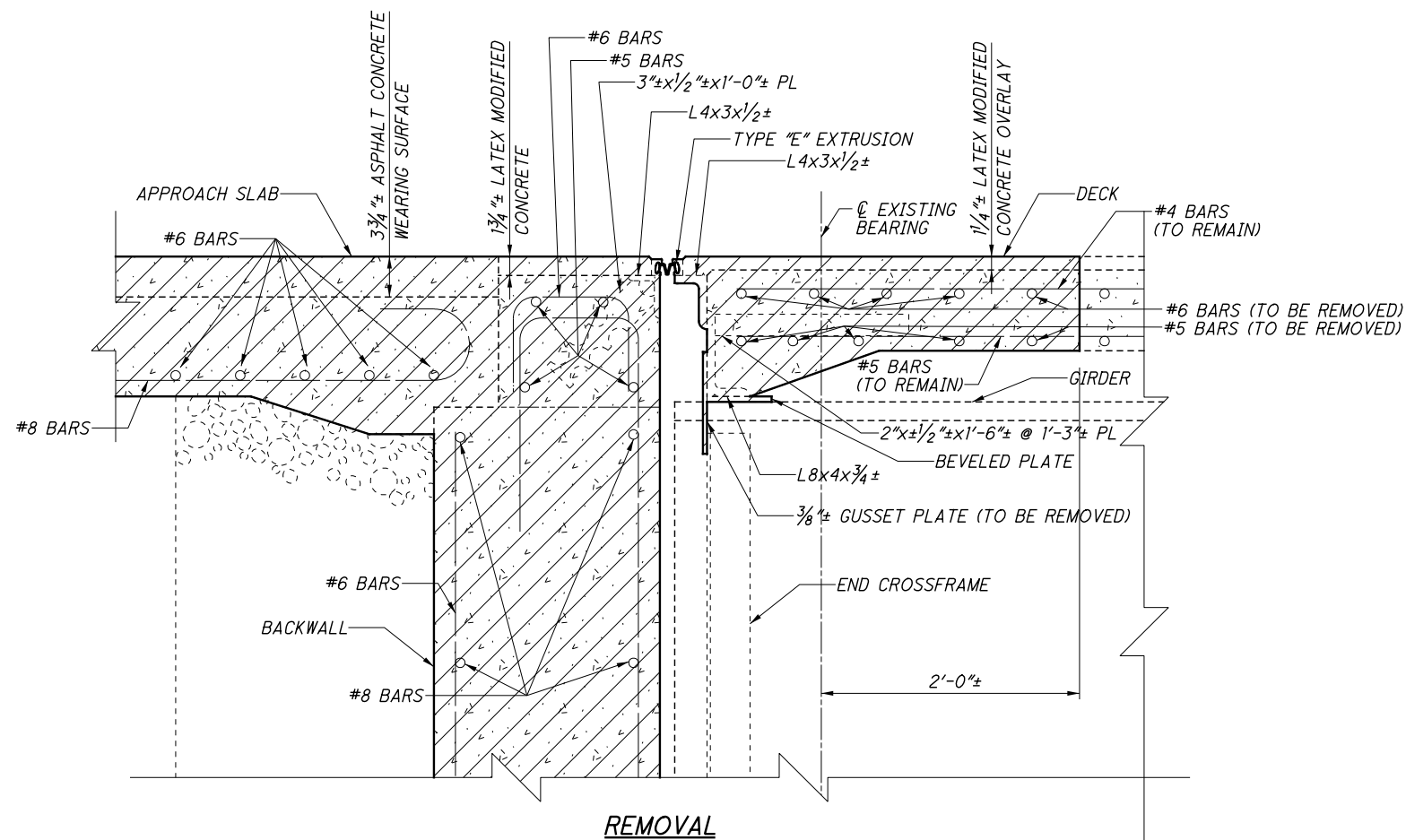
**RAILING ELEVATION DETAIL**

\* DIMENSIONS ARE BASED ON SURVEY OF EXISTING RAILING TRANSITION. TO BE VERIFIED BY CONTRACTOR.

**LEGEND**  
 - TO BE REMOVED

**NOTES**  
**SECTIONS A-A AND B-B:** FOR LOCATIONS SEE SHEETS 11/50 AND 12/50.

<b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902 		
DESIGNED RWC CHECKED BLN	DRAWN JSB REVISED	DATE 11-1-18 DT STRUCTURE FILE NUMBER 7705646
<b>ABUTMENT &amp; RAILING REMOVAL</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		
SUM-76-6.72 PID No. 96670		
13 / 50		
47 85		



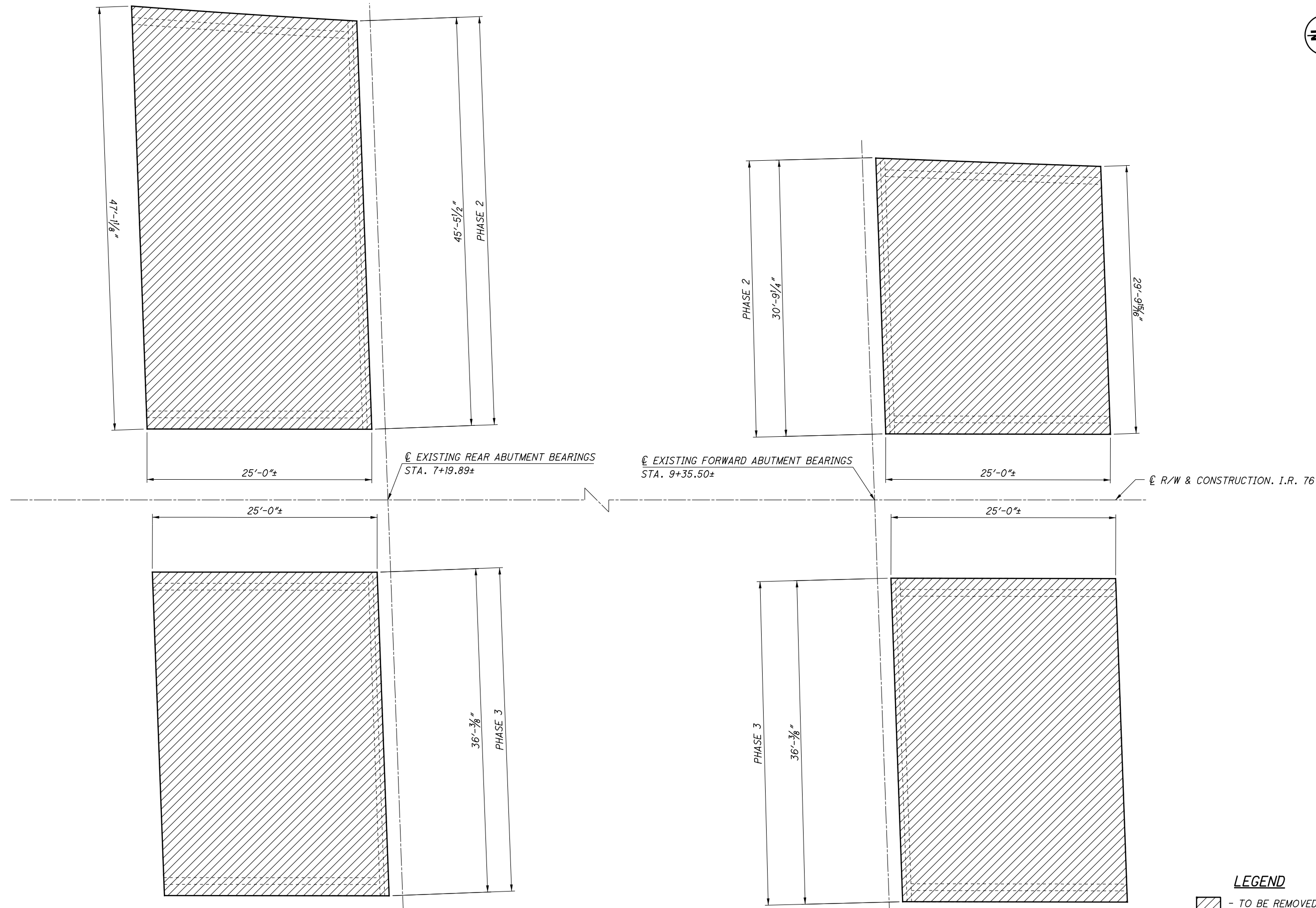
**LEGEND**

▨ - TO BE REMOVED

▩ - TO BE REMOVED AFTER BLOCKING OF THE STRUCTURE:  
 SOUTHBOUND (LEFT) BRIDGE  
 REAR ABUTMENT BETWEEN GIRDERS D & E  
 FORWARD ABUTMENT BETWEEN GIRDERS E & F

NORTHBOUND (RIGHT) BRIDGE  
 REAR ABUTMENT BETWEEN GIRDERS L & M  
 FORWARD ABUTMENT BETWEEN GIRDERS L & M

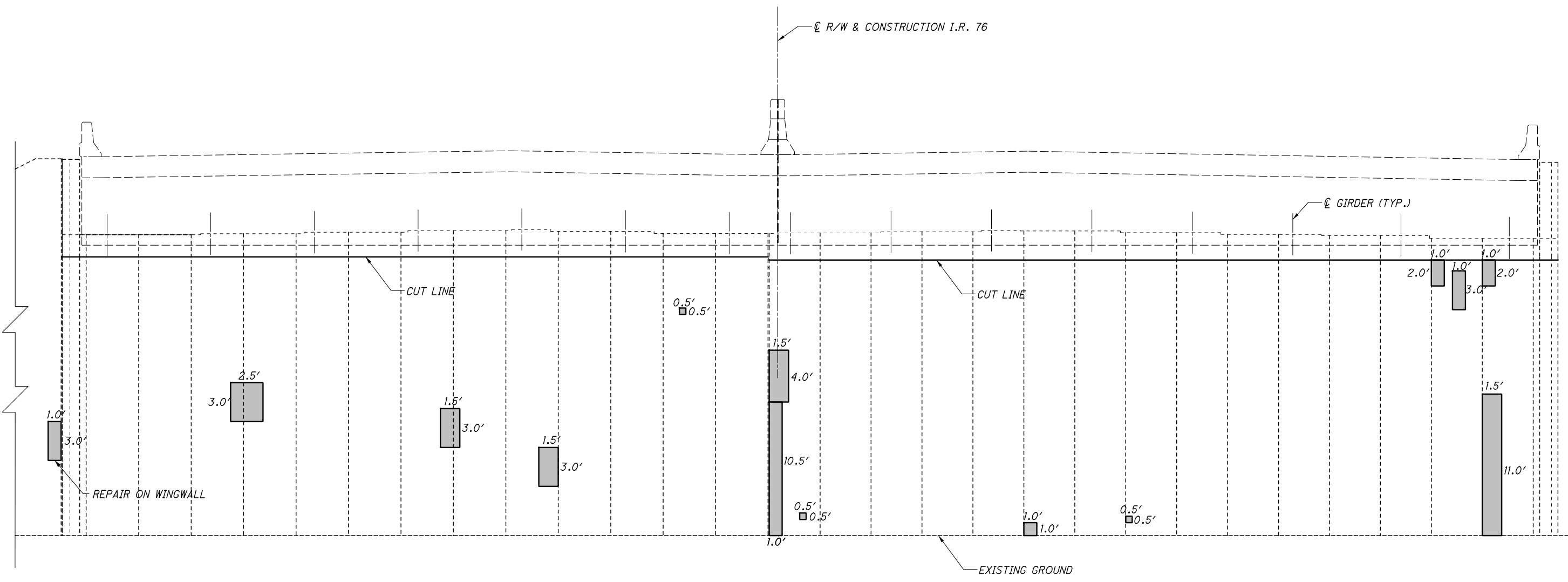
RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE 11-1-18	STRUCTURE FILE NUMBER 7705646
REVIEWED DT	DRAWN JSB
DESIGNED RWC	CHECKED BLN
JOINT REMOVAL DETAILS & SUPERSTRUCTURE REMOVAL DETAILS BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
SUM-76-6.72	PID No. 96670
14 / 50	
48 85	



**LEGEND**  
 - TO BE REMOVED

**NOTES**  
**WEARING COURSE REMOVED**  
 SHALL BE REMOVED FROM STA. 6+92.38 TO STA. 7+17.38 & FROM STA. 9+38.00 TO STA. 9+63.00 TO BE PAID FOR UNDER ITEM - 202 APPROACH SLAB REMOVED, AS PER PLAN

<b>SUM-76-6.72</b> PID No. 96670		<b>APPROACH SLAB REMOVAL</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER 7705646
RWC	JSB	DT	11-1-18	
CHECKED	REVISED			
BLN				



**REAR ABUTMENT ELEVATION**

	ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN				ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN			
	SOUTHBOUND (LEFT) BRIDGE		NORTHBOUND (RIGHT) BRIDGE		SOUTHBOUND (LEFT) BRIDGE		NORTHBOUND (RIGHT) BRIDGE	
	REAR ABUTMENT	FORWARD ABUTMENT	REAR ABUTMENT	FORWARD ABUTMENT	REAR ABUTMENT	FORWARD ABUTMENT	REAR ABUTMENT	FORWARD ABUTMENT
DELAMINATION REPAIR	42 SF		20 SF		9 SY		5 SY	
CONTINGENCY	42 SF	25 SF	20 SF	25 SF	9 SY	6 SY	5 SY	6 SY
<b>TOTAL</b>	<b>109 SF</b>		<b>65 SF</b>		<b>24 SY</b>		<b>16 SY</b>	

**LEGEND**

INCLUDED WITH ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

**NOTES**

**PATCHING:** ALL PATCHES SHALL BE SEALED 6" BEYOND THE PATCHING LIMITS USING EPOXY-URETHANE AND SHALL BE PAID WITH ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD.

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RICHLAND ENGINEERING LIMITED  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

DATE 11-1-18  
REVIEWED DT  
DRAWN USB  
DESIGNED RWC  
CHECKED BLN

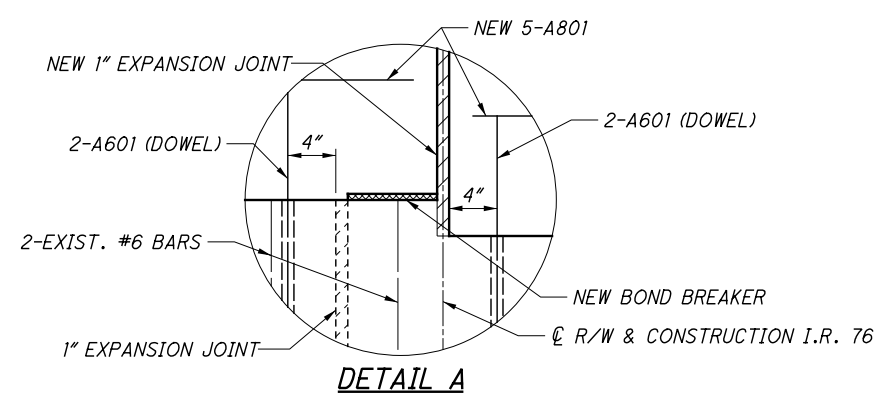
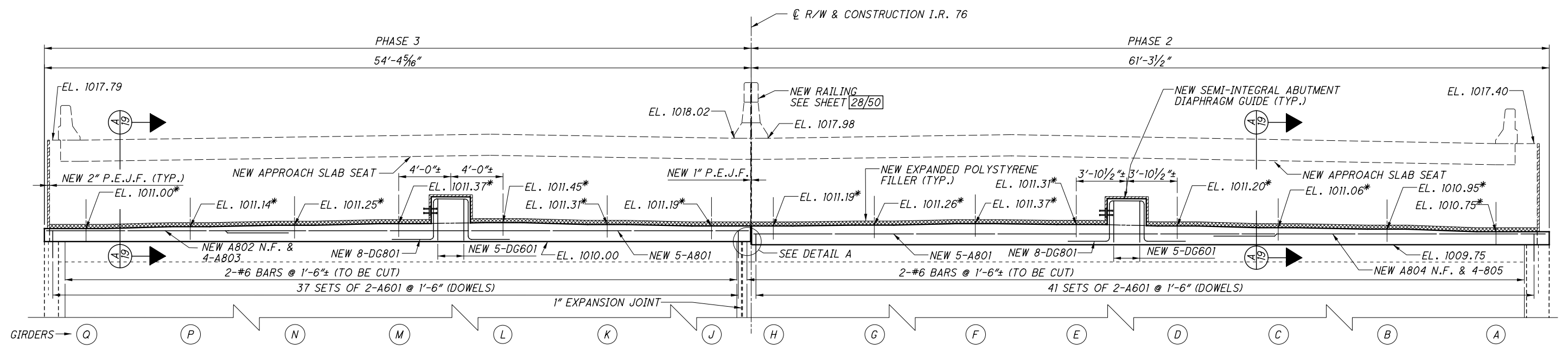
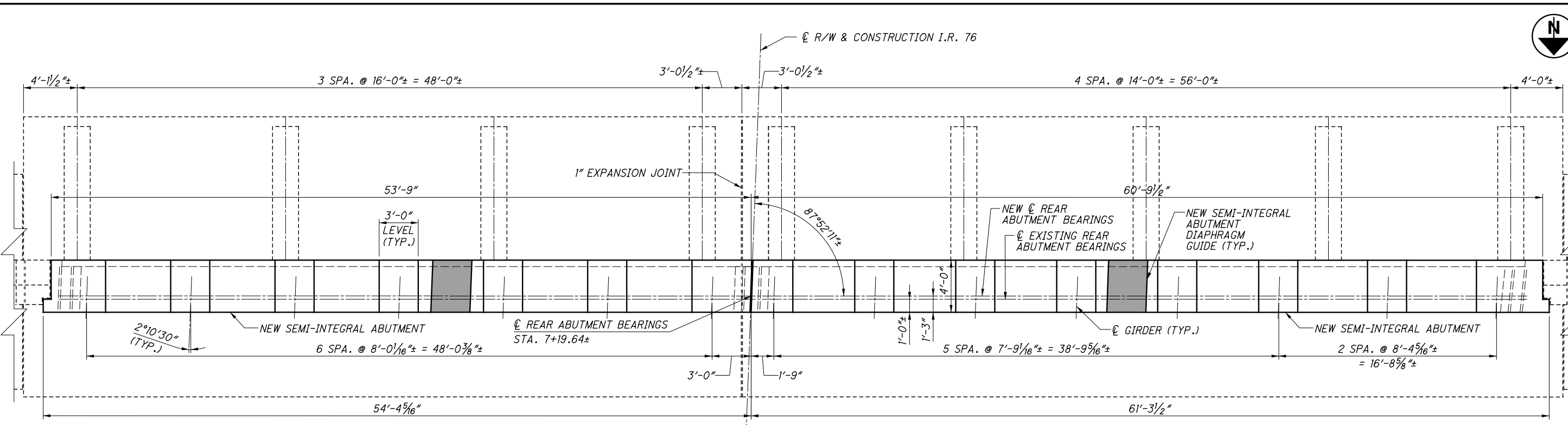
STRUCTURE FILE NUMBER 7705646

REAR ABUTMENT  
BRIDGE NO. SUM-76-0672  
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

SUM-76-6.72  
PID No. 96670

17/50

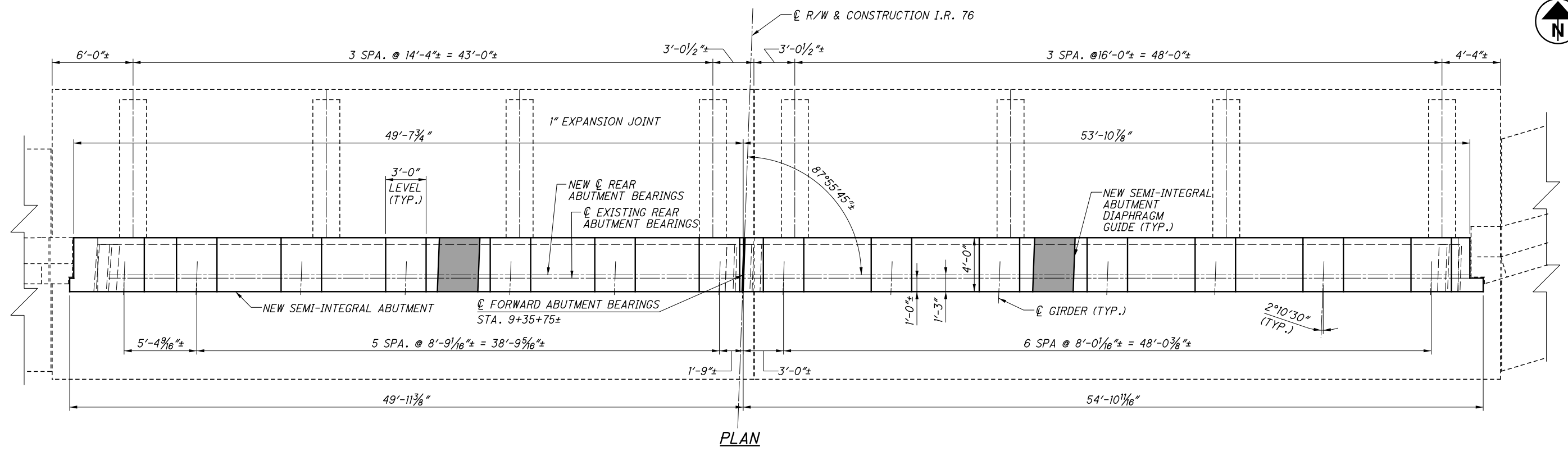
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85



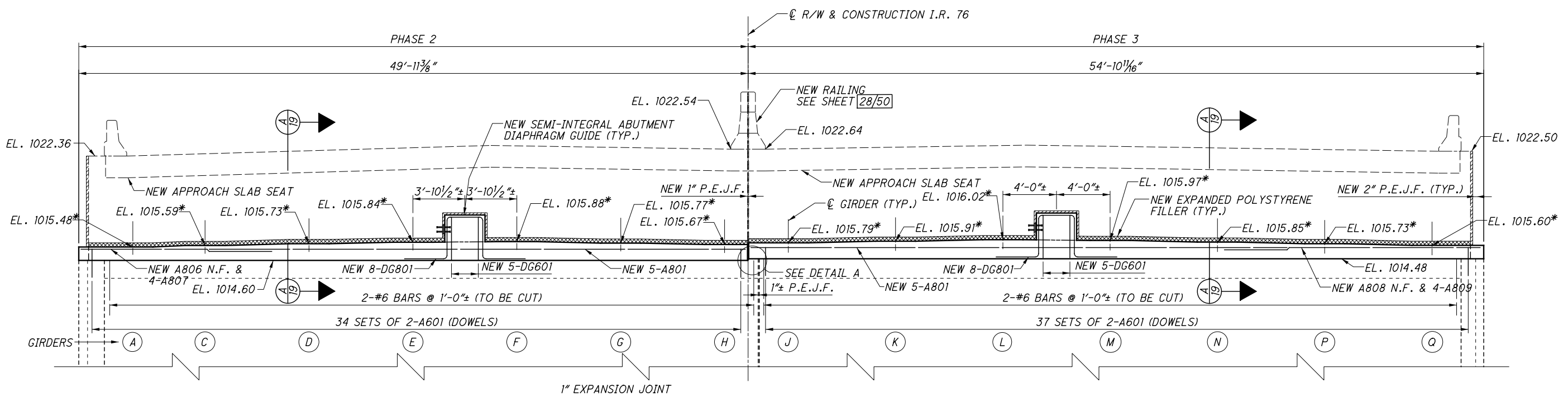
\* CONTRACTOR SHALL VERIFY THAT PROPOSED ABUTMENT SEAT ELEVATIONS WORK WITH EXISTING BOTTOM OF GIRDERS AND HEIGHT OF NEW BEARINGS TO BE INSTALLED.

**NOTES**  
**MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
 N.F. - NEAR FACE  
**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 4'-8" FOR #8 BARS.

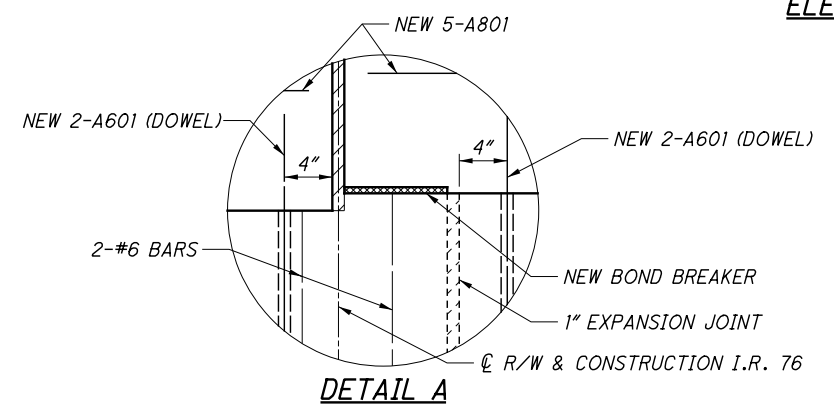
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PLAN



ELEVATION

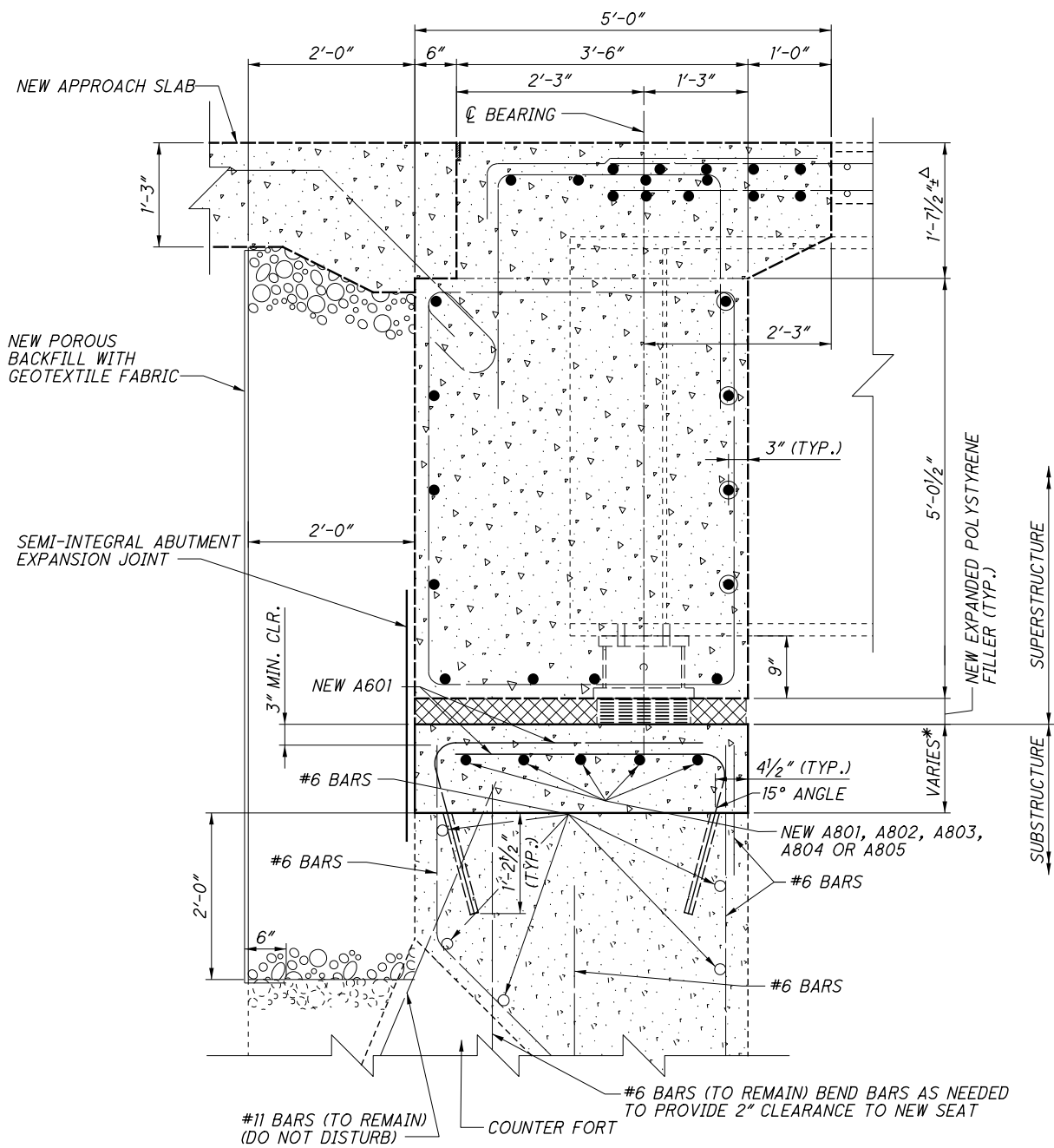


DETAIL A

\* CONTRACTOR SHALL VERIFY THAT PROPOSED ABUTMENT SEAT ELEVATIONS WORK WITH EXISTING BOTTOM OF GIRDERS AND HEIGHT OF NEW BEARINGS TO BE INSTALLED.

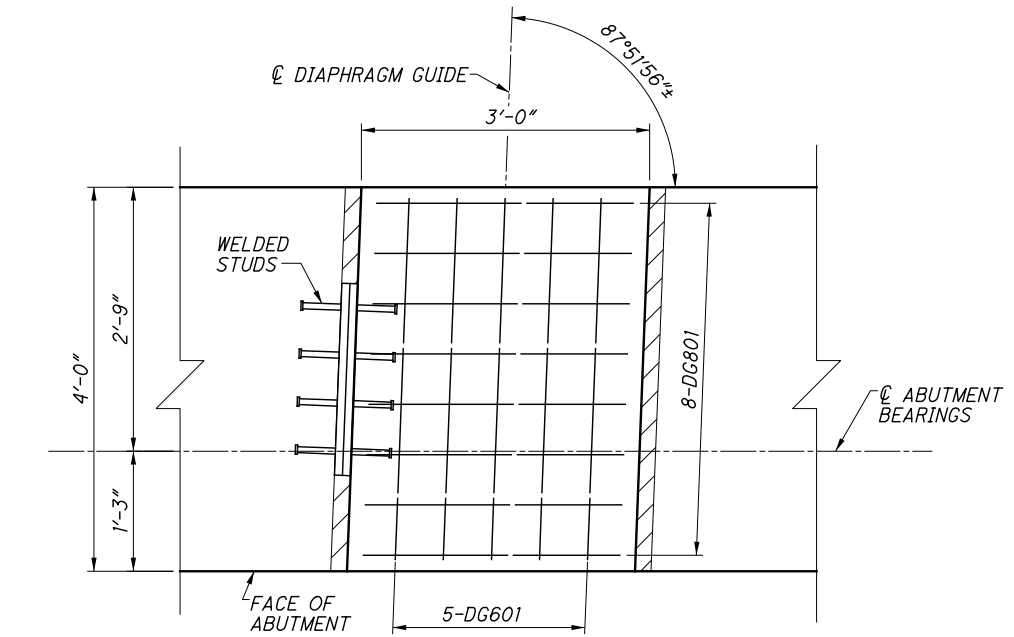
**NOTES**  
**MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
 N.F. - NEAR FACE  
**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 4'-8" FOR #5 BARS.

<b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE 11-1-18	STRUCTURE FILE NUMBER 7705646
REVIEWED DT	DRAWN USB
DESIGNED RWC	CHECKED BLN
<b>FORWARD ABUTMENT</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
SUM-76-6.72 PID No. 96670	
18 / 50	
52 85	

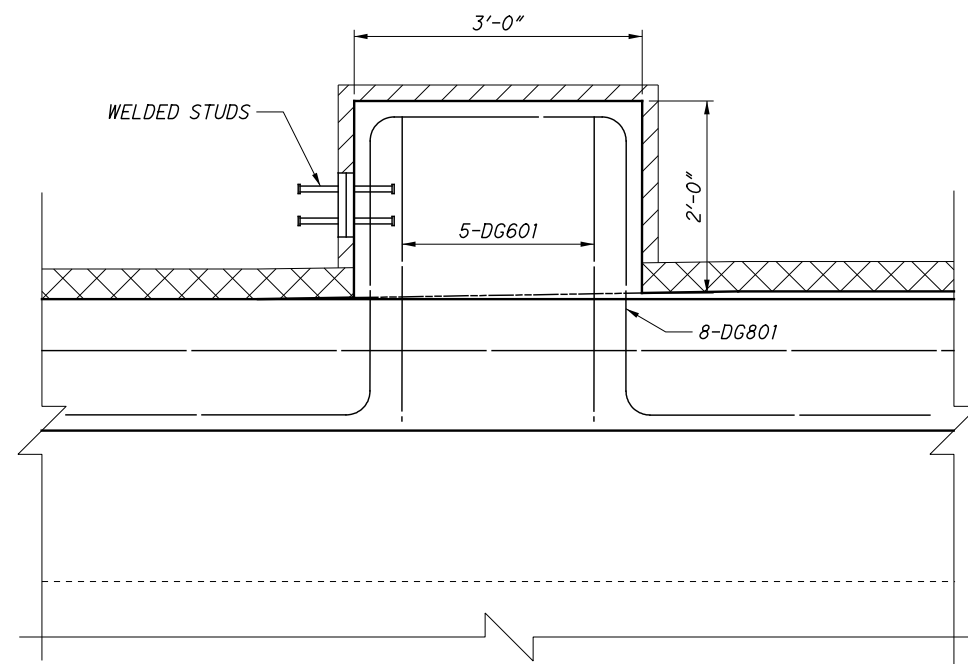


**SECTION A-A**

\* FOR VARIES DIMENSIONS SEE SHEET 17/50 AND 18/50.  
 Δ CONTRACTOR TO MATCH EXISTING ROADWAY ELEVATION



**PLAN**



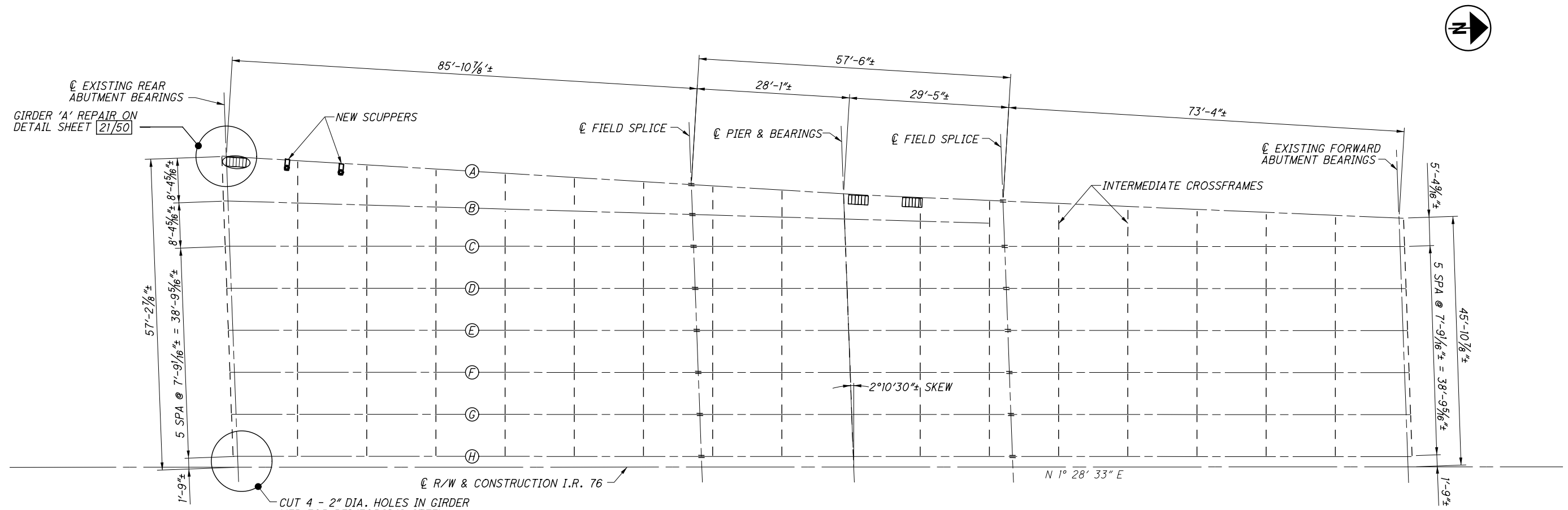
**ELEVATION**

**DIAPHRAGM GUIDE DETAIL**  
 (REAR ABUTMENT SHOWN - FORWARD ABUTMENT SIMILAR)

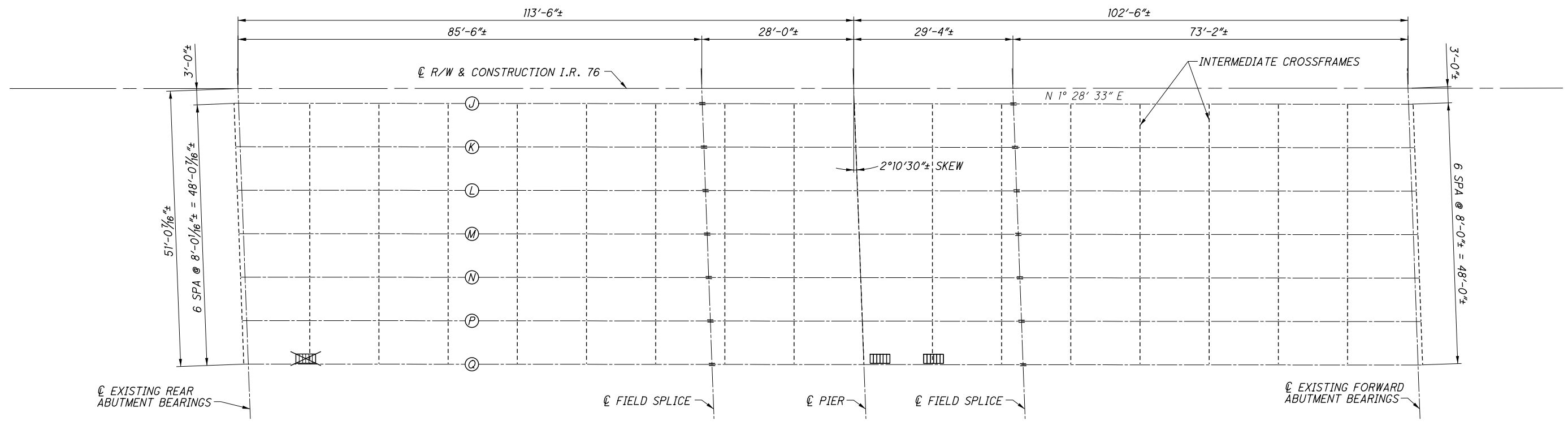
**NOTES**

**MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.  
**DIAPHRAGM GUIDE DETAIL:** FOR ADDITIONAL DETAILS SEE SCD SICD-2-14.  
**SECTION A-A:** FOR LOCATION SEE SHEETS 17/50 AND 18/50.

RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE 11-1-18	STRUCTURE FILE NUMBER 7705646
REVIEWED DT	DRAWN USB
DESIGNED RWC	CHECKED BLN
ABUTMENT DETAILS BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
SUM-76-6.72	PID No. 96670
19/50	
53 85	



EXISTING FRAMING PLAN - SOUTHBOUND (LEFT) STRUCTURE



EXISTING FRAMING PLAN - NORTHBOUND (RIGHT) STRUCTURE

LEGEND

- SCUPPER AND DOWNSPOUT CLEANOUT
- PLUG AND FILL
- REMOVE

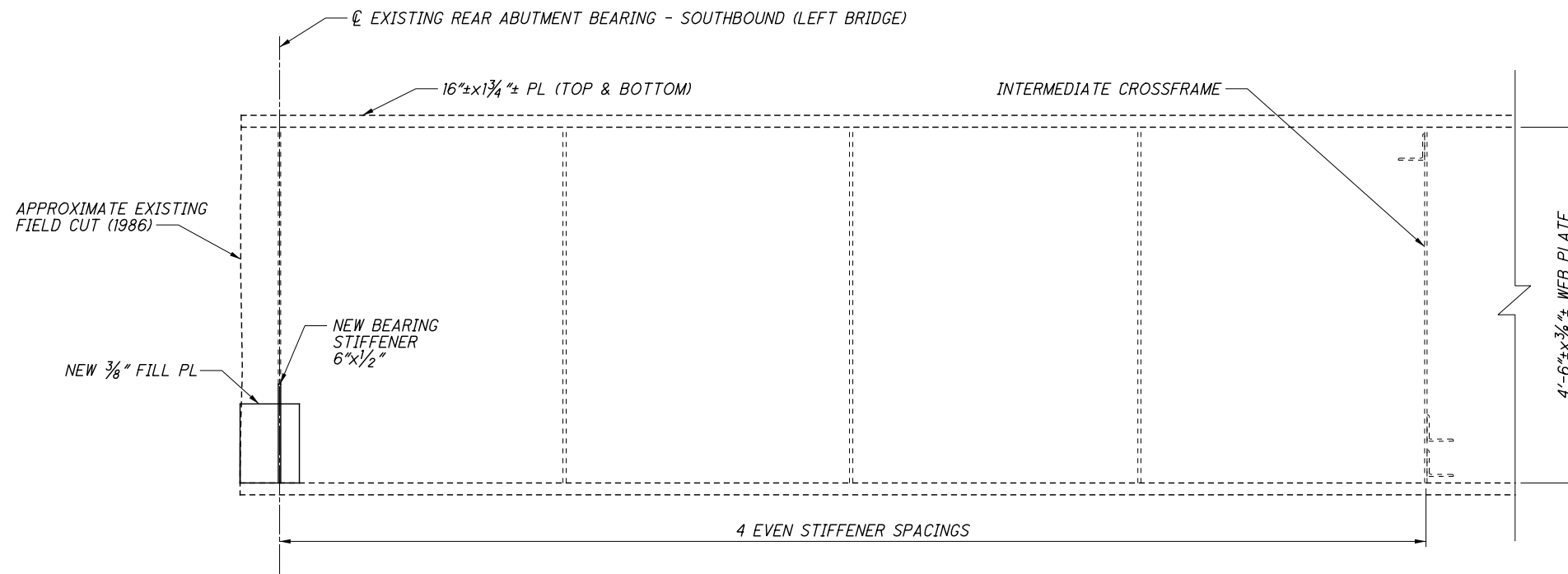
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MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

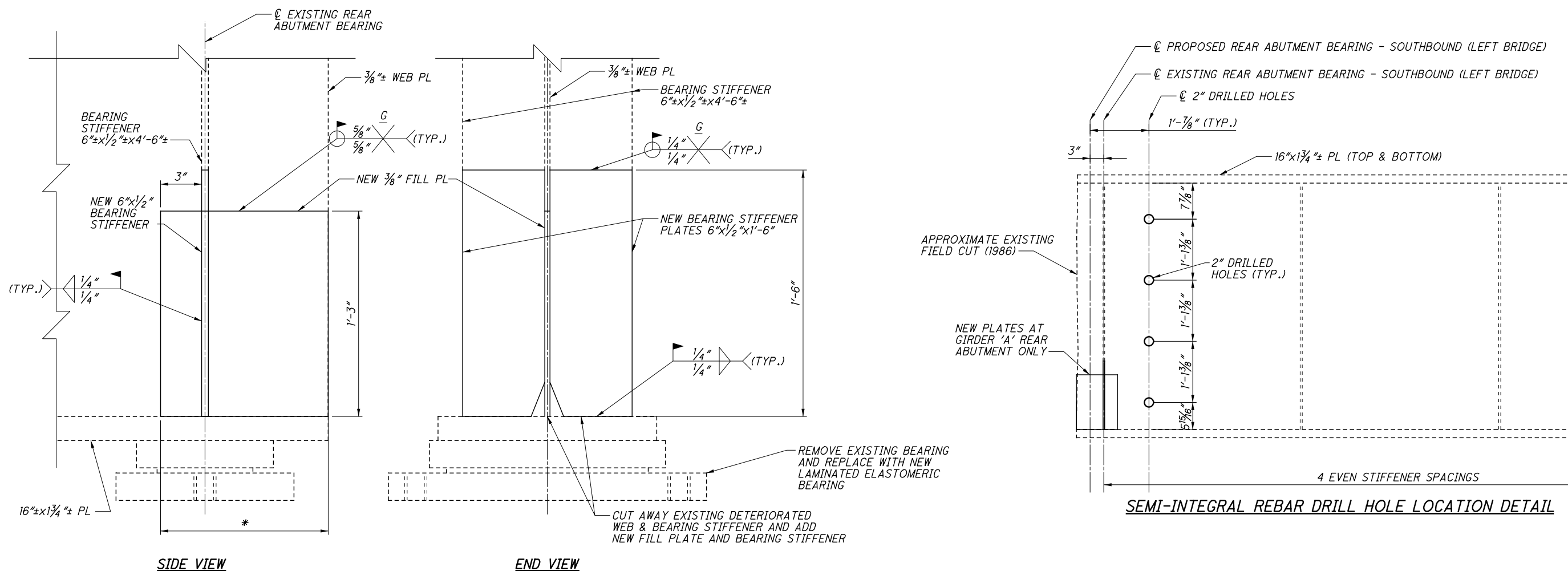
<p><b>SUM-76-6.72</b> PID No. 96670</p>	<p><b>EXISTING FRAMING PLAN</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY</p>	<p>DESIGNED RWC CHECKED BLN</p>	<p>DRAWN SCB REVISED</p>	<p>REVIEWED DT STRUCTURE FILE NUMBER 7705646</p>	<p>DATE 11-1-18</p>	<p>RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902</p>
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**EXISTING GIRDER 'A' - ELEVATION**



**EXISTING GIRDER 'A' - REPAIR DETAIL**  
(SOUTHBOUND STRUCTURE - REAR ABUTMENT)

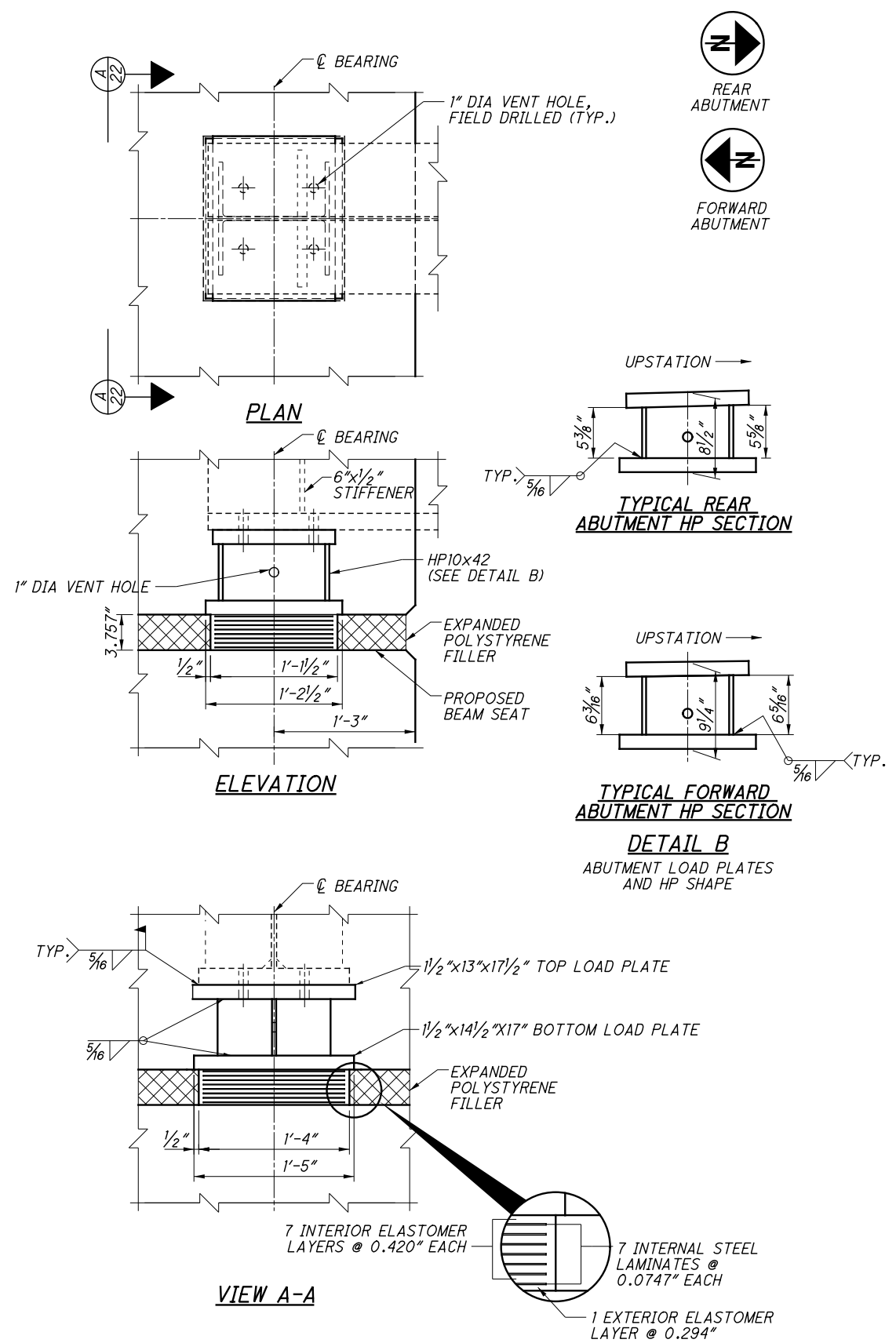
\* CONTRACTOR SHALL FIELD VERIFY THIS DIMENSION.

**NOTES**

**MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.  
**PROPOSED STEEL REPAIRS** SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL FOR REHABILITATION.

<b>EXISTING DETAILS</b>	BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	DATE 11-1-18	REVIEWED DT	DATE 11-1-18	REVIEWED DT
		STRUCTURE FILE NUMBER 7705646	SCB	STRUCTURE FILE NUMBER 7705646	SCB
DESIGNED RWC	CHECKED BLN	DRAWN SCB	REVISOR	DATE	REVISOR
SUM-76-6.72		PID No. 96670		21/50	
55		85			

RICHLAND ENGINEERING LIMITED  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902



**LAMINATED ELASTOMERIC BEARING**  
(3.757"x13.5"x16") (EXPANSION) (ABUTMENTS)

ELASTOMERIC BEARINGS															
BEARING DIMENSIONS						STEEL LOAD PLATE (TOP)			STEEL LOAD PLATE (BOTTOM)			REACTIONS		MAXIMUM TOTAL LOAD	
L	W	t <sub>i</sub>	t <sub>e</sub>	T	N	A	B	THICKNESS	A	B	THICKNESS	DL	LL		
13.5"	16"	0.420"	0.294"	0.0747"	9	13"	17 1/2"	1 1/2"	14 1/2"	17"	1 1/2"	127.5	50.0	177.5 K	

**NOTES**

**THE UNIT PRICE:** MATERIALS SHOWN ARE NEW UNLESS NOTED OTHERWISE. THE UNIT PRICE FOR BEARINGS SHALL INCLUDE ALL INCIDENTAL INSTALLATION MATERIALS, LABOR, TESTING, HP SHAPES, AND INCIDENTALS NECESSARY TO INSTALL LAMINATED ELASTOMERIC EXPANSION BEARINGS. PAYMENT SHALL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN.

**HP10x42 AND ALL LOAD PLATES** ARE ASTM A709, GRADE 50W AND WILL BE INCLUDED WITH BEARINGS FOR PAYMENT.

**ELASTOMERIC BEARINGS:** THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

**ALL BEARINGS** SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION AND DIRECTIONAL ARROW POINTING UP STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.

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

**CONTROL WELDING** SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

**BEARING REPOSITIONING:** IF THE STEEL IS PLACED ON BEARING AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/8 OF THE BEARING HEIGHT AT 60° F (±) 10° F, RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F (±) 10° F.

F:\2018\118022\_D4\_Bridge\_Design\_Review\_PID 106815\Task 3 - SUM-76-6.72\_SF 7705646\ProjectData\106815\Design\Structures\SUM076\_0672C\Sheets\76\_0672CDP001.dgn 11/29/2018 1:04:35 PM CraigB

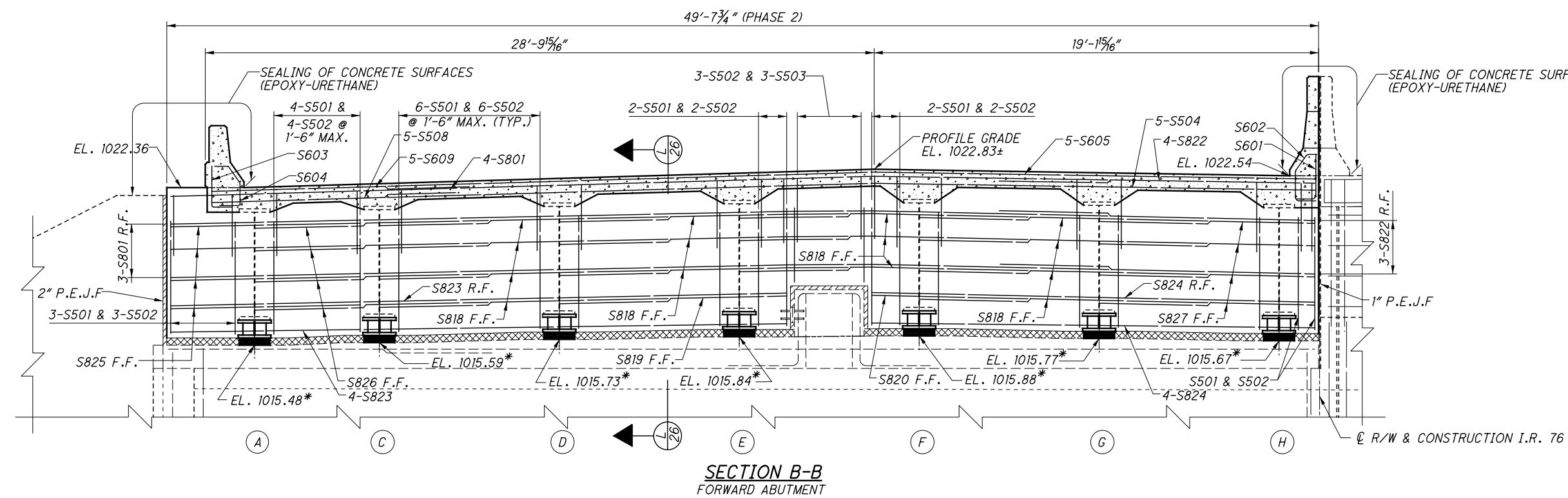
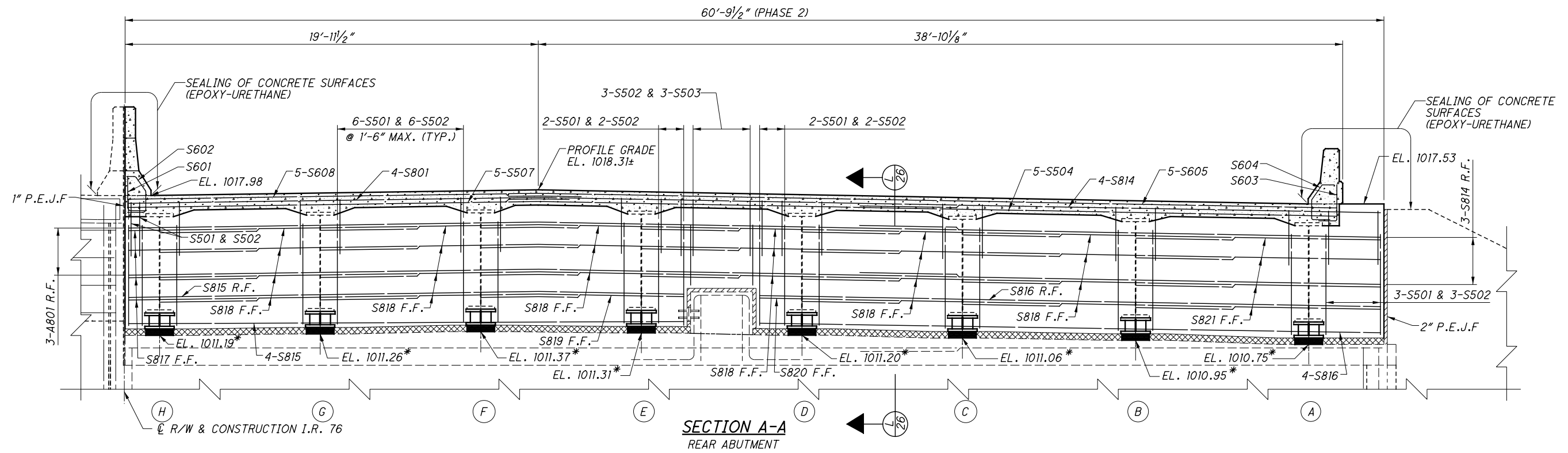


\* DIMENSIONS ARE BASED ON SURVEY OF EXISTING RAILING TRANSITION. TO BE VERIFIED BY CONTRACTOR.

**NOTES**  
**MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
**SCUPPERS:** FOR DETAILS SEE SHEET 42/50.

<b>SUM-76-6.72</b> PID No. 96670		<b>DECK PLAN</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		DESIGNED RWC	CHECKED BLN	DRAWN JSB	REVISED DT	DATE 11-1-18	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
23/50		57/85		STRUCTURE FILE NUMBER 7705646		REVIEWED DT		DATE 11-1-18	

F:\2018\118022\_D4\_Bridge Design Review\_PID 106815\Task 3 - SUM-76-6.72\_SF 7705646\ProjectData\106815\Design\Structures\SUM076\_0672C\Sheets\76\_0672CSD006.dgn 11/29/2018 11:34:54 AM Craig

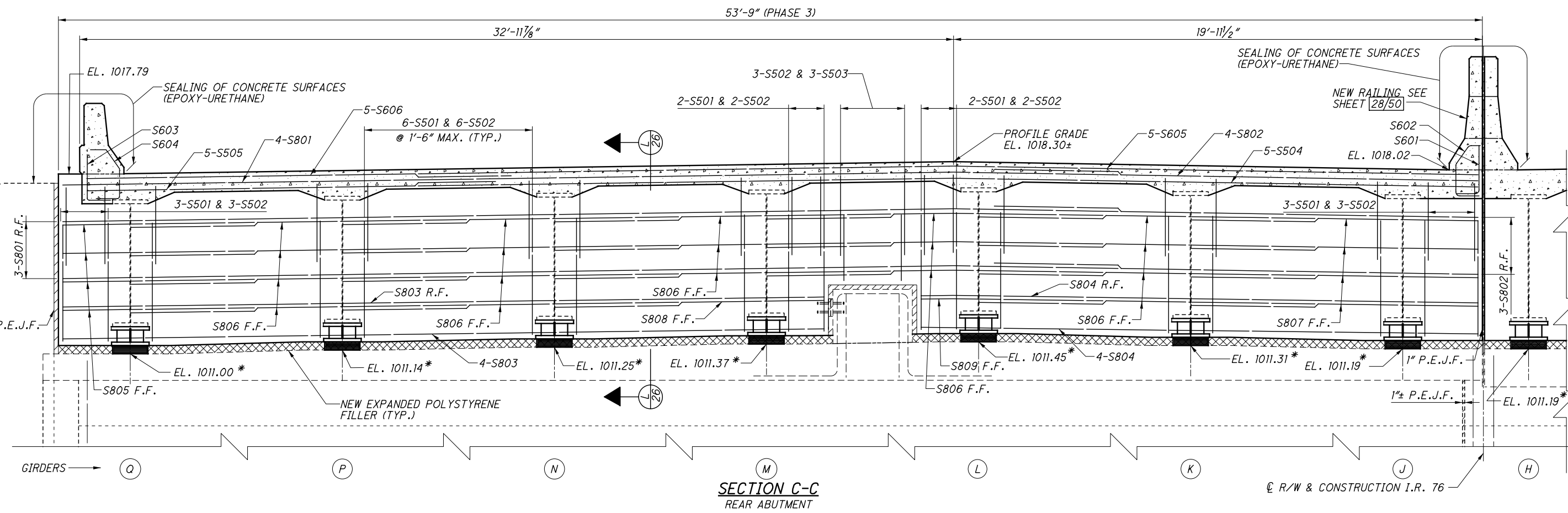


\* CONTRACTOR SHALL VERIFY THAT PROPOSED ABUTMENT SEAT ELEVATIONS WORK WITH EXISTING BOTTOM OF GIRDERS AND HEIGHT OF NEW BEARINGS TO BE INSTALLED.

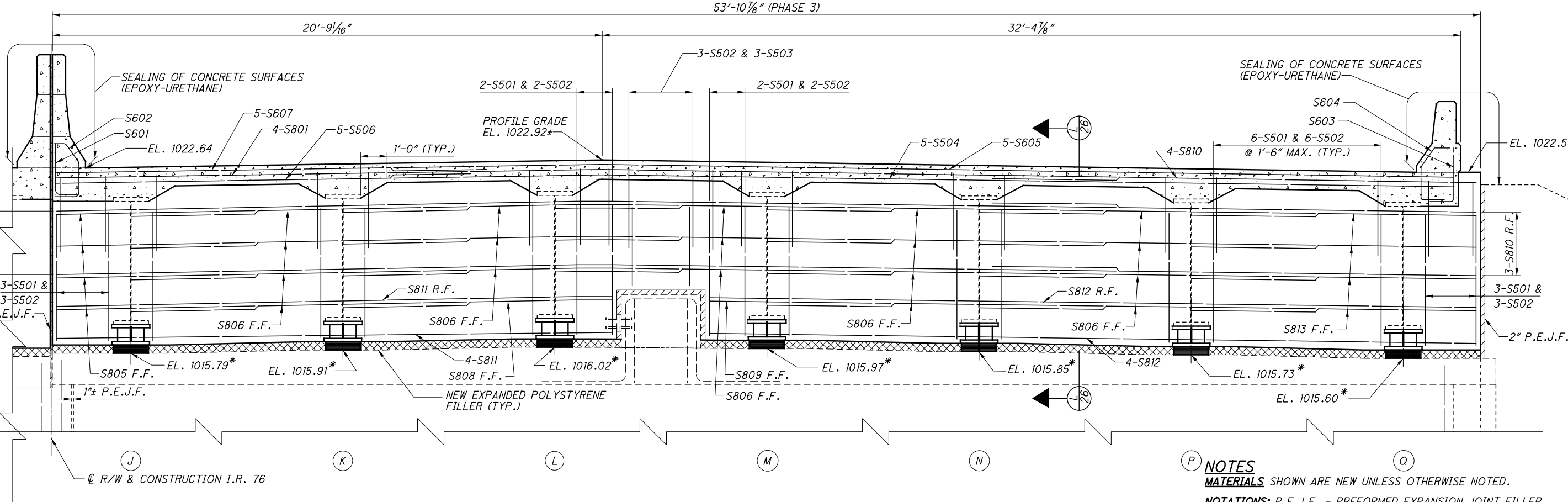
- NOTES**
- MATERIALS** SHOWN ARE NEW UNLESS OTHERWISE NOTED.
  - NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
R.F. - REAR FACE  
F.F. - FRONT FACE
  - REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-11" FOR #5 BARS, 3'-5" FOR #6 BARS AND 4'-8" FOR #8 BARS.
  - SECTION A-A & B-B:** FOR LOCATION SEE SHEETS 23/50.

<b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE REVIEWED DRAWN DESIGNED	FILE NUMBER STRUCTURE FILE NUMBER REVISIONS
SUM-76-6.72 PID No. 96670	BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY
24/50	58 85

F:\2018\118022\_D4\_Bridge Design Review\_PID 106815.Task 3 - SUM-76-6.72\_SF 7705646\ProjectData\106815\Design\Structures\SUM076\_0672C\_Sheets\76\_0672CSD001.dgn 11/29/2018 11:31:39 AM CraigB



**SECTION C-C**  
REAR ABUTMENT

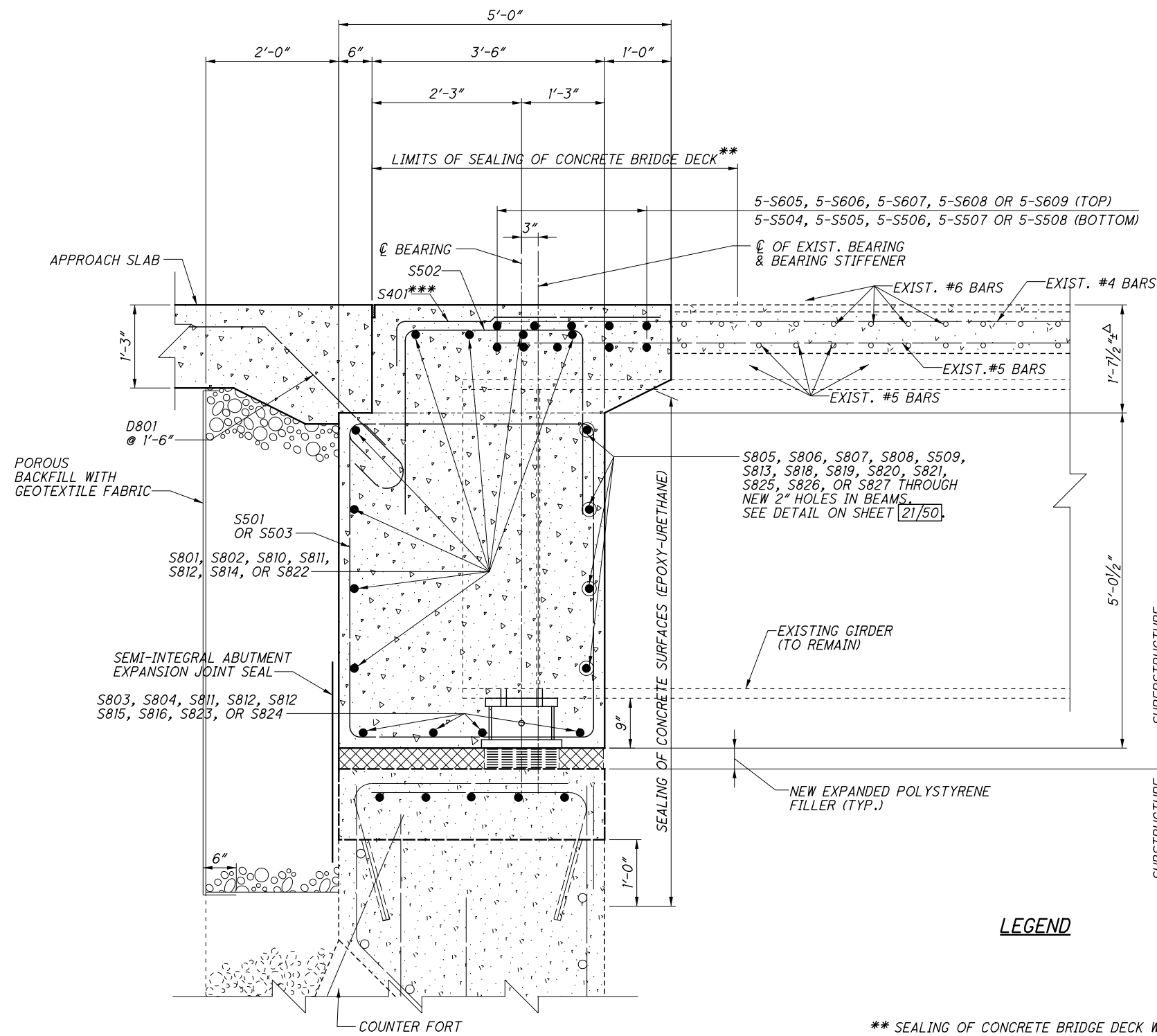


**SECTION D-D**  
FORWARD ABUTMENT

**NOTES**  
**MATERIALS** SHOWN ARE NEW UNLESS OTHERWISE NOTED.  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
 R.F. - REAR FACE  
 F.F. - FRONT FACE  
**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-11" FOR #5 BARS,  
 3'-5" FOR #6 BARS AND 4'-8" FOR #8 BARS.  
**SECTION C-C & D-D:** FOR LOCATION SEE SHEET [23/50].

\* CONTRACTOR SHALL VERIFY THAT PROPOSED ABUTMENT SEAT ELEVATIONS WORK WITH EXISTING BOTTOM OF GIRDERS AND HEIGHT OF NEW BEARINGS TO BE INSTALLED.

<b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE: 11-1-18 DT: DT STRUCTURE FILE NUMBER: 7705646	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
DRAWN: USB CHECKED: BLN DESIGNED: RWC	REVIEWED: DT REVISIONS: REVISED
<b>SUM-76-6.72</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
<b>SEMI-INTEGRAL ABUTMENT - NORTHBOUND (RIGHT)</b>	
PID No. 96670	
25/50	
59 85	



**SECTION L-L**

**LEGEND**

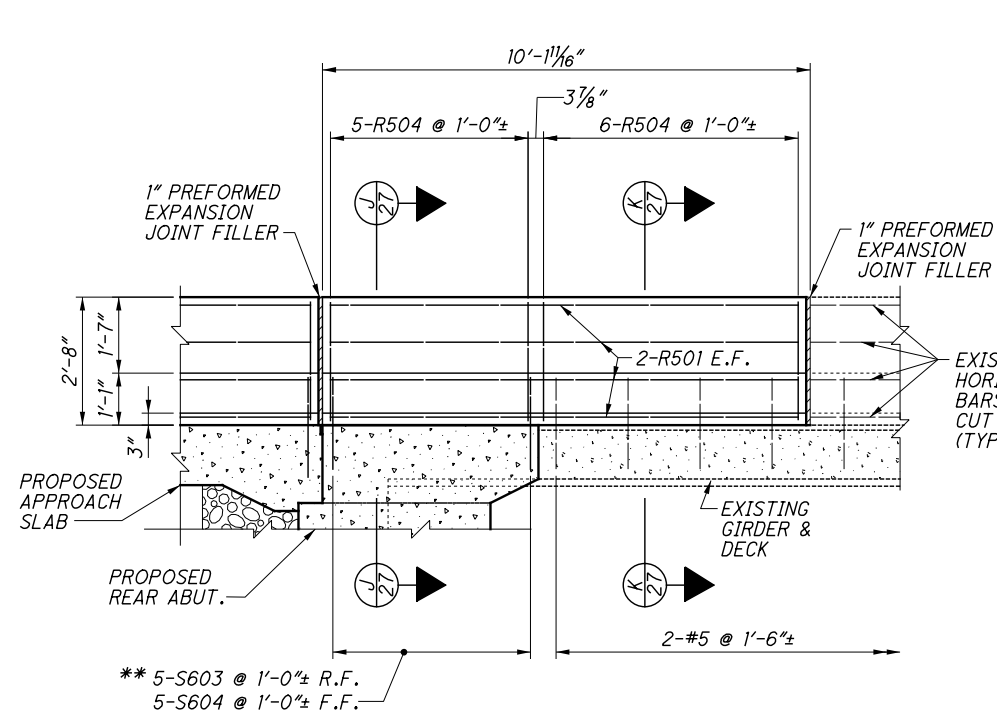
- \*\* SEALING OF CONCRETE BRIDGE DECK WITH HMWM RESIN
- \*\*\* LAPPED WITH EXISTING #4 BARS
- △ CONTRACTOR TO MATCH EXISTING ROADWAY ELEVATION

**NOTES**

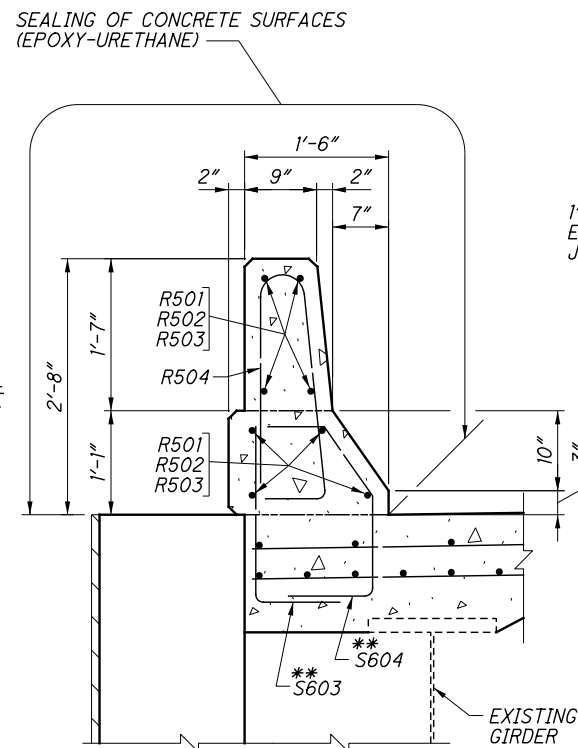
**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**SECTION L-L:** FOR LOCATION SEE SHEETS [24/50] AND [25/50].  
**FOR SUPERSTRUCTURE REINFORCING STEEL:** SEE SHEETS [24/50] AND [25/50].

<b>SUM-76-6.72</b>	<b>SEMI-INTEGRAL DETAILS</b>	RICHLAND ENGINEERING LIMITED	DATE: 11-1-18
PID No. 96670	BRIDGE NO. SUM-76-0672	29 NORTH PARK STREET	DT
	I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	MANSFIELD, OHIO 44902	STRUCTURE FILE NUMBER
			7705646
26/50			DESIGNED: RWC
60			DRAWN: USB
85			REVIEWED: DT
			CHECKED: BLN

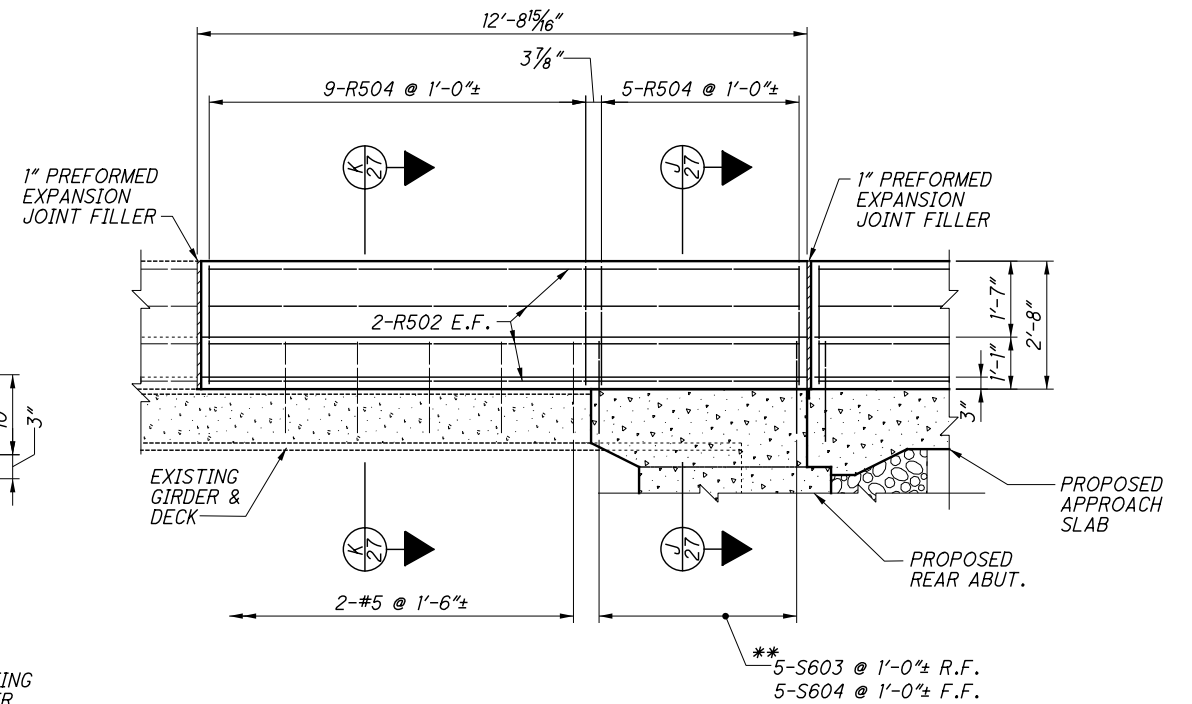
F:\2018\118022\_D4\_Bridge Design Review\_PID 106815\Task 3 - SUM-76-6.72\_SF 7705646\ProjectData\106815\Design\Structures\SUM076\_0672C\_Sheets\76\_0672CRA004.dgn 11/29/2018 11:25:51 AM CraigB



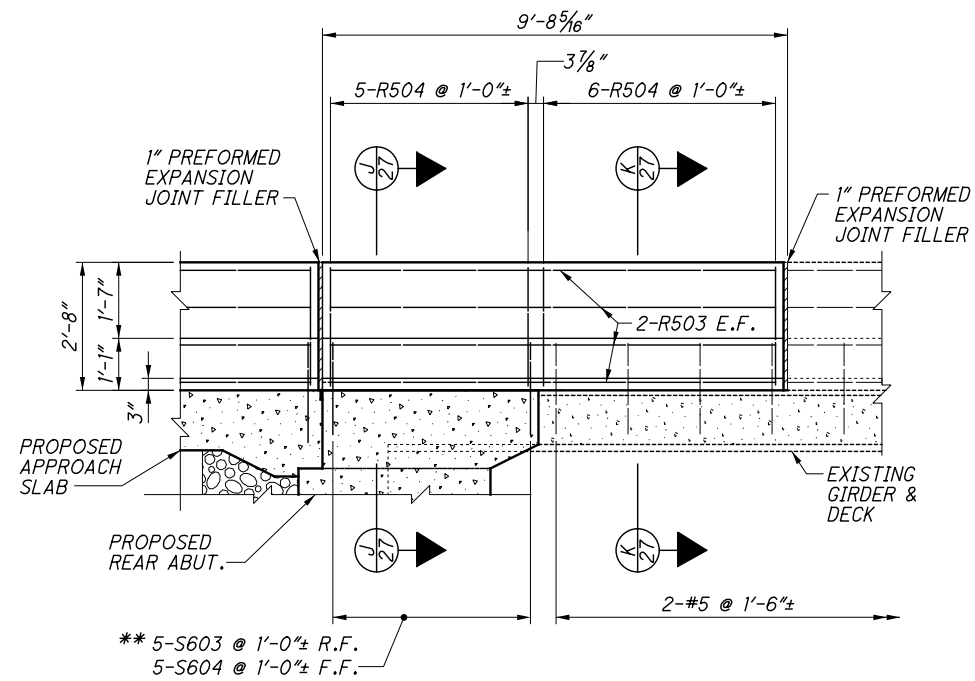
**SECTION E-E**  
(SOUTHWEST CORNER)  
(LOOKING WEST)



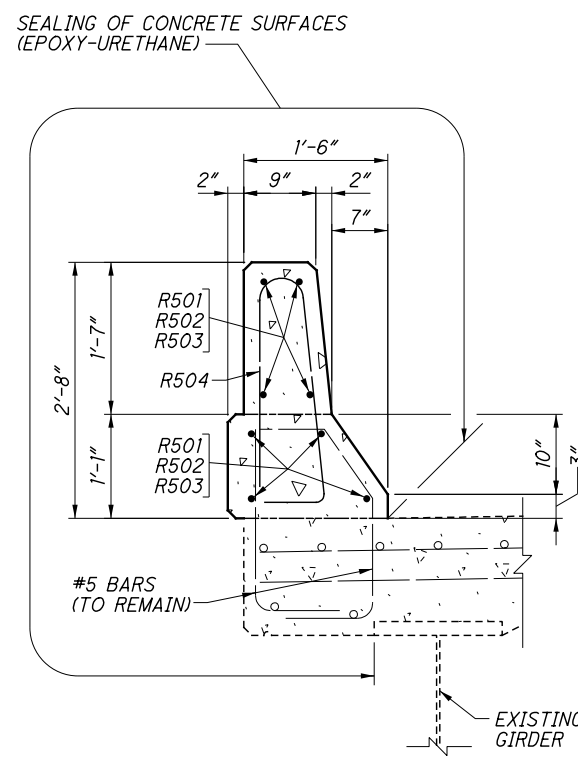
**SECTION J-J**



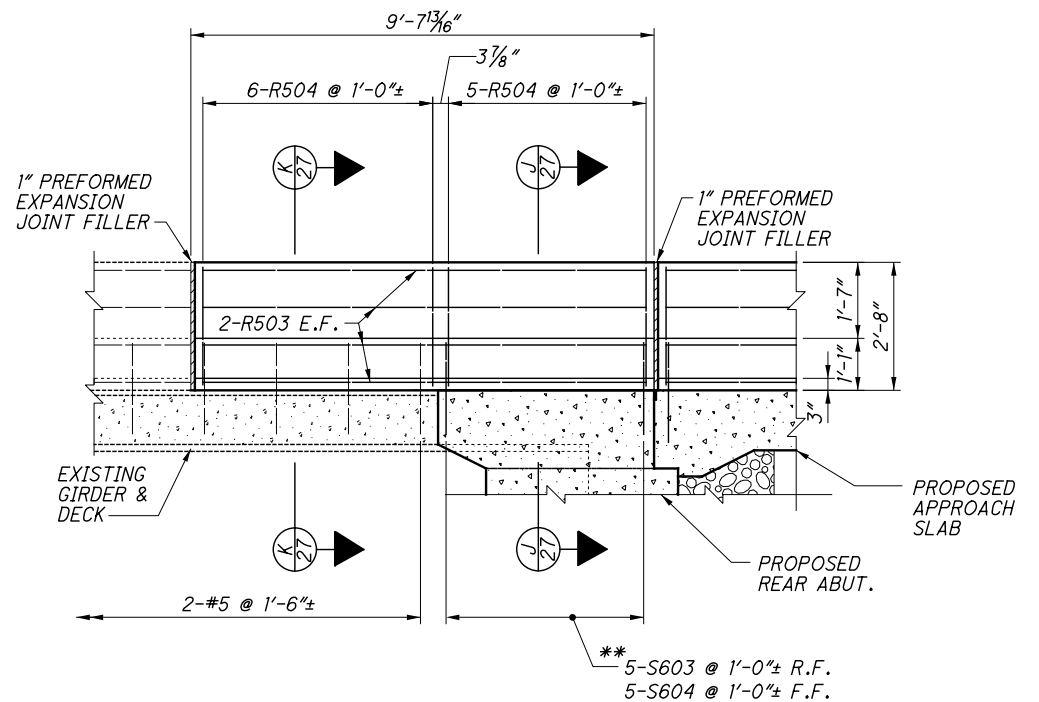
**SECTION F-F**  
(SOUTHEAST CORNER)  
(LOOKING EAST)



**SECTION H-H**  
(NORTHEAST CORNER)  
(LOOKING EAST)



**SECTION K-K**



**SECTION G-G**  
(NORTHWEST CORNER)  
(LOOKING WEST)

**LEGEND**

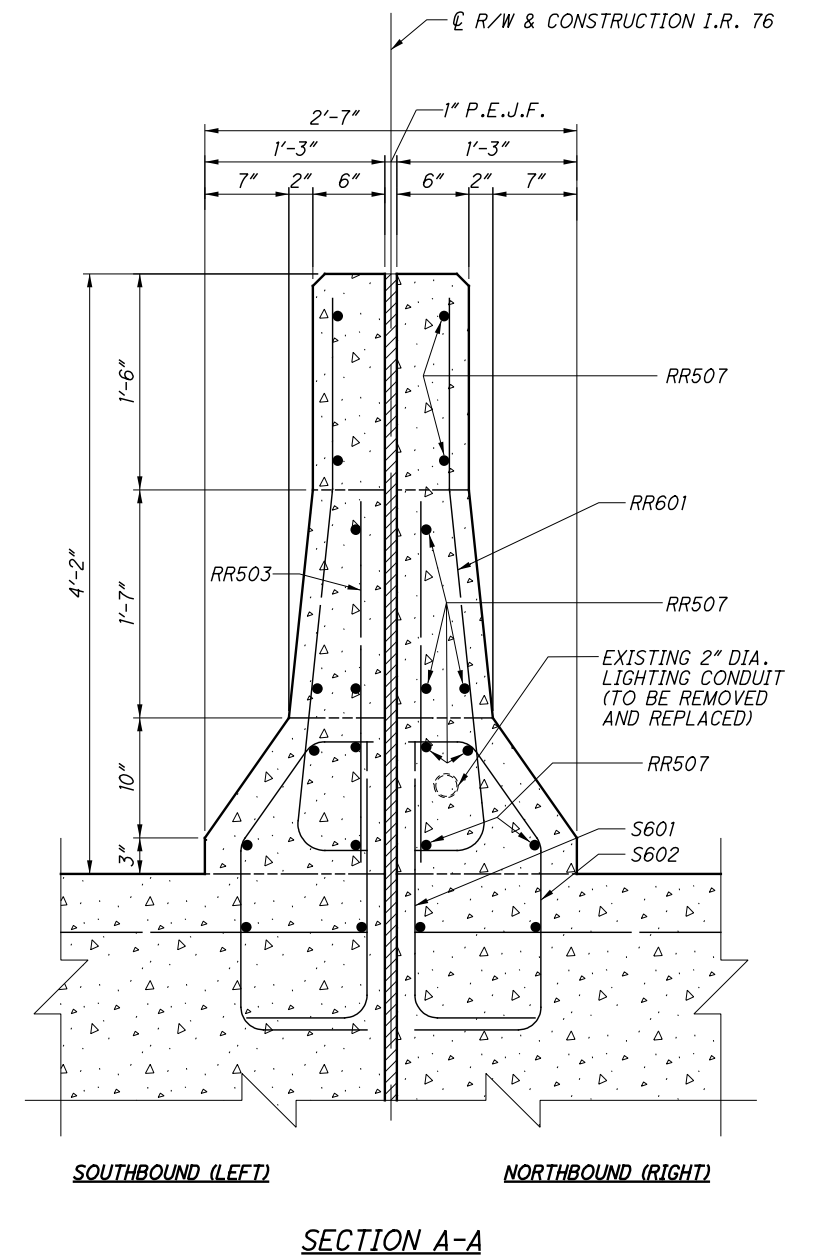
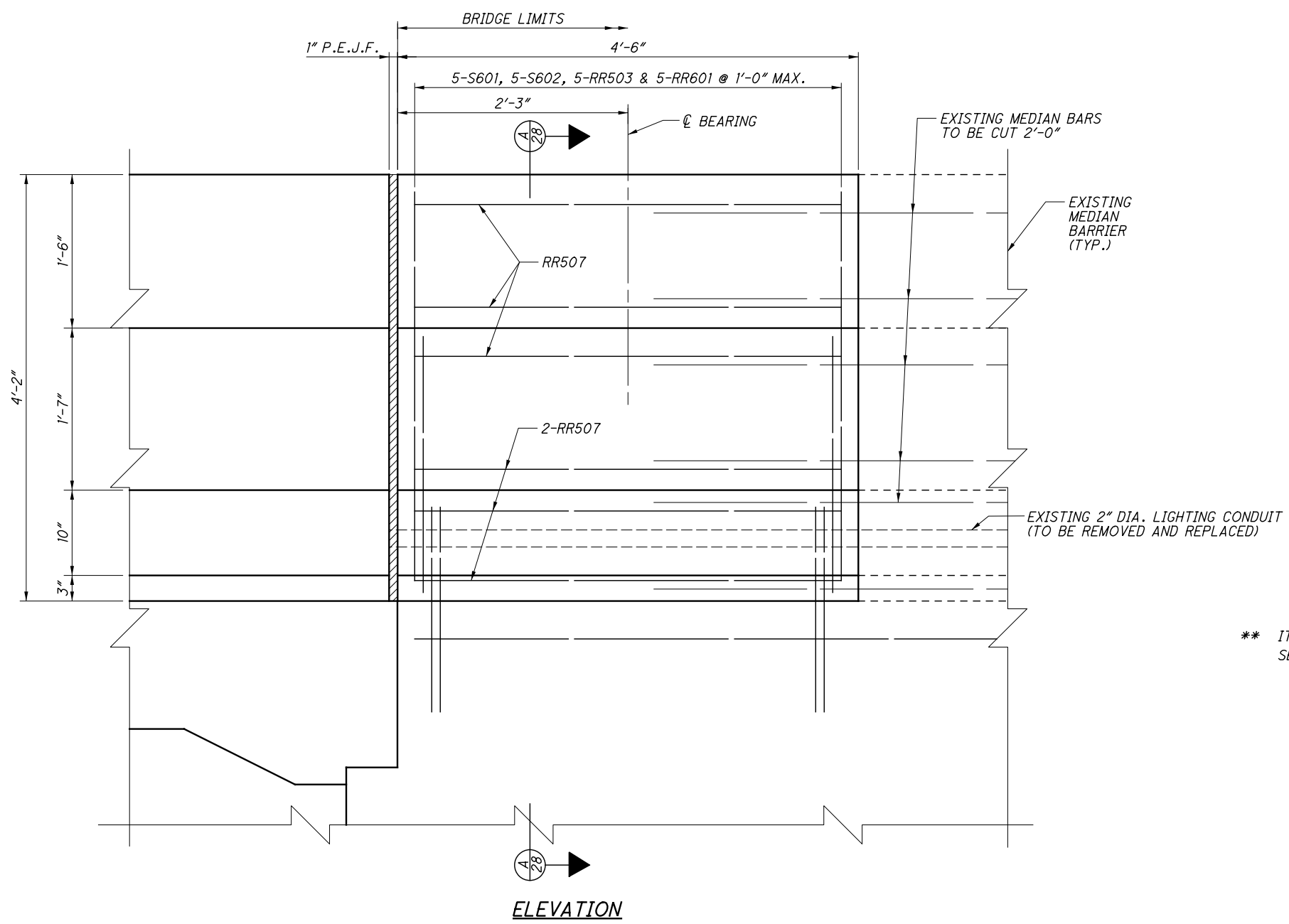
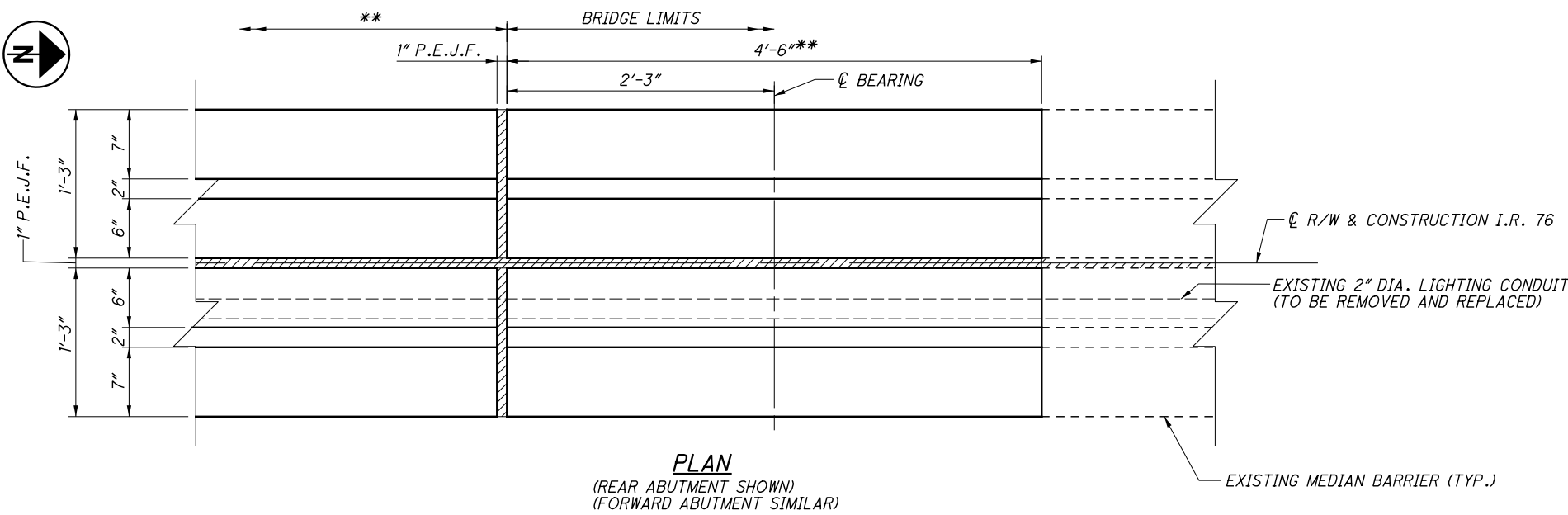
\*\* REINFORCING BARS DIFFER FROM SCD BR-1 (5-29-79) FOR ADDED STRENGTH.

**NOTES**

**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**SECTION E-E, F-F, G-G AND H-H:** FOR LOCATIONS SEE SHEET 23/50.

<p><b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902</p>	
<p>DATE: 11-1-18 DT: 11-1-18 STRUCTURE FILE NUMBER: 7705646</p>	<p>DESIGNED: RWC CHECKED: BLN</p>
<p><b>DECK OUTSIDE RAILING DETAILS</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY</p>	
<p>SUM-76-6.72 PID No. 96670</p>	<p>27/50 61 85</p>

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**LEGEND**

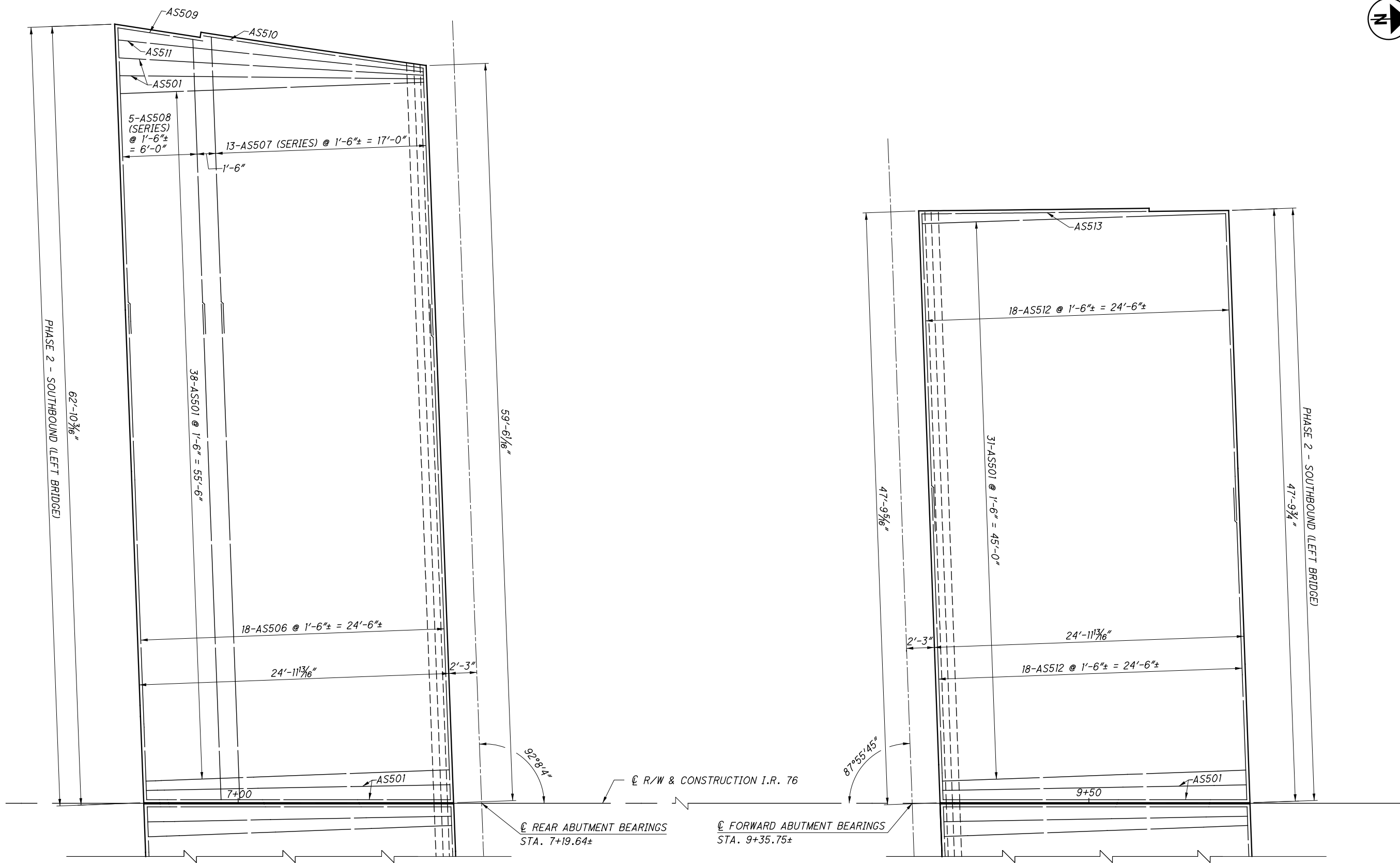
\*\* ITEM TO BE PAID FOR AS ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN PARAPET. SEE SHEET [7/50] FOR NOTE.

**NOTES**

**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
**SUPERSTRUCTURE REINFORCING STEEL:** SEE SHEET [26/50].

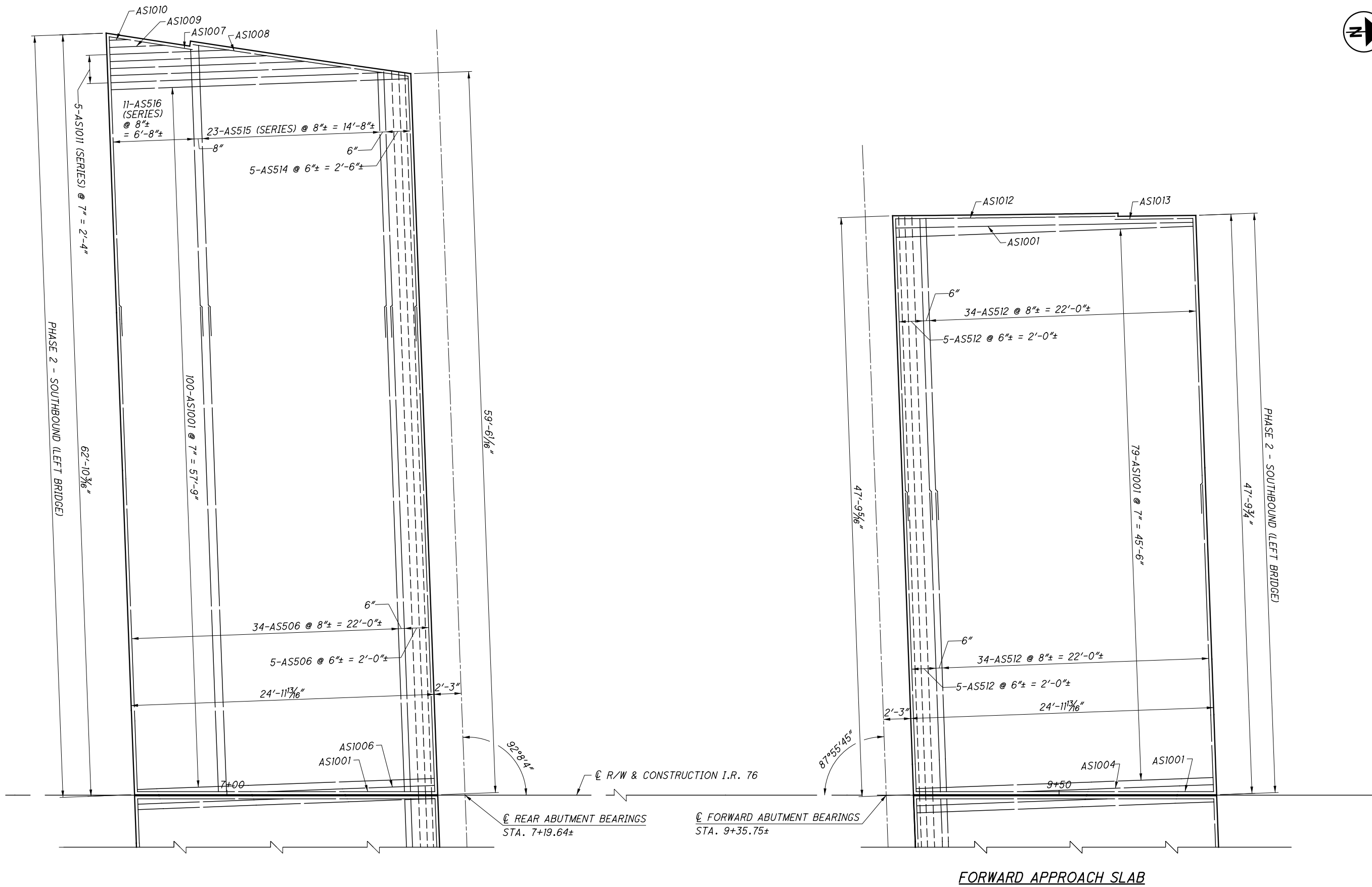
<b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE 11-1-18	STRUCTURE FILE NUMBER 7705646
REVIEWED DT	DRAWN JSB
DESIGNED RWC	CHECKED BLN
<b>DECK MEDIAN RAILING DETAILS</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
SUM-76-6.72 PID No. 96670	
28/50	
62 85	





**NOTES**  
**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**RAILING** NOT SHOWN FOR CLARITY.  
**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-6" FOR #5 BARS.

<b>SUM-76-6.72</b> PID No. 96670	APPROACH SLAB - SOUTHBOUND (LEFT) - TOP REINFORCING STEEL BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		DESIGNED RWC	CHECKED BLN	DRAWN JSB	REVISED	REVIEWED DT	DATE 11-1-18	STRUCTURE FILE NUMBER 7705646	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
	29/50	63 85								



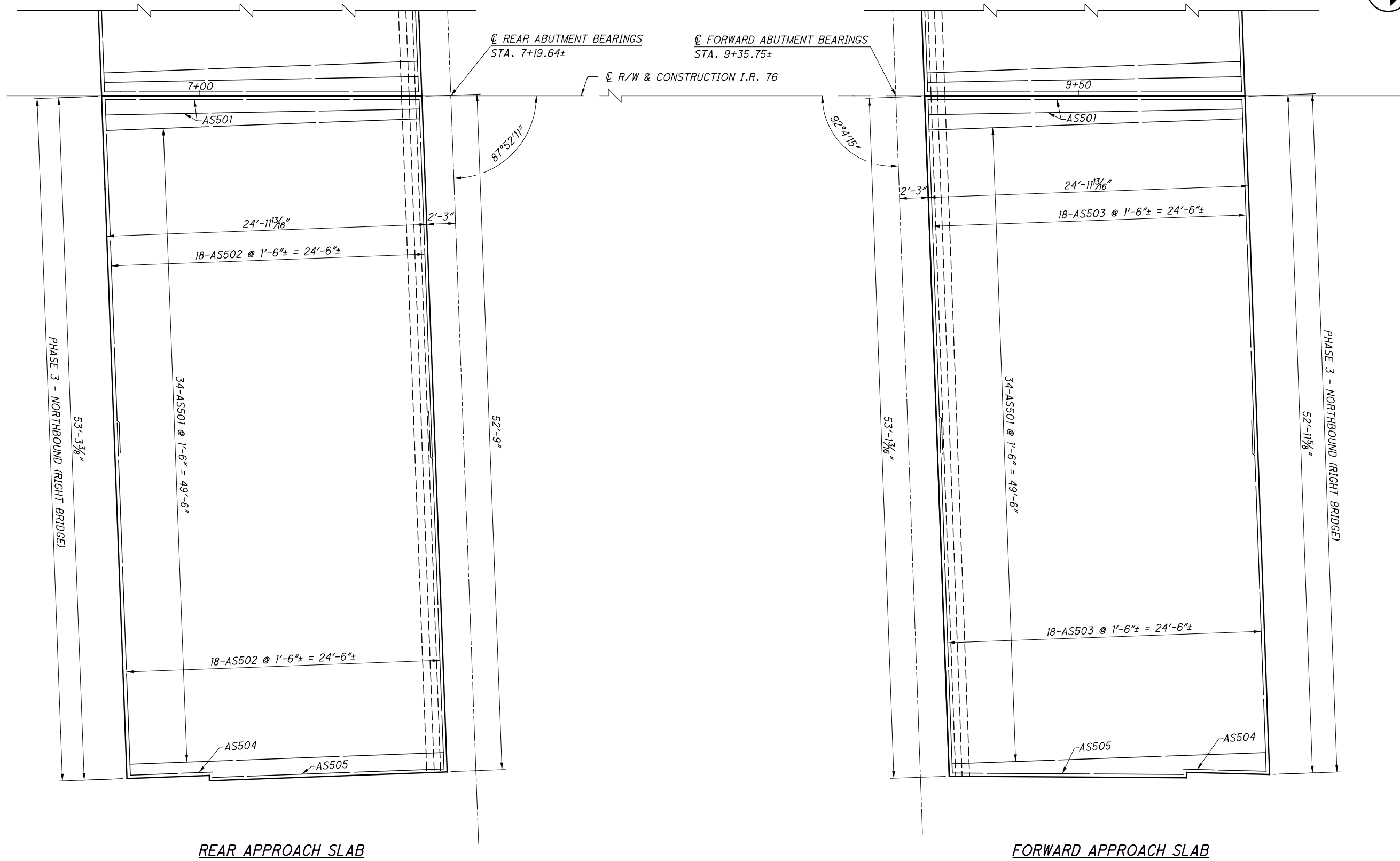
**NOTES**

**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.

**RAILING** NOT SHOWN FOR CLARITY.

**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-6" FOR #5 BARS.

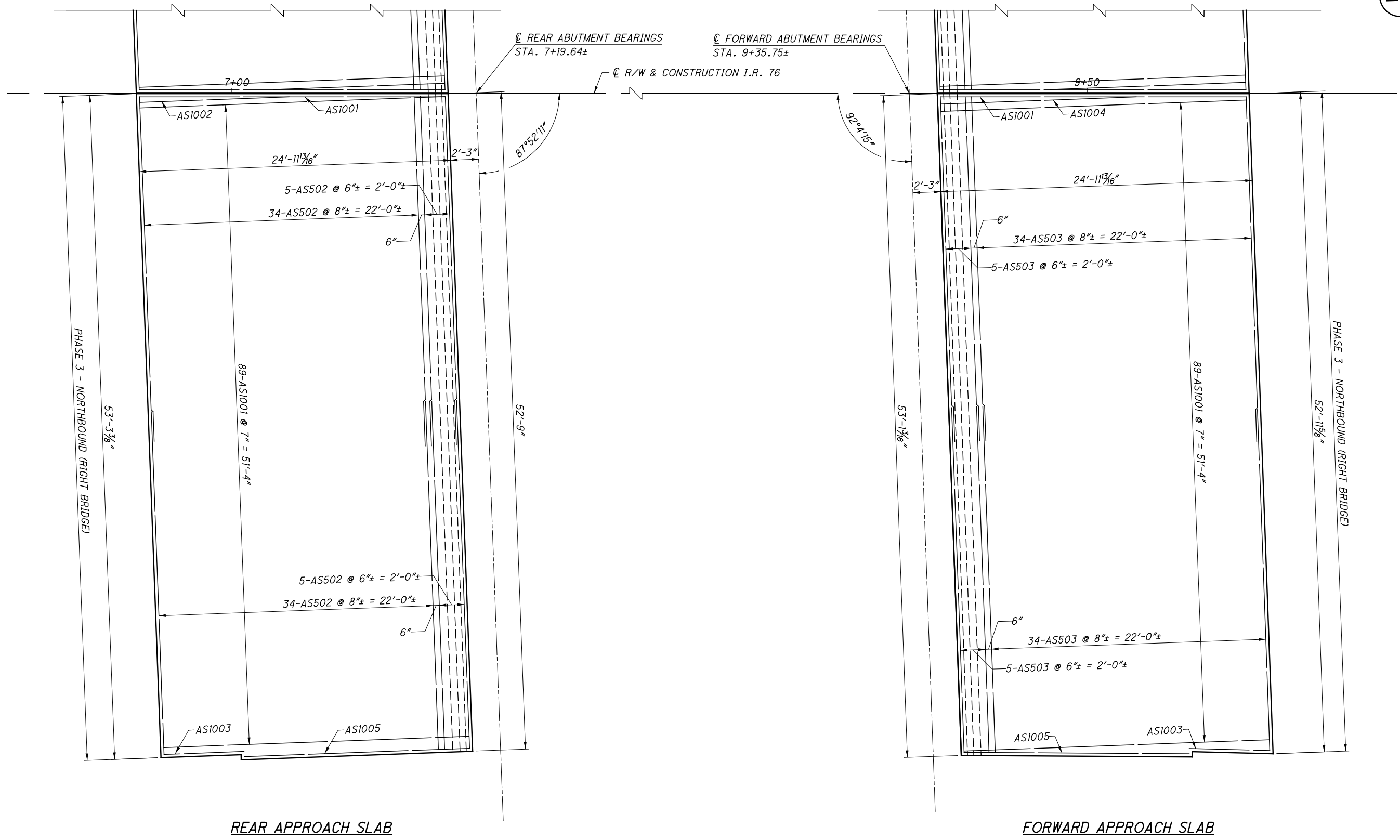
<b>SUM-76-6.72</b> PID No. 96670	APPROACH SLAB - SOUTHBOUND (LEFT) - BOTTOM REINFORCING STEEL BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		DESIGNED RWC	CHECKED BLN	DRAWN JSB	REVISED	REVIEWED DT	DATE 11-1-18	STRUCTURE FILE NUMBER 7705646	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
	30/50	64 85								



**NOTES**  
**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**RAILING** NOT SHOWN FOR CLARITY.  
**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-6" FOR #5 BARS.

SUM-76-6.72		APPROACH SLAB - NORTHBOUND (RIGHT) - TOP REINFORCING STEEL		RICHLAND ENGINEERING LIMITED	
PID No. 96670		BRIDGE NO. SUM-76-0672		29 NORTH PARK STREET	
		I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		MANSFIELD, OHIO 44902	
31/50				DESIGNED	REVIEWED
				RWC	DT
				CHECKED	STRUCTURE FILE NUMBER
				BLN	7705646
				DRAWN	DATE
				JSB	11-1-18
				REVISED	

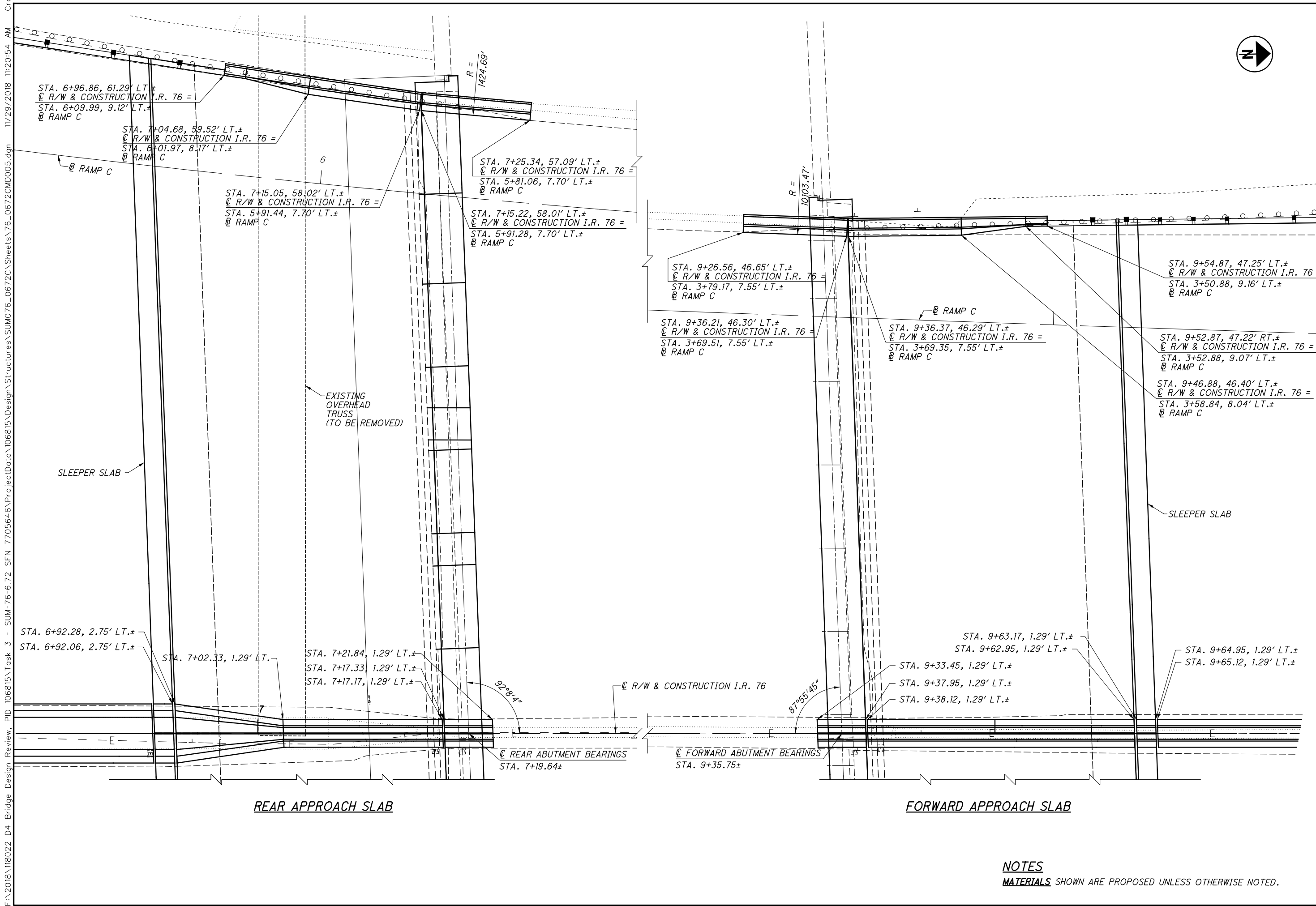
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SUM-76-6.72		APPROACH SLAB - NORTHBOUND (RIGHT) - BOTTOM REINFORCING STEEL		RICHLAND ENGINEERING LIMITED	
PID No. 96670		BRIDGE NO. SUM-76-0672		29 NORTH PARK STREET	
		I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		MANSFIELD, OHIO 44902	
32/50		DATE 11-1-18		STRUCTURE FILE NUMBER 7705646	
66		REVIEWED DT		DRAWN JSB	
85		CHECKED BLN		REVISED	

**NOTES**  
**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**RAILING** NOT SHOWN FOR CLARITY.  
**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-6" FOR #5 BARS.

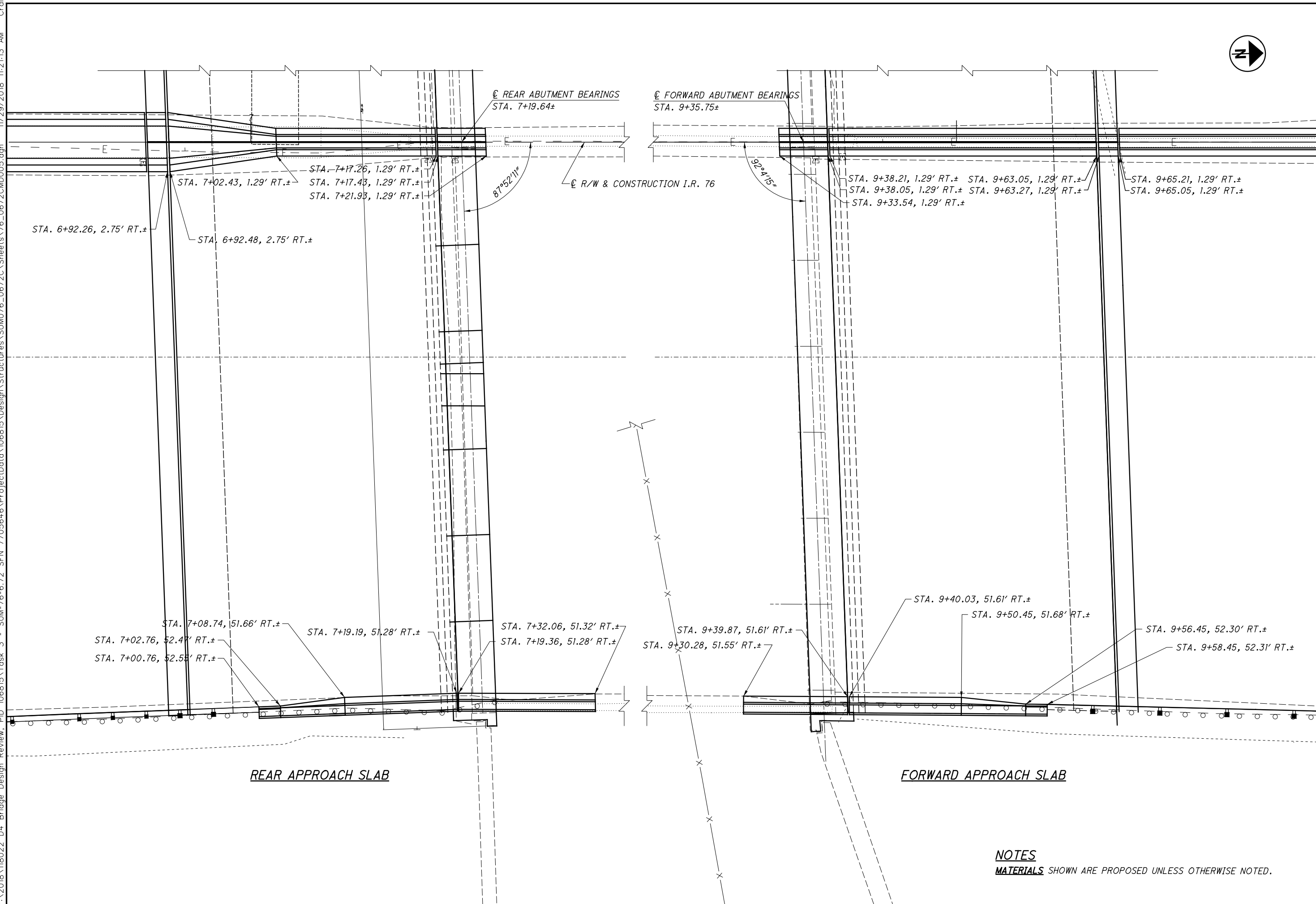
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RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE	11-1-18
REVIEWED	DT
DRAWN	JSB
DESIGNED	RWC
CHECKED	BLN
STRUCTURE FILE NUMBER	7705646
APPROACH SLAB - SOUTHBOUND (LEFT) - PARAPET LAYOUT	
BRIDGE NO. SUM-76-0672	
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
SUM-76-6-72	PID No. 96670
33/50	67/85

**NOTES**  
 MATERIALS SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.

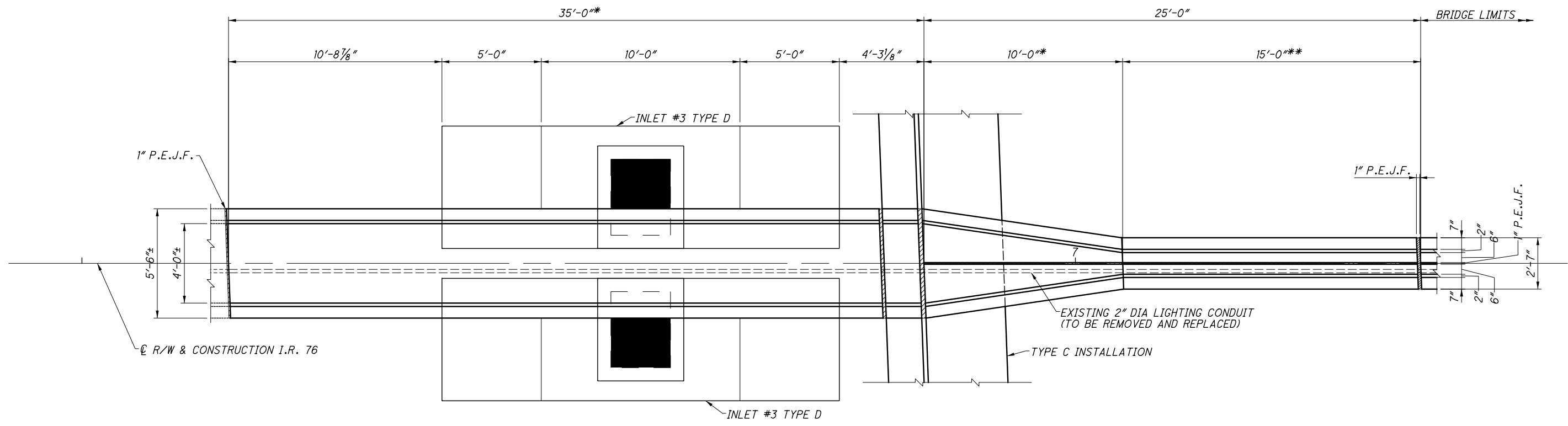
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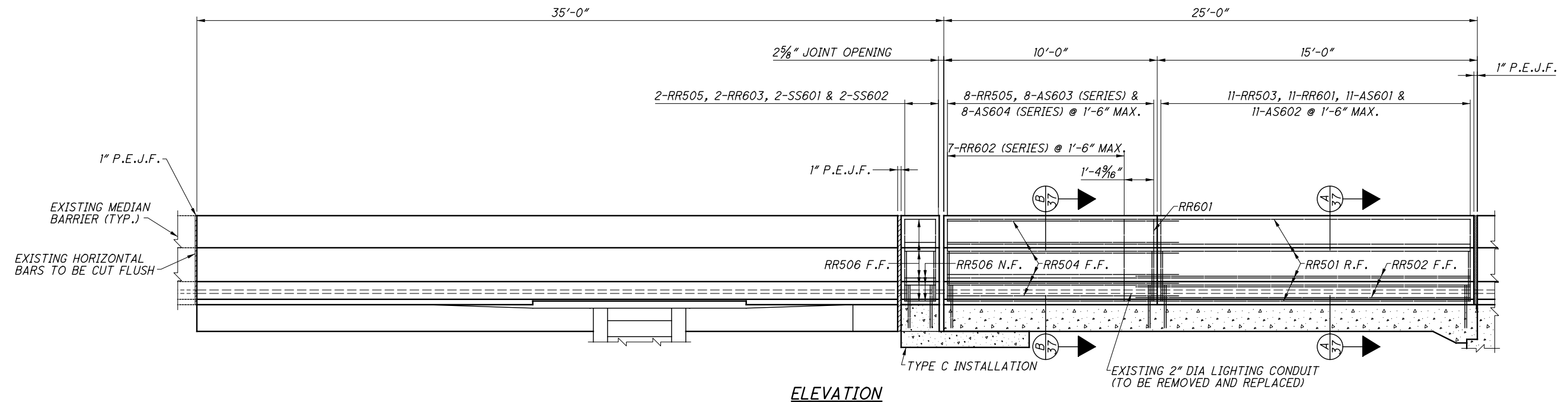
<b>SUM-76-6.72</b> PID No. 96670		<b>APPROACH SLAB - NORTHBOUND (RIGHT) - PARAPET LAYOUT</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		DESIGNED RWC	CHECKED BLN	DRAWN JSB	REVISED	REVIEWED DT	DATE 11-1-18	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
				STRUCTURE FILE NUMBER 7705646						

**NOTES**  
 MATERIALS SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.

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**PLAN**



**ELEVATION**

**LEGEND**

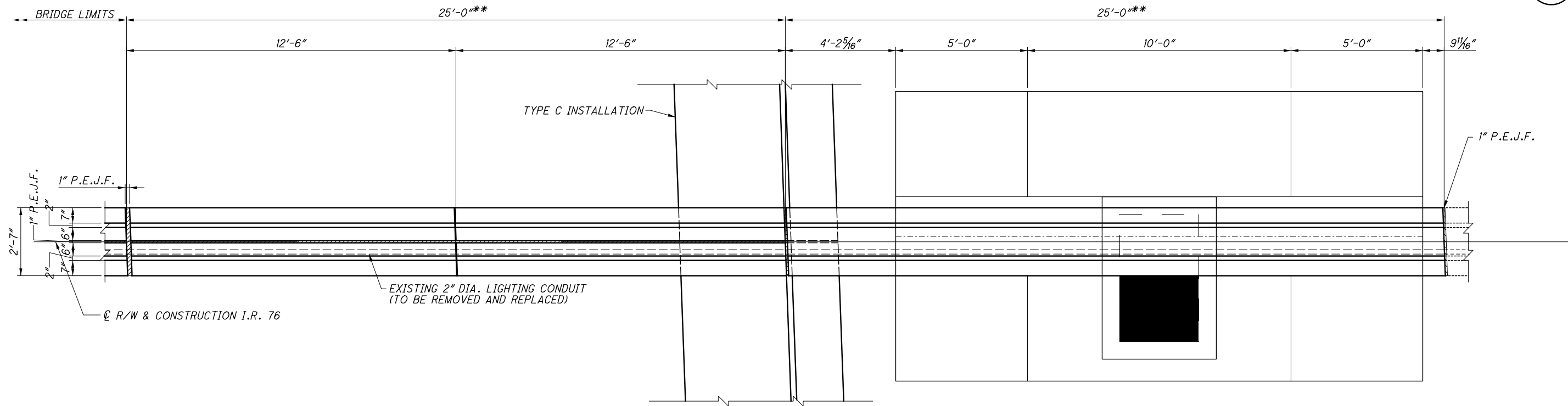
- \* ITEM TO BE PAID FOR AS ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN BARRIER. SEE SHEET 7/50 FOR NOTE.
- \*\* ITEM TO BE PAID FOR AS ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN PARAPET. SEE SHEET 7/50 FOR NOTE.

**NOTES**

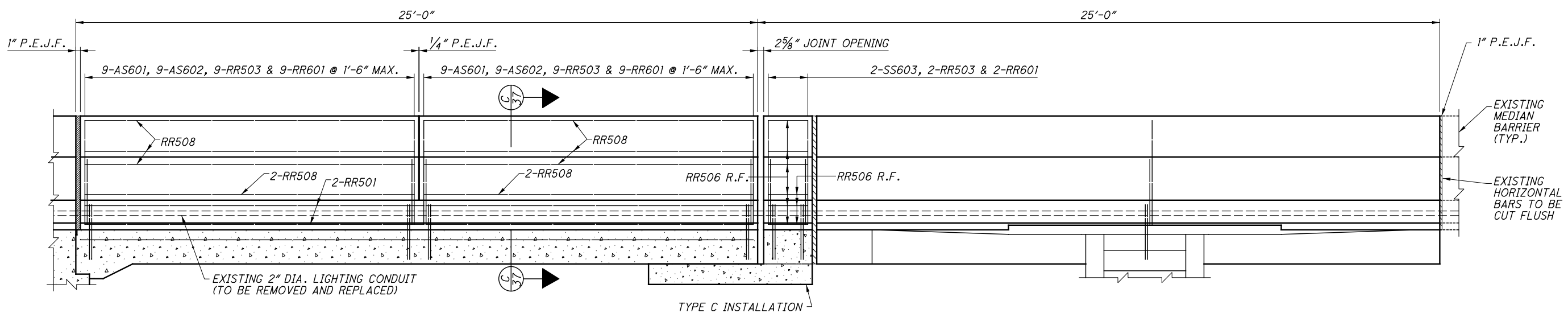
**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
 R.F. - REAR FACE  
 F.F. - FRONT FACE  
**APPROACH SLAB REINFORCING STEEL:** FOR ADDITIONAL REINFORCING DETAILS SEE SHEETS 29/50 THROUGH 32/50.

<b>SUM-76-6.72</b> PID No. 96670	<b>REAR APPROACH SLAB RAILING DETAILS - 1</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902 
DESIGNED: RWC CHECKED: BLN	DRAWN: USB REVISED:	REVIEWED: DT DATE: 11-1-18 STRUCTURE FILE NUMBER: 7705646
35/50 69 85		

F:\2018\118022\_D4\_Bridge\_Design\_Review\_PID 106815\Task 3 - SUM-76-6.72\_SF 7705646\ProjectData\106815\Design\Structures\SUM076\_0672C\Sheets\76\_0672CRA005.dgn 11/29/2018 11:26:26 AM Craig



PLAN



ELEVATION

LEGEND

\*\* ITEM TO BE PAID FOR AS ITEM 622 - BARRIER, MISC.: CONCRETE MEDIAN PARAPET. SEE SHEET [7/50] FOR NOTE.

NOTES

MATERIALS SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
 NOTATIONS: P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
 APPROACH SLAB REINFORCING STEEL: FOR ADDITIONAL REINFORCING DETAILS SEE SHEETS [29/50] THROUGH [32/50].



RICHLAND ENGINEERING LIMITED  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902

DESIGNED	RWC	CHECKED	BLN
DRAWN	JSB	REVISED	
REVIEWED	DT	STRUCTURE FILE NUMBER	7705646
DATE	11-1-18		

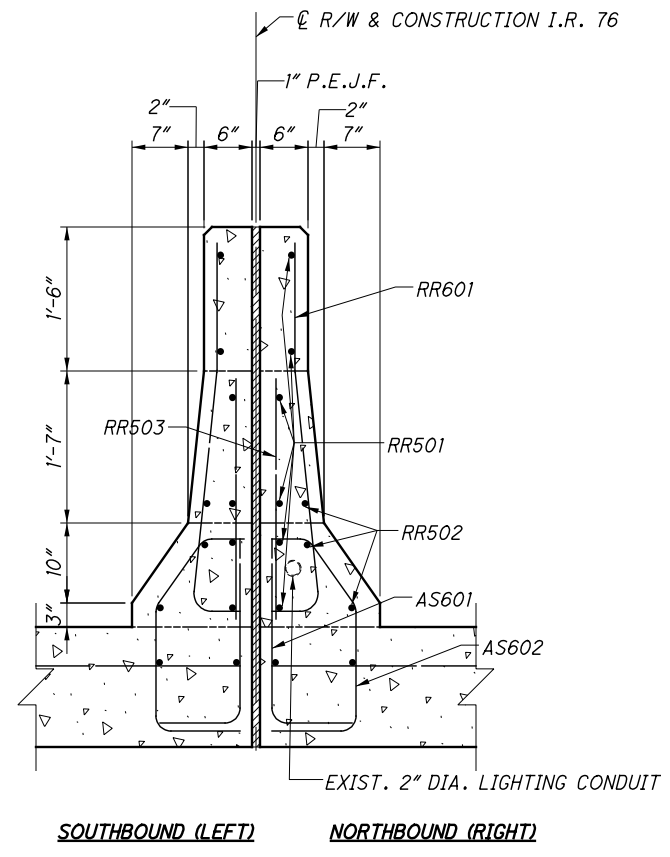
FORWARD APPROACH SLAB MEDIAN RAILING DETAILS - 2  
 BRIDGE NO. SUM-76-0672  
 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

SUM-76-6.72  
 PID No. 96670

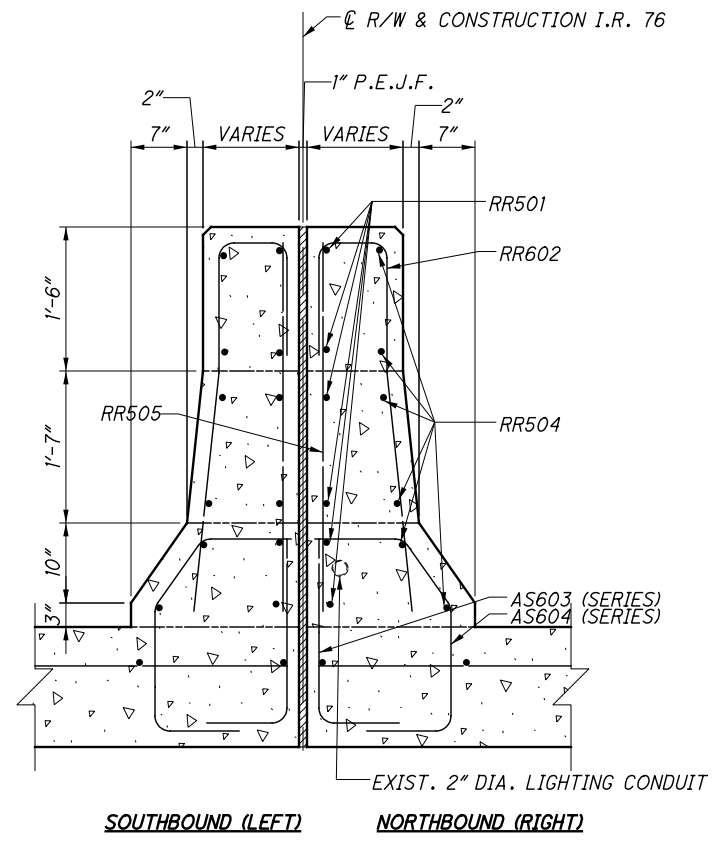
36/50

70  
85

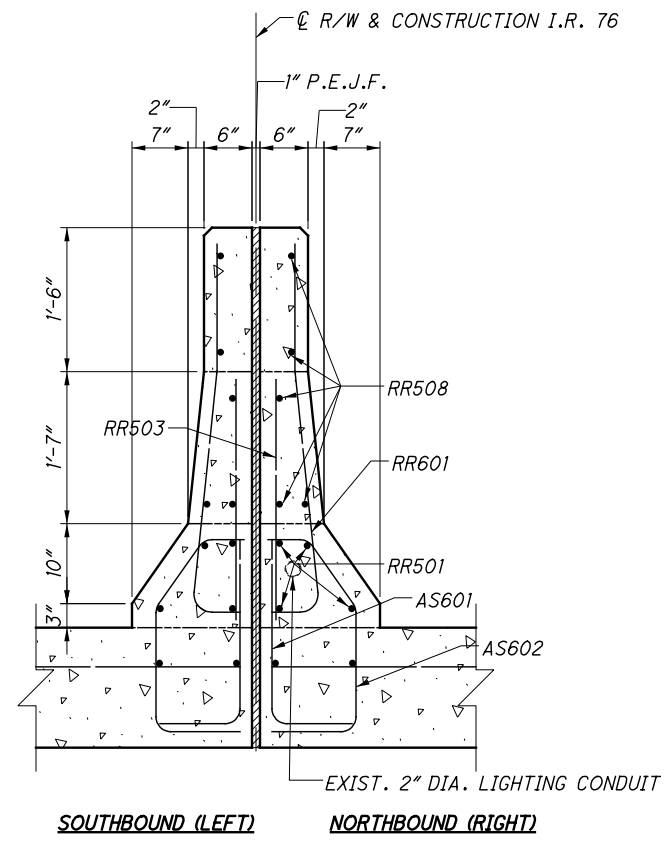




**SECTION A-A**



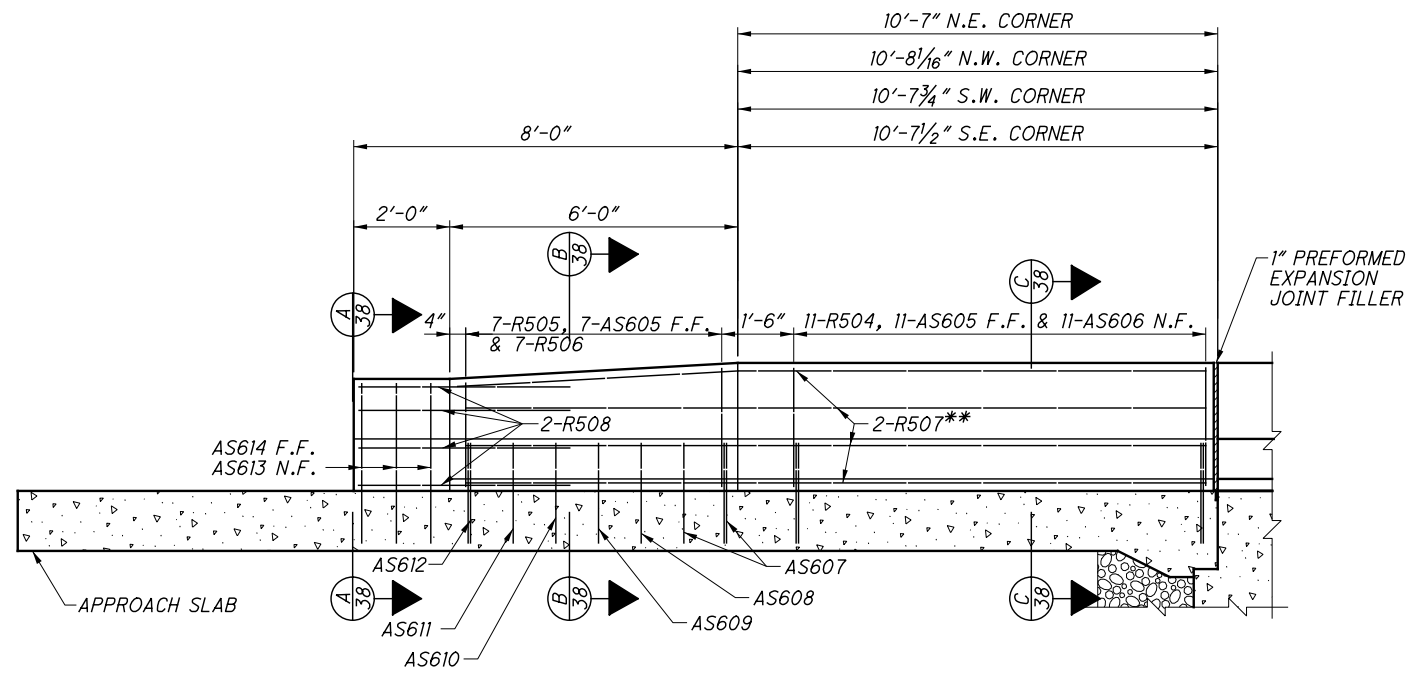
**SECTION B-B**



**SECTION C-C**

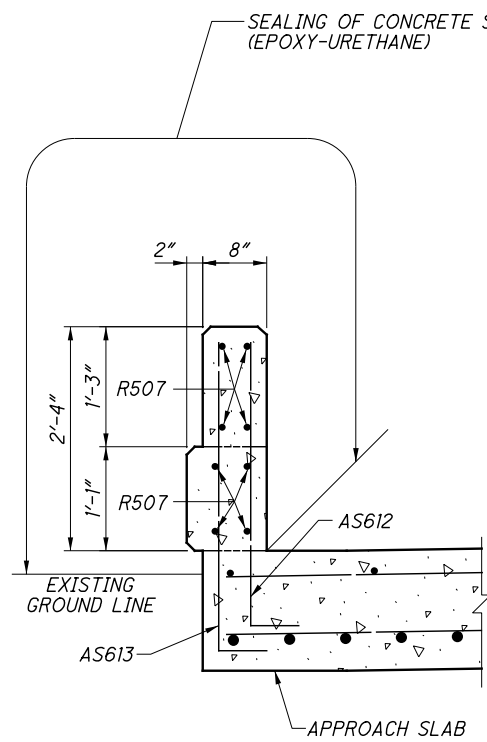
**NOTES**  
**MATERIALS:** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**NOTATIONS:** P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  
**SECTIONS A-A AND B-B:** FOR LOCATIONS SEE SHEET [35/50].  
**SECTIONS C-C:** FOR LOCATION SEE SHEET [36/50].  
**APPROACH SLAB REINFORCING STEEL:** FOR ADDITIONAL REINFORCING DETAILS SEE SHEETS [29/50] THROUGH [32/50].

<b>SUM-76-6.72</b> PID No. 96670		APPROACH SLAB RAILING DETAILS - 3 BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		DESIGNED RWC CHECKED BLN	DRAWN USB REVISED	REVIEWED DT STRUCTURE FILE NUMBER 7705646	DATE 11-1-18	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
37/50		71/85						

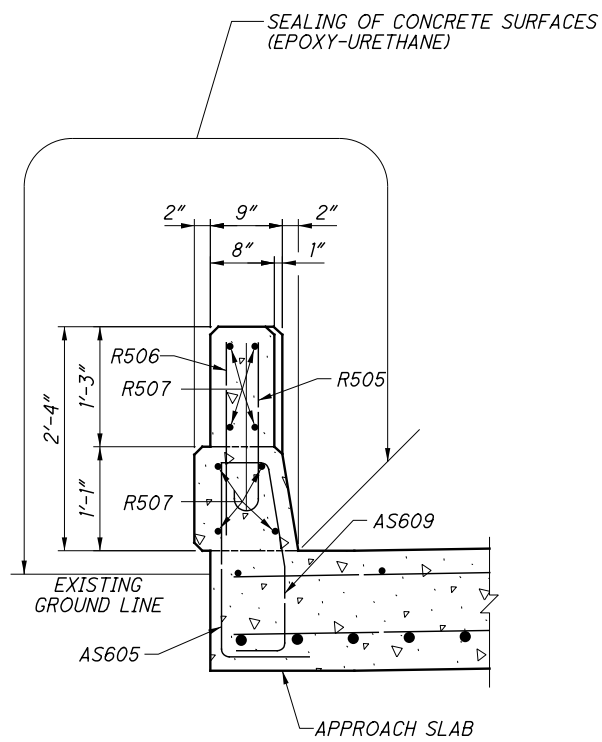


**RAILING ELEVATION DETAIL**

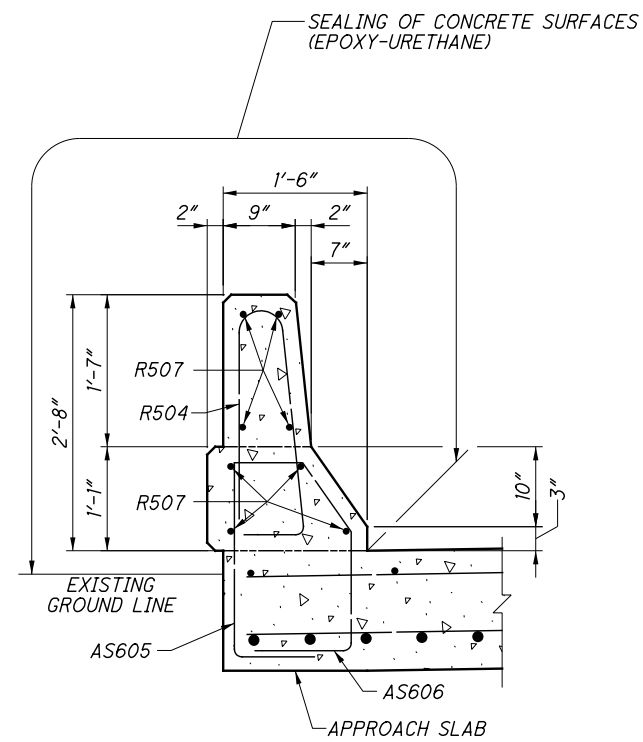
\*\* BEND IN FIELD WHERE NECESSARY



**SECTION A-A**



**SECTION B-B**

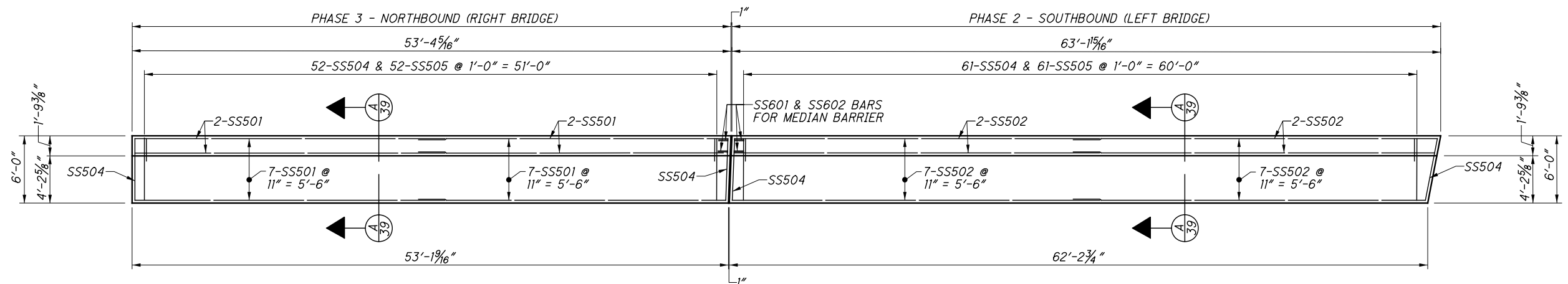


**SECTION C-C**

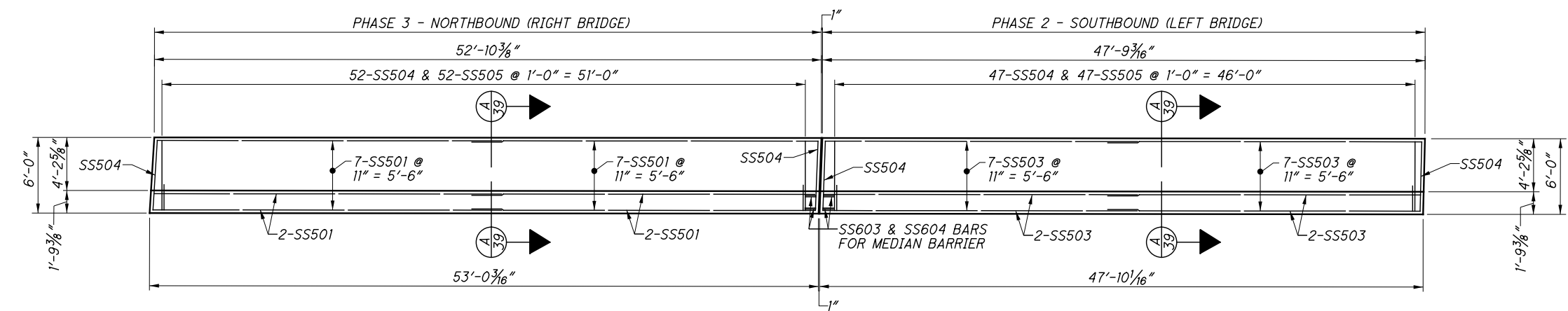
**NOTES**

**NOTATIONS:** F.F. - FAR FACE  
N.F. - NEAR FACE

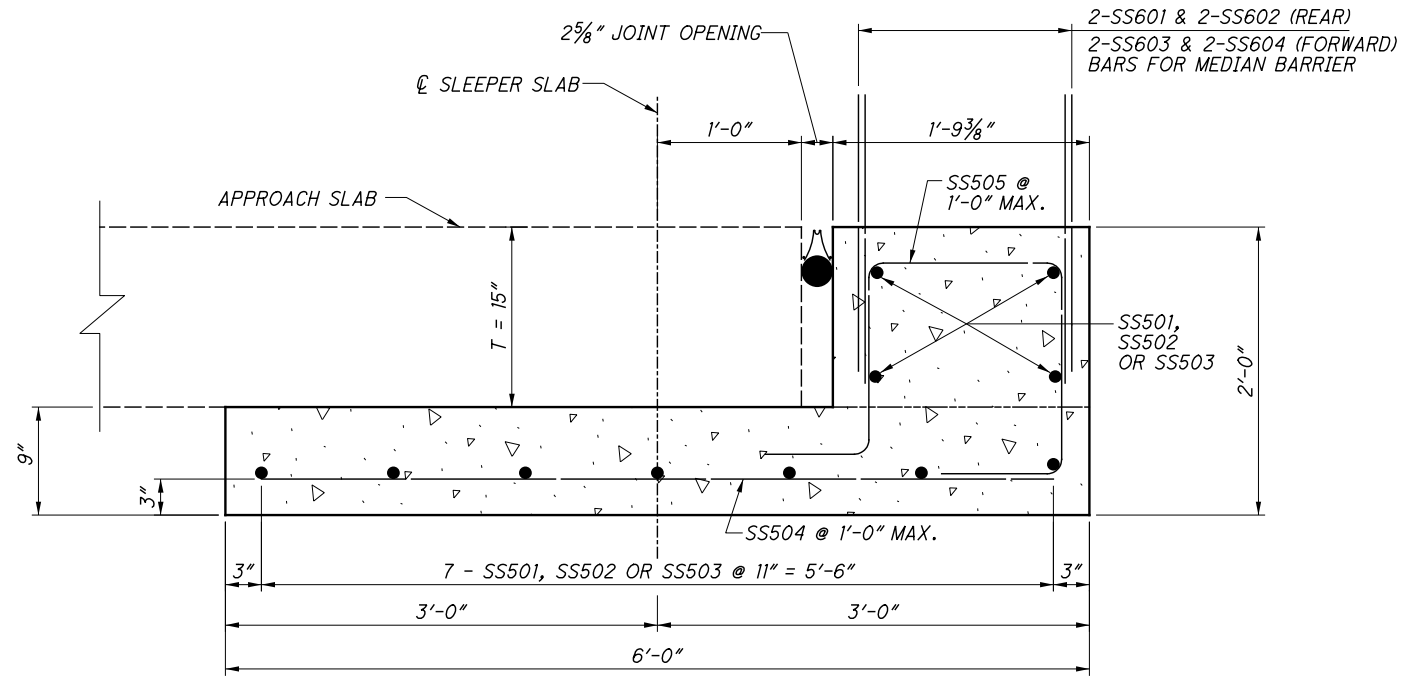
**APPROACH SLAB REINFORCING STEEL:** FOR ADDITIONAL REINFORCING DETAILS SEE SHEETS 31/50 AND 32/50.



**REAR TYPE C INSTALLATION**



**FORWARD TYPE C INSTALLATION**

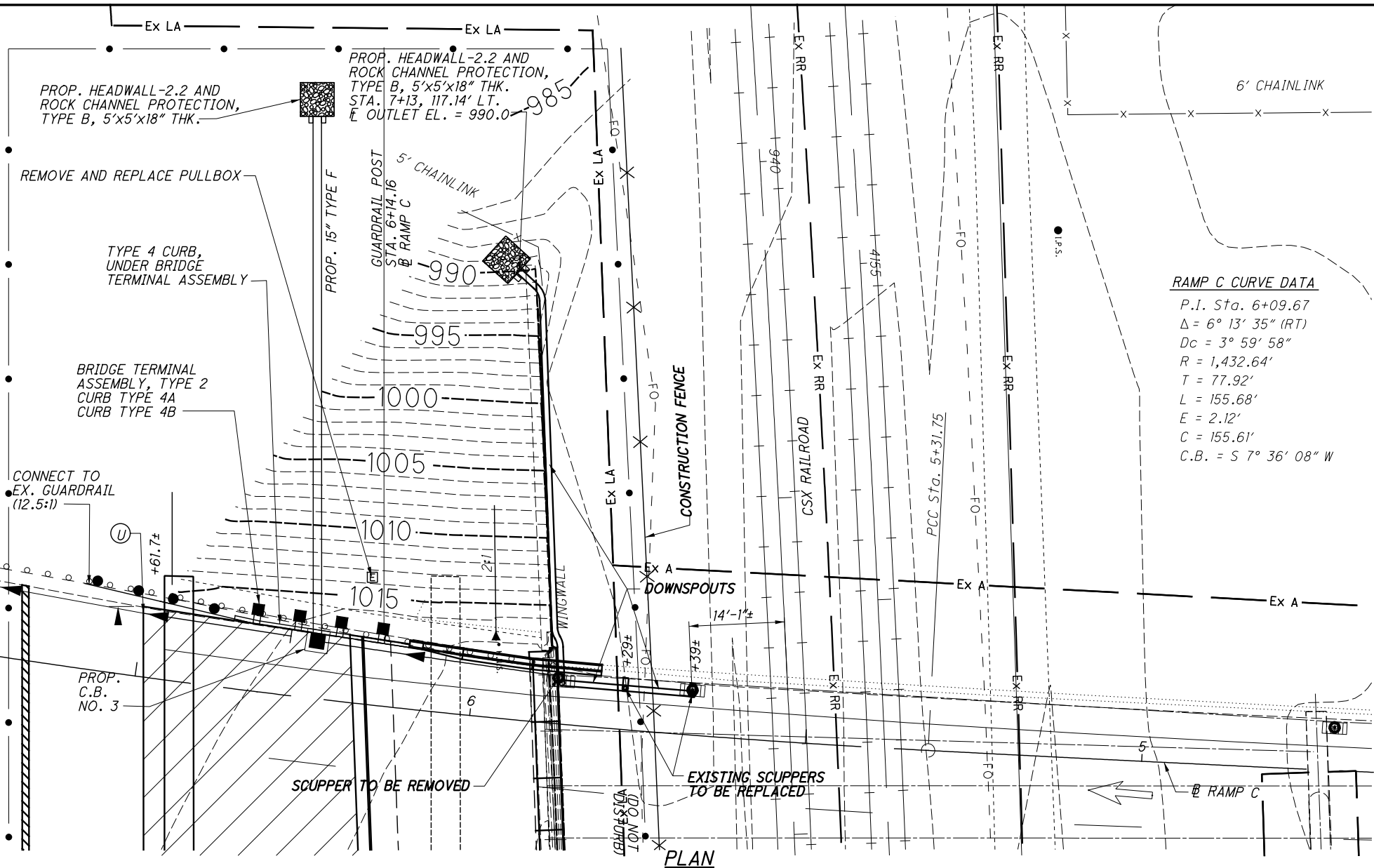


**SECTION A-A**

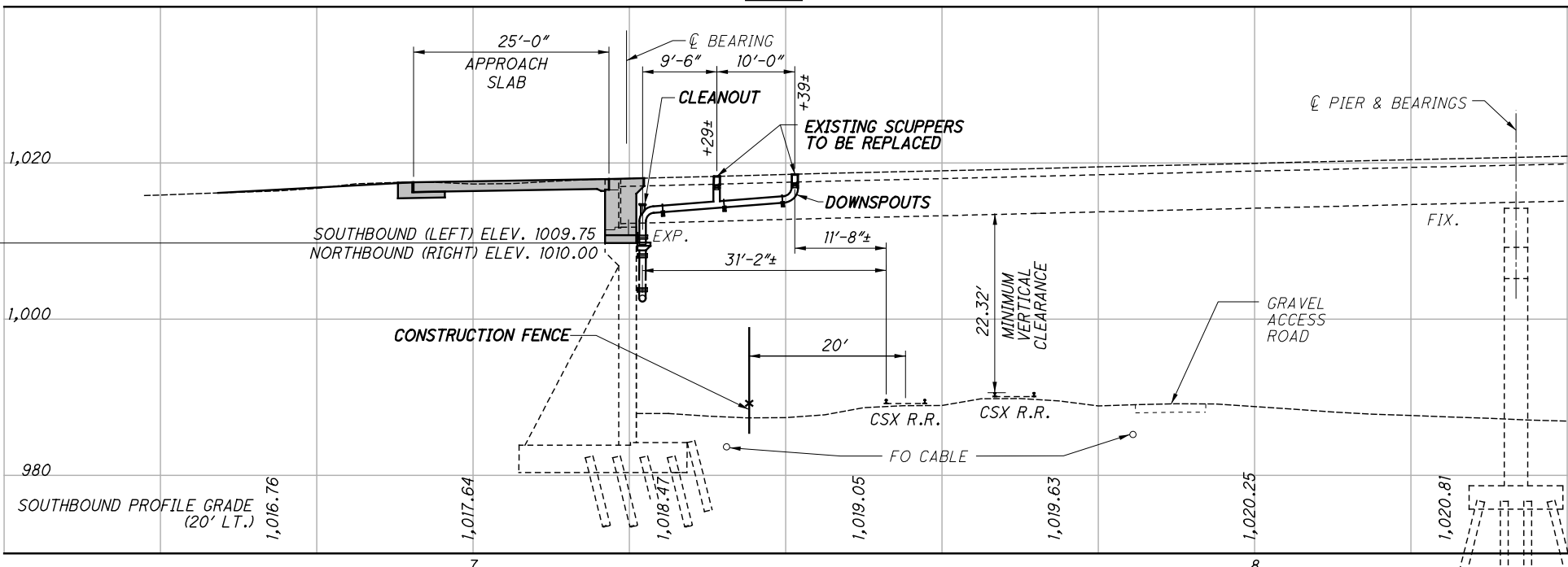
**NOTES**  
**MATERIALS** SHOWN ARE PROPOSED UNLESS OTHERWISE NOTED.  
**RAILING** NOT SHOWN FOR CLARITY.  
**REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-6" FOR #5 BARS.  
**FOR ADDITIONAL INFORMATION:** SEE SCD AS-2-15.



<b>SLEEPER SLAB</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
DESIGNED RWC	CHECKED BLN	DRAWN JSB
REVIEWED DT	DATE 11-1-18	STRUCTURE FILE NUMBER 7705646
SUM-76-6.72 PID No. 96670		39/50 73/85



**PLAN**

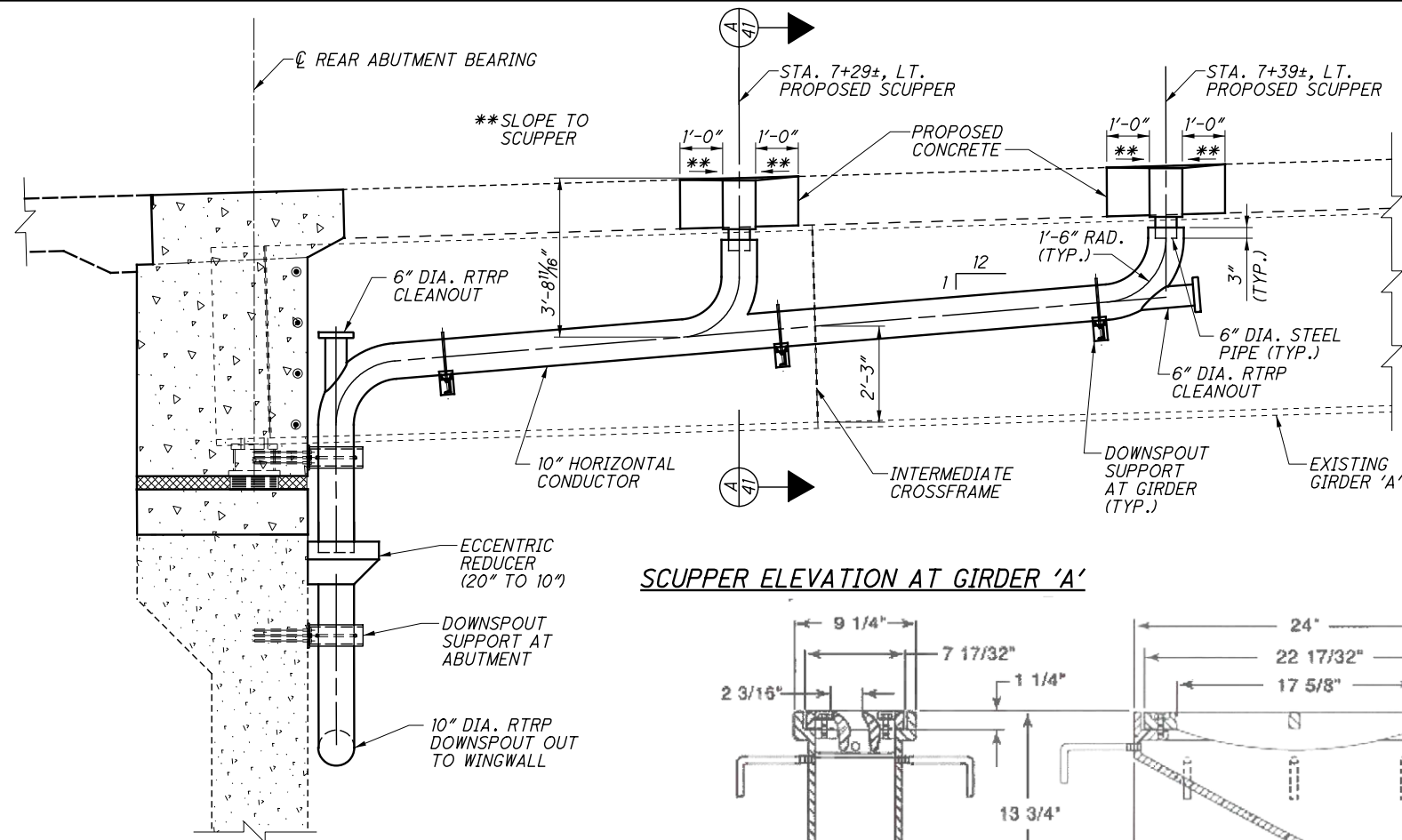


**PROFILE**

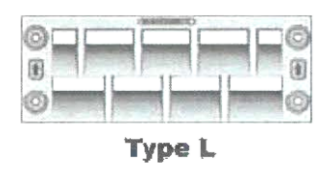
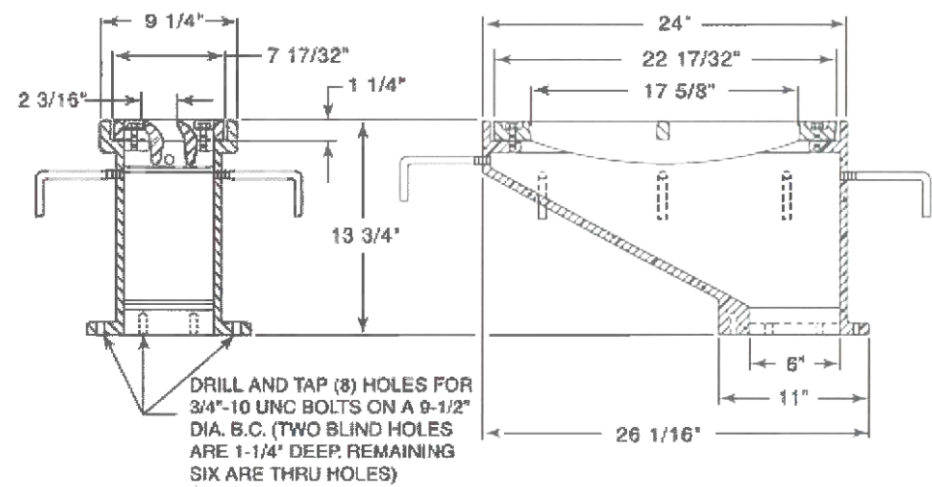


<b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE 11-1-18	STRUCTURE FILE NUMBER 7705646
REVIEWED DT	DRAWN JSB
DESIGNED RWC	CHECKED BLN
SUMMIT COUNTY STA. 7+17.39± STA. 9+38.00±	
<b>DRAINAGE PLAN</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	
SUM-76-6.72 PID No. 96670	
40/50	
74 85	

F:\2018\118022\_D4\_Bridge Design Review\_PID 106815\_Task 3 - SUM-76-6.72\_SF 7705646\ProjectData\106815\Design\Structures\SUM076\_0672C\_Sheets\76\_0672CSD009.dgn 11/29/2018 1:18:23 PM CraigB

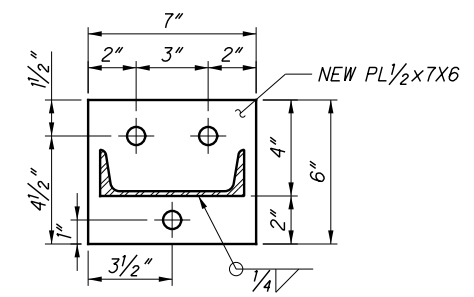


**SCUPPER ELEVATION AT GIRDER 'A'**

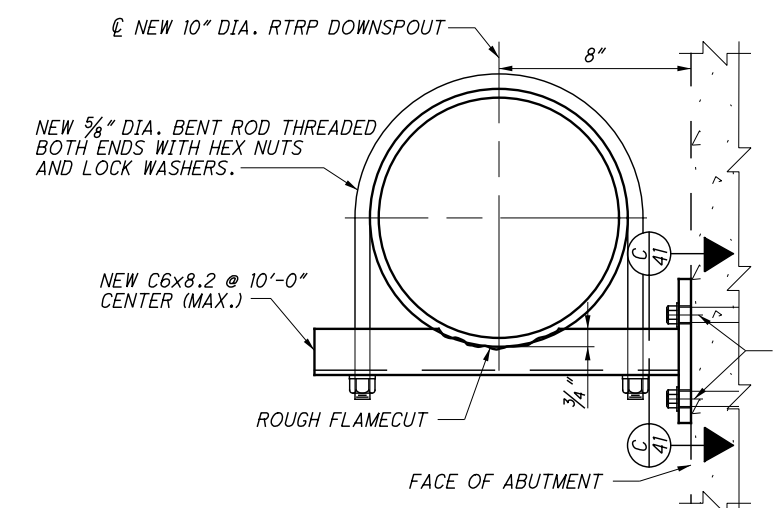


**Type L SCUPPER DETAIL**

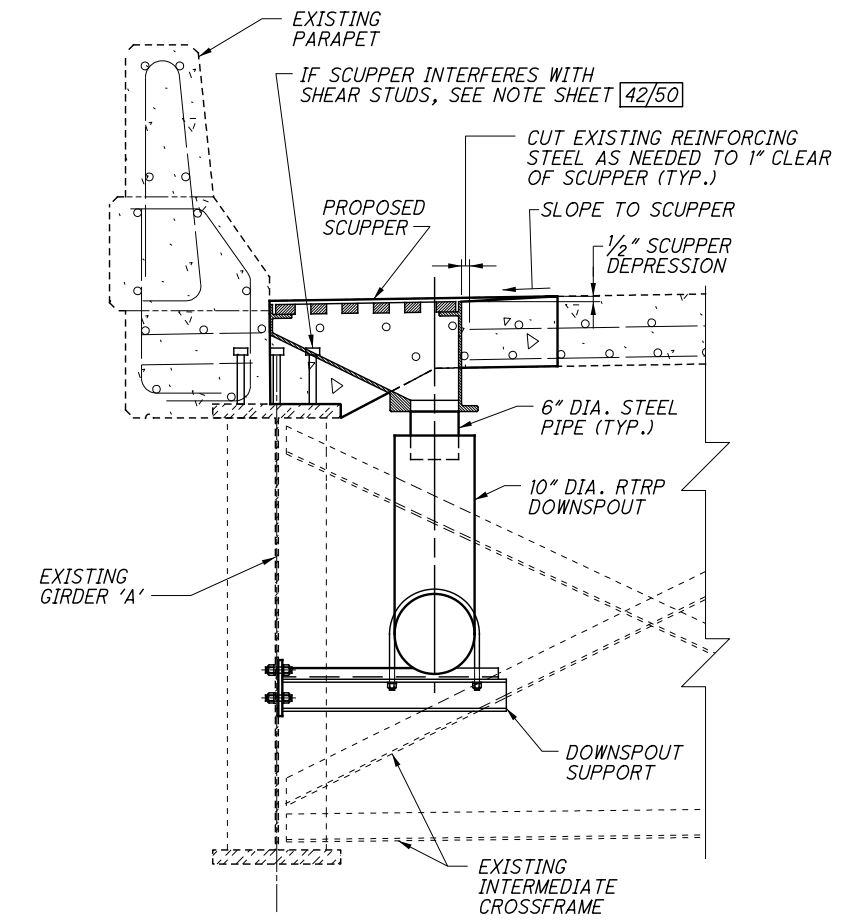
\* 5/8" DIA. ANCHOR SHALL BE GALVANIZED STEEL THREADED ROD WITH NUT AND WASHERS. SET IN NON-SHRINK, NON-METALLIC GROUT CONFORMING TO CMS 705.20.



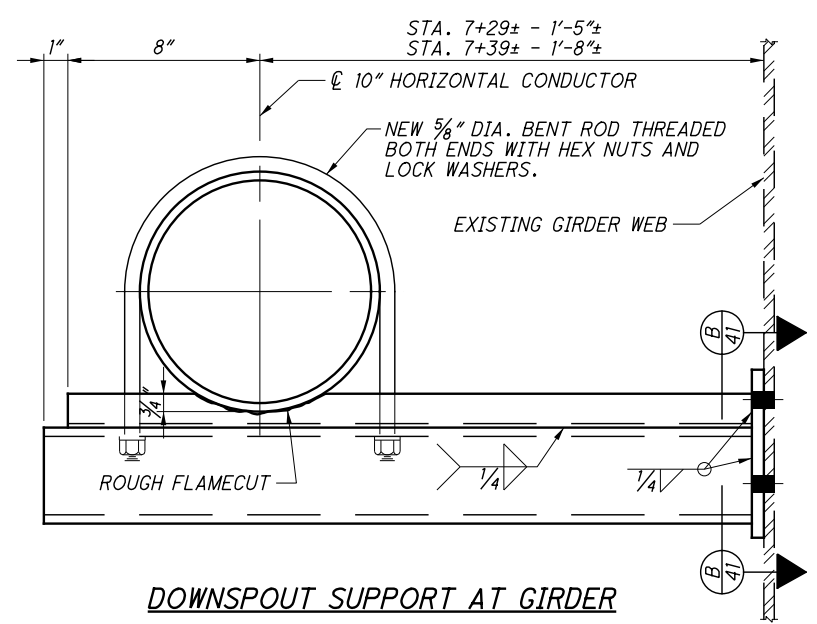
**SECTION C-C**



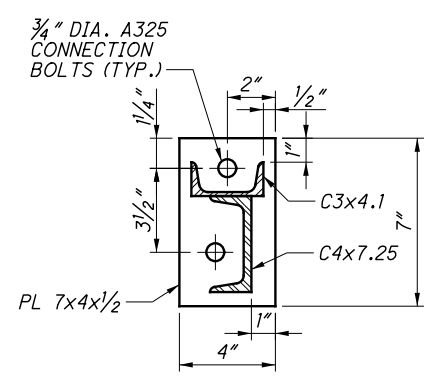
**DOWNSPOUT SUPPORT AT ABUTMENT AND WINGWALL**



**SECTION A-A**



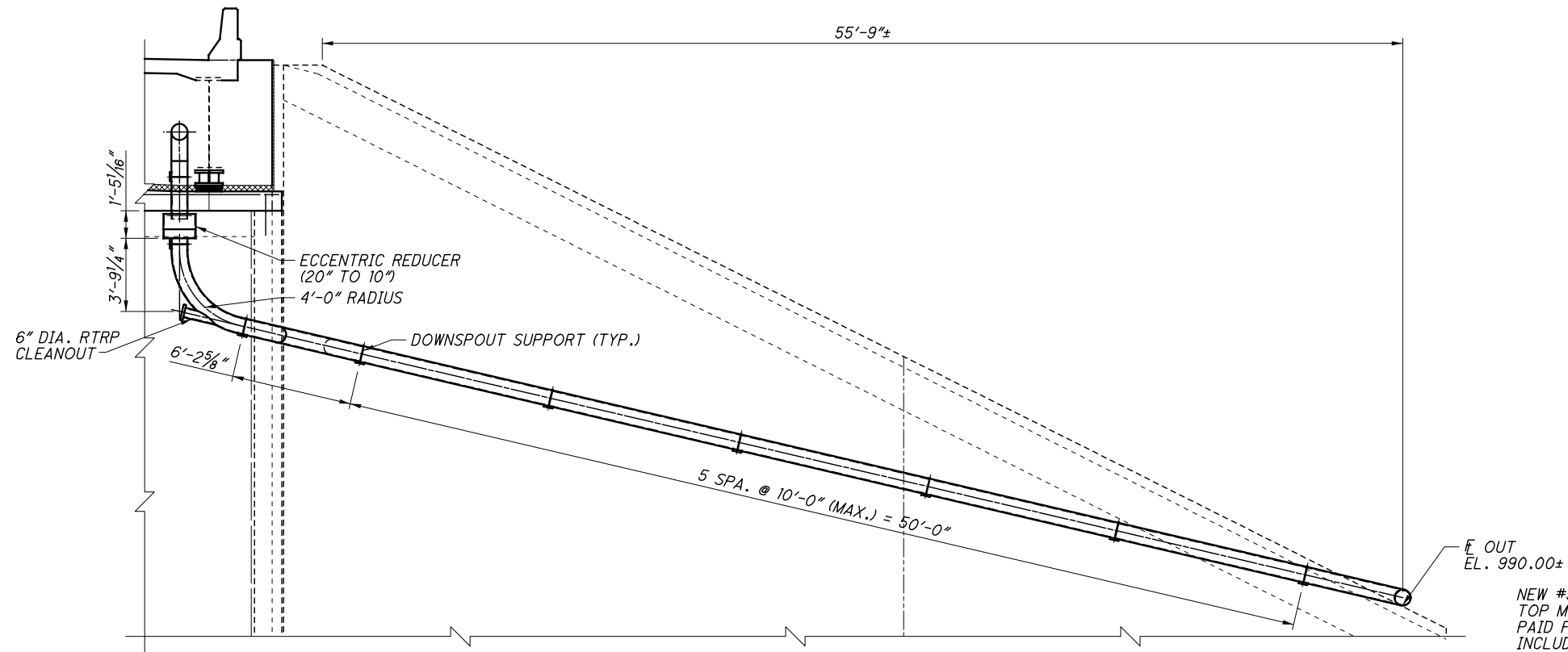
**DOWNSPOUT SUPPORT AT GIRDER**



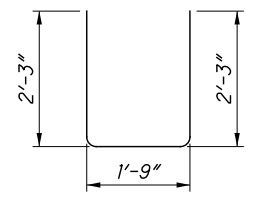
**SECTION B-B**

**NOTES**  
**NOTATION:** RTRP - REINFORCED THERMOSETTING RESIN PIPE  
**ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT SUPPORT REPAIR:** SEE SHEET 42/50.

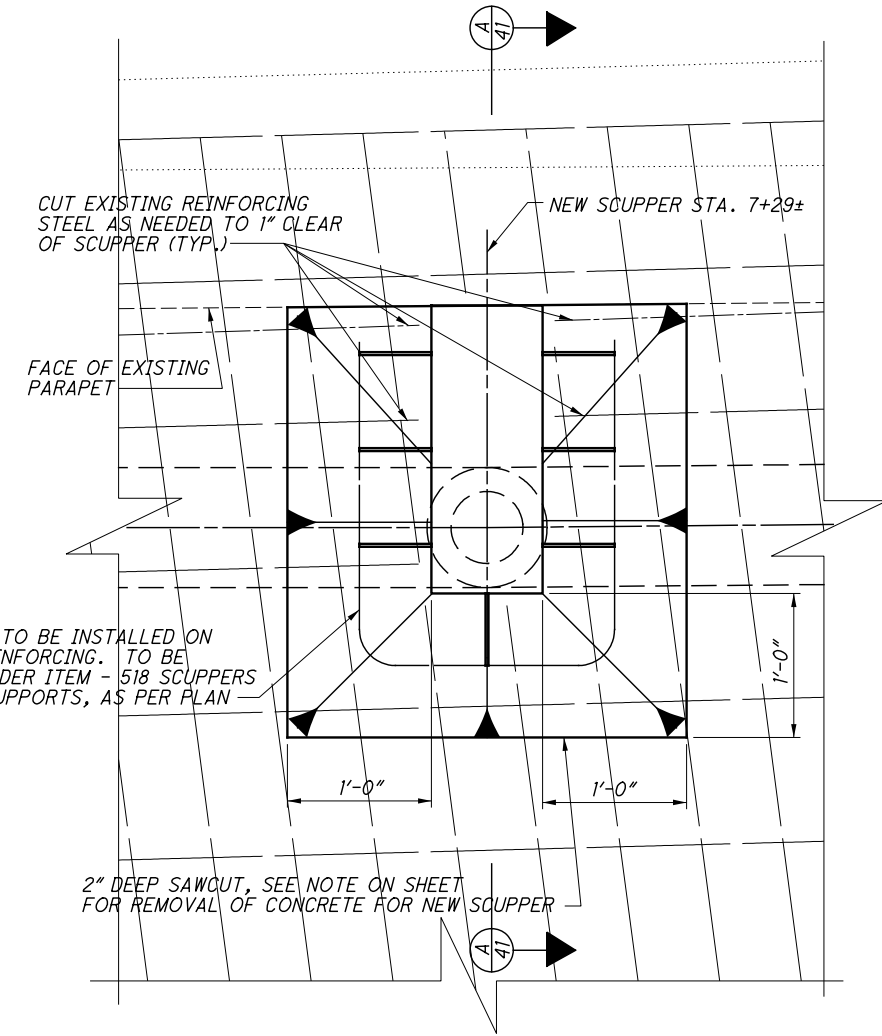
<b>DRAINAGE DETAILS</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY		DATE: 11-1-18 DT: DT STRUCTURE FILE NUMBER: 7702646	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
DESIGNED: RWC	CHECKED: BLN	DRAWN: USB	REVIEWED: DT
<b>SUM-76-6.72</b> PID No. 96670		41/50	75 85



**ELEVATION**



**NO. 5 BAR AROUND SCUPPER**  
 TOTAL ADJUSTED LENGTH OF BAR IS 6'-0"  
 WEIGHT OF BAR IS 6.3 LB.  
 (TOTAL OF 2 BARS ONE AT EACH SCUPPER INCLUDED IN ITEM 518)  
 (FOR INFORMATIONAL PURPOSES ONLY)



**PLAN**  
 (SCUPPER AT STA. 7+29± SHOWN,  
 SCUPPER AT 7+39± SIMILAR)

**NOTES**

**ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN**

IN ADDITION TO ITEM 518, THE SCUPPERS USED FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE DETAIL ON SHEET [41/50]. AN ASTM A709 6" STEEL GALVANIZED IN ACCORDANCE WITH CMS 711.02 (ASTM A123) DOWNSPOUT CONDUIT SHALL BE ATTACHED AND EXTENDED FROM THE SCUPPER AND LAPPED INTO THE PROPOSED 10" DOWNSPOUT. THE DOWNSPOUT CONDUIT COLOR SHALL MATCH THE ELEMENT IT IS ATTACHED TO.

THE EXISTING SCUPPERS AND CONCRETE DECK AROUND THE SCUPPER SHALL BE REMOVED PRIOR TO INSTALLATION OF THE NEW SCUPPER. THE CONCRETE DECK AROUND THE SCUPPER REMOVAL SHALL BE SAWCUT 2" DEEP TO CREATE A NEAT LINE PRIOR TO REMOVAL OF THE DECK. THE EXISTING REINFORCING STEEL AROUND THE EXISTING SCUPPER SHALL REMAIN AND BE CUT 1" CLEAR OF NEW SCUPPER, ANY DAMAGE TO THE REINFORCING STEEL OR EPOXY COATING WILL BE REPAIRED IN KIND. THE DECK REMOVAL AROUND THE SCUPPER LOCATION SHALL BE PERFORMED WITH SMALL EQUIPMENT (IE. SMALL JACKHAMMERS) TO NOT DAMAGE THE DECK, REINFORCING AND SHEAR STUDS TO REMAIN AS APPROVED BY THE ENGINEER. NO HOE RAMS OR EXPLOSIVES WILL BE PERMITTED.

THIS ITEM SHALL ALSO CONSIST OF REMOVING THE EXISTING REAR APPROACH BRIDGE DOWNSPOUTS FROM THE SCUPPERS TO THE ELEVATION OF THE ABUTMENT REPAIR AND BE PLUGGED AS APPROVED BY THE ENGINEER.

THE NEW SCUPPER SHALL BE SECURELY FASTENED IN PLACE AT THE CORRECT ELEVATION/OFFSET USING THE EXISTING GIRDER, SHEAR STUDS, AND ANCHORS INTO THE EXISTING CONCRETE DECK AS APPROVED BY THE ENGINEER. ADDITIONAL REINFORCING SHALL BE INSTALLED AROUND THE SCUPPER LOCATION. IF THE EXISTING GIRDER SHEAR STUDS INTERFERE WITH THE PROPOSED SCUPPER LOCATION AS APPROVED BY THE ENGINEER, THE EXISTING SHEAR STUDS SHALL BE REMOVED AND A MINIMUM ONE NEW SHEAR STUD IN ACCORDANCE WITH CMS 513.22 SHALL BE INSTALLED ON EACH SIDE OF THE PROPOSED SCUPPER LOCATION (TWO SHEAR STUDS MINIMUM). THE CONCRETE FOR THE CONCRETE DECK REPLACEMENT SHALL BE CLASS QC2 CONCRETE SUPERSTRUCTURE.

ALL SCUPPERS, SUPPORTS, AND INCIDENTALS SHALL BE ASTM A709 STEEL GALVANIZED IN ACCORDANCE WITH CMS 711.02 (ASTMA123).

ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN.

**ITEM 518 - PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN (10")**

THE OUTLET OF THE DOWNSPOUT SHALL BE MODIFIED TO DEPOSIT THE WATER ONTO THE ROCK CHANNEL PROTECTION APRON.

ALL DRAINAGE SCUPPERS, HOPPERS, AND DOWNSPOUT SUPPORTS INCLUDING INCIDENTALS SHALL BE ASTM A709 STEEL GALVANIZED IN ACCORDANCE WITH CMS 711.02 (ASTM A123) AFTER FABRICATION. ALL DOWNSPOUT CONDUIT SHALL BE REINFORCED THERMOSETTING RESIN PIPE (RTRP) ACCORDING TO CMS 707.80. LAP THE NEW 10" PIPE DOWNSPOUT OVER THE 6" PIPE SCUPPER DOWNSPOUT AS SHOWN IN THE PLANS.

COMPLETE ALL DOWNSPOUT WORK ON THE PIERS BEFORE SEALING THE CONCRETE. RTRP CONDUIT SHALL BE PIGMENTED TO MATCH THE COLOR OF THE ELEMENT IS ATTACHED TO.

PAYMENT SHALL BE MADE FOR THE PIPE, INCLUDING SPECIALS AND SUPPORTS, PER LINEAR FOOT UNDER ITEM 518 - PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN (10").

**ITEM 518 - PIPE HORIZONTAL CONDUCTOR, AS PER PLAN**

NEW 10" SCUPPER COLLECTOR PIPES SHALL BE INSTALLED TO COLLECT THE SCUPPER DRAINAGE AND CONDUCT IT TO THE DOWNSPOUTS ATTACHED TO THE REAR ABUTMENT.

ALL DRAINAGE HOPPERS, AND CONDUIT OR DOWNSPOUT SUPPORTS SHALL BE ASTM A709 STEEL GALVANIZED IN ACCORDANCE WITH CMS 711.02 (ASTM A123). AFTER FABRICATION.

EXISTING STRUCTURE NEW DRAINAGE CONDUITS, CONDUCTOR, ECCENTRIC REDUCER AND OTHER CONDUIT INCIDENTALS SHALL BE REINFORCED THERMOSETTING RESIN PIPE (RTRP) ACCORDING TO CMS 707.80. ELBOWS, REDUCERS, AND PIPE SOCKETS SHALL BE SHOP FABRICATED WITH THE CONDUCTORS. RTRP CONDUIT SHALL BE PIGMENTED TO MATCH THE ELEMENT IT IS ATTACHED TO.

ALL SCUPPERS SHALL BE NEENAH R-3921-V1 OR APPROVED EQUAL.

PAYMENT SHALL BE MADE FOR THE PIPE, INCLUDING SPECIALS AND SUPPORTS, PER LINEAR FOOT UNDER ITEM 518 - PIPE HORIZONTAL CONDUCTOR, AS PER PLAN.

**NOTATION:** RTRP - REINFORCED THERMOSETTING RESIN PIPE

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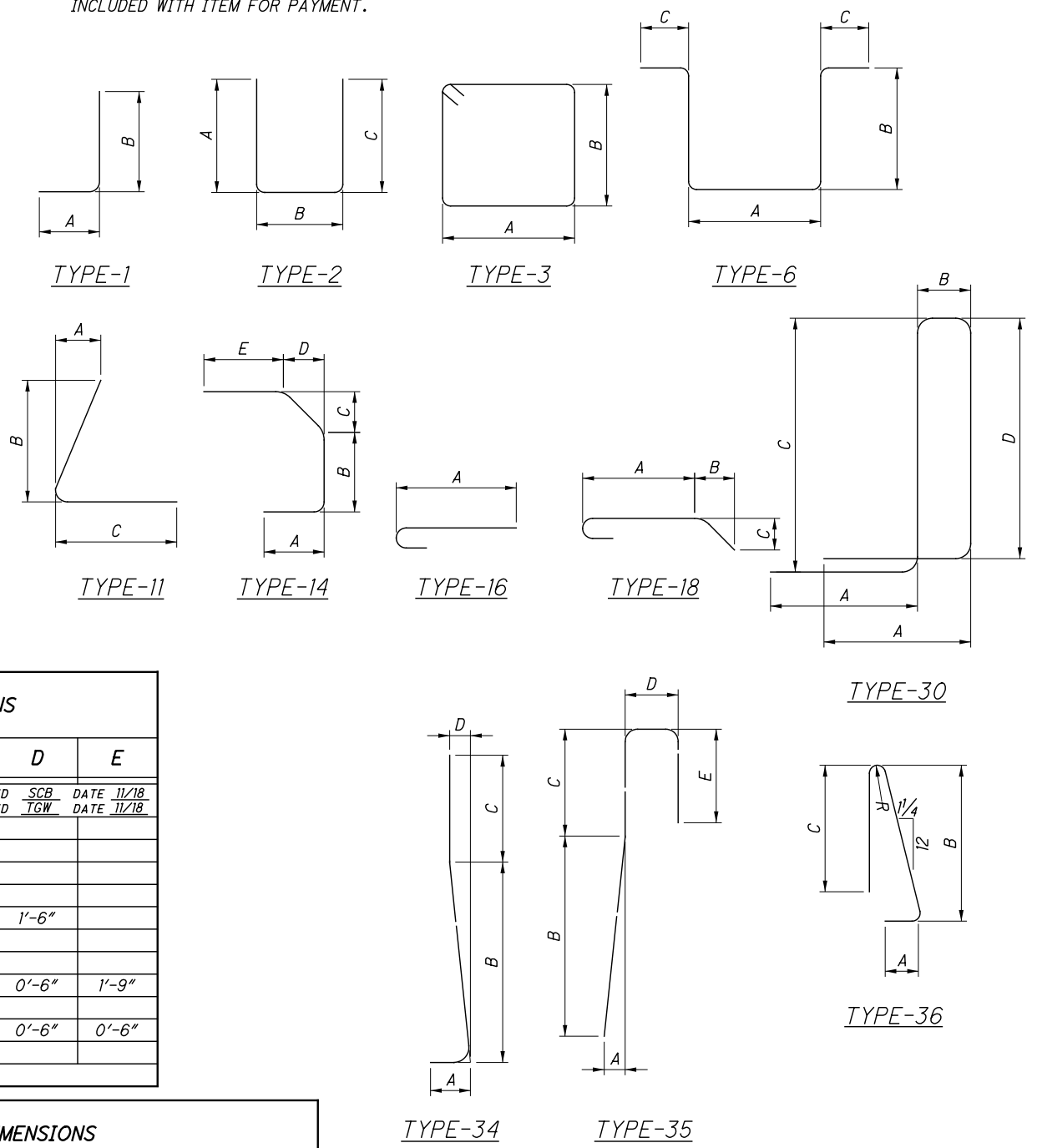
MARK	NUMBER							LENGTH	WEIGHT		TYPE	DIMENSIONS					
	NORTHBOUND (RIGHT)			SOUTHBOUND (LEFT)			GRAND TOTAL		NORTH-BOUND (RIGHT)	SOUTH-BOUND (LEFT)		A	B	C			
	REAR	FORWARD	TOTAL	REAR	FORWARD	TOTAL											
<b>ABUTMENT</b>													CALCULATED	JSB	DATE 11/18		
													CHECKED	TGW	DATE 11/18		
A601	74	74	148	82	68	150	298	5'-1"	1,130	1,145	11	0'-6"	2'-0"	3'-3"			
A801	5	5	10	5	5	10	20	40'-0"	1,068	1,068	STR						
A802	1		1				1	18'-9"	50		STR						
A803	4		4				4	18'-1"	193		STR						
A804				1		1	1	25'-8"		69	STR						
A805				4		4	4	25'-2"		269	STR						
A806					1	1	1	14'-4"		38	STR						
A807					4	4	4	14'-0"		150	STR						
A808		1	1				1	19'-3"	51		STR						
A809		4	4				4	18'-3"	195		STR						
<b>TOTAL</b>									2,687	2,739							

MARK	NUMBER							LENGTH	WEIGHT		TYPE	DIMENSIONS				
	NORTHBOUND (RIGHT)			SOUTHBOUND (LEFT)			GRAND TOTAL		NORTH-BOUND (RIGHT)	SOUTH-BOUND (LEFT)		A	B	C		
	REAR	FORWARD	TOTAL	REAR	FORWARD	TOTAL										
<b>DIAPHRAGM GUIDE</b>													CALCULATED	JSB	DATE 11/18	
													CHECKED	TGW	DATE 11/18	
DG601	5	5	10	5	5	10	20	14'-6"	218	218	3	3'-8"	3'-2"			
DG801	8	8	16	8	8	16	32	14'-5"	616	616	6	2'-8"	3'-1/4"	3'-2"		
<b>TOTAL</b>									834*	834*						

MARK	NUMBER							LENGTH	WEIGHT		TYPE	DIMENSIONS				
	NORTHBOUND (RIGHT)			SOUTHBOUND (LEFT)			GRAND TOTAL		NORTH-BOUND (RIGHT)	SOUTH-BOUND (LEFT)		A	B	C	D	E
	REAR	FORWARD	TOTAL	REAR	FORWARD	TOTAL										
<b>TYPE C INSTALLATION</b>													CALCULATED	SCB	DATE 11/18	
													CHECKED	TGW	DATE 11/18	
SS501	22	22	44				44	27'-7"	1,266		STR					
SS502				22		22	22	32'-7"	748		STR					
SS503					22	22	22	24'-10"	570		STR					
SS504	54	54	108	63	49	112	220	5'-6"	620	642	STR					
SS505	52	52	104	61	47	108	212	5'-4"	579	601	30	0'-10"	1'-3"	1'-6"	1'-6"	
SS601	2		2	2		2	4	3'-9"	11	11	1	1'-9"	2'-2"			
SS602	2		2	2		2	4	4'-5"	13	13	14	0'-10"	1'-3"	0'-8"	0'-6"	1'-9"
SS603		2	2		2	2	4	2'-10"	9	9	1	0'-10"	2'-2"			
SS604		2	2		2	2	4	3'-2"	10	10	14	0'-10"	1'-3"	0'-8"	0'-6"	0'-6"
<b>TOTAL</b>									2,508*	2,604*						

MARK	NUMBER							LENGTH	WEIGHT		TYPE	DIMENSIONS							
	NORTHBOUND (RIGHT)			SOUTHBOUND (LEFT)			GRAND TOTAL		NORTH-BOUND (RIGHT)	SOUTH-BOUND (LEFT)		A	B	C	D	E	R	INC	
	REAR	FORWARD	TOTAL	REAR	FORWARD	TOTAL													
<b>MEDIAN BARRIER</b>													CALCULATED	JSB	DATE 11/18				
													CHECKED	TGW	DATE 11/18				
RR501	6	4	10	6	4	10	20	24'-6"	256	256	STR								
RR502	3		3	3		3	6	15'-8"	49	49	STR								
RR503	16	25	41	16	25	41	82	2'-4"	100	100	STR								
RR504	6		6	6		6	12	11'-0"	69	69	STR								
RR505	10		10	10		10	20	3'-10"	40	40	STR								
RR506	9	9	18	9	9	18	36	1'-5"	27	27	STR								
RR507	9	9	18	9	9	18	36	4'-2"	78	78	STR								
RR508		10	10		10	10	20	12'-0"	125	125	STR								
RR601	17	25	42	17	25	42	84	4'-3"	268	268	34	0'-6"	2'-6"	1'-4"	0'-3"				
RR602	1 SR OF 7		1 SR OF 7	1 SR OF 7		1 SR OF 7	2 SR OF 7	6'-1" TO 7'-4"	70	70	35	0'-3"	2'-5"	1'-4"	1'-1" TO 2'-4"	1'-2"	0'-2 1/2"		
RR603	2		2	2		2	4	7'-4"	22	22	35	0'-3"	2'-5"	1'-4"	2'-4"	1'-2"			
<b>TOTAL</b>									1,104	1,104									

\* FOR INFORMATIONAL PURPOSES ONLY. REINFORCING STEEL INCLUDED WITH ITEM FOR PAYMENT.



**NOTES**

**BAR SIZE** IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES BAR LOCATION, THE NEXT DIGIT INDICATES THE BAR SIZE DESIGNATION. THE REMAINING DIGITS STATE THE SEQUENCE NUMBER.

EXAMPLE: A511  
 A = LOCATION OF THE BAR IN STRUCTURE (ABUTMENT)  
 5 = BAR SIZE DESIGNATION  
 11 = SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

ALL REINFORCING STEEL TO BE EPOXY COATED, PER CMS 709.00.

<b>REINFORCING STEEL LIST - 1</b> BRIDGE NO. SUM-76-0672 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY	<b>RICHLAND ENGINEERING LIMITED</b> 29 NORTH PARK STREET MANSFIELD, OHIO 44902
SUM-76-6.72 PID No. 96670	DATE 11-1-18 REVIEWED DT 11-1-18 STRUCTURE FILE NUMBER 7705646
DESIGNED RWC CHECKED BLN	DRAWN JSB REVISIONS
43/50	77 85

MARK	NUMBER						GRAND TOTAL	LENGTH	WEIGHT		TYPE	DIMENSIONS				
	NORTHBOUND (RIGHT)			SOUTHBOUND (LEFT)					NORTH-BOUND (RIGHT)	SOUTH-BOUND (LEFT)		A	B	C	D	E
	REAR	FORWARD	TOTAL	REAR	FORWARD	TOTAL										
<b>SUPERSTRUCTURE</b>													CALCULATED	JSB	DATE 11/18	
													CHECKED	TGW	DATE 11/18	
S401	74	74	148	78	65	143	291	4'-5"	437	421	1	0'-8"	3'-10"			
S501	40	40	80	45	37	82	162	15'-4"	1,279	1,311	3	3'-8"	3'-8"			
S502	43	43	86	48	40	88	174	8'-9"	785	803	2	2'-8"	3'-8"	2'-8"		
S503	3	3	6	3	3	6	12	12'-10"	80	80	3	3'-8"	2'-5"			
S504	5	5	10	5	5	10	20	40'-0"	417	417	STR					
S505	5		5				5	15'-5"	80		STR					
S506		5	5				5	16'-4"	85		STR					
S507				5		5	5	21'-11"		114	STR					
S508					5	5	5	11'-2"		58	STR					
S601	5	5	10	5	5	10	20	2'-7"	39	39	1	0'-10"	1'-11"			
S602	5	5	10	5	5	10	20	3'-3"	49	49	14	0'-10 1/2"	1'-3 1/2"	0'-8 1/2"	0'-6"	0'-5"
S603	5	5	10	5	5	10	20	2'-6"	38	38	1	0'-10"	1'-10"			
S604	5	5	10	5	5	10	20	3'-2"	48	48	14	0'-10 1/2"	1'-1"	0'-8 1/2"	0'-6"	0'-7"
S605	5	5	10	5	5	10	20	40'-0"	601	601	STR					
S606	5		5				5	16'-0"	83		STR					
S607		5	5				5	15'-9"	118		STR					
S608				5		5	5	21'-4"		160	STR					
S609					5	5	5	10'-7"		79	STR					
S801	7	7	14	7	7	14	28	40'-0"	1,495	1,495	STR					
S802	7		7				7	18'-4"	343		STR					
S803	5		5				5	28'-10"	385		STR					
S804	5		5				5	21'-0"	280		STR					
S805	4	4	8				8	7'-5"	158		STR					
S806	18	18	36				36	12'-8"	1,218		STR					
S807	4		4				4	10'-9"	115		STR					
S808	1	1	2				2	10'-1"	54		STR					
S809	1	1	2				2	6'-10"	36		STR					
S810		7	7				7	18'-7"	347		STR					
S811		5	5				5	20'-11"	279		STR					
S812		5	5				5	29'-3"	390		STR					
S813		4	4				4	11'-3"	120		STR					
S814				7		7	7	24'-9"		463	STR					
S815				5		5	5	26'-9"		357	STR					
S816				5		5	5	29'-7"		395	STR					
S817				4		4	4	6'-1"		65	STR					
S818				22	14	36	36	12'-5"		1,193	STR					
S819				1	1	2	2	9'-9"		52	STR					
S820				1	1	2	2	6'-8"		36	STR					
S821				4		4	4	11'-8"		125	STR					
S822					7	7	7	13'-7"		254	STR					
S823					5	5	5	26'-1"		348	STR					
S824					5	5	5	19'-1"		255	STR					
S825					4	4	4	7'-10"		84	STR					
S826					4	4	4	10'-0"		107	STR					
S827					4	4	4	9'-3"		99	STR					
D801	37	37	74	41	33	74	148	5'-3"	1,037	1,037	18	3'-1"	1'-0"	1'-0"		
<b>TOTAL</b>									10,396	10,580						

MARK	NUMBER						GRAND TOTAL	LENGTH	WEIGHT		TYPE	DIMENSIONS				
	NORTHBOUND (RIGHT)			SOUTHBOUND (LEFT)					NORTH-BOUND (RIGHT)	SOUTH-BOUND (LEFT)		A	B	C	R	
	REAR	FORWARD	TOTAL	REAR	FORWARD	TOTAL										
<b>RAILING</b>													CALCULATED	DPH	DATE 11/18	
													CHECKED	TGW	DATE 11/18	
R501				8		8	8	9'-8"		81	STR					
R502	8		8				8	12'-3"	102		STR					
R503		8	8		8	8	16	9'-3"	77	77	STR					
R504	25	22	47	22	22	44	91	5'-3"	257	241	36	0'-7 1/2"	2'-5"	2'-2"	2 1/8"	
R505	7	7	14	7	7	14	28	2'-4"	34	34	16	1'-9"				
R506	7	7	14	7	7	14	28	2'-0"	29	29	STR					
R507	8	8	16	8	8	16	32	16'-3"	271	271	STR					
R508	8	8	16	8	8	16	32	4'-5"	74	74	STR					
<b>TOTAL</b>									844	807						

**REINFORCING STEEL LIST - 2**

BRIDGE NO. SUM-76-0672  
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

**SUM-76-6.72**  
PID No. 96670

REVIEWED DATE 11-1-18  
DT STRUCTURE FILE NUMBER 7705646

DRAWN JSB  
RWC BLN

DESIGNED RWC  
CHECKED BLN

RICHLAND ENGINEERING LIMITED  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

**NOTES**  
 BENDING DIAGRAM: SEE SHEET 43/50.  
 ADDITIONAL NOTES: SEE SHEET 43/50.



MARK	NUMBER						LENGTH	WEIGHT		TYPE	DIMENSIONS						
	NORTHBOUND (RIGHT)			SOUTHBOUND (LEFT)				NORTH-BOUND (RIGHT)	SOUTH-BOUND (LEFT)		A	B	C	D	E	R	INC
	REAR	FORWARD	TOTAL	REAR	FORWARD	TOTAL											
<b>APPROACH SLAB</b>																	
CALCULATED JSB DATE 11/18 CHECKED TGW DATE 11/18																	
AS501	36	36	72	42	33	75	147	24'-6"	1,840	1,917	STR						
AS502	114		114				114	27'-8"	3,290		STR						
AS503		114	114				114	27'-7"	3,280		STR						
AS504	1	1	2				2	6'-5"	13		STR						
AS505	1	1	2				2	18'-0"	38		STR						
AS506				57		57	57	40'-0"		2,378	STR						
AS507				1 SR		1 SR	1 SR	21'-7"		310	STR					0'-2 1/2"	
				OF		OF	OF	TO									
				13		13	13	24'-1"									
AS508				1 SR		1 SR	1 SR	23'-11"		127	STR					0'-2 3/4"	
				OF		OF	OF	TO									
				5		5	5	24'-10"									
AS509				1		1	1	6'-11"		7	STR						
AS510				1		1	1	17'-10"		19	STR						
AS511				1		1	1	24'-8"		26	STR						
AS512					114	114	114	24'-11"		2,963	STR						
AS513					1	1	1	18'-1"		19	STR						
AS514					5	5	5	22'-0"		115	STR						
AS515				1 SR		1 SR	1 SR	21'-11"		553	STR					0'-1 1/4"	
				OF		OF	OF	TO									
				23		23	23	24'-2"									
AS516				1 SR		1 SR	1 SR	23'-10"		279	STR						
				OF		OF	OF	TO									
				11		11	11	24'-10"									
AS601	11	18	29	11	18	29	58	2'-10"	123	123	1	0'-10"	2'-2"				
AS602	11	18	29	11	18	29	58	3'-2"	137	137	14	0'-10"	1'-3"	0'-8"	0'-6"	0'-6"	
AS603	1 SR		1 SR	1 SR		1 SR	2 SR	2'-10"		40	1	0'-10"	2'-2"			0'-1 1/2"	
	OF		OF	OF		OF	OF	TO									
	8		8	8		8	8	3'-9"									
AS604	1 SR		1 SR	1 SR		1 SR	2 SR	3'-2"		46	14	0'-10"	1'-3"	0'-8"	0'-6"	0'-6"	
	OF		OF	OF		OF	OF	TO									
	8		8	8		8	8	4'-5"									
AS605	17	17	34	17	17	34	68	2'-8"	136	136	1	0'-10"	2'-0"				
AS606	11	11	22	11	11	22	44	3'-3"	107	107	14	0'-10"	1'-3"	0'-8"	0'-6"	0'-7"	
AS607	2	2	4	2	2	4	8	3'-3"	20	20	14	0'-10"	1'-3"	0'-8"	0'-5"	0'-7"	
AS608	1	1	2	1	1	2	4	3'-2"	10	10	14	0'-10"	1'-3"	0'-8"	0'-4"	0'-7"	
AS609	1	1	2	1	1	2	4	3'-0"	9	9	14	0'-10"	1'-0"	0'-11"	0'-3"	0'-6"	
AS610	1	1	2	1	1	2	4	2'-11"	9	9	14	0'-9"	1'-0"	0'-11"	0'-3"	0'-6"	
AS611	1	1	2	1	1	2	4	2'-9"	8	8	14	0'-8"	1'-0"	0'-11"	0'-2"	0'-5"	
AS612	1	1	2	1	1	2	4	2'-8"	8	8	14	0'-7"	1'-0"	0'-11"	0'-1"	0'-5"	
AS613	3	3	6	3	3	6	12	3'-7"	32	32	1	0'-10"	2'-11"				
AS614	3	3	6	3	3	6	12	3'-10"	35	35	1	0'-10"	3'-2"				
AS1001	90	90	180	101	81	182	362	25'-11"	20,073	20,297	16	24'-6"					
AS1002	1		1				1	11'-11"	51		STR						
AS1003	1	1	2				2	6'-5"	55		STR						
AS1004		1	1		1	1	2	15'-8"	67	67	STR						
AS1005	1	1	2				2	19'-5"	167		16	18'-0"					
AS1006				1		1	1	15'-1"		65	16	13'-8"					
AS1007				1		1	1	6'-11"		30	STR						
AS1008				1		1	1	19'-4"		83	16	17'-11"					
AS1009				1		1	1	4'-6"		19	STR						
AS1010				1		1	1	1'-6"		6	STR						
AS1011				1 SR		1 SR	1 SR	9'-9"		345	STR					3'-1 3/4"	
				OF		OF	OF	TO									
				5		5	5	22'-4"									
AS1012					1	1	1	19'-6"		84	16	18'-1"					
AS1013					1	1	1	6'-5"		28	STR						
<b>TOTAL</b>									29,594*	30,457*							

\* FOR INFORMATIONAL PURPOSES ONLY. REINFORCING STEEL INCLUDED WITH ITEM FOR PAYMENT.

**REINFORCING STEEL LIST - 3**

BRIDGE NO. SUM-76-0672  
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

**SUM-76-6.72**  
PID No. 96670

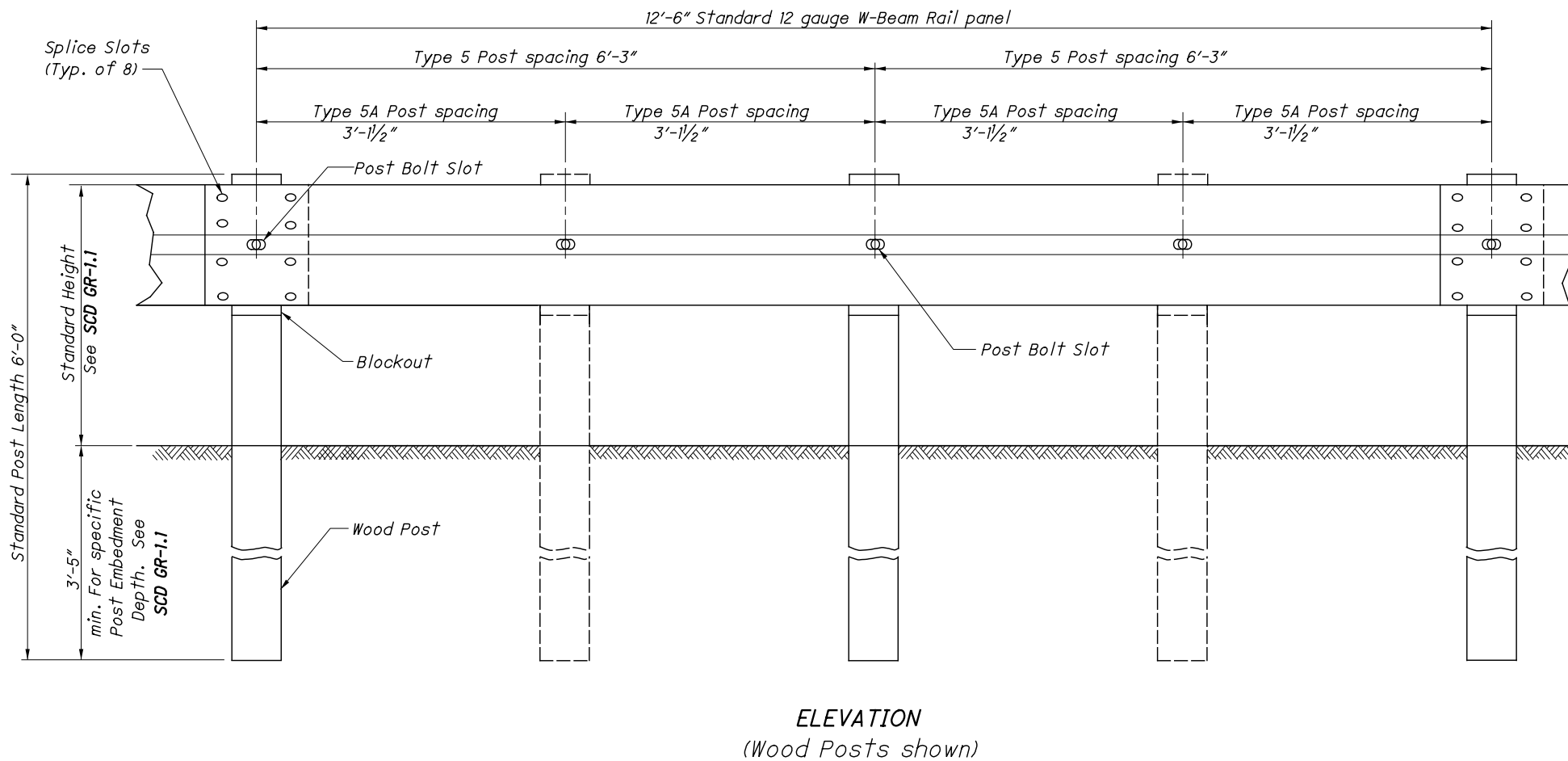
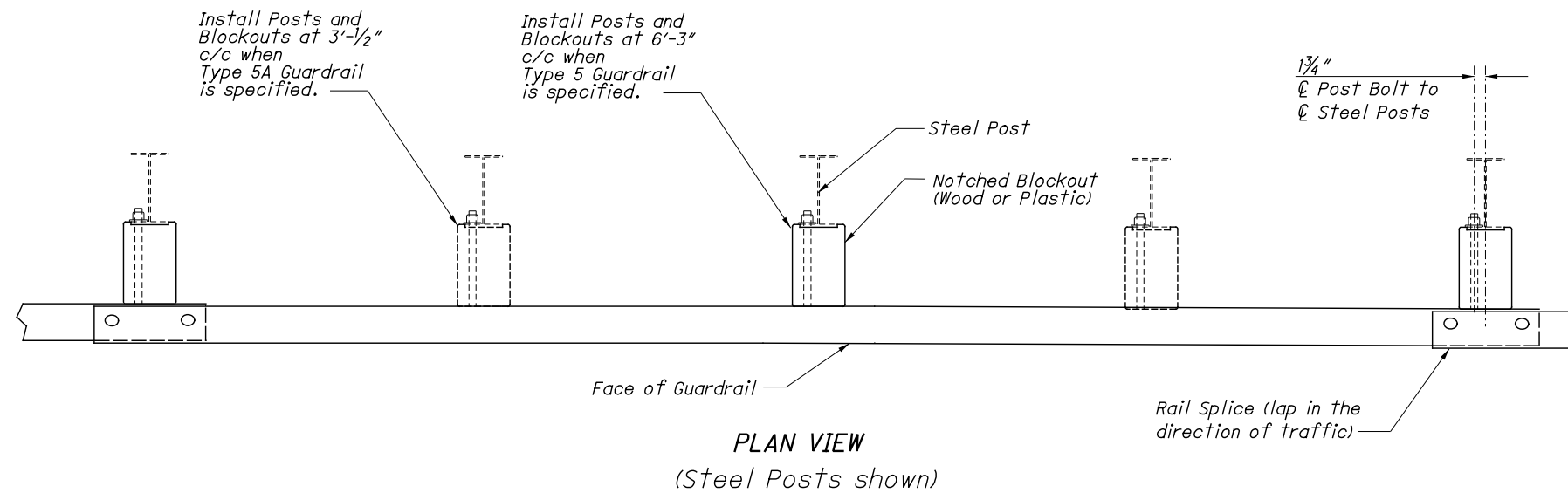
DESIGNED: RWC  
CHECKED: BLN

DRAWN: JSB  
REVISED:

REVIEWED: DT  
DATE: 11-1-18  
STRUCTURE FILE NUMBER: 7705646

RICHLAND ENGINEERING LIMITED  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

**NOTES**  
BENDING DIAGRAM: SEE SHEET 43/50.  
ADDITIONAL NOTES: SEE SHEET 43/50.



**NOTES**

**RAIL:** Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

**POSTS:** Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform Taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

**WELDED BEAM POSTS:** Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
- Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
- Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

**ALTERNATE POSTS:** Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

**BLOCKOUTS:** Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering**.

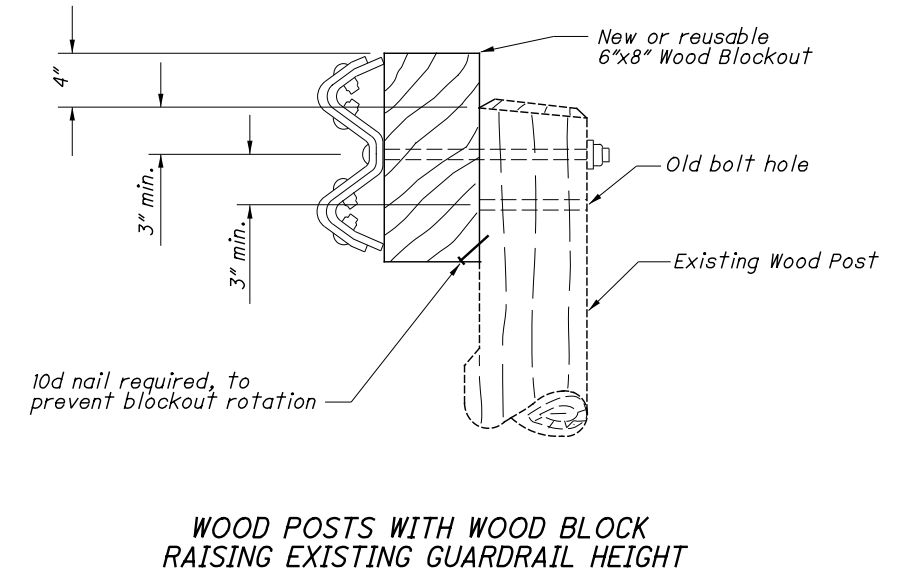
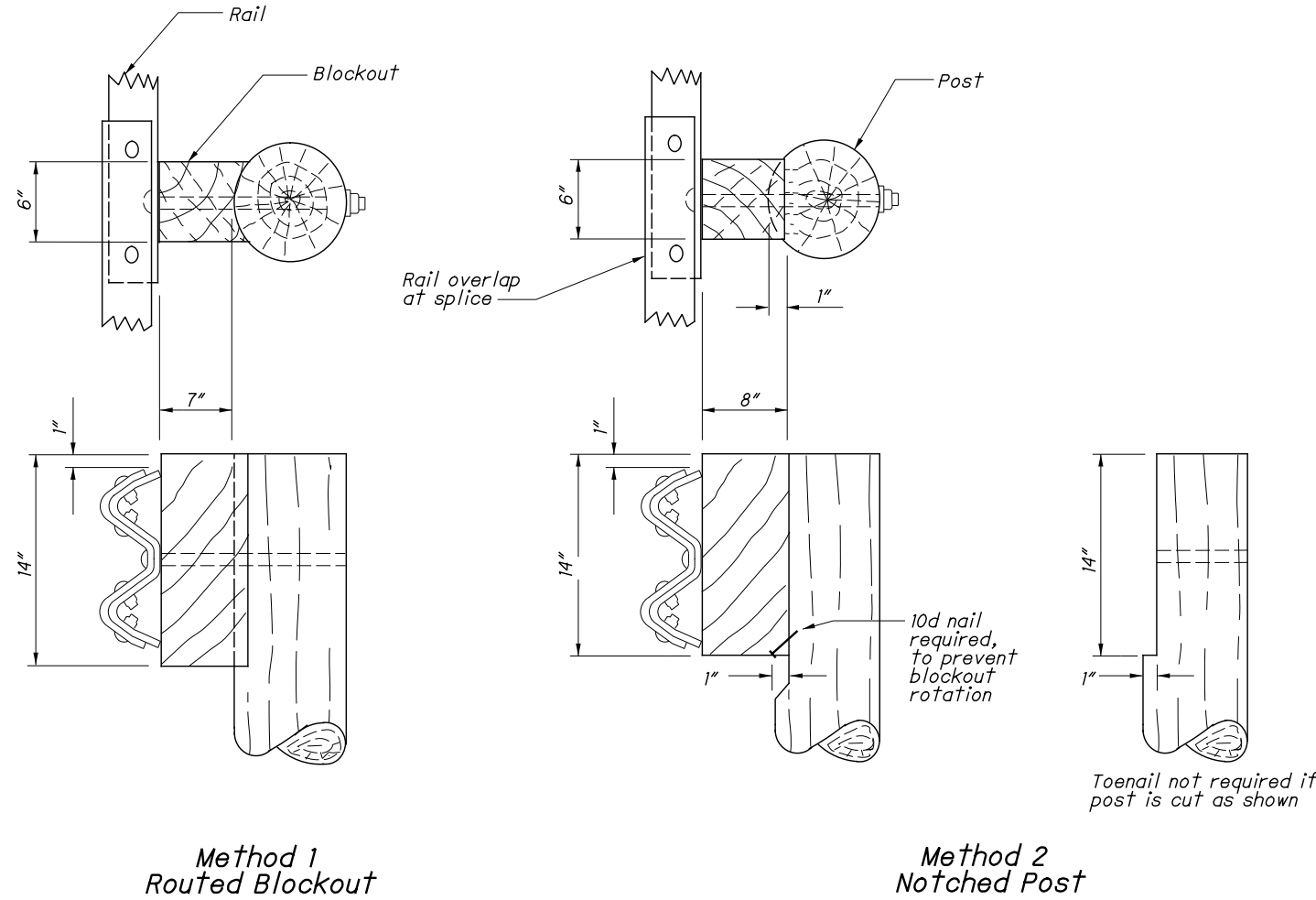
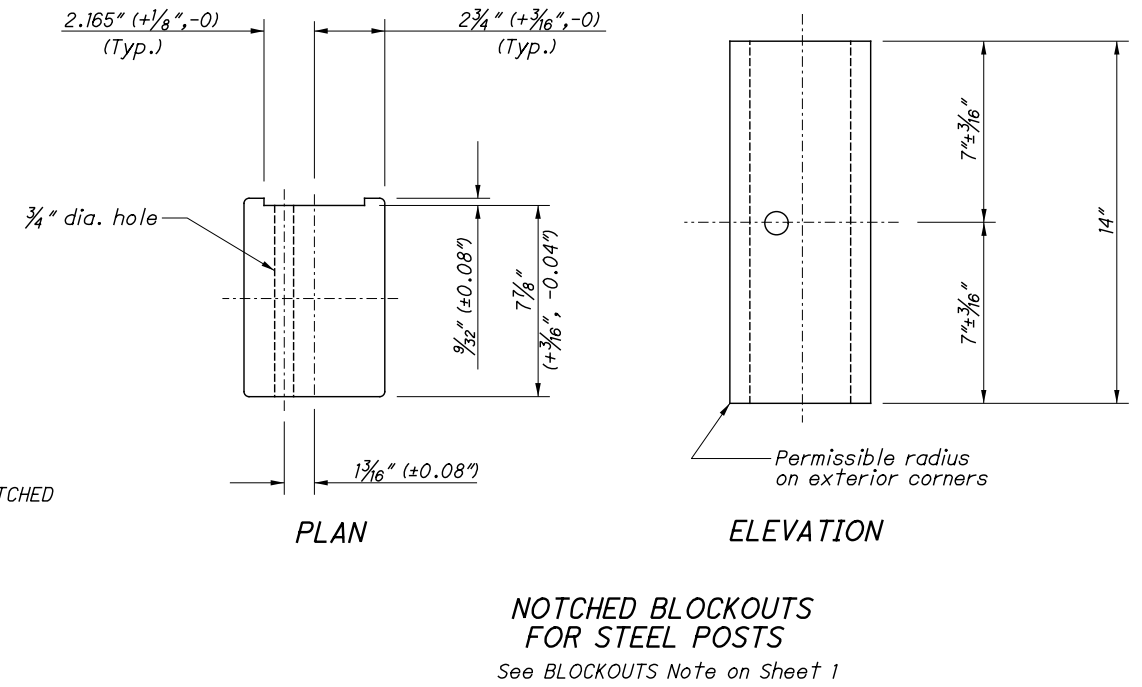
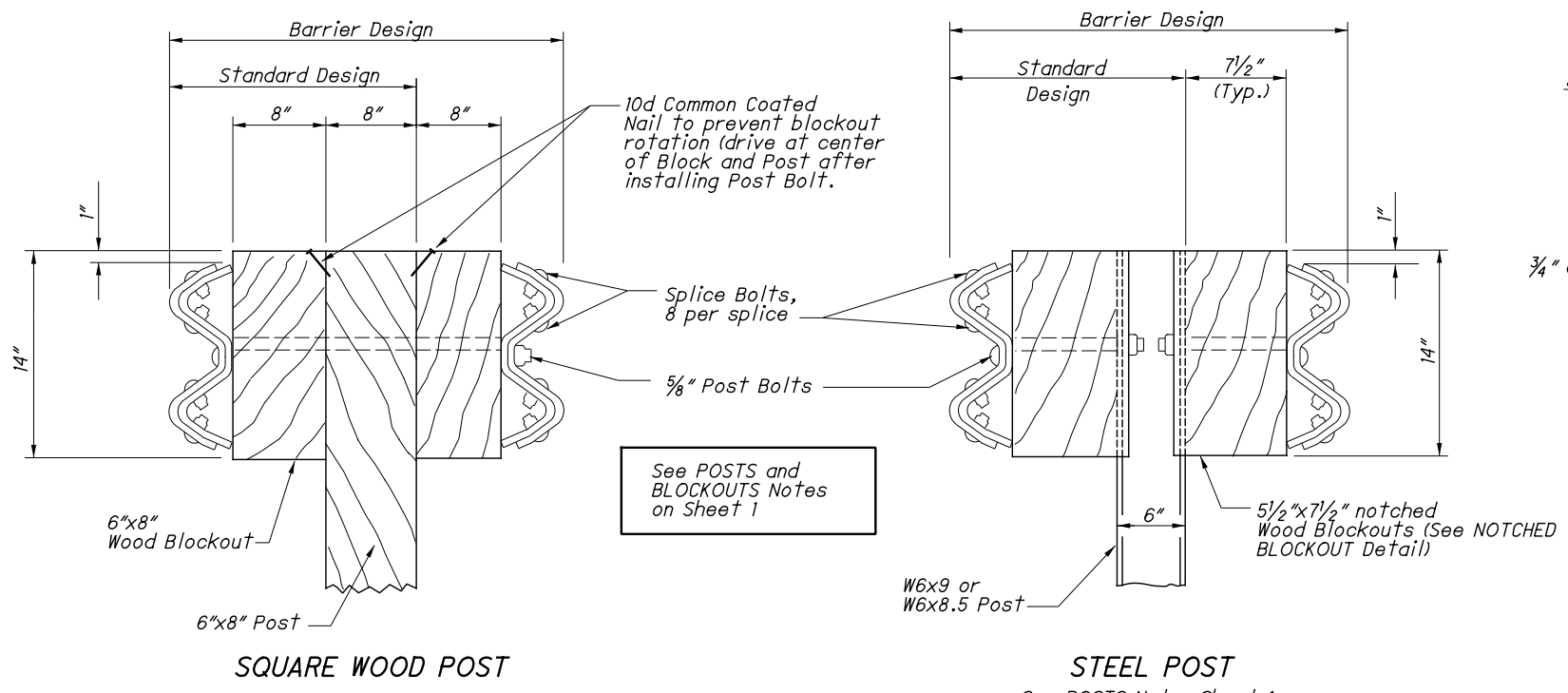
**WASHERS:** Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

**DELINEATION:** For barrier reflectors, see CMS 626.

**MISCELLANEOUS:** For other guardrail details, see SCD GR-1.1.

STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

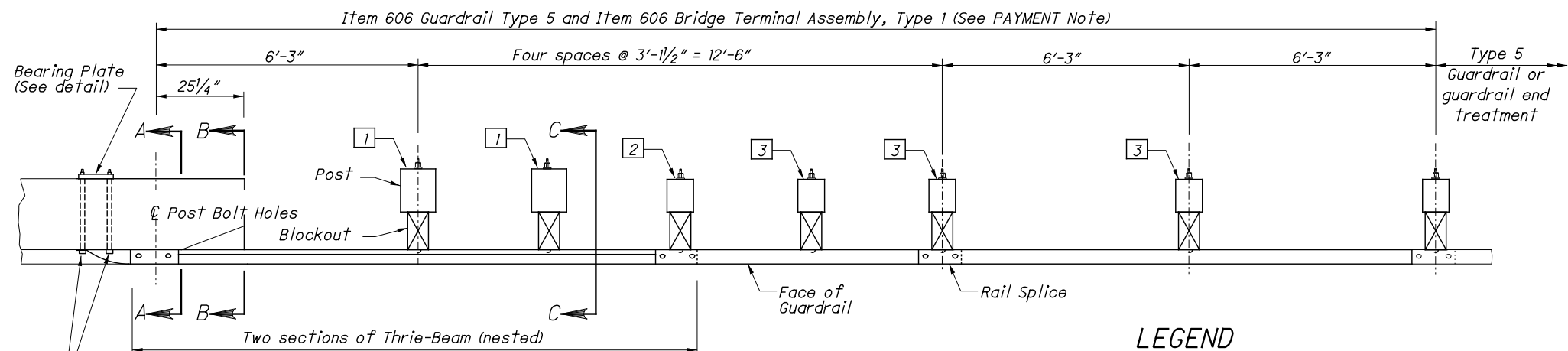
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Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

**ROUND WOOD POSTS**  
Single Sided runs only (Standard Design)

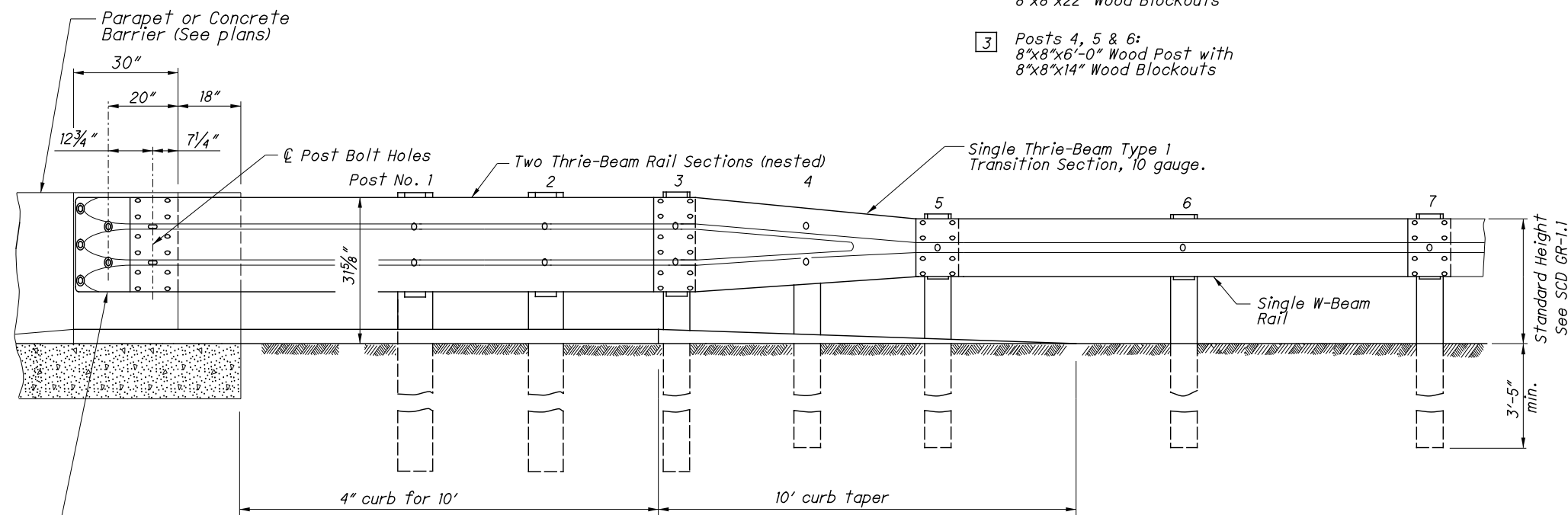
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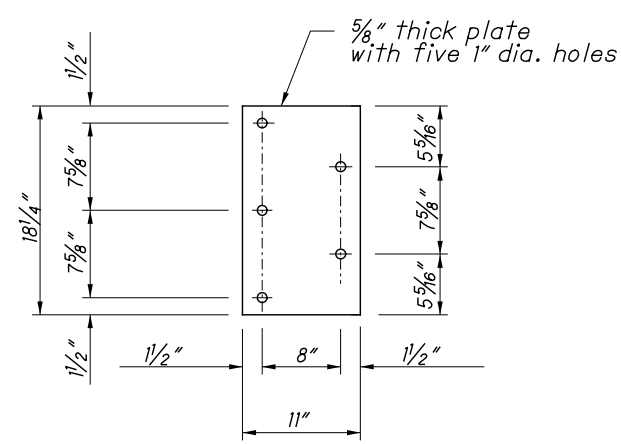
PLAN

LEGEND

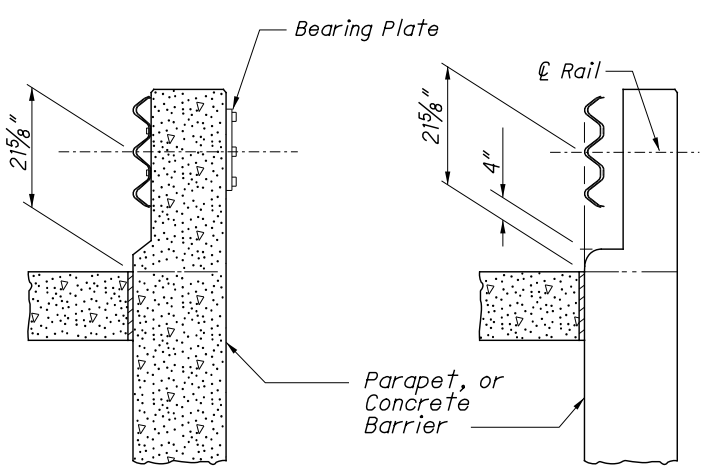
- 1 Posts 1 & 2:  
10"x10"x8'-0" Wood Post with  
8"x8"x22" Wood Blockouts
- 2 Post 3:  
8"x8"x8'-0" Wood Post with  
8"x8"x22" Wood Blockouts
- 3 Posts 4, 5 & 6:  
8"x8"x6'-0" Wood Post with  
8"x8"x14" Wood Blockouts



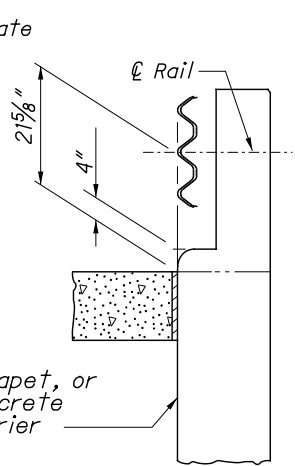
ELEVATION



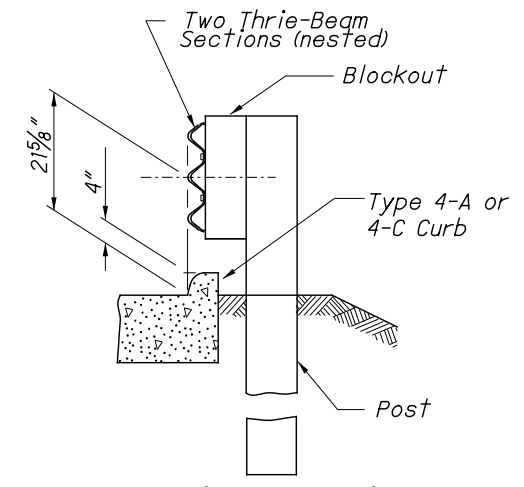
BEARING PLATE



SECTION A-A



SECTION B-B



SECTION C-C

Front of curb to be flush with face of guardrail.

NOTES

**GENERAL:** For additional details, see SCD GR-1.1.

**APPLICATION:** Use Type 1 Bridge Terminal Assembly to connect guardrail runs to bridges having deflector Parapet Type Bridge Railing (see **Structural Engineering's SCD BR-1**). It may also be used to connect guardrail runs to the approach ends of Concrete Barrier (see **SCD RM-4.6**).

On undivided, bi-directional roadways, Type 1's may be used to anchor guardrail runs to the trailing end of Deflector Parapets or Concrete Barrier installations.

**THRIE BEAM TRANSITION:** Symmetrical W-Beam to Thrie Beam transition panel shall be 10 gauge.

**POSTS:** Posts may be set in drilled holes or driven to grade. See SCD GR-1.1 for additional Post embedment details.

**WOOD POSTS -** Use square sawed pressure treated wood as per CMS 710.14 and fabricate with square ends. Bore bolt holes and trim the tops of posts, if required, after the posts are set.

**STEEL POSTS -** are allowed as an alternate. Use W8x24 for 10"x10" wood posts and use W6x25 for 8"x8" posts. Use same post material throughout assembly.

**BLOCKOUTS:** Use wood blockouts only, steel or plastic blockouts are not permitted. Use notched blockouts with steel posts.

**CURB:** Provide a Type 4A or 4C concrete curb minimum of 20', or longer as shown on plans, including a 10' taper (from curb height to flush). Front of curb to be flush with face of guardrail.

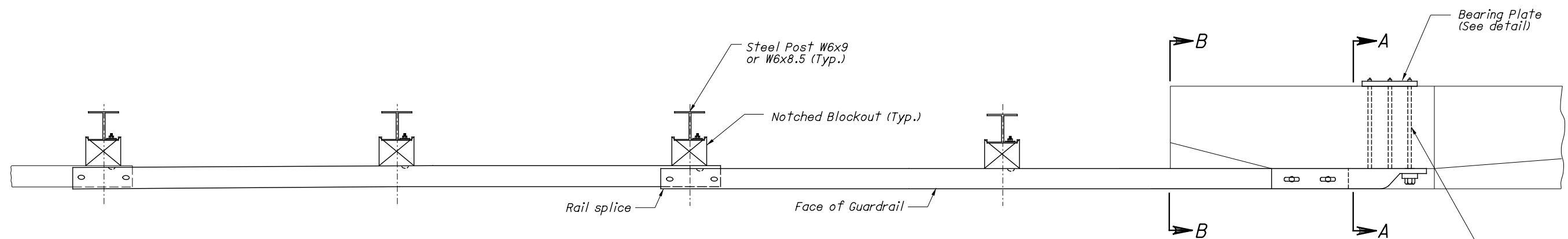
**FLARED GUARDRAIL:** Begin Standard Guardrail Flares as shown on SCD GR-5.1 preferably at or beyond Post No. 7; however, the flare may begin at Post No. 5.

**PAYMENT:** Item 606 - Bridge Terminal Assembly, Type 1, Each, includes the cost of extra components, in excess of normal guardrail, for additional and different size of posts and blockouts, nested Thrie-Beam, transition and connector sections, Bearing Plate, bolts, washers, nuts, and other hardware.

The curb is required in this design, and is paid separately under Item 609 - Curb, Type 4A (or 4C), per Foot, for the curb and taper sections, including materials, forming and labor needed to construct as shown.

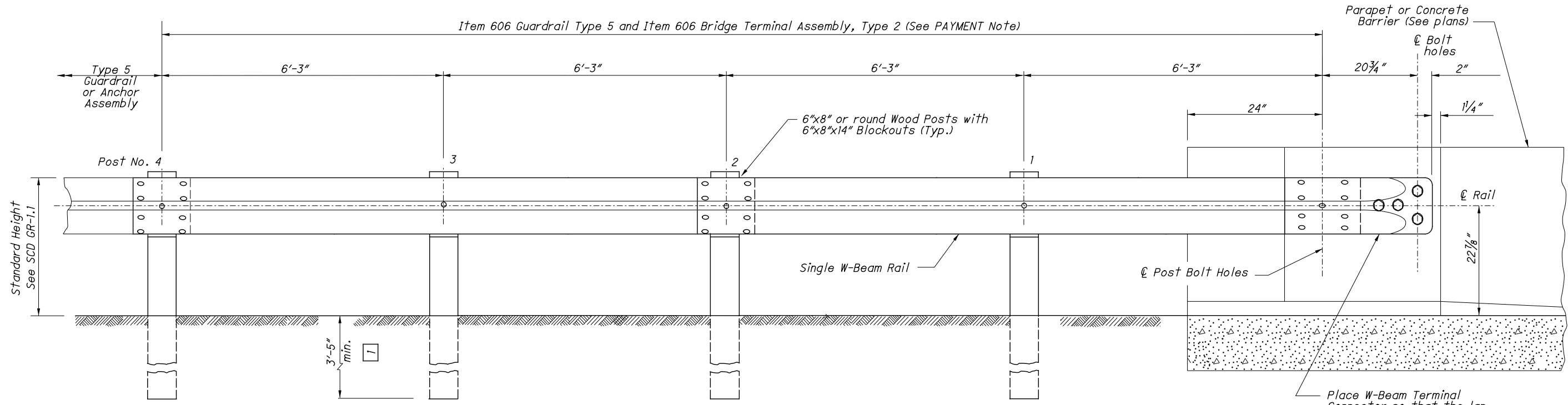
OFFICE OF ROADWAY ENGINEERING	DESIGNED XXX	CHECKED XXX	REVIEWED XXX
BRIDGE TERMINAL ASSEMBLY, TYPE 1	REVISION DATE	1/18/2013	CHECKED
PIS GR-3.1			
48/50			
82 85			

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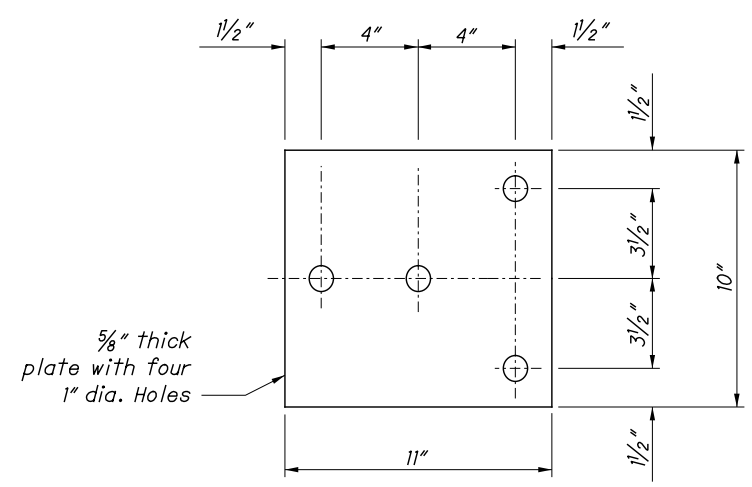
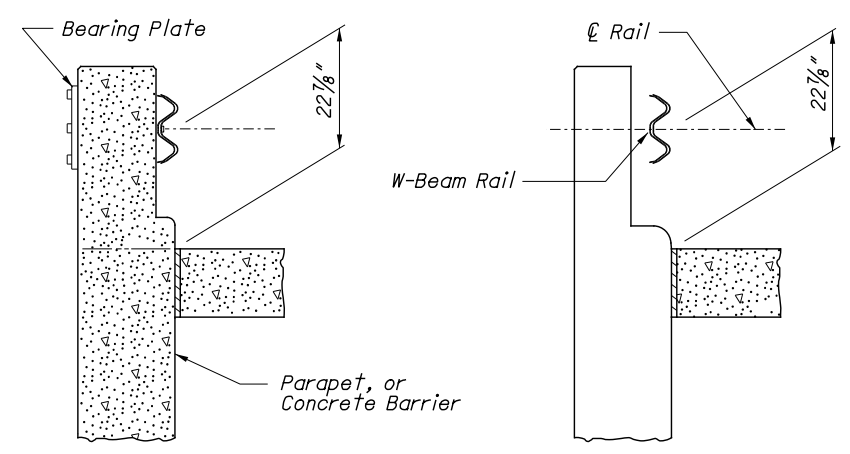
PLAN (Steel Posts shown. See POSTS Note.)

7/8" dia. ASTM A 325 through bolts (length to be determined in field in accordance with Parapet width) into Bearing Plate with standard washers and hex nuts



ELEVATION (Wood Posts shown. See POSTS Note.)

Place W-Beam Terminal Connector so that the lap is in the direction of traffic.



BEARING PLATE

NOTES

- GENERAL:** For additional rail and post details, see SCD GR-1.1.
- APPLICATION:** Use Type 2 Bridge Terminal Assembly to connect guardrail runs to the trailing end of Parapets or Concrete Barriers (see SCD RM-4.6 for barrier) on one-directional roadways. Do not use if located within clear zone of opposing traffic.
- POSTS:** Posts shall be of standard size and material specified for the appropriate type of guardrail to be installed leaving the bridge or barrier. For Type 5 guardrail, see SCD GR-2.1.
- BLOCKOUTS:** Wood or plastic blockouts are permitted.
- FLARED GUARDRAIL:** Begin Standard Guardrail Flares as shown on SCD GR-5.1, preferably at or beyond Post No. 4, however, the flare may begin at Post No. 2.
- PAYMENT:** Item 606 - Bridge Terminal Assembly, Type 2, Each, includes the cost of extra components, in excess of normal guardrail for the Terminal connector, Bearing Plates, bolts, washers, nuts, and other hardware.

DESIGNED XXX	CHECKED XXX	REVIEWED XXX	REVISION DATE 1/18/2013	OFFICE OF ROADWAY ENGINEERING
PLAN INSERT SHEET				BRIDGE TERMINAL ASSEMBLY, TYPE 2
PIS GR-3.2				49/50
				83 85

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### NOTES

**JOINTS:** Unsealed contraction joints spaced at 20' max. shall be constructed throughout the run of Concrete Barrier except that expansion joints shall be used at the center line of and around each bridge pier column and on either side of overhead sign supports, inlets and light pole foundations. If inter top is slip formed, the expansion joints adjacent to it may be omitted.

Contraction joints may be constructed with metal inserts inside the forms, preformed full width joint filler, a grooving tool, or by sawing. Inserts, tooled or sawed joints shall have a 3" minimum depth. All joints shall be constructed for the full height of the barrier including the base. Sawing shall be done as soon as curing will allow, to prevent spalling.

**BASE JOINTS:** The vertical walls between the barrier base and a concrete pavement or concrete base shall be provided with a sealed, grooved joint as shown on Std. Const. Dwg. BP-2.1. Sealing material shall conform with CMS 705.04.

**P.C.J.** = Permissible Construction Joint

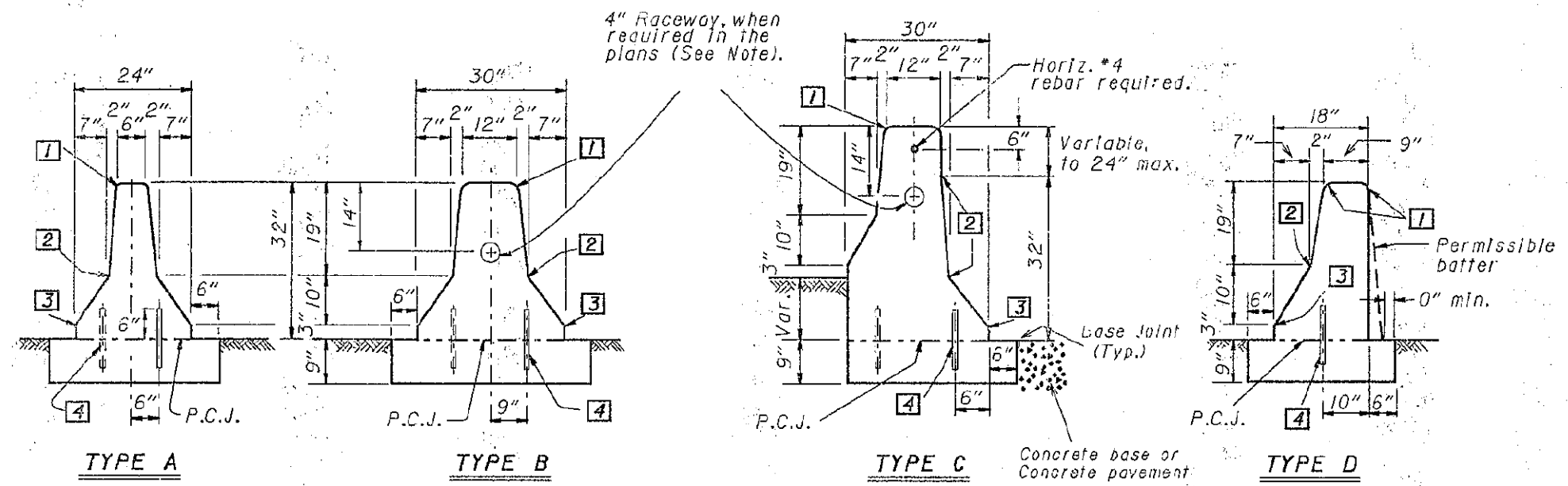
**MEASUREMENT:** 622 Concrete Barrier, including transitions and pier sections as per Standard Const. Drawing, MC-9.4, is paid for in linear feet as one of the four types (A, B, C or D) or as Type A50 and B50, (for 50" high barrier), with appropriate deductions for other items such as:

- 604 1-3 Median Inlet 20 Lin. Ft.
- 625 Light pole foundation or pullbox 2.5 Lin. Ft.
- 630 Overhead sign support foundation 10 Lin. Ft.
- 630 Barrier wall assembly 10 Lin. Ft.

**50 INCH HIGH BARRIER** shall be built in locations specified in the plans. Construct the lower 32" of the barrier and the barrier base using the same dimensions as shown in the corresponding Normal Section. The upper 18" may be constructed integral with the bottom, or separately with No. 4 rebar dowels at 4' foot maximum spacing. Start and end dowels 6" from barrier contraction joints.

**RACEWAY:** The contractor shall insure that the electrical raceway is clear of internal obstructions. Cost of the 4 inch polyvinyl chloride raceway and No. 10 AWG copper-clad or aluminum-clad wire if needed for future installation of circuits shall be included in the unit cost per linear foot for item 622, Concrete Barrier.

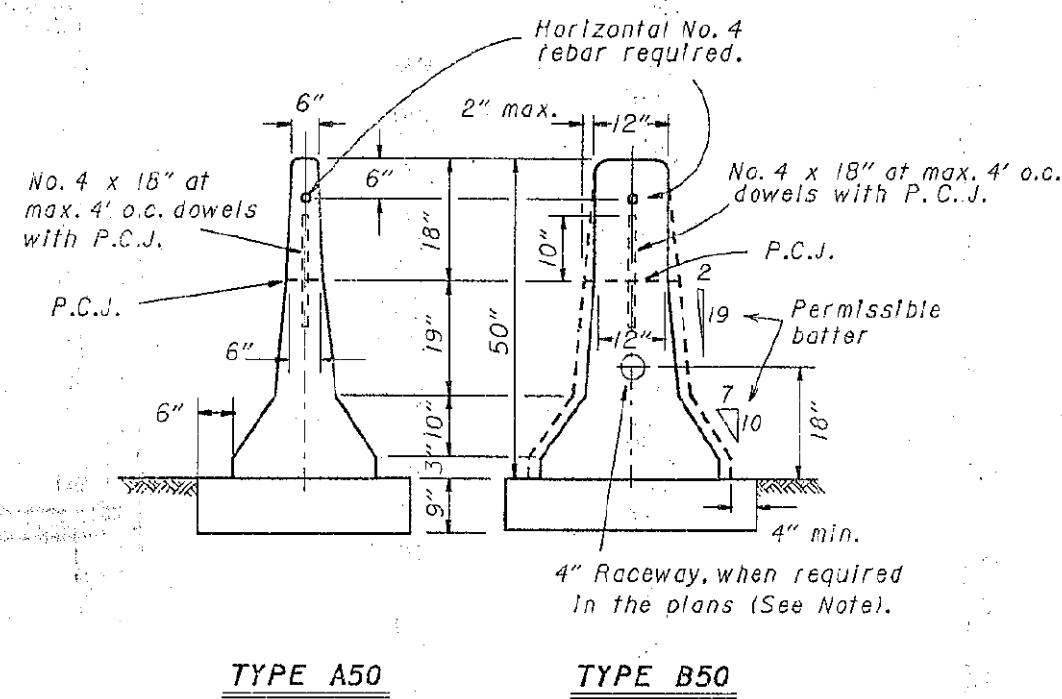
**STATION MARKING** shall be impressed in the "green" concrete on both sides at the top of the barrier if specified in the plans, which cost shall be incidental to the unit cost per linear foot bid for item 622, Concrete Barrier.



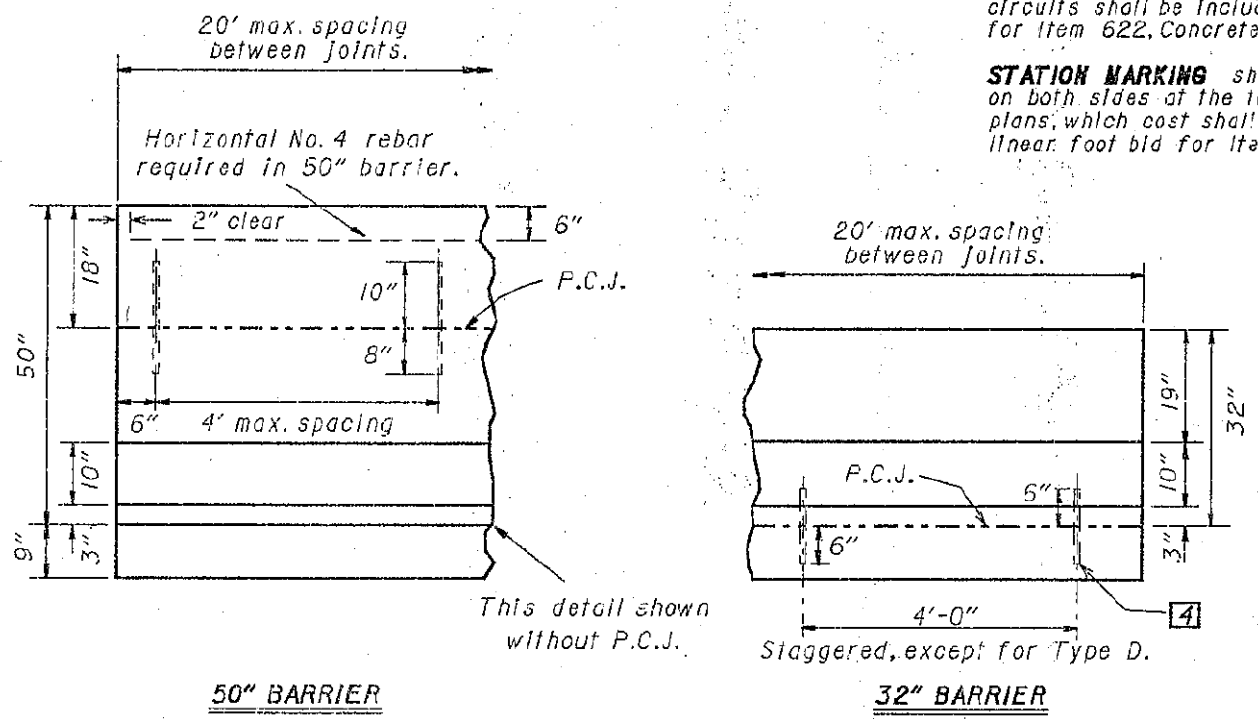
**NORMAL SECTIONS**

### LEGEND

- 1 1" Radius or 3/4" chamfer.
- 2 Permissible 10" radius.
- 3 Permissible 1" radius.
- 4 No. 8 epoxy coated deformed steel bars, 12" long, spaced 4' between successive bars on a staggered (except Type D) pattern. Omit dowels when top is constructed integral with the base.



**50" BARRIERS - TYPICAL SECTIONS**

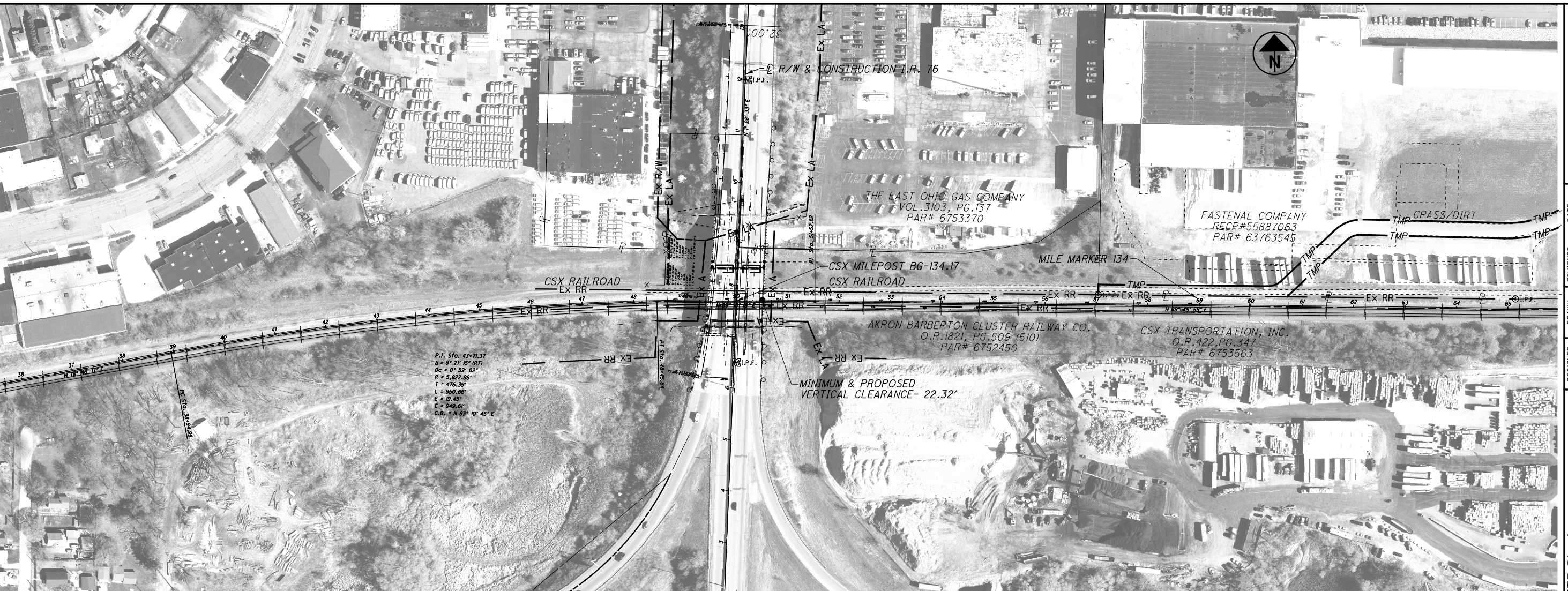


**BARRIER ELEVATIONS**

BUREAU OF LOCATION AND DESIGN OHIO DEPARTMENT OF TRANSPORTATION	
<b>CONCRETE BARRIER</b>	DATE 10-30-92
STANDARD CONSTRUCTION DRAWING	<b>MC-9.3</b>
APPROVED: <i>[Signature]</i> ENGR., L & D	

RICHLAND ENGINEERING LIMITED  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902  
 DATE 11-1-18  
 DT  
 STRUCTURE FILE NUMBER 7705646  
 DRAWN SCB  
 CHECKED BLN  
 DESIGNED RWC  
 REVISIONS  
 BARRIER DETAILS  
 BRIDGE NO. SUM-76-0672  
 I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY  
 SUM-76-6.72  
 PID No. 96670  
 50/50  
 84  
 85

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**DESIGNED**  
RWC

**DRAWN**  
RRB

**REVIEWED**  
DT

**DATE**  
11-1-18

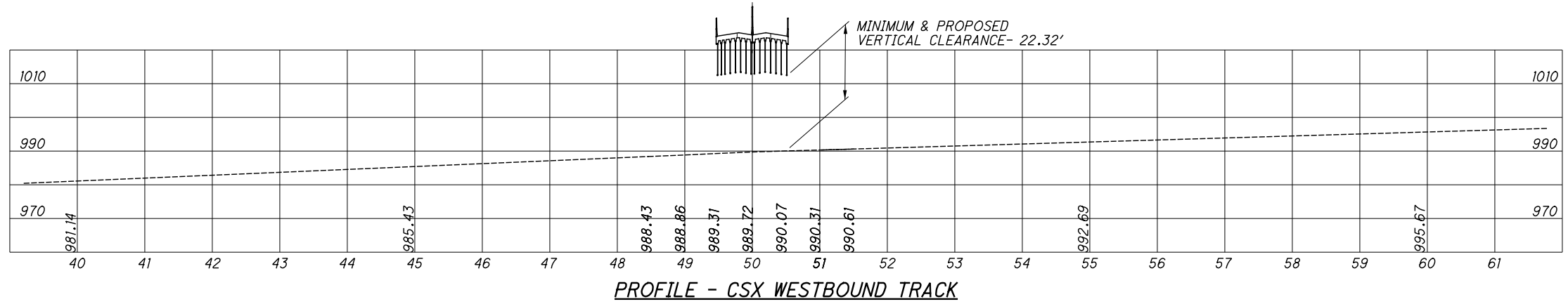
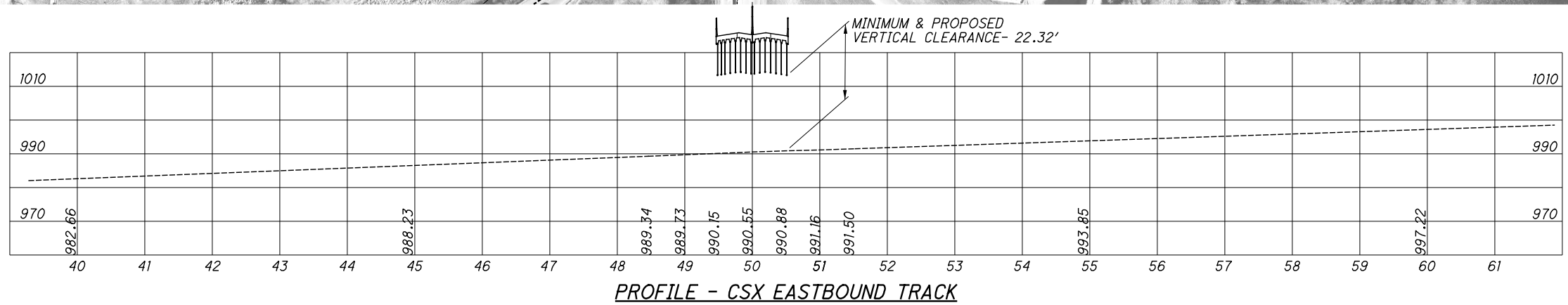
**STRUCTURE FILE NUMBER**  
7705646

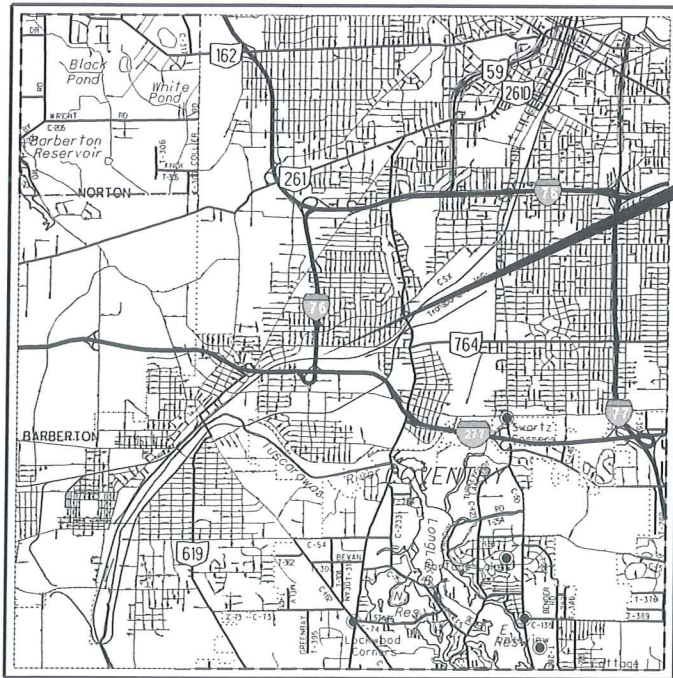
**RICHLAND ENGINEERING LIMITED**  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

**SUPPLEMENTAL SITE PLAN**  
BRIDGE NO. SUM-76-0672  
I-76 OVER CSX AND AKRON BARBERTON CLUSTER RAILWAY

**SUM-76-6.72**  
PID No. 96670

1 / 1





PROJECT SITE

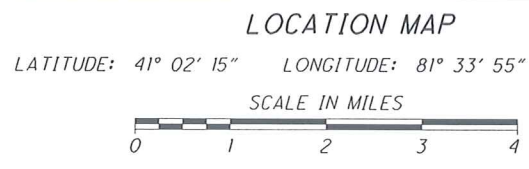
# RIGHT OF WAY LEGEND SHEET SUM-76-6.72

SUMMIT COUNTY  
CITY OF AKRON  
TRACT 2, LOT 10  
TOWNSHIP 1 - RANGE XI  
CONNECTICUT WESTERN RESERVE

**PROJECT DESCRIPTION**  
SUM-76-6.72 (PID: 108812) PART 3 EMERGENCY PROJECT TO REPAIR SFN 7705646 SUM-76-0672 IN THE CITY OF AKRON, SUMMIT COUNTY, OHIO. TO BE INCLUDED IN PID# 96670.

UTILITY OWNERS	
TYPE	NAME & ADDRESS
NATURAL GAS	DOMINION ENERGY OHIO ATTN: 2ND FLOOR RELOCATION DESIGN 320 SPRINGSIDE DR., SUITE 320 AKRON, OHIO 44333 330-664-2409; 888-504-0126 fax EMAIL: relocation@dominionenergy.com
WATER & SEWAGE	CITY OF AKRON ATTN: GEORGE THOMAS 6TH FLOOR 166 SOUTH HIGH STREET AKRON, OHIO 44308 330-375-2095
ELECTRIC	OHIO EDISON ATTN: MICHAEL JANSON BUILDING 1 1910 WEST MARKET STREET AKRON, OH 44313 330-830-7092
TELECOMM.	VERIZON BUSINESS ATTN: JOHN BACHELDER DEPT 42864 LOC 107 2400 NORTH GLENVILLE RICHARDSON, TX 75082 972-729-6016 EMAIL: Investigations@verizon.com
TELECOMM.	Sprint - NEXTEL ATTN: JESSICA M. REVELLE 6550 Sprint Parkway Overland Park, KS 66251 1-800-521-0579 EMAIL: jessica.m.revelle@sprint.com

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



**PLANS PREPARED BY:**  
FIRM NAME : THOMAS FOK & ASSOCIATES, INC.  
R/W DESIGNER: JOSEPH P. SLIFKA, JR. P.E.  
R/W REVIEWER: FRANKLIN D. SNYDER, JR. P.S.  
FIELD REVIEWER: FRANKLIN D. SNYDER, JR. P.S.  
PRELIMINARY FIELD REVIEW DATE: 11/02/2018  
TRACINGS FIELD REVIEW DATE: 12/07/2018  
OWNERSHIP UPDATED BY: JOSEPH P. SLIFKA, JR.  
DATE COMPLETED: 12/07/2018  
PLAN COMPLETION DATE: 12/07/2018

**STRUCTURE KEY**

	COMMERCIAL
	RESIDENTIAL
	OUT-BUILDING

**INDEX OF SHEETS:**

LEGEND SHEET	1
PROPERTY MAP & SUM. OF ADD. R/W	2
RIGHT OF WAY DETAIL SHEET	3-6

TYPES OF TITLE LEGEND:  
T = TEMPORARY EASEMENT

**CONVENTIONAL SYMBOLS**

County Line	Edge of Shoulder (Ex)
Township Line	Edge of Shoulder (Pr)
Section Line	Ditch / Creek (Ex)
Corporation Line	Ditch / Creek (Pr)
Fence Line (Ex)	Tree Line (Ex)
Center Line	Ownership Hook Symbol
Right of Way (Ex)	Property Line Symbol
Right of Way (Pr)	Break Line Symbol
Standard Highway Ease. (Ex)	Tree (Pr)
Standard Highway Ease. (Pr)	Tree (Remove)
Temporary Right of Way	Evergreen (Ex)
Channel Ease. (Pr)	Evergreen (Remove)
Utility Ease. (Ex)	Wetland (Pr)
Railroad	Post (Ex)
Guardrail (Ex)	Light (Ex)
Construction Limits	Fire Hydrant (Ex)
Edge of Pavement (Ex)	Water Valve (Ex)
Edge of Pavement (Pr)	Telephone Pole (Ex)
	Light Pole (Ex)

I, Franklin D. Snyder, Jr., P.S. have conducted a survey of the existing conditions for the Ohio Department of Transportation beginning in August 2018. The results of that survey are contained herein.

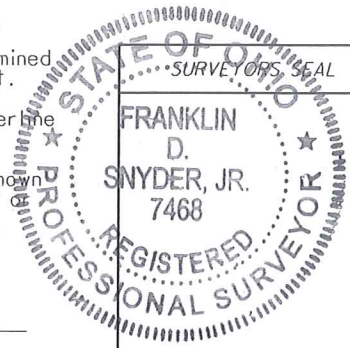
The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System, North Zone, NAD83 (2011). The Project Coordinates (US Survey feet) are relative to State Plane Grid Coordinates (meters) by a Combined Scale Factor of 0.99989474882 and U.S. Survey Feet to Meter conversion of 3937/1200. All as determined by the Ohio Department of Transportation, District 4 in July 2014 as part of the SUM-76-10.95 PID 95331 project.

As part of this project I have reestablished the locations of the existing property lines and the existing centerline of right of way for the property takes contained herein.

All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Standards for Boundary Surveys" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

*Franklin D. Snyder, Jr. P.S.*  
Franklin D. Snyder, Jr., Professional Surveyor No. S-7468

Date: 12/07/2018

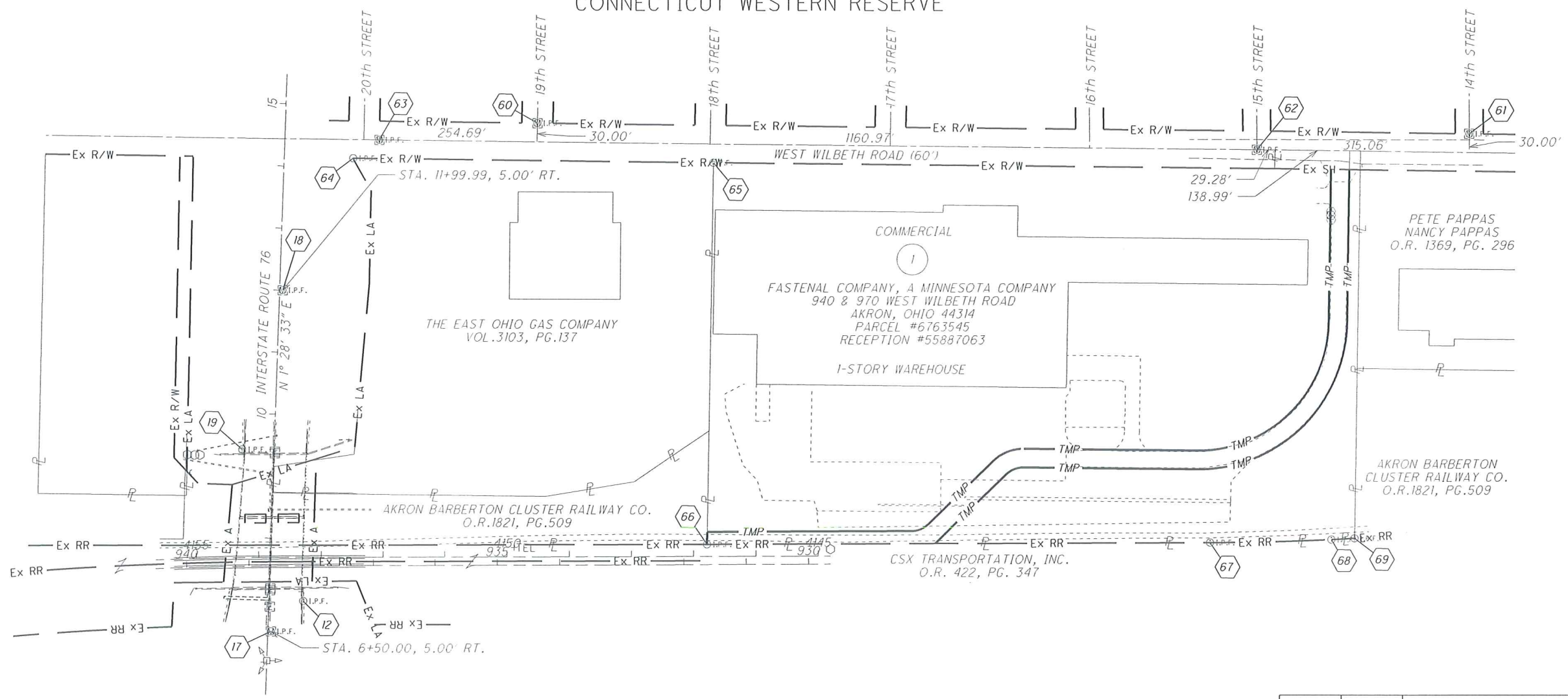
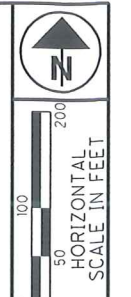


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FEDERAL PROJECT NO. 108812  
CALCULATED JPS CHECKED FDS  
RIGHT OF WAY LEGEND SHEET  
SUM-76-6.72  
1/6



SUMMIT COUNTY  
CITY OF AKRON  
TRACT 2, LOT 10  
TOWNSHIP 1 - RANGE XI  
CONNECTICUT WESTERN RESERVE



NOTE: SEE SHEET 5 OF 6 FOR MONUMENT TABLE

REV. BY	DATE	DESCRIPTION
	12/07/2018	

**TOTAL NUMBER OF :**  
 1 OWNERSHIPS      0 TOTAL TAKES  
 1 PARCELS        0 OWNERSHIPS W/ STRUCTURES INVOLVED

NOTE: ALL TEMPORARY PARCELS TO BE OF 6 MONTH DURATION.  
 NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
 \* DENOTES RIGHT OF WAY ENCROACHMENT  
 (c) = CALCULATED AREA

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

**GRANTEE:**  
 ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			BOOK	PAGE
I-T	FASTENAL COMPANY, A MINNESOTA COMPANY	3-6	RECEPTION #55887063		6763545	14.634	0.000	0.908	0.000	0.908	N		14.634	100% STATE	FOR ACCESS TO PROJECT		

R/W DESIGNER: JPS  
R/W REVIEWER: FDS

PROPERTY MAP / SUMMARY OF ADDITIONAL R/W

PID NO. 108812

SUM-76-6.72

P:\SUM\108812\_SUM-76-6.72\Design\RW\_Sheets\108812-RW001.dgn Sheet 12/7/2018 8:22:24 AM jsifkq

**BASIS FOR BEARINGS:**

BEARINGS ARE BASED ON MONUMENTS LOCATED RELATIVE TO THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD83(2011) AS ESTABLISHED BY THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 4 IN JULY 2014.

SUMMIT COUNTY  
CITY OF AKRON  
TRACT 2, LOT 10  
TOWNSHIP 1 - RANGE XI  
CONNECTICUT WESTERN RESERVE

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING MONUMENTS LOCATED DURING THE FIELD SURVEY.

SUM-76-6.31 CENTERLINE SCHEMATIC AND MONUMENT LOCATION PLAN DATED 2-18-1985.

AKRON EXPRESSWAY SYSTEM, KENMORE EXPRESSWAY CENTERLINE PLAT (BOOK 065, PAGE 55-56) AND RIGHT OF WAY PLANS.

SUMMIT COUNTY PLATS:  
BOOK 007, PAGE 58; BOOK 012, PAGE 39;  
BOOK 020, PAGE 35, BOOK 112, PAGE 22.

SUMMIT COUNTY DEED RECORDS AS LISTED.

CSX VALUATION MAP 09076, VI15.1/6.



0 10 20 40  
HORIZONTAL  
SCALE IN FEET

PID NO.  
**108812**

R/W DESIGNER  
JPS  
R/W REVIEWER  
FDS

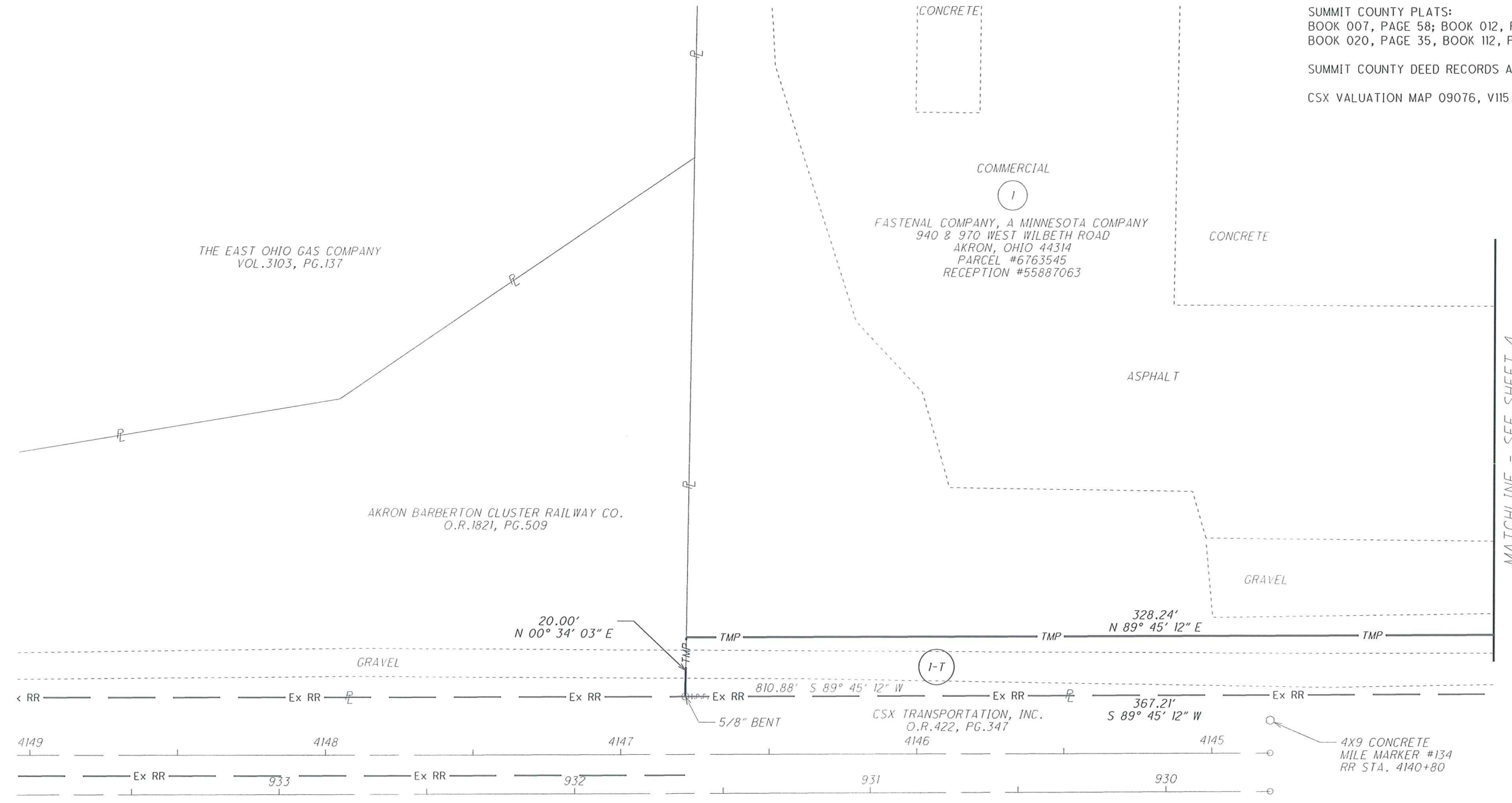
**RIGHT OF WAY DETAIL SHEET  
ACCESS DRIVE**

**SUM-76-6.72**

3 / 6



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REV. BY	DATE	DESCRIPTION

DATE COMPLETED 12/07/2018

SUMMIT COUNTY  
CITY OF AKRON  
TRACT 2, LOT 10  
TOWNSHIP 1 - RANGE XI  
CONNECTICUT WESTERN RESERVE



PID NO.  
**108812**

R/W DESIGNER  
JPS  
R/W REVIEWER  
FDS

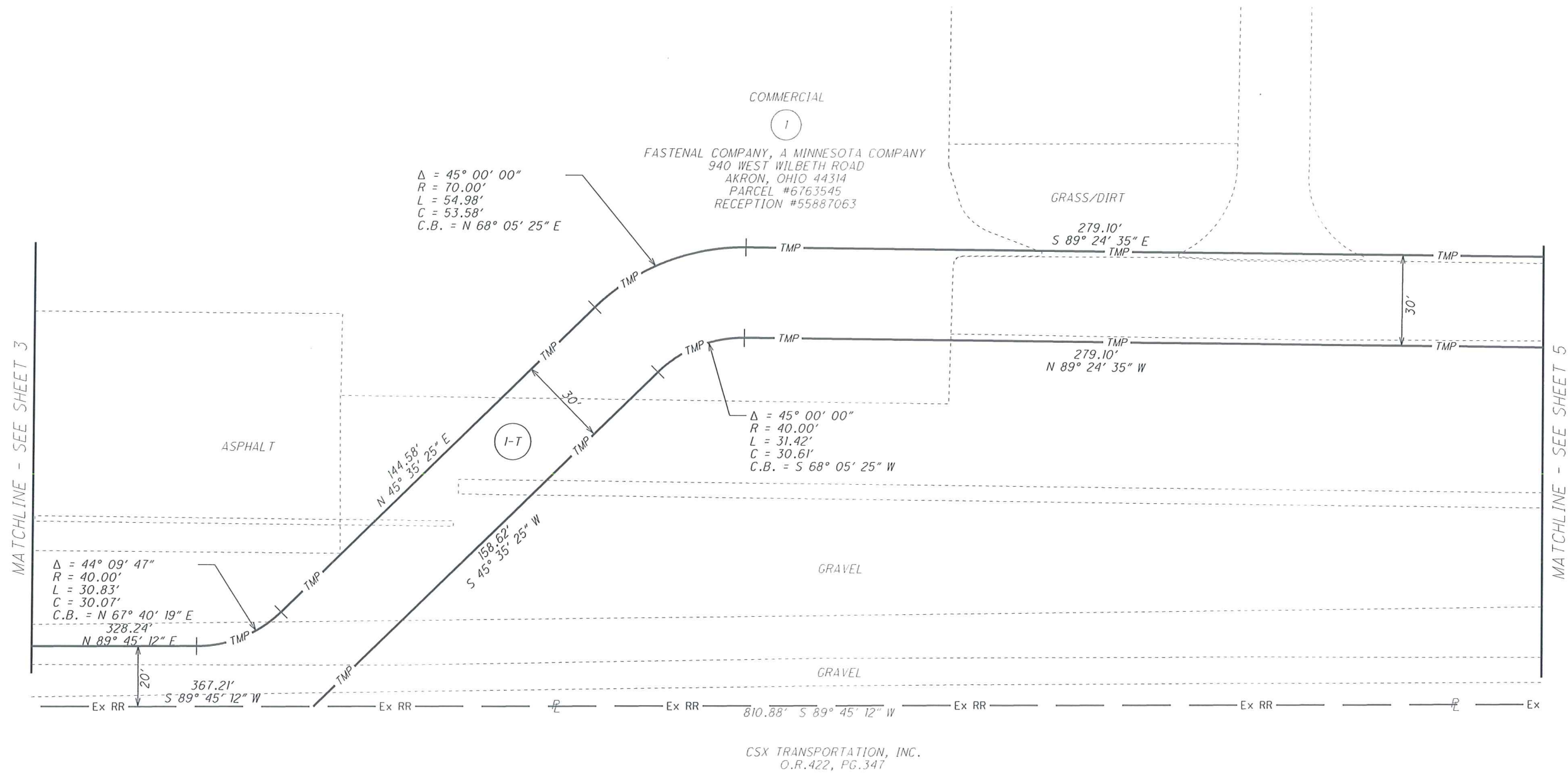
**RIGHT OF WAY DETAIL SHEET**  
**ACCESS DRIVE**

**SUM-76-6.72**

4 / 6



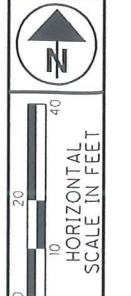
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REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 12/07/2018

SUMMIT COUNTY  
 CITY OF AKRON  
 TRACT 2, LOT 10  
 TOWNSHIP 1 - RANGE XI  
 CONNECTICUT WESTERN RESERVE



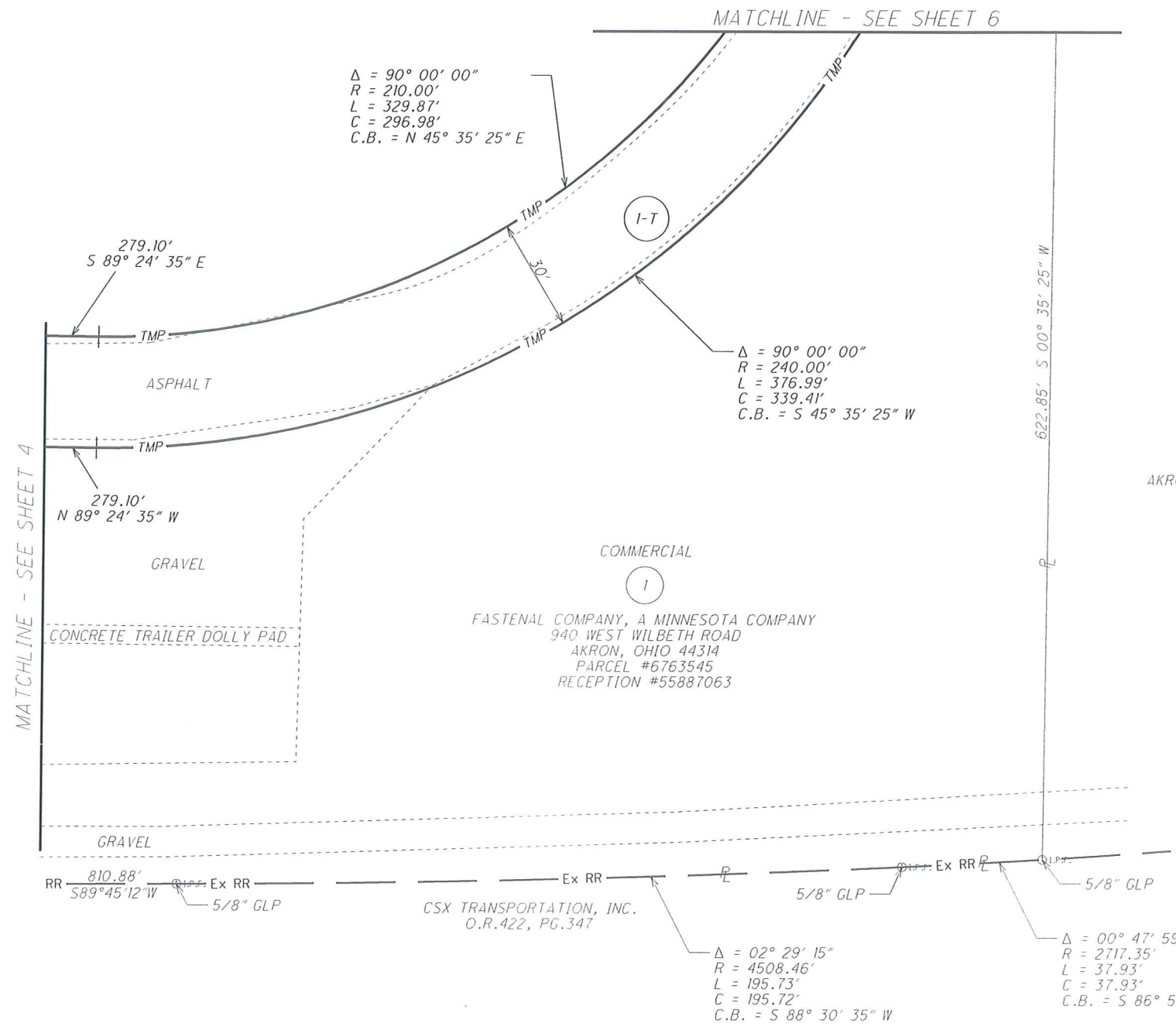
PID NO.  
**108812**

R/W DESIGNER  
 JPS  
 R/W REVIEWER  
 FDS

**RIGHT OF WAY DETAIL SHEET**  
**ACCESS DRIVE**

**SUM-76-6.72**

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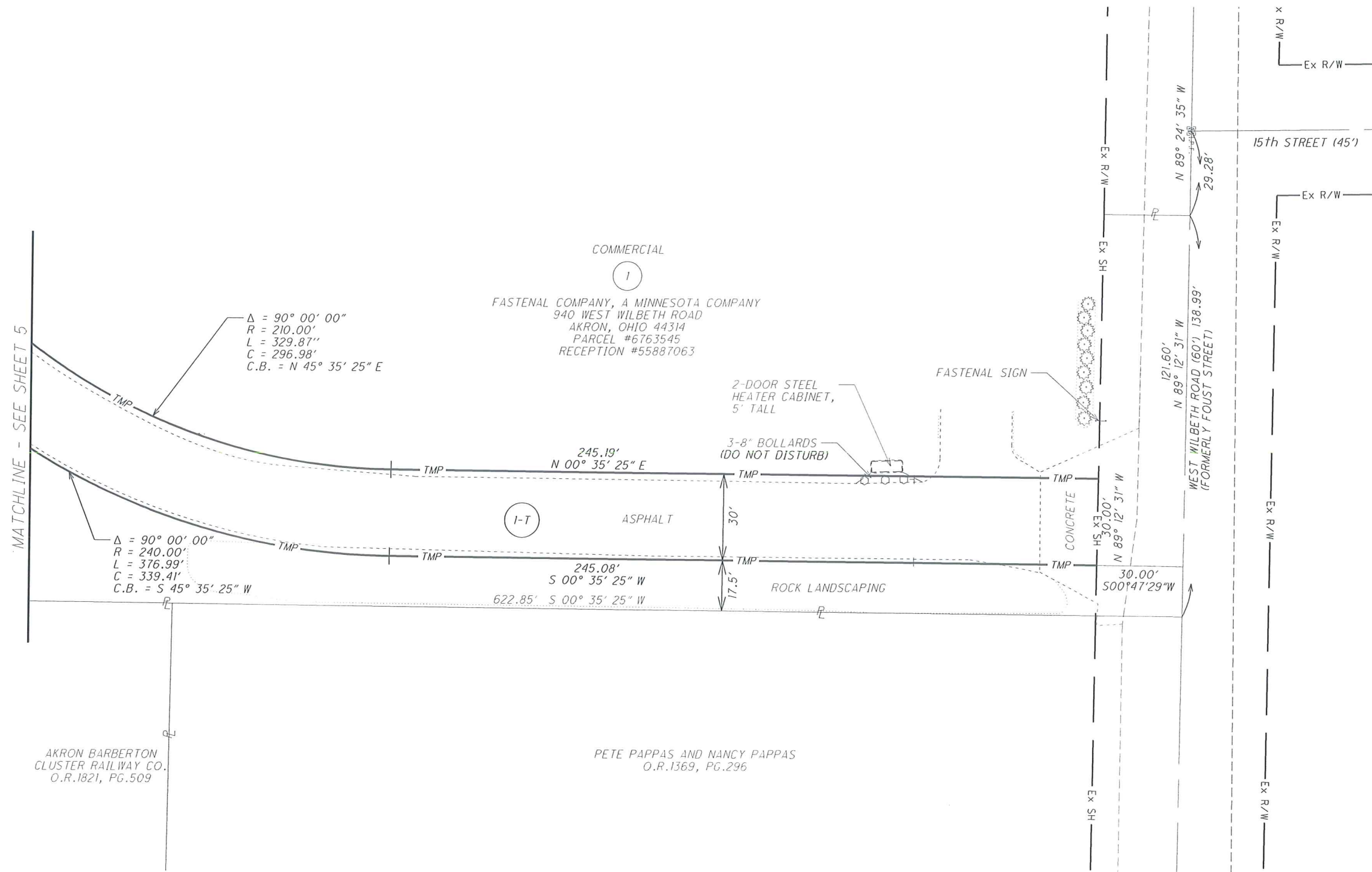
POINT #	PROJECT COORDINATES - U.S. SURVEY FEET			OHIO STATE PLANE, NORTH ZONE NAD83 (2011)			FEATURE	DESCRIPTION
	NORTHING	EASTING	ELEVATION	NORTHING-m	EASTING-m	ELEVATION-m		
12	500809.208	2226596.661	1016.76	152630.886	678596.589	309.91	IPID	5/8-NCI
15	501178.175	2226607.287	1022.93	152743.335	678599.827	311.79	IPINS	5/8-FOK
17	500760.097	2226545.189	1015.47	152615.918	678580.902	309.51	IPIN	3/4"
18	501309.906	2226559.354	1023.76	152783.483	678585.219	312.04	IPIN	3/4"
19	501053.007	2226496.878	1021.56	152705.188	678566.178	311.37	IPID	5/8-NCI
60	501579.660	2226968.428	982.96	152865.695	678709.892	299.61	IPID	1"
61	501563.067	2228473.040	1013.58	152860.638	679168.450	308.94	IPID	1"
62	501537.714	2228129.031	1012.68	152852.911	679063.607	308.67	IPID	1"
63	501552.300	2226713.445	980.29	152857.357	678632.181	298.79	IPID	1"
64	501522.636	2226671.390	980.45	152848.316	678619.364	298.84	IPIN	
65	501516.788	2227252.567	994.20	152846.534	678796.489	303.03	IPPIPE	
66	500902.021	2227246.479	993.97	152659.172	678794.633	302.96	IPIN	
67	500905.510	2228057.348	1001.96	152660.235	679041.760	305.40	IPID	
68	500910.600	2228252.998	1004.31	152661.787	679101.388	306.11	IPID	
69	500912.670	2228290.870	1004.13	152662.418	679112.931	306.06	IPID	

REV. BY	DATE	DESCRIPTION

DATE COMPLETED 12/07/2018

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SUMMIT COUNTY  
CITY OF AKRON  
TRACT 2, LOT 10  
TOWNSHIP 1 - RANGE XI  
CONNECTICUT WESTERN RESERVE



REV. BY	DATE	DESCRIPTION

DATE COMPLETED 12/07/2018

		PID NO. <b>108812</b>	R/W DESIGNER JPS	R/W REVIEWER FDS	<b>RIGHT OF WAY DETAIL SHEET ACCESS DRIVE</b>
6	6	<b>SUM-76-6.72</b>			
⊕					