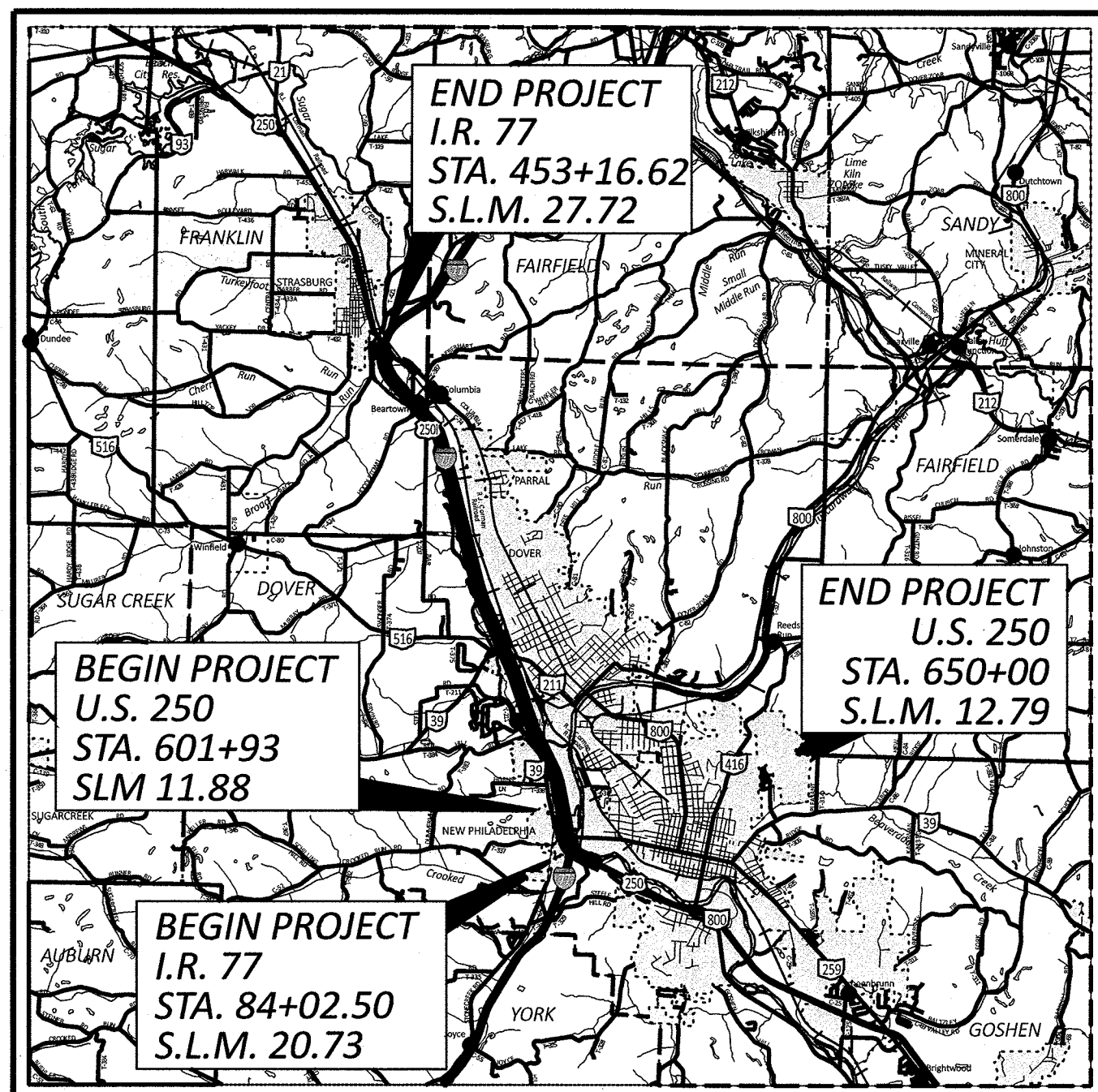


STATE OF OHIO DEPARTMENT OF TRANSPORTATION TUS-77-20.73, TUS-250-11.88

**DOVER TOWNSHIP
FRANKLIN TOWNSHIP
GOSHEN TOWNSHIP
TUSCARAWAS COUNTY**



LOCATION MAP

LATITUDE: 40°32'20" LONGITUDE: 81°29'55"



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

DESIGN DESIGNATION (SEE SHEET P.11)

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

INDEX OF SHEETS:

TITLE SHEET	P.1
SCHEMATIC PLAN	P.2-P.3
TYPICAL SECTIONS	P.4-P.9
GENERAL NOTES	P.10-P.11
MAINTENANCE OF TRAFFIC	P.12-P.15
GENERAL SUMMARY	P.16-P.18
SUBSUMMARIES	P.19-P.20
CALCULATIONS	P.21
PLAN SHEETS	P.22-P.34
ESTIMATED QUANTITIES	P.35-P.51
DRAINAGE DETAILS	P.52-P.56
MISCELLANEOUS DETAILS	P.57-P.64
TRAFFIC CONTROL	P.65-P.71

FEDERAL PROJECT NUMBER

E200(364)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RESURFACING OF I.R. 77 FROM SLM 20.73 TO SLM 27.72 A DISTANCE OF 6.99 MILES AND RESURFACING U.S. 250 FROM SLM 11.88 TO SLM 12.79 A DISTANCE OF 0.91 MILES. THIS WORK INCLUDES RESURFACING THE RAMPS AT THE INTERCHANGES WITHIN THE PROJECT, PAVEMENT MARKING, REPLACING SEGMENTS OF GUARDRAIL, AND EROSION CONTROL REMEDIATION AT THE STRASBURG INTERCHANGE.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 2.6 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)*
*ROUTINE MAINTENANCE PROJECT

LIMITED ACCESS

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

2019 SPECIFICATIONS

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

TITLE SHEET

TUS-77-20.73, TUS-250-11.88

MODEL: Sheet PAPER: 34x22 (in.) DATE: 6/9/2022 TIME: 3:40:00 PM USER: aslanina p:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 11\Tuscarawas\107570\400-Engineering\Roadway\Sheets\107570_GT001.dgn

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
ODOT DISTRICT 11
ENGINEERING
NEW PHILADELPHIA, OHIO

ENGINEER'S SEAL:

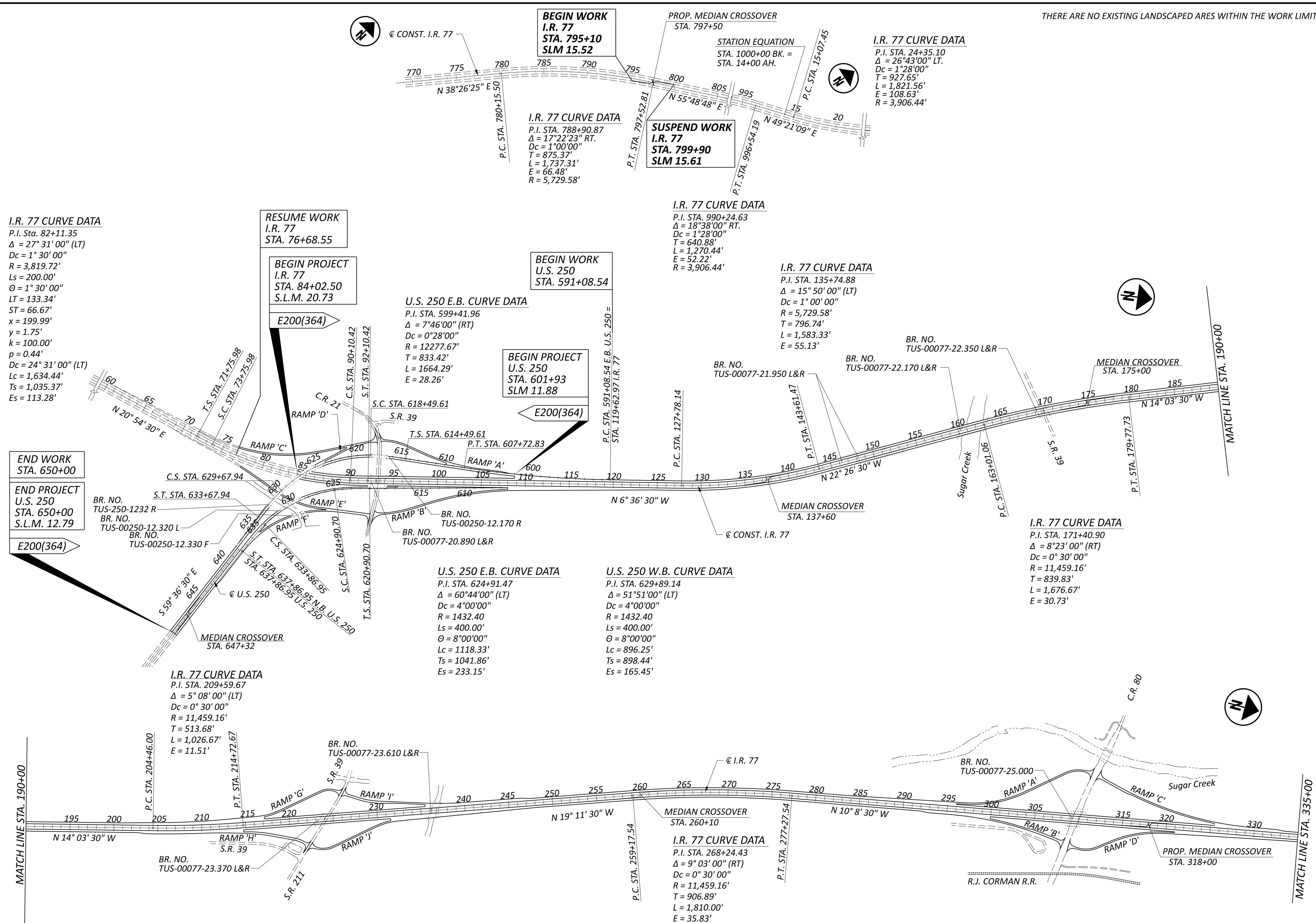
SIGNED: *Adrienne Slanina*
DATE: 6/9/2022

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
BP-2.1	1/21/22	RM-4.2	4/17/20	MT-95.30	7/19/19	MT-101.70	1/17/20	TC-41.20	10/18/13	800-2019	7/15/22	
BP-2.5	1/21/22			MT-95.31	7/19/19	MT-101.75	1/17/20	TC-42.20	10/18/13	807	1/21/22	
BP-3.1	1/21/22	PCB-91	7/17/20	MT-95.32	4/19/19	MT-101.90	7/17/20	TC-52.10	10/18/13	808	1/18/19	
BP-5.1	1/21/22			MT-95.40	1/17/20	MT-102.10	1/17/20	TC-52.20	1/15/21	821	4/20/12	
BP-9.1	1/18/19	DM-2.1	1/18/13	MT-95.45	1/17/20	MT-102.20	4/19/19	TC-61.30	7/19/19	832	10/19/18	
		DM-4.1	7/17/20	MT-95.50	7/21/17	MT-104.10	10/16/15	TC-65.10	1/17/14	846	4/17/15	
MGS-1.1	7/16/21	DM-4.3	1/15/16	MT-97.10	4/19/19	MT-105.10	1/17/20	TC-65.11	7/21/17	850	4/15/22	
MGS-2.1	1/19/18	DM-4.4	1/15/16	MT-97.12	1/20/17			TC-71.10	7/16/21	908	10/20/17	
MGS-3.1	1/19/18			MT-98.10	1/17/20			TC-72.20	7/20/18	921	4/20/12	
MGS-3.2	1/18/13			MT-98.11	1/17/20			TC-73.20	1/17/20			
MGS-4.2	7/19/13			MT-98.20	4/19/19			TC-74.10	1/21/22			
MGS-4.3	1/18/13			MT-98.21	1/17/20							
MGS-5.2	7/15/16			MT-98.22	1/17/20							
MGS-5.3	7/15/16			MT-98.28	1/17/20							
				MT-99.20	4/19/19							

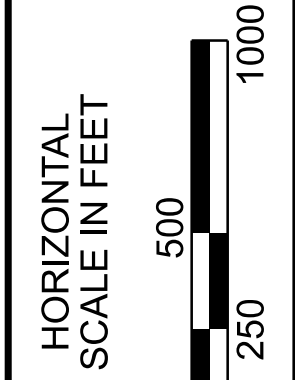
APPROVED *Thomas D. Bray*
DATE 6-10-2022 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.01	71

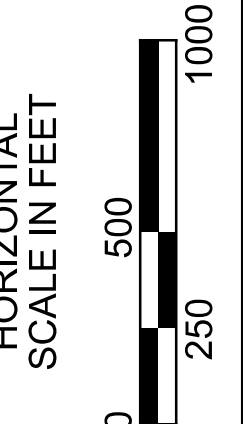
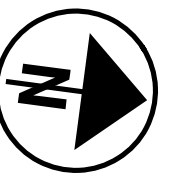
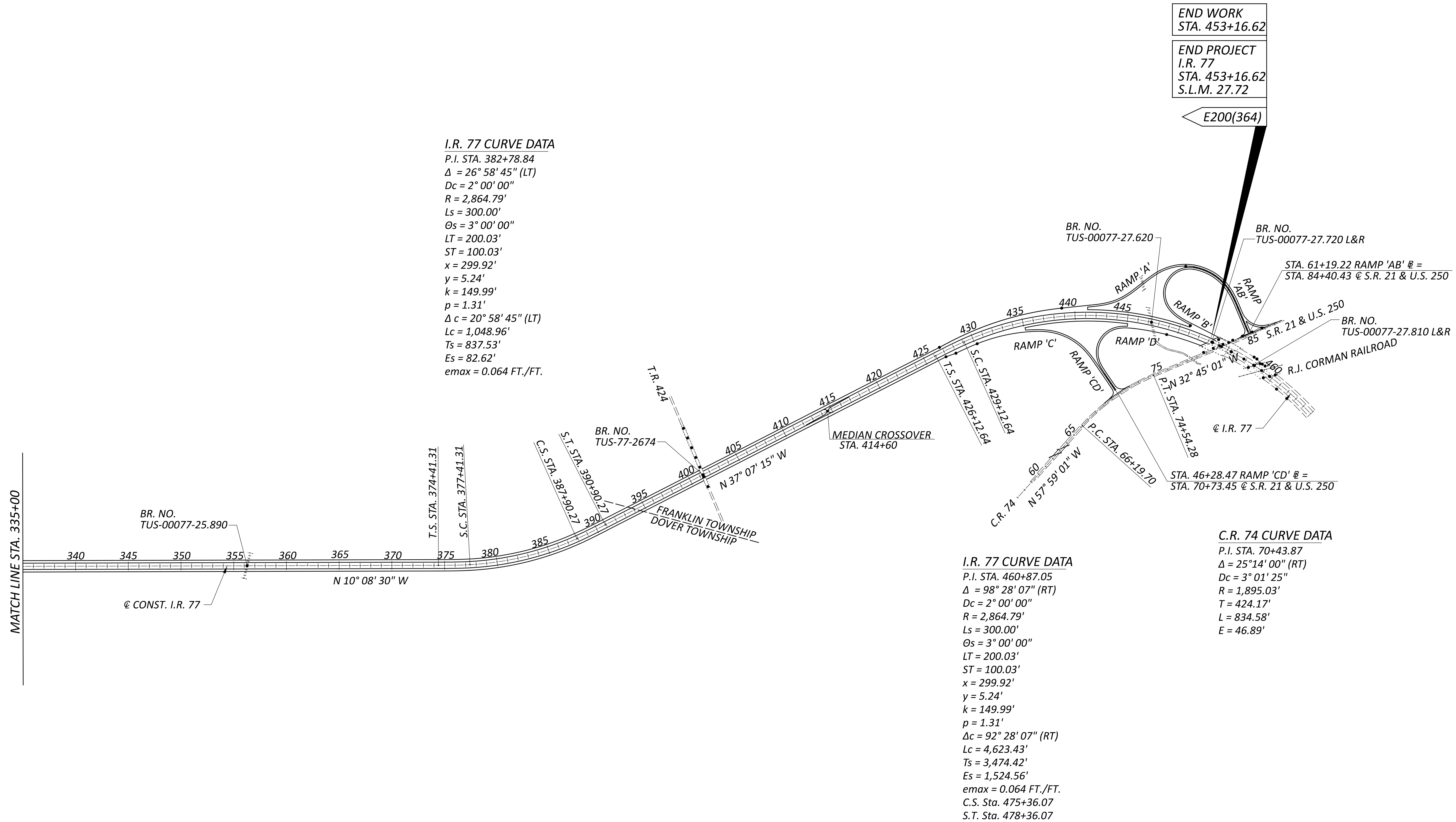


THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS.



SCHEMATIC PLAN
 STA. 770+00.00 TO STA. 335+00.00

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET TOTAL	P.02 71

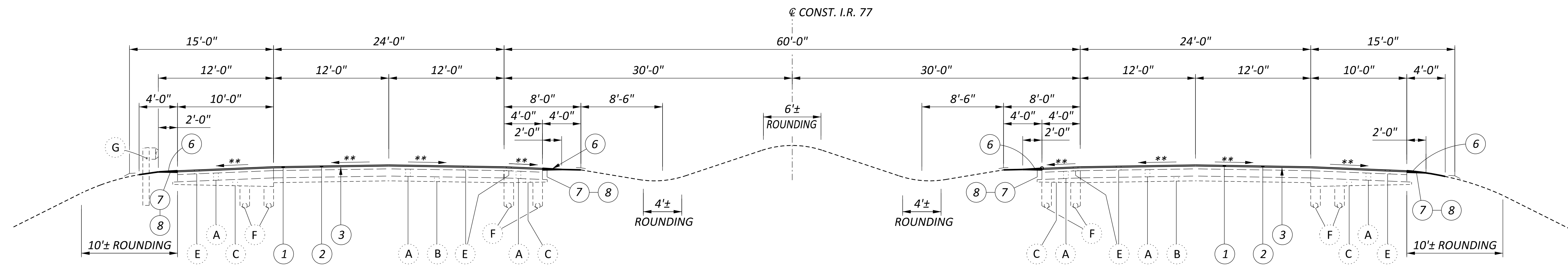


SCHEMATIC PLAN
 STA. 335+00.00 TO STA. 465+00.00

DESIGN AGENCY

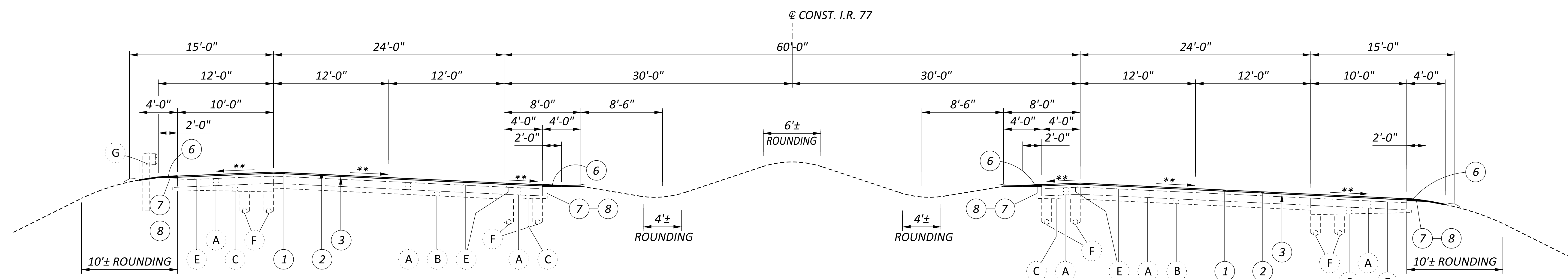


DESIGNER	
MVC	
REVIEWER	
TES 05/12/22	
PROJECT ID	
107570	
SHEET	TOTAL
P.03	71

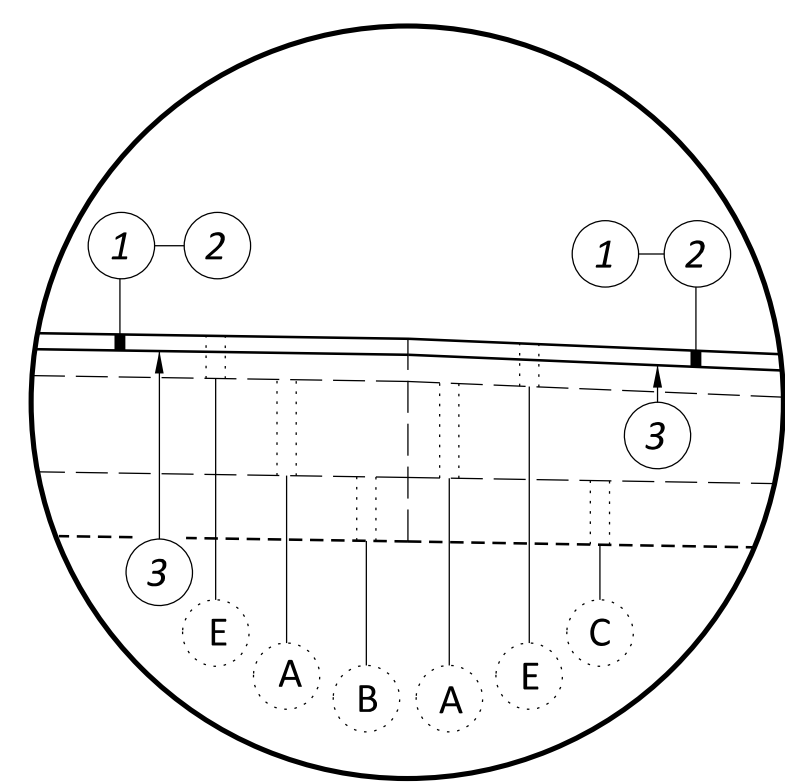


NORMAL SECTION
 STA. 92+40.00 TO STA. 126+75.00
 STA. 144+50.00 TO STA. 162+00.00
 STA. 180+75.00 TO STA. 203+50.00
 STA. 215+75.00 TO STA. 258+25.00
 STA. 278+00.00 TO STA. 283+00.00

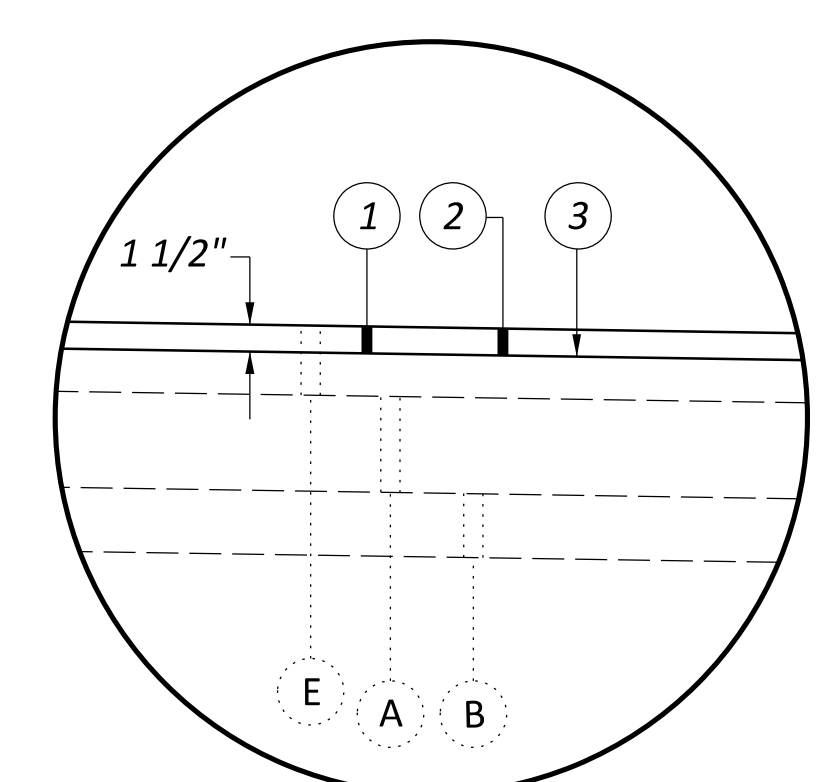
** MATCH EXISTING PAVEMENT SLOPE



SUPERELEVATED SECTION
 STA. 84+02.50 TO STA. 92+40.00
 STA. 126+75.00 TO STA. 144+50.00
 STA. 162+00.00 TO STA. 180+75.00
 STA. 203+50.00 TO STA. 215+75.00
 STA. 258+25.00 TO STA. 278+00.00



**TYPICAL MAINLINE RESURFACING DETAIL
 (MAINLINE & SHOULDER)**



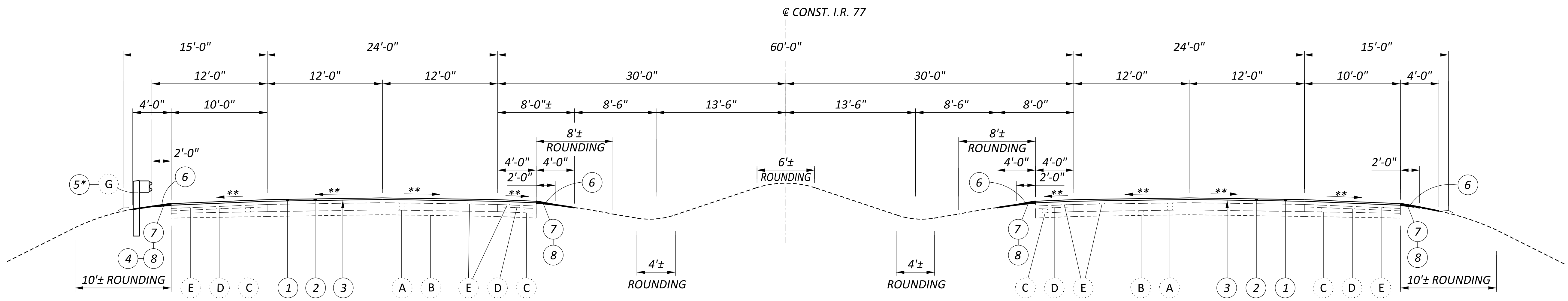
TYPICAL I.R. 77 RESURFACING DETAIL

PROPOSED LEGEND

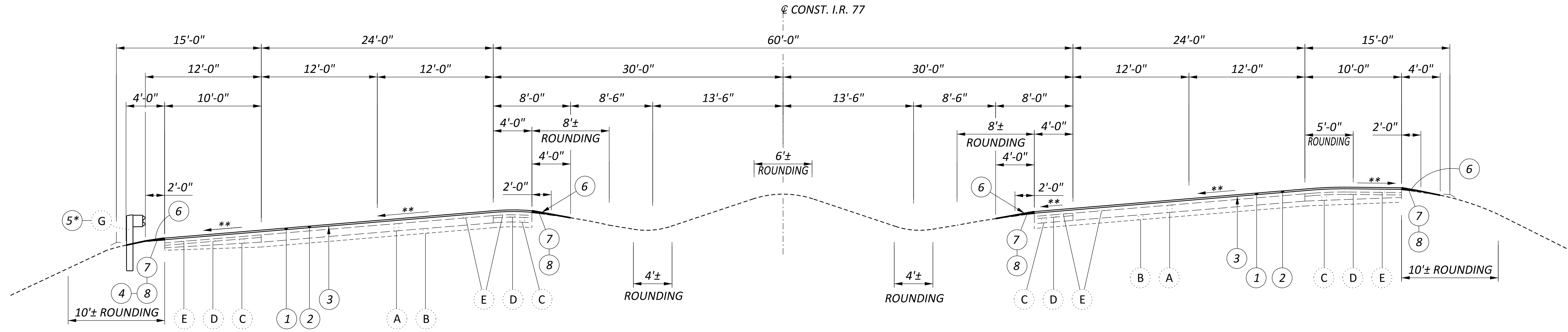
- ① ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN
- ② ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, (1 1/2" DEPTH)
- ③ ITEM 407 - TACK COAT (0.085 GAL./S.Y.)
- ④ ITEM 209 - LINEAR GRADING (APPLIED WITH NEW GUARDRAIL INSTALLATION)
- ⑤ ITEM 606 - GUARDRAIL, TYPE MGS
- ⑥ ITEM 408 - PRIME COAT, AS PER PLAN
- ⑦ ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN (2' WIDE)
- ⑧ ITEM 209 - SHOULDER PREPARATION, AS PER PLAN (4' WIDE)
- ⑨ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN
- ⑩ ITEM 203 - 4" GRANULAR EMBANKMENT, AS PER PLAN
- ⑪ ITEM 304 - 6" AGGREGATE BASE

EXISTING LEGEND

- A EXISTING 9" REINFORCED CONCRETE PAVEMENT
- B EXISTING SUBBASE
- C EXISTING AGGREGATE BASE
- D EXISTING BITUMINOUS AGGREGATE BASE
- E EXISTING ASPHALT CONCRETE
- F EXISTING UNDERDRAIN
- G EXISTING GUARDRAIL
- H EXISTING CURB



NORMAL SECTION
 STA. 283+00.00 TO STA. 377+75.00
 STA. 387+50.00 TO STA. 425+25.00

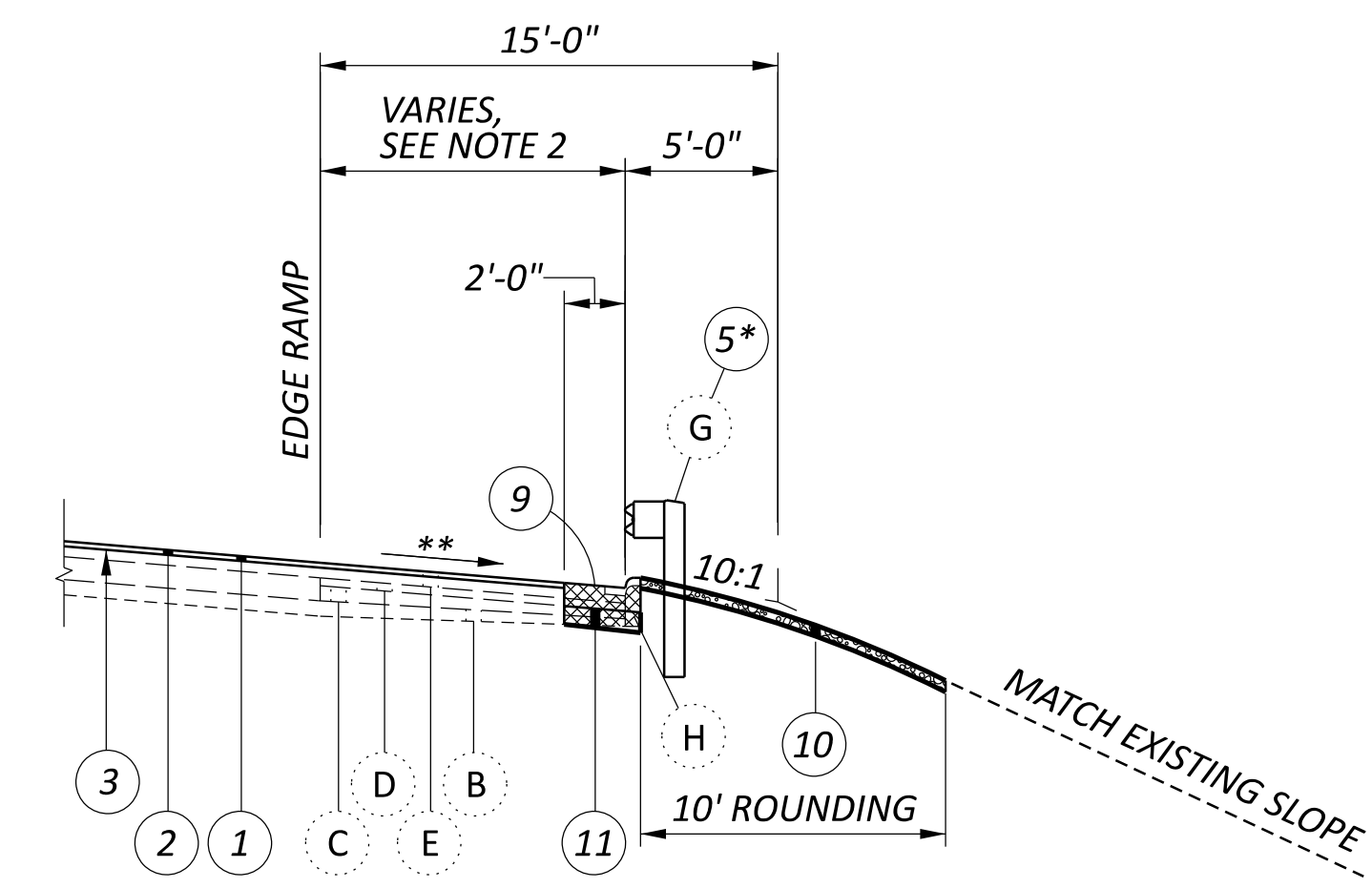


SUPERELEVATED SECTION
 STA. 377+75 TO STA. 387+50.00
 STA. 425+25.00 TO STA. 453+16.62

NOTES:

- SEE SHEET NO. P.04 FOR LEGEND AND RESURFACING DETAILS
- FOR CURB REPLACEMENT, THE CONTRACTOR SHALL PROVIDE AN OFFSET 2' FROM THE EXISTING FACE OF CURB TO LOCATE THE PROPOSED BASELINE FOR THE OUTSIDE GUTTER AND PAVEMENT REMOVAL LOCATION PER CMS 202.05. CONSTRUCT THE TYPE 4 COMBINATION CURB AND GUTTER PER SCD BP-5.1.

* SEE GUARDRAIL ESTIMATED QUANTITIES FOR PROPOSED GUARDRAIL REPLACEMENT LOCATIONS.
 ** MATCH EXISTING PAVEMENT SLOPE

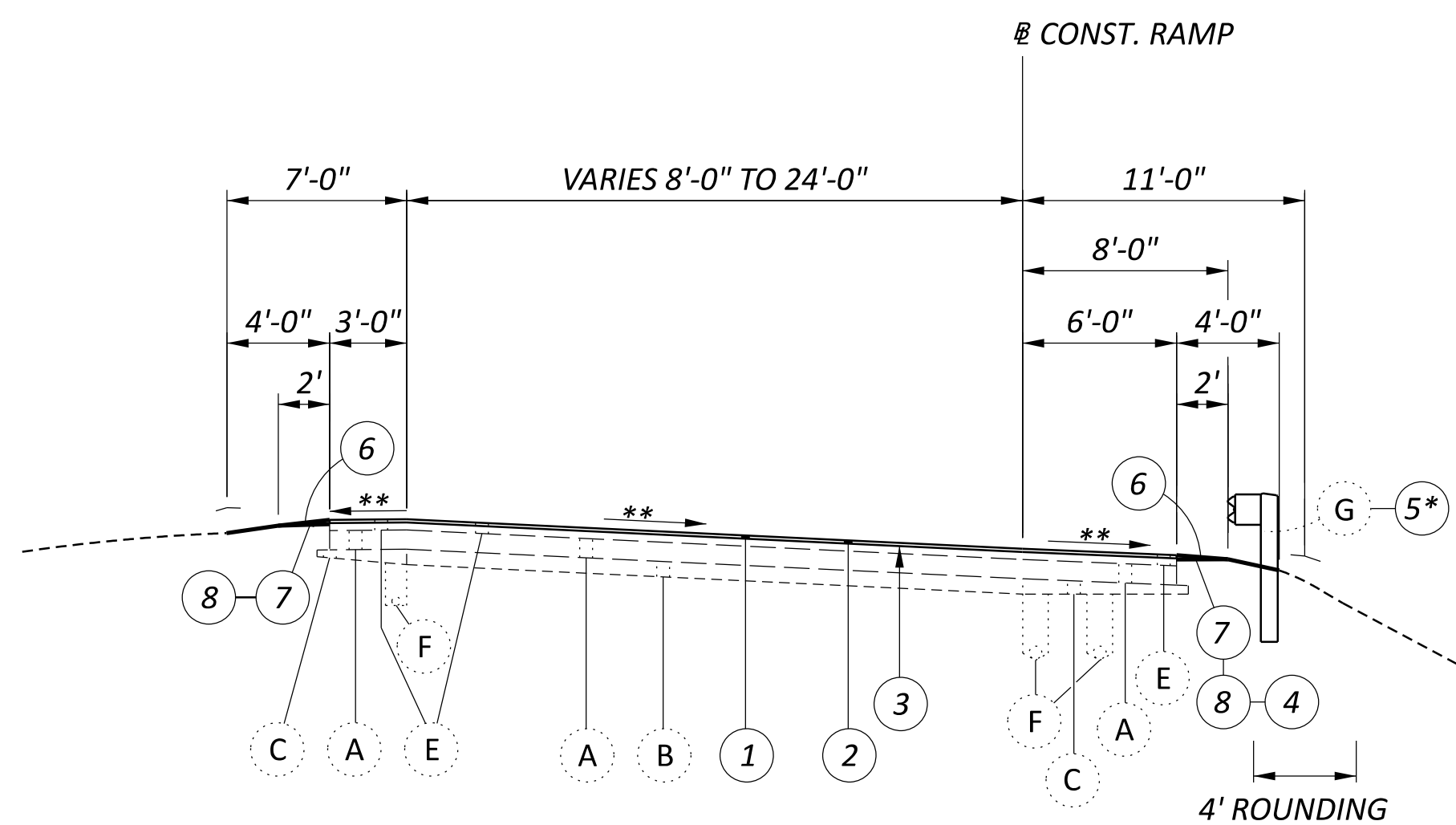


CURB REPLACEMENT DETAIL
 STA. 448+25 TO STA. 452+40.71

- LEGEND**
- ITEM 202 - PAVEMENT REMOVED
 - ITEM 202 - CURB REMOVED

TYPICAL SECTIONS

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.05	71



RAMP SUPERELEVATED SECTION

U.S. 250/S.R. 39 INTERCHANGE (EXIT 81)
 RAMP 'A' STA. 0+21.75 TO STA. 8+20.75
 RAMP 'B' STA. 0+20.52 TO STA. 19+78.14
 RAMP 'C' STA. 1+85.61 TO STA. 16+12.70
 RAMP 'D' STA. 0+21.00 TO STA. 6+69.30
 RAMP 'E' STA. 5+19.06 TO STA. 16+25.12
 RAMP 'F' STA. 3+65.00 TO STA. 13+17.00

S.R. 39 INTERCHANGE (EXIT 83)
 RAMP 'G' STA. 16+42.48 TO STA. 20+00.00
 RAMP 'G' STA. 22+50.00 TO STA. 25+87.81
 RAMP 'H' STA. 12+00.00 TO STA. 16+50.00
 RAMP 'H' STA. 17+50.00 TO STA. 19+52.26
 RAMP 'I' STA. 0+04.14 TO STA. 5+50.00
 RAMP 'I' STA. 9+00.00 TO STA. 9+47.55
 RAMP 'J' STA. 0+12.50 TO STA. 4+00.00
 RAMP 'J' STA. 6+50.00 TO STA. 12+50.00

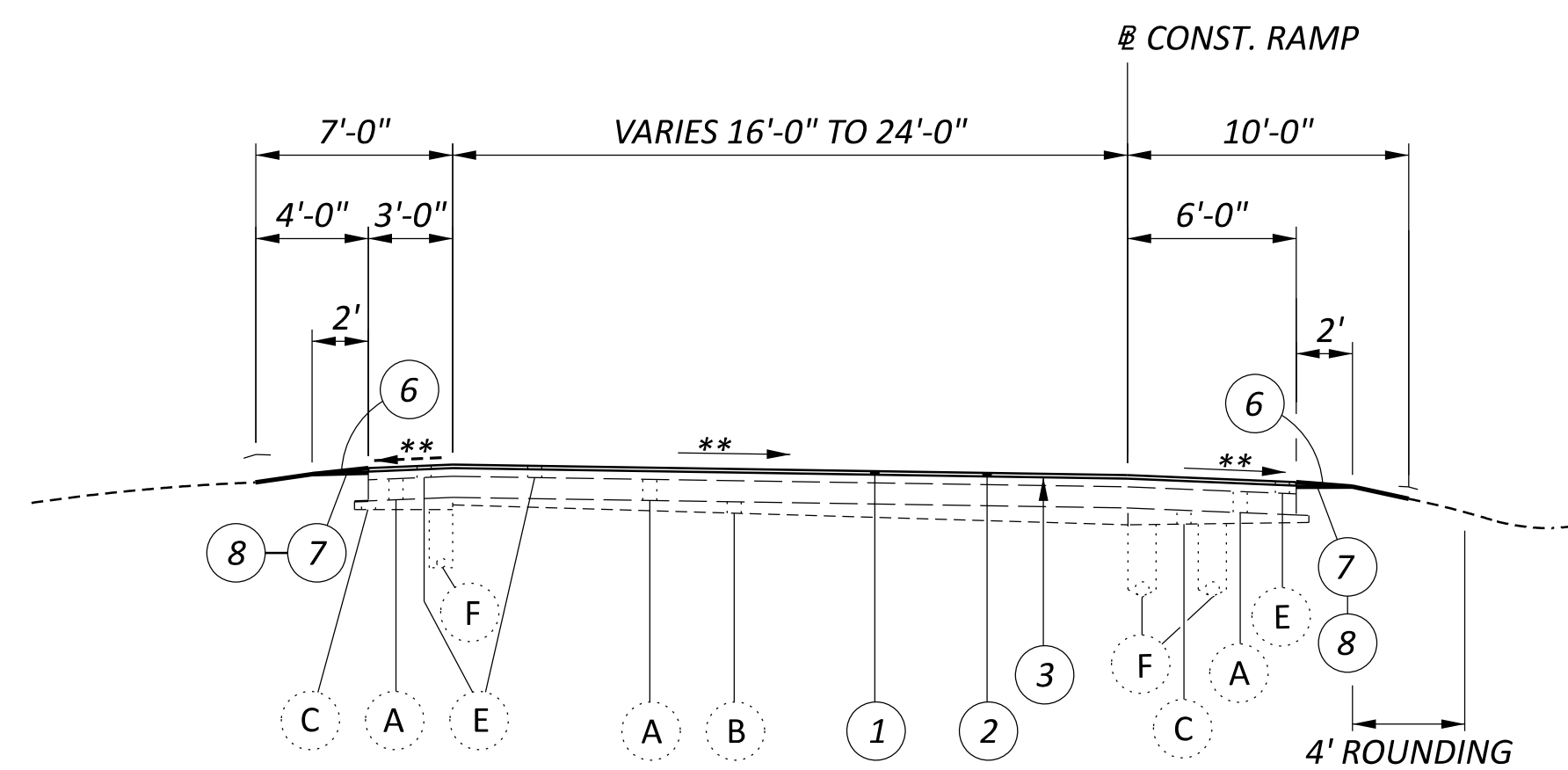
* SEE GUARDRAIL ESTIMATED QUANTITIES FOR PROPOSED GUARDRAIL REPLACEMENT LOCATIONS.

** MATCH EXISTING PAVEMENT SLOPE

BASILINE LOCATION RELATIVE TO DIRECTION OF TRAVEL

NOTE:

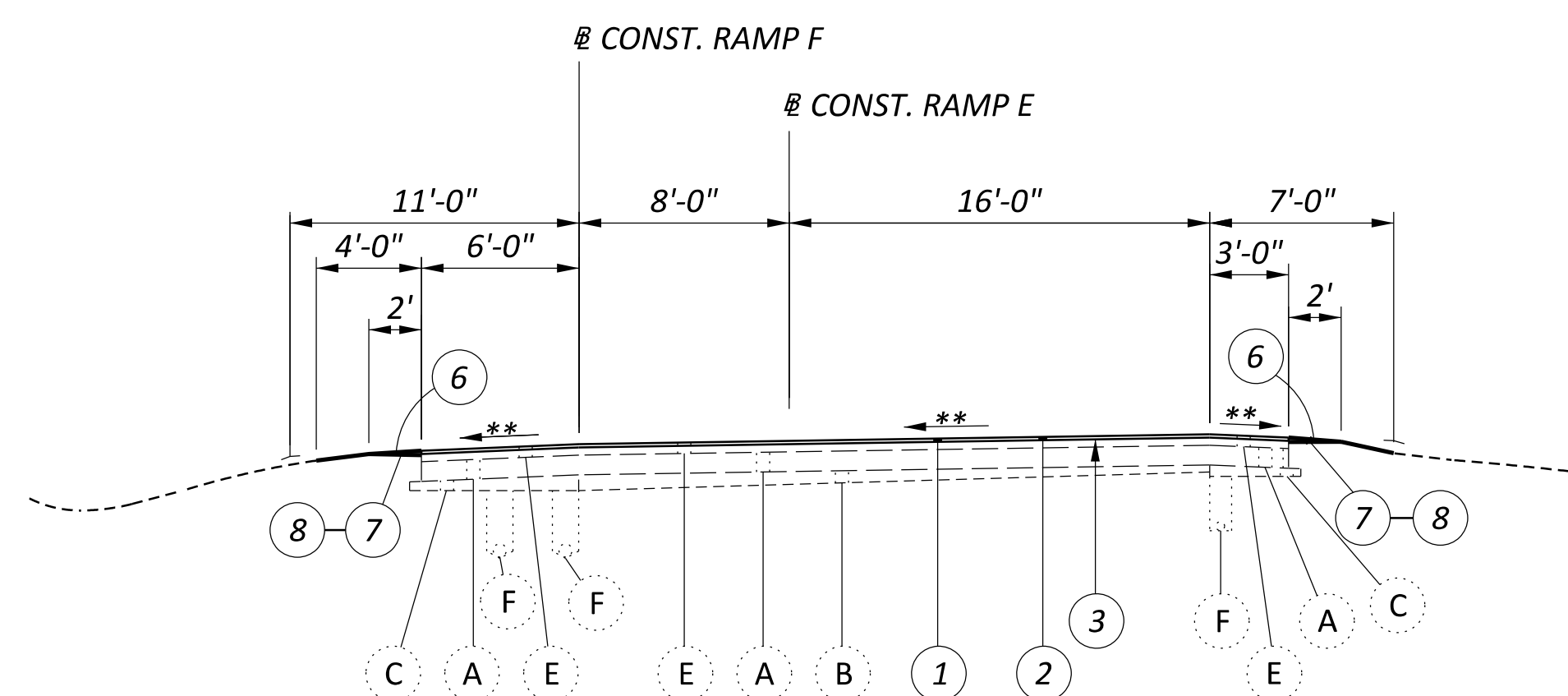
1. SEE SHEET NO. P.04 FOR LEGEND AND RESURFACING DETAILS



RAMP NORMAL SECTION

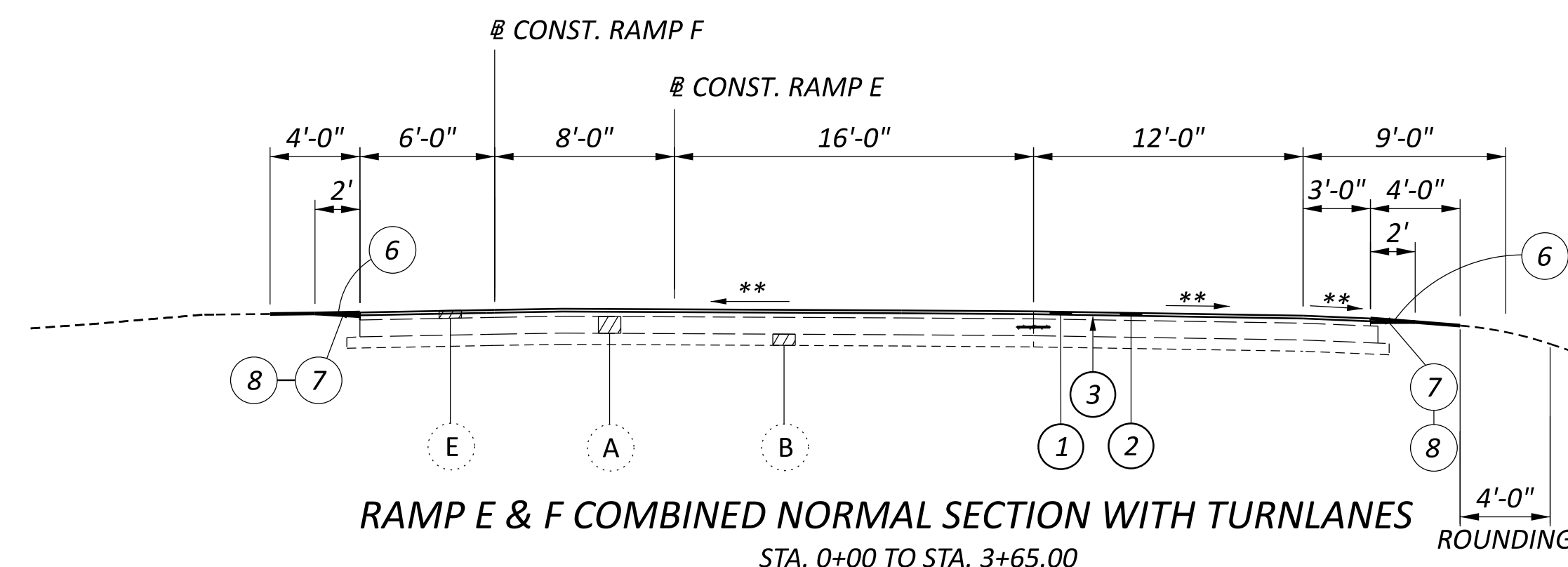
S.R. 39 INTERCHANGE (EXIT 83)

RAMP 'G' STA. 20+00.00 TO STA. 22+50.00
 RAMP 'H' STA. 16+50.00 TO STA. 17+50.00
 RAMP 'I' STA. 5+50.00 TO STA. 9+00.00
 RAMP 'J' STA. 4+00.00 TO STA. 6+50.00
 RAMP 'J' STA. 12+50.00 TO STA. 14+55.80



RAMP E & F COMBINED NORMAL SECTION

STA. 3+65.00 TO STA. 5+19.06



RAMP E & F COMBINED NORMAL SECTION WITH TURNLANES

STA. 0+00 TO STA. 3+65.00

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

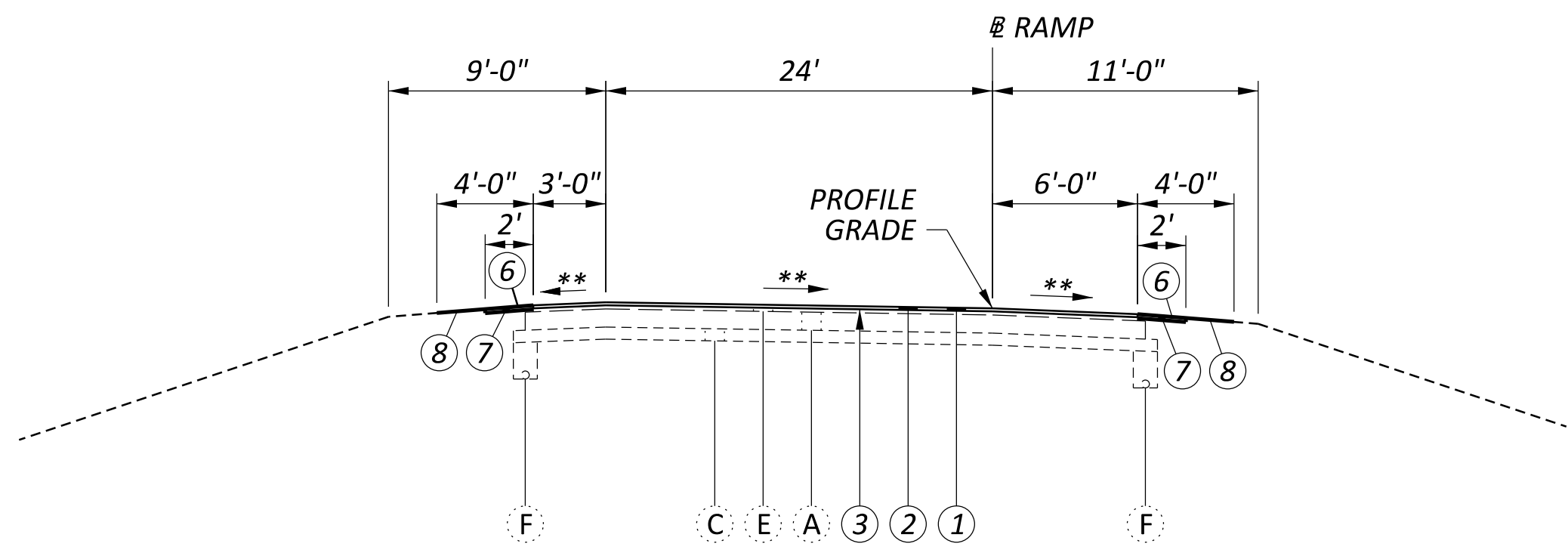
TES 05/12/22

PROJECT ID

107570

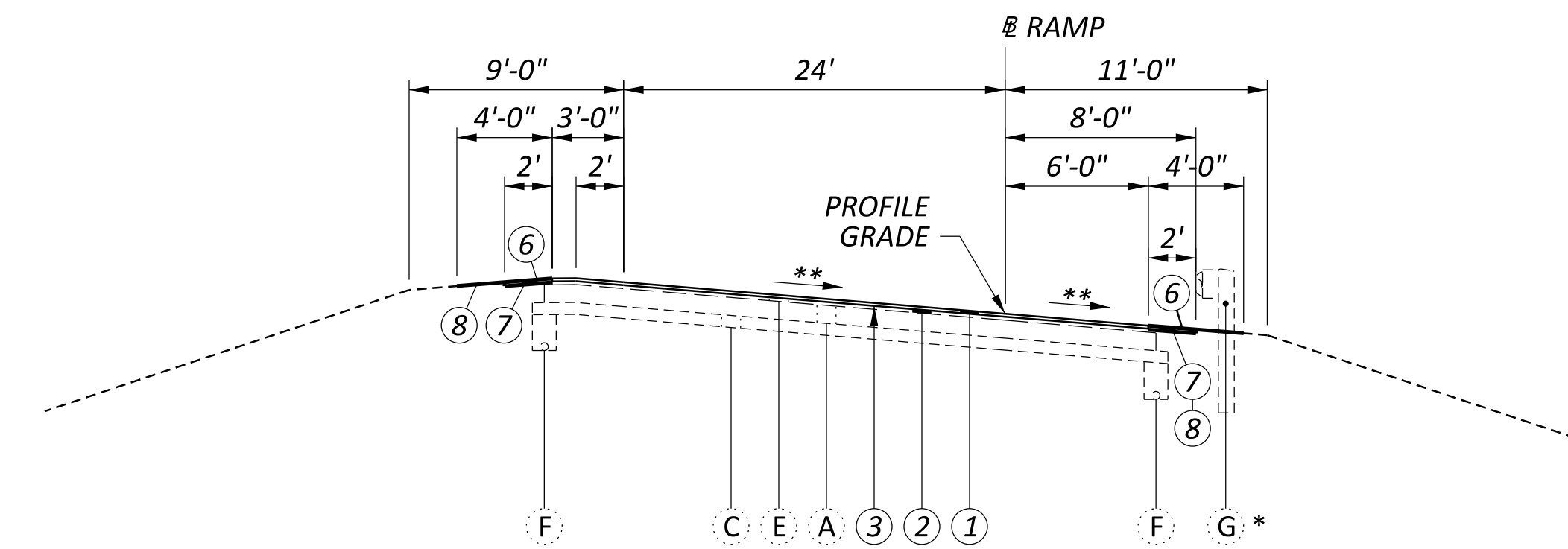
SHEET TOTAL

P.06 | 71



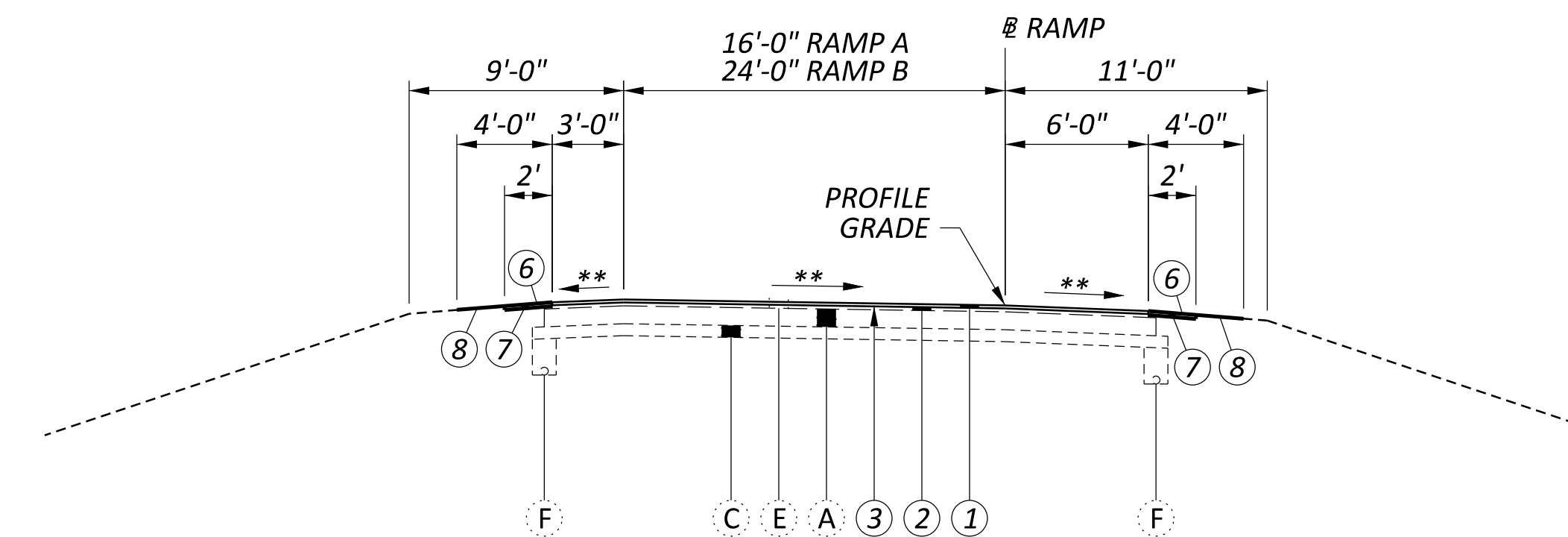
NORMAL SECTION (RAMPS)
(IN DIRECTION OF TRAVEL)

C.R. 80 INTERCHANGE (EXIT 85):
 STA. 311+10.13 TO STA. 313+44.19 (@ RAMP C)



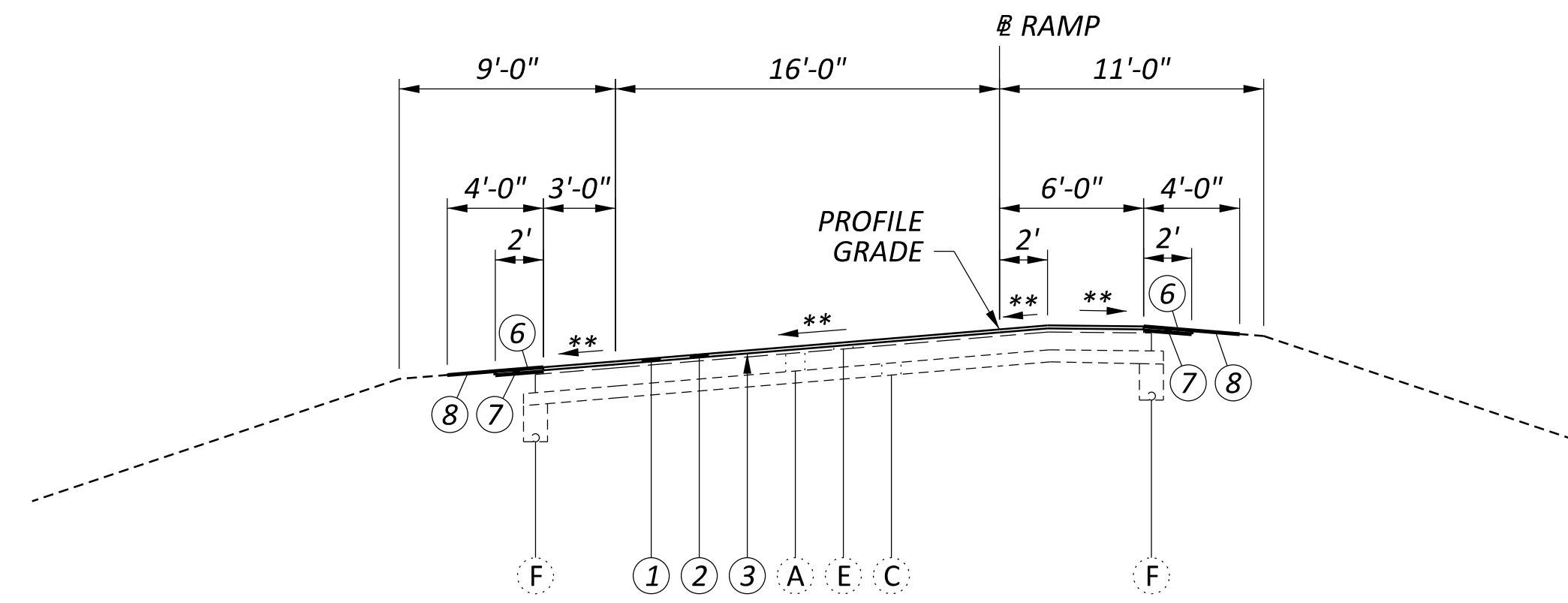
SUPERELEVATED SECTION (RAMPS)
(IN DIRECTION OF TRAVEL)

C.R. 80 INTERCHANGE (EXIT 85):
 STA. 304+80.00 TO STA. 307+44.27 (@ RAMP B)
 STA. 313+44.19 TO STA. 315+00.00 (@ RAMP C)



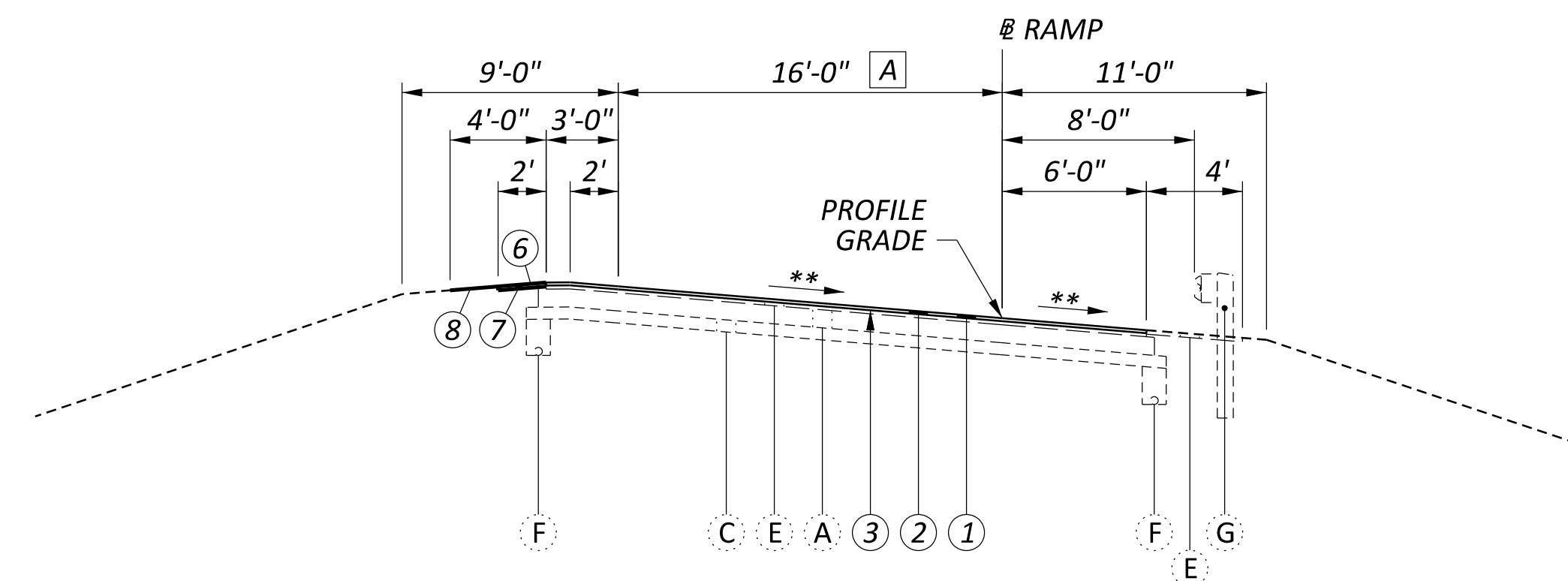
NORMAL SECTION (RAMPS)
(IN DIRECTION OF TRAVEL)

STA. 305+45.05 TO STA. 307+53.76 (@ RAMP A)
 STA. 307+44.27 TO STA. 308+69.04 (@ RAMP B)



SUPERELEVATED SECTION (RAMPS)
(IN DIRECTION OF TRAVEL)

C.R. 80 INTERCHANGE (EXIT 85):
 STA. 307+53.76 TO STA. 312+23.21 (@ RAMP A)
 STA. 308+46.22 TO STA. 312+13.44 (@ RAMP D)



A VARIES 16' TO 24' FROM STA. 304+30.00 TO STA. 304+80.00 (@ RAMP B)
 VARIES 24' TO 16' FROM STA. 315+00.00 TO STA. 315+50.00 (@ RAMP C)

SUPERELEVATED SECTION (RAMPS)
(IN DIRECTION OF TRAVEL)

C.R. 80 INTERCHANGE (EXIT 85):
 STA. 296+00.25 TO STA. 305+45.05 (@ RAMP A)
 STA. 299+95.06 TO STA. 304+80.00 (@ RAMP B)
 STA. 315+00.00 TO STA. 325+47.86 (@ RAMP C)
 STA. 312+13.44 TO STA. 320+99.75 (@ RAMP D)

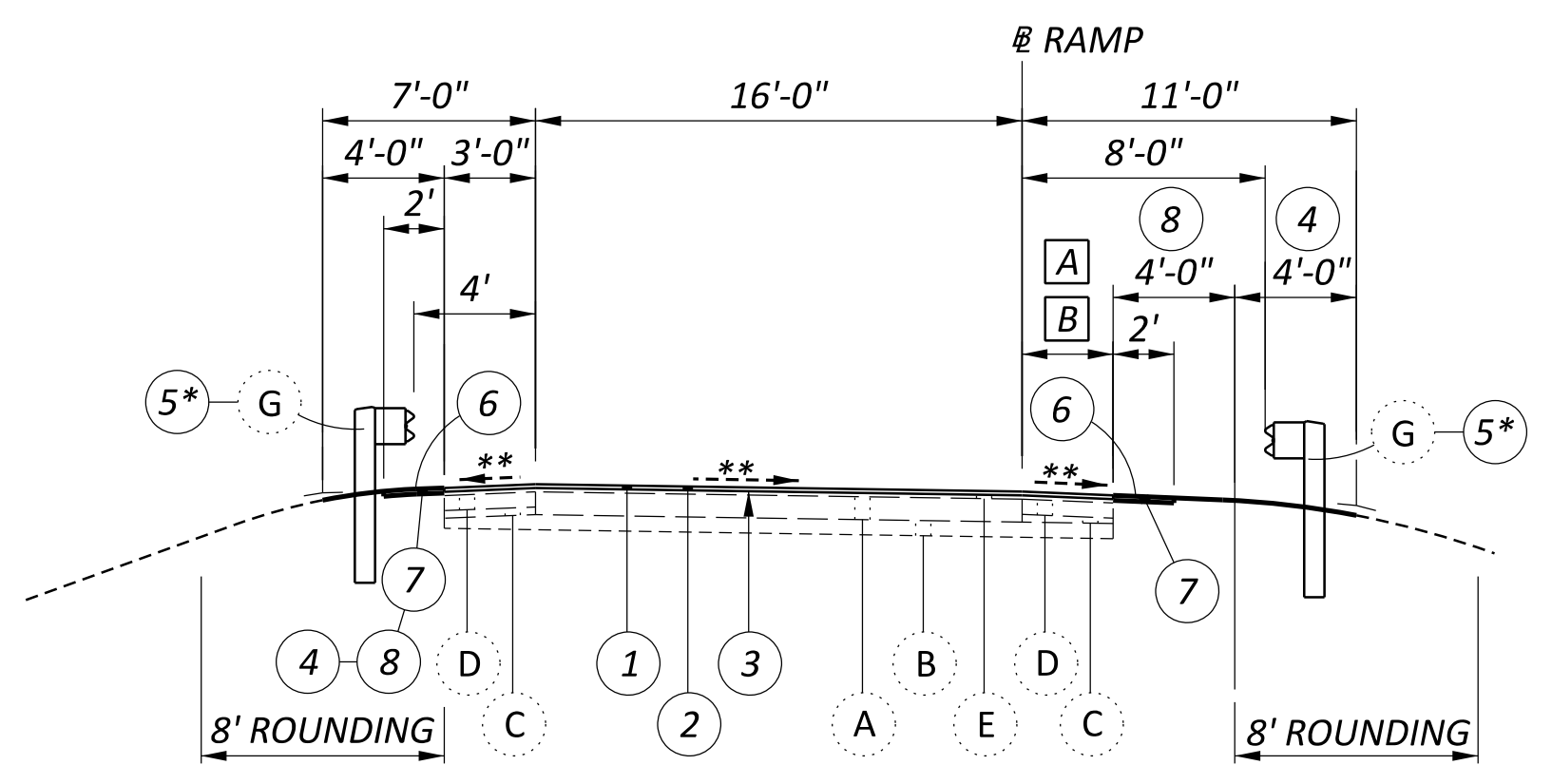
NOTE:

1. SEE SHEET NO. P.04 FOR LEGEND AND RESURFACING DETAILS

- * IN AREAS OF EXISTING GUARDRAIL FOR THE C.R. 80 INTERCHANGE, DO NOT DISTURB THE EXISTING PAVING UNDER GUARDRAIL
- ** MATCH EXISTING PAVEMENT SLOPE



DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.07	71



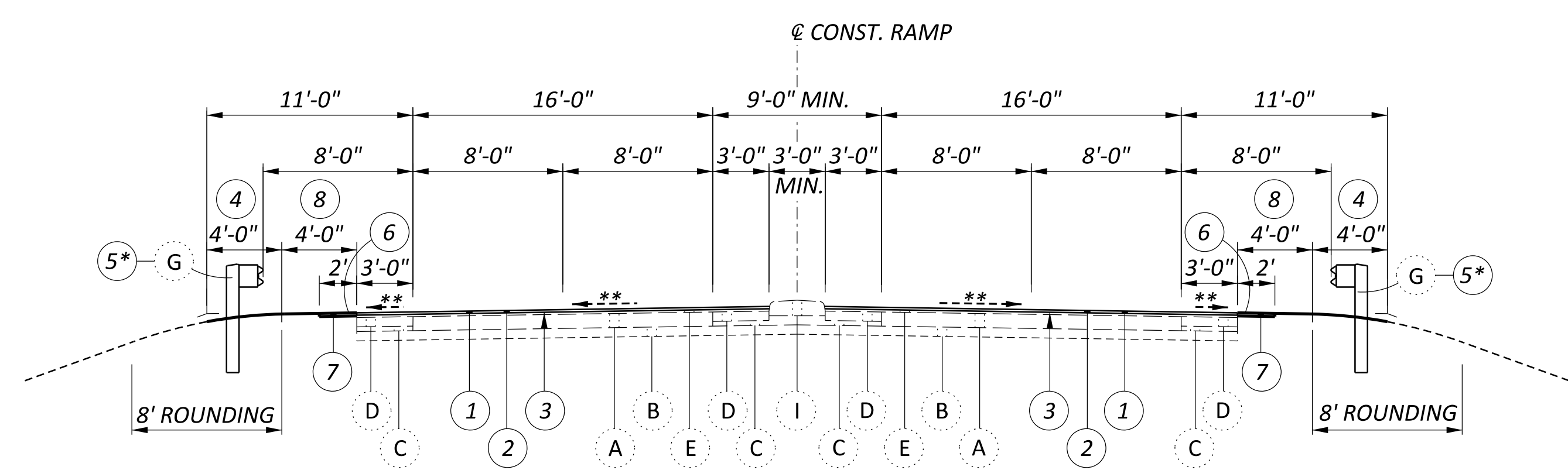
RAMPS
NORMAL & SUPERELEVATED SECTION
 (IN DIRECTION OF TRAFFIC)

U.S. 250/S.R. 21 INTERCHANGE (EXIT 87):
 RAMP 'A' STA. 41+26.00 TO STA. 52+38.67
 RAMP 'B' STA. 42+80.22 TO STA. 50+79.86
 RAMP 'C' STA. 34+96.08 TO STA. 43+96.59
 RAMP 'D' STA. 38+99.72 TO STA. 45+21.39

- [A] 3'-0" RAMP A & B
- [B] 6'-0" RAMP C & D

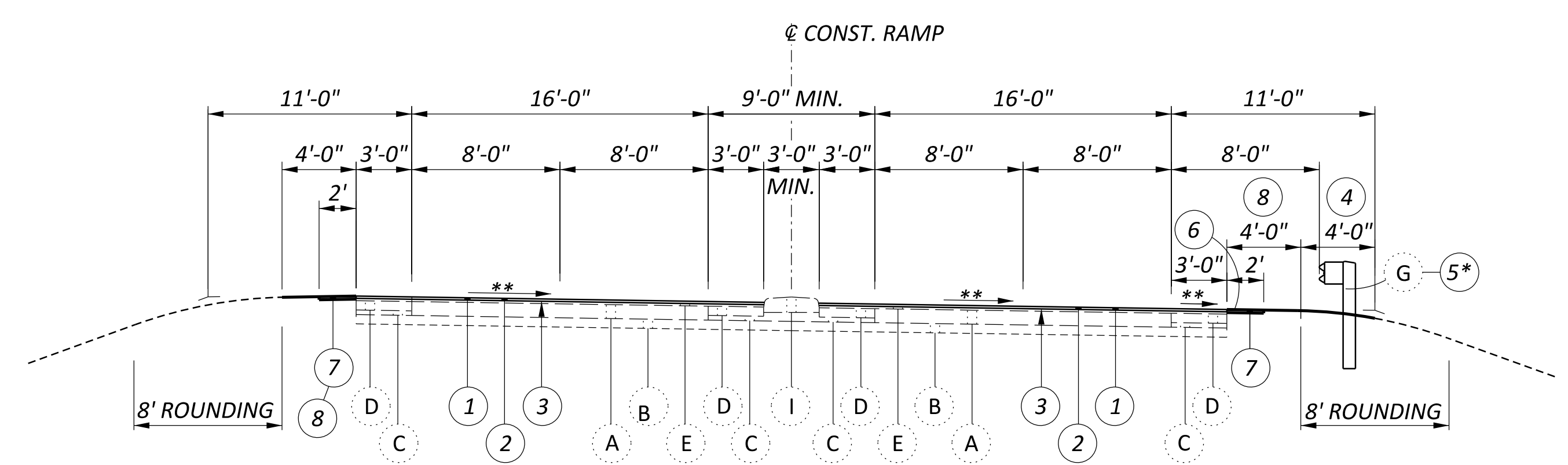
NOTE:

1. SEE SHEET NO. P.04 FOR LEGEND AND RESURFACING DETAILS
- * SEE GUARDRAIL ESTIMATED QUANTITIES FOR PROPOSED GUARDRAIL REPLACEMENT LOCATIONS.
 ** MATCH EXISTING PAVEMENT SLOPE



RAMPS 'AB' & 'CD'
NORMAL SECTION

U.S. 250/S.R. 21 INTERCHANGE (EXIT 87):
 RAMP 'AB' STA. 59+25.00 TO STA. 61+02.90
 RAMP 'CD' STA. 43+96.59 TO STA. 46+28.47

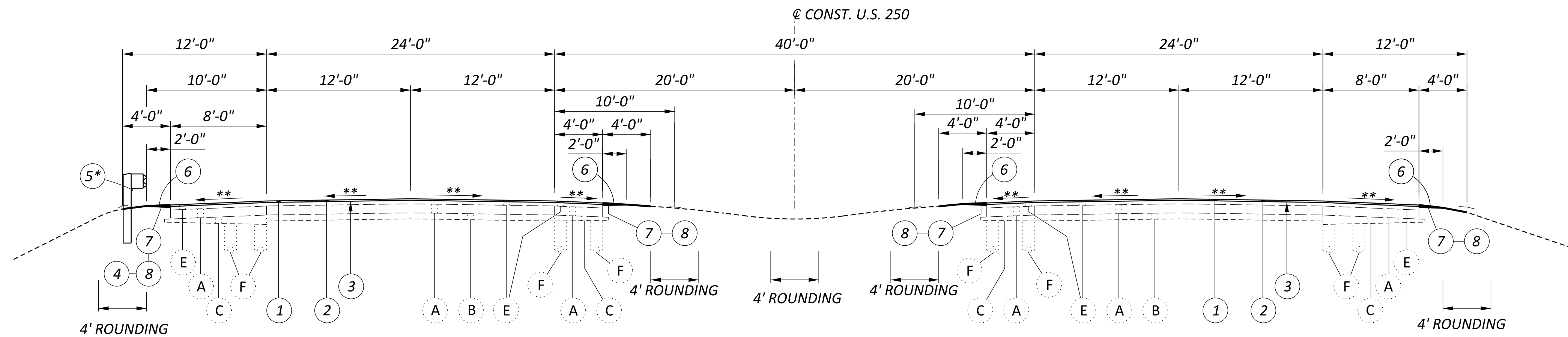


RAMPS 'AB'
SUPERELEVATED SECTION

U.S. 250/S.R. 21 INTERCHANGE (EXIT 87):
 RAMP 'AB' STA. 52+38.67 TO STA. 59+25.00



DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.08	71



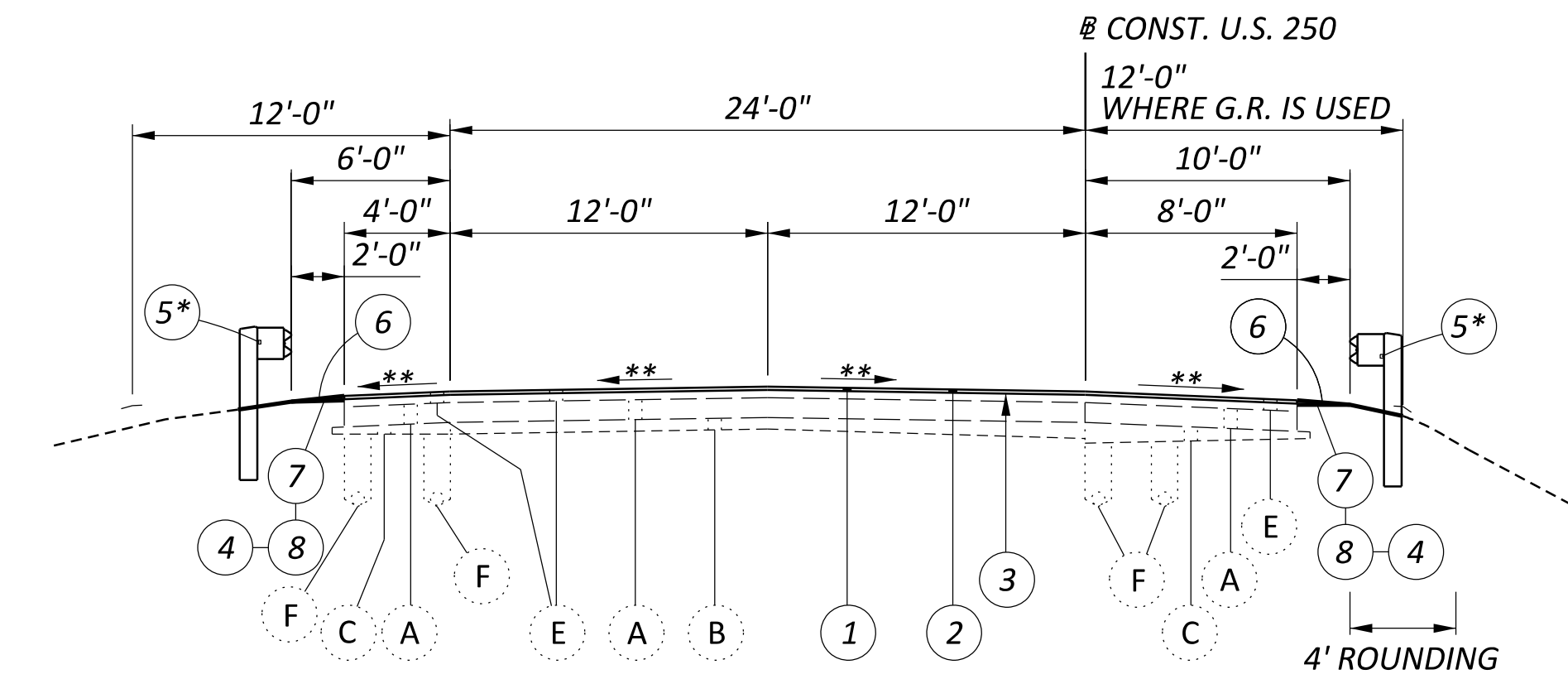
NORMAL SECTION
 STA. 638+50.00 TO STA. 650+00.00

NOTE:

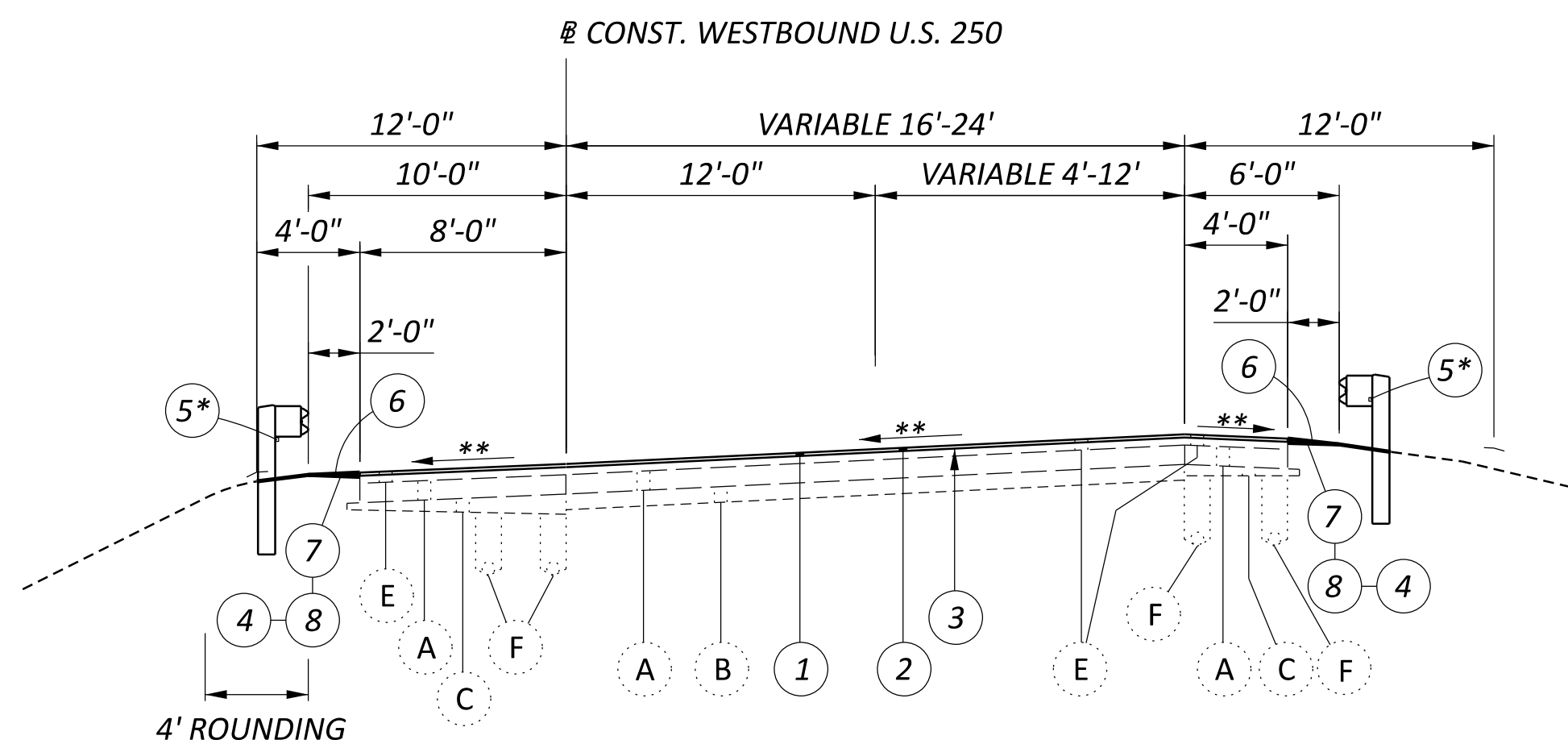
1. SEE SHEET NO. P.04 FOR LEGEND AND RESURFACING DETAILS

* SEE GUARDRAIL ESTIMATED QUANTITIES FOR PROPOSED GUARDRAIL REPLACEMENT LOCATIONS.

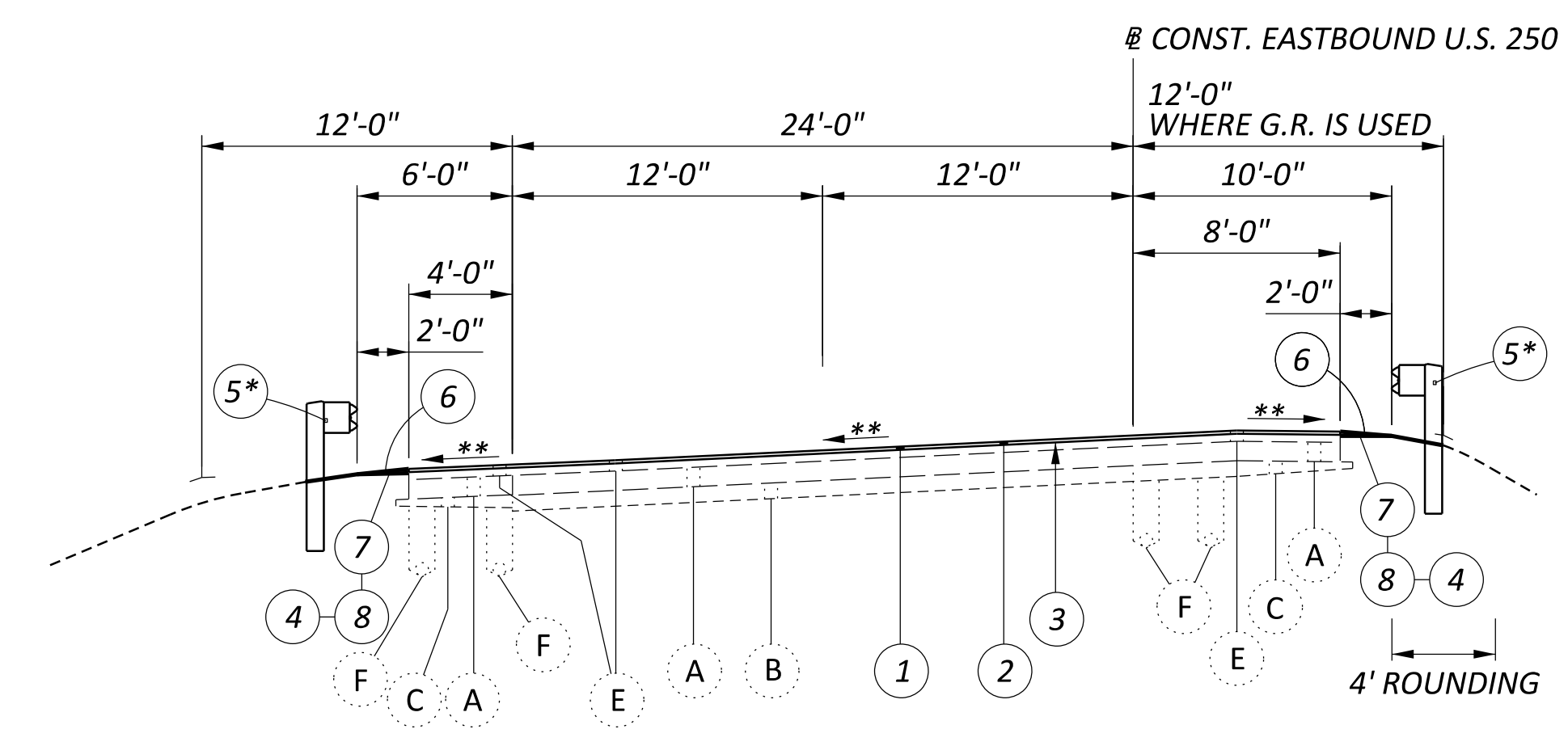
** MATCH EXISTING PAVEMENT SLOPE



NORMAL SECTION
 EASTBOUND U.S. 250
 STA. 608+50.00 TO STA. 613+50.00
 STA. 634+25.00 TO STA. 638+50.00



SUPERELEVATED SECTION
 WESTBOUND U.S. 250
 STA. 617+71.62 TO STA. 638+50.00



SUPERELEVATED SECTION
 EASTBOUND U.S. 250
 STA. 591+08.54 TO STA. 608+50.00
 STA. 613+50.00 TO STA. 634+25.00

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET

TOTAL

P.09 | 71

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER, OR ADJACENT TO, THE WORK AREA.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE (OUPS) TO ASSURE THAT THERE ARE NO UTILITY CONFLICTS IN THE AREA OF THE NEW SIGN SUPPORTS AND GUARDRAIL. SHOULD A CONFLICT BE NOTED, THE CONTRACTOR SHALL MOVE THE SIGN IN ORDER TO AVOID THE CONFLICT. THE ADJUSTED LOCATION SHALL BE AT THE APPROVAL OF THE ENGINEER.

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

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

HIGHWAY LIGHTING AND/OR TRAFFIC SIGNALS: EVEN THOUGH ODOT IS LISTED AS A MEMBER OF THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE CONTRACTOR IS REQUIRED TO CONTACT ODOT DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY THE ODOT PROJECT ENGINEER/PROJECT SUPERVISOR, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT HOURS IN ADVANCE OF ANY WORK.

PROFILE AND ALIGNMENT

THE WORK PROPOSED BY THIS PROJECT IS FOR THE PLANING AND PAVING OF THE EXISTING PAVEMENT. THE ALIGNMENT AND SUPERELEVATION RATES OF THE EXISTING PAVEMENT WILL NOT BE CHANGED AND THE PROFILE OF THE PROPOSED SURFACE WILL BE SIMILAR TO THAT OF THE EXISTING PAVEMENT. PREVIOUS CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT AND PROFILE ARE LISTED ON THIS SHEET.

PREVIOUS CONSTRUCTION PLANS

THE FOLLOWING PREVIOUS CONSTRUCTION PLANS ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 11 OFFICE:

- TUS-39-12.64, INTERSECTION UPGRADE, (PID 99976), 2018
- TUS-77-20.73/TUS-250-11.88, 4-LANE MAINTENANCE, (PID 81725), 2012
- TUS-77-24.50, NEW INTERCHANGE CONSTRUCTION, (PID 19734), 2009
- TUS-77-25.95, BRIDGE REMOVAL AND FILL, (PID 87890), 2014
- TUS-77-20.16/TUS-250-18.90 BRIDGE OVERLAY, (PID 109155), 2019

THESE PLANS CAN BE DOWNLOADED FROM THE FOLLOWING FTP SITE: [FTP://FTP.DOT.STATE.OH.US/PUB/CONTRACTS/ATTACH](ftp://ftp.dot.state.oh.us/pub/contracts/attach)

ITEM 201 - 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.

SURFACE COURSE COMPLETION REQUIREMENTS

ANY GIVEN LENGTH OF WORK ON WHICH RESURFACING OPERATIONS HAVE BEEN STARTED IN A CONSTRUCTION SEASON SHALL HAVE THE SURFACE COURSE PLACED THAT SAME SEASON.

COORDINATION OF RESURFACING AND PLANING OPERATIONS

ONCE THE PAVEMENT PLANING OPERATIONS HAVE COMMENCED, THE CONTRACTOR SHALL PLANE CONTINUOUSLY UNTIL ALL ELEMENTS OF WORK ASSOCIATED WITH THE PAVEMENT PLANING OPERATIONS ARE CONCLUDED. THE PAVEMENT PLANING OPERATIONS SHALL BE COMPLETED IN A TIMELY MANNER, OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR MUST BEGIN PAVING OPERATIONS NO LATER THAN 4 DAYS AFTER THE START OF THE PAVEMENT PLANING.

IF ASPHALT CONCRETE IS TO BE APPLIED DIRECTLY ONTO PORTLAND CEMENT, CONCRETE, OR BRICK PAVEMENT, THE CONTRACTOR SHALL TACK THE EXISTING PAVEMENT WITH RUBBERIZED ASPHALT EMULSION CONFORMING TO C&MS 702.13.

ALL GRINDINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR EXCEPT FOR WHAT IS REQUIRED TO BE USED FOR SHOULDER MATERIAL INDICATED IN ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN AND THE 300 TON DELIVERED TO THE TUSCARWAS COUNTY GARAGE.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, (1 1/2" AND 1 3/4" DEPTH)

THIS ITEM SHALL INCLUDE HAULING THE GRINDINGS FROM THE PAVEMENT PLANING OPERATION TO THE ADDRESS LISTED BELOW AND STOCKPILING THE MATERIAL IN A MANNER ACCEPTABLE TO THE ENGINEER. CONTINUOUS END DUMPING WILL NOT BE PERMITTED.

ALL PARTS: 300 TOTAL TONS (150 C.Y.) DELIVERED TO:

TUSCARAWAS COUNTY GARAGE
2201 REISER AVE. SE
NEW PHILADELPHIA, OH 44663
CONTACT: DAVE GLAZER
PHONE: 330-308-6590

ALL LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE SQUARE YARD BID PRICE FOR ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN, (PG70-22M)

FOLLOW SPECIFICATION 703.05 EXCEPT DO NOT USE COURSE 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 442 - ANTI-SEGREGATION EQUIPMENT

PROVIDE A MATERIAL TRANSFER VEHICLE IN ACCORDANCE WITH C&MS 401.12 WHEN PLACING THE ASPHALT SURFACE COURSE ON MAINLINE LANES ONLY.

THESE QUANTITIES ARE CARRIED WITH THE RESURFACING ESTIMATED QUANTITY SHEETS.

ITEM 621 - RAISED PAVEMENT MARKER REMOVED

EXISTING RAISED PAVEMENT MARKERS SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR DISPOSAL OFF THE PROJECT. IN AREAS OF PAVEMENT PLANING ONLY, THE REQUIREMENT TO FILL THE DEPRESSIONS SHALL BE WAIVED.

SHIELD

THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGELINE. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS SET FORTH IN CMS 107.10 CONCERNING THE PROTECTION AND RESTORATION OF ALL PUBLIC AND PRIVATE PROPERTY IMPACTED BY CONSTRUCTION OPERATIONS.

ITEM 408 - PRIME COAT, AS PER PLAN

THE CONTRACTOR WILL APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED AGGREGATE SHOULDER. A SHIELD SHALL BE PROVIDED TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

ITEM 617 - SHOULDER PREPARATION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 617.04, GRADE THE LOOSENEED BERM WITHIN FOUR FEET OF THE EDGE OF PAVEMENT TO ENSURE PROPER DRAINAGE. REMOVE EXCESS MATERIAL AND RECYCLE OR DISPOSE OF THE MATERIAL ACCORDING TO C&MS 105.16 AND 105.17.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

GRADED SHOULDERS SHALL BE RESHAPED AS PER THE REQUIREMENTS OF ITEM 617, COMPACTED AGGREGATE. GRINDINGS SHALL BE USED IN LIEU OF ITEM 617, COMPACTED AGGREGATE. IF THE AMOUNT OF GRINDINGS ARE NOT SUFFICIENT TO COVER THE COMPACTED AGGREGATE QUANTITY REQUIRED FOR THIS PLAN, THEN ADDITIONAL MATERIAL MEETING SPECIFICATION 617 SHALL BE PROCURED AND USED BY THE CONTRACTOR. ALL GRINDINGS SHALL ADHERE TO THE SPECIFICATIONS STATED IN CMS 617 AND MEET GRADATIONS CONFORMING TO CMS 703.18. THE COST FOR STORING THE GRINDINGS ON THE PROJECT AND PLACING THE GRINDINGS SHALL ALSO BE INCLUDED IN THIS ITEM.

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 611 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN

THE CONTRACTOR SHALL REMOVE THE EXISTING PAVEMENT AND SHEET METAL COVERING THE EXISTING GRATE AND ADJUST THE EXISTING CASTING TO GRADE PER C&MS 611.11D. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 611 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN - **1 EACH**

THIS CATCH BASIN IS IDENTIFIED AS CB-1 ON SHEET P.24 AT STA. 94+34 (NORTHBOUND I.R. 77 @ THE GORE WITH WESTBOUND U.S. 250)

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT AND COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 611 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B

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

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

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

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE J, ASTM D4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

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

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016

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

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE J, ASTM D4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

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 646 - EPOXY PAVEMENT MARKINGS
ITEM 807 - WET REFLECTIVE EPOXY PAVEMENT MARKINGS**

THE CONTRACTOR SHALL REPLACE THE EXISTING PAVEMENT MARKINGS WITHIN THE PROJECT LIMITS WITH NEW PAVEMENT MARKINGS AT THE SAME LOCATIONS AS PER CMS 641.06. SEE STANDARD DRAWING TC-71.10 AND TC-72.20 FOR PAVEMENT MARKING DETAILS.

DESIGN AGENCY



DESIGNER
MVC

REVIEWER
TES 05/12/22

PROJECT ID
107570

SHEET TOTAL
P.10 71

**I.R. 77
 DESIGN DESIGNATION (20.53 TO 20.84)**

CURRENT ADT (2023) ----- 19,000
 DESIGN ADT (2035) ----- 21,000
 DESIGN HOURLY VOLUME (2035) ----2,100
 DIRECTIONAL DISTRIBUTION ----- 51%
 TRUCKS (24 HOUR B&C) ----- 16%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (20.84 TO 20.89)**

CURRENT ADT (2023) ----- 32,500
 DESIGN ADT (2035) ----- 32,500
 DESIGN HOURLY VOLUME (2035) ----3,200
 DIRECTIONAL DISTRIBUTION ----- 51%
 TRUCKS (24 HOUR B&C) ----- 14%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (20.89 TO 20.91)**

CURRENT ADT (2023) ----- 32,500
 DESIGN ADT (2035) ----- 32,500
 DESIGN HOURLY VOLUME (2035) ----3,200
 DIRECTIONAL DISTRIBUTION ----- 100%
 TRUCKS (24 HOUR B&C) ----- 13%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (20.91 TO 21.20)**

CURRENT ADT (2023) ----- 32,500
 DESIGN ADT (2035) ----- 32,500
 DESIGN HOURLY VOLUME (2035) ----3,200
 DIRECTIONAL DISTRIBUTION ----- 50%
 TRUCKS (24 HOUR B&C) ----- 14%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (21.20 TO 23.36)**

CURRENT ADT (2023) ----- 32,500
 DESIGN ADT (2035) ----- 33,500
 DESIGN HOURLY VOLUME (2035) ----3,400
 DIRECTIONAL DISTRIBUTION ----- 50%
 TRUCKS (24 HOUR B&C) ----- 14%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (22.35 TO 22.78)**

CURRENT ADT (2023) ----- 32,500
 DESIGN ADT (2035) ----- 32,500
 DESIGN HOURLY VOLUME (2035) ----3,200
 DIRECTIONAL DISTRIBUTION ----- 100%
 TRUCKS (24 HOUR B&C) ----- 13%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (23.36 TO 23.37)**

CURRENT ADT (2023) ----- 32,500
 DESIGN ADT (2035) ----- 32,500
 DESIGN HOURLY VOLUME (2035) ----3,200
 DIRECTIONAL DISTRIBUTION ----- 100%
 TRUCKS (24 HOUR B&C) ----- 14%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (23.37 TO 25.02)**

CURRENT ADT (2023) ----- 34,500
 DESIGN ADT (2035) ----- 38,500
 DESIGN HOURLY VOLUME (2035) ----3,500
 DIRECTIONAL DISTRIBUTION ----- 50%
 TRUCKS (24 HOUR B&C) ----- 15%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (25.02 TO 27.38)**

CURRENT ADT (2023) ----- 35,500
 DESIGN ADT (2035) ----- 35,500
 DESIGN HOURLY VOLUME (2035) ----3,200
 DIRECTIONAL DISTRIBUTION ----- 50%
 TRUCKS (24 HOUR B&C) ----- 13%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (27.38 TO 27.45)**

CURRENT ADT (2023) ----- 35,500
 DESIGN ADT (2035) ----- 35,500
 DESIGN HOURLY VOLUME (2035) ----3,600
 DIRECTIONAL DISTRIBUTION ----- 100%
 TRUCKS (24 HOUR B&C) ----- 13%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (27.45 TO 27.56)**

CURRENT ADT (2023) ----- 35,500
 DESIGN ADT (2035) ----- 35,500
 DESIGN HOURLY VOLUME (2035) ----3,200
 DIRECTIONAL DISTRIBUTION ----- 50%
 TRUCKS (24 HOUR B&C) ----- 13%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**I.R. 77
 DESIGN DESIGNATION (27.56 TO 27.72)**

CURRENT ADT (2023) ----- 28,500
 DESIGN ADT (2035) ----- 33,000
 DESIGN HOURLY VOLUME (2035) ----3,000
 DIRECTIONAL DISTRIBUTION ----- 50%
 TRUCKS (24 HOUR B&C) ----- 15%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN INTERSTATE
 NHS PROJECT ----- YES

**U.S. 250
 DESIGN DESIGNATION (11.88 TO 12.08)**

CURRENT ADT (2023) ----- 7,200
 DESIGN ADT (2035) ----- 8,000
 DESIGN HOURLY VOLUME (2035) ----700
 DIRECTIONAL DISTRIBUTION ----- 100%
 TRUCKS (24 HOUR B&C) ----- 14%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN FREEWAY/EXPRESSWAY
 NHS PROJECT ----- YES

**U.S. 250
 DESIGN DESIGNATION (12.08 TO 12.20)**

CURRENT ADT (2023) ----- 7,200
 DESIGN ADT (2035) ----- 8,100
 DESIGN HOURLY VOLUME (2035) ----800
 DIRECTIONAL DISTRIBUTION ----- 100%
 TRUCKS (24 HOUR B&C) ----- 14%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN FREEWAY/EXPRESSWAY
 NHS PROJECT ----- YES

**U.S. 250
 DESIGN DESIGNATION (12.20 TO 12.33)**

CURRENT ADT (2023) ----- 20,000
 DESIGN ADT (2035) ----- 20,500
 DESIGN HOURLY VOLUME (2035) ----2,000
 DIRECTIONAL DISTRIBUTION ----- 100%
 TRUCKS (24 HOUR B&C) ----- 18%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN FREEWAY/EXPRESSWAY
 NHS PROJECT ----- YES

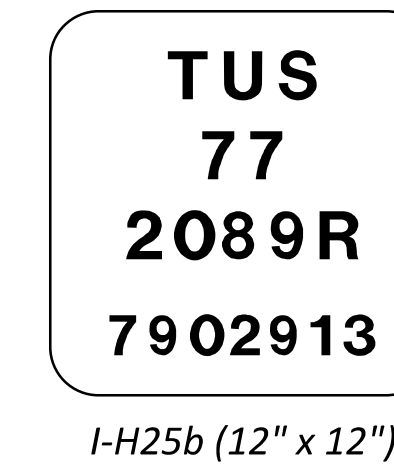
**U.S. 250
 DESIGN DESIGNATION (12.33 TO 12.80)**

CURRENT ADT (2023) ----- 20,000
 DESIGN ADT (2035) ----- 20,500
 DESIGN HOURLY VOLUME (2035) ----2,000
 DIRECTIONAL DISTRIBUTION ----- 50%
 TRUCKS (24 HOUR B&C) ----- 18%
 DESIGN SPEED ----- 70 MPH
 LEGAL SPEED ----- 70 MPH
 DESIGN FUNCTIONAL CLASSIFICATION:
 URBAN FREEWAY/EXPRESSWAY
 NHS PROJECT ----- YES

STRUCTURE IDENTIFICATION SIGNS

A STRUCTURE IDENTIFICATION SIGN (I-H25b) SHALL BE PLACED AT EACH APPROACH TO THE STRUCTURE INDICATED IN THE PLANS, ON THE RIGHT SHOULDER, FACING TRAFFIC. THESE SIGNS ARE MAINTENANCE MARKERS, AND SHALL UTILIZE SCD TC-52.20 SIGN BLANK DETAIL SQ-1-3 FOR MOUNTING HOLE LOCATIONS, EXCEPT THE INTERIOR (THIRD) HOLE SHALL BE NON-PERFORMED. ADDITIONALLY, THE SIGNS SHALL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

MOUNT SIGNS ON NEW NO. 2 POSTS AND INSTALL PER SCD TC-41.20. FOR SIGN LOCATIONS, SEE THE PLAN SHEETS P.23, P.24, AND P.34 FOR LOCATIONS. FOR SIGN QUANTITIES, SEE SIGNING ESTIMATED QUANTITIES ON SHEET NO. P.37.



GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE GUARDRAIL, INSTALL EMBANKMENT, GRADE AND REINSTALL GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF COMPLIANCE.

ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN

INSTALL THIS MGS BRIDGE TERMINAL ASSEMBLY AS PER SCD MGS-3.1 EXCEPT CONNECT THE NESTED THRIE BEAM TO THE EXISTING THRIE-BEAM TERMINAL CONNECTOR. ADJUST THE HEIGHT TO THE REQUIRED MGS HEIGHT OVER FIFTY FEET.

ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN

INSTALL THIS MGS BRIDGE TERMINAL ASSEMBLY AS PER SCD MGS-3.2 EXCEPT CONNECT THE MGS W-BEAM RAIL TO THE EXISTING W-BEAM TERMINAL CONNECTOR. ADJUST THE HEIGHT TO THE REQUIRED MGS HEIGHT OVER FIFTY FEET.

RAISED PAVEMENT MARKERS (RPM'S)

THE CONTRACTOR SHALL OMIT PLACING RAISED PAVEMENT MARKERS ACROSS THE CONCRETE DECKS AND CONCRETE APPROACH SLABS.

DESIGN AGENCY



DESIGNER
 MVC

REVIEWER
 TES 05/12/22

PROJECT ID
 107570

SHEET TOTAL
 P.11 | 71

ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF CMS ITEM 614, THESE MAINTENANCE OF TRAFFIC NOTES AND DETAILS, THE STANDARD CONSTRUCTION DRAWINGS, AND THE TRAFFIC CONTROL DETAILS DESCRIBED IN THESE PLANS.

THE MINIMUM LANE WIDTH FOR TRAFFIC CONTROL SHALL BE 11 FEET (EDGE LINE TO EDGE LINE) AT ALL TIMES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ORGANIZE HIS WORK IN SUCH A MANNER TO PROVIDE THE MOST SAFETY WITH THE LEAST INCONVENIENCE TO THE TRAVELING PUBLIC.

THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE MAINTENANCE OF TRAFFIC SCHEME. THE CONTRACTOR SHALL SUBMIT, IN WRITING, THIS MAINTENANCE OF TRAFFIC SCHEME AND A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT.

THE SHOULDERS SHALL HAVE THE EXISTING RUMBLE STRIPS REMOVED BEFORE TRAFFIC IS PERMITTED TO BE MAINTAINED ON THEM. SEE EXISTING RUMBLE STRIPS NOTE FOR ADDITIONAL INFORMATION.

THE PROPOSED MEDIAN SHOULDER PAVING SHALL BE COMPLETED BEFORE TRAFFIC IS PERMITTED TO BE MAINTAINED ON THEM.

ANY OPEN PAVEMENT TRENCH OR DROP-OFF SHALL BE ADEQUATELY MAINTAINED AND PROTECTED. THE PROTECTION USED SHALL MEET THE REQUIREMENTS OF STD DWG MT-101.90.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE WORK ZONES WHICH ALTERNATELY CLOSE BOTH THE PASSING AND TRAVEL LANE UNLESS THE DISTANCE BETWEEN THE LANE RESTRICTIONS EXCEEDS 2 MILES.

NO LANE CLOSURES CAN BE LEFT IN PLACE AT THE END OF A WORK SHIFT DURING DAYLIGHT HOURS.

ALL RAMPS MUST BE BUILT PART WIDTH AND CANNOT BE SHUT DOWN AT ANY TIME.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SMOOTH AND ORDERLY FLOW OF TRAFFIC THROUGH THE PROJECT AREA 24 HOURS PER DAY FOR THE DURATION OF THE PROJECT. THIS CONSISTS OF NOTIFYING THE OHIO STATE PATROL AFTER ENCOUNTERING ANY ACCIDENTS OR DISABLED VEHICLES OR OBJECTS HINDERING THE FLOW OF TRAFFIC.

THE CONTRACTOR SHALL DESIGNATE TO THE ENGINEER A PERSON RESPONSIBLE FOR MAINTENANCE OF TRAFFIC CONTROL DURING NON-WORK HOURS WHO SHALL BE AVAILABLE WITHIN (30) MINUTES AFTER NOTIFICATION.

PAYMENT FOR PROVIDING WATCHMEN, FURNISHING, ERECTING, MAINTAINING AND REMOVING SIGNS, CONES, DRUMS, MARKERS, SPECIAL LIGHTING, FLOODLIGHTING, WORK ZONE PAVEMENT MARKINGS, WORK ZONE RAISED PAVEMENT MARKERS, ETC., SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL ADDITIONAL SIGNS OR OTHER TRAFFIC CONTROL DEVICES AS REQUIRED ABOVE. ALL COSTS INVOLVED IN FURNISHING, INSTALLING AND MAINTAINING THESE DEVICES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

UNLESS THE ENGINEER DEEMS IT PHYSICALLY IMPOSSIBLE, ALL CONSTRUCTION EQUIPMENT SHALL EXIT ALL WORK ZONES FROM THE DOWNSTREAM END OF THE WORK ZONE OR BY INTERCHANGE RAMPS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO DIRECTLY TRANSPORT OR OPERATE ANY EQUIPMENT ACROSS THE OPEN LANES OF THE ROADWAY.

ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN (CONTINUED...)

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

THE CONTRACTOR WILL NOT PERFORM ANY WORK ON THIS PROJECT THAT REQUIRES A LANE CLOSURE BETWEEN THE HOURS OF 6:00 AM TO 7:00 PM ON MONDAY THROUGH THURSDAY, AND FROM 6:00 AM FRIDAY THROUGH 7:00 PM SUNDAY.

THE PLANING AND RESURFACING SHALL PROCEED CONTINUOUSLY DURING THE TIME FRAME SPECIFIED ABOVE, A MINIMUM OF FIVE (5) DAYS PER WEEK, WEATHER PERMITTING, EXCEPT DURING HOLIDAYS AND EVENTS LISTED BELOW.

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

MEMORIAL DAY FOURTH OF JULY
 LABOR DAY THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPENED 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 THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THRU 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THRU 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THRU 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THRU 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THRU 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THRU 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THRU 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THRU 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT TABLE BELOW:

LANE VALUE CONTRACT TABLE			
DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT
ALL LANES OF I.R. 77 AND U.S. 250 WITHIN THE PROJECT LIMITS	6:00 AM TO 7:00 PM, MON THROUGH THU, AND 6:00 AM FRI THROUGH 7:00 PM SUN	EACH HOUR	\$10,800

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

NOTIFICATION OF TRAFFIC RESTRICTIONS

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

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

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

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

IN ADDITION TO THE REQUIREMENTS OF SECTION 614.03 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY. THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT.

EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY, THIRTY FEET (30') FROM THE EDGE OF TRAVELED HIGHWAY UNLESS BEHIND GUARDRAIL, WHEN VARIOUS OPERATIONS ARE SCHEDULED TO CONTINUE THE NEXT WORKDAY. ON WEEKENDS OR AT OTHER TIMES OF SUSPENSION OF WORK, THE EQUIPMENT SHALL BE STORED AT EITHER A STORAGE AREA REMOVED FROM THE INTERSTATE ROUTE RIGHT OF WAY OR DESIGNATED LOCATIONS APPROVED BY THE ENGINEER OUTSIDE THE CLEAR ZONE AND ENVIRONMENTALLY IMPORTANT AREAS. NO EQUIPMENT OR MATERIALS SHALL BE PARKED OR STORED IN THE MEDIAN OF THE HIGHWAY OR USACE FLOWAGE EASEMENTS. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME 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 THROUGHOUT THE WORKSITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

MOVEMENT OF DRUMS

THE ROW OF DRUMS ALONG A CLOSED LANE SHALL BE MOVED OUT OF THE OPEN LANE ONTO THE NEW PAVEMENT AS SOON AS PAVING OPERATIONS PERMIT.

PERMITTED LANE CLOSURES ON INTERSTATE HIGHWAYS

ALL WORK ON THIS PROJECT ALONG I.R. 77 AND U.S. 250 THAT REQUIRES A LANE CLOSURE SHALL BE GOVERNED BY THE PERMITTED LANE CLOSURE SCHEDULE (PLCS). THE PLCS CAN BE ASSESSED AT THE FOLLOWING WEBSITE: [HTTP://PLCM.DOT.STATE.OH.US](http://plcm.dot.state.oh.us)

DESIGN AGENCY



DESIGNER
 MVC

REVIEWER
 TES 05/12/22

PROJECT ID
 107570

SHEET TOTAL
 P.12 | 71

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

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

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

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

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

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

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

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, 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).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:

ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND, AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

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

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

THE FIRST ACTIVE WORK AREA THAT DRIVERS ENCOUNTER; OR THE ACTIVE WORK AREA Laterally CLOSEST TO THE OPEN TRAVELED LANE; OR OTHER LOCATION AS APPROVED BY THE ENGINEER.

THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

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

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

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

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

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

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

PART 1 (01/IMS/PV)
ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE ----- 1,585 HOURS

PART 2 (02/NHS/PV)
ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE ----- 215 HOURS

USE: 1,800 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 A 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 CMS 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 PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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

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

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

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 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.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

PART 1 (01/IMS/PV)
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN --- 72 SIGN MONTH (ASSUMING 9 PCMS SIGNS FOR 8 MONTHS FOR I.R. 77)

PART 2 (02/NHS/PV)
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN --- 16 SIGN MONTH (ASSUMING 2 PCMS SIGNS FOR 8 MONTHS - U.S. 250)

USE: 88 SIGN MONTH

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN

THE CONTRACTOR SHALL USE THIS MATERIAL TO MAINTAIN THE BRIDGE DECKS AND PAVEMENT THROUGHOUT THE DURATION OF THE CONTRACT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

(01/IMS/PV) (I.R. 77)
ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN ----- 44 CU. YD.

(02/NHS/PV) (I.R. 77)
ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN ----- 6 CU. YD.

USE: 50 CU YD.

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET TOTAL

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ITEM 614 - WORK ZONE SPEED ZONES (WZSZS)

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

REVISION NUMBER	COUNTY & ROUTE	DIRECTION
WZ-60672	TUS-77 U.S. 250	N.B. & S.B. E.B. & W.B.

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

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

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

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

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

WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS SHALL BE IN ACCORDANCE WITH THIS NOTE AND SCD MT-104.10. ADDITIONALLY PAYMENT MAY BE REMOVED, OR A DISINCENTIVE APPLIED, FOR WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS THE SAME AS DESCRIBED IN THE MOST RECENT PUBLICATION OF SS 808 IN REGARDS TO WZSZS USING DSL SIGN ASSEMBLIES (SEE SS 808.06 PARAGRAPHS 4 THROUGH 7, INCLUDING TABLE 1).

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN O MUTCD PART 6.

**ITEM 614 - WORK ZONE SPEED ZONES (WZSZS)
(CONTINUED)**

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

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

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

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

PART 1 (01/IMS/PV)
 ITEM 808 - DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY --- 56 SIGN MONTH
 [ASSUMING 7 DSL SIGN ASSEMBLIES FOR 8 MONTHS FOR I.R. 77]

PART 2 (02/NHS/PV)
 ITEM 808 - DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY --- 16 SIGN MONTH
 [ASSUMING 2 DSL SIGN ASSEMBLIES FOR 8 MONTHS FOR U.S. 250]

USE: 72 SIGN MONTH

EXISTING RUMBLE STRIPS

IF THE CONTRACTOR CHOOSES TO MOVE TRAFFIC ONTO THE OUTSIDE SHOULDER TO MAINTAIN TRAFFIC, THE EXISTING RUMBLE STRIPS WILL HAVE TO BE REMOVED. THE AREA OF THE EXISTING RUMBLE STRIPS SHALL BE MILLED TO A DEPTH OF AT LEAST 2 INCHES; THE MILLED SURFACE AND THE SIDES SHALL BE COVERED WITH ODOT APPROVED AC LIQUID AND THEN FILLED WITH ASPHALT. PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SHALL BE USED TO FILL THE RUMBLE STRIPS. PAYMENT FOR ALL WORK ASSOCIATED WITH MILLING, AC LIQUID, TRAFFIC CONTROL AND THE FILLING OF THE RUMBLE STRIPS SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED WITH ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

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

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

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

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

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

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND RE-ERECTED 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.

PART 1 (01/IMS/PV)
 ITEM 614 - WORK ZONE INCREASED PENALTIES SIGN --- 7 EACH

PART 2 (02/NHS/PV)
 ITEM 614 - WORK ZONE INCREASED PENALTIES SIGN --- 2 EACH

USE: 9 EACH

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

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

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

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

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

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

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.

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

PART 1 (01/IMS/PV)
 ITEM 614 - BARRIER REFLECTOR, TYPE 1 (ONE-WAY) ----- 70 EACH
 PART 2 (02/NHS/PV)
 ITEM 614 - BARRIER REFLECTOR, TYPE 1 (ONE-WAY) ----- 30 EACH
(USE: 100 EACH)

PART 1 (01/IMS/PV)
 ITEM 614 - OBJECT MARKER, ONE-WAY -----70 EACH
 PART 2 (02/NHS/PV)
 ITEM 614 - OBJECT MARKER, ONE-WAY -----30 EACH
(USE: 100 EACH)

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

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ITEM 614 - WORK ZONE PAVEMENT MARKINGS, CLASS I, 807 PAINT
ITEM 614 - WORK ZONE PAVEMENT MARKINGS, CLASS I, 642 PAINT
ITEM 614 - WORK ZONE PAVEMENT MARKINGS, CLASS III, 642 PAINT
ITEM 614 - WORK ZONE MARKING SIGNS

THE CONTRACTOR SHALL BE REQUIRED TO INSTALL WORK ZONE MARKINGS AND SIGNS AT LOCATIONS IDENTIFIED BY THE ENGINEER PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

WORK ZONE PAVEMENT MARKINGS FOR MILLED SURFACES SHALL BE CLASS III, 642 PAINT. WORK ZONE PAVEMENT MARKINGS FOR NEWLY PAVED SURFACES SHALL BE CLASS I, 807 PAINT.

PRIOR TO PLACEMENT OF ANY WORK ZONE PAVEMENT MARKINGS, THE CONTRACTOR SHALL COMPLETELY OBLITERATE, AS PER 614.10, ALL EXISTING PAVEMENT MARKINGS THAT WOULD CREATE CONFUSION OR CONFLICT WITH THE WORK ZONE PAVEMENT MARKINGS.

WORK ZONE RAISED PAVEMENT MARKERS CANNOT BE USED TO SIMULATE (REPLACE) ANY TYPE OF WORK ZONE PAVEMENT MARKING.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR WORK ZONE SIGNS:

PART 1 (01/IMS/PV)
 ITEM 614 - WORK ZONE MARKING SIGN (W8-11-48 OR W8-H12a-48) --
 ---- 7 EACH

PART 2 (02/NHS/PV)
 ITEM 614 - WORK ZONE MARKING SIGN (W8-11-48 OR W8-H12a-48) --
 ---- 2 EACH

USE: 9 EACH

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

DELINEATION OF EXISTING 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 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

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

PART 1 (01/IMS/PV)
 ITEM 614, BARRIER REFLECTOR, TYPE 2, (UNIDIRECTIONAL) -- 50 EACH
 PART 2 (02/NHS/PV)
 ITEM 614, BARRIER REFLECTOR, TYPE 2, (UNIDIRECTIONAL) -- 20 EACH
(USE: 70 EACH)

PART 1 (01/IMS/PV)
 ITEM 614, OBJECT MARKER, ONE-WAY ----- 50 EACH
 PART 2 (02/NHS/PV)
 ITEM 614, OBJECT MARKER, ONE-WAY ----- 20 EACH
(USE: 70 EACH)

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

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 **5 M. GAL.**

WORK ZONE PAVEMENT MARKINGS TABLE

LOCATION	614												FUNDING
	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 807 PAINT (YELLOW)	WORK ZONE EDGE LINE, CLASS I, 807 PAINT (WHITE)	WORK ZONE EDGE LINE, CLASS III, 642 PAINT (YELLOW)	WORK ZONE EDGE LINE, CLASS III, 642 PAINT (WHITE)			WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
	MILE	MILE	MILE	MILE	MILE	MILE			FT.	FT.	FT.	FT.	
PART 1													
NORTHBOUND I.R. 77	6.99	6.99	6.99	6.66	6.99	6.66			124	124	5,982	5,982	
NORTHBOUND I.R. 77 RAMPS	0.07	0.07	1.47	1.47	1.47	1.47					473	473	
SOUTHBOUND I.R. 77	6.99	6.99	6.99	7.54	6.99	7.54			125	125	4,352	4,352	
SOUTHBOUND I.R. 77 RAMPS			1.93	2.05	1.93	2.05					831	831	
SUB-TOTALS PART 1	14.05	14.05	17.38	17.72	17.38	17.72			249	249	11,638	11,638	01/IMS/PV
PART 2													
EASTBOUND AND WESTBOUND U.S. 250	1.31	1.31	1.41	1.96	1.41	1.96					1,452	1,452	
U.S. 250 RAMPS	0.04	0.04	0.36	0.30	0.36	0.30			68	68	611	611	
SUB-TOTALS PART 2	1.35	1.35	1.77	2.26	1.77	2.26			68	68	2,063	2,063	02/NHS/PV
SUB-TOTALS (01/IMS/PV)	14.05	14.05	17.38	17.72	17.38	17.72			249	249	11,638	11,638	01/IMS/PV
SUB-TOTALS (02/NHS/PV)	1.35	1.35	1.77	2.26	1.77	2.26			68	68	2,063	2,063	02/NHS/PV
TOTALS (CARRIED TO GENERAL SUMMARY)	15.40	15.40	39.13		39.13				317	317	13,701	13,701	

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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
10	19		21			35	36		61	62	01/IMS/PV	02/NHS/PV							
ROADWAY																			
LS											LS	LS	201	11000	LS		CLEARING AND GRUBBING		
	356		95									95		202	23000	95	SY	PAVEMENT REMOVED	
			377									356		202	23500	356	SY	WEARING COURSE REMOVED	
						6,000	13,809					377		202	32000	377	FT	CURB REMOVED	
											13,809	6,000		202	38000	19,809	FT	GUARDRAIL REMOVED	
	305										305			203	10000	305	CY	EXCAVATION	
	152										152			203	20000	152	CY	EMBANKMENT	
			51								51			203	35001	51	CY	GRANULAR EMBANKMENT, AS PER PLAN	P.56
	574		185								759			204	10000	759	SY	SUBGRADE COMPACTION	
			170								170			204	50001	170	SY	GEOTEXTILE FABRIC, AS PER PLAN	P.56
						1.14	2.62				2.62	1.14		209	60500	3.76	MILE	LINEAR GRADING	
						5,568.75	13,093.75				13,093.75	5,568.75		606	15050	18,662.5	FT	GUARDRAIL, TYPE MGS	
							1				1			606	26050	1	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
						8	9				9	8		606	26150	17	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
						7	8				8	7		606	26550	15	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
						7	4				4	7		606	35003	11	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	P.11
						7	1				1	7		606	35103	8	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	P.11
EROSION CONTROL																			
			118								118			601	21060	118	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
			114								114			601	26001	114	CY	DUMPED ROCK FILL, TYPE B, AS PER PLAN	P.56
			20								20			601	38001	20	FT	PAVED GUTTER, TYPE 1-4, AS PER PLAN	P.56
			2								2			659	00100	2	EACH	SOIL ANALYSIS TEST	
			202								202			659	00300	202	CY	TOPSOIL	
	1,821										1,821			659	10000	1,821	SY	SEEDING AND MULCHING	
			91								91			659	14000	91	SY	REPAIR SEEDING AND MULCHING	
			0.25								0.25			659	20000	0.25	TON	COMMERCIAL FERTILIZER	
			0.38								0.38			659	31000	0.38	ACRE	LIME	
			10								10			659	35000	10	MGAL	WATER	
											8,850	1,150		832	30000	10,000	EACH	EROSION CONTROL	
DRAINAGE																			
									250		200	50		605	31100	250	FT	AGGREGATE DRAINS	
1											1			611	98631	1	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	P.10
PAVEMENT																			
										100	88	12		251	01010	100	CY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
	440,084										400,429	39,655		254	01001	440,084	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 1 1/2"	P.10
	175											175		254	01001	175	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 1 3/4"	P.10
									1,800		1,800			255	10111	1,800	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC FS, AS PER PLAN (A)	P.61
									250		255	250		255	10111	250	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC FS, AS PER PLAN (B)	P.61
									6,100		5,350	750		255	20000	6,100	FT	FULL DEPTH PAVEMENT SAWING	
	98										98			301	56000	98	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
	132		19								151			304	20000	151	CY	AGGREGATE BASE	
	37,507										34,086	3,421		407	10000	37,507	GAL	TACK COAT	
	16,873										15,452	1,421		408	10001	16,873	GAL	PRIME COAT, AS PER PLAN	P.10
	10,735										9,718	1,017		442	00100	10,735	CY	ANTI-SEGREGATION EQUIPMENT	
	18,396										16,715	1,681		442	10351	18,396	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (447), AS PER PLAN	P.10
			416								416			609	23001	416	FT	COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	P.56
						55						55		609	24510	55	FT	CURB, TYPE 4-C	
	84,375										77,282	7,093		617	20001	84,375	SY	SHOULDER PREPARATION, AS PER PLAN	P.10
	2,193										2,045	148		617	10101	2,193	CY	COMPACTED AGGREGATE, AS PER PLAN	P.10
	159,615										146,065	13,550		618	40100	159,615	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	

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PAVEMENT SUBSUMMARY																	
SHEET NO.	202	203		204	254		301	304	407	408	442		617		618	659	FUNDING
	WEARING COURSE REMOVED	EXCAVATION	EMBANKMENT	SUBGRADE COMPACTION	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	ASPHALT CONCRETE BASE, PG64-22, (449)	AGGREGATE BASE	TACK COAT	PRIME COAT, AS PER PLAN	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	ANTI-SEGREGATION EQUIPMENT	SHOULDER PREPARATION, AS PER PLAN	COMPACTED AGGREGATE, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	SEEDING AND MULCHING	
	SQ. YD.	CU. YD.	CU. YD.	SQ. YD.	1 1/2"	1 3/4"	CU. YD.	CU. YD.	GAL.	GAL.	CU. YD.	CU. YD.	SQ. YD.	CU. YD.	FT.	SQ. YD.	
PART 1																	
SUB-TOTALS CARRIED FROM SHEET P.38					120,240				10,222		5,011	5,011					
SUB-TOTALS CARRIED FROM SHEET P.39					16,251				1,381	3,145	676		15,733	437	36914.12		
SUB-TOTALS CARRIED FROM SHEET P.40					39,000				3,319	3,146	1,623		15,724	436	36914.09		
SUB-TOTALS CARRIED FROM SHEET P.41					112,931				9,599		4,707	4,707					
SUB-TOTALS CARRIED FROM SHEET P.42					16,220				1,378	3,145	676		15,733	437	36910.92		
SUB-TOTALS CARRIED FROM SHEET P.43					38,751				3,296	3,050	1,613		15,248	425	35326.29		
SUB-TOTALS CARRIED FROM SHEET P.44					17,712				1,505		739						
SUB-TOTALS CARRIED FROM SHEET P.45					20,804				1,767		864						
SUB-TOTALS CARRIED FROM SHEET P.46					8,078				687	1,415	337		7,086	148			
SUB-TOTALS CARRIED FROM SHEET P.47					8,966				763	1,551	373		7,758	162			
SUB-TOTALS CARRIED FROM SHEET P.58		65	76	287			49	66	22		17					830	
SUB-TOTALS CARRIED FROM SHEET P.59					1,476				125		62						
SUB-TOTALS CARRIED FROM SHEET P.60		240	76	287			49	66	22		17					991	
SUB-TOTALS: PART 1		305	152	574	400,429		98	132	34,086	15,452	16,715	9,718	77,282	2,045	146,065	1,821	01/IMS/PV
PART 2																	
SUB-TOTALS CARRIED FROM SHEET P.48	356				23,723	175			2,064		1,017	1,017					
SUB-TOTALS CARRIED FROM SHEET P.49					9,331				794	1,138	388		5,685	119	13,549.98		
SUB-TOTALS CARRIED FROM SHEET P.50					4,775				407		200						
SUB-TOTALS CARRIED FROM SHEET P.51					1,538				132	283	64		1,408	29			
SUB-TOTALS CARRIED FROM SHEET P.57					288				24		12						
SUB-TOTALS: PART 2	356				39,655	175			3,421	1,421	1,681	1,017	7,093	148	13,550		02/NHS/PV
SUB-TOTALS: 01/IMS/PV		305	152	574	400,429		98	132	34,086	15,452	16,715	9,718	77,282	2,045	146,065	1,821	01/IMS/PV
SUB-TOTALS: 02/NHS/PV	356				39,655	175			3,421	1,421	1,681	1,017	7,093	148	13,550		02/NHS/PV
TOTALS CARRIED TO GENERAL SUMMARY	356	305	152	574	440,084	175	98	132	37,507	16,873	18,396	10,735	84,375	2,193	159,615	1,821	

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POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM SUBSUMMARY							
LOCATION	STATION	SKEW ANGLE	EXPANSION JOINT PAY LENGTH	JOINT WIDTH	PAVEMENT THICKNESS	846	FUNDING
			FT.	IN.	IN.	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM, AS PER PLAN	
BR. NO. TUS-00077-20.890L, SFN: 7902883							
REAR ABUTMENT	92+41.33	3° 54' 00" L.F.	40.1	20	3	17	
FORWARD ABUTMENT	94+06.97	3° 54' 00" L.F.	40.1	20	3	17	
BR. NO. TUS-00077-20.890L, SFN: 7902883 TOTALS (CARRIED TO GENERAL SUMMARY)						34	01/IMS/PV
BR. NO. TUS-00077-20.890R, SFN: 7902913							
REAR ABUTMENT	92+41.33	3° 54' 00" L.F.	67.4	20	3	28	
FORWARD ABUTMENT	94+06.97	3° 54' 00" L.F.	63.1	20	3	26	
BR. NO. TUS-00077-20.890R, SFN: 7902913 TOTALS (CARRIED TO GENERAL SUMMARY)						54	01/IMS/PV
BR. NO. TUS-00077-21.950L, SFN: 7902972							
REAR ABUTMENT	146+28.50	NONE	35.75	20	3	15	
INTERMEDIATE JOINT	148+14.50	NONE	35.75	20	3	15	
INTERMEDIATE JOINT	149+86.00	NONE	35.75	20	3	15	
FORWARD ABUTMENT	151+39.50	NONE	35.75	20	3	15	
BR. NO. TUS-00077-21.950L, SFN: 7902972 TOTALS (CARRIED TO GENERAL SUMMARY)						60	01/IMS/PV
BR. NO. TUS-00077-21.950R, SFN: 7903006							
REAR ABUTMENT	148+23.50	NONE	35.75	20	3	15	
INTERMEDIATE JOINT	149+86.00	NONE	35.75	20	3	15	
INTERMEDIATE JOINT	151+51.50	NONE	35.75	20	3	15	
FORWARD ABUTMENT	153+34.50	NONE	35.75	20	3	15	
BR. NO. TUS-00077-21.950R, SFN: 7903006 TOTALS (CARRIED TO GENERAL SUMMARY)						60	01/IMS/PV
BR. NO. TUS-00077-22.170L, SFN: 7903030							
REAR ABUTMENT	160+21.25	35° 00' 00" L.F.	43.6	20	3	18	
FORWARD ABUTMENT	163+22.75	35° 00' 00" L.F.	43.6	20	3	18	
BR. NO. TUS-00077-22.170L, SFN: 7903030 TOTALS (CARRIED TO GENERAL SUMMARY)						36	01/IMS/PV
BR. NO. TUS-00077-22.170R, SFN: 7903065							
REAR ABUTMENT	160+21.25	35° 00' 00" L.F.	43.6	20	3	18	
FORWARD ABUTMENT	163+22.75	35° 00' 00" L.F.	43.6	20	3	18	
BR. NO. TUS-00077-22.170R, SFN: 7903065 TOTALS (CARRIED TO GENERAL SUMMARY)						36	01/IMS/PV
BR. NO. TUS-00077-23.370L, SFN: 7903243							
REAR ABUTMENT	223+39.20	36° 36' 30" L.F.	51.1	20	3	21	
FORWARD ABUTMENT	225+00.80	36° 36' 30" L.F.	51.1	20	3	21	
BR. NO. TUS-00077-23.370L, SFN: 7903243 TOTALS (CARRIED TO GENERAL SUMMARY)						42	01/IMS/PV
BR. NO. TUS-00077-23.370R, SFN: 7903278							
REAR ABUTMENT	223+39.20	36° 36' 30" L.F.	51.1	20	3	21	
FORWARD ABUTMENT	225+00.80	36° 36' 30" L.F.	51.1	20	3	21	
BR. NO. TUS-00077-23.370R, SFN: 7903278 TOTALS (CARRIED TO GENERAL SUMMARY)						42	01/IMS/PV

NOTE:
 FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT DETAILS, SEE SHEET P.63.

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET TOTAL

P.20 71

CURB REPLACEMENT CALCULATIONS

R-1

ITEM 202 - CURB REMOVED
 STA. 448+44 TO STA. 452+40.71 = 396.71 FT.
(USE: 377 FT.)

R-2

ITEM 202 - PAVEMENT REMOVED
 STA. 448+25 TO STA. 452+40.71
 $((377' \times 2' \text{ WIDE}) + (39' \times 2.5' \text{ WIDE})) \div 9 = 94.61 \text{ SQ. YD.}$
(USE: 95 SQ. YD)

C-1

ITEM 203 - SUBGRADE COMPACTION
 STA. 448+25 TO STA. 452+40.71
 $(416' \times 2.5' \text{ WIDE} \times 4' \text{ WIDTH}) \div 9 = 184.89 \text{ SQ. YD.}$
(USE: 185 SQ. YD)

ITEM 304 - AGGREGATE BASE
 STA. 448+25 TO STA. 452+40.71
 $(416' \times 2.5' \text{ WIDE} \times 0.5' \text{ DEPTH}) \div 27 = 19.26 \text{ CU. YD.}$
(USE: 19 CU. YD.)

ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN
 STA. 448+25 TO STA. 452+40.71 = 415.71 FT.
(USE: 416 FT.)

GE-1

ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN
 STA. 448+25 TO STA. 452+40.71
 $(416' \times 10 \text{ FT. WIDE} \times 4 \div 12 \text{ DEPTH}) \div 27 = 51.36 \text{ CU. YD.}$
(USE: 51 CU. YD.)

EROSION REMEDIATION CALCULATIONS

DRF-1 DRF-2

ITEM 601 - DUMPED ROCK FILL, TYPE B, AS PER PLAN
 DRF-1
 STA. 449+70
 $10' \times 20' \times 3' \div 27 = 22.22 \text{ CU. YD.}$
 DRF-2
 STA. 449+90
 $((43' \times (20' + 15') \div 2) + (5' \times 15')) \times 3' \div 27 = 91.94 \text{ CU. YD.}$
 SUBTOTAL: 22.22 CU. YD. + 91.44 CU. YD. = 113.66 CU. YD.
(USE: 114 CU. YD)

ITEM 204 - GEOTEXTILE FABRIC, AS PER PLAN
 DRF-1
 STA. 449+70
 $[(10' \times 20') + (10' + 10' + 20' + 20') \times 3'] \div 9 = 42.22 \text{ SQ. YD.}$
 DRF-2
 STA. 449+90
 $[(43' \times [(20' + 15') \div 2]) + (20' + 43' + 5' + 15' + 5' + 43') \times 3'] \div 9 = 127.27 \text{ SQ. YD.}$
 SUBTOTAL: 42.22 SQ. YD. + 127.27 SQ. YD. = 169.50 SQ. YD.
(USE: 170 CU. YD)

FL-1 FL-2 FL-3

ITEM 601 - TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT
 FL-1
 STA. 449+70
 $61.5' \times 5.5' \div 9 = 37.58 \text{ SQ. YD.}$
 FL-2
 STA. 451+00
 $64.5' \times 5.5' \div 9 = 39.42 \text{ SQ. YD.}$
 FL-3
 STA. 452+00
 $67.5' \times 5.5' \div 9 = 41.25 \text{ SQ. YD.}$
 SUBTOTAL: 37.58 SQ. YD. + 39.42 SQ. YD. + 41.25 SQ. YD. = 118.25 SQ. YD.
(USE: 118 SQ. YD)

PG-1

ITEM 601 - PAVED GUTTER, TYPE 1-4, AS PER PLAN
 STA. 448+40
(USE: 20 FT)

EROSION CONTROL CALCULATIONS

ITEM 659 - SOIL ANALYSIS TEST
(USE: 2 EACH)

ITEM 659 - TOPSOIL
 $1821 \text{ SQ. YD.} \times 111 \text{ CU. YD./1000 SQ. YD.} = 202.13 \text{ CU. YD.}$
(USE: 202 CU. YD.)

ITEM 659 - REPAIR SEEDING AND MULCHING
 $1821 \text{ SQ. YD.} \times 0.05 = 91.05 \text{ SQ. YD.}$
(USE: 91 SQ. YD.)

ITEM 659 - COMMERCIAL FERTILIZER
 $1821 \text{ SQ. YD.} \times 9 \times 30 \text{ LB/1000 SQ. FT.} \div 2000 = 0.25 \text{ TON}$
(USE: 0.25 TON)

ITEM 659 - LIME
 $1821 \text{ SQ. YD.} \times 9 \times 1 \text{ AC./43560 SQ. FT.} = 0.38 \text{ ACRE}$
(USE: 0.38 ACRE)

ITEM 659 - WATER
 $1821 \text{ SQ. YD.} \times 9 \times 300 \text{ GAL/1000/1000} \times 2 \text{ APP.} = 9.83 \text{ M. GAL.}$
(USE: 10 M. GAL.)

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

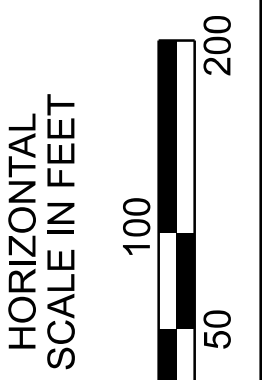
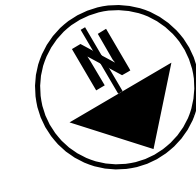
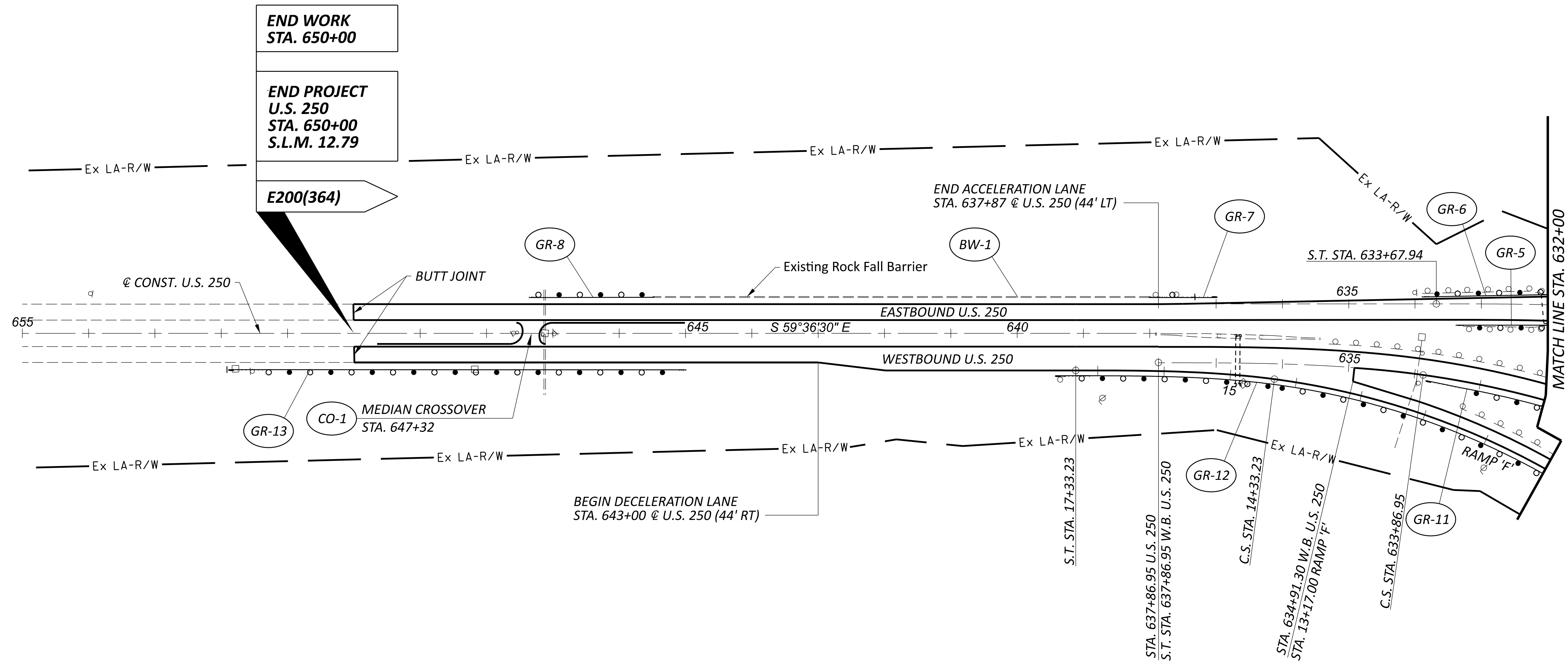
PROJECT ID

107570

SHEET TOTAL

P.21 | 71

TOTALS CARRIED TO GENERAL SUMMARY



PLAN SHEET - U.S. 250
 STA. 632+00 TO STA. 655+00

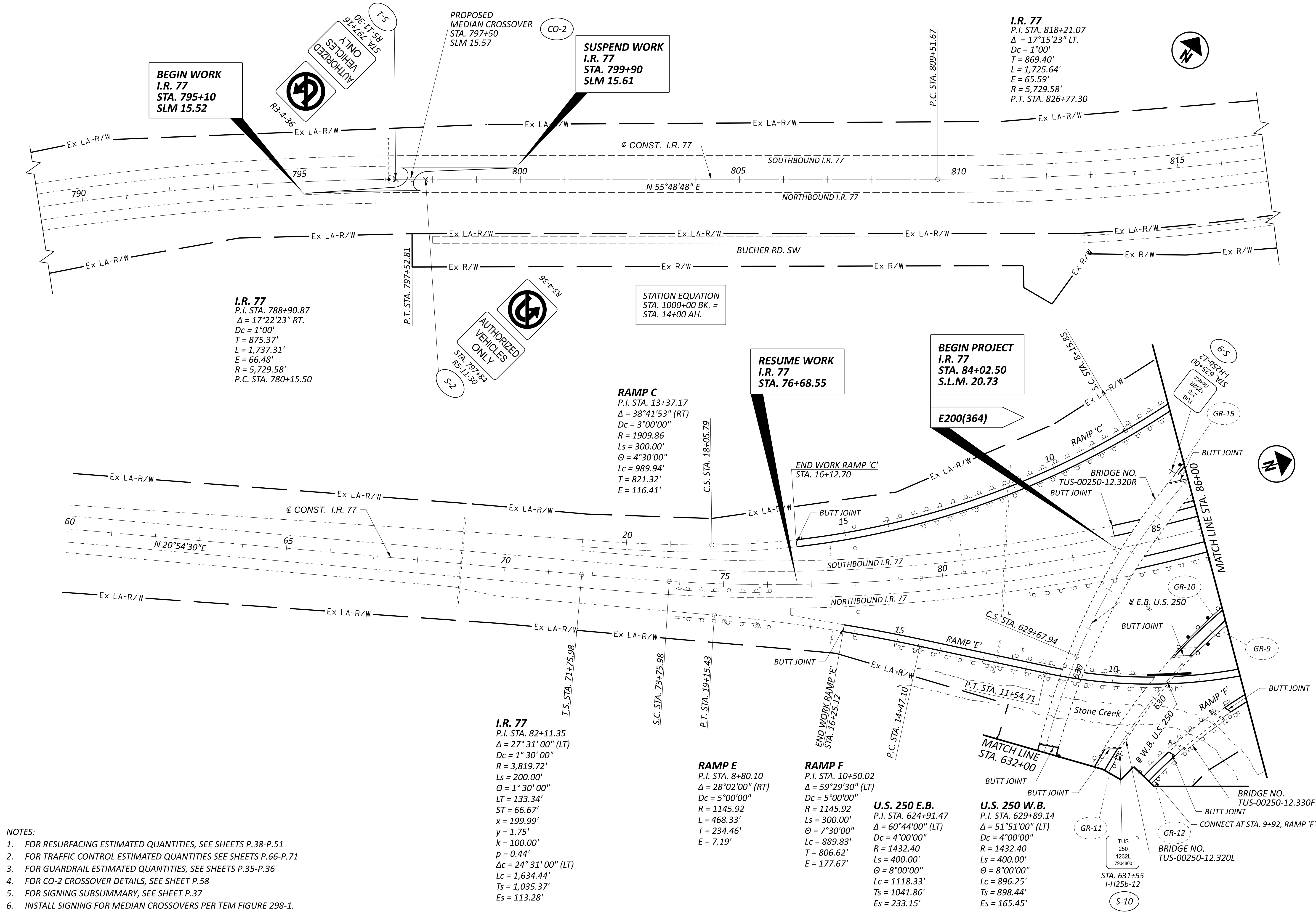
U.S. 250 E.B.
 P.I. STA. 624+91.47
 $\Delta = 60^{\circ}44'00''$ (LT)
 $Dc = 4^{\circ}00'00''$
 $R = 1432.40$
 $Ls = 400.00'$
 $\Theta = 8^{\circ}00'00''$
 $Lc = 1118.33'$
 $Ts = 1041.86'$
 $Es = 233.15'$

U.S. 250 W.B.
 P.I. STA. 629+89.14
 $\Delta = 51^{\circ}51'00''$ (LT)
 $Dc = 4^{\circ}00'00''$
 $R = 1432.40$
 $Ls = 400.00'$
 $\Theta = 8^{\circ}00'00''$
 $Lc = 896.25'$
 $Ts = 898.44'$
 $Es = 165.45'$

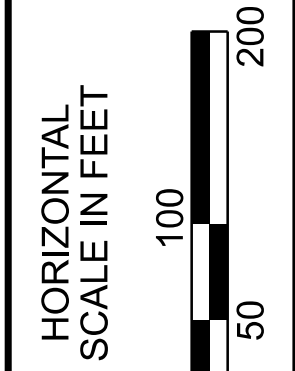
RAMP F
 P.I. STA. 10+50.02
 $\Delta = 59^{\circ}29'30''$ (LT)
 $Dc = 5^{\circ}00'00''$
 $R = 1145.92$
 $Ls = 300.00'$
 $\Theta = 7^{\circ}30'00''$
 $Lc = 889.83'$
 $T = 806.62$
 $E = 177.67'$

- NOTES:**
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36
 - FOR CO-1 CROSSOVER DETAILS, SEE SHEET P.57

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.22	71



- NOTES:
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36
 - FOR CO-2 CROSSOVER DETAILS, SEE SHEET P.58
 - FOR SIGNING SUBSUMMARY, SEE SHEET P.37
 - INSTALL SIGNING FOR MEDIAN CROSSOVERS PER TEM FIGURE 298-1.



PLAN SHEET - I.R. 77/ U.S. 250
STA. 790+00 TO STA. 86+00

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET TOTAL	P.23 71

RAMP C
 P.I. STA. 13+37.17
 $\Delta = 38^\circ 41' 53''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1909.86$
 $Ls = 300.00'$
 $\Theta = 4^\circ 30' 00''$
 $Lc = 989.94'$
 $T = 821.32'$
 $E = 116.41'$

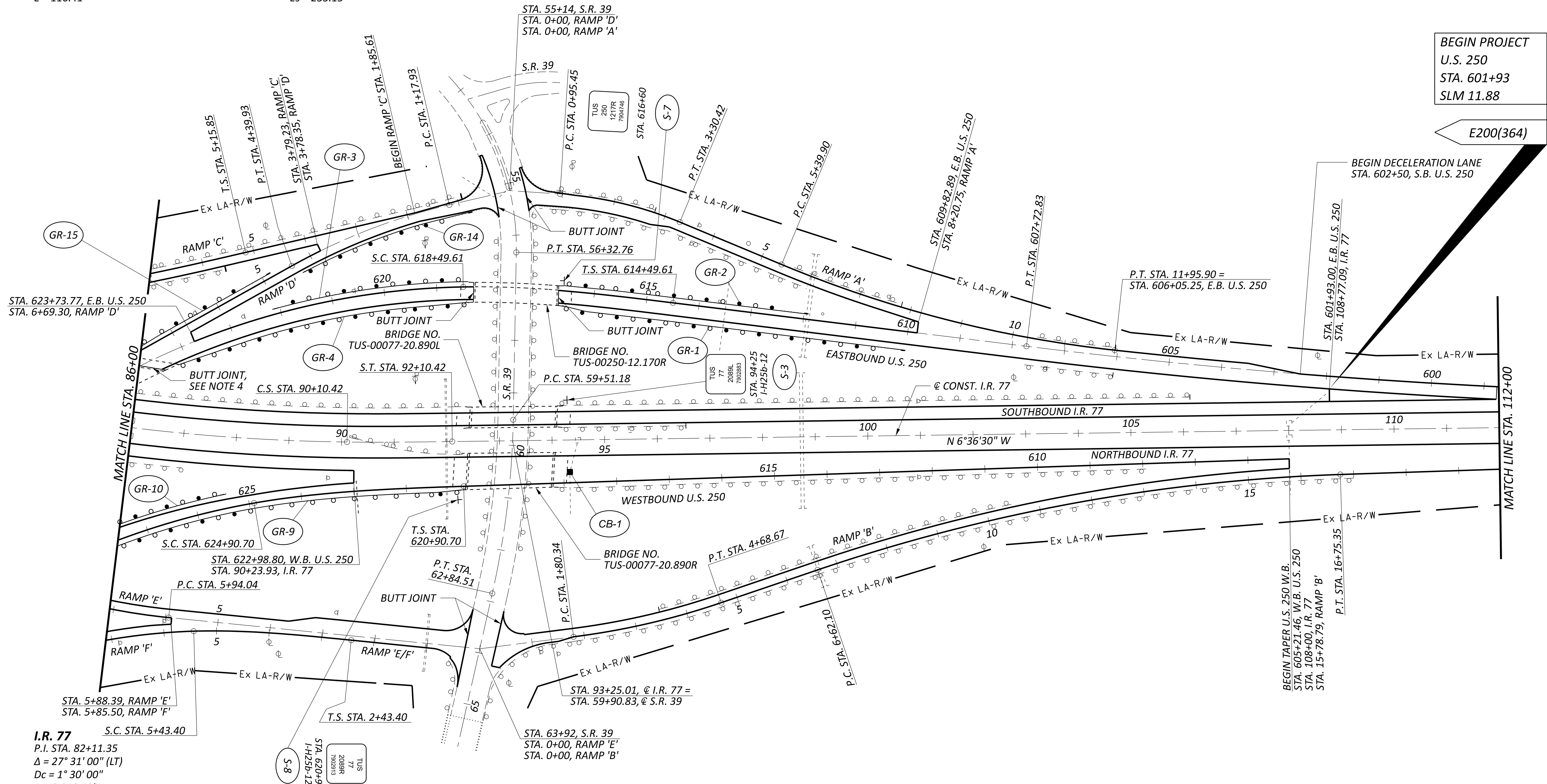
RAMP D
 P.I. STA. 2+80.00
 $\Delta = 16^\circ 06' 00''$ (LT)
 $Dc = 5^\circ 00' 00''$
 $R = 1145.92'$
 $L = 322.00'$
 $T = 162.07'$
 $E = 11.40'$

U.S. 250 E.B.
 P.I. STA. 624+91.47
 $\Delta = 60^\circ 44' 00''$ (LT)
 $Dc = 4^\circ 00' 00''$
 $R = 1432.40$
 $Ls = 400.00'$
 $\Theta = 8^\circ 00' 00''$
 $Lc = 1118.33'$
 $Ts = 1041.86'$
 $Es = 233.15'$

U.S. 250 E.B.
 P.I. STA. 599+41.96
 $\Delta = 7^\circ 46' 00''$ (RT)
 $Dc = 0^\circ 28' 00''$
 $R = 12277.67'$
 $T = 833.42'$
 $L = 1664.29'$
 $E = 28.26'$

RAMP A
 P.I. STA. 2+14.00
 $\Delta = 18^\circ 47' 50''$ (RT)
 $Dc = 8^\circ 00' 00''$
 $R = 716.20'$
 $L = 234.97'$
 $T = 118.55'$
 $E = 9.75'$

RAMP A
 P.I. STA. 8+70.16
 $\Delta = 16^\circ 24' 00''$ (LT)
 $Dc = 2^\circ 30' 00''$
 $R = 2291.83'$
 $L = 656.00'$
 $T = 330.26'$
 $E = 23.67'$



BEGIN PROJECT
 U.S. 250
 STA. 601+93
 SLM 11.88

E200(364)

BEGIN DECELERATION LANE
 STA. 602+50, S.B. U.S. 250

BEGIN TAPER U.S. 250 W.B.
 STA. 605+21.46, W.B. U.S. 250
 STA. 108+00, I.R. 77
 STA. 15+78.79, RAMP 'B'
 P.T. STA. 16+75.35

I.R. 77
 P.I. STA. 82+11.35
 $\Delta = 27^\circ 31' 00''$ (LT)
 $Dc = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $Ls = 200.00'$
 $\Theta = 1^\circ 30' 00''$
 $LT = 133.34'$
 $ST = 66.67'$
 $x = 199.99'$
 $y = 1.75'$
 $k = 100.00'$
 $p = 0.44'$
 $\Delta c = 24^\circ 31' 00''$ (LT)
 $Lc = 1,634.44'$
 $Ts = 1,035.37'$
 $Es = 113.28'$

RAMP F
 P.I. STA. 10+50.02
 $\Delta = 59^\circ 29' 30''$ (LT)
 $Dc = 5^\circ 00' 00''$
 $R = 1145.92$
 $Ls = 300.00'$
 $\Theta = 7^\circ 30' 00''$
 $Lc = 889.83'$
 $T = 806.62'$
 $E = 177.67'$

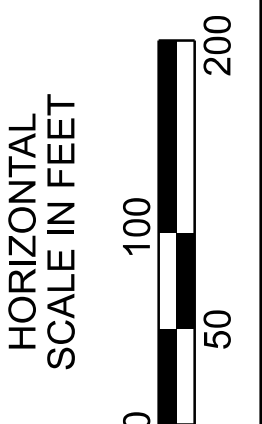
RAMP E
 P.I. STA. 8+80.10
 $\Delta = 28^\circ 02' 00''$ (RT)
 $Dc = 5^\circ 00' 00''$
 $R = 1145.92$
 $L = 468.33'$
 $T = 234.46'$
 $E = 7.19'$

U.S. 250 W.B.
 P.I. STA. 629+89.14
 $\Delta = 51^\circ 51' 00''$ (LT)
 $Dc = 4^\circ 00' 00''$
 $R = 1432.40$
 $Ls = 400.00'$
 $\Theta = 8^\circ 00' 00''$
 $Lc = 896.25'$
 $Ts = 898.44'$
 $Es = 165.45'$

RAMP B
 P.I. STA. 3+25.00
 $\Delta = 11^\circ 32' 00''$ (LT)
 $Dc = 4^\circ 00' 00''$
 $R = 1432.40$
 $L = 288.33$
 $T = 144.66'$
 $E = 7.29'$

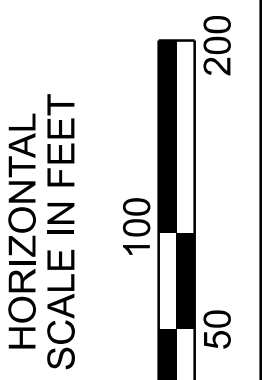
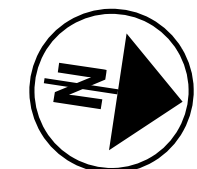
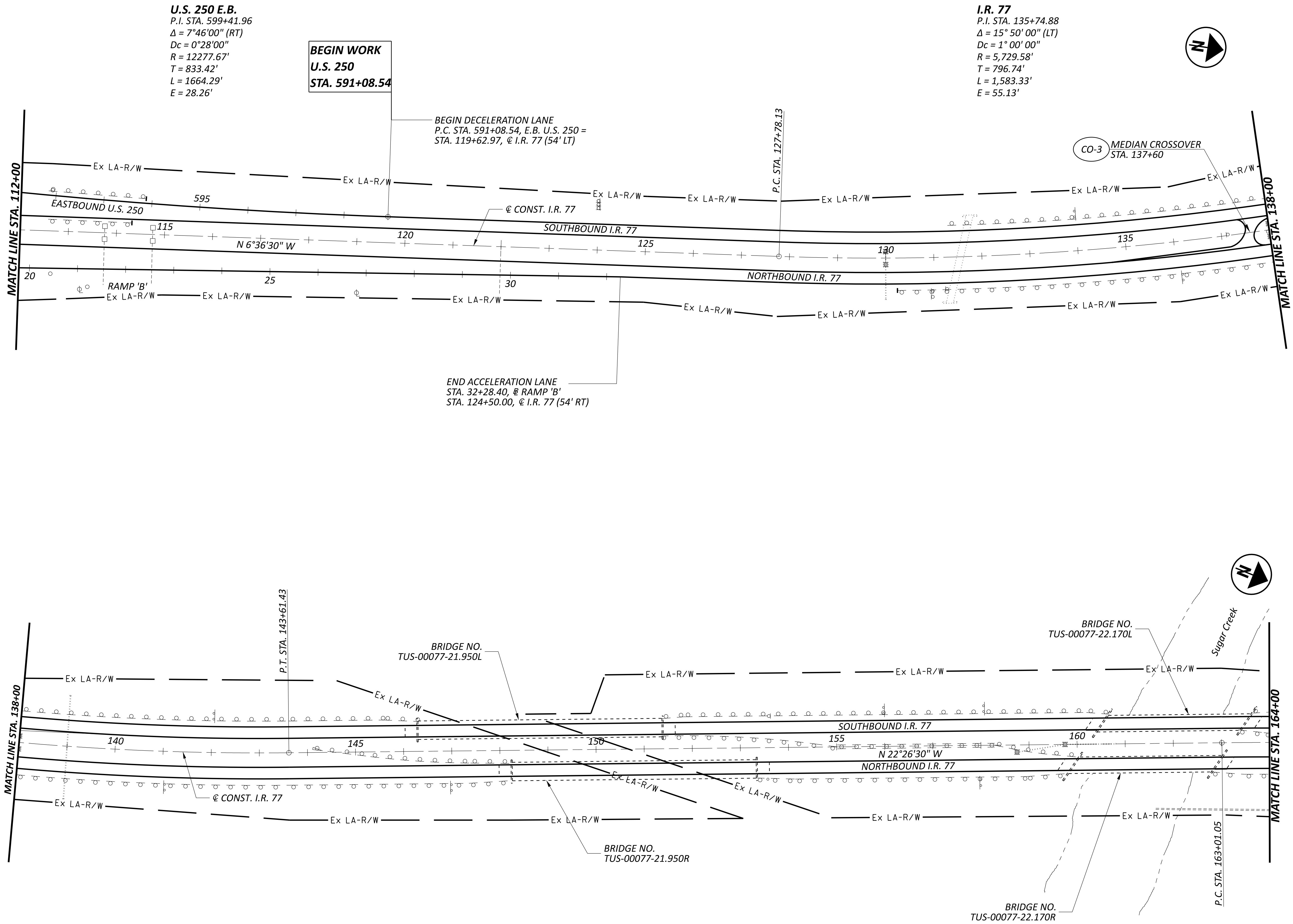
RAMP B
 P.I. STA. 11+72.43
 $\Delta = 16^\circ 53' 15''$ (RT)
 $Dc = 1^\circ 40' 00''$
 $R = 3437.75'$
 $L = 1013.25'$
 $T = 510.33'$
 $E = 37.67'$

- NOTES:
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36
 - FOR CB-1 CALCULATIONS, SEE SHEET P.21
 - FOR SIGNING SUBSUMMARY, SEE SHEET P.37
 - INSTALL SIGNING FOR MEDIAN CROSSEOVERS PER TEM FIGURE 298-1.



PLAN SHEET - I.R. 77/ U.S. 250
 STA. 86+00 TO STA. 112+00

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET TOTAL	P.24 71



PLAN SHEET - I.R. 77/ U.S. 250
 STA. 112+00 TO STA. 164+00

DESIGN AGENCY

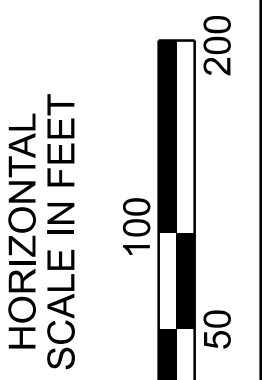
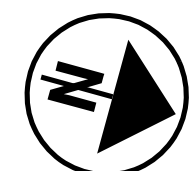
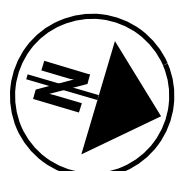
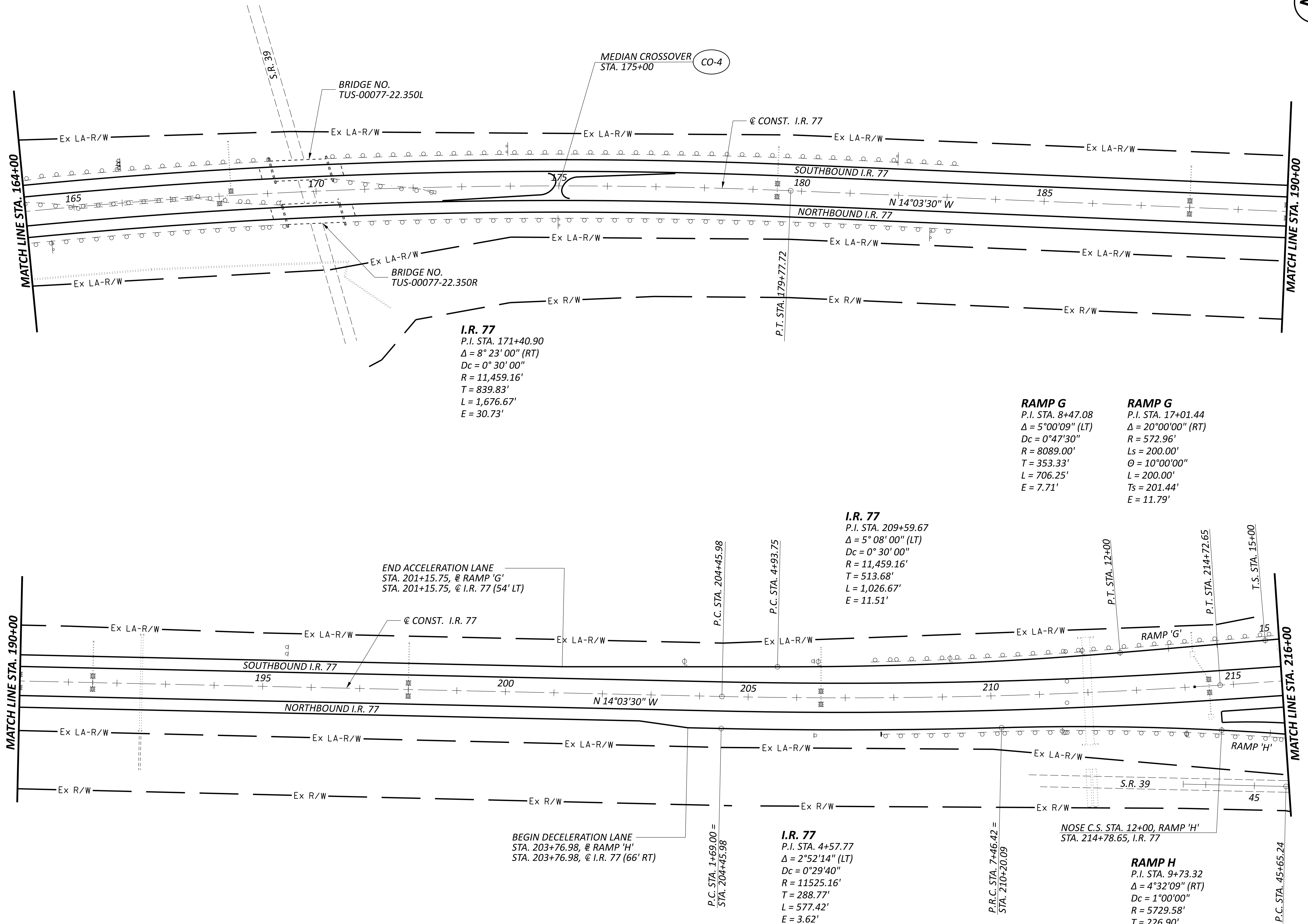


DESIGNER	MVC
REVIEWER	TES
DATE	05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.25	71

- NOTES:
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR CROSSOVER DETAILS, SEE SHEET P.59

NOTES:

- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
- FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
- FOR CO-4 CROSSOVER DETAILS, SEE SHEET P.59



PLAN SHEET - I.R. 77
 STA. 164+00 TO STA. 216+00

DESIGN AGENCY



DESIGNER
 MVC

REVIEWER
 TES 05/12/22

PROJECT ID
 107570

SHEET TOTAL
 P.26 71

RAMP G
 P.I. STA. 17+01.44
 $\Delta = 20^{\circ}00'00''$ (RT)
 $R = 572.96'$
 $L_s = 200.00'$
 $\Theta = 10^{\circ}00'00''$
 $L = 200.00'$
 $T_s = 201.44'$
 $E = 11.79'$

RAMP G
 P.I. STA. 24+39.67
 $\Delta = 43^{\circ}50'03''$ (LT)
 $D_c = 22^{\circ}55'06''$
 $R = 250.00'$
 $T = 100.59'$
 $L = 191.26'$
 $E = 19.48'$

STA. 224+19.38, @ I.R. 77 =
 STA. 533+94.28, @ S.R. 39

RAMP I
 P.I. STA. 2+96.47
 $\Delta = 16^{\circ}00'00''$ (LT)
 $L_s = 200.00'$
 $\Theta = 8^{\circ}00'00''$
 $R = 716.20'$
 $T = 200.92'$
 $L = 400.00'$
 $E = 9.39'$

RAMP I
 P.I. STA. 11+74.35
 $\Delta = 6^{\circ}47'36''$ (LT)
 $D_c = 1^{\circ}30'00''$
 $R = 3819.72'$
 $T = 226.80'$
 $L = 453.07'$
 $E = 6.73'$

RAMP H
 P.I. Sta. 14+00.22
 $\Delta = 8^{\circ}00'00''$ (RT)
 $L_s = 200.00'$
 $\Theta = 4^{\circ}00'00''$
 $R = 1432.40'$
 $L = 200.22'$
 $L = 400.00'$
 $E = 4.66'$

RAMP H
 P.I. Sta. 18+47.10
 $\Delta = 41^{\circ}28'48''$ (LT)
 $D_c = 16^{\circ}51'06''$
 $R = 340.00'$
 $T = 65.50'$
 $L = 129.42'$
 $E = 6.25'$

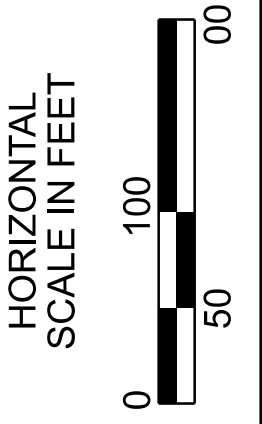
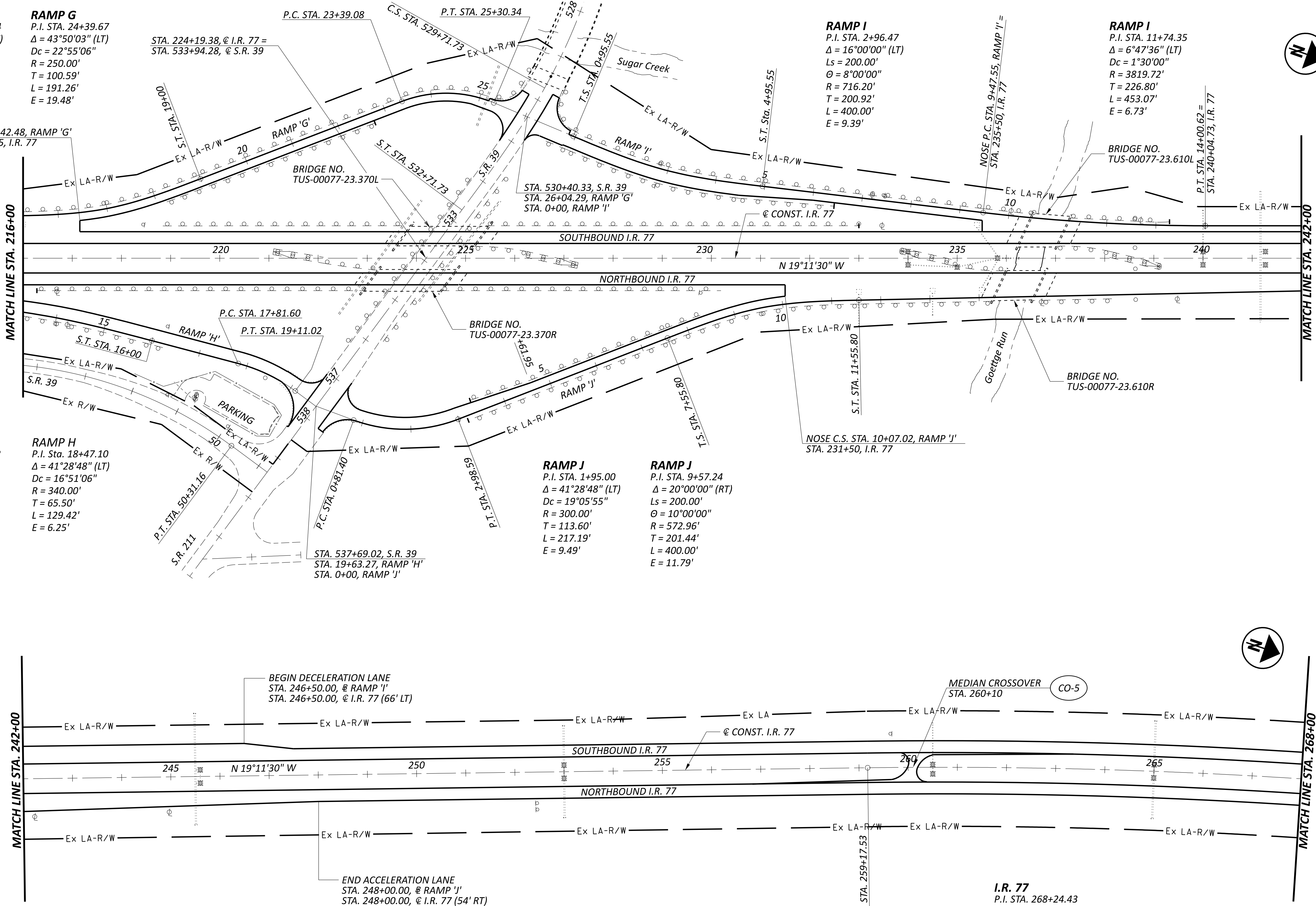
RAMP J
 P.I. STA. 1+95.00
 $\Delta = 41^{\circ}28'48''$ (LT)
 $D_c = 19^{\circ}05'55''$
 $R = 300.00'$
 $T = 113.60'$
 $L = 217.19'$
 $E = 9.49'$

RAMP J
 P.I. STA. 9+57.24
 $\Delta = 20^{\circ}00'00''$ (RT)
 $L_s = 200.00'$
 $\Theta = 10^{\circ}00'00''$
 $R = 572.96'$
 $T = 201.44'$
 $L = 400.00'$
 $E = 11.79'$

I.R. 77
 P.I. STA. 268+24.43
 $\Delta = 9^{\circ}03'00''$ (RT)
 $D_c = 0^{\circ}30'00''$
 $R = 11,459.16'$
 $T = 906.89'$
 $L = 1,810.00'$
 $E = 35.83'$

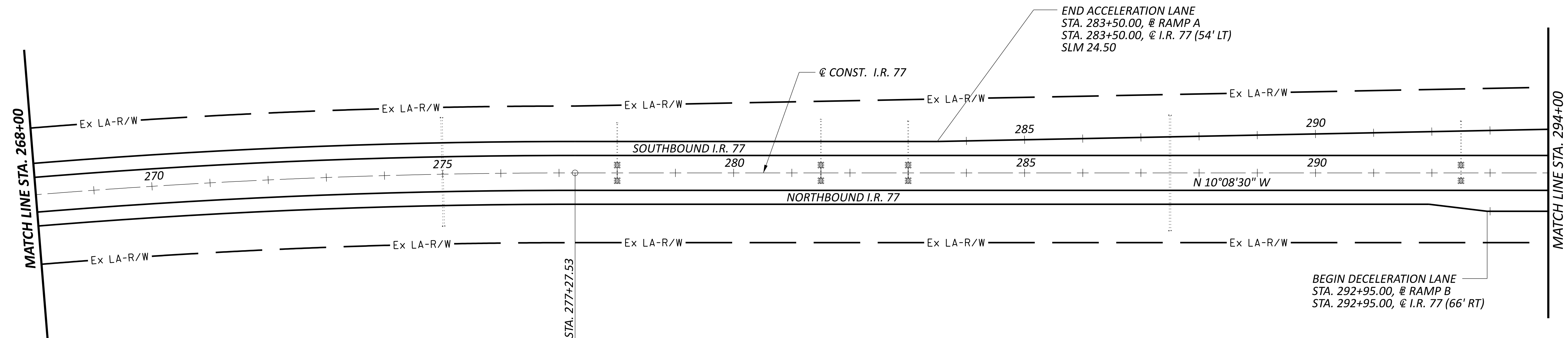
NOTES:

- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
- FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
- FOR CO-5 CROSSOVER DETAILS, SEE SHEET P.59



PLAN SHEET - I.R. 77
 STA. 216+00 TO STA. 268+00

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES
DATE	05/12/22
PROJECT ID	107570
SHEET	P.27
TOTAL	71

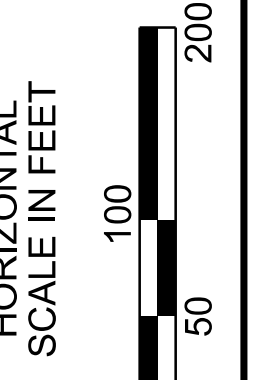
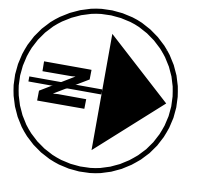


I.R. 77
 P.I. STA. 268+24.43
 $\Delta = 9^{\circ}03'00''$ (RT)
 $D_c = 0^{\circ}30'00''$
 $R = 11,459.16'$
 $T = 906.89'$
 $L = 1,810.00'$
 $E = 35.83'$

P.T. STA. 277+27.53

END ACCELERATION LANE
 STA. 283+50.00, @ RAMP A
 STA. 283+50.00, @ I.R. 77 (54' LT)
 SLM 24.50

BEGIN DECELERATION LANE
 STA. 292+95.00, @ RAMP B
 STA. 292+95.00, @ I.R. 77 (66' RT)



PLAN SHEET - I.R. 77
 STA. 268+00 TO STA. 294+00

- NOTES:
 1. FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 2. FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71

DESIGN AGENCY



DESIGNER	MVC
REVIEWER	TES
DATE	05/12/22
PROJECT ID	107570
SHEET	P.28
TOTAL	71

RAMP A
 P.I. Sta. 300+61.11
 $\Delta = 28^\circ 42' 55''$ (LT)
 $Dc = 4^\circ 15' 00''$
 $R = 1348.14'$
 $Ls = 238'$
 $\theta = 5^\circ 03' 27''$
 $LT = 158.73'$
 $ST = 79.39'$
 $x = 237.81'$
 $y = 7.00'$
 $k = 118.97'$
 $p = 1.75'$
 $\Delta c = 23^\circ 39' 28''$ (LT)
 $Lc = 556.65'$
 $emax = 0.083$

RAMP A
 P.I. Sta. 310+44.70
 $\Delta = 44^\circ 02' 24''$ (RT)
 $Dc = 16^\circ 30' 00''$
 $R = 347.25'$
 $T = 140.44'$
 $L = 266.91'$
 $E = 27.32'$
 $emax = 0.016$

OHIO AVE.
 P.I. Sta. 99+88.60
 $\Delta = 7^\circ 40' 10''$ (RT)
 $Dc = 3^\circ 45' 00''$
 $R = 1527.89'$
 $T = 102.41'$
 $L = 204.52'$
 $E = 3.43'$
 $emax = NC$

OHIO AVE.
 P.I. Sta. 106+29.31
 $\Delta = 6^\circ 49' 00''$ (LT)
 $Dc = 2^\circ 00' 00''$
 $R = 2864.79'$
 $T = 170.62'$
 $L = 340.83'$
 $E = 5.08'$
 $emax = NC$

RAMP C
 P.I. Sta. 322+07.56
 $\Delta = 24^\circ 10' 44''$ (LT)
 $Dc = 1^\circ 30' 00''$
 $R = 3819.72'$
 $T = 818.14'$
 $L = 1,611.93'$
 $E = 86.64'$
 $emax = 0.041$

T.S. STA. 296+00.25
 STA. 296+00.00, @ I.R. 77 (79' LT)

NOSE STA. 298+52.24, RAMP 'A'
 STA. 298+56.41, I.R. 77

S.C. STA. 298+38.25

NOSE STA. 299+92.36, RAMP 'B'
 STA. 299+95.89, I.R. 77

RAMP B
 P.I. Sta. 301+24.78
 $\Delta = 17^\circ 21' 44''$ (RT)
 $Dc = 1^\circ 30' 00''$
 $R = 3819.72'$
 $T = 583.21'$
 $L = 1,157.48'$
 $E = 44.27'$
 $emax = 0.041$

P.I. STA. 116+87.24
 $\Delta = 0^\circ 37' 30''$ RT

RAMP D
 P.I. STA. 310+70.79
 $\Delta = 44^\circ 49' 43''$ (LT)
 $Dc = 16^\circ 30' 00''$
 $R = 347.25'$
 $T = 143.23'$
 $L = 271.69'$
 $E = 28.38'$
 $emax = 0.016$

RAMP D
 P.I. STA. 316+80.60
 $\Delta = 26^\circ 19' 14''$ (RT)
 $Dc = 4^\circ 15' 00''$
 $R = 1348.14'$
 $Ls = 238'$
 $\theta = 5^\circ 03' 27''$
 $LT = 158.73'$
 $ST = 79.39'$
 $x = 237.81'$
 $y = 7.00'$
 $k = 118.97'$
 $p = 1.75'$
 $\Delta c = 21^\circ 15' 47''$ (LT)
 $Lc = 500.31$
 $emax = 0.083$

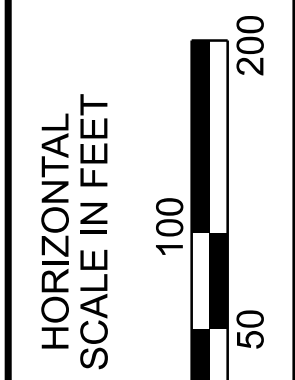
S.T. STA. 320+99.75
 STA. 321+00.00, @ I.R. 77 (79' RT)



MATCH LINE STA. 294+00

MATCH LINE STA. 323+00

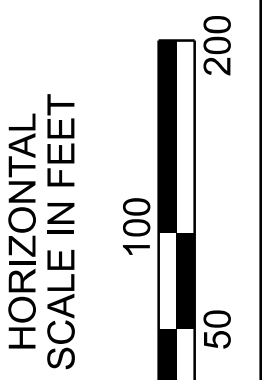
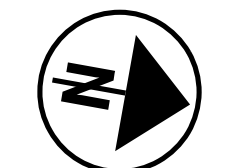
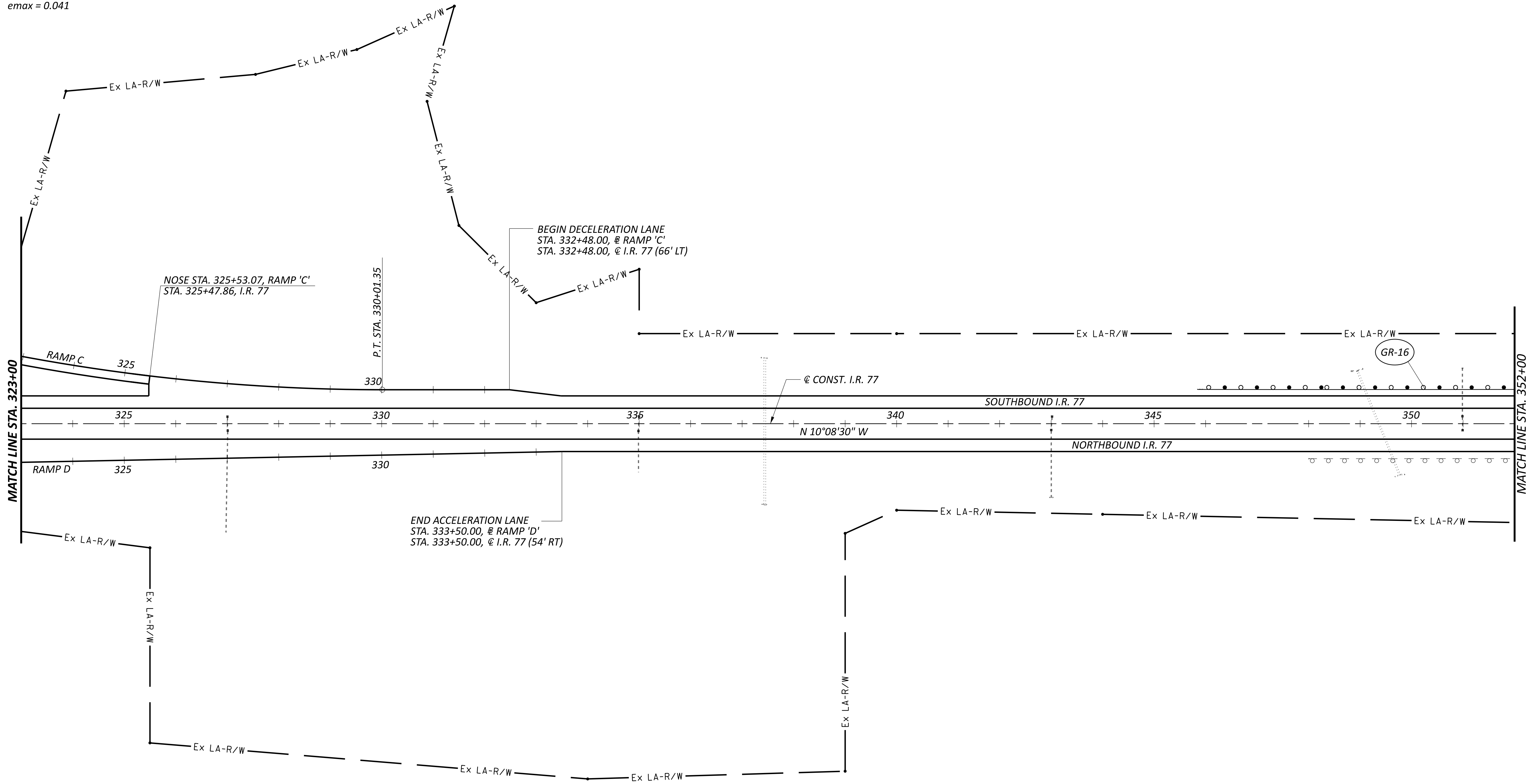
- NOTES:**
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR SIGNING SUBSUMMARY, SEE SHEET P.37
 - FOR CO-6 CROSSOVER DETAILS, SEE SHEET P.60
 - INSTALL SIGNING FOR MEDIAN CROSSOVERS PER TEM FIGURE 298-1.



PLAN SHEET - I.R. 77
 STA. 294+00 TO STA. 323+00

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES
DATE	05/12/22
PROJECT ID	107570
SHEET	P.29
TOTAL	71

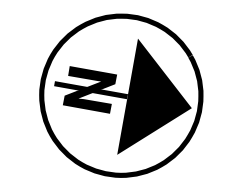
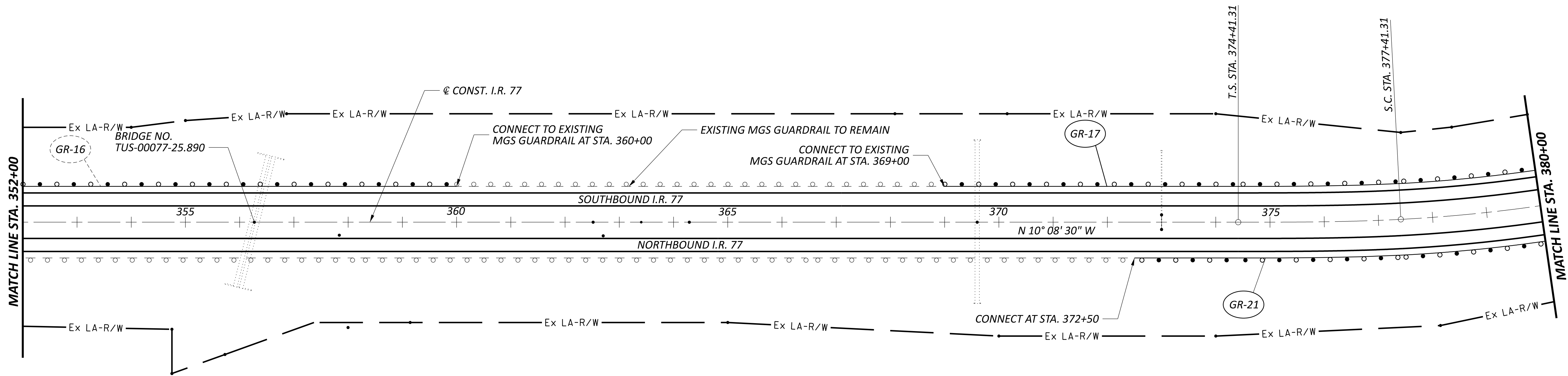
RAMP C
 P.I. STA. 322+07.56
 $\Delta = 24^\circ 10' 44''$ (LT)
 $Dc = 1^\circ 30' 00''$
 $R = 3819.72'$
 $T = 818.14'$
 $L = 1,611.93'$
 $E = 86.64'$
 $emax = 0.041$



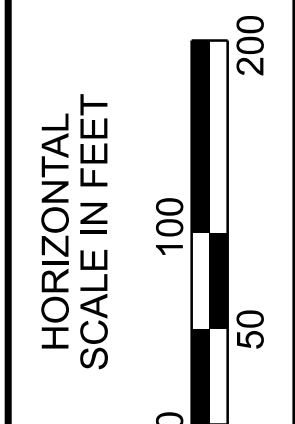
PLAN SHEET - I.R. 77
STA. 323+00 TO STA. 352+00

- NOTES:**
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.30	71



I.R. 77
 P.I. STA. 382+78.84
 $\Delta = 26^\circ 58' 45''$ (LT)
 $Dc = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $Ls = 300.00'$
 $\Theta s = 3^\circ 00' 00''$
 $LT = 200.03'$
 $ST = 100.03'$
 $x = 299.92'$
 $y = 5.24'$
 $k = 149.99'$
 $p = 1.31'$
 $\Delta c = 20^\circ 58' 45''$ (LT)
 $Lc = 1,048.96'$
 $Ts = 837.53'$
 $Es = 82.62'$
 $emax = 0.064$ FT./FT.



PLAN SHEET - I.R. 77
 STA. 352+00 TO STA. 380+00

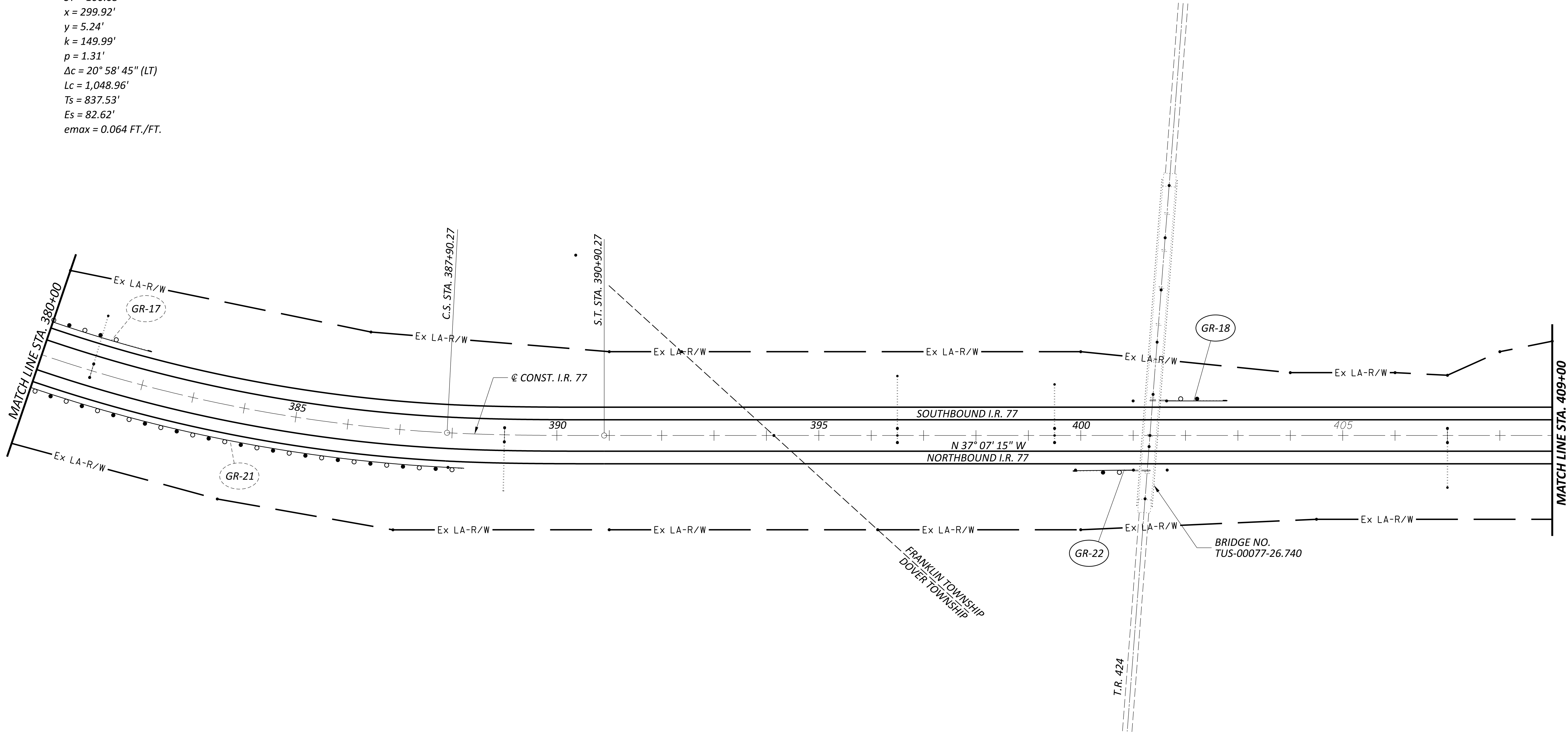
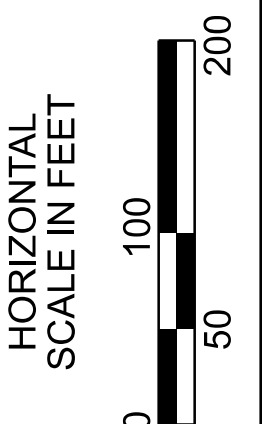
- NOTES:
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36

DESIGN AGENCY



DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.31	71

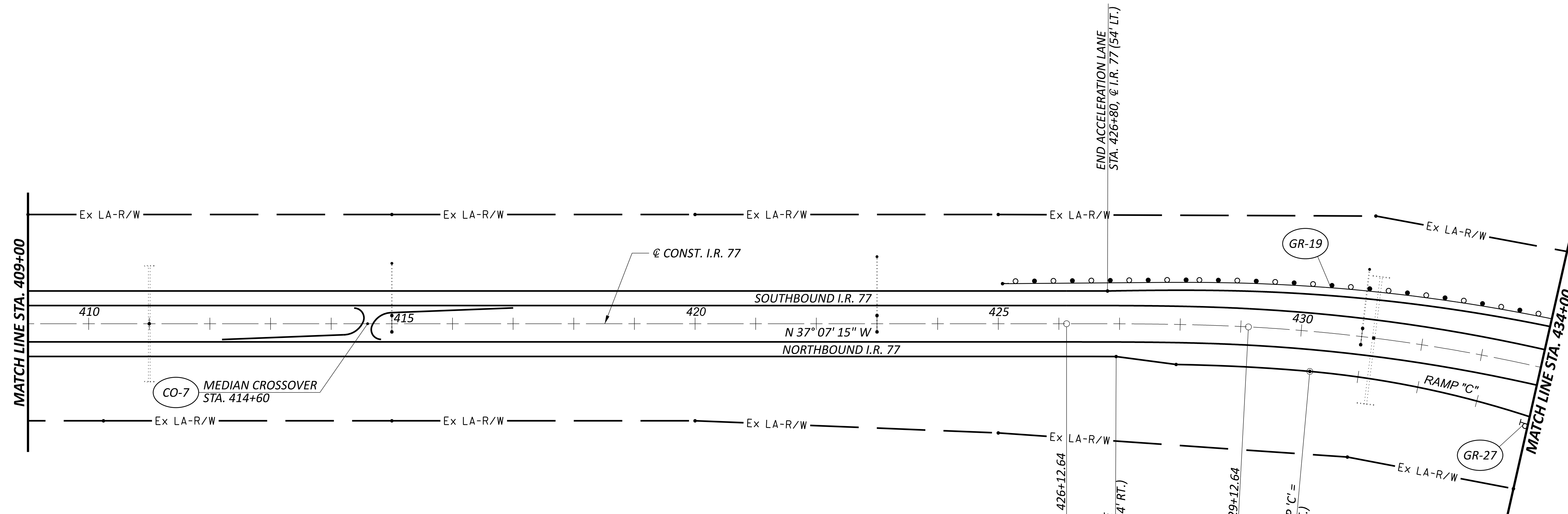
I.R. 77
 P.I. STA. 382+78.84
 $\Delta = 26^\circ 58' 45''$ (LT)
 $Dc = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $Ls = 300.00'$
 $\Theta_s = 3^\circ 00' 00''$
 $LT = 200.03'$
 $ST = 100.03'$
 $x = 299.92'$
 $y = 5.24'$
 $k = 149.99'$
 $p = 1.31'$
 $\Delta c = 20^\circ 58' 45''$ (LT)
 $Lc = 1,048.96'$
 $Ts = 837.53'$
 $Es = 82.62'$
 $emax = 0.064$ FT./FT.



PLAN SHEET - I.R. 77
 STA. 380+00 TO STA. 409+00

- NOTES:
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.32	71



I.R. 77
 P.I. STA. 460+87.05
 $\Delta = 98^\circ 28' 07''$ (RT)
 $D_c = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $L_s = 300.00'$
 $\theta_s = 3^\circ 00' 00''$
 $LT = 200.03'$
 $ST = 100.03'$
 $x = 299.92'$
 $y = 5.24'$
 $k = 149.99'$
 $p = 1.31'$
 $\Delta c = 92^\circ 28' 07''$ (RT)
 $L_c = 4,623.43'$
 $T_s = 3,474.42'$
 $E_s = 1,524.56'$
 $e_{max} = 0.064$ FT./FT.

END ACCELERATION LANE
 STA. 426+80, @ I.R. 77 (54' LT.)

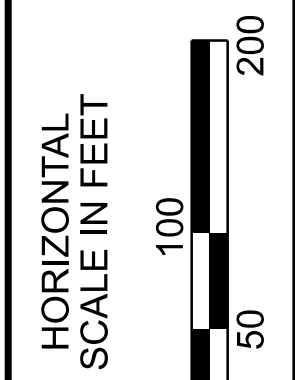
BEGIN DECELERATION LANE
 STA. 426+94.58, @ I.R. 77 (54' RT.)

S.C. STA. 429+12.64

P.C.C. STA. 30+20.00, @ RAMP 'C' =
 STA. 430+20, @ I.R. 77 (66' RT.)

RAMP "C"
 P.I. STA. 32+77.58
 $\Delta = 17^\circ 53' 03''$ (RT)
 $D_c = 3^\circ 30' 00''$
 $R = 1,637.02'$
 $T = 257.58'$
 $L = 510.98'$
 $E = 20.14'$

- NOTES:
- FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
 - FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
 - FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36
 - FOR CO-7 CROSSOVER DETAILS, SEE SHEET P.59



PLAN SHEET - I.R. 77
 STA. 409+00 TO STA. 434+00

DESIGN AGENCY



DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.33	71

RAMP "C"
D1 = 3° 30'
D2 = 10°
Δ1 = 3° 30'
Δ2 = 10°
Δ1+ Δ2 = 13° 30'
Θs = 6° 30'
Ls = 200.00'
T1 = 116.53'
T2 = 84.40'
Pa = 1.89'

RAMP "C"
P.I. STA. 39+80.12
Δ = 36° 19' 28" (RT)
Dc = 10° 00' 00"
R = 572.96'
T = 187.96'
L = 363.24'
Es = 53.39'

RAMP "C"
Δ = 46° 19' 28" (RT)
Ls = 200.00'
Θs = 10° 00' 00"
LT = 133.55'
ST = 66.86'
x = 199.39'
y = 11.61'
k = 99.90'
p = 2.91'
Ts = 342.24' Ah.

I.R. 77
P.I. Sta. 460+87.05
Δ = 98° 28' 07" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
Ls = 300.00'
Θs = 3° 00' 00"
LT = 200.03'
ST = 100.03'
x = 299.92'
y = 5.24'
k = 149.99'
p = 1.31'
Δc = 92° 28' 07" (RT)
Lc = 4,623.43'
Ts = 3,474.42'
Es = 1,524.56'
emax = 0.064 FT./FT.
C.S. Sta. 475+36.07
S.T. Sta. 478+36.07

S.R. 21 & U.S. 250
P.I. STA. 70+43.87
Δ = 25° 14' 00" (RT)
Dc = 3° 01' 25"
R = 1,895.03'
T = 424.17'
L = 834.58'
E = 46.89'

RAMP "D"
Δ = 103° 32' 46" (RT)
Ls = 150.00'
Θs = 18° 41' 00"
LT = 100.56'
ST = 50.51'
x = 148.41'
y = 16.18'
k = 74.73'
p = 4.06'
Ts = 367.70' Bk.

RAMP "D"
P.I. STA. 42+67.42
Δ = 84° 51' 46" (RT)
Dc = 24° 54' 40"
R = 230.00'
T = 210.25'
L = 340.66'
E = 81.62'

RAMP "D"
D1 = 2° 30'
D2 = 24° 54' 40"
Δ1 = 2° 30'
Δ2 = 24° 54' 40"
Δ1+ Δ2 = 27° 24' 40"
Θs = 22° 24' 40"
Ls = 200.00'
T1 = 129.49'
T2 = 74.40'
Pa = 6.48'

RAMP "D"
P.I. STA. 47+45.43
Δ = 7° 44' 26" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 155.05'
L = 309.62'
E = 5.24'

RAMP "A"
P.I. STA. 44+12.16
Δ = 32° 22' 24" (LT)
Dc = 10° 00' 00"
R = 572.96'
Ls = 200.00'
Θs = 10° 00' 00"
LT = 133.55'
ST = 66.86'
x = 199.39'
y = 11.61'
k = 99.90'
p = 2.91'
Δc = 12° 22' 24" (LT)
Lc = 123.73'
Ts = 267.06'
Es = 26.68'

RAMP "A"
P.I. STA. 50+32.41
Δ = 47° 35' 55" (RT)
Dc = 10° 59' 12"
R = 521.50'
Ls = 200.00'
Θs = 10° 59' 12"
LT = 133.59'
ST = 66.90'
x = 199.27'
y = 12.75'
k = 99.88'
p = 3.19'
Δc = 36° 36' 43" (RT)
Lc = 333.24'
Ts = 326.98' Bk.

RAMP "B"
P.I. STA. 57+90.48
Δ = 162° 04' 19" (LT)
Dc = 24° 54' 40"
R = 230.00'
Ls = 300.00'
Θs = 37° 22' 01"
LT = 204.91'
ST = 104.48'
x = 286.82'
y = 64.85'
k = 147.90'
p = 16.06'
Δc = 124° 42' 19" (LT)
Lc = 500.60'
Ts = 1510.26' Ah.

RAMP "AB"
P.I. STA. 55+20.25
Δ = 57° 59' 28" (RT)
Dc = 11° 26' 11"
R = 501.00'
Ls = 200.00'
Θs = 11° 26' 11"
LT = 133.61'
ST = 66.92'
x = 199.21'
y = 13.27'
k = 99.86'
p = 3.32'
Δc = 46° 33' 17" (RT)
Lc = 407.08'
Ts = 375.45' Ah.

**END WORK
END PROJECT
I.R. 77
STA. 453+16.62
S.L.M. 27.72**

E200(364)

**END ACCELERATION LANE
STA. 461+00, @ I.R. 77 (54' RT.)**

**BEGIN DECELERATION LANE
STA. 458+80.82, @ I.R. 77 (54' LT.)**

NOTES:

- 1. FOR RESURFACING ESTIMATED QUANTITIES, SEE SHEETS P.38-P.51
- 2. FOR TRAFFIC CONTROL ESTIMATED QUANTITIES SEE SHEETS P.66-P.71
- 3. FOR GUARDRAIL ESTIMATED QUANTITIES, SEE SHEETS P.35-P.36
- 4. FOR SIGNING SUBSUMMARY, SEE SHEET P.37
- 5. FOR EROSION CONTROL PLAN AND DETAILS, SEE SHEETS P.52-P.56



**PLAN SHEET - I.R. 77
STA. 434+00 TO STA. 462+50**

DESIGN AGENCY



DESIGNER
MVC

REVIEWER
TES 05/12/22

PROJECT ID
107570

SHEET TOTAL
P.34 71

GUARDRAIL ESTIMATED QUANTITIES - U.S. 250

REFERENCE NO.	SHEET NO.	STATION (+/-)		SIDE (DIRECTION OF TRAVEL)	GUARDRAIL ESTIMATED QUANTITIES - U.S. 250														FUNDING	COMMENTS				
					202		209		CURVED RAIL ELEMENTS (FOR INFO ONLY)		606						609				626			
					GUARDRAIL REMOVED	LINEAR GRADING	LENGTH	RADIUS	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	CURB, TYPE 4-C	BARRIER REFLECTOR, TYPE 1, ONE WAY	BARRIER REFLECTOR, TYPE 2, ONE WAY	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL (YELLOW/RED)			BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL (WHITE/RED)			
FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	FT.	EACH	EACH	EACH	EACH									
PART 2																								
EASTBOUND U.S. 250																								
GR-1	P.24	610+00.90	616+57.10	LT.	650	650			606.25		1		1				8	8						
GR-2	P.24	611+91.00	616+59.70	RT.	463	463			418.75		1		1				6	6						
GR-3	P.24	618+40.70	622+15.70	RT.	375	375			362.50			1					5							
GR-4	P.24	618+42.00	624+19.80	LT.	578	578			556.25				1	1	18.2		7							
GR-5	P.22	631+92.60	633+30.10	LT.	138	138			125.00			1					3							
GR-6	P.22	632+01.40	633+88.90	RT.	188	188			175.00			1					3							
GR-7	P.22	637+00.00	638+00.00	RT.	68	100			25.00		1		1				3							
GR-8	P.22	645+47.29	647+34.79	RT.	188	188			175.00			1					3							
BW-1	P.22	638+00.00	645+47.29	RT.												9								
WESTBOUND U.S. 250																								
GR-9	P.23-P.24	620+97.60	628+54.50	RT.	757	757			731.25				1	1			9							
GR-10	P.23-P.24	625+37.70	628+87.70	LT.	350	350			337.50			1					5							
GR-11	P.22-P.23	631+52.30	633+88.90	RT.	232	232			156.25		1		1		18.2		4							
GR-12	P.22-P.23	9+92 RAMP F	639+41.30	RT.	775	775			725.00		1						6	5						
GR-13	P.22	645+00.00	652+00.00	RT.	700	700			637.50		1	1					8							
U.S. 250 RAMP D																								
GR-14	P.24	0+77.80	4+27.80	LT.	350	350			287.50		1	1					5							
GR-15	P.23-P.24	4+81.80	8+05.84	RT.	188	188			250.00		1		1		18.2		3							
					CONVERT FEET TO MILE																			
						6,032																		
						MILE																		
SUB-TOTALS: PART 2					6,000	1.14			5,568.75		8	7	7	7		54.60	9	78		19	02/NHS/PV			
TOTALS CARRIED TO GENERAL SUMMARY					6,000	1.14			5,568.75		8	7	7	7		55	9	78		19	02/NHS/PV			

GUARDRAIL ESTIMATED QUANTITIES - U.S. 250

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET

P.35

TOTAL

71

GUARDRAIL ESTIMATED QUANTITIES - I.R. 77

REFERENCE NO.	SHEET NO.	STATION (+/-)		SIDE (DIRECTION OF TRAVEL)	202		209		CURVED RAIL ELEMENTS (FOR INFO ONLY)		606						609		626				FUNDING	COMMENTS	
					GUARDRAIL REMOVED	LINEAR GRADING	LENGTH	RADIUS	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	CURB, TYPE 4-C	BARRIER REFLECTOR, TYPE 1, ONE WAY	BARRIER REFLECTOR, TYPE 2, ONE WAY	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL (YELLOW/RED)	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL (WHITE/RED)						
																				FT.	FT.	FT.			FT.
PART 1																									
SOUTHBOUND I.R. 77																									
GR-16	P.30-P.31	345+87.50	360+00.00	RT.	1413	1,413				1,400.00			1							16			CONNECT TO EX. MGS G.R., ADJUST EX. HEIGHT AS NEEDED		
GR-17	P.31-P.32	369+00.00	382+00.00	RT.	1300	1,300				1,250.00		1								14			CONNECT TO EX. MGS G.R., ADJUST EX. HEIGHT AS NEEDED		
GR-18	P.32	401+65.40	402+77.90	RT.	113	113				37.50		1		1						3					
GR-19	P.33-P.34	425+05.00	58+55 RAMP A	RT.	3350	3,350				3,287.50		1	1							15		41	STA. 438+80, I.R. 77 = STA. 38+80.00, RAMP 'A'		
GR-20	P.34	443+95.00	449+20.00	RT.	525	525				462.50		1	1							7					
NORTHBOUND I.R. 77																									
GR-21	P.31-P.32	372+50.00	388+25.00	RT.	1575	1,575				1,562.50			1							17			CONNECT TO EX. MGS G.R., ADJUST EX. HEIGHT AS NEEDED		
GR-22	P.32	399+86.60	400+99.10	RT.	113	113				37.50		1		1						3					
GR-23	P.34	450+29.64	452+92.14	LT.	263	263				200.00	1			1						4					
S.R. 21/U.S. 250 INT. RAMP A																									
GR-24	P.34	44+50.50	49+13.00	LT.	463	463				400.00		1	1									6			
S.R. 21/U.S. 250 INT. RAMP B																									
GR-25	P.34	44+91.30	48+78.80	LT.	388	388				325.00		1	1									9			
GR-26	P.34	56+50.45 RAMP AB	453+91.39	RT.	1475	1,475				1,462.50			1			1						31	STA. 52+38.67, RAMP 'AB' = STA. 42+80.22, RAMP 'B' STA. 50+80.82, RAMP 'B' = STA. 450+92.12, I.R. 77		
S.R. 21/U.S. 250 INT. RAMP C																									
GR-27	P.34	433+87.25	45+47.31 RAMP CD	RT.	1175	1,175				1,125.00		1										25	STA. 435+10, I.R. 77 = STA. 34+96.08, RAMP C STA. 43+96.59, RAMP 'C' = STA. 43+95.59, RAMP 'CD' CONNECT TO EX. G.R. RADIUS, ADJUST EX. HEIGHT AS NEEDED		
S.R. 21/U.S. 250 INT. RAMP D																									
GR-28	P.33-P.34	41+21.71	43+46.71	LT.	225	225				162.50		1	1									6			
GR-29	P.34	45+40.91 RAMP CD	452+38.55	RT.	1431	1,431				1,381.25				1								19	STA. 49+00, RAMP 'D' = STA. 449+00, I.R. 77 STA. 38+99.72, RAMP 'D' = STA. 43+96.59, RAMP 'CD' CONNECT TO EX. MGS G.R., ADJUST EX. HEIGHT AS NEEDED		
CONVERT FEET TO MILE						13,809																			
SUB-TOTALS: PART 1					13,809	2.62		13,093.75	1	9	8	4	1							79	21	116	01/IMS/PV		
TOTALS CARRIED TO GENERAL SUMMARY					13,809	2.62		13,093.75	1	9	8	4	1							79	137	01/IMS/PV			

DESIGN AGENCY



DESIGNER
MVC

REVIEWER
TES 05/12/22

PROJECT ID
107570

SHEET TOTAL
P.36 | 71

SIGNING ESTIMATED QUANTITIES

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	CODE	SIZE (INCHES)	630				FUNDING	
			FROM	TO				GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN POST REFLECTOR	SIGN, FLAT SHEET		
								FT.	FT.	EACH	SQ. FT.		
PART 1													
P.23	S-1	I.R. 77 MEDIAN	797+16		CL	R3-4-36	36" X 36"		13.50	2	9		
						R5-11-30	24" X 30"				5		
P.23	S-2	I.R. 77 MEDIAN	797+84		CL	R3-4-36	36" X 36"		13.50	2	9		
						R5-11-30	24" X 30"				5		
P.24	S-3	I.R. 77 S.B.	94+25.00		RT.	I-H25b-12	12" X 12"	10			1		
P.29	S-4	I.R. 77 MEDIAN	317+66		CL	R3-4-36	36" X 36"		13.50	2	9		
						R5-11-30	24" X 30"				5		
P.29	S-5	I.R. 77 MEDIAN	318+34.00		CL	R3-4-36	36" X 36"		13.50	2	9		
						R5-11-30	24" X 30"				5		
P.34	S-6	I.R. 77 N.B.	452+35.00		RT.	I-H25b-12	12" X 12"	10			1		
SUB-TOTALS PART 1								20	54	8	58		01/IMS/PV
PART 2													
P.24	S-7	U.S. 250 E.B.	616+60.00		RT.	I-H25b-12	12" X 12"	10			1		
P.24	S-8	U.S. 250 W.B.	620+90.00		RT.	I-H25b-12	12" X 12"	10			1		
P.23	S-9	U.S. 250 E.B.	625+00.00		RT.	I-H25b-12	12" X 12"	10			1		
P.23	S-10	U.S. 250 W.B.	631+55.00		RT.	I-H25b-12	12" X 12"	10			1		
SUB-TOTALS PART 2								40			4		02/NHS/PV
SUB-TOTALS 01/IMS/PV								20	54	8	58		01/IMS/PV
SUB-TOTALS 02/NHS/PV								40			4		02/NHS/PV
TOTALS CARRIED TO GENERAL SUMMARY								60	54	8	62		

SIGNING ESTIMATED QUANTITIES

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET TOTAL

P.37 71

TUS-77-20.73, TUS-250-11.88

MODEL: Sheet PAPER: 34x22 (in.) DATE: 7/13/2022 TIME: 10:51:09 AM USER: mclark3
 p:\vohodot-pw-bentley.com\shiodo-pw-02\Documents\01 Active Projects\District 11\Tuscarawas\107570\40-Engineering\Roadway\Sheets\107570_G0001.dgn

RESURFACING ESTIMATED QUANTITIES - NORTHBOUND I.R. 77

LOCATION	STATION		LENGTH FT.	WIDTH FT.	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT TREATMENT						FUNDING	COMMENTS
						202	254	407	442				
						WEARING COURSE REMOVED SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN SQ. YD.	TACK COAT GAL.	THICKNESS IN.	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN CU. YD.	ANTI-SEGREGATION EQUIPMENT CU. YD.		
PART 1													
NORTHBOUND I.R. 77													
MAINLINE	84+02.50	453+16.62	36914.12	24	98,438		98,438	8,367	1 1/2	4,102	4,102		
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81													
U.S. 250 ACCELERATION LANE	90+23.93	108+00.00	1776.07	40-0	3,947		3,947	335	1 1/2	164	164		
RAMP 'B' ACCELERATION LANE	108+00.00	124+50.00	1650.00	39-0	3,575		3,575	304	1 1/2	149	149		
S.R. 39 INTERCHANGE - EXIT 83													
RAMP 'H' DECELERATION LANE TAPER	202+76.98	203+76.98	100.00	0-12	67		67	6	1 1/2	3	3		
RAMP 'H' PARALLEL DECELERATION LANE	203+76.98	210+20.09	643.11	12	857		857	73	1 1/2	36	36		
RAMP 'H' TAPERED WEDGE TO GORE	210+20.09	214+78.65	458.56	12-39	1,299		1,299	110	1 1/2	54	54		
RAMP 'J' ACCCELERATION LANE FROM GORE	231+50.00	248+00.00	1650.00	39-0	3,575		3,575	304	1 1/2	149	149		
C.R. 80 INTERCHANGE - EXIT 85													
RAMP 'B' DECELERATION LANE TAPER	291+95.00	292+95.00	100.00	0-12	67		67	6	1 1/2	3	3		
RAMP 'B' PARALLEL DECELERATION LANE	292+95.00	295+41.57	246.57	12	329		329	28	1 1/2	14	14		
RAMP 'B' TAPERED WEDGE TO GORE	295+41.57	299+92.36	450.79	12-39	1,277		1,277	109	1 1/2	53	53		
RAMP 'D' ACCCELERATION LANE FROM GORE	318+45.95	333+50.00	1504.05	39-0	3,259		3,259	277	1 1/2	136	136		
U.S.250/S.R. 21 INTERCHANGE - EXIT 87													
RAMP 'C' DECELERATION LANE TAPER	426+94.58	427+94.58	100.00	0-12	67		67	6	1 1/2	3	3		
RAMP 'C' DECELERATION LANE	427+94.58	430+20.00	225.42	12	301		301	26	1 1/2	13	13		
RAMP 'C' DECELERATION LANE TO GORE	430+20.00	435+10.00	490.00	12-41	1,443		1,443	123	1 1/2	60	60		
RAMP 'D' ACCCELERATION LANE FROM GORE	445+08.00	450+57.06	549.06	39-18	1,739		1,739	148	1 1/2	72	72		
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19							120,240	10,222		5,011	5,011	01/IMS/PV	

RESURFACING ESTIMATED QUANTITIES - NORTHBOUND I.R. 77

DESIGN AGENCY



DESIGNER
MVC
 REVIEWER
TES 05/12/22
 PROJECT ID
107570
 SHEET TOTAL
P.38 | 71

RESURFACING ESTIMATED QUANTITIES - NORTHBOUND I.R. 77 MEDIAN SHOULDER

LOCATION	STATION		LENGTH	PAVEMENT WIDTH	PAVEMENT AREA	GRADING WIDTH	GRADING AREA	BERMING WIDTH	BERMING AREA	PROPOSED PAVEMENT TREATMENT									FUNDING	COMMENTS
										254	407	408	442		617			618		
										PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	PRIME COAT, AS PER PLAN	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)		
1 1/2"	0.085 GAL/SY	0.4 GAL/SY																		
FROM	TO	FT.	FT.	SQ. YD.	FT.	SQ. YD.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	SQ. YD.	IN.	CU. YD.	FT.			
PART 1																				
MAINLINE	84+02.50	92+14.28	811.78	4	361	4	361	2	180	361	31	72	1 1/2	15	361	2	10	811.78		
APPROACH SLAB	92+14.28	92+39.28	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
BR. NO. TUS-77-2089R	92+39.28	94+04.92	165.64	3	55	N/A	N/A	N/A	N/A	55	5		1 1/2	2				165.64		SEE NOTE 1
APPROACH SLAB	94+04.92	94+29.92	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
MAINLINE	94+29.92	147+98.50	5,368.58	4	2,386	4	2,386	2	1,193	2,386	203	477	1 1/2	99	2,386	2	66	5,368.58		
APPROACH SLAB	147+98.50	148+23.50	25.00	4	11	N/A	N/A	N/A	N/A	11	1		1 1/2	0.46				25.00		
BR. NO. TUS-77-2195R	148+23.50	153+34.50	511.00	2.25	128	N/A	N/A	N/A	N/A	128	11		1 1/2	5				511.00		SEE NOTE 1
APPROACH SLAB	153+34.50	153+59.50	25.00	4	11	4	11	2	6	11	1	2	1 1/2	0.46	11	2	0.33	25.00		
MAINLINE	153+59.50	159+75.24	615.74	4	274	4	274	2	137	274	23	55	1 1/2	11	274	2	8	615.74		
APPROACH SLAB	159+75.24	160+00.24	25.00	4	11	N/A	N/A	N/A	N/A	11	1		1 1/2	0.46				25.00		
BR. NO. TUS-77-2217R	160+00.24	163+01.74	301.50	2	67	N/A	N/A	N/A	N/A	67	6		1 1/2	3				301.50		SEE NOTE 1
APPROACH SLAB	163+01.74	163+26.74	25.00	4	11	4	11	2	6	11	1	2	1 1/2	0.46	11	2	0.33	25.00		
MAINLINE	163+26.74	169+04.74	578.00	4	257	4	257	2	128	257	22	51	1 1/2	11	257	2	7	578.00		
APPROACH SLAB	169+04.74	169+29.74	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
BR. NO. TUS-77-2235R	169+29.74	170+48.28	118.54	5.5	72	N/A	N/A	N/A	N/A	72	6		1 1/2	3				118.54		SEE NOTE 1
APPROACH SLAB	170+48.28	170+73.28	25.00	5.5	15	4	11	2	6	15	1	2	1 1/2	0.64	11	2	0.33	25.00		
MAINLINE	170+73.28	222+91.91	5,218.63	4	2,319	4	2,319	2	1,160	2,319	197	464	1 1/2	97	2,319	2	64	5,218.63		
APPROACH SLAB	222+91.91	223+16.91	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
BR. NO. TUS-77-2337R	223+16.91	224+78.51	161.60	3	54	N/A	N/A	N/A	N/A	54	5		1 1/2	2				161.60		SEE NOTE 1
APPROACH SLAB	224+78.51	225+03.51	25.00	5.5	15	4	11	2	6	15	1	2	1 1/2	0.64	11	2	0.33	25.00		
MAINLINE	225+03.51	235+72.69	1,069.18	4	475	4	475	2	238	475	40	95	1 1/2	20	475	2	13	1,069.18		
APPROACH SLAB	235+72.69	235+97.69	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
BR. NO. TUS-77-2361R	235+97.69	236+77.35	79.66	3.75	33	N/A	N/A	N/A	N/A	33	3		1 1/2	1				79.66		SEE NOTE 1
APPROACH SLAB	236+77.35	237+02.35	25.00	5.5	15	4	11	2	6	15	1	2	1 1/2	0.64	11	2	0.33	25.00		
MAINLINE	237+02.35	453+16.62	21,614.27	4	9,606	4	9,606	2	4,803	9,606	817	1,921	1 1/2	400	9,606	2	267	21,614.27		
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19										16,251	1,381	3,145		676	15,733		437	36,914.12	01/IMS/PV	

NOTE:
 1. CONTRACTOR TO VARY SHOULDER PAVEMENT PLANING ACROSS BRIDGE DECK TO AVOID PLANING OVER THE EXISTING PAVED SCUPPER OPENINGS. SEE 'PAVING ACROSS BRIDGES WITH SCUPPERS DETAIL' ON SHEET P.64 FOR MORE INFORMATION.

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET TOTAL

P.39 | 71

RESURFACING ESTIMATED QUANTITIES - NORTHBOUND I.R. 77 MEDIAN SHOULDER

RESURFACING ESTIMATED QUANTITIES - NORTHBOUND I.R. 77 OUTSIDE SHOULDER

LOCATION	STATION		LENGTH	PAVEMENT WIDTH	PAVEMENT AREA	GRADING WIDTH	GRADING AREA	BERMING WIDTH	BERMING AREA	PROPOSED PAVEMENT TREATMENT								FUNDING	COMMENTS
										254	407	408	442		617		618		
										PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	PRIME COAT, AS PER PLAN	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN		
1 1/2"	0.085 GAL/SY	0.4 GAL/SY	IN.	CU. YD.	SQ. YD.	IN.	CU. YD.	FT.											
FROM	TO	FT.	FT.	SQ. YD.	FT.	SQ. YD.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	SQ. YD.	IN.	CU. YD.	FT.		
PART 1																			
MAINLINE	84+02.50	92+10.42	807.92	10	898	4	359	2	180	898	76	72	1 1/2	37	359	2	10	807.92	
APPROACH SLAB	92+10.42	92+35.42	25.00	7.5	21	N/A	N/A	N/A	N/A	21	2		1 1/2	0.87				25.00	
BR. NO. TUS-77-2089R	92+35.42	94+01.06	165.64	5	92	N/A	N/A	N/A	N/A	92	8		1 1/2	4				165.64	SEE NOTE 1; SEE NOTE 2
APPROACH SLAB	94+01.06	94+26.06	25.00	7.5	21	N/A	N/A	N/A	N/A	21	2		1 1/2	0.87				25.00	
MAINLINE	94+26.06	123+50.00	2,923.94	8	2,599	4	1,300	2	650	2,599	221	260	1 1/2	108	1,300	2	36	2,923.94	
MAINLINE	123+50.00	124+50.00	100.00	9	100	4	44	2	22	100	9	9	1 1/2	4	44	2	1.22	100.00	
MAINLINE	124+50.00	147+98.50	2,348.50	10	2,609	4	1,044	2	522	2,609	222	209	1 1/2	109	1,044	2	29	2,348.50	
APPROACH SLAB	147+98.50	148+23.50	25.00	7.75	22	N/A	N/A	N/A	N/A	22	2		1 1/2	1				25.00	
BR. NO. TUS-77-2195R	148+23.50	153+34.50	511.00	6	341	N/A	N/A	N/A	N/A	341	29		1 1/2	14				511.00	SEE NOTE 1
APPROACH SLAB	153+34.50	153+59.50	25.00	7.75	22	4	11	2	6	22	2	2	1 1/2	1	11	2	0.33	25.00	
MAINLINE	153+59.50	159+83.44	623.94	10	693	4	277	2	139	693	59	56	1 1/2	29	277	2	8	623.94	
APPROACH SLAB	159+83.44	160+21.25	37.81	7.75	33	N/A	N/A	N/A	N/A	33	3		1 1/2	1				37.81	
BR. NO. TUS-77-2217R	160+21.25	163+22.75	301.50	5.25	176	N/A	N/A	N/A	N/A	176	15		1 1/2	7				301.50	SEE NOTE 1
APPROACH SLAB	163+22.75	163+47.75	25.00	7.75	22	4	11	2	6	22	2	2	1 1/2	1	11	2	0.33	25.00	
MAINLINE	163+47.75	169+11.21	563.46	10	626	4	250	2	125	626	53	50	1 1/2	26	250	2	7	563.46	
APPROACH SLAB	169+11.21	169+36.21	25.00	11.5	32	N/A	N/A	N/A	N/A	32	3		1 1/2	1				25.00	
BR. NO. TUS-77-2235R	169+36.21	170+54.75	118.54	9.75	128	N/A	N/A	N/A	N/A	128	11		1 1/2	5				118.54	SEE NOTE 1
APPROACH SLAB	170+54.75	170+79.75	25.00	11.5	32	4	11	2	6	32	3	2	1 1/2	1	11	2	0.33	25.00	
MAINLINE	170+79.75	202+76.98	3,197.23	10	3,552	4	1,421	2	710	3,552	302	284	1 1/2	148	1,421	2	39	3,197.23	
MAINLINE	202+76.98	203+76.98	100.00	9	100	4	44	2	22	100	9	9	1 1/2	4	44	2	1	100.00	
MAINLINE	203+76.98	213+78.65	1,001.67	8	890	4	445	2	223	890	76	89	1 1/2	37	445	2	12	1,001.67	
MAINLINE	213+78.65	214+78.65	100.00	6.8	76	4	44	2	22	76	6	9	1 1/2	3	44	2	1	100.00	
MAINLINE	214+78.65	215+78.65	100.00	12	133	4	44	2	22	133	11	9	1 1/2	6	44	2	1	100.00	
MAINLINE	215+78.65	222+74.06	695.41	10	773	4	309	2	155	773	66	62	1 1/2	32	309	2	9	695.41	
APPROACH SLAB	222+74.06	222+99.06	25.00	11.5	32	N/A	N/A	N/A	N/A	32	3		1 1/2	1				25.00	
BR. NO. TUS-77-2337R	222+99.06	224+60.66	161.60	9	162	N/A	N/A	N/A	N/A	162	14		1 1/2	7				161.60	SEE NOTE 1
APPROACH SLAB	224+60.66	224+85.66	25.00	11.5	32	4	11	2	6	32	3	2	1 1/2	1	11	2	0.33	25.00	
MAINLINE	224+85.69	231+50.00	664.31	10	738	4	295	2	148	738	63	59	1 1/2	31	295	2	8	664.31	
MAINLINE	231+50.00	235+50.32	400.32	8	356	4	178	2	89	356	30	36	1 1/2	15	178	2	5	400.32	
APPROACH SLAB	235+50.32	235+75.32	25.00	8	22	N/A	N/A	N/A	N/A	22	2		1 1/2	1				25.00	
BR. NO. TUS-77-2361R	235+75.32	236+54.98	79.66	6.25	55	N/A	N/A	N/A	N/A	55	5		1 1/2	2				79.66	SEE NOTE 1; SEE NOTE 2
APPROACH SLAB	236+54.98	236+79.98	25.00	8	22	4	11	2	6	22	2	2	1 1/2	1	11	2	0.33	25.00	
MAINLINE	236+79.98	246+52.00	972.02	8	864	4	432	2	216	864	73	86	1 1/2	36	432	2	12	972.02	
MAINLINE	246+52.00	247+52.00	100.00	9	100	4	44	2	22	100	9	9	1 1/2	4	44	2	1	100.00	
MAINLINE	247+52.00	445+08.00	19,756.00	10	21,951	4	8,780	2	4,390	21,951	1,866	1,756	1 1/2	915	8,780	2	244	19,756.00	END AT RAMP D GORE
MAINLINE	445+08.00	449+00.00	392.00	6-8	305	4	174	2	87	305	26	35	1 1/2	13	174	2	5	392.00	
MAINLINE	449+00.00	453+16.62	416.62	8	370	4	185	2	93	370	31	37	1 1/2	15	185	2	5	416.62	
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19										39,000	3,319	3,146		1,623	15,724		436	36,914.09	01/IMS/PV

NOTES:

- CONTRACTOR TO VARY SHOULDER PAVEMENT PLANING ACROSS BRIDGE DECK TO AVOID PLANING OVER THE EXISTING PAVED SCUPPER OPENINGS. SEE 'PAVING ACROSS BRIDGES WITH SCUPPERS DETAIL' ON SHEET P.64 FOR MORE INFORMATION.
- THE CONTRACTOR SHALL IDENTIFY THE EXISTING RUMBLE STRIP PATTERN AND PLACE A STRIP ALONG THE NORTHBOUND WHITE EDGE LINE ACROSS THE BRIDGES IDENTIFIED IN THE TABLE ABOVE. THE WHITE EDGE LINES FOR U.S. 250 ON BRIDGE NO. TUS-77-2089R AND RAMP J ON BRIDGE NO. TUS-77-2361R SHALL NOT HAVE RUMBLE STRIPS.

DESIGN AGENCY



DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET TOTAL	P.40 71

RESURFACING ESTIMATED QUANTITIES - SOUTHBOUND I.R. 77

LOCATION	STATION		LENGTH FT.	WIDTH FT.	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT TREATMENT						FUNDING	COMMENTS
						202	254	407	442				
						WEARING COURSE REMOVED SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN 1 1/2" SQ. YD.	TACK COAT 0.085 GAL/SY GAL.	THICKNESS IN.	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN CU. YD.	ANTI-SEGREGATION EQUIPMENT CU. YD.		
PART 1													
SOUTHBOUND I.R. 77 MAINLINE													
	84+02.50	453+16.62	36,914.12	24	98,438		98,438	8,367	1 1/2	4,102	4,102		
S.R. 39 INTERCHANGE - EXIT 83													
RAMP 'G' ACCCELERATION LANE FROM GORE	201+15.75	217+15.35	1,599.60	0-39	3,466		3,466	295	1 1/2	144	144		
RAMP 'I' TAPERED WEDGE FROM GORE	235+50.00	240+04.73	454.73	39-12	1,288		1,288	109	1 1/2	54	54		
RAMP 'I' PARALLEL DECELERATION LANE	240+04.73	246+50.00	645.27	12	860		860	73	1 1/2	36	36		
RAMP 'I' DECELERATION LANE TAPER	246+50.00	247+50.00	100.00	12-0	67		67	6	1 1/2	3	3		
C.R. 80 INTERCHANGE - EXIT 85													
RAMP 'A' ACCCELERATION LANE FROM GORE	283+50.00	298+56.41	1,506.41	0-39	3,264		3,264	277	1 1/2	136	136		
RAMP 'C' TAPERED WEDGE FROM GORE	325+47.86	330+01.35	453.49	39-12	1,285		1,285	109	1 1/2	54	54		
RAMP 'C' PARALLEL DECELERATION LANE	330+01.35	332+48.00	246.65	12	329		329	28	1 1/2	14	14		
RAMP 'C' DECELERATION LANE TAPER	332+48.00	333+48.00	100.00	12-0	67		67	6	1 1/2	3	3		
U.S.250/S.R. 21 INTERCHANGE - EXIT 87													
RAMP 'A' ACCCELERATION LANE TO GORE	426+80.00	441+20.00	1,440.00	0-40	3,200		3,200	272	1 1/2	133	133		
RAMP 'C' DECELERATION LANE FROM GORE	450+92.12	453+16.62	224.50	39-14.5	667		667	57	1 1/2	28	28		
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19							112,931	9,599		4,707	4,707	01/IMS/PV	

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET

P.41

TOTAL

71

RESURFACING ESTIMATED QUANTITIES - SOUTHBOUND I.R. 77 MEDIAN SHOULDER

LOCATION	STATION		LENGTH	PAVEMENT WIDTH	PAVEMENT AREA	GRADING WIDTH	GRADING AREA	BERMING WIDTH	BERMING AREA	PROPOSED PAVEMENT TREATMENT								FUNDING	COMMENTS	
										254	407	408	442		617					618
										PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	PRIME COAT, AS PER PLAN	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN			RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
1 1/2"	0.085 GAL/SY	0.4 GAL/SY																		
FROM	TO	FT.	FT.	SQ. YD.	FT.	SQ. YD.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	SQ. YD.	IN.	CU. YD.	FT.			
PART 1																				
MAINLINE	84+02.50	92+18.39	815.89	4	363	4	363	2	181	363	31	72	1 1/2	15	363	2	10	815.89		
APPROACH SLAB	92+18.39	92+43.39	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
BR. NO. TUS-77-2089L	92+43.39	94+09.03	165.64	3	55	N/A	N/A	N/A	N/A	55	5		1 1/2	2				165.64	SEE NOTE 1	
APPROACH SLAB	94+09.03	94+34.03	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
MAINLINE	94+34.03	146+03.50	5,169.47	4	2,298	4	2,298	2	1,149	2,298	195	460	1 1/2	96	2,298	2	64	5,169.47		
APPROACH SLAB	146+03.50	146+28.50	25.00	4	11	4	11	2	6	11	1	2	1 1/2	0.46	11	2	0.33	25.00		
BR. NO. TUS-77-2195L	146+28.50	151+39.50	511.00	2.25	128	N/A	N/A	N/A	N/A	128	11		1 1/2	5				511.00	SEE NOTE 1	
APPROACH SLAB	151+39.50	151+64.50	25.00	4	11	N/A	N/A	N/A	N/A	11	1		1 1/2	0.46				25.00		
MAINLINE	151+64.50	160+17.25	852.75	4	379	4	379	2	190	379	32	76	1 1/2	16	379	2	11	852.75		
APPROACH SLAB	160+17.25	160+42.25	25.00	4	11	4	11	2	6	11	1	2	1 1/2	0.46	11	2	0.33	25.00		
BR. NO. TUS-77-2217L	160+42.25	163+43.75	301.50	2	67	N/A	N/A	N/A	N/A	67	6		1 1/2	3				301.50	SEE NOTE 1	
APPROACH SLAB	163+43.75	163+68.75	25.00	4	11	N/A	N/A	N/A	N/A	11	1		1 1/2	0.46				25.00		
MAINLINE	163+68.75	168+90.21	521.46	4	232	4	232	2	116	232	20	46	1 1/2	10	232	2	6	521.46		
APPROACH SLAB	168+90.21	169+15.21	25.00	4	11	4	11	2	6	11	1	2	1 1/2	0.46	11	2	0.33	25.00		
BR. NO. TUS-77-2235L	169+15.21	170+33.75	118.54	3.75	49	N/A	N/A	N/A	N/A	49	4		1 1/2	2				118.54	SEE NOTE 1	
APPROACH SLAB	170+33.75	170+58.75	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
MAINLINE	170+58.75	223+36.49	5,277.74	4	2,346	4	2,346	2	1,173	2,346	199	469	1 1/2	98	2,346	2	65	5,277.74		
APPROACH SLAB	223+36.49	223+61.49	25.00	4	11	4	11	2	6	11	1	2	1 1/2	0.46	11	2	0.33	25.00		
BR. NO. TUS-77-2337L	223+61.49	225+23.09	161.60	3	54	N/A	N/A	N/A	N/A	54	5		1 1/2	2				161.60	SEE NOTE 1	
APPROACH SLAB	225+23.09	225+48.09	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
MAINLINE	225+48.09	236+00.66	1,052.57	4	468	4	468	2	234	468	40	94	1 1/2	19	468	2	13.00	1,052.57		
APPROACH SLAB	236+00.66	236+25.66	25.00	5.5	15	4	11	2	6	15	1	2	1 1/2	0.64	11	2	0.33	25.00		
BR. NO. TUS-77-2361L	236+25.66	237+05.32	79.66	3.75	33	N/A	N/A	N/A	N/A	33	3		1 1/2	1				79.66	SEE NOTE 1	
APPROACH SLAB	237+05.32	237+30.32	25.00	5.5	15	N/A	N/A	N/A	N/A	15	1		1 1/2	0.64				25.00		
MAINLINE	237+30.32	453+13.42	21,583.10	4	9,592	4	9,592	2	4,796	9,592	815	1,918	1 1/2	400	9,592	2	266	21,583.10		
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19										16,220	1,378	3,145		676	15,733		437	36,910.92	01/IMS/PV	

- NOTE:
- CONTRACTOR TO VARY SHOULDER PAVEMENT PLANING ACROSS BRIDGE DECK TO AVOID PLANING OVER THE EXISTING PAVED SCUPPER OPENINGS. SEE 'PAVING ACROSS BRIDGES WITH SCUPPERS DETAIL' ON SHEET P.64 FOR MORE INFORMATION.

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET TOTAL

P.42 | 71

RESURFACING ESTIMATED QUANTITIES - SOUTHBOUND I.R. 77 MEDIAN SHOULDER

RESURFACING ESTIMATED QUANTITIES - SOUTHBOUND I.R. 77 OUTSIDE SHOULDER

LOCATION	STATION		LENGTH	PAVEMENT WIDTH	PAVEMENT AREA	GRADING WIDTH	GRADING AREA	BERMING WIDTH	BERMING AREA	PROPOSED PAVEMENT TREATMENT									FUNDING	REMARKS
										254	407	408	442		617			618		
										PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	PRIME COAT, AS PER PLAN	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)		
1 1/2"	0.085 GAL/SY	0.4 GAL/SY	IN.	CU. YD.	SQ. YD.	IN.	CU. YD.	FT.												
FROM	TO	FT.	FT.	SQ. YD.	FT.	SQ. YD.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	SQ. YD.	IN.	CU. YD.	FT.			
PART 1																				
MAINLINE	84+02.50	92+20.02	817.52	10	908	4	363	2	182	908	77	73	1 1/2	38	363	2	10	817.52		
APPROACH SLAB	92+20.02	92+45.02	25.00	11.5	32	N/A	N/A	N/A	N/A	32	3		1 1/2	1				25.00		
BR. NO. TUS-77-2089L	92+45.02	94+10.66	165.64	9	166	N/A	N/A	N/A	N/A	166	14		1 1/2	7				165.64	SEE NOTE 1	
APPROACH SLAB	94+10.66	94+35.66	25.00	11.5	32	N/A	N/A	N/A	N/A	32	3		1 1/2	1				25.00		
MAINLINE	94+35.66	108+77.09	1,441.43	10	1,602	4	641	2	320	1,602	136	128	1 1/2	67	641	2	18	1,441.43		
OMIT U.S. 250 DECELERATION LANE	108+77.09	119+62.97	1,085.88																	
MAINLINE	119+62.97	146+03.50	2,640.53	10	2,934	4	1,174	2	587	2,934	249	235	1 1/2	122	1,174	2	33	2,640.53		
APPROACH SLAB	146+03.50	146+28.50	25.00	7.75	22	4	11	2	6	22	2	2	1 1/2	1	11	2	0.33	25.00		
BR. NO. TUS-77-2195L	146+28.50	151+39.50	511.00	6	341	N/A	N/A	N/A	N/A	341	29		1 1/2	14				511.00	SEE NOTE 1	
APPROACH SLAB	151+39.50	151+64.50	25.00	7.75	22	N/A	N/A	N/A	N/A	22	2		1 1/2	1				25.00		
MAINLINE	151+64.50	160+34.05	869.55	10	966	4	386	2	193	966	82	77	1 1/2	40	386	2	11	869.55		
APPROACH SLAB	160+34.05	160+59.05	25.00	7.75	22	4	11	2	6	22	2	2	1 1/2	1	11	2	0.33	25.00		
BR. NO. TUS-77-2217L	160+59.05	163+60.55	301.50	5.25	176	N/A	N/A	N/A	N/A	176	15		1 1/2	7				301.50	SEE NOTE 1	
APPROACH SLAB	163+60.55	163+85.55	25.00	7.75	22	N/A	N/A	N/A	N/A	22	2		1 1/2	1				25.00		
MAINLINE	163+85.55	168+84.39	498.84	10	554	4	222	2	111	554	47	44	1 1/2	23	222	2	6	0.09		
APPROACH SLAB	168+84.39	169+09.39	25.00	11.5	32	4	11	2	6	32	3	2	1 1/2	1	11	2	0.33	25.00		
BR. NO. TUS-77-2235L	169+09.39	170+27.93	118.54	9.75	128	N/A	N/A	N/A	N/A	128	11		1 1/2	5				118.54	SEE NOTE 1	
APPROACH SLAB	170+27.93	170+52.93	25.00	11.5	32	N/A	N/A	N/A	N/A	32	3		1 1/2	1				25.00		
MAINLINE	170+52.93	201+15.75	3,062.82	10	3,403	4	1,361	2	681	3,403	289	272	1 1/2	142	1,361	2	38	3,062.82		
MAINLINE	201+15.75	201+66.55	50.80	9	51	4	23	2	11	51	4	4	1 1/2	2	23	2	1	50.80		
MAINLINE	201+66.55	217+15.35	1,548.80	8	1,377	4	688	2	344	1,377	117	138	1 1/2	57	688	2	19	1,548.80		
MAINLINE	217+15.35	223+54.31	638.96	10	710	4	284	2	142	710	60	57	1 1/2	30	284	2	8	638.96		
APPROACH SLAB	223+54.31	223+79.31	25.00	11.5	32	4	11	2	6	32	3	2	1 1/2	1	11	2	0.33	25.00		
BR. NO. TUS-77-2337L	223+79.31	225+40.91	161.60	9	162	N/A	N/A	N/A	N/A	162	14		1 1/2	7				161.60	SEE NOTE 1	
APPROACH SLAB	225+40.91	225+65.91	25.00	11.5	32	N/A	N/A	N/A	N/A	32	3		1 1/2	1				25.00		
MAINLINE	225+65.91	235+50.00	984.09	10	1,093	4	437	2	219	1,093	93	88	1 1/2	46	437	2	12	984.09		
MAINLINE	235+50.00	236+11.86	61.86	6.5	45	4	27	2	14	45	4	6	1 1/2	2	27	2	1	61.86		
APPROACH SLAB	236+11.86	236+36.86	25.00	8	22	4	11	2	6	22	2	2	1 1/2	1	11	2	0.33	25.00		
BR. NO. TUS-77-2361L	236+36.86	237+16.52	79.66	6.25	55	N/A	N/A	N/A	N/A	55	5		1 1/2	2				79.66	SEE NOTE 1	
APPROACH SLAB	237+16.52	237+41.52	25.00	8	22	N/A	N/A	N/A	N/A	22	2		1 1/2	1				25.00		
MAINLINE	237+41.52	246+50.00	908.48	8	808	4	404	2	202	808	69	81	1 1/2	34	404	2	11	908.48		
MAINLINE	246+50.00	247+50.00	100.00	9	100	4	44	2	22	100	9	9	1 1/2	4	44	2	1	100.00		
MAINLINE	247+50.00	453+13.42	20,563.42	10	22,848	4	9,139	2	4,570	22,848	1,942	1,828	1 1/2	952	9,139	2	254	20,563.42		
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19										38,751	3,296	3,050		1,613	15,248		425	35,326.29	01/IMS/PV	

NOTE:

- CONTRACTOR TO VARY SHOULDER PAVEMENT PLANING ACROSS BRIDGE DECK TO AVOID PLANING OVER THE EXISTING PAVED SCUPPER OPENINGS. SEE 'PAVING ACROSS BRIDGES WITH SCUPPERS DETAIL' ON SHEET P.64 FOR MORE INFORMATION.


DESIGN AGENCY



DESIGNER
 MVC
 REVIEWER
 TES 05/12/22
 PROJECT ID
 107570
 SHEET TOTAL
 P.43 | 71

RESURFACING ESTIMATED QUANTITIES - I.R. 77 RAMPS												
LOCATION	STATION		LENGTH FT.	WIDTH FT.	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT TREATMENT					FUNDING	COMMENTS
						202	254	407	442			
						WEARING COURSE REMOVED	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN		
FROM	TO	FT.	FT.	SQ. YD.	SQ. YD.	SQ. YD.	GAL.	IN.	CU. YD.			
PART 1												
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81												
NORTHBOUND I.R. 77 RAMPS												
RAMP E												
LANE	5+88.39	16+25.12	1036.73	16	1,843	1,843	157	1 1/2	77			
RAMP B												
EXTRA FOR INTERSECTION					307	307	26	1 1/2	13		CADD AREA	
LANE	0+30.86	15+78.79	1547.93	16	2,752	2,752	234	1 1/2	115			
SOUTHBOUND I.R. 77 RAMPS												
RAMP C												
RAMP C TAPER TO RAMP C/D GORE	1+85.61	3+79.23	193.62	2-30	344	344	29	1 1/2	14			
FROM RAMP C/D GORE	3+79.23	16+12.70	1233.47	16	2,193	2,193	186	1 1/2	91			
RAMP A												
EXTRA FOR INTERSECTION					142	142	12	1 1/2	6		CADD AREA	
TURNLANES	0+30.15	2+78.00	247.85	24	661	661	56	1 1/2	28			
TAPER	2+78.00	3+15.00	37.00	24-16	82	82	7	1 1/2	3			
TAPER TO E.B. U.S. 250 GORE	3+15.00	8+20.75	505.75	16	899	899	76	1 1/2	37			
S.R. 39 INTERCHANGE - EXIT 83												
NORTHBOUND I.R. 77 RAMPS												
RAMP H												
TRANSITION FROM RAMP GORE	12+00.00	14+50.00	250.00	16-24	556	556	47	1 1/2	23			
LANES	14+50.00	19+42.27	492.27	24	1,313	1,313	112	1 1/2	55			
EXTRA FOR INTERSECTION					214	214	18	1 1/2	9		CADD AREA	
RAMP J												
EXTRA FOR INTERSECTION					183	183	16	1 1/2	8		CADD AREA	
LANES	0+31.46	2+98.59	267.13	24	712	712	61	1 1/2	30			
TRANSITION	2+98.59	4+61.95	163.36	24-16	363	363	31	1 1/2	15			
LANE TO GORE	4+61.95	10+07.02	545.07	16	969	969	82	1 1/2	40			
SOUTHBOUND I.R. 77 RAMPS												
RAMP G												
LANE FROM RAMP GORE	16+42.48	25+83.00	940.52	16	1,672	1,672	142	1 1/2	70			
EXTRA FOR INTERSECTION					162	162	14	1 1/2	7		CADD AREA	
RAMP I												
EXTRA FOR INTERSECTION					251	251	21	1 1/2	10		CADD AREA	
LANES	0+21.28	4+50.00	428.72	24	1,143	1,143	97	1 1/2	48			
TRANSITION	4+50.00	6+00.00	150.00	24-16	333	333	28	1 1/2	14			
LANE TO GORE	6+00.00	9+47.55	347.55	16	618	618	53	1 1/2	26			
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19							17,712	1,505		739	01/IMS/PV	

DESIGN AGENCY



DESIGNER
MVC

REVIEWER
TES 05/12/22


PROJECT ID
107570

SHEET TOTAL
P.44 | 71

RESURFACING ESTIMATED QUANTITIES - I.R. 77 RAMPS

LOCATION	STATION		LENGTH FT.	WIDTH FT.	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT TREATMENT					FUNDING	COMMENTS
						202	254	407	442			
						WEARING COURSE REMOVED	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN		
FROM	TO	FT.	FT.	SQ. YD.	SQ. YD.	SQ. YD.	IN.	CU. YD.				
PART 1												
C.R. 80 INTERCHANGE - EXIT 85												
NORTHBOUND I.R. 77 RAMPS												
RAMP B												
FROM GORE TO TRANSITION	299+92.36	304+30.00	437.64	16	778	778	66	1 1/2	32			
TAPER	304+30.00	304+80.00	50.00	16-24	111	111	9	1 1/2	5			
TURNLANES	304+80.00	308+69.04	389.04	24	1,037	1,037	88	1 1/2	43			
EXTRA FOR INTERSECTION					293	293	25	1 1/2	12		CADD AREA	
RAMP D												
EXTRA FOR INTERSECTION					321	321	27	1 1/2	13		CADD AREA	
LANE	308+46.22	318+45.95	999.73	16	1,777	1,777	151	1 1/2	74			
SOUTHBOUND I.R. 77 RAMPS												
RAMP A												
LANE FROM RAMP GORE	298+52.24	312+35.44	1383.20	16	2,459	2,459	209	1 1/2	102			
EXTRA FOR INTERSECTION					293	293	25	1 1/2	12		CADD AREA	
RAMP C												
EXTRA FOR INTERSECTION					275	275	23	1 1/2	11		CADD AREA	
TURNLANES	311+10.47	315+00.00	389.53	24	1,039	1,039	88	1 1/2	43			
TAPER	315+00.00	315+50.00	50.00	24-16	111	111	9	1 1/2	5			
FROM TRANSITION TO GORE	315+50.00	325+47.86	997.86	16	1,774	1,774	151	1 1/2	74			
U.S.250/S.R. 21 INTERCHANGE - EXIT 87												
NORTHBOUND I.R. 77 RAMPS												
RAMP C												
LANES FROM RAMP GORE	34+96.08	46+28.47	1132.39	16	2,013	2,013	171	1 1/2	84			
EXTRA FOR INTERSECTION					146	146	12	1 1/2	6		CADD AREA	
RAMP D												
EXTRA FOR INTERSECTION					173	173	15	1 1/2	7		CADD AREA	
LANE	36+67.84	45+21.39	853.55	16	1,517	1,517	129	1 1/2	63			
SOUTHBOUND I.R. 77 RAMPS												
RAMP A												
LANE FROM RAMP GORE	41+26.00	61+03.22	1977.22	16	3,515	3,515	299	1 1/2	146			
EXTRA FOR INTERSECTION					145	145	12	1 1/2	6		CADD AREA	
RAMP B												
EXTRA FOR INTERSECTION					67	67	6	1 1/2	3		CADD AREA	
RAMP AB LANE	52+38.67	61+03.22	864.55	16	1,537	1,537	131	1 1/2	64			
LANE TO GORE	42+80.22	50+80.82	800.60	16	1,423	1,423	121	1 1/2	59		STA. EQUATION STA. 52+38.67, RAMP 'AB' = STA. 42+80.22, RAMP B	
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19							20,804	1,767		864	01/IMS/PV	

DESIGN AGENCY



DESIGNER
MVC

REVIEWER
TES 05/12/22

PROJECT ID
107570

SHEET TOTAL
P.45 | 71

TUS-77-20.73, TUS-250-11.88

MODEL: Sheet PAPER: 34x22 (in.) DATE: 7/13/2022 TIME: 10:52:09 AM USER: mclark3
 p:\vohodot-pw-bentley.com\shodot-pw-02\Documents\01 Active Projects\District 11\Tuscarawas\107570\40-Engineering\Roadway\Sheets\107570_G0010.dgn

RESURFACING ESTIMATED QUANTITIES - I.R. 77 RAMPS SHOULDERS

LOCATION	STATION		LENGTH FT.	PAVEMENT WIDTH		PAVEMENT AREA SQ. YD.	GRADING WIDTH		GRADING AREA SQ. YD.	BERMING WIDTH		BERMING AREA SQ. YD.	254	407	408	442	617		618	FUNDING	COMMENTS		
				LEFT	RIGHT		LEFT	RIGHT		LEFT	RIGHT		PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	PRIME COAT, AS PER PLAN	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS			COMPACTED AGGREGATE, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
				FT.	FT.		FT.	FT.		FT.	FT.		1 1/2"	0.085 GAL/SY	0.4 GAL/SY	IN.	CU. YD.	SQ. YD.	IN.			CU. YD.	FT.
PART 1																							
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																							
NORTHBOUND I.R. 77 RAMPS																							
RAMP E																							
GORE TO PAVEMENT JOINT	5+88.39	16+25.12	1036.73	6	3	1,037	4	4	922	2	2	461	1,037	88	184	1 1/2	43	922	1 1/2	19.20			
RAMP B																							
INTERSECTION TO GORE	0+36.86	15+78.79	1541.93	3	6	1,542	4	4	1,371	2	2	685	1,542	131	274	1 1/2	64	1,371	1 1/2	28.55			
SOUTHBOUND I.R. 77 RAMPS																							
RAMP C																							
INTERSECTION WITH CURB AND GUTTER	0+29.16	1+01.55	72.39																				
FROM CURB AND GUTTER TO GORE	1+01.55	3+79.23	277.68		6	185		4	123		2	62	185	16	25	1 1/2	8	123	1 1/2	2.57			
GORE TO PAVEMENT JOINT	3+79.23	16+12.70	1233.47	3	6	1,233	4	4	1,096	2	2	548	1,233	105	219	1 1/2	51	1,096	1 1/2	22.84			
RAMP A																							
INTERSECTION WITH CURB AND GUTTER	0+30.08	1+22.27	92.19																				
FROM CURB AND GUTTER TO GORE	1+22.27	8+20.75	698.48	6	3	698	4	4	621	2	2	310	698	59	124	1 1/2	29	621	1 1/2	12.93			
S.R. 39 INTERCHANGE - EXIT 83																							
NORTHBOUND I.R. 77 RAMPS																							
RAMP H																							
FROM GORE	12+00.00	13+00.00	100.00	3	7	111	4	4	89	2	2	44	111	9	18	1 1/2	5	89	1 1/2	1.85			
TO INTERSECTION WITH CURB AND GUTTER	13+00.00	18+77.08	577.08	3	6	577	4	4	513	2	2	256	577	49	102	1 1/2	24	513	1 1/2	10.69			
INTERSECTION WITH CURB AND GUTTER	18+77.08	19+42.27	65.19																				
RAMP J																							
INTERSECTION WITH CURB AND GUTTER	0+31.46	0+96.19	64.70																				
FROM CURB AND GUTTER	0+96.19	9+06.00	809.81	3	6	810	4	4	720	2	2	360	810	69	144	1 1/2	34	720	1 1/2	15.00			
TO GORE	9+06.00	10+07.02	101.02	3	7	112	4	4	90	2	2	45	112	10	18	1 1/2	5	90	1 1/2	1.87			
SOUTHBOUND I.R. 77 RAMPS																							
RAMP G																							
FROM GORE	16+42.48	16+50.00	7.52	3	8	9	4	4	7	2	2	3	9	1	1	1 1/2		7	1 1/2	0.14			
LANE	16+50.00	19+00.00	250.00	3	7	278	4	4	222	2	2	111	278	24	44	1 1/2	12	222	1 1/2	4.63			
TO INTERSECTION WITH CURB AND GUTTER	19+00.00	25+19.32	619.32	3	6	619	4	4	551	2	2	275	619	53	110	1 1/2	26	551	1 1/2	11.47			
INTERSECTION WITH CURB AND GUTTER	25+19.32	25+83.17	63.85																				
RAMP I																							
INTERSECTION WITH CURB AND GUTTER	0+21.28	0+91.57	70.29																				
FROM CURB AND GUTTER	0+91.57	8+47.55	755.98	3	6	756	4	4	672	2	2	336	756	64	134	1 1/2	31	672	1 1/2	14.00			
TO GORE	8+47.55	9+47.55	100.00	3	7	111	4	4	89	2	2	44	111	9	18	1 1/2	5	89	1 1/2	1.85			
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19													8,078	687	1,415		337	7,086		148		01/IMS/PV	

RAMP SIDES ARE DISPLAYED IN DIRECTION OF TRAVEL

RESURFACING ESTIMATED QUANTITIES - I.R. 77 RAMPS SHOULDERS

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET

P.46

TOTAL

71

TUS-77-20.73, TUS-250-11.88

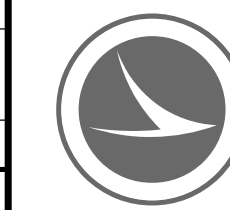
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RESURFACING ESTIMATED QUANTITIES - I.R. 77 RAMPS SHOULDERS

LOCATION	STATION		LENGTH FT.	PAVEMENT WIDTH		PAVEMENT AREA SQ. YD.	GRADING WIDTH		GRADING AREA SQ. YD.	BERMING WIDTH		BERMING AREA SQ. YD.	254	407	408	442	617		618	FUNDING	COMMENTS		
				LEFT	RIGHT		LEFT	RIGHT		LEFT	RIGHT		PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	PRIME COAT, AS PER PLAN	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS			COMPACTED AGGREGATE, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
				1 1/2"	0.085 GAL/SY		0.4 GAL/SY						SQ. YD.	GAL.	GAL.	IN.	CU. YD.	SQ. YD.	IN.			CU. YD.	FT.
PART 1																							
C.R. 80 INTERCHANGE - EXIT 85																							
NORTHBOUND I.R. 77 RAMPS																							
RAMP B																							
GORE TO INTERSECTION WITH CURB AND GUTTER	299+92.35	307+67.24	774.89	3	6	775	4	4	689	2	2	344	775	66	138	1 1/2	32	689	1 1/2	14.35			
INTERSECTION WITH CURB AND GUTTER	307+67.24	308+69.04	101.80																				
RAMP D																							
INTERSECTION WITH CURB AND GUTTER	308+46.22	309+77.59	131.37																				
FROM CURB AND GUTTER TO GORE	309+77.59	318+45.95	868.36	3	6	868	4	4	772	2	2	386	868	74	154	1 1/2	36	772	1 1/2	16.08			
SOUTHBOUND I.R. 77 RAMPS																							
RAMP A																							
GORE TO INTERSECTION WITH CURB AND GUTTER	298+52.24	311+24.00	1,271.76	3	6	1,272	4	4	1,130	2	2	565	1,272	108	226	1 1/2	53	1,130	1 1/2	23.55			
INTERSECTION WITH CURB AND GUTTER (LEFT SIDE ONLY)	311+24.00	312+65.86	141.86																				
INTERSECTION (RIGHT SIDE W/OUT CURB)	311+24.00	311+72.91	48.91		6	33		4	22		2	11	33	3	4	1 1/2	1	22	1 1/2	0.45			
INTERSECTION (RIGHT SIDE RADIUS)	311+72.91	103+86.86 (C.R. 80)	81.64		6-8	63		4	36		2	18	63	5	7	1 1/2	3	36	1 1/2	0.76			
INTERSECTION (RIGHT SIDE TAPER)	103+86.86 (C.R. 80)	103+46.86 (C.R. 80)	40.00		8	36		4	18		2	9	36	3	4	1 1/2	1	18	1 1/2	0.37			
RAMP C																							
INTERSECTION WITH CURB AND GUTTER (LEFT SIDE)	310+80.13	311+69.00	88.87																				
INTERSECTION (LEFT SIDE ONLY W/OUT CURB)	311+69.00	311+95.73	26.73	3		9	4		12	2		6	9	1	2	1 1/2	0.37	12	1 1/2	0.25			
INTERSECTION (RIGHT SIDE TAPER)	103+06.96 (C.R. 80)	103+66.96 (C.R. 80)	60.00		8	53		4	27		2	13	53	5	5	1 1/2	2	27	1 1/2	0.56			
INTERSECTION (RIGHT SIDE RADIUS)	103+66.96 (C.R. 80)	311+95.73	117.69		8-6	92		4	52		2	26	92	8	10	1 1/2	4	52	1 1/2	1.09			
INTERSECTION WITH CURB AND GUTTER TO GORE	311+95.73	325+48.92	1,353.19	3	6	1,353	4	4	1,203	2	2	601	1,353	115	240	1 1/2	56	1,203	1 1/2	25.06			
U.S.250/S.R. 21 INTERCHANGE - EXIT 87																							
NORTHBOUND I.R. 77 RAMPS																							
RAMP C																							
FROM GORE TO CURB ON LEFT	34+96.08	42+21.22	725.14	3	6	725	4	4	645	2	2	322	725	62	129	1 1/2	30	645	1 1/2	13.43			
TO RAMP CD GORE	42+21.22	42+94.22	73.00	3	6	73		4	32		2	16	73	6	6	1 1/2	3	32	1 1/2	0.68	WITH LEFT CURB		
RAMP CD (RAMP C SIDE)	42+94.22	46+28.47	334.25	3	6	334		4	149		2	74	334	28	30	1 1/2	14	149	1 1/2	3.09			
RAMP D																							
RAMP CD (RAMP D SIDE)	43+96.59	46+28.47	231.88	3	6	232		4	103		2	52	232	20	21	1 1/2	10	103	1 1/2	2.15	STA. 43+96.59, RAMP CD = STA. 38+99.72, RAMP D		
TO RAMP CD GORE	38+99.72	40+00.00	100.28	3	6	100		4	45		2	22	100	9	9	1 1/2	4	45	1 1/2	0.93			
TO RAMP D GORE	40+00.00	45+21.39	521.39	3	6	521	4	4	463	2	2	232	521	44	93	1 1/2	22	463	1 1/2	9.66			
SOUTHBOUND I.R. 77 RAMPS																							
RAMP A																							
FROM GORE TO CURB LEFT	41+26.00	51+60.00	1,034.00	3	3	689	4	4	919	2	2	460	689	59	184	1 1/2	29	919	1 1/2	19.15			
FROM CURB LEFT TO RAMP AB GORE	51+60.00	52+38.67	78.67	3	3	52		4	35		2	17	52	4	7	1 1/2	2	35	1 1/2	0.73			
RAMP AB (RAMP A SIDE)	52+38.67	61+03.22	864.55	3	3	576		4	384		2	192	576	49	77	1 1/2	24	384	1 1/2	8.01			
RAMP B																							
FROM GORE TO CURB LEFT	50+80.82	44+45.00	635.82	3	3	424	4	4	565	2	2	283	424	36	113	1 1/2	18	565	1 1/2	11.77	SEE NOTE 1		
FROM CURB LEFT TO RAMP AB GORE	44+45.00	42+80.22	164.78	3	3	110		4	73		2	37	110	9	15	1 1/2	5	73	1 1/2	1.53	STA. 42+80.22, RAMP B = STA. 52+38.67, RAMP AB		
RAMP AB (RAMP B SIDE)	52+38.67	61+03.22	864.55	3	3	576		4	384		2	192	576	49	77	1 1/2	24	384	1 1/2	8.01	SEE NOTE 1		
SUB-TOTALS: PART 1 CARRIED TO SHEET P.19													8,966	763	1,551		373	7,758		162		01/IMS/PV	

RESURFACING ESTIMATED QUANTITIES - I.R. 77 RAMPS SHOULDERS

DESIGN AGENCY



DESIGNER
MVC
REVIEWER
TES 05/12/22
PROJECT ID
107570
SHEET TOTAL
P.47 71

RESURFACING ESTIMATED QUANTITIES - EASTBOUND & WESTBOUND U.S. 250														
LOCATION	STATION		LENGTH	WIDTH	PAVEMENT AREA	PROPOSED PAVEMENT TREATMENT						FUNDING	COMMENTS	
						WEARING COURSE REMOVED	254		TACK COAT	THICKNESS	442			
							1 1/2"	1 3/4"			0.085 GAL/SY			ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN
FROM	TO	FT.	FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	GAL.	IN.	CU. YD.	CU. YD.			
PART 2														
EASTBOUND U.S. 250														
U.S. 250 DECELERATION LANE TAPER TO GORE	591+08.54	601+93.00	1084.46	0-52.5	3,163		3,163		269	1 1/2	132	132		
MAINLINE	601+93.00	616+44.75	1451.75	24	3,871		3,871		329	1 1/2	161	161		
BR. NO. TUS-00250-12.170R (REAR APPROACH SLAB)	616+44.75	616+69.75	25.00	36	100		100		9	1 1/2	4	4	PERFORM PROPOSED TREATMENT ON APPROACH SLABS (INCLUDES SHOULDERS)	
OMIT BR. NO. TUS-00250-12.170R	616+69.75	618+30.25	160.50	24	428									
BR. NO. TUS-00250-12.170R (FORWARD APPROACH SLAB)	618+30.25	618+55.25	25.00	36	100		100		9	1 1/2	4	4	PERFORM PROPOSED TREATMENT ON APPROACH SLABS (INCLUDES SHOULDERS)	
MAINLINE	618+55.25	623+73.77	518.52	24	1,383		1,383		118	1 1/2	58	58		
RAMP D GORE TO APPROACH SLAB	623+73.77	624+61.75	87.98	59-53	547		547		46	1 1/2	23	23		
BR. NO. TUS-00250-12.320R (REAR APPROACH SLAB)	624+61.75	624+86.75	25.00	63	175			175	15	1 3/4	9	9	INCLUDES SHOULDERS: PLANE 1 3/4" DEPTH; PLACE 1 3/4" SURFACE COURSE	
OMIT BR. NO. TUS-00250-12.320R	624+86.75	631+83.31	696.56											
BR. NO. TUS-00250-12.320R (FORWARD APPROACH SLAB)	631+83.31	632+08.31	25.00	56	156	156			13	1 3/4	8	8	INCLUDES SHOULDERS: REMOVE 1 3/4" WEARING COURSE; PLACE 1 3/4" SURFACE COURSE	
MAINLINE TO END ACCELERATION LANE	632+08.31	637+87.00	578.69	43.8-24	2,180		2,180		185	1 1/2	91	91		
MAINLINE	637+87.00	650+00.00	1213.00	24	3,235		3,235		275	1 1/2	135	135		
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81														
RAMP A DECELERATION LANE TAPER	602+50.00	603+50.00	100.00	0-12	67		67		6	1 1/2	3	3		
U.S. 250 WITH RAMP A DECELERATION LANE	603+50.00	606+05.25	255.25	12	340		340		29	1 1/2	14	14		
RAMP A DECELERATION LANE FLARE TO GORE	606+05.25	609+82.89	377.64	12-39	1,070		1,070		91	1 1/2	45	45		
WESTBOUND U.S. 250														
MAINLINE TO I.R. 77 N.B. GORE	622+98.80	624+90.70	191.90	16	341		341		29	1 1/2	14	14	FROM GORE	
MAINLINE TAPER	624+90.70	628+48.89	358.19	16-24	796		796		68	1 1/2	33	33	TO BUTT JOINT AT APPROACH SLAB	
BR. NO. TUS-00250-12.320L (FORWARD APPROACH SLAB)	628+48.89	628+73.89	25.00	36	100	100			9	1 3/4	5	5	INCLUDES SHOULDERS: REMOVE 1 3/4" WEARING COURSE; PLACE 1 3/4" SURFACE COURSE	
OMIT BR. NO. TUS-00250-12.320L	628+73.89	631+42.27	268.38	24	716								OMIT DECK	
BR. NO. TUS-00250-12.320L (REAR APPROACH SLAB)	631+42.27	631+67.27	25.00	36	100	100			9	1 3/4	5	5	INCLUDES SHOULDERS: REMOVE 1 3/4" WEARING COURSE; PLACE 1 3/4" SURFACE COURSE	
MAINLINE	631+67.27	650+00.00	1832.73	24	4,887		4,887		415	1 1/2	204	204		
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81														
RAMP 'F' TAPERED WEDGE FROM GORE	634+91.30	639+11.59	420.29	39-12	1,191		1,191		101	1 1/2	50	50		
RAMP 'F' PARALLEL DECELERATION LANE	639+11.59	642+00.00	288.41	12	385		385		33	1 1/2	16	16		
RAMP 'F' DECELERATION LANE TAPER	642+00.00	643+00.00	100.00	12-0	67		67		6	1 1/2	3	3		
SUB-TOTALS: PART 2 CARRIED TO SHEET P.19						356	23,723	175	2,064		1,017	1,017	02/NHS/PV	

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET TOTAL

P.48 | 71

TUS-77-20.73, TUS-250-11.88

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RESURFACING ESTIMATED QUANTITIES - U.S. 250 SHOULDER

LOCATION	STATION		LENGTH	PAVEMENT WIDTH		PAVEMENT AREA	GRADING WIDTH		GRADING AREA	BERMING WIDTH		BERMING AREA	254	407	408	442		617		618	FUNDING	COMMENTS		
				LEFT	RIGHT		PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT		PRIME COAT, AS PER PLAN	THICKNESS		ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)							
				FT.	FT.													SQ. YD.	FT.	FT.			SQ. YD.	FT.
PART 2																								
EASTBOUND U.S. 250																								
OUTSIDE SHOULDER																								
DECELERATION LANE TO RAMP A GORE	591+08.54	593+58.54	250.00	8	222	4	111	2	56	222	19	22	1 1/2	9	111	1 1/2	2.31	250.00						
	593+58.54	608+82.89	1,524.35	8	1,355	4	677	2	339	1,355	115	136	1 1/2	56	677	1 1/2	14.11	1,524.35						
RAMP A GORE TO BR. NO. TUS-00250-12.170R	608+82.89	609+82.89	100.00	7	78	4	44	2	22	78	7	9	1 1/2	3	44	1 1/2	0.93	100.00						
	609+82.89	610+82.89	100.00	12	133	4	44	2	22	133	11	9	1 1/2	6	44	1 1/2	0.93	100.00						
	610+82.89	611+32.89	50.00	9	50	4	22	2	11	50	4	4	1 1/2	2	22	1 1/2	0.46	50.00						
	611+32.89	616+44.75	511.86	8	455	4	227	2	114	455	39	46	1 1/2	19	227	1 1/2	4.74	511.86						
OMIT BR. NO. TUS-00250-12.170R & REAR AND FWD. A.S.	616+44.75	618+55.25	210.50																		APPROACH SLAB QUANTITIES CARRIED WITH MAINLINE			
TO RAMP D GORE	618+55.25	623+73.77	518.52	8	461	4	230	2	115	461	39	46	1 1/2	19	230	1 1/2	4.80	518.52						
RAMP D GORE TO BR. NO. TUS-00250-12.320R	623+73.77	624+61.75	87.98	6	59	4	39	2	20	59	5	8	1 1/2	2	39	1 1/2	0.81	87.98						
OMIT BR. NO. TUS-00250-12.320R & REAR AND FWD. A.S.	624+61.75	632+08.31	746.56																		APPROACH SLAB QUANTITIES CARRIED WITH MAINLINE			
BR. NO. TUS-00250-12.320R FWD. A.S. TO ROCK WALL BARRIER	632+08.31	638+00.00	591.69	8	526	4	263	2	131	526	45	52	1 1/2	22	263	1 1/2	5.48	591.69						
ROCK WALL BARRIER	638+00.00	645+50.00	750.00	8	667					667	57		1 1/2	28		1 1/2		750.00						
MAINLINE	645+50.00	650+00.00	450.00	8	400	4	200	2	100	400	34	40	1 1/2	17	200	1 1/2	4.17	450.00						
MEDIAN SHOULDER																								
INCLUDED WITH I.R. 77 SOUTHBOUND SHOULDER	591+08.54	601+93.00																						
RAMP A GORE TO BR. NO. TUS-00250-12.170R	601+93.00	616+44.75	1,451.75	4	645	4	645	2	323	645	55	129	1 1/2	27	645	1 1/2	13.44	1,451.75						
OMIT BR. NO. TUS-00250-12.170R & REAR AND FWD. A.S.	616+44.75	618+55.25	210.50																		APPROACH SLAB QUANTITIES CARRIED WITH MAINLINE			
TO BR. NO. TUS-00250-12.320R	618+55.25	624+61.75	606.50	4	270	4	270	2	135	270	23	54	1 1/2	11.23	270	1 1/2	5.62	606.50						
OMIT BR. NO. TUS-00250-12.320R & REAR AND FWD. A.S.	624+61.75	632+08.31	746.56																		APPROACH SLAB QUANTITIES CARRIED WITH MAINLINE			
MAINLINE	632+08.31	650+00.00	1,791.69	4	796	4	796	2	398	796	68	159	1 1/2	33.18	796	1 1/2	16.59	1,791.69						
WESTBOUND U.S. 250																								
OUTSIDE SHOULDER																								
MAINLINE TO I.R. 77 N.B. GORE	622+98.80	628+48.89	550.09	8	489	4	244	2	122	489	42	49	1 1/2	20	244	1 1/2	5.09	550.09						
OMIT BR. NO. TUS-00250-12.320L & REAR AND FWD. A.S.	628+48.89	631+67.27	318.38																		APPROACH SLAB QUANTITIES CARRIED WITH MAINLINE			
MAINLINE	631+67.27	633+41.30	174.03	8	155	4	77	2	39	155	13	16	1 1/2	6	77	1 1/2	1.61	174.03						
MAINLINE	633+41.30	633+91.30	50.00	9	50	4	22	2	11	50	4	4	1 1/2	2	22	1 1/2	0.46	50.00						
TO RAMP F GORE	633+91.30	634+91.30	100.00	12	133	4	44	2	22	133	11	9	1 1/2	6	44	1 1/2	0.93	100.00						
FROM RAMP F GORE	634+91.30	636+07.53	116.23	7	90	4	52	2	26	90	8	10	1 1/2	4	52	1 1/2	1.08	116.23						
MAINLINE	636+07.53	650+00.00	1,392.47	8	1,238	4	619	2	309	1,238	105	124	1 1/2	52	619	1 1/2	12.89	1,392.47						
MEDIAN SHOULDER																								
MAINLINE TO I.R. 77 N.B. GORE	622+98.80	628+48.89	550.09	4	244	4	244	2	122	244	21	49	1 1/2	10	244	1 1/2	5.09	550.09						
OMIT BR. NO. TUS-00250-12.320L & REAR AND FWD. A.S.	628+48.89	631+67.27	318.38																		APPROACH SLAB QUANTITIES CARRIED WITH MAINLINE			
MAINLINE	631+67.27	650+00.00	1,832.73	4	815	4	815	2	407	815	69	163	1 1/2	34	815	1 1/2	16.97	1,832.73						
SUB-TOTALS: PART 2 CARRIED TO SHEET P.19													9,331	794	1,138	388	5,685		119	13,549.98	02/NHS/PV			

DESIGN AGENCY



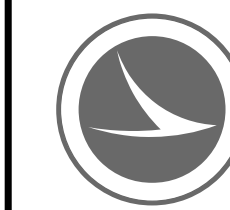
DESIGNER
 MVC
 REVIEWER
 TES 05/12/22
 PROJECT ID
 107570
 SHEET TOTAL
 P.49 | 71

RESURFACING ESTIMATED QUANTITIES - U.S. 250 SHOULDERS

SHOULDER SIDES ARE DISPLAYED IN DIRECTION OF TRAVEL

RESURFACING ESTIMATED QUANTITIES - U.S. 250 RAMPS												
LOCATION	STATION		LENGTH FT.	WIDTH FT.	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT TREATMENT					FUNDING	COMMENTS
						202	254	407	442			
						WEARING COURSE REMOVED	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN		
FROM	TO	FT.	FT.	SQ. YD.	SQ. YD.	SQ. YD.	GAL.	IN.	CU. YD.			
PART 2												
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81												
WESTBOUND U.S. 250 RAMPS												
RAMP E/F												
EXTRA FOR INTERSECTION					142		142	12	1 1/2	6		CADD AREA
TURNLANES	0+27.74	3+15.00	287.26	36	1,149		1,149	98	1 1/2	48		
TAPER	3+15.00	3+65.00	50.00	36-24	167		167	14	1 1/2	7		
TO RAMP E/F GORE	3+65.00	5+88.39	223.39	24-44	844		844	72	1 1/2	35		
RAMP F												
FROM GORE TO APPROACH SLAB	5+85.50	7+58.91	173.41	16	308		308	26	1 1/2	13		BUTT JOINT AT END APPROACH SLAB
OMIT BR. NO. TUS-00250-12.330F	7+58.91	8+96.06	137.15									
FROM APPROACH SLAB TO GORE	8+96.06	13+17.00	420.94	16	748		748	64	1 1/2	31		BUTT JOINT AT END APPROACH SLAB
EASTBOUND U.S. 250 RAMPS												
RAMP D												
EXTRA FOR INTERSECTION					244		244	21	1 1/2	10		CADD AREA
LANE THRU INTERSECTION	0+29.16	1+85.61	156.45	18	313		313	27	1 1/2	13		
LANE	1+85.61	3+78.35	192.74	16	343		343	29	1 1/2	15		
FROM RAMP C/D GORE TO E.B. U.S. 250 GORE	3+78.35	6+69.30	290.95	16	517		517	44	1 1/2	22		
SUB-TOTALS: PART 2 CARRIED TO SHEET P.19							4,775	407		200	02/NHS/PV	

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05/12/22

PROJECT ID

107570

SHEET

P.50

TOTAL

71

RESURFACING ESTIMATED QUANTITIES - U.S. 250 RAMPS SHOULDERS

LOCATION	STATION		LENGTH FT.	PAVEMENT WIDTH		PAVEMENT AREA SQ. YD.	GRADING WIDTH		GRADING AREA SQ. YD.	BERMING WIDTH		BERMING AREA SQ. YD.	254	407	408	442	617		618	FUNDING	COMMENTS		
				LEFT	RIGHT		LEFT	RIGHT		LEFT	RIGHT		PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT	PRIME COAT, AS PER PLAN	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN	SHOULDER PREPARATION, AS PER PLAN	THICKNESS			COMPACTED AGGREGATE, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
				FT.	FT.		FT.	FT.		FT.	FT.		SQ. YD.	GAL.	GAL.	IN.	CU. YD.	SQ. YD.	IN.			CU. YD.	MILE
PART 2																							
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																							
WESTBOUND U.S. 250 RAMPS																							
COMBINED RAMP E/F																							
<i>INTERSECTION TO GORE</i>																							
	0+27.74	5+88.39	560.65	6	3	561	4	4	498	2	2	249	561	48	100	1 1/2	23	498	1 1/2	10.38			
RAMP F																							
<i>FROM GORE TO APPROACH SLAB</i>																							
	5+85.50	7+58.91	173.41	6	3	173	4	4	154	2	2	77	173	15	31	1 1/2	7	154	1 1/2	3.21			
<i>OMIT BR. NO. TUS-00250-12.330F</i>																							
<i>FROM APPROACH SLAB TO GORE</i>																							
	7+58.91	8+96.06	137.15																				
	8+96.06	13+17.00	420.94	6	3	421	4	4	374	2	2	187	421	36	75	1 1/2	18	374	1 1/2	7.80			
EASTBOUND U.S. 250 RAMPS																							
RAMP D																							
<i>INTERSECTION WITH CURB AND GUTTER</i>																							
	0+29.16	1+01.55	72.39																				
<i>FROM CURB AND GUTTER TO GORE</i>																							
	1+01.55	3+78.35	276.80	3		92	4		123	2		62	92	8	25	1 1/2	4	123	1 1/2	2.56			
<i>GORE TO GORE</i>																							
	3+78.35	6+69.30	290.95	3	6	291	4	4	259	2	2	129	291	25	52	1 1/2	12	259	1 1/2	5.39			
SUB-TOTALS: PART 2 CARRIED TO SHEET P.19													1,538	132	283		64	1,408		29		02/NHS/PV	

RAMP SIDES ARE DISPLAYED IN DIRECTION OF TRAVEL

RESURFACING ESTIMATED QUANTITIES - U.S. 250 RAMPS SHOULDERS

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

TES 05-12-22

PROJECT ID

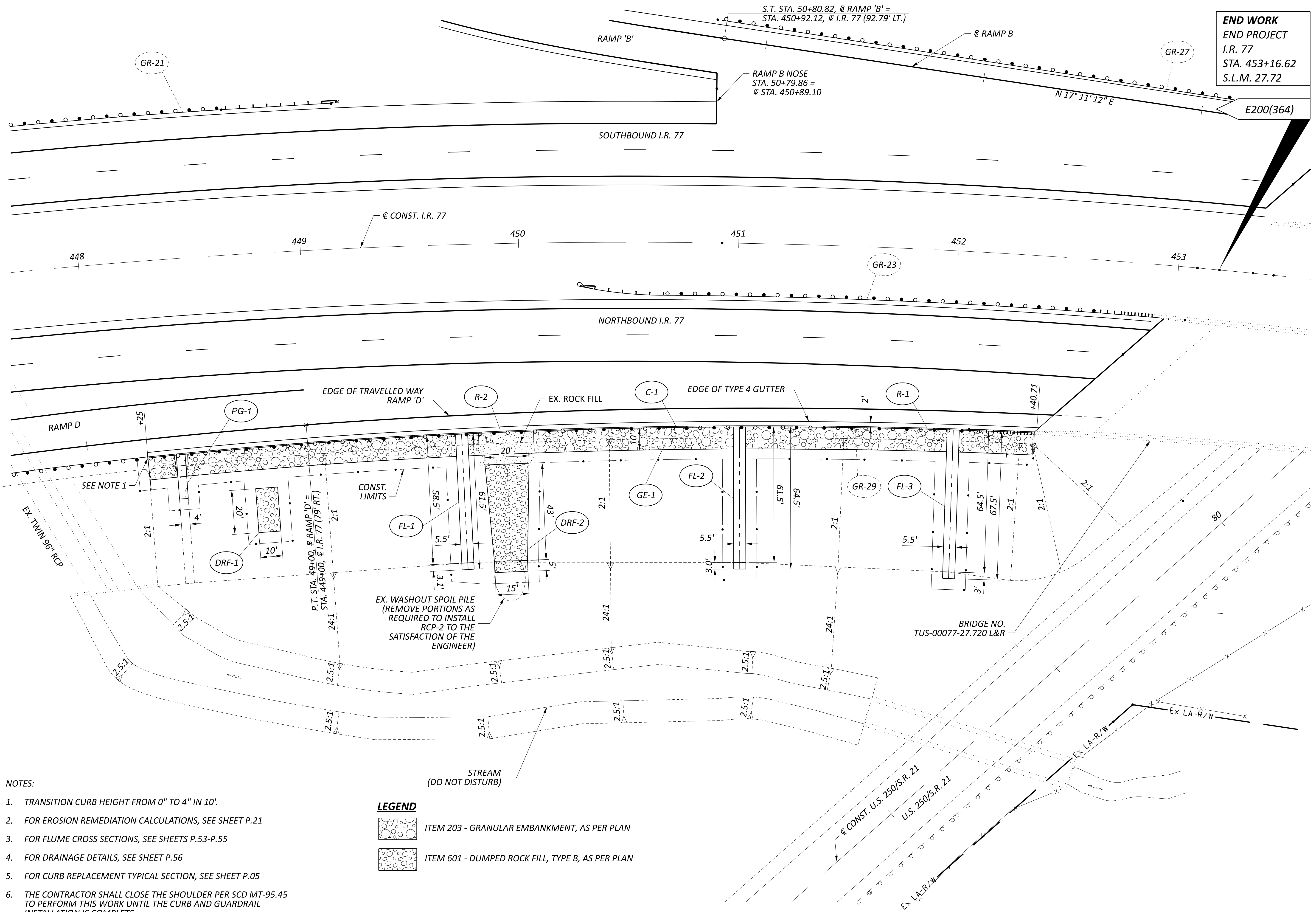
107570

SHEET

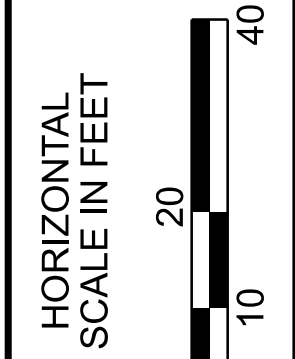
P.51

TOTAL

71



END WORK
 END PROJECT
 I.R. 77
 STA. 453+16.62
 S.L.M. 27.72



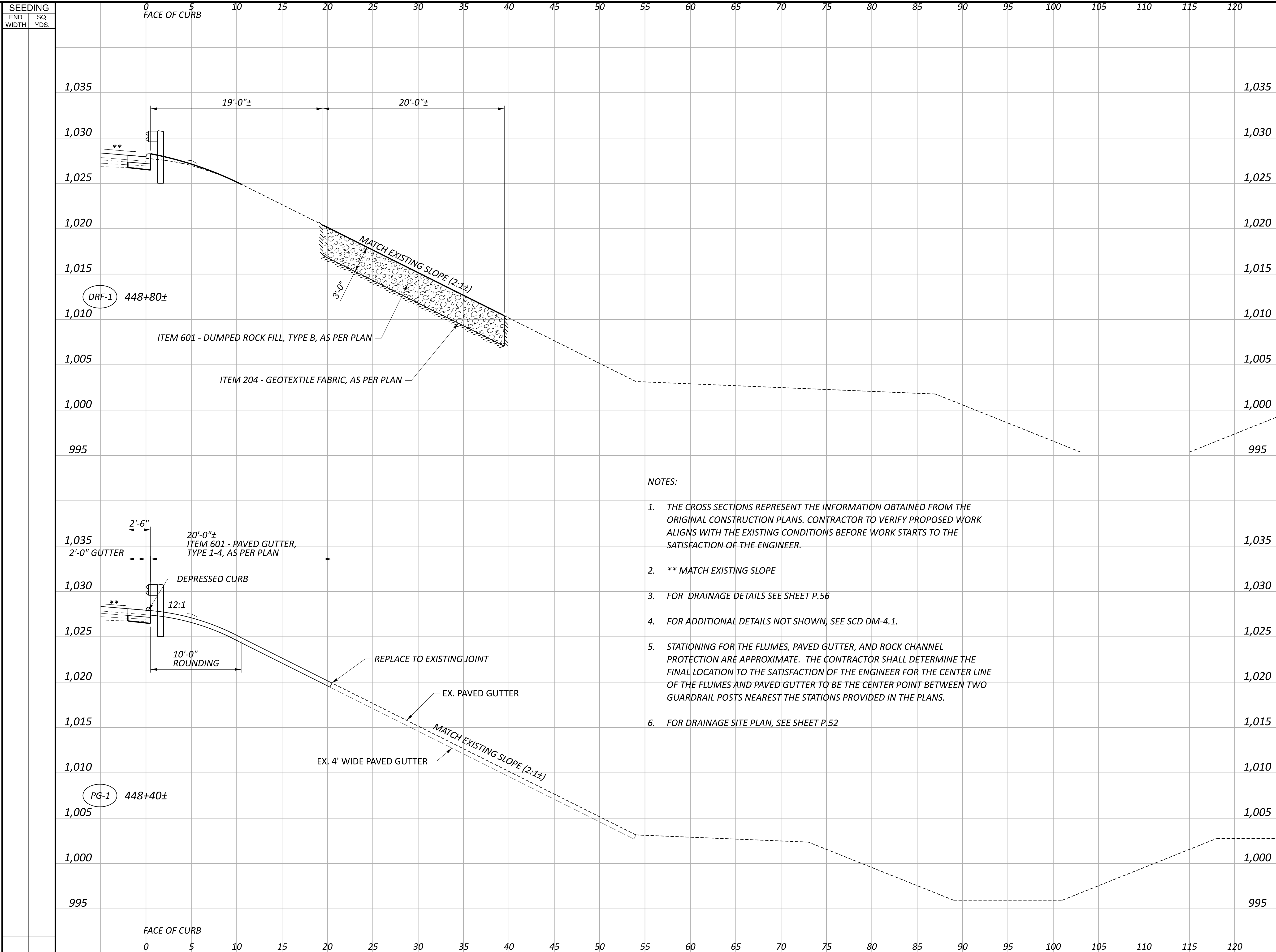
DRAINAGE SITE PLAN
 STA. 448+00 TO STA. 453+00

- NOTES:**
1. TRANSITION CURB HEIGHT FROM 0" TO 4" IN 10'.
 2. FOR EROSION REMEDIATION CALCULATIONS, SEE SHEET P.21
 3. FOR FLUME CROSS SECTIONS, SEE SHEETS P.53-P.55
 4. FOR DRAINAGE DETAILS, SEE SHEET P.56
 5. FOR CURB REPLACEMENT TYPICAL SECTION, SEE SHEET P.05
 6. THE CONTRACTOR SHALL CLOSE THE SHOULDER PER SCD MT-95.45 TO PERFORM THIS WORK UNTIL THE CURB AND GUARDRAIL INSTALLATION IS COMPLETE.

LEGEND

	ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN
	ITEM 601 - DUMPED ROCK FILL, TYPE B, AS PER PLAN

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET TOTAL	P.52 71



- NOTES:
1. THE CROSS SECTIONS REPRESENT THE INFORMATION OBTAINED FROM THE ORIGINAL CONSTRUCTION PLANS. CONTRACTOR TO VERIFY PROPOSED WORK ALIGNS WITH THE EXISTING CONDITIONS BEFORE WORK STARTS TO THE SATISFACTION OF THE ENGINEER.
 2. ** MATCH EXISTING SLOPE
 3. FOR DRAINAGE DETAILS SEE SHEET P.56
 4. FOR ADDITIONAL DETAILS NOT SHOWN, SEE SCD DM-4.1.
 5. STATIONING FOR THE FLUMES, PAVED GUTTER, AND ROCK CHANNEL PROTECTION ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE FINAL LOCATION TO THE SATISFACTION OF THE ENGINEER FOR THE CENTER LINE OF THE FLUMES AND PAVED GUTTER TO BE THE CENTER POINT BETWEEN TWO GUARDRAIL POSTS NEAREST THE STATIONS PROVIDED IN THE PLANS.
 6. FOR DRAINAGE SITE PLAN, SEE SHEET P.52

STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1,035				
1,030				
1,025				
1,020				
1,015				
1,010				
1,005				
1,000				
995				
1,035				
1,030				
1,025				
1,020				
1,015				
1,010				
1,005				
1,000				
995				

EROSION CONTROL CROSS SECTIONS
 PG- 1 & DRF-1

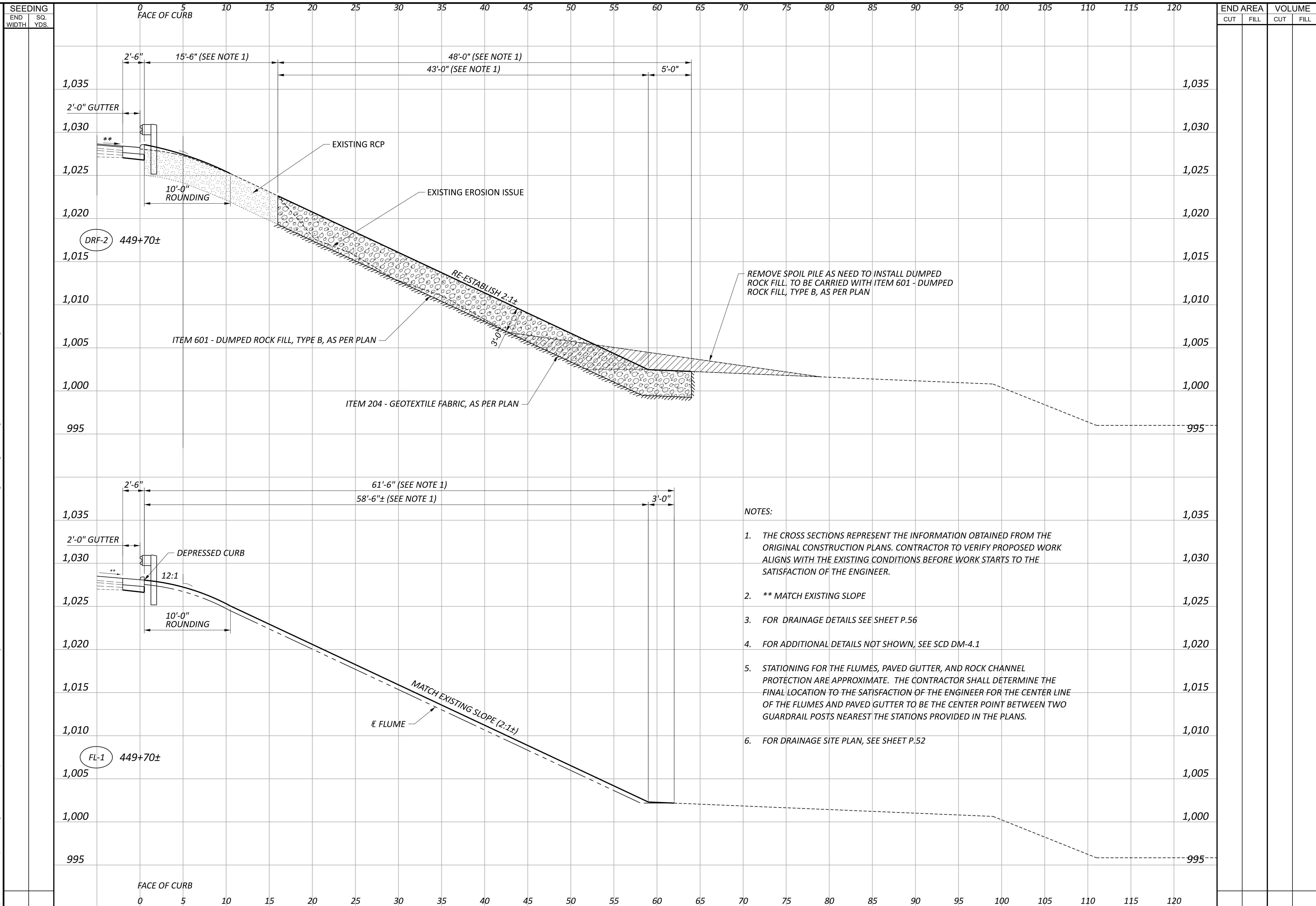
DESIGN AGENCY

DESIGNER
 MVC

REVIEWER
 TES 05/12/22

PROJECT ID
 107570

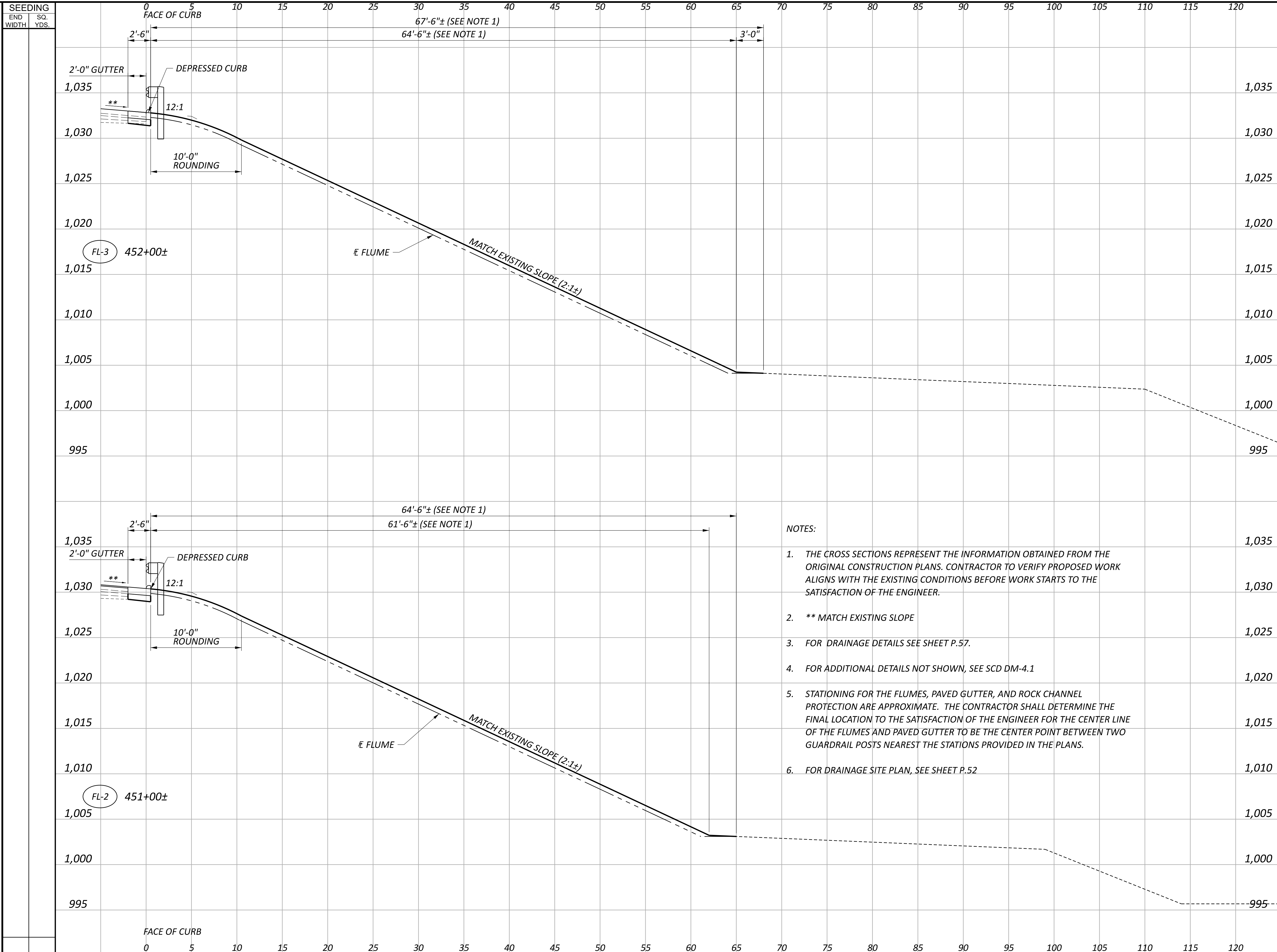
SHEET TOTAL
 P.53 | 71



- NOTES:
1. THE CROSS SECTIONS REPRESENT THE INFORMATION OBTAINED FROM THE ORIGINAL CONSTRUCTION PLANS. CONTRACTOR TO VERIFY PROPOSED WORK ALIGNS WITH THE EXISTING CONDITIONS BEFORE WORK STARTS TO THE SATISFACTION OF THE ENGINEER.
 2. ** MATCH EXISTING SLOPE
 3. FOR DRAINAGE DETAILS SEE SHEET P.56
 4. FOR ADDITIONAL DETAILS NOT SHOWN, SEE SCD DM-4.1
 5. STATIONING FOR THE FLUMES, PAVED GUTTER, AND ROCK CHANNEL PROTECTION ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE FINAL LOCATION TO THE SATISFACTION OF THE ENGINEER FOR THE CENTER LINE OF THE FLUMES AND PAVED GUTTER TO BE THE CENTER POINT BETWEEN TWO GUARDRAIL POSTS NEAREST THE STATIONS PROVIDED IN THE PLANS.
 6. FOR DRAINAGE SITE PLAN, SEE SHEET P.52

EROSION CONTROL CROSS SECTIONS
 FL-1 & DRF-2

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	P.54
TOTAL	71



STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1,035				
1,030				
1,025				
1,020				
1,015				
1,010				
1,005				
1,000				
995				
1,035				
1,030				
1,025				
1,020				
1,015				
1,010				
1,005				
1,000				
995				

- NOTES:
1. THE CROSS SECTIONS REPRESENT THE INFORMATION OBTAINED FROM THE ORIGINAL CONSTRUCTION PLANS. CONTRACTOR TO VERIFY PROPOSED WORK ALIGNS WITH THE EXISTING CONDITIONS BEFORE WORK STARTS TO THE SATISFACTION OF THE ENGINEER.
 2. ** MATCH EXISTING SLOPE
 3. FOR DRAINAGE DETAILS SEE SHEET P.57.
 4. FOR ADDITIONAL DETAILS NOT SHOWN, SEE SCD DM-4.1
 5. STATIONING FOR THE FLUMES, PAVED GUTTER, AND ROCK CHANNEL PROTECTION ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE FINAL LOCATION TO THE SATISFACTION OF THE ENGINEER FOR THE CENTER LINE OF THE FLUMES AND PAVED GUTTER TO BE THE CENTER POINT BETWEEN TWO GUARDRAIL POSTS NEAREST THE STATIONS PROVIDED IN THE PLANS.
 6. FOR DRAINAGE SITE PLAN, SEE SHEET P.52

EROSION CONTROL CROSS SECTIONS
 FL-2 & FL-3

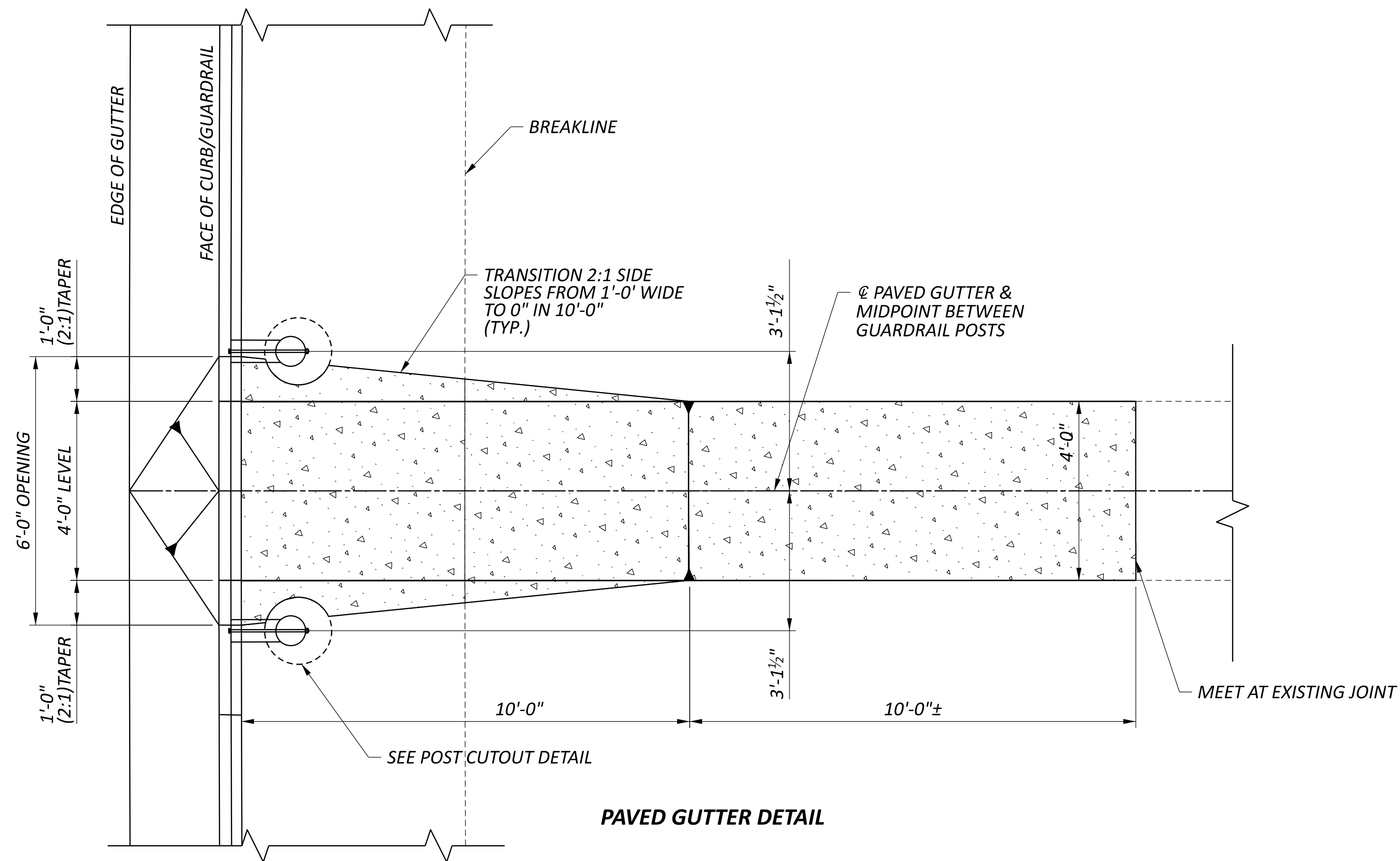
DESIGN AGENCY

DESIGNER
 MVC

REVIEWER
 TES 05/12/22

PROJECT ID
 107570

SHEET TOTAL
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PAVED GUTTER DETAIL

ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

ALL PROVISIONS OF ODOT CMS 203 SHALL APPLY WITH THE FOLLOWING MODIFICATION. THE CONTRACTOR SHALL USE NUMBER 1 AND 2 AGGREGATE PER CMS 703.01.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT AND COMPLETE THE INSTALLATION OF THE GRANULAR EMBANKMENT, SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 203, GRANULAR EMBANKMENT, AS PER PLAN.

ITEM 204 - GEOTEXTILE FABRIC, AS PER PLAN

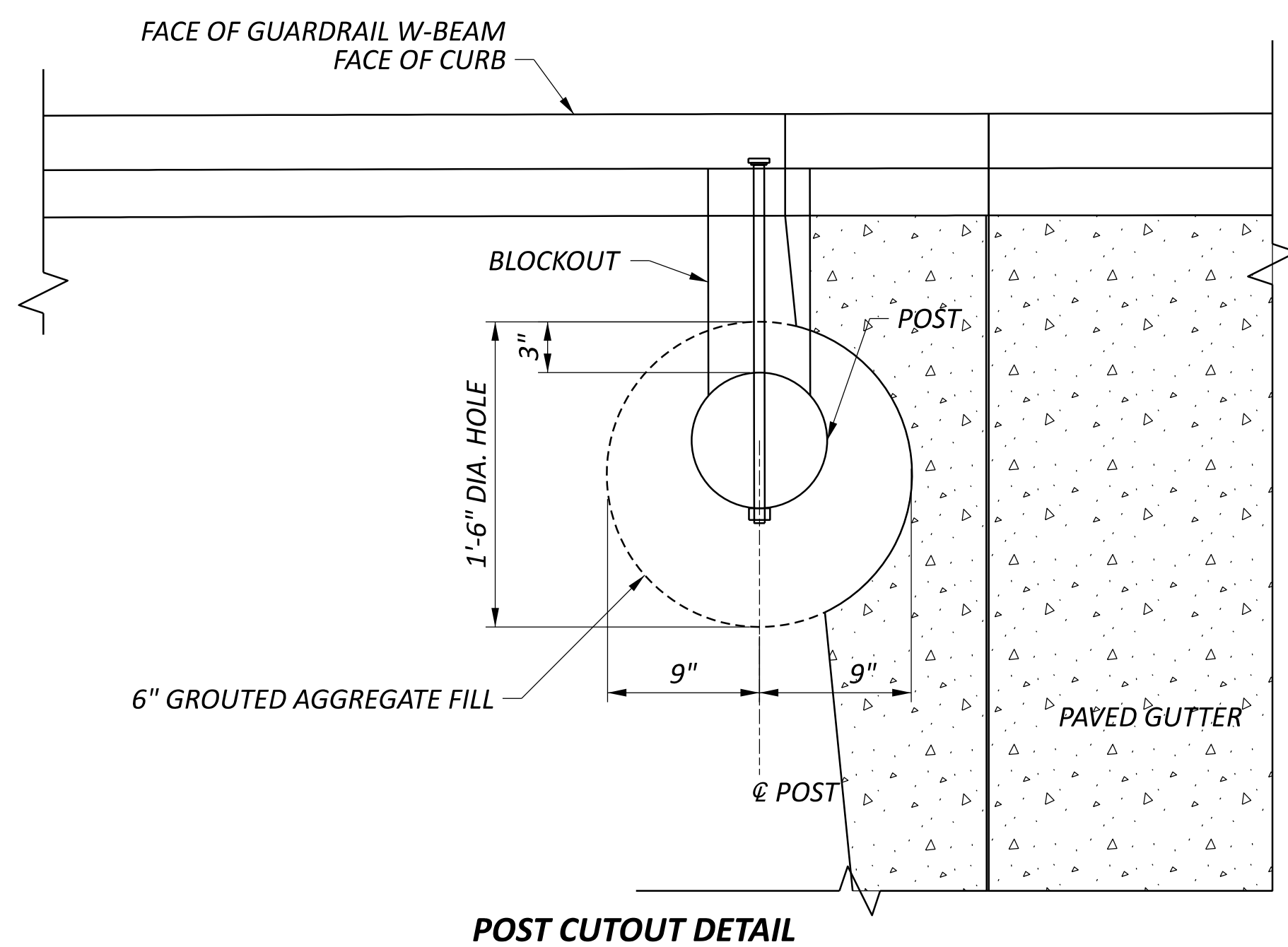
FOR THIS ITEM OF WORK THE CONTRACTOR SHALL LINE THE SURFACE OF THE UNDERCUT WITH GEOTEXTILE FABRIC, TYPE B CONFORMING TO 712.09 TO ACCEPT ITEM 601 - DUMPED ROCK FILL. PREPARE THE BOTTOM OF UNDERCUT TO RECEIVE THE GEOTEXTILE FABRIC TO A RELATIVELY SMOOTH SURFACE, FREE OF OBSTRUCTION AND DEBRIS. WITH THE LONG DIMENSION PARALLEL TO THE FLOW DIRECTION, LOOSELY PLACE THE FABRIC WITHOUT WRINKLES AND CREASES. WHERE JOINTS ARE NECESSARY, PROVIDE A 12-INCH MINIMUM OVERLAP, WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP. PLACE SECURING PINS WITH WASHERS AT A MINIMUM DISTANCE APART OF 2 FEET ALONG THE JOINTS AND AT A MINIMUM DISTANCE APART OF 5 FEET EVERYWHERE ELSE. WHEN REQUIRED BY THE PLANS FILL ALL VOIDS WITH GROUT.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT AND COMPLETE THE INSTALLATION OF THE GEOTEXTILE FABRIC DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 204 - GEOTEXTILE FABRIC, AS PER PLAN.

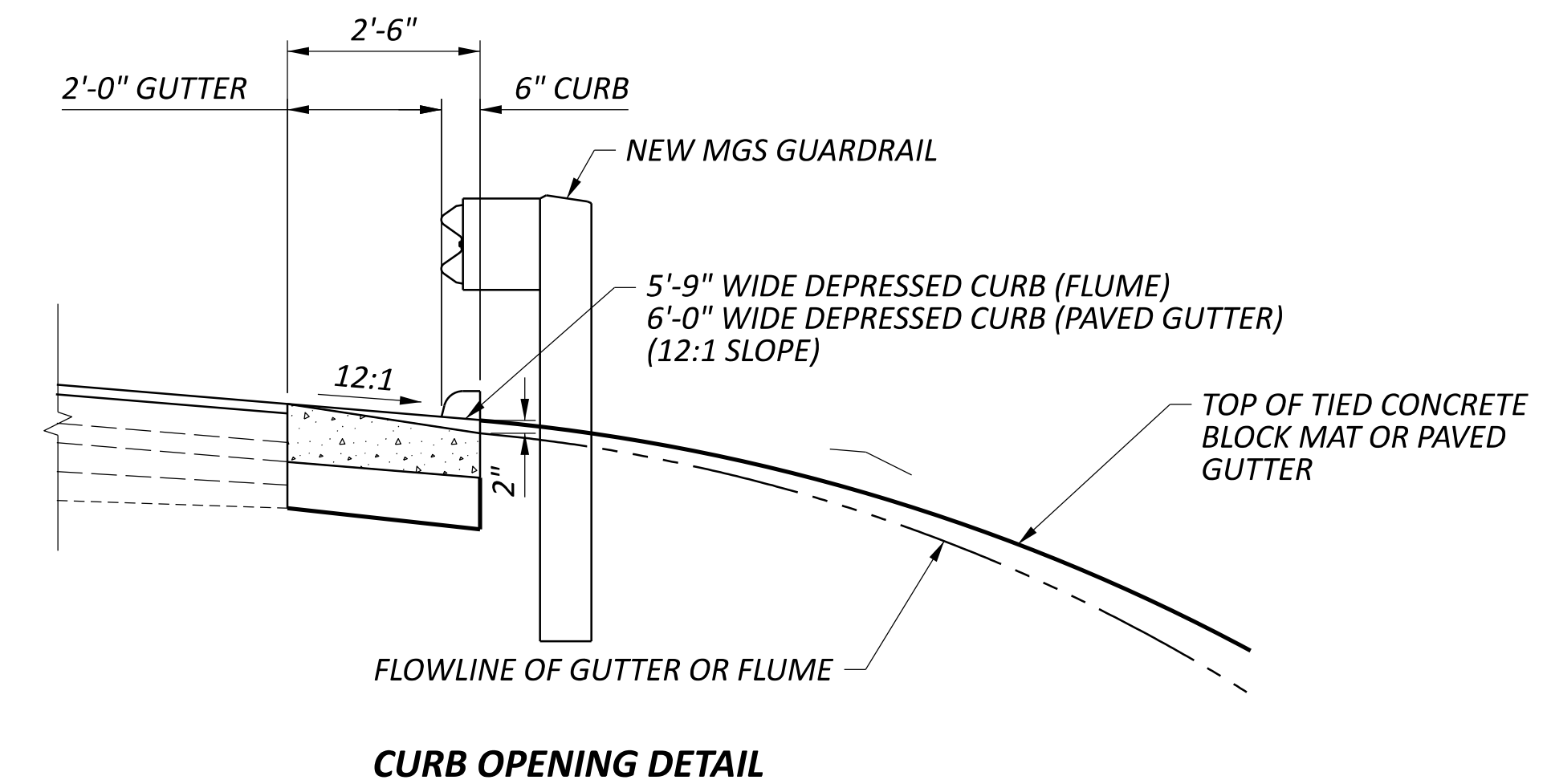
ITEM 601 - DUMPED ROCK FILL, TYPE B, AS PER PLAN

THE CONTRACTOR SHALL INSTALL THIS ITEM AS PER CMS 601.08. THIS ITEM OF WORK INCLUDES ALL EXCAVATION AND REMOVAL OF MATERIALS NECESSARY TO STABILIZE THE WASHOUTS AND PROVIDE A RELATIVELY SMOOTH SURFACE TO INSTALL THE GEOTEXTILE FABRIC.

ALL LABOR, EQUIPMENT, EXCAVATION, AND MATERIALS NECESSARY TO CONSTRUCT AND COMPLETE THE INSTALLATION OF THE DUMPED ROCK DESCRIBED ABOVE AND SHOWN IN THE PLANS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 601 - DUMPED ROCK FILL, TYPE B, AS PER PLAN.



POST CUTOUT DETAIL



CURB OPENING DETAIL

ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN

THE CONTRACTOR TO CONSTRUCT THE CURB AND GUTTER IN THE PLANS PER SCD BP-5.1 AND THE REQUIREMENT STIPULATED IN THIS NOTE.

THE CONTRACTOR SHALL LOCATE THE EXISTING CURB AND PROVIDE AN OFFSET 2' FROM THE EXISTING FACE OF CURB TO ESTABLISH THE PROPOSED BASELINE FOR THE OUTSIDE GUTTER AND PAVEMENT REMOVAL LOCATION PER CMS 202.05. CONSTRUCT THE TYPE 4 CURB AND GUTTER PER SCD BP-5.1 AND PROVIDE CUTOUTS FOR THE PAVED GUTTER AND FLUME PER THE DETAIL ABOVE AND DEPRESS THE GUTTER AND CURB FLOWLINE 2" AS PER SCD DM-4.1 AT THE LOCATIONS IDENTIFIED IN THE PLANS TO THE SATISFACTION OF THE ENGINEER.

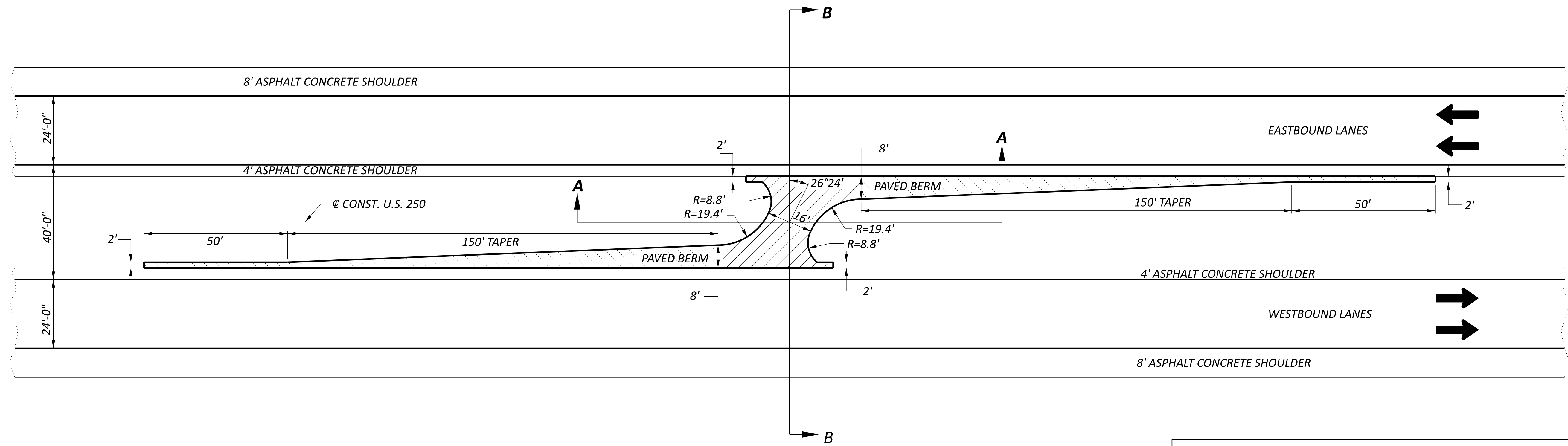
THIS ITEM OF WORK INCLUDES ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO PLACE THE CURB TO THE SATISFACTION OF THE ENGINEER.

ITEM 601 - PAVED GUTTER, TYPE 1-4, AS PER PLAN

THE CONTRACTOR TO CONSTRUCT THE PAVED GUTTER AS PER DM-2.1 AND THE DETAILS SHOWN ABOVE. POST CUTOUTS FOR GUARDRAIL INSTALLATION ARE INCLUDED IN THIS ITEM OF WORK.

THIS ITEM OF WORK INCLUDES ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THE PAVED GUTTER TO THE SATISFACTION OF THE ENGINEER.





PROPOSED LEGEND

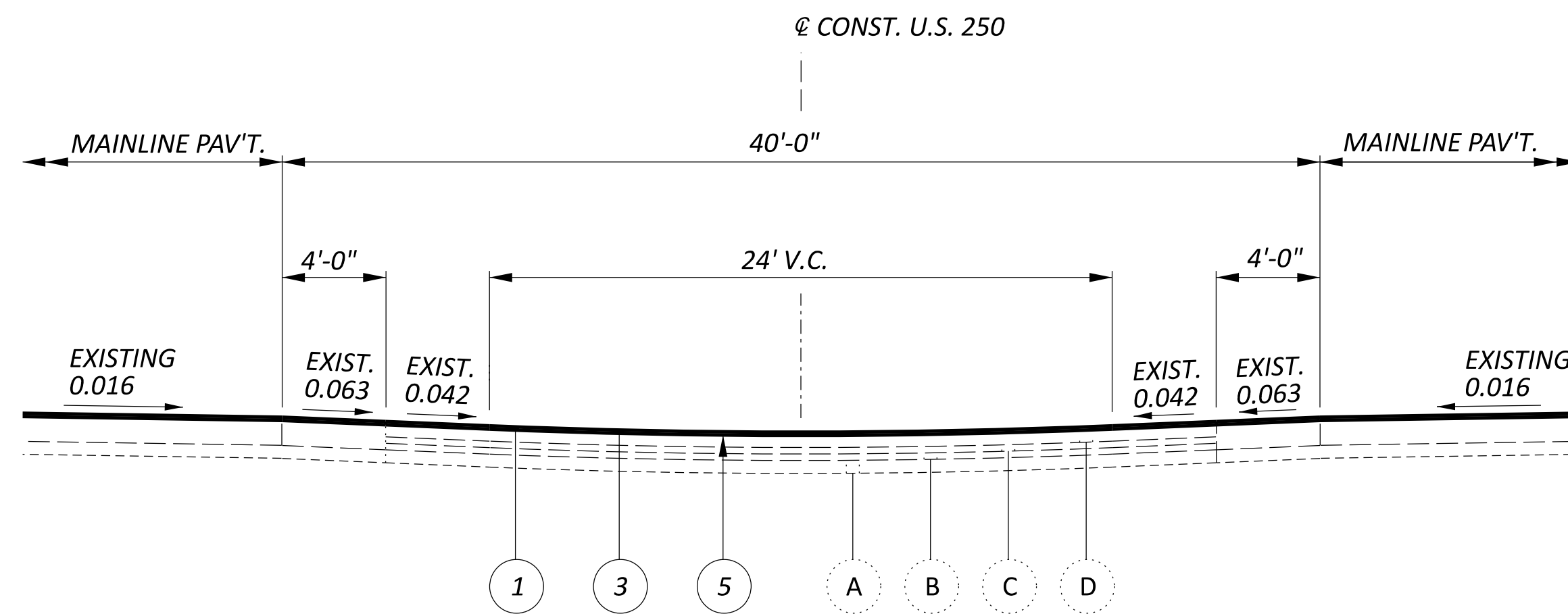
- ① ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B, (447), AS PER PLAN
- ② ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (¾" NOMINAL DEPTH)
- ③ ITEM 407 - TACK COAT (APPLIED @ 0.085 GALS./SQ.YD.)

PLAN CO-1 STA. 647+32
 SCALE 1:200

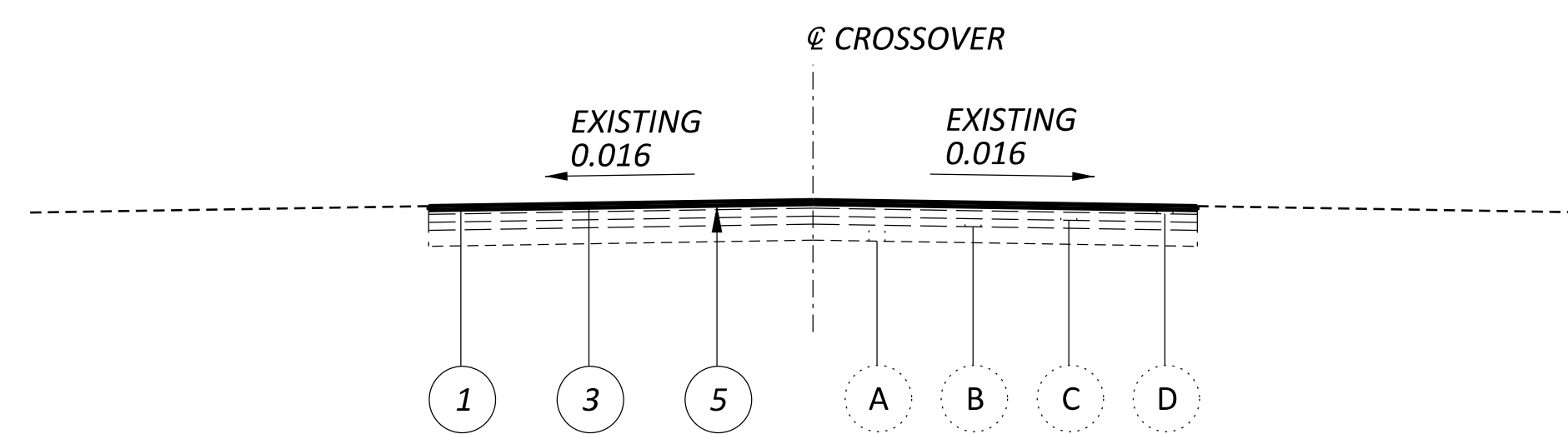
	CADD GENERATED AREA	= 889 SQ. FT.
	CADD GENERATED AREA (850 SQ. FT. X 2 TAPERS)	= 1700 SQ. FT.
TOTAL MEDIAN CROSS-OVER AREA		= 2589 SQ. FT.

EXISTING LEGEND

- A EXISTING SUBBASE
- B EXISTING AGGREGATE BASE
- C EXISTING BITUMINOUS AGGREGATE BASE
- D EXISTING ASPHALT CONCRETE



SECTION B-B
 SCALE 1:50



SECTION A-A
 SCALE 1:50

ESTIMATED QUANTITIES


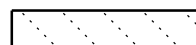
- ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, (1 1/2" DEPTH)
 2589 SQ. FT. ÷ 9 = 288 SQ. YD.
USE: 288 SQ. YD. (02/NHS/PV)
- ITEM 442 - ASPHALT CONCRETE SURFACE COURSE,
 12.5MM, TYPE B, (447), AS PER PLAN
 2589 SQ. FT. X 1½" ÷ 12 ÷ 27 = 11.99 CU. YD.
USE: 12 CU. YD. (02/NHS/PV)
- ITEM 407 - TACK COAT
 2589 SQ. FT ÷ 9 X 0.085 = 24.45 GALLON
USE: 24 GAL. (02/NHS/PV)

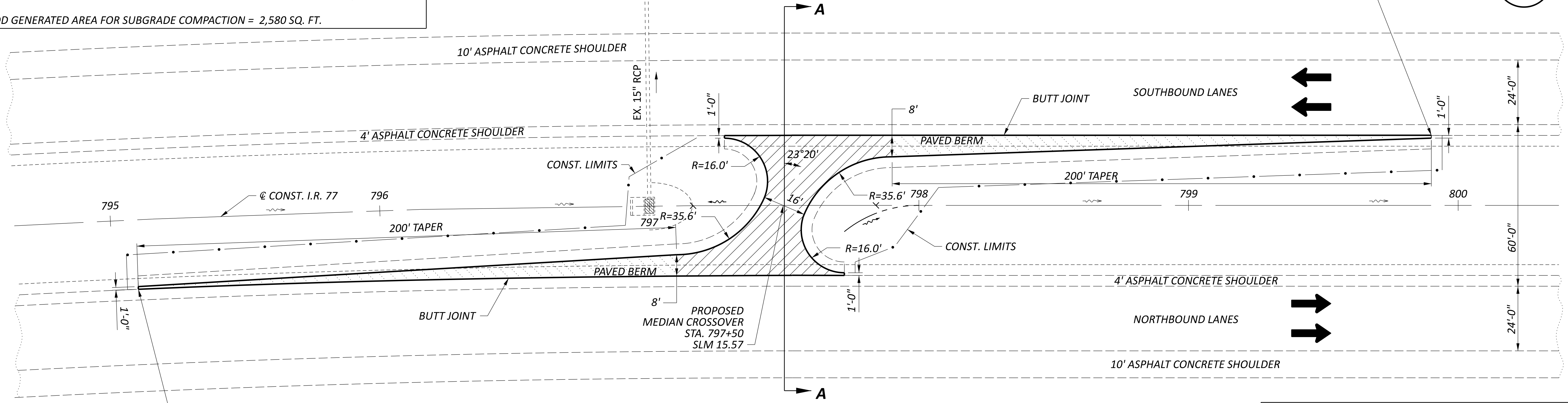
ESTIMATED QUANTITIES CARRIED TO SHEET P.19

DESIGN AGENCY

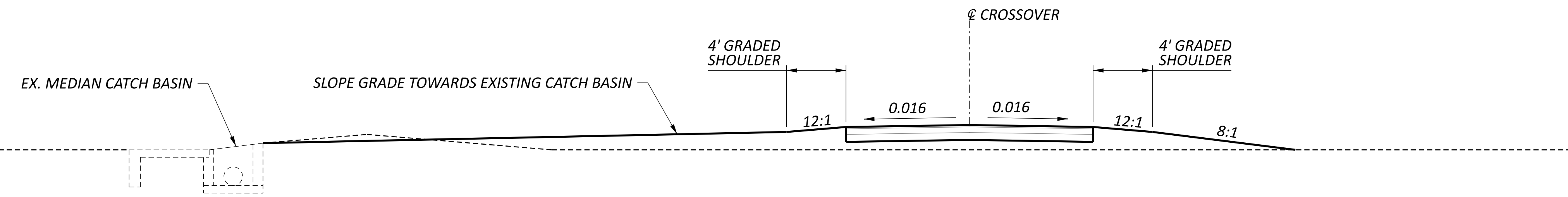


DESIGNER	MVC
REVIEWER	TES
DATE	05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.57	71

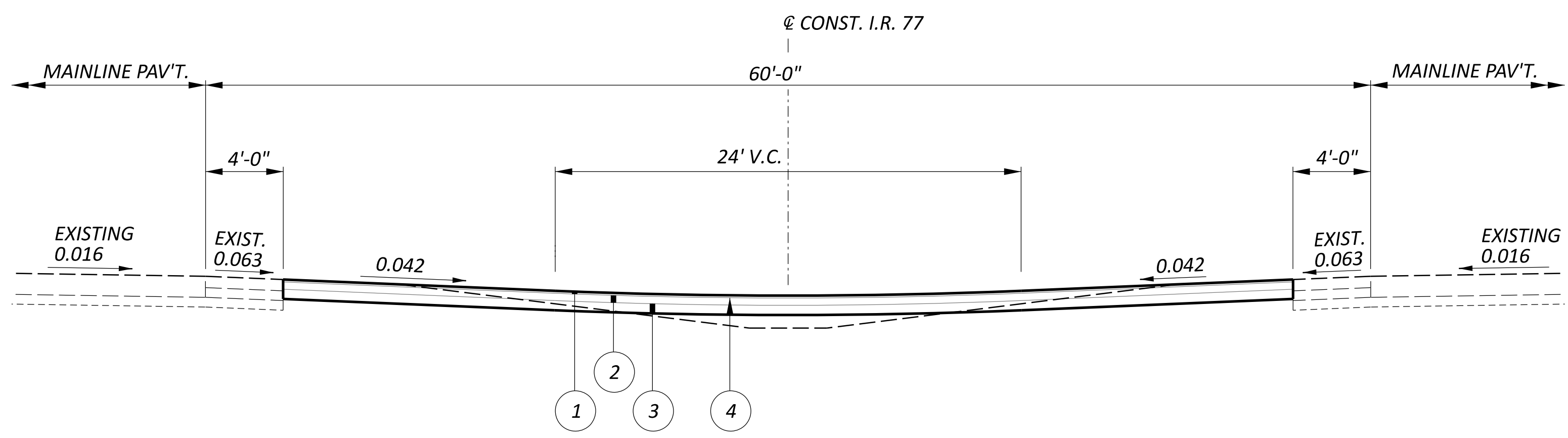
 CADD GENERATED AREA = 1,760 SQ. FT.
 TAPERS [200' X (8' + 1') / 2] = 900 SQ. FT. X 2 TAPERS = 1,800 SQ. FT.
 TOTAL MEDIAN CROSS-OVER AREA = 3,560 SQ. FT.
 CADD GENERATED AREA FOR SUBGRADE COMPACTION = 2,580 SQ. FT.



PLAN CO-2 STA. 797+50
SCALE 1:200



PROFILE ALONG @ CONST. I.R. 77
SCALE 1:50



SECTION A-A
SCALE 1:50

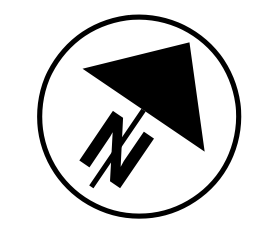
- NOTES:**
- FOR CO-2 CROSSOVER LOCATION, SEE SHEET P.23
 - CALCULATIONS CARRIED TO RESURFACING SUBSUMMARY ON SHEET P.19

PROPOSED LEGEND

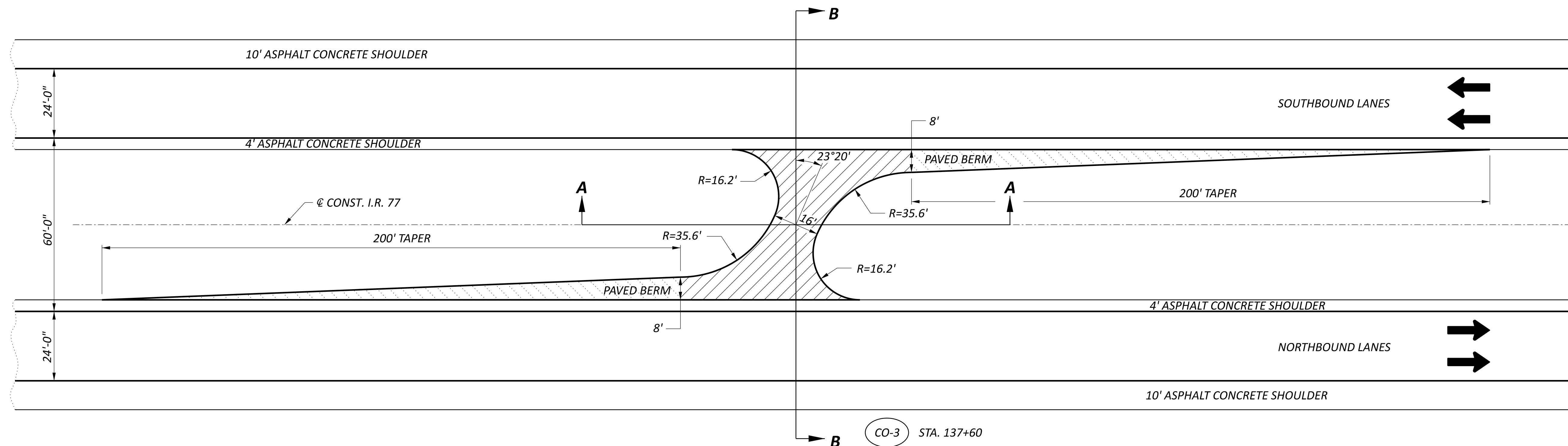
- ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN
- ITEM 301 - 4 1/2" ASPHALT CONCRETE BASE
- ITEM 304 - 6" AGGREGATE BASE
- ITEM 407 - TACK COAT (APPLIED @ 0.055 GALS./SQ. YD.)

CALCULATIONS

- ITEM 204 - SUBGRADE COMPACTION**
 2,580 SQ. FT. (CADD GENERATED AREA) ÷ 9 = 286.67 CU. YD.
 (USE: 287 SQ. YD.)
- ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B, (447), AS PER PLAN**
 3,560 SQ. FT. X 1 1/2" ÷ 12 ÷ 27 = 16.48 CU. YD.
 (USE: 17 CU. YD.)
- ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449)**
 3,560 SQ. FT. X 4 1/2" ÷ 12 ÷ 27 = 49.44 CU. YD.
 (USE: 49 CU. YD.)
- ITEM 304 - AGGREGATE BASE**
 3,560 SQ. FT. X 6" ÷ 12 ÷ 27 = 65.92 CU. YD.
 (USE: 66 CU. YD.)
- ITEM 407 - TACK COAT**
 3,560 SQ. FT. ÷ 9 X 0.055 = 21.76 GAL.
 (USE: 22 GAL.)
- ITEM 203 - EXCAVATION**
 65 CU. YD. (CADD GENERATED VOLUME)
 (USE: 65 CU. YD.)
- ITEM 203 - EMBANKMENT**
 76 CU. YD. (CADD GENERATED VOLUME)
 (USE: 76 CU. YD.)
- ITEM 659 - SEEDING AND MULCHING**
 830 SQ. YD. (CADD GENERATED AREA)
 (USE: 830 SQ. YD.)



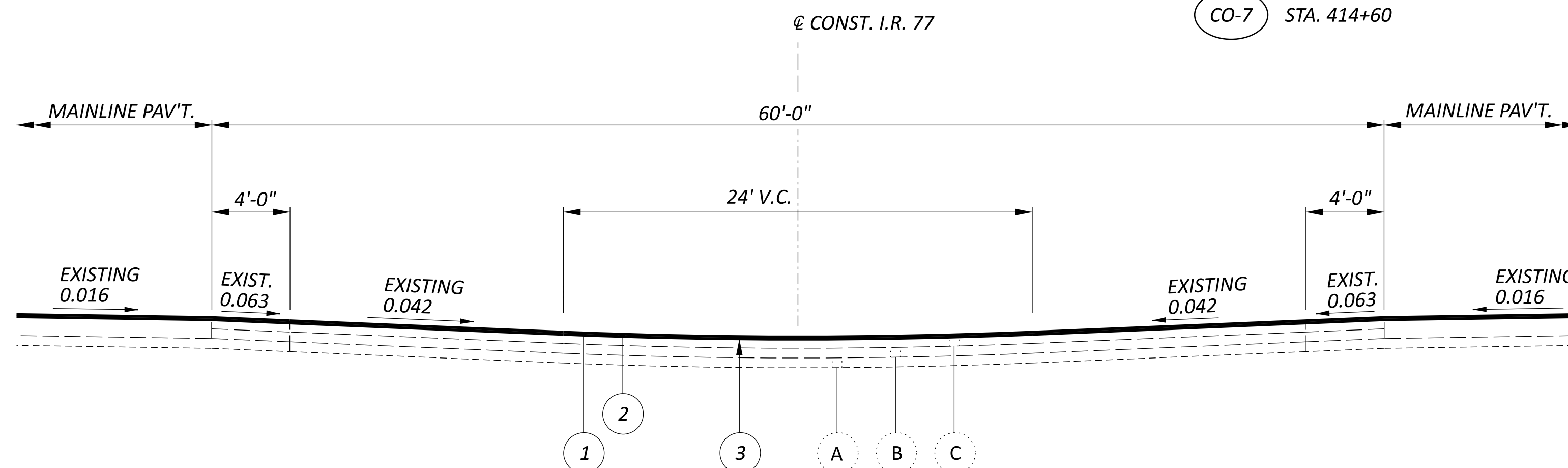
DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	P.58
TOTAL	71



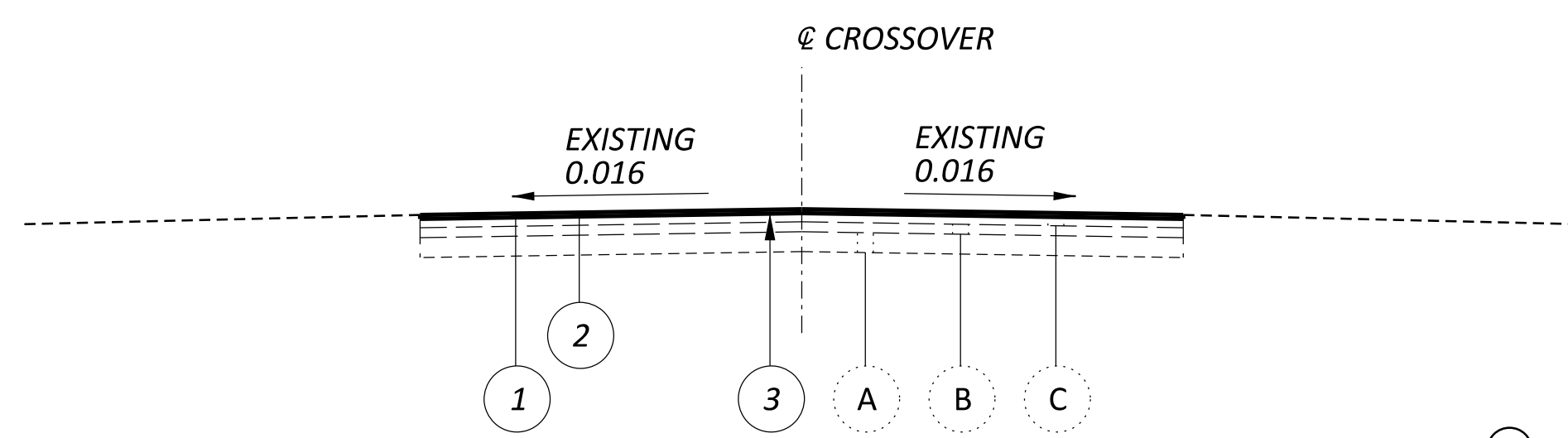
PLAN
SCALE 1:200

- CO-3 STA. 137+60
- CO-4 STA. 175+00
- CO-5 STA. 260+10
- CO-7 STA. 414+60

	CADD GENERATED AREA	= 1,720 SQ. FT.
	TAPERS [200' X (8' + 0')] 2	= 800 SQ. FT. X 2 TAPERS = 1,600 SQ. FT.
TOTAL MEDIAN CROSS-OVER AREA = 3,320 SQ. FT.		
X 4 LOCATIONS = 13,280 SQ. FT.		



SECTION B-B
SCALE 1:50



SECTION A-A
Scale 1:50

CALCULATIONS

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, (1 1/2" DEPTH)
 13,280 SQ. FT. ÷ 9 = 1475.56 SQ. YD.
USE: 1,476 SQ. YD. (01/IMS/PV)

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B, (447), AS PER PLAN
 13,280 SQ. FT. X 1 1/2" ÷ 12 ÷ 27 = 61.48 CU. YD.
USE: 62 CU. YD. (01/IMS/PV)

ITEM 407 - TACK COAT
 13,280 SQ. FT ÷ 9 X 0.085 = 125.42 GALLON
USE: 125 GALLON (01/IMS/PV)

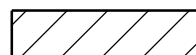

CALCULATIONS CARRIED TO SHEET P.19

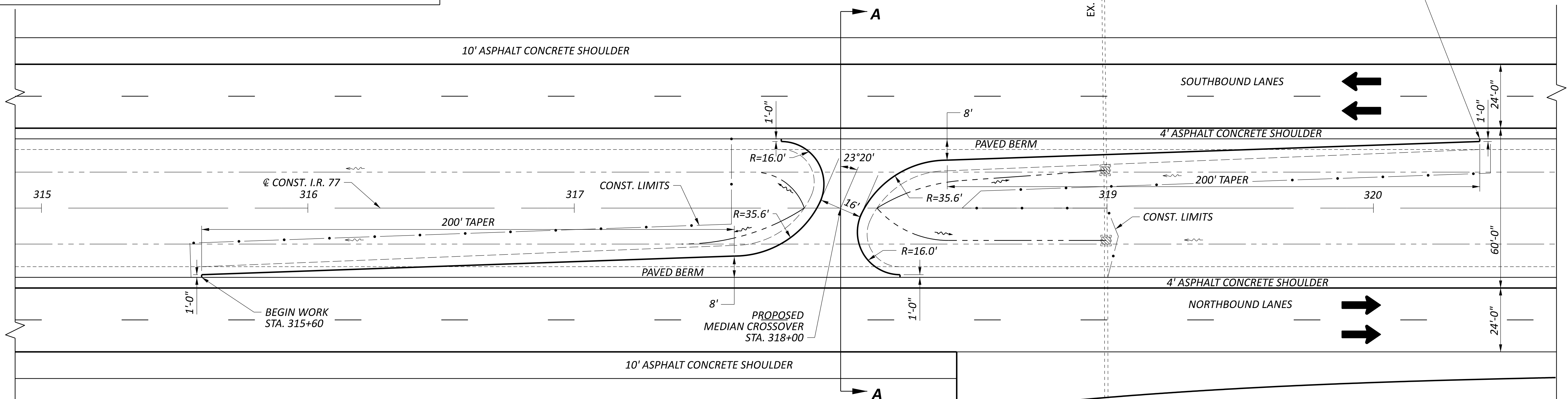
- EXISTING LEGEND**
- (A) — EXISTING SUBBASE
 - (B) — EXISTING AGGREGATE BASE
 - (C) — EXISTING ASPHALT CONCRETE PAVEMENT

- PROPOSED LEGEND**
- ① — ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B, (447), AS PER PLAN
 - ② — ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1 1/2" DEPTH)
 - ③ — ITEM 407 - TACK COAT (APPLIED @ 0.085 GALS./SQ. YD.)

TUS-77-20.73, TUS-250-11.88

MODEL: Sheet PAPER: 34x22 (in.) DATE: 7/13/2022 TIME: 10:53:57 AM USER: mdlark3
 pwc:\hohodot-pw.bentley.com\hohodot-pw-02\Documents\01 Active Projects\District 11\Tuscarawas\107570404-Engineering\Roadway\Sheets\107570_GA006.dgn

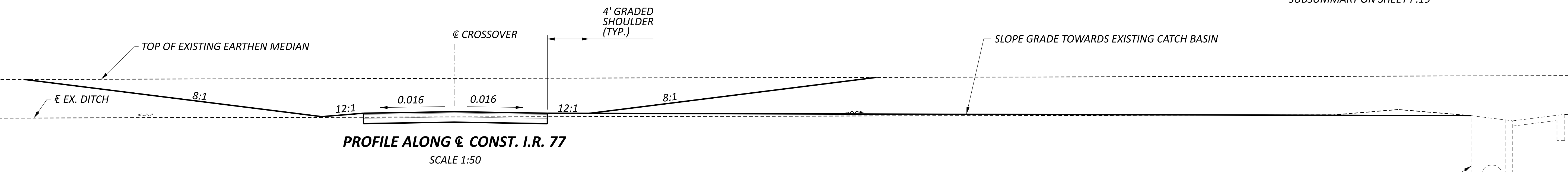
 CADD GENERATED AREA = 1,760 SQ. FT.
 TAPERS [200' X (8' + 1') / 2] = 900 SQ. FT. X 2 TAPERS = 1,800 SQ. FT.
 TOTAL MEDIAN CROSS-OVER AREA = 3,560 SQ. FT.
 CADD GENERATED AREA FOR SUBGRADE COMPACTION = 2,580 SQ. FT.



- PROPOSED LEGEND**
- ① ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (447), AS PER PLAN
 - ② ITEM 301 - 4 1/2" ASPHALT CONCRETE BASE
 - ③ ITEM 304 - 6" AGGREGATE BASE
 - ④ ITEM 407 - TACK COAT (APPLIED @ 0.055 GALS./SQ. YD.)

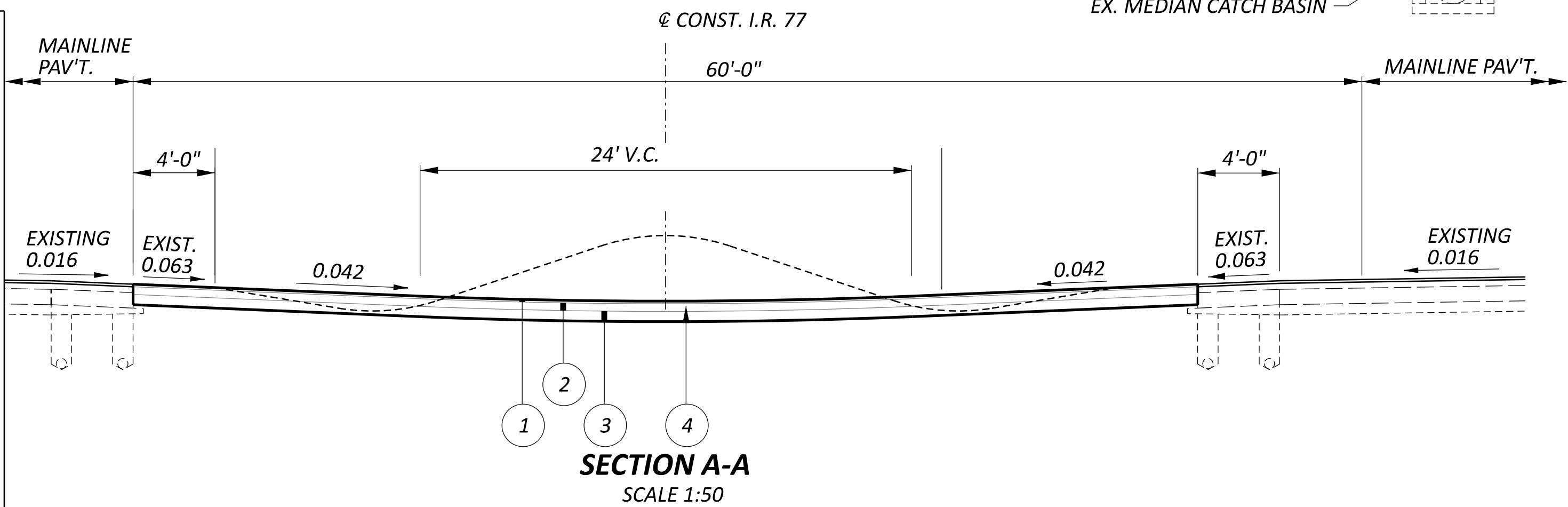
PLAN CO-6 STA. 318+00
SCALE 1:20

- NOTES:**
- FOR CO-6 CROSSOVER LOCATION, SEE SHEET P.29
 - CALCULATIONS CARRIED TO RESURFACING SUBSUMMARY ON SHEET P.19




PROFILE ALONG @ CONST. I.R. 77
SCALE 1:50

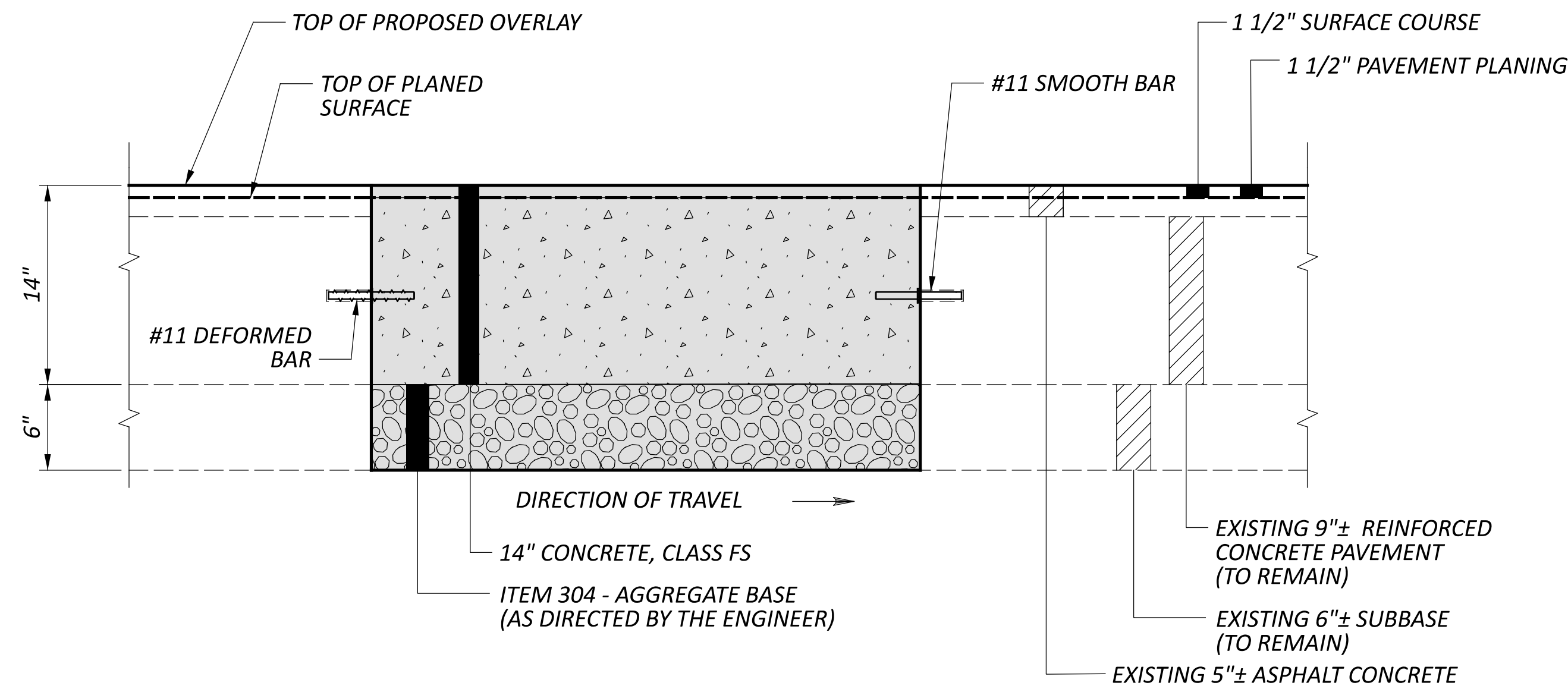
CALCULATIONS		
ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B, (447), AS PER PLAN 3,560 SQ. FT. X 1 1/2" ÷ 12 ÷ 27 = 16.48 CU. YD. (USE: 17 CU. YD.)	ITEM 407 - TACK COAT 3,560 SQ. FT. ÷ 9 X 0.055 = 21.76 GAL. (USE: 22 GAL.)	ITEM 659 - SEEDING AND MULCHING 820 SQ. YD. (CADD GENERATED AREA) (USE: 991 SQ. YD.)
ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449) 3,560 SQ. FT. X 4 1/2" ÷ 12 ÷ 27 = 49.44 CU. YD. (USE: 49 CU. YD.)	ITEM 203 - EXCAVATION 240 CU. YD. (CADD GENERATED VOLUME) (USE: 240 CU. YD.)	ITEM 203 - EMBANKMENT 76 CU. YD. (CADD GENERATED VOLUME) (USE: 76 CU. YD.)
ITEM 304 - AGGREGATE BASE 3,560 SQ. FT. X 6" ÷ 12 ÷ 27 = 65.92 CU. YD. (USE: 66 CU. YD.)	ITEM 204 - SUBGRADE COMPACTION 2,580 SQ. FT. (CADD GENERATED AREA) ÷ 9 = 286.67 CU. YD. (USE: 287 SQ. YD.)	



SECTION A-A
SCALE 1:50

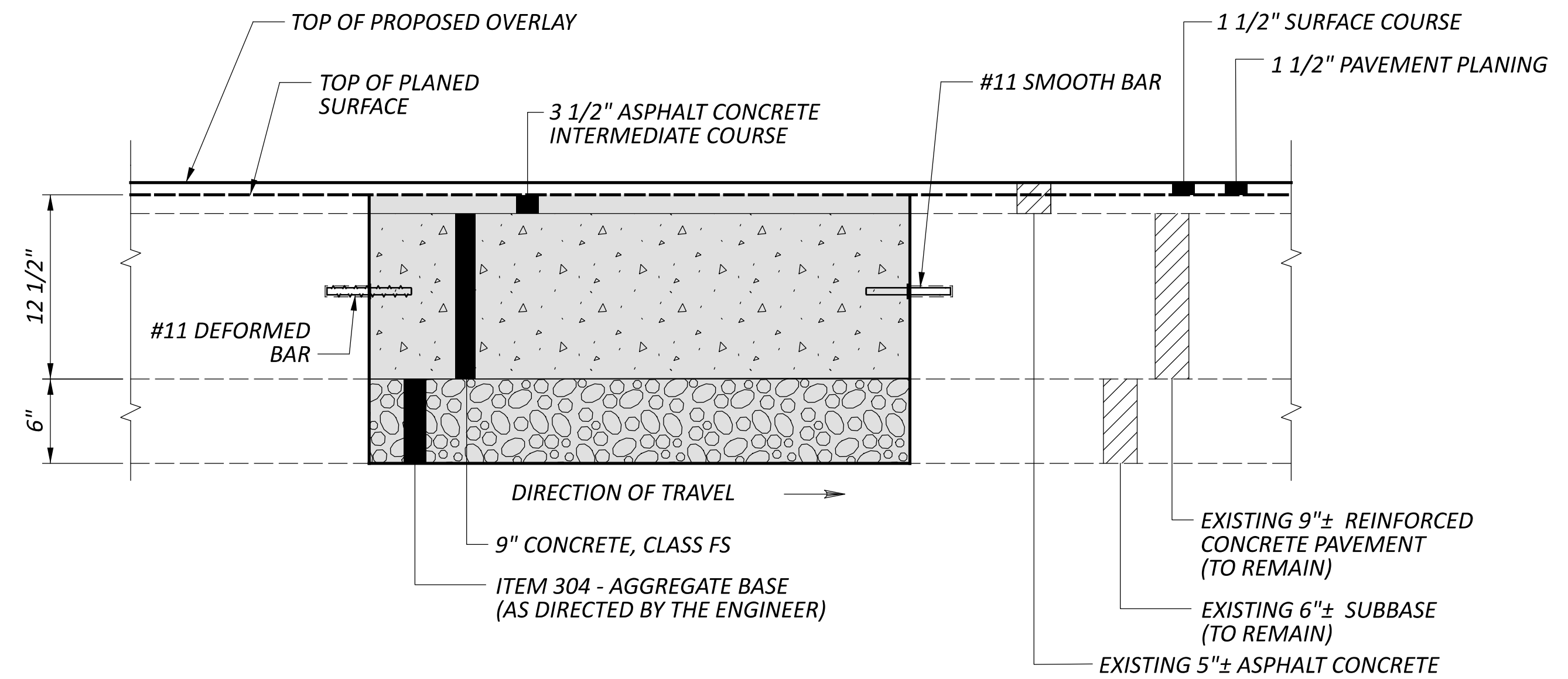
MEDIAN CROSSOVER DETAILS

DESIGN AGENCY	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.60	71



**MAINLINE PAVEMENT REPAIR TYPICAL (CONCRETE)
PART 1 - I.R. 77**

FOR DETAILS NOT SHOWN SEE STANDARD CONSTRUCTION DRAWING BP-2.5
 FOR TRANSVERSE JOINT REPAIR DETAILS AND BP-2.1 FOR LONGITUDINAL JOINT DETAILS



**MAINLINE PAVEMENT REPAIR TYPICAL (CONCRETE)
PART 2 - U.S. 250**

FOR DETAILS NOT SHOWN SEE STANDARD CONSTRUCTION DRAWING BP-2.5
 FOR TRANSVERSE JOINT REPAIR DETAILS AND BP-2.1 FOR LONGITUDINAL JOINT DETAILS

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN (A)

THE ESTIMATED QUANTITIES ARE TO BE CONSIDERED APPROXIMATE. A FINAL FIELD REVIEW WILL BE PERFORMED BY ODOT PRIOR TO CONSTRUCTION AND FINAL LOCATIONS WILL BE GIVEN TO THE CONTRACTOR PRIOR TO CONSTRUCTION.

THIS WORK CONSISTS OF REMOVING THE EXISTING ASPHALT CONCRETE, REINFORCED CONCRETE, AND THE AGGREGATE BASE COURSES; SHAPING AND COMPACTING THE EXPOSED MATERIAL; PLACING ITEM 304 AGGREGATE BASE; THEN INSTALLING DOWEL RODS FOLLOWED BY CONCRETE PAVEMENT, CLASS FS. POUR CONCRETE TO EXISTING SURFACE.

THIS WORK SHALL BE COMPLETED BEFORE MILLING AND RESURFACING BEGINS.

ALL OTHER PROVISIONS OF STANDARD CONSTRUCTION DRAWINGS BP-2.1 AND BP-2.5 APPLY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR INFORMATION ONLY:

14" CONCRETE, FS	700 CU. YD.
ITEM 304 - AGGREGATE BASE	300 CU. YD.
ITEM 509 - EPOXY COATED REINFORCING STEEL	16,736 POUNDS
ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	2,700 EACH

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. FINAL PAYMENT FOR THESE ITEMS SHALL BE FOR THE ACCEPTED QUANTITY COMPLETED IN PLACE.

PART 1 (01/IMS/PV)

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, FS, AS PER PLAN (A) - **1,800 SQ. YD.**

PART 1 (01/IMS/PV)

ITEM 255 - FULL DEPTH PAVEMENT SAWING ----- 5,350 FT.

PART 2 (02/NHS/PV)

ITEM 255 - FULL DEPTH PAVEMENT SAWING ----- 750 FT.

(USE: 6,100 FT.)

ITEM 605 - AGGREGATE DRAINS

THIS ITEM SHALL BE USED TO CONSTRUCT AGGREGATE DRAINS AND SHALL MEET THE REQUIREMENTS OF ITEM 605, AGGREGATE DRAINS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. FINAL PAYMENT FOR THESE ITEMS SHALL BE FOR THE ACCEPTED QUANTITY COMPLETED IN PLACE.

ITEM 605 - AGGREGATE DRAINS	200 FT. (I.R. 77) (01/IMS/PV)
ITEM 605 - AGGREGATE DRAINS	50 FT. (U.S. 250) (02/NHS/PV)
	(USE: 250 FT.)

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN (B)

THE ESTIMATED QUANTITIES ARE TO BE CONSIDERED APPROXIMATE. A FINAL FIELD REVIEW WILL BE PERFORMED BY ODOT PRIOR TO CONSTRUCTION AND FINAL LOCATIONS WILL BE GIVEN TO THE CONTRACTOR PRIOR TO CONSTRUCTION.

THIS WORK CONSISTS OF REMOVING THE EXISTING ASPHALT CONCRETE, REINFORCED CONCRETE, AND THE AGGREGATE BASE COURSES; SHAPING AND COMPACTING THE EXPOSED MATERIAL; PLACING ITEM 304 AGGREGATE BASE; THEN INSTALLING DOWEL RODS FOLLOWED BY CONCRETE PAVEMENT, CLASS FS. POUR 9" CONCRETE, PLACE ASPHALT CONCRETE INTERMEDIATE COURSE TO EXISTING SURFACE.

THIS WORK SHALL BE COMPLETED BEFORE MILLING AND RESURFACING BEGINS.

ALL OTHER PROVISIONS OF STANDARD CONSTRUCTION DRAWINGS BP-2.1 AND BP-2.5 APPLY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR INFORMATION ONLY:

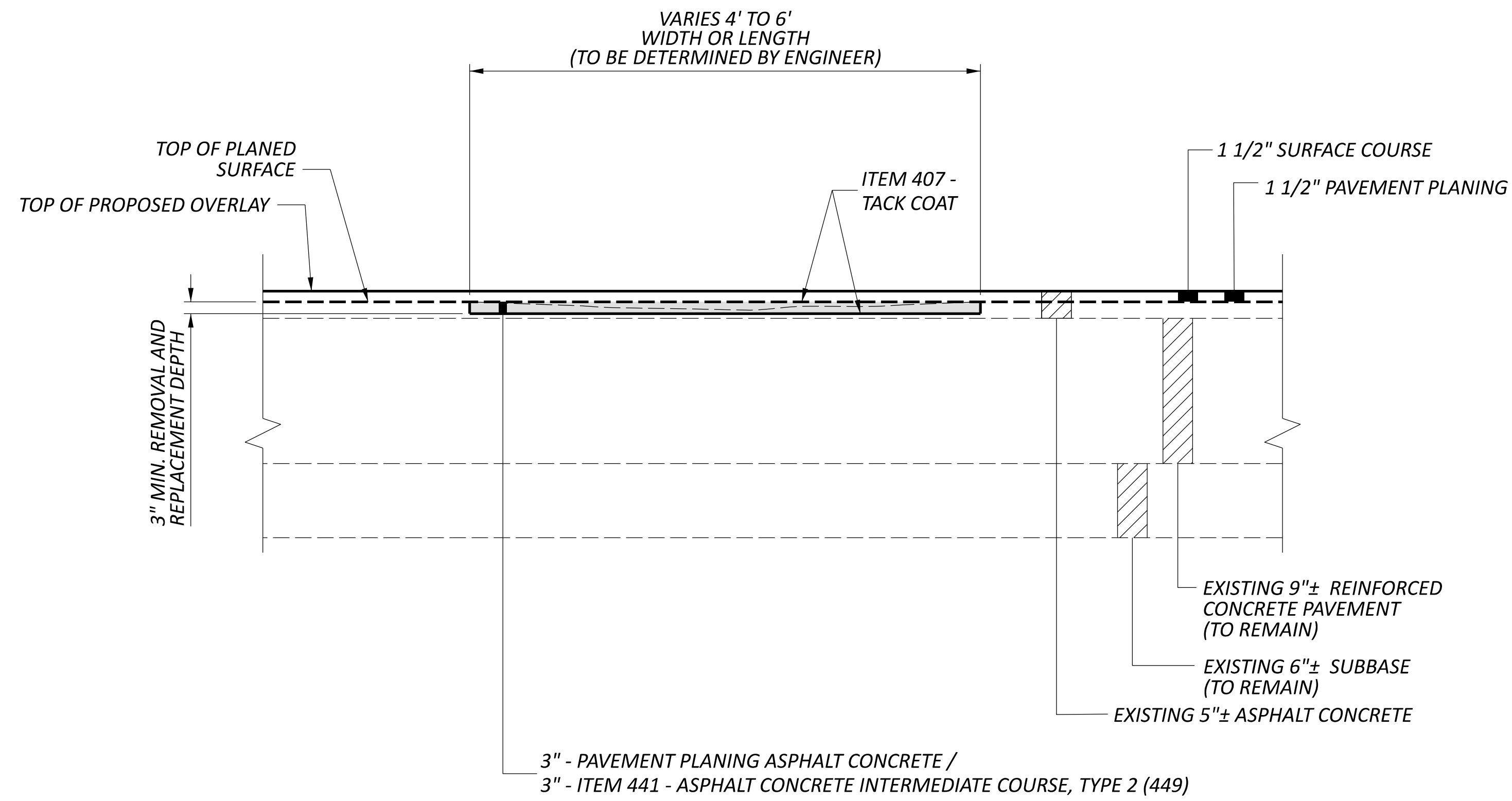
9" CONCRETE, FS	700 CU. YD.
ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (449)	700 CU. YD.
ITEM 304 - AGGREGATE BASE	300 CU. YD.
ITEM 509 - EPOXY COATED REINFORCING STEEL	16,736 POUNDS
ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	2,700 EACH

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. FINAL PAYMENT FOR THESE ITEMS SHALL BE FOR THE ACCEPTED QUANTITY COMPLETED IN PLACE.

PART 2 (02/NHS/PV)

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, FS, AS PER PLAN (B) - **250 SQ. YD.**





PARTIAL DEPTH PAVEMENT REPAIR TYPICAL

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

THIS ITEM OF WORK SHALL ADHERE TO THE REQUIREMENTS DETAILED IN CMS 251 USING ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 FOR THE PAVEMENT LIFTS.

ODOT SHALL PERFORM A FINAL FIELD REVIEW PRIOR TO CONSTRUCTION AND AT THAT TIME, THE ENGINEER WILL DETERMINE AND MARK THE SIZE AND LOCATION FOR EACH REPAIR AND PROVIDE THAT INFORMATION TO THE CONTRACTOR. FINAL PAYMENT FOR THESE LOCATIONS SHALL BE FOR THE ACCEPTED QUANTITY COMPLETED IN PLACE.

ALL PARTIAL DEPTH REPAIRS SHALL BE COMPLETED PRIOR TO COMMENCING PAVING OPERATIONS.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 251 - PARTIAL DEPTH REPAIR (441).

ESTIMATED QUANTITIES

PART 1 (O1/IMS/PV)

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441) 88 CU. YD.

PART 2 (O2/NHS/PV)

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441) 12 CU. YD.

(USE: 100 CU. YD.)

DESIGN AGENCY



DESIGNER

MVC

REVIEWER

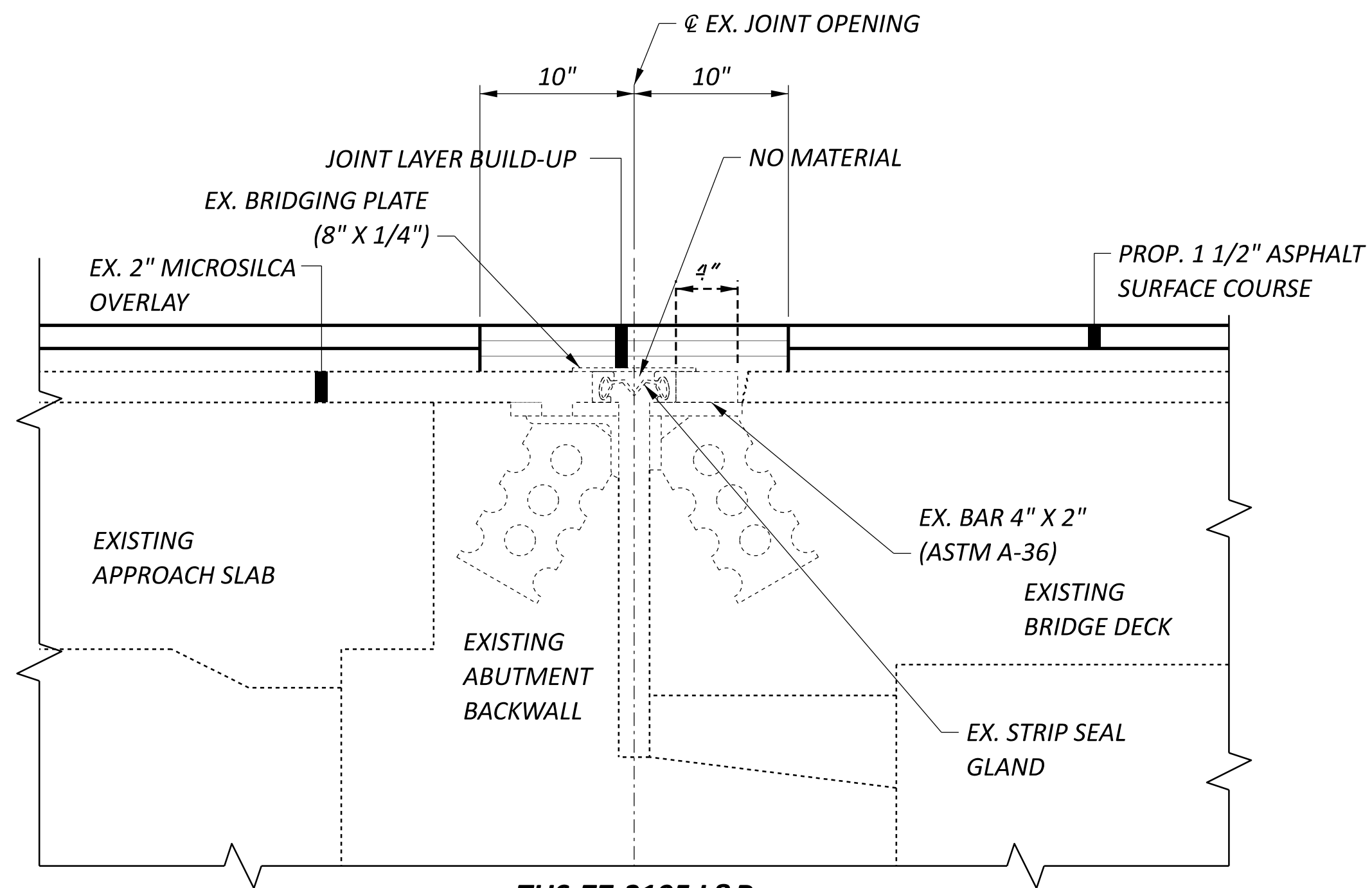
TES 05/12/22

PROJECT ID

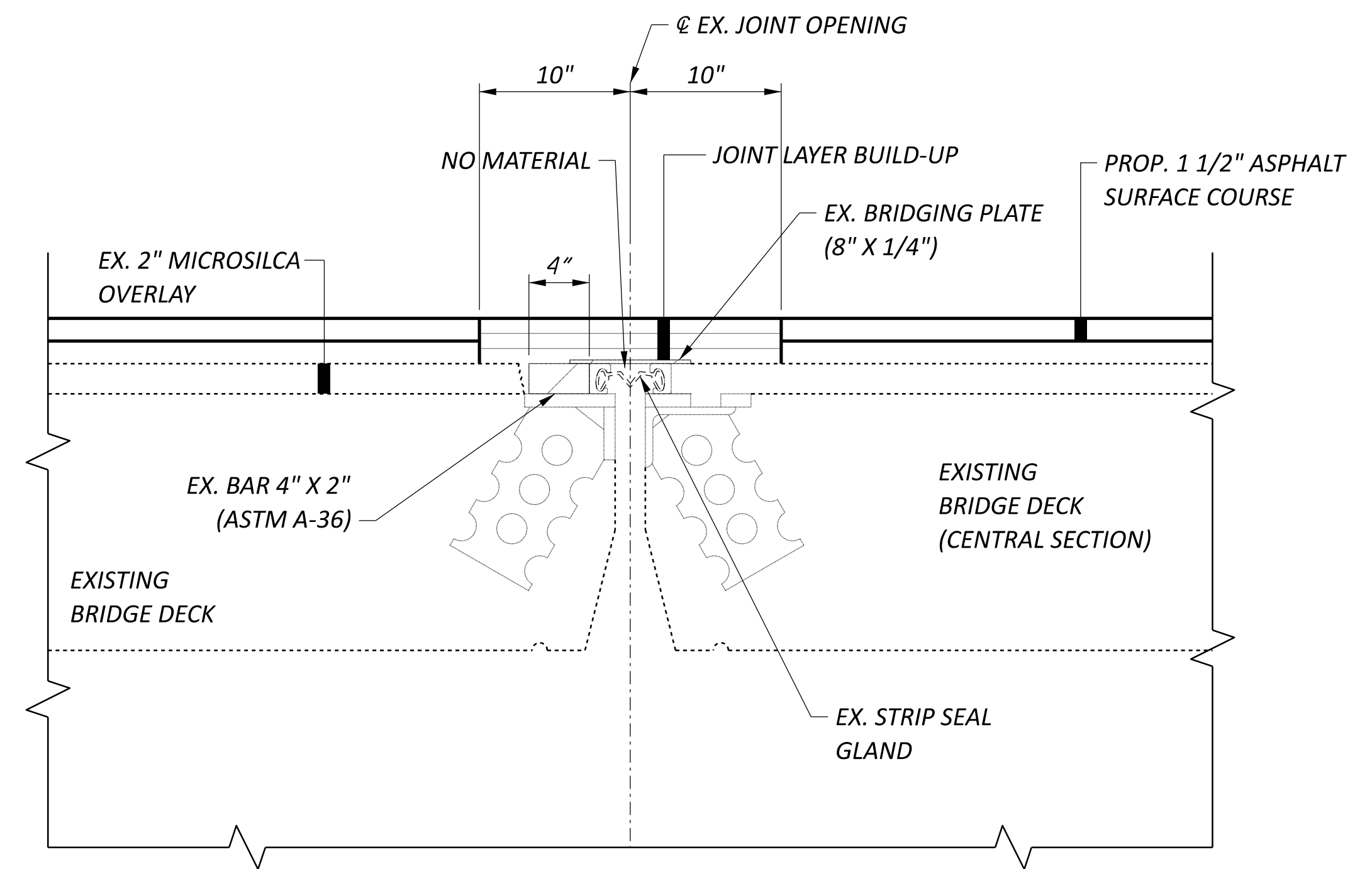
107570

SHEET TOTAL

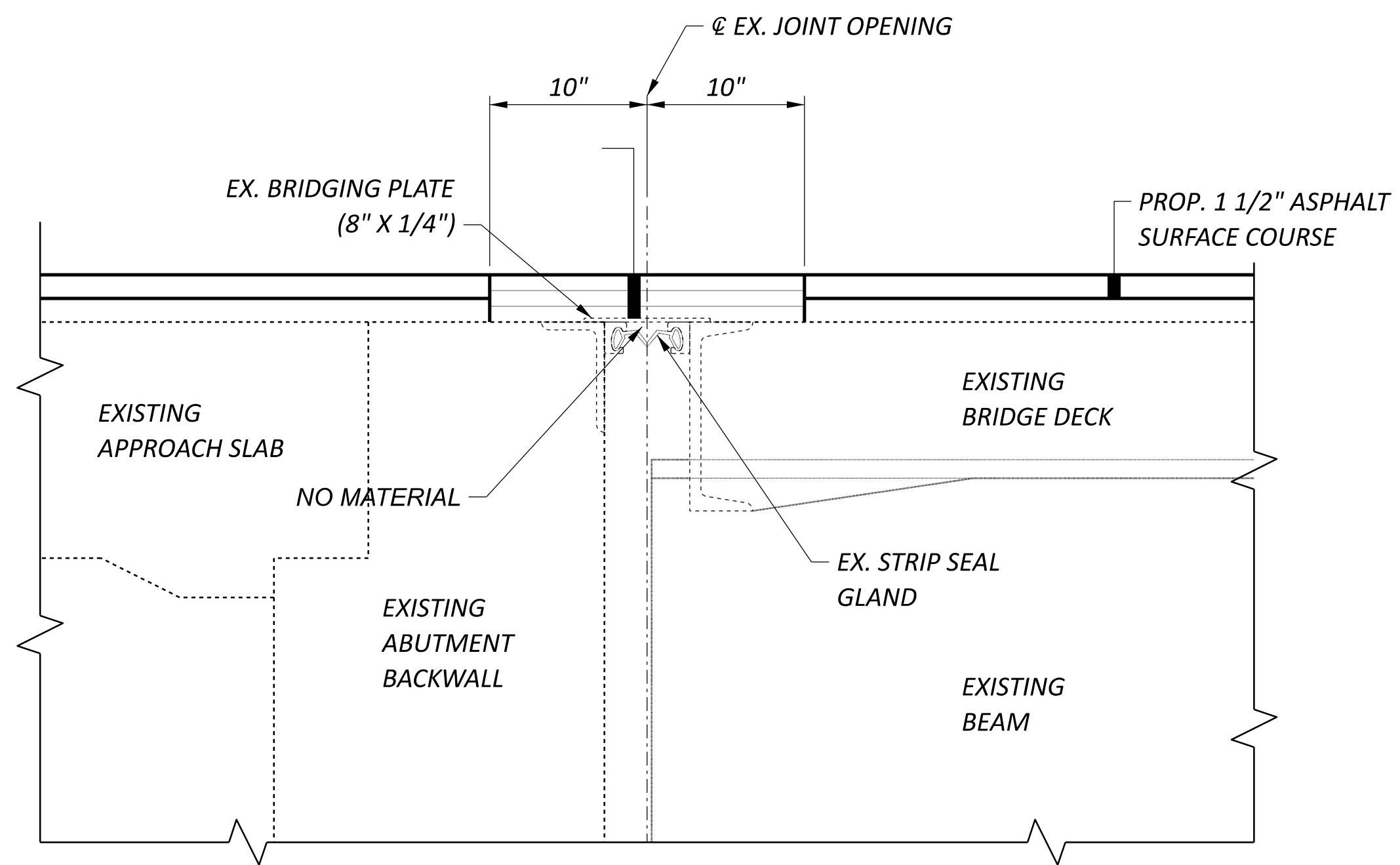
P.62 | 71



TUS-77-2195 L&R
EXPANSION JOINT SECTION
AT ABUTMENTS



TUS-77-2195 L&R
INTERMEDIATE JOINT SECTION



TUS-77-2089 L&R
TUS-77-2217 L&R
TUS-77-2337 L&R
EXPANSION JOINT SECTION
AT ABUTMENTS

ITEM 846 - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM, AS PER PLAN

THE CONTRACTOR SHALL INSTALL POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM PER SUPPLEMENTAL SPECIFICATION EXCEPT FOR INSTALLING NEW BRIDGING PLATES.

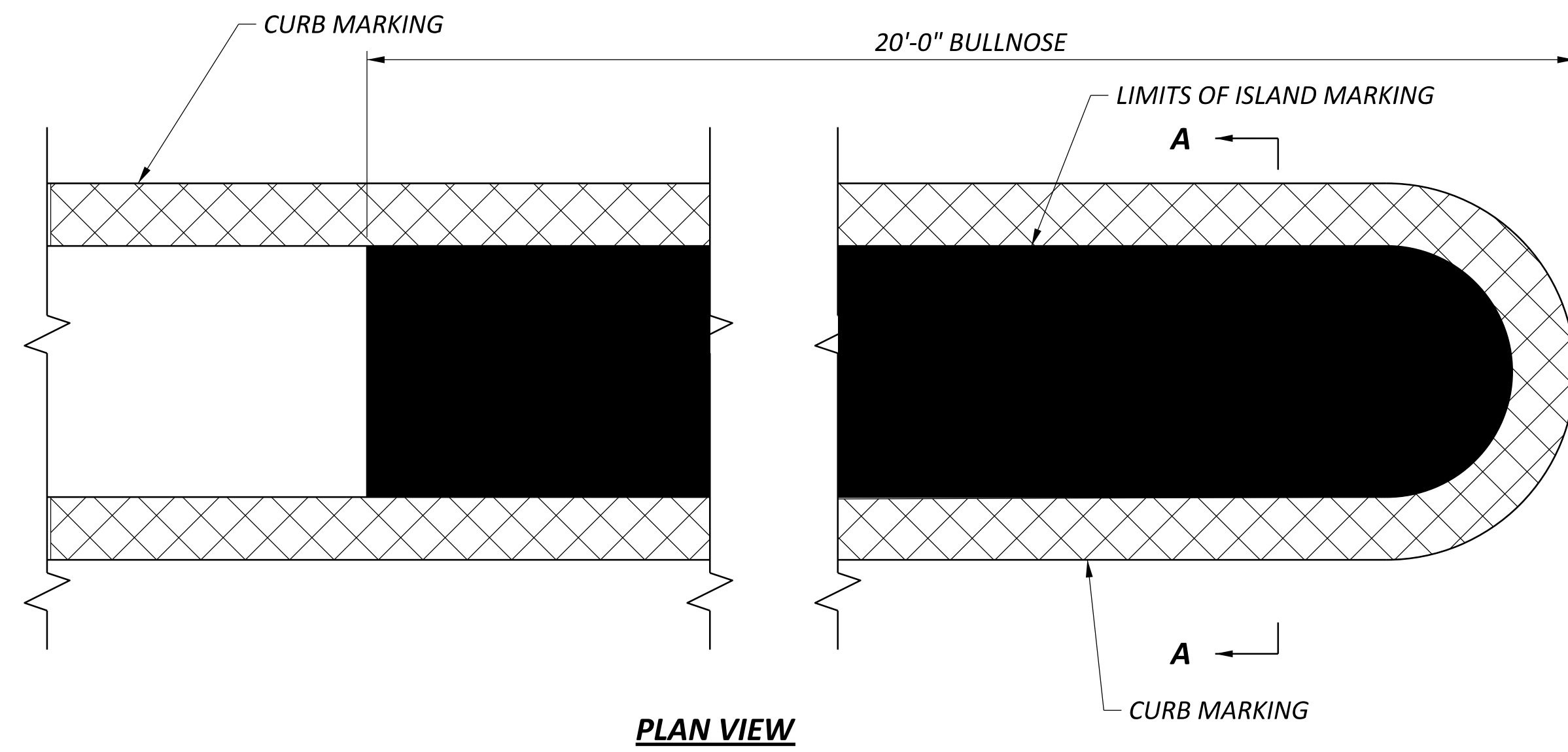
THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF CUBIC FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM 846 - CUBIC FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.

SEE SHEET P.20 FOR ITEM 846 - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM CALCULATIONS AND QUANTITIES PER STRUCTURE.

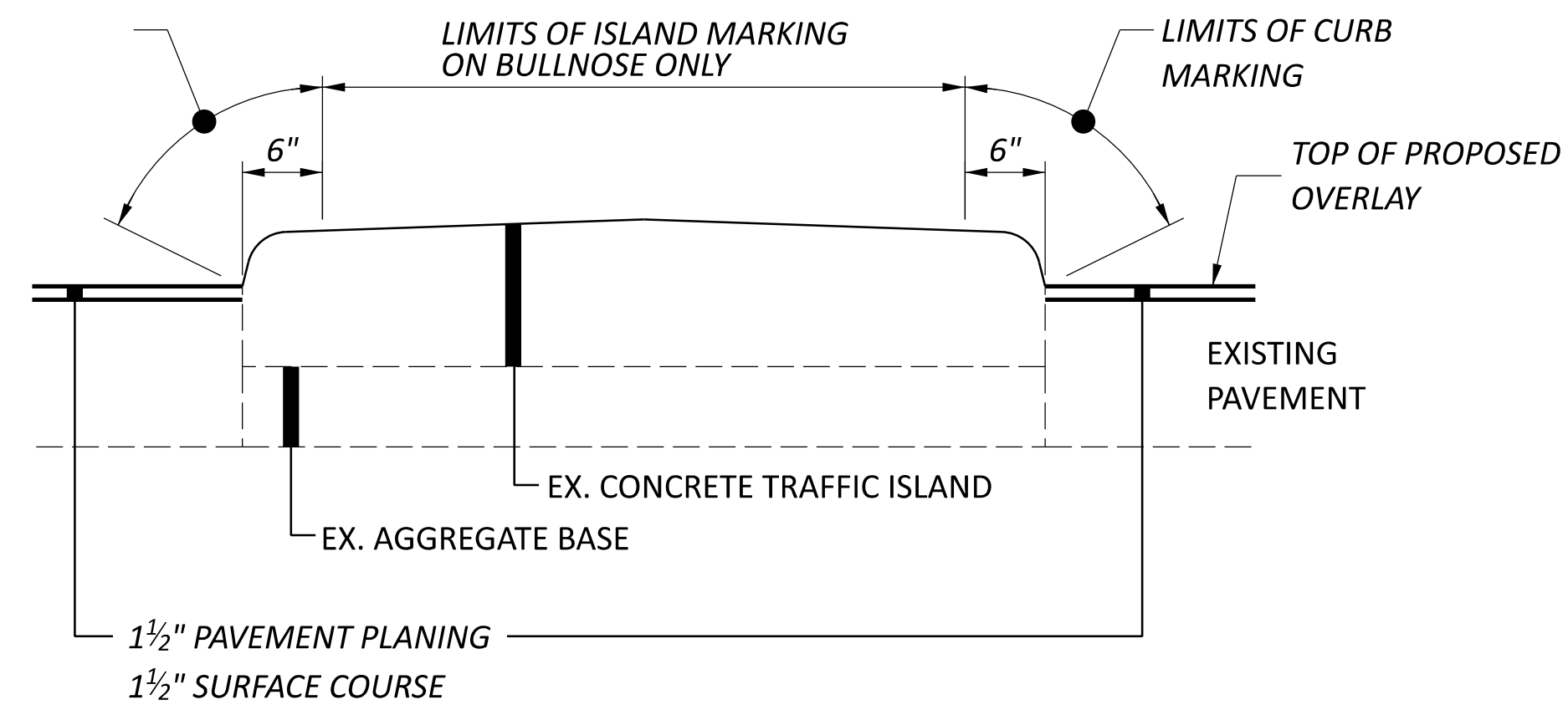
DESIGN AGENCY



DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET	TOTAL
P.63	71



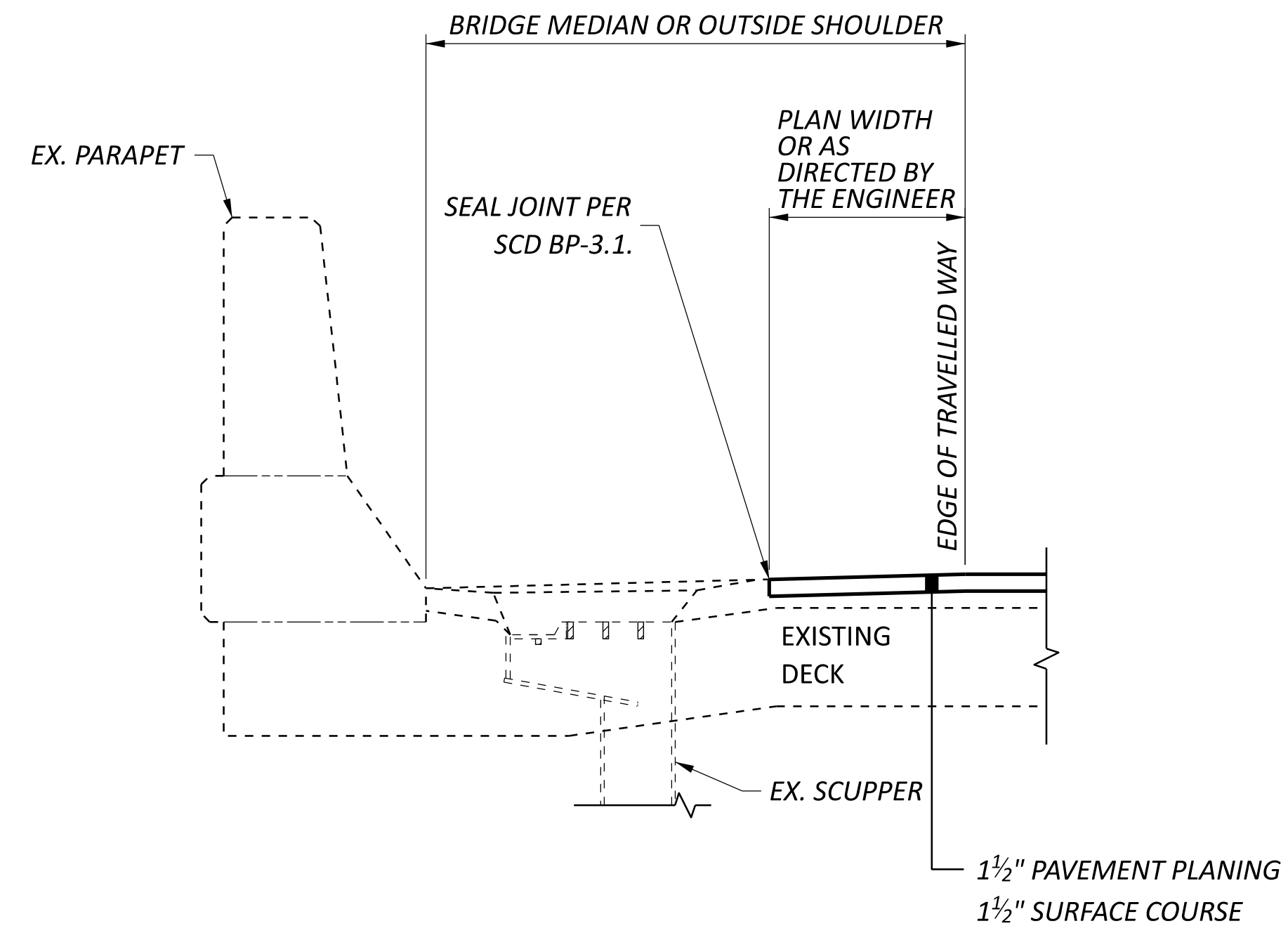
PLAN VIEW



ELEVATION

SECTION A-A

RAISED MEDIAN PAVEMENT MARKING DETAIL
 (FOR RAMPS A/B AND C/D AT EXIT 87)



CONTRACTOR TO REDUCE PLANING ACROSS THE BRIDGE DECK SHOULDERS AS STATED IN THE ESTIMATED QUANTITIES TO AVOID PLANING AND REPAVING OVER THE EXISTING SCUPPER OPENINGS. SEE SHOULDER PAVING ESTIMATED QUANTITIES FOR LOCATIONS AND PLAN WIDTHS.

PAVING ACROSS BRIDGES WITH SCUPPERS DETAIL




PAVEMENT MARKING SUBSUMMARY

SHEET NO.	621		642		646				807				850						FUNDING	
	RPM	RAISED PAVEMENT MARKER REMOVED	CURB MARKING, TYPE 1 (YELLOW)	ISLAND MARKING, TYPE 1 (YELLOW)	STOP LINE	CROSSWALK LINE, 12"	LANE ARROW	WRONG WAY ARROW	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (YELLOW)	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE)	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6" (WHITE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 12" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (CONCRETE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (CONCRETE)		GROOVING FOR 12" RECESSES PAVEMENT MARKING, (CONCRETE)
	EACH	EACH	FT.	SQ. FT.	FT.	FT.	EACH	EACH	MILE	MILE	MILE	FT.	FT.	MILE	FT.	FT.	MILE	FT.	FT.	
PART 1																				
SUB-TOTALS CARRIED FROM SHEET P.66	413	413							13.65	6.99		5,982	7,218	20.64	7,218	5,982				
SUB-TOTALS CARRIED FROM SHEET P.67	398	398							14.53	6.99		4,352	5,723	21.52	5,723	4,352				
SUB-TOTALS CARRIED FROM SHEET P.68	164	142	540	60	124		11	3	2.94	0.07		473		3.01		473				
SUB-TOTALS CARRIED FROM SHEET P.69	198	198	1,750	60	154	128	14	3	3.98			831		3.98		831				
SUB-TOTALS: PART 1	1,173	1,151	2,290	120	278	128	25	6	35.10	14.05		11,638	12,941	49.15	12,941	11,638				01/IMS/PV
PART 2																				
SUB-TOTALS CARRIED FROM SHEET P.70	81	81							3.37	1.31		1,452	2,229	4.10	1,703	1,110	0.58	525	342	
SUB-TOTALS CARRIED FROM SHEET P.71	70	70			68	100	12	2	0.66	0.04		782		0.64		782	0.06			
SUB-TOTALS: PART 2	151	151			68	100	12	2	4.03	1.35		2,234	2,229	4.74	1,703	1,892	0.64	525	342	02/NHS/PV
SUB-TOTALS: 01/IMS/PV	1,173	1,151	2,290	120	278	128	25	6	35.10	14.05		11,638	12,941	49.15	12,941	11,638				01/IMS/PV
SUB-TOTALS: 02/NHS/PV	151	151			68	100	12	2	4.03	1.35		2,234	2,229	4.74	1,703	1,892	0.64	525	342	02/NHS/PV
TOTALS CARRIED TO GENERAL SUMMARY	1,324	1,302	2,290	120	346	228	37	8	39.13	15.40		13,872	15,170	53.89	14,644	13,530	0.64	525	342	

TRAFFIC CONTROL SUBSUMMARY

DESIGN AGENCY



DESIGNER
MVC

REVIEWER
TES 05/12/22

PROJECT ID
107570

SHEET TOTAL
P.65 | 71

TRAFFIC CONTROL ESTIMATED QUANTITIES - NORTHBOUND I.R. 77


LOCATION	STATION		SIDE (DIRECTION OF TRAVEL)	621					RAISED PAVEMENT MARKER REMOVED	642		646					807			850					FUNDING	COMMENTS		
	FROM	TO		RPM						CURB MARKING, TYPE 1 (YELLOW)	ISLAND MARKING, TYPE 1 (YELLOW)	STOP LINE	CROSSWALK LINE, 24"	LANE ARROW	WRONG WAY ARROW	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (YELLOW)	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE)	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6" (WHITE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 12" RECESSES PAVEMENT MARKING, (ASPHALT)					
				SPACING	1-WAY WHITE	WHITE/RED	YELLOW/RED	YELLOW/YELLOW																FT.			SQ. FT.	FT.
PART 1																												
I.R. 77 NORTHBOUND MAINLINE	84+02.50	453+16.62	LT.																									
	84+02.50	453+16.62	CENTER	120	309			309								6.99			6.99									
	84+02.50	90+23.93	RT.																0.12									
	108+00.00	214+78.65	RT.																2.02									
	214+78.65	231+50.00	RT.																0.32									
	231+50.00	299+95.89	RT.																1.30									
	299+95.89	318+43.58	RT.																0.35									
	318+43.58	435+10.00	RT.																2.21									
	435+10.00	445+08.00	RT.																0.19									
	445+08.00	453+16.62	RT.																0.15									
ACCEL. LANE - U.S. 250	90+23.93	95+11.89	LT.	40		13		13											975.92								975.92	
	95+11.89	108+00.00	LT.																			1288.11						
ACCEL. LANE - RAMP 'B'	108+00.00	112+24.96	LT.	40		12		12											849.92								849.92	
	112+24.96	124+50.00	LT.																			1225.04						
DECEL. LANE - RAMP 'H'	202+76.98	211+94.38	LT.																			917.40					917.40	
	211+94.38	214+78.65	LT.	40		15		15											568.54								568.54	
ACCEL. LANE - RAMP 'J'	231+50.00	235+90.94	LT.	40		12		12											881.88								881.88	
	235+90.94	248+00.00	LT.																			1209.06						
DECEL. LANE - RAMP 'B'	291+95.00	297+16.70	LT.																			521.70					521.70	
	297+16.70	299+95.89	LT.	40		15		15											558.38								558.38	
ACCEL. LANE - RAMP 'D'	318+43.58	321+96.87	LT.	40		10		10											706.58								706.58	
	321+96.87	333+50.00	LT.																			1153.13						
DECEL. LANE - RAMP 'C'	426+94.58	432+02.22	LT.																			507.64					507.64	
	432+02.22	435+10.00	LT.	40		16		16											615.56								615.56	
ACCEL. LANE - RAMP 'D'	445+08.00	449+20.55	LT.	40		11		11											825.10								825.10	
	449+20.55	453+16.62	LT.																			396.07						
SUB-TOTALS CARRIED TO SHEET P.65					309	104			413							6.99	6.66	6.99	5981.88	7218.15	20.64	7218.15	5981.88					

TRAFFIC CONTROL ESTIMATED QUANTITIES

TRAFFIC CONTROL ESTIMATED QUANTITIES - NORTHBOUND I.R. 77 RAMP

LOCATION	STATION FROM TO		SIDE (DIRECTION OF TRAVEL)	621					642		646			807			850					FUNDING	COMMENTS												
				RPM	RAISED PAVEMENT MARKER REMOVED	CURB MARKING, TYPE 1 (YELLOW) FT.	ISLAND MARKING, TYPE 1 (YELLOW) SQ. FT.	STOP LINE FT.	CROSSWALK LINE, 24" FT.	LANE ARROW EACH	WRONG WAY ARROW EACH	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (YELLOW) MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE) MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT.	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6" (WHITE) FT.	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT) MILE	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT) FT.	GROOVING FOR 12" RECESSES PAVEMENT MARKING, (ASPHALT) FT.																
																				SPACING FT.	1-WAY WHITE EACH			WHITE/ RED EACH	YELLOW/ RED EACH	YELLOW/ YELLOW/ EACH									
PART 1																																			
I.R. 77 NORTHBOUND																																			
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																																			
RAMP 'E'	5+88.39	16+25.12	LT.																																
	5+88.39	16+25.12	RT.	80			14		14																										
RAMP 'B'	0+35.85	15+78.79	LT.																																
	0+35.85	15+78.79	RT.	80			20		20																										
S.R. 39 INTERCHANGE - EXIT 83																																			
RAMP 'H'	12+00.00	19+42.64	LT.	80/40			16		16																										
	12+00.00	19+42.64	RT.	40		11																													
	14+50.00	18+00.00	CENTER	40		10			10																										
	18+00.00	19+23.00	CENTER	40		4			4																										
	15+80.00		LT. & RT.	40																			123												
	18+26.00		LT.																																
RAMP 'J'	18+92.00		LT.																																
	19+23.00		LT. & RT.																																
	0+31.46	10+07.02	LT.	80			13		13																										
	0+31.46	10+07.02	RT.																																
C.R. 80 INTERCHANGE - EXIT 85																																			
RAMP 'B'	299+92.36	307+67.24	LT.	80/40			16		16																										
	299+92.36	307+67.24	RT.	40		11																													
	304+80.00	308+30.00	LT.	40		10			10																										
	302+70.00		CENTER																																
	305+28.00																																		
	306+08.00																																		
	306+88.00																																		
RAMP 'D'	307+68.00																																		
	308+30.00		LT. & RT.																																
	309+77.59	318+45.95	LT.	80			12		12																										
	309+77.59	318+45.95	RT.																																
U.S.250/S.R. 21 INTERCHANGE - EXIT 87																																			
RAMP 'C'	34+96.08	45+78.00	LT.	80			15		15																										
	34+96.08	45+78.00	RT.																																
	45+34.00		CENTER																																
	45+78.00		LT. & RT.																																
RAMP 'CD' RAISED MEDIAN	42+94.22	45+84.00																																	
RAMP 'D'	45+78.00	43+96.59	LT.	80			3		3																										
	45+78.00	43+96.59	RT.																																
	38+99.72	45+21.39	LT.	80			9		9																										
	38+99.72	45+21.39	RT.																																
SUB-TOTALS CARRIED TO SHEET P.65						46	118		142	540	60	124		11	3	1.47	1.47	0.07		473	3.01		473		01/IMS/PV										


TRAFFIC CONTROL ESTIMATED QUANTITIES

DESIGN AGENCY	
	
DESIGNER	MVC
REVIEWER	TES 05/12/22
PROJECT ID	107570
SHEET TOTAL	P.68 71

TRAFFIC CONTROL ESTIMATED QUANTITIES - SOUTHBOUND I.R. 77 RAMP

LOCATION	STATION		SIDE (DIRECTION OF TRAVEL)	621					RAISED PAVEMENT MARKER REMOVED	642		646					807			850					FUNDING	COMMENTS			
	FROM	TO		RPM						CURB MARKING, TYPE 1 (YELLOW)	ISLAND MARKING, TYPE 1 (YELLOW)	STOP LINE	CROSSWALK LINE, 24"	LANE ARROW	WRONG WAY ARROW	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (YELLOW)	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE)	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6" (WHITE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 12" RECESSES PAVEMENT MARKING, (ASPHALT)						
				SPACING	1-WAY WHITE	WHITE/ RED	YELLOW/ RED	YELLOW/ YELLOW																FT.			SQ. FT.	FT.	FT.
PART 1																													
I.R. 77 SOUTHBOUND																													
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																													
RAMP 'C'	3+79.23	16+25.12	LT.	80			17	17								0.24									0.24				
	0+23	16+25.12	RT.														0.30								0.30				
	3+08.75	3+79.23	LT.																										
STATIONING ALONG S.R. 39	54+67.50	55+52.50	RT.																								70.48		70.48
RAMP 'A'	0+35.85	8+20.75	LT.	80/40			16	16								0.15										0.15			
	0+35.85	8+20.75	RT.	40		11		11									0.15								0.15				
	0+52		LT. & RT.																										
	0+52	2+45.00	CENTER	40		6		6																					
	0+83		CENTER																										
	1+49.00		CENTER																										
	2+15.00		CENTER																										
	3+15.00		CENTER																										
S.R. 39 INTERCHANGE - EXIT 83																													
RAMP 'G'	16+42.48	25+83.00	LT.	80			13	13								0.18										0.18			
	16+42.48	25+83.00	RT.														0.18									0.18			
RAMP 'I'	0+21.28	9+47.55	LT.	80/40			18	18								0.18										0.18			
	0+21.28	9+47.55	RT.	40		11		11									0.18									0.18			
	0+42		LT. & RT.																										
	0+42	2+85.00	CENTER	40		7		7																					
	0+80		CENTER																										
	1+46.00		CENTER																										
	2+12.00		CENTER																										
	3+35.00		CENTER																										
C.R. 80 INTERCHANGE - EXIT 85																													
RAMP 'A'	298+52.24	311+24.00	LT.	80			17	17								0.24										0.24			
	298+52.24	312+25.00	RT.														0.27									0.27			
RAMP 'C'	311+79.00	325+53.07	LT.	80/40			24	24								0.26										0.26			
	311+25.00	325+53.07	RT.	40		11		11									0.29									0.29			
	311+75.00		LT. & RT.																										
	311+75.00	315+00.00	CENTER	40		9		9																					
	31+13.00		LT.																										
	312+93.00		LT.																										
	313+73.00		LT.																										
	314+53.00		LT.																										
	317+00.00		CENTER																										
U.S.250/S.R. 21 INTERCHANGE - EXIT 87																													
RAMP 'AB' RAISED MEDIAN	51+60.00	60+55.00																											
RAMP 'A'	41+26.00	60+55.00	LT.	80			25	25								0.37										0.37			
	41+26.00	60+55.00	RT.														0.37									0.37			
RAMP 'B'	50+80.82	60+55.00	LT.	80			13	13								0.31										0.31			
	50+80.82	60+55.00	RT.														0.31									0.31			
	60+55.00		LT. & RT.																										
SUB-TOTALS CARRIED TO SHEET P.65						55	143		198	1,750	60	154	128	14	3	1.93	2.05			831.48	3.98			831.48	01/IMS/PV				

TRAFFIC CONTROL ESTIMATED QUANTITIES

DESIGN AGENCY

 DESIGNER
 MVC
 REVIEWER
 TES 05/12/22
 PROJECT ID
 107570
 SHEET TOTAL
 P.69 | 71

TRAFFIC CONTROL ESTIMATED QUANTITIES - EASTBOUND AND WESTBOUND U.S. 250

LOCATION	STATION		SIDE (DIRECTION OF TRAVEL)	621					646				807					850					FUNDING	COMMENTS				
				RPM					STOP LINE	CROSSWALK LINE, 24"	LANE ARROW	WRONG WAY ARROW	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (YELLOW)	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE)	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6" (WHITE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 12" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (CONCRETE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (CONCRETE)			GROOVING FOR 12" RECESSES PAVEMENT MARKING, (CONCRETE)			
				SPACING FT.	1-WAY WHITE EACH	WHITE/ RED EACH	YELLOW/ RED EACH	YELLOW/ YELLOW/ EACH																		RAISED PAVEMENT MARKER REMOVED EACH	FT.	FT.
PART 2																												
U.S. 250 EASTBOUND																												
MAINLINE																												
	591+08.51	609+82.89	RT.																									
	609+82.89	616+69.75	RT.																									
BR. NO. TUS-00250-12.170R	616+69.75	618+30.25	RT.																									
	618+30.25	624+86.75	RT.																									
BR. NO. TUS-00250-12.320R	624+86.75	631+83.31	RT.																									
	631+83.31	650+00.00	RT.																									
	601+93.00	616+69.75	LT.																									
BR. NO. TUS-00250-12.170R	616+69.75	618+30.25	LT.																									
	618+30.25	624+86.75	LT.																									
BR. NO. TUS-00250-12.320R	624+86.75	631+83.31	LT.																									
	631+83.31	650+00.00	LT.																									
	598+75.00	616+69.75	CENTER	120	16																							
BR. NO. TUS-00250-12.170R	616+69.75	618+30.25	CENTER																									
	618+30.25	624+86.75	CENTER	120	6																							
BR. NO. TUS-00250-12.320R	624+86.75	631+83.31	CENTER																									
	631+83.31	650+00.00	CENTER	120	16																							
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																												
	602+50.00	607+55.94	RT.																									
	607+55.94	609+82.89	RT.	40		12																						
	623+73.77	624+86.75	RT.	40		3																						
BR. NO. TUS-00250-12.320R	624+86.75	626+57.85	RT.																									
	626+57.85	631+83.31	RT.																									
	631+83.31	637+87.00	RT.																									
U.S. 250 WESTBOUND																												
MAINLINE																												
	605+21.46	628+73.89	RT.																									
BR. NO. TUS-00250-12.320L	628+73.89	631+42.27	RT.																									
	631+42.27	634+91.30	RT.																									
	634+91.30	650+00.00	RT.																									
	622+98.80	628+73.89	LT.																									
BR. NO. TUS-00250-12.320L	628+73.89	631+42.27	LT.																									
	631+42.27	650+00.00	LT.																									
	631+42.27	650+00.00	CENTER	120	16																							
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																												
	634+91.30	637+06.28	RT.	40		12																						
	637+06.28	643+00.00	RT.																									

TRAFFIC CONTROL ESTIMATED QUANTITIES - U.S. 250 RAMPS

LOCATION	STATION		SIDE (DIRECTION OF TRAVEL)	621					646				807					850					FUNDING	COMMENTS												
				RPM					STOP LINE	CROSSWALK LINE, 24"	LANE ARROW	WRONG WAY ARROW	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (YELLOW)	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE)	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6" (WHITE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 12" RECESSES PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (CONCRETE)	GROOVING FOR 6" RECESSES PAVEMENT MARKING, (CONCRETE)			GROOVING FOR 12" RECESSES PAVEMENT MARKING, (CONCRETE)											
				SPACING	1-WAY WHITE	WHITE/RED	YELLOW/RED	YELLOW/YELLOW																		RAISED PAVEMENT MARKER REMOVED	FT.	EACH	EACH	EACH	EACH	FT.	FT.	EACH	EACH	MILE
PART 2																																				
U.S. 250 EASTBOUND																																				
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																																				
RAMP 'D'																																				
	0+23	6+69.30	LT.	80		9	9							0.12						0.12																
	3+10.00	3+78.35	RT.	40	3		3													68.35				68.35												
	3+78.35	6+69.30	RT.											0.06						0.06																
U.S. 250 WESTBOUND																																				
U.S. 250/S.R. 39 INTERCHANGE - EXIT 81																																				
RAMP 'E/F'																																				
	0+50.07	5+85.50	RT.	40	11		11							0.10						0.10																
	0+85.00	5+88.39	LT.	40		11	11							0.10						0.10																
STATIONING ALONG S.R. 39																																				
	63+53.85	64+34.70	RT.								100																									
	0+44.46		LT. & RT.						68																											
	0+42.96	3+15.00	RT.	40	8		8													272.04				272.04												
	0+44.32	3+15.00	RT.	40	8		8													270.68				270.68												
	3+15.00	5+00.00	CENTER	80	7		7																													
	5+00.00	5+85.50		40	4		4							0.04						0.04				171.00												
	0+57.00		LT. & RT.									3																								
	1+23.00		LT. & RT.									3																								
	1+89.00		LT. & RT.									3																								
	2+55.00		LT. & RT.									3																								
	3+21.00		LT. & RT.										2																							
RAMP 'F'																																				
	5+85.50	7+58.91	LT. & RT.	80		3	3							0.03	0.03					0.06																
BR. NO. TUS-00250-12.330F																																				
	7+58.91	8+96.06	LT. & RT.											0.03	0.03											0.06										
	8+96.06	13+17.00	LT. & RT.	80		6	6							0.08	0.08					0.16																
					41	29	70	68	100	12	2	0.36	0.30	0.04	782.07	0.64				782.07	0.06															
SUB-TOTALS CARRIED TO SHEET P.65					70		70	68	100	12	2	0.66	0.04	782	0.64				782	0.06																02/NHS/PV

TRAFFIC CONTROL ESTIMATED QUANTITIES