

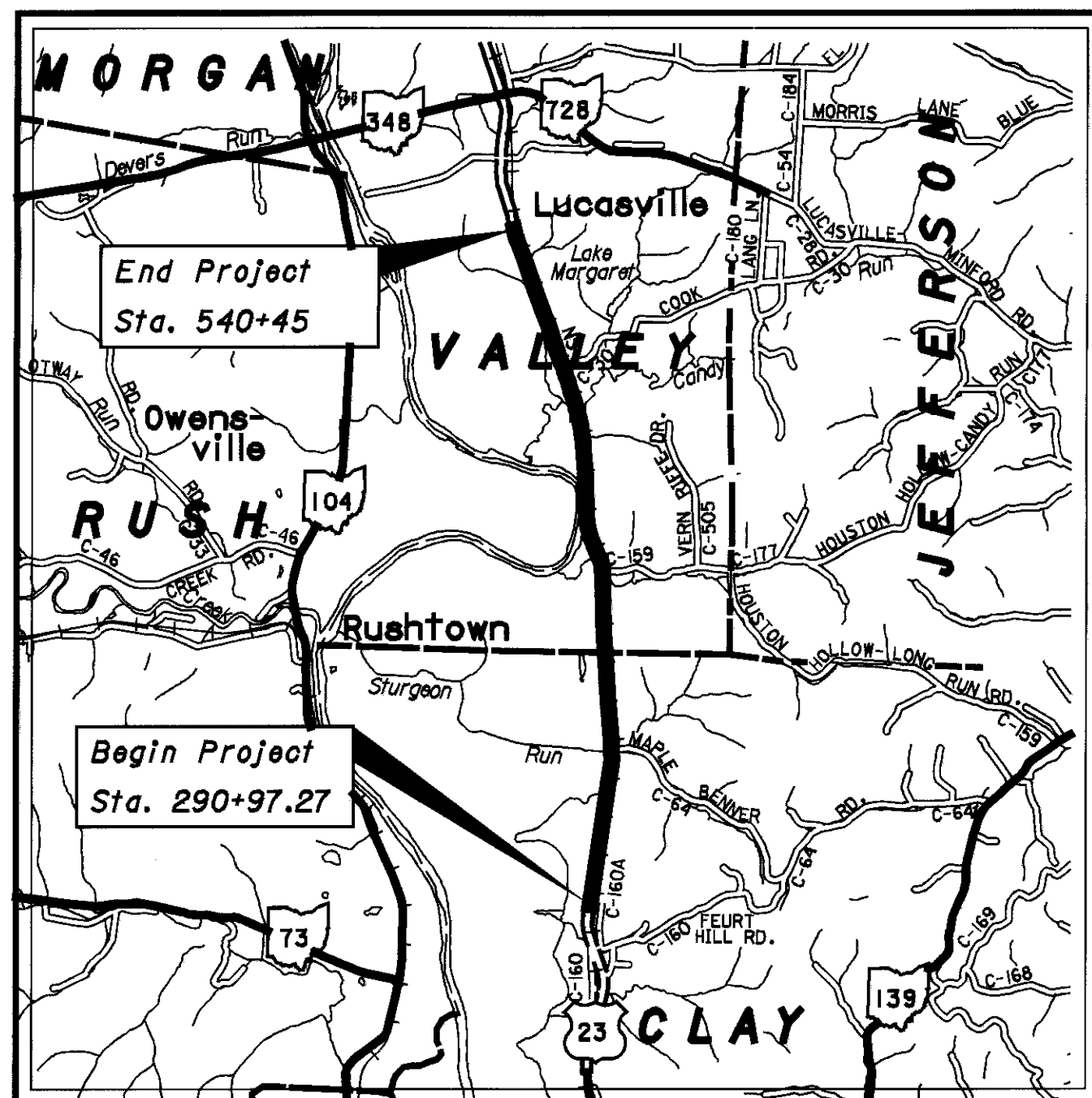
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

SCI-23-5.51

VALLEY TOWNSHIP CLAY TOWNSHIP SCIOTO COUNTY

PROJECT DESCRIPTION

IMPROVEMENT OF 4.70 MILES OF U.S. ROUTE 23 IN CLAY AND VALLEY TOWNSHIPS, SCIOTO COUNTY IN ACCORDANCE WITH PLANS AND SPECIFICATIONS BY GRADING, DRAINING, PLANING, AND PAVING WITH ASPHALT CONCRETE AND REHABILITATION OF BRIDGE NO. SCI-23-0896 A REINFORCED CONCRETE BOX BRIDGE (SPAN 30.00 FT. CLEAR; ROADWAY 72.00 FT. T/T PARAPET) OVER CANDY RUN.



LOCATION MAP

LATITUDE: 38°50'30" LONGITUDE: 82°59'05"

SCALE IN MILES



PORTION TO BE IMPROVED	—————
INTERSTATE & DIVIDED HIGHWAY	=====
UNDIVIDED STATE & FEDERAL ROUTES	—————
OTHER ROADS	—————

DESIGN DESIGNATION

CURRENT ADT (2000)	17,000
DESIGN YEAR ADT (2012)	20,600
DESIGN HOURLY VOLUME (2012)	2060
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	10%
DESIGN SPEED	3R PROJECT
LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION -
RURAL ARTERIAL

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF PRODUCTION
1980 WEST BROAD STREET
COLUMBUS, OHIO 43223

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1997 SPECIFICATIONS

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

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

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

ENGINEERS SEAL:
(FOR STRUCTURES WORK)

ENGINEERS SEAL:
(FOR ROADWAY WORK)

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	7/28/00	RM-4.2M	10/21/97	TC-41.20M	7/1/94	MT-35.10M	1/30/95	PCB-91	7/6/99	814	6/2/98	NWP#3	9/16/99
BP-5.1	7/28/00	RM-4.3M	10/21/97	TC-42.20M	3/31/94	MT-35.11M	1/30/95			828	7/28/98		
BP-9.1	7/28/00	RM-4.5M	10/21/97					SBR-1-99	1/12/99	830	10/21/98		
GR-1.1M	10/21/97	CB-2.3M	7/12/95	TC-52.10M	7/29/94	MT-95.30M	4/25/94			842	1/6/99		
GR-1.2M	1/3/96	CB-3.2M	7/12/95	TC-52.20M	7/29/94	MT-95.31M	4/25/94			843	5/5/98		
GR-2.1M	4/14/98	CB-3.3M	7/12/95	TC-61.10M	3/31/94	MT-95.32M	4/25/94			870	8/10/99		
GR-3.1M	10/21/97	HW-1.1M	7/12/95			MT-95.41M	4/25/94			877	4/13/99		
GR-3.2M	10/21/97	HW-2.1M	7/12/95	TC-65.10M	11/1/95					880	6/15/99		
GR-3.3M	10/21/97	HW-2.2M	7/12/95	TC-65.11M	11/1/95	MT-99.20M	1/30/95			899	10/21/98		
GR-4.1M	11/30/94	MH-1.2M	9/6/95	TC-65.12M	11/1/95					905	4/1/98		
GR-4.2M	10/21/97					MT-101.20M	3/1/96			906	5/5/98		
GR-5.1M	4/21/95	DM-1.1M	10/21/97	TC-71.10M	9/1/93	MT-102.10M	1/30/95			907	10/21/98		
GR-5.3M	11/30/94	DM-2.1M	6/30/95							908	3/28/00		
GR-6.1M	1/3/96	DM-4.3	4/29/99	TC-82.10	1/19/99	MT-105.10M	4/25/94			911	7/10/97		
		DM-4.4	4/29/99	TC-82.11	1/19/99	MT-105.11M	4/25/94			932	10/21/96		
										954	9/9/97		

APPROVED: *John F. Hager*
DATE 8/9/00 DISTRICT DEPUTY DIRECTOR

APPROVED: *Jordan Proctor*
DATE 9-18-00 DIRECTOR, DEPARTMENT OF TRANSPORTATION

SCI - USR 23 - 5.51
000563
DIST 09
PID# 19146
12-13-00

gstephen
08-FEB-2000 7:40AM

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FEDERAL PROJECT NO.
TE21-G000(041)

PID NO.
19146

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

SCI-23-5.51

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BEGIN WORK
STA. 290+82.27
BEGIN PROJECT
STA. 290+97.27
S.L.M. = 5.51
TE21-G000(041)

P.I. Sta = 296+74.18
 $\Delta = 30^\circ 30' 00''$ (RT)
 $Dc = 4^\circ 00' 00''$
 $R = 1,432.39'$
 $Ls = 400.00'$
 $\text{Theta} = 8^\circ 00' 00''$
 $LT = 266.94'$
 $ST = 133.58'$
 $x = 399.22'$
 $y = 18.59'$
 $k = 199.87'$
 $p = 4.65'$
 $\Delta c = 14^\circ 30' 00''$ (RT)
 $Lc = 362.50'$
 $Ts = 591.65'$
 $Es = 57.10'$

Structure SCI-23-0535
Over N&W Railroad & C.R. 160

P.I. Sta = 306+58.80
 $\Delta = 3^\circ 37' 00''$ (LT)
 $Dc = 0^\circ 30' 00''$
 $R = 11,459.10'$
 $T = 361.79'$
 $L = 723.33'$
 $E = 5.71'$

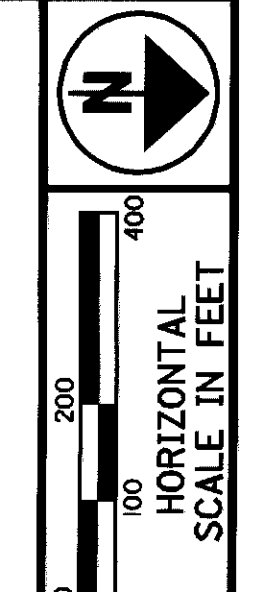
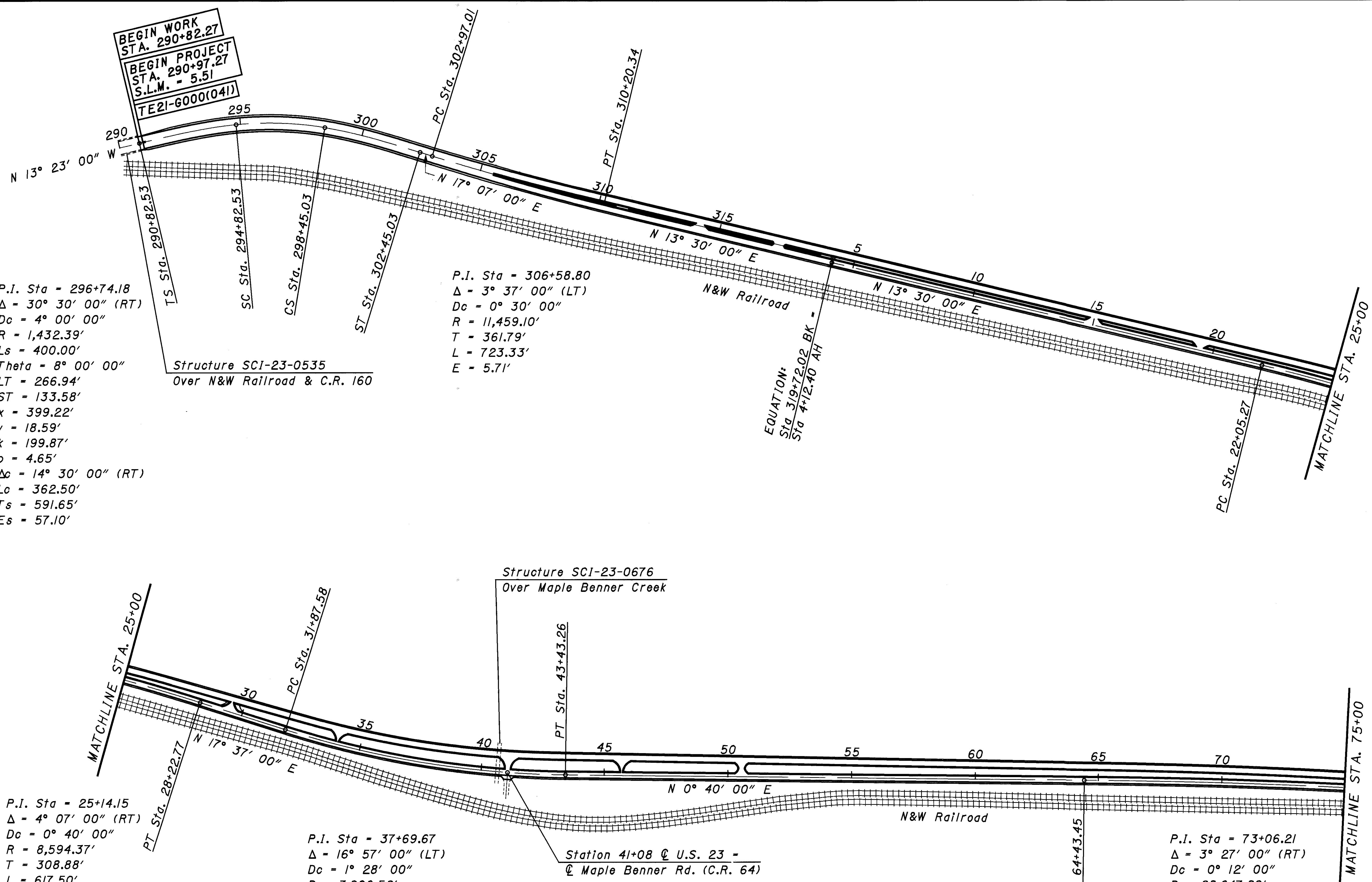
Structure SCI-23-0676
Over Maple Benner Creek

Station 41+08 @ U.S. 23 -
@ Maple Benner Rd. (C.R. 64)

P.I. Sta = 25+14.15
 $\Delta = 4^\circ 07' 00''$ (RT)
 $Dc = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 308.88'$
 $L = 617.50'$
 $E = 5.55'$

P.I. Sta = 37+69.67
 $\Delta = 16^\circ 57' 00''$ (LT)
 $Dc = 1^\circ 28' 00''$
 $R = 3,906.52'$
 $T = 582.09'$
 $L = 1,155.68'$
 $E = 43.13'$

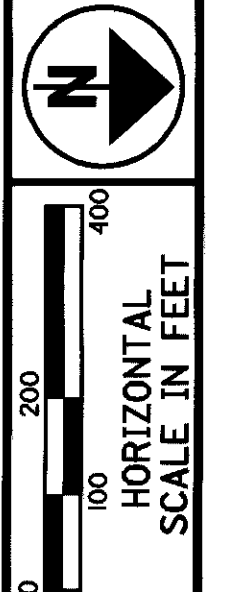
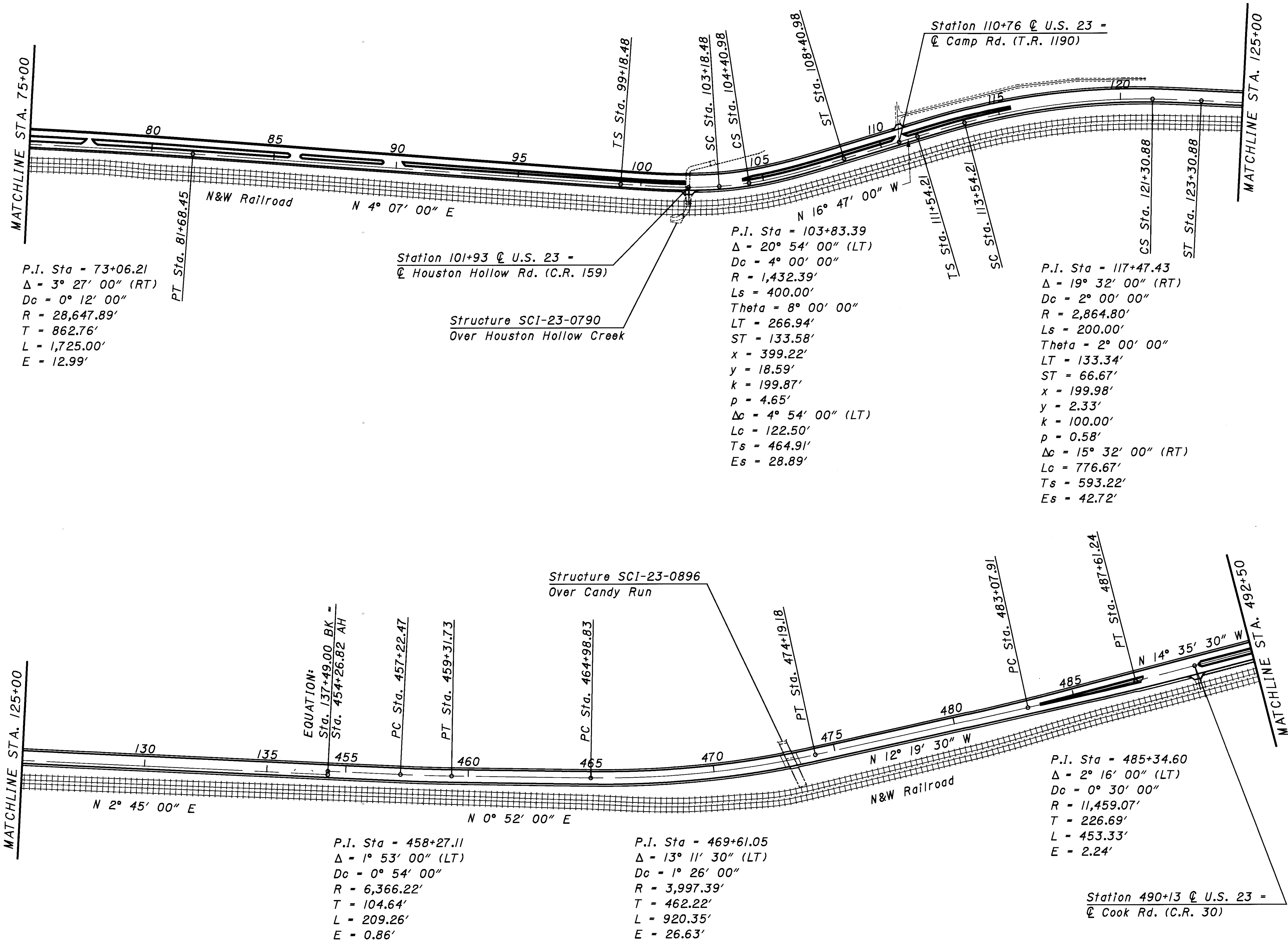
P.I. Sta = 73+06.21
 $\Delta = 3^\circ 27' 00''$ (RT)
 $Dc = 0^\circ 12' 00''$
 $R = 28,647.89'$
 $T = 862.76'$
 $L = 1,725.00'$
 $E = 12.99'$



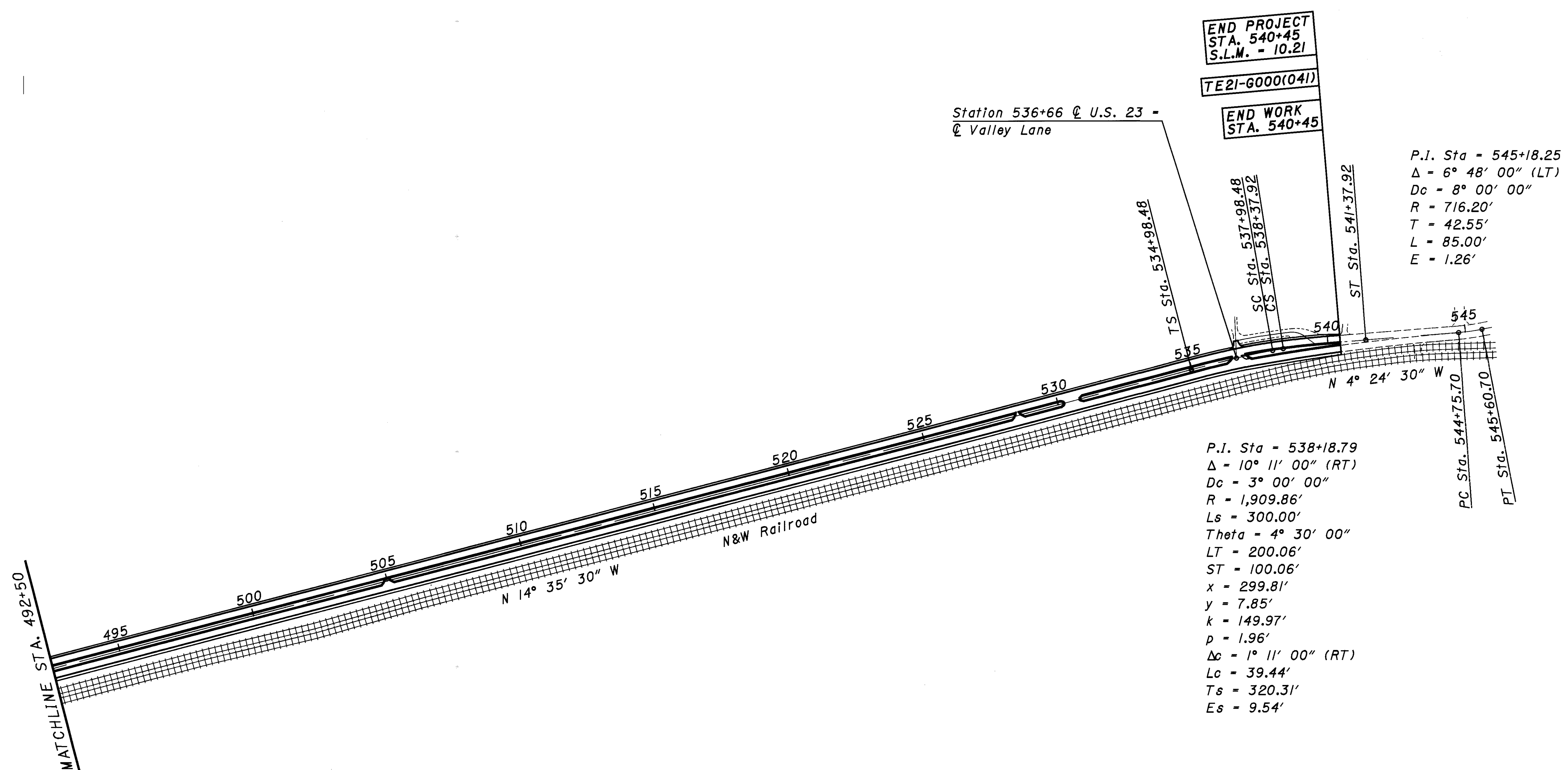
SCHEMATIC PLAN
STA. 290+00 TO STA. 75+00

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SCHEMATIC PLAN
STA. 75+00 TO STA. 492+50



END PROJECT
STA. 540+45
S.L.M. = 10.21

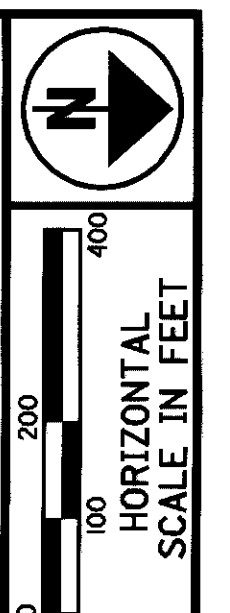
TE21-6000(041)

END WORK
STA. 540+45

Station 536+66 @ U.S. 23 -
@ Valley Lane

P.I. Sta = 545+18.25
 $\Delta = 6^\circ 48' 00''$ (LT)
 $Dc = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 42.55'$
 $L = 85.00'$
 $E = 1.26'$

P.I. Sta = 538+18.79
 $\Delta = 10^\circ 11' 00''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $Ls = 300.00'$
 $\text{Theta} = 4^\circ 30' 00''$
 $LT = 200.06'$
 $ST = 100.06'$
 $x = 299.81'$
 $y = 7.85'$
 $k = 149.97'$
 $p = 1.96'$
 $\Delta c = 1^\circ 11' 00''$ (RT)
 $Lc = 39.44'$
 $Ts = 320.31'$
 $Es = 9.54'$



SCHEMATIC PLAN
STA. 492+50 TO STA. 545+00

SCI-23-5.51

UTILITIES

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

AMERICAN ELECTRIC POWER
P.O. BOX 468
CHILLICOTHE, OHIO 45601
(740) 774-7132

COLUMBIA GAS OF OHIO
P.O. BOX 4220
ATHENS, OHIO 45701
(740) 592-0129

GTE NORTH INCORPORATED
P.O. BOX 511
PORTSMOUTH, OHIO 45662-0511
(740) 354-0511

SCIOTO COUNTY REGIONAL WATER AUTHORITY
P.O. BOX 310
LUCASVILLE, OHIO 45648
(740) 259-2301

SCIOTO COUNTY SANITARY SEWER DEPARTMENT
602 7TH STREET
PORTSMOUTH, OHIO 45662
(740) 355-8249

SCIOTO WATER, INC.
P.O. BOX 453
WHEELERSBURG, OHIO 45694
(740) 574-2111

CITY OF PORTSMOUTH - WATER DEPT.
802 SPRING LANE
PORTSMOUTH, OHIO 45662
(740) 354-4553

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

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL BE AS SHOWN ON THE TYPICAL SECTIONS.

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 RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

LOCATION AND ELEVATION OF NEW CONDUIT

WITH THE EXCEPTION OF THE NEW CONDUIT TO BE LAID AT STA. 298+45 AND AT STA. 104+05.48 AND THE NEW TRENCH DRAIN AT STA. 102+54.5, ALL PROPOSED CONDUIT SHALL BE AT THE SAME LOCATION AND GRADE AS THE EXISTING.

CONTINGENCY QUANTITIES

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

CLEARING AND GRUBBING

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

SEEDING AND MULCHING

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

ITEM 870 - SOIL ANALYSIS TEST 2 EACH

ITEM 870 - PLACING TOPSOIL 1330 CU. YD.

ITEM 870 - COMMERCIAL FERTILIZER 3.23 TON

ITEM 870 - AGRICULTURAL LIME 9.90 TON

ITEM 870 - WATER 129 M GAL.

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

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

ITEM 877 - TEMPORARY SEEDING AND MULCHING 4780 SQ. YD.

ITEM 877 - TEMPORARY PERIMETER FILTER FABRIC FENCE 31,665 LIN. FT.

ITEM 877 - TEMPORARY DITCH CHECK FILTER FABRIC FENCE 300 LIN. FT.

ITEM 877 - TEMPORARY INLET PROTECTION FILTER FABRIC FENCE 220 LIN. FT.

ITEM 877 - SEDIMENT REMOVAL 50 CU. YD.

ITEM 870 - COMMERCIAL FERTILIZER 0.22 TON

ITEM 870 - REPAIR SEEDING AND MULCHING 1200 SQ. YD.

ITEM 870 - WATER 13 M. GAL.

ITEM 870 - INTER-SEEDING 1200 SQ. YD.

CONCRETE PATCHING ON BOX CULVERT AT STA. 40+66.39

THIS WORK SHALL CONSIST OF PATCHING CONCRETE ON THE INSIDE OF THE SUBJECT CULVERT WHERE DETERIORATION HAS OCCURRED AT THE INFLOW POINTS OF DRAINAGE PIPES.

LOCATIONS TO BE ADDRESSED ARE: AT THE JUNCTURE OF A 6" LINE WITH THE CEILING OF THE CULVERT NEAR THE REAR WALL; AT THE JUNCTURE OF ANOTHER 6" LINE WITH THE TOP OF THE CULVERT'S HEAD WALL; AND VARIOUS 4" PIPE INLETS NEAR THE BOTTOM OF THE WALLS. LOCATIONS MAY BE ALTERED AS PER THE DIRECTION OF THE ENGINEER.

THE PATCHING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF SUPPLEMENTAL SPECIFICATION 843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, WITH THE EXCEPTION THAT SURFACE PREPARATION METHODS NEED NOT BE ABRASIVE BLASTING OR ULTRA-HIGH PRESSURE BLASTING, BUT MAY BE ANY METHOD THAT MEETS THE INTENT OF 843.05 AND THE APPROVAL OF THE ENGINEER.

THE PATCHING AROUND THE RECESSED 6" PIPE OPENINGS SHALL BE CURVED OR BELL SHAPED IN ORDER TO PROVIDE A SMOOTH TRANSITION FROM THE CONDUIT TO THE CULVERT WALL/CEILING. SHAPING AT OTHER OPENINGS SHALL BE AS PER ORIGINAL CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.

AVERAGE PATCH DEPTH IS ESTIMATED TO BE 1 1/2".

FOR THIS WORK, THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR 48 SQ. FT.

CALCULATED
AP
CHECKED
JAD

GENERAL NOTES

SCI-23-5.51

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DRAINAGE WORK AT STA. 507+15.8 RT.

THE CONTRACTOR SHALL EXCAVATE TO UNCOVER THE JUNCTURE OF THE EXISTING 18" CONDUIT CARRYING FLOW UNDER THE N&W RAILROAD TRACKS AND THE EXISTING 36" CONDUIT RUNNING UNDER U.S. 23. AN EXISTING BUT ABANDONED 12" LINE RUNNING FROM STA. 500+00, 79' RT. MAY ALSO BE ENCOUNTERED AT THIS LOCATION.

THE CONTRACTOR'S EXCAVATION SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE NO DAMAGE TO THE EXISTING LIVE CONDUITS. ANY DAMAGE SO INCURRED SHALL BE REPAIRED TO THE ENGINEER'S SATISFACTION AND AT THE CONTRACTOR'S EXPENSE.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR'S OPERATIONS AT THIS LOCATION CAUSE INCURSIONS ONTO THE RAILROAD RIGHT-OF-WAY OR INTERFERE WITH RAILROAD PROPERTY OR OPERATIONS. RAILROAD RIGHT-OF-WAY INFORMATION MAY BE FOUND IN HISTORIC PLAN SCI-23-(5.50),(9.08) AT THE ODOT DISTRICT 9 OFFICE IN CHILLICOTHE.

UPON UNCOVERING THE LIVE CONDUITS, THE EXISTING CONDITIONS SHALL BE NOTED BY THE ENGINEER PRIOR TO CONTINUING WITH THE WORK AT THIS LOCATION.

PAVING OPERATIONS AT LOCATIONS OF SLOTTED AND TRENCH DRAINS

THE CONTRACTOR SHALL PREVENT ENTRANCE OF ANY PLANING DEBRIS OR PAVING MATERIALS INTO TRENCH AND SLOT DRAINS SYSTEM BY SECURELY COVERING THE TRENCH OR SLOT DRAIN OPENINGS THAT ARE IN OR CLOSELY ADJACENT TO THE WORK AREAS. THE COVERS SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF THE WORK AND SHALL REMAIN IN PLACE UNTIL COMPLETION OF THE OPERATION, INCLUDING CLEAN-UP. THE COST OF SUCH PROTECTION SHALL BE CONSIDERED TO BE INCIDENTAL TO THE UNIT PRICE BID FOR PAVEMENT PLANING AND ASPHALT CONCRETE.

ANY SLOTTED OR TRENCH DRAINS FOUND TO CONTAIN DEBRIS OR OTHER MATERIAL FROM THE PLANING AND PAVING OPERATIONS SHALL BE CLEANED BY THE CONTRACTOR AND AT THE CONTRACTOR'S SOLE EXPENSE. THE CLEANING SHALL BE BY METHODS AS PRESCRIBED IN THESE PLANS OR BY THE DRAIN MANUFACTURER, AND SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER.

REVIEW OF DRAINAGE FACILITIES

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

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

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A

CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 203, LINEAR GRADING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL).

ITEM 203 - LINEAR GRADING, AS PER PLAN

THIS WORK SHALL CONSIST OF PREPARING GRADED SHOULDERS AND SLOPES AT LOCATIONS WHERE EXISTING GUARDRAIL IS REMOVED, OR WHERE NEW GUARDRAIL IS TO BE ERECTED, AS DIRECTED BY THE ENGINEER, TO INSURE A SMOOTH DRAINAGE SURFACE FREE OF ALL IRREGULARITIES AND APPLYING HERBICIDE AS SPECIFIED IN THE PLAN UNDER AREA TO BE PAVED.

ALL HOLES RESULTING FROM GUARDRAIL REMOVAL SHALL BE FILLED IN ACCORDANCE WITH REQUIREMENTS OF 203.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 203.05.

A QUANTITY OF ITEM 203, BORROW HAS BEEN PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER TO REGRADE SHOULDERS AND SLOPES AS SHOWN ON THE TYPICAL SECTIONS AND AS REQUIRED BY STANDARD DRAWINGS. SLOPES IN FRONT OF AND UNDER GUARDRAIL TO BE PAVED SHALL BE 10:1 OR FLATTER. THE SLOPE BEYOND PAVING SHALL BE VARIED AS REQUIRED TO MEET EXISTING SLOPE.

HERBICIDE SHALL BE TREFLAN E.C., OR SPIKE OR AN APPROVED EQUAL AND SHALL BE APPLIED TO THE PREPARED AREA UNDER AND IN FRONT OF THE GUARDRAIL AFTER FINAL LEVELING AND GRADING HAS BEEN COMPLETED. THE APPLICATION SHALL BE JUST PRIOR TO PAVING AND SHALL STRICTLY ADHERE TO THE MANUFACTURER'S INSTRUCTIONS.

EACH SUCCESSFUL BIDDER MUST BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR AND ALL PERSONS INVOLVED IN THE ACTUAL SPRAYING SHALL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE SPRAY CATEGORY. APPROPRIATE LICENSES SHALL BE SUBMITTED TO THE PROJECT SUPERVISOR, PRIOR TO COMMENCING WORK FOR VERIFICATION.

A QUANTITY OF ITEM 870, SEEDING AND MULCHING HAS BEEN PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER TO RESTORE SLOPES OUTSIDE OF PAVING LIMITS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 203, LINEAR GRADING, AS PER PLAN.

ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A: 1) SET GUARDRAIL POSTS

2) PLACE ITEM 448

METHOD B: 1) PLACE ITEM 448

2) BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)

3) SET GUARDRAIL POSTS

4) PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE A BITUMINOUS CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22 (UNDER GUARDRAIL).

**ITEM 202 - CATCH BASIN REMOVED
ITEM 604 - CATCH BASIN, NO. 5, AS PER PLAN**

UPON REMOVAL OF THE EXISTING CATCH BASIN AT STA. 101+34.86 RT., THE EXISTING FRAME AND GRATE SHALL BE CAREFULLY REMOVED, CLEANED, AND OTHERWISE SALVAGED FOR RE-USE ON THE NEW STRUCTURE.

ITEM 203 - DITCH CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT, DEBRIS AND OTHER OBSTRUCTIONS FROM THE EXISTING DRAINAGE DITCHES IN ORDER TO ENSURE THAT CONDUIT OPENINGS ARE CLEAR AND THAT THE DITCH FLOW RUNS IN THE PROPER DIRECTION WITHOUT PONDING OR OTHER BACK-UPS. MATERIAL REMOVED UNDER THIS ITEM SHALL BE DISPOSED OF AS PER 203.05. ALL DITCH CLEANING SHALL BE TO THE SATISFACTION OF THE ENGINEER.

THE ENGINEER MAY DIRECT DITCH CLEANOUT TO BE PERFORMED AT LOCATIONS/EXTENTS IN ADDITION TO THOSE SPECIFIED IN THESE PLANS. TO THAT END, THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - DITCH CLEANOUT 100 LIN. FT.

MEASUREMENT OF THE DITCH CLEANOUT SHALL BE THE ACTUAL LINEAR FEET MEASURED ALONG THE CENTERLINE OF THE DITCH.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 203, DITCH CLEANOUT.

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ITEM 202 - EXISTING CONDUIT CLEANED, AS PER PLAN

THIS WORK SHALL CONSIST OF THE CLEANOUT OF THE EXISTING 12" SLOTTED DRAIN EXTENDING FROM STA. 464+16 TO STA. 467+80. ALL GRAVEL, SEDIMENT AND OTHER DEBRIS SHALL BE REMOVED FROM THE DRAIN TO THE SATISFACTION OF THE ENGINEER. THE METHOD OF CLEANOUT SHALL BE A SNAKING-STYLE SYSTEM THAT WILL NOT DAMAGE THE EXISTING BITUMINOUS LINING IN ANY MANNER. THIS WORK SHALL NOT BE PERFORMED UNTIL ALL PAVING OPERATIONS ADJACENT TO THE DRAIN ARE COMPLETE. THE DRAIN SHALL BE PROTECTED DURING THE PLANING AND PAVING AS DESCRIBED IN THE PARAGRAPH ON PAVING AT SUCH LOCATIONS.

ITEM 254 - PAVEMENT PLANING, BITUMINOUS, AS PER PLAN

THE REQUIREMENTS OF ITEM 254 SHALL APPLY EXCEPT:

MAINLINE PLANING

THE INTENT OF THE PLANING IS TO MILL PAVEMENT TO REMOVE WHEEL RUTTING ALONG EXISTING PAVEMENT SLOPE AND TO PROVIDE A MILLED SURFACE THAT MATCHES THE EXISTING PAVEMENT SLOPE ON A CONTINUOUS SLOPE FOR THE PAVEMENT WIDTH. THE DEPTH OF THE MILLING REQUIRED ACROSS THE WIDTH OF THE PAVEMENT MAY VARY FROM A 1/2" MIN. AT LANE LINES/CENTERLINE AND/OR EDGES OF PAVEMENT PLANING TO A 1/4" MIN. DEPTH AT BOTTOM OF WHEEL RUTS. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTERLINE/LANE LINE OR EDGE OF PAVEMENT, TO PRODUCE THE LEAST AMOUNT OF MILLING IN CONFORMANCE WITH ABOVE LIMITS.

FIELD WORK NECESSARY TO ESTABLISH PROPER GRADE CONTROL FOR BOTH PLANING AND PAVING OPERATIONS WITHIN PLAN INTENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE COST SHALL BE INCLUDED IN THE LUMP SUM PAYMENT FOR ITEM 623, CONSTRUCTION LAYOUT STAKES.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING A MINIMUM 30 FOOT SKI-ARM SHALL BE USED DURING PLANING OPERATION.

ABOVE CONDITIONS DO NOT APPLY TO PLANING PERFORMED IN AREAS AS DIRECTED BY THE ENGINEER TO ELIMINATE ADVERSE SURFACE DISTORTION, OR TO PROVIDE A SATISFACTORY GRADE AT CASTINGS. THESE AREAS INCLUDE MATERIAL DISPLACED BY RUTTING OR SHOVING ASPHALT, SURFACE PATCHES, CONCRETE PATCHING, TRANSVERSE BUMPS, CASTINGS, ETC. PLANING OF THESE AREAS SHALL BE PERFORMED THROUGHOUT THE PROJECT PRIOR TO PAVING. AREAS TO BE PLANED WILL BE DESIGNATED BY THE ENGINEER.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN TWENTY-ONE (21) CALENDAR DAYS. THE 21 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE AND SHALL BE SUBJECT TO LIQUIDATED DAMAGES AS PER 108.07 OF THE CMS. PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAYS WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OW-17I SIGNS (UNEVEN PAVEMENT). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS.

DRAINAGE OF PLANED AREAS

TRENCHES 1 FOOT WIDE BY 1/2" DEEP SHALL BE GROUND FULL WIDTH OF PAVED SHOULDERS ON EACH SIDE OF THE TRAVELED LANES ON THE NORMAL CROWN SECTIONS AND ON THE LOW SIDE OF SUPERELEVATED SECTIONS. THESE TRENCHES ARE TO PROVIDE DRAINAGE FOR THE MAINLINE PLANED AREAS AND SHALL BE SPACED AT APPROXIMATELY 25 FEET. IF PONDING OF WATER IS NOTICED WITHIN THE GROUND AREAS ADDITIONAL TRENCHES SHALL BE GROUND INTO THE PAVED SHOULDERS AS DIRECTED BY THE ENGINEER. TRENCHES SHALL BE FILLED WITH ITEM 880, ASPHALT CONCRETE (5 YEAR WARRANTY) DURING THE ADJACENT MAINLINE INTERMEDIATE COURSE PLACEMENT OPERATION.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THIS PURPOSE:

ITEM 254 - PAVEMENT PLANING, BITUMINOUS, AS PER PLAN 2300 SQ. YD.

ITEM 880 - ASPHALT CONCRETE (5 YEAR WARRANTY) 96 CU. YD.

DISPOSAL OF CUTTINGS:

THE CONTRACTOR SHALL DELIVER 400 TONS OF THE PLANED ASPHALT MATERIAL TO THE ODOT GARAGE LOCATED ON U.S. 23 SOUTH OF LUCASVILLE. THE CONTRACTOR SHALL CONTACT TROY HUFF, COUNTY MANAGER AT (740) 259-2071 TO ARRANGE A TIME AND PLACE FOR THE MATERIAL TO BE DELIVERED.

ALL ADDITIONAL MATERIALS EXCEPT FOR THE PORTION USED FOR ITEM 617, SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE, AS PER PLAN SHALL BE DISPOSED OF AS PER ITEM 254.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH EXCEPTION OF ITEMS SEPARATELY ITEMIZED, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 254, PAVEMENT PLANING, BITUMINOUS, AS PER PLAN.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18".

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, 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 604 - DRAINAGE STRUCTURE, MISC.: CLEANOUT OF SMALL DRAINAGE STRUCTURES

THIS ITEM IS PROVIDED FOR THE CLEANING OUT OF THE TWO EXISTING DRAINAGE STRUCTURES AT STA. 116+84 RT.. THE WORK SHALL CONSIST OF THE REMOVAL OF DEBRIS AND SEDIMENT FROM THE APPURTENANCES IN ORDER THAT THE INVERTS MAY FLOW FREELY. ALL DRAINAGE STRUCTURE CLEANOUT SHALL BE TO THE SATISFACTION OF THE ENGINEER.

THE WORK MAY BE PERFORMED BY MANUAL OR MECHANICAL MEANS AND SHALL BE CONDUCTED IN SUCH A MANNER AS TO INCUR NO DAMAGE TO THE STRUCTURES. ANY SUCH DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER. DISPOSAL OF THE REMOVED MATERIAL SHALL BE AS PER THE PROVISIONS OF 203.05.

THE UNIT PRICE BID FOR THE SUBJECT ITEM SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUTS.

THE ENGINEER MAY DIRECT THE CLEANING OF DRAINAGE STRUCTURES OTHER THAN THOSE SPECIFIED. FOR THAT PURPOSE, THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 604 - DRAINAGE STRUCTURE, MISC.: CLEANOUT OF SMALL DRAINAGE STRUCTURES 3 EACH

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ITEM 603 - 36" CONDUIT, TYPE C, AS PER PLAN, 706.02

DUE TO THE PROXIMITY OF THIS WORK TO THE TRAVELED WAY, LOW STRENGTH MORTAR BACKFILL SHALL BE USED FOR TRENCH FILL TO A HEIGHT OF AT LEAST 1' ABOVE THE TOP OF THE CONDUIT. THIS LEAN GROUT SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ITEM 613 AND SHALL BE INCLUDED IN THE PRICE BID FOR THE SUBJECT ITEM.

ITEM 604 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN

UPON COMPLETION OF THE CONNECTIONS OF THE PROPOSED NEW TRENCH DRAIN AND THE NEW 12" CONDUIT TO THE EXISTING TYPE 6 CATCH BASIN AT STA. 104+05.48, THE FRAME AND GRATE SHALL BE ADJUSTED TO THE ELEVATION OF THE PROPOSED FINISHED GRATE. ALL COSTS OF THE REMOVAL OF THE EXISTING APRON AND THE RECONSTRUCTION OF A NEW APRON OF THE SAME SHAPE AND DIMENSIONS (APPROX. 4'-5" X 5'-8") SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM.

ITEM 617 - SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE, AS PER PLAN

THE REQUIREMENTS OF ITEM 617 SHALL APPLY EXCEPT:

THE EXISTING ASPHALT CONCRETE PAVEMENT MATERIAL REMOVED UNDER ITEM 254 - PAVEMENT PLANING, AS PER PLAN MAY BE USED AS MATERIAL FOR ITEM 617, SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE, AS PER PLAN.

IN LIEU OF THE GRADATION REQUIREMENTS OF 617.03, THE MATERIAL SHALL BE VISUALLY INSPECTED BY THE ENGINEER. NO MATERIAL SHALL BE USED WITHOUT PRIOR APPROVAL BY THE ENGINEER.

MATERIALS OBTAINED FROM OTHER SOURCES SHALL MEET ALL REQUIREMENTS OF ITEM 617.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

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

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

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

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF ITEM 203, OR IT MAY BE REMOVED.

THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER LINEAR FOOT FOR ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

APPLICATION OF THIS ITEM AT ANY OTHER LOCATIONS OTHER THAN STA. 507+15.8 RT. SHALL BE AS DIRECTED BY THE ENGINEER, AND SHALL CONSIST OF THE OPERATIONS DESCRIBED ABOVE. FOR THE PURPOSES OF ANY CONDUIT FILLING AND PLUGGING THAT THE ENGINEER MAY SO DIRECT, THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT 10 LIN. FT.

FOR THE 12" EXISTING, ABANDONED LINE AT STA. 507+15.8 RT., THE PROXIMITY TO THE N&W RAILROAD TRACKS PRECLUDES FILLING, CRUSHING OR REMOVAL. FILLING AND PLUGGING SHALL THEREFORE CONSIST OF A 12" THICK MASONRY CONCRETE PLUG AT THE DOWNSTREAM END OF THE LINE, AS SHOWN ELSEWHERE IN THESE PLANS.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT, GRAVEL AND ALL OTHER DEBRIS FROM THE EXISTING DRAINAGE CONDUITS BY MEANS OF HAND-CLEANING, VACU-JET, OR ACCEPTABLE EQUIVALENT. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 203.05. ALL PIPES SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

THE ENGINEER MAY DIRECT PIPE CLEANOUT TO BE PERFORMED AT LOCATIONS/EXTENTS IN ADDITION TO THOSE SPECIFIED IN THESE PLANS. TO THAT END, THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL - PIPE CLEANOUT 50 LIN. FT.

ITEM SPECIAL - TRENCH DRAIN

A NEW TRENCH DRAIN SHALL BE INSTALLED FROM STA. 102+54.5 TO STA. 104+05.48. IT SHALL FOLLOW THE LINE OF THE EXISTING SLOTTED DRAIN AT THE LOCATION AND SHALL BE ADJUSTED FOR THE GRADE OF THE PROPOSED SURFACE.

THE PROPOSED TRENCH DRAIN SYSTEM SHALL BE PRECAST POLYMER DRAINAGE CHANNEL WITH 4" OPENING AND EQUIPPED WITH ANCHOR BOLTS AND WITH A DUCTILE IRON FRAME AND REMOVABLE GRATES SUITABLE FOR HIGHWAY TRAFFIC. THE SYSTEM SHALL BE: THE POLYDRAIN INTERCEPTOR A-67 AS MANUFACTURED BY ABT, INC.; THE ACO DRAIN NW100 AS MANUFACTURED BY ACO DRAIN, INC.; THE POLYCAST SERIES 900 AS MANUFACTURED BY STRONGWELL, OR; APPROVED EQUAL.

THE FRAME AND REMOVABLE GRATE SHALL MEET AASHTO-H20 STANDARDS.

THE DRAIN AND ITS CONNECTION TO THE EXISTING CATCH BASIN AT STA. 104+05.48 SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. ALL MATERIALS AND INCIDENTALS NEEDED TO HOLD THE CHANNEL TO LINE AND GRADE, PREVENT FLOTATION AND ENSURE PROPER CONCRETE ENCASEMENT SHALL BE INCLUDED WITH THE TRENCH DRAIN.

DETAIL DRAWINGS ARE PROVIDED ON SHEET 53.

THE COST OF ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED FOR COMPLETE AND PROPER INSTALLATION OF THE NEW TRENCH DRAIN, INCLUDING ALL COSTS ASSOCIATED WITH THE CATCH BASIN CONNECTION, CONCRETE ENCASEMENT, SETTING LINE AND GRADE AND ANY AND ALL INCIDENTALS SHALL BE PAID AT THE UNIT PRICE BID FOR ITEM SPECIAL, TRENCH DRAIN.

RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN

RAISED PAVEMENT MARKERS REMOVED ARE TO BE DELIVERED TO THE ODOT WHEELERSBURG OUTPOST (U.S. 52 & S.R. 522) BETWEEN THE HOURS OF 7:30 A.M. AND 3:30 P.M., WEEKDAYS.

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ITEM 614 MAINTAINING TRAFFIC

Traffic shall be maintained on U.S. 23 at all times, using a minimum of one 11-foot wide lane of travel in each direction.

The length and duration of lane closures and restrictions are subject to 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.

For all work activities except the widening of structure SCI-23-0896, lane closures and restrictions shall be permitted during working daylight hours only. Closures and restrictions shall be in conformance with MT-95.30M, MT-95.31M and MT-95.32M. At night and during non-working hours four-lane two-way traffic shall be provided on the existing travel lanes.

The maintenance of traffic through the bridge work zone at SCI-23-0896 shall provide for two lanes of travel in each direction as per MT-102.10M and sheets 12 through 17 of this plan.

The Contractor shall arrange for all maintenance of traffic operations such that there will be no obstruction to the continuous flow of traffic. Intersections, cross-overs and drives shall be open to traffic at all times. Particular attention shall be paid to drive at the Ohio State Highway Patrol where access shall not be interrupted or hindered in any manner for any purpose whatsoever.

Prior to the commencement of work, the Contractor shall submit to the Engineer the name(s) and telephone number(s) of a local representative or representative(s) who can be contacted 24 hours a day by the Ohio Department of Transportation and all interested law enforcement agencies. This person or persons shall be responsible for placing or replacing any traffic control devices as are necessary to safely maintain the traveled way. In emergency situations, the Contractor shall, within one hour of initial notification or knowledge of the emergency, address any damages to and/or failures and malfunctions of the traffic control devices and otherwise protect and provide maintenance to the traveling public. If, in the estimation of the Engineer, proper response is not being provided by the Contractor or the Contractor's representative(s) cannot be reached, the Department may take the necessary steps to protect the traveling public and/or place the traffic control devices in proper working order with the cost of any such services being deducted from any money due or to become due the Contractor.

Prior to reopening any segment of roadway to traffic, permanent or temporary markings shall be in place.

All work and traffic control devices shall be in accordance with 614 and other applicable portions of the specifications as well as the Ohio Manual of Uniform Traffic Control Devices. Payment for all labor, equipment and materials shall be included in the lump sum contract price for Item 614, Maintaining Traffic, unless separately itemized in the plans.

HOLIDAY RESTRICTIONS

No work shall be performed and all lanes shall be open to traffic during the following periods when a holiday (Memorial Day, Fourth of July, Labor Day, Thanksgiving, Christmas, New Year's Day) is on:

- Monday or Tuesday
from 12 noon the Friday before the actual holiday until 12 noon the day following the holiday

- Wednesday
from 12 noon on the day before until 12 noon on the day following
- Thursday or Friday
from 12 noon on the day before until 12 noon on the Monday following
- Saturday or Sunday
12 noon on Friday until 12 noon on Monday

There shall be no extensions for holiday requirements due to material delays, unless such delays are nation-wide, or for labor strikes, unless such strikes are area-wide. Should the Contractor fail to meet any of these requirements, liquidated damages shall be assessed in accordance with 108.07.

MAINTENANCE OF TRAFFIC FOR WIDENING OF STRUCTURE SCI-23-0896

A. SUGGESTED PHASING

Phase 1 shall consist of closing a portion of the left lane and maintaining four 11-foot lanes of two-way travel on the remaining roadway and portions of the right shoulder by use of portable concrete barrier, drums and other provisions of MT-102.10M and these plans. The following work activities shall be performed on the left side of the bridge and adjacent roadway shoulder:

- Removal of the existing bridge rail and adjacent existing guardrail
- Removal of portions of the existing structure as per sheet 55 of the plans.
- Deck widening and construction of a new concrete, single slope bridge parapet.
- Construction of single slope barrier transitions on the approach shoulders.
- Installation of new guardrail
- All other activities associated with the needed deck widening and new parapets and transitions.
- Restoration of the deck surface and shoulder and roadway pavement prior to reopening to traffic

Phase 2 shall consist of closing the right lane and maintaining four 11-foot lanes of two-way travel on the remaining roadway and portions of the right shoulder by use of portable concrete barrier, drums and other provisions of MT-102.10M and these plans. The following work activities shall be performed on the left side of the bridge and adjacent roadway shoulder:

- Work activities are identical to those of Phase 1 and are applied on the right side of the bridge and the adjacent roadway.

B. PLANING AND RESURFACING

Planing and resurfacing of the existing deck and adjacent roadway and shoulder areas shall not be performed as part of the bridge widening work. These activities shall be performed after completion of all bridge work and the reopening of the bridge area to traffic using the existing travel lanes.

DROP-OFFS

There shall be no overnight drop-offs of greater than 1 1/2". Refer to sheet 18 for detailed information on maintenance and protection of traffic for drop-offs.

ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR

In addition to the requirements of 614 and the latest edition of the Manual of Uniform Traffic Control Devices (OMUTCD), a uniformed law enforcement officer and official patrol car with working top-mounted lights shall be provided for controlling the following tasks:

- Lane closures during initial set up periods
- Lane closures during tear-down periods
- Substantial shifts of a closure point
- Initiation of new closure arrangements

Law Enforcement Officers (LEO's) should not be used where the OMUTCD intends that flaggers be used. The LEO's are considered to be employed by the Contractor and the Contractor shall be responsible for their actions. Although they are employed by the Contractor, the Project Engineer shall have control over their placement.

The official patrol car shall be a public safety vehicle as required by the Ohio Revised Code.

Information regarding arrangement and payments by the Contractor for special duty LEO with patrol car may be obtained by contacting the Ohio State Highway Patrol, Lucasville, Ohio, (740)-354-2888.

Law enforcement officers with patrol cars required by the traffic maintenance tasks above shall be paid at the unit price (hourly) basis under Item 614, Law Enforcement Officer with Patrol Car. The following estimated quantity has been carried to the Maintenance of Traffic Subsummary:

ITEM 614	LAW ENFORCEMENT OFFICER WITH PATROL CAR	36 Hour
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The hours paid shall include the minimum show-up time required by the law enforcement agency involved.

If the Contractor wishes to utilize LEOs for flagging and traffic control other than that required in this plan, he may do so at his own expense. Payment for the excess above the Contract requirements will be included under Item 614, Maintaining Traffic.

ITEM 614 WORK ZONE SPEED LIMIT SIGN

The Contractor shall furnish, install, maintain, cover during suspension of work and subsequently remove work zone speed limit signs (R-10) (45 mph speed limit) and supports for the work at structure SCI-23-8.96 in accordance with the following requirements.

The Contractor shall cover or remove any existing speed limit or minimum speed signs within the reduced speed zone. These signs shall be restored during suspension or upon termination of the reduced speed limit. The expense of covering or removal and restoration of existing speed limit or minimum speed signs shall be included in the pay item for the work zone speed limit signs.

The work zone speed limit signs may be erected or uncovered no more than 4 hours before the actual start of the bridge work. The signs shall be removed or covered no later than 4 hours following restoration of all lanes to traffic with no restrictions or sooner as directed by the Engineer.

The Contractor shall erect a work zone speed limit sign in advance of the structure work area. The sign shall be mounted on the right side of approaching traffic 250 feet in advance of the temporary striping for

the current maintenance of traffic phase. The zone shall extend to the limits of the phase striping and signing. Speed limit signs (R-10) to indicate the resumption of the statutory speed limit shall be placed at the end of the reduced speed zone.

The Contractor may use signs and supports that are in used but good condition provided that the signs meet current ODOT specifications. Sign faces shall be reflectorized with Type G sheeting complying with the requirements of 730.19 and U.S. Department of Transportation supplemental specification for Type III-C sheeting, FP-85. Work zone speed limit signs shall be mounted on two ground mounted supports, no. 3 posts, as per 630.06 of the CMS.

Work zone speed limit signs and supports will be measured as the number of sign installations, including the signs and necessary supports. If a sign and support combination is removed and re-erected at another location within the project due to changes in the speed zone directed by the Engineer, it shall be considered to be another unit.

The following quantity has been carried to the Maintenance of Traffic Subsummary:

ITEM 614	WORK ZONE SPEED LIMIT SIGN	8 Each
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GUARDRAIL REPLACEMENT

No hazard shall be left unprotected except for the time necessary to remove the existing guardrail, prepare the site and install new barrier or guardrail in a continuous operation. The removal of all guardrail shall be as directed by the Engineer. No guardrail shall be removed until the replacement material is on the site, ready for installation. Failure to comply with this requirement shall be deemed sufficient cause to order work to be suspended until such time as the Engineer is assured of compliance.

TRENCH OPENINGS FOR TRENCH DRAINS

Trench openings for trench drain work shall be maintained and protected at all times. At the end of each working day, trenches shall be backfilled to within 1/2" of the adjacent paved surface. No portion of the trench shall be left open overnight. In the event that work must be suspended due to weather or other reasons, all open trenches shall be backfilled at the direction of the Engineer.

Open upstream pipe ends shall be blocked, and permanent fill shall be protected, prior to placement of any temporary fills needed to meet the above requirements. Refer to sheet 18 for details of any overnight/non-working hours protection devices that may be required.

The cost of all maintenance and protection of traffic associated with the trench drain work, including placement and removal of any temporary plugs, backfill, etc., shall be included in the lump sum contract price bid for Item 614, Maintaining Traffic.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

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DUST CONTROL

The Contractor shall furnish and apply water and calcium chloride for dust control as directed by the Engineer. The following contingency quantities have been carried to the Maintenance of Traffic Subsummary for dust control purposes:

ITEM 616	WATER	50 M. Gal.
ITEM 616	CALCIUM CHLORIDE	5 Ton

ITEM SPECIAL REPLACEMENT DRUM

Drums furnished by the Contractor in accordance with the requirements of the plans, specification and proposal that become damaged by traffic for reasons beyond the control of the Contractor shall be replaced in kind when ordered by the Engineer. Replacement drums shall be new.

Payment for the new drums shall be made at the Contract unit price per each for Item Special, Replacement Drum, and shall include the cost of removal and disposal of the old drum as well as providing and maintaining the replacement drum in accordance with contract requirements for the original drum.

The following estimated quantity has been carried to the Maintenance of Traffic Subsummary:

ITEM SPECIAL	REPLACEMENT DRUM	100 Each
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ITEM SPECIAL REPLACEMENT SIGN

Flat sheet signs furnished by the Contractor in accordance with the plans, specifications and proposal that become damaged by traffic for reasons beyond the control of the Contractor shall be replaced in kind at the direction of the Engineer. Replacement signs shall be new. Other materials may be in used but good condition subject to the approval of the Engineer.

Payment for the new signs shall be made at the Contract unit price per square foot for Item Special, Replacement Sign, and shall include the cost of removal and disposal of damaged signs, hardware and supports as well as providing and maintaining the replacement signs, hardware, supports, etc.

The following estimated quantity has been carried to the Maintenance of Traffic Subsummary:

ITEM SPECIAL	REPLACEMENT SIGN	100 Sq. Ft.
--------------	------------------	-------------

ITEM 614 BARRIER REFLECTORS AND OBJECT MARKERS

Barrier reflectors and object markers shall be installed on all portable concrete barrier used for traffic control. Barrier reflectors and their installation shall conform to the proposal note and Item 626. Spacing and location for barrier reflectors and object markers shall conform to Standard Drawing MT-102.10M for the maintenance of traffic at bridge SCI-23-0896.

TEMPORARY BARRIER REFLECTORS FOR GUARDRAIL AND PARAPET

Existing and new guardrail, new bridge parapet and new parapet transitions adjacent to temporary travel lanes utilizing any portion of the shoulder shall be outfitted with barrier reflectors as per section 626 of the CMS. Spacing of the reflectors shall be 25 ft. center-to-center.

TEMPORARY MARKINGS AND SIGNS

Any time the existing or temporary lane lines, center lines, or channelizing lines are obliterated as a result of a construction operation (pavement planing, asphalt pavement overlays, etc.) the contractor shall place temporary pavement markings prior to reopening that section of the pavement to the traveling public. The following quantities have been provided for such purposes, as directed by the Engineer, and have been carried to the Maintenance of Traffic Subsummary:

ITEM 614	TEMPORARY LANE LINE, CLASS II	28.08 Mi.
ITEM 614	TEMPORARY CENTER LINE, CLASS I (DOUBLE SOLID)	7.92 Mi.
ITEM 614	TEMPORARY CHANNELIZING LINE, CLASS I	273 Lin. Ft.

When edge lines are obliterated, "No Edge Line" signs as per CMS 614.04 shall be provided. The following quantity is provided for this purpose, as directed by the Engineer, and has been carried to the Maintenance of Traffic Subsummary:

ITEM 614	WORK ZONE MARKING SIGN	24 Each
----------	------------------------	---------

At the work zone for the widening of structure SCI-23-08.96, the existing travel lanes shall be reopened to traffic, on existing pavement, between phases and upon completion of the bridge work. Full temporary pavement markings shall be in place prior to these reopenings. The following quantities have been provided for such purposes, as directed by the Engineer, and have been carried to the Maintenance of Traffic Subsummary:

ITEM 614	TEMPORARY EDGE LINE, CLASS I (WHITE)	1.20 Mi.
ITEM 614	TEMPORARY CENTER LINE, CLASS I (DOUBLE SOLID)	1.20 Mi.
ITEM 614	TEMPORARY LANE LINE, CLASS I (DASHED)	1.20 Mi.
ITEM 614	TEMPORARY TRANSVERSE LINE, CLASS I (YELLOW)	853 Lin. Ft.

The following quantities have been carried to the Maintenance of Traffic Subsummary for use by the Contractor if the final pavement markings, through no fault of the Contractor, cannot be placed within 21 working days as per CMS 614.10:

ITEM 614	TEMPORARY EDGE LINE, CLASS I (WHITE)	9.41 Mi.
ITEM 614	TEMPORARY EDGE LINE, CLASS I (YELLOW)	6.79 Mi.
ITEM 614	TEMPORARY LANE LINE, CLASS I (DASHED)	9.36 Mi.
ITEM 614	TEMPORARY CENTER LINE, CLASS I (DOUBLE SOLID)	2.55 Mi.

ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

The following estimated quantity has been included in the Maintenance of Traffic Subsummary for use, as directed by the Engineer, as wedge courses and other Maintenance of Traffic Purposes:

ITEM 614	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	20 Cu. Yd.
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ALTERNATIVE METHODS

If the contractor so elects, he may submit alternative methods for the maintenance of traffic, provided the intent of the above provisions is followed. No additional inconvenience to the traveling public shall be allowed. No alternate plan shall be placed into effect until approval has been granted, in writing, by the Director.

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CHECKED
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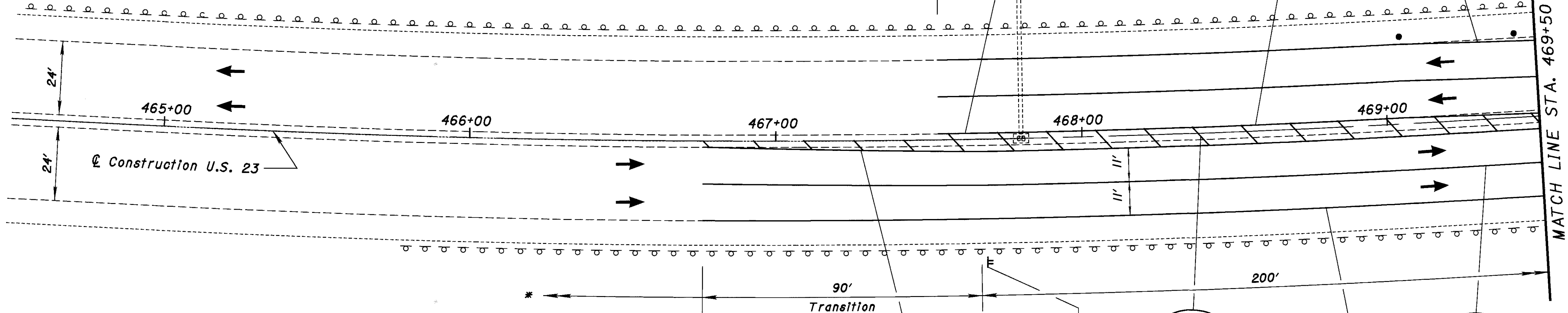
MAINTENANCE OF TRAFFIC GENERAL NOTES

SCI-23-5.51

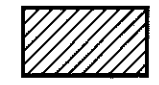



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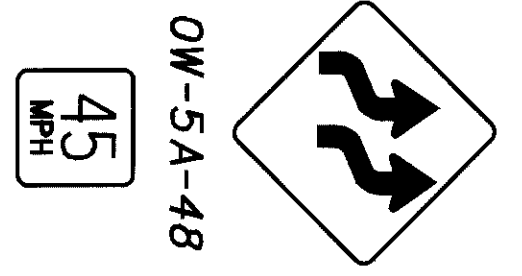
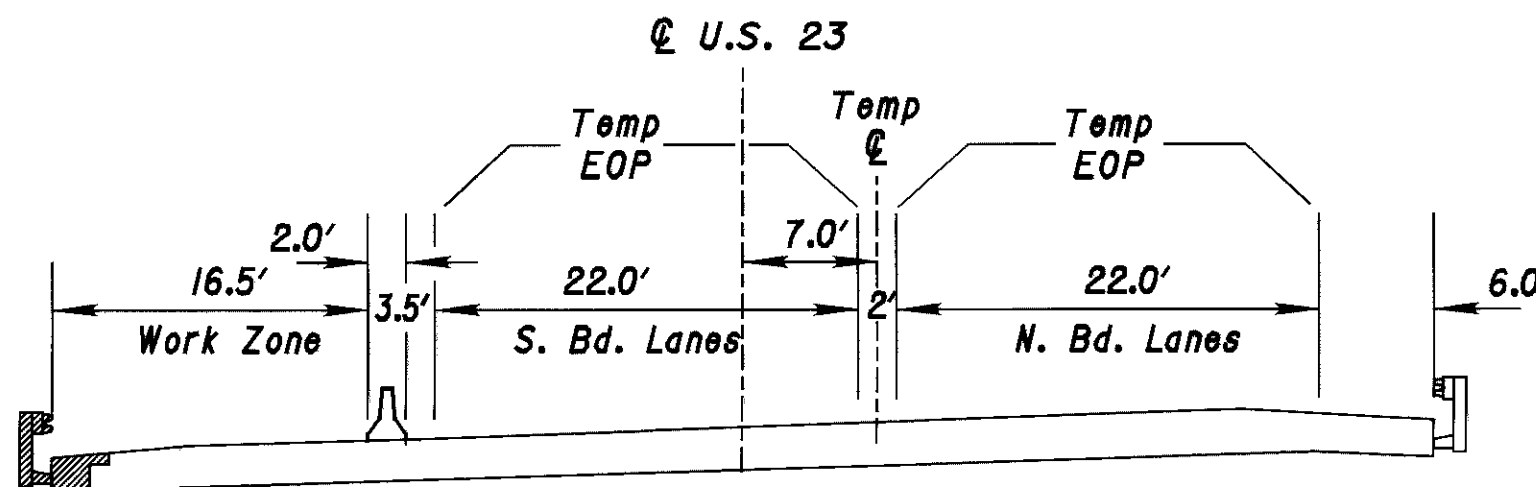
END CONSTRUCTION
OC-8-60

Erect 500' from end of trailing shift (typ.)

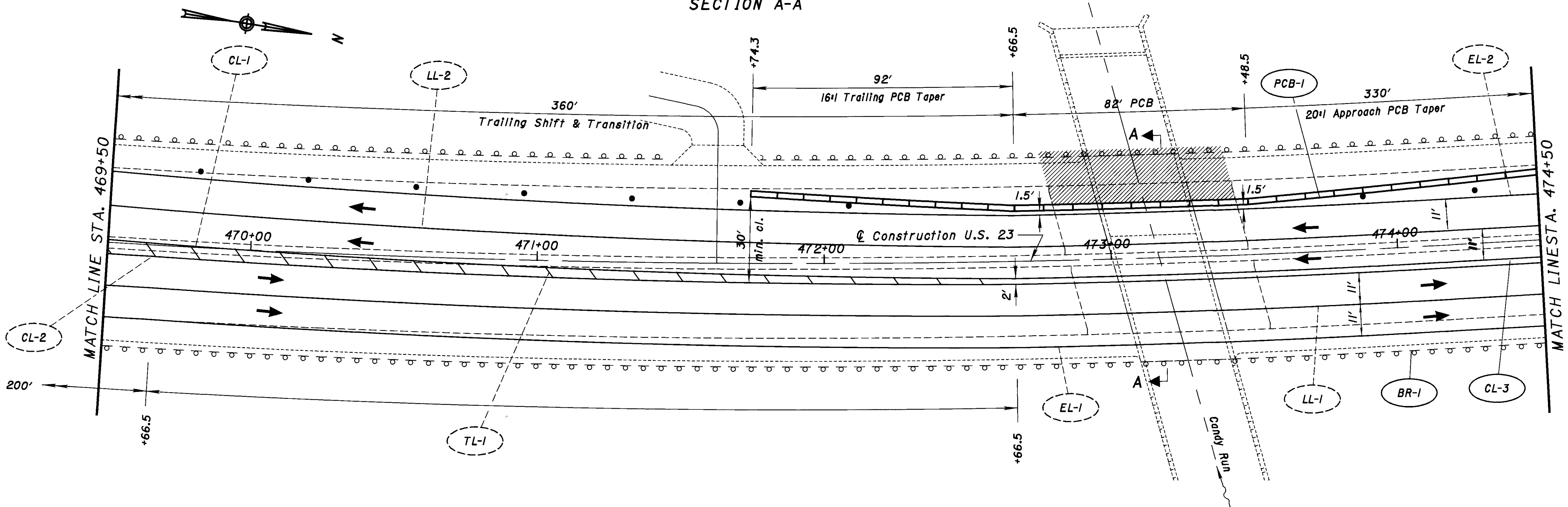


LEGEND

-  Work Area
-  32" Portable Concrete Barrier
-  Drums spaced at 40' c-c min., or as otherwise provided in Std. Dwgs. MT-95.41M and MT-102.10M
-  Direction of Traffic



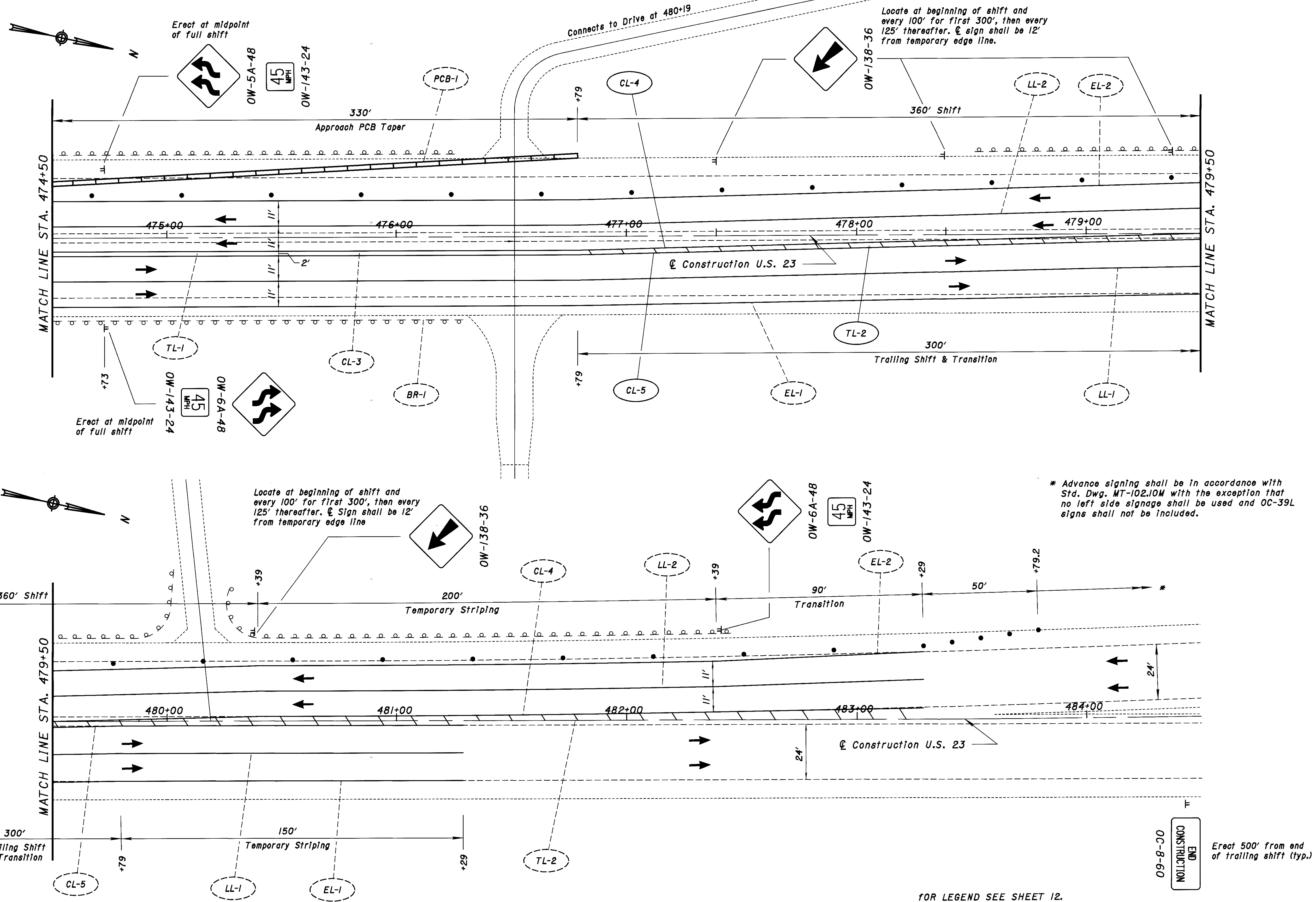
* Advance signing shall be in accordance with Std. Dwg. MT-102.10M with the exception that no left side signing shall be used and OC-39L signs shall not be included.



PHASE 1 MAINTENANCE OF TRAFFIC
Work at Structure SCI-23-8.96, Sta. 464+50 to Sta. 474+50

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FOR LEGEND SEE SHEET 12.

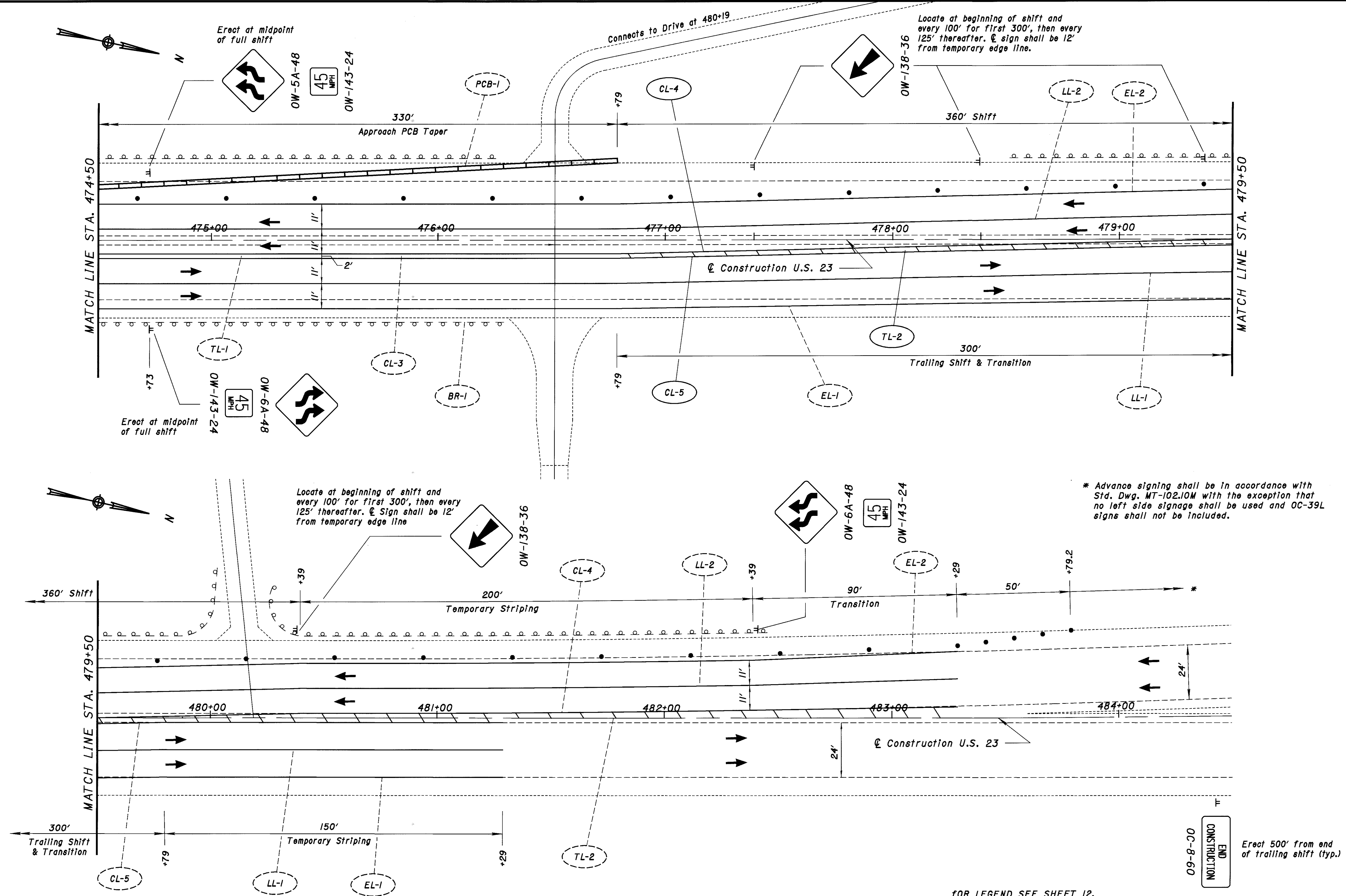
09-8-00
CONSTRUCTION
END

Erect 500' from end of trailing shift (typ.)

PHASE 1 MAINTENANCE OF TRAFFIC
Work at Structure SCI-23-8.96, Sta. 474+50 to Sta. 484+50

SCI-23-5.51

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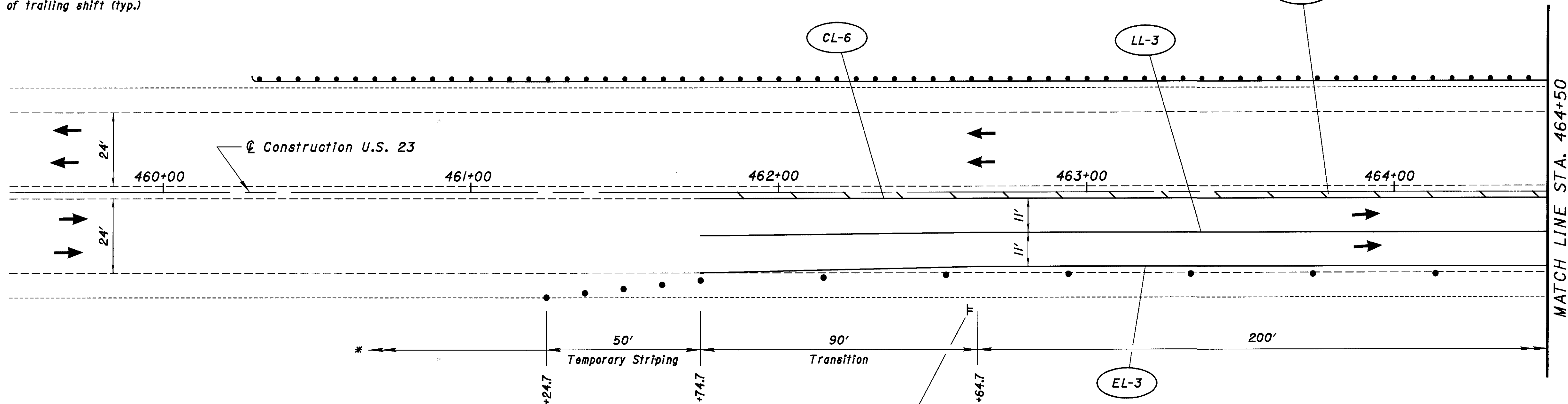
FOR LEGEND SEE SHEET 12.

SCI-23-5.51

PHASE 1 MAINTENANCE OF TRAFFIC
Work at Structure SCI-23-8.96, Sta. 474+50 to Sta. 484+50

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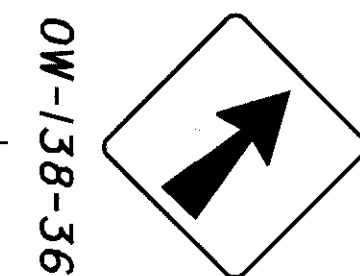
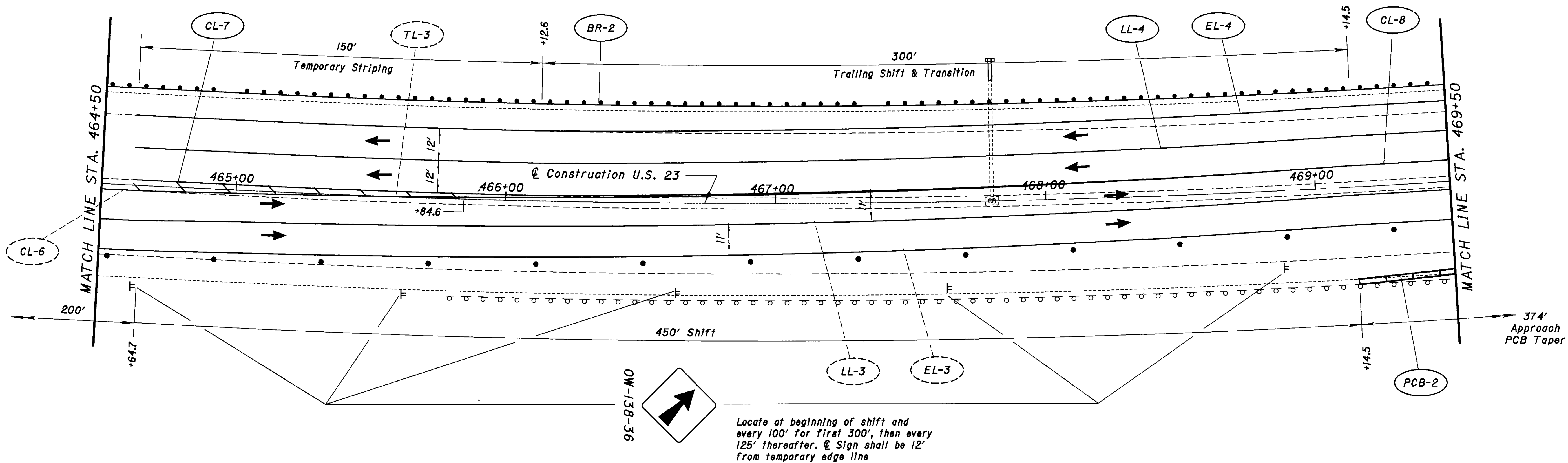
END CONSTRUCTION
OC-8-60
Erect 500' from end of trailing shift (typ.)



* Advance signing shall be in accordance with Std. Dwg. MT-102.10M with the exception that no left side signing shall be used and OC-39L signs shall not be included.

LEGEND

- Work Area
- 32" Portable Concrete Barrier
- Drums spaced at 40' c-c min., or as otherwise provided in Std. Dwgs. MT-95.41M and MT-102.10M
- Direction of Traffic

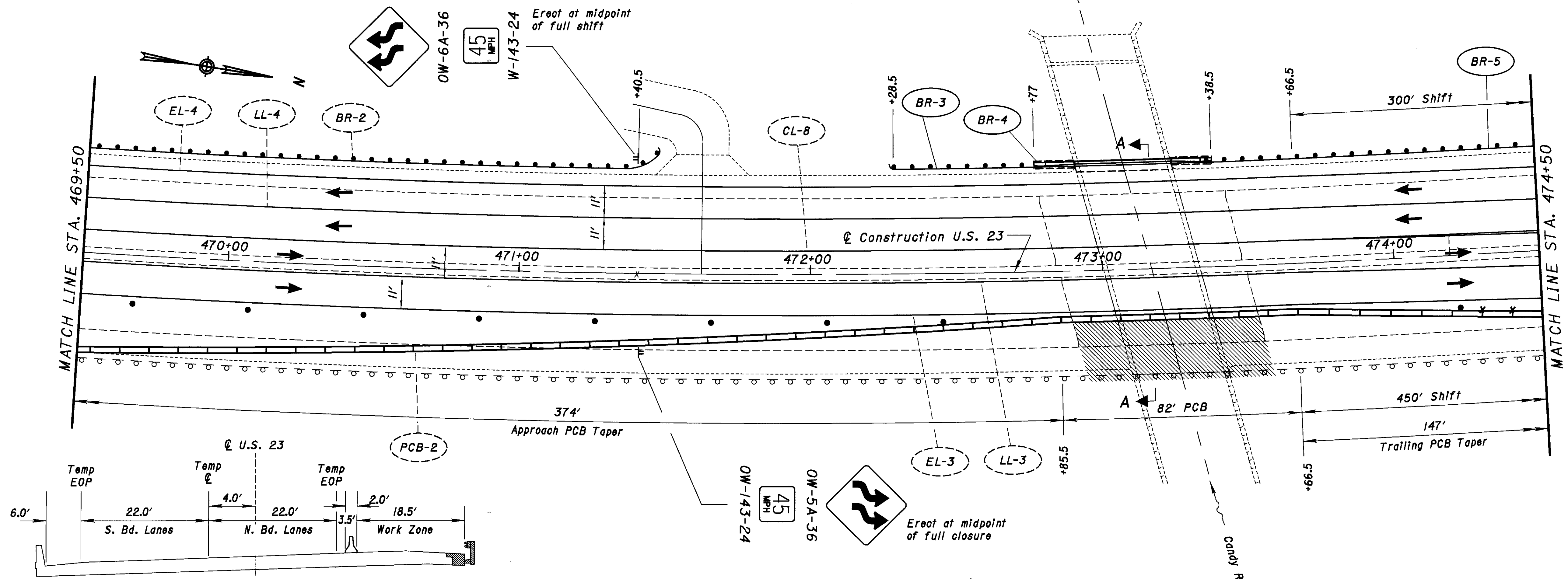


OC-38-36
Locate at beginning of shift and every 100' for first 300', then every 125' thereafter. Sign shall be 12' from temporary edge line

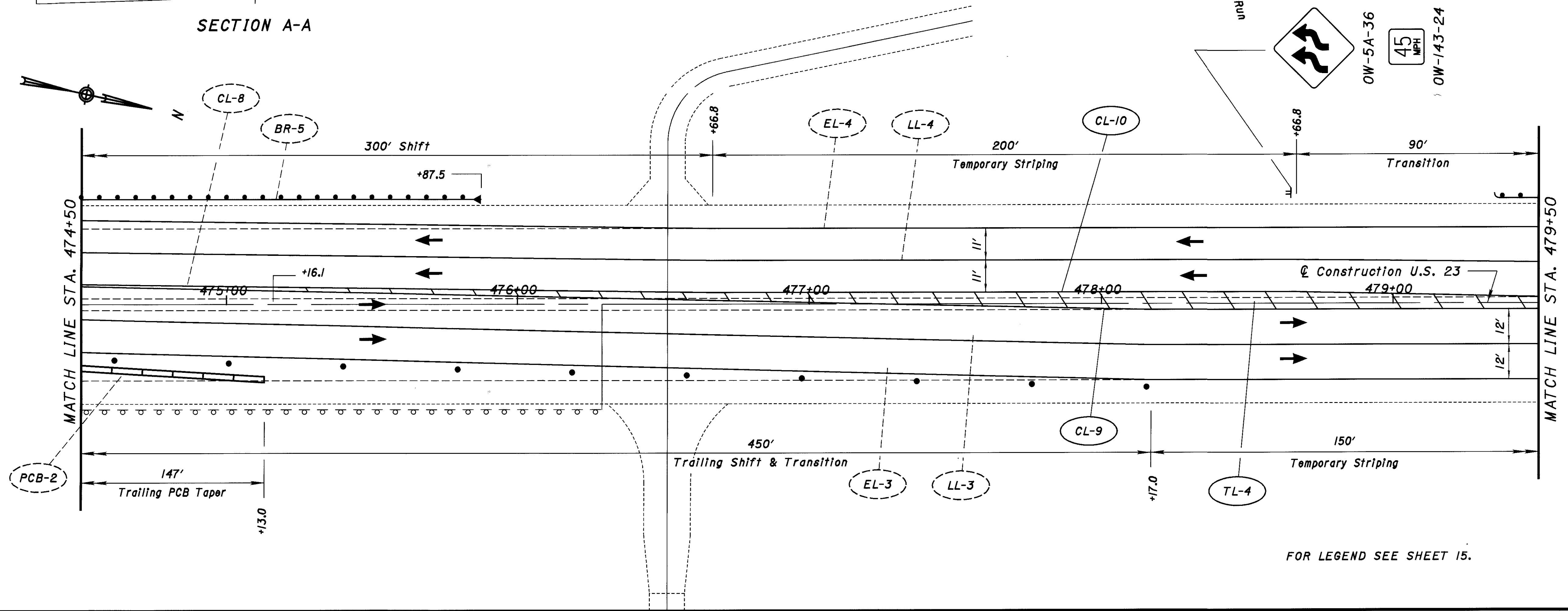
PHASE 2 MAINTENANCE OF TRAFFIC
Work at Structure SCI-23-8.96, Sta. 459+50 to Sta. 469+50

SCI-23-5.51

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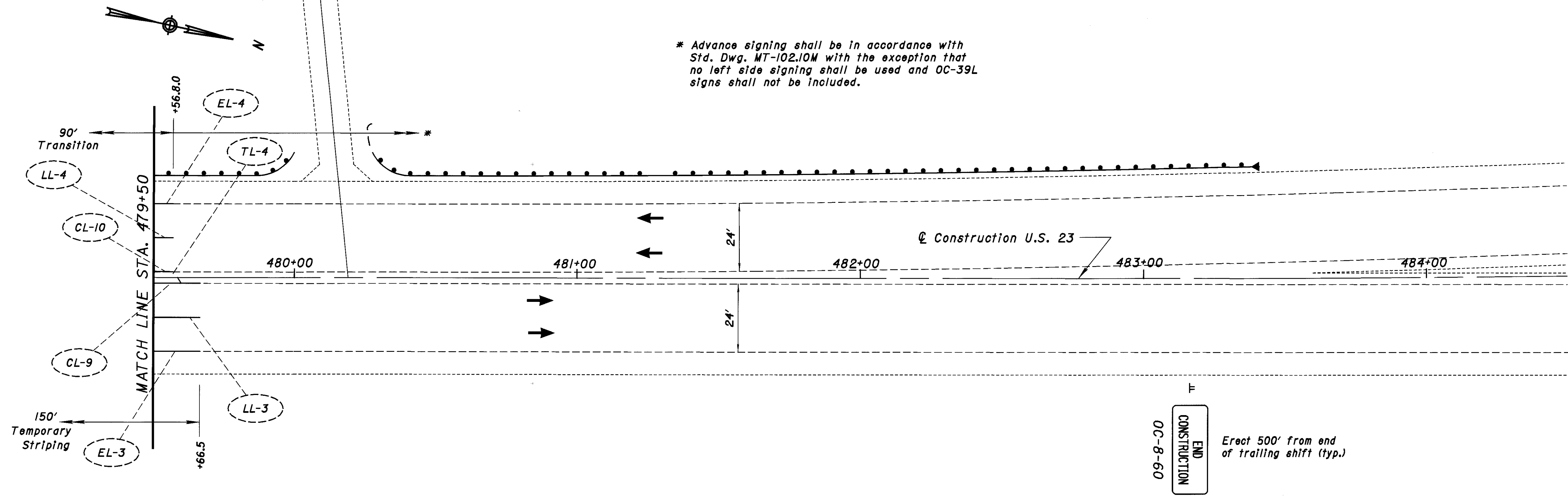


SECTION A-A



FOR LEGEND SEE SHEET 15.

* Advance signing shall be in accordance with
 Std. Dwg. MT-102.10M with the exception that
 no left side signing shall be used and OC-39L
 signs shall not be included.



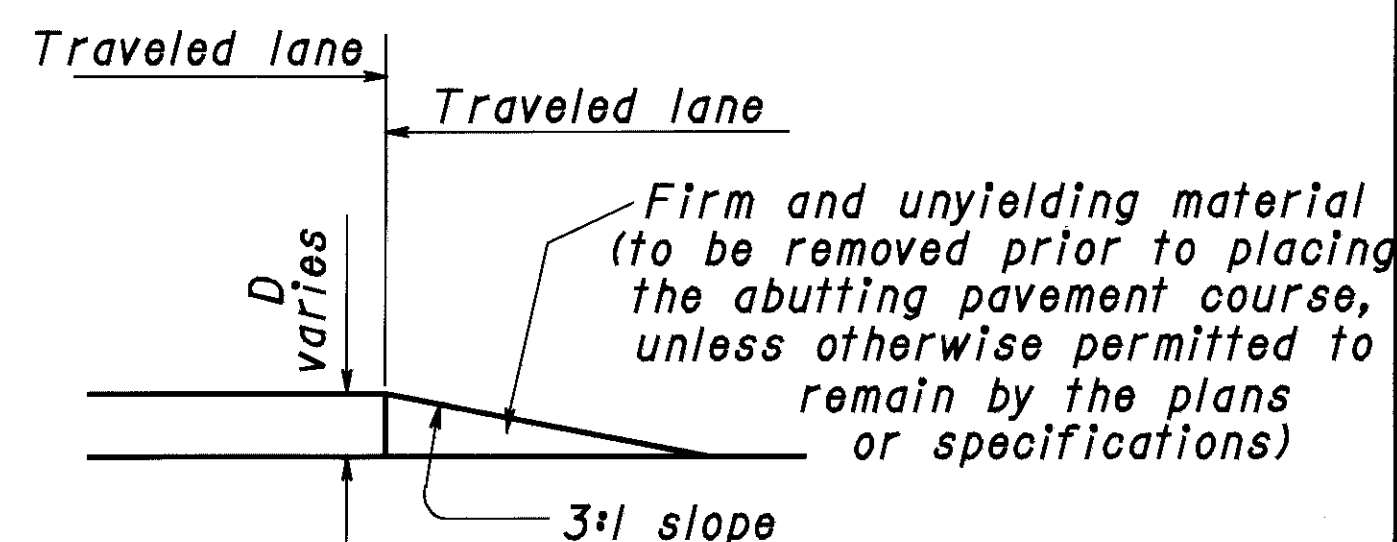
FOR LEGEND SEE SHEET 15.

NOTES -- DROP OFFS IN WORK AREAS

- It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
- While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
- In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
- The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
- Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing RM-4.2M and Item 622.
- When drums are specified for a dropoff condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
- When OW-151 (Low Shoulder) signs or OW-171 (Uneven Lanes) and OWP-171 signs are required, they shall be placed 750' in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the dropoff condition extends more than one-half mile, additional signs should be erected at intervals of one mile or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
- Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10', drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" and approval is granted by the Project Engineer.
- Pavement Repairs (or similar work):
 - Lengths greater than 60 feet - utilize appropriate treatment from Condition I.
 - Lengths of 60 feet or less - repairs shall be effected in accordance with 255.08. Drums may be used as a separator adjacent to the traveled lane.

**OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)**

- This treatment may be used when permitted for Condition I only.
- OW-171 and OWP-171 signs required.



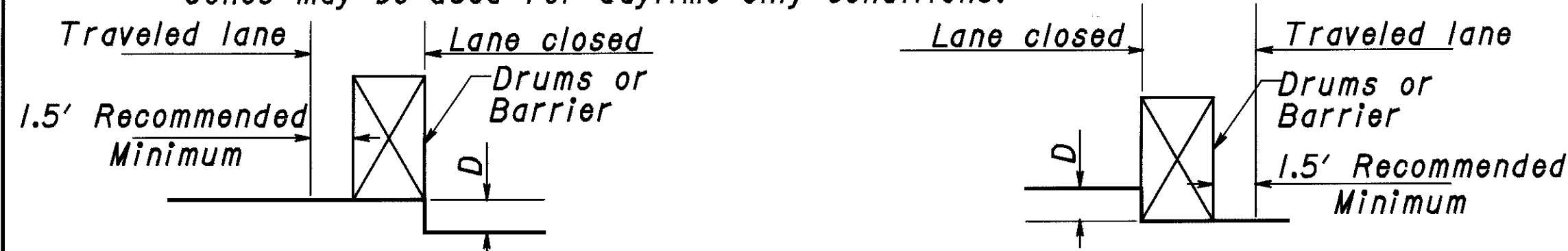
CONDITION I

DROPOFFS BETWEEN TRAVELED LANES

- These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D (In.)	Treatment
≤ 1/2	Erect OW-171 and OWP-171 signs.
> 1/2 - 3	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3 - 5	Lane closure utilizing drums as shown below.
> 5	Lane closure utilizing portable concrete barrier as shown below.

*Cones may be used for daytime only conditions.



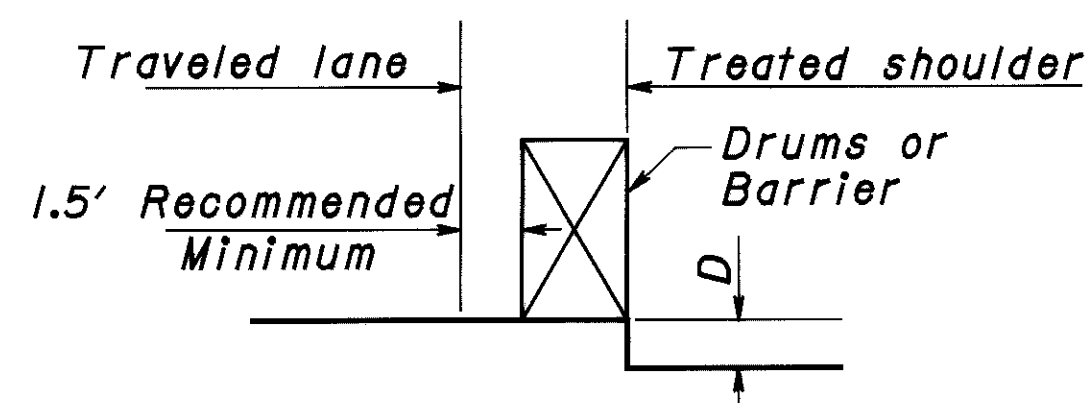
CONDITION II

DROPOFFS WITHIN GRADED SHOULDER AREA

- The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
- The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be twelve (12) feet.

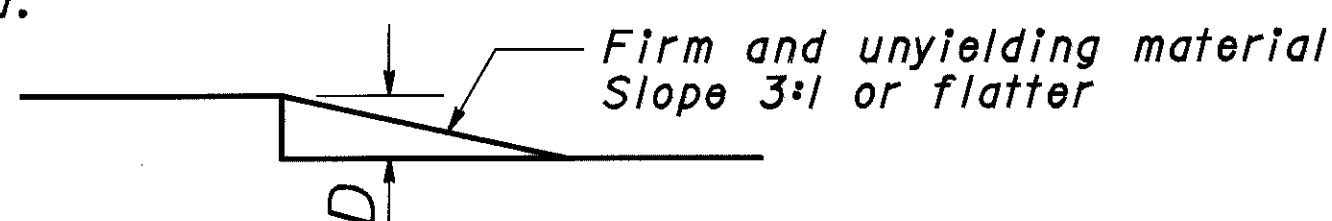
D (In.)	Treatment
≤ 1/2	1) If edgelines are present, no treatment necessary OR 2) Erect OW-171 and OWP-171 signs.
> 1/2 - 5	1) If min. lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5 - 12 Daylight only	If min. lane width* requirements can be met, maintain lanes utilizing drums as shown below.
> 5 - 24	1) If min. lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums.
> 24	Lane closure utilizing portable concrete barrier as shown below.

* Minimum lane widths shall be 10' unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

- This treatment may not be used within a bituminous shoulder where a hot longitudinal joint is required.
- OW-151 signs required.



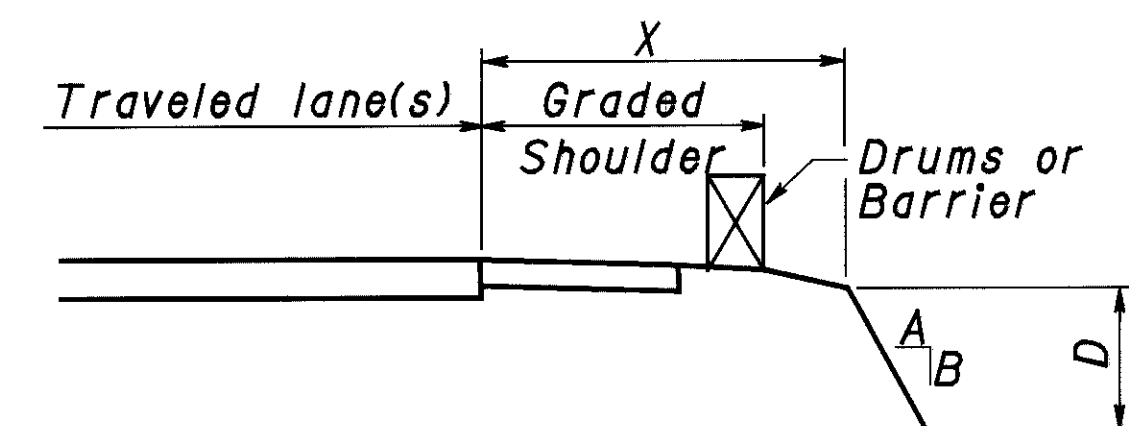
CONDITION III

DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

- See Note 2 under Condition II.
- Use Chart A or B below, as applicable.

CHART A

- USE FOR:
- Uncurbed Facilities.
 - Curbed Facilities, where:
 - Curbs are less than 6" in height.
 - Curbs are 6" or greater in height and the legal speed is greater than 40 mph.

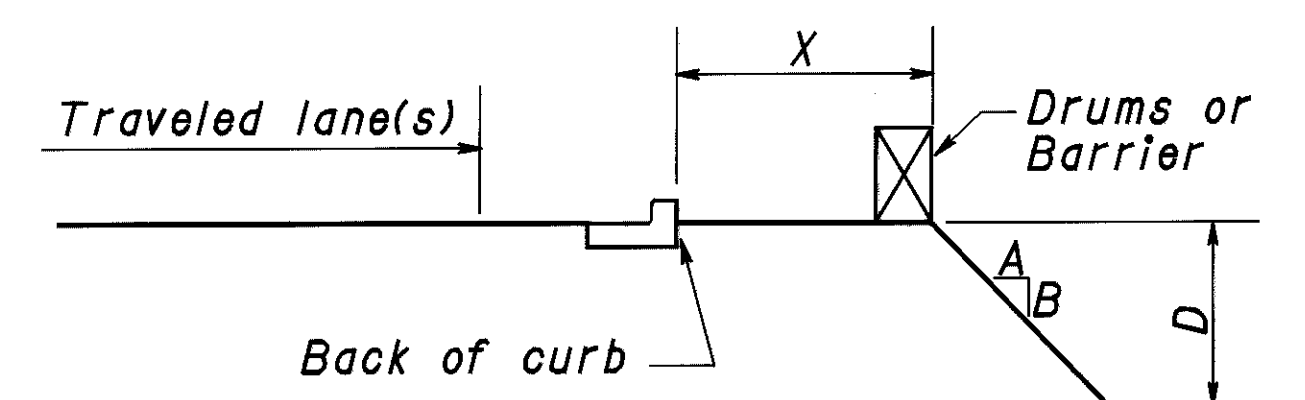


X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-4	Any	Any	(a)	(a)
4-30	Any	3:1 or Flatter	None	None
4-12	< 3	Steeper than 3:1	None	None
4-12	> 3 - < 12	Steeper than 3:1	Drums	Drums
4-12	> 12	Steeper than 3:1	Drums	Barrier
> 12 - 20	< 12	Steeper than 3:1	None	None
> 12 - 20	> 12 - < 24	Steeper than 3:1	Drums	Drums
> 12 - 20	> 24	Steeper than 3:1	Drums	Barrier
> 20 - 30	< 24	Steeper than 3:1	None	Drums
> 20 - 30	> 24	Steeper than 3:1	Drums	Barrier
> 30	Any	Any	None	None

(a) Use treatment specified under Condition II.

CHART B

- USE FOR: Curbed facilities, where the curb is 6" or greater in height and the legal speed is 40 mph or less.



X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-10	< 12	Any	None	Drums
0-10	> 12	Any	Drums	Drums
> 10	Any	Any	None	None

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**MAINTENANCE OF TRAFFIC
DROP-OFFS IN WORK ZONES**

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SHEET NUMBER												ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
6	8		23	24	29		31	31A	32	33	54							
												DRAINAGE						
			19.9										602	20000	19.9	CU YD	CONCRETE MASONRY	
			64										603	04600	64	LIN FT	12" CONDUIT, TYPE C, 706.02	
			152										603	04600	152	LIN FT	12" CONDUIT, TYPE C, 707.13	
			25										603	05200	25	LIN FT	12" CONDUIT, TYPE F, 707.05 (0.079) TYPE C	
			64										603	06100	64	LIN FT	15" CONDUIT, TYPE C, 706.02	
			40										603	10600	40	LIN FT	24" CONDUIT, TYPE C, 706.02	
			8										603	16601	8	LIN FT	36" CONDUIT, TYPE C, AS PER PLAN, 706.02	8
			1										604	01600	1	EACH	CATCH BASIN, NO. 5	
			1										604	01601	1	EACH	CATCH BASIN, NO. 5, AS PER PLAN	7
			1										604	02804	1	EACH	CATCH BASIN, NO. 8 WITHOUT APRON	
			1										604	09001	1	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	8
			1										604	09500	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
			5										604	09501	5	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	53
			1										604	09900	1	EACH	CATCH BASIN GRATE	
			1										604	31500	1	EACH	MANHOLE, NO. 3	
			151										SPECIAL	60460000	151	LIN FT	TRENCH DRAIN	9
	3		2										604	98000	5	EACH	DRAINAGE STRUCTURE, MISC.: CLEANOUT OF SMALL DRAINAGE STRUCTURES	8
48													843	50000	48	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	
												PAVEMENT						
	2300						853			145,413	499		254	01001	149,065	SQ YD	PAVEMENT PLANING, BITUMINOUS, AS PER PLAN	8
							21						301	46000	21	CU YD	BITUMINOUS AGGREGATE BASE, PG64-22	
							21						304	20000	21	CU YD	AGGREGATE BASE	
							50						408	10000	50	GALLON	BITUMINOUS PRIME COAT	
			614										448	46060	614	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)	
										17,952			617	20000	17,952	SQ YD	SHOULDER PREPARATION	
				-95			-20			374			617	98100	259	CU YD	SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE, AS PER PLAN	9
								80,330					618	40100	80,330	LIN FT	RUMBLE STRIPS, TYPE 2 (ASPHALT)	
									1235				830	10000	1235	LIN FT	ASPHALT CONCRETE CURB, TYPE 1	
	96						148			13,906	25		880	10000	14,175	CU. YD.	ASPHALT CONCRETE (5 YEAR WARRANTY)	
												TRAFFIC CONTROL						
				11									620	10300	11	EACH	DELINEATOR, TYPE C, POST MOUNTED	
					174								621	00222	174	EACH	RAISED PAVEMENT MARKER, LOW PROFILE, YELLOW-YELLOW, INSTALLATION ONLY	
					32								621	00226	32	EACH	RAISED PAVEMENT MARKER, LOW PROFILE, WHITE, INSTALLATION ONLY	
					623								621	00230	623	EACH	RAISED PAVEMENT MARKER, LOW PROFILE, WHITE-RED, INSTALLATION ONLY	
			244										626	00100	244	EACH	BARRIER REFLECTOR, TYPE A	
			1										626	00200	1	EACH	BARRIER REFLECTOR, TYPE B	
										30			630	03100	30	LIN FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										2			630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
										2			630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
													828	10000	16.21	MILE	EDGE LINE	
													828	10100	9.36	MILE	LANE LINE	
													828	10200	2.55	MILE	CENTER LINE	
													828	10300	91	LIN. FT.	CHANNELIZING LINE	
													828	10400	150	LIN. FT.	STOP LINE	
													828	10600	3688	LIN. FT.	TRANSVERSE LINE	
													828	10800	21	SQ. FT.	ISLAND MARKING	
													828	20300	1	EACH	LANE ARROW	
													828	20410	1	EACH	WORD ON PAVEMENT, 96"	

GENERAL SUMMARY

SCI-23-5.51

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REF NO.	SHEET NO.	STATION TO STATION	SIDE	203	203			606	606	606	606	606	606	870	617	448	620	626	626	
				BORROW	LINEAR GRADING, AS PER PLAN			GUARDRAIL, TYPE 5, USING 9 FOOT POSTS	GUARDRAIL, TYPE 5A	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE A	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE I	SEEDING AND MULCHING	SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE, * AS PER PLAN	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG 64-22 (UNDER GUARDRAIL)	DELINEATOR, TYPE C, POST MOUNTED	BARRIER REFLECTOR, TYPE A	BARRIER REFLECTOR, TYPE B	
				CU.YD.	STATION			LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	SQ.YD.	CU.YD.	CU.YD.	EACH	EACH	EACH	
GR-1	36	290+82.27** To 314+02.2	LT.	129.2	23.5			2337.5				1		2611	-10.8	71.8		25		
GR-2	36	290+82.27** To 303+24.5	RT.		12.2			1212.5				1		1361	-5.7	17.0		14		
GR-3	36,37	314+49.3 To 317+26.8	LT.	14.6	2.9			262.5				2		319	-1.2	8.1		5		
GR-1	37	319+00.1 To 14+93.0	LT.	63.2	11.6			1137.5				2		1292	-5.3	35.1		13		
GR-2	37	6+12.5 To 19+12.5	RT.	72.2	13.0			1237.5		1		1		1444	-6.0	40.1	1	14		
GR-3	37,38	15+47.9 To 29+35.0	LT.	76.4	14.0			1375				2		1556	-6.4	42.4		16		
GR-1	38	29+75.3 To 34+55.9	LT.	26.4	4.8			412.5		1		1		528	-2.2	14.7	1	6		
GR-2	38	37+66.7 To 40+90.5	RT.	16.7	3.8			300		1	1			417	-1.4	9.3	1	5		
GR-3	38	38+27.4 To 46+02.0	LT.	42.4	7.6			700		1		1		847	-3.5	23.5	1	9		
GR-1	39,40	59+82.2 To 77+31.6	LT.	96.5	17.6			1737.5				2		1958	-8.0	53.6		19		
GR-2	39,40	71+12.4 To 75+12.6	RT.	22.2	4.0			337.5		1		1		444	-1.9	12.3	1	5		
GR-1	40,41	98+58.5 To 101+57.5	RT.	16.7	3.0			212.5	25	1		1		333	-1.4	9.3	1	4		
GR-1	41	102+40.0 To 110+86.9	LT.	44.4	8.6			825			1	1		958	-3.7	24.7		10		
GR-2	41,42	111+71.7 To 135+52.5	LT.	133.3	24.0			2337.5		1		1		2667	-11.1	74.1	1	25		
GR-1	42,43	460+30.4 To 471+47.4	LT.	61.1	11.1			1087.5				2		1236	-5.1	34.0		13		
GR-2	42,43	464+79.9 To 472+97.7	RT.	45.8	8.2			775		1			1	917	-3.8	25.5	1	9		
GR-1	43	472+28.7 To 472+79.2	LT.	2.8	0.5			37.5				1	1	56	-0.2	1.5		1		
GR-2	43	472+79.2 To 473+36.6	LT.																1	
GR-3	43	473+36.6 To 475+87.3	LT.	13.9	2.5			200		1			1	278	-1.2	7.7	1	3		
GR-4	43	473+54.0 To 476+16.0	RT.	14.6	2.6			250				1	1	292	-1.2	8.1		4		
GR-5	43	479+36.4 To 480+01.4	LT.	2.8	0.8			50				2		83	-0.2	1.5		3		
GR-6	43	480+40.8 To 483+40.9	LT.	16.7	3.0			237.5		1		1		333	-1.4	9.3	1	5		
GR-1	44	493+25 To 496+50	LT.	18.1	3.2			262.5		1		1		361	-1.5	10.0	1	5		
GR-2	44,45	508+73.5 To 528+40.6	LT.	108.3	19.8			1950				2		2194	-9.0	60.2		21		
GR-1	45	528+84.1 To 530+20.6	LT.	6.2	1.5			125				2		167	-0.5	3.5		3		
GR-2	45	531+07.2 To 536+64.3	LT.	30.2	5.6			537.5				2		625	-2.5	16.8		7		
* The deduction is the result of Item 617 being calculated along the entire length of the project in the pavement calculations.																				
** Connect to existing W-Beam Guardrail.																				
TOTALS CARRIED TO GENERAL SUMMARY				1075	209			19,937.5	25	11	2	31	4	23,277	-95	614	11	244	1	

GUARDRAIL SUBSUMMARY

SCI-23-5.51

CALCULATED
GFR
CREATED
JAD

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REF NO.	SHEET NO.	STATION TO STATION	SIDE	202																	
				GUARDRAIL REMOVED																	
				LIN. FT.																	
R-1	36	290+82.27 To 313+90	LT.	2325																	
R-2	36	290+82.27 To 303+12	RT.	1212.5																	
R-3	36,37	314+50 To 317+12	LT.	262.5																	
R-1	37	4+15 To 14+90	LT.	1075																	
R-2	37	7+75 To 19+25	RT.	1150																	
R-3	37,38	15+45 To 29+28	LT.	1387.5																	
R-1	38	30+00 To 33+15	LT.	312.5																	
R-2	38	38+00 To 43+38	LT.	525																	
R-3	38	38+95 To 40+89	RT.	250																	
R-1	39,40	59+75 To 77+19	LT.	1750																	
R-2	39,40	71+15 To 75+28	RT.	412.5																	
R-1	41	100+35 To 101+34	RT.	100																	
R-2	41	102+25 To 107+42	LT.	500																	
R-3	41	108+75 To 110+00	LT.	125																	
R-4	41,42	111+60 To 133+41	LT.	2200																	
R-1	42,43	460+25 To 471+43	LT.	1112.5																	
R-2	42,43	465+79 To 473+09	RT.	737.5																	
R-1	43	471+78 To 472+91	LT.	112.5																	
R-2	43	473+25 To 476+25	LT.	300																	
R-3	43	473+42 To 476+29	RT.	287.5																	
R-4	43	478+50 To 480+03	LT.	175																	
R-5	43	480+29 To 482+45	LT.	237.5																	
R-1	44	492+95 To 494+58	LT.	162.5																	
R-2	44,45	508+75 To 528+25	LT.	1950																	
R-1	45	528+70 To 530+19	LT.	162.5																	
R-2	45	530+90 To 536+60	LT.	600																	
R-3	45	537+00 To 538+47	LT.	150																	
TOTALS CARRIED TO GENERAL SUMMARY				19,575																	

CALCULATED
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CHECKED
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GUARDRAIL REMOVAL SUBSUMMARY

SCI-23-5.51

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SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	621	621	621	828	828	828	828	828	828	828	828	828	828		
			FROM	TO		RAISED PAVEMENT MARKERS REMOVED FOR STORAGE	RAISED PAVEMENT MARKER, LOW PROFILE WHITE, INSTALLATION ONLY	RAISED PAVEMENT MARKER, LOW PROFILE YELLOW-YELLOW, INSTALLATION ONLY	RAISED PAVEMENT MARKER, LOW PROFILE WHITE-RED, INSTALLATION ONLY	STOP LINE	TRANSVERSE LINE (YELLOW)	ISLAND MARKING, (YELLOW)	LANE ARROW	WORD ON PAVEMENT 96" (ONLY)	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CENTER LINE (DOUBLE YELLOW)	CHANNELIZING LINE		
			EACH	EACH		EACH	EACH	LIN. FT.	LIN. FT.	SQ. FT.	EACH	EACH	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.				
41	PM-13	U.S. 23	110+98	115+50	LT.																
41	PM-14	U.S. 23	110+98	115+50	LT.													452			
41	PM-15	U.S. 23	111+02	124+50	LT.	3												458			
																		1357			
41	PM-16	U.S. 23	115+50	124+50	LT.	21															
41	PM-17	U.S. 23	115+50	124+50	LT.	21			12										900		
41	PM-18	U.S. 23	115+50	124+50	LT.				12										900		
										785											
42	PM-1	U.S. 23	124+50	137+49.00	LT.	29			16										1299		
42	PM-2	U.S. 23	124+50	137+49.00	LT.	30			16										1299		
42	PM-3	U.S. 23	124+50	137+49.00	LT.					615											
42	PM-4	U.S. 23	124+50	137+49.00	LT.																
42	PM-5	U.S. 23	124+50	137+49.00	RT.														1299		
42	PM-6	U.S. 23	124+50	137+49.00	LT.	18			17										1299		
42	PM-7	U.S. 23	124+50	137+49.00	CL	17			17										1299		
42	PM-8	U.S. 23	454+26.82	466+00	LT.	25			14										1173		
42	PM-9	U.S. 23	454+26.82	466+00	RT.	26			14										1173		
42	PM-10	U.S. 23	454+26.82	466+00	LT./RT.																
42	PM-11	U.S. 23	454+26.82	466+00	LT.					555									1173		
42	PM-12	U.S. 23	454+26.82	466+00	RT.														1173		
42	PM-13	U.S. 23	454+26.82	466+00	LT.	16			15										1173		
42	PM-14	U.S. 23	454+26.82	466+00	RT.	15			15										1173		
43	PM-1	U.S. 23	466+00	483+60	LT.	41			23										1760		
43	PM-2	U.S. 23	466+00	483+60	RT.	41			23										1760		
43	PM-3	U.S. 23	466+00	483+60	LT./RT.					880											
43	PM-4	U.S. 23	466+00	491+00	LT.														2500		
43	PM-5	U.S. 23	466+00	489+95	RT.														2403		
43	PM-6	U.S. 23	466+00	491+00	LT.	32			31										2500		
43	PM-7	U.S. 23	466+00	491+00	RT.	32			31										2500		
43	PM-8	U.S. 23	483+60	489+90	LT.														630		
43	PM-9	U.S. 23	483+60	489+90	RT.														630		
43	PM-10	U.S. 23	490+10	490+27	RT.					17											
43	PM-11	U.S. 23	490+24	491+00	RT.														84		
43	PM-12	U.S. 23	490+25	491+00	LT.														80		
43	PM-13	U.S. 23	490+25	491+00	RT.														80		
44	PM-1	U.S. 23	491+00	516+00	LT.														2500		
44	PM-2	U.S. 23	491+00	516+00	RT.														2500		
44	PM-3	U.S. 23	491+00	516+00	LT.														2500		
TOTALS CARRIED TO SHEET 29						367			126	130		17	2835					13,788	7330	9944	10,264

PAVEMENT MARKING SUBSUMMARY

SCI-23-5.51

CALCULATED
GFR
CHECKED
JAD

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SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	621	621	621	828	828	828	828	828	828	828	828	828	828	
			FROM	TO		RAISED PAVEMENT MARKERS REMOVED FOR STORAGE	RAISED PAVEMENT MARKER, LOW PROFILE WHITE, INSTALLATION ONLY	RAISED PAVEMENT MARKER, LOW PROFILE YELLOW-YELLOW, INSTALLATION ONLY	RAISED PAVEMENT MARKER, LOW PROFILE WHITE-RED, INSTALLATION ONLY	STOP LINE	TRANSVERSE LINE (YELLOW)	ISLAND MARKING, (YELLOW)	LANE ARROW	WORD ON PAVEMENT 96" (ONLY)	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CENTER LINE (DOUBLE YELLOW)	CHANNELIZING LINE	
			EACH	EACH		EACH	EACH	LIN. FT.	LIN. FT.	SQ. FT.	EACH	EACH	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.			
44	PM-4	U.S. 23	491+00	516+00	RT.															
44	PM-5	U.S. 23	491+00	516+00	LT.	32														
44	PM-6	U.S. 23	491+00	516+00	RT.	32		31												
45	PM-1	U.S. 23	516+00	536+51	LT.															
45	PM-2	U.S. 23	516+00	536+51	RT.															
45	PM-3	U.S. 23	516+00	536+70	LT.															
45	PM-4	U.S. 23	516+00	540+45	RT.															
45	PM-5	U.S. 23	516+00	540+45	LT.	31														
45	PM-6	U.S. 23	516+00	540+45	RT.	31		30												
45	PM-7	U.S. 23	536+67	536+75	LT.															
45	PM-8	U.S. 23	536+99	540+45	LT.					8										
45	PM-9	U.S. 23	536+99	540+45	RT.															
45	PM-10	U.S. 23	536+86	540+45	LT.															
47	PM-1	U.S. 23	101+52		LT./RT.															
47	PM-2	U.S. 23	101+94		RT.					24										
47	PM-3	U.S. 23	101+94	102+26	RT.					32									2	
47	PM-4	U.S. 23	102+59		LT.					34										
47	PM-5	U.S. 23	102+59	103+50	LT.	5			3											
47	PM-6	U.S. 23	102+59	102+64	LT.														91	
47	PM-7	U.S. 23	102+64	104+17	LT.	5														
47	PM-8	U.S. 23	102+64	104+17	LT.	5													153	
47	PM-9	U.S. 23	102+64	104+17	LT.														153	
47	PM-10	U.S. 23	102+89		LT.															
47	PM-11	U.S. 23	103+30		LT.								1							
TOTALS (THIS SHEET)						141		125	6	98	98	21	1	1		7398	4817	9890	308	91
TOTALS (SHEET 26)						263		186	38		755					14,015	10,254	14,826	2896	
TOTALS (SHEET 27)						263		32	186		35					14,494	13,472	14,786		
TOTALS (SHEET 28)						367		126	130	17	2835					13,788	7330	9944	10,264	
SUBTOTALS						1034		32	623	174	150	3688	21	1	1	49,695	35,873	49,446	13,468	91
TOTALS CARRIED TO GENERAL SUMMARY						1034		829		150	3688	21	1	1		85,568	49,446	13,468		91
															16.21 MI.	9.36 MI.	2.55 MI.			

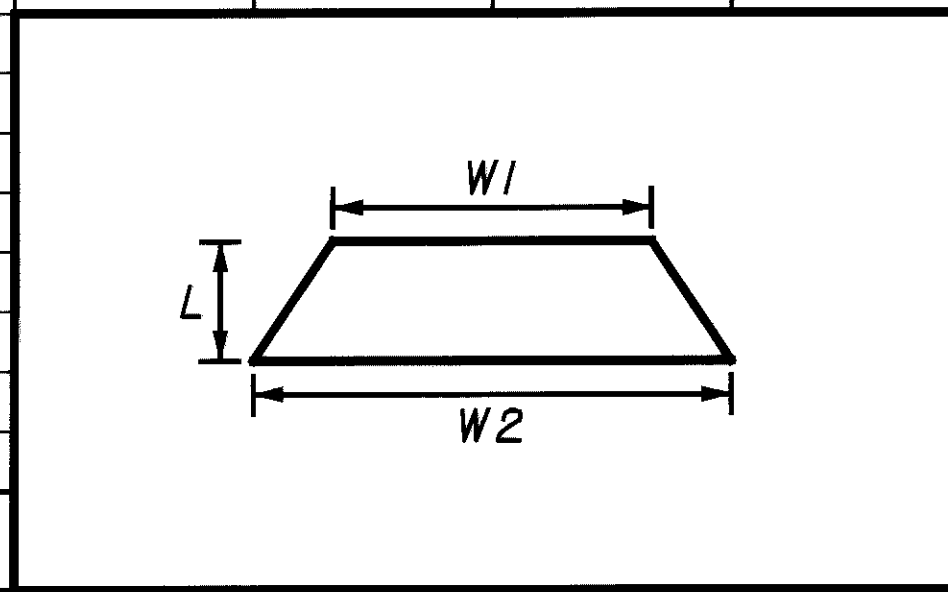
PAVEMENT MARKING SUBSUMMARY

SCI-23-5.51

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SHEET NO.	REFERENCE NO.	STATION	SIDE	LENGTH "L"	WIDTH "W1"	WIDTH "W2"	AREA	203	254	301	304	408	617	880	880	880										
								EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	PAVEMENT PLANING, BITUMINOUS, AS PER PLAN	6" BITUMINOUS AGGREGATE BASE, PG64-22	6" AGGREGATE BASE	BITUMINOUS PRIME COAT (0.4 GAL./SQ.YD.)	SHOULDER RECONDITIONING, MISC. COMPACTED AGGREGATE, AS PER PLAN **	1/2" ASPHALT CONCRETE (5 YEAR WARRANTY)	3" ASPHALT CONCRETE (5 YEAR WARRANTY)	ASPHALT CONCRETE (5 YEAR WARRANTY) (VARIES 0 TO 1 1/2")	CU.YD.	SQ.YD.	CU.YD.	CU.YD.	GAL.	CU.YD.	CU.YD.	CU.YD.		
42	DR-1	455+25	LT.	3	17	20	56						-0.1				0.1									
42	DR-2	459+10	RT.	3	17	20	56						-0.1				0.1									
43	DR-1	471+63	LT.	3	26	32	87						-0.1				0.2									
43	DR-2	476+52	LT.	3	23	28	76						-0.1				0.2									
43	DR-3	476+52	RT.	3	35	41	114						-0.2				0.3									
43	DR-4	480+19	LT.	3	19	25	66						-0.1				0.2									
43	DR-5	488+28	LT.	3	45	50	142						-0.2				0.3									
43	DR-6	489+56	LT.	3	50	56	159						-0.3				0.4									
43	P-1	490+13	RT.	10		48	373*						-0.2				0.9									
43	CR-1	489+12	CL		245	259	3738*		415.3				-2.3		34.6											
44	DR-1	505+00	LT.	3	19	25	66						-0.1				0.2									
44	CR-1	505+00	CL		19	50	499*						-0.3	2.3												
45	DR-1	528+25	LT.	3	25	32	86						-0.1				0.2									
45	DR-2	530+53	LT.	3	75	81	234						-0.4				0.5									
45	DR-3	539+55	LT.	3	45	50	142						-0.2				0.3									
45	P-1	536+66	LT.	3		29	383*						-0.1				0.9									
45	CR-1	528+50	CL		19	50	499*						-0.3	2.3												
45	CR-2	530+52	CL		84	84	1103*						-0.8	5.1												
45	CR-3	536+69	CL		60	93	675*/467*	19.5		8.6	8.6	20.8	-0.7	3.1	4.3											
TOTALS (THIS SHEET)								19.5	415.3	8.6	8.6	20.8	-6.7		12.8	38.9	4.8									
TOTALS (SHEET 30)								27.1	437.7	12.0	12.0	28.9	-12.8		41.0	42.5	8.0									
SUBTOTALS								46.6	853.0	20.6	20.6	49.7	-19.5		53.8	81.4	12.8									
TOTALS CARRIED TO GENERAL SUMMARY								47	853	21	21	50	-20			148										



* Planimeted area.
 ** The deduction is the result of Item 617 being calculated along the entire length of the project in the pavement calculations.

DRIVEWAY, STREET, AND CROSSOVER SUBSUMMARY	SCI-23-5.51						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">CALCULATED</td> <td style="font-size: small;">GFR</td> </tr> <tr> <td style="font-size: small;">CHECKED</td> <td style="font-size: small;">JAD</td> </tr> </table>	CALCULATED	GFR	CHECKED	JAD	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">31</td> </tr> <tr> <td style="text-align: center;">57</td> </tr> </table>	31	57
CALCULATED	GFR						
CHECKED	JAD						
31							
57							

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STATION		618 RUMBLE STRIPS, TYPE 1 (ASPHALT)
FROM	TO	LIN. FT.
U.S. 23 SOUTHBOUND-OUTSIDE		
290+97.27	313+93	2296
314+43	317+20	277
317+60	319+72.02	212
4+12.40	14+87	1075
15+36	29+26	1390
29+68	50+27	2059
50+73	77+22	2649
77+64	85+39	775
86+06	89+50	344
90+04	101+69	1165
102+13	110+53	840
111+22	137+49.00	2627
454+26.82	455+10	83
455+40	471+38	1598
471+87	476+30	443
476+72	479+94	322
480+36	487+85	749
488+70	489+20	50
489+92	504+80	1488
505+20	528+25	2305
528+75	529+91	116
531+12	536+44	532
537+08	538+85	177
539+62	540+39	77
SUBTOTAL 1		23,649

STATION		618 RUMBLE STRIPS, TYPE 1 (ASPHALT)
FROM	TO	LIN. FT.
U.S. 23 SOUTHBOUND-INSIDE		
305+55	313+92	837
314+45	316+97	252
317+95	319+72.02	177
4+12.40	14+74	1062
15+26	18+88	362
20+00	29+26	926
29+79	33+49	370
34+58	40+45	587
41+69	45+15	346
46+26	50+12	386
50+97	77+27	2630
77+60	85+37	777
86+35	89+22	287
90+28	101+58	1130
104+60	110+59	599
111+07	115+50	443
483+60	487+95	435
490+59	504+90	1431
505+10	528+40	2330
528+60	529+88	128
531+15	536+54	539
536+84	540+45	361
SUBTOTAL 2		16,395

STATION		618 RUMBLE STRIPS, TYPE 1 (ASPHALT)
FROM	TO	LIN. FT.
U.S. 23 NORTHBOUND-OUTSIDE		
290+97.27	317+26	2629
317+77	319+72.02	195
4+12.40	19+24	1512
19+63	33+83	1420
34+24	40+63	639
41+52	45+49	397
45+91	48+52	261
49+08	50+26	118
50+80	85+70	3490
86+06	101+47	1541
102+37	137+49.00	3512
454+26.82	458+95	468
459+25	476+09	1684
476+94	489+64	1270
490+55	530+33	3978
530+86	540+45	959
SUBTOTAL 3		24,073

STATION		618 RUMBLE STRIPS, TYPE 1 (ASPHALT)
FROM	TO	LIN. FT.
U.S. 23 NORTHBOUND-INSIDE		
305+55	313+61	806
314+77	316+97	220
317+95	319+72.02	177
4+12.40	14+42	1030
15+58	19+20	362
19+68	28+89	921
30+22	33+95	373
34+12	40+93	681
41+22	45+62	440
45+78	50+12	434
50+97	76+89	2592
77+97	85+37	740
86+35	89+22	287
90+46	101+58	1112
104+17	110+27	610
111+38	115+50	412
483+60	487+66	406
490+59	504+61	1402
505+39	528+11	2272
528+89	529+88	99
531+15	536+22	507
537+15	540+45	330
SUBTOTAL		16,213
SUBTOTAL 1		23,649
SUBTOTAL 2		16,395
SUBTOTAL 3		24,073
TOTAL CARRIED TO GENERAL SUMMARY		80,330

SCI-23-5.51	CALCULATED	GFR
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REF NO.	SHEET NO.	STATION TO STATION	SIZE	SIDE	202	830	630	630	630	632							
					CURB REMOVED	ASPHALT CONCRETE CURB, TYPE 1	GROUND MOUNTED SUPPORT, NO. 3 POST	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	DETECTOR LOOP	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	
MR-1	36	290+82.27 To 303+05		RT.	1205												
C-1	36	290+82.27 To 303+05		RT.		1175											
DL-1	40	97+64	6'X8'	LT.						1							
DL-2	40	97+64	6'X8'	RT.						1							
DL-3	40	98+89	6'X8'	LT.						1							
DL-4	40	98+89	6'X8'	RT.						1							
MR-1	41	103+56 To 104+17		LT.	60												
C-1	41	103+56 To 104+17		LT.		60											
DL-1	41	105+06	6'X8'	LT.						1							
DL-2	41	105+06	6'X8'	LT.						1							
DL-3	41	106+48	6'X8'	LT.						1							
DL-4	41	106+48	6'X8'	LT.						1							
S-1	45	536+26		LT.			16	1	1								
S-2	45	536+64		LT.			14	1	1								
TOTALS CARRIED TO GENERAL SUMMARY					1265	1235	30	2	2	8							

MISCELLANEOUS SUBSUMMARY

SCI-23-5.51

CALCULATED
GFR
CHECKED
JAD

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STATION		LIN. FT.	254	617	617	880	880	880											
FROM	TO		PAVEMENT PLANING, BITUMINOUS, AS PER PLAN SQ.YD.	SHOULDER PREPARATION SQ.YD.	SHOULDER RECONDITIONING, MISC. COMPACTED AGGREGATE, AS PER PLAN CU.YD.	1 1/2" ASPHALT CONCRETE (5 YEAR WARRANTY) CU.YD.	3" ASPHALT CONCRETE (5 YEAR WARRANTY) CU.YD.	ASPHALT CONCRETE (5 YEAR WARRANTY) (VARIES 1/2" TO 3") CU.YD.											
290+82.27	291+40	57.73		12.8	0.2														
290+97.27	291+07	9.73	60.6					2.8											
291+07	291+40	33	231.0					14.5											
291+40	292+17	77	462.0	34.2	0.8	4.3	37.8												
292+17	301+65	948	5688.0	421.4	8.8	61.4	465.2												
301+65	303+05	140	840.0	62.2	1.2	9.1	70.0												
303+05	305+55	250	1569.4	111.2	2.4	16.2	130.8												
305+55	306+55	100	577.8	88.8	2.0	8.4	48.2												
306+55	319+72.02	1317.02	7609.4	1170.8	24.4	97.6	634.2												
4+12.40	101+65	9752.60	56,348.4	8668.8	180.8	722.4	4695.6												
101+65	102+15	50	288.8	44.4	0.8	4.2	24.0												
102+15	115+50	1335	7713.4	1186.8	24.8	123.6	642.8												
115+50	116+84	134	930.6	59.6	1.2	8.7	77.5												
116+84	123+20	636	4098.7	282.6	5.8	41.2	329.8												
123+20	123+70	50	300.0	22.2	0.4	3.2	24.5												
123+70	137+49.00	1379.00	8274.0	612.8	12.8	89.4	689.5												
454+26.82	464+16	989.18	5935.1	439.6	9.2	64.1	494.6												
464+16	467+80	364	2184.0	161.8	3.4	23.6	178.6												
467+80	472+40	460	2760.0	204.4	4.2	29.8	230.0												
472+40	472+84.96	44.96	339.7	10.0	0.2			19.8											
473+48.96	473+90	41.04	310.1	9.2	0.2			18.0											
473+90	480+55	665	3990.0	295.6	6.2	43.1	332.5												
480+55	483+60	305	1897.8	135.6	2.8	19.8	158.1												
483+60	487+50	390	2253.4	346.8	7.2	36.2	187.8												
487+50	490+35	285	1646.6	253.2	5.2	29.0	137.2												
490+35	539+75	4940	28,542.2	3293.4	68.7	417.4	2378.6												
539+75	540+45	70	561.9	23.4	0.6			31.2											
SUBTOTALS			145,412.9	17,951.6	374.3	1852.7	11,967.3	86.3											
TOTALS CARRIED TO GENERAL SUMMARY			145,413	17,952	374		13,906												

PAVEMENT SUBSUMMARY

SCI-23-5.51

CALCULATED
GFR
CHECKED
JAD

*Station 290+82.27 to Station 291+40
Station 290+97.27 to Station 291+07

Item 880 - Asphalt Concrete (5 Year Warranty) (Varies 1 1/2" to 3")
[486 Sq.Ft. x (1/2(1.5 + 1.84) In./12)] ÷ 27 +
[59 Sq.Ft. x (1.5 In./12)] ÷ 27 = 2.8 Cu.Yd

Item 254 - Pavement Planing, Bituminous, As Per Plan
[545 Sq.Ft.] ÷ 9 = 60.6 Sq.Yd.

*Item 617 - Shoulder Preparation
1/2[57.73 Ft. x 2 Ft.] ÷ 9 = 6.4 Sq. Yd. x
2 Sides = 12.8 Sq. Yd.

*Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/4[57.73 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
0.1 Cu.Yd. x 2 Sides = 0.2 Cu.Yd.

Station 291+07 to Station 291+40

Item 880 - Asphalt Concrete (5 Year Warranty) (Varies 1 1/2" to 3")
[1782 Sq.Ft. x (1/2(1.84 + 3) In./12)] ÷ 27 +
[297 Sq.Ft. x (1.5 In./12)] ÷ 27 -
1/2[132 Sq. Ft. x 1/2(0.34 + 1.5)/ 12] ÷ 27 =
14.5 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[2079 Sq.Ft.] ÷ 9 = 231.0 Sq.Yd.

Station 291+40 to Station 292+17

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
[77 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 +
[77 Ft. x 1/2(3 + 7)Ft. x (1.5 In./12)] ÷ 27 =
4.3 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[77 Ft. x 54 Ft. x (3 In./12)] ÷ 27 -
1/2[77 Ft. x 4 Ft. x (1.5 In./12)] ÷ 27 =
37.8 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[77 Ft. x 54 Ft.] ÷ 9 = 462.0 Sq.Yd.

Item 617 - Shoulder Preparation
[77 Ft. x 2 Ft.] ÷ 9 = 17.1 Sq.Yd. x
2 Sides = 34.2 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[77 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
0.4 Cu.Yd. x 2 Sides = 0.8 Cu.Yd.

Station 292+17 to Station 301+65

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
2[948 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 =
61.4 Cu.Yd.

Station 292+17 to Station 301+65 (Cont.)

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[948 Ft. x 54 Ft. x (3 In./12)] ÷ 27 -
1/2[948 Ft. x 4 Ft. x (1.5 In./12)] ÷ 27 =
465.2 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[948 Ft. x 54 Ft.] ÷ 9 = 5688.0 Sq.Yd.

Item 617 - Shoulder Preparation
[948 Ft. x 2 Ft.] ÷ 9 = 210.7 Sq.Yd. x
2 Sides = 421.4 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[948 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
4.4 Cu.Yd. x 2 Sides = 8.8 Cu.Yd.

Station 301+65 to Station 303+05

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
2[140 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 =
9.1 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[140 Ft. x 54 Ft. x (3 In./12)] ÷ 27 =
70.0 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[140 Ft. x 54 Ft.] ÷ 9 = 840.0 Sq.Yd.

Item 617 - Shoulder Preparation
[140 Ft. x 2 Ft.] ÷ 9 = 31.1 Sq.Yd. x
2 Sides = 62.2 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[140 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
0.6 Cu.Yd. x 2 Sides = 1.2 Cu.Yd.

Station 303+05 to Station 305+55

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
2[250 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 =
16.2 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[250 Ft. x 1/2(54 + 59) Ft. x (3 In./12)]
÷ 27 = 130.8 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[250 Ft. x 1/2(54 + 59) Ft.] ÷ 9 =
1569.4 Sq.Yd.

Item 617 - Shoulder Preparation
[250 Ft. x 2 Ft.] ÷ 9 = 55.6 Sq.Yd. x
2 Sides = 111.2 Sq. Yd.

Station 303+05 to Station 305+55 (Cont.)

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[250 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
1.2 Cu.Yd. x 2 Sides = 2.4 Cu.Yd.

Station 305+55 to Station 306+55

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
[100 Ft. x 1/2(7 + 5) Ft. x (1.5 In./12)] ÷ 27
+ [100 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 =
4.2 Cu.Yd. x 2 Sides = 8.4 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[100 Ft. x 26 Ft. x (3 In./12)] ÷ 27 =
24.1 Cu.Yd. x 2 Sides = 48.2 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[100 Ft. x 26 Ft.] ÷ 9 = 288.9 Sq.Yd. x
2 Sides = 577.8 Sq.Yd.

Item 617 - Shoulder Preparation
[100 Ft. x 2 Ft.] ÷ 9 = 22.2 Sq.Yd. x
4 Sides = 88.8 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[100 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
0.5 Cu.Yd. x 4 Sides = 2.0 Cu.Yd.

Station 306+55 to Station 319+72.02

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
[1317.02 Ft. x 5 Ft. x (1.5 In./12)] ÷ 27 +
[1317.02 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 =
48.8 Cu.Yd. x 2 Sides = 97.6 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[1317.02 Ft. x 26 Ft. x (3 In./12)] ÷ 27 =
317.1 Cu.Yd. x 2 Sides = 634.2 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[1317.02 Ft. x 26 Ft.] ÷ 9 = 3804.7 Sq.Yd. x
2 Sides = 7609.4 Sq.Yd.

Item 617 - Shoulder Preparation
[1317.02 Ft. x 2 Ft.] ÷ 9 = 292.7 Sq.Yd. x
4 Sides = 1170.8 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[1317.02 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
6.1 Cu.Yd. x 4 Sides = 24.4 Cu.Yd.

Station 4+12.40 to Station 101+65

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
[9752.60 Ft. x 5 Ft. x (1.5 In./12)] ÷ 27 +
[9752.60 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 =
361.2 Cu.Yd. x 2 Sides = 722.4 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[9752.60 Ft. x 26 Ft. x (3 In./12)] ÷ 27 =
2347.8 Cu.Yd. x 2 Sides = 4695.6 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[9752.60 Ft. x 26 Ft.] ÷ 9 = 28,174.2 Sq.Yd.
x 2 Sides = 56,348.4 Sq.Yd.

Item 617 - Shoulder Preparation
[9752.60 Ft. x 2 Ft.] ÷ 9 = 2167.2 Sq.Yd. x
4 Sides = 8668.8 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[9752.60 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
45.2 Cu.Yd. x 4 Sides = 180.8 Cu.Yd.

Station 101+65 to Station 102+15

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
[50 Ft. x 1/2(5 + 7) Ft. x (1.5 In./12)] ÷ 27
+ [50 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 =
2.1 Cu.Yd. x 2 Sides = 4.2 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
[50 Ft. x 26 Ft. x (3 In./12)] ÷ 27 =
12.0 Cu.Yd. x 2 Sides = 24.0 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[50 Ft. x 26 Ft.] ÷ 9 = 144.4 Sq.Yd. x
2 Sides = 288.8 Sq.Yd.

Item 617 - Shoulder Preparation
[50 Ft. x 2 Ft.] ÷ 9 = 11.1 Sq.Yd. x
4 Sides = 44.4 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
1/2[50 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
0.2 Cu.Yd. x 4 Sides = 0.8 Cu.Yd.

Station 102+15 to Station 115+50

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
[1335 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 +
[1335 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 =
61.8 Cu.Yd. x 2 Sides = 123.6 Cu.Yd.

Note:

See sheets 24, 30, and 31, for the deduction
of Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan through guard-
rail, driveway, street, and crossover sections.

Station 102+15 to Station 115+50 (Cont.)

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[1335 \text{ Ft.} \times 26 \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 = 321.4 \text{ Cu.Yd.} \times 2 \text{ Sides} = 642.8 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[1335 \text{ Ft.} \times 26 \text{ Ft.}] \div 9 = 3856.7 \text{ Sq.Yd.} \times 2 \text{ Sides} = 7713.4 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[1335 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 296.7 \text{ Sq.Yd.} \times 4 \text{ Sides} = 1186.8 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[1335 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 6.2 \text{ Cu.Yd.} \times 4 \text{ Sides} = 24.8 \text{ Cu.Yd.}$

Station 115+50 to Station 116+84

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[134 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 8.7 \text{ Cu.Yd.}$

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[134 \text{ Ft.} \times \frac{1}{2}(63 + 62) \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 = 77.5 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[134 \text{ Ft.} \times \frac{1}{2}(63 + 62) \text{ Ft.}] \div 9 = 930.6 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[134 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 29.8 \text{ Sq.Yd.} \times 2 \text{ Sides} = 59.6 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[134 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 0.6 \text{ Cu.Yd} \times 2 \text{ Sides} = 1.2 \text{ Cu.Yd.}$

Station 116+84 to Station 123+20

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[636 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 41.2 \text{ Cu.Yd.}$

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[636 \text{ Ft.} \times \frac{1}{2}(62 + 54) \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 - \frac{1}{2}[636 \text{ Ft.} \times \frac{1}{2}(12 + 4) \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 329.8 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[636 \text{ Ft.} \times \frac{1}{2}(62 + 54) \text{ Ft.}] \div 9 = 4098.7 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[636 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 141.3 \text{ Sq.Yd.} \times 2 \text{ Sides} = 282.6 \text{ Sq. Yd.}$

Station 116+84 to Station 123+20 (Cont.)

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[636 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 2.9 \text{ Cu.Yd.} \times 2 \text{ Sides} = 5.8 \text{ Cu.Yd.}$

Station 123+20 to Station 123+70

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[50 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 3.2 \text{ Cu.Yd.}$

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[50 \text{ Ft.} \times 54 \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 - \frac{1}{2}[50 \text{ Ft.} \times 4 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 24.5 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[50 \text{ Ft.} \times 54 \text{ Ft.}] \div 9 = 300.0 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[50 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 11.1 \text{ Sq.Yd.} \times 2 \text{ Sides} = 22.2 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[50 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 0.2 \text{ Cu.Yd.} \times 2 \text{ Sides} = 0.4 \text{ Cu.Yd.}$

Station 123+70 to Station 137+49.00

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[1379.00 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 89.4 \text{ Cu.Yd.}$

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[1379.00 \text{ Ft.} \times 54 \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 = 689.5 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[1379.00 \text{ Ft.} \times 54 \text{ Ft.}] \div 9 = 8274.0 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[1379.00 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 306.4 \text{ Sq.Yd.} \times 2 \text{ Sides} = 612.8 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[1379.00 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 6.4 \text{ Cu.Yd.} \times 2 \text{ Sides} = 12.8 \text{ Cu.Yd.}$

Station 454+26.82 to Station 464+16

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[989.18 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 64.1 \text{ Cu.Yd.}$

Station 454+26.82 to Station 464+16 (Cont.)

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[989.18 \text{ Ft.} \times 54 \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 = 494.6 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[989.18 \text{ Ft.} \times 54 \text{ Ft.}] \div 9 = 5935.1 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[989.18 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 219.8 \text{ Sq.Yd.} \times 2 \text{ Sides} = 439.6 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[989.18 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 4.6 \text{ Cu.Yd.} \times 2 \text{ Sides} = 9.2 \text{ Cu.Yd.}$

Station 464+16 to Station 467+80

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[364 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 23.6 \text{ Cu.Yd.}$

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[364 \text{ Ft.} \times 54 \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 - \frac{1}{2}[364 \text{ Ft.} \times 4 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 178.6 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[364 \text{ Ft.} \times 54 \text{ Ft.}] \div 9 = 2184.0 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[364 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 80.9 \text{ Sq.Yd.} \times 2 \text{ Sides} = 161.8 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[364 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 1.7 \text{ Cu.Yd.} \times 2 \text{ Sides} = 3.4 \text{ Cu.Yd.}$

Station 467+80 to Station 472+40

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[460 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 29.8 \text{ Cu.Yd.}$

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[460 \text{ Ft.} \times 54 \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 = 230.0 \text{ Cu.Yd.}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[460 \text{ Ft.} \times 54 \text{ Ft.}] \div 9 = 2760.0 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $[460 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 102.2 \text{ Sq.Yd.} \times 2 \text{ Sides} = 204.4 \text{ Sq. Yd.}$

Station 467+80 to Station 472+40 (Cont.)

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{2}[460 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 2.1 \text{ Cu.Yd.} \times 2 \text{ Sides} = 4.2 \text{ Cu.Yd.}$

Station 472+40 to Station 472+84.96

Item 880 - Asphalt Concrete (5 Year Warranty) (Varies 1 1/2" to 3")
 $[44.96 \text{ Ft.} \times 54 \text{ Ft.} \times (\frac{1}{2}(1.5 + 3) \text{ In.}/12)] \div 27 + 2[44.96 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 19.8 \text{ Cu.Yd}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[44.96 \text{ Ft.} \times 68 \text{ Ft.}] \div 9 = 339.7 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $\frac{1}{2}[44.96 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 5.0 \text{ Sq.Yd.} \times 2 \text{ Sides} = 10.0 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{4}[44.96 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 0.1 \text{ Cu.Yd.} \times 2 \text{ Sides} = 0.2 \text{ Cu.Yd.}$

Station 473+48.96 to Station 473+90

Item 880 - Asphalt Concrete (5 Year Warranty) (Varies 1 1/2" to 3")
 $[41.04 \text{ Ft.} \times 54 \text{ Ft.} \times (\frac{1}{2}(1.5 + 3) \text{ In.}/12)] \div 27 + 2[41.04 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 18.0 \text{ Cu.Yd}$

Item 254 - Pavement Planing, Bituminous, As Per Plan
 $[41.04 \text{ Ft.} \times 68 \text{ Ft.}] \div 9 = 310.1 \text{ Sq.Yd.}$

Item 617 - Shoulder Preparation
 $\frac{1}{2}[41.04 \text{ Ft.} \times 2 \text{ Ft.}] \div 9 = 4.6 \text{ Sq.Yd.} \times 2 \text{ Sides} = 9.2 \text{ Sq. Yd.}$

Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan
 $\frac{1}{4}[41.04 \text{ Ft.} \times 2 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 0.1 \text{ Cu.Yd.} \times 2 \text{ Sides} = 0.2 \text{ Cu.Yd.}$

Station 473+90 to Station 480+55

Item 880 - 1 1/2" Asphalt Concrete (5 Year Warranty)
 $2[665 \text{ Ft.} \times 7 \text{ Ft.} \times (1.5 \text{ In.}/12)] \div 27 = 43.1 \text{ Cu.Yd.}$

Item 880 - 3" Asphalt Concrete (5 Year Warranty)
 $[665 \text{ Ft.} \times 54 \text{ Ft.} \times (3 \text{ In.}/12)] \div 27 = 332.5 \text{ Cu.Yd.}$

Note:
 See sheets 24, 30, and 31, for the deduction of Item 617 - Shoulder Reconditioning, Misc.: Compacted Aggregate, As Per Plan through guard-rail, driveway, street, and crossover sections.

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Station 473+90 to Station 480+55 (Cont.)

Item 254 - Pavement Planing, Bituminous, As Per Plan
[665 Ft. x 54 Ft.] ÷ 9 = 3990.0 Sq.Yd.

Item 617 - Shoulder Preparation
[665 Ft. x 2 Ft.] ÷ 9 = 147.8 Sq.Yd. x
2 Sides = 295.6 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
 $\frac{1}{2}$ [665 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
3.1 Cu.Yd. x 2 Sides = 6.2 Cu.Yd.

Station 480+55 to Station 483+60

Item 880 - $\frac{1}{2}$ " Asphalt Concrete (5 Year
Warranty)
2[305 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 =
19.8 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year
Warranty)
[305 Ft. x $\frac{1}{2}$ (54 + 58) Ft. x (3 In./12)]
÷ 27 = 158.1 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[305 Ft. x $\frac{1}{2}$ (54 + 58) Ft.] ÷ 9 =
1897.8 Sq.Yd.

Item 617 - Shoulder Preparation
[305 Ft. x 2 Ft.] ÷ 9 = 67.8 Sq.Yd. x
2 Sides = 135.6 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
 $\frac{1}{2}$ [305 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
1.4 Cu.Yd. x 2 Sides = 2.8 Cu.Yd.

Station 483+60 to Station 487+50

Item 880 - $\frac{1}{2}$ " Asphalt Concrete (5 Year
Warranty)
[390 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 +
[390 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 =
18.1 Cu.Yd. x 2 Sides = 36.2 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year
Warranty)
[390 Ft. x 26 Ft. x (3 In./12)] ÷ 27 =
93.9 Cu.Yd. x 2 Sides = 187.8 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[390 Ft. x 26 Ft.] ÷ 9 = 1126.7 Sq.Yd. x
2 Sides = 2253.4 Sq.Yd.

Item 617 - Shoulder Preparation
[390 Ft. x 2 Ft.] ÷ 9 = 86.7 Sq.Yd. x
4 Sides = 346.8 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
 $\frac{1}{2}$ [390 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
1.8 Cu.Yd. x 4 Sides = 7.2 Cu.Yd.

Station 487+50 to Station 490+35

Item 880 - $\frac{1}{2}$ " Asphalt Concrete (5 Year
Warranty)
[285 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 +
[285 Ft. x 9 Ft. x (1.5 In./12)] ÷ 27 +
2[285 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 =
29.0 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year
Warranty)
[285 Ft. x 26 Ft. x (3 In./12)] ÷ 27 =
68.6 Cu.Yd. x 2 Sides = 137.2 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[285 Ft. x 26 Ft.] ÷ 9 = 823.3 Sq.Yd. x
2 Sides = 1646.6 Sq.Yd.

Item 617 - Shoulder Preparation
[285 Ft. x 2 Ft.] ÷ 9 = 63.3 Sq.Yd. x
4 Sides = 253.2 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
 $\frac{1}{2}$ [285 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
1.3 Cu.Yd. x 4 Sides = 5.2 Cu.Yd.

Station 490+35 to Station 539+75

Item 880 - $\frac{1}{2}$ " Asphalt Concrete (5 Year
Warranty)
[4940 Ft. x 7 Ft. x (1.5 In./12)] ÷ 27 +
2[4940 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 +
 $\frac{1}{2}$ [4940 Ft. x 9 Ft. x ((1.5 + 0.25) In./12)]
÷ 27 = 417.4 Cu.Yd.

Item 880 - 3" Asphalt Concrete (5 Year
Warranty)
[4940 Ft. x 26 Ft. x (3 In./12)] ÷ 27 =
1189.3 Cu.Yd. x 2 Sides = 2378.6 Cu.Yd.

Item 254 - Pavement Planing, Bituminous, As Per Plan
[4940 Ft. x 26 Ft.] ÷ 9 = 14,271.1 Sq.Yd. x
2 Sides = 28,542.2 Sq.Yd.

Item 617 - Shoulder Preparation
[4940 Ft. x 2 Ft.] ÷ 9 = 1097.8 Sq.Yd. x
3 Sides = 3293.4 Sq. Yd.

Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
 $\frac{1}{2}$ [4940 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
22.9 Cu.Yd. x 3 Sides = 68.7 Cu.Yd.

Station 539+75 to Station 540+45

Item 880 - Asphalt Concrete (5 Year
Warranty) (Varies $\frac{1}{2}$ " to 3")
2[70 Ft. x 26 Ft. x ($\frac{1}{2}$ (1.5 + 3) In./12)] ÷ 27
+ 2[70 Ft. x 3 Ft. x (1.5 In./12)] ÷ 27 +
[70 Ft. x $\frac{1}{2}$ (7 + 3.5) Ft. x (1.5 In./12)] ÷ 27
+ [70 Ft. x 9 Ft. x ($\frac{1}{2}$ (1.5 + 0.25)
+ 1.5) In./12)] ÷ 27 = 31.2 Cu.Yd.

Station 539+75 to Station 540+45 (Cont.)

Item 254 - Pavement Planing, Bituminous, As Per Plan
[70 Ft. x $\frac{1}{2}$ (36 + 32.5) Ft.] ÷ 9 +
[70 Ft. x 38 Ft.] ÷ 9 = 561.9 Sq.Yd.

Item 617 - Shoulder Preparation
 $\frac{1}{2}$ [70 Ft. x 2 Ft.] ÷ 9 = 7.8 Sq.Yd. x
3 Sides = 23.4 Sq. Yd.

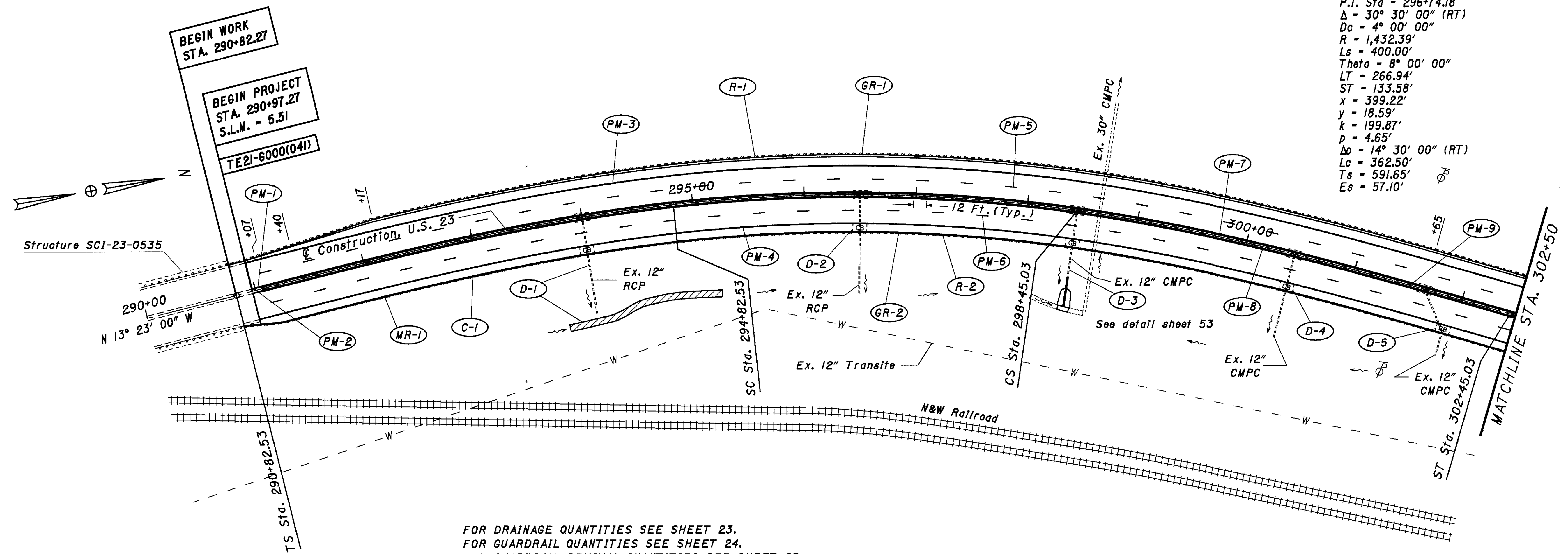
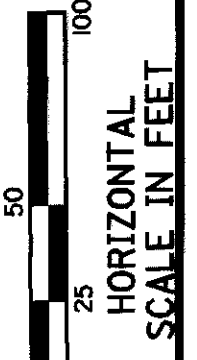
Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan
 $\frac{1}{4}$ [70 Ft. x 2 Ft. x (1.5 In./12)] ÷ 27 =
0.2 Cu.Yd. x 3 Sides = 0.6 Cu.Yd.

Note:
See sheets 24, 30, and 31, for the deduction
of Item 617 - Shoulder Reconditioning, Misc.:
Compacted Aggregate, As Per Plan through guard-
rail, driveway, street, and crossover sections.

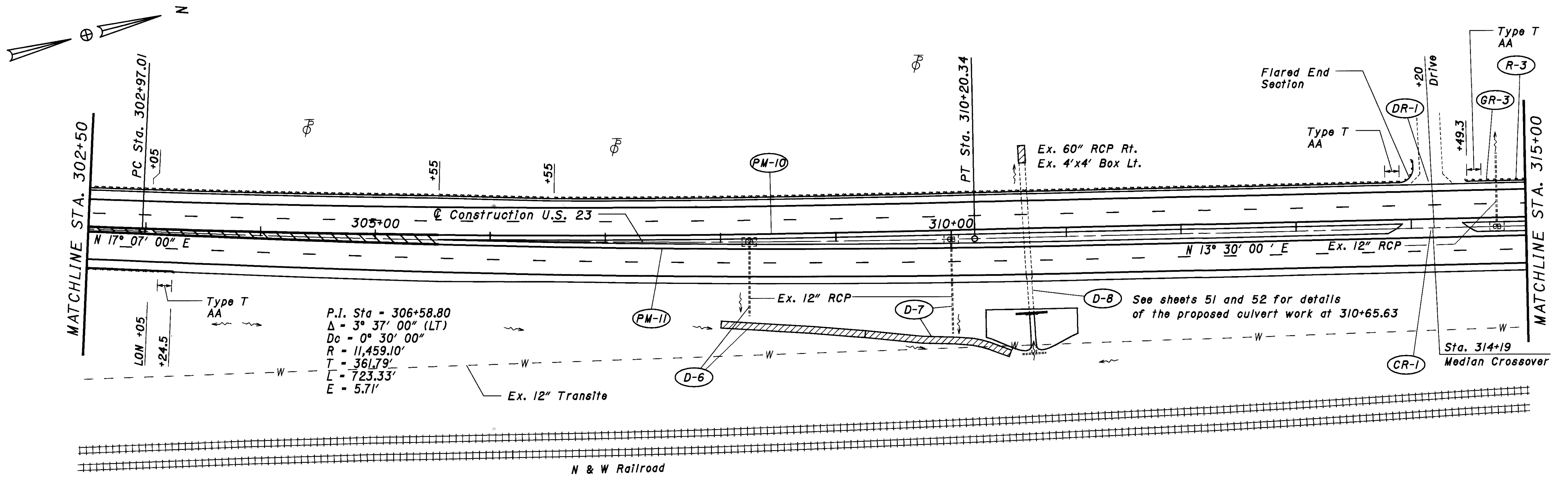
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P.I. Sta = 296+74.18
 $\Delta = 30^\circ 30' 00''$ (RT)
 $D_c = 4^\circ 00' 00''$
 $R = 1,432.39'$
 $L_s = 400.00'$
 $\text{Theta} = 8^\circ 00' 00''$
 $LT = 266.94'$
 $ST = 133.58'$
 $x = 399.22'$
 $y = 18.59'$
 $k = 199.87'$
 $p = 4.65'$
 $\Delta_c = 14^\circ 30' 00''$ (RT)
 $L_c = 362.50'$
 $T_s = 591.65'$
 $E_s = 57.10'$



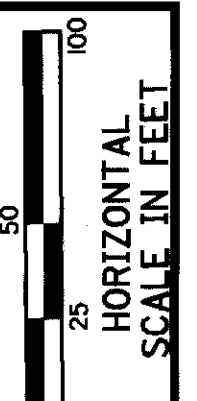
FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 26.
 FOR DRIVEWAY AND CROSSOVER QUANTITIES SEE SHEET 30.
 FOR CURB AND CURB REMOVAL QUANTITIES SEE SHEET 32.



P.I. Sta = 306+58.80
 $\Delta = 3^\circ 37' 00''$ (LT)
 $D_c = 0^\circ 30' 00''$
 $R = 11,459.10'$
 $T = 361.79'$
 $L = 723.33'$
 $E = 5.71'$

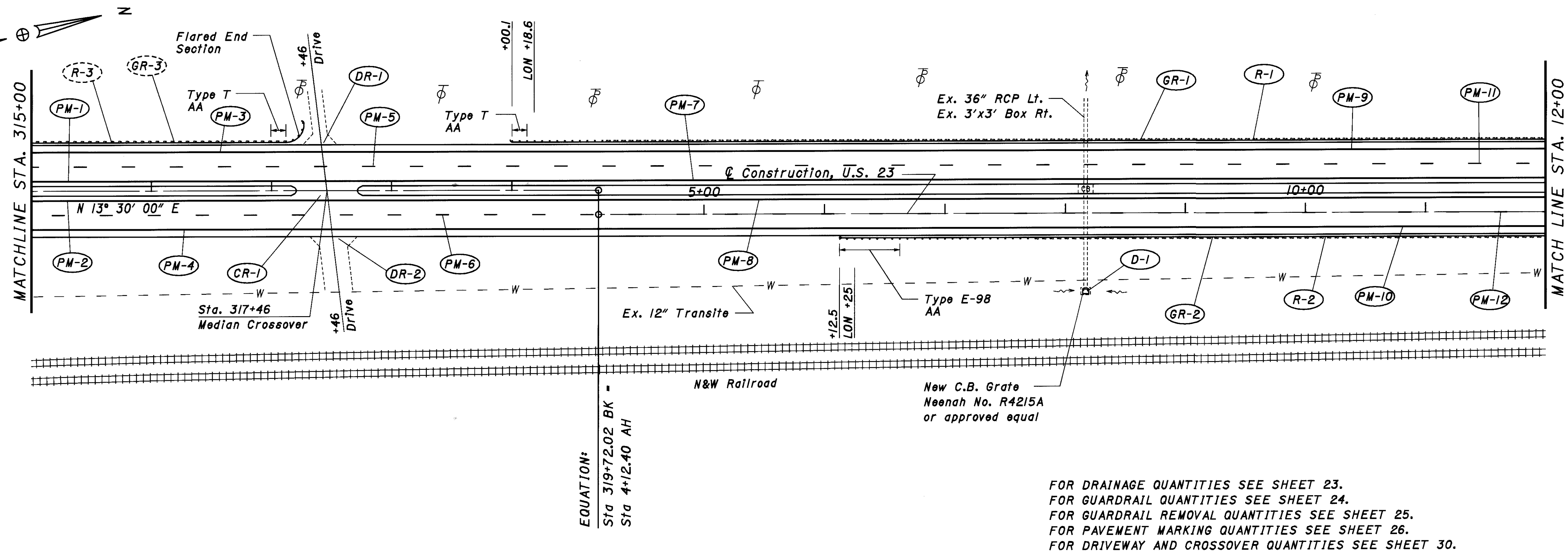
PLAN U.S. 23
 STA. 290+00 TO STA. 315+00

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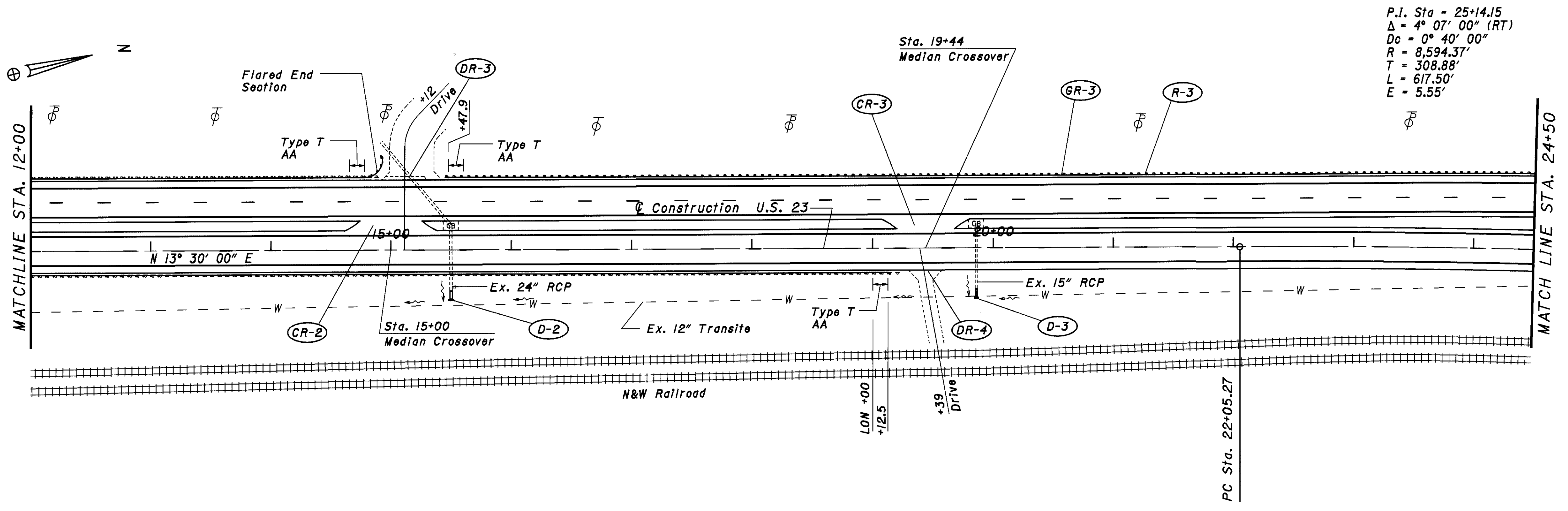
PLAN U.S. 23
STA. 315+00 TO STA. 24+50

SCI-23-5.51



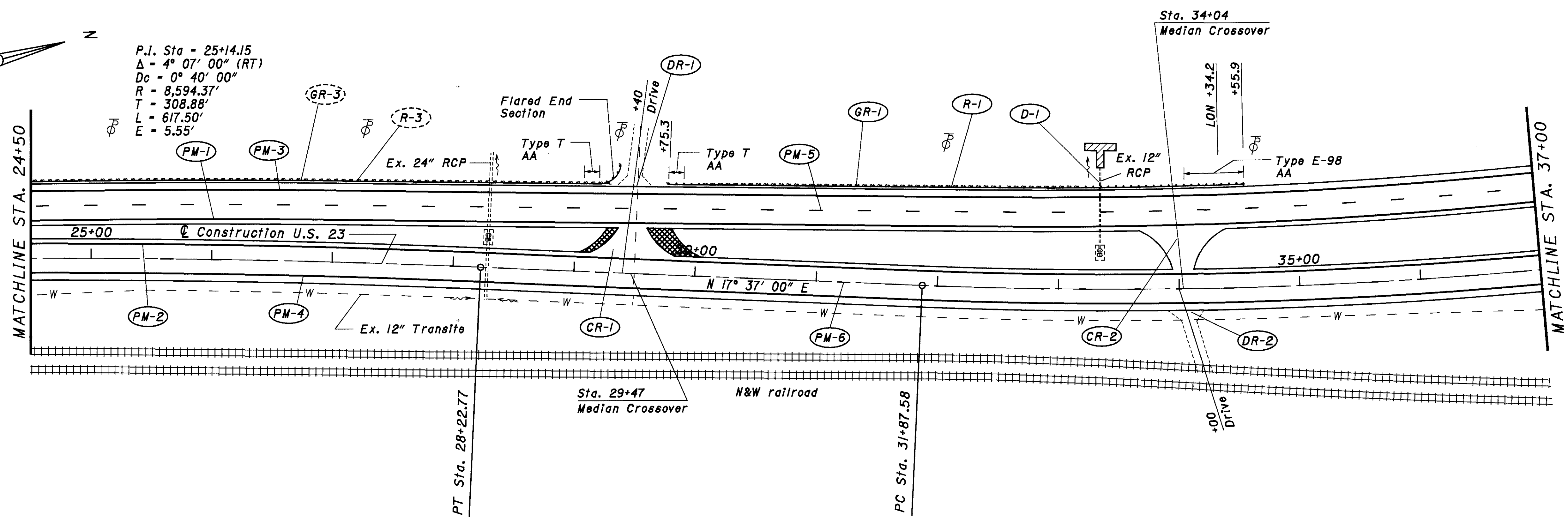
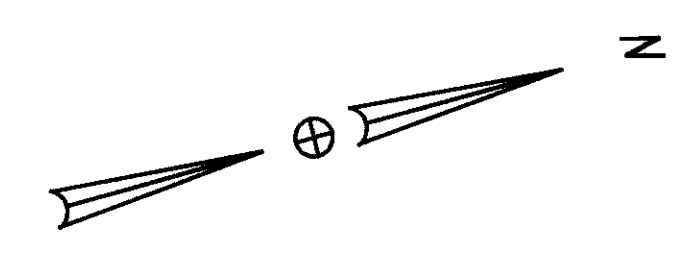
EQUATION:
 Sta 319+72.02 BK =
 Sta 4+12.40 AH

FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVING QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 26.
 FOR DRIVEWAY AND CROSSOVER QUANTITIES SEE SHEET 30.



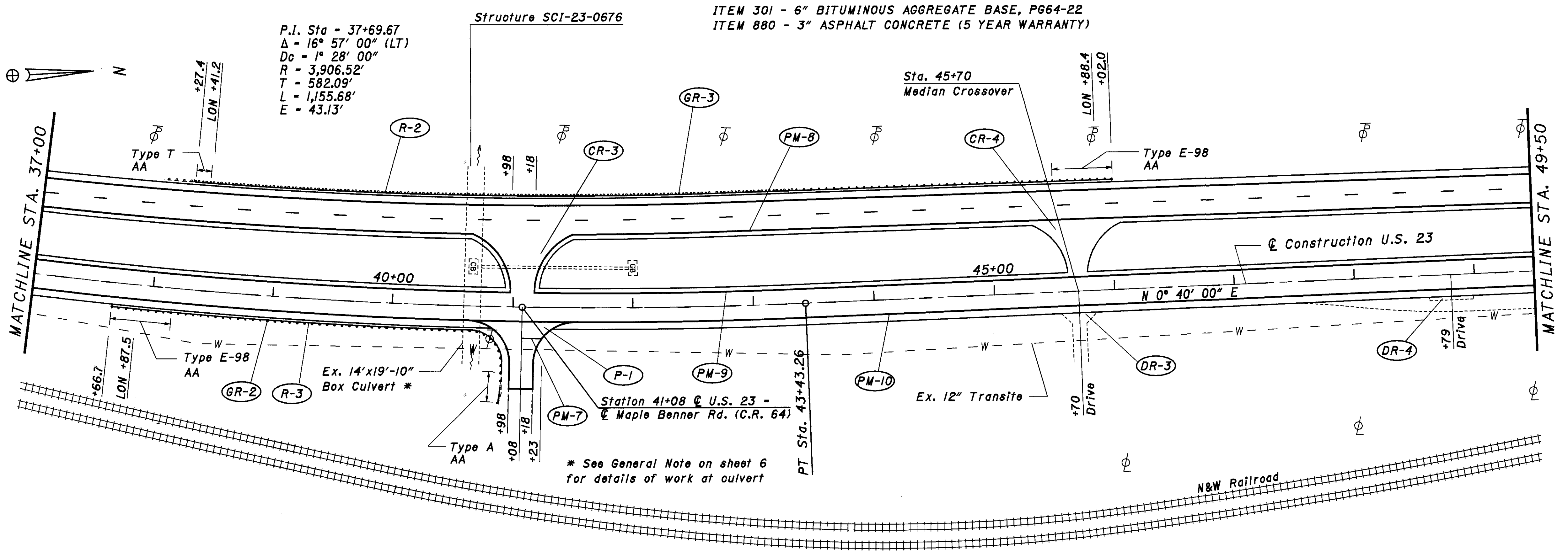
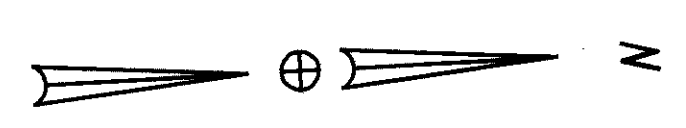
P.I. Sta = 25+14.15
 $\Delta = 4^\circ 07' 00''$ (RT)
 $D_c = 0^\circ 40' 00''$
 $R = 8,594.37'$
 $T = 308.88'$
 $L = 617.50'$
 $E = 5.55'$

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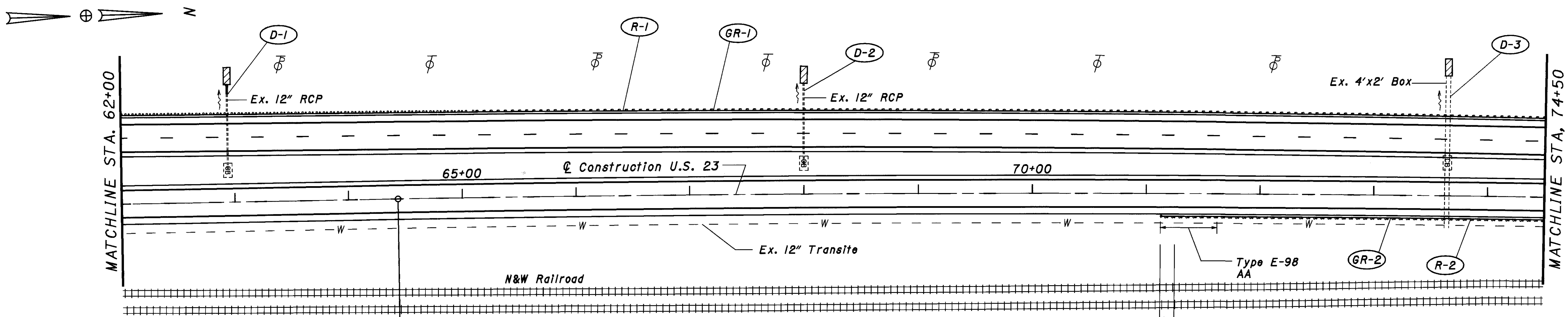
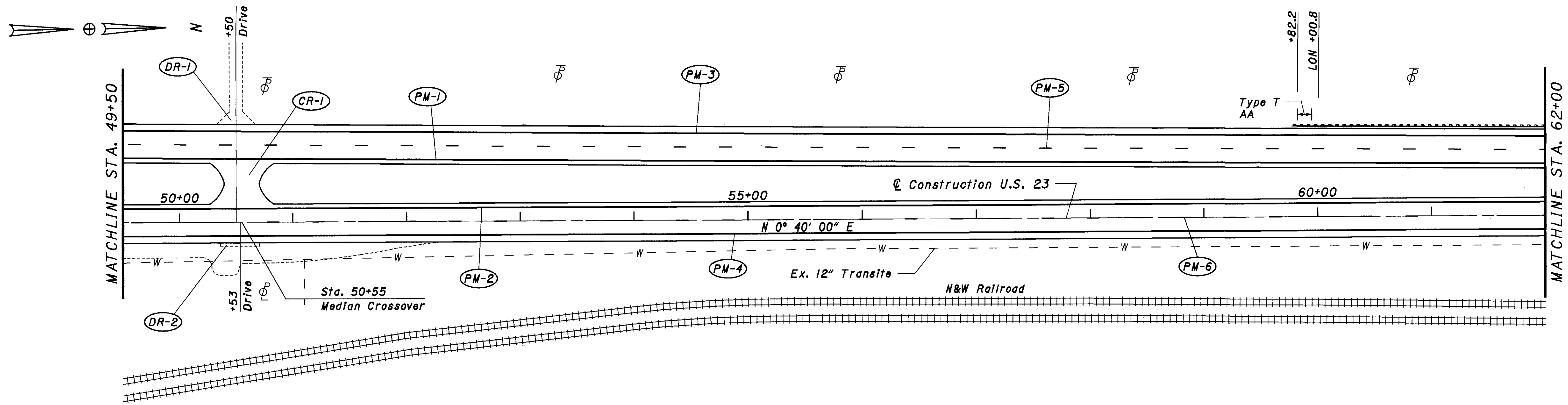
- MEDIAN CROSSOVER WIDENING BUILD-UP:**
- ITEM 203 - 13/2" EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
 - ITEM 304 - 6" AGGREGATE BASE
 - ITEM 408 - BITUMINOUS PRIME COAT (0.4 GAL./SQ. YD.)
 - ITEM 301 - 6" BITUMINOUS AGGREGATE BASE, PG64-22
 - ITEM 880 - 3" ASPHALT CONCRETE (5 YEAR WARRANTY)

FOR DRAINAGE QUANTITIES SEE SHEET 23.
FOR GUARDRAIL QUANTITIES SEE SHEET 24.
FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEETS 25.
FOR PAVEMENT MARKING QUANTITIES SEE SHEETS 26-27.
FOR DRIVEWAY, STREET, AND CROSSOVER QUANTITIES SEE SHEET 30.



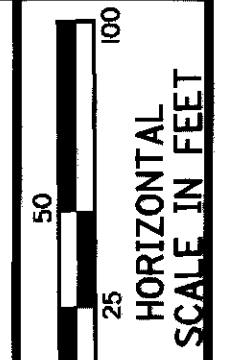
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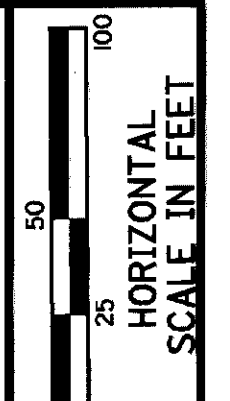
P.I. Sta = 73+06.21
 $\Delta = 3^\circ 27' 00''$ (RT)
 $Dc = 0^\circ 12' 00''$
 $R = 28,647.89'$
 $T = 862.76'$
 $L = 1,725.00'$
 $E = 12.99'$

FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 27.
 FOR DRIVEWAY AND CROSSOVER QUANTITIES SEE SHEET 30.



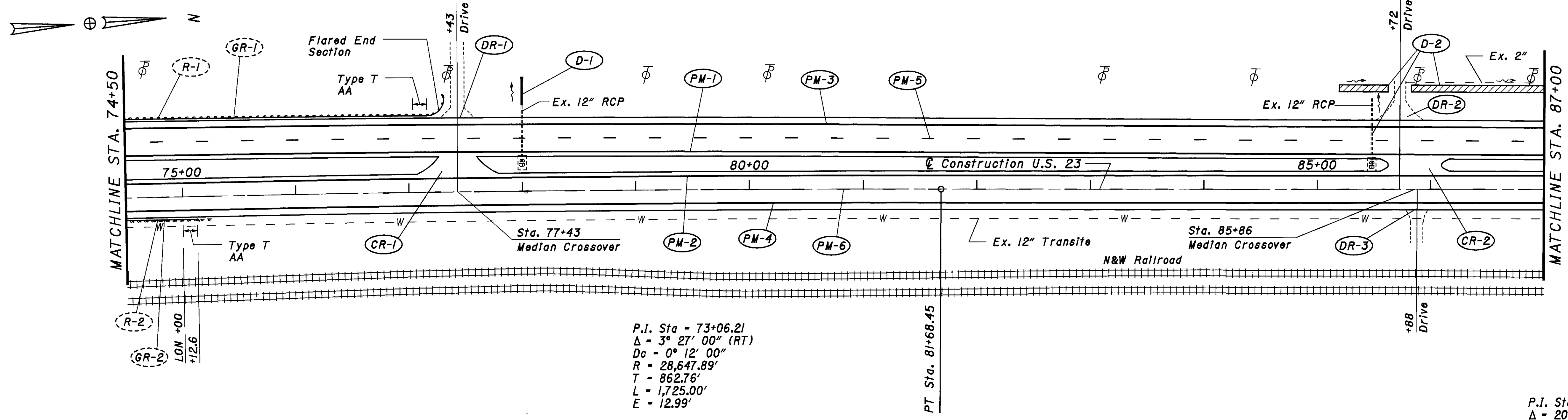
PLAN U.S. 23
 STA. 49+50 TO STA. 74+50

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PLAN U.S. 23
STA. 74+50 TO STA. 99+50

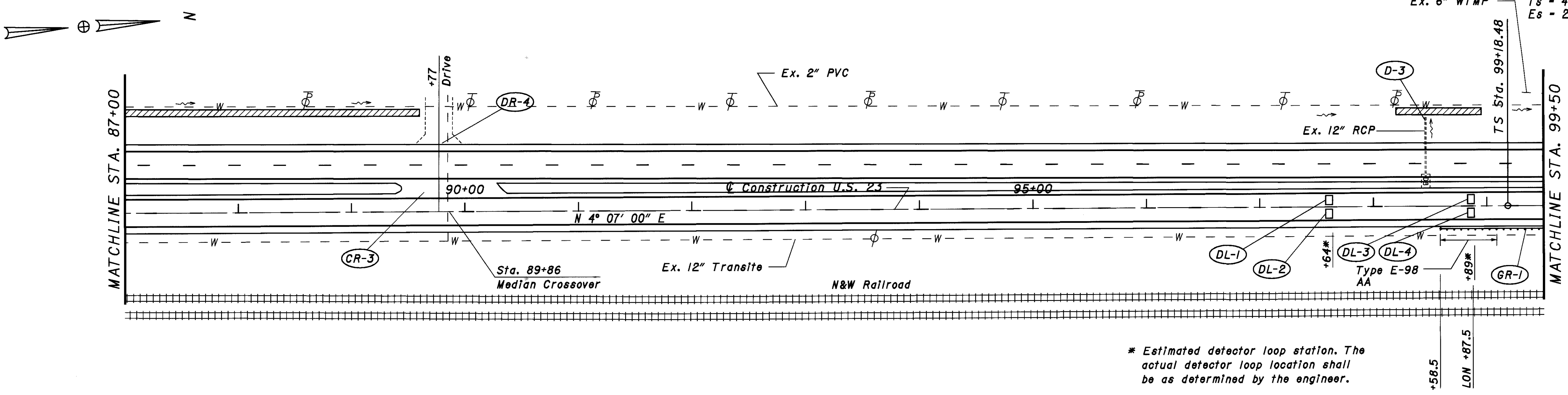
SCI-23-5.51



P.I. Sta = 73+06.21
 $\Delta = 3^\circ 27' 00''$ (RT)
 $Dc = 0^\circ 12' 00''$
 $R = 28,647.89'$
 $T = 862.76'$
 $L = 1,725.00'$
 $E = 12.99'$

P.I. Sta = 103+83.39
 $\Delta = 20^\circ 54' 00''$ (LT)
 $Dc = 4^\circ 00' 00''$
 $R = 1,432.39'$
 $Ls = 400.00'$
 $Theta = 8^\circ 00' 00''$
 $LT = 266.94'$
 $ST = 133.58'$
 $x = 399.22'$
 $y = 18.59'$
 $k = 199.87'$
 $p = 4.65'$
 $\Delta c = 4^\circ 54' 00''$ (LT)
 $Lc = 122.50'$
 $Ts = 464.91'$
 $Es = 28.89'$

FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 27.
 FOR DRIVEWAY AND CROSSOVER QUANTITIES SEE SHEET 30.
 FOR DETECTOR LOOP QUANTITIES SEE SHEET 32.



* Estimated detector loop station. The actual detector loop location shall be as determined by the engineer.

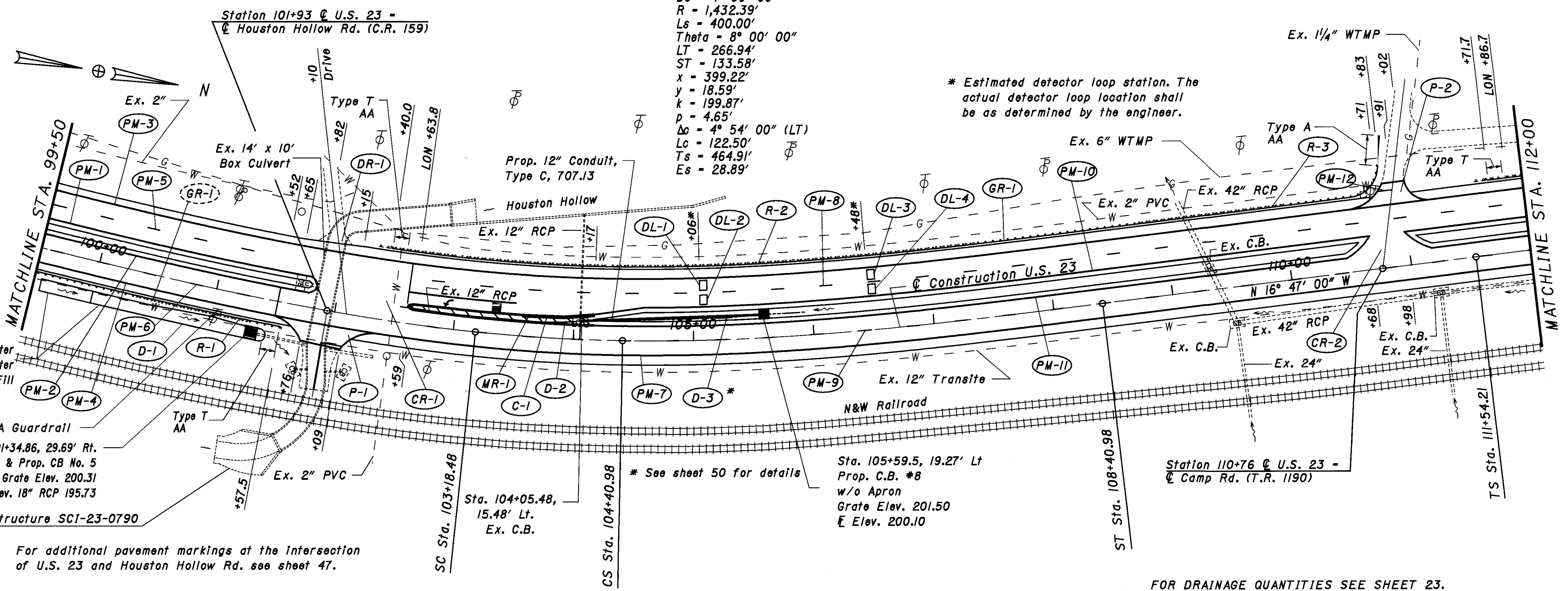
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P.I. Sta = 103+83.39
 $\Delta = 20^\circ 54' 00''$ (LT)
 $Dc = 4^\circ 00' 00''$
 $R = 1,432.39'$
 $Ls = 400.00'$
 $\theta = 8^\circ 00' 00''$
 $LT = 266.94'$
 $ST = 133.58'$
 $x = 399.22'$
 $y = 18.59'$
 $k = 199.87'$
 $p = 4.65'$
 $\Delta c = 4^\circ 54' 00''$ (LT)
 $Lc = 122.50'$
 $Ts = 464.91'$
 $Es = 28.89'$

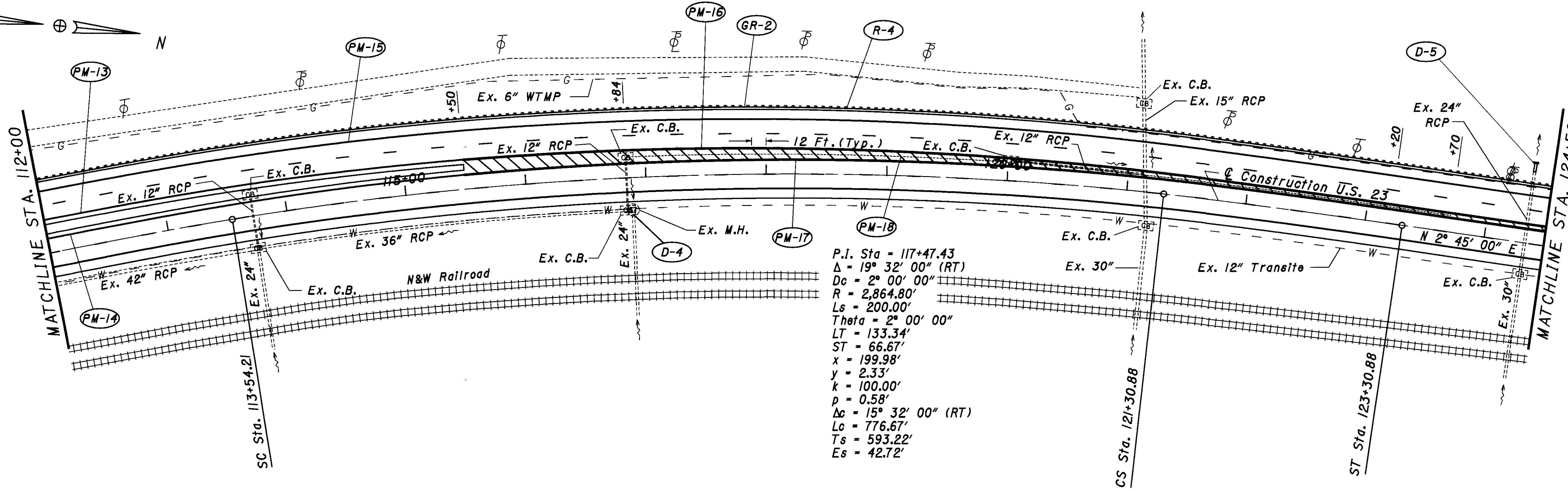
* Estimated detector loop station. The actual detector loop location shall be as determined by the engineer.

* See sheet 50 for details

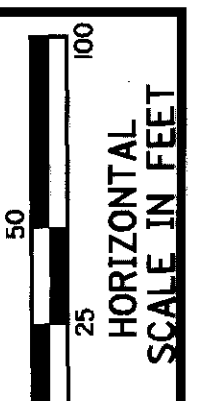
FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEETS 27-28.
 FOR DRIVEWAY, STREET, AND CROSSOVER QUANTITIES SEE SHEET 30.
 FOR CURB AND CURB REMOVAL QUANTITIES SEE SHEET 32.
 FOR DETECTOR LOOP QUANTITIES SEE SHEET 32.



For additional pavement markings at the intersection of U.S. 23 and Houston Hollow Rd. see sheet 47.



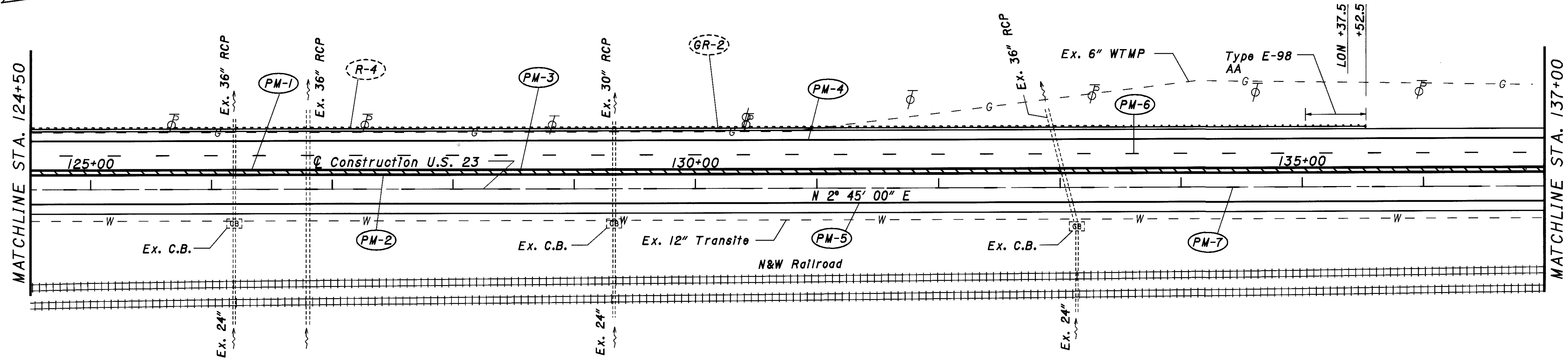
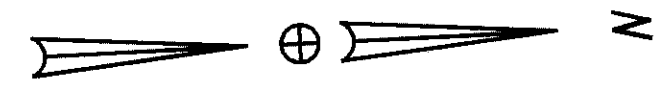
P.I. Sta = 117+47.43
 $\Delta = 19^\circ 32' 00''$ (RT)
 $Dc = 2^\circ 00' 00''$
 $R = 2,864.80'$
 $Ls = 200.00'$
 $\theta = 2^\circ 00' 00''$
 $LT = 133.34'$
 $ST = 66.67'$
 $x = 199.98'$
 $y = 2.33'$
 $k = 100.00'$
 $p = 0.58'$
 $\Delta c = 15^\circ 32' 00''$ (RT)
 $Lc = 776.67'$
 $Ts = 593.22'$
 $Es = 42.72'$



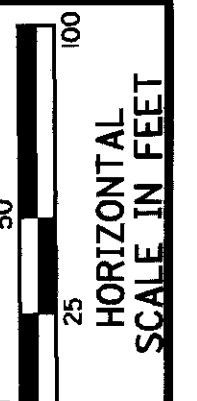
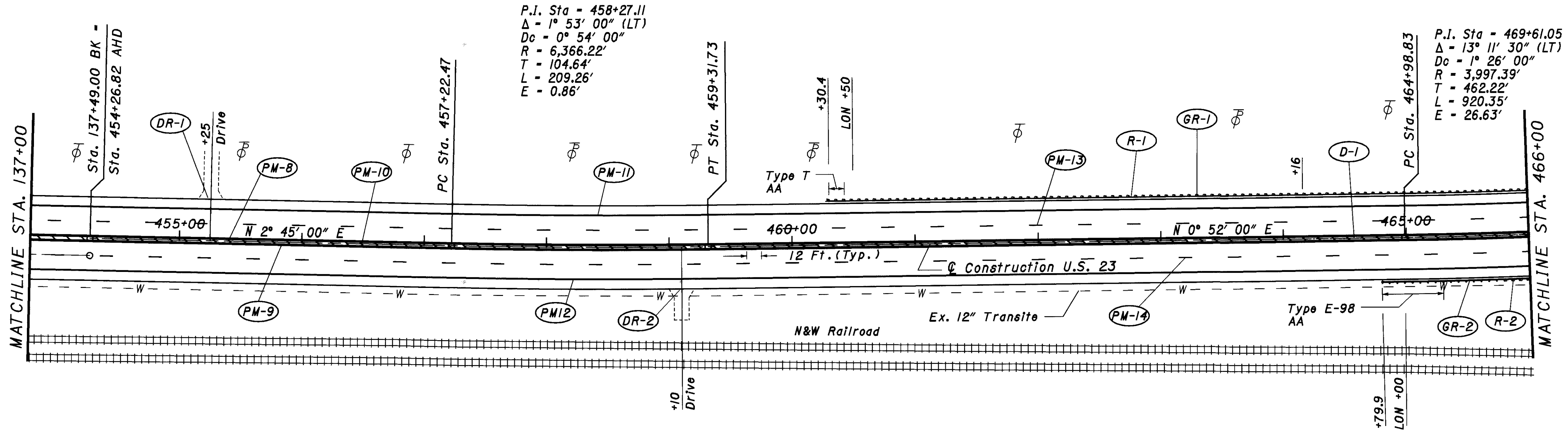
PLAN U.S. 23
 STA. 99+50 TO STA. 124+50

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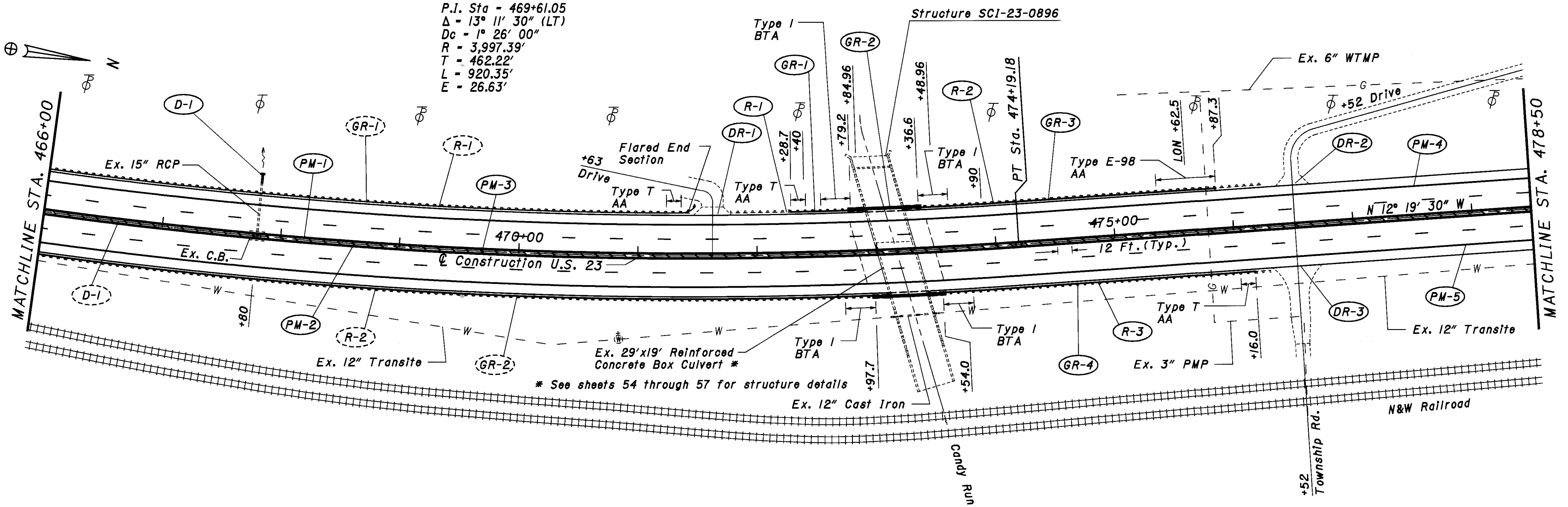
FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 28.
 FOR DRIVEWAY QUANTITIES SEE SHEET 31.



PLAN U.S. 23
STA. 124+50 TO STA. 466+00

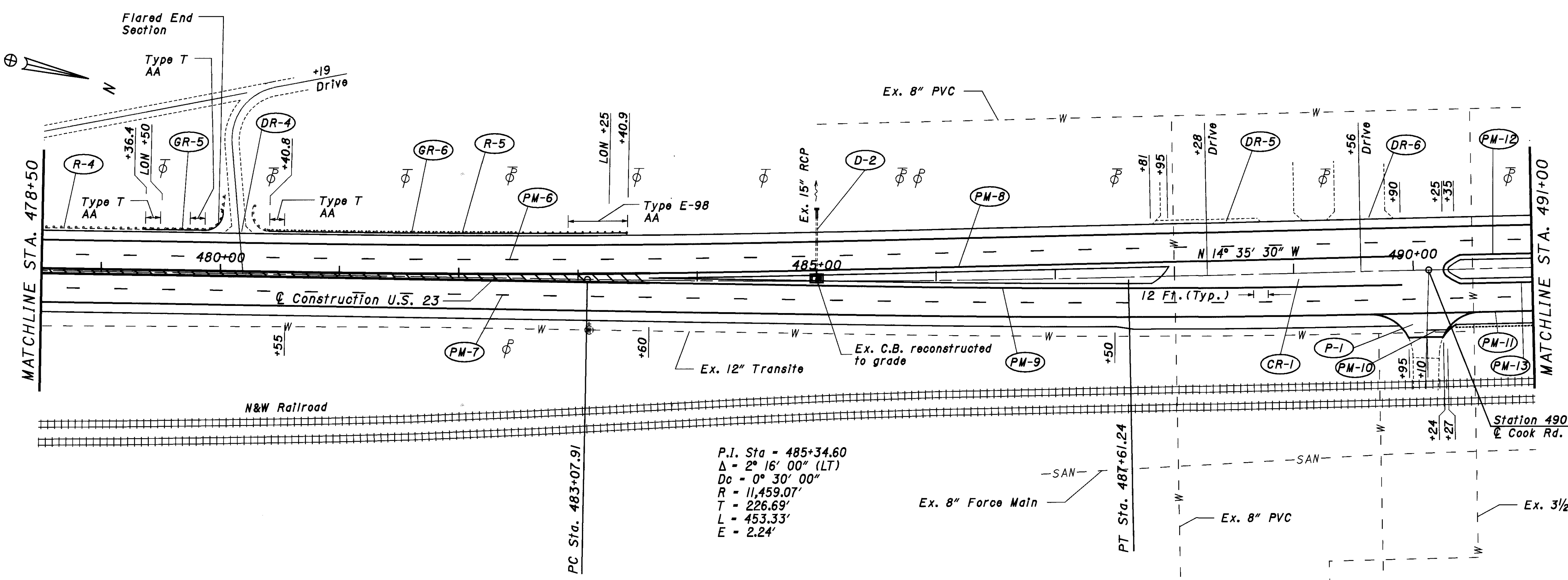
P.I. Sta = 469+61.05
 $\Delta = 13^\circ 11' 30''$ (LT)
 $D_c = 1^\circ 26' 00''$
 $R = 3,997.39'$
 $T = 462.22'$
 $L = 920.35'$
 $E = 26.63'$

Structure SCI-23-0896



FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 28.
 FOR DRIVEWAY, STREET, AND CROSSOVER QUANTITIES SEE SHEET 31.

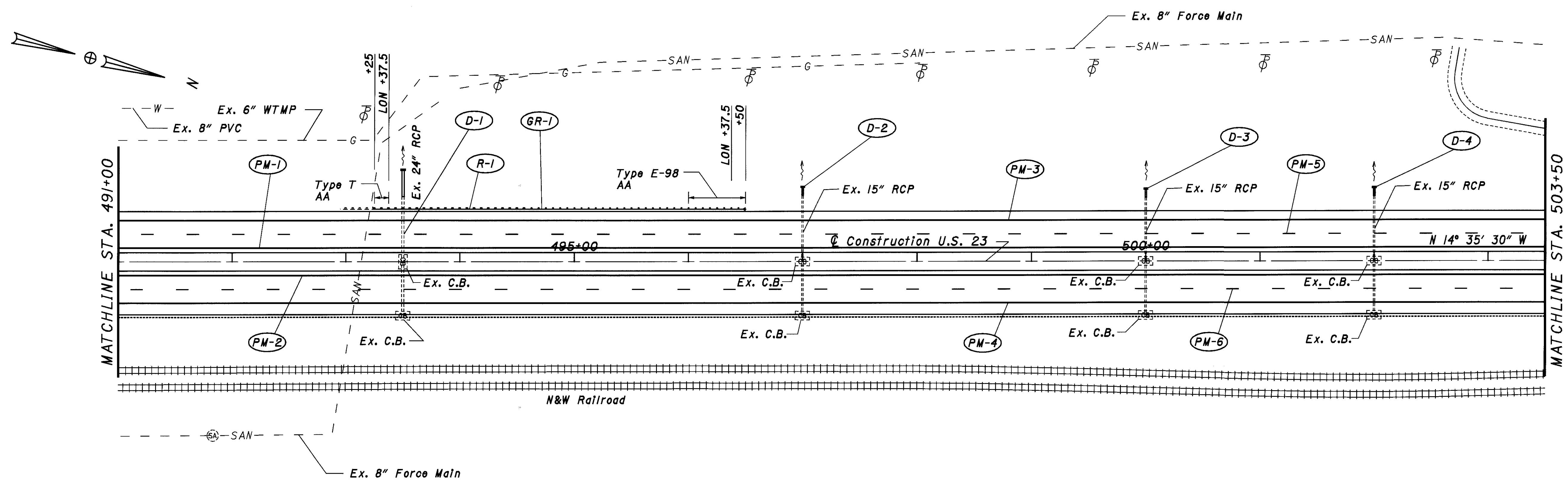
P.I. Sta = 485+34.60
 $\Delta = 2^\circ 16' 00''$ (LT)
 $D_c = 0^\circ 30' 00''$
 $R = 11,459.07'$
 $T = 226.69'$
 $L = 453.33'$
 $E = 2.24'$



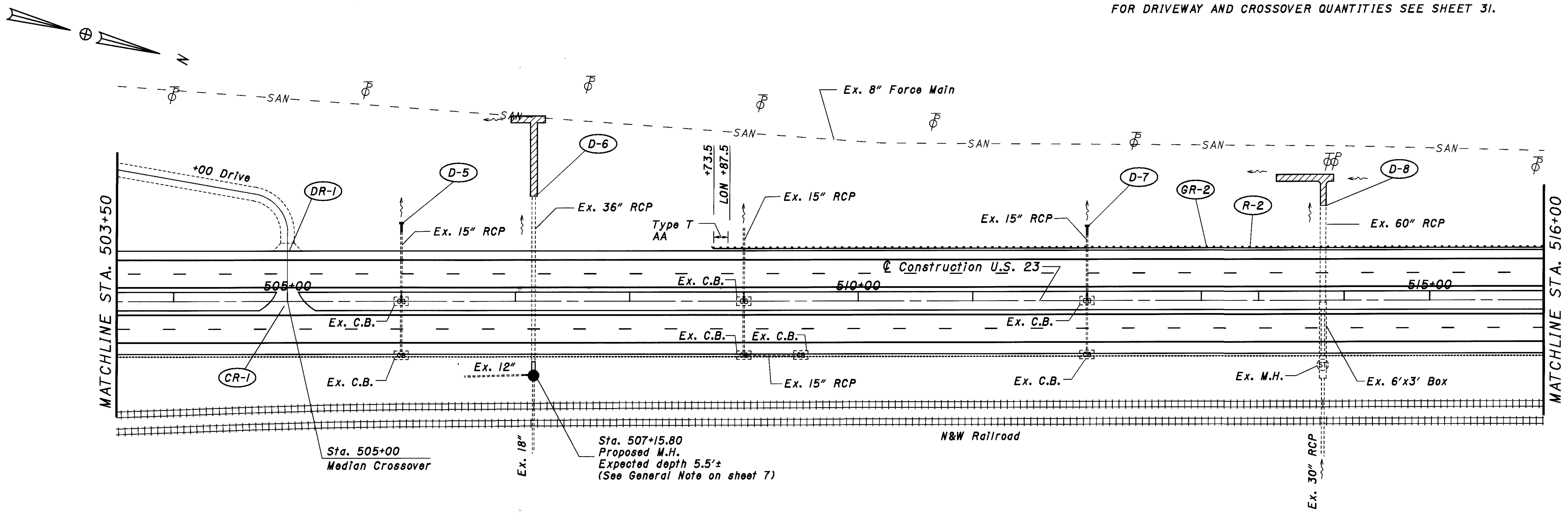
Station 490+13 @ U.S. 23 -
 @ Cook Rd. (C.R. 30)

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FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEETS 28-29.
 FOR DRIVEWAY AND CROSSOVER QUANTITIES SEE SHEET 31.

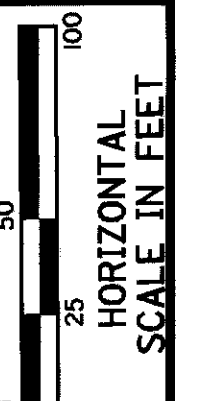


0 25 50 100
 HORIZONTAL
 SCALE IN FEET

PLAN U.S. 23
 STA. 491+00 TO STA. 516+00

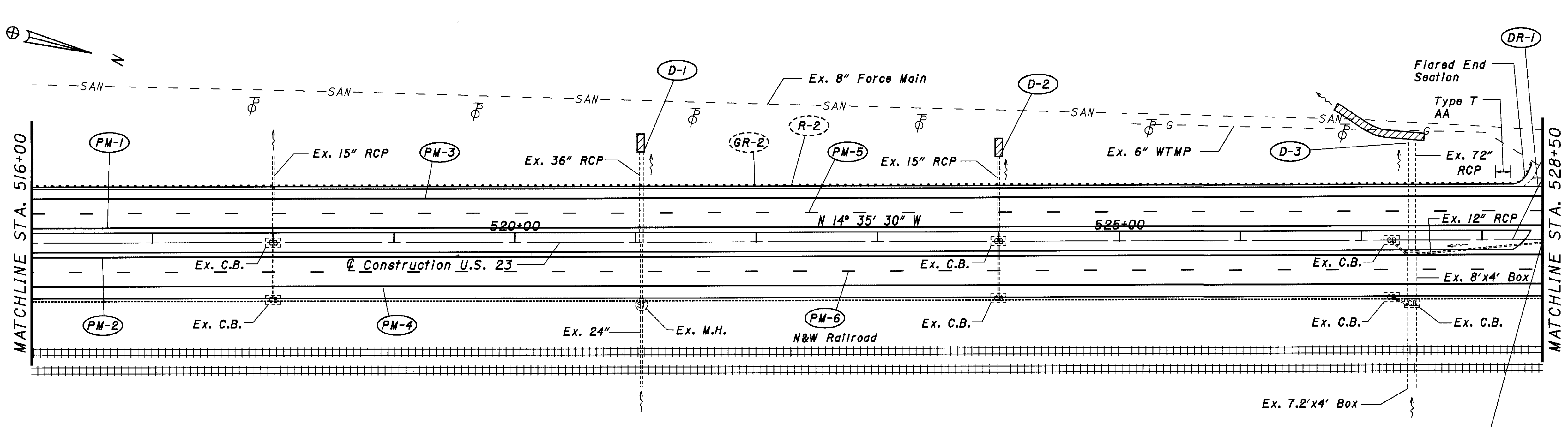
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44
 57



PLAN U.S. 23
 STA. 516+00 TO STA. 541+00

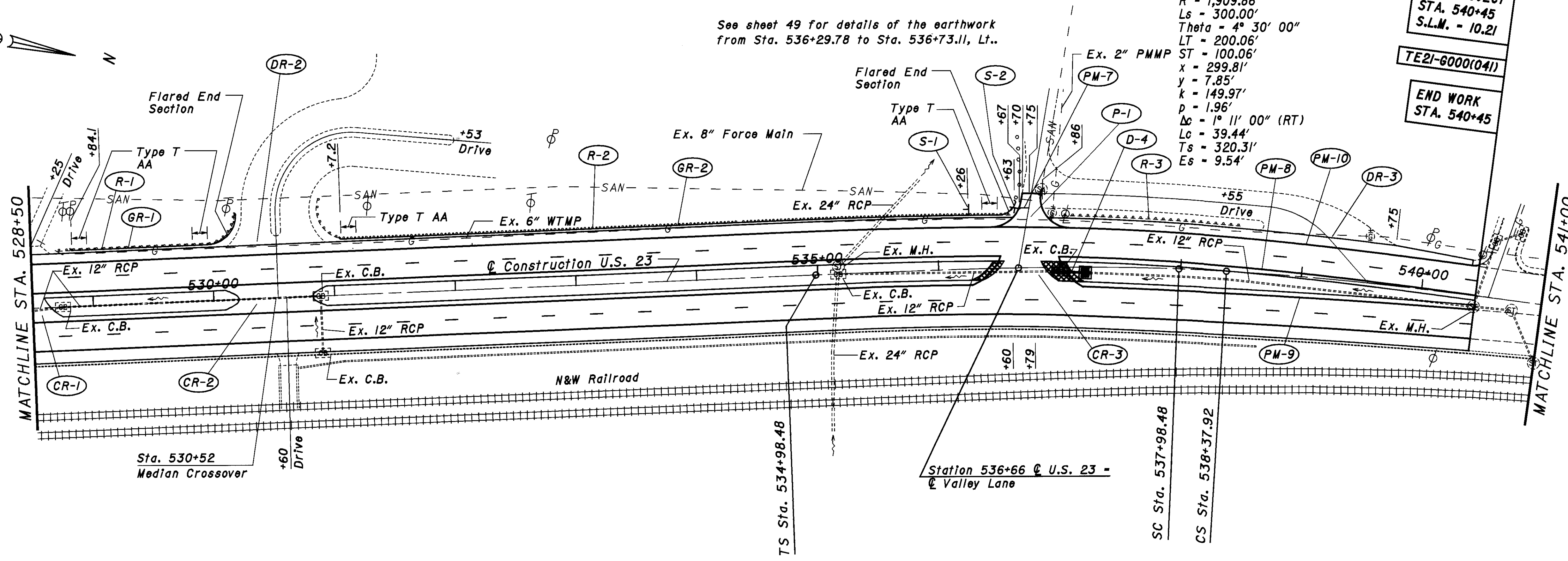
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- MEDIAN CROSSOVER WIDENING BUILD-UP:**
- ITEM 203 - 13 1/2" EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
 - ITEM 304 - 6" AGGREGATE BASE
 - ITEM 408 - BITUMINOUS PRIME COAT (0.4 GAL./SQ. YD.)
 - ITEM 301 - 6" BITUMINOUS AGGREGATE BASE, PG64-22
 - ITEM 880 - 3" ASPHALT CONCRETE (5 YEAR WARRANTY)

FOR DRAINAGE QUANTITIES SEE SHEET 23.
 FOR GUARDRAIL QUANTITIES SEE SHEET 24.
 FOR GUARDRAIL REMOVAL QUANTITIES SEE SHEET 25.
 FOR PAVEMENT MARKING QUANTITIES SEE SHEET 29.
 FOR DRIVEWAY AND CROSSOVER QUANTITIES SEE SHEET 31.
 FOR SIGN QUANTITIES SEE SHEET 32.

Sta. 528+50
Median Crossover

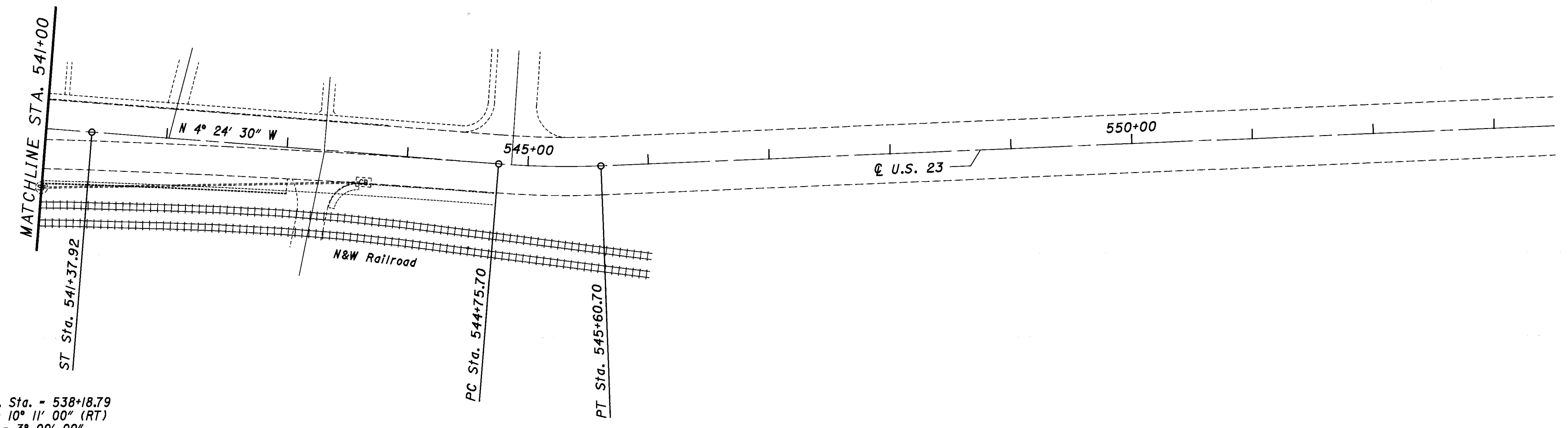
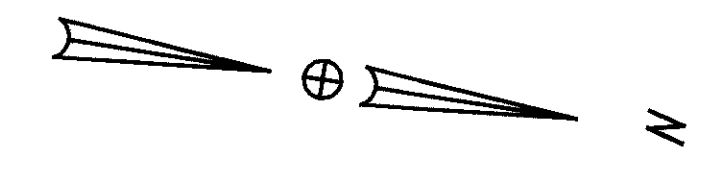


P.I. Sta. = 538+18.79
 $\Delta = 10^\circ 11' 00''$ (RT)
 $D_c = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $L_s = 300.00'$
 $\text{Theta} = 4^\circ 30' 00''$
 $LT = 200.06'$
 $ST = 100.06'$
 $x = 299.81'$
 $y = 7.85'$
 $k = 149.97'$
 $p = 1.96'$
 $\Delta_c = 1^\circ 11' 00''$ (RT)
 $L_c = 39.44'$
 $T_s = 320.31'$
 $E_s = 9.54'$

END PROJECT
 STA. 540+45
 S.L.M. = 10.21
TE21-6000(041)
END WORK
 STA. 540+45

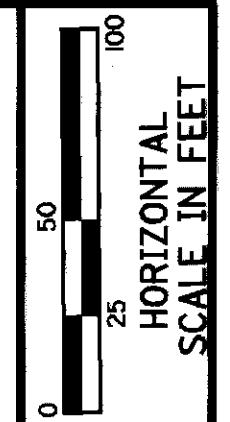
See sheet 49 for details of the earthwork from Sta. 536+29.78 to Sta. 536+73.11, Lt..

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P.I. Sta. = 538+18.79
 Δ = 10° 11' 00" (RT)
 D_c = 3° 00' 00"
 R = 1,909.86'
 L_s = 300.00'
 θ = 4° 30' 00"
 L_T = 200.06'
 S_T = 100.06'
 x = 299.81'
 y = 7.85'
 k = 149.97'
 p = 1.96'
 Δ_c = 1° 11' 00" (RT)
 L_c = 39.44'
 T_s = 320.31'
 E_s = 9.54'

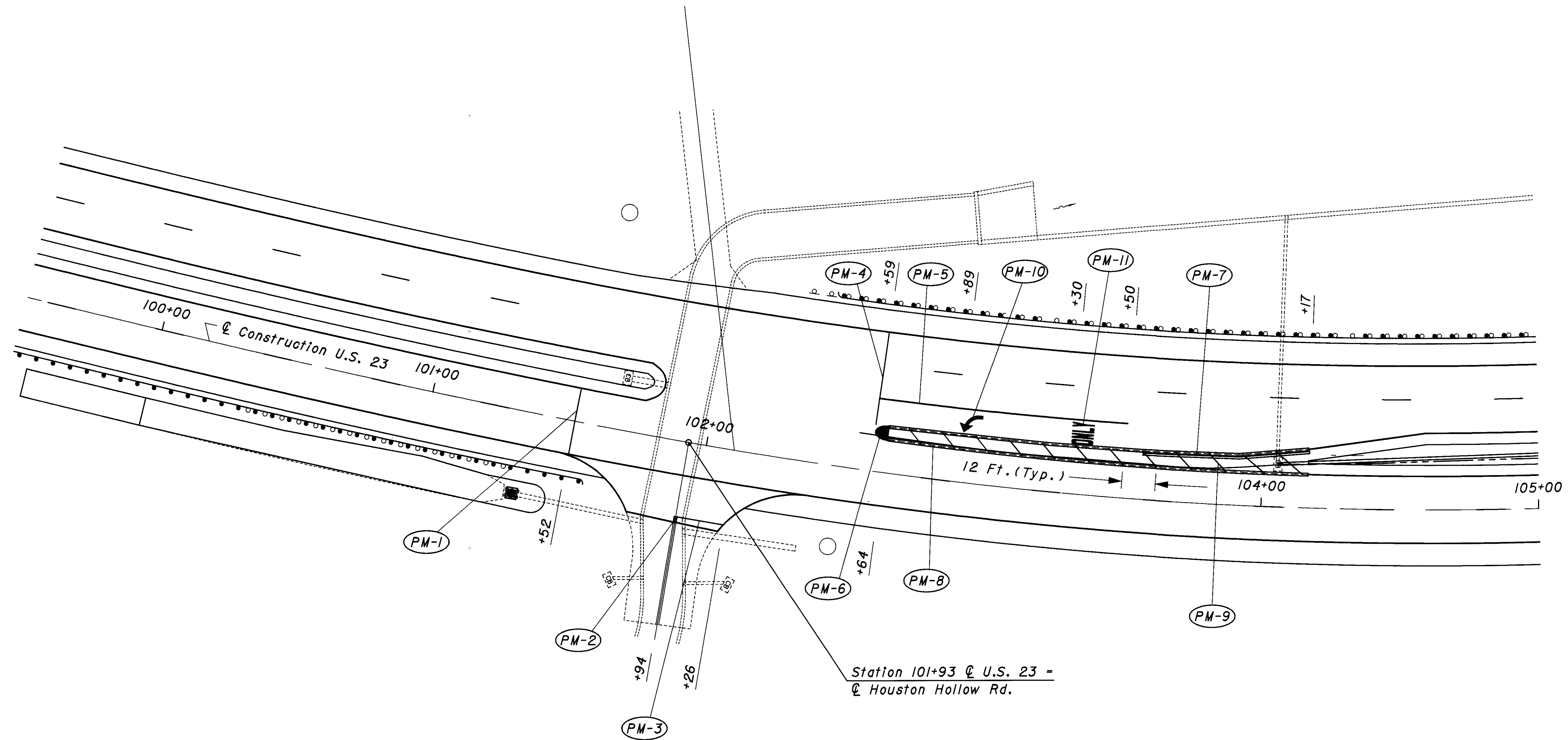
P.I. Sta = 545+18.25
 Δ = 6° 48' 00" (LT)
 D_c = 8° 00' 00"
 R = 716.20'
 T = 42.55'
 L = 85.00'
 E = 1.26'



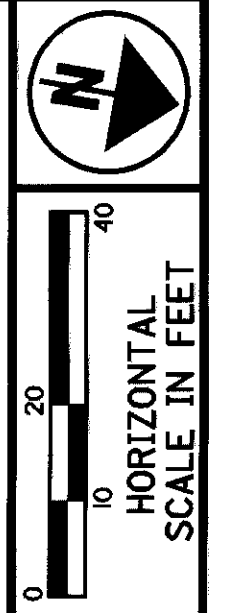
PLAN U.S. 23
 STA. 541+00 TO STA. 553+00

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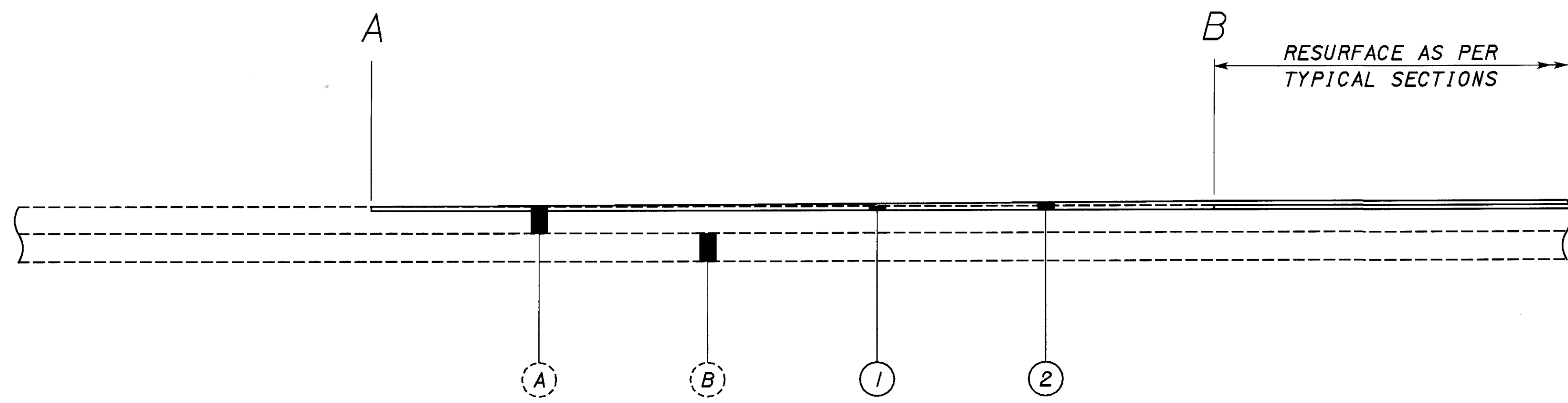
FOR PAVEMENT MARKING QUANTITIES SEE SHEET 29.



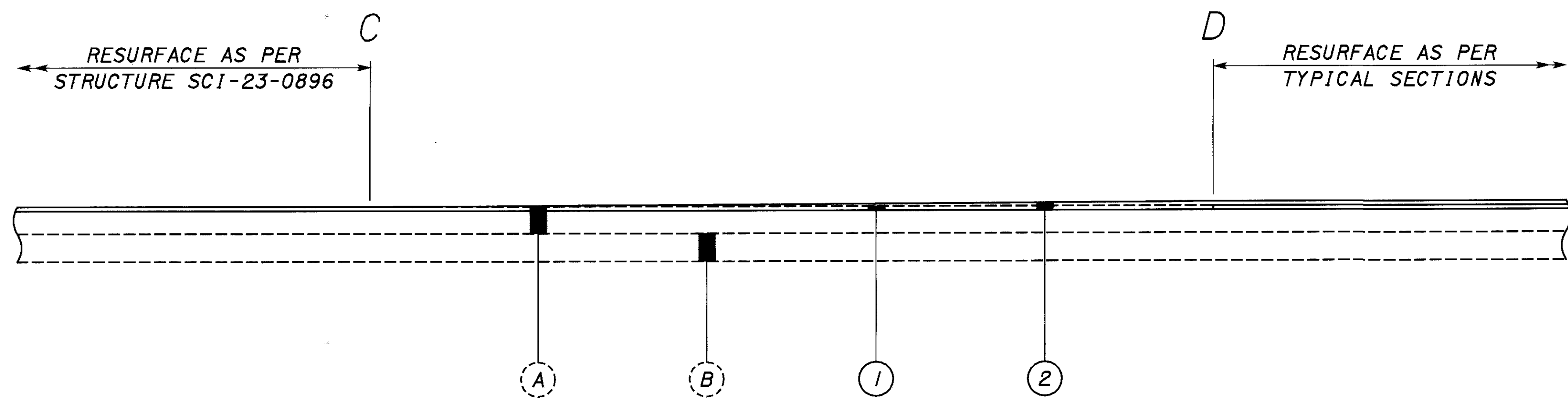
PAVEMENT MARKING INTERSECTION DETAIL -
U.S. 23 & HOUSTON HOLLOW RD.

SCI-23-5.51

47
57



A	B	LENGTH
STA. 290+97.27	STA. 291+40.00	42.73 LIN. FT.
STA. 540+45.00	STA. 539+75.00	70.00 LIN. FT.



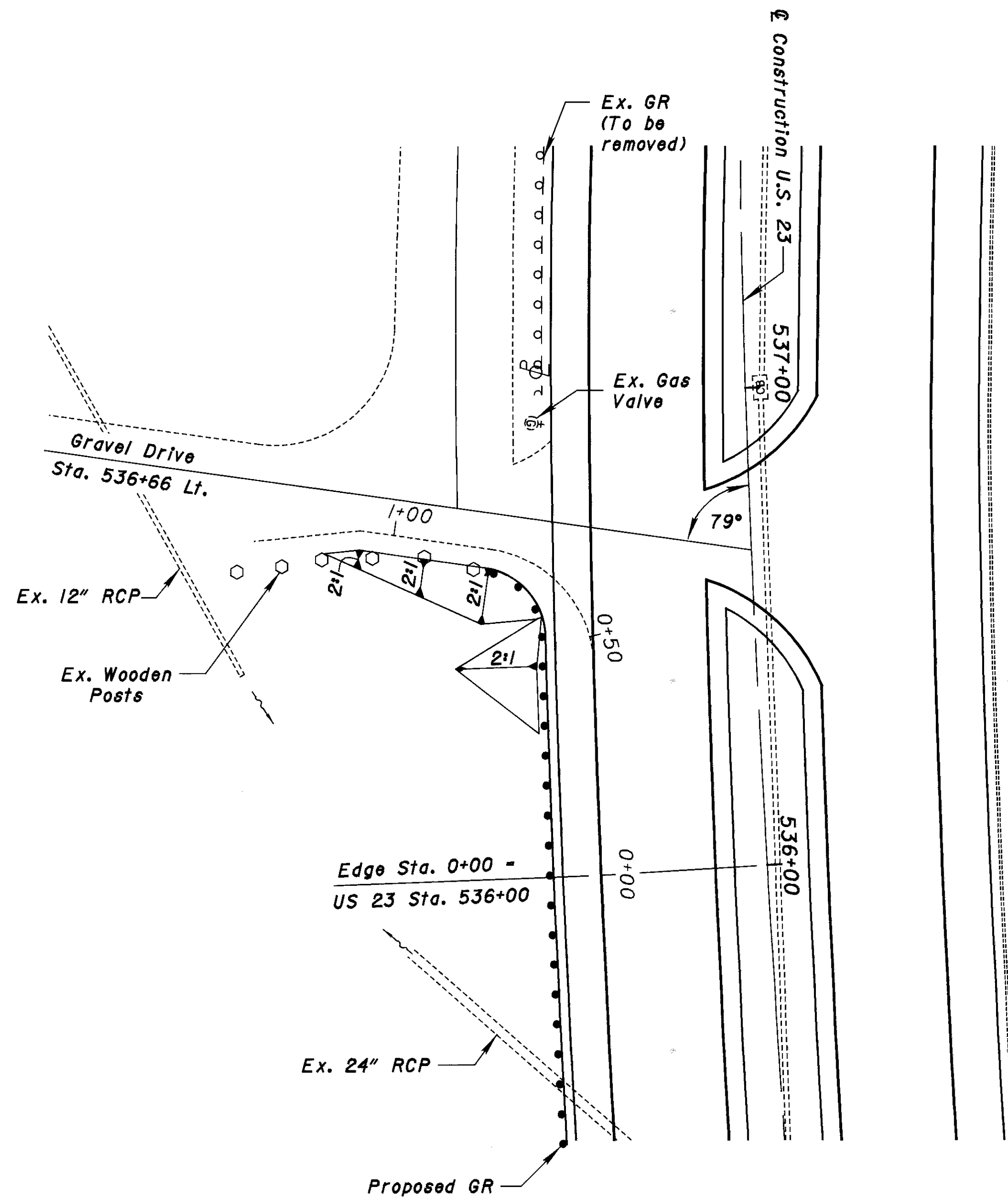
C	D	LENGTH
STA. 472+84.96	STA. 472+40.00	44.96 LIN. FT.
STA. 473+48.96	STA. 473+90.00	41.04 LIN. FT.

LEGEND

- ① ITEM 254 - PAVEMENT PLANING, BITUMINOUS, AS PER PLAN (AVG. 1 1/2")
- ② ITEM 880 - ASPHALT CONCRETE (5 YEAR WARRANTY) (VARIES 1 1/2" TO 3")
- Ⓐ EXISTING PAVEMENT
- Ⓑ EXISTING BASE

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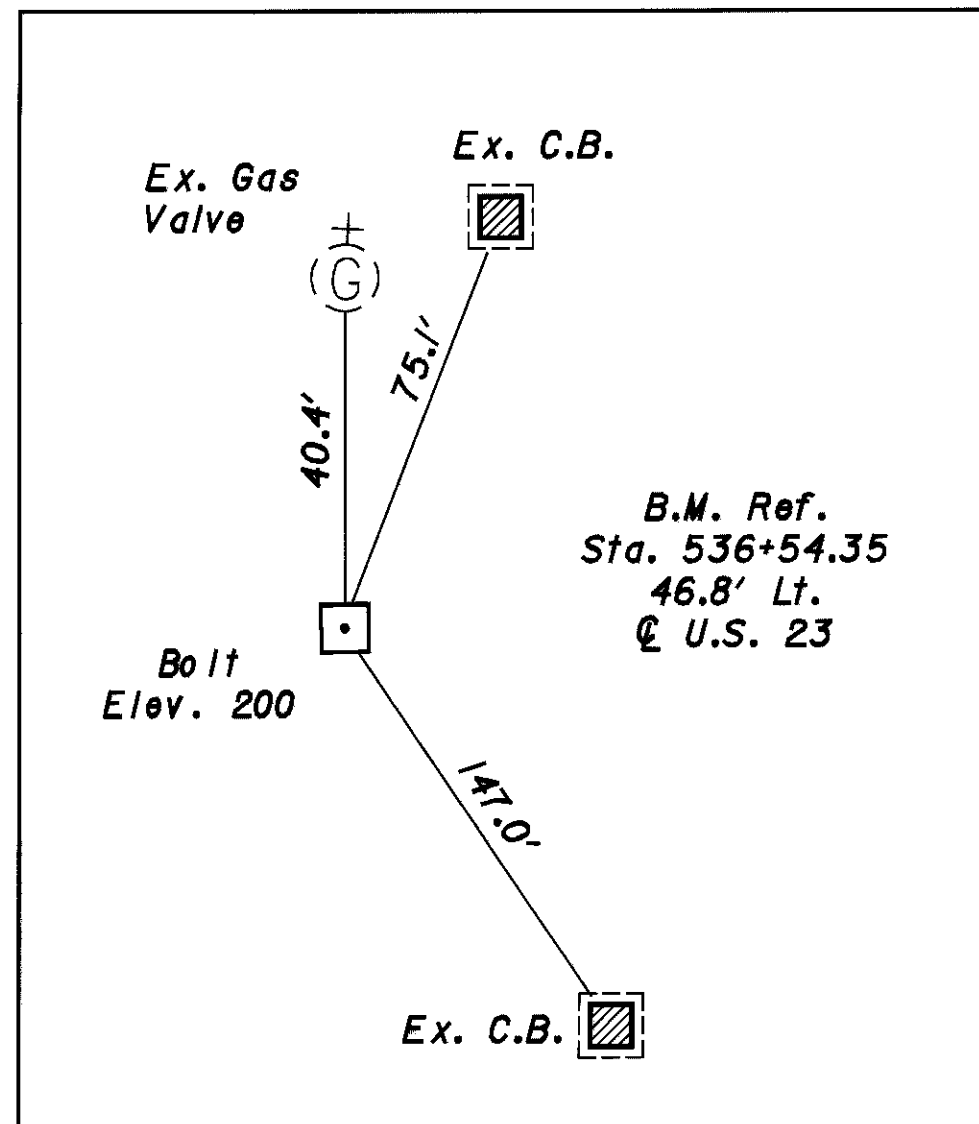
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NOTES:

Care shall be taken when working around the existing wooden posts on the drive. They shall not be damaged, dislocated or otherwise disturbed.

See sheets 32 and 45 for locations of signs in the work area and the associated pay items.

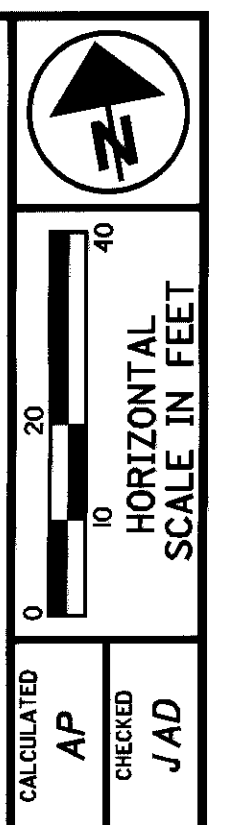


SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL
0		0	0		
33				0	6
17.2		0	8.7		
12				0	3
3.5		0	0.5		
20				0	2
19.2		0	5.2		
15				0	1
0		0	0		
80*	TOTAL			0*	12*

* Totals Carried to the General Summary

EARTHWORK AND SEEDING QUANTITIES

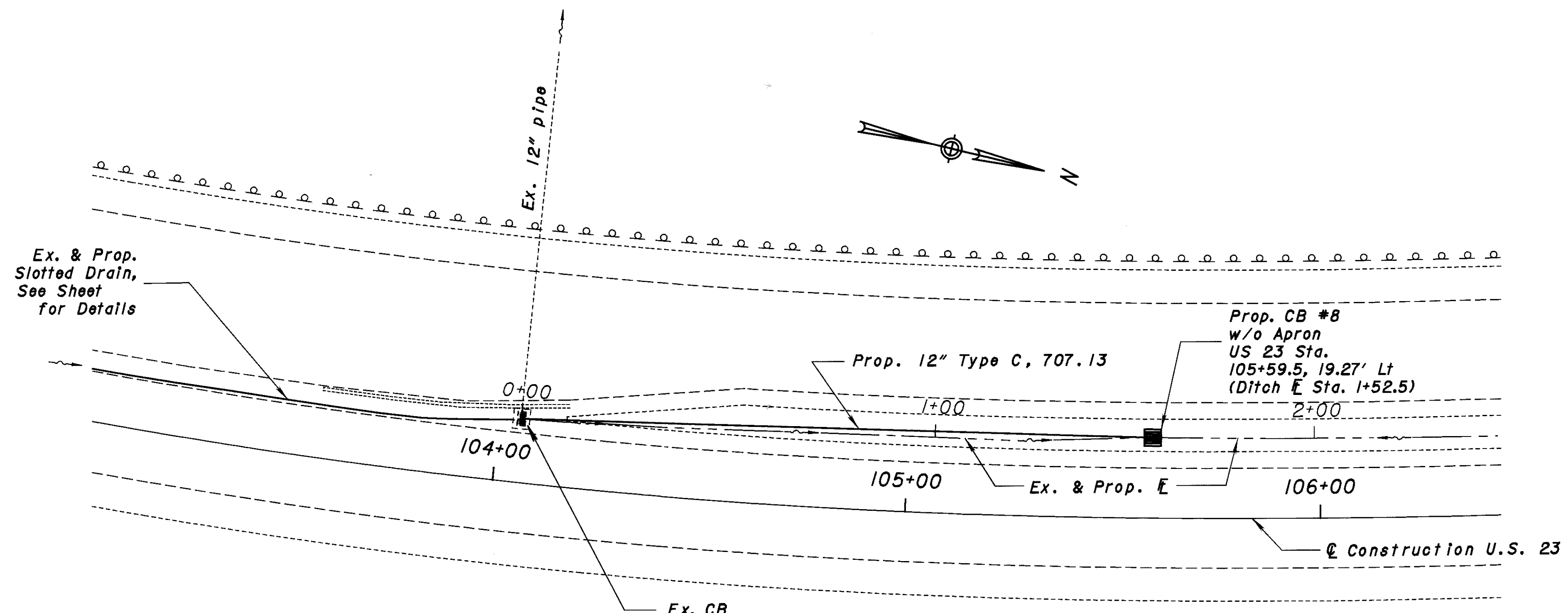
- Existing Ground Line & Structure
- Proposed Ground Line for Roadway Work (not included in the above quantities)
- Proposed Groundline



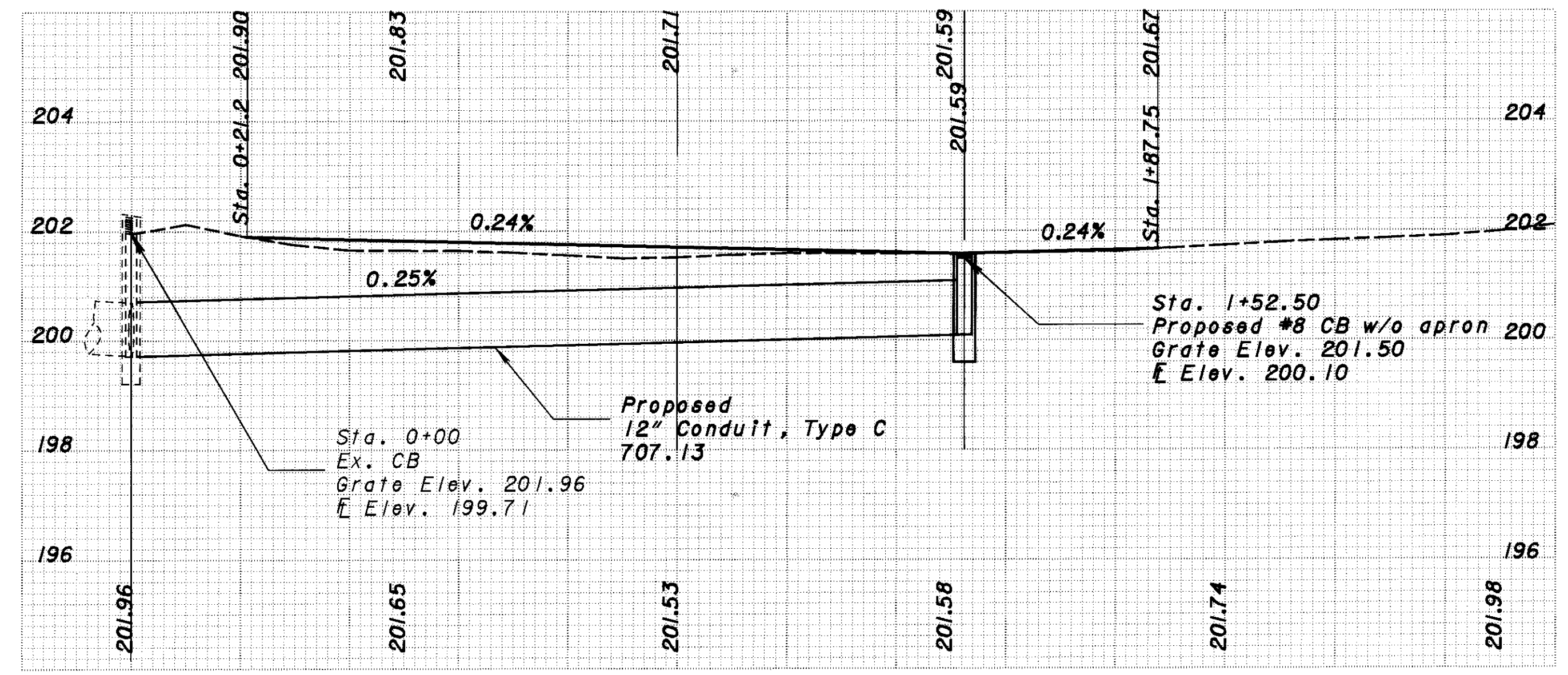
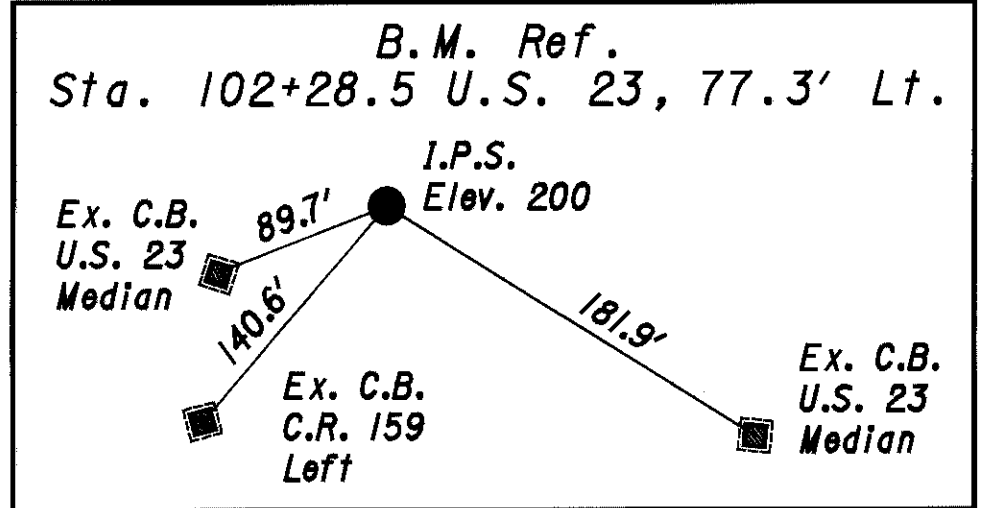
CALCULATED AP CHECKED JAD
MISCELLANEOUS DETAILS
Earthwork Sta. 536+29.78 to Sta. 536+73.11, Lt.

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PLAN VIEW



DITCH LINE PROFILE

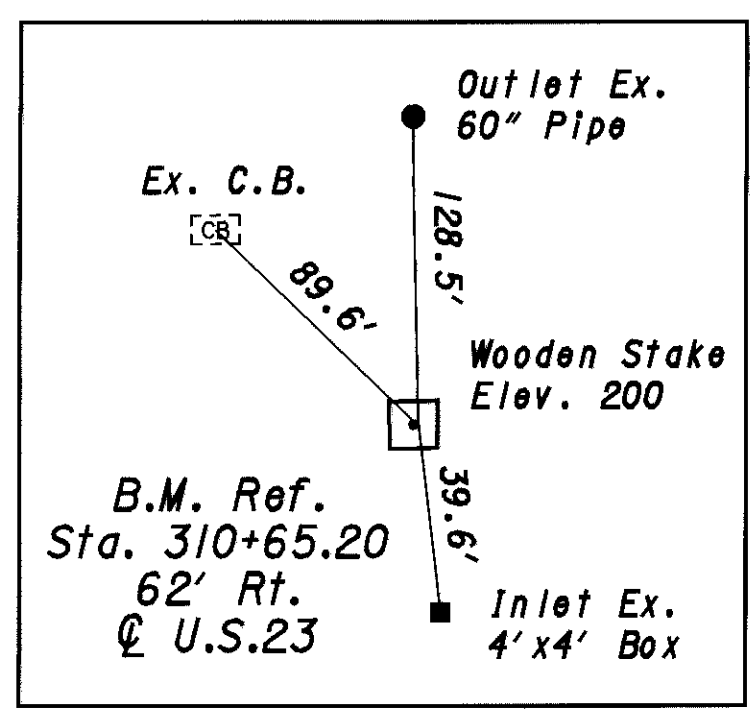
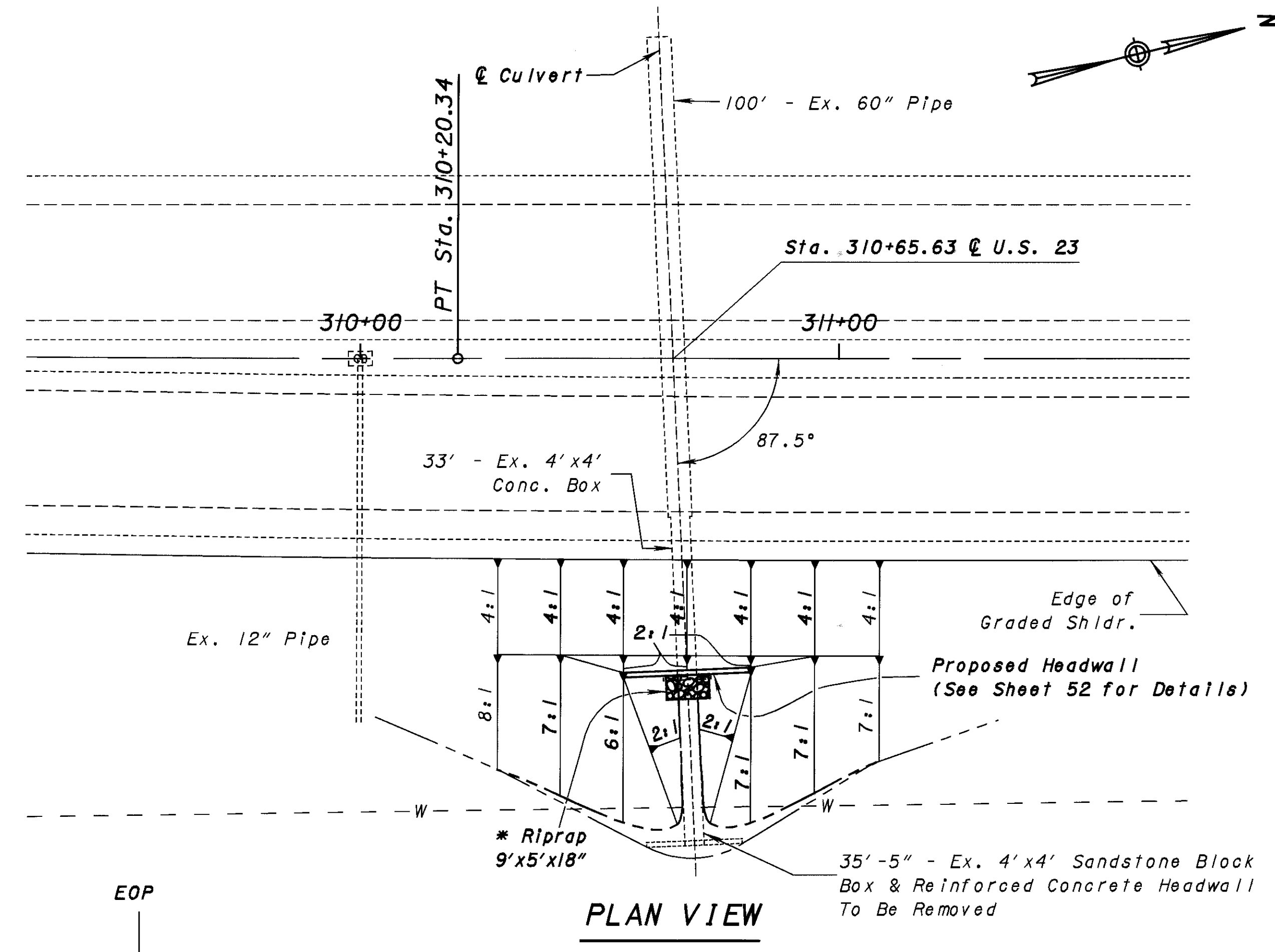
SEEDING	END WIDTH	SO. YDS.	END AREA		VOLUME	
			CUT	FILL	CUT	FILL
0	20	20	0	0		
Ditch E Sta. 1+87.75 (US 23 Sta. 105+85.59, 19.14' Lt.) 201.67						
8	16.8	8	0	0.1	0	0.1
Prop. CB #8 w/o apron Sta. 1+52.5 Grate Elev. 201.50 E Elev. 200.10						
8	44.4	8	0	0.1	0	0.7
Ditch E Sta. 1+50 (US 23 Sta. 105+57.03, 19.25' Lt.) 201.58						
8	44.4	8	0	0.7	0	1.3
Ditch E Sta. 1+00 (US 23 Sta. 105+06.56, 18.11' Lt.) 201.53						
8	44.4	8	0	0.7	0	0.4
Ditch E Sta. 0+50.00 (US 23 Sta. 104+55.95, 17.20' Lt.) 201.65						
0	0	0	0	0	0	0
Ditch E Sta. 0+21.20 (US 23 Sta. 104+26.89, 16.18' Lt.) 201.90						
0	0	0	0	0	0	0
Sta. 0+00 Ex. CB Grate Elev. 201.96 E Elev. 199.71						
0	0	0	0	0	0	0
Ditch E Sta. 0+00.00 (US 23 Sta. 104+05.48, 15.42' Lt.) 202.30						
118*	TOTAL				0*	3*

* Totals carried to the General Summary
CROSS SECTIONS ALONG DITCH LINE

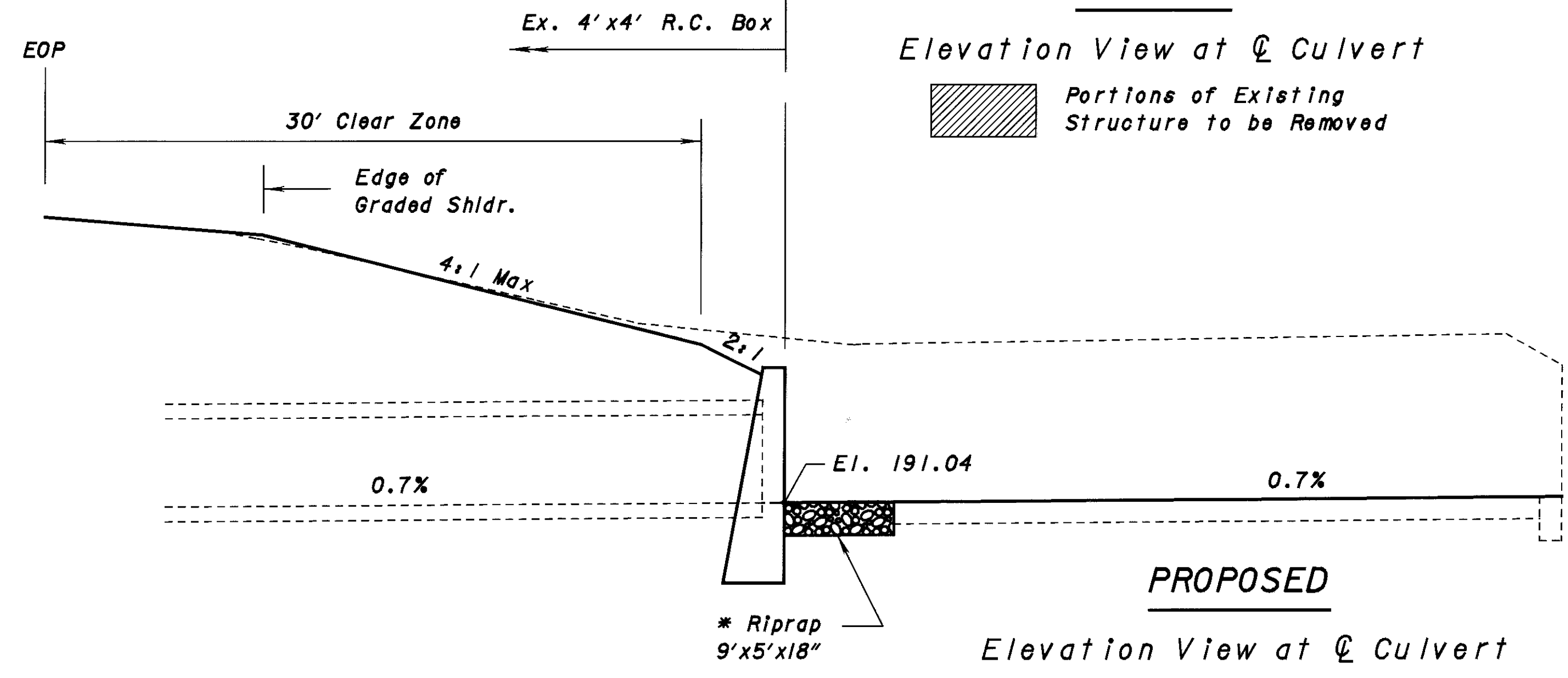
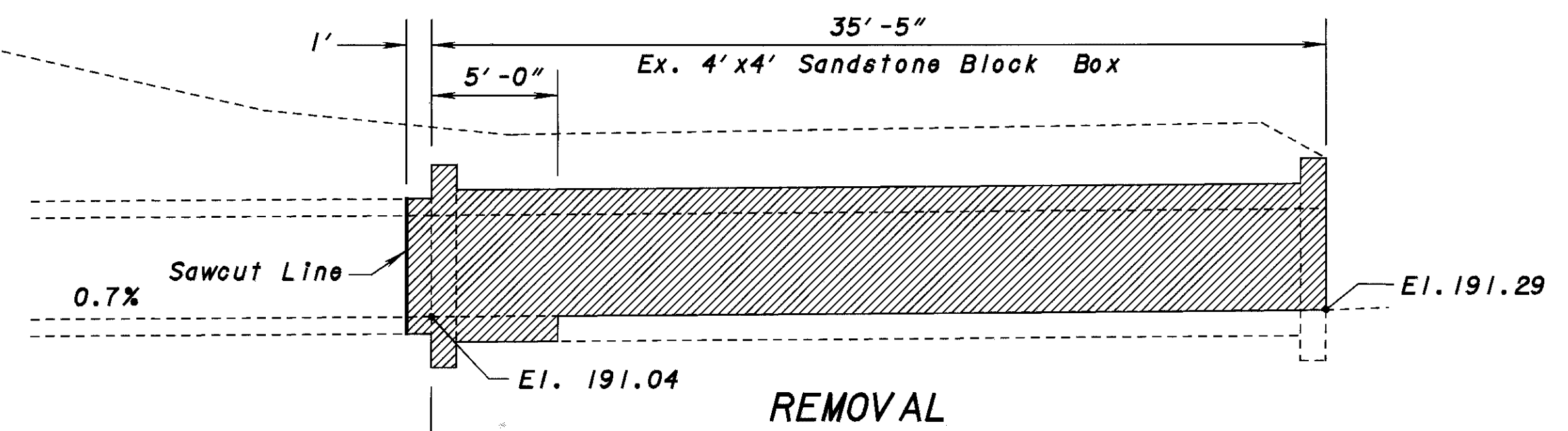
DRAINAGE DETAILS
STA. 104+05.48 to STA. 105+85.59

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*** NOTE**
ITEM 601 RIPRAP
The following quantity has been carried to the General Summary for the riprap to be placed at station 310+68.6, 69' Rt.
ITEM 601 RIPRAP 5.0 Sq. Yd.

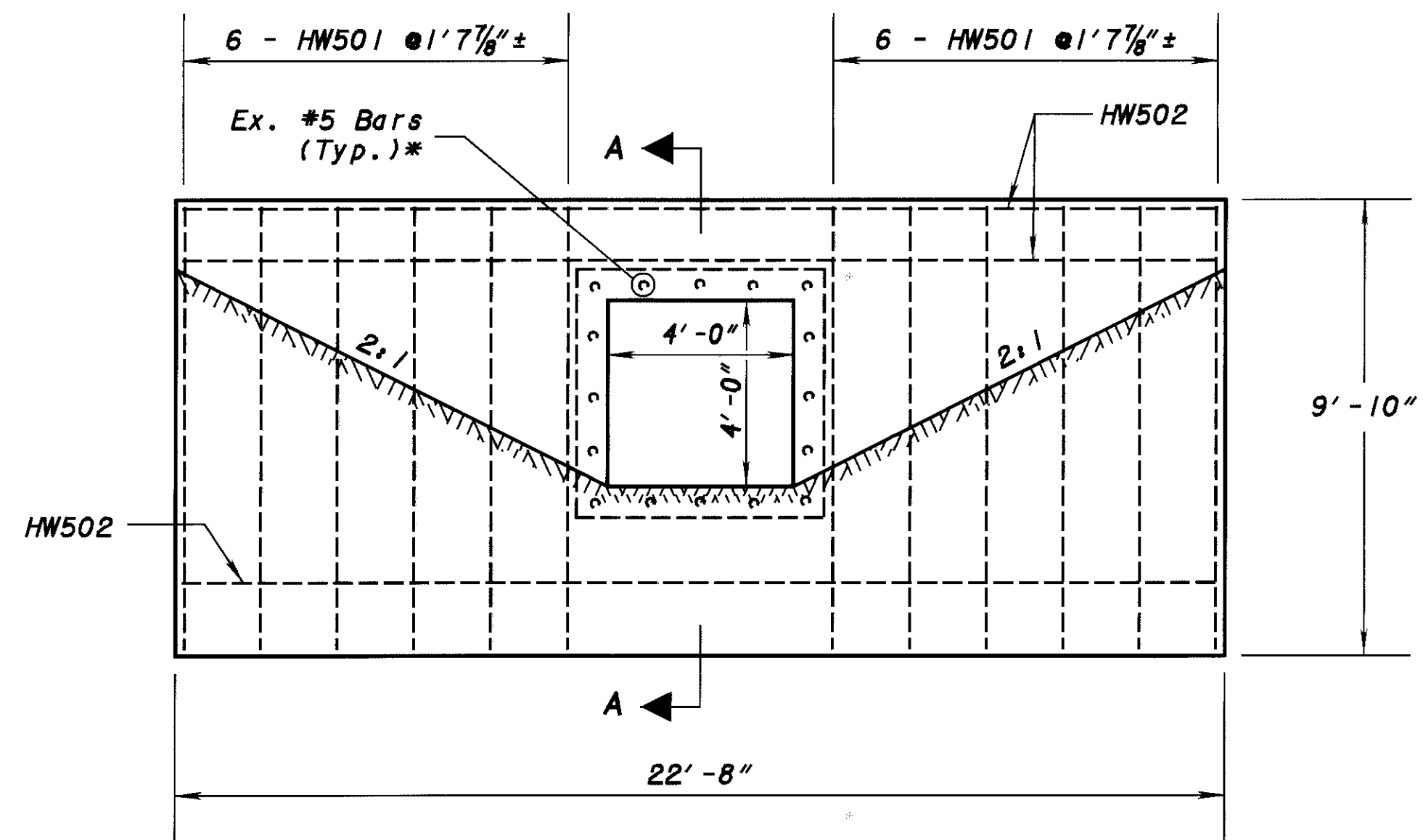


SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL
0	200	0	0		
64	EOP 311+10, 32' Rt. @ U.S. 23			42	0
58	198	114	0		
130	EOP 310+90, 32' Rt. @ U.S. 23			90	0
59	198	128	0		
118	EOP 310+70, 32' Rt. @ U.S. 23			65	0
				-47	0
47	198	46	0		
52	EOP 310+50, 32' Rt. @ U.S. 23			17	0
0	198	0	0		
	EOP 310+30 @ U.S. 23				
364*	TOTAL	TOTAL		167*	0*

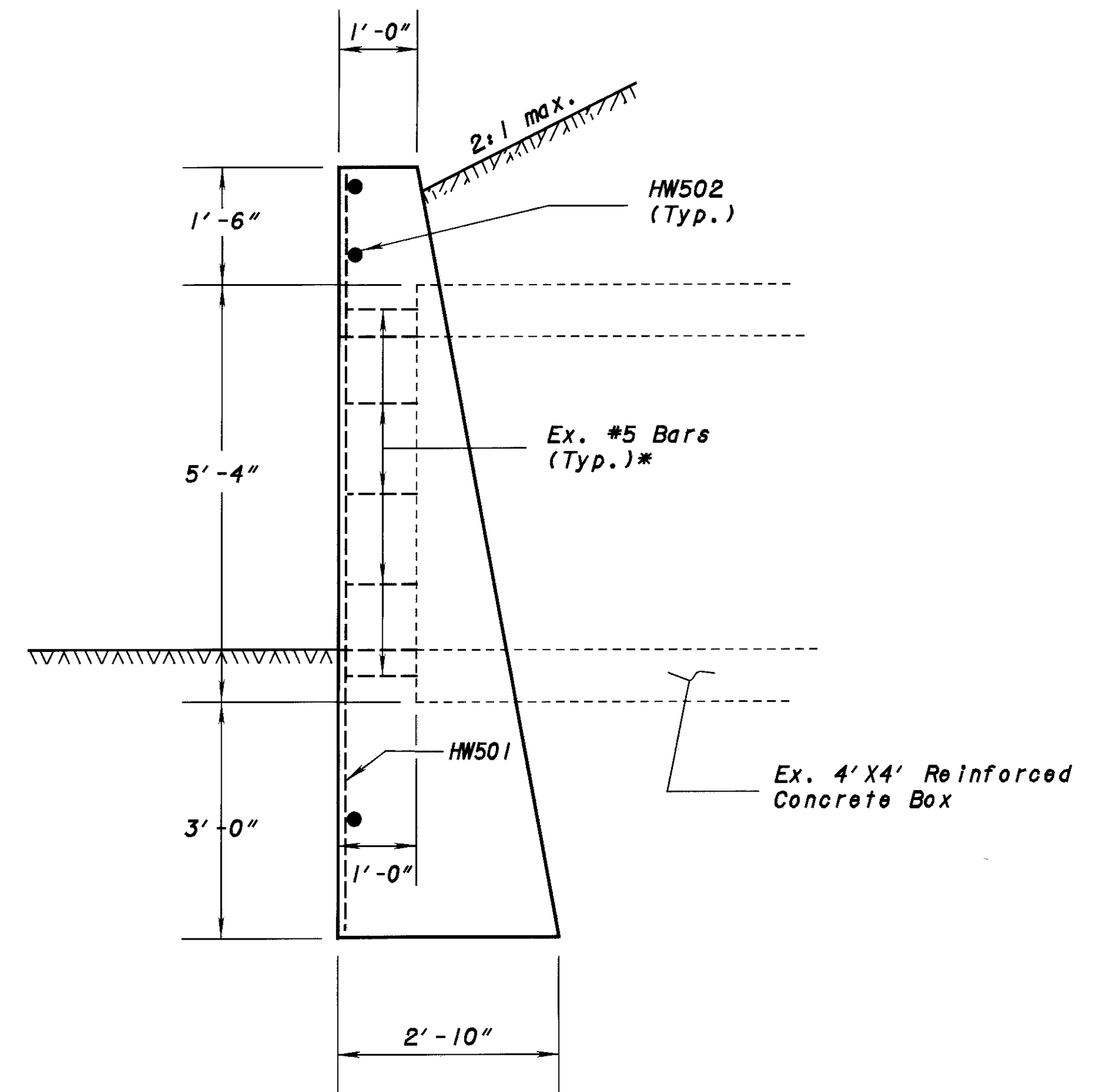
* Totals Carried to the General Summary

EARTHWORK AND SEEDING QUANTITIES

- Existing Ground Line & Structure
- Proposed Ground Line for Roadway Work (not included in the above quantities)
- Proposed Groundline



PROPOSED HEADWALL
Elevation View

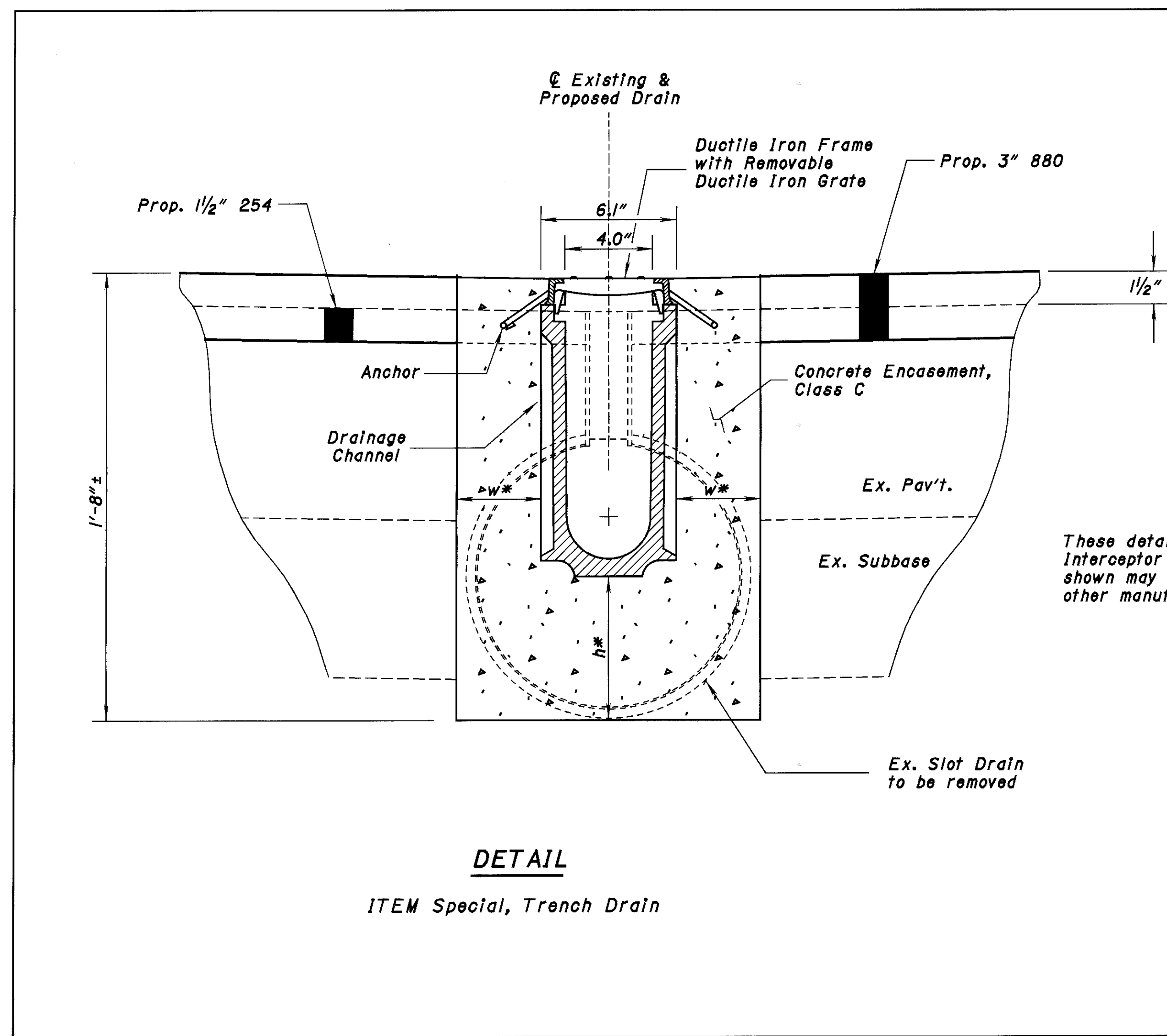
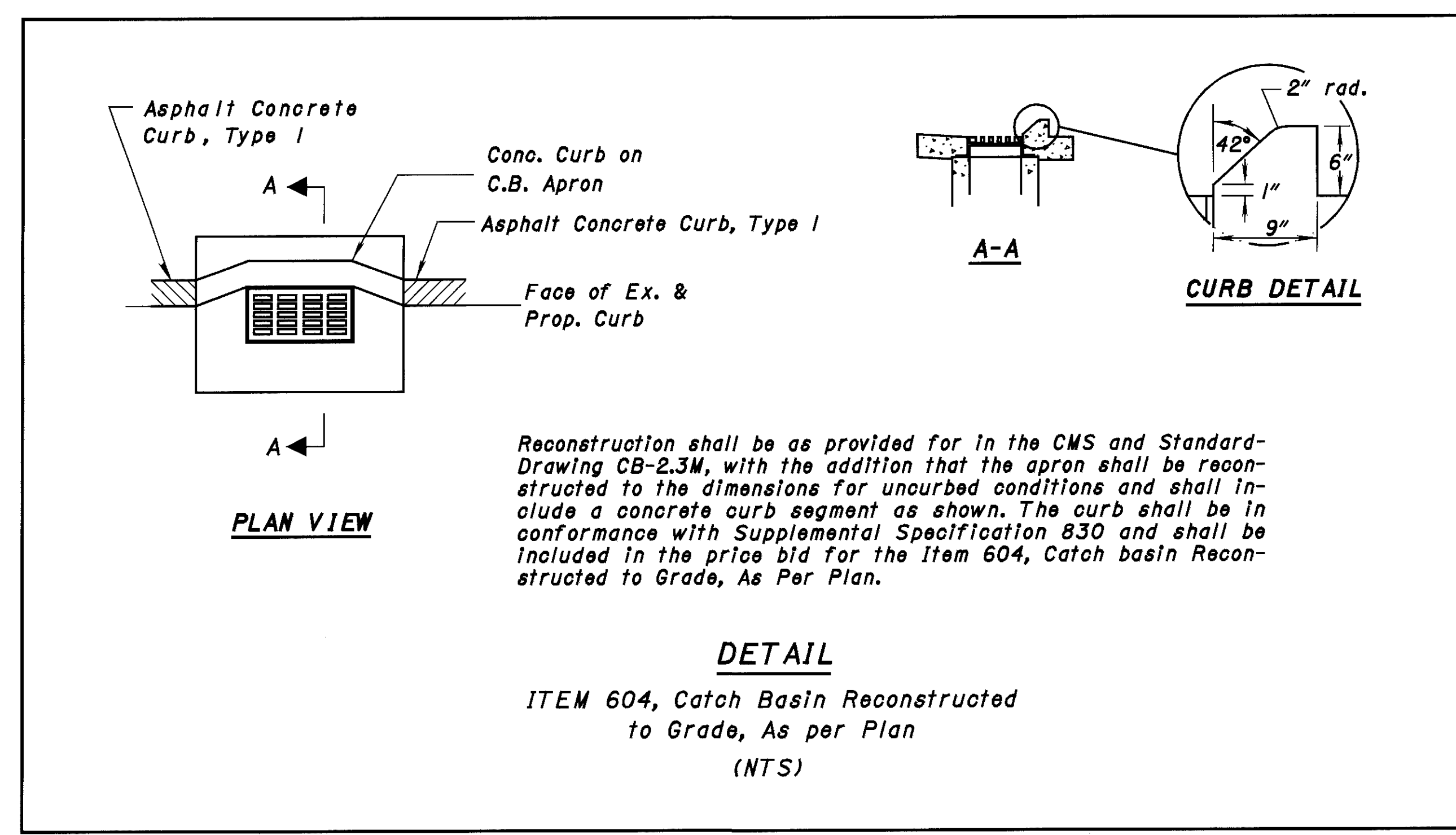
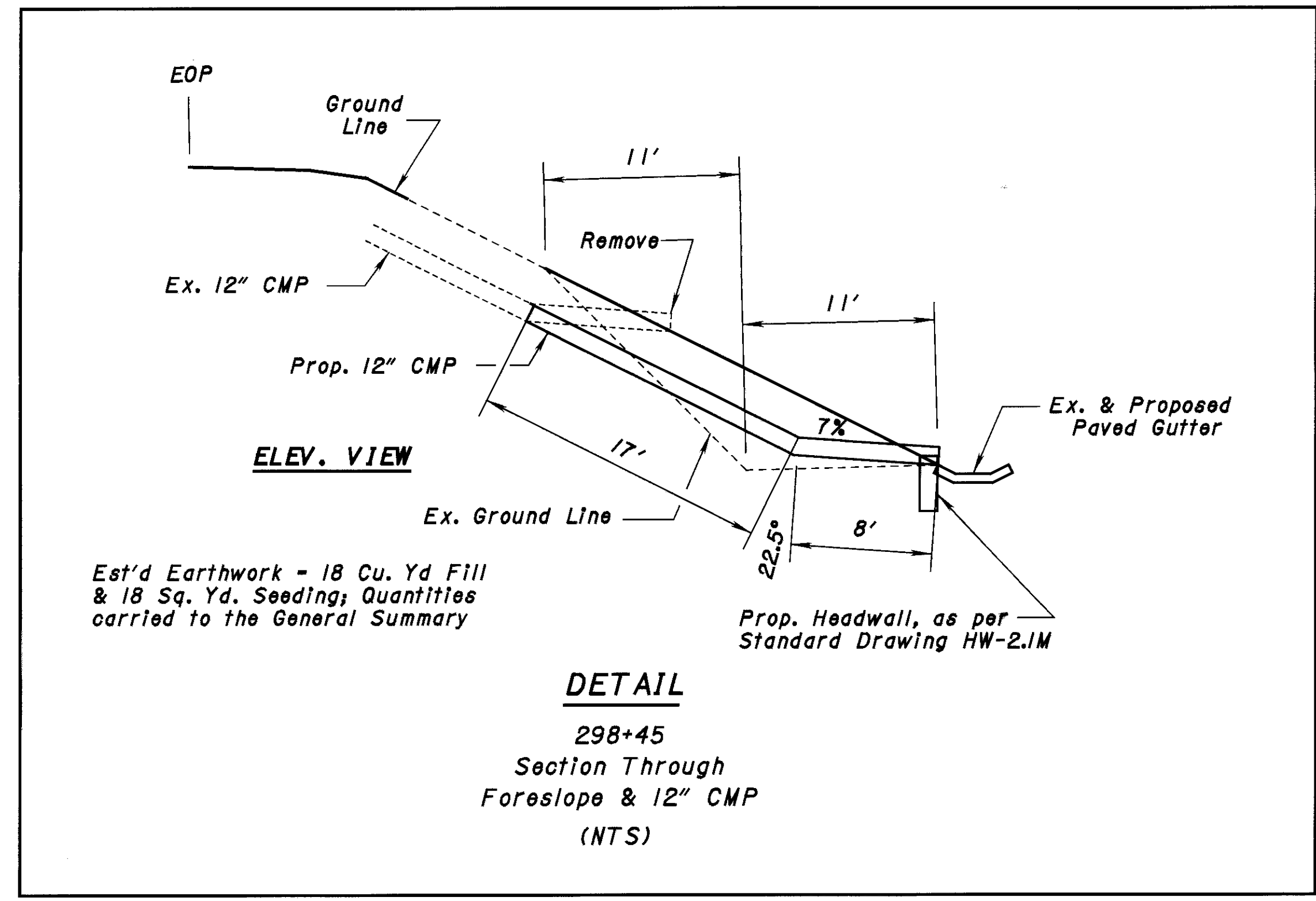


SECTION A-A

HEADWALL REINFORCEMENT
FOR INFORMATION ONLY

MARK	TOTAL	LENGTH	WEIGHT	TYPE
HW501	12	5'-0"	63	Str
HW502	3	22'-4"	70	Str

* The 16 existing longitudinal, straight #5 reinforcement bars shall be preserved for reuse. Any such reinforcement that the Engineer finds to be unusable due to damage incurred by the Contractor's operations shall be replaced with new steel at the Contractor's expense. Any reinforcement that the Engineer deems to be unusable due to corrosion or other cross-section that existed prior to concrete removal shall be replaced by the Contractor with new steel, and the cost of such replacement shall be included in the price bid for Item 602, Concrete Masonry.



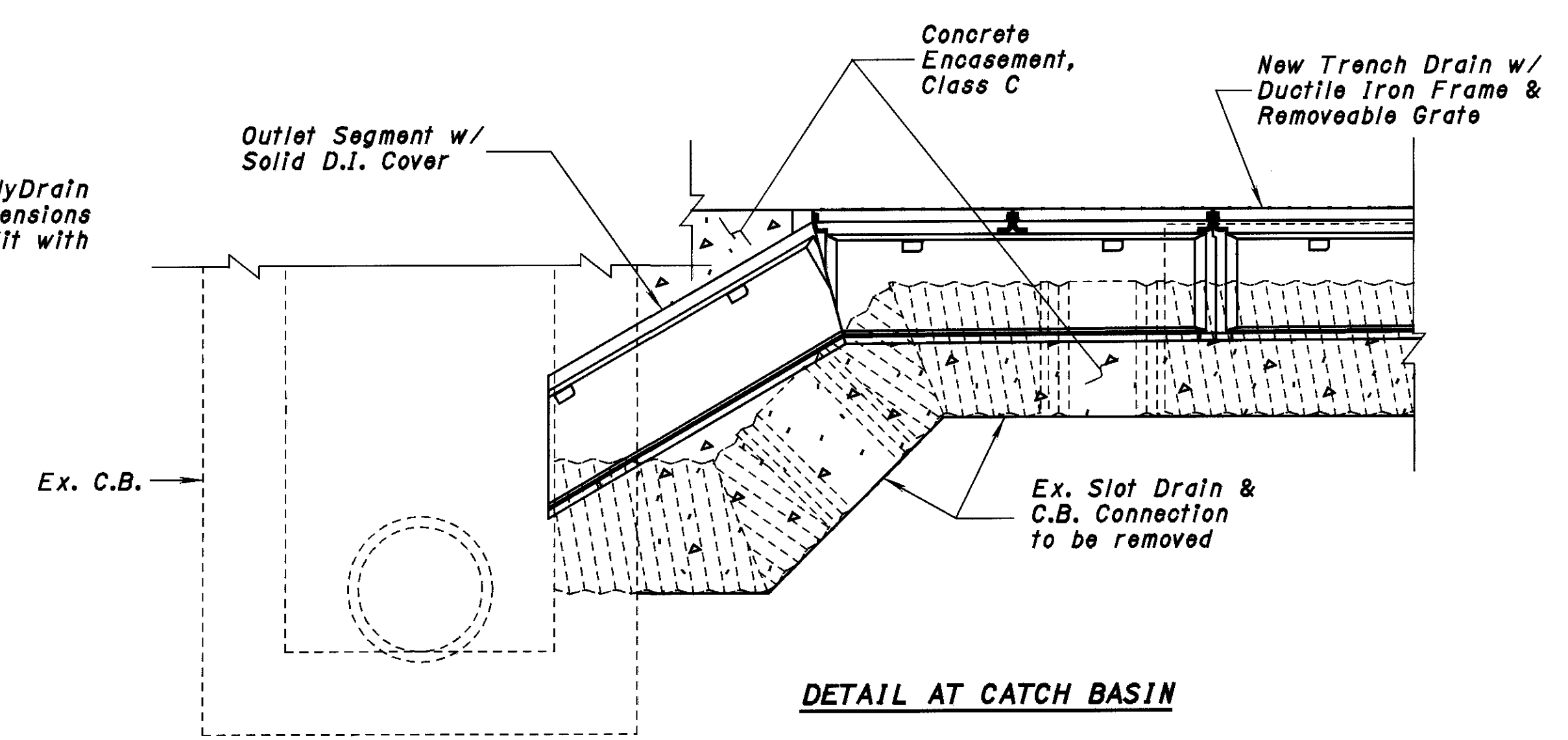
*** TRENCH AND ENCASEMENT DIMENSIONS**

The excavation for the removal of the existing slot drain system shall serve as the trench for the new trench drain system.

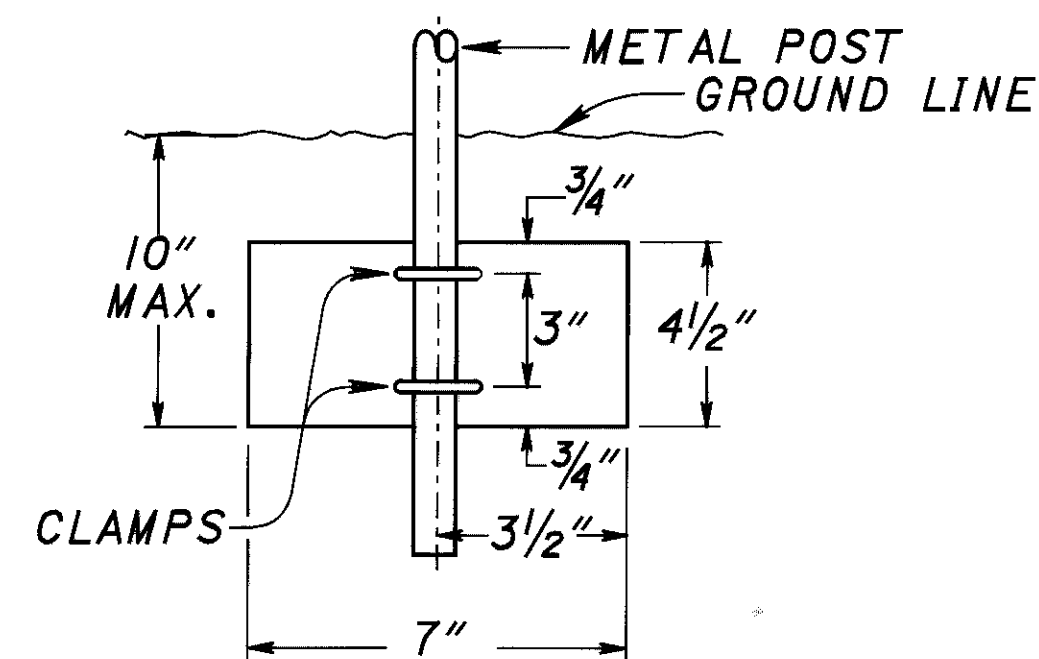
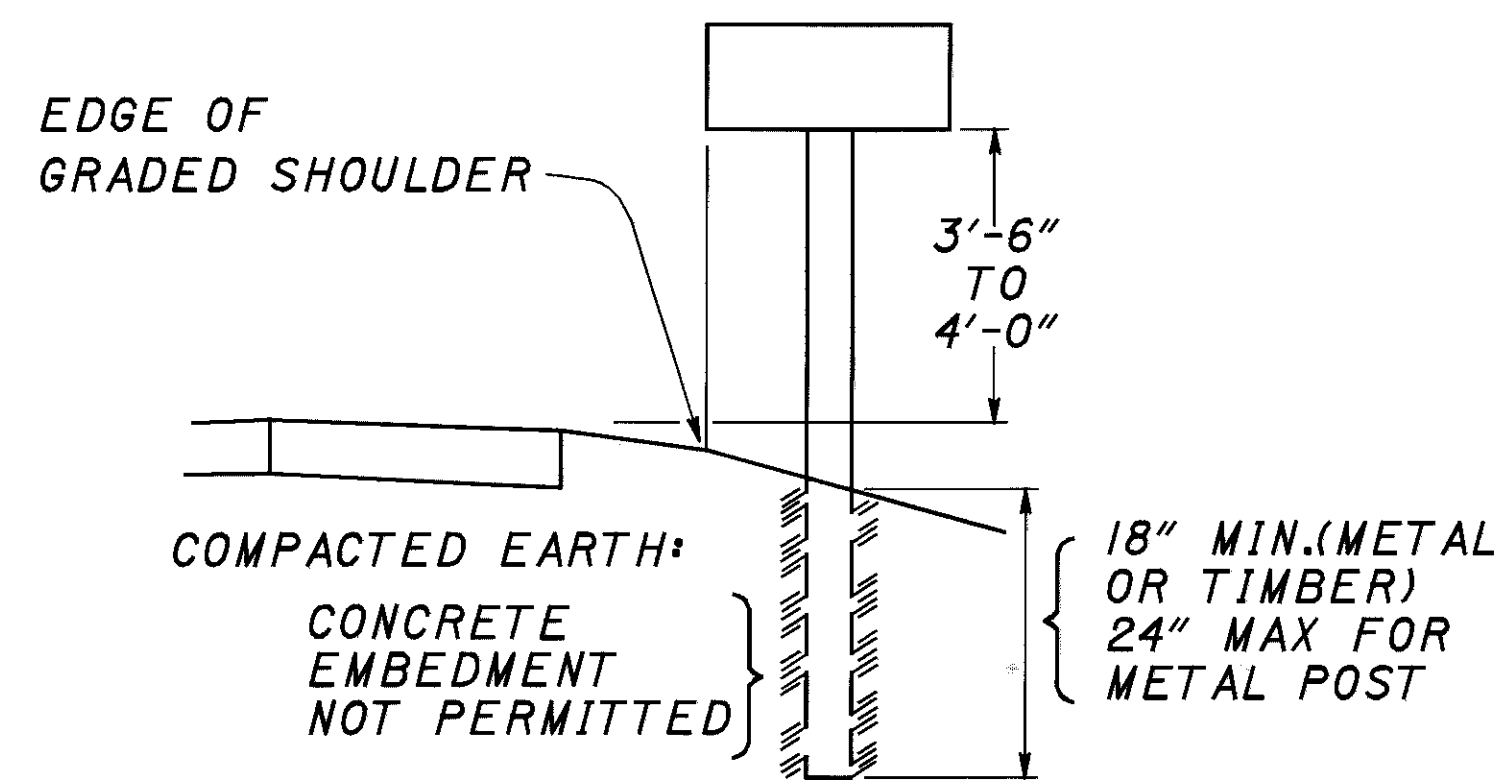
At any location where the trench opening does not meet the manufacturer's minimum required lateral (dimension w) or bottom (dimension h) clearances, additional excavation shall be performed to meet these limits. The costs of such additional excavation are to be included in the unit price bid for ITEM Special, Trench Drain.

The concrete encasement shall completely fill the trench.

These details are based upon the PolyDrain Interceptor A-67 by ABT, Inc. The dimensions shown may be adjusted as needed to fit with other manufacturer's specifications



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ANTI-TWIST PLATE

ITEM SPECIAL - MAILBOX SUPPORT

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

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4 1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

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

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.

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

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

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

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

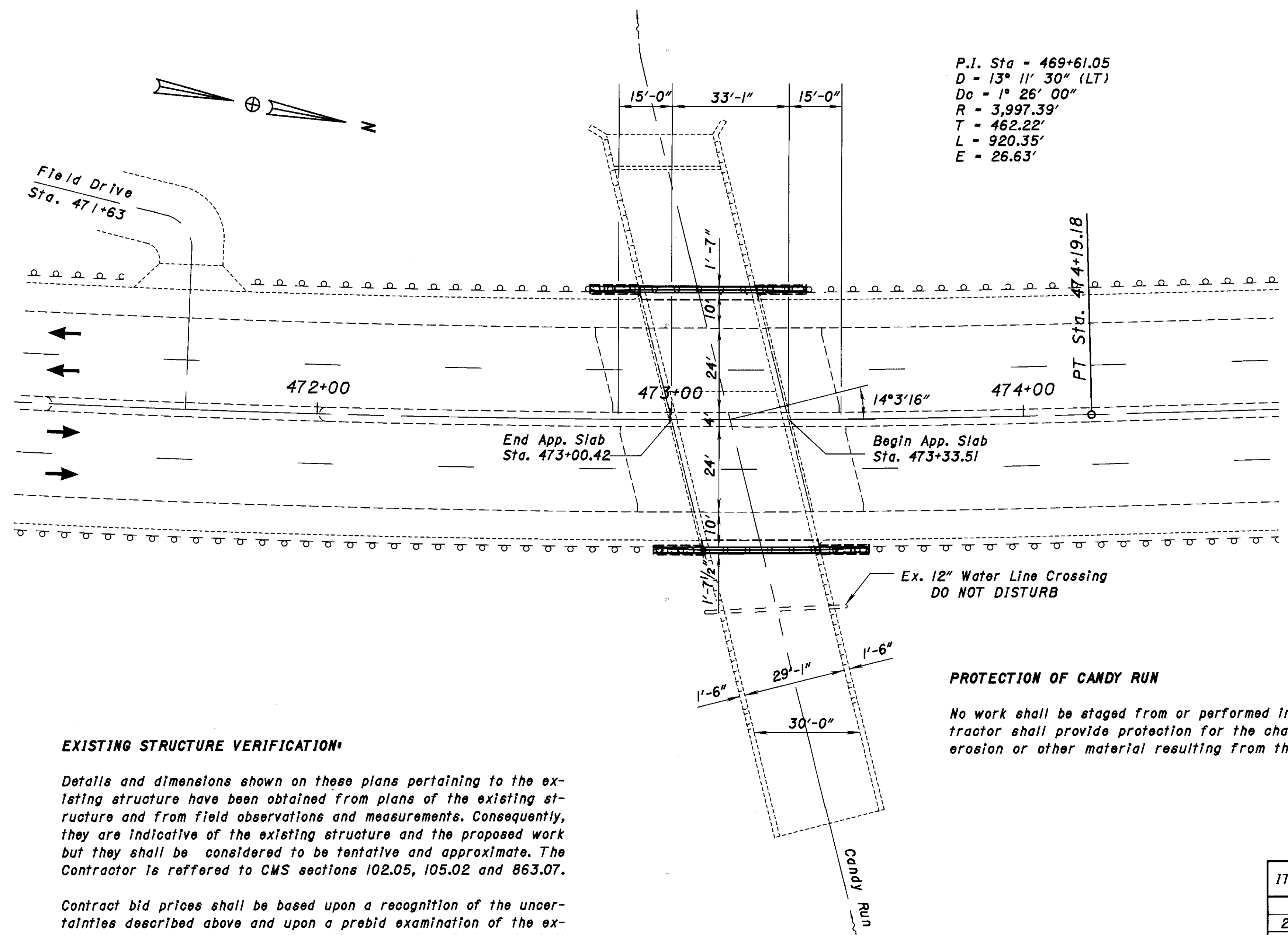
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL - MAILBOX SUPPORT SYSTEM, SINGLE 1 EACH

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P.I. Sta = 469+61.05
 D = 13° 11' 30" (LT)
 Dc = 1° 26' 00"
 R = 3,997.39'
 T = 462.22'
 L = 920.35'
 E = 26.63'

EXISTING STRUCTURE

Type: Reinforced Concrete Box Culvert
 Span: 30' clear along ϕ roadway
 Roadway: 72' f/f guardrail including 4' median
 Load: S-15-40
 Skew: 14°-3'-16" R.F.
 Wearing Surface: Variable thickness bituminous concrete
 Approach Slabs: 15'-0"
 Alignment: 1°26' curve lt.

STRUCTURE WORK ACTIVITIES	DETAILS
• Remove portions of existing overlay and structure	2/4
• Construct reinforced concrete deck extension and single slope parapet	3/4,4/4
• Construct new single slope concrete barrier transitions	3/4,4/4
• Seal new concrete surfaces	4/4

EXISTING STRUCTURE VERIFICATION:

Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered to be tentative and approximate. The Contractor is referred to CMS sections 102.05, 105.02 and 863.07.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

Historic plan references: S.H. 5 Sec "H" (Pt.) and SCI-23-(5.99-9.08)

PAVING CALCULATIONS

STATION 472+84.96 TO STATION 473+48.96

ITEM 880 1 1/2" Asphalt Concrete (5 Year Warranty)
 $[(64.0' \times 72.0' \times 1.5"/12) + (34.1' \times 3' \times ((7/2" + 5" + 8" + 7/4") \times 1/2) - 1.5"/12) + 27] = 25.4 \text{ Cu. Yd.}$

ITEM 254 Pavement Planing, Bituminous, As Per Plan

$[(30.0' \times 68.0') + (34.0' \times 72')] + 9 = 498.7 \text{ Sq. Yd.}$

EARTHWORK & SEEDING QUANTITIES

The following earthwork and seeding quantities apply from station 472+78.94 to station 473+54.94:

CUT: 4.0 Cu.Yd.
 FILL: 6.0 Cu.Yd.
 SEEDING: 45 Sq. Yd.

SEALING LONGITUDINAL DECK JOINTS

The longitudinal deck joints between the new and old concrete shall be sealed with High Molecular Weight Methacrylate (HMWM) resin as per supplemental specification 846 date 06/15/99. The sealant shall be applied to the deck surface for the full length of each joint and for a distance of a minimum of 1' on either side of the joint. The cost of this work shall be incidental to Item 842, Class S Concrete, Superstructure.

PROTECTION OF CANDY RUN

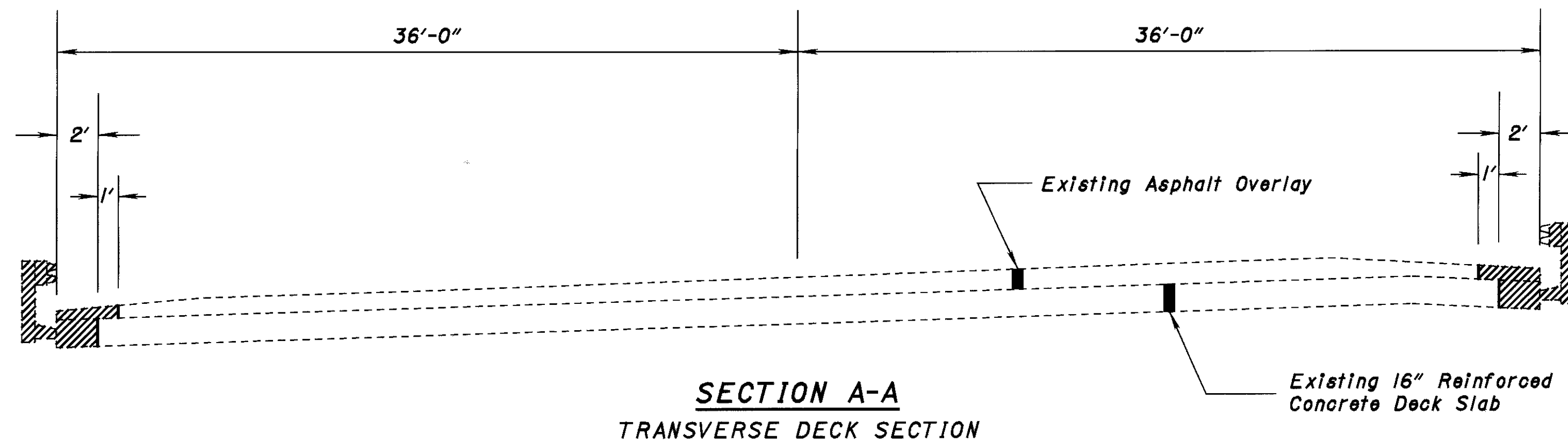
No work shall be staged from or performed in the channel. The Contractor shall provide protection for the channel from debris, soil erosion or other material resulting from the work in this area.

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
202	11200	Lump		Portions of Structure Removed
Special	51267510	131	Sq. Yd.	Sealing of Concrete Surfaces (Epoxy-Urethane)
622	10161	56	Lin. Ft.	Concrete Barrier, Single Slope, Type D, As Per Plan
842	34000	25	Cu. Yd.	Class S Concrete, Superstructure
254	01001	499	Sq. Yd.	Pavement Planing, Bituminous, As Per Plan
524	94500	66	Lin. Ft.	Drilled Shafts, 24" Diameter
880	10000	25	Cu. Yd.	Asphalt Concrete (5 Year warranty)
203	12000	4	Cu. Yd.	Excavation not Including Embankment Construction
203	20000	6	Cu. Yd.	Embankment
870	10000	45	Sq. Yd.	Seeding and Mulching

These totals have been carried to the General Summary

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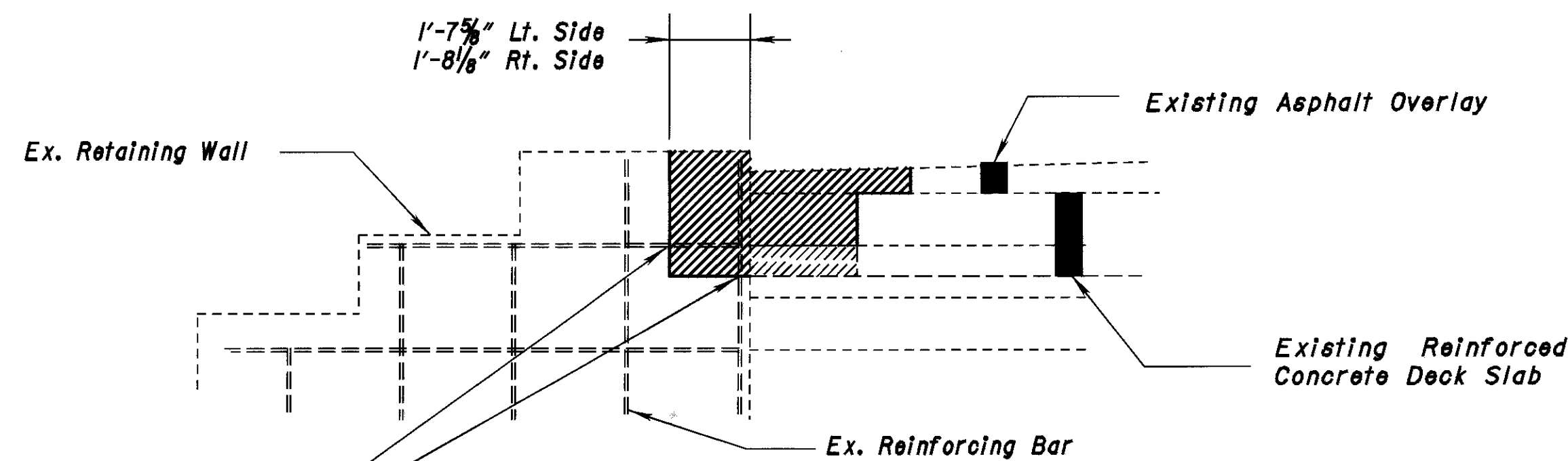
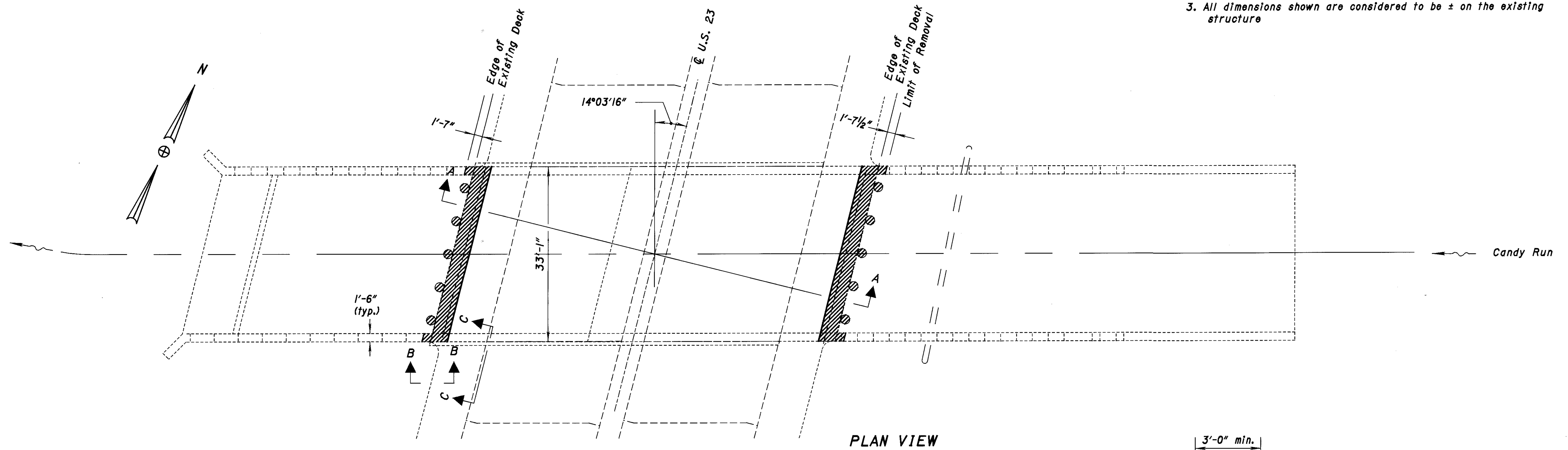


LEGEND

- Portions of existing structure to be removed
- Portions of existing structure to be removed, hidden from view
- Cut lines
- Hidden cut lines

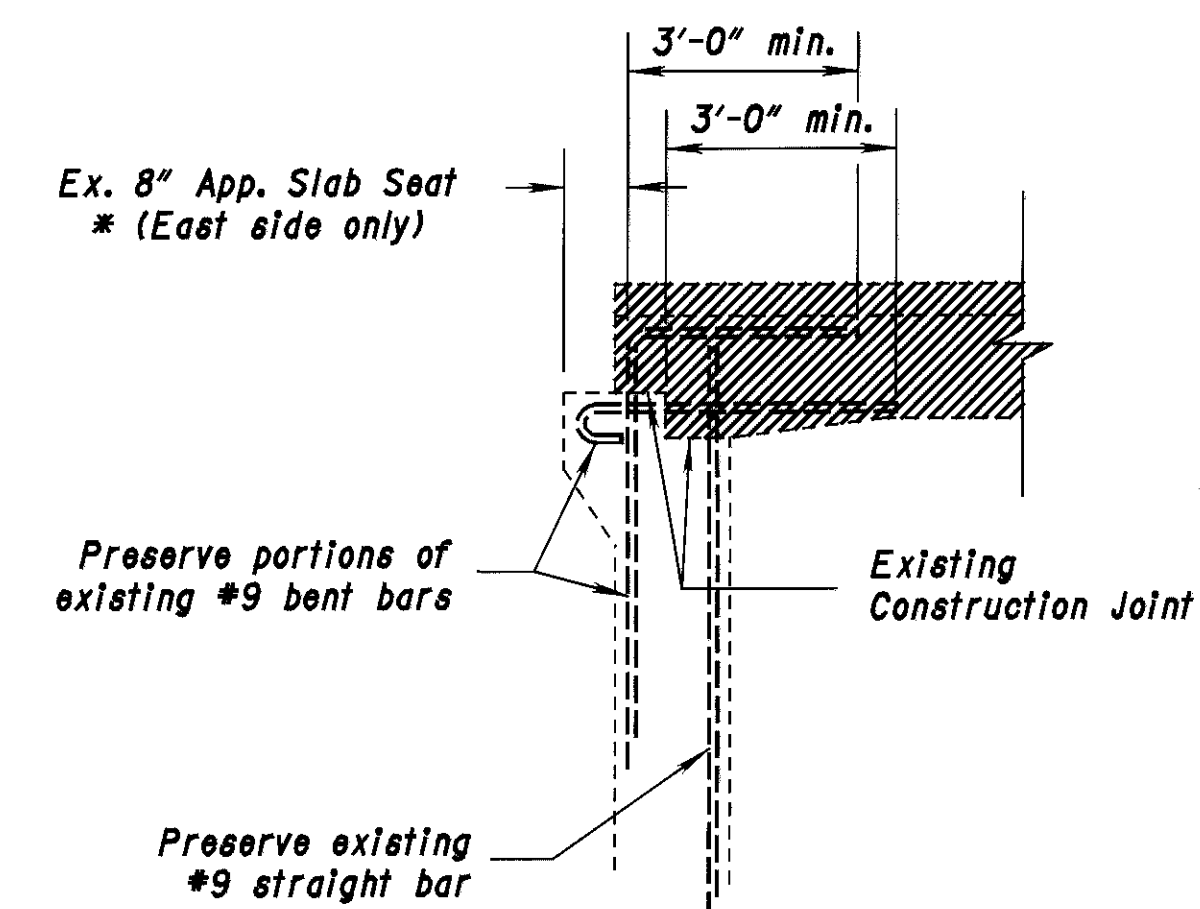
NOTES

1. All existing transverse reinforcement steel shall be preserved.
2. Contractor shall field verify existing dimensions
3. All dimensions shown are considered to be ± on the existing structure



SECTION B-B

ELEVATION VIEW
Detail at Top Rear Face of Wall, SW
(NW Opp. Hand, East Similar*)

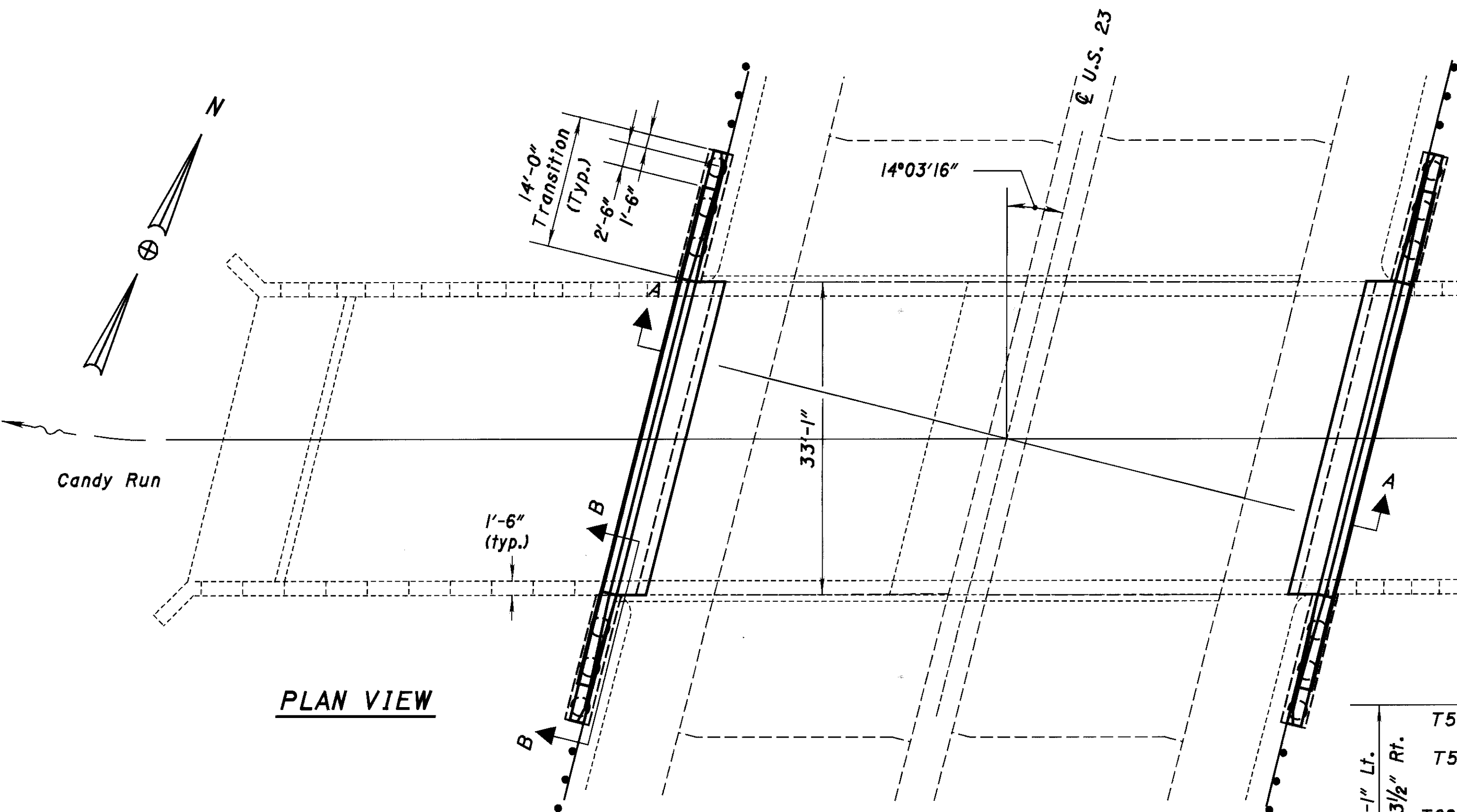
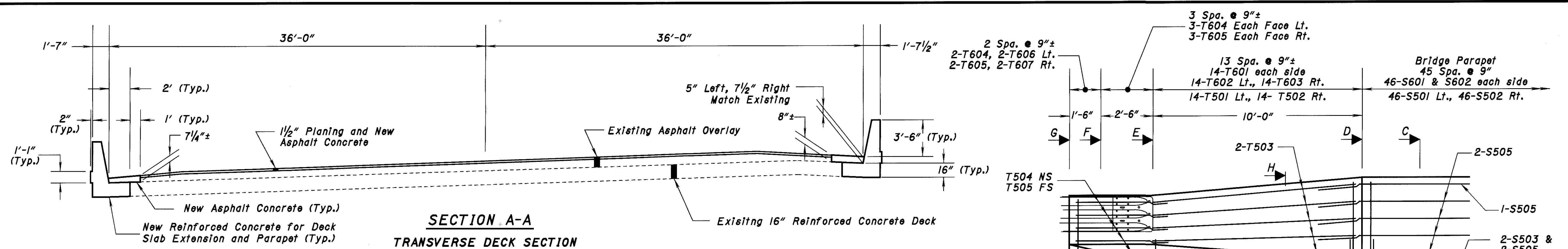


SECTION C-C

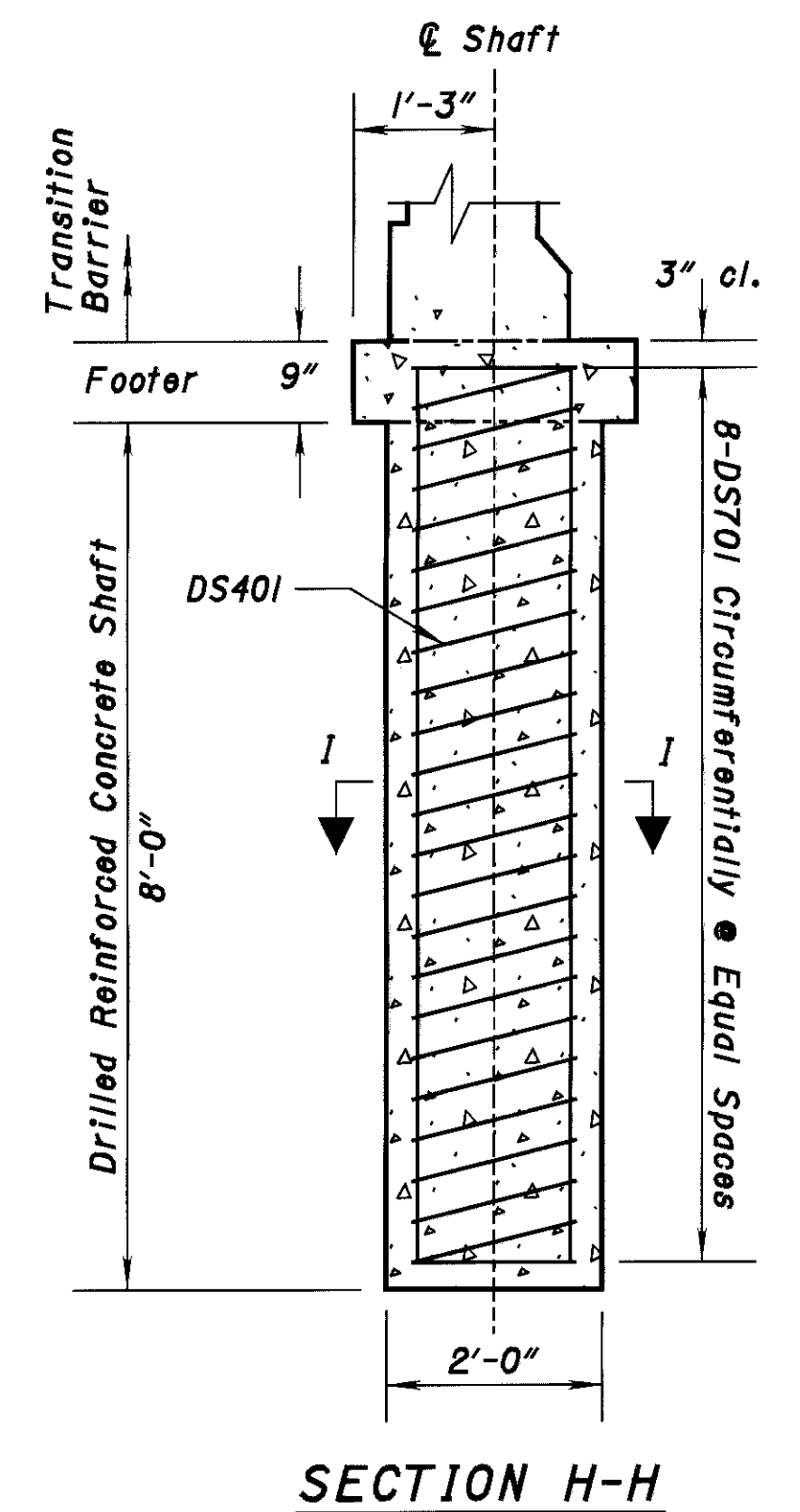
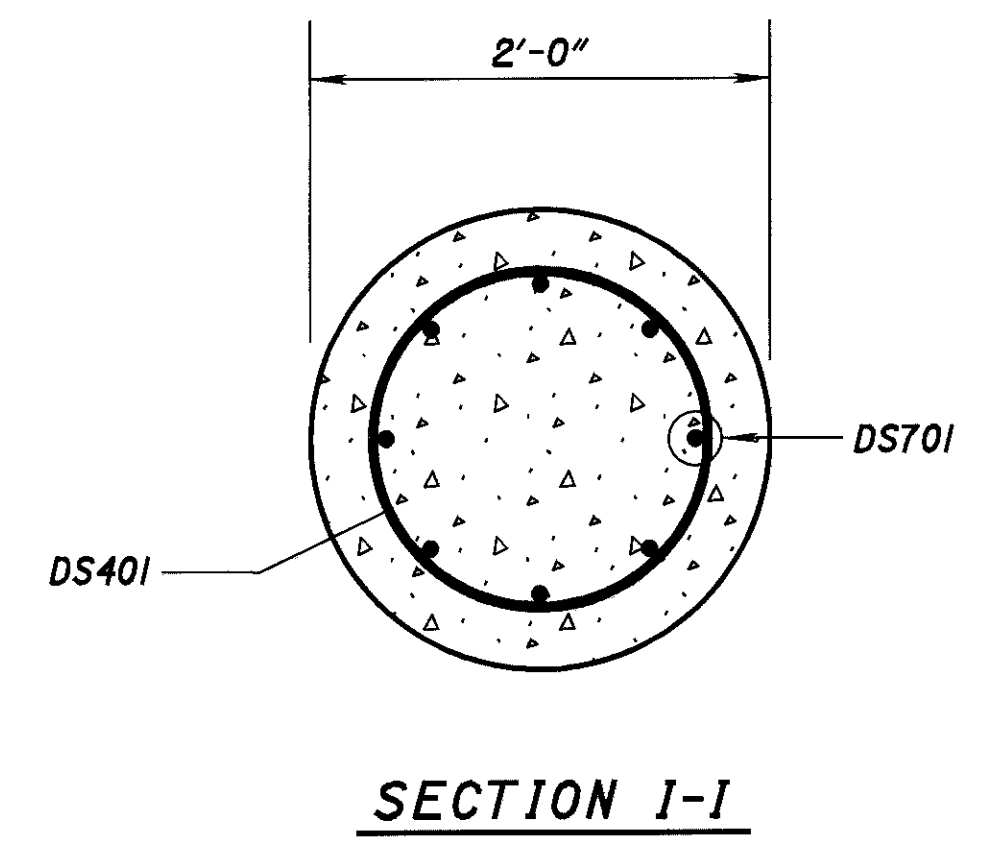
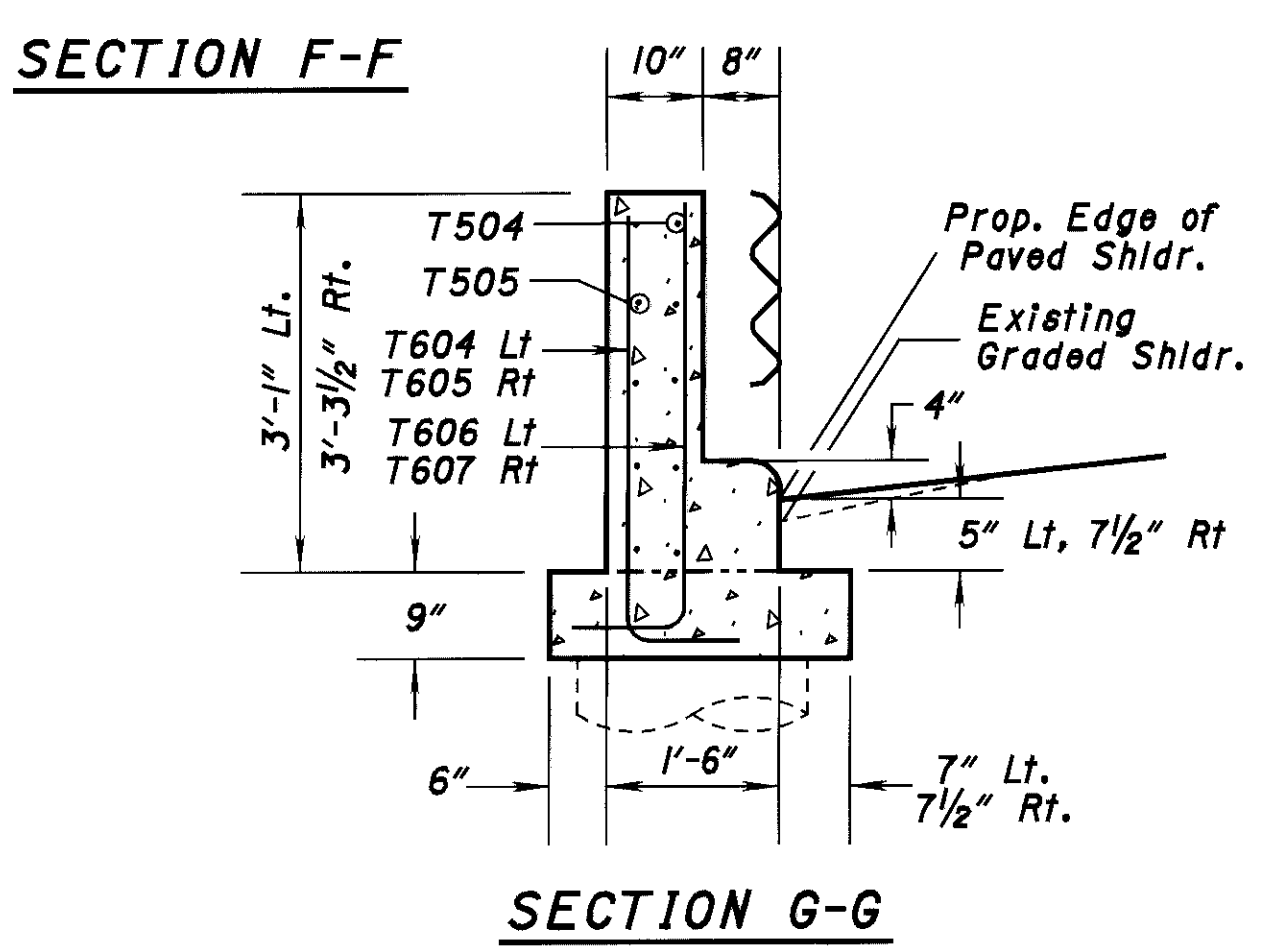
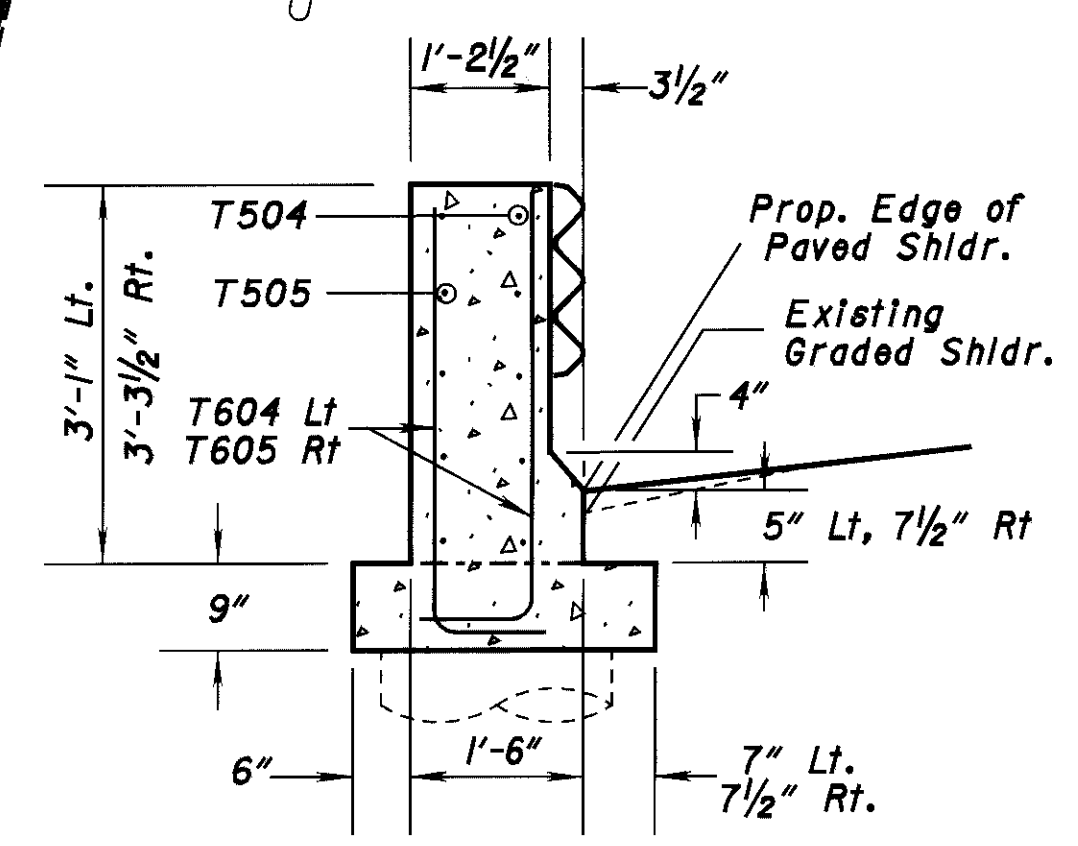
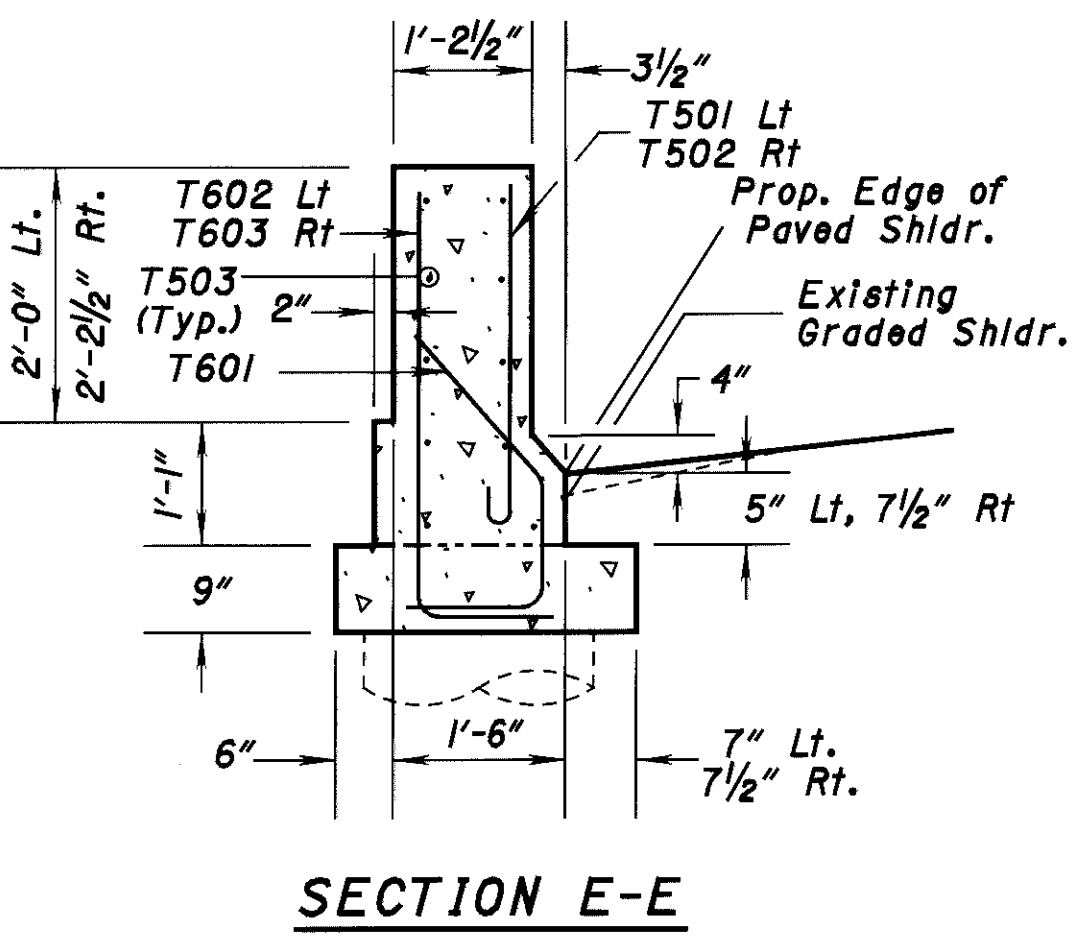
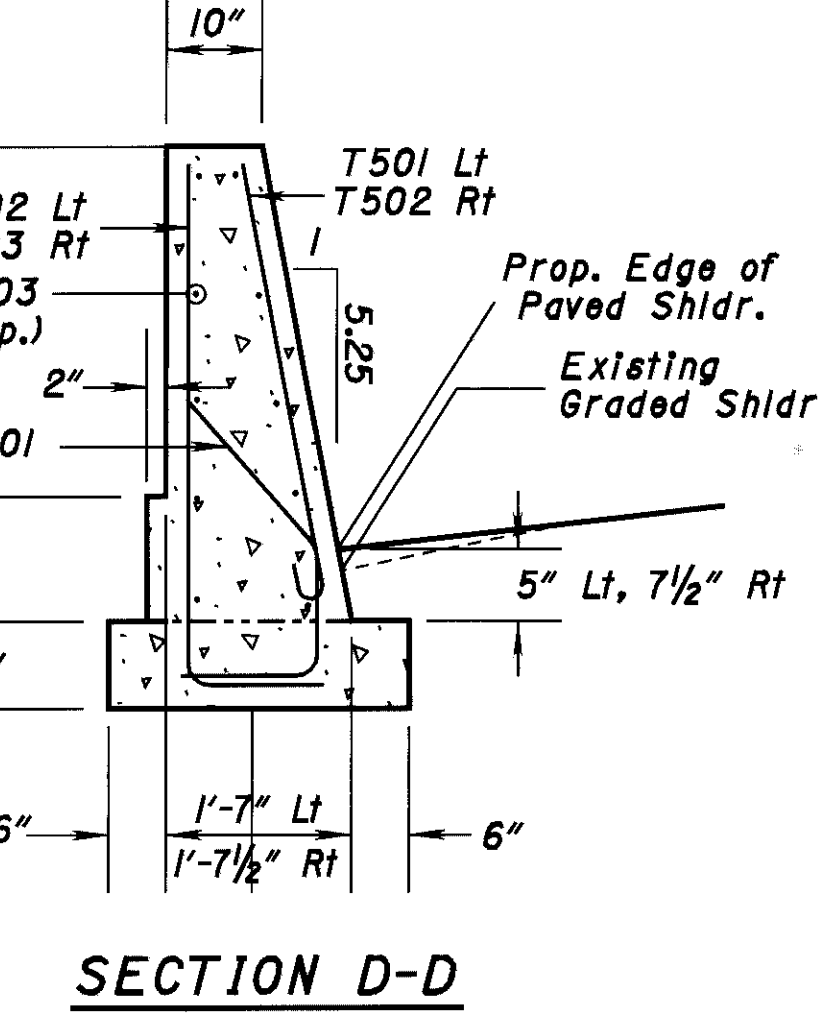
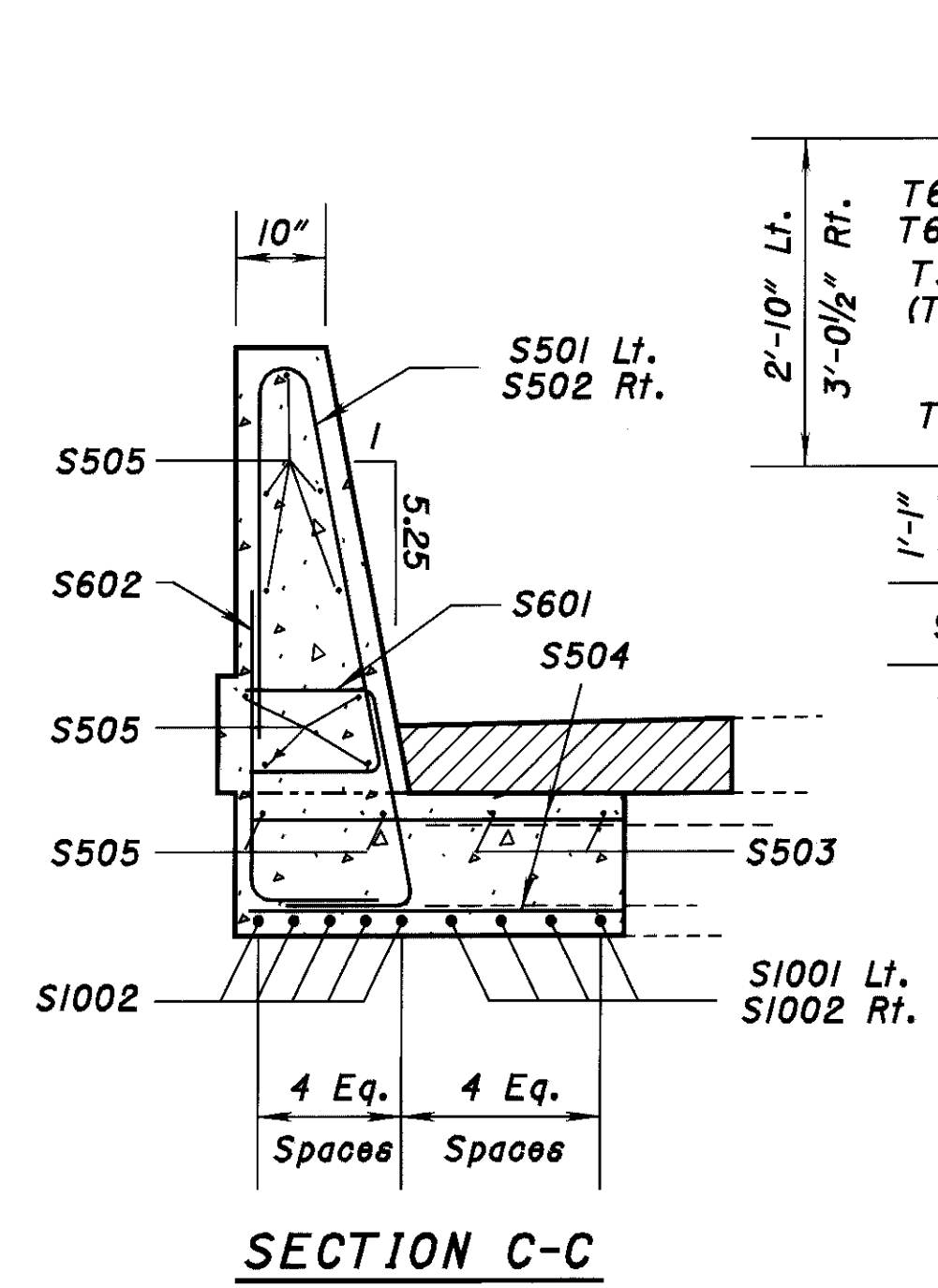
ELEVATION VIEW
Transverse View of Detail at Top of Wall, SW
(NW Opp. Hand, East Similar*)

Existing reinforcement shall be cut 2" below the finished surface and the resulting recess shall be filled with non-shrink grout. Payment shall be included in the price bid for Item 842 (Typical each wing)

DESIGN AGENCY ODOT CENTRAL OFFICE OFFICE OF PRODUCTION	DATE 01/26/00
REVIEWED DFT	STRUCTURE FILE NUMBER 7300247
DRAWN AP	REVISED
DESIGNED AP	CHECKED TAA
EXISTING STRUCTURAL REMOVAL BRIDGE NO. SCI-23-0896 OVER CANDY RUN	
SCI-23-5.51	
2 / 4	
55 57	



Legend:
 N.S. - Near Side
 F.S. - Far Side



SECTION B-B
 ELEVATION VIEW
 BRIDGE & TRANSITION
 PARAPET

Deck Extension
 Lt. Side: 36-S504 @ 2'-0"
 Rt. Side: 30-S504 @ 2'-6"

Notes
 The provisions of Standard Drawings SBR-1-99 and RM-4.5M shall apply except as detailed in these plans. All parapet and transition joints shall be sawcut and caulked as per Detail A, SBR-1-99.
 The 9" deep footers for the barrier transitions shall be Class C concrete. All other concrete shall be Class S.
 See sheet 4 of 4 for concrete sealing and foreslope grading details.
 New reinforcing steel may require field cutting or bending for proper fit.

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DESIGN AGENCY	ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION	
DATE	01/26/00
REVIEWED	DFT
STRUCTURE FILE NUMBER	7300247
DRAWN	AP
CHECKED	TAA
DESIGNED	AP

STRUCTURAL DETAILS
 BRIDGE NO. SCI-23-0896
 OVER CANDY RUN

SCI-23-5.51

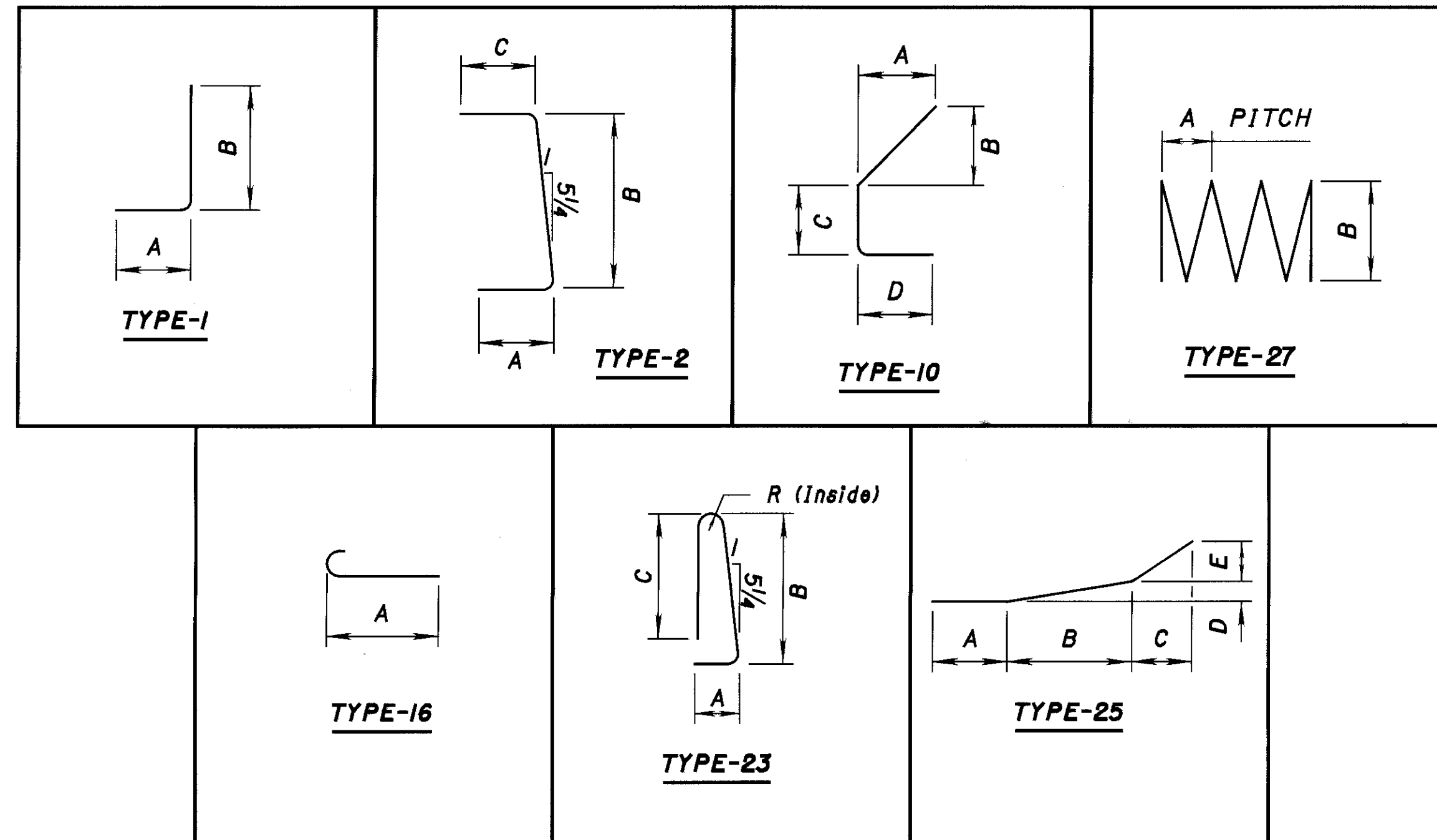
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FOR INFORMATION ONLY

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	LEFT	RIGHT	TOTAL				A	B	C	D	E	R	INC.
SUPERSTRUCTURE													
S502	46	46	92	8'-9 1/4"	842	23	1'-2"	3'-9 1/2"	3'-7 1/2"			2 3/4"	
S503	2	2	4	32'-9"	137	Str.							
S504	36	30	66	3'-6"	241	Str.							
S505	11	11	22	38'-0"	872	Str.							
S601	46	46	92	4'-3"	587	2	1'-2"	2'-2 3/8"	1'-2"				
S602	46	46	92	3'-11 1/2"	547	1	1'-2"	2'-11 3/8"	1'-2"				
S1001	4		4	32'-1"	552	Str.							
S1002	5	9	14	32'-9"	1973	Str.							

MARK	NUMBER					LENGTH	WEIGHT	TYPE	DIMENSIONS								
	LEFT		RIGHT		TOTAL				A	B	C	D	E	R	INC.		
	REAR	FWD	REAR	FWD													
PARAPET TRANSITIONS																	
T501	1 Series of 14	1 Series of 14			28	3'-3 1/2" to 4'-2"	109	16	2'-8 1/2" to 3'-7"								0 3/4"
T502			1 Series of 14	1 Series of 14	28	3'-6" to 4'-4 1/2"	115	16	2'-11" to 3'-9 1/2"								0 3/4"
T503	10	10	10	10	40	10'-0"	417	Str.									
T504	5	5	5	5	20	5'-6"	115	25	1'-8"	2'-5"	1'-5"	0'-1 1/2"	0'-5"				
T505	5	5	5	5	20	5'-6"	115	Str.									
T601	14	14	14	14	56	3'-9"	315	10	1'-1 1/4"	1-3 1/8"	1'-1 1/4"	1'-2"					
T602	1 Series of 14	1 Series of 14			28	4'-5 3/4" to 5'-3 3/4"	206	1	1'-2"	3'-5 3/8" to 4'-3 5/8"							0 3/4" ±
T603			1 Series of 14	1 Series of 14	28	4'-8 1/4" to 5'-6 1/4"	215	1	1'-2"	3'-6 1/8" to 4'-8 1/8"							0 3/4" ±
T604	8	8			16	4'-5 3/4"	108	1	1'-2"	3'-5 5/8"							
T605			8	8	16	4'-8 1/4"	113	1	1'-2"	3'-8 1/8"							
T606	4	4			8	4'-3 1/4"	26	1	0'-11 1/2"	3'-5 5/8"							
T607			4	4	8	4'-5 3/4"	27	1	0'-11 1/2"	3'-8 1/8"							
DS401	2	2	2	2	8	8'-3"	612	27	0'-4 1/2"	1'-6"							
DS701	16	16	16	16	64	8'-3"	1079	Str.									



NOTES -- REINFORCING STEEL

The list of reinforcement is provided for the Contractor's information only. All reinforcing is included in the appropriate concrete item for payment.

All reinforcing steel shall be epoxy coated as per Section 709 of the CMS. All labor, equipment, material and other resources required for installation are included in the price bid for the appropriate concrete item.

Where existing reinforcing is to be preserved for reuse, any such reinforcement that the Engineer finds to be unuseable due to damage incurred by the Contractor's operations shall be replaced with new steel at the Contractor's expense. Any reinforcement that the Engineer deems to be unuseable due to corrosion or cross-section loss that existed prior to the concrete removal shall be replaced by the Contractor with new steel, and the cost of such replacement shall be included in the price bid for the pertinent items of work.

All labor, equipment and materials for constructing the new foreslopes behind the transition barriers shall be included in the price bid for Item 622, Concrete Barrier, Single Slope, Type D, As Per Plan. The new foreslopes shall be graded as shown or as directed by the Engineer.

