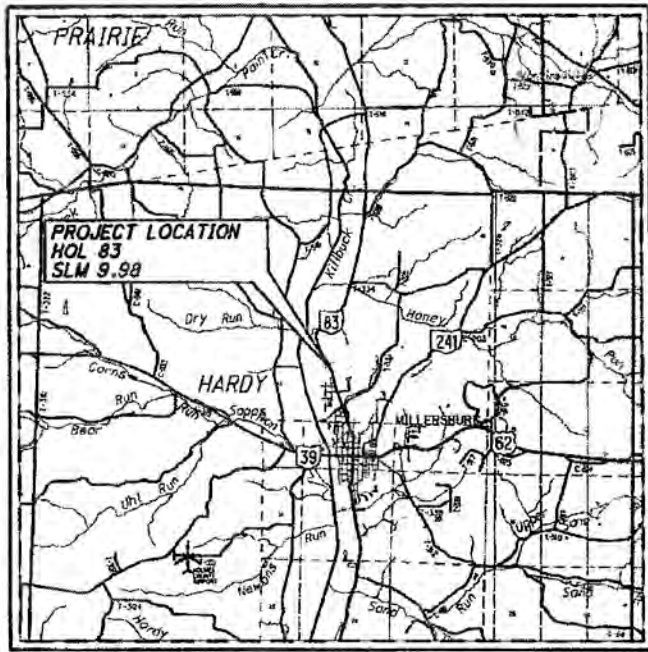


HOL - SR 83-09.98
 200471 PID - 99648
 Dist 11 10/1/2020

Contract Proposal available @
 www.contracts.dot.state.oh.us

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LOCATION MAP

LATITUDE: 40°34'00" LONGITUDE: 81°55'20"



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

DESIGN DESIGNATION

CURRENT ADT (2021)	7800
DESIGN YEAR ADT (2041)	8000
DESIGN HOURLY VOLUME (2041)	700
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	15%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN MINOR ARTERIAL	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
 ODOT DISTRICT II
 ENGINEERING DEPARTMENT
 NEW PHILADELPHIA, OHIO

ENGINEERS SEAL:

SIGNED: *Dillon Michael L. Flick*
 DATE: 6/25/20

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

HOL-83-9.98
 VILLAGE OF MILLERSBURG
 HOLMES COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
TYPICAL SECTIONS	2
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GROSS SECTIONS	12-14
CULVERT DETAILS	15-16
RIGHT OF WAY	17-21

ATTENTION
 Contact the Ohio Department
 of Transportation for current
 Plans of Record

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	01/17/20	MT-96.11	4/17/20	TC-65.11	7/21/17	800-2019	7/17/20 WATERWAY PERMITS
BP-4.1	7/19/13	MT-96.20	7/15/16			832	10/19/18 CONDITIONS
BP-5.1	1/18/19	MT-96.26	1/18/19	RM-4.2	4/17/20	902	07/19/19
CB-1.2	1/15/16	MT-101.60	1/17/20	HW-2.1	7/20/18		
		MT-101.70	1/17/20	HW-2.2	1/20/18		
DM-1.1	7/21/17	MT-101.75	1/17/20				
DM-1.2	1/18/13	MT-101.90	7/21/17				
DM-4.3	1/15/16	MT-106.10	1/17/20				
DM-4.4	1/15/16						
		TC-41.20	10/18/13				
MGS-1.1	1/19/18	TC-42.20	10/18/13				
MGS-2.1	1/19/18	TC-52.10	10/18/13				
MGS-4.2	7/19/13	TC-52.20	7/20/18				
		TC-61.30	7/19/19				
		TC-65.10	1/17/14				

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE REPLACEMENT OF A CULVERT LOCATED ALONG S.R. 83 IN HOLMES COUNTY WITH MINIMAL ROADWAY WORK (0.02 MILES) INCLUDING EMBANKMENT AND GUARDRAIL.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A (MAINTENANCE)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A (MAINTENANCE)
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (MAINTENANCE)

2019 SPECIFICATIONS

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

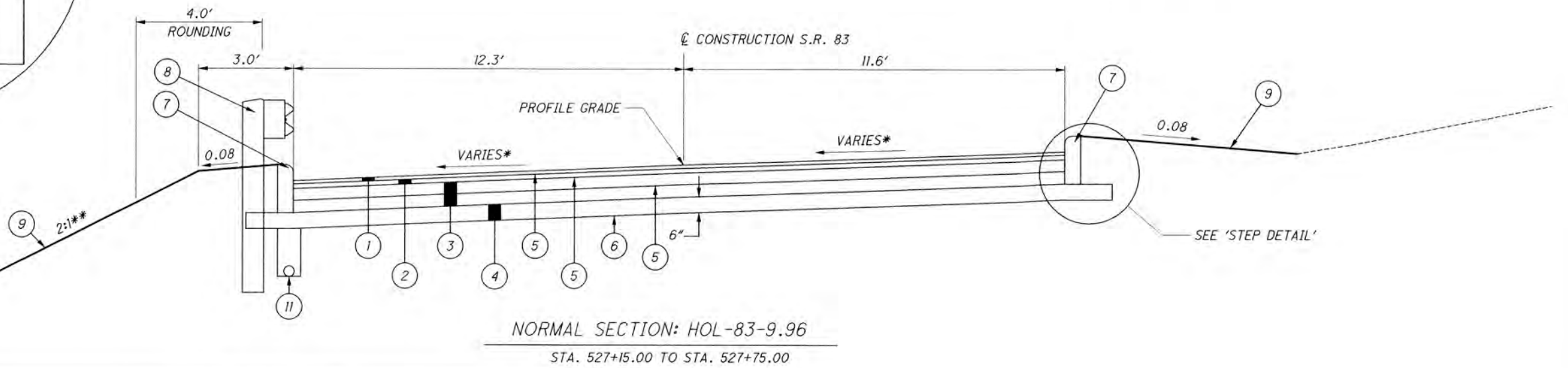
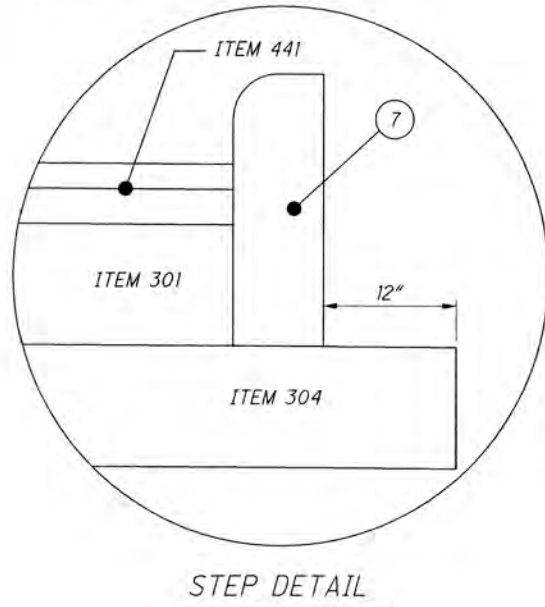
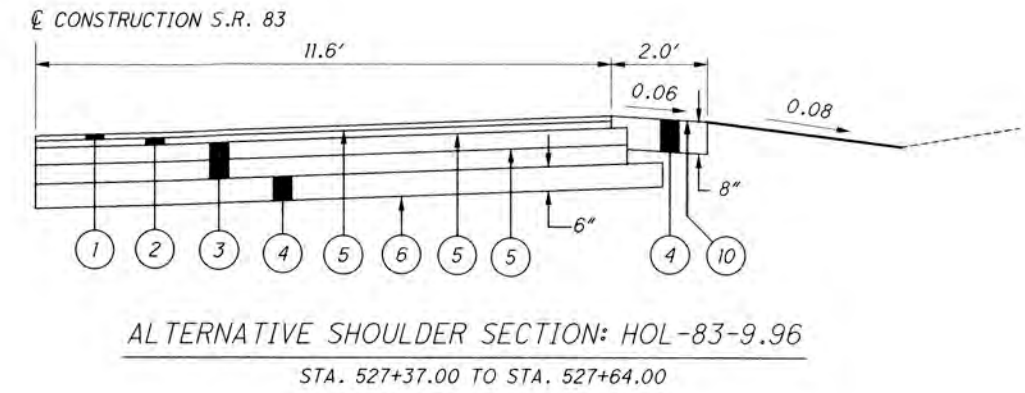
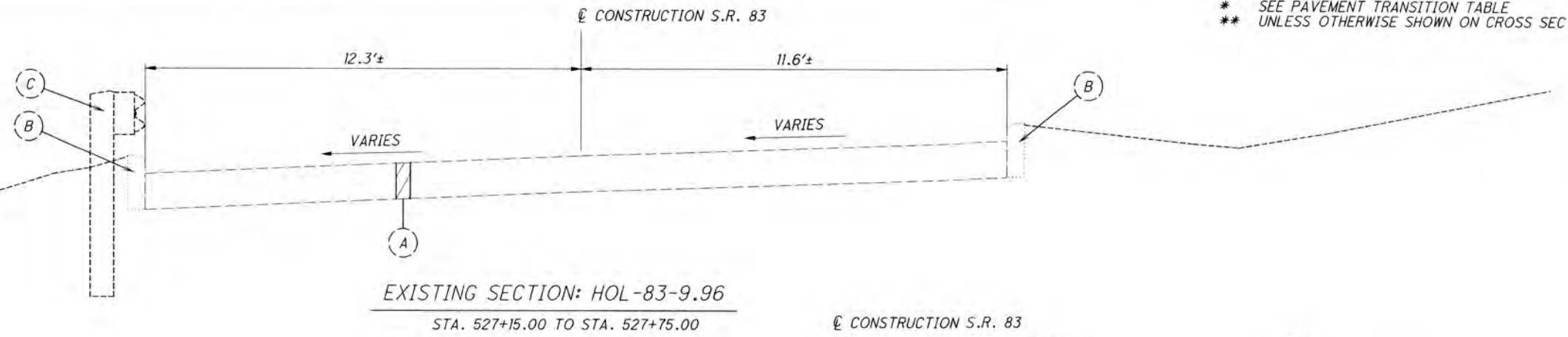
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED: *AG Noiro Jr.*
 DATE: 6/29/2020 DISTRICT DEPUTY DIRECTOR

APPROVED: *John A. ...*
 DATE: 7/10/2020 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E171 (042)
 PID NO. 99648
 CONSTRUCTION PROJECT NO. NONE
 RAILROAD INVOLVEMENT NONE
 HOL-83-9.98
 1/21

* SEE PAVEMENT TRANSITION TABLE
 ** UNLESS OTHERWISE SHOWN ON CROSS SECTIONS



- LEGEND**
- ① — ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, (PG70-22M)
 - ② — ITEM 441 - 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
 - ③ — ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
 - ④ — ITEM 304 - AGGREGATE BASE
 - ⑤ — ITEM 407 - TACK COAT (0.55 GAL./S.Y.)
 - ⑥ — ITEM 204 - SUBGRADE COMPACTION
 - ⑦ — ITEM 609 - CURB, TYPE 6
 - ⑧ — ITEM 606 - GUARDRAIL, TYPE MGS
 - ⑨ — ITEM 659 - SEEDING AND MULCHING
 - ⑩ — ITEM 408 - PRIME COAT, AS PER PLAN (0.40 GAL./S.Y.)
 - ⑪ — ITEM 605 - 6" BASE PIPE UNDERDRAINS
 - A — EXISTING 12"± ASPHALT CONCRETE
 - B — EXISTING CURB
 - C — EXISTING GUARDRAIL

PAVEMENT TRANSITION TABLE

EDGE ELEV	LEFT SIDE				CENTERLINE		RIGHT SIDE				EDGE ELEV
	TRANSITION RATE	ELEV CORR	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEV CORR	TRANSITION RATE	
944.25	G=548	-0.710	-0.0577	12.30	527+15.00	944.96	11.60	0.0379	0.440	G=1521	945.40
944.04		-0.691	-0.0562	12.30	527+25.00	944.73	11.60	0.0373	0.433		945.16
943.77		-0.646	-0.0525	12.30	527+50.00	944.42	11.60	0.0359	0.416		944.83
943.89		-0.600	-0.0488	12.30	527+75.00	944.49	11.60	0.0345	0.400		944.89

UTILITIES

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

VILLAGE OF MILLERSBURG
HONORABLE ATTN: JEFF HUEBNER
6 NORTH WASHINGTON ST
MILLERSBURG, OHIO 44654
OFFICE: 330-674-1886

NORTHEAST OHIO NATURAL GAS
ATTN: MARK L. WETZEL
9081 STATE ROUTE 250
STRASBURG, OHIO 44680
OFFICE: 330-878-5589

CENTURYLINK CORPORATION
ATTN: JEFFREY SCHOONOVER
2025 AKRON ROAD
WOOSTER, OHIO 44691
OFFICE: 330-262-1128

CHARTER COMMUNICATIONS
ATTN: RON ICKES
5520 WHIPPLE AVE NW
NORTH CANTON, OHIO 44720
330-494-9200

AEP OHIO POWER COMPANY
ATTN: KEITH SCHALMO
301 CLEVELAND AVE SW.
CANTON, OHIO 44701
330-438-7720

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

ROUNDING

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

WORK LIMITS

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

CLEARING AND GRUBBING

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

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

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

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)

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

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 10 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: STATIC & ODOT VRS
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: GEOID 12A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011)
ELLIPSOID: GRS 1980
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE
COMBINED SCALE FACTOR: 1.00006296911608
ORIGIN OF COORDINATE SYSTEM: N 329002.906 E 2129119.326

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

UNITS ARE IN U.S. SURVEY FEET.

RAISED PAVEMENT MARKER (RPM)

THE CONTRACTOR SHALL REPLACE ALL EXISTING RAISED PAVEMENT MARKERS WITHIN THE PROJECT LIMITS.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 621, RPM
STA. 527+15.00 TO STA. 527+75.00 -- 3 EACH

ITEM 621, RAISED PAVEMENT MARKER REMOVED
STA. 527+15.00 TO STA. 527+75.00 -- 3 EACH

WATERS OF THE U.S.

WATERS OF THE US HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA. THESE FEATURES ARE SHOWN IN THE CONSTRUCTION PLANS. THE CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT NO IMPACTS OCCUR TO ANY WATERS OF THE US IN EXCESS OF THE IMPACTS DEPICTED BY THE CONSTRUCTION LIMITS IN THE PLANS.

ANY OTHER SITE PROPOSED BY THE CONTRACTOR FOR OFF PROJECT ANCILLARY CONSTRUCTION (STAGING AREAS, WASTE LOCATIONS, AND/OR BORROW LOCATIONS) MUST MEET THE REQUIREMENTS OF CMS 105.16.

ITEM 408 - PRIME COAT, AS PER PLAN

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

PAVEMENT MARKING

THE CONTRACTOR SHALL REPLACE ALL EXISTING PAVEMENT MARKINGS WITHIN THE PROJECT LIMITS.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 642, EDGE LINE, 6", TYPE 1
STA. 527+15.00 TO STA. 527+75.00 -- 0.02 MILE

ITEM 642, CENTER LINE, TYPE 1
STA. 527+15.00 TO STA. 527+75.00 -- 0.01 MILE

ENDANGERED BAT HABITAT REMOVAL

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST
2 EACH

659, TOPSOIL
39 CU. YD.

659, REPAIR SEEDING AND MULCHING
18 SQ. YD.

659, INTER-SEEDING
18 SQ. YD.

659, COMMERCIAL FERTILIZER
0.05 TON

659, LIME
0.07 ACRES

659, WATER
1.97 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.

MODIFIED DRIVEWAY GEOMETRY

THE COMMERCIAL DRIVEWAY LOCATED NEAR STA. 528+25.00, LT. IS SHOWN IN THE PLANS AS AGGREGATE BUT HAS RECENTLY BEEN WIDENED AND PAVED WITH ASPHALT. THE FOLLOWING QUANTITIES ARE BEING PROVIDED TO REMOVE AND REPLACE A MINIMAL AMOUNT OF EXISTING ASPHALT IN ORDER TO ACCOMMODATE THE PROPOSED GUARDRAIL SHOWN IN THE PLANS.

ITEM 202, PAVEMENT REMOVED
STA. 528+25.00, LT. -- 5 SY

ITEM 252, FULL DEPTH PAVEMENT SAWING
STA. 528+25.00, LT. -- 15 FT

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, (PG70-22M)
STA. 528+25.00, LT. -- 1 CY

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350 OR MASH 2016)

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

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

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

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

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, 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.

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CALCULATED
DMLF
CHECKED
ANS

GENERAL NOTES

HOL-83-9.98

ITEM 614, MAINTAINING TRAFFIC

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 614, THE MAINTENANCE OF TRAFFIC DESCRIBED ON SHEETS 6-7 AND WITH PORTABLE BARRIER AS PER STANDARD DRAWING MT-96.11.

THE MAINTENANCE OF TRAFFIC SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION; THE REFERENCED STANDARD CONSTRUCTION DRAWINGS INCLUDING DESIGNER NOTES; THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS); POLICY NO. 516-003(P) TRAFFIC MANAGEMENT IN WORK ZONES INTERSTATE AND OTHER FREEWAYS; ODOT LOCATION AND DESIGN MANUAL, VOLUME 1; ODOT TRAFFIC ENGINEERING MANUAL; AND ALL REQUIREMENTS DETAILED IN THESE PLANS.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 - ROADS FOR MAINTAINING TRAFFIC.

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

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVEWAYS DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL MEET WITH AFFECTED PROPERTY OWNERS PRIOR TO THE OPENING OF EACH MAINTENANCE OF TRAFFIC PHASE TO DISCUSS HOW THE SIGNAL PHASING AND DRIVEWAY ACCESS WILL FUNCTION.

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

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 10 CY

PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

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

ITEM 616, WATER 10 M. GAL.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

OVERHEAD-MOUNTED WORK ZONE SIGNALS

SIGNALS SHALL BE OVERHEAD MOUNTED IN ACCORDANCE WITH THE DETAILS SHOWN ON TRAFFIC SCD MT-96.20.

EARTHWORK FOR MAINTAINING TRAFFIC

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

EXCAVATION FOR MAINTAINING TRAFFIC 1 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 65 CU. YD.

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

TRENCH FOR WIDENING

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

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

A 1' TALL RISER SHALL BE CONSTRUCTED ON THE PROPOSED CATCH BASIN, NO. 2-4 AT STA. 527+45.95, 14.3' RT. FOR MAINTAINING TRAFFIC FOR THE DURATION OF THE PROJECT. UPON COMPLETION OF THE PROJECT, THE RISER SHALL BE REMOVED AND THE CATCH BASIN RESTORED TO ITS ORIGINAL CONDITION. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIAL REQUIRED TO CONSTRUCT AND ULTIMATELY REMOVE THE CATCH BASIN RISER SHALL BE PAID UNDER ITEM 611 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN.

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

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

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

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

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

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

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

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

NOTIFICATION OF TRAFFIC RESTRICTIONS

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

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

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

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

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

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

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

ITEM 614, BARRIER REFLECTOR, TYPE 1 BIDIRECTIONAL 7 EACH
ITEM 614, OBJECT MARKER, TWO-WAY 7 EACH

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

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL (CONT.)

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AS SHOWN ON SHEETS 5-7 AND STANDARD CONSTRUCTION DRAWINGS MT-96.11, MT-96.20, AND MT-96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. NO LOOP DETECTORS WILL BE PERMITTED TO BE CUT INTO THE PAVEMENT.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

#ALL PHASES

	1	2	3	4	5	6	7	8
ALL RED								
S.R. 83 (NORTHBOUND)								
ALL RED								
S.R. 83 (SOUTHBOUND)								
ALL RED								
DRIVE (STA. 527+25.00)								
ALL RED								
DRIVE (STA. 528+25.00)								
MIN. GREEN	--	10	--	10	--	10	--	10
EXTENSION	--	4	--	4	--	4	--	4
MAX. GREEN	--	60	--	60	--	22	--	22
YELLOW	--	4	--	4	--	4	--	4
ALL RED	11	--	11	--	7	--	7	--
RECALL	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF

* PHASES AS SHOWN ON SCD MT-96.20 & MT-96.26 FOR ACTUATED CONTROL.

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE SHOWN IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION

PHASE 1:

- 1) INSTALL PAVEMENT FOR MAINTAINING TRAFFIC, WORK ZONE GUARDRAIL, ALL WORK ZONE CONSTRUCTION SIGNALS, WORK ZONE SIGNS, WORK ZONE PAVEMENT MARKINGS, PORTABLE BARRIER, AND MAINTAIN TRAFFIC AS SHOWN IN THE PHASE 1 PLAN AND STANDARD CONSTRUCTION DRAWINGS.
- 2) COMPLETE THE REMOVAL OF THE EXISTING CULVERT AND CATCH BASIN AND THE INSTALLATION OF THE PROPOSED CULVERT, CATCH BASIN, DRAINAGE CONNECTIONS, AND EROSION CONTROL.
- 3) COMPLETE THE PROPOSED FULL-DEPTH PAVEMENT (UP THROUGH AND INCLUDING INTERMEDIATE COURSE) AND INSTALL GUARDRAIL. INSTALL THE PAVEMENT FOR MAINTAINING TRAFFIC NECESSARY FOR PHASE 2 CONSTRUCTION.

PHASE 2:

- 1) INSTALL WORK ZONE SIGNS, WORK ZONE PAVEMENT MARKINGS, PORTABLE BARRIER, AND MAINTAIN TRAFFIC AS SHOWN IN PHASE 2 PLAN AND STANDARD DRAWINGS.
- 2) COMPLETE THE REMOVAL OF THE EXISTING CULVERT, THE INSTALLATION OF THE PROPOSED CULVERT, EMBANKMENT RECONSTRUCTION/ SLOPE REPAIR AND INSTALL EROSION CONTROL.
- 3) REMOVE PAVEMENT FOR MAINTAINING TRAFFIC AND BACKFILL WITH 304 AGGREGATE BASE. COMPLETE PROPOSED FULL-DEPTH PAVEMENT (UP TO AND INCLUDING INTERMEDIATE COURSE), AND GUARDRAIL.
- 4) REMOVE ALL WORK ZONE CONSTRUCTION SIGNALS, WORK ZONE SIGNS, WORK ZONE PAVEMENT MARKINGS, PORTABLE BARRIER.

FINAL:

- 1) INSTALL AND MAINTAIN BARREL ZONE AS NEEDED TO PLACE ASPHALT SURFACE COURSE, PAVEMENT MARKINGS, AND TRAFFIC CONTROL DEVICES. REMOVE PAVEMENT FOR MAINTAINING TRAFFIC FROM PHASE 2 CONSTRUCTION AND BACKFILL WITH 304 AGGREGATE BASE.
- 2) APPLY PRIME COAT TO ALL OF THE 304 AGGREGATE BASE SHOULDERS.

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CALCULATED
DWLF
CHECKED
ANS

MAINTENANCE OF TRAFFIC GENERAL NOTES

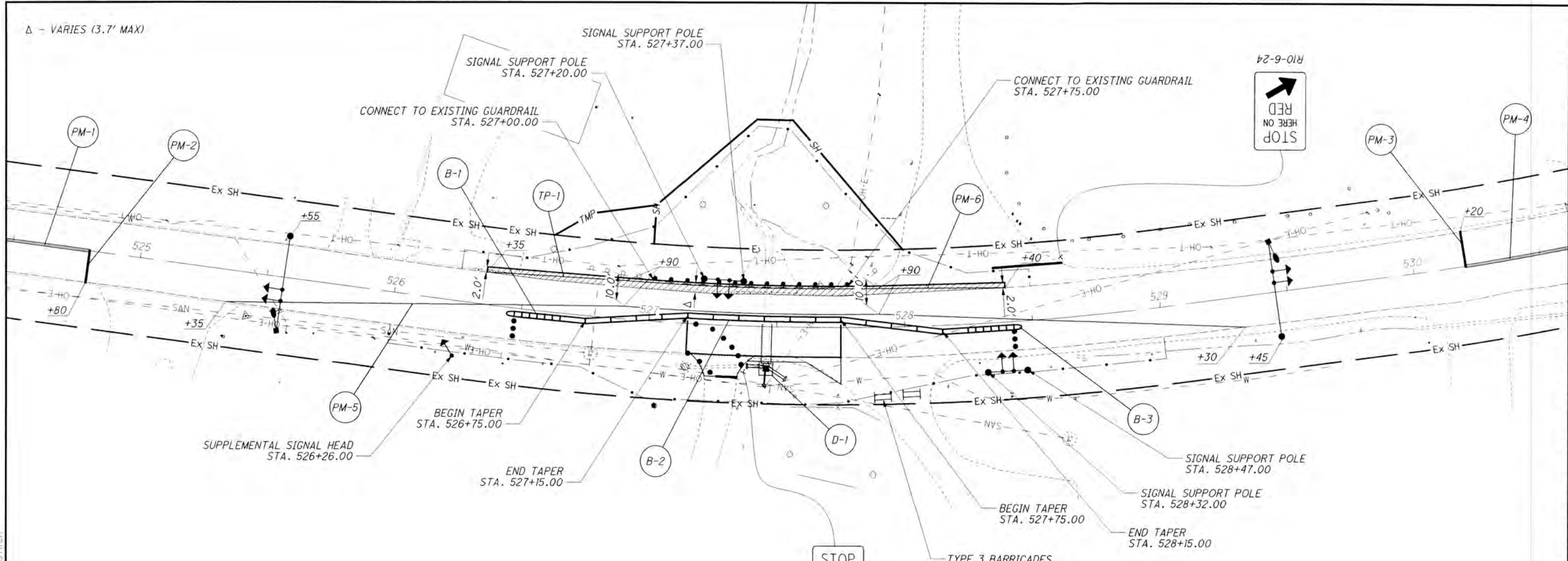
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CONSTRUCTION PHASE	REFERENCE NO.	SHEET NO.	STATION		SIDE	614				611	615		622
			FROM	TO		WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I MILE	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I MILE	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I FT	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS (BIDIRECTIONAL) EACH		CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN EACH	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	
PHASE 1	PM-1	6	519+80.00	524+80.00	℄	0.09							
	PM-2	6		524+80.00	RT			13					
	PM-3	6		530+20.00	LT			13					
	PM-4	6	530+20.00	535+20.00	℄	0.09							
	PM-5	6	525+35.00	529+30.00	RT/LT		0.07						
	PM-6	6	526+35.00	528+40.00	LT		0.04						
	B-1	6	526+45.00	526+75.00	RT				1				10
	B-2	6	526+75.00	528+15.00	RT/LT								140
	B-3	6	528+15.00	528+45.00	RT				1				10
	D-1	6		527+45.95	RT					1			
	GR-1	6	527+00.00	527+75.00	LT								
	TP-1	6	526+35.00	528+40.00	LT						72	LUMP	
	PHASE 1 TOTALS						0.18	0.11	26	2	1	72	LUMP
PHASE 2	PM-7	7	525+30.00	529+70.00	LT/RT	0.08							
	PM-8	7	526+10.00	529+00.00	RT	0.06							
	B-4	7	526+45.00	526+75.00	LT				1				10
	B-5	7	526+75.00	528+21.00	RT/LT								160
	TP-2	7	526+10.00	529+00.00	RT						117	LUMP	
PHASE 2 TOTALS						0.14			1		117	LUMP	170
TOTALS CARRIED TO GENERAL SUMMARY						0.32	0.11	26	3	1	189	LUMP	330

MAINTENANCE OF TRAFFIC QUANTITIES								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">CALCULATED</td> <td style="text-align: center;">DMLF</td> <td style="text-align: center;">CHECKED</td> <td style="text-align: center;">ANS</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">21</td> <td></td> <td></td> </tr> </table>	CALCULATED	DMLF	CHECKED	ANS	5	21		
CALCULATED	DMLF	CHECKED	ANS					
5	21							

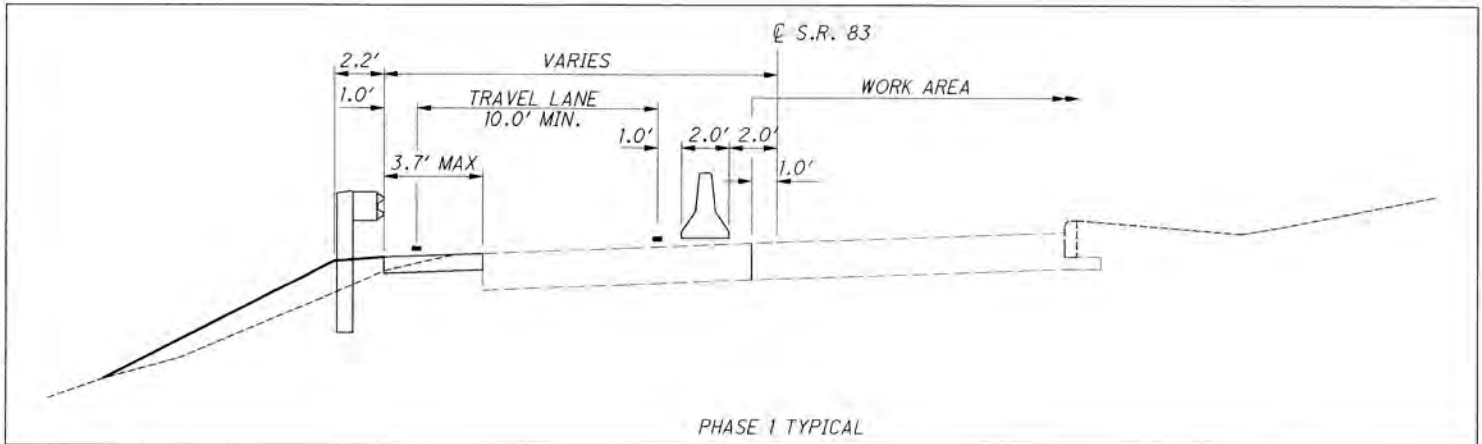
Δ - VARIES (3.7' MAX)



**MAINTENANCE OF TRAFFIC
PHASE ONE**

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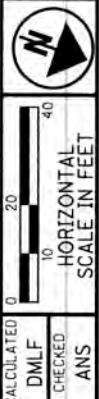
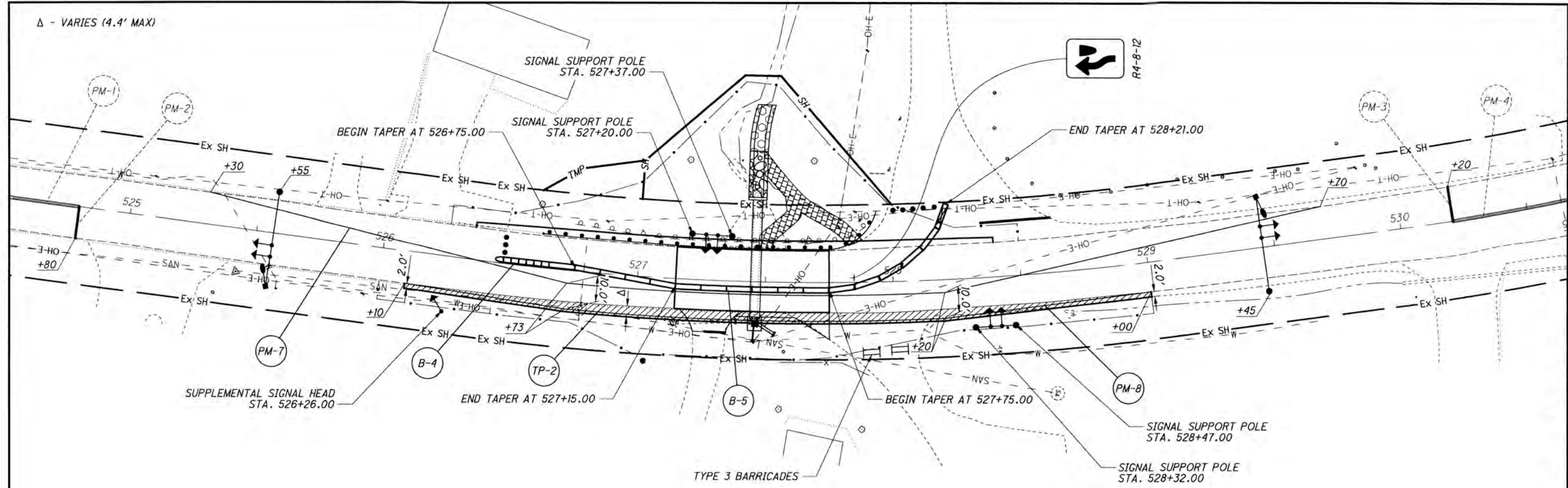
LEGEND	
	PAVEMENT FOR MAINTAINING TRAFFIC
	PORTABLE BARRIER
	WORK ZONE IMPACT ATTENUATOR
	DRUMS
	WORK ZONE SIGNAL HEAD



- NOTES:
1. FOR ADDITIONAL NOTES AND DETAILS, SEE MAINTENANCE OF TRAFFIC NOTES ON SHEET 4 AND STANDARD DRAWINGS MT-96.11, MT-96.20, AND MT-96.26
 2. FOR SEQUENCE OF CONSTRUCTION, SEE SHEET 4.
 3. FOR SIGNAL TIMING AND PHASING, SEE SHEET 4.

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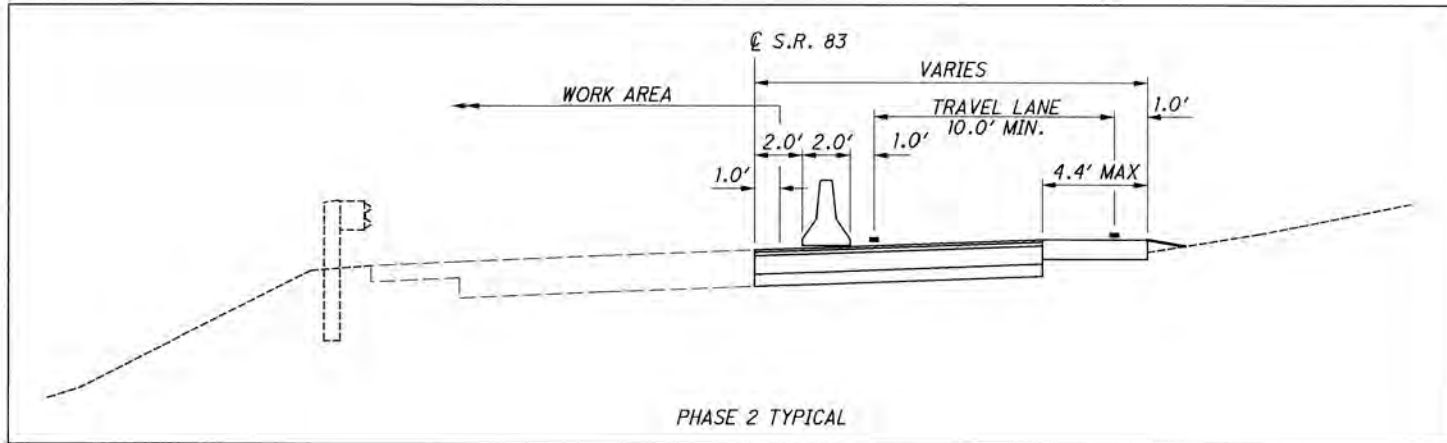
Δ - VARIES (4.4' MAX)



MAINTENANCE OF TRAFFIC
 PHASE TWO

HOL-83-9.98

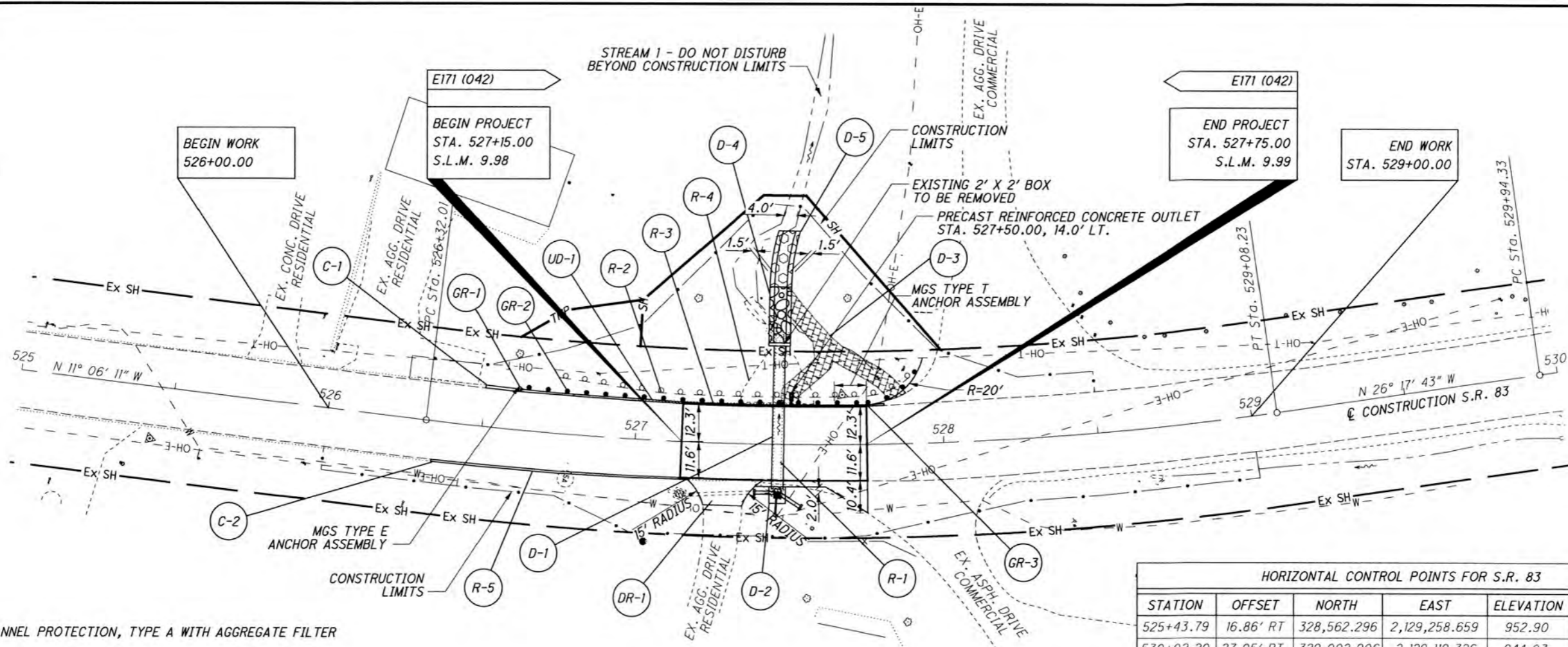
LEGEND	
	PAVEMENT FOR MAINTAINING TRAFFIC
	PORTABLE BARRIER
	TAPERED END SECTION
	WORK ZONE IMPACT ATTENUATOR
	DRUMS
	WORK ZONE SIGNAL HEAD





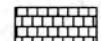
- NOTES:
1. FOR ADDITIONAL NOTES AND DETAILS, SEE MAINTENANCE OF TRAFFIC NOTES ON SHEET 4 AND STANDARD DRAWINGS MT-96.11, MT-96.20, AND MT-96.26
 2. FOR SEQUENCE OF CONSTRUCTION, SEE SHEET 4.
 3. FOR SIGNAL TIMING AND PHASING, SEE SHEET 4.

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P.I. Sta. 527+70.94
 $\Delta = 15^\circ 11' 32''$ (LT)
 $D_c = 5^\circ 30' 00''$
 $R = 1,041.74'$
 $T = 138.93'$
 $L = 276.22'$
 $E = 9.22'$
 $C = 275.41'$
 $C.B. = N 18^\circ 41' 57'' W$

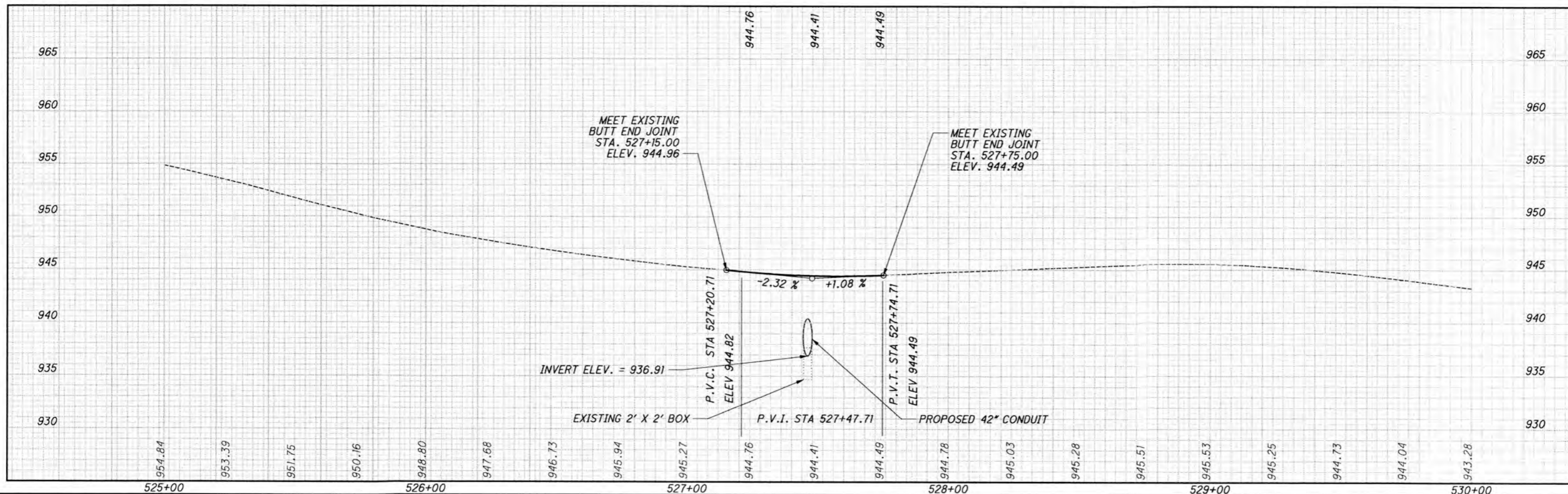


LEGEND

-  - ROCK CHANNEL PROTECTION, TYPE A WITH AGGREGATE FILTER
-  - ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1
-  - TIED CONCRETE BLOCK MAT, TYPE 2

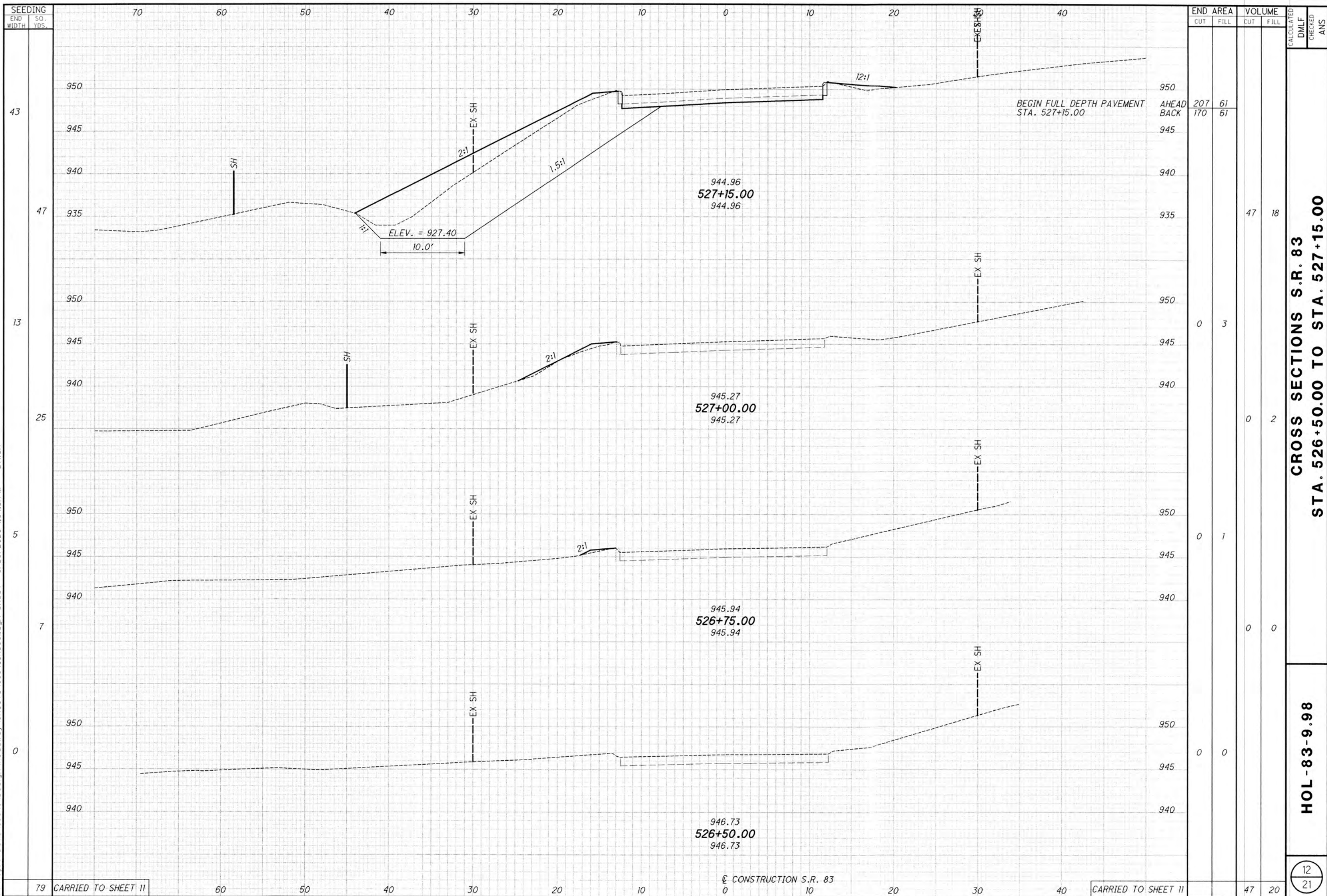
HORIZONTAL CONTROL POINTS FOR S.R. 83					
STATION	OFFSET	NORTH	EAST	ELEVATION	REMARKS
525+43.79	16.86' RT.	328,562.296	2,129,258.659	952.90	CONCRETE MON.
530+02.20	27.05' RT.	329,002.906	2,129,119.326	944.03	CONCRETE MON.
527+67.04	16.11' LT.	328,770.948	2,129,175.344	943.37	CONTROL POINT
526+32.01	€	328,645.624	2,129,225.126	-----	€ Reference
529+08.23	€	328,906.498	2,129,136.829	-----	€ Reference

FOR ESTIMATED QUANTITIES, SEE SHEET 11.
 FOR CULVERT DETAILS AND QUANTITIES, SEE SHEET 15.



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SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DNLF	CHECKED ANS
		CUT	FILL	CUT	FILL		
43		207	61	47	18		
47		170	61	0	2		
13		0	3	0	1		
25		0	0	0	0		
5		0	1	0	0		
7		0	0	0	0		
0		0	0	0	0		
79	CARRIED TO SHEET 11			47	20		

CROSS SECTIONS S.R. 83
STA. 526+50.00 TO STA. 527+15.00

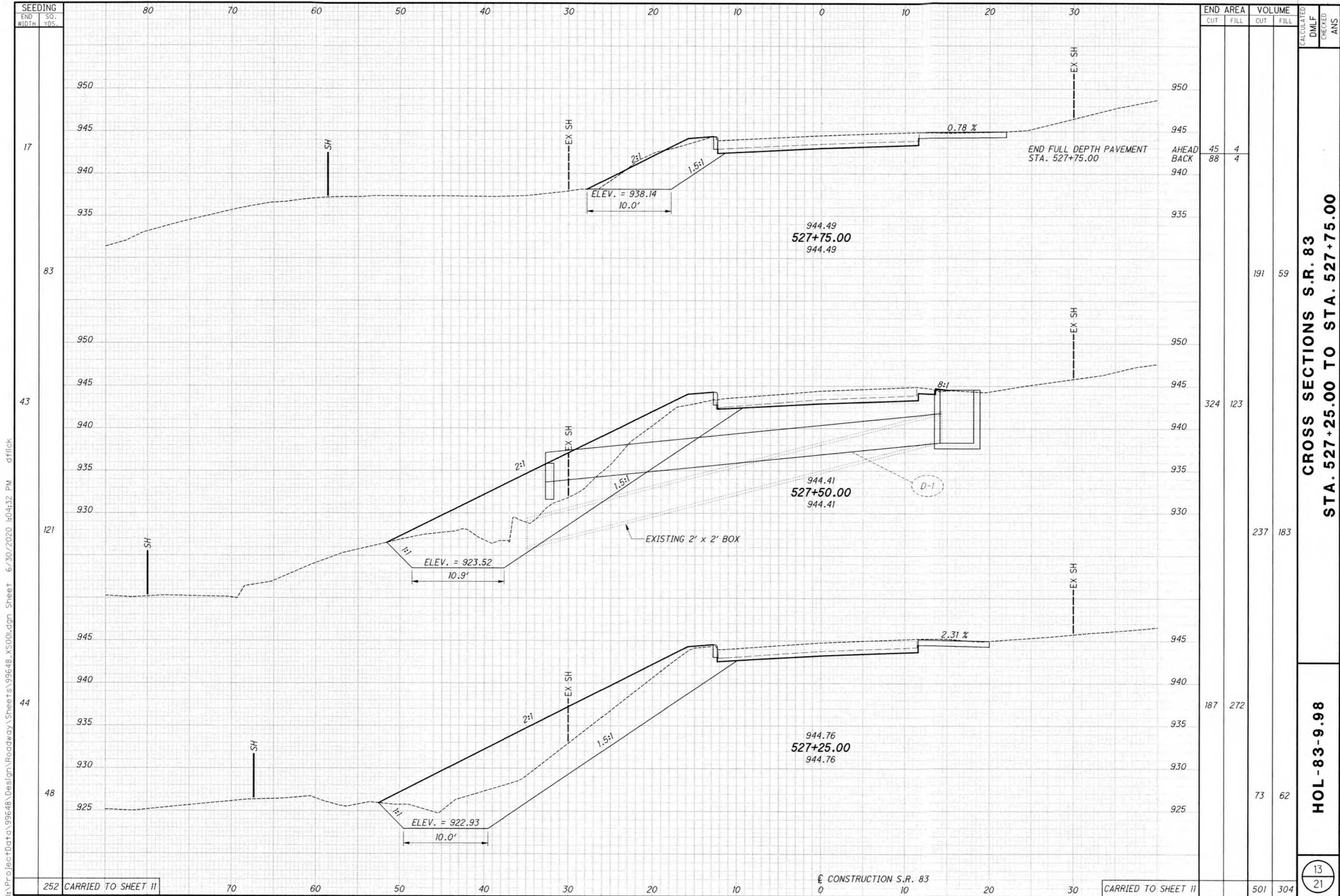
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12
 21

CONSTRUCTION S.R. 83

CARRIED TO SHEET 11

CARRIED TO SHEET 11



SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED D.M.L.F.	CHECKED ANS.
		CUT	FILL	CUT	FILL		
17		45	4				
83		88	4	191	59		
43		324	123	237	183		
121		187	272	73	62		
44							
48							
252	CARRIED TO SHEET 11			501	304		

CROSS SECTIONS S.R. 83
STA. 527+25.00 TO STA. 527+75.00

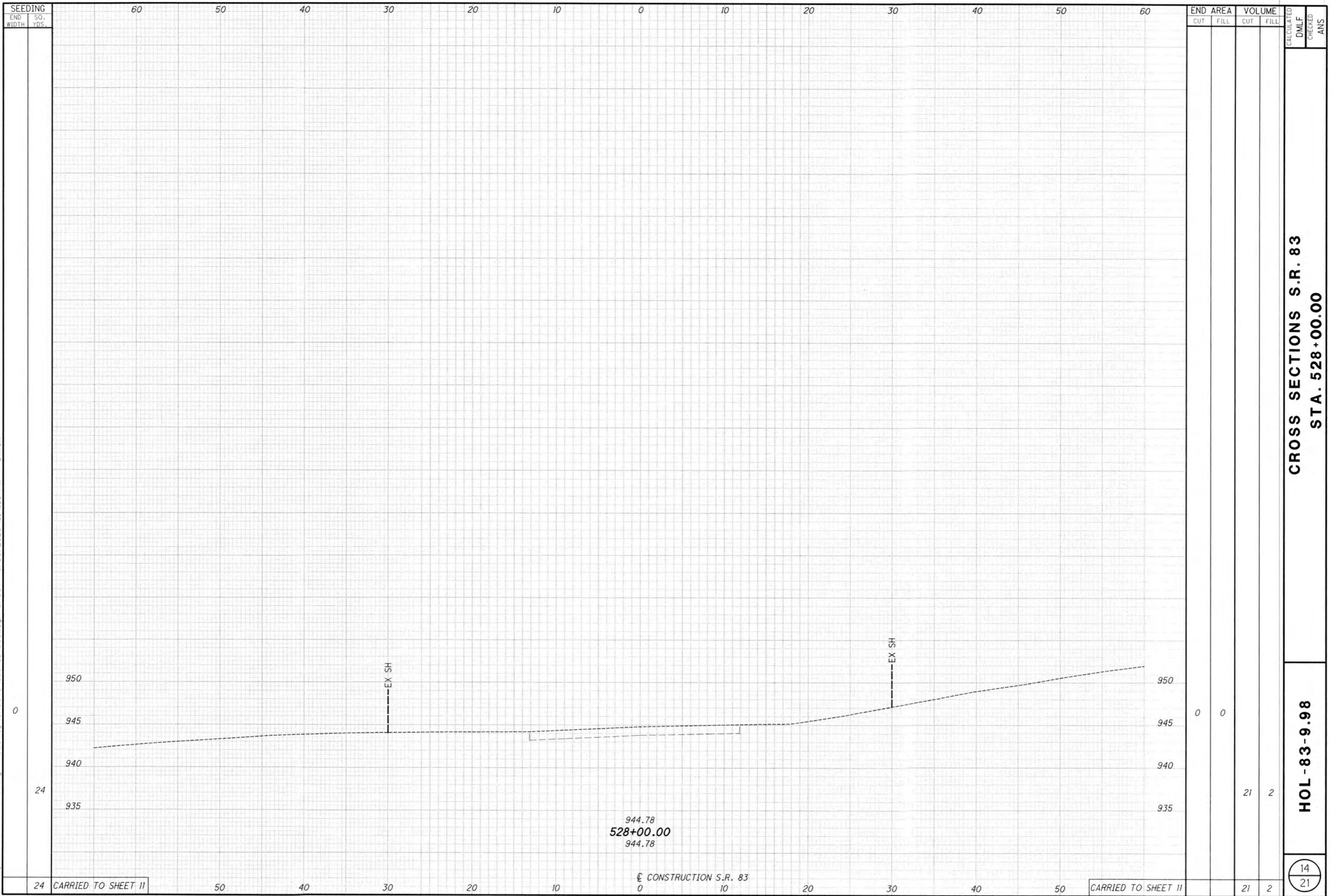
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13
 21

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CONSTRUCTION S.R. 83
 0 10 20 30

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SEEDING		60	50	40	30	20	10	0	10	20	30	40	50	60
END WIDTH	SO. YDS.													
24		CARRIED TO SHEET 11												

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	21	2

CALCULATED	DMLF	CHECKED	ANS
CROSS SECTIONS S.R. 83 STA. 528+00.00			
HOL - 83 - 9.98			
14 21			

CARRIED TO SHEET 11

CONSTRUCTION S.R. 83




EXISTING STRUCTURES

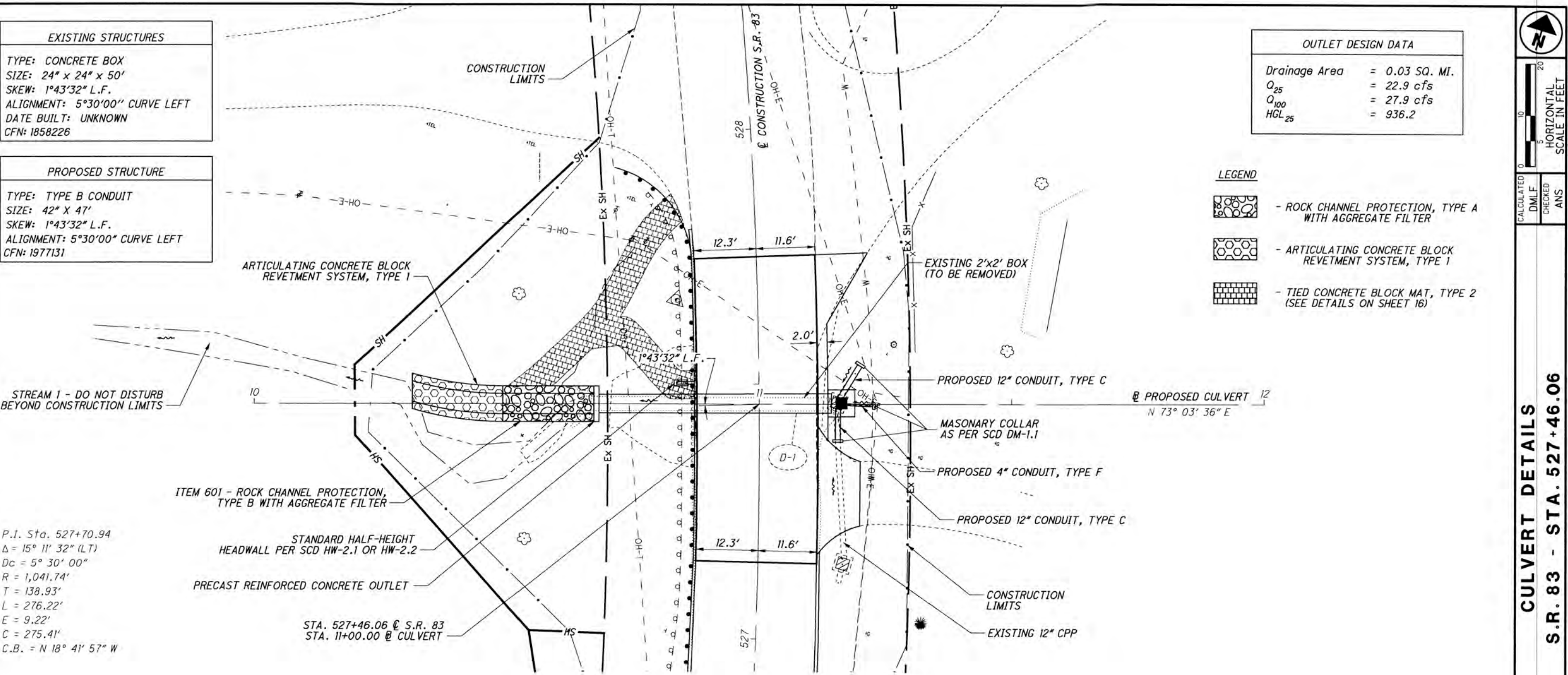
TYPE: CONCRETE BOX
 SIZE: 24" x 24" x 50'
 SKEW: 1°43'32" L.F.
 ALIGNMENT: 5°30'00" CURVE LEFT
 DATE BUILT: UNKNOWN
 CFN: 1858226

PROPOSED STRUCTURE

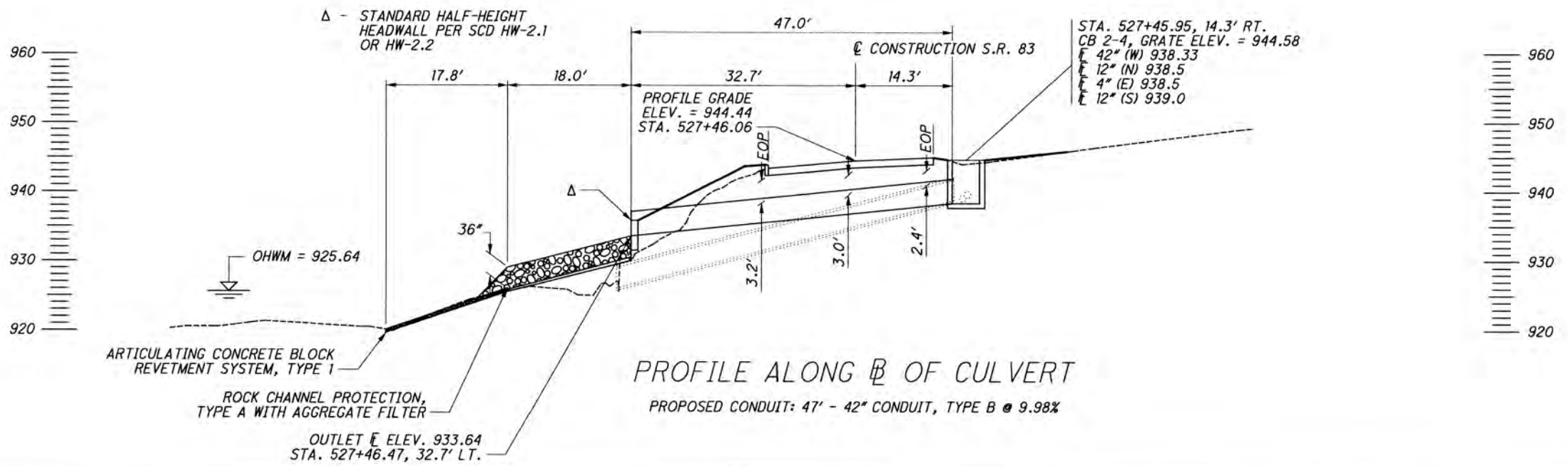
TYPE: TYPE B CONDUIT
 SIZE: 42" X 47'
 SKEW: 1°43'32" L.F.
 ALIGNMENT: 5°30'00" CURVE LEFT
 CFN: 1977131

OUTLET DESIGN DATA	
Drainage Area	= 0.03 SQ. MI.
Q_{25}	= 22.9 cfs
Q_{100}	= 27.9 cfs
HGL ₂₅	= 936.2

- LEGEND**
-  - ROCK CHANNEL PROTECTION, TYPE A WITH AGGREGATE FILTER
 -  - ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1
 -  - TIED CONCRETE BLOCK MAT, TYPE 2 (SEE DETAILS ON SHEET 16)



P.I. Sta. 527+70.94
 $\Delta = 15^\circ 11' 32''$ (LT)
 $Dc = 5^\circ 30' 00''$
 $R = 1,041.74'$
 $T = 138.93'$
 $L = 276.22'$
 $E = 9.22'$
 $C = 275.41'$
 $C.B. = N 18^\circ 41' 57'' W$



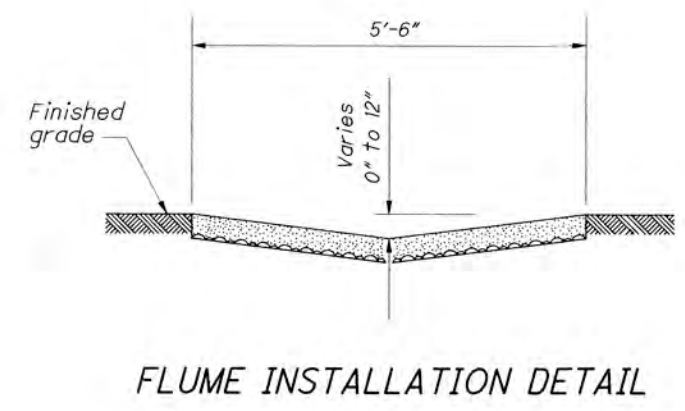
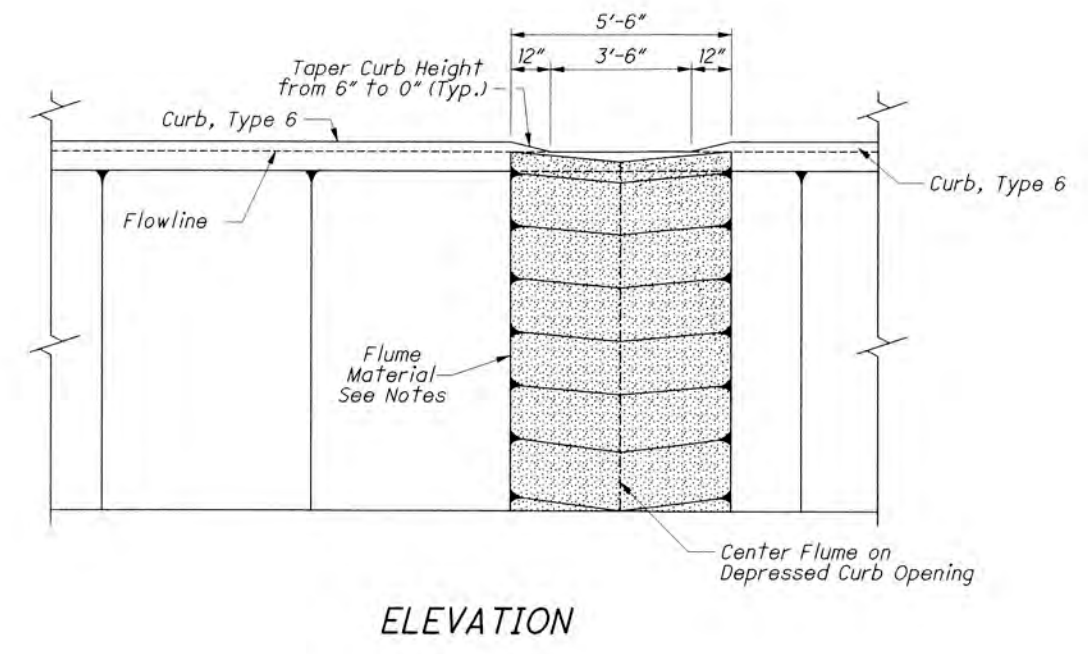
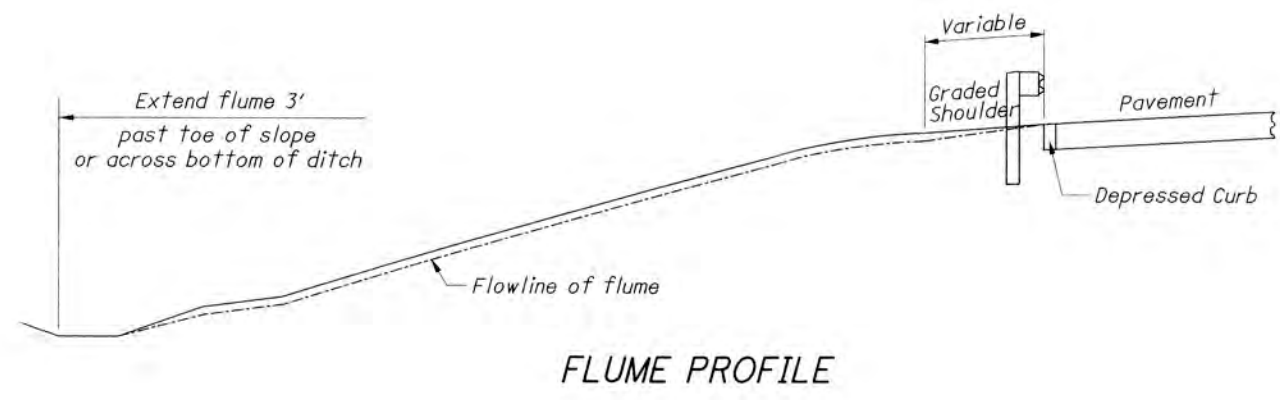
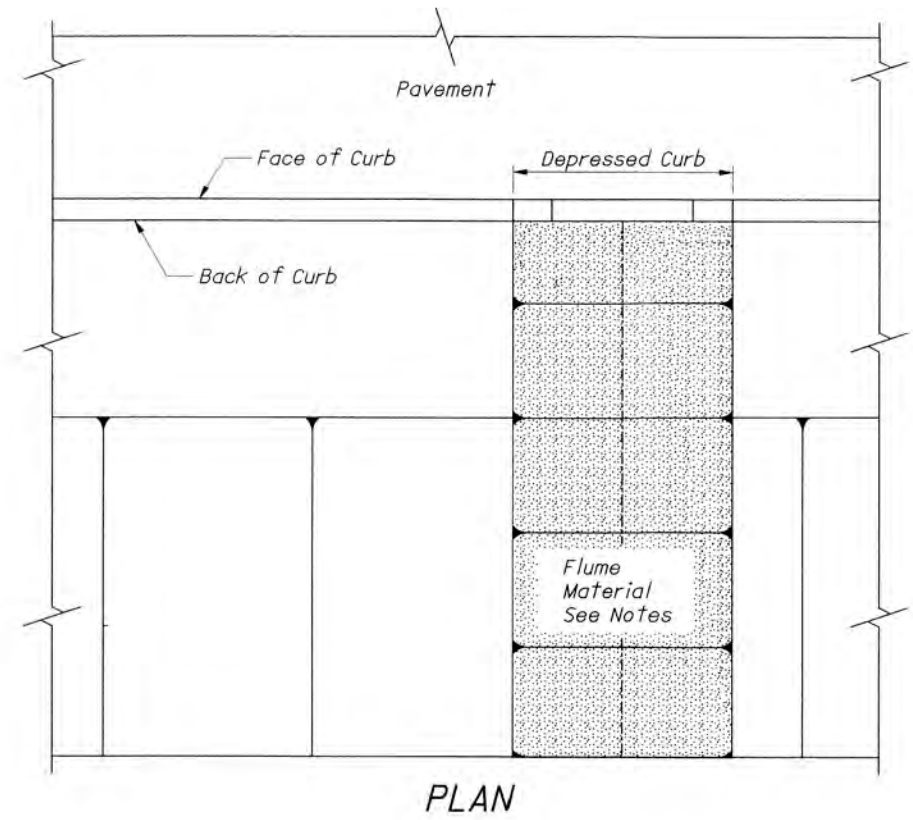
HORIZONTAL SCALE IN FEET

CALCULATED
 DMLF
 CHECKED
 ANS

CULVERT DETAILS
 S.R. 83 - STA. 527+46.06

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NOTES

FLUME MATERIAL:
 Provide Item 601 Tied Concrete Block Mat, Type 2 on Geotextile Fabric as shown in the plans. Start Tied Concrete Block Mat at the back of curb. Anchor the upstream end of the mat.

Shape the flume as shown, vary the depth to ensure positive drainage into the flume at the top of the slope and to lay the mat flat at the toe of the slope. Provide the maximum depth along the slope.

PAYMENT:
 Payment for all of the above is included in the unit price bid for Item 601, Tied Concrete Block Mat, Type 2, Square Yard.

FLUME DETAILS

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