

**BEGIN PROJECT
STA. 200+80.00**

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Pamela Boratyn
Director, Department of Transportation

DESIGN AGENCY



DESIGNER

BIM

REVIEWED

REVIEWER
IDB 02/26

HRB 02/28

PROJECT ID

120494

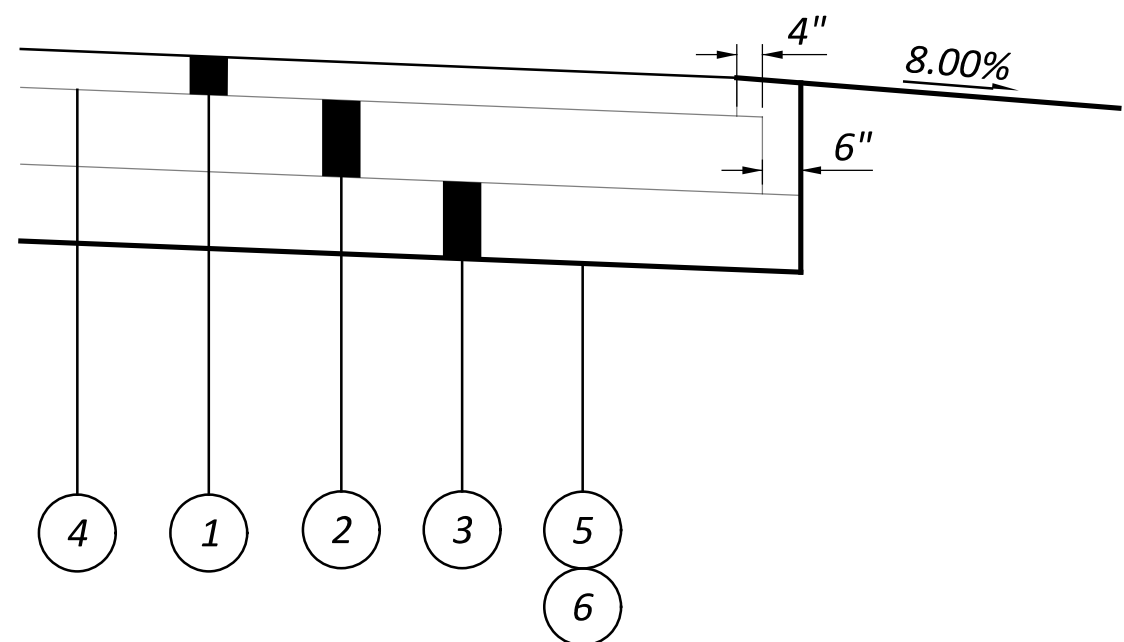
SHEET TOTAL

P.1 | 4

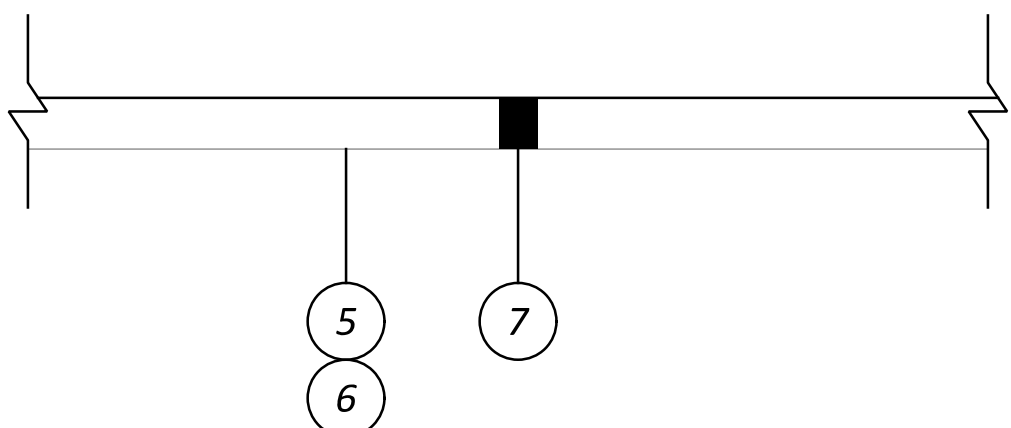
[illegible]

EXISTING LEGEND

- A 7"± EXISTING ASPHALT PAVEMENT
- B 6"± AGGREGATE BASE



STEP DETAIL

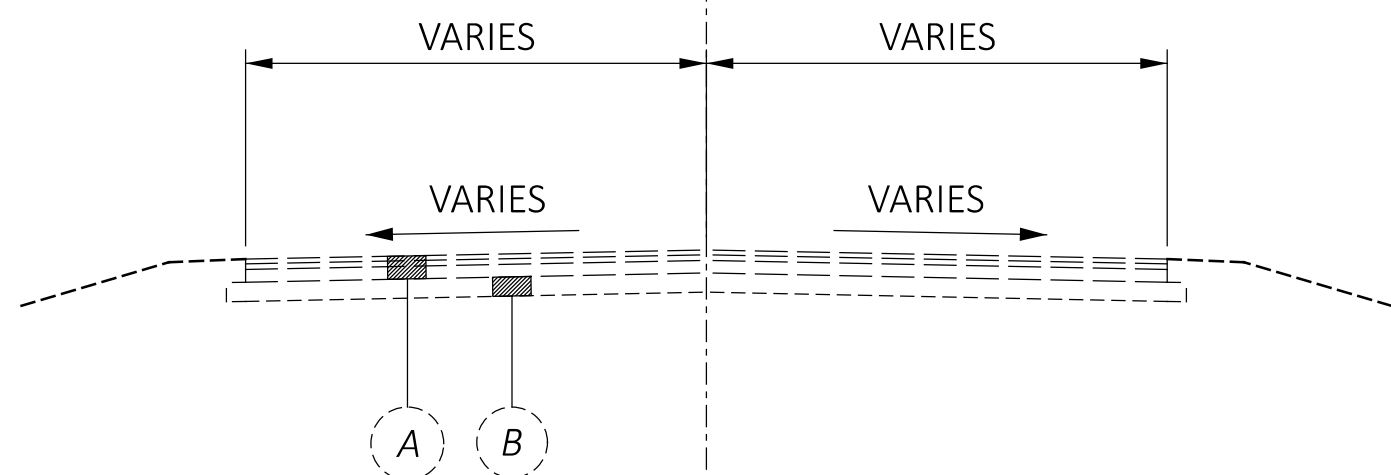


RESIDENTIAL DRIVE

PROPOSED LEGEND

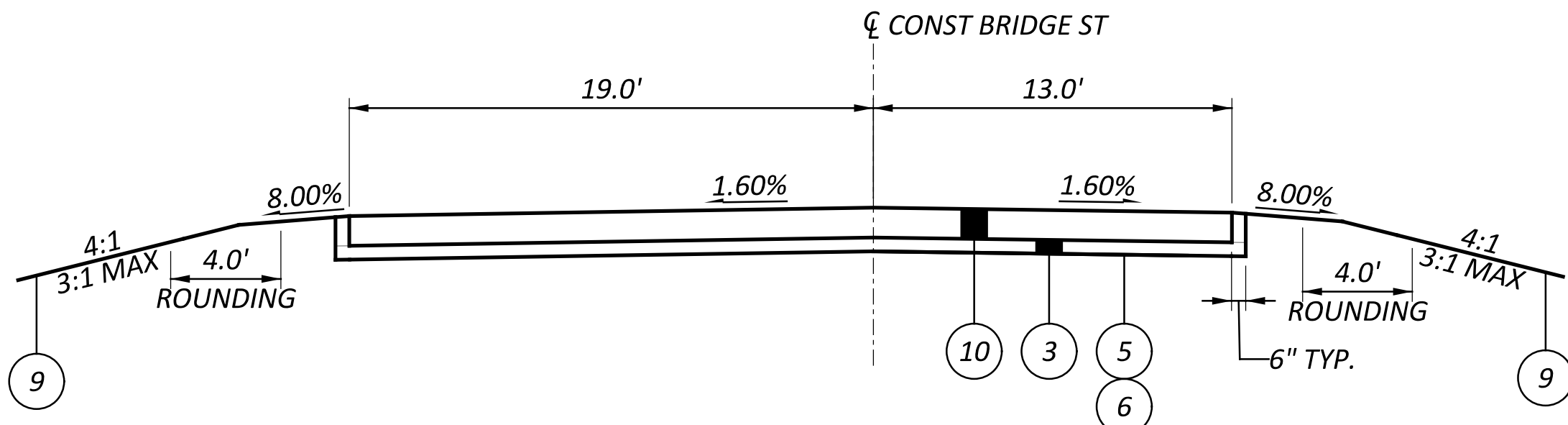
- 1 ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449) PG64-22
- 2 ITEM 301 - 4" ASPHALT CONCRETE BASE, PG64-22, (449)
- 3 ITEM 304 - 6" AGGREGATE BASE
- 4 ITEM 407 - NON-TRACKING TACK COAT (@0.06 GAL/SY)
- 5 ITEM 204 - SUBGRADE COMPACTION
- 6 ITEM 204 - PROOF ROLLING
- 7 ITEM 304 - 8" AGGREGATE BASE
- 8 ITEM 608 - 4" CONCRETE WALK
- 9 ITEM 659 - SEEDING AND MULCHING
- 10 ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=15", REAR & T=17", FORWARD)
- 11 ITEM 254 - 1.25" PAVEMENT PLANING, ASPHALT CONCRETE
- 12 ITEM 606 - GUARDRAIL, TYPE MGS
- 13 ITEM 407 - NON-TRACKING TACK COAT (@0.09 GAL/SY)

CONST BRIDGE ST



EXISTING SECTION

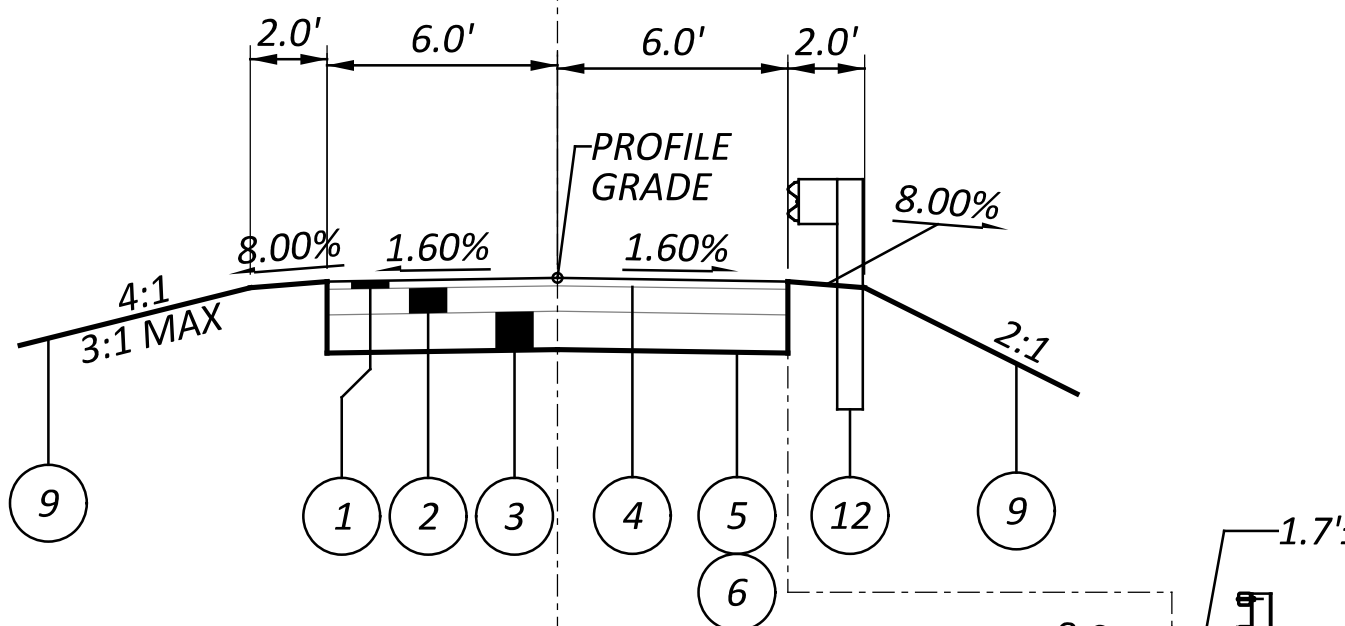
STA 200+00.00 TO STA 200+28.55 (BRIDGE ST)
STA 203+23.81 TO STA 203+92.14 (BRIDGE ST)
STA 0+13.13 TO STA 1+00.00 (WATER ALLEY)



PROPOSED APPROACH SLAB - BRIDGE ST

STA 201+10.52 TO STA 201+35.52
STA 202+21.52 TO STA 202+51.52

CONST WATER ALLEY

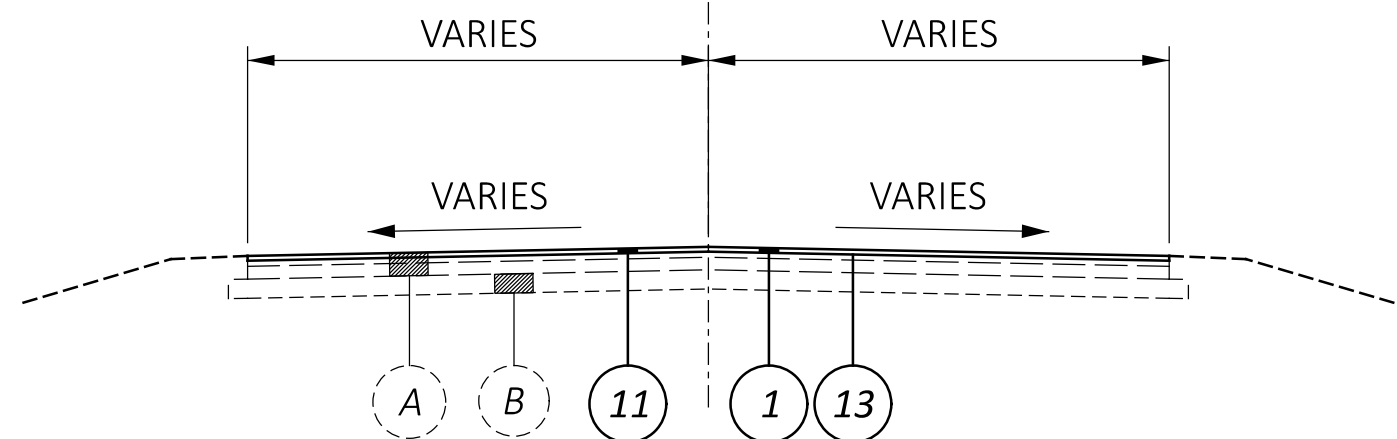


SECTION APPLIES:
STA 0+23.13 TO STA 0+48.54

PROPOSED SECTION - WATER ALLEY

STA 0+19.51 TO STA 0+70.00

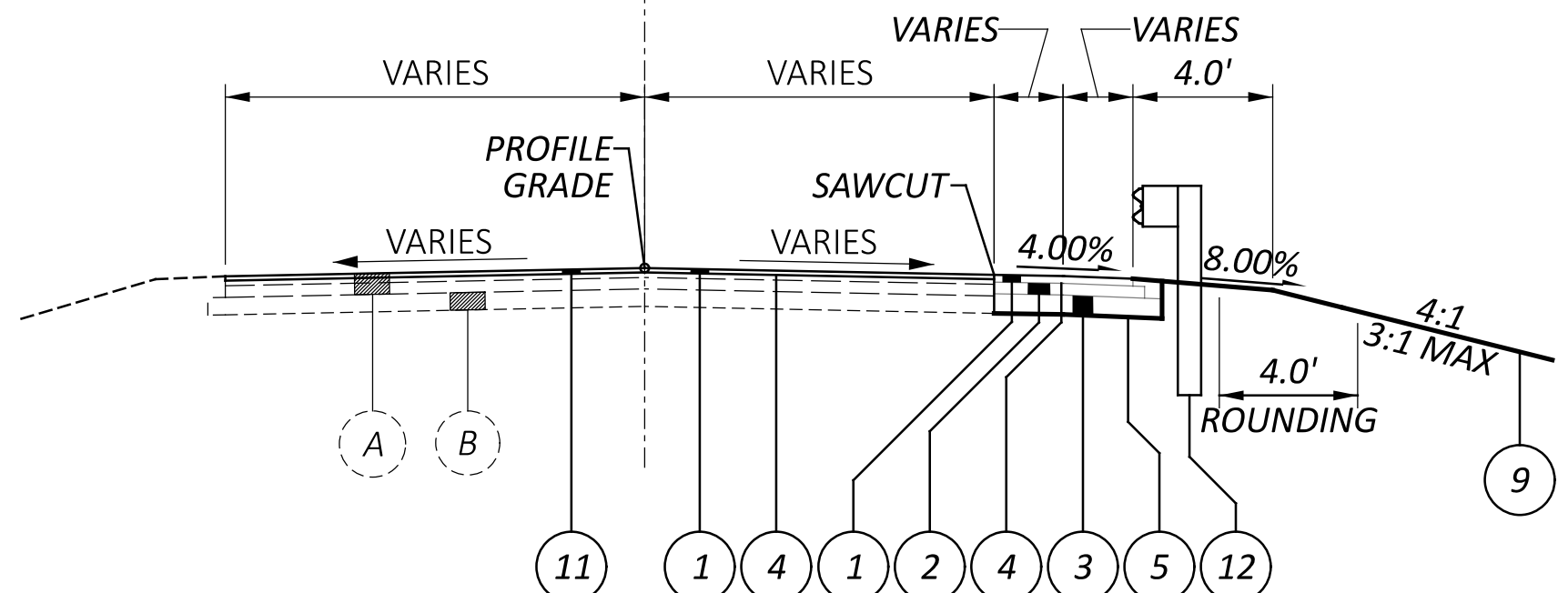
CONST BRIDGE ST



PROPOSED SECTION - BRIDGE ST

STA 200+28.55 TO STA 200+70.11

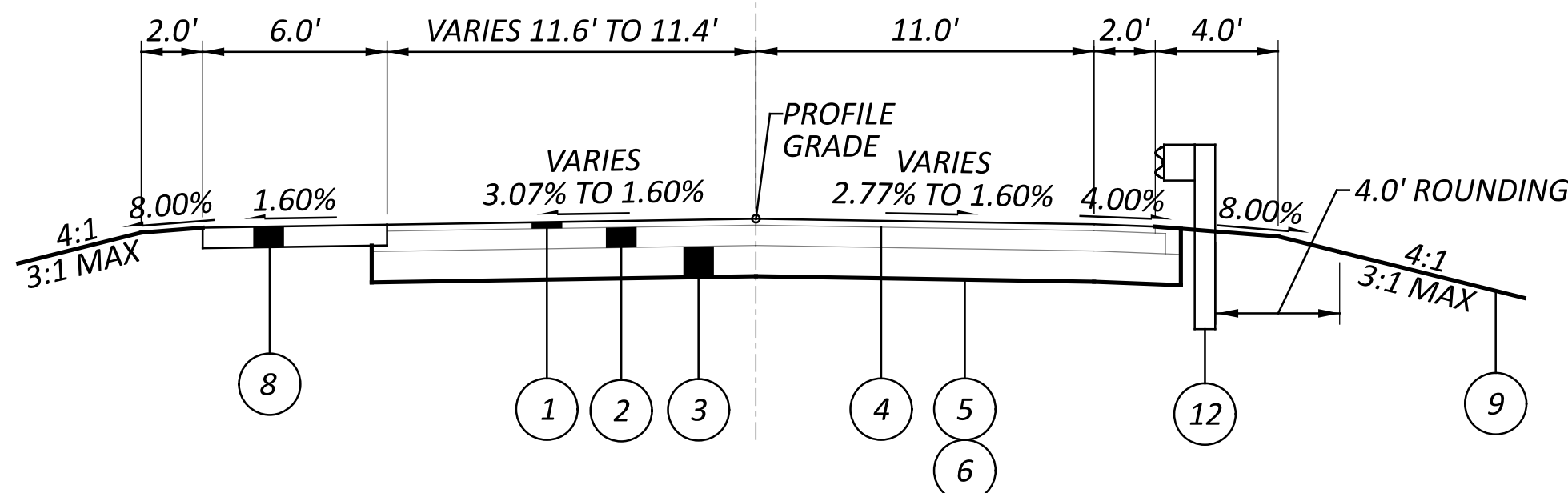
CONST BRIDGE ST



PROPOSED SECTION - BRIDGE ST

STA 200+70.11 TO STA 200+80.00
STA 202+92.66 TO STA 203+23.81

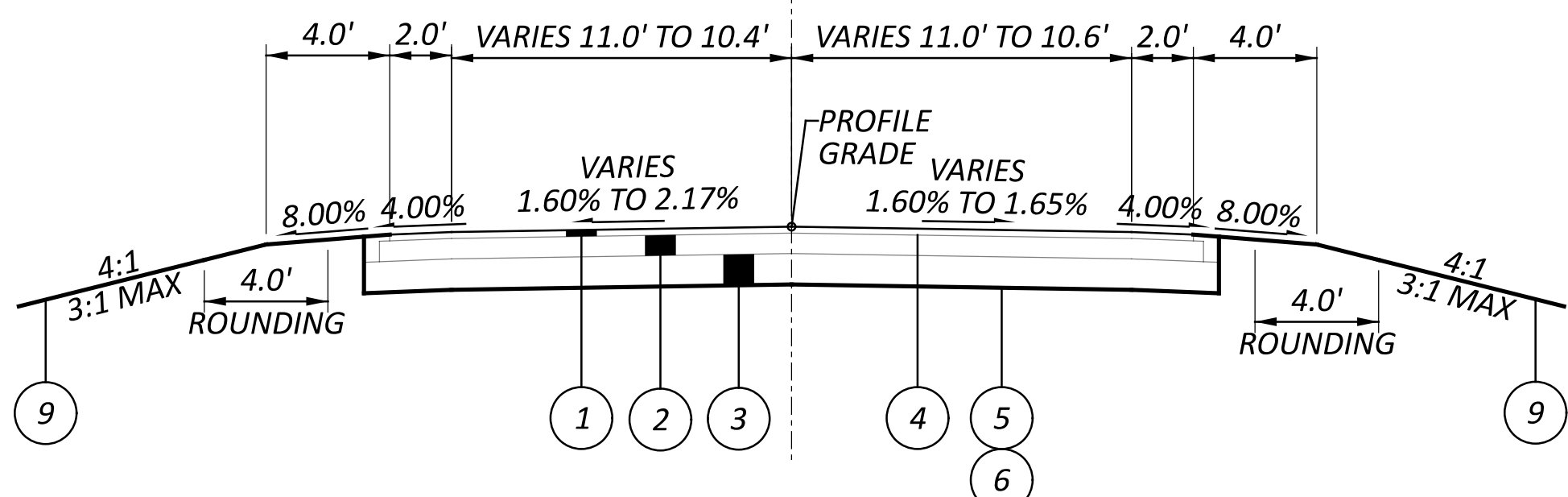
CONST BRIDGE ST



PROPOSED SECTION - BRIDGE ST

STA 200+80.00 TO STA 201+10.52

CONST BRIDGE ST



PROPOSED SECTION - BRIDGE ST

STA 202+51.52 TO STA 202+92.66

UTILITIES

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

AEP OHIO POWER COMPANY
47687 NATIONAL RD W
ST CLAIRSVILLE, OHIO 43950
ATTN: CLARKE SAUNDERS
(614) 312-5807
CMSAUNDERS@AEP.COM

NORTHEAST OHIO NATURAL GAS CORP.
9081 STATE RT 250 NW
STRASBURG, OHIO 44680
ATTN: MARK WETZEL
(330) 878-5589
MWETZEL@NEOGAS.COM

CHARTER COMMUNICATIONS
5520 WHIPPLE AVE
NORTH CANTON, OHIO 44720
ATTN: RON ICKES
(330) 494-9200
RON.ICKES@CHARTER.COM

FRONTIER COMMUNICATIONS
921 STEUBENVILLE AVE
CAMBRIDGE, OHIO 43725
ATTN: TRAVIS ART
(740) 432-6961
TRAVIS.M.ART@FTR.COM

HORIZON NETWORK PARTNERS
1123 GOODALE BLVD
COLUMBUS, OHIO 43212
ATTN: STACIE STEARNS
(740) 215-9066
STACIE.STEARNS@HORIZONCONNECTS.COM

VILLAGE OF BOWERSTON
402 E MAIN ST
BOWERSTON, OHIO 44695
ATTN: BART BUSBY
(330) 432-4597
BOWERSTONVILLAGE83@GMAIL.COM

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. 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.

ROUNDING

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

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET BELOW 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: ORTN/TOTAL STATION/DIFFERENTIAL LEVELING
MONUMENT TYPE: SOLID IRON PIPES, THREE-QUARTER (3/4) INCH DIAMETER, THIRTY (30) INCHES LONG WITH AN ALUMINUM CAP CONTAINING THE TEXT "PRIMARY PROJECT CONTROL" OR "AZIMUTH MARK" SET FLUSH.

IRON PIPES, THIRTEEN-SIXTEENTHS (13/16) INCH INSIDE DIAMETER, THIRTY (30) INCHES LONG WITH A RED PLASTIC PLUG PLACED IN THE TOP BEARING THE TEXT "EMHT TRAV".

MAG NAIL WITH SHINER BEARING THE TEXT "EMHT TRAVERSE".

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS 80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: HARRISON COUNTY
ORIGIN OF COORDINATE SYSTEM: 0,0

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

UNITS ARE IN U.S. SURVEY FEET.

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.

ABANDONED UTILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF ANY ABANDONED UTILITY FACILITY THAT MAY CONFLICT WITH ANY PROPOSED FACILITY OR CONSTRUCTION ACTIVITY PROPOSED IN THESE PLANS, INCLUDING THE INSTALLATION OF PROPOSED CONDUIT, UNDERDRAIN, STORM SEWER, STRUCTURES, WATERLINE, SANITARY SEWER LINE, SUBGRADE STABILIZATION, FOUNDATIONS, ETC. THE CONTRACTOR IS ADVISED TO VERIFY THAT A UTILITY FACILITY HAS BEEN ABANDONED BEFORE PROCEEDING WITH REMOVING IT. IF IT IS DETERMINED THAT THE UTILITY FACILITY IS ACTIVE AND IN CONFLICT, THEN THE CONTRACTOR SHALL NOTIFY THE MUNICIPAL ENGINEER AND ODOT ENGINEER PRIOR TO PROCEEDING WITH ANY AFFECTED PROPOSED WORK. IF THE PLAN DOES NOT SPECIFICALLY PAY FOR THE REMOVAL OF ANY ABANDONED UTILITY LINE, PAYMENT FOR THE REMOVAL AND COORDINATION WITH THE OWNER, AS DESCRIBED HEREIN, SHALL BE INCLUDED IN THE PRICE OF AFFECTED WORK.

EXPOSING EXISTING UTILITIES BEFORE DIGGING

THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE PROXIMITY OF EXISTING AND/OR RELOCATED UTILITY FACILITIES. ALL UTILITIES NEAR THE SUBSURFACE WORK SHALL BE EXPOSED PRIOR TO DIGGING. CONTRACTOR MUST NOTIFY UTILITY OWNERS (CONTACT INFORMATION ON THIS SHEET) 7 DAYS PRIOR TO DIGGING OVER OR AROUND UNDERGROUND FACILITIES TO GIVE THE OWNER THE OPPORTUNITY TO BE ON-SITE DURING EXPOSING/CONSTRUCTION.

IF, WHILE EXPOSING, CONFLICTS ARE FOUND TO BE PRESENT BETWEEN PROPOSED WORK AND EXISTING UTILITIES THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER AND THE UTILITY OWNER.

COST TO EXPOSE EXISTING UTILITIES SHALL BE INCLUDED IN THE ITEMS OF WORK AFFECTED. THE CONTRACTOR IS REMINDED TO KEEP THEIR OUPS TICKET UPDATED ACCORDING TO INDUSTRY PRACTICE.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET RW.3 OF THE RIGHT OF WAY PLANS.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	4	0	4

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. ____ FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING	2 HOUR
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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	64 CU. YD.
659, SEEDING AND MULCHING	581 SQ. YD.
659, REPAIR SEEDING AND MULCHING	29 SQ. YD.
659, INTER-SEEDING	29 SQ. YD.
659, COMMERCIAL FERTILIZER	0.13 TON
659, LIME	0.12 ACRES
659, WATER	3 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.

DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 07/01/24

PROJECT ID

120494

SHEET

P.3

TOTAL

41

ASBESTOS SURVEY

AN ASBESTOS SURVEY FOR SFN 3431789, SINGLE SPAN PRESTRESSED CONCRETE BOX BEAMS, ON CONCRETE AND STONE MASONARY ABUTMENTS SCHEDULED FOR DEMOLITION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. A COPY OF THE ASBESTOS INSPECTION REPORT FOR THE STRUCTURE IS INCLUDED IN THE PLAN PACKAGE FOR THIS PROJECT. THE ASBESTOS INSPECTION REPORT DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS ABOVE REGULATORY LIMITS.

DISPOSE ASBESTOS CONTAINING MATERIALS IN A LANDFILL LICENSED BY THE OHIO DEPARTMENT OF HEALTH AND PERMITTED BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY - DIVISION OF AIR POLLUTION CONTROL TO ACCEPT ASBESTOS CONTAINING MATERIAL. THE REMOVAL AND DISPOSAL OF ALL ASBESTOS CONTAINING MATERIAL MUST COMPLY WITH THE OHIO ADMINISTRATIVE CODE (OAC) REGULATIONS AND THE NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHA^P) STANDARD FOR ASBESTOS.

ELECTRONIC SUBMISSION:

SUBMIT A COMPLETED ELECTRONIC NOTIFICATION OF DEMOLITION AND RENOVATION FORM (NDRF), APPLICABLE FEES, AND THE ASBESTOS INSPECTION REPORT TO THE OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. SUBMIT THE NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT USING THE OEPA EBUSINESS CENTER. SUBMIT ONE ELECTRONIC PDF COPY AND ONE HARD COPY OF THE NDRF TO THE ENGINEER. THE ENGINEER WILL PROVIDE ONE COPY TO THE DISTRICT ENVIRONMENTAL STAFF.

HARD COPY SUBMISSION:

THE CONTRACTOR MAY SUBMIT A HARD COPY OF THE COMPLETED NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT. FOLLOW THE MAILING INSTRUCTIONS ON THE NDRF. CHECK WITH LOCAL HEALTH DEPARTMENT, 538 N MAIN ST., CADIZ, OH 43907, (740) 942-2616 TO DETERMINE IF THEY REQUIRE A HARD COPY SUBMITTAL.

SUBMIT THE COMPLETED NDRF TO OEPA AT LEAST 10 DAYS PRIOR TO DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. RETAIN TWO HARD COPIES OF THE NDRF AND SUBMIT ONE COPY TO THE ENGINEER AND EMAIL ONE COPY TO THE ODOT DISTRICT ENVIRONMENTAL COORDINATOR AT: THOMAS.STRATTON@DOT.OHIO.GOV.

BASIS OF PAYMENT

SUBMIT ALL DOCUMENTATION RELATED TO THE SURVEY, ABATEMENT, TRANSPORT, AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS TO THE ENGINEER WITHIN TWO WEEKS OF COMPLETION. THE ENGINEER WILL PROVIDE A COPY OF THE DOCUMENTATION TO THE DISTRICT ENVIRONMENTAL STAFF.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE BID PRICE OF LUMP SUM.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

690E98400 ITEM SPECIAL - MISC.: WORK INVOLVING ASBESTOS CONTAINING MATERIALS - LUMP SUM

VERTICAL CONTROL				
BENCH MARK	NORTHING (GROUND)	EASTING (GROUND)	Elevation	DESCRIPTION
BM #2	537822.1380	139835.5770	938.05	CHISELED "X" ON THE EAST FLANGE BOLT OF A FIRE HYDRANT LOCATED ON THE WEST SIDE OF BRIDGE STREET, BEING THE FIRST HYDRANT (270 FEET) NORTH OF WATER ALLEY
BM #4	537384.3990	139642.2170	961.59	CHISELED "X" ON THE WEST BOLT OF A FIRE HYDRANT LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF MAIN STREET AND LIBERTY STREET
BM #5	537787.4300	139416.8560	937.80	CHISELED "X" ON THE NORTH FLANGE BOLT OF A FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF WATER ALLEY, BEING THE SECOND HYDRANT (400 FEET) WEST OF BRIDGE STREET

HORIZONTAL CONTROL					
POINTS	STATION	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION	DESCRIPTION
6	201+45.25, 62.68' LT	537595.6071	139717.0303	937.98	1165 POL MAGS
7	202+23.65, 31.34' RT	537642.1160	139831.2580	934.59	1157 TOPO IRS w/cap
201	OUTSIDE LIMITS OF CENTERLINE STATIONING	538142.8100	538142.8100	939.03	1152 ALUMINUM ODOT CAP IPS w/cap
202	203+79.57, 18.93' RT	537793.3830	139865.1190	936.44	1152 ALUMINUM ODOT CAP IPS w/cap
203	201+36.40, 21.53' LT	537574.2950	139753.3310	942.64	1152 ALUMINUM ODOT CAP IPS w/cap
204	OUTSIDE LIMITS OF CENTERLINE STATIONING	537268.6970	139507.7890	975.39	1152 ALUMINUM ODOT CAP IPS w/cap
205	OUTSIDE LIMITS OF CENTERLINE STATIONING	537760.7480	139435.7480	935.70	1165 #205 MAGS
402	203+97.63, 18.12' LT	537822.1380	139835.5770	938.05	1185 BM#2 BMS
404	OUTSIDE LIMITS OF CENTERLINE STATIONING	537384.3990	139642.2170	961.59	1185 BM#4 BMS
405	OUTSIDE LIMITS OF CENTERLINE STATIONING	537787.4300	139416.8560	937.80	1185 BM#5 BMS

GENERAL NOTES

DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02/28/25

PROJECT ID

120494

SHEET

P.4

TOTAL

41

SEQUENCE OF CONSTRUCTION

PHASE 1 SHALL CONSTRUCT THE EASTERN PORTION OF THE PROPOSED STRUCTURE. THIS WORK SHALL BE COMPLETED WITH ONE-LANE, TWO-WAY TRAFFIC MAINTAINED USING PORTABLE TRAFFIC SIGNAL CARTS PER ODOT SCD MT-96.11. PEDESTRIAN TRAFFIC WILL BE MAINTAINED ON THE EXISTING WALKWAY IN PHASE 1. WATER ALLEY WILL BE CLOSED IN PHASE 1.

PHASE 2 SHALL CONSTRUCT THE WESTERN PORTION OF THE PROPOSED STRUCTURE. THIS WORK SHALL BE COMPLETED WITH ONE-LANE, TWO-WAY TRAFFIC MAINTAINED USING PORTABLE TRAFFIC SIGNAL CARTS PER ODOT SCD MT-96.11. WATER ALLEY WILL BE CLOSED IN PHASE 2. THE BRIDGE ST STRUCTURE WILL BE CLOSED TO PEDESTRIAN TRAFFIC IN PHASE 2.

AT THE CONCLUSION OF PHASE 2, PORTABLE BARRIER SHALL BE REMOVED SO THAT GROOVES CAN BE SAWCUT INTO THE DECK SURFACE. THIS WORK SHALL BE COMPLETED PART-WIDTH WITH TRAFFIC MAINTAINED PER ODOT SCD MT-97.10.

TRAFFIC SHALL BE PHYSICALLY SEPARATED FROM THE WORK ZONE VIA UNANCHORED PORTABLE BARRIER IN EACH PHASE.

ITEM 614, MAINTAINING TRAFFIC

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

MEASUREMENT AND PAYMENT

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

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

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

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

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

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

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

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

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

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN ON SHEETS P.6 - P.7 AND TRAFFIC SCDS MT-96.11, 96.20 AND 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.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

	PHASE			
	1 (ALL RED) DUMMY PHASE	2 MAINLINE (NORTHBOUND)	3 (ALL RED) DUMMY PHASE	4 MAINLINE (SOUTHBOUND)
MIN. GREEN				
EXTENSION				
MAX. GREEN				
YELLOW				
ALL RED				
RECALL				

NOTE TO REVIEWER: SIGNAL TIMING WILL BE PROVIDED IN THE NEXT SUBMITTAL

THE CONTRACTOR SHALL ALSO DESIGN, FURINISH, 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.

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 OR PERMANENT BARRIER (INCLUDING BRIDGE PARAPETS) 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 (BI-DIRECTIONAL)

ITEM 614, OBJECT MARKER, TWO-WAY

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

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

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

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

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

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

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

•FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

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

○ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND

○AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,

○AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

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

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

•THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR

•THE ACTIVE WORK AREA Laterally CLOSEST TO THE OPEN TRAVELED LANE; OR

•OTHER LOCATION AS APPROVED BY THE ENGINEER.

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

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

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

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

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

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

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

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

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

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.

NOTICE OF TRAFFIC RESTRICTIONS TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURE & 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

RE-OPENING TO TRAFFIC
PRIOR TO OPENING THE ROAD TO TRAFFIC, PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE.

DESIGN AGENCY



DESIGNER

BDM

REVIEWER

SMM 02/28/25

PROJECT ID

120494

SHEET

P.5

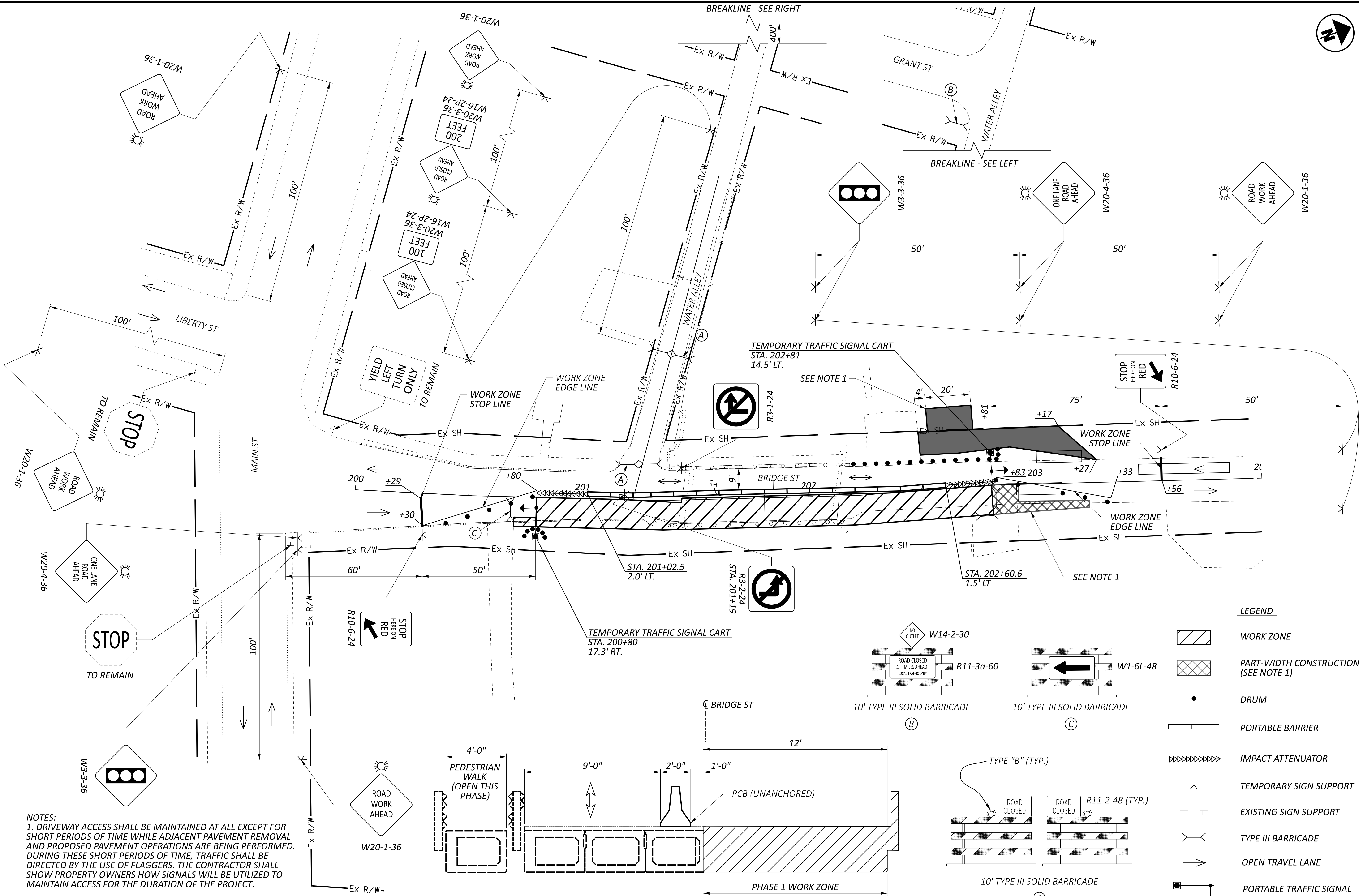
TOTAL

41

NOTES:
1. DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL EXCEPT FOR SHORT PERIODS OF TIME WHILE ADJACENT PAVEMENT REMOVAL AND PROPOSED PAVEMENT OPERATIONS ARE BEING PERFORMED. DURING THESE SHORT PERIODS OF TIME, TRAFFIC SHALL BE DIRECTED BY THE USE OF FLAGGERS. THE CONTRACTOR SHALL SHOW PROPERTY OWNERS HOW SIGNALS WILL BE UTILIZED TO MAINTAIN ACCESS FOR THE DURATION OF THE PROJECT.

2. SIGNAL TIMING WILL BE INCLUDED IN THE NEXT SUBMITTAL. RECALL WILL BE TURNED "ON" FOR NB AND "OFF" FOR SB TO MINIMIZE QUEUEING IMPACTS TO THE INTERSECTION.

PHASE 1 TYPICAL SECTION



LEGEND

- WORK ZONE
- PART-WIDTH CONSTRUCTION (SEE NOTE 1)
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- TYPE III BARRICADE
- OPEN TRAVEL LANE
- PORTABLE TRAFFIC SIGNAL
- TRAFFIC COMPACTED SURFACE
- TEMPORARY SIGNAL DETECTION ZONE

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
BRIDGE STREET - STA. 200+00 TO STA. 204+00

HORIZONTAL
SCALE IN FEET
0 20 40

DESIGN AGENCY

EMHT

DESIGNER

RLS

REVIEWER

BDM 02/28/25

PROJECT ID

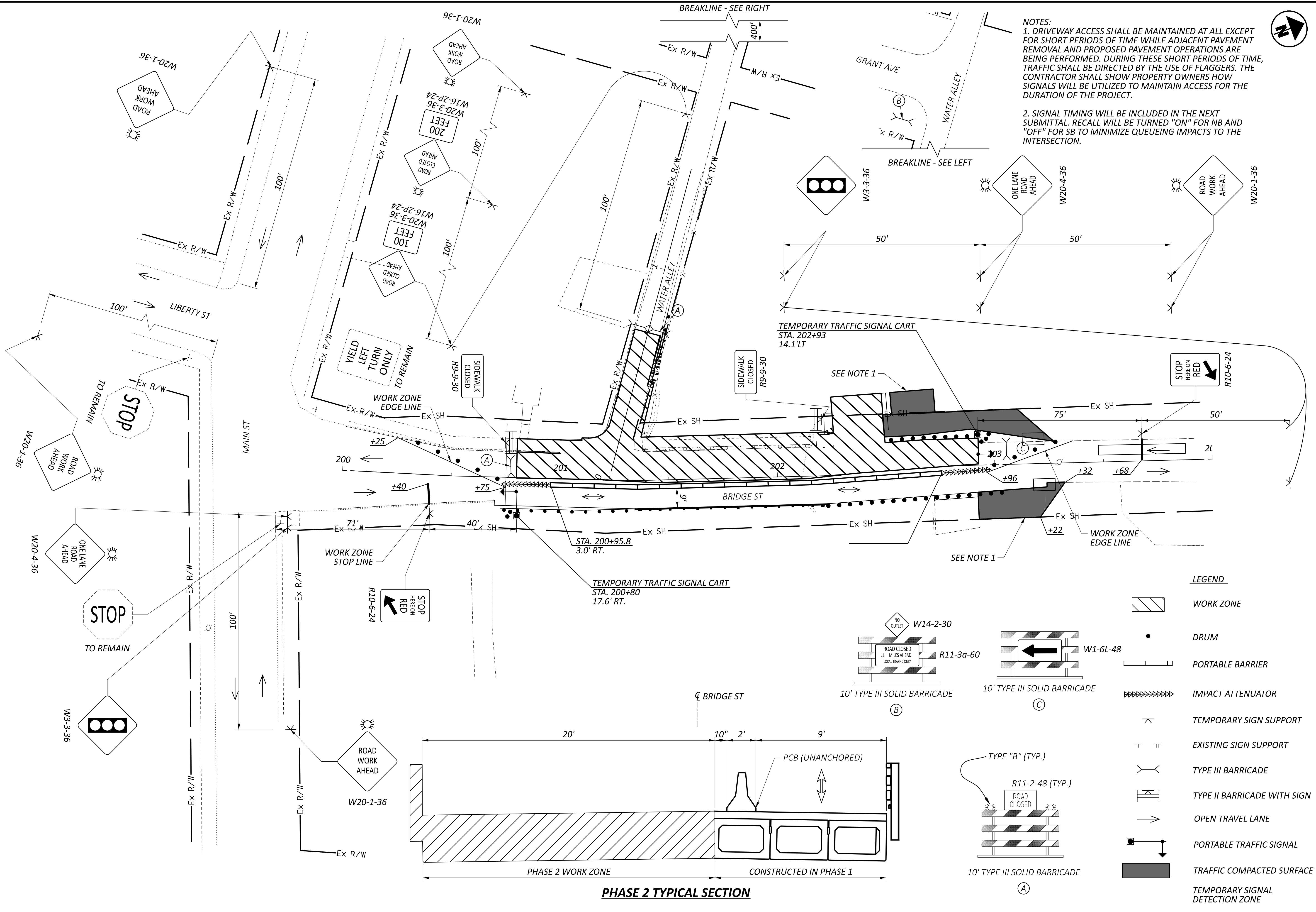
120494

SHEET

P.6

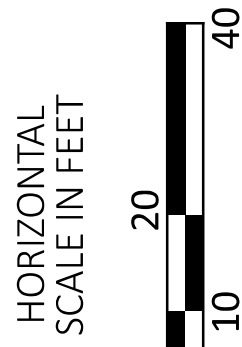
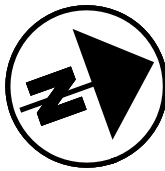
TOTAL

41



PHASE 2 TYPICAL SECTION

NOTES:
1. DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL EXCEPT FOR SHORT PERIODS OF TIME WHILE ADJACENT PAVEMENT REMOVAL AND PROPOSED PAVEMENT OPERATIONS ARE BEING PERFORMED. DURING THESE SHORT PERIODS OF TIME, TRAFFIC SHALL BE DIRECTED BY THE USE OF FLAGGERS. THE CONTRACTOR SHALL SHOW PROPERTY OWNERS HOW SIGNALS WILL BE UTILIZED TO MAINTAIN ACCESS FOR THE DURATION OF THE PROJECT.
2. SIGNAL TIMING WILL BE INCLUDED IN THE NEXT SUBMITTAL. RECALL WILL BE TURNED "ON" FOR NB AND "OFF" FOR SB TO MINIMIZE QUEUEING IMPACTS TO THE INTERSECTION.



MAINTENANCE OF TRAFFIC PLAN - PHASE 2
BRIDGE STREET - STA. 200+00 TO STA. 204+00

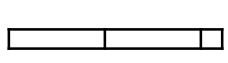
LEGEND



WORK ZONE



DRUM



PORTABLE BARRIER



IMPACT ATTENUATOR



TEMPORARY SIGN SUPPORT



EXISTING SIGN SUPPORT



TYPE III BARRICADE



TYPE II BARRICADE WITH SIGN



OPEN TRAVEL LANE



PORTABLE TRAFFIC SIGNAL



TRAFFIC COMPACTED SURFACE

TEMPORARY SIGNAL
DETECTION ZONE

DESIGN AGENCY



DESIGNER

RLS

REVIEWER

BDM 02/28/25

PROJECT ID

120494

SHEET

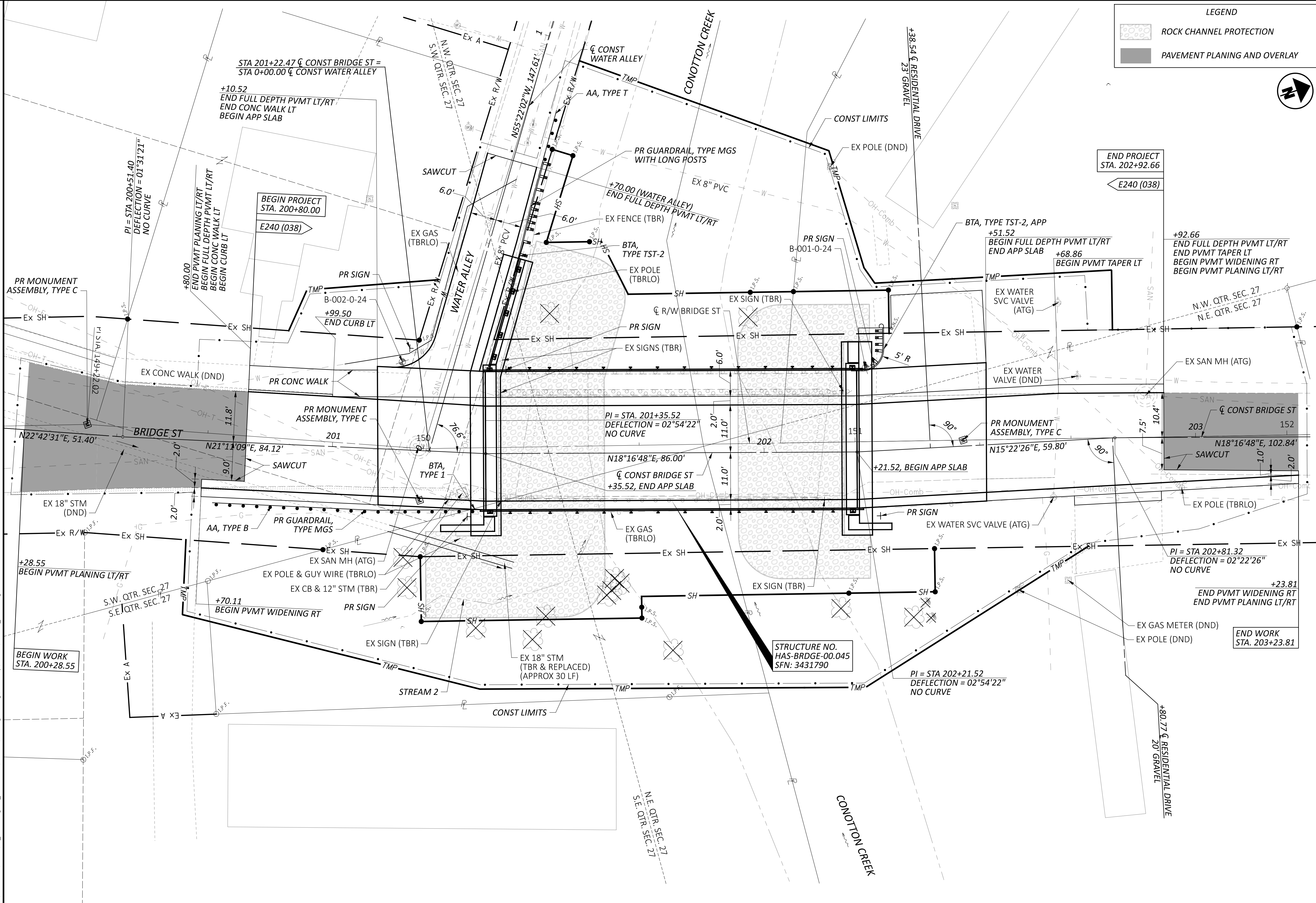
P.7

TOTAL

41

HAS-BRIDGE STREET BRIDGE REPLACEMENT

MODEL: Bridge St - Sheet 1 PAPER SIZE: 34x22 (in) DATE: 2/28/2025 TIME: 8:02:28 AM USER: albrahmkhalil
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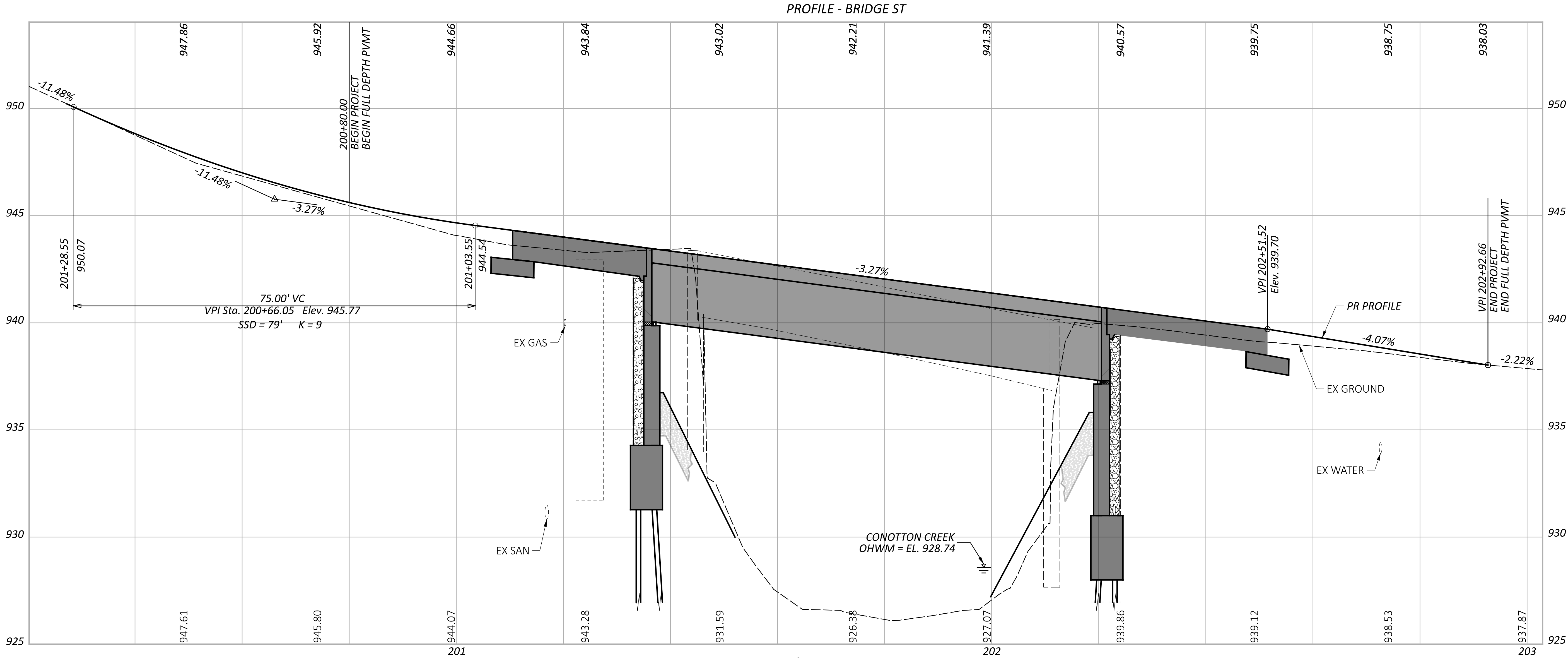
PLAN - BRIDGE ST
STA 200+25.00 TO STA 203+25.00

DESIGN AGENCY	
EMHT	
DESIGNER	
BLM	
REVIEWER	
HRB 02/28/25	
PROJECT ID	
120494	
SHEET	TOTAL
P.8	41

HAS-BRIDGE STREET BRIDGE REPLACEMENT

MODEL: Bridge St - Sheet 2 PAPER SIZE: 34x22 (in.) DATE: 2/28/2025 TIME: 8:02:30 AM USER: albrahmkhalil

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PROFILES
BRIDGE ST AND WATER ALLEY

DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02/28/25

PROJECT ID

120494

SHEET

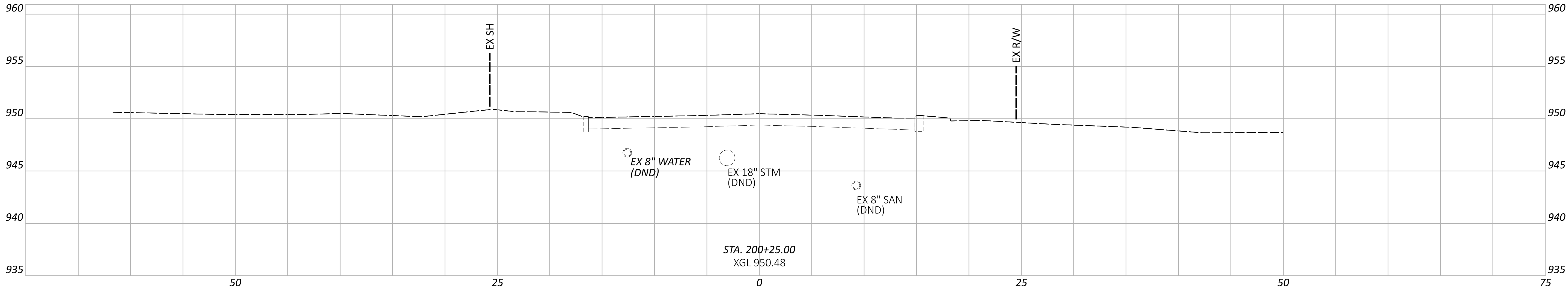
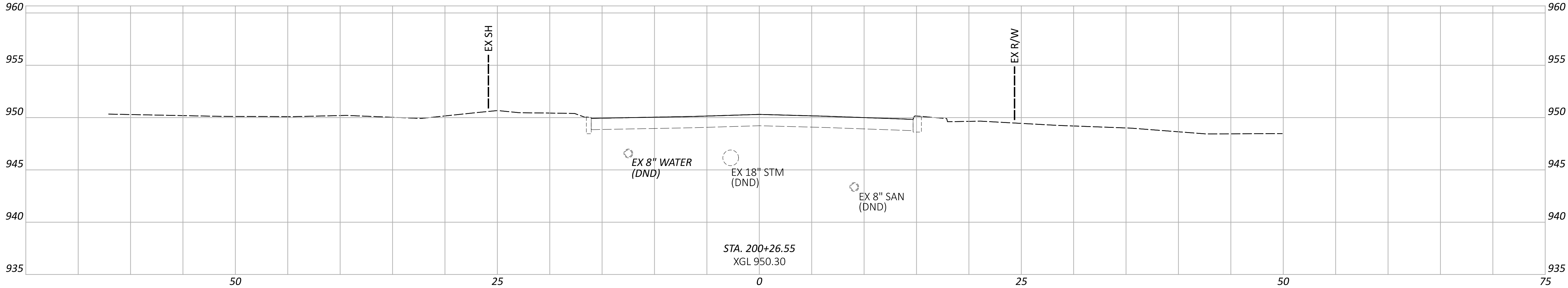
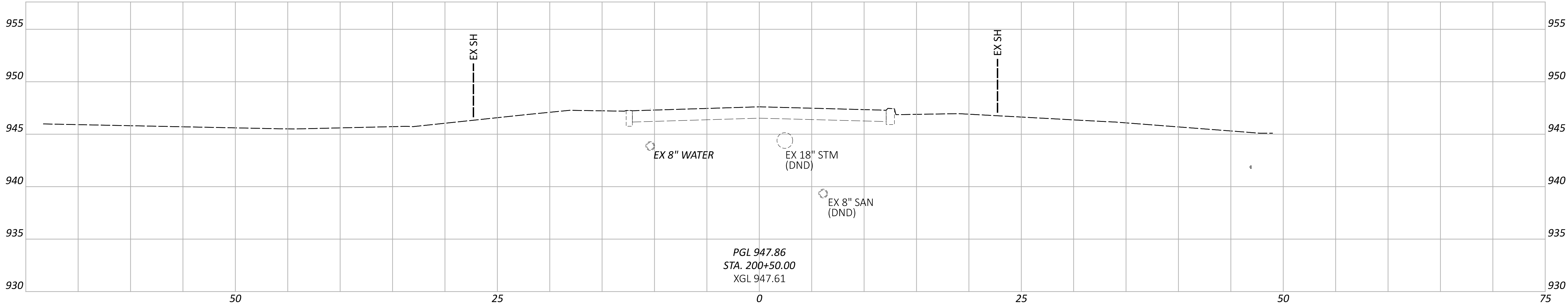
P.9

TOTAL

41

HAS-BRIDGE STREET BRIDGE REPLACEMENT

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CROSS SECTIONS - BRIDGE ST
STA 200+25.00 TO STA 200+50.00

DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02/28/25

PROJECT ID

120494

Sheet Totals

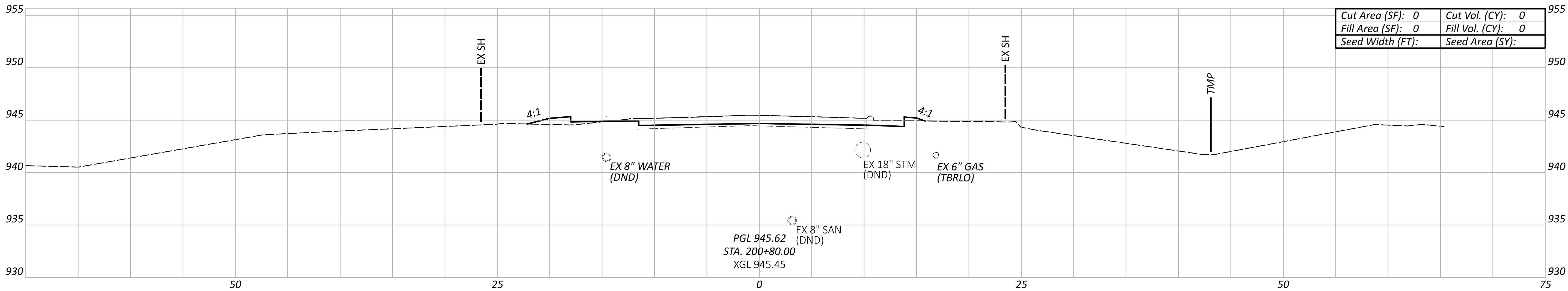
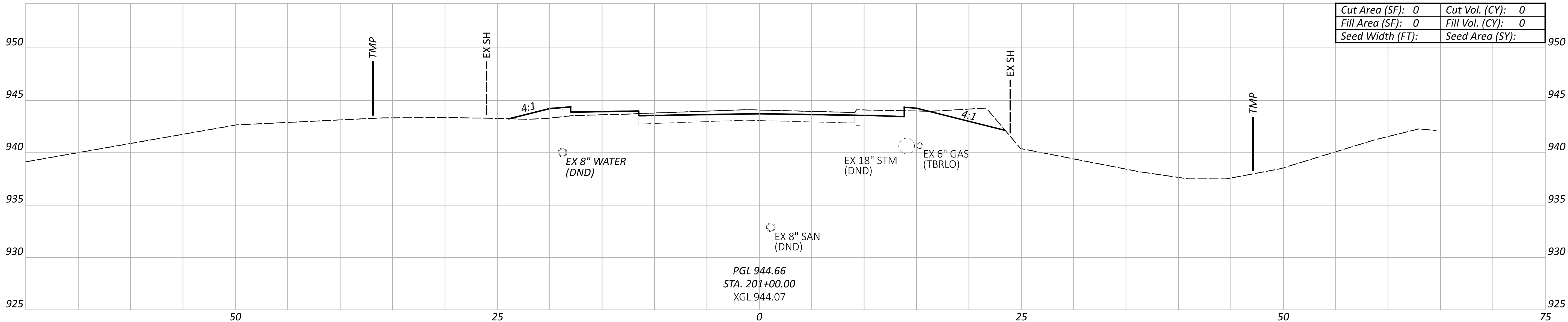
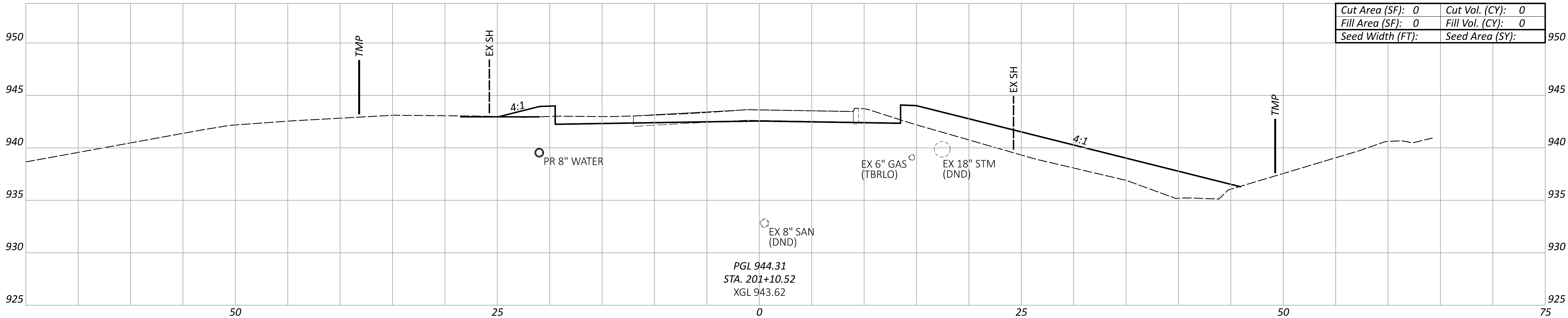
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SHEET TOTAL

P.10 41

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CROSS SECTIONS - BRIDGE ST
STA 200+80.00 TO STA 201+10.52

DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02/28/25

PROJECT ID

120494

Sheet Totals

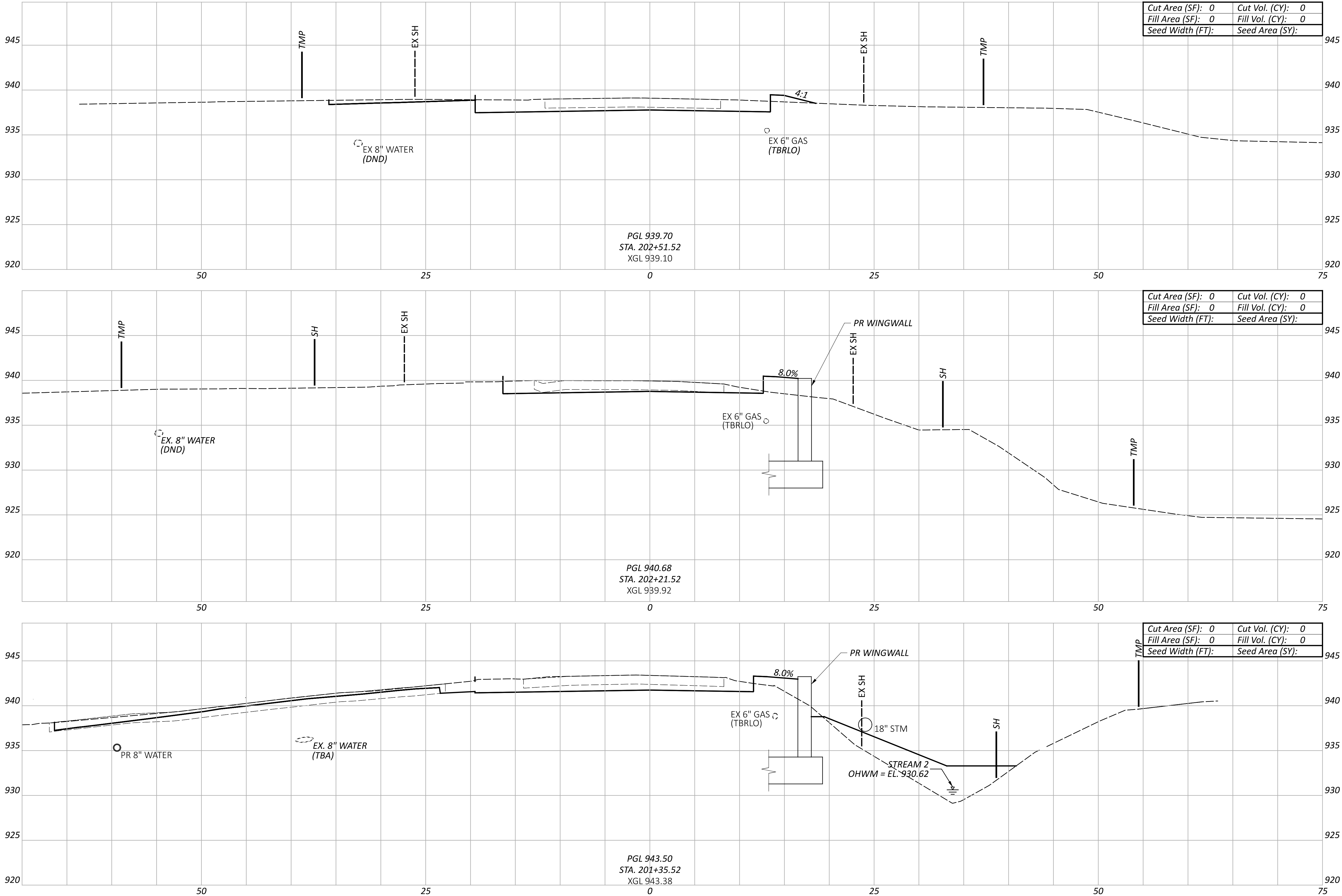
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SHEET TOTAL

P.11 41

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CROSS SECTIONS - BRIDGE ST
STA 201+35.52 TO STA 202+51.52

DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02/28/25

PROJECT ID

120494

Sheet Totals

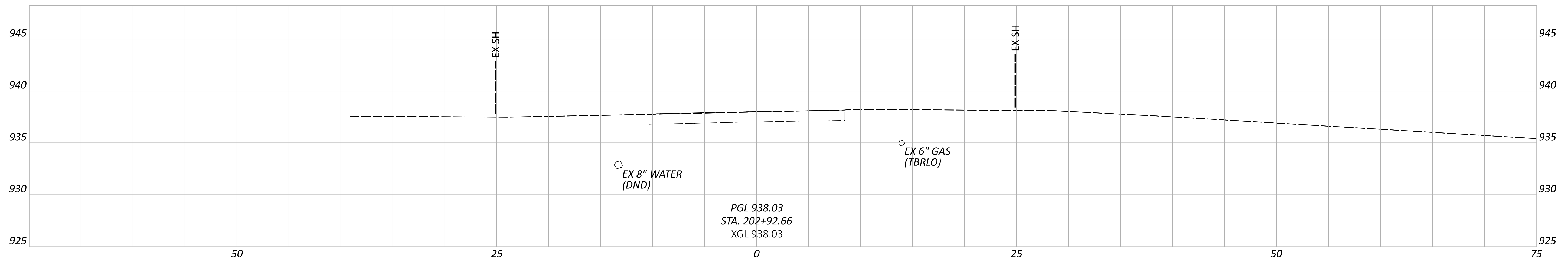
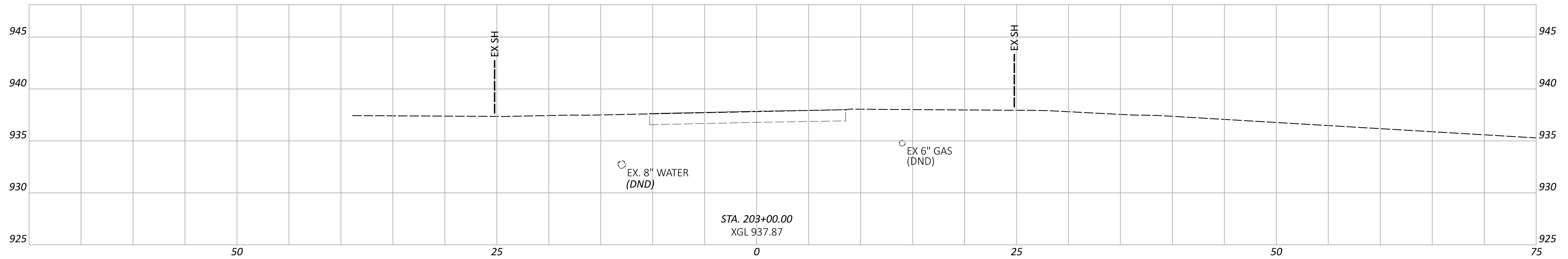
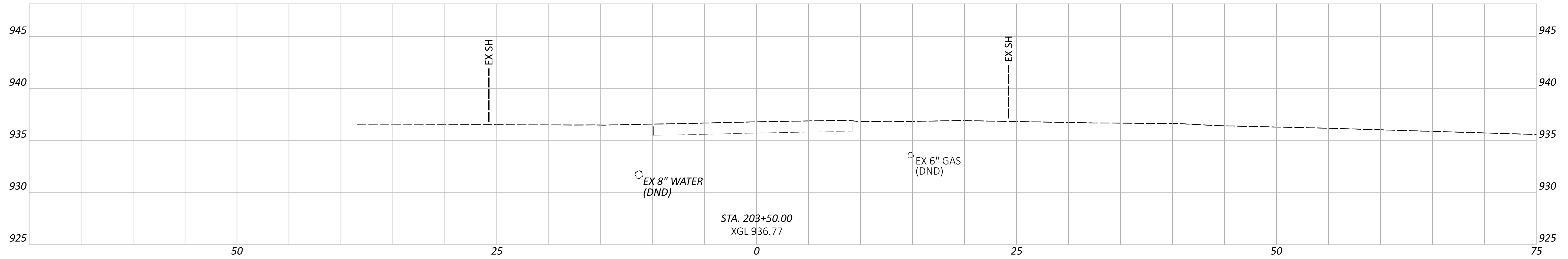
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SHEET TOTAL

P.12 41

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Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02/28/25

PROJECT ID

120494

SHEET

TOTAL

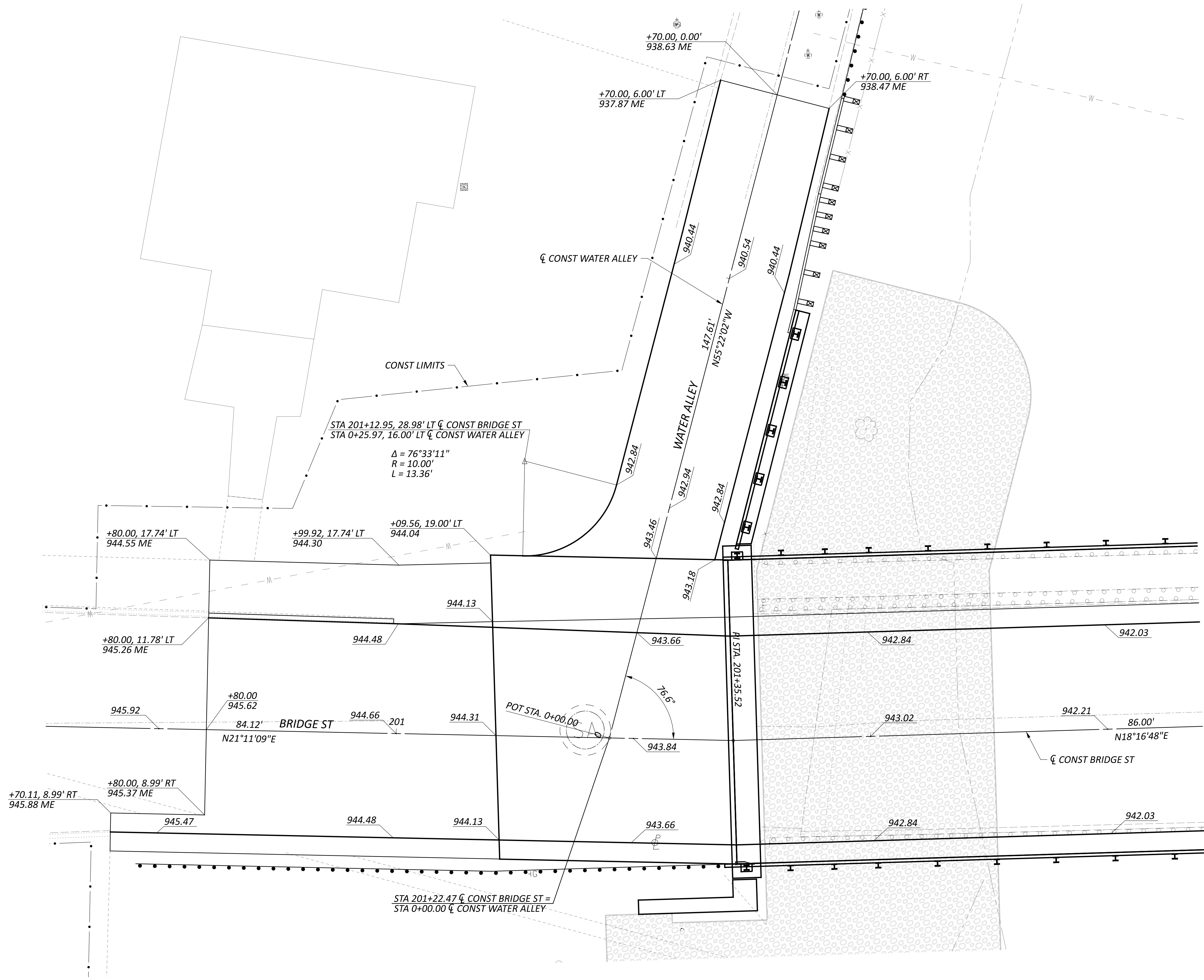
P.13

41

CROSS SECTIONS - BRIDGE ST
STA 202+92.66 TO STA 203+50.00

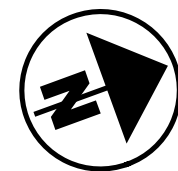
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LEGEND

ME = MATCH EXISTING



INTERSECTION DETAIL BRIDGE ST AND WATER ALLEY

DESIGN AGENCY

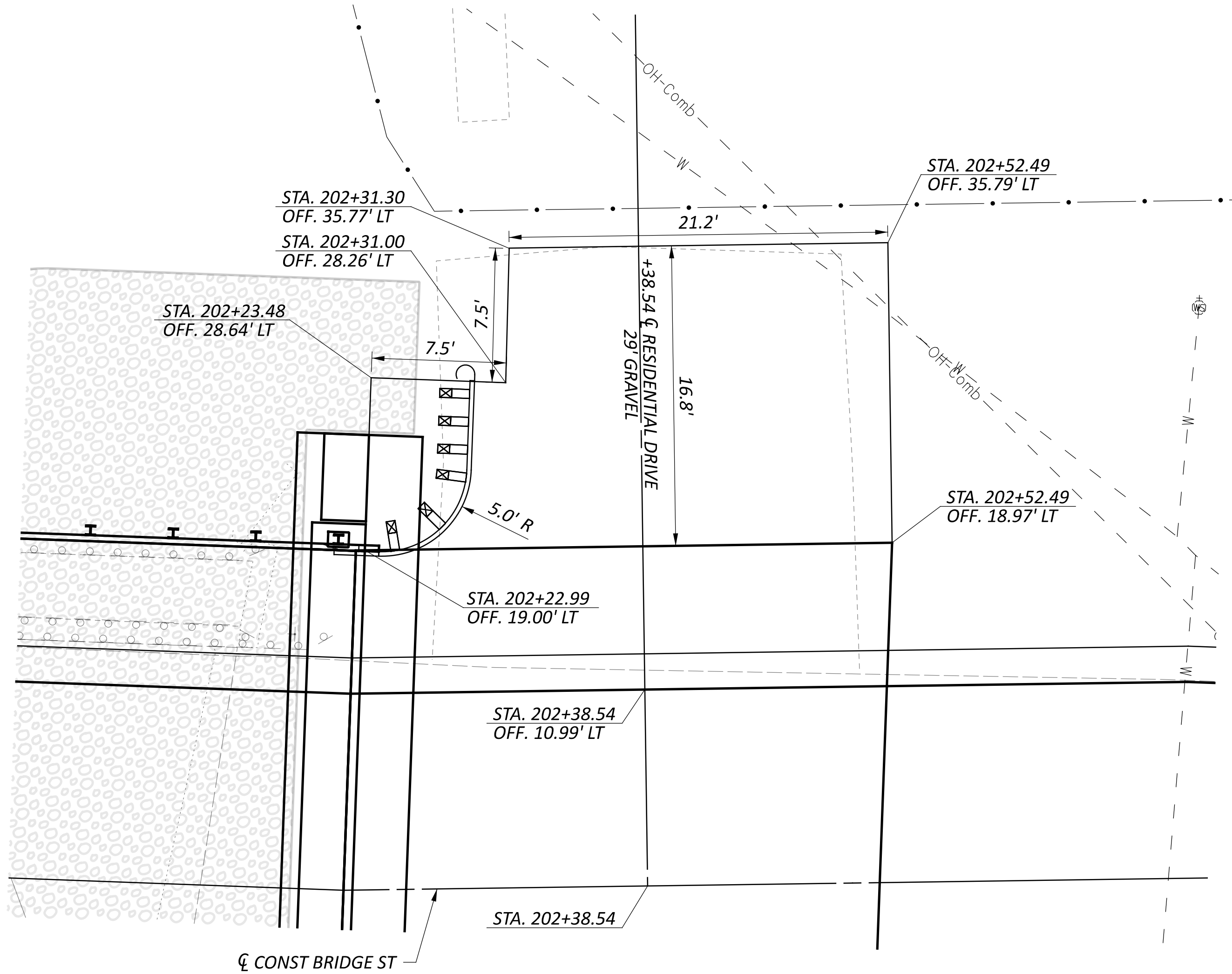


DESIGNER	
BLM	
REVIEWER	
HRB 02/28/25	
PROJECT ID	
120494	
SHEET	TOTAL
P.14	41

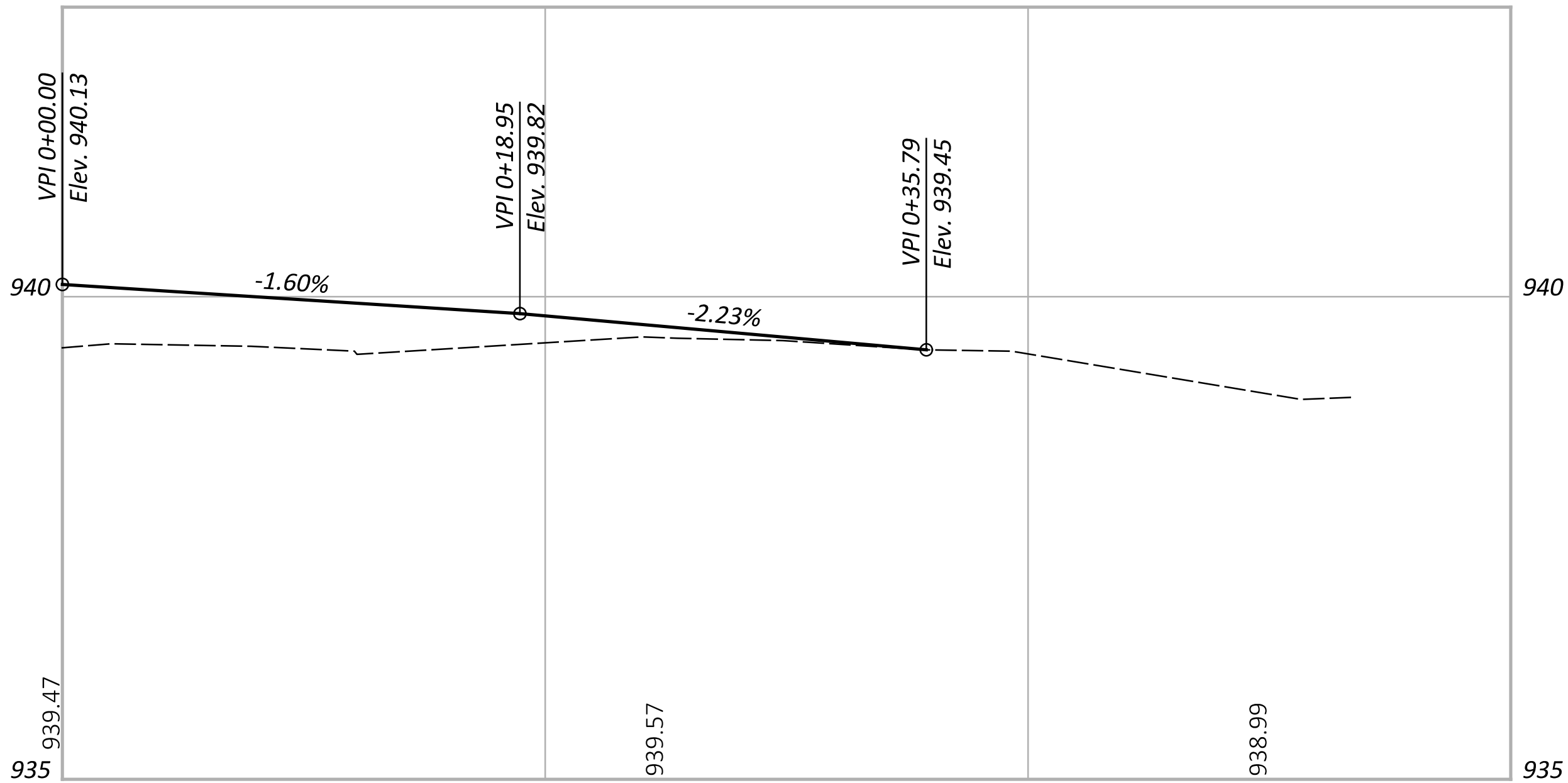
HAS-BRIDGE STREET BRIDGE REPLACEMENT

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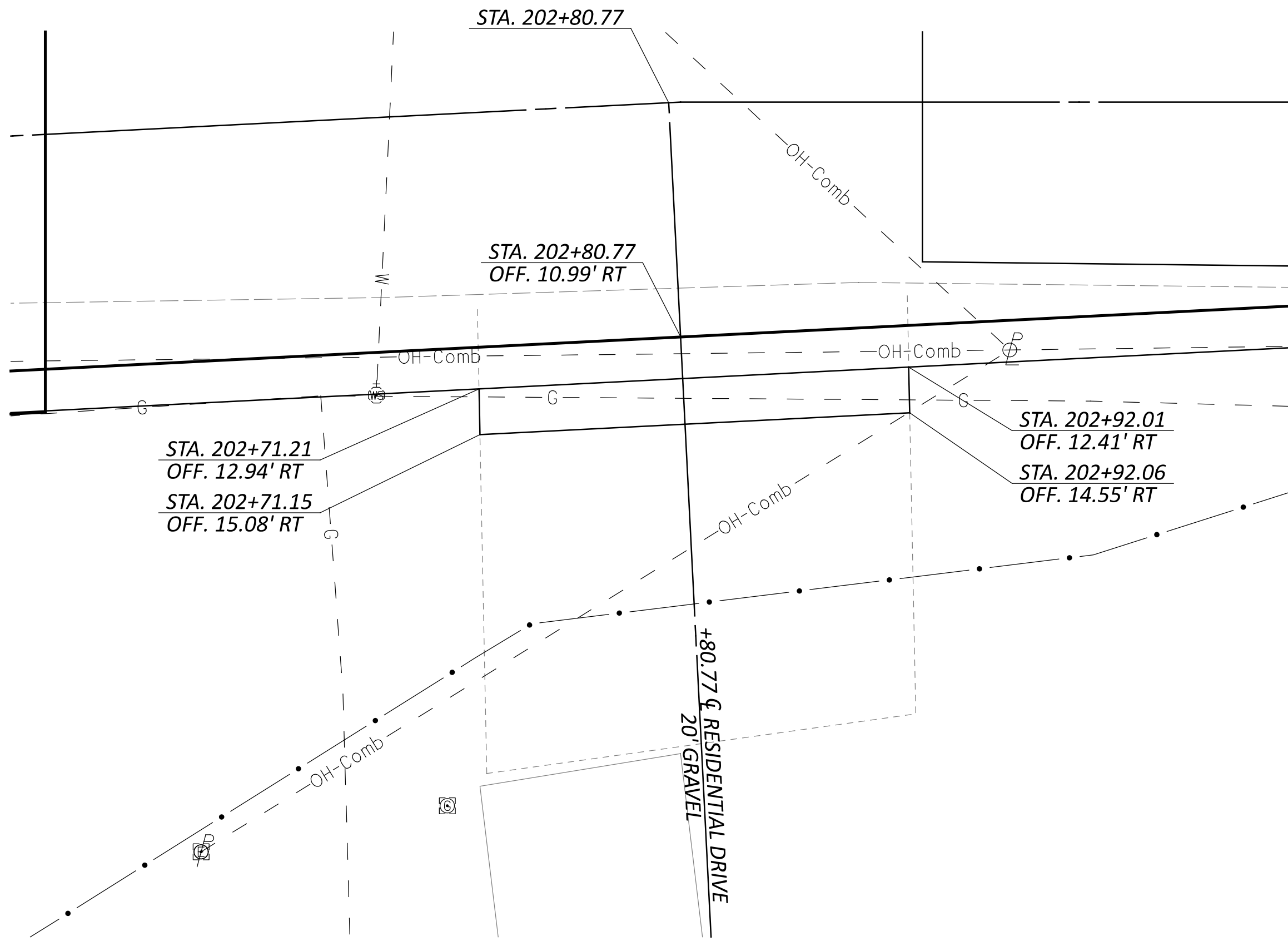
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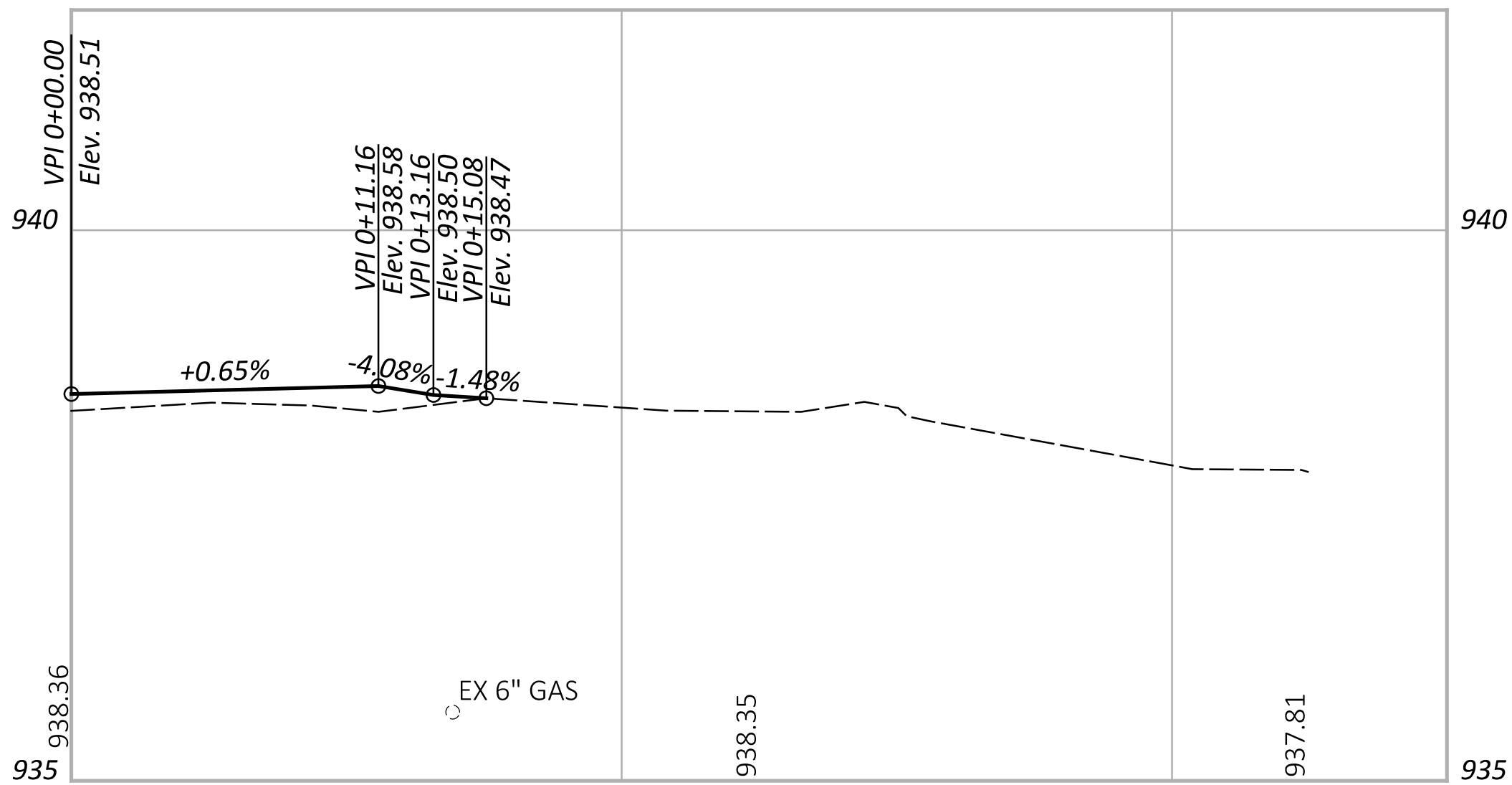
PLAN - DRIVE 1
STA 202+38.54 LT $\oslash$ CONST BRIDGE ST



PROFILE - DRIVE 1
STA 202+38.54 LT $\oslash$ CONST BRIDGE ST

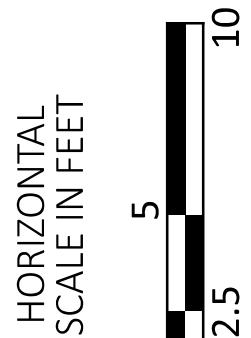


PLAN - DRIVE 2
STA 202+80.77 RT $\oslash$ CONST BRIDGE ST



PROFILE - DRIVE 2
STA 202+80.77 RT $\oslash$ CONST BRIDGE ST

DRIVEWAY DETAILS - DRIVES 1 & 2
PLAN AND PROFILE



DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02/28/25

PROJECT ID

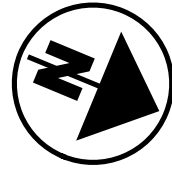
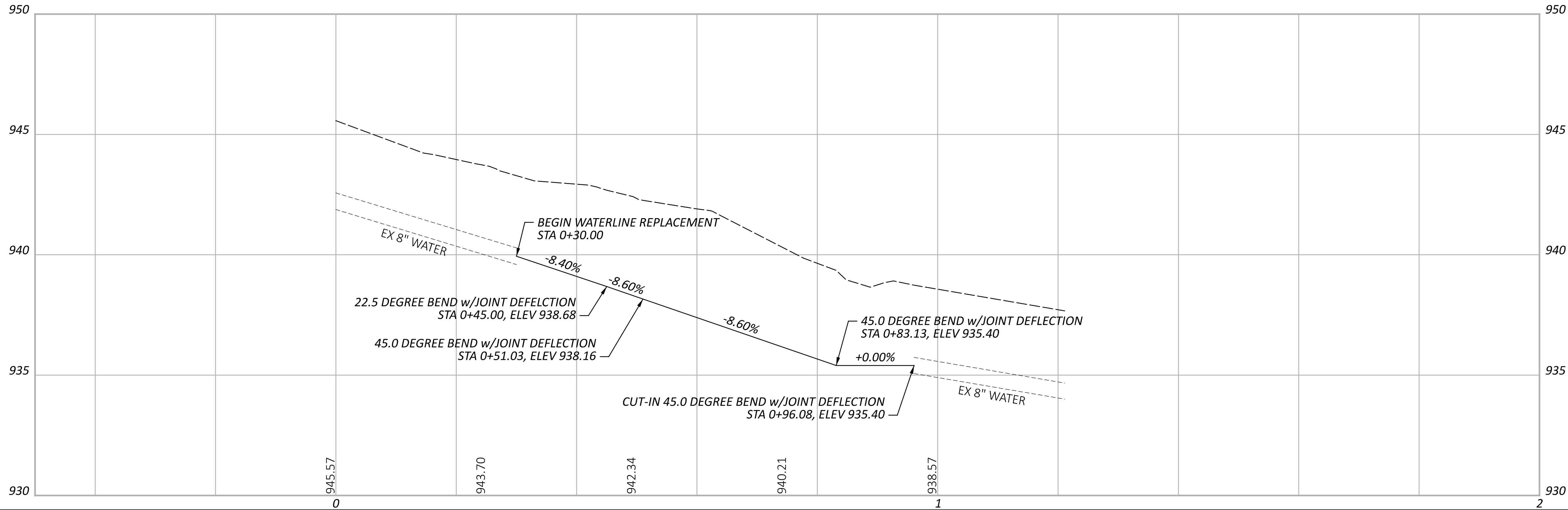
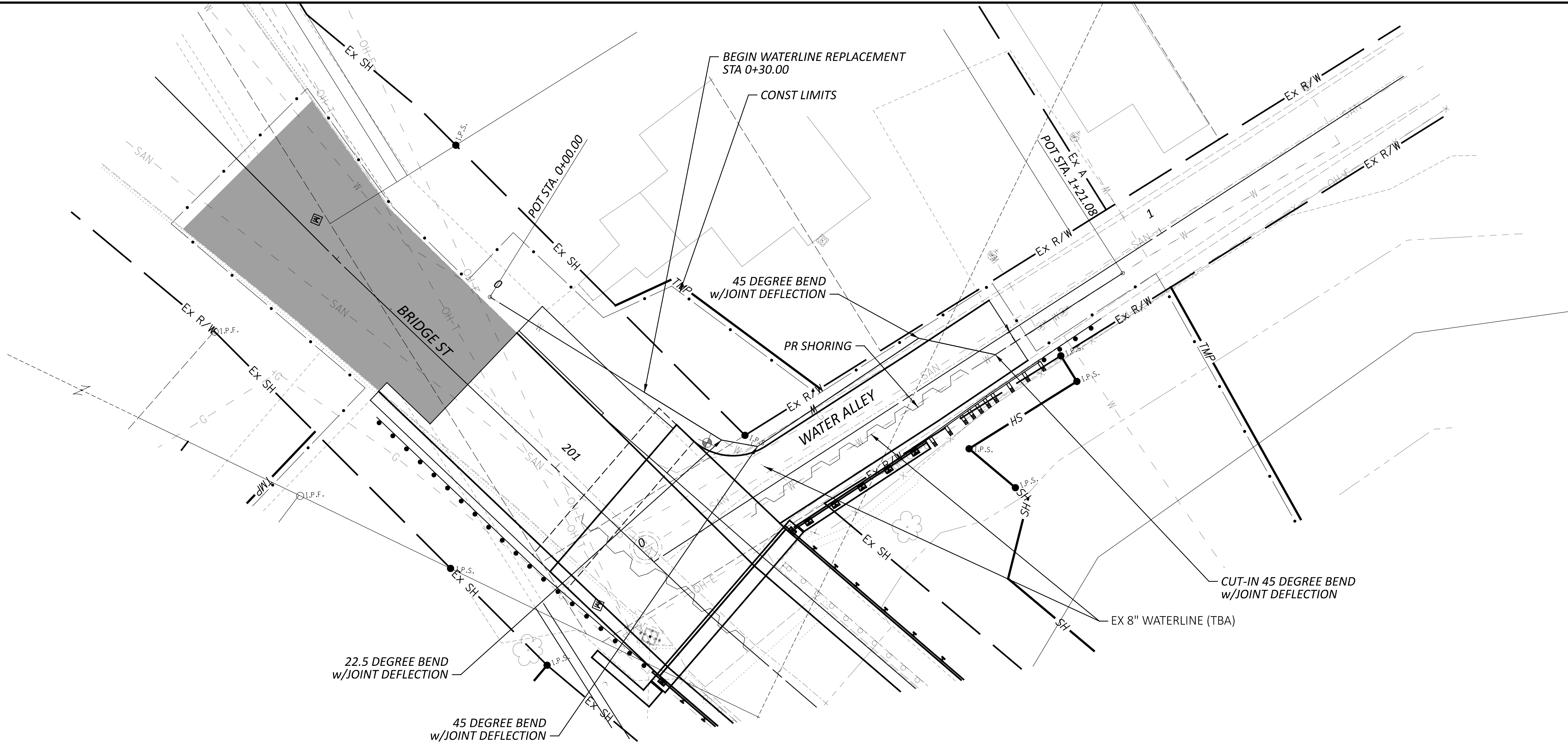
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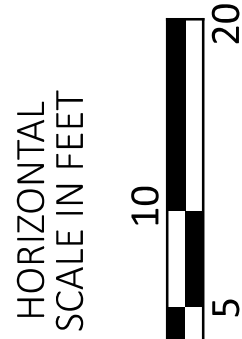
P.15

TOTAL

41



WATERLINE RELOCATION PLAN AND PROFILE
STA 0+30.00 TO STA 0+96.08



DESIGN AGENCY



DESIGNER

BLM

REVIEWER

HRB 02-28-25

PROJECT ID

120494

SHEET

P.16

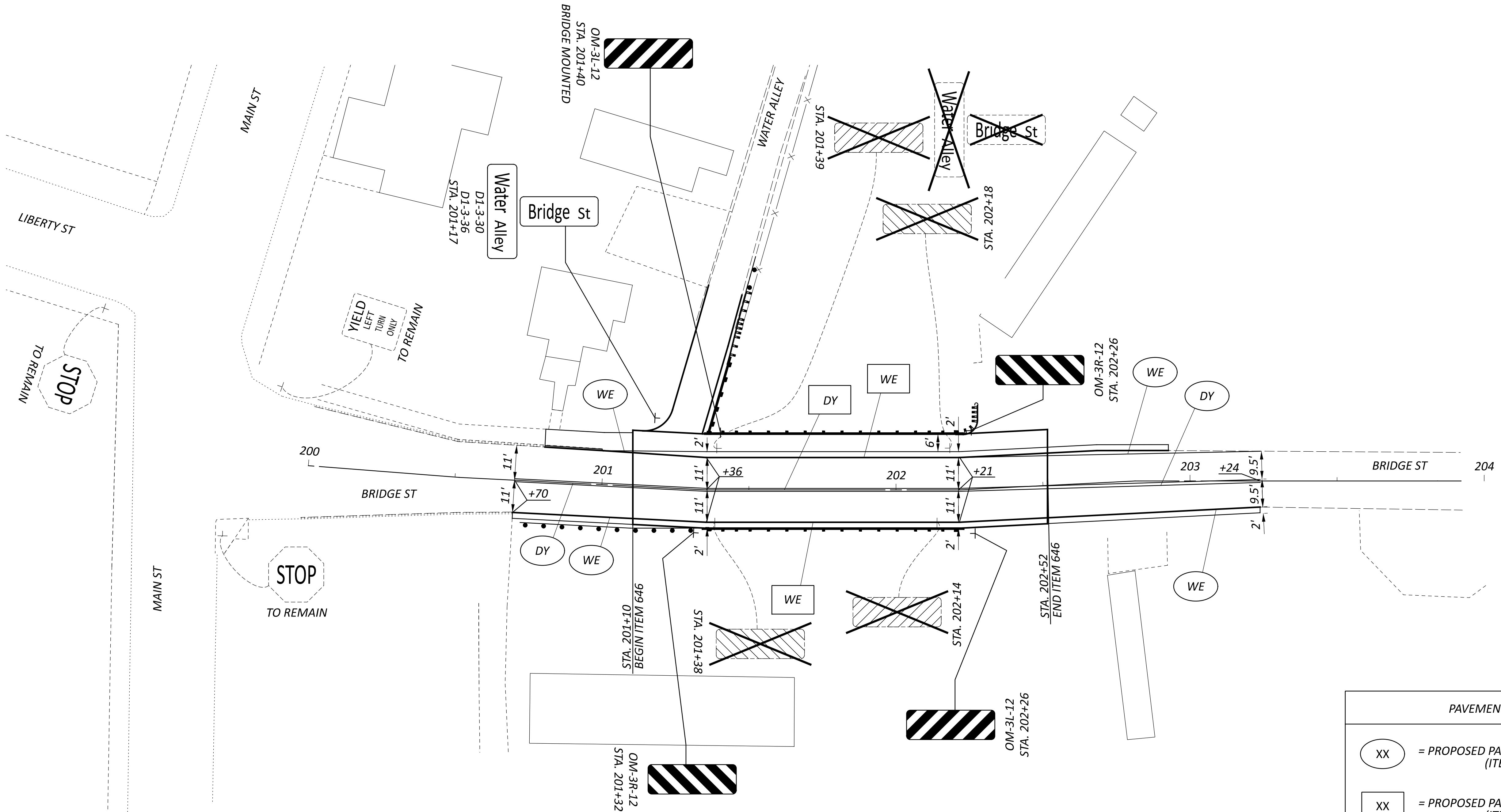
TOTAL

41

HAS-BRIDGE STREET BRIDGE REPLACEMENT

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NOTE TO REVIEWER:
EXISTING TRAFFIC CONTROL FOR THE MAIN ST/LIBERTY ST/BRIDGE ST INTERSECTION IS NON-TRADIONAL AND COULD CAUSE CONFUSION. HAS CONVERSION TO A 4-WAY STOP BEEN CONSIDERED?



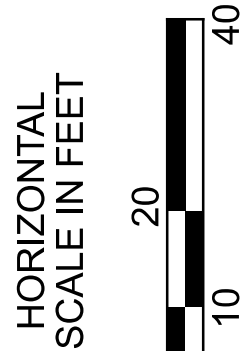
LINE SPECIFICATIONS		
ITEM 644	ITEM 646	EDGE LINE, 4" WHITE
WE	WE	
DY	DY	CENTER LINE, DOUBLE YELLOW

PAVEMENT MARKING LEGEND	
XX	= PROPOSED PAVEMENT MARKINGS (ITEM 644)
XX	= PROPOSED PAVEMENT MARKINGS (ITEM 646)
XX	= EXISTING PAVEMENT MARKINGS

SIGNING LEGEND	
	= EXISTING SIGN
	= EXISTING SIGN REMOVED
	= PROPOSED SIGN



TRAFFIC CONTROL PLAN



DESIGN AGENCY



DESIGNER

BDM

REVIEWER

SMM 02/28/25

PROJECT ID

120494

SHEET

P.17

TOTAL

41

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD DRAWING(S):

AS-1-15	01/20/2023	DATED (REVISED)
AS-2-15	07/21/2023	DATED (REVISED)
PSBD-2-07	07/20/2018	DATED (REVISED)
SICD-1-21	01/19/2024	DATED (REVISED)
TST-1-99	01/15/2021	DATED (REVISED)
HL-50.12	07/15/2022	DATED (REVISED)
PCB-91	07/17/2020	DATED (REVISED)

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 10th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2024 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

DESIGN LOADING INCLUDES:
VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT

DESIGN DATA

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) 7 KSI
COMPRESSIVE STRENGTH (RELEASE) 5 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH = 70 KSI

PRESTRESSING STRAND:
AREA= 0.167 IN²
ULTIMATE STRENGTH= 270 KSI
INITIAL STRESS= 202.5 KSI (LOW RELAXATION STRANDS)

CONCRETE CLASS QC2:
COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1:
COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI
STEEL SHEET PILING - ASTM A572 GRADE 50 - YIELD STRENGTH 50 KSI

CONCRETE REINFORCEMENT:

EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60-KSI.

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE PLANS:

THERE ARE NO PLANS OF THE EXISTING BRIDGE. PROSPECTIVE BIDDERS SHALL EXAMINE THE SITE PRIOR TO BIDDING TO DETERMINE DIMENSIONS AND DETAILS OF THE EXISTING STRUCTURE.

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THE DEPTH AND MATERIAL TYPE BELOW GRADE OF THE EXISTING BRIDGE ABUTMENTS IS UNKNOWN. REMOVAL OF EXISTING ABUTMENTS SHALL BE PERFORMED IN PHASES AS SHOWN ON THE REMOVAL DETAIL SHEETS.

ALTERNATE REMOVAL METHODS AND LIMITS MAY BE PROPOSED BY THE CONTRACTOR AND SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENT PRIOR TO PROCEEDING. ANY METHODS WHICH RESULT IN INSTABILITIES OF THE EXISTING STRUCTURE DURING CONSTRUCTION ARE NOT PERMITTED. ALTERNATIVE REMOVAL LIMITS AND METHODS ARE AT NO ADDITIONAL COST TO THE PROJECT.

SCOUR ELEVATIONS:

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW.

	REAR ABUT	FWD ABUT
DESIGN FLOOD	917.83	917.83
CHECK FLOOD	914.88	914.88

BEARING PAD SHIMS:

PLACE 1/8" THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 9 INCHES BY 9 INCHES, UNDER ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. FURNISH TWO SHIMS PER BEAM. THE DEPARTMENT WILL MEASURE THIS ITEM BY THE TOTAL NUMBER SUPPLIED. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 1/8" PREFORMED BEARING PADS. ANY UNUSED SHIMS BECOME THE PROPERTY OF THE STATE.

ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN

FURNISH POLYSTYRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM C578 TYPE IV. NEATLY CUT MATERIAL AS NECESSARY TO ALLOW FOR PROPER INSTALLATION. JOINTS AT ABUTTING PIECES SHALL BE SEALED WITH DUCT TAPE. ALLOWABLE TOLERANCE FOR THE TOTAL THICKNESS OF THE MATERIAL SHALL BE -0", +1/2". DO NOT PLACE MORE THAN TWO LAYERS OF POLYSTYRENE TO ACHIEVE TOTAL THICKNESS.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 257 KIPS PER PILE FOR THE REAR ABUTMENT PILES. THE TOTAL FACTORED LOAD IS 261 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. THE REAR ABUTMENT PILES WERE DESIGNED TO ACCOMMODATE 13.45 FT OF SCOUR. THE FORWARD ABUTMENT PILES WERE DESIGNED TO ACCOMMODATE 10.17 FT OF SCOUR.

ABUTMENT PILES:
HP14x73 PILES 45 FEET LONG, ORDER LENGTH (REAR ABUTMENT)
HP14x73 PILES 35 FEET LONG, ORDER LENGTH (FORWARD ABUTMENT)

STEEL PILE POINTS OR SHOES

USE STEEL PILE POINTS TO PROTECT THE TIPS OF THE PROPOSED STEEL H-PILES AT THE REAR AND FORWARD ABUTMENTS.

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARISIAN, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING

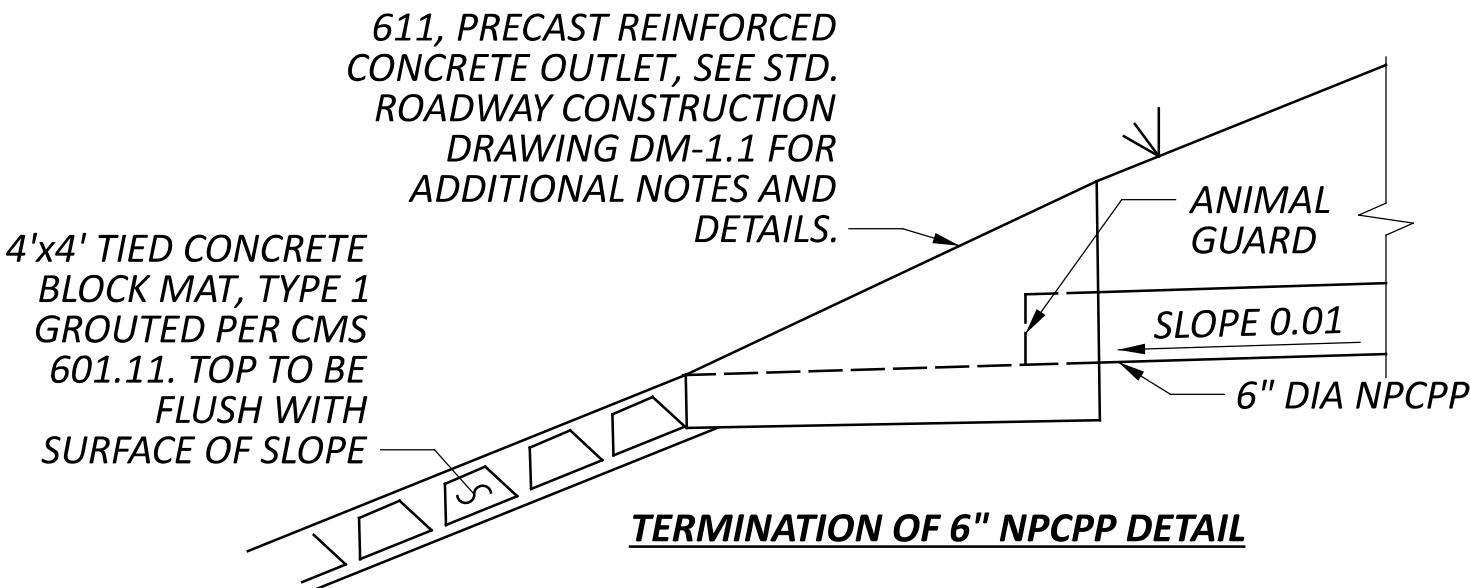
USE A PILE DRIVING HAMMER OF A RATED ENERGY OF NO GREATER THAN 44,000 FOOT-POUNDS TO INSTALL THE PILES. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATION. IF CONSTRUCTING AN ALTERNATIVE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

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

PAYMENT FOR ALL ITEMS SHOWN FOR PIPE TERMINATION ARE INCLUDED WITH ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.



ABBREVIATION LEGEND

- ABUT -ABUTMENT
- ADT - AVERAGE DAILY TRAFFIC
- ADTT- AVERAGE DAILY TRUCK TRAFFIC
- APPR -APPROACH
- APPROX - APPROXIMATE
- BOF - BOTTOM OF FOOTING
- BOT-BOTTOM
- BRGS - BEARINGS
- BTA - BRIDGE TERMINAL ASSEMBLY
- C/C -CENTER TO CENTER
- CB - CATCH BASIN
- CJ- CONSTRUCTION JOINT
- CL- CENTERLINE
- CLR - CLEARANCE
- CONST - CONSTRUCTION
- DIA - DIAMETER
- DWG - DRAWING
- EF - EACH FACE
- EL - ELEVATION
- E/P- EDGE OF PAVEMENT
- E/S- EDGE OF SHOULDER
- EX - EXISTING
- EXP - EXPANSION
- FWD- FORWARD
- F/F-FACE TO FACE
- FF- FAR FACE
- FWD- FORWARD
- HORIZ - HORIZONTAL
- LT- LEFT
- MAX - MAXIMUM
- MIN - MINIMUM
- N/A - NOT APPLICABLE
- NF - NEAR FACE
- NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
- OFF - OFFSET
- O/O - OUT TO OUT
- PCJ - PHASE CONSTRUCTION JOINT
- PCPP - PERFORATED CORRUGATED PLASTIC PIPE
- PEJF - PREFORMED EXPANSION JOINT FILLER
- PG - PROFILE GRADE
- PROP - PROPOSED
- RT - RIGHT
- PVMT - PAVEMENT
- SER - SERIES
- SHLDR - SHOULDER
- SPA - SPACES
- ST - STREET
- STA - STATION
- STD - STANDARD
- STR - STRAIGHT
- TBR - TO BE REMOVED
- TRBL - TO BE RELOCATED
- TBRLO - TO BE RELOCATED BY OTHERS
- TEMP - TEMPORARY
- TOS - TOP OF SLOPE
- T/T - TOE TO TOE
- TYP - TYPICAL
- VERT - VERTICAL

SFN 3431790	
DESIGN AGENCY EMHT	
DESIGNER AI	CHECKER TDA
REVIEWER CAS 02/28/25	
PROJECT ID 120494	
SUBSET 2	TOTAL 19
SHEET P.19	TOTAL 41

ESTIMATED QUANTITIES								
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT	SUPER	GEN	SHEET #
202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				2/19
202	23500		SY	WEARING COURSE REMOVED				
503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				2/19
503	21300	LS		UNCLASSIFIED EXCAVATION				
505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				
507	00300		FT	STEEL PILES HP14X73, FURNISHED				
507	00350		FT	STEEL PILES HP14X73, DRIVEN				
507	93300		EACH	STEEL POINTS OR SHOES				
509	10000		LB	EPOXY COATED STEEL REINFORCEMENT				
511	31613		CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN				2/19
511	44112		CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING				
511	46512		CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING				
512	10100		SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)				
512	33000		SY	TYPE 2 WATERPROOFING				
515	12091		EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB33-48 (BEAM LENGTH = 84'-0"), AS PER PLAN				13/19
516	13900		SF	2" PREFORMED EXPANSION JOINT FILLER				
516	14020		FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				
516	41100		EACH	1/8" PREFORMED BEARING PAD, TYPE CDP				
516	43201		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN				12/19
517	70001		FT	RAILING (TWIN STEEL TUBE), AS PER PLAN (WINGWALL MOUNTED)				18/19
517	70001		FT	RAILING (TWIN STEEL TUBE), AS PER PLAN				16/19 - 17/19
518	21200		CY	POROUS BACKFILL WITH FILTER FABRIC				
518	40000		FT	6" PERFORATED CORRUGATED PLASTIC PIPE				
518	40011		FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN				2/19
526	25011		SY	REINFORCED CONCRETE APPROACH SLABS (T=15") WITH QA/QC, AS PER PLAN				19/19
526	30011		SY	REINFORCED CONCRETE APPROACH SLABS (T=17") WITH QA/QC, AS PER PLAN				19/19
526	90010		FT	TYPE A INSTALLATION				
601	32200		CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER				
625	33000		EACH	STRUCTURE GROUNDING SYSTEM				

ESTIMATED QUANTITIES
BRIDGE NO. HAS-BRIDGE-00.045
OVER CONOTTON CREEK

SFN
3431790

DESIGN AGENCY
EMHNT

DESIGNER
AJH

CHECKER
TDA

REVIEWER
CAS 02/28/25

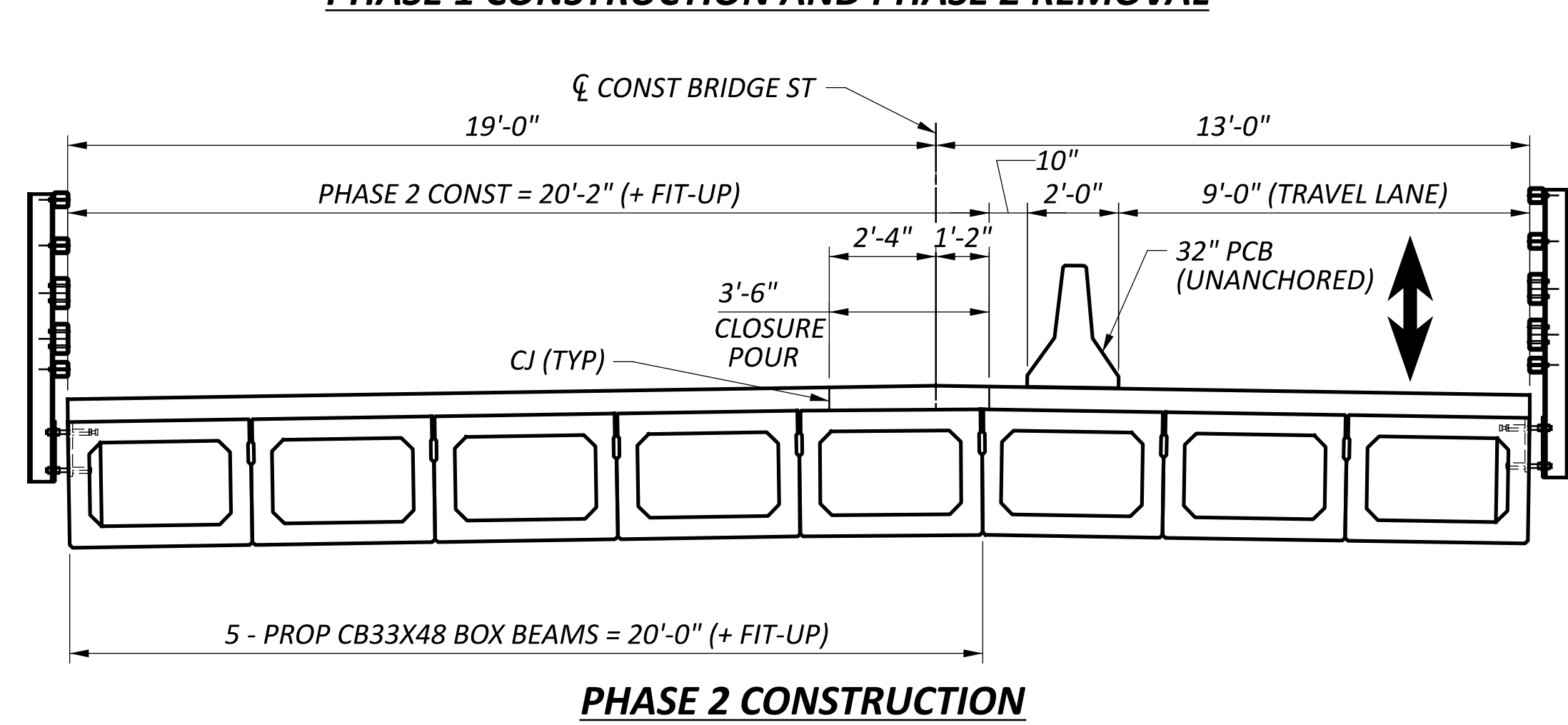
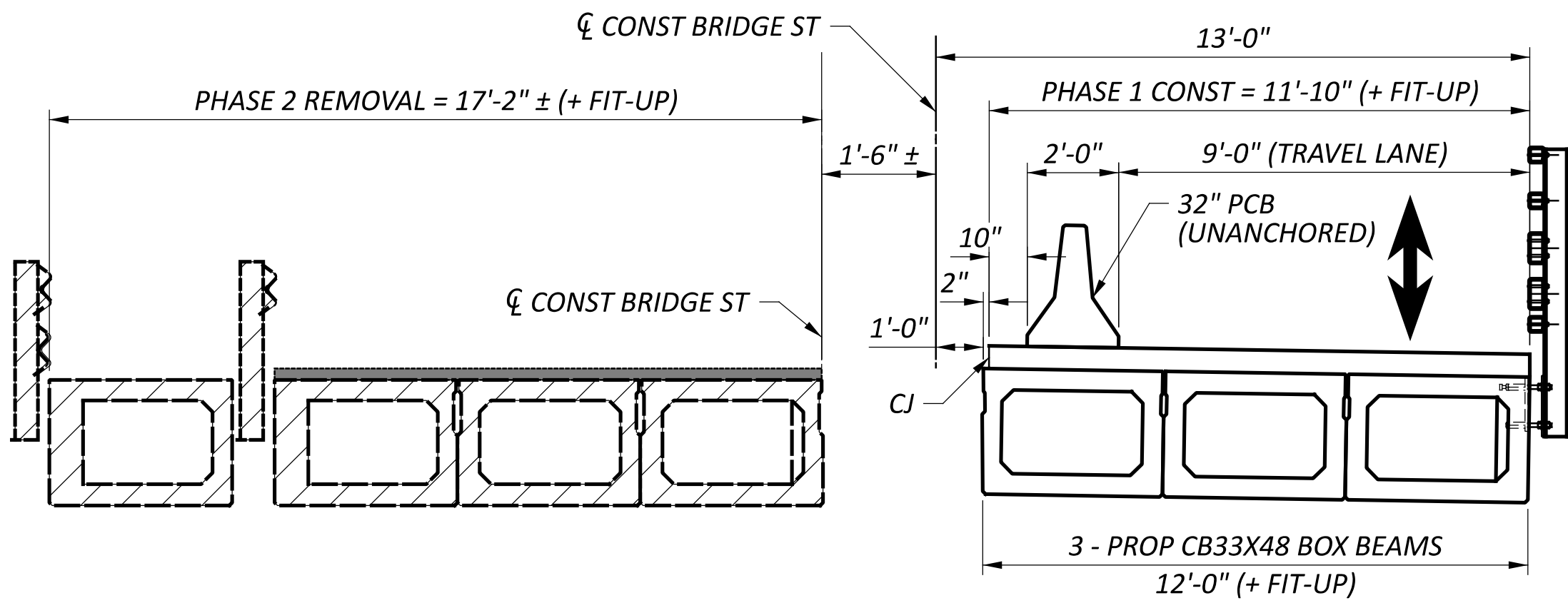
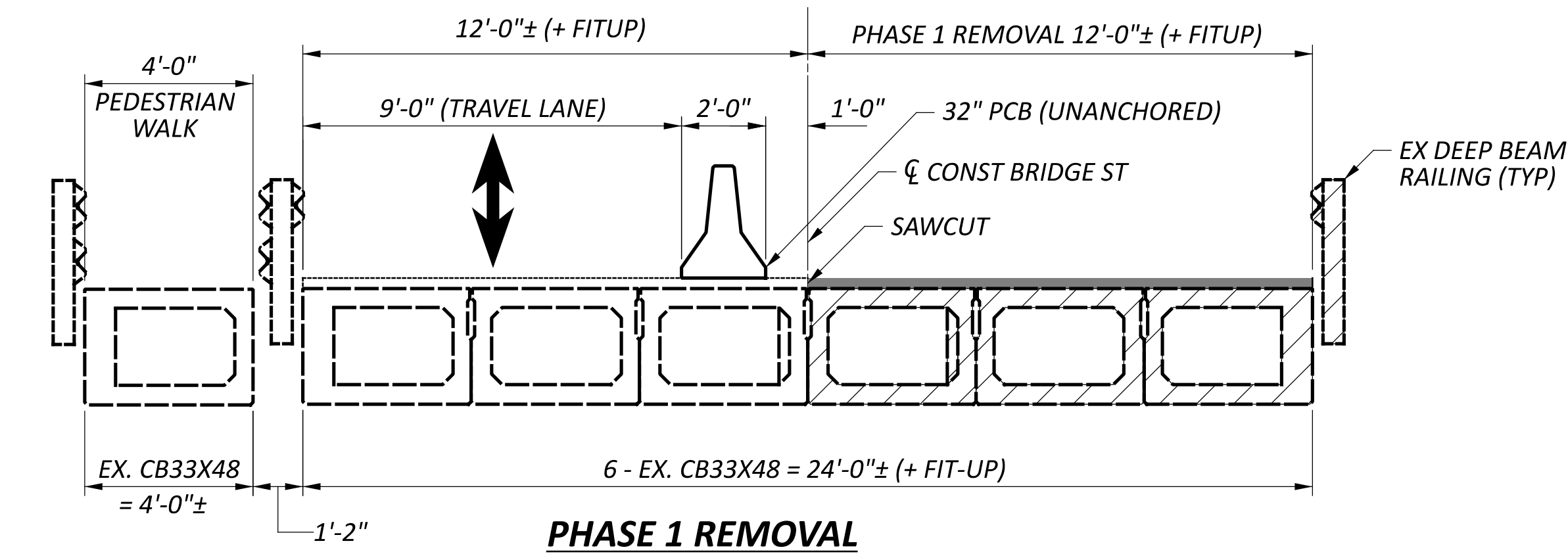
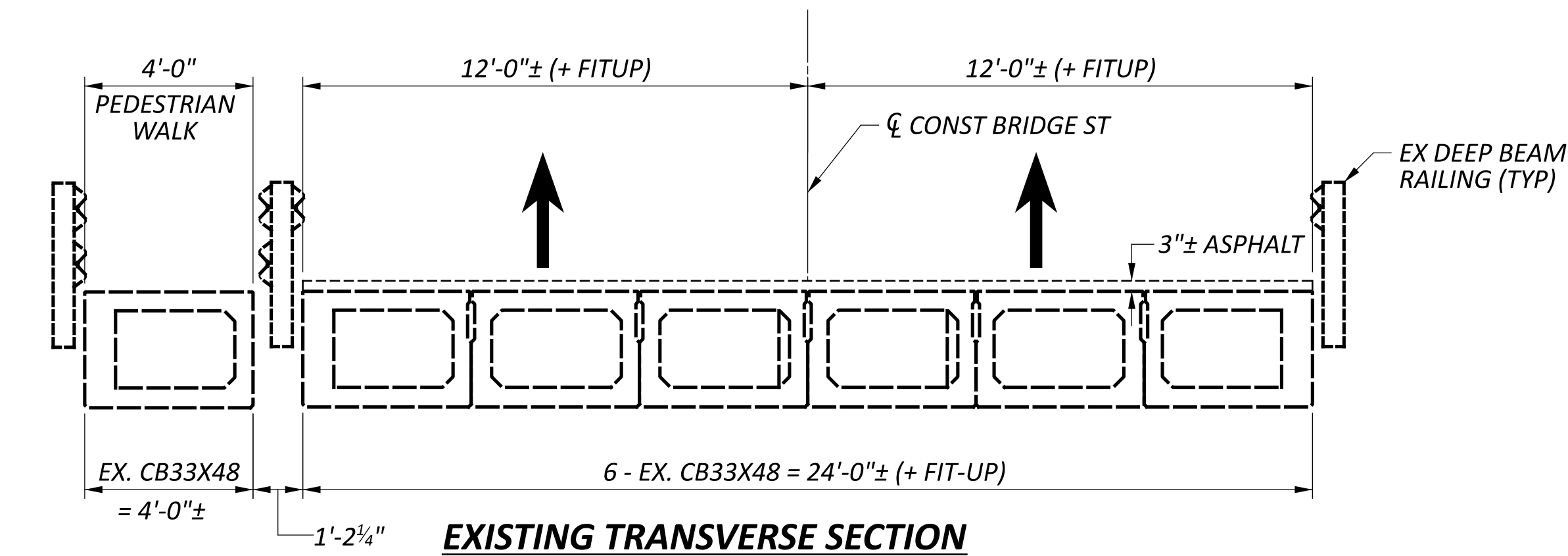
PROJECT ID
120494

SUBSET
3

TOTAL
19

SHEET
P.20

TOTAL
41



PHASE 1 REMOVAL

1. INSTALL AND MAINTAIN CONSTRUCTION SIGNALS AS SHOWN ON SHEET P.6/41 & P.7/41 AND AS PER SCD MT-96.11.
2. ERECT BRIDGE MOUNTED UNANCHORED PORTABLE BARRIER ON THE LEFT PORTION OF THE EXISTING STRUCTURE AS SHOWN PER SCD PCB-91.
3. USE SIGNALS TO MAINTAIN ALTERNATING ONE-WAY TRAFFIC ON THE LEFT PORTION OF BRIDGE STREET.
4. SAW CUT BETWEEN EXISTING BOX BEAMS AS SHOWN.
5. REMOVE THE RIGHT PORTION OF THE EXISTING SUPERSTRUCTURE, AND ABUTMENT BACKWALLS TO FACILITATE PLACEMENT OF PROPOSED BEAMS AS SHOWN ON SHEET 6/19 TO 7/19. INSTALL TEMPORARY SHORING AS NEEDED.

PHASE 1 CONSTRUCTION & PHASE 2 REMOVAL

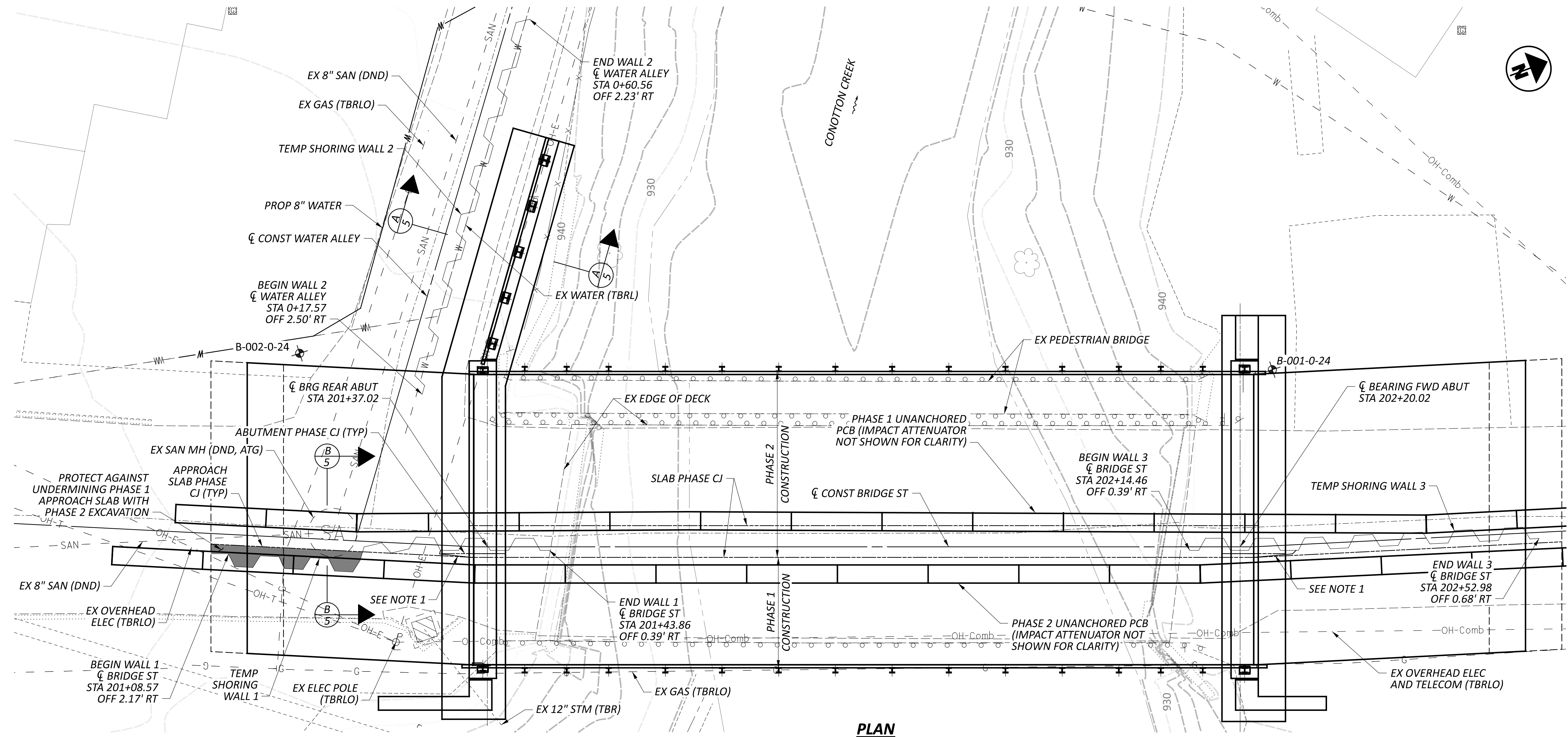
1. CONSTRUCT THE RIGHT PORTION OF THE BRIDGE, APPROACH SLABS AND TEMPORARY SHORING.
2. ERECT BRIDGE MOUNTED UNANCHORED PORTABLE BARRIER ON THE NEWLY CONSTRUCTED RIGHT PORTION OF THE DECK AS SHOWN AND AS PER SCD PCB-91.
3. USE SIGNALS TO MAINTAIN ALTERNATING ONE-WAY TRAFFIC ON THE RIGHT PORTION OF BRIDGE STREET.
4. REMOVE LEFT PORTION OF EXISTING SUPERSTRUCTURE, AND REMAINING PORTIONS OF EXISTING SUBSTRUCTURE TO 1' BELOW PROPOSED GROUND ELEVATION AS SHOWN ON SHEET 6/19 & 7/19.

PHASE 2 CONSTRUCTION

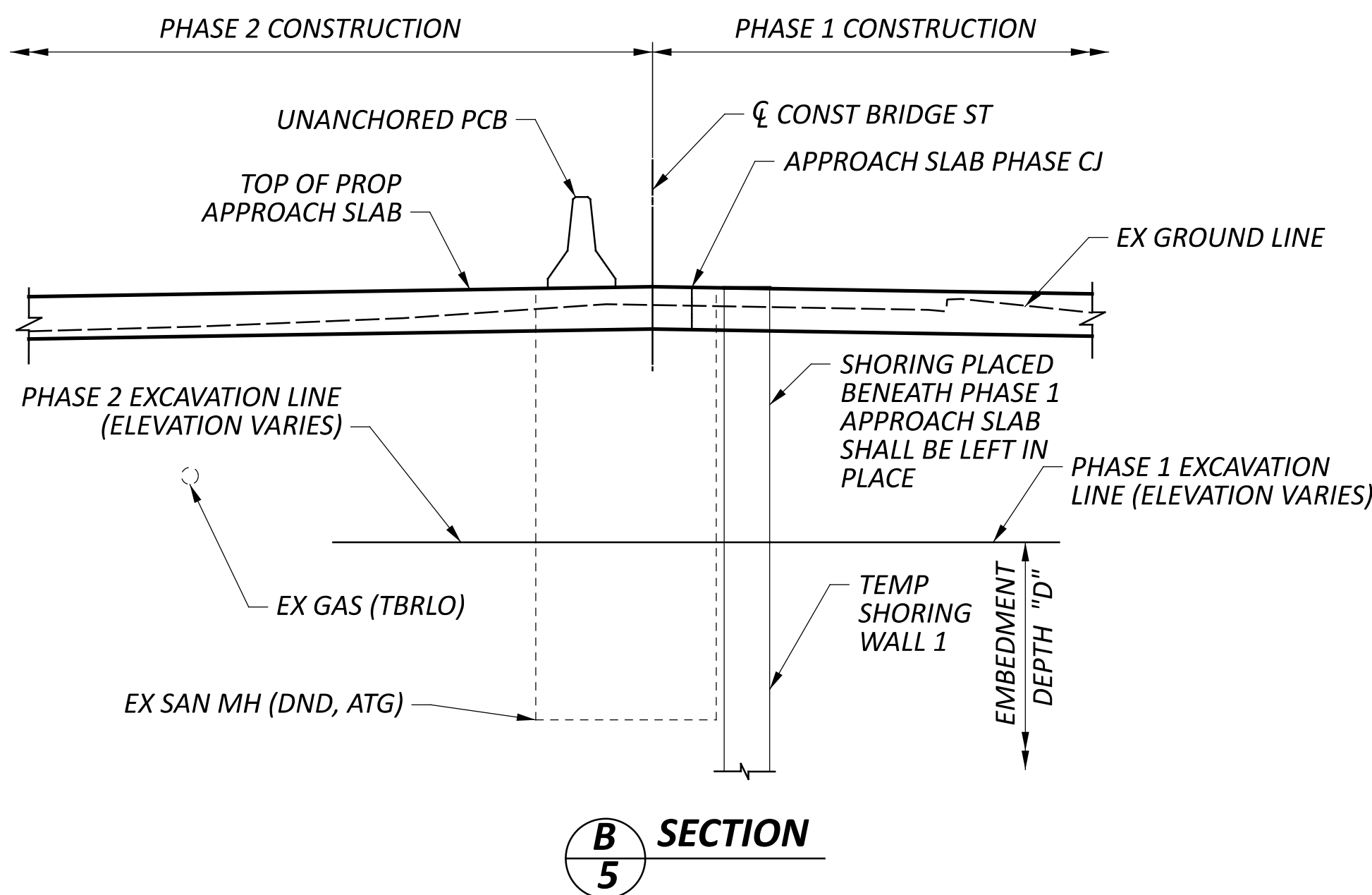
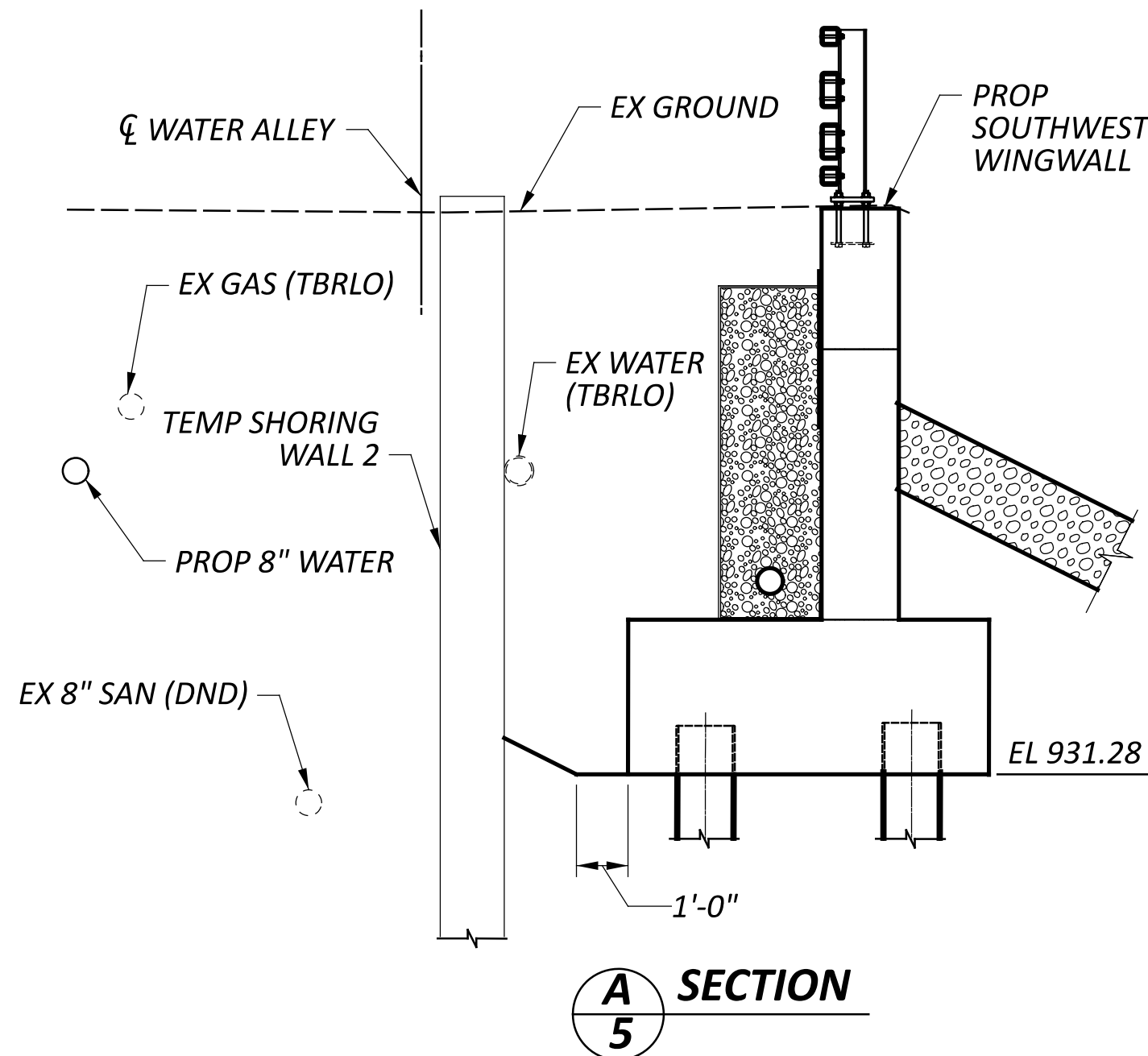
1. CONSTRUCT THE LEFT PORTION OF THE BRIDGE AND APPROACH SLABS.
2. IN ONE CONTINUOUS OPERATION, UTILIZING FLAGGERS, REMOVE THE PORTABLE BARRIER, AND REMOVE TRAFFIC SIGNALS AND CONFLICTING PAVEMENT MARKINGS.
3. SAW CUT GROOVES INTO THE DECK SURFACE UTILIZING FLAGGERS AS PER SCD MT-97.10.

LEGEND:

- ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 202 - WEARING COURSE REMOVED (3"± ASPHALT)



PLAN

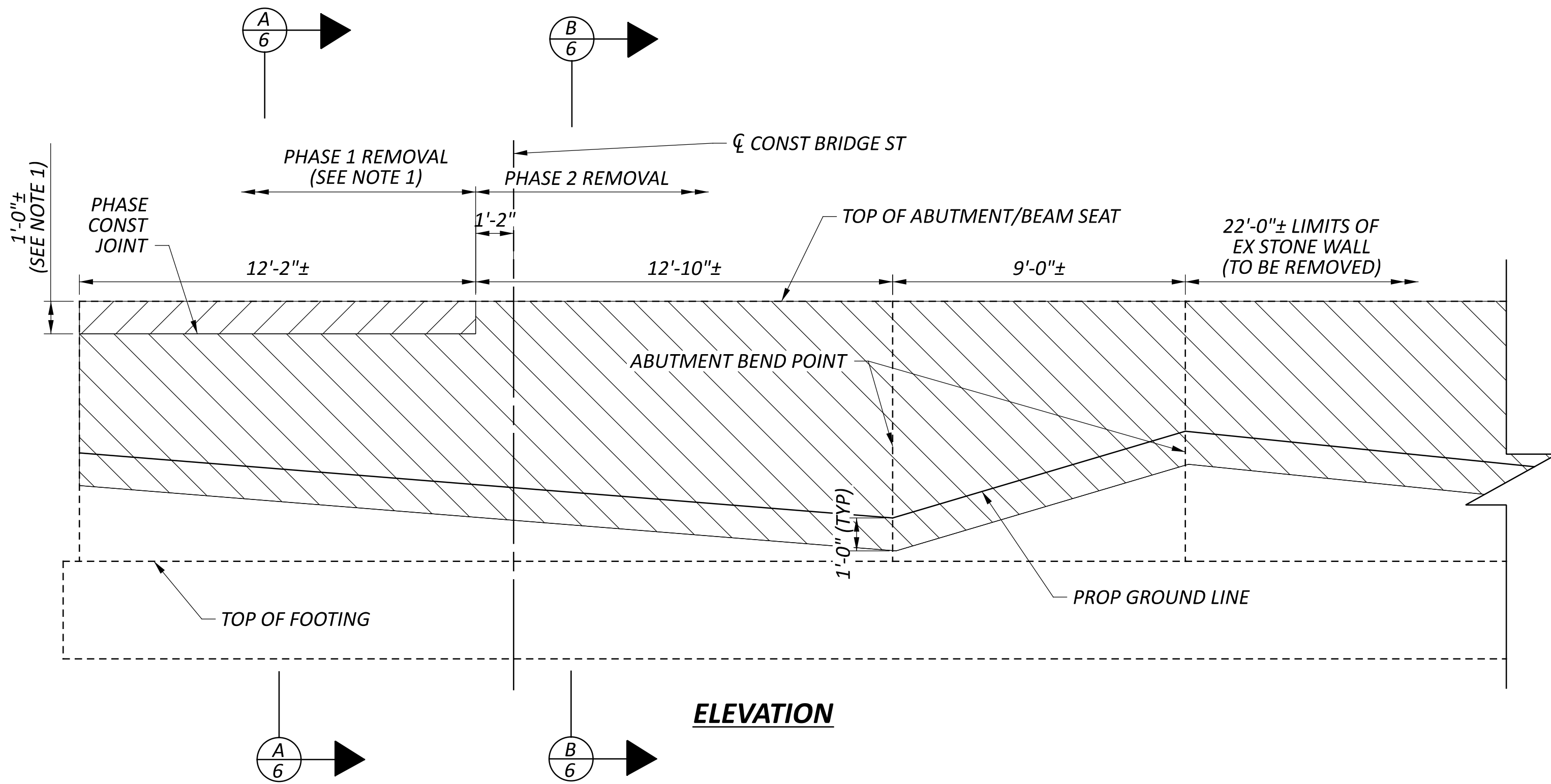
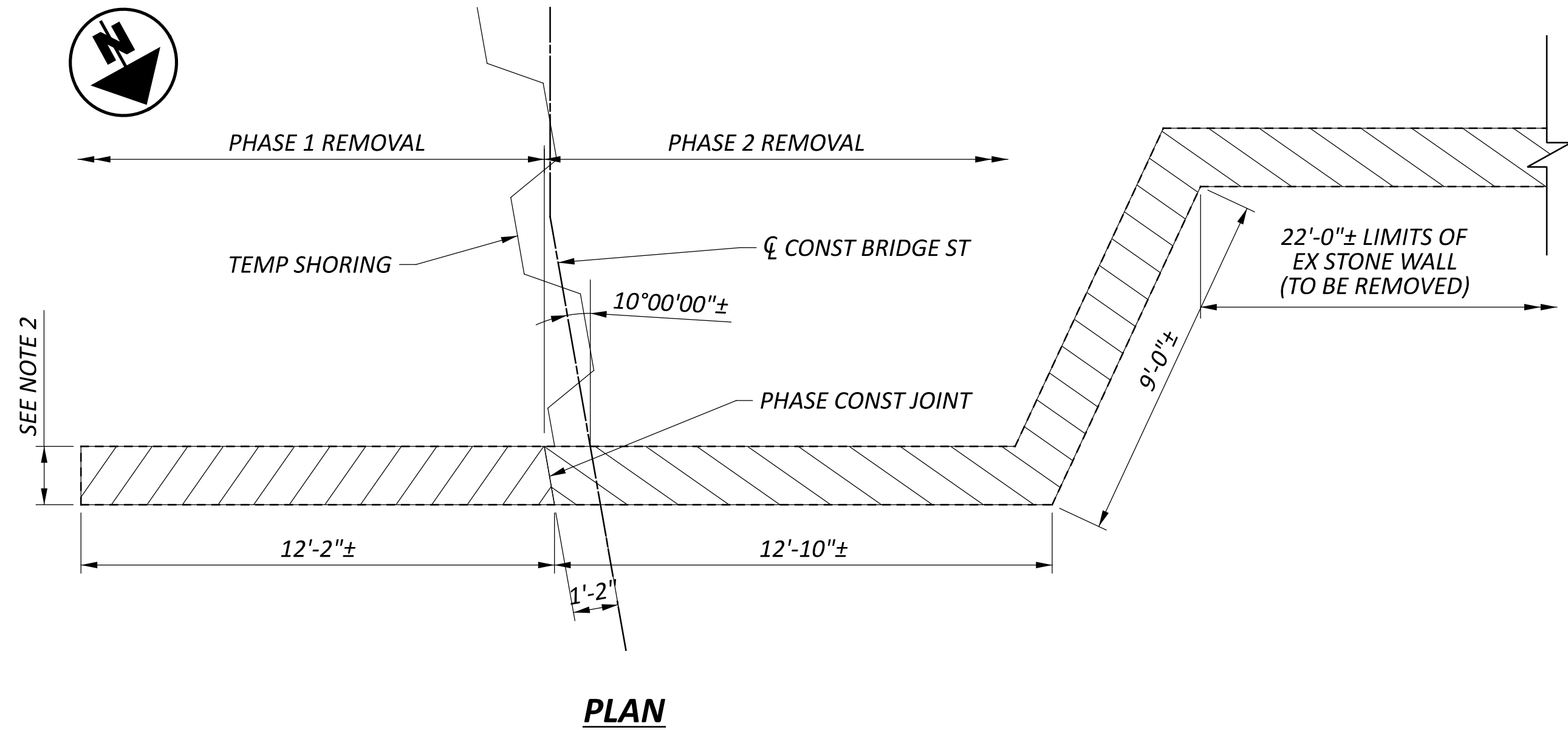


TEMPORARY SHORING DATA TABLE								
WALL NUMBER	REFERENCE ALIGNMENT	BEGIN STATION	BEGIN OFFSET (FT)	BEGIN TOP OF WALL EL	END STATION	END OFFSET (FT)	END TOP OF WALL EL	LENGTH (FT)
1	CL BRIDGE ST	201+08.57	2.17 RT	943.65	201+43.86	0.39 RT	943.22	35.29
2	CL WATER ALLEY	0+17.57	2.50 RT	942.81	0+60.56	2.23 RT	938.96	43.00
3	CL BRIDGE ST	202+14.46	0.39 RT	939.9	202+52.98	0.68 RT	939.06	38.52

TEMPORARY SHORING DATA TABLE					
WALL NUMBER	MAX RETAINED HEIGHT, H (FT)	STEEL GRADE (KSI)	MIN SECTION MODULUS (IN ³ /FT)	MIN MOMENT OF INERTIA (IN ⁴ /FT)	MIN EMBEDMENT DEPTH, D (FT)
1	12.00	50	30.20	184.20	24.00
2	11.53	50	30.20	184.20	24.00
3	12.00	50	30.20	184.20	24.00

NOTES:

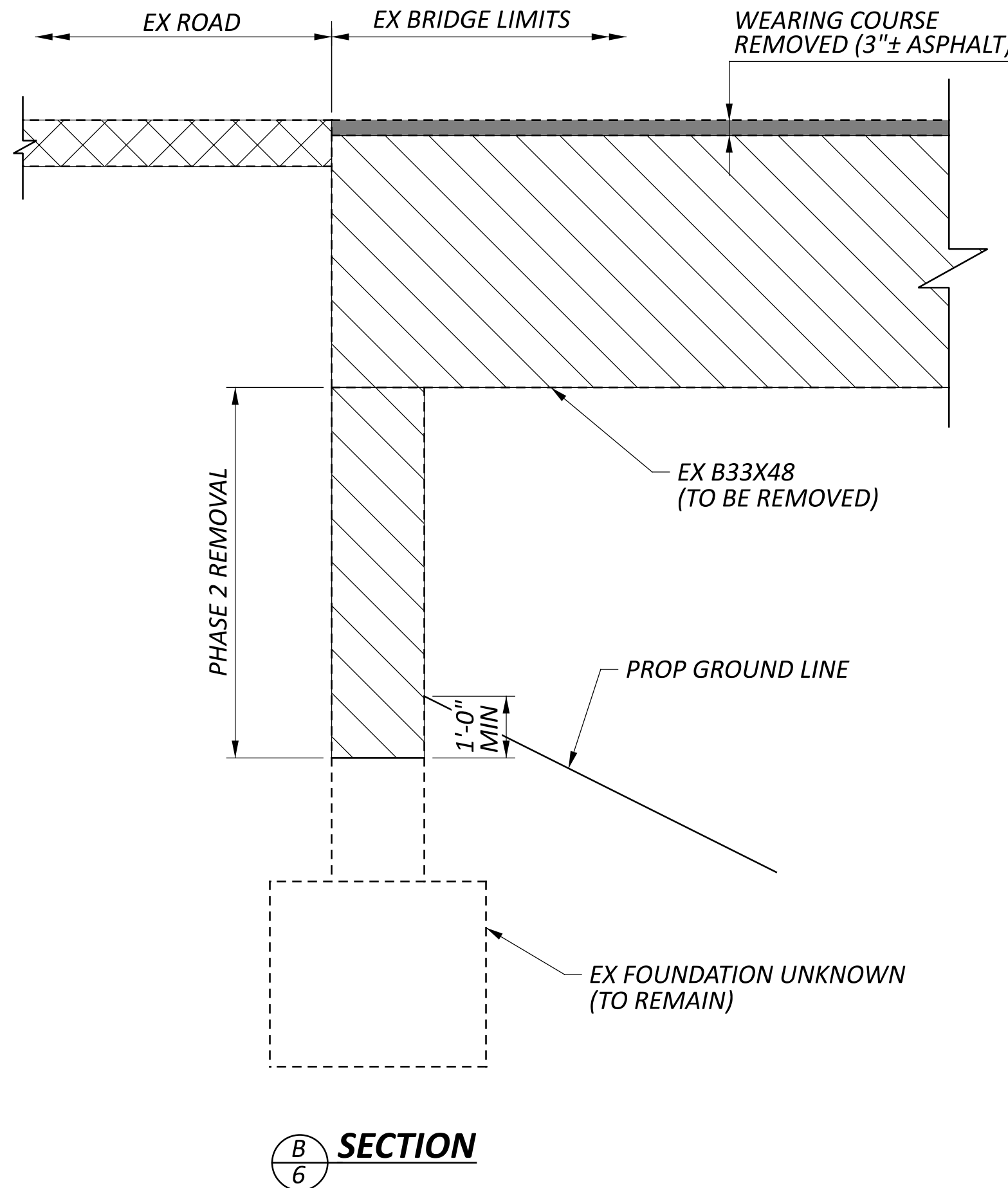
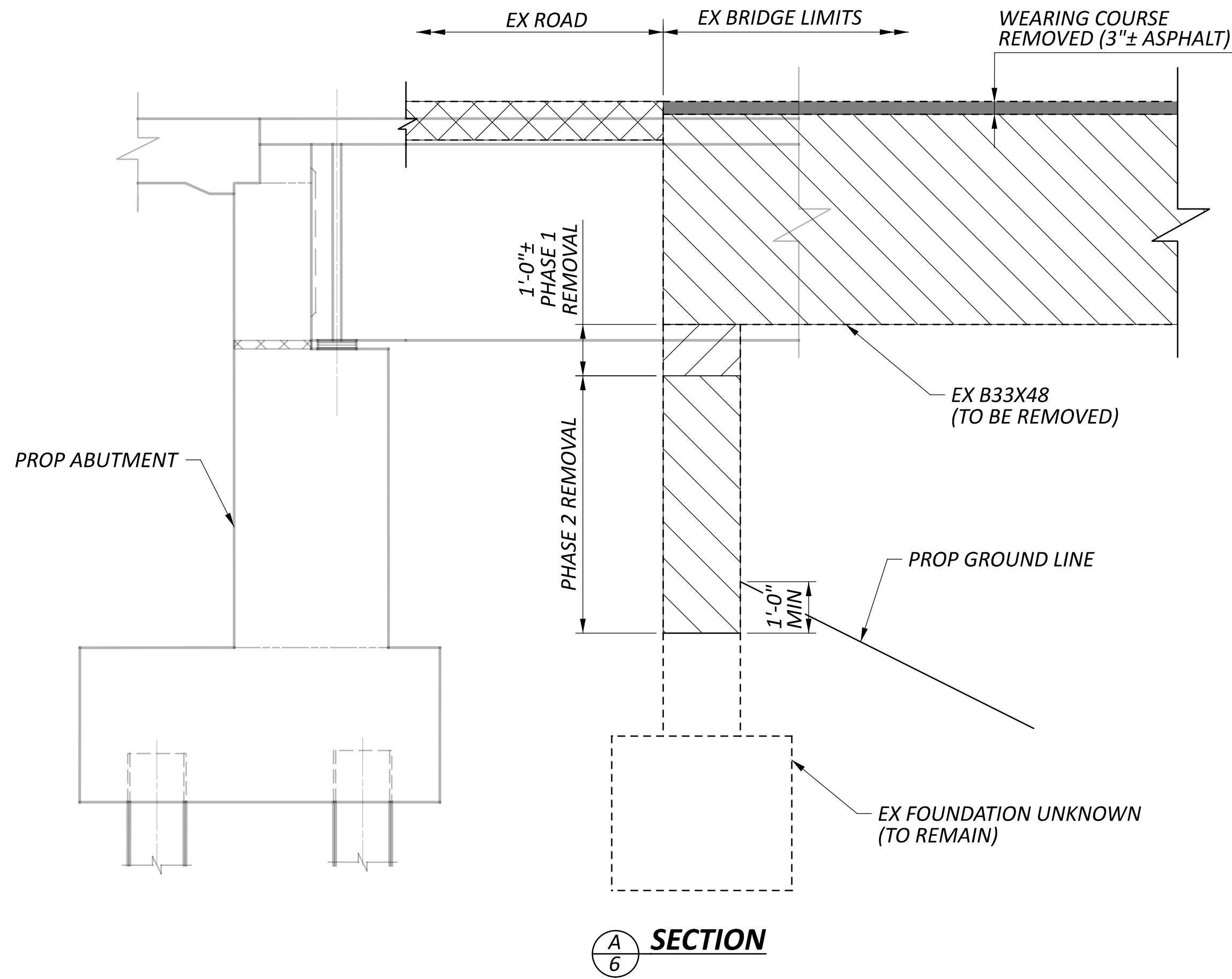
- DURING PHASE 1 CONSTRUCTION CONTRACTOR SHALL INSTALL ADDITIONAL TEMPORARY SHORING TO RETAIN BACKFILL BEHIND ABUTMENT ONCE SHORING IS REMOVED TO ACCESS PHASE 1 ABUTMENT DURING PHASE 2 CONSTRUCTION. INCLUDE COST IN ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.
- ALL COSTS ASSOCIATED WITH CONSTRUCTING WALLS 1-3 SHALL BE INCLUDED FOR PAYMENT WITH ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

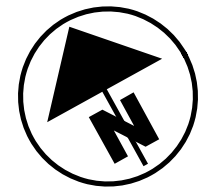
**LEGEND**

- LIMITS OF PHASE 1 STRUCTURE REMOVED PER ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- LIMITS OF PHASE 2 STRUCTURE REMOVED PER ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 202 - WEARING COURSE REMOVED
- ITEM 202 - PAVEMENT REMOVED (INCLUDED WITH ROADWAY FOR PAYMENT)

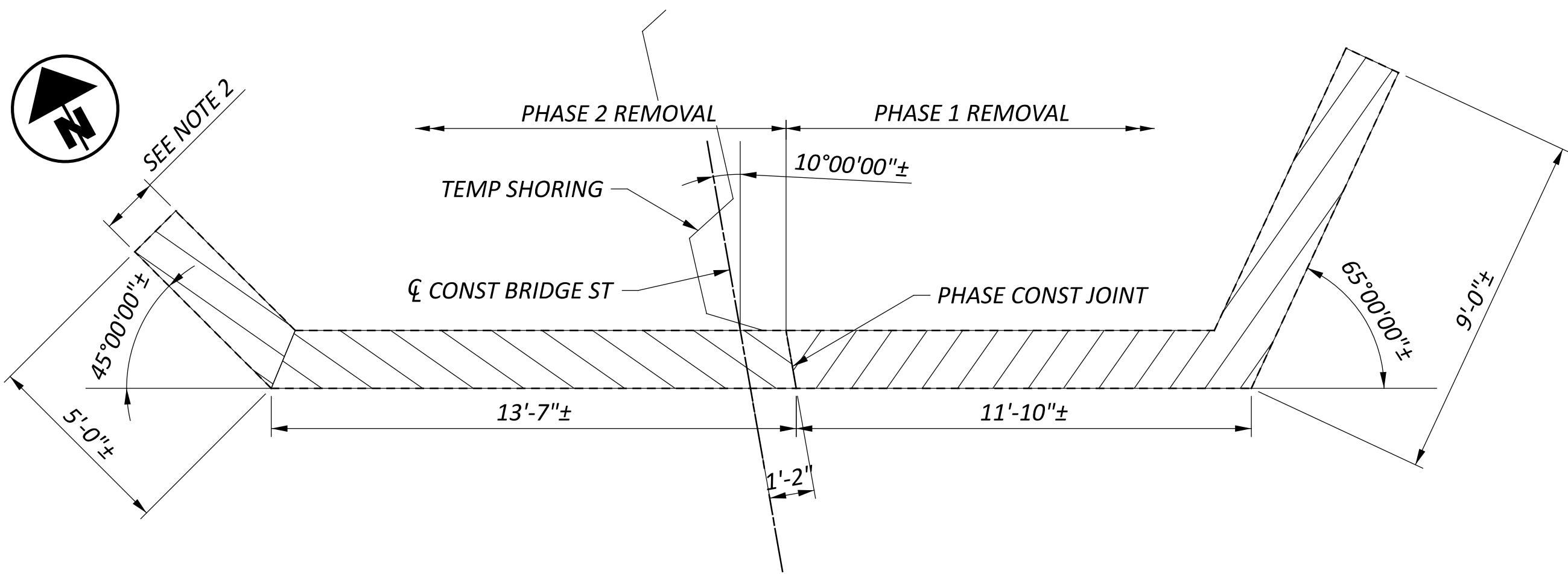
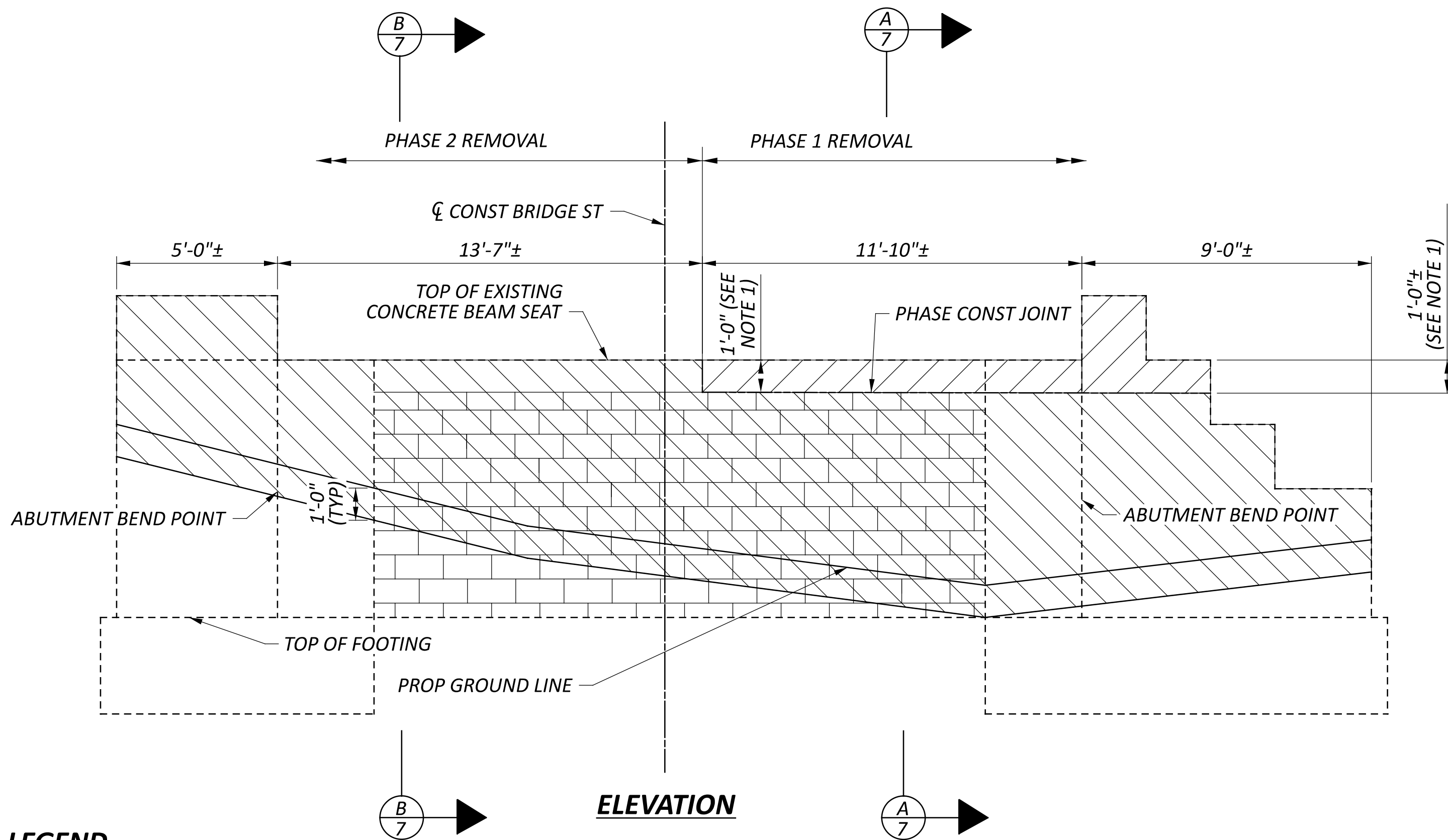
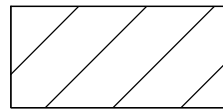
NOTES

- LIMIT PHASE 1 EXISTING ABUTMENT REMOVAL TO WHAT IS REQUIRED TO FACILITATE INSTALLATION OF THE PROPOSED SUPERSTRUCTURE OVER THE EXISTING ABUTMENTS. REMAINING ABUTMENT REMOVAL SHALL OCCUR IN PHASE 2 CONSTRUCTION. AS EXISTING ABUTMENT SIZE IS UNKNOWN, CARE SHALL BE TAKEN WITH EACH STEP OF REMOVAL TO NOT COMPROMISE THE EXISTING ABUTMENT WHILE IT IS STILL IN USE FOR MAINTAINING TRAFFIC. DETAILED REMOVAL OPERATIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PERFORMING WORK.
- EXISTING ABUTMENT THICKNESS IS UNKNOWN. CONTRACTOR SHALL TAKE CAUTION WHILE INSTALLING TEMPORARY SHORING AND EXCAVATION BEHIND THE EXISTING ABUTMENTS.

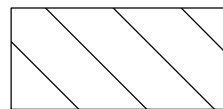




SEE NOTE 2

**PLAN****ELEVATION****LEGEND**

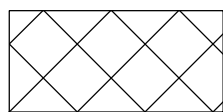
- LIMITS OF PHASE 1 STRUCTURE REMOVED
PER ITEM 202 - STRUCTURE REMOVED,
OVER 20 FOOT SPAN, AS PER PLAN



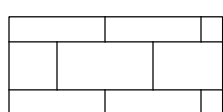
- LIMITS OF PHASE 2 STRUCTURE REMOVED
PER ITEM 202 - STRUCTURE REMOVED,
OVER 20 FOOT SPAN, AS PER PLAN



- ITEM 202 - WEARING COURSE REMOVED



- ITEM 202 - PAVEMENT REMOVED
(INCLUDED WITH ROADWAY FOR PAYMENT)

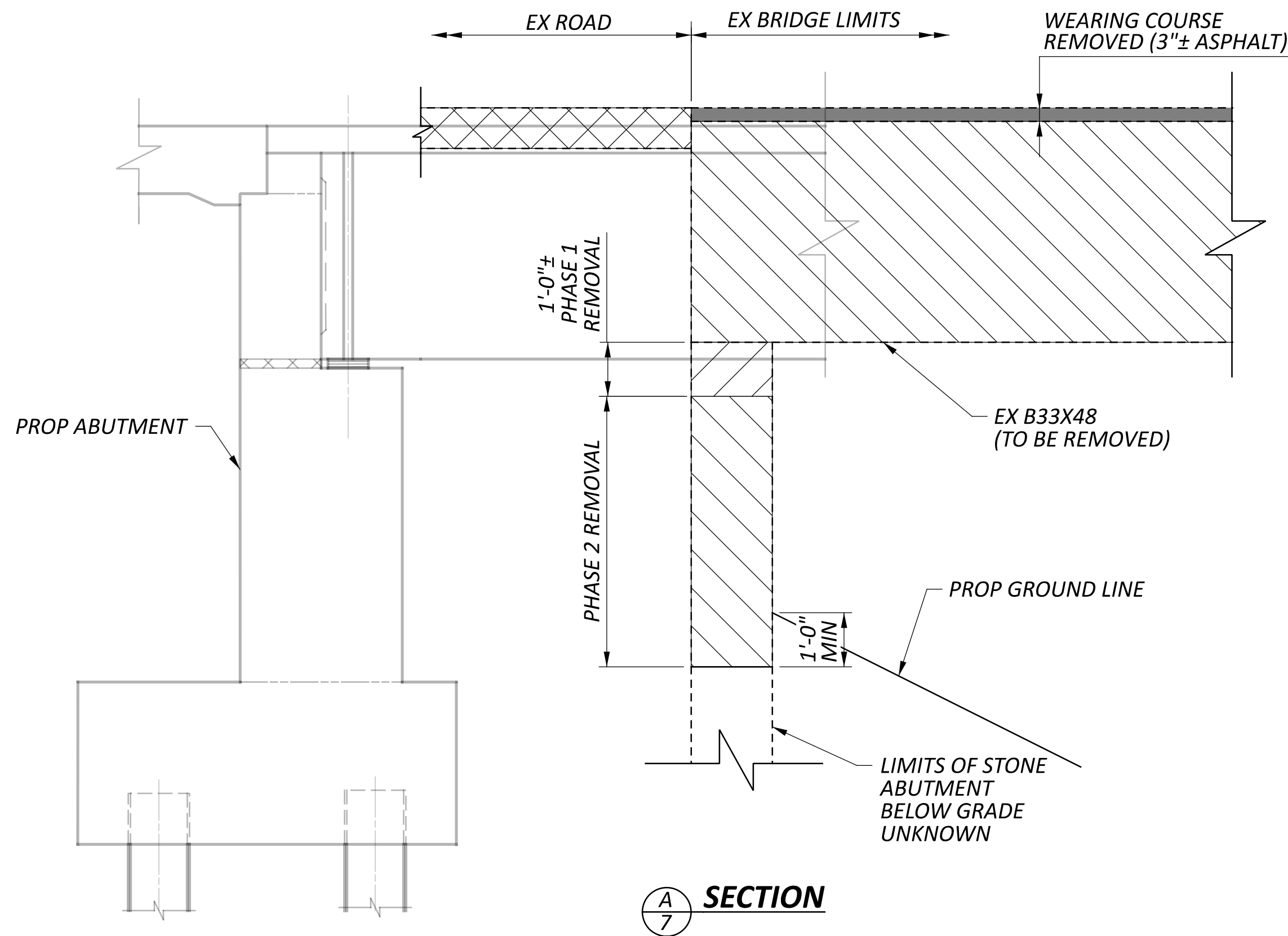
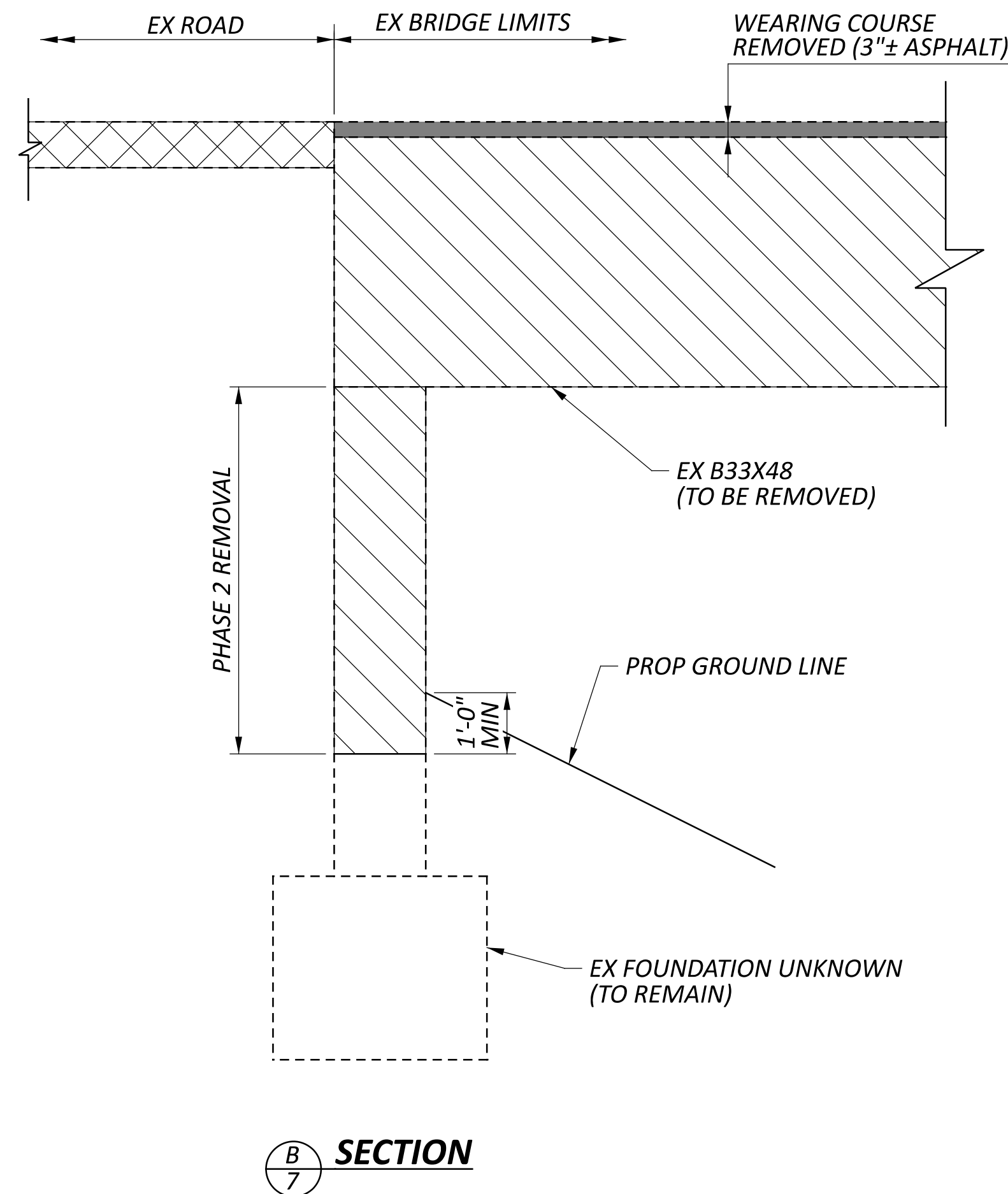


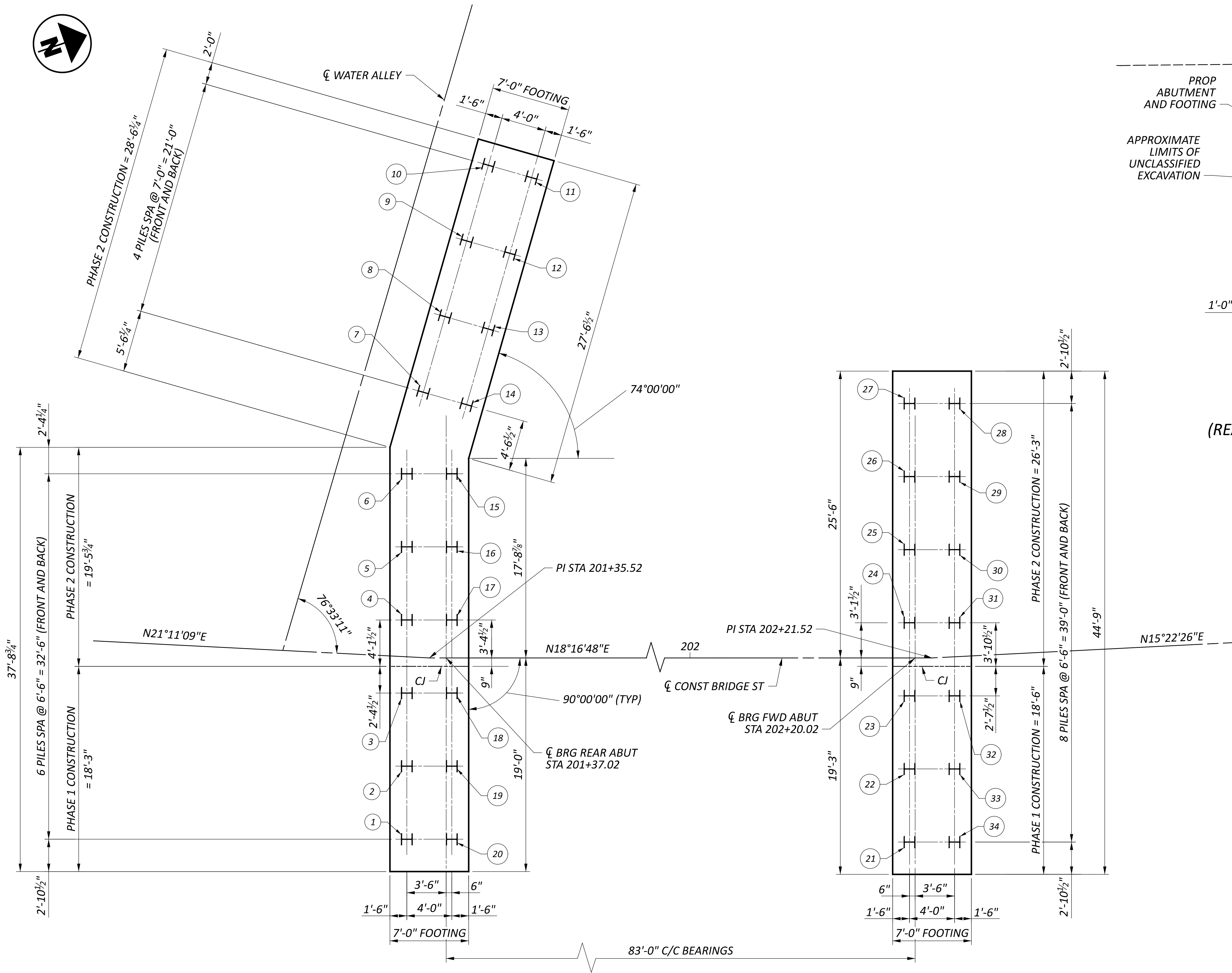
- LIMITS OF EXISTING STONE ABUTMENTS.
THE STONES SHALL BE REMOVED AS A PART
OF PHASE 2 REMOVALS.

NOTES

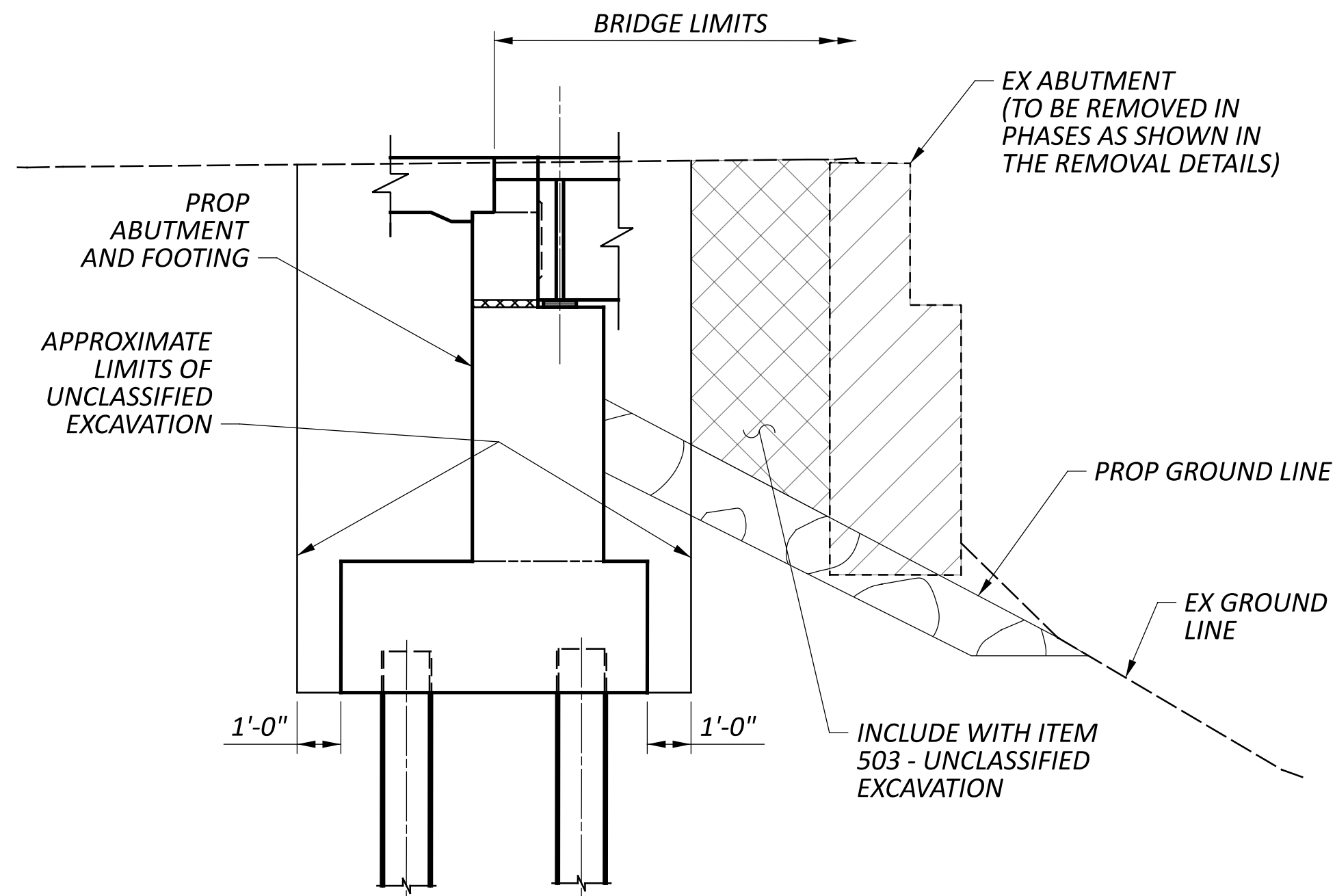
1. LIMIT PHASE 1 EXISTING ABUTMENT REMOVAL TO WHAT IS REQUIRED TO FACILITATE INSTALLATION OF THE PROPOSED SUPERSTRUCTURE OVER THE EXISTING ABUTMENTS. REMAINING ABUTMENT REMOVAL SHALL OCCUR IN PHASE 2 CONSTRUCTION. AS EXISTING ABUTMENT SIZE IS UNKNOWN, CARE SHALL BE TAKEN WITH EACH STEP OF REMOVAL TO NOT COMPROMISE THE EXISTING ABUTMENT WHILE IT IS STILL IN USE FOR MAINTAINING TRAFFIC. DETAILED REMOVAL OPERATIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PERFORMING WORK.

2. EXISTING ABUTMENT THICKNESS IS UNKNOWN. CONTRACTOR SHALL TAKE CAUTION WHILE INSTALLING TEMPORARY SHORING AND EXCAVATION BEHIND THE EXISTING ABUTMENTS.

**SECTION A-A****SECTION B-B**



FOUNDATION PLAN



ABUTMENT EXCAVATION SCHEMATIC
(REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR)

LEGEND

- $\bigcirc$ - PILE NUMBER "X"
- H - HP 14 x 73 VERTICAL PILE

LEGEND:

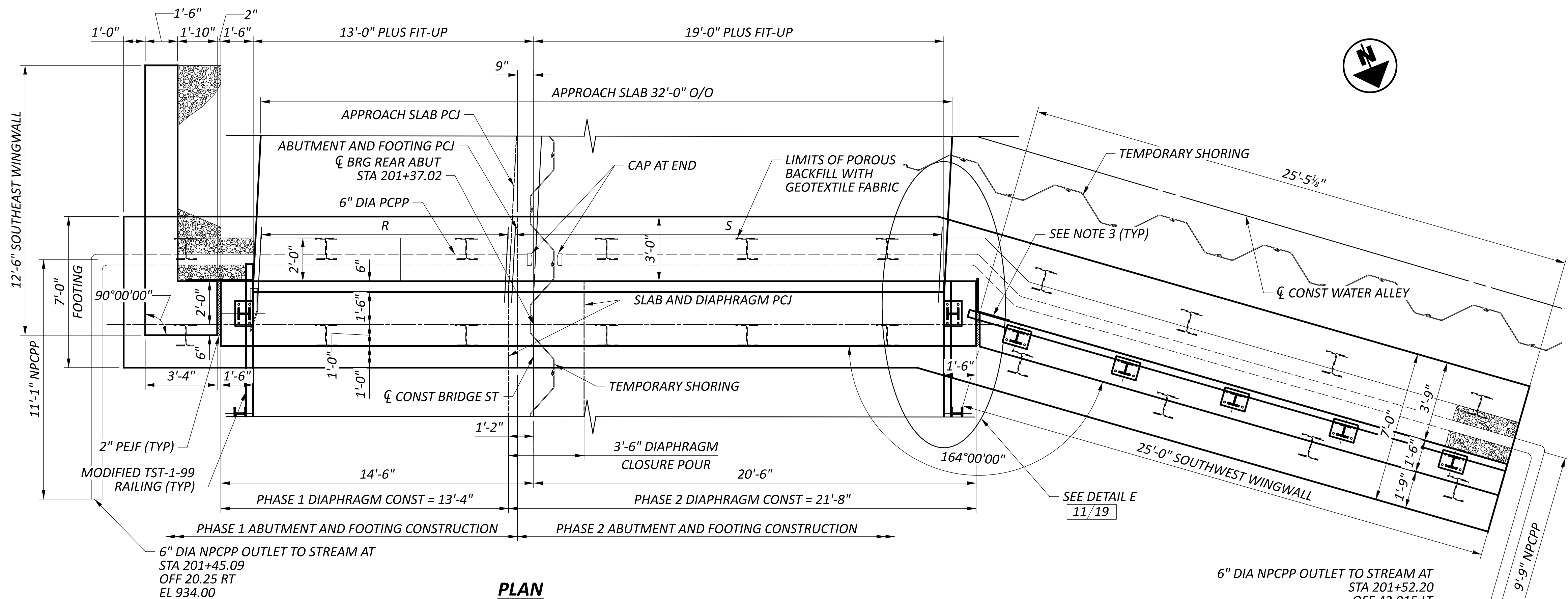
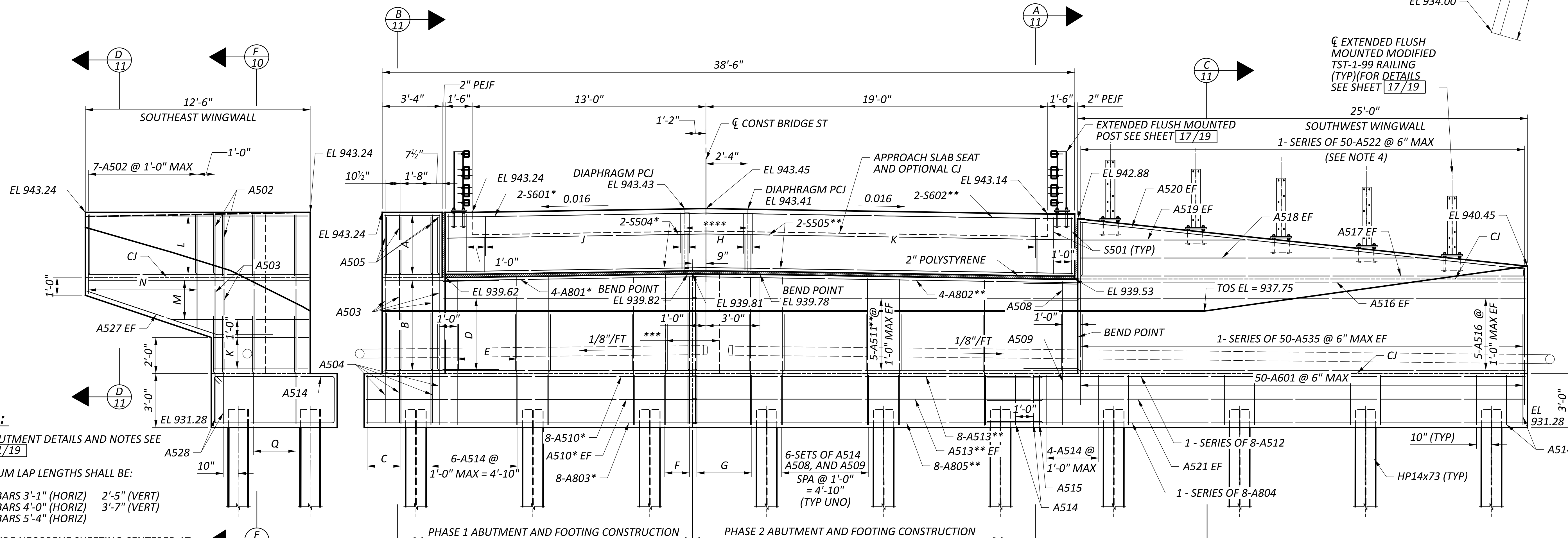
- A - 5-A501 @ 1'-0" MAX EF
B - 6-A506 @ 1'-0" MAX EF
C - 3-514 @ 1'-0" MAX
D - 5-A507* @ 1'-0" MAX EF
E - 5 SETS OF A508, AND A509 @ 1'-0" MAX
F - 3 SETS OF A514, A508, AND A509 @ 1'-0" MAX
G - 5 SETS OF A514, A508, AND A509 @ 1'-0" MAX
H - 4-S502 & 4-S503 @ 1'-6" MAX
J - 9-S502 & 9-S503 @ 1'-6" MAX
K - 12-S502 & 12-S503 @ 1'-6" MAX
L - 5-A523 @ 1'-0" MAX EF
M - 1 SERIES OF 5-A524 @ 1'-0" MAX EF
N - 1-SERIES OF 7-A525 @ 1'-0" MAX EF
P - 3-A526 @ 1'-0" MAX EF
Q - 3- SETS OF A502, A503, AND A528 @ 1'-0" MAX
R - 9- D801 BARS @ 1'-6" MAX
S - 15-D801 BARS @ 1'-6" MAX

* - INCLUDES MECHANICAL CONNECTOR ON ONE END

** - PLUS EXTENSION FOR MECHANICAL CONNECTOR

*** - TYPE 2 WATERPROOFING (3'-0" WIDE, CENTERED ON JOINT)

**** - 3'-6" DIAPHRAGM CLOSURE POUR

**PLAN****ELEVATION**(ELEVATIONS GIVEN AT ϕ BEARING)**NOTES:**

- FOR ABUTMENT DETAILS AND NOTES SEE SHEET 11/19
- MINIMUM LAP LENGTHS SHALL BE:
#5 BARS 3'-1" (HORIZ) 2'-5" (VERT)
#6 BARS 4'-0" (HORIZ) 3'-7" (VERT)
#8 BARS 5'-4" (HORIZ)
- 3'-0" WIDE NEOPRENE SHEETING CENTERED AT VERTICAL JOINT FROM BOTTOM OF APPROACH SLAB SEAT TO 1'-6" BELOW BEAM SEAT
- PLACE A602 BARS AROUND RAILING ANCHOR ASSEMBLIES.

**SOUTHWEST WINGWALL
ELEVATION**

REAR ABUTMENT PLAN AND ELEVATION
BRIDGE NO. HAS-BRIDGE-00.045
OVER CONOTTON CREEK

SFN
3431790

DESIGN AGENCY

EMHT

DESIGNER
AI

CHECKER
TDA

REVIEWER
CAS

PROJECT ID
120494

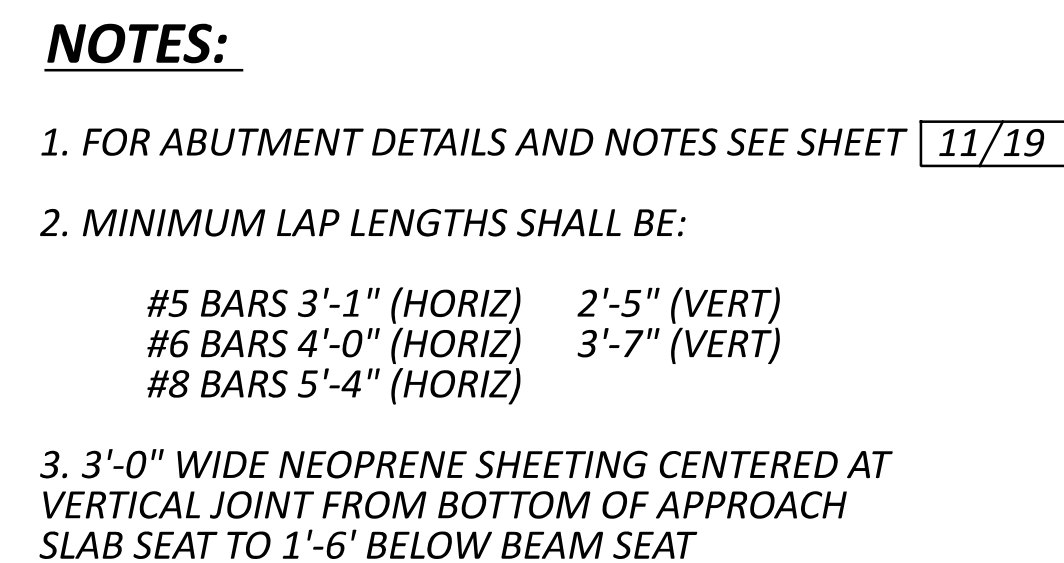
SUBSET
9

TOTAL
19

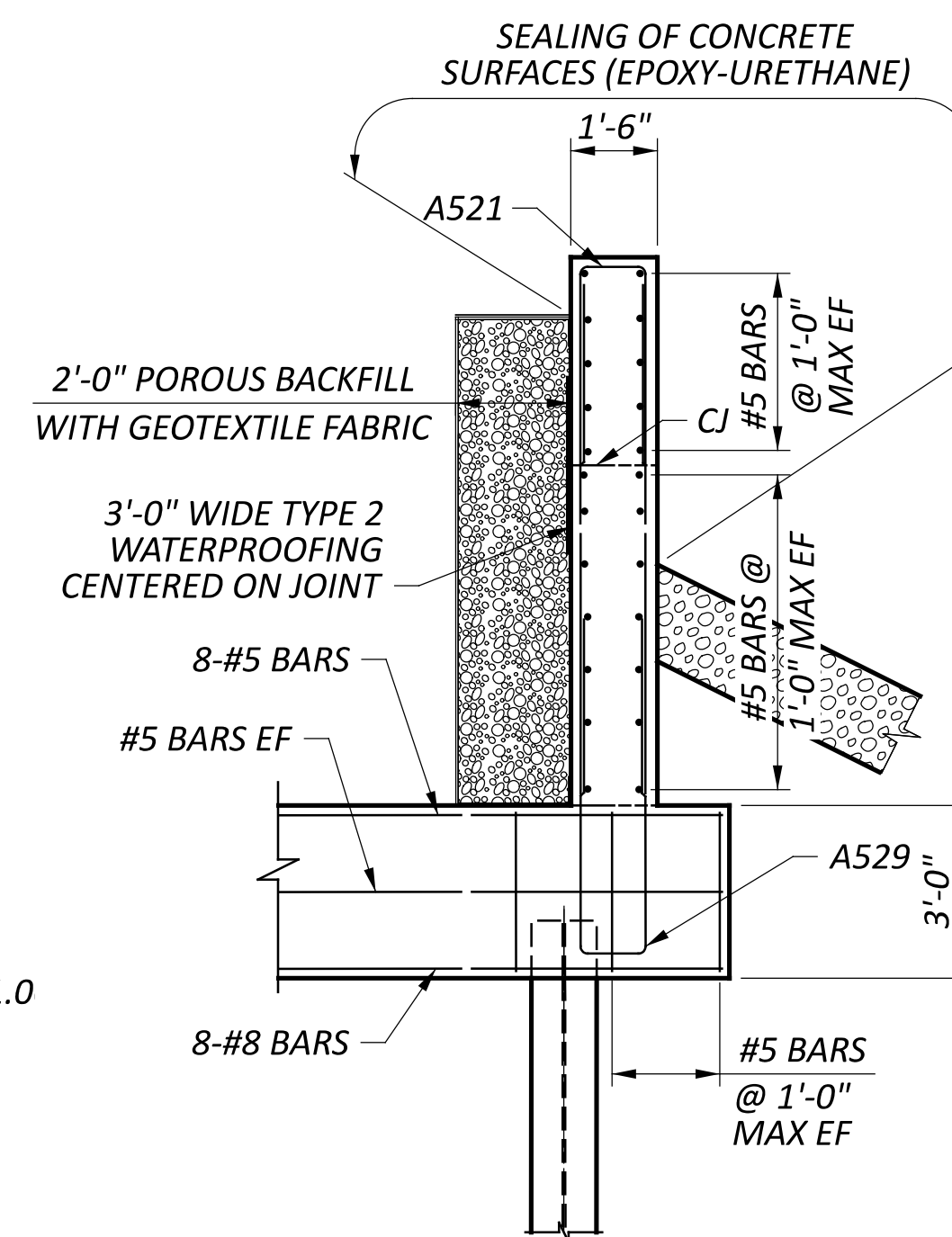
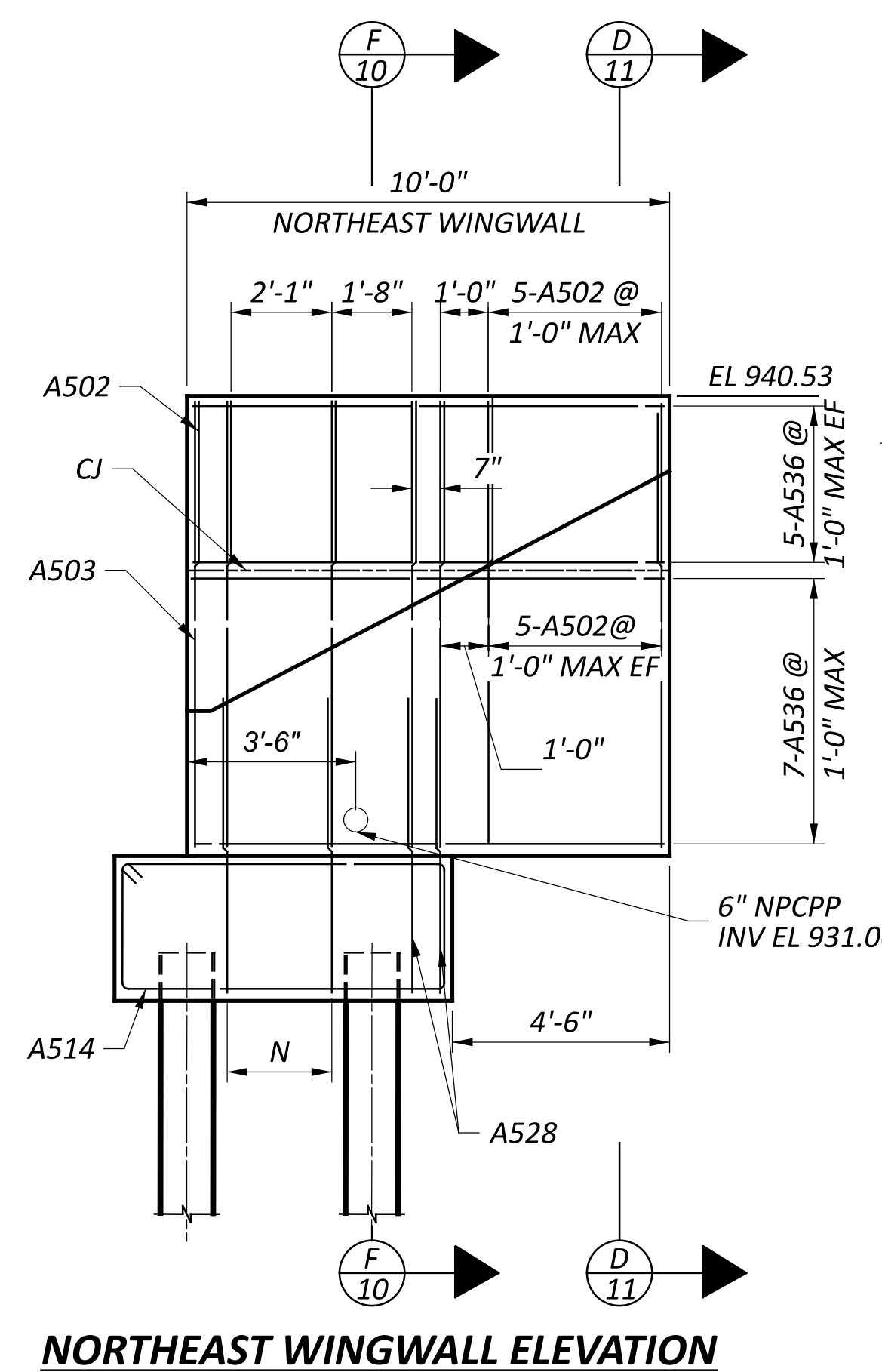
SHEET
P.26

TOTAL
41

HAS-BRIDGE STREET BRIDGE REPLACEMENT



- LEGEND:**
- A - 14-S507 & 14-S508 @ 1'-6"
MAX
- B - 9-S507 & 9-S508 @ 1'-6"
MAX
- C - 4-S507 & 4-S508 @ 1'-6"
MAX
- D - 3 SETS OF A503, A504,
AND A505 @ 1'-0" MAX
- E - 6-A533** @ 1'-0" MAX EF
- F - 6-534* @ 1'-0" MAX EF
- G - 5-A501 @ 1'-0" MAX EF
- H - 7-A506 @ 1'-0" MAX EF
- J - 4 SETS OF A509 AND A531
@ 1'-0" MAX
- K - 4 SETS OF A514, A509 AND
A531 @ 1'-0" MAX
- L - 3-SETS OF A514, A509, AND
A531 @ 1'-0 MAX
- M - 2 SETS OF A514, A509 AND
A531 @ 1'-0" MAX
- N - 3 SETS OF A502, A503 AND
A528 @ 1'-0" MAX
- * - INCLUDES MECHANICAL
CONNECTOR ON ONE END
- ** - PLUS EXTENSION FO
MECHANICAL CONNECTOR
- *** - 3'-6" DIAPHRAGM
CLOSURE POUR
- **** - TYPE 2 WATERPROOFING
(3'-0" WIDE, CENTERED ON
JOINT)



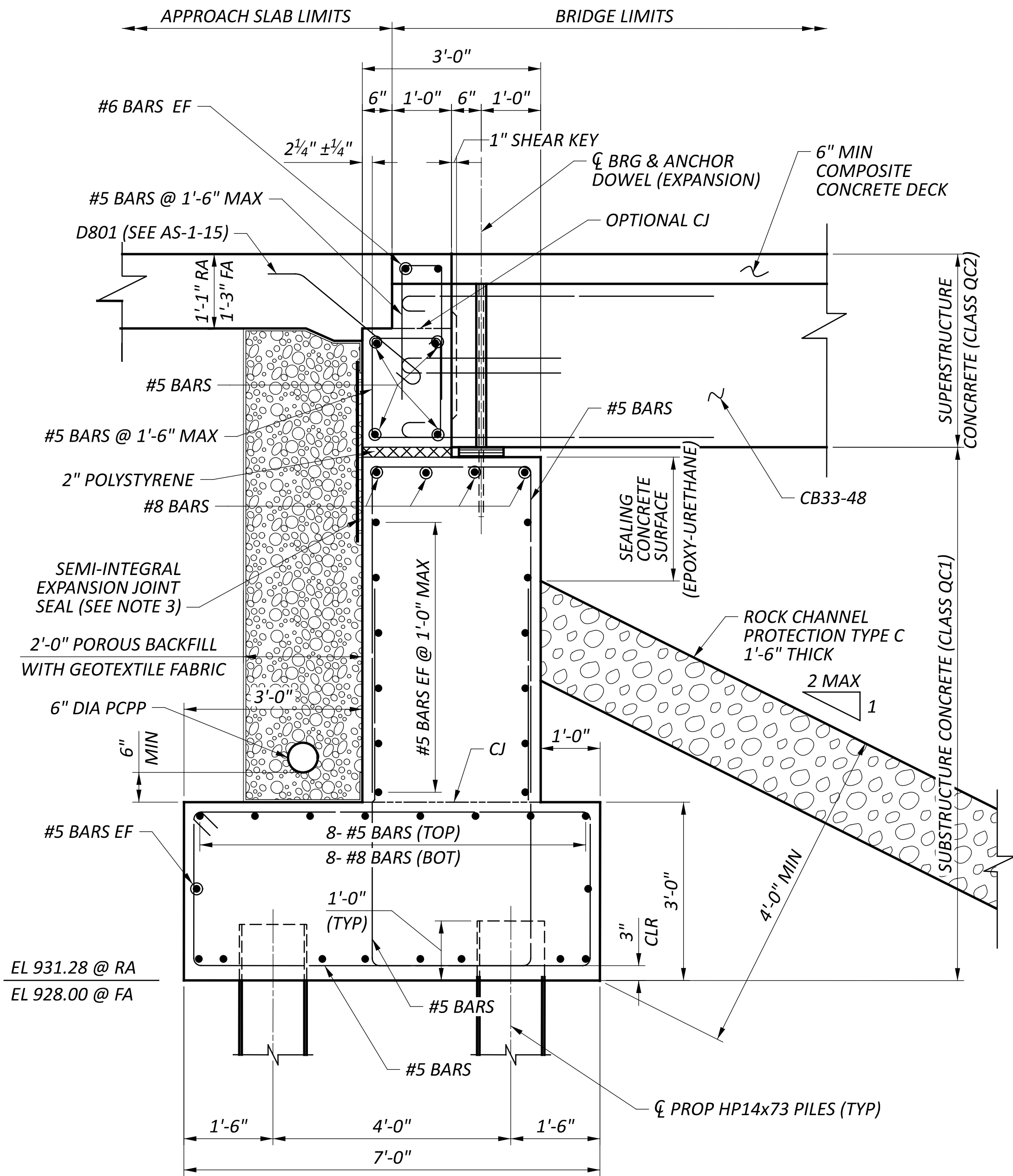
FWD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. HAS-BRIDGE-00.045
OVER CONOTTON CREEK

SFN		3431790	
DESIGN AGENCY			
			
DESIGNER		CHECKER	
AI		TDA	
REVIEWER			
CAS 02/28/25			
PROJECT ID			
120494			
SUBSET		TOTAL	
10		19	
SHEET		TOTAL	
P.27		41	

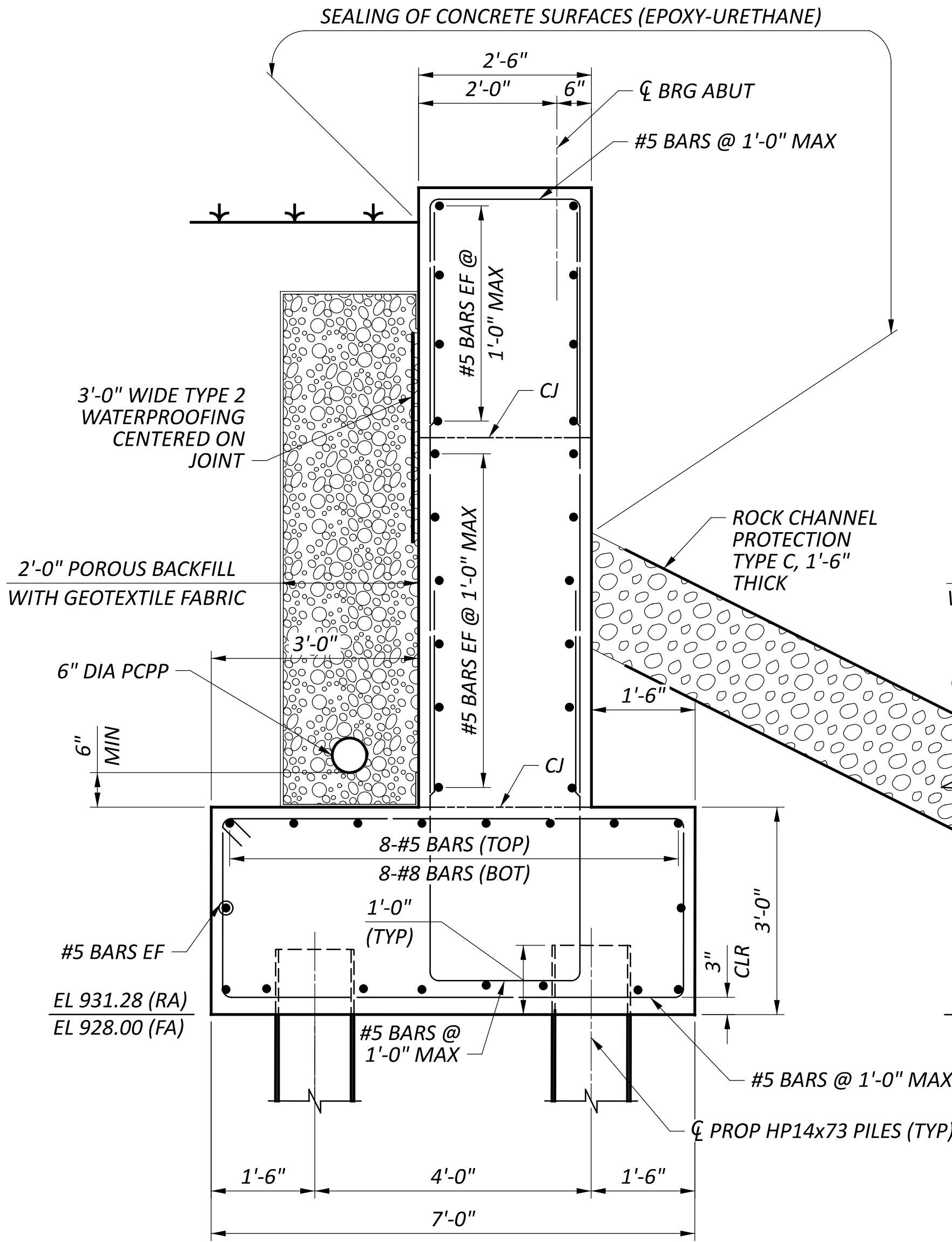
NOTES:

- BRIDGE SEAT REINFORCING SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.
- MINIMUM LAP LENGTHS SHALL BE:

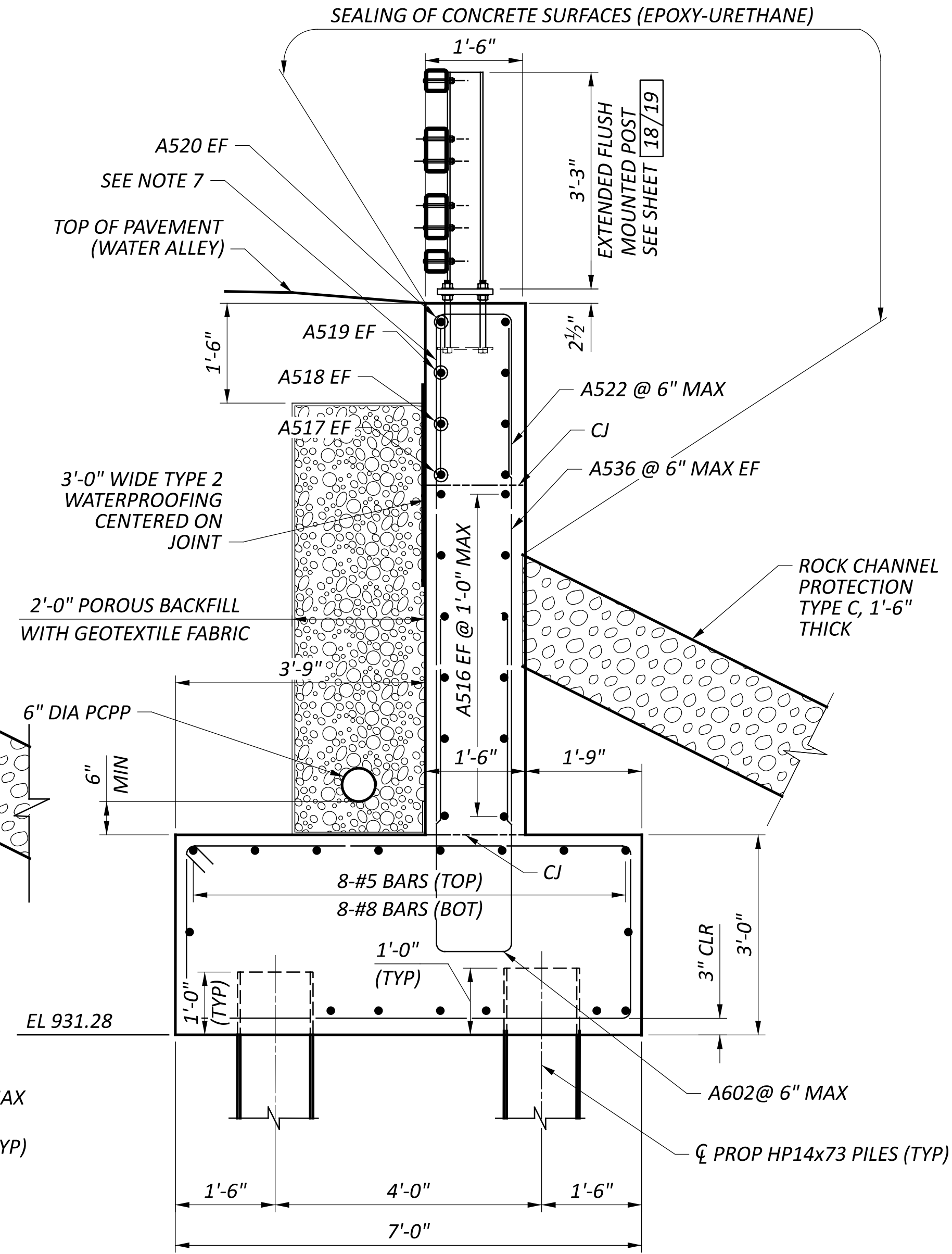
#5 BARS 3'-1" (HORIZ)	2'-5" (VERT)
#6 BARS 4'-0" (HORIZ)	3'-7" (VERT)
#8 BARS 5'-4" (HORIZ)	
- 3'-0" WIDE NEOPRENE SHEETING CENTERED AT VERTICAL JOINT.
- DO NOT PLACE THE ABUTMENT AND WINGWALL CONCRETE ABOVE THE BEAM SEAT CONSTRUCTION JOINT UNTIL THE PRESTRESSED BOX BEAMS HAVE BEEN ERECTED.
- INCLUDE POLYSTYRENE FOR PAYMENT WITH ITEM 511- CLASS QC2 CONCRETE WITH QC/QA, AS PER PLAN.
- ABUTMENT DIAPHRAGM CONCRETE: PLACE THE CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS WITH DECK SLAB CONCRETE.
- ONE A522 BAR SHALL BE PLACED AROUND THE TST-1-99 RAILING SPACER PLATE. TRIM PLATE AS NEEDED TO FACILITATE BAR PLACEMENT



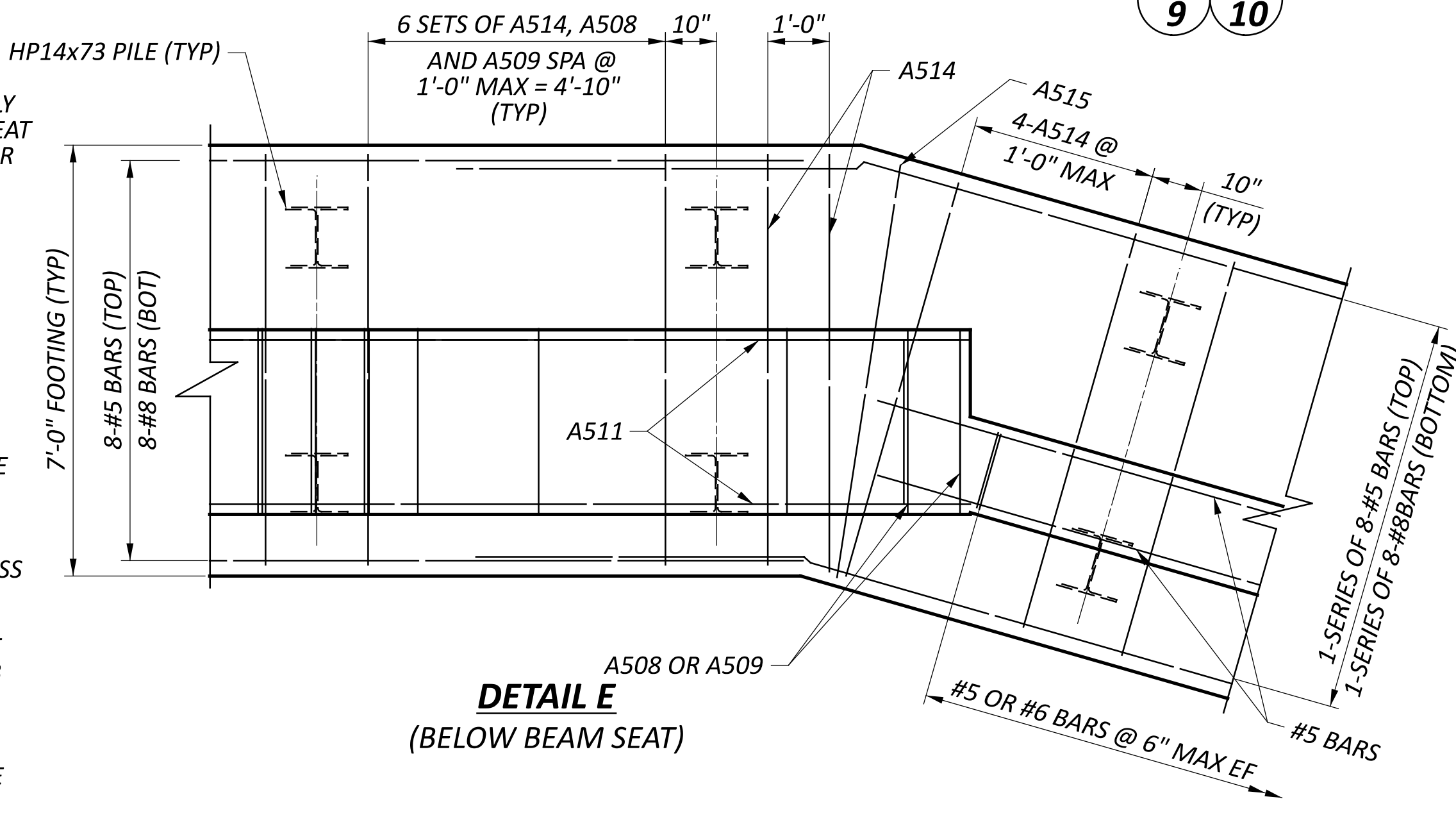
SECTION
A-A



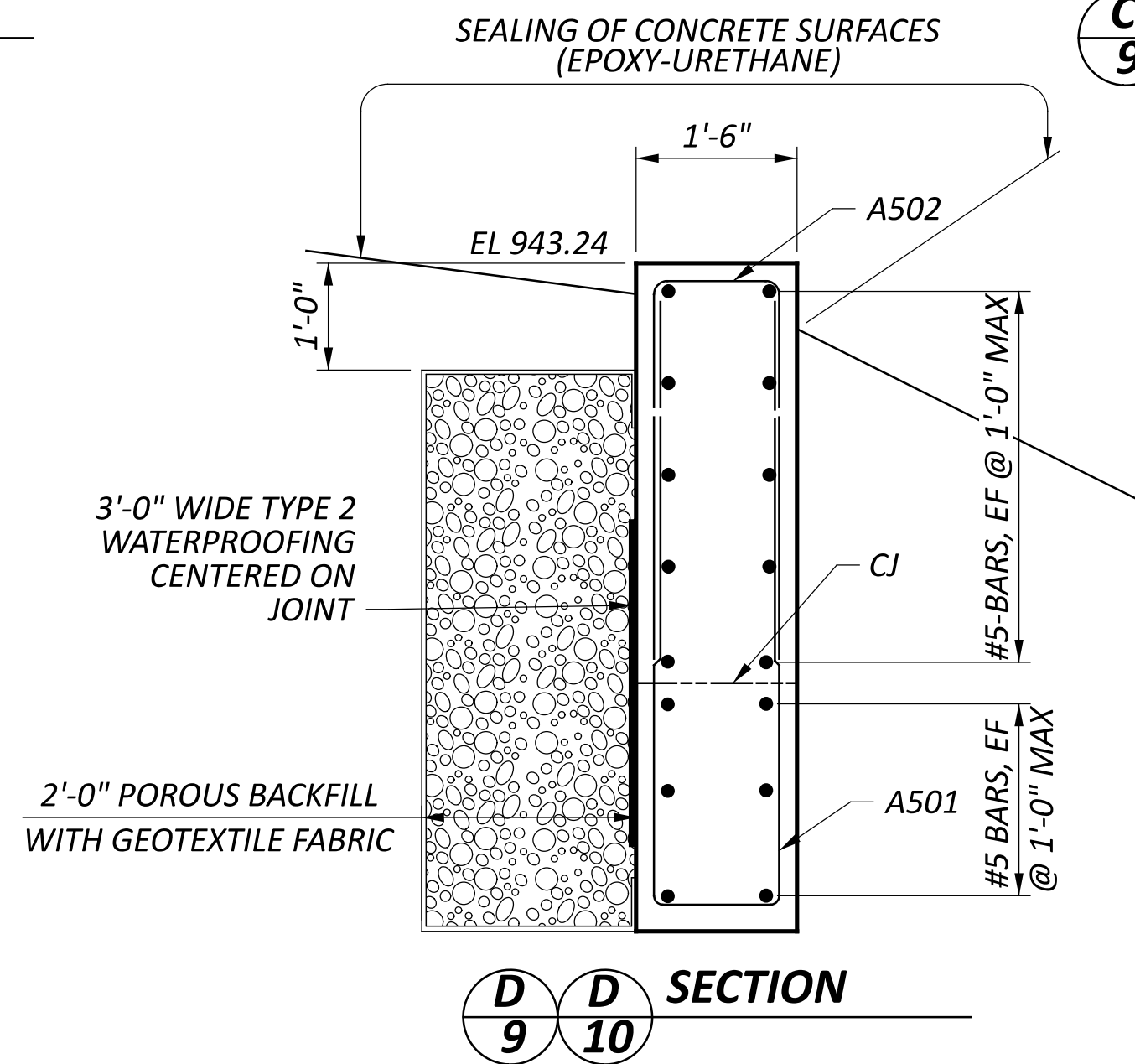
SECTION
B-B



SECTION
C-C



DETAIL E
(BELOW BEAM SEAT)



SECTION
D-D

NOTES:

1. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER, THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
2. CAMBER:

ESTIMATED CAMBER AT DAY 0 (D₀) IS

1.78

INCHES

ESTIMATED CAMBER AT DAY 30 (D₃₀) IS

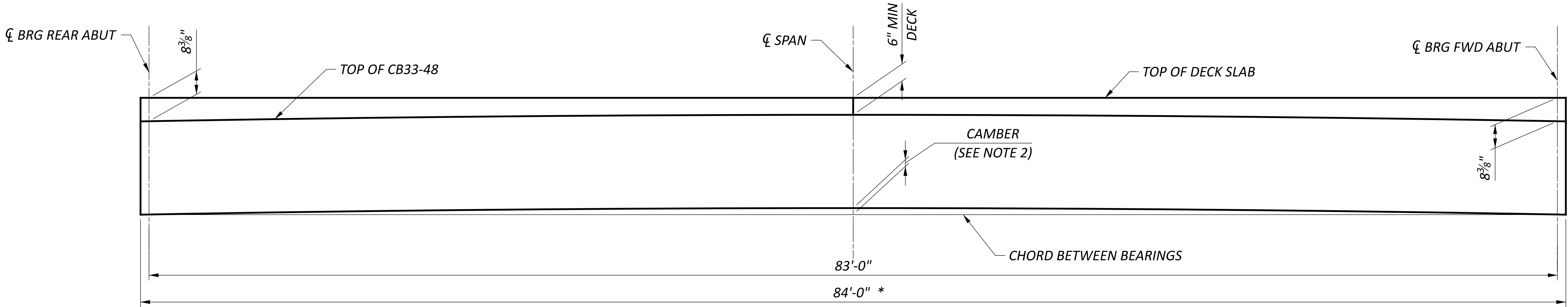
3.16

INCHES

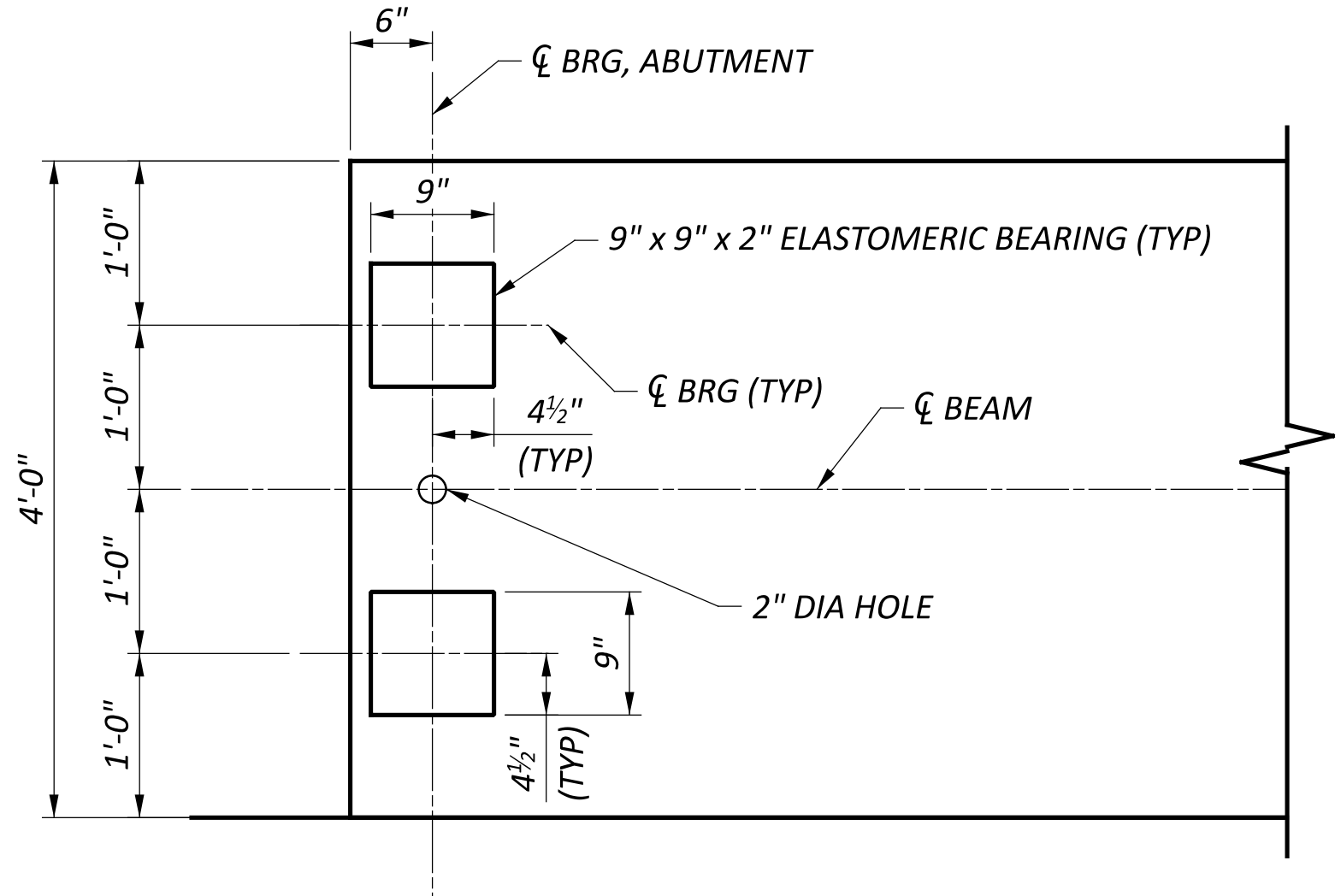
DEFLECTION DUE TO REMAINING DEAD LOAD (E.G. CONCRETE DECK, DIAPHRAGMS, BRIDGE RAILINGS, ETC.) IS

0.78

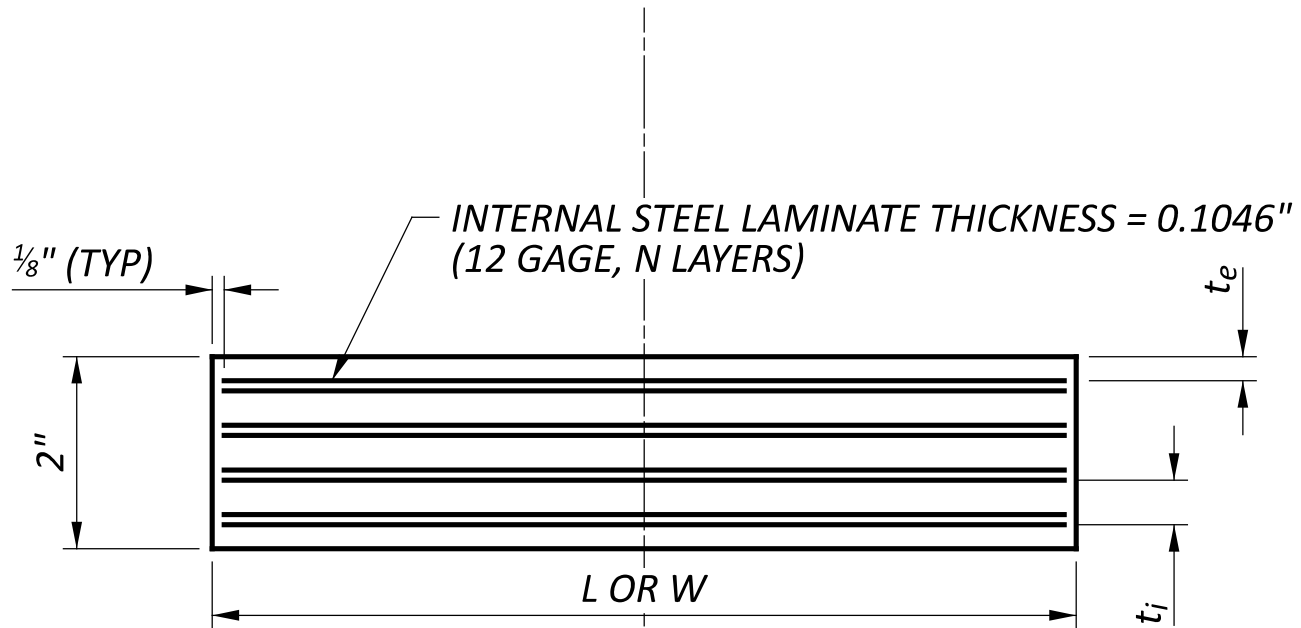
INCHES
3. THE BEAM SEAT ELEVATIONS ASSUME ESTIMATED CAMBER AT DAY 30.
4. NOTE TO FABRICATOR: THE DIMENSIONS MEASURED ALONG THE LENGTH OF THE BEAM, MARKED WITH A *, DO NOT CONTAIN ALLOWANCE FOR THE EFFECT OF THE LONGITUDINAL GRADE. INCLUDE THE PROPER ALLOWANCE FOR THESE DIMENSIONS IN THE SHOP DRAWINGS.



CAMBER AND TOPPING THICKNESS



BEARING PAD LAYOUT



LAMINATED ELASTOMERIC BEARING

ELASTOMERIC BEARING											
LOCATION	ELASTOMERIC BEARING DIMESNIONS								REACTIONS #		
	L (INCHES)	W (INCHES)	t _i (INCHES)	t _e (INCHES)	T (INCHES)	N	N _i	N _e	MAX DL (KIPS)	MAX LL (KIPS)	MAX TOTAL LOAD (KIPS)
ALL BEAMS	9	9	0.36	0.25	2.00	4	3	2	32.16	24.84	57.00

LEGEND:

- t_i - THICKNESS OF INTERNAL LAYER

t_e - THICKNESS OF EXTERNAL LAYER

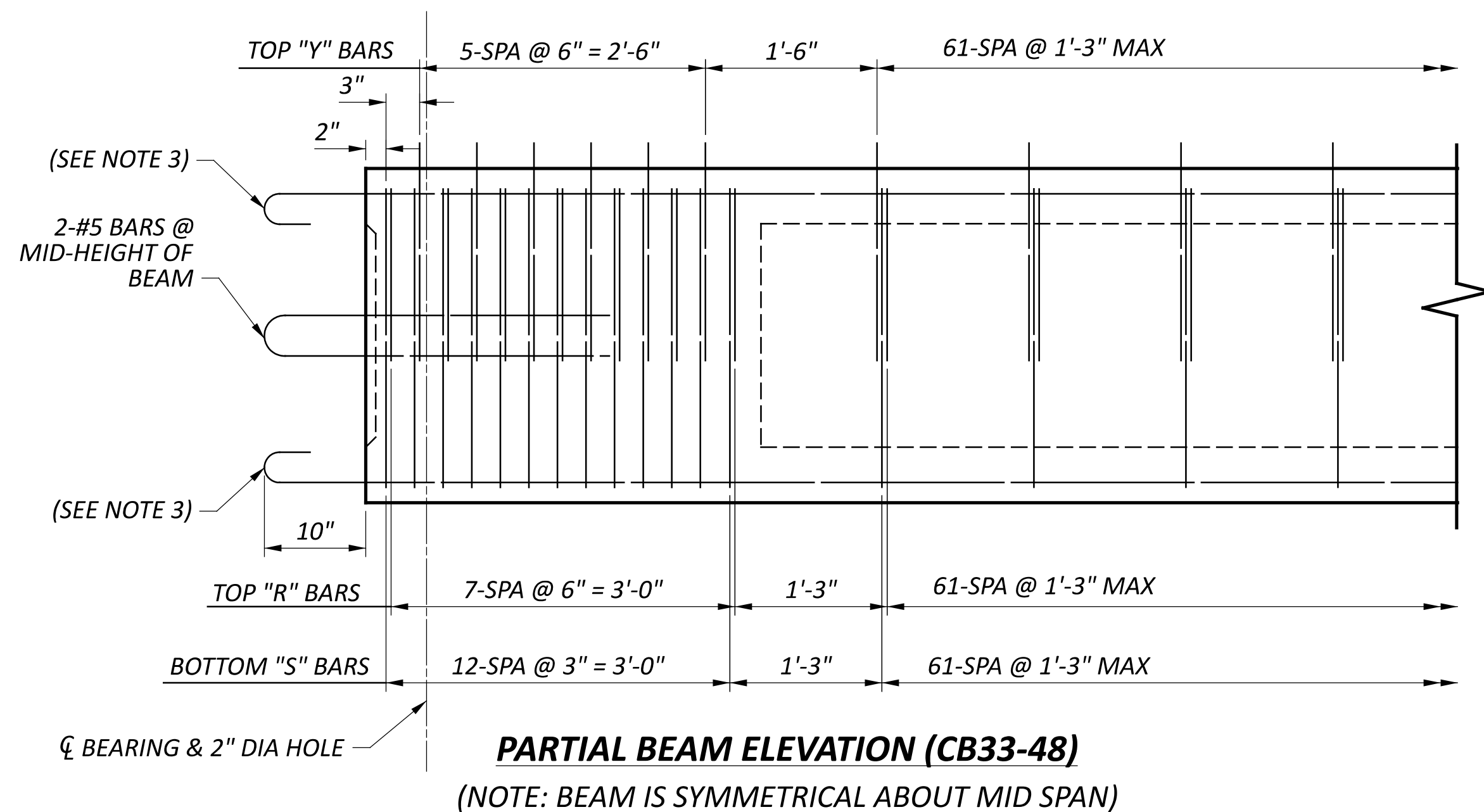
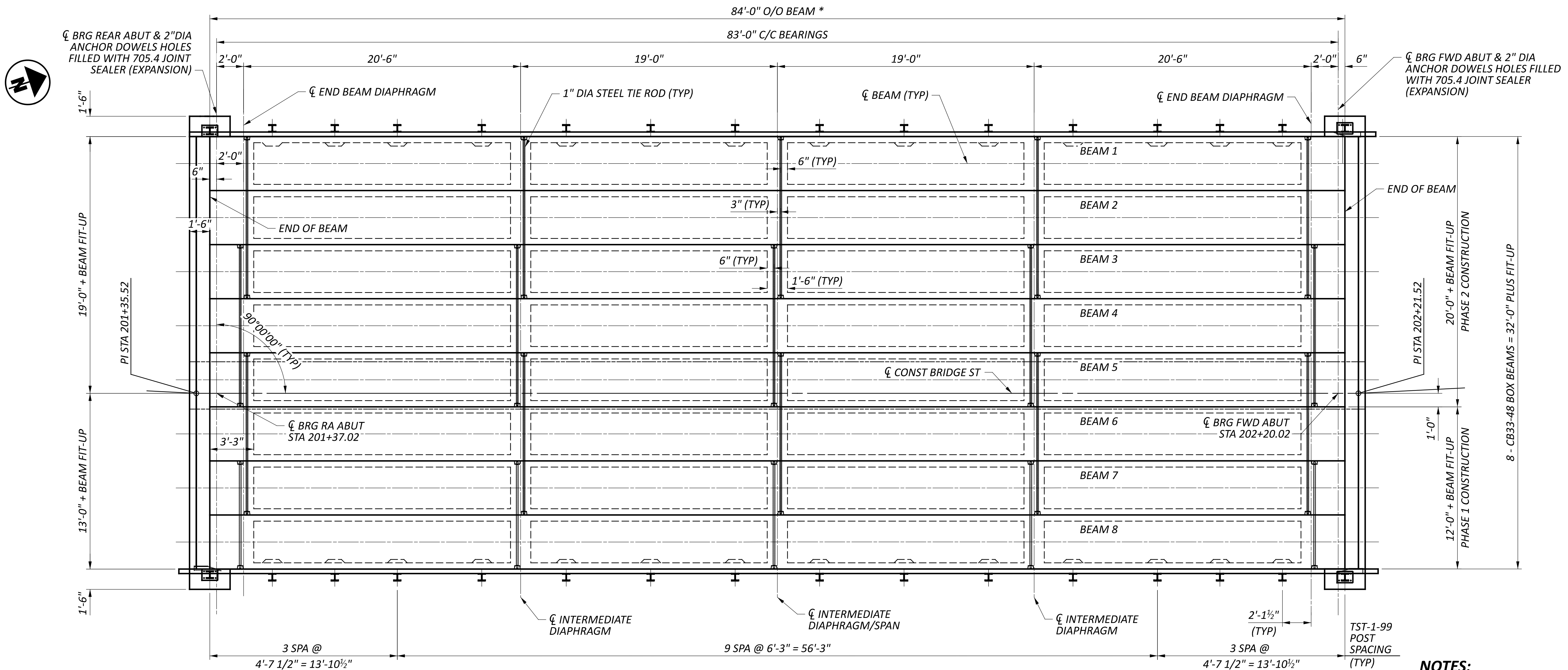
T - TOTAL THICKNESS

N - NUMBER OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.1046" (12 GAGE)

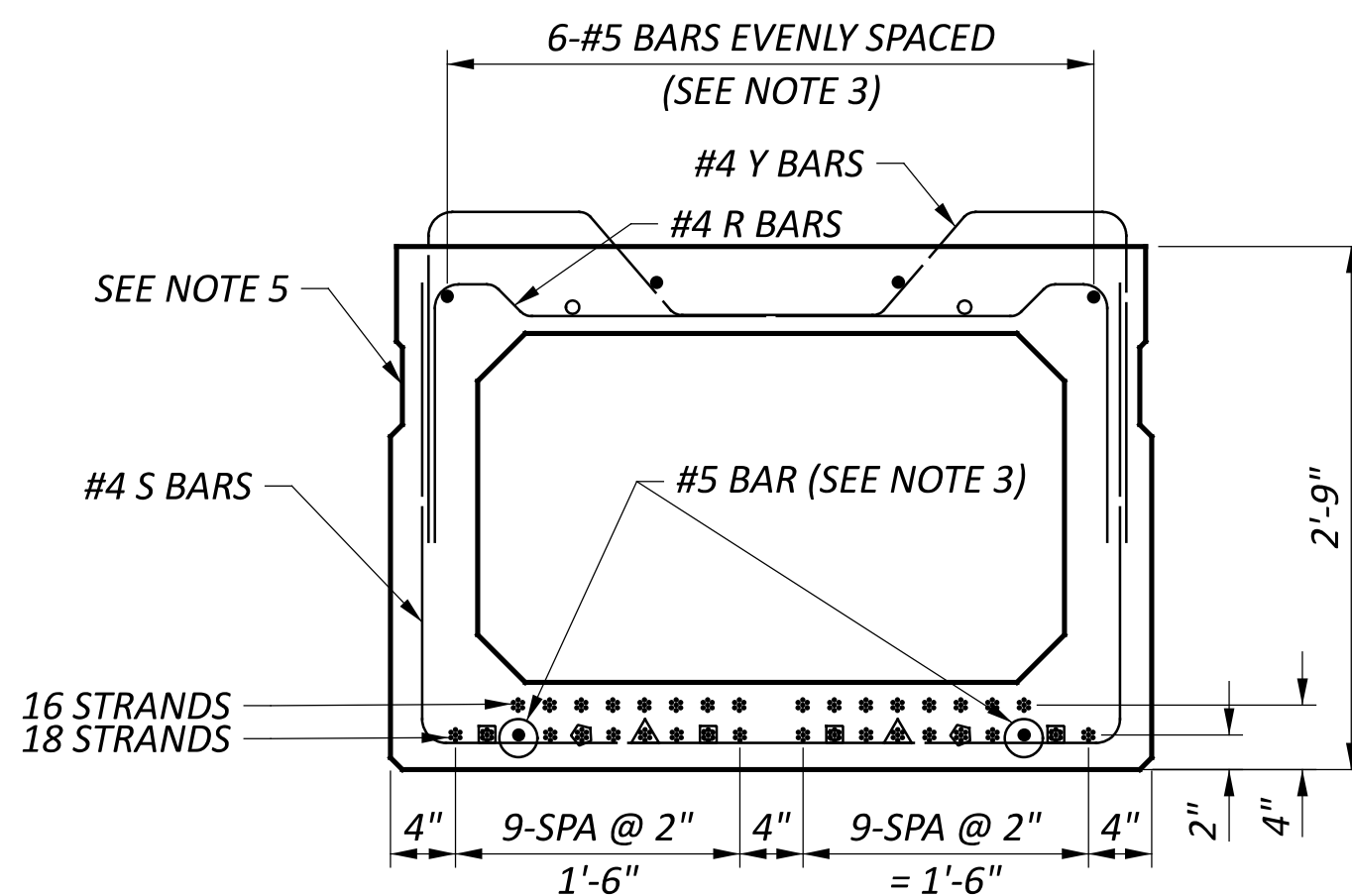
N_i - NUMBER OF INTERNAL LAYERS

N_e - NUMBER OF EXTERNAL LAYERS

- LOADS GIVEN IN THE BEARINGS TABLE ARE SERVICE LOADS AND WITH NO IMPACT.

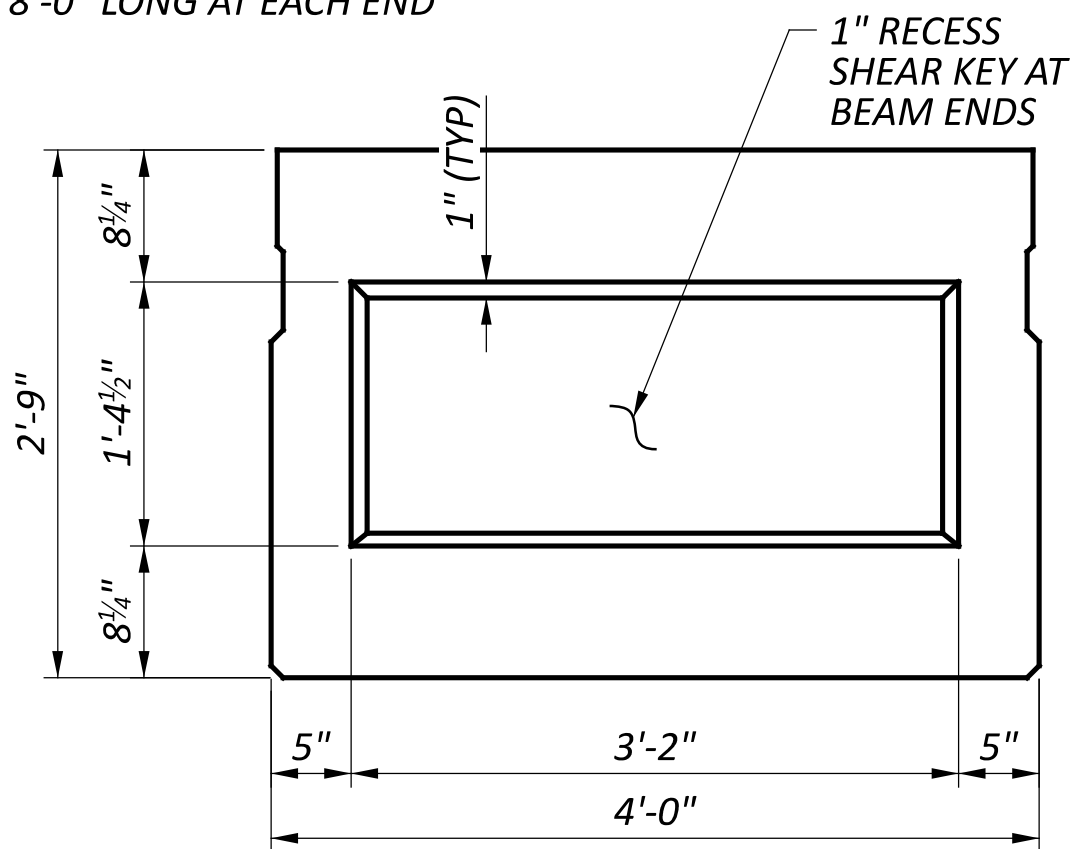


FRAMING PLAN

CB 33-48 BOX BEAM SECTION
(34-1/2" DIA STRANDS)

LEGEND:

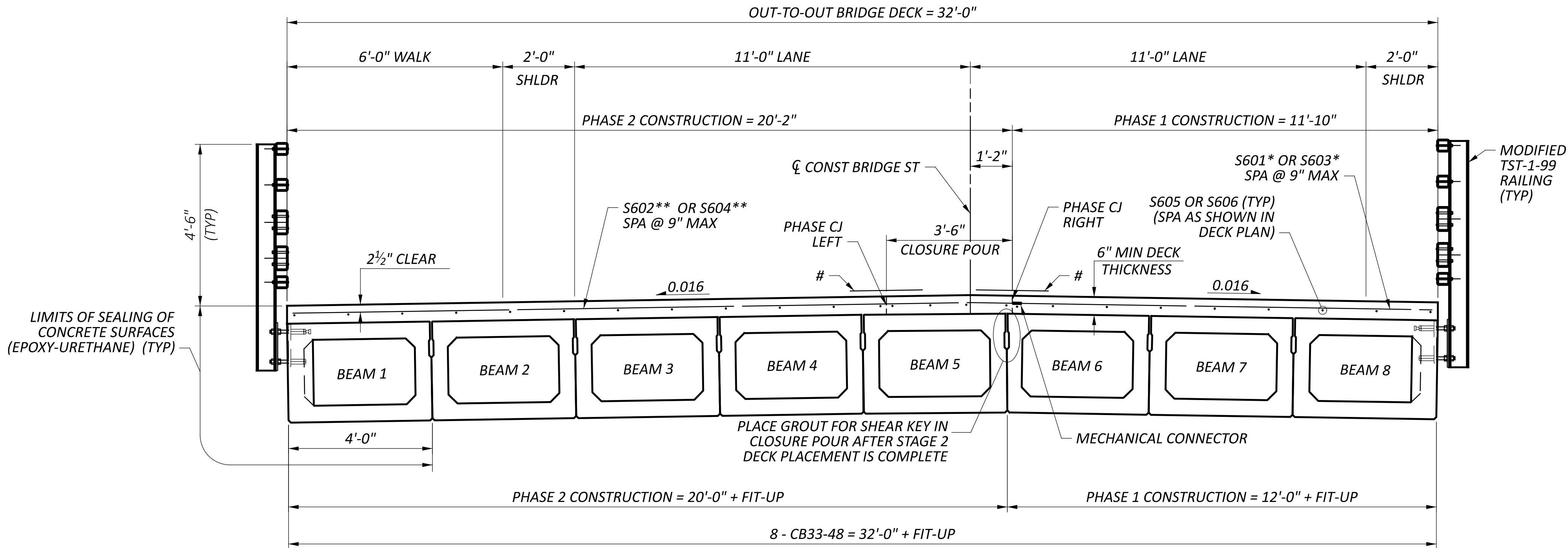
- ▲ - DEBOND STRAND FOR 4'-0" AT EACH END
- - DEBOND STRAND FOR 6'-6" AT EACH END
- - DEBOND STRAND FOR 9'-0" AT EACH END
- * - NON-DEBOND STRAND
- - #5 BAR FULL LENGTH
- - #5 BAR 8'-0" LONG AT EACH END



BEAM END SHEAR KEY DETAIL

NOTES:

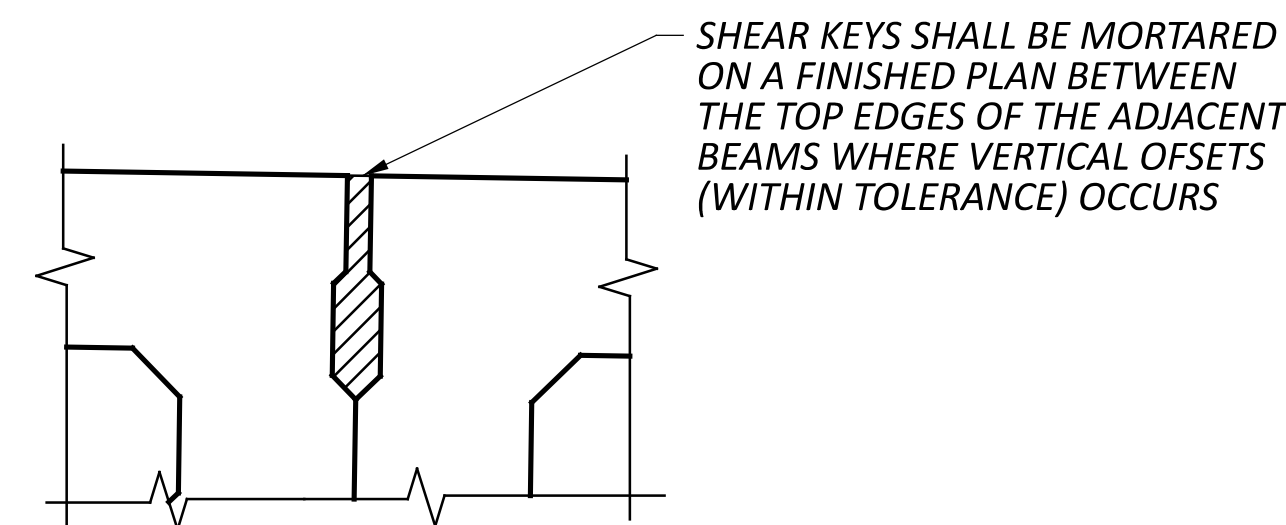
- SEE STANDARD DRAWING PSBD-2-07 FOR PRESTRESSED CONCRETE BOX BEAMS DETAILS.
- FOR TRANSVERSE SECTION AND DECK REINFORCEMENT DETAILS, SEE SHEET 14/19.
- EXTEND TOP AND BOTTOM BARS AN EMBEDMENT OF 10" INTO ABUTMENT DIAPHRAGM AND PROVIDE 180° HOOK. BARS TO BE EPOXY COATED.
- REINFORCING BARS PROJECTING FROM THE BEAM SHALL BE EPOXY COATED AND BE INCLUDED WITH ITEM 515, PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBER, FOR PAYMENT.
- BEAM EDGE SHEAR KEY DETAIL SHALL BE OMITTED ON BEAMS 1 AND 8 OUTSIDE FACE.
- NOTE TO FABRICATOR: THE DIMENSIONS MEASURED ALONG THE LENGTH OF THE BEAM, MARKED WITH A *, DO NOT CONTAIN AN ALLOWANCE FOR THE EFFECT OF THE LONGITUDINAL GRADE. INCLUDE THE PROPER ALLOWANCE FOR THESE DIMENSIONS IN THE SHOP DRAWINGS.



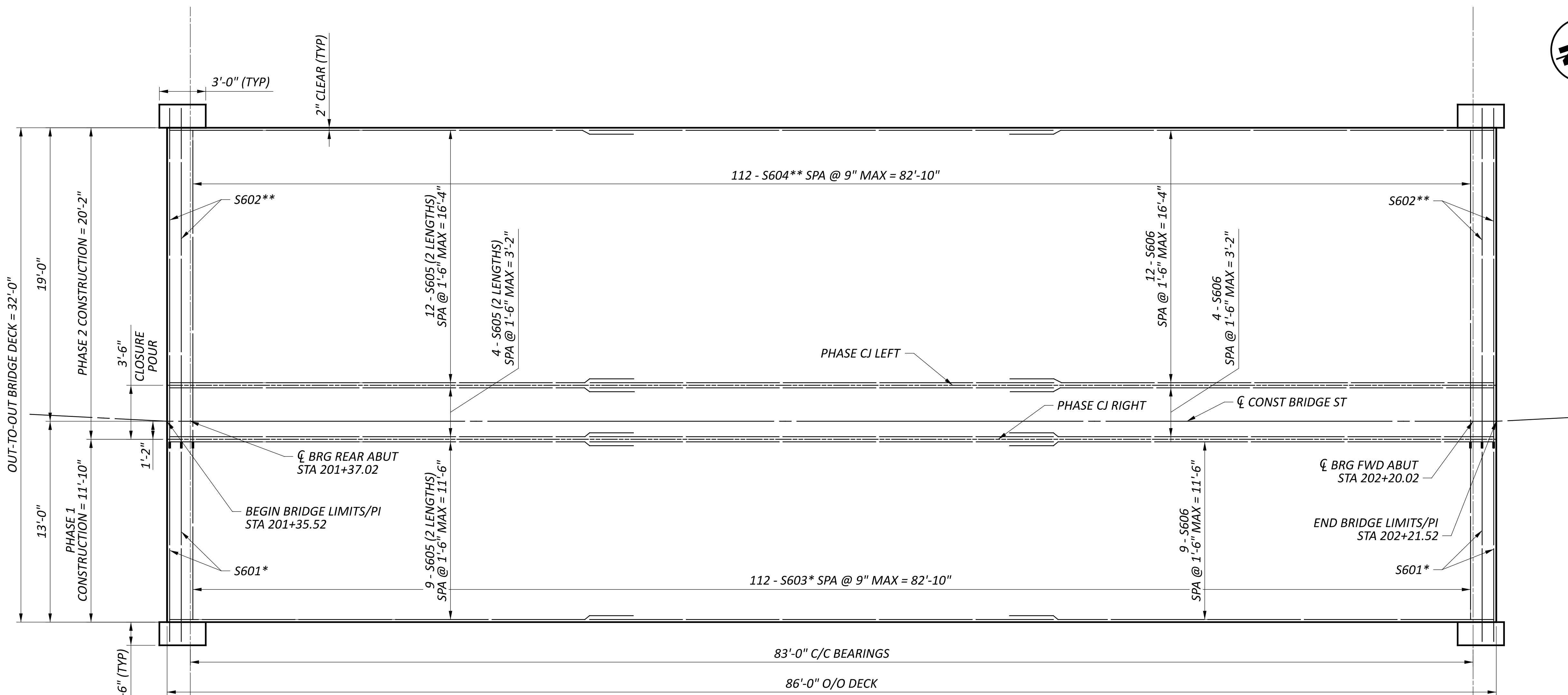
TRANSVERSE SECTION

NOTES

- SEE STANDARD DRAWING PSBD-2-07 FOR PRESTRESSED CONCRETE BOX BEAM DETAILS.
- SEE ABUTMENT DIAPHRAGM DETAIL ON SHEET 11/19.
- DECK SLAB THICKNESS FOR CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK CONCRETE IS MEASURED ACCORDING TO C&MS 511. IN ADDITION TO THE DESIGN SLAB THICKNESS, THE QUANTITY INCLUDES A VARIABLE HAUNCH THICKNESS THAT PROVIDES AN ALLOWANCE FOR BEAM CAMBER.
- MINIMUM LAP LENGTHS SHALL BE:
#6 BARS: 2'-10"



SHEAR KEY DETAIL



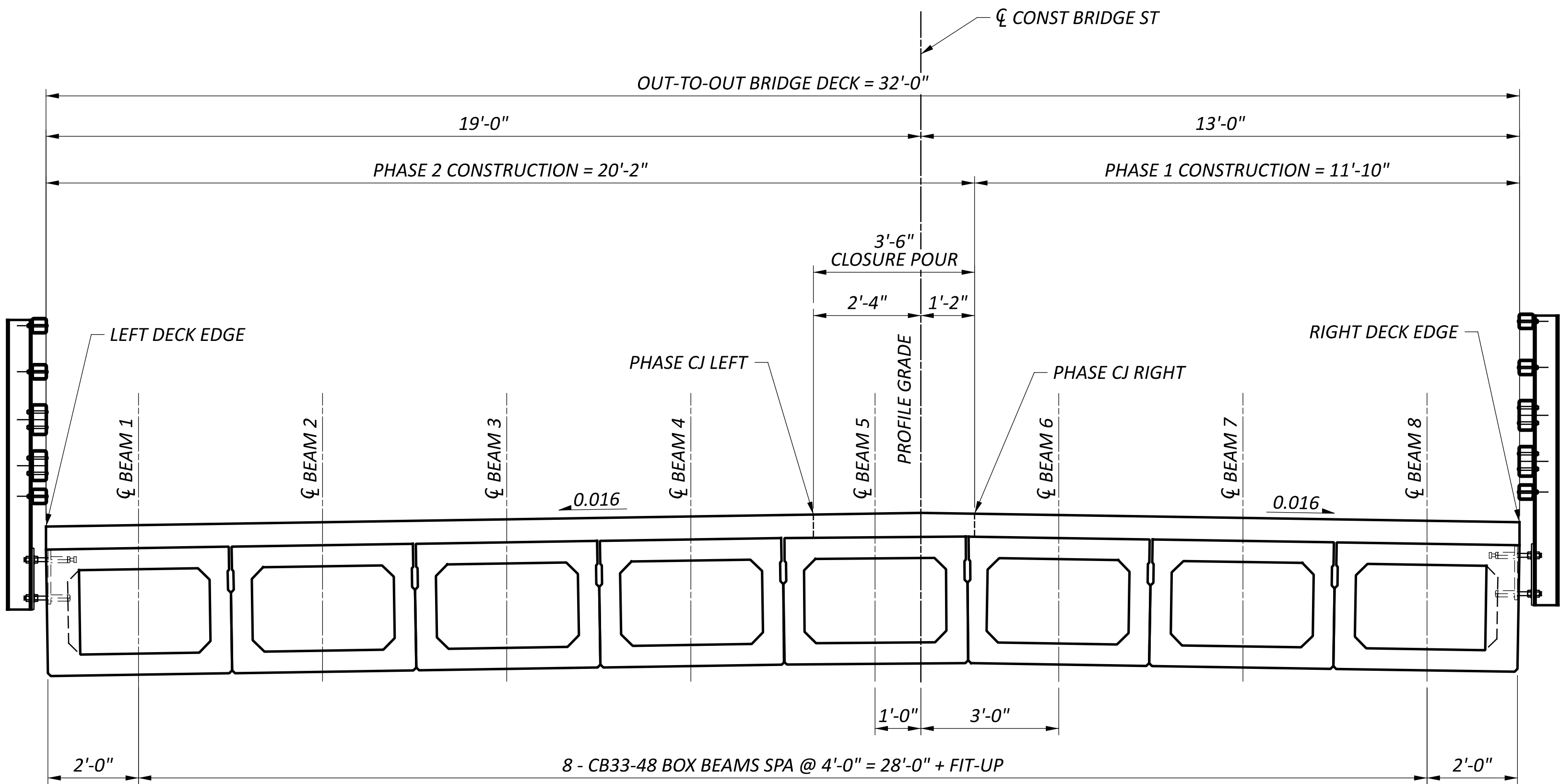
DECK REINFORCING PLAN

LEGEND

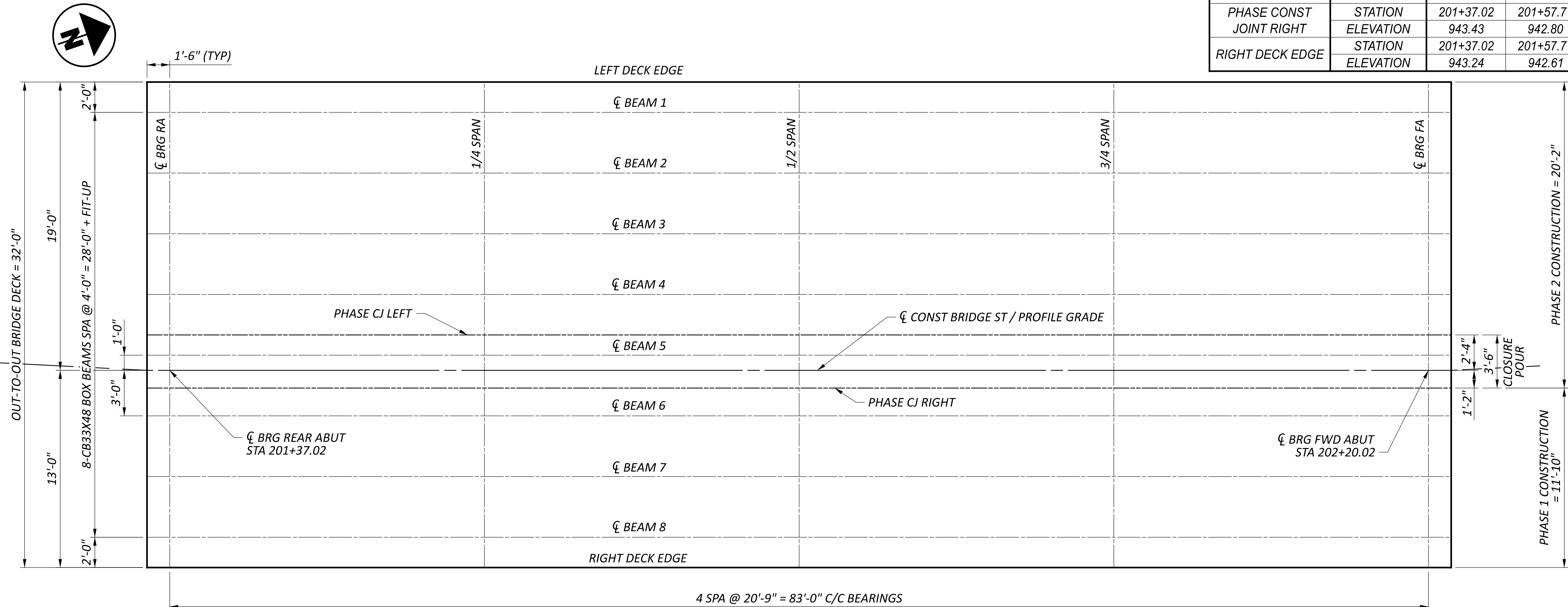
* - INCLUDES MECHANICAL CONNECTOR ON ONE END

** - PLUS EXTENSION FOR MECHANICAL CONNECTOR

- 2'-0" HMWM CENTERED ON PHASE CJ



SCREED LINES LOCATION



4 SPA @ 20'-9" = 83'-0" C/C BEARINGS

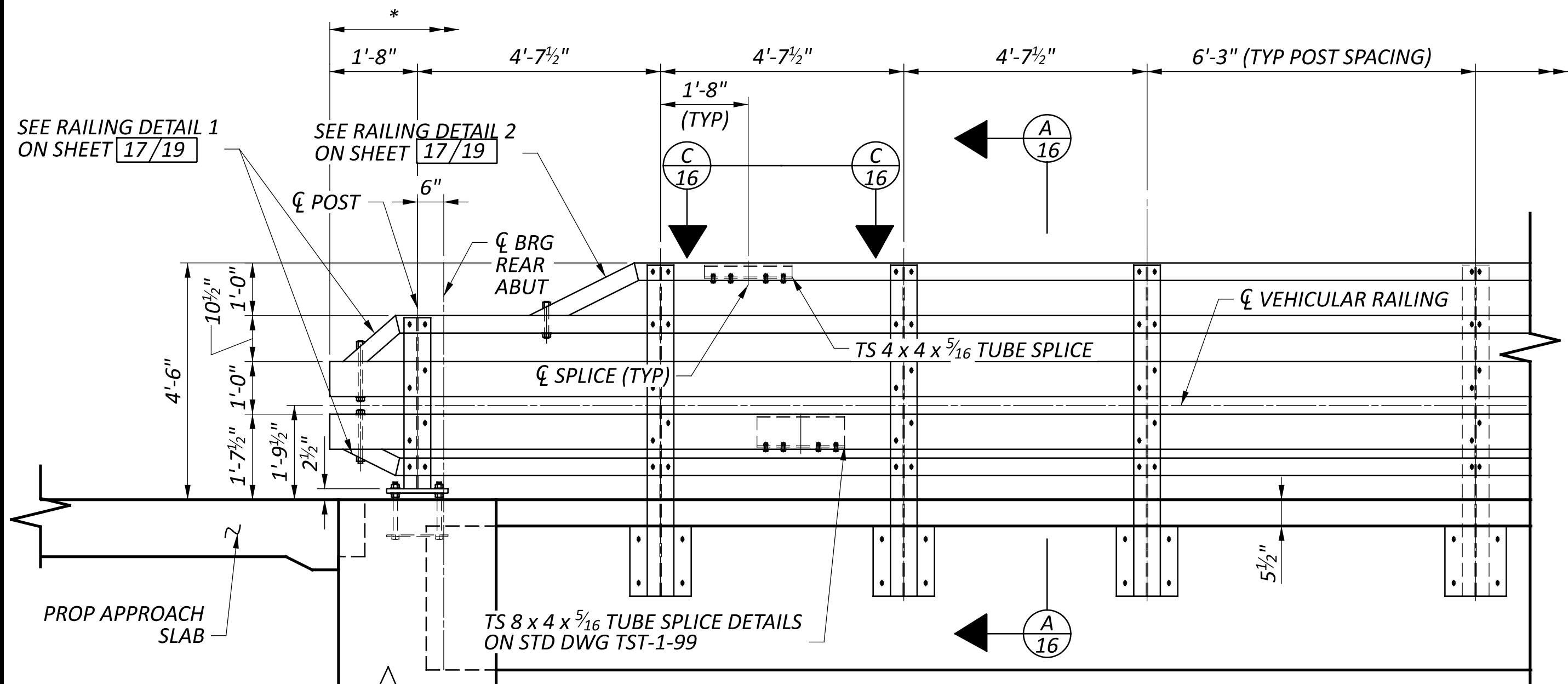
SCREED LINES LAYOUT

FINAL DECK SURFACE ELEVATIONS						
LOCATION	DESCRIPTION	CL BRG RA	1/4 SPAN	1/2 SPAN	3/4 SPAN	CL BRG FA
LEFT DECK EDGE	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.14	942.47	941.79	941.11	940.43
CL BEAM 1	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.18	942.50	941.82	941.14	940.46
CL BEAM 2	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.24	942.56	941.88	941.20	940.53
CL BEAM 3	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.30	942.63	941.95	941.27	940.59
CL BEAM 4	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.37	942.69	942.01	941.33	940.65
PHASE CONST JOINT LEFT	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.41	942.73	942.05	941.37	940.70
CL BEAM 5	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.43	942.75	942.07	941.40	940.72
PROFILE GRADE	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.45	942.77	942.09	941.41	940.73
PHASE CONST JOINT RIGHT	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.43	942.75	942.07	941.39	940.71
CL BEAM 6	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.40	942.72	942.04	941.36	940.69
CL BEAM 7	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.34	942.66	941.98	941.30	940.62
CL BEAM 8	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.27	942.59	941.91	941.24	940.56
RIGHT DECK EDGE	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.24	942.56	941.88	941.20	940.53

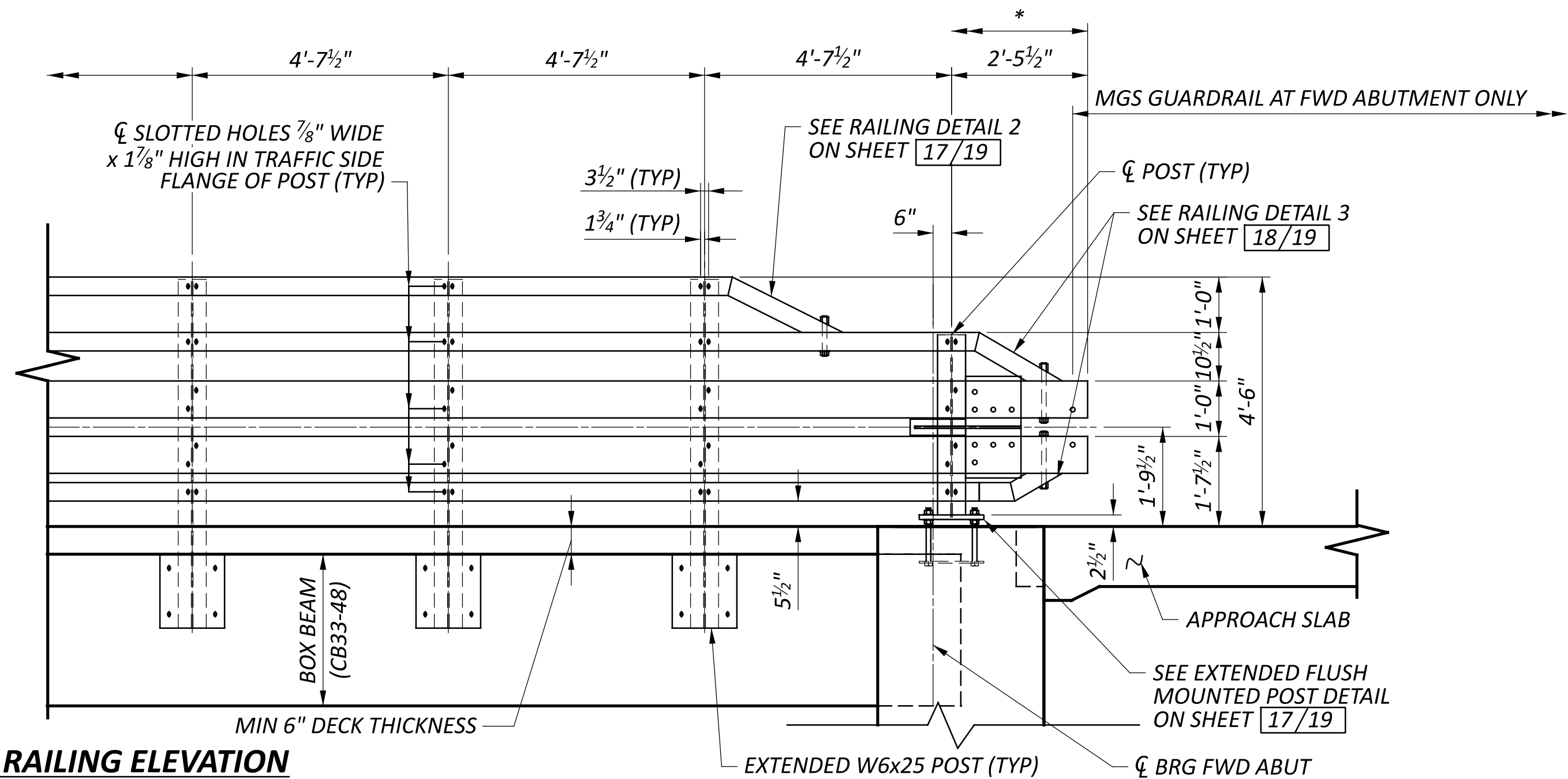
SCREED ELEVATIONS						
LOCATION	DESCRIPTION	CL BRG RA	1/4 SPAN	1/2 SPAN	3/4 SPAN	CL BRG FA
LEFT DECK EDGE	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.14	942.51	941.85	941.15	940.43
PHASE CONST JOINT LEFT	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.41	942.78	942.12	941.42	940.70
PROFILE GRADE	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.45	942.81	942.16	941.46	940.73
PHASE CONST JOINT RIGHT	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.43	942.80	942.14	941.44	940.71
RIGHT DECK EDGE	STATION	201+37.02	201+57.77	201+78.52	201+99.27	202+20.02
	ELEVATION	943.24	942.61	941.95	941.25	940.53

NOTES

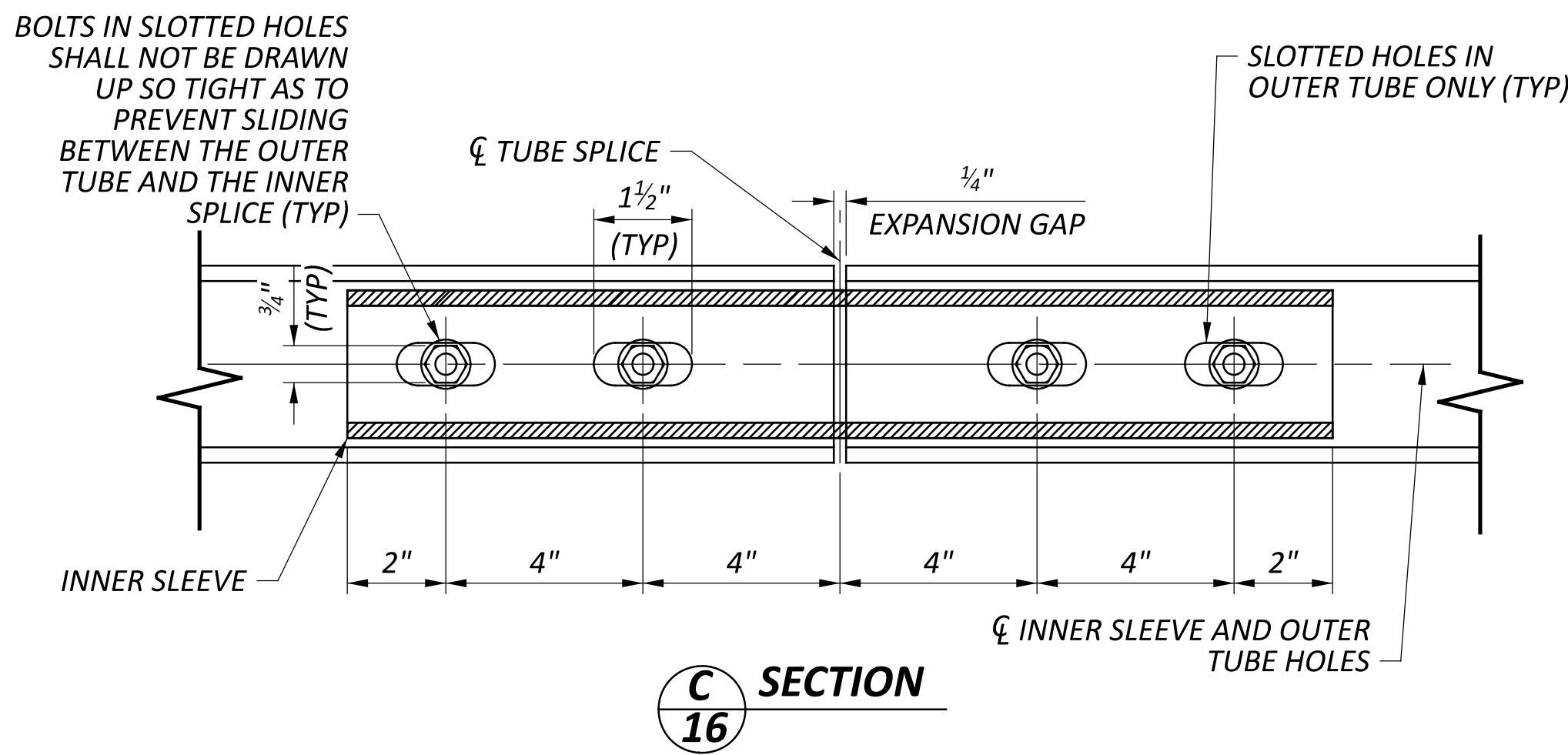
- SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LAODS.
- FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.



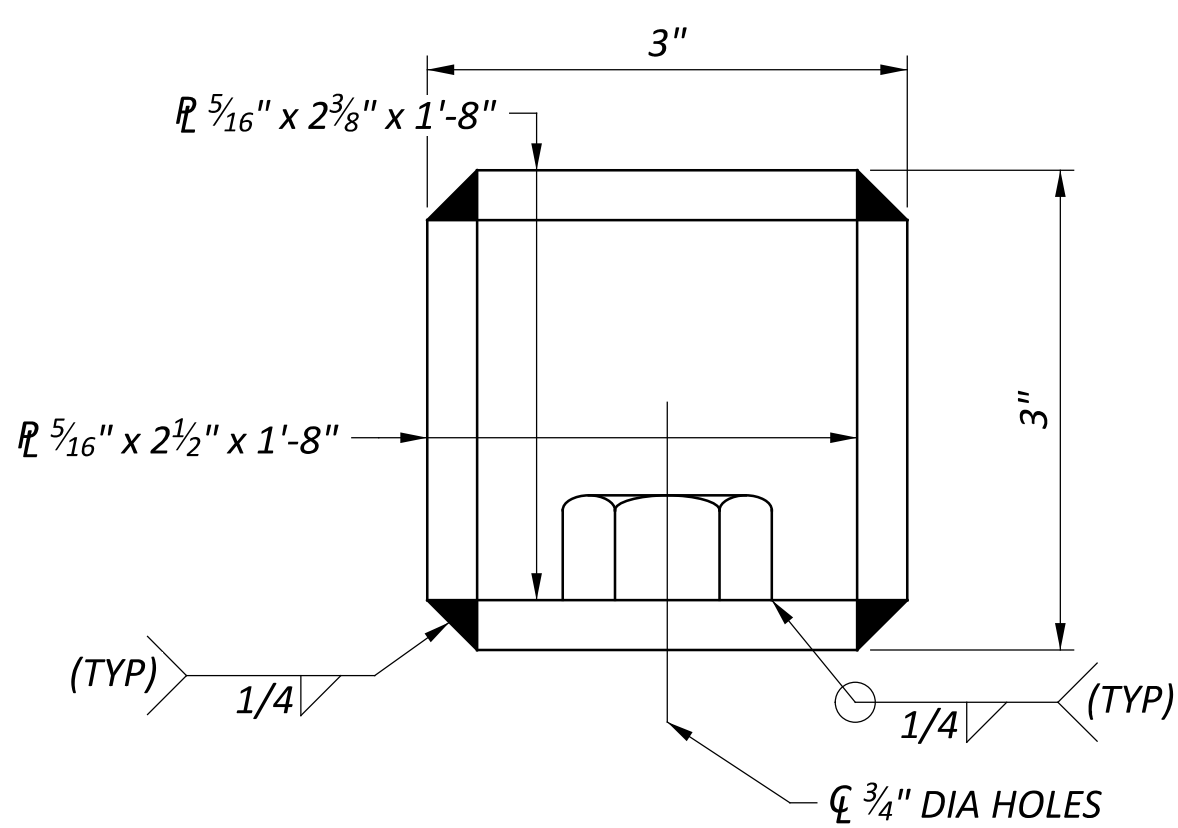
WEST SIDE FIVE-TUBE STEEL RAILING ELEVATION
(MGS GUARDRAIL NOT SHOWN FOR CLARITY)



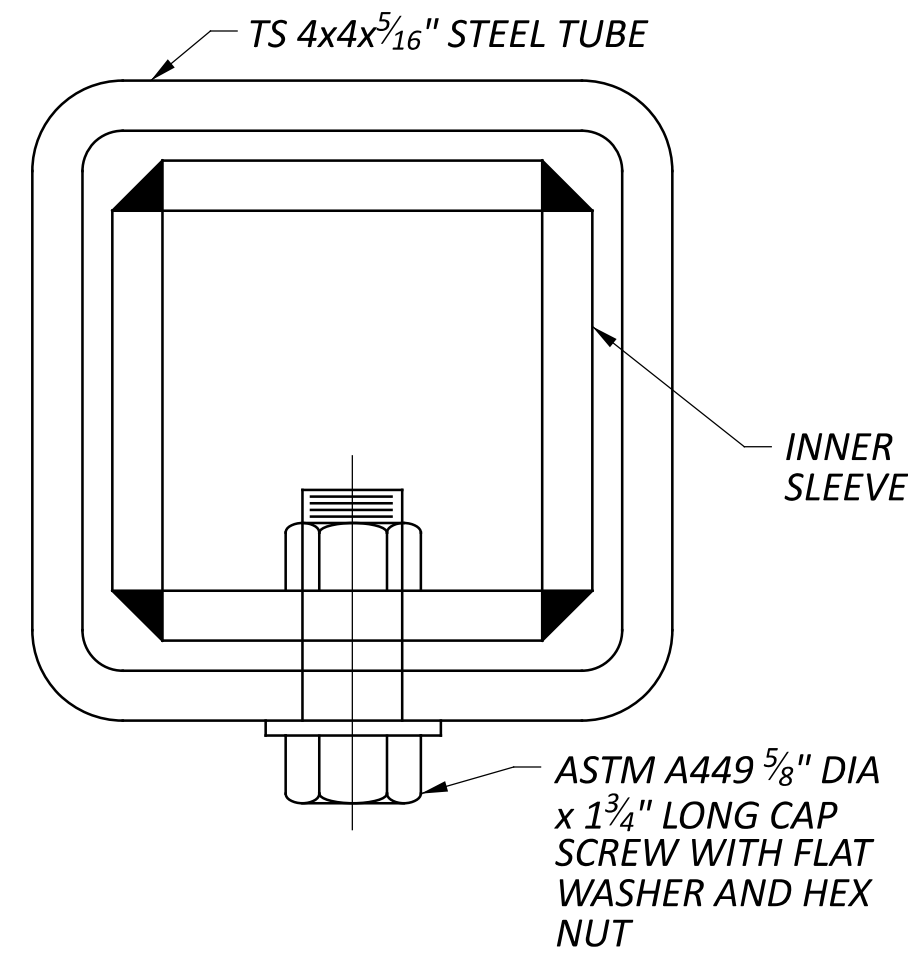
EAST SIDE FIVE-TUBE STEEL RAILING ELEVATION
(MGS GUARDRAIL NOT SHOWN FOR CLARITY)



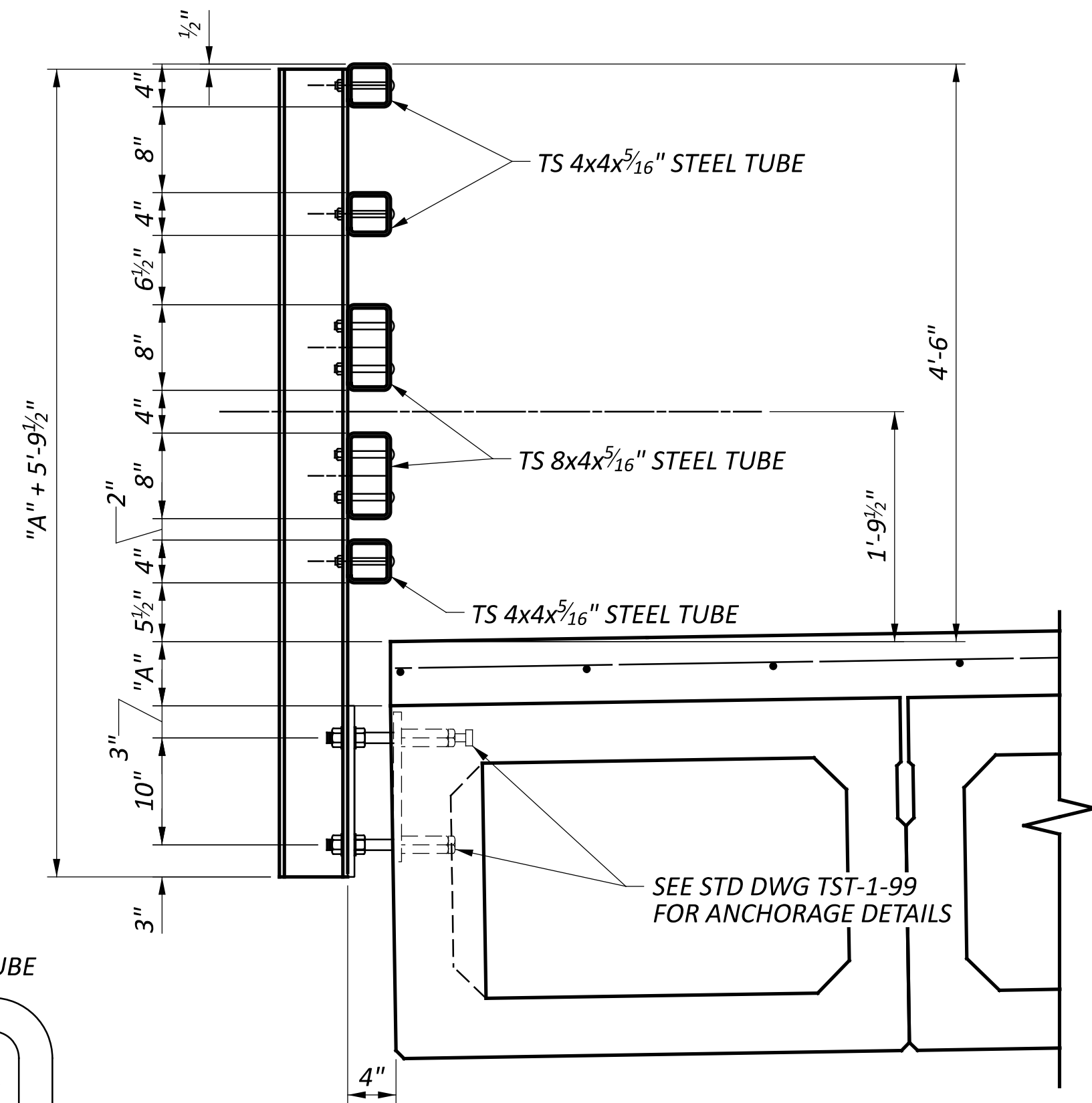
C SECTION
16



FINISHED DIMENSIONS OF INNER SLEEVE



SECTION THROUGH SPLICE



A SECTION
16

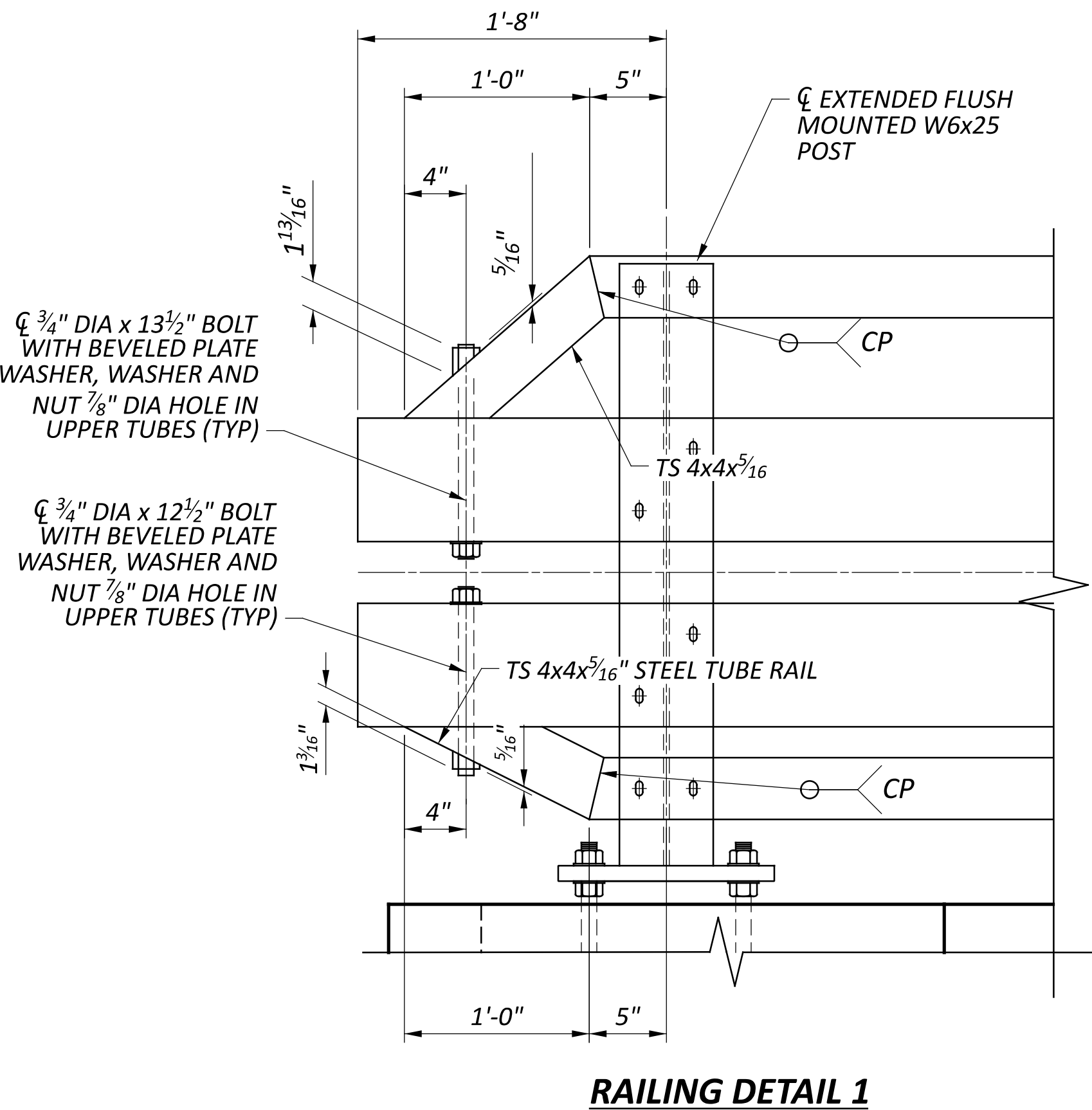
LEGEND:

"A" - DECK THICKNESS, THIS DIMENSION VARIES ACROSS THE LENGTH OF THE BRIDGE. SEE SHEET

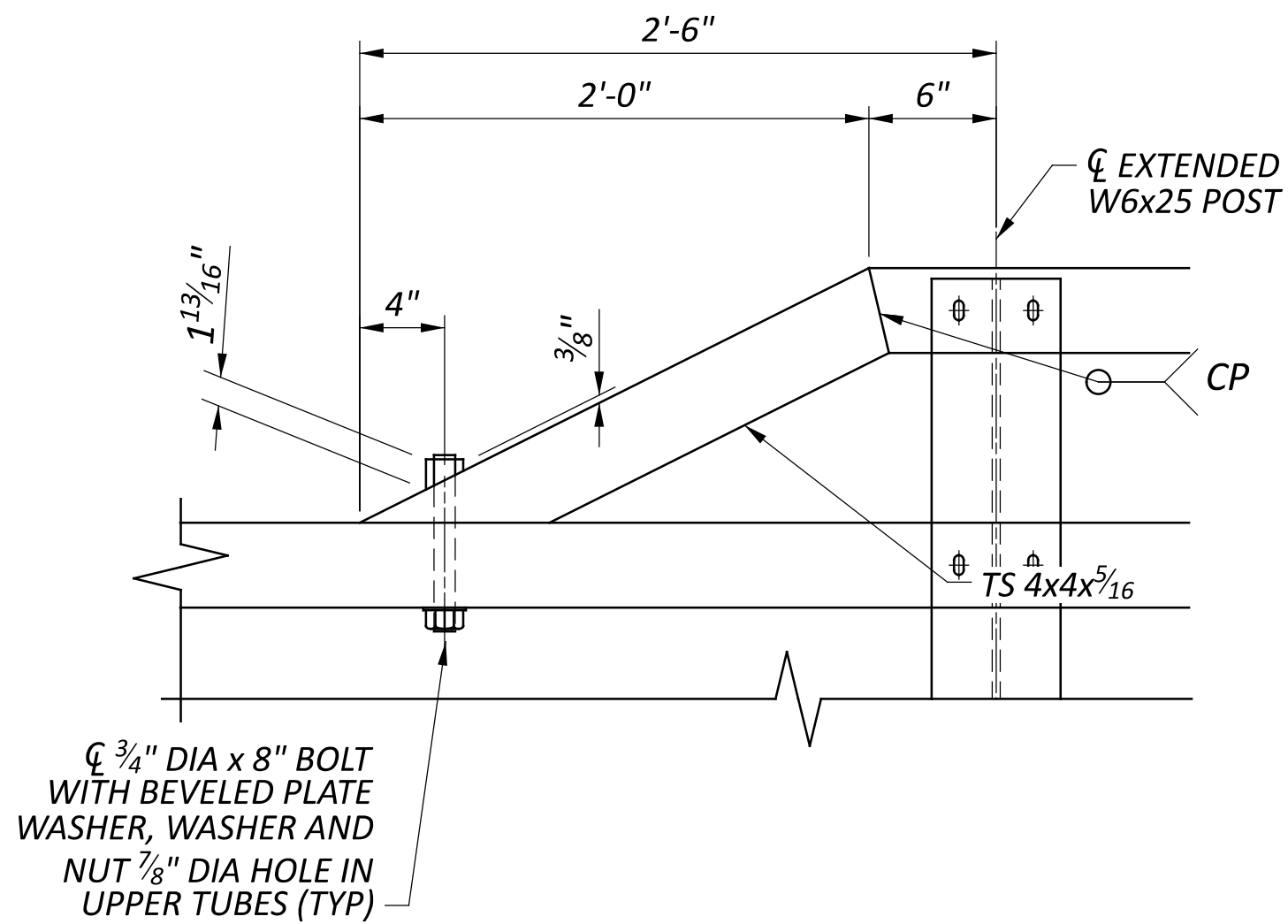
* - PAYMENT LIMITS OF BRIDGE RAILING

NOTES:

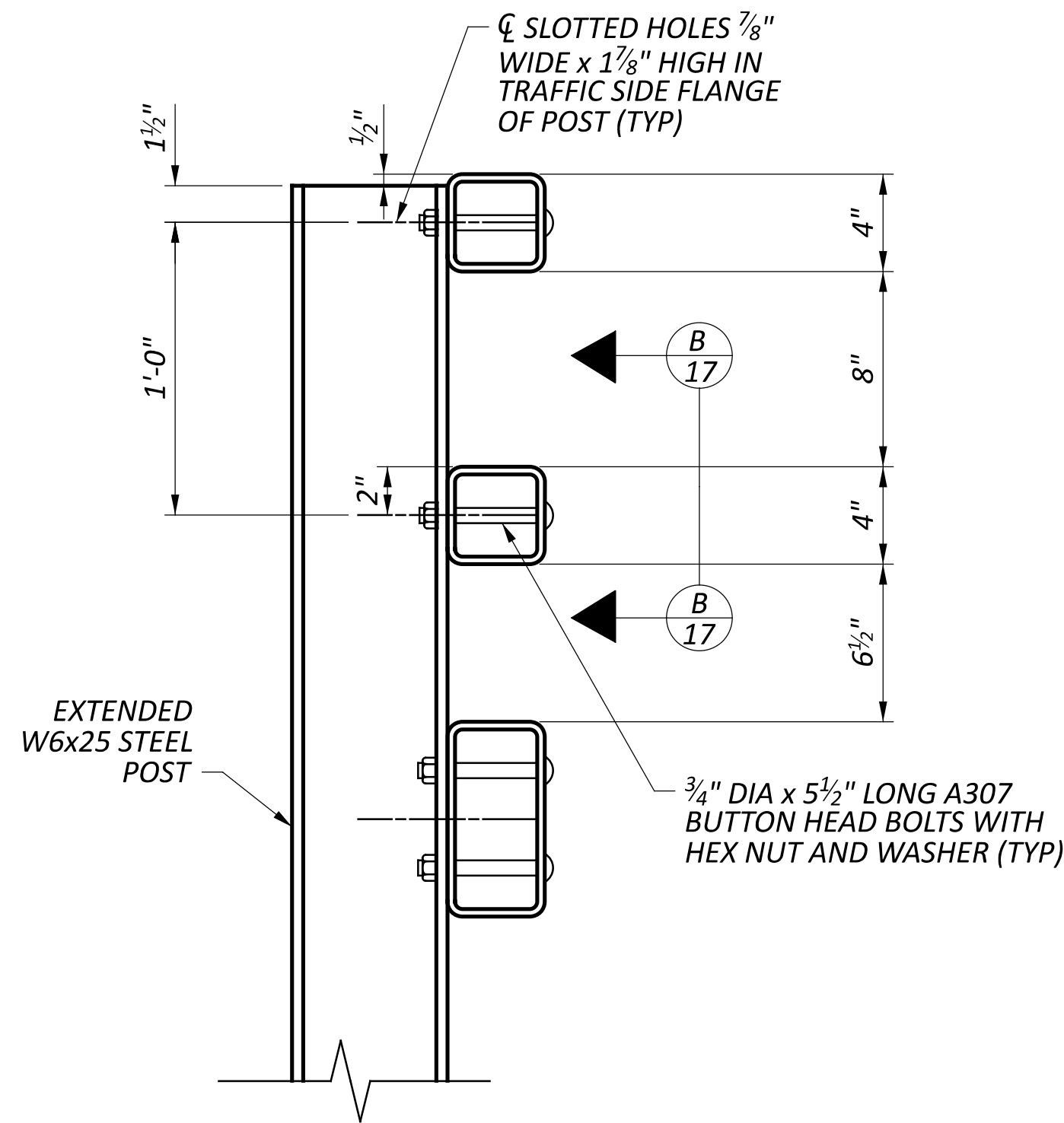
- FOR RAILING SPLICE DETAILS AND NOTES NOT SHOWN, SEE STD DWG TST-1-99.
- FOR MGS BRIDGE TERMINAL ASSEMBLY DETAILS, SEE STD DWG MGS-3.1.



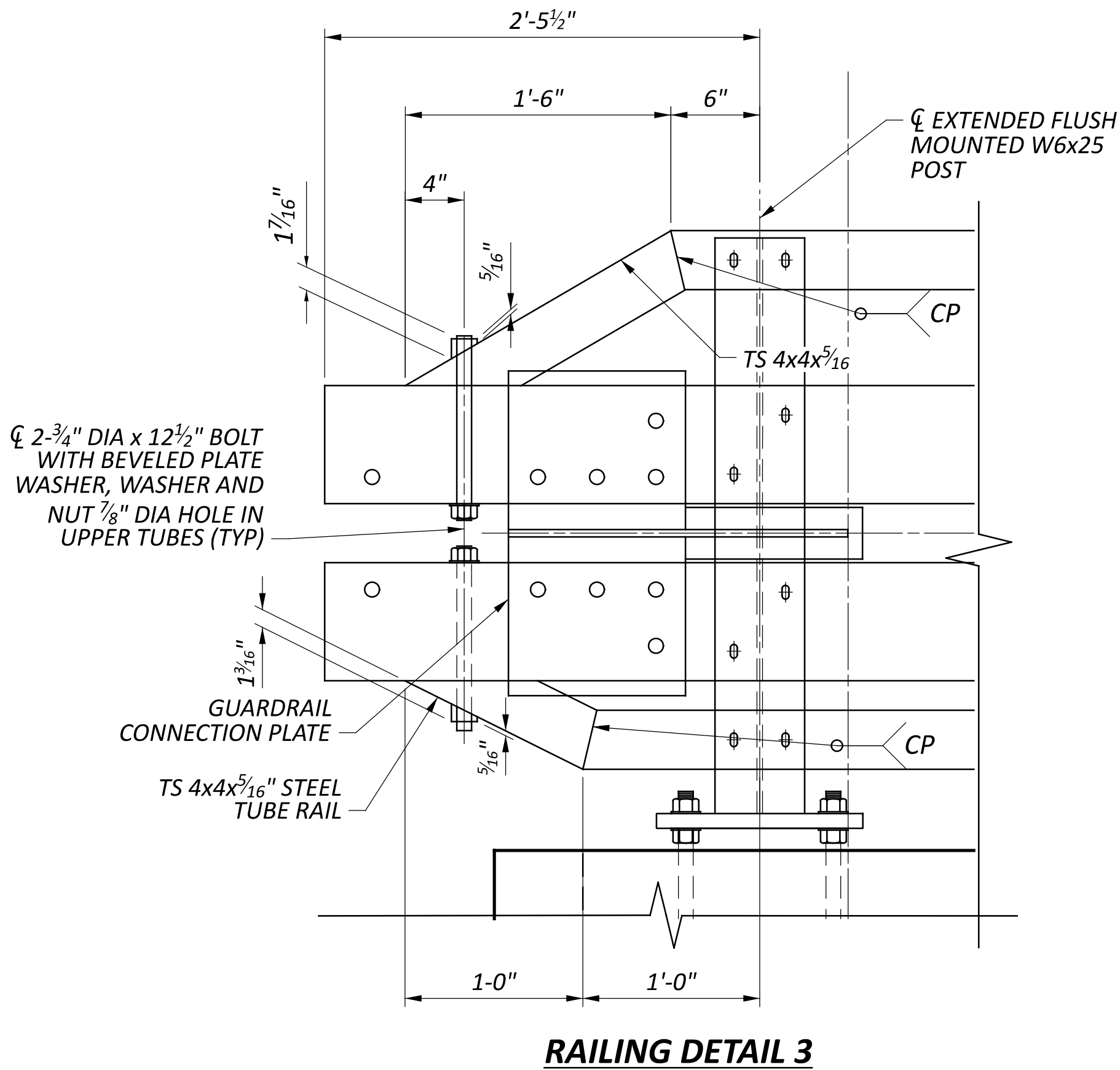
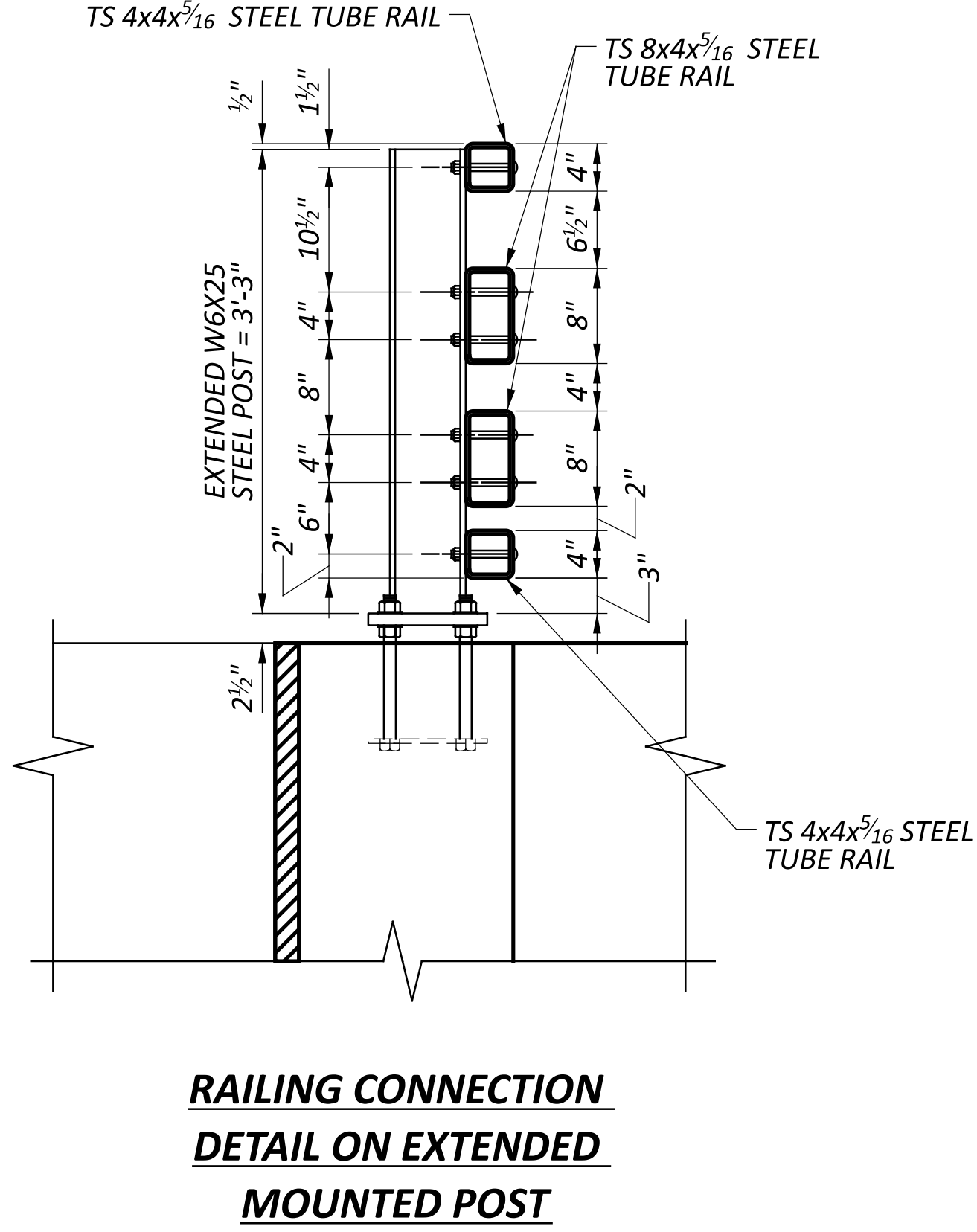
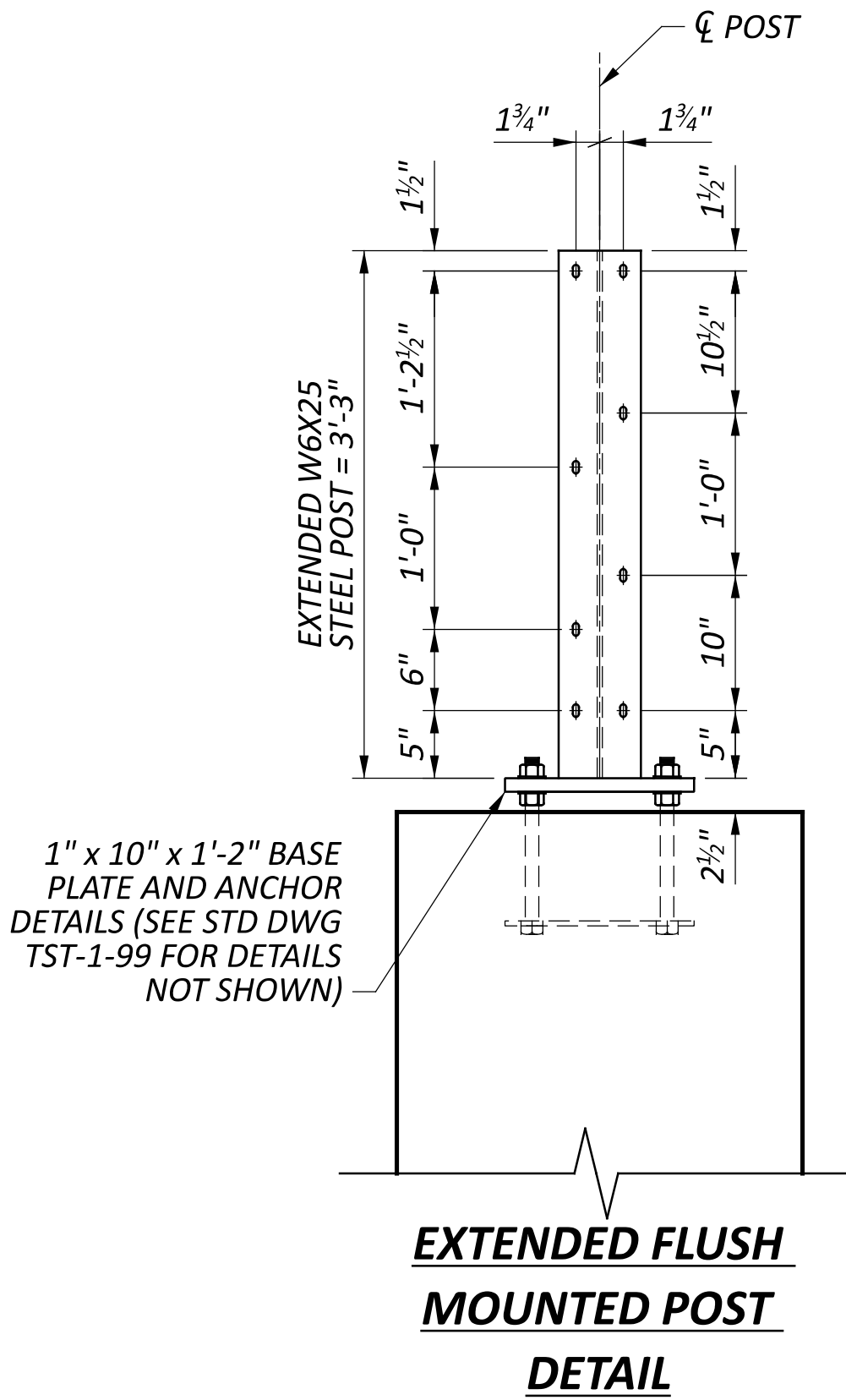
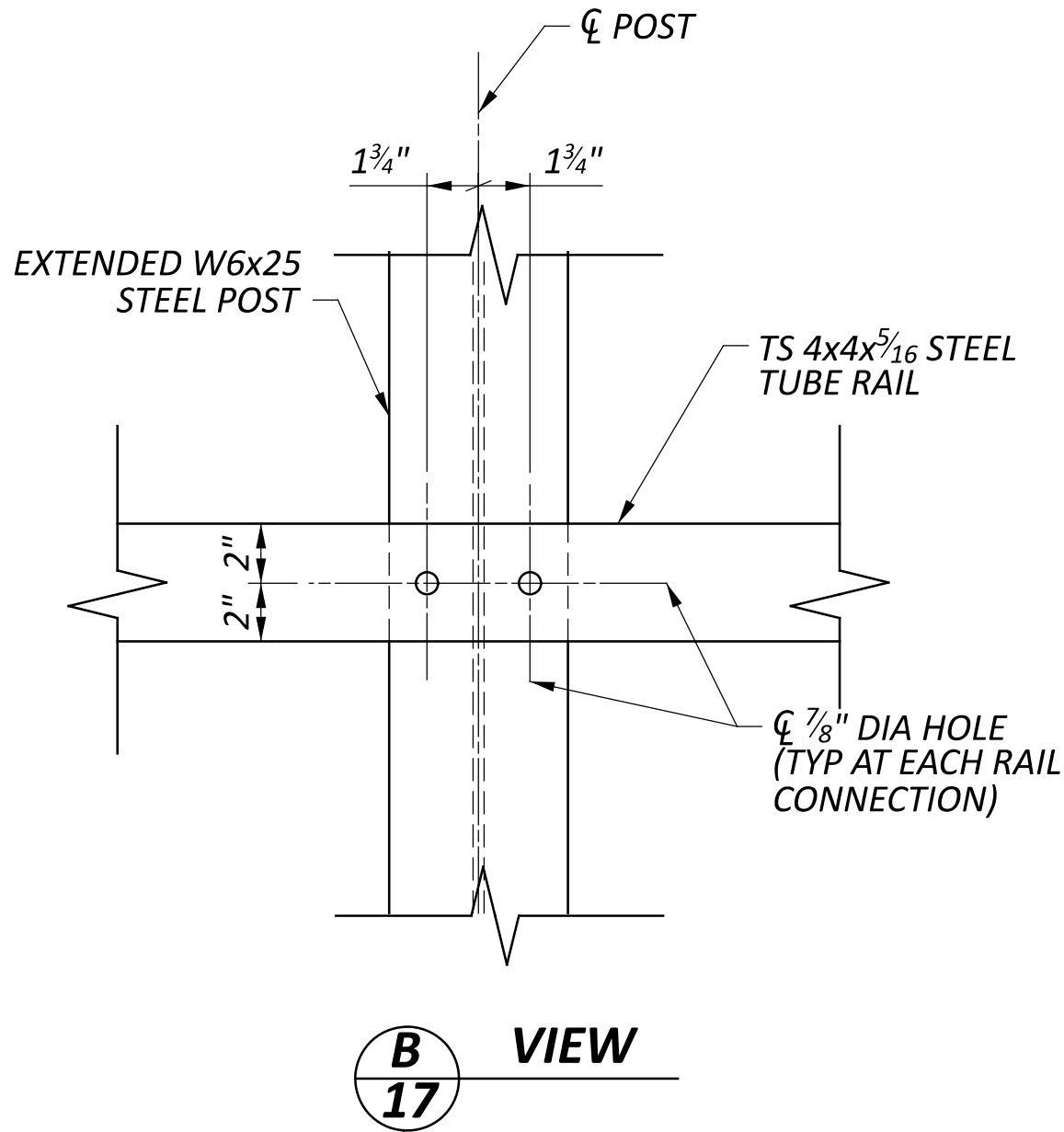
RAILING DETAIL 1



RAILING DETAIL 2

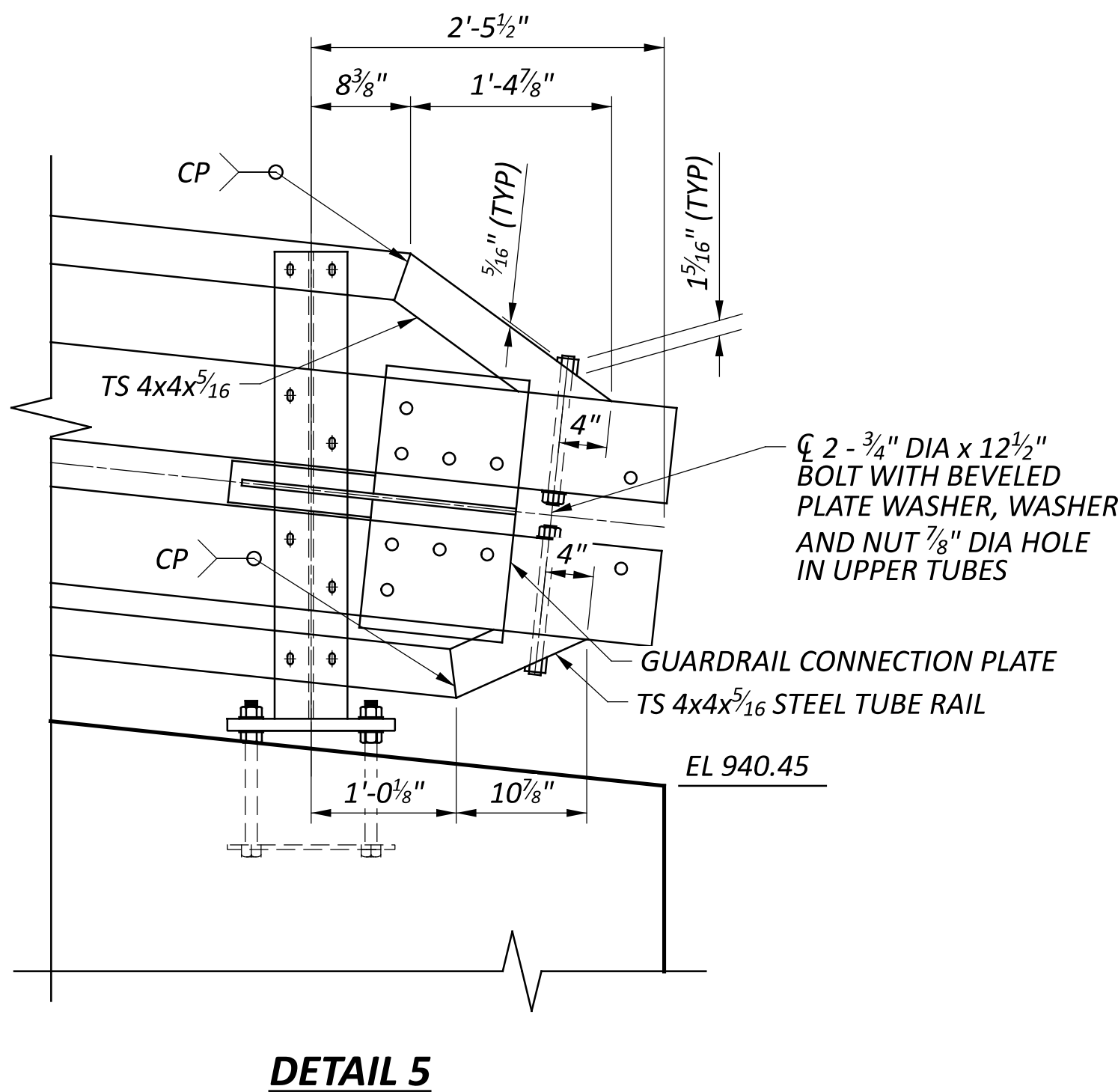
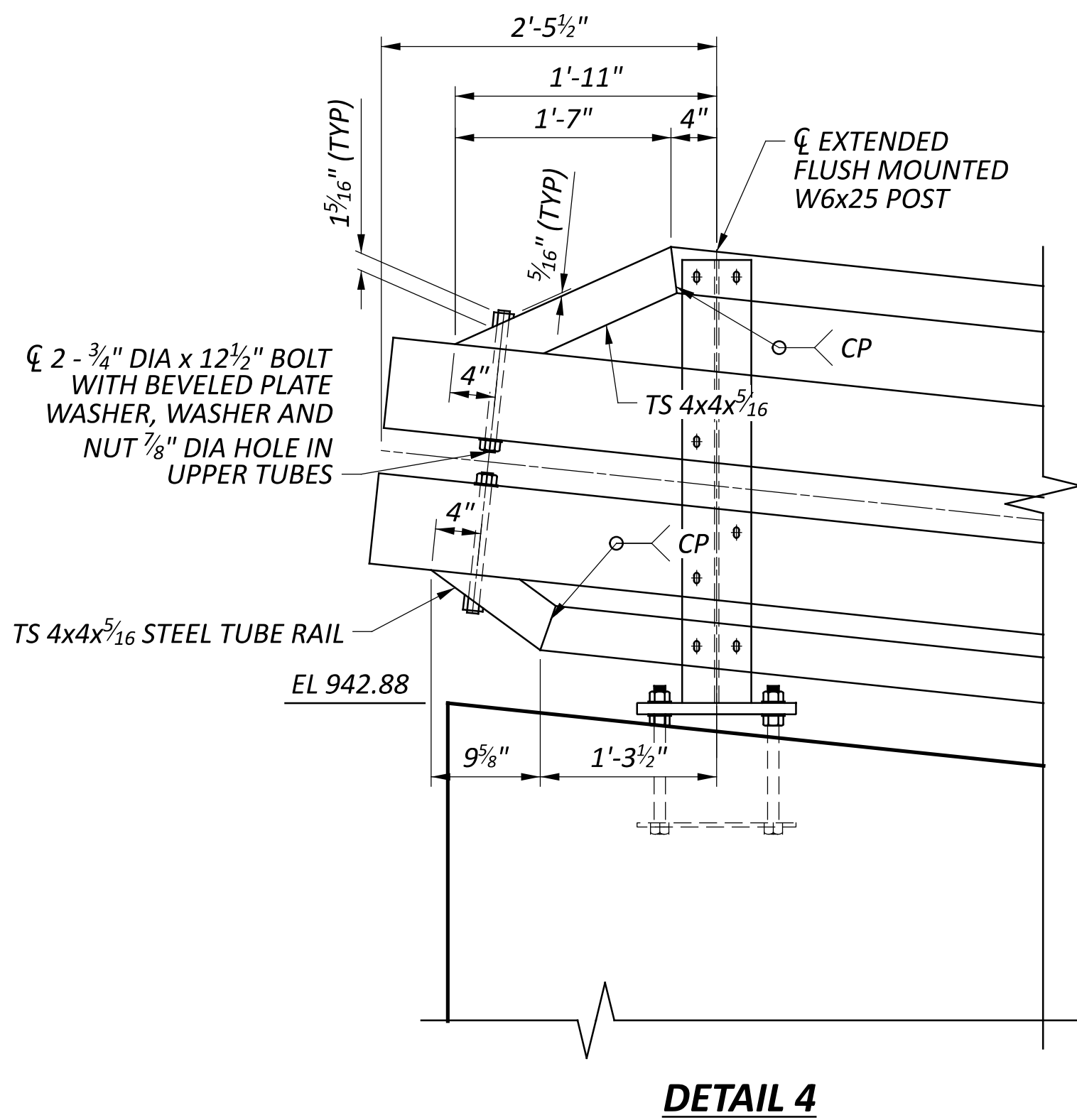
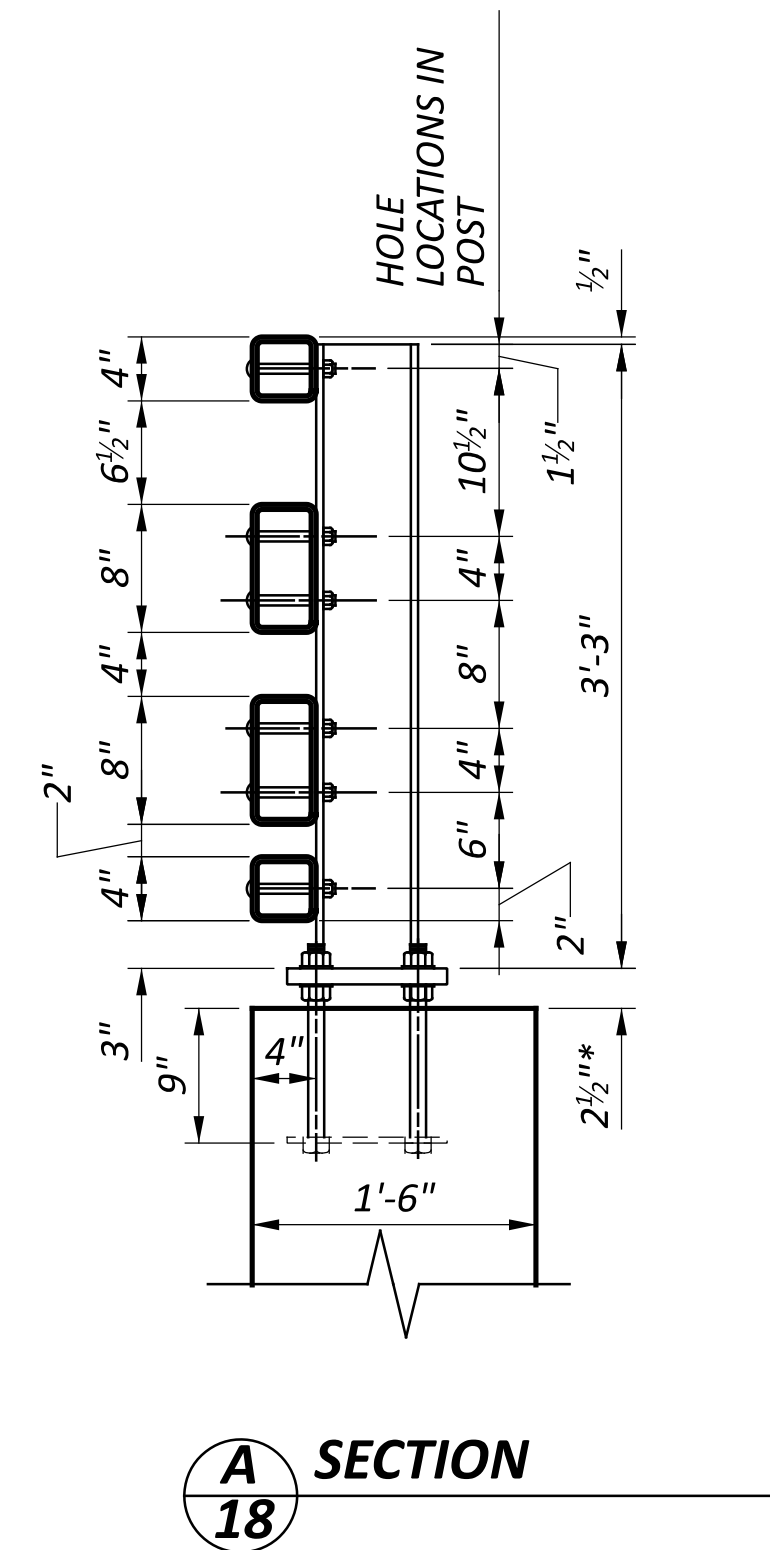
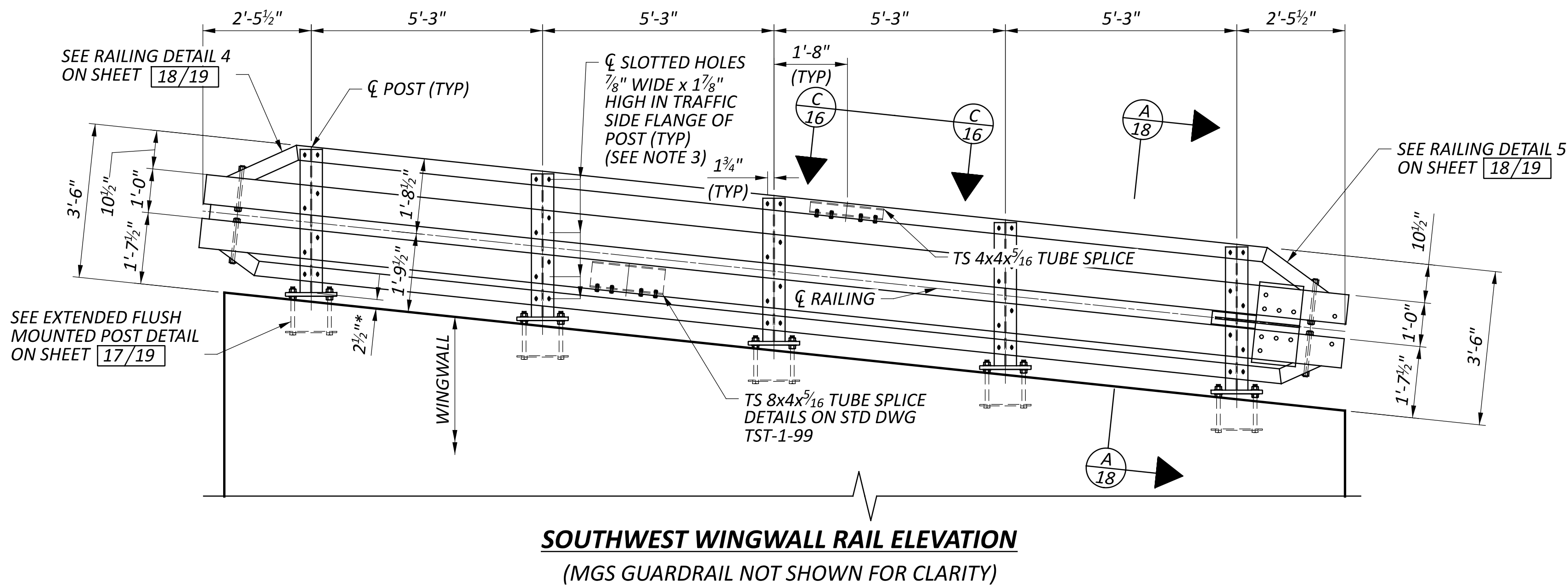
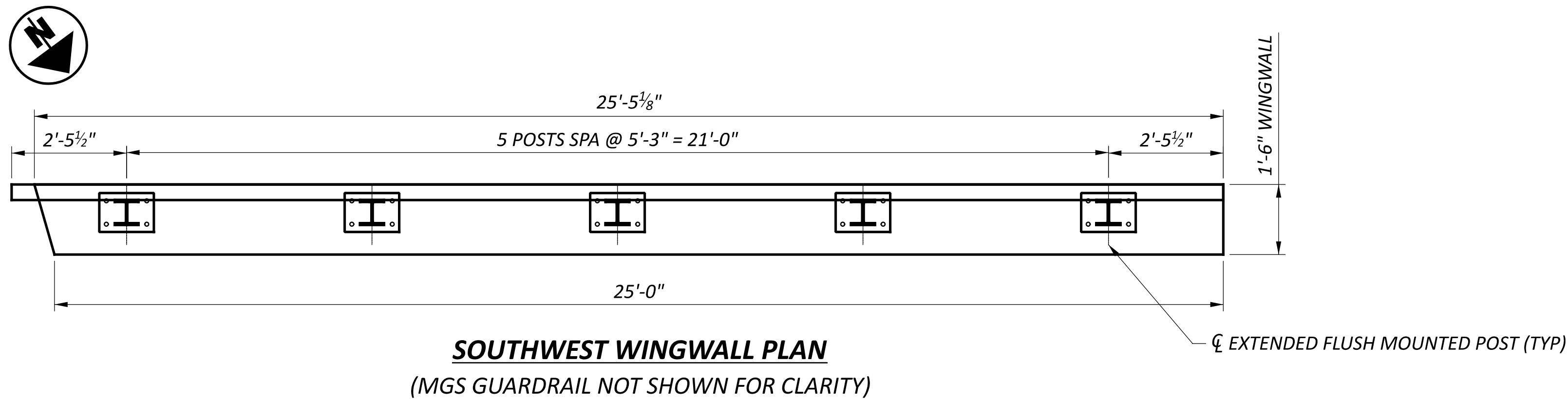


TS 4x4x5/16 RAILING CONNECTION DETAIL
(BOTTOM TS 4x4x5/16 CONNECTION SIMILAR)



NOTES:

1. FOR RAILING SPLICE DETAILS AND NOTES NOT SHOWN, SEE STD DWG TST-1-99.
2. FOR MGS BRIDGE TERMINAL ASSEMBLY DETAILS, SEE STD DWG MGS-3.1.

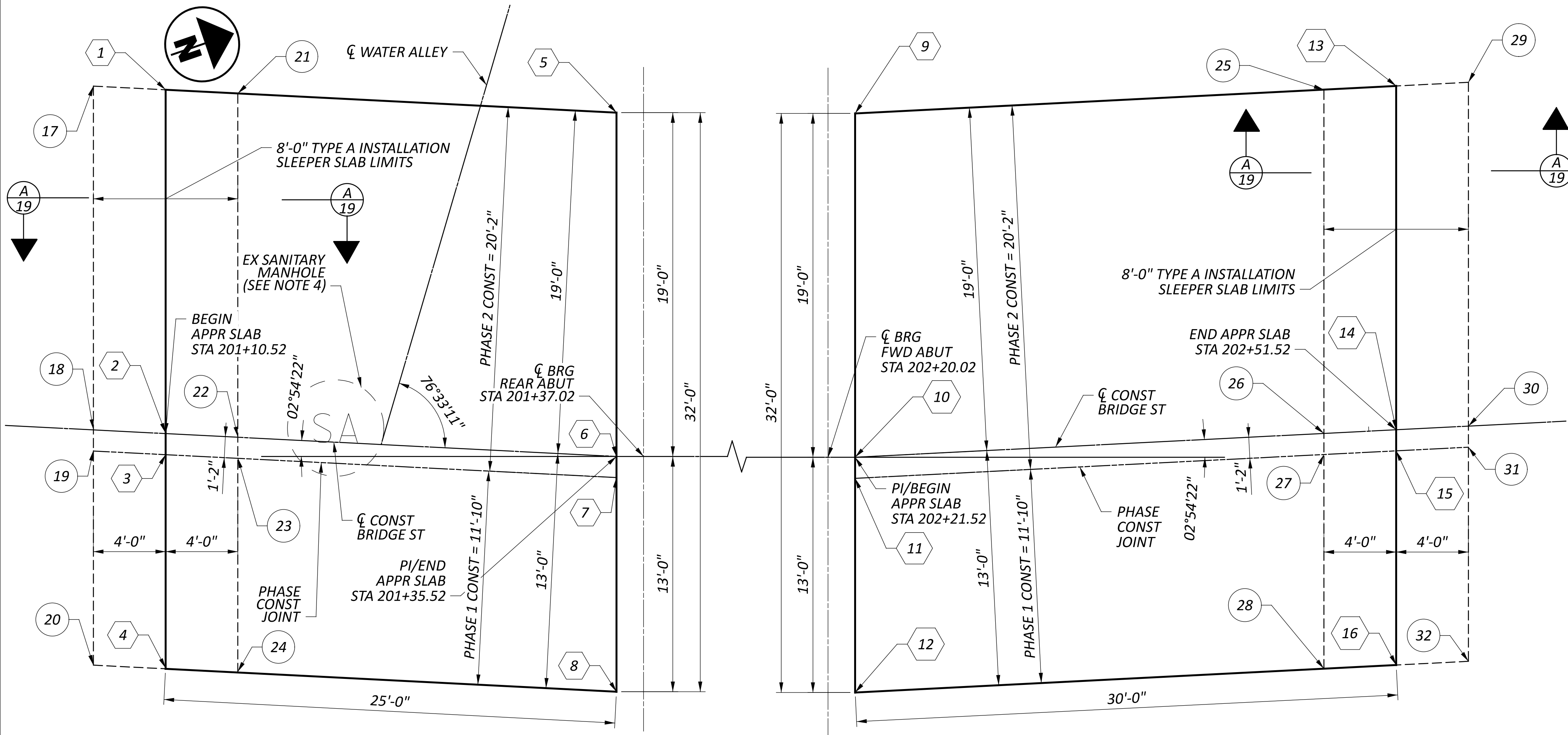


LEGEND:

* - MEASURED AT CL POST

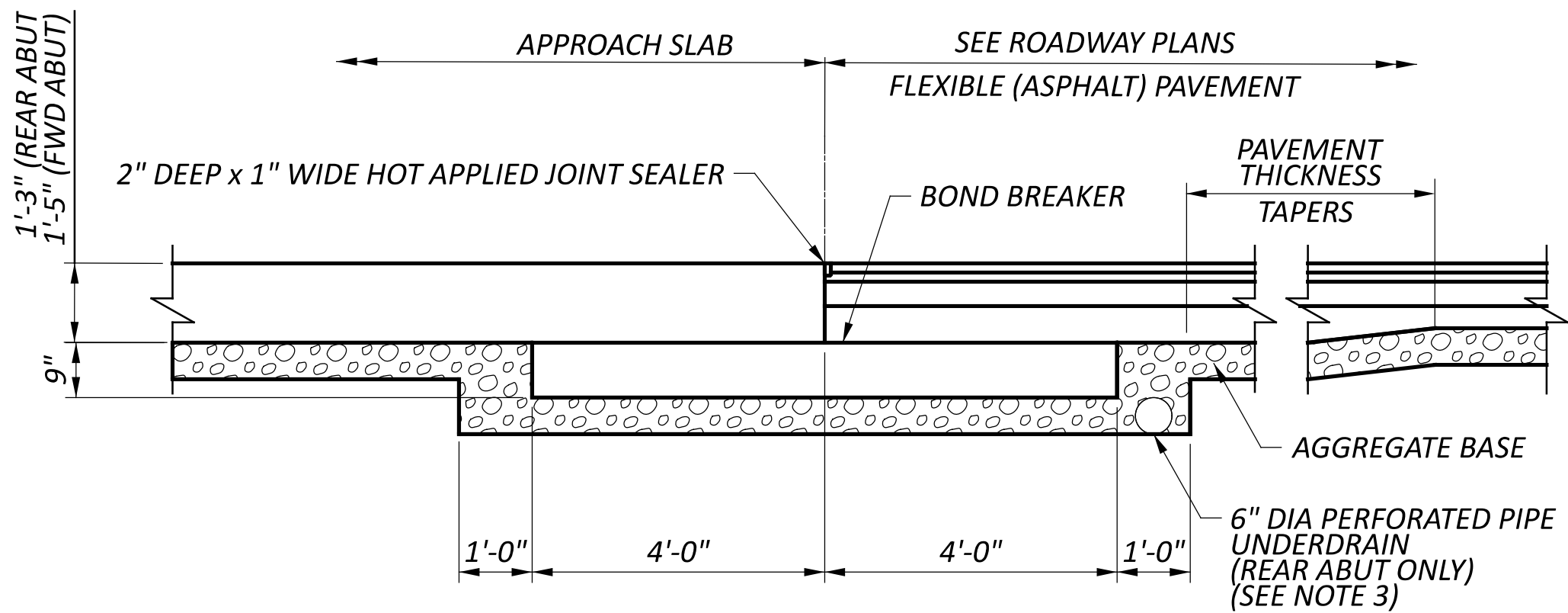
NOTES:

- FOR RAILING SPLICE DETAILS AND NOTES NOT SHOWN, SEE STD DWG TST-1-99.
- FOR MGS BRIDGE TERMINAL ASSEMBLY DETAILS, SEE STD DWG MGS-3.1.
- HOLE PLACEMENT IN THE HORIZONTAL RAIL MEMBERS SHALL TAKE INTO ACCOUNT THE SLOPE OF THE TOP OF THE WINGWALL.



REAR APPROACH SLAB

FORWARD APPROACH SLAB



A-19 SECTION
(REINFORCEMENT NOT SHOWN FOR CLARITY)

NOTES:

- SEE STANDARD DRAWING AS-1-15 FOR ADDITIONAL REINFORCED APPROACH SLAB NOTES AND DETAILS.
- SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL APPROACH SLAB INSTALLATION NOTES AND DETAILS.
- SEE STANDARD DRAWING AS-2-15 FOR PERFORATED PIPE DETAILS. THE PERFORATED PIPE IS REQUIRED AT THE REAR APPROACH SLAB AND SHALL DRAIN TO THE EAST SIDE OF THE APPROACH SLAB.
- PLACE 1" PEJF AROUND MANHOLE. TRIM REINFORCING 2" CLEAR OF MANHOLE OPENING. INCLUDE 1" PEJF FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T = 15"), AS PER PLAN.

LEGEND:

- X APPROACH SLAB SURFACE ELEVATION, LOCATION NUMBER "X"
- X SLEEPER SLAB SURFACE ELEVATION, LOCATION NUMBER "X"

TOP OF APPROACH SLAB ELEVATIONS				
APPR SLAB	MARK	STATION	OFFSET	ELEVATION
REAR	1	201+09.56	-19.00	944.04
	2	201+10.52	0.00	944.31
	3	201+10.58	1.17	944.29
	4	201+11.18	13.00	944.08
	5	201+35.52	-19.00	943.19
	6	201+35.52	0.00	943.50
	7	201+35.52	1.17	943.48
	8	201+35.52	13.00	943.29
FORWARD	9	202+21.52	-19.00	940.38
	10	202+21.52	0.00	940.68
	11	202+21.52	1.17	940.67
	12	202+21.52	13.00	940.48
	13	202+52.49	-19.00	939.36
	14	202+51.52	0.00	939.70
	15	202+51.46	1.17	939.69
	16	202+50.86	13.00	939.52

TOP OF SLEEPER SLAB ELEVATIONS				
APPR SLAB	MARK	STATION	OFFSET	ELEVATION
REAR	17	201+05.55	-19.00	942.92
	18	201+06.52	0.00	943.19
	19	201+06.58	1.17	943.17
	20	201+07.18	13.00	942.97
	21	201+13.55	-19.00	942.66
	22	201+14.52	0.00	942.93
	23	201+14.58	1.17	942.91
	24	201+15.18	13.00	942.70
FORWARD	25	202+48.49	-19.00	938.08
	26	202+47.52	0.00	938.42
	27	202+47.46	1.17	938.40
	28	202+46.86	13.00	938.23
	29	202+56.49	-19.00	937.78
	30	202+55.52	0.00	938.12
	31	202+55.46	1.17	938.11
	32	202+54.86	13.00	937.94

PROJECT DESCRIPTION

REPLACEMENT OF EXISTING SINGLE SPAN NON-COMPOSITE PRESTRESSED CONCRETE BOX BEAMS BRIDGE WITH NEW SINGLE SPAN PRECAST CONCRETE BOX BEAM BRIDGE, NEW APPROACH SLABS, NEW BRIDGE RAIL AND GUARDRAIL, MINOR RESURFACING OF BRIDGE STREET OVER CONOTTON CREEK.

HISTORIC RECORDS

NO HISTORIC RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY

BASED ON THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) QUATERNARY GEOLOGY MAP OF OHIO, THE PROJECT SITE IS MAPPED WITHIN THE MUSKINGUM-PITTSBURGH PLATEAU REGION WITHIN THE ALLEGHENY PLATEAUS SECTION OF THE APPALACHIAN PLATEAUS PHYSIOGRAPHIC PROVINCE OF OHIO. THIS REGION IS CHARACTERIZED AS A DISSECTED MODERATE TO HIGH RELIEF PLATEAU HAVING BROAD MAJOR VALLEYS THAT CONTAIN OUTWASH TERRACES, AND TRIBUTARIES WITH LACUSTRINE TERRACES; MEDIUM-GRAINED BEDROCK SEQUENCES COARSER THAN THOSE IN MARIETTA PLATEAU BUT FINER THAN THOSE IN IRONTON PLATEAU; REMNANTS OF ANCIENT TEAYS-AGE DRAINAGE SYSTEM UNCOMMON. THE BEDROCK GEOLOGY CONSISTS OF PENNSYLVANIAN-AGED ALLEGHENY AND POTTSVILLE GROUPS UNDIVIDED, CONSISTING OF SHALE, SILTSTONE, SANDSTONE, CONGLOMERATE, AND LESSER AMOUNTS OF LIMESTONE, CLAY, FLINT, AND COAL.

RECONNAISSANCE

AT THE TIME OF OUR SITE RECONNAISSANCE VISIT ON FEBRUARY 9, 2024, THE EXISTING BRIDGE STREET WAS OBSERVED TO BE A TWO-LANE, ASPHALTIC CONCRETE PAVED ROADWAY ALIGNED IN A NORTHEAST TO SOUTHWEST ORIENTATION. THE BRIDGE CONSISTS OF A NON-COMPOSITE PRESTRESSED CONCRETE BOX BEAMS STRUCTURE ON CONCRETE AND SANDSTONE ABUTMENTS. THE CONOTTON CREEK WAS OBSERVED TO BE A RELATIVELY SMALL, LOW FLOW WATERWAY WITH A GENERAL FLOW DIRECTION TOWARDS THE WEST AT THE SUBJECT STRUCTURE. BASED ON THE PROVIDED PRELIMINARY PLAN AND PROFILE OF THE BRIDGE DATED MAY 30, 2024 PREPARED BY EMH&T, THE EMBANKMENTS AT THE BRIDGE ABUTMENTS SLOPE DOWN TOWARDS CONOTTON CREEK AT SLOPE INCLINATIONS OF ABOUT 2 HORIZONTAL (H) TO 1 VERTICAL (V) TO 4H TO 1V.

SUBSURFACE EXPLORATION

A TOTAL OF TWO (2) BORINGS, DESIGNATED AS B-001-0-24 AND B-002-0-24 WERE PERFORMED ON FEBRUARY 19, 2024 TO DEPTHS OF APPROXIMATELY 50 AND 60 FEET BELOW THE EXISTING GROUND SURFACE, RESPECTIVELY. THE BORINGS WERE DRILLED WITH A TRACK-MOUNTED DRILL RIG UTILIZING A 3¼-INCH I.D. CONTINUOUS FLIGHT HOLLOW STEM AUGER TO ADVANCE THE BOREHOLES BETWEEN SAMPLING ATTEMPTS. THE DRILL ROD ENERGY RATIOS WAS 78.8%. THE SPLIT-BARREL SAMPLES WERE OBTAINED AT THE BORING LOCATIONS AT 2.5-FOOT INTERVALS TO A DEPTH OF APPROXIMATELY 10 FEET, FOLLOWED BY CONTINUOUS SAMPLING TO A DEPTH OF 25 FEET, AND AT 5-FOOT INTERVALS THEREAFTER TO THE BEDROCK DEPTH. WE OBSERVED AND RECORDED GROUNDWATER LEVELS DURING DRILLING AND UPON COMPLETION OF DRILLING.

EXPLORATION FINDINGS

BORINGS B-001-0-24 AND B-002-0-24 WERE PERFORMED AT THE NORTH AND SOUTH ABUTMENTS OF BRIDGE STREET BRIDGE OVER THE CONOTTON CREEK, RESPECTIVELY. BORINGS B-001-0-24 AND B-002-0-24 ENCOUNTERED A SURFICIAL LAYER CONSISTING OF TOPSOIL APPROXIMATELY 8 INCHES THICK. BORING B-002-0-24 ENCOUNTERED FILL MATERIAL TO DEPTH OF ABOUT 3.5 FEET BELOW THE EXISTING GROUND SURFACE. THE FILL MATERIALS CONSISTED OF COHESIVE SOIL DESCRIBED AS SILT AND CLAY (A-6A). BELOW THE SURFICIAL LAYER/EXISTING FILL, THE NATIVE COHESIVE SOILS ENCOUNTERED IN THE BORINGS INCLUDED VERY SOFT TO HARD, SILT AND CLAY (A-6A) AND SILTY CLAY (A-6B). THE NATIVE GRANULAR SOILS ENCOUNTERED IN THE BORINGS INCLUDED VERY LOOSE TO DENSE, SANDY SILT (A-4A), AND COARSE AND FINE SAND (A-3A). BEDROCK WAS ENCOUNTERED IN BORINGS B-001-0-24, AND B-002-0-24 AT A DEPTH VARYING FROM ABOUT 38.5 TO 50 FEET, WHICH CORRESPONDS TO ELEVATIONS VARYING FROM ABOUT EL 901.5 TO EL 894.0 FEET. THE BEDROCK ENCOUNTERED IN THE BORINGS CONSISTED OF MODERATELY WEATHERED SHALE, AND SANDSTONE. IN BORING B-001-0-24 GROUNDWATER WAS ENCOUNTERED AT A DEPTH OF 16 FEET BELOW GROUND SURFACE DURING DRILLING AND WAS NOT ENCOUNTERED UPON COMPLETION OF DRILLING. IN BORING B-002-0-24 GROUNDWATER WAS ENCOUNTERED AT A DEPTH OF 8.5 FEET BELOW GROUND SURFACE DURING DRILLING AND WAS NOT ENCOUNTERED UPON COMPLETION OF DRILLING.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS OF GEOTECHNICAL EXPLORATION, DATED JULY 2023.

AVAILABLE INFORMATION

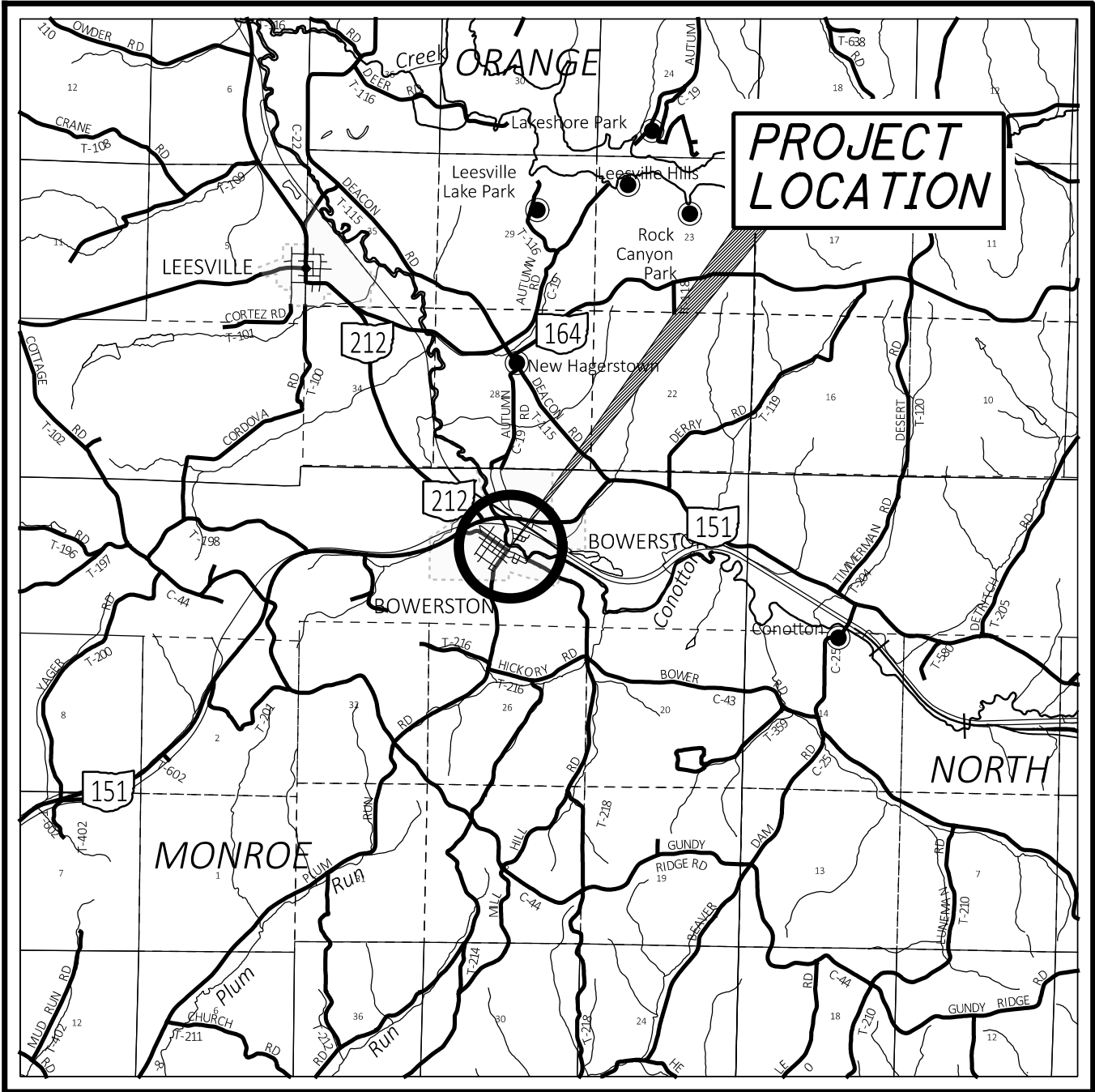
THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE SOIL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
COARSE AND FINE SAND	A-3a	5	6
SANDY SILT	A-4a	2	3
SILT AND CLAY	A-6a	1	10
SILTY CLAY	A-6b	0	8
	TOTAL	8	27
SANDSTONE			
SHALE			
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL		
BORING LOCATION - PLAN VIEW.			
DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.		
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
X/Y/Z	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.		
W	INDICATES FREE WATER ELEVATION.		
	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.		
	INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.		
SS	INDICATES A SPLIT SPOON SAMPLE.		

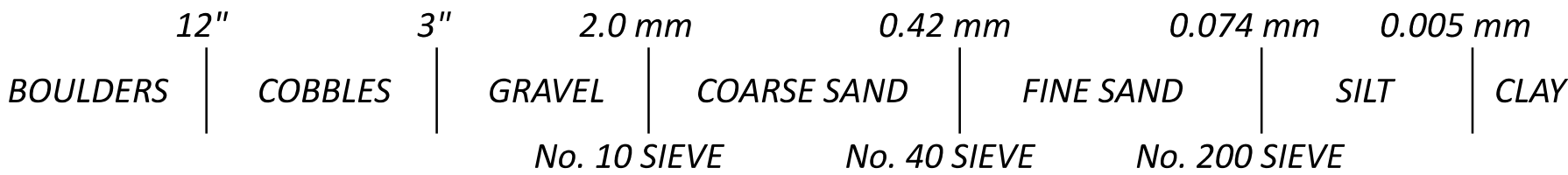
SCOUR DATA

Boring Number	Sample Number	Elevation (feet)	D ₅₀ (mm)	Erodibility Index, K	τ _c (psf)	D _{15, reqd} (mm)	Erosion Category, (EC)
B-001-0-24	SS-6	928.5-927.0	0.148	--	0.0015	0.0733	2.211
	SS-7	927.0-925.5	0.141	--	0.0025	0.1182	2.211
	SS-8	925.5-924.0	0.158	--	0.0012	0.0591	2.211
	SS-9	924.0-922.5	0.241	--	0.005	0.241	1.458
	SS-10 to SS-13	922.5-916.5	0.25	--	0.0052	0.25	1.478
	SS-14 to SS-16	916.5-901.5	0.06	--	0.1162	5.562	3.255
	Sandstone	901.5-899.0	--	48.782	36.93	--	2.084
B-002-0-24	Shale	899.0-890.0	--	134.666	61.359	--	2.656
	SS-5	934.0-932.5	0.062	--	0.0245	1.1705	3.255
	SS-6	932.5-931.0	0.078	--	0.0078	0.3739	2.211
	SS-7	931.0-929.5	0.089	--	0.0081	0.3865	2.211
	SS-8	929.5-928.0	0.156	--	0.0015	0.0717	2.211
	SS-9 and SS-10	928.0-925.0	0.15	--	0.0026	0.1237	2.211
	SS-11 to SS-13	925.0-920.5	0.06	--	0.1287	6.1603	3.255
	SS-14 to SS-17	920.5-900.5	0.062	--	0.1222	5.8476	3.075
	SS-18 and SS-19	900.5-894.0	0.065	--	0.2153	10.304	2.975
	Shale	894.0-884.0	--	279.527	88.402	--	2.656



LOCATION MAP
SCALE IN MILES

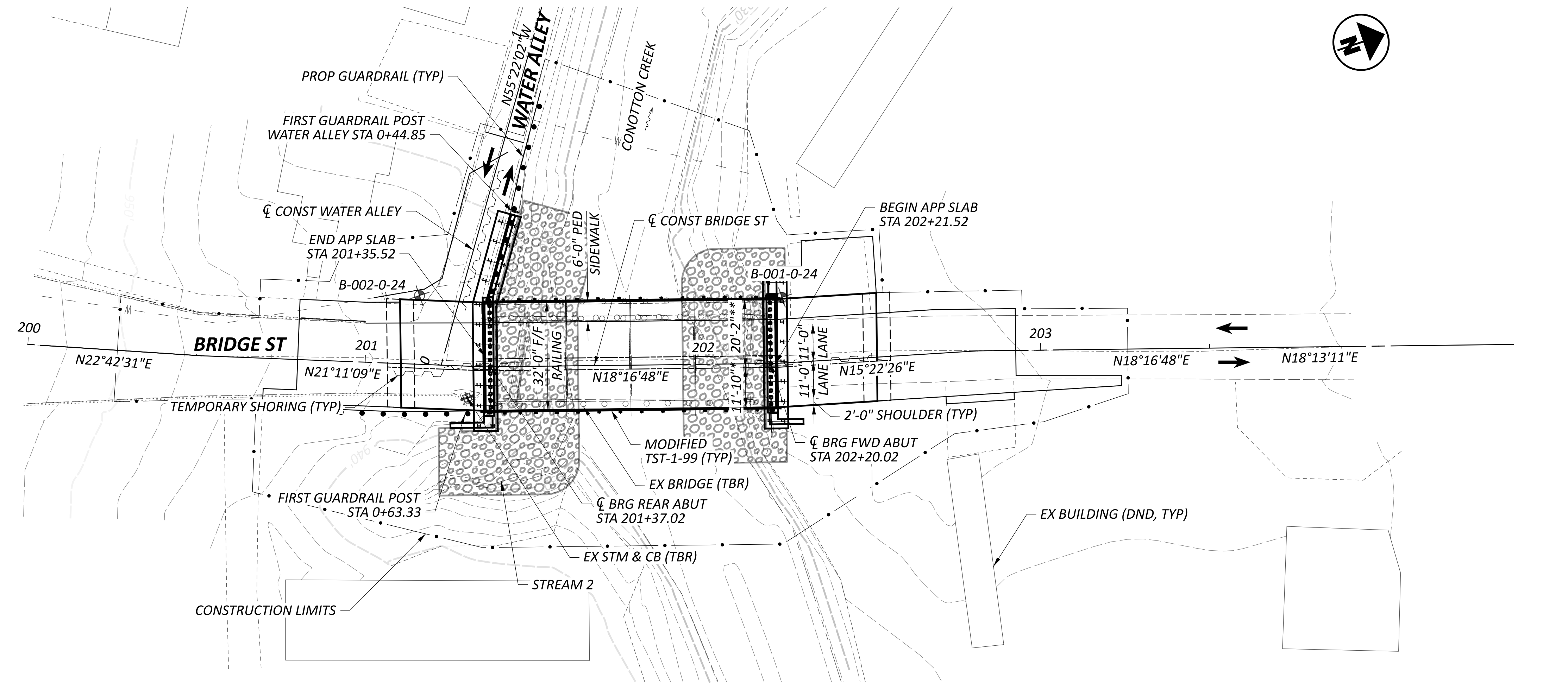
PARTICLE SIZE DEFINITIONS



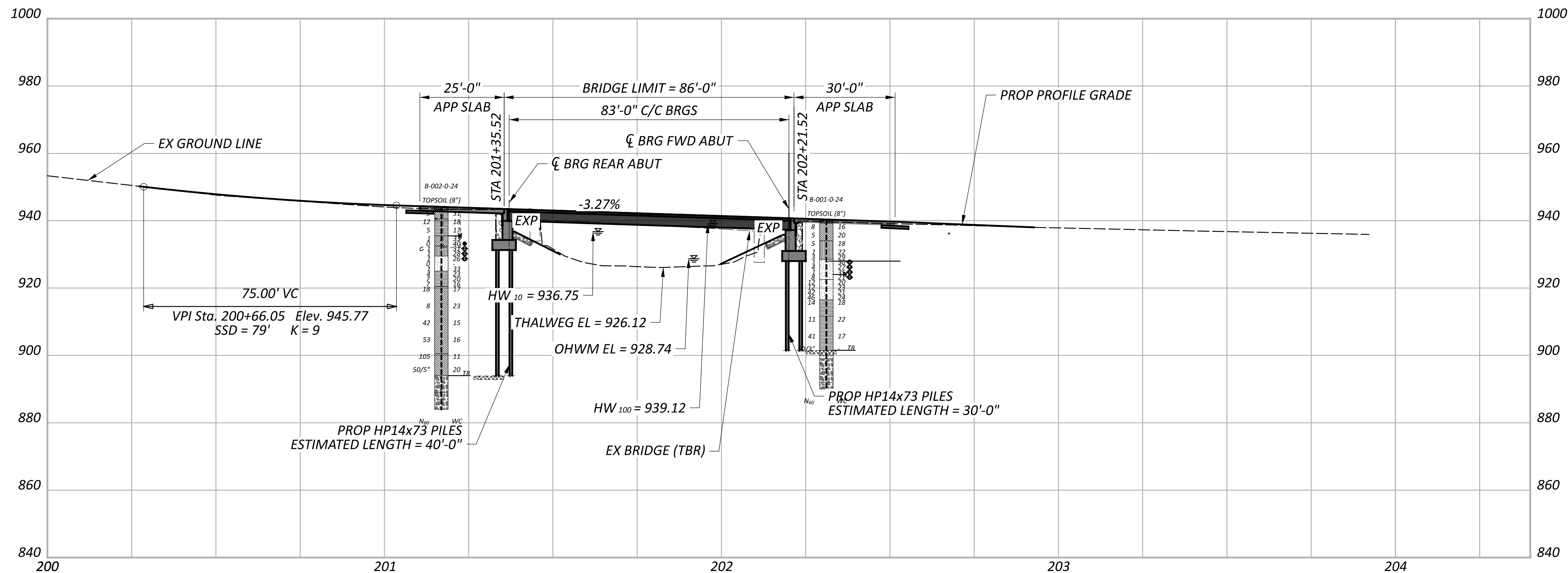
RECON. - ZAC 2/9/24
DRILLING - KR 2/19/24-2/20/24
DRAWN - BCM 1/28/25
REVIEWED - KME 1/31/25



DESIGNER	CHECKER
BCM	AA
REVIEWER	
KME	1-31-25
PROJECT ID	
120494	
SUBSET	TOTAL
1	5
SHEET	TOTAL
P.37	41

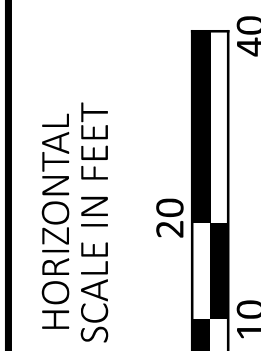


PLAN



PROFILE ALONG ϕ CONST BRIDGE ST

GEOTECHNICAL PROFILE - BRIDGE
HAS-BRIDGE STREET OVER CONOTTON CREEK



DESIGN AGENCY



DESIGNER

BCM

CHECKER

AA

REVIEWER

KME 1-31-25

PROJECT ID

120494

SUBSET

2

TOTAL

5

SHEET

P.38

TOTAL

41

HAS-BRIDGE STREET BRIDGE REPLACEMENT

MODEL: 03 B-001-0-24 LOG PAPER SIZE: 34x22 (in.) DATE: 2/11/2025 TIME: 10:30:28 AM USER: bcm1ner
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PROJECT: HAS-BRIDGE STREET BRIDGE				DRILLING FIRM / OPERATOR: TC / K. REINHART				DRILL RIG: MOBILE B-57 (DR#613)				STATION / OFFSET: 202+31.6' LT.				EXPLORATION ID					
TYPE: BRIDGE		SAMPLING FIRM / LOGGER: TC / T. CAROTHERS		SAMPLING METHOD: 3.25" HSA / NQ2		SPT / NQ2		HAMMER: AUTOMATIC HAMMER		ALIGNMENT: BRIDGE STREET		ELEVATION: 939.8 (MSL)		EOB: 50.0 ft.		PAGE					
PID: 120494 SFN: 3431790		DRILLING METHOD: 2/20/24		SAMPLING METHOD: 2/20/24		SPT / NQ2		CALIBRATION DATE: 8/11/22		ELEVATION: 939.8 (MSL)		EOB: 50.0 ft.		LAT / LONG: 40.425919, -81.187127		1 OF 1					
START: 2/20/24		END: 2/20/24		SAMPLING METHOD: 2/20/24		SPT / NQ2		ENERGY RATIO (%): 78.8		LAT / LONG: 40.425919, -81.187127		EOB: 50.0 ft.		LAT / LONG: 40.425919, -81.187127		1 OF 1					
MATERIAL DESCRIPTION AND NOTES				ELEV.	DEPTHS	SPT / ROD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	PL	WC	BOOTH CLASS (psi)				
TOPSOIL (8')				939.1																	
MEDIUM STIFF, BROWN, SILT AND CLAY, LITTLE SAND, LITTLE GRAVEL, MOIST					1	3	8	33	SS-1	-	-	-	-	-	-	16	A-6a (V)				
					2	3															
					3																
					4	2	5	33	SS-2	1.00	-	-	-	-	-	-	20	A-6a (V)			
					5																
VERY LOOSE TO LOOSE, BROWN, SANDY SILT, TRACE GRAVEL, MOIST TO WET				933.8	6	2	5	67	SS-3	-	-	-	-	-	-	18	A-4a (V)				
					7	2	2														
					8																
					9	1	0	1	100	SS-4	-	-	-	-	-	-	22	A-4a (V)			
					10	1	3	78	SS-5	-	-	-	-	-	-	-	29	A-4a (V)			
VERY LOOSE TO LOOSE, BROWN AND GRAY, COARSE AND FINE SAND, TRACE TO LITTLE GRAVEL, WET				928.3	11	1	1	100	SS-6	-	0	5	74	- 21 -	NP	NP	30	A-3a (0)			
					12	1	1	1	100	SS-6	-	0	5	74	- 21 -	NP	NP	30	A-3a (0)		
					13	1	0	1	100	SS-6	-	0	5	74	- 21 -	NP	NP	30	A-3a (0)		
					14	1	4	100	SS-7	-	0	4	72	- 24 -	NP	NP	27	A-3a (0)			
					15	1	0	1	33	SS-8	-	1	12	65	- 22 -	NP	NP	35	A-3a (0)		
MEDIUM DENSE TO DENSE, GRAY, COARSE AND FINE SAND, TRACE GRAVEL, WET					16	1	2	8	56	SS-9	-	15	19	49	- 17 -	NP	NP	21	A-3a (0)		
					17	2	4														
					18	2	4	12	100	SS-10	-	-	-	-	-	-	-	20	A-3a (V)		
					19	5	5	12	50	SS-11	-	-	-	-	-	-	-	23	A-3a (V)		
					20	5	4														
STIFF GRAY, SILTY CLAY, TRACE TO LITTLE SAND, MOIST				916.3	21	10	15	42	100	SS-12	-	-	-	-	-	-	21	A-3a (V)			
					22	11	15	46	100	SS-13	-	-	-	-	-	-	-	24	A-3a (V)		
					23	15	20														
					24	2	3	14	100	SS-14	1.00	-	-	-	-	-	-	18	A-6b (V)		
					25																
STIFF, BROWN, SILTY CLAY, LITTLE SAND, MOIST				911.3	26																
					27																
					28																
					29	2	3	11	100	SS-15	1.00	-	-	-	-	-	-	22	A-6b (V)		
					30	5															
SANDSTONE, GRAY, SEVERELY WEATHERED.				901.3	31																
					32																
					33																
					34	10	18	41	100	SS-16	1.00	-	-	-	-	-	-	17	A-6b (V)		
					35	13															
SANDSTONE, GRAY, MODERATELY WEATHERED, SLIGHTLY STRONG, FINE GRAINED, THIN BEDDED, FRACTURED, RQD 30%, REC 100%.					36																
					37																
					38																
					39																
					40																
SHALE, GRAY, MODERATELY WEATHERED, MODERATELY STRONG, FINE GRAINED, THIN BEDDED, FRACTURED, RQD 54%, REC 60%, @41.5' - 42.0'; Unit weight = 161 pcf, Qu = 4,831 psi					41																
					42	55		100	NQ2-1											CORE	
					43																
					44																
					45																
SHALE, GRAY, MODERATELY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED TO SLIGHTLY FRACTURED, RQD 83%, REC 100%.				891.8	46																
					47																
					48																
					49																
					50	47		100	NQ2-2												CORE
					EOB																

HAS-BRIDGE STREET BRIDGE REPLACEMENT

MODEL: 04 B-002-0-24 LOG PAPER SIZE: 34x22 (in.) DATE: 2/11/2025 TIME: 10:32:09 AM USER: bcm\mlner
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PROJECT: HAS-BRIDGE STREET BRIDGE				DRILLING FIRM / OPERATOR: TC / K. REINHART				DRILL RIG: MOBILE B-57 (DR#613)				STATION / OFFSET: 201+17.5' LT.				EXPLORATION ID					
TYPE: BRIDGE				SAMPLING FIRM / LOGGER: TC / T. CAROTHERS				HAMMER: AUTOMATIC HAMMER				ALIGNMENT: BRIDGE STREET				B-002-0-24					
PID: 120494 SFN: 3431790				DRILLING METHOD: 3.25" HSA / NQ2				CALIBRATION DATE: 8/11/22				ELEVATION: 943.7 (MSL) EOB: 60.0 ft.				PAGE					
START: 2/19/24 END: 2/19/24				SAMPLING METHOD: SPT / NQ2				ENERGY RATIO (%): 78.8				LAT / LONG: 40.425629, -81.187259				1 OF 1					
MATERIAL DESCRIPTION AND NOTES				ELEV.	DEPTHS	SPT / ROD	N ₆₀	REC SAMPLE (%)	HP ID	GRADATION (%)	ATTERBERG	WC	ODOT CLASS (G)	BACK FILL							
TOPSOIL (8')				943.7																	
DARK BROWN, SILT AND CLAY, TRACE SAND, FILL, DAMP				943.0	1	2	5	39	SS-1	-	-	-	-								
					2	2															
					3																
					4	6	12	67	SS-2	1.00	-	-	-	-	-	31	A-6a (V)				
					5	4															
MEDIUM STIFF TO STIFF, BROWN, SILTY CLAY, LITTLE SAND, MOIST @3.5' to 5.0': SAMPLE CONTAINS SANDSTONE FRAGMENTS				940.2	6	2	5	39	SS-3	1.00	-	-	-	-	18	A-6b (V)					
					7	2															
					8																
					9	2	0	1	28	SS-4	-	-	-	-	-	-	33	A-6a (V)			
					10	0	0	100	SS-5	-	13	1	34	24	28	16	13	40	A-6a (5)		
VERY LOOSE, GRAY, SANDY SILT, WET				935.2	11	0															
					12	0	0	1	100	SS-6	-	1	1	49	-	49	-	NP	NP	31	A-4a (3)
					13	0															
					14	0	1	56	SS-7	-	0	2	53	-	45	-	NP	NP	28	A-4a (2)	
					15	0	0	1	33	SS-8	-	0	5	77	-	18	-	NP	NP	26	A-3a (0)
VERY LOOSE, GRAY, COARSE AND FINE SAND, WET				929.2	16	0	0	0	SS-9	-	-	-	-	-	-	-	-	A-3a (V)			
					17	0															
					18	0	0	1	28	SS-10	-	-	-	-	-	-	-	-	-	33	A-3a (V)
					19	1	2	4	67	SS-11	0.50	-	-	-	-	-	-	-	-	23	A-6b (V)
					20	2	1														
SOFT TO MEDIUM STIFF, GRAY, SILTY CLAY, LITTLE SAND, MOIST				924.7	21	1	2	7	44	SS-12	-	-	-	-	-	-	-	20	A-6b (V)		
					22	3	2														
					23	3	7	83	SS-13	-	-	-	-	-	-	-	-	-	-	16	A-6b (V)
					24	2	6	18	100	SS-14	4.50	-	-	-	-	-	-	-	-	17	A-6a (V)
					25																
STIFF TO HARD BROWN SILT AND CLAY, TRACE SAND, TRACE GRAVEL, MOIST @28.5' to 30.0': INTERBEDDED SAND LAYER				920.2	26																
					27																
					28																
					29	1	2	8	100	SS-15	-	-	-	-	-	-	-	-	-	23	A-6a (V)
					30	4															
					31																
					32																
					33																
					34	10	15	42	100	SS-16	-	-	-	-	-	-	-	-	-	15	A-6a (V)
					35	17															
					36																
					37																
					38																
					39	15	20	53	100	SS-17	-	-	-	-	-	-	-	-	-	16	A-6a (V)
					40	20															
					HARD, GRAY, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, MOIST @43.5' to 45.0': SAMPLE CONTAINS SANDSTONE FRAGMENTS				900.2	41											
42																					
43																					
44	30	39	105	100						SS-18	-	-	-	-	-	-	-	-	-	11	A-6a (V)
45	41																				
SHALE GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE GRAINED, THIN BEDDED, FRACTURED; RQD 47%, REC 80%. @52.0' - 52.5'; Unit weight = 164 pcf, Qu = 9,509 psi @53.3' - 53.9'; Unit weight = 163 pcf, Qu = 9,670 psi				893.7	46																
					47																
					48																
					49	50															
					50																
SHALE GRAY, MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, FINE GRAINED, THIN BEDDED, FRACTURED; RQD 80%, REC 100%.				888.7	51																
					52	47														CORE	
					53																
					54																
					55																
CORE				883.7	56																
					57	67														CORE	
					58																
					59																

NOTES: WATER ENCOUNTERED AT 8.5 FEET WHILE DRILLING. WATER NOT ENCOUNTERED UPON COMPLETION
ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH BENTONITE CHIPS

NOTES: WATER ENCOUNTERED AT 8.5 FEET WHILE DRILLING. WATER NOT ENCOUNTERED UPON COMPLETION
ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH BENTONITE CHIPS

GEOTECHNICAL PROFILE - BRIDGE
HAS-BRIDGE STREET OVER CONOTTON CREEK
BORING LOG B-002-0-24



DESIGN AGENCY

DESIGNER

BCM

CHECKER

AA

REVIEWER

KME 1-31-25

PROJECT ID

120494

SUBSET

4

TOTAL

5

SHEET

P.40

TOTAL

41

HAS-BRIDGE STREET BRIDGE REPLACEMENT

MODEL: 05 RC PHOTOS PAPER SIZE: 34x22 (in.) DATE: 2/11/2025 TIME: 10:33:05 AM USER: bcm\mliner
C:\Users\bcm\liner\OneDrive - Terracon Consultants Inc\Desktop\CAD\COLUMBUS\N4235509\COVER.dgn



Office of Geotechnical Engineering

B-001-0-24



Run #:	Depth		Recovery		RQD	
NQ2-1	40.0'	45.0'	60/60	100%	33/60	55%
NQ2-2	45.0'	50.0'	60/60	100%	28/60	47%
HAS Bridge Street Bridge Replacement						



Office of Geotechnical Engineering

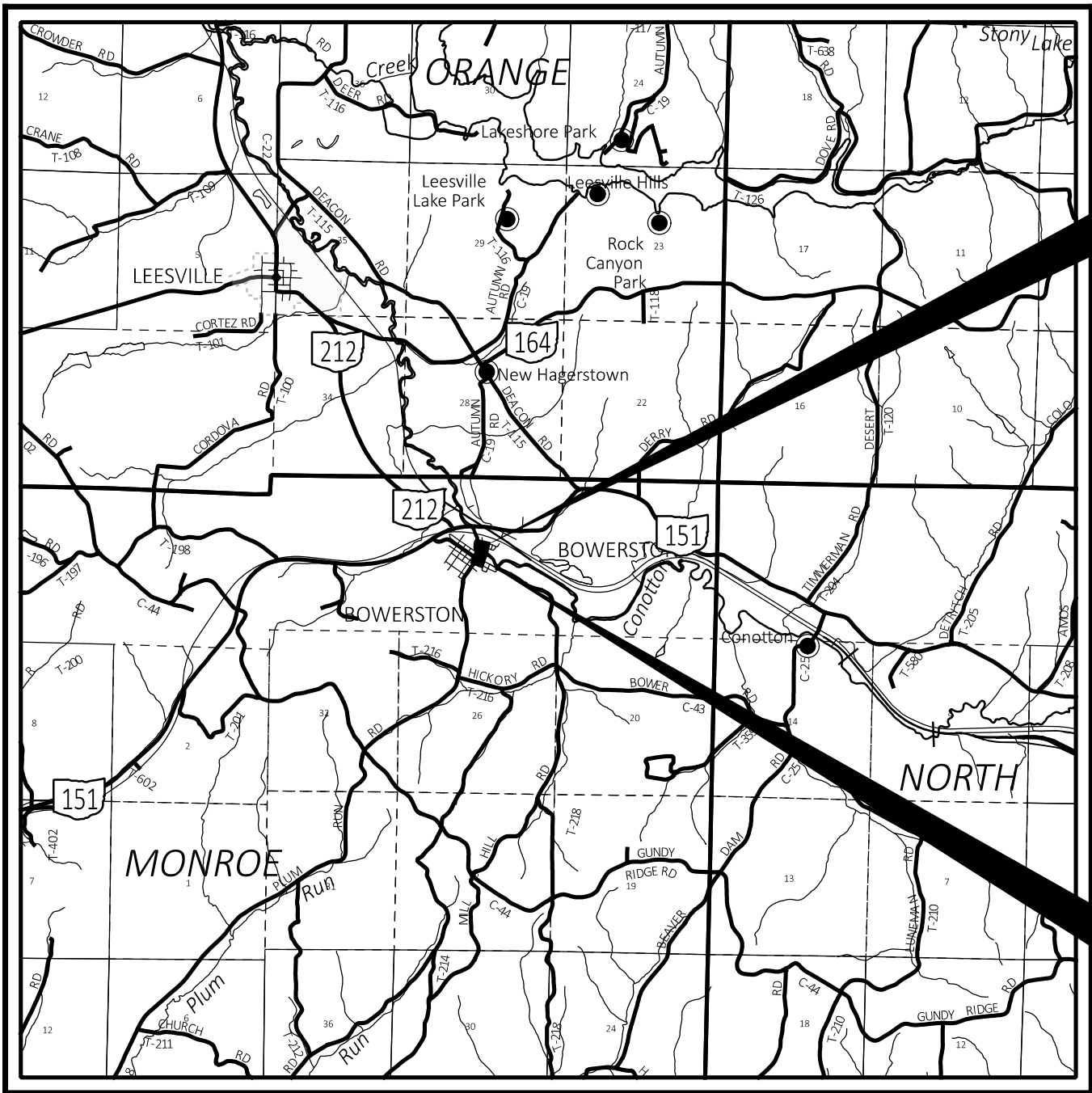
B-002-0-23



Run #:	Depth		Recovery		RQD	
NQ2-1	50.0'	55.0'	48/60	80%	28/60	47%
NQ2-2	55.0'	60.0'	60/60	100%	40/60	67%
HAS Bridge Street Bridge Replacement						

DESIGN AGENCY	
terracon	
DESIGNER	CHECKER
BCM	AA
REVIEWER	
KME 1-31-25	
PROJECT ID	
120494	
SUBSET	TOTAL
5	5
SHEET	TOTAL
P.41	41

GEOTECHNICAL PROFILE - BRIDGE
HAS-BRIDGE STREET OVER CONOTTON CREEK
ROCK CORE PHOTOS FOR B-001-0-24 & B-002-0-24



LOCATION MAP

LATITUDE: 40°25'35" N LONGITUDE: 81°11'15" W



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

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

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

CONVENTIONAL SYMBOLS

County Line	-----	Edge of Shoulder (Ex)	-----
Township Line	-----	Edge of Shoulder (Pr)	-----
Section Line	-----	Ditch / Creek (Ex)	-----
Corporation Line	----- or -----	Ditch / Creek (Pr)	-----
Fence Line (Ex)	----- (Pr) -----	Tree Line (Ex)	-----
Center Line	-----	Ownership Hook Symbol	Example
Right of Way (Ex)	----- Ex R/W -----	Property Line Symbol	Example
Right of Way (Pr)	----- R/W -----	Break Line Symbol	Example
Standard Highway Ease.(Ex)	----- Ex SH -----	Tree (Pr) Tree (Ex) Shrub (Ex)	
Standard Highway Ease.(Pr)	----- SH -----	Tree (Remove) Shrub (Remove)	
Temporary Right of Way	----- TMP -----	Evergreen (Ex) Stump	
Channel Ease. (Pr)	----- CH -----	Evergreen (Remove) Stump (Remove)	
Utility Ease. (Ex)	----- Ex U -----	Wetland (Pr) Grass (Pr) Aerial Target	
Railroad	----- or -----	Post (Ex) Mailbox (Ex) Mailbox (Pr)	
Guardrail (Ex)	----- (Pr) -----	Light (Ex) Telephone Marker (Ex) TEL	
Construction Limits	-----	Fire Hydrant (Ex) Water Meter (Ex)	
Edge of Pavement (Ex)	-----	Water Valve (Ex) Utility Valve Unknown (Ex.)	
Edge of Pavement (Pr)	-----	Telephone Pole (Ex) Power Pole (Ex)	
		Light Pole (Ex)	

NOTES:

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

RIGHT OF WAY LEGEND SHEET HAS-BRIDGE STREET BRIDGE REPLACEMENT HARRISON COUNTY VILLAGE OF BOWERSTON SEC. 27, T. 13 N., R. 6 W.

OLD SEVEN RANGES

INDEX OF SHEETS:

LEGEND SHEET	RW.1
CENTERLINE PLAT	RW.2-RW.3
PROPERTY MAP	RW.4
SUMMARY OF ADDITIONAL R/W	RW.5
TOPO AND BOUNDARY SHEETS	RW.6-RW.8

TYPES OF TITLE LEGEND:
SH = STANDARD HIGHWAY EASEMENT
T = TEMPORARY EASEMENT

PROJECT DESCRIPTION

COMPLETE REPLACEMENT OF EXISTING BRIDGE HAS-00027-00.045, WHICH CARRIES BRIDGE STREET OVER CONOTTON CREEK IN THE VILLAGE OF BOWERSTON. LIMITED ROADWAY WORK ON EITHER SIDE OF THE BRIDGE TO TIE INTO THE PROPOSED STRUCTURE.

PLANS PREPARED BY:

FIRM NAME : EVANS, MECHWART, HAMBLETON & TILTON, INC.

R/W DESIGNER: BRANDON R. KING, P.S. 8772

R/W REVIEWER: JOSHUA M. MEYER, P.S. 8485

FIELD REVIEWER: BRANDON R. KING, P.S. 8772

PRELIMINARY FIELD REVIEW DATE: 09/26/2024

OWNERSHIP UPDATED BY: BRANDON R. KING, P.S. 8772

DATE COMPLETED: 01/30/2025

FIELD REVIEWER: BRANDON R. KING, P.S. 8772

FINAL FIELD REVIEW DATE: 01/30/2025

FINAL R/W PLAN DATE: 02/28/2025

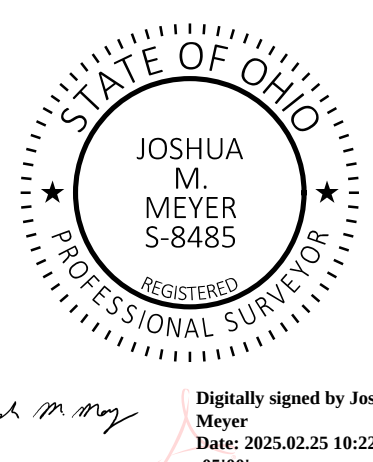
STRUCTURE KEY

	RESIDENTIAL
	COMMERCIAL
	OUT-BUILDING

UTILITY OWNERSHIP			
TYPE	NAME & ADDRESS	TYPE	NAME & ADDRESS
Electric	AEP Ohio Power Company Clarke Saunders 47687 National Rd W St. Clairsville, OH 43950 (614) 312-5807 cmsaunders@aep.com	Telecommunications	Charter Communications Ron Ickes 5520 Whipple Ave North Canton, OH 44720 (330) 494-9200 ron.ickes@charter.com
Gas	Northeast Ohio Natural Gas Corp. Mark Wetzel 9081 State Rt 250 NW Strasburg, OH 44680 (330) 878-5589 mwetzel@neogas.com	Telecommunications	Fronter Communcations Travis Art 921 Steubenville Ave Cambridge, OH 43725 (740) 432-6961 travis.m.art@ftr.com
Water	Village of Bowerston Bart Busby 402 E Main St Bowerston, OH 44695 (330) 432-4597 bowerstonvillage83@gmail.com	Telecommunications	Horizon Network Partners Stacie Stearns 1123 Goodale Blvd Columbus, OH 43212 (740) 215-9066 stacie.stearns@horizonconnects.com

I, Joshua M. Meyer, P.S. 8485 have conducted a survey of the existing conditions for the Ohio Department of Transportation in February, March, and July 2024. The results of that survey are contained herein. Underground utility locations are shown for informational purposes only. Their location as marked on the ground by the utility company or their representatives, per Ohio811 Confirmation Ticket Numbers A402300839, A402300873, and B402300345, were surveyed and mapped as a part of this project. I followed Ohio811 Utility Damage Prevention laws and have no direct knowledge or control of how these marks were placed, nor knowledge of the accuracy as to their intended depiction of subsurface utility facilities. See the Survey Parameters note affixed to these plans for the horizontal and vertical survey parameters used for this project. As a part of this project, I have reestablished the locations of the existing boundary lines, the existing center line of Right of Way and the existing Right of Way limits as necessary for the property takes contained herein. As a part of this project I have established the proposed boundary lines, calculated the Gross Take, present road occupied (PRO), Net Take and Net Residue herein. As a part of this work, right of way monuments will be set at the locations shown herein per the Memorandum of Understanding between the Board of Registration for Engineers and Surveyors and the Ohio Department of Transportation dated 9-22-2010. All of my work contained herein was conducted in accordance with the Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words "I and my" as used herein are to mean that either myself or someone working under my direct supervision.

SURVEYOR'S SEAL



BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE OHIO COUNTY COORDINATE SYSTEM, HARRISON COUNTY ZONE, NAD83 (2011). SAID BEARINGS ORIGINATED FROM A FIELD TRAVERSE WHICH WAS TIED (REFERENCED) TO SAID COORDINATE SYSTEM BY GNSS OBSERVATIONS USING THE OHIO REAL TIME NETWORK. THE PORTION OF THE WEST LINE OF THE NE ¼ SEC. 27, HAVING A BEARING OF NORTH 03°20'41" EAST, IS DESIGNATED THE "BASIS OF BEARINGS" FOR THIS SURVEY.

BASIS OF EX. C/L OF R/W AND R/W WIDTH:

THE CENTERLINE OF RIGHT OF WAY AND RIGHT OF WAY LIMITS WERE ESTABLISHED BY USING THE FOLLOWING:

VOL. 13, P. 301 VACATION ORDINANCE NO. 202

HARRISON COUNTY TAX MAPS
1911 BOWERSTON MAP (B. 3, P. 35) (AKA P. 6, F. 2)
RAILROAD VAL MAP V-1 OHIO 40

HARRISON COUNTY PLATS:
DUNLAP'S ADDITIONS, P. 4, F. 3
JOSEPH OVERHOLT'S FIRST ADDITION, P. 4, F. 4

HARRISON COUNTY SURVEYS:
BOWERSTON 8
BOWERSTON 43
BOW-V-2
BOW-V-33
BOW-V-46
BOW-V-61
BOW-V-69
BOW-V70

BASIS OF STATIONING:
ASSUMED STATIONING FOR THE EXISTING C/L OF RW FOR BRIDGE STREET AND WATER ALLEY.

SURVEY PARAMETERS:

THE FOLLOWING HORIZONTAL AND VERTICAL POSITIONING PARAMETERS WERE USED FOR ALL SURVEYING ON THIS PROJECT:

POSITIONING METHOD: ORTN/ TOTAL STATION/ DIFFERENTIAL LEVELING

MONUMENT TYPE:

Solid Iron pipes, three-quarter (3/4) inch diameter, thirty (30) inches long with an aluminum cap containing the text "PRIMARY PROJECT CONTROL" or "AZIMUTH MARK" set flush.

Iron pipes, thirteen-sixteenths (13/16) inch inside diameter, thirty (30) inches long with a red plastic plug placed in the top bearing the text "EMHT TRAV".

Magnetic nail with shiner bearing the text "EMHT TRAVERSE"

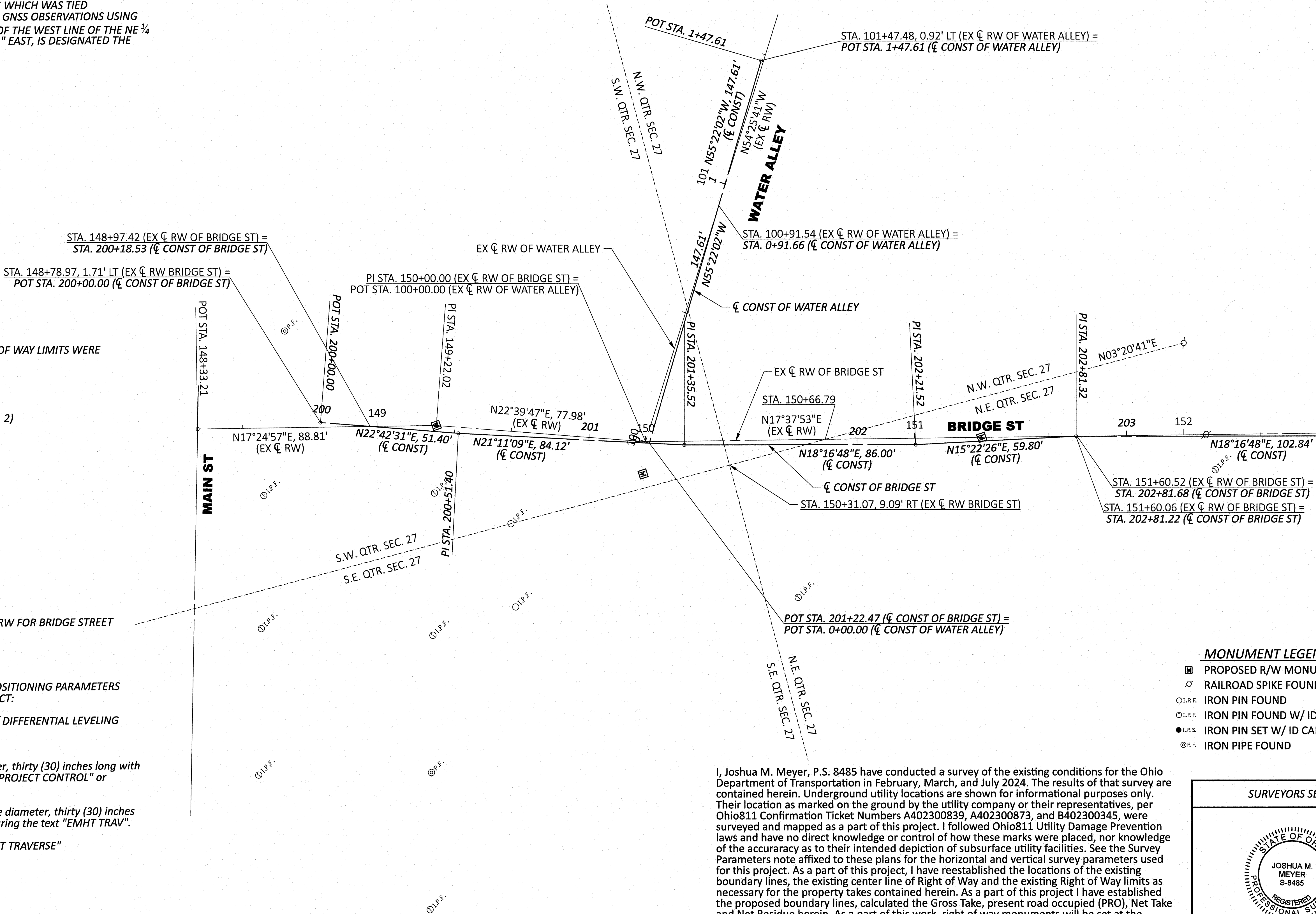
VERTICAL POSITIONING:

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 18

HORIZONTAL POSITIONING:

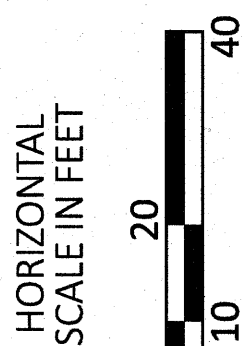
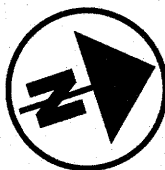
REFERENCE FRAME: NAD83(2011)
ELLIPSOID: GRS 80
MAP PROJECTION: Lambert Conformal Conic
COORDINATE SYSTEM: OCCS, HARRISON COUNTY

HARRISON COUNTY
VILLAGE OF BOWERSTON
SEC. 27, T. 13 N, R. 6 W
OLD SEVEN RANGES



I, Joshua M. Meyer, P.S. 8485 have conducted a survey of the existing conditions for the Ohio Department of Transportation in February, March, and July 2024. The results of that survey are contained herein. Underground utility locations are shown for informational purposes only. Their location as marked on the ground by the utility company or their representatives, per Ohio811 Confirmation Ticket Numbers A402300839, A402300873, and B402300345, were surveyed and mapped as a part of this project. I followed Ohio811 Utility Damage Prevention laws and have no direct knowledge or control of how these marks were placed, nor knowledge of the accuracy as to their intended depiction of subsurface utility facilities. See the Survey Parameters note affixed to these plans for the horizontal and vertical survey parameters used for this project. As a part of this project, I have reestablished the locations of the existing boundary lines, the existing center line of Right of Way and the existing Right of Way limits as necessary for the property takes contained herein. As a part of this project I have established the proposed boundary lines, calculated the Gross Take, present road occupied (PRO), Net Take and Net Residue herein. As a part of this work, right of way monuments will be set at the locations shown herein per the Memorandum of Understanding between the Board of Registration for Engineers and Surveyors and the Ohio Department of Transportation dated 9-22-2010. All of my work contained herein was conducted in accordance with the Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words "I and my" as used herein are to mean that either myself or someone working under my direct supervision.

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

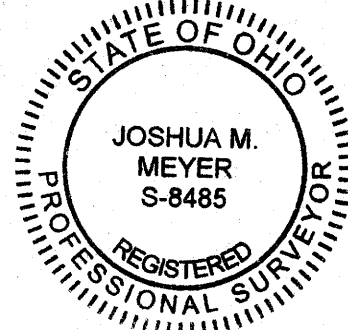


CENTERLINE PLAT (1 OF 2)

MONUMENT LEGEND

- PROPOSED R/W MONUMENT BOX
- RAILROAD SPIKE FOUND
- IRON PIN FOUND
- IRON PIN FOUND W/ ID CAP
- IRON PIN SET W/ ID CAP
- IRON PIPE FOUND

SURVEYORS SEAL



February 25, 2025

DESIGN AGENCY

EMHT

DESIGNER
BRK

REVIEWER
JMM 02-28-25

PROJECT ID
120494

SUBSET TOTAL
RW.2 RW.8

CENTERLINE & MONUMENT COORDINATE TABLE								
Station Offset (From EX C/L RW)		Project Coordinates (See Survey Parameters)		Monument Description		Monuments To Be Set During Construction		R/W Mon. Expected To Be Disturbed
Station	Offset	Northing (US ft)	Easting (US ft)	Pt. #	Description	Mon. Assy. (623 Type C)	Ref. Mon. (623 Type A)	R/W Mon. (623 Type B)
EX. Centerline of RW - Bridge St								
149+22.02	0.00	537481.430	139737.770		CL PI	1		
150+00.00	12.00' RT	537548.764	139778.890		CL REF.		1	
151+25.00	0.00	537672.516	139805.677		CL POT	1		
152+08.57	0.00	537752.160	139830.985	601	RAILROAD SPIKE FND.			
Right of Way Monuments Expected To Be Disturbed & Miscellaneous Monuments (Stationing from EX C/L RW OF BRIDGE ST)								
148+58.65	12.93' LT	537424.839	139706.464		MAGNETIC NAIL W/ SHINER "EMHT INC." SET			
148+61.46	21.50' LT	537430.081	139699.134		MAGNETIC NAIL W/ SHINER "EMHT INC." SET			
149+29.55	25.00' LT	537498.014	139717.603		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			
149+78.51	25.00' RT	537523.920	139782.604		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
149+97.27	25.00' LT	537560.497	139743.693		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+02.41 EXT.	39.94' RT	537540.225	139805.604		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+01.10 EXT.	25.00' RT	537544.768	139791.309		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+29.24	47.29' LT	537595.578	139731.601		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+30.95	68.81' LT	537603.727	139711.611		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+35.71	67.27' LT	537607.794	139714.520		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+39.24	47.29' LT	537605.108	139734.630		¾" IRON PIPE SET W/ ORANGE CAP "EMHT REF"			1
150+50.00	37.50' RT	537589.680	139818.699		¾" IRON PIPE SET W/ ORANGE CAP "EMHT REF"			1
150+50.00	40.00' RT	537588.923	139821.082		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+76.27	35.00' LT	537636.678	139757.562		¾" IRON PIN SET W/ ORANGE CAP "EMHT REF"			1
150+86.27	35.00' LT	537646.208	139760.591		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
150+98.00	35.00' RT	537636.183	139830.855		¾" IRON PIPE SET W/ ORANGE CAP "EMHT REF"			1
151+08.27	25.00' LT	537664.145	139776.785		MAGNETIC NAIL W/ SHINER "EMHT INC." SET			1
151+08.27	35.00' LT	537667.174	139767.255		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
151+18.00	25.00' RT	537658.272	139827.383		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
151+18.00	35.00' RT	537655.243	139836.913		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			1
152+02.70	25.00' LT	537754.143	139805.388		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			
152+11.12	25.00' RT	537747.015	139855.587		¾" IRON REBAR SET W/ 2" ALUM. CAP "EMHT INC."			
148+53.94	128.35' RT	537378.057	139839.865	624	¾" IRON REBAR FND. W/ CAP "DIVERSIFIED ENG"			
148+55.79	74.16' RT	537396.035	139788.704	623	¾" IRON REBAR FND. W/ CAP "DIVERSIFIED ENG"			
148+57.44	24.97' RT	537412.333	139742.262	622	¾" IRON REBAR FND. W/ CAP "DIVERSIFIED ENG"			
148+66.15	35.80' LT	537438.836	139686.892	635	¾" IPF			
149+23.25	24.99' RT	537472.937	139761.306	619	¾" IRON REBAR FND. W/ CAP "DIVERSIFIED ENG"			
149+26.66	77.49' RT	537455.855	139811.064	620	¾" IRON REBAR FND. W/ CAP "DIVERSIFIED ENG"			
149+29.99	128.17' RT	537439.398	139859.117	621	⅝" IPF			
149+33.34	178.78' RT	537422.989	139907.108	616	⅝" IRON REBAR FND. W/ ILLEGIBLE CAP			
149+52.46	34.14' RT	537496.365	139781.006	617	⅝" IRON REBAR FND.			
149+56.61	64.69' RT	537488.418	139810.796	618	⅝" IRON REBAR FND. BENT			
150+56.08	58.40' RT	537589.144	139840.454	613	¾" IRON REBAR FND. W/ CAP "DIVERSIFIED ENG"			
151+05.15	214.64' RT	537588.589	140004.222	614	¾" IRON REBAR FND. W/ CAP "DIVERSIFIED ENG"			
152+00.33	244.85' RT	537670.146	140061.839	612	MINE BOLT FND.			
152+00.56	34.04' LT	537754.838	139796.125	603	MINE BOLT FND.			
152+11.75	13.04' RT	537751.241	139844.385	602	⅝" IRON REBAR FND. W/ CAP "D.A. BOWER #5753"			
152+22.43	177.42' LT	537819.104	139666.105	605	⅝" IRON REBAR FND.			
152+75.15	52.98' LT	537831.663	139800.665	604	⅝" IRON REBAR FND.			
152+87.56	18.93' RT	537821.705	139872.955	641	⅝" IRON REBAR FND. BENT			
Horizontal Control Monuments (Stationing from EX C/L RW OF BRIDGE ST)								
N/A	N/A	537268.697	139507.789	204	¾" IRON PIN SET W/ 2" ALUM. CAP			
150+15.54	20.14' LT	537574.295	139753.331	203	¾" IRON PIN SET W/ 2" ALUM. CAP			
150+97.04	379.28' RT	537760.748	139435.748	205	MAGNETIC NAIL SET W/ SHINER "EMHT TRAVERSE"			
152+58.19	20.04' RT	537793.383	139865.119	202	¾" IRON PIN SET W/ 2" ALUM. CAP			
N/A	N/A	538142.810	139820.634	201	¾" IRON PIN SET W/ 2" ALUM. CAP			
					Quantity Carried to General Summary	2	1	17

EXT. = EXTENDED BACK TANGENT

SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.1.

HORIZONTAL
SCALE IN FEET

0

10

20

40

CENTERLINE PLAT (2 OF 2)

DESIGN AGENCY

EMHT

DESIGNER

BRK

REVIEWER

JMM 02-28-25

PROJECT ID

120494

SUBSET

TOTAL

RW.3

RW.8

OWNERSHIP NAME AND NUMBER

1-3 NOT USED

- 4

THE VILLAGE OF BOWERSTON
- 5

MARY ANNA COTTER
CO-TRUSTEE OF THE COTTER FAMILY TRUST
DATED APRIL 25, 2000
- 6

CODY MULLINS
- 7

DAVID BOWER
- 8

DEREK WARNER
AMIE WARNER
- 9

NOT USED
- 10

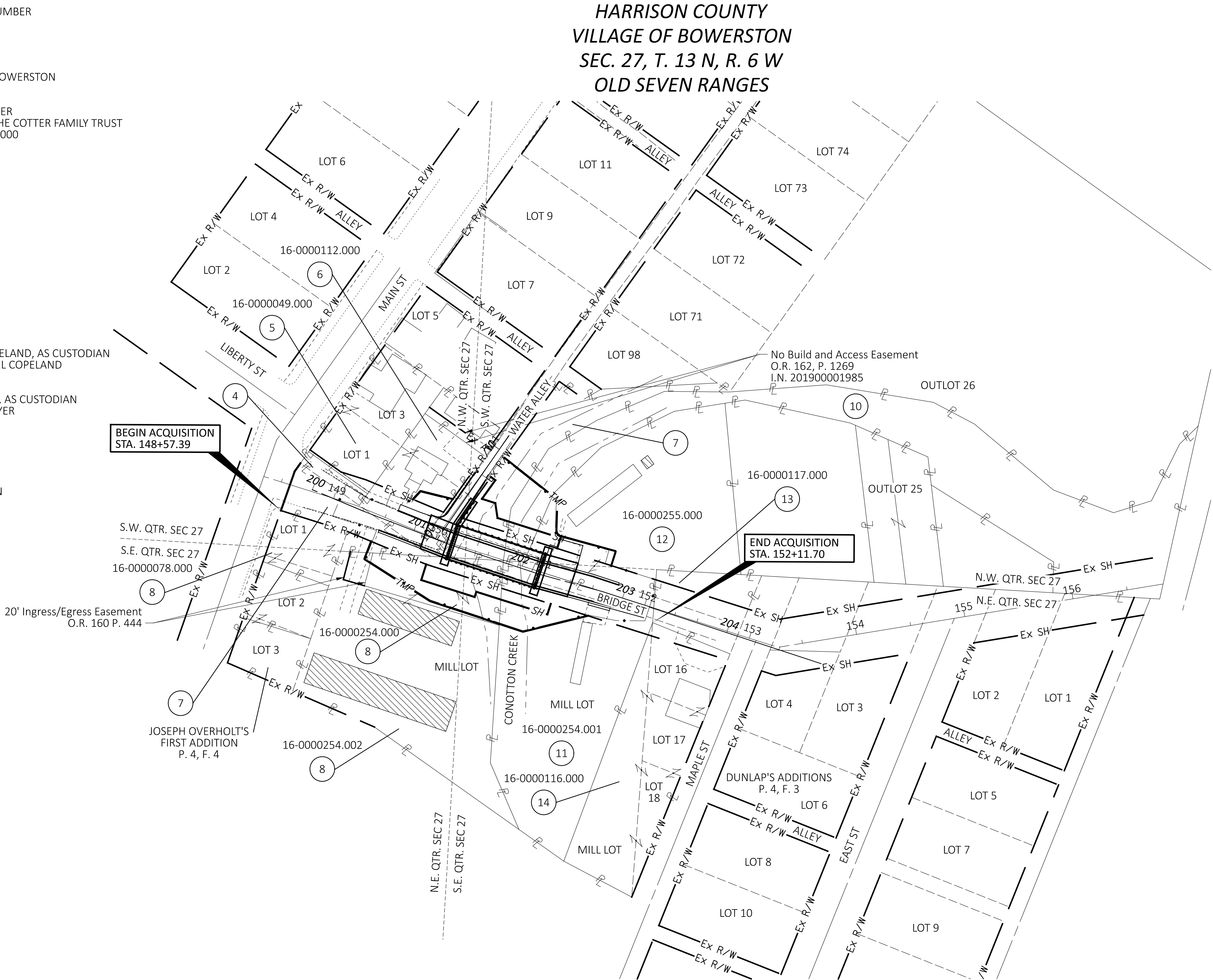
MABEL GORDON
- 11

TAMMY LYNN COPELAND, AS CUSTODIAN
OF BRENT MICHAEL COPELAND
- 12

SHERRI SUE FRYER, AS CUSTODIAN
OF KAYLEE SUE FRYER
- 13

W. B. MASTERS
ED C. MILLIKEN
- 14

JEFFREY C. DROWN



CLOSURES, GAPS, AND OVERLAPS:
THERE APPEARS TO BE AN APPARENT 2.05'
DIMENSIONAL OVERLAP
BETWEEN PARCELS 4 AND 5

NOTE: AUDITOR'S PARCEL NUMBERS ARE
UNKNOWN FOR PARCELS 7 AND 10

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		FEBRUARY 28, 2025

HORIZONTAL
SCALE IN FEET

0

25

50

100

PROPERTY MAP

DESIGN AGENCY

EMHT

DESIGNER

BRK

REVIEWER

JMM 02-28-25

PROJECT ID

120494

SUBSET

RW.4

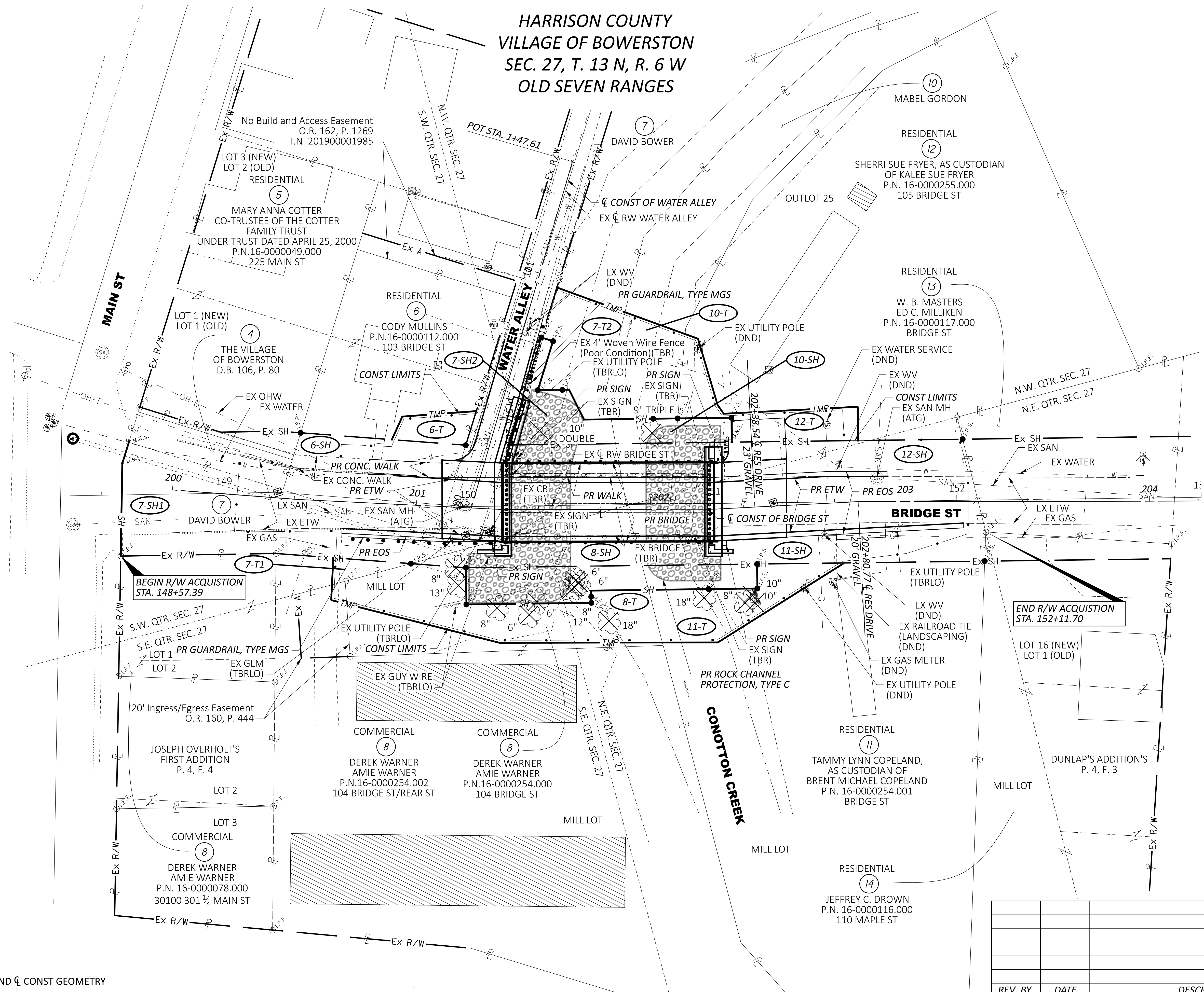
TOTAL

RW.8

SUMMARY OF ADDITIONAL RIGHT OF WAY	
DESIGN AGENCY EMHIT	
DESIGNER BRK	
REVIEWER JMM 02-28-25	
PROJECT ID 120494	
SUBSET RW.5	TOTAL RW.8

MODEL: 0 - Sheet 5 PAPERSIZE: 34x22 (in.) DATE: 2/25/2025 TIME: 9:55:23 AM USER: bking
I:\20230339\ODOT\07 D11 Bridge St Bowerston\120494\400-Engineering\RW\Sheets\120494 RT001.dgn

SEE SHEET RW.6 FOR EX C RW AND C CONST GEOMETRY



*HARRISON COUNTY
VILLAGE OF BOWERSTON
SEC. 27, T. 13 N, R. 6 W
OLD SEVEN RANGES*



HORIZONTAL
SCALE IN FEET

10 20 40

RIGHT OF WAY TOPO SHEET
STA 148+00.00 TO STA 153+00.00

DESIGN AGENCY



DESIGNER	
BRK	
REVIEWER	
MM 02-28-25	
PROJECT ID	
120494	
MEET	TOTAL
RW.6	RW.8

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	FEBRUARY 28, 2025	

MODEL: 0 - Sheet 6 PAPER SIZE: 34x22 (in.) DATE: 2/25/2025 TIME: 9:55:26 AM USER: bking
J:\20230339\ODOT\07 D11 Bridge St Bowerston\20494\400-Engineering\RW\Sheets\20494 RB001.dgn

CLOSURES, GAPS, AND OVERLAPS:
THERE APPEARS TO BE AN APPARENT 2.05'
DIMENSIONAL OVERLAP
BETWEEN PARCELS 4 AND 5

HORIZONTAL
SCALE IN FEET

A horizontal scale bar with alternating black and white segments. The bar is labeled with '0' at the left end, '20' in the middle, and '40' at the right end. The segments are 10 feet long each, with the first segment (0-10) being white, the second (10-20) being black, the third (20-30) being white, and the fourth (30-40) being black.

RIGHT OF WAY BOUNDARY SHEET
STA 148+00.00 TO STA 153+00.00

DESIGN AGENCY



DESIGNER

BRH

REVIEWER

REVIEWER
IMM 02 28 25

JIMM 02-28-23

PROJECT ID
123456789

120494

SHEET	TOTAL
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RW.7	RW.8
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REV. BY	DATE	DESCRIPTION
DATE COMPLETED	FEBRUARY 28, 2025	

PARCEL 6-SH DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-3	S 03°20'41" W	31.47'
3	150+00.57	16.86' RT	3-4	S 35°34'19" W	13.99'
4	149+88.41	13.62' RT	4-5	S 35°34'19" W	66.00'
5	149+24.08	1.12' LT	5-6	N 54°25'41" W	24.50'
6	149+29.55	25.00' LT	6-7	N 22°39'47" E	67.71'
7	149+97.27 100+23.76*	25.00' LT 8.25' LT*	7-4	S 54°25'41" E	39.62'

PARCEL 6-T DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-3	S 03°20'41" W	31.47'
3	150+00.57	16.86' RT	3-4	S 35°34'19" W	13.99'
4	149+88.41	13.62' RT	4-7	N 54°25'41" W	39.62'
7	149+97.27 100+23.76*	25.00' LT 8.25' LT*	7-8	S 22°39'47" W	30.31'
8	149+66.95	25.00' LT	8-9	N 47°16'59" W	10.35'
9	149+70.50	34.72' LT	9-10	N 14°06'37" E	30.37'
10	100+38.36*	8.25' LT*	10-7	S 54°25'41" E	14.60'

PARCEL 7-SH1 DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-3	S 03°20'41" W	31.47'
3	150+00.57	16.86' RT	3-11	S 03°20'41" W	24.95'
11	149+78.51	25.00' RT	11-12	S 22°39'47" W	55.34'
12	149+20.88	25.00' RT	12-13	S 17°24'57" W	63.49'
13	148+57.39	25.00' RT	13-14	N 70°40'11" W	37.95'
14	148+58.65	12.93' LT	14-15	N 54°25'41" W	9.01'
15	148+61.46	21.50' LT	15-3	N 35°34'19" E	145.99'

PARCEL 7-SH2 DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-2	S 03°20'41" W	28.51'
2	150+03.45	16.13' RT	2-29	N 54°25'41" W	89.28'
29	150+30.95 100+75.00*	68.81' LT 8.25' RT*	29-30	N 35°34'19" E	5.00'
30	100+75.00*	13.25' RT*	30-31	S 54°25'41" E	21.00'
31	150+29.24 100+54.00*	47.29' LT 13.25' RT*	31-32	N 17°37'53" E	12.76'
32	150+42.00	47.29' LT	32-33	N 81°36'54" E	13.68'
33	150+48.00	35.00' LT	33-56	N 17°37'53" E	11.10'
56	150+59.10	35.00' LT	56-21	S 81°38'37" E	35.95'
21	150+64.89	0.48' RT	21-1	S 03°20'41" W	34.90'

PARCEL 7-T1 DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-11	S 03°20'41" W	56.42'
11	149+78.51	25.00' RT	11-16	S 03°20'41" W	33.41'
16	149+46.98	36.05' RT	16-17	N 68°48'51" W	11.06'
17	149+46.69	25.00' RT	17-11	N 22°39'47" E	31.81'

POINTS 18 AND 19 = NOT USED

ALL STATIONS AND OFFSETS ARE FROM THE EX   RW OF BRIDGE STREET EXCEPT WHERE NOTED OTHERWISE.

* = STATIONS AND OFFSETS ARE FROM THE EX   RW OF WATER ALLEY.

** = EXTENDED BACK TANGENT OF EX   RW OF BRIDGE ST.

PARCEL 7-T2 DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-2	S 03°20'41" W	28.51'
2	150+03.45	16.13' RT	2-29	N 54°25'41" W	89.28'
29	150+30.95 100+75.00*	68.81' LT 8.25' RT*	29-36	N 54°25'41" W	21.44'
36	100+96.44*	8.25' RT*	36-54	N 38°21'12" E	29.64'
54	150+65.28	78.72' LT	54-55	S 57°47'00" E	32.50'
55	150+57.10	47.27' LT	55-56	S 81°38'37" E	12.43'
56	150+59.10	35.00' LT	56-33	S 17°37'53" W	11.10'
33	150+48.00	35.00' LT	33-32	S 81°36'54" W	13.68'
32	150+42.00	47.29' LT	32-31	S 17°37'53" W	12.76'
31	150+29.24 100+54.00*	47.29' LT 13.25' RT*	31-30	N 54°25'41" W	21.00'
30	100+75.00*	13.25' RT*	30-29	S 35°34'19" W	5.00'

PARCEL 8-SH DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-21	N 03°20'41" E	34.90'
21	150+64.89	0.48' RT	21-22	S 86°18'48" E	35.57'
22	150+73.46	35.00' RT	22-23	S 17°37'53" W	23.46'
23	150+50.00	35.00' RT	23-24	S 72°22'07" E	5.00'
24	150+50.00	40.00' RT	24-25	S 17°37'53" W	51.10'
25**	150+02.41	39.94' RT	25-26	N 72°22'07" W	15.00'
26**	150+01.10	25.00' RT	26-11	S 22°39'47" W	22.59'
11	149+78.51	25.00' RT	11-1	N 03°20'41" E	56.42'

PARCEL 8-T DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-11	S 03°20'41" W	56.42'
11	149+78.51	25.00' RT	11-26	N 22°39'47" E	22.59'
26**	150+01.10	25.00' RT	26-25	S 72°22'07" E	15.00'
25**	150+02.41	39.94' RT	25-24	N 17°37'53" E	51.10'
24	150+50.00	40.00' RT	24-23	N 72°22'07" W	5.00'
23	150+50.00	35.00' RT	23-22	N 17°37'53" E	23.46'
22	150+73.46	35.00' RT	22-27	S 86°18'48" E	22.27'
27	150+78.83	56.61' RT	27-28	S 18°16'48" W	66.62'
28	150+12.22	55.86' RT	28-20	S 32°35'14" W	70.99'
20	149+47.14	42.33' RT	20-16	N 68°48'51" W	6.28'
16	149+46.98	36.05' RT	16-11	N 03°20'41" E	33.41'

PARCEL 10-SH DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-21	N 03°20'41" E	34.90'
21	150+64.89	0.48' RT	21-56	N 81°38'37" W	35.95'
56	150+59.10	35.00' LT	56-34	N 17°37'53" E	27.17'
34	150+86.27	35.00' LT	34-35	S 66°34'19" E	30.99'
35	150+83.14	4.16' LT	35-21	S 03°20'41" W	18.83'

PARCEL 10-T DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-21	N 03°20'41" E	34.90'
21	150+64.89	0.48' RT	21-56	N 81°38'37" W	35.95'
56	150+59.10	35.00' LT	56-55	N 81°38'37" W	12.43'
55	150+57.10	47.27' LT	55-54	N 57°47'00" W	32.50'
54	150+65.28	78.72' LT	54-37	N 38°21'12" E	26.18'
37	150+89.77	69.46' LT	37-34	S 66°34'19" E	34.63'
34	150+86.27	35.00' LT	34-56	S 17°37'53" W	27.17'

PARCEL 11-SH DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-21	N 03°20'41" E	34.90'
21	150+64.89	0.48' RT	21-35	N 03°20'41" E	18.83'
35	150+83.14	4.16' LT	35-38	S 66°34'19" E	4.19'
38	150+82.72	0.00'	38-39	N 17°37'53" E	125.89'
39	152+08.61	0.00'	39-40	S 85°39'19" E	13.45'
40	152+11.70	13.09' RT	40-41	S 69°34'19" E	11.93'
41	152+11.12	25.00' RT	41-42	S 17°37'53" W	93.12'
42	151+18.00	25.00' RT	42-43	S 72°22'07" E	10.00'
43	151+18.00	35.00' RT	43-22	S 17°37'53" W	44.54
22	150+73.46	35.00' RT	22-21	N 86°18'48" W	35.57

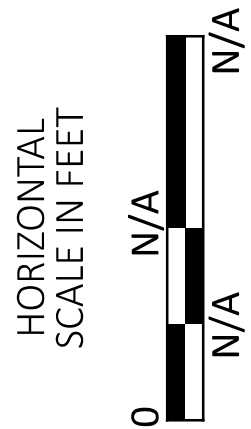
PARCEL 11-T DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-21	N 03°20'41" E	34.90'
21	150+64.89	0.48' RT	21-22	S 86°18'48" E	35.57
22	150+73.46	35.00' RT	22-43	N 17°37'53" E	44.54
43	151+18.00	35.00' RT	43-42	N 72°22'07" W	10.00'
42	151+18.00	25.00' RT	42-44	N 17°37'53" E	35.67'
44	151+53.67	25.00' RT	44-45	S 13°48'27" E	61.10'
45	151+01.54	56.87' RT	45-27	S 18°16'48" W	22.71'
27	150+78.83	56.61' RT	27-22	N 86°18'48" W	22.27'

PARCEL 12-SH DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-35	N 03°20'41" E	53.73'
35	150+83.14	4.16' LT	35-34	N 66°34'19" W	30.99'
34	150+86.27	35.00' LT	34-46	N 17°37'53" E	22.00'
46	151+08.27	35.00' LT	46-47	S 72°22'07" E	10.00'
47	151+08.27	25.00' LT	47-48	N 17°37'53" E	94.43'
48	152+02.70	25.00' LT	48-39	S 85°39'19" E	25.69'
39	152+08.61	0.00'	39-38	S 17°37'53" W	125.89'
38	150+82.72	0.00'	38-35	N 66°34'19" W	4.19'

PARCEL 12-T DETAIL TABLE					
POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	150+31.07	9.09' RT	1-35	N 03°20'41" E	53.73'
35	150+83.14	4.16' LT	35-34	N 66°34'19" W	30.99'
34	150+86.27	35.00' LT	34-37	N 66°34'19" W	34.63'
37	150+89.77	69.46' LT	37-49	N 38°21'12" E	5.58'
49	150+94.99	67.48' LT	49-50	S 88°09'30" E	28.28'
50	151+02.69	40.27' LT	50-51	N 73°35'28" E	4.36'
51	151+05.13	36.65' LT	51-52	N 15°22'26" E	54.91'
52	151+60.00	38.82' LT	52-53	S 72°22'07" E	13.82'
53	151+60.00	25.00' LT	53-47	S 17°37'53" W	51.73'
47	151+08.27	25.00' LT	47-46	N 72°22'07" W	10.00'
46	151+08.27	35.00' LT	46-34	S 17°37'53" W	22.00'

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	FEBRUARY 28, 2025	

DESIGNER	BRK
REVIEWER	JMM
PROJECT ID	02-28-25
	120494
SHEET	TOTAL
RW.8	RW.8



RIGHT OF WAY BOUNDARY SHEET
PARCEL DETAIL TABLES

DESIGN AGENCY



DESIGNER	BRK
REVIEWER	JMM
PROJECT ID	02-28-25
	120494
SHEET	TOTAL
RW.8	RW.8