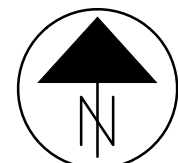
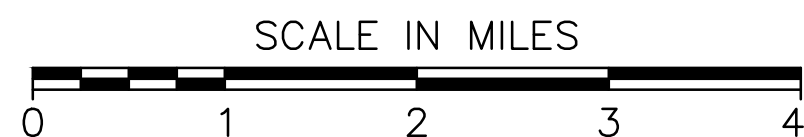




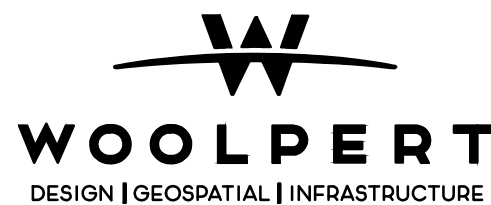
LATITUDE: 39°11'50" LONGITUDE: 81°28'29"



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)

PLAN PREPARED BY:



ONE EASTON OVAL
SUITE 400
COLUMBUS, OH 43219
T 614-476-6000
F 614-476-6225

ENGINEERS SEAL:



SIGNED _____
DATE: 3/14/2025

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ATH-CR46C-0.96

BLACKWOOD COVERED BRIDGE

LODI TOWNSHIP

ATHENS COUNTY

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[illegible]

FEDERAL PROJECT NUMBER

E240127

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

REHABILITATION OF EXISTING BLACKWOOD COVERED BRIDGE. INCLUDES CAPPING OF ABUTMENTS, REPLACEMENT OF FLOOR SYSTEM WITH STEEL BEAMS AND TIMBER DECK, AND REINSTALLATION OF COVERED BRIDGE TRUSS, SIDING AND ROOF, WITH REPAIRS AS NEEDED. LENGTH OF PROJECT IS 0.02 MILES.

EARTH DISTURBED AREA

PROJECT EARTH DISTURBED AREA:	0.25 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.15 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	0.40 ACRES
NO NOI REQUIRED	

2023 SPECIFICATIONS

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

APPROVED _____
DATE _____ ODOT LPA COORDINATOR

APPROVED _____
DATE _____ ATHENS COUNTY COMMISSIONER

APPROVED _____
DATE _____ ATHENS COUNTY ENGINEER

TITLE SHEET

DESIGN AGENCY



DESIGNER	CHECKER
CML	PES

REVIEWER
TML 3/14/25

PROJECT ID
117469

SUBSET	TOTAL
1	20

SHEET	TOTAL
1	20

SUPERVISOR QUALIFICATIONS:

THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A PERSON OR PERSONS PERSONALLY EXPERIENCED IN TIMBER FRAME CONSTRUCTION OF HISTORIC COVERED BRIDGES. THIS SHALL INCLUDE TIMBER SELECTION, ORIENTATION, MEASUREMENT, LAYOUT, FABRICATION, AND INSTALLATION. THIS PERSON SHALL BE KNOWN AS THE TIMBER FRAMER.

THE TIMBER FRAMER SHALL BE IN CHARGE OF AND RESPONSIBLE FOR THE SELECTION OF TIMBER TO BE USED FOR REPAIR OF THE TRUSSES. THE TIMBER FRAMER SHALL BE PRESENT AT THE JOB SITE AT ALL TIMES DURING THE PERFORMANCE OF TIMBER FRAMING WORK. THE TIMBER FRAMER NEED NOT BE PRESENT DURING OTHER ACTIVITIES.

THE TIMBER FRAMER SHALL HAVE A MINIMUM EXPERIENCE IN TIMBER FRAME CONSTRUCTION OF AT LEAST TWO HISTORIC COVERED BRIDGES IN THE LAST TEN YEARS.

SUPERVISOR QUALIFICATION SHALL BE SUBMITTED AT TIME OF BID. THE ENGINEER WILL APPROVE OR REJECT THE CONTRACTOR’S TIMBER FRAMER WITHIN 10 CALENDAR DAYS FOLLOWING THE SUBMISSION OF THE REPORT OF NAMES AND VERIFIABLE RESUME INFORMATION. WORK ON THE BRIDGE STRUCTURE SHALL NOT COMMENCE UNTIL THE CONTRACTOR RECEIVES WRITTEN APPROVAL OF ITS TIMBER FRAMER FROM THE ENGINEER. IN THE EVENT THE CONTRACTOR ELECTS TO SUBSTITUTE AN ALTERNATE, VERIFIABLE RESUME INFORMATION SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THAT INDIVIDUAL’S PERFORMANCE OF TIMBER FRAMING RELATED WORK. THE ENGINEER WILL APPROVE OR REJECT THE CONTRACTOR’S PROPOSED SUBSTITUTE WITHIN 10 CALENDAR DAYS. FAILURE TO UTILIZE THE TIMBER FRAMER WHOSE EXPERIENCE RESUMES WERE SUBMITTED MAY BE CAUSE FOR SUSPENSION OF THAT PORTION OF THE WORK. DELAYS CAUSED BY THE CONTRACTOR’S FAILURE TO MEET THIS REQUIREMENT SHALL BE THE CONTRACTOR’S SOLE RESPONSIBILITY AND SHALL NOT BE CAUSE FOR EXTENSION OF TIME.

UTILITIES:

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

SURVEYING PARAMETERS:

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THE TABLE ON THIS SHEET CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: FIELD SURVEY
MONUMENT TYPE: PK NAIL

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 12A

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: OHIO SOUTH 3402
COORDINATE SYSTEM: COORDINATES PROVIDED ARE GRID ORIGIN
COMBINED SCALE FACTOR: 1.000000000
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.

CONTINGENCY QUANTITIES:

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

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.

ALL WORK MUST BE WITHIN THE EXISTING RIGHT-OF-WAY UNLESS CONTRACTOR OBTAINS A WRITTEN WORK AGREEMENT OR AGREEMENTS FROM THE PROPERTY OWNER OR OWNERS FOR ALL WORK OUTSIDE OF THE EXISTING RIGHT-OF-WAY IN ACCORDANCE WITH 105.16, 105.17, 106.05, 107.01, 107.02, 107.10, AND 107.19.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM FIELD OBSERVATIONS, MEASUREMENTS, AND LIMITED EXISTING PLANS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY CONTRACTORS IN THE FIELD AND INCLUDED IN THE WORKING DRAWING SUBMITTALS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL AND VERTICAL EXCEPT AS NOTED.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING:

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT. SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

PROTECTION OF DRINKING WATER RESOURCES:

BEST CONSTRUCTION PRACTICES ARE TO BE IMPLEMENTED TO MINIMIZE WATER QUALITY IMPACTS. IDLE EQUIPMENT, PETROCHEMICALS, AND TOXIC/HAZARDOUS MATERIALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES OR STREAMS. REFUELING SHALL NOT BE UNDERTAKEN NEAR DRAINAGE WAYS, DITCHES OR STREAMS. A SPILL CONTAINMENT KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. SPILLS OF FUELS, OILS, CHEMICALS, OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY. IF THE SPILL IS A REPORTABLE AMOUNT, THE LOCAL FIRE DEPARTMENT (911), LOCAL EMERGENCY COORDINATOR (740)-592-3276 AND THE OEPA (1-800-282-9378) MUST BE CONTACTED WITHIN 30 MINUTES OF KNOWLEDGE OF THE RELEASE.

PROTECTION OF BATS – CUTTING RESTRICTIONS:

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. THE CONTRACTOR SHALL NOT REMOVE TREES UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THE CONTRACTOR SHALL DEMARCAT E CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

CLEARING AND GRUBBING:

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

SCOPE OF WORK:

THE REHABILITATION OF THE BLACKWOOD COVERED BRIDGE WILL INCLUDE TEMPORARY REMOVAL OF THE SUPERSTRUCTURE, REMOVAL OF PORTIONS OF THE STONE ABUTMENTS, CAPPING OF ABUTMENTS WITH CONCRETE, INSTALLATION OF A NEW STEEL BEAM AND TIMBER FLOOR SYSTEM, REINSTALLATION OF TIMBER TRUSSES, INSTALLATION OF NEW ROOFING AND SIDING, AND OTHER MISCELLANEOUS REPAIRS AS DESCRIBED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE PURPOSE OF THE WORK AS DETAILED IN THESE PLANS IS TO REPAIR THE STRUCTURE WHILE MAINTAINING THE HISTORICAL INTEGRITY. THE INCLUDED DETAILS SHALL BE ADHERED TO SO AS TO MAINTAIN THE HISTORIC NATURE OF THE STRUCTURE. ANY MISCELLANEOUS ADDITIONAL WORK SHALL BE CONSTRUCTED IN THE SAME MANNER AS THE EXISTING BRIDGE.

1. INSTALL TEMPORARY STRUCTURAL TIMBER MEMBER SUPPORTS AND REINFORCEMENTS. CRIBS, SHORING, BRACING, OR OTHER MEANS SHALL BE USED AS NECESSARY TO STABILIZE THE EXISTING BRIDGE BOTH VERTICALLY AND HORIZONTALLY IN ORDER TO SAFELY REMOVE THE BRIDGE FROM EXISTING SUPPORTS OR TEMPORARILY SHORE THE BRIDGE IN PLACE TO PERFORM THE PROPOSED REHABILITATION WORK.

2. REMOVE ALL ROOFING AND SIDING FROM STRUCTURE.

3. REMOVE ALL DECK PLANKING, BRACING, AND FLOOR BEAMS.

4. REMOVE PORTIONS OF EXISTING ABUTMENTS AS SHOWN. INSTALL ANCHOR DOWELS AND REINFORCED CONCRETE CAPS.

5. SET NEW STEEL BEAMS AND INSTALL DIAPHRAGMS, DECKING, AND RAILING.

6. PERFORM TIMBER TRUSS REPAIRS AND MEMBER REPLACEMENTS.

7. RESET TIMBER TRUSSES ON NEW PEDESTALS ON ABUTMENTS.

8. INSTALL NEW ROOFING AND SIDING.

9. APPLY FIRE PROTECTION COATING AND PAINT EXTERIOR OF SIDING.

10. REMOVE ANY REMAINING SHORING AND WORK PLATFORMS.


11. CLEAN ALL DEBRIS FROM BRIDGE AND BRIDGE SEATS USING COMPRESSED AIR.

ITEM 659: SEEDING. MISC.: SEEDING AND MULCHING. CLASS 4B:

THIS ITEM SHALL INCLUDE ALL WORK TO PERFORM SEEDING AND MULCHING ACTIVITIES PER C&MS 659 FOR ALL AREAS WITHIN THE CONSTRUCTION LIMITS THAT ARE IMPACTED BY CONSTRUCTION ACTIVITIES. THIS SHALL INCLUDE A SOIL ANALYSIS TEST, TOPSOIL, SEEDING AND MULCHING CLASS 4B, INTER-SEEDING, COMMERCIAL FERTILIZER, AND LIME.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE MADE AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM 659: SEEDING, MISC.: SEEDING AND MULCHING, CLASS 4B.

GENERAL NOTES
BRIDGE NO. ATH-CR46-0096
BLACKWOOD COVERED BRIDGE OVER MIDDLE BRANCH OF SHADE RIVER

SFN 0549568	
DESIGN AGENCY	
	
DESIGNER CML	CHECKER PES
REVIEWER TML 3/14/25	
PROJECT ID 117469	
SUBSET 2	TOTAL 20
SHEET 2	TOTAL 20

MAINTAINING TRAFFIC, AS PER PLAN:

BLACKWOOD ROAD SHALL BE CLOSED DURING CONSTRUCTION.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

ROAD CLOSURES	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

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

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES AND STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN TRAFFIC SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

INTERSECTION OF BLACKWOOD ROAD AND ZION ROAD.

BLACKWOOD ROAD, AT EASTERN END OF PROJECT WORK LIMITS

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 - DETOUR SIGNING:

SIZE AND PLACEMENT OF DETOUR SIGNS SHALL FOLLOW THE REQUIREMENTS OF THE OMUTCD SECTION 6F.03, SECTION 2A.11 AND TABLE 6F.01. DETOUR SIGNING SHALL PROVIDE DRIVERS ADEQUATE TIME TO CLEARLY READ THE SIGNS AND MAKE THE PROPER DECISIONS AT EACH REQUIRED TURNING MOVEMENT. THE DESIGNATED DETOUR ROUTE SHALL BE SIGNED IN ACCORDANCE WITH THE REQUIREMENTS BELOW:

- APPROXIMATELY 500 FEET PRIOR TO A REQUIRED TURN AT AN INTERSECTION NOT CONTROLLED BY A STOP SIGN (FOR 45 MPH OR HIGHER ONLY).
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT AN INTERSECTION.
- AT ANY OTHER INTERSECTION OR DECISION POINT WHERE THE DETOUR ROUTE IS CONTRARY TO THE NORMAL, EXPECTED TURNING MANEUVER OR OTHERWISE UNCLEAR.

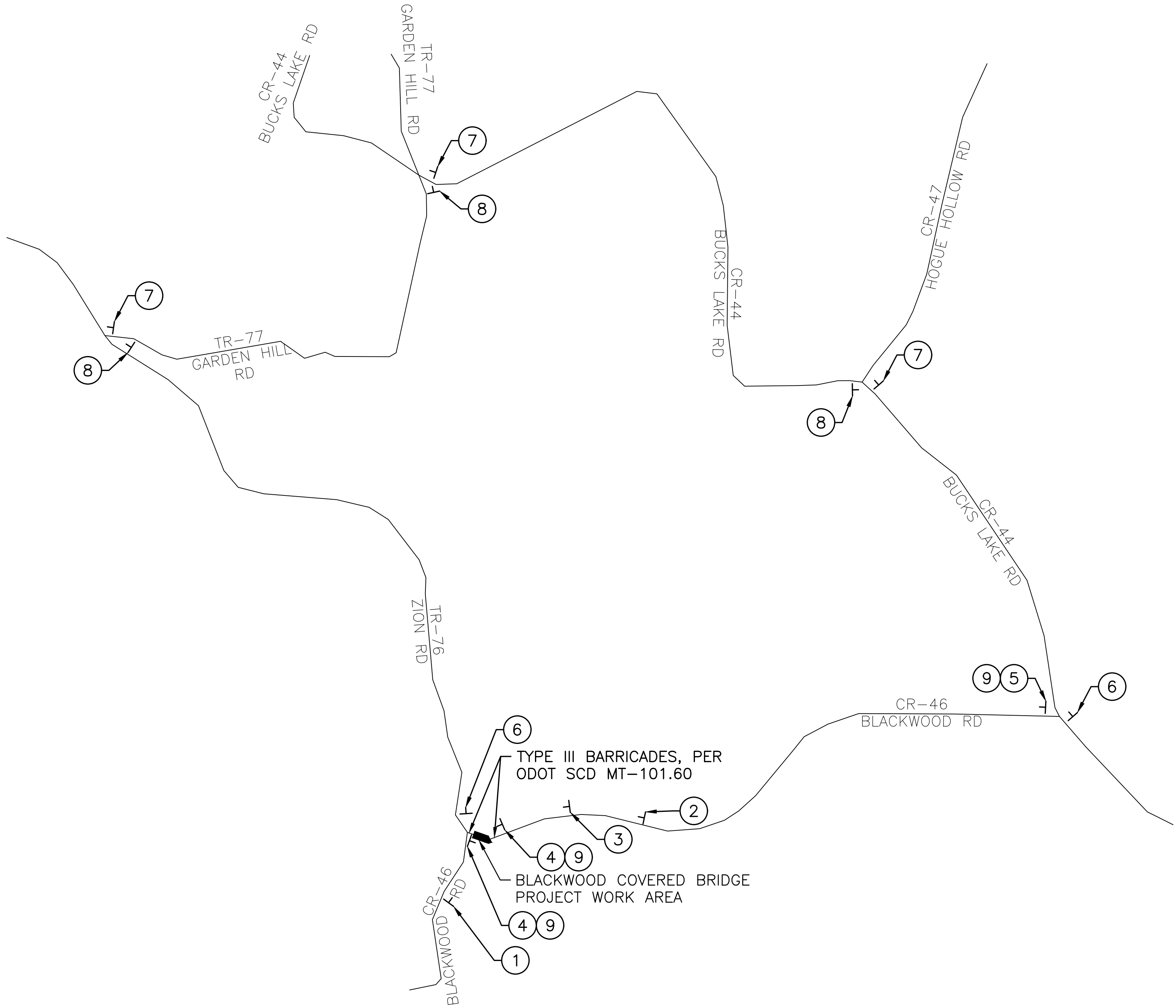
DETOUR SIGNS SHALL BE PLACED, WHEN POSSIBLE, NEXT TO BUT NOT BLOCKING EXISTING ROUTE MARKERS OR LANE ASSIGNMENT SIGNS. DETOUR SIGNS SHALL NOT OBSCURE OR BE OBSCURED BY OTHER EXISTING OR TEMPORARY SIGNS.

DETOUR SIGNS SHALL BE ERECTED AND/OR UNCOVERED PRIOR TO THE ROAD BEING CLOSED TO TRAFFIC BUT NO EARLIER THAN FOUR HOURS PRIOR TO THE CLOSURE. DETOUR SIGNS SHALL BE COVERED AND/OR REMOVED NO LATER THAN FOUR HOURS FOLLOWING THE ROAD RE-OPENING TO TRAFFIC.

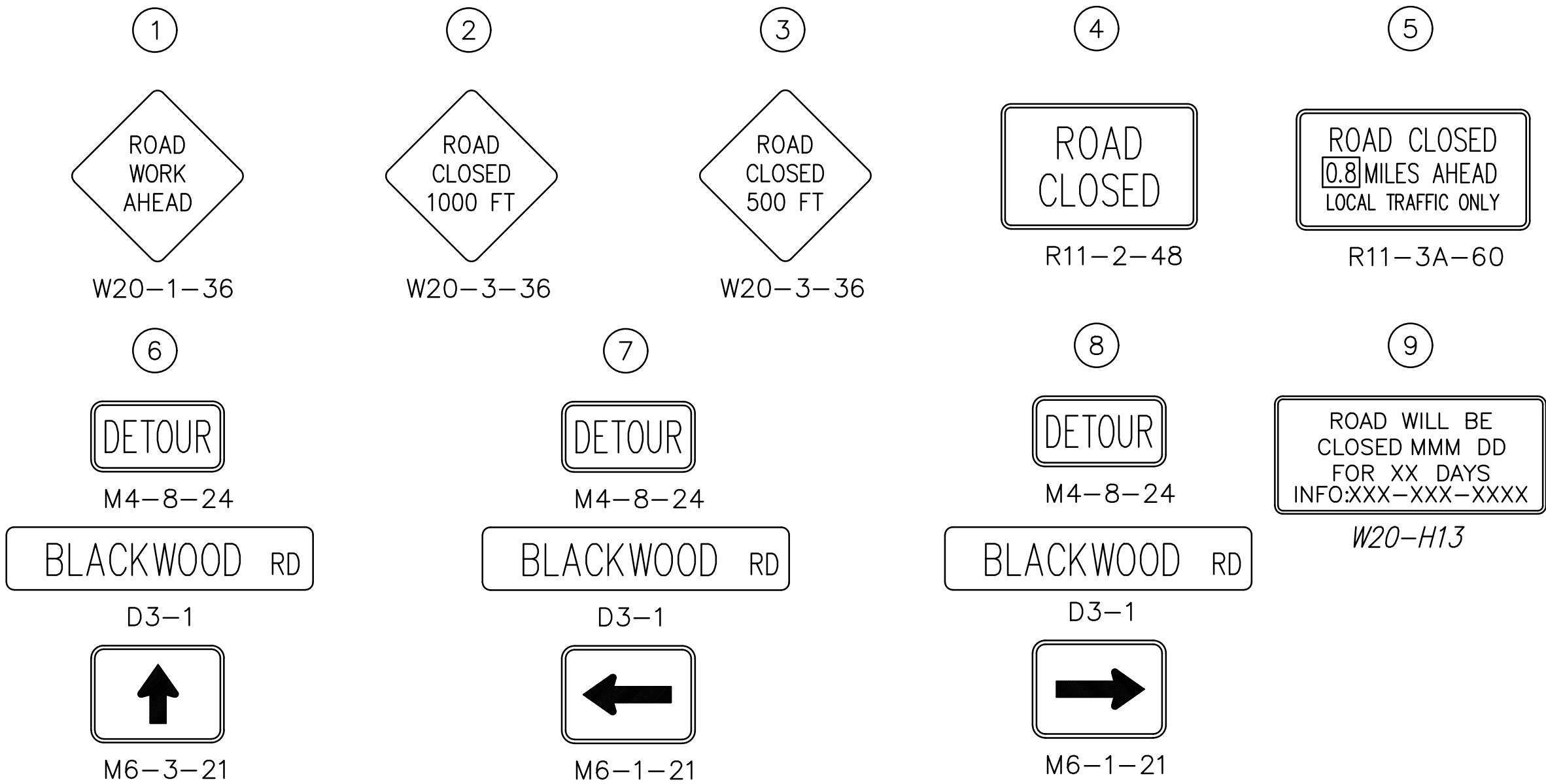
PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, PROPER SIGN PLACEMENT AND SIZING, TIMELY ERECTING AND/OR UNCOVERING OF SIGNS, MAINTAINING SIGNS, AND TIMELY COVERING AND/OR REMOVING SIGNS AND SUPPORTS.

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

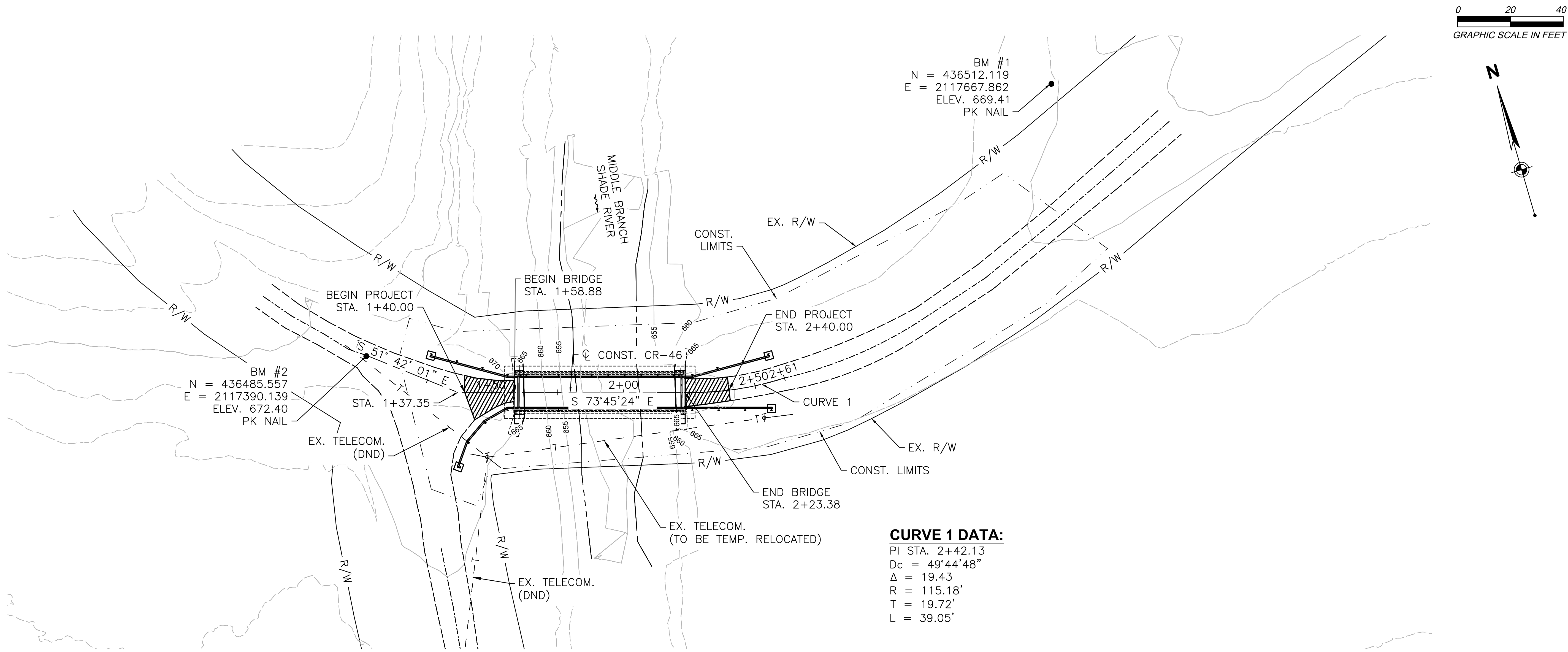
ITEM 614 - DETOUR SIGNING	LUMP SUM
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DETOUR PLAN
(1" = 500')



SFN 0549568	
DESIGN AGENCY	
WOOLPERT	
DESIGNER BTR	CHECKER CML
REVIEWER 0 3/14/25	
PROJECT ID 117469	
SUBSET 3	TOTAL 20
SHEET 3	TOTAL 20



SCHEMATIC PLAN

NO ASBESTOS OR ASBESTOS BELOW REGULATORY LIMITS

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED, AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049

OR

ASBESTOS PROGRAM
OHIO EPA, DAPC
50 W. TOWN ST. SUITE 700
COLUMBUS, OH 43215

NO ASBESTOS OR ASBESTOS BELOW REGULATORY LIMITS (CONT.)

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 10 OFFICE, 338 MUSKINGUM DRIVE MARIETTA, OH 45850.

BASIS FOR PAYMENT – THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

IN-STREAM WORK RESTRICTION

NO PERMANENT OR TEMPORARY FILLS ARE PERMITTED BELOW THE ORDINARY HIGH WATER MARK (OHWM) OF THE MIDDLE BRANCH SHADE RIVER. NO CONSTRUCTION ACTIVITIES OR ANCILLARY CONSTRUCTION (STAGING AREAS, WASTE LOCATONS, AND/OR BORROW LOCATONS) ARE PERMITTED BELOW THE OHWM OF THE MIDDLE BRANCH SHADE RIVER. IF WORK IS DEEMED NECESSARY BELOW THE OHWM OF THE MIDDLE BRANCH SHADE RIVER, A WATERWAY PERMIT WILL NEED TO BE OBTAINED BY THE ATHENS COUNTY ENGINEER’S OFFICE PRIOR TO ANY WORK BELOW THE OHWM.


DEMOLITION DEBRIS

THE INTENTIONAL DISCHARGE OF DEMOLITION DEBRIS FROM ANY STRUCTURE (INCLUDING BUT NOT LIMITED TOO BRIDGES, CULVERTS, ABUTMENTS, WING WALLS, PIERS) IS NOT AUTHORIZED FOR THIS PROJECT. IF ANY DEMOLITION DEBRIS FALLS IN THE MIDDLE BRANCH SHADE RIVER, IT MUST BE REMOVED IMMEDIATELY. NOTIFY THE ENGINEER OF ANY INADVERTENT FILL DISCHARGED INTO THE MIDDLE BRANCH SHADE RIVER. ALSO CONTACT DISTRICT 10 ENVIRONMENTAL COORDINATOR, RACHEL GOODPASTER, AT 740-568-4391 IF ANY UNINTENTIONAL DISCHARGE OCCURS.

SCHEMATIC PLAN AND GENERAL NOTES

BRIDGE NO. ATH-CR46-0096

BLACKWOOD COVERED BRIDGE OVER MIDDLE BRANCH OF SHADE RIVER

SFN 0549568	
DESIGN AGENCY	
	
DESIGNER BTR	CHECKER CML
REVIEWER TML 3/14/25	
PROJECT ID 117469	
SUBSET 4	TOTAL 20
SHEET 4	TOTAL 20

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, THE ODOT BRIDGE MANUAL 2020, AND THE NATIONAL DESIGN STANDARDS FOR WOOD CONSTRUCTION, 2018, WITH 2018 SUPPLEMENT.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
PEDESTRIAN LIVE LOAD: 0.090 KSF (NON-CONCURRENT)

DESIGN STRESSES:

CONCRETE CLASS QC1 – COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT
MINIMUM YIELD STRENGTH 60-KSI

STRUCTURAL STEEL – ASTM A709 GRADE 50W

STRUCTURAL TIMBER – AASHTO M 168 AND SUPPLEMENT 1072 OR GRADED AND STAMPED UNDER THE RULES OF THE NORTHEAST LUMBER MANUFACTURERS ASSOCIATION.

WHITE OAK, SELECT STRUCTURAL:

ROUGH FULL SAWN TIMBER SHALL BE USED TO REPAIR MAIN TRUSS MEMBERS INCLUDING VERTICALS, DIAGONALS, UPPER CHORD, AND LOWER CHORD.

WHITE OAK, GRADE NO. 1 OR BETTER:

ROUGH FULL SAWN TIMBER SHALL BE USED FOR SECONDARY MEMBERS INCLUDING KNEE BRACES, UPPER BRACING, CROSS BRACING, SPACER BLOCKS, DECKING, AND BEARING BLOCKS.

WHITE OAK, GRADE NO. 2 OR BETTER:

ROUGH FULL SAWN TIMBER SHALL BE USED FOR MEMBERS INCLUDING RAFTERS, UPPER BRACING, RUNNERS, RAILING BOARD, AND RAILING POSTS.

POPLAR, GRADE NO. 2 OR BETTER:

ROUGH FULL SAWN TIMBER SHALL BE USED FOR REPLACEMENT OF TIMBER SIDING BOARDS AND BATTENS.

DESIGN STRESSES ARE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION AND ARE PROVIDED ON SHEET 5/20.

FOR WET SERVICE MOISTURE CONDITIONS WHERE MOISTURE CONTENT > 19%.

ROUGH FULL SAWN TIMBER SHALL BE STORED BOTH AT THE LUMBER YARD AND THE PROJECT SITE AFTER IT IS ROUGH FULL SAWN IN ORDER TO MAXIMIZE AIR DRYING TIME. THIS WILL INCLUDE STACKING THE TIMBER TO MAXIMIZE AIR FLOW AND PROVIDING A WATERPROOF COVER. PLACE MATS ON GROUND UNDER TIMBER STORED ON SITE.

DESIGN STRESSES (CONT.):

FASTENERS –

BOLTS, NUTS, WASHERS, AND THRUST CASTINGS:

EXISTING STEEL BOLTS, NUTS, WASHERS, AND CASTINGS SHALL BE REUSED WHERE PRACTICAL. REPLACEMENT GALVANIZED STEEL BOLTS, NUTS, WASHERS, RODS, AND CASTINGS SHALL CONFORM TO ASTM A 307 AND 711.10 WITH DIAMETER EQUAL TO OR GREATER THAN THE EXISTING DIAMETER. GALVANIZED MALLEABLE IRON WASHERS SHALL BE USED WITH NUTS AT WOOD INTERFACES. ALL NUTS AND BOLTS SHALL BE TIGHTENED TO SNUG TIGHT CONDITION.

STAINLESS STEEL FASTENERS SHALL NOT BE USED WITH GALVANIZED STEEL PLATES.

NAILS:

NAILS SHALL BE USED FOR CONNECTION OF SECONDARY STRUCTURAL TIMBER MEMBERS (I.E. BRACING AND ROOF SYSTEM) TO EACH OTHER AND FOR THEIR CONNECTION TO THE MAIN STRUCTURAL TIMBER MEMBERS OF THE TRUSS. THE LENGTH OF NAIL USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 1-1/2" PENETRATION INTO STRUCTURAL TIMBER MEMBER.

NAILS SHALL BE STAINLESS STEEL OR ZINC COATED STEEL.

PRE-DRILLING OF LUMBER AND/OR STRUCTURAL TIMBER MEMBER MAY BE REQUIRED TO AVOID SPLITTING OF WOOD.

SCREWS:

SCREWS SHALL BE USED FOR CONNECTION OF FLOOR SYSTEM TO EACH OTHER AND FOR THEIR CONNECTION TO THE MAIN STRUCTURAL TIMBER MEMBERS OF THE TRUSS. THE LENGTH OF NAIL USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 1-1/2" OR 8D PENETRATION, WHICHEVER IS LARGER, INTO STRUCTURAL TIMBER MEMBER.

SCREWS SHALL BE STAINLESS STEEL OR ZINC COATED STEEL.

PRE-DRILLING OF LUMBER AND/OR STRUCTURAL TIMBER MEMBER IS REQUIRED TO AVOID SPLITTING OF WOOD. SELF-TAPPING SCREWS ARE NOT ALLOWED.

REPLACEMENT MEMBER DIMENSIONS:

QUANTITY FOR BID IS BASED ON TIMBER SUMMARY TABLE.

PRIOR TO MANUFACTURE OF EACH REPLACEMENT MEMBER, THE CONTRACTOR SHALL MEASURE ALL EXISTING MEMBERS, INCLUDING THOSE THAT WERE INACCESSIBLE AT TIME OF INSPECTION, TO DETERMINE IF THERE ARE ANY FOUND TO BE LARGER THAN THE ASSOCIATED DIMENSIONS LISTED IN THE SUMMARY TABLE FOR THAT MEMBER. REPLACEMENT MEMBER SHALL USE THE LARGER OF EITHER THE FIELD MEASURED MEMBER AND THE MEASUREMENT PROVIDED IN THE BRIDGE TIMBER SUMMARY TABLE. THE DIMENSIONS OF THE REPLACEMENT MEMBERS SHALL BE RECORDED AND SUBMITTED TO THE ENGINEER. REPLACEMENT MEMBERS SHALL BE SIZED AND MANUFACTURED TO ACCOUNT FOR SHRINKAGE OF THE MEMBERS ON THE FINAL STRUCTURE.

PAYMENT FOR ANY REPLACEMENT MEMBERS THAT VARY FROM WHAT IS PROVIDED IN THE TIMBER SUMMARY TABLE SHALL BE AN EXTENSION OF THE CONTRACT UNIT PRICE BID FOR THOUSAND FEET BOARD MEASURE, MFBM.

ITEM 202. PORTIONS OF STRUCTURE REMOVED. OVER 20 FOOT SPAN. AS PER PLAN:

DUE TO THE HISTORIC NATURE OF THE EXISTING BRIDGE, THE PORTIONS OF THE BRIDGE THAT ARE TO BE REPLACED ARE TO BE CAREFULLY REMOVED IN A MANNER THAT WILL AVOID DAMAGE TO THE EXISTING PORTIONS OF THE BRIDGE THAT ARE TO BE PRESERVED AND REUSED.

THE EXISTING STRUCTURAL TRUSS SHALL BE STABILIZED BY INSTALLING TEMPORARY SUPPORTS PER ITEM 516. CRIBS, SHORING, BRACING, OR OTHER MEANS SHALL BE USED TO THE EXTENT REQUIRED TO ALLOW THE EXISTING TRUSSES TO BE REMOVED AND STORED FOR REUSE.

THE DIMENSIONS OF EXISTING STRUCTURAL MEMBERS AND FASTENERS TO BE REMOVED SHALL BE MEASURED AND RECORDED PRIOR TO AND AFTER REMOVAL TO PROVIDE INFORMATION NEEDED FOR THE SIZING OF THE REPLACEMENT MEMBERS AND SHALL BE PRESERVED FOR POSSIBLE REUSE IN THE REHABILITATED STRUCTURE AS REPLACEMENT MEMBERS.

THE ORIGINAL HARDWARE AND FASTENERS SHALL NOT BE REMOVED UNLESS IT IS REQUIRED BY THE REHABILITATION WORK. TEMPORARY CONNECTIONS FOR TEMPORARY SUPPORTS AND BRACING SHALL NOT BE ATTACHED TO EXISTING WOOD TIMBER MEMBERS TO BE PRESERVED OR TO BE REUSED IN THE REHABILITATED STRUCTURE IN A MANNER THAT DAMAGES THE WOOD. (I.E. ONLY EXISTING HOLES IN EXISTING TIMBER MEMBERS MAY BE USED FOR TEMPORARY BOLTED CONNECTIONS, FIELD DRILLING OF NEW HOLES WILL NOT BE PERMITTED.) EXISTING THREADED FASTENERS SHALL BE REMOVED BY MECHANICAL MEANS IF POSSIBLE.

THIS WORK SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF WOOD PLANKING, STRINGERS, BRACING, RUNNING BOARDS, ROOF MEMBERS, AND OTHER MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE PRESERVED OR INCORPORATED INTO THE REHABILITATED STRUCTURE AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. REMOVE PORTIONS OF EXISTING STONE ABUTMENTS AS SHOWN IN PLANS. STONES ARE TO BE STORED ON SITE FOR COUNTY FORCES FOR PICKUP OF STORED MATERIALS. STEEL RODS AND HARDWARE FROM TRUSS REHABILITATIONS ARE TO BE STORED ON SITE FOR PICKUP BY THE COUNTY.

THE STRUCTURAL TIMBER MEMBERS SHALL BE CAREFULLY DISASSEMBLED AS NEEDED AND PROTECTED UNTIL DESIGNATED BY THE ENGINEER FOR REUSE, SALVAGE, OR DISPOSAL. ALL REMOVALS SHALL BE LIMITED TO MECHANICAL METHODS. EACH REMOVED MEMBER SHALL BE IDENTIFIED BY SOME NONDESTRUCTIVE METHOD THAT IS DURABLE BUT NOT PERMANENT. THE METHOD OF MARKING MUST BE APPROVED BY THE ENGINEER.

TIMBER MEMBERS THAT ARE DESIGNATED FOR REUSE OR SALVAGE SHALL BE STORED ON THE PROJECT SITE UNTIL THE BRIDGE REHABILITATION WORK IS COMPLETED. DESIGNATED MEMBERS SHALL BE PROTECTED FROM WEATHER AND DAMAGE. TAKE CARE IN THE REMOVAL OF EXISTING FLOOR BEAMS, WHICH WHILE NOT INTENDED FOR REUSE, SHALL BE THE PROPERTY OF THE COUNTY ON COMPLETION OF THE PROJECT. FLOOR BEAMS ARE TO BE STORED ON SITE FOR COUNTY FORCES. COORDINATE WITH THE COUNTY FOR PICKUP OF STORED MATERIALS.


THE CONTRACTOR SHALL TAKE PRECAUTION TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

THERE ARE TWO STEEL TENSION RODS RUNNING FROM BEARING TO BEARING ON THE BOTTOM CHORD OF EACH TRUSS. THIS SYSTEM SHALL BE REINSTALLED AS PART OF THE RECONSTRUCTION OF THE TRUSS. TIGHTEN THE TENSION RODS TO SNUG-TIGHT WHILE THE TRUSS IS IN THE CAMBERED AND SUPPORTED CONDITION.

THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH SHALL BE FULL COMPENSATION FOR ALL NECESSARY TOOLS, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF ODOT C&MS 202, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 512: SEALING OF CONCRETE SURFACES:

AREAS HAVING FORMLINED TEXTURE SHALL BE SEALED WITH AN EPOXY-URETHANE SYSTEM PER THE ODOT C&MS 512, WITH FEDERAL STANDARD NO. FS-595C-23578 OR AS DIRECTED BY THE ENGINEER TO MATCH EXISTING STONE COLOR.

SFN 0549568	
DESIGN AGENCY	
	
DESIGNER CML	CHECKER PES
REVIEWER TML 3/14/25	
PROJECT ID 117469	
SUBSET 5	TOTAL 20
SHEET 5	TOTAL 20

ITEM 514 – FIELD PAINTING. MISC.: FIRE RETARDANT

PRIOR TO PAINTING, APPLY ONE COAT OF CLEAR FIRE RETARDANT VARNISH TO ALL EXPOSED WOOD SURFACES ON THE INTERIOR, EXTERIOR AND UNDERSIDE OF THE COVERED BRIDGE. FIRE RETARDANT SHALL BE FULLY DRIED BEFORE PAINTING OF MEMBERS. VARNISH SHALL BE NOCHAR FIRE PREVENTER (NFP) AS PROVIDED BY NOCHAR OF INDIANAPOLIS, INDIANA 46260, OR APPROVED EQUAL.

CONTACT: NOCHAR, INC.
1311 W 96TH STREET SUITE 253, INDIANAPOLIS, IN 46260

PRIOR TO FIRE RETARDANT APPLICATION, EXISTING PAINT MUST BE REMOVED FROM ALL AFOREMENTIONED EXPOSED WOOD SURFACES USING SOLVENT BASED AND HAND–TOOL METHODS. SURFACE PREPARATION, MIXING, AND APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER’S INSTRUCTIONS. HIGH PRESSURE WATER SHALL NOT BE USED FOR SURFACE PREPARATION.

THIS WORK WILL BE PAID FOR AT THE LUMP SUM PRICE BID, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF ODOT C&MS 514, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 514 – FIELD PAINTING. MISC.: WOOD PAINTING:

AFTER APPLICATION OF FIRE RETARDANT, APPLY TWO COATS OF WOOD PAINT TO EXTERIOR OF SIDING. WOOD PAINT SHALL BE FEDERAL COLOR 595–31350 RED 100 PERCENT ACRYLIC SOLID COLOR BY SHERWIN WILLIAMS OR APPROVED EQUAL. COUNTY APPROVAL SHALL BE RECEIVED PRIOR TO PAINTING OF STRUCTURE.

LOCAL CONTACT: SHERWIN WILLIAMS COMMERCIAL PAINT STORE
530 CLARK STREET
MIDDLETOWN, OHIO 45042
513–423–4644

MEMBERS SHALL BE CLEANED AND FREE OF DEBRIS PRIOR TO PAINTING. SURFACE PREPARATION, MIXING, AND APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER’S INSTRUCTIONS. THINNING OF WOOD PAINT SHALL NOT BE PERMITTED.

THIS WORK WILL BE PAID FOR AT THE CONTRACT SQUARE FOOT UNIT PRICE BID, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF ODOT C&MS 514, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 602 – MASONRY. MISC.: RESET OR REPLACE SUBSTRUCTURE STONES

THIS WORK SHALL INCLUDE RESETTING OR REPLACING ABUTMENT STONES TO PROVIDE SUITABLE SEATING AND FIRM CONTACT ON ALL SIDES. STONES SHALL BE DRY LAID AND RESET AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL NECESSARY STONE REQUIRED, OF SIMILAR SIZE AND TYPE TO THE ORIGINAL. EXCAVATION AND BACKFILL REQUIRED FOR ACCESS SHALL BE PERFORMED PER ODOT C&MS 203 AND SHALL BE PAID AS INCIDENTAL TO THE WORK. A CONTINGENCY QUANTITY OF 20 SQ FT FOR RESETTING OR REPLACING SUBSTRUCTURE STONES HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES. THE MEASUREMENT IS TAKEN AS THE ELEVATION AREA OF THE STONES.

THE ACCEPTED QUANTITY OF STONE RESETTING WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT OF STONE FOR ITEM 602 – MASONRY, MISC.: RESET OR REPLACE SUBSTRUCTURE STONES.

ITEM 602 – MASONRY. MISC.: REPOINTING MORTAR JOINTS

THIS WORK SHALL INCLUDE REPOINTING EXISTING STONE ABUTMENT JOINTS IN AREAS WHERE EXISTING MORTAR OR STONE HAS BEEN LOST, DAMAGED, OR OTHERWISE COMPROMISED. THE JOINTS SHALL BE CLEANED, WELL WETTED, BLOWN DRY OF STANDING WATER, AND THEN FILLED WITH FRESH MORTAR COMPRISED OF ONE PART BY VOLUME OF PORTLAND CEMENT 701.07, ONE HALF PART OF LIME 712.04, AND 2½ PARTS OF SAND 703.03. THE MORTAR SHALL BE DRIVEN INTO THE JOINT AND FINISHED WITH A POINTING TOOL. A CONTINGENCY QUANTITY OF 150 LINEAL FEET OF POINTING MORTAR JOINTS HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES.

THE ACCEPTED QUANTITY OF REPOINTING MORTAR JOINTS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAL FOOT OF JOINT FOR ITEM 602 – MASONRY, MISC.: REPOINTING MORTAR JOINTS.

ITEM 516. JACKING AND TEMPORARY SUPPORT OF STRUCTURE. AS PER PLAN:

THE EXISTING STRUCTURAL TRUSS SHALL BE STABILIZED BY INSTALLING TEMPORARY SUPPORTS. CRIBS, SHORING, BRACING, OR OTHER MEANS SHALL BE USED TO THE EXTENT REQUIRED TO ALLOW THE STRUCTURAL TIMBER TO BE REMOVED FROM THE EXISTING STRUCTURE AND STORED FOR REUSE.

THE ANTICIPATED WORK ORDER IS TO REMOVE THE EXISTING ROOF, SIDING, DECKING, AND FLOOR BEAMS, FOLLOWED BY REMOVAL OF THE EXISTING TRUSSES USING A CRANE. OTHER OPERATIONS ARE ALLOWABLE AS PART OF THE CONTRACTOR’S MEANS AND METHODS.

IT SHALL BE THE CONTRACTOR’S RESPONSIBILITY TO MAINTAIN THE STABILITY OF THE COVERED BRIDGE DURING REMOVAL. DUE TO THE CONDITION OF THE STRUCTURE, LIMITED EQUIPMENT OR MATERIALS (40 PSF) SHALL BE ALLOWED TO BE ON OR TO MOVE ACROSS THE BRIDGE PRIOR TO SHORING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE PLAN FOR THE REMOVAL AND REHABILITATION OF THE STRUCTURAL TIMBER MEMBERS INCLUDING TEMPORARY STRUCTURAL SUPPORTS AND TEMPORARY MEMBER REINFORCEMENT MEETING THE REQUIREMENTS OF C&MS 501.05. THREE (3) SETS OF THE REMOVAL AND REHABILITATION PLAN, WHICH SHALL INCLUDE THE INFORMATION DESCRIBED IN THIS NOTE, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST (30) DAYS BEFORE THE ACTUAL WORK IS TO BEGIN. THE REMOVAL AND REHABILITATION PLAN SHALL BE APPROVED PRIOR TO PERFORMING ANY WORK ON THE BRIDGE. THE PLANS SHALL BE PREPARED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER.

PLANS FOR REMOVAL AND SUPPORT SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE, NUMBER, AND SEAL OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATION AND ANALYSIS OF THE STRUCTURAL TIMBER TRUSS MEMBERS TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED TO THE MEMBERS BY THE CONTRACTOR’S OPERATIONS.
3. DRAWINGS SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF LIFT AND SUPPORT LOCATIONS AND LOCATIONS OF TEMPORARY STRUCTURAL TIMBER MEMBER SUPPORTS AND TEMPORARY MEMBER REINFORCEMENT FOR THE REMOVAL AND REHABILITATION OF THE STRUCTURAL TIMBER TRUSS MEMBERS.
4. DRAWINGS OF METHODS OF ATTACHMENT TO THE STRUCTURAL TIMBER MEMBER. ADDING HOLES TO THE STRUCTURAL TIMBER MEMBER TO BE REUSED WILL NOT BE PERMITTED.

THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM 516, WHICH SHALL BE FULL COMPENSATION FOR ALL NECESSARY TOOLS, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF ODOT C&MS 501.05, AND TO THE SATISFACTION OF THE ENGINEER. THE BRIDGE SHALL BE SUPPORTED SUCH THAT POSITIVE CAMBER IS PROVIDED AT THE MIDSPAN OF SPAN IN THE MAGNITUDE OF 6”.

ITEM 530 SPECIAL – STRUCTURES: RESTORATION OF TIMBER TRUSS

RESTORE THE EXISTING TRUSS TO ITS ORIGINAL AS BUILT CONDITION BY REPLACING ALL FRACTURED OR DETERIORATED TIMBER MEMBERS NOTED UNDER THE “TRUSS” HEADING IN THE BRIDGE TIMBER SUMMARY TABLE ON SHEET 8/20. EACH MEMBER TO BE REPLACED SHALL BE THOROUGHLY MEASURED AND DOCUMENTED. THE REPLACEMENT MEMBER SHALL MATCH THE REPLACED MEMBER DIMENSIONALLY WITH ADJUSTMENTS TO FIT THE OVERALL TRUSS DIMENSIONS UNLESS SPECIFIED OTHERWISE.

NEW TIMBER MEMBERS SHALL BE MADE FROM AIR DRIED ROUGH CUT WHITE OAK, SELECT STRUCTURAL. FIELD CUT TO MATCH THE ORIGINAL TIMBER MEMBER THAT IT REPLACES. REPLACEMENT MEMBERS SHALL BE SIZED TO ACCOUNT FOR SHRINKAGE OF THE NEW TIMBER MEMBER IN THE FINAL STRUCTURE. PRIOR TO CUTTING AND SHAPING OF A REPLACEMENT MEMBER, THE CONTRACTOR SHALL MEASURE THE STRUCTURE TO DETERMINE THE DIMENSIONS AND DETAILS FOR THE REPLACEMENT MEMBER ON THE FINAL STRUCTURE. MEASUREMENT OF JUST THE MEMBER BEING REPLACED MAY NOT PROVIDE THE REQUIRED DIMENSIONS AND DETAILS DUE TO SHRINKAGE, DAMAGE, PREVIOUS REPAIRS, OR OTHER CAUSES. THE DIMENSIONS AND DETAILS SHALL BE RECORDED ON THE WORKING DRAWINGS.

THE CONTRACTOR SHALL SUBMIT THE WORKING DRAWINGS FOR REPLACEMENT TIMBER MEMBERS WITH DIMENSIONS AND DETAILS OF EXISTING AND PROPOSED TIMBER MEMBERS TO THE ENGINEER FOR ACCEPTANCE BEFORE THE REPLACEMENT TIMBER MEMBERS ARE CUT AND SHAPED.

EXISTING BOLTS, PINS, AND HARDWARE FOR THE TRUSS TIMBER MEMBER CONNECTIONS SHALL BE REUSED WHEN POSSIBLE. ALL REPLACEMENT AND NEW BOLTS, NUTS, WASHERS, STEEL PLATES, AND MISCELLANEOUS HARDWARE REQUIRED FOR THE RESTORATION OF THE WOOD TRUSS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

THE ABOVE WORK, OTHER THAN HARDWARE PAID UNDER ITEM 513, SHALL BE MEASURED FOR PAYMENT AS THE ACTUAL THOUSAND FEET BOARD MEASURE OF TIMBER USED FOR THE RESTORATION OF THE TIMBER TRUSS, OBTAINED USING ACTUAL SIZES AND ACTUAL LENGTHS OF TIMBER MEMBERS REPLACED.

THIS WORK WILL BE PAID FOR AT THE CONTRACT THOUSAND FEET BOARD MEASURE, MFBM, UNIT PRICE BID, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF ODOT C&MS 500, INCLUDING 501.01, 501.02, 501.04, 508, SUPPLEMENT 1072, AND TO THE SATISFACTION OF THE ENGINEER.


ITEM 530 SPECIAL – STRUCTURES: ADDITIONAL TIMBER

RESTORE THE EXISTING TRUSS TO ITS ORIGINAL AS BUILT CONDITION BY REPLACING ALL FRACTURED OR DETERIORATED TIMBER MEMBERS AS REQUIRED. RESTORATION WORK IS TO REUSE SOUND PORTIONS OF ORIGINAL TIMBER MEMBERS AND TO USE NEW TIMBER MEMBERS WHERE ORIGINAL TIMBER IS UNSUITABLE IN ORDER TO PRODUCE A SOUND AND RELIABLE REHABILITATED BRIDGE.

A PRELIMINARY ASSESSMENT OF THE FITNESS OF THE EXISTING TIMBER MEMBERS HAS BEEN MADE. A COMPLETE AND ACCURATE TABULATION OF THE CURRENT CONDITION OF THE TIMBER MEMBERS IS NOT POSSIBLE BECAUSE SOME OF THE MEMBERS ARE INACCESSIBLE OR HIDDEN. IF, DURING CONSTRUCTION, OTHER MEMBERS ARE FOUND TO BE DAMAGED, THE ENGINEER WILL EXAMINE THE MEMBER AT THAT TIME AND DETERMINE IF IT IS TO BE REUSED OR REPLACED. AN ADDITIONAL 0.53 THOUSAND BOARD FOOT HAS BEEN ESTABLISHED TO BE USED AS DIRECTED BY THE ENGINEER FOR THIS PURPOSE.

THE ABOVE WORK SHALL BE MEASURED FOR PAYMENT AS THE ACTUAL THOUSAND FEET BOARD MEASURE OF TIMBER USED FOR THE RESTORATION OF THE TIMBER TRUSS, OBTAINED USING ACTUAL SIZES AND ACTUAL LENGTHS OF TIMBER MEMBERS REPLACED.

THIS WORK WILL BE PAID FOR AT THE CONTRACT THOUSAND FEET BOARD MEASURE, MFBM, UNIT PRICE BID, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF ODOT C&MS 500, INCLUDING 501.01, 501.02, 501.04, 508, SUPPLEMENT 1072, AND TO THE SATISFACTION OF THE ENGINEER.

SFN 0549568	
DESIGN AGENCY	
	
DESIGNER BTR	CHECKER CML
REVIEWER 0 3/14/25	
PROJECT ID 117469	
SUBSET 6	TOTAL 20
SHEET 6	TOTAL 20

ITEM 511 – CONCRETE. MISC.: FORMLINER

THE FOLLOWING REQUIREMENTS SHALL BE REQUIRED WHERE "TEXTURE TYPE A" IS SHOWN IN THE PLANS. WHERE A TEXTURE IS NOT INDICATED THE CONCRETE SHALL BE FINISHED IN ACCORDANCE WITH THE ODOT C&MS 511.

FORMLINERS MATERIAL SHALL HAVE SUFFICIENT FIRMNESS TO RESIST DISTORTION FROM FRESHLY PLACED CONCRETE AND SUFFICIENT PLIABILITY TO PERMIT REMOVAL WITHOUT DAMAGE TO THE FORMLINERS OR TO EARLY AGE CONCRETE. FORMLINERS SHALL HAVE A SHORE HARDNESS OF APPROXIMATELY 25.

THE MINIMUM THICKNESS OF THE DEEPEST UNDERCUT IN THE TEXTURED FORMLINERS SHALL BE 1/2 INCH TO 5/8 INCH. FORMLINER PANELS SHALL BE A MINIMUM WIDTH OF 4'-0" AND IN LENGTHS TO PROVIDE CONTINUOUS LINERS FOR THE VERTICAL DIMENSIONS. IF DIMENSIONS TO BE FORMED ARE SMALLER THAN 4'-0" IN WIDTH, THE FORMLINER PANEL WIDTH SHALL MATCH THAT OF THE AREA TO WHICH IT IS BEING APPLIED.

FORMLINERS SHALL BE INSTALLED IN THE FORMS TO PROVIDE THE DIMENSIONAL RELATIONSHIP BETWEEN TEXTURED AND FLAT CONCRETE SURFACES AS SHOWN ON THE PLANS. FORMLINERS SHALL BE ATTACHED FIRMLY TO PRIMARY FORM ELEMENTS TO ENSURE THAT THE FORMLINERS WILL BE TRUE AND STRAIGHT IN THE VERTICAL POSITION. ADJACENT EDGES OF FORMLINER PANELS SHALL BE OVERLAPPED BY 1/16 INCH ON EITHER SIDE OF EACH PANEL.

AFTER FORMS ARE STRIPPED, IMPERFECTIONS IN THE FINISHED CONCRETE SHALL BE PATCHED WITH THE SAME MATERIALS AND MIX USED IN THE CONCRETE POUR TO RESTORE FULLY THE TEXTURED SURFACES TO THE SATISFACTION OF THE ENGINEER.

TEXTURES TO BE OBTAINED THROUGH THE USE OF FORMLINERS SHALL BE A SLIGHTLY ROUGH, GRANULAR SURFACE SIMILAR TO THE FOLLOWING STANDARD FORMLINER TEXTURE PATTERNS OR APPROVED EQUAL:

- CUSTOMROCK FORMLINERS PATTERN 1106 RANDOM CUT STONE (12" COURSING) KEYED
- FITZGERALD FORMLINERS PATTERN 17009 LIBERTY ISLAND STONE – 12"H

PAYMENT FOR FORMLINERS AND AESTHETIC TREATMENT, INCLUDING ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROVIDE THE FINAL PRODUCT, SHALL BE MADE UNDER ITEM 511: CONCRETE, MISC.: FORMLINER, ON A SQUARE FOOT BASIS OF AREA SHOWN IN THE PLANS.

ITEM SPECIAL – STRUCTURE. MISC.: TIMBER ROOF SYSTEM

INSTALL RAFTERS AND PURLINS TO SUPPORT THE ROOFING SYSTEM. NOTCH RAFTERS AT THE UPPER CHORD CONNECTIONS AS NECESSARY TO MATCH THE EXISTING STRUCTURE. THE ABOVE ITEMS SHALL BE MADE FROM ROUGH SAWN WHITE OAK, GRADE NO. 2 OR BETTER.

THIS WORK WILL BE PAID FOR AT THE CONTRACT THOUSAND FEET BOARD MEASURE, MFBM, UNIT PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 500, INCLUDING 501.01, 501.02, 501.04, 508, SUPPLEMENT 1072, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL – STRUCTURE. MISC.: MISCELLANEOUS FRAMING:

REPLACE KNEE BRACING, UPPER LATERAL BRACES AND RAFTERS, AND LONGITUDINAL ROOF BEAM AT SPECIFIED LOCATIONS. TIMBER SHALL BE ROUGH SAWN TO FIT THE SPECIFIC LOCATION. MEMBERS SHALL BE MADE FROM WHITE OAK, GRADE NO. 1 OR BETTER.

THIS WORK WILL BE PAID FOR AT THE CONTRACT THOUSAND FEET BOARD MEASURE, MFBM, UNIT PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 500, INCLUDING 501.01, 501.02, 501.04, 508, SUPPLEMENT 1072, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL – STRUCTURE. MISC.: BOARD AND BATTEN SIDING:

INSTALL THREE (3) HORIZONTAL LINES OF 2" X 4" NAILING BOARDS TO THE OUTSIDE OF THE WOOD TRUSSES AND TO THE ENDS OF THE TRUSS PORTALS AS INDICATED ON SHEET 16/20, SHIMMED, TRIMMED, AND BLOCKED AS NECESSARY TO PRODUCE A PLUMB AND STRAIGHT SURFACE FOR ATTACHMENT OF SIDING, AND ATTACH THE 1" X 10" X 13'-5" LONG VERTICAL SIDING BOARDS AND 1" X 2" X 13'-5" BATTENS.

NEW LUMBER FOR SIDING AND NAILERS SHALL BE KILN-DRIED, ROUGH SAWN POPLAR, NO. 2 OR BETTER. 8D (MIN. LENGTH) RING SHANK STAINLESS STEEL NAILS SHALL BE USED TO ATTACH THE SIDING AND BATTENS TO NAILING BOARDS.

THIS WORK WILL BE PAID FOR AT THE CONTRACT SQUARE FOOT UNIT PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 500, INCLUDING 501.01, 501.02, 501.04, 508, SUPPLEMENT 1072, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL – STRUCTURE. MISC.: TIMBER FLOORING (RUNNERS):

INSTALL TIMBER RUNNERS AS SHOWN ON PLANS. THE RUNNERS SHALL BE MADE FROM ROUGH SAWN WHITE OAK, GRADE NO. 2 OR BETTER.

THIS WORK WILL BE PAID FOR AT THE CONTRACT SQUARE FOOT UNIT PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 500, INCLUDING 501.01, 501.02, 501.04, 508, SUPPLEMENT 1072, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 513 STRUCTURAL STEEL MEMBERS. LEVEL UF. AS PER PLAN

EXISTING BOLTS, PINS, AND HARDWARE FOR THE TRUSS TIMBER MEMBER CONNECTIONS SHALL BE REUSED WHEN POSSIBLE. ALL REPLACEMENT AND NEW BOLTS, NUTS, WASHERS, STEEL PLATES, AND MISCELLANEOUS HARDWARE REQUIRED FOR THE COMPLETION OF THE PROJECT AND NOT OTHERWISE QUANTIFIED IN OTHER PAY ITEMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

ITEM 517 – RAILING. MISC: BRIDGE RAILING

CONSTRUCT BRIDGE RAILING AS SHOWN ON SHEETS 16-17/20.

PAYMENT FOR BRIDGE RAILING SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT, AND SHALL INCLUDE ALL COMPONENTS, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO FULLY INSTALL THE GUARDRAIL.

ITEM 606 – GUARDRAIL. MISC.: TIMBER

ITEM 606 – ANCHOR ASSEMBLY. MISC.: END ANCHORAGE

REFERENCE SHEETS 18 – 19 FOR TIMBER GUARDRAIL ITEM DETAILS.

PAYMENT FOR TIMBER GUARDRAIL SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT, AND SHALL INCLUDE ALL COMPONENTS, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO FULLY INSTALL THE GUARDRAIL.

PAYMENT FOR TIMBER GUARDRAIL ANCHOR ASSEMBLIES SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH ANCHOR ASSEMBLY, AND SHALL INCLUDE ALL COMPONENTS, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO FULLY INSTALL THE ANCHOR.

ITEM SPECIAL – DOUBLE LOCK STANDING SEAM METAL ROOFING:

INSTALL DOUBLE STANDING SEAM METAL ROOFING PANEL SECTIONS WITH FASCIA BOARDS, HURRICANE TIES, STANDARD EAVE WITH PANEL STARTER, RAKE-STARTING ON AND TERMINATING OFF-MODULE WITHOUT WALL PANEL, AND RIDGE CAP TRIM.

PANELS:

24 GAUGE STEEL CONFORMING TO ASTM A-653 STRUCTURAL GRADE 33 WITH G90 (1.25 OZ.) GALVANIZED SUBSTRATE.

FINISH SHALL BE A TWO COAT SYSTEM COMPRISED OF ONE COAT OF FULL STRENGTH 70% RESIN KYNAR 500 FLUOROCARBON OVER A SMOOTH COAT OF CORROSION RESISTANT BASED ON PRIMER.

COLOR OF THE PANELS WILL BE SELECTED BY THE ATHENS COUNTY ENGINEER. COLOR CHIP SAMPLES FOR THE MANUFACTURER OF THE PANELS THAT THE CONTRACTOR PROPOSES TO USE MUST BE SUBMITTED FOR APPROVAL OF COLOR SAMPLE, IF ANY, THAT IS SELECTED FOR USE.

PANELS SHALL BE WARRANTED TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP. FINISH SHALL BE WARRANTED AGAINST PEELING, CRACKING, OR CHECKING FOR A PERIOD OF 25 YEARS AND CHALKING IN EXCESS OF THE NUMERICAL RATING OF 8 WHEN MEASURED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN ASTM D-4214-07 (2015) FOR A PERIOD OF 20 YEARS AND SHALL NOT CHANGE COLOR MORE THAN 5 E HUNTER UNITS WHEN MEASURED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN ASTM D-2244-16 FOR A PERIOD OF 20 YEARS; ALL DATES BEGINNING THE DAY OF SHIPMENT.

METAL ROOFING WARRANTY PACKAGE SHALL BE COMPLETED AND SUBMITTED TO THE ATHENS COUNTY ENGINEER.

RIDGE CAP AND TRIM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATIONS AND SHALL BE THE SAME MATERIAL, GAUGE, FINISH, AND COLOR AS THE PANELS.

FASTENERS:


PANELS SHALL BE INSTALLED USING #10 x 1" TYPE A SELF-TAPPING SCREWS AND MEDALLION-LOK UL-90 CLIPS (OR EQUAL). FASTENERS SHALL BE CARBON STEEL OR STAINLESS STEEL. PLACEMENT OF CLIPS SHALL BE AT 30" MAXIMUM SPACING BETWEEN CENTERS OF CLIPS.

HURRICANE TIES SHALL BE 18 GA. SIMPSON STRONG-TIE PRODUCTS OR APPROVED EQUIVALENT. SUBMIT PRODUCTS FOR APPROVAL PRIOR TO CONSTRUCTION.

LUMBER FOR FASCIA BOARDS SHALL BE KILN-DRIED ROUGH FULL SAWN POPLAR, GRADE 2 OR BETTER. FASCIA BOARDS SHALL BE STAINED THE SAME AS THE SIDING. FASCIA BOARDS SHALL BE STAINED PRIOR TO INSTALLATION OF METAL ROOFING.

THIS WORK WILL BE PAID FOR AT THE CONTRACT SQUARE FOOT UNIT PRICE BID FOR ITEM SPECIAL – STRUCTURE, MISC.: METAL ROOFING. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 500, AND TO THE SATISFACTION OF THE ENGINEER.

THIS ITEM SHALL INCLUDE HURRICANE TIES AND REPLACEMENT OF ROOF BOARDS NOT OTHERWISE COVERED UNDER OTHER ITEMS, SUCH AS EAVES. FASCIA, RIDGE POLE BOARDS, SHEATHING, AND RAFTERS SHALL BE PAID FOR UNDER ITEM SPECIAL – STRUCTURE, MISC.: TIMBER ROOF SYSTEM.

SFN 0549568	
DESIGN AGENCY	
	
DESIGNER CML	CHECKER PES
REVIEWER TML 3/14/25	
PROJECT ID 117469	
SUBSET 7	TOTAL 20
SHEET 7	TOTAL 20


ESTIMATED QUANTITIES					CALC BY: CML CHECK BY: PES	DATE: 3/6/2025 DATE: 3/7/2025
ITEM	EXT	QUANTITY (01/STR/BR)	UNIT	DESCRIPTION	SEE SHEET	
STRUCTURE REPAIR (ATH-CR46-00.96)						
201	11000	LS		CLEARING AND GRUBBING		
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	5/20	
301	56000	5	CY	ASPHALT CONCRETE BASE, PG64-22, (449)		
304	20000	7	CY	AGGREGATE BASE		
407	10000	3	GAL	TACK COAT		
441	10000	2	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22		
509	10000	2487	LB	EPOXY COATED REINFORCING STEEL		
511	45710	16	CY	CLASS QC1 CONCRETE, ABUTMENT		
511	71200	202	SF	CONCRETE, MISC.: FORMLINER	7/20	
512	10000	23	SY	SEALING OF CONCRETE SURFACES		
513	10001	LS		STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	7/20	
513	10260	52757	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3		
514	27700	2050	SF	FIELD PAINTING, MISC.: WOOD STAIN, AS PER PLAN	6/20	
514	27800	LS		FIELD PAINTING, MISC.: FIRE RETARDANT, AS PER PLAN	6/20	
516	10501	24	FEET	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL, AS PER PLAN	16/20	
516	41100	4	EACH	1/8" PREFORMED BEARING PAD, TYPE CDP		
516	42000	8	EACH	ELASTOMERIC BEARING PAD, MISC.: 3/4" ELASTOMERIC BEARING PAD, TYPE PEP, WITH LOAD PLATE AND ANCHORS		
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6/20	
517	76300	129	FT	RAILING, MISC.: BRIDGE RAILING	7/20	
530 SPECIAL	00600	750	SF	STRUCTURE, MISC.: TIMBER FLOORING (DECKING)	15/20	
530 SPECIAL	00600	540	SF	STRUCTURE, MISC.: TIMBER FLOORING (RUNNER)	7/20	
530 SPECIAL	00600	2050	SF	STRUCTURE, MISC.: BOARD AND BATTEN SIDING	7/20	
530 SPECIAL	00600	1570	SF	STRUCTURE, MISC.: DOUBLE LOCK STANDING SEAM METAL ROOFING	7/20	
530 SPECIAL	10700	0.22	MFBM	STRUCTURE, MISC.: RESTORATION OF TIMBER TRUSS	6/20	
530 SPECIAL	10700	2.3	MFBM	STRUCTURE, MISC.: TIMBER ROOF SYSTEM	7/20	
530 SPECIAL	10700	0.92	MFBM	STRUCTURE, MISC.: MISCELLANEOUS TIMBER	7/20	
530 SPECIAL	10700	0.6	MFBM	STRUCTURE, MISC.: ADDITIONAL TIMBER	6/20	
602	97000	20	SF	MASONRY, MISC.: RESET OR REPLACE SUBSTRUCTURE STONES	6/20	
602	98100	50	FT	MASONRY, MISC.: REPOINTING MORTAR JOINTS	6/20	
606	98000	120	FT	GUARDRAIL, MISC.: TIMBER	7/20	
606	99200	4	EACH	ANCHOR ASSEMBLY, MISC.: END ANCHORAGE	7/20	
659	98700	LS		SEEDING, MISC.: SEEDING AND MULCHING, CLASS 4B		
INCIDENTALS						
103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE AND FOR PAYMENT BOND		
614	10001	LS		MAINTAINING TRAFFIC, AS PER PLAN	3/20	
614	12420	LS		DETOUR SIGNING	3/20	
623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
624	10000	LS		MOBILIZATION		

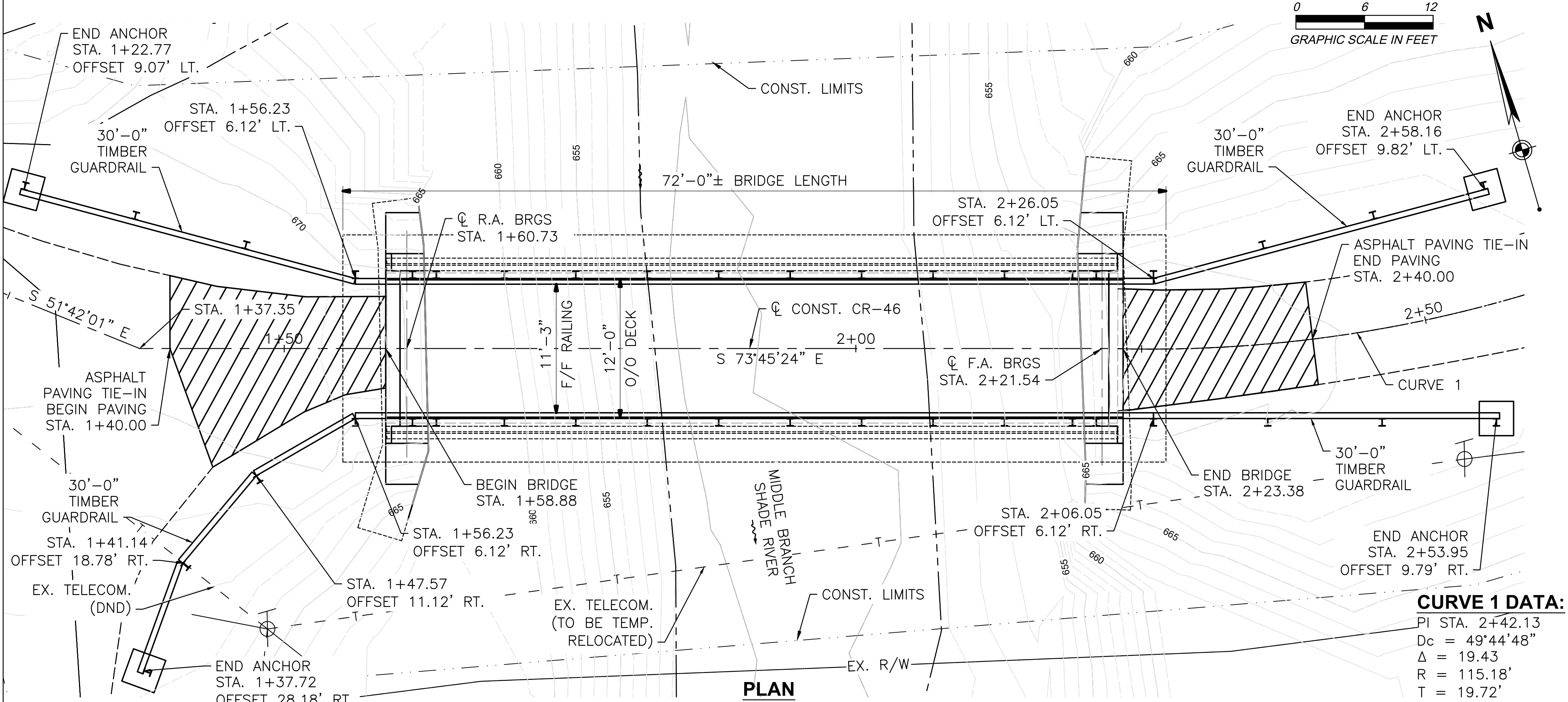
BRIDGE TIMBER SUMMARY TABLE										CALC BY: CML CHECK BY: PES	DATE: 12/12/2024 DATE: 12/12/2024
MEMBER	SIZE	NUMBER OF PIECES REQUIRED	TOTAL LENGTH (INCHES)	MFBM	LOCATIONS (LEFT)	LOCATIONS (RIGHT)	SPECIES	FINISH	TREATMENT		
TRUSS				0.22							
VERTICAL	6 3/4" x 6 3/4" x 14'-6"	4	174	0.22	L1-U1, L7-U7	L1-U1, L7-U7	WHITE OAK SELECT STRUCTURAL	FULL SAWN	RETARDANT		
FLOORING				8.47							
DECK PLANKS	2" x 10" x 12'-0"	372	144	7.44	-	-	WHITE OAK GRADE 1	FULL SAWN	RETARDANT		
RUNNERS	1" x 10"	-	7,440	1.03	-	-	WHITE OAK GRADE 2	FULL SAWN	RETARDANT		
TIMBER ROOF SYSTEM				2.30							
RAFTER	2" x 4" x 11'-0"	144	132	1.06	-	-	WHITE OAK GRADE 2	FULL SAWN	RETARDANT		
PURLINS	1" x 6"	-	20,736	0.86	-	-	WHITE OAK GRADE 2	FULL SAWN	RETARDANT		
COLLAR TIES	2" x 4" x 8'-0"	72	96	0.38	-	-	WHITE OAK GRADE 2	FULL SAWN	RETARDANT		
MISCELLANEOUS				0.92							
UPPER LATERAL RAFTERS	4 3/4" x 5 1/2" x 15'-6"	11	186	0.37	-	-	WHITE OAK GRADE 2	FULL SAWN	RETARDANT		
UPPER CROSS BRACING	4" x 4" x 12'-0"	16	144	0.26	-	-	WHITE OAK GRADE 2	FULL SAWN	RETARDANT		
LONGITUDINAL ROOF BEAM	4 1/2" x 4" x 8'-0"	20	96	0.24	-	-	WHITE OAK GRADE 2	FULL SAWN	RETARDANT		
KNEE BRACING	4" x 4" x 4'-9"	4	57	0.03	-	-	WHITE OAK GRADE 1	FULL SAWN	RETARDANT		
BEARING BLOCK	4" x 7" x 1'-3"	8	15	0.02	-	-	WHITE OAK GRADE 1	FULL SAWN	RETARDANT		

LIST OF ABBREVIATIONS:

ABUT.	—	ABUTMENT
APPR.	—	APPROACH
BL	—	BASELINE
BOT.	—	BOTTOM
BET.	—	BETWEEN
BRG.	—	BEARING
C/C	—	CENTER TO CENTER
CIP	—	CAST IN PLACE
C.J.	—	CONSTRUCTION JOINT
CONT.	—	CONTINUED
CL	—	CENTERLINE
CLR.	—	CLEAR
CONST.	—	CONSTRUCTION
DIA.	—	DIAMETER
E.F.	—	EACH FACE
ELEV.	—	ELEVATION
EQ.	—	EQUAL
EST.	—	ESTIMATED
EX.	—	EXISTING
EXP.	—	EXPANSION
F.A.	—	FORWARD ABUTMENT
FTG.	—	FOOTING
INCR.	—	INCREMENT
MAX.	—	MAXIMUM
MIN.	—	MINIMUM
M.O.T.	—	MAINTENANCE OF TRAFFIC
N.F.	—	NEAR FACE
NTS	—	NOT TO SCALE
NO.	—	NUMBER
O/O	—	OUT TO OUT
NP.	—	PROPOSED
PT.	—	POINT
PVMT.	—	PAVEMENT
R.A.	—	REAR ABUTMENT
REF.	—	REFERENCE
REQ'D	—	REQUIRED
SER.	—	SERIES
SPA.	—	SPACES
SYP	—	SOUTHERN YELLOW PINE
TEMP.	—	TEMPORARY
T/S	—	TOE OF SLOPE
T/T	—	TOE TO TOE
TYP.	—	TYPICAL
U.N.O.	—	UNLESS NOTED OTHERWISE
VERT.	—	VERTICAL
W/	—	WITH

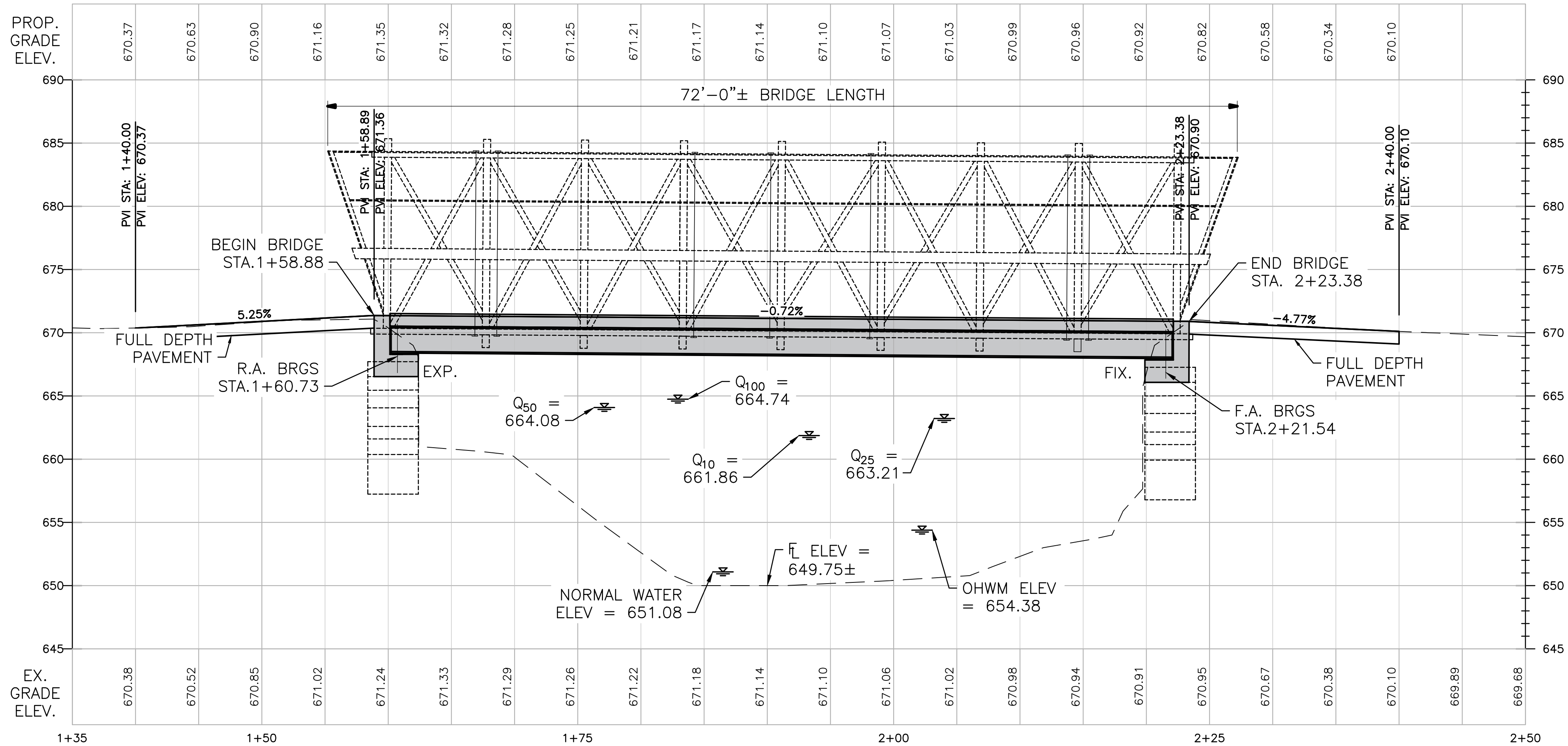
GENERAL SUMMARY AND MEMBER TABLE
BRIDGE NO. ATH-CR46-0096
BLACKWOOD COVERED BRIDGE OVER MIDDLE BRANCH OF SHADE RIVER

SFN 0549568	
DESIGN AGENCY	
	
DESIGNER CML	CHECKER PES
REVIEWER TML 3/14/25	
PROJECT ID 117469	
SUBSET 8	TOTAL 20
SHEET 8	TOTAL 20



CURVE 1 DATA:

PI STA. 2+42.13
Dc = 49°44'48"
Δ = 19.43
R = 115.18'
T = 19.72'
L = 39.05'



PROFILE

BENCHMARK DATA

BM #1 N=436512.119, E=2117667.862 ELEV. 669.41, PK NAIL
BM #2 N=436485.557, E=2117390.139 ELEV. 672.40, PK NAIL

NOTE:

GUARDRAIL LOCATIONS ARE GIVEN TO THE FRONT FACE OF GUARDRAIL POST.

HYDRAULIC DATA

DRAINAGE AREA = 29.2 SQ. MILES

DESIGN FLOOD: Q(10) = 2,570 CFS V(10) = 5.06 FT/S
SCOUR DESIGN: Q(25) = 3,400 CFS V(25) = 5.29 FT/S
SCOUR CHECK: Q(50) = 4,070 CFS V(50) = 5.44 FT/S
FEMA: Q(100) = 4,790 CFS V(100) = 5.71 FT/S

STRUCTURE CLEARS THE 10-YR DESIGN HIGH WATER BY 6.09 FEET.
STRUCTURE CLEARS THE FIS HIGH WATER BY 3.32 FEET.
DESIGN SCOUR = 16.07 FEET.

EXISTING STRUCTURE

TYPE: SINGLE SPAN COVERED BRIDGE WITH MULTIPLE KINGPOST TRUSS, TIMBER DECKING AND FLOOR SYSTEM, SUPPORTED ON STONE ABUTMENTS.

SPAN: 60'-5"± C/C BEARINGS

WIDTH: 14'-2"± F/F RAILING, 14'-2"± DECKING

LOADING: UNKNOWN

SKEW: NONE DATE BUILT: 1879

APPROACH SLAB: NONE NRHP NO: 78002004

ALIGNMENT: TANGENT

CROWN: NONE

DISPOSITION: REMOVE EXISTING FLOORING SYSTEM FROM EXISTING TRUSS THAT IS TO REMAIN. INSTALL NEW DECKING AND FLOORING SYSTEM AS A NAIL LAMINATED TIMBER DECK WITH RUNNING BOARDS ON SINGLE SPAN STEEL BEAMS. MODIFY EXISTING BEAM SEAT TO MAINTAIN DECK PROFILE.

PROPOSED STRUCTURE

TYPE: SINGLE SPAN COVERED TIMBER KINGPOST TRUSS WITH TIMBER DECKING AND FLOOR SYSTEM ON STEEL BEAMS, SUPPORTED ON STONE AND CONCRETE CAPPED ABUTMENTS.

SPAN: 60'-9¾" C/C BEARINGS

WIDTH: 11'-3" F/F RAILING, 12'-0" DECKING

LOADING: HL-93 (NON-CONCURRENT)
PEDESTRIAN LIVE LOAD: 0.090 KSF (NON-CONCURRENT)

SKEW: NONE DATE BUILT: 1881

APPROACH SLAB: NONE NRHP NO: 78002004

ALIGNMENT: TANGENT

CROWN: NONE

COORDINATES: LATITUDE: 39° 11' 50.00" N
LONGITUDE: 81° 28' 29.00" W

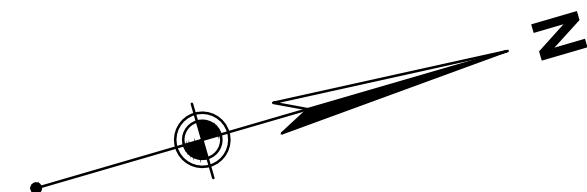


Diagram illustrating the cross-section of a bridge deck and support structure, showing various layers, reinforcement, and dimensions.

Dimensions and Tolerances:

- Top width: $3'-4" \pm \text{MIN.}$, $3'-8\frac{3}{4}" \pm \text{MAX.}$
- Width below top: $1'-3"$
- Width below that: $2'-1" \pm \text{MIN.}$, $2'-5\frac{3}{4}" \pm \text{MAX.}$
- Width below that: $7\frac{1}{8}"$
- Width below that: $1'-5\frac{7}{8}" \pm \text{MIN.}$, $1'-10\frac{5}{8}" \pm \text{MAX.}$
- Deck thickness: $10"$
- Clearance (CLR.): $2"$ (TYP.)
- Bottom width: $1'-0"$ (TYP.)

Materials and Layers:

- TYPE C, $2" \times 1"$ JOINT FILLER AS PER ODOT SCD AS-1-15
- $1.25"$ ASPHALT SURFACE COURSE
- $4"$ ASPHALT CONCRETE BASE
- $6"$ AGGREGATE BASE

Reinforcement and Structural Elements:

- 2-A503
- A508
- 2-A503
- A507
- 2-A501
- 2-A501
- C.J.
- 2-A501
- A506
- 1-A501
- D602
- 2-A501
- 4-A801
- 1-A501
- 4-A801

Other Components:

- DECK RUNNER
- DECK
- PROP BEAM W24x192
- ELASTOMERIC BEARING AND ANCHOR, SEE NOTE 3
- ELEV. 668.29
- ELEV. 666.55 \pm
- EX. STONE ABUTMENT

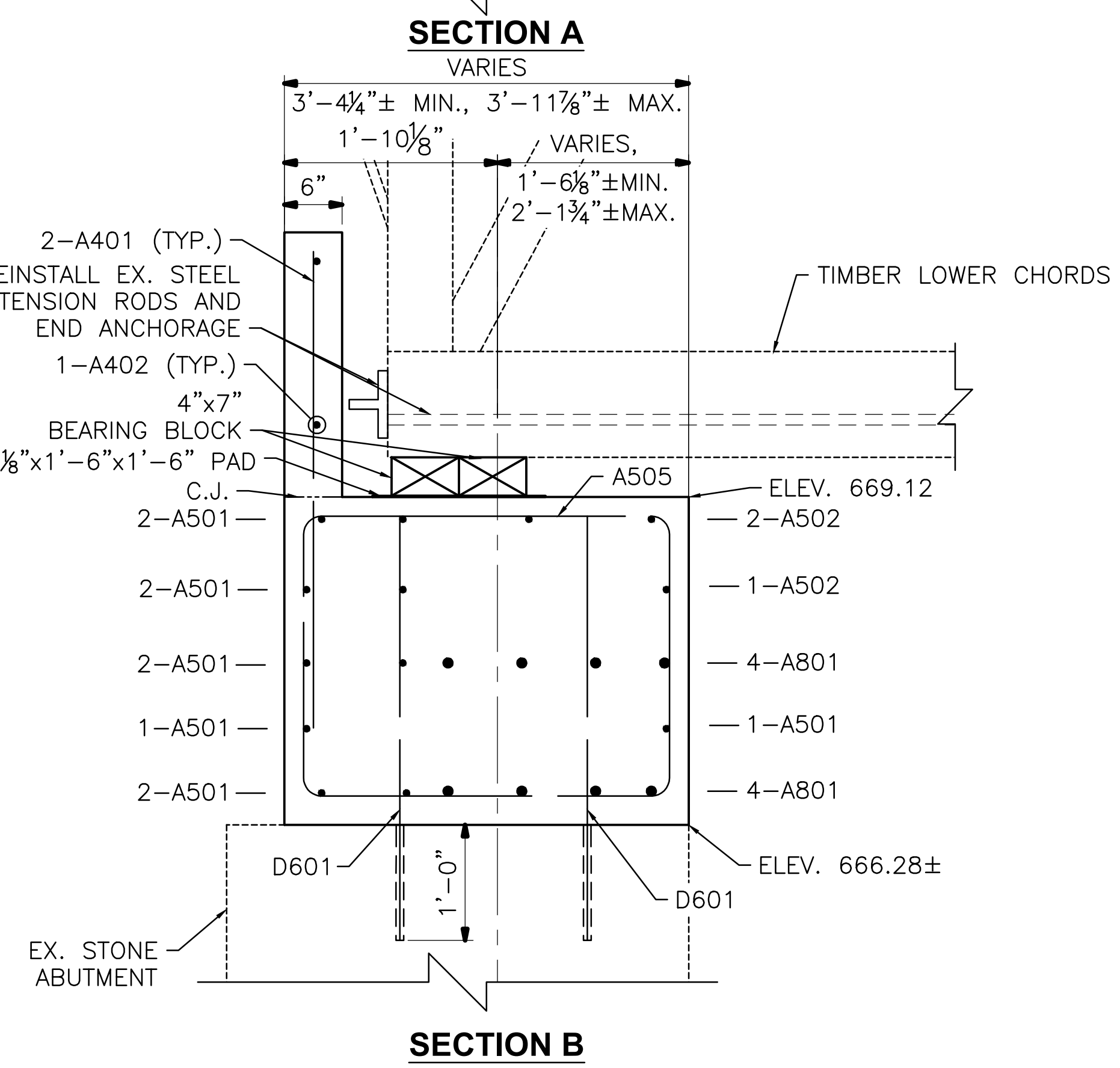
VARIES
 $3'-4" \pm$ MIN., $3'-8\frac{3}{4}" \pm$ MAX.
 $1'-10\frac{1}{8}"$
 $1'-5\frac{7}{8}" \pm$ MIN.
 $1'-10\frac{1}{8}" \pm$ MAX.
 6"
 2-A401 (TYP.)
 REINSTALL EX. STEEL TENSION RODS AND END ANCHORAGE
 1-A402 (TYP.)
 4"x7"
 BEARING BLOCK
 $\frac{1}{8}" \times 1'-6" \times 1'-6"$ PAD
 C.J.
 A504
 ELEV. 669.56
 2-A501
 2-A501
 2-A501
 1-A501
 1-A501
 2-A502
 1-A502
 4-A801
 1-A501
 4-A801
 D601
 1'-0"
 D601
 ELEV. 666.55±
 EX. STONE ABUTMENT
 TIMBER LOWER CHORDS

NOTES:

1. PROVIDE FORMLINER ON ALL VERTICAL FACES OF CONCRETE EXPOSED IN THE FINAL CONDITION.
2. SEE SHEET 11/20 FOR FORWARD ABUTMENT DETAILS.
3. SEE SHEET 17/20 FOR BEARING DETAILS.
4. SEE SHEET 16/20 FOR EXPANSION JOINT DETAILS.




REAR ABUTMENT ELEVATION

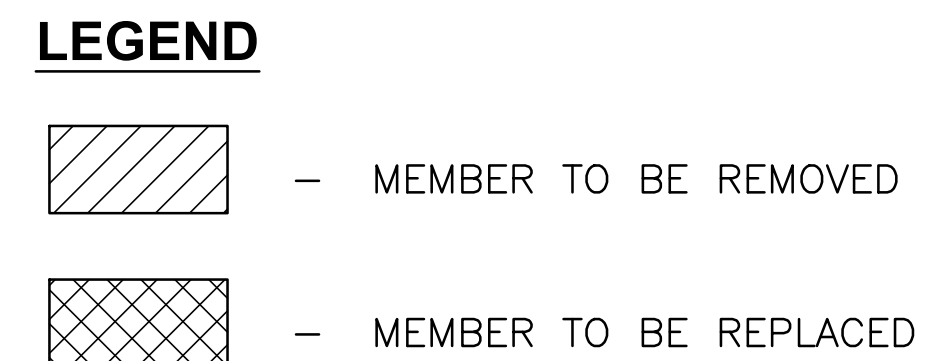


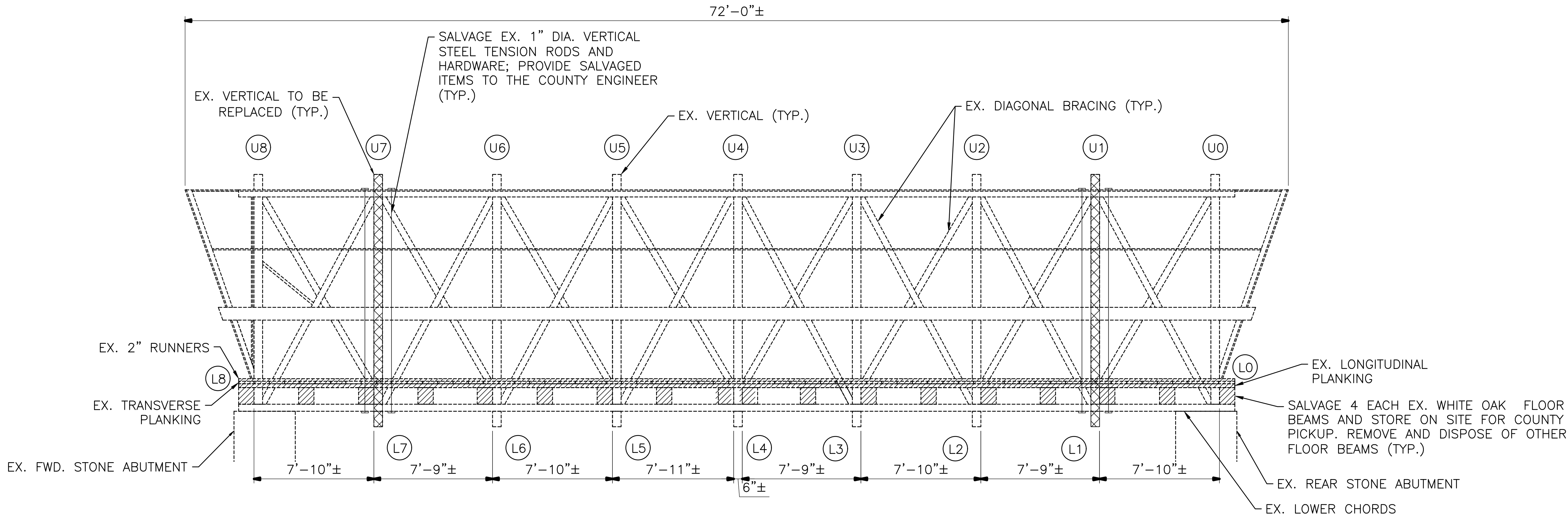
- NOTES:**

 1. PROVIDE FORMLINER ON ALL VERTICAL FACES OF CONCRETE EXPOSED IN THE FINAL CONDITION.
 2. SEE SHEET 10/20 FOR REAR ABUTMENT DETAILS.
 3. SEE SHEET 17/20 FOR BEARING DETAILS.
 4. SEE SHEET 16/20 FOR EXPANSION JOINT DETAILS.

LEGEND

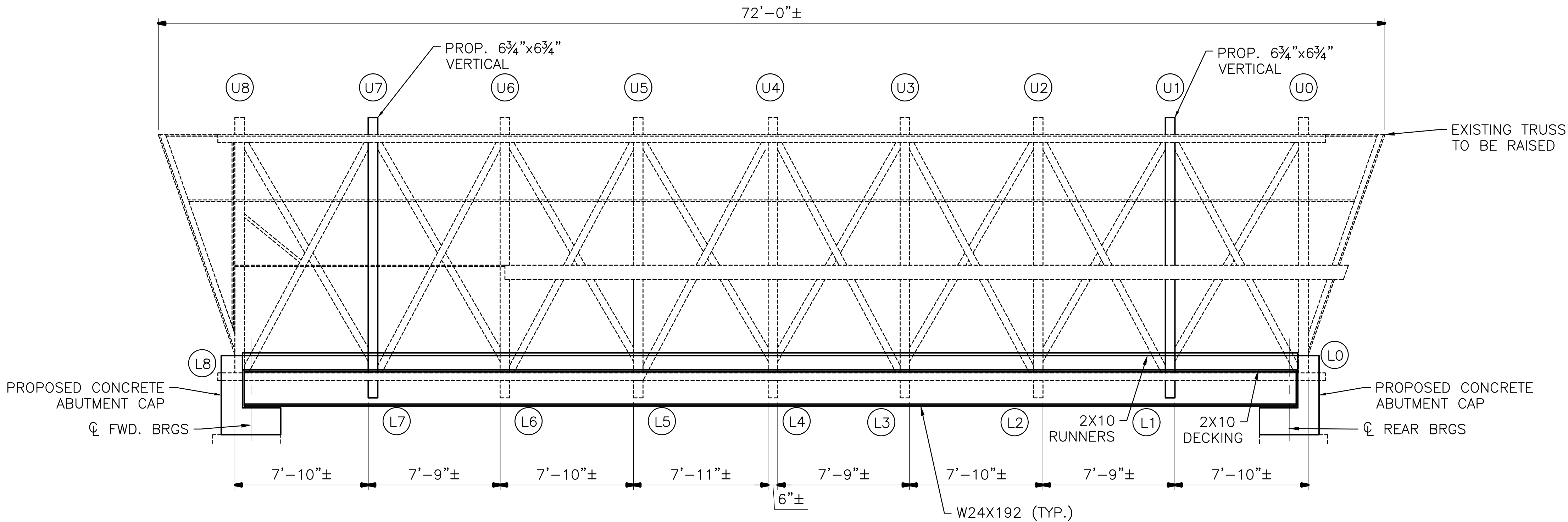
	— EXISTING ABUTMENT STONE TO BE REMOVED
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EXISTING RIGHT TRUSS SECTION

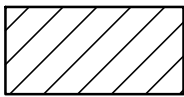
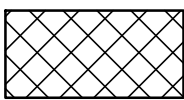
(VIEW FROM INTERIOR FACE)

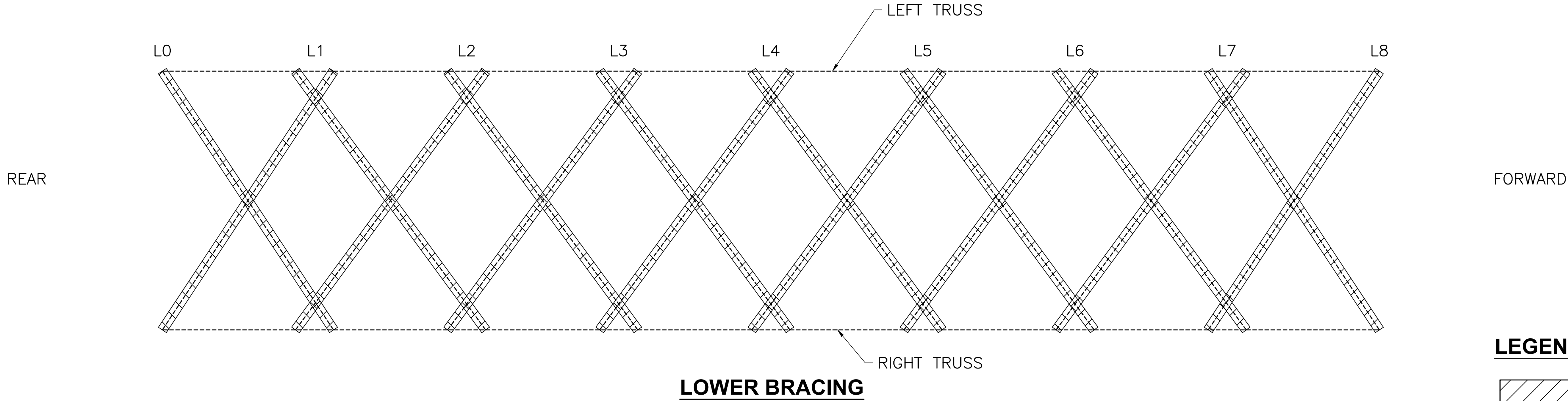
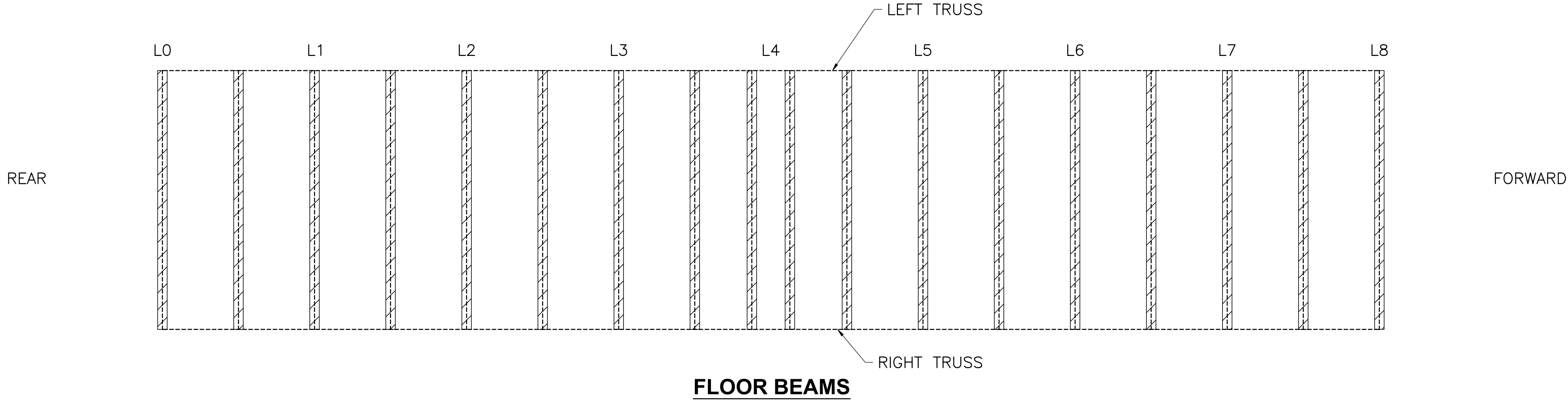
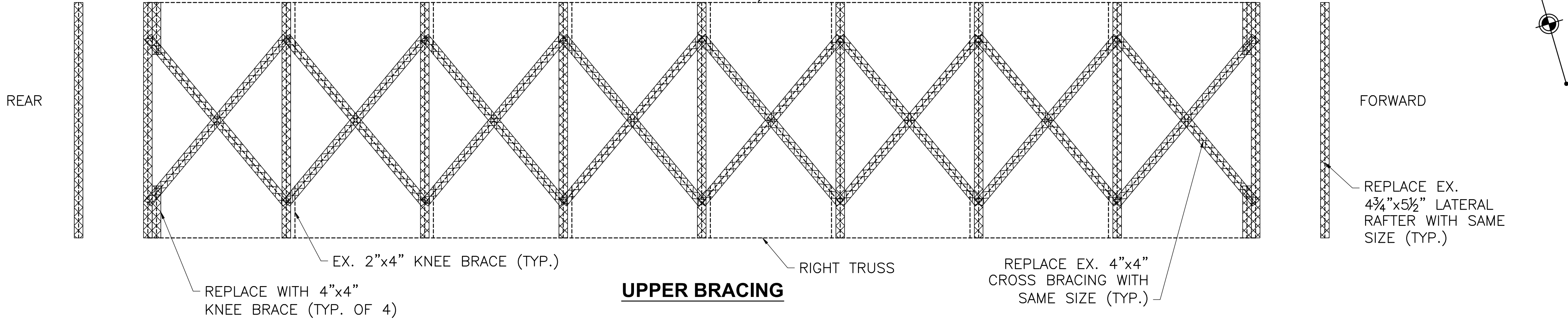


PROPOSED RIGHT TRUSS SECTION

(VIEW FROM INTERIOR FACE)

LEGEND

-  - MEMBER TO BE REMOVED
-  - MEMBER TO BE REPLACED



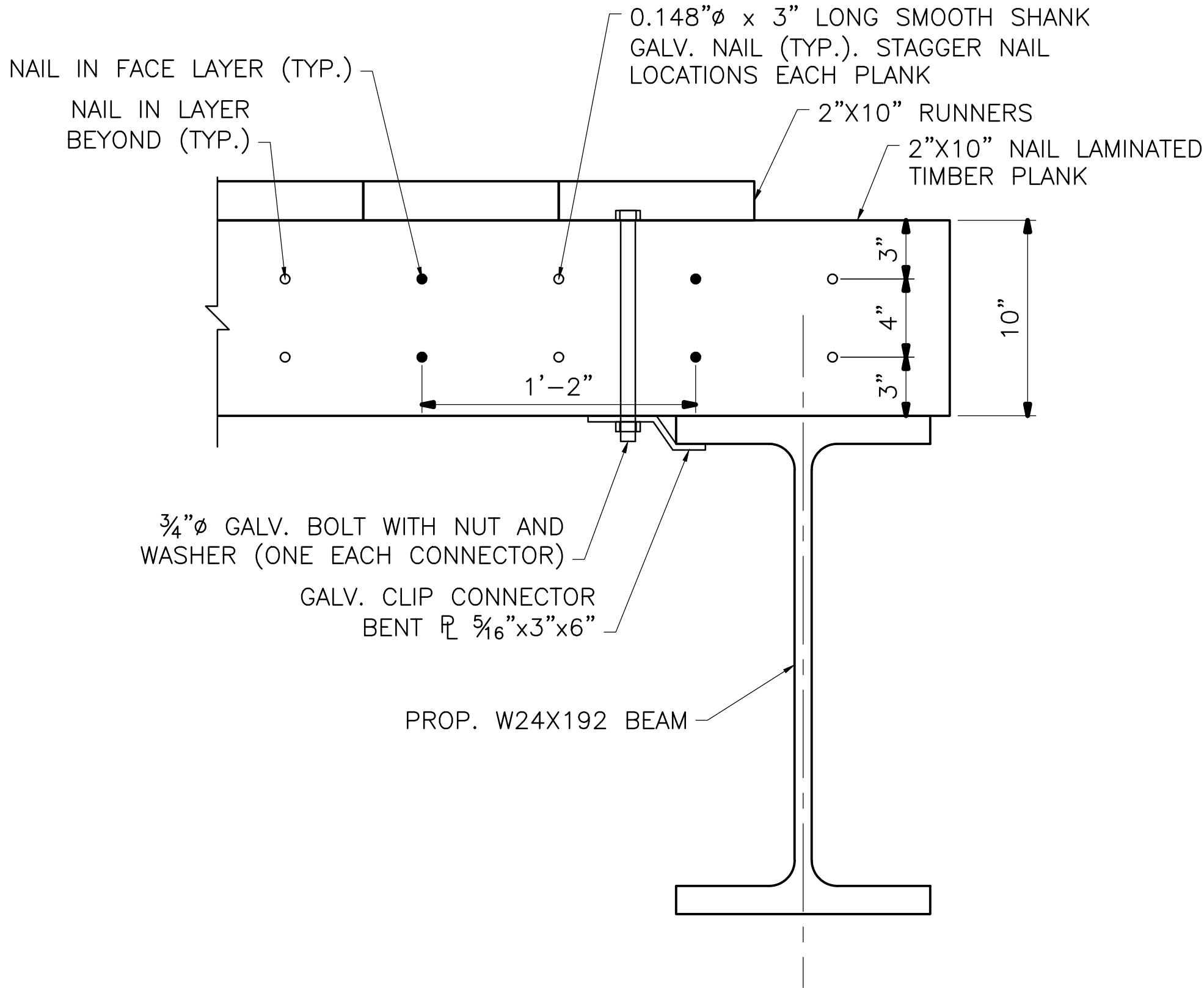
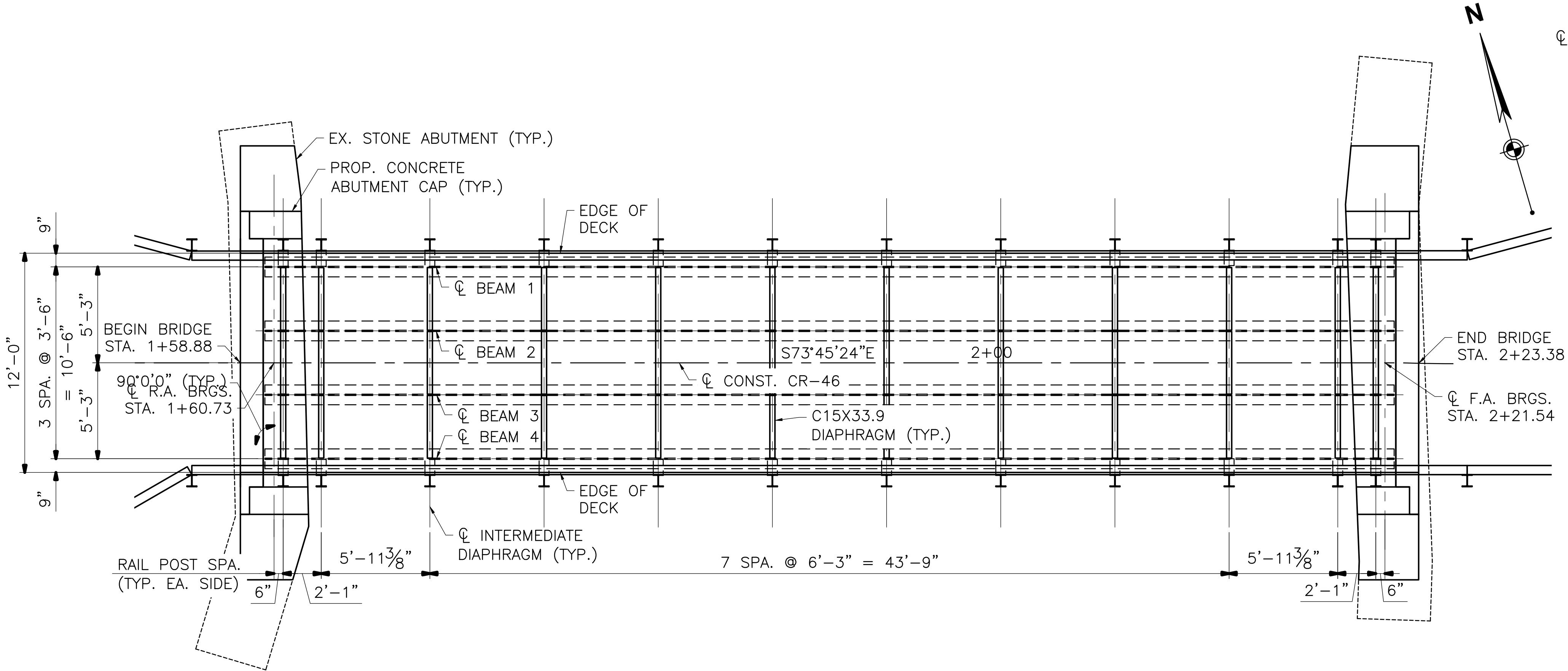
LEGEND

	— FLOOR BEAMS AND LOWER BRACING MEMBERS TO BE REMOVED IN THEIR ENTIRETY
	— KNEE BRACES AND UPPER BRACING MEMBERS TO BE REMOVED AND REPLACED

BRACING AND FLOOR BEAM PLANS
BRIDGE NO. ATH-CR46-0096
BLACKWOOD COVERED BRIDGE OVER MIDDLE BRANCH OF SHADE RIVER

SFN		0549568
DESIGNER		CML
CHECKER		PES
REVIEWER		TML 3/14/25
PROJECT ID		117469
SUBSET	TOTAL	
14	20	
SHEET	TOTAL	
14	20	

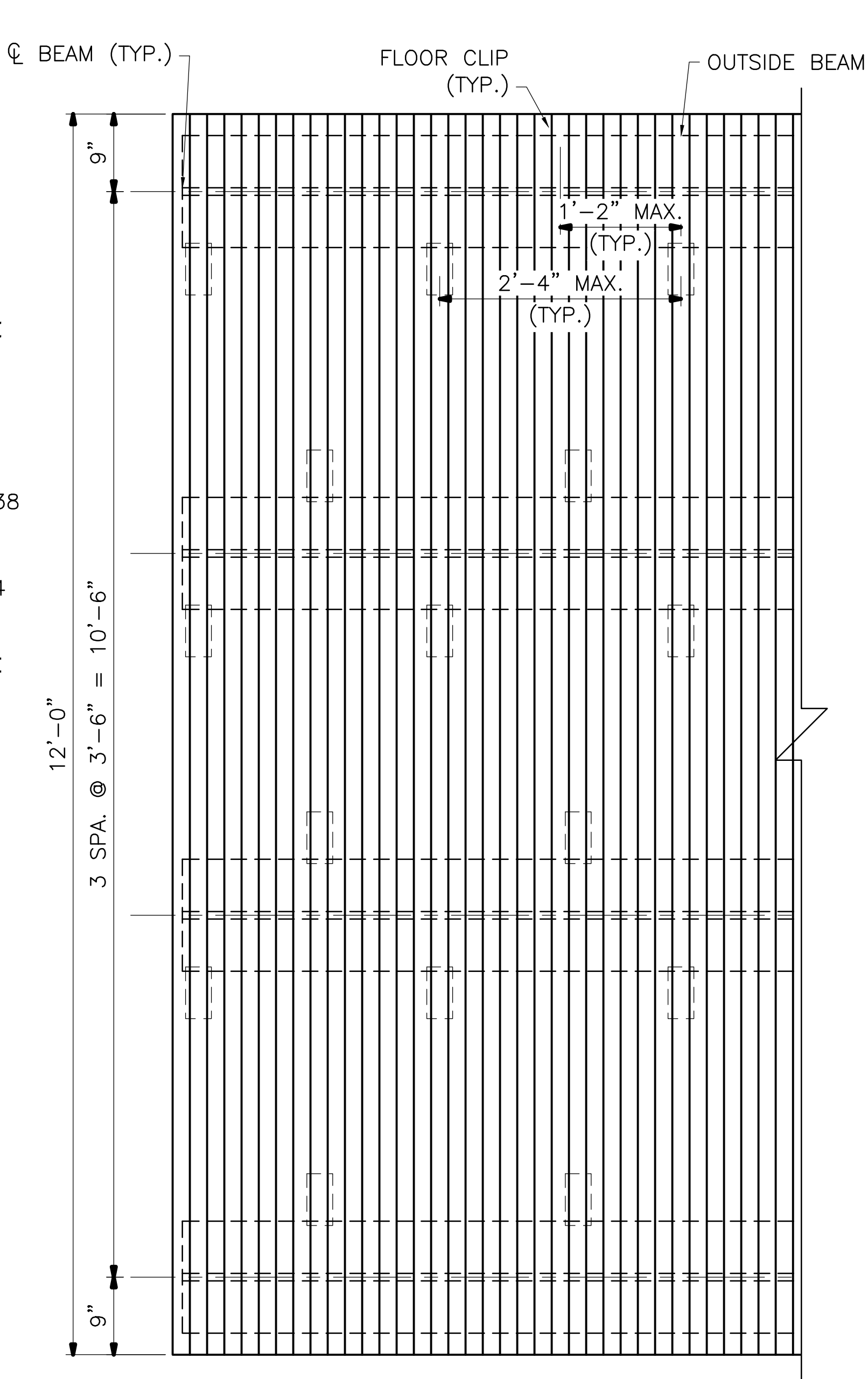




DECK LAMINATION DETAIL

FINAL DECK SURFACE AND TOP OF HAUNCH ELEVATION TABLE						
	LOCATION	CL R.A. BRGS.	SPAN 1			CL F.A. BRGS.
			1/4 SPAN	1/2 SPAN	3/4 SPAN	
BEAM 1	STATION	1+60.73	1+75.93	1+91.14	2+06.34	2+21.54
	TOP OF HAUNCH ELEVATION	670.51	670.44	670.34	670.22	670.08
	DEAD LOAD DEFLECTION	0.000	0.034	0.048	0.034	0.000
	FINAL DECK ELEVATION	671.35	671.24	671.13	671.02	670.91
BEAM 2	STATION	1+60.73	1+75.93	1+91.14	2+06.34	2+21.54
	TOP OF HAUNCH ELEVATION	670.51	670.44	670.35	670.22	670.08
	DEAD LOAD DEFLECTION	0.000	0.037	0.052	0.037	0.000
	FINAL DECK ELEVATION	671.35	671.24	671.13	671.02	670.91
BEAM 3	STATION	1+60.73	1+75.93	1+91.14	2+06.34	2+21.54
	TOP OF HAUNCH ELEVATION	670.51	670.44	670.35	670.22	670.08
	DEAD LOAD DEFLECTION	0.000	0.009	0.010	0.004	0.000
	FINAL DECK ELEVATION	671.35	671.24	671.13	671.02	670.91
BEAM 4	STATION	1+60.73	1+75.93	1+91.14	2+06.34	2+21.54
	TOP OF HAUNCH ELEVATION	670.51	670.44	670.34	670.22	670.08
	DEAD LOAD DEFLECTION	0.000	0.034	0.048	0.034	0.000
	FINAL DECK ELEVATION	671.35	671.24	671.13	671.02	670.91

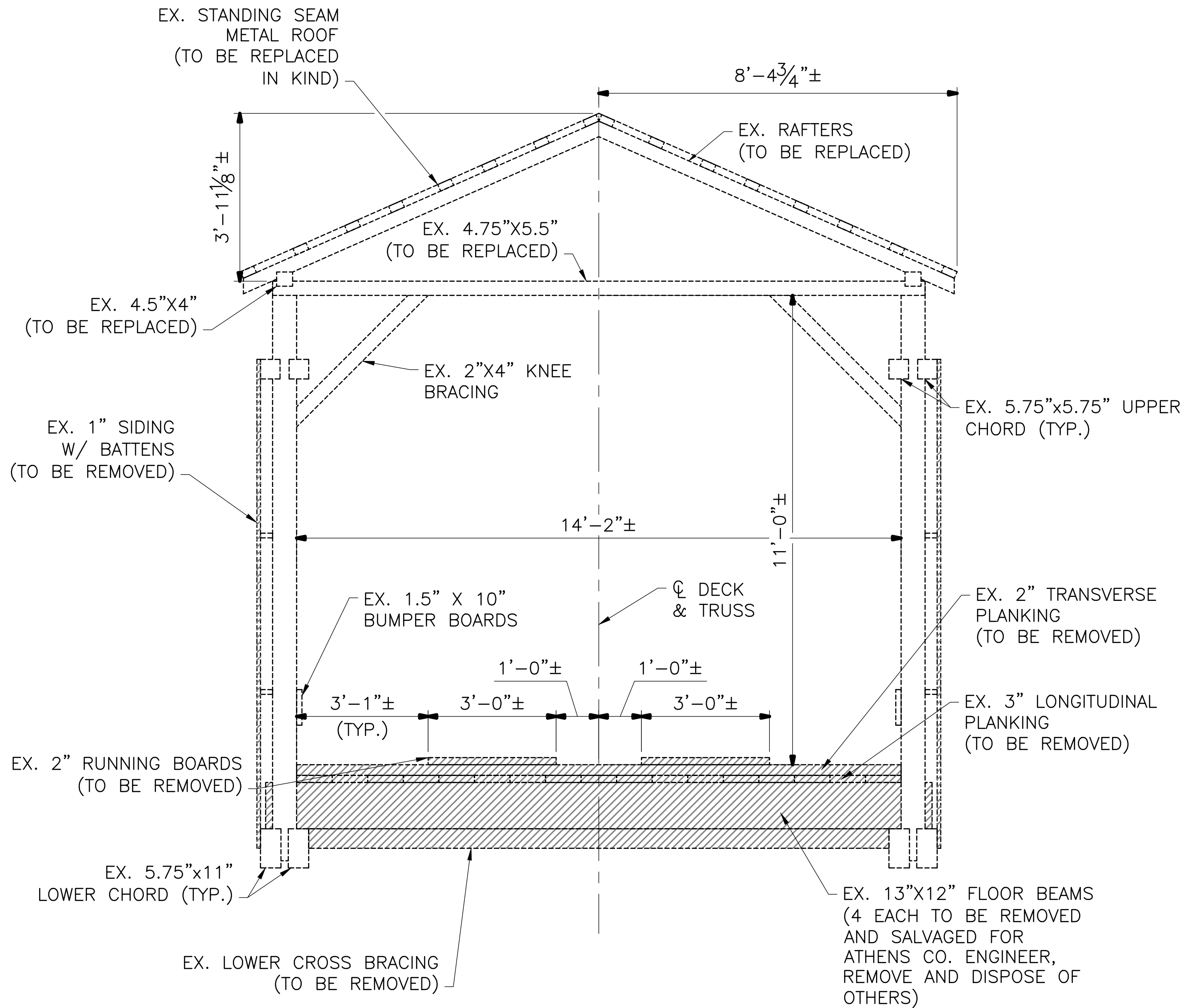
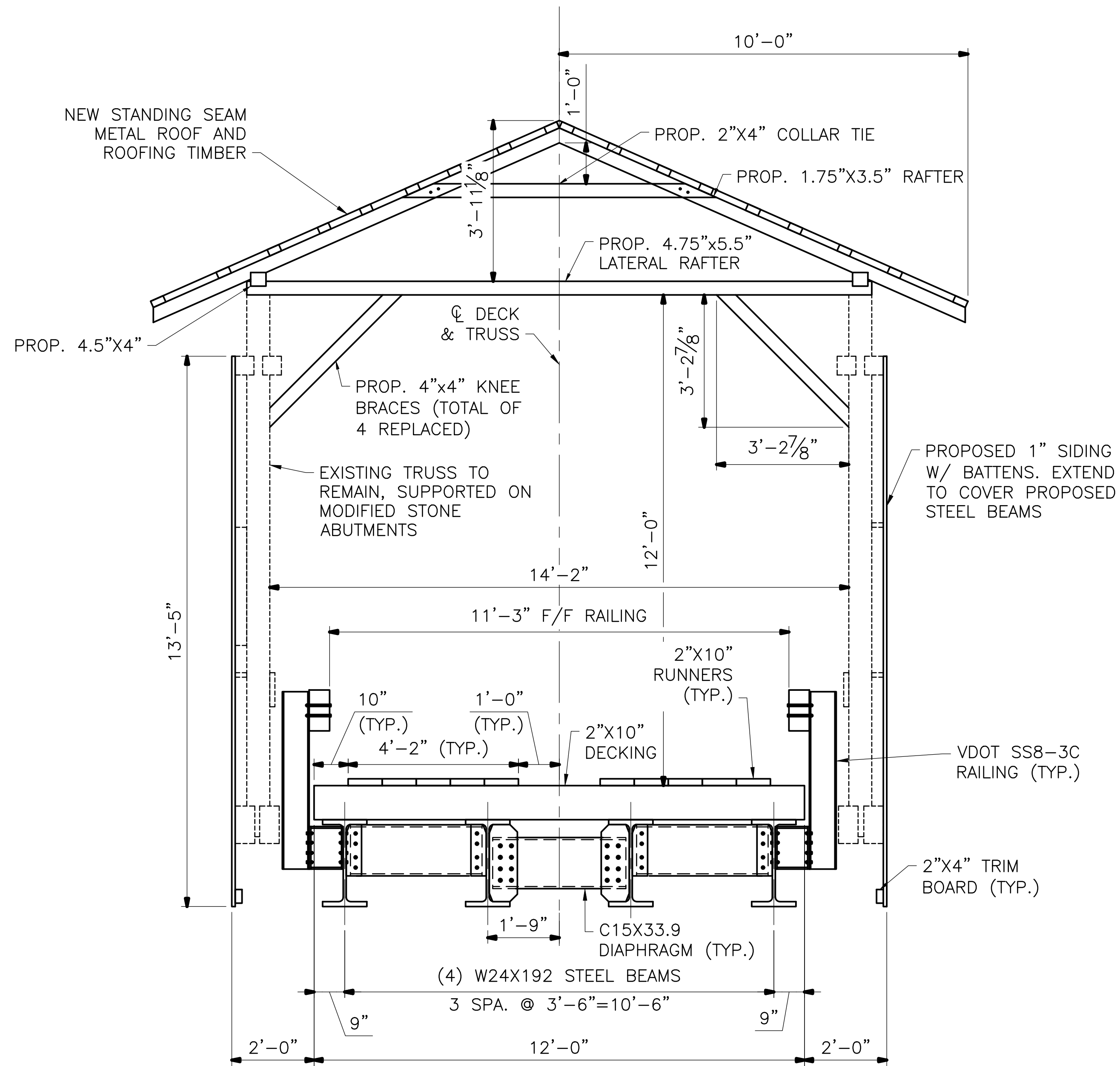
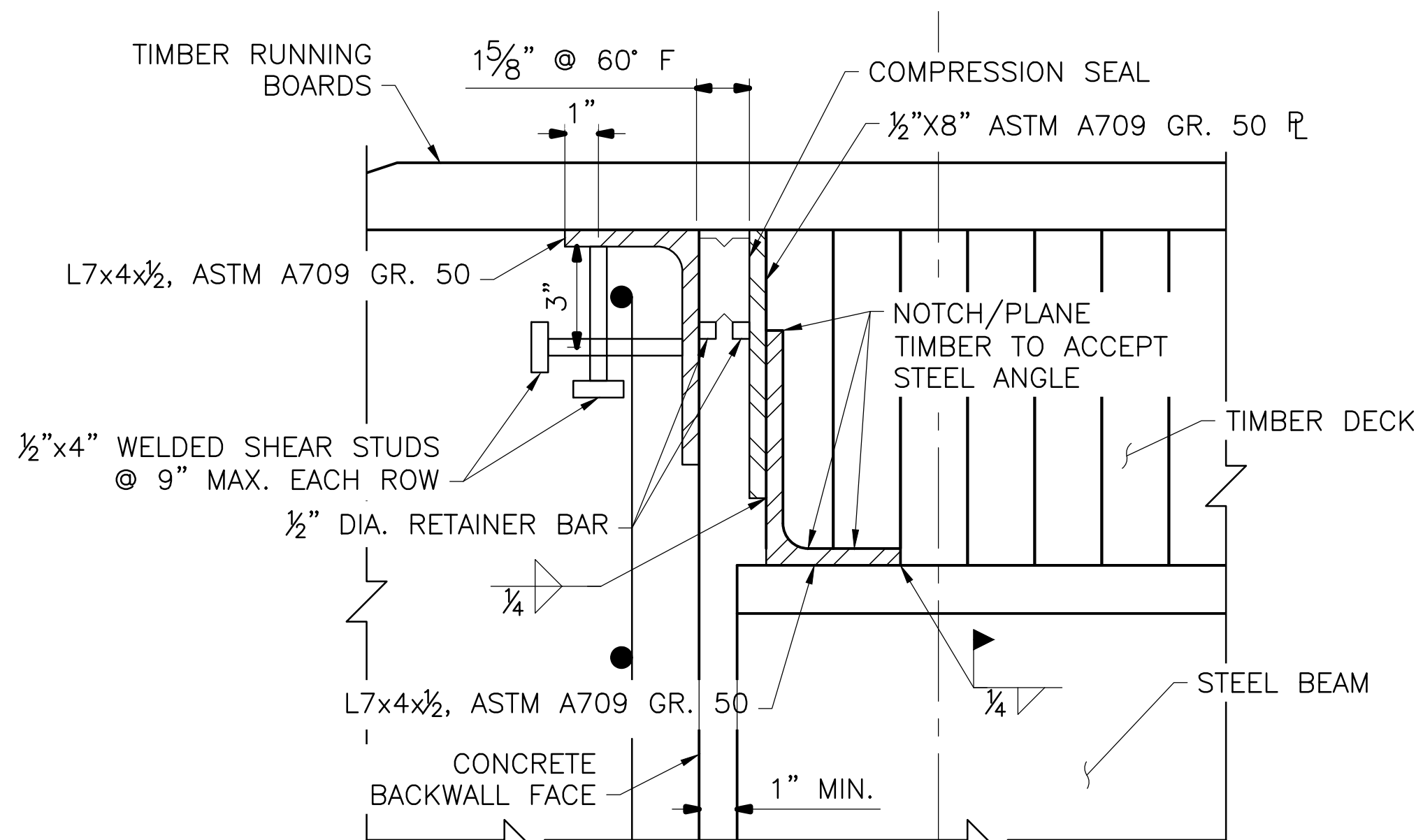
DEFLECTION AND CAMBER TABLE						
	LOCATION	CL R.A. BRGS.	SPAN 1			CL F.A. BRGS.
			1/4 SPAN	1/2 SPAN	3/4 SPAN	
BEAM 1	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/4"	3/8"	1/4"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/8"	1/8"	0"
	REQUIRED SHOP CAMBER	0"	7/16"	9/16"	7/16"	0"
BEAM 2	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/4"	3/8"	1/4"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	3/16"	1/16"	0"
	REQUIRED SHOP CAMBER	0"	7/16"	5/8"	7/16"	0"
BEAM 3	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/4"	3/8"	1/4"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	3/16"	1/8"	0"
	REQUIRED SHOP CAMBER	0"	7/16"	5/8"	7/16"	0"
BEAM 4	DEFLECTION DUE TO WEIGHT OF STEEL	0"	1/4"	3/8"	1/4"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/8"	1/8"	0"
	REQUIRED SHOP CAMBER	0"	7/16"	9/16"	7/16"	0"



FLOOR CLIP LAYOUT

NOTES:

- FURNISH STEEL PLATE AND BAR MATERIAL ACCORDING TO CMS 711, GRADE 36. THREADED RODS, BOLTS, NUTS, AND WASHERS SHALL CONFORM TO ASTM A325.
- GALVANIZE ALL TIMBER DECK STEEL, HARDWARE AND ACCESSORIES PER CMS 711.02.
- INSTALL NAIL LAMINATED TIMBER DECKING AS SHOWN. PAYMENT FOR DECKING, INCLUDING THE TIMBER, NAILS AND FASTENERS, BOLTS, NUTS, WASHERS, CLIP CONNECTORS, AND ANY OTHER INCIDENTALS, MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO INSTALL THE DECKING AND COMPLETE THE WORK SHALL BE PAID FOR ON THE PLAN SQUARE FOOT BASIS FOR ITEM 530 SPECIAL – STRUCTURES, TIMBER FLOORING (DECKING).
- STEEL FOR BEAMS, DIAPHRAGMS, AND ASSOCIATED ASSEMBLIES SHALL BE GRADE 50W WEATHERING STEEL. BEAM MATERIAL SHALL BE CVN.
- COAT ALL STEEL FRAMING UNCOATED WEATHERING STEEL SURFACES WITHIN 10–FT OF THE BEAM END PER C&MS 514. THIS INCLUDES THE END DIAPHRAGMS AND FIRST DIAPHRAGMS FROM THE END DIAPHRAGMS, INCLUDING ALL ASSOCIATED STEEL ASSEMBLIES. TINT THE TOP COAT TO A COLOR CLOSELY MATCHING AMS STANDARD 595A 20045 OR 20059, THE COLOR OF WEATHERING STEEL.

**EXISTING TRANSVERSE SECTION****PROPOSED TRANSVERSE SECTION****EXPANSION JOINT DETAILS****EXPANSION JOINT NOTES:**

1. COMPRESSION SEAL: FURNISH MATERIAL CONFORMING TO 705.11. THE SEAL CONFIGURATION SHALL BE SIMILAR TO THE DETAILS SHOWN. ACCEPTED MANUFACTURERS ARE D.S. BROWN (MODEL CV2520), WATSON-BOWMAN-ACME (MODEL WA250), OR AN APPROVED EQUIVALENT. INSTALL THE SEAL ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND UNDER SUPERVISION OF THE MANUFACTURER'S DESIGNATED REPRESENTATIVE.
2. FURNISH SEALS IN ONE CONTINUOUS PIECE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. COAT ALL STEEL PARTS OF JOINT ASSEMBLY ACCORDING TO 516.
4. THE FABRICATOR SHALL DESIGN AND INSTALL TEMPORARY SUPPORTS TO RESIST SHIPPING, ERECTION, AND CONSTRUCTION FORCES WITHOUT DAMAGE TO THE STEEL OR ARMOR COATING. THESE SUPPORTS SHALL BE ADJUSTABLE IN THE FIELD TO ACCOUNT FOR VARIABLE TEMPERATURE SETTINGS. INSTALL THE SUPPORTS AFTER THE FABRICATION AND COATING IS COMPLETE.
5. ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF PLACEMENT, $-1/16"$ FOR EACH 10°F HIGHER THAN 60°F AND $+1/16"$ FOR EACH 10°F LOWER THAN 60°F .
6. EXPANSION JOINTS, INCLUDING STEEL ARMOR ASSEMBLIES, ANCHORS, FIELD WELDING, RETAINER BARS, AND COMPRESSION SEALS, INCLUDING ALL LABOR, EQUIPMENT, AND MATERIALS TO COMPLETE THE WORK, SHALL BE PAID FOR AT THE UNIT BID PRICE PER FOOT FOR ITEM 516: STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL, AS PER PLAN.

LEGEND:

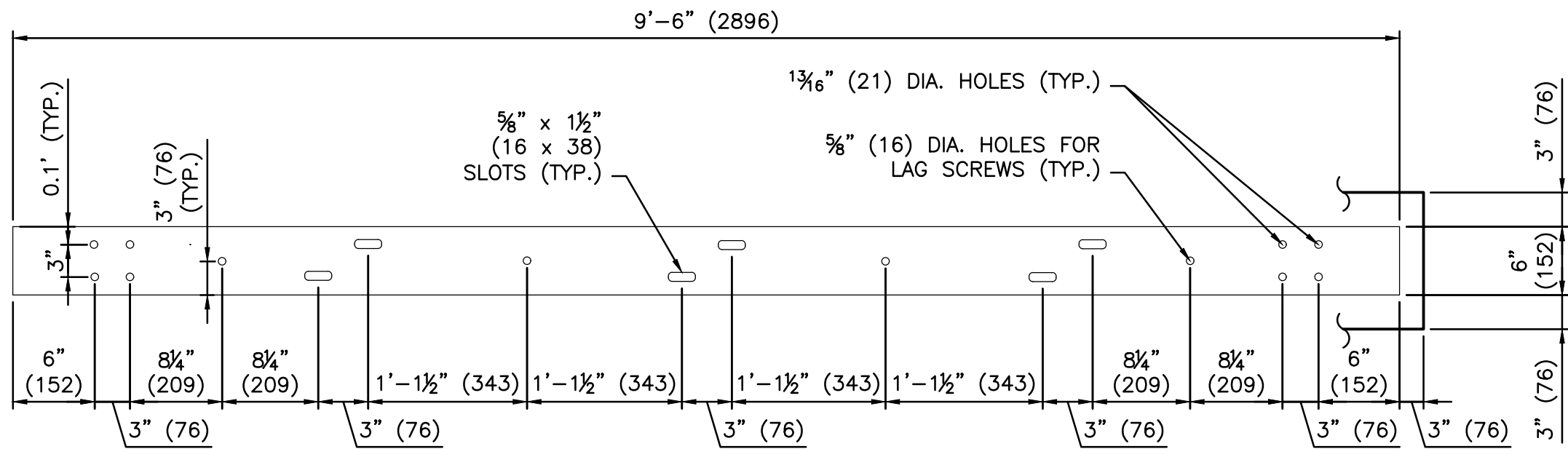
- MEMBER TO BE REMOVED

NOTES:

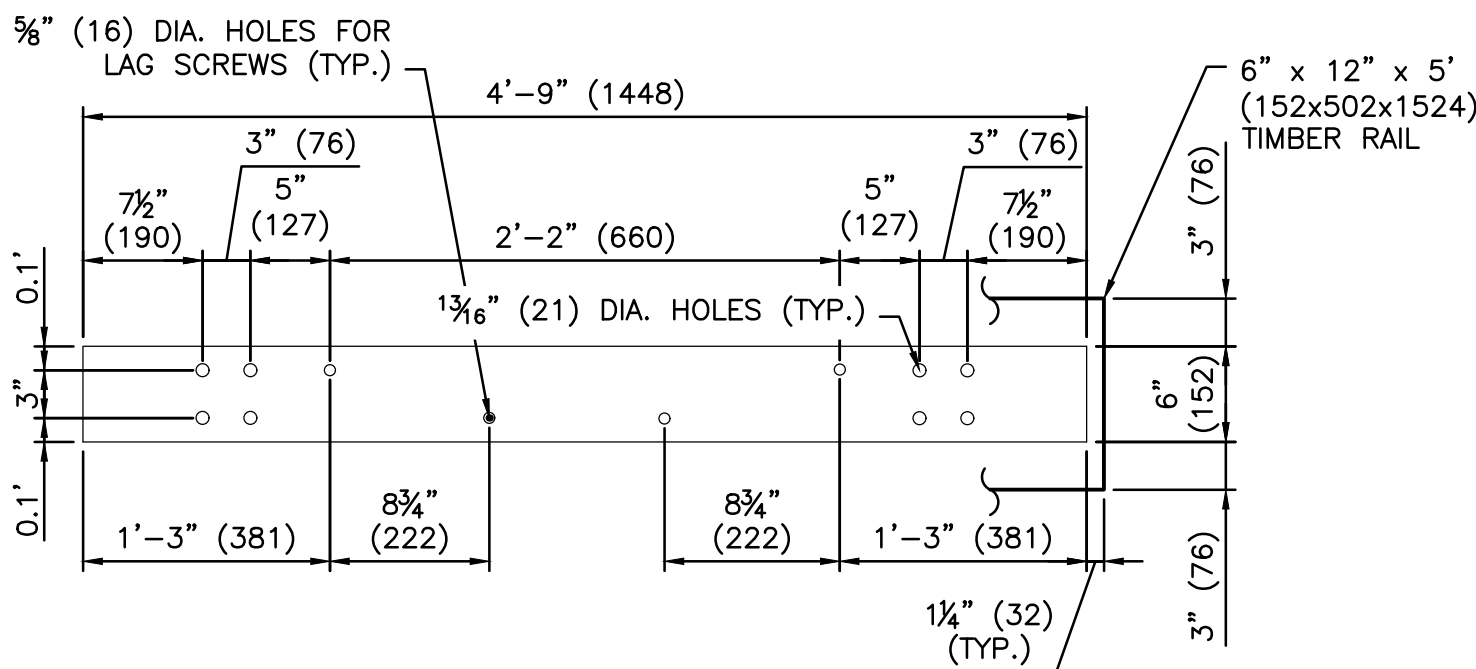
1. EXISTING MEMBER SIZES ARE APPROXIMATE.
2. SEE ODOT SCD GSD-1-19 FOR ADDITIONAL DIAPHRAGM DETAILS.
3. SEE VDOT SS8-3C FOR ADDITIONAL RAILING DETAILS.



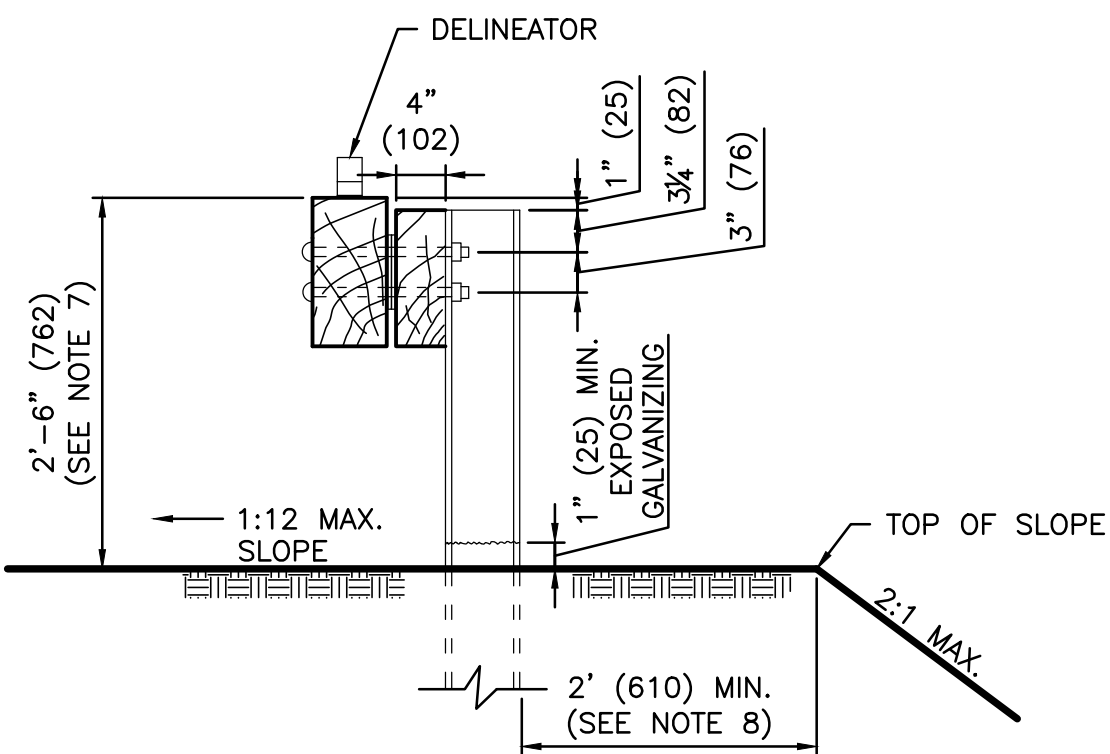
1. PROVIDE STRAPPING WITH PURLINS AS RECOMMENDED BY THE ROOF MANUFACTURER.
2. SEE VDOT SS8-3C FOR ADDITIONAL RAILING AND DIAPHRAGM DETAILS.
3. SEE ODOT SCD GSD-1-19 FOR ADDITIONAL INTERMEDIATE DIAPHRAGM DETAILS.
4. ALL BOLTS SHALL BE PROVIDED WITH WASHERS AND NUTS, AND ALL ASSEMBLIES SHALL BE GALVANIZED.



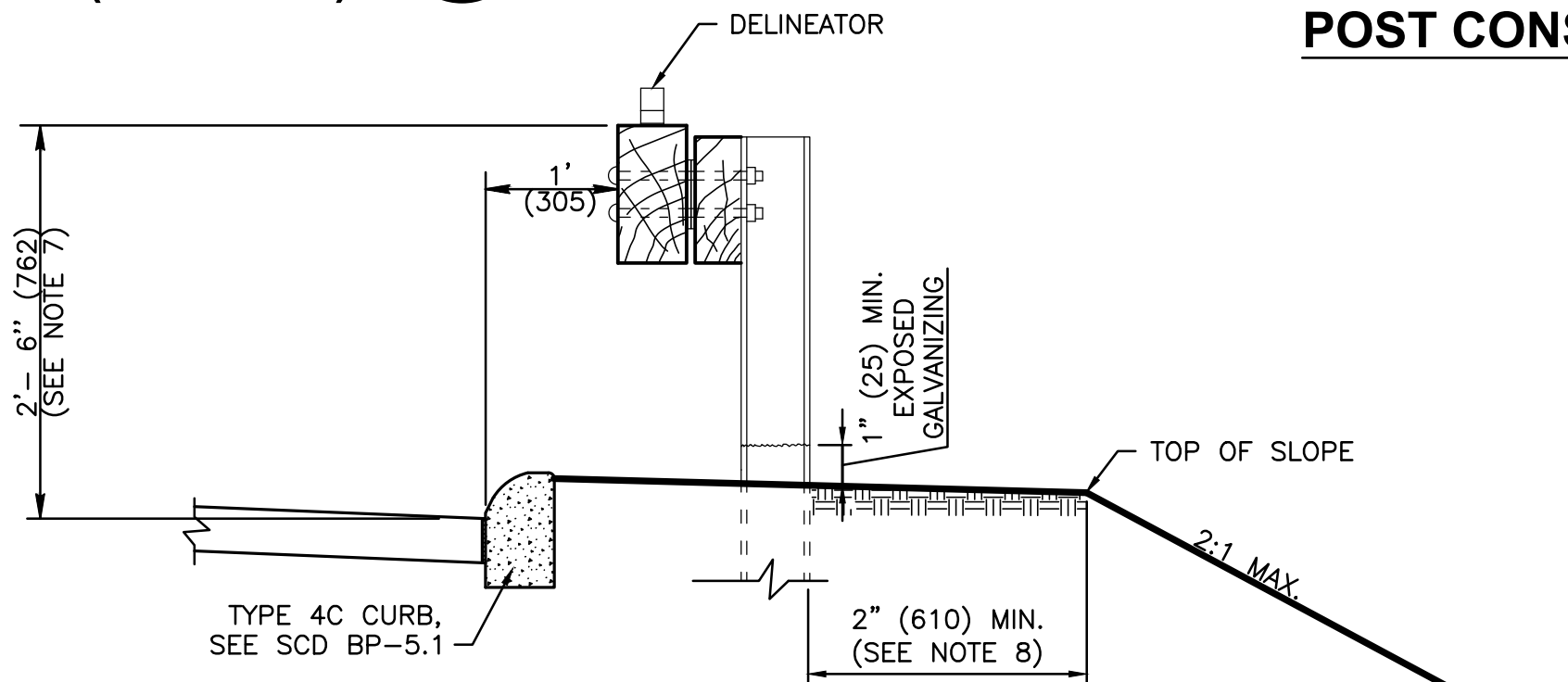
(REAR VIEW)
STANDARD STEEL RAIL DETAIL
6" x 3/8" x 9'-6" (152x9x2896)



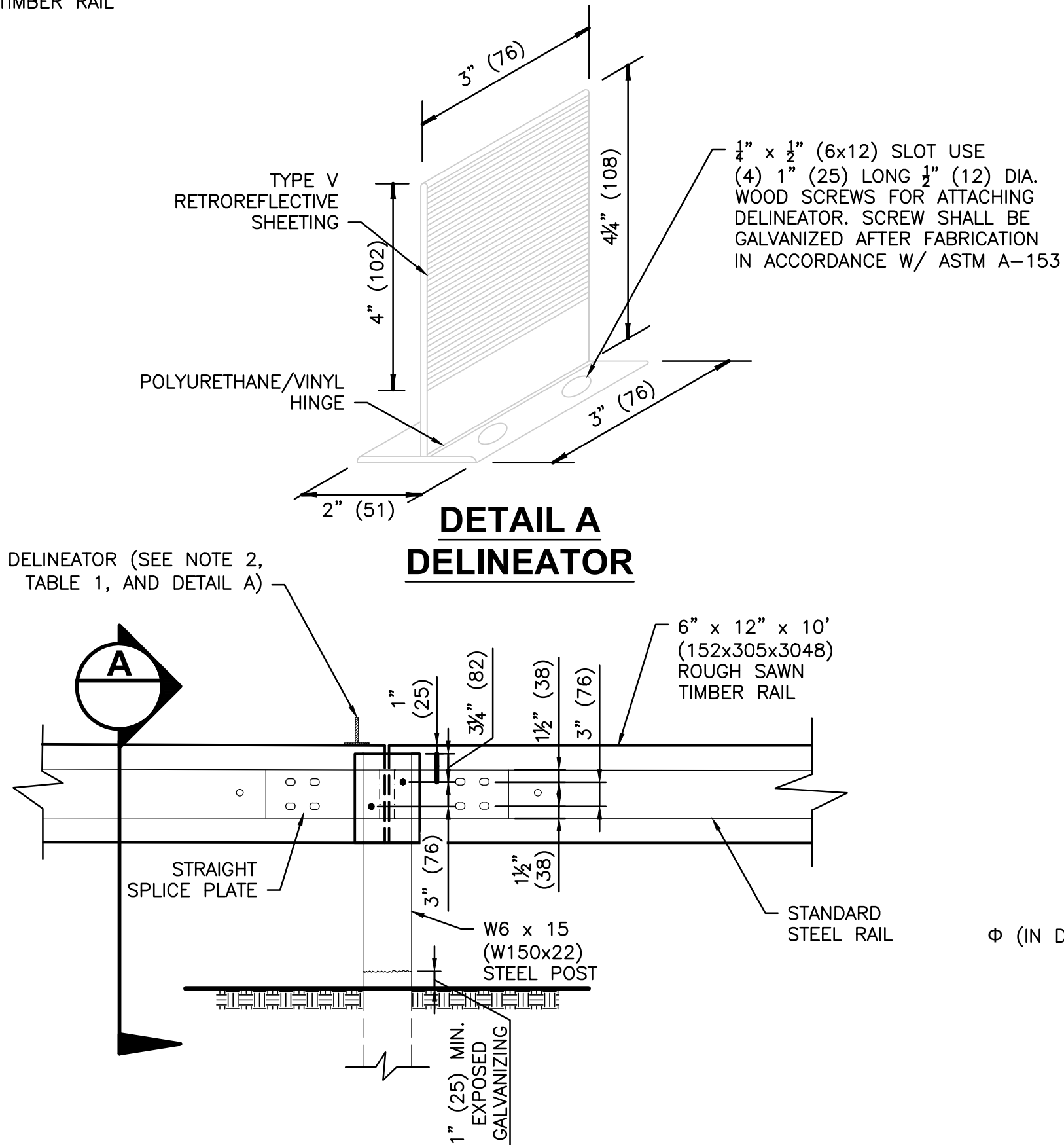
STEEL RAIL DETAIL
6' x 3/8" x 4'-9" (1829x9x1448)
FOR CURVES WITH R <= 70' (21.3m)



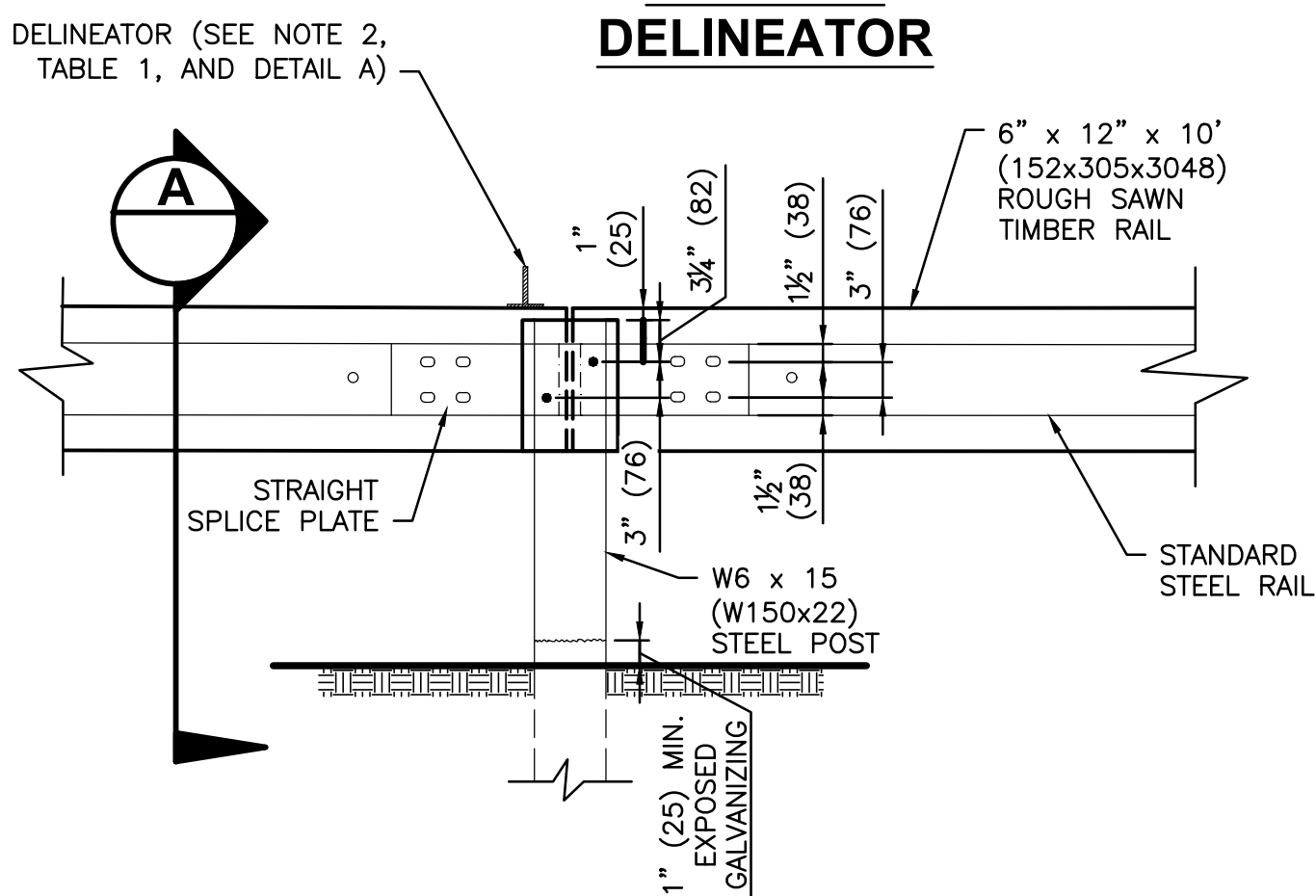
SECTION
(NO CURB)



CONCRETE CURBING WITH
MERRITT PARKWAY GUARDRAIL



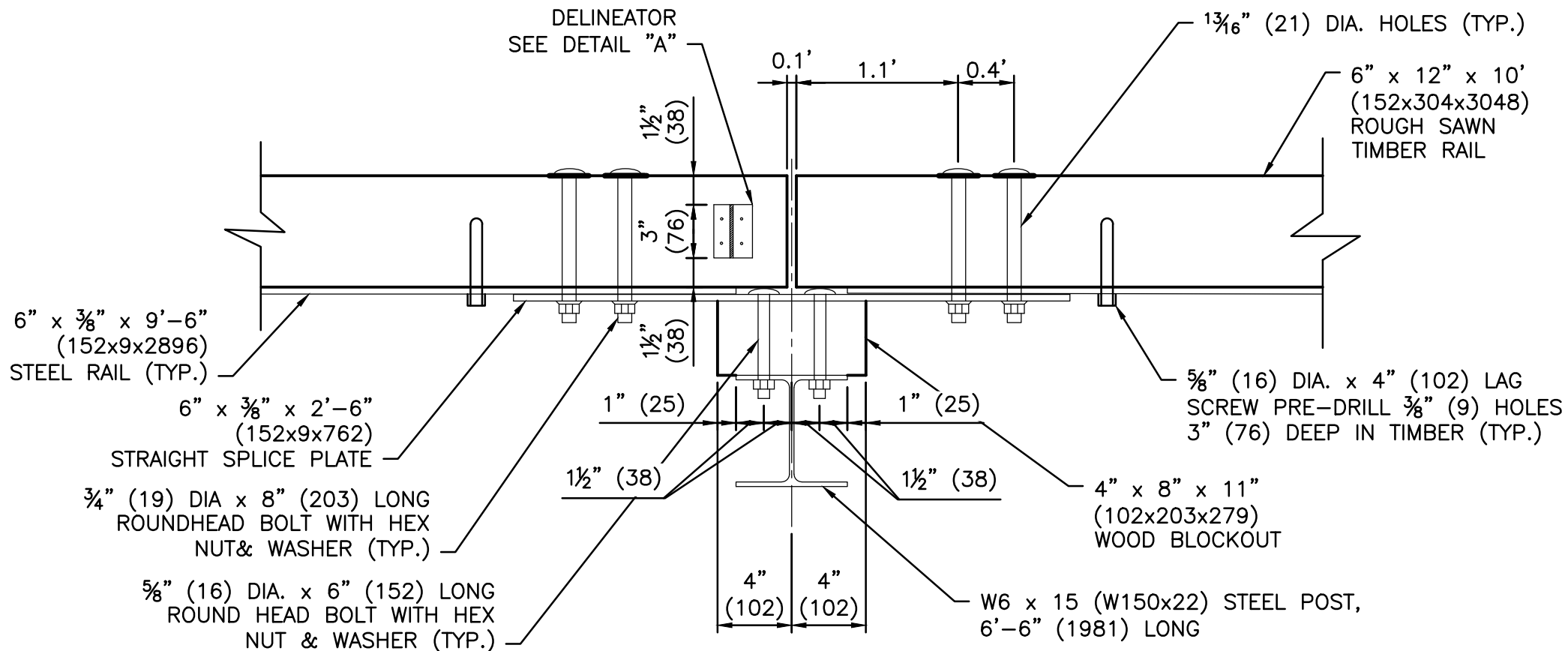
DETAIL A
DELINEATOR



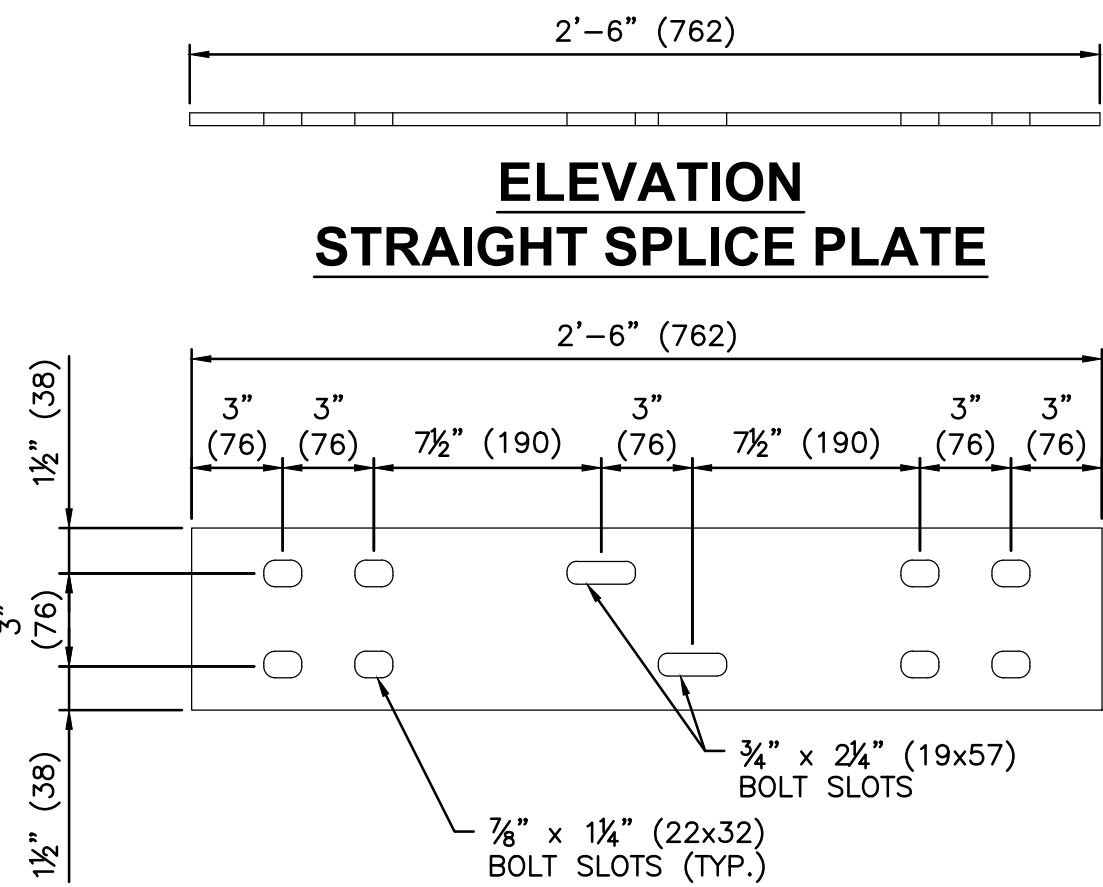
REAR VIEW ELEVATION
POST CONSTRUCTION

TABLE 1

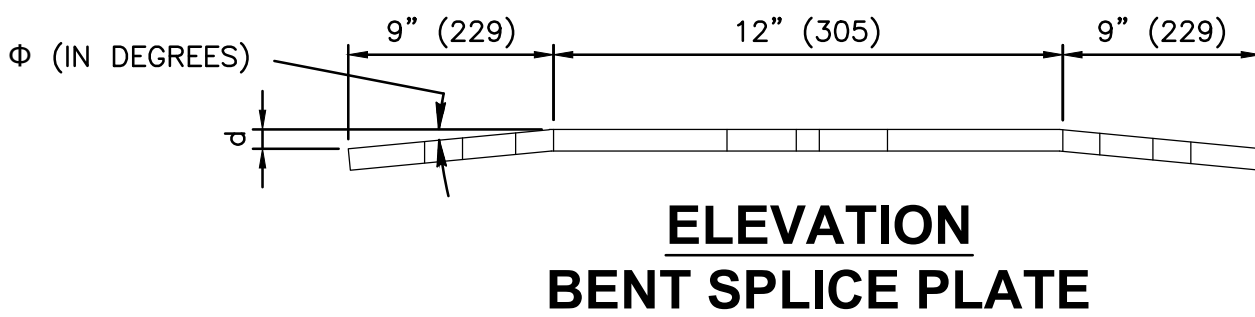
DELINEATOR SPACING	
CURVE RADIUS	SPACE
< 300' (91.4m)	20' (6.10m)
≥ 300' (91.4m)	50' (15.2m)



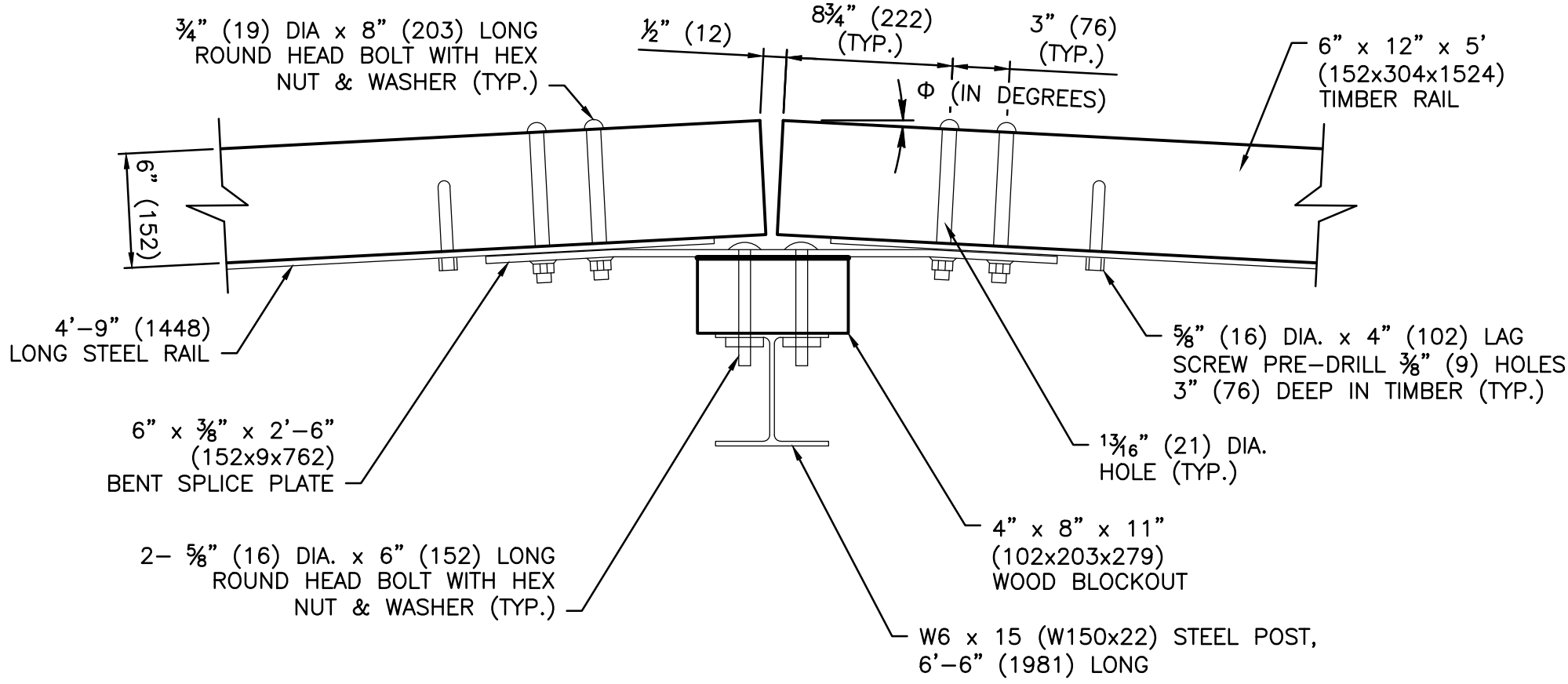
POST CONNECTION FOR
STRAIGHT SECTIONS



(FRONT VIEW)
STEEL SPLICE PLATE DETAIL
6" x 3/8" x 2'-6" (152x9x762)



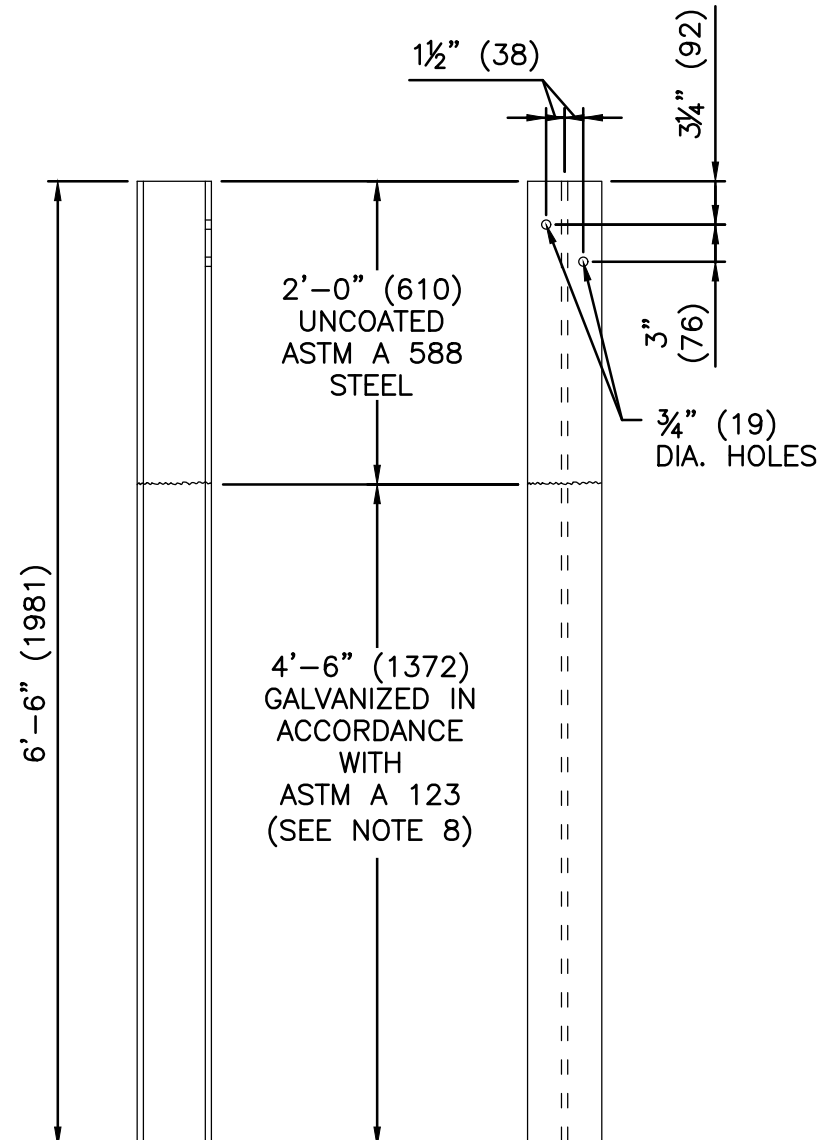
ELEVATION
BENT SPLICE PLATE



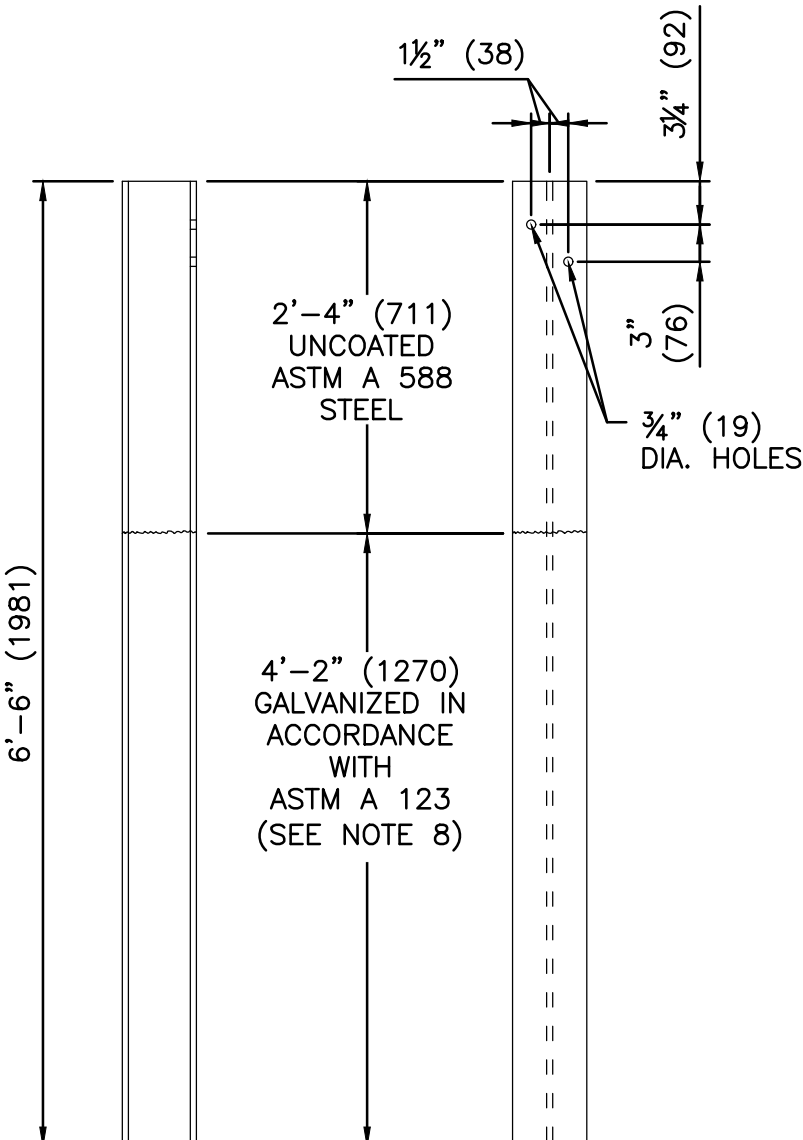
POST CONNECTION
FOR CURVES WITH R < 70' (21.3m)

NOTES

- MATERIALS AND CONSTRUCTION OF THE MERRITT PARKWAY GUARDRAIL SHALL CONFORM TO SPECIAL PROVISION PROVIDED WITH THE PROJECT.
- DELINEATORS SHALL BE PLASTIC INVERTED T-SECTIONS IN ACCORDANCE WITH DETAIL "A". REFLECTORS SHALL BE SPACED IN ACCORDANCE WITH TABLE 1, AND POSITIONED PERPENDICULAR TO THE ADJACENT EDGE OF LANE. DO NOT ATTACH REFLECTORS ON FLARE OR TERMINAL SECTIONS. REFLECTIVE SHEETING SHALL BE SILVER-WHITE ON ALL RAIL SECTIONS ADJACENT TO THE RIGHT SHOULDER, AND YELLOW ON RAIL SECTIONS ADJACENT TO THE LEFT SHOULDER OF TRAVEL LANES. DELINEATORS SHALL BE INCLUDED IN THE COST FOR "MERRITT PARKWAY GUARDRAIL".
- TWO ADDITIONAL 5/8" (16) DIA. X 4" (102) LONG LAG SCREWS AND WASHERS SHALL BE INSTALLED AT ALL MID-SPAN POINTS FOR STANDARD SYSTEMS.
- ALL CONNECTION HARDWARE SHALL BE SUFFICIENTLY TIGHTENED TO ACCOMMODATE FOR SHRINKAGE OF THE WOOD ELEMENTS.
- WHEN FURNISHING THE SHOP BENT SPLICE PLATES, USE THE MINIMUM BEND ANGLE AS SHOWN IN TABLE 2.
- FOR RAILING SET ON A CURVE WITH RADII < 70' (21.3m) SPACE POSTS AT 5' (1524).
- GUARDRAIL HEIGHT MAY VARY UP TO 2" (51) PLUS OR MINUS THE HEIGHT SHOWN IN THE DETAILS TO ACHIEVE A SMOOTH AND CONTINUOUS GUARDRAIL PROFILE.
- 7'-6" (2286) LONG POSTS MAY BE USED IN LOCATIONS WHERE 2' (610) MIN SHELF IS NOT ATTAINABLE. GALVANIZED COATING LIMITS SHALL BE INCREASED BY 1" (305). PAYMENT FOR EXTRA LONG POSTS SHALL BE INCLUDED WITH THE ITEM FOR MERRITT PARKWAY GUARDRAIL.



SIDE VIEW FRONT VIEW
POST DETAIL
W6 x 15 (W150x22)
WITH CURBING

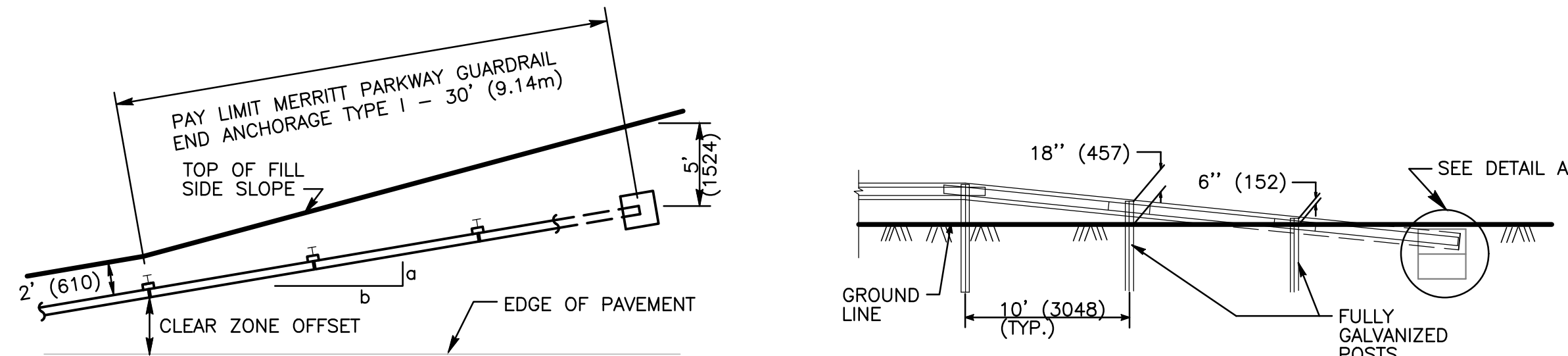


SIDE VIEW FRONT VIEW
POST DETAIL
W6 x 15 (W150x22)
NO CURBING

TABLE 2

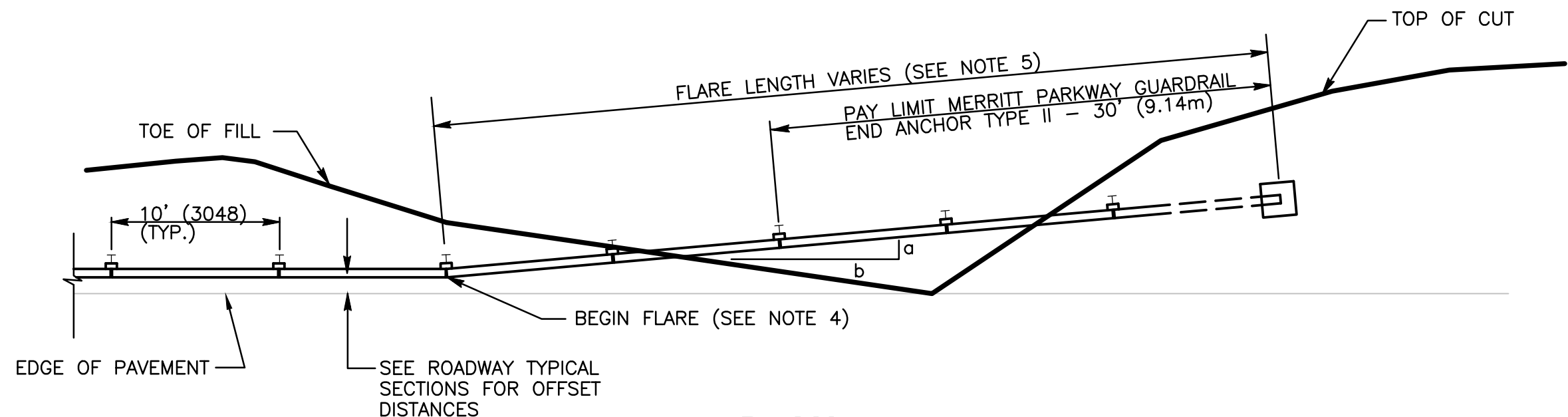
RADIUS R (FT.)(m)	φ (DEGREES)	d (IN.)(mm)
35 (10.7) MIN.	4.10	5/8 (16)
40 (12.2)	3.58	9/16 (14)
45 (13.7)	3.18	1/2 (13)
50 (15.2)	2.86	7/16 (11)
55 (16.8)	2.60	7/16 (11)
60 (18.3)	2.40	3/8 (9)
65 (19.8)	2.20	3/8 (9)
70 (21.3)	2.05	5/16 (8)
OVER 70 (21.3)	FLAT	0

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED



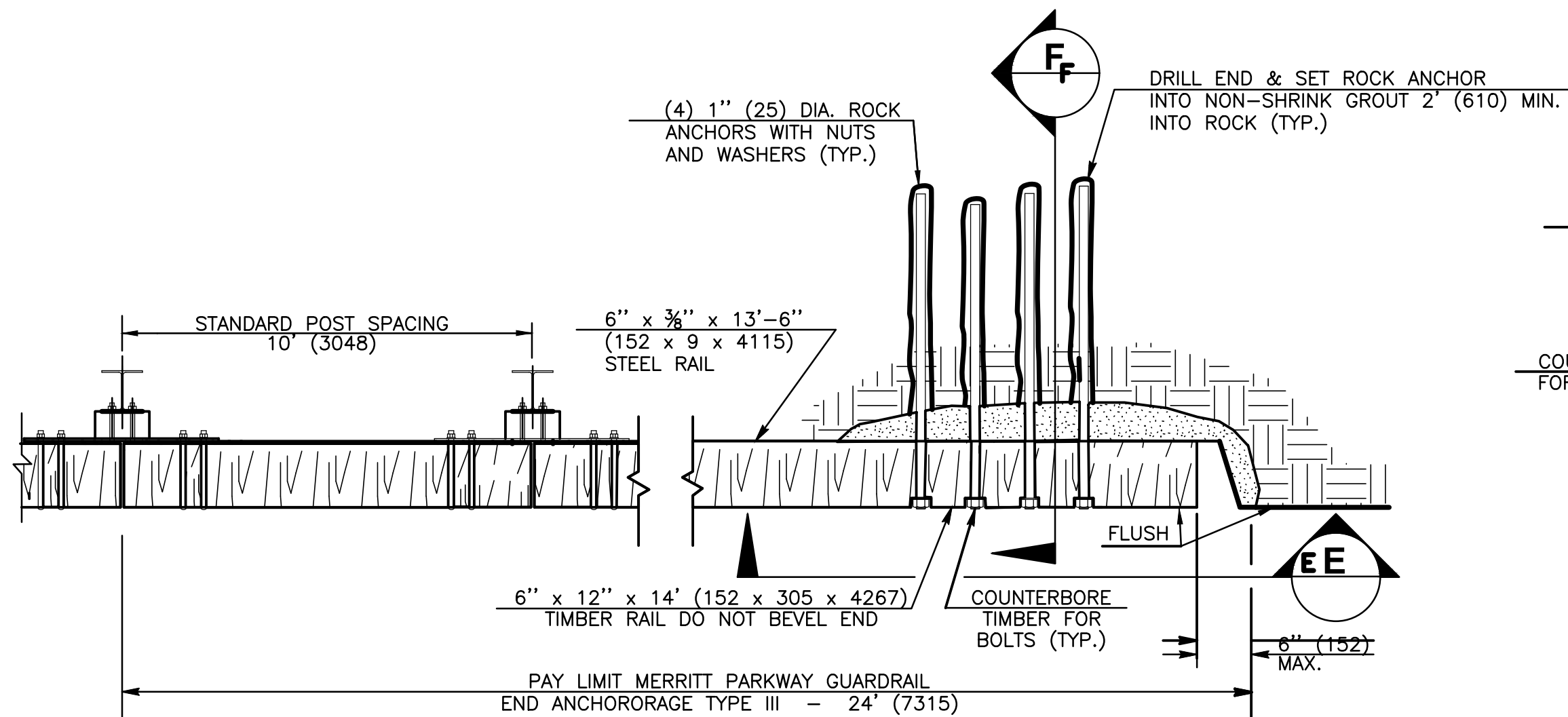
PLAN
MERRITT PARKWAY GUARDRAIL END ANCHORAGE TYPE I
(BURIED ANCHOR)

NOTE: SEE PLAN SHEETS FOR FLARE RATE a:b.

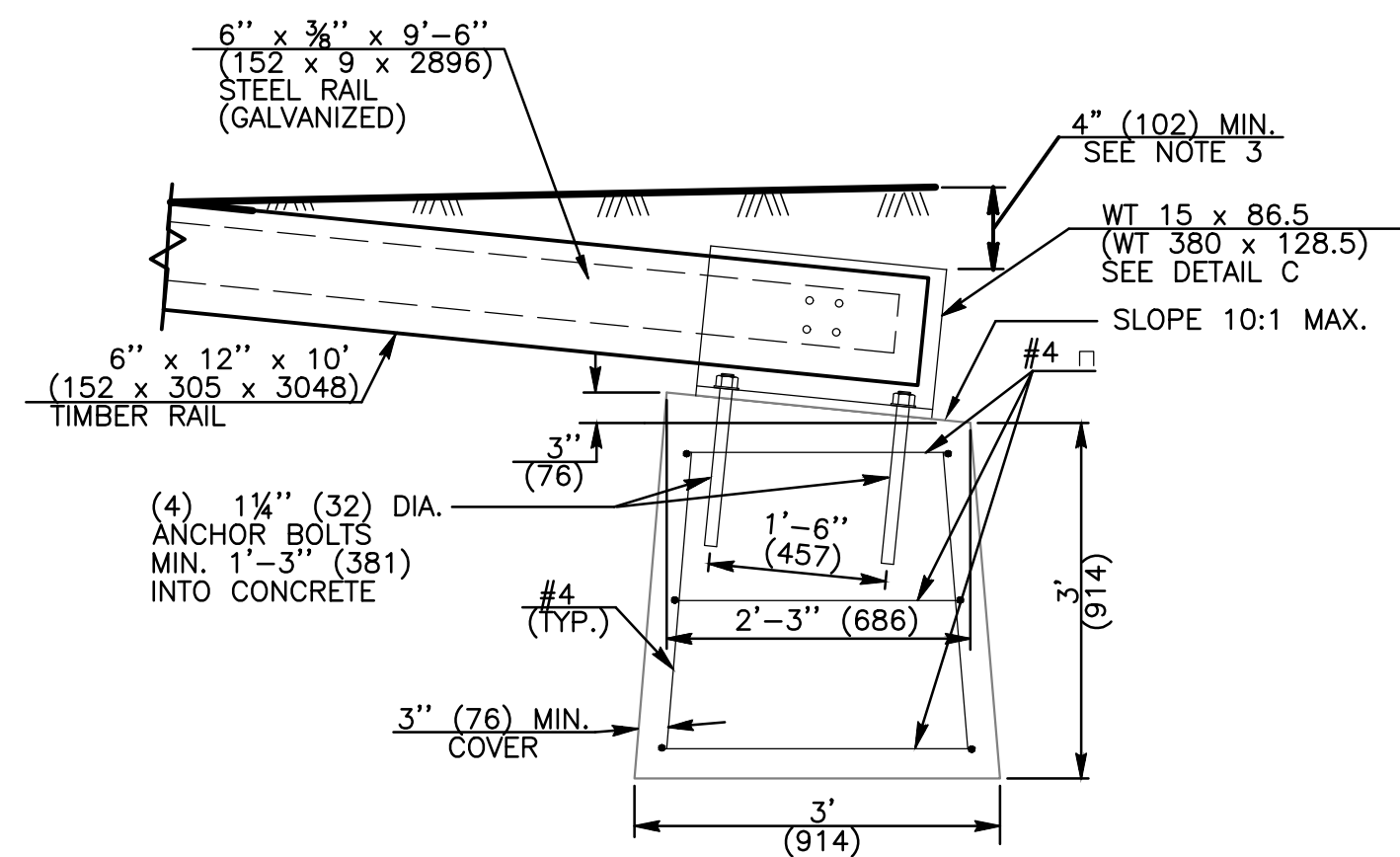


PLAN
MERRITT PARKWAY GUARDRAIL END ANCHORAGE TYPE II
(EARTH CUT SLOPE ANCHOR)

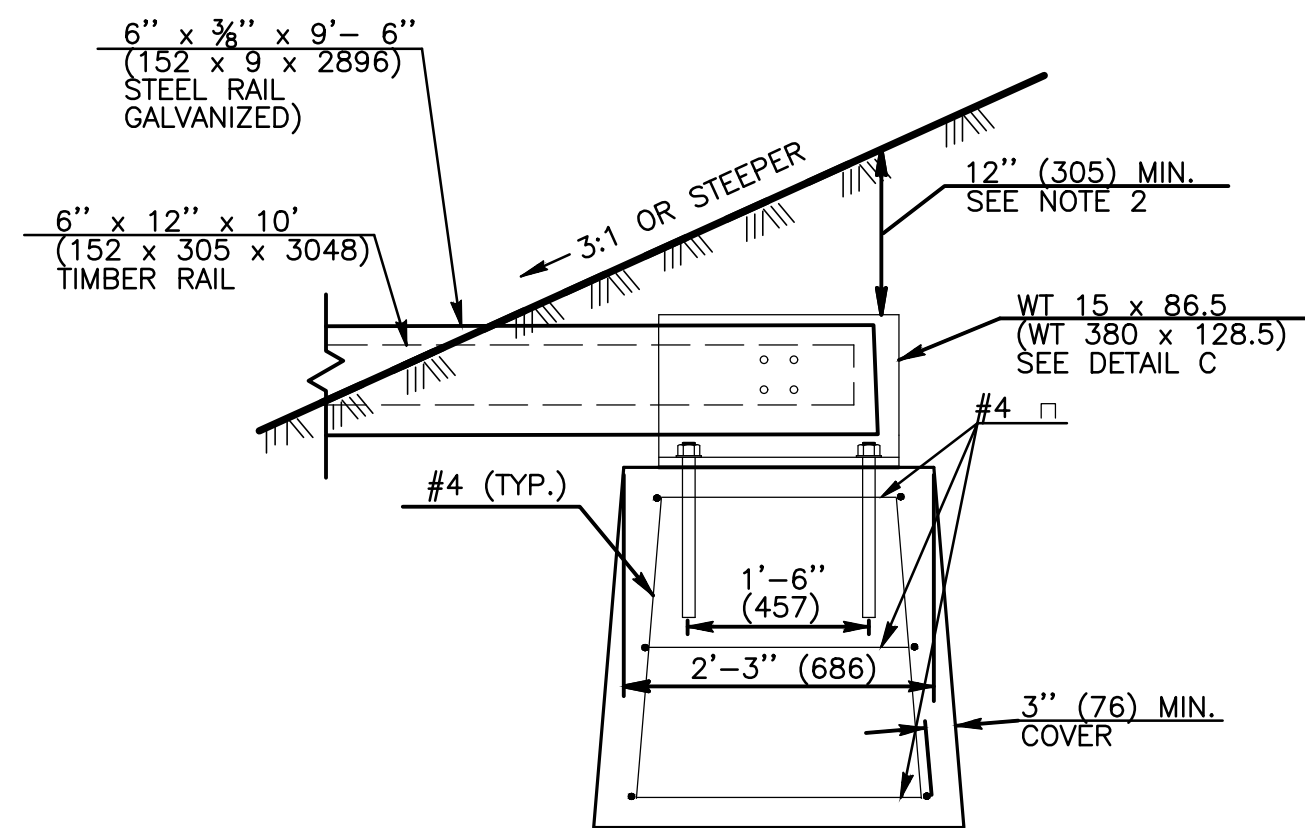
NOTE: SEE PLAN SHEETS FOR FLARE RATE a:b.



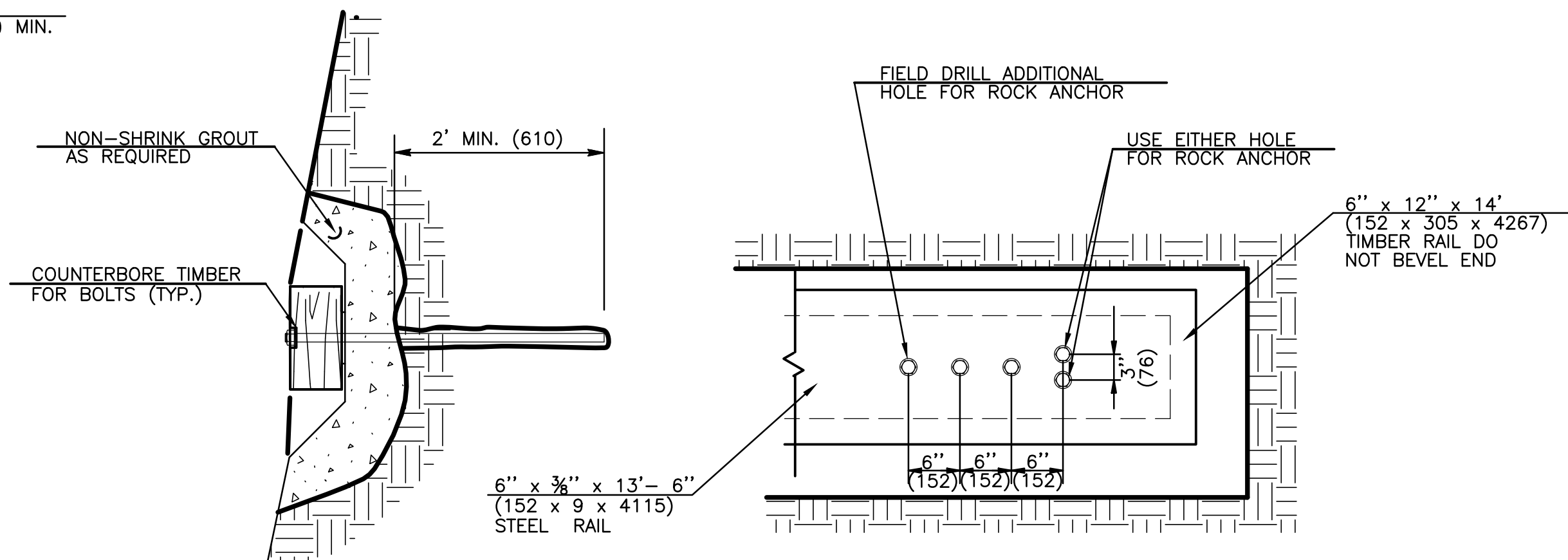
PLAN
MERRITT PARKWAY GUARDRAIL END ANCHORAGE TYPE III
(ROCK CUT ANCHOR)



ELEVATION
DETAIL A



ELEVATION
DETAIL B

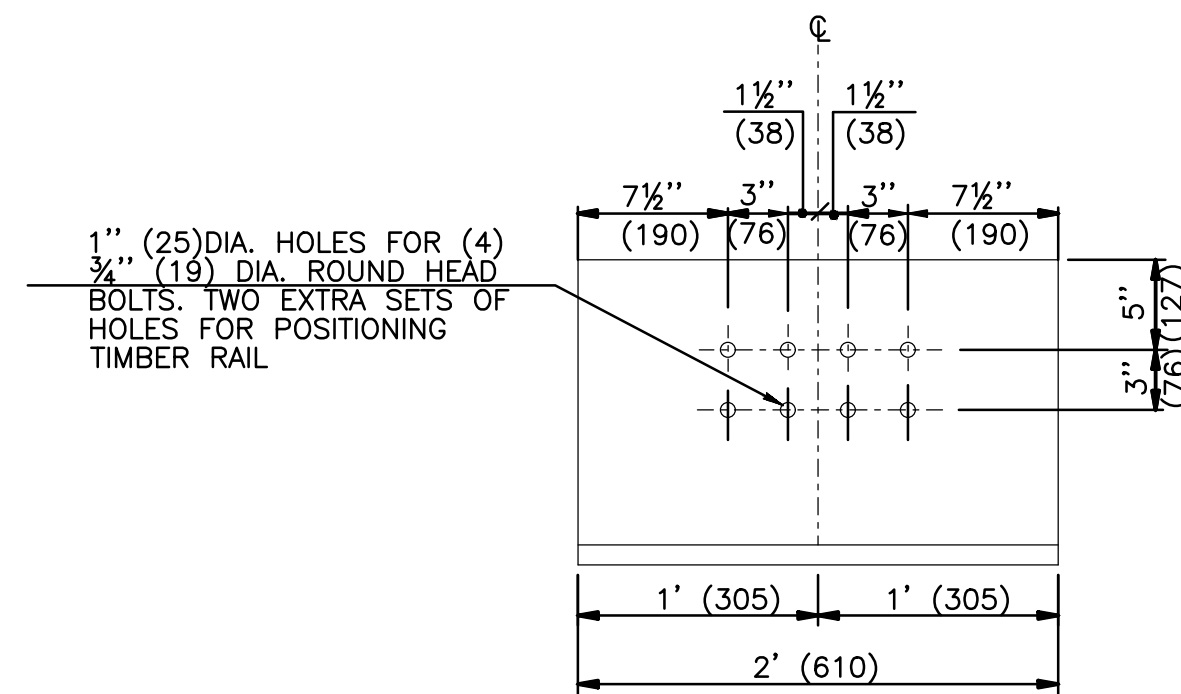


SECTION
F

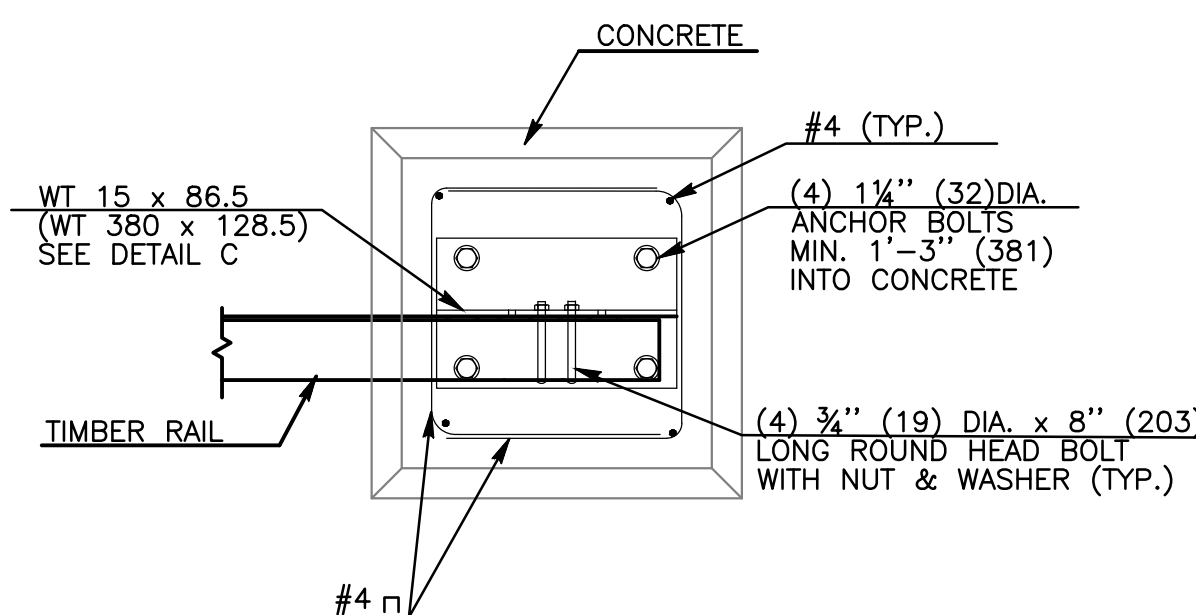
SECTION
E

NOTES:

- MATERIALS AND CONSTRUCTION OF THE MERRITT PARKWAY GUARDRAIL END ANCHORS SHALL CONFORM TO THE SPECIAL PROVISIONS PROVIDED WITH THE PROJECT. ALL HARDWARE IN CONTACT WITH THE GROUND SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIAL PROVISION.
- FOR THE END ANCHOR TYPE II, EXTEND THE FLARE INTO THE CUT SLOPE UNTIL A MINIMUM 12" (305) OF COVER IS OBTAINED OVER THE GUARDRAIL ELEMENT.
- FOR THE END ANCHOR TYPE I, EXTEND THE FLARE OUTSIDE THE CLEAR ZONE AND BURY THE GUARDRAIL ANCHOR AND ELEMENT TO OBTAIN A MINIMUM COVER OF 4" (102). SEE DETAIL A.
- BEGIN THE FLARE AT THE NEAREST POST TO A TRANSITION POINT BETWEEN FILL AND CUT AS DIRECTED BY THE ENGINEER.
- THE GUARDRAIL FLARE SHOWN ON THE PLAN SHEETS IS THE MINIMUM LENGTH AND RATE REQUIRED AS DIRECTED BY THE ENGINEER. FLARE THE GUARDRAIL SO THAT THE TERMINAL SECTION IS OUTSIDE THE CLEAR ZONE.



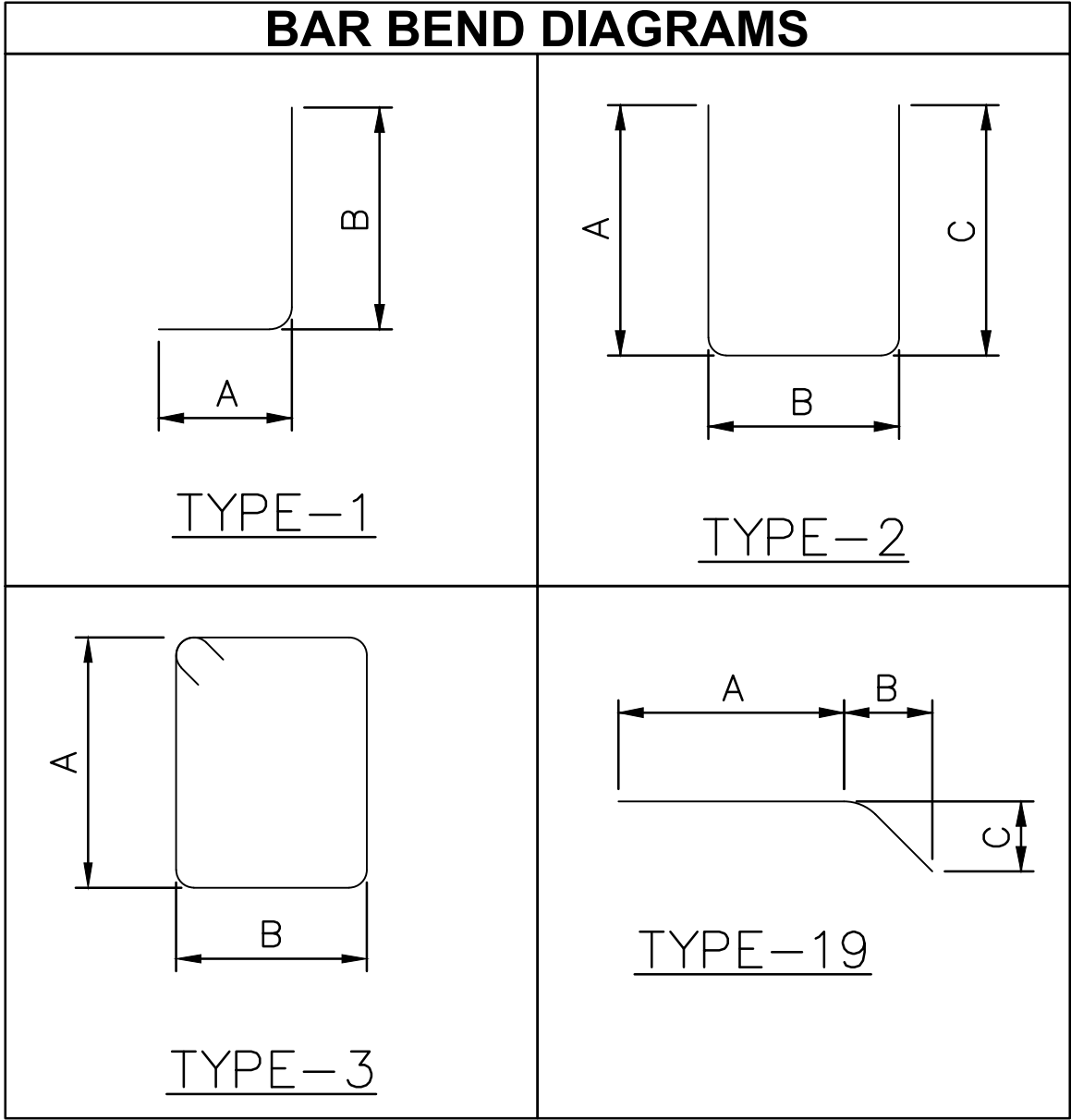
ELEVATION
DETAIL C
WT 15 x 86.5 (GALVANIZED)
(WT 380 X 128.5)



PLAN
DETAIL D
PLAN VIEW FOR
TYPE I & II ANCHOR

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

ABUTMENT REINFORCING														
BAR MARK	MAT'RL TYPE	NUMBER		TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS						
		REAR	FORWARD					A	B	C	D	E	R	INC.
A401	ECSR	4	4	8	4'-2"	23	ST.							
A402	ECSR	4	4	8	1'-11"	11	ST.							
A501	ECSR	10	10	20	16'-3"	339	ST.							
A502	ECSR	4	4	8	8'-7"	72	3	1'-2"	2'-10"					
A503	ECSR	4	4	8	13'-3"	111	ST.							
A504	ECSR	4		4	10'-11"	46	3	2'-6"	2'-8"					
A505	ECSR		4	4	10'-7"	45	3	2'-6"	2'-6"					
A506	ECSR	1 SER OF 10	1 SER OF 10	2 SER OF 10	9'-1" TO 9'-9"	197	3	1'-3" TO 3'-0"	3'-0" TO 3'-4"					1"
A507	ECSR	1 SER OF 10	1 SER OF 10	2 SER OF 10	7'-2" TO 7'-6"	153	1	3'-0" TO 3'-4"	4'-3"					1"
A508	ECSR	1 SER OF 10	1 SER OF 10	2 SER OF 10	6'-0" TO 6'-4"	129	1	3'-0" TO 3'-4"	3'-1"					1"
A509	ECSR	1 SER OF 3	SER OF	1 SER OF 3	8'-1" TO 9'-9"	28	3	1'-3" TO 3'-4"	2'-6" TO 3'-4"					10"
A510	ECSR	1 SER OF 3	SER OF 3	1 SER OF 3	8'-3" TO 9'-1"	28	3	1'-3" TO 3'-0"	2'-7" TO 3'-0"					5"
A511	ECSR	SER OF 3	1 SER OF 3	1 SER OF 3	9'-5" TO 9'-11"	31	3	1'-1" TO 3'-7"	3'-4" TO 3'-7"					3"
A512	ECSR	SER OF 3	1 SER OF 3	1 SER OF 3	8'-5" TO 8'-9"	27	3	1'-1" TO 3'-0"	2'-10" TO 3'-0"					2"
A513	ECSR	18	18	36	6'-2"	232	ST.							
A514	ECSR	3		3	6'-4"	20	19	2'-10"	3'-5"	11"				
A515	ECSR	3		3	6'-3"	20	19	2'-10"	3'-5"	5"				
A516	ECSR		3	3	6'-3"	20	19	2'-10"	3'-5"	4"				
A517	ECSR		3	3	6'-3"	20	ST.							
A801	ECSR	8	8	16	16'-3"	695	ST.							
D601	ECSR	4	4	8	3'-10"	47	ST.							
D602	ECSR	32	32	64	2'-0"	193	ST.							
					TOTAL = 2487 LBS									



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT AFTER THE LETTERS WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS AFTER THE LETTERS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A NO. 5 BAR IN THE ABUTMENTS. A LEGEND OF THE DESCRIPTORS IS GIVEN BELOW:

A - ABUTMENT
D - DOWEL

2. BAR DIMENSIONS SHOWN ARE OUT-TO-OUT UNLESS OTHERWISE NOTED.
3. "ST." INDICATES A STRAIGHT BAR.
4. ECSR = EPOXY COATED STEEL REINFORCEMENT.