

DRAFT

SUDBURY
LINCOLN ROAD

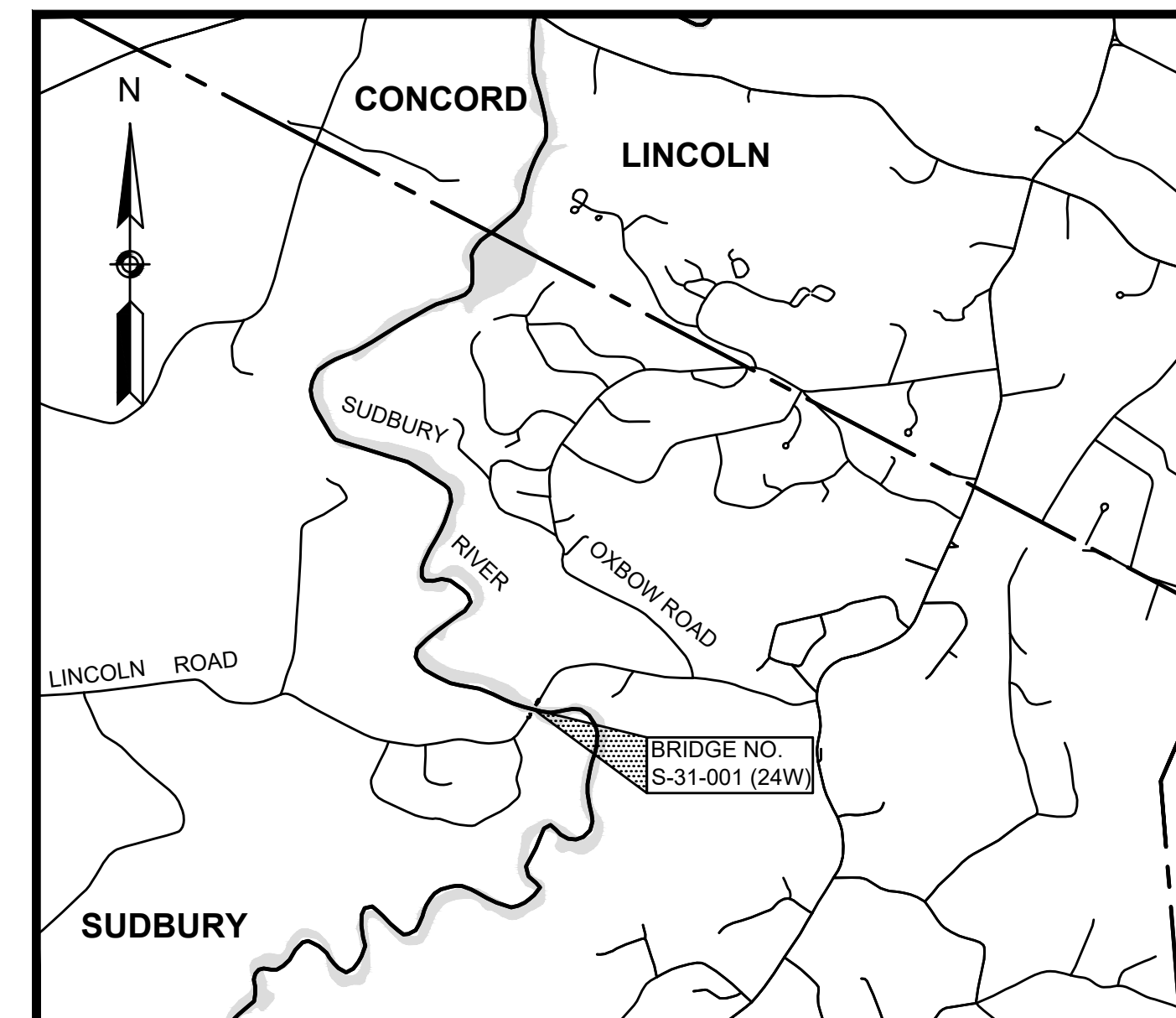
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	10
PROJECT FILE NO. T1520			

TITLE SHEET & INDEX

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
APPROVED UNDER PROVISIONS OF
MASS. GEN. LAWS CH 85 S 35

DISTRICT 3 BRIDGE ENGINEER



DATE



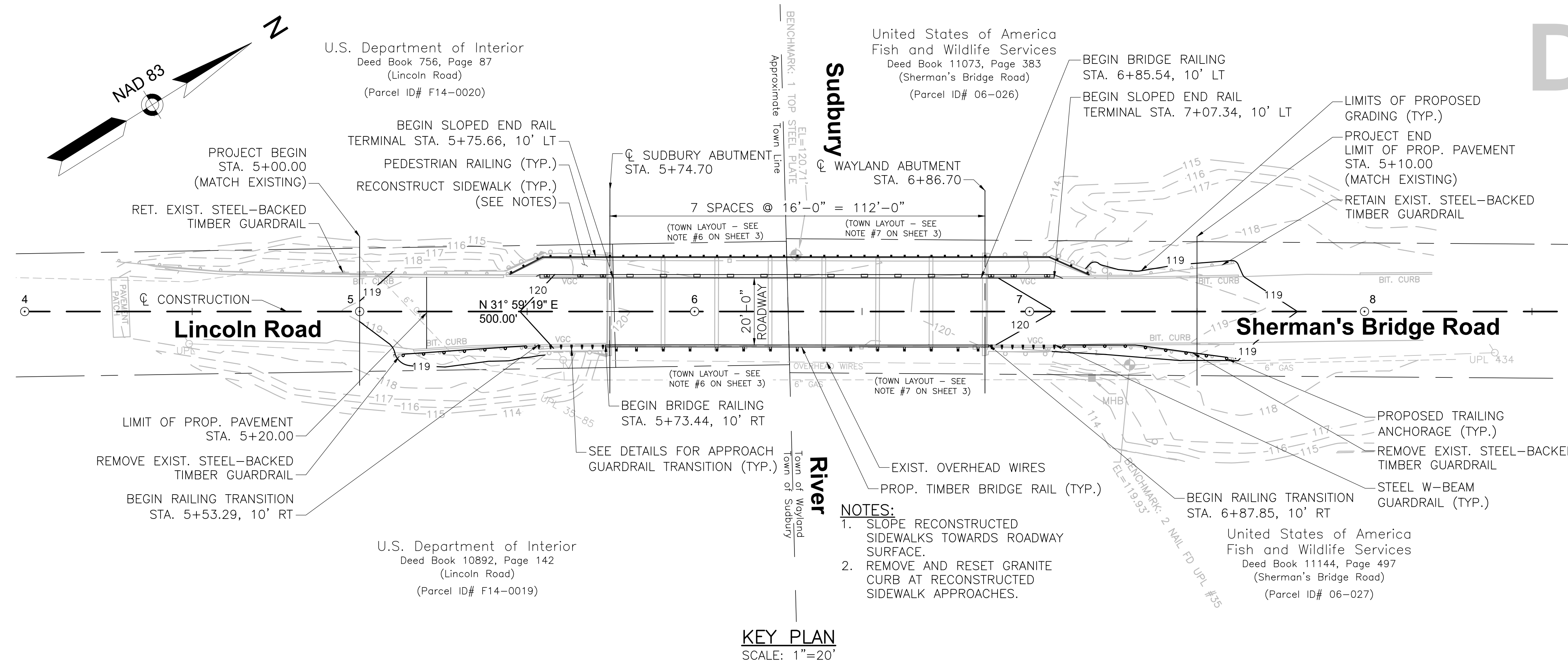
LOCUS MAP
SCALE: 1"=2000'

BRIDGE SHEET INDEX

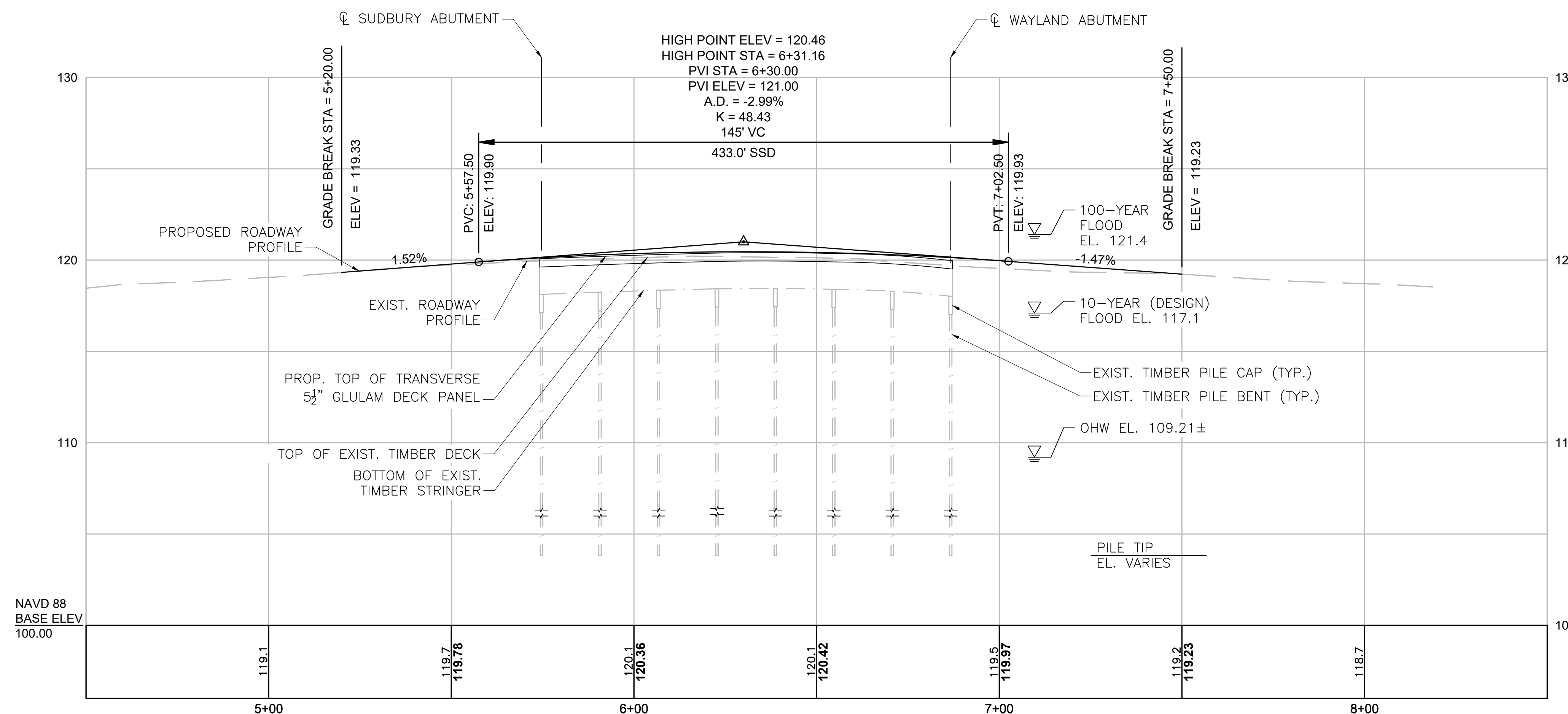
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	GENERAL NOTES
3	EXISTING CONDITIONS CROSS SECTION
4	ELEVATION & TRANSVERSE SECTION
5	FRAMING PLAN & DETAILS
6	SUBSTRUCTURE REPAIRS
7	TIMBER BRIDGE RAIL (1 OF 2)
8	TIMBER BRIDGE RAIL (2 OF 2)
9	APPROACH RAIL TRANSITIONS
10	TRAFFIC MANAGEMENT PLAN

	MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
		
	PROPOSED BRIDGE PRESERVATION SUDBURY/WAYLAND LINCOLN ROAD/SHERMAN'S BRIDGE ROAD OVER SUDBURY RIVER MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION 10 PARK PLAZA BOSTON, MASS	
TITLE:		CHIEF ENGINEER

SHEET 1 OF 10 SHEETS BRIDGE NO. S-31-001 (24W)



KEY PLAN
SCALE: 1"=20'



LINCOLN ROAD PROFILE
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

GENERAL NOTES:

1. IN ACCORDANCE WITH 2002 STANDARD SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS (17TH EDITION), FOR H2O LOADING.
2. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) IS TRANSFORMED TO STATE PLANE COORDINATE SYSTEM AND USED THROUGHOUT.
3. VERTICAL DATUM: ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

BENCH MARK:

#1 TOP STEEL PLATE
EL=120.71'

#2 NAIL FD UPL #35
EL=119.93'

SURVEY NOTES:

1. HORIZONTAL DATUM DERIVED FROM G.P.S. SATELLITE OBSERVATIONS ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) TRANSFORMED TO MASSACHUSETTS STATE PLANE COORDINATE SYSTEM – MAINLAND ZONE ON 4/14/15 AS NOTED IN HANCOCK ASSOCIATES, INC. FIELD BOOK #783 UTILIZING A SCALE FACTOR OF 0.9999990808.
2. VERTICAL DATUM WAS OBTAINED FROM A BENCHMARK ON SHERMAN'S BRIDGE (EL.=121.49 NGVD29) PROVIDED BY THE TOWN OF SUDBURY ENGINEERING DEPARTMENT, CONVERTED TO NAVD88 (EL.=120.71 NAVD88).
3. ALL FIELD SURVEY DATA WAS RECORDED IN HANCOCK ASSOCIATES, INC. FIELD BOOK #783.
4. UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD LOCATIONS OF STRUCTURES. OTHER UNDERGROUND UTILITIES MAY EXIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.
5. THIRTEEN WOOD STRINGERS WERE OBSERVED BELOW THE BRIDGE.
6. SIDELINE OF LINCOLN ROAD SHOWN ON SHEET 1 WAS OBTAINED FROM A PLAN ENTITLED "PLAN SHOWING LINCOLN ROAD SIDELINES AT SHERMAN'S BRIDGE" DATED JULY 23, 1991 ON FILE AT THE TOWN OF SUDBURY ENGINEERING OFFICE.
7. SIDELINE OF SHERMAN'S BRIDGE ROAD SHOWN ON SHEET 1 WAS OBTAINED FROM A PLAN ENTITLED "WAYLAND, MASSACHUSETTS PLAN OF FISH AND WILDLIFE PROPERTY LINES, 1972 SHERMANS BRIDGE LAYOUT LINES, AND BRIDGE CONTROL POINTS" DATED JULY 20, 1991, AS REVISED AUGUST 8, 1991 ON FILE AT THE TOWN OF WAYLAND'S TOWN SURVEYOR'S OFFICE.

HYDRAULIC DATA (FROM EXISTING PLANS):

DRAINAGE AREA: 146.21 SQUARE MILES
DESIGN DISCHARGE: 2570 CFS
DESIGN FREQUENCY: 10 YEARS
DESIGN VELOCITY: 2.4 FPS
DESIGN HIGH WATER ELEVATION: 117.1 (NGVD CONVERTED TO NAVD 88)

BASIC FLOOD DATA (FROM EXISTING PLANS):

DISCHARGE Q (100 YEAR): 4610 CFS
HIGH WATER ELEVATION: 121.4 (NGVD CONVERTED TO NAVD 88)

RECORD OF FLOOD (FROM EXISTING PLANS):

DISCHARGE: UNKNOWN
FREQUENCY: UNKNOWN
DATE: UNKNOWN
HISTORY OF ICE FLOWS: UNKNOWN
EVIDENCE OF SCOUR AND EROSION: NO SCOUR WAS OBSERVED DURING FIELD SURVEY.

UTILITIES:

THE CONTRACTOR SHALL LOCATE AND PROTECT FROM DAMAGE ALL EXISTING UTILITIES. ALL EXISTING UTILITIES SHALL REMAIN IN PLACE AND ACTIVE THROUGHOUT THE DURATION OF CONSTRUCTION.

EXISTING CONDITIONS:

EXISTING CONDITIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND VERIFY ALL PRESENT DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE/SHE HAS MADE THE REQUIRED MEASUREMENTS, AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

PAVEMENT MARKING NOTES:

CONTRACTOR TO COORDINATE WITH TOWN(S) FOR SPEED WARNING PAVEMENT MARKINGS IN THE BRIDGE APPROACHES.

TRANSVERSE GLULAM PANEL DECK TIMBER BRIDGE NOTES:

1. CONTRACTOR SHALL DESIGN, FABRICATE, AND DELIVER THE GLULAM DECK PANEL BRIDGE IN ACCORDANCE WITH THE SIZE AND LAYOUT AS SHOWN ON THESE PLANS.
2. ALL LUMBER AND SAWN TIMBER USED IN FABRICATION OF GLULAM DECK SHALL BE VISUALLY GRADED NO. 1 SOUTHERN YELLOW PINE OR WESTERN SPECIES MEETING AASHTO M168 AND ANSI/AITC A190.1 AND HAVE MINIMUM TABULATED VALUES FOR Fb = 907 PSI AND E = 1,380,000 PSI.
3. GLULAM TIMBERS SHALL BE MANUFACTURED USING THE WET ADHESIVE METHOD IN CONFORMANCE WITH AASHTO M168 AND ASTM D2559.
4. BEAMS COMPRISING THE GLULAM DECK SHALL BE MANUFACTURED USING LUMBER OF 1.375" WIDTH FOR A REQUIRED MINIMUM NET FINISHED BEAM WIDTH OF 4.00'.
5. ALL STEEL HARDWARE SHALL CONFORM TO AASHTO M314 (ASTM F1554, GRADE 36 OR ASTM A307, GRADE C) AND HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M232 (ASTM A153).
6. STRUCTURAL STEEL PLATES SHALL CONFORM TO AASHTO M275 (ASTM A722) AND SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123).
7. ANCHOR RODS AND NUTS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH AASHTO M298 (ASTM B695, CLASS 50).
8. EXISTING LONGITUDINAL STRINGERS SHALL BE ATTACHED TO THE DECK PANELS WITH THROUGH BOLTS ATTACHED TO ALUMINUM DECK BRACKETS AND GALVANIZED LAG BOLTS TO THE TOP SIDE OF EXISTING STRINGER (SEE DETAIL).

SUDBURY
LINCOLN ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	10
PROJECT FILE NO.		T1520	

GENERAL NOTES

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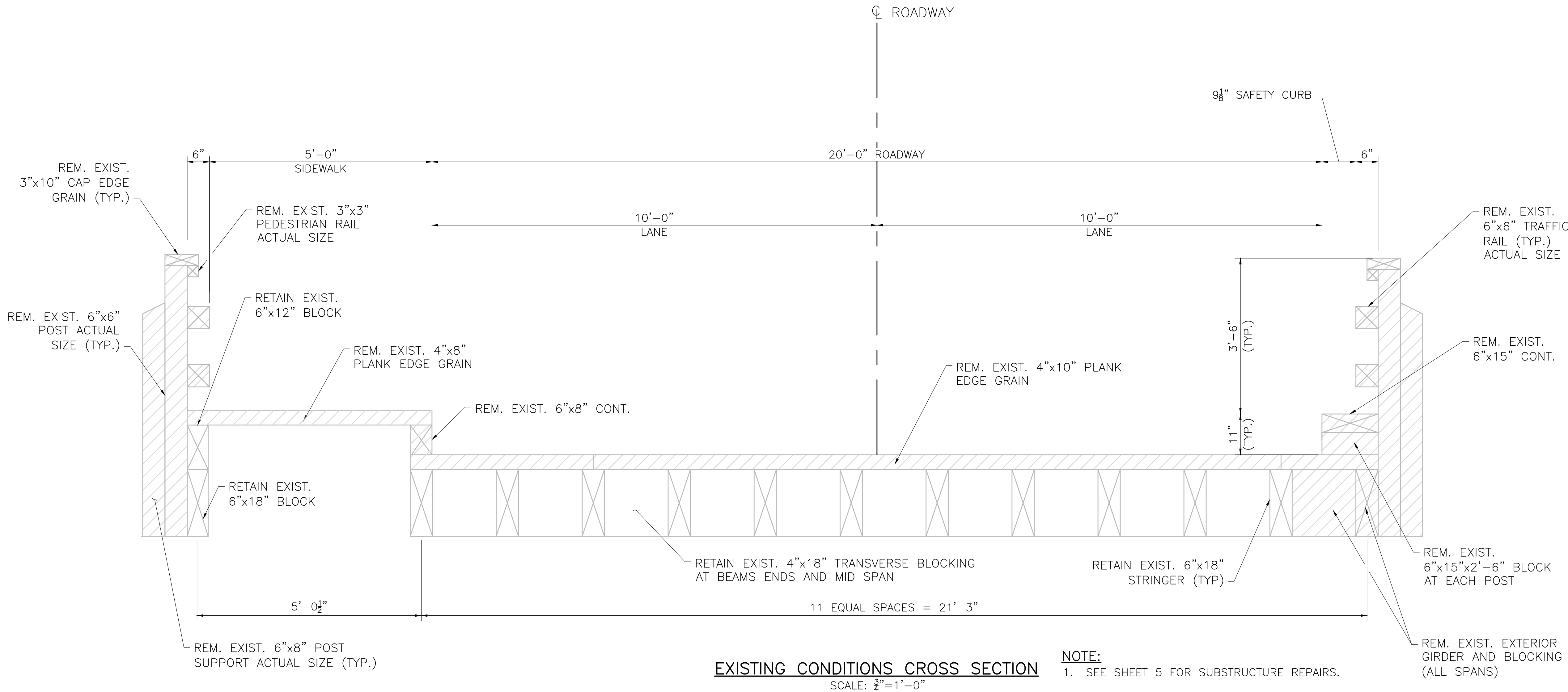
COMMONWEALTH OF MASSACHUSETTS
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SUDBURY LINCOLN ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	10
PROJECT FILE NO.		T1520	

EXISTING CONDITIONS CROSS SECTION



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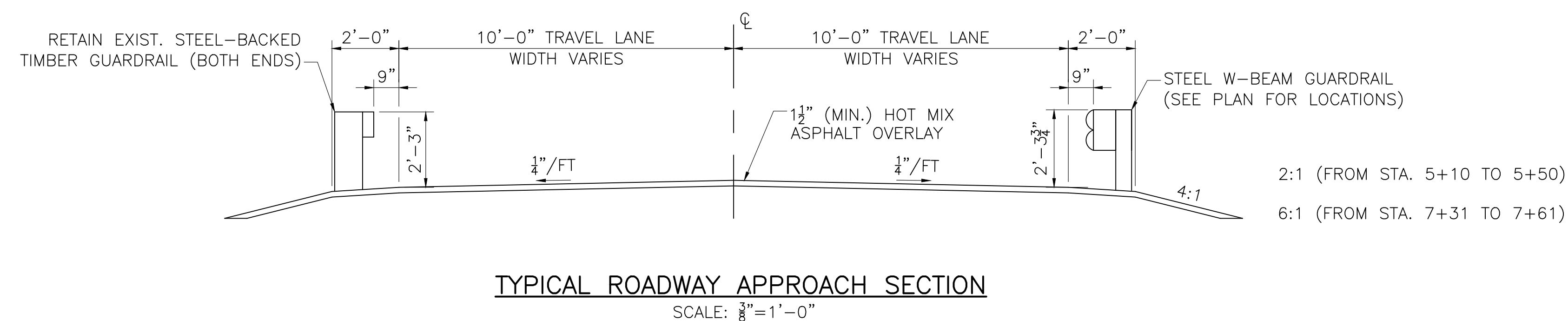
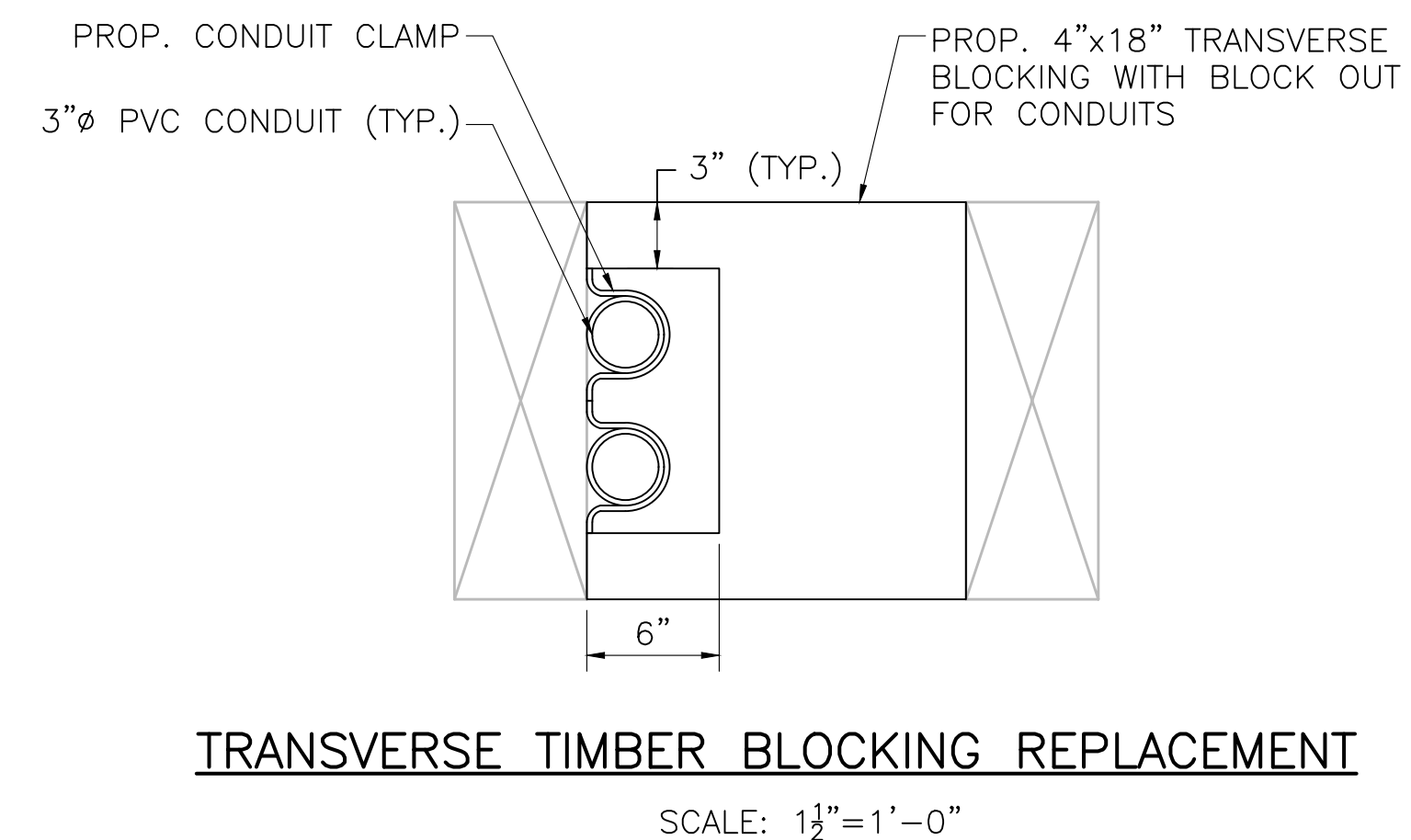
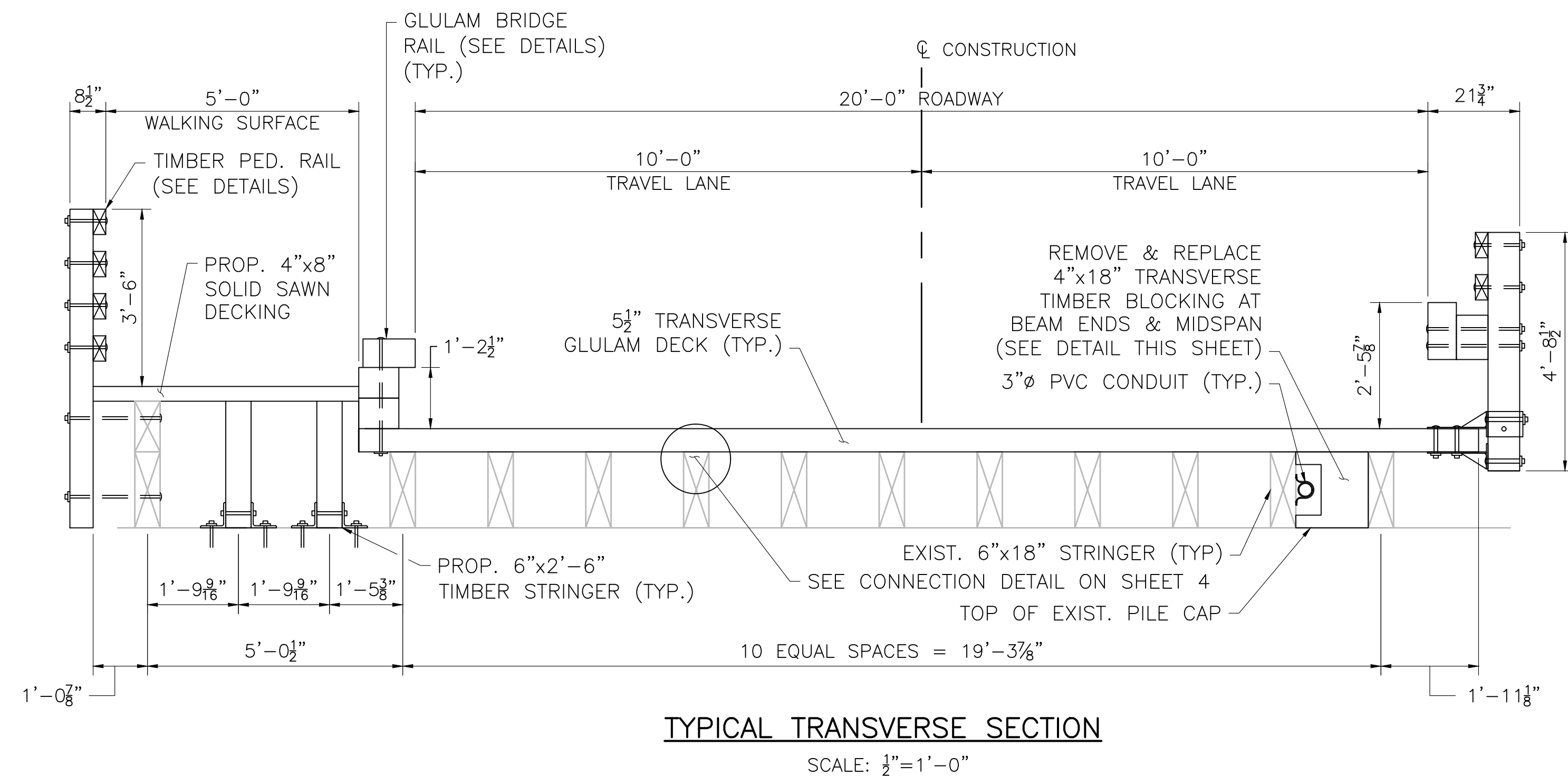
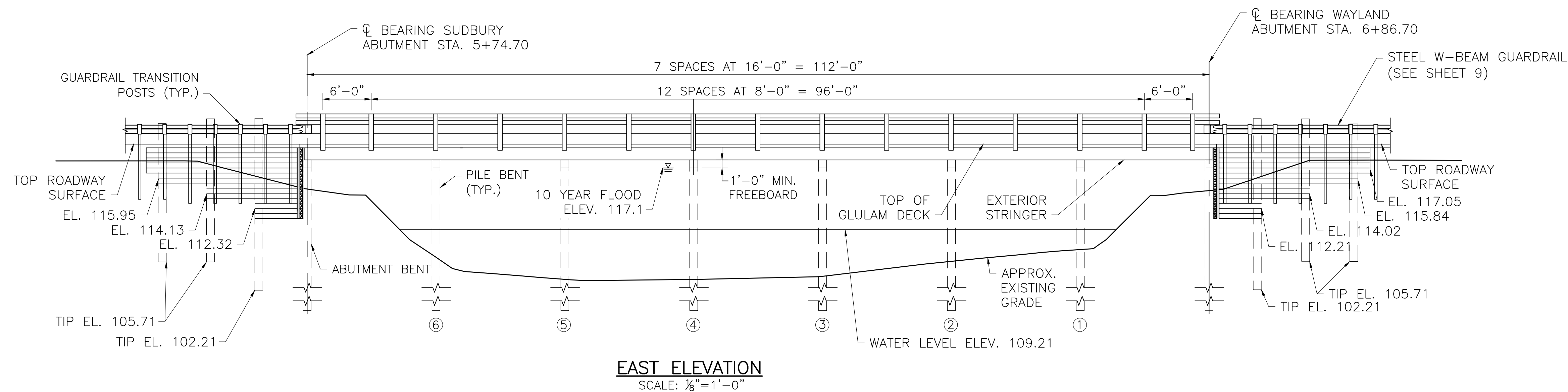
COMMONWEALTH OF MASSACHUSETTS
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STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	10
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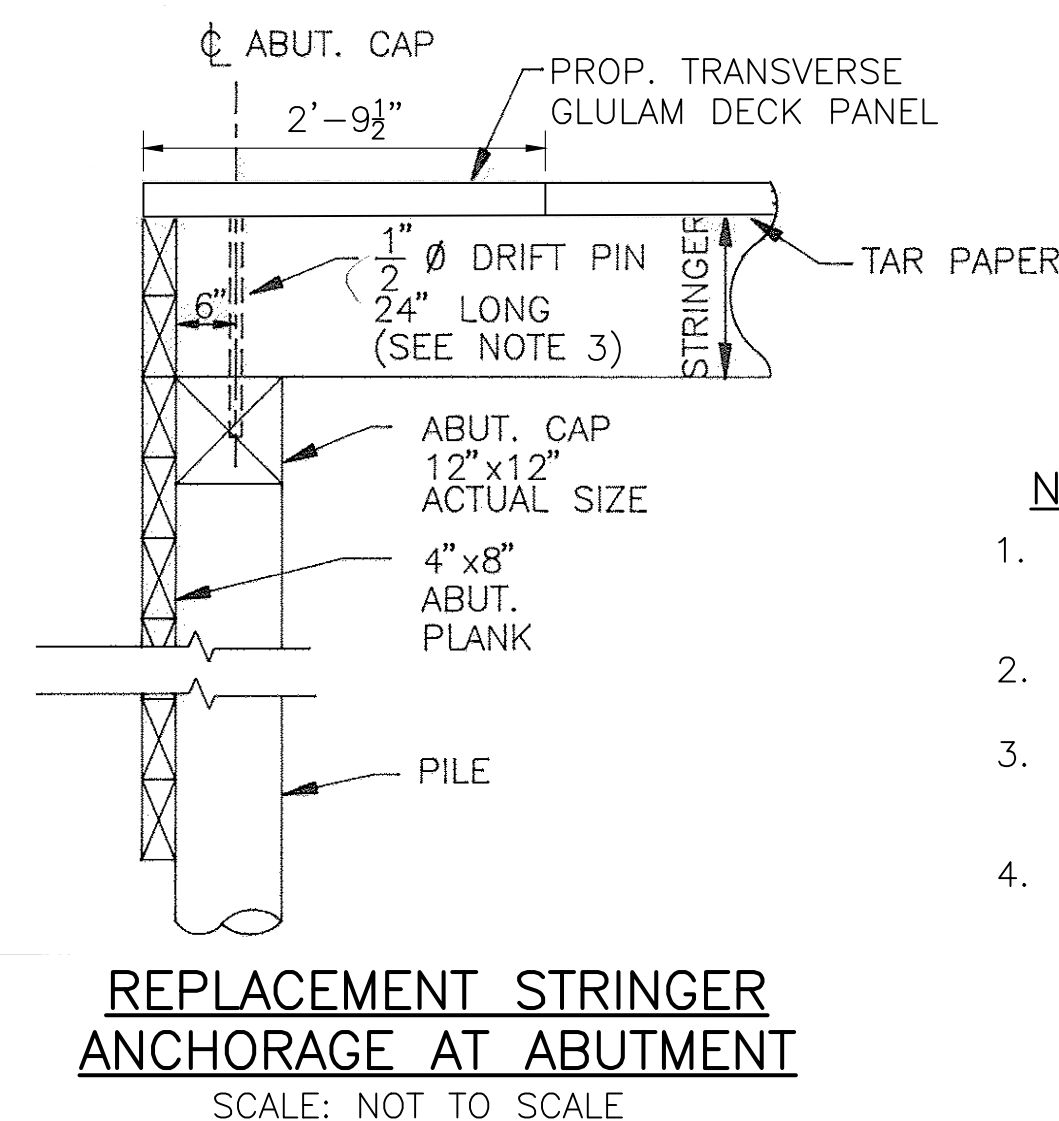
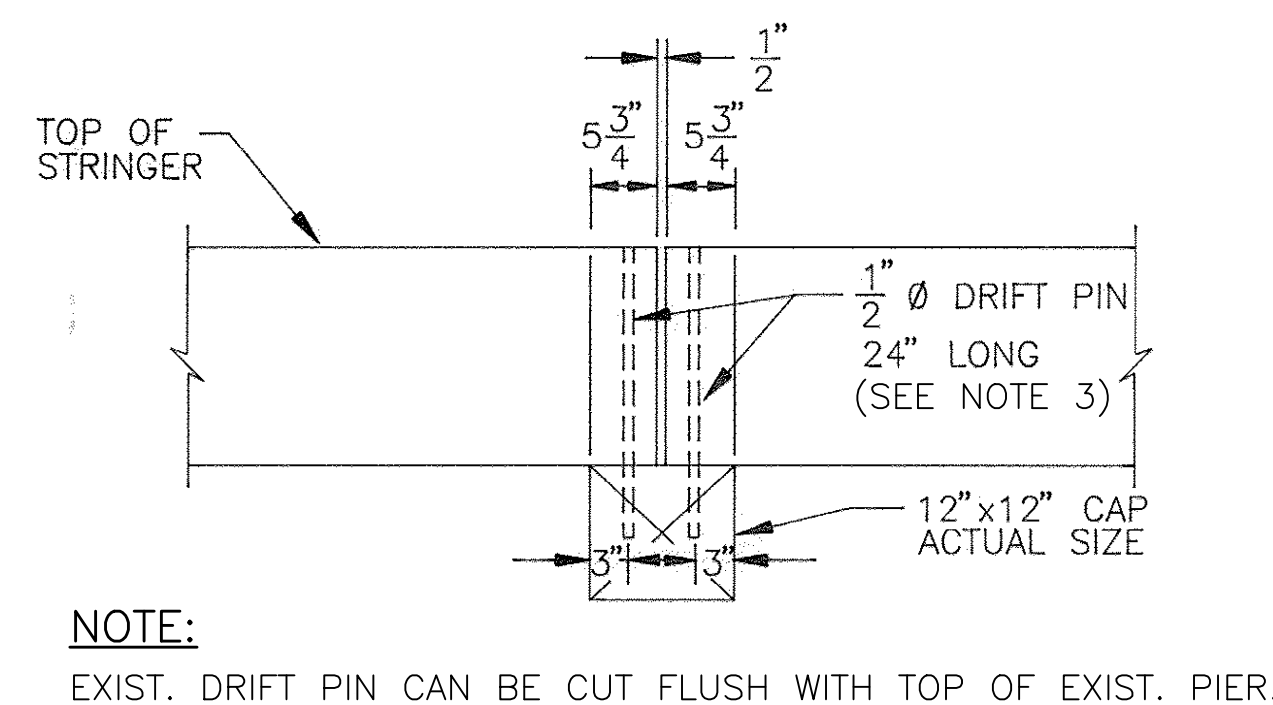
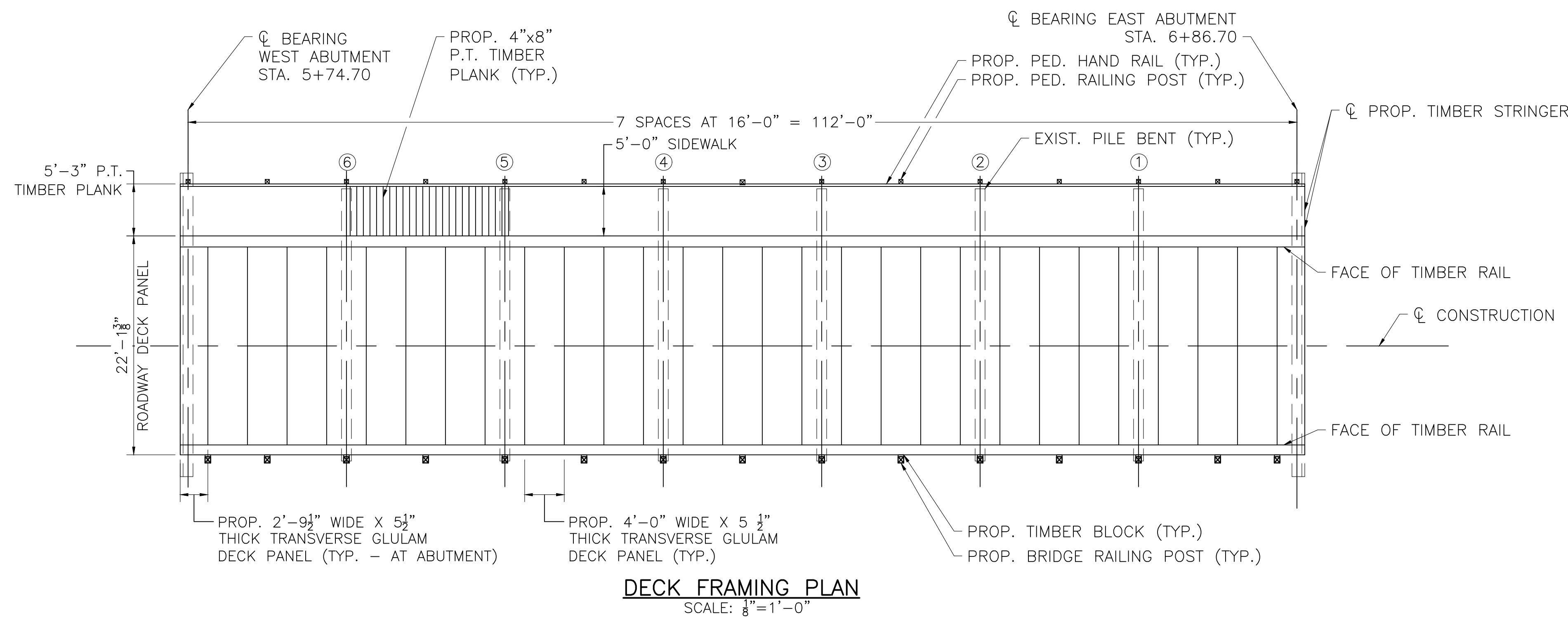
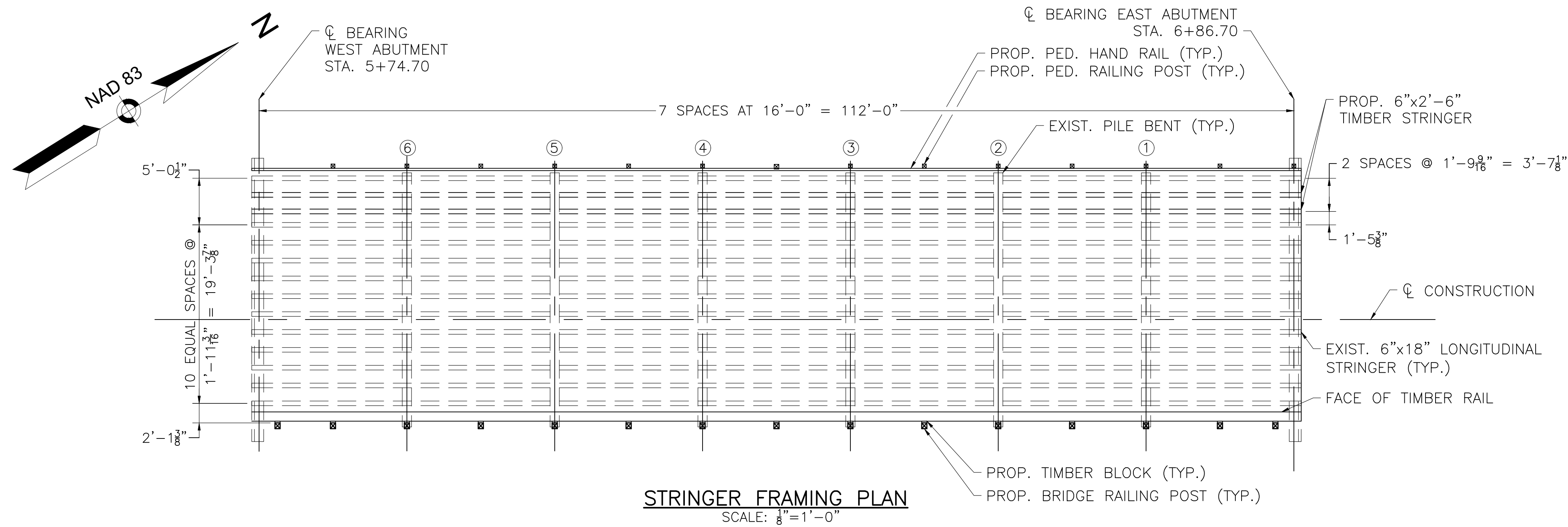
ELEVATION & TRANSVERSE SECTION



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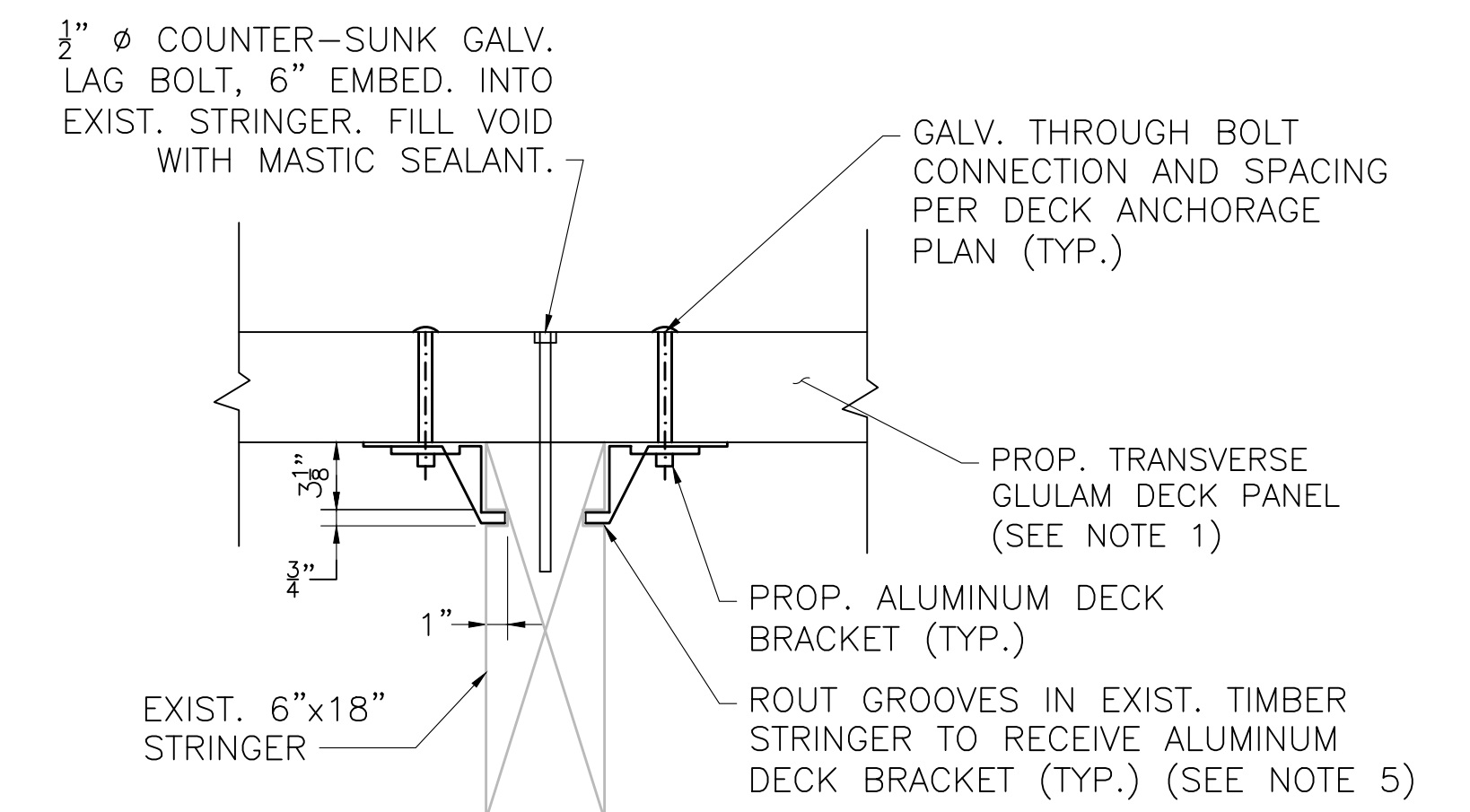
- NOTES:**
1. STRINGERS SHALL BE PREBORED WITH $\frac{7}{16}"$ DIAMETER HOLE FOR $\frac{1}{2}"$ DIAMETER DRIFT PIN BEFORE PRESSURE TREATING WITH PRESERVATIVE.
 2. ALL REPLACEMENT STRINGERS SHALL BE NORTHERN RED OAK, SELECT STRUCTURAL GRADE (TO MATCH EXISTING STRINGERS).
 3. DRILL NEW HOLES INTO PIER AND ABUTMENT CAPS FOR REPLACEMENT STRINGER DRIFT PINS. PRESSURE TREAT DRILL HOLES IN EXISTING SUBSTRUCTURE PRIOR TO DRIFT PIN INSTALLATION.
 4. ALL LUMBER AND TIMBER USED IN FABRICATION SHALL BE PRESSURE TREATED WITH WOOD PRESERVATIVE IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M133 AND AWPA STANDARD C14.

**SUDBURY
LINCOLN ROAD**

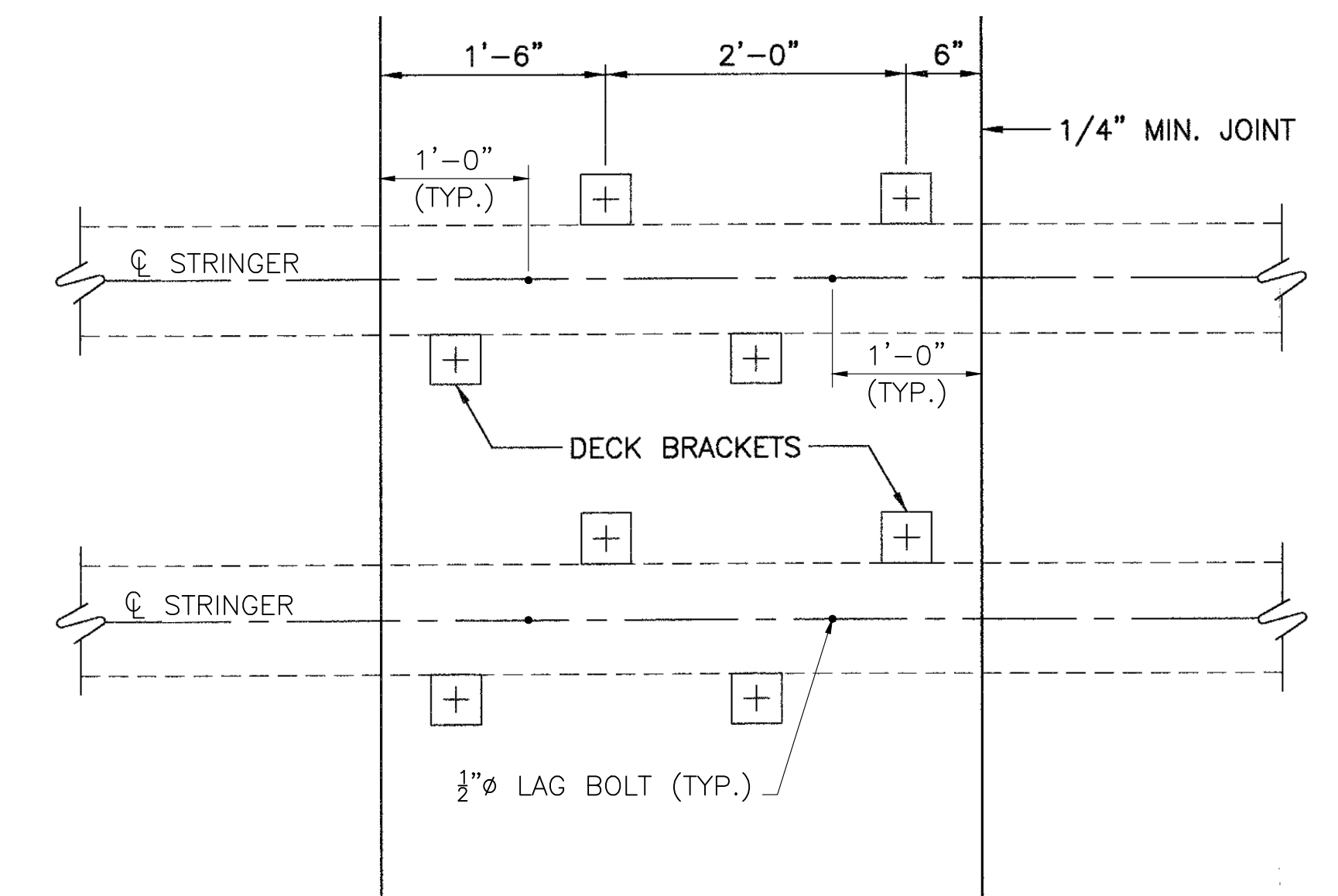
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	10

PROJECT FILE NO. T1520

FRAMING PLAN & DETAILS



- NOTES:**
1. PRELOAD DECK PANEL DURING FASTENING OF DECK TO BEAM.
 2. FIELD APPLY WOOD PRESERVATIVE IN ACCORDANCE WITH AASHTO M133 INTO ROUTED GROOVES PRIOR TO BRACKET INSTALLATION.
 3. DECK BRACKET TO BE IN ACCORDANCE WITH AMERICAN INSTITUTE OF TIMBER CONSTRUCTION GLULAM DECK ATTACHMENT PROVISIONS.
 4. GROOVES ARE ONLY REQUIRED AT BRACKET LOCATIONS AND DO NOT HAVE TO BE CONTINUOUS.
 5. GROOVE LENGTH TO BE $8"+2xY$ (Y DIMENSION TO BE PER FABRICATOR).



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PILE BENT NO.	PILE NO.	LOCATION	REPAIR TYPE
1	5	BOTTOM	DIAGONAL BRACE
2	1	BOTTOM	DIAGONAL BRACE
5	3	TOP	DIAGONAL BRACE
6	4	BOTTOM	PILE JACKET

SUBSTRUCTURE DEFICIENCY TABLE

TIMBER BRACING REPAIR NOTES

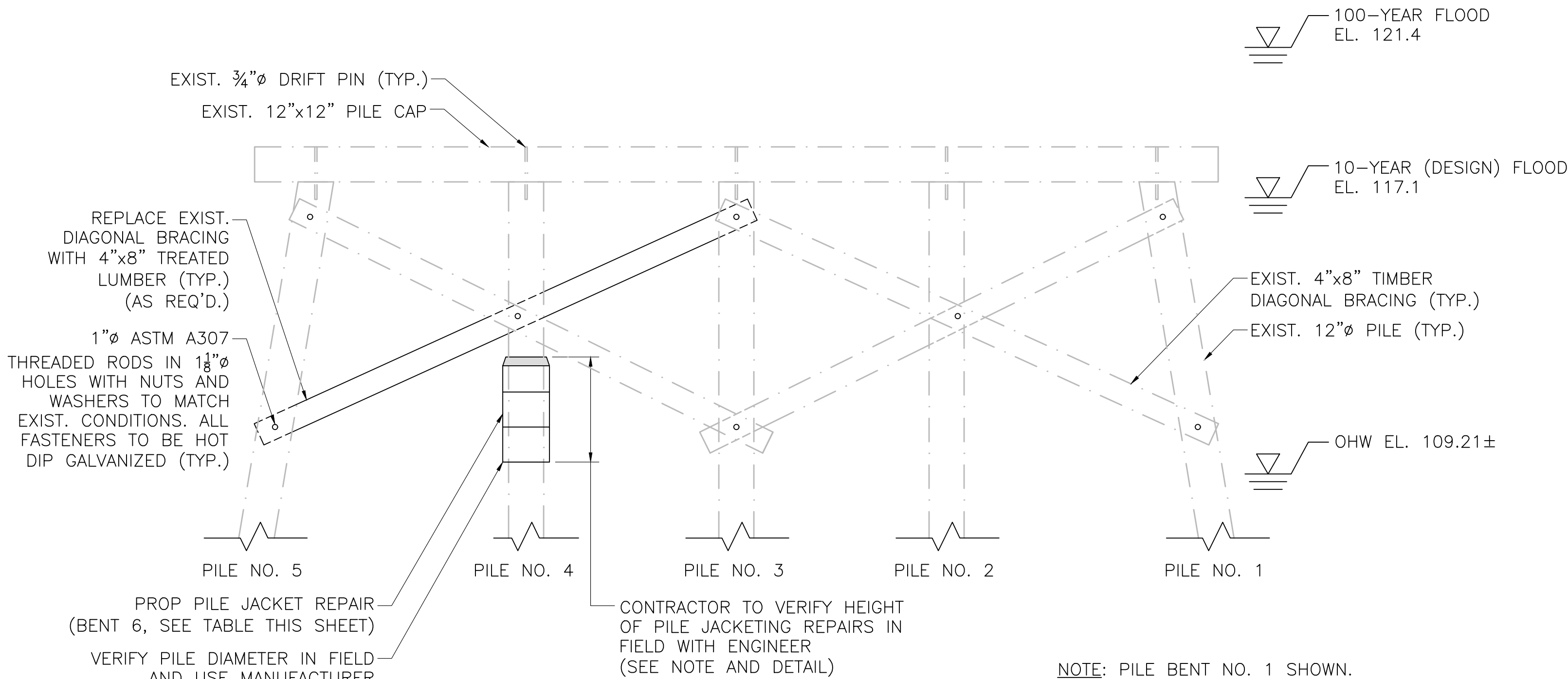
- PILE BENTS ARE NUMBERED FROM EAST TO WEST. PILES ARE NUMBERED FROM SOUTH TO NORTH. REFER TO THE FRAMING PLAN ON SHEET 5.
- SUBSTRUCTURE DEFICIENCIES INCLUDE SEVERE RUST AND SECTION LOSS TO FASTENERS, LOOSE DIAGONAL BRACING AT SEVERAL LOCATIONS, IN ADDITION TO A DEEP AREA OF ROT TO THE BOTTOM OF PILE 4 ON BENT 6.
- ALL EXISTING FASTENERS, IN ADDITION TO THE BRACES LISTED IN THE ABOVE TABLE, SHALL BE REPLACED.
- WHEN REPLACING TIMBER CROSS BRACING OR REPLACING STEEL FASTENERS, INSTALL BOLTS SNUG TIGHT THROUGH THE CENTER OF THE BRACING/PILE. MAINTAIN 6" MINIMUM CLEARANCE TO BRACING END.
- ALL NEW CROSS-BRACING LUMBER SHALL BE SOUTHERN YELLOW PINE #2 AND SHALL BE TREATED PER MASSDOT STANDARD SPECIFICATIONS M9.05.1.
- ALL DIMENSIONS ARE TAKEN FROM THE EXISTING BRIDGE PLANS. ACTUAL DIMENSIONS ENCOUNTERED IN THE FIELD MAY VARY.

TIMBER PILE REPAIR SEQUENCE

- CONTRACTOR SHALL VERIFY THE HEIGHT OF PILE JACKETING REPAIR IN THE FIELD.
- CONTRACTOR SHALL REMOVE CROSS-BRACING AS NEEDED TO PERFORM PILE JACKETING. UPON COMPLETION OF PILE JACKETING, CROSS BRACING SHALL BE IMMEDIATELY RESTORED PRIOR TO MOVING ON TO THE NEXT PILE OR NEXT BENT.
- IF REQUIRED, EXCAVATE MUD AND/OR VEGETATION AROUND PILE AS NEEDED TO ENABLE JACKET INSTALLATION. RESTORE ANY DISTURBANCES TO ORIGINAL CONDITION AFTER COMPLETING THE PILE WORK.
- INSPECT EACH PILE PRIOR TO REPAIR AND REMOVE LOOSE AND UNSOUND PILE MATERIAL. SEE TABLE FOR EXPECTED PILE REPAIR LOCATIONS. THE CONTRACTOR, ENGINEER, AND PILE WRAP SUPPLIER SHALL JOINTLY INSPECT THE PILE RECEIVING THE PILE JACKET REPAIR.
- INSTALL SIKA FIBERGLASS REINFORCED PLASTIC (FRP) PILE REPAIR SLEEVES (OR EQUIVALENT) TO SPECIFIED PILES. FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS TO FACILITATE PROPER EPOXY INJECTION.
- INJECT SIKADUR 35 HI-MOD LV LPL EPOXY MORTAR TO RESTORE ORIGINAL PILE CROSS SECTION. EPOXY MORTAR SHALL ACHIEVE A COMPRESSIVE STRENGTH OF 9,000 PSI.
- ALL MANUFACTURER'S INSTALLATION RECOMMENDATIONS SHALL BE STRICTLY ADHERED TO DURING INSTALLATION OF FRP SLEEVES AND EPOXY MORTAR.

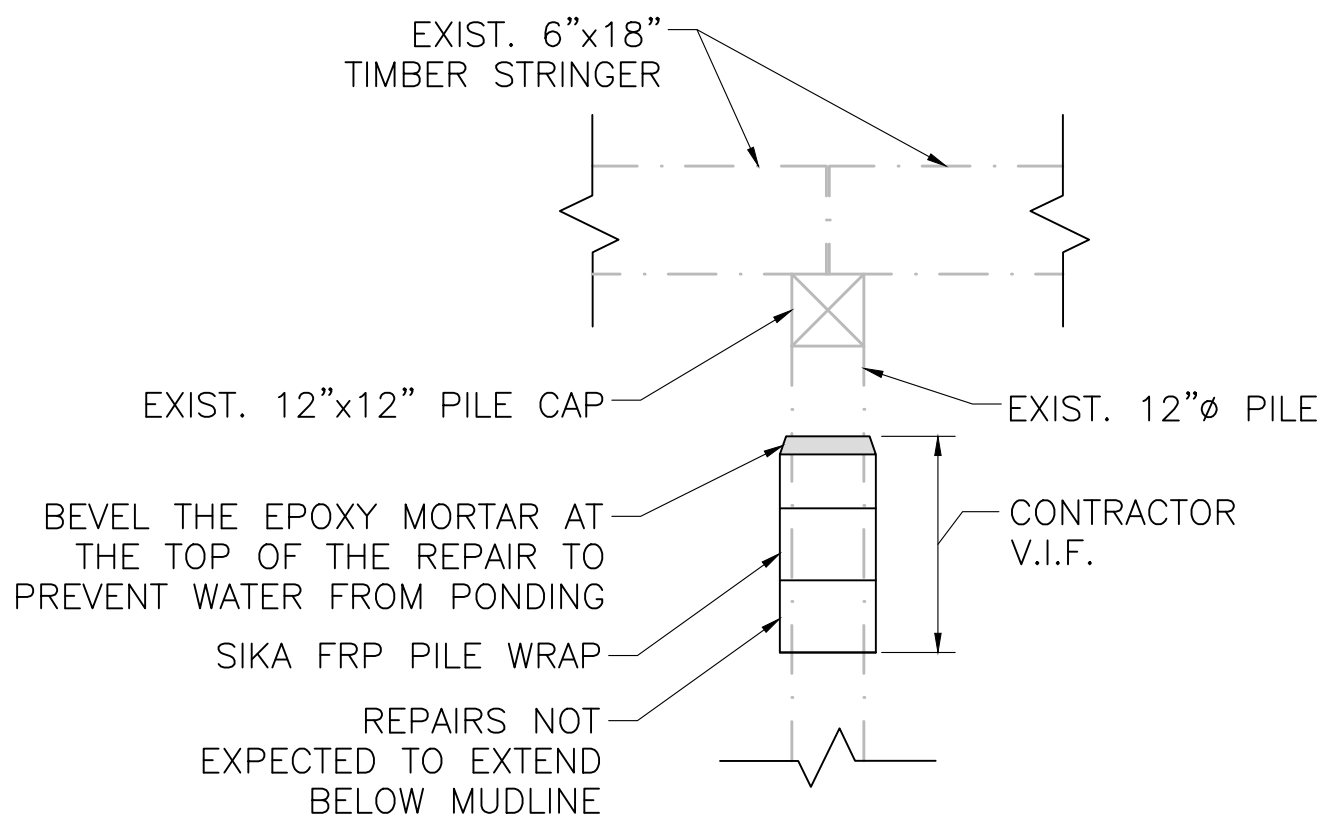
TIMBER PILE REPAIR NOTES

- THE FOLLOWING NOTES ARE INTENDED TO PROVIDE A GENERAL REPRESENTATION OF THE TIMBER PILE REPAIR PROCESS. THESE NOTES MAY BE SUPERCEDED MODIFIED, OR ADJUSTED BY THE REPAIR PROCEDURE RECOMMENDED BY THE PILE WRAP MANUFACTURER.
- ALL PILE SURFACES WITHIN REPAIR AREA SHALL BE THOROUGHLY CLEANED OF ALL DETERIORATED PILE MATERIAL, OIL, GREASE, DEBRIS, AND DELETERIOUS MATERIAL THAT WOULD PREVENT PROPER BONDING. PREPARE PILE SURFACES USING WATER BLASTING OR OTHER APPROVED METHODS. JACKET PLACEMENT SHALL NOT PROCEED UNTIL PILE SURFACE PREPARATION HAS BEEN APPROVED BY THE ENGINEER.
- SUBMERGED FIBERGLASS JACKETS SHALL BE INSTALLED BY CERTIFIED PROFESSIONAL DIVERS.
- ALL JACKETS SHALL BE SEALED TO PREVENT EPOXY MORTAR LEAKAGE DURING CONSTRUCTION.
- SPACERS AND ANY PUMPING PORTS (IF REQUIRED) SHALL BE FIELD INSTALLED.
- PLACE BEAD OF EPOXY IN FEMALE PORTION OF TONGUE AND GROOVE INTERLOCKING JACKET JOINT.
- JACKET SHALL BE OPENED AND PLACED AROUND THE PILE. ALLOW JACKET TO RETURN TO ORIGINAL SHAPE AND ENGAGE INTERLOCKING JOINT.
- SET JACKET AT PROPER ELEVATION SO THAT A MINIMUM OF 2'-0" OF UNDAMAGED PILE IS LOCATED INSIDE JACKET, ABOVE AND BELOW DAMAGED AREA OF PILE.
- INSTALL BACKER ROD AT BOTTOM OF JACKET AND PUMP WITH APPROVED EPOXY MORTAR.
- TOP OF REPAIR SHALL BE BEVELED TO PREVENT THE PONDING OF WATER AT THE TOP OF THE JACKET.



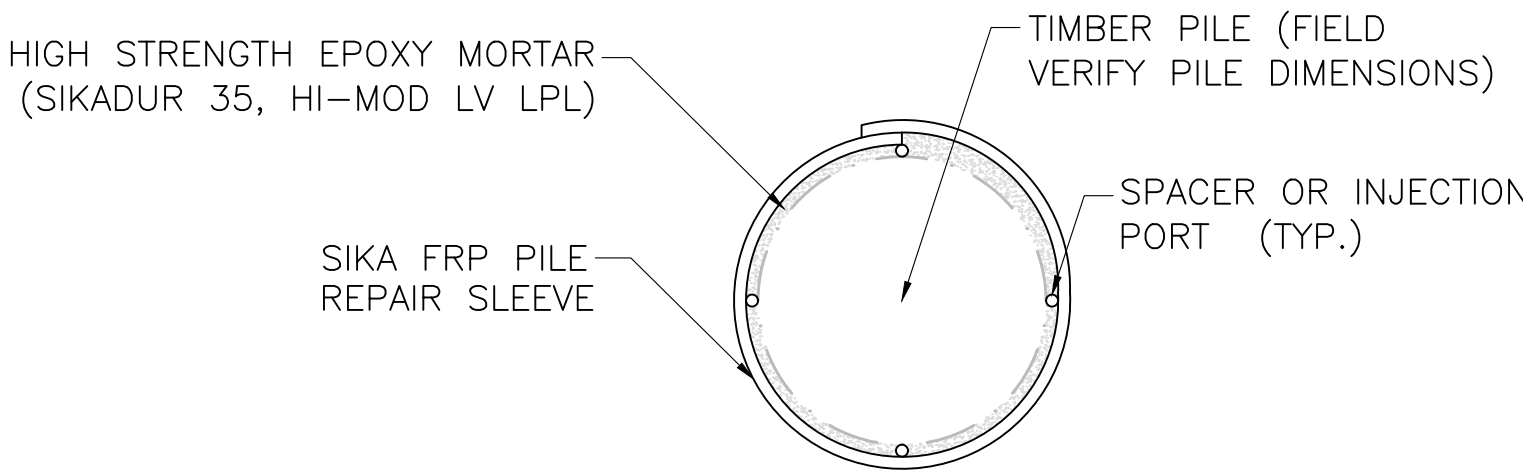
TYPICAL PIER ELEVATION
(LOOKING TOWARD WAYLAND)

SCALE: 3/8" = 1'-0"



TIMBER PILE JACKETING DETAIL

NOT TO SCALE



SCHEMATIC PILE JACKETING DETAIL

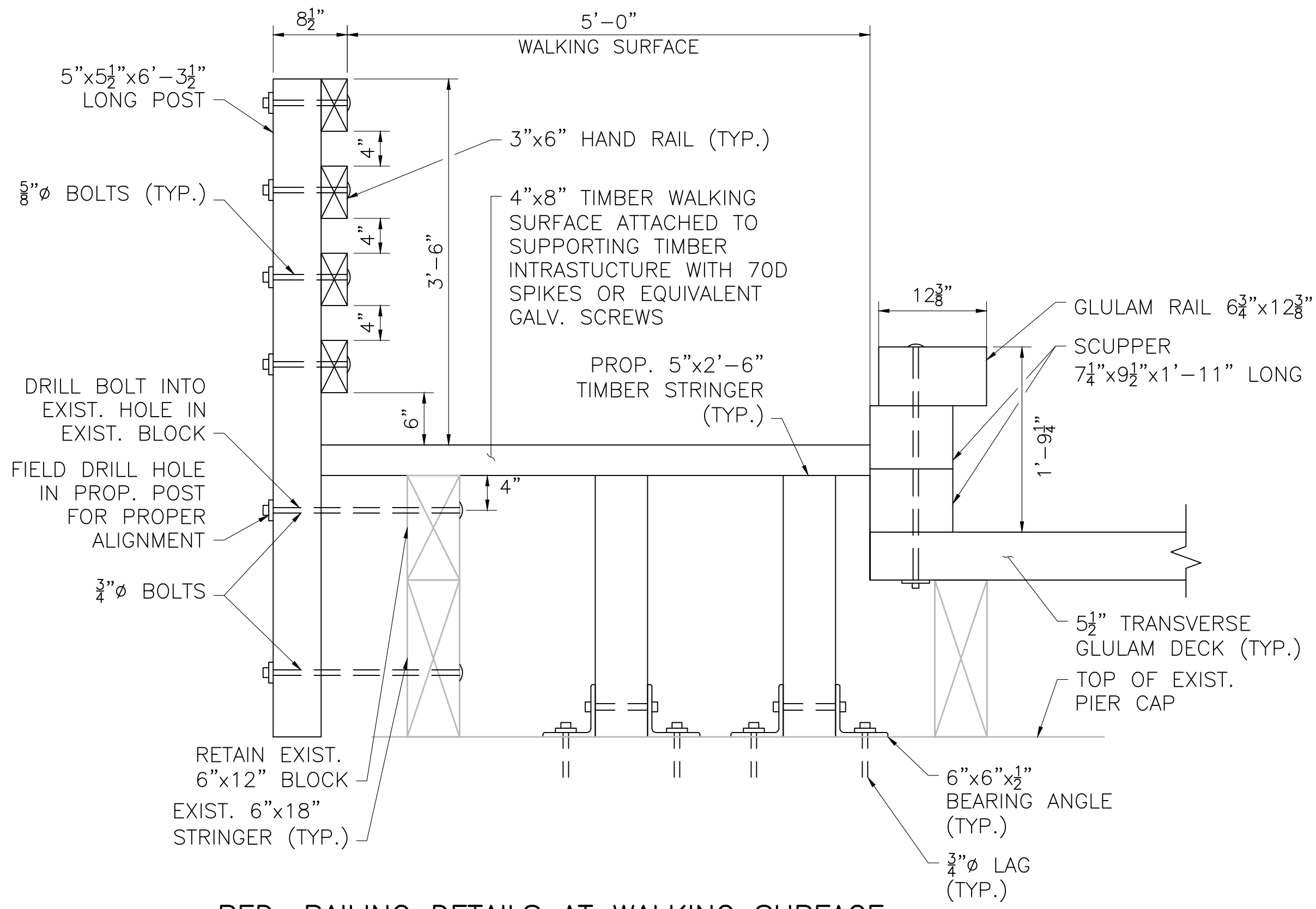
NOT TO SCALE

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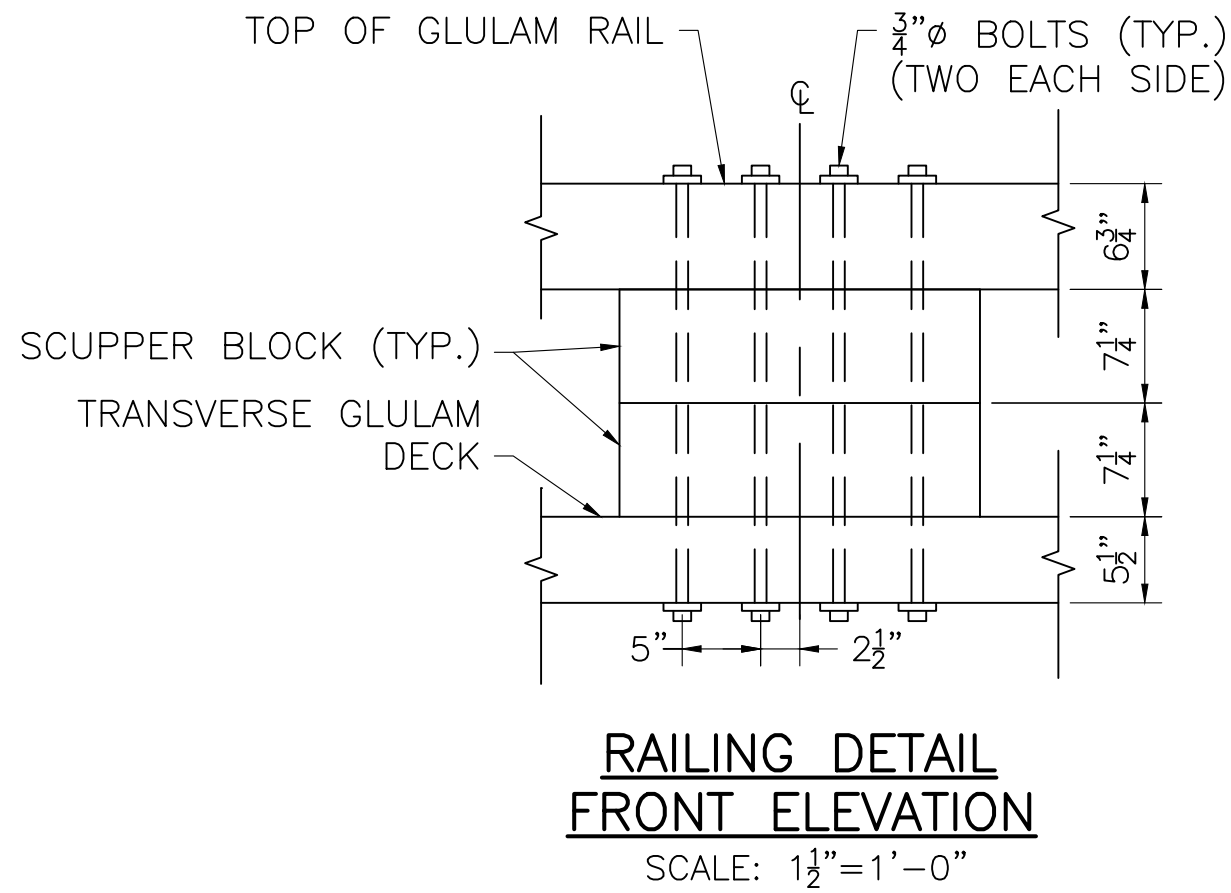
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STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	10
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TIMBER BRIDGE RAIL (1 OF 2)			

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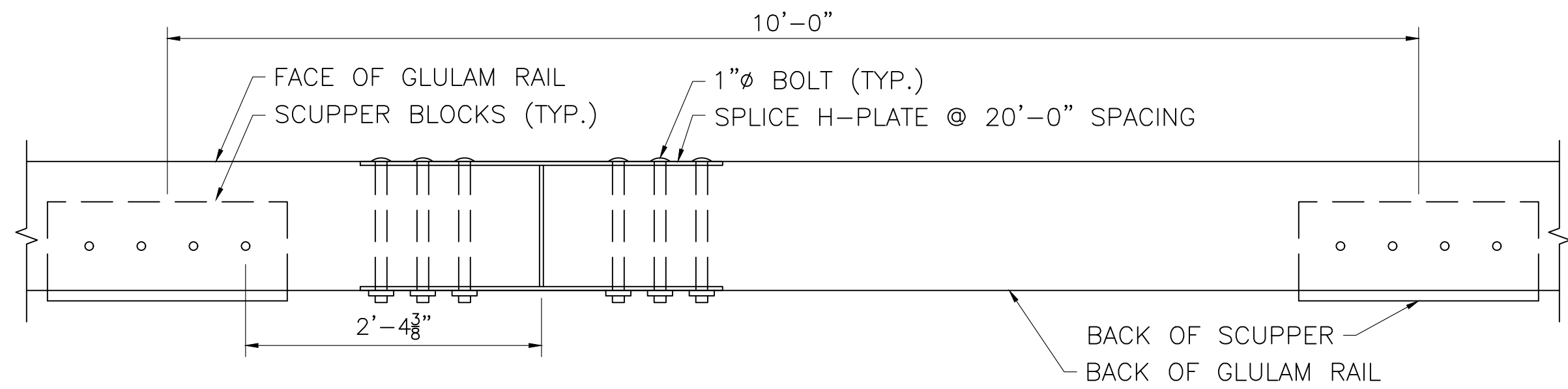
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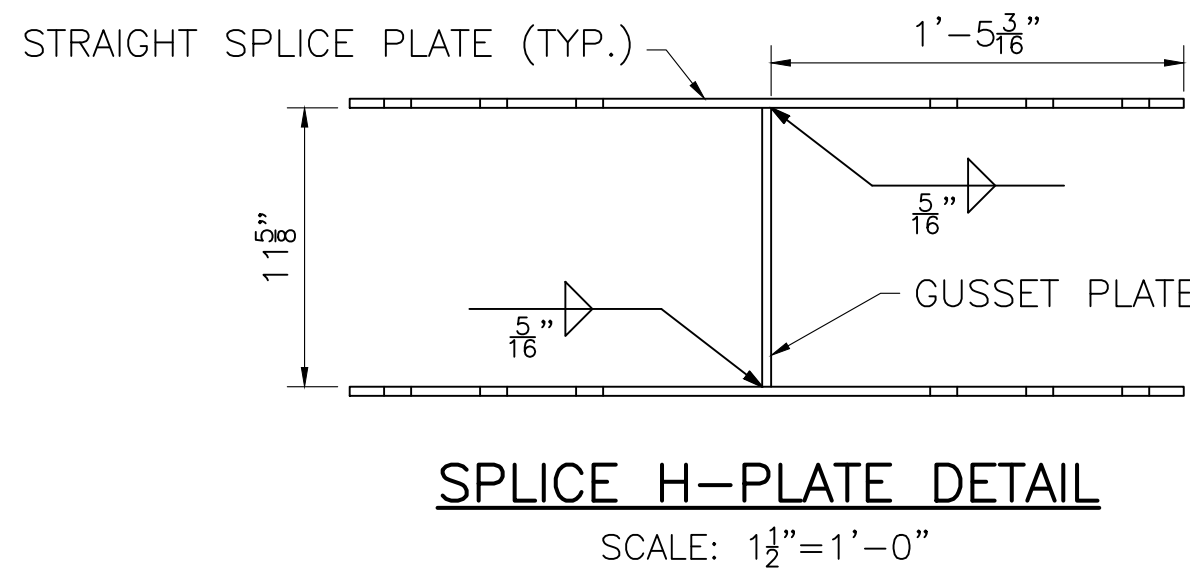
PED. RAILING DETAILS AT WALKING SURFACE
& VEHICLE RAILING AT CURB
SCALE: 1"=1'-0"



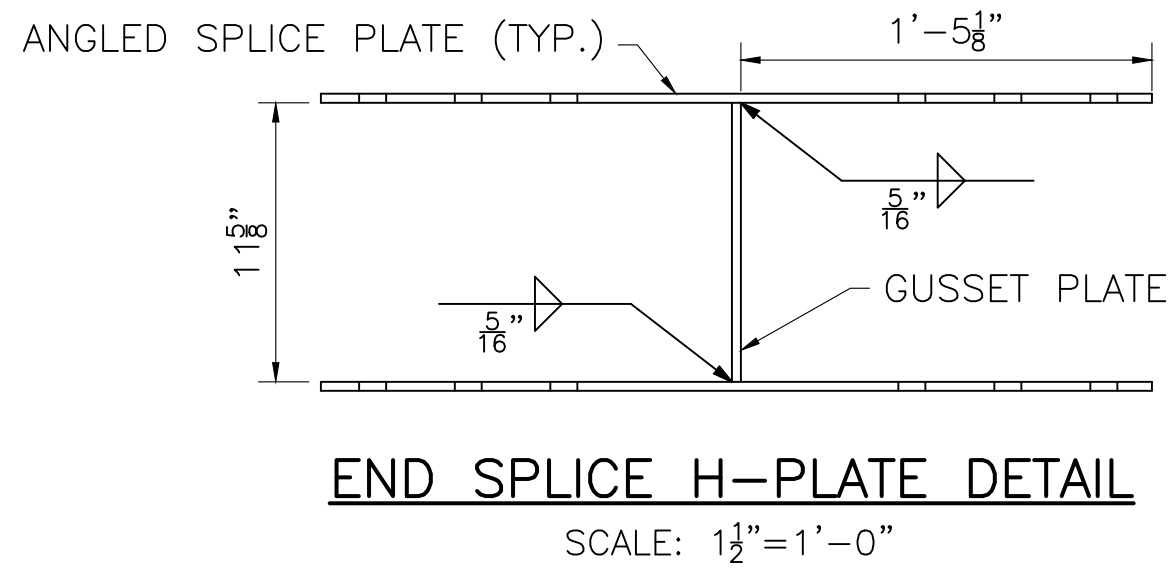
RAILING DETAIL
FRONT ELEVATION
SCALE: 1 1/2"=1'-0"



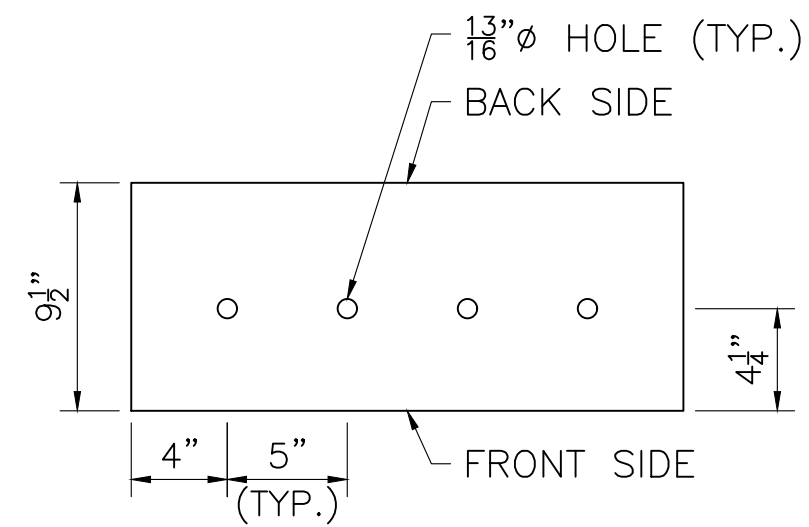
GENERAL CONFIGURATION: PLAN
SCALE: 1"=1'-0"



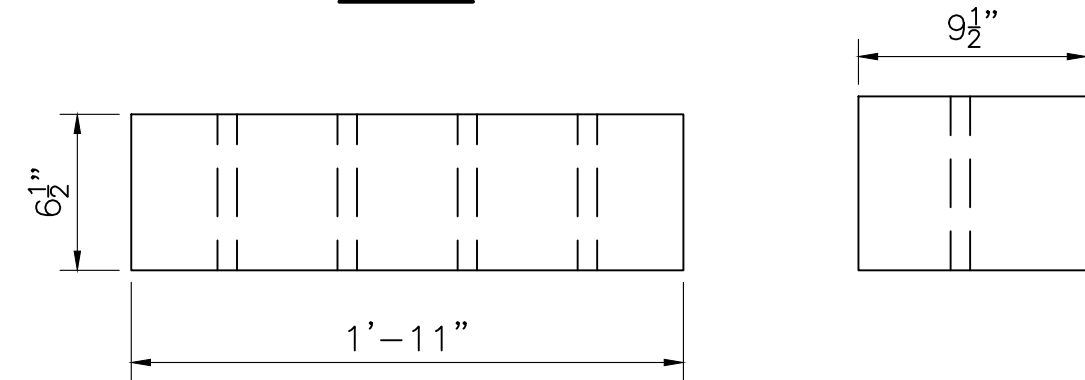
SPLICE H-PLATE DETAIL
SCALE: 1 1/2"=1'-0"



END SPLICE H-PLATE DETAIL
SCALE: 1 1/2"=1'-0"



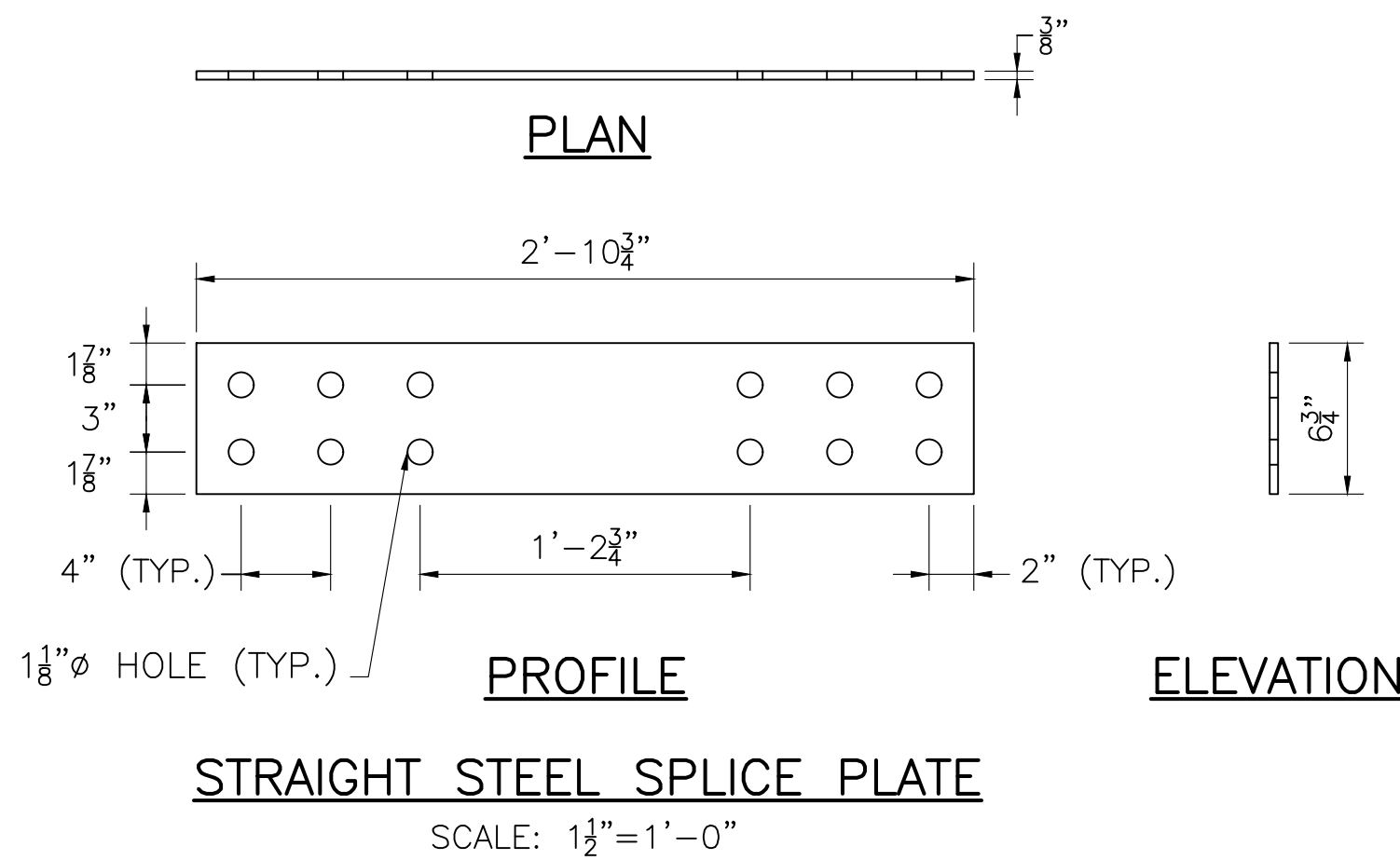
PLAN



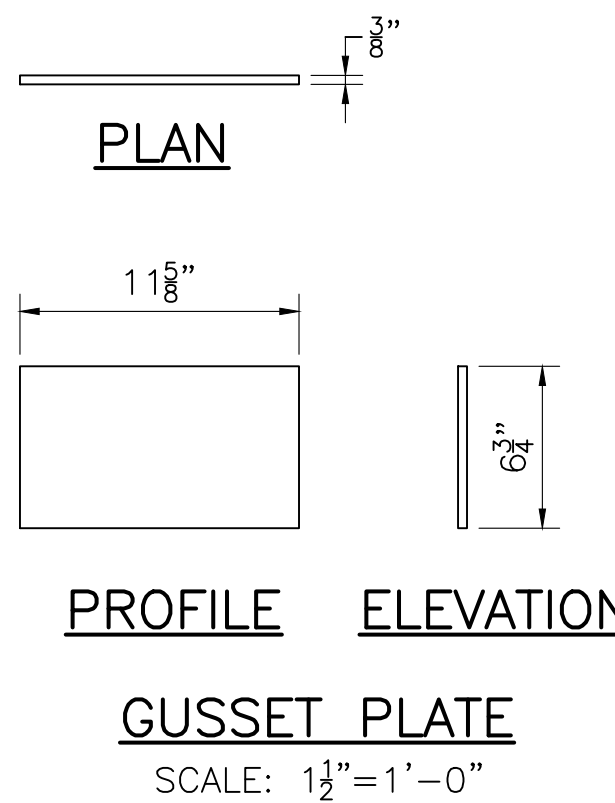
PROFILE

ELEVATION

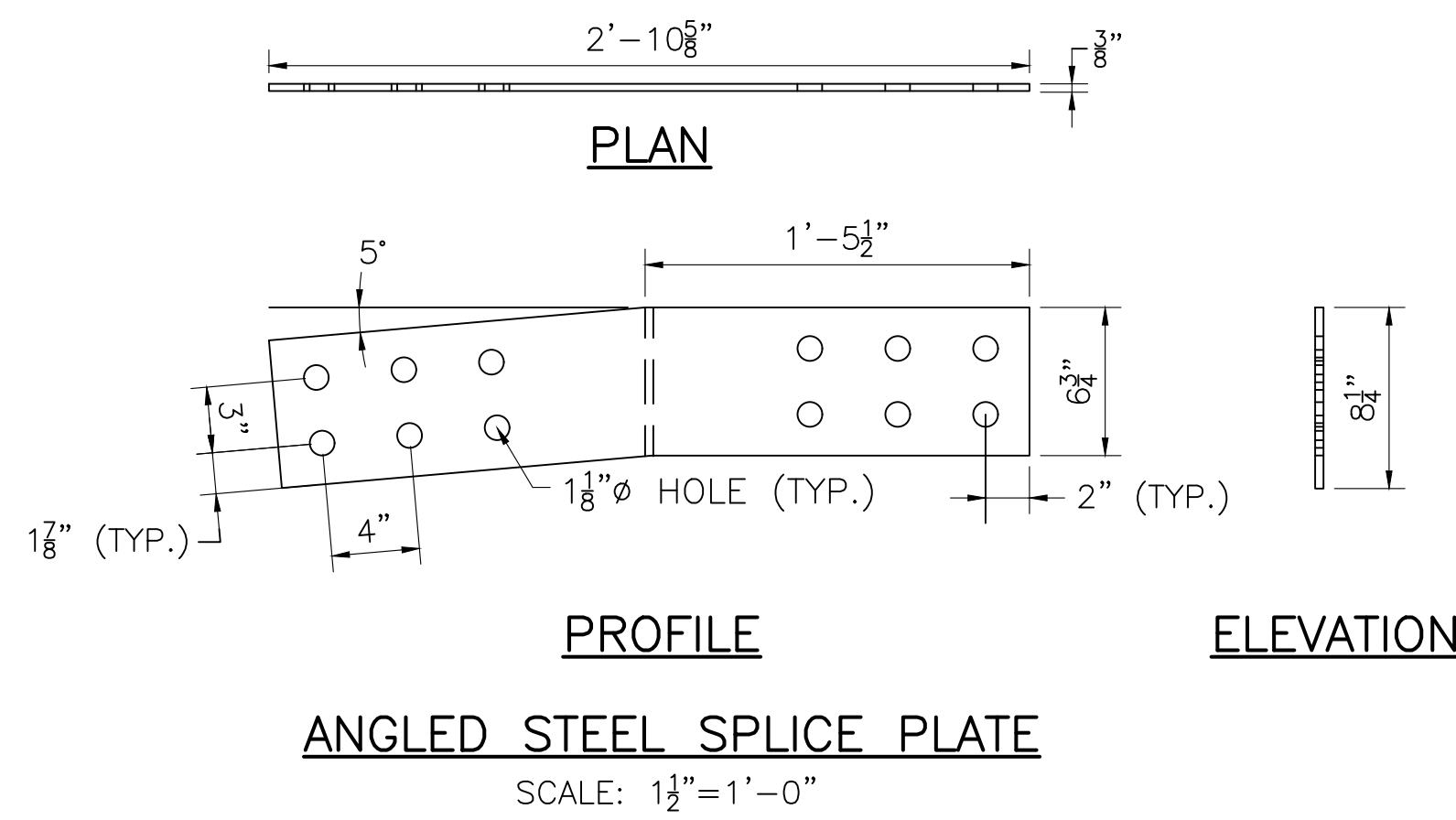
SCUPPER BLOCK DETAILS
SCALE: 1 1/2"=1'-0"



STRAIGHT STEEL SPLICE PLATE
SCALE: 1 1/2"=1'-0"



GUSSET PLATE
SCALE: 1 1/2"=1'-0"



ANGLED STEEL SPLICE PLATE
SCALE: 1 1/2"=1'-0"

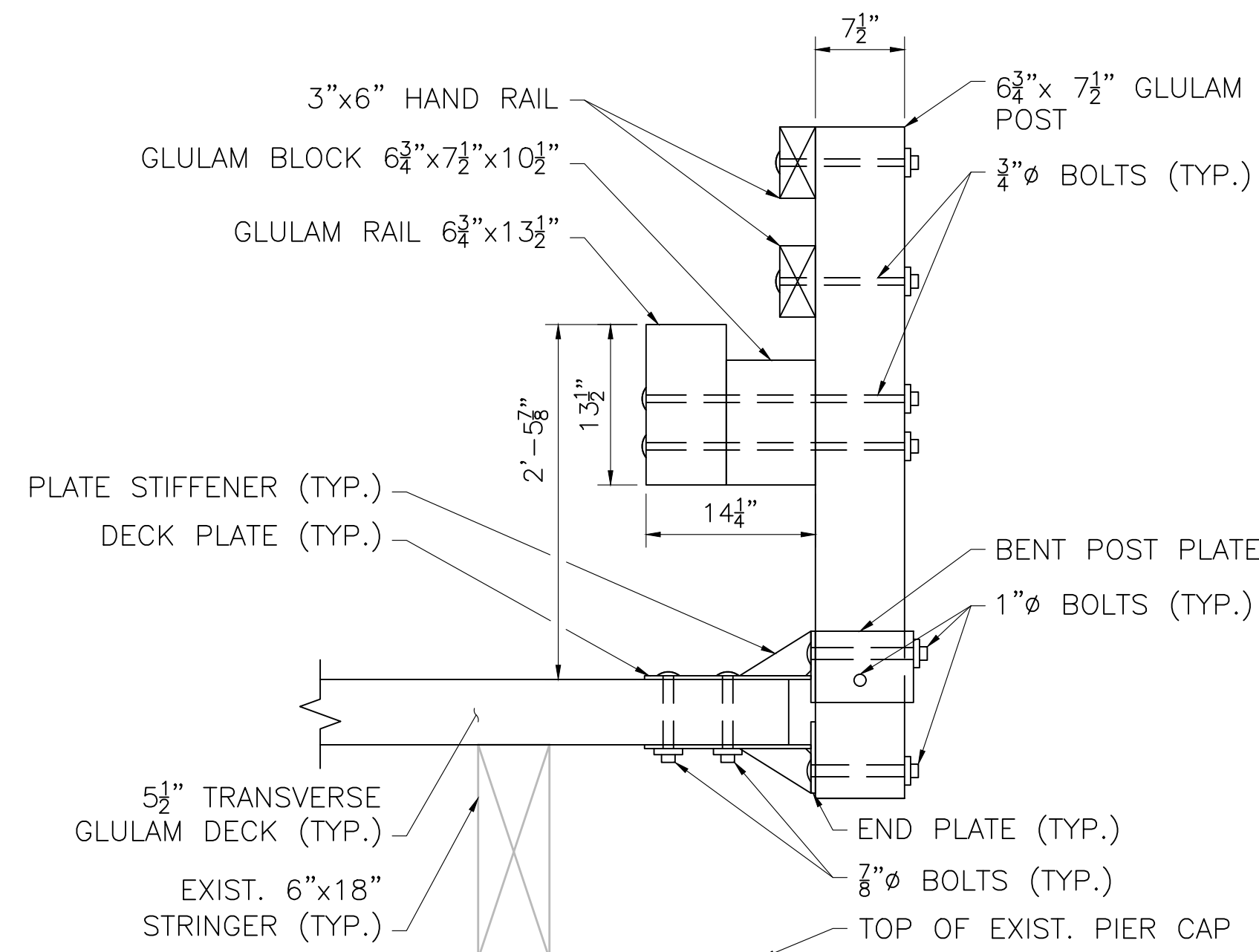
NOTE: REFER TO FHWA ELIGIBILITY LETTER FOR THE WEST VIRGINIA TL-1 TIMBER CURB-TYPE BRIDGE BARRIER FOR MORE INFORMATION. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE ENGINEER TO REVIEW AND APPROVE.

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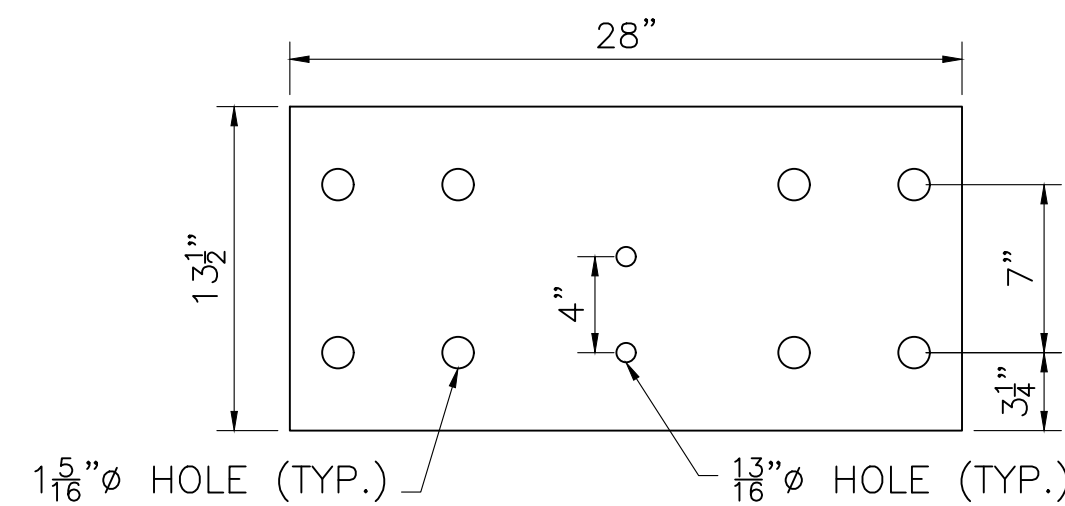
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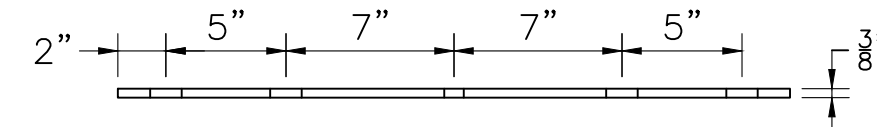
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TIMBER BRIDGE RAIL (2 OF 2)			



VEHICLE RAILING DETAILS AT CURB
SCALE: 1"=1'-0"

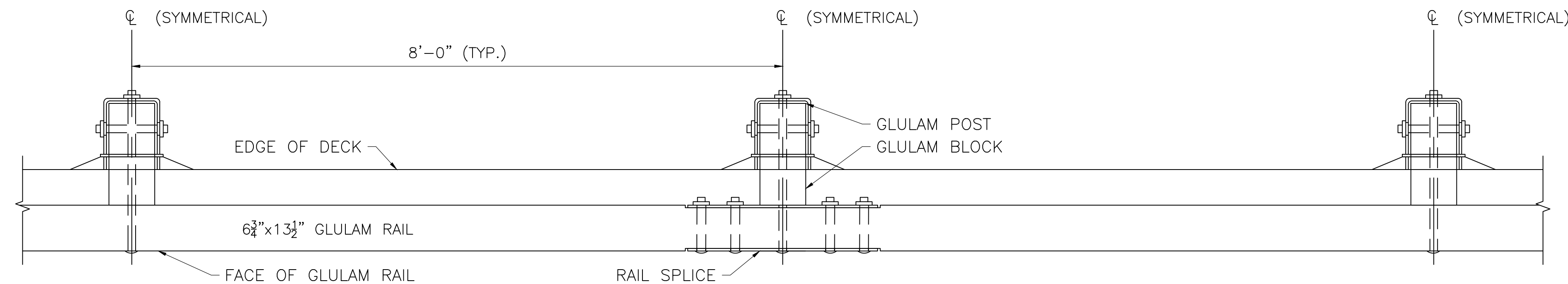


PROFILE

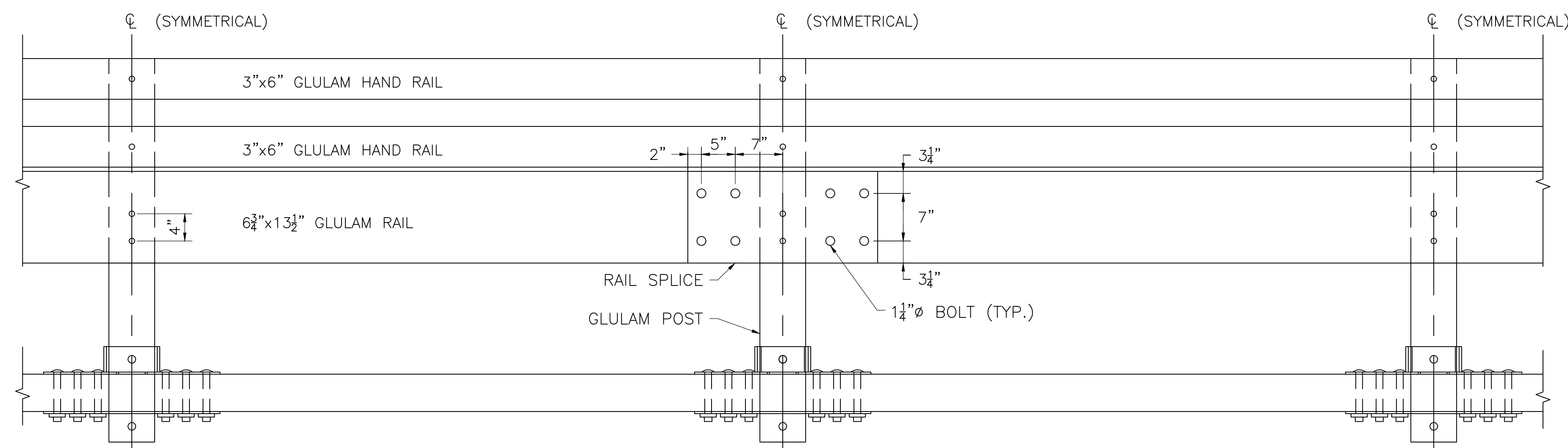


PLAN

RAIL STEEL SPLICE PLATE DETAIL
SCALE: 1 $\frac{1}{2}"$ =1'-0"

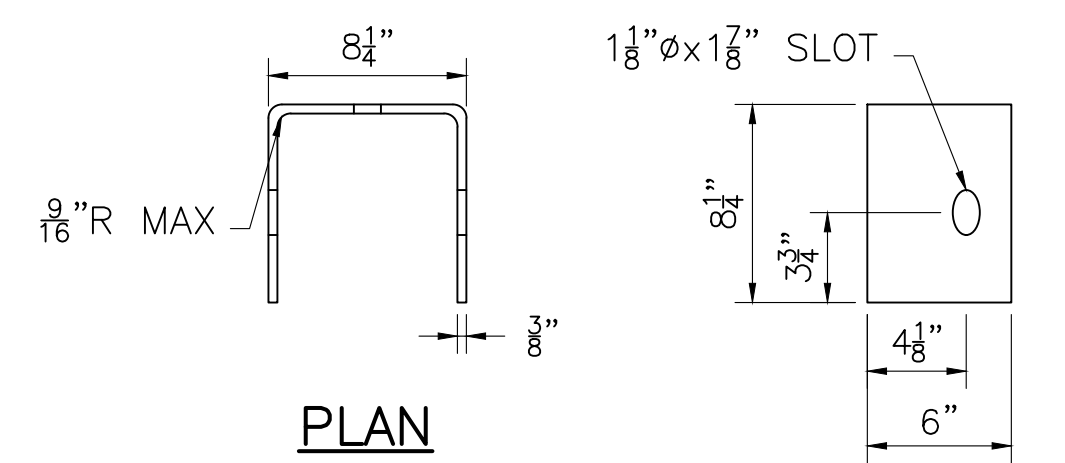


PLAN



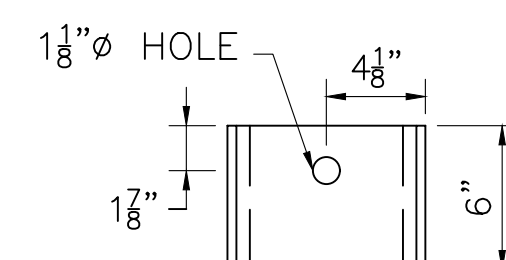
FRONT ELEVATION

GENERAL CONFIGURATION
SCALE: 1"=1'-0"



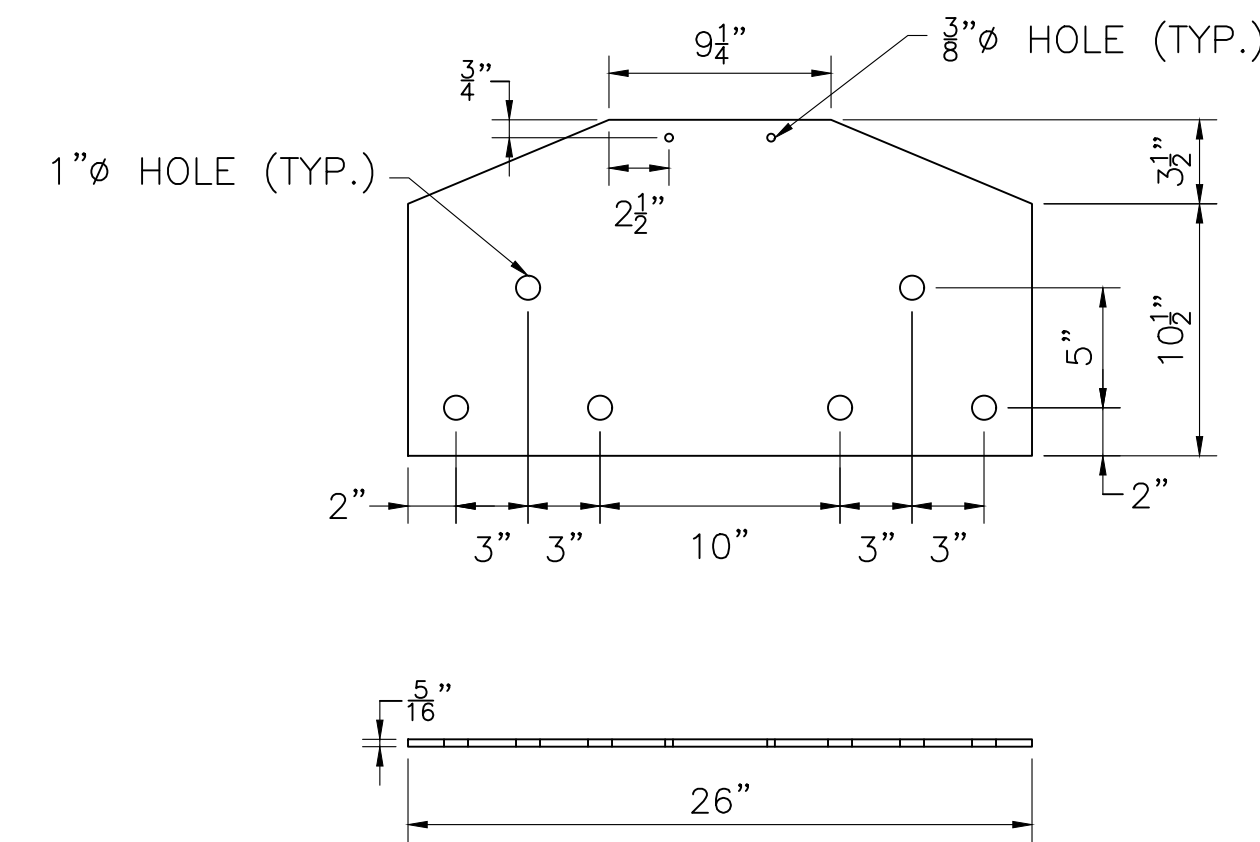
PLAN

ELEVATION



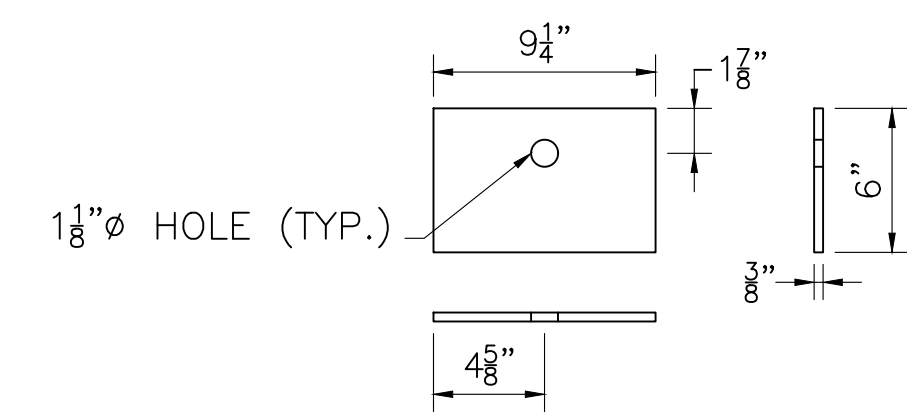
PROFILE

BENT POST PLATES
SCALE: 1 $\frac{1}{2}"$ =1'-0"



DECK PLATES

SCALE: 1 $\frac{1}{2}"$ =1'-0"



END PLATES

SCALE: 1 $\frac{1}{2}"$ =1'-0"

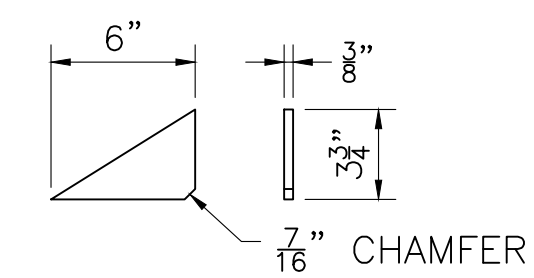
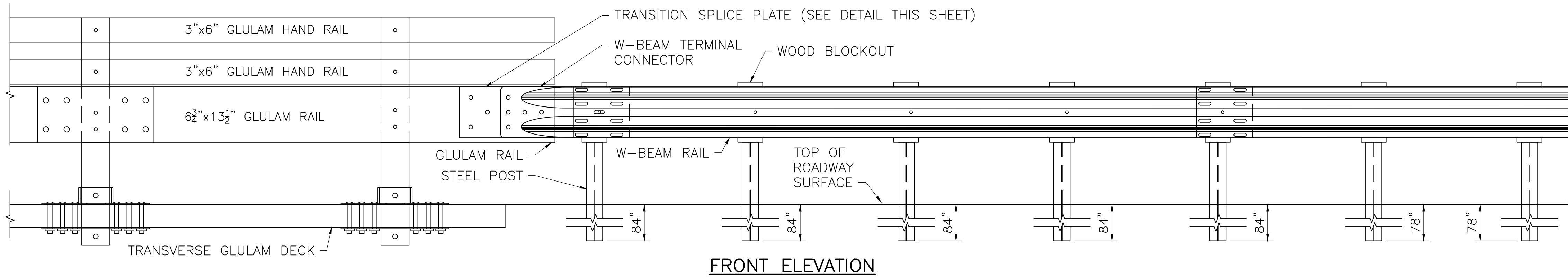
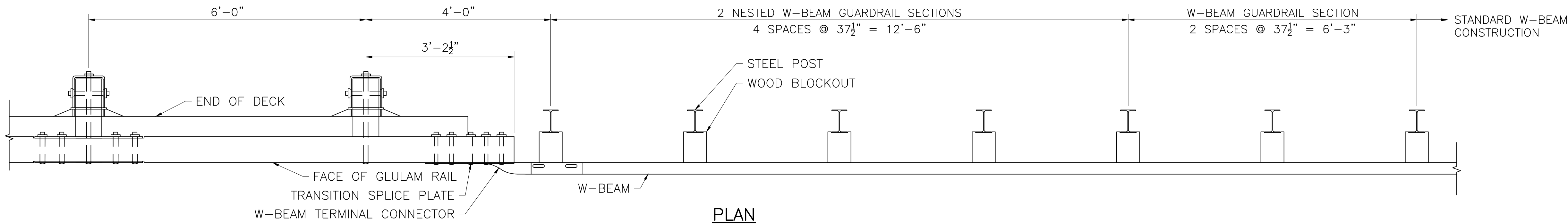


PLATE STIFFENER

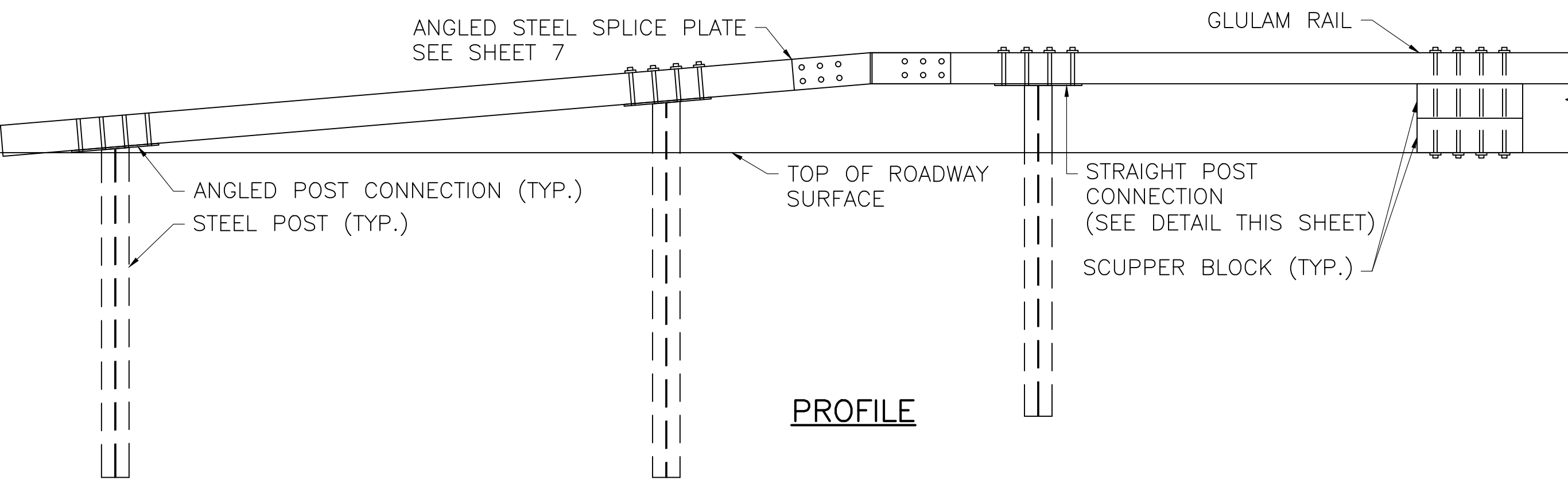
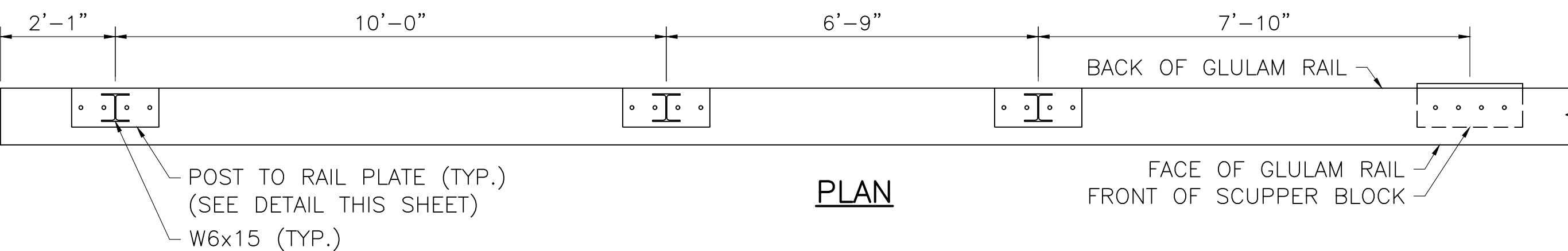
SCALE: 1 $\frac{1}{2}"$ =1'-0"

MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
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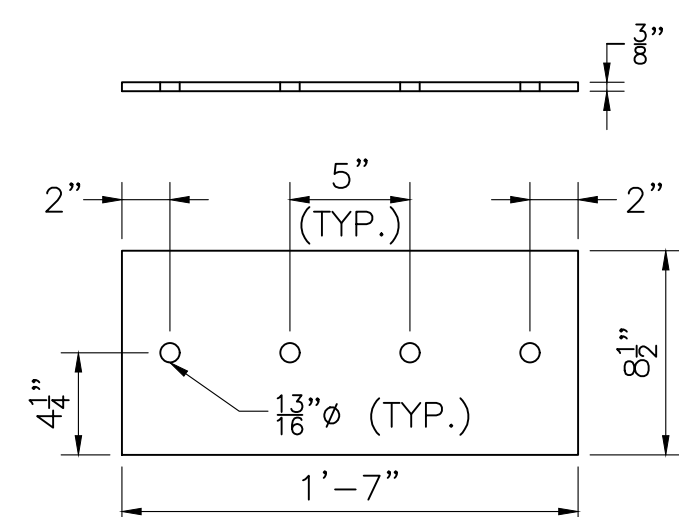
NOTE: REFER TO FHWA "GUIDE FOR BRIDGE CURB/RAIL AND APPROACH TREATMENT FOR EXTREMELY LOW VOLUME ROADS" FOR MORE INFORMATION REGARDING THIS BARRIER SYSTEM. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE ENGINEER TO REVIEW AND APPROVE.



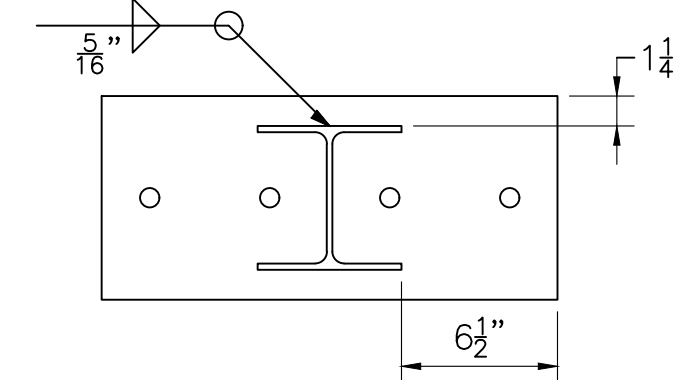
**APPROACH GUARDRAIL TRANSITION
(EAST SIDE OF BRIDGE)**
SCALE: 3/4"=1'-0"



**SLOPED END RAIL TERMINAL
(WEST SIDE OF BRIDGE)**
SCALE: 1/2"=1'-0"



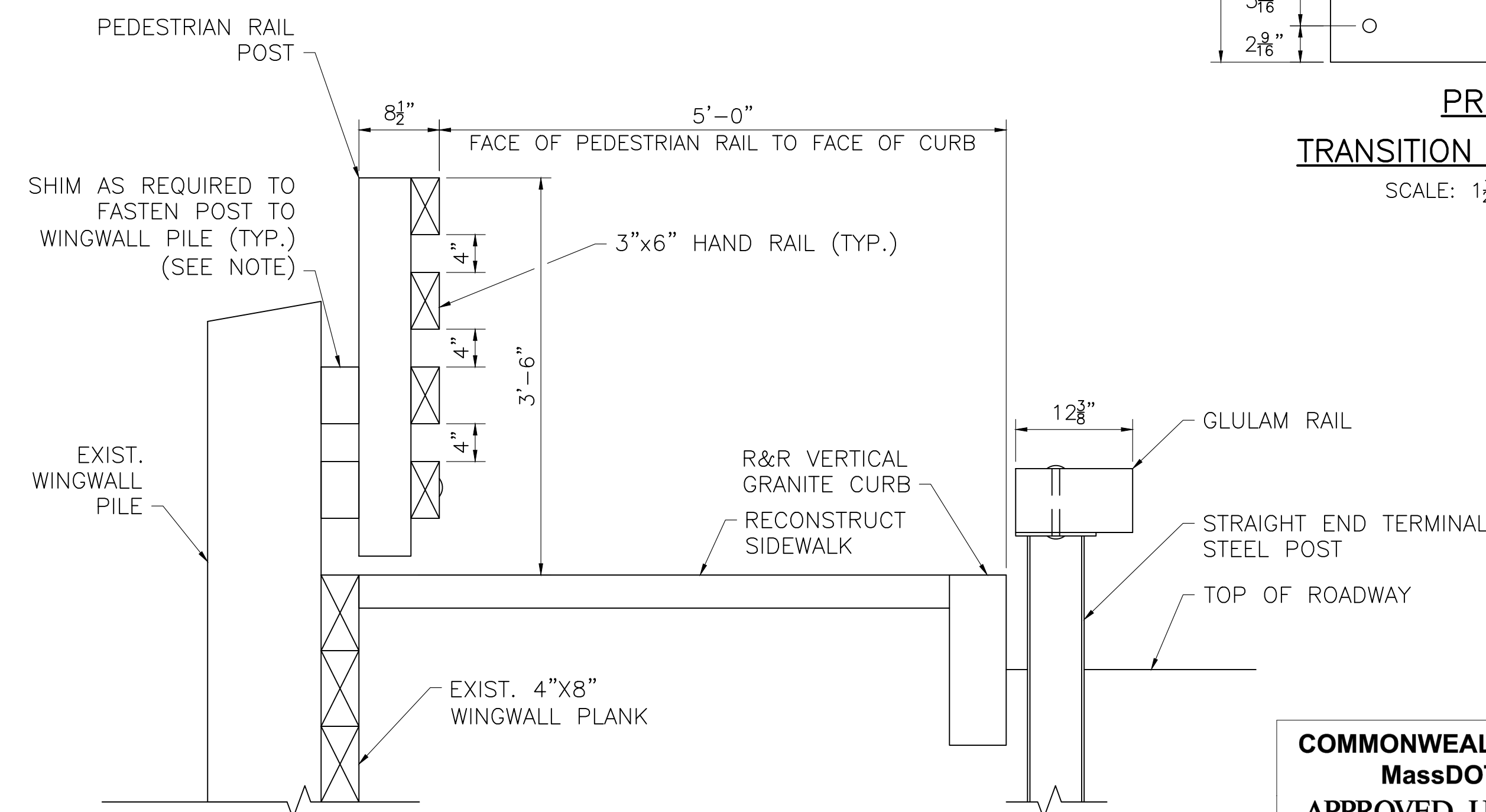
POST TO RAIL PLATE
SCALE: 1 1/2"=1'-0"



POST TO RAIL CONNECTION
SCALE: 1 1/2"=1'-0"

NOTE: REFER TO FHWA "GUIDE FOR BRIDGE CURB/RAIL AND APPROACH TREATMENT FOR EXTREMELY LOW VOLUME ROADS" AND THE FHWA ELIGIBILITY LETTER FOR THE WEST VIRGINIA TL-1 TIMBER CURB-TYPE BRIDGE BARRIER FOR MORE INFORMATION REGARDING THE APPROACH GUARDRAIL TRANSITIONS.

DRAFT

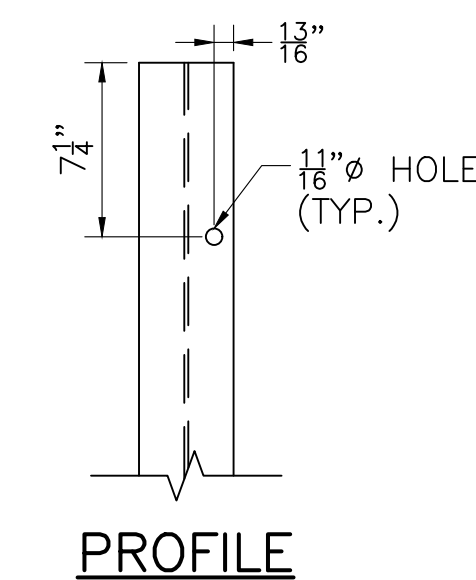
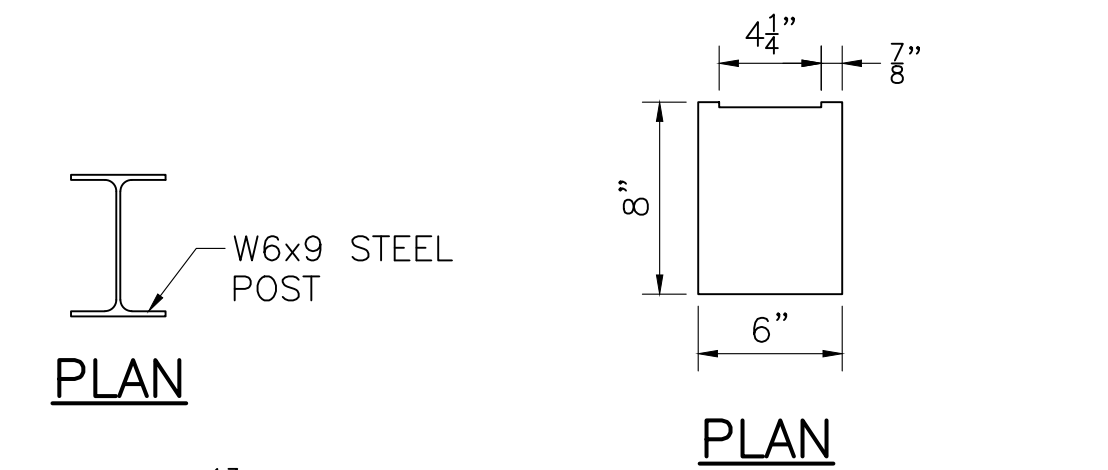


NOTE:
FASTEN PEDESTRIAN RAIL POST USING TIMBER SHIMS AS REQUIRED. IN LOCATIONS WHERE GEOMETRY OF POSTS AND WINGWALL PILES DO NOT ALLOW ADEQUATE ROOM FOR FASTENING, SHIM BEHIND THE PEDESTRIAN HAND RAIL FOR CONNECTION AND OMIT POST.

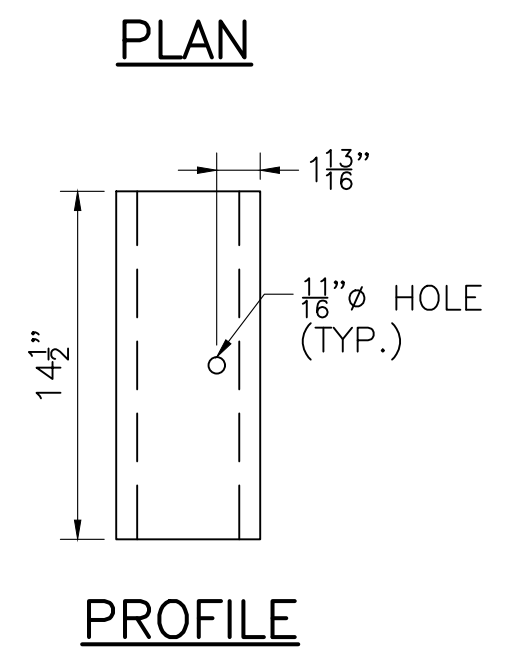
PEDESTRIAN RAILING PLAN AND DETAILS
SCALE: 1"=1'-0"

SUDBURY LINCOLN ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	10
PROJECT FILE NO.		T1520	

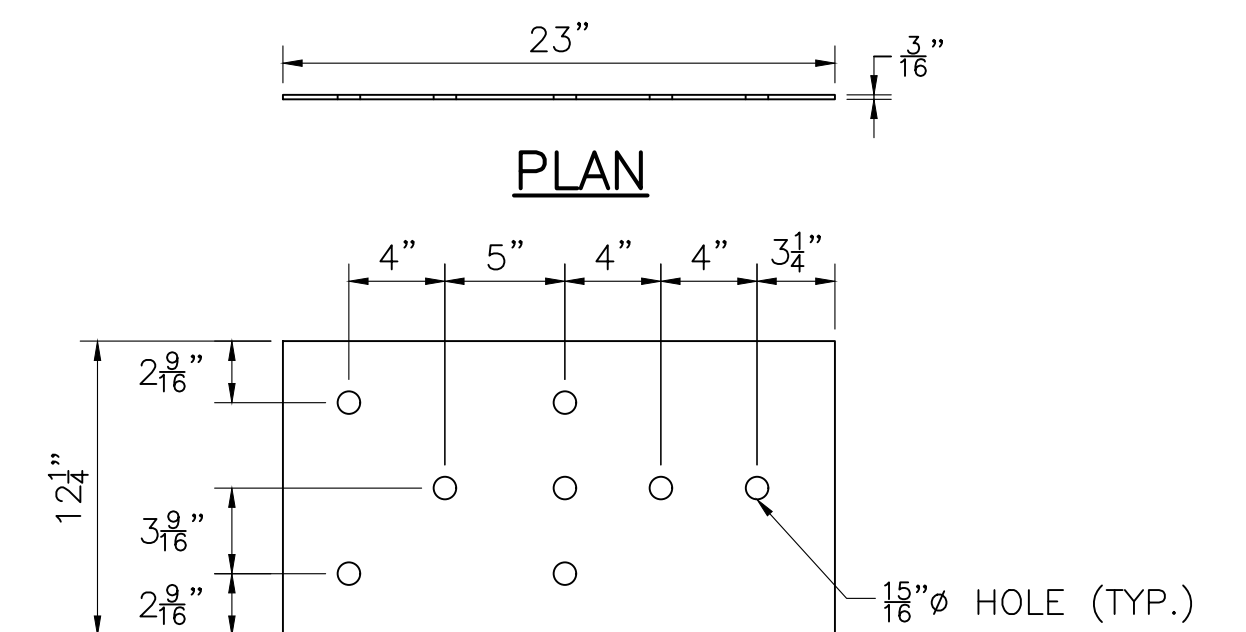
APPROACH RAIL TRANSITIONS



STEEL POST
SCALE: 1 1/2"=1'-0"



WOOD BLOCKOUT
SCALE: 1 1/2"=1'-0"



**PROFILE
TRANSITION SPLICE PLATE**
SCALE: 1 1/2"=1'-0"

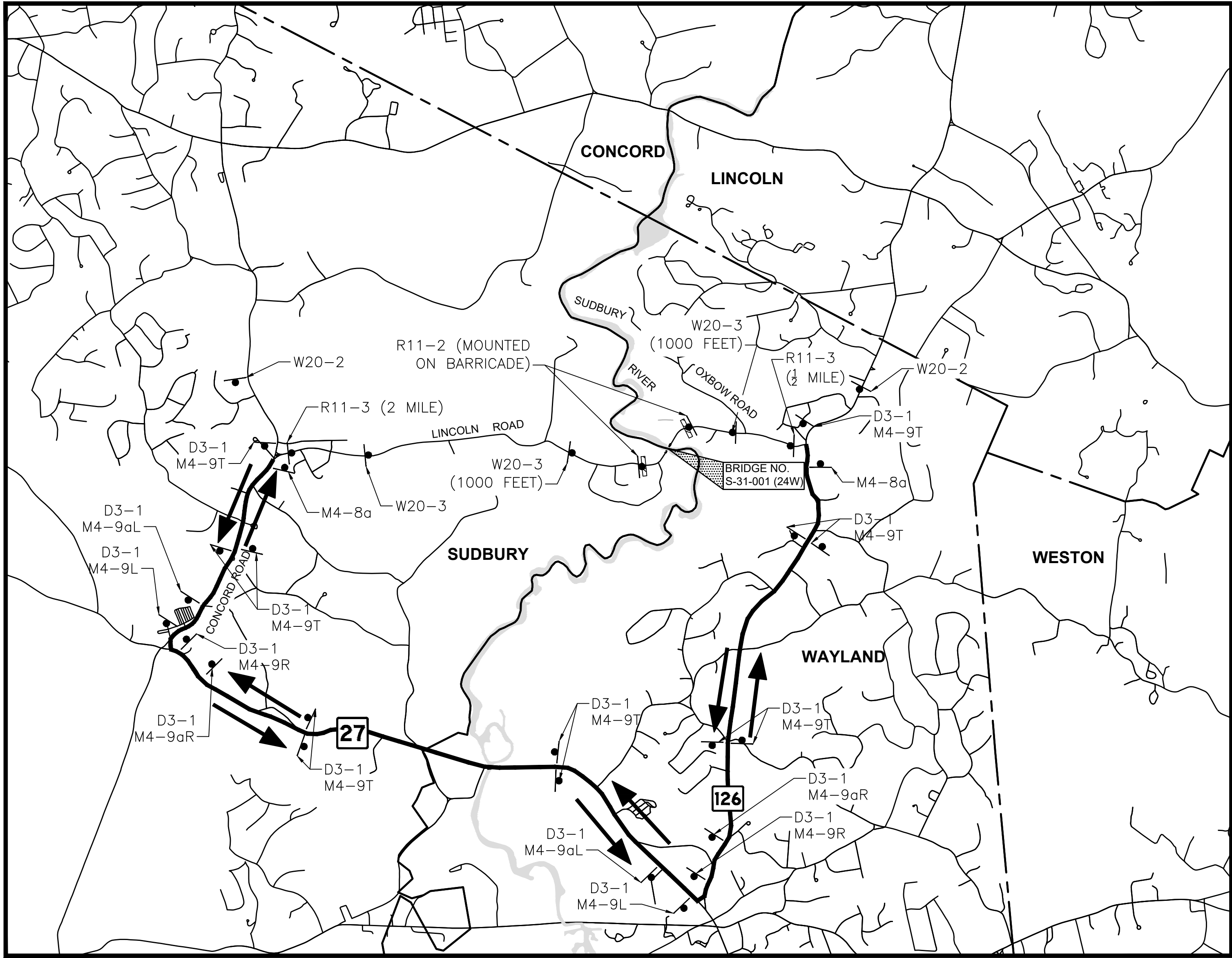
**COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
APPROVED UNDER PROVISIONS OF
MASS. GEN. LAWS CH 85 S 35**

DISTRICT 3 BRIDGE ENGINEER DATE

MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
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TEMPORARY SIGNS

ID NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			COLOR			NUMBER OF SIGNS REQUIRED
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER	
D3-1	30	12		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			ORANGE	BLACK	BLACK	19
M4-8a	30	24					ORANGE	BLACK	BLACK	2
M4-9T	30	24					ORANGE	BLACK	BLACK	11
M4-9aL	30	24					ORANGE	BLACK	BLACK	2
M4-9L	30	24					ORANGE	BLACK	BLACK	2
M4-9aR	30	24					ORANGE	BLACK	BLACK	2
M4-9R	30	24					ORANGE	BLACK	BLACK	2
R11-2	48	30					WHITE	BLACK	BLACK	2
R11-3 (1/2 MILE)	60	30					WHITE	BLACK	BLACK	1
R11-3 (2 MILE)	60	30					WHITE	BLACK	BLACK	1
W20-2	36	36					ORANGE	BLACK	BLACK	2
W20-3	36	36					ORANGE	BLACK	BLACK	3
W20-3 (1000 FT)	36	36					ORANGE	BLACK	BLACK	2



DETOUR PLAN DURING CONSTRUCTION
SCALE: 1"=2000'

LEGEND

- PORTABLE BREAKAWAY
- BARRICADE TYPE III (TYP.)

GENERAL NOTES

- THE DETOUR SHALL BE IMPLEMENTED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES AND SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION.
- ALL TEMPORARY SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), 11th EDITION (2023) AS AMENDED.
- THE BOTTOM OF ALL SIGNS SHALL BE MOUNTED AT LEAST 7 FOOT ABOVE THE EXISTING GROUND.
- SIGNS MOUNTED ON A TYPE 3 BARRICADE MAY NOT COVER MORE THAN 50% OF THE AREA OF THE TOP 2 RAILS NOR 33% OF THE TOTAL AREA OF THE 3 RAILS.

DRAFT

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