



## ADDENDUM NO. 1

To: All Prospective Bidders

Through: Libby Knott, Project Manager, Trails and Greenways Planner, DCR Trails and Greenways

From: ADDENDUM NO. 1 DCR Contract # P25-3582-C1A

Date: 10/17/24

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Please find the following **ADDENDUM No. 1** for **DCR Contract No. P25-3582-C1A** which is to be included as part of the Contract Documents thereof.

General Bidders shall acknowledge receipt of this **Addendum No. 1** by **checking the appropriate box** on the project page within the Bid Express website. ([www.bidexpress.com](http://www.bidexpress.com))

The MCRT Waltham Linden Street Bridge Pre-Bid Site Walk Sign-In Sheet is attached to this Addendum No. 1.

### Notice of Modifications of PS&E Package

1. Plan Sheet 4 – The Split Rail Fence detail has been revised.
2. Plan Sheet 5 – An existing tree has been added to the plan east of the bridge.
3. Plan Sheet 9 – Structural Steel Notes 3 and 8 have been revised. Shielding Note 3 has been added. The bronze plaque dimensions have been revised.
4. Plan Sheet 11 – The gap dimension in the C.I.P Concrete Timber Deck Support Detail has been revised.
5. Plan Sheet 14 – The attachment detail callout in Rail Detail has been shifted.
6. Plan Sheet 15 – The split-rail fence has been modified to match the revised detail on Sheet 4. Some text has been adjusted for clarity but not otherwise modified.

COMMONWEALTH OF MASSACHUSETTS · EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS

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Executive Office of Energy & Environmental Affairs  
Brian Arrigo, Commissioner  
Department of Conservation and Recreation

7. Job Specific Specifications Page S-7 – Item No. 107.97 – The measurement unit has been updated in the item heading. The coating requirement in the MATERIALS section has been clarified. CONSTRUCTION METHODS paragraph 3 regarding submittals has been revised.
8. Job Specific Specifications Page S-26 – Item No. 992.12 – Payment for the asphalt pavement (paragraph 2) and yellow striping (paragraph 5) have been clarified.
9. Job Specific Specifications Page S-29 – Item No. 992.12 – Cast aluminum deck brackets have been removed from the GLULAM TIMBER DECK / TIMBER BRIDGE RAILING / TIMBER STRINGERS section.
10. Job Specific Specifications Page S-30 – Item No. 992.12 – Payment Sub-Item 450.60 has been added.
11. Bid Form
  - a. The quantity for Item No. 657. – TEMPORARY FENCE has been updated.
  - b. The description of Item No. 748. – MOBILIZATION has been revised.
  - c. The quantity for Item No. 834.99 – REFLECTORIZED DELINEATOR POST REMOVED AND RESET has been updated.
  - d. The quantity for Item No. 852. – SAFETY SIGNING FOR TRAFFIC MANAGEMENT has been updated.
  - e. Item 867.106 – 6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) has been added.

**The following questions were received:**

**Question 1**

Drawing sheet 14 calls for the new bridge deck to receive two courses of SUPERPAVE Bridge Surface Course - 9.5. Will Pay Item 450.60 be added to the project or is the bridge paving incidental to Item 992.12?

**Answer 1**

The bridge pavement is incidental to Item 992.12. Special Provision 992.12 has been clarified by addendum, including adding a line to the Schedule for Partial Payment.

**Question 2**

The cleaning notes on Sheet 9 state that the existing bridge structure shall be cleaned of all loose debris and vegetation. Does that apply to the entire truss superstructure or only the areas below the deck level?

## **Answer 2**

The cleaning notes to the entire bridge superstructure.

## **Question 3**

For Item 107.97 Structural Steel Repairs, can all the steel items to be replaced be removed at once?

## **Answer 3**

The steel items to be replaced may be removed in any sequence provided the other requirements of the contract are met. Structural Steel Note 11 on Sheet 9 of 15 requires the Contractor to be responsible for maintaining the structural stability of the structure during construction. Per Special Provision 107.97. The Contractor's means and methods, including sequence and maintenance of structural stability, shall be included in the required submittal. This submittal shall be stamped by a Professional Engineer. This has been clarified by addendum.

## **Question 4**

The structural steel notes on Sheet 9 include "All structural steel components and fastening hardware shall be hot-dipped galvanized and painted in accordance with the standard specifications. Paint shall be dark bronze". The documents do not call for the bridge to be painted. Please clarify the desired finish for the new steel components – plain steel, weathering steel, galvanized, painted...

## **Answer 4**

All new steel components shall be treated as specified in Structural Steel Note 3 on Sheet 9 of 15. Existing steel shall not be coated except as required by Structural Steel Note 8 and Special Provision 107.97. This has been clarified by addendum.

## **Question 5**

Spec section 107.97 includes "All existing steel member surfaces that will be in permanent contact with new steel shall be cleaned to at least SSPC-SP3 and primed with an approved primer before performing the repairs." Is this step required since the bridge is not being painted?

### **Answer 5**

This step is required. The primer shall be limited to surfaces to be in contact with new structural steel. Structural Steel Note 8 on Sheet 9 of 15 has been modified by addendum to match the Special Provision.

### **Question 6**

Plan Sheet 6 shows the construction of an asphalt sidewalk across the commuter rail tracks. Will rubber rail seals be required? If so, will Keolis provide them?

### **Answer 6**

Rubber rail seals are required and will be provided and installed by Keolis.

### **Question 7**

Could you please provide the existing plans for Bridge No. 113 (Linden St. Bridge - Waltham, MA)?

### **Answer 7**

Plans for the existing Linden Street Bridge are not available.

### **Question 8**

Does the curb and post "Attachment Detail", depicted on pg. 14 of 15 (project drawings), apply to every (bridge rail system) post location?

### **Answer 8**

The attachment detail applies to all bridge rail post locations.

### **Question 9**

Contract Special provisions (pg. S-29) reference "cast aluminum alloy deck brackets". Could you please confirm which brackets are to be "cast aluminum alloy"?

### **Answer 9**

Cast aluminum alloy deck brackets are not required for this project. The Special Provision has been modified by addendum.

### **Question 10**

Item 655 is titled "Cedar Rail Fence". Item 655 special provisions (pg. S-11 Materials section) calls for the timber rail to be cut from the "specified grade for dry, well-seasoned, and dressed Southern Yellow Pine, spruce, or fir that complies with AASHTO M168". Are any components of the "Cedar Rail Fence" required to be cedar? Do the Timber Notes on Pg. 9 of the project drawings apply to Item 655?

### **Answer 10**

As specified, the fence materials shall be Southern Yellow Pine, spruce, or fir. No cedar elements are required. The timber notes on Plan Sheet 9 do not apply to Item 655.

### **Question 11**

Pg. 6 of the project drawings shows 3 bollards being removed and replaced. Could you please provide details regarding the style of bollard, and confirm how payment will be made for this work?

### **Answer 11**

The bollards are called out on Sheet 6 to be Removed and Reset. The bollard is a flex-post style bollard. Item 834.99 is intended for the removal and resetting of posts at the Beaver Street crossing.

### **Question 12**

Could you please verify method of payment for bridge shielding work?

### **Answer 12**

Shielding will not be measured or paid for separately. The shielding shall be considered incidental to the related items of work. A note has been added to Plan Sheet 9 by addendum.

### **Question 13**

Could you please confirm that there are no alternates (per Part I Section 4 of the project documents) associated with this project?

### **Answer 13**

There are no alternates for this project.

#### **Question 14**

Regarding bid Item # 748.2 - MBTA/ Keolis Force Account:

- a. The item is included in the bid as an allowance item to reimburse the MBTA/Keolis for their work performed on the project. Is it possible to remove this work from the Contractor's scope and have the MBTA/Keolis coordinate directly with the DCR for reimbursement?
- b. Keolis requires an upfront deposit of funds into an account that they may then draw money out of as their work occurs. Please confirm that the DCR will pay any required upfront deposits.
- c. Confirm that beyond issuing payment to the MBTA/Keolis the Contractor's only responsibilities under this item shall be coordinating getting copies of the MBTA/Keolis' invoices to the DCR.

#### **Answer 14**

- a. The work will not be removed from the Contractor's scope.
- b. Yes, DCR will reimburse the Contractor for this up-front deposit.
- c. Refer to the specifications for all scheduling and coordination that is required.

#### **Question 15**

The completion of the Contractor's work at Beaver Street is contingent on the MBTA/Keolis getting the new pedestrian gates installed and this material may have a significant procurement time. Is it known if the MBTA/Keolis has ordered these gates? As this work could impact the Contractor's overall schedule and an on-time completion.

#### **Answer 15**

It is unknown at this time if the gates have been ordered.

#### **Question 16**

At the Beaver Street rail crossing, will the Contractor be responsible for the subgrade prep, subbase installation, and paving work between the railroad tracks? Or will the MBTA/ Keolis be doing this work?

#### **Answer 16**

Bidders shall anticipate that the Contractor will be performing this work.

**Question 17**

Please provide a detail for the required at grade railroad crossing at Beaver Street. Please be sure to indicate if rubber boots (rail boots) will be required, and if so, provide details on the size.

**Answer 17**

The pavement notes for the box widening at Beaver Street are provided on sheet 4 of the plans. Rubber boots will be provided and installed by Keolis.

**Question 18**

Sheet S-7 of the Specs lists the unit for Item # 107.97 – Structural Steel Repairs as “FOOT”, please confirm that this item will be measured and paid by the pound “LB” as shown on the bid form.

**Answer 18**

Measurement and payment will be by the Pound. The Special Provision has been modified by addendum.

**Question 19**

The location of some of the structural steel repairs at the Linden Street Bridge fall over the middle of Linden Street and due to the severe skew of the roadway underneath the bridge, it may not be possible to safely access the repair areas while still maintaining one lane of traffic on Linden Street. Will daily shutdowns/ detours of Linden Street be permissible during working hours to facilitate the work?

**Answer 19**

The Contractor may propose a detour route that must be submitted for approval by the City, including signage and number of days the detour route will be implemented. Item 852. has been increased accordingly to account for additional signage.

**Question 20**

The new steel and connector material supplied under Item # 107.97 is specified to be hot-dipped galvanized. Will this material need to be painted so that the color is similar to that of the existing bridge?

**Answer 20**

Galvanizing and painting is required for new structural steel components per Structural Steel Note 3 on Plan Sheet 9. This requirement has been added to the Special Provision by addendum for clarity.

**Question 21**

Pedestrian access onto the MCRT at Beaver Street is currently permitted and the plans do not show any requirements to restrict access during construction operations. During construction, the Contractor's only means of access the eastern limits of the Linden Street bridge approach will be from Beaver Street. Please inform if it will be acceptable to restrict pedestrian access onto the MCRT at Beaver Street.

**Answer 21**

To accommodate the required access for construction vehicles and equipment, the contractor may place temporary fence and restrict access at the Beaver Street location. The limits and alignment to be determined in the field. A quantity for additional fence and signage has been added by addendum.

**Question 22**

Drawing sheet 5 shows a new broken yellow line on the new bridge paving. Is this line to be paint or thermoplastic? What pay item will be used for this marking?

**Answer 22**

The line will be thermoplastic. A pay item has been added by addendum.

**Question 23**

Plan sheet #5 calls for broken yellow line "BYL" pavement markings along the trail and across the bridge at Linden Street. There is no pay item for yellow pavement markings. Please add a bid item for yellow paint.

**Answer 23**

A pay item has been added by addendum.



**Question 24**

Detail A on plan sheet #14 calls for two lifts of Superpave Bridge Surface Course – 9.5 on the bridge deck. There is no bridge pavement item within the contract, please advise.

**Answer 24**

Special Provision 992.12 has been updated by Addendum to clarify that the bridge surface course is incidental to this item.

**Question 25**

At the Linden Street Bridge, the proposed split rail fence is called out to meet the existing fence. However, the “Split Rail Fence Details” on plan sheet #4 do not match the detail of the existing fencing along the trail, as the existing rail does not have the 2x8 top rail @ 30 degrees. Please advise.

**Answer 25**

The detail has been modified by addendum to remove the top and back rails.

**Question 26**

With regard to Linden Street bid of 10-24-2024, on sheet 6 of 15 work at RR track is shown. Please provide greater detail of “BOX WIDENING” at tracks also proposed sidewalk at track area. Plan shows 3 bollards are to be R&R. There appears to be no item to cover these.

**Answer 26**

No additional detail will be provided for the Box Widening. Item 834.99 is intended for the removal and resetting of posts at the Beaver Street crossing.

**END OF ADDENDUM No. 1**

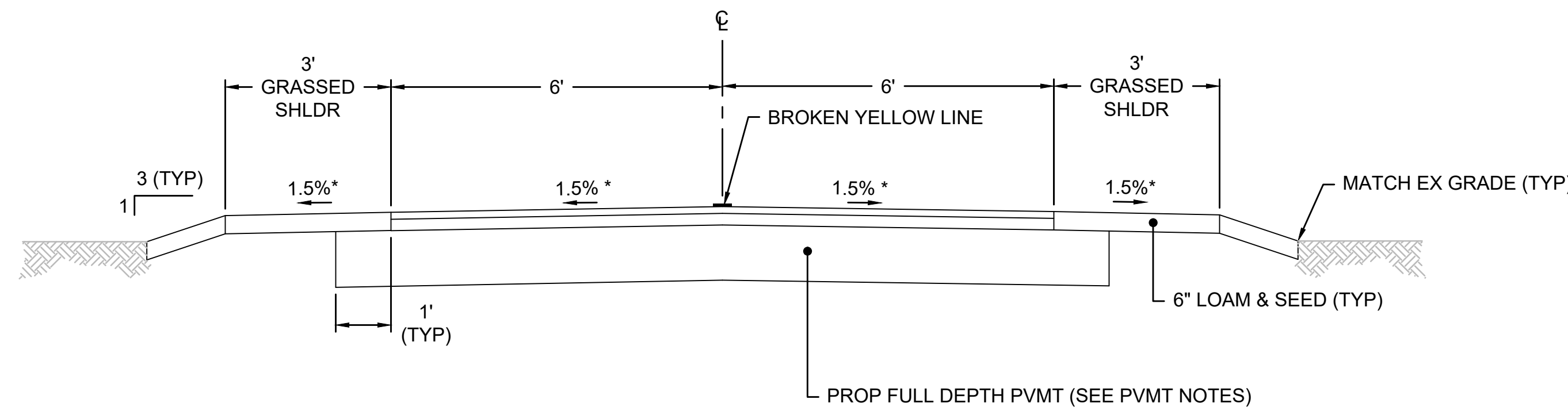


**WALTHAM**  
**MCR T WALTHAM LINDEN STREET BRIDGE**

SHEET NO.	TOTAL SHEETS
4	15

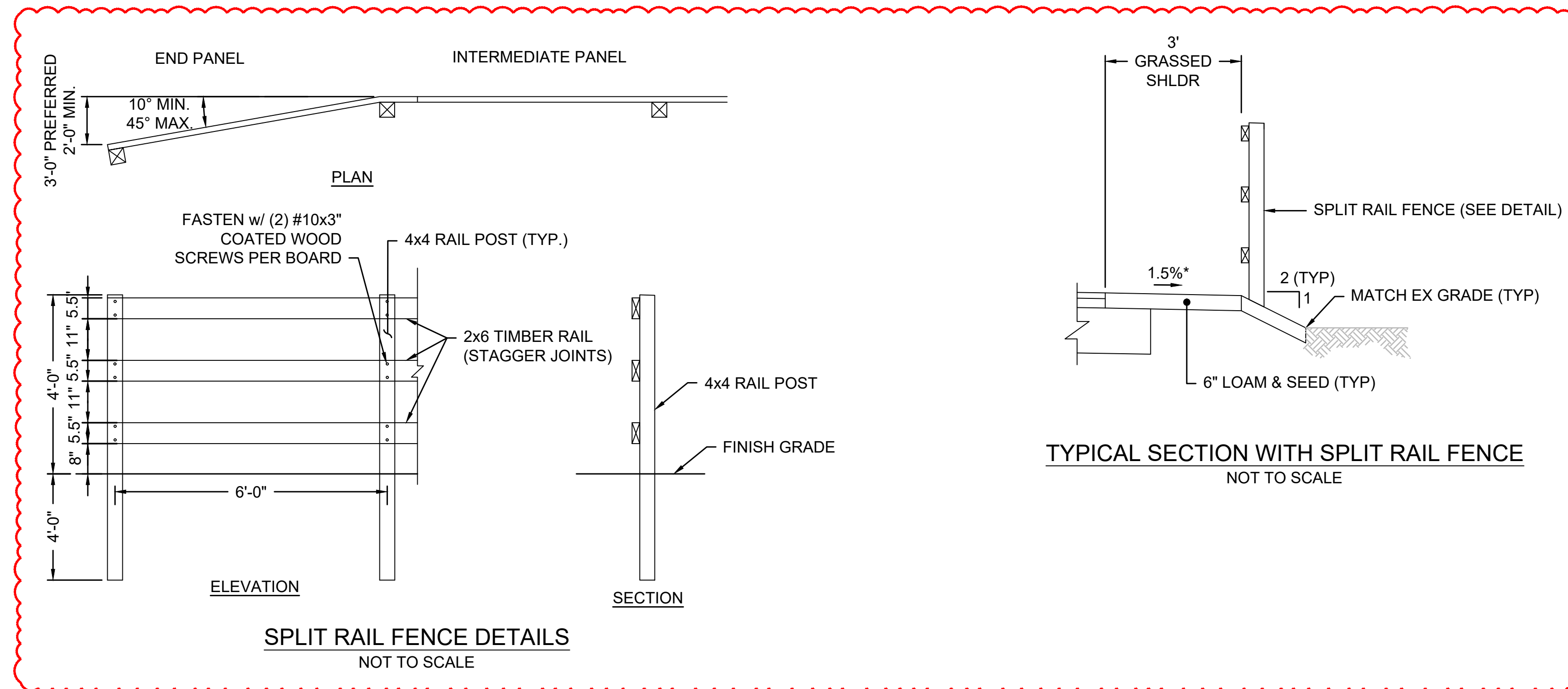
MADCR PROJECT NO. P25-3582-C1A

**TYPICAL SECTION AND DETAILS**



\* CONSTRUCTION TOLERANCE = ± 0.5%,  
SEE SUPERELEVATION (SHEET ##)

**TYPICAL SECTION TRAIL**  
NOT TO SCALE



**SPLIT RAIL FENCE DETAILS**  
NOT TO SCALE

**TYPICAL SECTION WITH SPLIT RAIL FENCE**  
NOT TO SCALE

**PAVEMENT NOTES**

**FULL DEPTH CONSTRUCTION (LINDEN STREET)**

- TOP COURSE: 1.5" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)
- INTERMEDIATE COURSE: 2.5" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC-19.0)
- SUBBASE: 12" GRAVEL BORROW
- SUBGRADE: SPECIAL BORROW AS REQUIRED BASED ON EXISTING SUBGRADE MATERIALS

**PEDESTRIAN CURB RAMP AND CEMENT CONCRETE SIDEWALK (BEAVER STREET)**

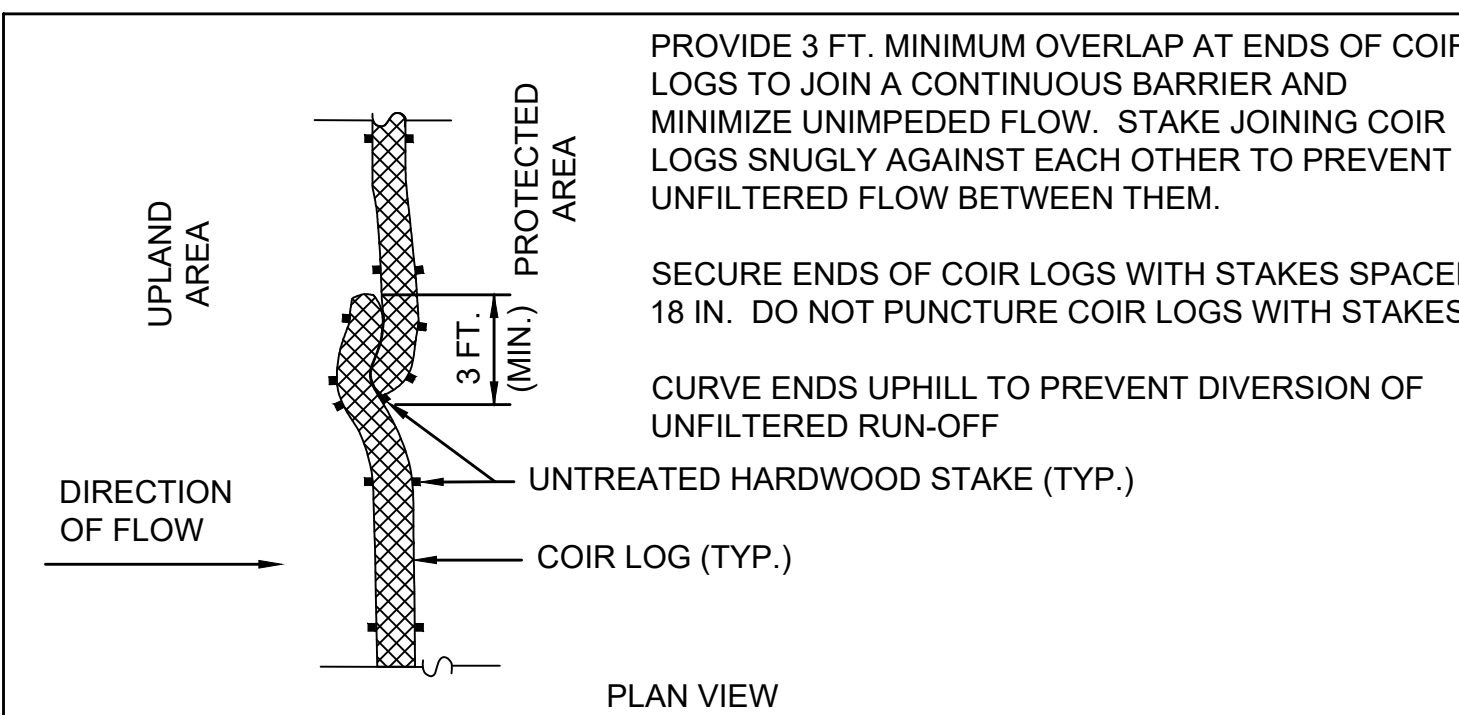
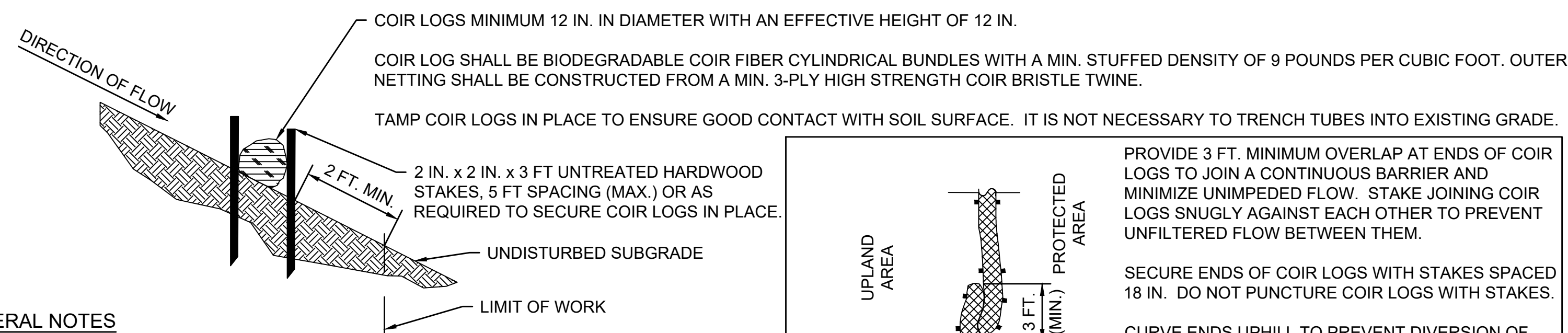
- SURFACE: 4" CEMENT CONCRETE (AIR ENTRAINED, 4,000 PSI, 0.75", 610)
- SUBBASE: 8" GRAVEL BORROW (TYPE B)

**BOX WIDENING (BEAVER STREET)**

- SURFACE COURSE: 1 1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)
- INTERMEDIATE COURSE: 2" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5)
- BASE COURSE: 4" SUPERPAVE BASE COURSE - 37.5 (SBC-37.5)
- SUBBASE: 4" DENSE GRADE CRUSHED STONE FOR SUBBASE  
8" GRAVEL BORROW

**GENERAL NOTES:**

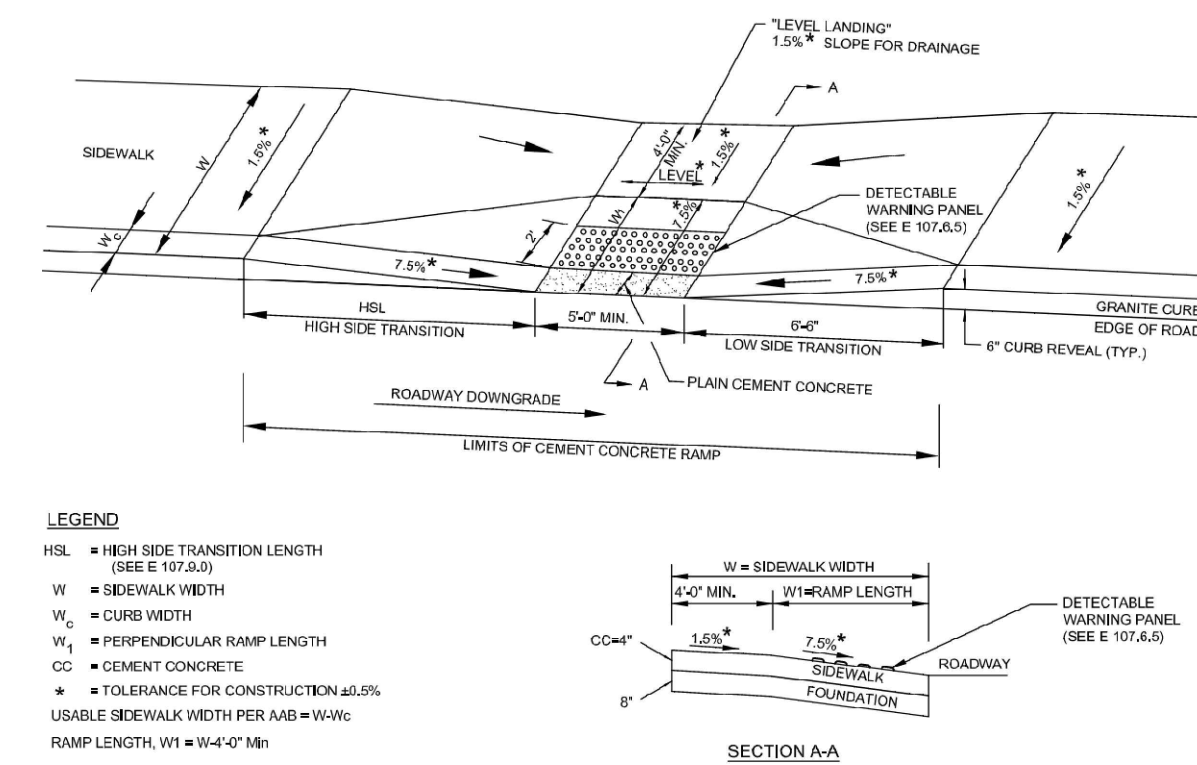
- ALL HOT MIX ASPHALT PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 450 QUALITY ASSURANCE OR HMA.
- ASPHALT EMULSION FOR TACK COAT (ITEM 452) SHALL BE SPRAY APPLIED FOR TRIPLE OVERLAP COVERAGE AT 0.08 GAL/SY OVER MILLED SURFACES AND 0.07 GAL/SY OVER SMOOTH SURFACES.
- HMA JOINT ADHESIVE (ITEM 438) SHALL BE APPLIED IN SURFACE COURSE AT ALL VERTICAL COLD JOINTS PRIOR TO HMA PAVING.
- ALL HOT MIX ASPHALT WALKS AND DRIVEWAYS SHALL BE ESTIMATED AND PAID FOR UNDER ITEM 702. OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- WHERE EXISTING GRAVEL IS FOUND TO BE SUITABLE, THE EXISTING GRAVEL MAY BE USED IN PROPOSED SUBBASE, AFTER APPROVAL BY THE ENGINEER.



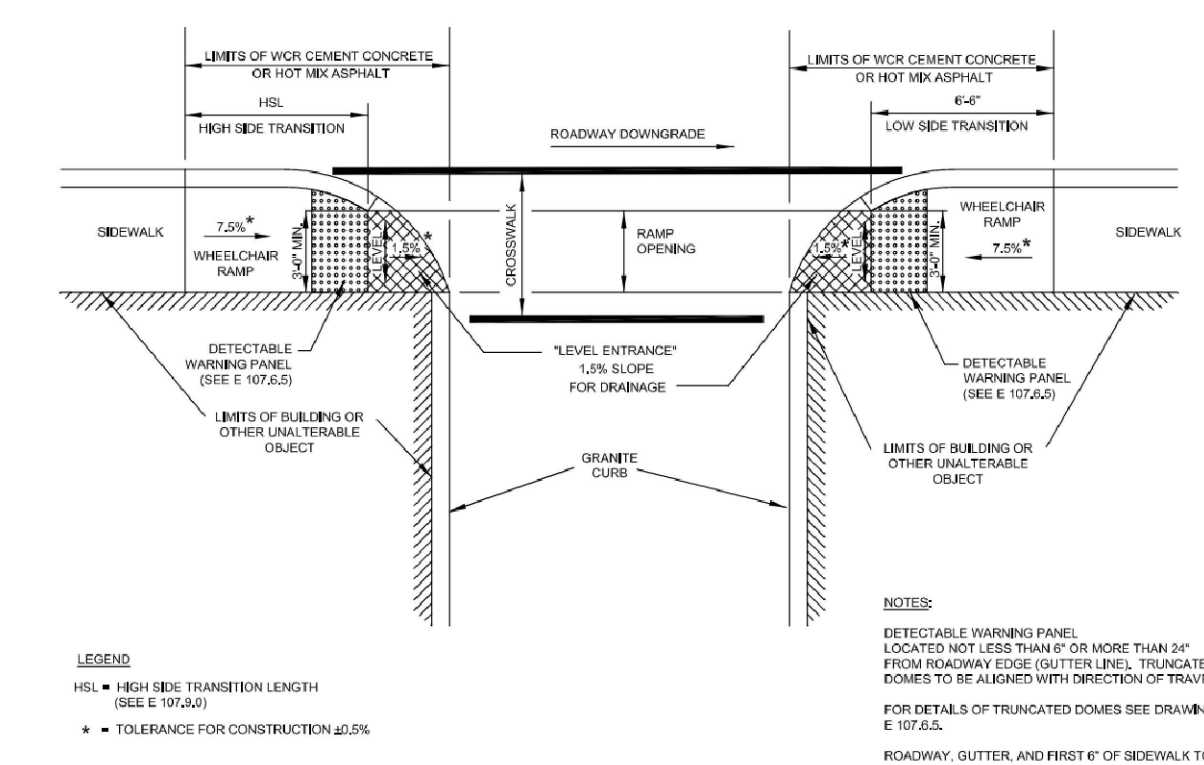
**COIR LOG DETAIL**  
NOT TO SCALE

**GENERAL NOTES**

- PROVIDE A MINIMUM COIR LOG DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER COIR LOG DIAMETER OR ADDITIONAL COURSING OF COIR LOGS TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
- INSTALL COIR LOGS ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
- CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.
- COIR LOGS TO BE LEFT IN PLACE AND BACKFILLED TO PROPOSED EMBANKMENT GRADES. STAKES MAY BE LEFT IN PLACE AND DRIVEN A MINIMUM OF 6 INCHES BELOW FINISH GRADE. STAKES MAY BE REMOVED, BUT NOT BEFORE VEGETATION IS ESTABLISHED TO THE SATISFACTION OF THE ENGINEER.



**MASSDOT STD. DETAIL 107.2.0**



**MASSDOT STD. DETAIL 107.6.0**

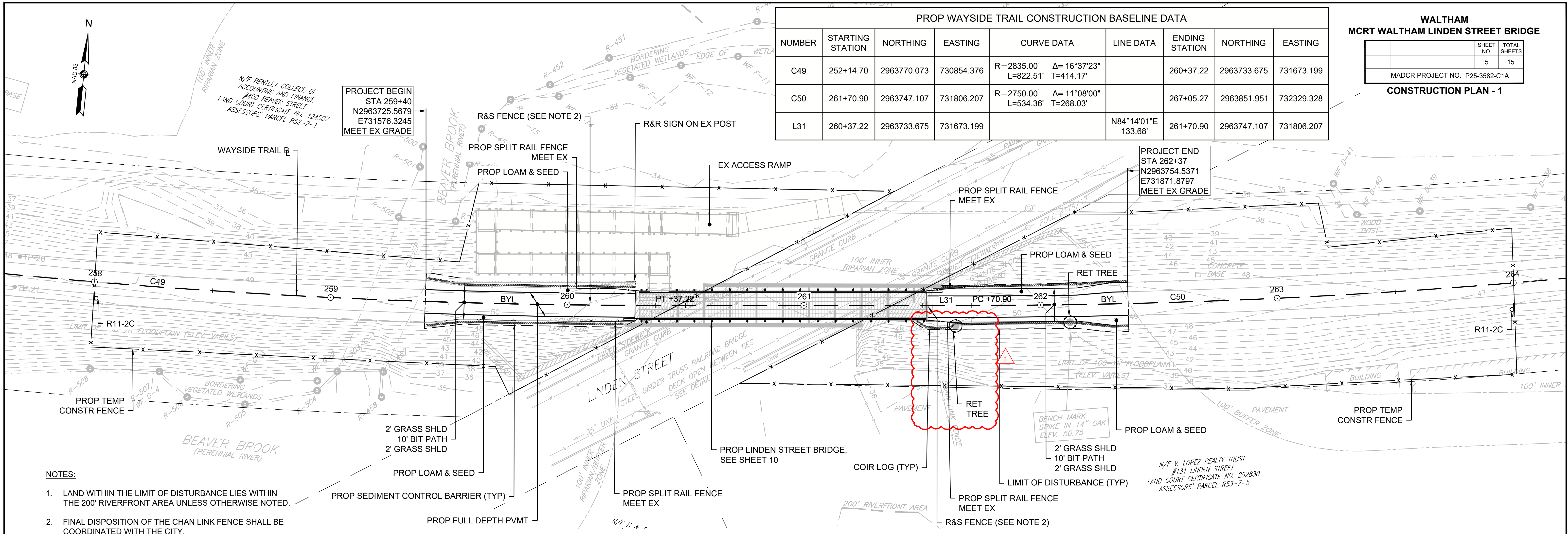
**WALTHAM  
MCRT WALTHAM LINDEN STREET BRIDGE**

SHEET NO.	TOTAL SHEETS
5	15

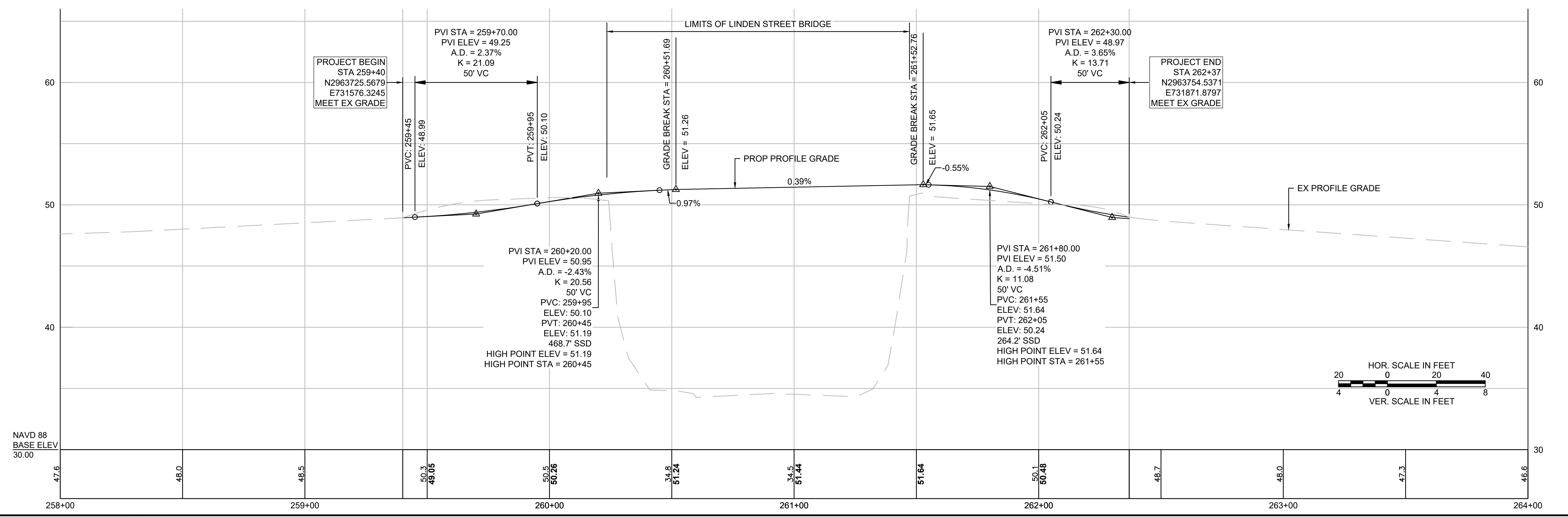
MADCR PROJECT NO. P25-3582-C1A

**CONSTRUCTION PLAN - 1**

PROP WAYSIDE TRAIL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C49	252+14.70	2963770.073	730854.376	R = 2835.00' Δ = 16°37'23" L = 822.51' T = 414.17'		260+37.22	2963733.675	731673.199
C50	261+70.90	2963747.107	731806.207	R = 2750.00' Δ = 11°08'00" L = 534.36' T = 268.03'		267+05.27	2963851.951	732329.328
L31	260+37.22	2963733.675	731673.199		N84°14'01"E 133.68'	261+70.90	2963747.107	731806.207



- NOTES:**
- LAND WITHIN THE LIMIT OF DISTURBANCE LIES WITHIN THE 200' RIVERFRONT AREA UNLESS OTHERWISE NOTED.
  - FINAL DISPOSITION OF THE CHAIN LINK FENCE SHALL BE COORDINATED WITH THE CITY.



**GENERAL NOTES**

- ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE IN ACCORDANCE WITH:
  - THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 2020.
  - THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020, INCLUDING THE LATEST INTERIM REVISIONS.
  - THE AASHTO LRFRD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2nd EDITION, INCLUDING THE LATEST INTERIM REVISIONS.
  - THE SPECIFICATIONS ACCOMPANYING AND CONTAINED WITHIN THESE PLANS.
- ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NGVD 88).
- HORIZONTAL DATUM IS THE MASSACHUSETTS STATE PLANE.
- INFORMATION CONCERNING THE LOCATIONS OF THE STRUCTURES, THEIR CONDITION, AND DIMENSIONS IS FURNISHED SOLELY FOR THE INFORMATION AND CONVENIENCE OF THE CONTRACTOR, AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION AND MEASUREMENTS OF THE SITES AND STRUCTURES' CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THIS CONTRACT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE TOWN OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.

**DESIGN**

- DESIGN SPECIFICATIONS:
  - AASHTO LRFD GUIDE SPECIFICATIONS SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION, 2009, INCLUDING ALL INTERIM REVISIONS.
  - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020 INCLUDING ALL INTERIM REVISIONS.
  - THE 2024 EDITION OF THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION INCLUDING THE 2024 EDITION SUPPLEMENT.
  - MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT) BRIDGE MANUAL, HUNDRETH ANNIVERSARY EDITION, 2024, INCLUDING ALL REVISIONS TO DATE.
- DESIGN LOADING:
  - PEDESTRIAN LIVE LOAD: 90 PSF
  - VEHICLE LIVE LOAD: H-10 TRUCK

**STRUCTURAL STEEL NOTES**

- ALL NEW STEEL SHAPES AND PLATES SHALL CONFORM TO THE LATEST PROVISIONS OF AASHTO DESIGNATION M 270 (ASTM DESIGNATION A 709) GRADE 36 OR 50.
- ALL STEEL COMPONENTS, FABRICATIONS, AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 960 OF THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, INCLUDING THE LATEST SUPPLEMENTAL AND INTERIM SPECIFICATIONS.
- ALL NEW STRUCTURAL STEEL COMPONENTS AND FASTENING HARDWARE SHALL BE HOT-DIPPED GALVANIZED AND PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. PAINT SHALL BE DARK BRONZE (FEDERAL STD. 595B COLOR NO. 10045).
- ALL BOLTED CONNECTIONS SHALL UTILIZE HIGH STRENGTH BOLTS CONFORMING TO AASHTO M164 (ASTM A325).
- WASHERS MEETING AASHTO M293 (ASTM F436) ARE TO BE USED OVER ALL HOLES THAT ARE MORE THAN 1/16 INCH IN DIAMETER GREATER THAN THE BOLT DIAMETER AND UNDER ALL PARTS TURNED DURING ASSEMBLY.
- PRIOR TO FABRICATION, ALL MATERIALS SHALL BE BLAST-CLEANED TO AT LEAST SSPC-SP6 TO REMOVE ALL OIL, DIRT, GREASE, MILL SCALE AND OTHER DELETERIOUS MATERIALS FROM THE SURFACES OF THE STEEL TO BE FABRICATED.
- PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL WHICH HAVE BEEN FLAME CUT OR OTHERWISE HARDENED SHALL BE SOFTENED BY GRINDING OR BLAST-CLEANING TO PROVIDE A SURFACE SUITABLE FOR COATING.
- ALL EXISTING STEEL SURFACES TO BE IN CONTACT WITH NEW STRUCTURAL STEEL SHALL BE CLEANED TO SSPC-SP3, POWER TOOL CLEANING AND PRIMED WITH AN APPROVED PRIMER.
- WHEN STEEL DIE STAMPS ARE TO BE USED TO IDENTIFY PIECES AND MEMBERS, FABRICATORS SHALL UTILIZE LOW STRESS STAMPS.
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST STRUCTURAL WELDING CODE ANSI/AASHTO/AWS D1.5 (INCLUDING ALL INTERIMS TO DATE) AND APPLICABLE SUPPLEMENTAL AWS PUBLICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING TO MAINTAIN THE STRUCTURAL STABILITY OF STRUCTURES DURING CONSTRUCTION.

**TIMBER NOTES**

- SAWN LUMBER AND TIMBER SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL TIMBER, LUMBER, AND PILING, AASHTO M 168 AND SHALL BE AASHTO DESIGNATION SOUTHERN PINE NO. 1 OR EQUIVALENT.
  - STRUCTURAL GLUED LAMINATED TIMBER SHALL CONFORM TO THE AMERICAN NATIONAL STANDARD ANSI/AITC A-190.1, SPECIFICATION FOR STRUCTURAL GLUED LAMINATED TIMBER AND SHALL BE AASHTO IDENTIFICATION NUMBER 47 FOR VISUALLY GRADED SOUTHERN PINE OR IDENTIFICATION NUMBER 2 FOR DOUGLAS FIR.
  - ALL SAWN LUMBER SHALL BE SOUTHERN YELLOW PINE, PRESSURE TREATED TO A MINIMUM NET RETENTION OF 0.60 POUNDS PER CUBIC FOOT OF OIL-BORNE COPPER NAPHTHEANTE PRESERVATIVE, CONFORMING TO THE REQUIREMENTS OF THE AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARD OR AS NOTED ELSEWHERE. ACP SHALL BE APPLIED BY A STANDARD PRESSURE PROCESS AND SHALL CONFORM TO THE RECOMMENDED PRACTICES OF THE AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA). EACH PIECE SHALL BEAR THE AMERICAN WOOD PRESERVERS BUREAU (AWPB) QUALITY MARK INDICATING COMPLIANCE WITH AWPB STANDARD LP-22.
- TIMBER BRIDGE RAILS AND EXPOSED TIMBER PLANKING SHALL BE TREATED WITH WATERBORNE PRESERVATIVES OR OIL-BORNE PRESERVATIVES IN LIGHT PETROLEUM SOLVENT PER AASHTO M 133.
- GLUED LAMINATED TIMBER DECKS SHALL BE TREATED WITH A PENTACHLOROPHENOL TYPE A OIL PRESERVATIVE CONFORMING TO AWPA STANDARD C-28 AND P-9. RETENTION LEVEL SHALL BE 0.5 PCF AS PER AWPA STANDARD C-28.
  - PRESERVATION TREATMENT SHALL BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH AASHTO M 133 AND AWPA STANDARD M2.
  - ALL TREATED TIMBER MATERIALS SHALL FOLLOW POST-TREATMENT REQUIREMENTS SUMMARIZED IN BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS (WWPI 1996) TO ENSURE ALL SURFACES ARE FREE OF EXCESS PRESERVATIVE AND CHEMICALS ARE FIXATED IN THE WOOD.
  - TIMBER SHALL BE DRIED TO A MOISTURE CONTENT OF 19% OR LESS AFTER TREATMENT.
  - ALL TIMBER COMPONENTS SHALL BE FABRICATED TO THE MAXIMUM EXTENT PRACTICABLE, INCLUDING CUTS, COUNTERBORES, AND HOLES, PRIOR TO TREATMENT.
  - ALL FIELD CUTS, COUNTERBORES, AND HOLES SHALL BE TREATED WITH COPPER NAPHTHENATE IN ACCORDANCE WITH AWPA STANDARD M4.
  - THREADS ON ALL HARDWARE SHALL BE PEENED OVER AFTER TIGHTENING. TOUCH UP GALVANIZING AFTER PEENING.
  - ALL HARDWARE INCLUDING A-307 FASTENERS FOR TIMBER CONNECTIONS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A-123 OR ASTM A-153, AS APPLICABLE.
  - PRE-DRILLING IS REQUIRED FOR ALL LAG, BOLT, AND DOWEL INSTALLATIONS. HOLES FOR DOWELS IN DECK SHALL BE SIZED TO PROVIDE A TIGHT FIT.
  - ALL GLULAM SHALL BE CUT, DRILLED, AND COMPLETELY FABRICATED PRIOR TO PRESSURE TREATMENT WITH PRESERVATIVES.
  - ALL WOOD AND METAL COMPONENTS SHALL BE HANDLED AND STORED CAREFULLY SO AS NOT TO DAMAGE THE MATERIAL. IF DAMAGE DOES OCCUR, EXPOSED UNTREATED WOOD SHALL BE FIELD TREATED IN ACCORDANCE WITH AASHTO M 133.
  - HARDWARE SHALL BE COUNTERSUNK WHERE NOTED, WITH THREADED BOLT ENDS AND NUTS PLACED ON THE OUTSIDE OF WALKWAY.
  - TIMBER SURFACES AND EDGES SHALL BE PLANED AND SANDED SMOOTH.
  - WATERPROOFING MEMBRANE SHALL BE COMPATIBLE WITH THE WOOD PRESERVATIVE.
  - THE TOPS OF ALL STRINGERS AND OTHER MEMBERS SUPPORTING DECKING AND GLULAM PANELS SHALL BE CAPPED WITH TAR PAPER PER MASSDOT STANDARD SPECIFICATION SECTION M9.06.2. TAR PAPER SHALL ALSO BE PLACED BETWEEN THE BOTTOM OF TIMBER MEMBERS AND SUPPORTING STEEL STRINGERS.

**CONCRETE NOTES**

- ALL CONCRETE SHALL BE MASSDOT 4000 PSI, 3/4 IN., 610 CEMENT CONCRETE
- ALL EXPOSED EDGES AND REENRANT CORNERS NOT OTHERWISE DETAILED ON THE PLANS SHALL HAVE A MINIMUM OF 3/4" CHAMFER.

**REINFORCING STEEL**

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 GRADE 60. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

MODIFICATION CONDITION	#4 BARS	#5 BARS
1. NONE	21"	26"
2. 12" OF CONCRETE BELOW BAR	29"	36"
3. COATED BARS, COVER < 3DB, OR CLEAR SPACING < 6DB	31"	39"
4. COATED BARS, ALL OTHER CASES	25"	31"
5. CONDITION 2. AND 3.	35"	44"
6. CONDITION 2. AND 4.	34"	43"

IF THE ABOVE BARS ARE SPACED 6" OR MORE ON CENTER, THE LAP LENGTH SHALL BE 80% OF THE LAP LENGTH GIVEN ABOVE. ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

**CLEANING**

- THE EXISTING BRIDGE STRUCTURE SHALL BE CLEANED OF ALL LOOSE DEBRIS AND VEGETATION. CLEANING METHODS SHALL BE LIMITED TO MECHANICAL METHODS AND CLEAN COMPRESSED AIR WITH NO ABRASIVES OR SOLVENTS. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONTAIN POTENTIAL CONTAMINANTS (e.g. BIRD GUANO). CLEANING SHALL BE CONSIDERED INCIDENTAL TO ITEM 992.12 EXCEPT THAT CLEANING OF MASONRY JOINTS TO BE POINTED AND GROUTED SHALL BE INCIDENTAL TO ITEM 685.3.
- THE CONTRACTOR SHALL PROVIDE PROTECTIVE DEVICES AS REQUIRED TO PREVENT ANY DAMAGE TO THE WORK AND TO OTHER PROPERTY OR PERSONS UNDER OR AROUND THE BRIDGE STRUCTURES DURING CLEANING AND CONSTRUCTION OPERATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT NO DEBRIS FALLS INTO ANY PROPERTY DURING WORK ON THE BRIDGE. THE USE OF SUSPENDED NETS OR TARPS TO CATCH FALLING DEBRIS SHALL BE EMPLOYED. ANY MATERIAL THAT DOES ENTER ANY PROPERTY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING ANY EXISTING PAINT THAT MAY BE REMAINING FOR LEAD CONTENT PRIOR TO PERFORMING ANY WORK. THE LEAD PAINT TEST SHALL BE PERFORMED BY A CERTIFIED LEAD PAINT TESTING COMPANY. IF LEAD IS PRESENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MITIGATION NECESSARY FOR THE PROPOSED WORK IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.
- REFER TO PART 4 "SPECIAL CONDITIONS OF THE CONTRACT" REGARDING GENERAL REQUIREMENTS WORK INVOLVING PAINTED STEEL AND PIGEON WASTE. NO SEPARATE PAYMENT SHALL BE MADE FOR COMPLYING WITH THESE REQUIREMENTS.

**SHIELDING NOTES**

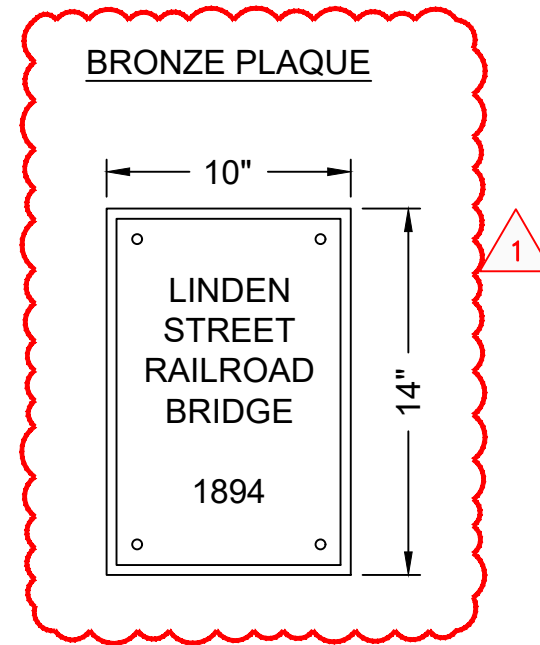
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT NO DEBRIS FALLS ONTO THE ROADWAY BELOW THE LINDEN STREET BRIDGE. THE METHOD FOR SHIELDING SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.
- ANY MATERIAL THAT DOES ENTER ANY ROADWAY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- SHIELDING WILL NOT BE MEASURED OR PAID FOR SEPARATELY, AND SHALL BE CONSIDERED INCIDENTAL TO RELATED ITEMS OF WORK.

**PROTECTIVE SCREEN NOTES**

- PROTECTIVE SCREEN DETAILING SHALL GENERALLY BE IN ACCORDANCE WITH THE MASSDOT TYPE 1 PROTECTIVE SCREEN STANDARD DETAIL DATED APRIL 2024, INCLUDING CLAMPS, SPLICES, AND TENSION BAND CONNECTIONS.
- USE 6 GAGE TIES AT 12" O.C. TO ALL POSTS AND TOP 3 RAILS. SPACE TIES TO BOTTOM RAIL AT 6" O.C.
- ALL ALUMINUM, INCLUDING HARDWARE AND FABRIC, SHALL RECEIVE A 4±1 MIL POLYESTER POWDER COAT FINISH. THE COLOR SHALL BE BLACK.
- THE CHAIN LINK FABRIC SHALL BE SECURED BY KNUCKLING TOGETHER THE CUT ENDS OF THE FABRIC WIRE IN A MANNER SIMILAR TO THE ORIGINALLY MANUFACTURED END.

**PROTECTIVE SCREEN MATERIALS**

POST AND RAILS	ASTM B 221, ALLOY 6061-T6, SCHEDULE 40 PIPE
TENSION BARS, RAIL SPLICES, WASHERS, AND POST CONN. CLAMPS	ASTM B 221, ALLOY 6061-T6
FABRIC AND TIES	AASHTO M 181 TYPE III ALLOY 6061-T89 OR T94; 6 GAGE
TENSION BANDS	ASTM B 221, ALLOY 6063-T5
BOLTS	ASTM B 316, ALLOY 2024-T4
NUTS	ASTM B 316, ALLOY 6061-T6
PROTECTIVE SCREEN CLAMPS	ASTM B 221, ALLOY 6061-T6



**NOTES**

- ONE PLAQUE EACH TO BE INSTALLED ON THE NORTHEAST AND SOUTHWEST TRUSS END CHORDS.
- SEE SPECIAL PROVISION 992.121 FOR ADDITIONAL REQUIREMENTS.

**WALTHAM  
MCRT WALTHAM LINDEN STREET BRIDGE**

SHEET NO.	TOTAL SHEETS
9	15

MADCR PROJECT NO. P25-3582-C1A

**STRUCTURAL NOTES**

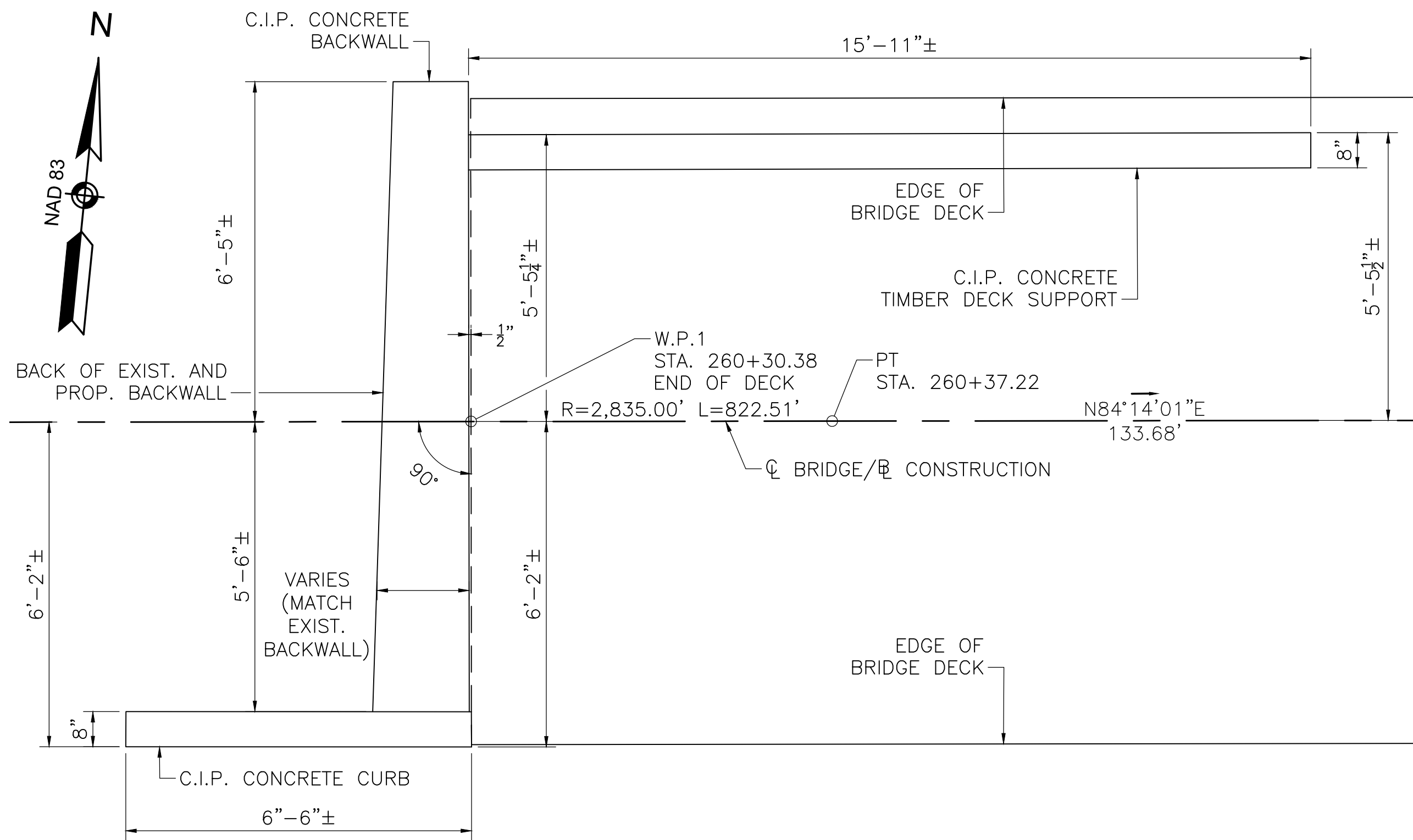
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**WALTHAM  
MCRT WALTHAM LINDEN STREET BRIDGE**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	15

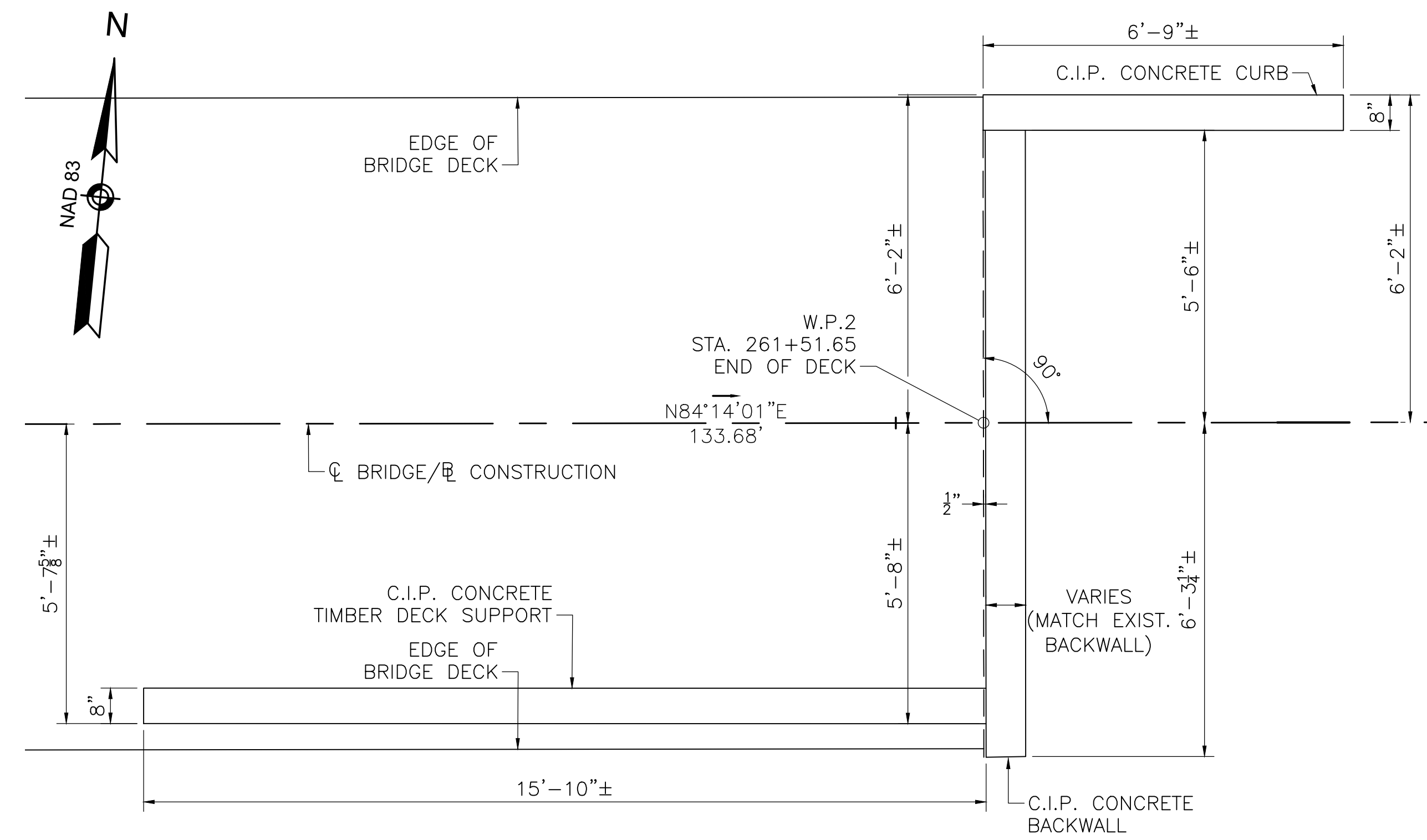
MADCR PROJECT NO. P25-3582-C1A

**BRIDGE PLAN - 2  
BRIDGE No. 113  
LINDEN BRIDGE SUBSTRUCTURE LAYOUT**



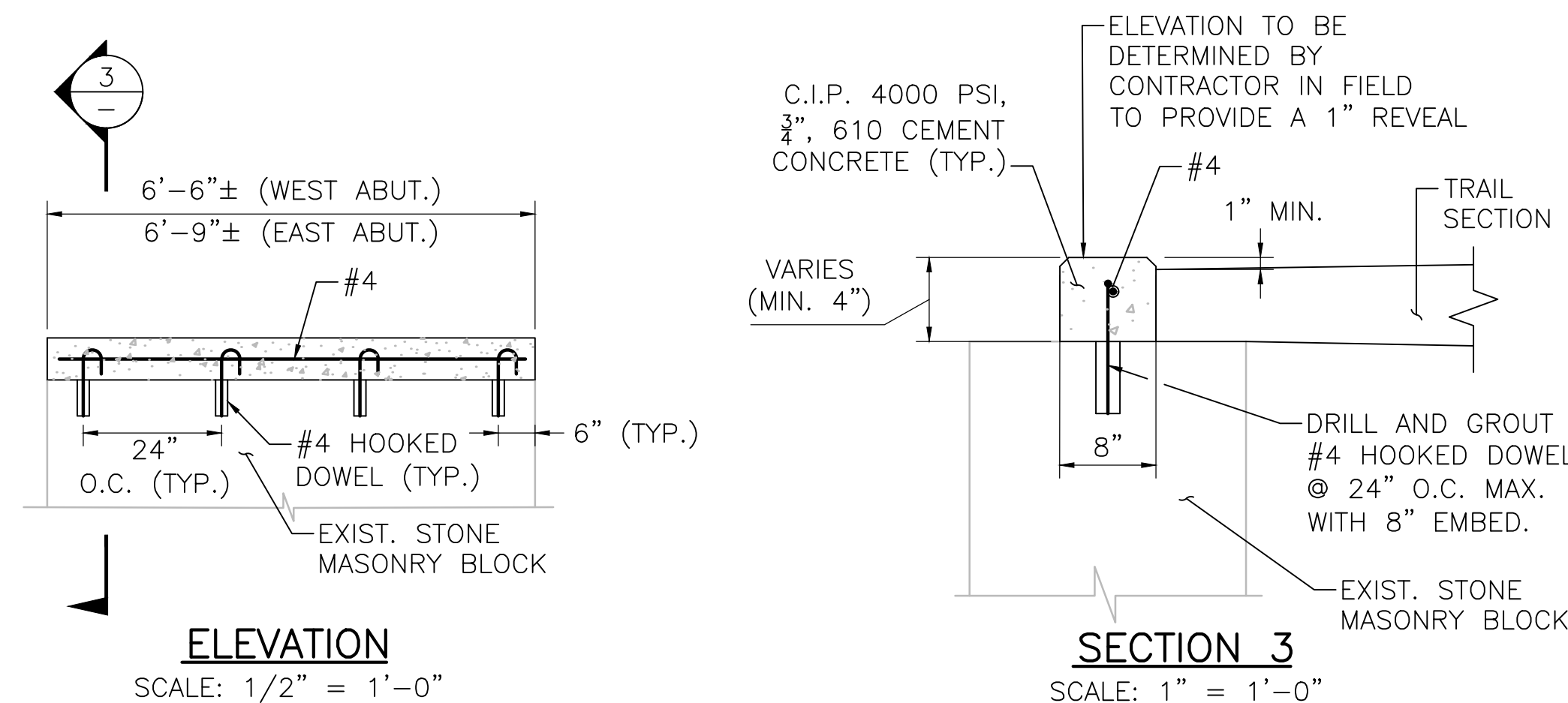
**WEST ABUTMENT C.I.P. CONCRETE BACKWALL LAYOUT**

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

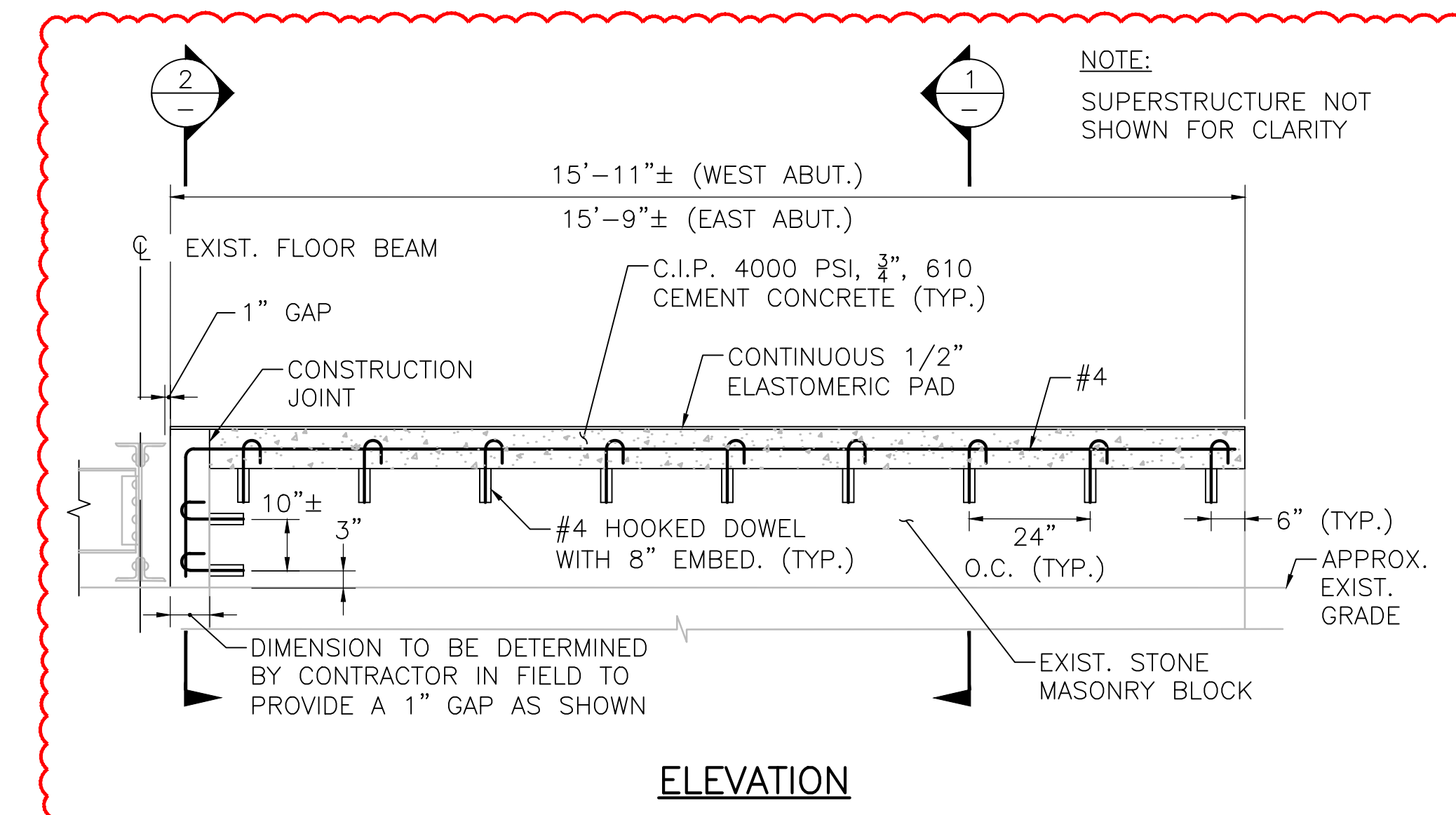
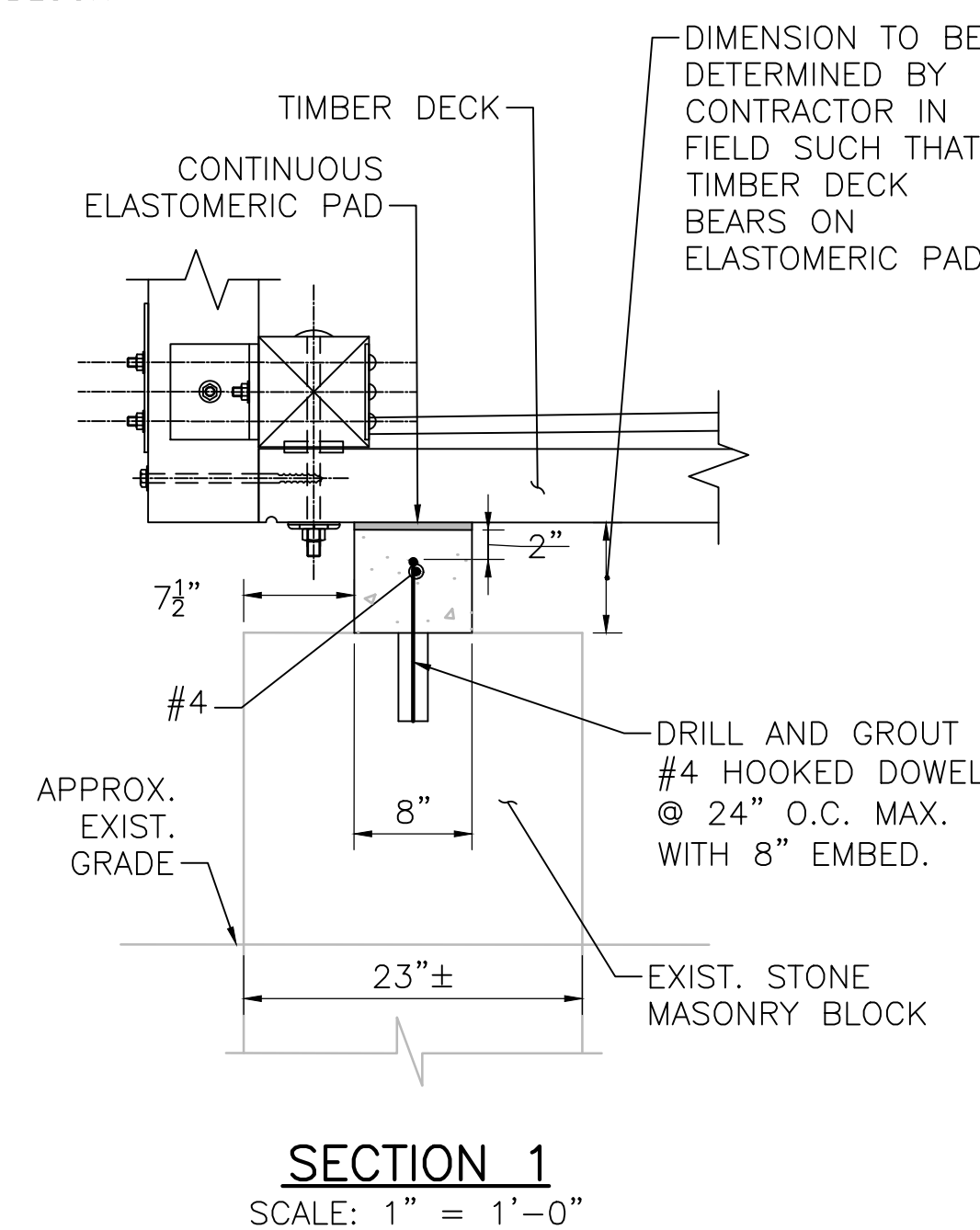


**EAST ABUTMENT C.I.P. CONCRETE BACKWALL LAYOUT**

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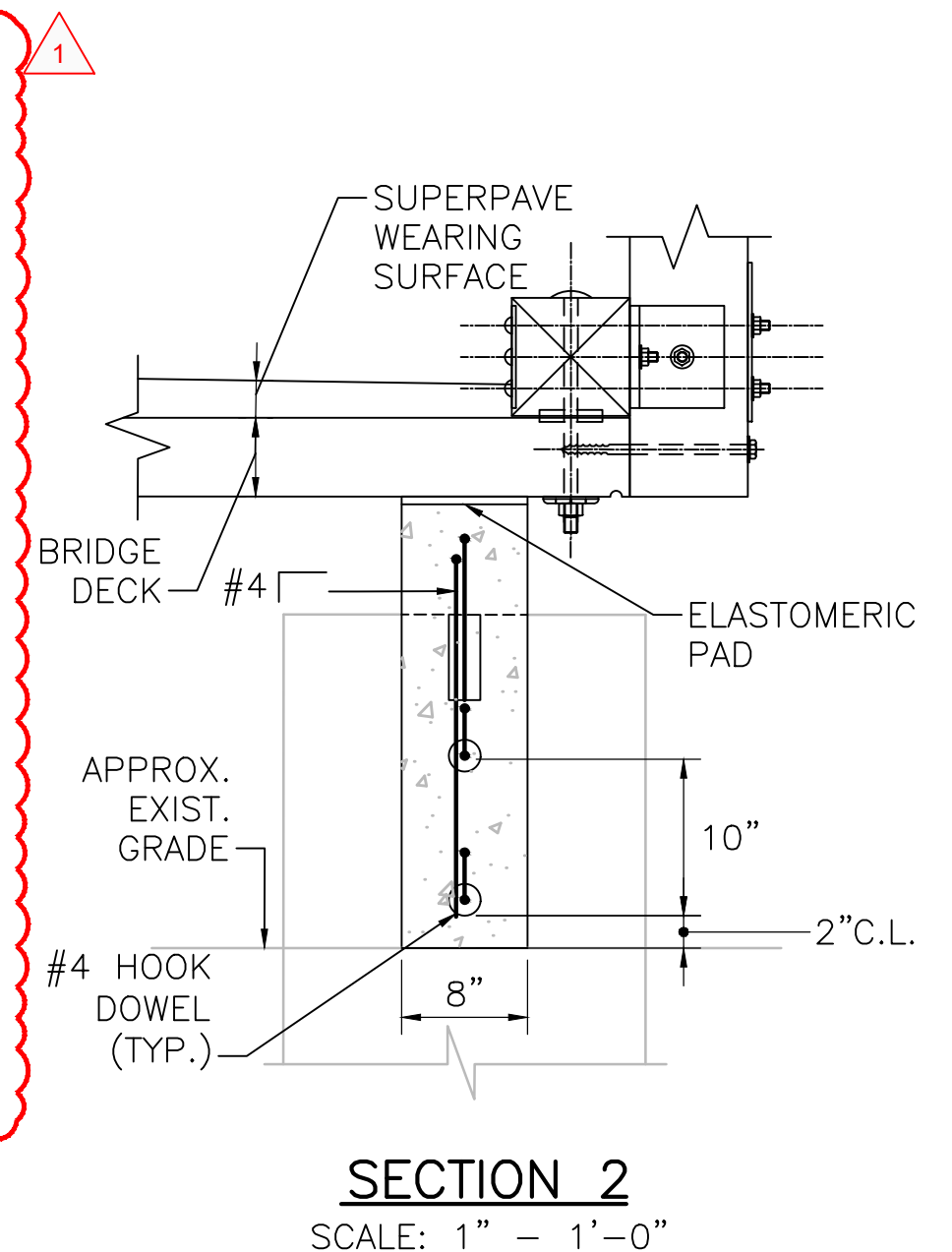


**C.I.P. CONCRETE CURB DETAIL**



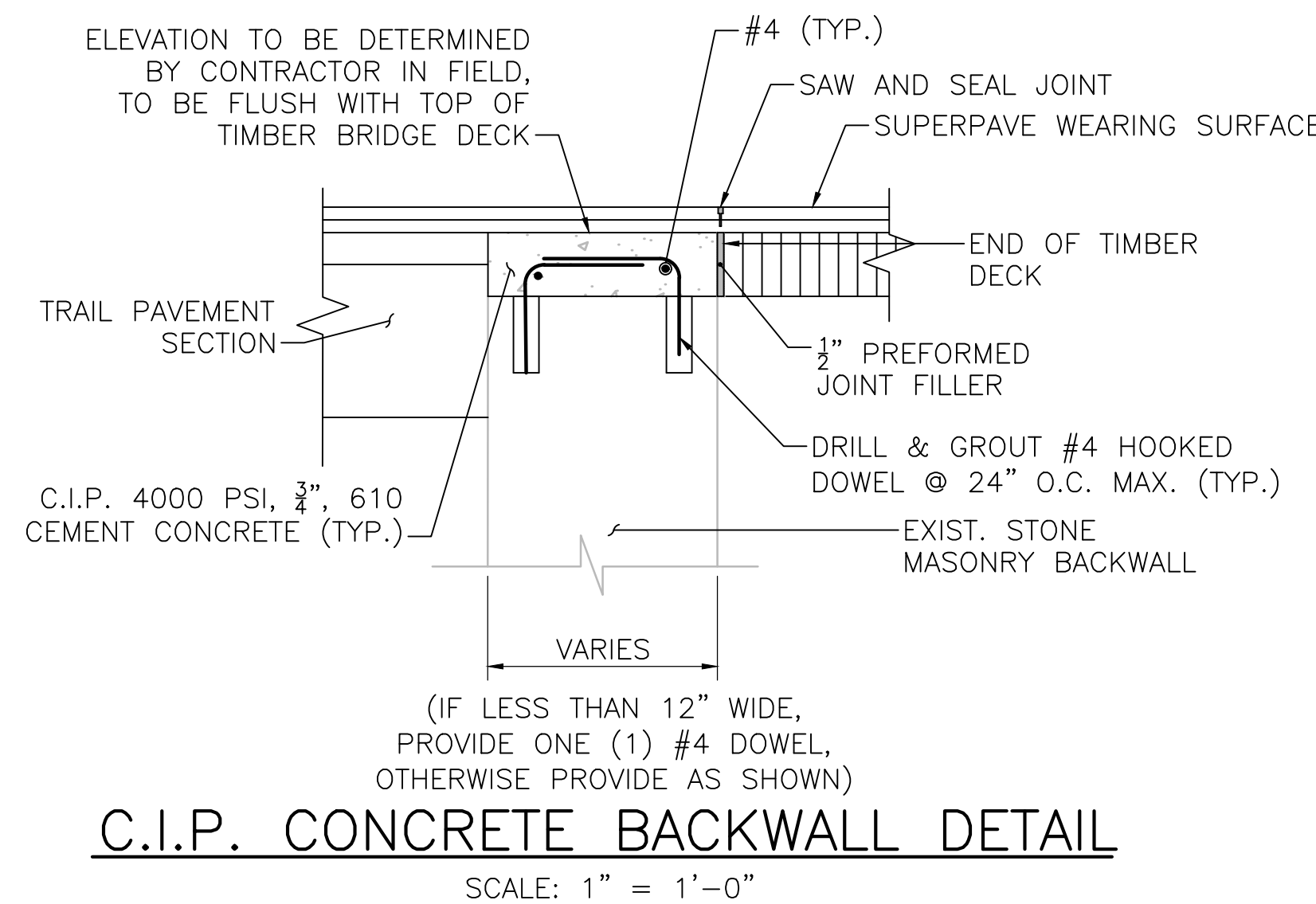
**C.I.P. CONCRETE TIMBER DECK SUPPORT DETAIL**

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



**SECTION 2**

SCALE: 1" = 1'-0"



**C.I.P. CONCRETE BACKWALL DETAIL**

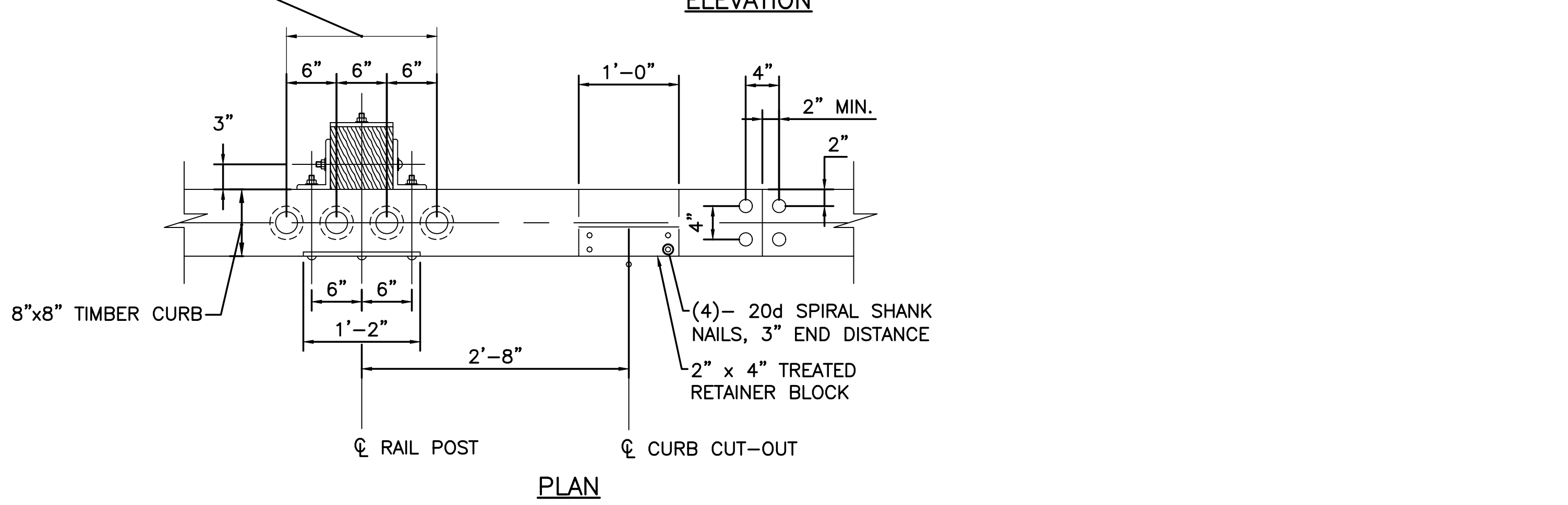
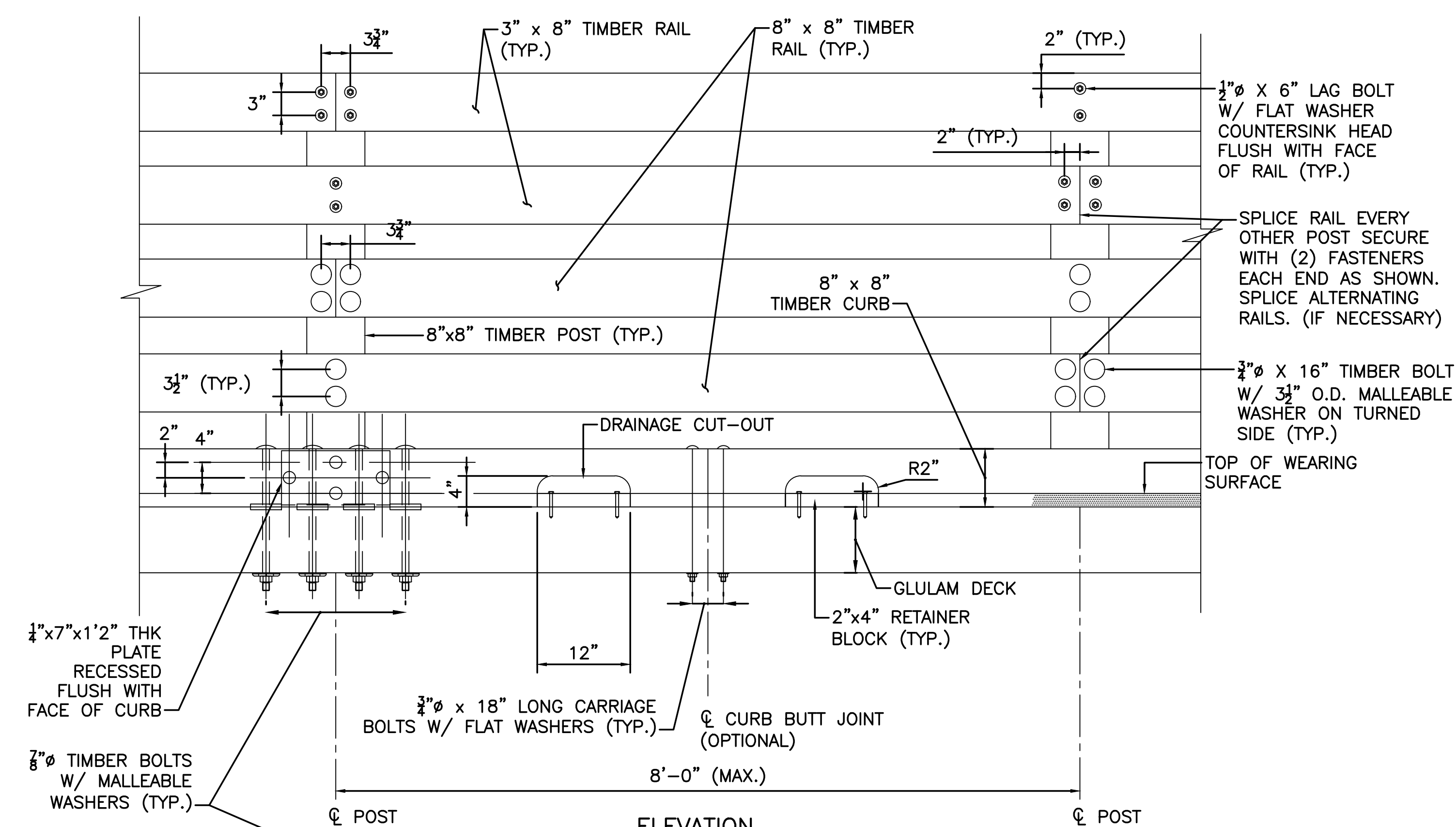
SCALE: 1" = 1'-0"

**WALTHAM  
MCRT WALTHAM LINDEN STREET BRIDGE**

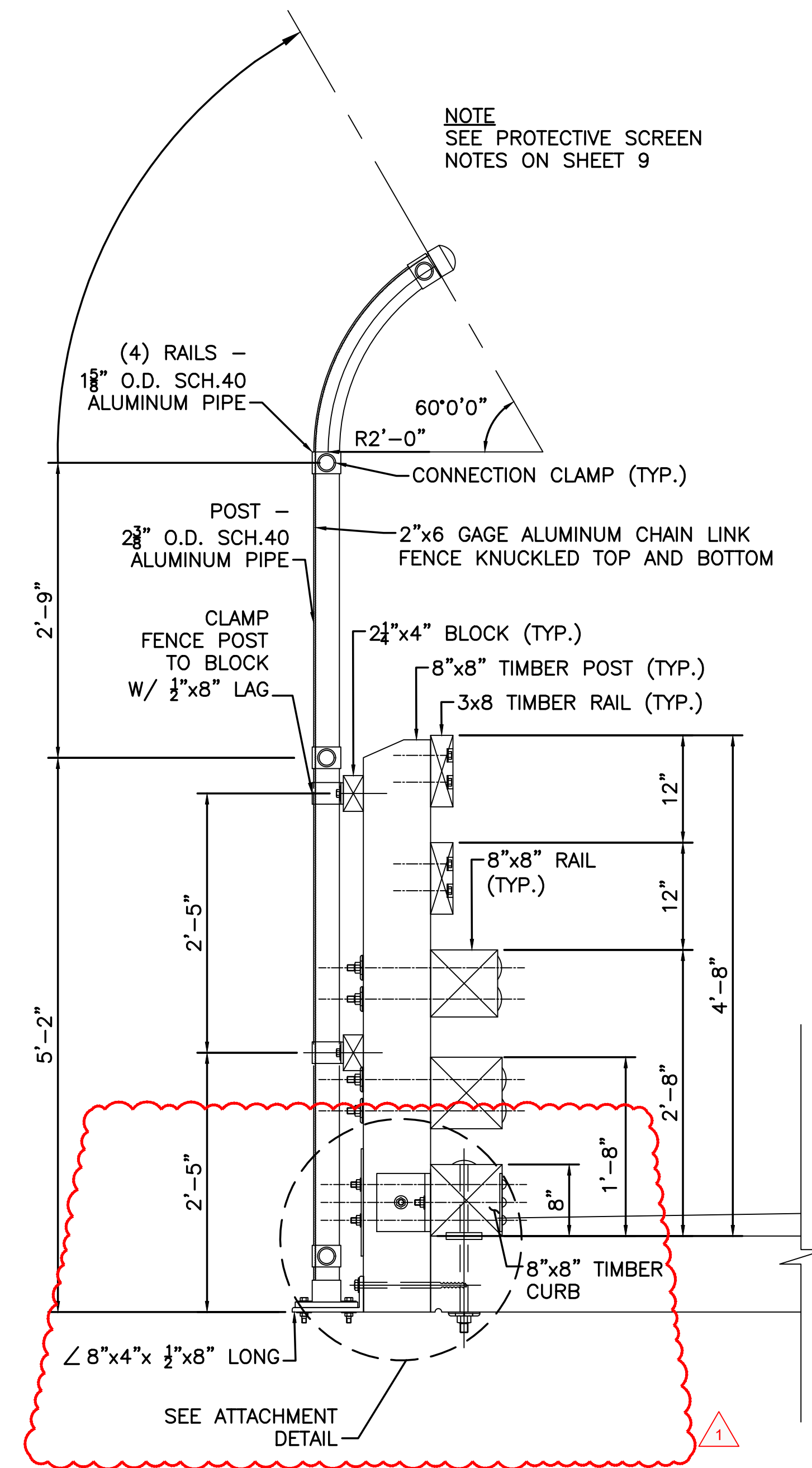
SHEET NO.	TOTAL SHEETS
14	15

MADCR PROJECT NO. P25-3582-C1A

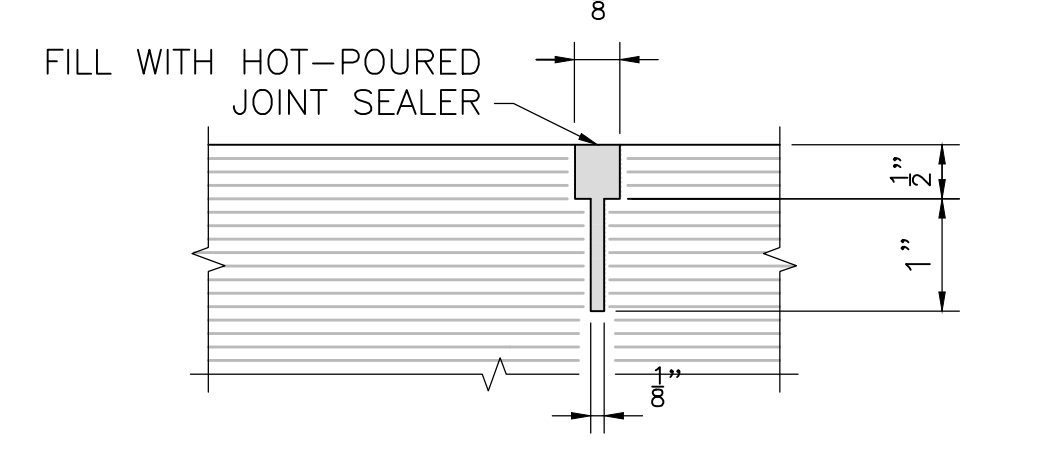
**BRIDGE PLAN - 5  
BRIDGE No. 113  
LINDEN BRIDGE RAILING - DETAILS**



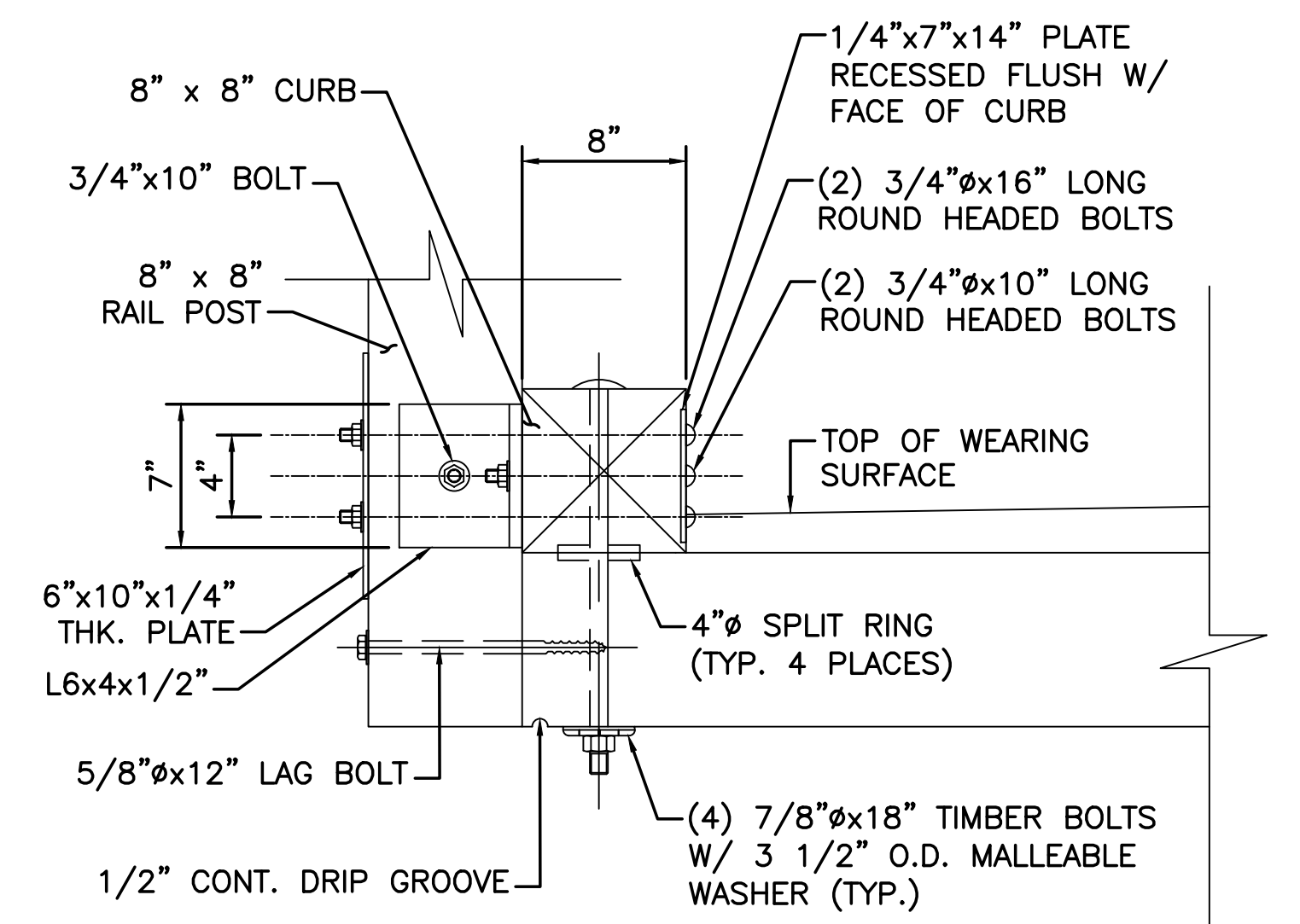
**CURB AND RAIL POST ATTACHMENT DETAIL**  
SCALE: 1" = 1'-0"



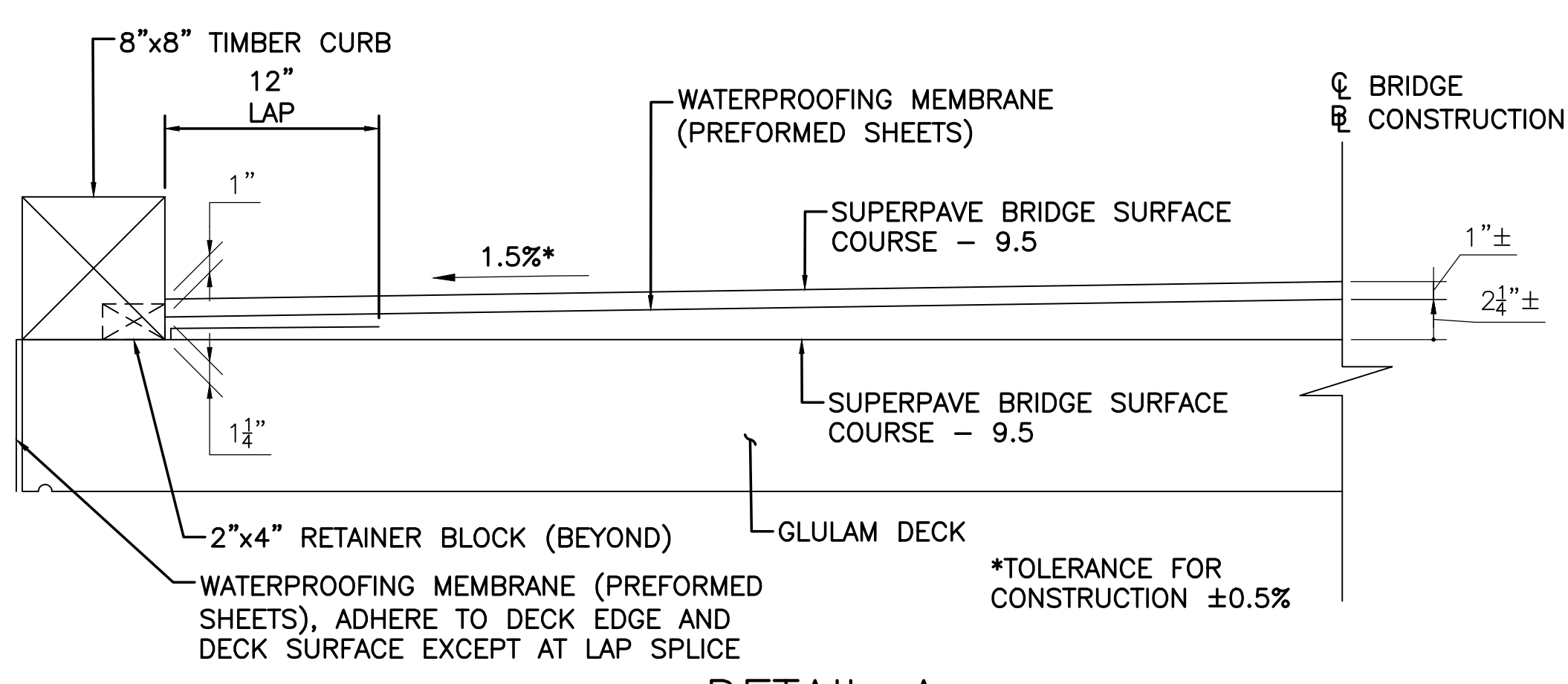
**RAIL DETAIL**  
SCALE: 1" = 1'-0"



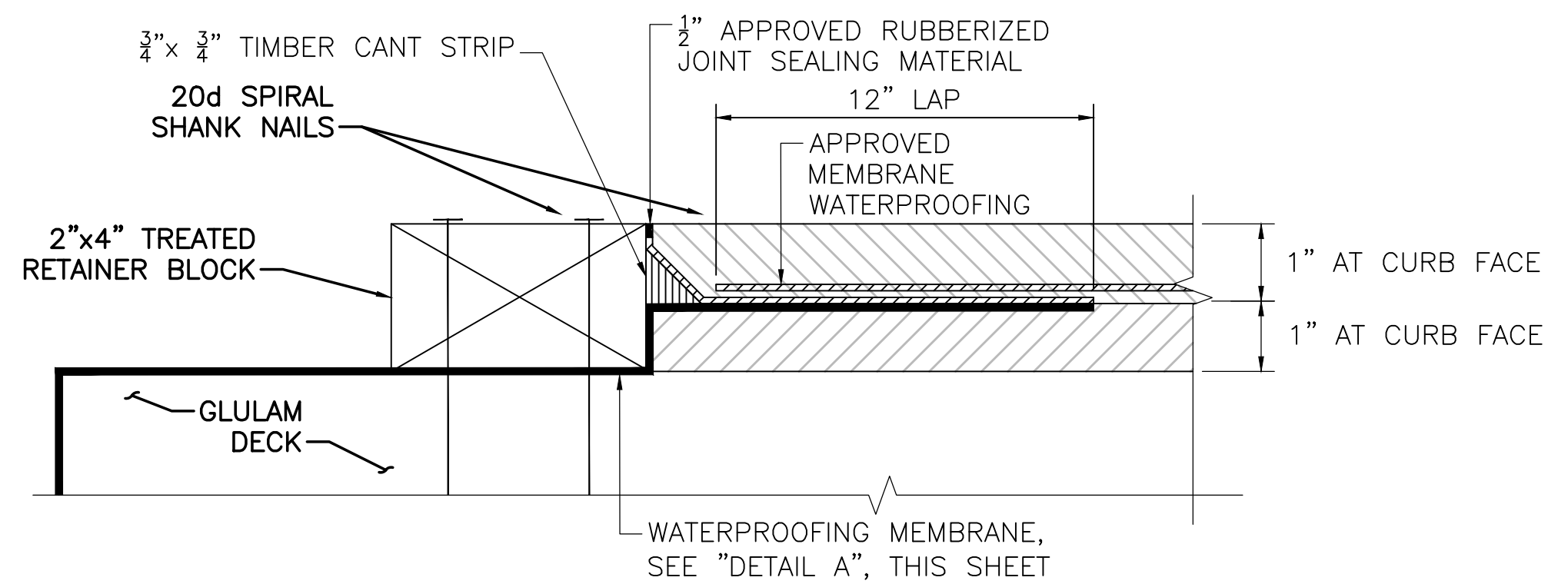
**PAVEMENT SAWCUT DETAIL**  
SCALE: 1" = 1'-0"



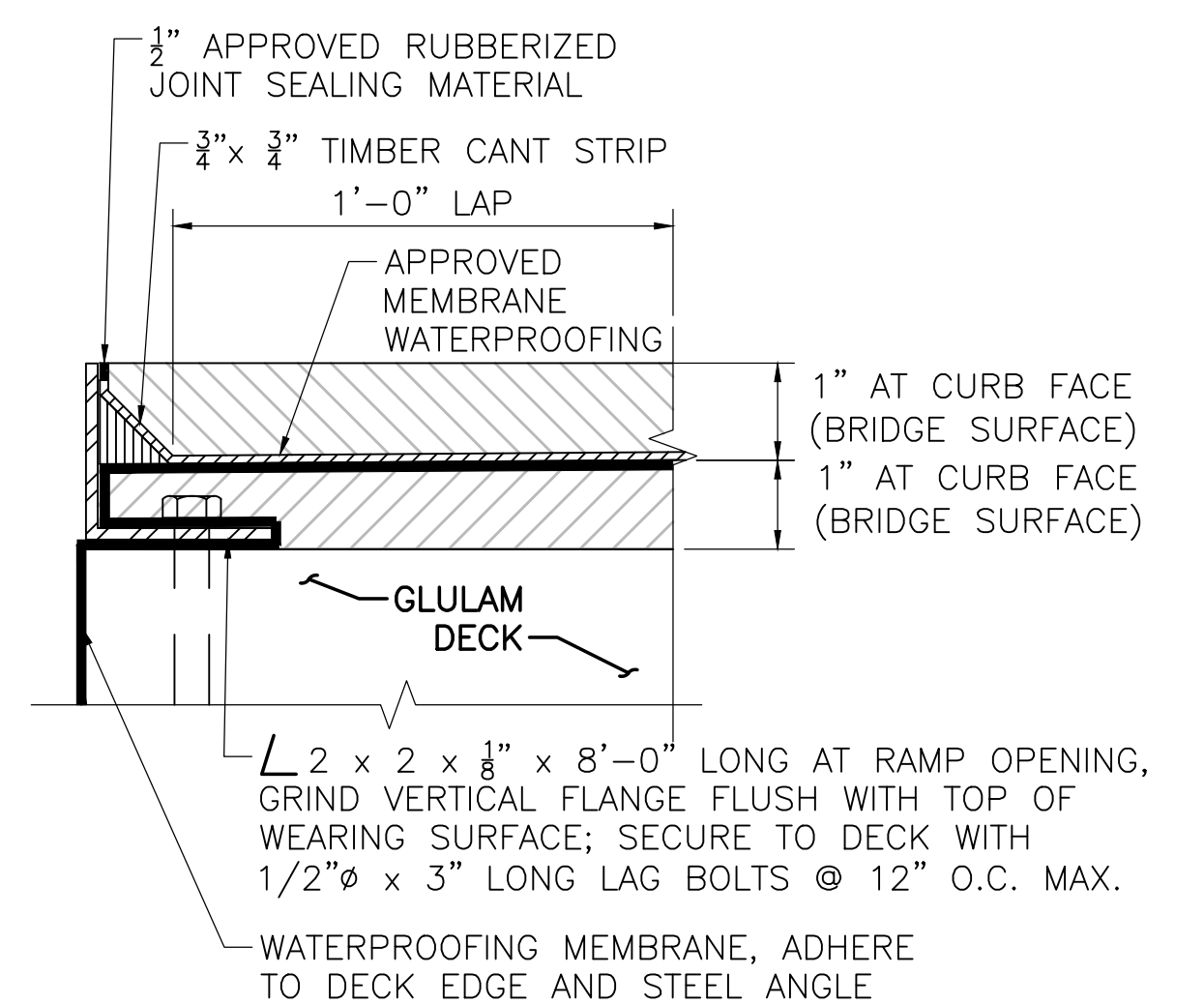
**ATTACHMENT DETAIL**  
SCALE: 1 1/2" = 1'-0"



**DETAIL A**  
SCALE: 1 1/2" = 1'-0"



**DETAIL B**  
NO SCALE



**DETAIL C**  
(AT ACCESS RAMP OPENING)  
NO SCALE

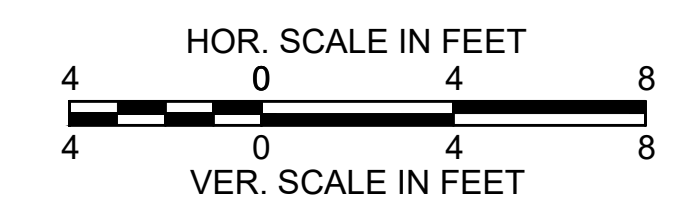
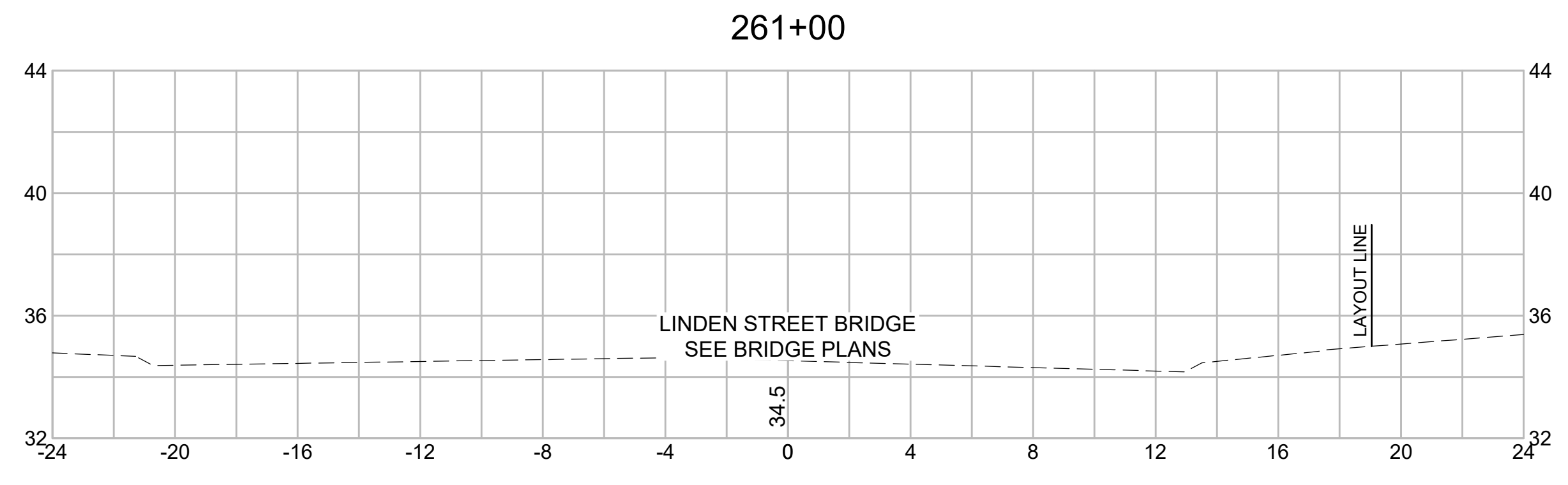
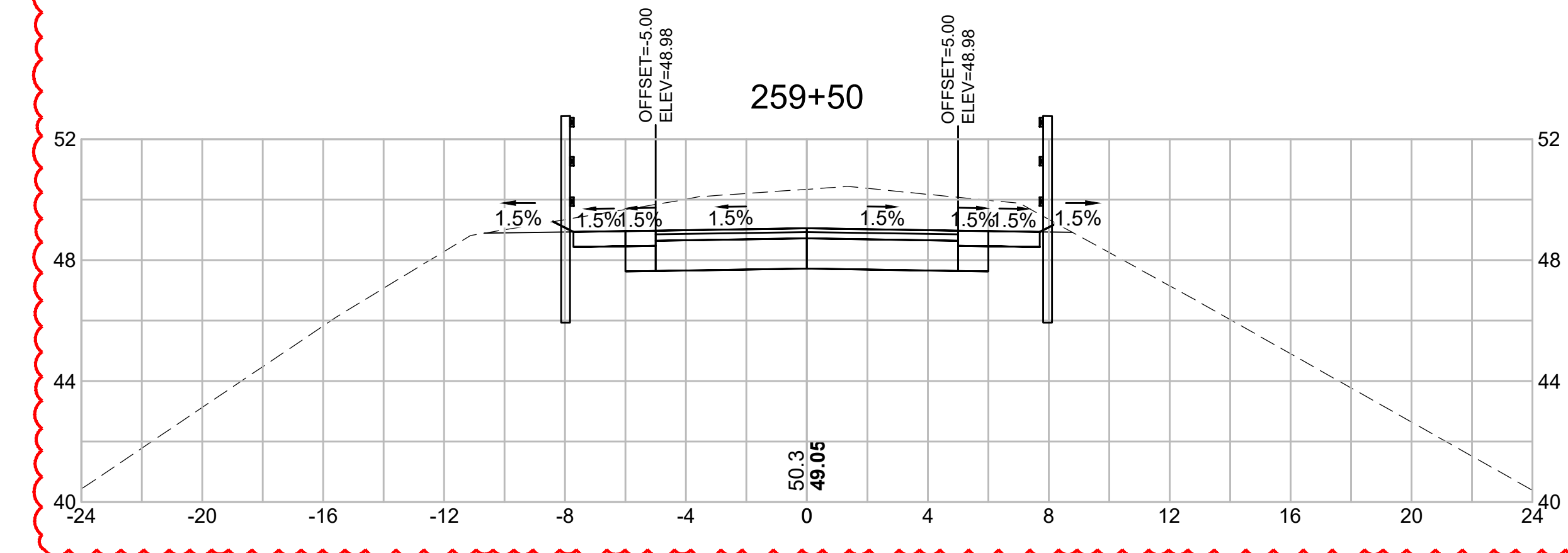
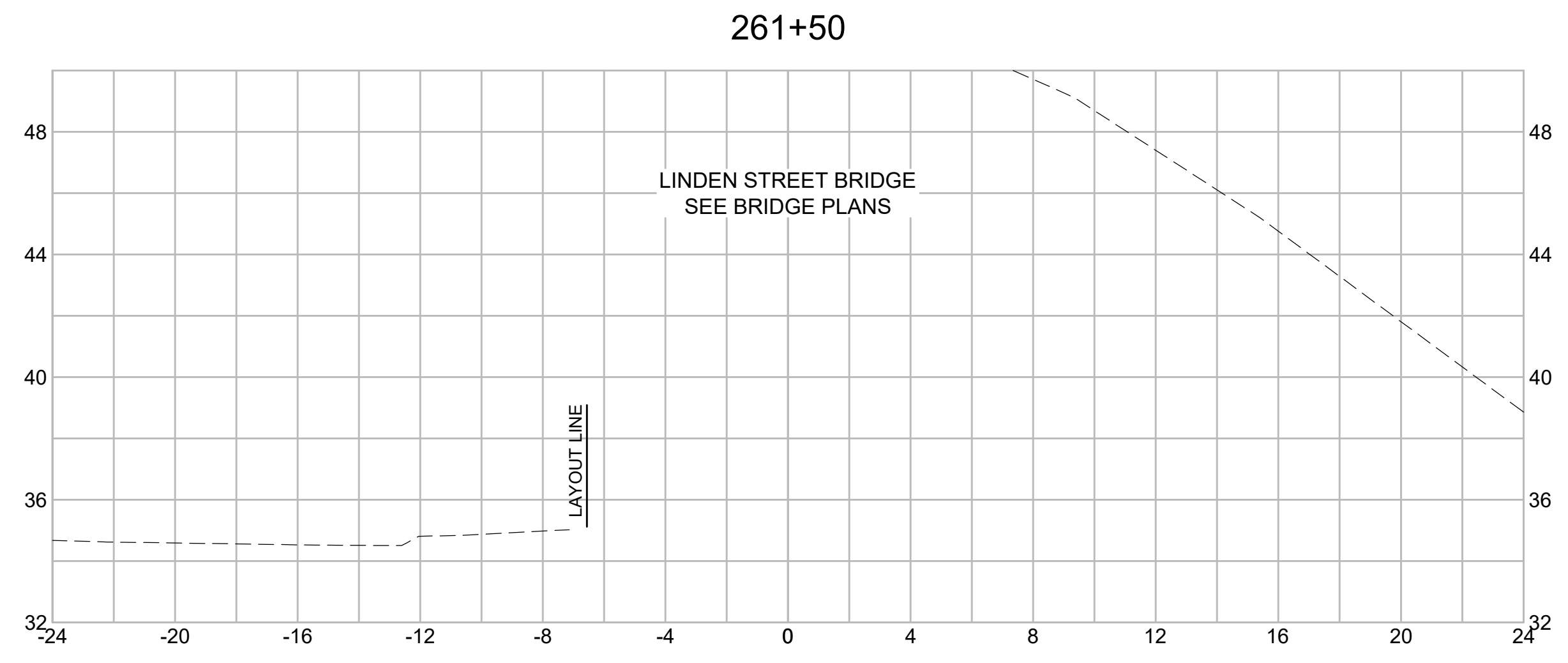
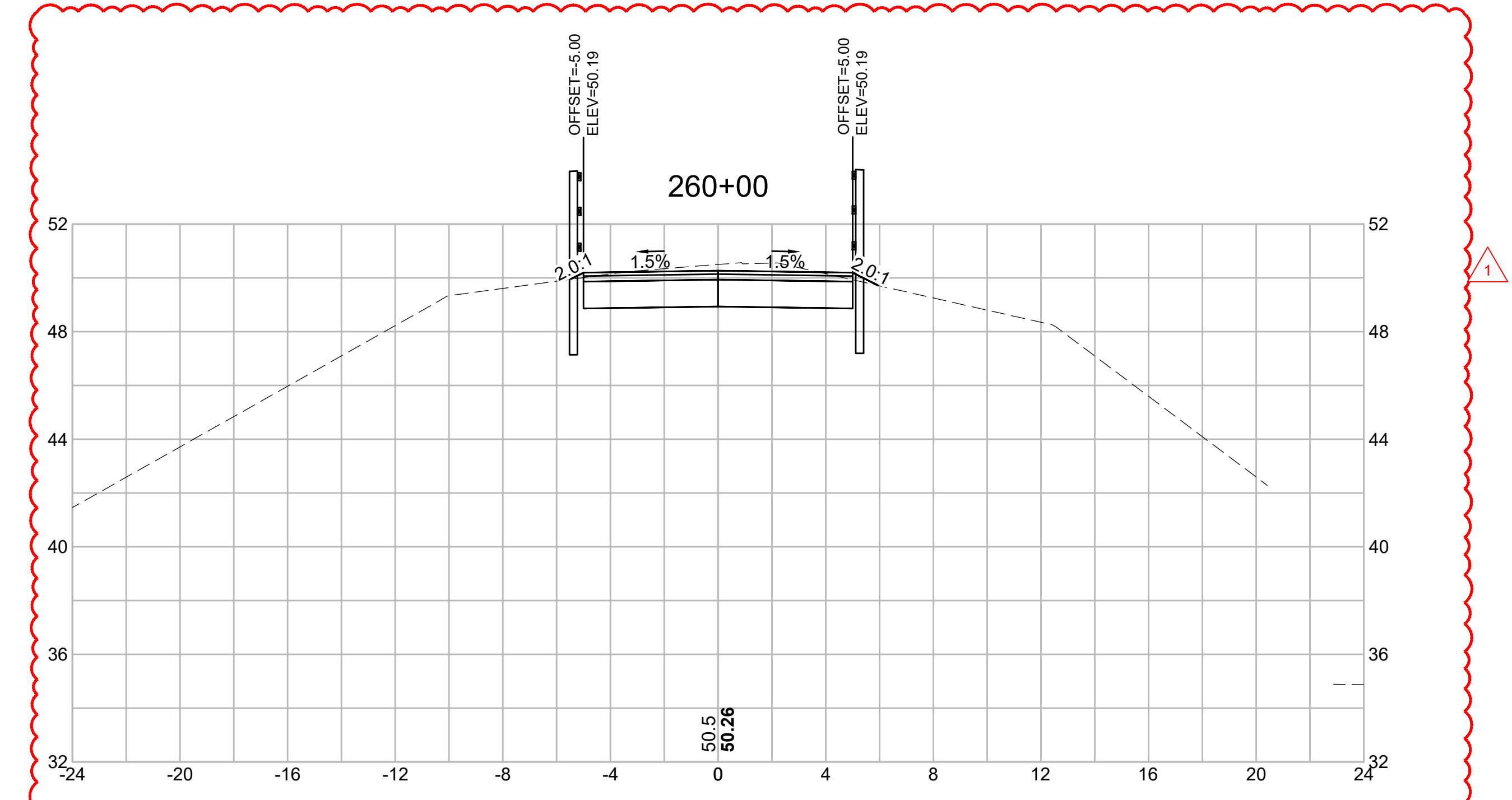
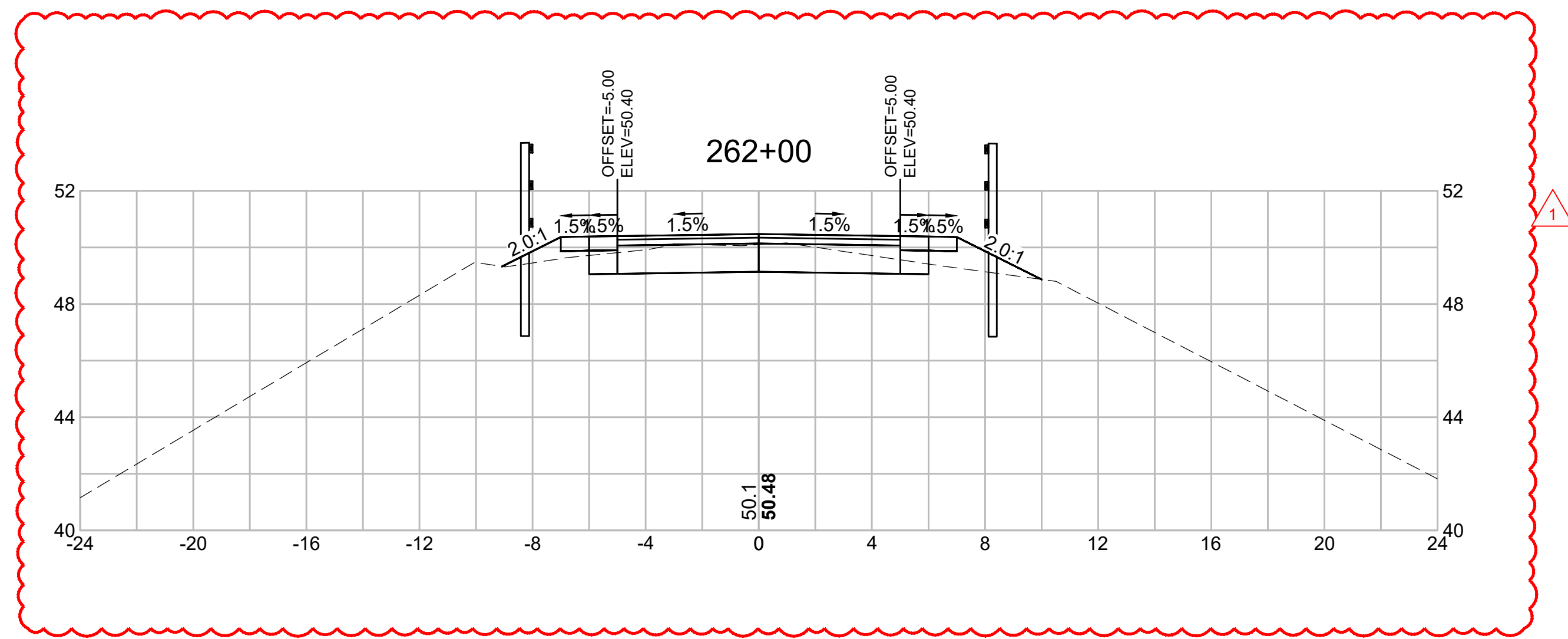
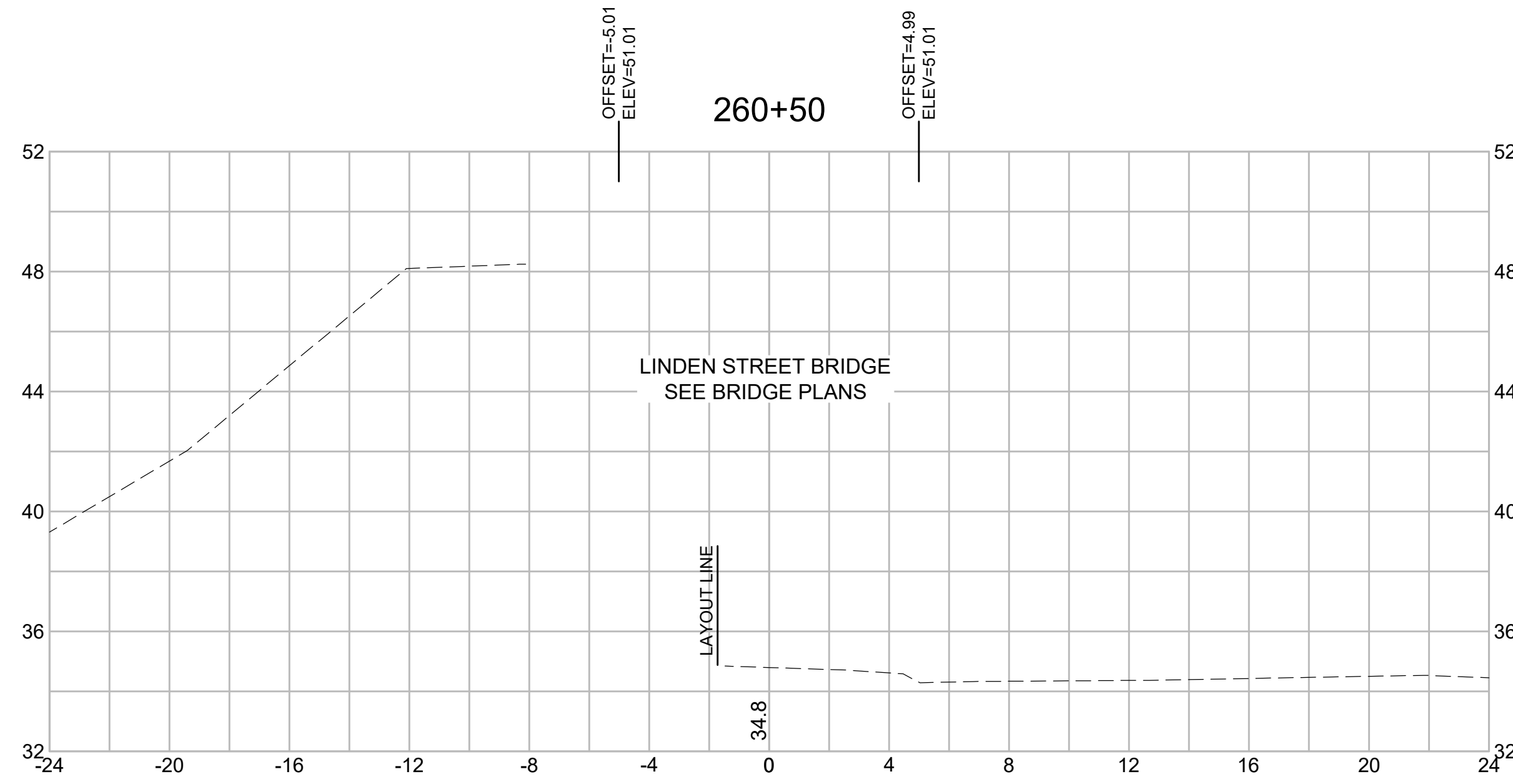
- NOTES:**
- ALLOW FIRST BRIDGE SURFACE COURSE TO COOL SUFFICIENTLY SO WATERPROOFING MEMBRANE DOES NOT TEAR WHEN APPLYING THE SECOND BRIDGE SURFACE COURSE.
  - SEE "DETAIL B" AND "DETAIL C", THIS SHEET.

**WALTHAM  
MCR T WALTHAM LINDEN STREET BRIDGE**

SHEET NO.	TOTAL SHEETS
15	15

MADCR PROJECT NO. P25-3582-C1A

**CROSS SECTIONS**





**ITEM 107.97****STRUCTURAL STEEL REPAIRS****FOOTPOUND**

**DESCRIPTION:** All work shall be in accordance with the relevant provisions of Sections 960 and 961 of the Standard Specifications, the Special Conditions of the Contract, and the following:

The work to be done under this Item consists of demolition and work involving existing painted steel, providing new steel, removing rivets, and replacing missing steel and fasteners in order to repair the deteriorated/damaged under-bridge diagonal steel bracing members and connection plates, and horizontal gusset plates. Photos of respective areas of repair/replacement have been included at the end of the specification.

Gusset plates shall be replaced to the best extent practicable, particularly at areas where existing damage to floor beams is present.

The work also includes all tasks associated with lead paint as described in Section 961.

**MATERIALS:** All new structural steel used in the repairs shall be AASHTO designation M 270 (ASTM A 709) Grade 36 or 50, and all fasteners shall be ASTM A325 high strength bolts and nuts. All new structural steel and connectors shall be hot-dipped galvanized and painted in accordance with Plan Sheet 9-Structural Steel Note 3 and the MassDOT Standard Specifications.

**CONSTRUCTION METHODS:** The contractor shall assume that the coatings on the existing steel contain lead (Pb), unless otherwise determined by testing. All demolition and work involving painted steel shall conform to the requirements of Section 961.

All existing steel member surfaces that will be in permanent contact with new steel shall be cleaned to at least SSPC-SP3 and primed with an approved primer before performing the repairs.

The ~~methods of repair~~ procedures, sequence, method of maintaining structural stability, materials, and equipment, ~~and anchorage~~ proposed by the Contractor shall be submitted ~~on a standard shop drawing~~ for approval by the Engineer prior to beginning of work. The submittal shall be stamped by a Massachusetts registered P.E. Approval shall not relieve the Contractor of responsibility for the successful completion of the work.

The work shall be done by methods not likely to produce fracture or other injury to the steel members. Torch cutting or heating of steel will not be permitted for rivet removal where the rivet is connected to any component to remain.

During the course of the work, it may be necessary to disconnect, support, or adjust steel which is to remain in the structure. For these situations, the Contractor shall submit his proposals for disconnecting, supporting, or adjusting the steel, as necessary, to the Engineer for approval. The Contractor's proposals shall be approved prior to the actual commencement of any disconnecting, supporting, or adjusting of steel. If, in the opinion of the Engineer, the Contractor's operations damage other members of the structure being repaired, he/she shall be required to change his/her methods of operations and make all necessary repairs to the damaged member as ordered by the Engineer at no additional cost to the State.

Welding will not be permitted.

**ITEM 874.2 (CONTINUED)**

work and all equipment, tools, and machinery used in handling material and executing any part of the work shall be subject to the approval of the Engineer prior to the

commencement of work; if found unsatisfactory, shall be changed to the Engineer's specifications and approval.

**METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

Sign Removed and Reset will be measured for payment per Each. The price so stated shall constitute full and complete compensation for all labor, tools, materials, and equipment, hardware, and all incidentals required to finish the work, complete in place and accepted by the Engineer

**ITEM 992.12                      ALTERATION TO BRIDGE STRUCTURE NO. 113      LUMP SUM  
(LINDEN STREET BRIDGE)**

The work under this Lump Sum Item shall conform to the applicable provisions of Section 995 of the Massachusetts Department of Transportation (MassDOT) Standard Specifications and the specific requirements stipulated below for the component parts of this Item. For those component parts where no specific requirement is stipulated, the Standard Specifications shall apply except for payment.

Work under this Item shall include all materials, equipment, and labor needed to alter the complete bridge structure, which includes the following: bridge cleaning, sawing and sealing joints in asphalt pavement at bridges, reinforced concrete backwalls, curbs, and deck supports including epoxy coated reinforcing, glulam timber deck including all hardware and dowels, timber bridge railing including all hardware, timber beams including all hardware, Type I protective screen, drilling and grouting dowels, elastomeric bearing pads, membrane waterproofing for bridge decks, [asphalt pavement](#), and any component not listed but shown on the Plans.

Bridge excavation, gravel borrow for backfilling structures and pipes, and debris removal shall be considered incidental to this Item.

The following items shall be considered as included in this Item: Development of Assembly Plans, form liners, neoprene seals, backer rods, preformed and premoulded filler, joint sealer, caulking, closed cell foam, weep holes with bagged stone, all piping and drains, waterproofing protective course, and all other work considered as incidental to the work involved in furnishing and placing the concrete elements.

[Payment for the broken yellow striping across the bridge will be made under Item No. 867.106 – 6 Inch ReflectORIZED Yellow Line \(Thermoplastic\).](#)

**ITEM 992.12 (CONTINUED)****GLULAM TIMBER DECK / TIMBER BRIDGE RAILING / TIMBER STRINGERS**

The work to be done under these Sub-Items shall be per the Standard Specifications, the Plans, and shall include the following:

All hardware used for fastening including, but not limited to, bolts, nuts, washers, steel plates and angles, split rings, ~~east aluminum alloy deck brackets~~, steel dowels, etc., shall be included in the sub-item unit price for Treated Timber, no separate payment will be made for these items. Preformed joint material shall be considered incidental to these items.

**MEMBRANE WATERPROOFING FOR BRIDGE DECKS**

The work to be done under this Sub-Item shall be per Section 965 of the Standard Specifications.

**SCHEDULE BASIS FOR PARTIAL PAYMENT**

The Item No. 992.12 Alteration to Bridge Structure No. 113 (Linden Street Bridge) will be paid per the LUMP SUM unit at the Contract Bid Price, based on Contractor's independent investigation of the work prior to bidding. The Contract Bid Price shall include all labor, materials, tools, equipment, and all other incidentals that may be necessary to perform the work as specified, complete in place and accepted by the Engineer. No increase will be made to the Bid Price due to any unseen nature of the work or materials involved.

Within ten (10) days after the award of the Contract, the Contractor shall submit, in duplicate, for the approval of the Engineer, a schedule of unit prices for the major components of the bridge structure as listed below. The bridge structure Lump Sum breakdown quantities provided below are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the Lump Sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual bridge components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 992.12, and no further compensation will be allowed.

The schedule on the following proposal forms apply only to Item 992.12. Payment for similar materials and construction at locations other than at this bridge structure shall not be included under this Item. Sub-Item numbering is presented for information only in coordination with MassDOT Standard Nomenclature.

ALTERATION TO BRIDGE STRUCTURE NO. 113 (LINDEN STREET BRIDGE)  
SCHEDULE FOR PARTIAL PAYMENT

Sub-Item	Component	Quantity	Unit	Unit Price	Amount
106.35	Bridge Cleaning	1	LS		
<u>450.60</u>	<u>Superpave Bridge Surface Course 9.5 (SSC-B – 9.5)</u>	<u>23</u>	<u>TON</u>		
482.31	Sawing & Sealing Joints in Asphalt Pavement at Bridges	100	FT		
904.	4000 psi, ¾ in., 610 Cement Concrete	3	CY		
910.1	Steel Reinforcement for Structures – Epoxy Coated	110	LB		
912.	Drilling and Grouting Dowels	56	EA		
933.	Plain Elastomeric Bearing Pad	22	SF		
955.1	Timber Stringers	4	MBF		
955.2	Glulam Timber Deck	8	MBF		
955.3	Timber Bridge Railing	6	MBF		
965.	Membrane Waterproofing for Bridge Decks	1690	SF		
975.3	Protective Screen Type I	230	LF		
Total Lump Sum Price for Item 992.12 =					

Any component not covered in these Job Specific Specifications, but shown on the plans, shall be included in the contract lump sum price for Item 992.12. unless specifically covered under another payment item.

**ITEM 992.121****BRONZE PLAQUE****EACH****DESCRIPTION**

Work under this item consists of furnishing and installing two bronze plaques on the existing truss end chords. All work shall be performed in accordance with the Standard Specifications, the Plans, and this Special Provision.

The Contractor shall submit documentation showing that the plaque Manufacturer has a minimum of 10 years of experience in manufacturing bronze plaques and shall provide documentation of at least five similar projects, including the name and contact information for the project owners.