





PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

STATE	FEDERAL AID	STATE
ROUTE	PROJECT	ROUTE
VA.		N/A
		UPC 111404, EN17-153-115

FHWA Construction and Scour Code: **X951-S5**

**GENERAL NOTES:**

- Width: 5'-0" face-to-face of railing.
- Span layout: 28'-1 1/4" steel rolled beam simple span, 9'-0"-9'-0"-5'-9" timber simple spans
- Capacity: 90 psf Pedestrian Live Loading;
- Drainage area: 329 acres
- Specifications:
  - Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.
  - Design: AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017; and VDOT Modifications.
  - LRFD Guide Specifications for Design of Pedestrian Bridges, 2nd Edition, 2009.
  - Standards: Virginia Department of Transportation Road and Bridge Standards, 2016; including all current revisions.

The Contractor shall be responsible for obtaining all necessary permits from the Town of Vienna, Fairfax County and NOVA Parks as applicable before beginning of construction.

The Contractor shall adhere to the License Agreement between the Town of Vienna and NOVA Parks.

The Contractor shall be responsible for any damage to existing structures, pavement or other existing features which occur as a result of project construction. Any damage repair, reconstruction and/or restoration shall be at the Contractor's expense and subject to Town approval.

The Contractor shall field verify all dimensions, locations and elevations of existing structures shown on the current drawings. All discrepancies between field conditions and these plans shall be brought to the attention of the project manager for the Town before proceeding with work that is directly affected by the discrepancy.

Any deviations from approved plans and/or Specifications must be approved by the Engineer/Owner in writing prior to the start of the affected portion of work.

Contractor to be aware of site constraints including but not limited to specimen trees, HVAC equipment, building utilities both on and near the bridge structure, and the immediate proximity to the historic Freeman Store Building that require protection and care to be taken.

Structural steel for the superstructure of Span a, including sole plates, shall be ASTM A709 Grade 50 and shall be hot dipped galvanized.

Concrete in substructure shall be Class A3.

Permeability testing does not apply to this project.

Deformed reinforcing bars shall conform to ASTM A615 Grade 60. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

Timber construction shall follow the requirements of Section 418 of the VDOT Specifications unless otherwise stated in the plans herein.

All timber shall be pressure treated conforming to Section 236 of the VDOT Specifications and shall be dried to a moisture content of 19 percent or less after treatment.

All timber ends shall be cut square. Cut ends shall not be placed in contact with ground or concrete. Bolt holes for through bolts shall be 1/16" larger in diameter than the bolt size.

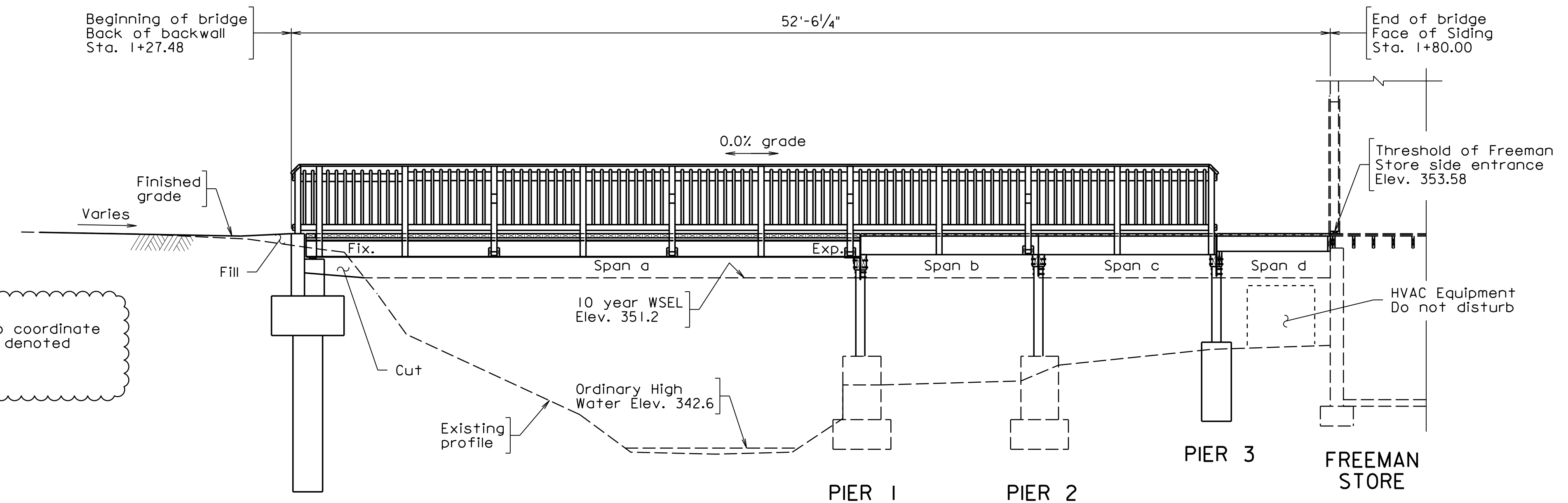
Timber shall be predrilled for lag bolts in accordance with manufacturers recommendations.

All cuts and holes in timber shall be field treated in accordance with AWP standards and shall be field treated a second time no sooner than four hours after completion of the first field treatment.

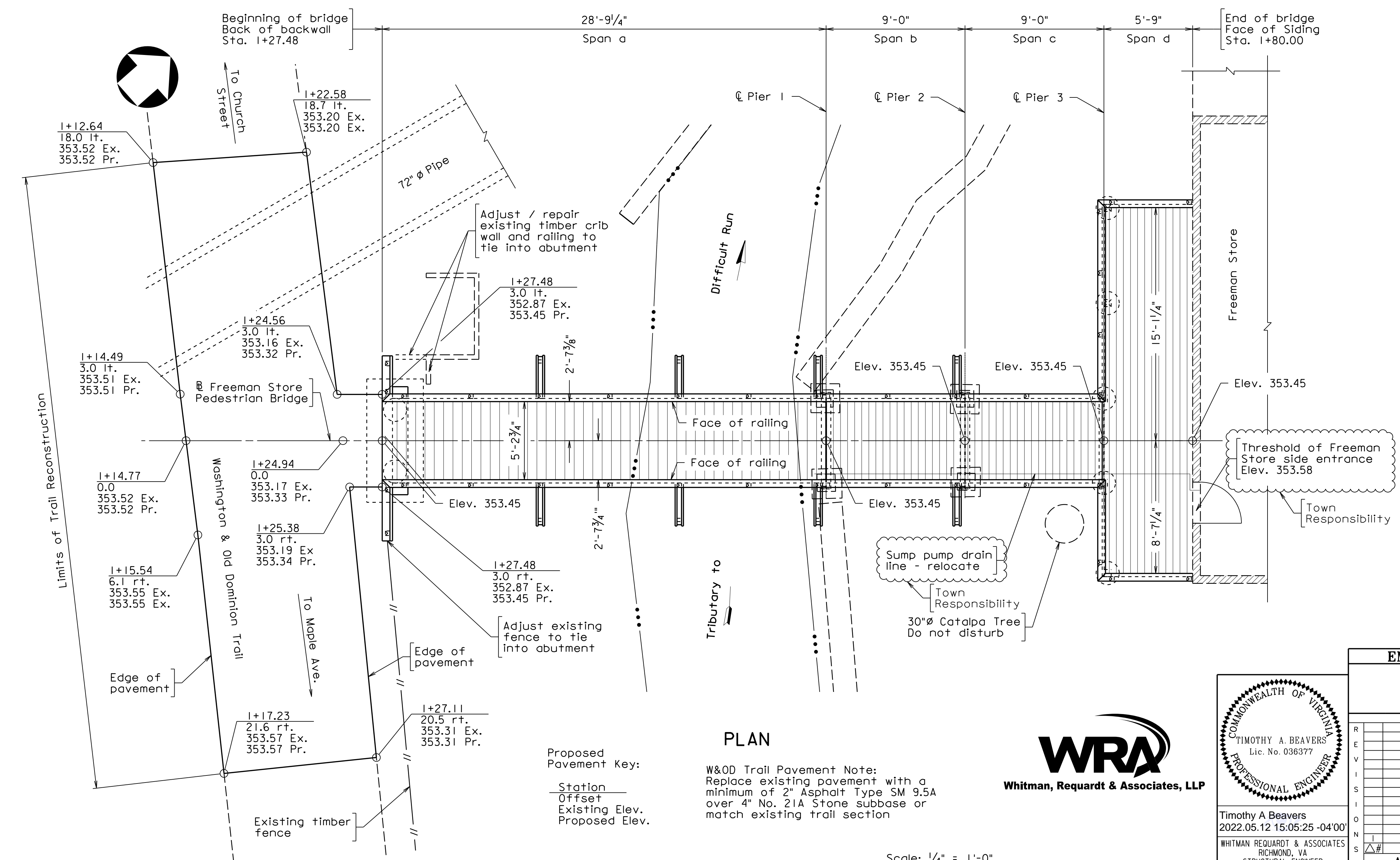
All hardware for timber connections, including nails shall be hot dipped galvanized in accordance with VDOT Specifications or stainless steel.

Footings shall bear on firm material. For bearing requirements, see the Spread Footing Data Table on sheet 6.

B.M.: Threshold of Freeman Store side entrance, Elev. 353.58



**ELEVATION ALONG FRONT RAIL**

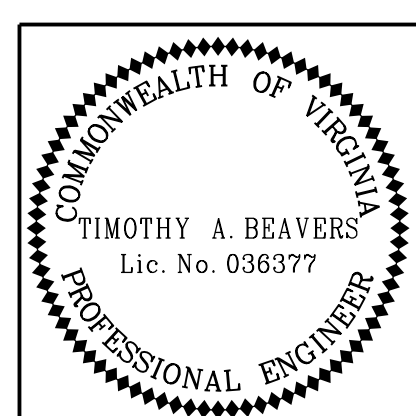


**PLAN**

Proposed Pavement Key:  
 Station — Existing Elev.  
 Offset — Proposed Elev.

W&OD Trail Pavement Note:  
 Replace existing pavement with a minimum of 2" Asphalt Type SM 9.5A over 4" No. 21A Stone subbase or match existing trail section

Scale: 1/4" = 1'-0"



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 WHITMAN REQUARDT & ASSOCIATES  
 RICHMOND, VA  
 STRUCTURAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911		MAY 2020	
TOWN OF VIENNA, VIRGINIA DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180			
DEPARTMENT OF PUBLIC WORKS 703-255-6380		FREEMAN STORE PEDESTRIAN BRIDGE PLAN AND ELEVATION AND GENERAL NOTES	
PROJECT NO: EN17-153-115			
PLAN NO.	DESIGNED: JRM	SHEET	
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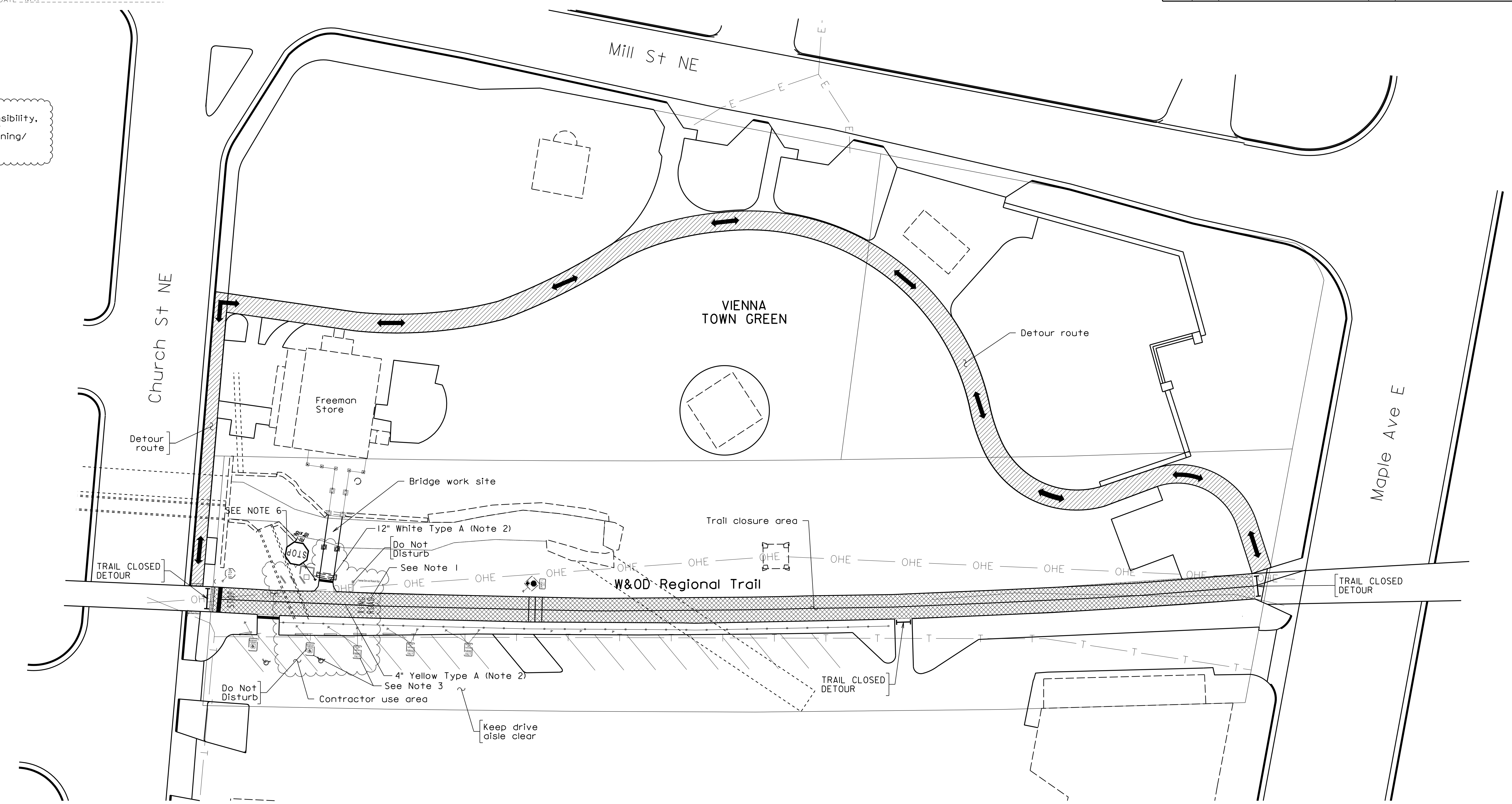
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Town Responsibility,  
 Entire Sheet  
 (MOT and Signing/  
 Marking)



Signing and Marking Notes:

- Contractor shall replace "ROAD XING" pavement message in existing location.
- Contractor shall replace the existing center stripe across entire length of trail reconstruction. Proposed 12" Stop Bar to be set 4' from edge of W&OD Trail.
- If necessary for construction, the Contractor shall remove existing parking signs and post and store for the duration of construction. Upon completion, the Contractor shall reset existing the parking signs and posts in their original location.
- Any parking space asphalt pavement and/or markings that are damaged during construction shall be replaced in kind upon completion of construction at the expense of the Contractor.
- All new pavement markings and signs shall be installed per MUTCD Part 9 "Traffic Control for Bicycle Facilities"
- Contractor shall install new Stop Sign R1-1 (18"x18"). Stop Sign post shall be installed per Fairfax County PFM Plate No. 17A-7 St'd. No. TCS-1 "Typical Detail for Standard Wood Post Stop & Yield Signs".

Trail Detour Notes:

Contractor to prepare and submit their plan for the trail closure area and detour. Plan shall include route marking, sign details, defined work areas, and appropriate public protection measures around work areas.

Detour plan to be reviewed and approved by all jurisdictions having authority including but not limited to Town of Vienna and Northern Virginia Regional Park Authority.

A minimum of 30 calendar days required for review prior to installation of trail closure and detour.

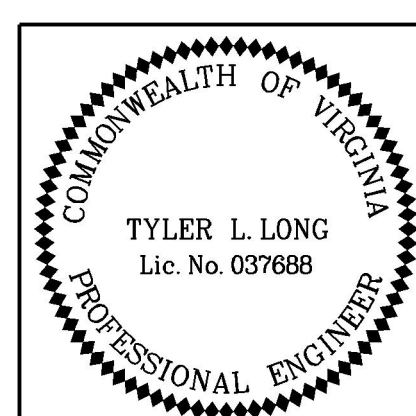
Detour route shown for pedestrian and bikes. Bikes shall be notified to dismount and walk detour.

- Signed W&OD Trail Detour Route
- Closed section of W&OD Trail

Scale: 1" = 20'-0"



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 FAIRFAX, VA  
 ROADWAY ENGINEER

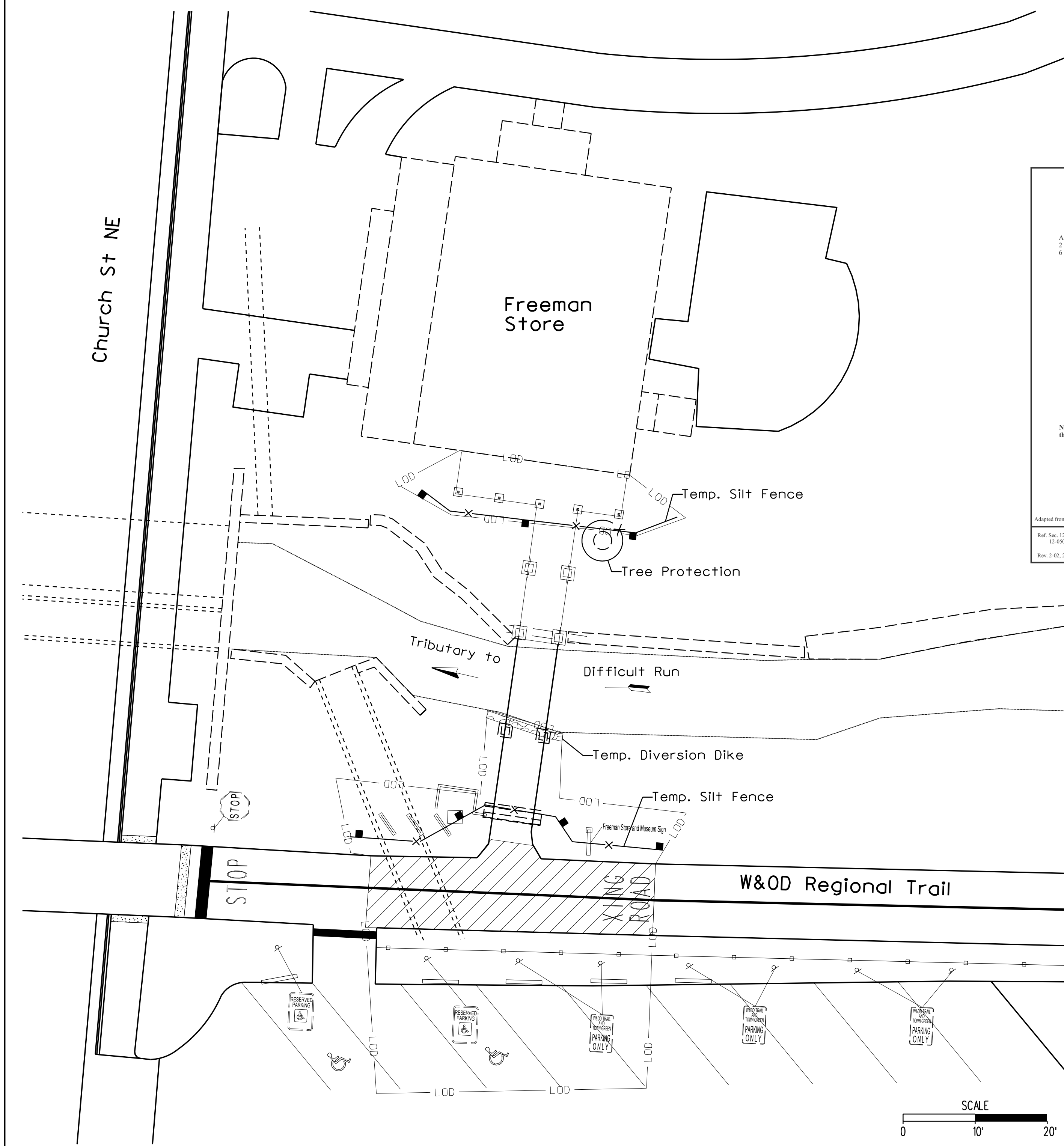
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TOWN OF VIENNA, VIRGINIA DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180		
DEPARTMENT OF PUBLIC WORKS		703-255-6380
FREEMAN STORE PEDESTRIAN BRIDGE TRAIL DETOUR AND SIGNING/MARKING PLAN		
PROJECT NO: EN17-153-115		
PLAN NO.	DESIGNED: TLL DRAFTED: TLL CHECKED: TAB	SHEET 3 of 17

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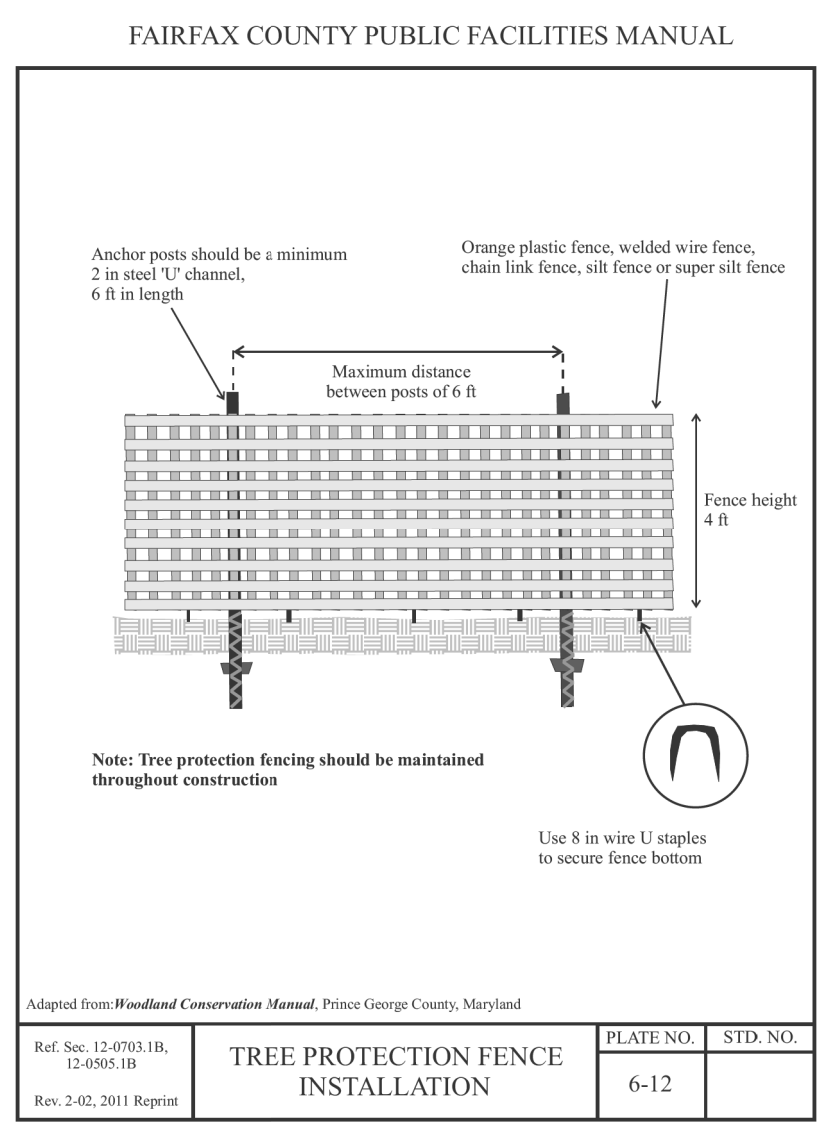


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VA.				N/A	UPC 111404, EN17-153-115



PLAN



**PRACTICE 5.2: SANDBAG/STONE DIVERSION**  
 Diverting practice for temporarily diverting stream flow around a portion of a stream's width during construction.

**DESCRIPTION**  
 This practice involves installing a barrier in a portion of the stream channel for the purpose of diverting flow around an area of the stream to provide dry conditions during construction.

**APPROPRIATE USES**

- When installation of stream practices requires diverting flow around an area of the streambank and a portion of the stream bed to maintain workable conditions.
- To enhance construction conditions to repair small, localized areas of bank failure or implement bank stabilization/protection measures.

**LIMITATIONS**

- Results in smaller area of stream access compared to other temporary in-stream construction methods.
- May fail and erode during storm events.
- For large channels, PRACTICE 5.4 Portable Dams/Barriers may be more suitable.

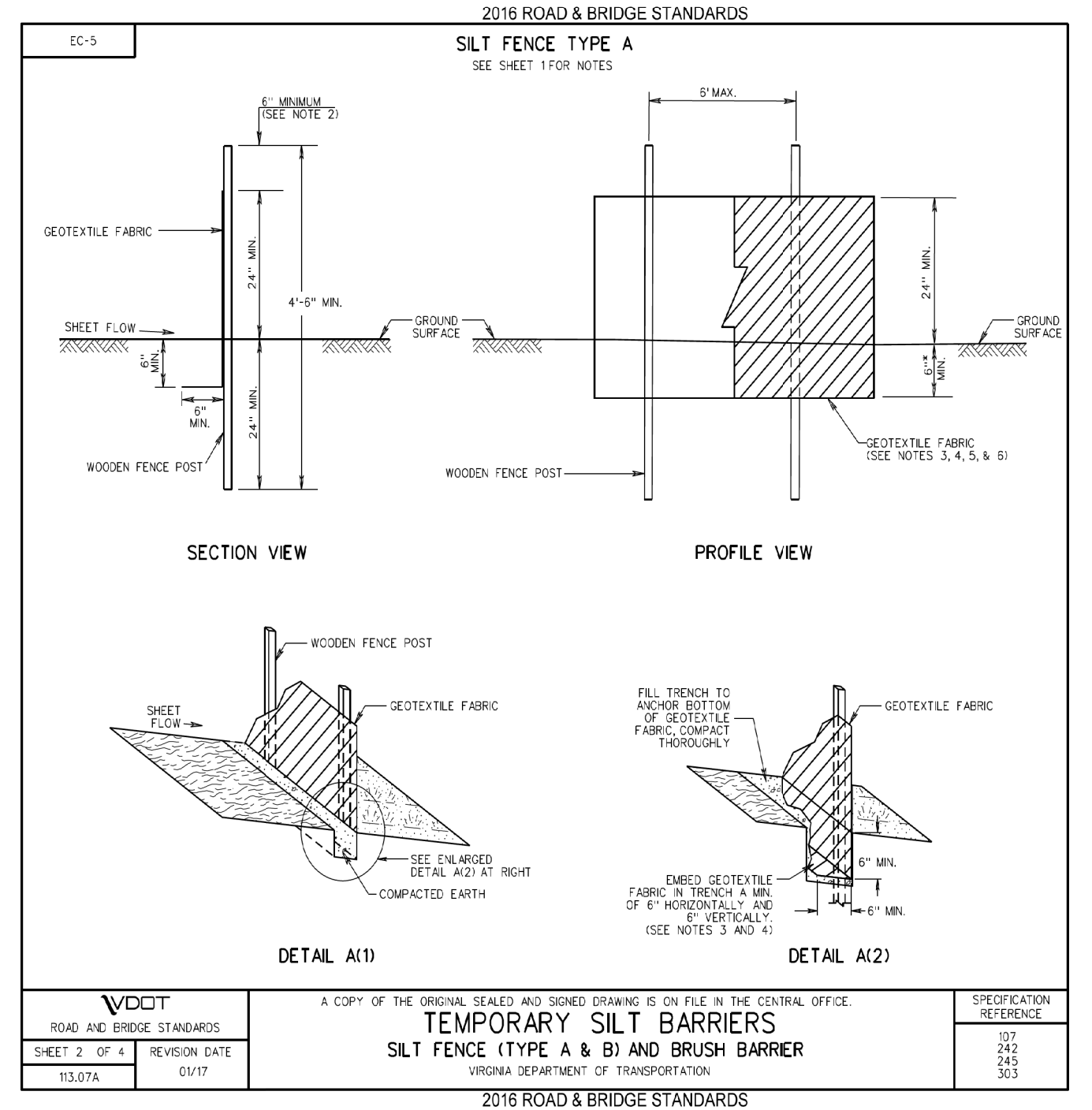
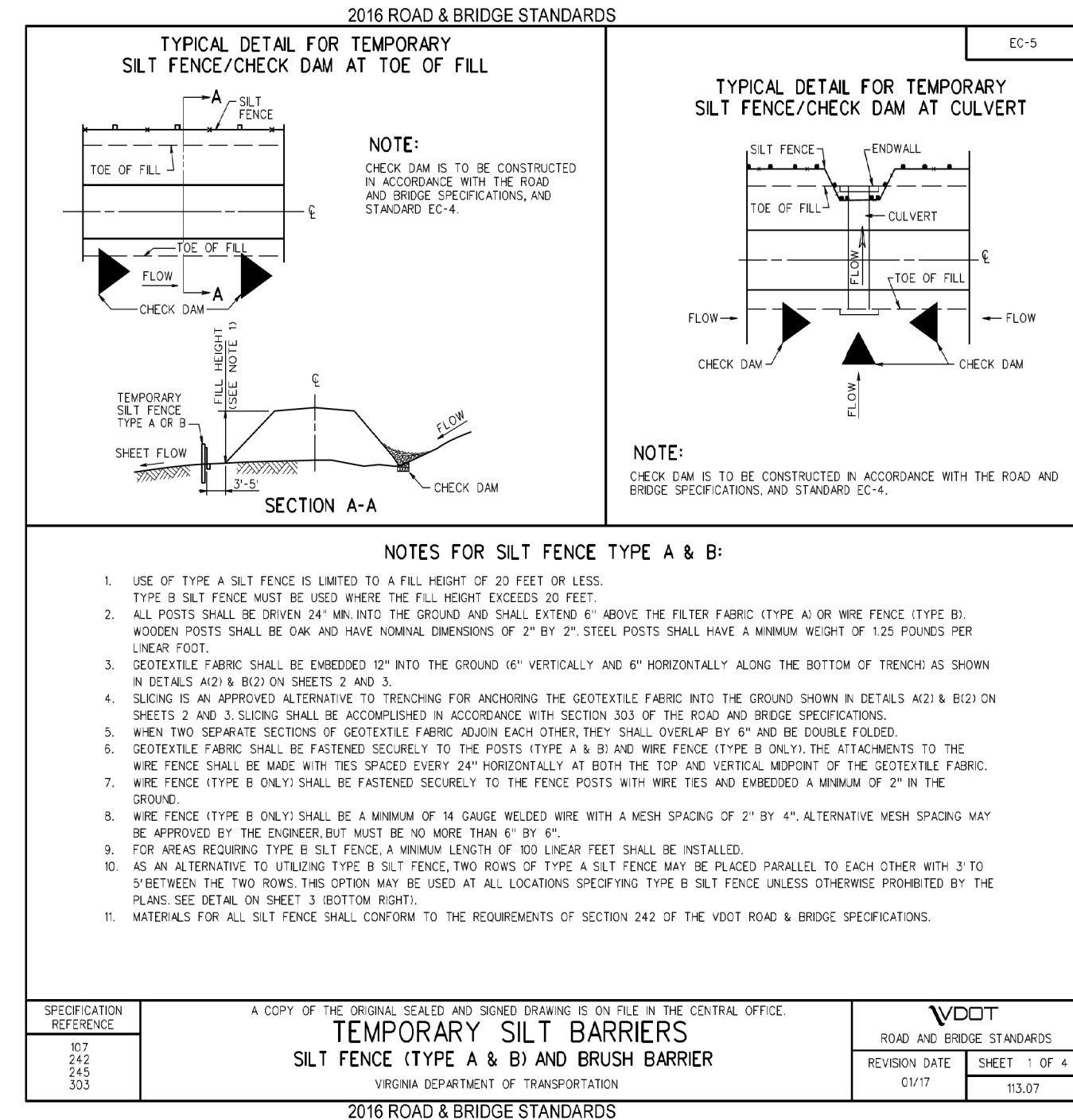
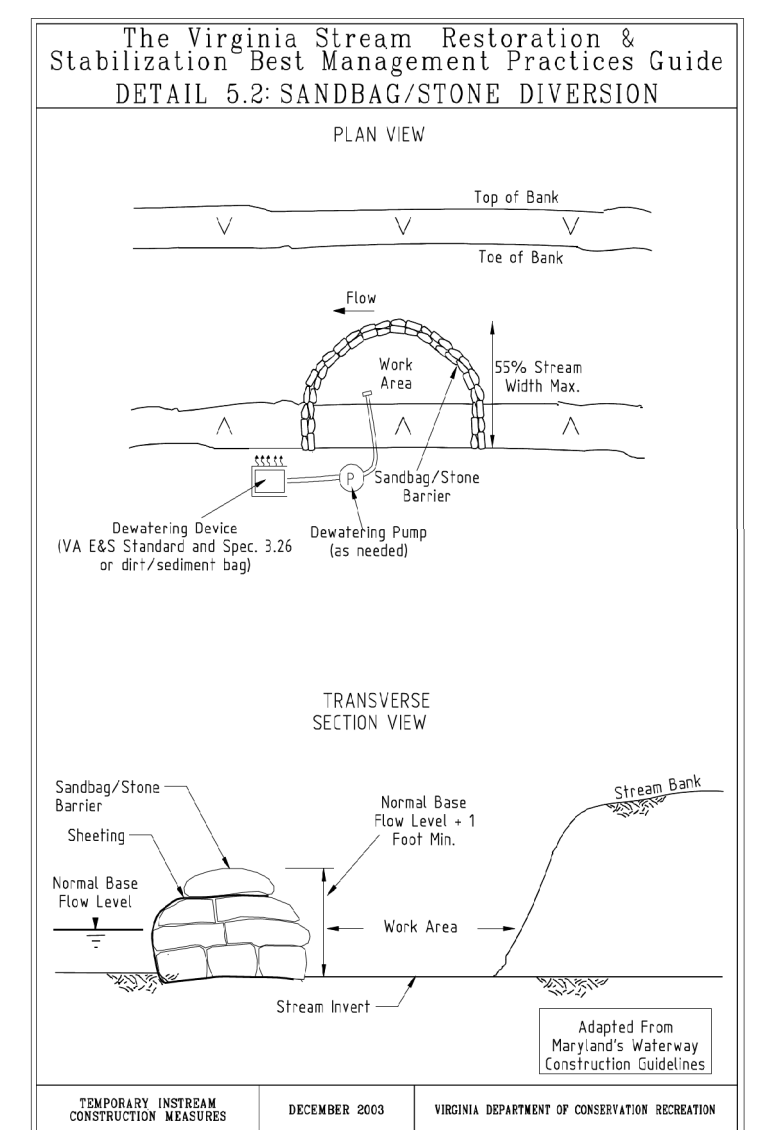
**DESIGN REQUIREMENTS AND PROCEDURES**

- Height of in-stream barriers shall be the normal base flow depth + 1 foot of freeboard.
- In-stream barrier shall not be greater than 55% of the stream bottom width.
- De-watering pump must be diverted through a de-watering structure per Standard and Specification 3.26 in the Virginia Erosion and Sediment Control Handbook.

**MATERIAL SPECIFICATIONS**

- In-stream Barrier:** Either riprap per Standard and Specification 3.19, Riprap of the Virginia Erosion and Sediment Control Handbook or sandbags. Sandbags may be lined on site or pre-lined and made of butyl or polypropylene materials which are resistant to ultra-violet radiation, tearing, and puncture and should be woven tightly enough to prevent leakage of the fill material (i.e., sand, fine gravel, etc.).
- Sheeting:** Seamless polyethylene plastic sheeting with a minimum 4-mil thickness impervious and resistant to puncture, tearing and ultraviolet degradation or equivalent.
- Pump-out Equipment:** (As needed) Electric, diesel or gasoline vented, vacuum or centrifugal primed pumps, appropriately sized rigid intake and discharge hoses with positive restrained joints. Necessary connectors and properly stored fuel.

- Construction Recommendations**
- Sandbag/stone barrier should be monitored daily for leakage and repaired as necessary.
  - Remove all large debris located within the foundation to ensure proper sealing and reduce leakage through the barrier.
  - In-stream barrier should extend upstream and downstream of the area to be disturbed so its placement does not interfere with in-stream construction.
  - Sandy material should be used to fill sandbags. If permitted, material from the channel may be used to fill the bags.
  - The length of stream diverted should be determined by the amount of work that can be completed in one workday.
- Installation Guidelines**
- The diversion structure should be installed from upstream to downstream.
  - Use de-watering pump and coffering device to remove water silt between the in-stream barriers after installation and as needed during construction.
  - Complete in-stream construction activities and remove in-stream barriers.
  - Restore/repair impacted stream areas.



**EROSION & SEDIMENT CONTROL NOTES:**

All erosion and sediment control items are to be in accordance with the Virginia Erosion and Sediment Control Handbook and the VDOT Road and Bridge Standards.

Install temporary silt fence along abutment A and along pier 3.

Install a sandbag/stone diversion to protect the stream during the removal of the existing foundation (See Sheet 5) along the channel banks. See this sheet for additional details. Stabilize the channel bank once the foundation is removed.

Install tree protection fencing at tree shown on plan. Care shall be taken to minimize disturbance to the root mat outside of the tree protection fencing.

Debris in the channel is not to be removed by any machinery.

The Contractor shall take great care to not disturb the existing wood post and cable fencing during construction. If the fencing requires removal, the Contractor shall remove and store materials during construction activities. Upon completion of construction, the fence shall be reset in the existing location. Cost for removal, storing and resetting shall be included in other items.

Permanent Seeding shall be applied to disturbed areas upon completion of construction in accordance with the VDOT Road and Bridge Specifications Section 603 and as directed by the Town.

▨ DENOTES AREA OF TRAIL RECONSTRUCTION



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	<b>TOWN OF VIENNA, VIRGINIA</b> DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180																			
	<b>DEPARTMENT OF PUBLIC WORKS</b> 703-255-6380																			
	<b>FREEMAN STORE PEDESTRIAN BRIDGE</b> EROSION AND SEDIMENT CONTROL PLAN AND DETAILS <b>PROJECT NO: EN17-153-115</b>																			
<table border="1"> <tr> <th>PLAN NO.</th> <th>DESIGNED: KME</th> <th>SHEET</th> </tr> <tr> <td></td> <td>DRAFTED: TLL</td> <td>4 of 17</td> </tr> <tr> <td></td> <td>CHECKED: TAB</td> <td></td> </tr> </table>	PLAN NO.	DESIGNED: KME	SHEET		DRAFTED: TLL	4 of 17		CHECKED: TAB		<table border="1"> <tr> <th>DESCRIPTION</th> <th>BY</th> <th>APPROVED</th> <th>DATE</th> </tr> <tr> <td colspan="4" style="text-align: center;">APPROVED BY THE DEPARTMENT OF PUBLIC WORKS</td> </tr> </table>			DESCRIPTION	BY	APPROVED	DATE	APPROVED BY THE DEPARTMENT OF PUBLIC WORKS			
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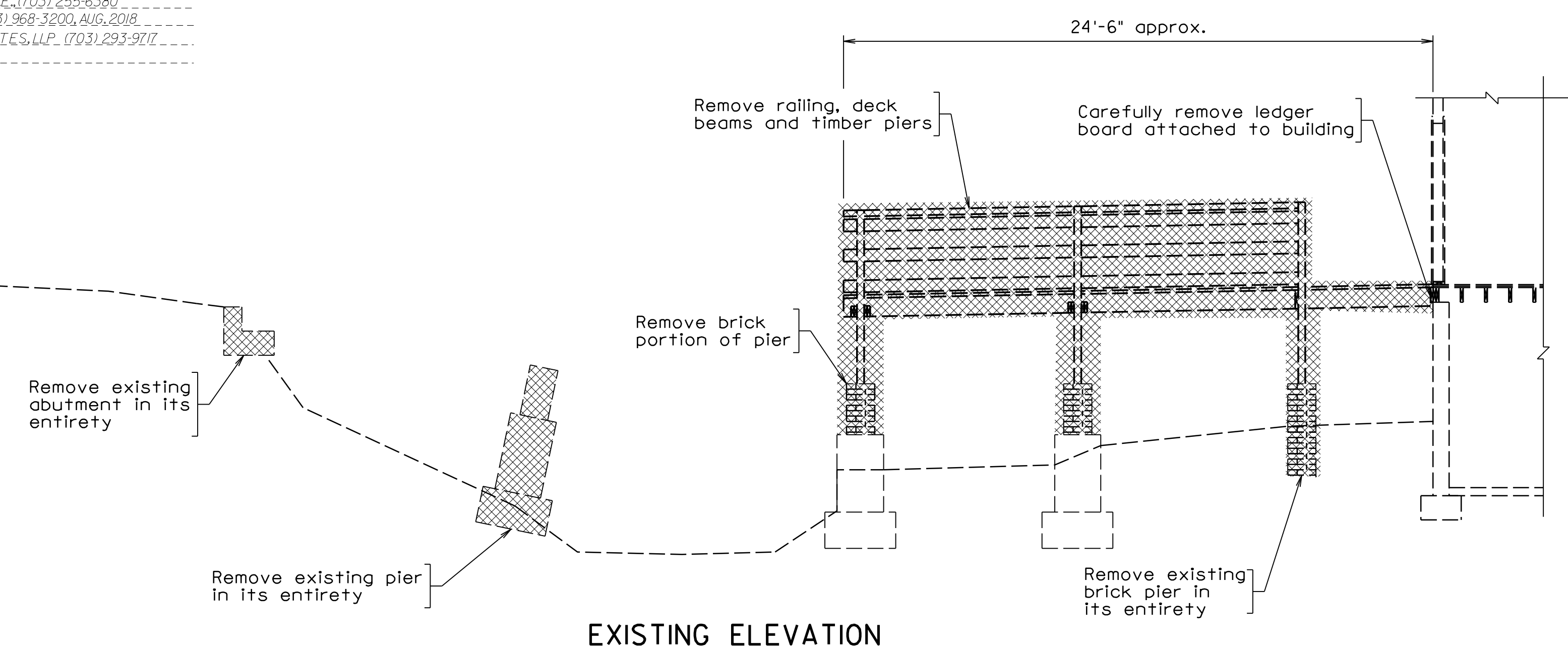


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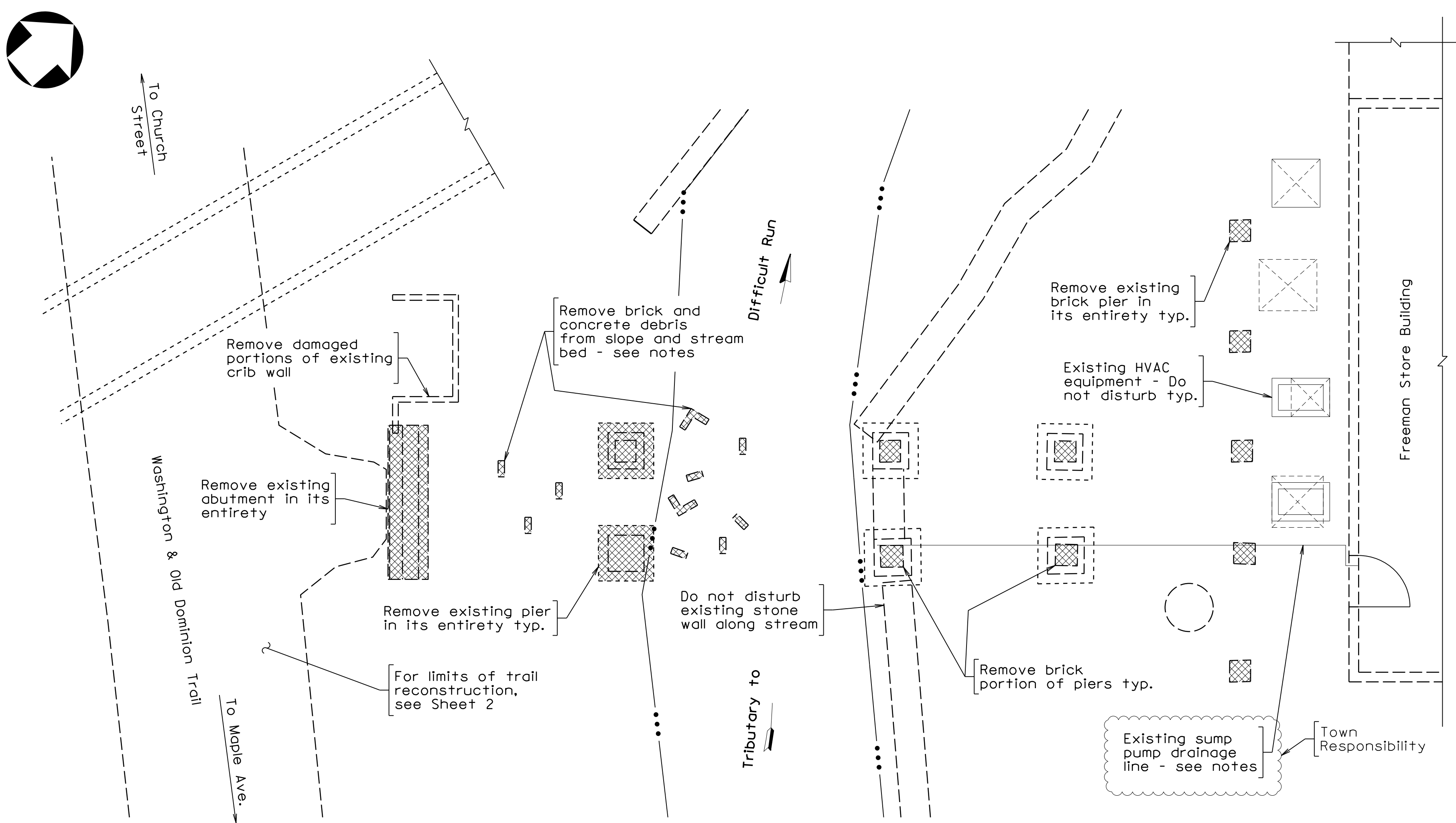
STATE	FEDERAL AID		STATE	
	ROUTE	PROJECT	ROUTE	PROJECT
VA.			N/A	UPC 111404, EN17-153-115

Notes:  
 Contractor shall exercise extreme care in performing its work adjacent to and on the grounds of the historic Freeman Store.  
 For removal of items in the stream, contractor shall be limited to hand methods and limit disturbance of the stream bed. Only manmade materials of brick, concrete, rebar and other trash may be removed.  
 HVAC equipment to remain in operation throughout the duration of demolition and reconstruction. Contractor shall be aware of this constraint and not damage the equipment or utility lines servicing it.  
 The existing sump pump discharge line shall remain in operation throughout the duration of demolition and reconstruction. Contractor shall install a bypass line that drains safely to the stream before demolition of the existing timber superstructure.  
 Carefully remove the existing ledger board that attaches to the Freeman Store building. Inspect the siding boards and door brick molding exposed by removing the deck for any damage or rot and replace in kind. See sheet 15 for details of the replacement ledger board.  
 Top surface of existing concrete piers that are to remain shall be cleaned, leveled and prepared to accept proposed post base anchors.

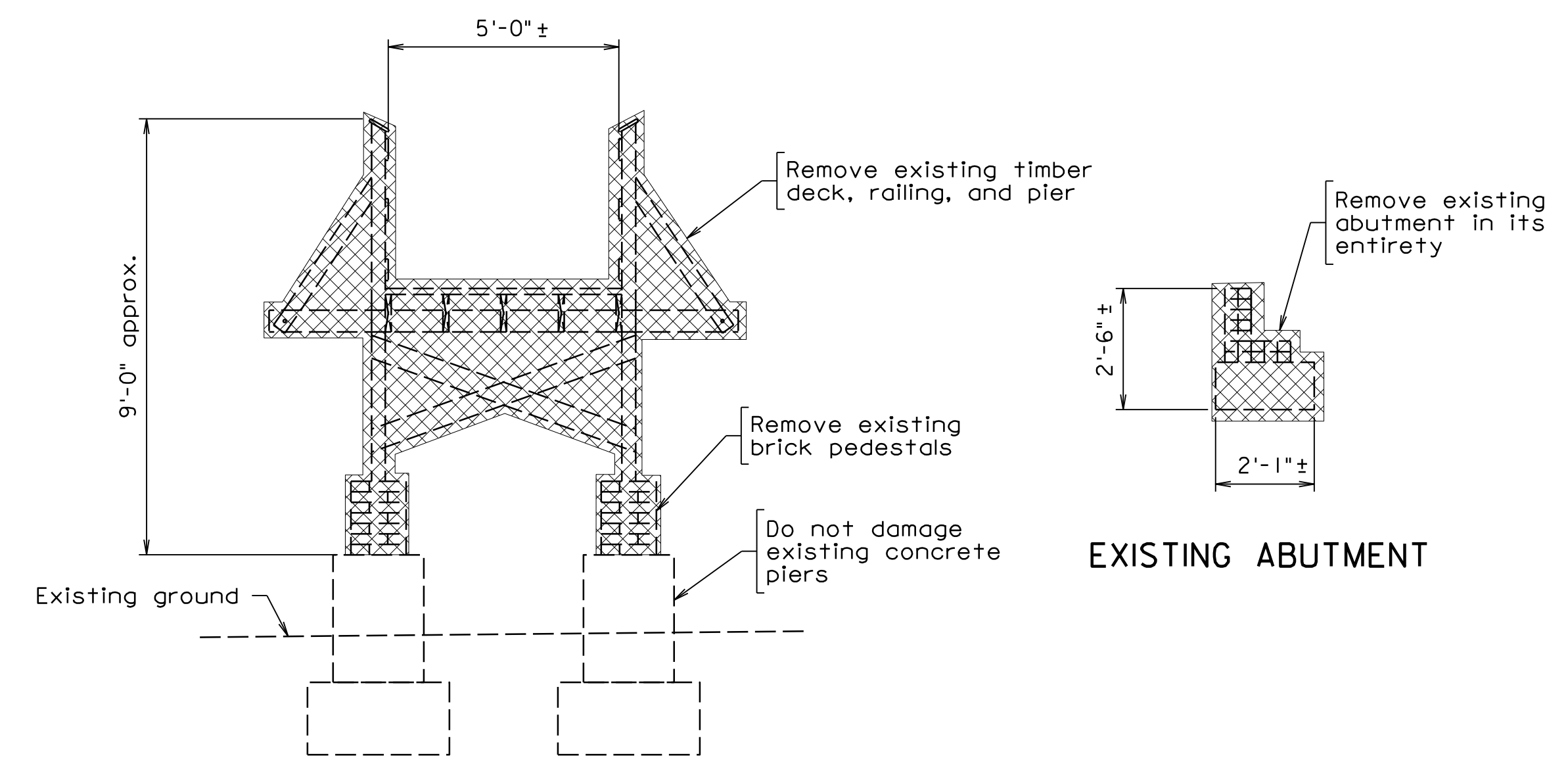
 Denotes removal



EXISTING ELEVATION



DEMOLITION PLAN SHOWING EXISTING SUBSTRUCTURE



EXISTING PIER

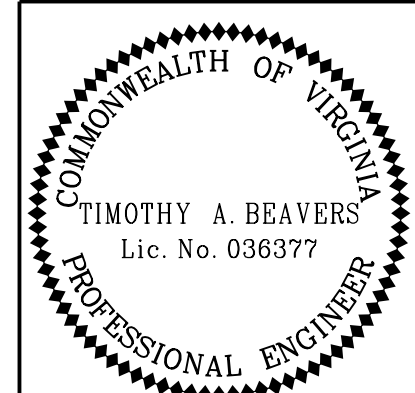
SECTION AT EXISTING PIER AND ABUTMENT

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



Whitman, Requardt & Associates, LLP

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PROJECT NO: EN17-153-115			
PLAN NO.	DESIGNED: JRM	SHEET	
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 WHITMAN REQUARDT & ASSOCIATES  
 RICHMOND, VA  
 STRUCTURAL ENGINEER

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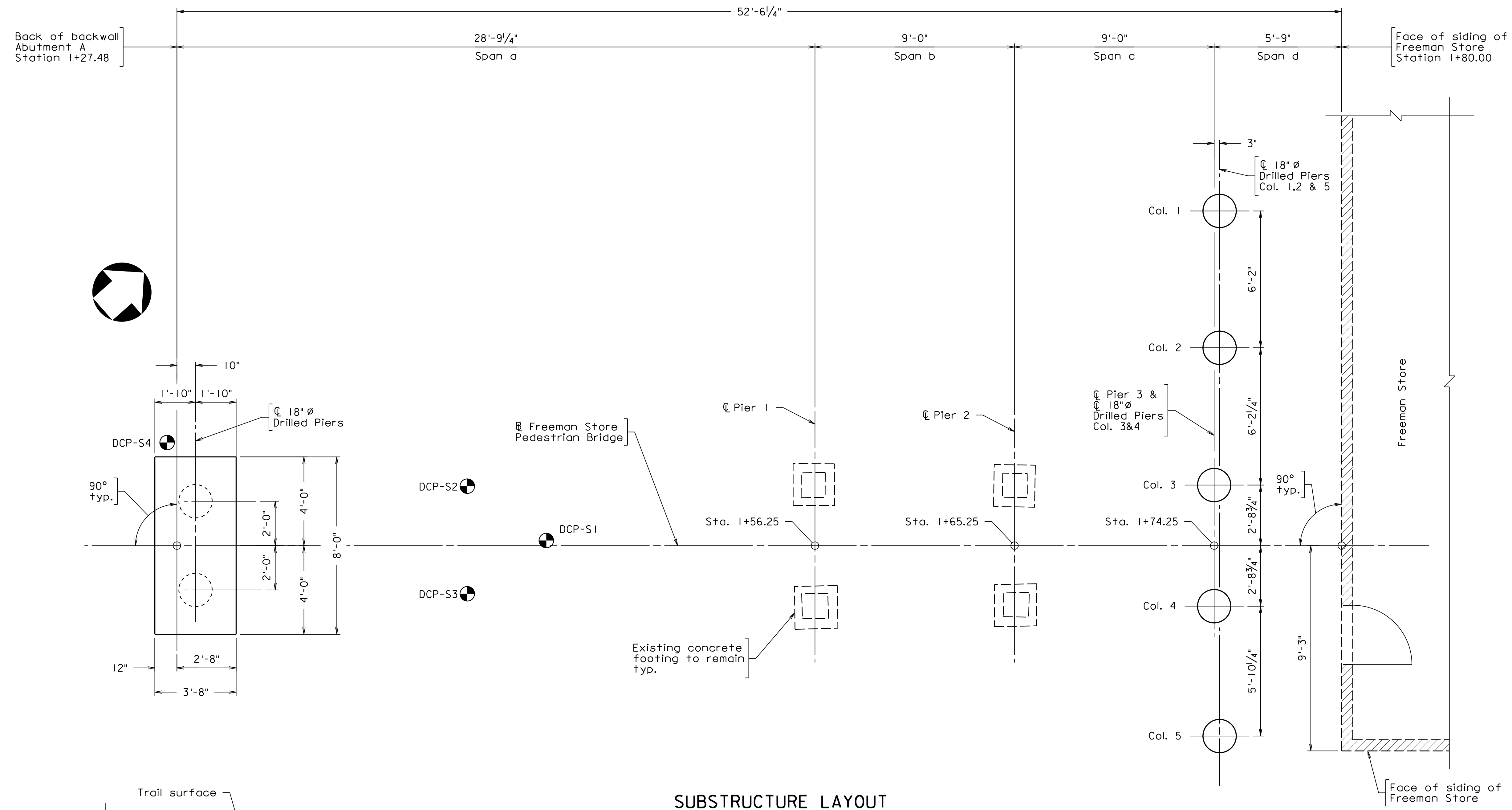
Scale: 1/4" = 1'-0" Unless otherwise noted.

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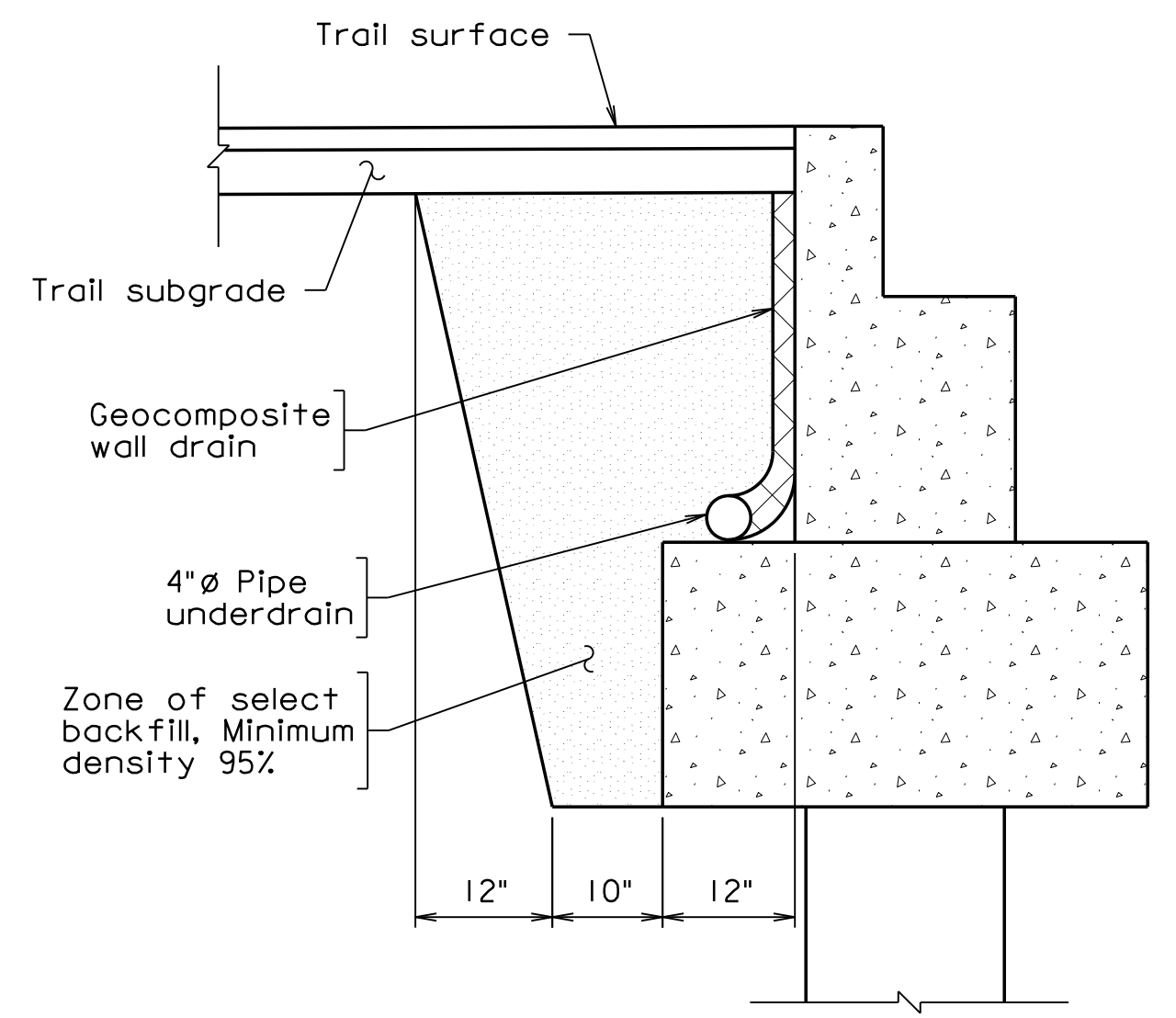


Notes:  
 This substructure layout is to be used only for the purpose of locating the existing and proposed substructure locations.  
 For abutment details, see sheet 7.  
 For Pier 3 foundation details, see sheet 10.

Legend:  
 ⊙ Indicates approx. location of Dynamic Cone Penetration (DCP) probe.

Horizontal and Vertical Control:  
 Freeman Store Pedestrian Bridge Definition:  
 Point BEGIN: N 7014311.5070 E 11834286.5483  
 Station 1+00  
 Point END: N 7014386.5120 E 11834352.6865  
 Station 2+00  
 Coarse from BEGIN to END  
 N 41°-24'-19.08" E Dist. 100.00  
 Point on Tangent Station 1+74.25  
 N 7014367.1982 E 11834335.6559  
 Elevations shown are referenced to the North American Vertical Datum (NAVD) of 1988. Benchmark defined on sheet 2.  
 Horizontal bearings and coordinates shown are referenced to the Virginia State Grid North Zone NAD 83 - US Survey Foot.

**SUBSTRUCTURE LAYOUT**

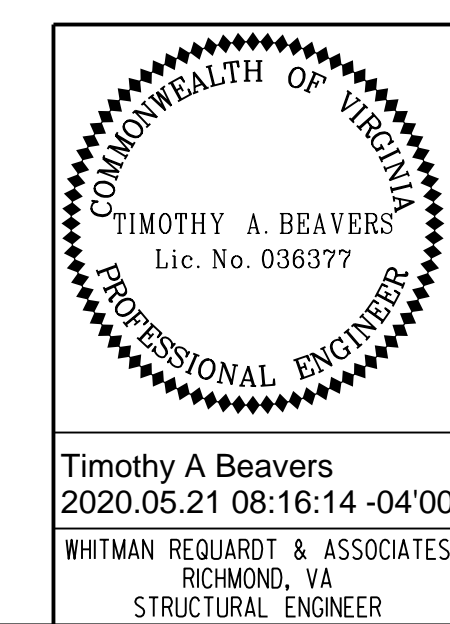


**SECTION THROUGH ABUTMENT BACKFILL AND DRAINAGE DETAILS**  
 Scale: 3/4" = 1'-0"

Substructure Unit	SERVICE		STRENGTH
	Nominal Bearing Resistance (tsf)	Tolerable Settlement (inches)	Factored Bearing Resistance (tsf)
Abutment A	1.5	0.5	1.5
Pier 1	2.0	0.5	2.0
Pier 2	2.0	0.5	2.0
Pier 3	2.0	0.5	2.0

The Service Limit State controls the footing design.

Scale: 3/8" = 1'-0" unless otherwise noted



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PROJECT NO: EN17-153-115		
PLAN NO.	DESIGNED: JRM DRAFTED: CMD CHECKED: TAB	SHEET 6 of 17

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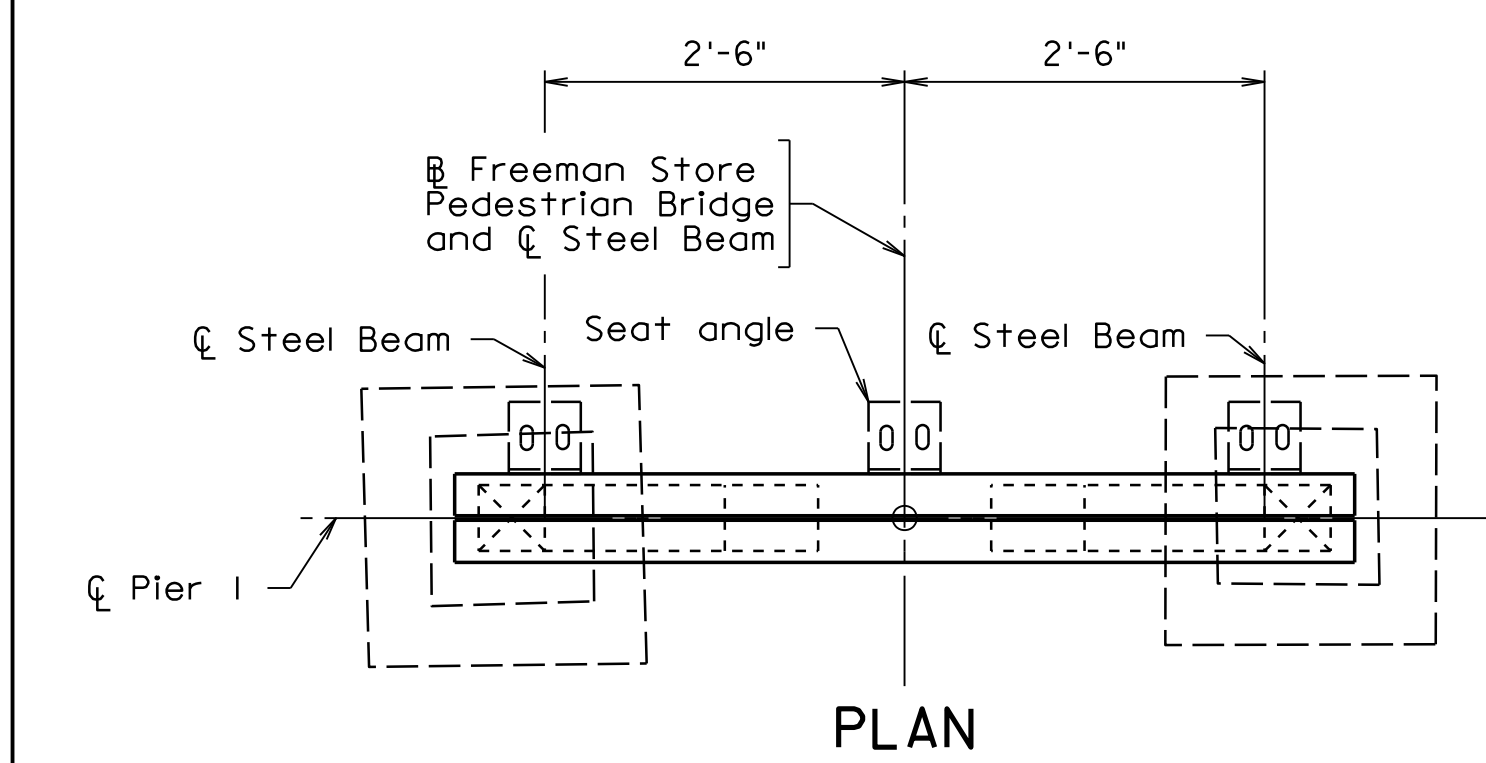




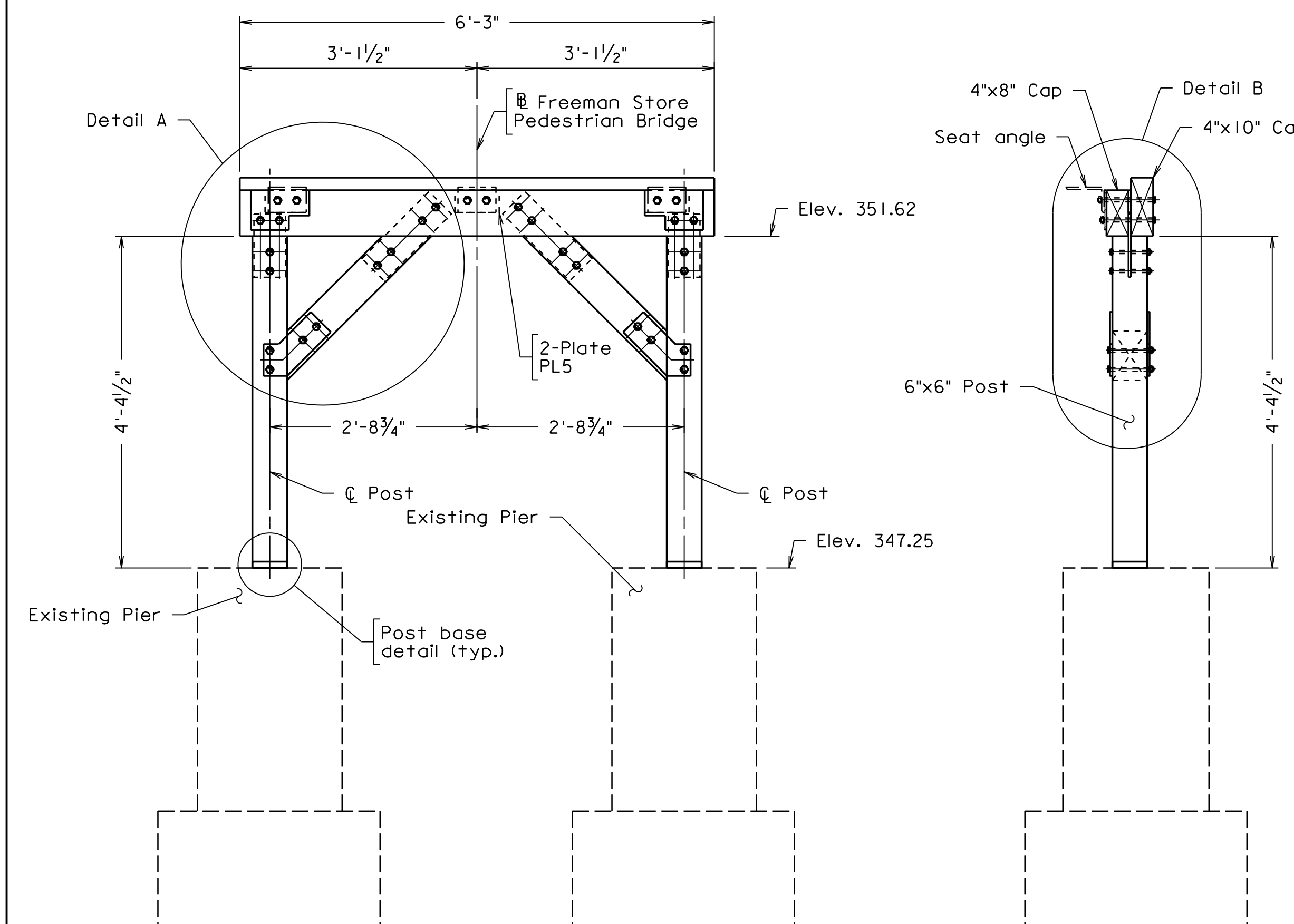


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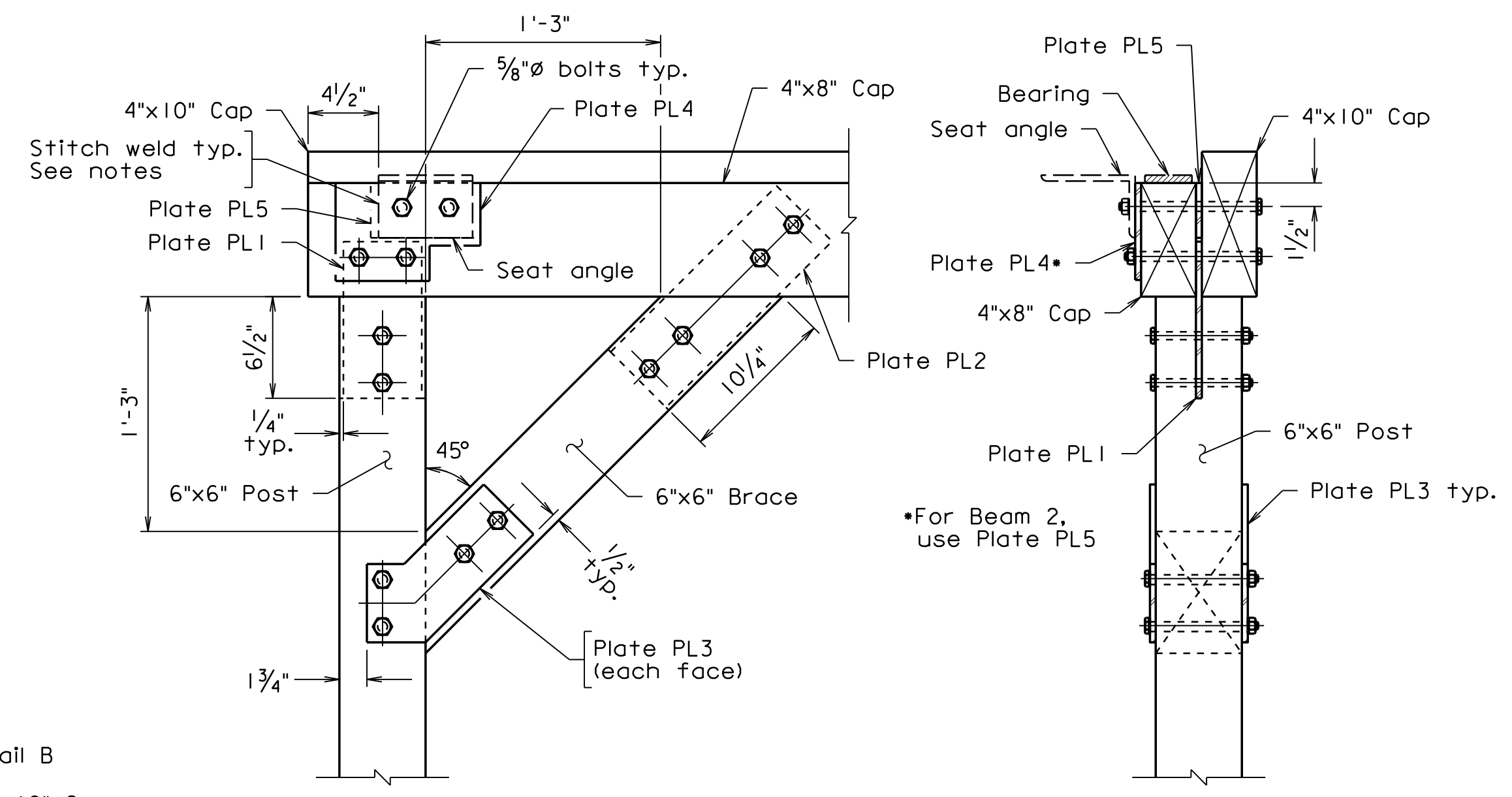


PLAN



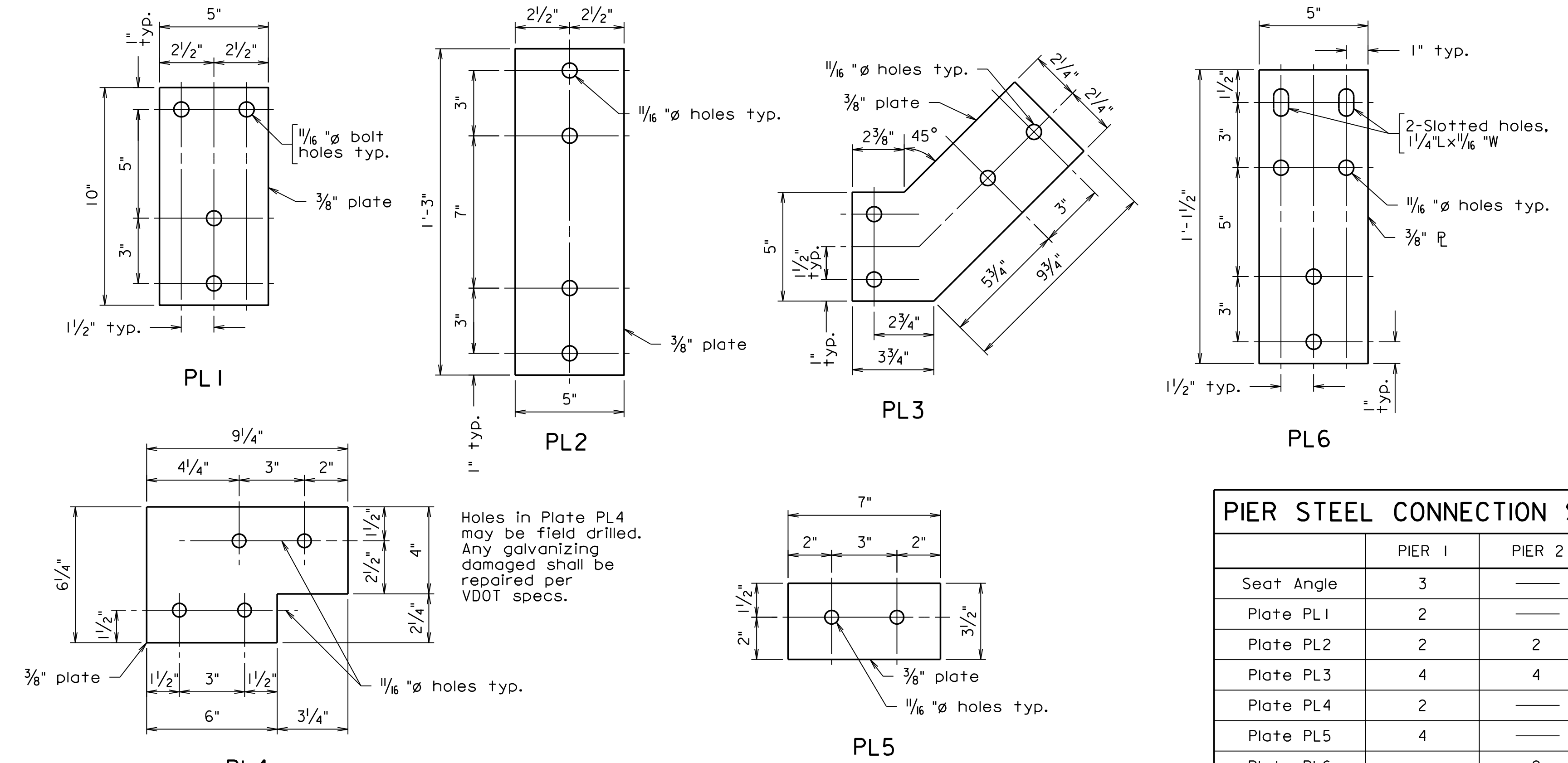
ELEVATION

SECTION



DETAIL A  
Scale: 1/2" = 1'-0"

DETAIL B  
Scale: 1/2" = 1'-0"



PL1

PL2

PL3

PL6

PL4

PL5

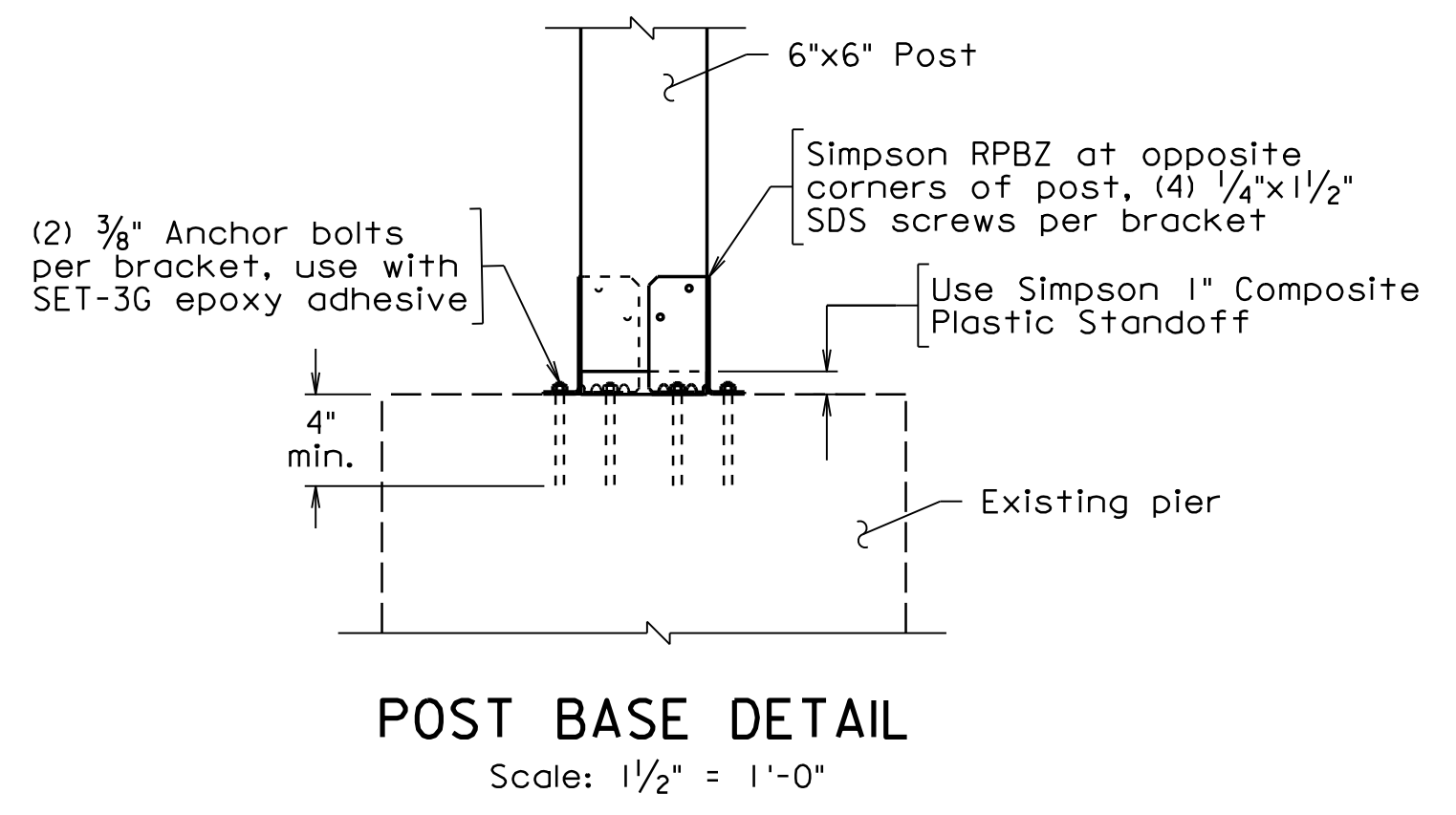
Holes in Plate PL4 may be field drilled. Any galvanizing damaged shall be repaired per VDOT specs.

PLATE DETAILS  
Scale: 3" = 1'-0"

Notes:  
 All fabricated plate connectors shall be ASTM A709 Grade 36 and shall be hot dipped galvanized.  
 For details of the bearing and the seat angle, see Sheet 11.  
 Once the seat angle is positioned properly, angle shall be stitch welded to Plate PL4.  
 Post base connector shall be either as specified or an approved equivalent product with equal or greater capacities.  
 For hidden plate connectors cut appropriate slot in wood member to accommodate thickness of plate.  
 Connectors shown are those required for strength and aesthetics. No substitutions unless expressly permitted in writing by the Engineer.

PIER STEEL CONNECTION SCHEDULE

	PIER 1	PIER 2	PIER 3
Seat Angle	3	—	—
Plate PL1	2	—	—
Plate PL2	2	2	2
Plate PL3	4	4	4
Plate PL4	2	—	—
Plate PL5	4	—	—
Plate PL6	—	2	2
Post Base	2	2	5

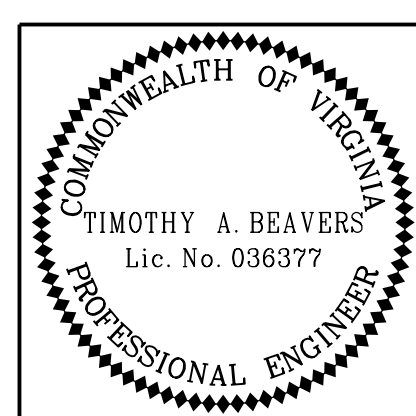


POST BASE DETAIL  
Scale: 1/2" = 1'-0"

Scale: 3/4" = 1'-0" Unless otherwise noted.



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DEPARTMENT OF PUBLIC WORKS 703-255-6380		FREEMAN STORE PEDESTRIAN BRIDGE PIER 1 DETAILS	
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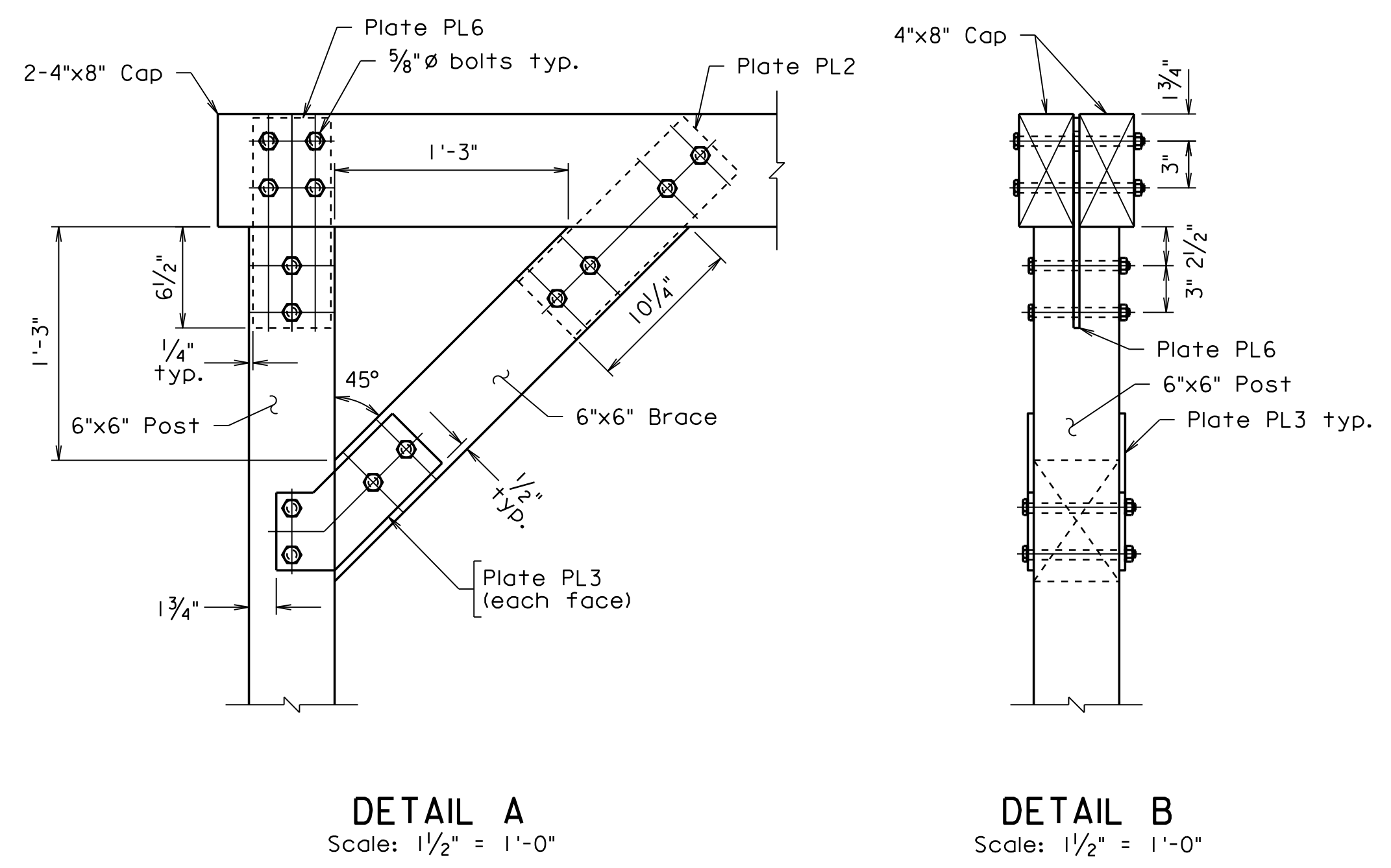
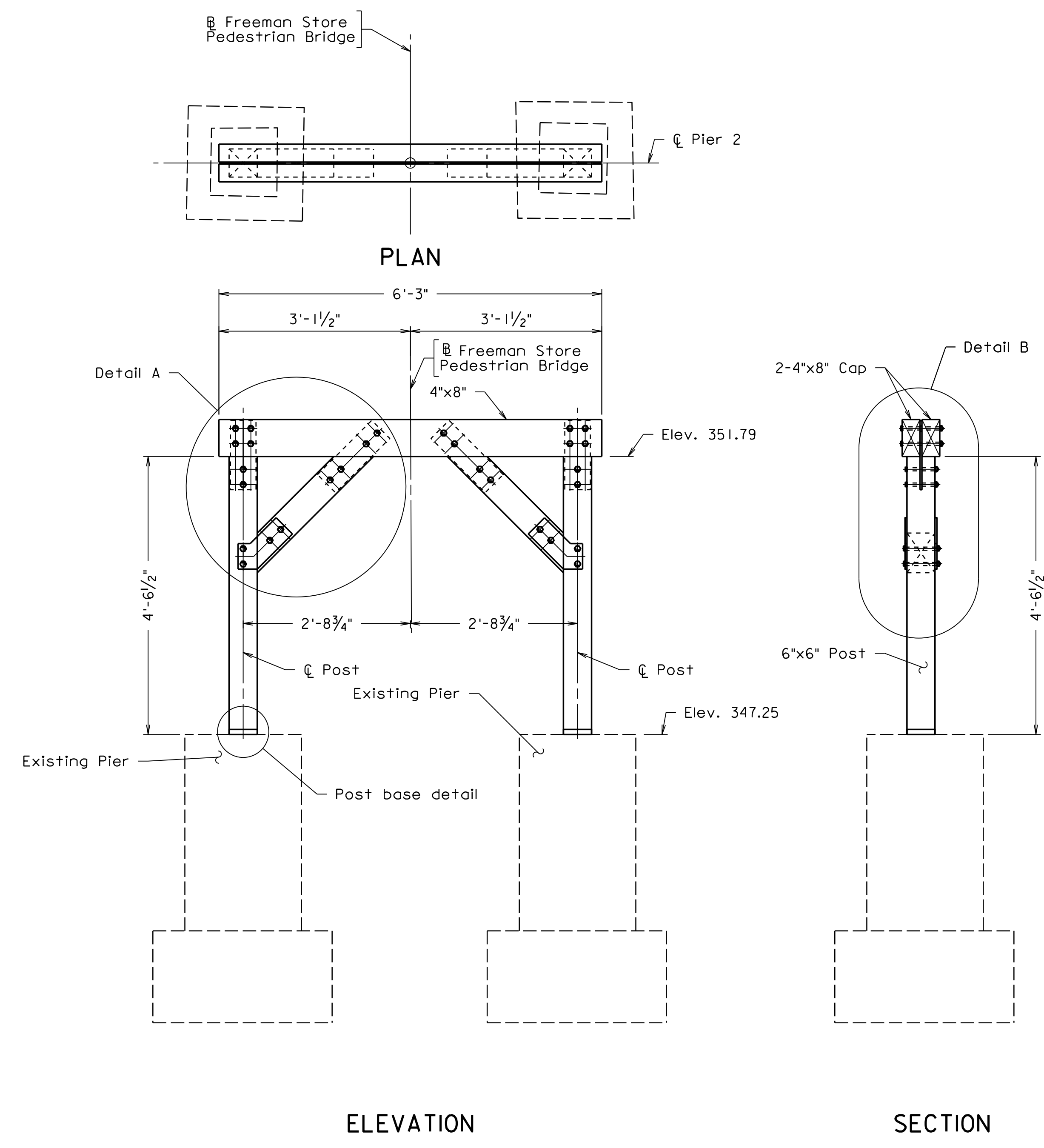
UPC111404\_008.dgn



PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

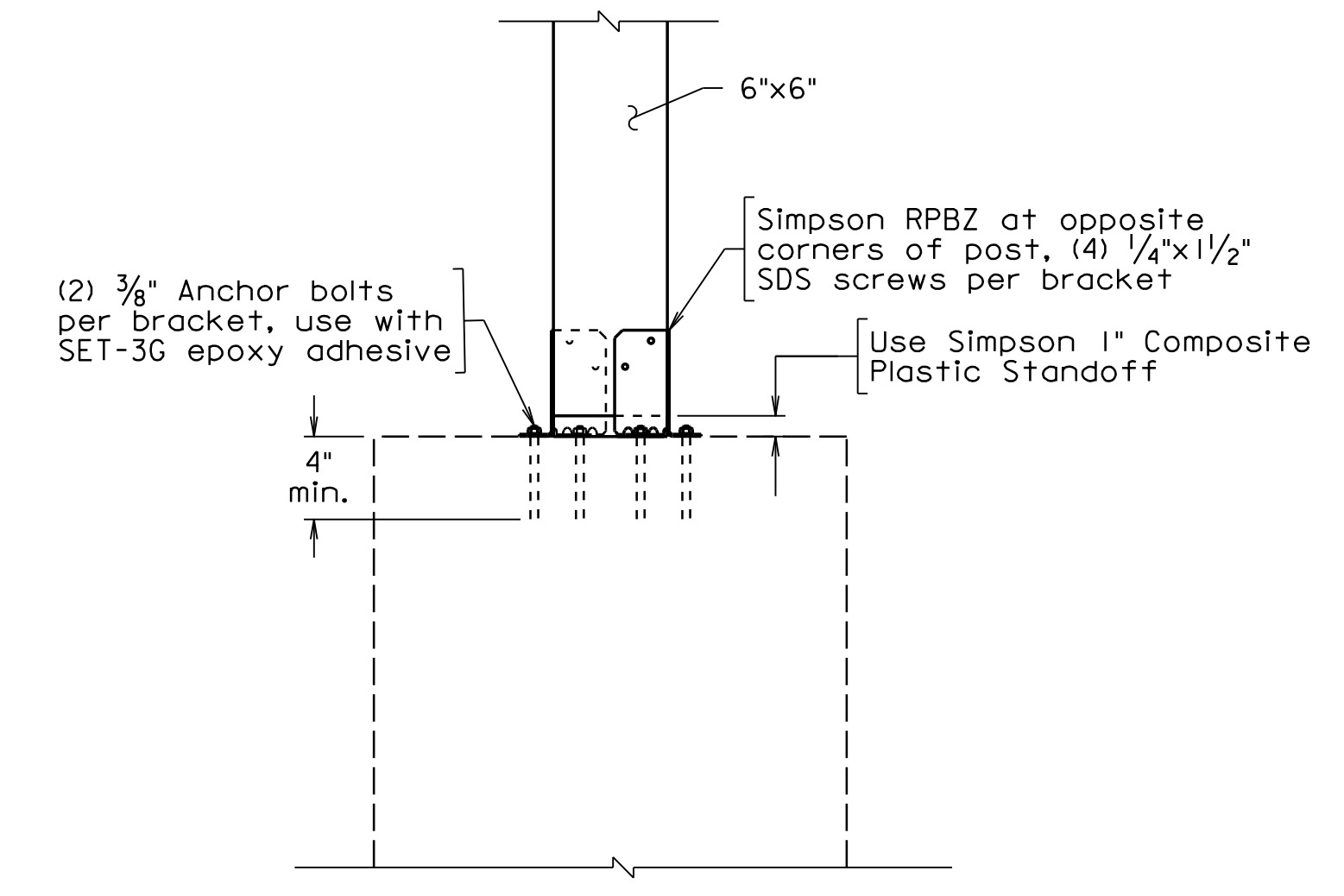
STATE	FEDERAL AID		STATE	
VA.	ROUTE	PROJECT	ROUTE	PROJECT
			N/A	UPC 111404, EN17-153-115

Notes:  
 See sheet 8 for pier notes.  
 For plate connection details, see sheet 8.



DETAIL A  
 Scale: 1/2" = 1'-0"

DETAIL B  
 Scale: 1/2" = 1'-0"

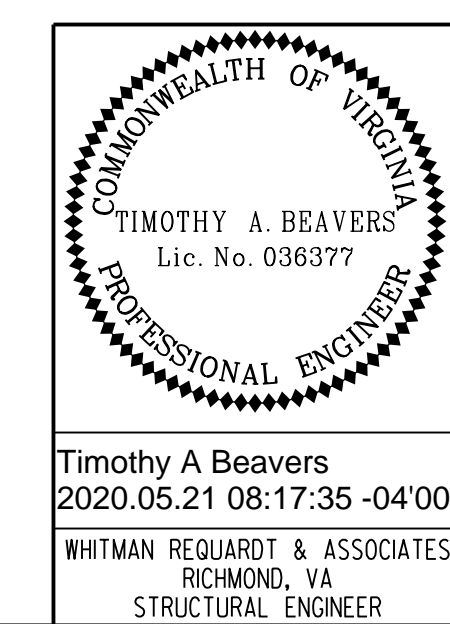


POST BASE DETAIL  
 Scale: 1/2" = 1'-0"

Scale: 3/4" = 1'-0" Unless otherwise noted.



EMERGENCY POLICE - FIRE - RESCUE 911 MAY 2020  
 TOWN OF VIENNA, VIRGINIA  
 DEPARTMENT OF PUBLIC WORKS  
 127 CENTER STREET S. VIENNA, VIRGINIA 22180



REVISIONS				
NO.	DESCRIPTION	BY	APPROVED	DATE
1				
2				
3				
4				
5				

DEPARTMENT OF PUBLIC WORKS 703-255-6380	
FREEMAN STORE PEDESTRIAN BRIDGE PIER 2 DETAILS	
PROJECT NO: EN17-153-115	
PLAN NO.	DESIGNED: CMD DRAFTED: CMD CHECKED: TAB
	SHEET 9 of 17

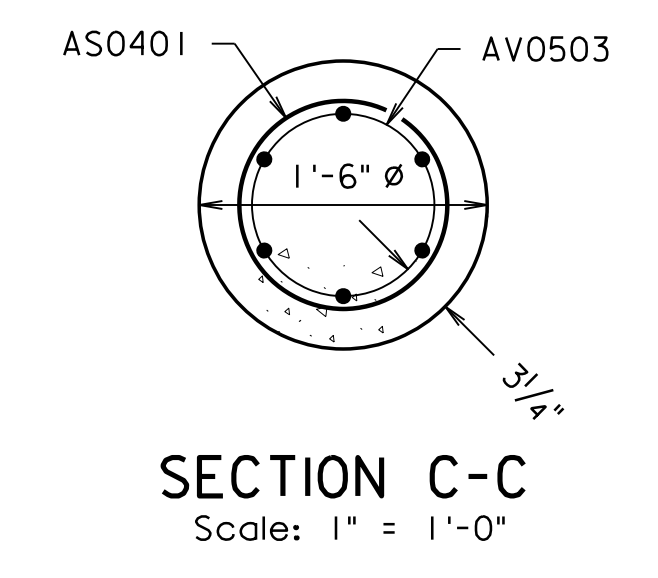
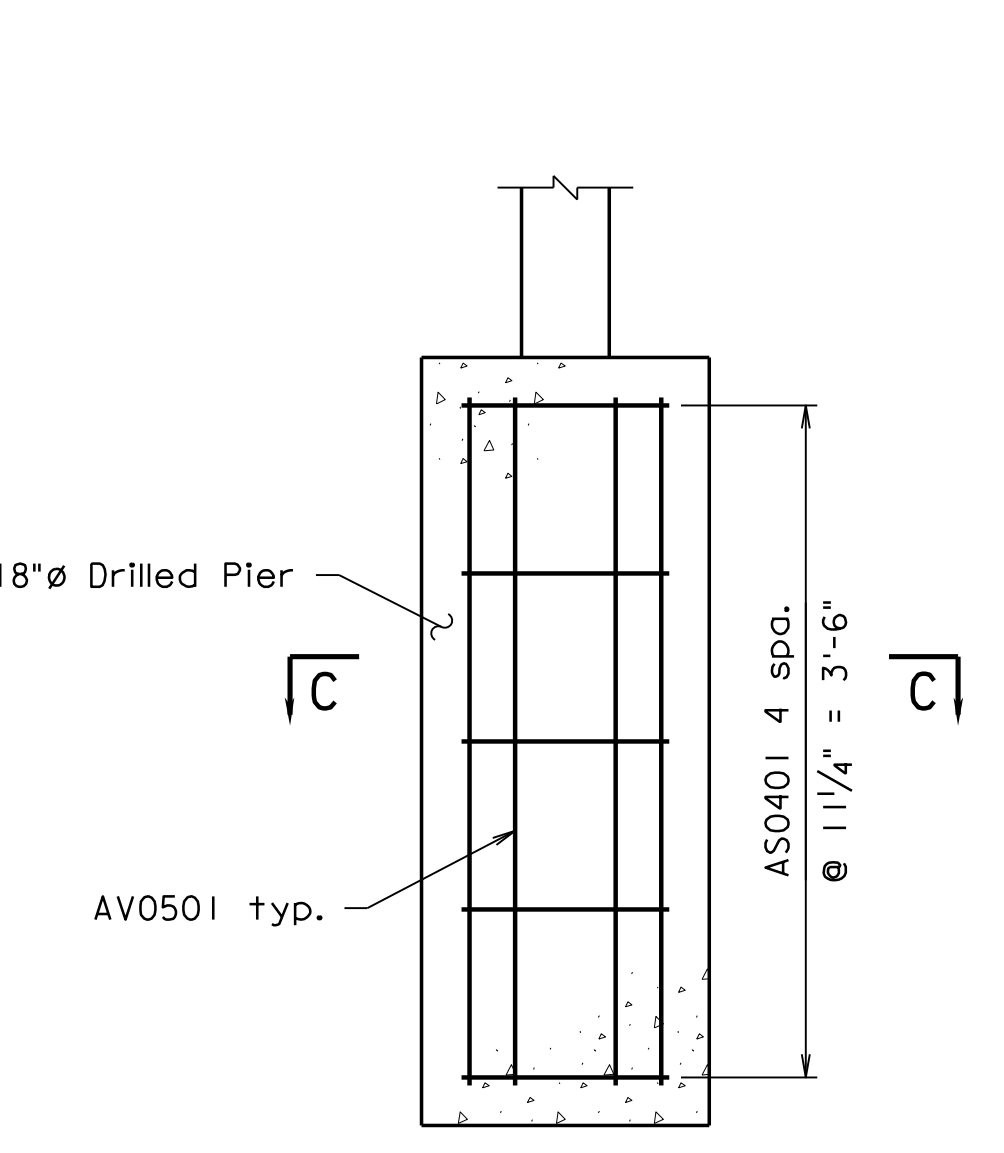
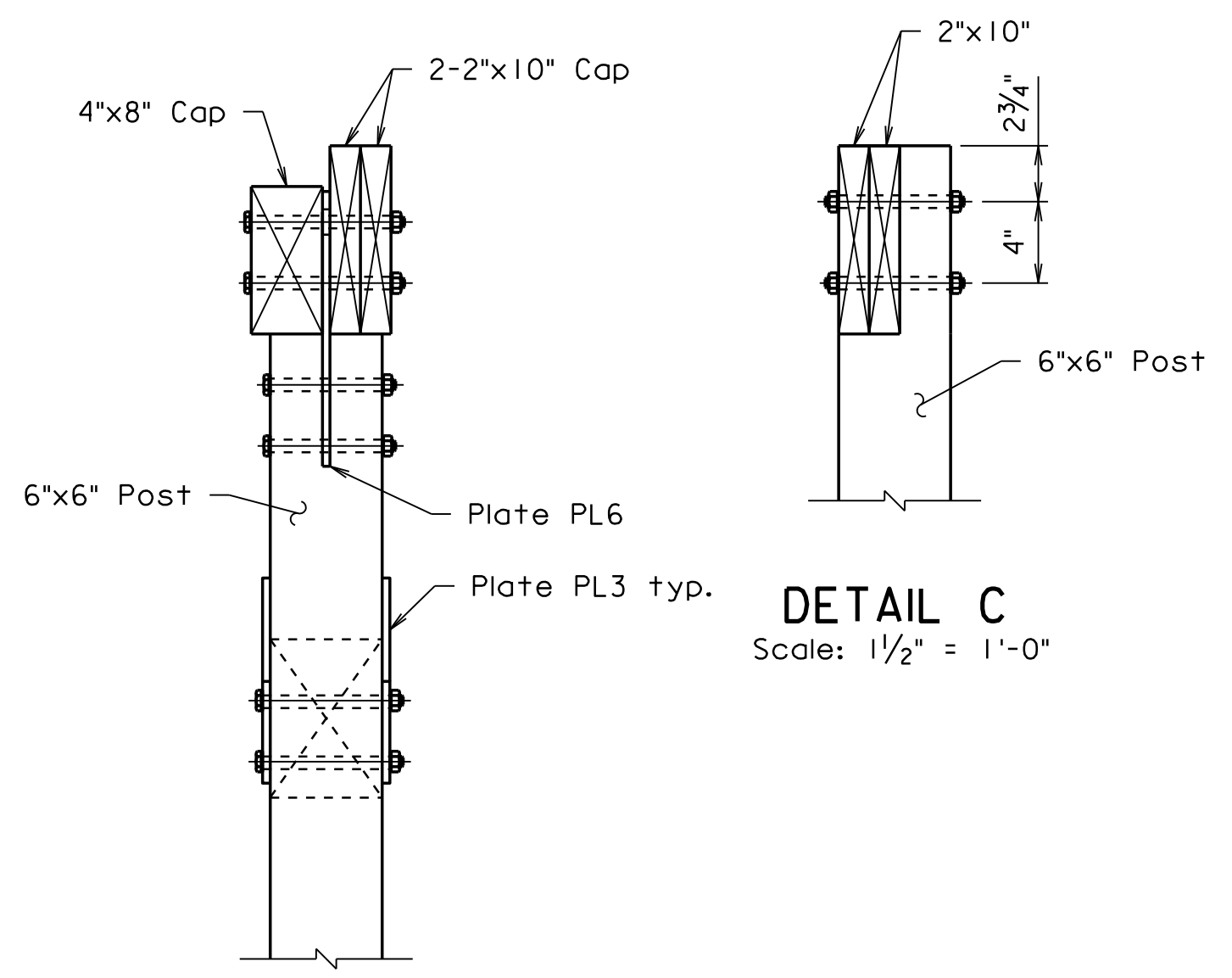
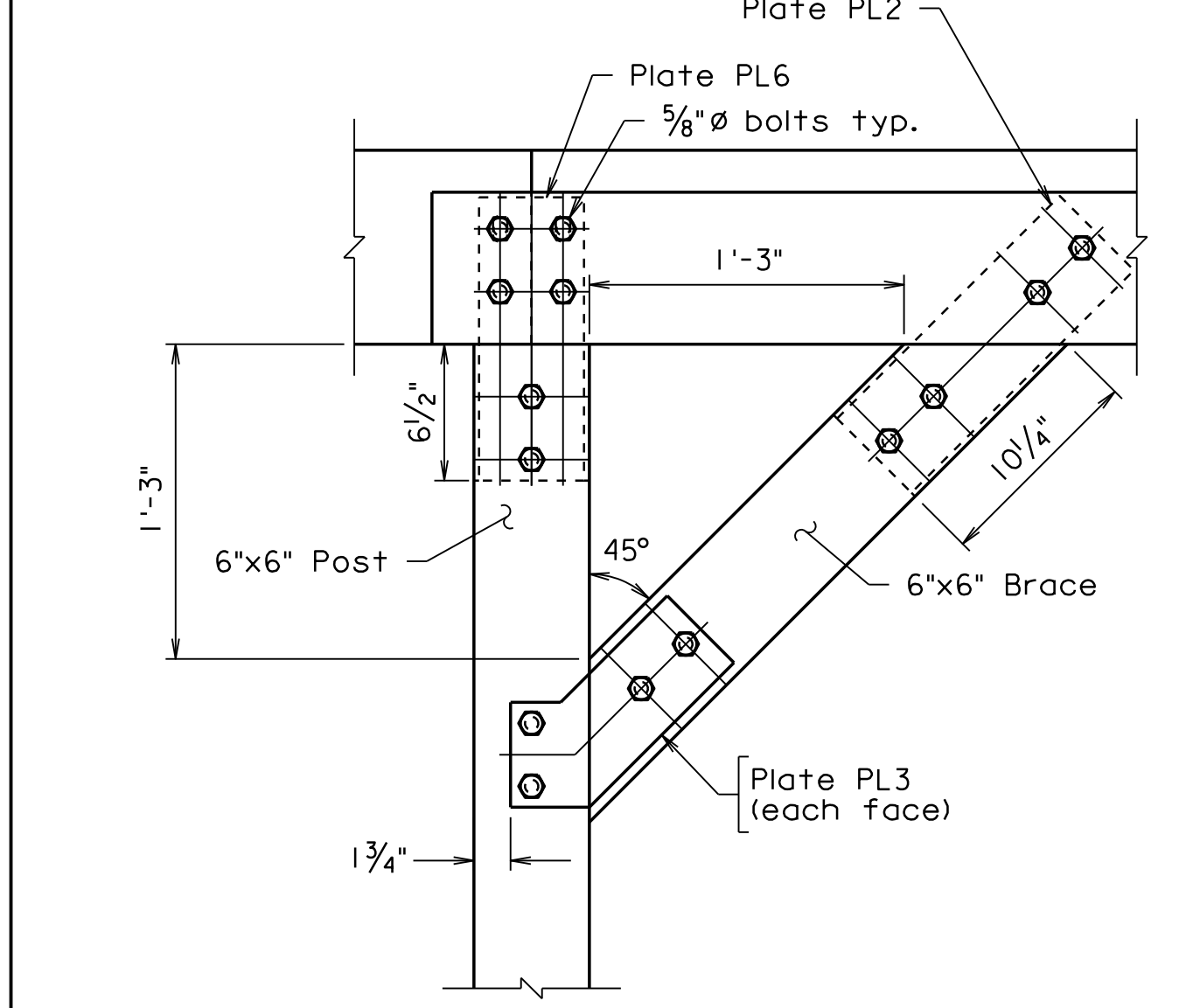
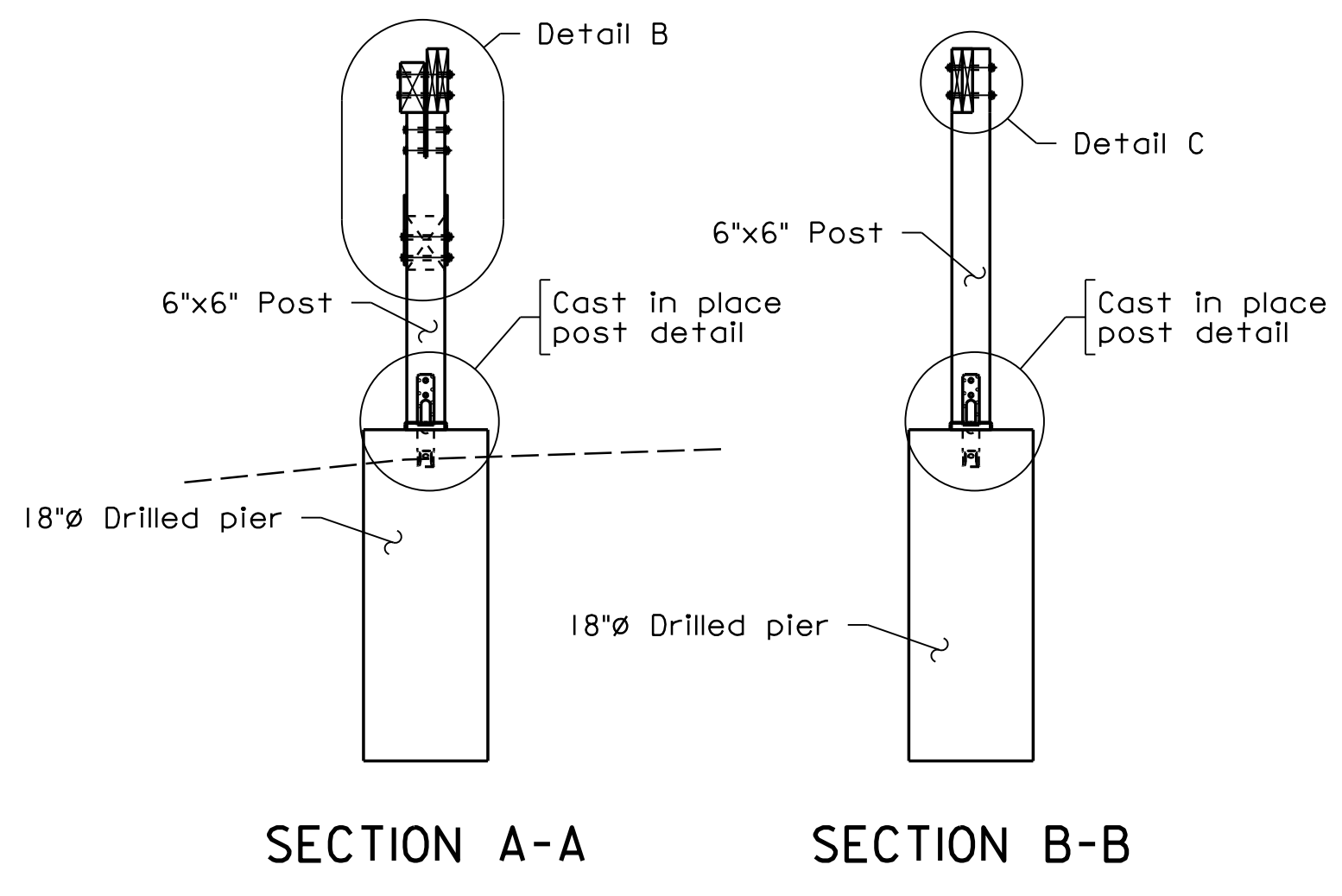
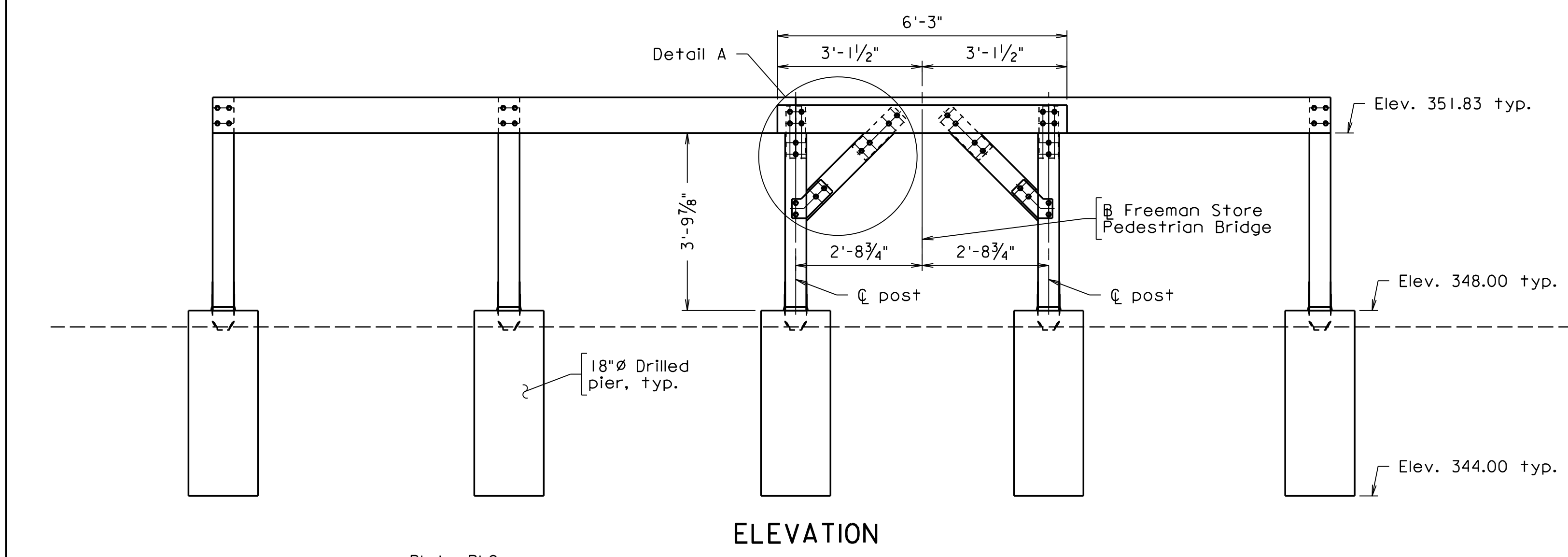
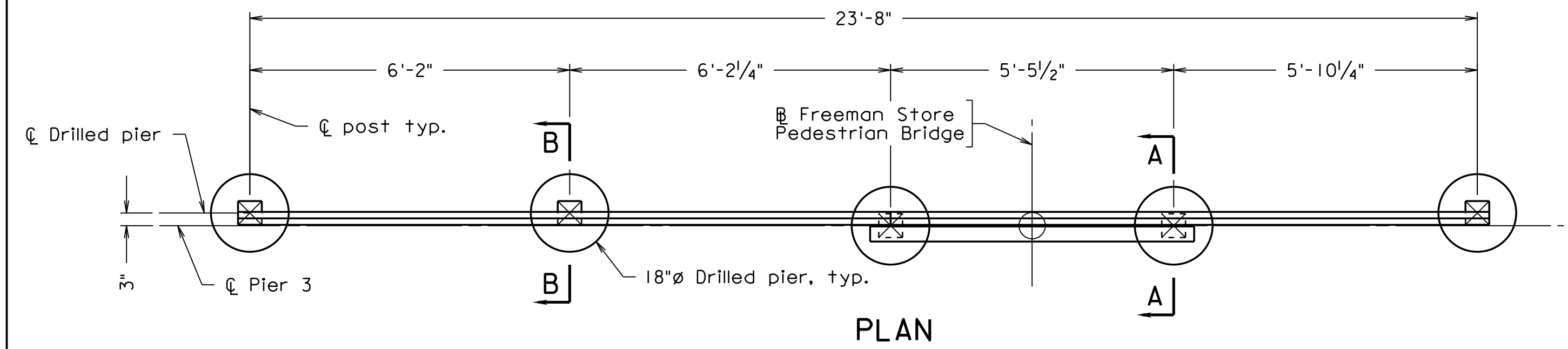
UPC 111404\_009.dgn



PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

STATE	FEDERAL AID		STATE	
ROUTE	PROJECT	ROUTE	PROJECT	
VA.		N/A	UPC 111404, EN17-153-115	

Notes:  
 See sheet 8 for pier notes.  
 For plate connection details see sheet 8.  
 Contractor may use the post base detail shown for Pier 1 or Pier 2 as a substitute for the details shown for Pier 3 at no additional cost to the Town.



REINFORCING STEEL SCHEDULE					
AS0503			AS0401		
Mark	Size	No.	Length	Pin ø	Location
AV0503	#5	30	3'-6"	-	Pier 3 Footing
AS0401	#4	25	4'-0"	-	Pier 3 Footing

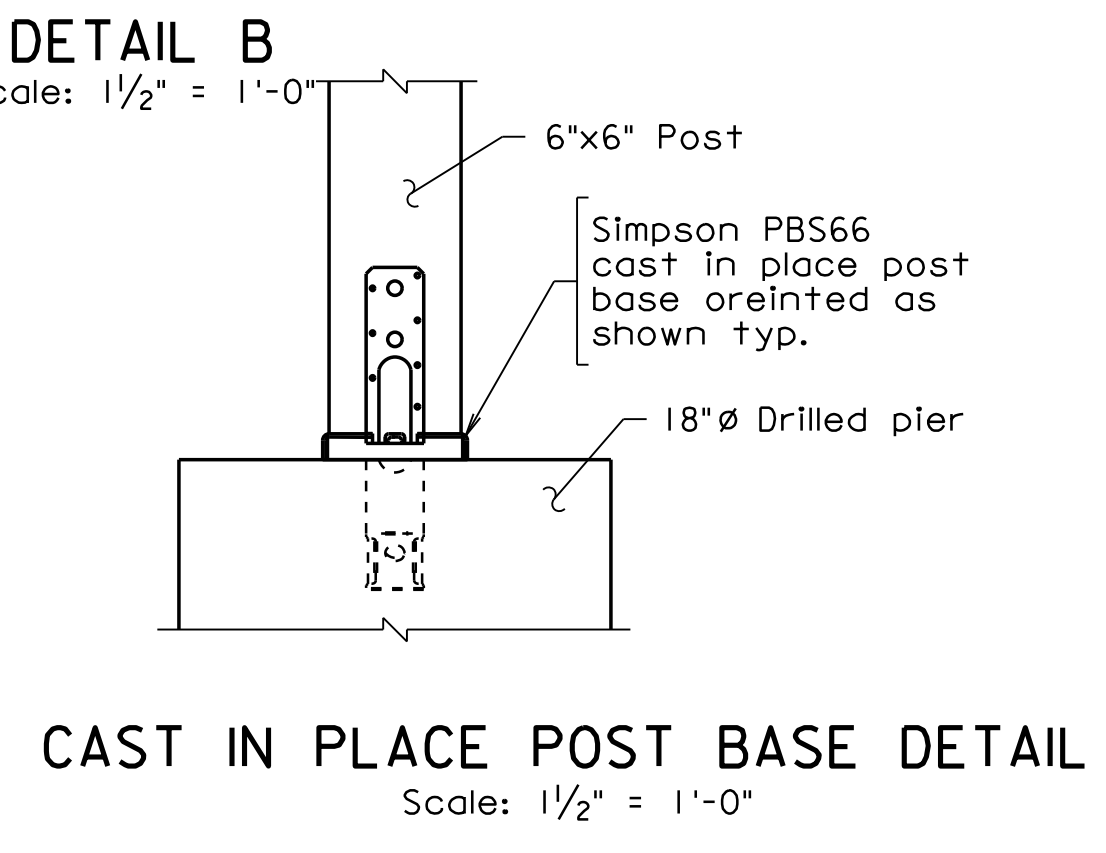
Dimensions in bending diagram are out-to-out of bars.

DETAIL A  
 Scale: 1/2" = 1'-0"

DETAIL B  
 Scale: 1/2" = 1'-0"

DETAIL C  
 Scale: 1/2" = 1'-0"

DRILLED PIER TYPICAL SECTION  
 Scale: 1" = 1'-0"

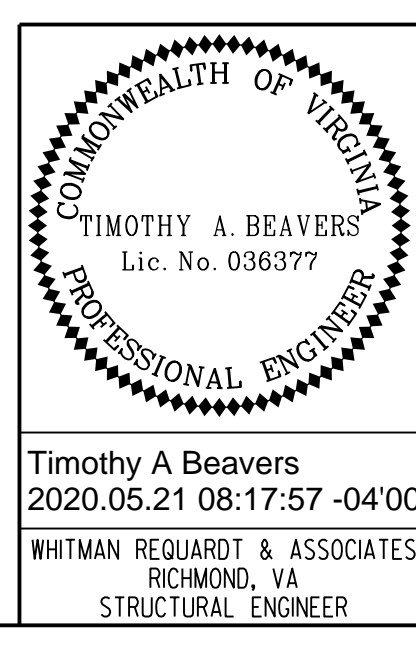


Scale: 1/2" = 1'-0"

Scale: 1/2" = 1'-0" Unless otherwise noted.



EMERGENCY POLICE - FIRE - RESCUE 911 MAY 2020



TOWN OF VIENNA, VIRGINIA DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180			
DEPARTMENT OF PUBLIC WORKS 703-255-6380		FREEMAN STORE PEDESTRIAN BRIDGE PIER 3 DETAILS	
PROJECT NO: EN17-153-115			
PLAN NO.	DESIGNED: CMD	SHEET	
	DRAFTED: CMD	10 of 17	
	CHECKED: TAB		
APPROVED BY THE DEPARTMENT OF PUBLIC WORKS			

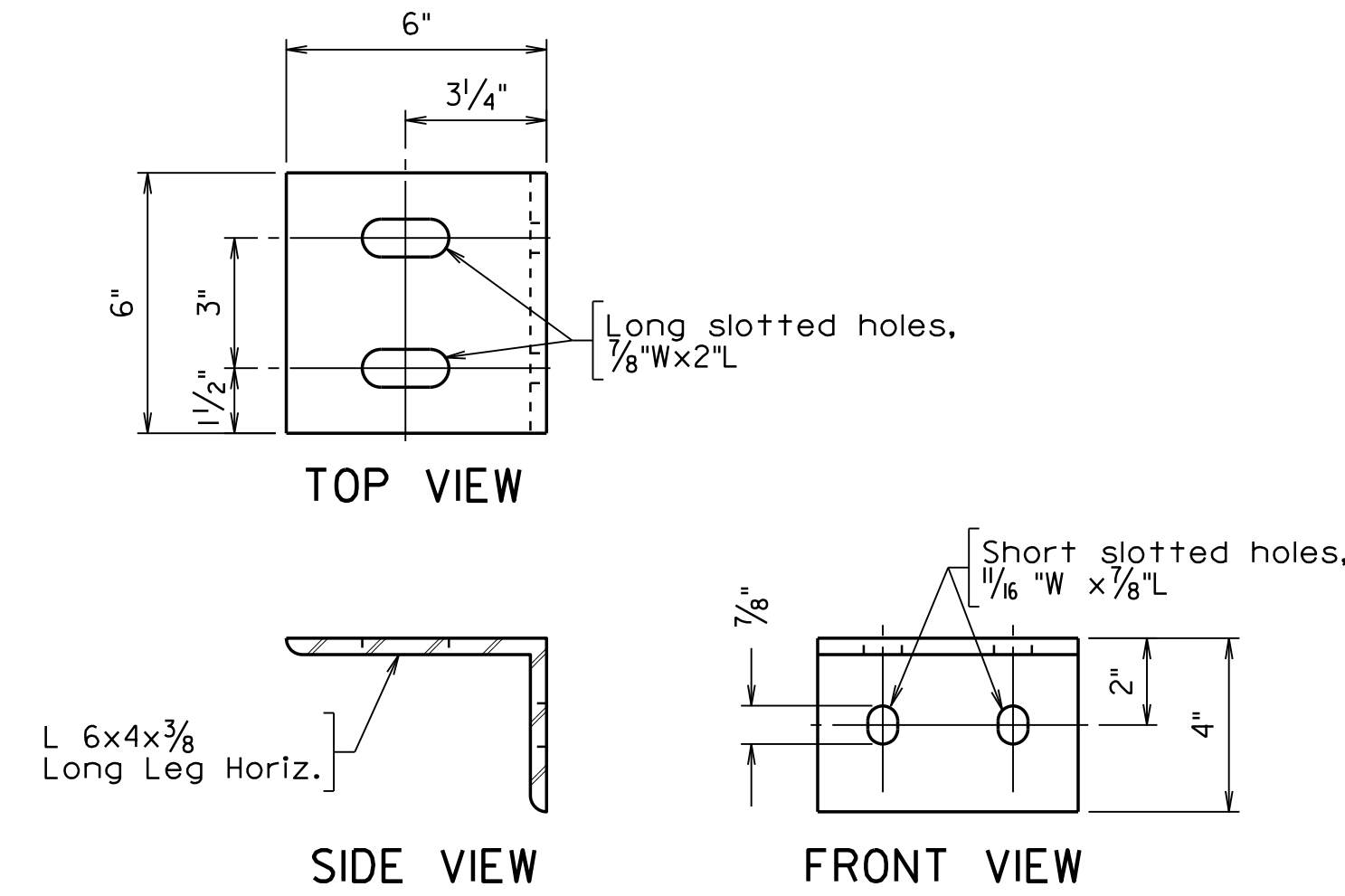
UPC111404\_010.dgn



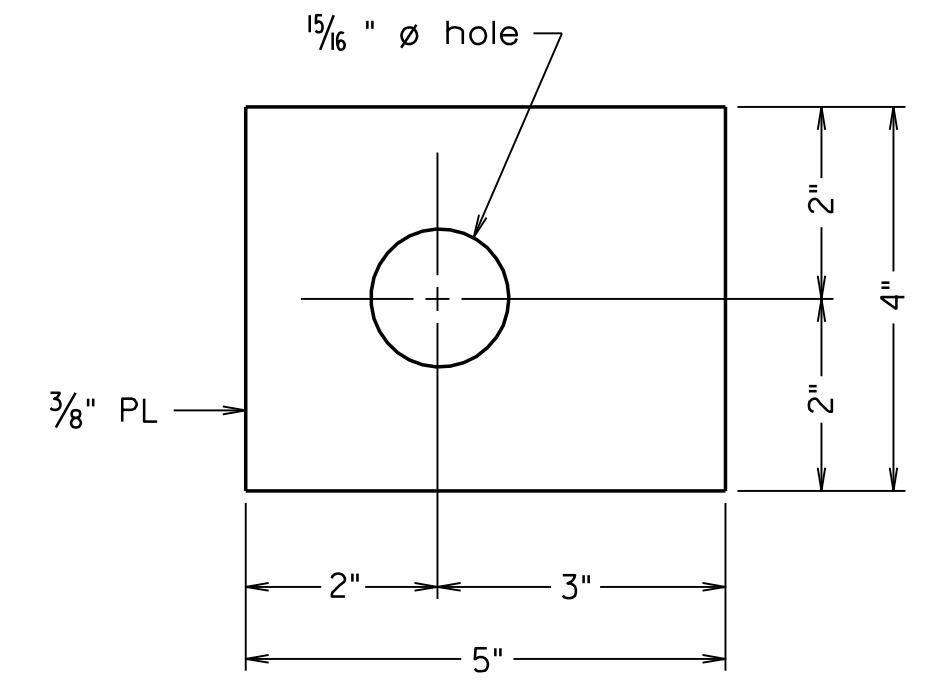
PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

STATE	FEDERAL AID		STATE	
ROUTE	PROJECT	ROUTE	PROJECT	
VA.		N/A	UPC 111404, EN17-153-115	

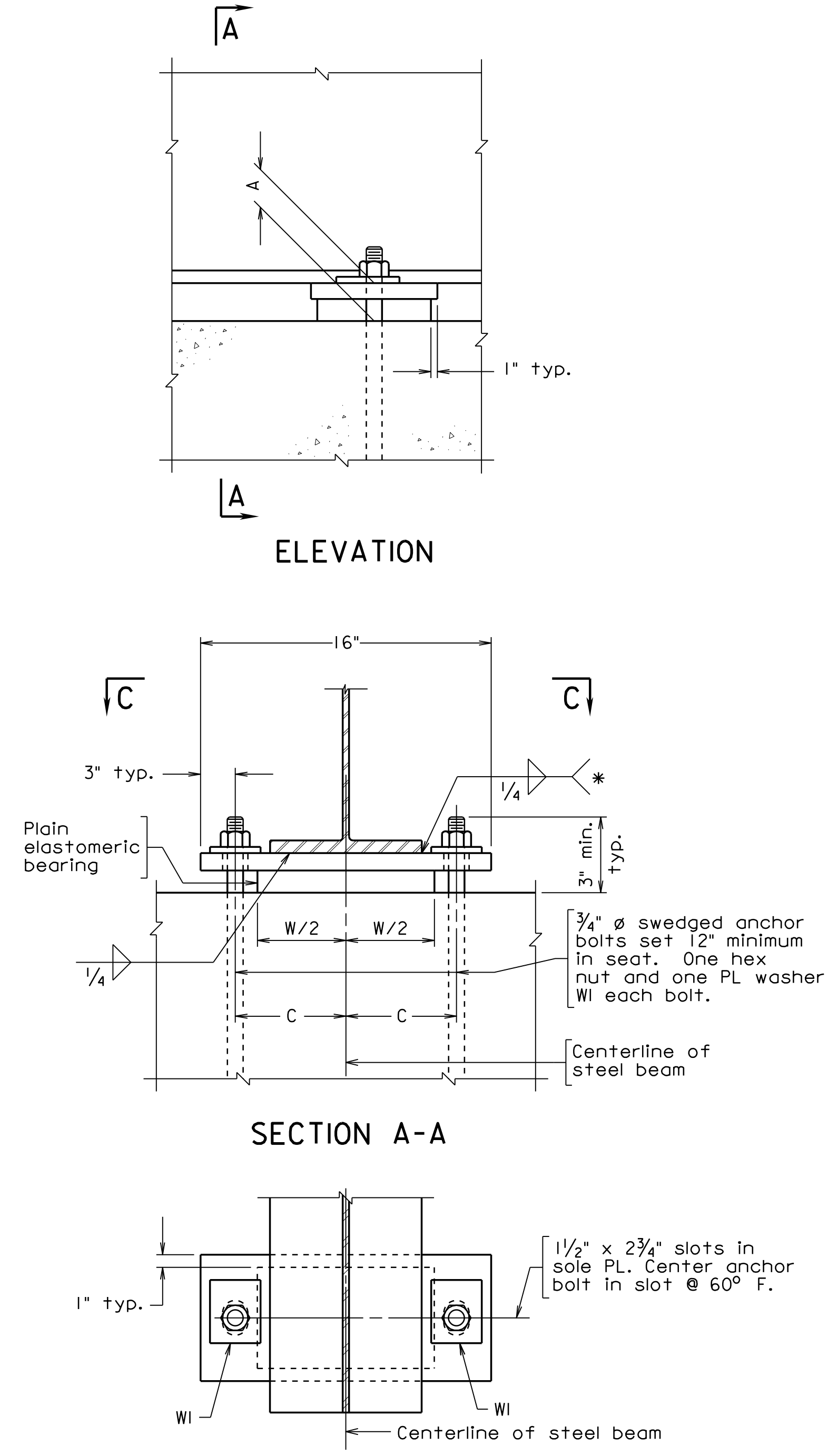
Notes:  
 Material: Elastomer - 60 durometer hardness.  
 Minimum sole plate thickness is 3/4". Sole plates, washer, and anchor bolts shall be hot dipped galvanized.  
 Elastomeric bearings shall be molded as a single unit.  
 \* Weld shall terminate 1/4" from edge of sole plate.  
 Pier I seat angle shall be installed after beam is set on bearing. 3/4" bolts connecting seat angle to beam shall be hand tightened then the nut backed off 1/4 turn. Exposed threads shall be marred or the nut spot welded to the bolt to prevent it from coming loose. See Sheet 8 for additional details.  
 Bearing areas on the steel beam, masonry seat and timber seat shall be treated with epoxy and grit in accordance with VDOT Specification 408.03(g).  
 Centerline of steel beam (including center line and text) shall be marked on the top, bottom and side surfaces of the laminated elastomeric bearing prior to shipping. The markings shall be done with an indelible ink or flexible paint of contrasting color.



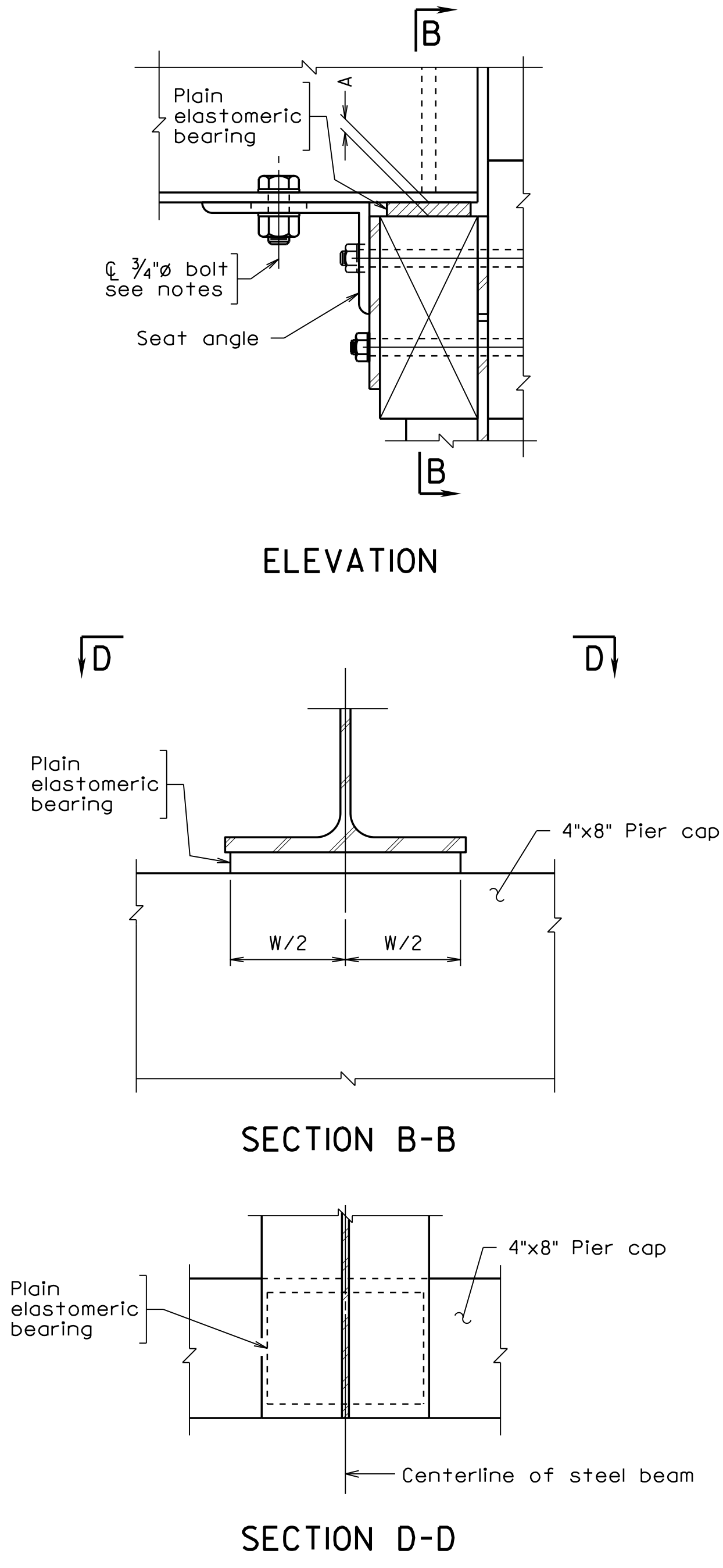
SEAT ANGLE DETAIL



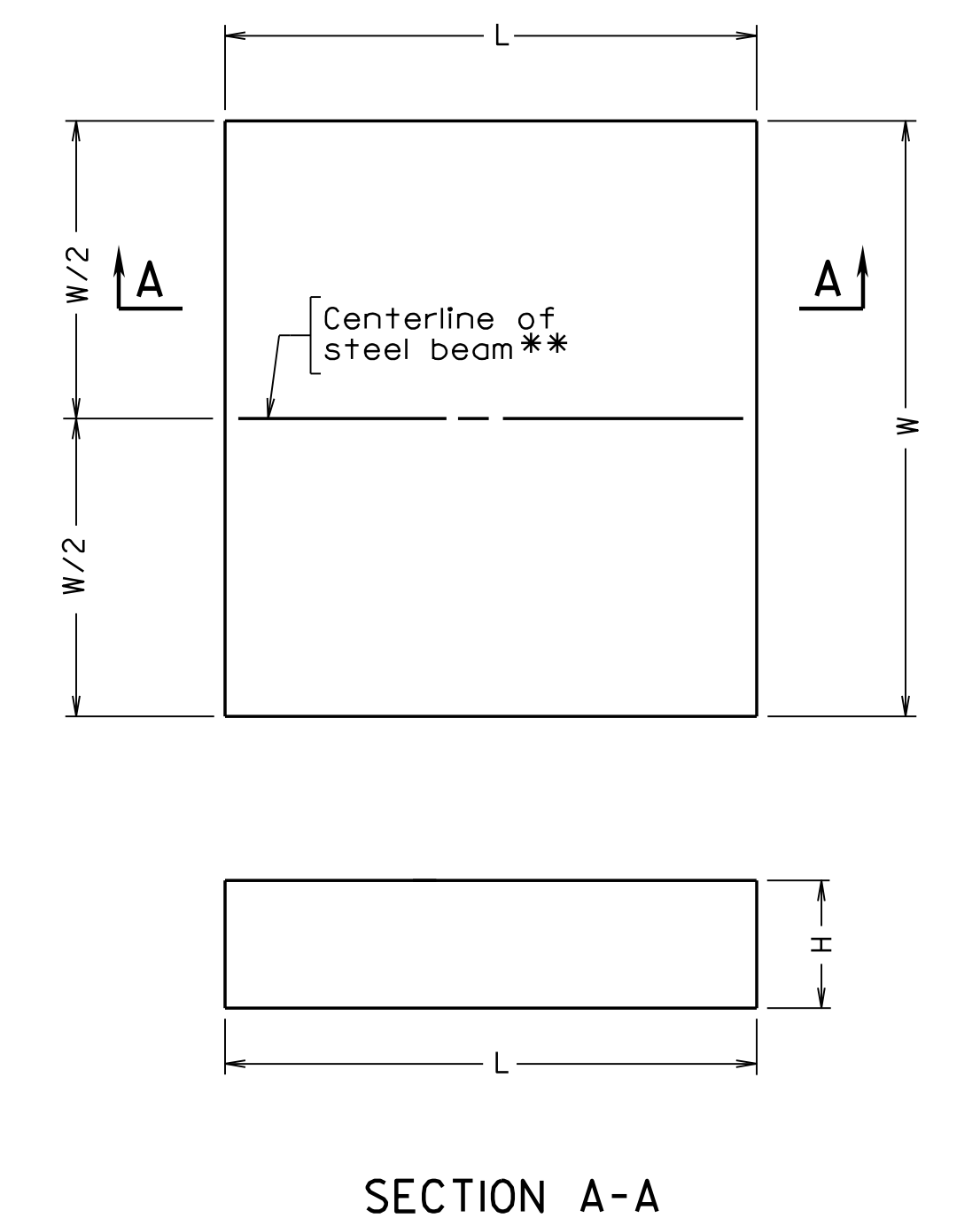
WASHER WI



ABUTMENT A BEARING ASSEMBLY



PIER I BEARING ASSEMBLY



LAMINATED ELASTOMERIC BEARING

Span	Abut.	Pier	Bearing type	A	C	Plain Elastomeric Bearing			Grade %	Total Load (kips)
						W	L	H		
a	A		Fix	1 1/4	5	5.5	3	1/2	0	4
a		I	Exp	1/2	5	5.5	3	1/2	0	4

All dimensions in table are in inches.

Scale: Not to scale



	EMERGENCY POLICE - FIRE - RESCUE 911			MAY 2020
	TOWN OF VIENNA, VIRGINIA			
	DEPARTMENT OF PUBLIC WORKS			
	127 CENTER STREET S. VIENNA, VIRGINIA 22180			
DEPARTMENT OF PUBLIC WORKS		703-255-6380		
FREEMAN STORE PEDESTRIAN BRIDGE		BEARING DETAILS		
PROJECT NO: EN17-153-115				
PLAN NO.	DESIGNED: JRM	SHEET		
	DRAFTED: CMD	11 of 17		
	CHECKED: TAB			
APPROVED BY THE DEPARTMENT OF PUBLIC WORKS				

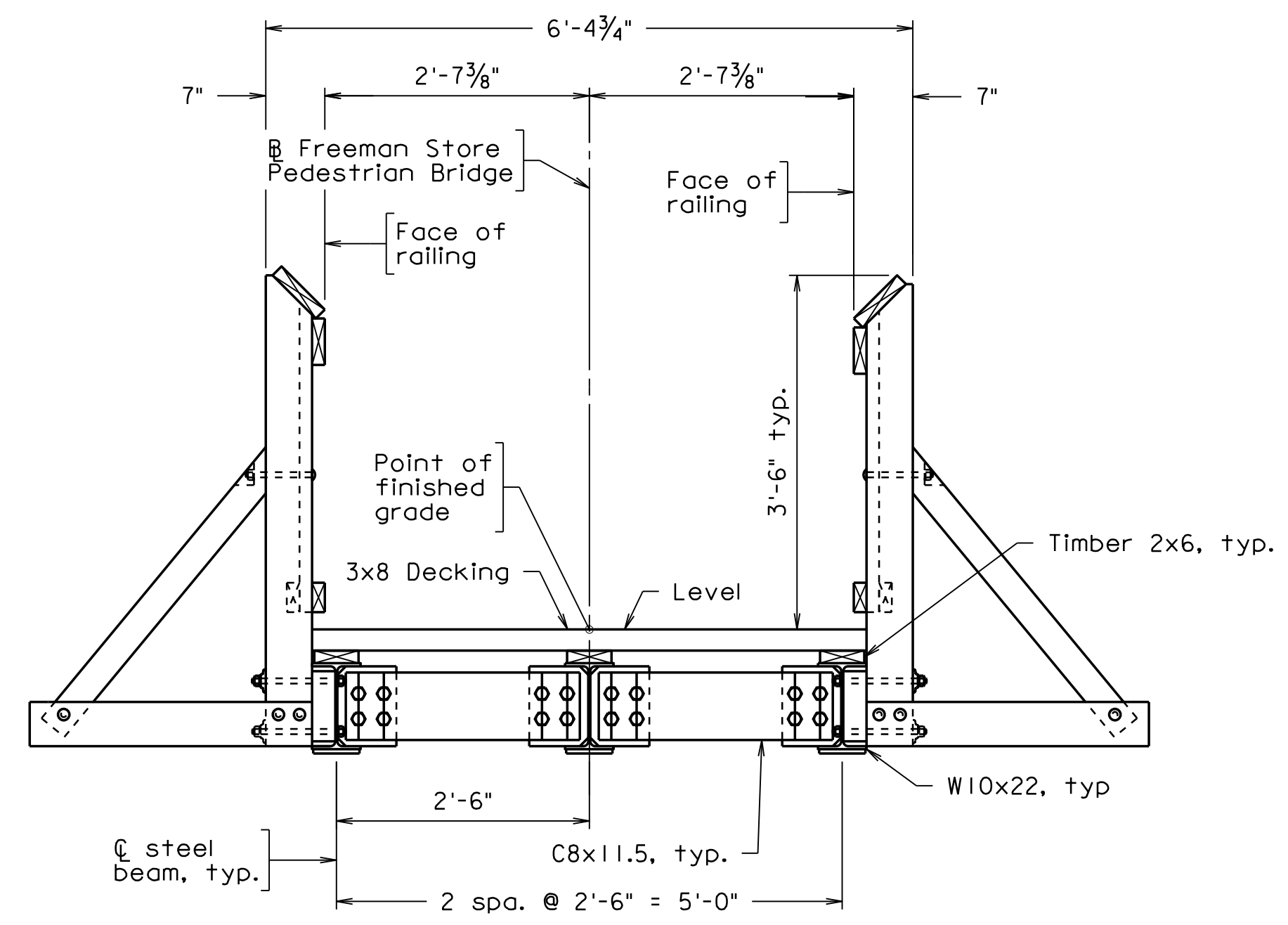
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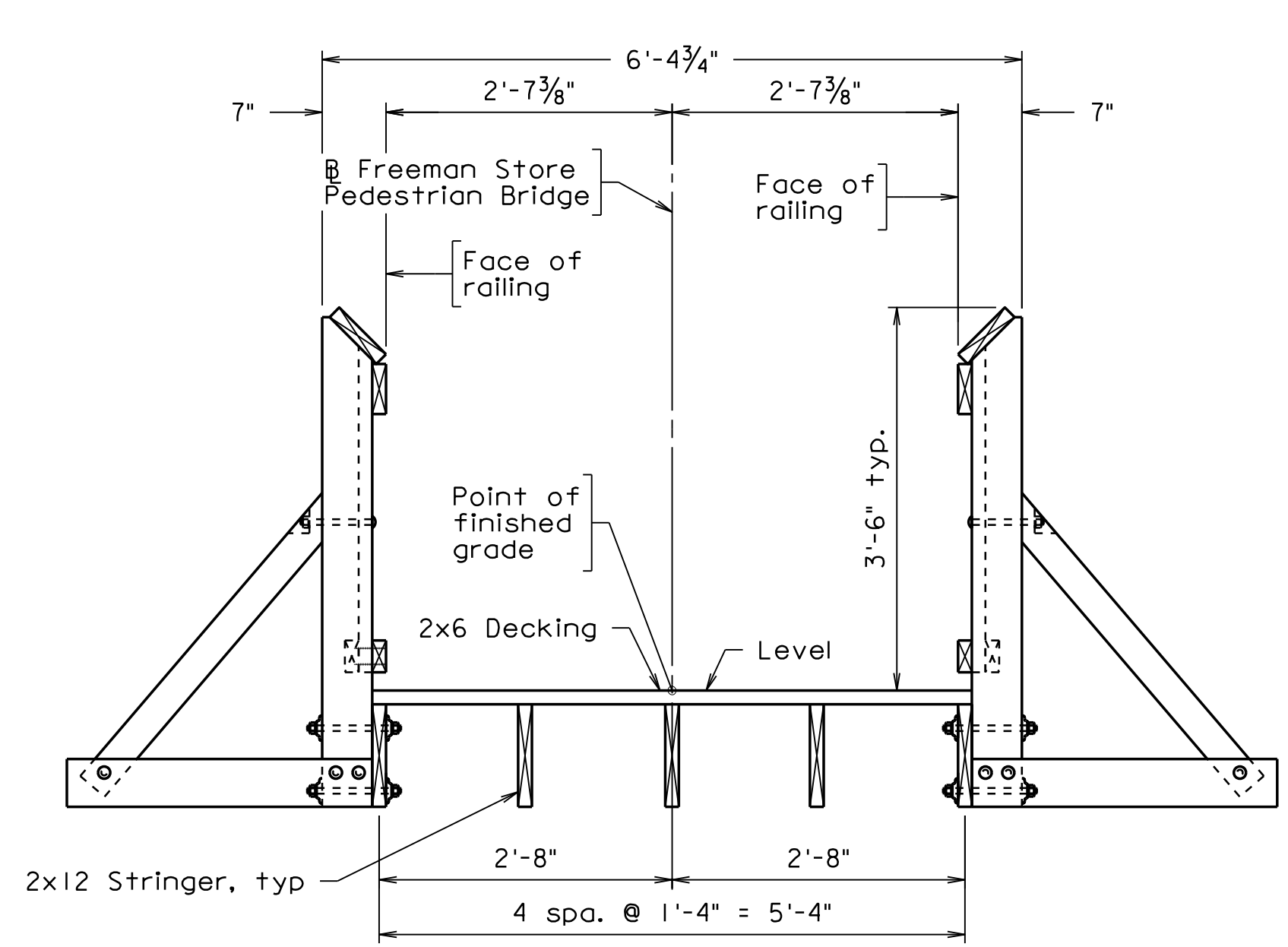
PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

STATE	FEDERAL AID		STATE	
ROUTE	PROJECT	ROUTE	PROJECT	
VA.		N/A	UPC 111404, EN17-153-115	

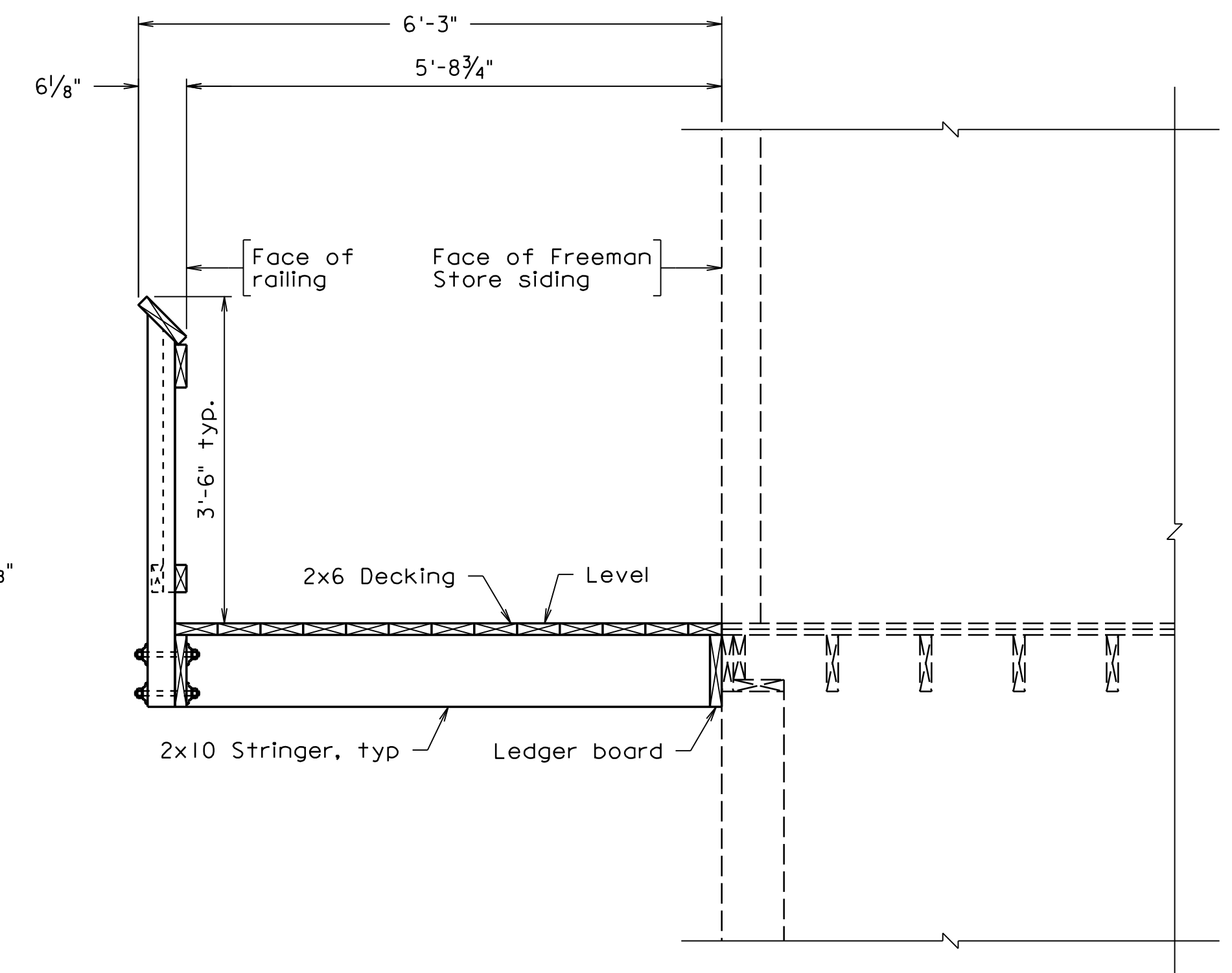
Notes:  
 For span a details see sheet 13.  
 For span b&c details see sheet 14.  
 For span d details see sheet 14.  
 For ledger board details see sheet 15.  
 For handrail details see sheets 16 and 17.



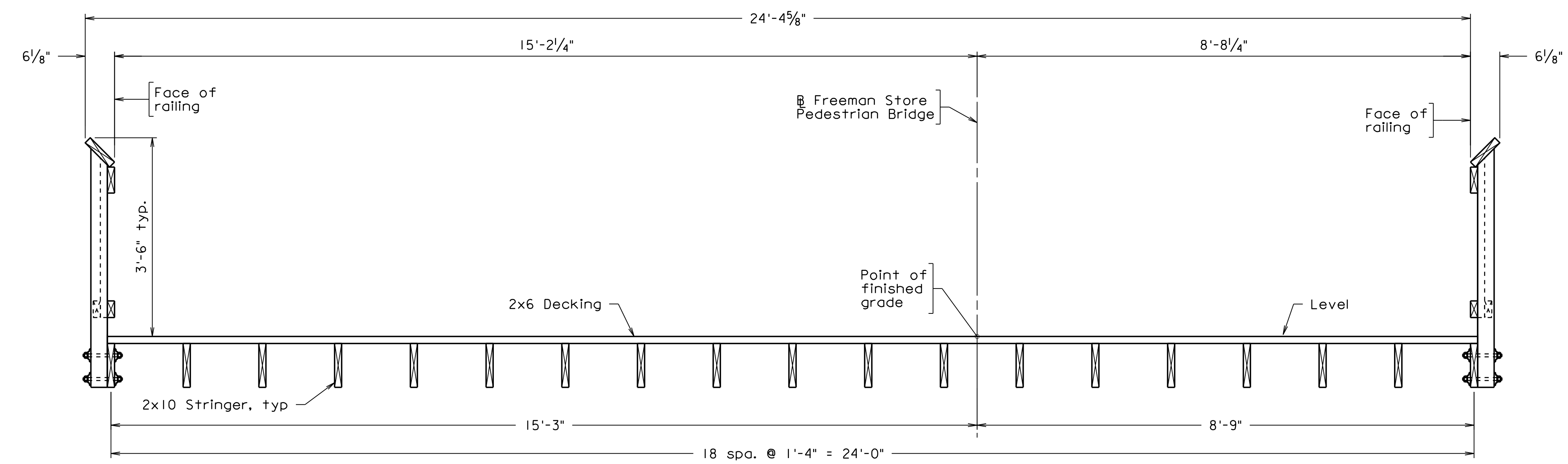
TRANSVERSE SECTION - SPAN a



TRANSVERSE SECTION - SPANS b & c



LONGITUDINAL SECTION - SPAN d



TRANSVERSE SECTION - SPAN d

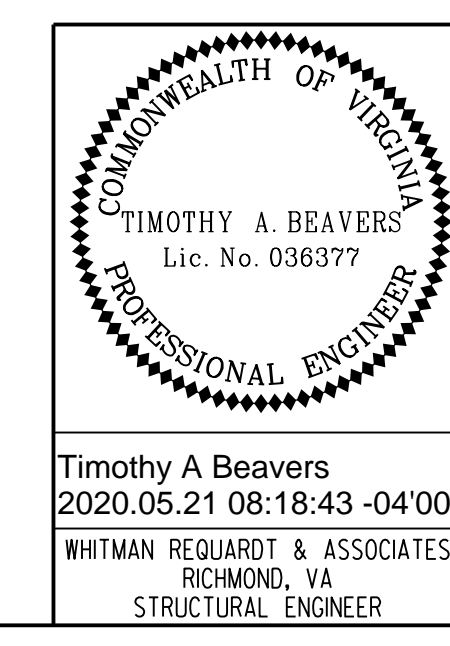


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EMERGENCY POLICE - FIRE - RESCUE 911 MAY 2020

TOWN OF VIENNA, VIRGINIA  
 DEPARTMENT OF PUBLIC WORKS  
 127 CENTER STREET S. VIENNA, VIRGINIA 22180

DEPARTMENT OF PUBLIC WORKS 703-255-6380	
FREEMAN STORE PEDESTRIAN BRIDGE TRANSVERSE SECTIONS	
PROJECT NO: EN17-153-115	
PLAN NO.	DESIGNED: JRM DRAFTED: CMD CHECKED: TAB
SHEET 12 of 17	



Timothy A Beavers  
 2020.05.21 08:18:43 -04'00'  
 WHITMAN REQUARDT & ASSOCIATES  
 RICHMOND, VA  
 STRUCTURAL ENGINEER

Scale: 3/4" = 1'-0"

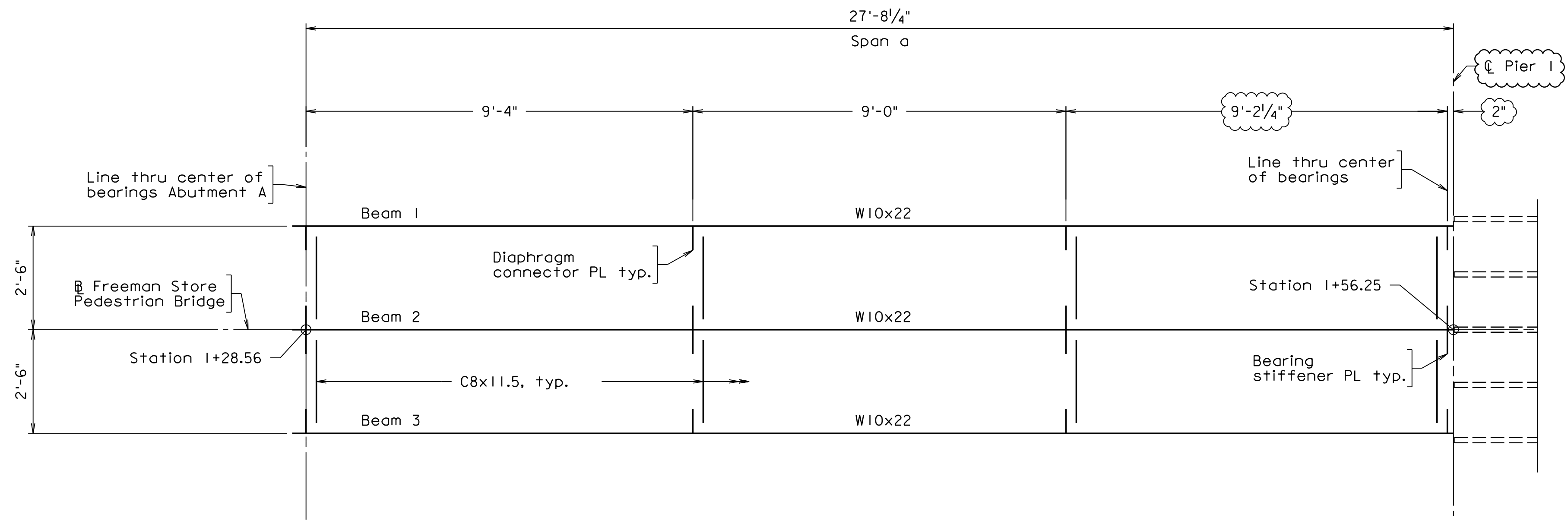
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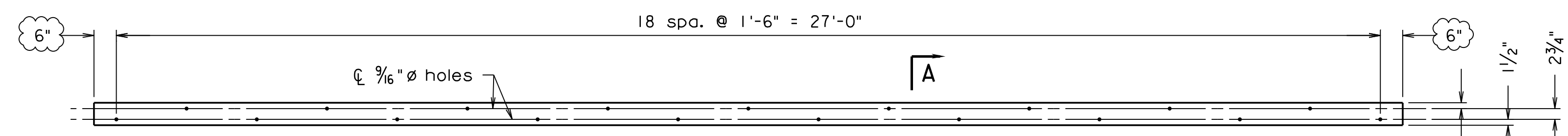
PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

STATE	FEDERAL AID		STATE	
VA.	ROUTE	PROJECT	ROUTE	PROJECT
			N/A	UPC 111404, EN17-153-115

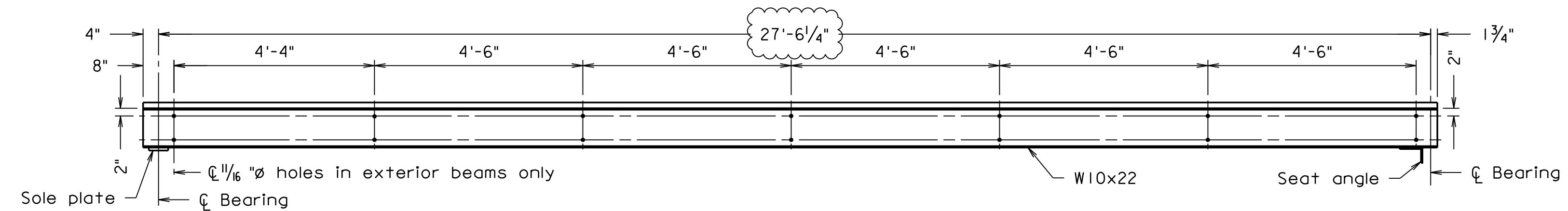
Notes:  
 All structural steel fasteners shall be high strength ASTM 325 1/8"Ø unless otherwise noted.  
 All structural steel to be hot dipped galvanized or metalized in accordance with VDOT specifications. Any damaged coatings to be field galvanized in accordance with VDOT specification.  
 Mill camber shall be placed up. Camber at midspan shall be 1/4" with a +/- 1/8" tolerance.  
 For transverse section, see Sheet 12.  
 For bearing details, see Sheet 11.



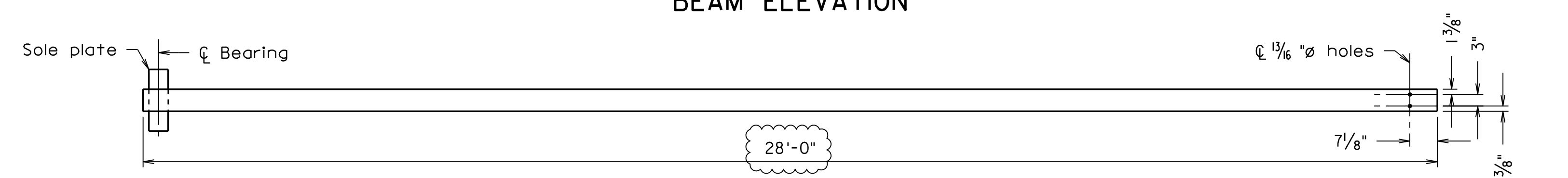
FRAMING PLAN - SPAN a



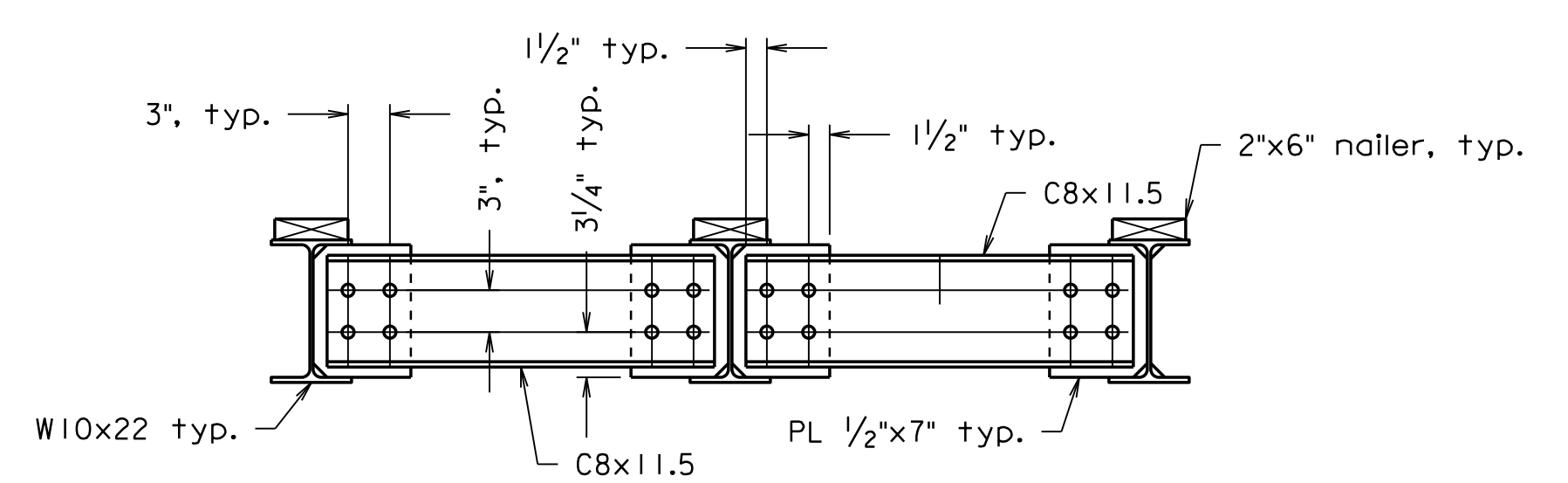
TOP FLANGE



BEAM ELEVATION

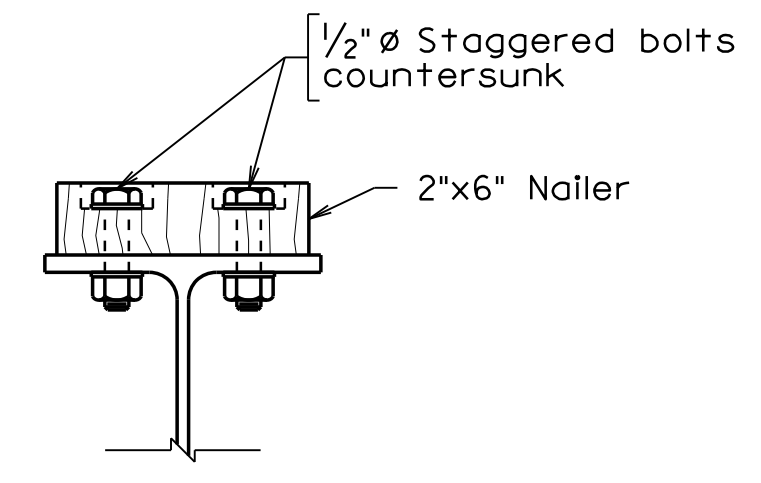


BOTTOM FLANGE

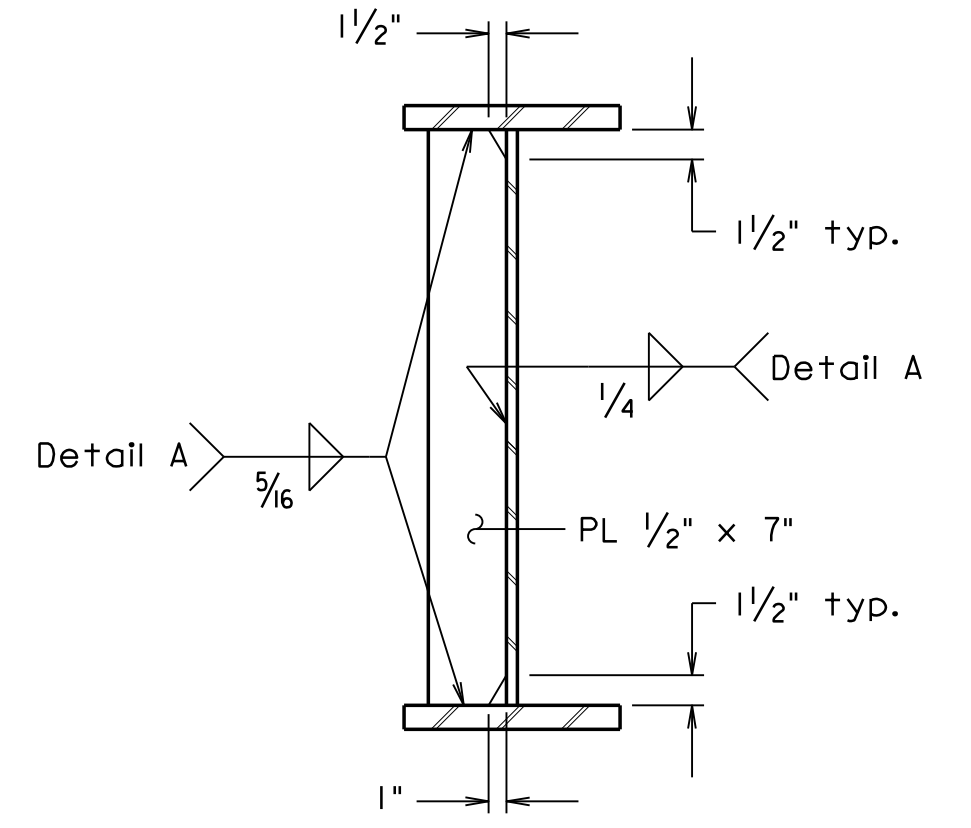


DIAPHRAGM ELEVATION

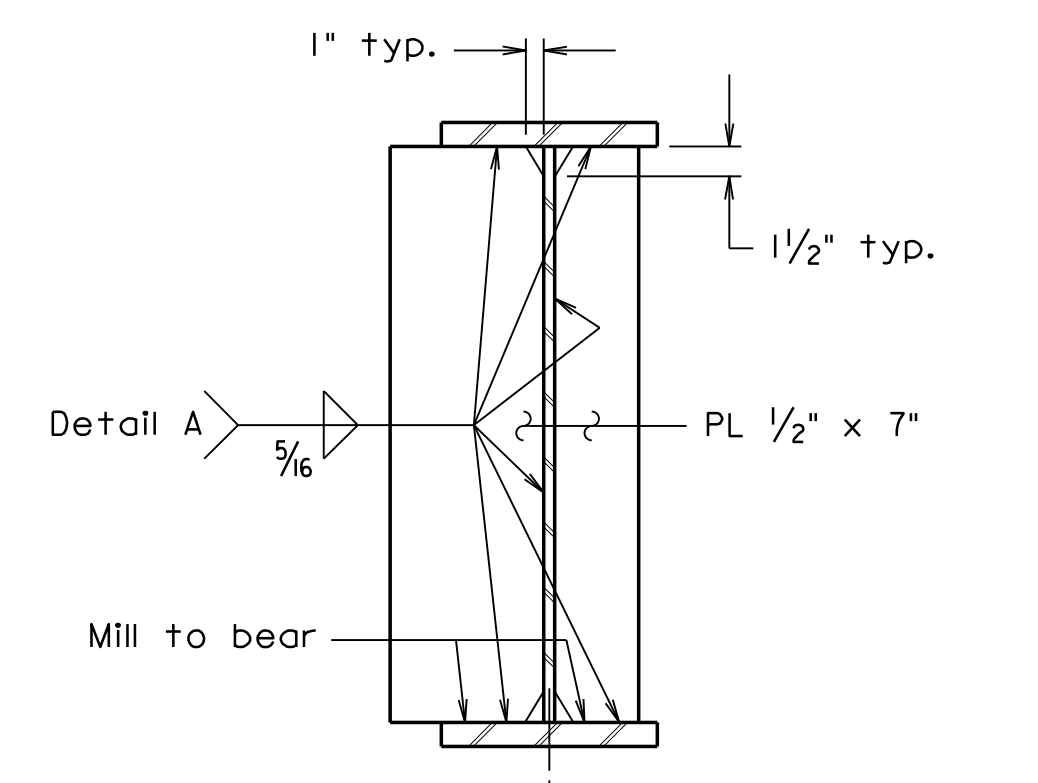
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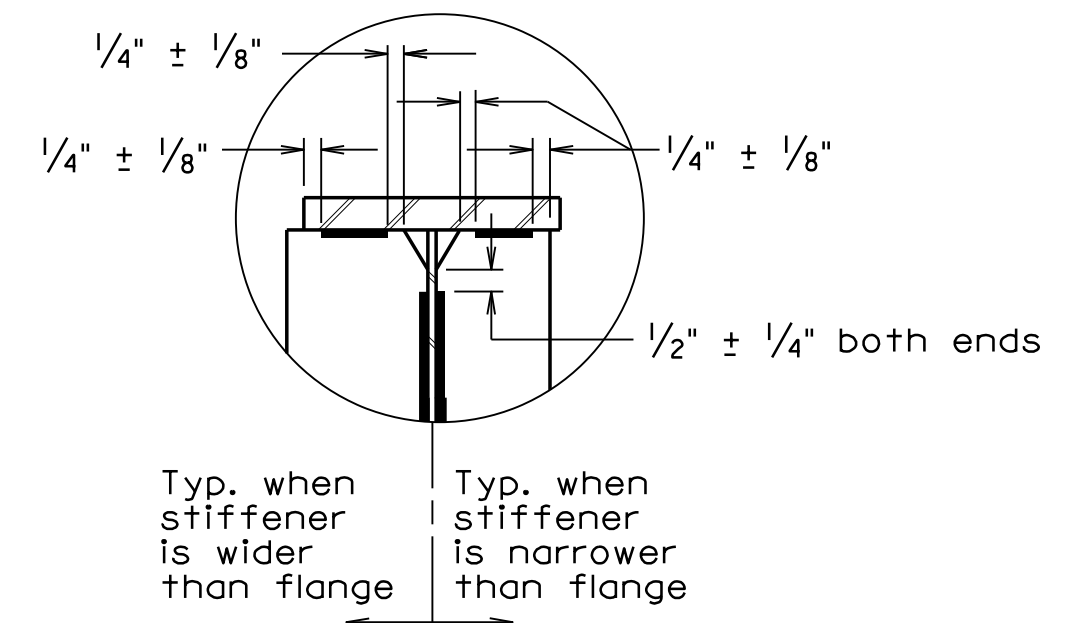
SECTION A-A  
Scale: 3" = 1'-0"



DIAPHRAGM CONNECTOR PLATE  
Not to Scale



BEARING STIFFENERS  
Not to Scale



DETAIL A  
Not to Scale

UPC111404\_013.dgn

Scale: 1/2" = 1'-0" Unless otherwise noted.



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EMERGENCY POLICE - FIRE - RESCUE 911		MAY 2020	
TOWN OF VIENNA, VIRGINIA DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180			
DEPARTMENT OF PUBLIC WORKS 703-255-6380		FREEMAN STORE PEDESTRIAN BRIDGE FRAMING PLAN - SPAN a (STEEL SPAN)	
PROJECT NO: EN17-153-115			
PLAN NO.	DESIGNED: JRM	SHEET	
	DRAFTED: CMD	13 of 17	
	CHECKED: TAB		

COMMONWEALTH OF VIRGINIA  
 TIMOTHY A. BEAVERS  
 Lic. No. 036377  
 PROFESSIONAL ENGINEER

Timothy A Beavers  
 2022.05.12 15:06:33 -04'00'  
 WHITMAN REQUARDT & ASSOCIATES  
 RICHMOND, VA  
 STRUCTURAL ENGINEER

R				
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Misc. updates	TAB	5-9-22
DESCRIPTION	BY	DATE
APPROVED BY THE DEPARTMENT OF PUBLIC WORKS		



PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

STATE	FEDERAL AID		STATE	
ROUTE	PROJECT		ROUTE	PROJECT
VA.			N/A	UPC 111404, EN17-153-115

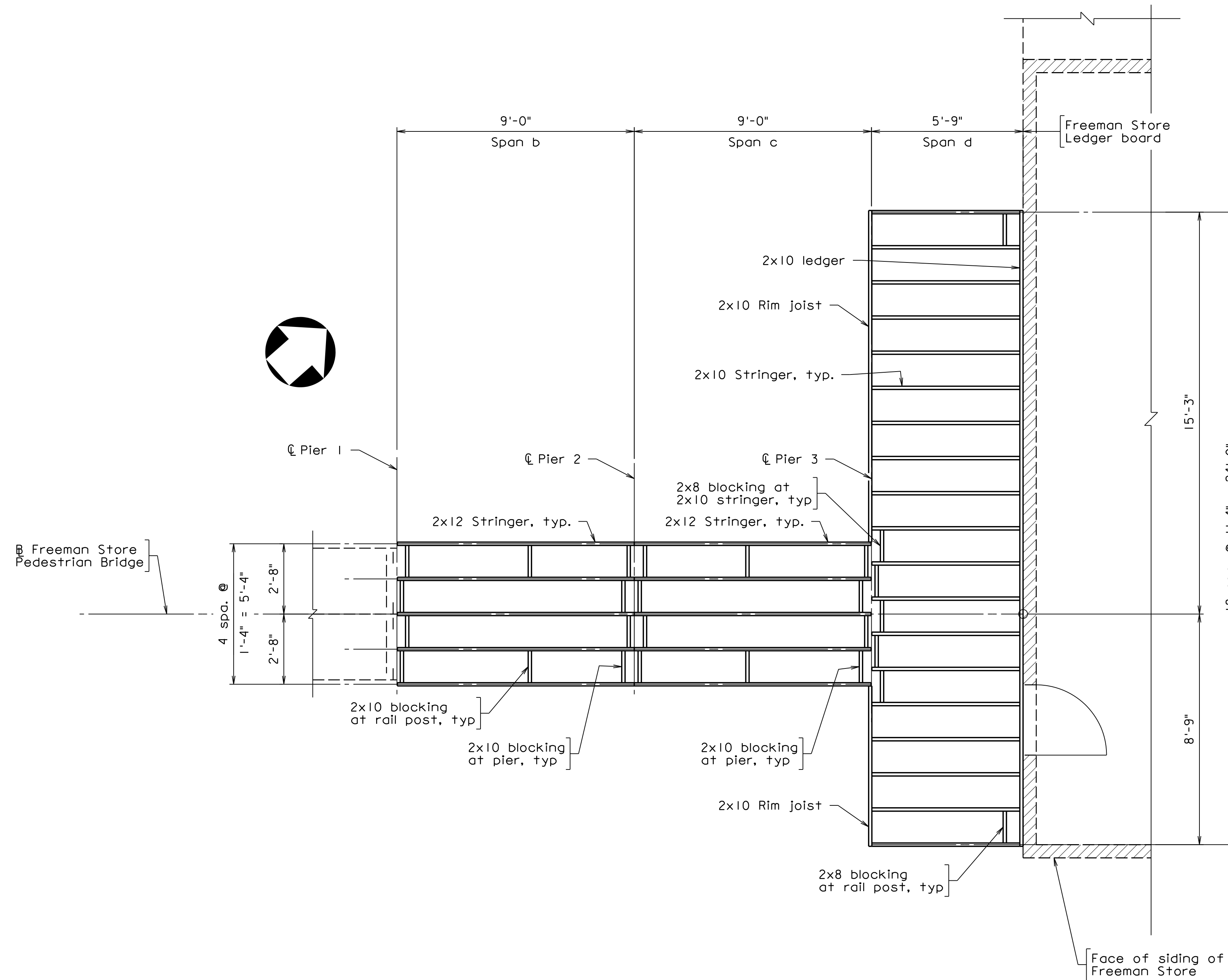
Notes:

End screw rim joist into 2X10 stringers with a minimum of 2 - #10x3/2" galv. deck screws per stringer.

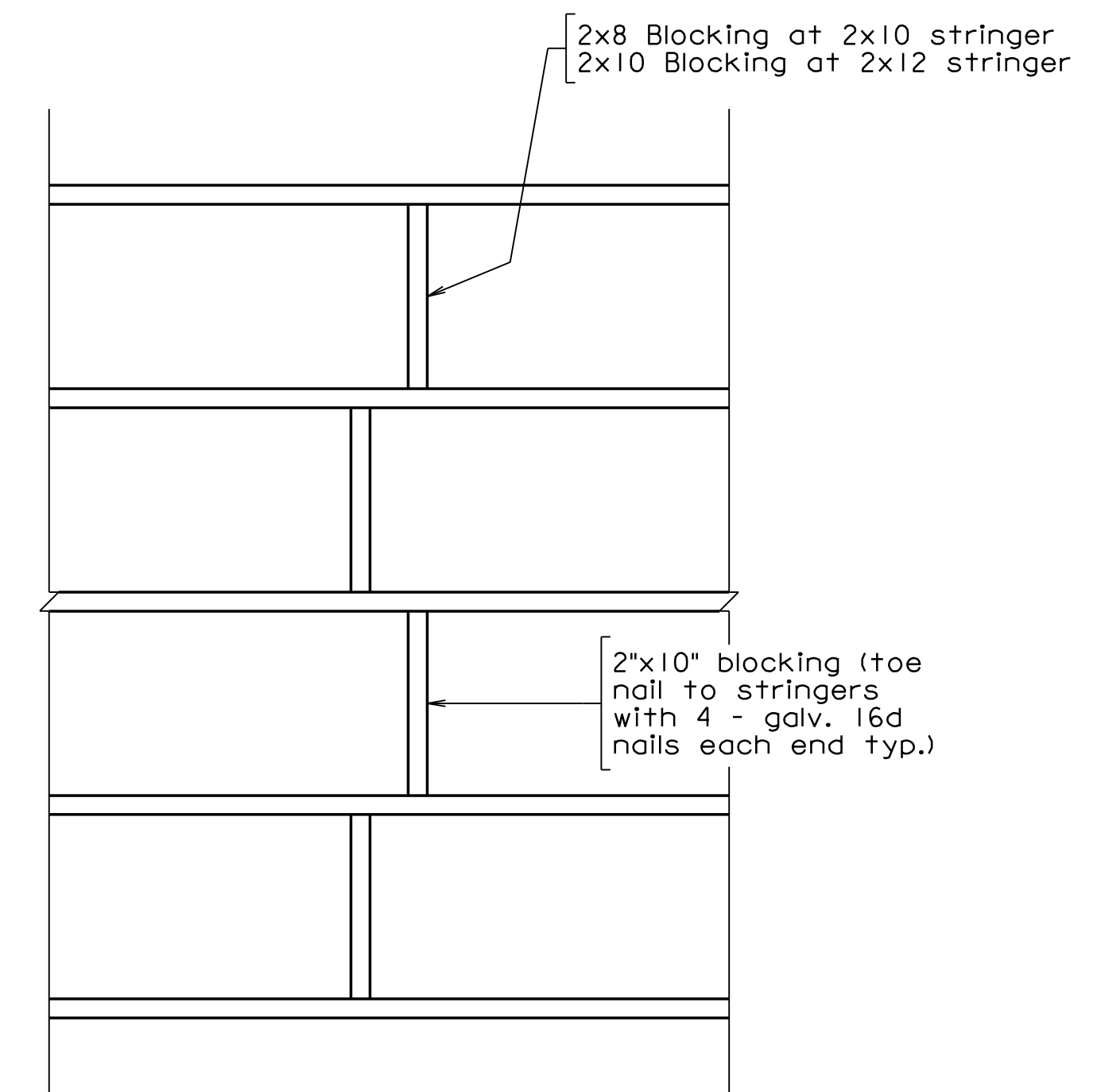
For ledger board attachment details and miscellaneous superstructure details, see Sheet 15.

For railing details, see Sheets 16 and 17.

For transverse sections, see Sheet 12.



FRAMING PLAN SPANS b THROUGH d



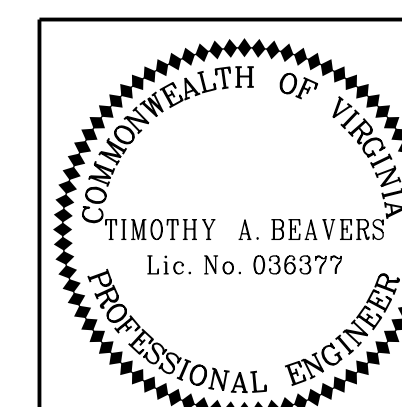
STRINGER BLOCKING DETAIL



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EMERGENCY POLICE - FIRE - RESCUE 911 MAY 2020

TOWN OF VIENNA, VIRGINIA  
 DEPARTMENT OF PUBLIC WORKS  
 127 CENTER STREET S. VIENNA, VIRGINIA 22180



Timothy A Beavers  
 2020.05.21 08:19:24 -04'00'  
 WHITMAN REQUARDT & ASSOCIATES  
 RICHMOND, VA  
 STRUCTURAL ENGINEER

REVISIONS				
NO.	DESCRIPTION	BY	APPROVED	DATE
1				

DEPARTMENT OF PUBLIC WORKS 703-255-6380	
FREEMAN STORE PEDESTRIAN BRIDGE FRAMING PLAN - SPANS b-d (TIMBER SPANS)	
PROJECT NO: EN17-153-115	
PLAN NO.	DESIGNED: JRM DRAFTED: CMD CHECKED: TAB
	SHEET 14 of 17

Scale: 3/8" = 1'-0" Unless otherwise noted.

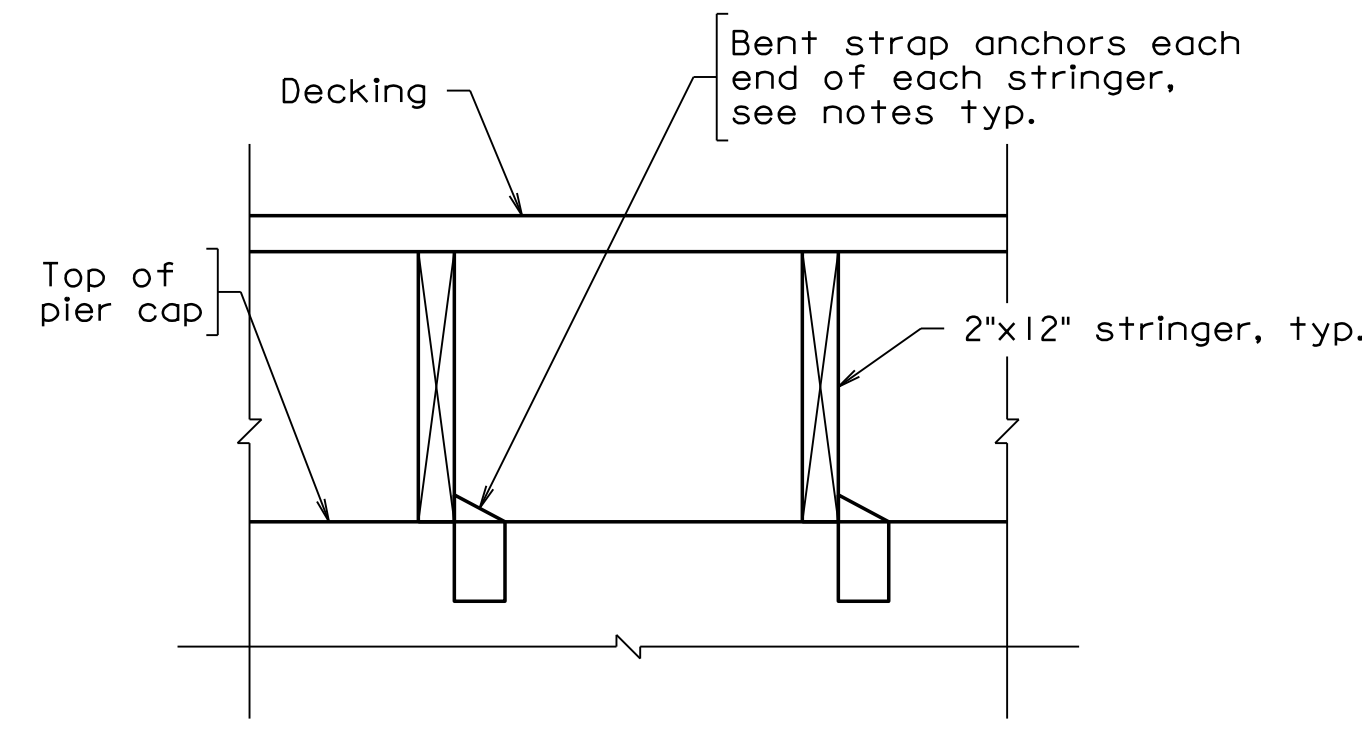
UPC111404\_014.dgn



PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

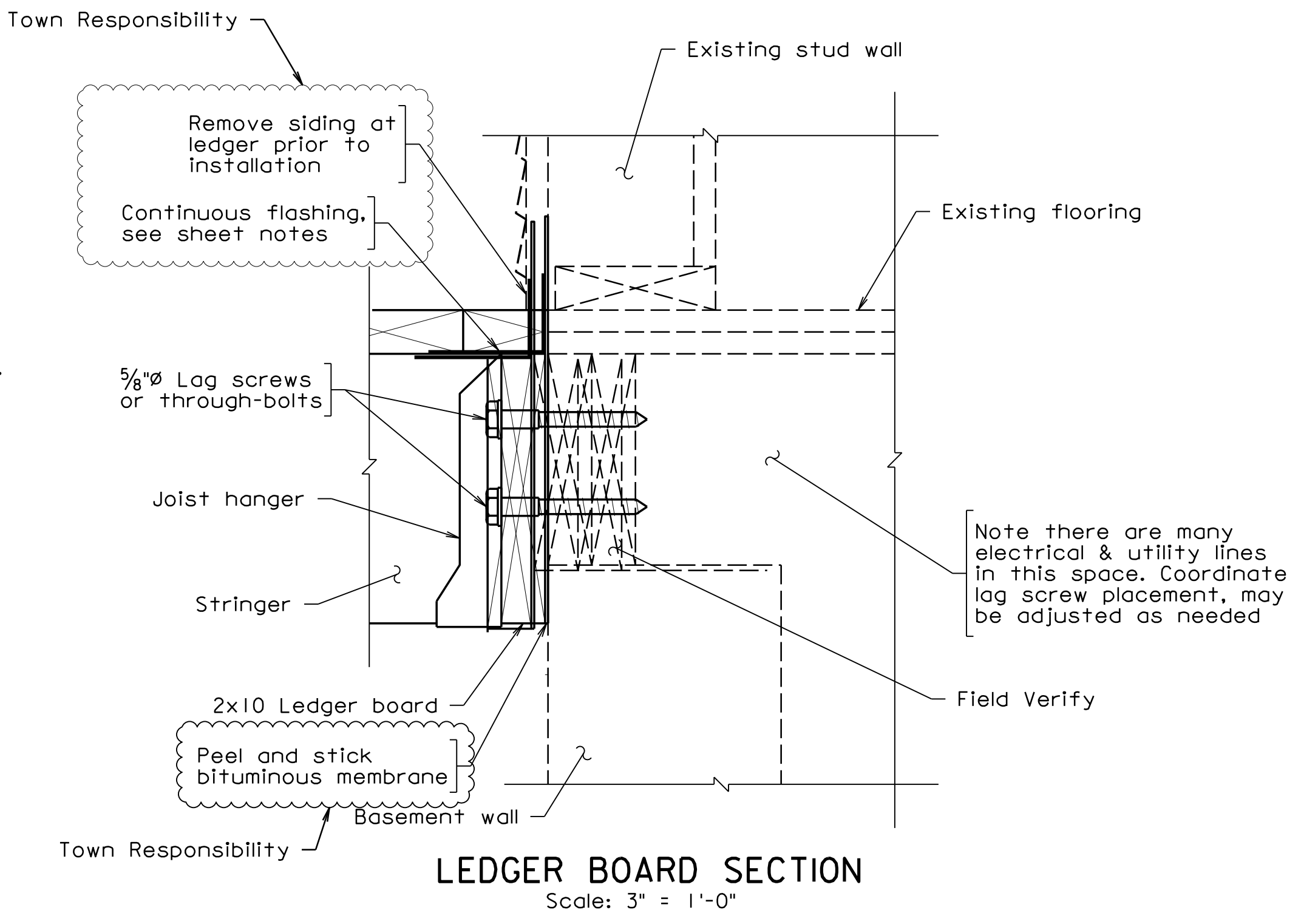
STATE	FEDERAL AID		STATE	
ROUTE	PROJECT	ROUTE	PROJECT	
VA.		N/A	UPC 111404, EN17-153-115	

Notes:  
 Contractor to install an ADA approved threshold. Any necessary modifications to the door, building, etc. shall be the responsibility of the contractor. Details of the proposed threshold, its connection and any associated modifications shall be submitted for review and approval by the Owner.  
 Continuous flashing at ledger board connection shall be copper (with copper nails only), stainless steel, UV resistant plastic, or galvanized steel with a G-185 coating per Fairfax County typical deck details.  
 Continuous flashing shall continue across the door threshold with appropriate details.

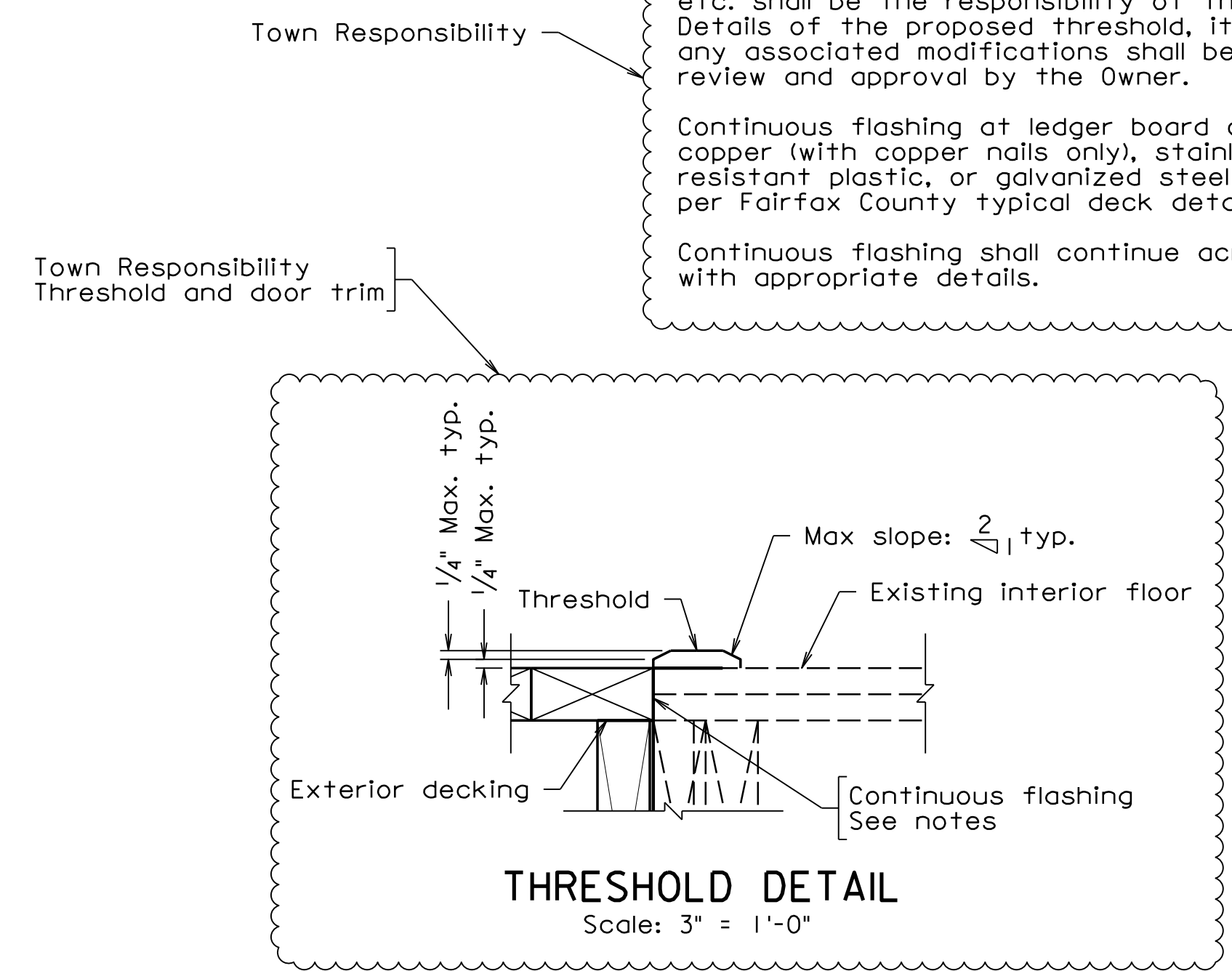


Notes:  
 Bent strap anchors shall be 18 gauge, hot dipped galvanized and have a minimum uplift capacity of 450 lbs.  
 Bent strap anchors shall be Simpson Strong-Tie H2.5A or approved equal.

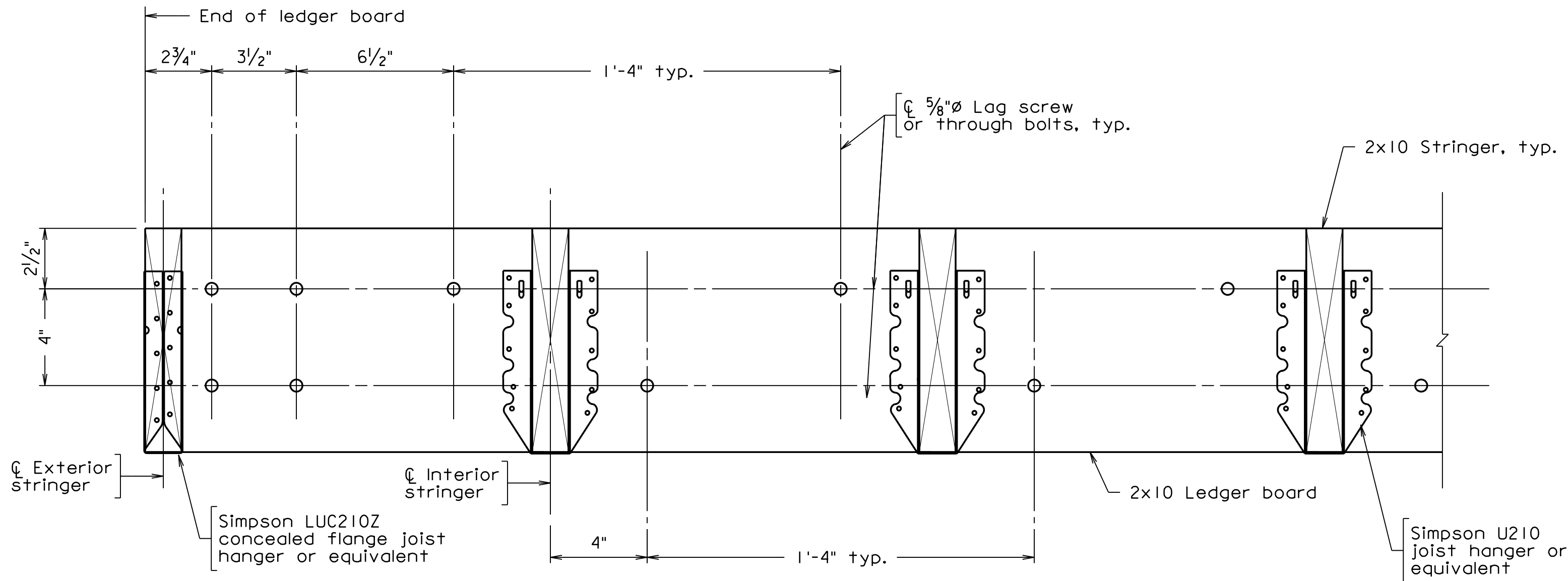
TYPICAL STRINGER TIEDOWN DETAIL



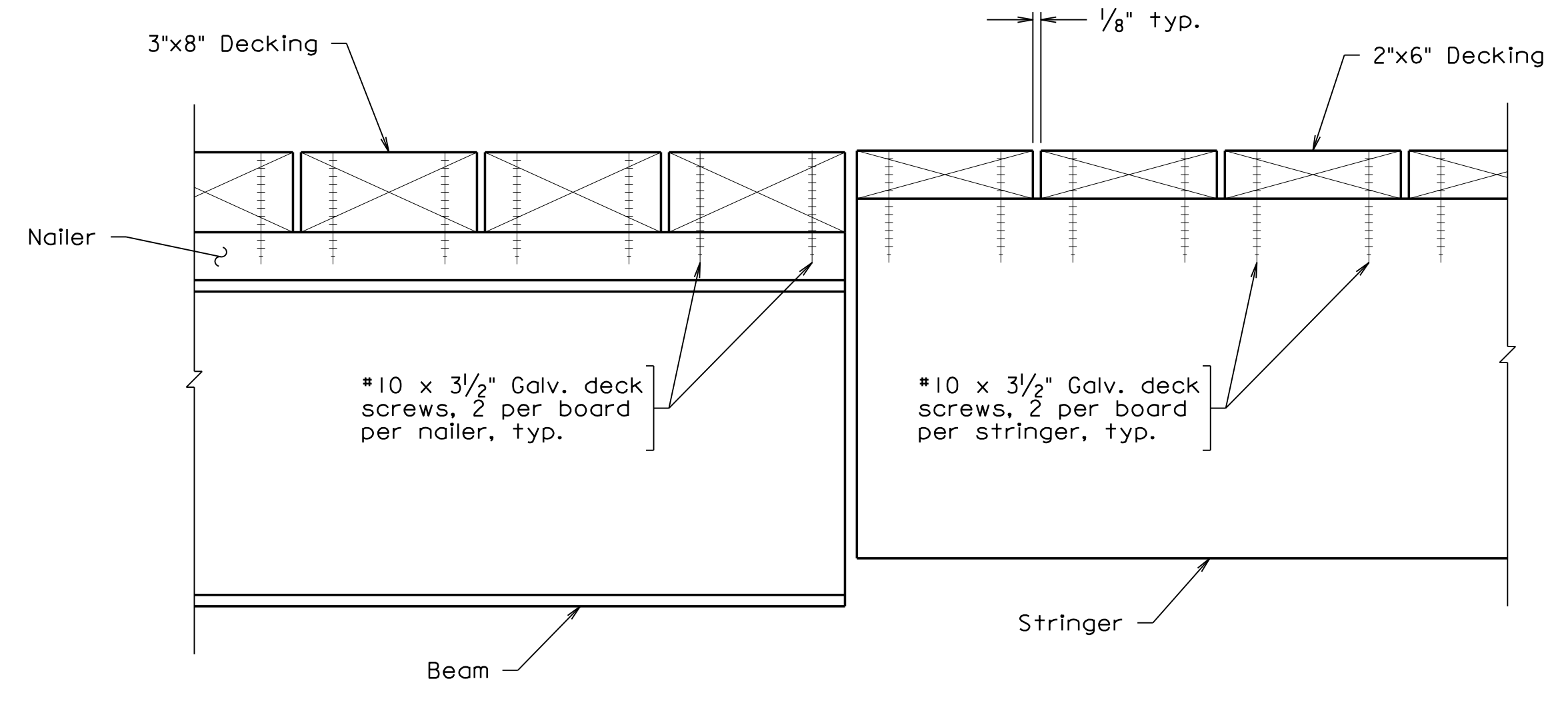
LEDGER BOARD SECTION  
 Scale: 3" = 1'-0"



THRESHOLD DETAIL  
 Scale: 3" = 1'-0"



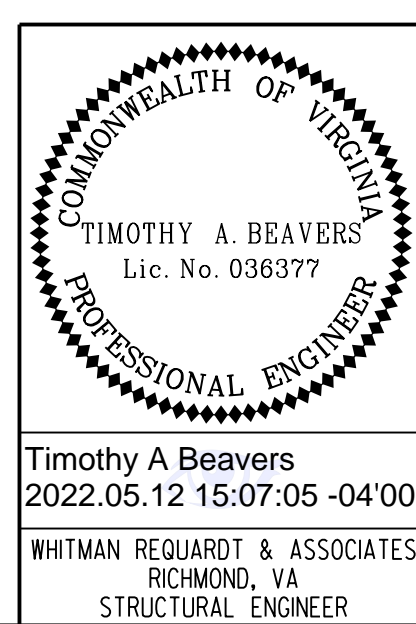
LEDGER BOARD PART ELEVATION  
 Scale: 3" = 1'-0"



DECKING DETAILS  
 Scale: 3" = 1'-0"



Whitman, Requardt & Associates, LLP



Timothy A Beavers  
 2022.05.12 15:07:05 -04'00'  
 WHITMAN REQUARDT & ASSOCIATES  
 RICHMOND, VA  
 STRUCTURAL ENGINEER

EMERGENCY POLICE - FIRE - RESCUE 911		MAY 2020	
TOWN OF VIENNA, VIRGINIA DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180			
DEPARTMENT OF PUBLIC WORKS 703-255-6380		FREEMAN STORE PEDESTRIAN BRIDGE SUPERSTRUCTURE DETAILS	
PROJECT NO: EN17-153-115			
PLAN NO.	DESIGNED: JRM	SHEET	
	DRAFTED: CMD	15 of 17	
	CHECKED: TAB		
APPROVED BY THE DEPARTMENT OF PUBLIC WORKS			

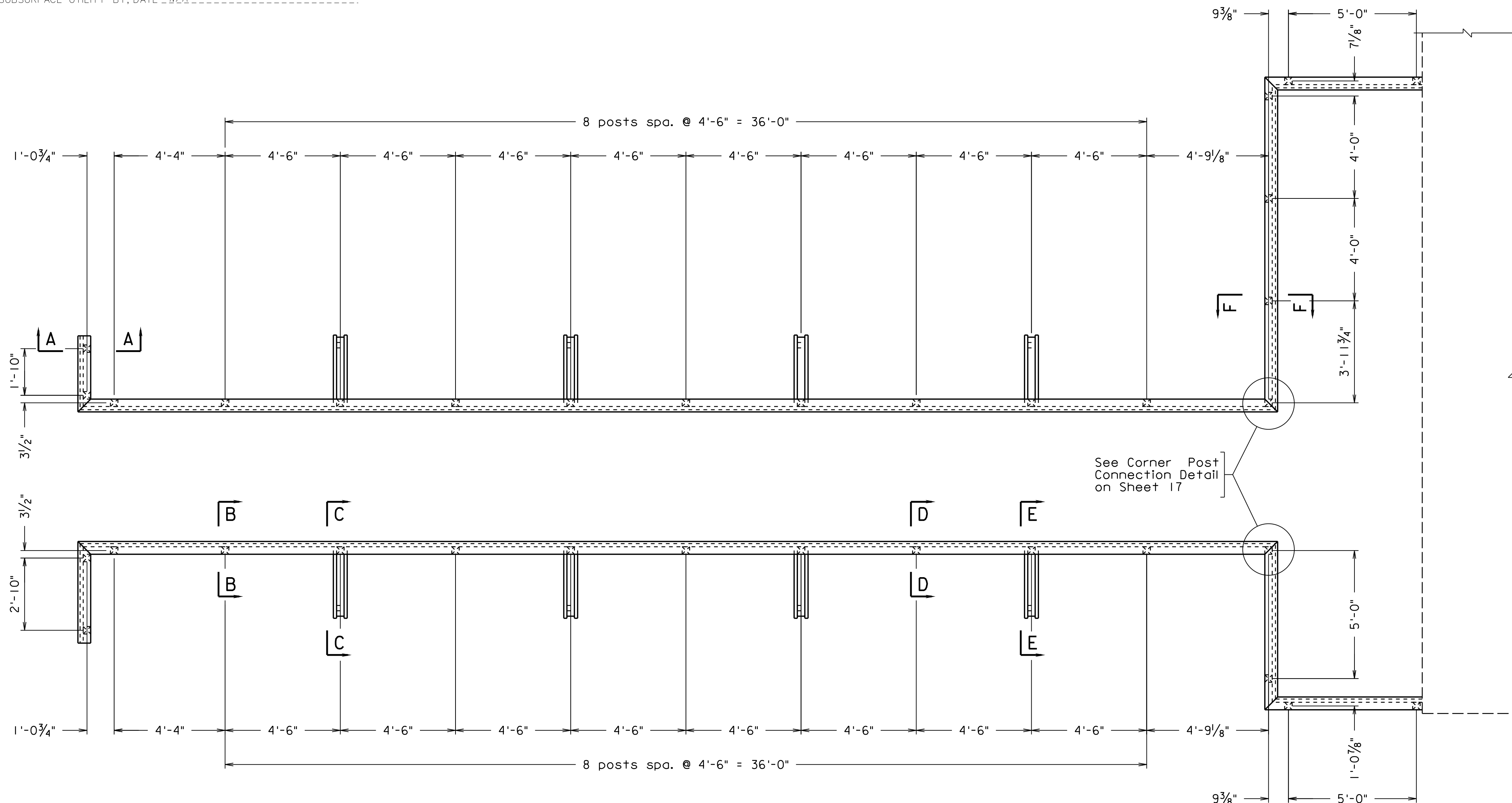
Scale: 1/2" = 1'-0" Unless otherwise noted.

UPC111404\_015.dgn



PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

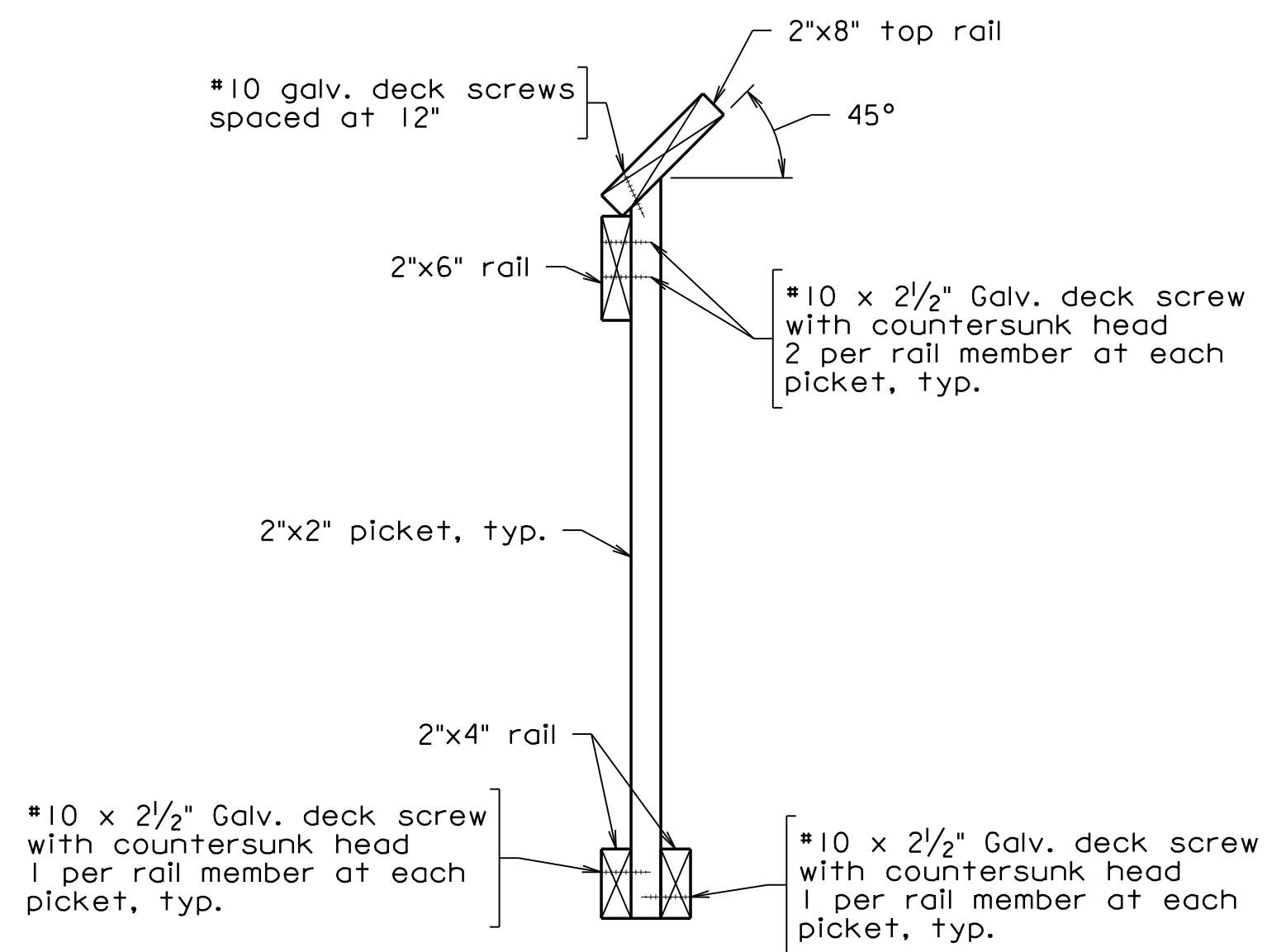
STATE	FEDERAL AID		STATE	
ROUTE	PROJECT	ROUTE	PROJECT	
VA.		N/A	UPC 111404, EN17-153-115	



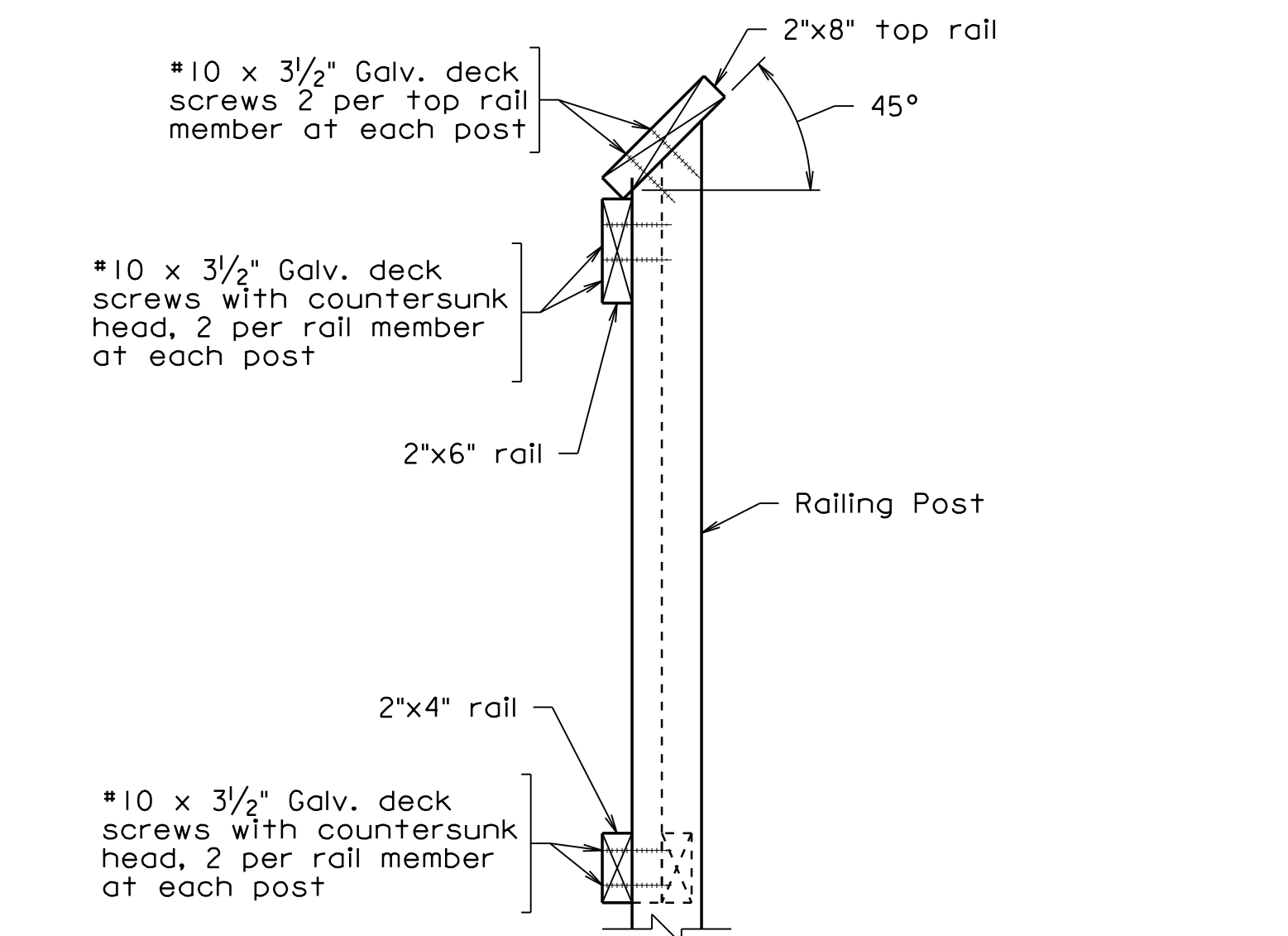
RAILING PLAN

RAILING ELEVATION

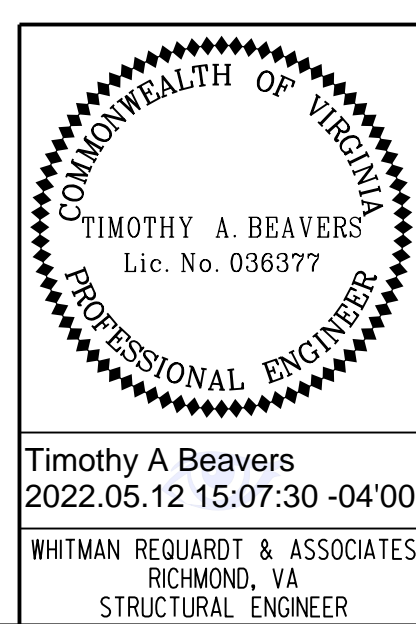
Notes:  
 See Sheet 17 for railing sections and details.  
 Round all edges of the rails exposed to pedestrians.  
 Timber for railing components that are considered hand contact surfaces to include top rail, rails, pickets and railing posts shall be treated in accordance with section 236.02(c)7 of the specifications.



TYPICAL RAIL AND PICKET SECTION  
 Not to Scale



TYPICAL RAIL AND POST SECTION  
 Not to Scale



EMERGENCY POLICE - FIRE - RESCUE 911		MAY 2020	
TOWN OF VIENNA, VIRGINIA DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180			
DEPARTMENT OF PUBLIC WORKS 703-255-6380		FREEMAN STORE PEDESTRIAN BRIDGE RAILING PLAN AND ELEVATION	
PROJECT NO: EN17-153-115			
PLAN NO.	DESIGNED: JRM	SHEET	
	DRAFTED: CMD	16 of 17	
	CHECKED: TAB		
APPROVED BY THE DEPARTMENT OF PUBLIC WORKS			

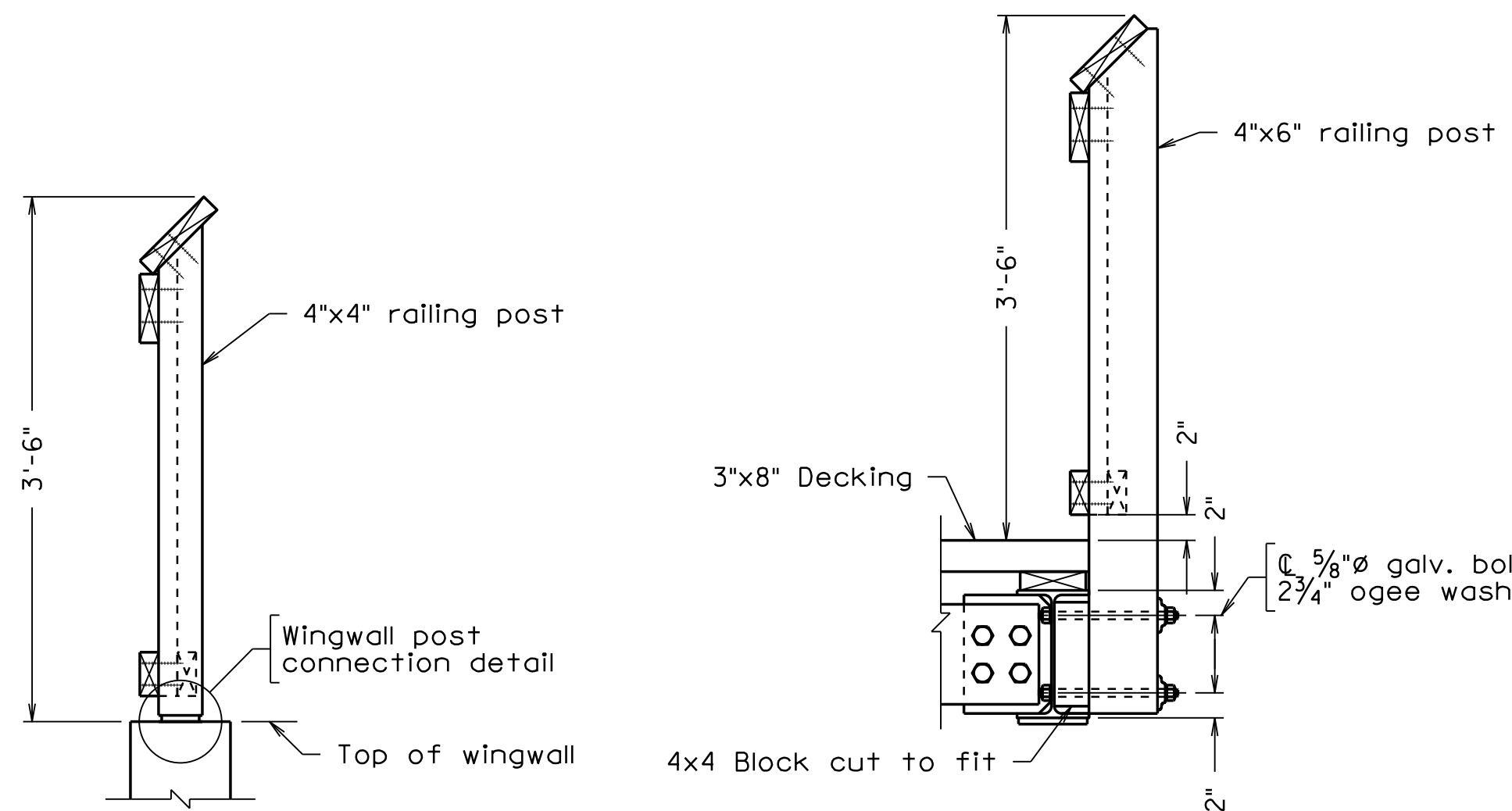
Scale: 3/8" = 1'-0" Unless otherwise noted.

UPC 111404\_016.dgn

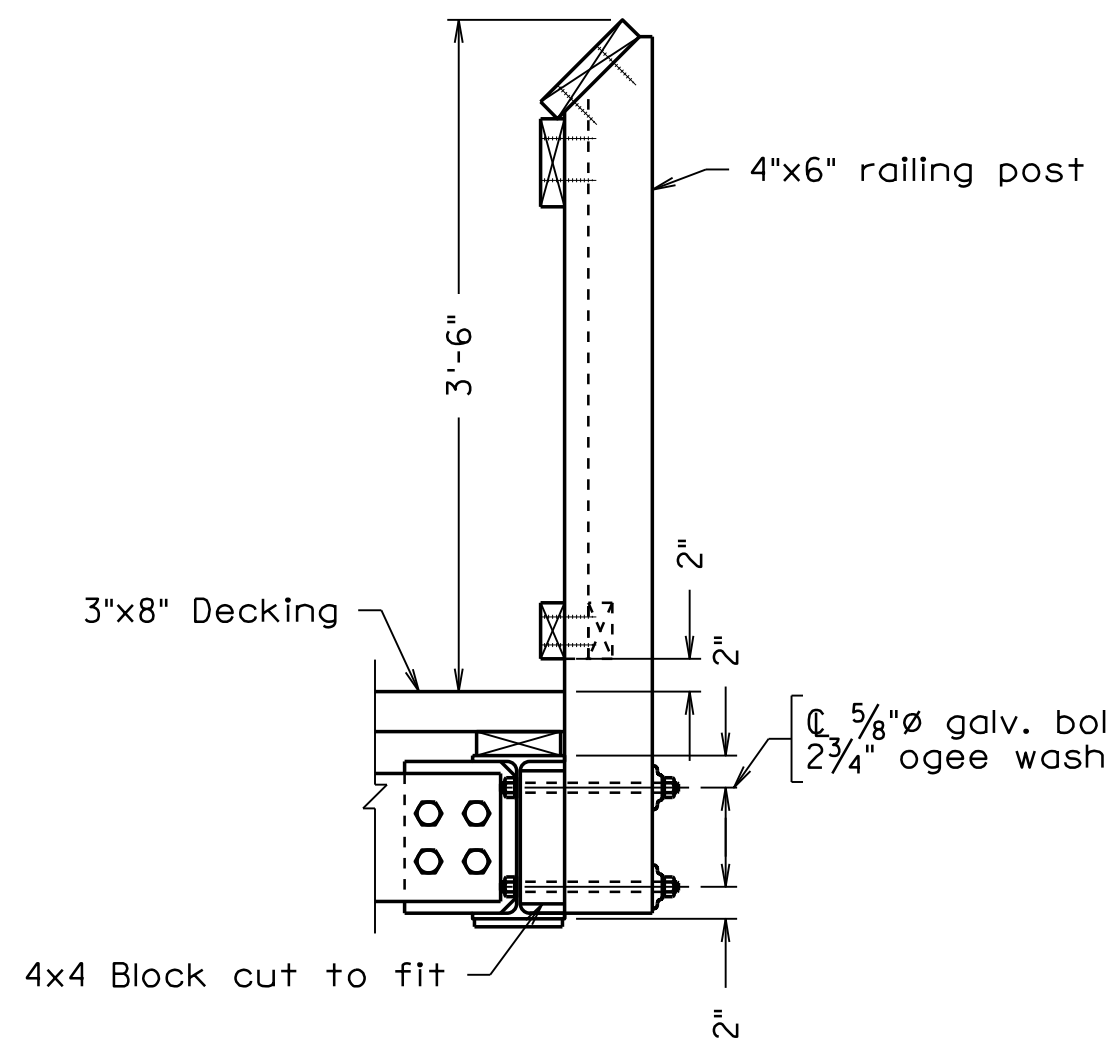


PROJECT MANAGER: MICHAEL J. GALLAGHER, P.E. (703) 255-6380  
 SURVEYED BY, DATE: RICE ASSOCIATES (703) 968-3200, AUG. 2018  
 DESIGN BY: WHITMAN, REQUARDT & ASSOCIATES, LLP (703) 293-9717  
 SUBSURFACE UTILITY BY, DATE: N/A

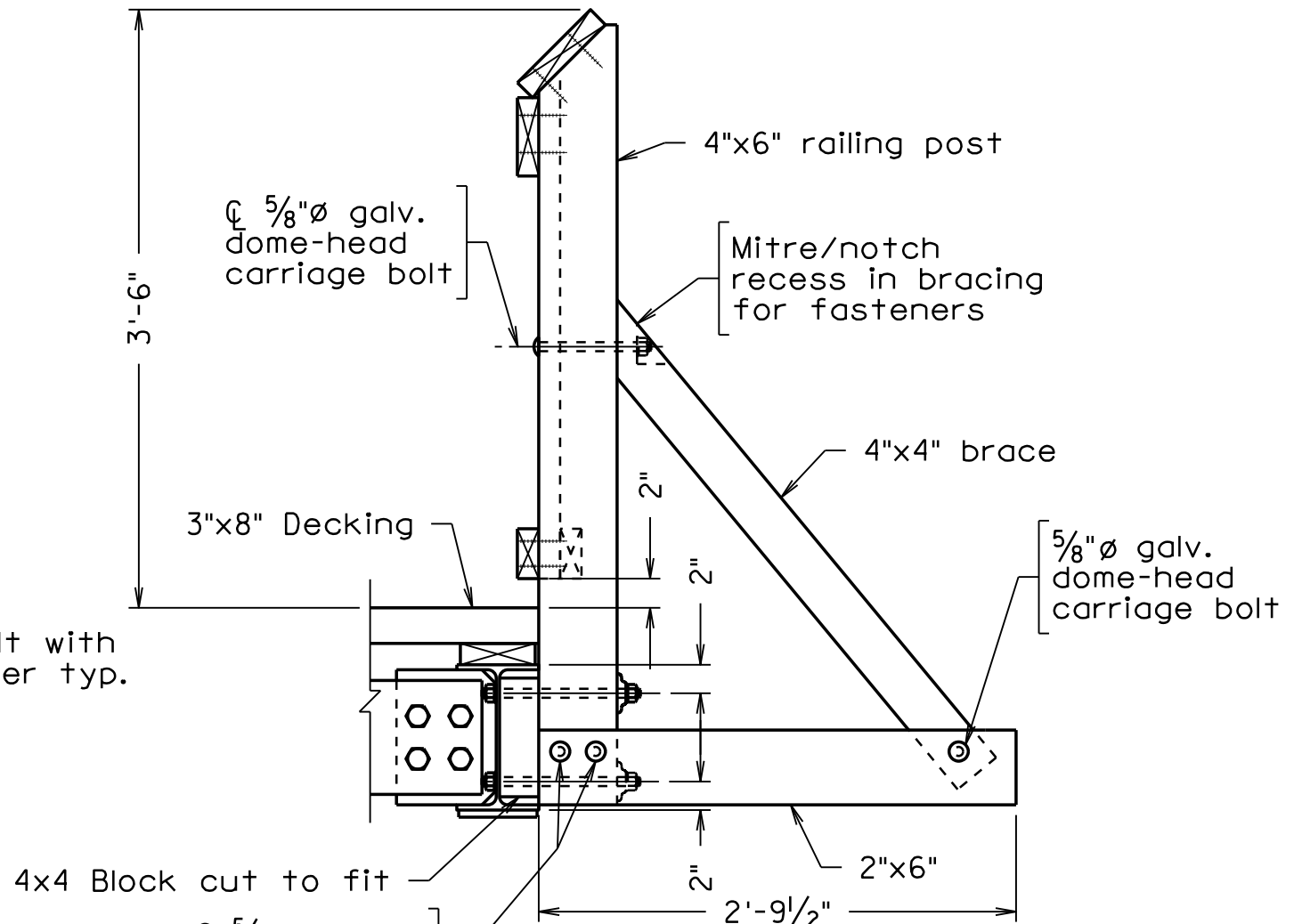
STATE	FEDERAL AID		STATE	
ROUTE	PROJECT	ROUTE	PROJECT	
VA.		N/A	UPC 111404, EN17-153-115	



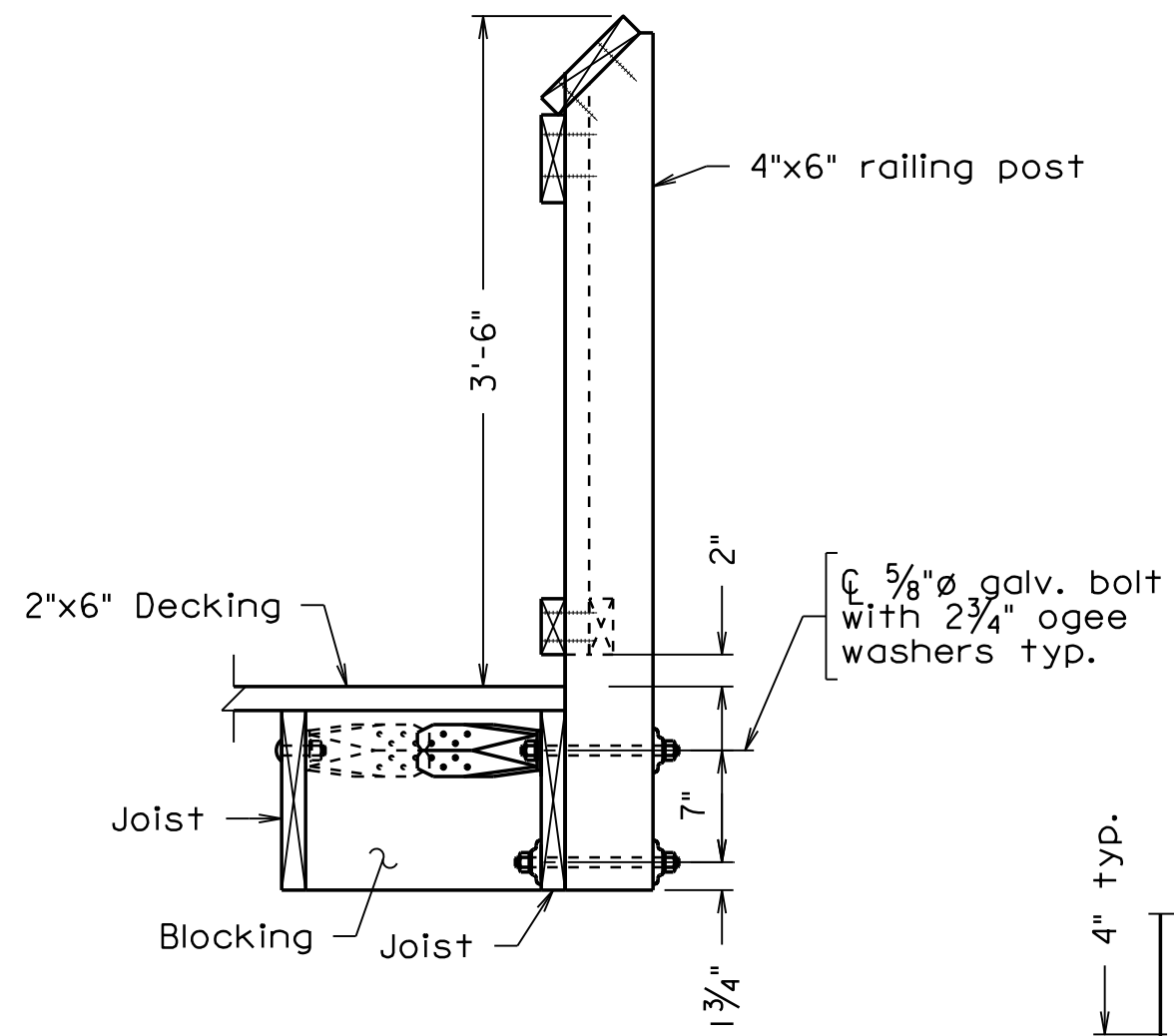
**SECTION A-A**  
 Post Connection at Wingwall  
 Scale: 1" = 1'-0"



**SECTION B-B**  
 Post Connection to Steel Span a  
 Scale: 1" = 1'-0"

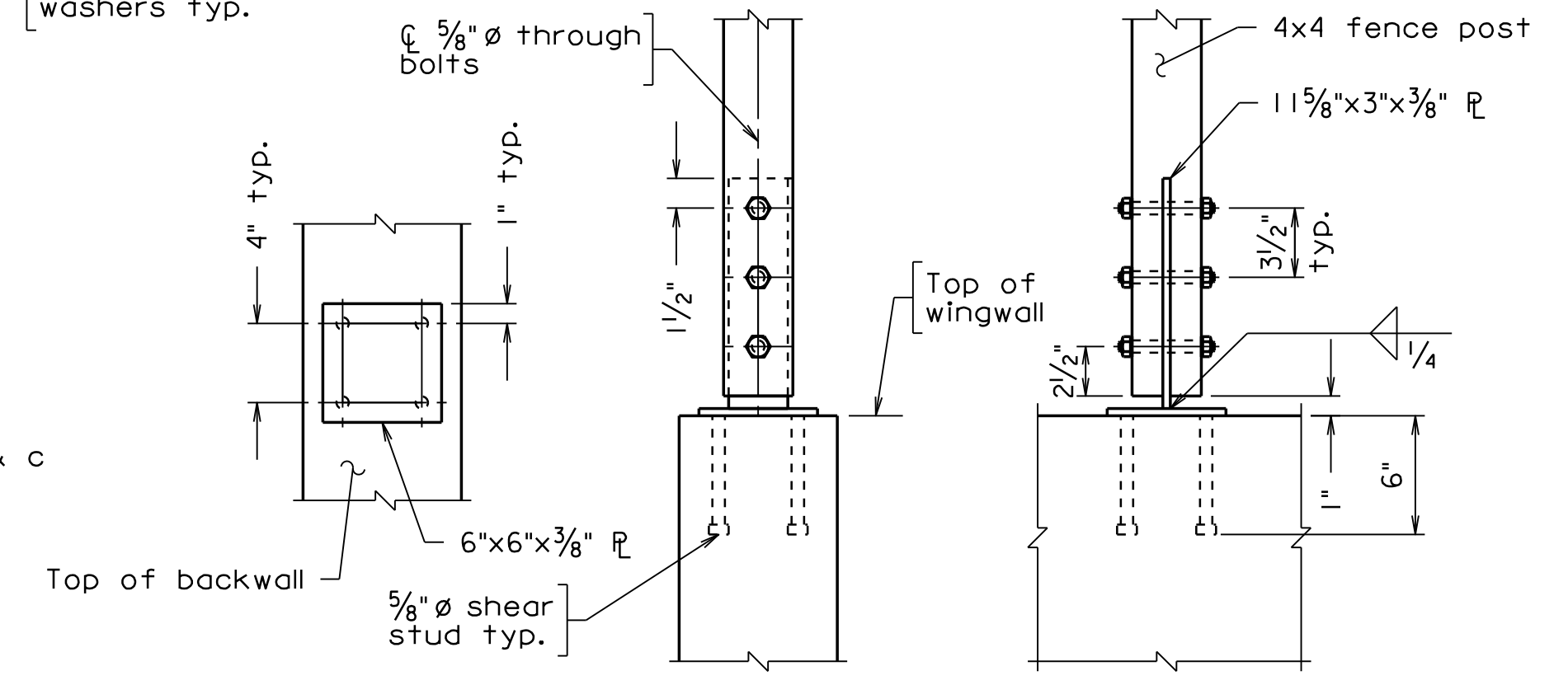


**SECTION C-C**  
 Post Connection to Steel Span a with Kicker  
 Scale: 1" = 1'-0"

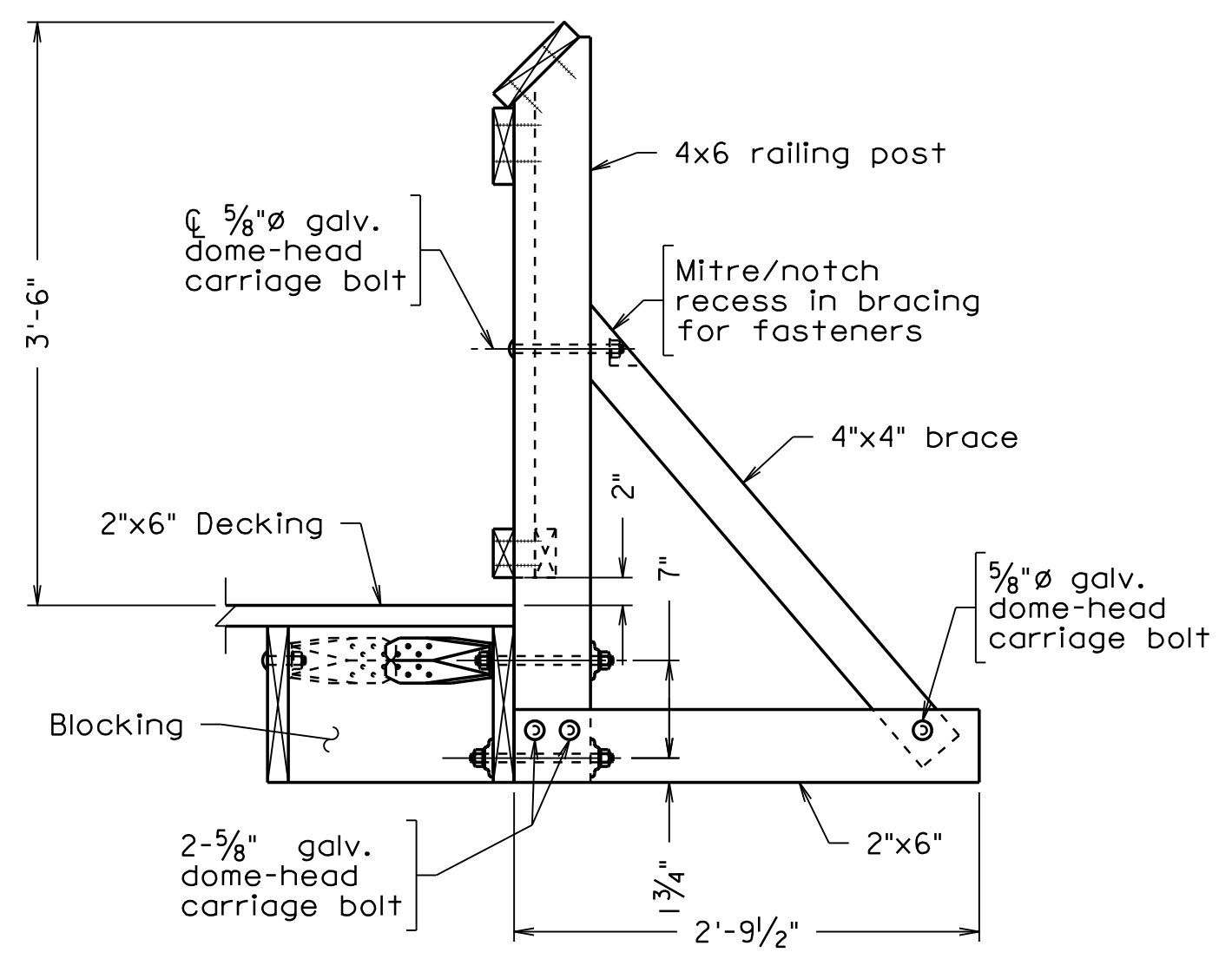


**SECTION D-D**  
 Post Connection to Timber Spans b & c  
 Scale: 1" = 1'-0"

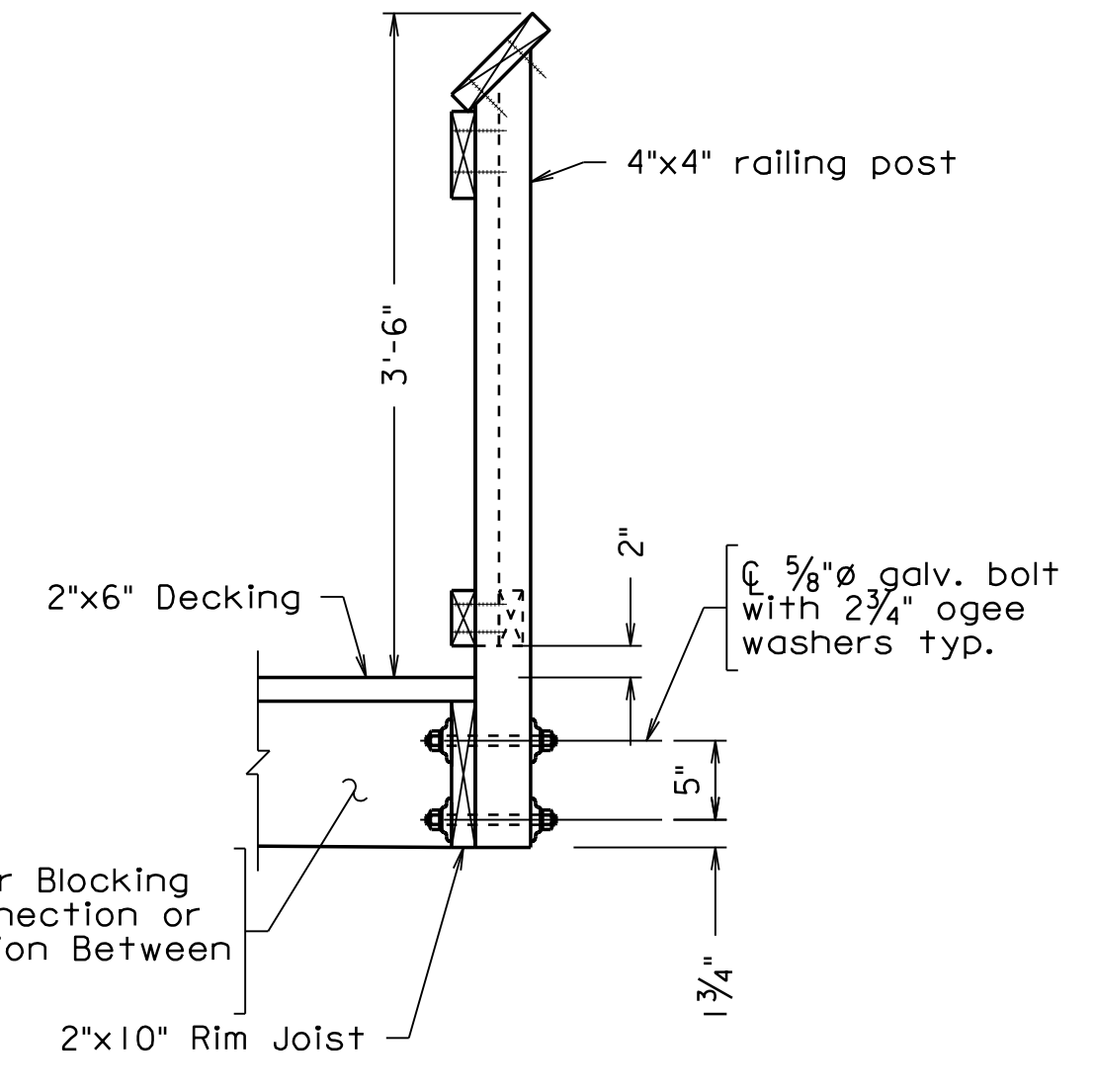
Notes:  
 All hardware for timber connections, including nails shall be hot dipped galvanized in accordance with VDOT Specifications or stainless steel.  
 All bolts used in railing post connections shall be 5/8" galvanized with 2 3/4" ogee washers unless otherwise noted.  
 Hold-down anchors at railing posts shall be Simpson Strong-Tie HDU2 or approved equal.



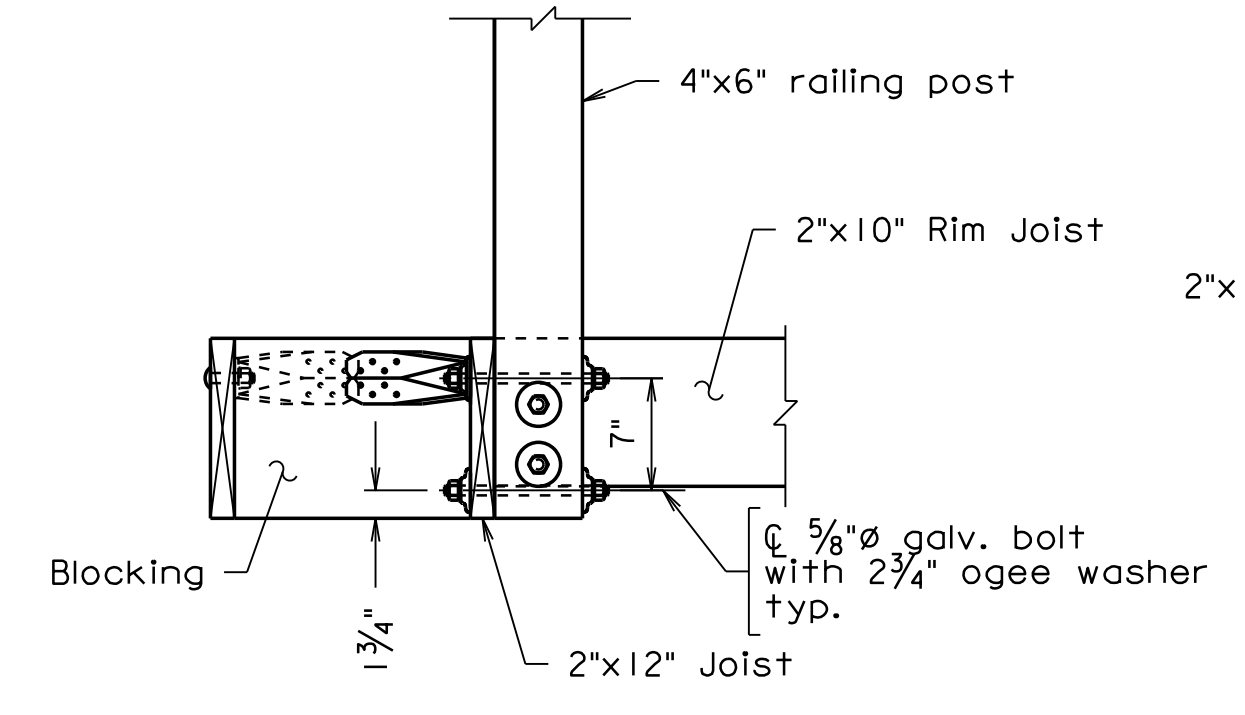
**WINGWALL POST CONNECTION DETAIL**  
 Scale: 1/2" = 1'-0"



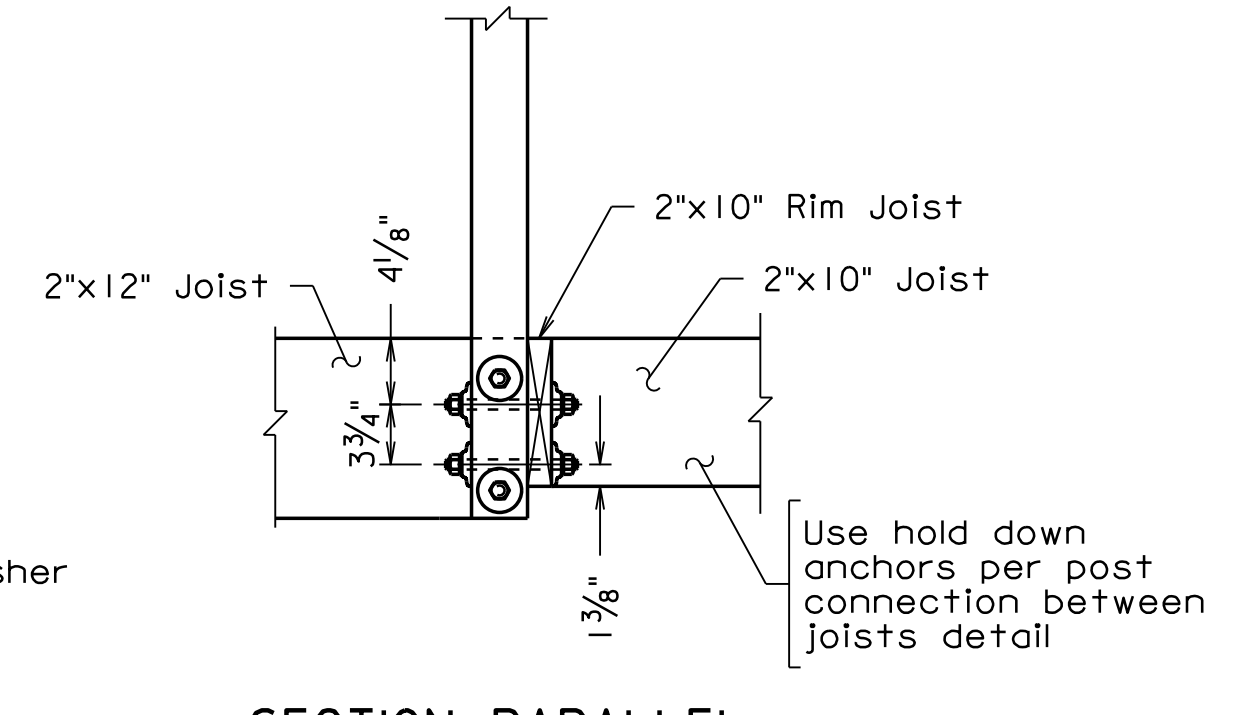
**SECTION E-E**  
 Post Connection to Timber Spans b & c with Kicker  
 Scale: 1" = 1'-0"



**SECTION F-F**  
 Post Connection to Timber Span d  
 Scale: 1" = 1'-0"

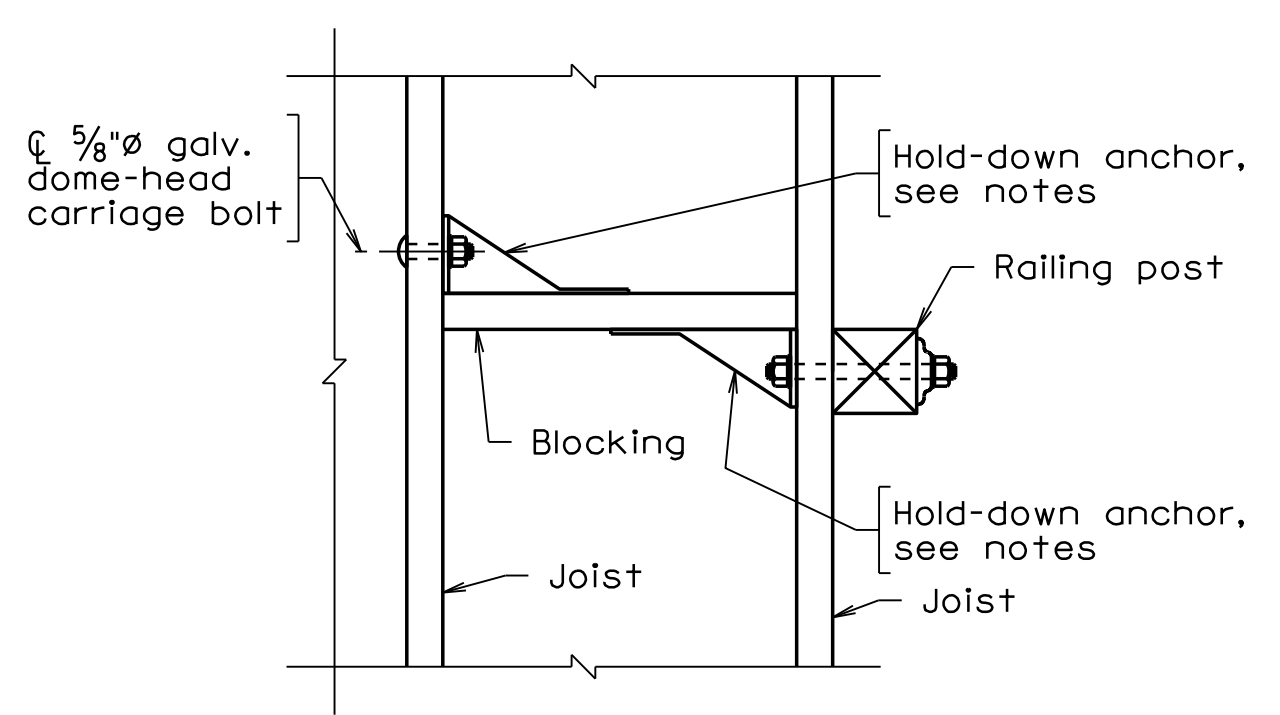


**SECTION TRANSVERSE TO BRIDGE**

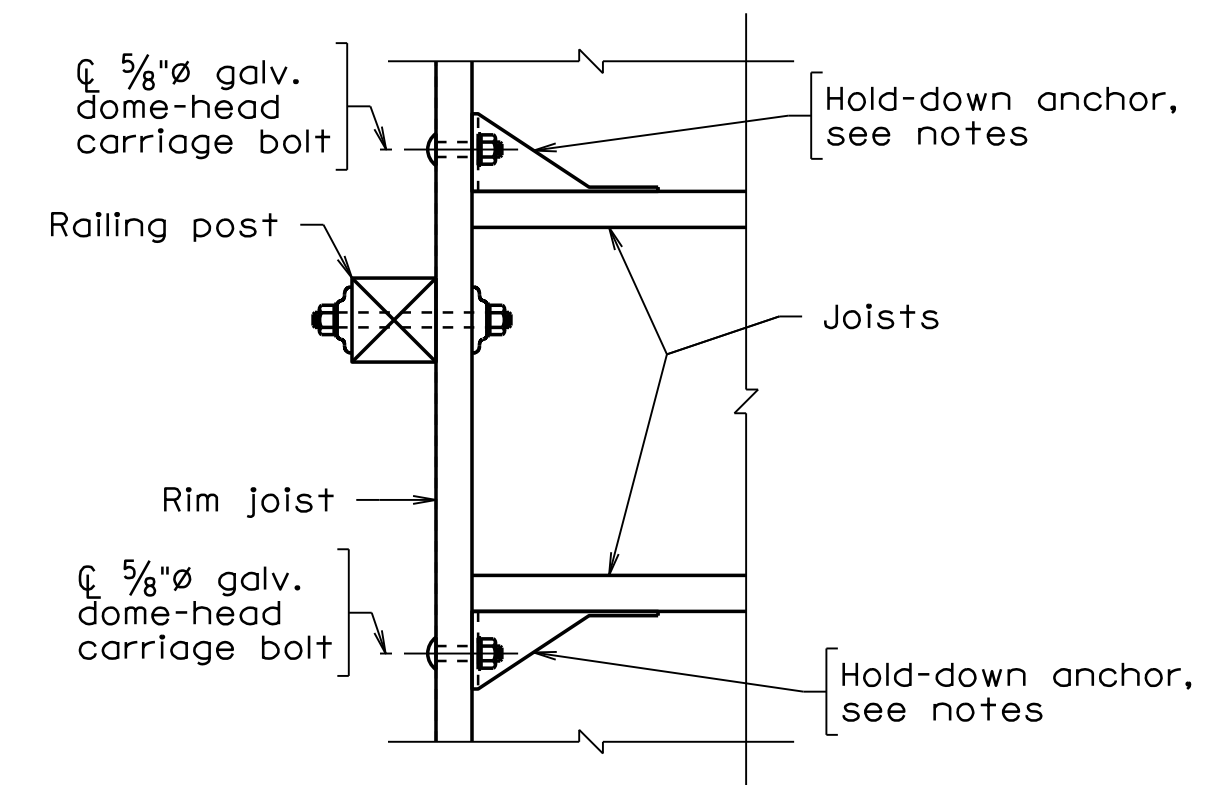


**SECTION PARALLEL TO BRIDGE**

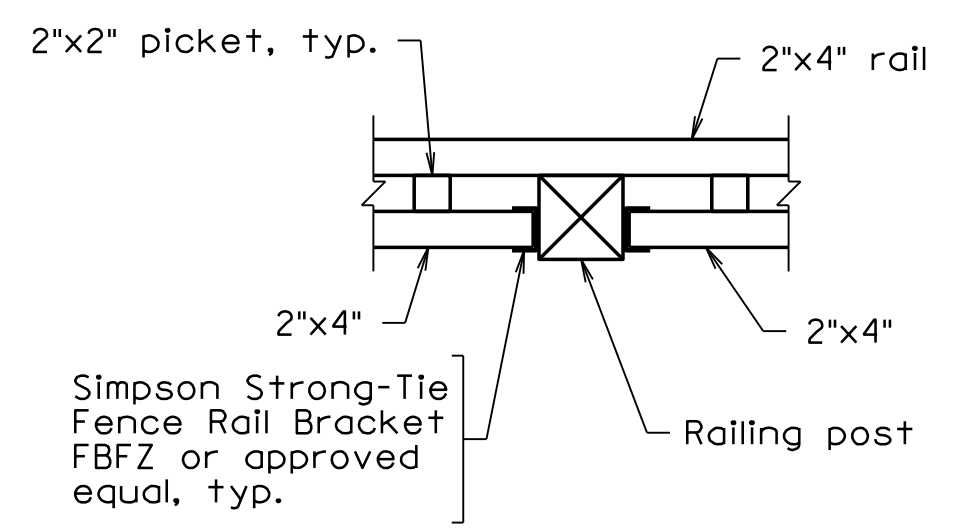
Note: Decking and lower rail not shown for clarity  
**CORNER POST CONNECTION DETAIL**  
 Scale: 1" = 1'-0"



**POST CONNECTION DETAIL**  
 Timber Spans b, c, & d  
 Scale: 1/2" = 1'-0"



**POST CONNECTION BETWEEN JOISTS DETAIL**  
 Timber Span d  
 Scale: 1/2" = 1'-0"

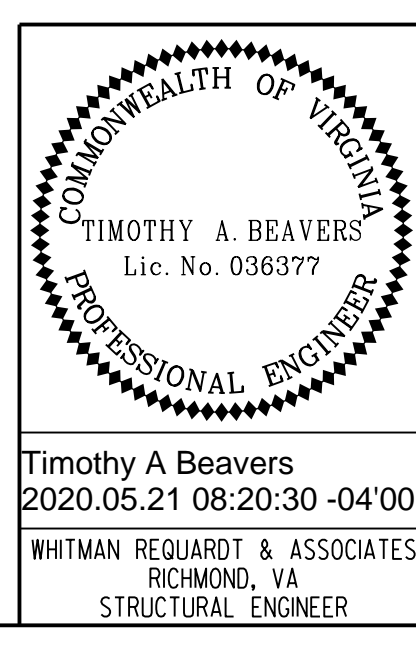


**SECTION G-G**  
 Scale: 1/2" = 1'-0"

Scale: 1" = 1'-0" Unless otherwise noted.



EMERGENCY POLICE - FIRE - RESCUE 911		MAY 2020	
TOWN OF VIENNA, VIRGINIA DEPARTMENT OF PUBLIC WORKS 127 CENTER STREET S. VIENNA, VIRGINIA 22180			
DEPARTMENT OF PUBLIC WORKS 703-255-6380		FREEMAN STORE PEDESTRIAN BRIDGE RAILING SECTIONS AND DETAILS	
PROJECT NO: EN17-153-115			
PLAN NO.	DESIGNED: JRM	SHEET	
	DRAFTED: CMD	17 of 17	
	CHECKED: TAB		
APPROVED BY THE DEPARTMENT OF PUBLIC WORKS			



Timothy A Beavers  
 2020.05.21 08:20:30 -04'00'  
 WHITMAN REQUARDT & ASSOCIATES  
 RICHMOND, VA  
 STRUCTURAL ENGINEER

UPC111404\_017.dgn