



LUMP SUM BID ITEMS - Paving		
Mobilization	1	LS
Site Clearing	1	LS
Site Restoration	1	LS
Removal of Existing Structures	1	LS
MEASURED QUANTITY BID ITEMS - Paving		
Concrete Sidewalk (6")(AE)	251	sf
Reinforcing Steel (Grade 60)(Epoxy Coated)	10	lb
Thickened Edge Sidewalk	23	lf
Drilling and Grouting	2	ea

LUMP SUM BID ITEMS - Bridge		
Electric Lighting System	1	LS
Fence (Special) (Removal and Resetting)	8	lf
MEASURED QUANTITY BID ITEMS - Bridge		
Paving Brick	54	sy
Excavation, Common (Contractor Furnished)	6	cy
Fill, Compacted (95% Density)	6	cy
Retaining Wall (MBW)	70	sff
Concrete Surface Repair	62	sf
Epoxy Resin Crack Repair	233	lf
Reinforcing Steel (Repair)(Grade 60)(Set Price)	1	lb
Drilling and Grouting	8	ea

LUMP SUM BID ITEMS - Carthalite		
Cleaning	1	LS
MEASURED QUANTITY BID ITEMS - Carthalite		
Patching	9	sf
Crack Injection	60	lf
Void Injection	2	sf
Surface Toning	8	sf
Graffiti Mitigation	8	sf

LUMP SUM BID ITEMS - Cast Stone		
Cleaning	1	LS
Repointing	1	LS
Sealant at Lamp to Pillar Joints	1	LS
MEASURED QUANTITY BID ITEMS - Cast Stone		
Patching	30	sf
Crack Injection	30	lf
Cap Stones	3	ea
Post Panel	1	ea
Blocks	15	ea
Graffiti Mitigation	26	sf

LUMP SUM BID ITEMS -Traffic		
Traffic Signal Adjustment	2	ea
Traffic Control	1	LS
MEASURED QUANTITY BID ITEMS -Traffic		
Signing, Elec. Portable Message (each per day)	30	day

LUMP SUM BID ITEMS - Landscaping		
Buffalo Sod	268	sy

MEASURED QUANTITY BID ITEMS - Erosion Control BMP		
BMP, Back of Curb Protection, Curlex	172	lf

ADD ALTERNATE 1 MEASURED QUANTITY BID ITEMS - Bridge		
Bridge Painting (Organic Zinc w/ Acrylic System) (Railing)	415	lf

ADD ALTERNATE 2 MEASURED QUANTITY BID ITEMS - Bridge		
Wall Jacking	2	ea

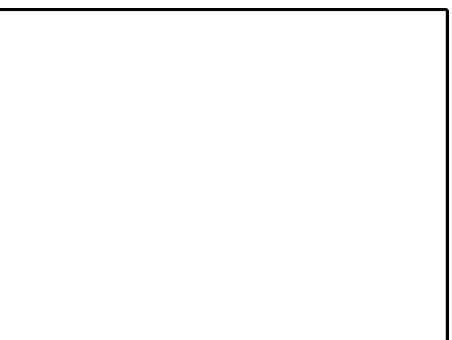
ADD ALTERNATE 3 LUMP SUM BID ITEMS - Bridge		
Masonry Coating - (Superstructure)	1	LS

ADD ALTERNATE 4 LUMP SUM BID ITEMS - Bridge		
Masonry Coating - (Substructure)	1	LS

ADD ALTERNATE 5 LUMP SUM BID ITEMS - Bridge		
Cleaning and Renewable Coating Application	1	LS

See "General Notes," sheet for ranking of priority of Add. Alternates.

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1	Title Sheet
2	Bridge Quantities and Index to Sheets
3	General Notes
4	Construction Layout
5	Typical Section
6-15	Conservation Details
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17	Bridge Repair - I
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19	Concrete Surface and Crack Repair - Locations
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21	Brick Settlement Repair
22	Drain Tube Locations
23	Replacement of Damaged Bricks
	Standards
24	Supports and Spacers for Reinforcing Steel



CONSULTANTS:

MINISA BRIDGE REHABILITATION  
WICHITA, KANSAS  
CITY OF WICHITA

REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
SCALE:  
DATE:  
DESIGNED BY: PAM  
DRAWN BY: PAM  
CHECKED BY: WBS

SHEET TITLE:  
**BRIDGE QUANTITIES AND INDEX TO SHEETS**

SHEET NO.  
**2**  
SHEET 2 OF 35

**NOTES TO GENERAL CONTRACTOR:**

- 1) Complete all paving brick work requiring use of a mechanical plate vibrator/compactor before conservation work begins.
- 2) Coordinate work with Conservator to establish access to the non-traffic (back) face of the handrail via falsework, platforms, person-lifts, or other method to be approved by the City and Conservator. The cost of this access method is subsidiary to other bid items.
- 3) Ensure sidewalk access is maintained through the project for pedestrian traffic and Conservator access to traffic face of handrail, subsidiary to Traffic Control bid items.

**ADDITIONAL ALTERNATE WORK**

Four additional Alternate Work bid items are included in these plans for inclusion in this project at the request of the City of Wichita only. From highest priority and likeliness to be requested to lowest, they are as follows.

- 1) **Steel Handrail Painting**  
At request of City of Wichita only, clean and paint all surfaces of the metal handrail on the bridge, retaining wall wing extensions, and on the southeast retaining wall. This work will consist of exposing an additional 3/4" length of steel wherever steel handrail components penetrate or contact cast stone faces. Taking care to protect cast stone or other non-steel components, blast clean all surfaces of the steel handrail to meet SSPC-SP6 Specifications (latest revision). Paint steel with an approved organic zinc primer with a waterborne acrylic finish coat, taking care to protect non-steel surfaces from overspray. The color of the finish coat shall be red and match the red color of the existing Carthalite. Submit color samples to be approved by the City. Fill areas of removed cast stone to original face using an appropriate material to be approved by the City. This work will be paid for by the bid item, "Bridge Painting (Organic Zinc w/Acrylic System) (Railing)".
- 2) **Wall Jacking**  
At request of City of Wichita only, perform wall jacking at two retaining walls located at the northwest and southwest retaining walls. Contractor to submit plans for approval for permanent jacking of walls to close settlement gaps that have occurred. Indicate intended foundation, wall lift, and jacking materials and means for protecting them on a permanent basis. Describe intended means to backfill area under lifted blocks. Wall rotation shall be monitored through lifting process to verify overturning is not occurring. This work will be paid for by the Additional Alternate bid item, "Wall Jacking," paid "each" by retaining wall.
- 3) **Masonry Coating (Superstructure)**  
At request of City of Wichita only, coat visible portions of the superstructure, including bottom flange of exterior-most precast I-girders, bottom and exterior faces of exterior cast-in-place girders, overhang brackets, and bottom surface of the overhang with paint. Clean all existing vandalism from concrete surfaces before applying masonry coat. This cleaning will be subsidiary to the bid item, "Masonry Coating (Superstructure)." Do not complete this work until any required concrete surface repair or epoxy resin crack repair activities have been completed on surfaces to be coated.
- 4) **Masonry Coating (Substructure)**  
At request of City of Wichita only, coat visible abutment walls and wings from top of ground to bottom of abutment diaphragm, and pier walls from top of ground to bottom of pier cap for Piers No. 1, No. 2, and No. 6 with paint. Clean all existing vandalism from concrete surfaces before applying masonry coat. This cleaning will be subsidiary to the bid item, "Masonry Coating (Substructure)." Do not complete this work until any required concrete surface repair or epoxy resin crack repair activities have been completed on surfaces to be coated.
- 5) **Cleaning and Renewable Coating Application**  
At request of City of Wichita only, clean and coat two bronze plaques with an approved renewable protective coating. This work will be paid for by the bid item, "Cleaning and Renewable Coating Application".

**GENERAL NOTES**

**REMOVAL OF EXISTING STRUCTURES:** For removal of substructure lighting system near Abutment No. 1, see "Bridge Repair - II" sheet. For removal of specified areas of existing sidewalk and curb required for pavement work, see "Sidewalk and Curb Repair" sheet. "Removal of Existing Structures," Lump Sum will be full payment for these items. All materials removed from the existing structure shall become the property of the Contractor. Remove this material from the site.

**BROKEN CONCRETE:** Waste the non-pigmented broken concrete from the existing bridge on sites provided by the Contractor and approved by the Engineer.

Any Carthalite (pigmented material) found to have broken from the structure are to be left in place by the Bridge and/or Pavement Contractor and brought to the immediate attention of the Conservator. The Conservator will be responsible for all modification, removal, or repair of Carthalite.

**EXISTING STRUCTURE:** Plans of the existing structure are on file and available for inspection by qualified bidders at  
Wichita City Hall  
455 N Main  
Wichita, KS 67202-1603  
7th Floor Engineering

A packet containing existing documentation of repairs will be included with submittal of these plans as an attachment or special provision.

**FALSEWORK PLANS AND SHOP DRAWINGS:** Use the U.S. Customary system of units on falsework plans and shop drawing details.

**REINFORCING STEEL:** All reinforcing steel dimensions are to the centerline of bars unless otherwise noted. All reinforcing steel shall conform to the requirements of ASTM A615, Grade 60.

Where non coated bars come in contact with epoxy coated bars, they need not be coated.

**EXISTING DIMENSION VERIFICATION:** Dimensions of the existing structure are based on old plans. Verify, by field measurement, the as built dimensions of the existing structure and submit such verification in writing to the Engineer. The verification will include sketches, drawings, photographs, and descriptions as needed to clearly define the as built dimensions that will be incorporated in the new construction.

**TEMPORARY CONSTRUCTION LOADS:** The Contractor will not stockpile construction materials, debris/rubble or place equipment weighing more than 20 tons on the bridge without prior written approval by the KDOT Area Engineer. For bridges with highway traffic on or under the bridge the Contractor will provide plans showing the location, quantity and weight of the proposed materials, debris or equipment weighing more than 20 tons. These plans, and accompanying calculations, will bear the Seal of the Contractor's Engineer before approval is granted. The Contractor's Engineer will use AASHTO Specifications for limitations on structural capacities, as the structure is found in the field.

**CONSERVATOR WORK:** See Conservator Plans and Project Special Provisions for conservator work. Contractor must select a prequalified Conservator for the work as shown in the Project Special Provisions.

**EPOXY BONDING AGENT:** Prepare all existing concrete surfaces which will be in contact with new concrete with an approved Epoxy Bonding Agent in accordance with the manufacturer's recommendations. Provide material for Epoxy Resin Bonding Systems per KDOT Specification Division 1700. This is subsidiary to the bid item "Concrete Surface Repair", sf.

**TEMPERATURE:** The design temperature for all dimensions is 60° F.

**QUANTITIES:** Items not listed separately in the Summary of Quantities are subsidiary to other items in the proposal.

**DIMENSIONS:** All dimensions shown on the design plans are horizontal dimensions unless otherwise noted. Make necessary allowances for roadway grade and cross slope.

**DRILLING AND GROUTING:** This item shall consist of grouting reinforcing steel, anchor bolts, tie bars, or dowel bars into the existing concrete, where required by the Engineer, with an epoxy grout. Follow KDOT Specifications 842 and any associated Special Provisions. Follow the manufacturer's directions for mixing, application and curing. The tools, materials, labor and incidentals necessary to complete the work shall be paid for per each by the bid item, "Drilling and Grouting".

**ELECTRIC LIGHTING SYSTEM:** Replace malfunctioning light sensor on always-on light fixture and remove and replace damaged glass panes on fixtures as needed. Effort shall be made to match the color and style of existing glass panes to existing, intact panes. The bid item, "Electric Lighting System," LS shall be full payment for this work.

**SITE CLEARING:** Remove brush from under the bridge in front of both abutments and all retaining walls. Brush removal under the bridge is limited to between Abutment No. 1 and Pier No. 1 and between Pier No. 6 and Abutment No. 2. Tree stumps not fully removed will be treated with a stump killing chemical to be approved by the Engineer.

Remove logs piled against Piers No. 2, 3, 4, and 5 if present.

**FENCE (SPECIAL) (REMOVING AND RESETTNG):** This will be payment for removal of damaged anchors, touch-up of damaged paint, field straightening, and remounting of repaired pedestrian fence section on the North East retaining wall. See "Bridge Repair - II" sheet for details.

**RETAINING WALL (MBW):** Repair four damaged modular block retaining walls. These locations are near the northwest, and southwest wings. see "Bridge Repair - I" sheet for details.

**FILL, COMPACTED (95% DENSITY):** Correct local erosion near the ends of three retaining walls. These locations are near the northeast, southwest, and northwest wings. This local grading will consist of compacting material (Type B) in low areas to match the adjacent slope.

**EXCAVATION, COMMON (CONTRACTOR FURNISHED):** Excavation of material from a location to be approved by the Engineer for local grading will be paid for as, "Excavation, Common (Contractor Furnished)".

**TRAFFIC SIGNAL ADJUSTMENT:** Contractor to adjust signal timing and phasing for the summer closure months at the intersections of 13th and Biting and 13th and Waco. Timing and phasing will be provided by the Engineer. Contractor will adjust signal timing based on observed field observations by the Engineer after implementation. Contractor will return signal and phasing time to the original values when summer traffic closure is completed.



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CONSULTANTS:

**MINISA BRIDGE REHABILITATION**  
WICHITA, KANSAS  
CITY OF WICHITA

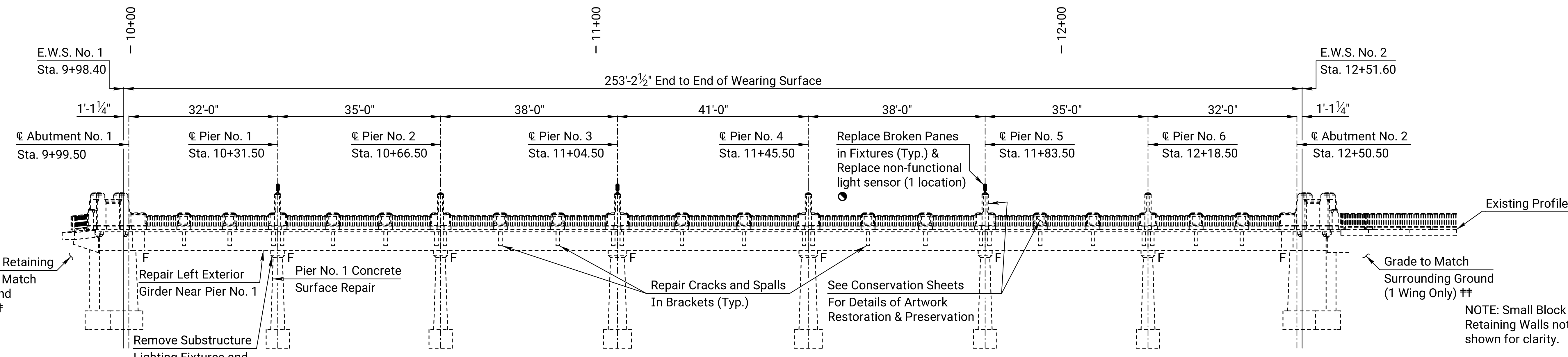
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SHEET TITLE:  
**GENERAL NOTES**

SHEET NO.  
**3**  
SHEET 3 OF 35

NOTE: Small Block Retaining Walls not shown for clarity.



**ELEVATION**  
 32' - 35' - 38' - 41' - 38' - 35' - 32'  
 Continuous Concrete Girders  
 43'-4" Roadway, 6'-0" Sidewalk Lt. & Rt., 0° Skew

Estimated Sodding Area (for information only):

Northeast Retaining Wall:	93.6 sy
Southeast Retaining Wall:	0 sy
Southwest Retaining Wall:	80.9 sy
Northwest Retaining Wall:	92.8 sy
Total:	267.3 sy

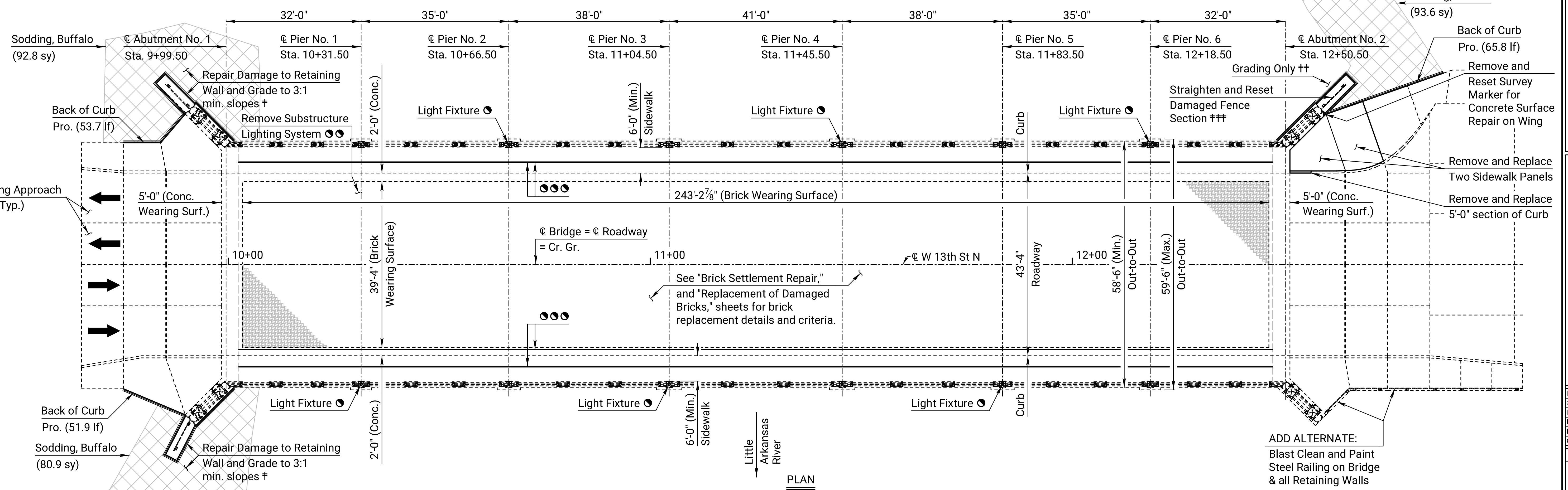
Estimated Back of Curb Protection (for information only):

Northeast Retaining Wall:	65.8 lf
Southeast Retaining Wall:	0 lf
Southwest Retaining Wall:	51.9 lf
Northwest Retaining Wall:	53.7 lf
Total:	171.4 lf

NOTE: Back of Curb Protection to be used for erosion control until placement of sod. Lengths and areas are approximate. Final quantities to be determined in field.

- † Grading and Retaining Wall Repair, see "Bridge Repair - I," sheet
- ‡‡ Grading without Retaining Wall Repair, see "Bridge Repair - I," sheet
- ‡‡‡ Repair Damaged Pedestrian Fence, see "Bridge Repair - II," sheet
- Repair Deck Lighting as needed, see "Bridge Repair - II," sheet
- Remove Substructure Lighting System, see "Bridge Repair - II," sheet
- Potential utility location, taken from existing plans, see, "Typical Section," sheet for details.


Scale: 1" = 12'



**PLAN**

Note: Topographic survey was not done for this project. Information shown is taken from aerial photos, existing plans, and site pictures. Right-Of-Way not shown.

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SHEET TITLE:  
**CONSTRUCTION LAYOUT**

SHEET NO.  
**4**  
 SHEET 4 OF 35

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MINISA BRIDGE REHABILITATION

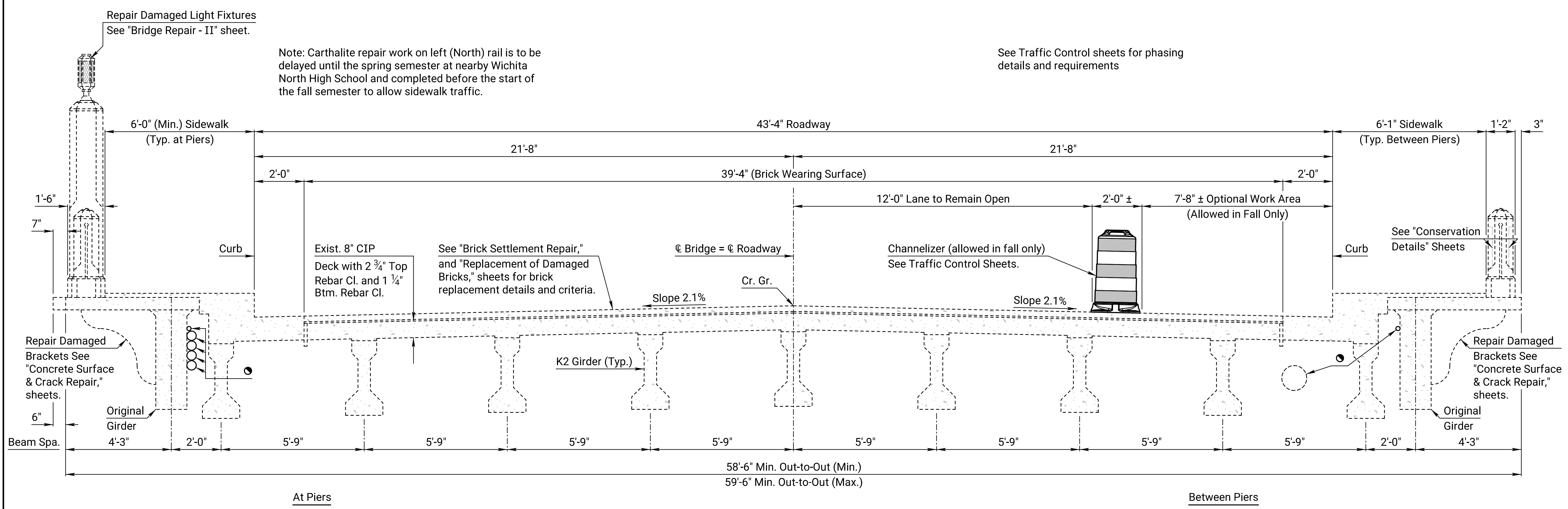
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SHEET TITLE:  
 TYPICAL SECTION

SHEET NO.  
 5  
 SHEET 5 OF 35



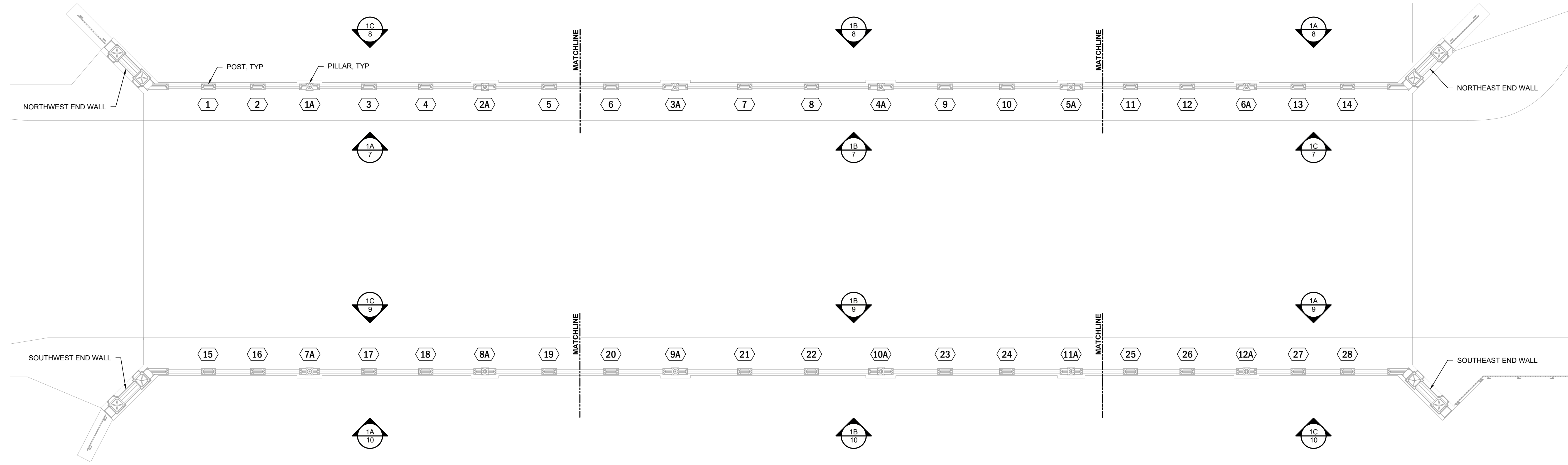
Note: Carthelite repair work on left (North) rail is to be delayed until the spring semester at nearby Wichita North High School and completed before the start of the fall semester to allow sidewalk traffic.

See Traffic Control sheets for phasing details and requirements

TYPICAL SECTION

● Utilities shown are from existing plans. Contractor to do their own utility locate to identify conflicts.

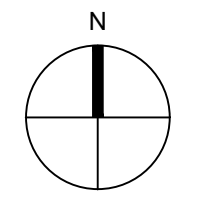
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**LEGEND**

XXX - ELEMENT ID

**1 CAST STONE REPAIR PLAN**  
 SCALE: 3/32" = 1'-0"



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**MINISA BRIDGE REHABILITATION**

WICHITA, KANSAS

CITY OF WICHITA

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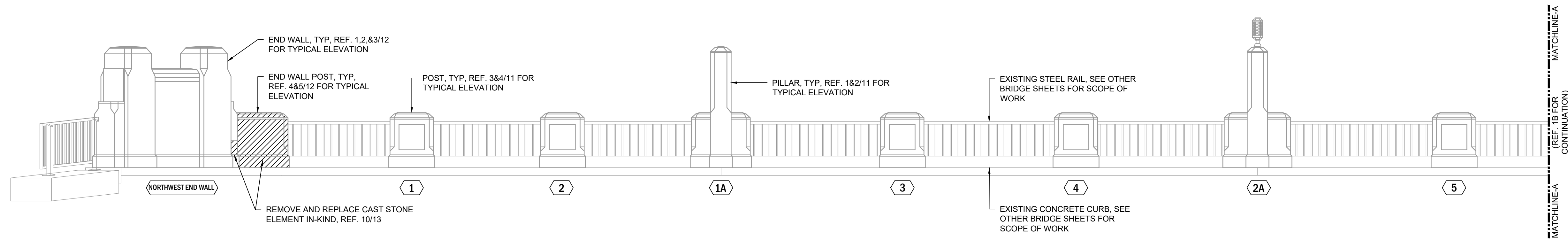
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**CAST STONE REPAIR PLAN**

SHEET NO.  
**6**

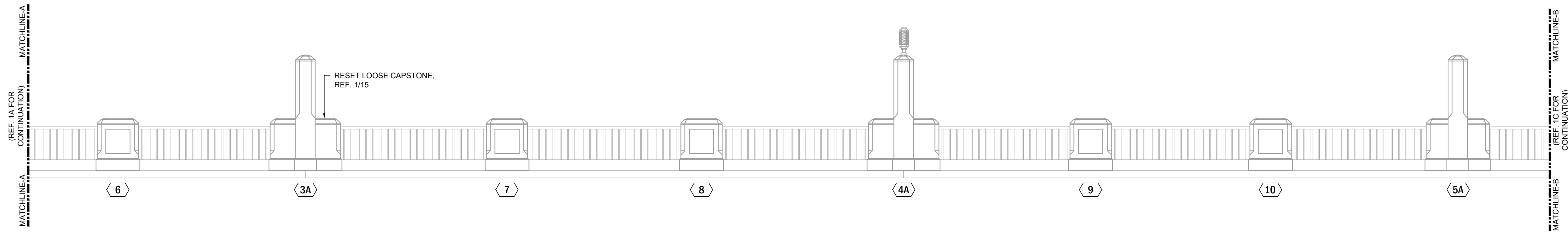
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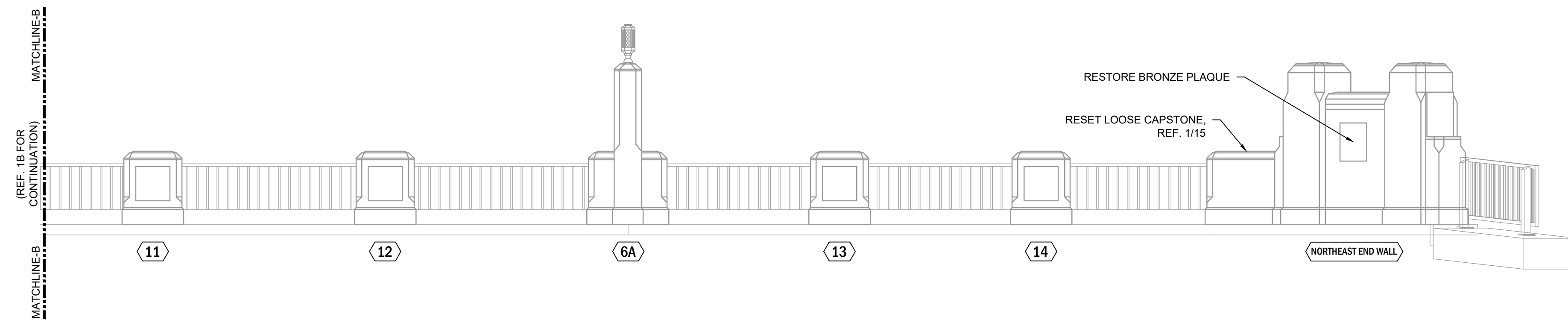
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**1A NORTH RAIL ROADSIDE ELEVATION 1A**  
SCALE: 1/4" = 1'-0"



**1B NORTH RAIL ROADSIDE ELEVATION 1B**  
SCALE: 1/4" = 1'-0"



**1C NORTH RAIL ROADSIDE ELEVATION 1C**  
SCALE: 1/4" = 1'-0"

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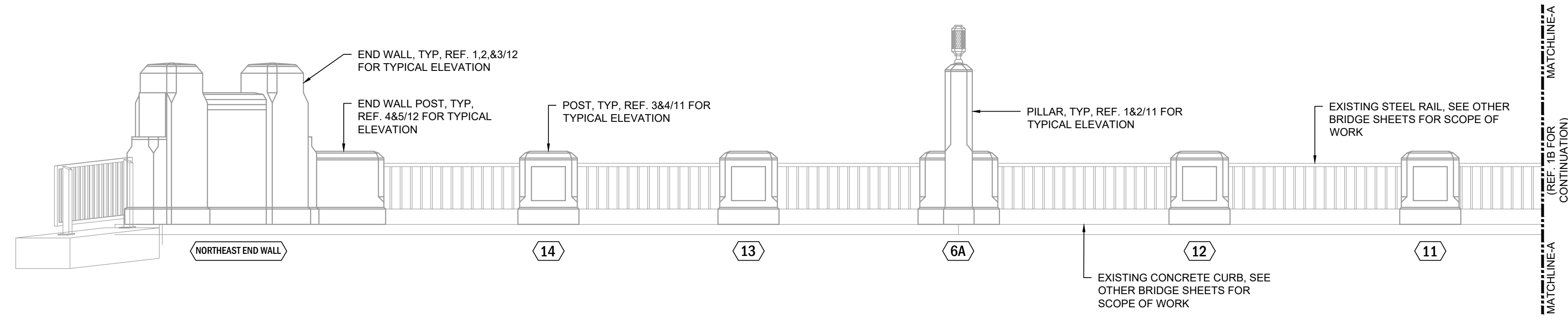
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**CAST STONE REPAIR  
 NORTH RAIL ROADSIDE  
 ELEVATIONS**

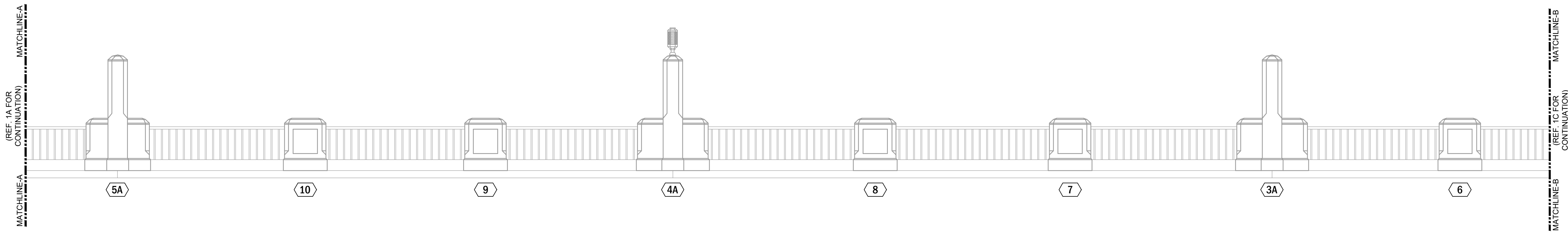
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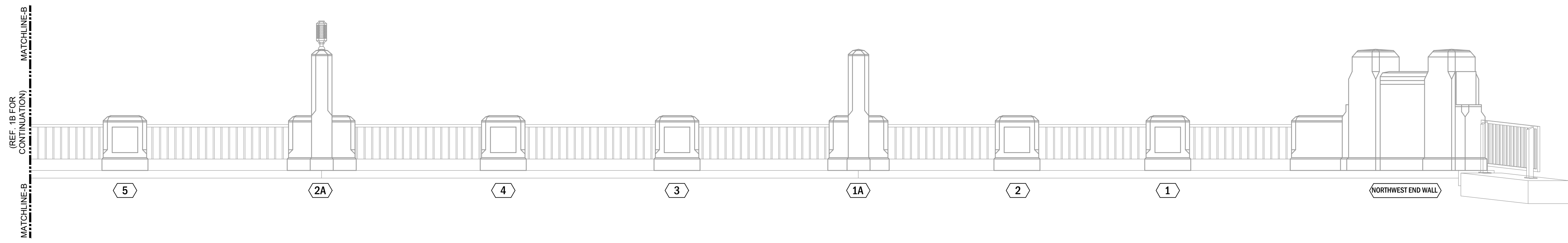
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1A NORTH RAIL RIVERSIDE ELEVATION 1A  
SCALE: 1/4" = 1'-0"




1B NORTH RAIL RIVERSIDE ELEVATION 1B  
SCALE: 1/4" = 1'-0"



1C NORTH RAIL RIVERSIDE ELEVATION 1C  
SCALE: 1/4" = 1'-0"

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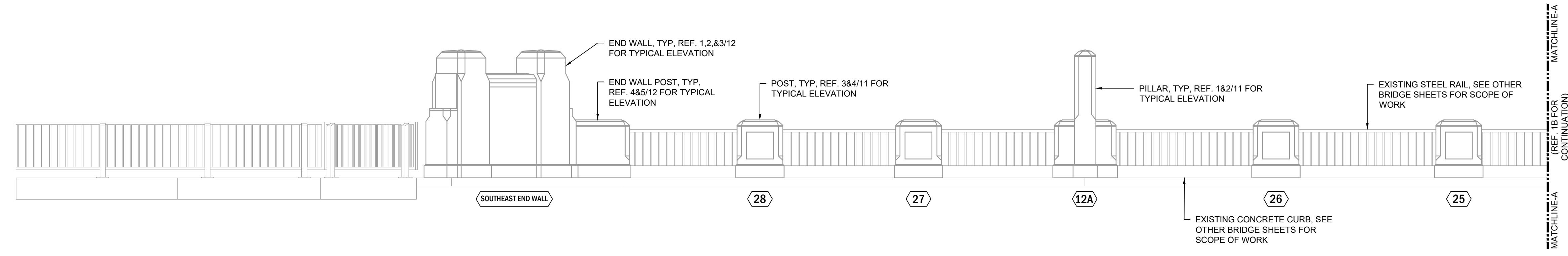
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SHEET TITLE:  
 CAST STONE REPAIR  
 NORTH RAIL RIVERSIDE  
 ELEVATIONS

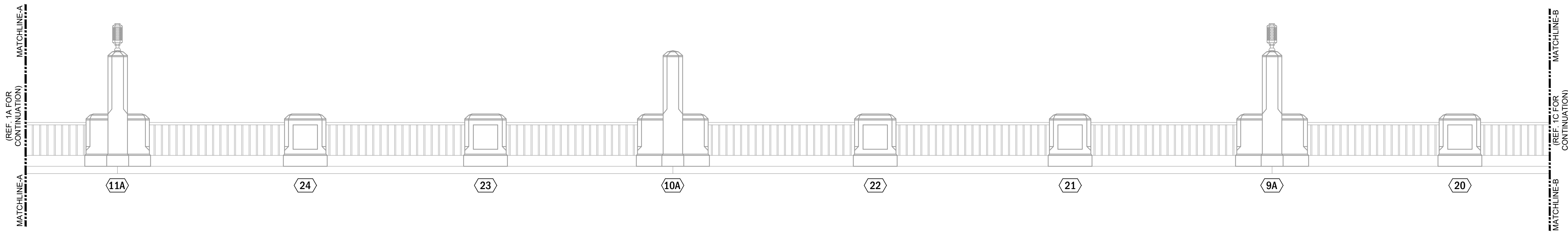
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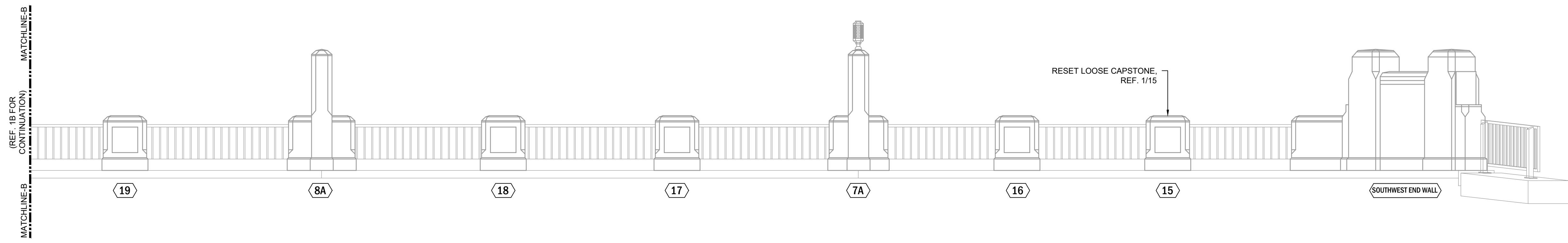
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**1A SOUTH RAIL ROADSIDE ELEVATION 1A**  
SCALE: 1/4" = 1'-0"



**1B SOUTH RAIL ROADSIDE ELEVATION 1B**  
SCALE: 1/4" = 1'-0"



**1C SOUTH RAIL ROADSIDE ELEVATION 1C**  
SCALE: 1/4" = 1'-0"

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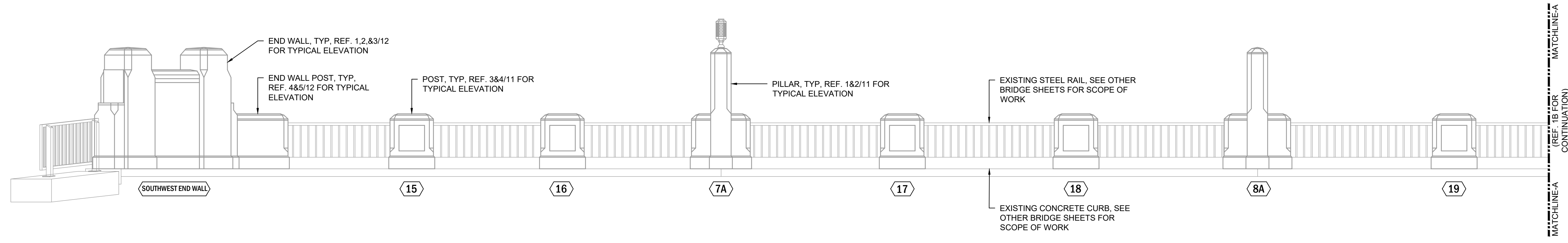
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 SOUTH RAIL ROADSIDE  
 ELEVATIONS**

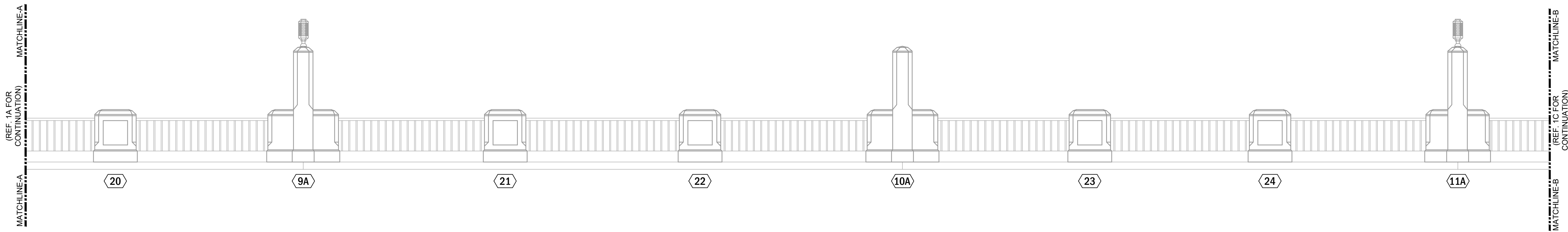
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 SHEET 9 OF 35

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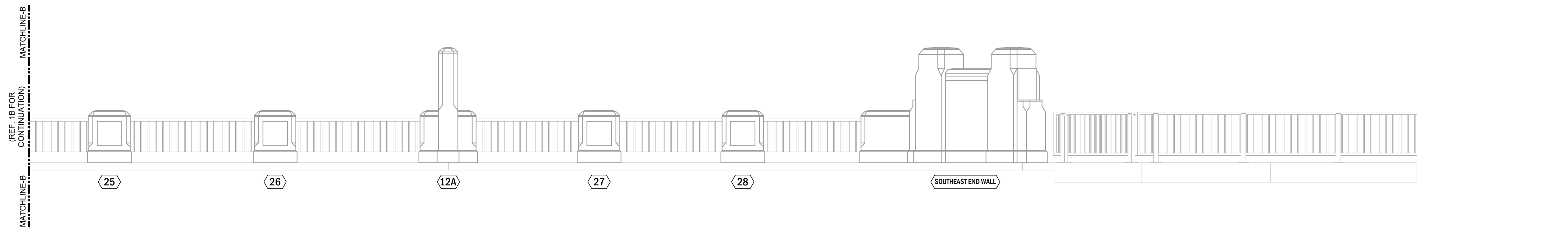
SHEET NOTES	LEGEND
1. AREAS OF WORK SHOWN ARE KNOWN AREAS WITH THE GREATEST SEVERITY OF DISTRESS. CONTRACTOR TO IDENTIFY ADDITIONAL LOCATIONS FOR REPAIR OUTSIDE OF KNOWN AREAS BASED ON TYPICAL CONDITIONS SHOWN ON SHEET 13. ACTUAL AREAS OF REPAIR TO BE CONFIRMED BY ENGINEER PRIOR TO START OF WORK. 2. CLEAN 100% CAST STONE AND CARTHALITE SURFACES. 3. REPOINT 100% MORTAR JOINTS.	(XXX) - ELEMENT ID



1A SOUTH RAIL RIVERSIDE ELEVATION 1A  
SCALE: 1/4" = 1'-0"



1B SOUTH RAIL RIVERSIDE ELEVATION 1B  
SCALE: 1/4" = 1'-0"



1C SOUTH RAIL RIVERSIDE ELEVATION 1C  
SCALE: 1/4" = 1'-0"

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MINISA BRIDGE REHABILITATION  
 WICHITA, KANSAS  
 CITY OF

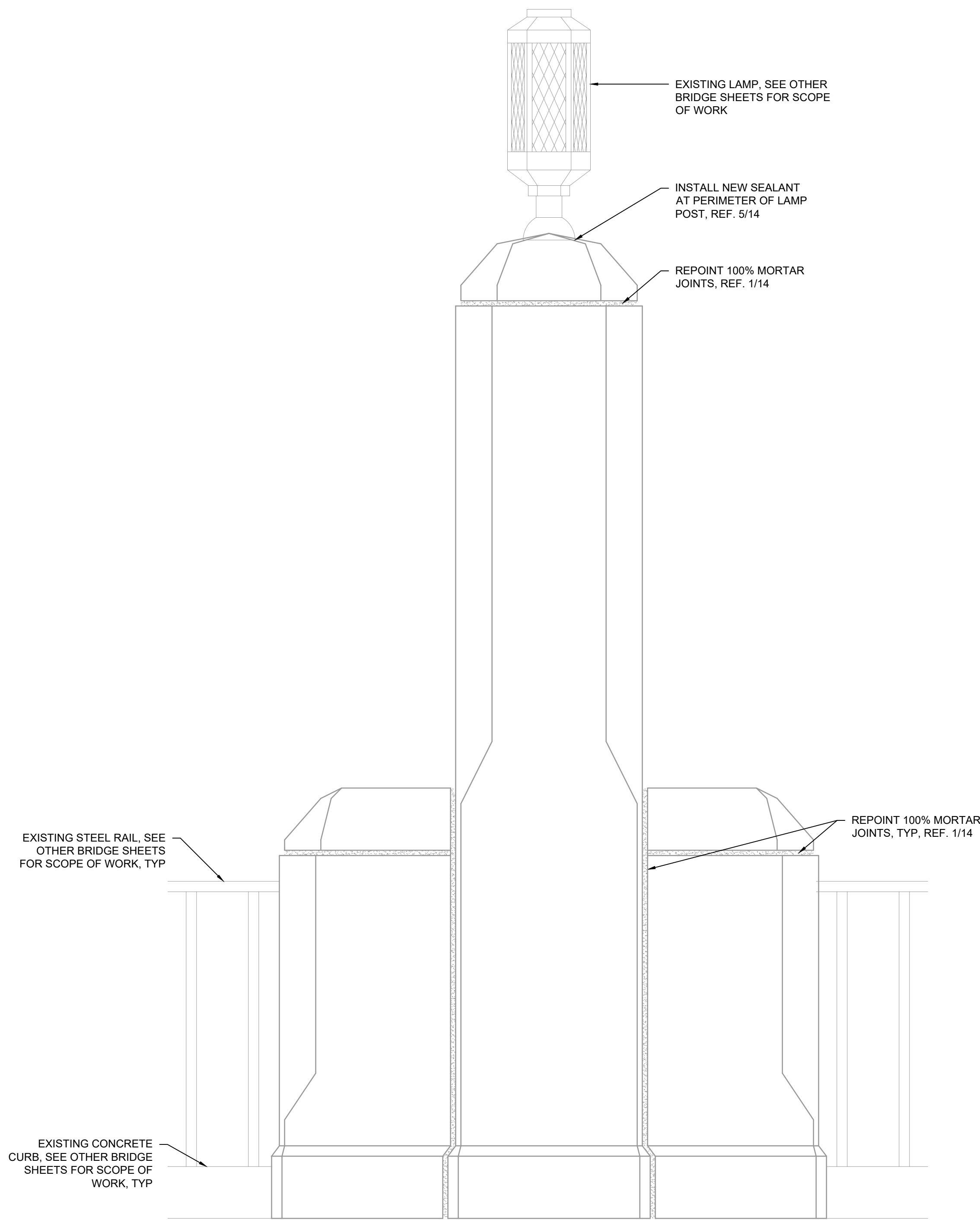
REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
 SCALE: AS NOTED  
 DATE: 03/02/2026  
 DESIGNED BY:  
 DRAWN BY: CSO  
 CHECKED BY: PEG

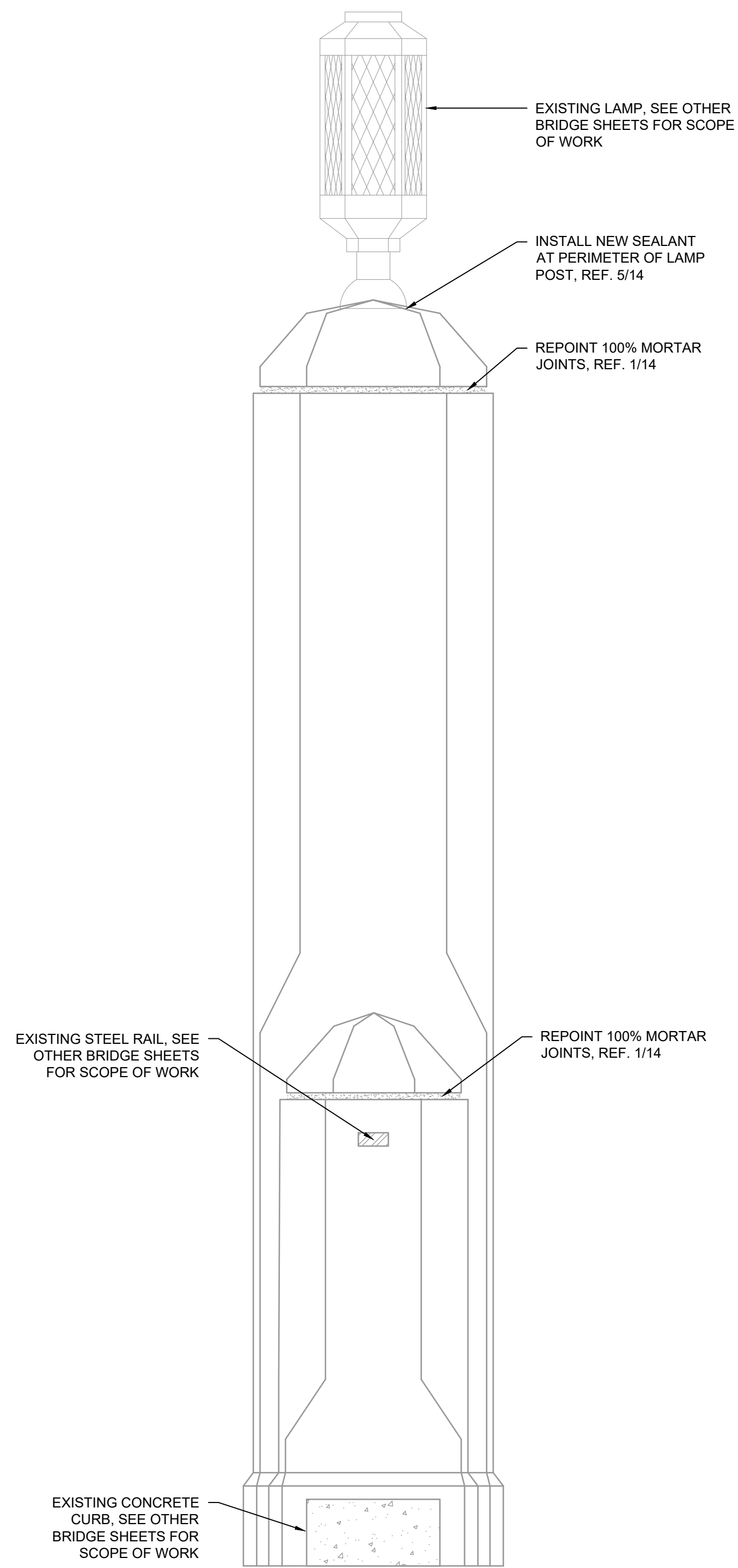
SHEET TITLE:  
 CAST STONE REPAIR  
 SOUTH RAIL RIVERSIDE  
 ELEVATIONS

SHEET NO.  
 10  
 SHEET 10 OF 35

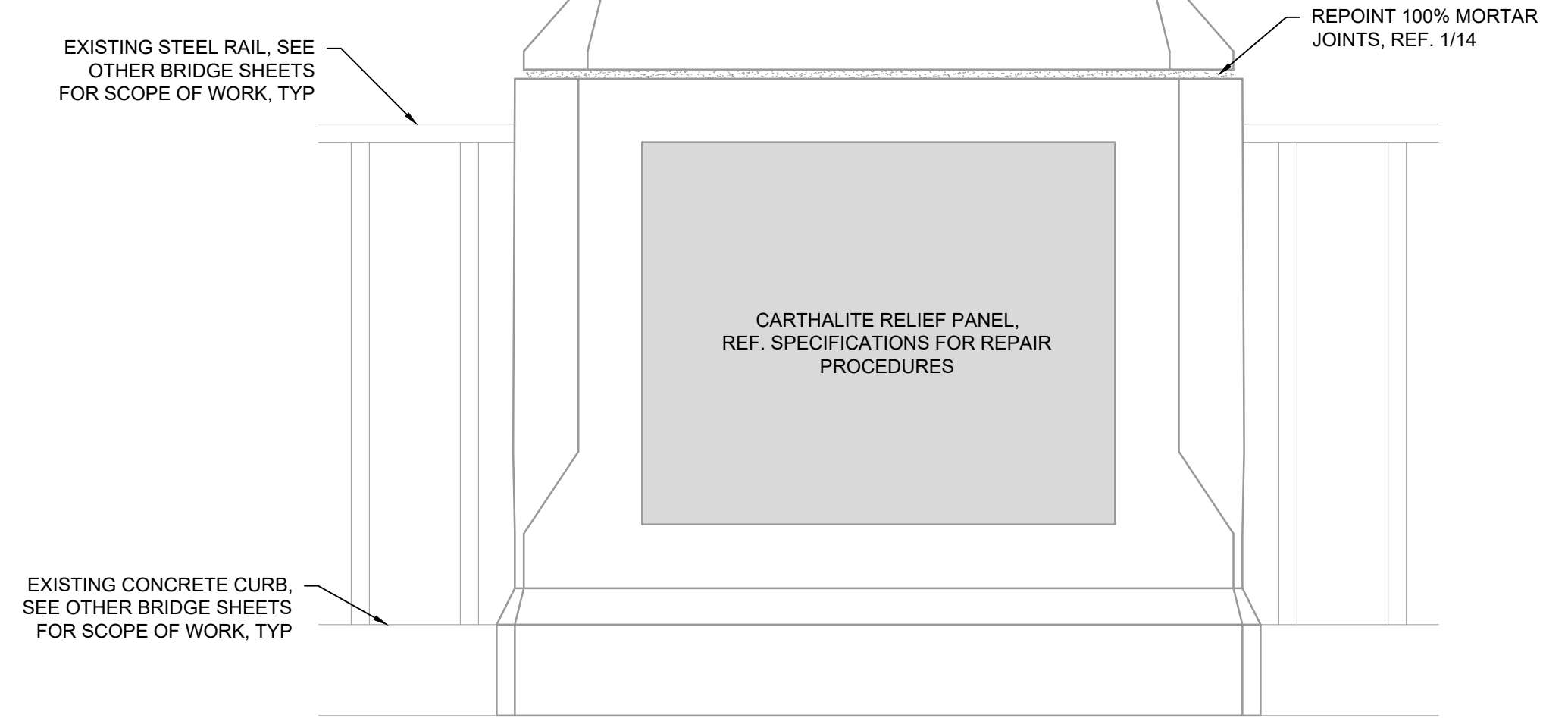
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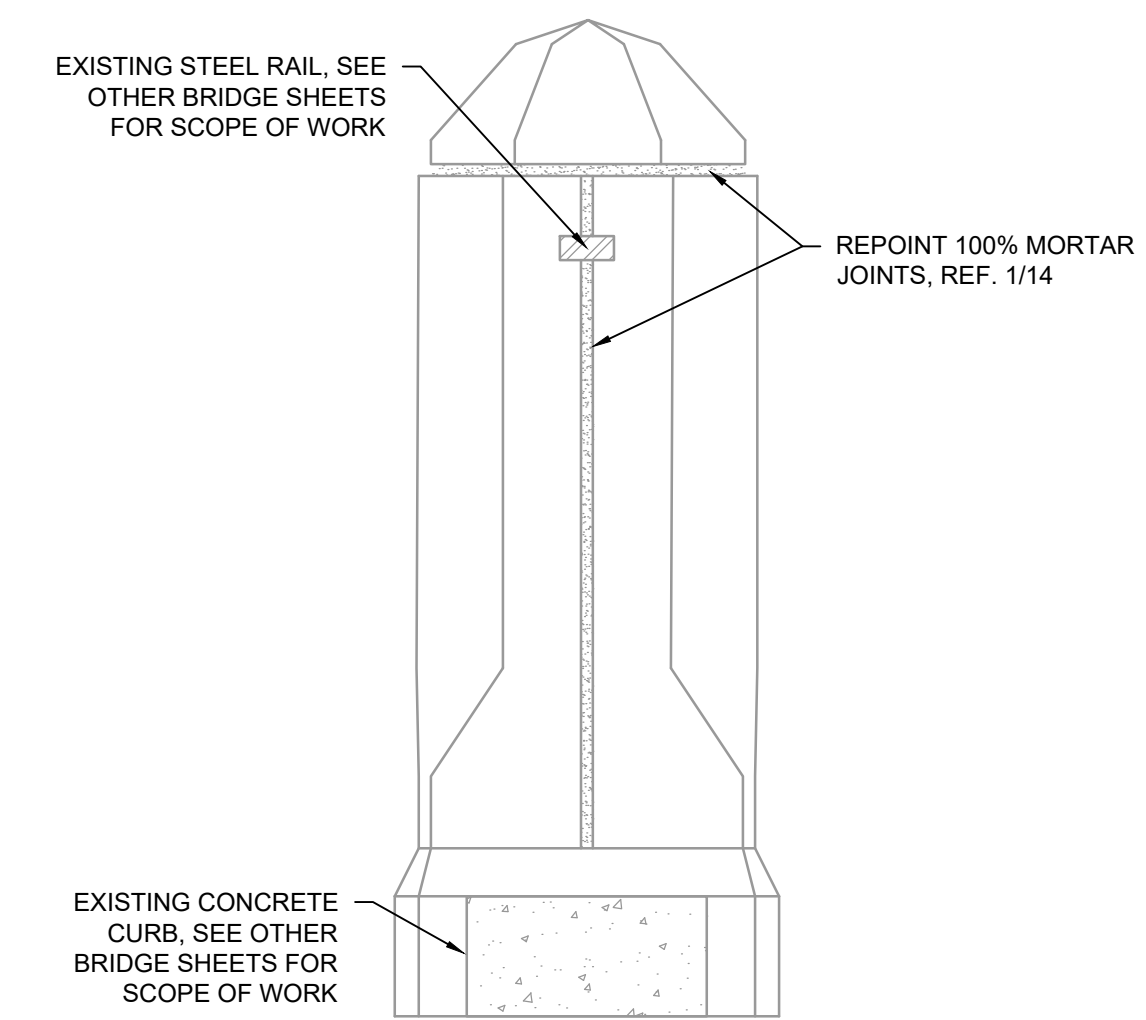
1 PILLAR FRONT AND BACK ELEVATION  
1-1/2" = 1'-0"



2 PILLAR SIDE ELEVATION  
1-1/2" = 1'-0"



3 POST FRONT AND BACK ELEVATION  
1-1/2" = 1'-0"



4 POST SIDE ELEVATION  
1-1/2" = 1'-0"

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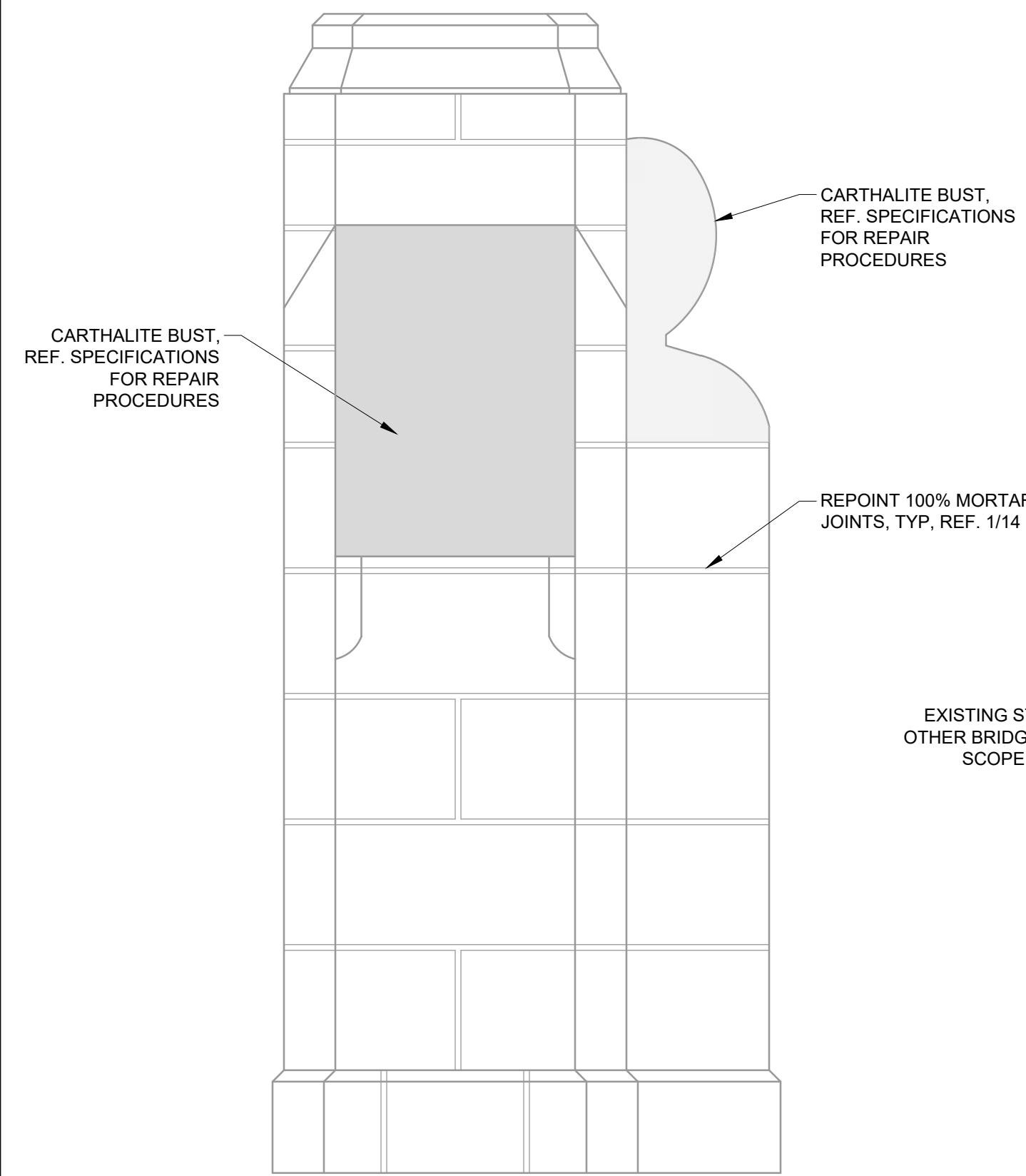
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DRAWN BY: CSO  
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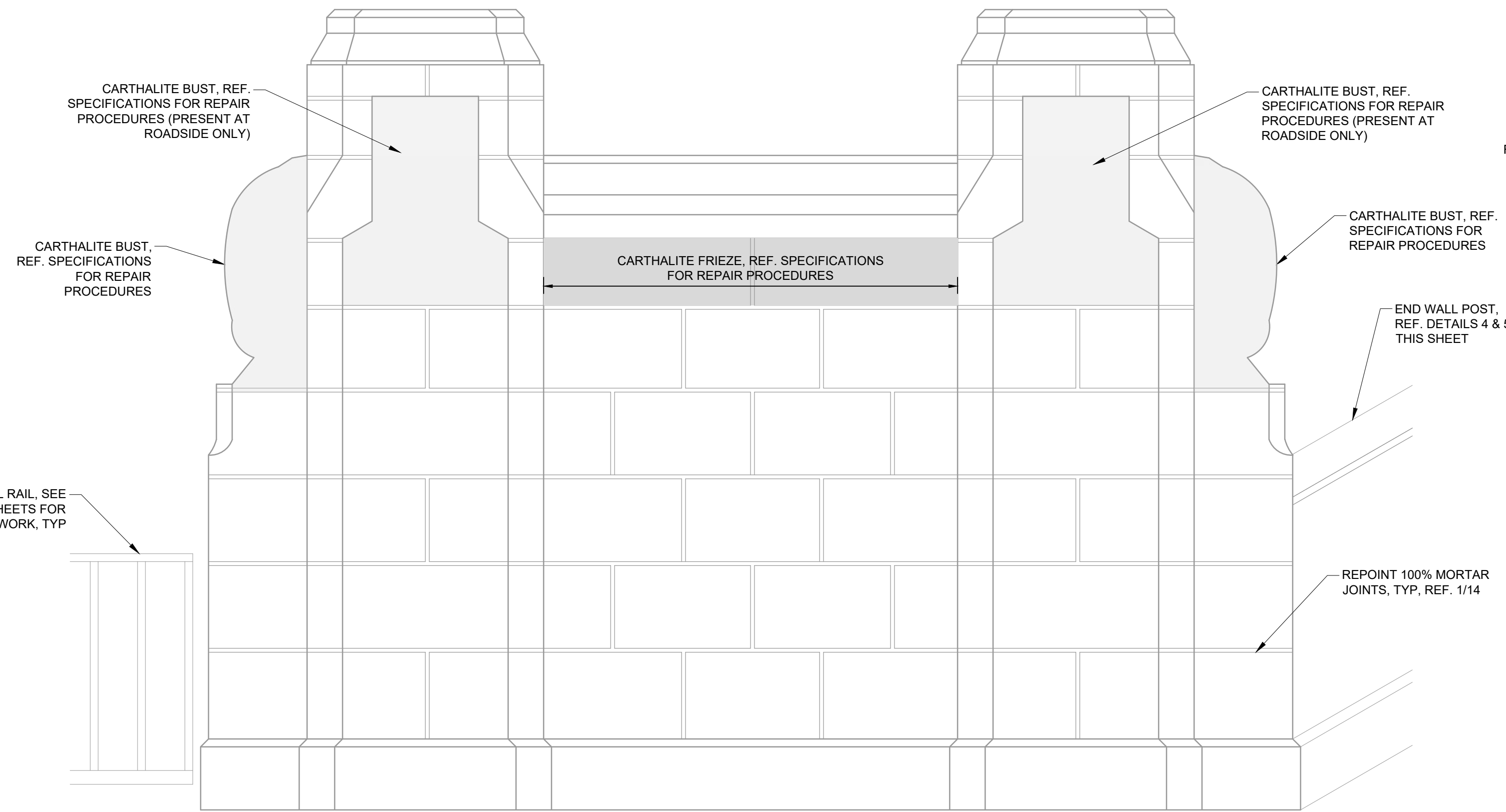
SHEET TITLE:  
**CAST STONE REPAIR ELEMENT ELEVATIONS**

SHEET NO.  
**11**  
SHEET 11 OF 35

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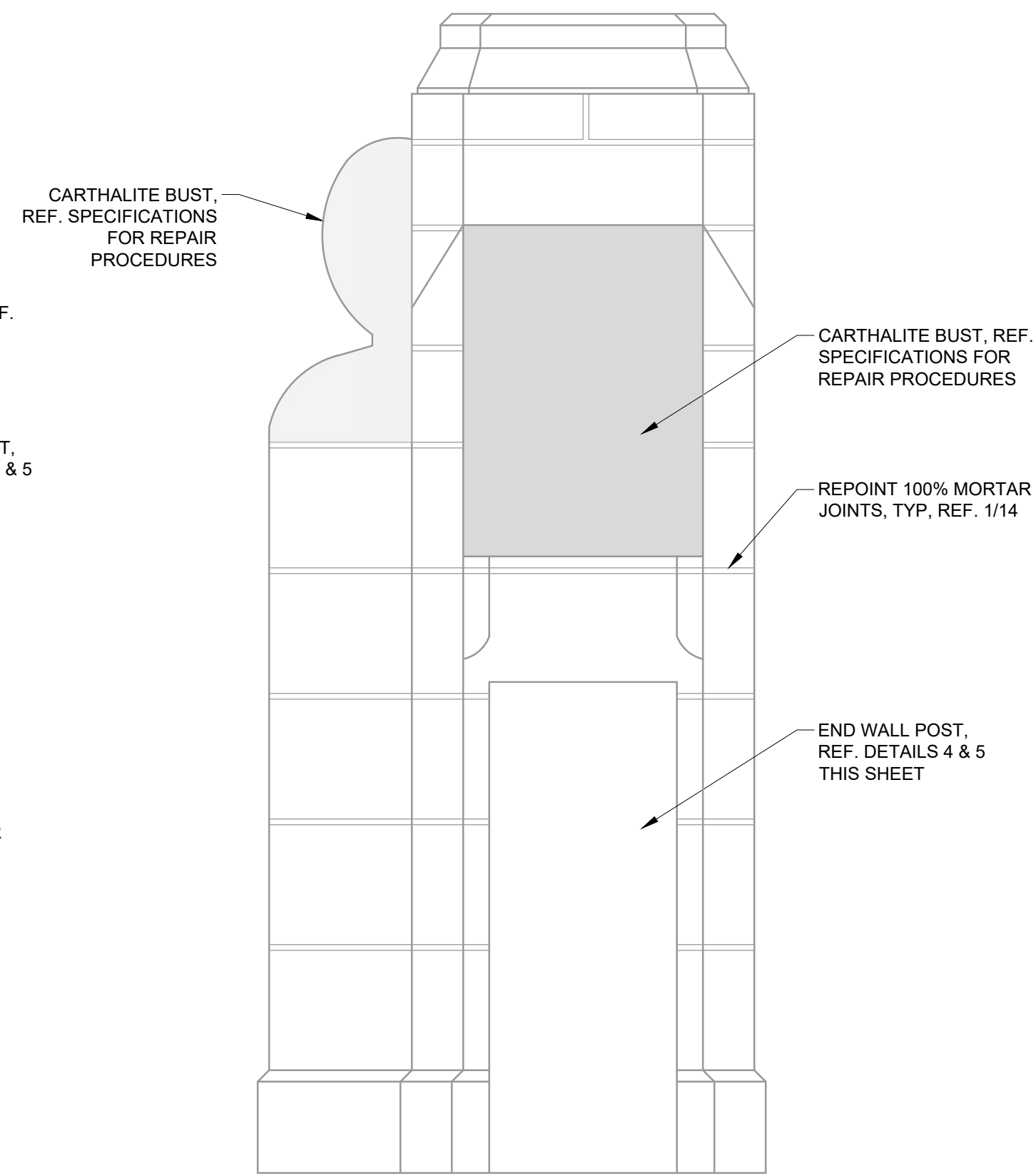


1 END WALL SIDE ELEVATION AT STEEL RAIL  
1" = 1'-0"

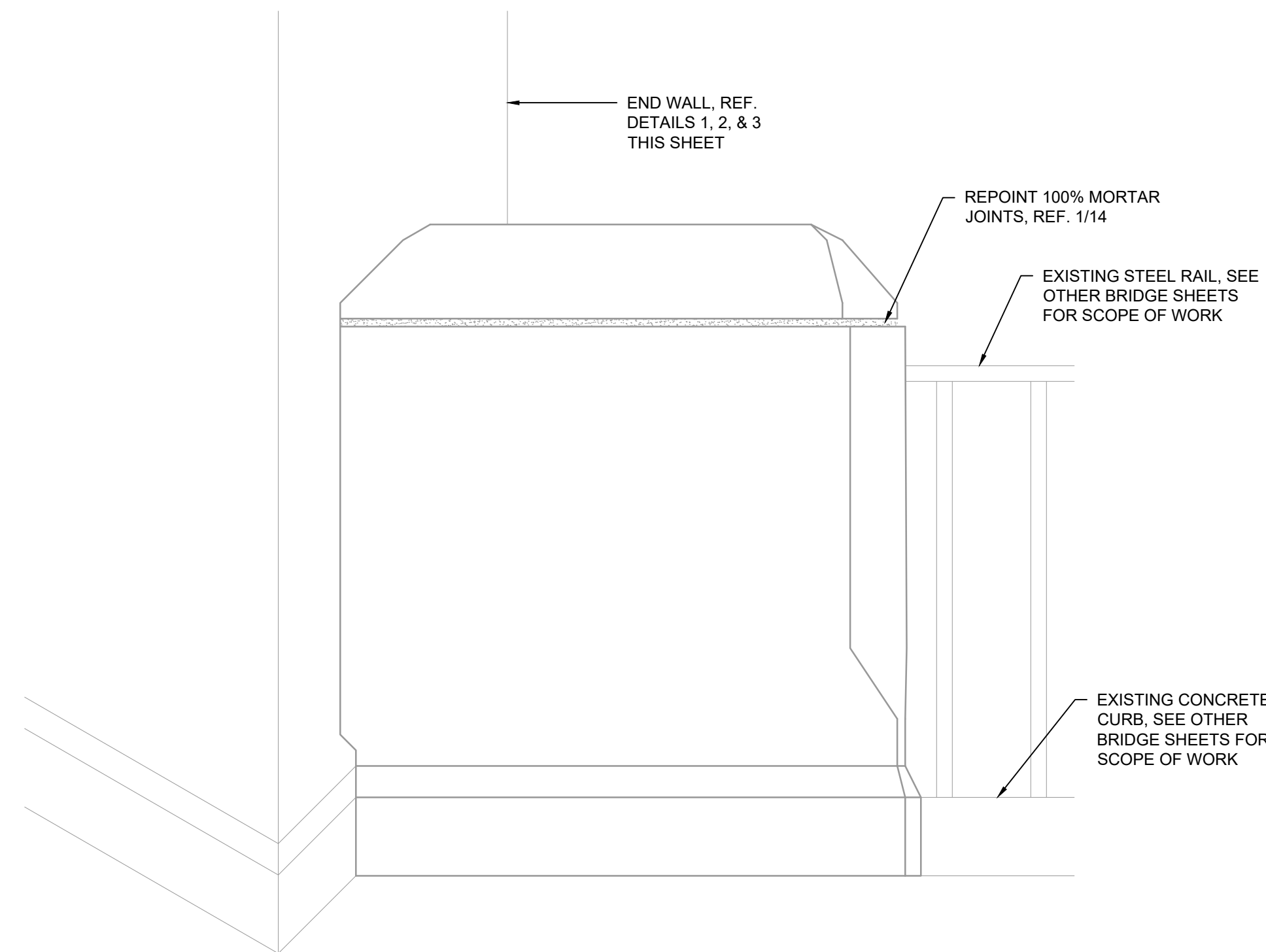


NOTE: END WALL BACK (RIVERSIDE) ELEVATION SIM.

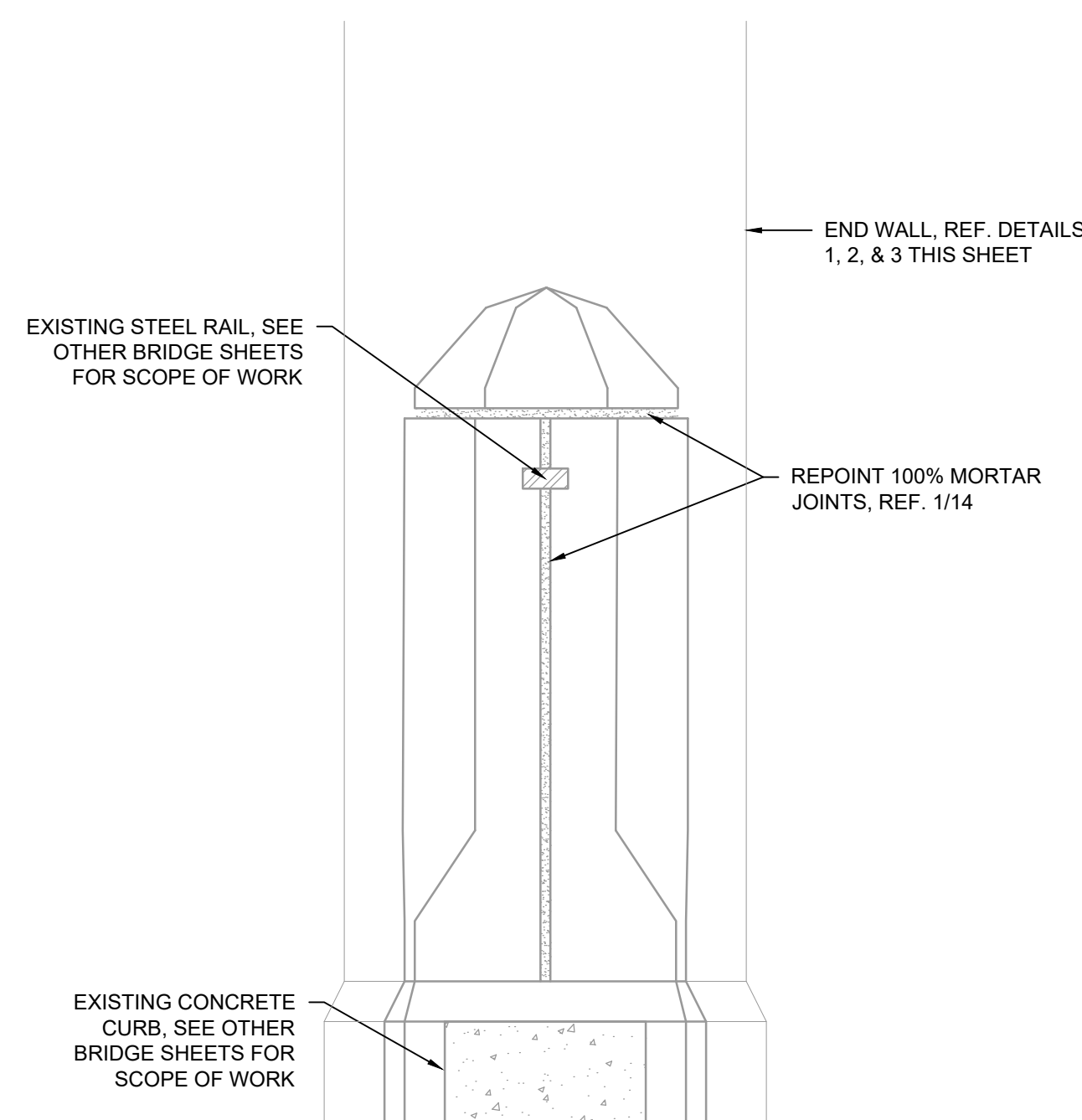
2 END WALL FRONT (ROADSIDE) ELEVATION  
1" = 1'-0"



3 END WALL SIDE ELEVATION AT POST  
1" = 1'-0"



4 END WALL POST FRONT AND BACK ELEVATION  
1-1/2" = 1'-0"



5 END WALL POST SIDE ELEVATION  
1-1/2" = 1'-0"

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MINISA BRIDGE REHABILITATION  
WICHITA, KANSAS  
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DATE: 03/02/2026  
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DRAWN BY: CSO  
CHECKED BY: PEG

SHEET TITLE:  
**CAST STONE REPAIR ELEMENT ELEVATIONS**

SHEET NO.  
12  
SHEET 12 OF 35

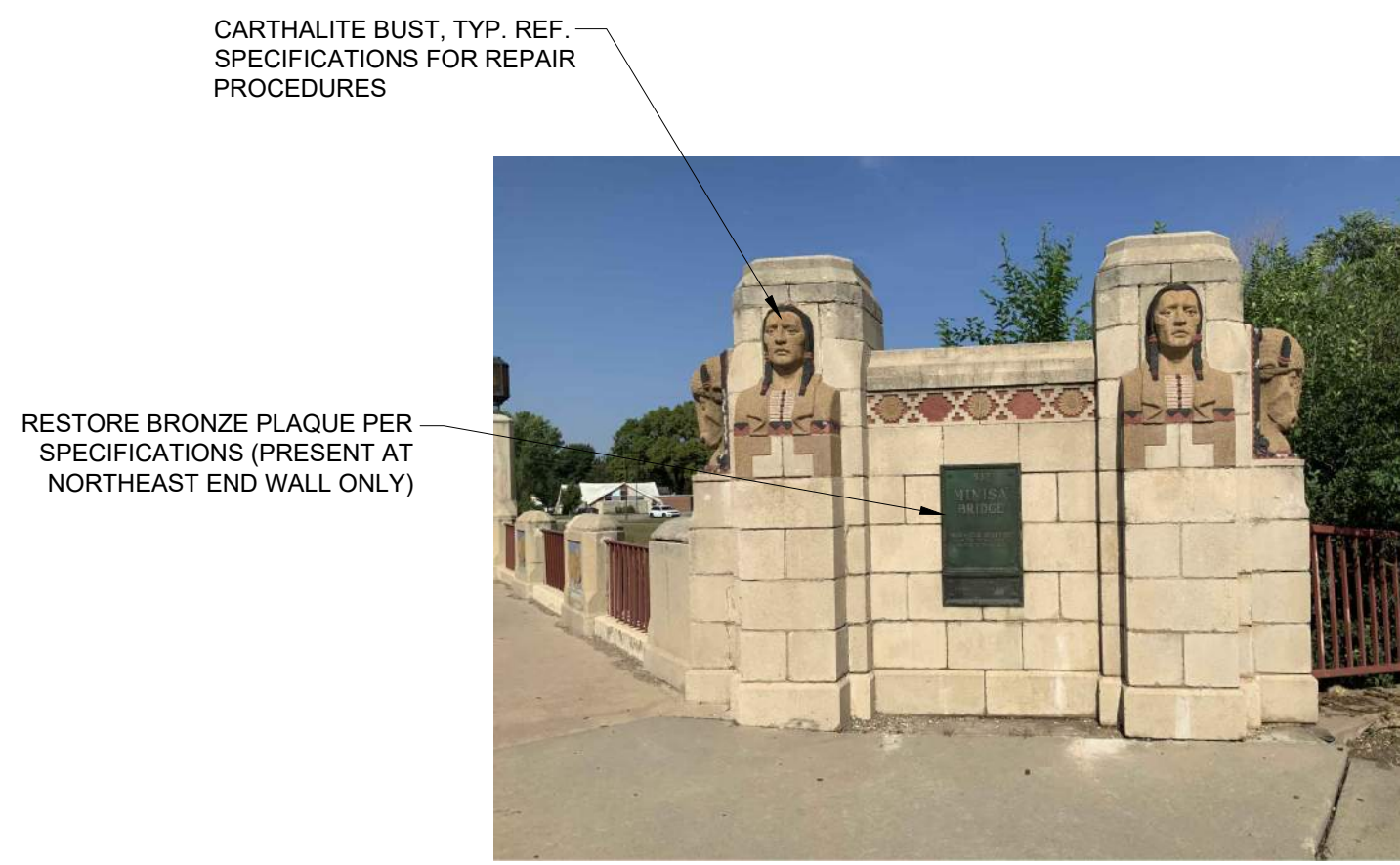


CARTHALLITE RELIEF PANEL.  
REF. SPECIFICATIONS FOR  
REPAIR PROCEDURES

1 TYPICAL POST CONDITION  
NOT TO SCALE



2 TYPICAL PILLAR CONDITION  
NOT TO SCALE



CARTHALLITE BUST, TYP. REF.  
SPECIFICATIONS FOR REPAIR  
PROCEDURES

RESTORE BRONZE PLAQUE PER  
SPECIFICATIONS (PRESENT AT  
NORTHEAST END WALL ONLY)

3 TYPICAL END WALL CONDITION  
NOT TO SCALE



REMOVE AND REINSTALL LOOSE  
CAPSTONES PER 1/15

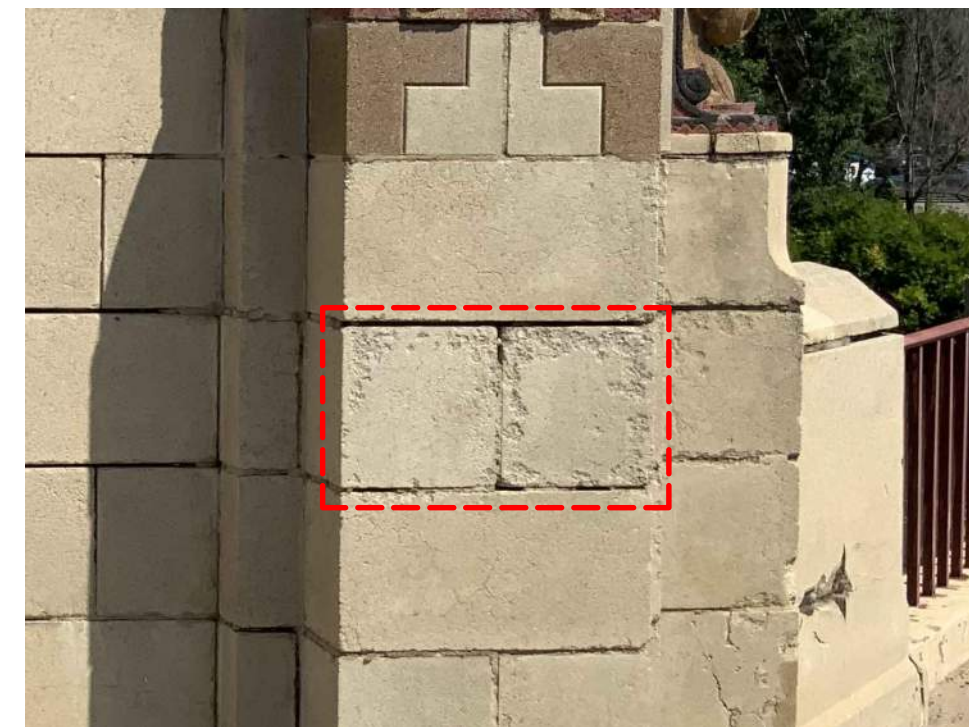
REPOINT 100% MORTAR  
JOINTS, REF. 1/14

4 TYPICAL MORTAR DETERIORATION AT CAPSTONE  
NOT TO SCALE



REPOINT 100% MORTAR  
JOINTS, REF. 1/14

5 TYPICAL MORTAR DETERIORATION AT END WALL  
NOT TO SCALE



6 TYPICAL SURFACE SCALING AT END WALL  
NOT TO SCALE

CLEAN CAST STONE PER SPECIFICATIONS.  
NO WORK ANTICIPATED AT SURFACE CRAZING



7 TYPICAL SURFACE CONDITIONS  
NOT TO SCALE



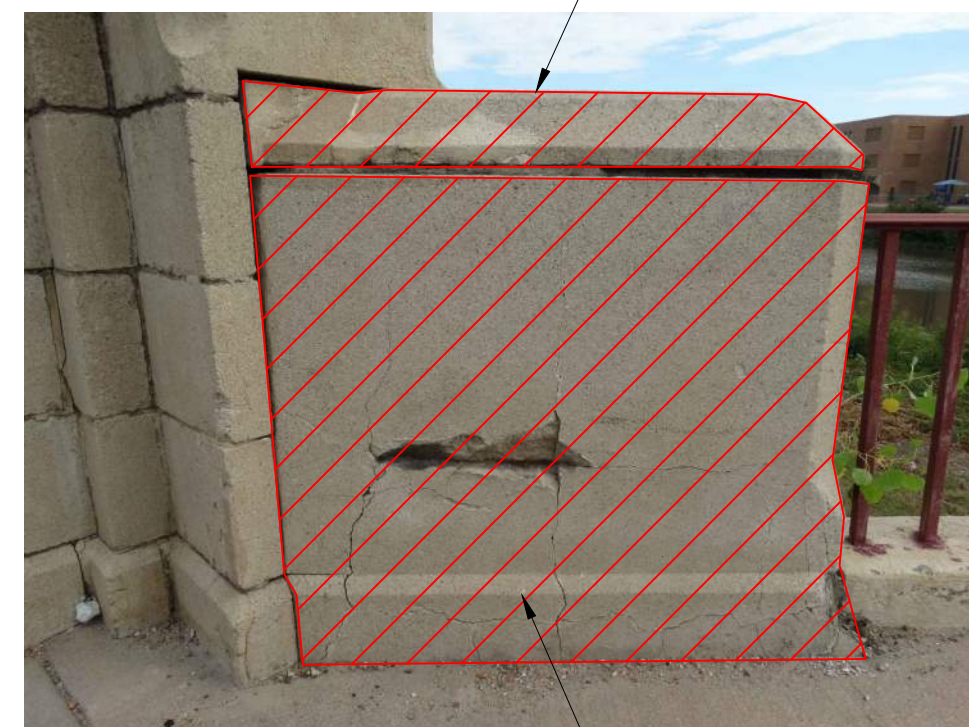
REPAIR SPALLED CAST STONE PER 3/14

8 TYPICAL SPALL  
NOT TO SCALE



TYPICAL CRACKING, REF.  
SPECIFICATIONS FOR  
REPAIR PROCEDURE

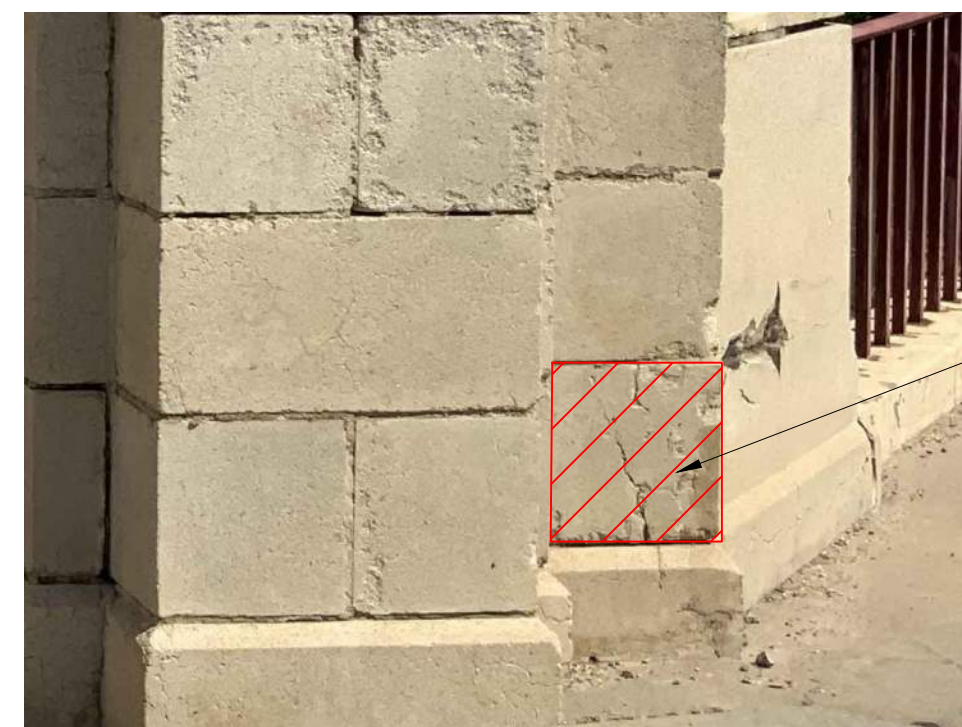
9 TYPICAL CRACKING  
NOT TO SCALE



CAST STONE ELEMENT WITH SEVERE  
DETERIORATION, TYP. REMOVE AND  
REPLACE IN-KIND, AS SPECIFIED. REMOVE  
AND REPLACE CAPSTONE PER 1/15

REMOVE AND REPLACE END WALL  
POST PANEL PER 6/14

10 CAST STONE ELEMENTS TO BE REPLACED  
NOT TO SCALE



REMOVE AND REPLACE END WALL  
BLOCK PER 3/15, SIM



REMOVE UNSOUND PREVIOUS REPAIRS  
AND REPLACE CAST STONE PER 3/14

11 TYPICAL PREVIOUS REPAIR  
NOT TO SCALE

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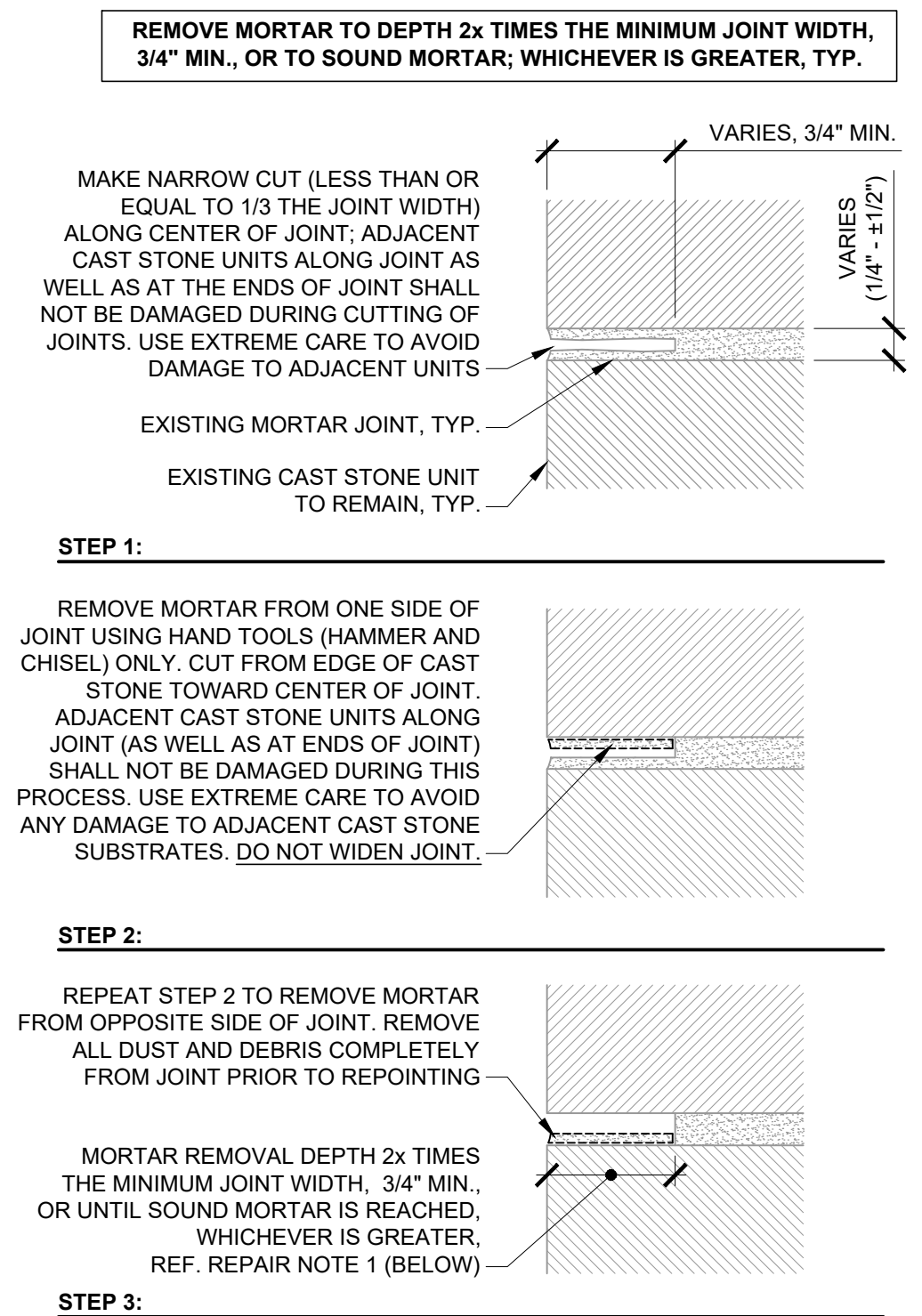
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WICHITA, KANSAS  
CITY OF  
**WICHITA**

REVISIONS:	MARK	DATE	DESCRIPTION

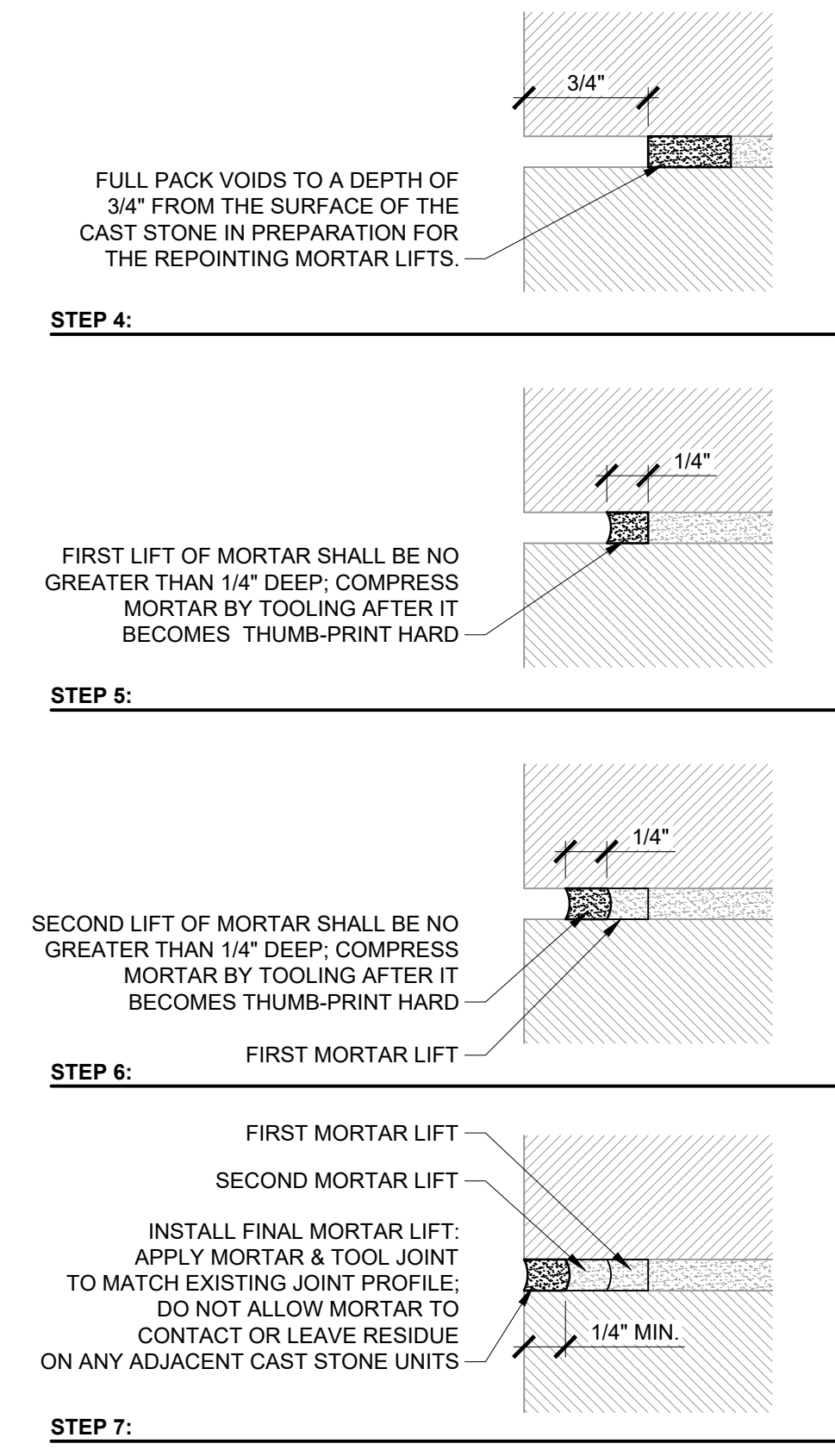
PROJ NO: 472-2024-086025  
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DRAWN BY: CSO  
CHECKED BY: PEG

SHEET TITLE:  
**CAST STONE EXISTING CONDITIONS**

SHEET NO.  
**13**  
SHEET 13 OF 35

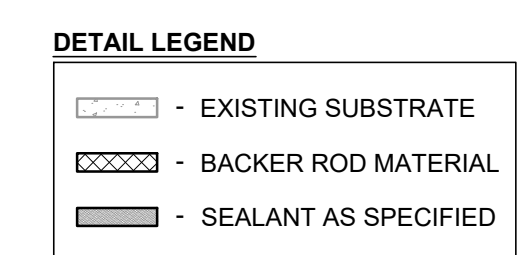


- MORTAR REMOVAL NOTES**
- CRESCENT-SHAPED REMNANTS OF MORTAR LEFT BY CAST STONE SAW ARE NOT PERMITTED. REMOVE MORTAR TO ACHIEVE UNIFORM REMOVAL DEPTH. USE OF ROUTERS OR POWER TOOLS MAY BE USED AT HORIZONTAL JOINTS ONLY IF DEMONSTRATED SUCCESSFULLY IN MOCKUP AND APPROVED BY ENGINEER. HAND CHISEL AT ALL OTHER JOINTS.
  - DO NOT DAMAGE FACE OF CAST STONE UNITS. ALL CAST STONE UNITS DAMAGED DURING MORTAR REMOVAL AND REPOINTING ACTIVITIES SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.



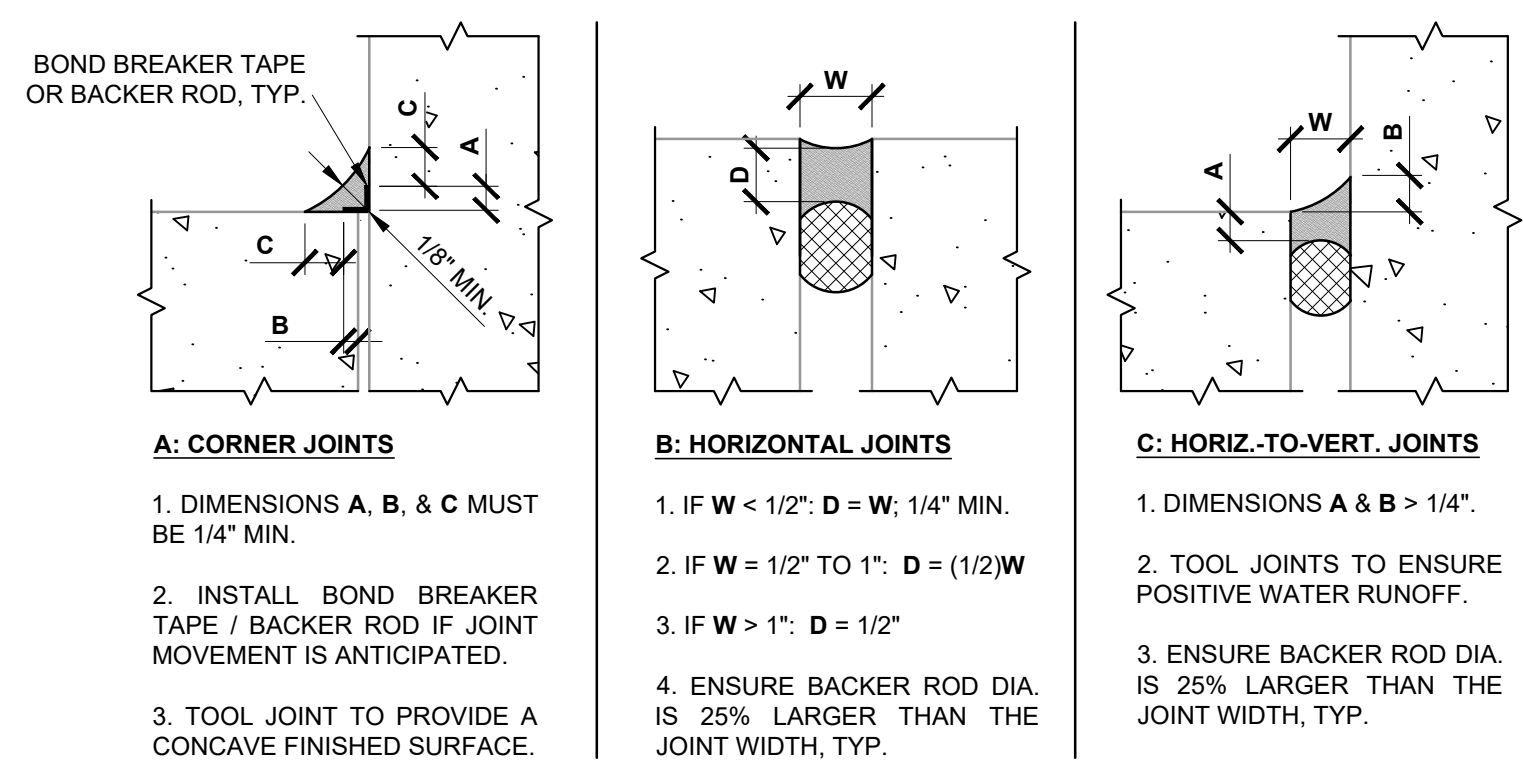
- MORTAR REPOINTING NOTES**
- PRE-HYDRATE NEW MORTAR AND JOINT AS DEFINED IN THE PROJECT SPECIFICATIONS. INSTALL NEW MORTAR IN 1/4" LIFTS.
  - ACTUAL JOINT SHALL BE TOOLED TO MATCH ORIGINAL JOINT PROFILE AS DETERMINED VIA MOCK-UP AND APPROVAL BY THE ENGINEER AND OWNER.

**1 TYPICAL JOINT REPOINTING PROCEDURES**  
NOT TO SCALE

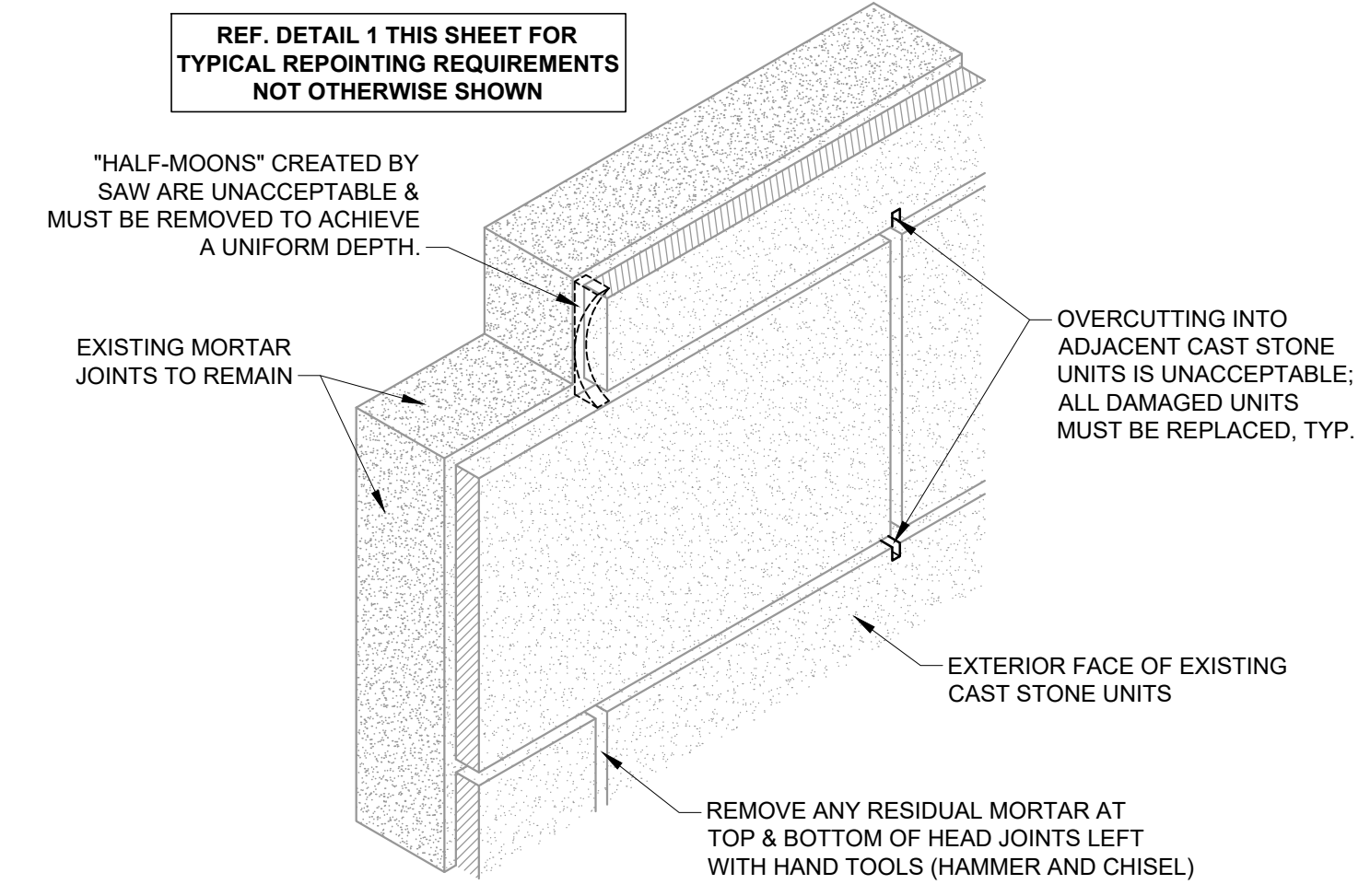


**JOINT PROFILE TABLE**

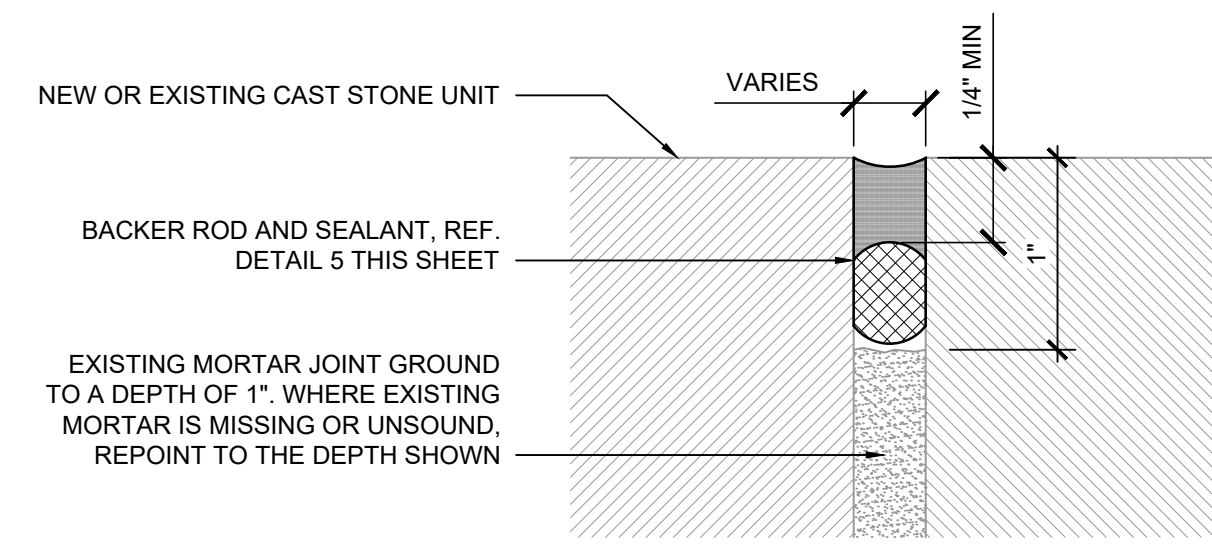
WIDTH (W)	DEPTH (D)
0" - 1/2"	1/4"
> 1/2"	W/2



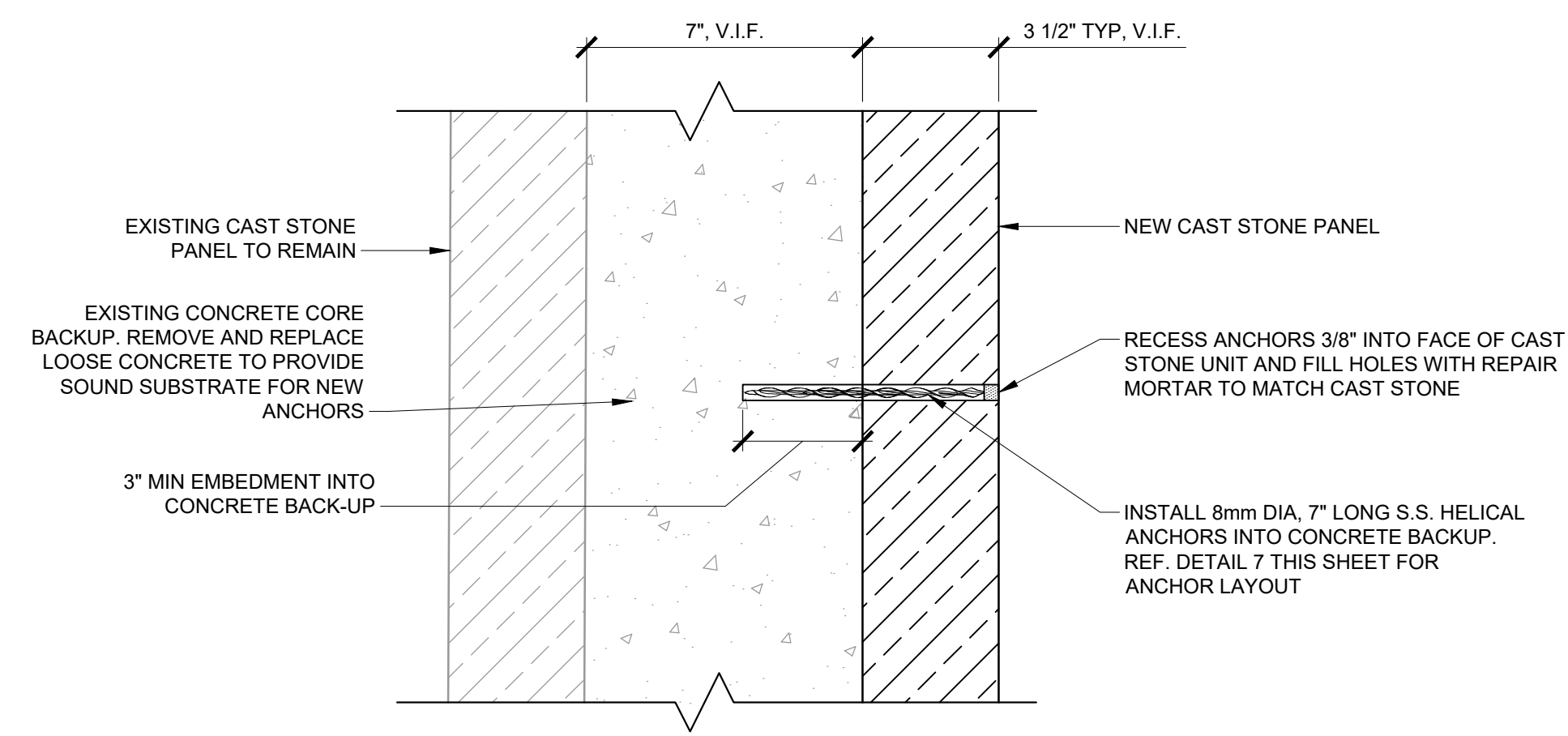
**5 TYPICAL SEALANT JOINT INSTALLATION GUIDELINES**  
NOT TO SCALE



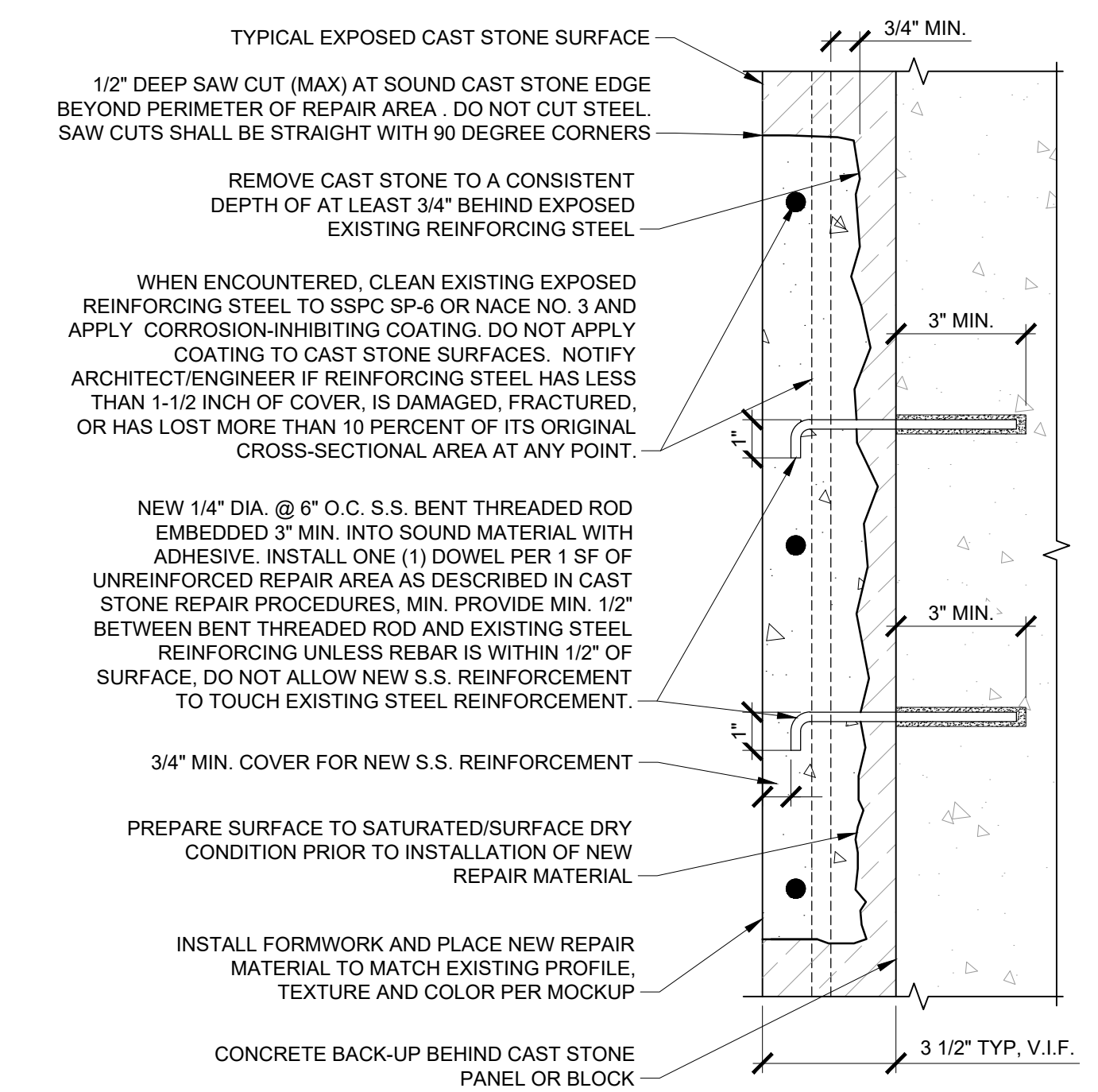
**2 JOINT REPOINTING PROCEDURES, TYP.**  
NOT TO SCALE



**4 TYPICAL UPWARD FACING JOINT**  
NOT TO SCALE

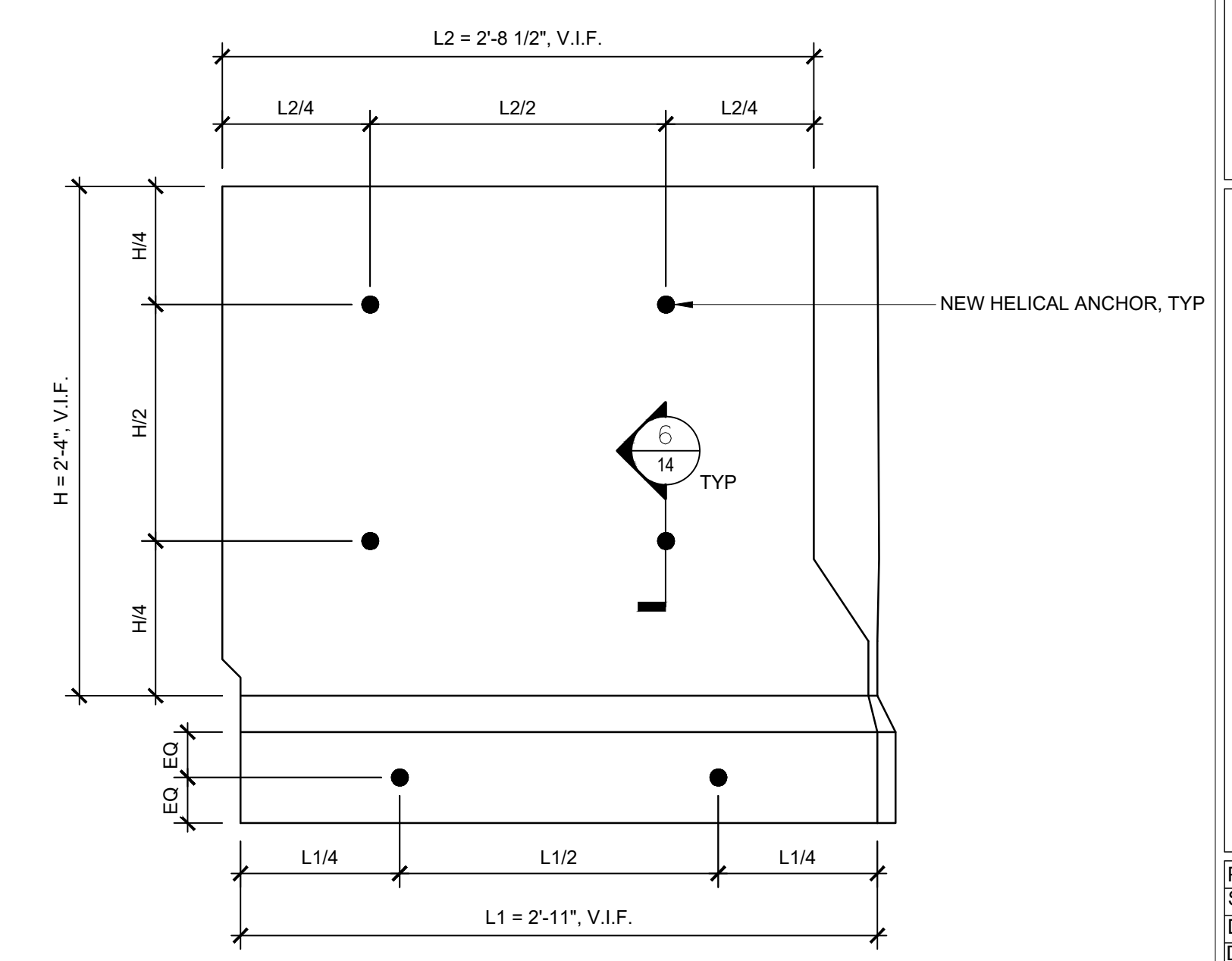


**6 TYPICAL POST PANEL INSTALLATION SECTION**  
3" = 1'-0"



- NOTES:**
- REPAIR EXTENTS AND ROD EMBEDMENT DEPTHS MAY BE ADJUSTED FOR GEOMETRIC CONSTRAINTS OF THE CAST STONE MEMBERS AT THE APPROVAL OF THE ENGINEER.
  - CLEAN, PREPARE AND PRE-WET CAST STONE SURFACE TO RECEIVE NEW PATCH. CAST STONE SURFACE SHALL BE SATURATED SURFACE DRY (SSD) AT TIME OF REPAIR MATERIAL PLACING.
  - FORM AND PLACE REPAIR MATERIAL PER MANUFACTURER'S SPECIFICATIONS. INSTALL NEW FORMWORK TO FOLLOW ORIGINAL CONFIGURATION OF FACADE. PROVIDE SUFFICIENT SUPPORT TO PREVENT DEFLECTION OF FORMS DURING PLACEMENT AND CURE. KEEP REPAIR MATERIAL INSIDE FORM FOR MINIMUM OF 5 DAYS.
  - CURE NEW REPAIR MATERIAL USING WET BURLAP AND POLYETHYLENE SHEETING FOR A MINIMUM OF 7 DAYS OR PER MANUFACTURER'S WRITTEN INSTRUCTIONS. SEAL EDGES OF POLYETHYLENE TO RETAIN MOISTURE.

**3 CAST STONE REPAIR AT VERTICAL SURFACE**  
3" = 1'-0"



NOTE: DIMENSIONS ARE BASED ON LIMITED FIELD MEASUREMENTS AND ARE APPROXIMATE. DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY; CONTRACTOR TO VERIFY ALL DIMENSIONS.

**7 POST PANEL INSTALLATION ELEVATION**  
1-1/2" = 1'-0"

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MINISA BRIDGE REHABILITATION

WICHITA, KANSAS

CITY OF WICHITA

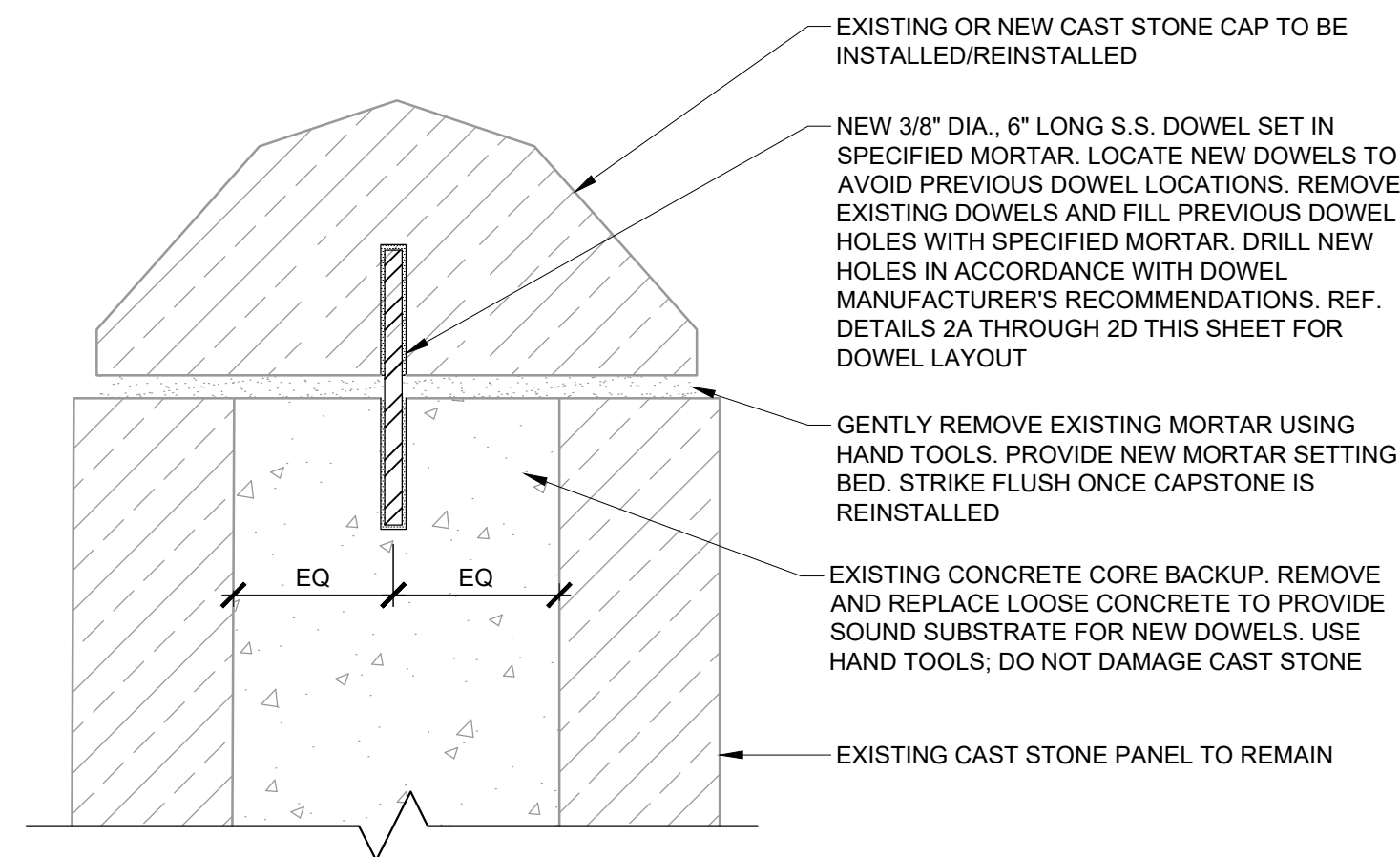
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DRAWN BY: CSO  
CHECKED BY: PEG

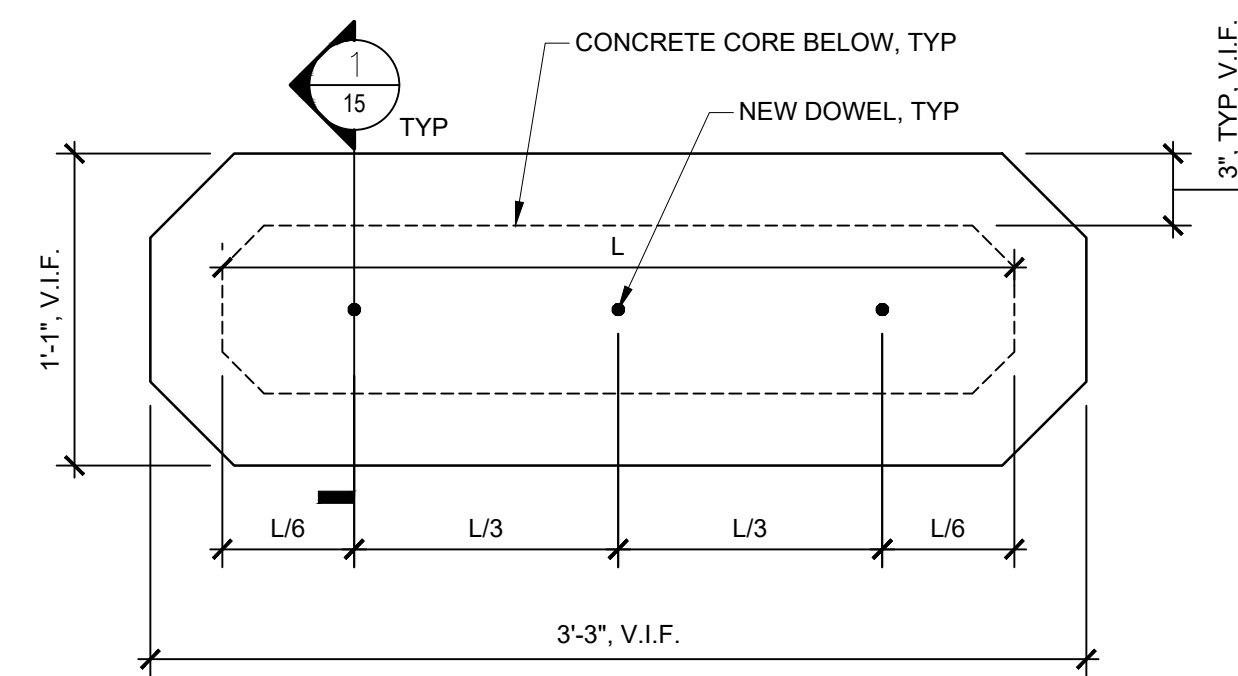
SHEET TITLE:  
**CAST STONE REPAIR DETAILS**

SHEET NO.  
14  
SHEET 14 OF 35

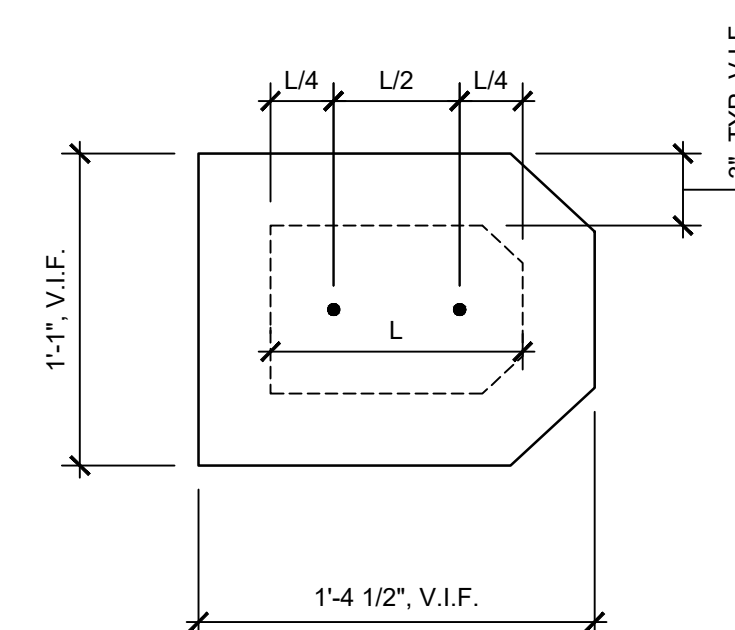


1 TYPICAL CAPSTONE INSTALLATION SECTION  
3" = 1'-0"

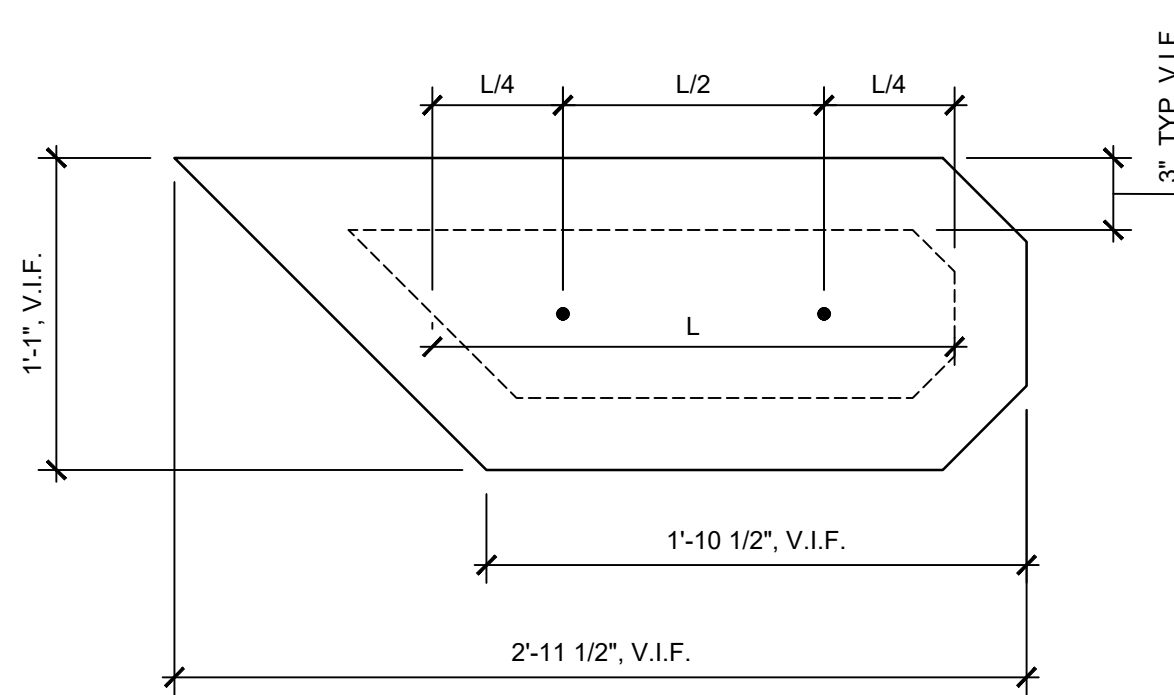
NOTE: DIMENSIONS ARE BASED ON LIMITED FIELD MEASUREMENTS AND ARE APPROXIMATE. DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY; CONTRACTOR TO VERIFY ALL DIMENSIONS.



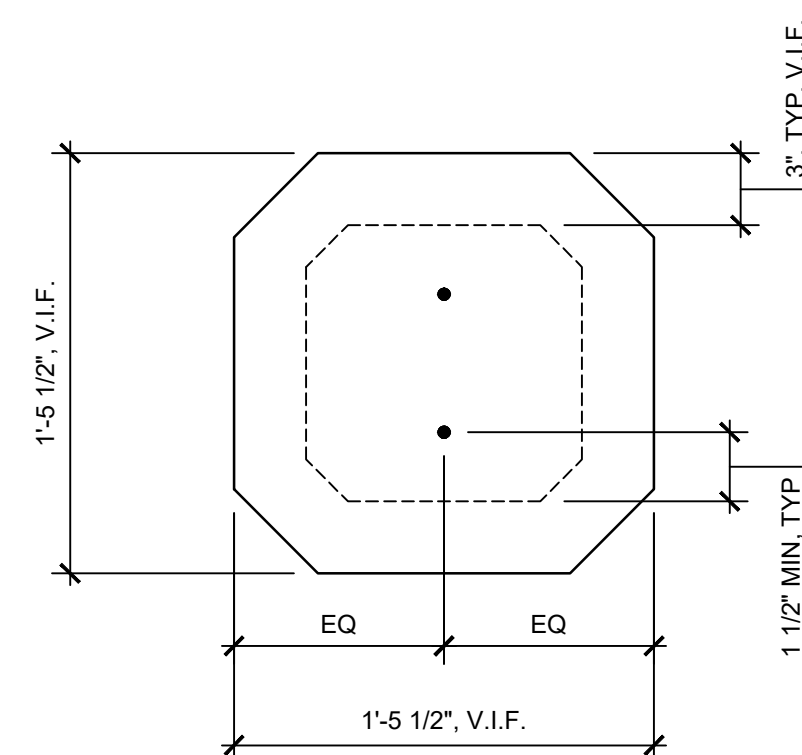
2A: PIER CAPSTONE PLAN



2B: PILLAR SIDE WING CAPSTONE PLAN

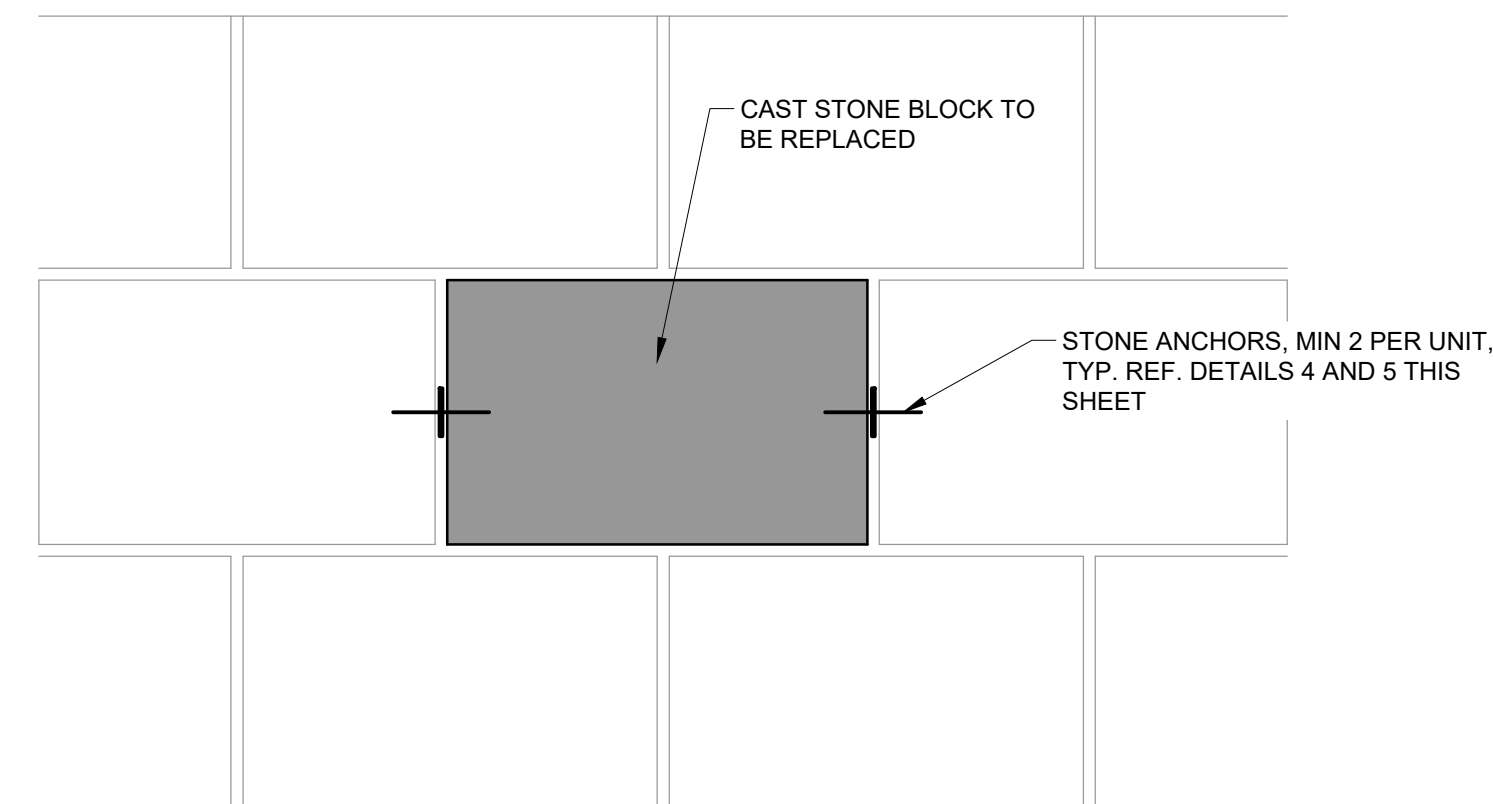


2C: END WALL CAPSTONE PLAN

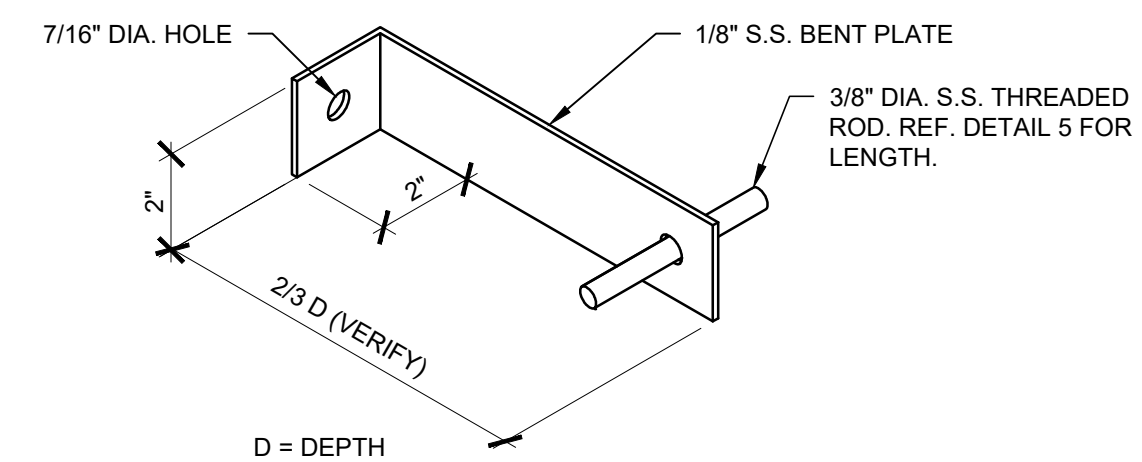


2D: PILLAR CENTER COLUMN CAPSTONE PLAN

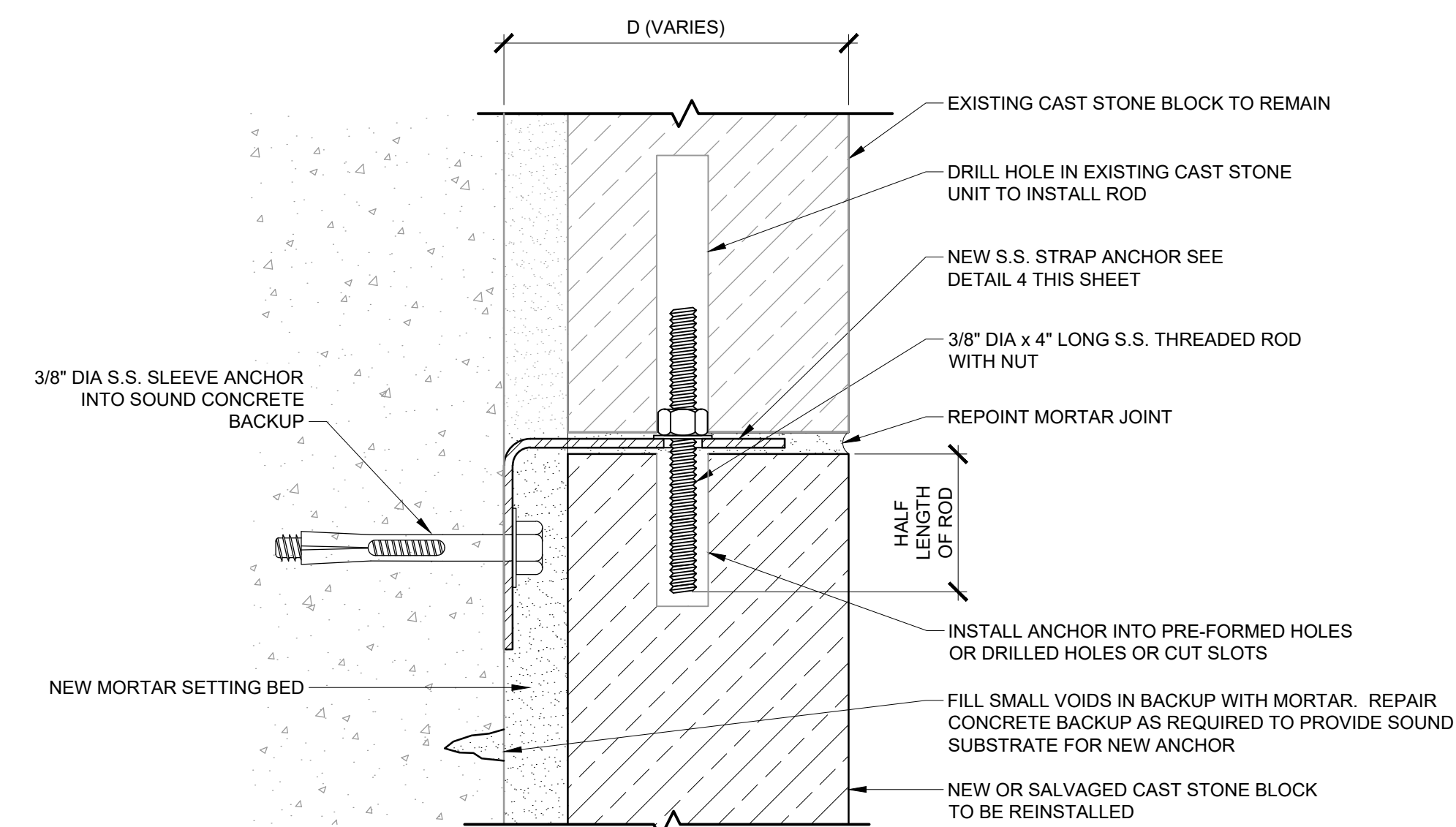
2 CAPSTONE INSTALLATION PLANS  
1-1/2" = 1'-0"



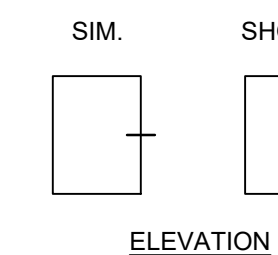
3 ELEVATION - TYPICAL END WALL BLOCK REPLACEMENT  
1-1/2" = 1'-0"



4 ISOMETRIC - TYPICAL STRAP AND PIN ANCHOR  
3" = 1'-0"



NOTE: PROVIDE 3/4" MIN EDGE DISTANCE AT DRILLED HOLES OR CUT SLOTS.



5 SECTION - TYPICAL STRAP AND PIN ANCHOR  
6" = 1'-0"

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MINISA BRIDGE REHABILITATION

WICHITA, KANSAS  
CITY OF  
**WICHITA**

REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
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DESIGNED BY:  
DRAWN BY: CSO  
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SHEET TITLE:  
**CAST STONE REPAIR DETAILS**

SHEET NO.  
15  
SHEET 15 OF 35



CONSULTANTS:

MINISA BRIDGE REHABILITATION



REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: PAM  
 DRAWN BY: PAM  
 CHECKED BY: WBS

SHEET TITLE:  
 BRIDGE REPAIR - I

SHEET NO.  
 17  
 SHEET 17 OF 35

RETAINING WALL GENERAL NOTES

At request of City of Wichita only, perform wall jacking at two retaining walls located off the northwest and southwest wing walls. Contractor to submit plans for approval for permanent jacking of walls to close settlement gaps that have occurred. Indicate intended foundation, wall lift, and jacking materials and means for protecting them on a permanent basis. Describe intended means to backfill area under lifted blocks. Wall rotation shall be monitored through lifting process to verify overturning is not occurring. This work will be paid for by the Additional Alternate bid item. "Wall Jacking," ea.

At the request of the City, a more invasive repair will instead be made according to the double boxed note above. If this method of repair is not requested by the City, the preferred or alternate method below will be assumed. Methods not shown may be proposed for approval by the City.

The following are suggested methods for repairing damage to two retaining walls, located off the northwest and southwest wings of the bridge. The intent of these repairs is to prevent loss of fines through openings between displaced modular blocks in the retaining wall and fill voids without compromising the MSE reinforcing straps located behind the wall. This work will be paid for as, "Retaining Wall (MBW)," sff.

**Preferred Method:** Clean and replace loose blocks, anchoring with geogrid or grout as necessary. The Contractor may hydrovac behind the wall, being careful not to over excavate and compromise the geogrid structural system. Excavate only to the first layer of geogrid. Place filter fabric behind blocks to prevent fine migration and compact. Material to be approved by the City behind the wall to fill voids. Run water continuously from behind the top of the wall to confirm fine migration is arrested.

**Alternate Method:** Expanding foam will be placed in all visible openings between blocks in the retaining walls to stop material loss through the wall. The Contractor will attempt to use a foam matching the color of the retaining wall. Place low strength flowable fill behind the repaired wall. After the flowable fill has sufficiently cured, run water continuously from behind the top of the wall to confirm fine migration is arrested.

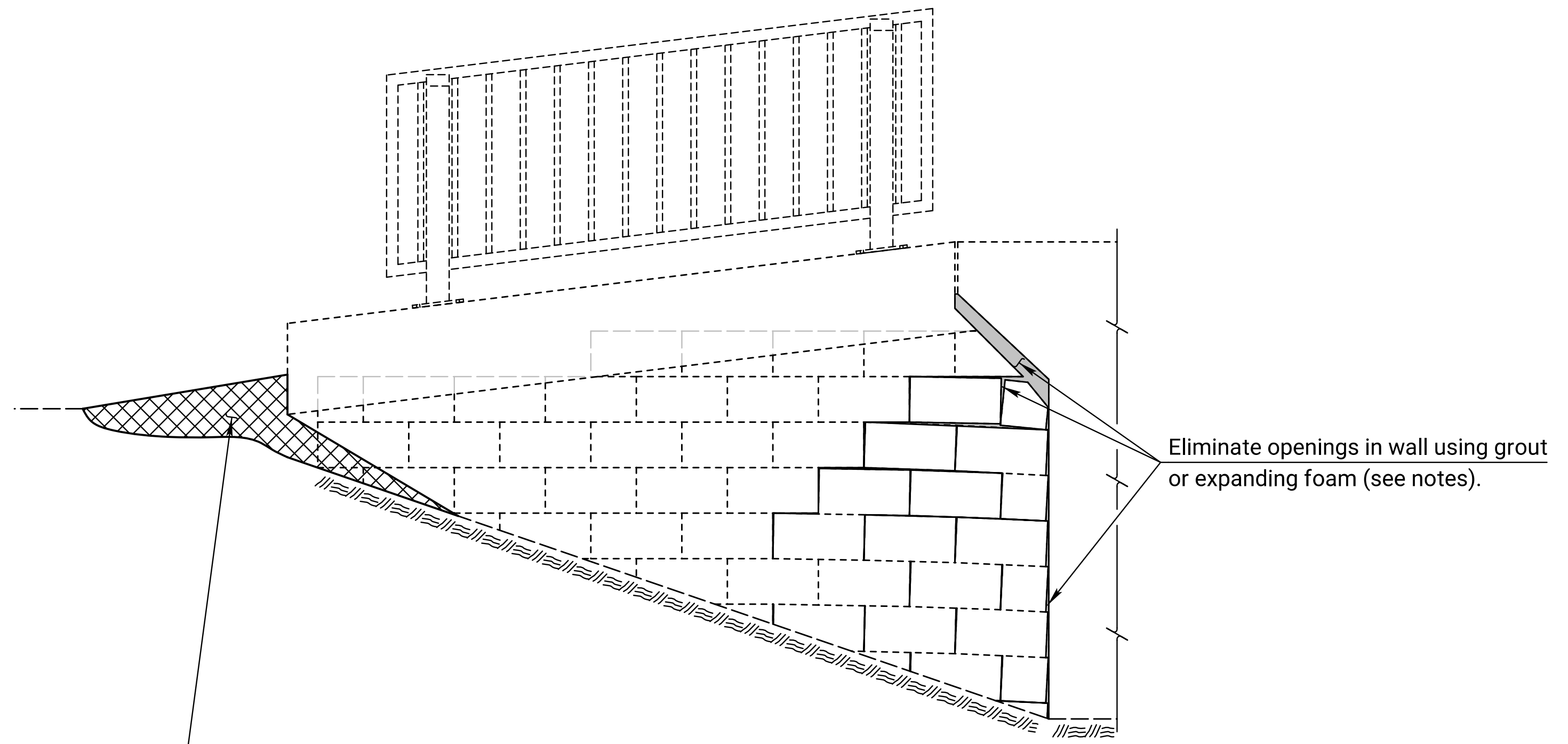
**FILL, COMPACTED (95% Density):** Correct local erosion near the ends of three retaining walls. These locations are near the northeast, southwest, and northwest wings. This local grading will consist of compacting material (Type B) in low areas to match the adjacent slope.

Estimated Volume of Material (for information only):

Northeast Retaining Wall:	2	Cu. Yds.
Southeast Retaining Wall:	0	Cu. Yds.
Southwest Retaining Wall:	2	Cu. Yds.
Northwest Retaining Wall:	2	Cu. Yds.
Total:	6	Cu. Yds.

**EXCAVATION, COMMON (CONTRACTOR FURNISHED):** Excavation of material from a location to be approved by the Engineer for local grading will be paid for as "Excavation, Common (Contractor Furnished)".

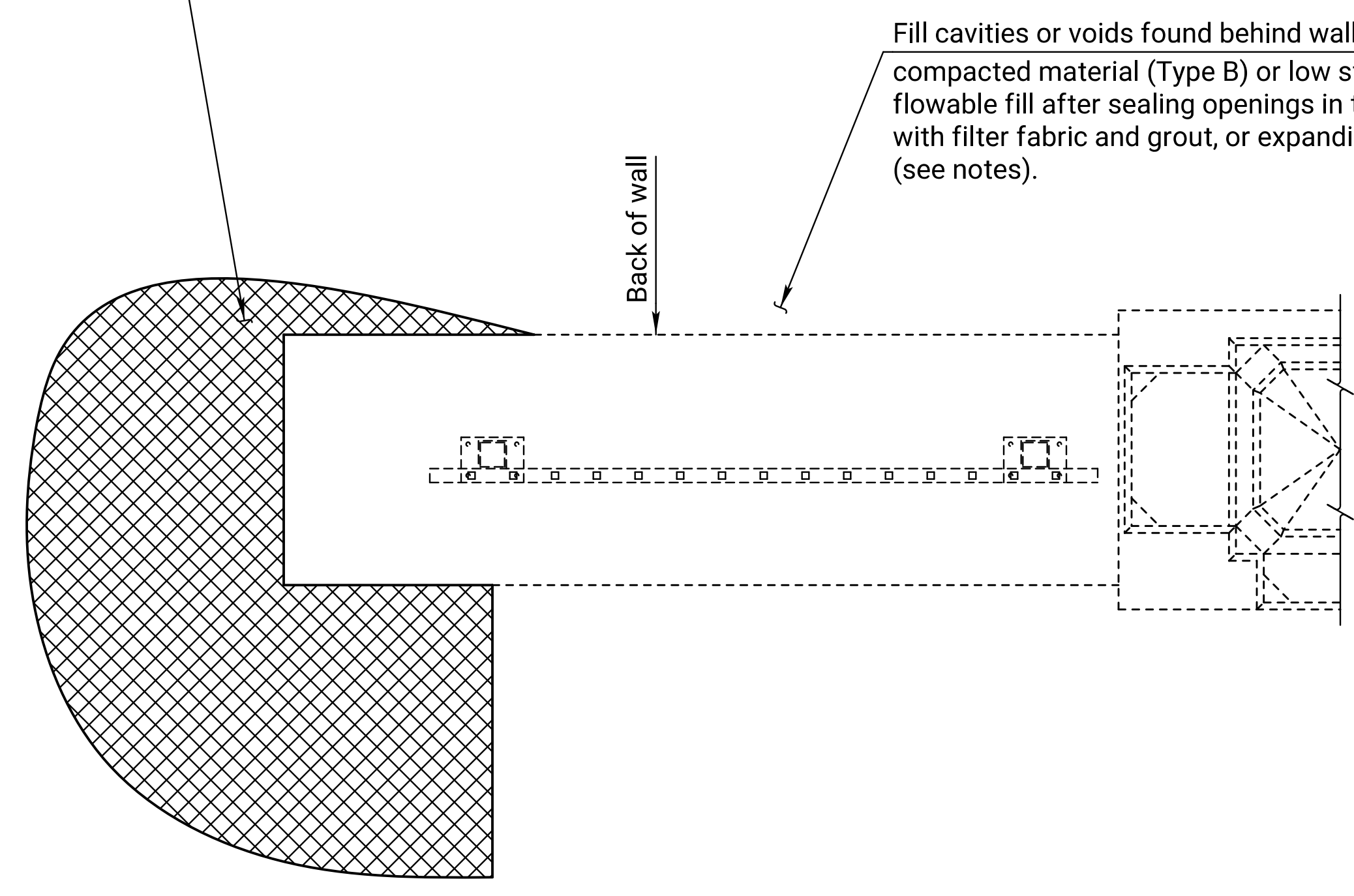
SUMMARY OF RETAINING WALL (MBW)	
Northwest Wing	35 sff
Southwest Wing	35 sff
Total Area	70 sff



RETAINING WALL - ELEVATION

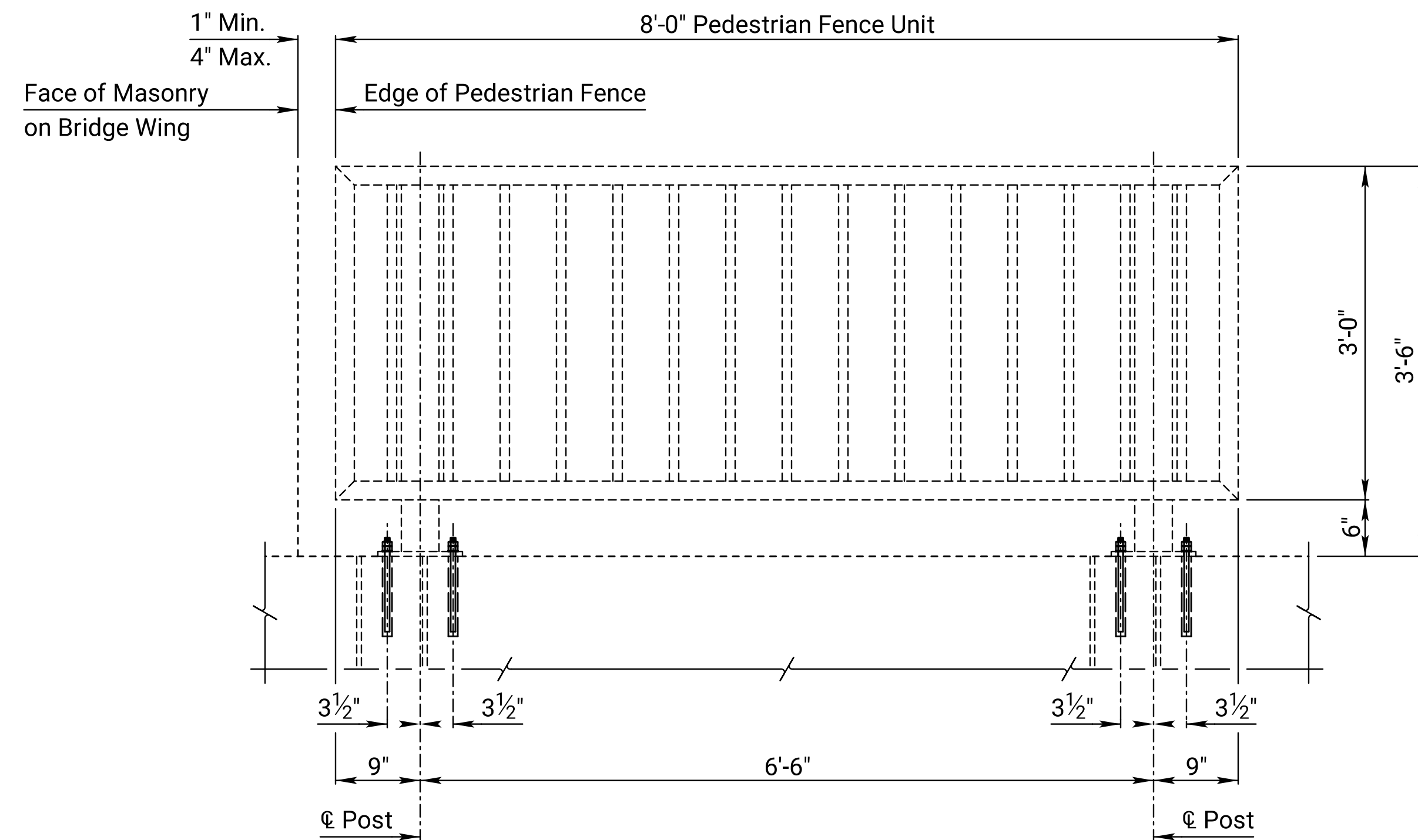
**Local Grading (3 locations only):**  
 Backfill with local material to be approved by the Engineer and compact (Type B). Grade to provide minimum 3:1 slope. See notes for payment of material excavation and placement.

Fill cavities or voids found behind wall using compacted material (Type B) or low strength flowable fill after sealing openings in the walls with filter fabric and grout, or expanding foam (see notes).



RETAINING WALL - PLAN  
 Southwest wall shown.

RETAINING WALL REPAIR AND GRADING



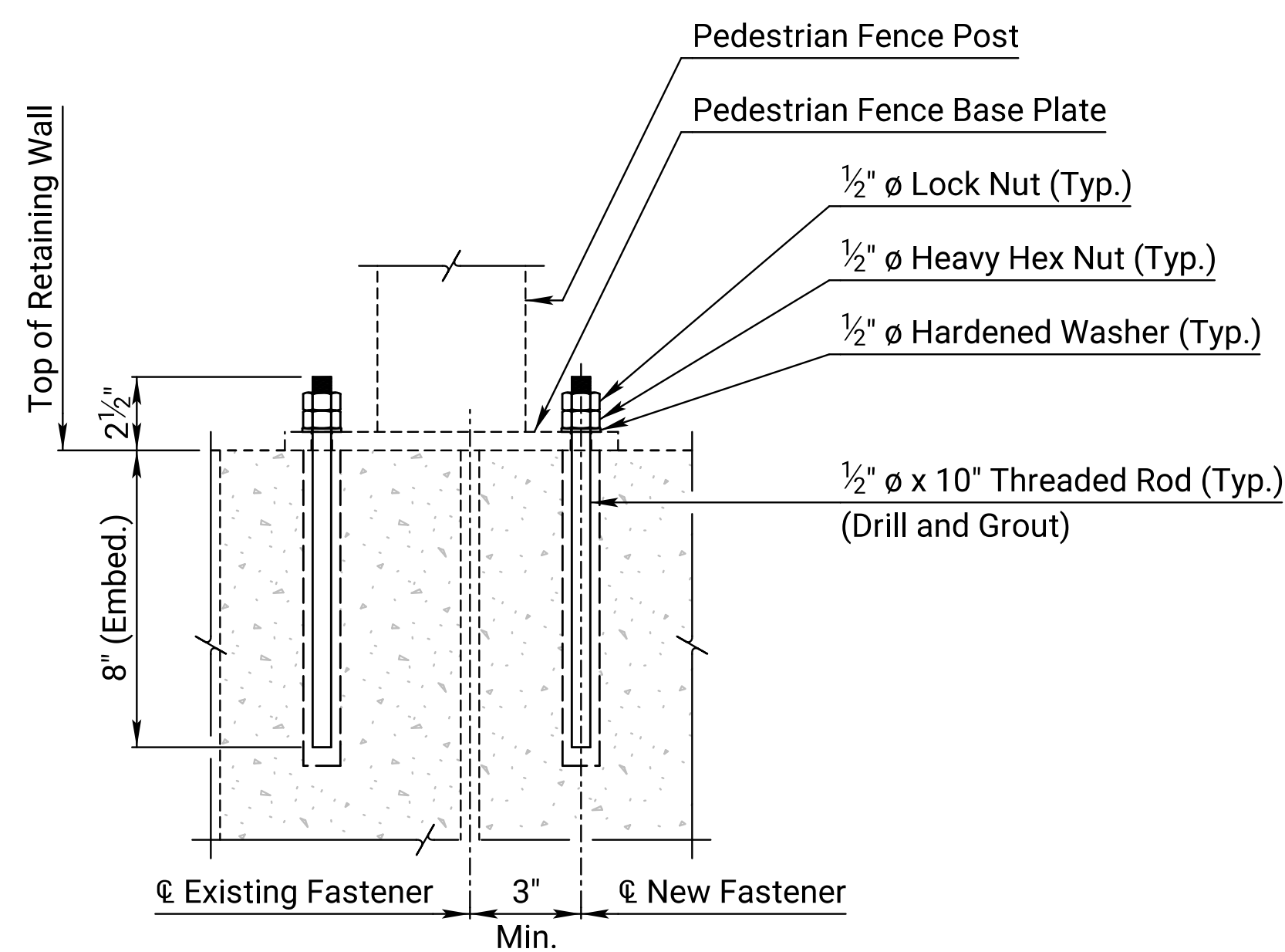
**DETAILS OF RESET RAILING - ELEVATION**

**HANDRAIL REMOVE & RESET GENERAL NOTES**

**CONSTRUCTION:** The following is a suggested method for resetting the damaged pedestrian fence unit on the retaining wall near the Northeast bridge abutment wing. Contractor to propose means and methods to Engineer for approval prior to removal and resetting of handrail.

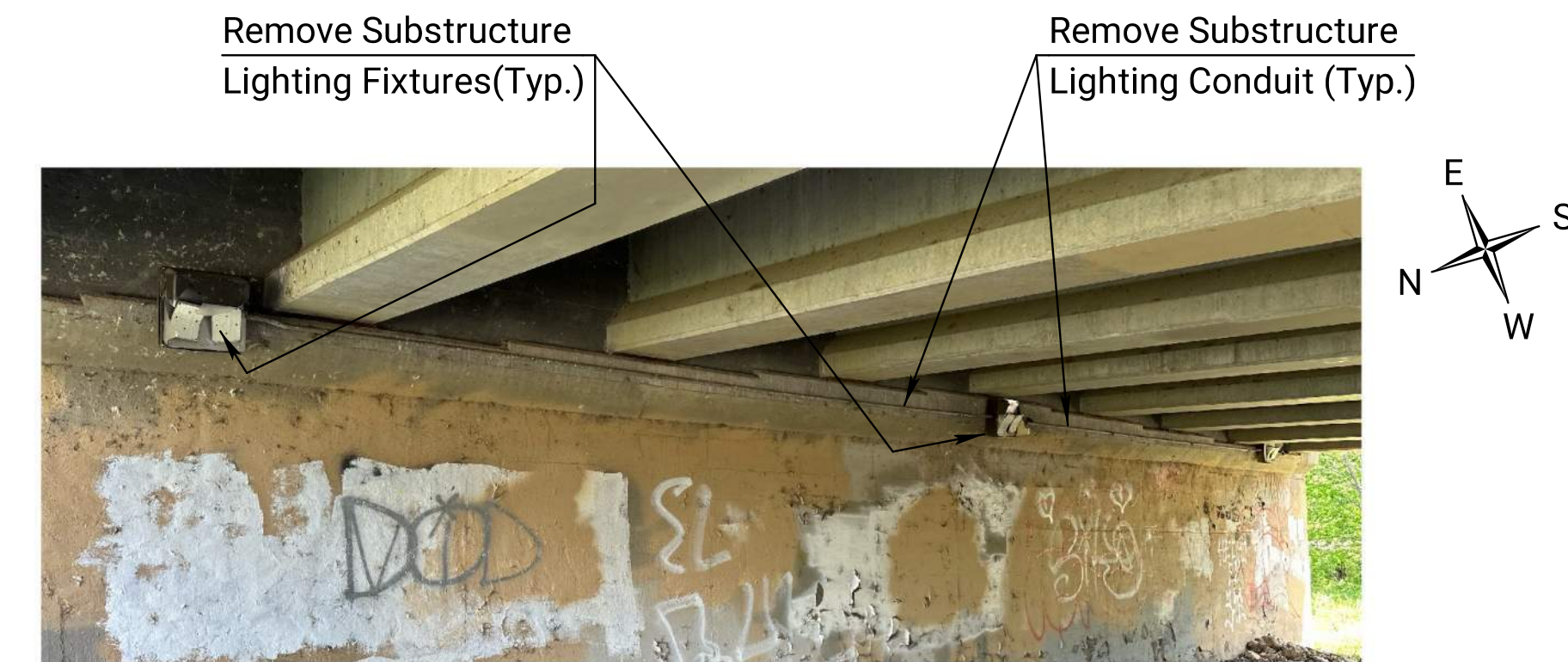
- 1) Cut or grind all fasteners connecting the pedestrian fence to the retaining wall flush with the concrete surface and set aside the pedestrian fence section.
- 2) Bend the posts and base plates of the pedestrian fence as needed to straighten impact damage and return the fence to true through heat straightening or other means (to be approved by Engineer).
- 3) Touch up any areas of paint damaged by the vehicular impact or bending operations.
- 4) Mark holes to position the repaired pedestrian fence unit on the retaining wall such that the nearest edge is no less than 1" or greater than 4" to the concrete posts on the bridge. Take care to leave at least 3" from the holes in the pedestrian fence base plates to the original embedded fasteners in the retaining wall.
- 5) Drill and grout 1/2" diameter threaded rods aligned with the marked bolt holes in the previous step with 8" of embedment in the retaining wall using a KDOT approved epoxy grout.
- 6) Place the pedestrian fence unit over the threaded rods and secure in place using a hardened washer, heavy hex nut, and a lock nut on every threaded rod.

**PAYMENT:** "Fence (Special) (Removing and Resetting)," If shall be payment for steps 1 through 4 and 6. "Drilling and Grouting," ea shall be payment for step 5 only.



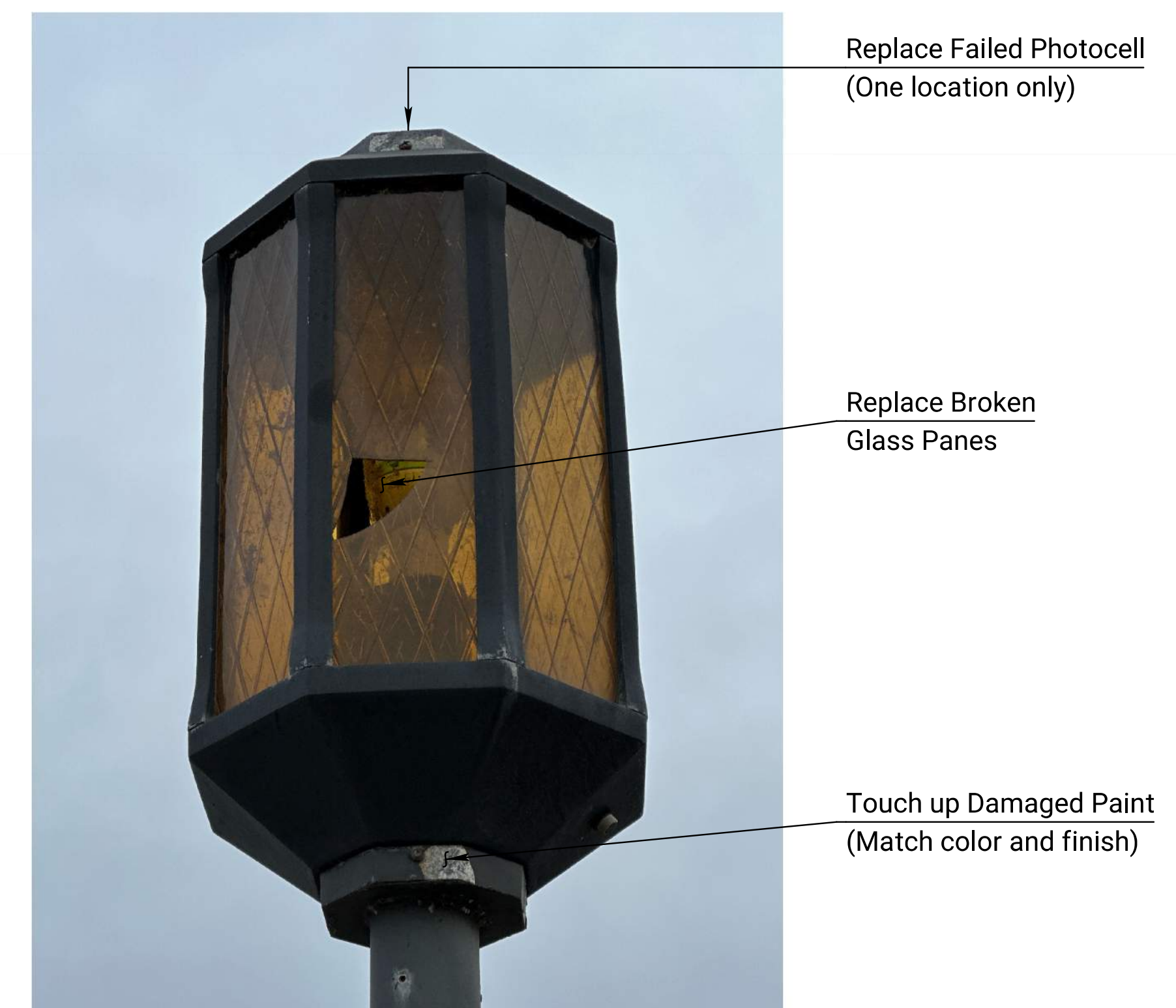
**ATTACHMENT DETAIL**

**REMOVE AND RESET EXISTING FENCE**



**REMOVAL OF EXISTING STRUCTURES:** Removal of existing substructure lighting system, including all lighting fixtures and conduit on Pier No. 1 is included in the bid item, "Removal of Existing Structures," LS.

**REMOVAL OF SUBSTRUCTURE LIGHTING SYSTEM**



**PHOTO OF LIGHT FIXTURE**  
Note broken glass pane.

**ELECTRIC LIGHTING SYSTEM:** Replace malfunctioning light sensor on always-on light fixture and remove and replace damaged glass panes on fixtures as needed. Effort shall be made to match the color and style of existing glass panes to existing, intact panes. The bid item, "Electric Lighting System," LS shall be full payment for this work.

**LIGHTING SYSTEM REPAIR**

CONSULTANTS:

**MINISA BRIDGE REHABILITATION**



REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: PAM  
 DRAWN BY: PAM  
 CHECKED BY: WBS

SHEET TITLE:

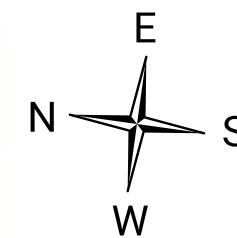
BRIDGE REPAIR - II

SHEET NO.

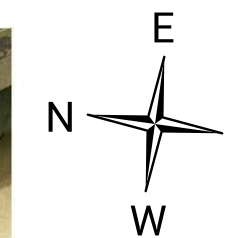
18

SHEET 18 OF 35

Perform "Concrete Surface Repair," and/or "Epoxy Resin Crack Repair," at the the bottom face of the left exterior girder in Span 1 near Pier No. 1 as needed. Limits are to be found in the field, limit length of repair to 5'-0" along length of girder.

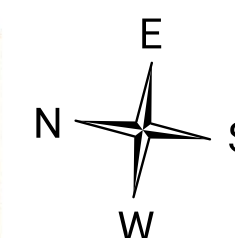


GIRDER 1 NEAR PIER 1



Perform "Concrete Surface Repair," at the west face of Pier No. 1. Actual limits are to be found in the field.

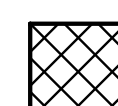

PIER 1 WALL

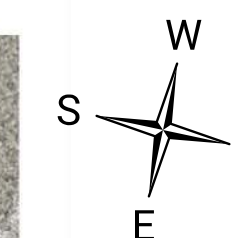


Mark areas of spalled and/or unsound concrete and surface cracks of all brackets. Delaminated/unsound concrete shall be found by sounding the surfaces with a hammer.

See "Concrete Surface and Crack Repair Additional Details" sheet for details, materials, and procedures for Concrete Surface Repair and Epoxy Resin Crack Repair.

LEGEND

-  Concrete Surface Repair
-  Epoxy Resin Crack Repair



Remove and preserve City of Wichita survey marker and reset marker with a Registered Land Surveyor after concrete surface repair. This work is subsidiary to, "Concrete Surface Repair."

Concrete Surface Repair (Northeast Wing)

See "Sidewalk and Curb Repair," sheets for replacement of this sidewalk panel.

CORNER OF N.E. WING

OVERHANG BRACKETS

PREPARED BY  
  
 214 N FRANKS AVE  
 WICHITA, KANSAS 67202  
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CONSULTANTS:

MINISA BRIDGE REHABILITATION

WICHITA, KANSAS  


REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: PAM  
 DRAWN BY: PAM  
 CHECKED BY: WBS

SHEET TITLE:  
 CONCRETE SURFACE AND CRACK REPAIR  
 LOCATIONS

SHEET NO.  
 19  
 SHEET 19 OF 35

PIER, BRACKET AND GIRDER CONCRETE REPAIR GENERAL NOTES

EPOXY RESIN CRACK REPAIR

The Field Engineer shall determine and mark cracks on the surfaces of all brackets and in the locations shown on the previous sheet.

At locations in the brackets or in the left exterior girder near Pier No. 1 with exterior cracks, but not requiring concrete surface repair, inject epoxy grout to seal the cracks in accordance with KDOT & Manufacturer Specifications.

The bid item, "Epoxy Resin Crack Repair," If shall be full compensation for all epoxy grout and ports, all labor, materials and equipment necessary to complete the repair of cracked concrete in the brackets and one location on the left exterior girder near Pier No. 1.

Estimated lengths are based on visual observation in the field. Actual quantities are to be determined in the field by the Engineer.

CONCRETE SURFACE REPAIR

The Field Engineer shall determine and mark areas of spalled and/or unsound concrete on the surfaces of all brackets and in the locations shown on the previous sheet. Delaminated/unsound concrete shall be found by sounding the surfaces with a hammer.

The Contractor shall remove all deteriorated or damaged concrete delineated by the Engineer. Additional concrete shall be removed to create a minimum thickness of new concrete of 1 inch. Do not feather edges. At repair locations, the concrete shall be removed from  $\frac{3}{4}$ " around the reinforcing steel near the surface to allow a positive bond of new concrete to the existing structure. On overhead surfaces, provide a minimum of 1" of cover to the reinforcing steel.

Remove corrosion from all exposed reinforcing steel by brushing or sandblasting. For more information, see "Concrete Surface Repair Details," this sheet.

Repair or replacement of deteriorated reinforcing steel delineated by the Engineer shall be paid for by the bid item, "Reinforcing Steel (Repair) (Grade 60)(Set Price)."

Use Concrete (Grade 4.0) (AE) (SA) or an approved Shotcrete as the repair material. Refer to DIVISION 800 of KDOT specifications for surface preparation requirements for, "Concrete Surface Repair."

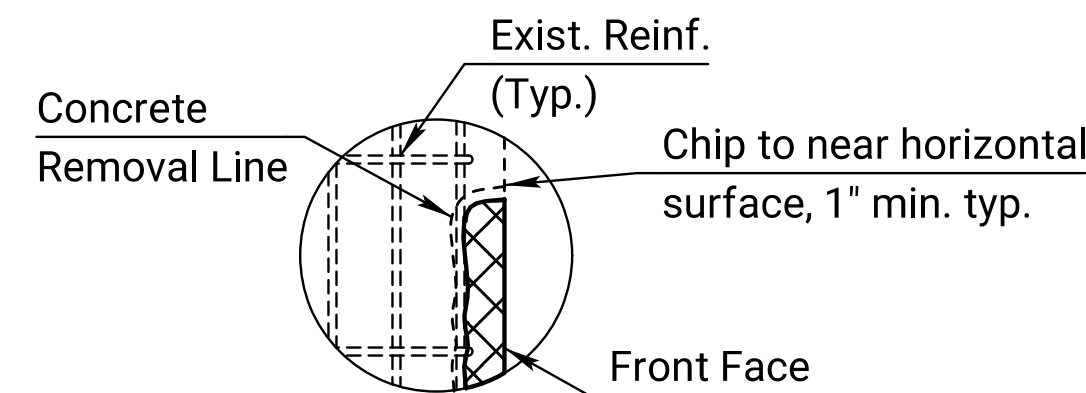
The removal of deteriorated or damaged concrete or reinforcing steel, placement of repair material, and all labor, materials, equipment, and incidentals necessary to complete the repairs shall be paid for as, "Concrete Surface Repair," sf.

All removal or repair of specialty or pigmented materials will be performed by the Conservator. Details shown on this sheet apply only to standard, non pigmented, concrete.

SUMMARY OF CONCRETE SURFACE REPAIR	
Left Girder Near Pier No. 1	6.3 sf
Pier No. 1 Wall	20.0 sf
Overhang Brackets	35.0 sf
Bridge Wing	1.0 sf
<b>Total</b>	<b>62.3 sf</b>

SUMMARY OF EPOXY RESIN CRACK REPAIR	
Left Girder Near Pier No. 1	3.0 lf
Pier No. 1 Wall	0.0 lf
Overhang Brackets	230.0 lf
Bridge Wing	0.0 lf
<b>Total</b>	<b>233.0 lf</b>

Note: Take extreme care to not damage existing reinforcing.



CONCRETE SURFACE REPAIR DETAIL

**REINFORCING STEEL:** Care should be exercised to prevent cutting, stretching or damaging exposed reinforcing steel and to avoid breaking the bond on exposed reinforcing that is partially exposed yet remains in sound concrete. At repair locations, the concrete shall be removed from  $\frac{3}{4}$ " around the reinforcing steel near the surface to allow a positive bond of new concrete to the existing structure. Reinforcing steel damaged, cut, or deteriorated shall be replaced as directed by the Engineer. See table for minimum splice lengths required. Replacement of bars damaged by the Contractor shall be subsidiary to, "Concrete Surface Repair".

CONCRETE SURFACE REPAIR DETAILS

MINIMUM REBAR SPLICE LENGTHS		
Existing Bar Size	Minimum Splice Lengths (inches)	
	Existing Gr. 40 ksi Bars	Existing Gr. 60 ksi Bars
#4	12"	16"
#5	13"	20"
#6	16"	24"
#7	20"	30"
#8	26"	39"
#9	33"	49"
#10	42"	62"
#11	51"	77"

Note: If splicing epoxy coated reinforcing steel, increase the above splice lengths by 20%.

☑ Lap lengths are based on a Class B splice. Use the minimum splice length corresponding to the grade of the existing reinforcing in the column.

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MINISA BRIDGE REHABILITATION

WICHITA, KANSAS  
  
 CITY OF WICHITA

REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: PAM  
 DRAWN BY: PAM  
 CHECKED BY: WBS

SHEET TITLE:  
**CONCRETE SURFACE AND CRACK REPAIR**  
**DETAILS AND SEQUENCE**

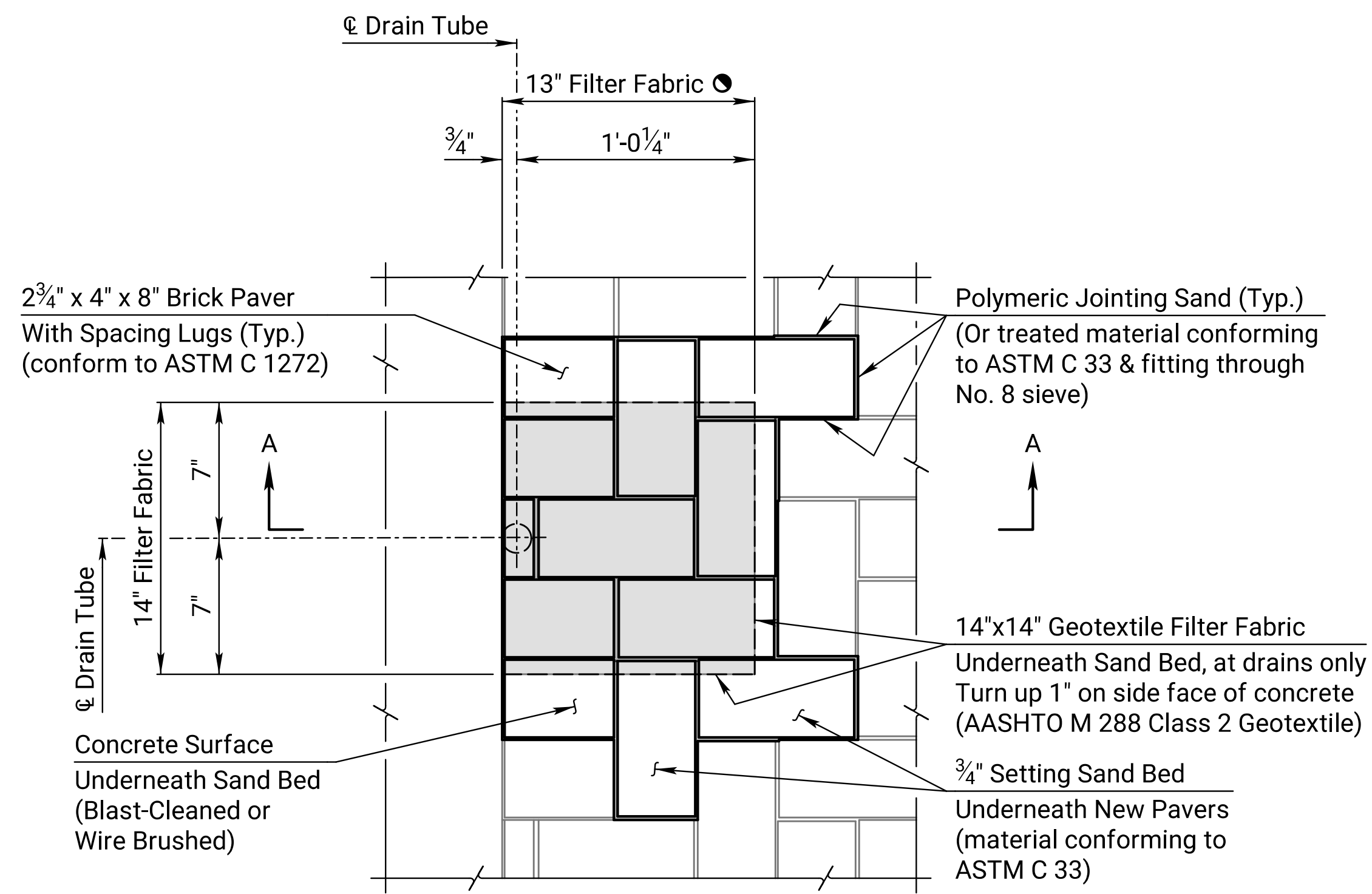
SHEET NO.  
**20**  
 SHEET 20 OF 35

**BRICK SETTLEMENT GENERAL NOTES**

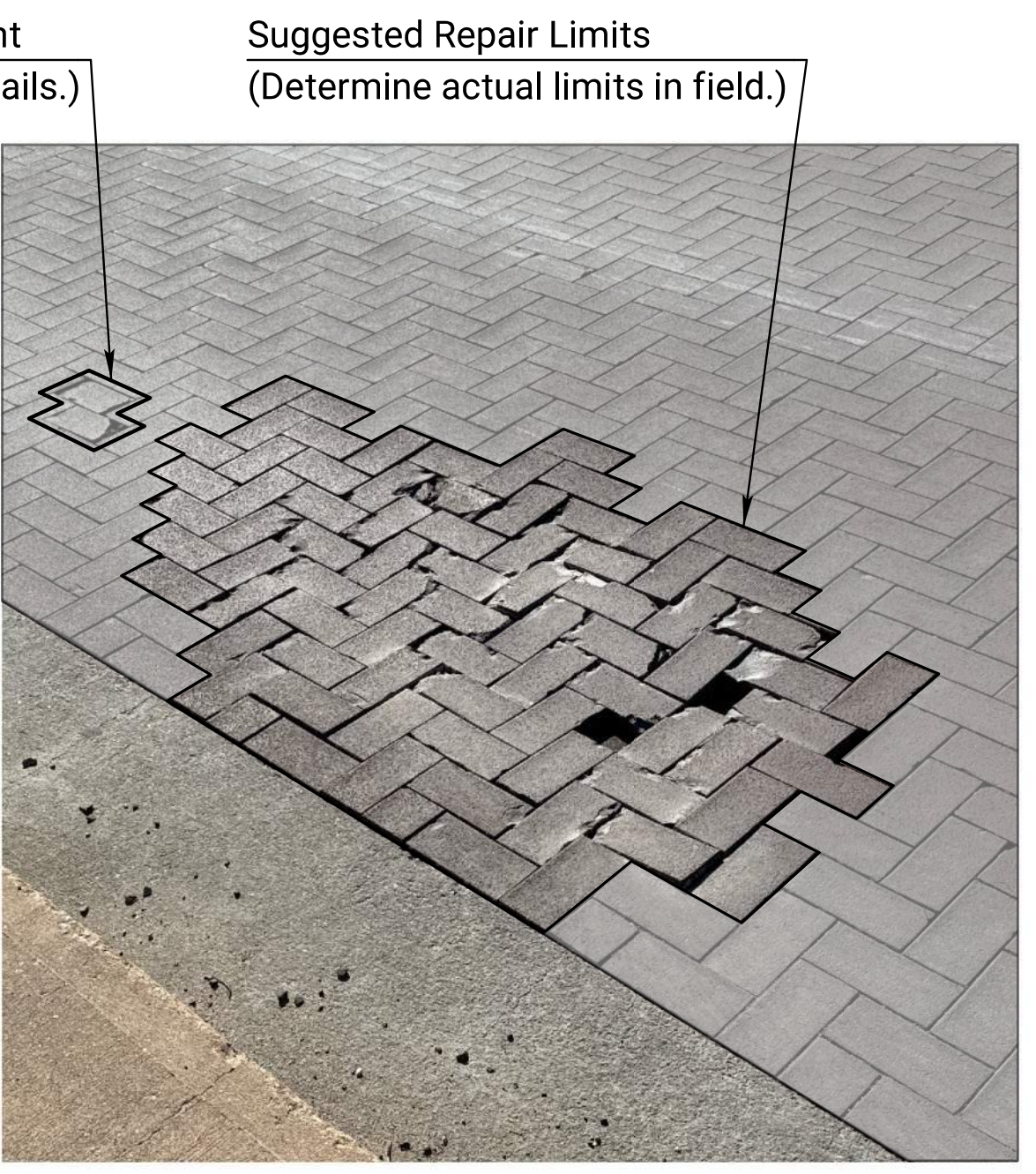
CONSTRUCTION: The following is a suggested sequence for repairing areas of the brick pavement with visible settlement.

- 1) Visually identify areas with vertical settlement of brick pavers and mark them with chalk or other means, avoiding overspray. Verify limits with City Inspector.
  - 2) Remove settled brick pavers, taking care not to disturb adjacent brick pavers to remain in place. Remove the exposed sand bed, without undermining adjacent pavers. If a fabric layer or membrane is encountered, it shall be cut around the perimeter of the repair area and removed to fully expose the concrete sub-deck.
  - 3) If a drain tube is exposed, remove additional pavers using the previous sequence as needed to ensure a clearance of at least 6" from the drain to the face of any pavers to remain in place.
  - 4) Blast-clean the concrete deck or use a wire brush and shop vac to remove any adhesives or sealant only in area to be covered by 14"x14" fabric, taking care not to displace adjacent pavers.
  - 5) Center a 14"x14" Geotextile Filter Fabric square complying with AASHTO M 288 Class 2 Geotextile at every exposed deck drain. If a deck drain is not present, Filter Fabric is not required. The Contractor may use adhesive to temporarily hold the fabric in place. For drains near the curb, place the fabric over the drain and turn the fabric 1" up the vertical concrete face.
- Note: Test the first fabric location by placing sand over the fabric per the following steps, and run water through the drain to ensure no sand passes the fabric before completing fabric placement.
- 6) A 3/4" thick sand setting bed shall be placed in the repair area. Use material conforming to ASTM C 33 with a maximum particle size of 3/16".
  - 7) Place new 2 3/4" x 4" x 8" brick pavers with spacing lugs, complying with ASTM C 1272 in a herringbone pattern, aligned with adjacent pavers.
  - 8) A first pass shall be made with a mechanical plate vibrator/compactor before the addition of joint sand.
  - 9) Fill the joints between brick pavers with an approved high-performance polymeric sand. All work with polymeric sand shall be done in accordance with manufacturer's specifications. Material too large to fill the joints shall be brushed or blown off the surface of the pavers and not forced into the joints. If using a polymer additive to stabilize sand, the sand component shall conform to ASTM C 33 and pass a No. 8 sieve. Use of mason's sand conforming to ASTM C 144 will not be allowed. Alternate sweeping additional joint sand and vibrating into place using a mechanical plate vibrator/compactor until the joints are full.
  - 10) Excess material shall be brushed or blown off the surface, taking care not to remove polymeric sand from the joints.
  - 11) Saturate the pavement surface in the repair area with water, taking care not to remove polymeric sand from the joints. No vehicle or foot traffic will be allowed on the repair area for a minimum of 4 hours. Use of a power washer is not allowed.

PAVING BRICK: All labour, materials, equipment, and incidentals required to complete replacement of brick pavers shown on this sheet shall be paid for by the bid item, "Paving Brick," sy.



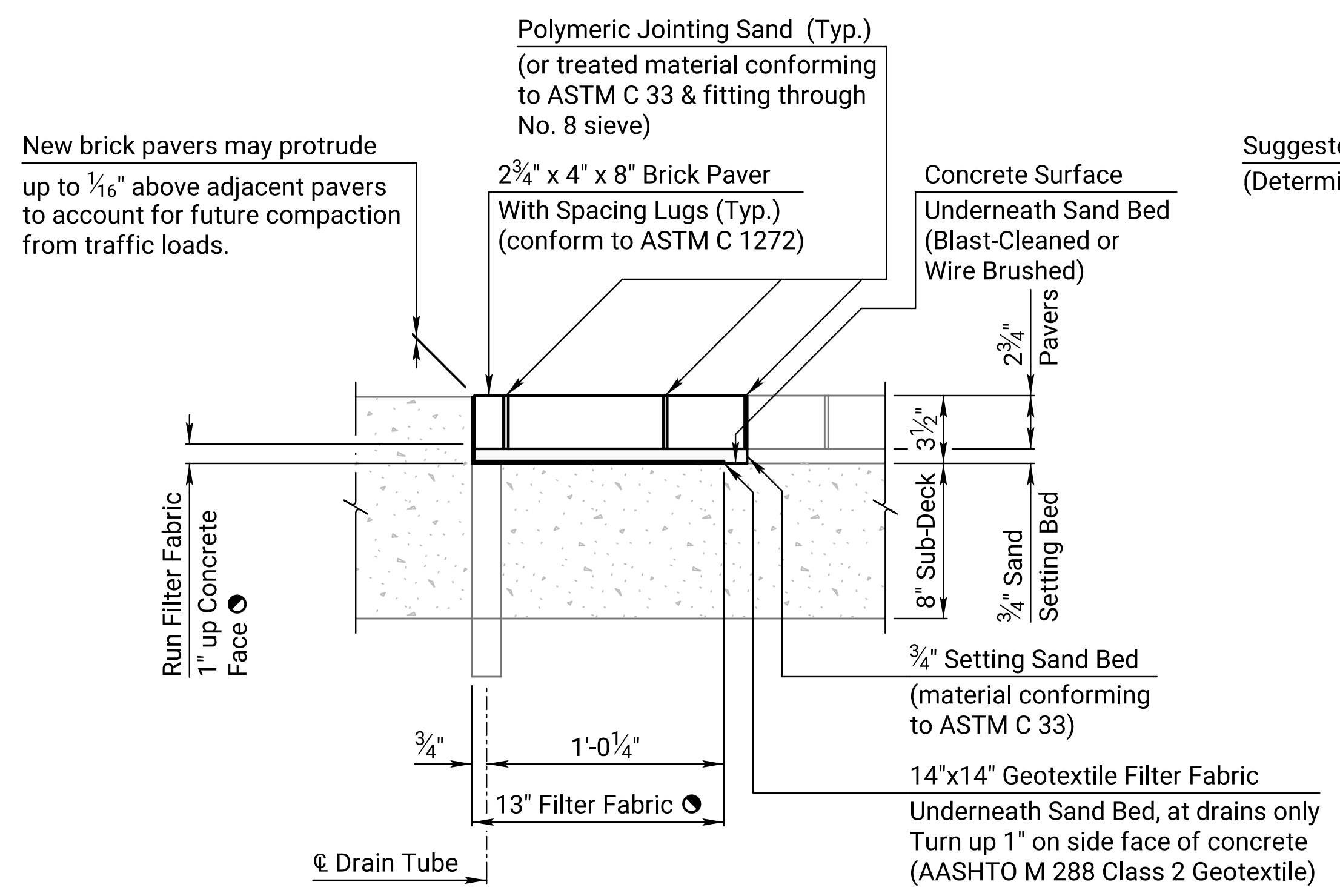
**SETTLEMENT REPAIR - PLAN**



**SETTLEMENT LOCATION - EXAMPLE 1**

Vehicular traffic will not be allowed within 4'-0" of the repair area after brick paver removal, until the repair is completed.

● Lay 13" of 14x14" fabric on concrete and run 1" up vertical concrete face.



**SECTION A-A**



**SETTLEMENT LOCATION - EXAMPLE 2**

SUMMARY OF PAVING BRICK	
Brick Settlement Repair ●	10.6 sy
Damaged Brick Replacement ●●	42.5 sy
<b>Total Paving Brick</b>	<b>53.2 sy</b>

● See this sheet for details.  
 ●● See "Replacement of Damaged Brick," sheet for details.

CONSULTANTS:

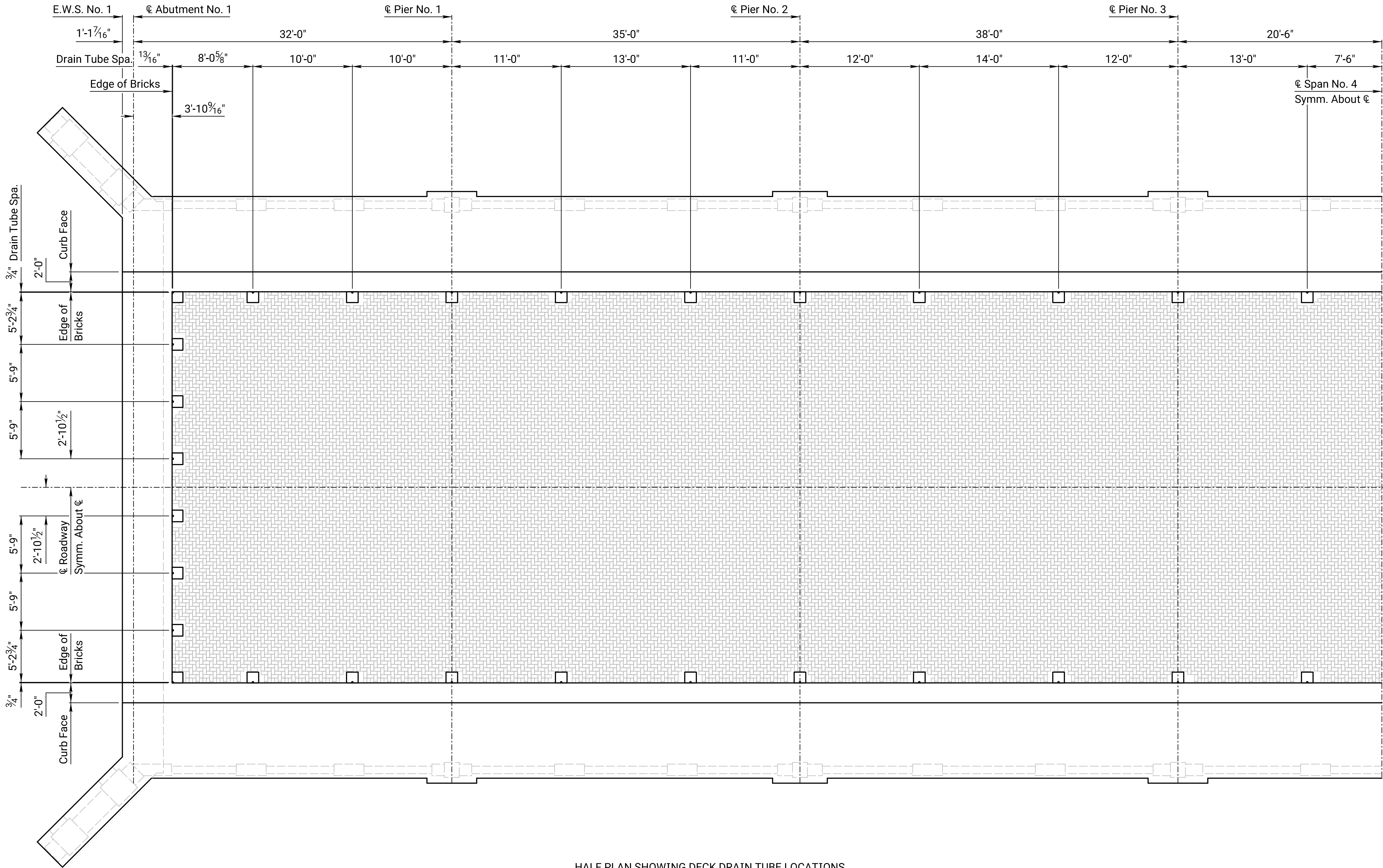
MINISA BRIDGE REHABILITATION  
 WICHITA, KANSAS  
 CITY OF WICHITA

REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
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SHEET TITLE:  
**BRICK SETTLEMENT REPAIR**

SHEET NO.  
**21**  
 SHEET 21 OF 35



HALF PLAN SHOWING DECK DRAIN TUBE LOCATIONS

Plotted by: jmadrigal 24-MAR-2026 12:16  
File: minisa\_brdp031.dgn

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WICHITA, KANSAS  
  
 CITY OF WICHITA

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PROJ NO: 472-2024-086025  
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SHEET TITLE:  
 DRAIN TUBE LOCATIONS

SHEET NO.  
 22  
 SHEET 22 OF 35

CONSULTANTS:

MINISA BRIDGE REHABILITATION

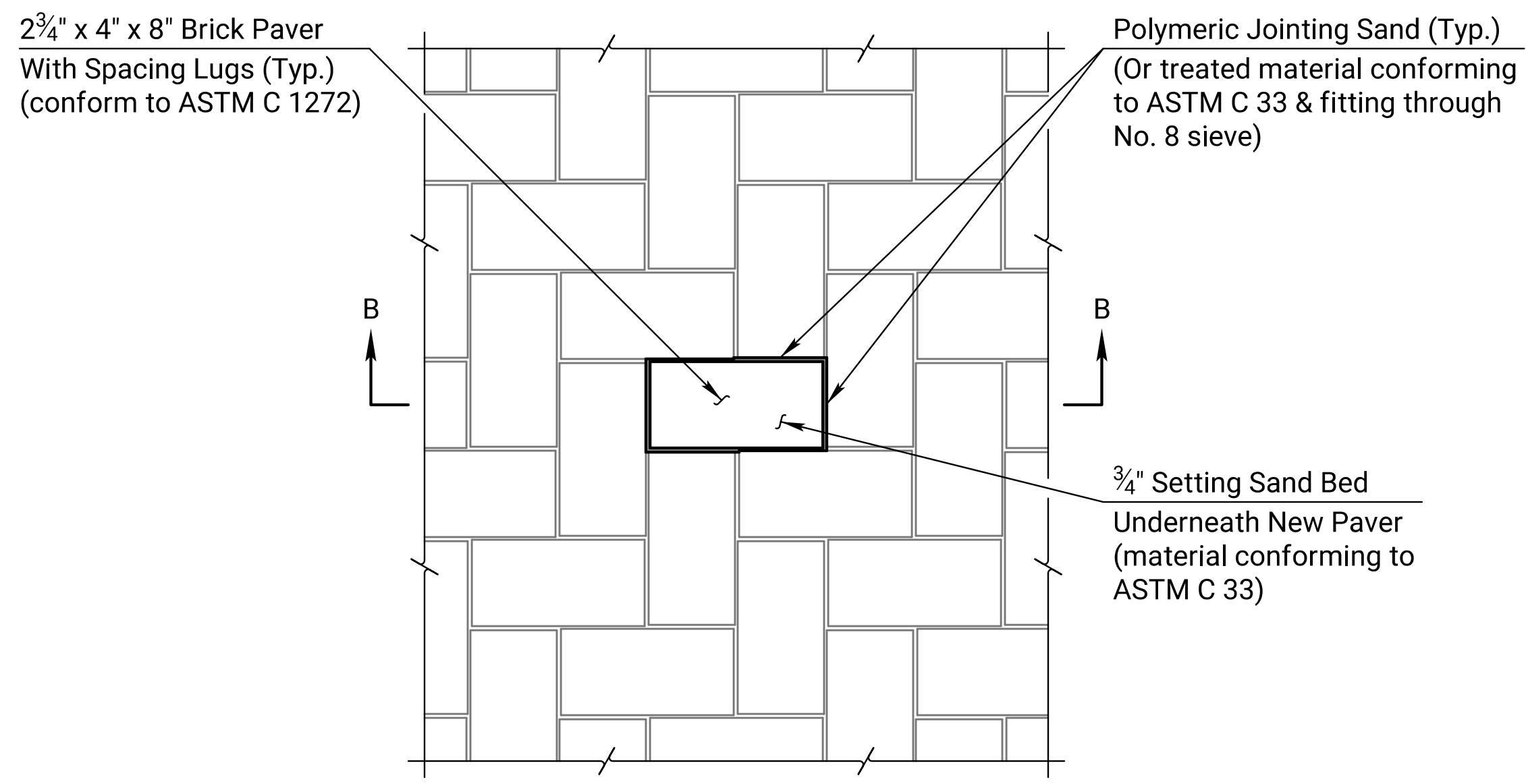


REVISIONS:	MARK	DATE	DESCRIPTION

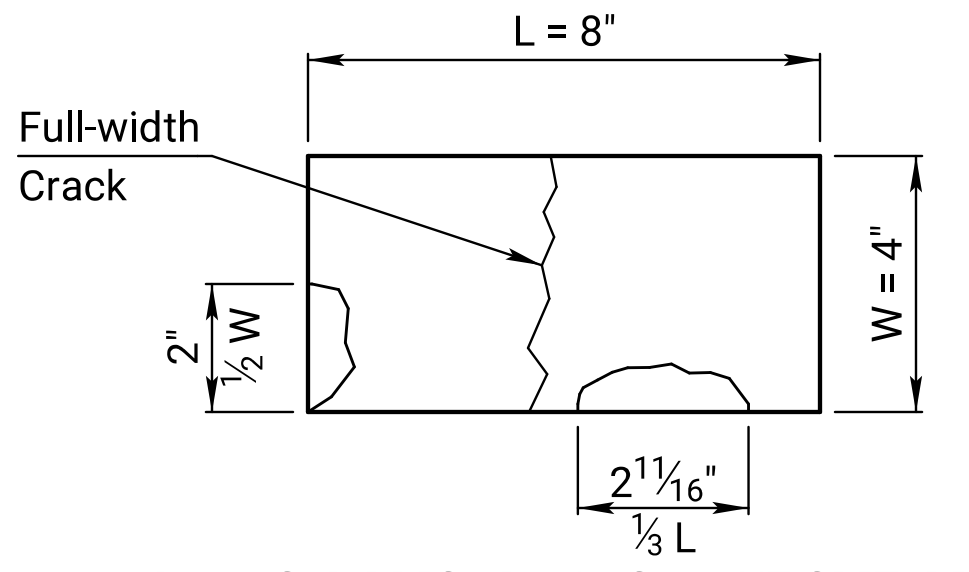
PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: PAM  
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SHEET TITLE:  
 REPLACEMENT OF DAMAGED BRICKS

SHEET NO.  
 23  
 SHEET 23 OF 35

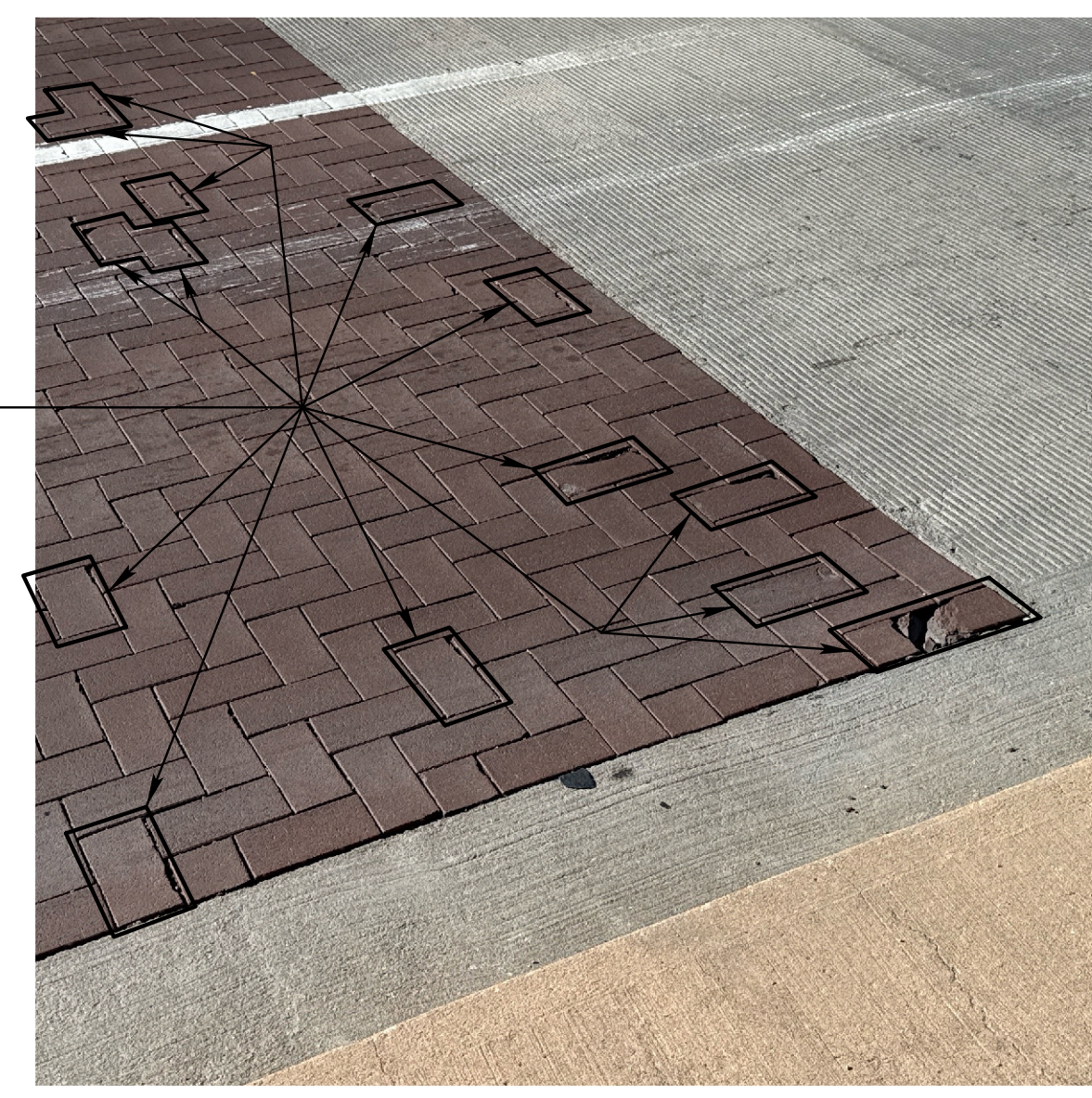


DAMAGED BRICK REPLACEMENT - PLAN



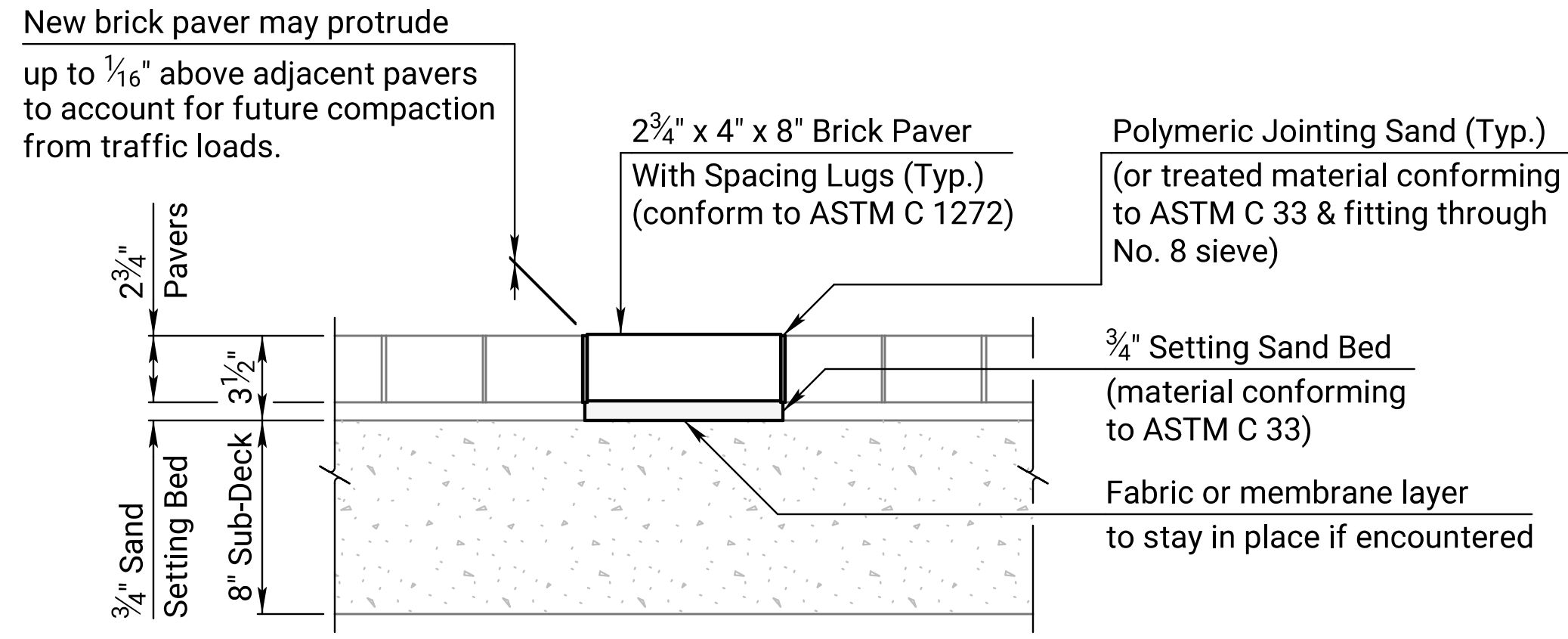
DAMAGED BRICK REPLACEMENT CRITERIA  
 Replace bricks meeting at least one of these criteria.

Vehicular traffic will not be allowed within 4'-0" of the repair area after brick paver removal, until the repair is completed.



DAMAGED BRICK EXAMPLE

Damaged Brick Replacement (Typ.)



SECTION B-B

New brick paver may protrude up to  $\frac{1}{16}$ " above adjacent pavers to account for future compaction from traffic loads.

DAMAGED BRICKS GENERAL NOTES

CONSTRUCTION: The following is a suggested sequence for repairing chipped or split brick pavers.

- 1) Visually identify brick pavers with chipping along at least one half of a short face or one third of a long face or with a full width crack. Verify limits with Engineer.
- 2) Remove damaged brick paver(s), taking care not to disturb adjacent pavers to remain in place. Remove the exposed sand bed, without undermining adjacent bricks. If a fabric layer or membrane is encountered, it will remain in place.
- 3) A  $\frac{3}{4}$ " thick sand setting bed shall be placed in the repair area. Use material conforming to ASTM C 33 with a maximum particle size of  $\frac{3}{16}$ ".
- 4) Place a new  $2 \frac{3}{4}$ " x 4" x 8" brick paver with spacing lugs, complying with ASTM C1272, aligned with adjacent pavers.
- 5) A first pass shall be made with a mechanical plate vibrator/compactor before the addition of joint sand.
- 6) Fill the joints between brick pavers with an approved high-performance polymeric sand. All work with polymeric sand shall be done in accordance with manufacturers' specifications. Material too large to fill the joints shall be brushed or blown off the surface of the pavers and not forced into the joints. If using a polymer additive to stabilize sand, the sand component shall conform to ASTM C 33 and pass a No. 8 sieve. Use of mason's sand conforming to ASTM C 144 will not be allowed. Alternate sweeping additional joint sand and vibrating into place using a mechanical plate vibrator/compactor until the joints are full.
- 7) Excess material shall be brushed or blown off the surface, taking care not to remove polymeric sand from the joints.
- 8) Saturate the pavement surface in the repair area with water, taking care not to remove polymeric sand from the joints. No vehicle or foot traffic will be allowed on the repair area for a minimum of 4 hours. Use of a power washer is not allowed.

PAVING BRICK: All labor, materials, equipment, and incidentals required to complete replacement of brick pavers shown on this sheet shall be paid for by the bid item, "Paving Brick," sy.

SUMMARY OF PAVING BRICK	
Brick Settlement Repair ●	10.6 sy
Damaged Brick Replacement ●●	42.5 sy
<b>Total Paving Brick</b>	<b>53.2 sy</b>

● See "Brick Settlement Repair," sheet for details.  
 ●● See this sheet for details.

**GENERAL NOTES**

Reference is made to the latest edition of the CRSI "Manual of Standard Practice" for recommended industry practices concerning reinforcing steel.

Use only the following types of bar supports:

- 1) Wire Bar Supports:
  - a) Epoxy coated reinforcing: Class 1 Protection
  - b) Non-epoxy coated reinforcing: Class 1, 2, or 3 Protection
- 2) Plastic Bar Supports
- 3) Supplementary bars

When securing epoxy coated reinforcement, use tie wires or metal clips that are epoxy or plastic coated.

Do not weld reinforcing steel to bar supports or to other reinforcing steel. Shop weld spacer frames for haunched slabs.

Tie bars at all intersections around the perimeter of each mat and at not less than 2'-0" centers or at every intersection, whichever is greater.

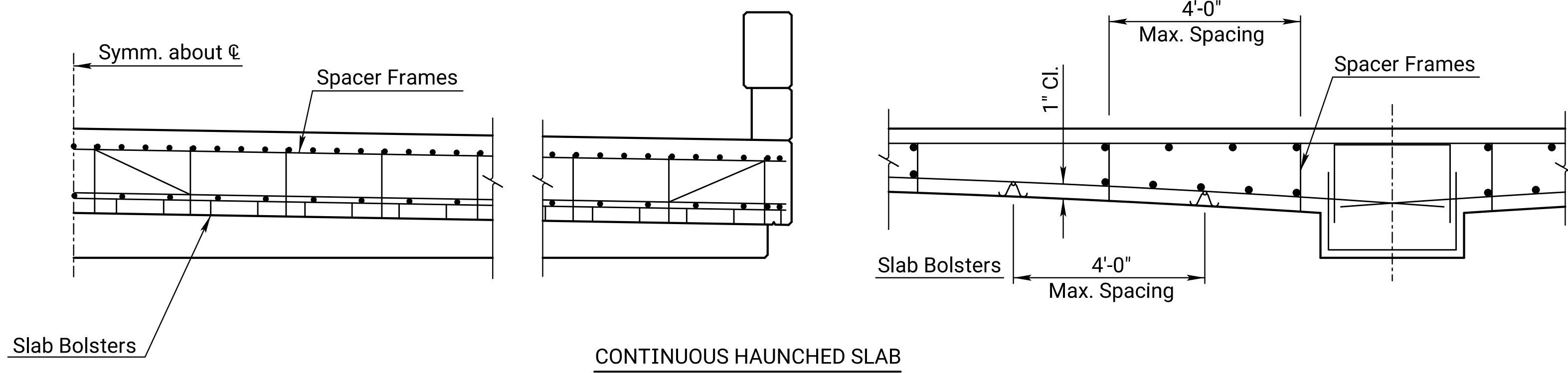
Where more than one length of bar support is required, lap the end legs so they are locked or tied together.

Use proper height supports to maintain the distance between the reinforcing and the formed surface or the top surface of deck slabs within 1/4" of that indicated on the plans.

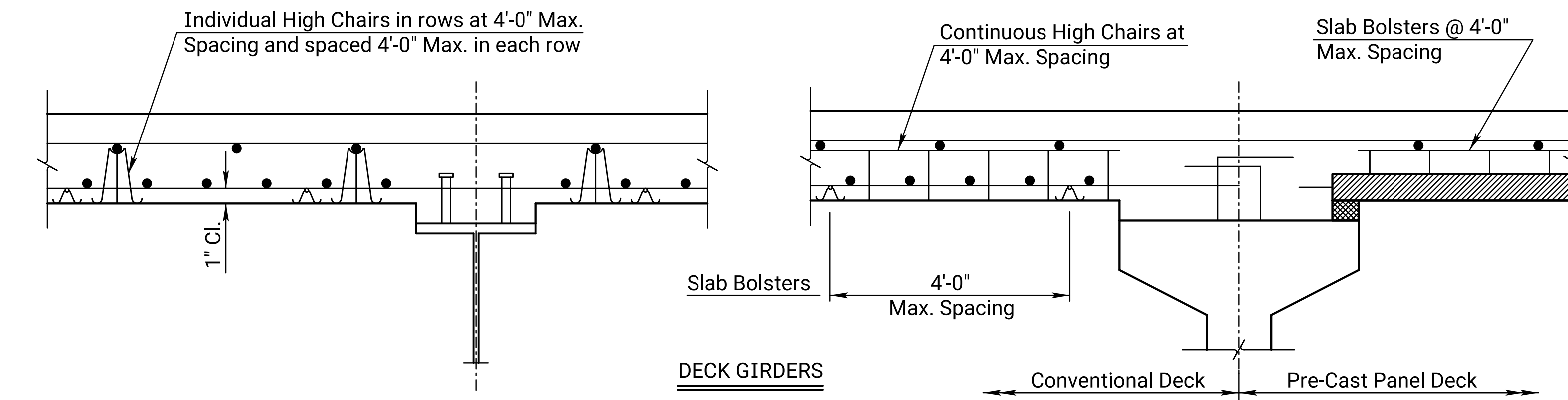
Spacings shown are maximums. Use sufficient supports, as determined by the Engineer, to retain the reinforcing steel in position.

Construct any platforms, required for the support of workers and/or equipment during concrete placement, directly on the forms and not on the reinforcing steel.

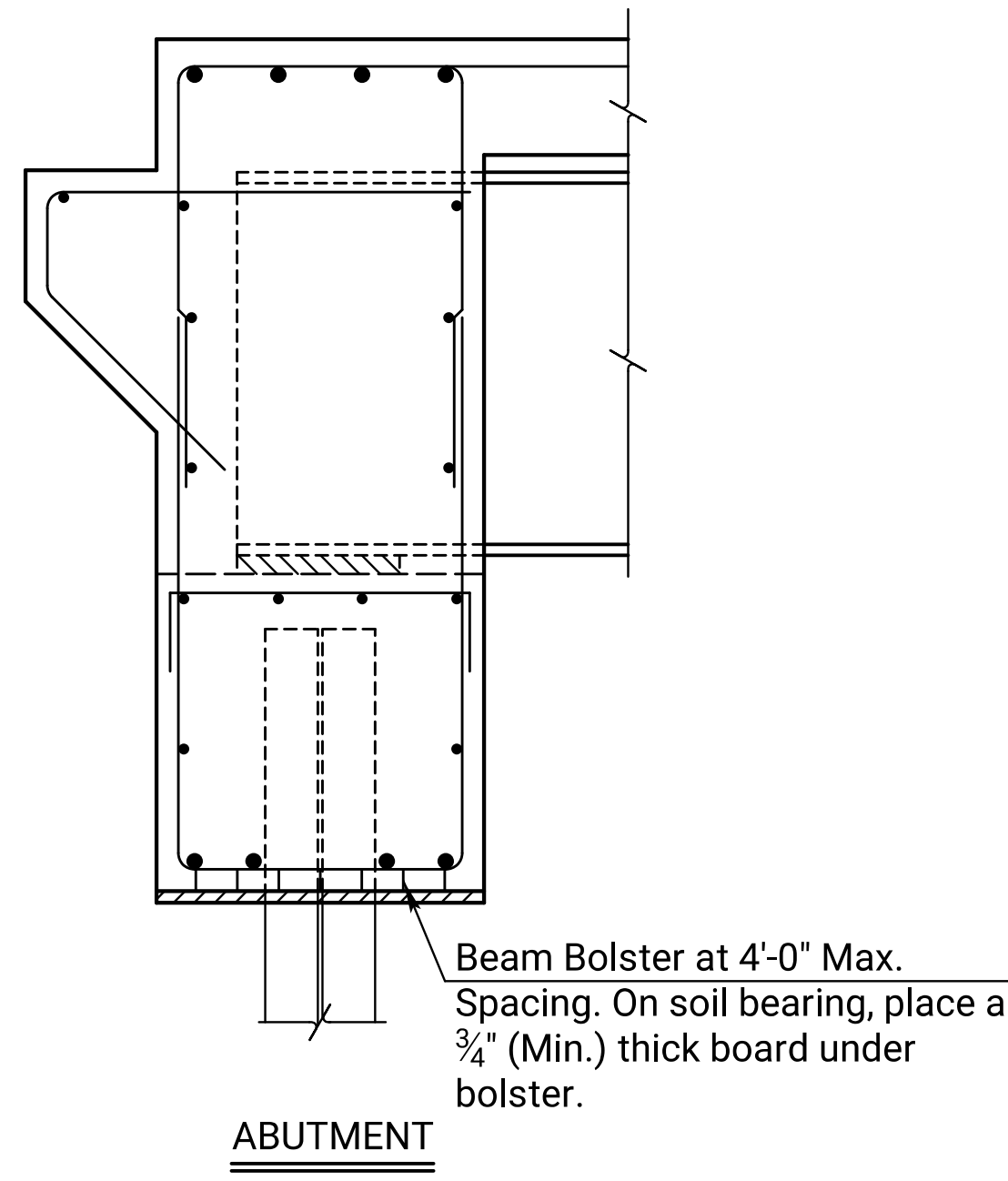
Designs and arrangements of Supports or Spacers other than as shown on this sheet, may be used with the permission of the Engineer.



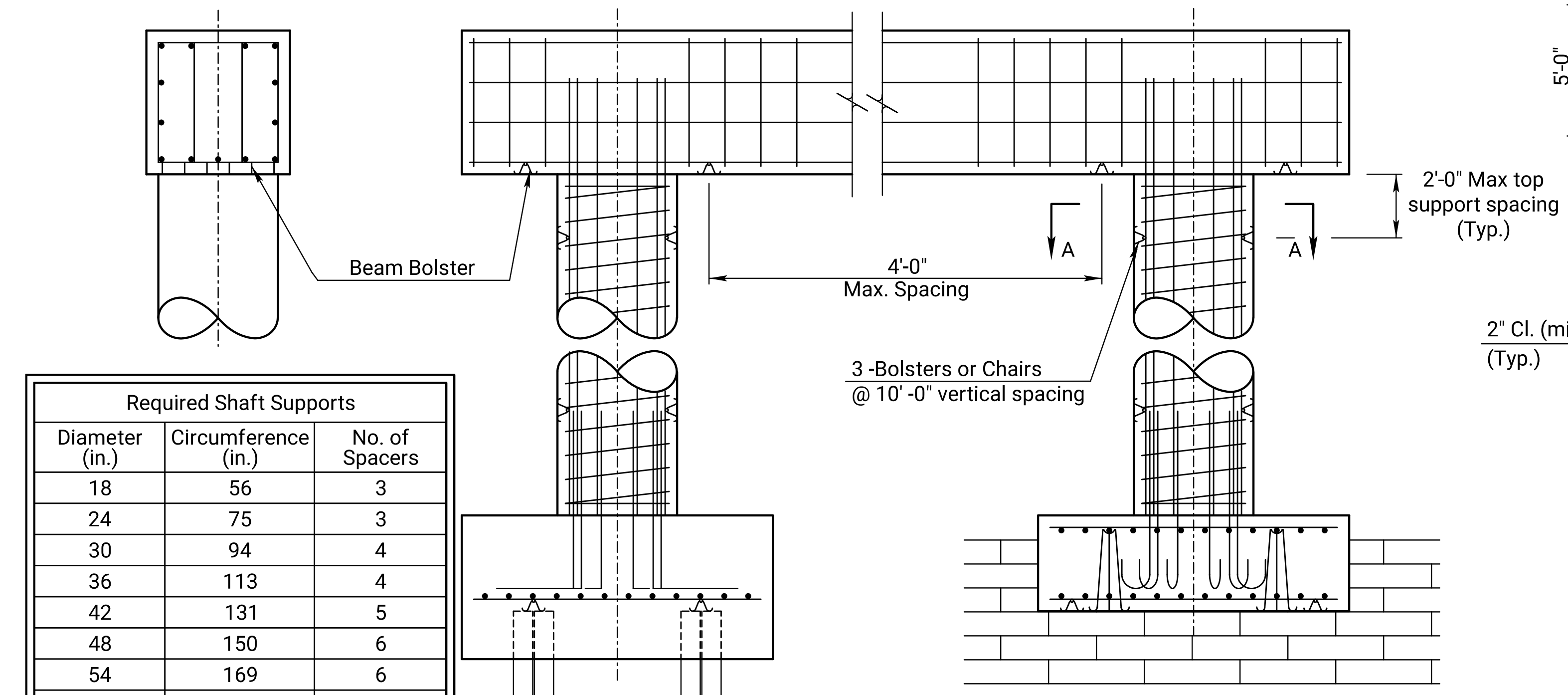
**CONTINUOUS HAUNCHED SLAB**



**DECK GIRDERS**

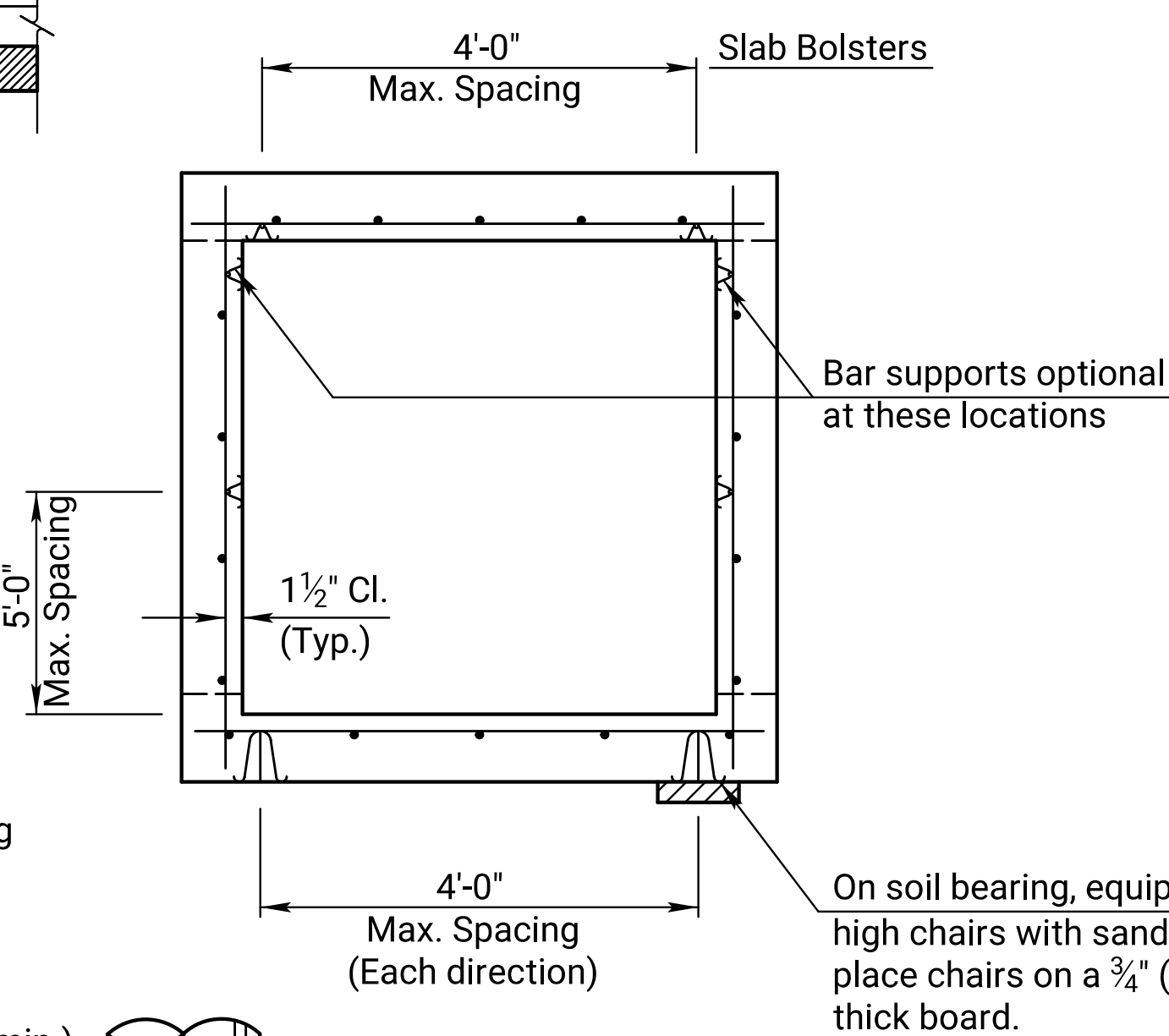


**ABUTMENT**

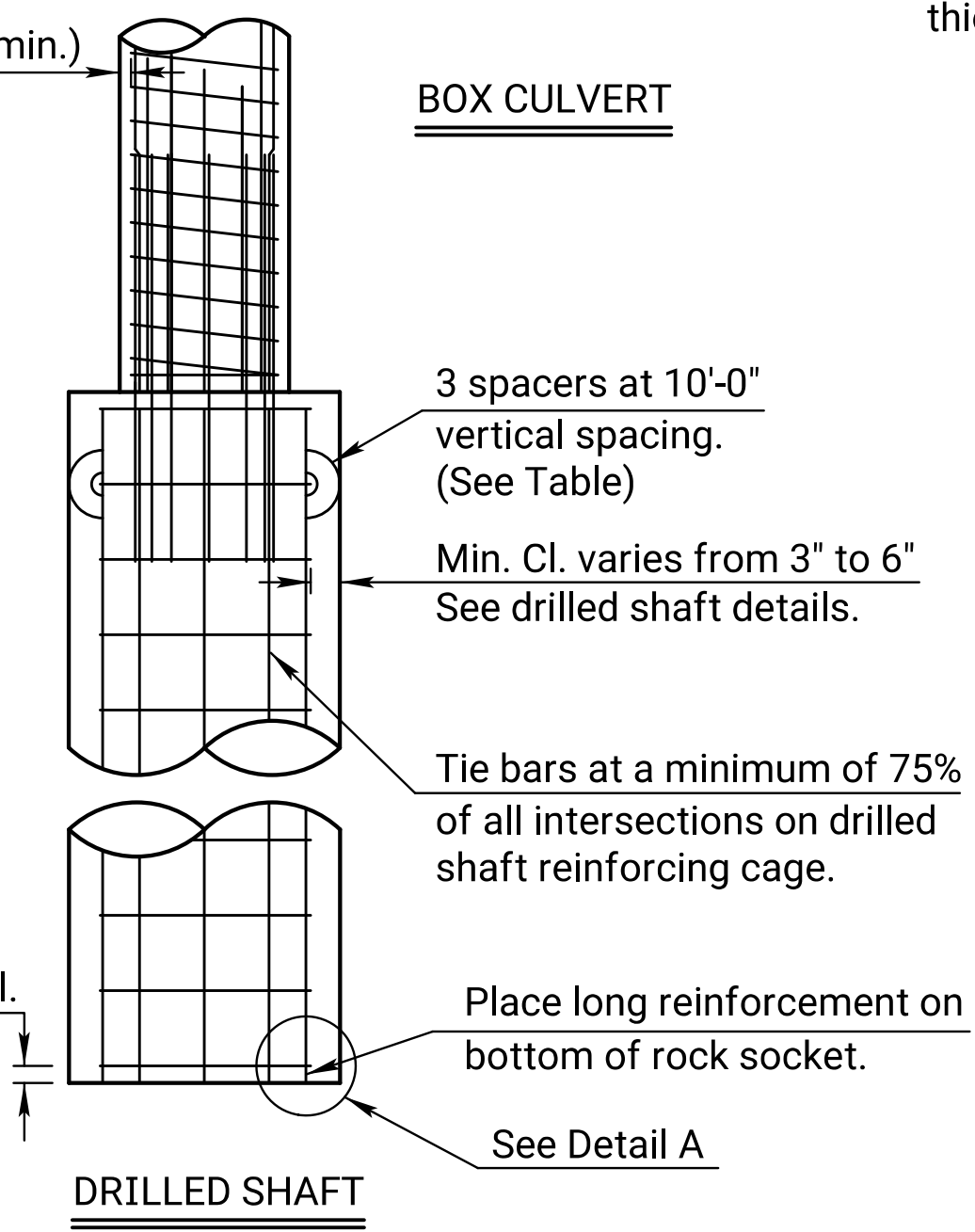


**PIER**

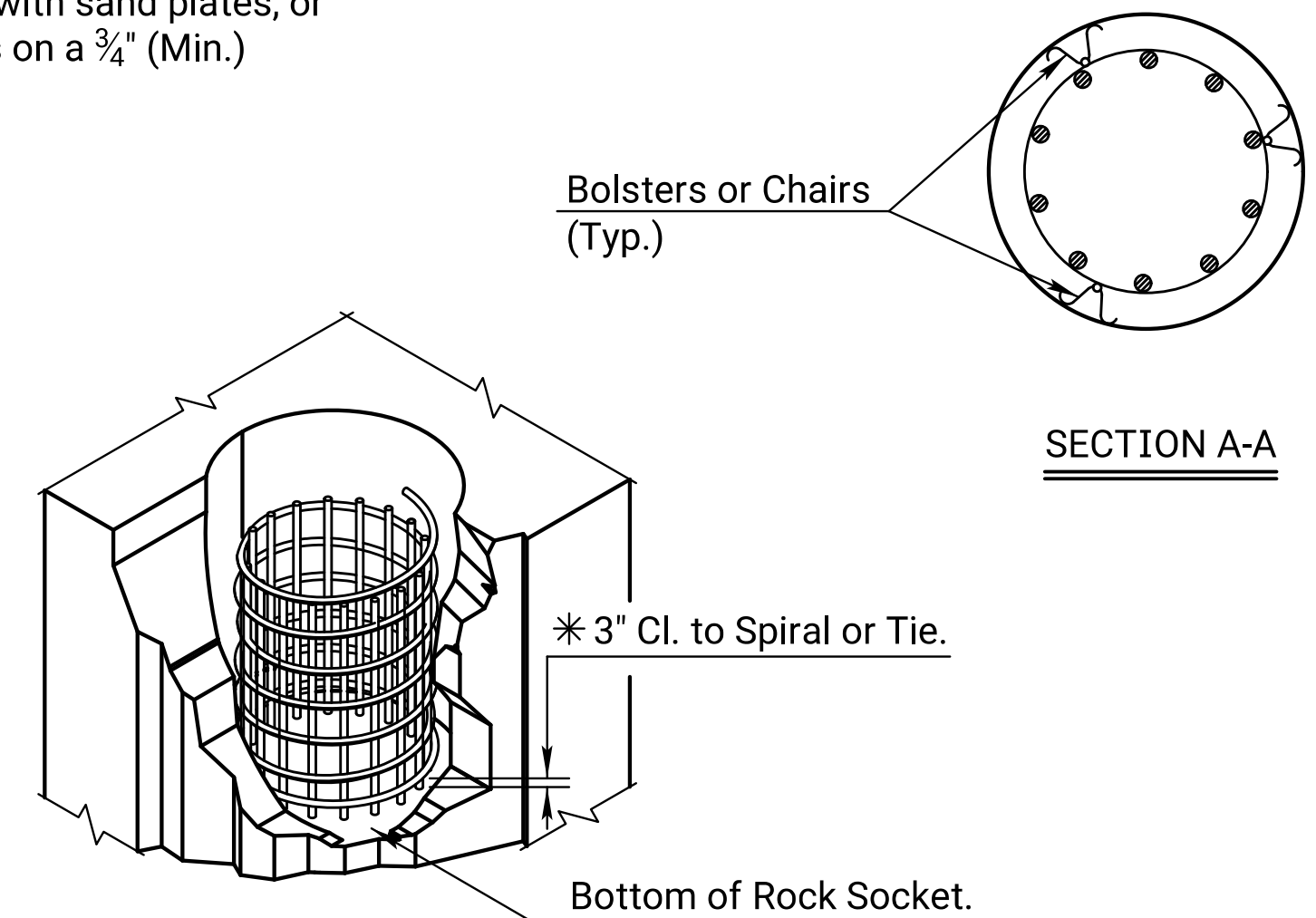
Required Shaft Supports		
Diameter (in.)	Circumference (in.)	No. of Spacers
18	56	3
24	75	3
30	94	4
36	113	4
42	131	5
48	150	6
54	169	6
60	188	7
66	207	7
72	226	8
78	244	9
84	263	9
90	282	10
96	301	11
102	320	11
108	339	12



**BOX CULVERT**



**DRILLED SHAFT**



**DETAIL A**

\* Note: Longitudinal reinforcing steel is placed on the bottom of the rock socket. Maintain 3" clearance from the bottom of rock socket to the first spiral or tie bar.

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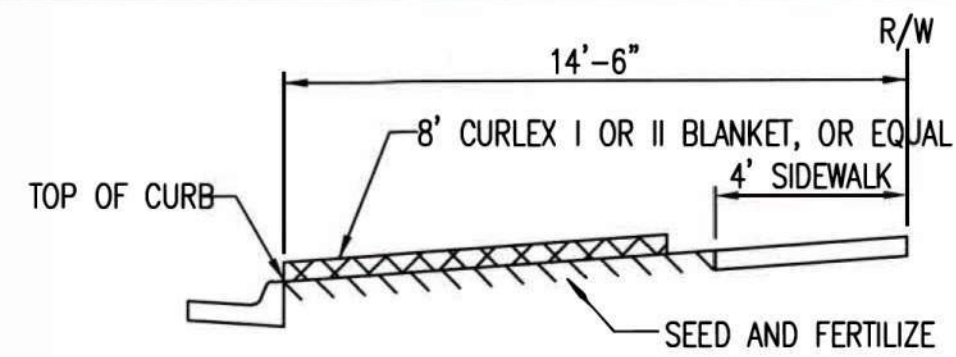
WICHITA, KANSAS  
 CITY OF

REVISIONS:	DESCRIPTION	DATE	MARK

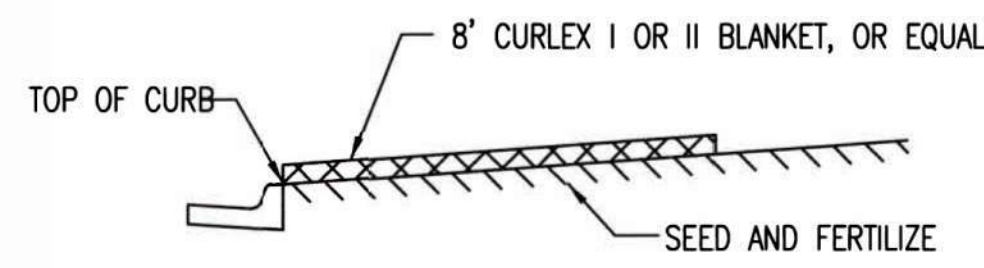
PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: PAM  
 DRAWN BY: PAM  
 CHECKED BY: WBS

SHEET TITLE:  
**SUPPORTS AND SPACERS FOR REINFORCING STEEL**

SHEET NO.  
**24**  
 SHEET 24 OF 35

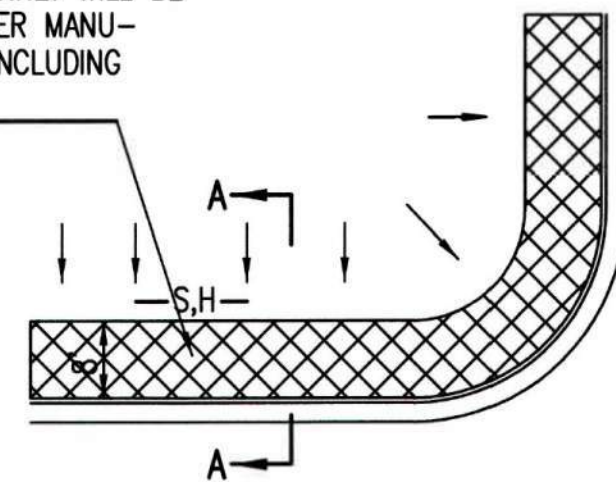


SECTION B-B

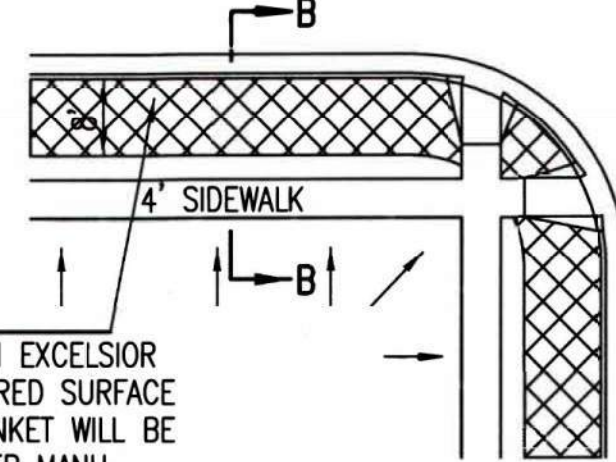


SECTION A-A

INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)



SOUTH STREET

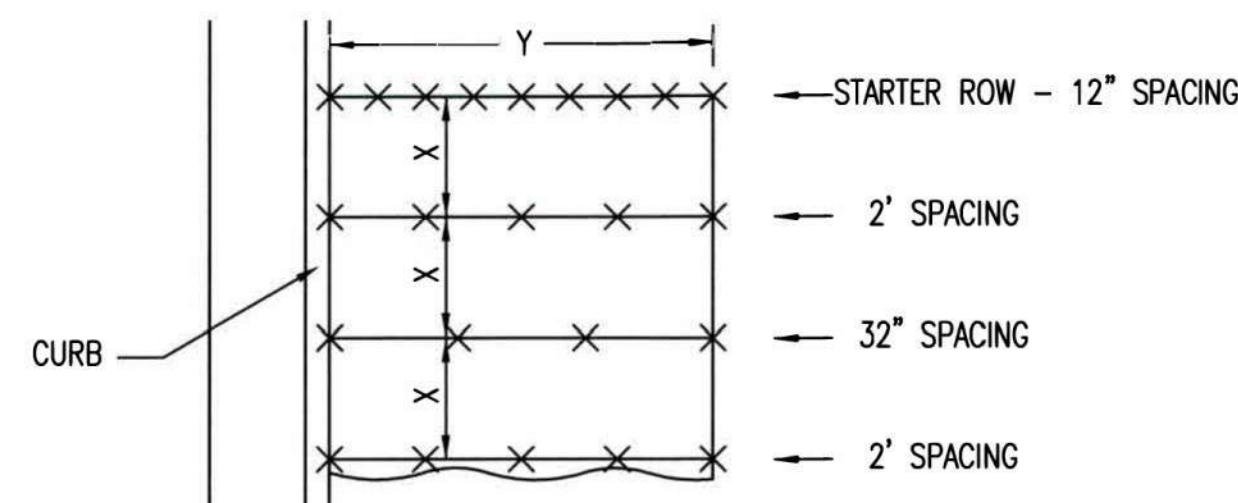


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

**GENERAL NOTES**

- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

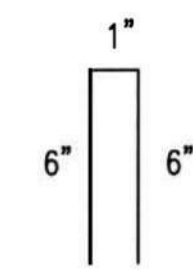
**BACK OF CURB PROTECTION DETAIL**



STAPLE PATTERN

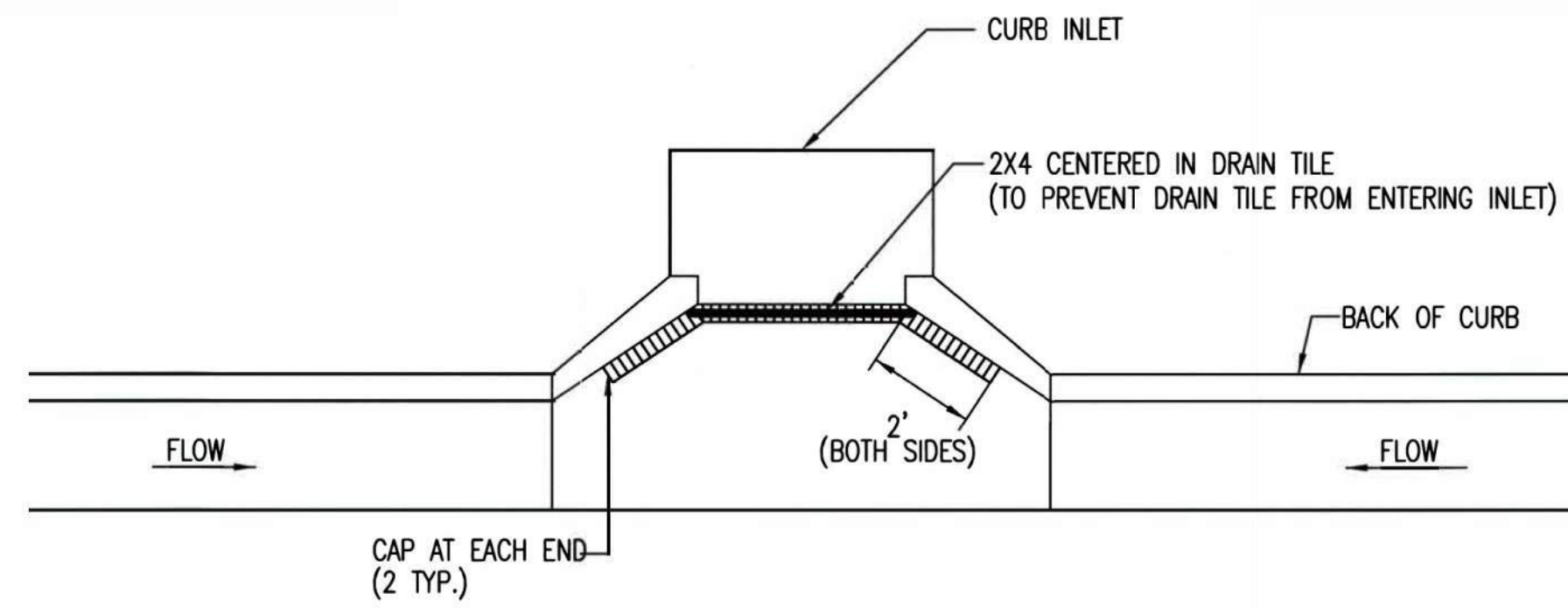
NOTES: USE 6" SEAM OVERLAP  
(X & Y = RECOMMENDED BY MANUFACTURE)

**DETAILS FOR APPROVED EROSION CONTROL MAT**



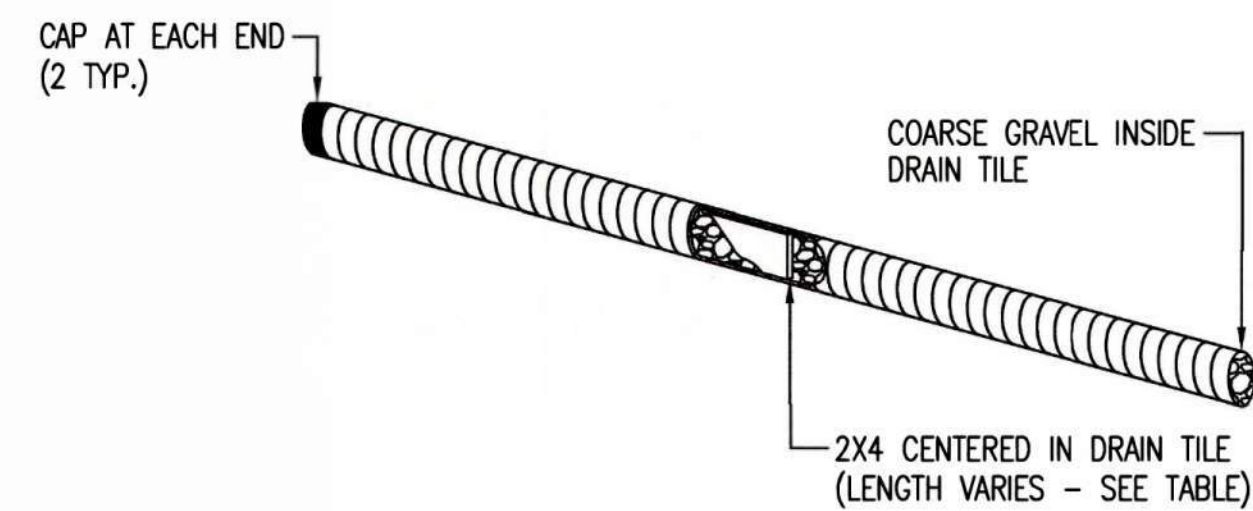
11 GA. WIRE

STAPLE

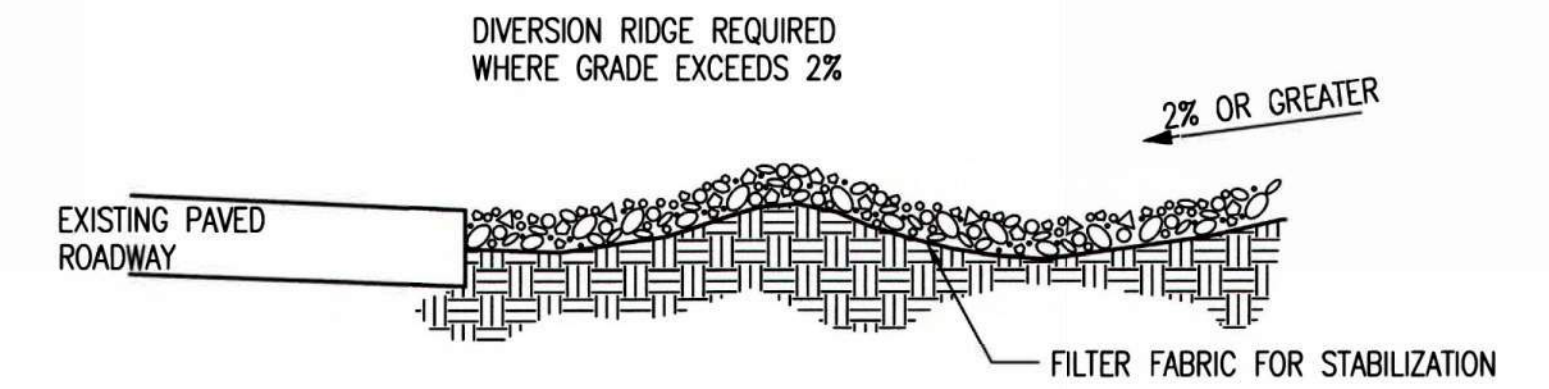


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

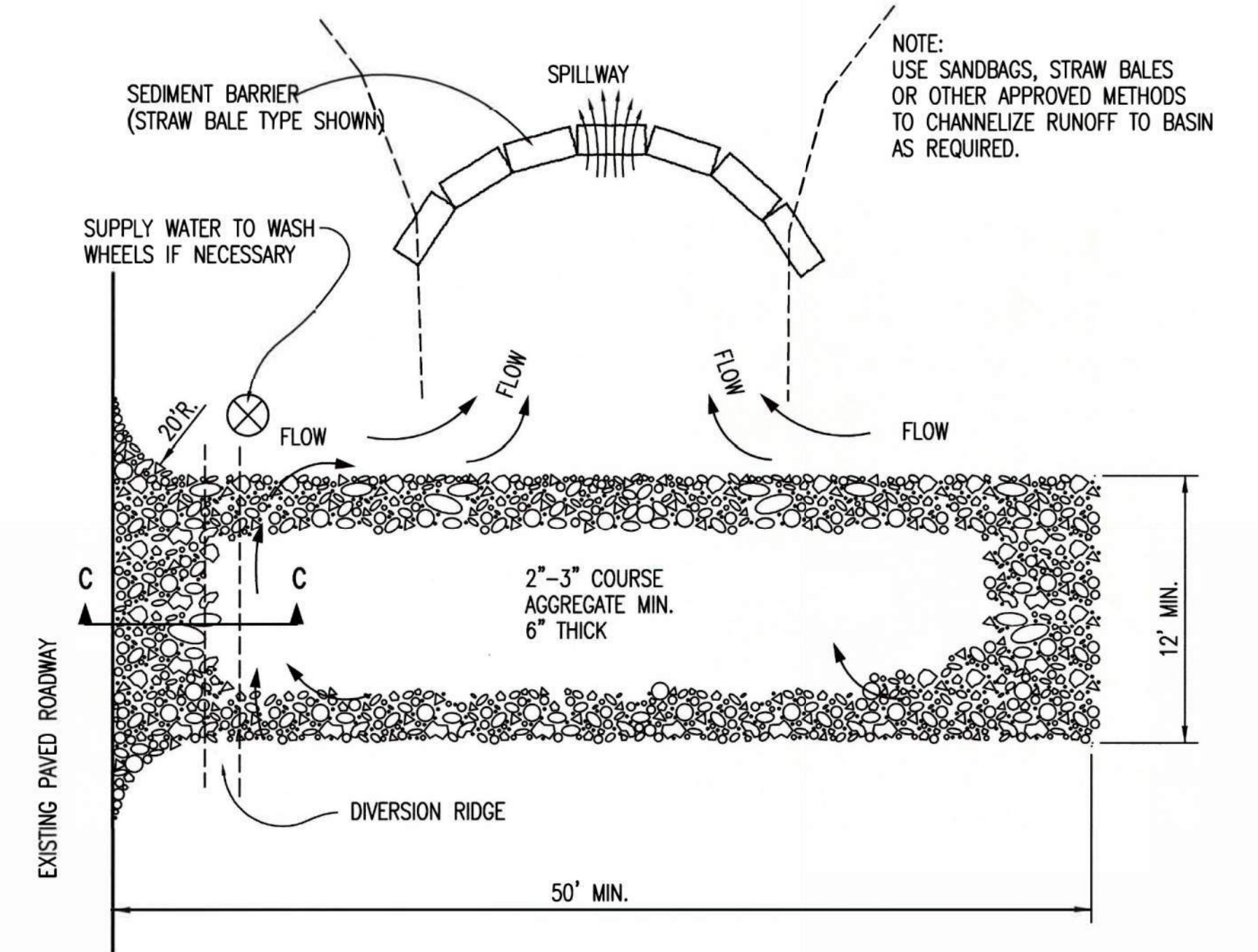
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



**CURB INLET PROTECTION**  
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



**STABILIZED CONSTRUCTION ENTRANCE**

**GENERAL NOTES**

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
- DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013



05/13/13

**CITY OF WICHITA**  
PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

**BACK OF CURB PROTECTION,  
CURB INLET PROTECTION AND  
CONSTRUCTION ENTRANCE**

CITY ENGINEER

**GARY JANZEN, P.E.**

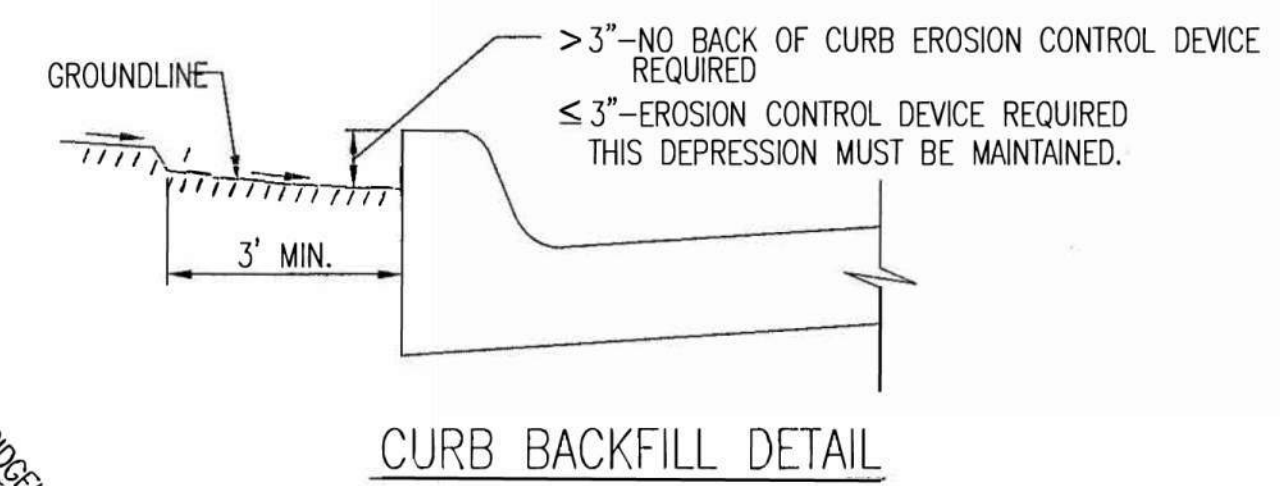
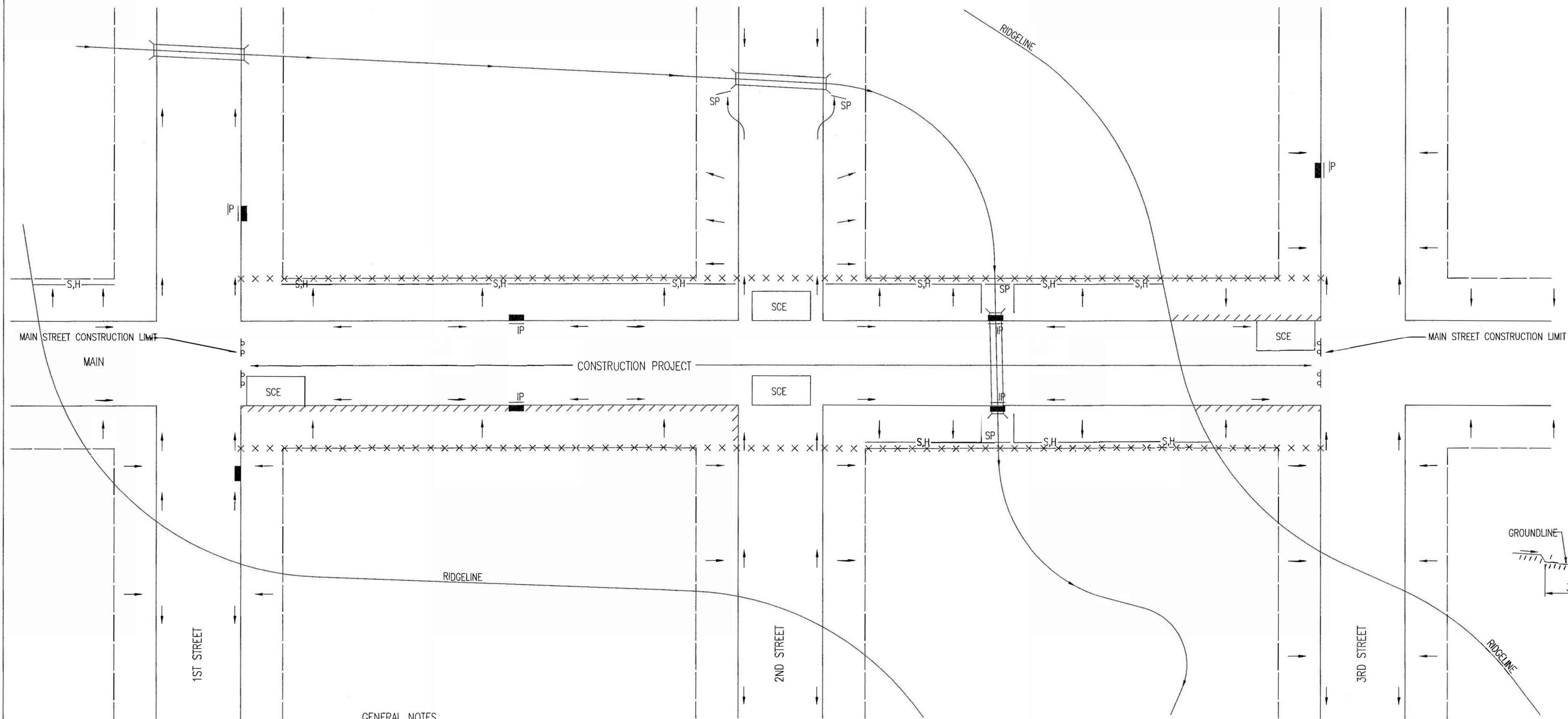
PROJECT NUMBER: 472-2024-086025  
OCA NUMBER: \_\_\_\_\_  
DATE: \_\_\_\_\_

**CITY ENGINEER'S OFFICE**  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET  
**25**  
OF 35

GENERAL NOTES

- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
- IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
- FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
- FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.



THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

- LEGEND**
- R-O-W LIMITS
  - DRAINAGE FLOW PATH
  - x x x x R/W LIMIT WITHIN CONSTRUCTION LIMIT
  - STORM WATER INLETS
  - IP INLET PROTECTION
  - S.H— SILT FENCE OR HAY BALE BARRIER
  - SP STREAM PROTECTION
  - SCE STABILIZED CONSTRUCTION ENTRANCE
  - //////// BACK OF CURB PROTECTION

GENERAL NOTES

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
- THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
- EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
- INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
- EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
- ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
- THE CONTRACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
  - THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs - BACK OF CURB SEDIMENT BARRIER DETAILS)
  - THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
  - ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
  - SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)



REVISION: JUNE 2015

<b>STREET IMPROVEMENT PROJECTS</b>		
CITY ENGINEER <b>GARY JANZEN, P.E.</b>		
PROJECT NUMBER 472-2024-086025	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET <b>26</b> OF 35



CONSULTANTS:

MINISA BRIDGE REHABILITATION

WICHITA, KANSAS  
 CITY OF  







REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: RLO  
 DRAWN BY: RLO  
 CHECKED BY: x


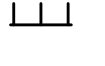

SHEET TITLE:  
 TRAFFIC DETOUR MAP

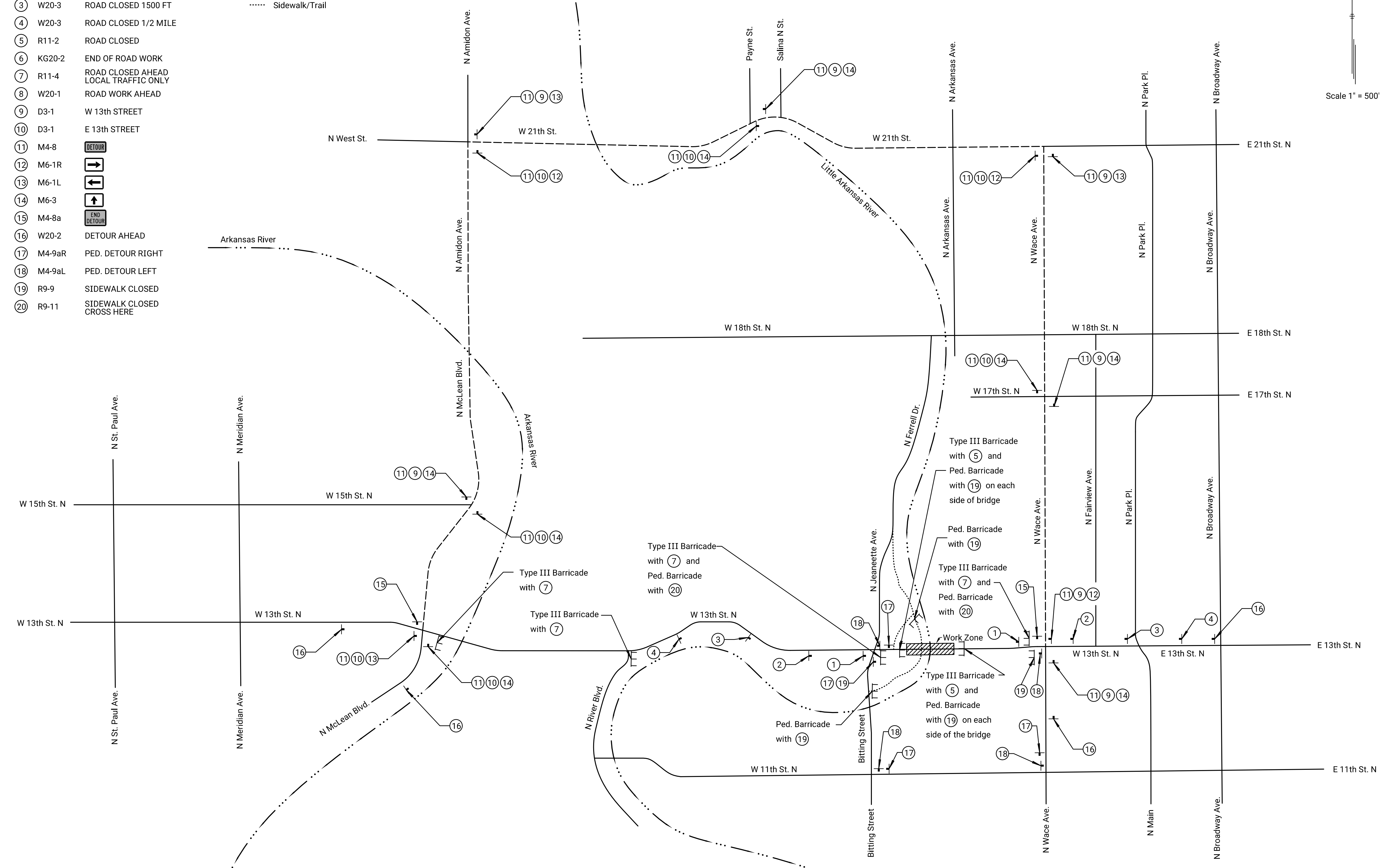
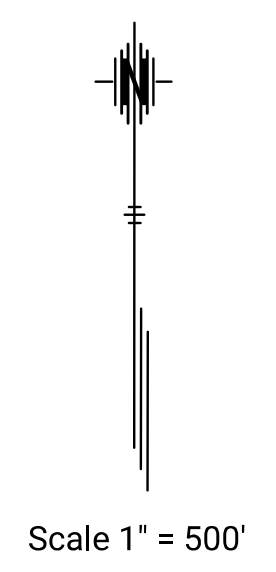
SHEET NO.  
 28  
 SHEET 28 OF 35

SIGN LEGEND

- ① W20-3 ROAD CLOSED 500 FT
- ② W20-3 ROAD CLOSED 1000 FT
- ③ W20-3 ROAD CLOSED 1500 FT
- ④ W20-3 ROAD CLOSED 1/2 MILE
- ⑤ R11-2 ROAD CLOSED
- ⑥ KG20-2 END OF ROAD WORK
- ⑦ R11-4 ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY
- ⑧ W20-1 ROAD WORK AHEAD
- ⑨ D3-1 W 13th STREET
- ⑩ D3-1 E 13th STREET
- ⑪ M4-8 
- ⑫ M6-1R 
- ⑬ M6-1L 
- ⑭ M6-3 
- ⑮ M4-8a 
- ⑯ W20-2 DETOUR AHEAD
- ⑰ M4-9aR PED. DETOUR RIGHT
- ⑱ M4-9aL PED. DETOUR LEFT
- ⑲ R9-9 SIDEWALK CLOSED
- ⑳ R9-11 SIDEWALK CLOSED CROSS HERE

LEGEND

-  Traffic Control Sign
-  Type III Barricade
-  Sidewalk/Trail





Scale: 1" = 100'

NOTE: Business entrances covered by lane closure taper to remain open during construction.

- LEGEND**
- ▬ Traffic Control Sign
  - ▬▬ Type III Barricade
  - Channelizing Device

PREPARED BY  
  
 214 N FRANKS AVE  
 WICHITA, KANSAS 67202  
 PHONE: 316-215-6091

CONSULTANTS:

MINISA BRIDGE REHABILITATION  
 WICHITA, KANSAS  
 CITY OF WICHITA

REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: 472-2024-086025  
 SCALE:  
 DATE:  
 DESIGNED BY: RLO  
 DRAWN BY: RLO  
 CHECKED BY: x

SHEET TITLE:  
 13TH STREET SEQUENCING PLAN

SHEET NO.  
 27  
 SHEET 27 OF 33



STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2024-086025	2026	31	35

1) Design Speed: Those items delegated to temporary traffic control should be designed and installed using the posted/legal speed of the roadway prior to work starting.

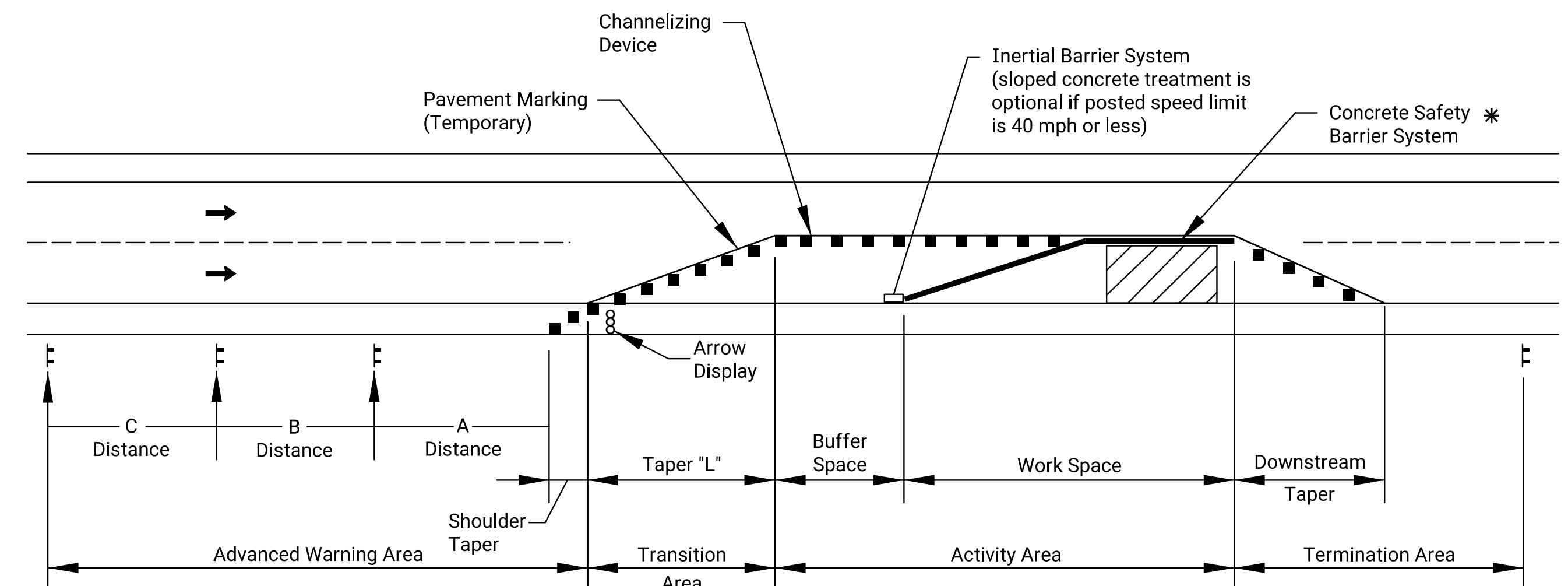
2) Minimum Lane Width: Lane widths shall be a minimum of 11' (measured between centerlines of pavement markings) or as shown on the plans, or as directed by the engineer. A lane width less than 11' may require restricted roadway width signing.

3) Consideration should be made to separate pedestrian and, if needed, bicycle movements from both work site activity and vehicular traffic. Unless a reasonable safe route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

5) When the driving surface open to traffic is milled or is a temporary surface made of loose material, or when directed by the engineer a W8-15 (Grooved Pavement) or W8-7 (Loose Gravel) sign shall be used on mainline approaches. This sign should be placed a "C" distance after the W20-1 (Road Work Ahead) sign. A W8-15p motorcycle plaque shall be used to supplement the W8-15 or W8-7 signs. All signs shall be displayed as long as the condition is present.

6) Alternative temporary rumble strip options may be available. Please contact the Temporary Traffic Control Unit for more information at 785-296-1179 or 785-296-1183.



### TYPICAL WORK ZONE COMPONENTS

\* When concrete barrier system is used, portable channelizing devices are not needed along the tangent barrier section.

Minimum advance warning sign spacing (in feet):

SPEED (MPH) *	A	B	C
URBAN (40 MPH OR LOWER)	100	100	100
URBAN (45 MPH OR HIGHER)	350	350	350
RURAL (55 MPH OR LOWER)	500	500	500
RURAL (60 MPH OR HIGHER)	750	750	750
EXPRESSWAY/FREEWAY	1000	1500	2640

\* Posted speed prior to work starting  
The minimum spacing between signs shall be no less than 100', unless directed by the engineer.  
The spacing between any signs may be increased beyond the minimum values in the table above as approved by the engineer in order to maximize visibility.

Taper Formulas:

$L = WS$  for speeds of 45 MPH or more

$L = WS^2/60$  for speeds of 40 MPH or less

Where:  $L$  = Minimum length of taper in feet  
 $S$  = Numerical value of posted speed prior to work starting in MPH  
 $W$  = Width in offset feet

Shifting Taper =  $1/2 L$   
Shoulder Taper =  $1/3 L$

Channelizer Placement:

- The spacing between devices in transition area (taper) should not exceed a distance in feet equal to 1/2 the posted speed limit in mph prior to work starting.
- The spacing between devices in the advanced warning area and the activity area should not exceed a distance in feet equal to two times the posted speed limit in mph prior to work starting.
- Channelizing devices shall be placed for optimum visibility, normally at right angles to the traffic flow.
- Place directional indicator barricades in series to direct traffic onto the new path. The arrow sign should not be visible to opposing traffic.
- Alternating diagonal orange and white striping must slope downward in the direction traffic is expected to pass.

Buffer Space

SPEED (MPH) *	20	25	30	35	40	45	50	55	60	65	70	75
LENGTH (ft)	115	155	200	250	305	360	425	495	570	645	730	820

\* Posted speed prior to work starting

Neither work activity nor storage of equipment, vehicles, or material should occur in the buffer space. When a protection vehicle is placed in advance of the work space, only the space upstream of the vehicle constitutes the buffer space.

If temporary concrete safety barrier system is used to separate approaching traffic from the work space, the barrier system shall be considered part of the activity area. A full lane width should be available throughout the length of the buffer space. See typical work zone components above.

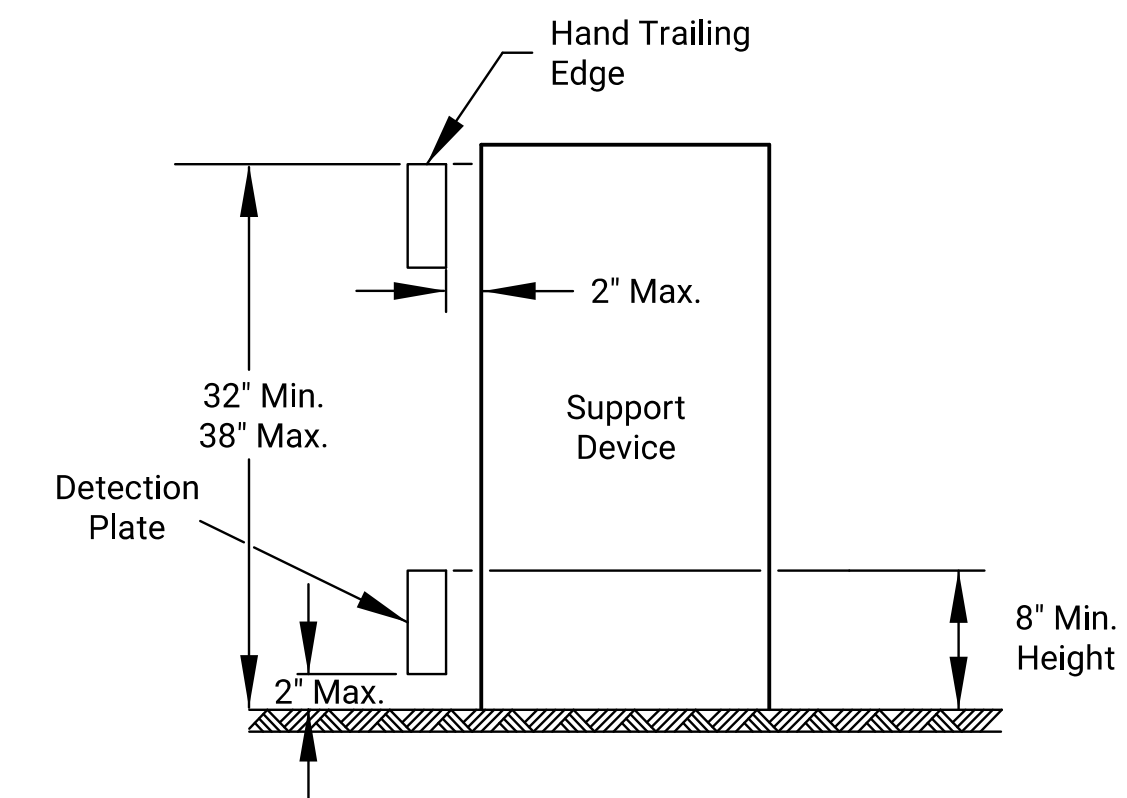
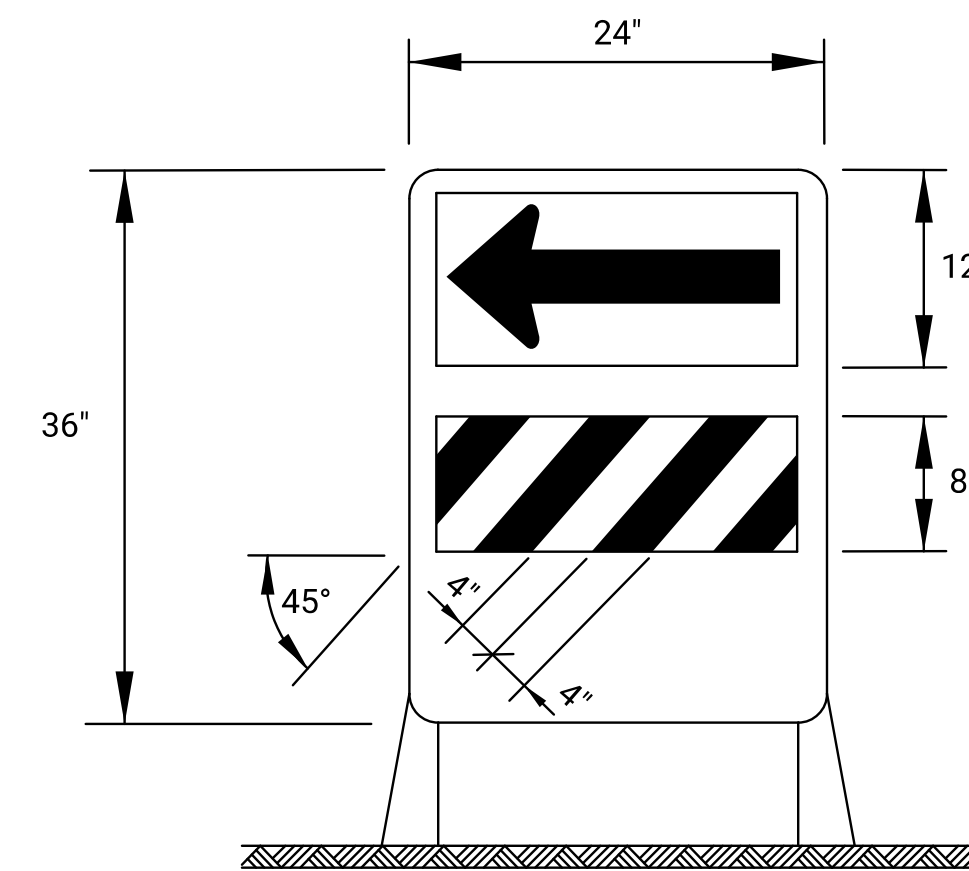
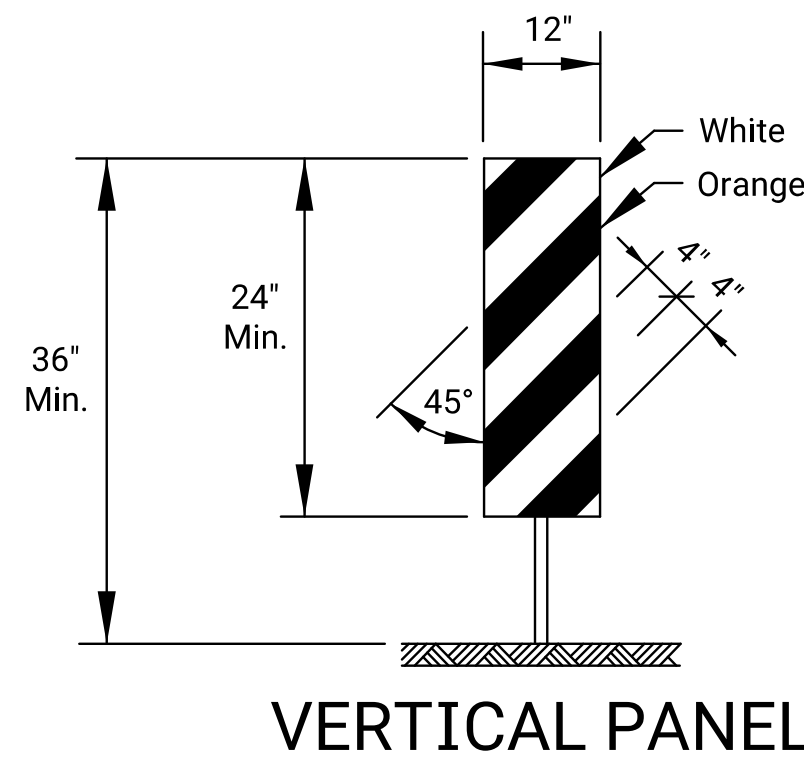
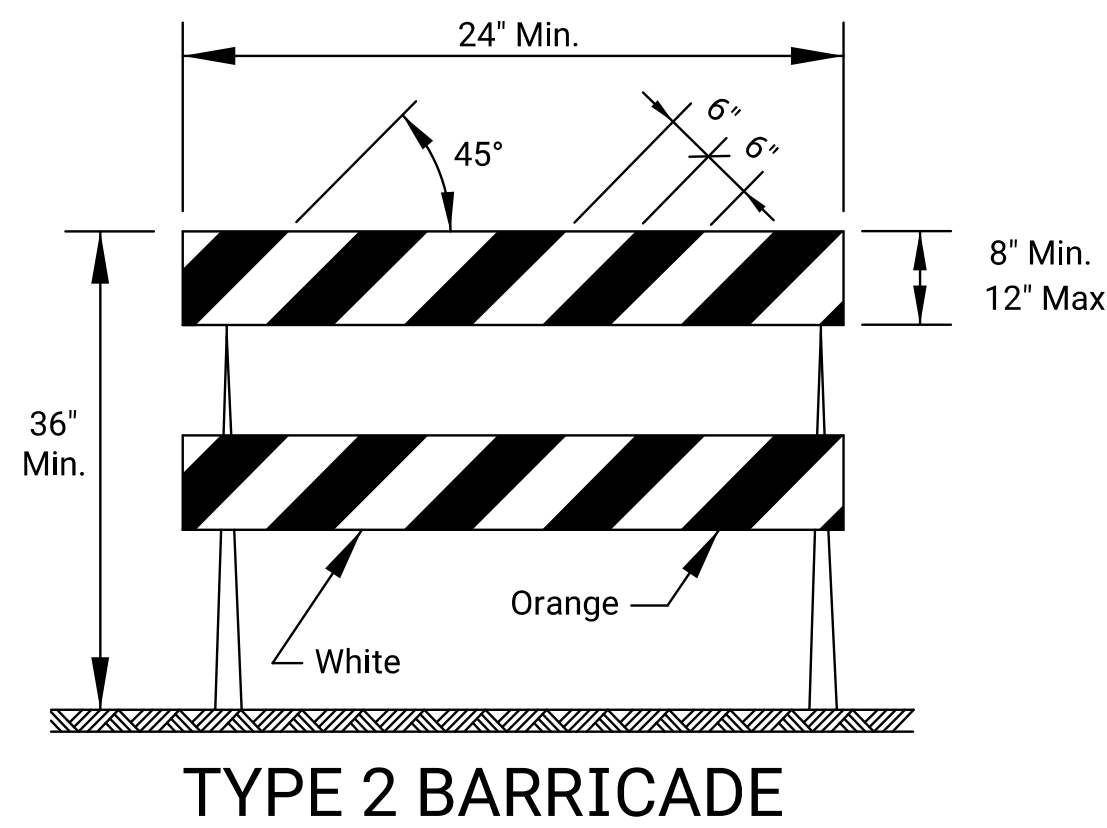
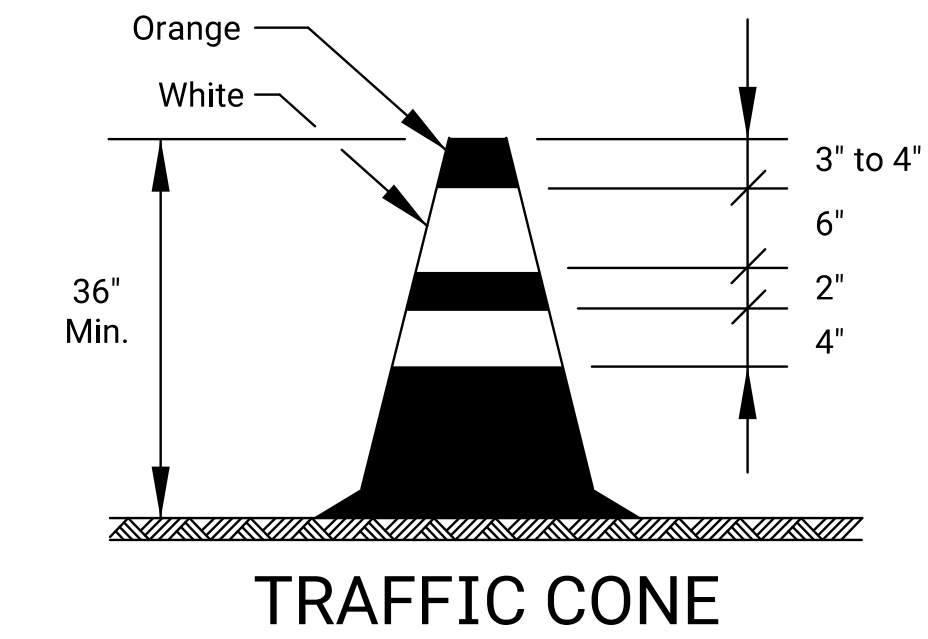
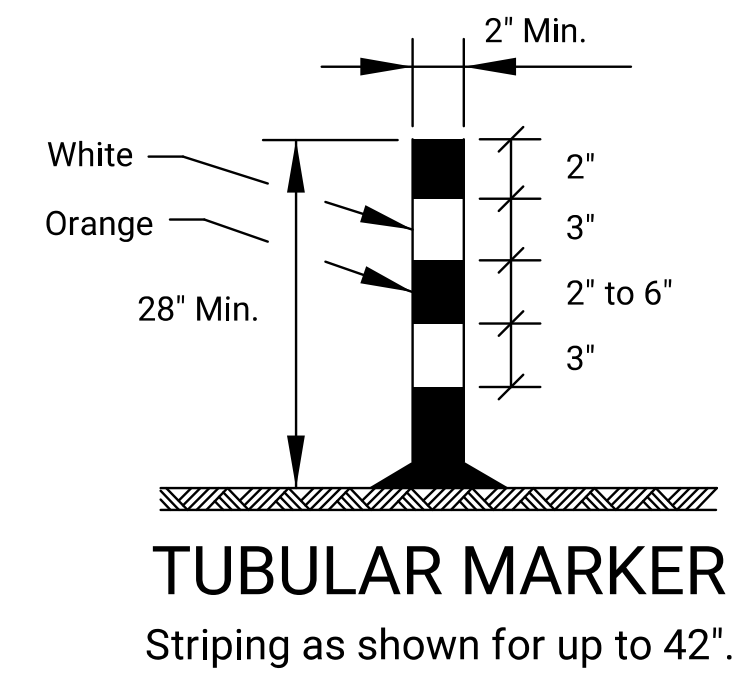
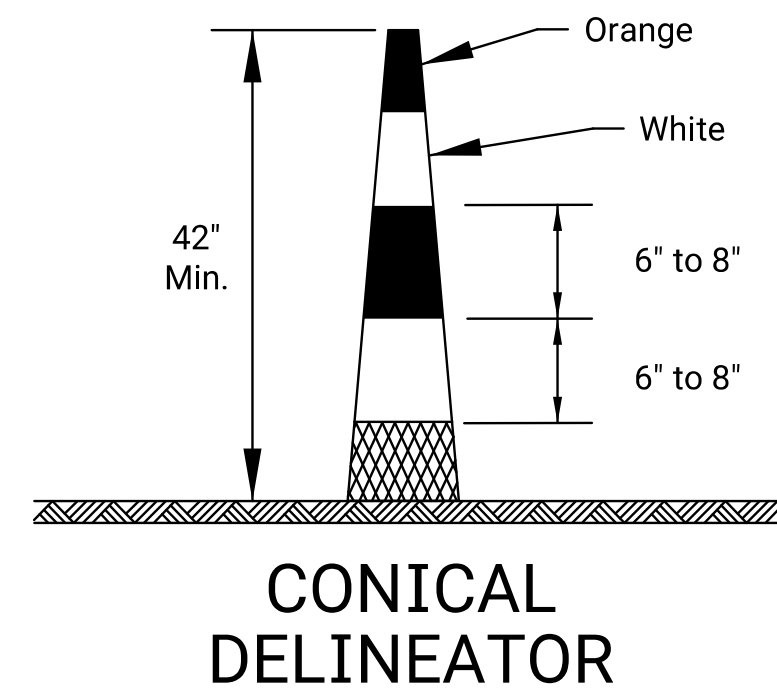
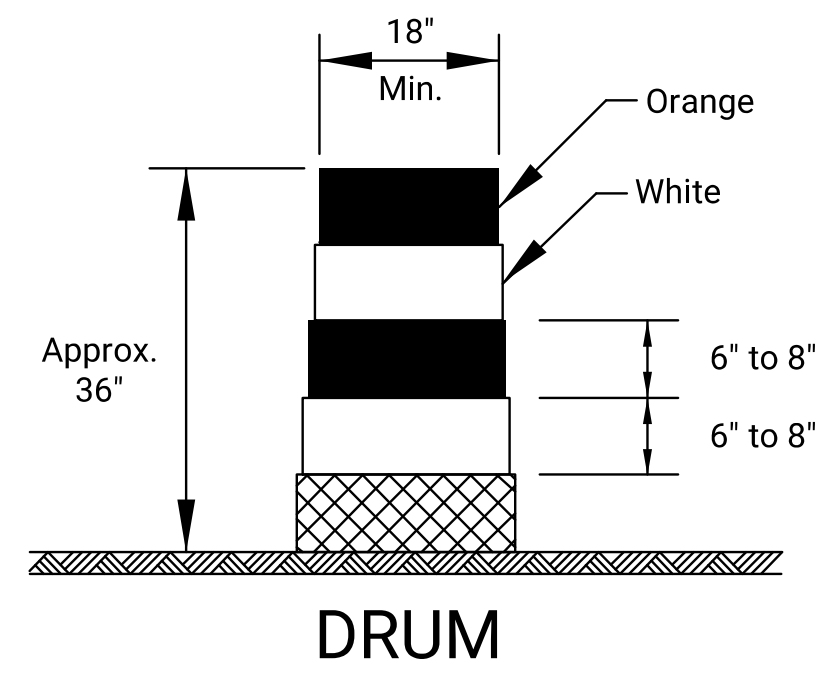
NO.	DATE	REVISIONS	BY	APPD
02	03-13-18	W8-15p usage changed to Shall	R.W.B.	E.K.G.
01	08-18-15	Channelizer spacing info	R.W.B.	K.E.

KANSAS DEPARTMENT OF TRANSPORTATION

### TRAFFIC CONTROL GENERAL NOTES

TE700

DESIGNED	B.A.H.	DETAILED	R.W.B.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.		



For rails less than 36" long, 4" wide stripes may be used. All stripes shall slope downward to the traffic side for channelization.

The stripes shall slope downward to the traffic side for channelization.

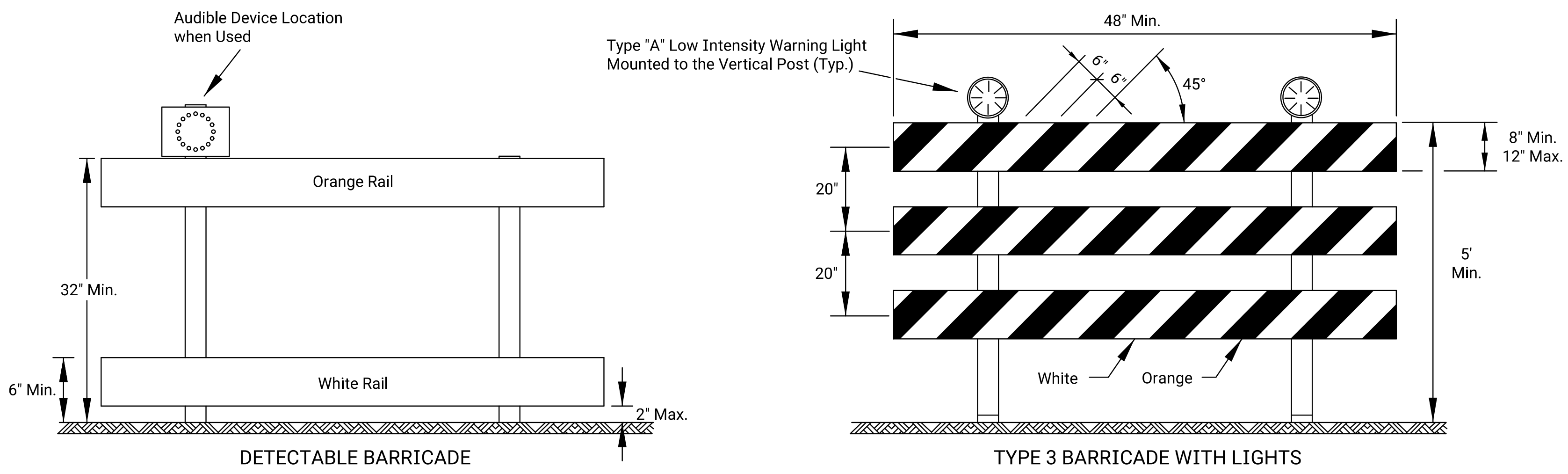
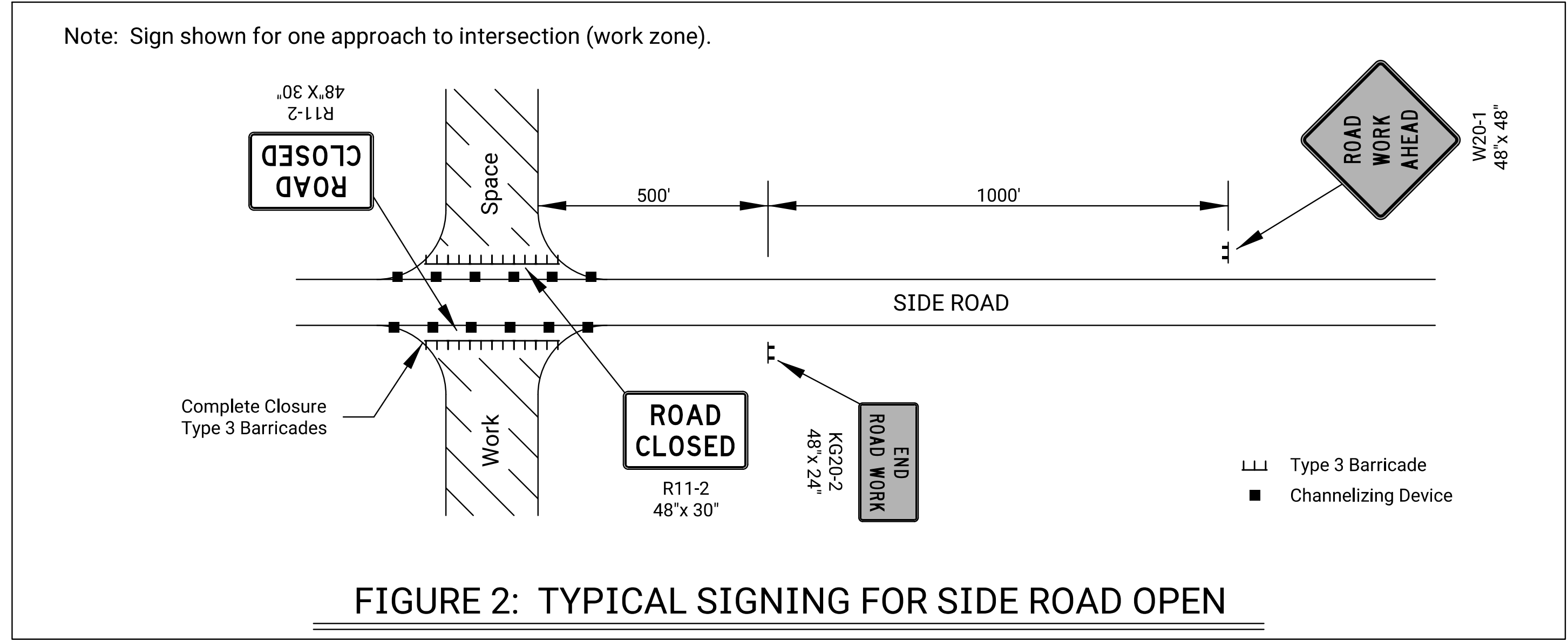
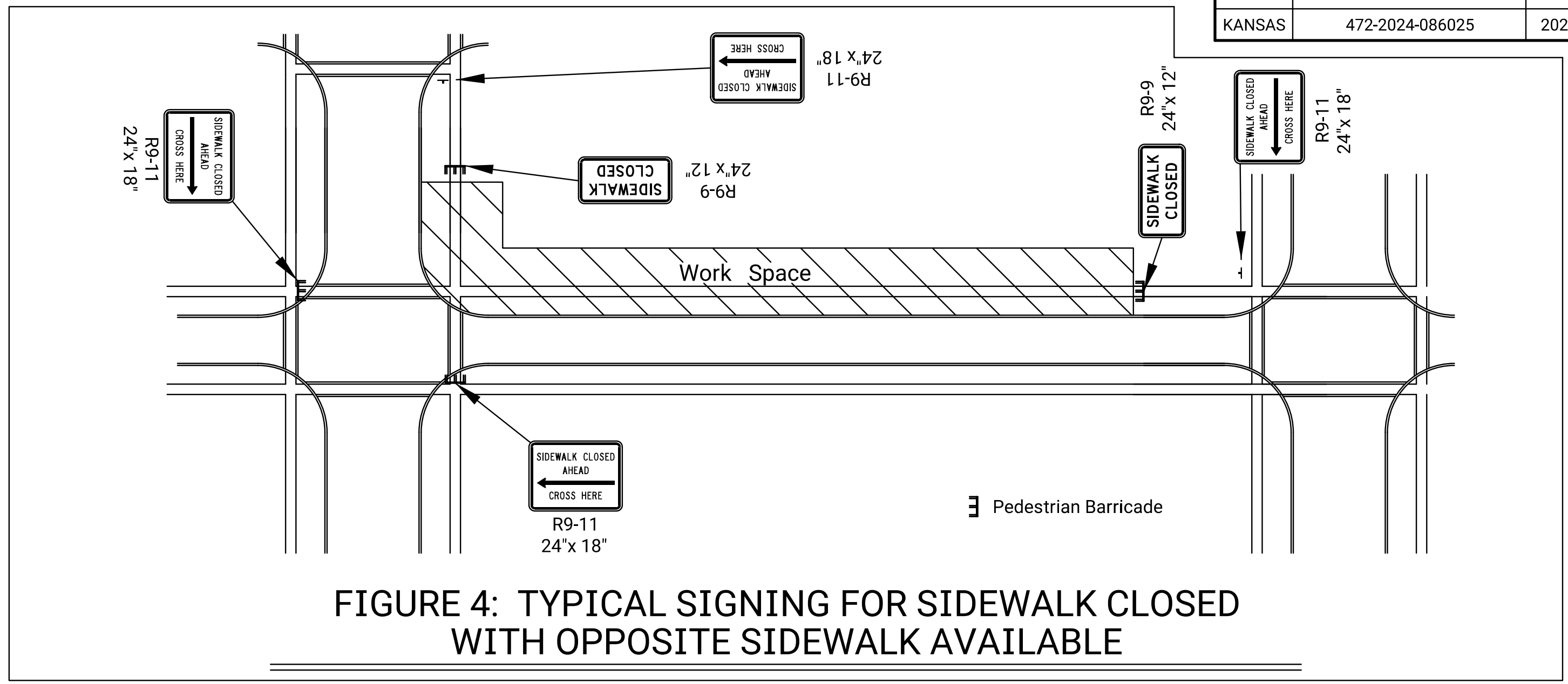
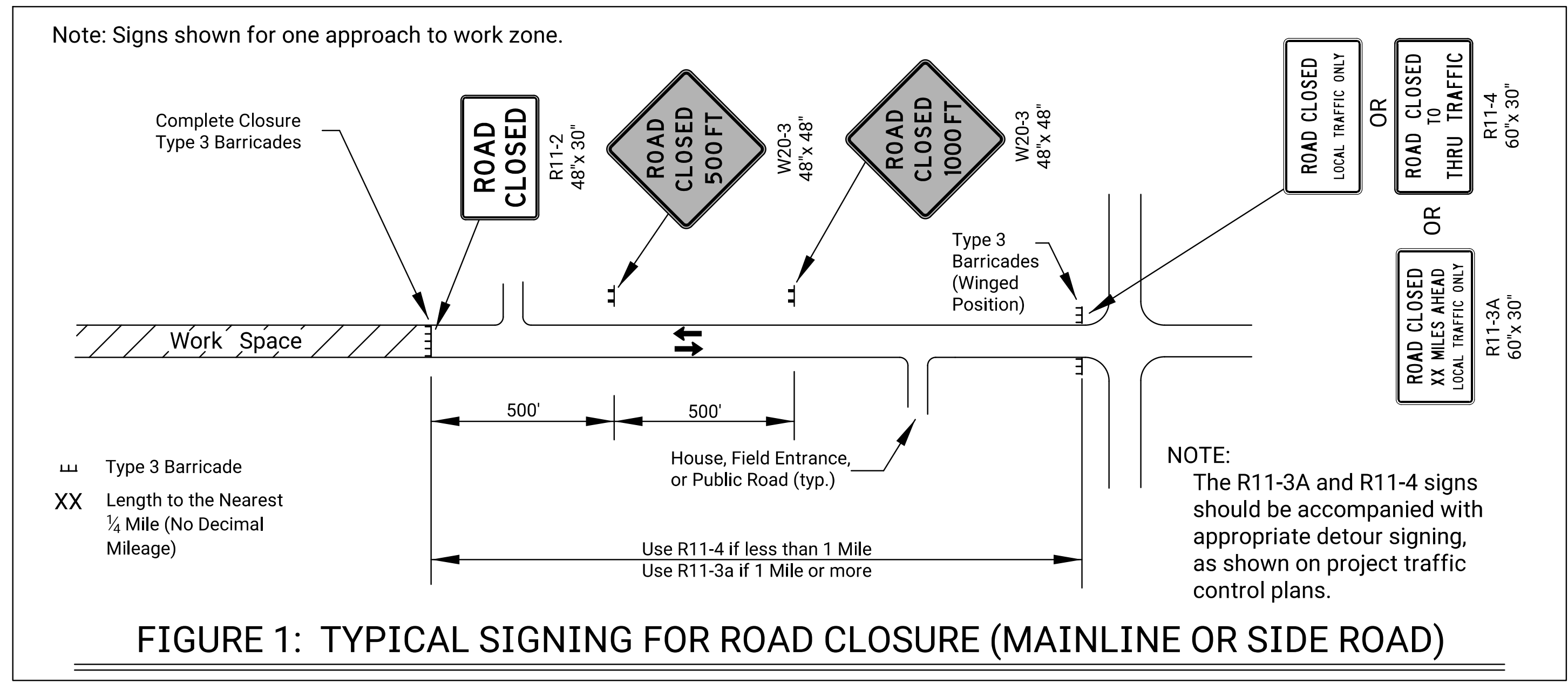
The stripes shall slope downward in the direction traffic is to pass. The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.

- Support device shall not project beyond the detection plate into the pathway.
- Hand trailing edges and detection plates are optional for continuous walls.
- Interconnect pedestrian channelizers to prevent displacement and to provide continuous guidance through or around work.
- Alternate pathways shall be firm, stable, and slip resistant.
- Treat height differentials > 1/2" in the surfaces of alternate paths with a firm, stable, and slip resistant temporary ramp having a slope of 12:1 or flatter and having a width equal to the alternate path.
- Use alternating orange/white on interconnected devices.

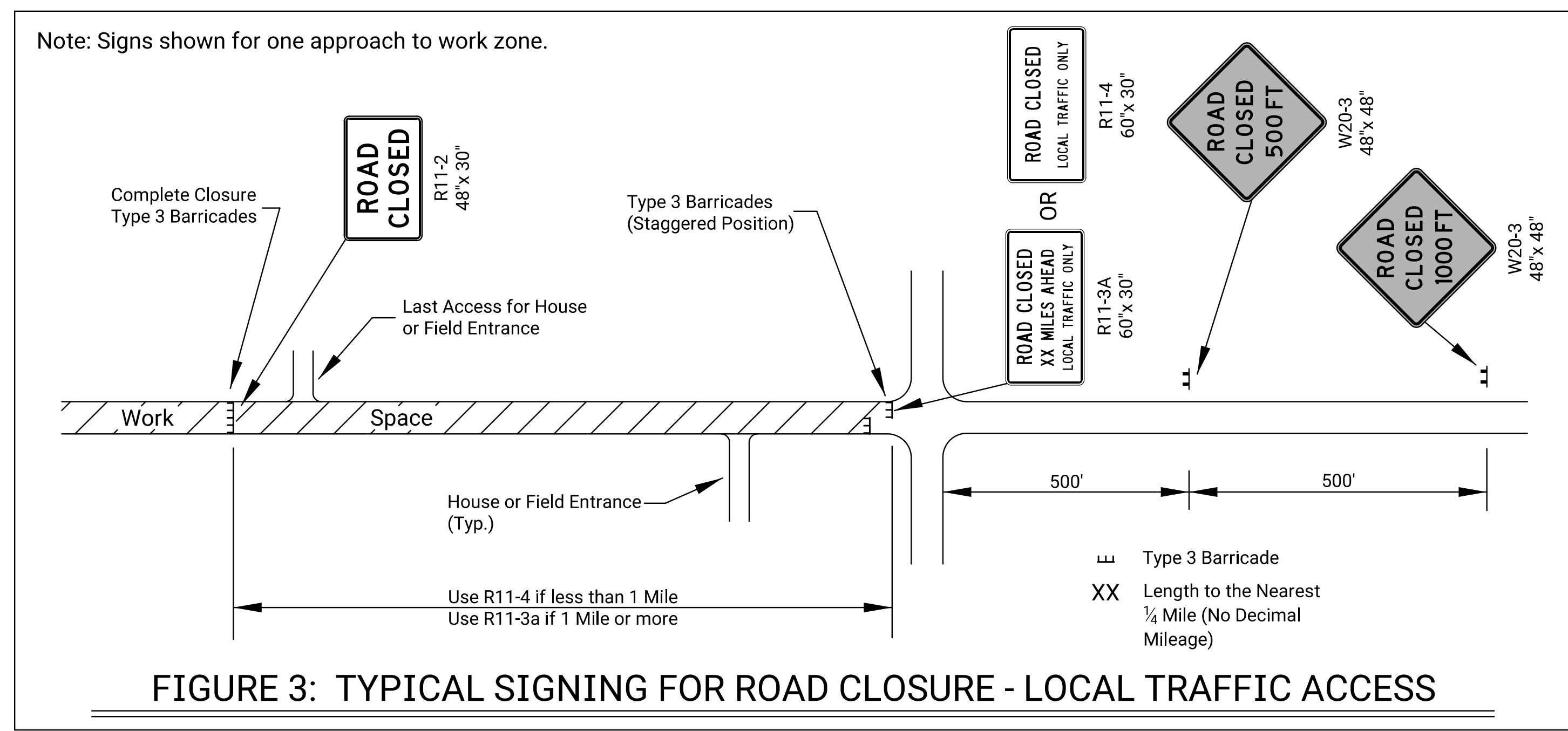
Item	Location	Location								
		Cross-overs	Shoofly Divisions	Tangents	Tapers	Ramps	Head to Head	Object Identifier	Lead-in Devices	Gores
Portable	Drums	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Conical Delineators	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Vertical Panels	(2)	(2)	(2)	(2)	(2)	(1,2)	Yes	(2)	(2)
	Direction Indicator Barricade	No	No	No	Yes	No	No	No	No	No
	Type 2 Barricade	(2)	(2)	(2)	(2)	No	No	Yes	No	No
Fixed	Traffic Cones	No	No	(4)	(4)	(4)	No	(4)	(4)	(4)
	Tubular Markers	(3)	(3)	(3)	No	(3)	Yes	No	Yes	Yes
	Vertical Panels	(3)	(3)	(3)	(3)	(3)	(3)	Yes	(2,3)	(2)

- Not allowed on centerline delineation along freeways or expressways.
- The stripes shall slope downward to the traffic side for channelization.
- May be used upon the approval of the engineer.
- Daytime operations only.

NO.	DATE	REVISIONS	BY	APPD
KANSAS DEPARTMENT OF TRANSPORTATION				
<b>TRAFFIC CONTROL CHANNELIZING DEVICES</b>				
TE702				
DESIGNED		06-01-15		APPD.
L.E.R.		R.W.B.		QUANTITIES
DETAIL CK.		QUAN. CK.		TRACE CK.
DESIGN CK.		DETAIL CK.		QUAN. CK.
Kristina Erickson				
DOT Graphics Certified				



1. Support device shall not project beyond the detection plate into the pathway.
2. Barricades shall be used to close the entire width of the pathway.
3. Do not use warning lights on pedestrian barricades.
4. Do not use warning lights on audible devices.



**ROAD CLOSED GENERAL NOTES**

As shown in Figure 1, at the point where thru traffic must detour and local traffic can proceed to the location where the roadway is completely closed, the R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) or R11-4 (ROAD CLOSED LOCAL TRAFFIC ONLY or ROAD CLOSED TO THRU TRAFFIC) sign shall be used with Type 3 barricades (winged position), placed on the shoulders of roadway.

As shown in Figure 3, when local traffic must be allowed access into the work zone, Type 3 barricades shall be longitudinally staggered to maintain the appearance of a closed roadway. A second line of end-to-end Type 3 barricades shall be placed just beyond the last access point in the work zone, to completely close the roadway.

The R11-4 (ROAD CLOSED TO THRU TRAFFIC or ROAD CLOSED LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is less than 1 mile.

The R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is 1 mile or greater.

The words "BRIDGE OUT" (or BRIDGE CLOSED) may be substituted for the words "ROAD CLOSED" on the R11-3a or R11-4 sign where applicable.

NO.	DATE	REVISIONS	BY	APPD
KANSAS DEPARTMENT OF TRANSPORTATION				
<b>TRAFFIC CONTROL CLOSURES</b>				
TE704				
DESIGNED	B.A.H.	DETAILED	R.W.B.	QUANTITIES
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE	CK.
FHWA APPROVAL 06-01-15   APPD. Kristina Erickson				
DOT Graphics Certified 07-18-2022 Sh. No. 33				

### SIGN LAYOUT INFORMATION



Std. Size  
Expwy/Freeway  
6" C  
48"x 24"



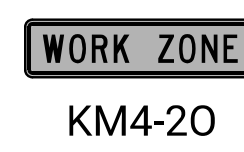
Std. Size  
Expwy/Freeway  
8" D  
48"x 48"



Std. Size  
Expwy/Freeway  
6" C  
48"x 24"

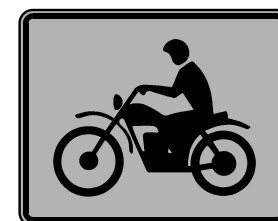


Std. Size  
Expwy/Freeway  
8" D  
48"x 48"



Std. Size  
3" C  
24"x 6"

Expwy/Freeway  
6" C  
48"x 12"



Std. Size  
Expwy/Freeway  
30"x 24"



Mileage to be Determined  
by the Engineer.



Std. Size  
Expwy/Freeway  
8" D  
48"x 48"



Std. Size  
Expwy/Freeway  
48"x 48"



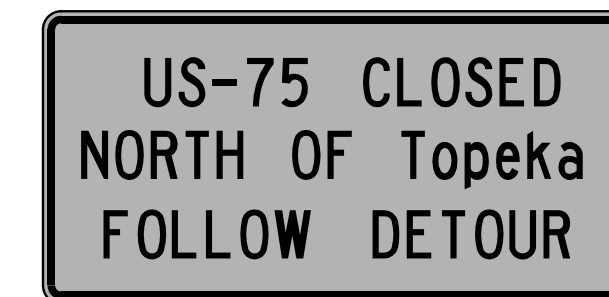
Std. Size  
Expwy/Freeway  
30"x 24"



Std. Size  
6" C

Expwy/Freeway  
10" D

SP-01  
(Special Sign)

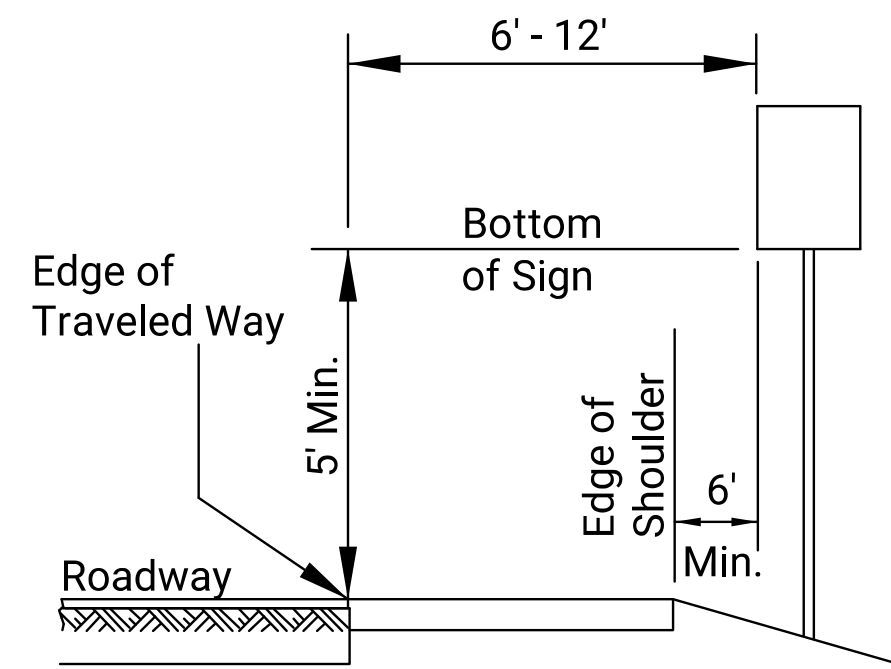


Std. Size  
Uppercase: 6" C  
Lowercase: 4.5" C

Expwy/Freeway  
Uppercase: 10" D  
Lowercase: 8" D

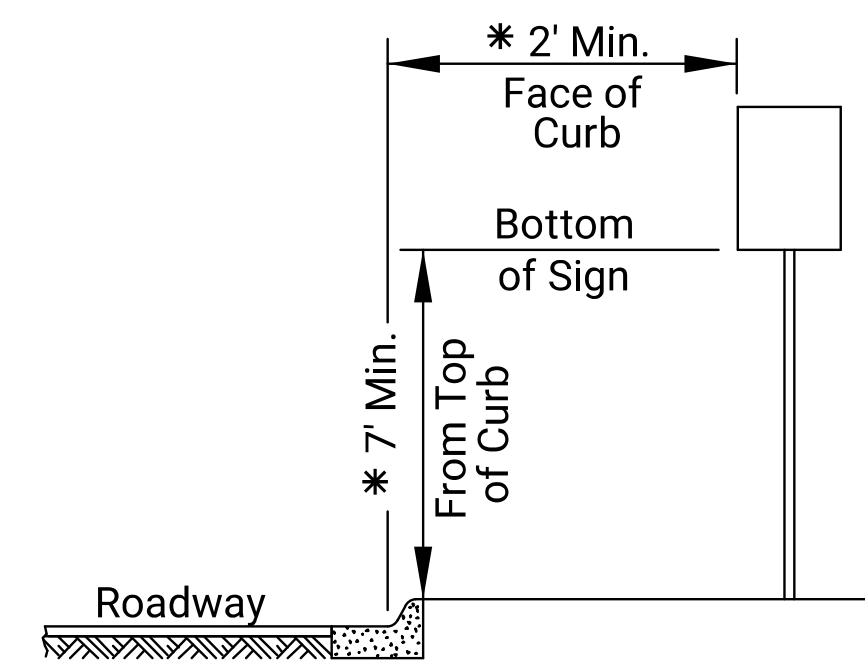
SP-02  
(Special Sign)

All city names and street names on special signs and destination signs must have upper and lower case letters.



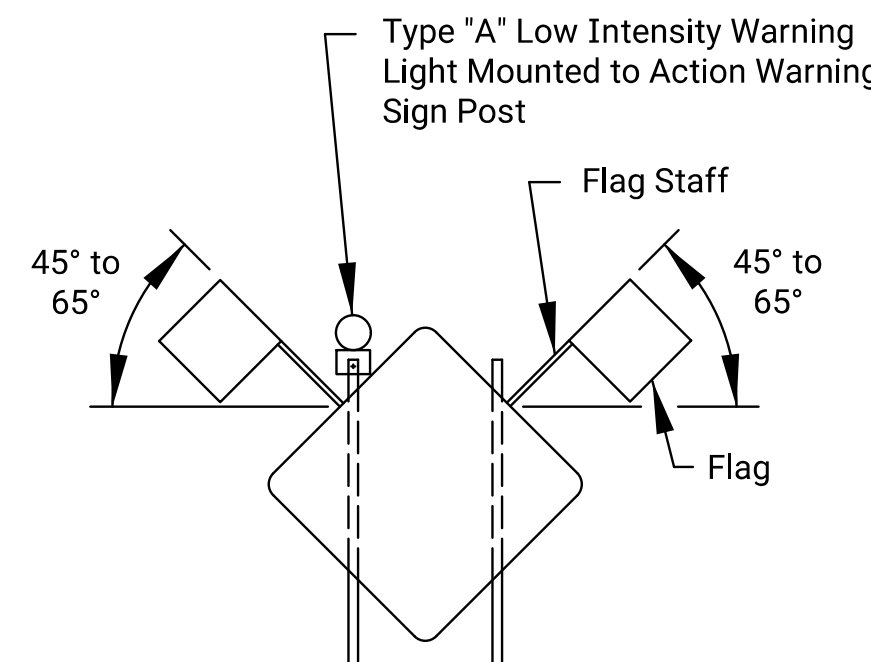
#### RURAL

- 1) Ground-mounted signs shall be mounted at a minimum height of 5' measured from the bottom of sign to the near edge of the pavement.
- 2) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.
- 3) The height of the secondary sign mounted below another sign may be 4' measured from the bottom of the sign to the near edge of the pavement. Signs shall not overlap each other.



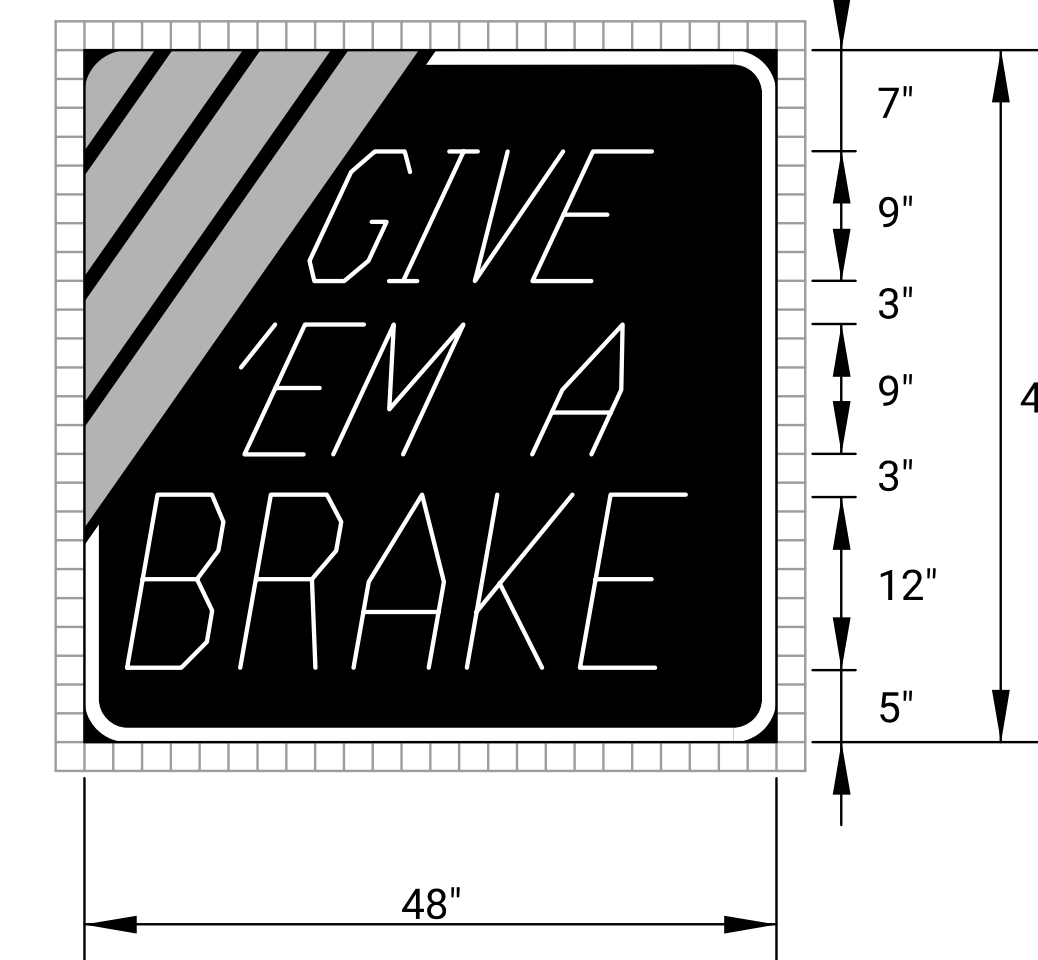
#### URBAN

- 1) Signs shall be mounted at a minimum height of 7' measured from the bottom of sign to the near edge of the pavement.
- 2) Neither portable nor permanent sign supports should be located on sidewalks or areas designated for pedestrian or bicycle traffic.
- 3) Signs mounted lower than 7' should not project more than 4" into pedestrian facilities.
- 4) The height from of the secondary sign mounted below another sign may be 6' measured from the bottom of sign to the near edge of the pavement. Signs shall not overlap each other.
- 5) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.
- \* 6) Pedestrian detour signing shall be a minimum of 2' measured from the top of the pedestrian pathway to the bottom of the sign and shall not protrude into the walkway nor shall it project beyond the back of curb.

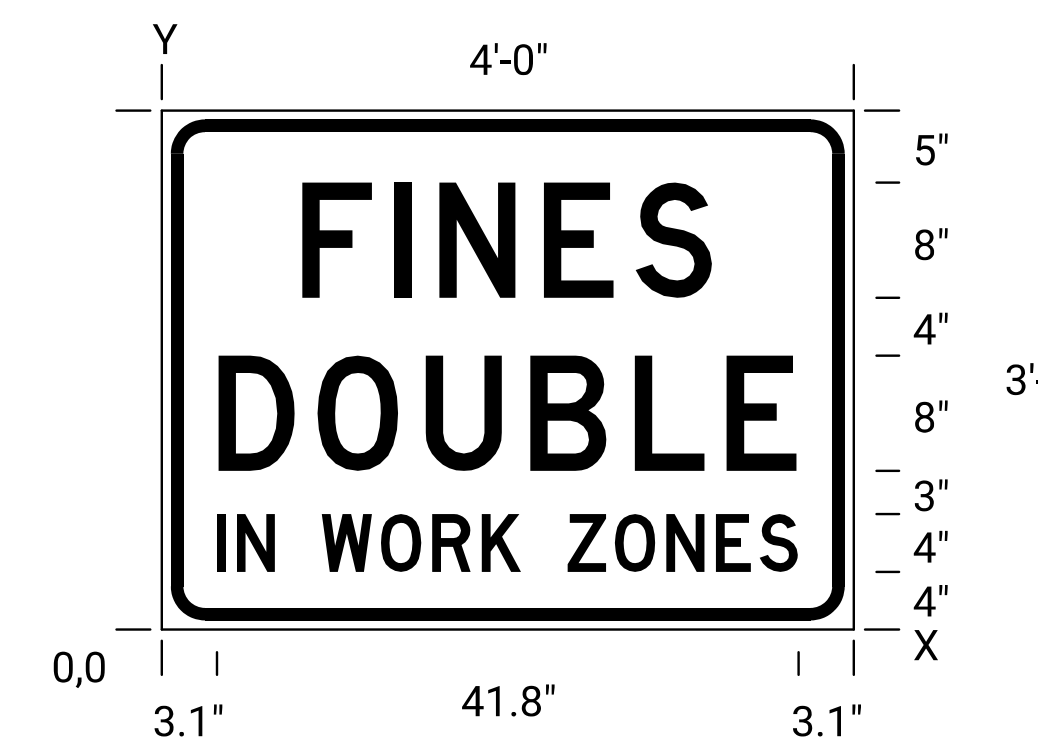


When the sign width is equal to or greater than 9', three or more wood posts may be used with a minimum of 4' between the centerline of each post. All signs less than 9' in width shall use a maximum of two wood posts.

- In the case of hitting rock when driving posts
1. Shift the sign location. Do not violate minimum sign spacing.
  2. With the engineer's approval, use acceptable alternative sign stands.



KI-104a



KI-105a

Sign Number	GIVE EM A BRAKE
Width x Height	4'-0" x 4'-0"
Border Width	1.0"
Corner Radius	4.0"
Stripe Width	3.0"
Mounting	Ground
Background	Type: Non-Reflective Color: Black
Legend/Border	Type: Reflective Color: White
Legend Font	Dutch 801 Roman SWC 25 Degree Slant
Stripes	Type: Reflective Color: Orange

Sign Number	FINES DOUBLE
Width x Height	4'-0" x 3'-0"
Border Width	0.9"
Corner Radius	3.0"
Mounting	Ground
Background	Type: Reflective Color: White
Legend/Border	Type: Non-Reflective Color: Black

Dimensions in inches Spacings are to start of next letter

Y FONT	LETTER SPACINGS												HT LEN		
23.0 D	F	I	N	E	S									8.0	
	9.7	6.4	3.2	7.3	6.4	5.4	9.7							28.6	
11.0 D	D	O	U	B	L	E								8.0	
	3.9	6.9	7.5	7.3	6.4	4.9	3.9							40.3	
4.0 D	I	N	W	O	R	K	Z	O	N	E	S			4.0	
	3.1	1.6	2.7	3.2	4.3	3.8	3.6	2.8	3.4	3.8	3.6	3.2	2.7	3.1	41.8

Notes:

- Typically, there are two sets of informational signs installed per project: one for each direction of traffic.
- Install signs a minimum of 500' in advance of the road work ahead sign. The engineer may designate a more appropriate location if conditions dictate.
- The informational signs are not to interfere with the traffic control signs for the project.

NO.	DATE	REVISIONS	BY	APPD
KANSAS DEPARTMENT OF TRANSPORTATION				
<b>TRAFFIC CONTROL SIGN INFORMATION</b>				
TE710				
FHWA APPROVAL		06-01-15		APPD
DESIGNED	R.W.B.	DETAILED	R.W.B.	QUANTITIES
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.	TRACE CK.
		Kristina Erickson		

