

GENERAL NOTES

SPECIFICATIONS: All references to the Specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction with current Supplemental Specifications. All references to the AASHTO Specifications are to the current edition of the AASHTO LRFD Bridge Design Specs, with interims.

DESIGN LOAD: This bridge is designed for a KYHL-93 live load. The KYHL-93 live load is arrived at by increasing the standard HL-93 truck and lane loads as specified in the AASHTO Specifications by 25%.

FUTURE WEARING SURFACE: This structure is designed for a 60 PSF future wearing surface load.

DESIGN STRESSES:

Concrete Class "A"	~	f'c = 3500 psi
Concrete Class "AA"	~	f'c = 4000 psi
Steel Reinforcement	~	Fy = 60,000 psi
Structural Steel Yield Strength	~	Fy = 50,000 psi

DESIGN METHOD: All reinforced concrete members are designed by the load and resistance factor method as specified in the current AASHTO Specifications.

REINFORCEMENT: Dimensions shown from the face of concrete to bars are to center of bars unless otherwise shown. Spacing of bars is from center to center of bars. Clear distance to face of concrete is 2", unless otherwise noted. Any reinforcement bars designed be suffix (e) in the plans shall be epoxy coated in accordance with section 811.10 of the Standard Specifications. Any reinforcing bars designated by suffix (s) in a bill of reinforcement shall be considered a stirrup for purposes of bend diameters.

BEVELED EDGES: Bevel all exposed edges 5 " unless otherwise noted.

COMPLETION OF THE STRUCTURE: The Contractor is required to complete the structure in accordance with the plans and specifications. Material, labor or construction operations, not otherwise specified, are to be included in the bid item most appropriate to the work involved. This may include cofferdams, shoring, excavations, backfilling, removal of all or parts of existing structures, phase construction, incidental materials, labor or anything else required to complete the structure.

SHOP DRAWINGS: Submit shop drawings that are required by the plans and specifications directly to the Division of Structural Design. Is any changes in the design plans are proposed by a fabricator or supplier, submit those changes to the Department through the Contractor.

DIMENSIONS: Dimensions are for a normal temperature of 60 degrees Fahrenheit. Layout dimensions are horizontal dimensions.

SUPERSTRUCTURE SLAB: Ensure the entire superstructure slab is poured continuously, out to out, before allowing any concrete to set.

MASONRY COATING: Apply a masonry coating finish to the substructure in accordance with section 601.03.18.

CONCRETE SEALER: Seal deck in accordance with the Special Note for Concrete Sealing.

ON-SITE INSPECTION: Each contractor submitting a bid for this work shall make a thorough inspection of the project site prior to submitting a bid and shall be thoroughly familiarized with existing conditions so that work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department of Highways.

BONDING CONCRETE TO PREVIOUSLY POURED CONCRETE: Use an epoxy bond coat as described in section 511.03.02 of the Standard Specifications to bond the new concrete to the existing concrete at all construction joints noted in the plans. Include the cost of this work in unit price bid for Concrete Class "A".

EXISTING PLANS: For information regarding the existing structure see drawing number 05575.

DAMAGE TO THE SUBSTRUCTURES: The contractor is responsible for any and all damages to the existing substructures during reconstruction even to the replacement of the entire substructure, should they be damaged due to his actions.

MAINTAIN AND CONTROL TRAFFIC: The contractor is fully responsible for maintaining and controlling traffic on this project. Bridge shall be fully closed for construction. Contractor shall provide signs at each end of the road to let the public know of closure and shall also provide Type III barriers at each end of the bridge. Include all costs in the lump sum price bid for maintain and control traffic.

REMOVE SUPERSTRUCTURE: Include in the lump sum bid for "Remove Superstructure" all costs (materials, labor, equipment) associated with removing and disposing of the existing superstructure (including any wearing surface) and soil/backfill as necessary behind beams as detailed herein in accordance with Section 203 of the Specifications.

FIELD MEASUREMENTS: All dimensions and elevations given in these plans are based on field measurements. Prior to beginning work or ordering any materials, the contractor shall verify all dimensions and elevations. No claim will be honored by the Department of Highways regarding site conditions.

PAVEMENT: The contractor shall provide a minimum of 8" DGA, 2~4" lifts of asphalt base, and 1½" Asphalt Surface where full depth pavement is required near ends of bridge. Backfilling behind beams is incidental to the price bid for Foundation Preparation. Elsewhere, the contractor shall provide surface as necessary to provide a smooth transition from end of bridge to existing pavement. Rough pavement limits are shown in the plans or as Engineer directs.

ELEVATIONS: The elevations given in these plans are relative elevations based on a point located on Abutment 1. The elevation at this location is assumed to be 100 foot and is not based on sea level elevations. Before starting any demolition, the contractor should make a reference benchmark off the bridge.

CONCRETE PATCHING METHOD: All cost to perform this operation is included in other items, concrete patching or incidental to the contract.

1. Use a saw to cut patch boundaries 1 inch deep maximum.
2. Use pneumatic hammers and chisels, not exceeding 20 pounds, for removal.
3. Remove all unsound material while protecting sound material and existing steel reinforcement.
4. Rout all cracks and cavities.
5. Chip all patch boundaries to form a sound, mechanical shoulder.
6. The patch depth at any point shall extend at least 2 inches behind existing steel reinforcement.
7. Blast clean reinforcement and coat with cold galvanizing. Supplement damaged steel reinforcement as required.
8. Within 12 hours of placing concrete patch, blast clean all surfaces to remove dust and loose material with compressed air. Compressed air must be free from oil and water.
9. Apply epoxy bond coat as required by the Standard Specifications.
10. Form to original dimensions.
11. Place Class "M1" Concrete and cure as required by the Standard Specifications.

The following abbreviations may have been used in the preparation of these plans:

bet.	between
b.f.	Back Face
BOF	Bottom of Footing
BOS	Bottom of Slab
bot.	Bottom
Brg.	Bearing
C to C	Center to Center
c.e.	Current Edition
C.Y.	Cubic Yards
Chd.	Chord
CL	Center Line
Clr.	Clear
Conc.	Concrete
Cu.	Cubic
Dwg.	Drawing
e.f.	Each Face
El.	Elevation
eq.	Equal
Est.	Estimate
Ext.	Exterior
F to F	Face to Face
f.f.	Front Face
f.s.	Far Side
fr.	Front
ft.	Feet
I.D.	Inside Diameter
in.	Inch
Int.	Interior
L	Left
LBS	Low Bridge Seat
LBS.	Pounds
M	Meter
MPH	Miles Per Hour
n.s.	Near Side
O.D.	Outside Diameter
Opp.	Opposite
PC	Point of Curvature
Perp.	Perpendicular
PI	Point of Intersection
PPC	Precast Prestressed Concrete
PPCDU	Precast Prestressed Deck Unit
PSI	Pounds per Square Inch
PT	Point of Tangency
R	Radius
R	Right
RCBC	Reinforced Concrete Box Culvert
RCDG	Reinforced Concrete Deck Girder
Req'd	Required
RR	Railroad
Shld.	Shoulder
spa.	Spaces
Sta.	Station
Std.	Standard
Str.	Straight
Tan	Tangent
Thru	Through
TOF	Top of Footing
TOS	Top of Slab
Tot.	Total
Typ.	Typical
Vert.	Vertical
W.P.	Working Point
Yd.	Yard



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: Brian.Miller

REVISION	DATE

DATE PLOTTED: 10-OCT-2024

PREPARED BY
**Division of
Structural Design**

DATE: November 2023	CHECKED BY
DESIGNED BY: N. Cordtz	W. Deaton
DETAILED BY: B. Miller	N. Cordtz

FILE NAME: J:\District04\RS & M\090B00056N Nelson\Final Plans and Closeout\28840.dgn

GENERAL NOTES

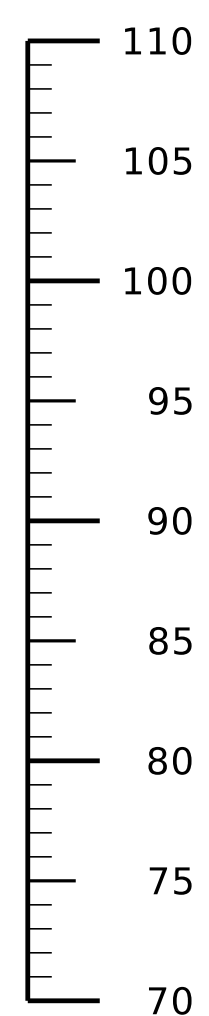
CROSSING
Cedar Creek

ROUTE
US 62

BRIDGE ID.
090B00056N
SHEET NO.
52

COUNTY OF
NELSON
DRAWING NUMBER
28840

MicroStation v10.16.3.1



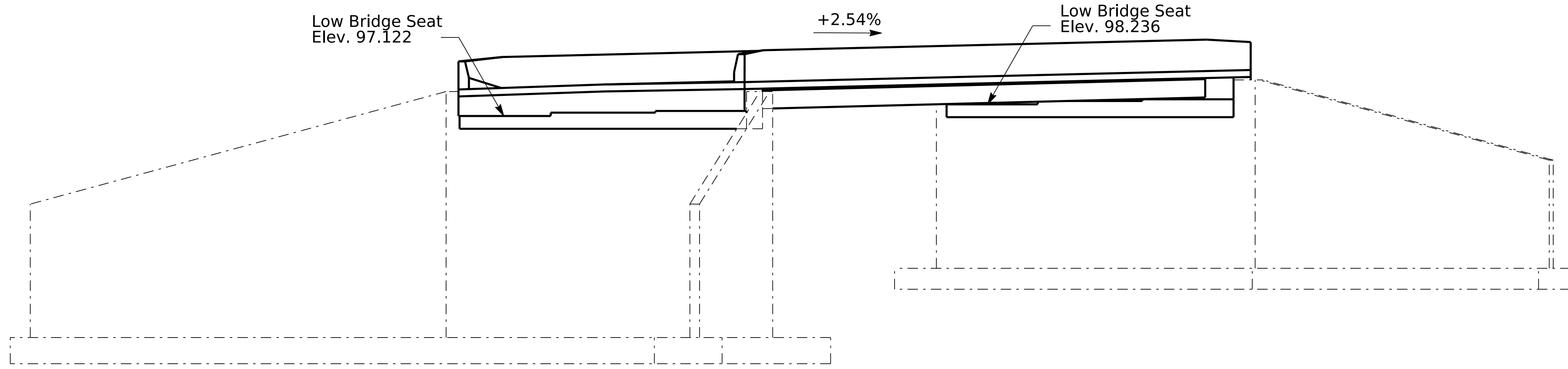
◀ To Bardstown

To Elizabethtown ▶

Low Bridge Seat
Elev. 97.122

+2.54%

Low Bridge Seat
Elev. 98.236

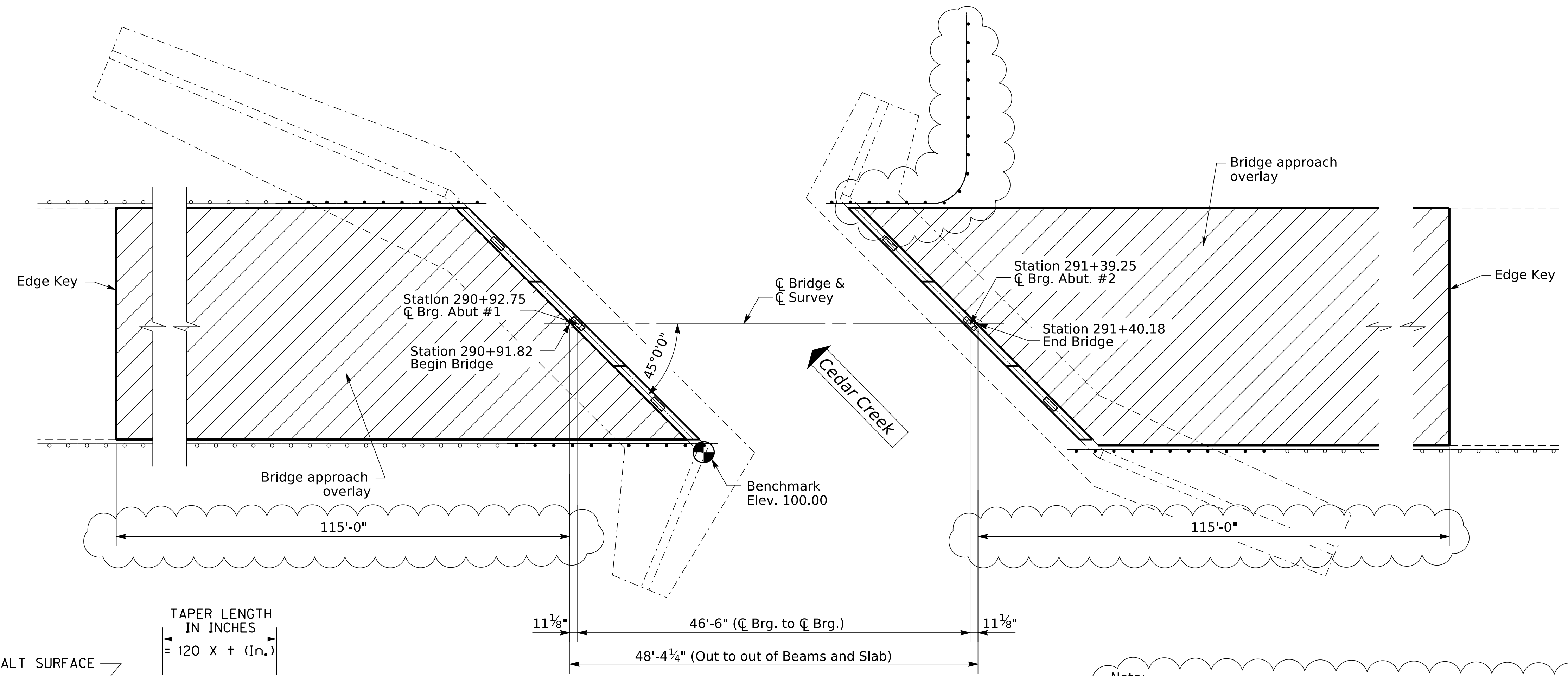


Abutment #1
Fixed

Abutment #2
Expansion

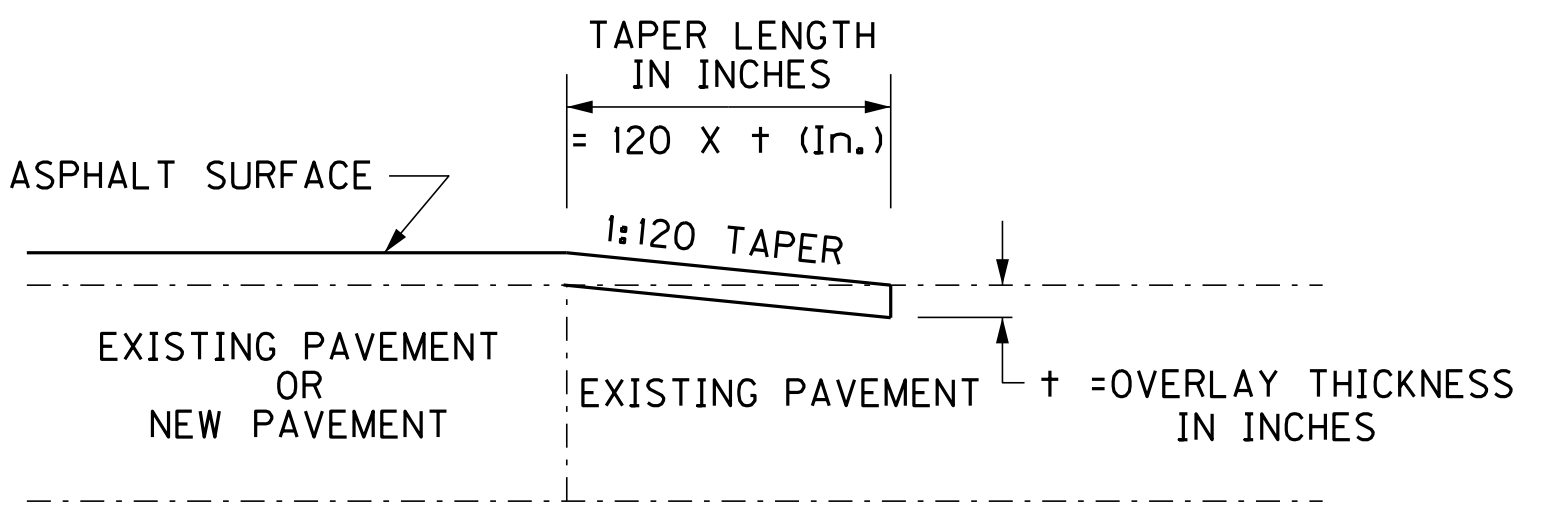
ELEVATION

46'-6" PPC Box Beam, SB21, Simple Span
KYHL-93 Live Load ~ 28'-0" Shoulder Width @ Bridge
45° Skew Lt. ~ 24'-11" Bridge Roadway Width ~ 2:1 Fill Slopes

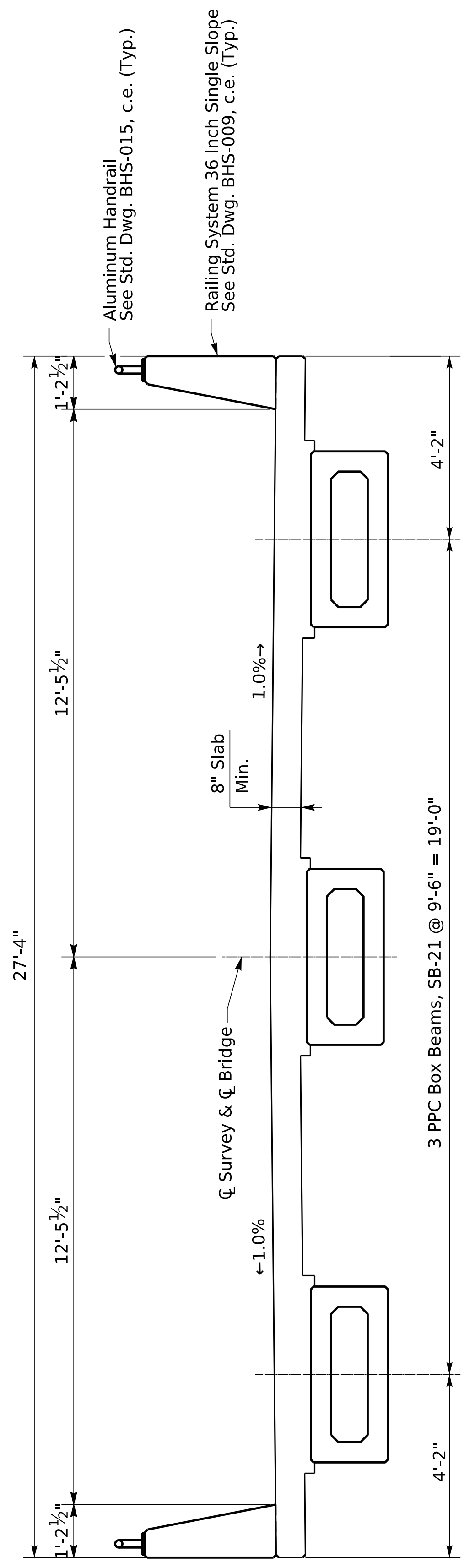


PLAN

~Superstructure not shown~



EDGE KEY DETAIL



TYPICAL SECTION

Note:
At the South West corner remove and replace all of the existing guardrail. Use a TL-2 transition with terminal section No. 1, See Std. Dwg. RBR-010.
At the other corners of the bridge remove 18'-9" of the existing guardrail. Use the TL-3 transition to connect to the existing guardrail.
See Std. Dwg. BHS-014



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE
Guardrail and note Modification	10/9/24

PREPARED BY
**Division of
Structural Design**

DATE: November 2023	CHECKED BY:
DESIGNED BY: N. Cordtz	W. Deaton
DETAILED BY: B. Miller	N. Cordtz

LAYOUT
CROSSING
Cedar Creek

ROUTE
US 62

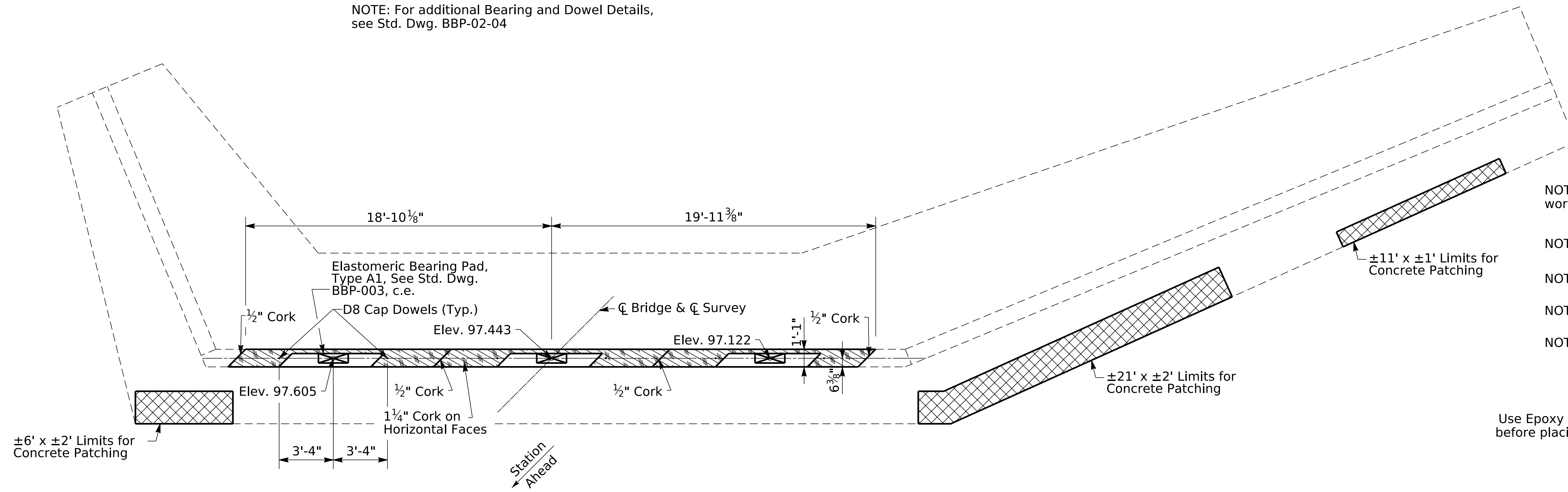
BRIDGE ID.
090B00056N

SHEET NO.
53

COUNTY OF
NELSON

DRAWING NUMBER
28840

NOTE: For additional Bearing and Dowel Details, see Std. Dwg. BBP-02-04



PLAN - Showing Cap

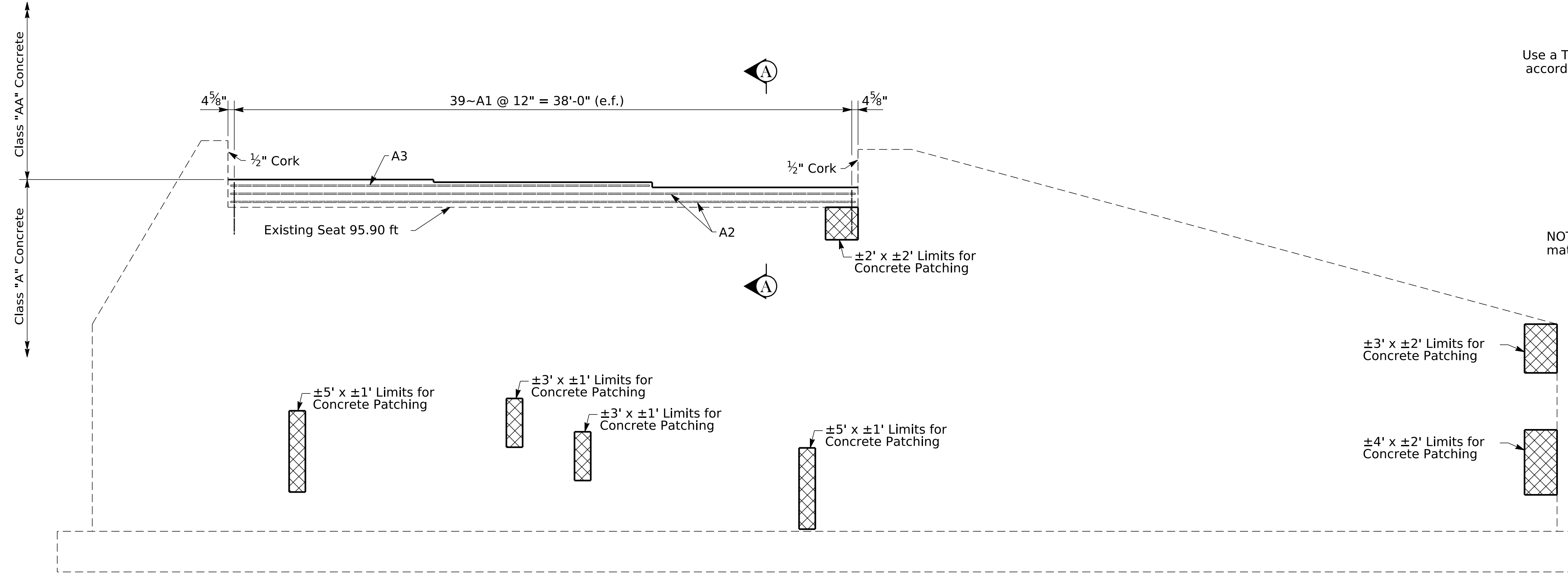
NOTE: Epoxy Inject Cracks as Engineer Directs. Do not begin injection work until Engineer agrees with all proposed locations.

NOTE: Place elastomeric bearing pads as shown on this sheet.

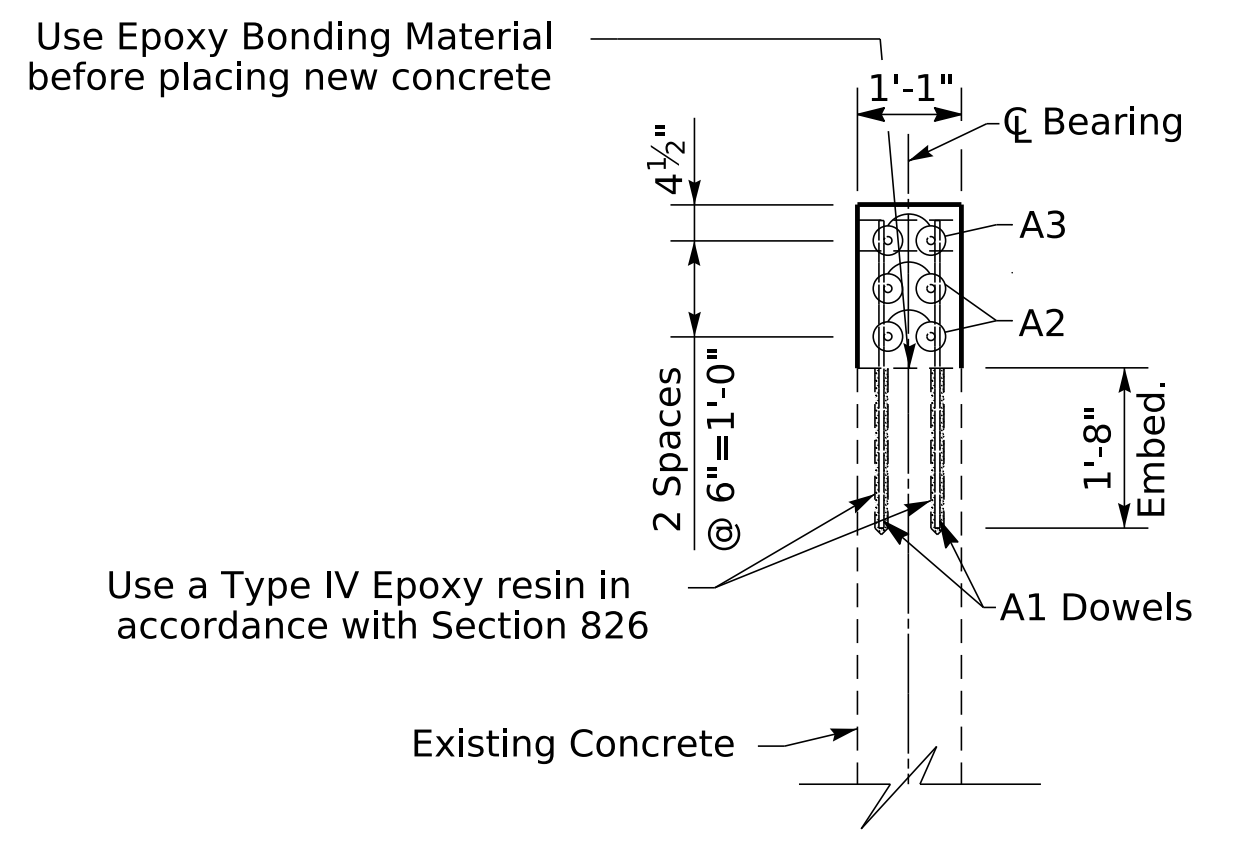
NOTE: Beam elevations are given at the top of concrete.

NOTE: Ensure not to drill into existing rebars, adjust location if necessary.

NOTE: See General Note for Concrete Patching Method.



ELEVATION - Showing Cap



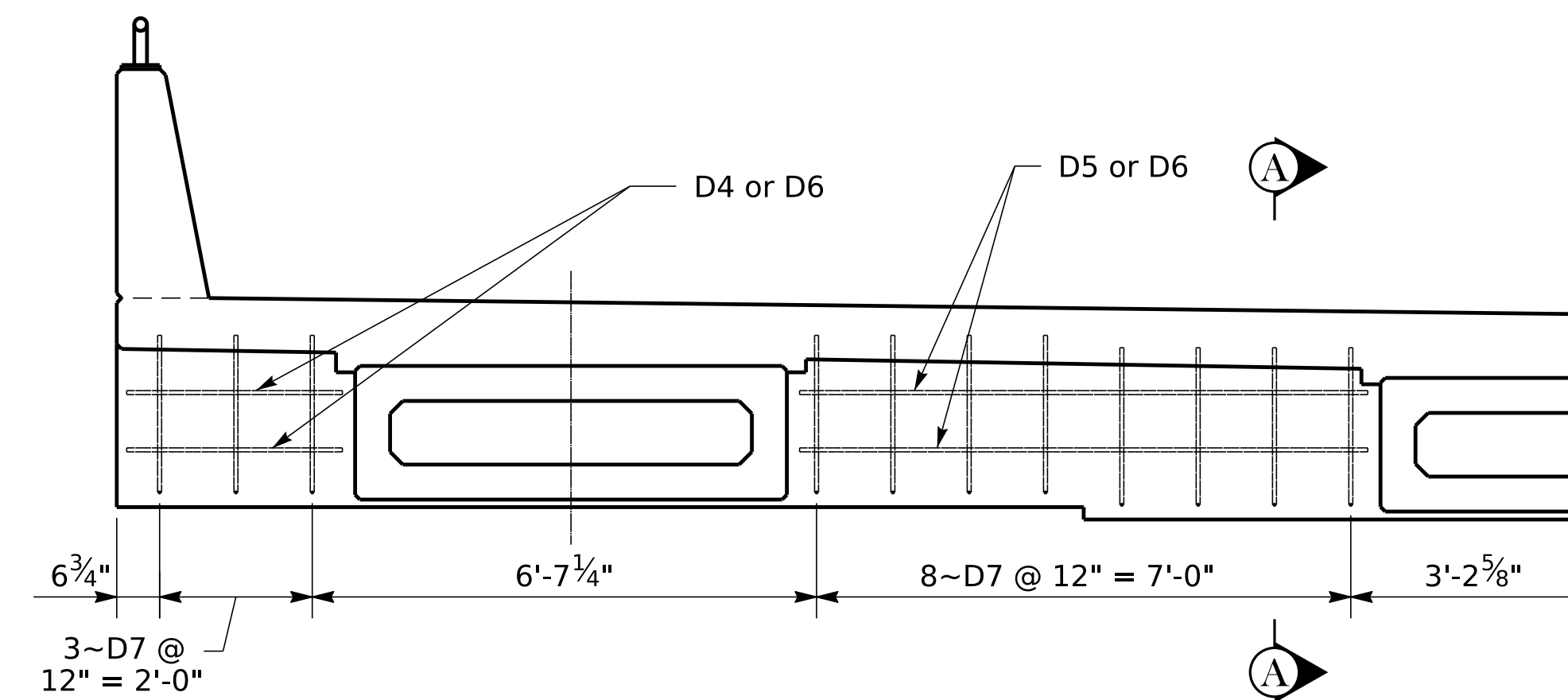
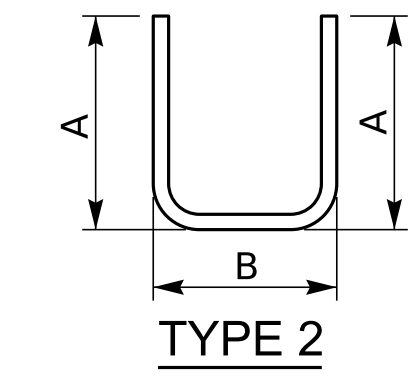
SECTION A-A

NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.

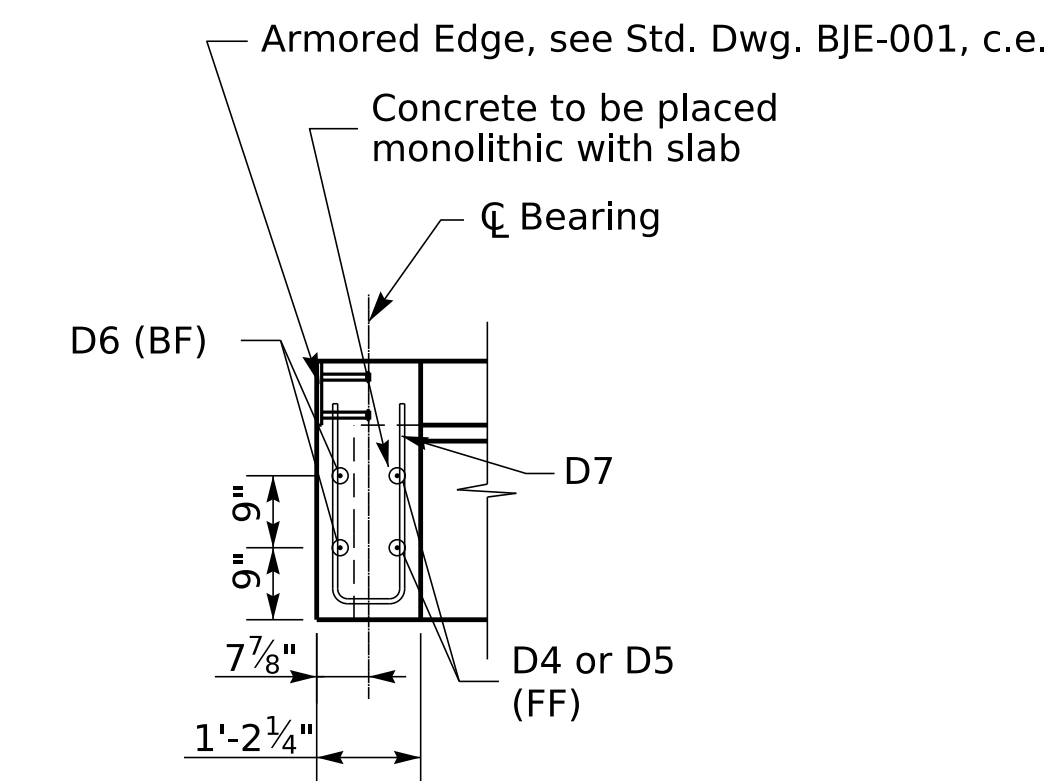
BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A	B
A1	Str.	78	5	3- 3	Dowel		
A2	Str.	4	8	38- 5	Cap		
A3	Str.	2	8	25- 9	Cap		
D4e	Str.	4	5	2- 8	Diaphragm		
D5e	Str.	4	5	7- 4	Diaphragm		
D6e	Str.	2	5	38- 4	Diaphragm		
D7e	2s	22	5	5- 3	Diaphragm	2- 2	1- 2
D8e	Str.	6	*	2- 0	Cap Dowel		

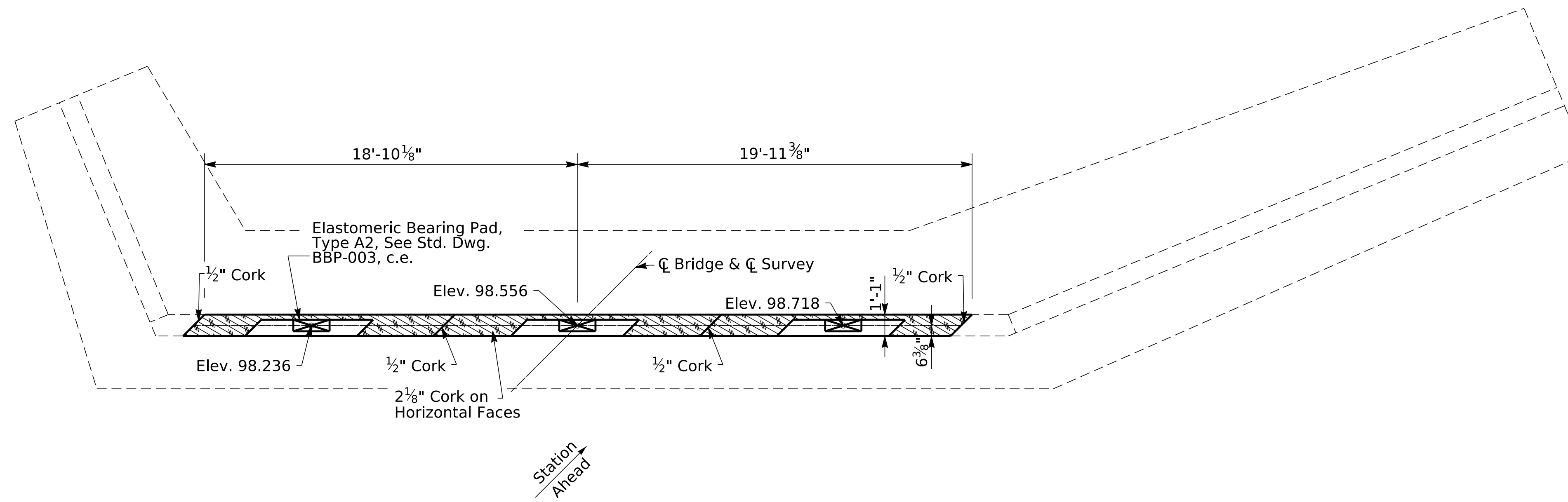
* 1 1/2" Smooth Round Pin May be Commercial Grade Steel



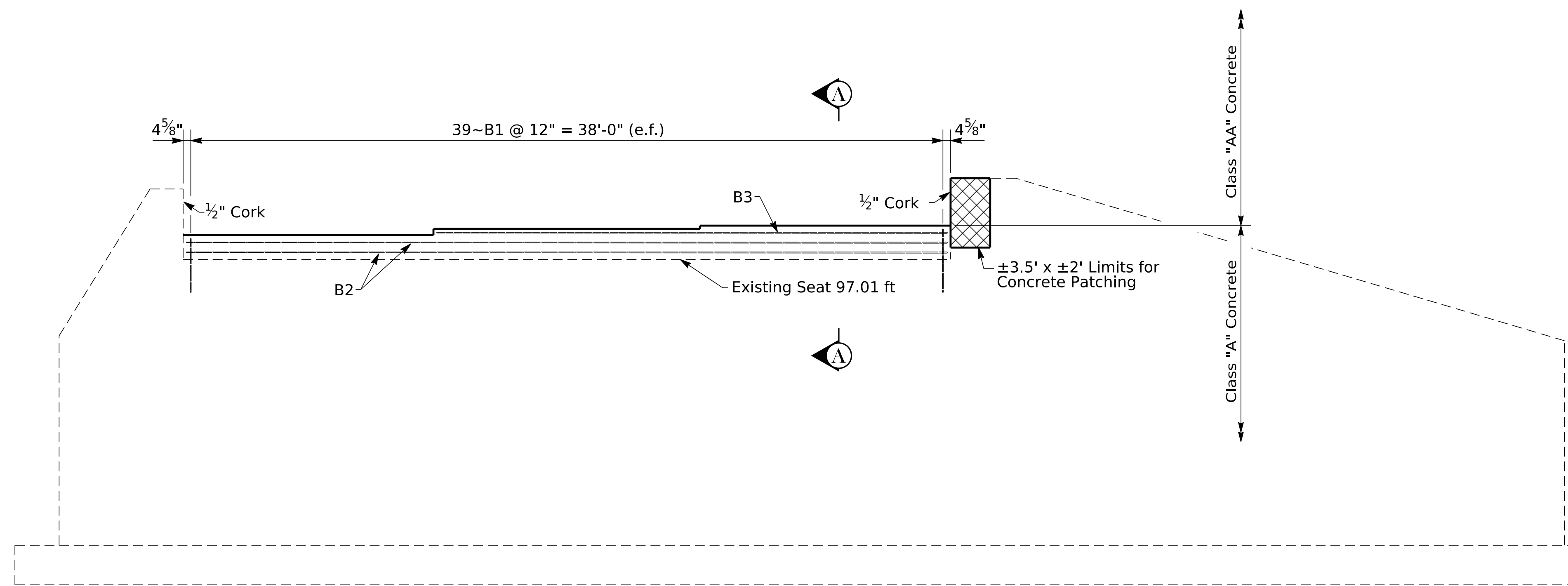
ABUTMENT DIAPHRAGM
(Measured along ϕ Wall)



SECTION A-A



PLAN - Showing Cap



ELEVATION - Showing Cap

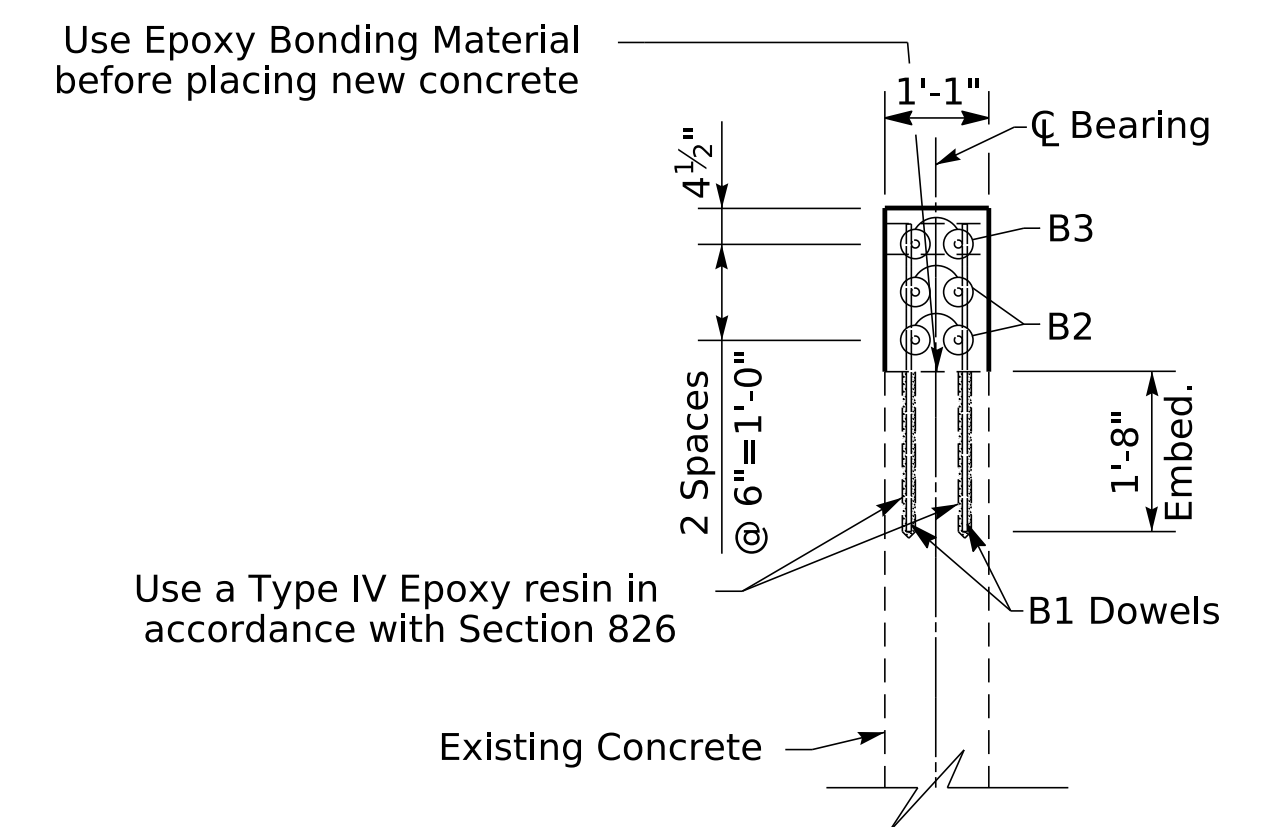
NOTE: Epoxy Inject Cracks as Engineer Directs. Do not begin injection work until Engineer agrees with all proposed locations.

NOTE: Place elastomeric bearing pads as shown on this sheet.

NOTE: Beam elevations are given at the top of concrete.

NOTE: Ensure not to drill into existing rebars, adjust location if necessary.

NOTE: See General Note for Concrete Patching Method.



SECTION A-A

NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



REVISION

DATE

PREPARED BY

Division of
Structural Design

DATE: November 2023

CHECKED BY

DESIGNED BY: N. Cordtz

W. Deaton

DETAILED BY: E. Downey

N. Cordtz

ABUTMENT 2

CROSSING

Cedar Creek

ROUTE

US 62

BRIDGE ID.

090B00056N

SHEET NO.

56

COUNTY OF

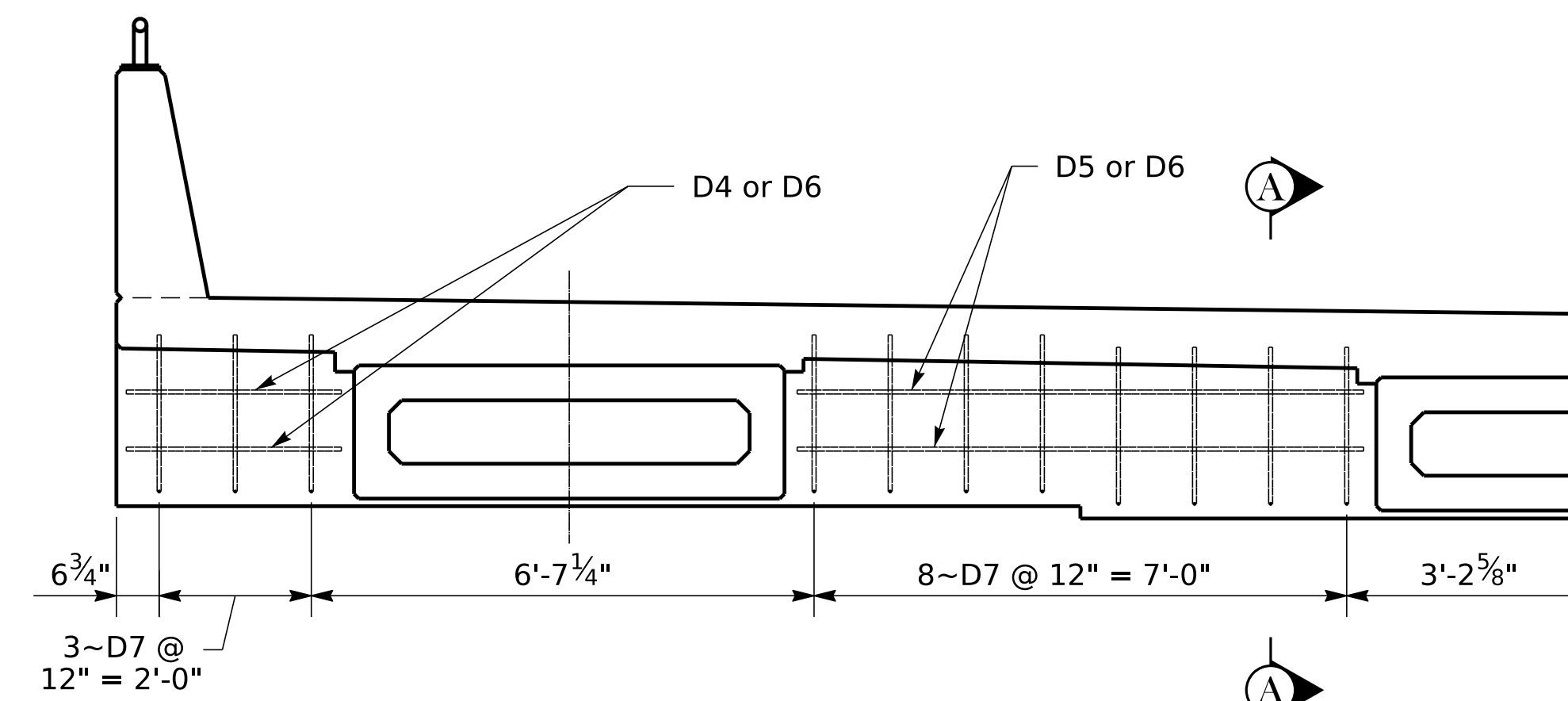
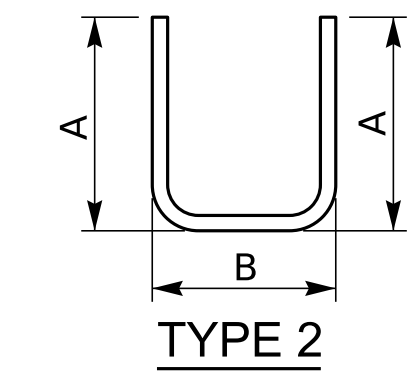
NELSON

DRAWING NUMBER

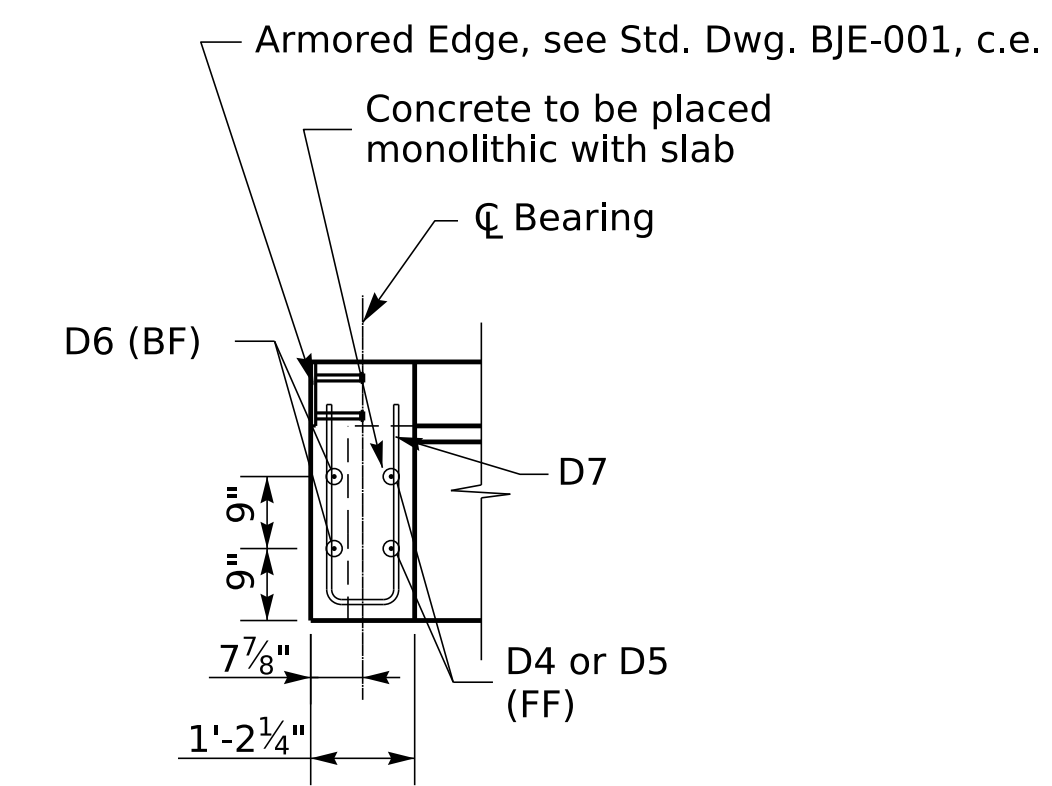
28840

BILL OF REINFORCEMENT

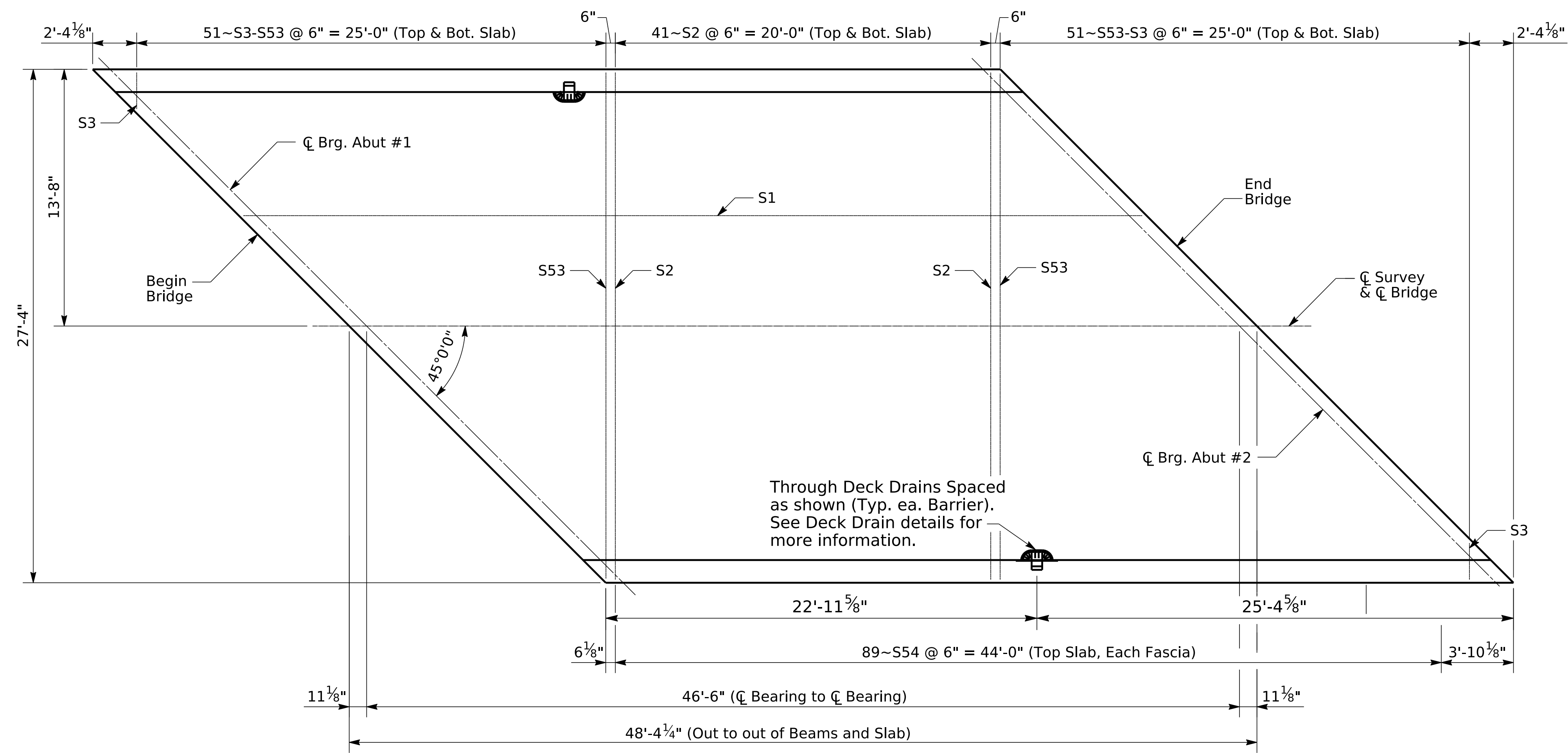
MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A	B
B1	Str.	78	5	3- 3	Dowel		
B2	Str.	4	8	38- 5	Cap		
B3	Str.	2	8	25- 9	Cap		
D4e	Str.	4	5	2- 8	Diaphragm		
D5e	Str.	4	5	7- 4	Diaphragm		
D6e	Str.	2	5	38- 4	Diaphragm		
D7e	2s	22	5	5- 3	Diaphragm	2- 2	1- 2



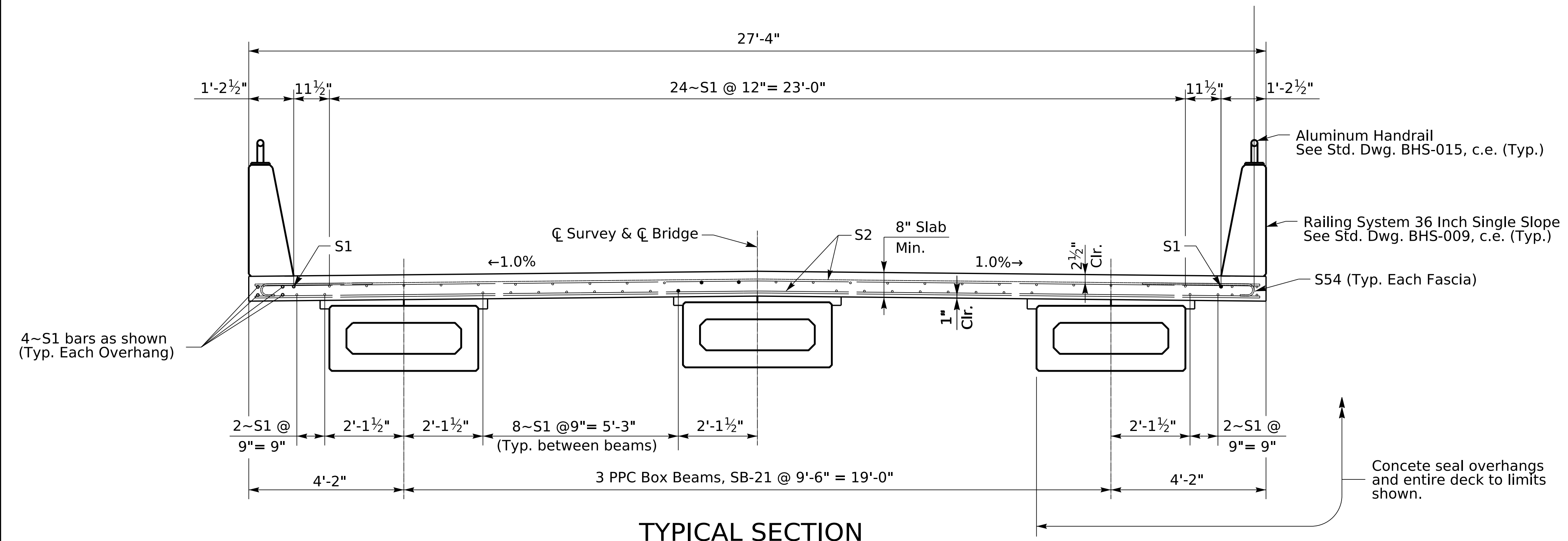
ABUTMENT DIAPHRAGM
(Measured along ϕ Wall)



SECTION A-A

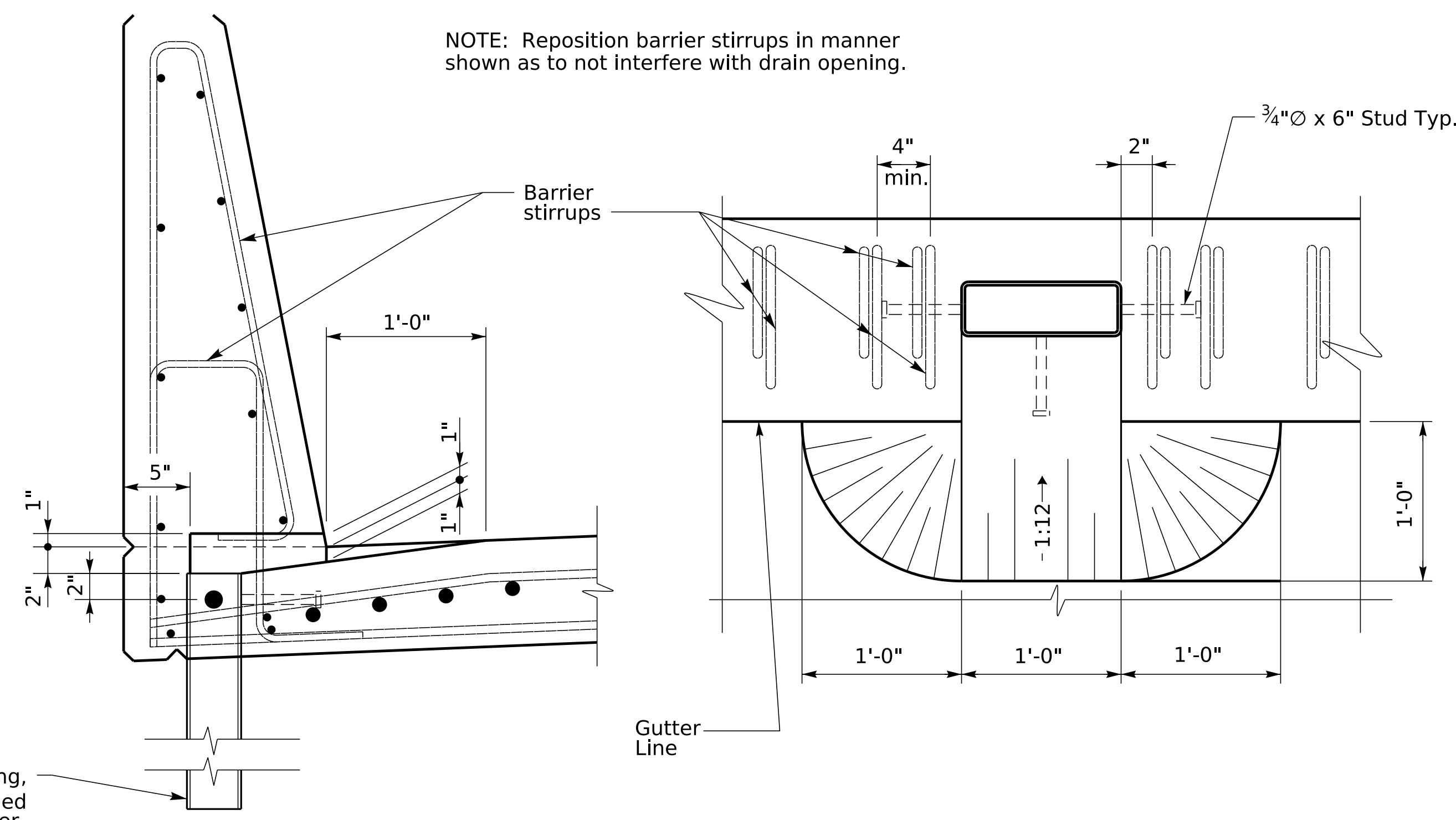


PLAN



TYPICAL SECTION

1'-0" x 4" x 1/4" Tubing,
Grade A, or 1/4" welded
plates. Galvanize after
fabrication. Extend 3" min.
below bottom of beam

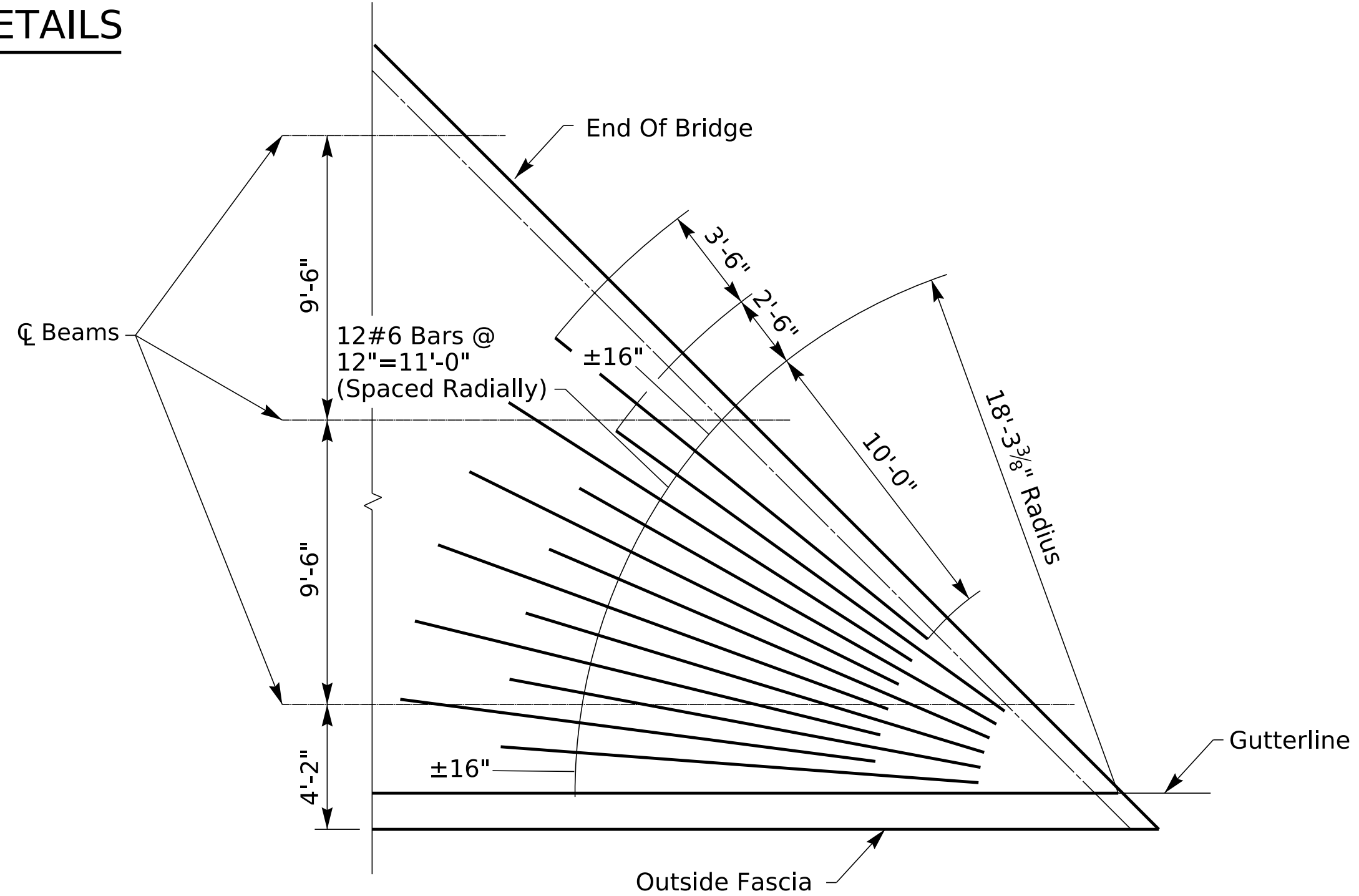


SECTION THROUGH DRAIN

PLAN OF DRAIN (Barrier not in place)

NOTE: Field bend top transverse slab reinforcement in the area of the drain to maintain 2 1/2" of concrete cover through the drain. Bend reinforcement approximately 1'-0" from the gutter line. Transverse slab reinforcement adjacent to the opening is not to be bent. Longitudinal reinforcement is not to be tied to the transverse reinforcement adjacent to the drain for a distance sufficient to allow the reinforcement to sag under the bent reinforcement in the drain area. Include all costs to fabricate and install the drain as detailed in the unit price bid for "Deck Drain".

DRAIN DETAILS

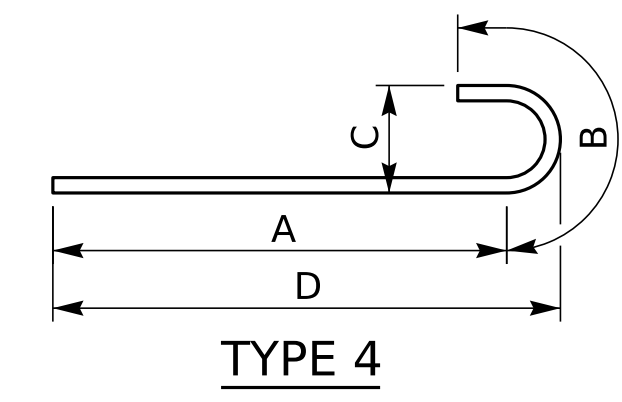


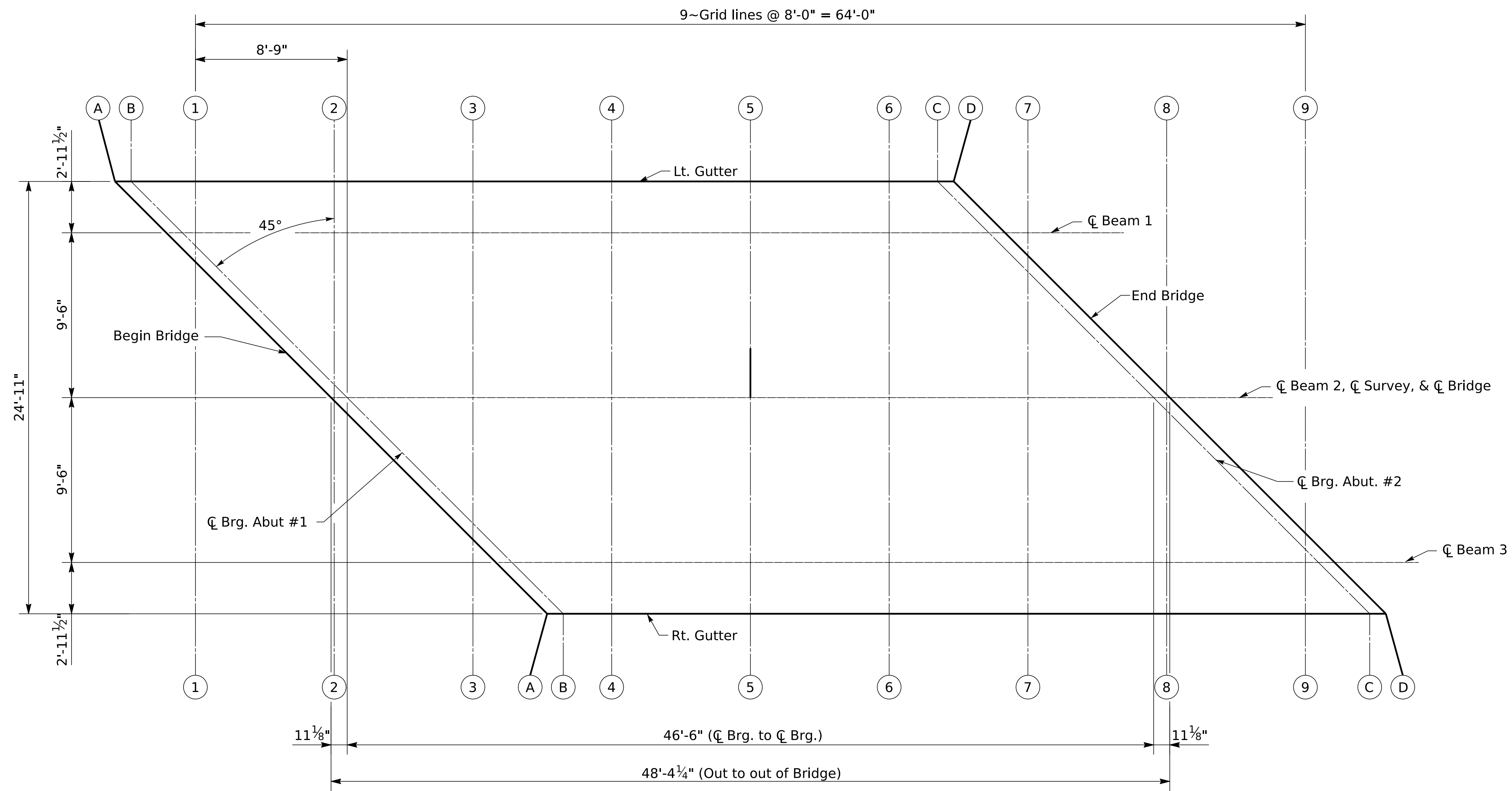
CORNER REINFORCEMENT
(Typical Each Acute Corner)

Note: Corner reinforcement to be placed beneath longitudinal and transverse reinforcement in top of slab.

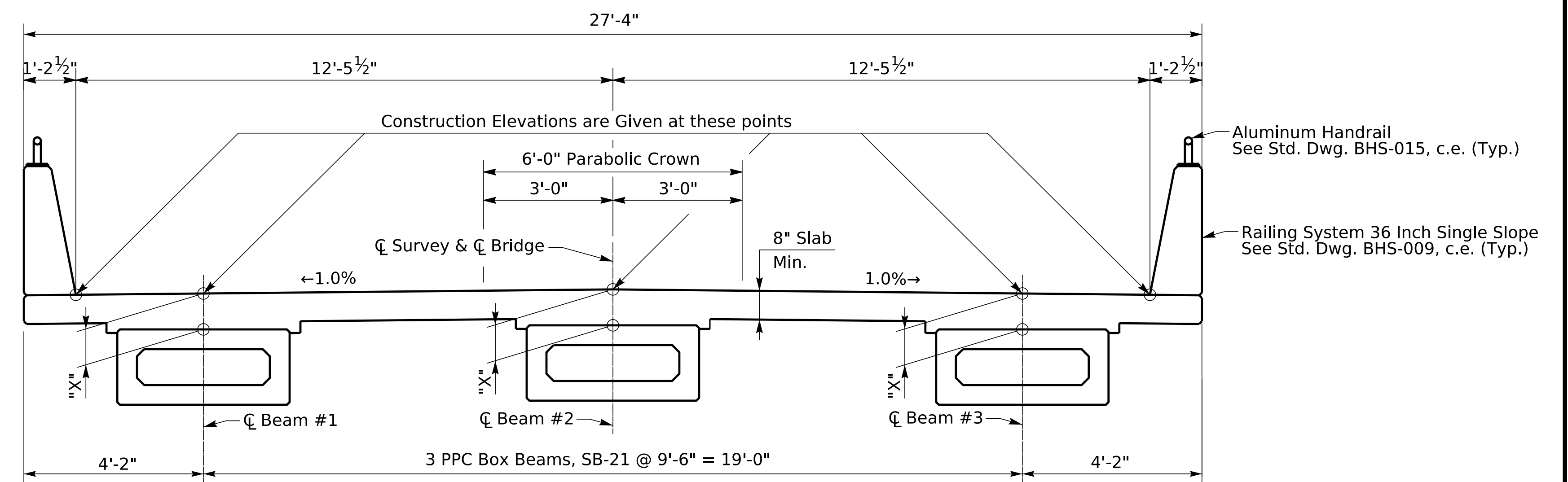
BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A	B	C	D	
S1e	Str.	54	5	47-10	Slab Longitudinal					
S2e	Str.	82	5	27- 0	Slab Transverse					
S3e	Str.	4	5	1-11	Slab Transverse					
S4e	Str.	4	5	2- 5	Slab Transverse					
S5e	Str.	4	5	2-11	Slab Transverse					
S6e	Str.	4	5	3- 5	Slab Transverse					
S7e	Str.	4	5	3-11	Slab Transverse					
S8e	Str.	4	5	4- 5	Slab Transverse					
S9e	Str.	4	5	4-11	Slab Transverse					
S10e	Str.	4	5	5- 5	Slab Transverse					
S11e	Str.	4	5	5-11	Slab Transverse					
S12e	Str.	4	5	6- 5	Slab Transverse					
S13e	Str.	4	5	6-11	Slab Transverse					
S14e	Str.	4	5	7- 5	Slab Transverse					
S15e	Str.	4	5	7-11	Slab Transverse					
S16e	Str.	4	5	8- 5	Slab Transverse					
S17e	Str.	4	5	8-11	Slab Transverse					
S18e	Str.	4	5	9- 5	Slab Transverse					
S19e	Str.	4	5	9-11	Slab Transverse					
S20e	Str.	4	5	10- 5	Slab Transverse					
S21e	Str.	4	5	10-11	Slab Transverse					
S22e	Str.	4	5	11- 5	Slab Transverse					
S23e	Str.	4	5	11-11	Slab Transverse					
S24e	Str.	4	5	12- 5	Slab Transverse					
S25e	Str.	4	5	12-11	Slab Transverse					
S26e	Str.	4	5	13- 5	Slab Transverse					
S27e	Str.	4	5	13-11	Slab Transverse					
S28e	Str.	4	5	14- 5	Slab Transverse					
S29e	Str.	4	5	14-11	Slab Transverse					
S30e	Str.	4	5	15- 5	Slab Transverse					
S31e	Str.	4	5	15-11	Slab Transverse					
S32e	Str.	4	5	16- 5	Slab Transverse					
S33e	Str.	4	5	16-11	Slab Transverse					
S34e	Str.	4	5	17- 5	Slab Transverse					
S35e	Str.	4	5	17-11	Slab Transverse					
S36e	Str.	4	5	18- 5	Slab Transverse					
S37e	Str.	4	5	18-11	Slab Transverse					
S38e	Str.	4	5	19- 5	Slab Transverse					
S39e	Str.	4	5	19-11	Slab Transverse					
S40e	Str.	4	5	20- 5	Slab Transverse					
S41e	Str.	4	5	20-11	Slab Transverse					
S42e	Str.	4	5	21- 5	Slab Transverse					
S43e	Str.	4	5	21-11	Slab Transverse					
S44e	Str.	4	5	22- 5	Slab Transverse					
S45e	Str.	4	5	22-11	Slab Transverse					
S46e	Str.	4	5	23- 5	Slab Transverse					
S47e	Str.	4	5	23-11	Slab Transverse					
S48e	Str.	4	5	24- 5	Slab Transverse					
S49e	Str.	4	5	24-11	Slab Transverse					
S50e	Str.	4	5	25- 5	Slab Transverse					
S51e	Str.	4	5	25-11	Slab Transverse					
S52e	Str.	4	5	26- 5	Slab Transverse					
S53e	Str.	4	5	26-11	Slab Transverse					
S54e		4	178	4	3-6	Slab Overhangs	2- 10	0- 8	0- 4	3- 0
S55e	Str.	24	6	16- 0	Corner Reinforcement					





GRID LAYOUT



TYPICAL SECTION

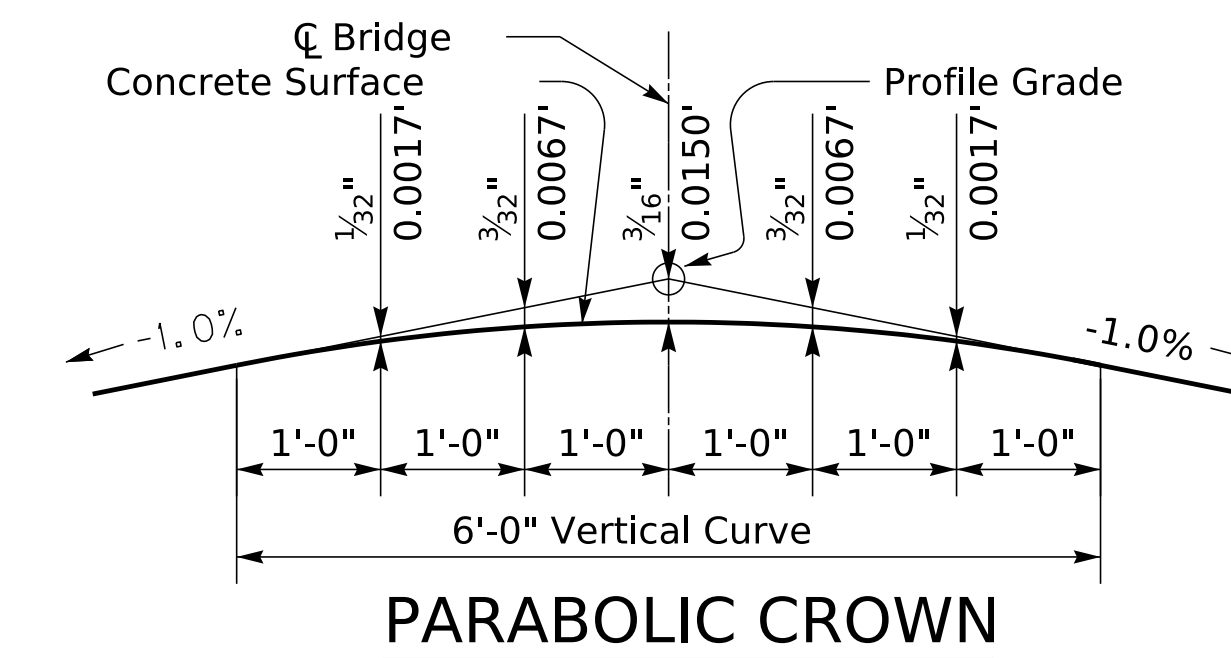
REVISION	DATE

DATE: November 2023	CHECKED BY: W. Deaton
DESIGNED BY: N. Cordtz	
DETAILED BY: B. Miller	N. Cordtz

ROUTE: US 62	BRIDGE ID: 090B00056N	COUNTY OF: NELSON
	SHEET NO. S12	DRAWING NUMBER 28840

CONSTRUCTION ELEVATIONS

LOCATION	LT. GUTTER			BEAM 1			BEAM 2			BEAM 3			RT. GUTTER		
	CONSTR. ELEV.	TOP OF BEAM	DIM. *X*	CONSTR. ELEV.	TOP OF BEAM	DIM. *X*	CONSTR. ELEV.	TOP OF BEAM	DIM. *X*	CONSTR. ELEV.	TOP OF BEAM	DIM. *X*	CONSTR. ELEV.	TOP OF BEAM	DIM. *X*
SKREW LN AA	99.685			99.790			100.110			100.272			100.317		
SKREW LN BB	99.709			99.813			100.133			100.296			100.341		
SKREW LN CC	100.889			100.993			101.314			101.476			101.521		
SKREW LN DD	100.912			101.017			101.337			101.499			101.545		
GRID LN 01	99.819			99.836											
GRID LN 02	100.052			100.072											
GRID LN 03	100.272			100.297			100.348								
GRID LN 04	100.474			100.506			100.576			100.466			100.424		
GRID LN 05	100.658			100.697			100.788			100.697			100.658		
GRID LN 06	100.830			100.872			100.982			100.912			100.880		
GRID LN 07							101.160			101.109			101.084		
GRID LN 08										101.290			101.270		
GRID LN 09										101.460			101.443		



NOTES FOR ELEVATIONS TAKEN ON PRESTRESSED CONCRETE BEAMS

Take elevations on top of beam at points indicated by the grid layout. The beam elevations are to be read to three decimals, and entered in tables under "Top of Beam" elevations.

Compute dimension "X" as follows: "Construction Elevation" minus "Top of Beam" elevation equals dimension "X". Construction Elevations include camber due to weight of the concrete slab and barrier. Measuring of dimension "X" gives the final check on beam tolerances for camber, beam damage, and errors in erection that produce reverse cambers, sags, and unsightly fascia beams.

For setting templates, measure dimension "X" above top of beams for top of template. Do not set template by elevations.

Temporary supports or shoring will not be permitted under the girders when pouring the concrete floor slab or when taking "Top of Beam" elevations.

Construct barrier to roadway grade. Do not add camber to the barrier.

Note to Engineer: The "Maximum Allowable Camber" shown on the beam sheet is the amount of camber, measured prior to casting the deck, above which the beam will begin to encroach into the slab. If the measured camber is greater than the "Maximum Allowable Camber" the contractor will be responsible for any necessary adjustments to assure a minimum slab thickness of 8 inches as shown in the plans. This work will be considered incidental to the completion of the structure and must have the approval of the Engineer.

The minimum allowable X-Dimension on a beam is that which results in the design deck thickness (8") at the edge of the beam flange. This is calculated as the deck thickness + (half the top flange width * cross slope of the bridge). For ex. 8" + 24"*0.02 = 8.48" = 0.707'. Any necessary modifications to some or all of the X-dimensions must meet the approval of the Engineer.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: Brian.Miller

REVISION

DATE

PREPARED BY

**Division of
Structural Design**

DATE: November 2023

DESIGNED BY: N. Cordtz

DETAILED BY: B. Miller

CHECKED BY

W. Deaton

N. Cordtz

CONSTRUCTION ELEVATIONS

CROSSING
Cedar Creek

ROUTE

US 62

BRIDGE ID.

090B00056N

SHEET NO.
S13

COUNTY OF

NELSON

DRAWING NUMBER
28840