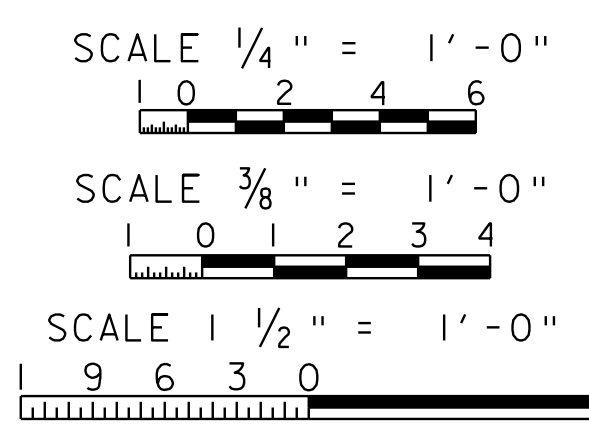
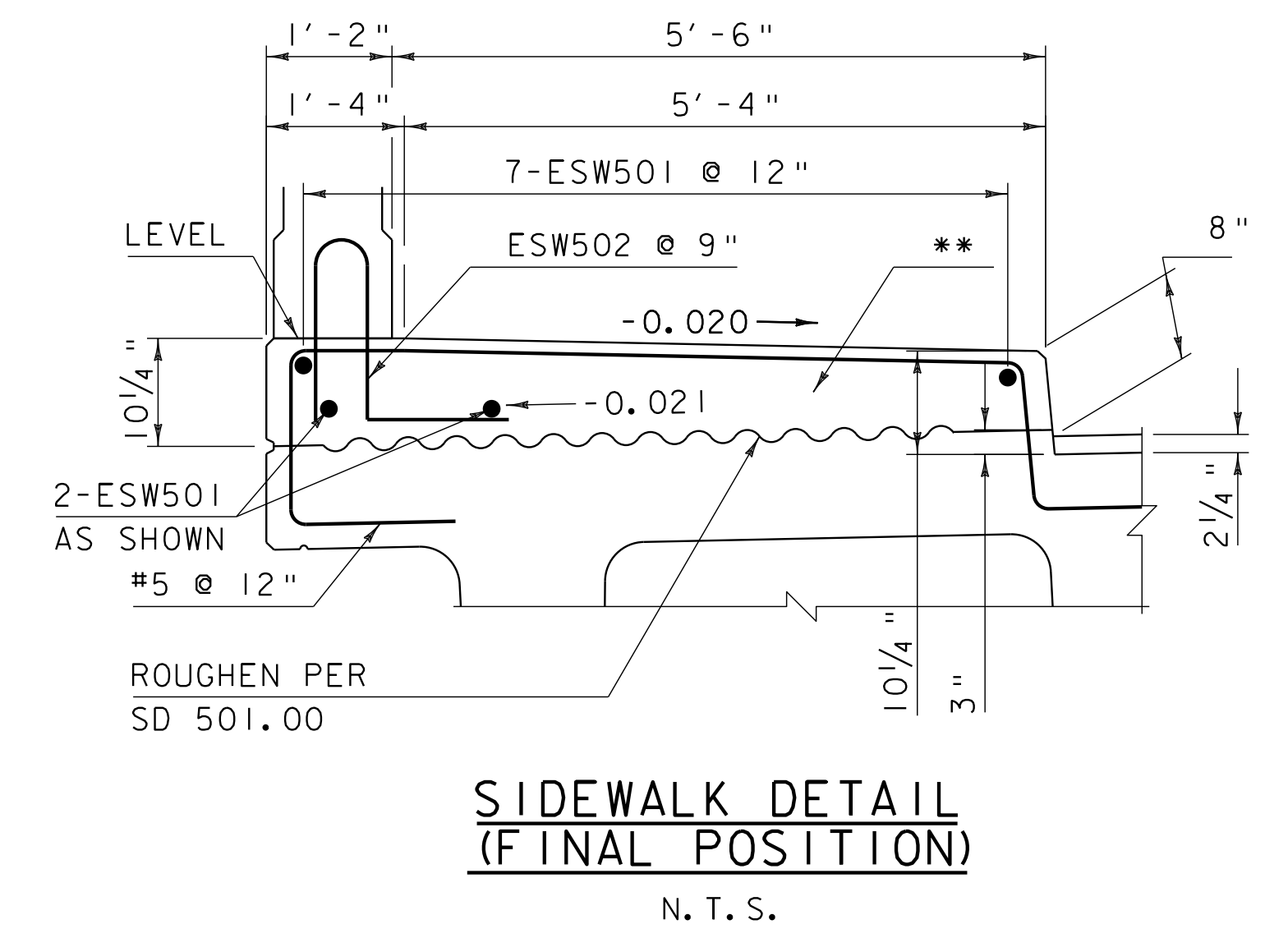
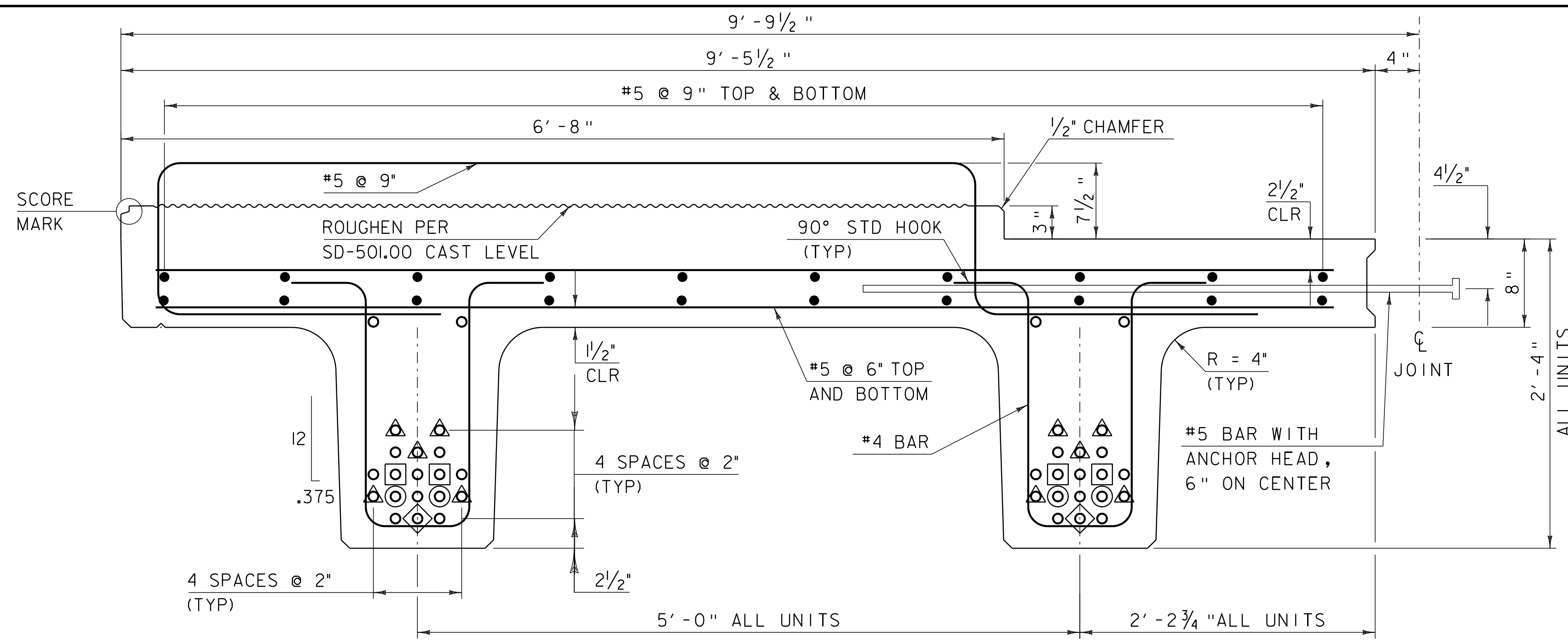


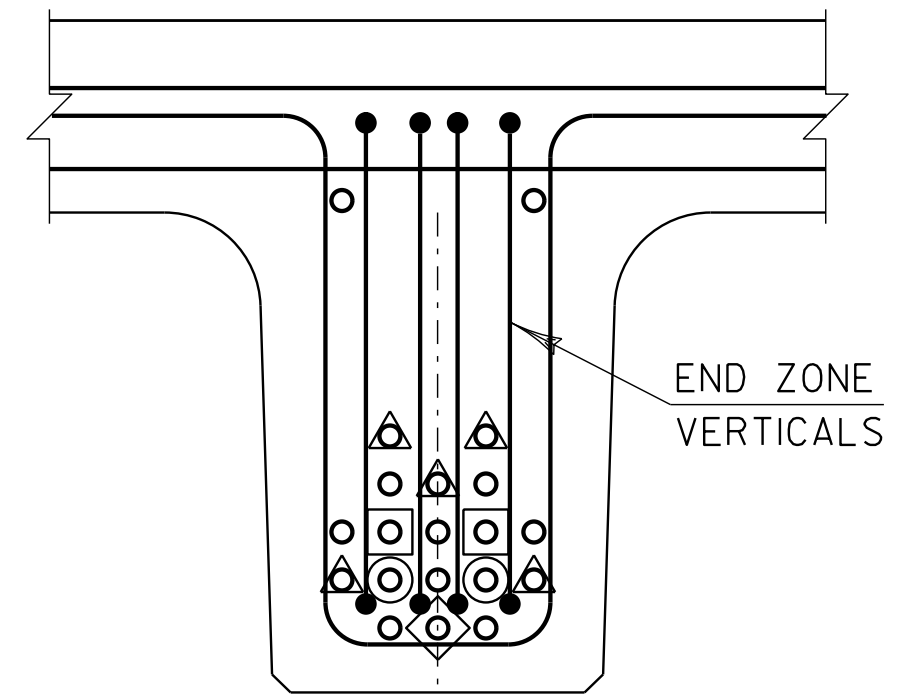
\*TWO #5 BARS SHALL BE PLACED AS SHOWN ALONG ENTIRE LENGTH OF JOINT. PAYMENT SHALL BE INCIDENTAL TO SPECIAL PROVISION (PRESTRESSED CONCRETE, NEXT D BEAMS) (NEXT 28 D).  
\*\*SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)



PROJECT NAME:	CHESTER	FILE NAME:	84e061/Str/84e061sup.dgn	PLOT DATE:	20-SEP-2010
PROJECT NUMBER:	BRF 025-I(28)	PROJECT LEADER:	C.P.WILLIAMS	DRAWN BY:	M.FESSEL
		DESIGNED BY:	R.S.YOUNG	CHECKED BY:	R.S.YOUNG
		BRIDGE 8 FRAMING PLAN			SHEET 28 OF 124

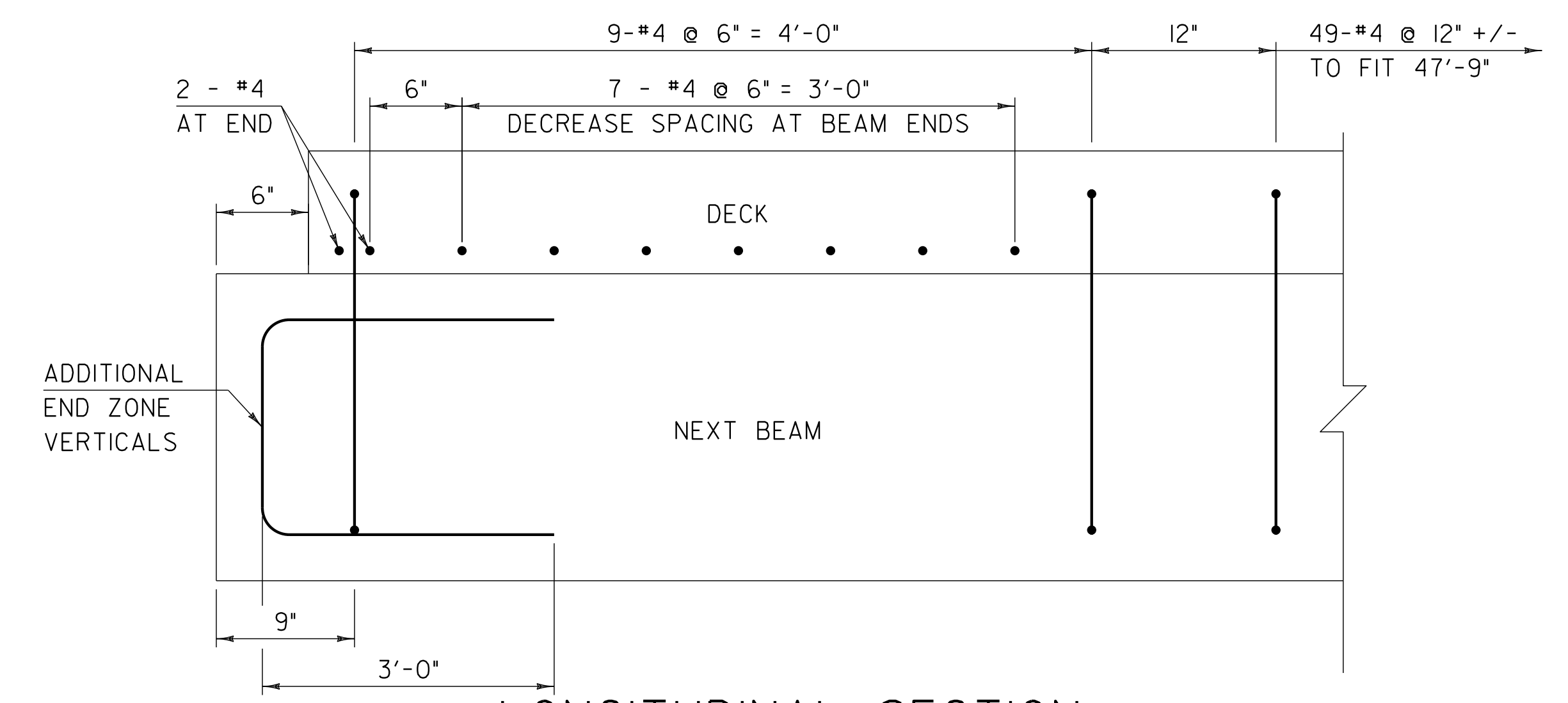


**UNIT 1**  
 SCALE: 1 1/2" = 1'-0"

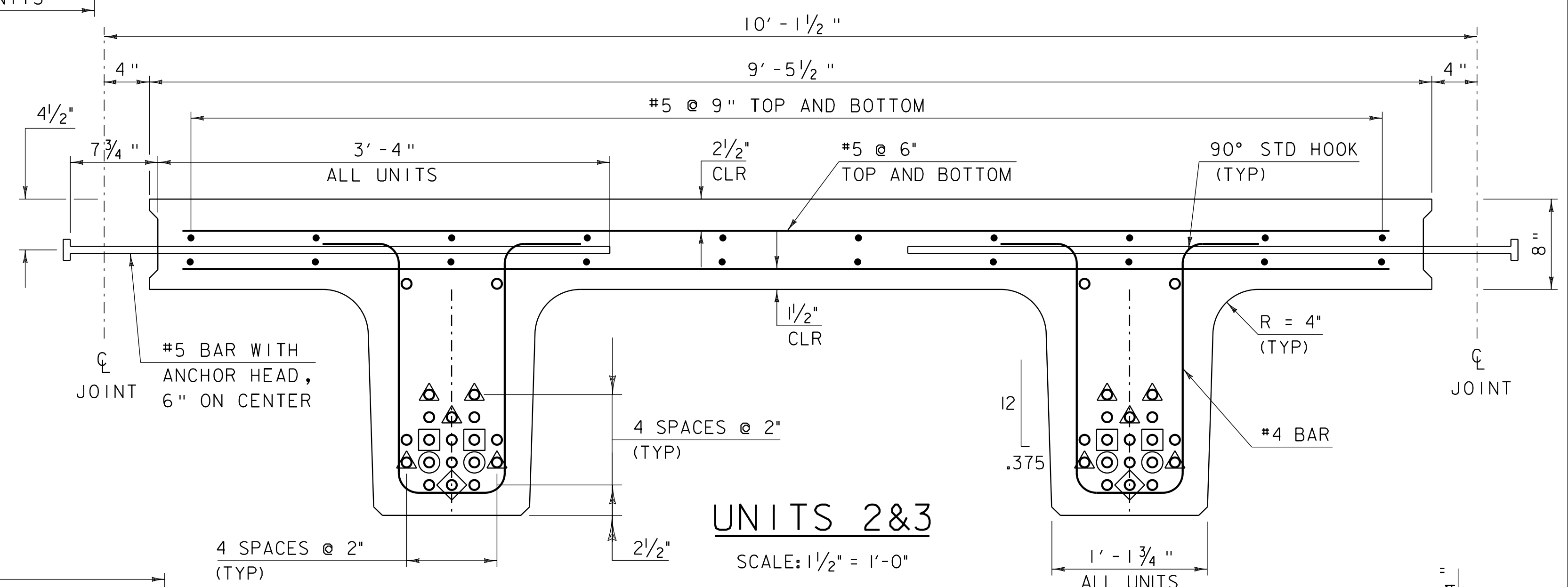


- ◇ - DEBONDED 12'
- - DEBONDED 8'
- - DEBONDED 4'
- △ - DEBONDED 6'

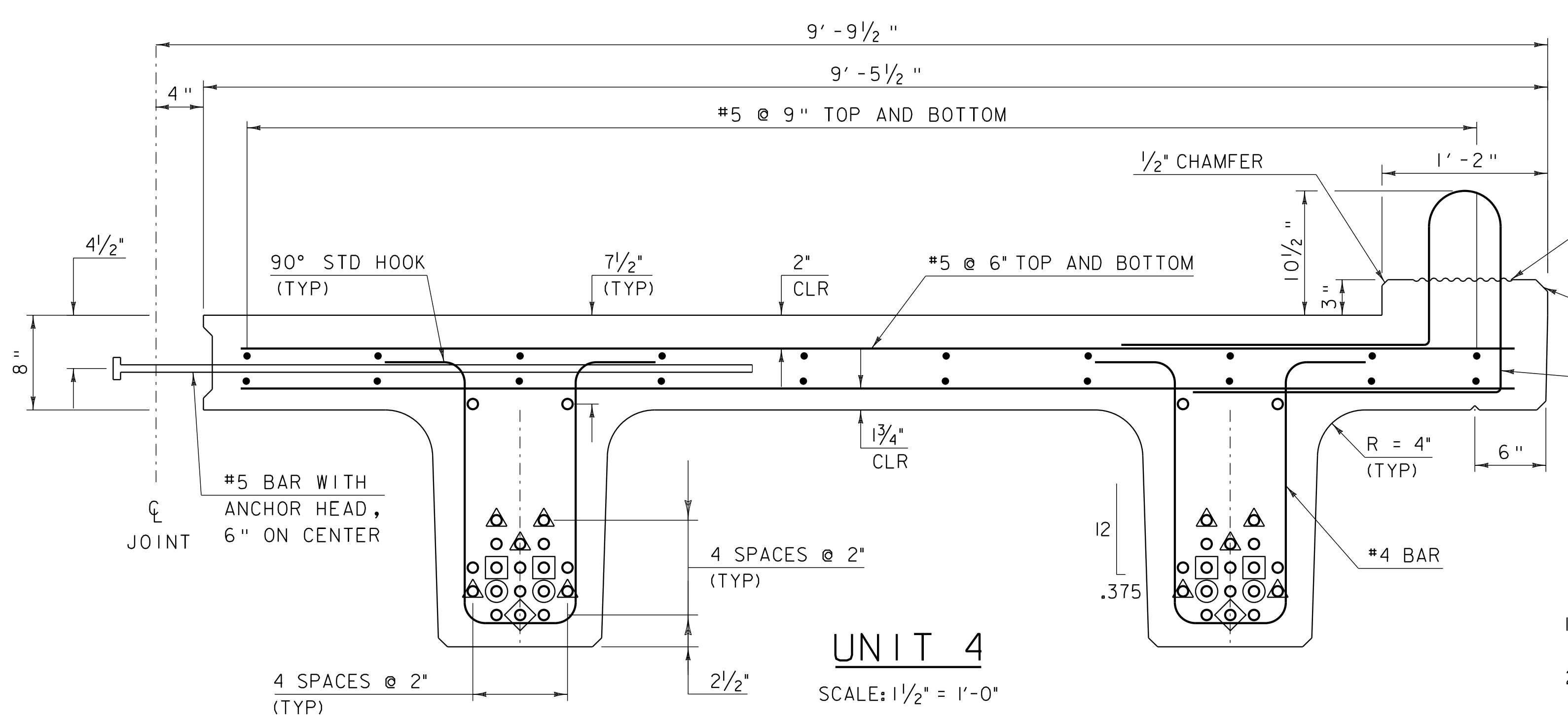
**END SECTION**  
 SCALE: 1 1/2" = 1'-0"



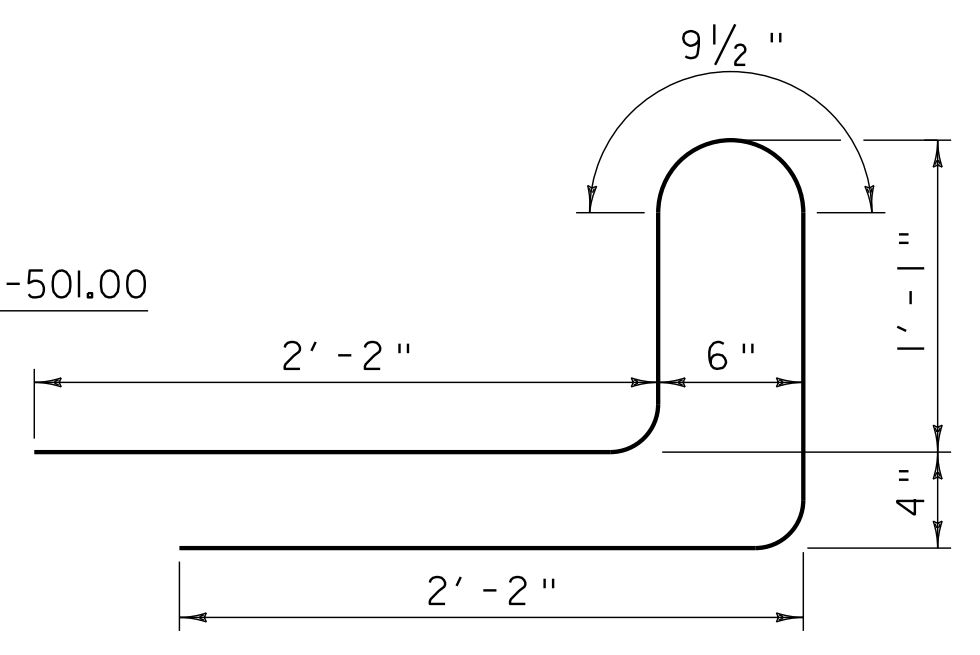
**LONGITUDINAL SECTION**  
 SCALE: 1 1/2" = 1'-0"



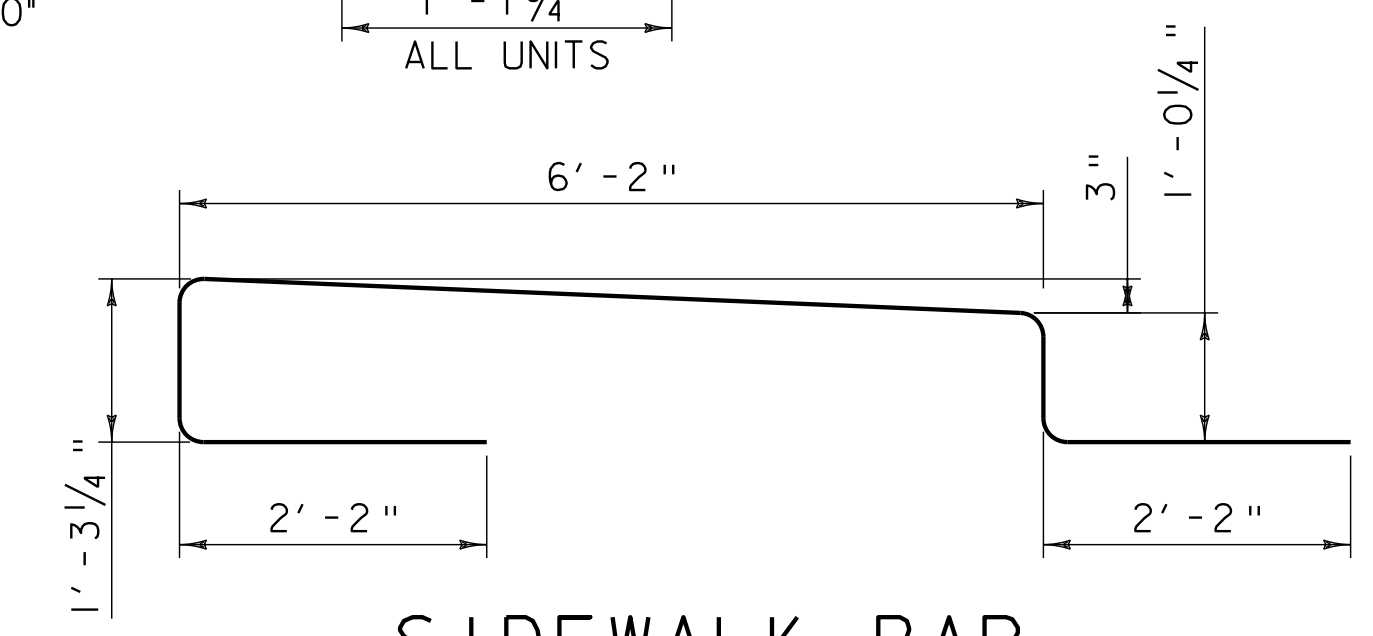
**UNITS 2 & 3**  
 SCALE: 1 1/2" = 1'-0"



**UNIT 4**  
 SCALE: 1 1/2" = 1'-0"

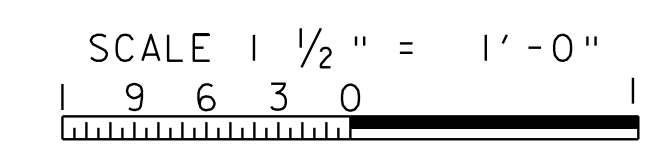
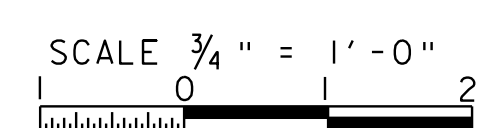


**RAILING BAR**  
 SCALE: 1 1/2" = 1'-0"

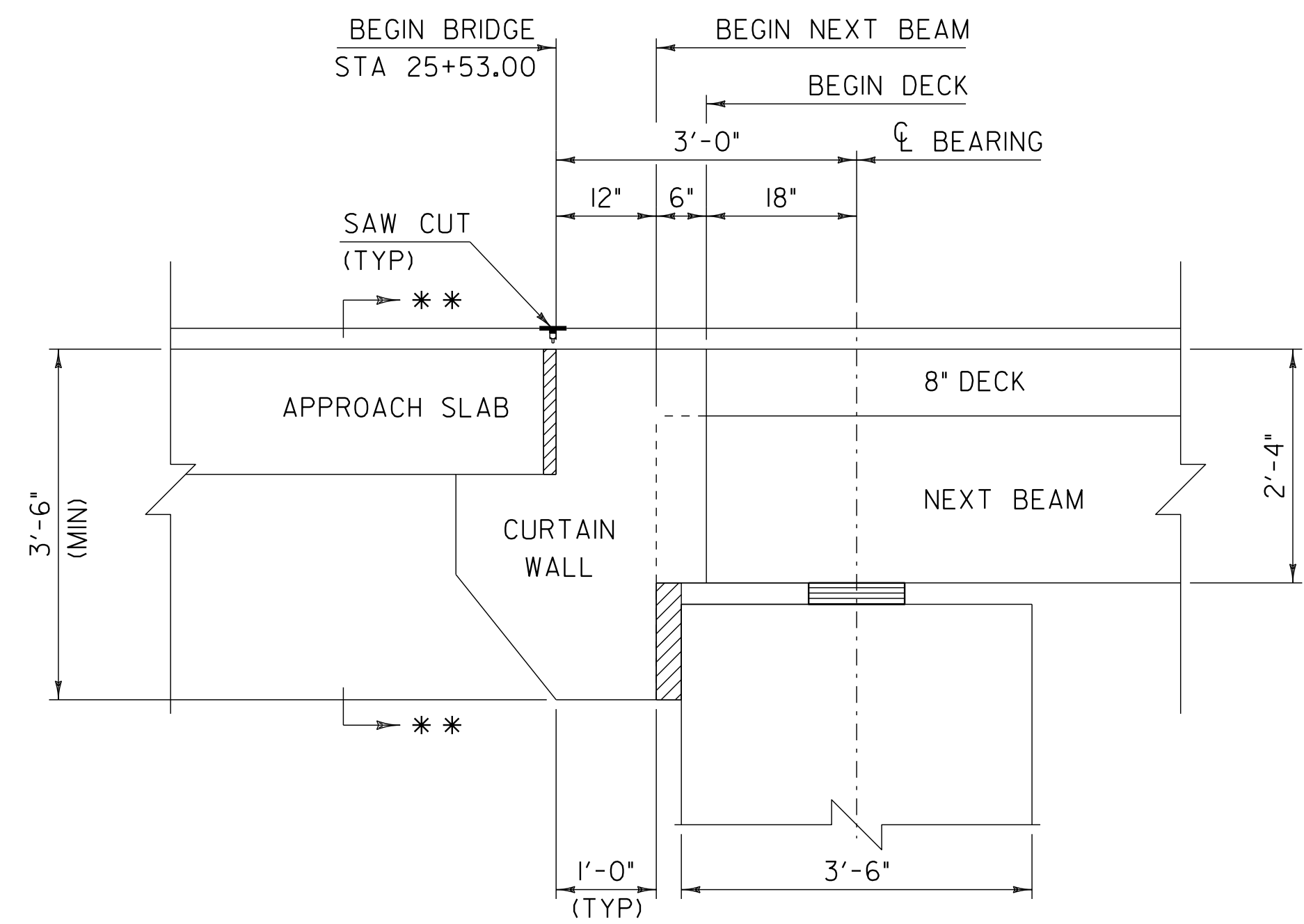


**SIDEWALK BAR**  
 SCALE: 3/4" = 1'-0"

- NOTES:
1. LEAVE SIX STRANDS 1'-6" LONG AS SHOWN ON SHEET 30
  2. REINFORCING STEEL SHALL BE EPOXY COATED ACCORDING TO SECTION 713.07.



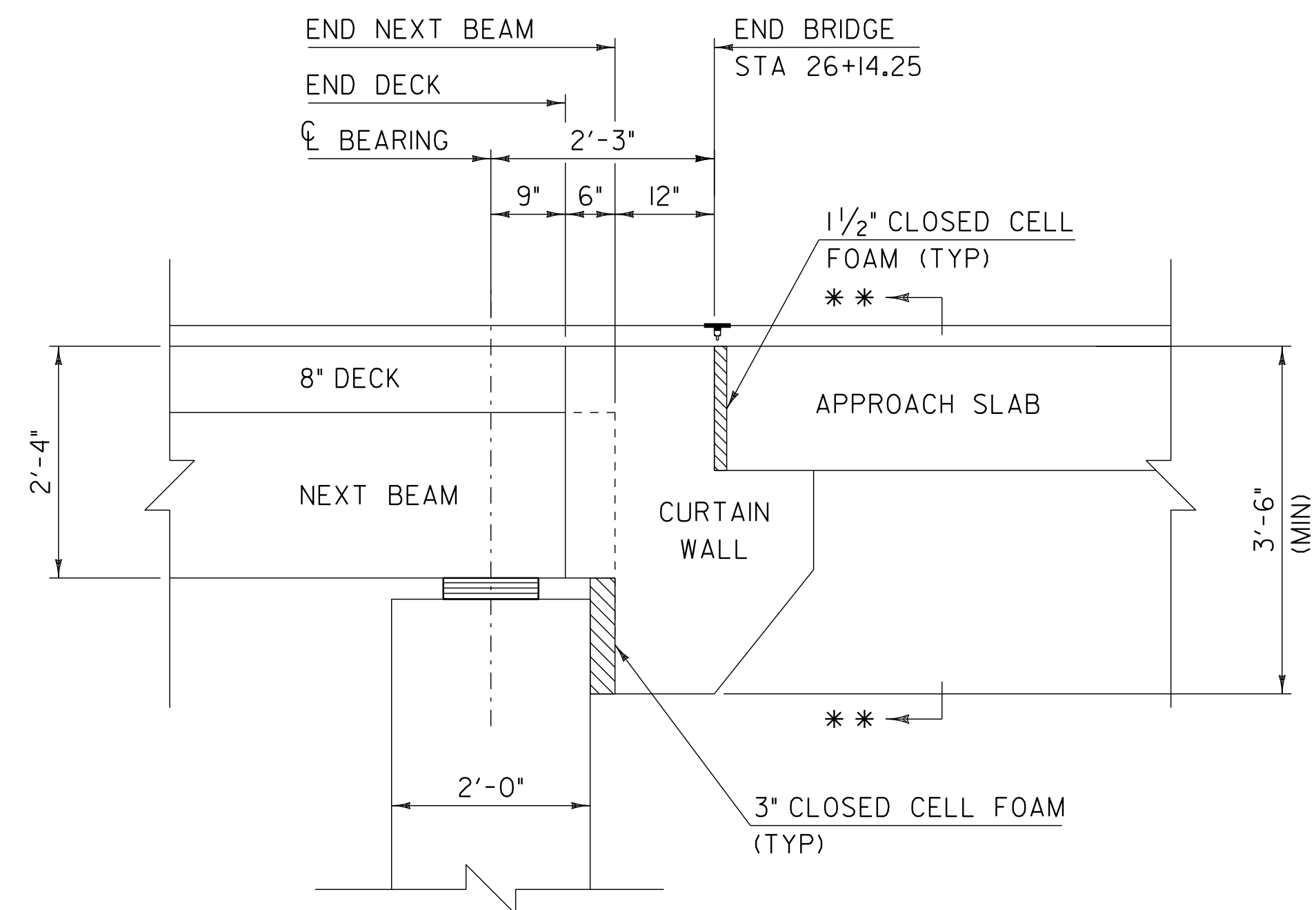
PROJECT NAME: CHESTER	PLOT DATE: 20-SEP-2010
PROJECT NUMBER: BRF 025-1(28)	DRAWN BY: M.FESSEL
FILE NAME: 84e061/Str/84e061sup.dgn	CHECKED BY: R.S.YOUNG
PROJECT LEADER: C.P.WILLIAMS	SHEET 29 OF 124
DESIGNED BY: R.S.YOUNG	



**BRIDGE END DETAIL ABUTMENT 1**

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

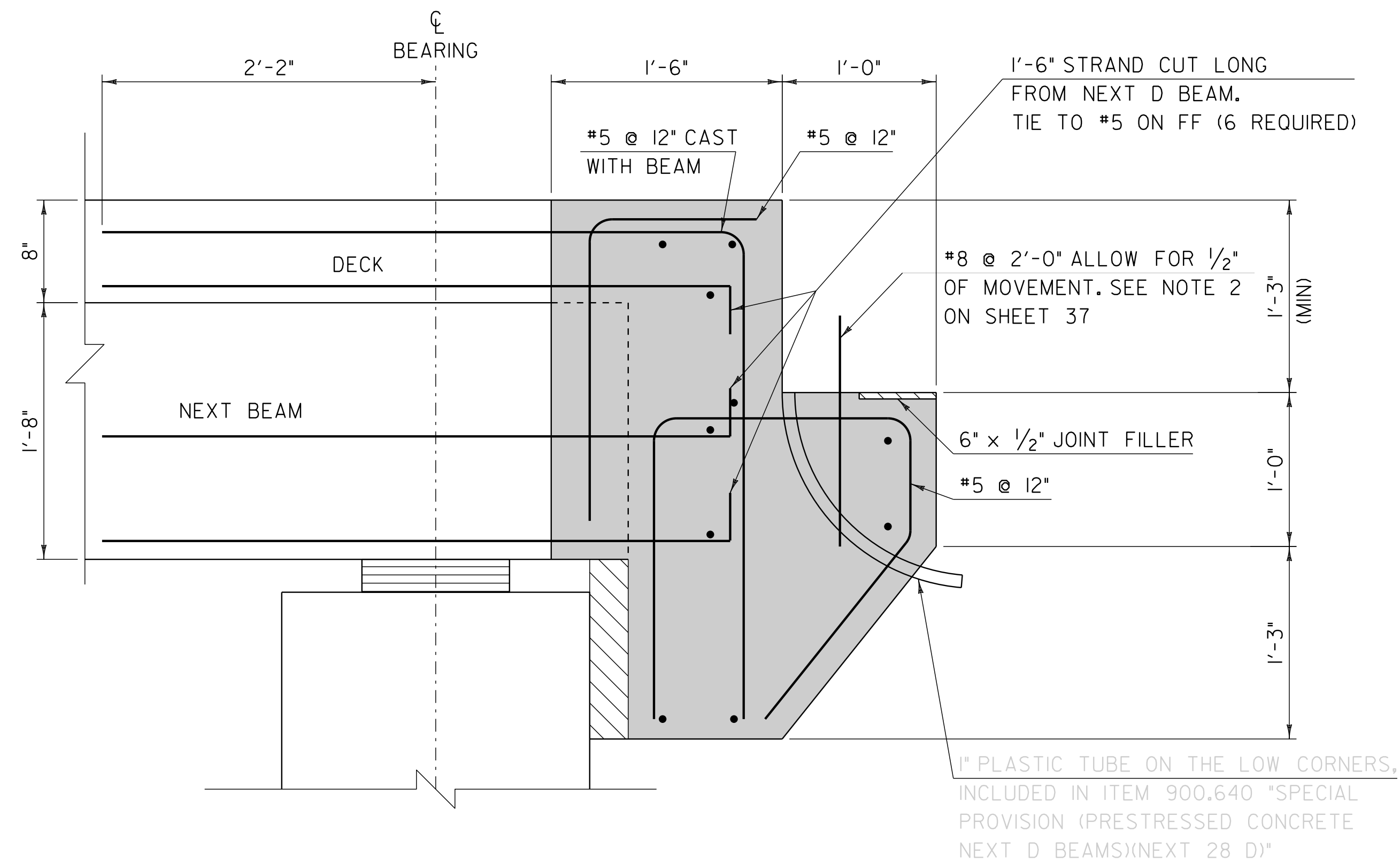
\*\* SEE SHEET 31 FOR CURTAIN WALL END VIEWS



**BRIDGE END DETAIL ABUTMENT 2**

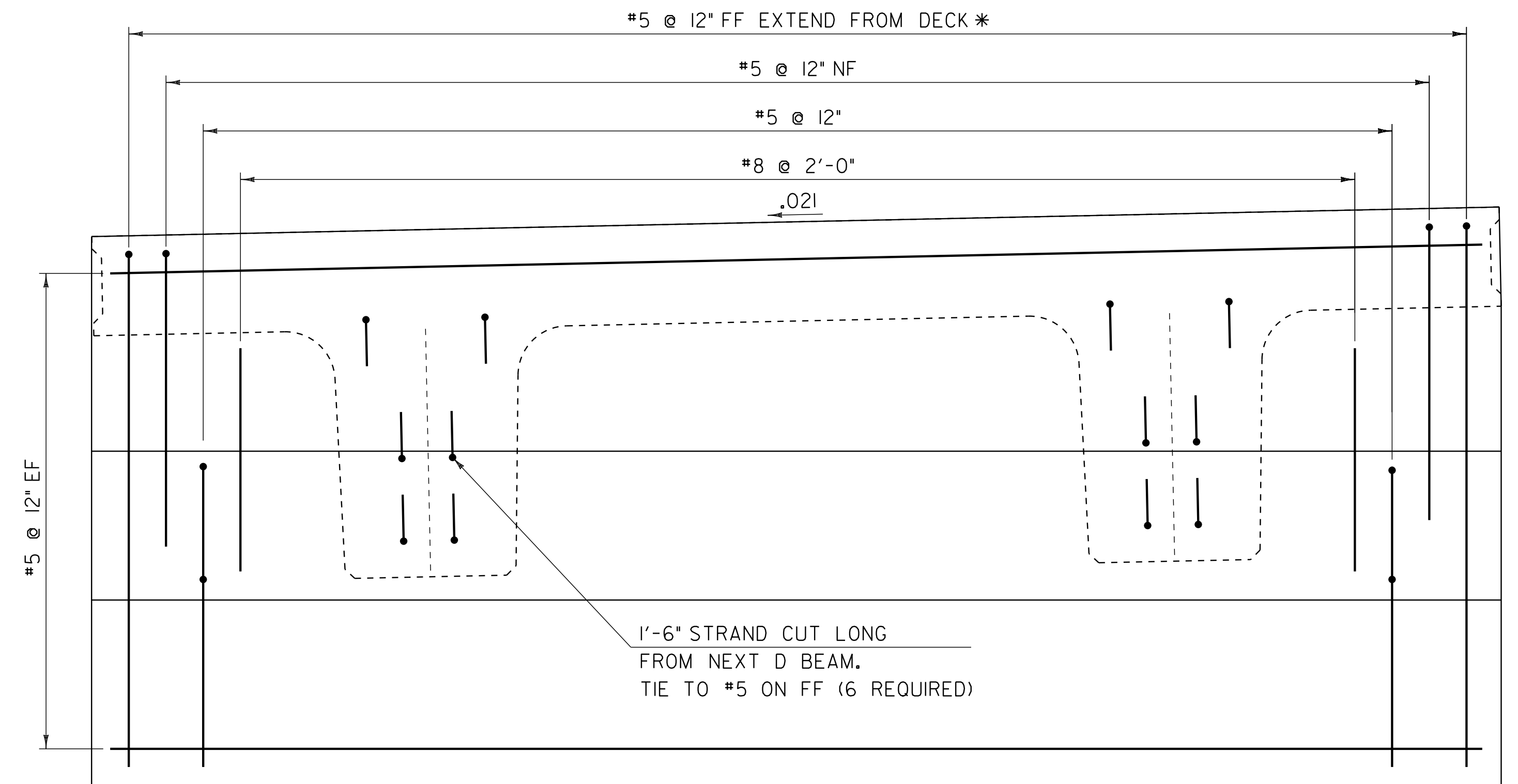
SCALE: 3/4" = 1'-0"

\* 12 ADDITIONAL BARS SHALL BE USED AT THE JOINT LOCATIONS. PAYMENT SHALL BE INCIDENTAL TO ITEM 900.640 SPECIAL PROVISION (PRESTRESSED CONCRETE, NEXT D BEAMS)(NEXT 28 D)



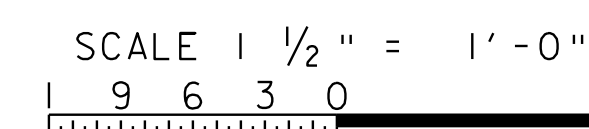
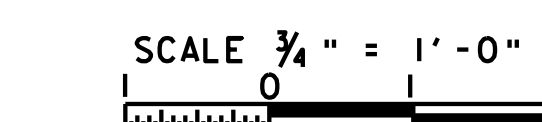
**PRECAST CONCRETE CURTAIN WALL REINFORCING TYPICAL**

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



**PRECAST CONCRETE CURTAIN WALL REINFORCING ELEV.**

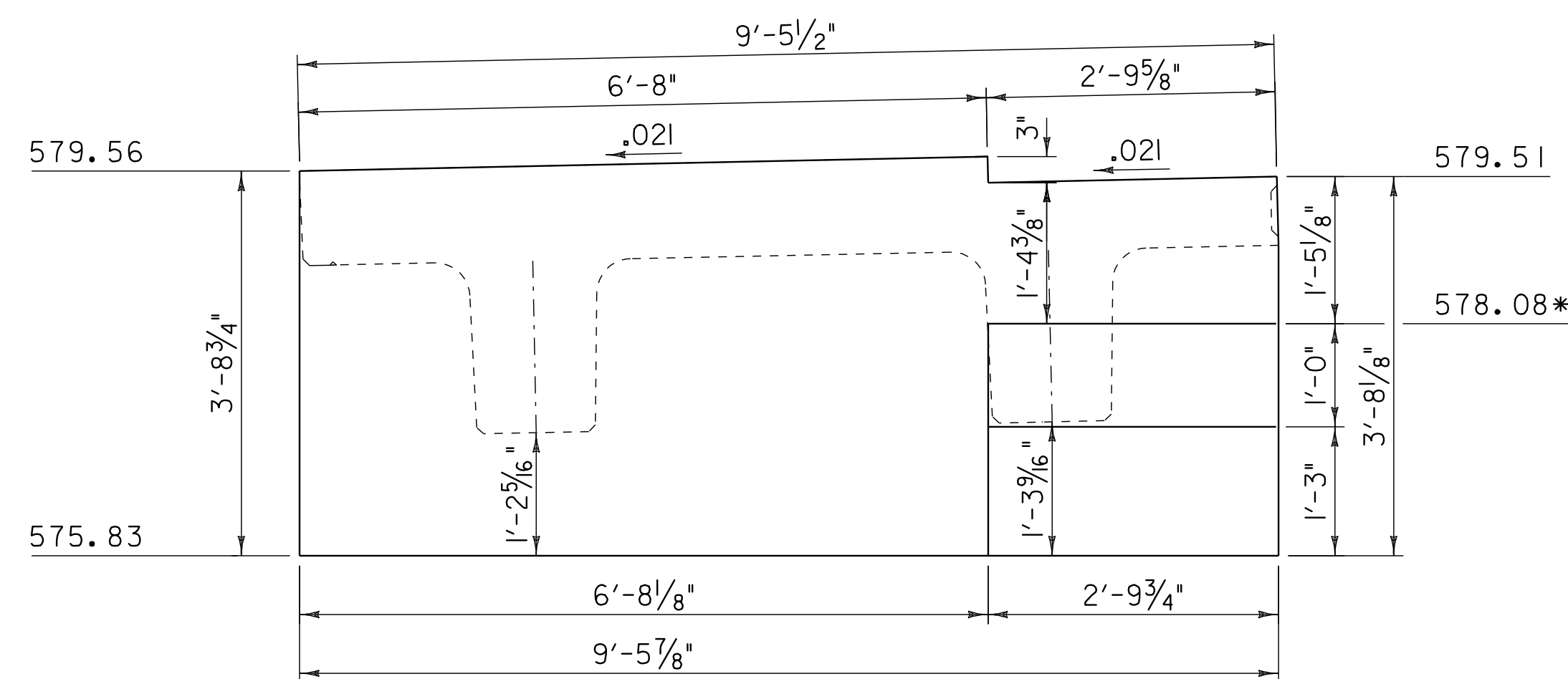
SCALE: 1 1/2" = 1'-0"



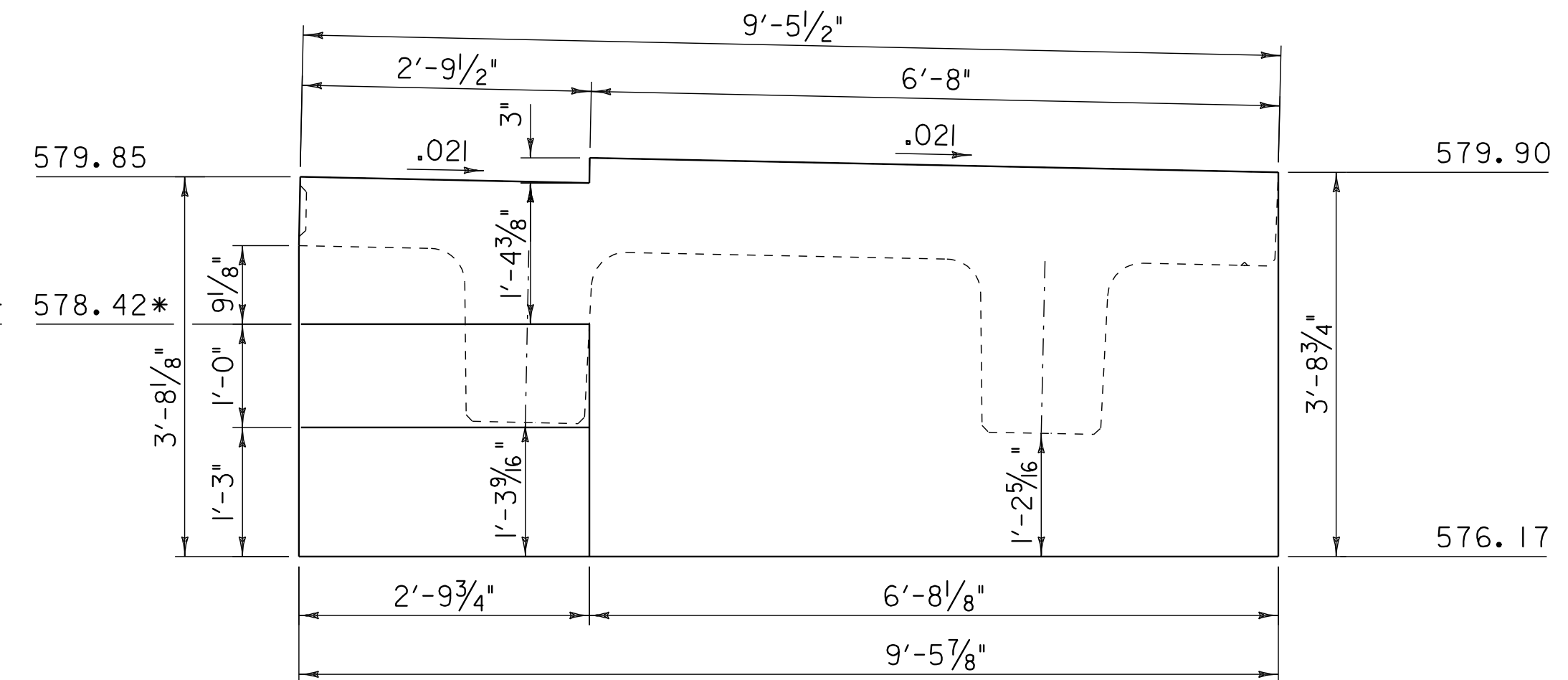
PROJECT NAME: CHESTER  
PROJECT NUMBER: BRF 025-1(28)

FILE NAME: 84e061/Str/sub.dgn  
PROJECT LEADER: C.P.WILLIAMS  
DESIGNED BY: R.S.YOUNG  
BRIDGE 8 BRIDGE END DETAILS

PLOT DATE: 20-SEP-2010  
DRAWN BY: M.FESSEL  
CHECKED BY: R.S.YOUNG  
SHEET 30 OF 124



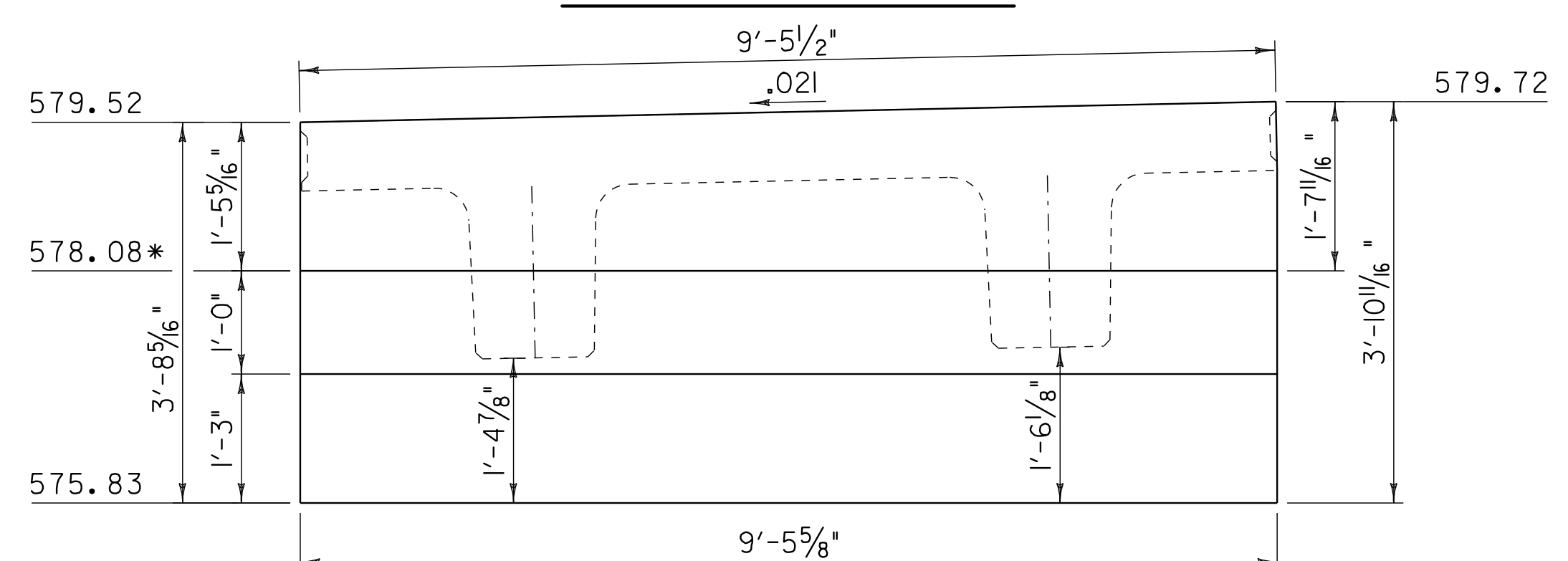
ABUTMENT #1, UNIT 1



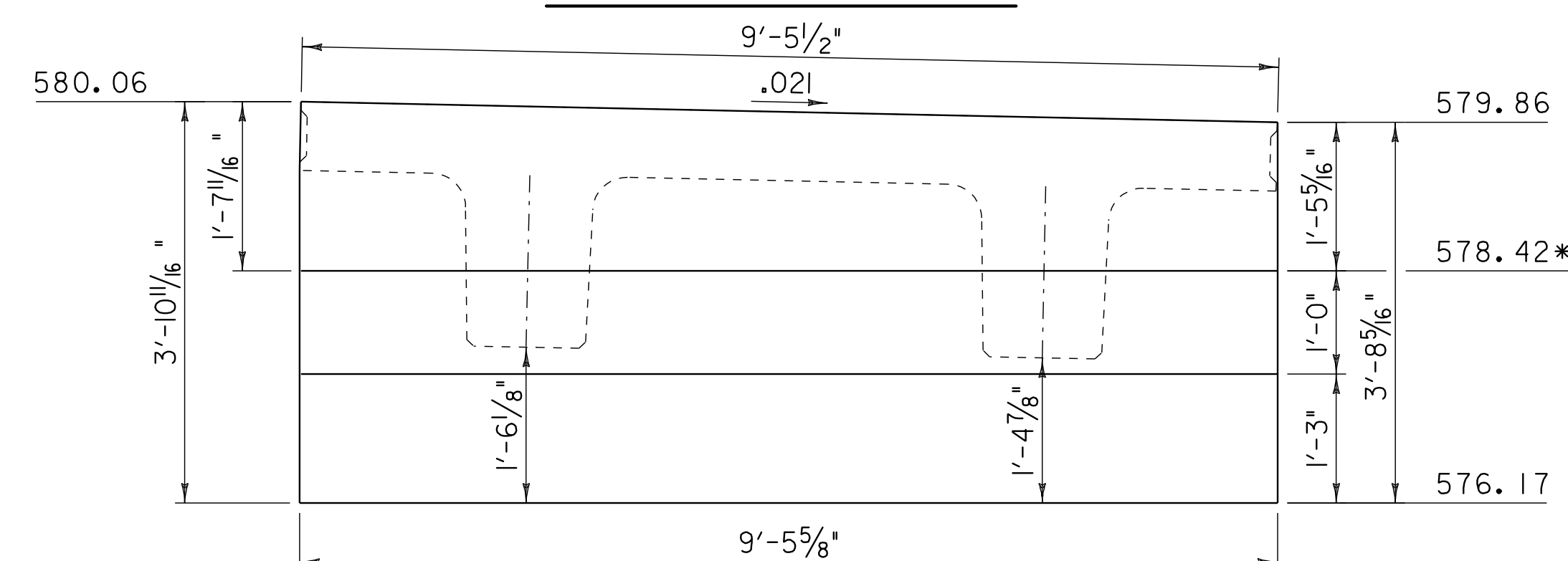
ABUTMENT #2, UNIT 1

\* APPROACH SLAB SEAT ELEVATIONS

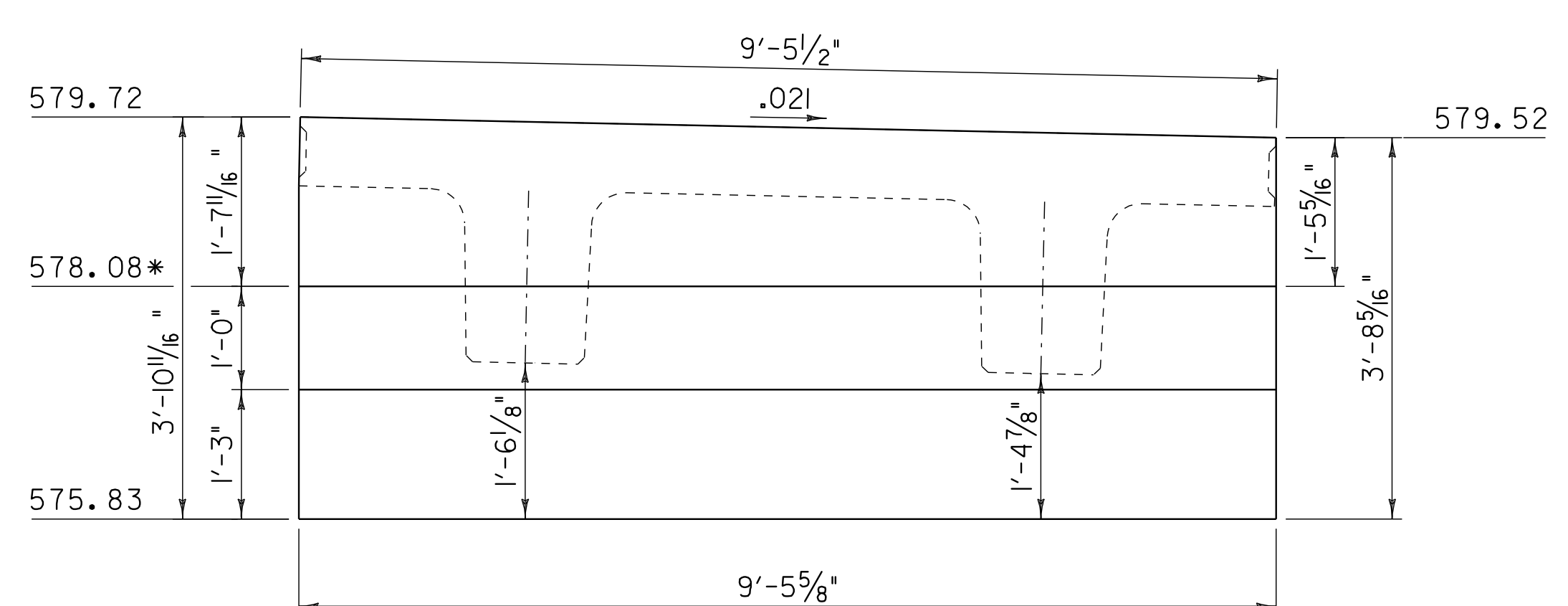
NOTE:  
SEAT ELEVATIONS MAY BE ADJUSTED WHEN THE FINAL APPROACH SLAB DIMENSIONS AND CONNECTION DETAILS HAVE BEEN DETERMINED. SEE NOTE 2 SHEET 37.



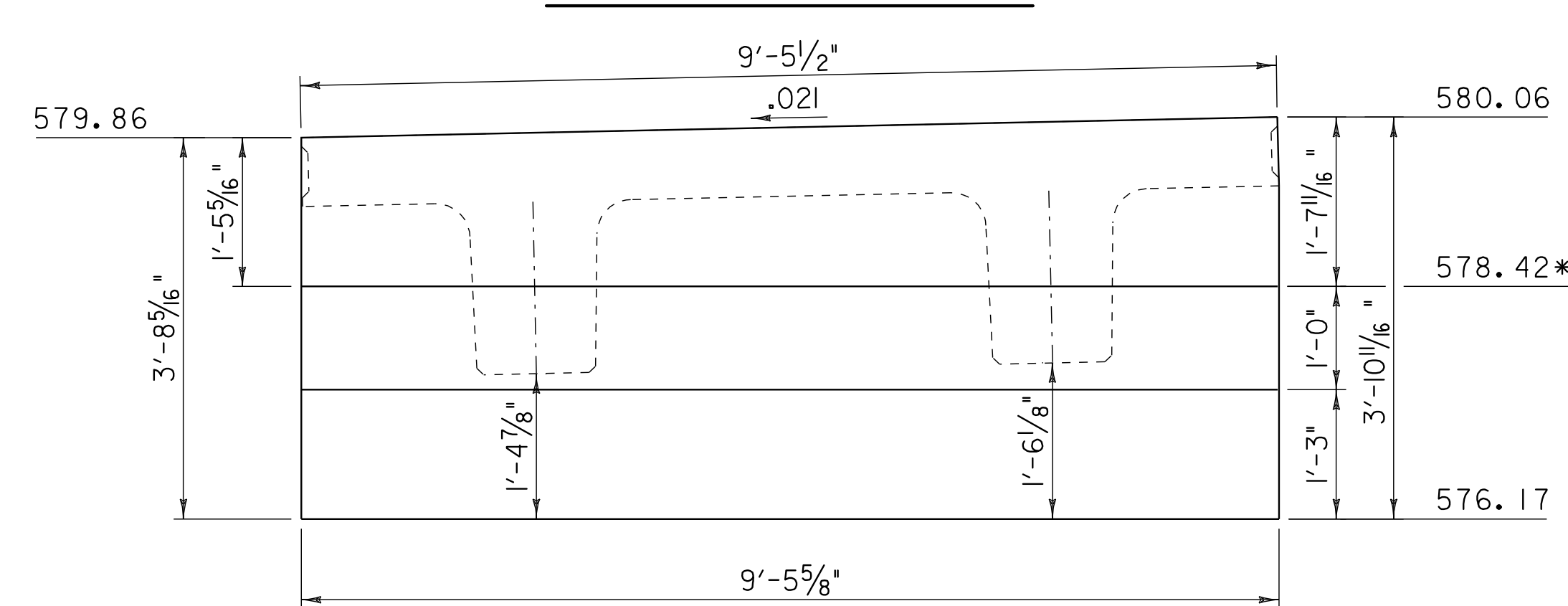
ABUTMENT #1, UNIT 2



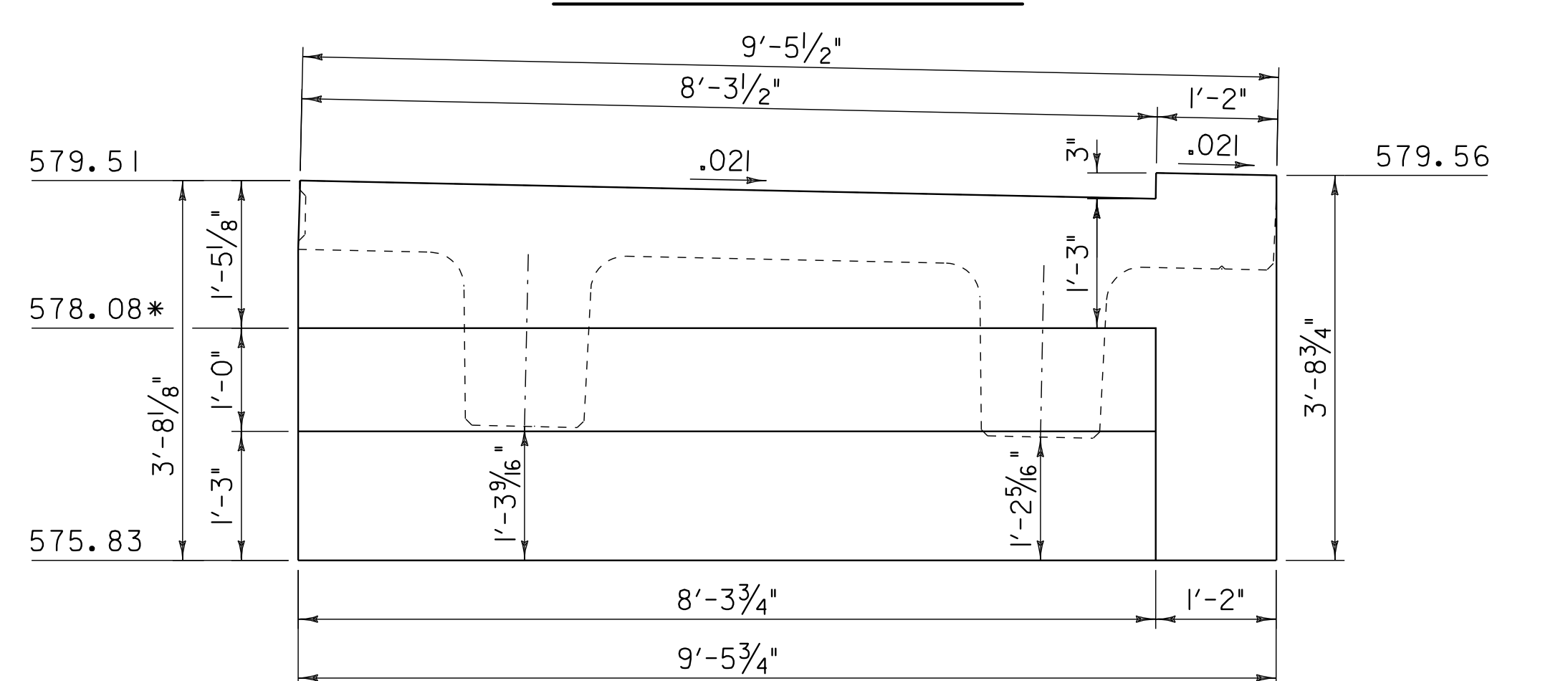
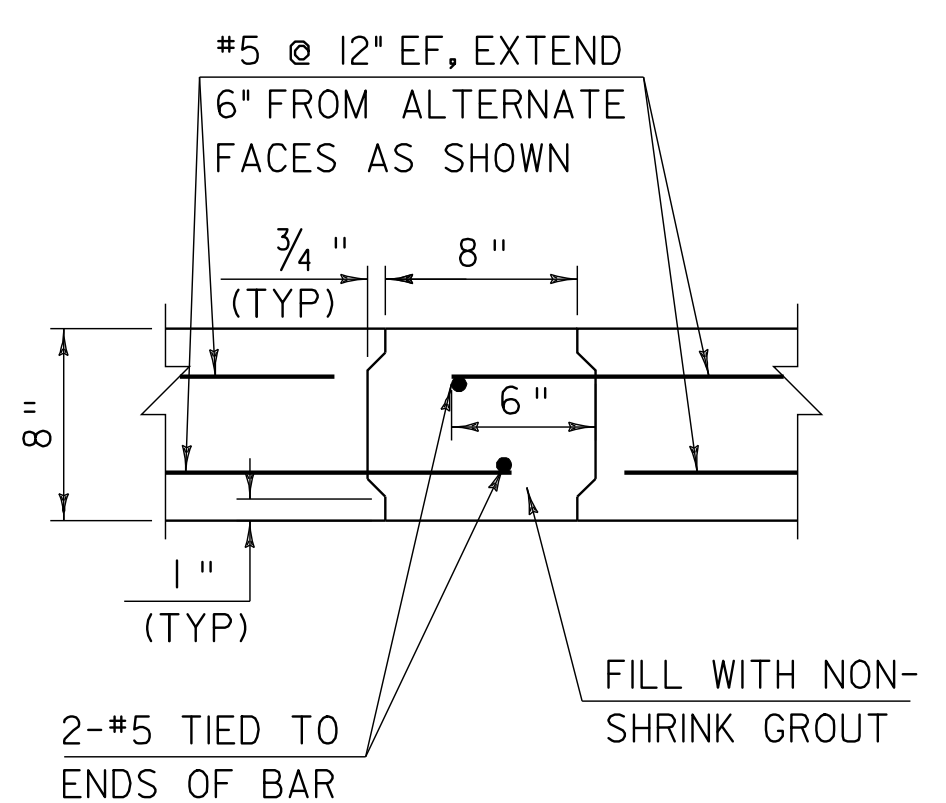
ABUTMENT #2, UNIT 2



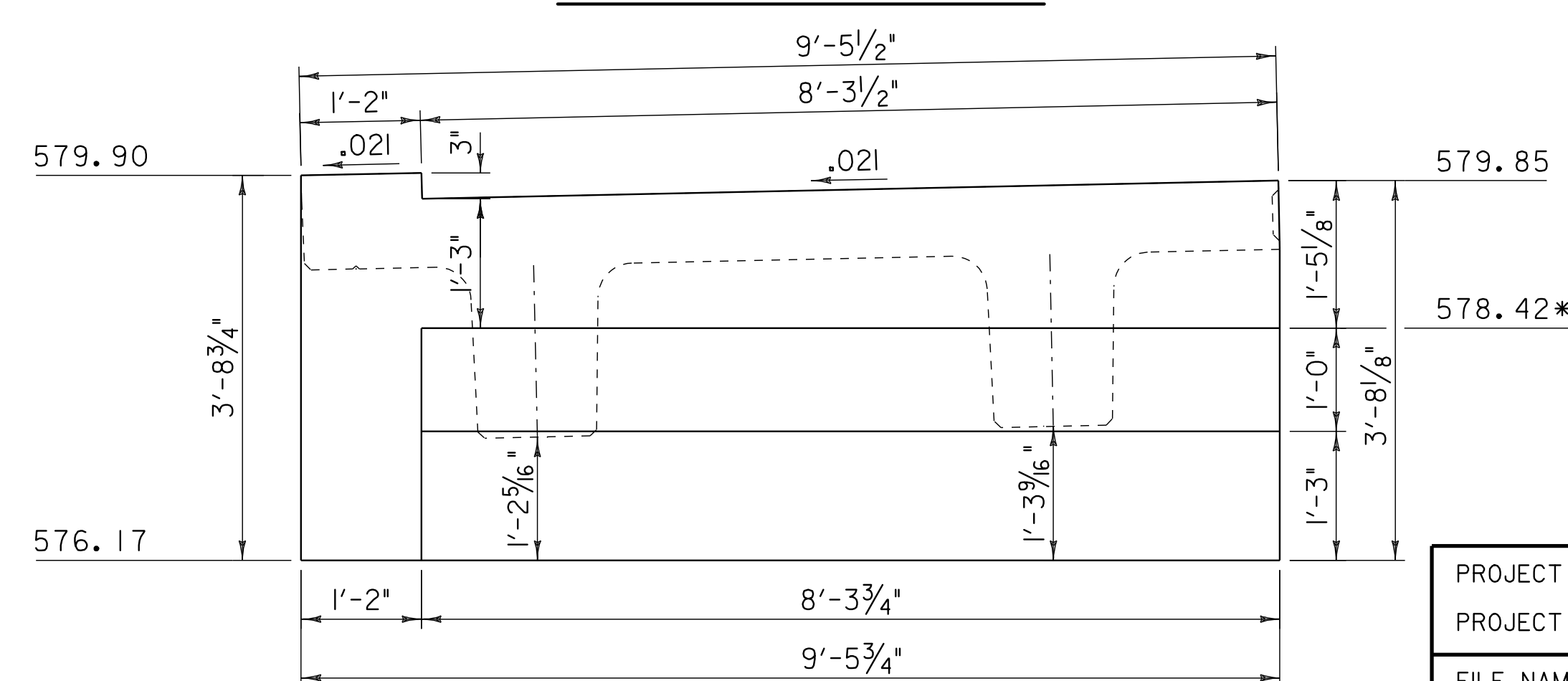
ABUTMENT #1, UNIT 3



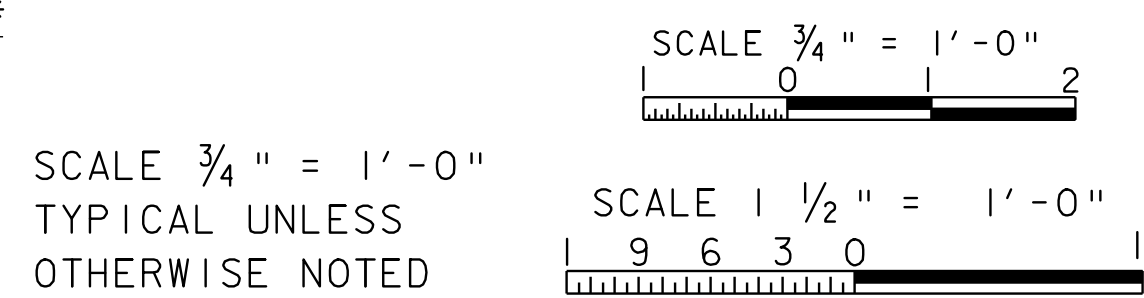
ABUTMENT #2, UNIT 3



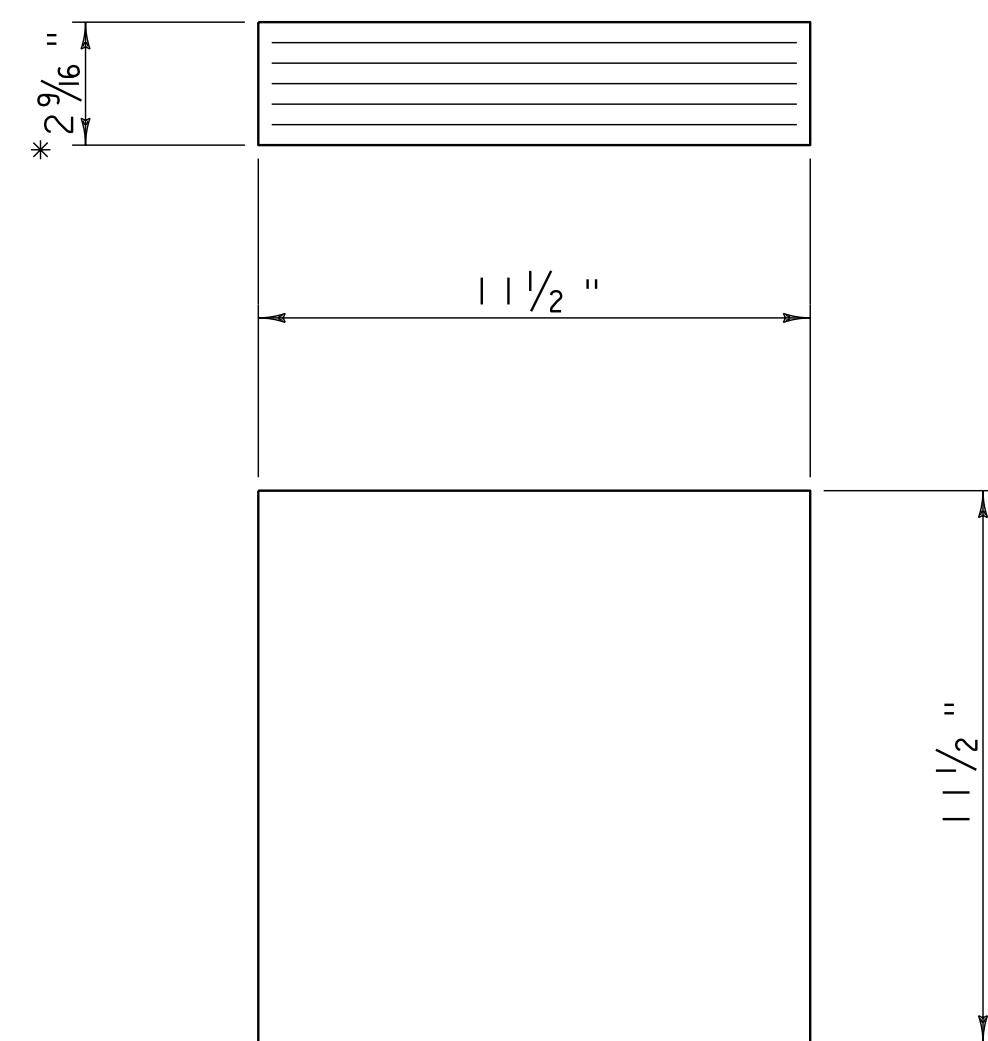
ABUTMENT #1, UNIT 4



ABUTMENT #2, UNIT 4



PROJECT NAME:	CHESTER	PLOT DATE:	21-SEP-2010
PROJECT NUMBER:	BRF 025-I(28)	DRAWN BY:	D.D.BEARD
FILE NAME:	84e061/Structures/sub.dgn	CHECKED BY:	R.S.YOUNG
PROJECT LEADER:	C.P.WILLIAMS	SHEET	31 OF 124
DESIGNED BY:	H.I.SALLS		
BRIDGE 8 CURTAIN WALL DETAILS			



ELASTOMERIC BEARING DETAIL

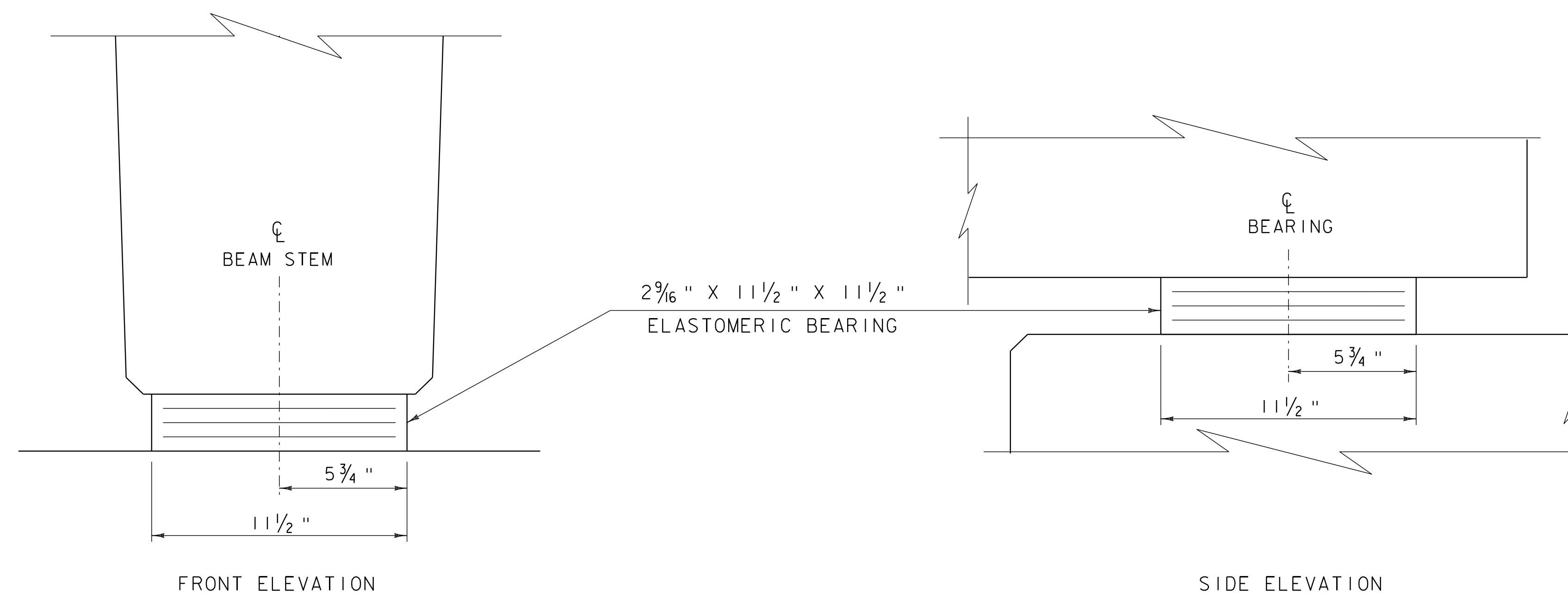
- \* 2 - 1/8 " EXTERIOR LAYERS OF ELASTOMER
- 4 - 1/2 " INTERIOR LAYERS OF ELASTOMER
- 5 - 1/16 " STEEL REINFORCING PLATES

SCALE 3" = 1'-0"

Design Load (kip)	Service Limit State	Vertical	Max	91.7
			Min	41.0
			Transverse	----
			Longitudinal	----
Strength Limit State		Vertical	Max	140.8
			Min	----
			Transverse	----
			Longitudinal	----
Translation (in)	Service Limit State	Irreversible	Transverse	0
			Longitudinal	1/16
		Reversible	Transverse	3/16
			Longitudinal	1/2
Rotation (rad)	Service Limit State	Irreversible	Transverse	0.000
			Longitudinal	0.033
		Reversible	Transverse	0.000
			Longitudinal	0.007

BEARING NOTES

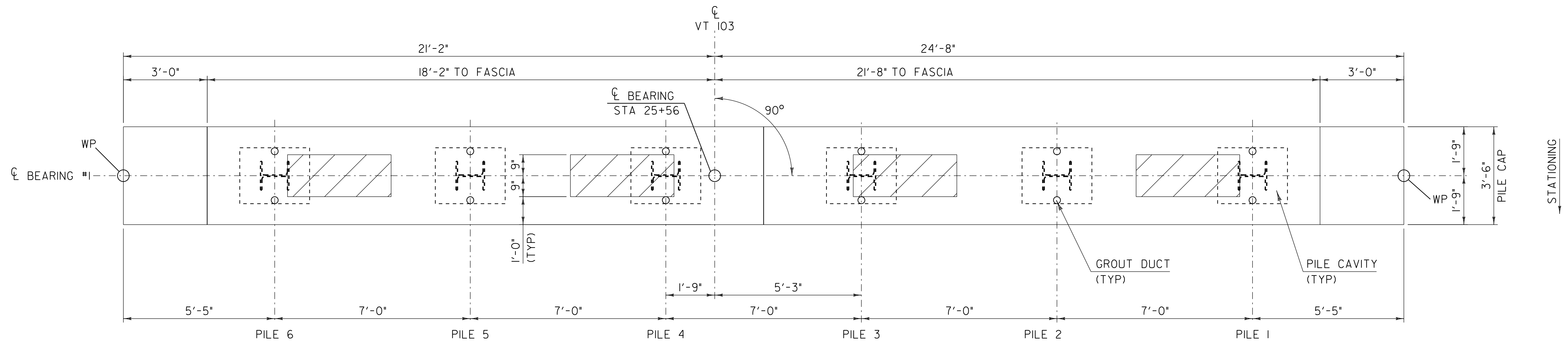
1. BEARINGS SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF STANDARD SPECIFICATIONS SECTIONS 531 AND 731.
2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL AASHTO M270M/M270 GRADE 36. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
3. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM 1/8 " EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.
4. THE ELASTOMER WAS DESIGNED WITH A SHEAR MODULUS OF 100 PSI +/- 15%
5. THE ELASTOMER SHALL MEET THE REQUIREMENTS OF LOW TEMPERATURE ZONE D, GRADE 4.
6. THE CONCRETE UNDER THE BEARING DEVICE SHALL BE LEVEL.
7. ALL DESIGNS DONE FOR THE BEARINGS SHALL BE PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4TH EDITION AND ITS LATEST REVISIONS.
8. ALTERNATE CONFIGURATIONS FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE DESIGN LOADS AND CRITERIA SHOWN ON THE PLANS.
9. BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATIVE CONFIGURATION.
10. THE CONTRACTOR IS ADVISED TO HAVE A MINIMUM OF 16 - 1/4 "x12 1/2 "x12 1/2 " GALVANIZED STEEL SHIMS AVAILABLE FOR USE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND SHALL BE INCLUDED UNDER ITEM 531.11, "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD".



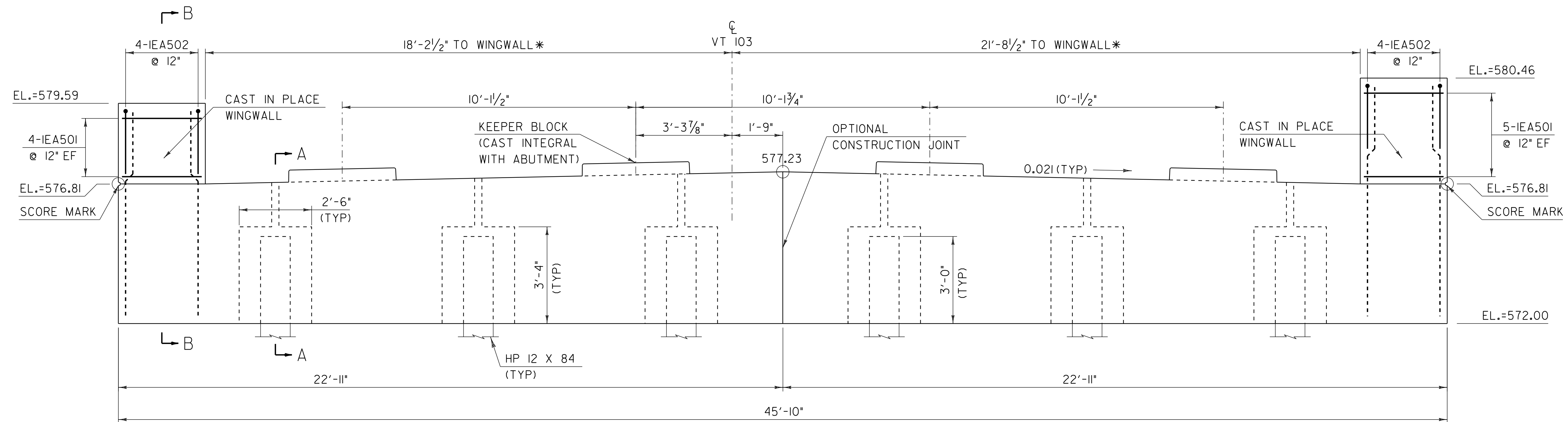
ELASTOMERIC BEARING DETAILS

SCALE 3" = 1'-0"

PROJECT NAME:	CHESTER	PLOT DATE:	20-SEP-2010
PROJECT NUMBER:	BRF 025-I(28)	DRAWN BY:	M.FESSEL
FILE NAME:	84e061/Str/84e061details.dgn	CHECKED BY:	R.S.YOUNG
PROJECT LEADER:	C.P.WILLIAMS	BRIDGE 8 ELASTOMERIC BEARING DETAILS	SHEET 32 OF 124
DESIGNED BY:	R.S.YOUNG		



**ABUTMENT I PLAN VIEW**  
SCALE 1/2" = 1'-0"

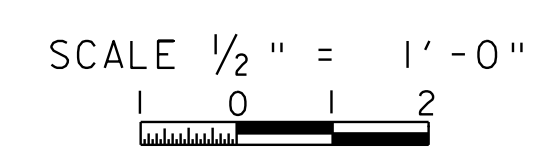


**ABUTMENT I ELEVATION VIEW**  
SCALE 1/2" = 1'-0"

**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SEE SHEET 34  
 FOR SECTIONS "A-A" & "B-B"

\* PROVIDE 1/2" PREFORMED JOINT FILLER BETWEEN FASCIA AND WINGWALLS

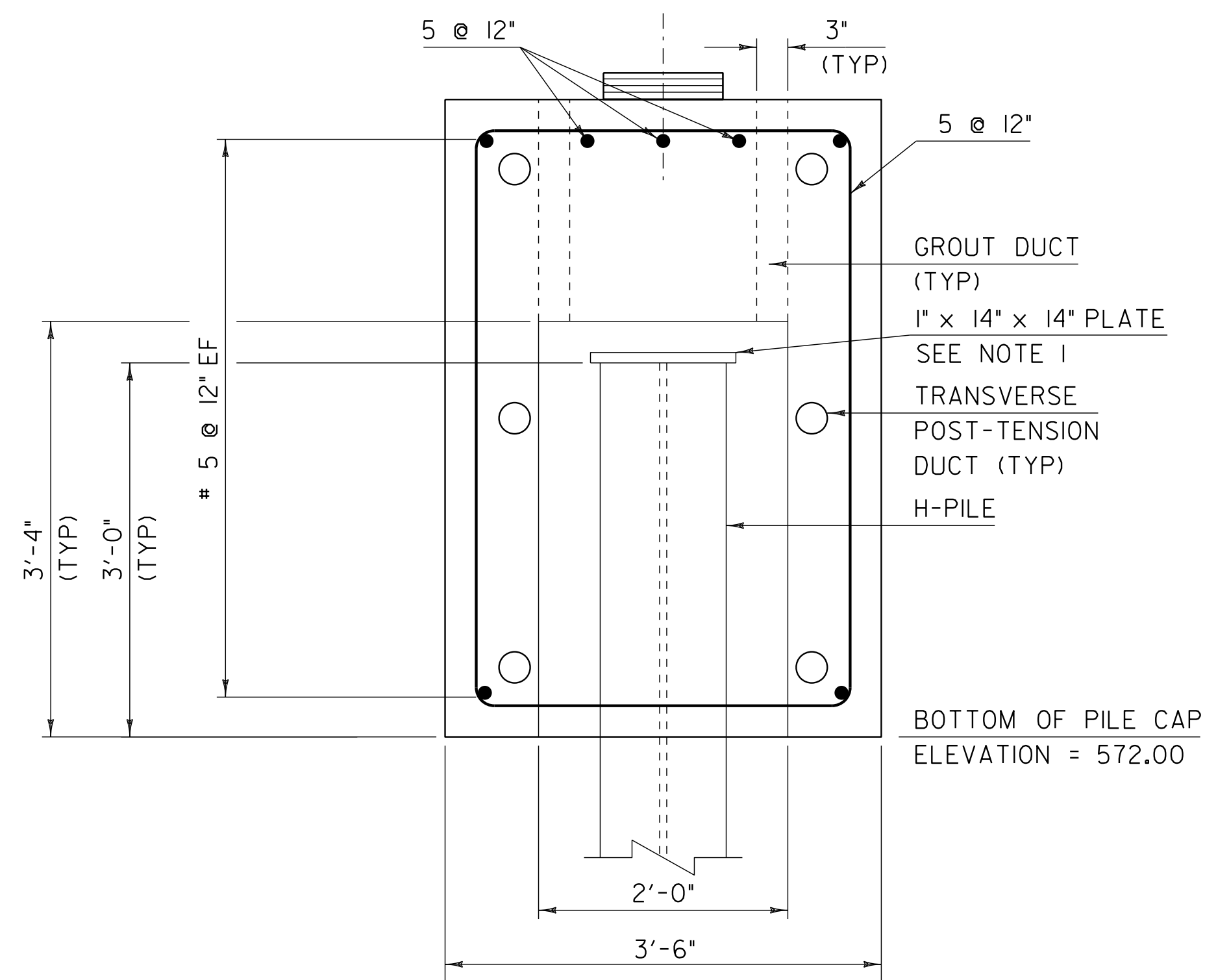


PROJECT NAME: CHESTER	
PROJECT NUMBER: BRF 025-1(28)	
FILE NAME: 84e061/str/sub.dgn	PLOT DATE: 20-SEP-2010
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: M.FESSEL
DESIGNED BY: R.S.YOUNG	CHECKED BY: R.S.YOUNG
BRIDGE 8 ABUTMENT I DETAILS	SHEET 33 OF 124

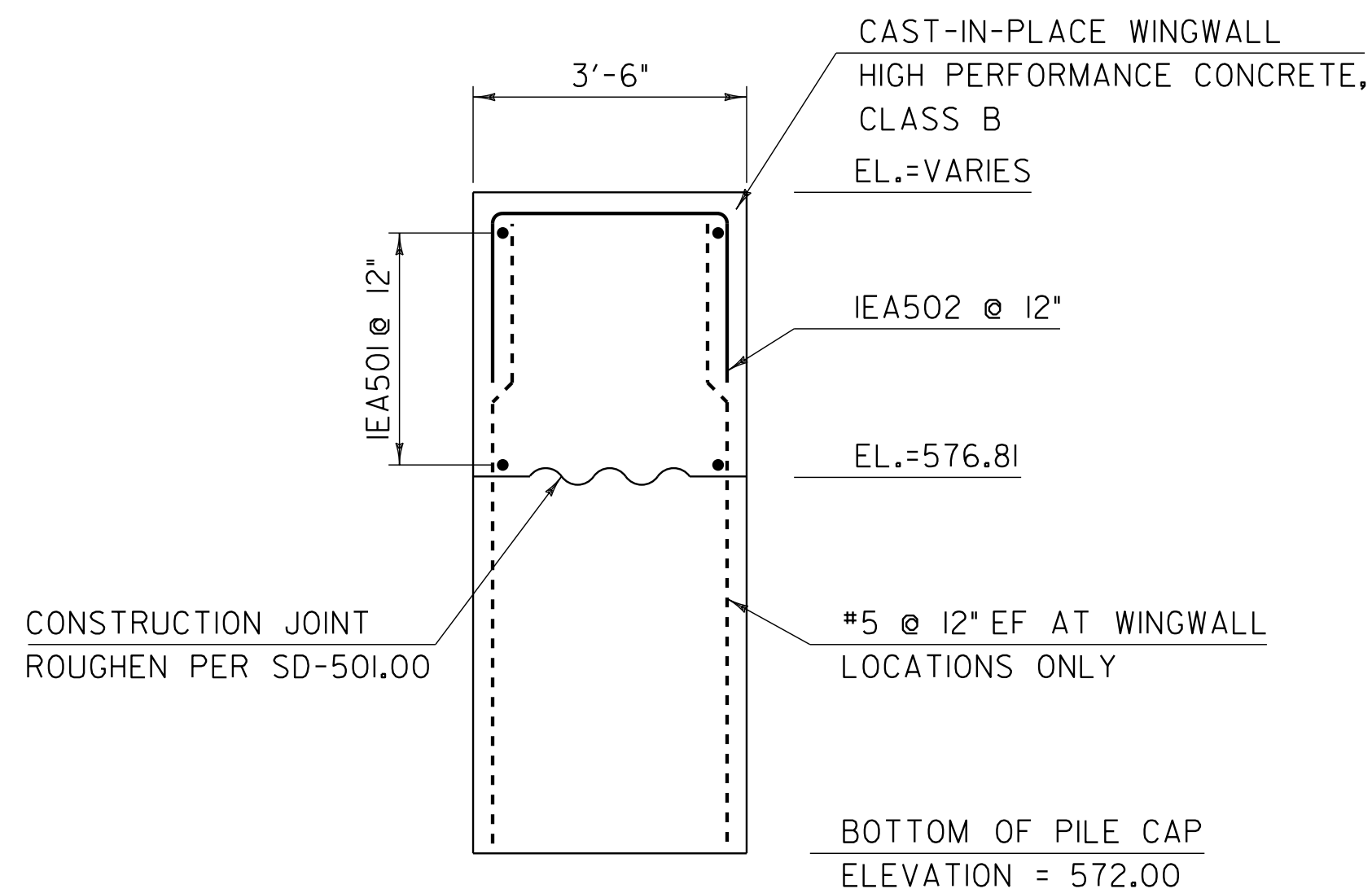


NOTES:

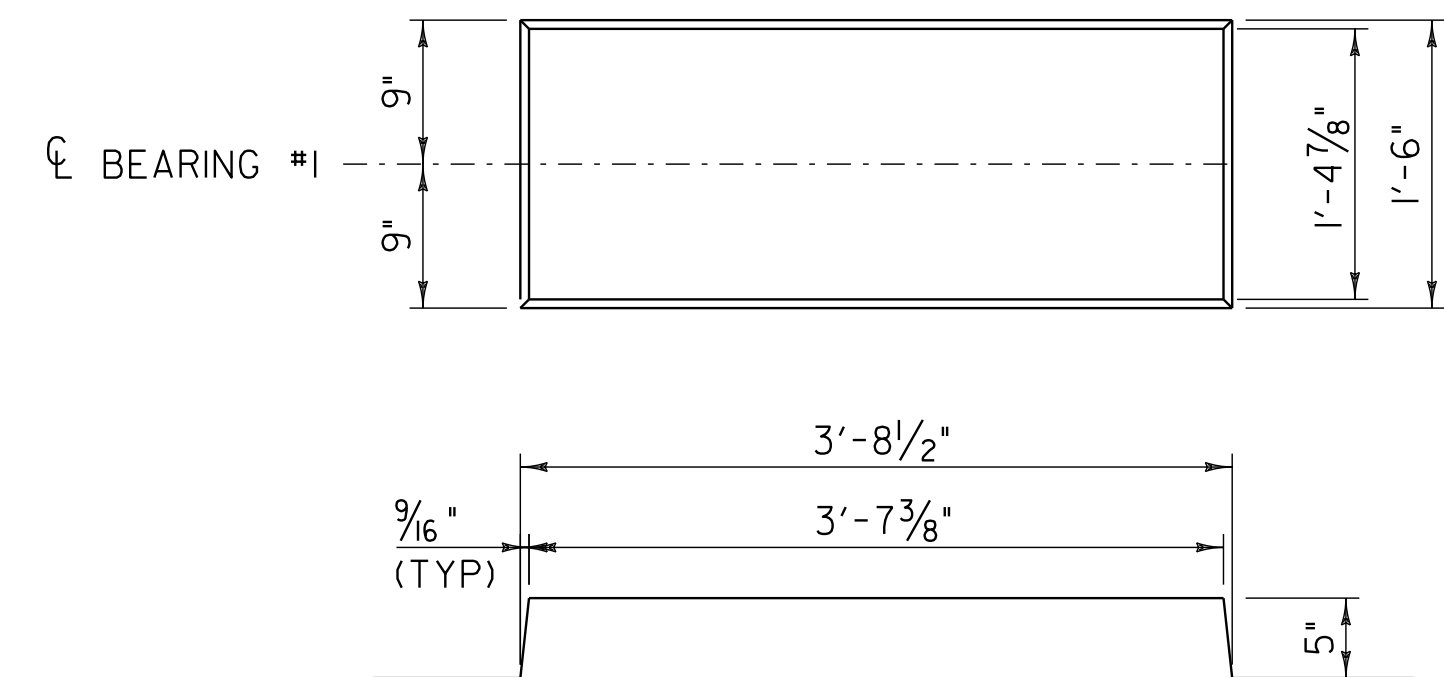
1. UNLESS OTHERWISE NOTED, ABUTMENTS SHALL BE PRECAST CONCRETE ACCORDING TO SECTION 540.
2. ONCE PILES HAVE BEEN CUT TO THEIR FINAL ELEVATIONS, 1" x 14" x 14" STEEL PLATES SHALL BE WELDED TO THE TOP OF THE PILES. PAYMENT FOR THE PLATES SHALL BE INCIDENTAL TO ITEM 505.265 "STEEL PILING FOR INTEGRAL ABUTMENTS, HP 12 X 84"
3. PILE CAVITY GROUT DUCTS (FILL AND VENT) SHALL BE CORRUGATED.
4. SEE GENERAL NOTES FOR ADDITIONAL FABRICATION, CONSTRUCTION, AND SEQUENCE NOTES.
5. REINFORCING FOR THE PRECAST ABUTMENTS SHALL BE EPOXY COATED ACCORDING TO SUBSECTION 713.07



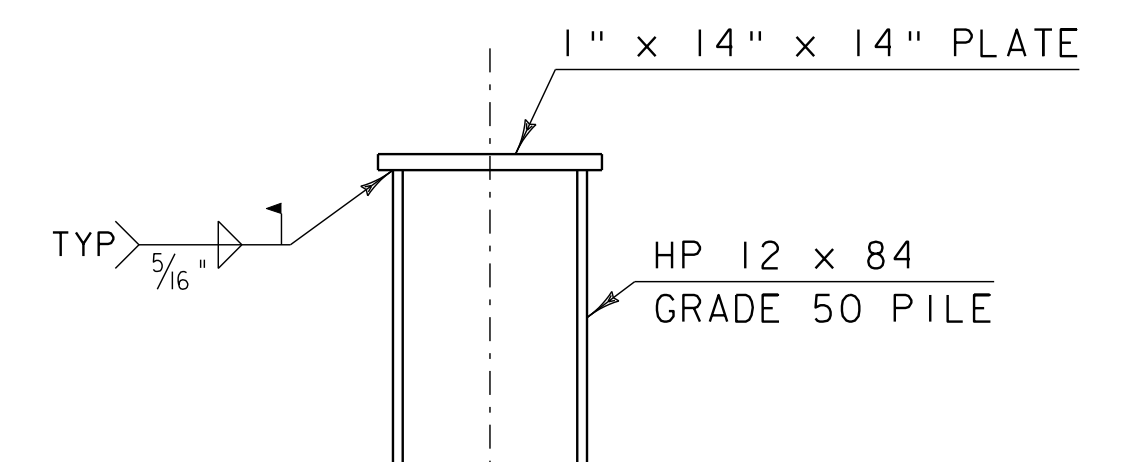
**SECTION A-A**  
SCALE 1" = 1'-0"



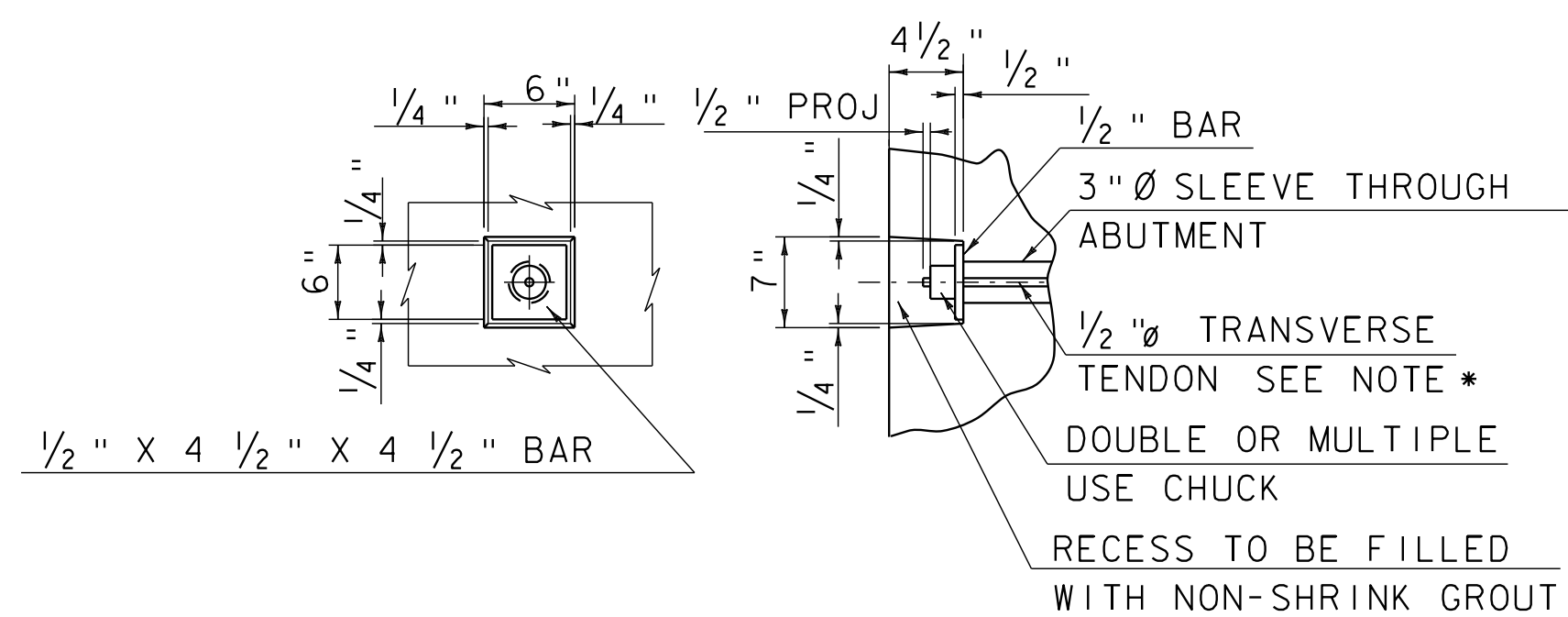
**SECTION B-B**  
SCALE 1/2" = 1'-0"



**KEEPER BLOCK DETAIL**  
SCALE 1" = 1'-0"

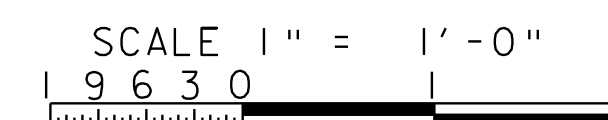
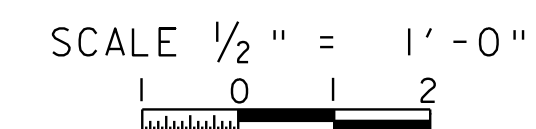


**PILE PLATES (TYP)**  
SCALE 1" = 1'-0"



**1/2" Ø TRANSVERSE TENDON DETAIL**  
(NOT TO SCALE)

\* TRANSVERSE TIES SHALL BE COVERED BY SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITER GREASE BETWEEN SHEATH AND STRAND) FOR THE LENGTH OF STRAND, EXCEPT AT ANCHORAGE LOCATIONS.

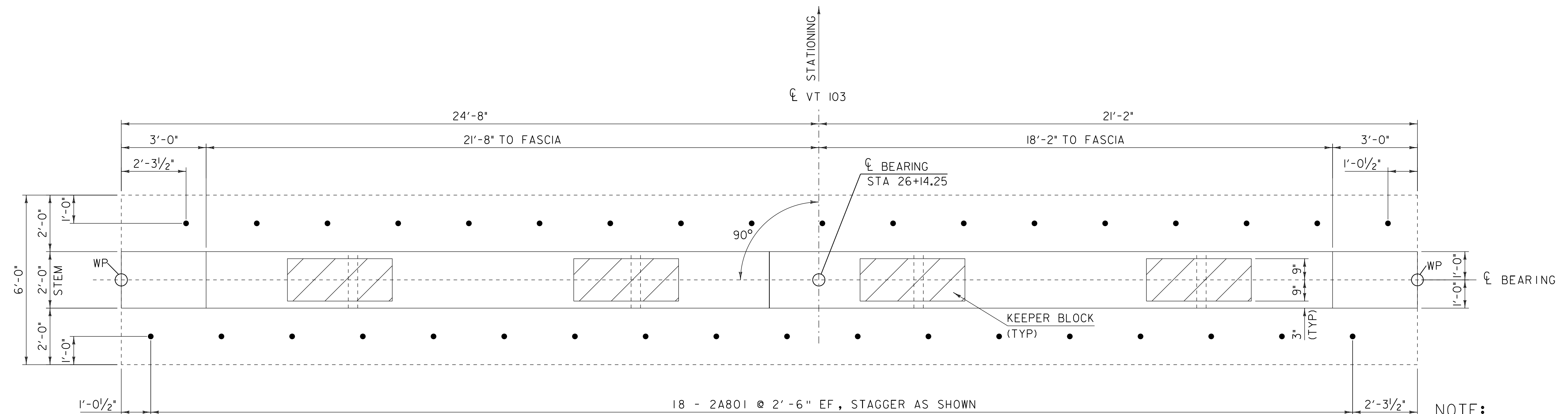


**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: CHESTER  
 PROJECT NUMBER: BRF 025-1(28)

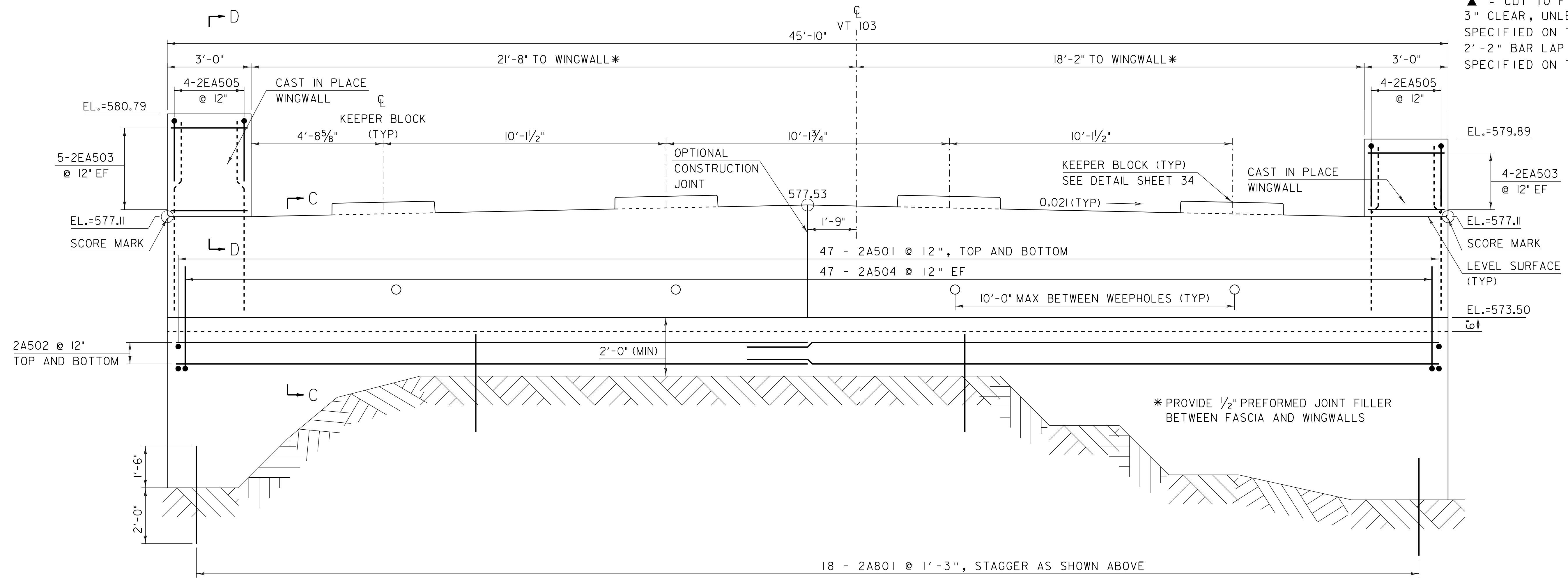
FILE NAME: 84e061/str/sub.dgn  
 PROJECT LEADER: C.P.WILLIAMS  
 DESIGNED BY: R.S.YOUNG  
 BRIDGE 8 ABUTMENT I SECTIONS

PLOT DATE: 20-SEP-2010  
 DRAWN BY: M.FESSEL  
 CHECKED BY: R.S.YOUNG  
 SHEET 34 OF 124



**ABUTMENT 2 PLAN VIEW**  
SCALE 1/2" = 1'-0"

**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



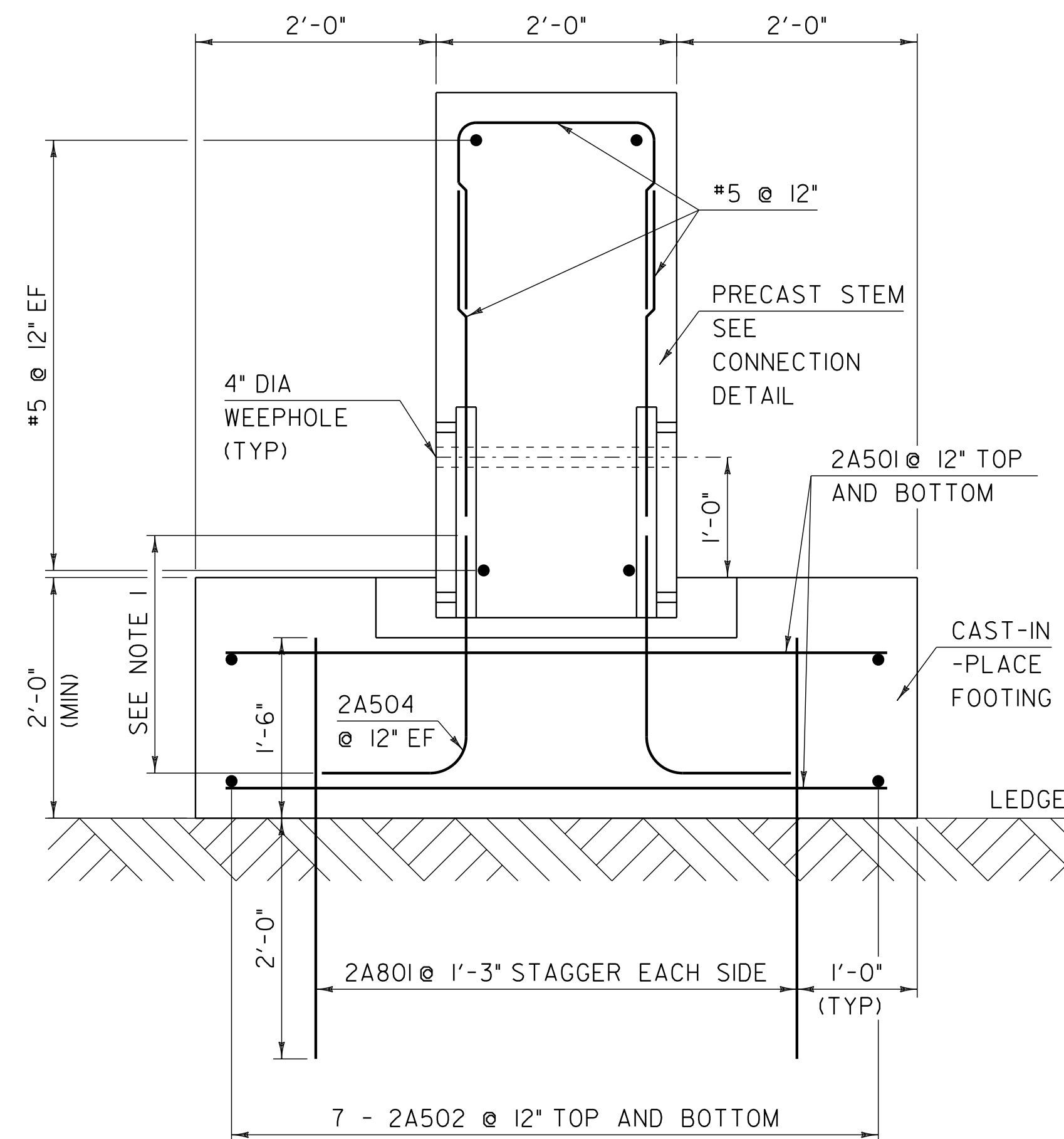
**ABUTMENT 2 ELEVATION VIEW**  
SCALE 1/2" = 1'-0"

SEE SHEET 36  
FOR SECTIONS "C-C" & "D-D"

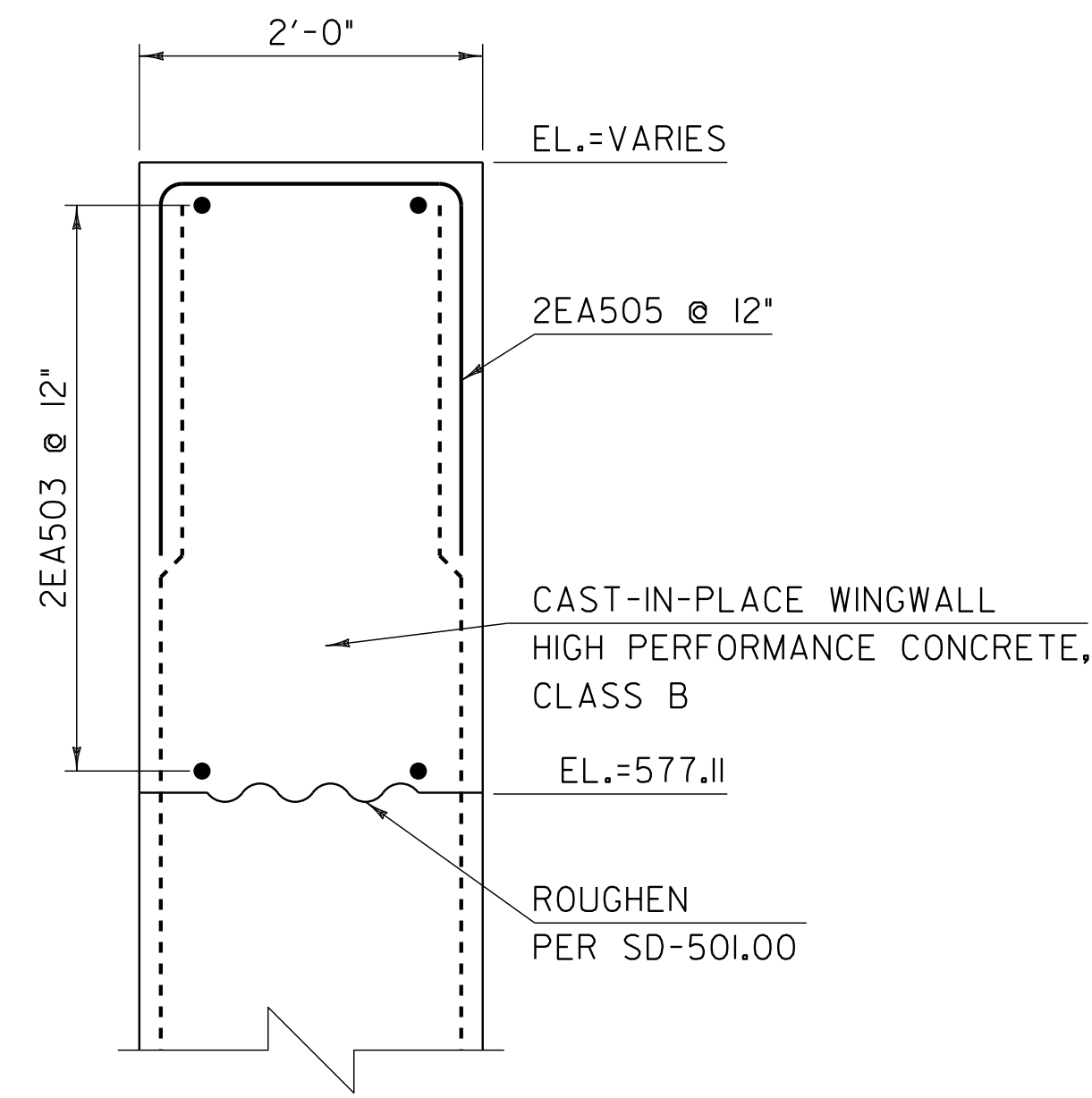
SCALE 1/2" = 1'-0"

PROJECT NAME:	CHESTER	PLOT DATE:	20-SEP-2010
PROJECT NUMBER:	BRF 025-1(28)	DRAWN BY:	M.FESSEL
FILE NAME:	84e061/Str/sub.dgn	DESIGNED BY:	R.S.YOUNG
PROJECT LEADER:	C.P.WILLIAMS	CHECKED BY:	R.S.YOUNG
BRIDGE 8 ABUTMENT 2 DETAILS		SHEET	35 OF 124

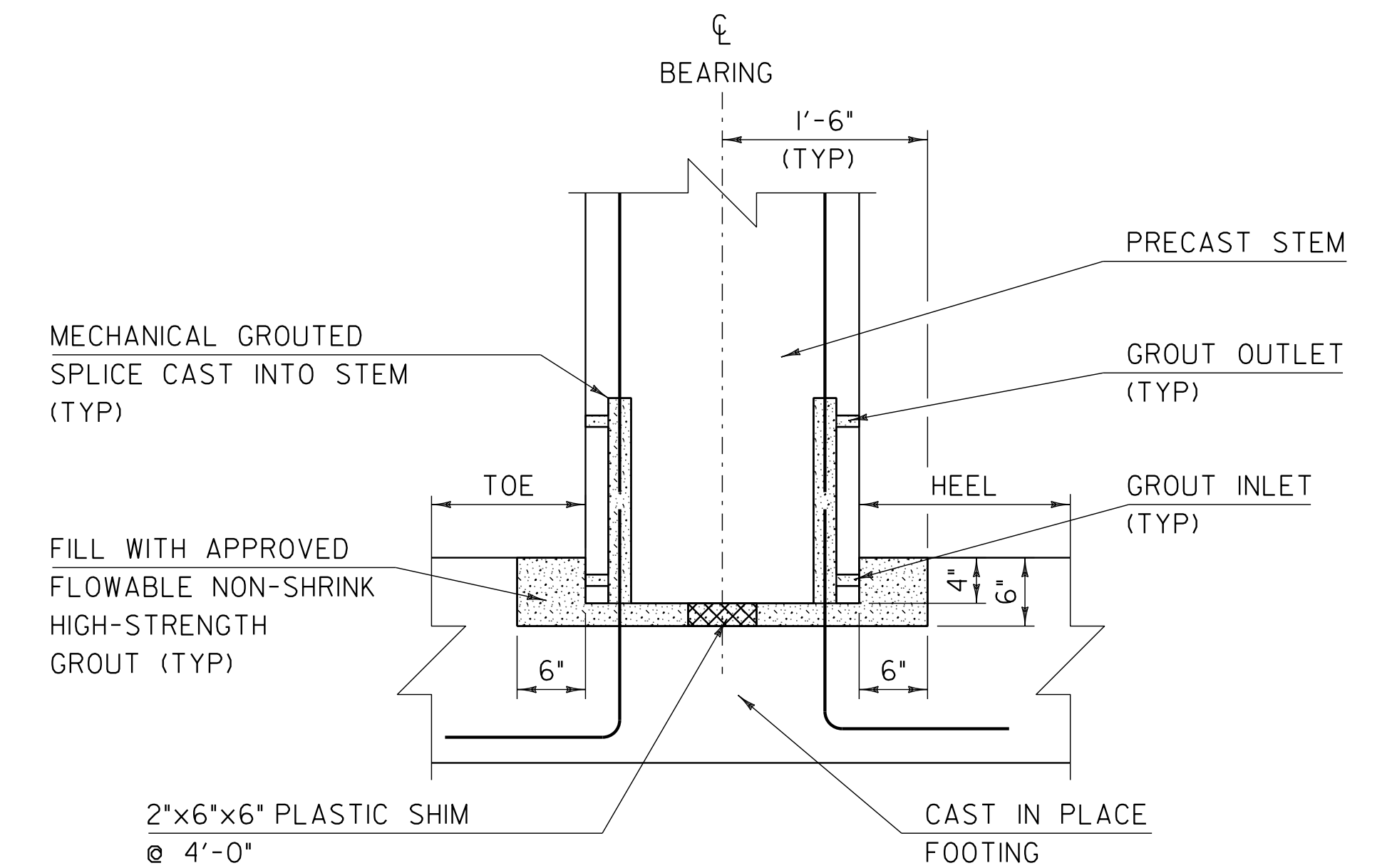




**SECTION C-C**  
SCALE 1" = 1'-0"



**SECTION D-D**  
SCALE 1" = 1'-0"



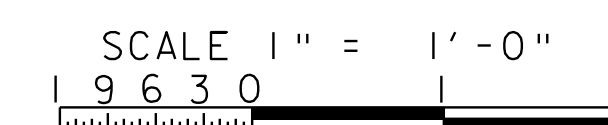
**CONNECTION DETAIL**  
SCALE 1" = 1'-0"

**NOTES:**

1. LEG LENGTH SHALL MEET THE REQUIREMENTS OF THE MECHANICAL GROUTED CONNECTION, 3'-0" LEG IS PROVIDED FOR ESTIMATING PURPOSES.
2. DURING FABRICATION OF THE PRECAST STEM A TEMPLATE SHALL BE CREATED BY THE STEM FABRICATOR TO LOCATE THE MECHANICAL GROUT CONNECTORS. THE TEMPLATE SHALL BE USED FOR FIELD PLACEMENT OF THE VERTICAL FOOTING REINFORCEMENT TO BE INCERTED INTO THE MECHANICAL GROUT CONNECTORS.
3. THE CONNECTION FROM THE PRECAST STEM TO THE FOOTING SHALL BE INCLUDED IN THE FABRICATION DRAWINGS. THE MECHANICAL GROUTED CONNECTION SHALL MEET THE REQUIREMENTS OF ASTM 1034 AND SHALL HAVE A YEILD STRENGTH OF 125% OF THE REINFORCING STEEL YIELD STRENGTH .
4. SEE GENERAL NOTES FOR ADDITIONAL FABRICATION, CONSTRUCTION, AND SEQUENCE NOTES.
5. REINFORCING FOR THE PRECAST STEM SHALL BE EPOXY COATED ACCORDING TO SUBSECTION 713.07.
6. THE NUMBER OF DOWELS TO BE DRILLED AND GROUTED WAS DETERMINED ASSUMING THE BEDROCK TO BE SMOOTH AND AT AN INCLINE OF 45 DEGREES. THE NUMBER OF DOWELS MAY BE REDUCED WITH APPROVAL OF THE PROJECT MANAGER ONCE BEDROCK IS EXPOSED AND THE ACTUAL SURFACE ROUGHNESS AND PROFILE IS DETERMINED.

**NOTE:**

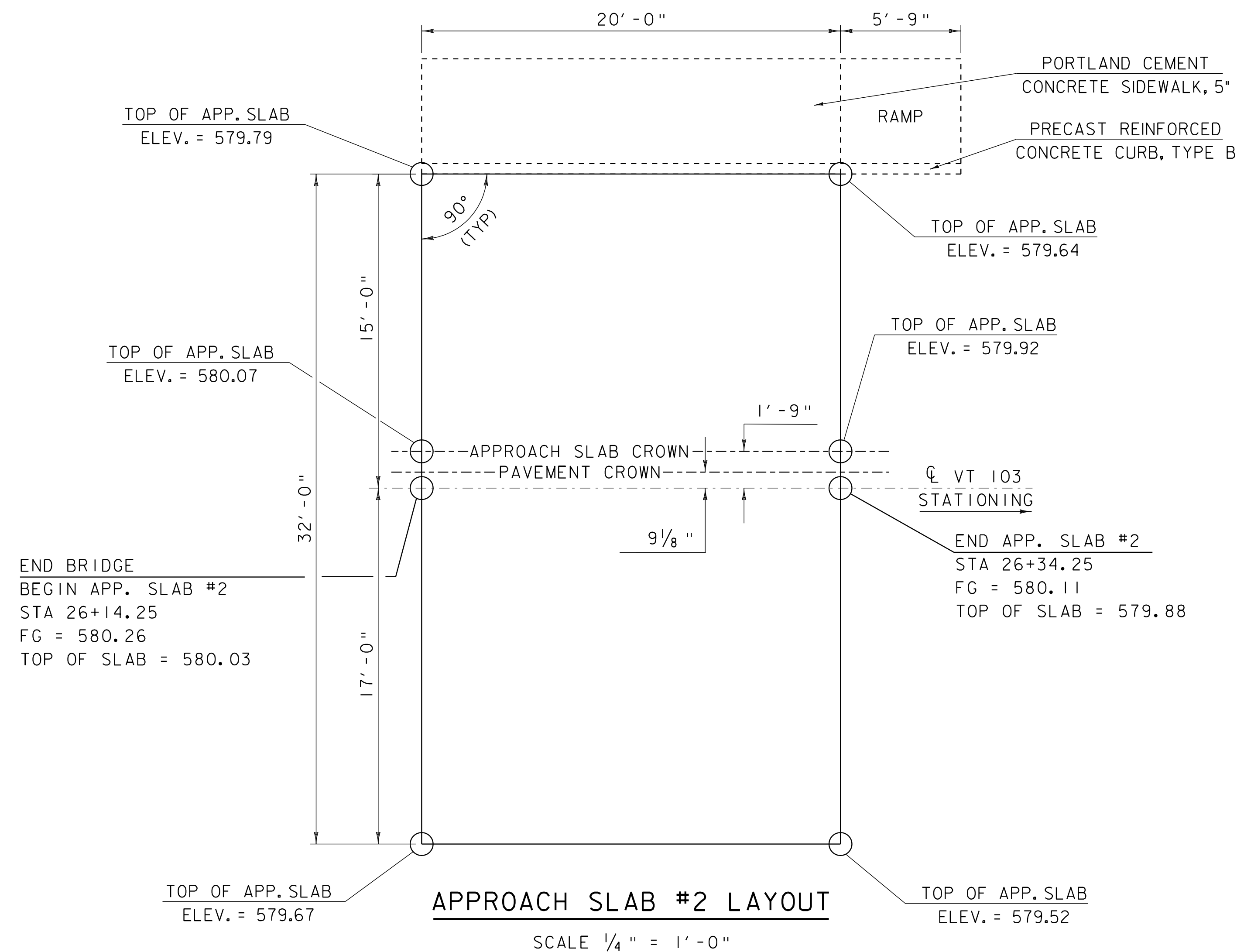
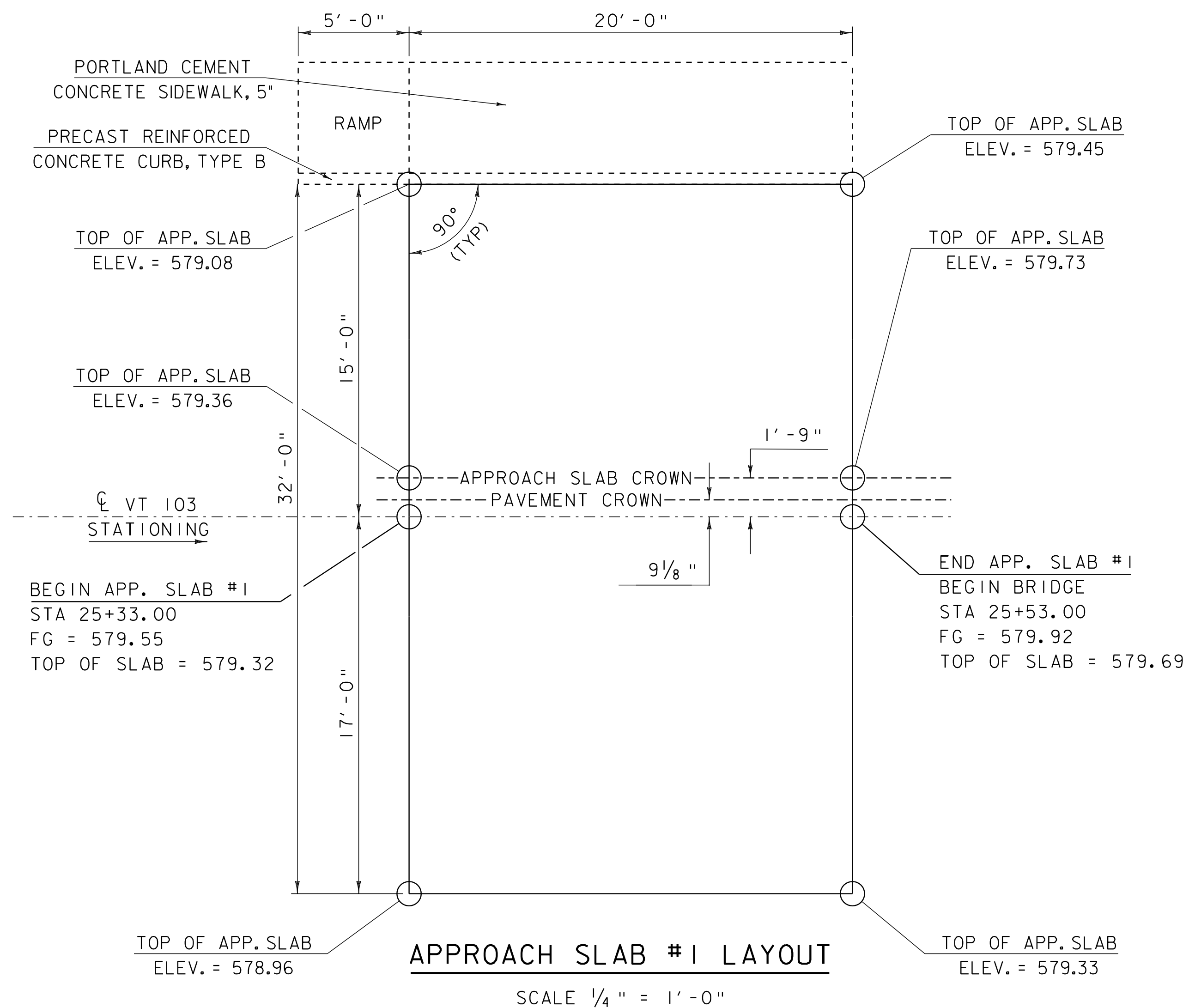
NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



PROJECT NAME: CHESTER  
 PROJECT NUMBER: BRF 025-1(28)

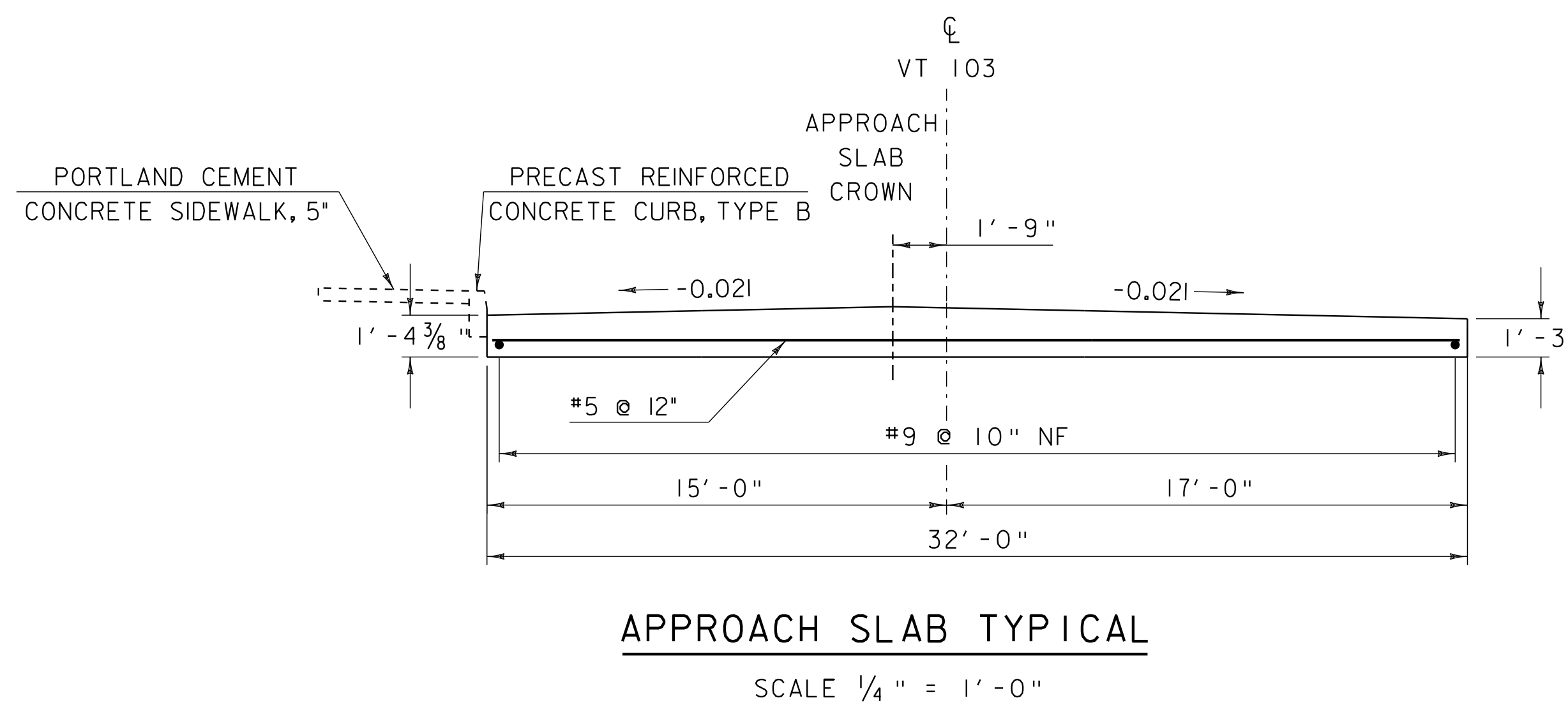
FILE NAME: 84e061/str/sub.dgn  
 PROJECT LEADER: C.P.WILLIAMS  
 DESIGNED BY: R.S.YOUNG  
 BRIDGE 8 ABUTMENT 2 SECTIONS

PLOT DATE: 20-SEP-2010  
 DRAWN BY: M.FESSEL  
 CHECKED BY: R.S.YOUNG  
 SHEET 36 OF 124



**NOTES:**

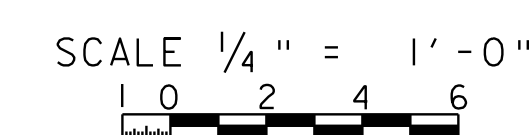
1. THE APPROACH SLABS SHALL BE THE SUPER-SLAB SYSTEM FOR FORT MILLER.
2. THE CONNECTION DETAIL TO THE APPROACH SLAB BRACKET SHALL BE COORDINATED BETWEEN PRECAST FABRICATORS. THE DETAILS SHALL BE SHOWN ON THE FABRICATION DRAWINGS.
3. THE LOCATION OF CONSTRUCTION JOINTS NEEDED FOR SHIPMENT OF THE APPROACH SLABS SHALL BE DETERMINED BY THE FABRICATOR. THREE LONGITUDINAL JOINTS ARE ALLOWED AND SHALL BE DESIGNED TO PROVIDE ADAQUATE SHEAR RESISTANCE. THE CONNECTION DETAILS SHALL BE SHOWN ON THE FABRICATION DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING UNIFORM CONTACT BETWEEN THE APPROACH SLABS AND THE SUBBASE MATERIAL TO THE SATISFACTION OF THE ENGINEER. THE DRAWINGS SHALL INDICATE THE MEANS AND METHODS NECESSARY TO INSTALL THE APPROACH SLABS TO THE ELEVATIONS SPECIFIED.
5. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING APPROACH SLABS TO RESIST LIFTING STRESSES. INSTALLATION SEQUENCE AND LIFTING PLAN SHALL BE SHOWN ON THE CONSTRUCTION DRAWINGS. THE REINFORCING STEEL IN THE FINAL CONDITION SHALL BE SHOWN ON THE CONSTRUCTION DRAWING, INCLUDING THE REINFORCING STEEL FOR PICK POINTS AND TO ACCOMIDATE SHIPPING.
6. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
7. PAYMENT FOR THE APPROACH SLABS, ALL LABOR, TOOLS, AND MATERIALS NEEDED FOR PLACEMENT SHALL BE INCLUDED UNDER ITEM 900.620 "SPECIAL PROVISION (PRECAST APPROACH SLAB, SUPER-SLAB) (BRIDGE 8) ".



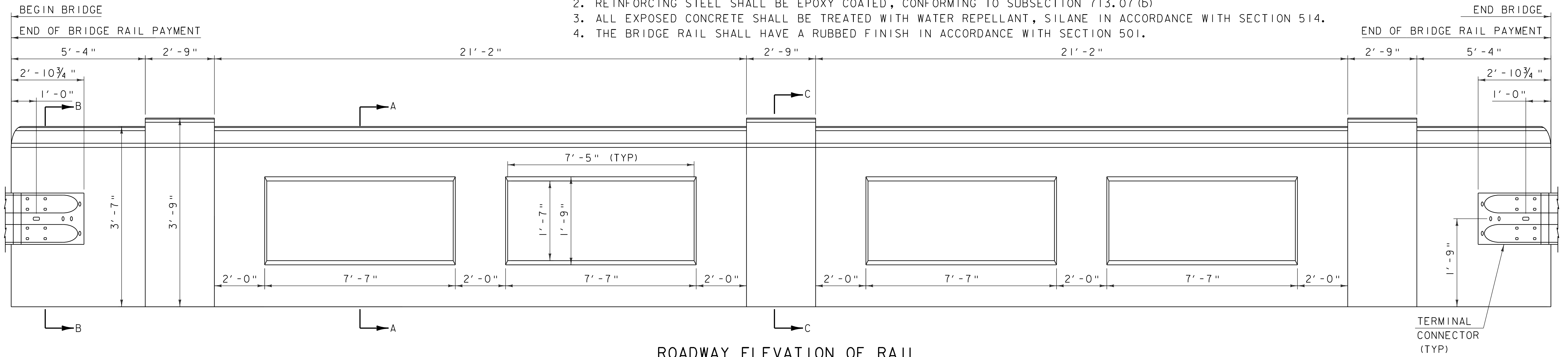
**NOTE:**  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: CHESTER  
PROJECT NUMBER: BRF 025-1(28)

FILE NAME: 84e061\s84e064slab.dgn PLOT DATE: 20-SEP-2010  
PROJECT LEADER: C.P.WILLIAMS DRAWN BY: M.FESSEL  
DESIGNED BY: R.S.YOUNG CHECKED BY: R.S.YOUNG  
BRIDGE 8 PRECAST APPROACH SLAB DETAILS SHEET 37 OF 124

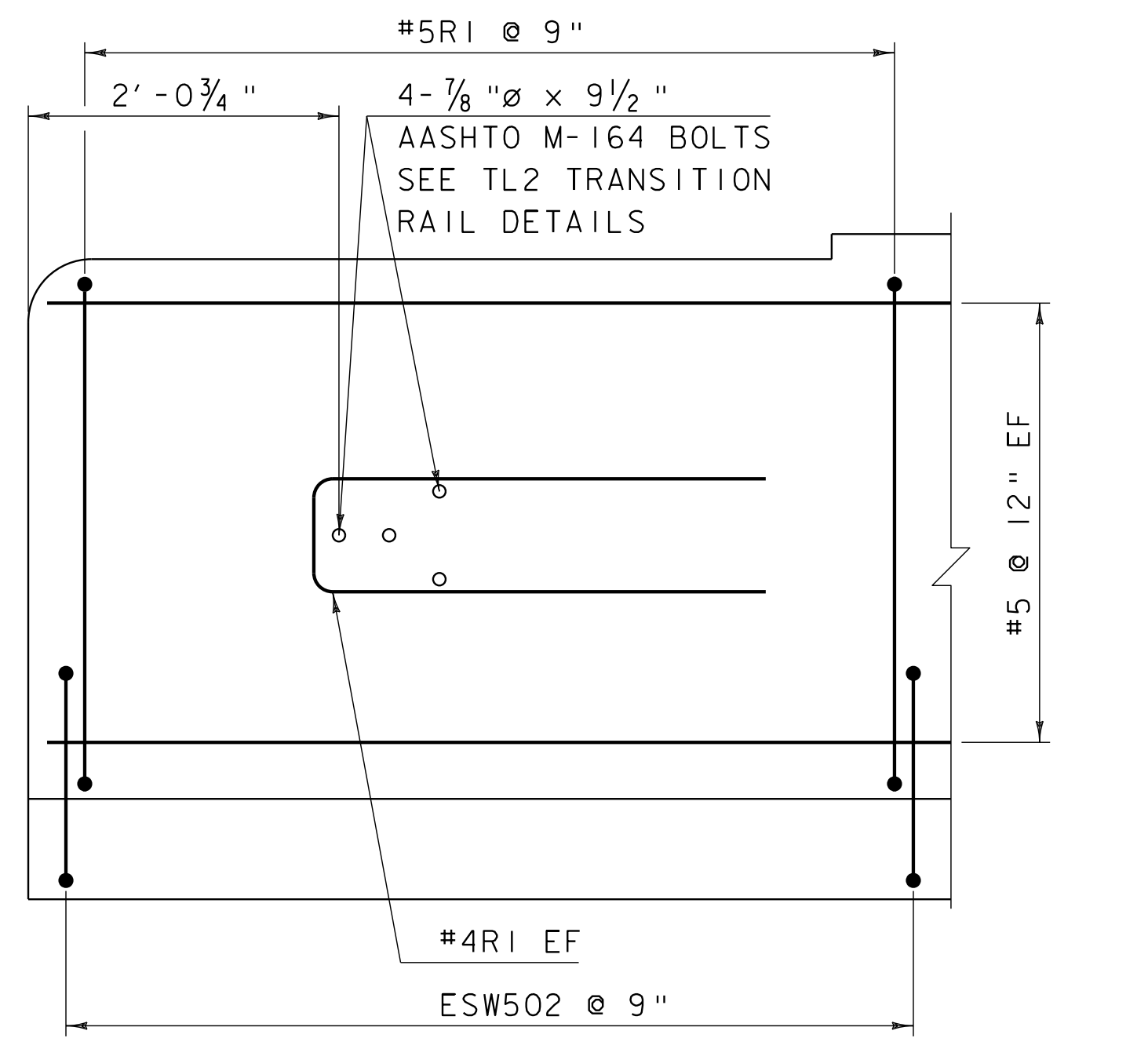


- NOTE: 1. BRIDGE RAIL SHALL BE PAID FOR UNDER ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)"  
 2. REINFORCING STEEL SHALL BE EPOXY COATED, CONFORMING TO SUBSECTION 713.07 (b)  
 3. ALL EXPOSED CONCRETE SHALL BE TREATED WITH WATER REPELLANT, SILANE IN ACCORDANCE WITH SECTION 514.  
 4. THE BRIDGE RAIL SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH SECTION 501.



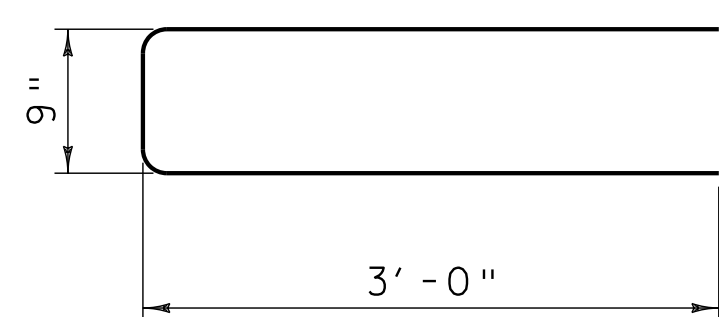
**ROADWAY ELEVATION OF RAIL**

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



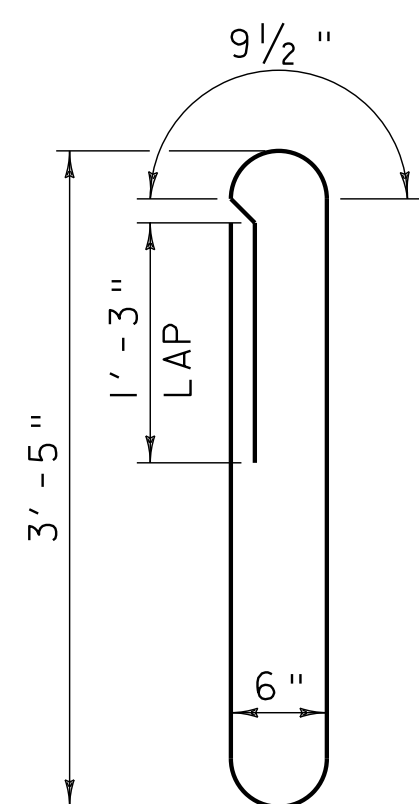
**TYPICAL REINFORCING PLACEMENT**

SCALE 1" = 1'-0"



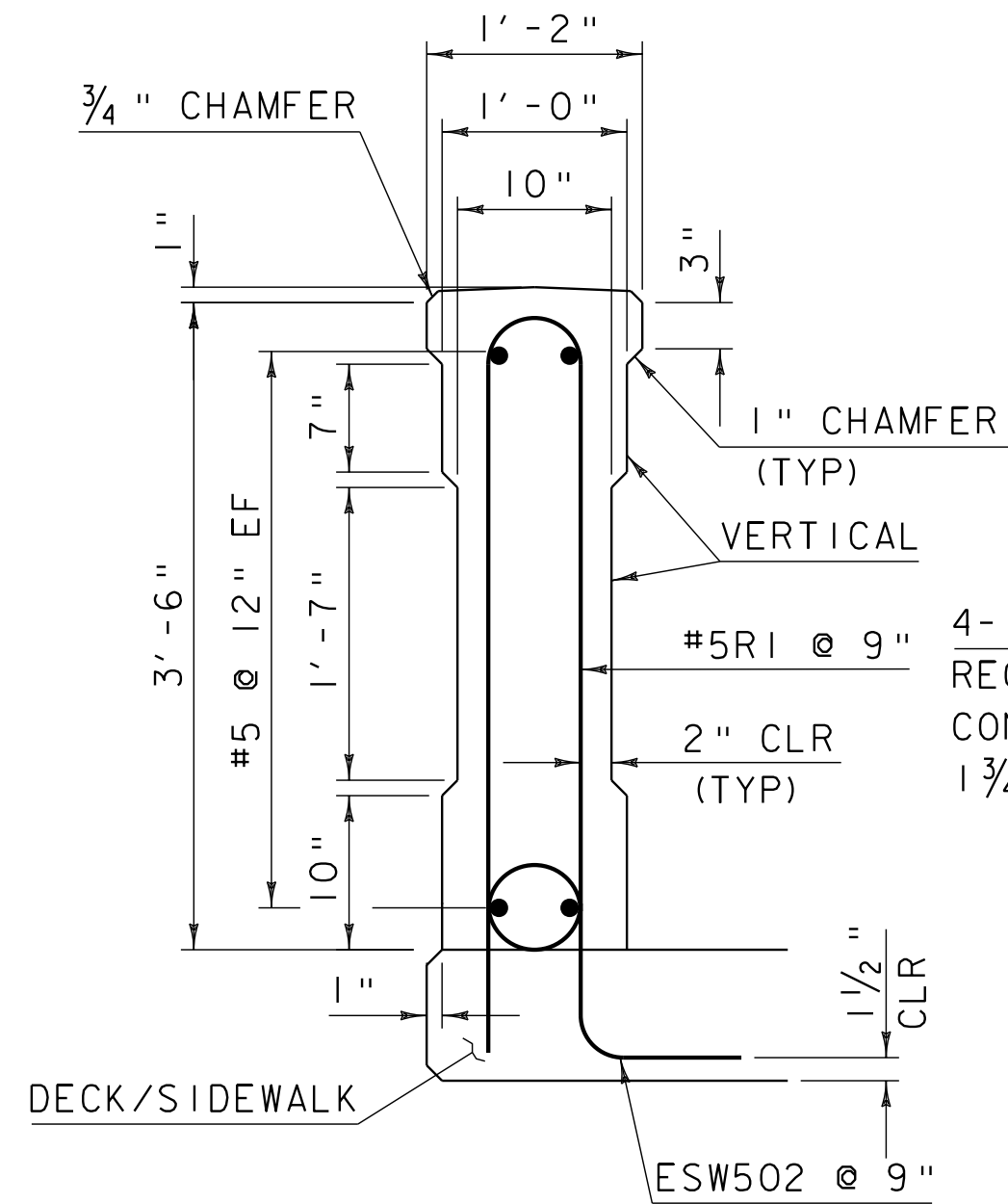
**BAR #4RI**

SCALE 1" = 1'-0"  
 8 - REQUIRED



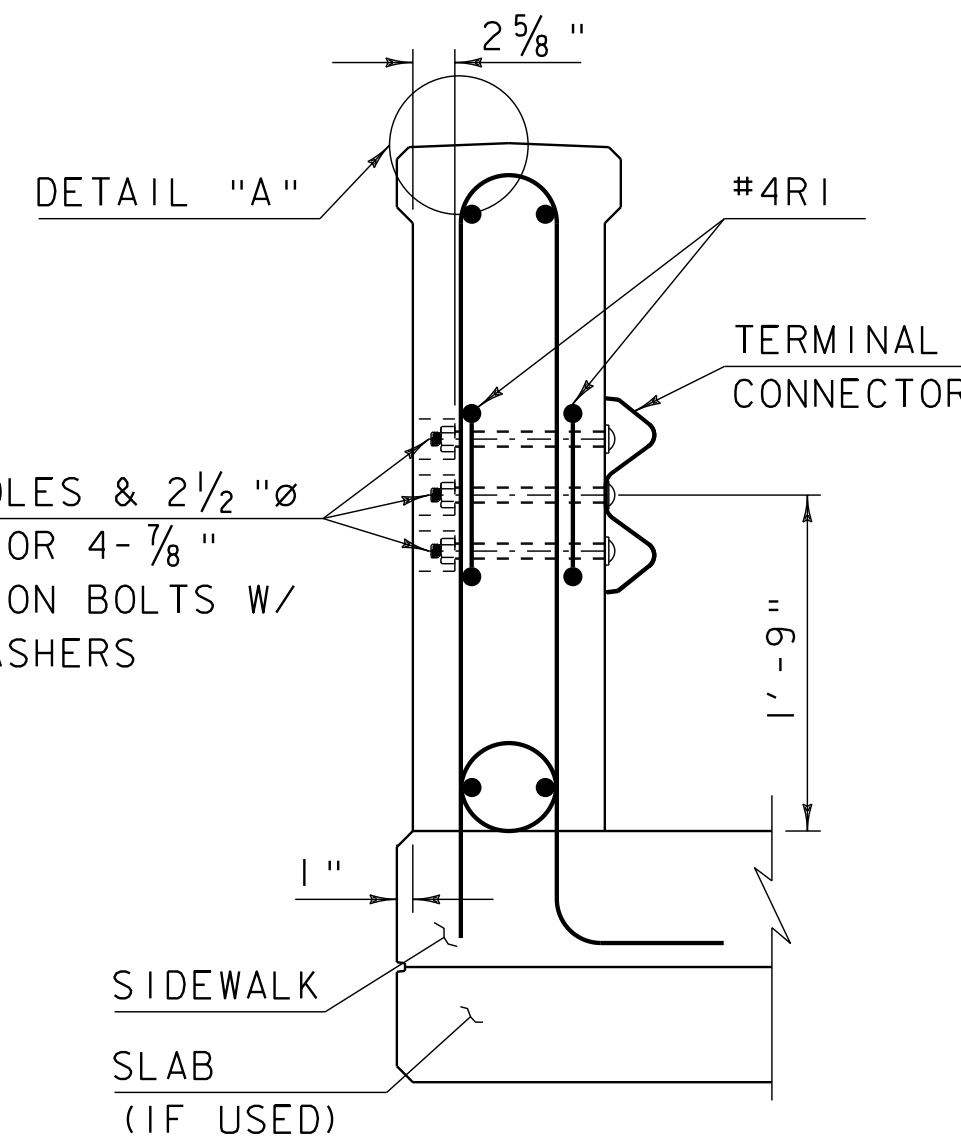
**BAR #5RI**

SCALE 1" = 1'-0"  
 164 - REQUIRED



**SECTION A-A**

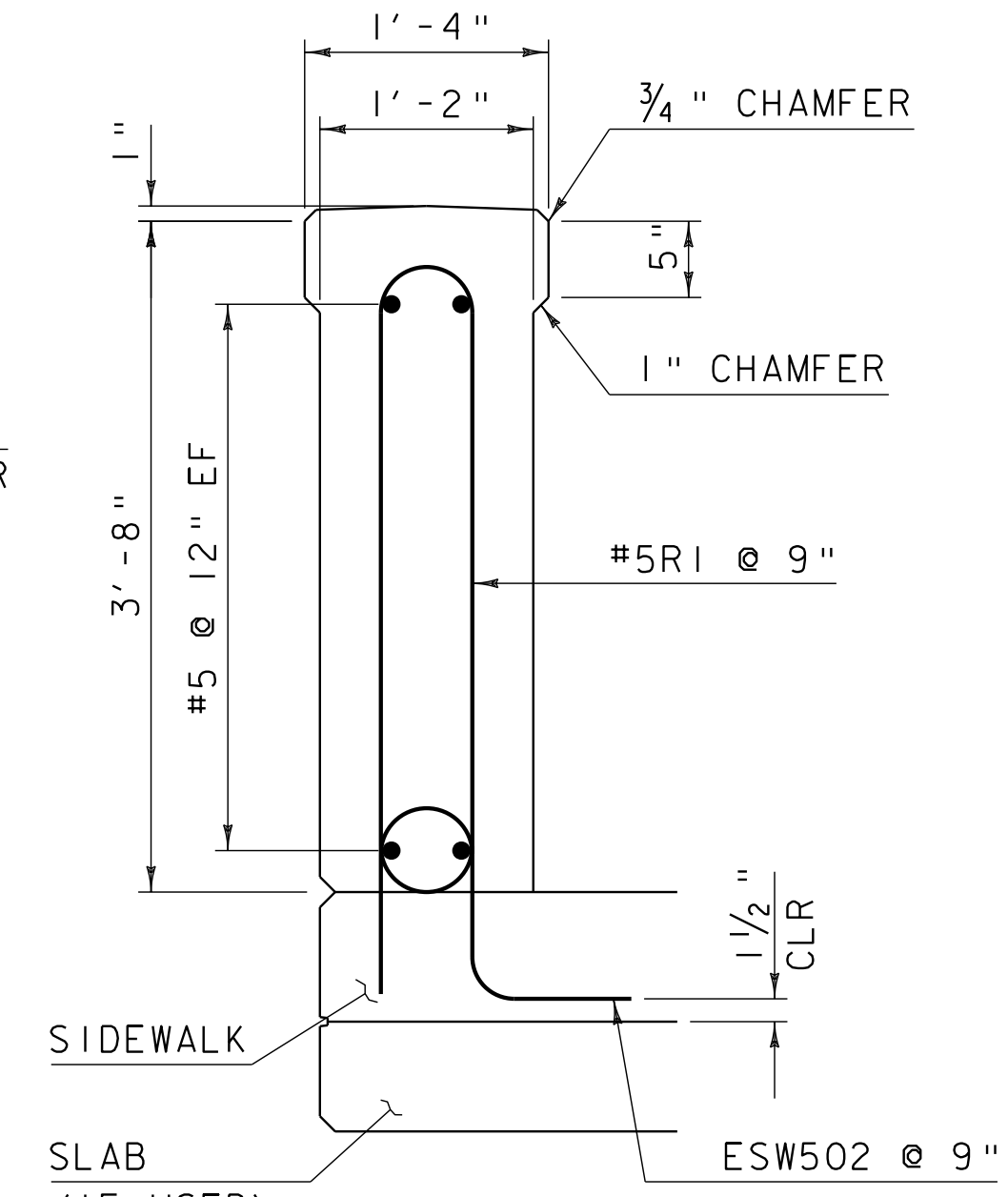
SCALE 1" = 1'-0"



**SECTION B-B**

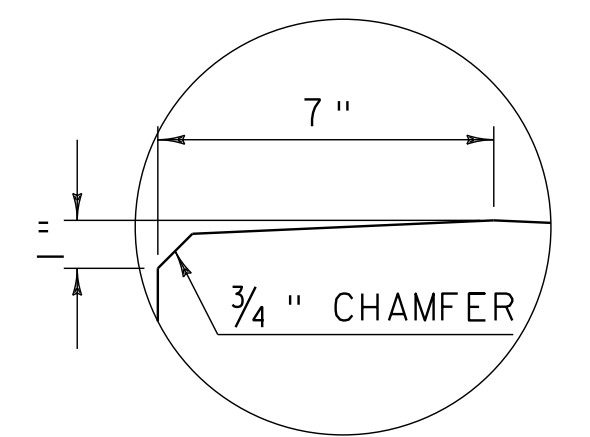
SCALE 1" = 1'-0"

HOLES AND RECESSES ARE TO BE FORMED OR CORED, PERCUSSION DRILLING IS NOT PERMITTED.



**SECTION C-C**

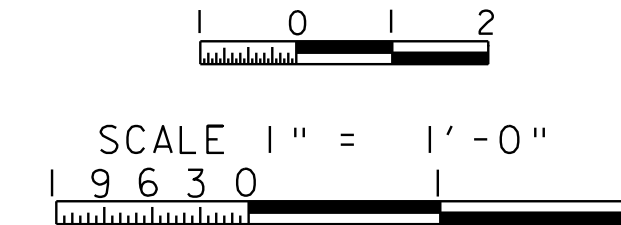
SCALE 1" = 1'-0"



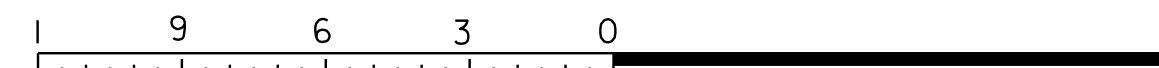
**DETAIL "A"**

SCALE 3" = 1'-0"

SCALE 1/2" = 1'-0"



SCALE 3" = 1'-0"



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PROJECT NAME: CHESTER  
 PROJECT NUMBER: BRF 025-I(28)

FILE NAME: 84e061\84e061rail.dgn  
 PROJECT LEADER: C.P.WILLIAMS  
 DESIGNED BY: R.S.YOUNG  
 BRIDGE 8 BRIDGE RAIL DETAIL

PLOT DATE: 20-SEP-2010  
 DRAWN BY: D.D.BEARD  
 CHECKED BY: E.R.CHARBONNEAU  
 SHEET 38 OF 124