

CURVE DATA				
NO.	R	Δ	T	L
A	1105.00'	33°20'32"	330.91'	643.04'

NOTES:

- ① Paint "WATMAUGH ROAD BRIDGE"
 - ② Paint "BRIDGE NO. 20C-0017"
 - ③ 72"Ø CIDH Pile
 - ④ 30"Ø CIDH Pile
 - ⑤ Rock slope protection, see ROADWAY PLANS
 - ⑥ Deck Access Opening
 - ⑦ Free Standing Interpretive Sign
1. For "HYDRAULIC SUMMARY" and "PILE DATA TABLE", see "FOUNDATION PLAN" sheet.
 2. For "INDEX TO PLANS" and "GENERAL NOTES", see "GENERAL NOTES" sheet.
 3. For locations and details of Deck Access Opening, see "GIRDER LAYOUT" sheet.
 4. Sign locations must be field verified and approved by the Engineer. For free standing interpretive sign details, see "INTERPRETIVE SIGN DETAILS" sheet.

LEGEND:

- Indicates existing structure
- ➔ Indicates direction of traffic
- ~ Indicates direction of flow

UTILITIES:

- ① 18"Ø Opening for Future Utility
- ② 18"Ø Opening for Future Utility

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN BY	KA
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	PLANS APPROVAL DATE
---------------------------	---------------------

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION			
DATE	REVISION	BY	APPROVED

CONSTRUCTION COMPLETED:

RESIDENT ENGINEER AS BUILT DRAWINGS BY:

moffatt & nichol

2185 NORTH CALIFORNIA BLVD, SUITE 500
WALNUT CREEK, CALIFORNIA 94596
(925) 944-5411

SONOMA COUNTY
PUBLIC INFRASTRUCTURE
JOHANNES J. HOEVERTSZ, P.E., DIRECTOR

GENERAL PLAN

WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK

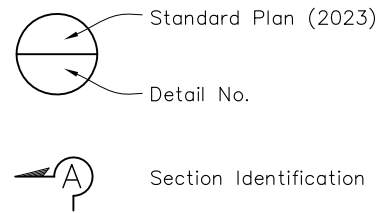
ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	18
TOTAL SHEETS	39

S-1 FINAL SUBMITTAL

INDEX TO PLANS

SHEET NO.	DRAWING NO.	TITLE
18	S-1	GENERAL PLAN
19	S-2	GENERAL NOTES
20	S-3	DECK CONTOURS
21	S-4	FOUNDATION PLAN
22	S-5	ABUTMENT 1 LAYOUT
23	S-6	ABUTMENT 4 LAYOUT
24	S-7	ABUTMENT DETAILS NO. 1
25	S-8	ABUTMENT DETAILS NO. 2
26	S-9	ABUTMENT DETAILS NO. 3
27	S-10	PIER LAYOUT
28	S-11	PIER DETAILS
29	S-12	TRUSS DETAILS NO. 1
30	S-13	TRUSS DETAILS NO. 2
31	S-14	TYPICAL SECTION
32	S-15	GIRDER LAYOUT
33	S-16	GIRDER REINFORCEMENT
34	S-17	MISCELLANEOUS DETAILS
35	S-18	DRAINAGE DETAILS
36	S-19	INTERPRETIVE SIGN DETAILS
37	S-20	LATTICE AND LATTICE FRAMING DETAILS
38	S-21	LOG OF TEST BORINGS 1 OF 2
39	S-22	LOG OF TEST BORINGS 2 OF 2

PLAN SYMBOLS



GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

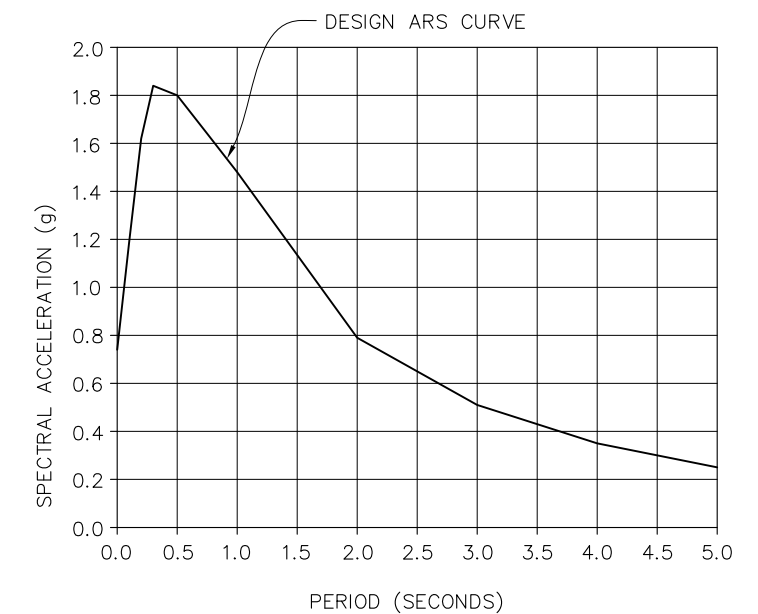
DESIGN:
AASHTO LRFD Bridge Design Specifications,
6th edition with California Amendments,
updated December 2023.
Standard Plans and Specifications, 2024 edition
Structure Technical Policies as of March 2024.

SEISMIC DESIGN:
Caltrans Seismic Design Criteria (SDC),
Version 2.0 dated April 2019 with Interim Revisions
dated October 2023.

DEAD LOAD:
Includes 35 psf for future wearing surface.
Includes 250 plf total for future utilities.

LIVE LOADING:
HL93 and Permit Design Load
3'-1" Live Load Surcharge

SEISMIC LOADING:
Soil Profile: Vs30 = 869 ft/sec
Moment Magnitude: Mmax = 6.99
Peak Ground Acceleration = 0.74g



ARS CURVE
(5% DAMPING)

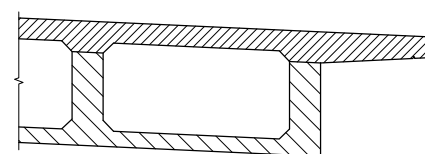
REINFORCED CONCRETE:
 $f_y = 60$ ksi
 $f'_c = 3.6$ ksi (Unless otherwise specified in CONCRETE
STRENGTH AND TYPE LIMITS)

PRESTRESSING STEEL:
See "PRESTRESSING NOTES" on "GIRDER LAYOUT" sheet

SOIL PARAMETERS:
For Determination of Design Lateral Earth Pressure
 $\gamma = 120$ lb/ft³
 $\phi = 30^\circ$



ELEVATION



PART TYPICAL SECTION

LEGEND:	
	Structural Concrete, Bridge
	Structural Concrete, Bridge Footing
	Structural Concrete, Bridge ($f'_c = 4.0$ ksi)
	Cast-in-Drilled-Hole Concrete Pile ($f'_c = 4.0$ ksi)
	Structural Concrete, Bridge (Polymer Fiber) ($f'_c = 4.0$ ksi)

CONCRETE STRENGTH AND TYPE LIMITS

NOTE:
NO SCALE
The Contractor shall verify all controlling field
dimensions before ordering or fabricating any material.

QUANTITIES

LEAD COMPLIANCE PLAN	1	LS
WORK AREA MONITORING	1	LS
STRUCTURE EXCAVATION (BRIDGE)	518	CY
STRUCTURE BACKFILL (BRIDGE)	417	CY
30" CAST-IN-DRILLED-HOLE CONCRETE PILING	842	LF
72" CAST-IN-DRILLED-HOLE CONCRETE PILING	400	LF
PRESTRESSING CAST-IN-PLACE CONCRETE	1	LS
STRUCTURAL CONCRETE, BRIDGE FOOTING	105	CY
STRUCTURAL CONCRETE, BRIDGE	540	CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	184	CY
JOINT SEAL (MR = 1 1/2")	70	LF
BAR REINFORCING STEEL (BRIDGE)	327,930	LB
HEADED BAR REINFORCEMENT	96	EA
BRIDGE REMOVAL	1	LS
RESTORE AND REINSTALL EXISTING TRUSS PANELS	1	EA
MISCELLANEOUS METAL (BRIDGE)	11,367	LB
CALIFORNIA ST-75 BRIDGE RAIL	455	LF
TUBULAR BICYCLING RAILING	427	LF

Path: Z:\Projects\2024\WATMAUGH\Drawings\2024\2024-01-15\2024-01-15.dwg
 Plot Date: Feb 08, 2025 at 10:39

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DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION		CONSTRUCTION COMPLETED:	
DATE	REVISION	BY	APPROVED

moffatt & nichol
2185 NORTH CALIFORNIA BLVD, SUITE 500
WALNUT CREEK, CALIFORNIA 94596
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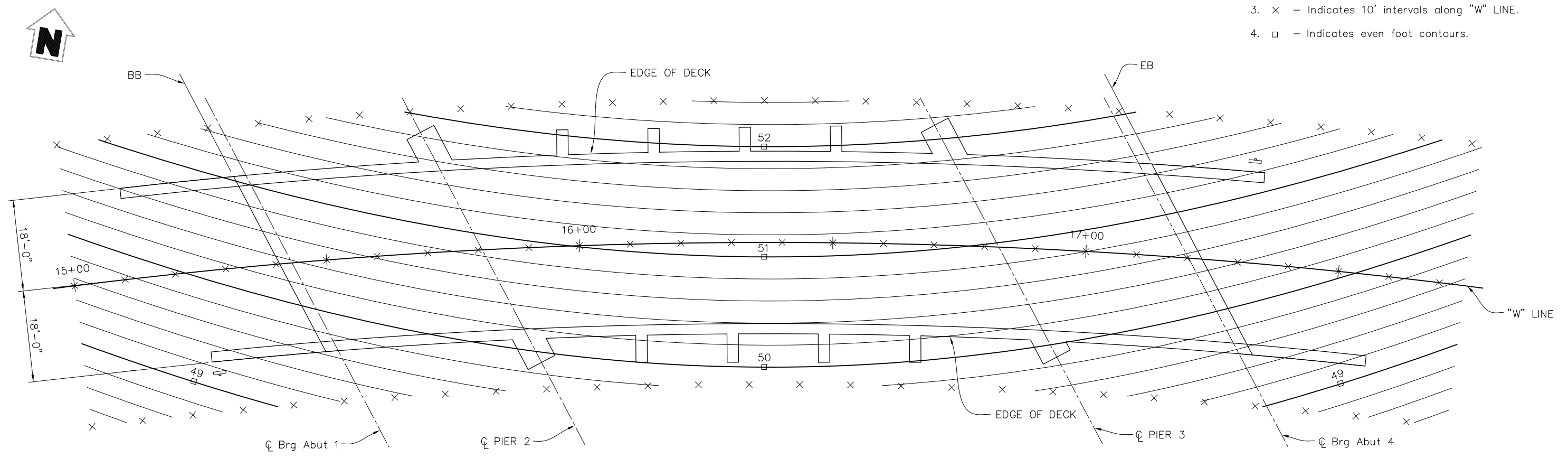


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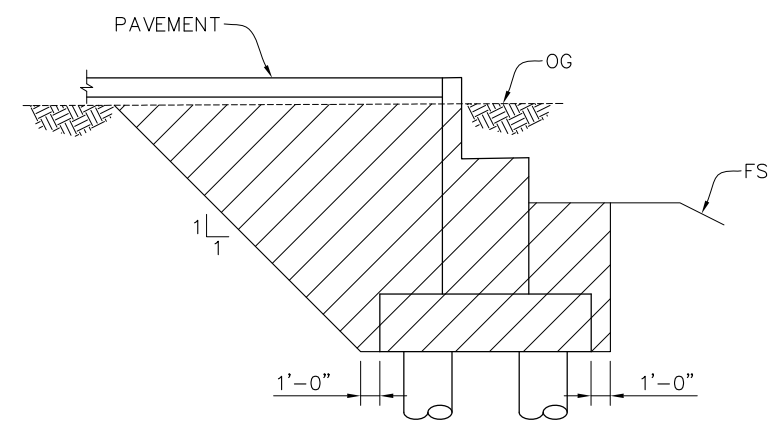
GENERAL NOTES		ROAD NUMBER	09018
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK		BUDGET NUMBER	C11002
		FISCAL YEAR	20XX-XX
		SHEET NUMBER	19
		TOTAL SHEETS	39

S-2 FINAL SUBMITTAL

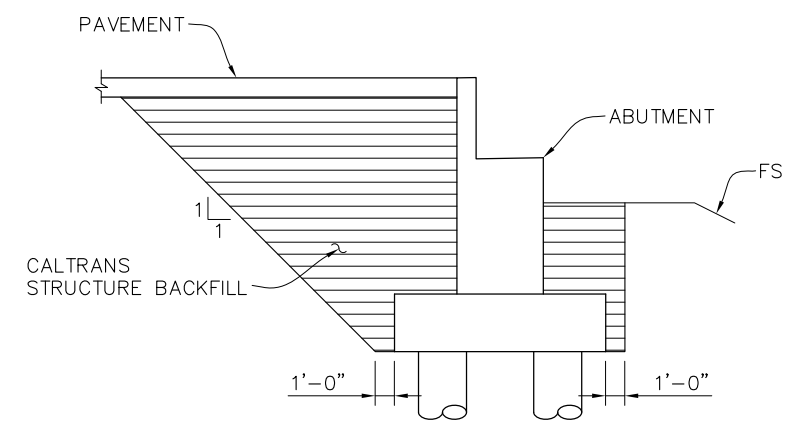
- NOTES:
1. Contour interval is 0.2'.
 2. Contours do not include camber.
 3. x - Indicates 10' intervals along "W" LINE.
 4. □ - Indicates even foot contours.



PLAN
1" = 10'



LIMITS OF STRUCTURE EXCAVATION
NO SCALE



LIMITS OF STRUCTURE BACKFILL
NO SCALE

- LEGEND:
- STRUCTURE EXCAVATION
 - STRUCTURE BACKFILL

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN BY	AB
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE

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DATE	REVISION	BY	APPROVED

RESIDENT ENGINEER AS BUILT DRAWINGS BY:

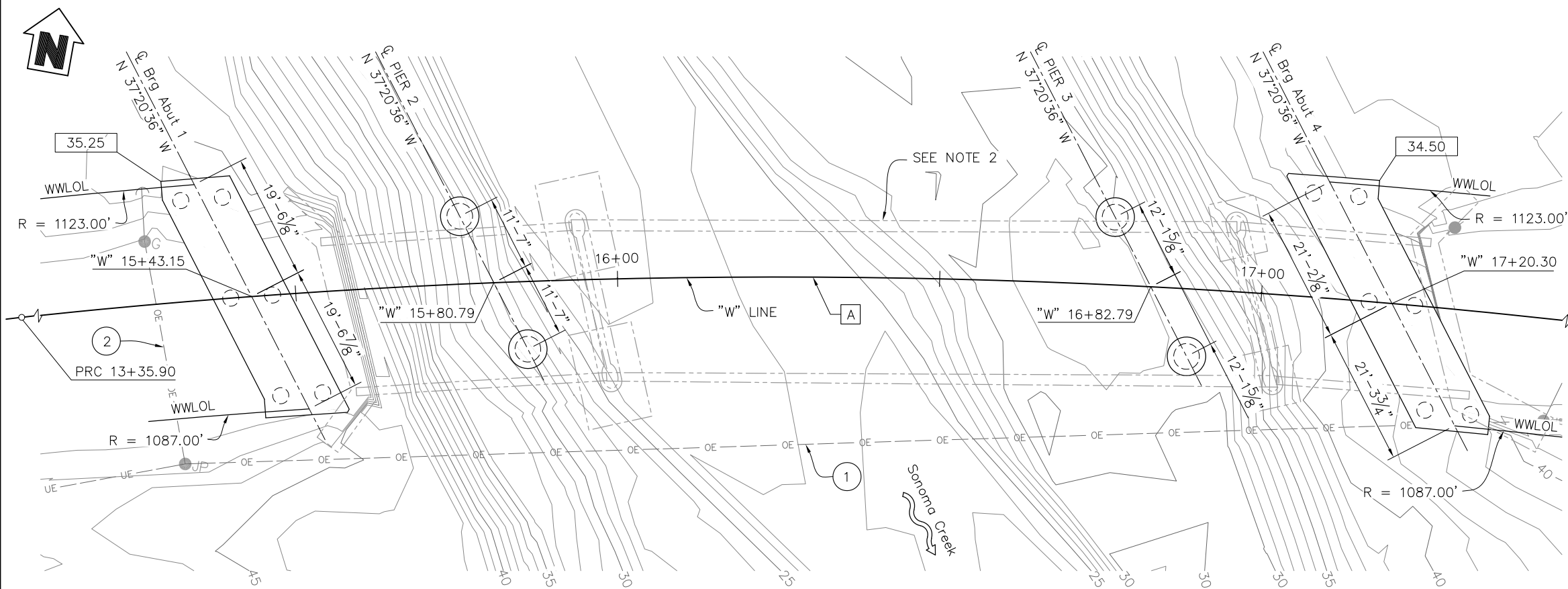
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DECK CONTOURS
WATMAUGH ROAD BRIDGE
REPLACEMENT OVER SONOMA CREEK

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	20
TOTAL SHEETS	39

S-3 FINAL SUBMITTAL



PLAN
1" = 10'

- LEGEND:**
- XXX.XX Indicates bottom of footing elevation (feet)
 - Indicates new structure
 - - - Indicates existing structure
 - ~ Indicates direction of Flow
 - Indicates 30"Ø CIDH Pile
 - ⊙ Indicates 72"Ø CIDH Pile

- NOTES:**
1. For limits of excavation and backfill, see "DECK CONTOURS" sheet.
 2. See "GENERAL PLAN" and ROADWAY PLANS for removal.

BENCHMARK

Cinquini & Passarino Control Point No. 1, being a found No. 5 rebar with cap stamped DOTPW Elevation = 42.53' (NAVD 88).

The Orthometric elevations shown hereon are based on the north American Aerial Datum of 1988 (NAVD 1988) and were determined by Static GPS Ties to CGPS Stations P199, P200 & P264 with published ellipsoidal heights of (P199 = 184.285'), (P200 = -80.675') and (P264 = 759.703'), in addition to applying the NGS Geoid Height Model "Geoid2012a".

PILE DATA TABLE

Location	Pile Type	Nominal Resistance		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Cut off Elevation (ft)
		Compression (kips)	Tension (kips)			
Abut 1	30"Ø CIDH	490	0	-34 (a) -1 (c) -10 (d)	-34.0	+35.5
Pier 2	72"Ø CIDH	2120	0	-73 (a) -34 (c) -28 (d)	-73.0	+26.0
Pier 3	72" Ø CIDH	2180	0	-74 (a) -33 (c) -28 (d)	-74.0	+27.0
Abut 4	30" Ø CIDH	530	0	-36 (a) -2 (c) -17 (d)	-36.0	+34.75

- NOTES:**
1. Design tip elevations are controlled by the following demands:
(a) Compression, (c) Settlement, and (d) Lateral Load.
 2. Specified tip elevations shall not be raised above the design tip elevations for Settlement and Lateral Load.

HYDROLOGIC SUMMARY TABLE

Drainage Area: 58.1 mi ²			
Frequency	Design Flood	Base Flood	Overtopping Flood/ Flood of Record
	50-year	15,500 cfs	16,700 cfs
Discharge	15,500 cfs	16,700 cfs	-
Water Surface Elevation at Bridge	43.43 ft	44.11 ft	-

Floodplain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation.

EXISTING UTILITIES

ID	Utility	Quantity	Owner	Description
1	Electrical (Overhead)	1	PG&E	To be relocated by others
2	Electrical (Overhead)	1	PG&E	To be relocated by others

CURVE DATA

NO.	R	Δ	T	L
A	1105.00'	33°20'32"	330.91'	643.04'

SCOUR DATA TABLE

Support Location	Long Term (Degradation and Contraction) Scour Elevation (ft)	Short Term (Local) Scour Depth (ft)
Abut 1	+41.1	5.4
Pier 2	+26.6	9.0
Pier 3	+27.6	8.7
Abut 4	+41.0	4.1

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN BY	KA
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE _____

CONSTRUCTION COMPLETED: _____

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION

DATE	REVISION	BY	APPROVED

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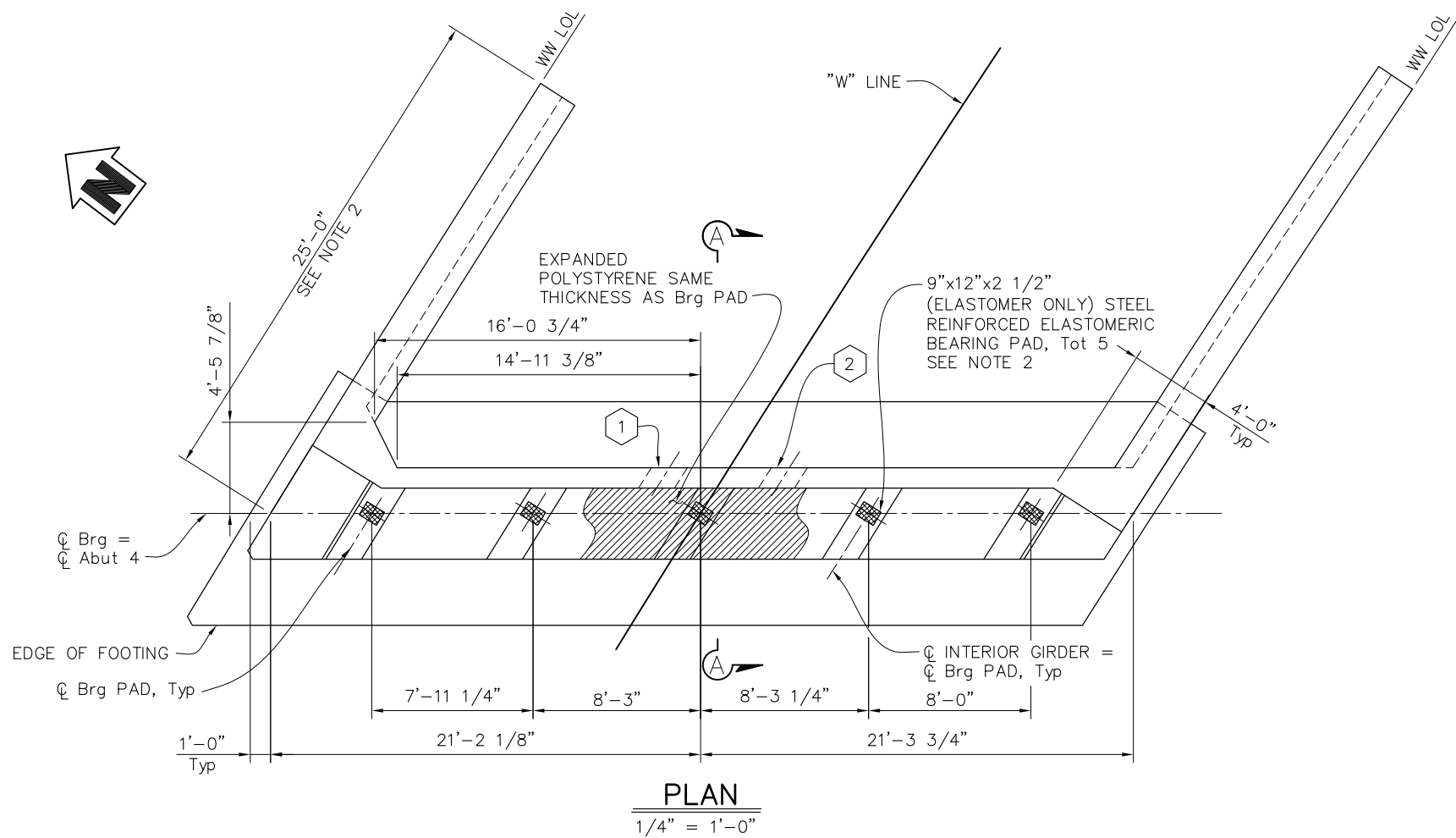
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FOUNDATION PLAN

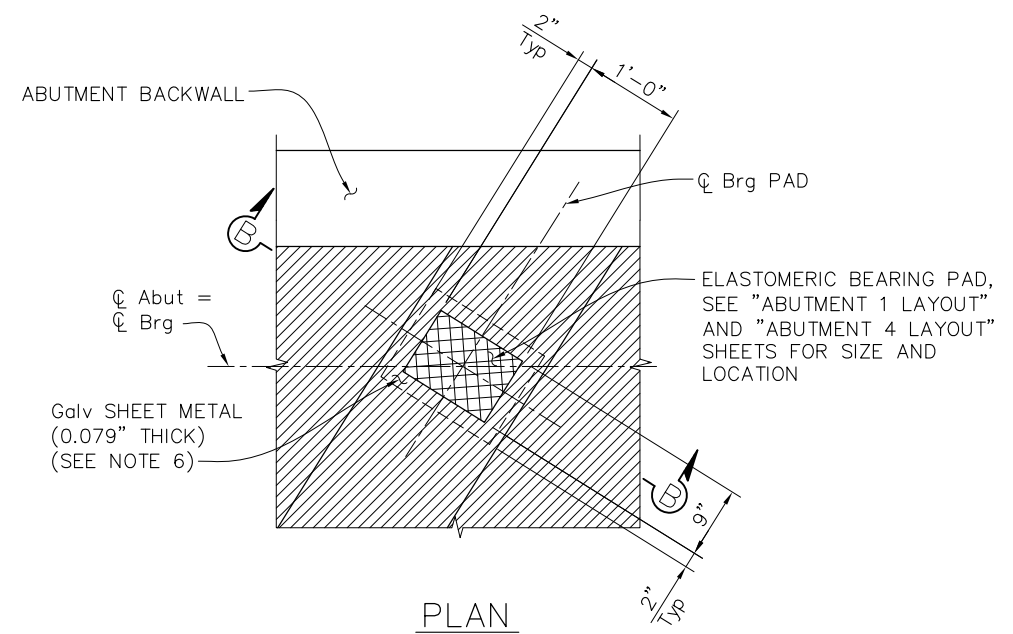
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	21
TOTAL SHEETS	39

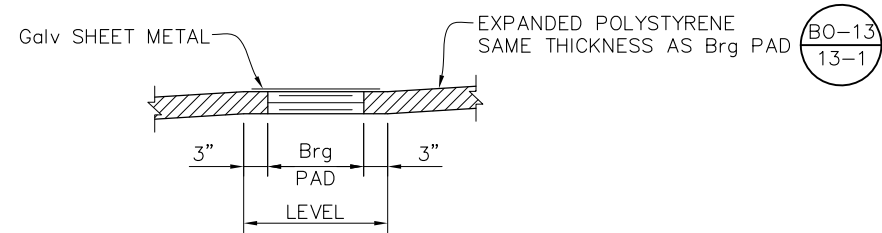
S-4 FINAL SUBMITTAL



PLAN
1/4" = 1'-0"

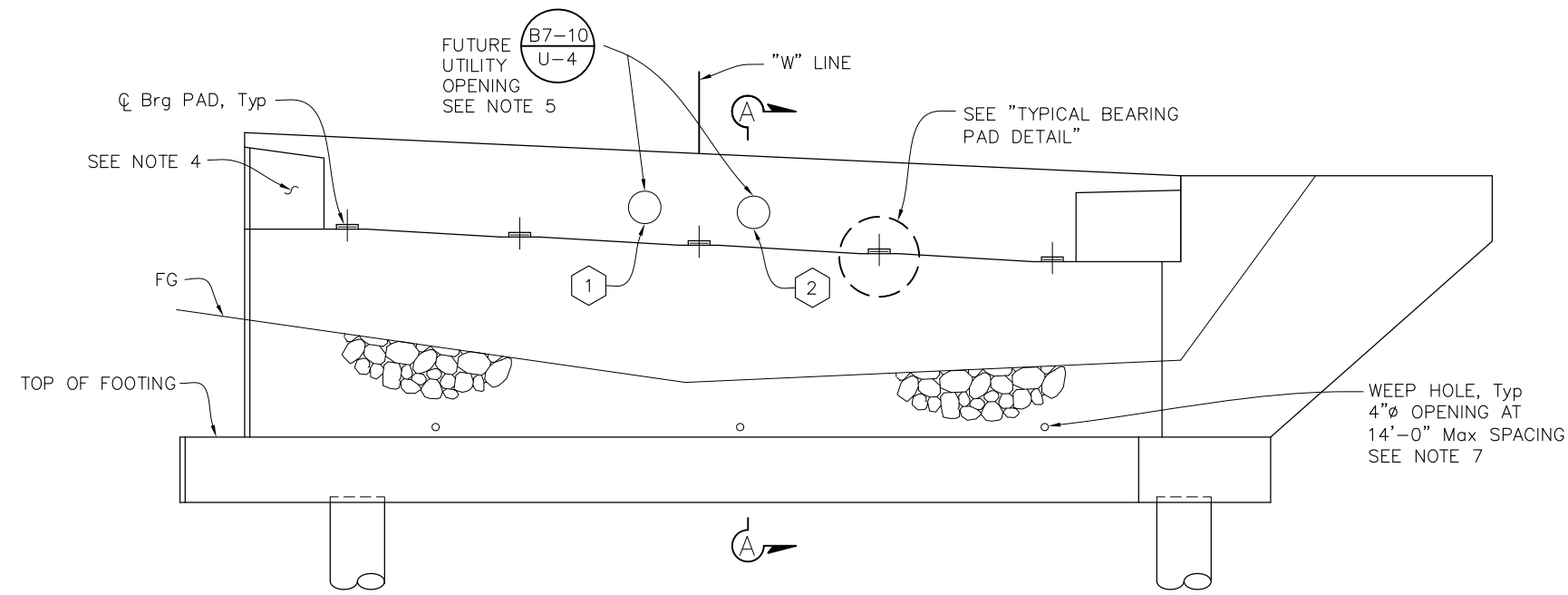


PLAN



SECTION B-B

TYPICAL BEARING PAD DETAIL
NO SCALE



ELEVATION
1/4" = 1'-0"

NOTE:
All piles & bridge rail not shown.

NOTES:

1. For abutment pile locations and footing dimensions, see "ABUTMENT DETAILS NO. 1" sheet.
2. For wingwall elevations, see "ABUTMENT DETAILS NO. 2" sheet.
3. For "SECTION A-A", see "ABUTMENT 1 LAYOUT" sheet.
4. For details and reinforcement not shown, see "SHEAR KEY DETAIL" ON "ABUTMENT DETAILS NO. 3" sheet.
5. For utility description and opening size, see "GENERAL PLAN" sheet.
6. Coat top of Bearing Pad with silicone grease prior to placing sheet metal.
7. For drain outlet and geocomposite drain details, see "DRAINAGE DETAILS" sheet.

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

1/4" = 1'-0" (Scale)
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 Plot Date: Feb 08, 2025 at 10:39

DESIGN BY	AB
DRAWING BY	EP
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REGISTERED CIVIL ENGINEER	_____
PLANS APPROVAL DATE	_____

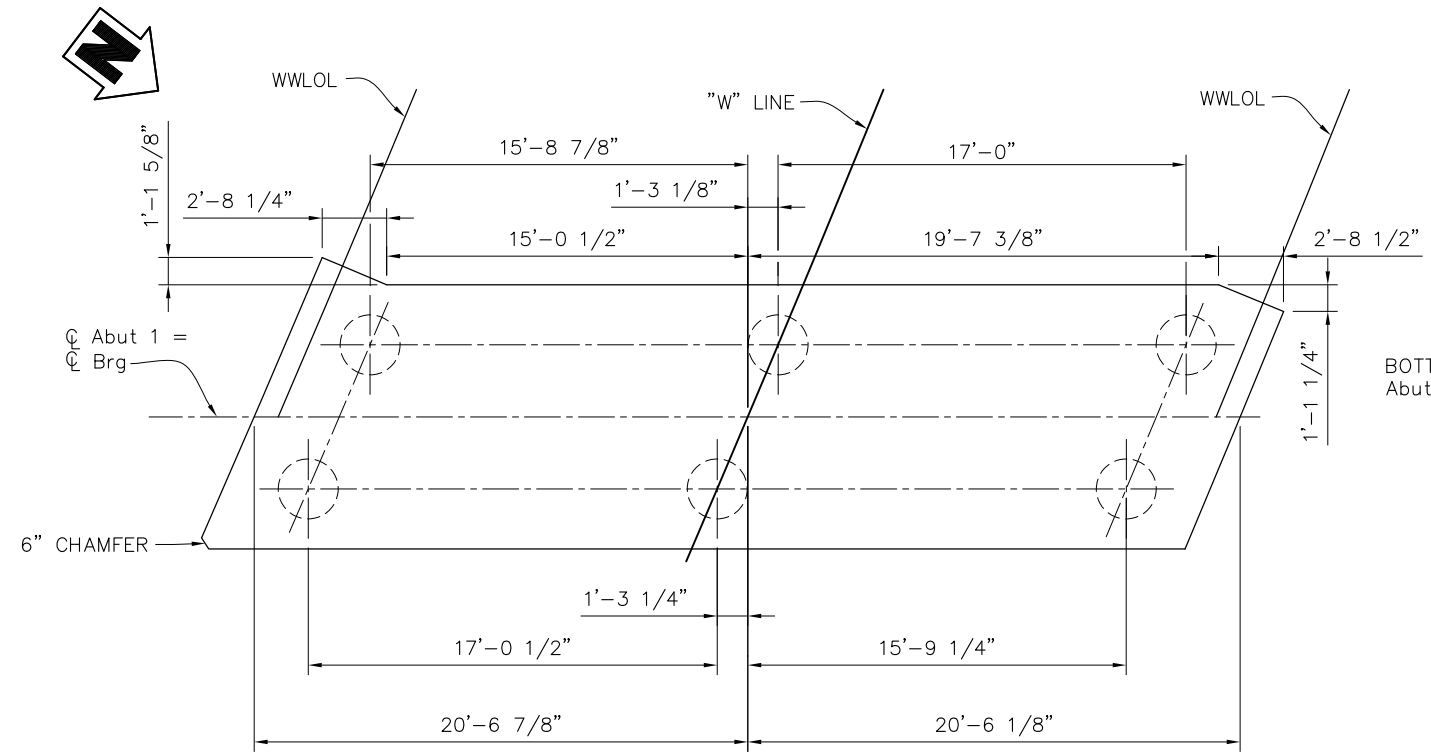
"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION		CONSTRUCTION COMPLETED:	
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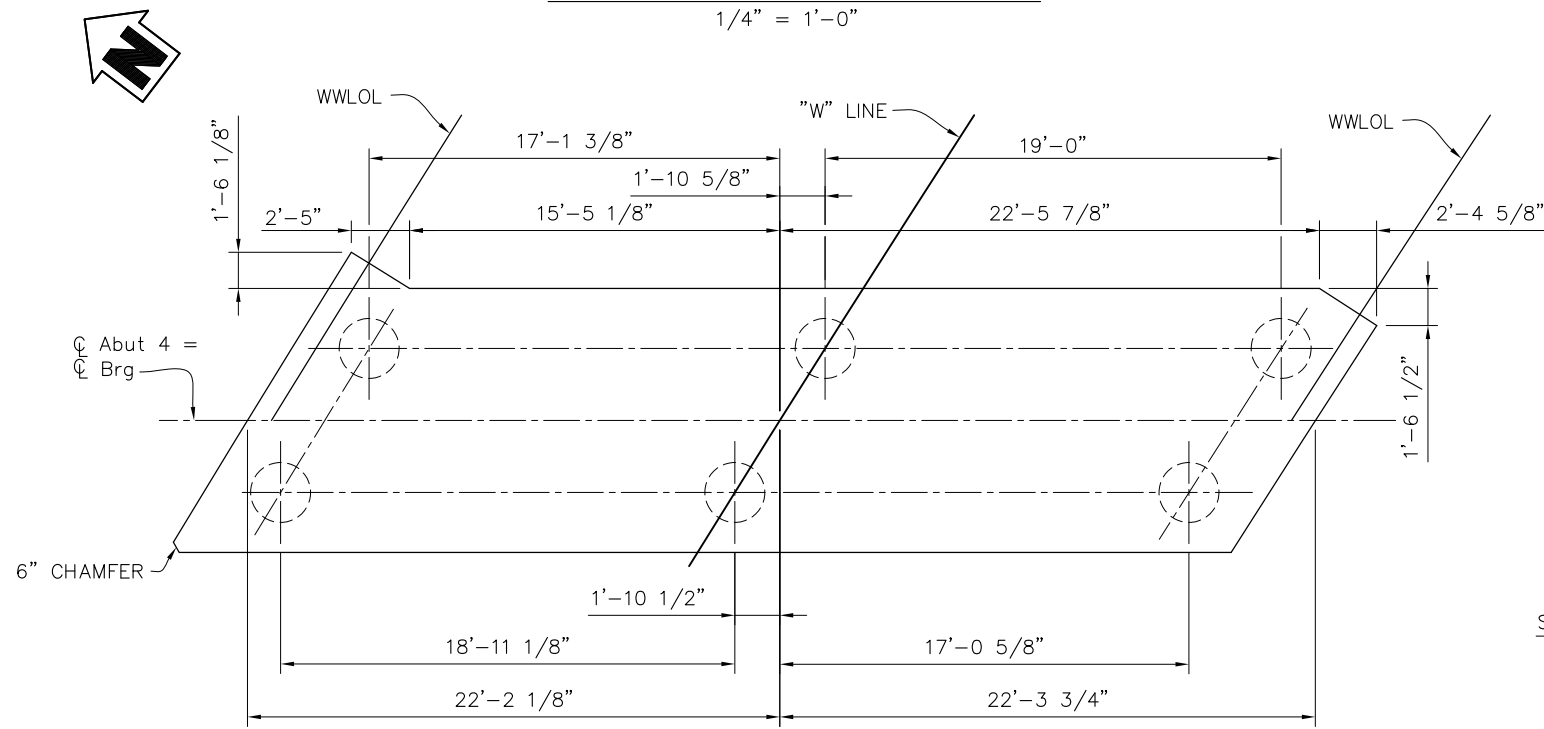
ABUTMENT 4 LAYOUT	ROAD NUMBER	09018
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	BUDGET NUMBER	C11002
	FISCAL YEAR	20XX-XX
	SHEET NUMBER	23
	TOTAL SHEETS	39

S-6 FINAL SUBMITTAL



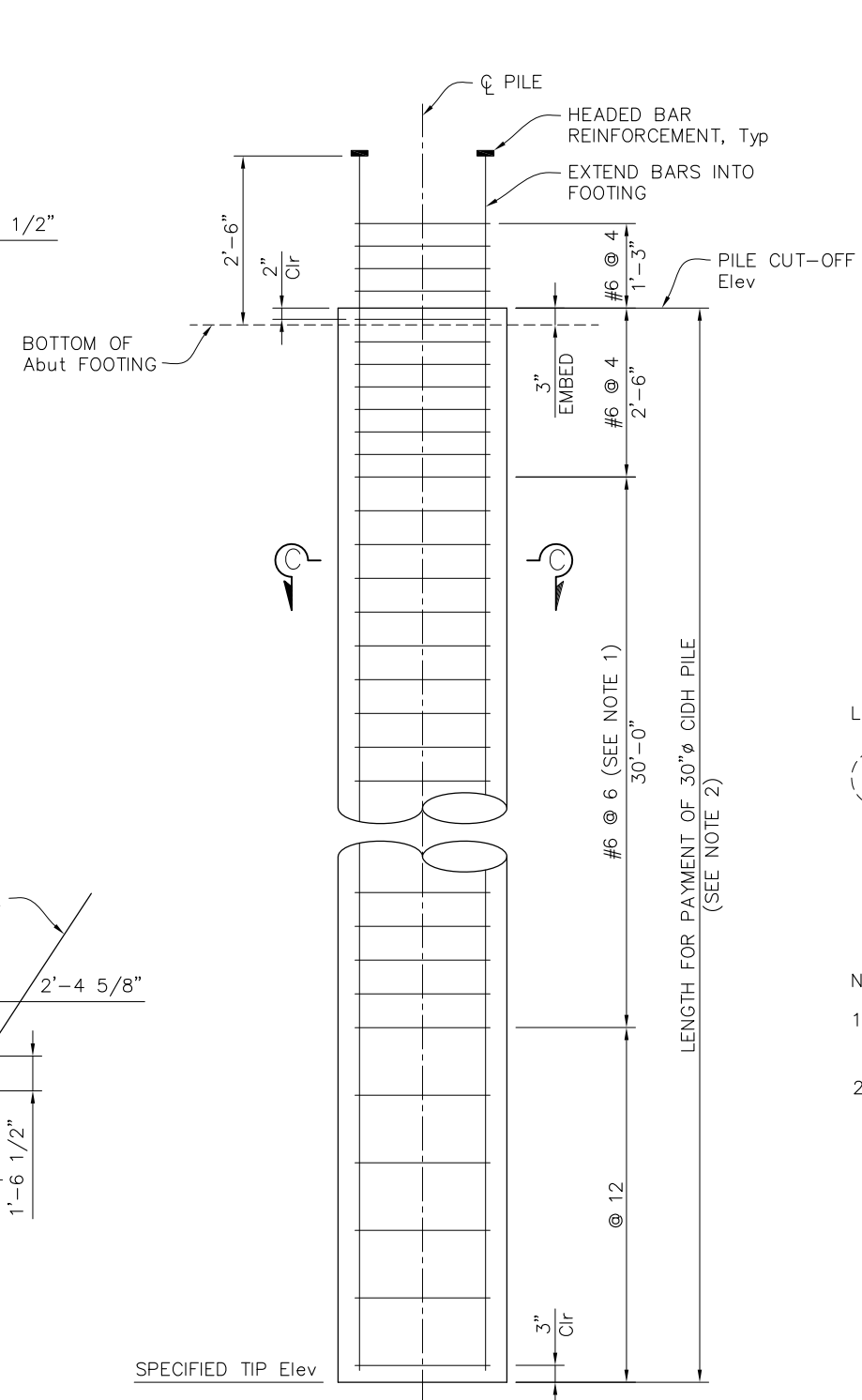
ABUTMENT 1 FOOTING PLAN

1/4" = 1'-0"



ABUTMENT 4 FOOTING PLAN

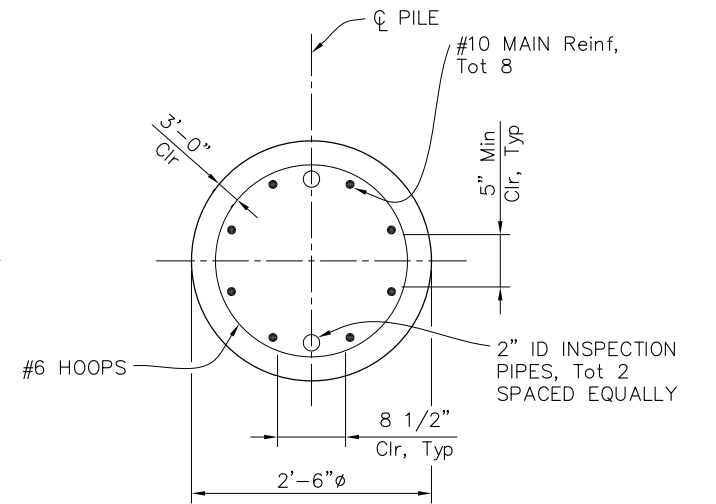
1/4" = 1'-0"



ELEVATION

CIDH PILE DETAIL

3/4" = 1'-0"



SECTION C-C

1" = 1'-0"

LEGEND:

(+) Indicates 30" CIDH Pile

NOTES:

- All hoops must be butt welded continuous and meet "Ultimate Splice" requirements.
- No splices shall be permitted in the upper 40'-0" of vertical CIDH pile reinforcement. Splices shall be staggered.

NOTE: All reinforcement not shown for clarity.

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN BY	AB
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	_____
PLANS APPROVAL DATE	_____

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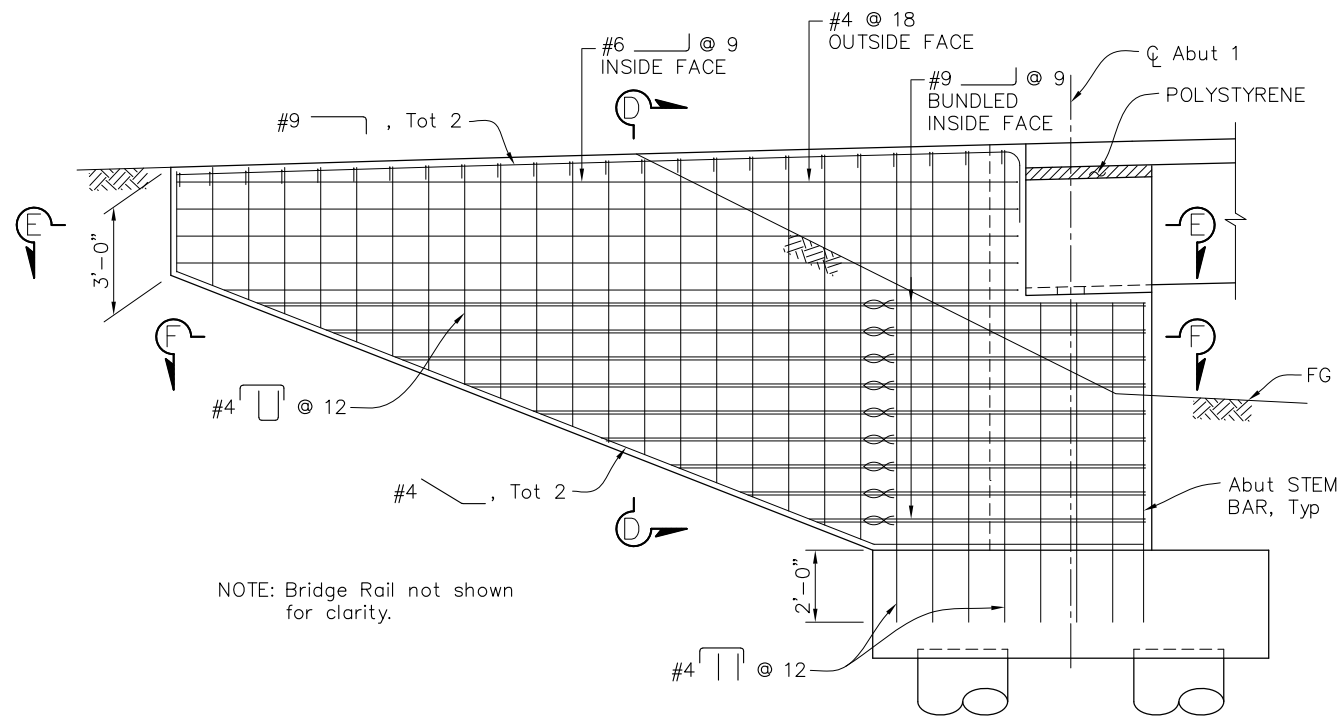


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ABUTMENT DETAILS NO. 1	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	24
TOTAL SHEETS	39

S-7 FINAL SUBMITTAL

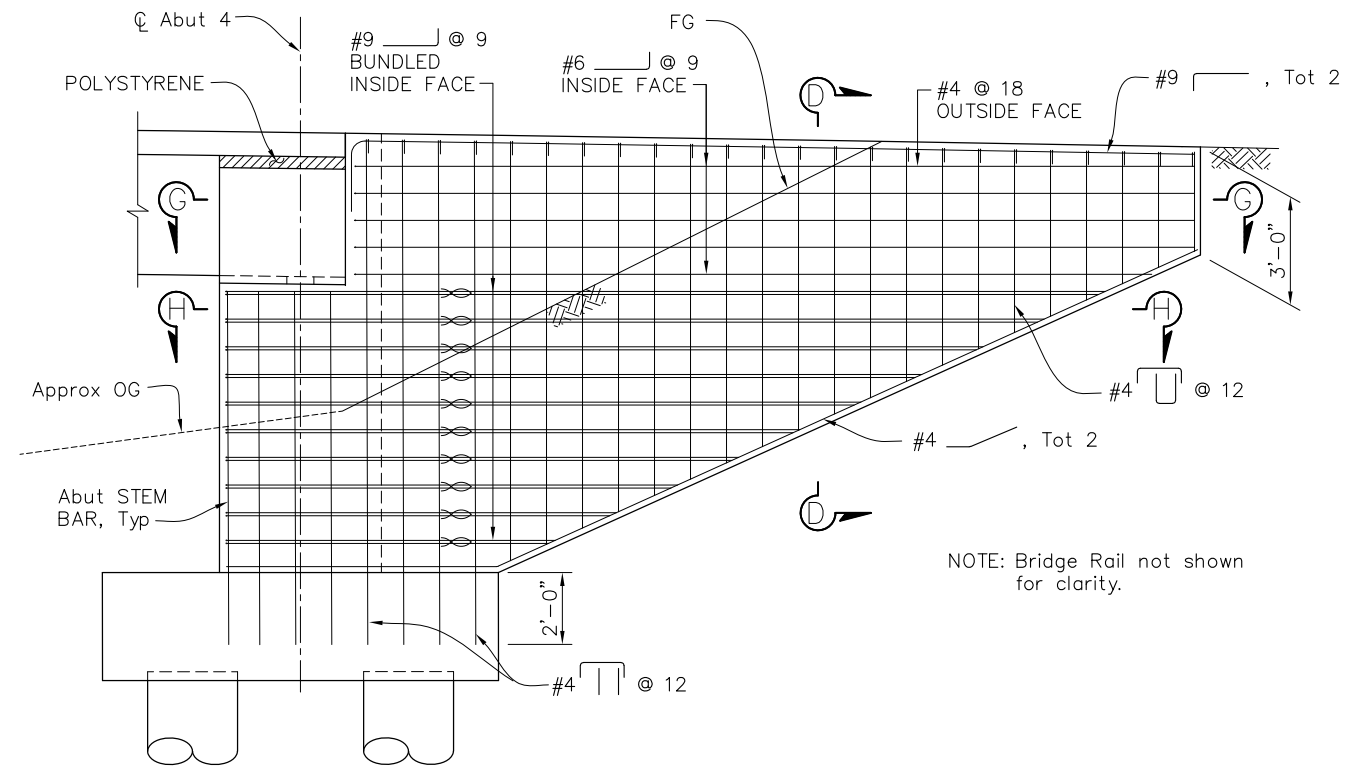


NOTE: Bridge Rail not shown for clarity.

ABUTMENT 1 SOUTH WINGWALL ELEVATION

3/8" = 1'-0"

(ABUTMENT 4 NORTH WINGWALL SIMILAR)

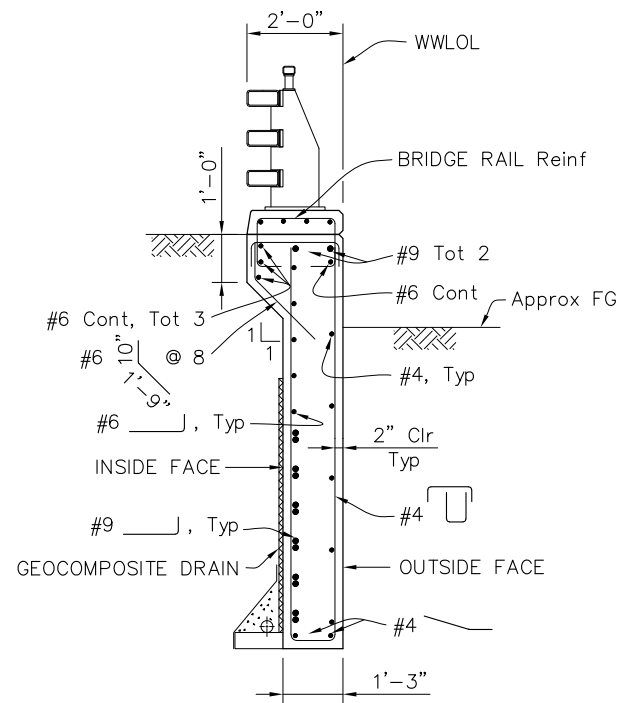


NOTE: Bridge Rail not shown for clarity.

ABUTMENT 4 SOUTH WINGWALL ELEVATION

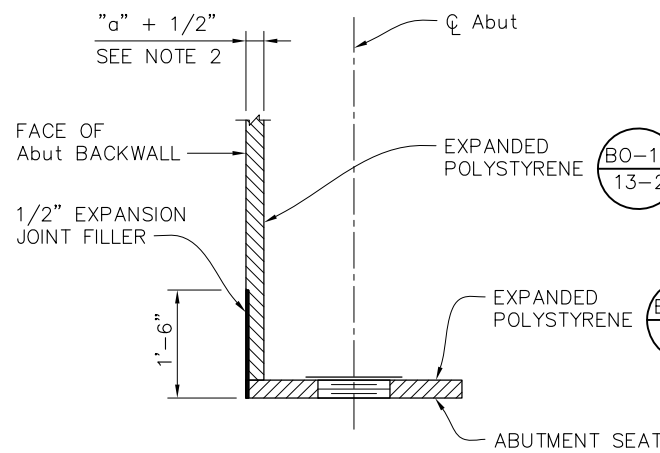
3/8" = 1'-0"

(ABUTMENT 1 NORTH WINGWALL SIMILAR)



SECTION D-D

1/2" = 1'-0"



DETAIL A

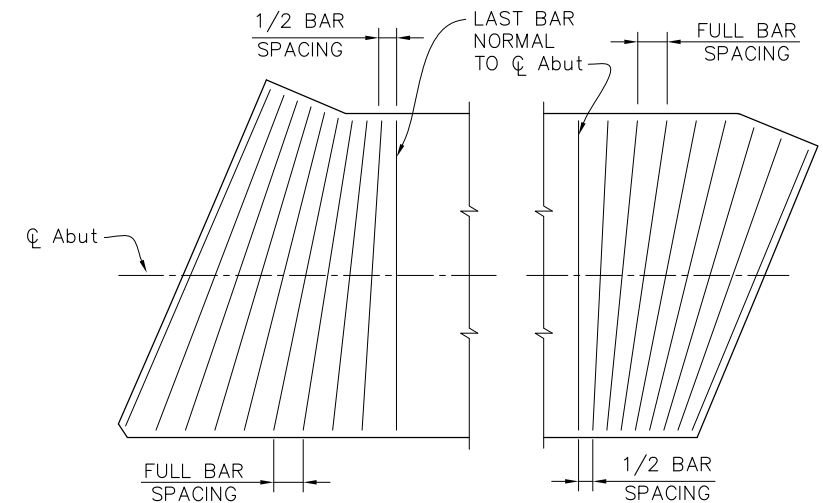
NO SCALE

LEGEND:

∞ Indicates Bundled Reinf

NOTES:

- For "SECTION E-E", "SECTION F-F", "SECTION G-G" and "SECTION H-H", see "ABUTMENT DETAILS NO. 3" sheet.
- For "a" dimension, see Standard Plan **B6-21**.



ACUTE CORNER

OBTUSE CORNER

ABUTMENT FOOTING DETAIL

NO SCALE

(Abut 1 SHOWN, Abut 4 SIMILAR)

NOTE:
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CHECKED BY	AF

REGISTERED CIVIL ENGINEER	_____
PLANS APPROVAL DATE	_____

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RESIDENT ENGINEER AS BUILT DRAWINGS BY:				RESIDENT ENGINEER AS BUILT DRAWINGS BY:			
DATE	REVISION	BY	APPROVED	DATE	REVISION	BY	APPROVED

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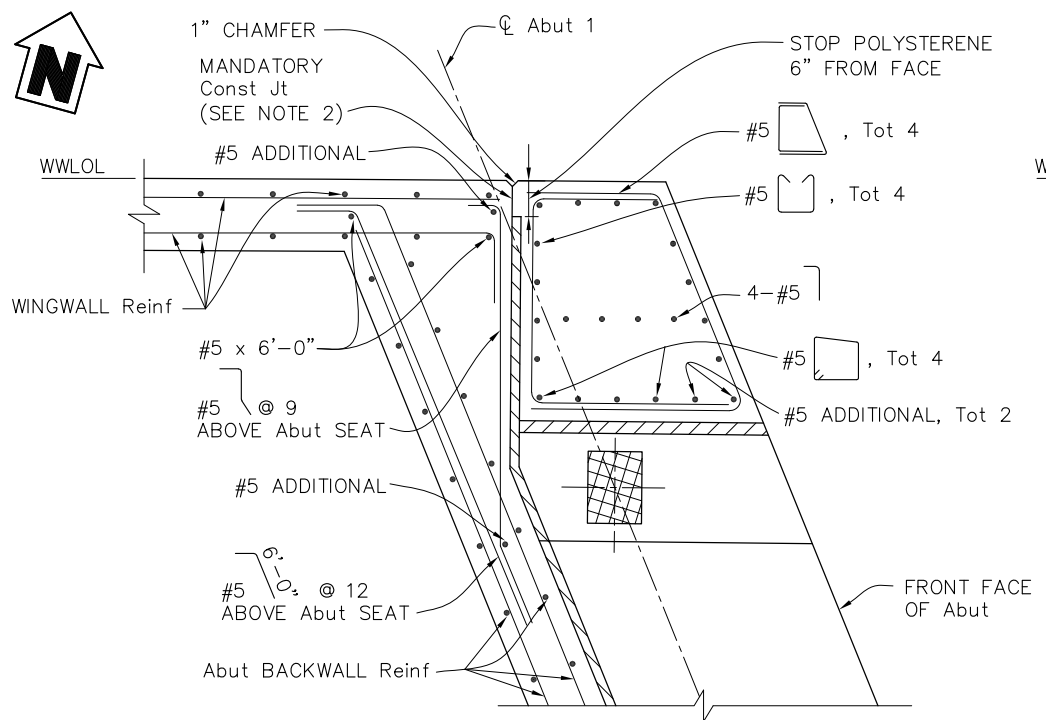
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ABUTMENT DETAILS NO. 2	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

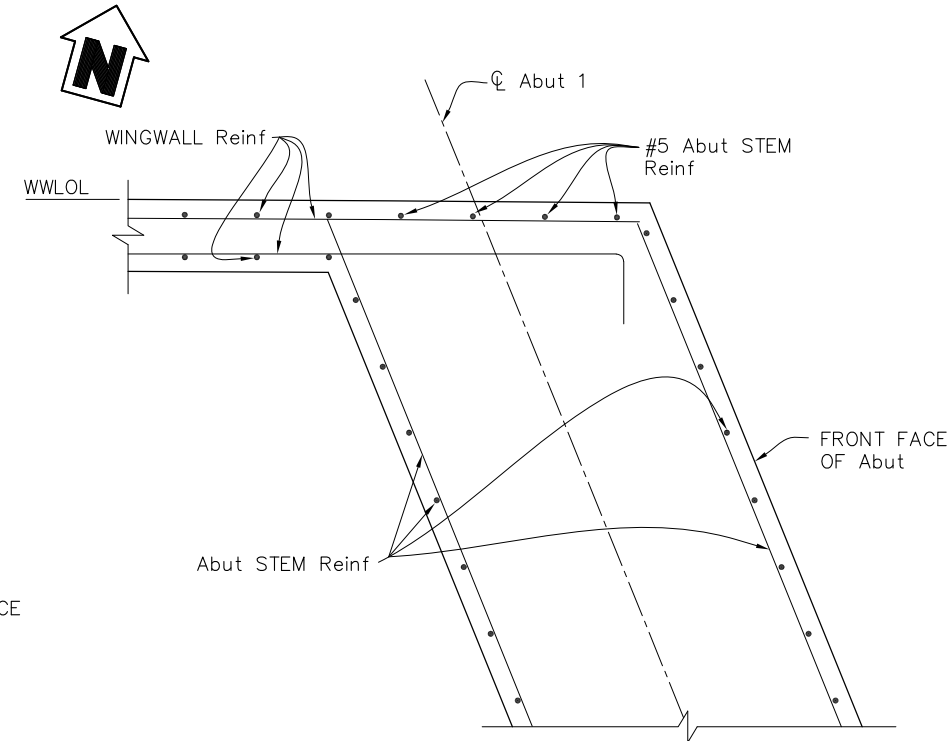
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BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	25
TOTAL SHEETS	39

FINAL SUBMITTAL

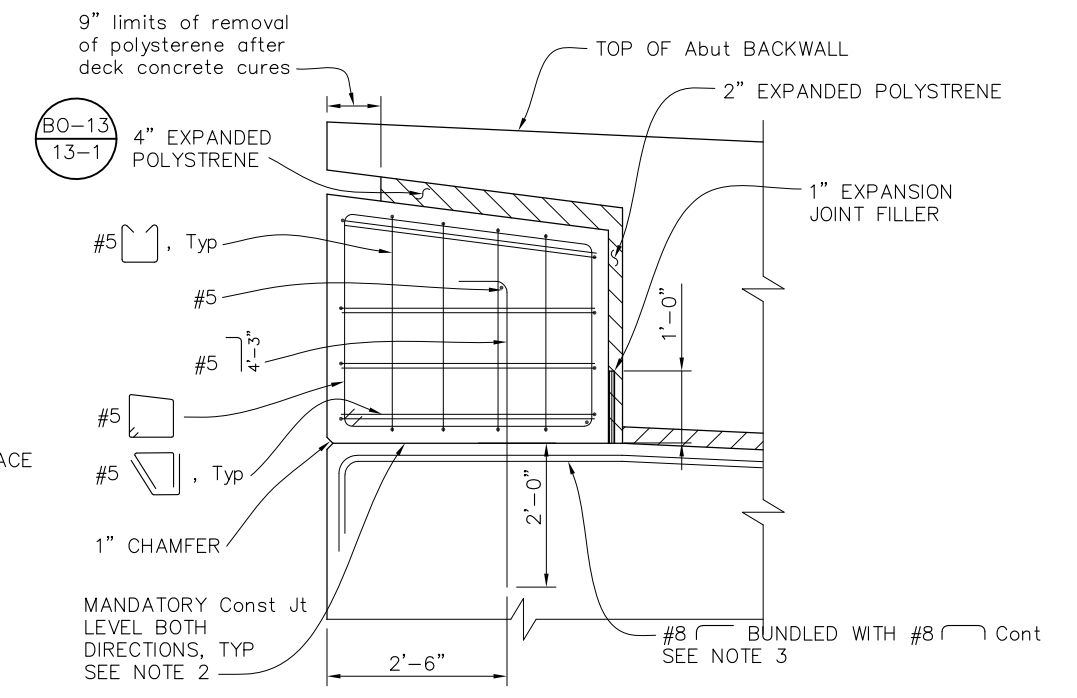
S-8



SECTION E-E
3/4" = 1'-0"



SECTION F-F
3/4" = 1'-0"

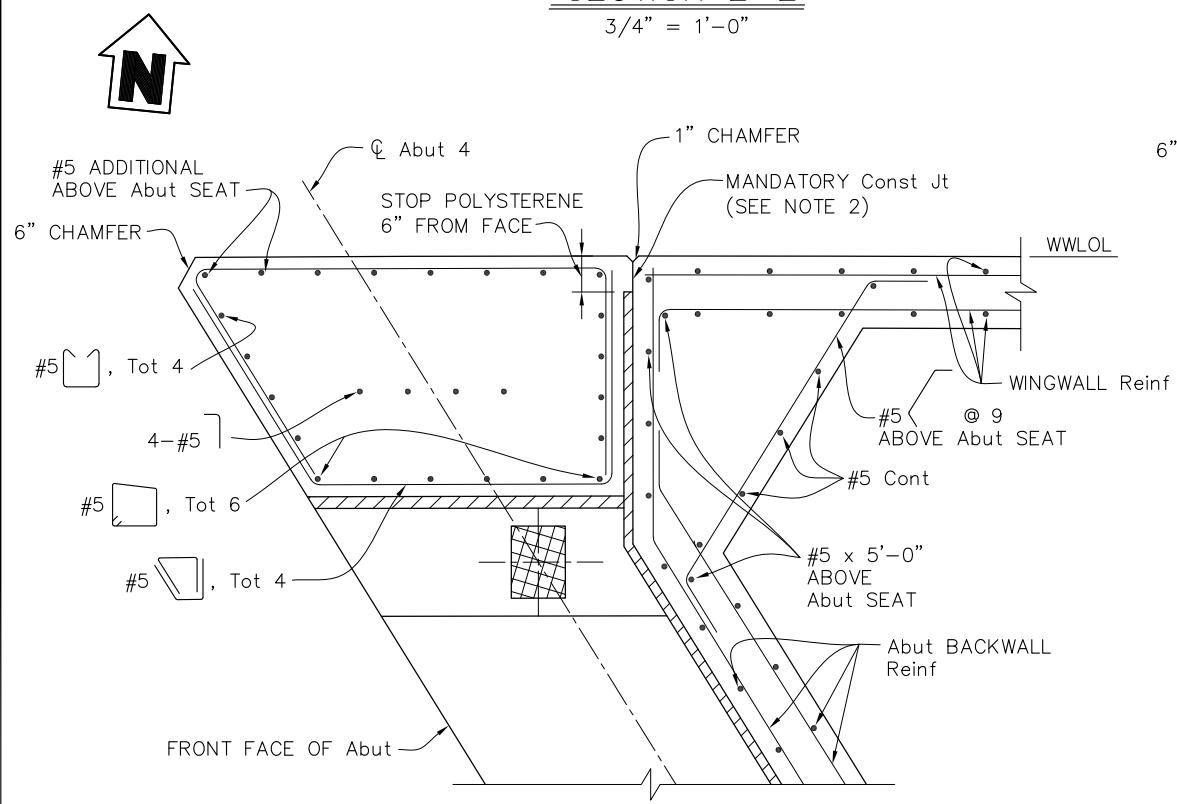


NOTE: Barrier not shown.

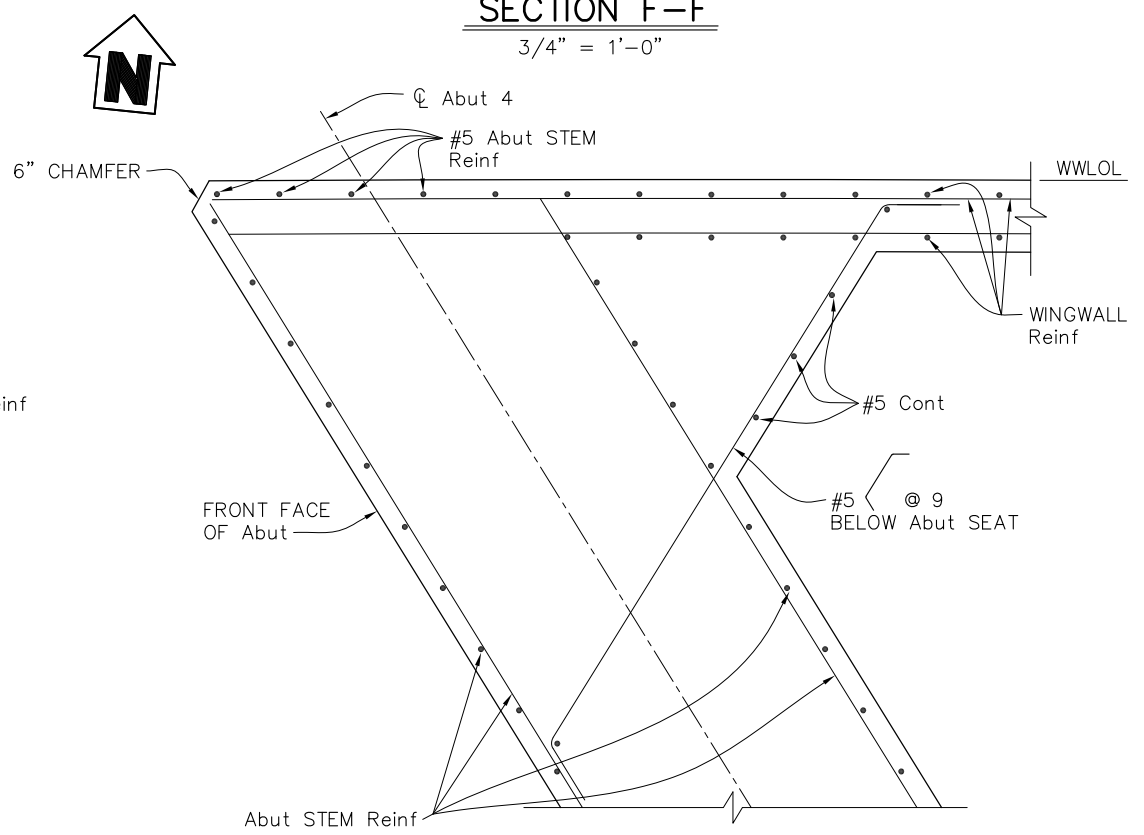
SHEAR KEY DETAIL

3/4" = 1'-0"

(Abut 4 NORTH SHEAR KEY SHOWN,
Abut 4 SOUTH SHEAR KEY SIMILAR;
Abut 1 SHEAR KEYS SIMILAR)



SECTION G-G
3/4" = 1'-0"



SECTION H-H
3/4" = 1'-0"

NOTES:

1. For reinforcement not shown, see "ABUTMENT 1 LAYOUT".
2. Mandatory joint surface to be smooth finished and lined with 15 pound construction paper.
3. For placement and number of hanger bars, see "SECTION A-A" on "ABUTMENT 1 LAYOUT" sheet.

NOTE:
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DESIGN BY	AB
DRAWING BY	EP
CHECKED BY	AF

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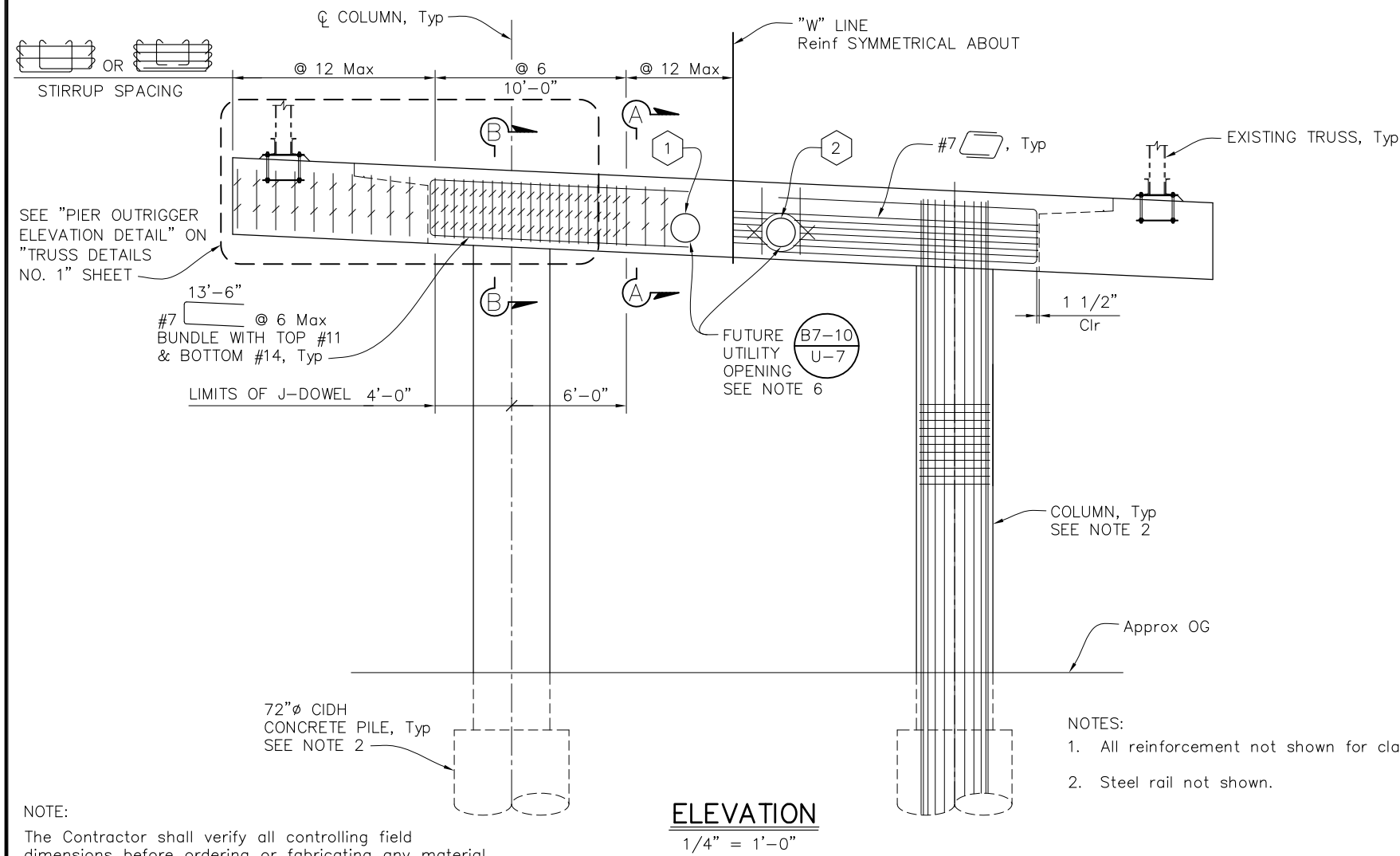
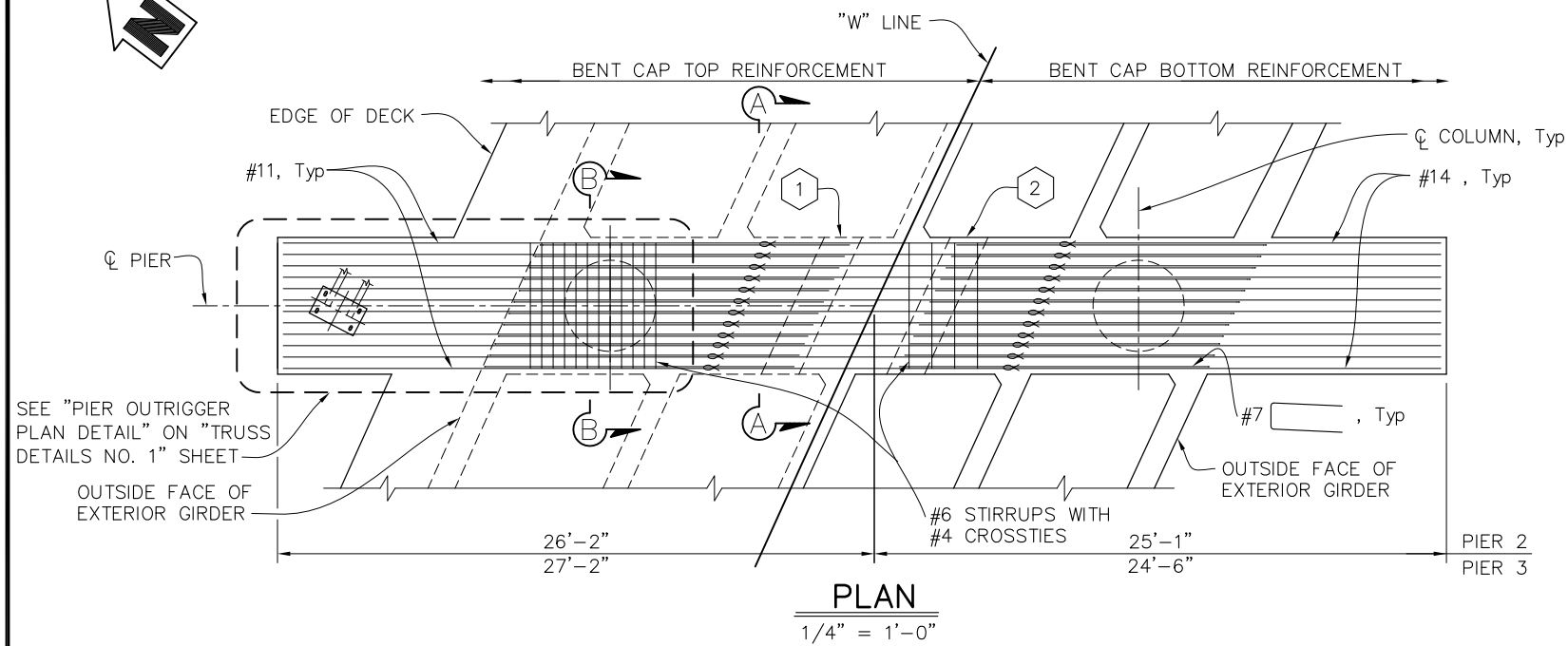
SONOMA COUNTY
PUBLIC INFRASTRUCTURE
JOHANNES J. HOEVERTSZ, P.E., DIRECTOR

ABUTMENT DETAILS NO. 3	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

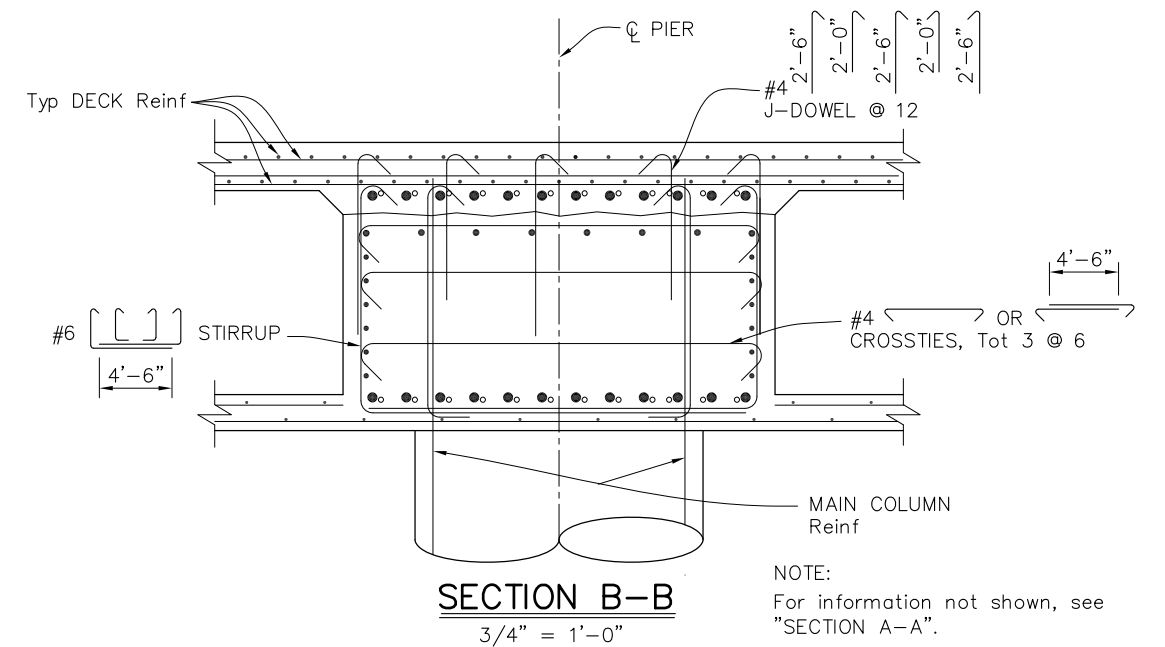
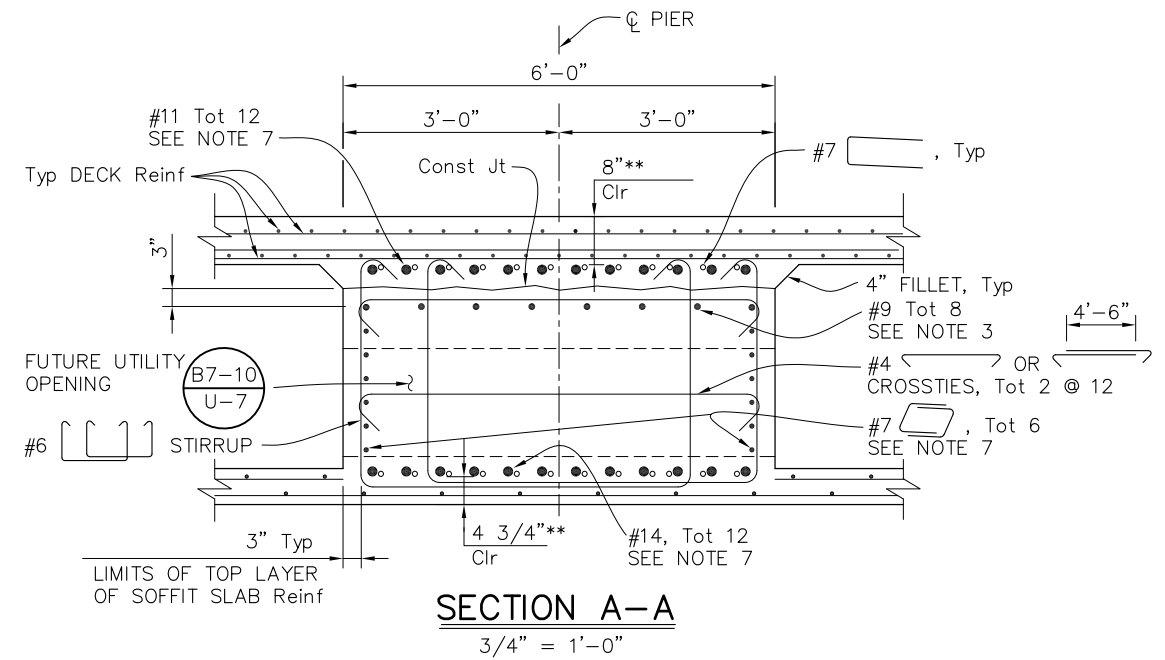
ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	26
TOTAL SHEETS	39

FINAL SUBMITTAL

Plot: 7/20/2025 09:27:46 AM
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 Plot Date: 07/20/2025 09:27:46 AM



NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.



LEGEND:

- ∞ Indicates Bundled Bars
- ** Clearance to main cap reinforcement

NOTES:

1. Pier 2 shown, Pier 3 similar.
2. For column and pile reinforcement, see "PIER DETAILS" sheet.
3. Dimensions are approximate. Place a minimum of 3" below construction joint, but place to clear prestressing ducts.
4. No splices allowed in main bent cap reinforcement.
5. Place stirrup reinforcement perpendicular to ϕ Pier.
6. For description of utilities and sizes, see "GENERAL PLAN" sheet.
7. Provide service lap splice between columns, 6'-0" away from the ϕ column.

DESIGN BY	KA
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	PLANS APPROVAL DATE
---------------------------	---------------------

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION			
CONSTRUCTION COMPLETED:			
RESIDENT ENGINEER AS BUILT DRAWINGS BY:			
DATE	REVISION	BY	APPROVED

moffatt & nichol
2185 NORTH CALIFORNIA BLVD, SUITE 500
WALNUT CREEK, CALIFORNIA 94596
(925) 944-5411

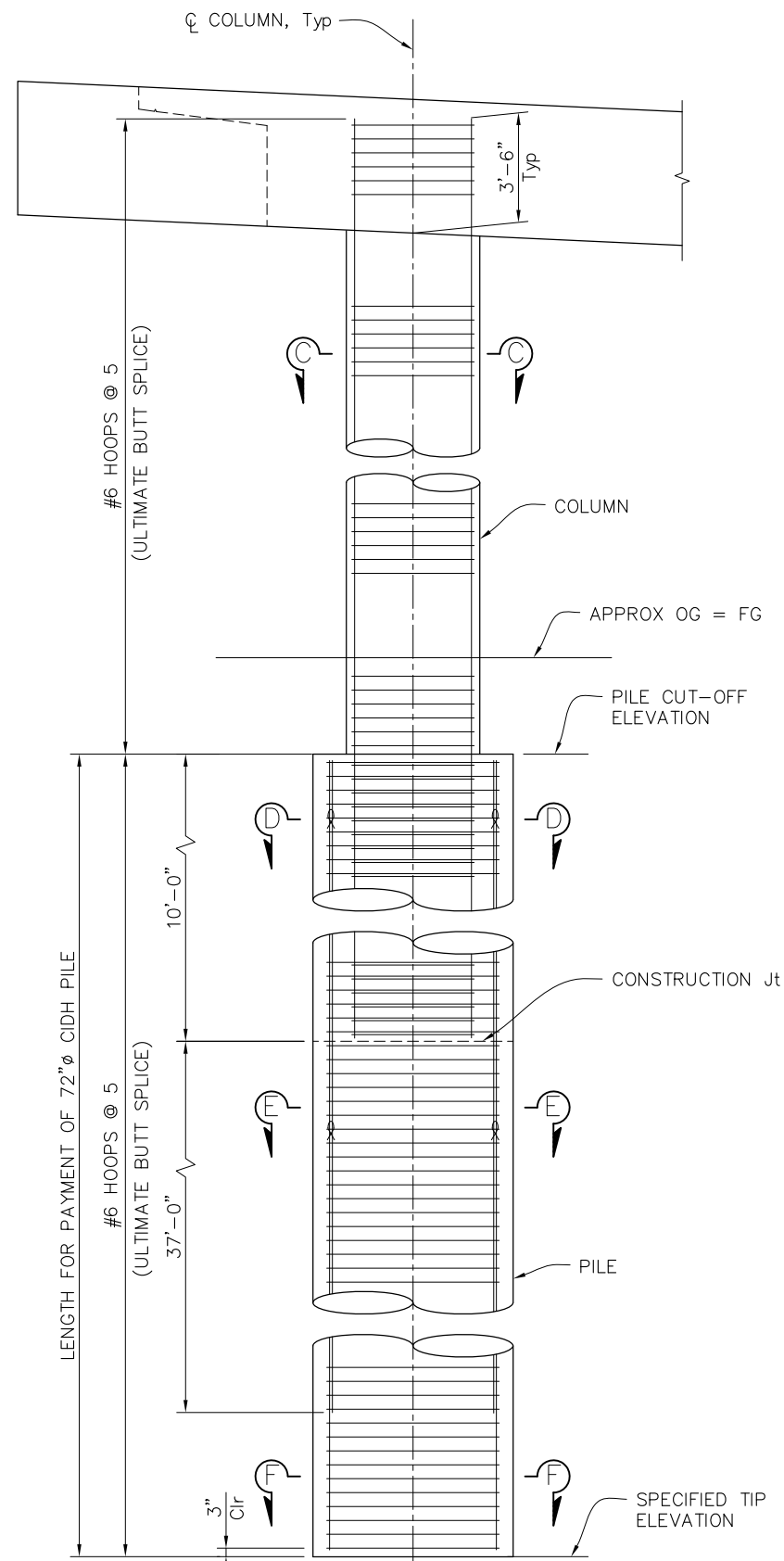
SONOMA COUNTY
PUBLIC INFRASTRUCTURE
JOHANNES J. HOEVERTSZ, P.E., DIRECTOR

PIER LAYOUT	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	27
TOTAL SHEETS	39

S-10

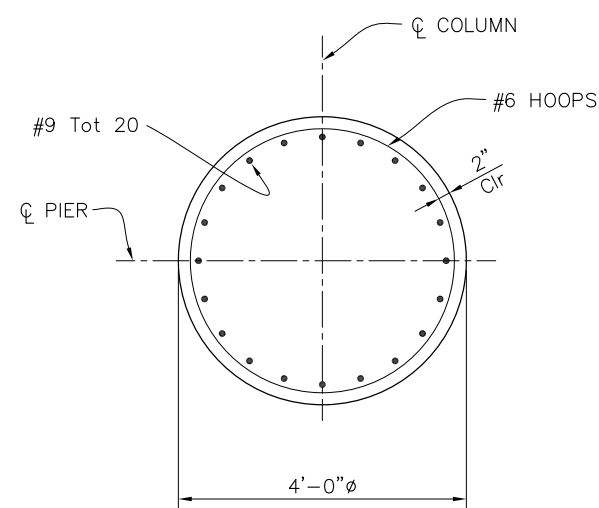
FINAL SUBMITTAL



COLUMN AND PILE DETAIL

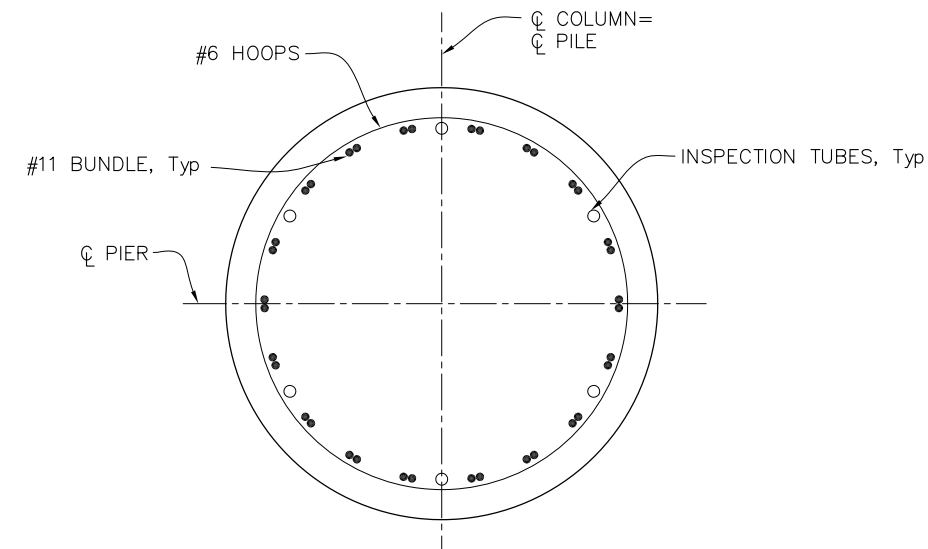
NOTE: $3/8" = 1'-0"$
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

NOTE: All reinforcement not shown for clarity.



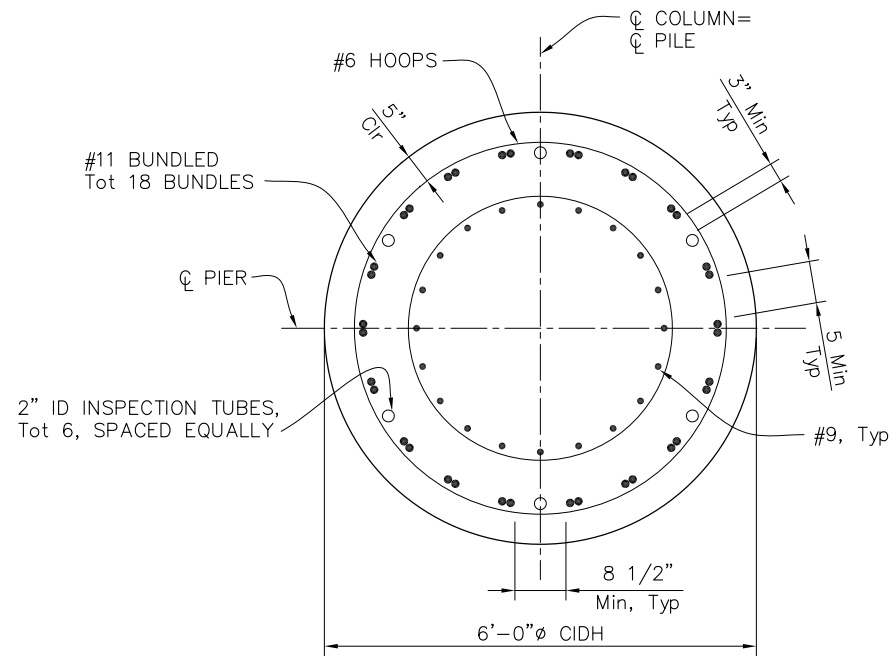
SECTION C-C

$3/4" = 1'-0"$



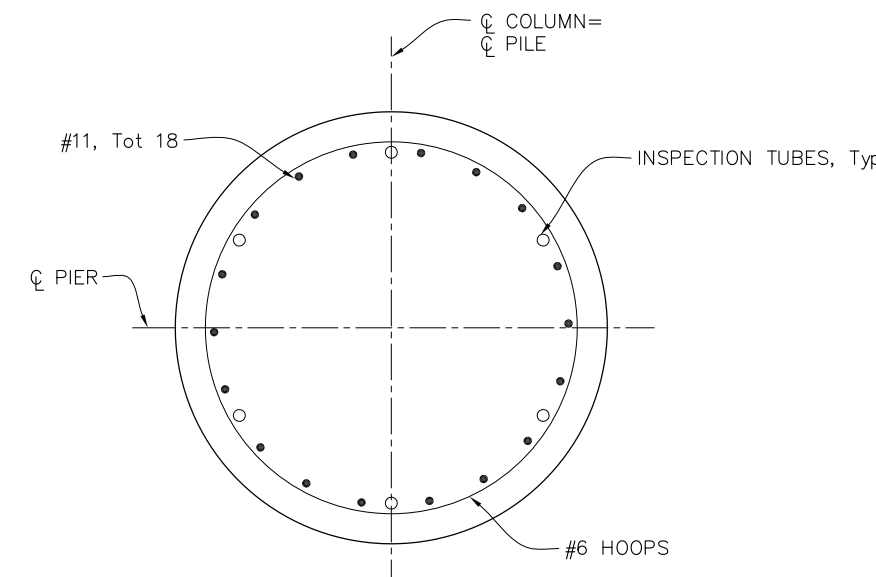
SECTION E-E

$3/4" = 1'-0"$



SECTION D-D

$3/4" = 1'-0"$



SECTION F-F

$3/4" = 1'-0"$

LEGEND:
∞ Indicates Bundled Bars

NOTES:

1. Pier 2, Column 1 shown. All columns similar.
2. No splices permitted in main column and upper 40'-0" of vertical CIDH pile reinforcement. Where permitted, splices in vertical CIDH pile reinforcement shall meet "Service Splice" requirement. Splices must be staggered.
3. All hoops must be butt welded continuous and meet "Ultimate Splice Requirement".

Path: Z:\Projects\2020\2020-05-15\Drawings\2020-05-15\2020-05-15.dwg Plot Date: Fri, 06/01/2024 10:15:40
 Plot: 0/10/2024 10:15:40

DESIGN BY	KA
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	_____
PLANS APPROVAL DATE	_____

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION		CONSTRUCTION COMPLETED:	
DATE	REVISION	BY	APPROVED

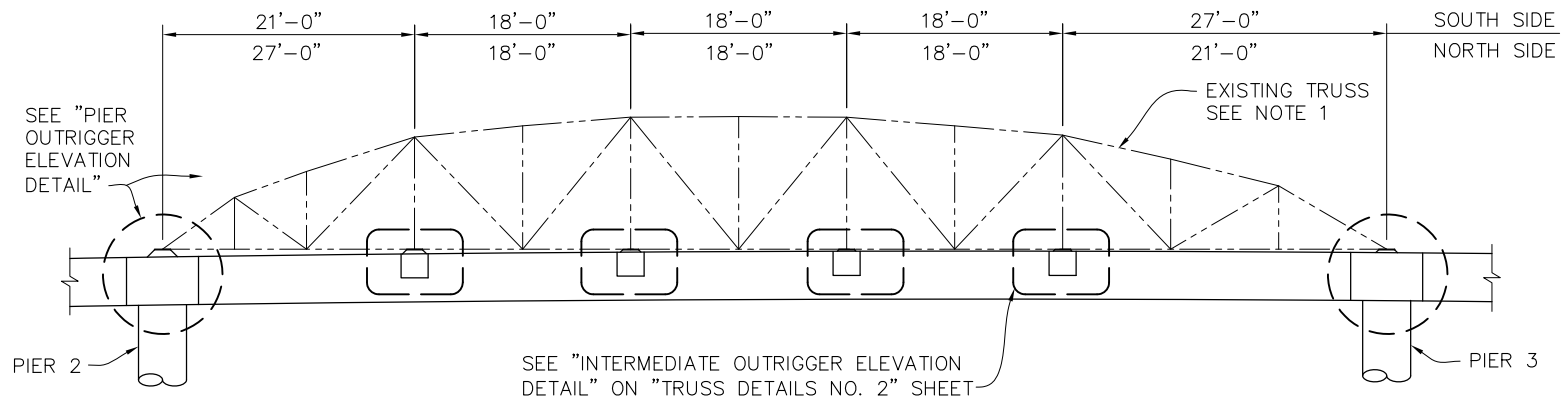
2185 NORTH CALIFORNIA BLVD, SUITE 500
 WALNUT CREEK, CALIFORNIA 94596
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 JOHANNES J. HOEVERTSZ, P.E., DIRECTOR

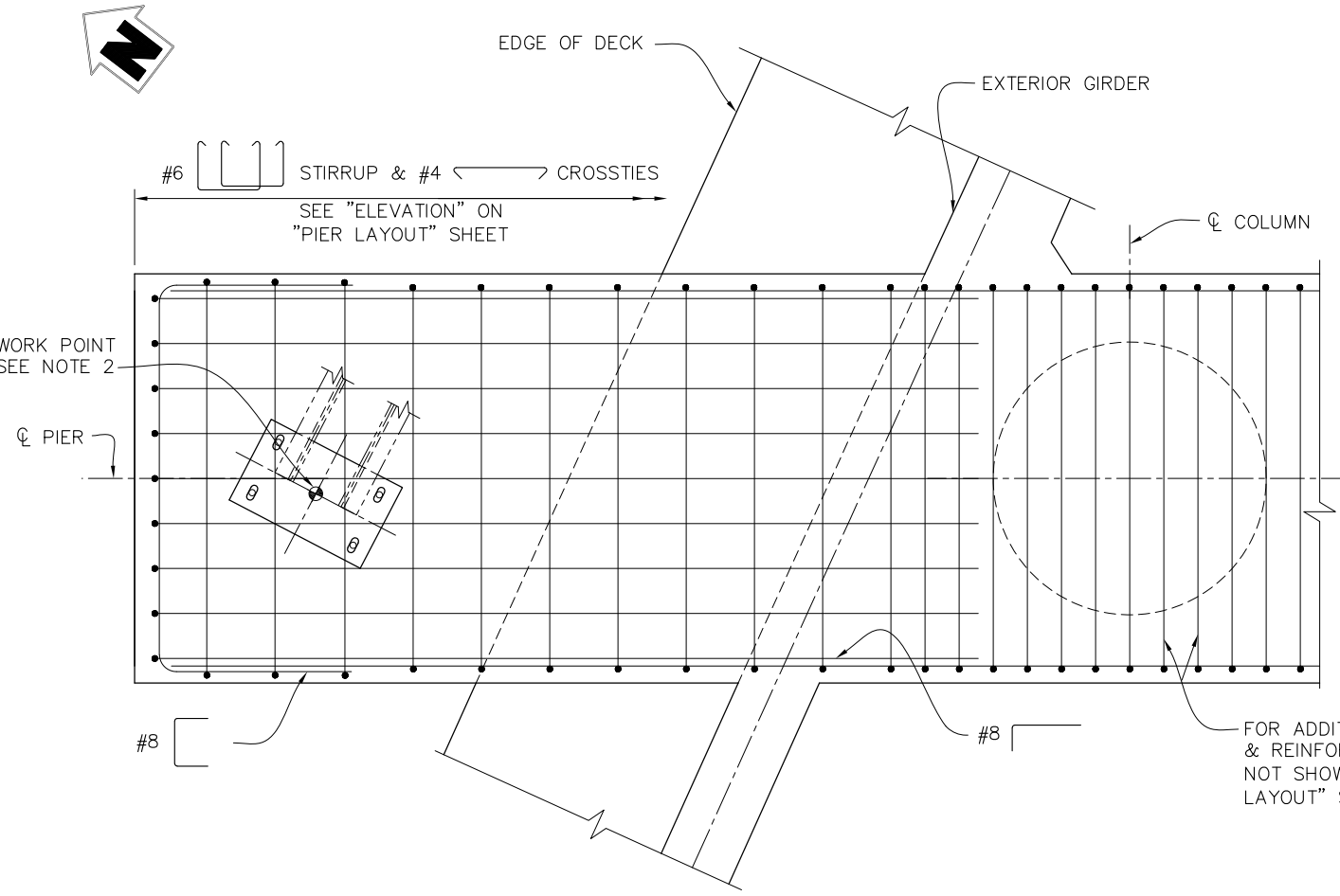
PIER DETAILS	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	28
TOTAL SHEETS	39

S-11 FINAL SUBMITTAL



EXISTING TRUSS ELEVATION
1/8" = 1'-0"



PLAN

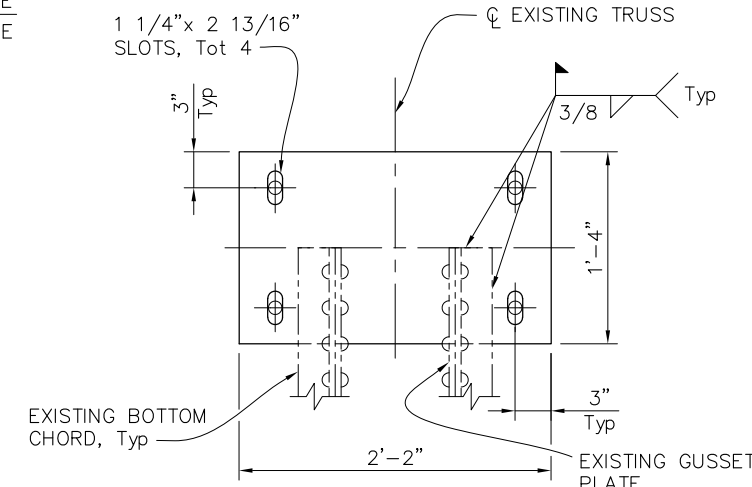
NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN BY	AB
DRAWING BY	EP
CHECKED BY	AF

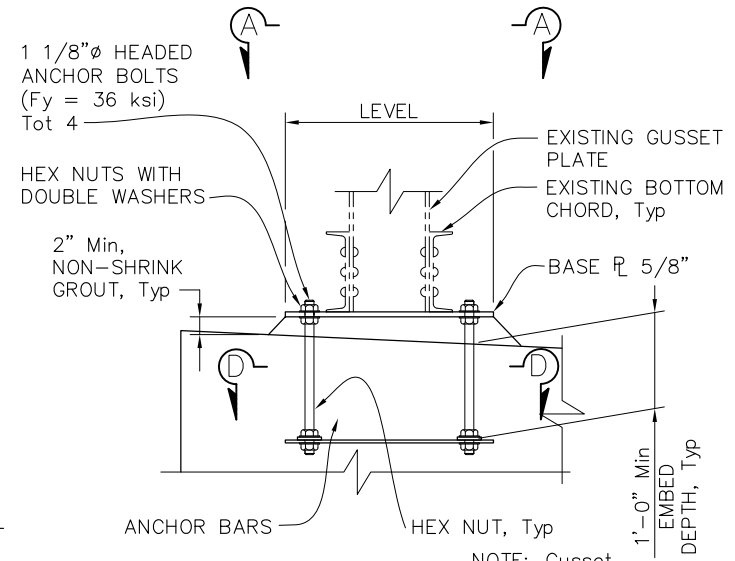
REGISTERED CIVIL ENGINEER	PLANS APPROVAL DATE
---------------------------	---------------------

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION			
CONSTRUCTION COMPLETED:			
RESIDENT ENGINEER AS BUILT DRAWINGS BY:			
DATE	REVISION	BY	APPROVED

PIER OUTRIGGER DETAIL
3/4" = 1'-0"
(PIER 2 SHOWN, PIER 3 SIMILAR)

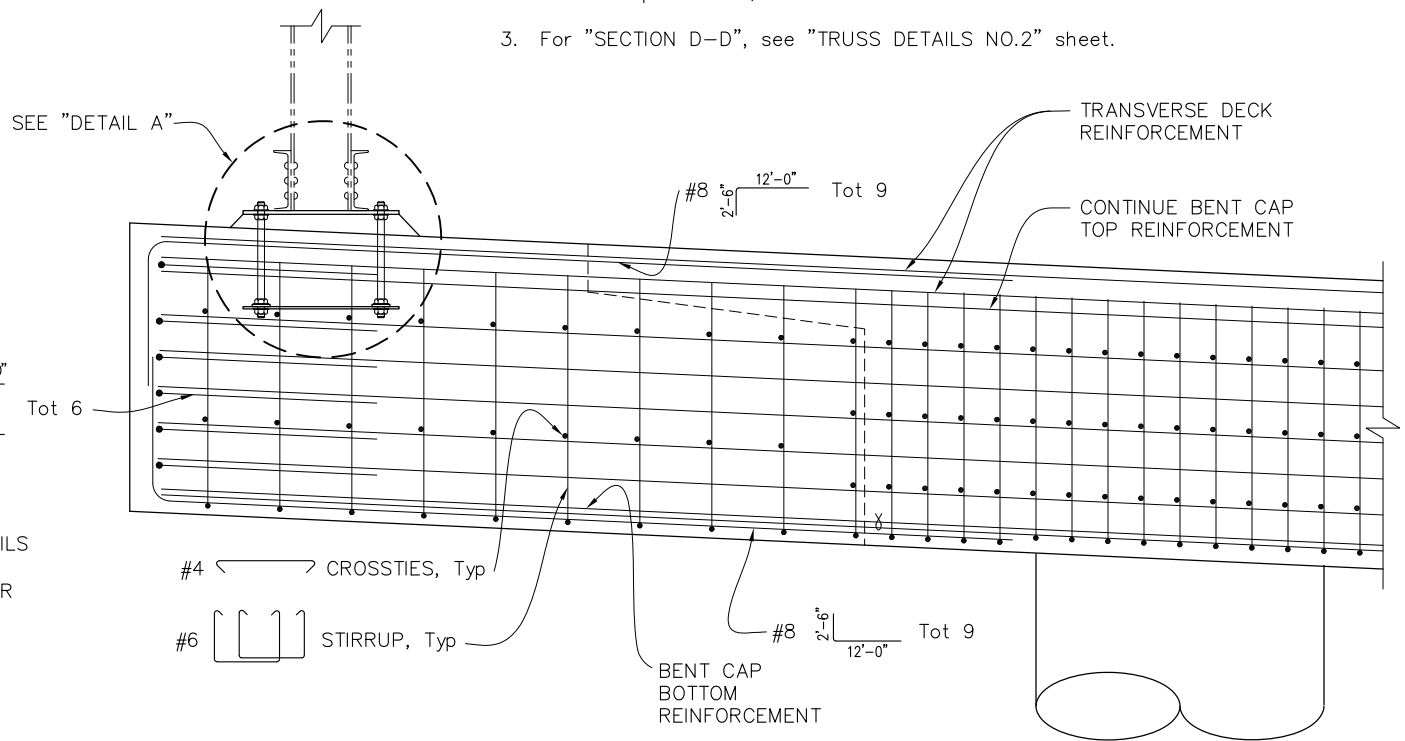


SECTION A-A
1 1/2" = 1'-0"



DETAIL A
1" = 1'-0"

- NOTES:
- Existing truss panels to be removed, restored, and installed on new structure. Restoration includes replacing removed, missing, loose, and damaged rivets with high strength bolts and cleaning and painting the steel truss members.
 - For work point data, see table on "GIRDER LAYOUT" sheet.
 - For "SECTION D-D", see "TRUSS DETAILS NO.2" sheet.



ELEVATION

S-12

FINAL SUBMITTAL

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION			
CONSTRUCTION COMPLETED:			
RESIDENT ENGINEER AS BUILT DRAWINGS BY:			
DATE	REVISION	BY	APPROVED

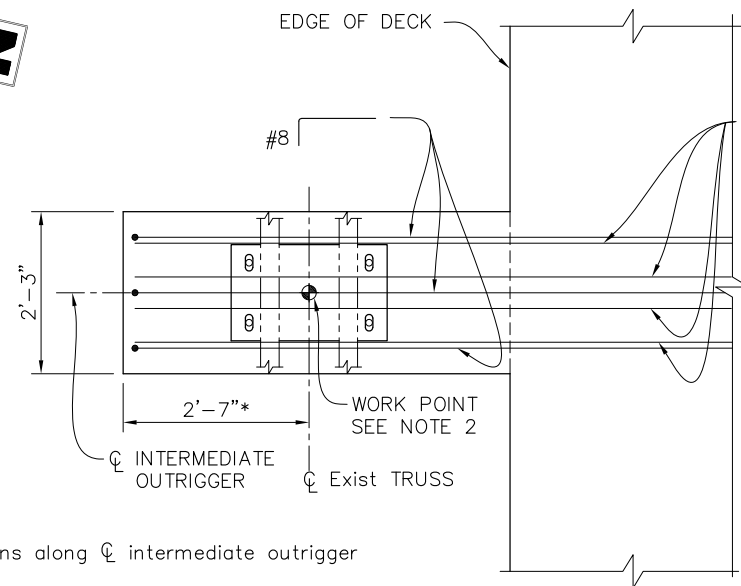
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WALNUT CREEK, CALIFORNIA 94596
(925) 944-5411



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PUBLIC INFRASTRUCTURE
JOHANNES J. HOEVERTZ, P.E., DIRECTOR

TRUSS DETAILS NO. 1	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

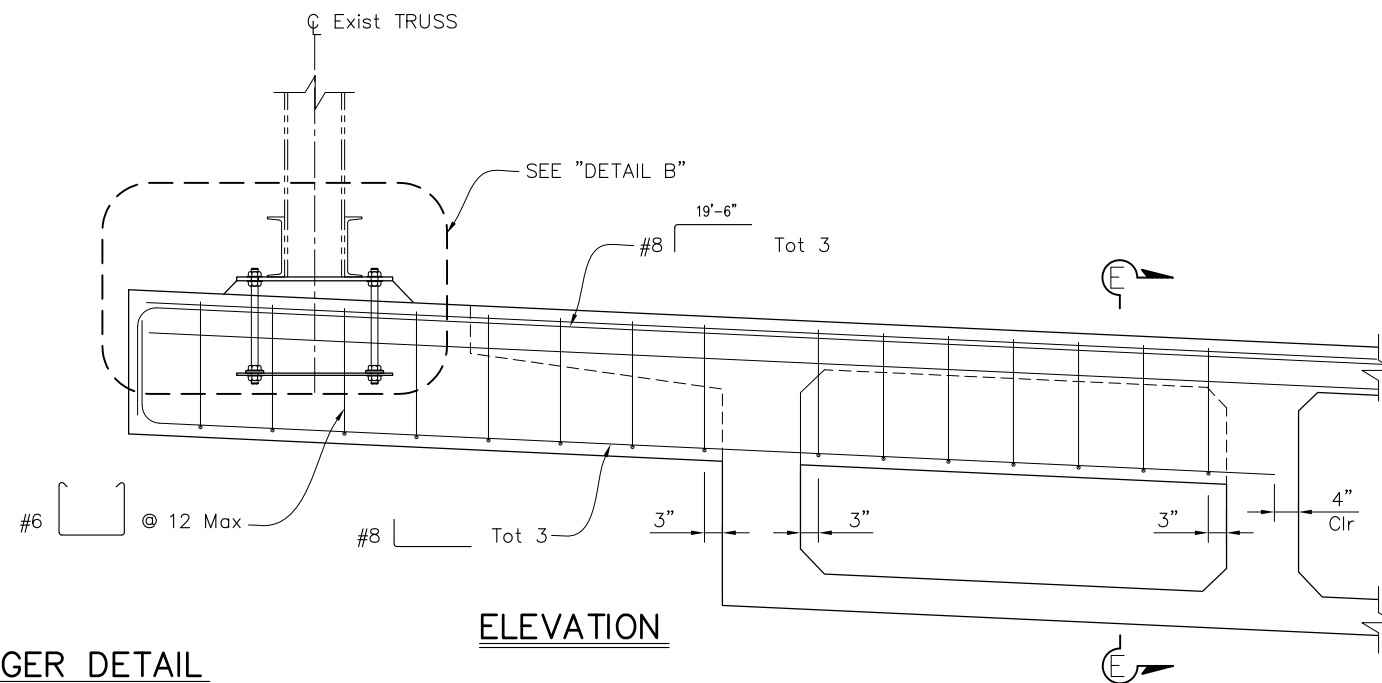
ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	29
TOTAL SHEETS	39



* Dimensions along ϕ intermediate outrigger

PLAN

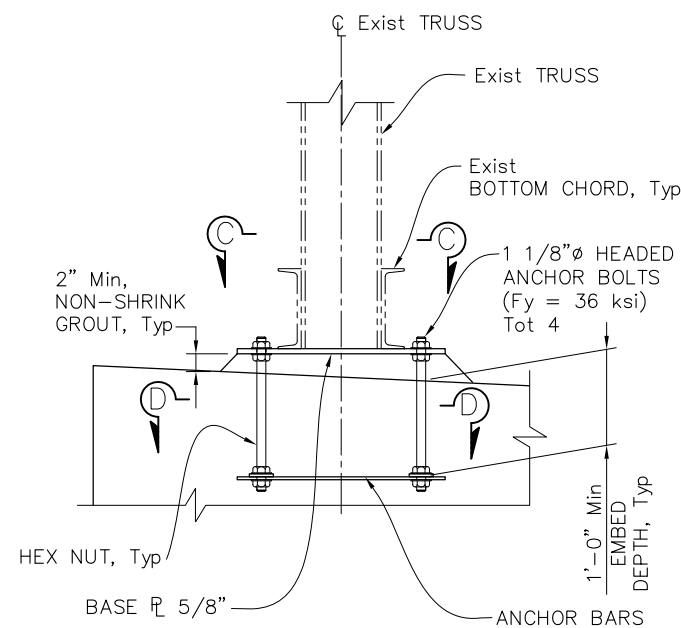
TRANSVERSE DECK SLAB
TOP REINFORCEMENT



ELEVATION

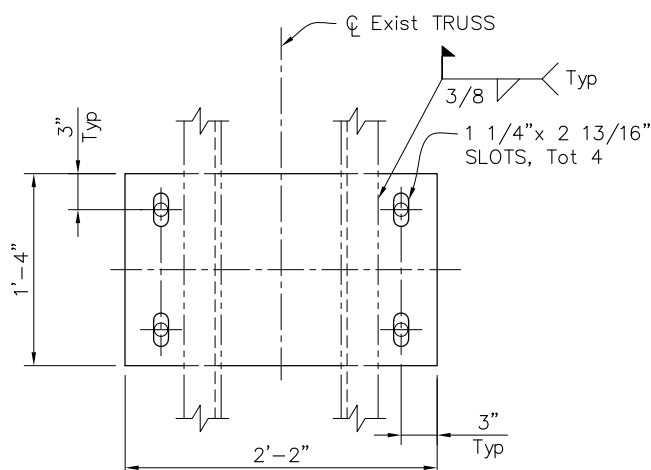
INTERMEDIATE OUTRIGGER DETAIL

3/4" = 1'-0"



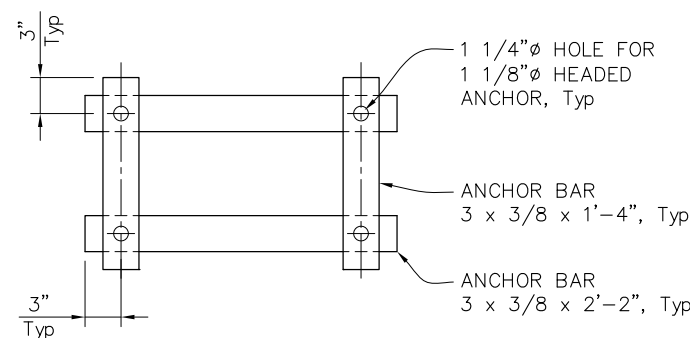
DETAIL B

1" = 1'-0"



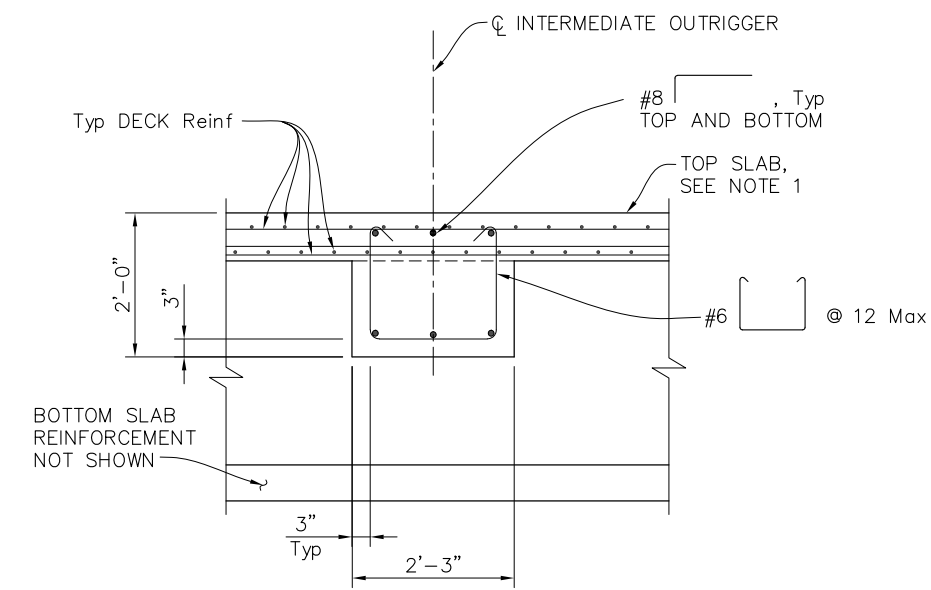
SECTION C-C

1 1/2" = 1'-0"



SECTION D-D

1 1/2" = 1'-0"



SECTION E-E

3/4" = 1'-0"

LEGEND:

Indicates work point @ ϕ Truss

NOTES:

1. For top and bottom slab reinforcement see "TYPICAL SECTION" sheet.
2. For work point details, see table on "GIRDER LAYOUT" sheet.

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

File: 272020-05-TRUSS-02.dwg
 Plot: 272020-05-TRUSS-02.dwg
 Plot Date: 06/08/2025 at 15:40

DESIGN BY	AB
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	_____
PLANS APPROVAL DATE	_____

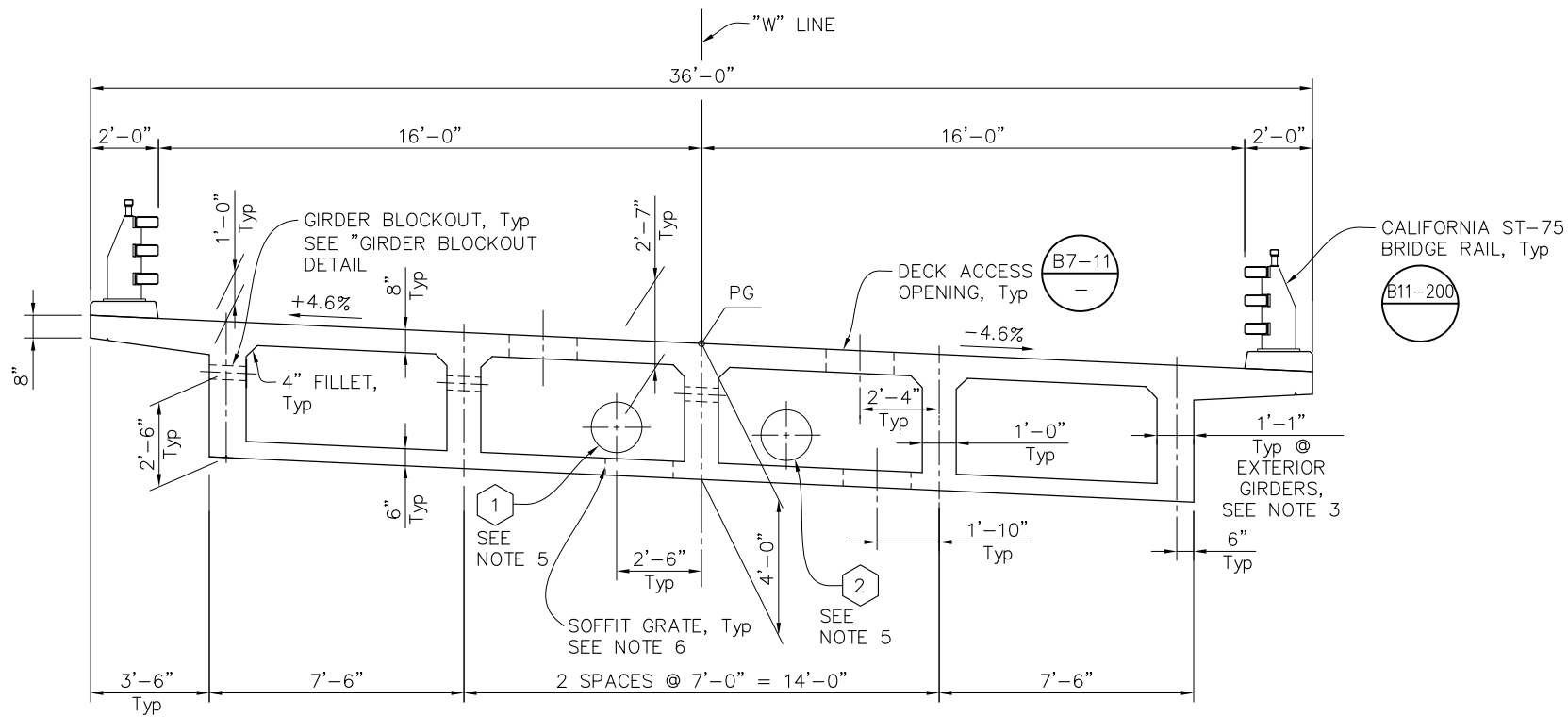
"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION			
CONSTRUCTION COMPLETED:			
DATE	REVISION	BY	APPROVED

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TRUSS DETAILS NO. 2	ROAD NUMBER	09018
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	BUDGET NUMBER	C11002
	FISCAL YEAR	20XX-XX
	SHEET NUMBER	30
	TOTAL SHEETS	39

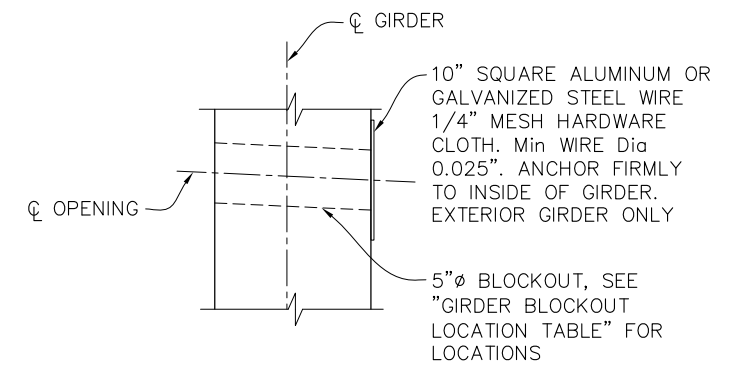
S-13 FINAL SUBMITTAL



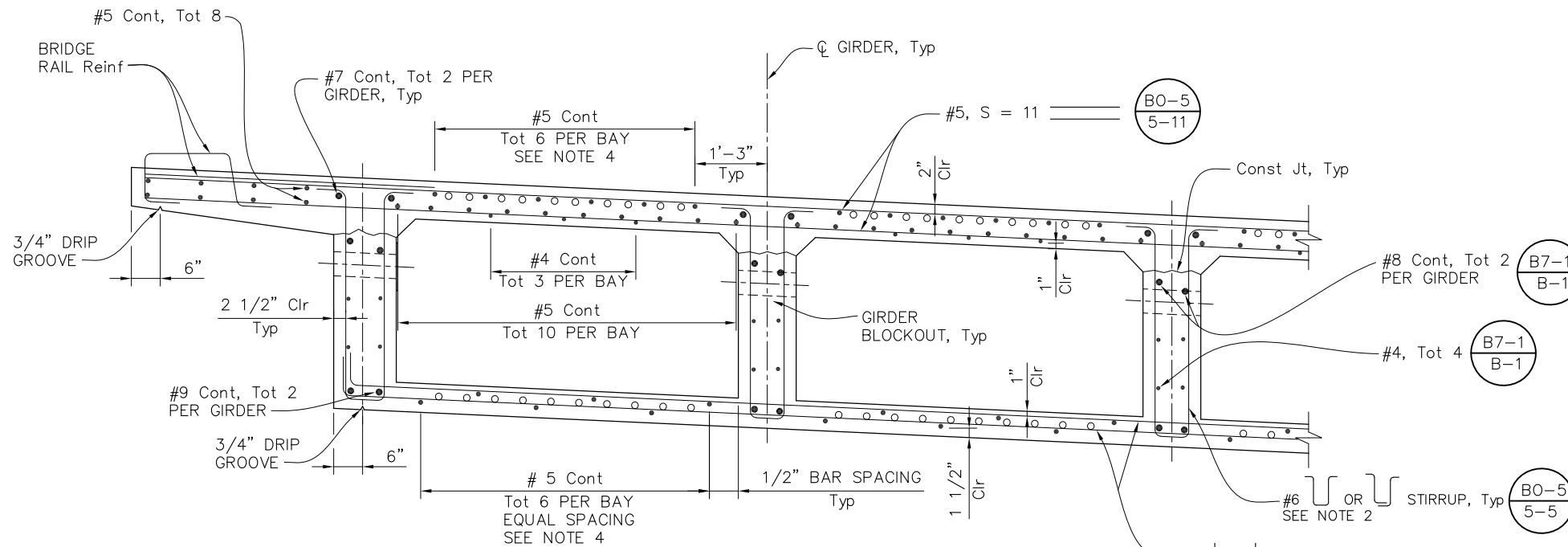
TYPICAL SECTION
3/8" = 1'-0"

LEGEND:

- Indicates additional slab reinforcement. See "GIRDER REINFORCEMENT" sheet for details.
- Indicates continuous slab & girder reinforcement



GIRDER BLOCKOUT DETAIL
1 1/2" = 1'-0"



PART TYPICAL SECTION
3/4" = 1'-0"

GIRDER BLOCKOUT LOCATION TABLE		
Girder	Opening 1 (Sta)	Opening 2 (Sta)
Lt Exterior Girder	16+35.00	16+40.00
Lt Interior Girder	16+35.00	16+40.00
Center Girder	-	16+40.00

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN BY	AB
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	PLANS APPROVAL DATE
---------------------------	---------------------

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION			
CONSTRUCTION COMPLETED:			
RESIDENT ENGINEER AS BUILT DRAWINGS BY:			
DATE	REVISION	BY	APPROVED

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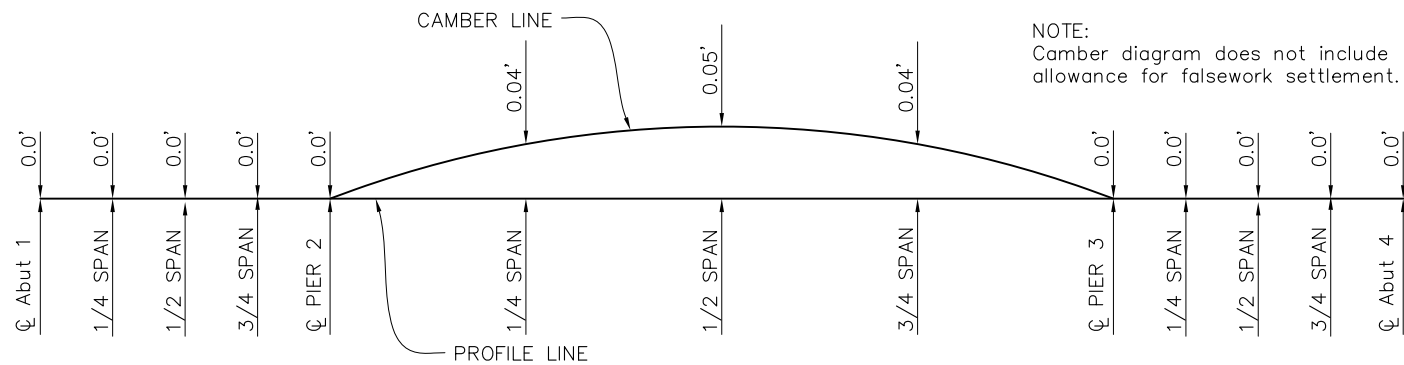
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PUBLIC INFRASTRUCTURE
JOHANNES J. HOEVERTSZ, P.E., DIRECTOR

TYPICAL SECTION	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	31
TOTAL SHEETS	39

S-14 FINAL SUBMITTAL



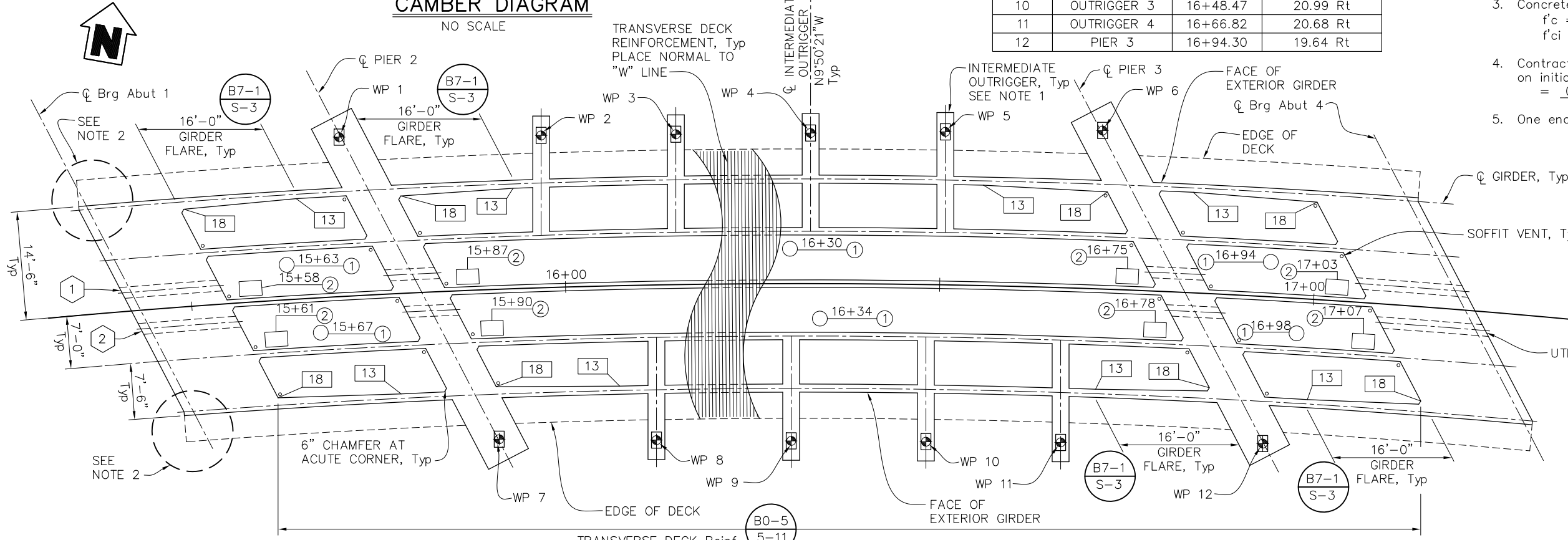
WORK POINT DATA			
WORK POINT	LOCATION (☐ Exist TRUSS)	Sta	OFFSET FROM "W" LINE (FEET)
1	PIER 2	15+70.89	21.28 Lt
2	OUTRIGGER 1	15+97.38	20.36 Lt
3	OUTRIGGER 2	16+15.06	20.10 Lt
4	OUTRIGGER 3	16+32.73	20.12 Lt
5	OUTRIGGER 4	16+50.41	20.44 Lt
6	PIER 3	16+71.01	21.17 Lt
7	PIER 2	15+90.40	20.03 Rt
8	OUTRIGGER 1	16+11.78	20.73 Rt
9	OUTRIGGER 2	16+30.12	21.01 Rt
10	OUTRIGGER 3	16+48.47	20.99 Rt
11	OUTRIGGER 4	16+66.82	20.68 Rt
12	PIER 3	16+94.30	19.64 Rt

PRESTRESSING NOTES

- 270 ksi Low Relaxation Strand:
 - Pjack = 4175 kips
 - Anchor Set = 3/8 in
 - Total Number of girders = 5
 - Friction wobble coefficient $\mu = 0.15$
 - Friction curvature coefficient $k = 0.0002/\text{ft}$
- Distribution of prestress force (Pjack) between girders shall not exceed the ratio 10:9. Maximum final force variation between girders shall not exceed 95 kips.
- Concrete:
 - $f'_c = 4000$ psi @ 28 days
 - $f'_{ci} = 3500$ psi @ time of stressing
- Contractor shall submit elongation calculations based on initial stress at = 0.882 times jacking stress.
- One end stressing to be performed from Abut 1.

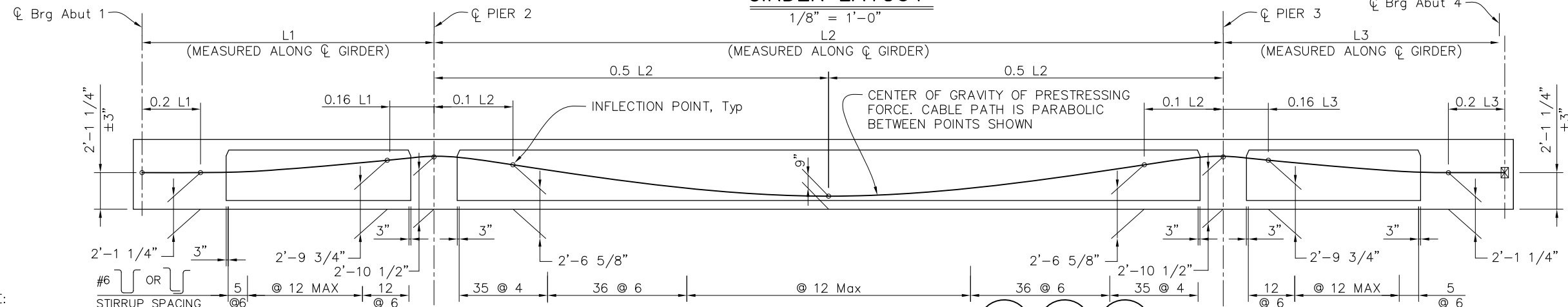
CAMBER DIAGRAM

NO SCALE



GIRDER LAYOUT

1/8" = 1'-0"



LONGITUDINAL SECTION

NO SCALE

LEGEND:

- XX Indicates girder stem width in inches
- WP Indicates work point @ ☐ Exist Truss
- ☒ Indicates theoretical point of no movement for prestressing
- Indicates Soffit Vent
- X Future Utility, see "GENERAL PLAN" sheet
- ① Deck Access Opening
- ② Soffit grate. see "GIRDER DETAILS" sheet

NOTES:

- For details not shown, see "TRUSS DETAILS NO. 1" and "TRUSS DETAILS NO. 2" sheets.
- For deck and soffit corner reinforcement details, see "MISCELLANEOUS DETAILS" sheet.
- Remove formwork within box girder cells containing future utility openings after construction.

NOTE: The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

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DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	
PLANS APPROVAL DATE	

CONSTRUCTION COMPLETED:			
"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION			
DATE	REVISION	BY	APPROVED

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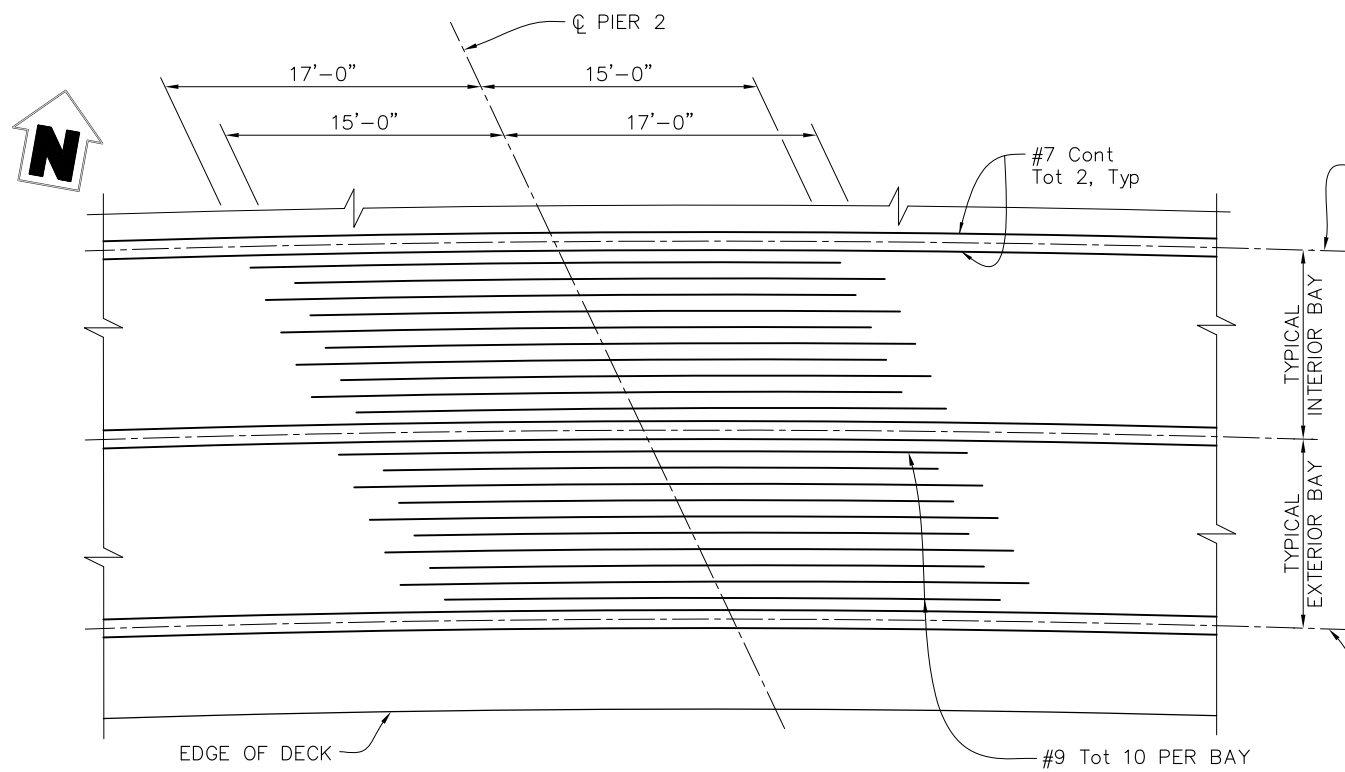
SONOMA COUNTY
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 JOHANNES J. HOEVERTSZ, P.E., DIRECTOR

GIRDER LAYOUT
WATMAUGH ROAD BRIDGE
REPLACEMENT OVER SONOMA CREEK

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	32
TOTAL SHEETS	39

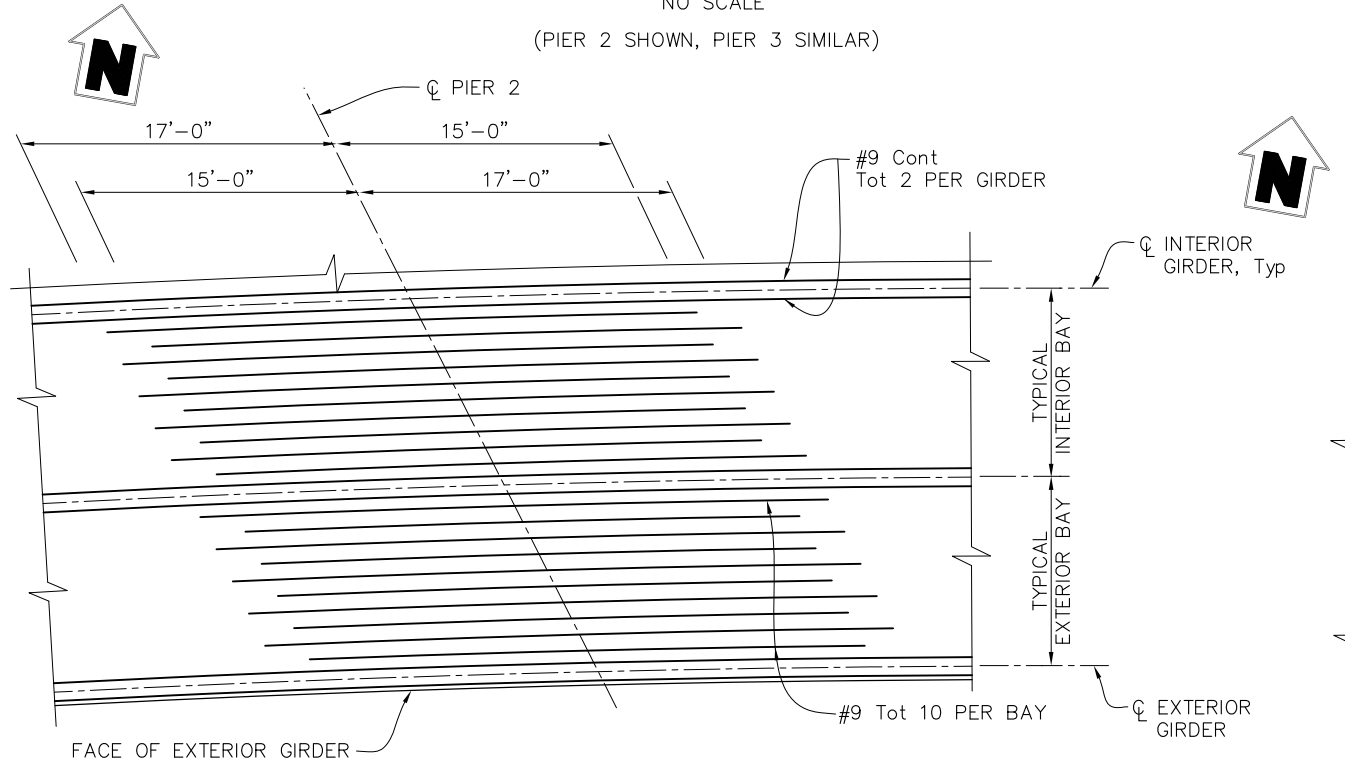
S-15

FINAL SUBMITTAL



ADDITIONAL TOP SLAB REINFORCEMENT

NO SCALE
(PIER 2 SHOWN, PIER 3 SIMILAR)



ADDITIONAL BOTTOM SLAB REINFORCEMENT

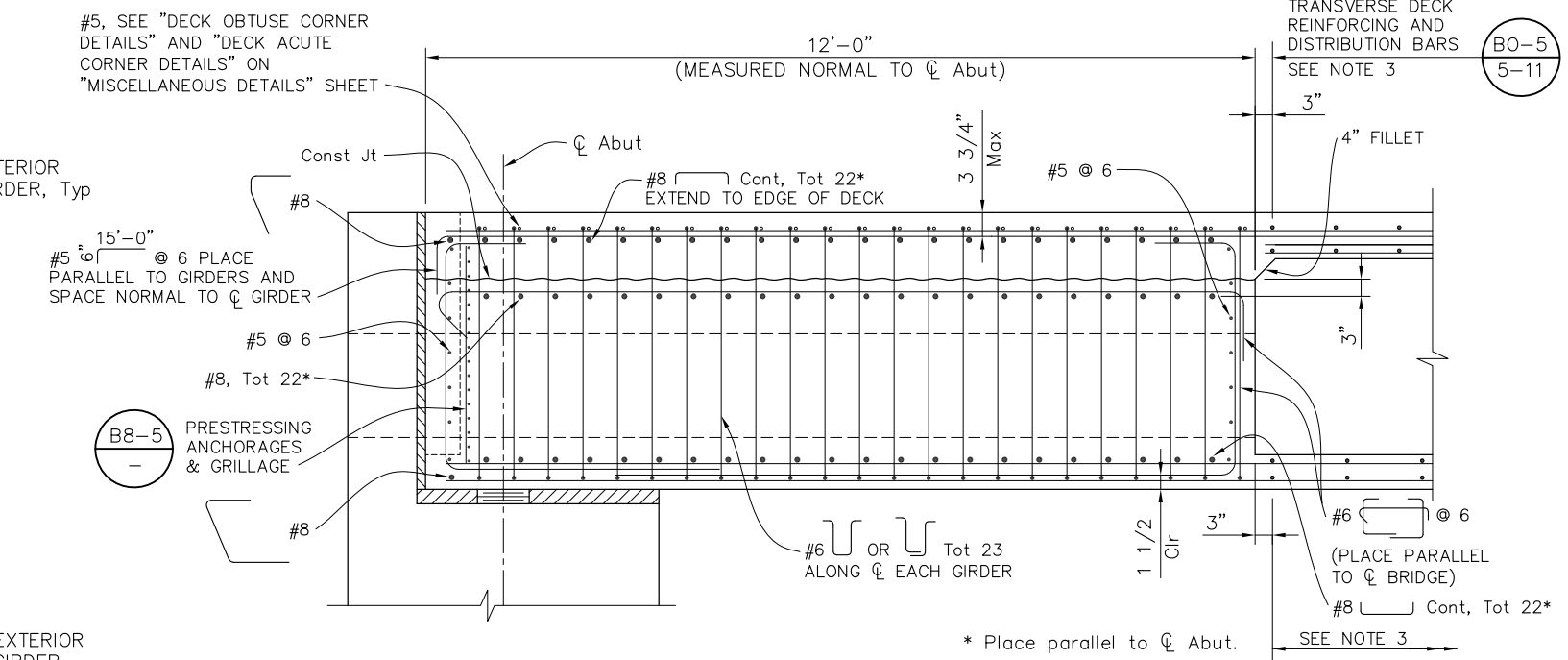
NO SCALE
(PIER 2 SHOWN, PIER 3 SIMILAR)

NOTE:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN BY	AB
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	PLANS APPROVAL DATE
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"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION				CONSTRUCTION COMPLETED:			
RESIDENT ENGINEER AS BUILT DRAWINGS BY:				BY APPROVED			
DATE	REVISION	BY	APPROVED	DATE	REVISION	BY	APPROVED



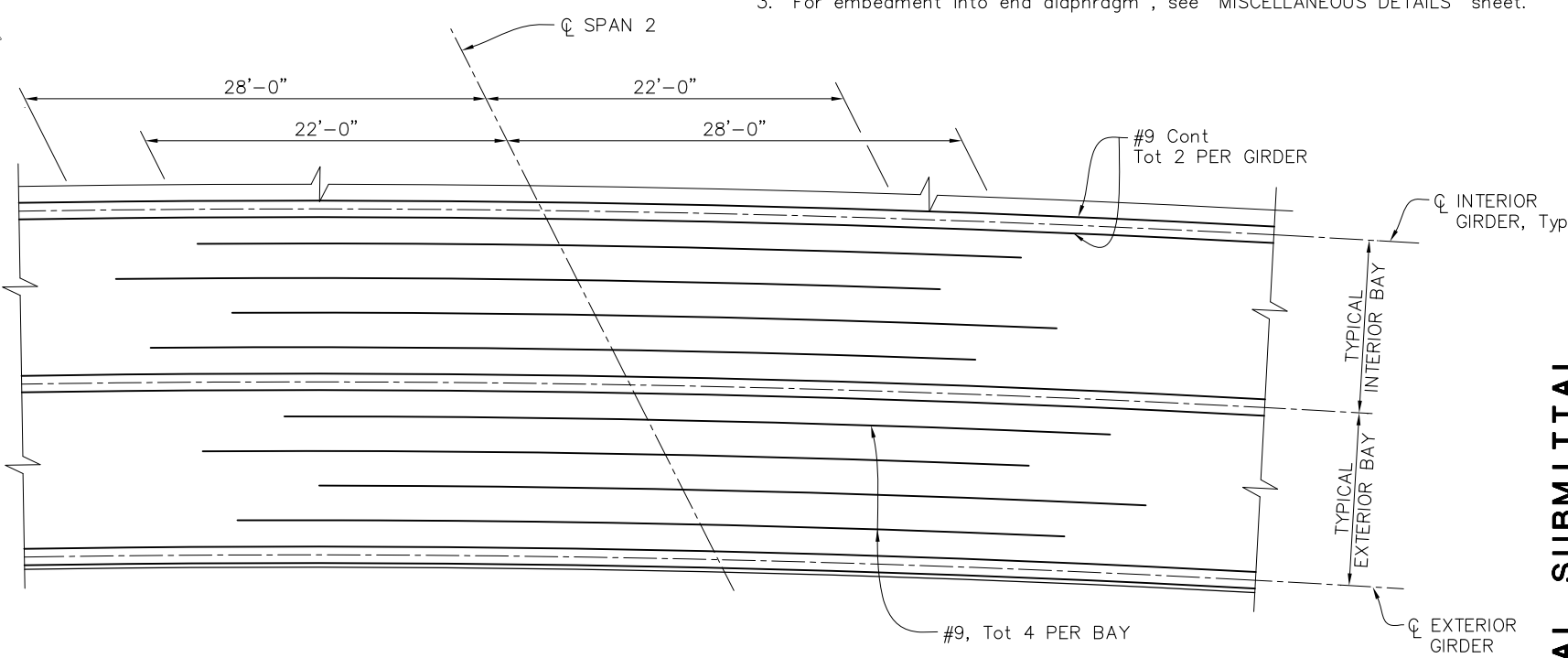
END DIAPHRAGM DETAIL

3/4" = 1'-0"
(Abut 1 SHOWN, Abut 4 SIMILAR)

NOTES:

NOTES:

1. All distances measured from centerline.
2. No splicing permitted in additional top & bottom slab reinforcement.
3. For embedment into end diaphragm, see "MISCELLANEOUS DETAILS" sheet.



ADDITIONAL BOTTOM SLAB REINFORCEMENT AT SPAN 2

NO SCALE

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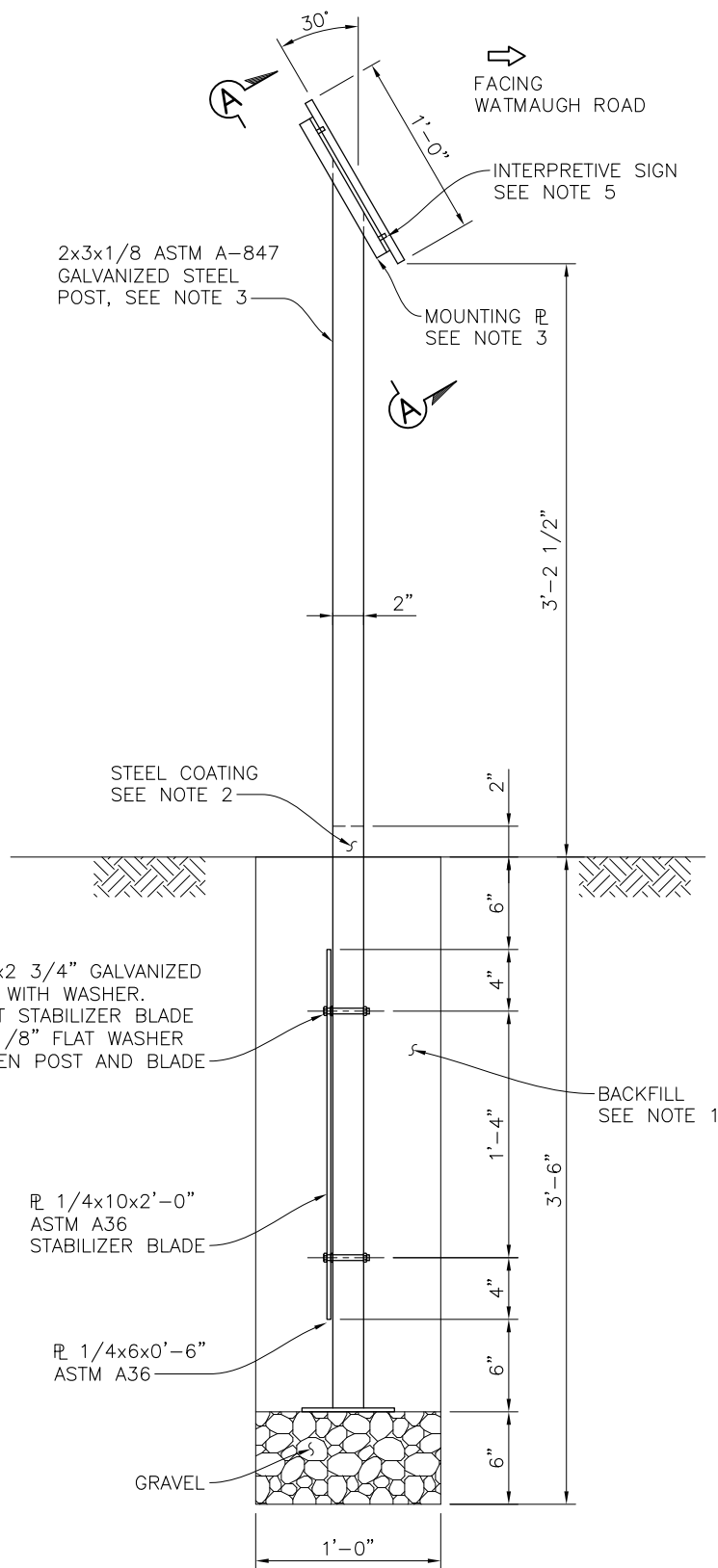
GIRDER REINFORCEMENT	
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	

ROAD NUMBER	09018
BUDGET NUMBER	C11002
FISCAL YEAR	20XX-XX
SHEET NUMBER	33
TOTAL SHEETS	39

S-16

FINAL SUBMITTAL

File: 2782024-05-27-10-40-AM.dwg
 Plot: 05/27/2024 10:40:00 AM
 Plot Date: 05/27/2024 10:40:00 AM
 Plot Time: 05/27/2024 10:40:00 AM

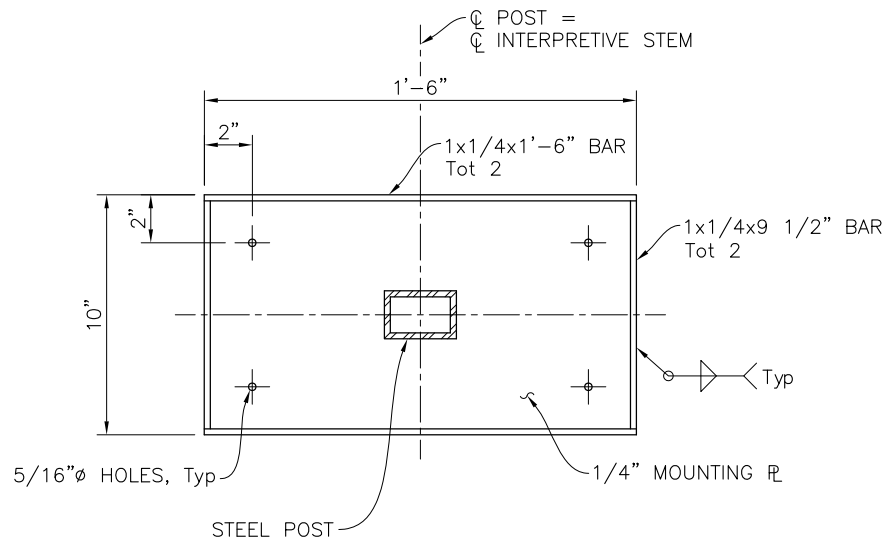


FREE STANDING INTERPRETIVE SIGN

NO SCALE

NOTE:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.



SECTION A-A

NO SCALE

NOTES:

1. Embed post with stabilizer blade attached. Place gravel in base of hole. Use existing material removed to backfill in 6" lifts tamped to 95% compaction.
2. Prior to embedment, apply two heavy coats of alkyd base metal primer. Coating must include 2" of base not embedded.
3. Steel post and mounting plate must be primed and painted. The paint color must be approved by the engineer. At the contractor's option, galvanized steel post and mounting plate may be unpainted ASTM 316 Stainless Steel.
4. Attach sign to mounting plate with 18-8 SS tamper proof flat head machine screw spanners, 1/4"-20 thread 1/2" length. Holes must be predrilled on sign panel.
5. Interpretive sign and signage content to be provided by County.
6. All details shown on this sheet are included in the limits of payment for "INSTALL INTERPRETIVE SIGN".

Path: C:\Users\jgibson\OneDrive\Documents\Projects\2020-21\19-0001.dwg Plot Date: Feb 06, 2025 at 15:41

DESIGN BY	KA
DRAWING BY	EP
CHECKED BY	AF

REGISTERED CIVIL ENGINEER	_____
PLANS APPROVAL DATE	_____

"RECORD DRAWING" INFORMATION TO BE COMPLETED AFTER CONSTRUCTION				CONSTRUCTION COMPLETED:			
RESIDENT ENGINEER AS-BUILT DRAWINGS BY:				RESIDENT ENGINEER AS-BUILT DRAWINGS BY:			
DATE	REVISION	BY	APPROVED	DATE	REVISION	BY	APPROVED

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 JOHANNES J. HOEVERTSZ, P.E., DIRECTOR

INTERPRETIVE SIGN DETAILS	ROAD NUMBER	09018
	BUDGET NUMBER	C11002
WATMAUGH ROAD BRIDGE REPLACEMENT OVER SONOMA CREEK	FISCAL YEAR	20XX-XX
	SHEET NUMBER	36
	TOTAL SHEETS	39

S-19 FINAL SUBMITTAL

