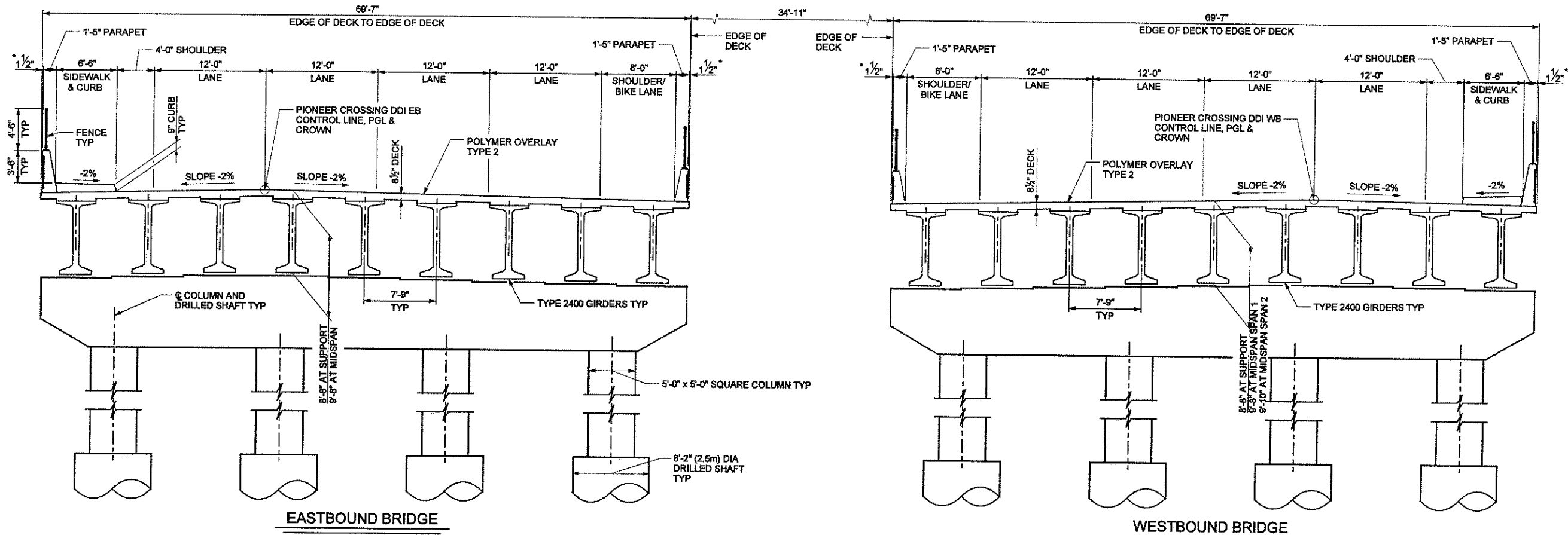
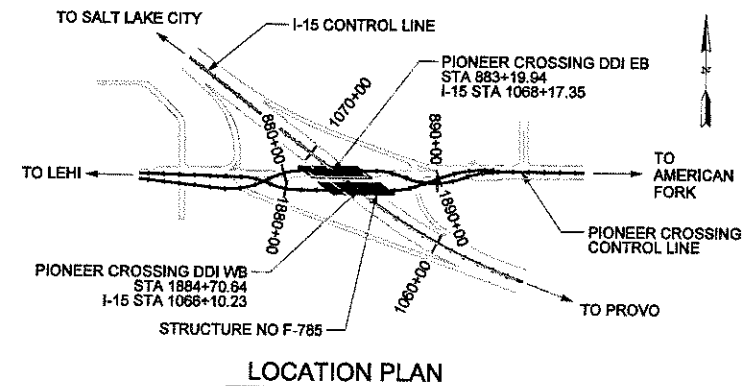


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| 15. EASTBOUND ABUTMENT 1 REINF | 30. WB BENT 2 PLAN & ELEVATION | 45. EXPANSION JOINT DETAILS | 60. WB SOUTH PARAPET LAYOUT | |



DESIGN DATA

HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4TH EDITION, WITH 2008 INTERIMS. SEISMIC DESIGN IN ACCORDANCE WITH MCEER/ATC 49 AND UDOT SEISMIC DESIGN CRITERIA.

CAST-IN-PLACE CONCRETE: CLASS AA(AE) $f_c = 4.0$ KSI; f_y (REINF) = 60 KSI; $n = 8$

PRESTRESSED CONCRETE: CLASS AA(AE) $f_c = 10.0$ KSI; $f_d = 7.0$ KSI; f_y (NONPRESTRESSED) = 60 KSI; $n = 5$

STRUCTURAL STEEL: $F_y = 36$ KSI

SACRIFICIAL WEARING SURFACE: $\frac{1}{2}$ " CONCRETE

FUTURE WEARING SURFACE: 35 PSF

DESIGN SPEED: 35 MPH PIONEER CROSSING; 70 MPH I-15

SEISMIC: SEISMIC DESIGN PARAMETERS
OPERATIONAL PERFORMANCE OBJECTIVE (2% PE IN 50 YRS) $PGA = 0.51g$
 $S_s =$ MAX CONSIDERED EQ GROUND MOTION AT $0.2s = 1.18g$
 $S_1 =$ MAX CONSIDERED EQ GROUND MOTION AT $1.0s = 0.50g$
SITE CLASS D, $SHL = IV$, $SDR = 8$.

TRAFFIC DATA: 2030 ADT = 47,330 (PIONEER CROSSING)

PARAPET TEST LEVEL: TL-3 MIN

SECTION THRU STRUCTURES

(DIMENSIONS SHOWN ARE MEASURED NORMAL TO ROADWAY)
(LOOKING UPSTATION)

QUANTITIES

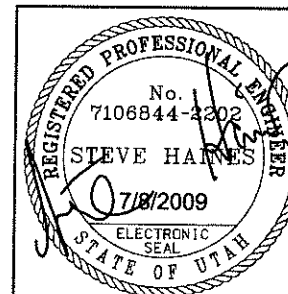
ITEM	EST	UNIT	AS CONSTR
GRANULAR BACKFILL BORROW (PLAN QUANTITY)		CY	
REMOVE BRIDGE	1	LUMP	
PILE DRIVING EQUIPMENT	1	LUMP	
16" DRIVEN PILES		LF	
8'-2" DIA DRILLED SHAFTS		LF	
PILE SLEEVES		LF	
REINFORCING STEEL (COATED)		LBS	
REINFORCING STEEL (UNCOATED)		LBS	
STRUCTURAL CONCRETE (EST QTY CY)	1	LUMP	
CONCRETE SLOPE PROTECTION		SY	
PENETRATING CONCRETE SEALER		SF	
PRESTRESSED CONCRETE MEMBER TYPE 2400		EA	
EXPANSION JOINT		LF	
FENCE		LF	
ELECTRICAL WORK - BRIDGES	1	LUMP	

NOTES

SEE "SITUATION & LAYOUT 2" SHEET FOR GENERAL NOTES.
* $\frac{1}{2}$ " LEDGE FOR BARRIER FORMWORK

BRIDGE LOAD RATING				
HL-93				
	EB BRIDGE		WB BRIDGE	
	RATING	LOCATION	RATING	LOCATION
INV	1.06 FN	BENT	1.03 FN	BENT
OPER	1.37 FN	BENT	1.33 FN	BENT

FN DENOTES RATING CONTROLLED BY NEG MOMENT FLEXURE
F DENOTES RATING CONTROLLED BY FLEXURE
S DENOTES RATING CONTROLLED BY SHEAR
Mr AT MIDSPAN = 26,663 K-FT
Mr AT BENT = 9288 K-FT
Vr AT 11.1' = 1288 KIPS



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
SITUATION & LAYOUT 1

UTAH
COUNTY
F-785
DRG. NO.

SHT. 01 OF 67

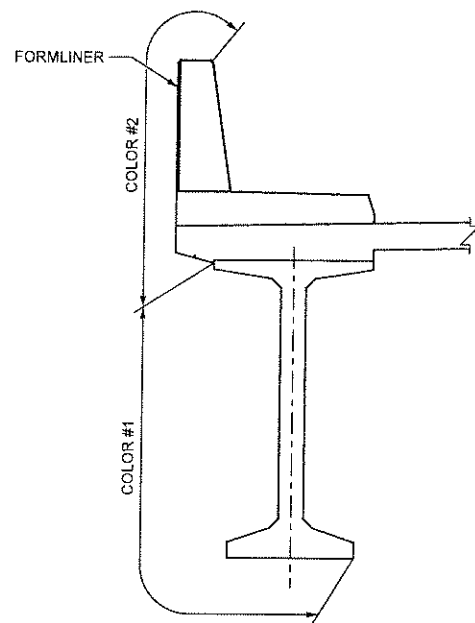
SRH	REC - INDC 32 - REMOVED NFC HATCHING	SRH	REC SUBMITTAL	SRH	100% SUBMITTAL	SRH	80% SUBMITTAL	SRH	30% SUBMITTAL	REVISIONS
2	07/07/09	1	05/15/09	C	04/13/09	B	03/11/09	A	01/07/09	NO
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE

DESIGN	DLS	03/09	CHECK	BJB	04/09	DESIGN	MLS	03/09	CHECK	VTG	05/09
APPROVAL	7/8/2009	DATE	SENIOR DESIGN ENGR.		APPROVAL	7/8/2009	DATE	STRUCTURE DESIGN MANAGER			
FOR USE	7/8/2009	DATE			FOR USE	7/8/2009	DATE				

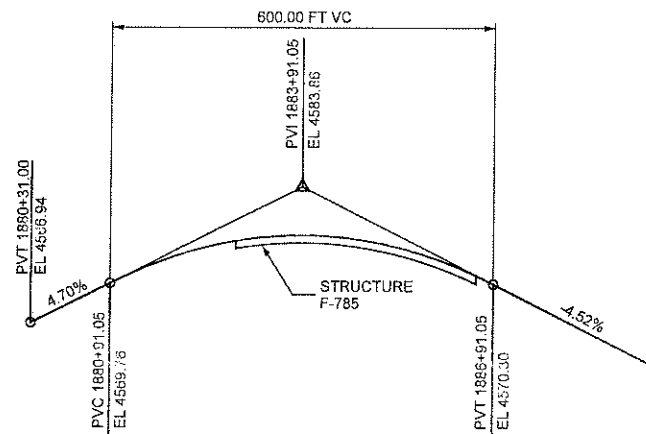
PROJECT NUMBER	S-R399(42) & S-R399(59)
QUANT.	

GENERAL NOTES

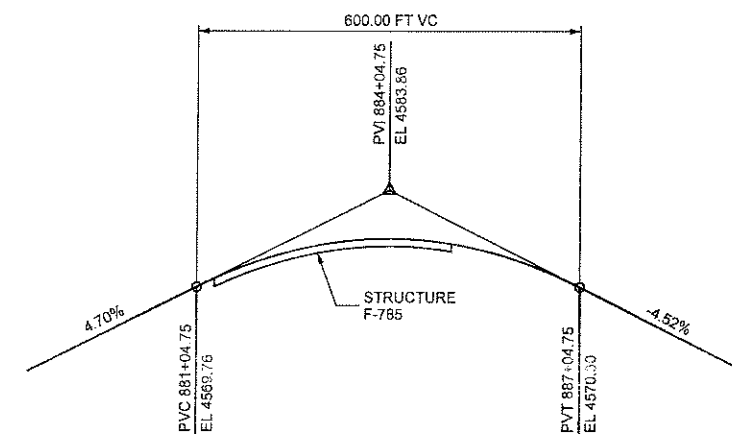
1. USE COATED DEFORMED REINFORCING STEEL BARS CONFORMING TO AASHTO M284 AND AASHTO M31, GRADE 60, FOR ALL REINFORCING STEEL UNLESS NOTED OTHERWISE.
2. USE STRUCTURAL STEEL CONFORMING TO AASHTO M 270 GRADE 36 EXCEPT WHERE NOTED OTHERWISE.
3. CHAMFER ALL EXPOSED CONCRETE CORNERS $\frac{3}{4}$ " EXCEPT WHERE NOTED OTHERWISE.
4. PROVIDE 2" CONCRETE COVER TO REINFORCING STEEL EXCEPT WHERE NOTED OTHERWISE.
5. USE CLASS AA(AE) CAST-IN-PLACE CONCRETE UNLESS NOTED OTHERWISE.
6. HORIZONTAL DIMENSIONS ARE PLAN. VERTICAL DIMENSIONS ARE PLUMB.
7. DO NOT SCALE THE DRAWINGS.
8. SUBMIT SHOP DRAWINGS FOR ALL PRECAST ELEMENTS.
9. ALL ELEVATIONS SHOWN ARE TO TOP OF CONCRETE UNLESS NOTED OTHERWISE.
10. STAIN COLOR #1 IS TO BE SHERWIN-WILLIAMS COLOR NO. SW6095 "TOASTY" OR APPROVED EQUAL. STAIN COLOR #2 IS TO BE SHERWIN-WILLIAMS COLOR NO. SW6143 "BASKET BEIGE" OR APPROVED EQUAL. COLORS ARE TO BE SELECTED FROM TEST PANELS PROVIDED BY CONTRACTOR.



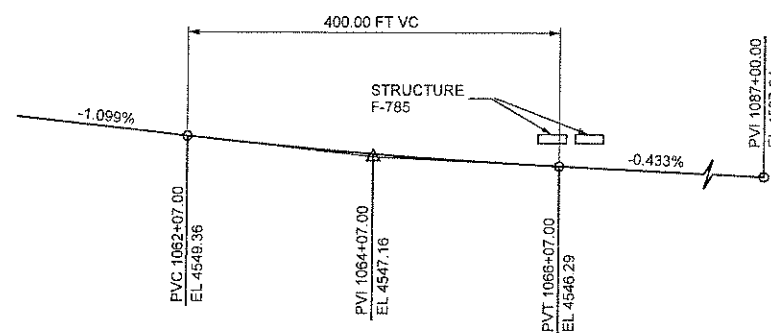
STRUCTURE STAIN LIMITS



PIONEER CROSSING WB PROFILE

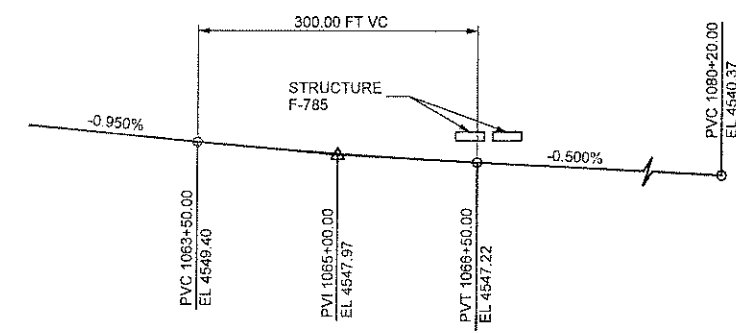


PIONEER CROSSING EB PROFILE



I-15 NB PROFILE

I-15 NB SUPERELEVATION DATA		
STATION	SUPERELEVATION	
	LEFT	RIGHT
1064+35.00	+4.80%	-4.80%
1066+45.00	+2.00%	-2.00%
1067+95.00	0.00%	-2.00%
1069+45.00	-2.00%	-2.00%



I-15 SB PROFILE

I-15 SB SUPERELEVATION DATA		
STATION	SUPERELEVATION	
	LEFT	RIGHT
1064+35.00	+4.80%	-4.80%
1066+45.00	+2.00%	-2.00%
1067+95.00	0.00%	-2.00%
1069+45.00	-2.00%	-2.00%

COMMON ABBREVIATIONS

AS	AS SHOWN
ES	EQUALLY SPACED
EF	EACH FACE
FF	FRONT FACE
BF	BACK FACE
BOF	BOTTOM OF FOOTING
BOTT	BOTTOM

CURVE DATA

PCB-3

$\Delta = 28^{\circ}14'54"$ RT
 $R = 522.00'$
 $T = 131.35'$
 $L = 257.36'$
 $PI = STA 880+14.57$
 $N = 308362.98$
 $E = 551705.68$

PCB-4

$\Delta = 22^{\circ}18'40"$ RT
 $R = 522.00'$
 $T = 102.94'$
 $L = 203.27'$
 $PI = STA 886+81.66$
 $N = 308356.90$
 $E = 552378.08$

PCWB-2

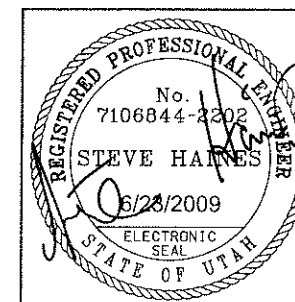
$\Delta = 22^{\circ}57'31"$ LT
 $R = 522.00'$
 $T = 106.01'$
 $L = 209.17'$
 $PI = STA 1879+90.35$
 $N = 308237.06$
 $E = 551696.50$

PCWB-3

$\Delta = 19^{\circ}39'50"$ LT
 $R = 522.00'$
 $T = 90.46'$
 $L = 179.15'$
 $PI = STA 1887+61.61$
 $N = 308230.06$
 $E = 552470.36$

I-15-2

$\Delta = 17^{\circ}57'13"$ RT
 $R = 3700.00'$
 $T = 584.49'$
 $L = 1159.39'$
 $PI = STA 1060+02.02$
 $N = 307852.43$
 $E = 552666.51$



UTAH DEPARTMENT OF TRANSPORTATION
 SALT LAKE CITY, UTAH
 KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2
 PIONEER CROSSING OVER I-15
 SITUATION & LAYOUT 2

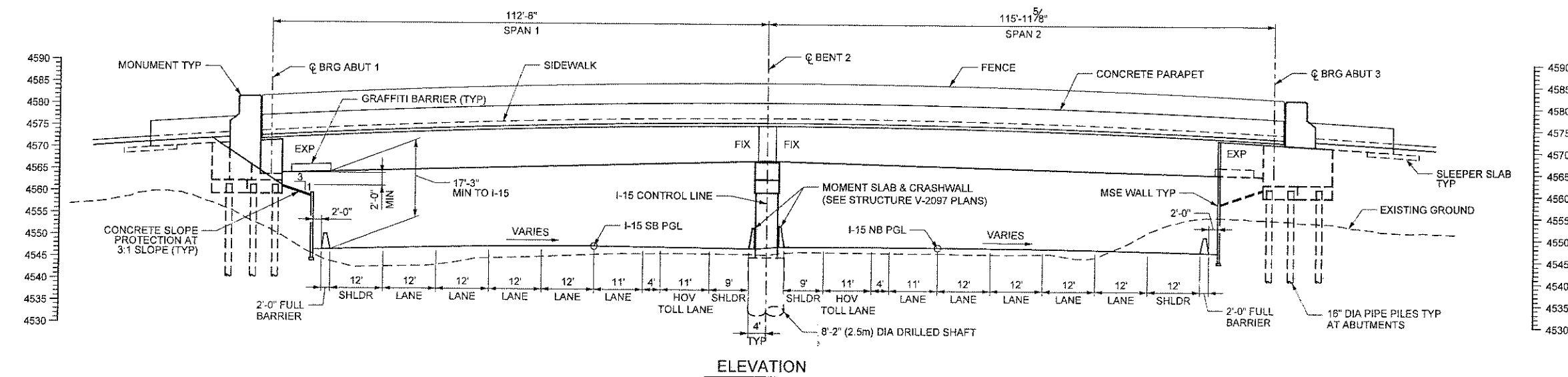
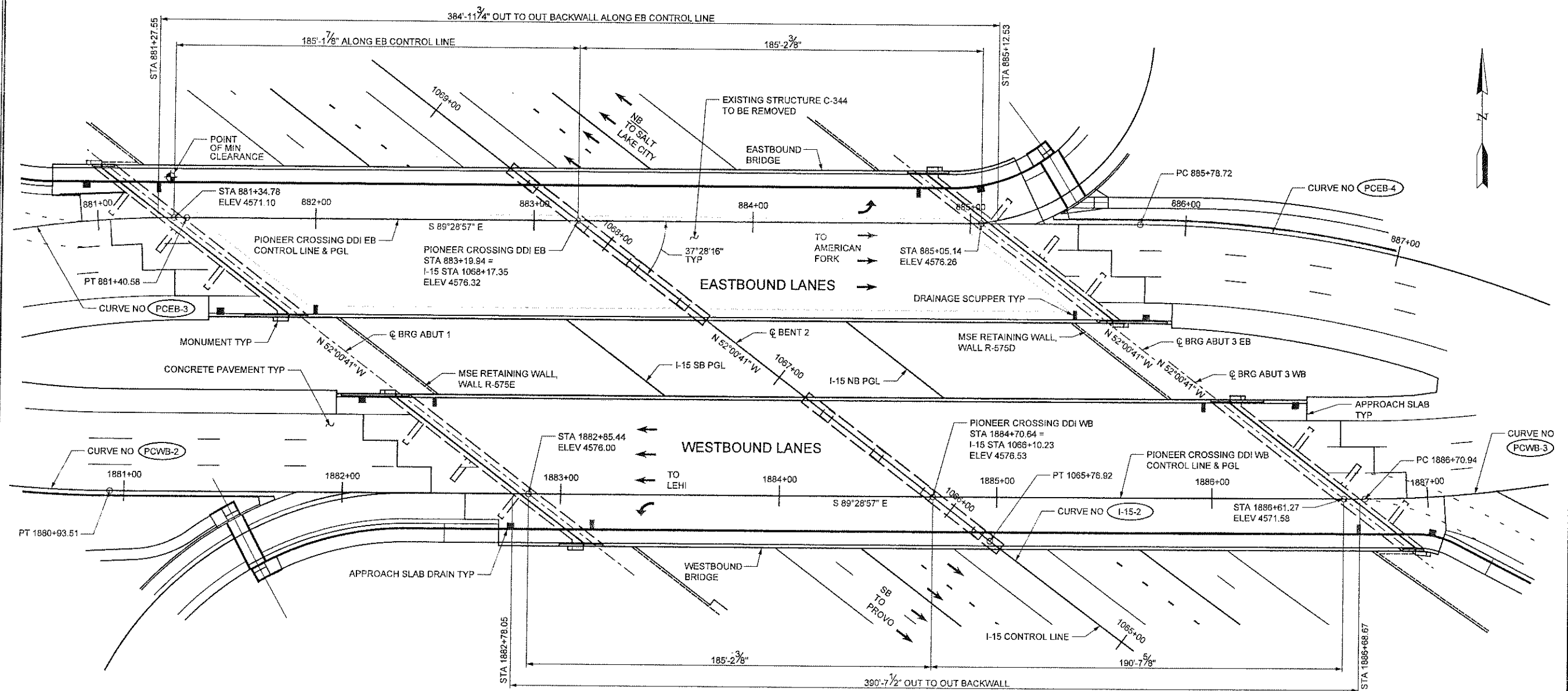
UTAH
 COUNTY
 F-785
 DRG. NO.

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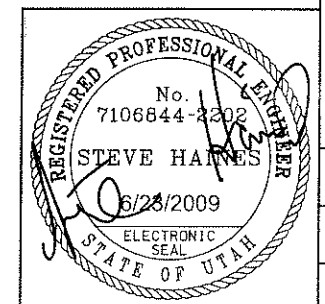
NO.	DATE	BY	REVISIONS
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C	04/13/09	SRH	100% SUBMITTAL
B	03/11/09	SRH	60% SUBMITTAL
A	01/07/09	SRH	30% SUBMITTAL

DESIGN	CHECK	DATE	QUANT.
DLS	03/09	04/09	
DRWN	03/09	05/09	
JGC	03/09		
DATE			
DATE			

PROJECT NUMBER	STRUCTURE DESIGN NUMBER
S-R399(42) & S-R399(59)	



WESTBOUND ROADWAY SHOWN, EASTBOUND SIMILAR.
ELEVATION SHOWN NORMAL TO I-15 CONTROL LINE



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
SITUATION & LAYOUT 3

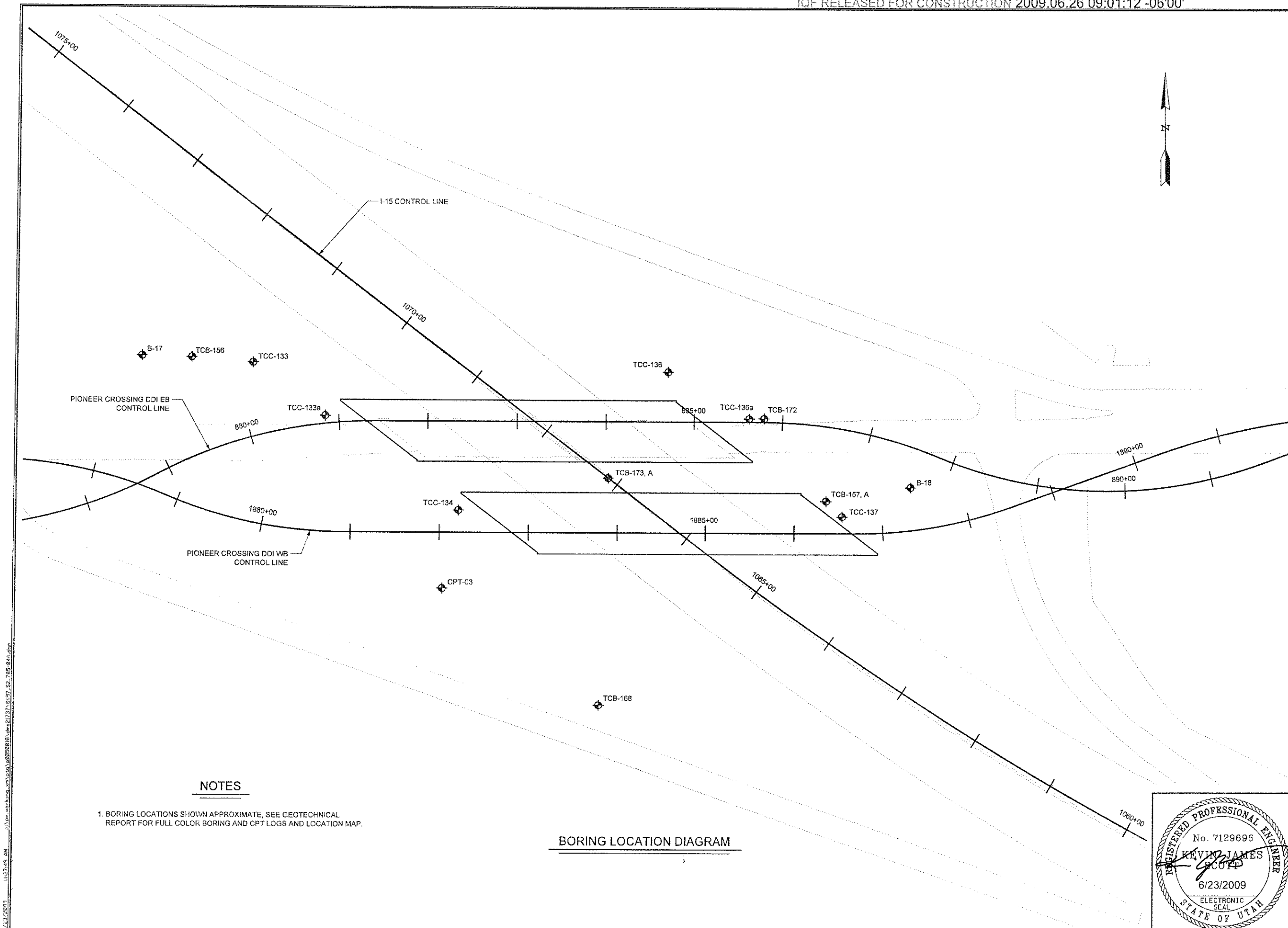
UTAH
COUNTY
F-785
DRG. NO.

SHT. 03 OF 67

NO.	DATE	BY	REVISIONS
1	03/15/09	SRH	RFC SUBMITTAL
2	04/13/09	SRH	100% SUBMITTAL
3	03/11/09	SRH	60% SUBMITTAL
4	01/07/09	SRH	30% SUBMITTAL
5	01/07/09	SRH	30% SUBMITTAL

DESIGN	CHECK	DATE	BY	QUANT.
DLS	BJB	04/09		
MLS	VTG	05/09		
MLS	VTG	05/09		
MLS	VTG	05/09		

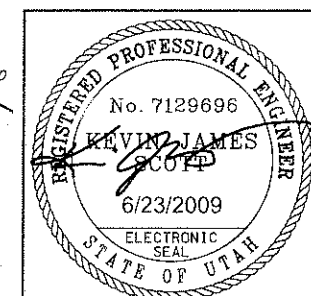
APPROVAL	REVISION	DATE	BY	QUANT.
APPROVED FOR USE	APPROVED FOR USE	06/23/2009	APPROVED FOR USE	06/23/2009



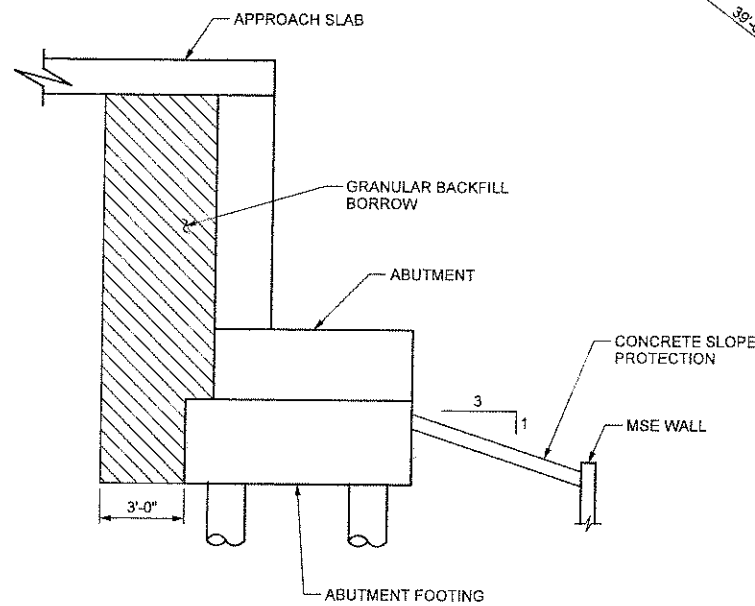
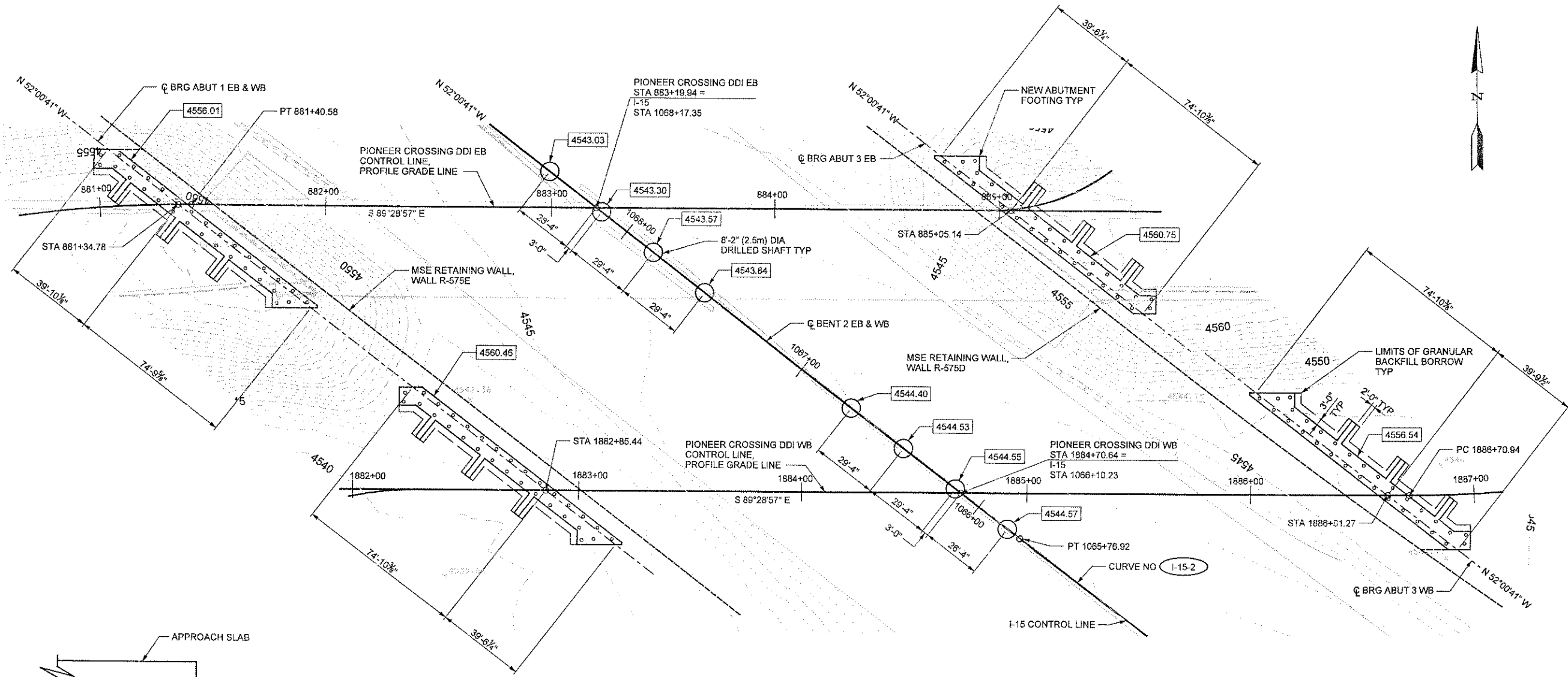
NOTES

- 1. BORING LOCATIONS SHOWN APPROXIMATE, SEE GEOTECHNICAL REPORT FOR FULL COLOR BORING AND CPT LOGS AND LOCATION MAP.

BORING LOCATION DIAGRAM



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE				DESIGN KJS 03/09		CHECK RAR 03/09		1 05/10/09		RFC SUBMITTAL	
PIONEER CROSSING - SEGMENT 2				DRAWN SBA 03/09		CHECK VTG 03/09		A 03/11/09		KJS 100% SUBMITTAL	
PIONEER CROSSING OVER I-15				QUANT.		CHECK		BY		KJS 60% SUBMITTAL	
SOIL DATA SHEET 1				STRUCTURE DESIGN MANAGER		DATE		NO.		REVISIONS	
PROJECT NUMBER S-R399(42) & S-R399(59)				DATE		DATE		DATE		REMARKS	
UTAH				COUNTY		F-785		DRG. NO.			
SHT. 04A				OF 67							



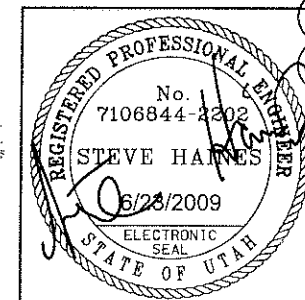
LIMITS OF GRANULAR BACKFILL DETAIL

AT ABUTMENTS ONLY
SECTION IS AT RIGHT ANGLES
TO ABUTMENT FACE

FOUNDATION PLAN

NOTES

- ELEVATIONS AT BOTTOM OF FOOTING OR TOP OF DRILLED SHAFT ARE SHOWN THUS [XXXX.XX].
- PROVIDE A MINIMUM 2'-0" SOIL COVER FOR ABUTMENT FOOTINGS.
- LIMITS OF GRANULAR BACKFILL BORROW HEIGHT AT ABUTMENTS EXTENDS FROM BOTTOM OF STRUCTURE TO BOTTOM OF APPROACH SLAB.



UTAH DEPARTMENT OF TRANSPORTATION

SALT LAKE CITY, UTAH

KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2

PIONEER CROSSING OVER I-15

FOUNDATION LAYOUT

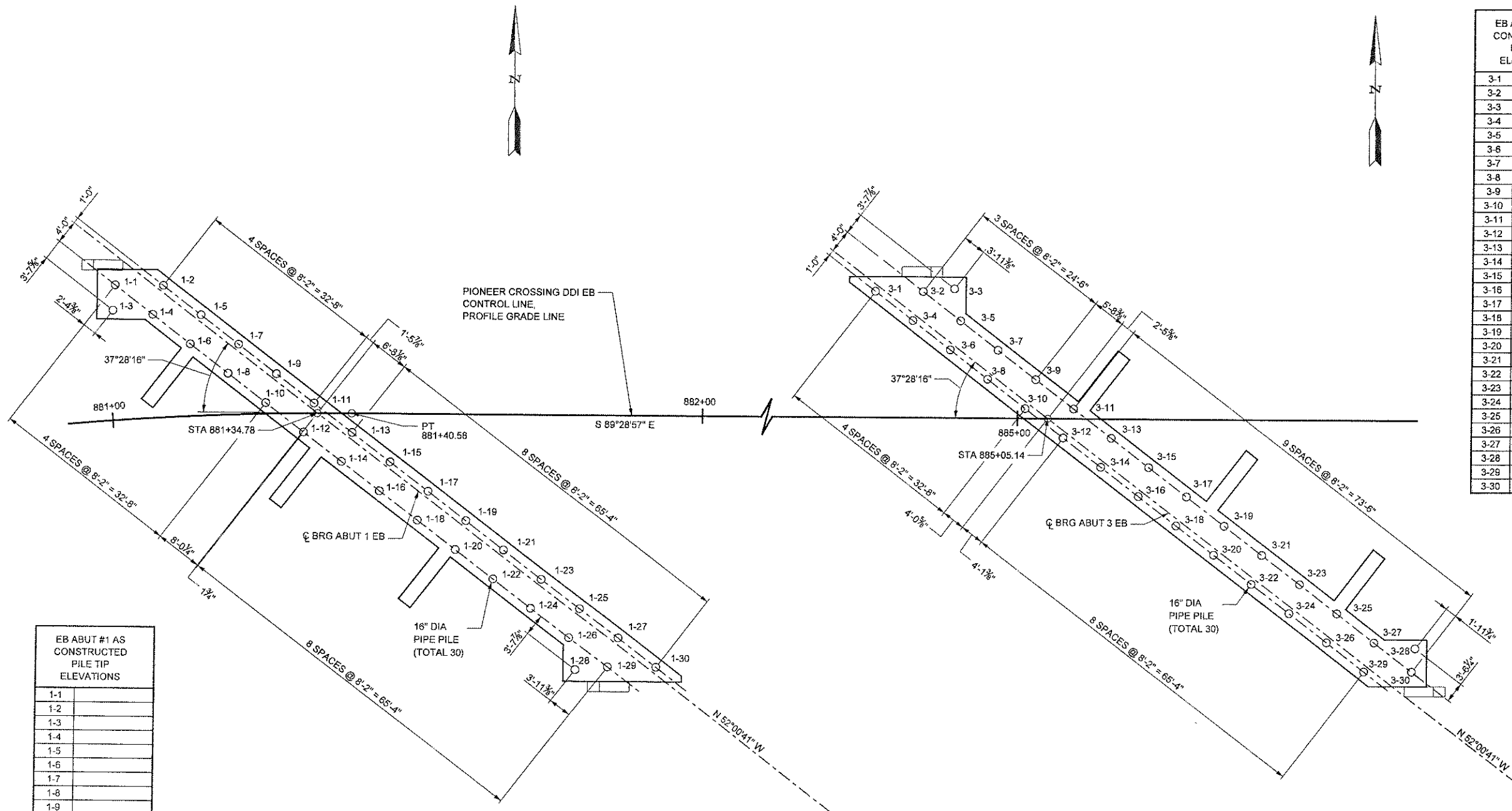
PROJECT NUMBER S-R399(42) & S-R399(59)

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NO	DATE	BY	REVISIONS
3	05/15/09	SRH	RFC SUBMITTAL
2	04/08/09	SRH	RFC BENT 2 SUBMITTAL
E	03/18/09	SRH	100% BENT 2 SUBMITTAL
D	03/11/09	SRH	60% SUBMITTAL
1	03/02/09	SRH	RFC EARLY FOUNDATION SUBMITTAL
C	02/25/09	SRH	30% BENT 2 SUBMITTAL

CHECK	DATE	BY	QUANT.
CHECK	03/09	VTG	
CHECK	02/09	DLS	
CHECK	02/09	MLS	
CHECK	02/09	DATE	



EB ABUT #1 AS CONSTRUCTED PILE TIP ELEVATIONS	
1-1	
1-2	
1-3	
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1-24	
1-25	
1-26	
1-27	
1-28	
1-29	
1-30	

EB ABUT #3 AS CONSTRUCTED PILE TIP ELEVATIONS	
3-1	
3-2	
3-3	
3-4	
3-5	
3-6	
3-7	
3-8	
3-9	
3-10	
3-11	
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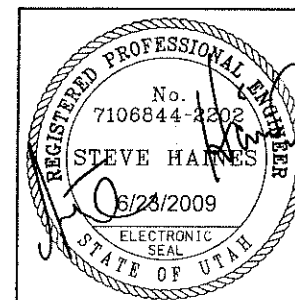
PILE LAYOUT
ABUT 1 EB

PILE LAYOUT
ABUT 3 EB

ABUTMENT PILE LAYOUT
EASTBOUND BRIDGE

NOTES

1. SEE "DRIVEN PILE DETAILS" SHEET FOR PILE CASING DETAIL, PILE DETAILS AND NOTES.
2. INSTALL CMP SLEEVES AT ALL PILE LOCATIONS PRIOR TO PLACING OF EMBANKMENT.

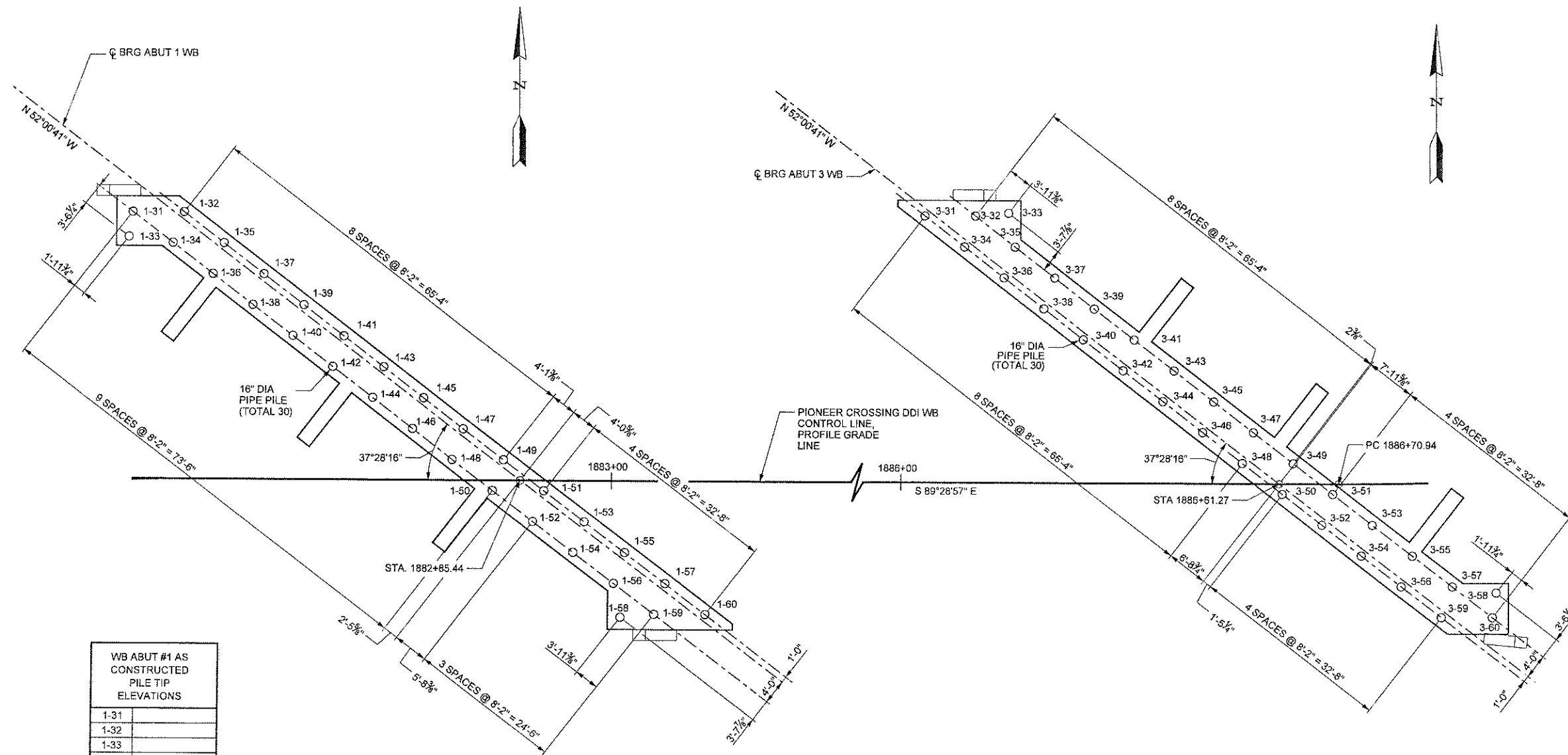


UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
EASTBOUND PILE LAYOUT

PROJECT
NUMBER
S-R399(42) & S-R399(59)

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WB ABUT #1 AS CONSTRUCTED PILE TIP ELEVATIONS	
1-31	
1-32	
1-33	
1-34	
1-35	
1-36	
1-37	
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1-39	
1-40	
1-41	
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1-60	

PILE LAYOUT

ABUT 1 WB

ABUTMENT PILE LAYOUT

WESTBOUND BRIDGE

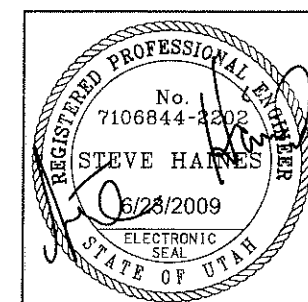
PILE LAYOUT

ABUT 3 WB

NOTES

1. SEE "EASTBOUND PILE LAYOUT" SHEET FOR NOTES.

WB ABUT #3 AS CONSTRUCTED PILE TIP ELEVATIONS	
3-31	
3-32	
3-33	
3-34	
3-35	
3-36	
3-37	
3-38	
3-39	
3-40	
3-41	
3-42	
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3-60	



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH

DESIGNER: KIEWIT/CLYDE

CHECK: VTG 02/09

CHECK: BJB 02/09

CHECK: [Signature]

PIONEER CROSSING - SEGMENT 2

PIONEER CROSSING OVER I-15

WESTBOUND PILE LAYOUT

PROJECT NUMBER: S-R399(42) & S-R399(59)

UTAH

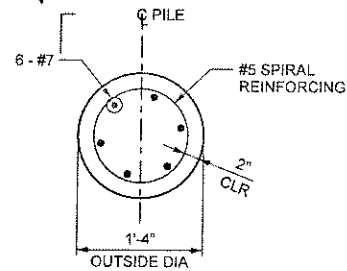
COUNTY

F-785

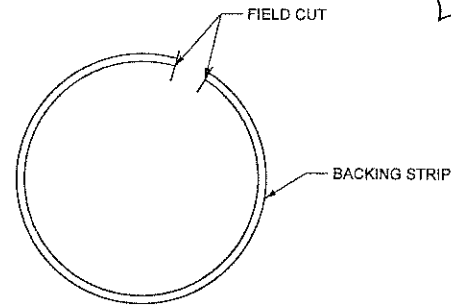
DRG. NO.

SHT. 07

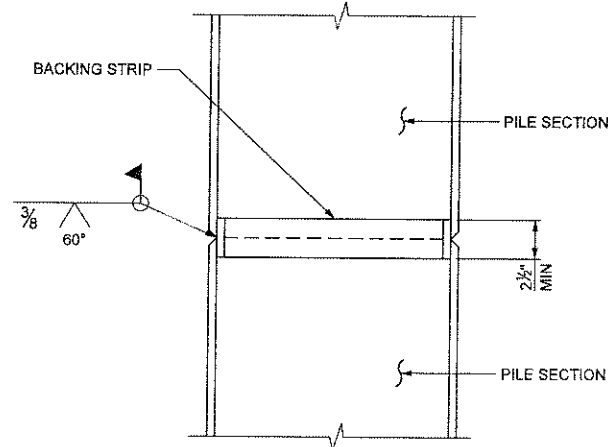
OF 67



SECTION A-A

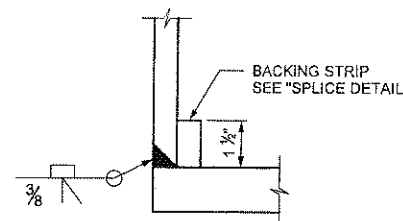


NOTE:
FIELD CUT PIECE OF PILE SO WHEN COMPRESSED
IT WILL SLIDE INSIDE PILE SECTIONS.

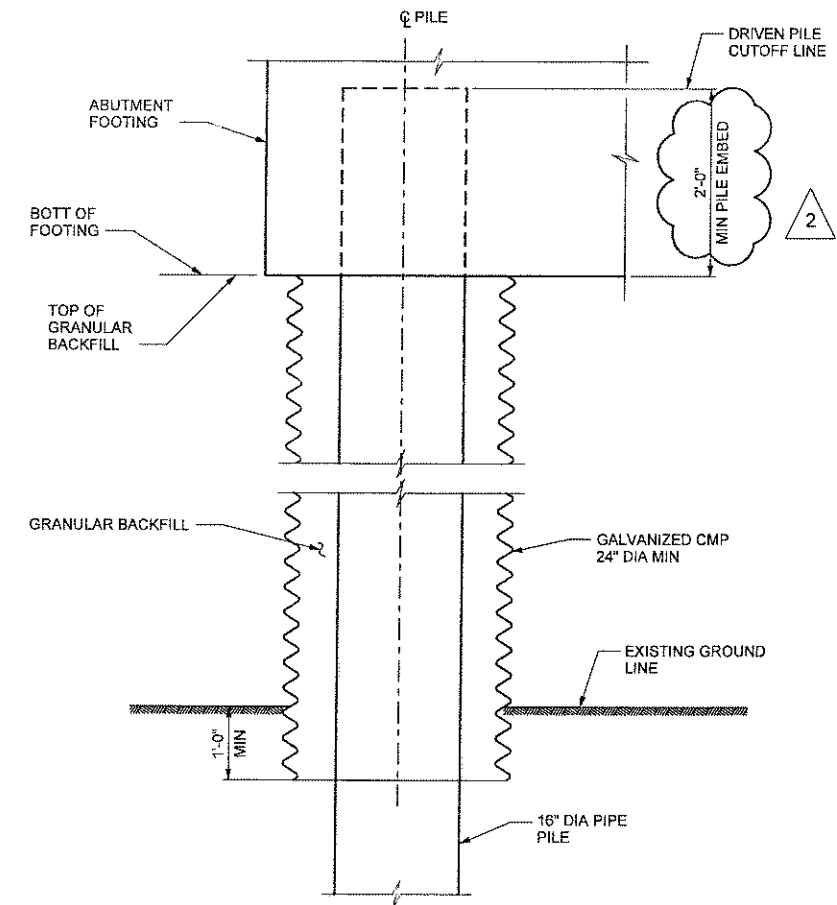


SPlice DETAIL

USE FULL STRENGTH WELDED SPLICES



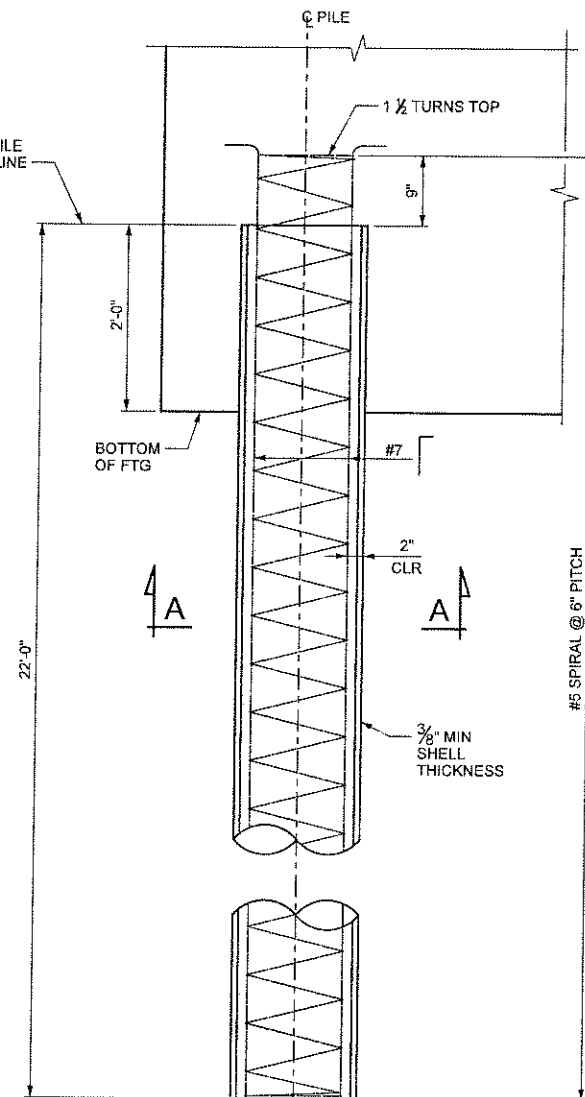
DETAIL 1



PILE CASING DETAIL

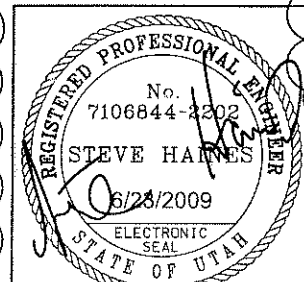
NOTES

1. FILL PILE SHELL WITH CLASS "AA" CONCRETE. (f'c=4 KSI)
2. HOLD REINFORCING STEEL ADEQUATELY IN FINAL POSITION DURING PLACEMENT OF CONCRETE AROUND BARS.
3. USE PILES MEETING ASTM A252 GRADE 3 WITH A MINIMUM YIELD STRENGTH OF 45 KSI.
4. PILE TIP ELEVATIONS ARE APPROXIMATE. VERIFY THESE ELEVATIONS AT THE TIME OF CONSTRUCTION IN ACCORDANCE WITH SECTION 02455S OF THE STANDARD SPECIFICATIONS AND PART 3, SECTION 3.2 OF THE SPECIAL PROVISIONS.
5. USE UNCOATED REINFORCEMENT FOR PILE EMBEDDED REINFORCEMENT.
6. USE A PILE HAMMER WITH A MINIMUM RATED ENERGY OF 52 KIP-FT.
7. PLACE GRANULAR BACKFILL (CLEAN NON-ANGULAR SAND) IN CMP CASING AFTER COMPLETION OF PILE DRIVING. VIBRATE BACKFILL IN PLACE. SUBMIT VIBRATION METHOD TO ENGINEER FOR APPROVAL.
8. VERIFY DRIVEN PILE CAPACITY AS DESCRIBED IN SECTION 6.3 OF THE UDOT GEOTECHNICAL MANUAL OF INSTRUCTION. USE THE CASE PILE WAVE ANALYSIS PROGRAM (CAPWAP) TO VERIFY THE ULTIMATE PILE CAPACITY AT EACH ABUTMENT LOCATION. TEST A MINIMUM OF 6 PILES PER ABUTMENT LOCATION AS DEFINED IN SECTION 02455 OF THE STANDARD SPECIFICATIONS. IF CONSISTENCY IS NOTED DURING DRIVING, THIS NUMBER CAN BE REDUCED TO 4 PILES PER ABUTMENT. USE THE VERSION OF CAPWAP THAT IS MOST RECENT AND WHICH INCLUDES A FULL COMPUTER GRAPHICS PACKAGE.



ELEVATION

PILE DATA										
LOCATION	ESTIMATED PILE TIP ELEV (FEET)	ELEV OF MIN ACCEPTABLE PILE PENETRATION (FEET)	SERVICE I PILE LOAD (KIPS)	SERVICE I PILE RESISTANCE (KIPS)	STRENGTH I PILE LOAD (KIPS)	STRENGTH I PILE RESISTANCE (KIPS)	EXTREME EVENT I PILE LOAD (KIPS)	EXTREME EVENT I PILE RESISTANCE (KIPS)	EXTREME EVENT I PILE UPLIFT (KIPS)	REQUIRED DRIVING RESISTANCE (KIPS)
EB ABUT #1	4493	4493	204	263	314	382	335	500	N/A	590
EB ABUT #3	4491	4491	204	263	314	382	335	500	N/A	590
WB ABUT #1	4482	4482	204	263	314	382	335	460	N/A	590
WB ABUT #3	4483	4483	204	263	314	382	335	460	N/A	590



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
DRIVEN PILE DETAILS

UTAH
COUNTY
F-785
DRG. NO.

SHT. 08 OF 67

PROJECT
NUMBER
S-R399(42) & S-R399(59)

APPROVAL
RECORD
DATE
APPROVED
FOR USE
DATE

DESIGN
DLS
03/09
CHECK
VTG
04/09
DRAWN
MLS
03/09
CHECK
VTG
05/09
QUANT.
CHECK

REVISIONS

NO. DATE BY

1 02/12/09 A SRH 100% EARLY FOUNDATION SUBMITTAL

2 02/12/09 A SRH 100% EARLY FOUNDATION SUBMITTAL

3 02/12/09 A SRH 100% EARLY FOUNDATION SUBMITTAL

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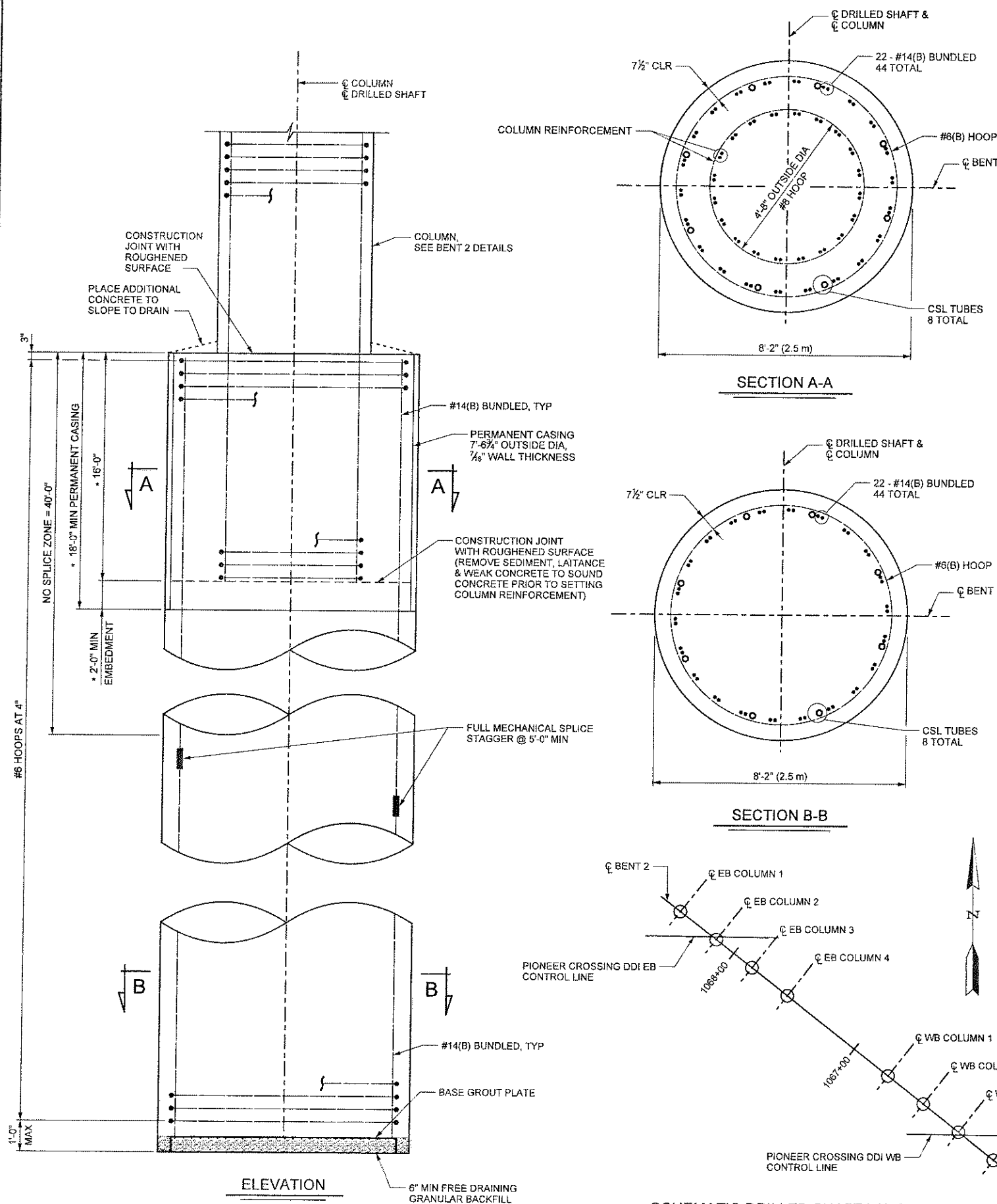
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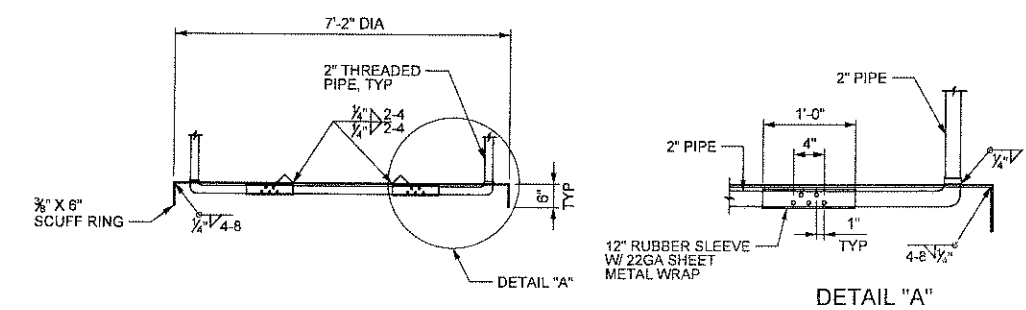
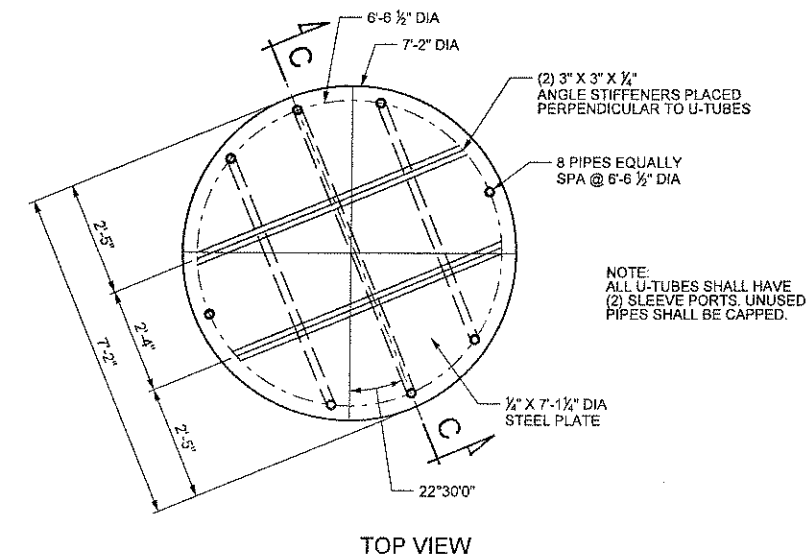
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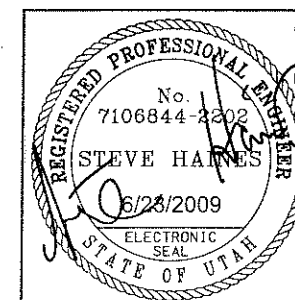


DRILLED SHAFT DATA							
LOCATION	DRILLED SHAFT TIP MINIMUM ELEV (FEET)	SERVICE I RESISTANCE (KIPS)	STRENGTH I LOAD (KIPS)	STRENGTH I RESISTANCE (KIPS)	EXTREME I LOAD (KIPS)	EXTREME I RESISTANCE (KIPS)	AS CONST TIP ELEV (FEET)
EB COLUMN #1	4453	2160	2788	2800	2651	5300	
EB COLUMN #2	4453	2160	2788	2800	2651	5300	
EB COLUMN #3	4453	2160	2788	2800	2651	5300	
EB COLUMN #4	4453	2160	2788	2800	2651	5300	
WB COLUMN #1	4453	2160	2788	2800	2651	5300	
WB COLUMN #2	4453	2160	2788	2800	2651	5300	
WB COLUMN #3	4453	2160	2788	2800	2651	5300	
WB COLUMN #4	4453	2160	2788	2800	2651	5300	



NOTES

1. USE RESISTANCE WELDED SPLICES FOR ALL HOOP SPLICES, SEE SPECIAL PROVISIONS.
2. STAGGER ALL HOOP SPLICES 180°.
3. USE UNCOATED DEFORMED BILLET STEEL CONFORMING TO ASTM A706 GRADE 60 FOR DRILLED SHAFT HOOPS.
4. USE UNCOATED REINFORCEMENT FOR LONGITUDINAL DRILLED SHAFT REINFORCEMENT.
5. SEE "BENT 2 DETAILS" SHEET FOR COLUMN DETAILS AND REINFORCEMENT.
6. SEE "FOUNDATION LAYOUT" SHEET FOR TOP OF SHAFT ELEVATIONS.
7. SEE BENT 2 PLAN & ELEVATION SHEETS FOR TOP OF COLUMN ELEVATIONS.
8. PROVIDE SONIC LOGGING TESTING FOR EACH DRILLED SHAFT TO VERIFY INTEGRITY.
9. MINIMUM BASE GROUT PRESSURE IS 400 PSI UNLESS NOTED OTHERWISE.
10. SEE SPECIAL PROVISION SECTION 024675, "PIONEER OVER I-15 CENTER BENT DRILLED SHAFTS," FOR BASE GROUT AND DRILLED SHAFT REQUIREMENTS.



UTAH DEPARTMENT OF TRANSPORTATION

SALT LAKE CITY, UTAH

KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2

PIONEER CROSSING OVER I-15

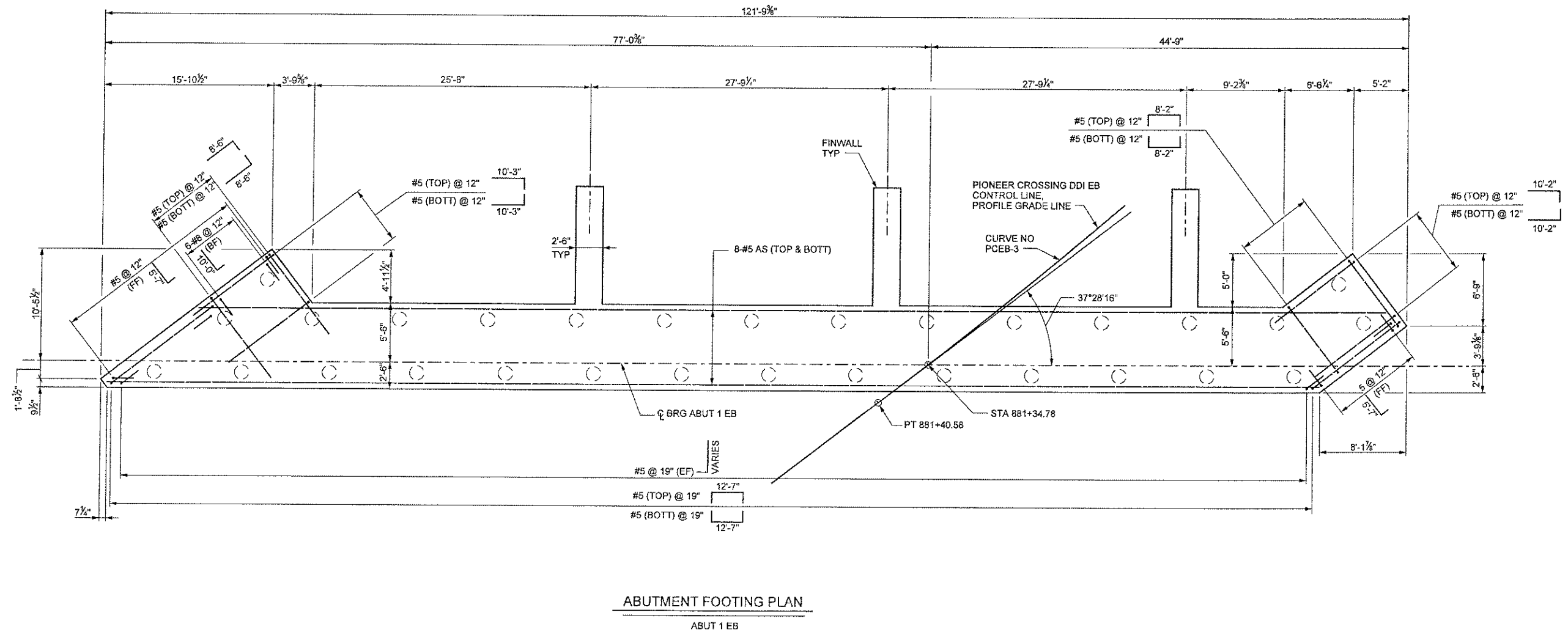
DRILLED SHAFT DETAILS

UTAH COUNTY

F-785

DRG. NO.

SHT. 09 OF 67

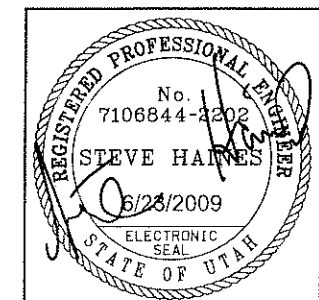


ABUTMENT FOOTING PLAN

ABUT 1 EB

NOTES

1. SEE "FINWALL DETAILS" SHEET FOR FINWALL REINFORCEMENT.
2. SEE "ABUTMENT REINFORCEMENT" SHEETS FOR ELEVATION AND SECTION VIEWS.
3. ADJUST SPACING OF BARS AS NEEDED TO AVOID CONFLICT WITH PILES.
4. SEE "FOUNDATION LAYOUT" SHEET FOR BOTTOM OF FOOTING ELEVATIONS.
5. SEE "PILE LAYOUT" SHEETS FOR PILE LOCATIONS.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE				PIONEER CROSSING - SEGMENT 2	
				PIONEER CROSSING OVER I-15	
				EB ABUTMENT 1 FOOTING	
				PROJECT NUMBER	S-R399(42) & S-R399(59)
				UTAH COUNTY	
				DRG. NO.	F-785
				SHT. 10	OF 67

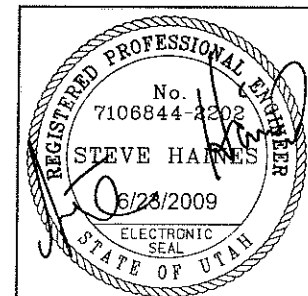
NO.	DATE	BY	REVISIONS
1	05/15/09	SRH	RFC SUBMITTAL
2	04/13/09	SRH	100% SUBMITTAL
3	03/11/09	SRH	80% SUBMITTAL

DESIGN	CHECK	DATE	QUANT
DLS 03/09	BUB 04/09		
MLS 03/09	VTG 05/09		

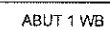


ABUT 3 EB

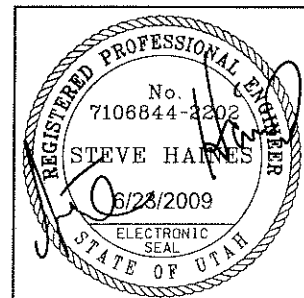
1. SEE "EB ABUTMENT 1 FOOTING" SHEET FOR ADDITIONAL NOTES.



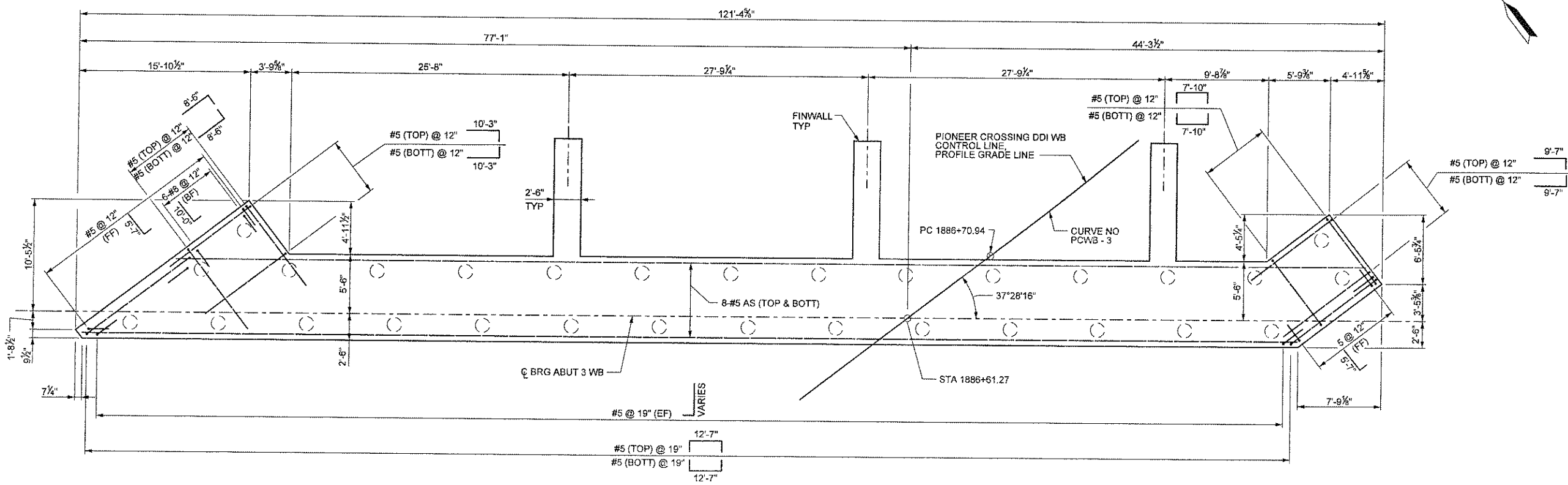
SHT. 11		OF 67	
UTAH COUNTY		F-785 PRG. NO.	
PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE	
PIONEER CROSSING OVER I-15		DESIGN DLS 03/09 CHECK BJB 04/09	
EB ABUTMENT 3 FOOTING		1 05/15/09 SRH RFC SUBMITTAL	
PROJECT NUMBER		B 04/13/09 SRH 100% SUBMITTAL	
S-R399(42) & S-R399(59)		A 03/11/09 SRH 60% SUBMITTAL	
APPROVAL REDONIA DATE		NO DATE BY	
APPROVED 6/23/2009 PORTUSE DATE		REMARKS	
STRUCTURE DESIGN MANAGER		REVISONS	



1. SEE "EB ABUTMENT 1 FOOTING" SHEET FOR ADDITIONAL NOTES.



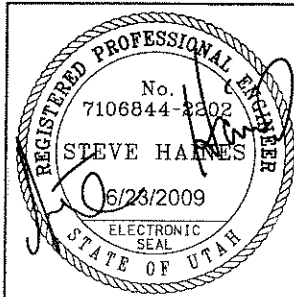
SHT. 12		OF 67	
UTAH COUNTY		F-785	
PIONEER CROSSING - SEGMENT 2		PRG. NO.	
PIONEER CROSSING OVER I-15		PROJECT NUMBER	
WB ABUTMENT 1 FOOTING		S-R399(42) & S-R399(59)	
APPROVAL PERMIT <u>6/23/2009</u> DATE <u>6/23/2009</u> SENIOR DESIGN ENGINEER <u>[Signature]</u>		APPROVED <u>6/23/2009</u> FOR USE <u>DATE</u> STRUCTURE DESIGN MANAGER <u>[Signature]</u>	
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE			
DESIGN <u>DLS</u> <u>03/09</u>		CHECK <u>BJB</u> <u>04/09</u>	
DRAWN <u>MLS</u> <u>03/09</u>		CHECK <u>VTG</u> <u>05/09</u>	
QUANT		CHECK	
1		05/15/09	
B		04/13/09	
A		03/11/09	
NO.		DATE	
BY		REMARKS	
		REVISONS	



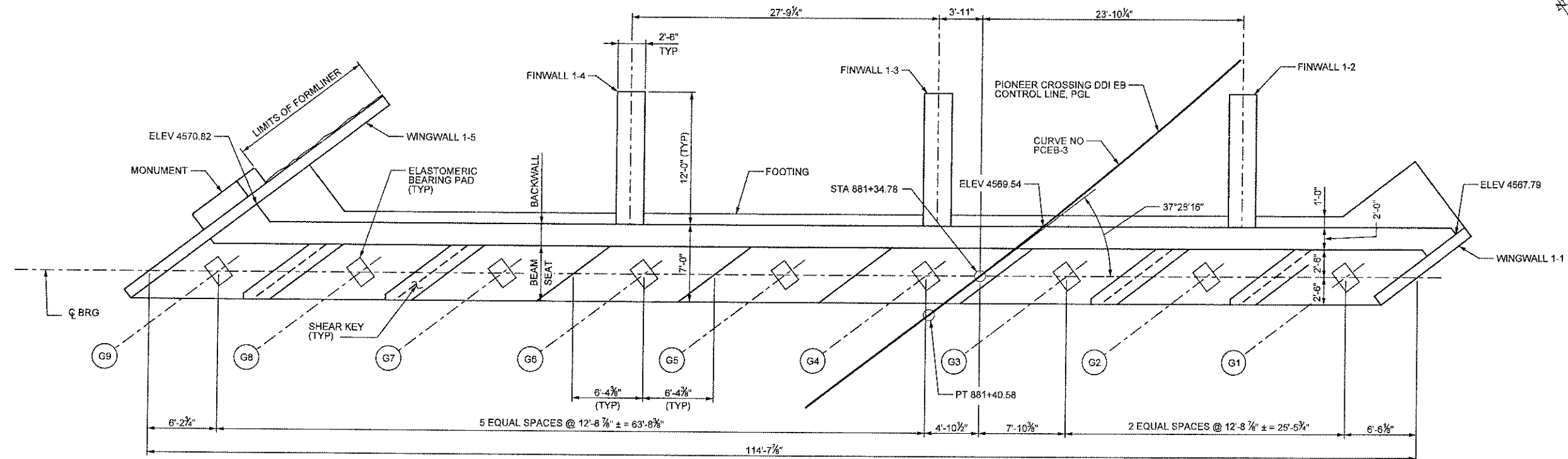
ABUTMENT FOOTING PLAN
ABUT 3 WB

NOTES

1. SEE "EB ABUTMENT 1 FOOTING" SHEET FOR ADDITIONAL NOTES.

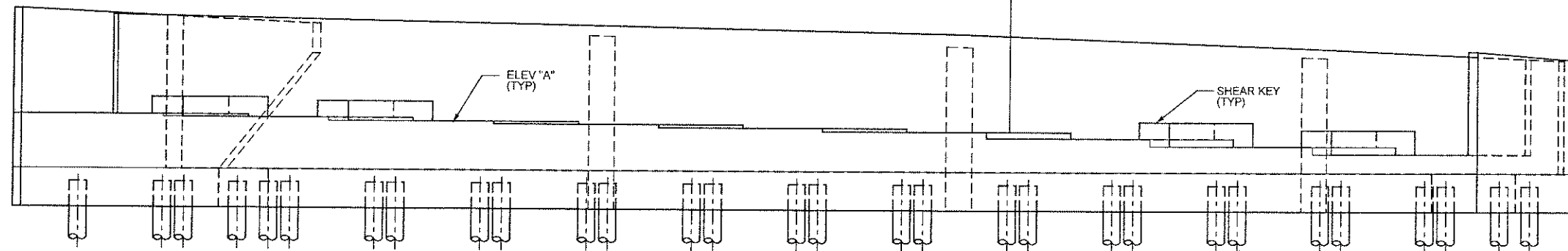


PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION		SALT LAKE CITY, UTAH		KIEWIT/CPLYDE	
PIONEER CROSSING OVER I-15		WB ABUTMENT 3 FOOTING		DESIGN DLS 03/09		CHECK BJB 04/09	
PROJECT NUMBER S-R399(42) & S-R399(59)		DATE 6/23/2009		DRAWN MSL 03/09		CHECK YTG 05/09	
STRUCTURE DESIGN MANAGER		DATE 6/23/2009		CHECK		REVISIONS	
UTAH COUNTY		F-785		BY		DATE	
SHT. 13 OF 67							



EB ABUTMENT #1 - PLAN

DECK SLAB AND APPROACH SLAB
NOT SHOWN FOR CLARITY



EB ABUTMENT #1 - ELEVATION

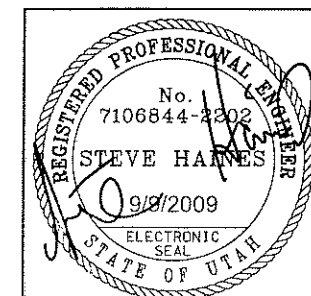
LOOKING DOWNSTATION
MONUMENTS NOT SHOWN

EB ABUTMENT #1 BEAM SEAT ELEVATIONS	
GIRDER	ELEV "A"
G1	4560.38
G2	4560.96
G3	4561.57
G4	4562.03
G5	4562.29
G6	4562.54
G7	4562.77
G8	4562.98
G9	4563.18

2

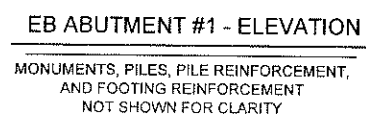
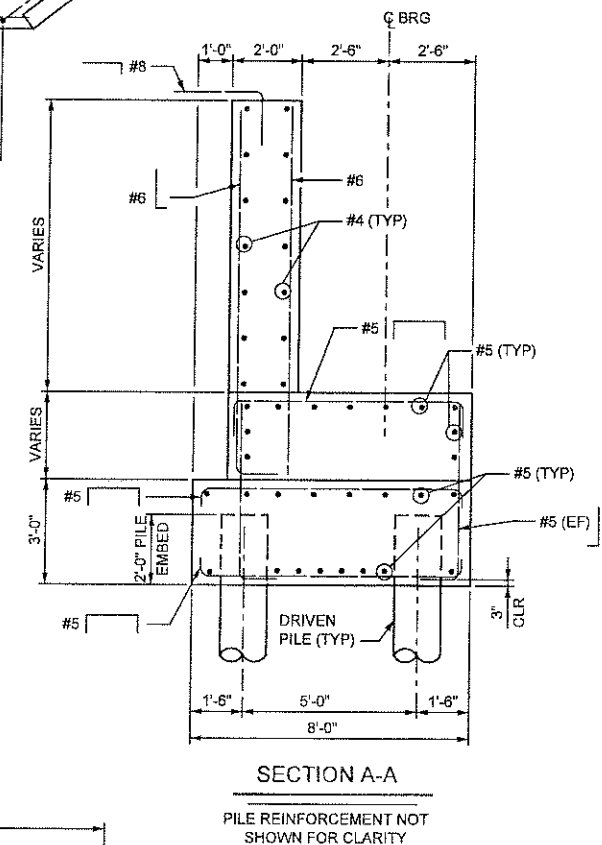
NOTES

- ELEVATIONS SHOWN ARE AT ϕ BEARING.
- FINISH BEARING SEAT AREA HIGH AND RUB OR GRIND LEVEL TO ELEVATIONS SHOWN $\pm \frac{1}{8}$ ". DO NOT GROUT UNDER ELASTOMERIC BEARING PADS.
- SEE "ABUTMENT DRAINAGE DETAILS" SHEET FOR DRAIN DETAILS.
- SEE "END DIAPHRAGM DETAILS" SHEET FOR ABUTMENT DIAPHRAGM.
- SEE "SHEAR KEY DETAILS" SHEET FOR SHEAR KEYS.
- TOP OF BACKWALL ELEVATIONS ARE GIVEN AT BACK FACE.
- SEE "EB ABUTMENT 1 REINF" SHEET FOR ABUTMENT REINFORCEMENT DETAILS.
- SEE "EB ABUTMENT 1 WINGWALLS" SHEET FOR WINGWALL DIMENSIONS, ELEVATIONS AND REINFORCEMENT DETAILS.
- SEE "FINWALL DETAILS" SHEET FOR FINWALL DETAILS.
- SEE "MONUMENT DETAIL" SHEETS FOR MONUMENTS.



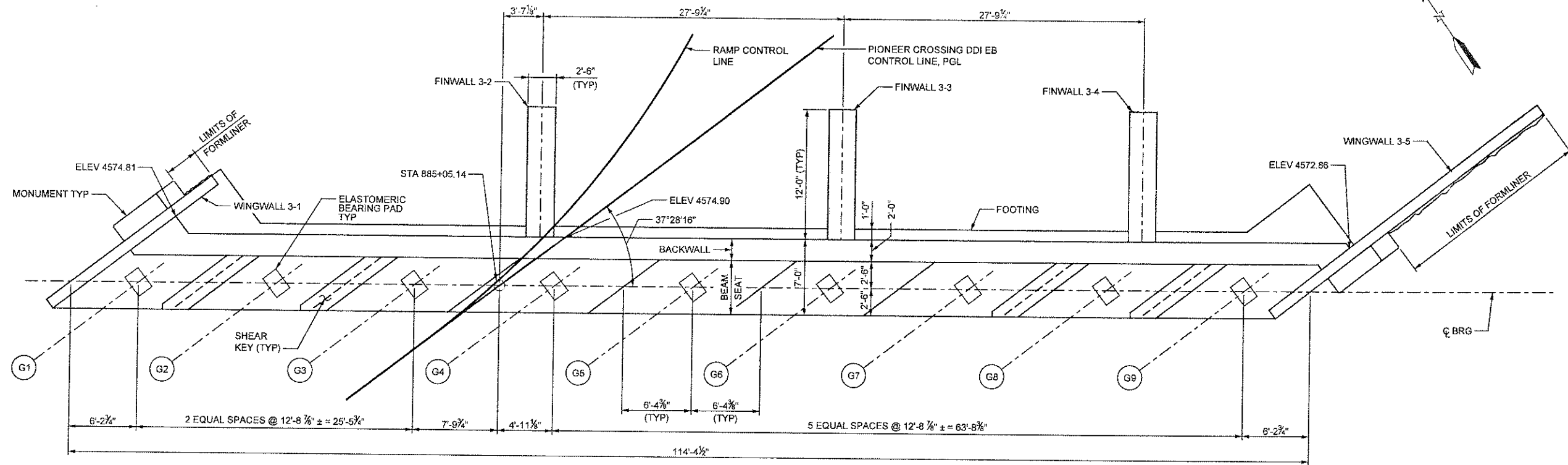
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE		PIONEER CROSSING - SEGMENT 2	
PIONEER CROSSING OVER I-15		PIONEER CROSSING OVER I-15	
EASTBOUND ABUTMENT 1		EASTBOUND ABUTMENT 1	
PROJECT NUMBER S-R399(42) & S-R399(59)		PROJECT NUMBER S-R399(42) & S-R399(59)	
UTAH COUNTY		UTAH COUNTY	
F-785		F-785	
DRG. NO.		DRG. NO.	
SHT. 14 OF 67		SHT. 14 OF 67	

NO.	DATE	BY	REVISIONS
2	09/09/09	SRH	DRF 034 - ADDED SOLE PLATES
1	05/15/09	SRH	RFI SUBMITTAL
B	04/13/09	SRH	100% SUBMITTAL
A	03/11/09	SRH	60% SUBMITTAL



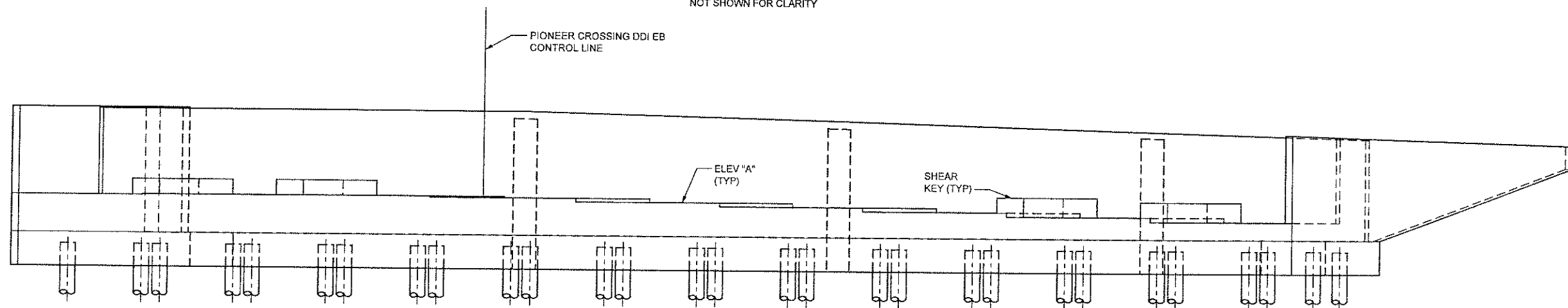
-

UTAH
COUNTY
F-785
DRG. NO.



EB ABUTMENT #3 - PLAN

DECK SLAB AND APPROACH SLAB
NOT SHOWN FOR CLARITY



EB ABUTMENT #3 - ELEVATION

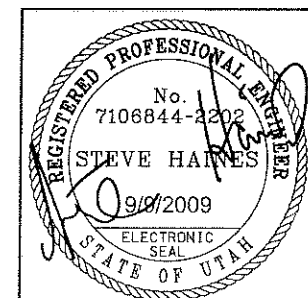
LOOKING UPSTATION
MONUMENTS NOT SHOWN

EB ABUTMENT #3 BEAM SEAT ELEVATIONS	
GIRDER	ELEV "A"
G1	4567.04
G2	4567.08
G3	4567.11
G4	4567.00
G5	4566.68
G6	4566.35
G7	4566.00
G8	4565.63
G9	4565.25

2

NOTES

- ELEVATIONS SHOWN ARE AT ϕ BEARING.
- FINISH BEARING SEAT AREA HIGH AND RUB OR GRIND LEVEL TO ELEVATIONS SHOWN $\pm \frac{1}{8}$ ". DO NOT GROUT UNDER ELASTOMERIC BEARING PADS.
- SEE "EASTBOUND ABUTMENT 3 REINF" SHEET FOR ABUTMENT REINFORCEMENT DETAILS.
- SEE "EB ABUTMENT 3 WINGWALLS" SHEET FOR WINGWALL DIMENSIONS, ELEVATIONS AND REINFORCEMENT DETAILS.
- SEE "FINWALL DETAILS" SHEET FOR FINWALL DETAILS.
- SEE "ABUTMENT DRAINAGE DETAILS" SHEET FOR DRAIN DETAILS.
- SEE "END DIAPHRAGM DETAILS" SHEET FOR ABUTMENT DIAPHRAGM.
- SEE "SHEAR KEY DETAILS" SHEET FOR SHEAR KEYS.
- TOP OF BACKWALL ELEVATIONS ARE GIVEN AT BACK FACE.
- SEE "MONUMENT DETAILS" SHEETS FOR MONUMENTS.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
EASTBOUND ABUTMENT 3

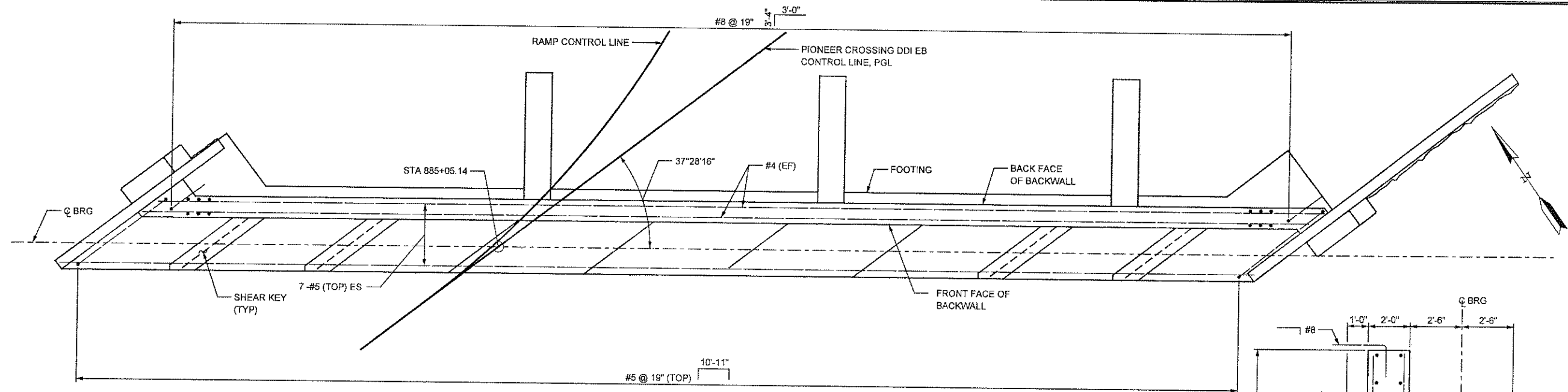
UTAH
COUNTY
F-785
DRG. NO.

SHT. 16 OF 67

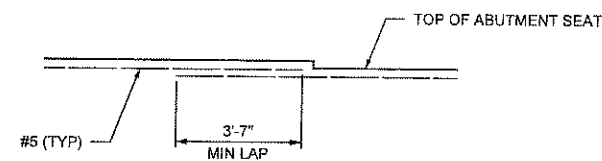
NO.	DATE	BY	REVISIONS
2	09/09/09	SRH	DRF1034 - ADDED SOLE PLATES
1	05/15/09	SRH	RFC SUBMITTAL
B	04/13/09	SRH	100% SUBMITTAL
A	03/11/09	SRH	50% SUBMITTAL

DESIGN	DLS	03/09	CHECK	BJB	04/09
DRAWN	MLS	03/09	CHECK	VTG	05/09
QUANT.			CHECK		

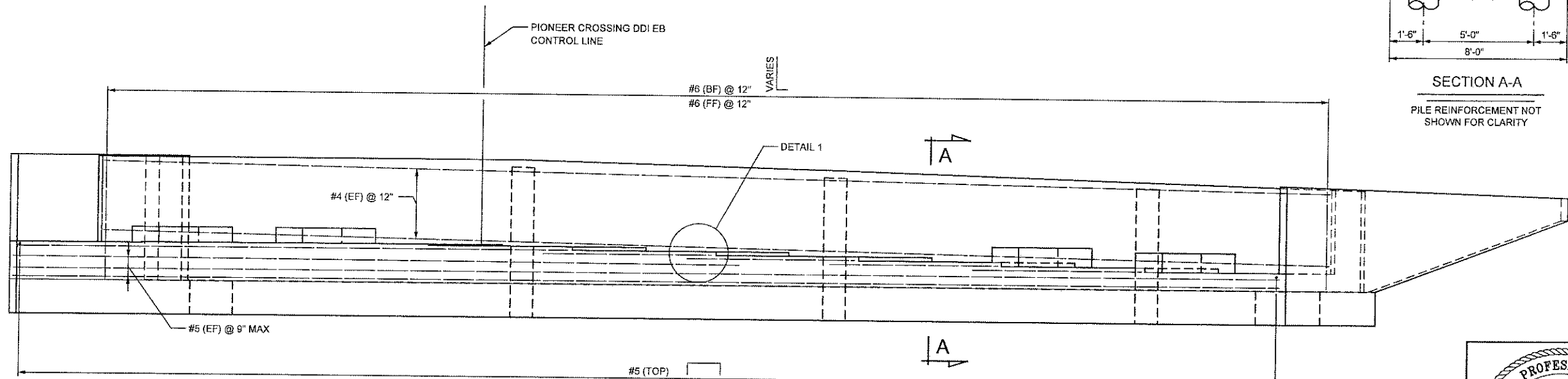
PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
EASTBOUND ABUTMENT 3
PROJECT NUMBER
S-R399(42) & S-R399(59)



EB ABUTMENT #3 - PLAN
FOOTING REINFORCEMENT NOT SHOWN FOR CLARITY

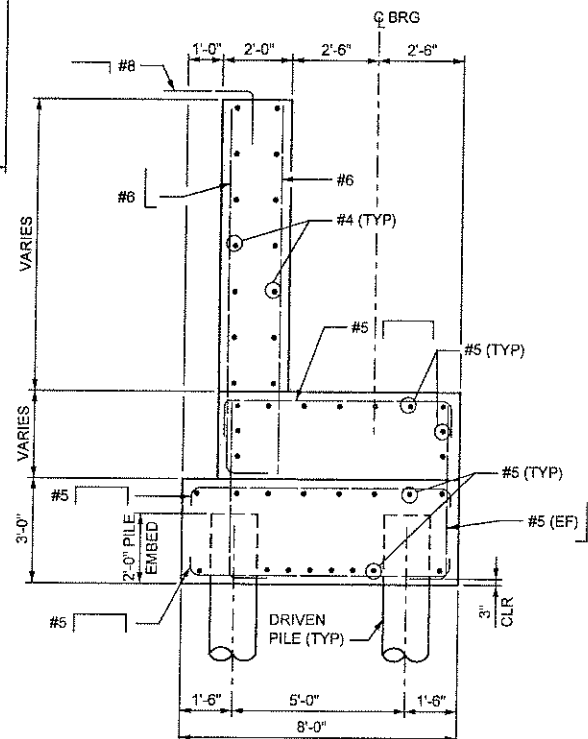


DETAIL 1



EB ABUTMENT #3 - ELEVATION

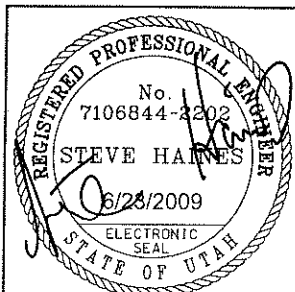
MONUMENTS, PILES, PILE REINFORCEMENT,
AND FOOTING REINFORCEMENT
NOT SHOWN FOR CLARITY



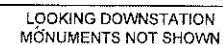
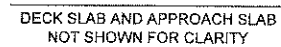
SECTION A-A
PILE REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

1. WINGWALL AND FINWALL REINFORCEMENT NOT SHOWN FOR CLARITY.
2. SEE "SHEAR KEY DETAILS" SHEET FOR SHEAR KEY REINFORCEMENT.
3. SEE "EASTBOUND ABUTMENT 3" SHEET FOR ADDITIONAL NOTES.
4. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENT REINFORCEMENT.

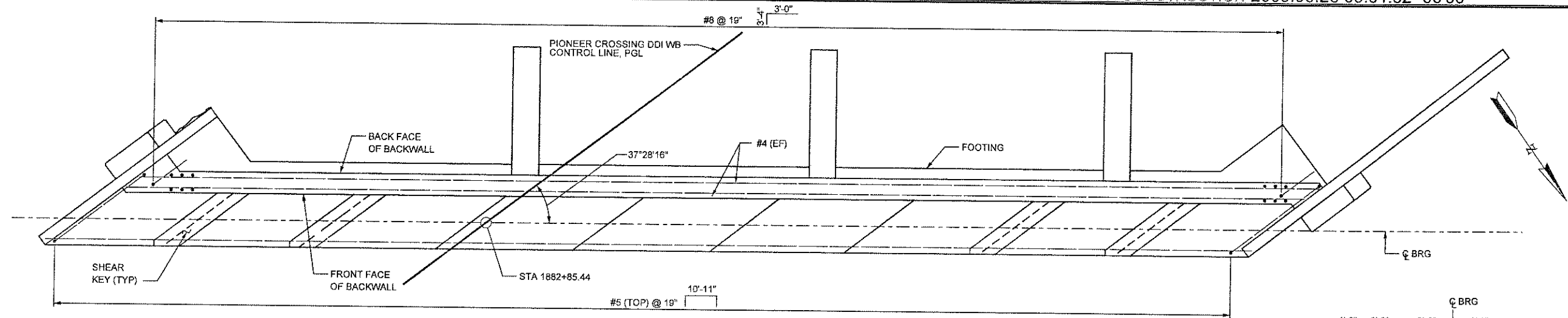


PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION																											
PIONEER CROSSING OVER I-15		SALT LAKE CITY, UTAH				KIEWIT/CLYDE																							
EASTBOUND ABUTMENT 3 REINF		APPROVAL RECOMM.		6/23/2009		DESIGN		DLS		03/09		CHECK		BUB		04/09		1		06/15/09		SRH		RFC SUBMITTAL					
PROJECT NUMBER		S-R399(42) & S-R399(59)		APPROVED FOR USE		6/23/2009		DATE		DRAWN		JGC		03/09		CHECK		VTC		05/09		A		03/11/09		SRH		80% SUBMITTAL	
																CHECK						NO		DATE		BY		REMARKS	
																												REVIEWS	



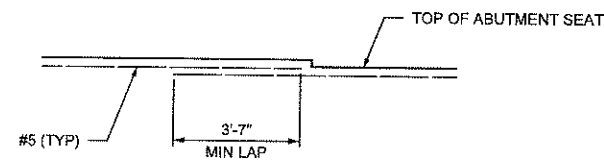
2

SHT. 18 OF 67

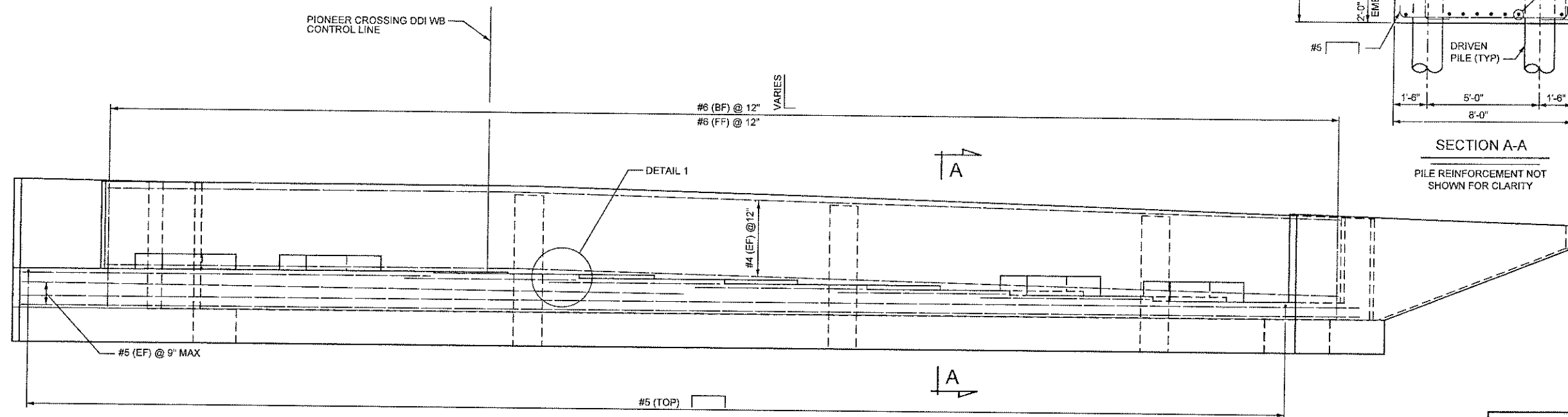


WB ABUTMENT #1 - PLAN

FOOTING REINFORCEMENT NOT SHOWN FOR CLARITY

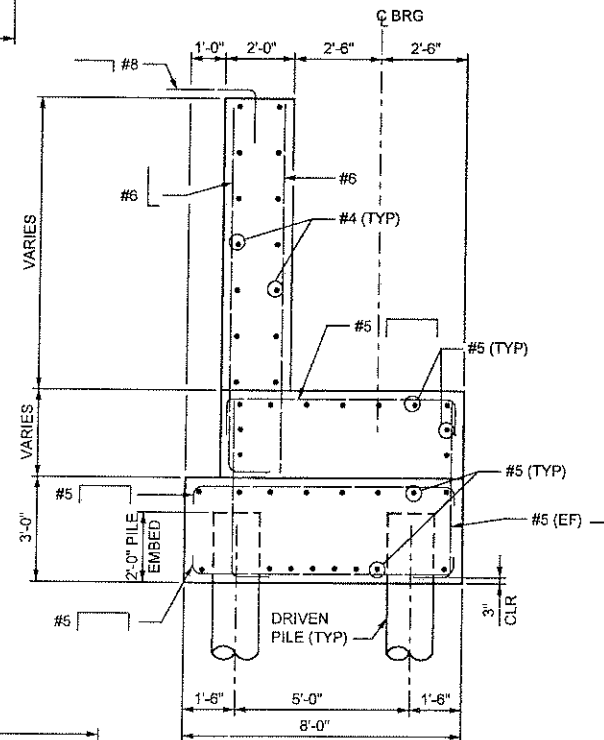


DETAIL 1



WB ABUTMENT #1 - ELEVATION

MONUMENTS, PILES, PILE AND FOOTING REINFORCEMENT NOT SHOWN FOR CLARITY

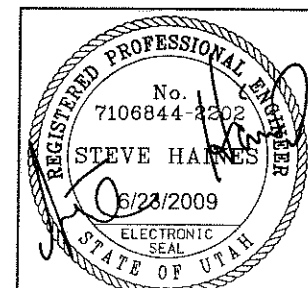


SECTION A-A

PILE REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

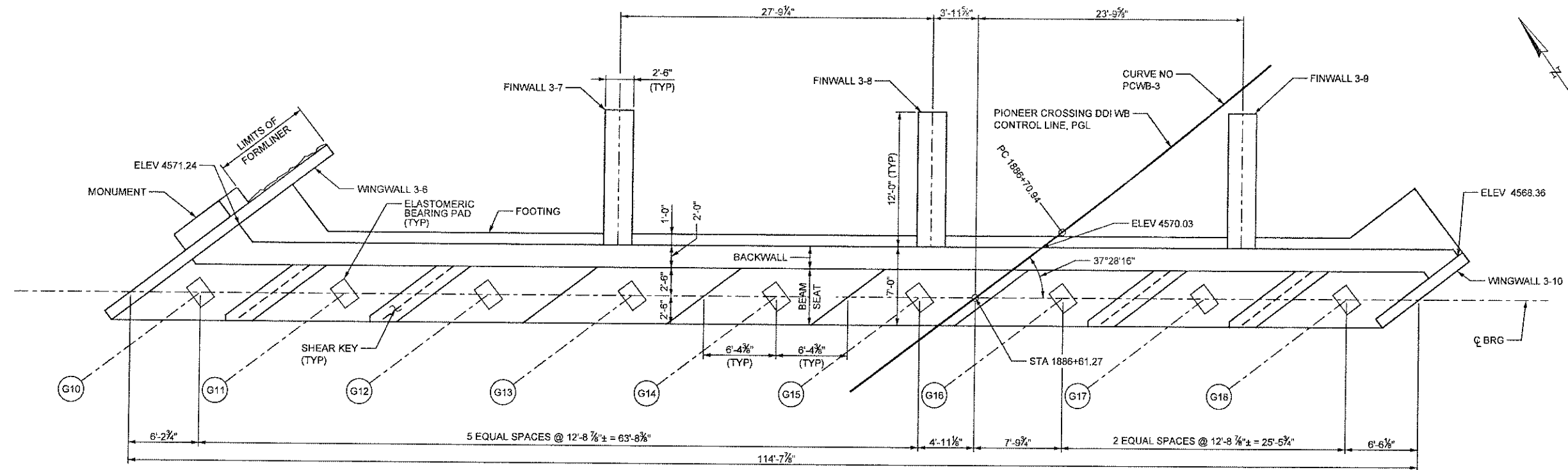
1. WINGWALL AND FINWALL REINFORCEMENT NOT SHOWN FOR CLARITY.
2. SEE "SHEAR KEY DETAILS" SHEET FOR SHEAR KEY REINFORCEMENT.
3. SEE "WESTBOUND ABUTMENT 1" SHEET FOR ADDITIONAL NOTES.
4. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENT REINFORCEMENT.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CILYDE

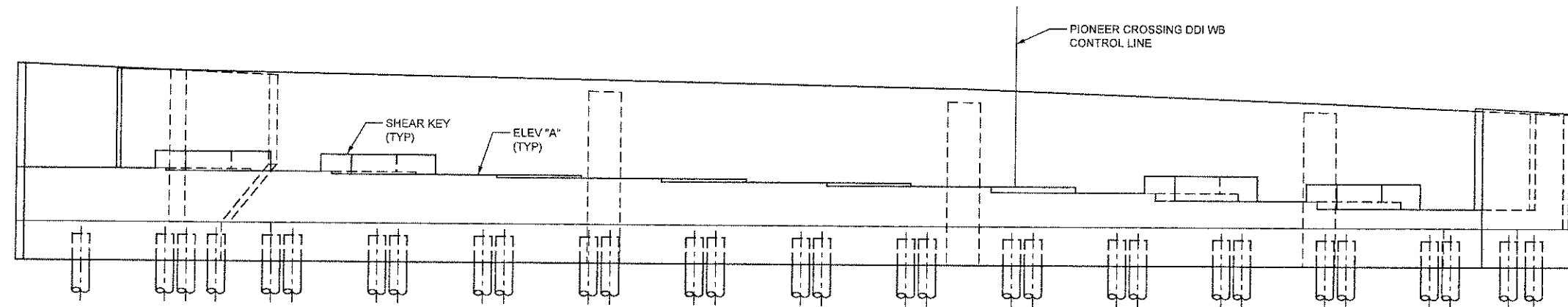
PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
WESTBOUND ABUTMENT 1 REINF
PROJECT NUMBER S-R399(42) & S-R399(59)

UTAH COUNTY
F-785
DRG. NO.



WB ABUTMENT #3 - PLAN

DECK SLAB AND APPROACH SLAB
NOT SHOWN FOR CLARITY



WB ABUTMENT #3 - ELEVATION

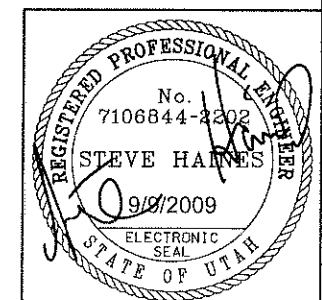
LOOKING UPSTATION
MONUMENTS NOT SHOWN

WB ABUTMENT #3 BEAM SEAT ELEVATIONS	
GIRDER	ELEV "A"
G10	4563.56
G11	4563.39
G12	4563.19
G13	4562.98
G14	4562.75
G15	4562.51
G16	4562.06
G17	4561.48
G18	4560.89

2

NOTES

- ELEVATIONS SHOWN ARE AT ϕ BEARING.
- FINISH BEARING SEAT AREA HIGH AND RUB OR GRIND LEVEL TO ELEVATIONS SHOWN $\pm \frac{1}{8}$ ". DO NOT GROUT UNDER ELASTOMERIC BEARING PADS.
- SEE "WESTBOUND ABUTMENT 3 REINF" SHEET FOR ABUTMENT REINFORCEMENT DETAILS.
- SEE "WB ABUTMENT 3 WINGWALLS" SHEET FOR WINGWALL DIMENSIONS, ELEVATIONS AND REINFORCEMENT DETAILS.
- SEE "FINWALL DETAILS" SHEET FOR FINWALL DETAILS.
- SEE "ABUTMENT DRAINAGE DETAILS" SHEET FOR DRAIN DETAILS.
- SEE "END DIAPHRAGM DETAILS" SHEET FOR ABUTMENT DIAPHRAGM.
- SEE "SHEAR KEY DETAILS" SHEET FOR SHEAR KEYS.
- TOP OF BACKWALL ELEVATIONS ARE GIVEN AT BACK FACE.
- SEE "MONUMENT DETAILS" SHEETS FOR MONUMENTS.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
WESTBOUND ABUTMENT 3

UTAH

COUNTY

F-785

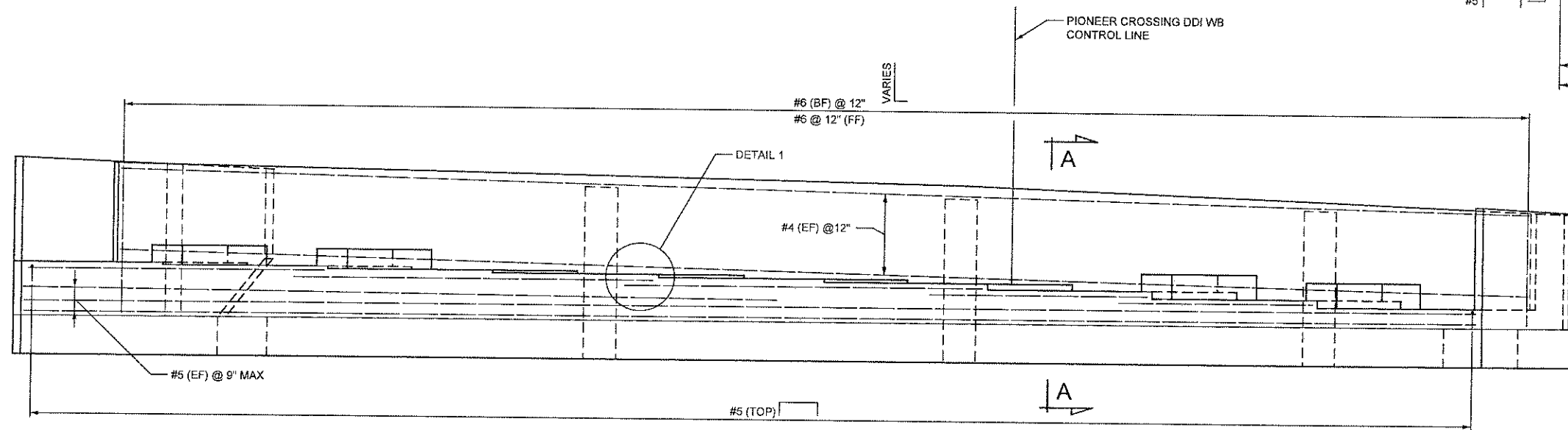
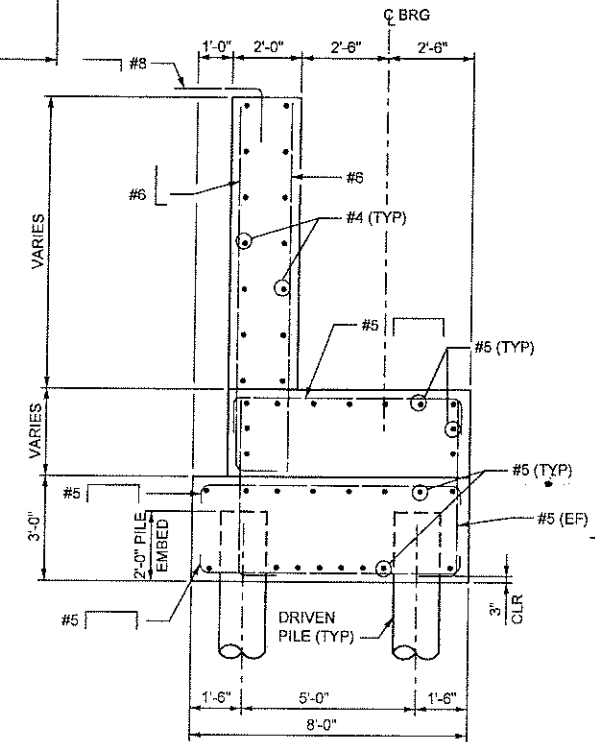
DRG. NO.

SHT. 20 OF 67

NO.	DATE	BY	REVISIONS
2	09/09/09	SRH	DRF1034 - ADDED SOLE PLATES
1	05/15/09	SRH	RF1034 SUBMITTAL
B	04/13/09	SRH	100% SUBMITTAL
A	03/11/09	SRH	60% SUBMITTAL

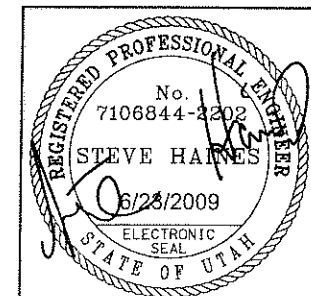
DESIGN	DLS	03/09	CHECK	BJB	04/09
DRAWN	MLS	03/09	CHECK	VTG	05/09
QUANT.			CHECK		

APPROVAL	DATE	APPROVED FOR USE	DATE
STRUCTURE DESIGNER	09/09/09	STRUCTURE DESIGNER	09/09/09
PROJECT NUMBER	S-R399(42) & S-R399(59)		

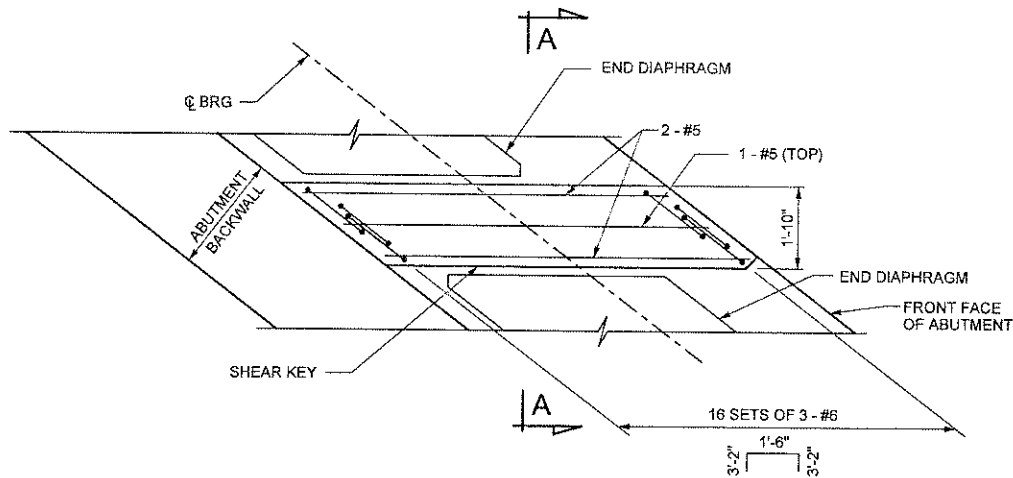


SECTION A-A

PILE REINFORCEMENT NOT SHOWN FOR CLARITY

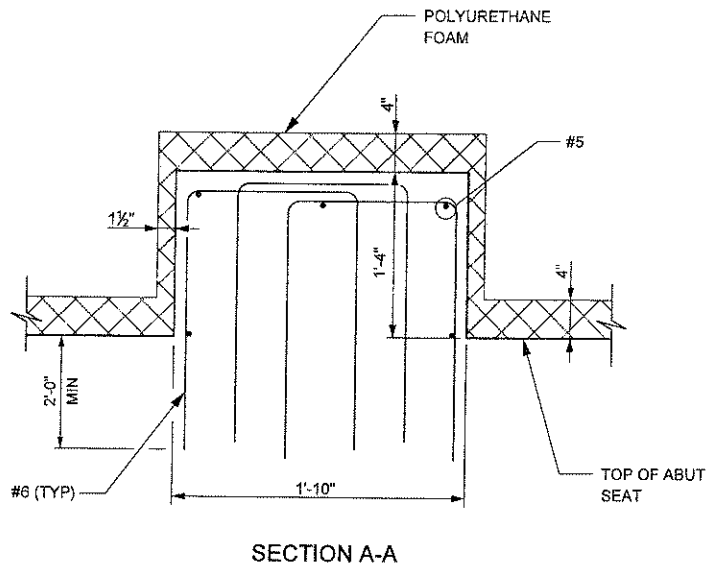


SHT. 21	OF 67
UTAH COUNTY	
F-785	DRG. NO.
PIONEER CROSSING - SEGMENT 2	UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE
PIONEER CROSSING OVER I-15	DESIGN DLS 03/09 CHECK BJB 04/09
WESTBOUND ABUTMENT 3 REINF	APPROVAL RECORD DATE 6/23/2009 <i>[Signature]</i> SENIOR DESIGN ENGINEER
PROJECT NUMBER S-R399(42) & S-R399(59)	DRAWN MLS 03/09 CHECK VTG 05/09 APPROVED FOR USE DATE 6/23/2009 <i>[Signature]</i> STRUCTURE DESIGN MANAGER
	1 05/15/09 SRH RFC SUBMITTAL
	B 04/13/09 SRH 100% SUBMITTAL
	A 03/11/09 SRH 60% SUBMITTAL
	NO. DATE BY REMARKS
	REVISIONS



PLAN - SHEAR KEY

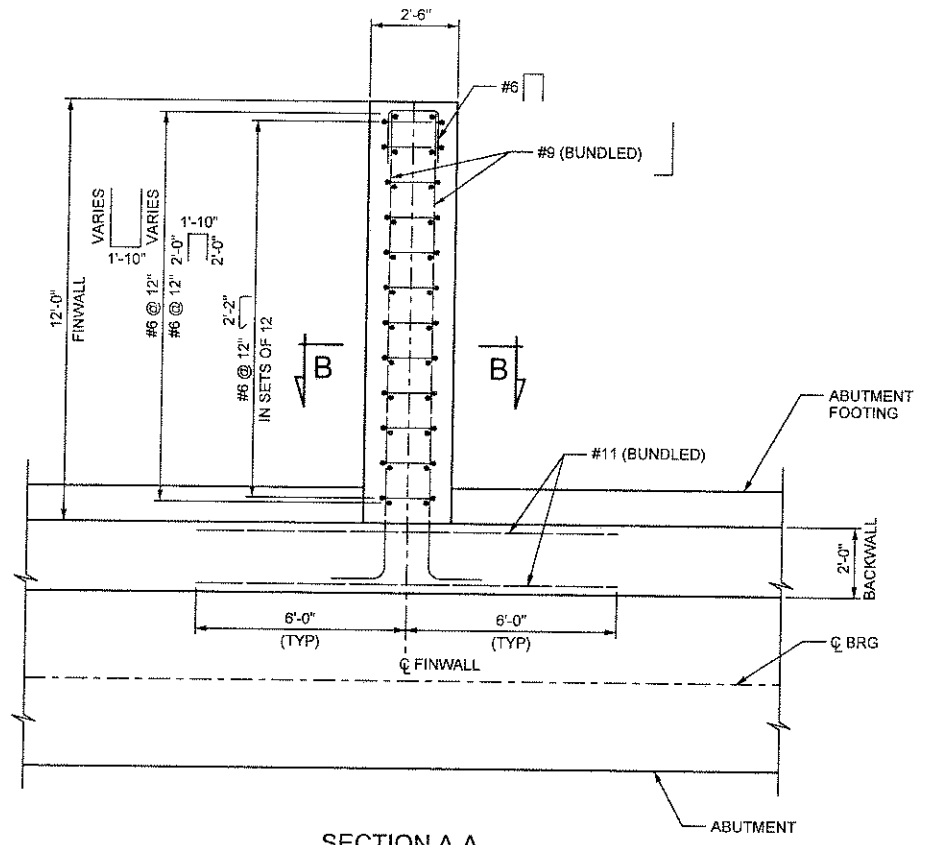
GIRDERS NOT SHOWN.
SEE ABUTMENT DETAILS FOR LOCATION
OF SHEAR KEYS.



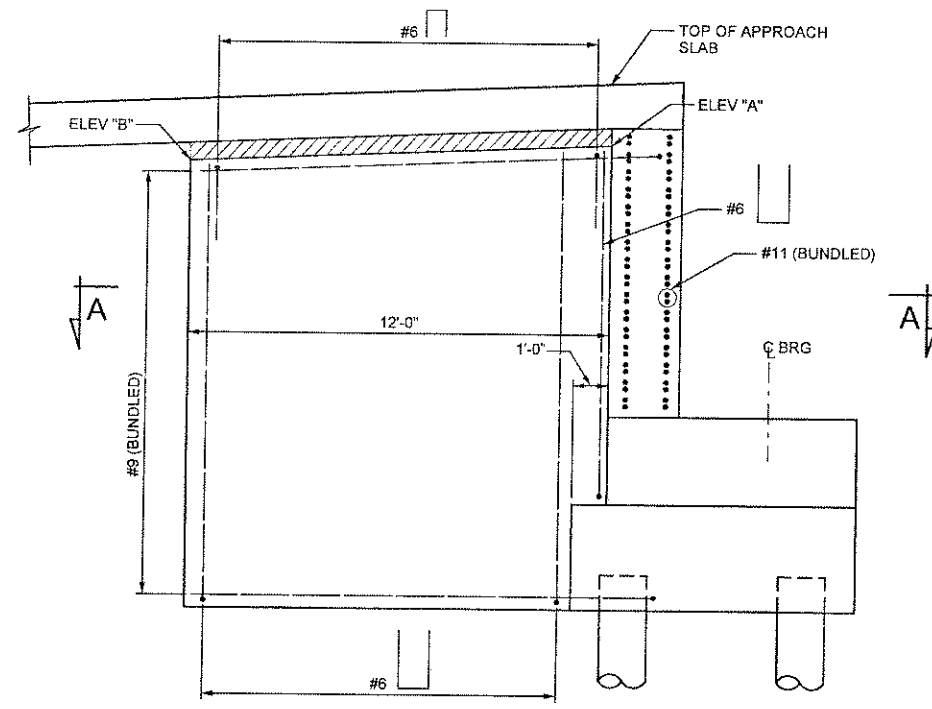
SECTION A-A



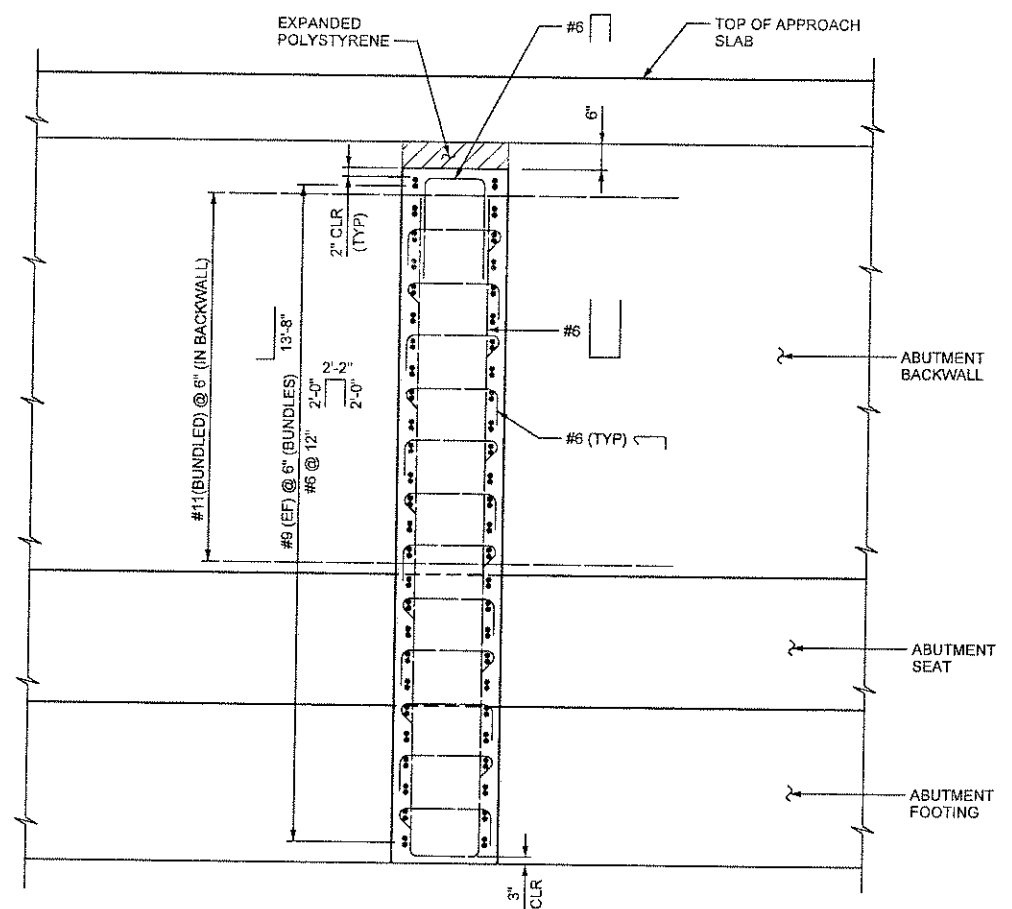
UTAH COUNTY		F-785		DRG. NO.		SHT. 22		OF 67					
PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE											
PIONEER CROSSING OVER I-15		DESIGN		DLS		03/09		CHECK		BJB		04/09	
SHEAR KEY DETAILS		DATE		6/23/2009		SENIOR DESIGN INGR.							
PROJECT NUMBER		APPROVED FOR USE		6/23/2009		DATE		6/23/2009		STRUCTURE DESIGN MANAGER			
S-R399(42) & S-R399(59)		QUANT.				CHECK							
		NO		DATE		BY						REVISIONS	
		A		03/11/09		SRH		60% SUBMITTAL					
		B		04/13/09		SRH		100% SUBMITTAL					
		1		05/18/09		SRH		RFC SUBMITTAL					



SECTION A-A
ABUTMENT REINFORCEMENT
NOT SHOWN FOR CLARITY



ELEVATION VIEW

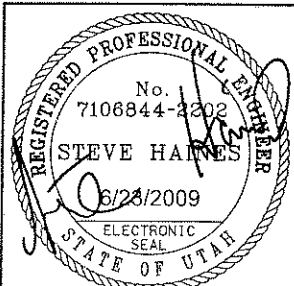


SECTION B-B

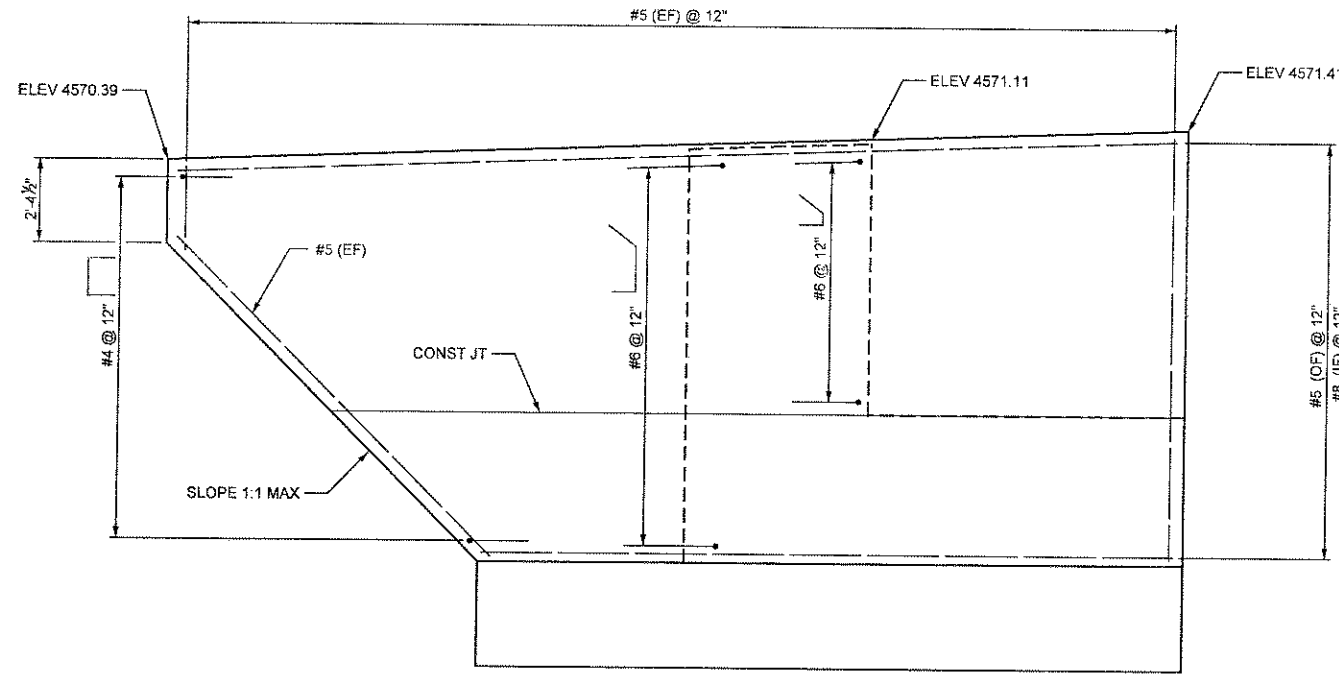
FINWALL ELEVATION TABLE		
FINWALL	ELEV "A"	ELEV "B"
1-2	4568.20	4568.02
1-3	4569.25	4568.73
1-4	4569.81	4569.33
1-7	4572.56	4572.56
1-8	4573.40	4573.43
1-9	4574.12	4573.79
3-2	4574.40	4574.09
3-3	4573.74	4573.79
3-4	4572.96	4572.98
3-7	4570.25	4569.78
3-8	4569.73	4569.24
3-9	4568.71	4568.56

NOTES

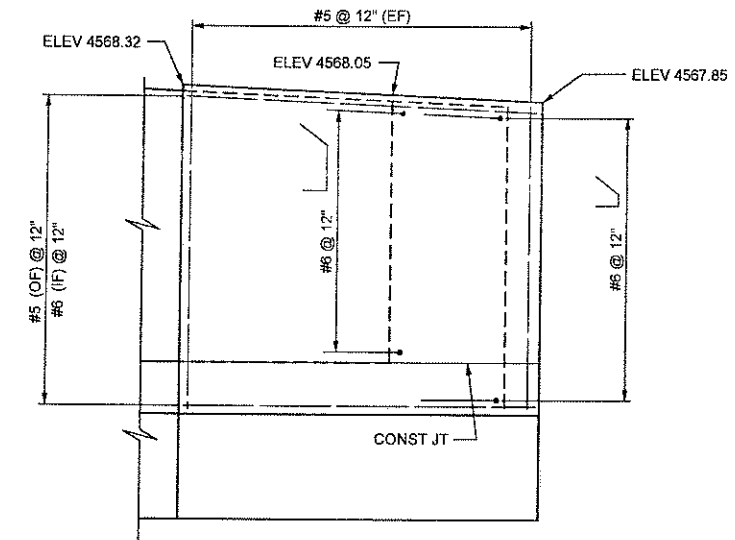
1. SEE "FOUNDATION LAYOUT" SHEET FOR BOTTOM OF FOOTING ELEVATIONS.
2. SEE ABUTMENT SHEETS FOR DESIGNATION OF FINWALLS.
3. ALL ELEVATIONS ARE AT C OF FINWALL.



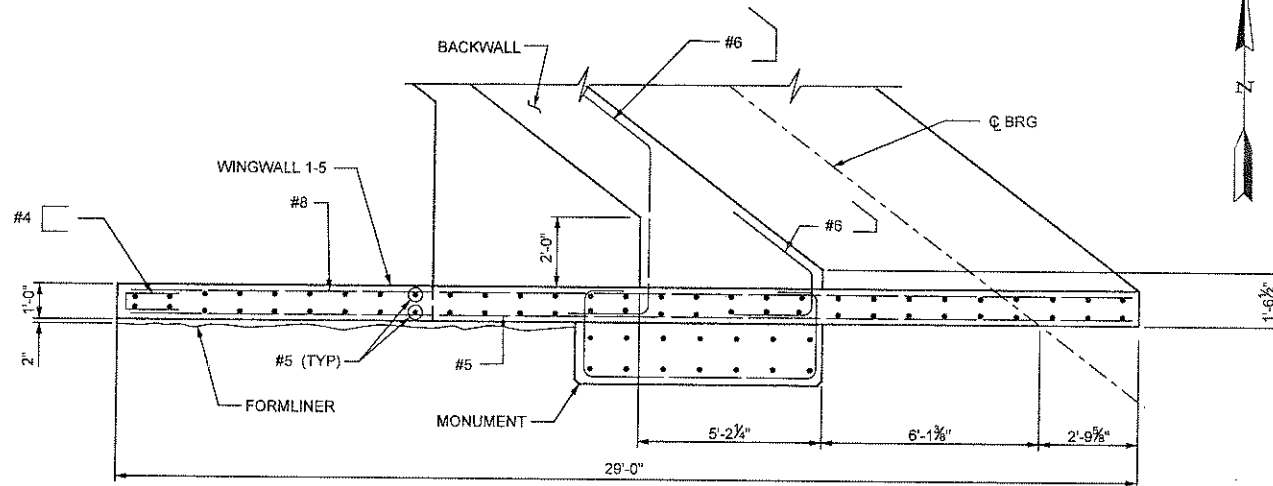
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE		DESIGN DLS 03/09	CHECK BJB 04/09	100% SUBMITTAL SRH 04/13/09	REVISIONS
PIONEER CROSSING - SEGMENT 2	PIONEER CROSSING OVER I-15	APPROVAL RECORD DATE 6/23/2009	STRUCTURE DESIGN MANAGER DATE 6/23/2009	QUANT.	BY
FINWALL DETAILS		S-R399(42) & S-R399(59)		REMARKS	
UTAH COUNTY		F-785		DRG. NO.	
SHT. 23		OF 67			



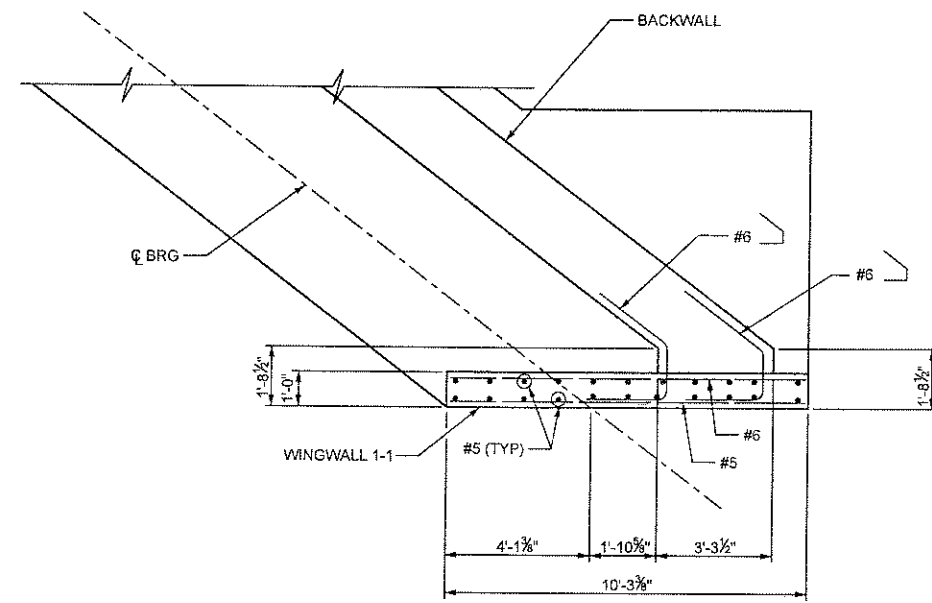
ELEVATION WINGWALL 1-5
MONUMENT NOT SHOWN



ELEVATION WINGWALL 1-1



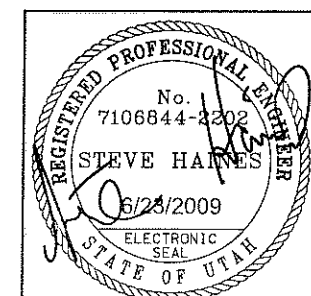
PLAN WINGWALL 1-5
BACKWALL REINFORCEMENT NOT SHOWN.



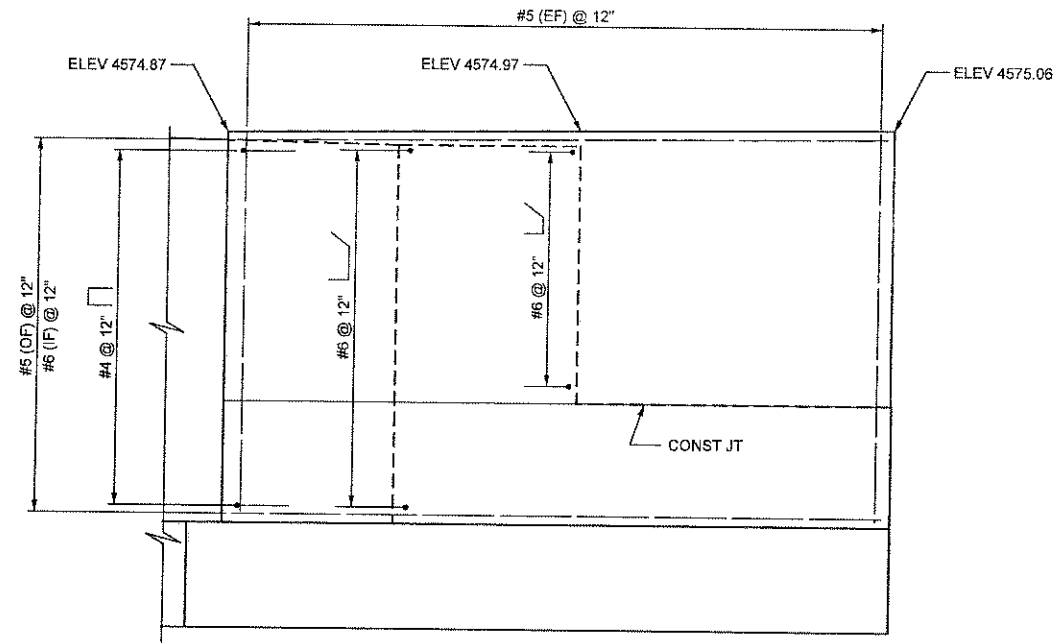
PLAN WINGWALL 1-1
BACKWALL REINFORCEMENT NOT SHOWN.

NOTES

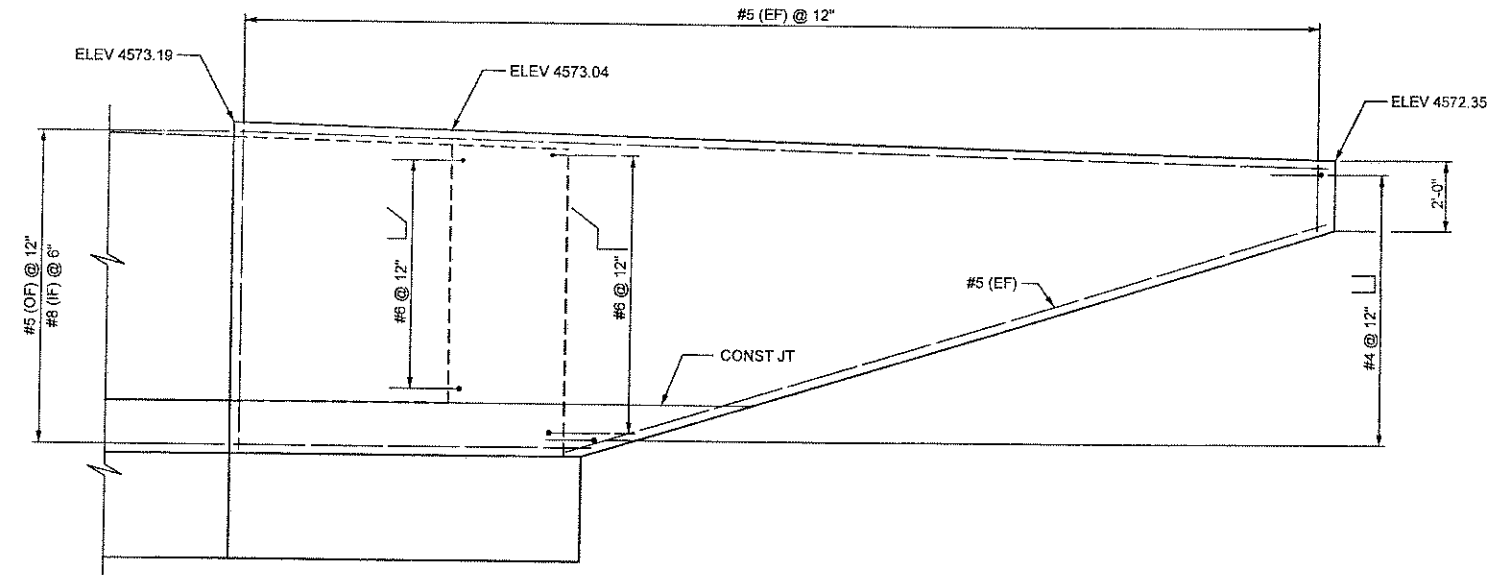
1. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENT REINFORCEMENT.
2. FOOTING REINFORCEMENT AND DOWELS NOT SHOWN.



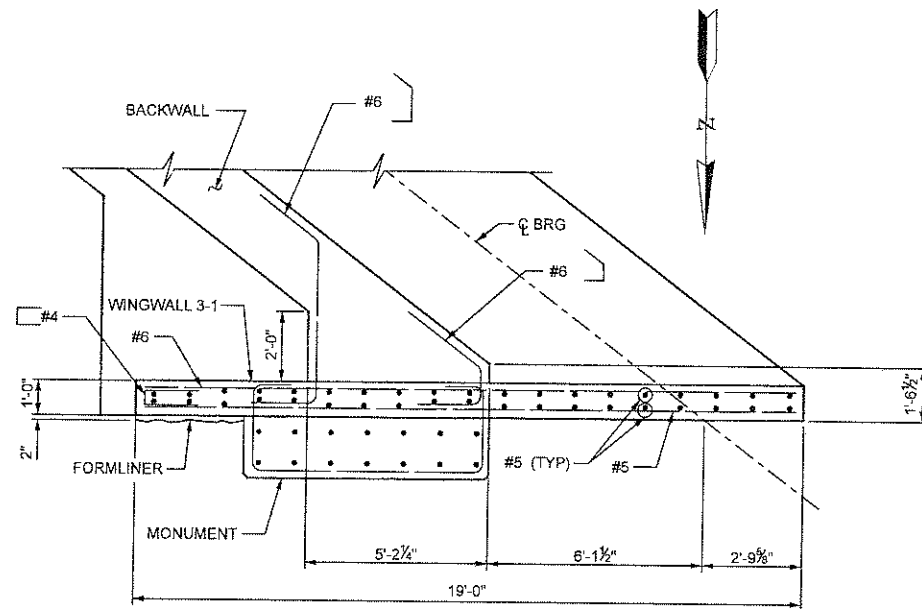
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CPLYDE				DESIGN DLS 02/09 DRAWN MLS 02/09 CHECK BJB 05/09 CHECK BJB 05/09 CHECK			
PIONEER CROSSING - SEGMENT 2				1			
PIONEER CROSSING OVER I-15				B			
EB ABUTMENT 1 WINGWALLS				A			
PROJECT NUMBER S-R399(42) & S-R399(59)				NO. DATE BY			
UTAH COUNTY				REVISIONS			
F-785				BY			
DRG. NO.				DATE			
SHT. 24 OF 67				REMARKS			



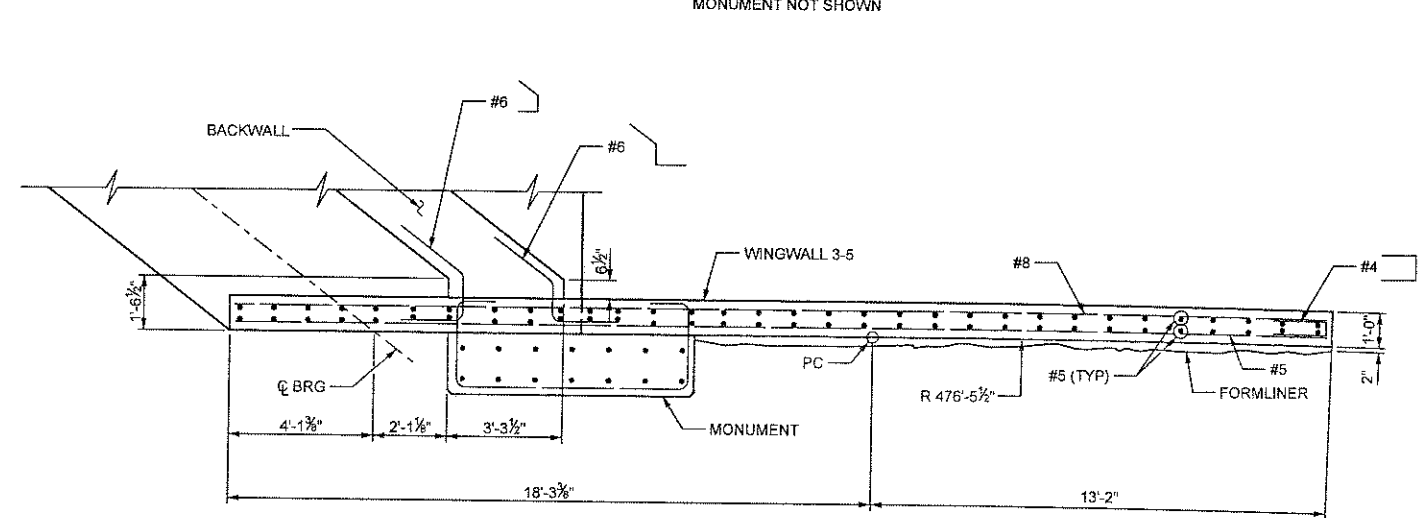
ELEVATION WINGWALL 3-1
MONUMENT NOT SHOWN



ELEVATION WINGWALL 3-5
MONUMENT NOT SHOWN



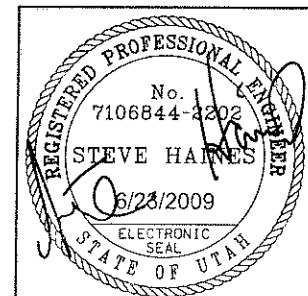
PLAN - WINGWALL 3-1
BACKWALL REINFORCEMENT NOT SHOWN.



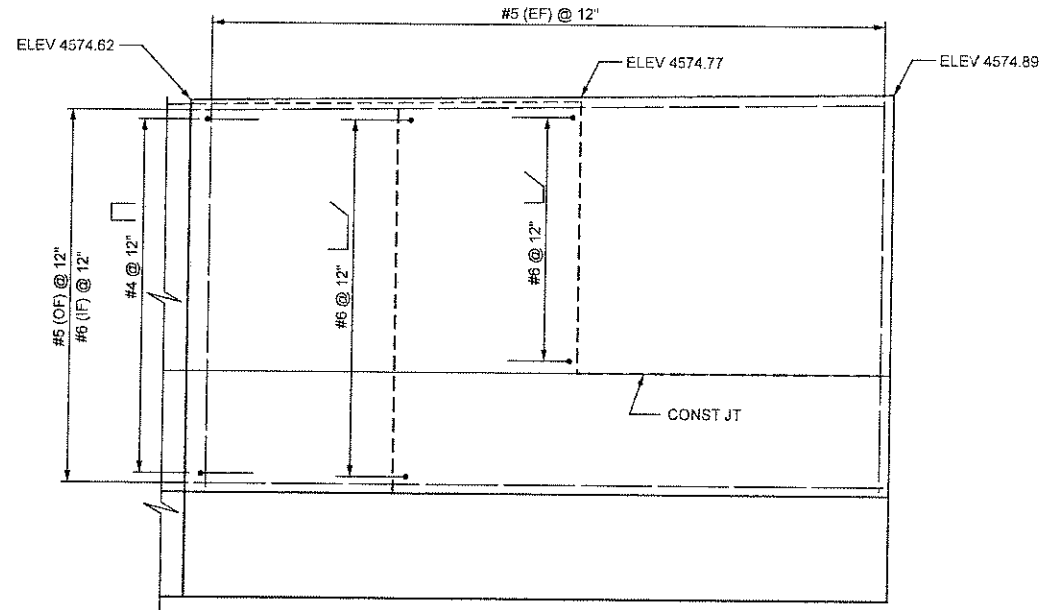
PLAN - WINGWALL 3-5
BACKWALL REINFORCEMENT NOT SHOWN.

NOTES

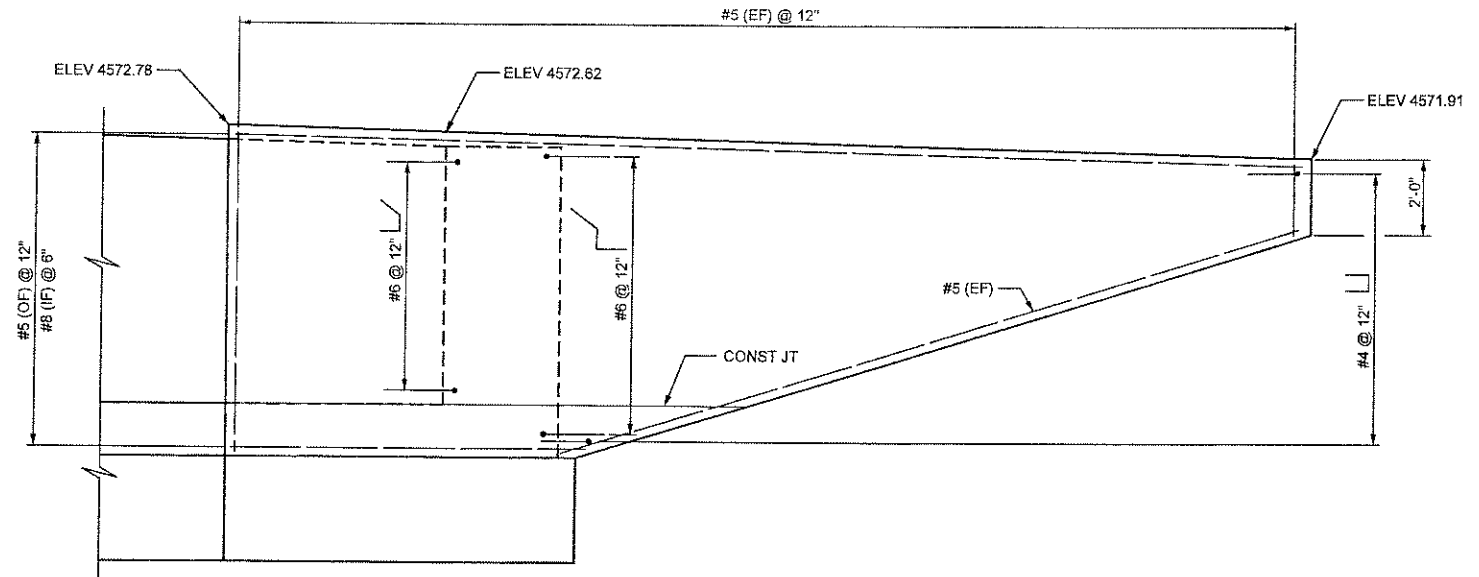
1. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENT REINFORCEMENT.
2. FOOTING REINFORCEMENT AND DOWELS NOT SHOWN.



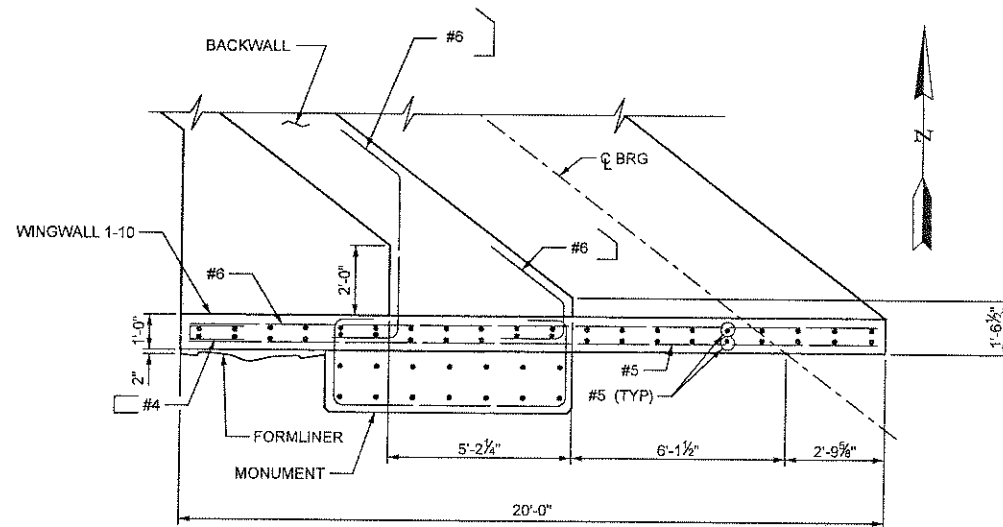
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/COLYDE									
DESIGN		DLS	02/09	CHECK		BJB	05/09	SRH SUBMITTAL	
DRAWN		MLS	02/09	CHECK		BJB	05/09	SRH 100% SUBMITTAL	
APPROVAL		DATE	6/23/2009	FOR USE		DATE	6/23/2009	SRH 60% SUBMITTAL	
PROJECT NUMBER		S-R399(42) & S-R399(59)		STRUCTURE DESIGN MANAGER		DATE		REVISIONS	
PIONEER CROSSING - SEGMENT 2		PIONEER CROSSING OVER I-15		EB ABUTMENT 3 WINGWALLS		UTAH COUNTY		F-785	
DRG. NO.		SHT. 25		OF 67					



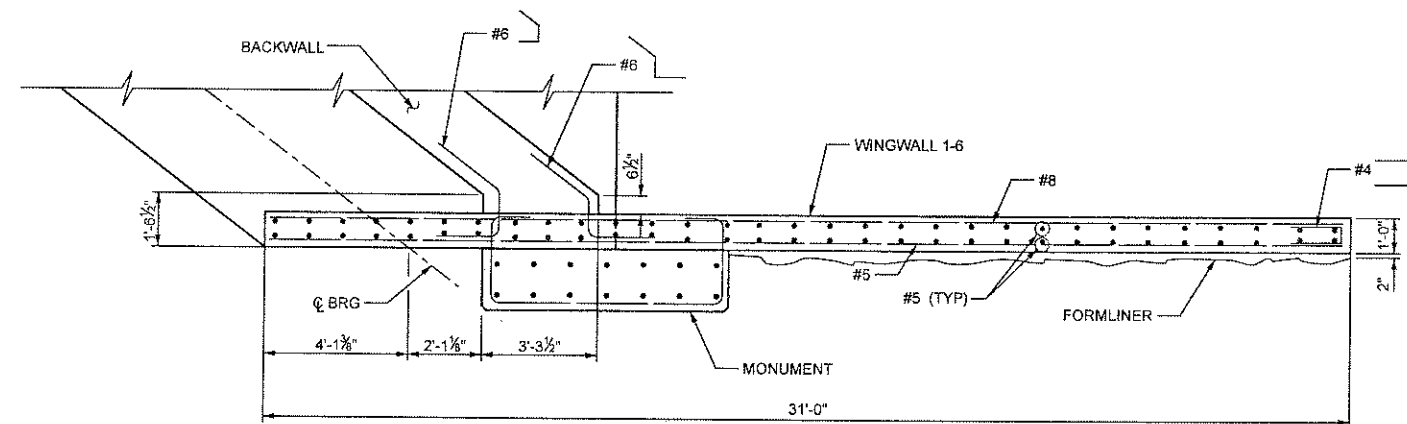
ELEVATION WINGWALL 1-10
MONUMENT NOT SHOWN



ELEVATION WINGWALL 1-6
MONUMENT NOT SHOWN



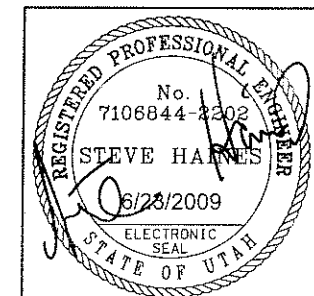
PLAN - WINGWALL 1-10
BACKWALL REINFORCEMENT NOT SHOWN.



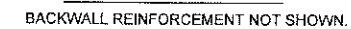
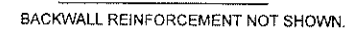
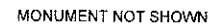
PLAN - WINGWALL 1-6
BACKWALL REINFORCEMENT NOT SHOWN.

NOTES

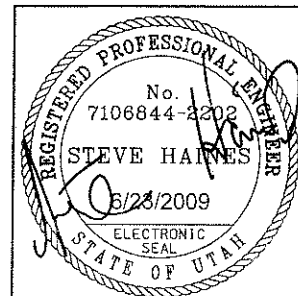
1. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENT REINFORCEMENT.
2. FOOTING REINFORCEMENT AND DOWELS NOT SHOWN.



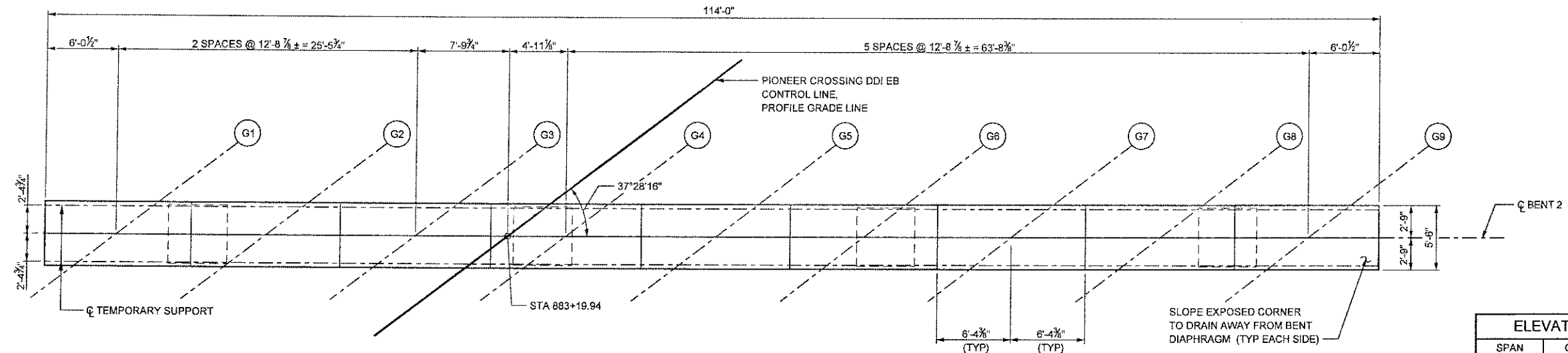
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE				PIONEER CROSSING - SEGMENT 2			
DESIGN DLS 02/09				PIONEER CROSSING OVER I-15			
DRAWN MLS 02/09				WB ABUTMENT 1 WINGWALLS			
CHECK BJB 05/09				PROJECT NUMBER S-R399(42) & S-R399(59)			
CHECK BJB 05/09				UTAH COUNTY			
CHECK				F-785			
NO. DATE BY				DRG. NO.			
1 05/15/09 SRH RFC SUBMITTAL				SHT. 26 OF 67			
B 04/13/09 SRH 100% SUBMITTAL							
A 03/11/09 SRH 60% SUBMITTAL							
REVISIONS							



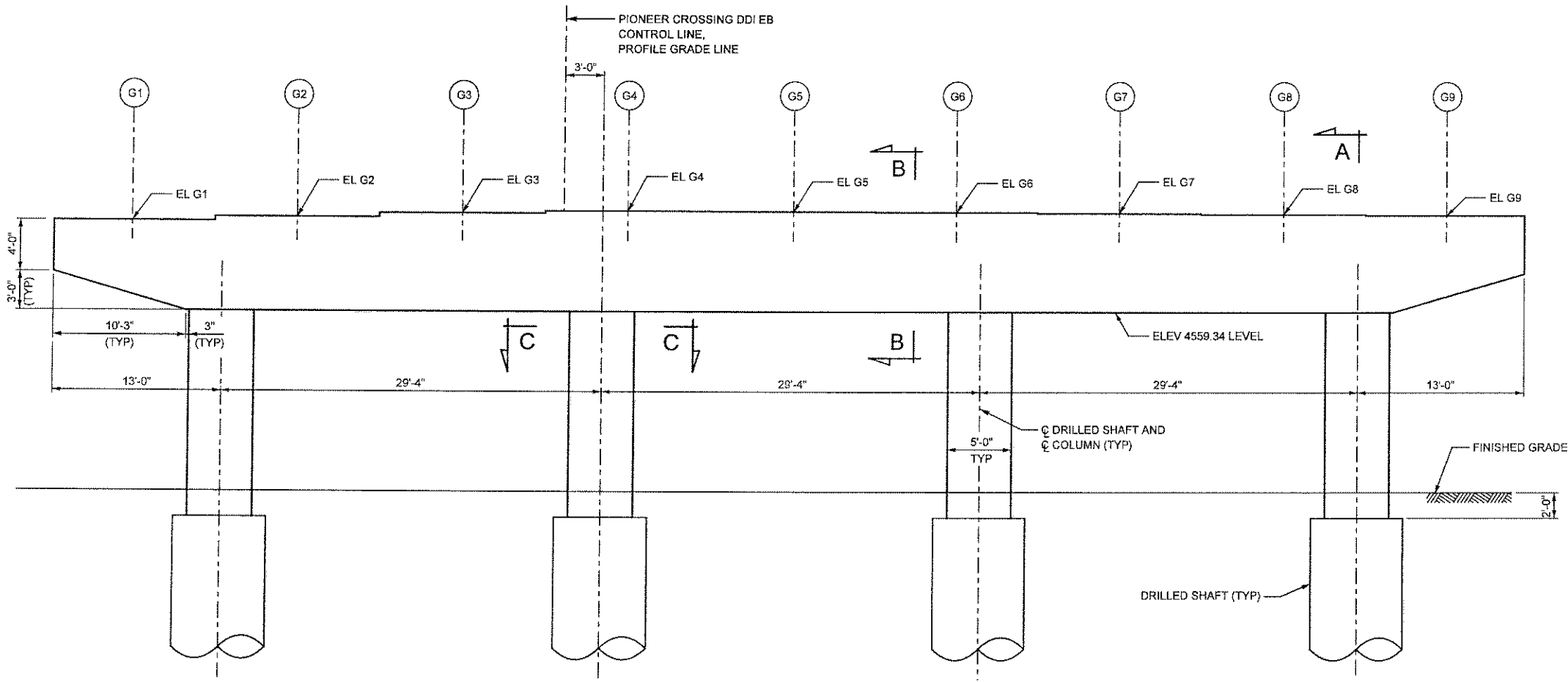
1. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENT REINFORCEMENT.
2. FOOTING REINFORCEMENT AND DOWELS NOT SHOWN.



SHT. 27	OF 67
UTAH COUNTY	
F-785	ORG. NO.
PIONEER CROSSING - SEGMENT 2	UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE
PIONEER CROSSING OVER I-15	DESIGN DLS 02/09 CHECK BJB 05/09
WB ABUTMENT 3 WINGWALLS	DRAWN M/S 02/09 CHECK BJB 05/09
PROJECT NUMBER S-R399(42) & S-R399(59)	APPROVAL RECORD: 6/23/2009 DATE: <i>[Signature]</i> SENIOR DESIGN ENGR. APPROVED FOR USE: 6/23/2009 DATE: <i>[Signature]</i> STRUCTURE DESIGN MANAGER
	1 05/15/09 SRH RFC SUBMITTAL
	B 04/13/09 SRH 100% SUBMITTAL
	A 03/11/09 SRH 60% SUBMITTAL
	NO. DATE BY
	REVISIONS
	REMARKS



PLAN - BENT 2
EASTBOUND BRIDGE

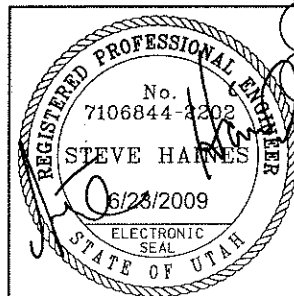


ELEVATION - BENT 2
EASTBOUND BRIDGE

ELEVATION SCHEDULE		
SPAN	GIRDER	ELEVATION
1	G1	4566.34
1	G2	4566.67
1	G3	4566.99
1	G4	4567.17
1	G5	4567.15
1	G6	4567.11
1	G7	4567.06
1	G8	4566.99
1	G9	4566.91
2	G1	4566.48
2	G2	4566.80
2	G3	4567.11
2	G4	4567.28
2	G5	4567.25
2	G6	4567.20
2	G7	4567.13
2	G8	4567.05
2	G9	4566.95

NOTES

1. PLACE STIRRUPS NORMAL TO C BENT.
2. FOR DRILLED SHAFT REINFORCING, SEE "DRILLED SHAFT DETAILS" SHEET. FOR TOP OF DRILLED SHAFT ELEVATIONS, SEE "FOUNDATION LAYOUT" SHEET.
3. FINISH THE BEARING SEAT HIGH AND GRIND OR RUB TO WITHIN $\pm \frac{1}{16}$ " OF ELEVATION SHOWN. NO GROUTING. MAINTAIN 2" CLEAR TO REINFORCEMENT AFTER GRINDING.
4. ADJUST SPACING OF BENT CAP REINFORCING UP TO 4" TO ACCOMMODATE COLUMN REINFORCING. MAINTAIN AT LEAST THREE BAR DIAMETER SPACING.
5. FOR SECTIONS A-A, B-B, AND C-C SEE "BENT 2 DETAILS" SHEET.
6. BEARING SEAT ELEVATIONS ARE AT C TEMPORARY SUPPORT.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CPLYDE

DESIGN DLS 03/09
CHECK VTG 03/09

APPROVAL 6/23/2009
RECOMM. DATE

APPROVED 6/23/2009
FOR USE DATE

PROJECT NUMBER
S-R399(42) & S-R399(59)

UTAH COUNTY
F-785
DRG. NO.

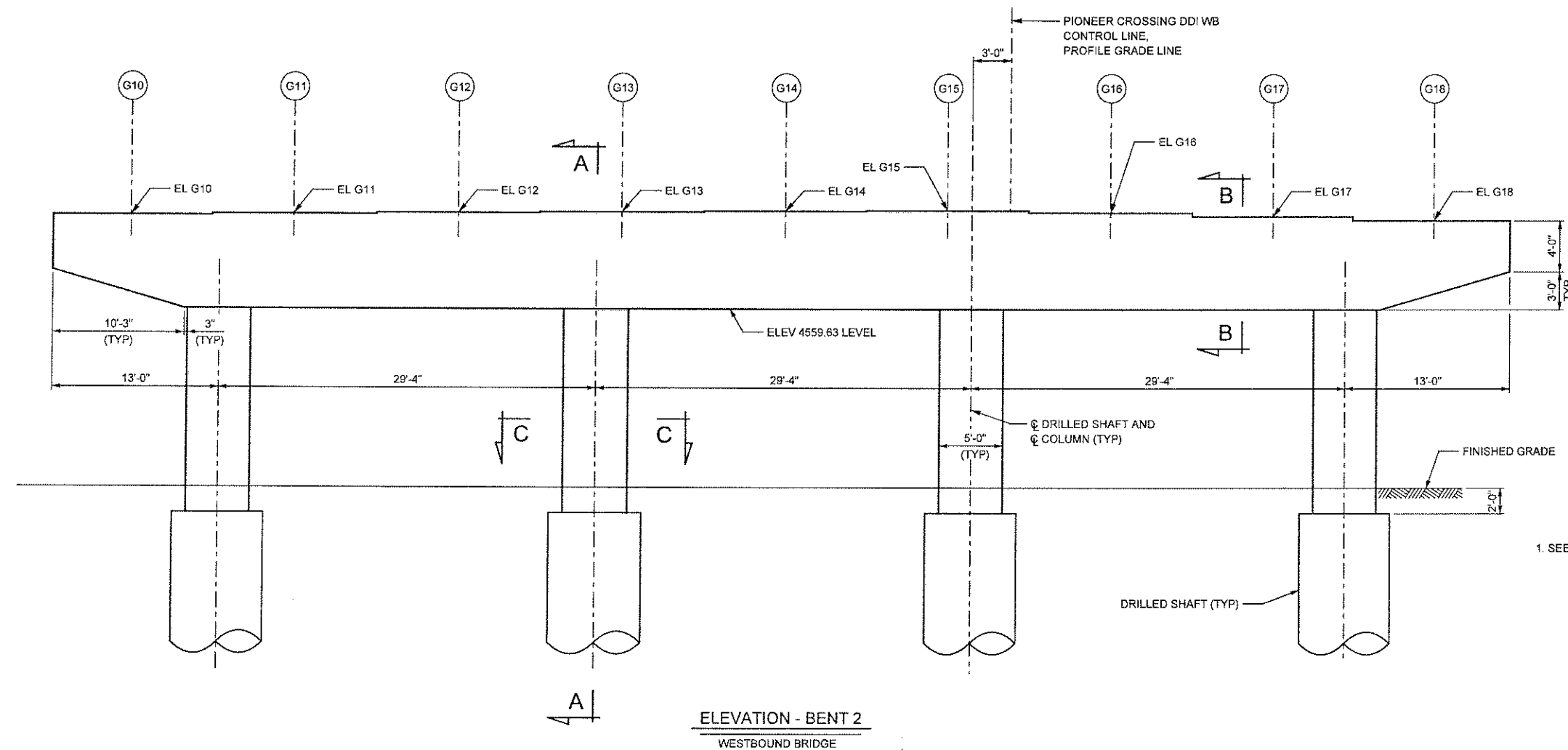
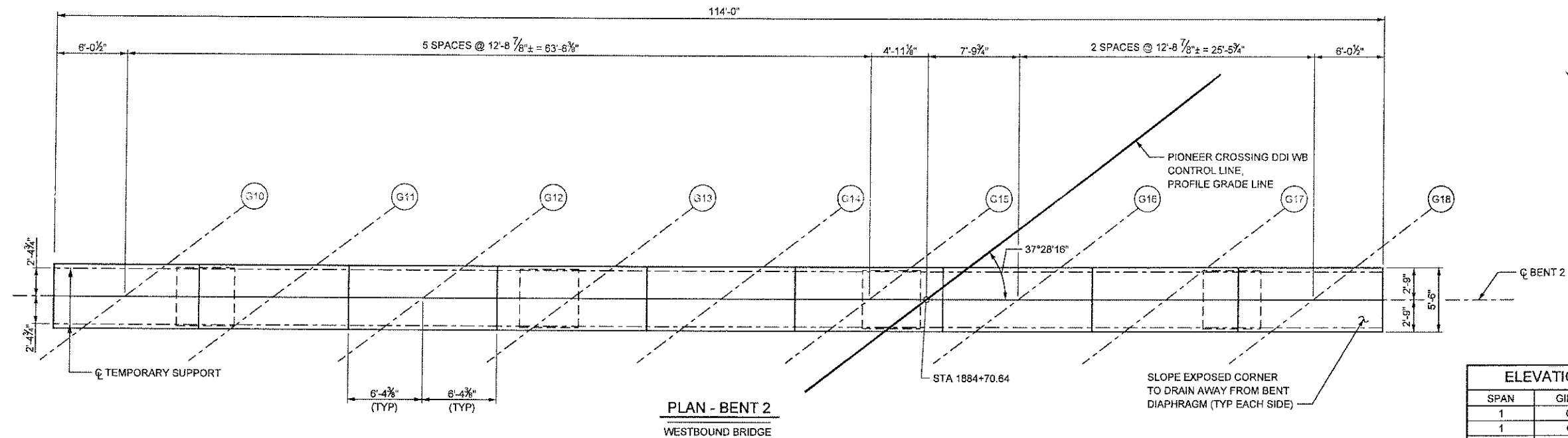
SHT. 29 OF 67

2

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
EB BENT 2 PLAN & ELEVATION

REVISIONS

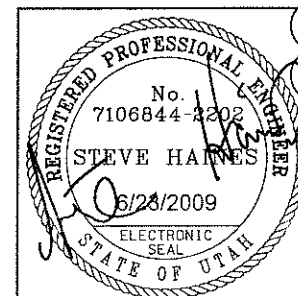
NO.	DATE	BY	REMARKS
1	05/15/09	SRH	RFC SUBMITTAL
2	04/08/09	SRH	RFC BENT 2 SUBMITTAL
3	03/18/09	SRH	100% BENT 2 SUBMITTAL
4	03/11/09	SRH	80% SUBMITTAL
5	02/25/09	SRH	80% BENT 2 SUBMITTAL



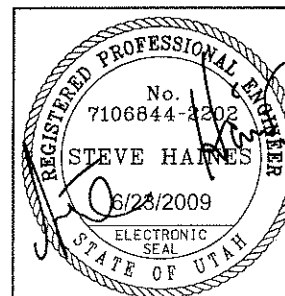
ELEVATION SCHEDULE		
SPAN	GIRDER	ELEVATION
1	G10	4567.01
1	G11	4567.14
1	G12	4567.24
1	G13	4567.34
1	G14	4567.41
1	G15	4567.47
1	G16	4567.33
1	G17	4567.05
1	G18	4566.75
2	G10	4566.99
2	G11	4567.10
2	G12	4567.20
2	G13	4567.28
2	G14	4567.34
2	G15	4567.39
2	G16	4567.23
2	G17	4566.94
2	G18	4566.63

NOTES

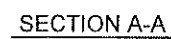
1. SEE "EB BENT 2 PLAN AND ELEVATION" SHEET FOR NOTES.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH		KIEWIT/CILYDE	
DESIGN	DLS	CHECK	VTG
DATE	03/09	DATE	03/09
APPROVAL	03/23/2009	APPROVED	03/23/2009
RECOMM.	03/23/2009	FOR USE	03/23/2009
PROJECT NUMBER S-R399(42) & S-R399(59)		STRUCTURE PERSON MANAGER	
PIONEER CROSSING - SEGMENT 2 PIONEER CROSSING OVER I-15		WB BENT 2 PLAN & ELEVATION	
COUNTY		UTAH	
DRG. NO.		F-785	
SHT. 30		OF 67	



PIONEER CROSSING - SEGMENT 2		UTAH COUNTY		SHT. 31	
PIONEER CROSSING OVER I-15		F-785		OF 67	
BENT 2 DETAILS		DRG. NO.			
PROJECT NUMBER		S-R399(42) & S-R399(59)			
APPROVAL RECOMM. 6/23/2009		DATE		APPROVED 6/23/2009 FOR USE	
DESIGN DLS 03/09		CHECK VTG 03/09		CHECK	
DRAWN MLS 03/09		CHECK VTG 03/09		CHECK	
QUANT		CHECK		CHECK	
STRUCTURE DESIGN MANAGER		DATE		REMARKS	
UTAH DEPARTMENT OF TRANSPORTATION		SALT LAKE CITY, UTAH		REVIEWS	
KIEWIT/CLYDE		CHECK VTG 03/09		BY	
2		05/15/09		RFC SUBMITTAL	
1		04/08/09		SRH RFC BENT 2 SUBMITTAL	
C		03/18/09		SRH 100% BENT 2 SUBMITTAL	
B		03/11/09		SRH 60% SUBMITTAL	
A		02/25/09		SRH 60% BENT 2 SUBMITTAL	
NO		DATE		REMARKS	



GIRDER NOT SHOWN

DIMENSIONS			
ABUT	GIRDER	"A"	"B"
3EB	G1	1 $\frac{3}{16}$ "	$\frac{7}{8}$ "
3EB	G2	$\frac{7}{8}$ "	$\frac{7}{8}$ "
3EB	G3	$\frac{7}{8}$ "	1 $\frac{3}{8}$ "
3EB	G4	$\frac{7}{8}$ "	1 $\frac{3}{8}$ "
3EB	G5	$\frac{7}{8}$ "	$\frac{7}{8}$ "
3EB	G6	$\frac{7}{8}$ "	$\frac{7}{8}$ "
3EB	G7	$\frac{7}{8}$ "	1 $\frac{5}{8}$ "
3EB	G8	$\frac{7}{8}$ "	1"
3EB	G9	$\frac{7}{8}$ "	1"
3WB	G10	$\frac{7}{8}$ "	1 $\frac{1}{4}$ "
3WB	G11	$\frac{7}{8}$ "	1 $\frac{1}{4}$ "
3WB	G12	$\frac{7}{8}$ "	1 $\frac{3}{8}$ "
3WB	G13	$\frac{7}{8}$ "	1 $\frac{5}{8}$ "
3WB	G14	$\frac{7}{8}$ "	1 $\frac{7}{8}$ "
3WB	G15	$\frac{7}{8}$ "	1 $\frac{3}{8}$ "
3WB	G16	$\frac{7}{8}$ "	1 $\frac{1}{4}$ "
3WB	G17	$\frac{7}{8}$ "	1 $\frac{1}{2}$ "
3WB	G18	$\frac{7}{8}$ "	1 $\frac{3}{8}$ "

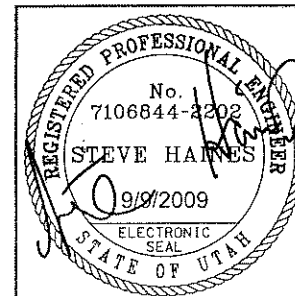
1. USE REINFORCED ELASTOMERIC BEARING PAD WITH 50-DUROMETER HARDNESS, GRADE 3.
2. PREPARE THE SURFACES OF THE EMBEDDED AND SOLE PLATES FOR WELDING ACCORDING TO AWS D 19.9-72.
3. RESTORE/REPAIR THE ZINC COATING ON THE EMBEDDED AND SOLE PLATE SURFACES ACCORDING TO ASTM A780-09.
4. PERFORM ALL WELDING PER AWS D1.5 AND D1.1, WHERE APPLICABLE.



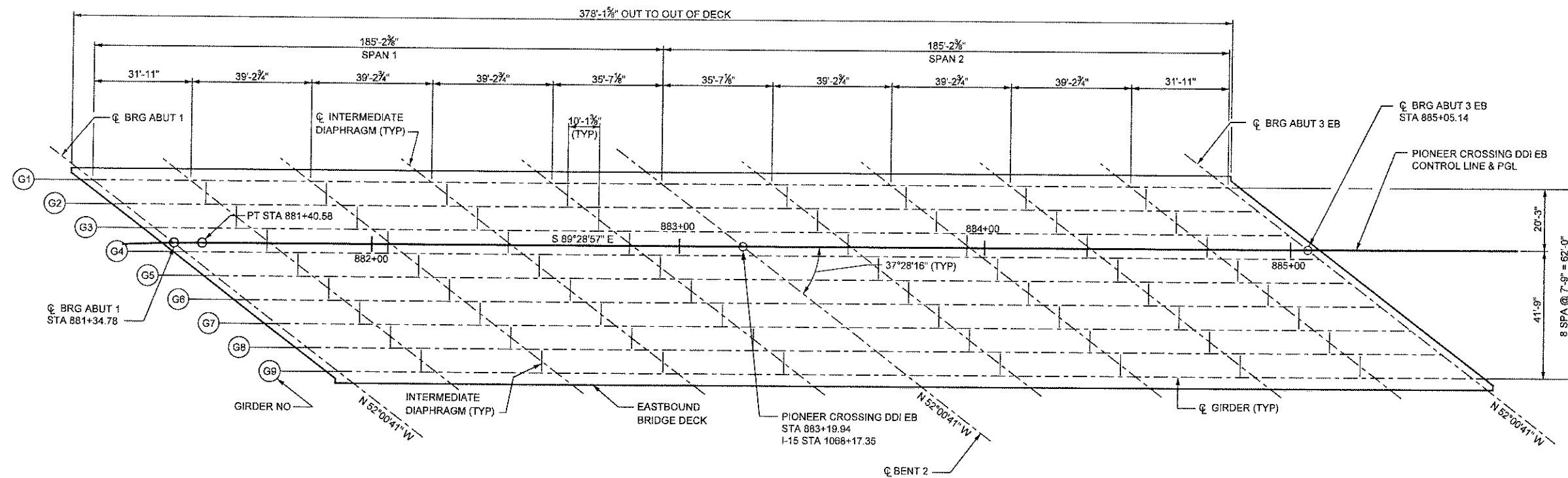
NOTE:
TAKE APPROPRIATE PRECAUTIONS TO PROTECT
ELASTOMERIC PADS FROM FIELD WELDING PROCESSES.



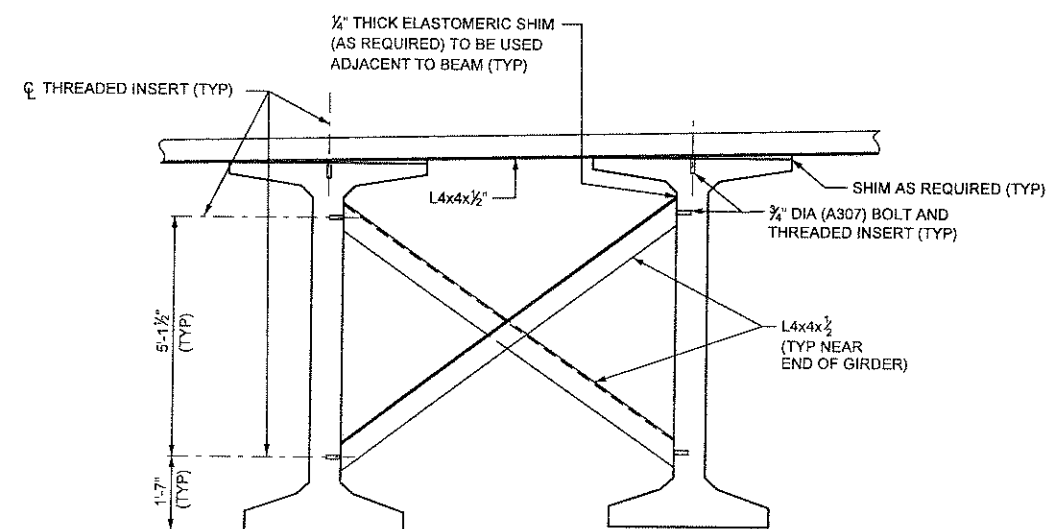
PLAN
BEARING PLATE & ELASTOMERIC PAD NOT SHOWN
ABUTMENT 1 SHOWN, ABUTMENT 3 SIMILAR



SHT. 32 OF 67		UTAH COUNTY		PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION									
		F-785 DRG. NO.		PIONEER CROSSING OVER I-15		SALT LAKE CITY, UTAH KIEWIT/CLYDE									
		BEARING DETAILS		APPROVAL RECOMM. DATE	9/9/2009	DESIGN DLS		03/09	CHECK VTG	04/09	2	09/09/09	SRH	DRF1034 - ADDED SOLE PLATES	
						SENIOR DESIGN ENGR					1	09/15/09	SRH	RFC SUBMITTAL	
		PROJECT NUMBER		APPROVED FOR USE DATE	9/9/2009	DRAWN JGC		03/09	CHECK VTG	04/09	B	04/13/09	SRH	100% SUBMITTAL	
		S-R399(42) & S-R399(59)				JGC					A	09/11/09	SRH	60% SUBMITTAL	
				STRUCTURE DESIGN W/AMER		QUANT.			CHECK		NO.	DATE	BY	REVISIONS	

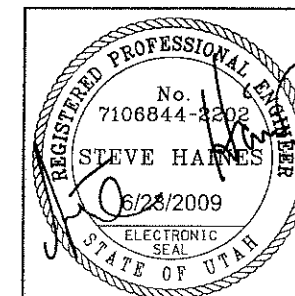


EASTBOUND FRAMING PLAN



TEMPORARY BRACING DETAIL

1. TEMPORARY ERECTION DIAPHRAGMS ARE REQUIRED AT BOTH ENDS OF GIRDERS AND SHOULD BE INSTALLED AS SOON AS POSSIBLE AFTER GIRDERS ARE ERECTED.
2. PLACE TEMPORARY BRACING ALONG THE SKEW. LOCATE TEMPORARY BRACES AT THE ϕ BEARING LINE ON THE ABUTMENT ENDS, AND AT THE ϕ TEMPORARY SUPPORT LINE ON THE BENT 2 ENDS OF THE GIRDERS.
3. SUBMIT DETAILS OF THE TEMPORARY ERECTION DIAPHRAGM TO THE ENGINEER FOR APPROVAL.
4. AFTER THE SPAN HAS BEEN MOVED INTO ITS FINAL POSITION, THE TEMPORARY BRACING MAY BE REMOVED.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
EASTBOUND FRAMING PLAN

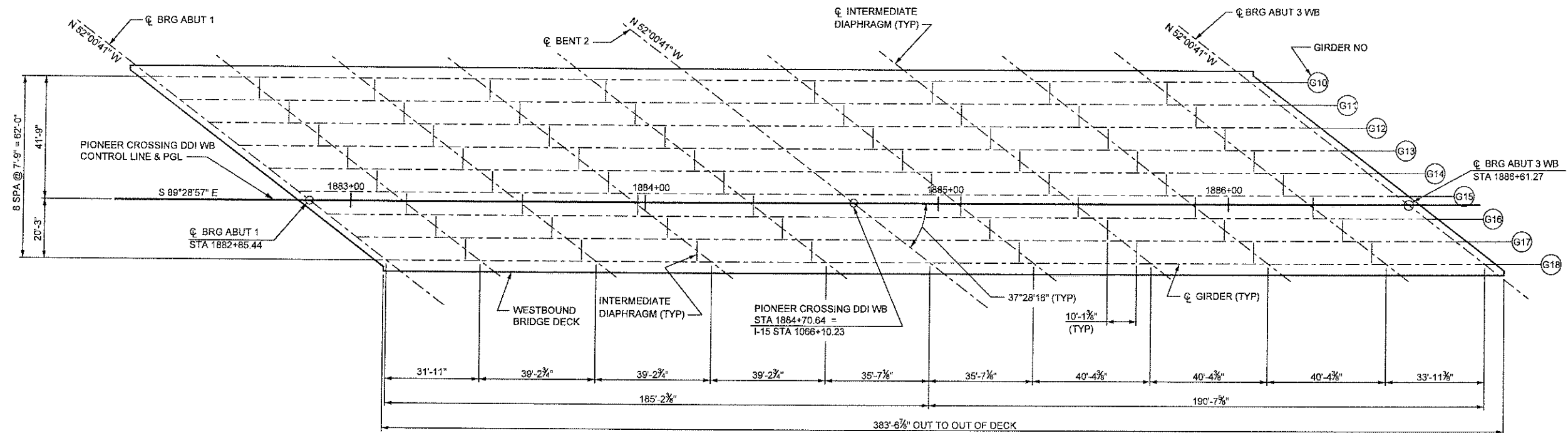
UTAH
COUNTY
F-785
DRG. NO.

SHT. 33 OF 67

NO.	DATE	BY	REVISIONS
2	05/15/09	SRH	RFC SUBMITTAL
1	04/27/09	SRH	RFC GIRDER SUBMITTAL
B	04/03/09	SRH	100% GIRDER SUBMITTAL
A	03/17/09	SRH	60% SUBMITTAL

DESIGN	DLS	03/09	CHECK	BJB	04/09
DRAWN	JGC	03/09	CHECK	BJB	04/09
QUANT.			CHECK		

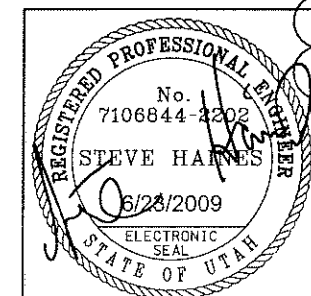
APPROVAL	6/23/2009	DATE	APPROVED	6/23/2009	DATE
RECOMM.			FOR USE		
STRUCTURE DESIGN MANAGER					



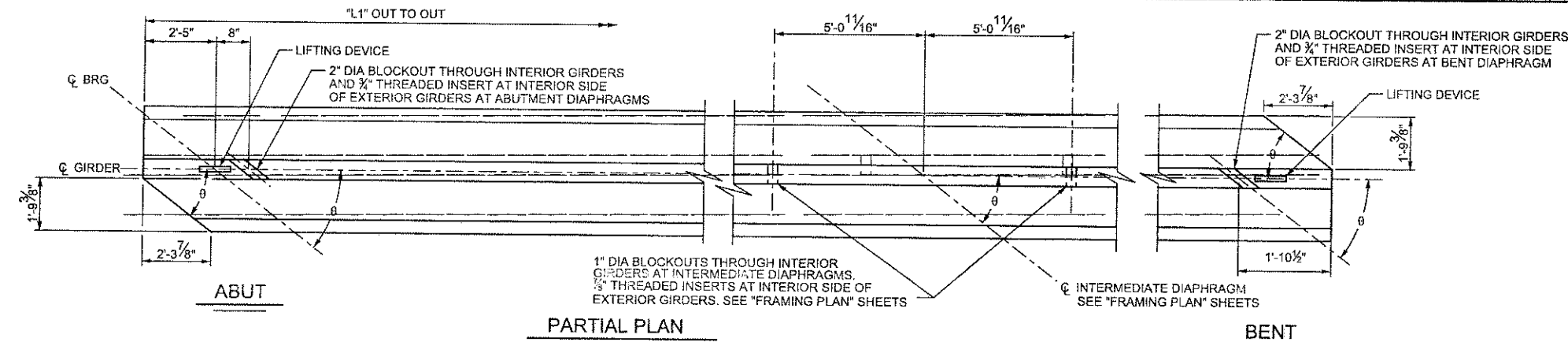
WESTBOUND FRAMING PLAN

NOTES

1. SEE "EASTBOUND FRAMING PLAN" FOR NOTES AND TEMPORARY BRACING REQUIREMENTS.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE			
DESIGN	DLS	03/09	CHECK
DRAWN	JGC	03/09	CHECK
QUANT.			CHECK
APPROVAL	8/23/2009	DATE	8/23/2009
FOR USE	8/23/2009	DATE	8/23/2009
STRUCTURE DESIGN MANAGER			
2			
PIONEER CROSSING - SEGMENT 2			
PIONEER CROSSING OVER I-15			
WESTBOUND FRAMING PLAN			
PROJECT NUMBER S-R399(42) & S-R399(59)			
UTAH COUNTY			
F-785			
ORG. NO.			
SHT. 34 OF 67			



REINFORCING STEEL SCHEDULE				
BAR MARK	SIZE NO.	LENGTH	SKETCH	
G31	6	9'-9 1/2"		
G33	5	"RR"		
G34	4	6'-10 1/2"		
G35	4	4'-0"		
G36	6	4'-1"		
G37	5	2'-7 1/2"		

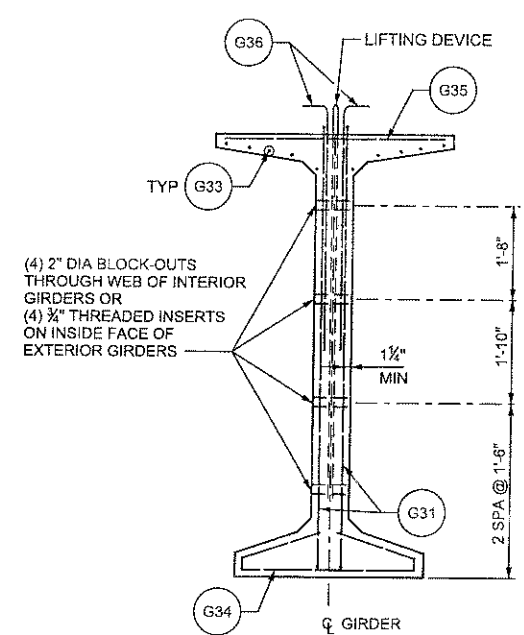
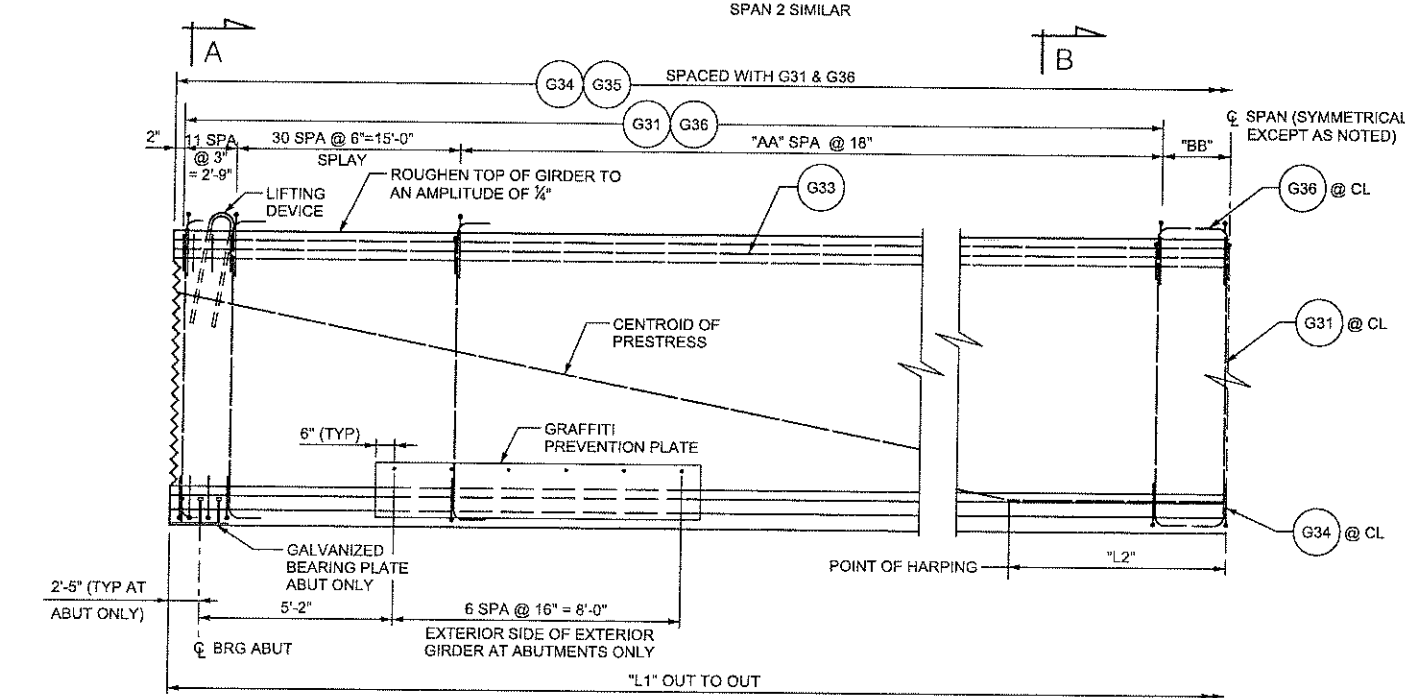
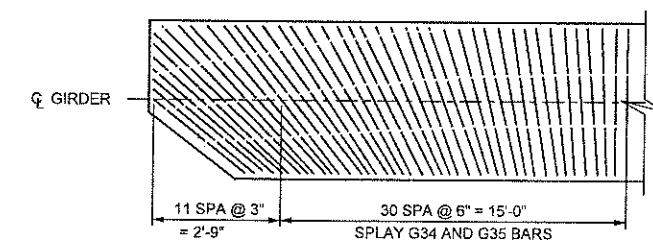
↑ VARIES AT GIRDER ENDS

GENERAL NOTES

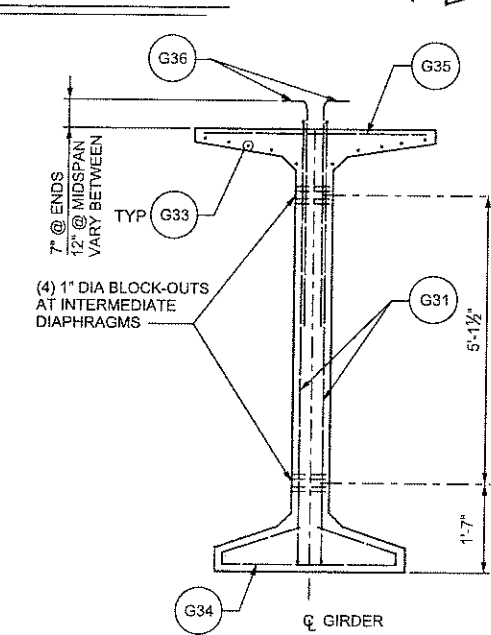
- UNLESS OTHERWISE SHOWN, ALL DIMENSIONS ARE OUT TO OUT OF BARS.
- PLACE BARS #G34 IMMEDIATELY BELOW LOWER ROW OF PRESTRESSING STRANDS.
- USE 0.60" DIAMETER LOW RELAXATION PRESTRESSING STRANDS (AASHTO M203M GRADE 270).
- PLACE BEARING PLATES AND PADS WHERE SHOWN IN BEARING PLATE DETAILS.
- USE COATED REINFORCING BARS CONFORMING TO AASHTO DESIGNATION M-31, GRADE 60.
- LEVEL GIRDER ENDS (INCLUDING BEARING PLATES) AS REQUIRED BY PROFILE. SEE "SITUATION & LAYOUT 2" SHEET.
- USE CLASS AA (AE) CONCRETE FOR GIRDERS WITH STRENGTH $f'_c = 10.0$ KSI.
- EXTEND STRANDS PARALLEL TO GIRDER AS INDICATED IN "GIRDER DETAILS 2."
- FOR DIMENSIONS, NUMBER OF REBAR, AND REBAR LENGTHS NOT SHOWN, SEE GIRDER SCHEDULE SHEETS.
- ALL GIRDER LENGTHS ARE MEASURED ALONG CENTERLINE OF GIRDER.
- ROTATE G31 BARS AS NEEDED AT GIRDER ENDS.
- SEE "GIRDER DETAILS 2" SHEET FOR LOCATION OF G37 BARS.

TRANSVERSE REINFORCING @ SKEWED ENDS

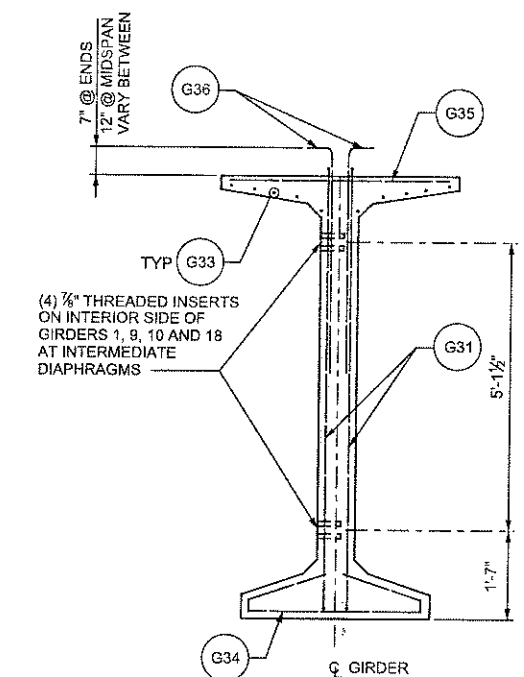
ONLY TRANSVERSE REINFORCEMENT SHOWN FOR CLARITY



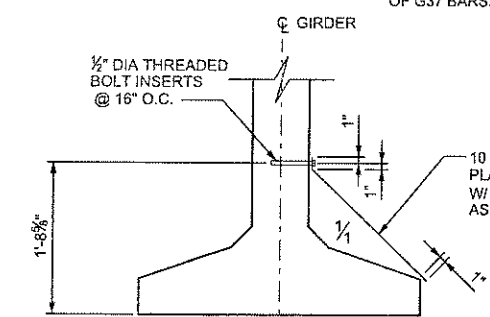
SECTION A-A
INTERIOR GIRDER SHOWN, EXTERIOR SIMILAR



SECTION B-B
INTERIOR GIRDER

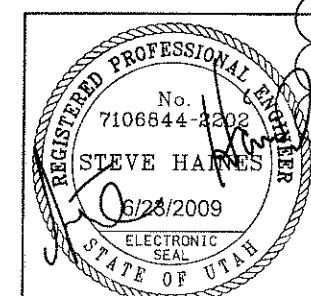


SECTION B-B
EXTERIOR GIRDER
G9 & G18 SHOWN, G1 & G10 OPPOSITE



GRAFFITI PREVENTION SECTION

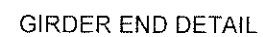
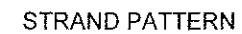
ABUTMENT EXTERIOR SIDE OF EXTERIOR GIRDERS ONLY



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CULDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
GIRDER DETAILS 1

UTAH COUNTY
F-785
DRG. NO.

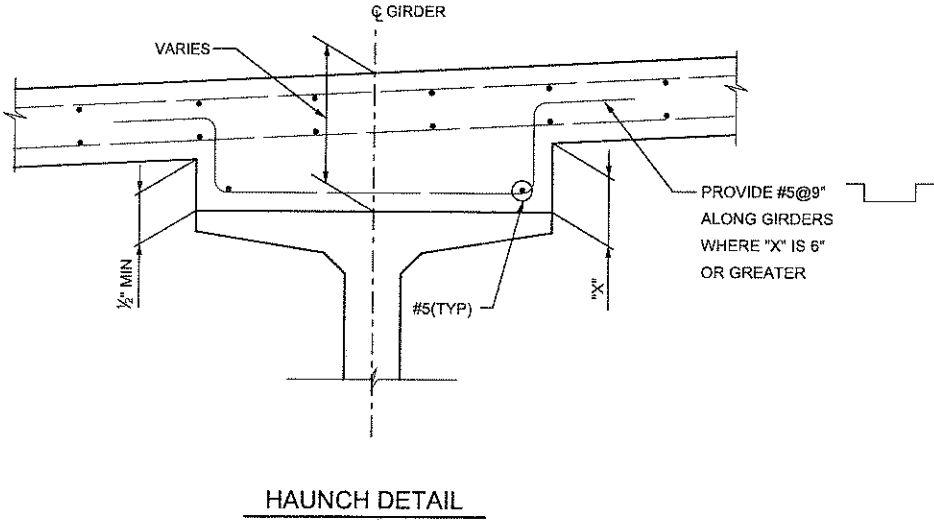


-
- REGISTERED PROFESSIONAL ENGINEER
 No. 7106844-2202
 STEVE HAINES
 9/9/2009
 ELECTRONIC SEAL
 STATE OF UTAH

SHT. 36 OF 67

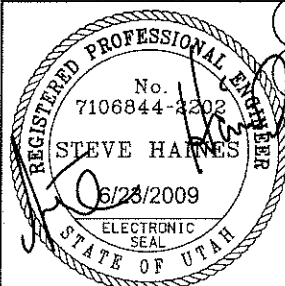
GIRDER DESIGN SCHEDULE														
SPAN	GIRDER	"L1"	Ø	MIN CONC COMPRESSIVE STRENGTH AT RELEASE fci (KSI)	"L2"	HARPED STRANDS				STRAIGHT STRANDS				
						NUMBER OF STRANDS	YGH (IN)		TOTAL HARPED STRAND FORCE (KIP)		NUMBER OF STRANDS	YGS	TOTAL STRAIGHT STRAND FORCE (KIP)	
							END	MID	JACKING	FINAL			JACKING	FINAL
1	G1-G18	186'-4 1/4"	37°28'16"	7.0	18'-7 3/8"	18	10"	78 1/2"	791.0	647.5	50	3 3/8"	2197.1	1798.7
2	G1-G9	186'-4 1/4"	37°28'16"	7.0	18'-7 3/8"	18	10"	78 1/2"	791.0	647.5	50	3 3/8"	2197.1	1798.7
2	G10-G18	191'-9 1/4"	37°28'16"	7.0	19'-2 1/8"	18	10"	78 1/2"	791.0	651.8	50	3 3/8"	2197.1	1810.6

GIRDER REINFORCING SCHEDULE					
SPAN	GIRDER	BAR SPACING AND DIMENSIONS			
		"AA"	"BB"	"NS"	"RR"
1	G1-G18	49	1'-9 1/8"	3	193'-4 1/4"
2	G1-G9	49	1'-9 1/8"	3	193'-4 1/4"
2	G10-G18	51	1'-5 3/4"	3	198'-9 1/2"

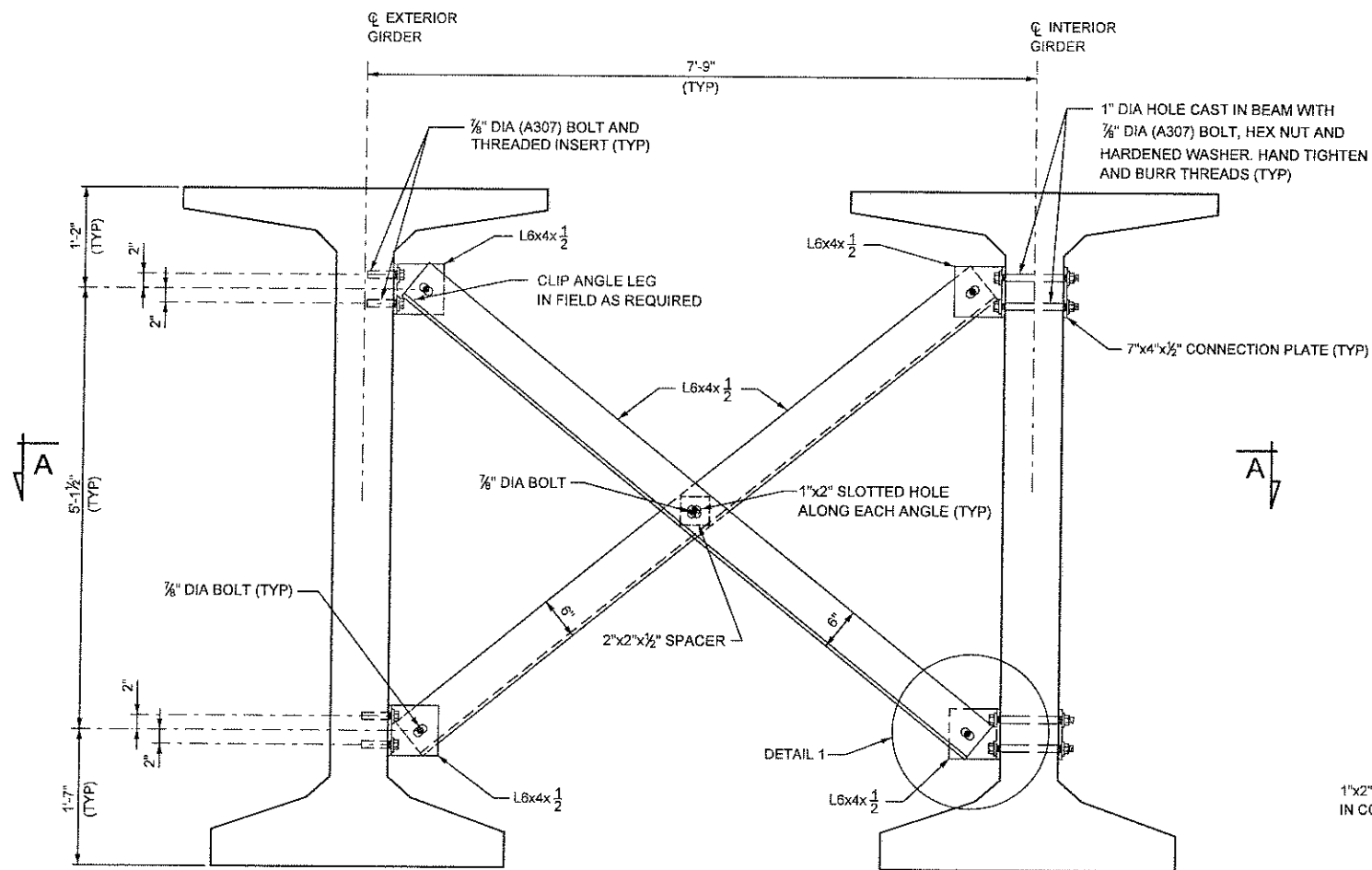


NOTE

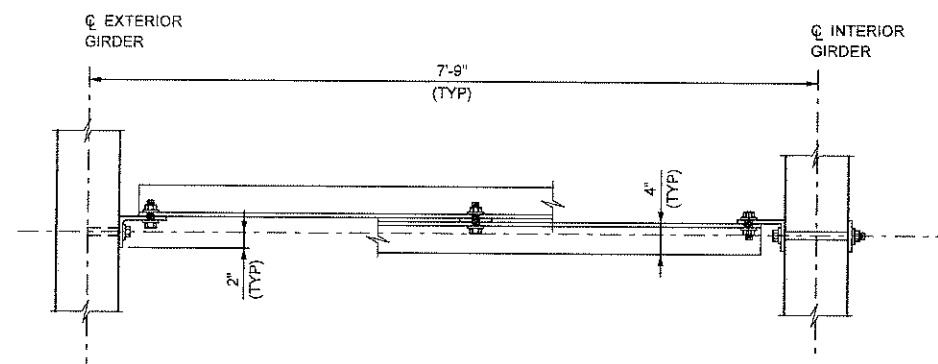
1. SEE "GIRDER DETAILS 1" AND "GIRDER DETAILS 2" SHEETS FOR ADDITIONAL INFORMATION AND NOTES.



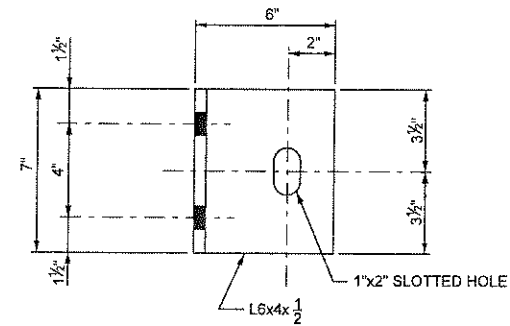
UTAH DEPARTMENT OF TRANSPORTATION		SALT LAKE CITY, UTAH		KIEWIT/CLYDE	
PIONEER CROSSING - SEGMENT 2		DESIGN DLS 03/09		CHECK BJB 04/09	
PIONEER CROSSING OVER I-15		DRAWN MSL 03/09		CHECK BJB 04/09	
GIRDER SCHEDULE		APPROVAL DATE 8/23/2009		APPROVED FOR USE DATE 8/23/2009	
PROJECT NUMBER S-R399(42) & S-R399(59)		STRUCTURE DESIGN MANAGER		CLIENT	
UTAH COUNTY		F-785		DRG. NO.	
SHT. 37		OF 67		2	



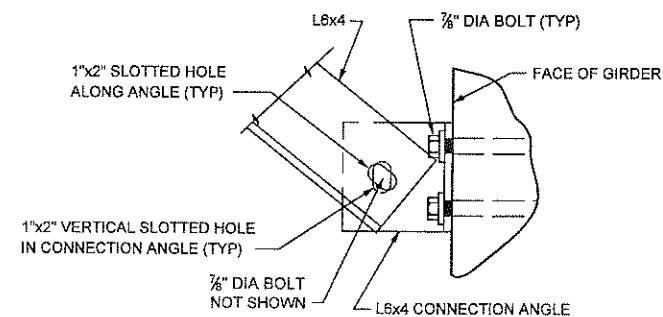
TYPICAL INTERMEDIATE DIAPHRAGM



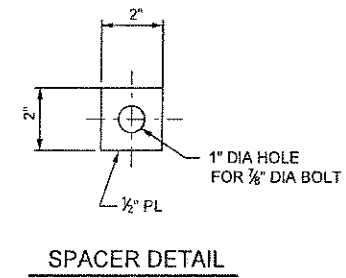
SECTION A-A



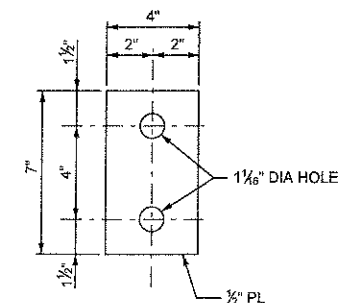
CONNECTION ANGLE DETAIL



DETAIL 1



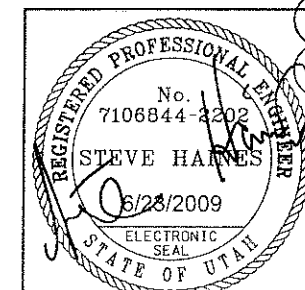
SPACER DETAIL



CONNECTION PLATE DETAIL

NOTES

- SEE "FRAMING PLAN" SHEETS FOR NUMBER AND LOCATION OF INTERMEDIATE DIAPHRAGMS.
- USE 7/8" DIA ASTM A325 HIGH STRENGTH BOLTS WITH HEX NUTS, TWO 2 1/4" MINIMUM O. D. WASHERS AND TWO HARDENED WASHERS UNLESS OTHERWISE SHOWN.
- GALVANIZE ALL STRUCTURAL STEEL DIAPHRAGM MATERIALS INCLUDING BOLTS, NUTS AND WASHERS IN ACCORDANCE WITH ASTM A-123 (AASHTO M-111).



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
INTERMEDIATE DIAPHRAGM DETAILS

UTAH COUNTY
F-785
DRG. NO.

SHT. 38 OF 67

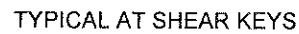
NO.	DATE	BY	REVISIONS
2	05/15/09	SRH	RFC SUBMITTAL
1	04/21/09	SRH	RFC GIRDER SUBMITTAL
B	04/03/09	SRH	100% GIRDER SUBMITTAL
A	03/11/09	SRH	60% SUBMITTAL

DESIGN	CHECK	DATE	QUANT.
DLS	BJB	04/09	
JGC	BJB	04/09	
JGC	BJB	04/09	
JGC	BJB	04/09	

APPROVAL	RECOMM.	DATE	FOR USE
		02/23/2009	
		02/23/2009	

PROJECT NUMBER	PROJECT NAME
S-R399(42) & S-R399(59)	

STRUCTURE DESIGN MANAGER	DATE



TYPICAL WITHOUT SHEAR KEYS

EASTBOUND BRIDGE SECTION SHOWN, WESTBOUND SECTION OPPOSITE HAND.
DIMENSION SHOWN ARE MEASURED NORMAL TO GIRDERS



SECTION TAKEN NORMAL TO BACKWALL



SECTION TAKEN NORMAL TO BACKWALL

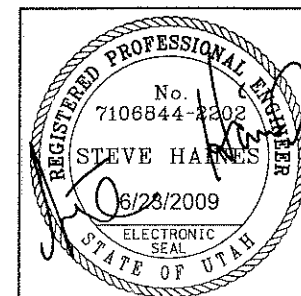


SECTION TAKEN NORMAL TO BACKWALL

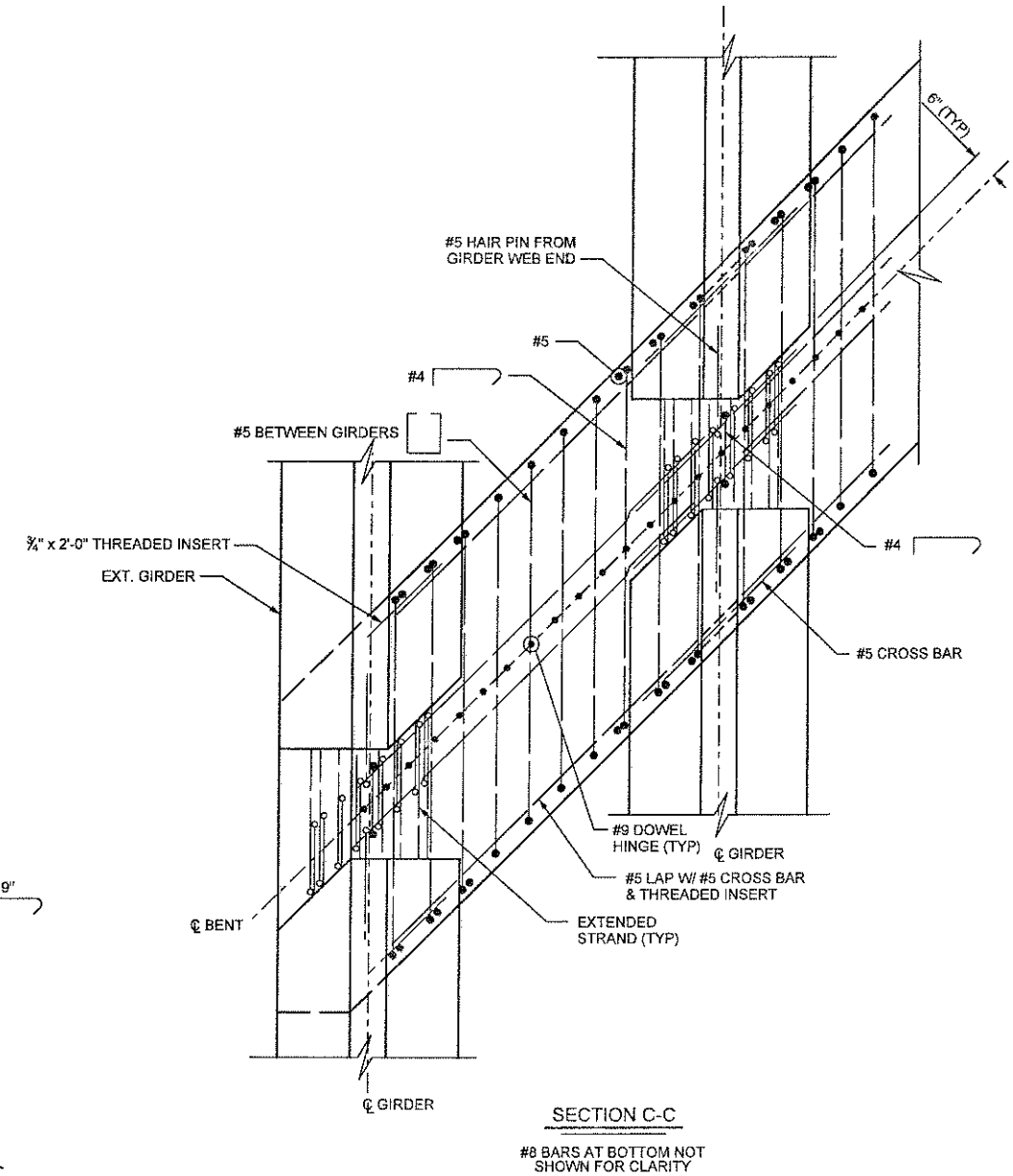
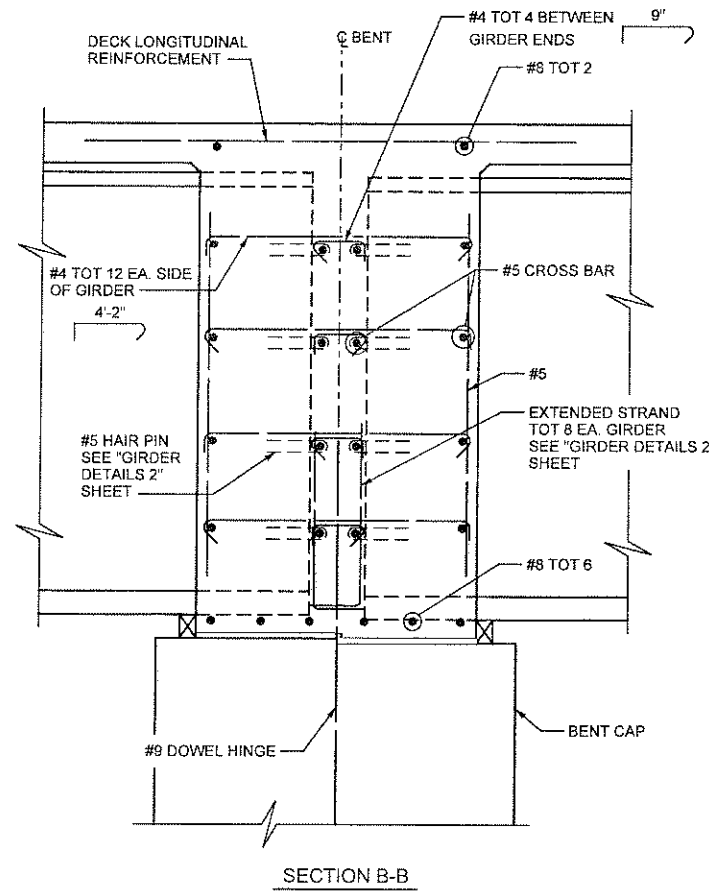
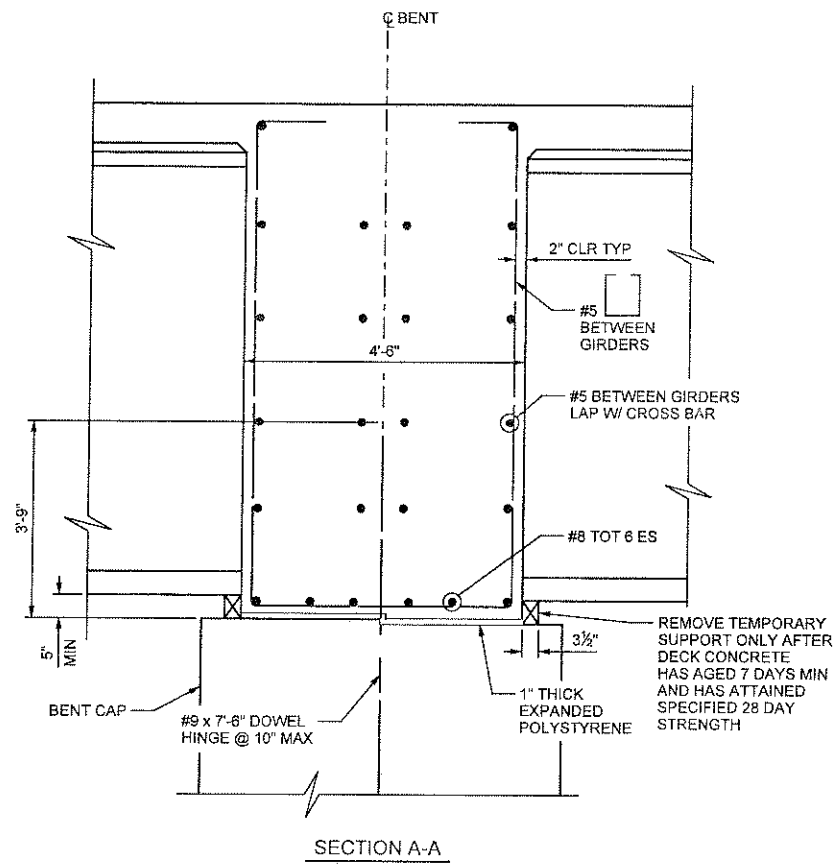
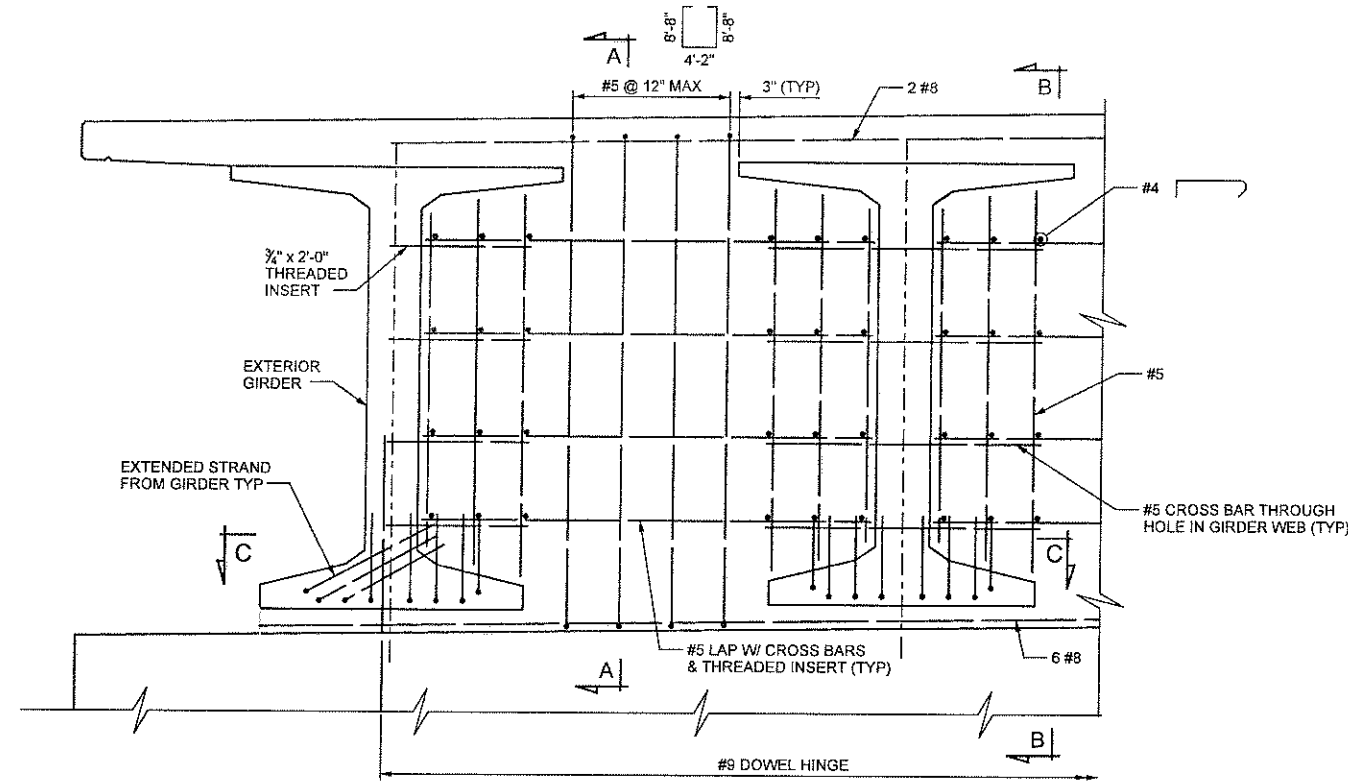


NOTE: MONUMENT NOT SHOWN.

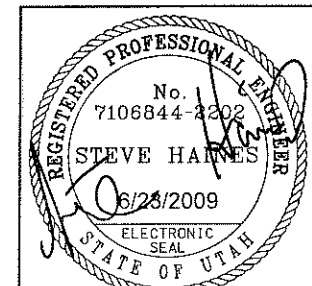
1. SEE DECK PLAN SHEETS FOR #8 BARS AT TOP OF DIAPHRAGM.
2. MONUMENTS NOT SHOWN FOR CLARITY.



SHT. 39 OF 67		UTAH COUNTY		F-785		DRG. NO.	
PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE					
PIONEER CROSSING OVER I-15		DESIGN DLS 03/09		CHECK BJB 04/09			
END DIAPHRAGM DETAILS		APPROVAL RECONAL 6/23/2009 DATE <i>[Signature]</i> SENIOR DESIGN ENGINEER		DRAWN JGC 03/09		CHECK VTG 05/09	
PROJECT NUMBER S-R399(42) & S-R399(59)		APPROVED 6/23/2009 FOR USE DATE <i>[Signature]</i> STRUCTURE DESIGN MANAGER		QUANT.		CHECK	
						REVISIONS	
				NO.		DATE	
				BY		REMARKS	
				1		05/15/09 SRH RFC SUBMITTAL	
				B		04/13/09 SRH 100% SUBMITTAL	
				A		03/11/09 SRH 60% SUBMITTAL	



- NOTES
1. SEE "BENT 2 DETAILS" SHEET FOR #9 DOWEL HINGE.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
BENT 2 DIAPHRAGM DETAILS

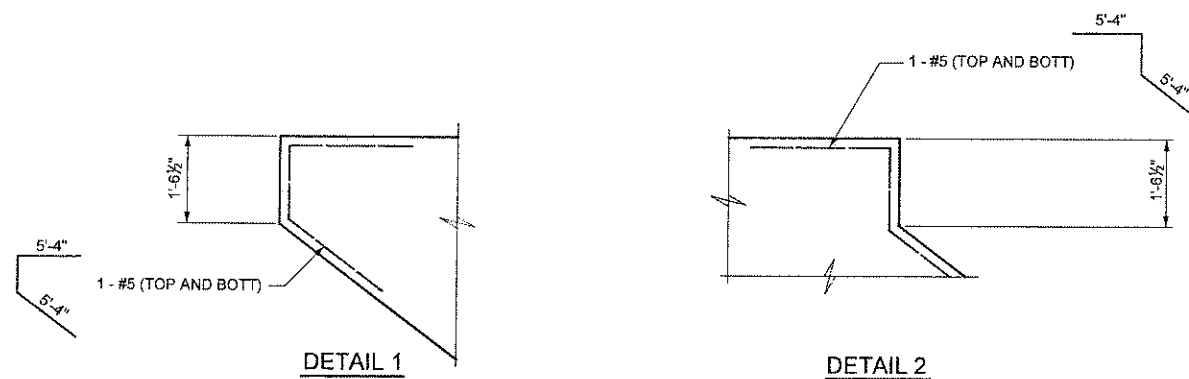
UTAH
COUNTY
F-785
DRG. NO.

SHT. 40 OF 67

NO.	DATE	BY	REVISIONS
1	05/15/09	SRH	RFC SUBMITTAL
2	04/13/09	SRH	100% SUBMITTAL
3	03/11/09	SRH	60% SUBMITTAL

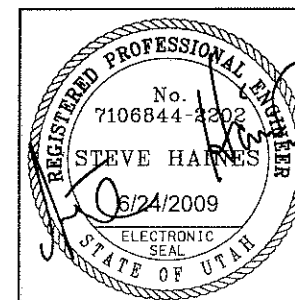
DESIGN	DLS	03/09	CHECK	BJB	04/09
DRAWN	DLS	03/09	CHECK	VTG	05/09
QUANT.			CHECK		

APPROVAL	06/23/2009	DATE	APPROVED FOR USE	06/23/2009	DATE
RECOMM.					
STRUCTURE DESIGN MANAGER					

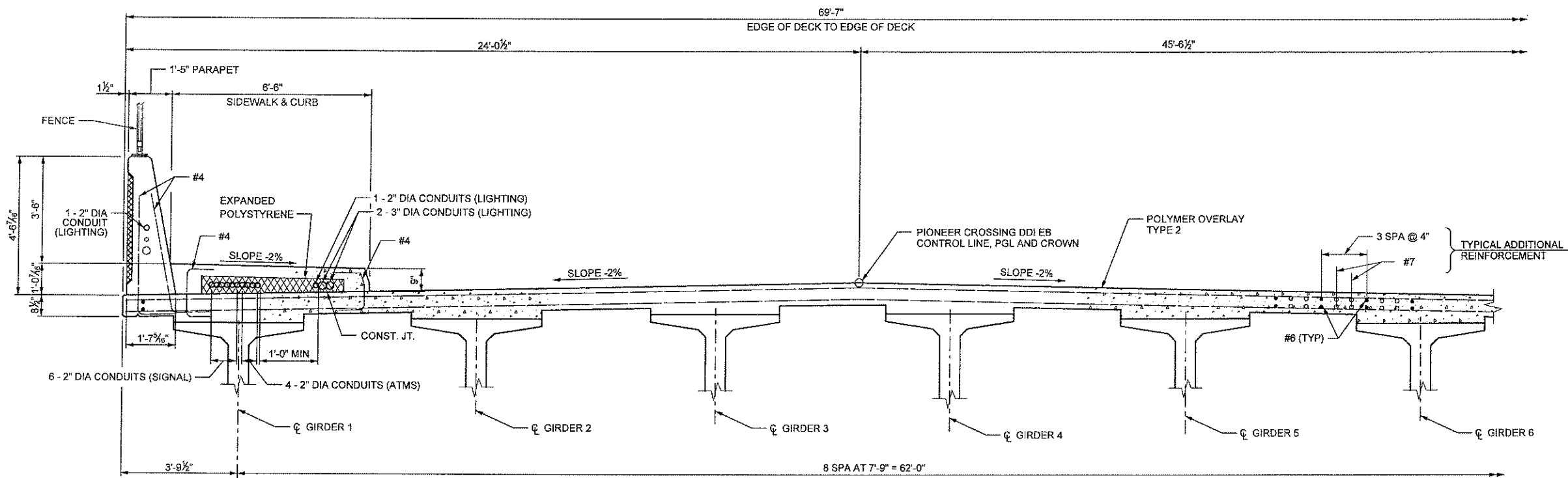


DRAINAGE SCUPPER PLAN

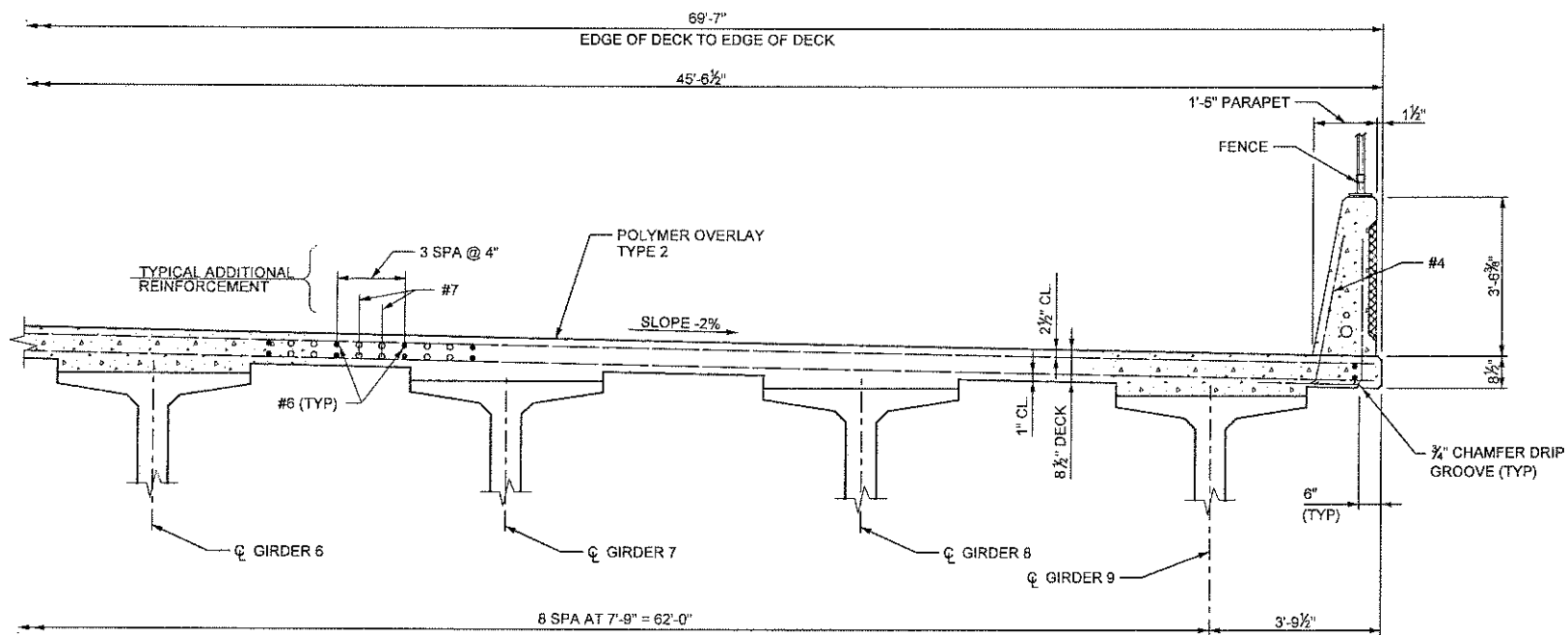
1. MINIMUM LAP LENGTH FOR #5 = 3'-3"
MINIMUM LAP LENGTH FOR #6 = 3'-10"
MINIMUM LAP LENGTH FOR #7 & #9 = 4'-9"
MINIMUM LAP LENGTH FOR #8 = 7'-2"
2. ALTERNATE REINFORCEMENT LENGTHS TO STAGGER LAP LOCATIONS.
3. LAP BOTTOM TRANSVERSE REINFORCEMENT OVER GIRDERS AND STAGGER LAP TOP TRANSVERSE REINFORCEMENT AT MID-SPAN BETWEEN GIRDERS AND STAGGER LAPS. LAP LONGITUDINAL REINFORCEMENT A MINIMUM OF 20'-0" AWAY FROM THE SPMT SUPPORTS.
4. SEE PARAPET SHEETS FOR PARAPET AND SIDEWALK LAYOUT, REINFORCEMENT AND DETAILS.
5. SEE "EXPANSION JOINT DETAILS" SHEET FOR EXPANSION JOINTS.
6. SEE "DECK DRAIN DETAILS" SHEET FOR DRAINAGE SCUPPER DETAILS.
7. CUT & BEND LONGITUDINAL REINFORCEMENT TO CLEAR DRAINAGE SCUPPERS.
8. EXTEND #5'S TOP AND BOTTOM LONGITUDINAL TO END OF DECK AT ABUTMENTS. EXTEND #5'S TOP AND BOTTOM A DISTANCE OF 18'-0" AND 5'-0" (ALTERNATING) FROM SPMT CONSTRUCTION JOINT AT BENT 2.
9. EXTEND #7'S TOP AND BOTTOM @ BENT 2 ALTERNATING 18'-0" AND 5'-6" FROM SPMT CONSTRUCTION JOINT.
10. CUT TEMPORARY STRANDS IN TOP FLANGE OF EACH GIRDER AFTER THE GIRDER HAS BEEN PLACED ON THE TEMPORARY BRIDGE LOCATION SUPPORTS. TEMPORARY STRANDS ARE PROVIDED BY THE FABRICATOR FOR THE TRANSPORT AND ERECTION PHASE OF THE GIRDERS.



SHT. 41 OF 67



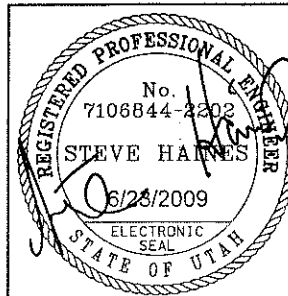
LEFT CROSS SECTION
LOOKING UP STATION



RIGHT CROSS SECTION
LOOKING UP STATION

NOTES

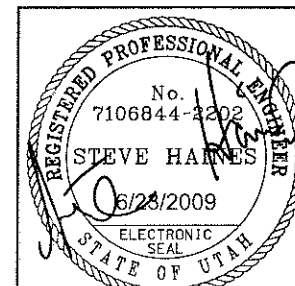
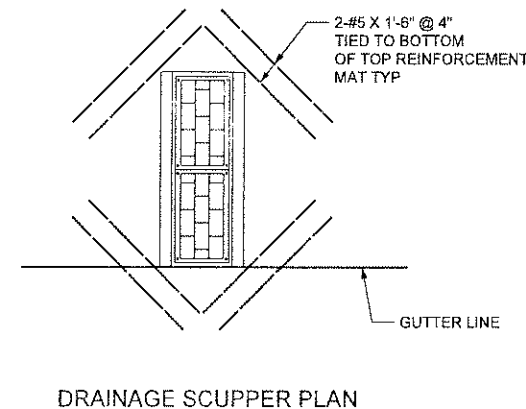
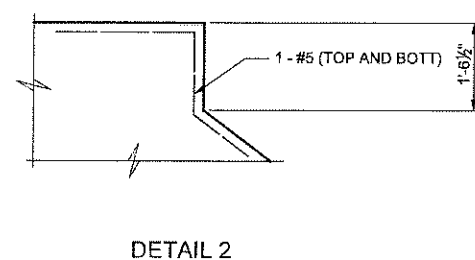
1. SEE "PARAPET LAYOUT" SHEETS FOR SIDEWALK AND PARAPET DETAILS & REINFORCEMENT.
2. SEE ATMS, LIGHTING, AND SIGNAL PLANS FOR CONDUIT DETAILS.



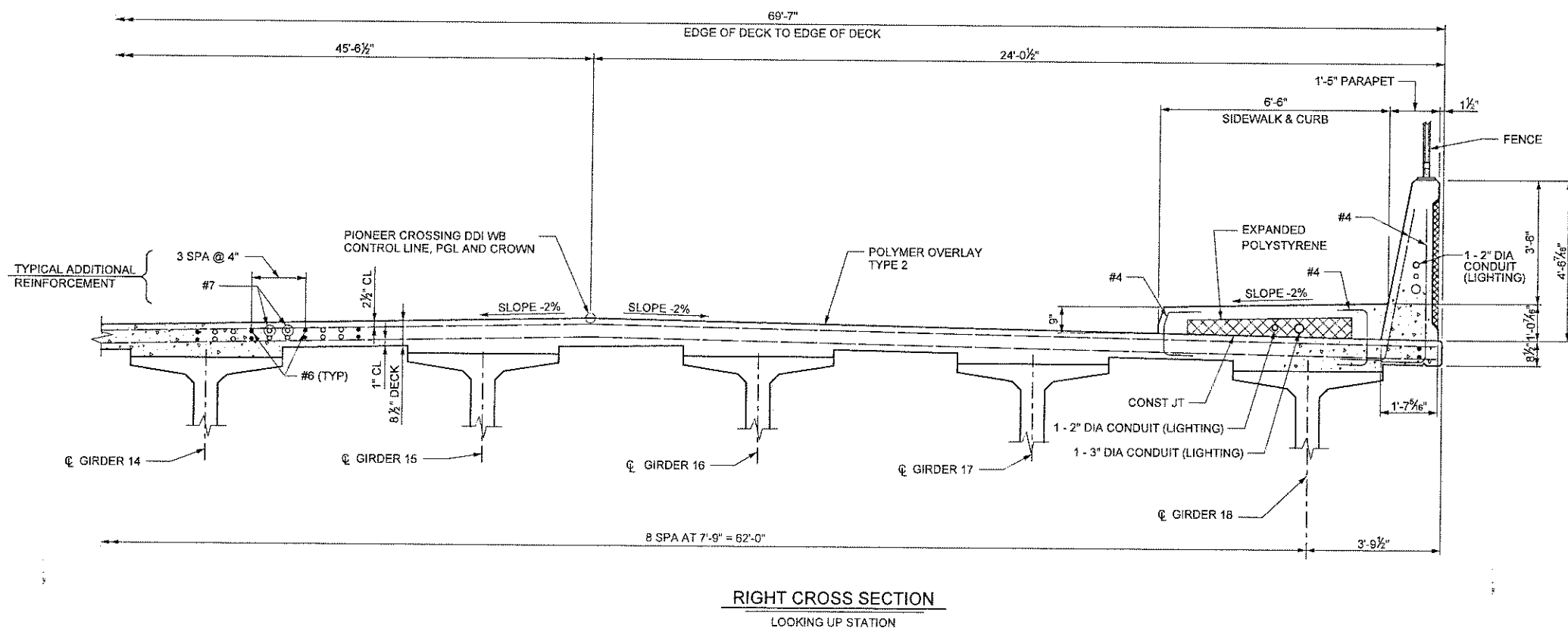
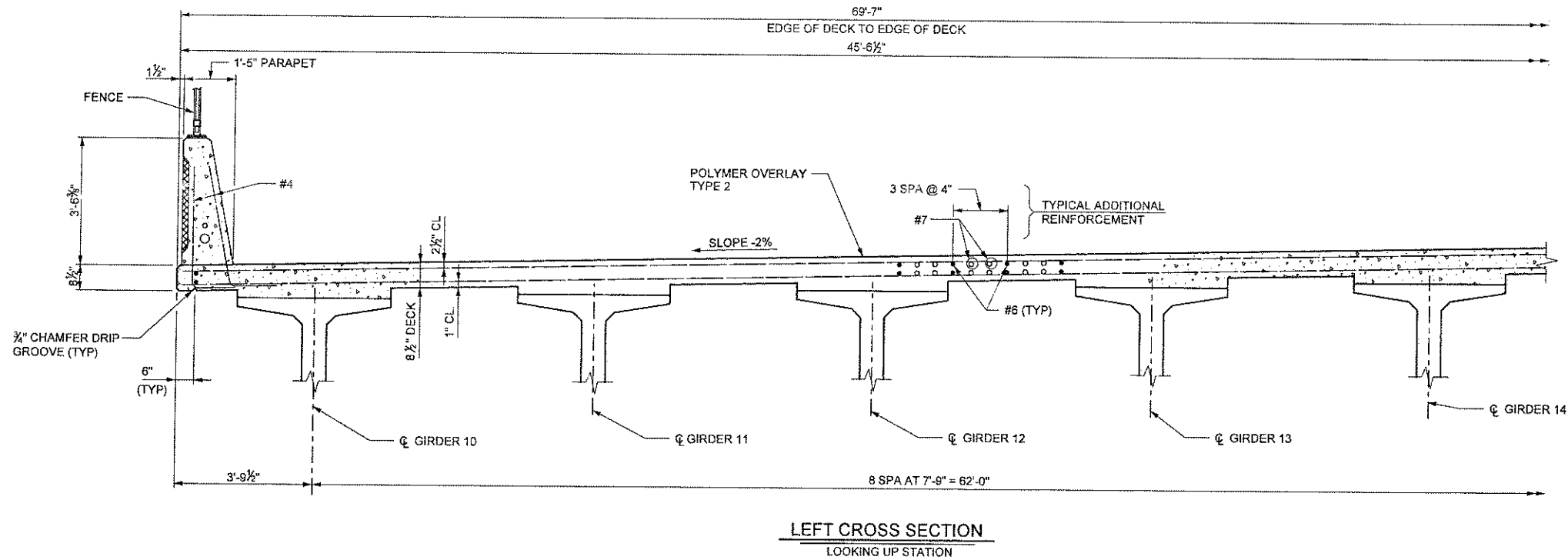
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CPLYDE				DESIGN	DLS	03/09	CHECK	VTG	05/09
PIONEER CROSSING - SEGMENT 2				DRAWN	JGC	03/09	CHECK	VTG	05/09
PIONEER CROSSING OVER I-15				QUANT			CHECK		
EASTBOUND DECK SECTION				APPROVAL	02/23/2009	DATE	RECOMM.	02/23/2009	DATE
PROJECT NUMBER S-R399(42) & S-R399(59)				APPROVED FOR USE	02/23/2009	DATE	STRUCTURE DESIGN MANAGER	02/23/2009	DATE
UTAH COUNTY				REVISIONS					
F-785				NO	DATE	BY	REMARKS		
DRG. NO.				1	05/15/09	SRH	RFC SUBMITTAL		
SHT. 42 OF 67				8	04/13/09	SRH	100% SUBMITTAL		
				A	03/11/09	SRH	80% SUBMITTAL		



1. MINIMUM LAP LENGTH FOR #5 = 3'-3"
MINIMUM LAP LENGTH FOR #6 = 3'-10"
MINIMUM LAP LENGTH FOR #7 = 4'-9"
MINIMUM LAP LENGTH FOR #8 = 7'-2"
2. ALTERNATE REINFORCEMENT LENGTHS TO STAGGER LAP LOCATIONS.
3. LAP BOTTOM TRANSVERSE REINFORCEMENT OVER GIRDERS AND STAGGER LAP. LAP TOP TRANSVERSE REINFORCEMENT AT MID-SPAN BETWEEN GIRDERS AND STAGGER LAPS. LAP LONGITUDINAL REINFORCEMENT A MINIMUM OF 20'-0" AWAY FROM THE SPMT SUPPORTS.
4. SEE PARAPET SHEETS FOR PARAPET AND SIDEWALK LAYOUT, REINFORCEMENT AND DETAILS.
5. SEE "EXPANSION JOINT DETAILS" SHEET FOR EXPANSION JOINTS.
6. SEE "DECK DRAIN DETAILS" SHEET FOR DRAINAGE SCUPPER DETAILS.
7. CUT & BEND LONGITUDINAL REINFORCEMENT TO CLEAR DRAINAGE SCUPPERS.
8. EXTEND #5'S TOP AND BOTTOM LONGITUDINAL TO END OF DECK AT ABUTMENTS. EXTEND #5'S TOP AND BOTTOM A DISTANCE OF 18'-0" AND 5'-0" (ALTERNATING) FROM SPMT CONSTRUCTION JOINT AT BENT 2.
9. EXTEND #7'S TOP AND BOTTOM @ BENT 2 ALTERNATING 18'-0" AND 5'-6" FROM SPMT CONSTRUCTION JOINT.
10. CUT TEMPORARY STRANDS IN TOP FLANGE OF EACH GIRDER AFTER THE GIRDER HAS BEEN PLACED ON THE TEMPORARY BRIDGE LOCATION SUPPORTS. TEMPORARY STRANDS ARE PROVIDED BY THE FABRICATOR FOR THE TRANSPORT AND ERECTION PHASE OF THE GIRDERS.

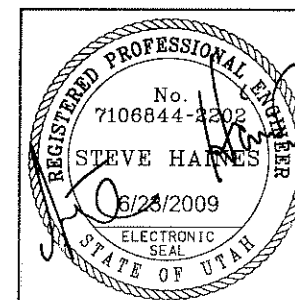


SHT. 43	OF	67
UTAH COUNTY		PIONEER CROSSING - SEGMENT 2
F-785 DRG. NO.	PIONEER CROSSING OVER I-15	
		WESTBOUND DECK PLAN
PROJECT NUMBER	S-R399(42) & S-R399(59)	
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE		
APPROVAL RECORD DATE	APPROVED FOR USE DATE	STRUCTURE DESIGN MANAGER
9/23/2009	6/23/2009	Joe Lloyd
SENIOR DESIGN ENGR		
DESIGN DLS 01/09	CHECK VTG 05/09	
DRAWN JGC 01/09	CHECK VTG 05/09	
QUANT.	CHECK	
N.O.	DATE	BY
NO.	DATE	BY
REMARKS		
REVISONS		
1	05/15/09	SRH RFC SUBMITTAL
B	04/13/08	SRH 100% SUBMITTAL
A	03/11/09	SRH 60% SUBMITTAL



NOTES

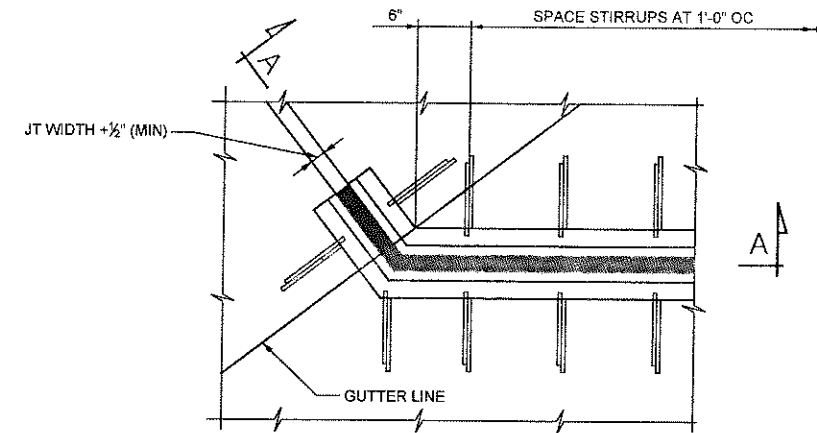
1. SEE "PARAPET LAYOUT" SHEETS FOR SIDEWALK AND PARAPET DETAILS & REINFORCEMENT.
2. SEE LIGHTING PLANS FOR LIGHTING CONDUIT DETAILS.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CPLYDE				DESIGN DLS 03/09 CHECK VTG 05/09				DATE 05/15/09 BY SRH 100% SUBMITTAL				DATE 03/11/09 BY SRH 60% SUBMITTAL				REVISIONS			
PIONEER CROSSING - SEGMENT 2				APPROVAL RECOMM 6/23/2009 DATE 6/23/2009				FOR USE DATE 6/23/2009 DATE 6/23/2009				STRUCTURE DESIGN MANAGER							
PIONEER CROSSING OVER I-15				WESTBOUND DECK SECTION				PROJECT NUMBER S-R399(42) & S-R399(59)											
UTAH				COUNTY				F-785				DRG. NO.				SHT. 44 OF 67			

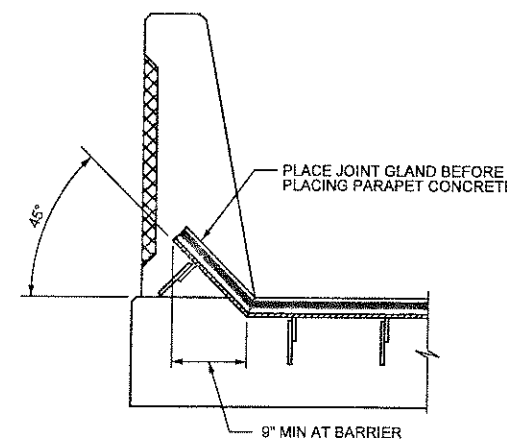
LOCATION	RATED CAPACITY	JOINT WIDTH (IN)						
		30°F	40°F	50°F	60°F	70°F	80°F	90°F
ABUTMENTS	4"	3 3/8"	3 1/2"	3 1/8"	3"	2 1/8"	2 1/4"	2 3/8"

DIMENSION ARE ALONG CENTERLINE OF BRIDGE.

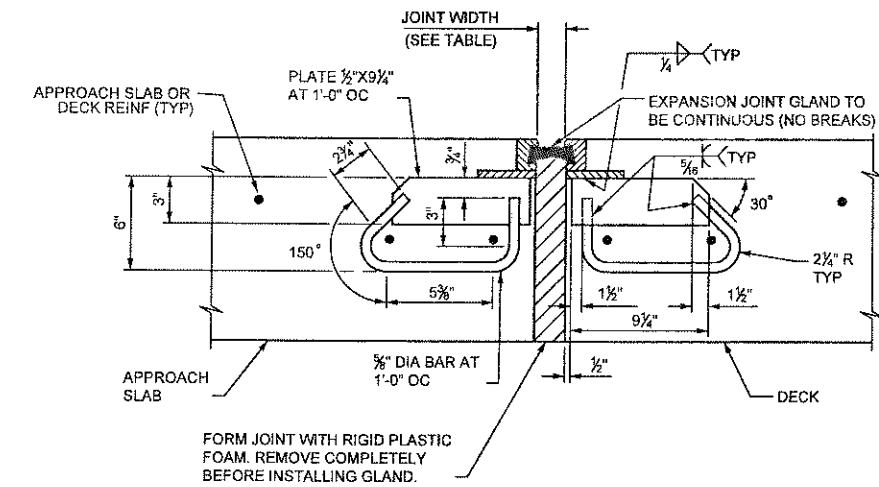


PLAN - EXPANSION JOINT AT BARRIER

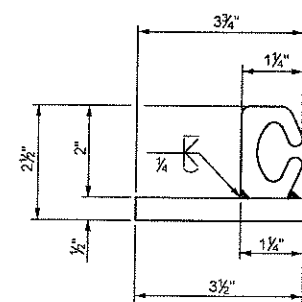
NOTE : PLAN AT BARRIER SHOWN, PLAN AT SIDEWALK SIMILAR.



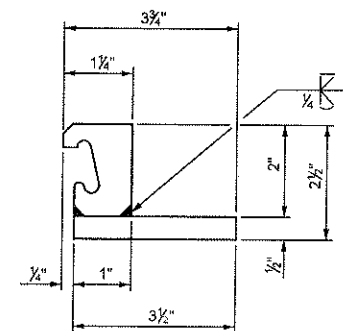
SECTION A-A



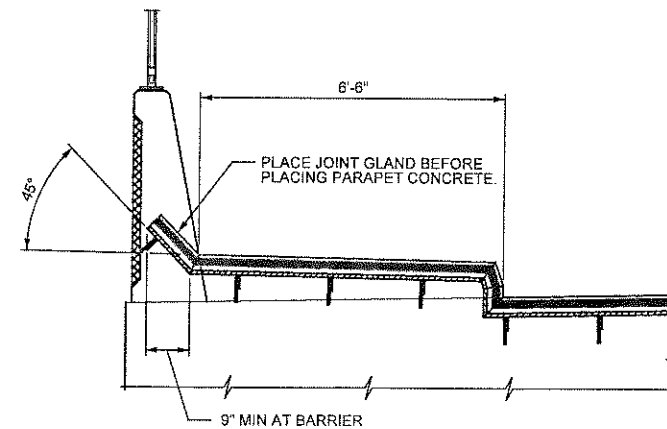
TYPICAL JOINT SECTION



D. S. BROWN STRIP SEAL SYSTEM
(USE AS SERIES SEAL ELEMENT)

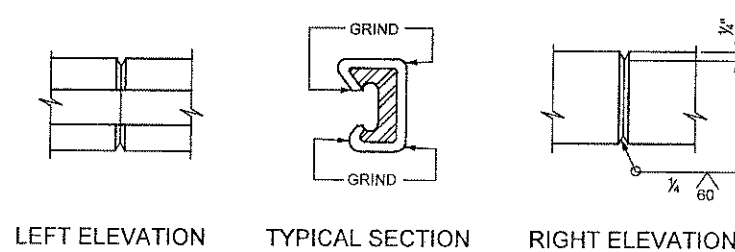


WABO STRIP SEAL SYSTEM
(USE SE SERIES SEAL ELEMENT)

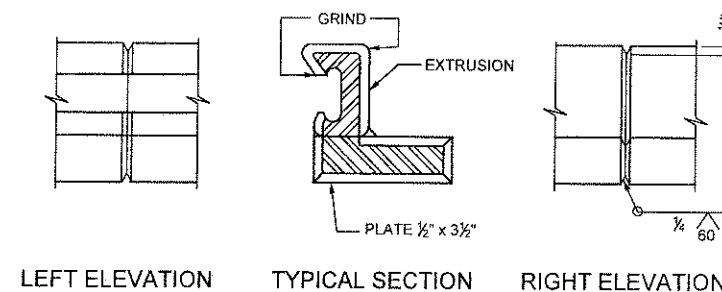


SECTION AT SIDEWALK

ALTERNATES FOR STEEL EXTRUSION SYSTEMS



STEEL EXTRUSION SPLICE DETAIL



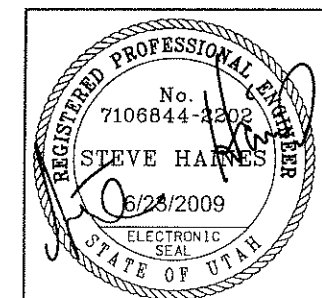
STEEL EXTRUSION RAIL AND
PLATE SPLICE DETAIL

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
EXPANSION JOINT DETAILS

UTAH
COUNTY
F-785
DRG. NO.

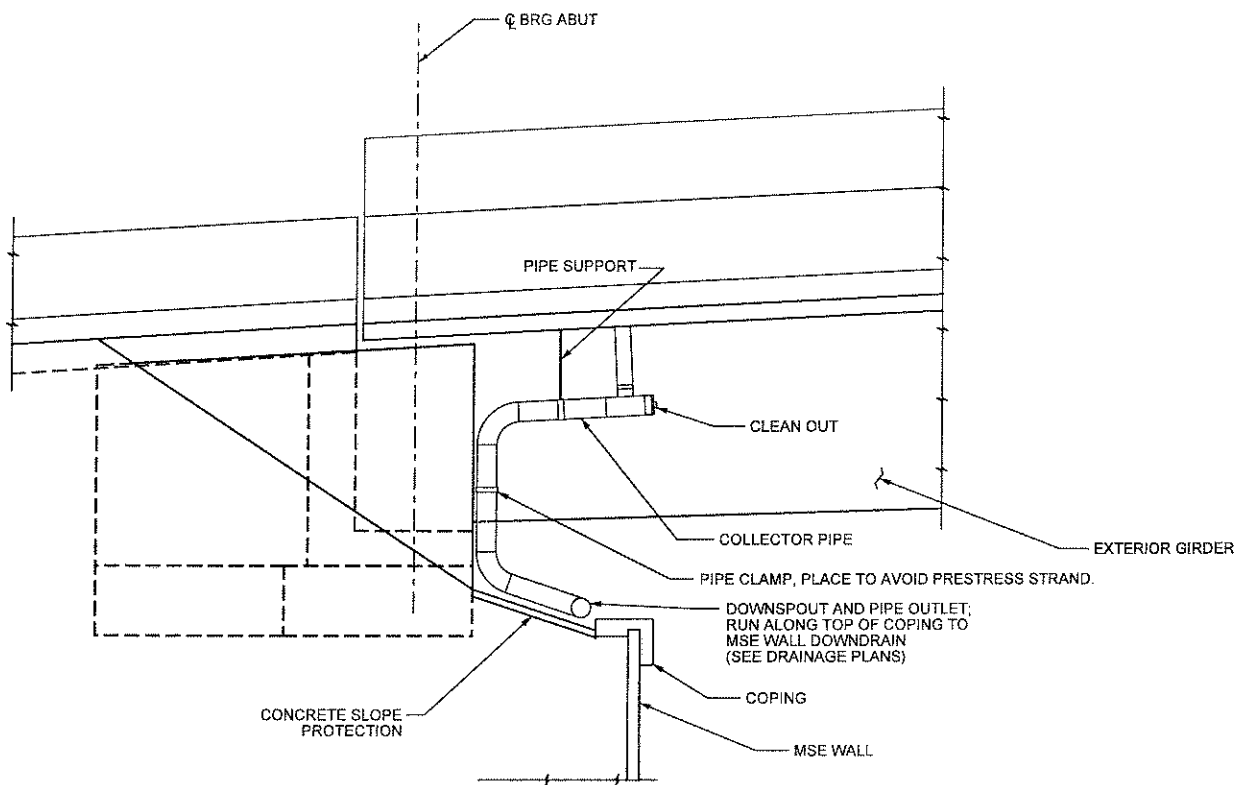
SHT. 45 OF 67



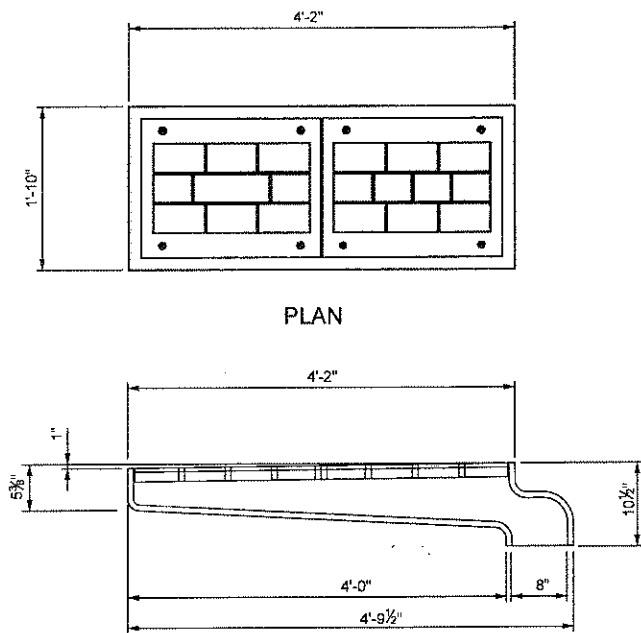
NO.	DATE	BY	REVISIONS
1	05/15/09	SRH	RFC SUBMITTAL
2	04/13/09	SRH	100% SUBMITTAL
3	03/11/09	SRH	60% SUBMITTAL

DESIGN	CHECK	DATE	QUANT.
DLS	VTG	04/09	
JGC	VTG	03/09	

APPROVAL	DATE	FOR USE
02/22/09		
02/22/09		



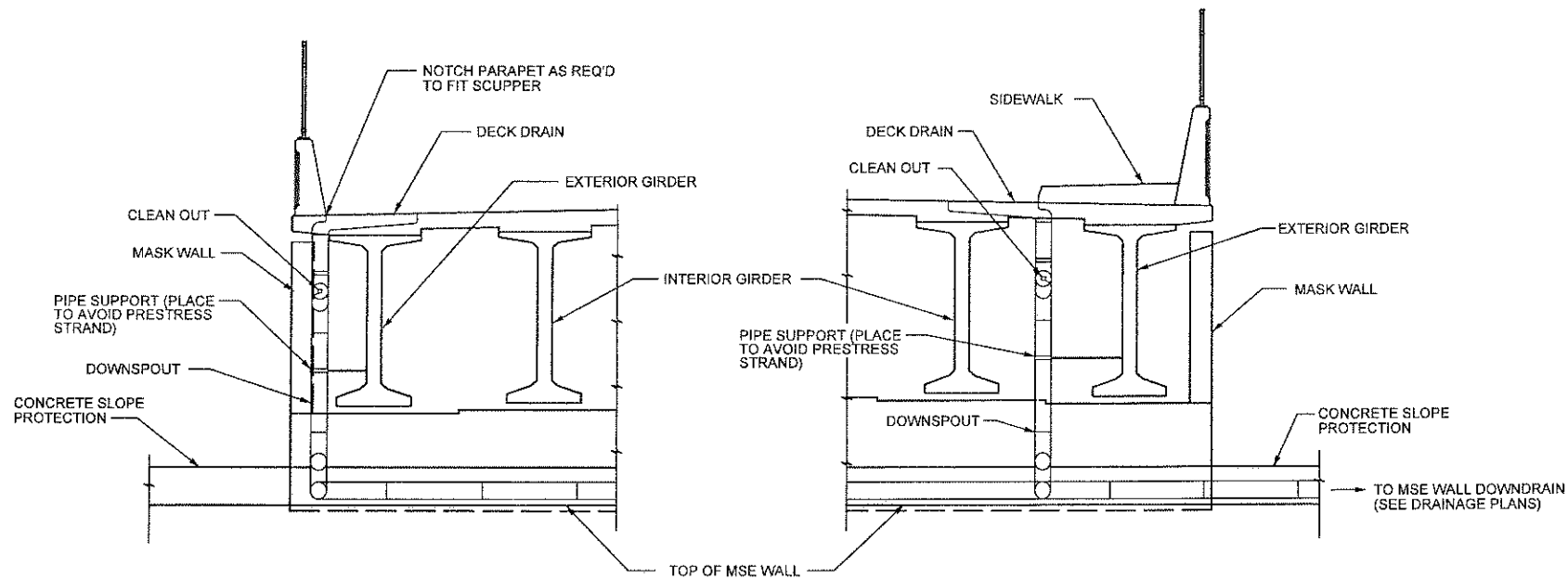
TYPICAL ELEVATION



PLAN

SECTION

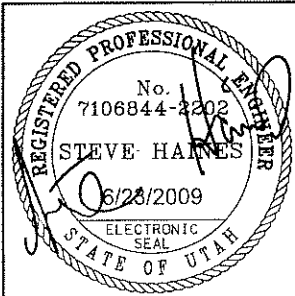
DECK DRAIN DETAILS



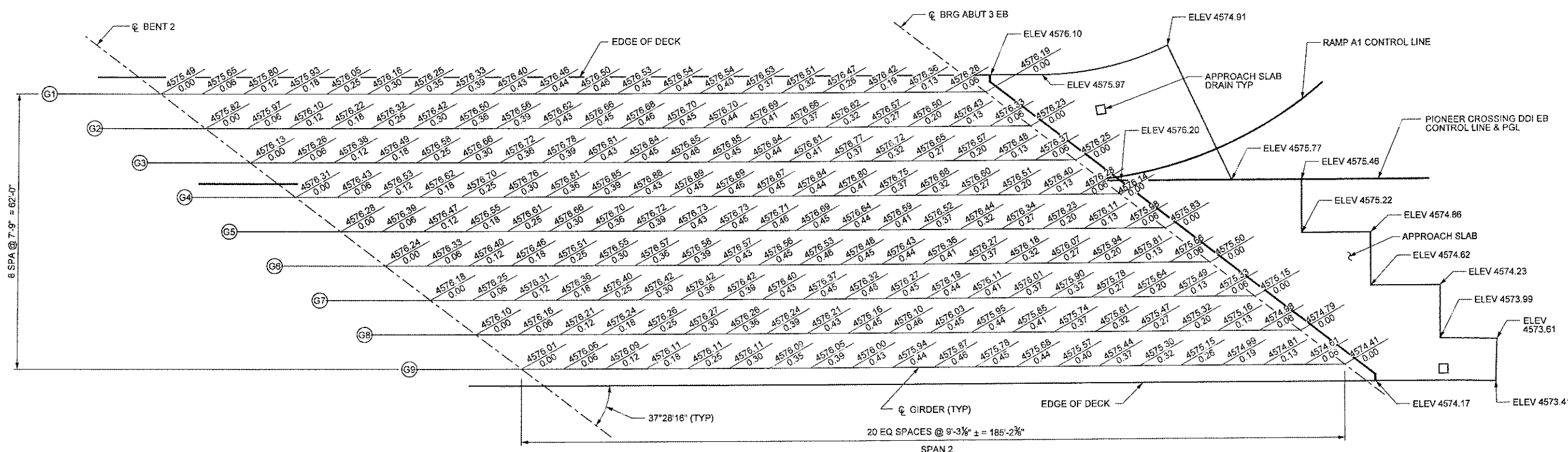
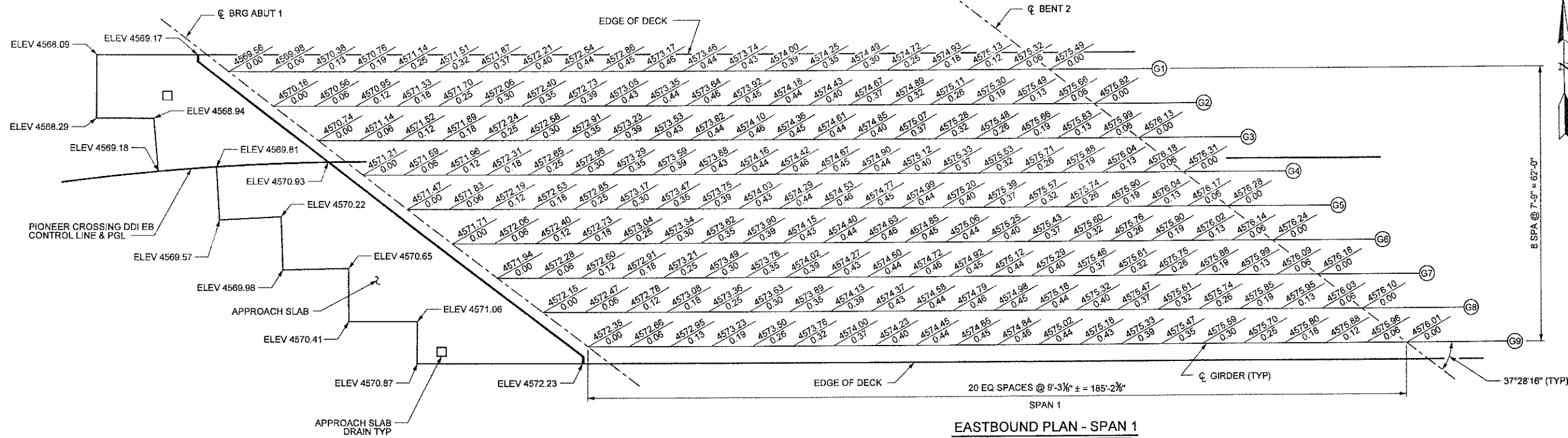
PART SECTION AT ABUTMENTS

NOTES

1. USE NEENAH TYPE R-3951 HEAVY DUTY BRIDGE SCUPPERS AND 8" DIA. PIPE AND DOWNSPOUTS.
2. SEE "DECK PLAN" SHEETS FOR LOCATIONS AND NUMBER REQUIRED.
3. MONUMENTS NOT SHOWN FOR CLARITY.



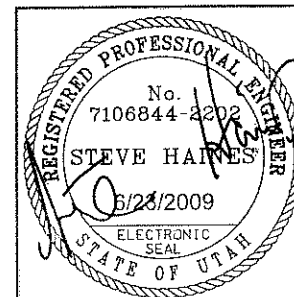
UTAH DEPARTMENT OF TRANSPORTATION											
SALT LAKE CITY, UTAH											
KIEWIT/CPLYDE											
PIONEER CROSSING - SEGMENT 2		PIONEER CROSSING OVER I-15		DECK DRAIN DETAILS		PROJECT NUMBER S-R399(42) & S-R399(59)		REVISIONS			
UTAH COUNTY		F-785		DRG. NO.		SHT. 46 OF 67					
APPROVAL		6/23/2009		DATE		RECOMM.		6/23/2009		DATE	
DESIGN		DLS		03/09		CHECK		VTG		04/09	
DRAWN		JGC		03/09		CHECK		VTG		05/09	
QUANT						CHECK					
STRUCTURE DESIGN MANAGER		DATE		6/23/2009		DATE		6/23/2009		DATE	
1		05/15/09		SRH		RFI SUBMITTAL					
B		04/13/09		SRH		100% SUBMITTAL					
A		03/11/09		SRH		60% SUBMITTAL					
NO.		DATE		BY							



CONTROL LINE ELEVATIONS		
POINT	STATION	ELEVATION
CL BRG ABUT 1	881+34.78	4571.10
CL BENT 2	883+19.94	4576.32
CL BRG ABUT 3 EB	885+05.14	4576.28

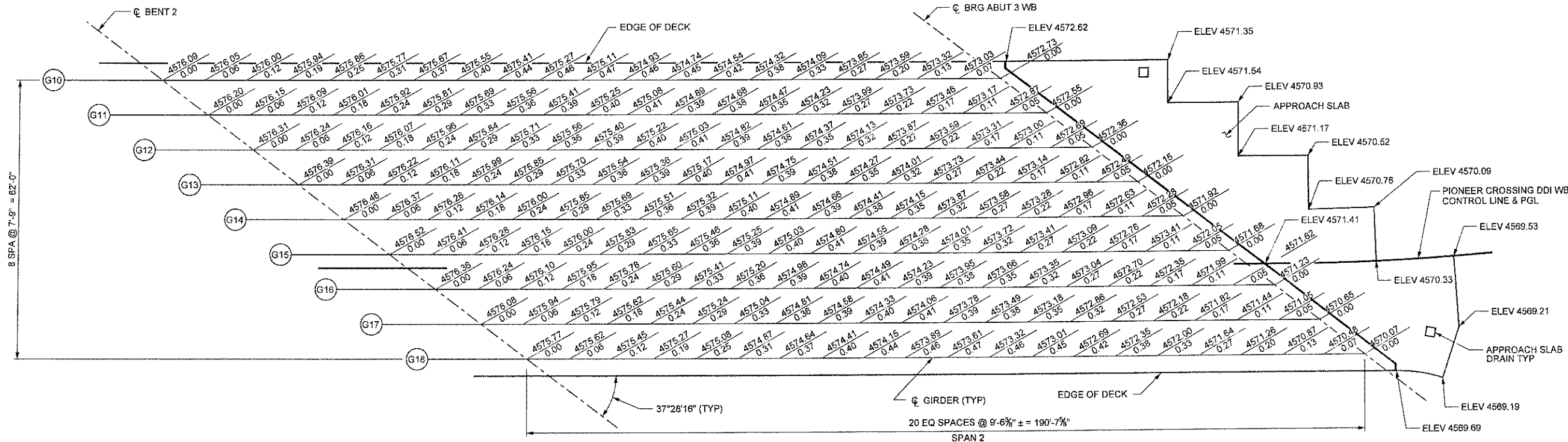
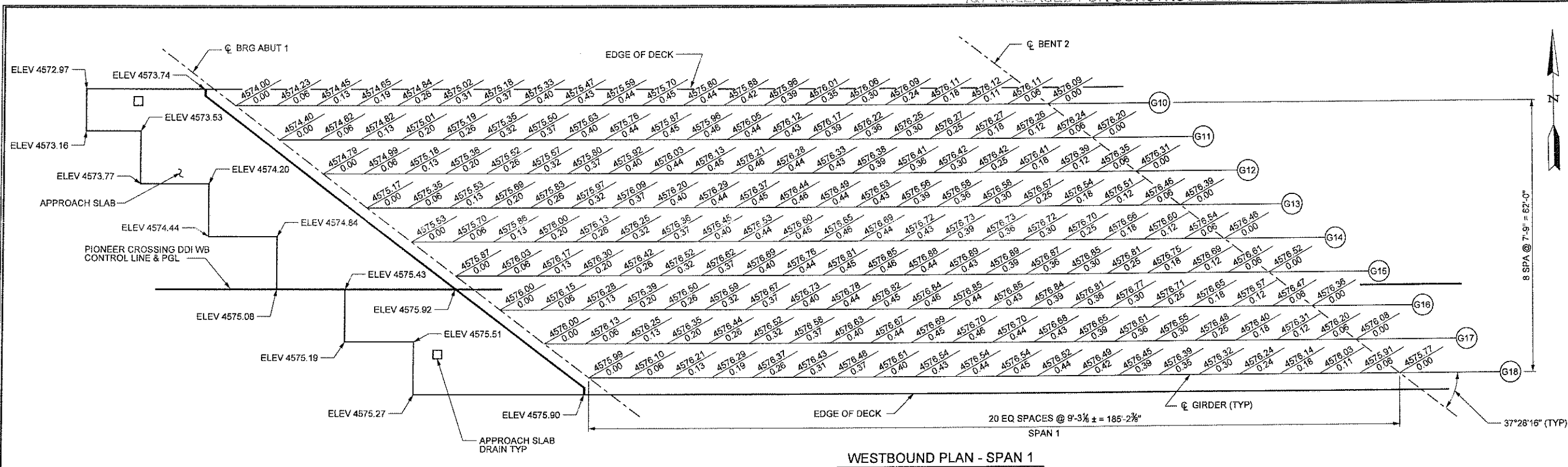
NOTES

- FIGURES ABOVE THE LINES ARE FINISH GRADE ELEVATIONS AT THE TOP OF CONCRETE ALONG CENTERLINE OF GIRDERS. FIGURES BELOW THE LINES ARE DEAD LOAD DEFLECTIONS (FT). ADD THE DEFLECTIONS TO THE FINISHED GRADE ELEVATIONS TO OBTAIN SCREED ELEVATIONS.
- APPROACH SLAB ELEVATIONS ARE TOP OF CONCRETE AT INDICATED LOCATIONS.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE			
DESIGN	DLS	03/09	CHECK
DRAWN	JGC	03/09	CHECK
QUANT.			CHECK
APPROVAL	RECOMM.	DATE	DATE
		02/22/09	
APPROVED FOR USE	DATE	02/22/09	STRUCTURE SUPERVISOR
PROJECT NUMBER S-R399(42) & S-R399(59)			
PIONEER CROSSING - SEGMENT 2			
PIONEER CROSSING OVER I-15			
EASTBOUND SCREED ELEVATIONS			
UTAH COUNTY			
F-785			
DRG. NO.			
SHT. 47 OF 67			

6/23/2009 12:51:02 PM c:\pwworking\kiewit-clayco\project\885\885.dwg

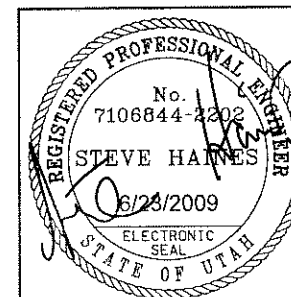


CONTROL LINE ELEVATIONS		
POINT	STATION	ELEVATION
CL BRG ABUT 1	1882+85.44	4576.00
CL BENT 2	1884+70.64	4576.53
CL BRG ABUT 3 WB	1886+61.27	4571.58

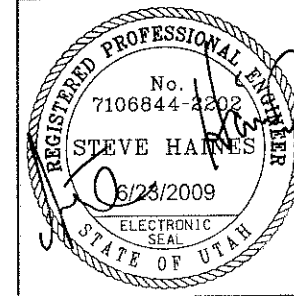
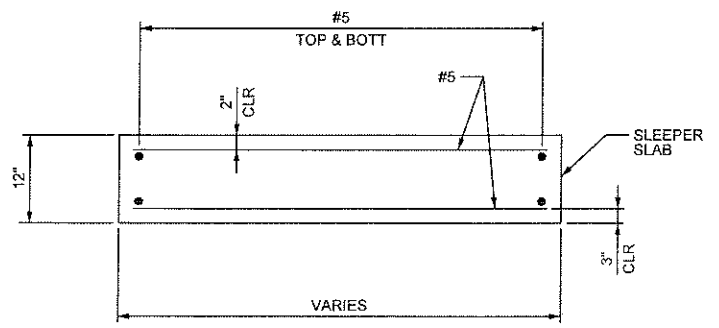
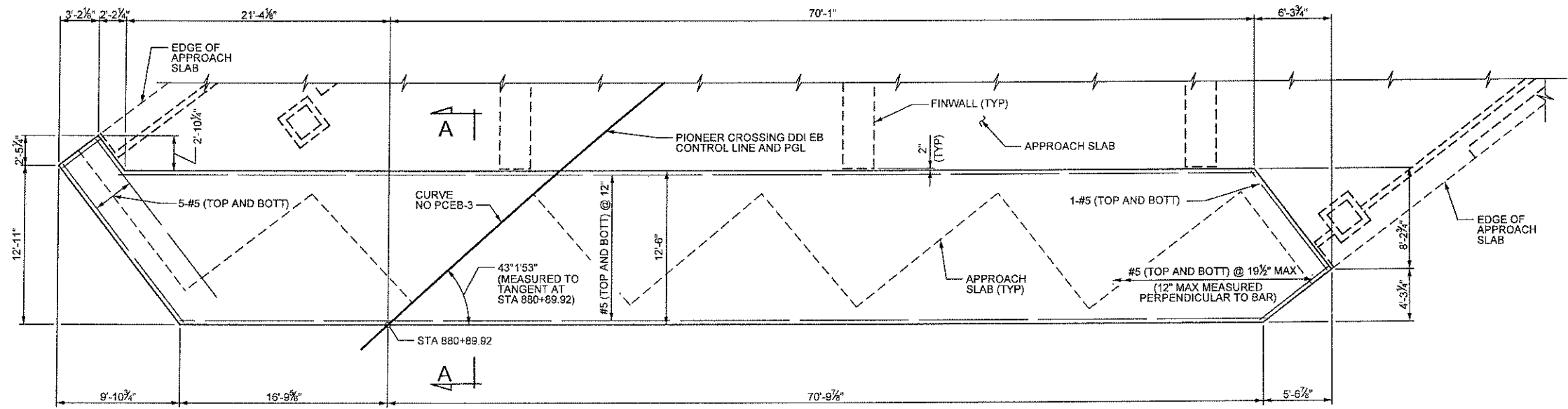
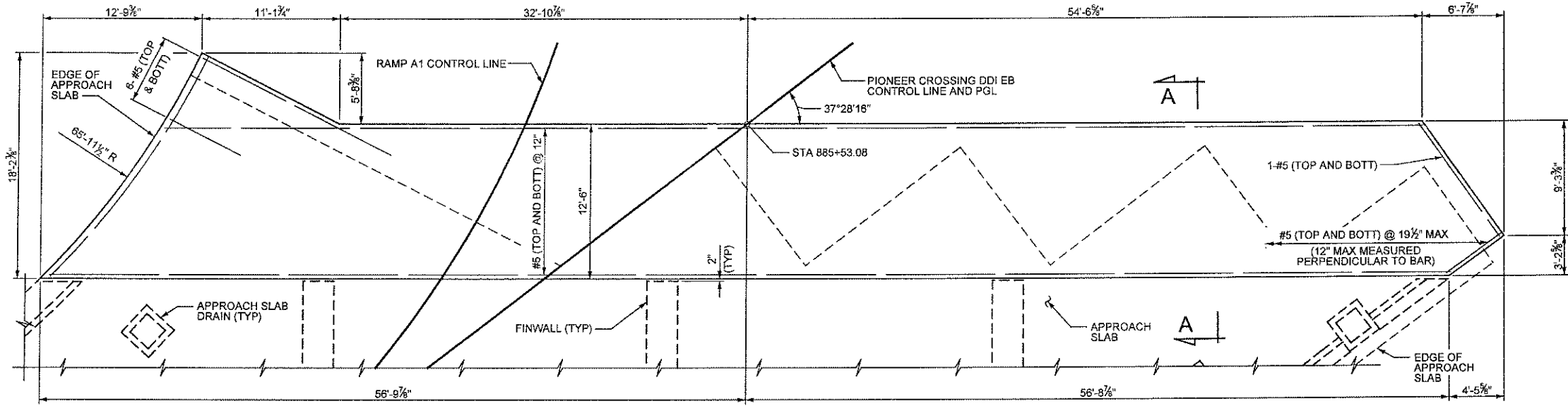
WESTBOUND PLAN - SPAN 2

NOTES

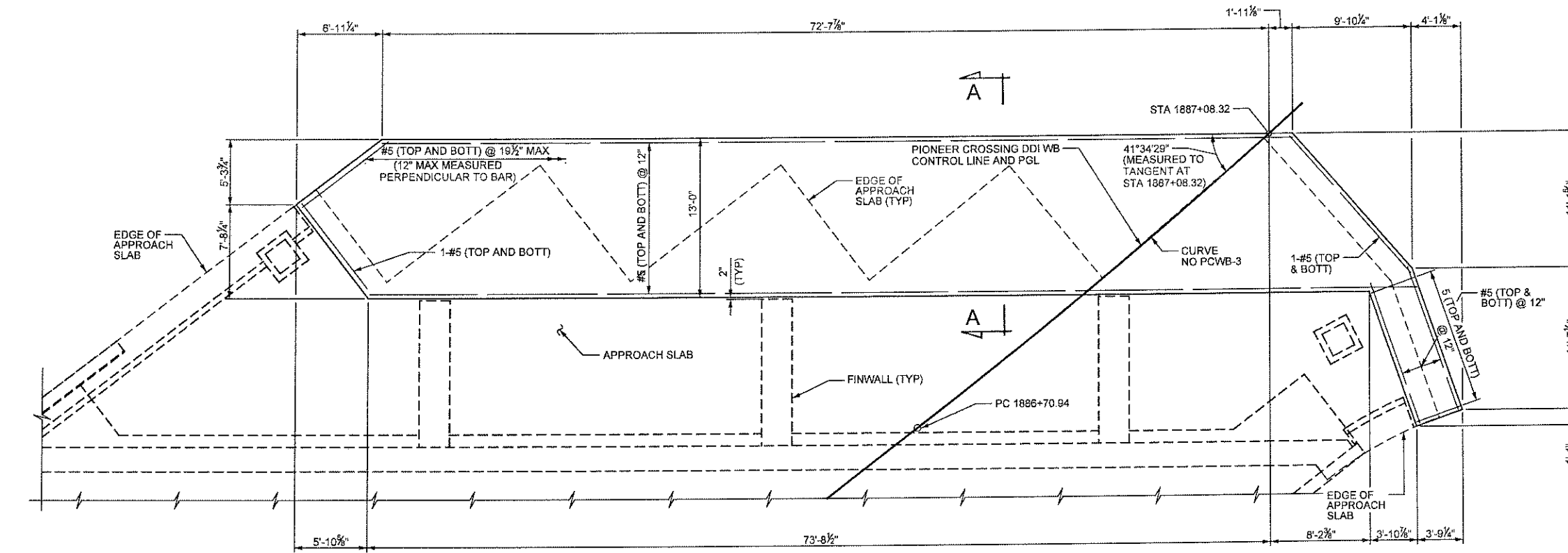
- FIGURES ABOVE THE LINES ARE FINISH GRADE ELEVATIONS AT THE TOP OF CONCRETE ALONG CENTERLINE OF GIRDERS. FIGURES BELOW THE LINES ARE DEAD LOAD DEFLECTIONS (FT). ADD THE DEFLECTIONS TO THE FINISHED GRADE ELEVATIONS TO OBTAIN SCREED ELEVATIONS.
- APPROACH SLAB ELEVATIONS ARE TOP OF CONCRETE AT INDICATED LOCATIONS.



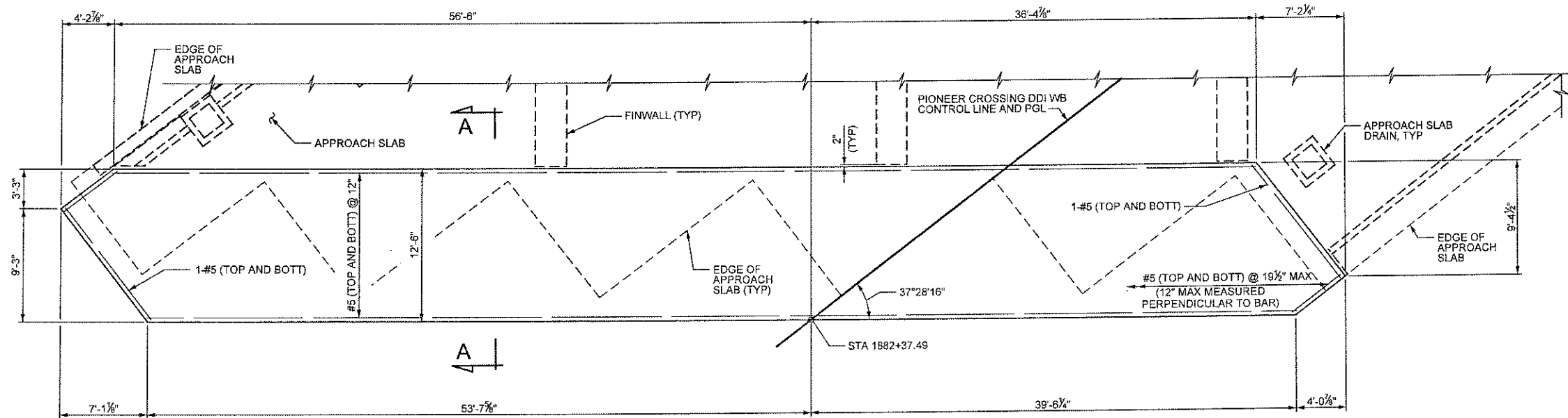
UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE		DESIGN DLS 03/09	CHECK BJB 04/09	100% SUBMITTAL	REVISIONS
APPROVAL RECOMM. 02/23/2009	DATE 02/23/2009	DESIGN DLS 03/09	CHECK BJB 04/09	100% SUBMITTAL	REVISIONS
APPROVED FOR USE 02/23/2009	DATE 02/23/2009	DESIGN DLS 03/09	CHECK BJB 04/09	100% SUBMITTAL	REVISIONS
PIONEER CROSSING - SEGMENT 2		PIONEER CROSSING OVER I-15		WESTBOUND SCREED ELEVATIONS	
PROJECT NUMBER S-R399(42) & S-R399(59)		UTAH COUNTY		F-785 DRG. NO.	
SHT. 48		OF 67			



PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE																	
PIONEER CROSSING OVER I-15		APPROVAL RECOMM. 62322009		DESIGN DLS 03/09		CHECK BJB 04/09		1		05/15/09		SRH		RFC SUBMITTAL					
EB SLEEPER SLAB DETAILS		SIGNATURE OF ENGINEER		DRAWN OR 03/09		CHECK JAG 05/09		B		04/13/09		SRH		100% SUBMITTAL					
		DATE		QUANT		CHECK		A		04/11/09		SRH		60% SUBMITTAL					
PROJECT NUMBER		APPROVED FOR USE		STRUCTURE DESIGN MANAGER				NO.		DATE		BY		REMARKS					
S-R399(42) & S-R399(59)		DATE												REVISIONS					
UTAH COUNTY																			
F-785																			
DRG. NO.																			
SHT. 49		OF 67																	



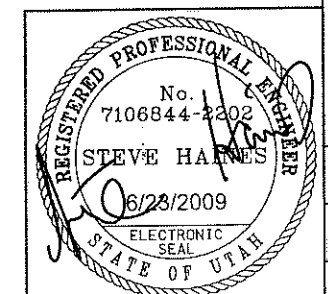
WB LAYOUT (ABUTMENT 3)



WB LAYOUT (ABUTMENT 1)

NOTES

1. SEE "EB SLEEPER SLAB DETAILS" SHEET FOR SECTION A-A.



UTAH DEPARTMENT OF TRANSPORTATION

SALT LAKE CITY, UTAH

KIEWIT/CILYDE

PIONEER CROSSING - SEGMENT 2

PIONEER CROSSING OVER I-15

WB SLEEPER SLAB DETAILS

PROJECT NUMBER S-R399(42) & S-R399(59)

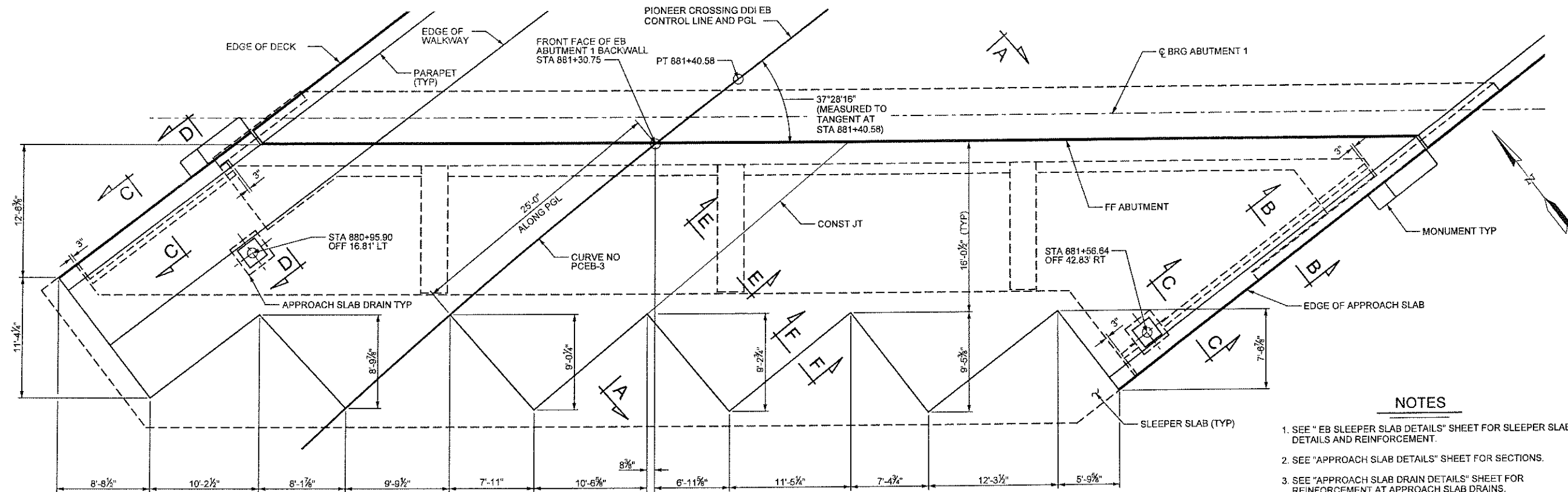
UTAH COUNTY F-785

DRG. NO.

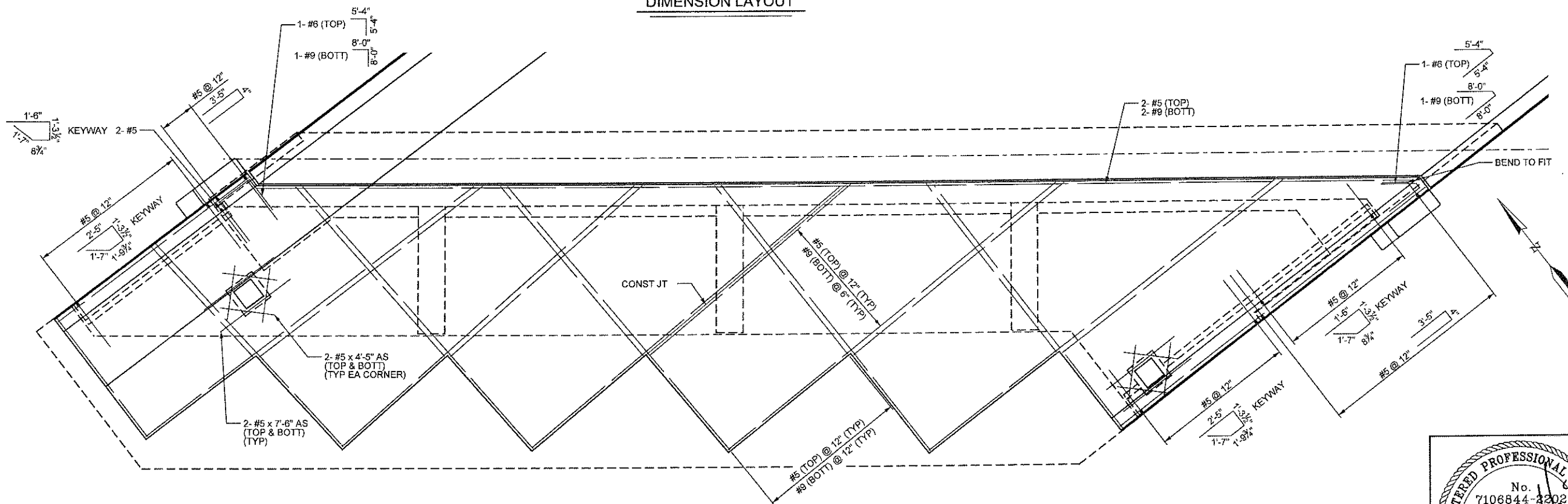
SHT. 50 OF 67

NO.	DATE	BY	REVISIONS
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2	04/13/09	SRH	100% SUBMITTAL
3	03/11/09	SRH	60% SUBMITTAL

DESIGN	DLS	03/09	CHECK	B.J.B.	04/09	CHECK
DRAWN	OR	03/09	CHECK	J.A.G.	05/09	CHECK
QUANT.						



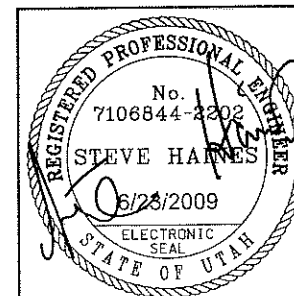
DIMENSION LAYOUT



REINFORCEMENT LAYOUT

NOTES

1. SEE "EB SLEEPER SLAB DETAILS" SHEET FOR SLEEPER SLAB DETAILS AND REINFORCEMENT.
2. SEE "APPROACH SLAB DETAILS" SHEET FOR SECTIONS.
3. SEE "APPROACH SLAB DRAIN DETAILS" SHEET FOR REINFORCEMENT AT APPROACH SLAB DRAINS.
4. CUT APPROACH SLAB REINFORCEMENT AT DRAIN OPENINGS.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
EB ABUTMENT 1 APPROACH PLAN

UTAH
COUNTY
F-785
DRG. NO.

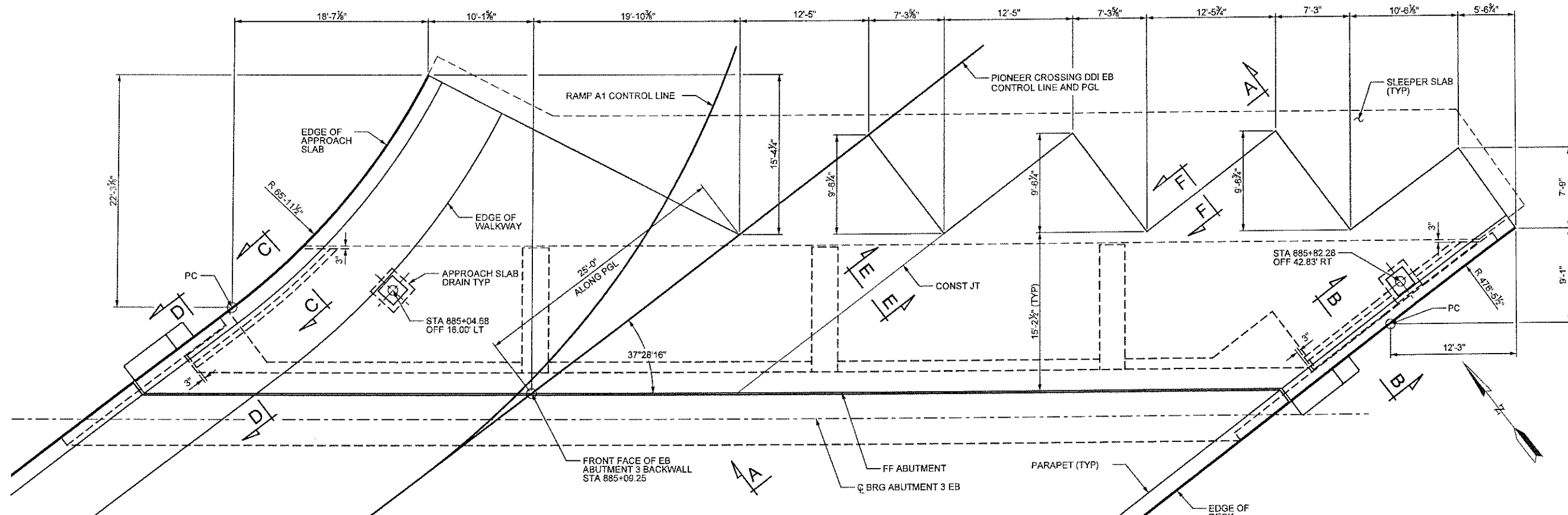
SHT. 51 OF 67

NO	DATE	BY	REVISIONS
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2	07/13/09	SRH	100% SUBMITTAL
3	03/11/09	SRH	80% SUBMITTAL

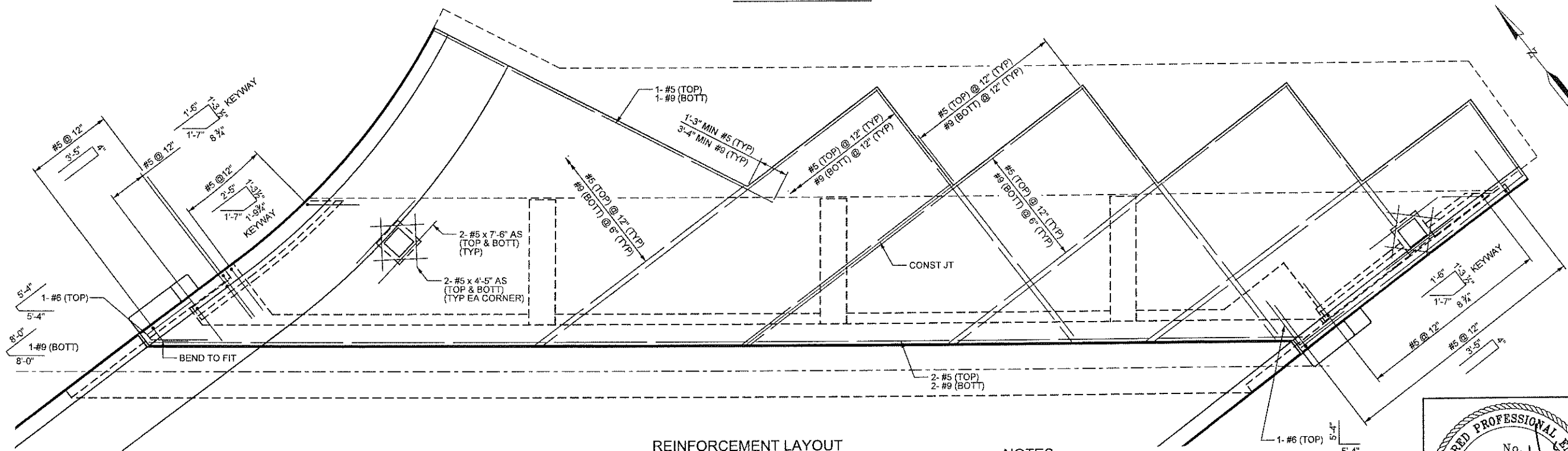
DESIGN	CHECK	DATE	QUANT.
DLS 03/09	BJB 04/09		
ROW 03/09	JAG 05/09		

APPROVAL	DATE	FOR USE
6/23/2009		
6/23/2009		

PROJECT NUMBER	S-R399(42) & S-R399(59)
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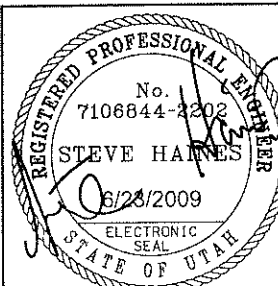
DIMENSION LAYOUT



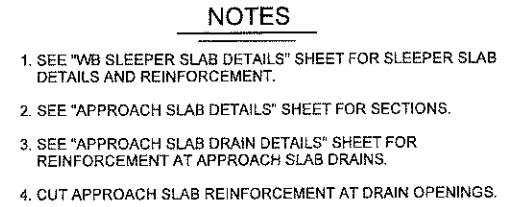
REINFORCEMENT LAYOUT

NOTES

1. SEE "EB SLEEPER SLAB DETAILS" SHEET FOR SLEEPER SLAB DETAILS AND REINFORCEMENT.
2. SEE "APPROACH SLAB DETAILS" SHEET FOR SECTIONS.
3. SEE "APPROACH SLAB DRAIN DETAILS" SHEET FOR REINFORCEMENT AT APPROACH SLAB DRAINS.
4. CUT APPROACH SLAB REINFORCEMENT AT DRAIN OPENINGS.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE				PIONEER CROSSING - SEGMENT 2			
PIONEER CROSSING OVER I-15				PIONEER CROSSING OVER I-15			
EB ABUTMENT 3 APPROACH PLAN				EB ABUTMENT 3 APPROACH PLAN			
S-R399(42) & S-R399(59)				S-R399(42) & S-R399(59)			
PROJECT NUMBER				PROJECT NUMBER			
UTAH COUNTY				UTAH COUNTY			
F-785				F-785			
DRG. NO.				DRG. NO.			
SHT. 52 OF 67				SHT. 52 OF 67			
100% SUBMITTAL				100% SUBMITTAL			
80% SUBMITTAL				80% SUBMITTAL			
60% SUBMITTAL				60% SUBMITTAL			
50% SUBMITTAL				50% SUBMITTAL			
40% SUBMITTAL				40% SUBMITTAL			
30% SUBMITTAL				30% SUBMITTAL			
20% SUBMITTAL				20% SUBMITTAL			
10% SUBMITTAL				10% SUBMITTAL			
0% SUBMITTAL				0% SUBMITTAL			
REVISIONS				REVISIONS			
NO.				NO.			
DATE				DATE			
BY				BY			
SRH				SRH			
05/15/09				05/15/09			
100% SUBMITTAL				100% SUBMITTAL			
80% SUBMITTAL				80% SUBMITTAL			
60% SUBMITTAL				60% SUBMITTAL			
50% SUBMITTAL				50% SUBMITTAL			
40% SUBMITTAL				40% SUBMITTAL			
30% SUBMITTAL				30% SUBMITTAL			
20% SUBMITTAL				20% SUBMITTAL			
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0% SUBMITTAL				0% SUBMITTAL			

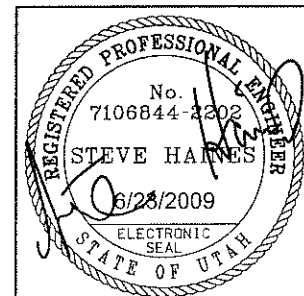


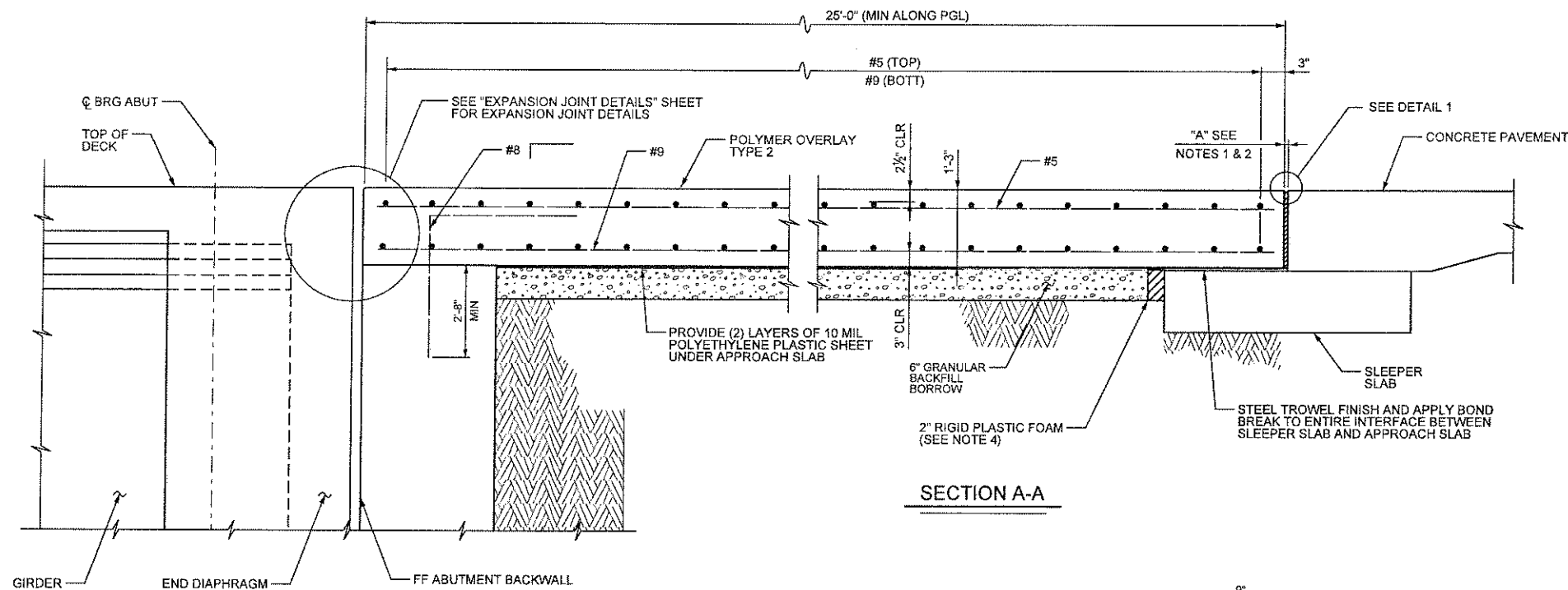
REGISTERED PROFESSIONAL ENGINEER
 No. 7106844-2202
 STEVE HANNES
 6/28/2009
 ELECTRONIC SEAL
 STATE OF UTAH

SHT. 53 OF 67

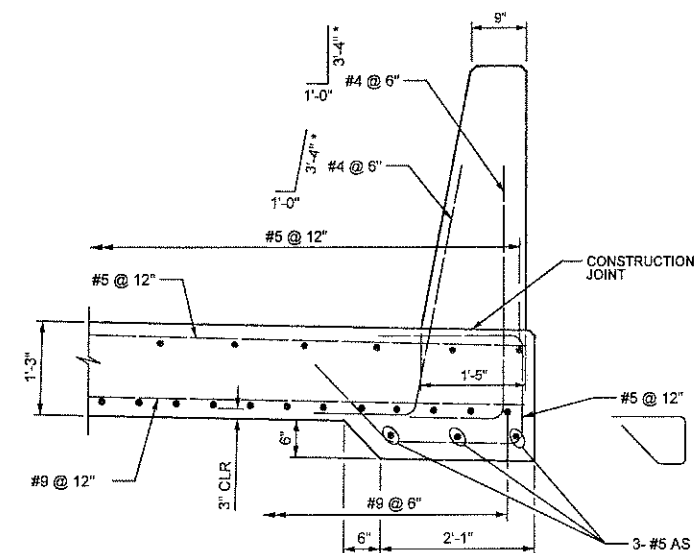


1. SEE "EB SLEEPER SLAB DETAILS" SHEET FOR SLEEPER SLAB DETAILS AND REINFORCEMENT.
2. SEE "APPROACH SLAB DETAILS" SHEET FOR SECTIONS.
3. SEE "APPROACH SLAB DRAIN DETAILS" SHEET FOR REINFORCEMENT AT APPROACH SLAB DRAINS.
4. CUT APPROACH SLAB REINFORCEMENT AT DRAIN OPENINGS.

[illegible]

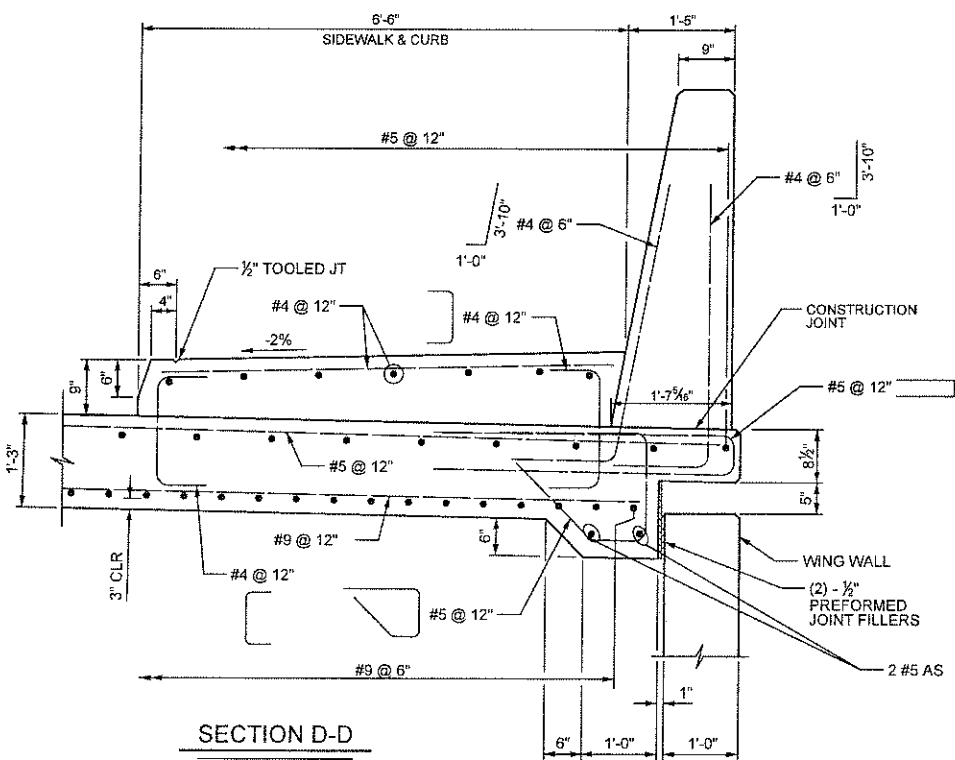


SECTION A-A

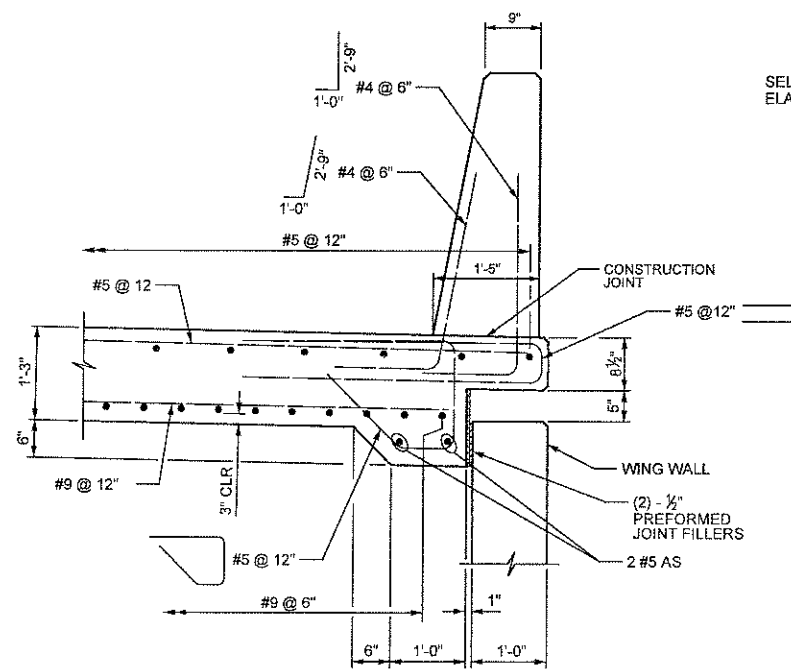


SECTION C-C

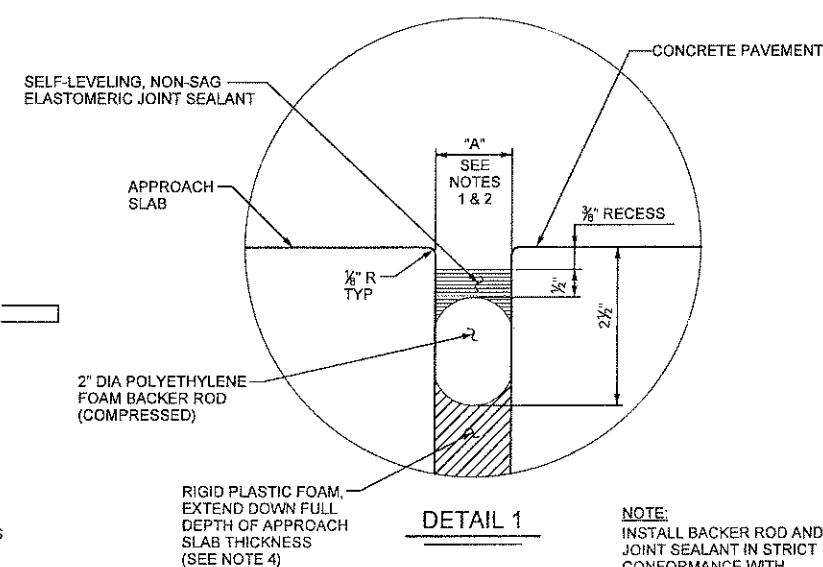
SECTION WITHOUT WALKWAY SHOWN
(SECTION WITH WALKWAY SIMILAR)
* 4'-5" WITH WALKWAY



SECTION D-D

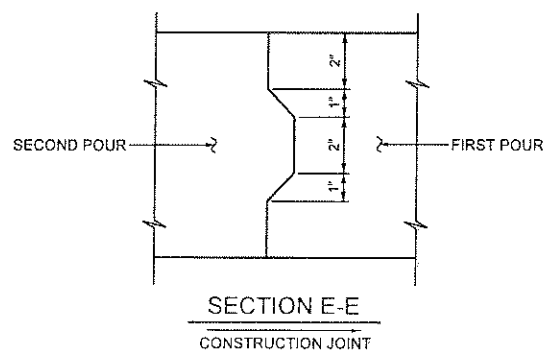


SECTION B-B



DETAIL 1

NOTE:
INSTALL BACKER ROD AND
JOINT SEALANT IN STRICT
CONFORMANCE WITH
MANUFACTURERS INSTRUCTIONS

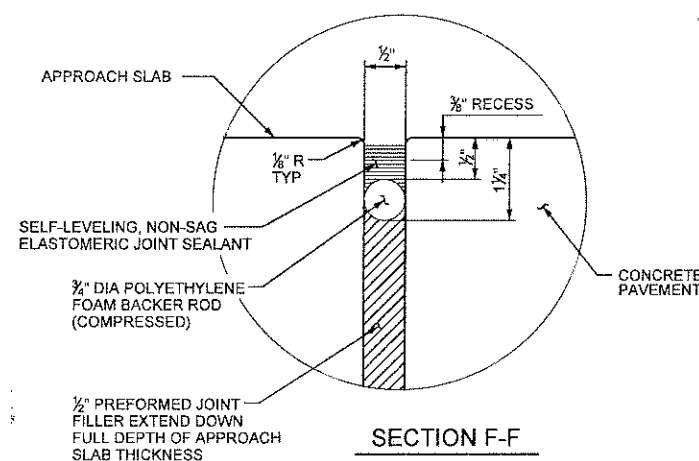


SECTION E-E

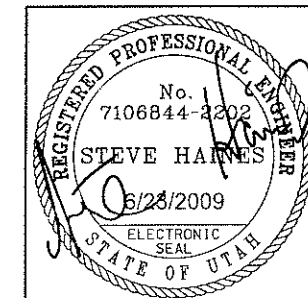
CONSTRUCTION JOINT

NOTES

- DO NOT INSTALL JOINT SEALANT ABOVE 90°F OR BELOW 50°F. JOINT WIDTH "A" IS MEASURED PERPENDICULAR TO SLEEPER SLAB.
- JOINT OPENING AT 60° IS 1 1/2". ADD AN ADDITIONAL 1/4" FOR EVERY 25° BELOW 60° AND SUBTRACT 1/8" FOR EVERY 15° ABOVE 60°.
- SEE "PARAPET LAYOUT" SHEETS FOR DETAILS AND REINFORCEMENT OF PARAPET.
- USE CLOSED CELL, RIGID PLASTIC FOAM. CUT RIGID PLASTIC FOAM TO CONFORM TO THE CROSS SECTION OF THE SLAB AND FURNISH IN STRIPS EQUAL TO THE WIDTH OF THE SLAB. MAKE THE TOP SURFACE SMOOTH. PROVIDE A SNUG FIT WITHOUT LOSS IN THICKNESS OF THE MATERIAL.



SECTION F-F



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
APPROACH SLAB DETAILS

UTAH
COUNTY
F-785
DRG. NO.

SHT. 55 OF 67

NO	DATE	BY	REVISIONS
1	05/15/09	SRH	RFC SUBMITTAL
2	04/13/09	SRH	100% SUBMITTAL
3	03/11/09	SRH	80% SUBMITTAL

DESIGN	DLS	03/09	CHECK	BLB	04/09
DRAWN	ROW	03/09	CHECK	JAG	05/09
APPROVED	FOR USE	DATE	DATE	DATE	DATE

PROJECT NUMBER	S-R399(42) & S-R399(59)
STRUCTURE DESIGN MANAGER	

SECTION A-A

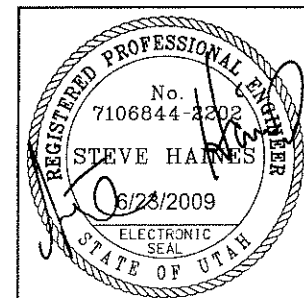
ISOMETRIC

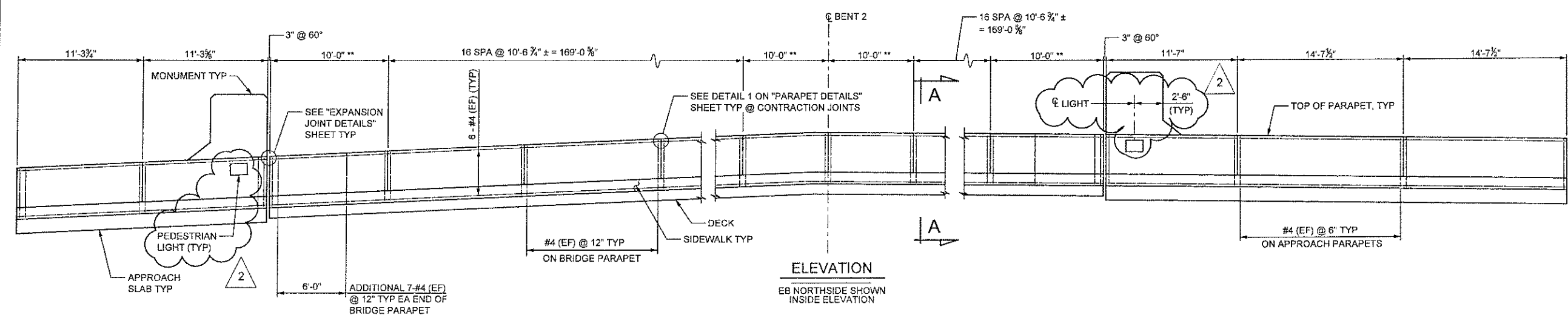
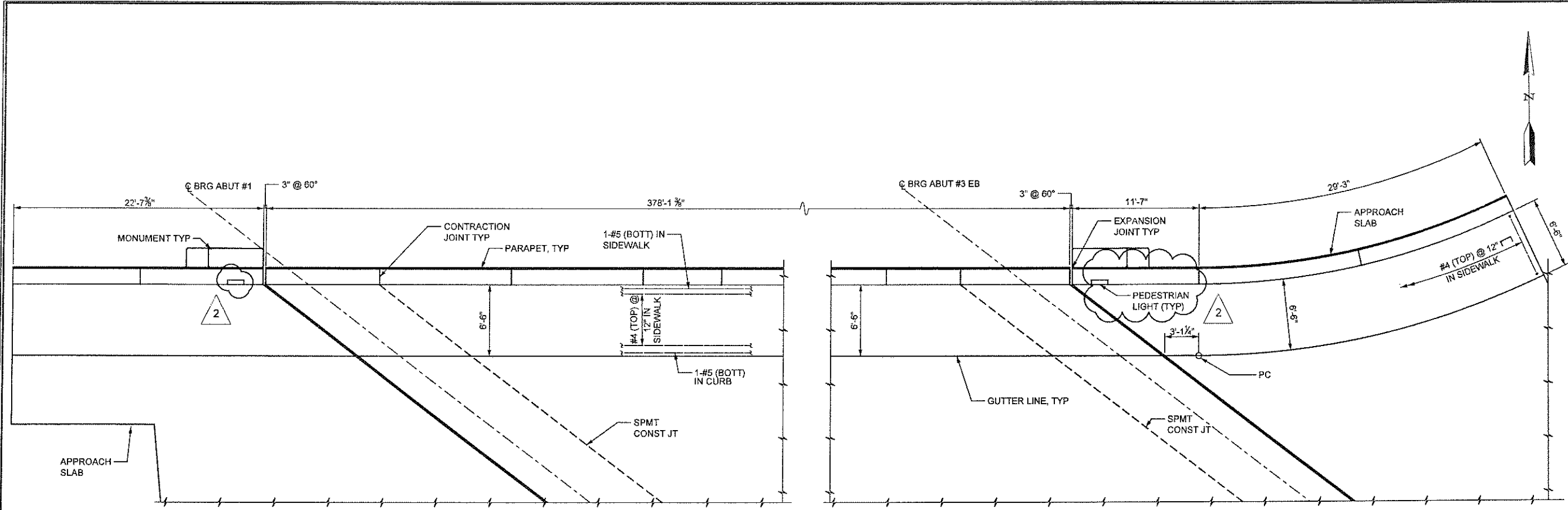
SECTION AT WINGWALL
SEE SECTION WITHOUT WINGWALL FOR MORE INFO

SECTION WITHOUT SIDEWALK & WITHOUT WINGWALL SHOWN
SECTION WITH SIDEWALK SIMILAR

NOTES

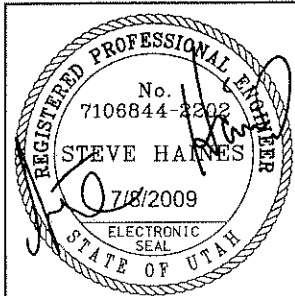
1. FIELD CUT OR BEND APPROACH SLAB REINFORCING TO CLEAR APPROACH SLAB DRAINS.
2. SEE DRAINAGE DRAWINGS FOR CATCH BASIN STATIONS, OFFSETS, AND ELEVATIONS.
3. SEE DRAINAGE DRAWINGS FOR PIPE DETAILS.
4. USE BICYCLE SAFE GRATE FROM UDOT STANDARD DRAWING "GF 8" FOR GRATE. UDOT'S "STANDARD GRATE" MAY BE SUBSTITUTED WITH ENGINEER'S APPROVAL. SEE UDOT STANDARD DRAWINGS "GF 8".
5. PLACE EDGE OF CATCH BASIN AT LEAST 6" FROM THE EDGE OF THE ABUTMENT OR THE EDGE OF THE SLEEPER SLAB.

[illegible]

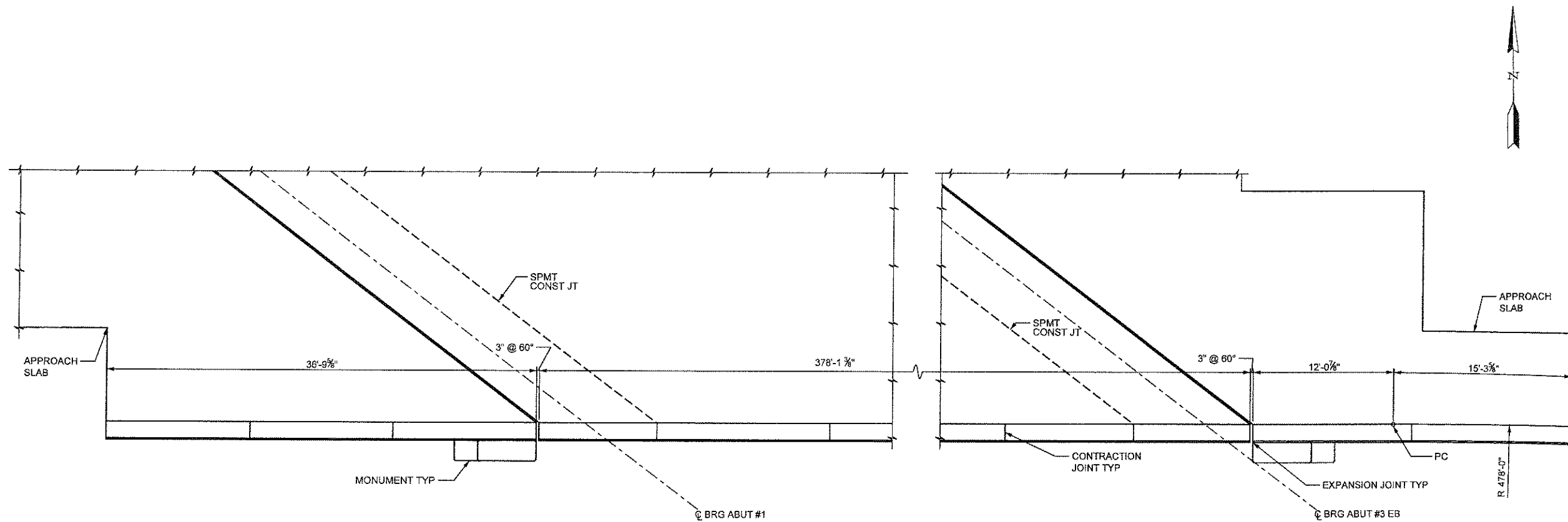


NOTES

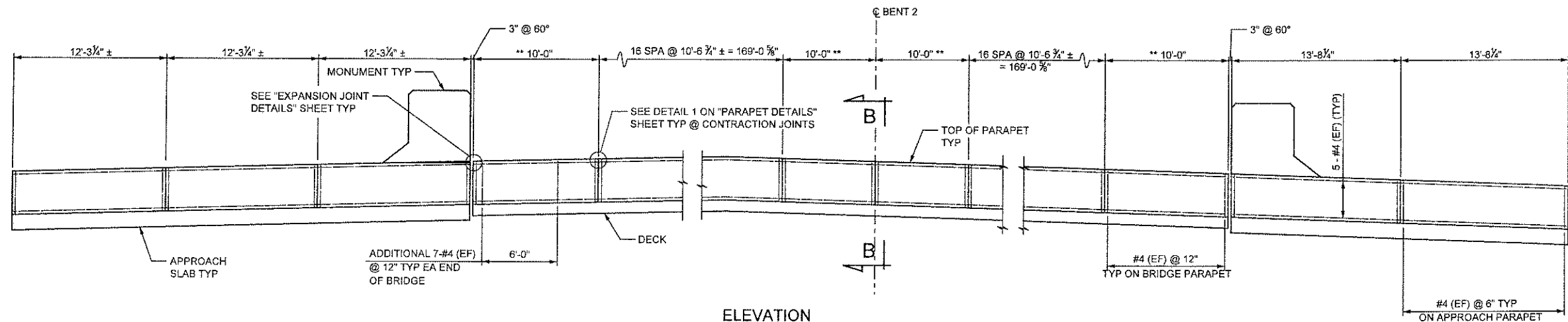
1. DECK AND APPROACH SLAB REBAR NOT SHOWN FOR CLARITY.
2. SEE "PARAPET DETAILS" SHEET FOR SECTION A-A AND ADDITIONAL NOTES.
3. * FIELD VERIFY
4. ** TO BE POURED AFTER SPMT MOVE
5. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENTS.
6. MINIMUM LAP LENGTH FOR #4 = 2'-11"
7. PEDESTRIAN LIGHTS TO BE DEVINE LIGHTING MODEL NO. F653 OR APPROVED EQUAL.
8. PEDESTRIAN LIGHTS TO BE PLACED AT 29'-6" O.C.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CPLYDE				PIONEER CROSSING - SEGMENT 2			
DESIGN DLS 03/09 CHECK BJB 05/09				PIONEER CROSSING OVER I-15			
DRAWN ROW 03/09 CHECK BJB 09/09				EB NORTH PARAPET LAYOUT			
QUANT.				PROJECT NUMBER S-R399(42) & S-R399(59)			
APPROVAL RECOMM. DATE 7/8/2009 FOR USE DATE 7/8/2009				UTAH COUNTY F-785 DRG. NO.			
REVISIONS				SHT. 57 OF 67			
2	07/07/09	SRH	RFC - NDC 32 - ADDED BARRIER LIGHTS				
1	05/15/09	SRH	RFC SUBMITTAL				
B	04/13/09	SRH	100% SUBMITTAL				
A	03/11/09	SRH	60% SUBMITTAL				
NO	DATE	BY	REMARKS				



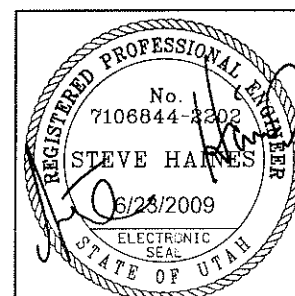
PLAN
EB SOUTHSIDE SHOWN



ELEVATION
EB SOUTHSIDE SHOWN
OUTSIDE ELEVATION
HORIZONTAL DIMENSIONS ARE ALONG
INSIDE FACE OF BARRIER

NOTES

1. DECK AND APPROACH SLAB REBAR NOT SHOWN FOR CLARITY.
2. SEE "PARAPET DETAILS" SHEET FOR SECTION B-B AND ADDITIONAL NOTES.
3. * FIELD VERIFY
4. ** TO BE POURED AFTER SPMT MOVE
5. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENTS.
6. MINIMUM LAP LENGTH FOR #4 = 2'-11".



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CLYDE				PIONEER CROSSING - SEGMENT 2			
DESIGN DLS 03/09 CHECK BJB 05/09				PIONEER CROSSING OVER I-15			
DRAWN ROW 03/09 CHECK BJB 05/09				EB SOUTH PARAPET LAYOUT			
QUANT.				PROJECT NUMBER S-R399(42) & S-R399(59)			
APPROVAL RECORD 8/23/2009 DATE				UTAH COUNTY			
APPROVED 8/23/2009 FOR USE				F-785			
STRUCTURE DESIGN MANAGER				DRG. NO.			
REVISIONS				SHT. 58 OF 67			
NO.	DATE	BY	REMARKS				
1	05/15/09	SRH	RFC SUBMITTAL				
B	04/13/09	SRH	100% SUBMITTAL				
A	03/11/09	SRH	60% SUBMITTAL				



13'-6 1/8" ±

13'-6 1/8" ±

3" @ 60°

MONUMENT TYP

SEE "EXPANSION JOINT DETAILS" SHEET TYP

16 SPA @ 10'-6 3/4" ± = 169'-0 3/4" ±

10'-0" ±

10'-0" ±

17 SPA @ 10'-3 1/4" ± = 174'-5 1/4" ±

3" @ 60°

11'-11 5/8"

11'-11 5/8"

11'-11 5/8"

TOP OF PARAPET TYP

5-#4 (EF) (TYP)

DECK

APPROACH SLAB TYP

ADDITIONAL 7-#4 (EF) @ 12" TYP EA END OF BRIDGE PARAPET

6'-0"

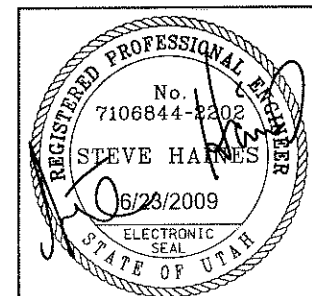
#4 (EF) @ 12" TYP ON BRIDGE PARAPETS

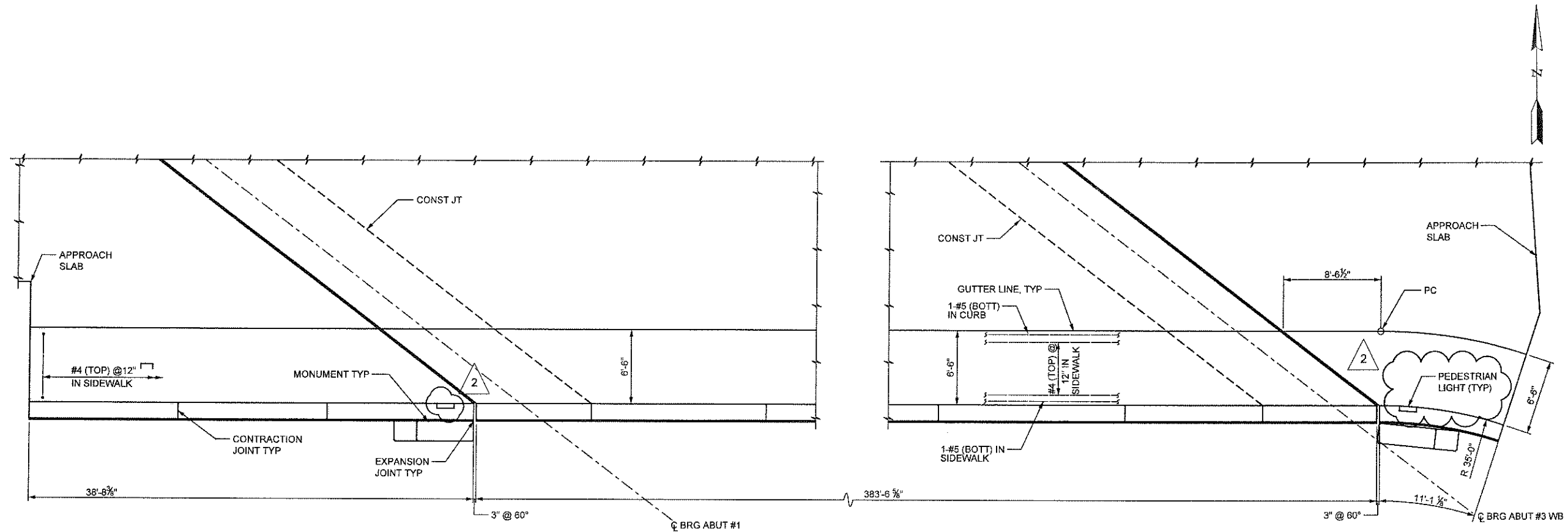
ELEVATION

WB NORTHSIDE SHOWN INSIDE ELEVATION

#4 (EF) @ 6" TYP ON APPROACH PARAPETS

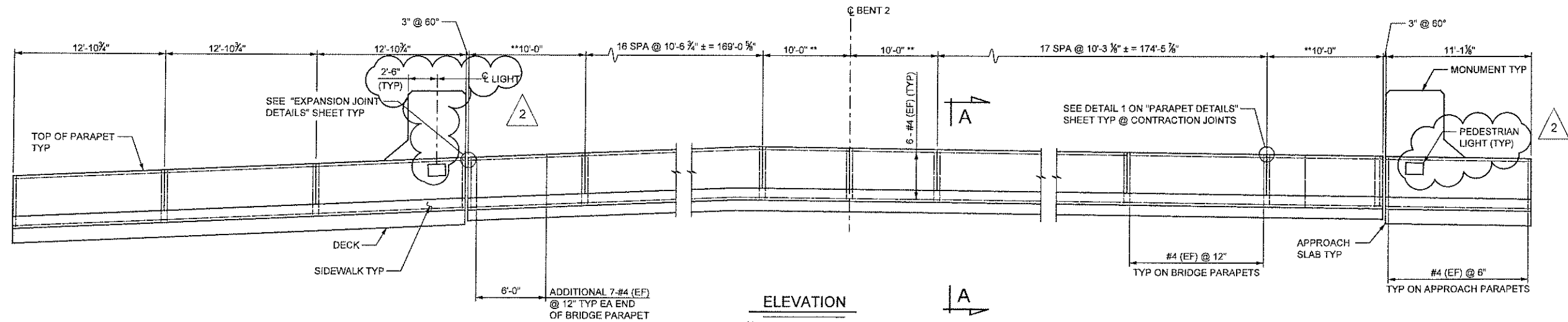
1. DECK AND APPROACH SLAB REBAR NOT SHOWN FOR CLARITY.
2. SEE "PARAPET DETAILS" SHEET FOR SECTION B-B AND ADDITIONAL NOTES.
3. * FIELD VERIFY
4. ** TO BE POURED AFTER SPMT MOVE
5. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENTS.
6. MINIMUM LAP LENGTH FOR #4 = 2'-11".

[illegible]



PLAN

WB SOUTHSIDE SHOWN



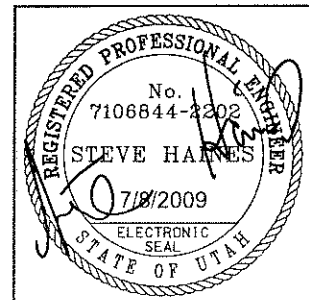
ELEVATION

WB SOUTHSIDE SHOWN
OUTSIDE ELEVATION

HORIZONTAL DIMENSIONS ARE ALONG
INSIDE FACE OF BARRIER

NOTES

1. DECK AND APPROACH SLAB REBAR NOT SHOWN FOR CLARITY.
2. SEE "PARAPET DETAILS" SHEET FOR SECTION A-A AND ADDITIONAL NOTES.
3. * FIELD VERIFY
4. ** TO BE POURED AFTER SPMT MOVE
5. SEE "MONUMENT DETAILS" SHEETS FOR MONUMENTS.
6. MINIMUM LAP LENGTH FOR #4 = 2'-11"
7. PEDESTRIAN LIGHTS TO BE DEVINE LIGHTING MODEL NO. F653 OR APPROVED EQUAL.
8. PEDESTRIAN LIGHTS TO BE PLACED AT 29'-11" O.C.



UTAH DEPARTMENT OF TRANSPORTATION

SALT LAKE CITY, UTAH
KIEWIT/CPLYDE

PIONEER CROSSING - SEGMENT 2

PIONEER CROSSING OVER I-15

WB SOUTH PARAPET LAYOUT

PROJECT NUMBER S-R399(42) & S-R399(59)

UTAH

COUNTY

F-785

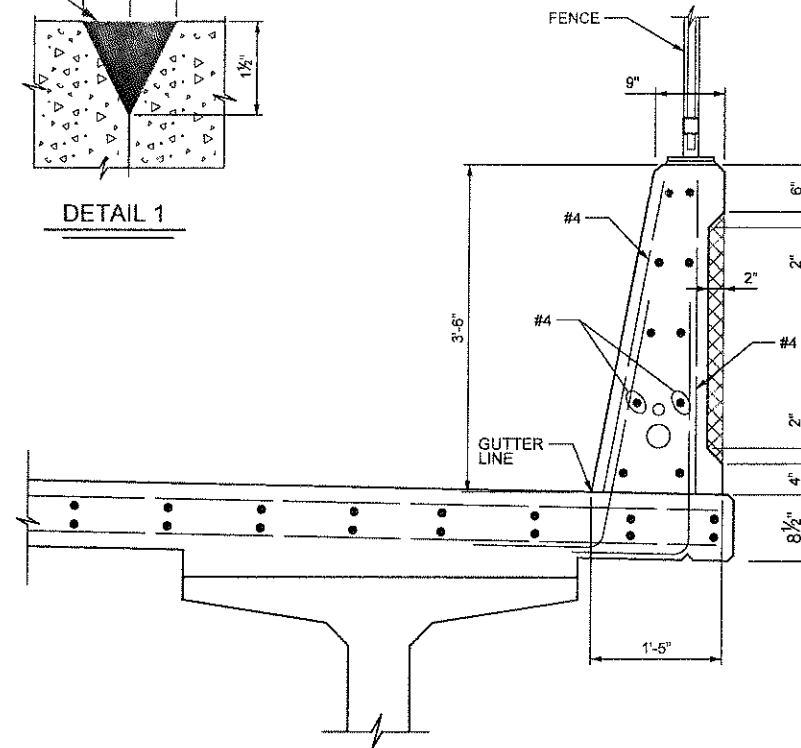
DRG. NO.

SHT. 60 OF 67

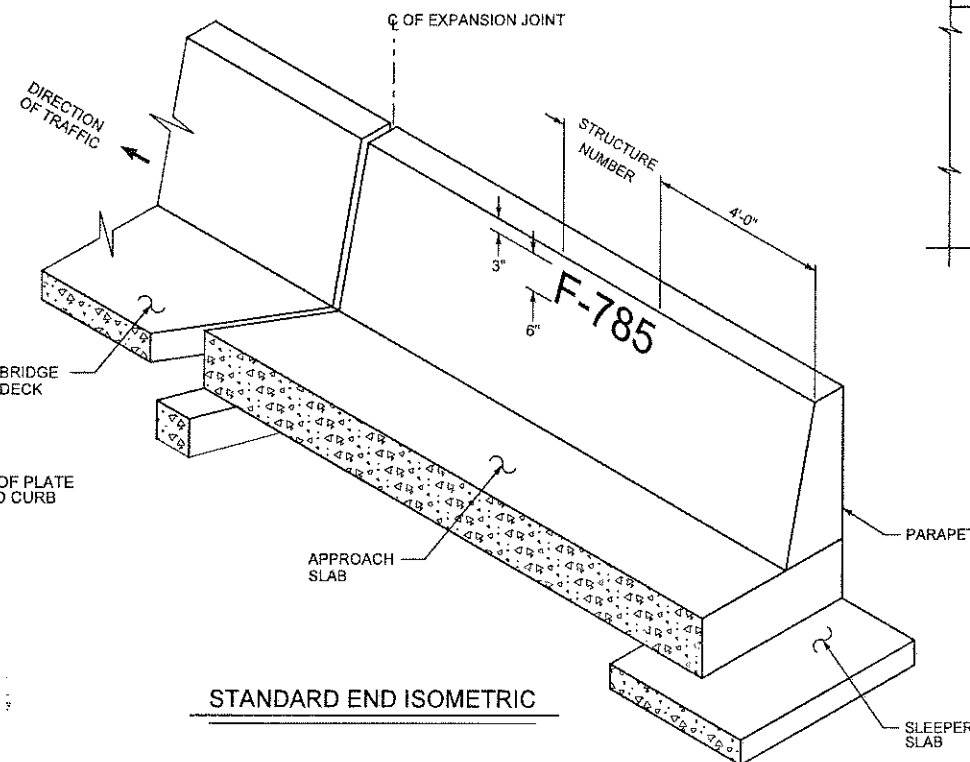
NO.	DATE	BY	REVISIONS
2	07/07/09	SRH	RFC - NDC 32 - ADDED BARRIER LIGHTS
1	05/15/09	SRH	RFC SUBMITTAL
B	04/13/09	SRH	100% SUBMITTAL
A	03/11/09	SRH	80% SUBMITTAL

DESIGN	DLS	03/09	CHECK	BJB	05/09
DRAWN	ROW	03/09	CHECK	BJB	05/09
QUANT.			CHECK		

APPROVAL	RECOMM.	DATE	DATE	DATE	DATE
		7/8/2009		7/8/2009	



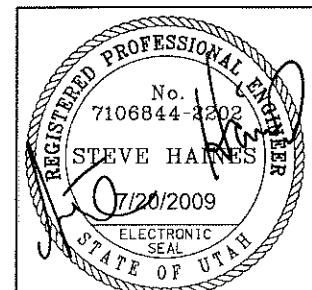
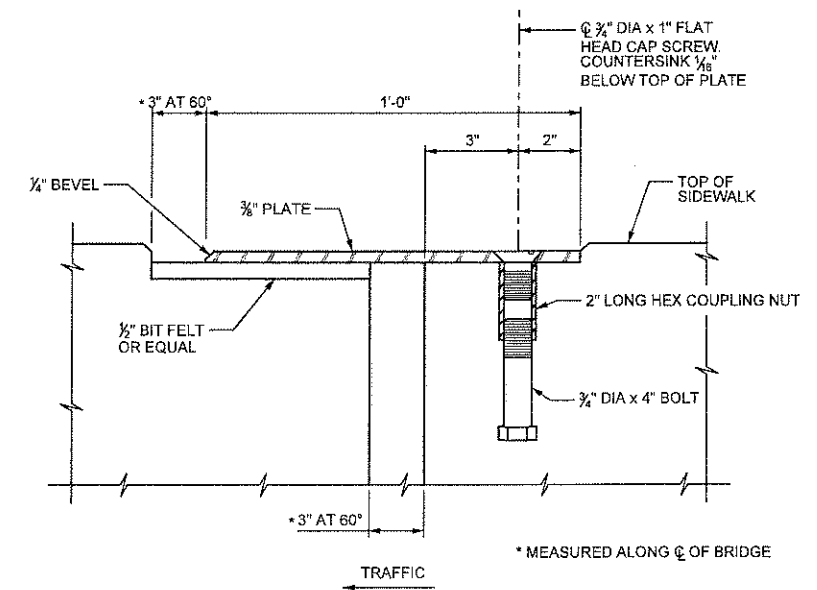
SECTION B-B

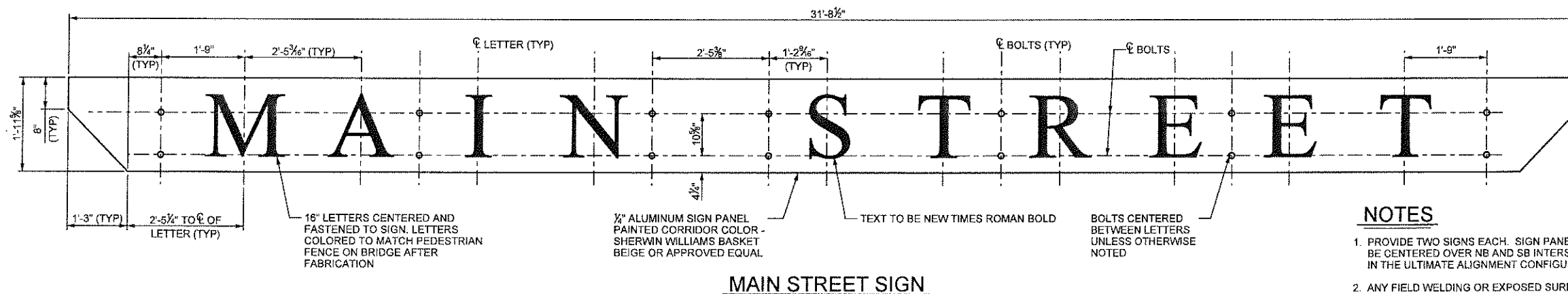
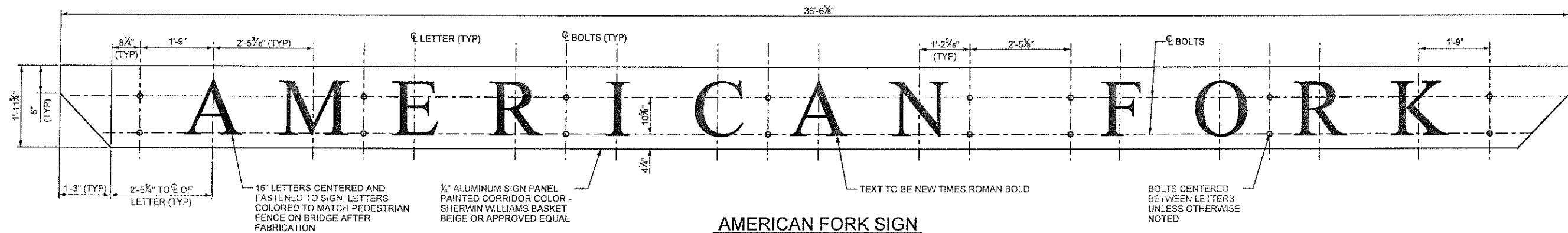


SECTION C-C

NOTES

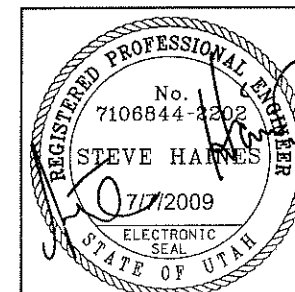
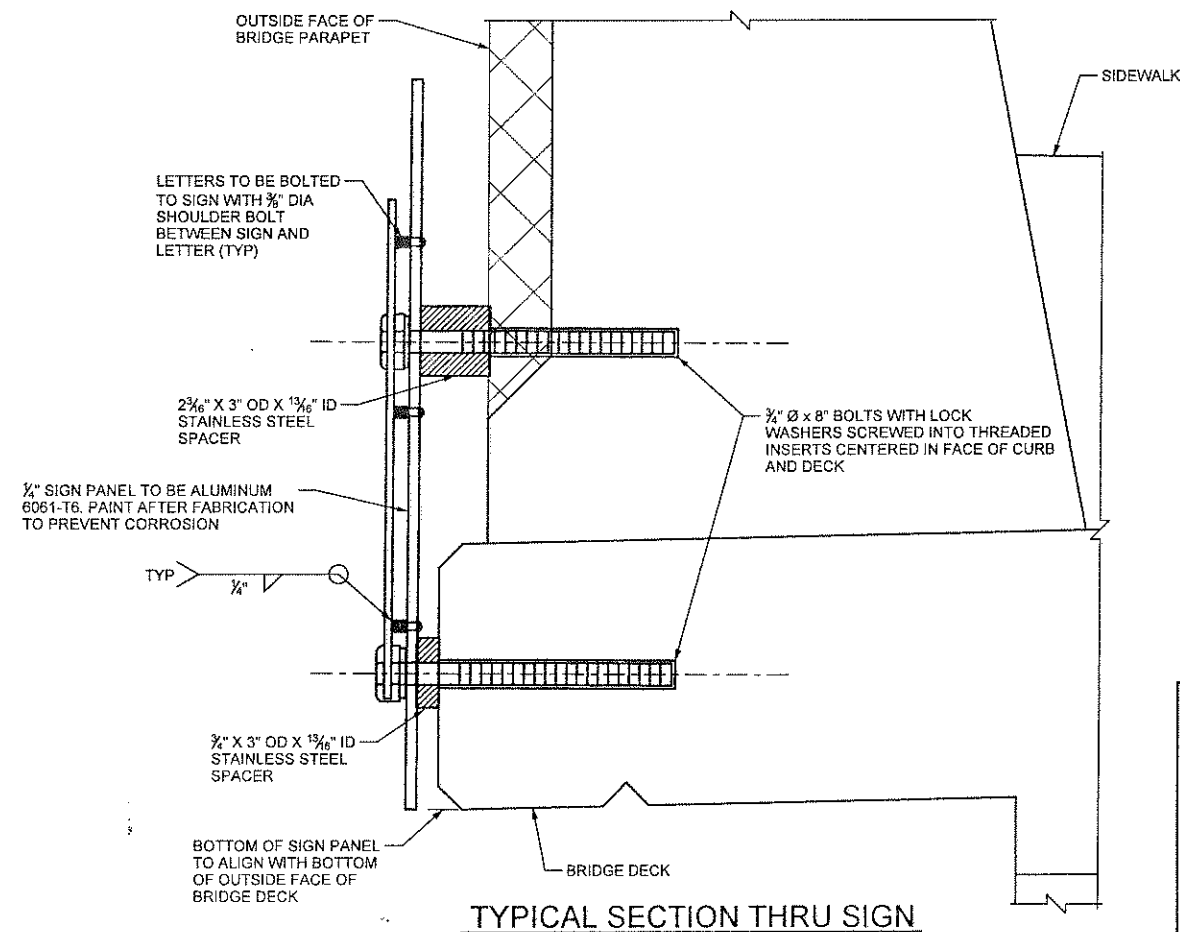
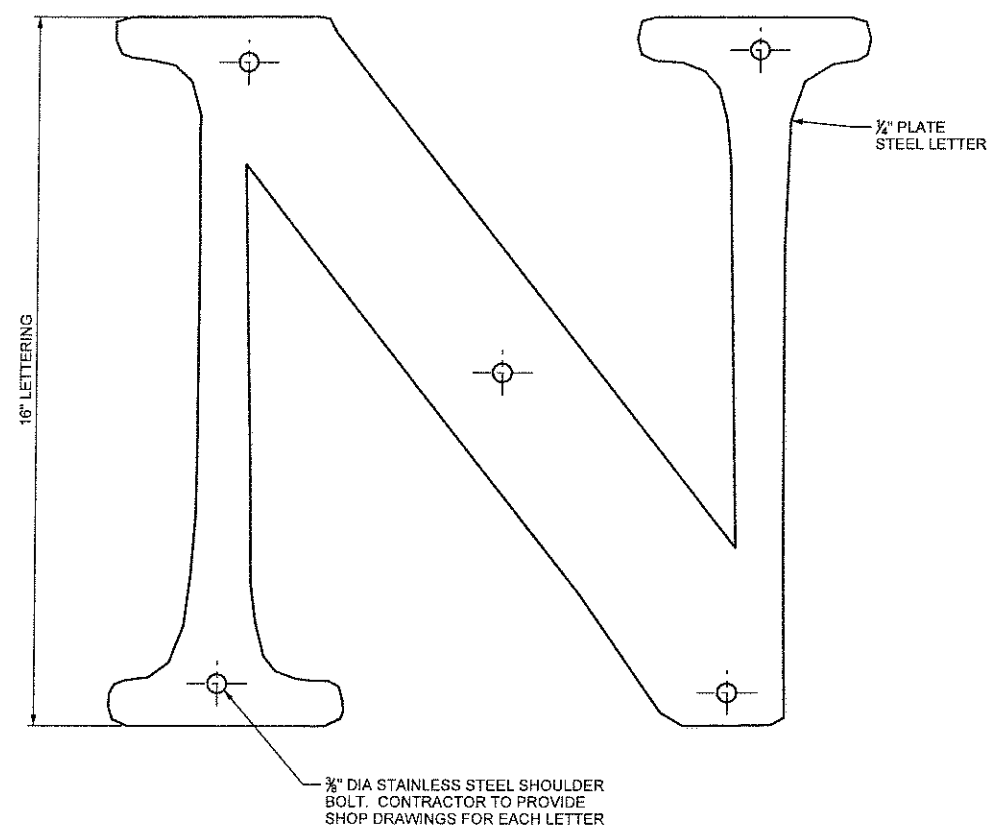
1. SEE PARAPET LAYOUT SHEETS FOR PARAPET DIMENSIONS, ELEVATIONS AND REINFORCEMENT DETAILS.
2. STAGGER ALL REINFORCING STEEL LAP SPLICES.
3. PROVIDE 2" MIN COVER TO REINFORCING STEEL UNLESS OTHERWISE NOTED.
4. EXTEND SEALANT AND FOAM BACKER ROD FROM DECK TO TOP OF PARAPET ON THE INSIDE AND OUTSIDE OF PARAPET FACE AND ACROSS TOP OF PARAPET.
5. PLACE NUMBER ON RIGHT APPROACH PARAPET AT BEGINNING OF BRIDGE LOOKING IN DIRECTION OF TRAFFIC FOR BOTH DIRECTIONS.
6. SEE "FENCE LAYOUT" SHEET FOR FENCE LAYOUT AND "FENCE DETAILS" SHEET FOR CONNECTIONS.
7. GALVANIZE ALL IRON AND HARDWARE
8. SEE UDOT STD DWG GW9 FOR DELINEATION HARDWARE AND STD DWG GW10 FOR DELINEATION SPACING.
9. FIELD CUT LONGITUDINAL #4 BARS TO AVOID LIGHT FIXTURES. FIELD BEND VERTICAL #4 BARS EXTENDING FROM DECK TO AVOID LIGHT FIXTURES.
10. ADJUST SPACING OF CONTRACTION JOINTS TO AVOID CONFLICT WITH PEDESTRIAN LIGHTS, IF NEEDED. PROVIDE 2" CLEAR FROM EDGE OF LIGHT TO $\frac{1}{2}$ CONTRACTION JOINT.

[illegible]



NOTES

1. PROVIDE TWO SIGNS EACH. SIGN PANELS WILL BE CENTERED OVER NB AND SB INTERSTATE 15 IN THE ULTIMATE ALIGNMENT CONFIGURATION.
2. ANY FIELD WELDING OR EXPOSED SURFACES OF CONNECTION BOLTS WILL BE PAINTED TO MATCH ADJACENT SURFACE - BLACK OR BEIGE.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CILYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
SIGN DETAILS

UTAH COUNTY
F-785
DRG. NO.

SHT. 62 OF 67

NO	DATE	BY	REVISIONS
1	07/07/09	SRH	RFC - NDC 32 - NEW SHEET

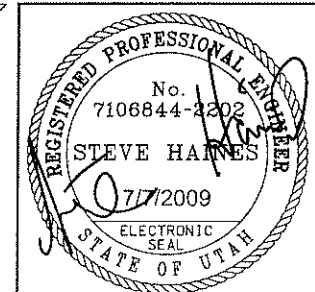
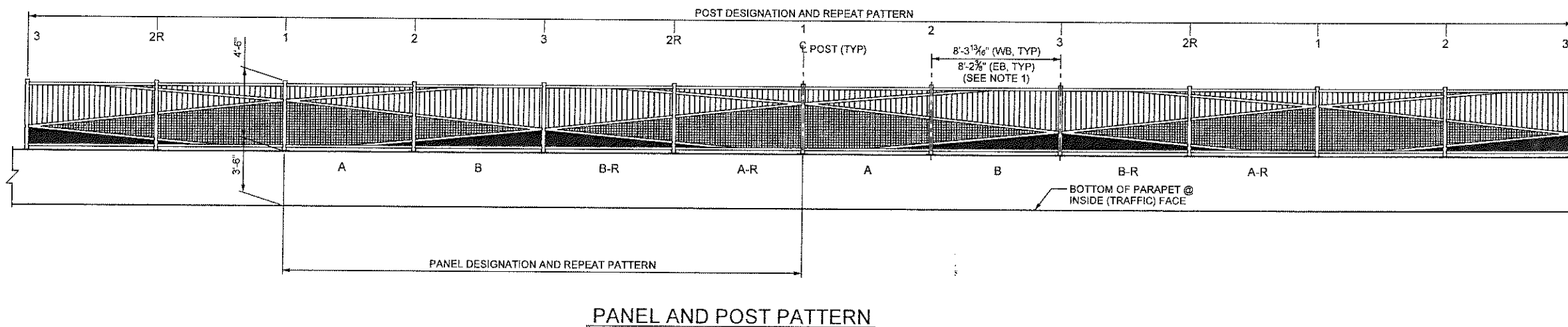
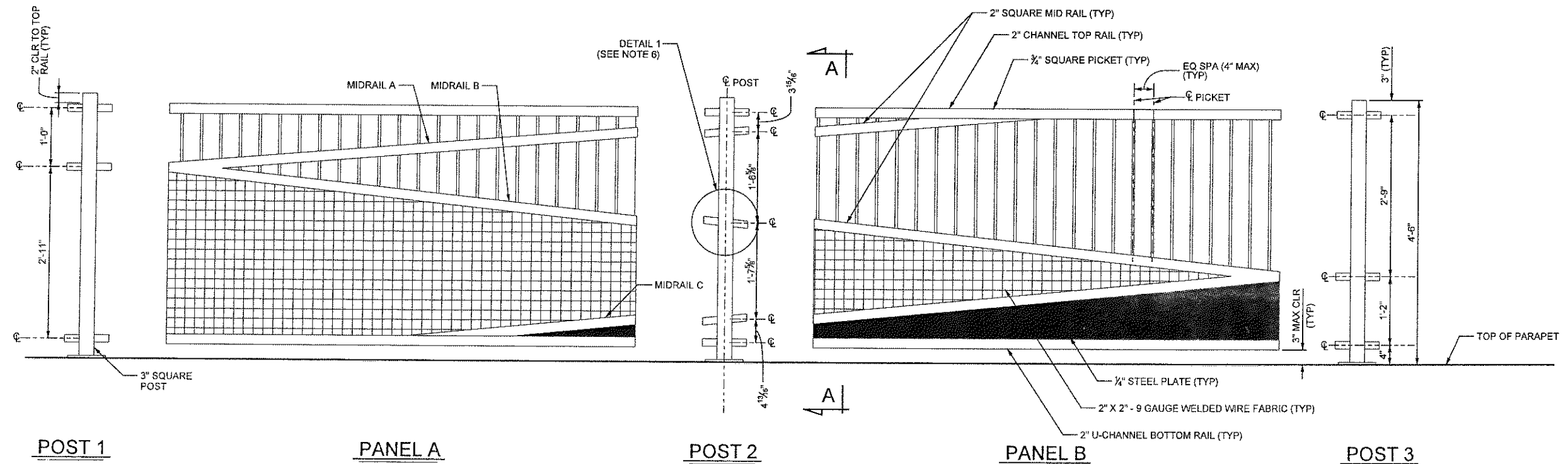
CHECK	CHK	DATE
CHECK	JKB	06/09
CHECK	JKB	06/09
CHECK	JKB	06/09

DESIGN	CHK	DATE
DESIGN	MMDSJ	06/09
DRAWN	JBS	06/09
QUANT	JKB	06/09

PROJECT NUMBER	STRUCTURE DESIGN NUMBER
S-R399(42) & S-R399(59)	

NOTES

1. FABRICATOR TO VERIFY MEASUREMENTS OF BRIDGE PARAPETS AND ADJUST FENCE LAYOUT AS NEEDED. SHOP DRAWINGS WILL BE PROVIDED SHOWING ALL DIMENSIONS AND ANGLES OF FENCE ELEMENTS.
2. ALL POSTS TO BE SET VERTICAL. TOP AND BOTTOM RAILS TO BE PARALLEL TO TOP OF PARAPET.
3. ALL FENCE COMPONENTS WILL BE PAINTED BLACK BY FABRICATOR WITH EPOXY PAINT. WELDS, CONNECTORS OR OTHER FIELD WORK RESULTING IN EXPOSED STEEL WILL BE TOUCHED UP WITH THE SAME PAINT.
4. SAMPLE PANELS OF A AND B WILL BE PROVIDED PRIOR TO FENCE PRODUCTION.
5. LOW POINTS OF ALL MID-RAILS WILL HAVE $\frac{1}{4}$ " DRILLED WEEP HOLE. SHOW LOCATIONS ON SHOP DRAWINGS.
6. FOR SECTIONS AND DETAILS, SEE "FENCE DETAILS" SHEET.
7. VERTICAL REBAR SPACING IN PARAPET MAY BE LOCALLY FIELD ADJUSTED IF IN CONFLICT WITH POST EMBEDMENT ASSEMBLY.
8. EQUIP ALL POSTS WITH A STEEL OR MALLEABLE IRON WEATHER-RESISTANT CAP, DESIGNED TO FIT SECURELY OVER THE POSTS AND CARRY AN APRON AROUND THE OUTSIDE OF THE POST. PAINT CAPS TO MATCH ALL OTHER FENCE COMPONENTS.



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/CLYDE

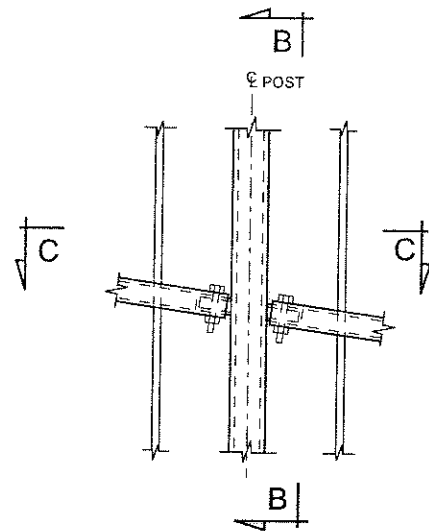
PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
FENCE LAYOUT

UTAH
COUNTY
F-785
DRG. NO.

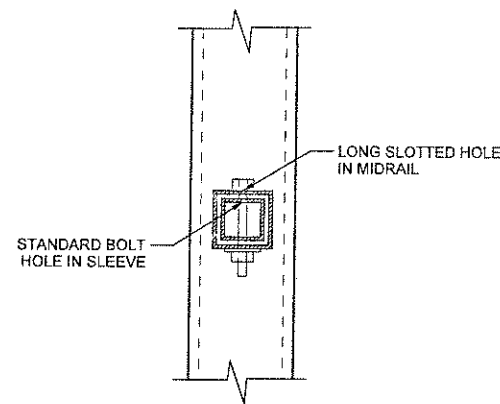
SHT. 63 OF 67

APPROVAL	RECOMM.	DATE	DESIGN	DATE	CHECK	DATE	NO.	BY	REVISIONS
APPROVED FOR USE	7/7/2009	7/7/2009	DESIGN DSJ/MM	06/09	CHECK JKB	06/09	1	07/07/09	SRH RFC - NDC 32 - NEW SHEET
STRUCTURE DESIGN MANAGER			DRAWN DSJ	06/09	CHECK JKB	06/09			

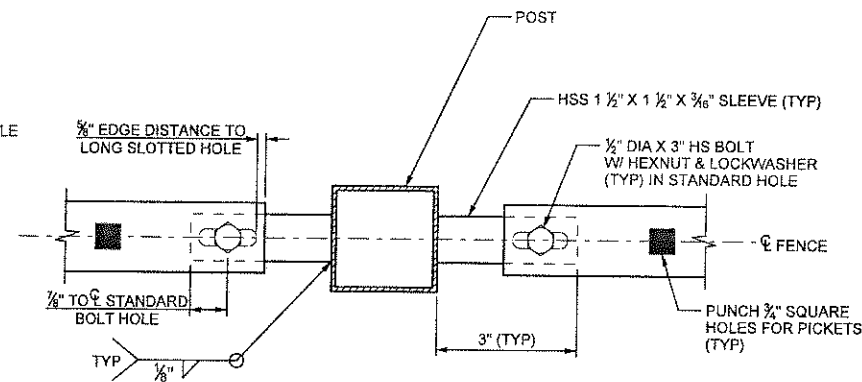
PROJECT NUMBER
S-R399(42) & S-R399(59)



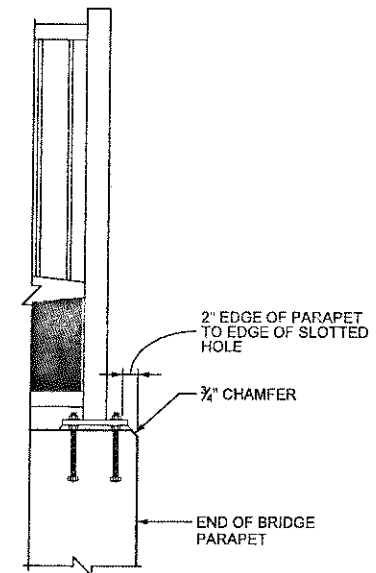
DETAIL 1



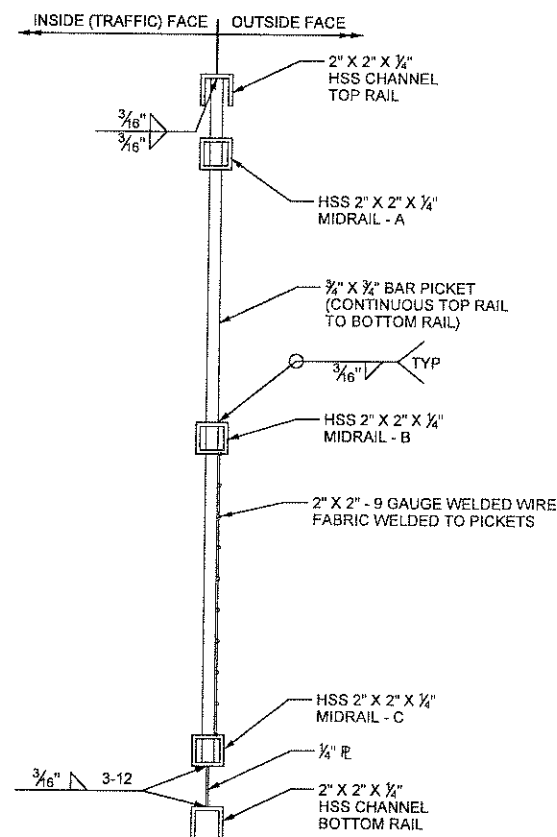
SECTION B-B



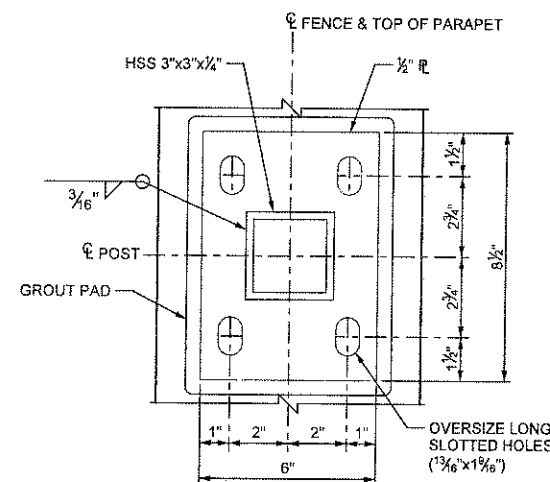
SECTION C-C



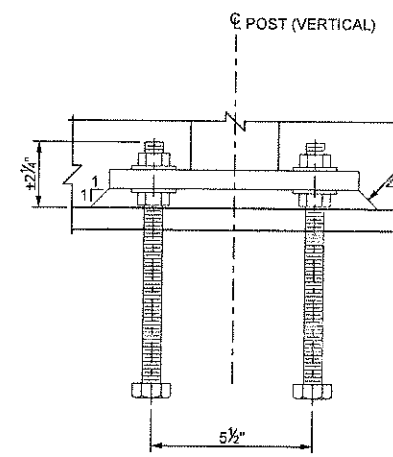
END POST DETAIL



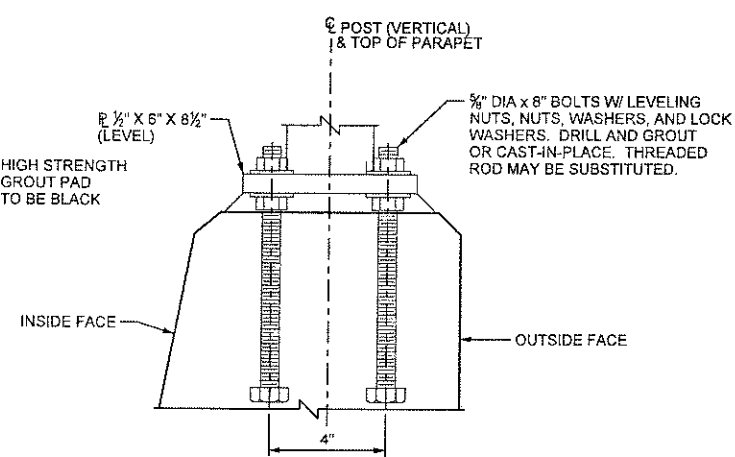
SECTION A-A



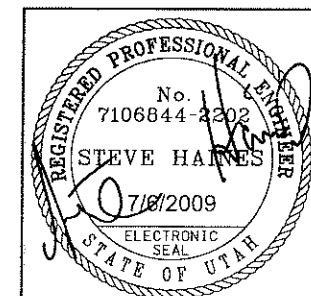
PLAN



ELEVATION
GROUT PAD / BOLT DETAIL



SECTION



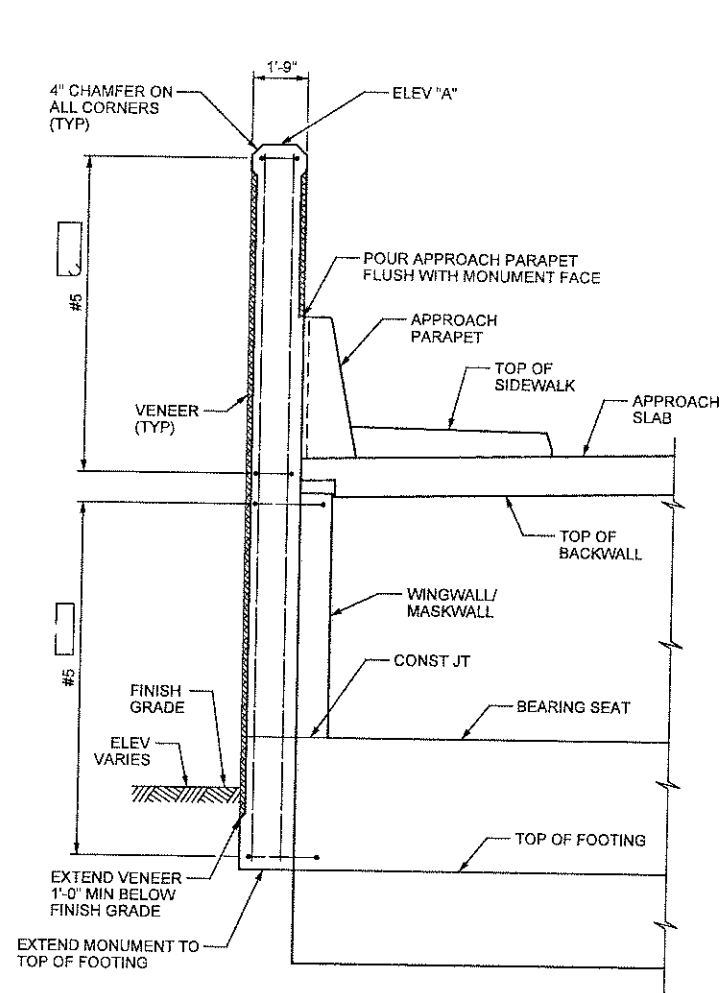
UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
KIEWIT/COLYDE

PIONEER CROSSING - SEGMENT 2
PIONEER CROSSING OVER I-15
FENCE DETAILS

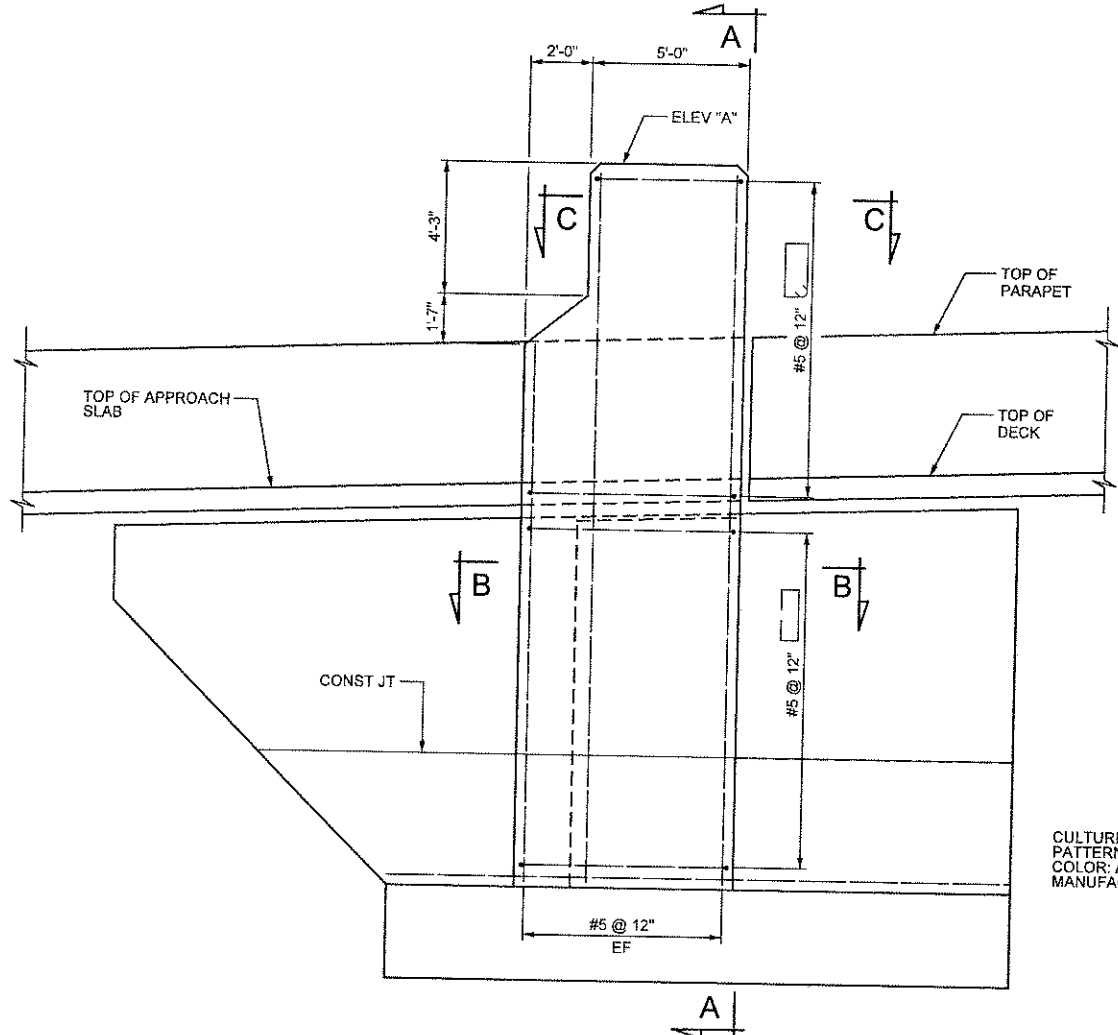
UTAH
COUNTY
F-785
DRG. NO.

SHT. 64 OF 67

NO.	DATE	BY	REVISIONS
1	07/07/09	SRH	RFC - NDC 32 - NEW SHEET
DESIGN	DS/JMM	06/09	CHECK JKB 06/09
DRAWN	DSL	06/09	CHECK JKB 06/09
APPROVED FOR USE	7/16/2009	DATE	STRUCTURE DESIGN MANAGER
APPROVAL	7/16/2009	DATE	SENIOR DESIGN ENGR
REVISION	7/16/2009	DATE	DATE
PROJECT NUMBER	S-R399(42) & S-R399(59)		



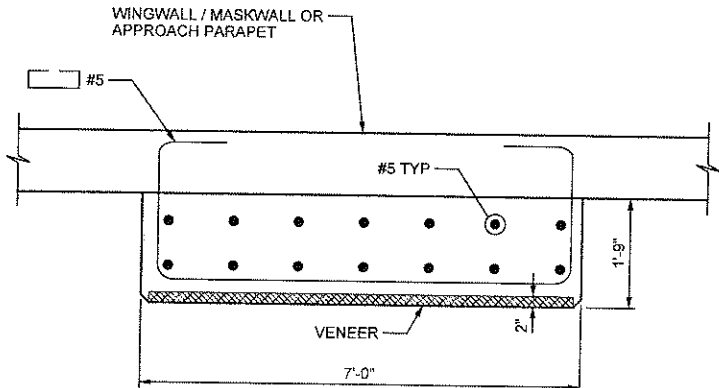
SECTION A-A



TYPICAL ELEVATION
FENCE AND GIRDER NOT SHOWN

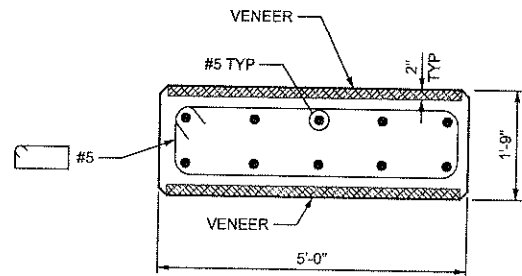
CULTURED STONE VENEER
PATTERN: SOUTHERN HACKETT
COLOR: ALMOND BLUFF
MANUFACTURER: KODIAK MOUNTAIN

LIMITS OF VENEER



SECTION B-B

WINGWALL AND PARAPET REINFORCEMENT
NOT SHOWN

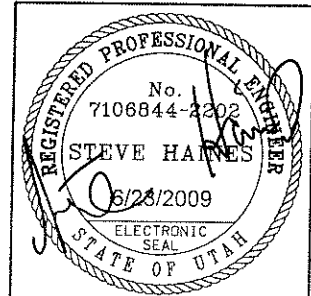


SECTION C-C

TOP OF MONUMENT ELEVATIONS	
WINGWALL	ELEV "A"
1-1	4579.21
1-5	4581.27
1-6	4582.77
1-10	4585.94
3-1	4588.14
3-5	4583.20
3-6	4581.65
3-10	4579.73

NOTES

1. SEE "MONUMENT DETAILS 2" SHEET FOR MONUMENTS
AT WINGWALL 1-1 AND WINGWALL 3-10.



UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH KIEWIT/CPLYDE		DESIGN DLS 03/09	CHECK VTG 05/09	REVISIONS
PIONEER CROSSING - SEGMENT 2		DRAWN OR 03/09	CHECK VTG 05/09	
PIONEER CROSSING OVER 1-15		DATE 05/15/09	BY SRH	
MONUMENT DETAILS 1		NO.	DATE	
PROJECT NUMBER S-R399(42) & S-R399(59)		QUANT.	CHECK	
UTAH COUNTY				
F-785				
DRG. NO.				
SHT. 65 OF 67				

MONUMENT AT
WINGWALL 1-1

MONUMENT AT
WINGWALL 3-10

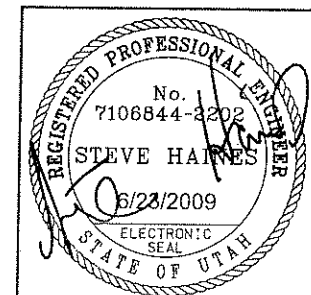
SECTION A-A

VIEW B-B

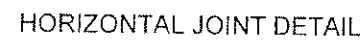
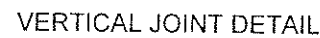
SECTION D-D

NOTES

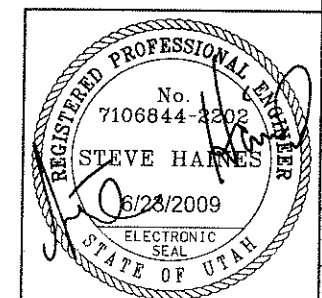
1. SEE "MONUMENT DETAILS 1" SHEET FOR ELEV "A",
SECTION C-C AND LIMITS OF VENEER.



PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION												
PIONEER CROSSING OVER 1-15		SALT LAKE CITY, UTAH												
MONUMENT DETAILS 2		KIEWIT/CLYDE												
PROJECT NUMBER	S-R399(42) & S-R399(59)	APPROVAL	DESIGN	DLS	05/09	CHECK	VTG	05/09	1	05/15/09	SRH	RFC SUBMITTAL	REMARKS	REVISIONS
		RECOMM.	DATE	BENCH DESIGN ENGR.	DRAWN	MLS	05/09	CHECK						
		FOR USE	DATE	STRUCTURE DESIGN MANAGER		QUANT.		CHECK						
		6/23/2008												



1. LOCATION OF THE TOE OF SLOPE IS APPROXIMATE ONLY AND SHALL BE MODIFIED TO MEET FIELD CONDITIONS AS DIRECTED BY THE PROJECT ENGINEER.
2. CUT-OFF-WALL IS CONTINUOUS AROUND PERIMETER OF SLOPE PROTECTION EXCEPT AT THE ABUTMENT FOOTING AND THE MSE RETAINING WALL.
3. USE CLASS A (AE) CONCRETE FOR ALL SLOPE PROTECTION.
4. SEE GRADING PLANS FOR SLOPES AND ELEVATIONS.



PIONEER CROSSING - SEGMENT 2		UTAH DEPARTMENT OF TRANSPORTATION					
PIONEER CROSSING OVER I-15		SALT LAKE CITY, UTAH KIEWIT/CLYDE					
CONCRETE SLOPE PROTECTION		DESIGN DLS 03/09		CHECK BJB 05/09			
PROJECT NUMBER S-R399(42) & S-R399(59)		DRAWN MLS 03/09		CHECK BJB 05/09		1	
		QUANT.		CHECK		NO. BY DATE	
		APPROVAL RECORD: 8/23/2009 DATE		APPROVED FOR USE: 8/23/2009 DATE		REMARKS	
		SENIOR DESIGN ENGR. [Signature]		STRUCTURE DESIGN MANAGER [Signature]		REVISONS	
UTAH COUNTY F-785 DRG. NO.							