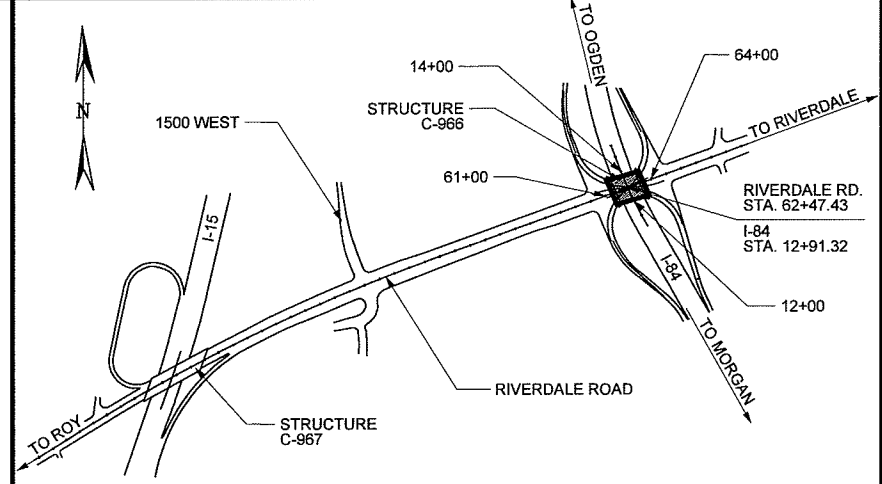


| BRIDGE LOAD RATING | | |
|--------------------|--------|--------------------|
| HL-93 | | |
| | RATING | LOCATION |
| INV. | 1.006 | 37.88' F SERV II |
| OPER. | 1.308 | 37.88' F SERV II A |

F DENOTES RATING CONTROLLED BY FLEXURE,
S DENOTES RATING CONTROLLED BY SHEAR
Mr AT 37.88' = 2729 k-ft,
Vr AT 0.00' = 307 kips



LOCATION PLAN

GENERAL NOTES:

- USE COATED DEFORMED-BILLET REINFORCING STEEL BARS CONFORMING TO AASHTO M284 OR M111 AND M31 GRADE 60 RESPECTIVELY.
- CHAMFER ALL EXPOSED CONCRETE CORNERS 3/4" EXCEPT WHERE NOTED OTHERWISE.
- USE STRUCTURAL STEEL CONFORMING TO AASHTO M270 GRADE 50 EXCEPT WHERE NOTED OTHERWISE. 3/4" EXCEPT WHERE NOTED OTHERWISE.
- PROVIDE 2" CONCRETE COVER TO REINFORCING STEEL EXCEPT WHERE NOTED OTHERWISE.
- USE CLASS AA(AE) CAST-IN-PLACE CONCRETE EXCEPT WHERE NOTED OTHERWISE.
- REMOVE EXISTING STRUCTURES A MINIMUM OF 2' BELOW FINISHED GRADE.

DESIGN DATA

HL-93 LOADING IN ACCORDANCE WITH CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND INTERIMS. SEISMIC DESIGN IN ACCORDANCE WITH MCEER/ATC 49.

CAST-IN-PLACE AND PRECAST APPROACH SLAB CONCRETE: CLASS AA (AE) $f_c = 4$ KSI; f_y (REINF.) = 60 KSI; $n = 8$

ALL OTHER CAST-IN-PLACE AND PRECAST CONCRETE: CLASS AA (AE) $f_c = 5$ KSI; f_y (REINF.) = 60 KSI; $n = 7$

STRUCTURAL STEEL: $f_y = 50$ KSI

SACRIFICIAL WEARING SURFACE: 1/2" CONCRETE, ADDITIONAL 1/4" ASSUMED FOR GRINDING

FUTURE WEARING SURFACE: 35 PSF

DESIGN SPEED: 75 M.P.H. (I-84) 50 M.P.H. (RIVERDALE ROAD)

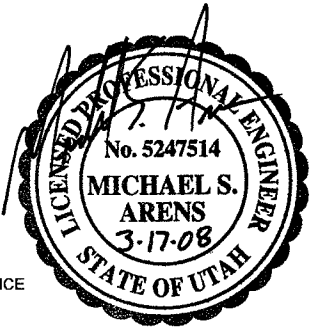
SEISMIC: SEISMIC DESIGN PARAMETERS (2% PE IN 50 YR.) $PGA = 0.54$
 $S_s = \text{MAX. CONSIDERED EQ GROUND MOTION AT } 0.2s = 1.24g$
 $S_1 = \text{MAX. CONSIDERED EQ GROUND MOTION AT } 1.0s = 0.53g$
 SITE CLASS D, $SHL = IV$, $SDR = 4$.

INDEX OF SHEETS

- | | |
|---------------------------------|----------------------------------|
| 1. SITUATION AND LAYOUT 1 OF 2 | 21. DECK PLAN |
| 2. SITUATION AND LAYOUT 2 OF 2 | 22. DECK DETAILS 1 OF 3 |
| 3. PHASING PLAN | 23. DECK DETAILS 2 OF 3 |
| 4. SOIL DATA SHEET 1 OF 3 | 24. DECK DETAILS 3 OF 3 |
| 5. SOIL DATA SHEET 2 OF 3 | 25. UTILITY DETAILS |
| 6. SOIL DATA SHEET 3 OF 3 | 26. END DIAPHRAGM DETAILS |
| 7. FOUNDATION PLAN | 27. SCREED ELEVATIONS |
| 8. PILE DETAILS | 28. APPROACH SLAB DETAILS 1 OF 3 |
| 9. ABUTMENT DETAILS 1 OF 4 | 29. APPROACH SLAB DETAILS 2 OF 3 |
| 10. ABUTMENT DETAILS 2 OF 4 | 30. APPROACH SLAB DETAILS 3 OF 3 |
| 11. ABUTMENT DETAILS 3 OF 4 | 31. APPROACH SLAB DRAIN DETAILS |
| 12. ABUTMENT DETAILS 4 OF 4 | 32. PARAPET DETAILS |
| 13. BENT #2 PLAN AND ELEVATION | 33. PARAPET END DETAILS |
| 14. BENT #2 DETAILS 1 OF 2 | 34. OVERHEAD SIGNAL 1 OF 2 |
| 15. BENT #2 DETAILS 2 OF 2 | 35. OVERHEAD SIGNAL 2 OF 2 |
| 16. STEEL GIRDER DETAILS 1 OF 2 | 36. REINFORCING SCHEDULE 1 OF 4 |
| 17. STEEL GIRDER DETAILS 2 OF 2 | 37. REINFORCING SCHEDULE 2 OF 4 |
| 18. ABUTMENT BEARING DETAILS | 38. REINFORCING SCHEDULE 3 OF 4 |
| 19. BENT BEARING DETAILS | 39. REINFORCING SCHEDULE 4 OF 4 |
| 20. FRAMING PLAN | |

QUANTITIES

| ITEM | ESTIM. | UNIT | AS CONST. |
|--|---------|------|-----------|
| REMOVE BRIDGE | 1 | LUMP | |
| DRIVEN PILES (HP 14X102) | 9,584 | LF | |
| STRUCTURAL CONCRETE (EST. QTY. 1955 CY) | 1 | LUMP | |
| STRUCTURAL STEEL (EST. QTY 719,444 LBS) | 1 | LUMP | |
| REINFORCING STEEL-COATED (PLAN QUANTITY) | 499,401 | LBS | |
| PRECAST DECK PANELS | 1 | LUMP | |
| OVERHEAD SIGNAL STRUCTURE | 1 | LUMP | |
| TYPE I POLYMER OVERLAY | 32,810 | SF | |
| 5' CHAINLINK FENCE (TYPE I) | 384 | LF | |
| STRUCTURE MURALS | 1 | LUMP | |



UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
STRUCTURES DIVISION

PREPARED BY: MICHAEL BAKER JR. INC.

RIVERDALE ROAD, I-15 TO WASHINGTON BLVD
RIVERDALE ROAD OVER I-84
SITUATION AND LAYOUT 1 OF 2

PROJECT NUMBER: SP-0026(4)0

| | | | | | |
|--------|-----|-------|-------|-----|-------|
| DESIGN | MSA | 02/08 | CHECK | JK | 02/08 |
| DRAWN | AA | 02/08 | CHECK | JK | 02/08 |
| QUANT. | JK | 03/08 | CHECK | MSA | 03/08 |

DATE: 3/17/08

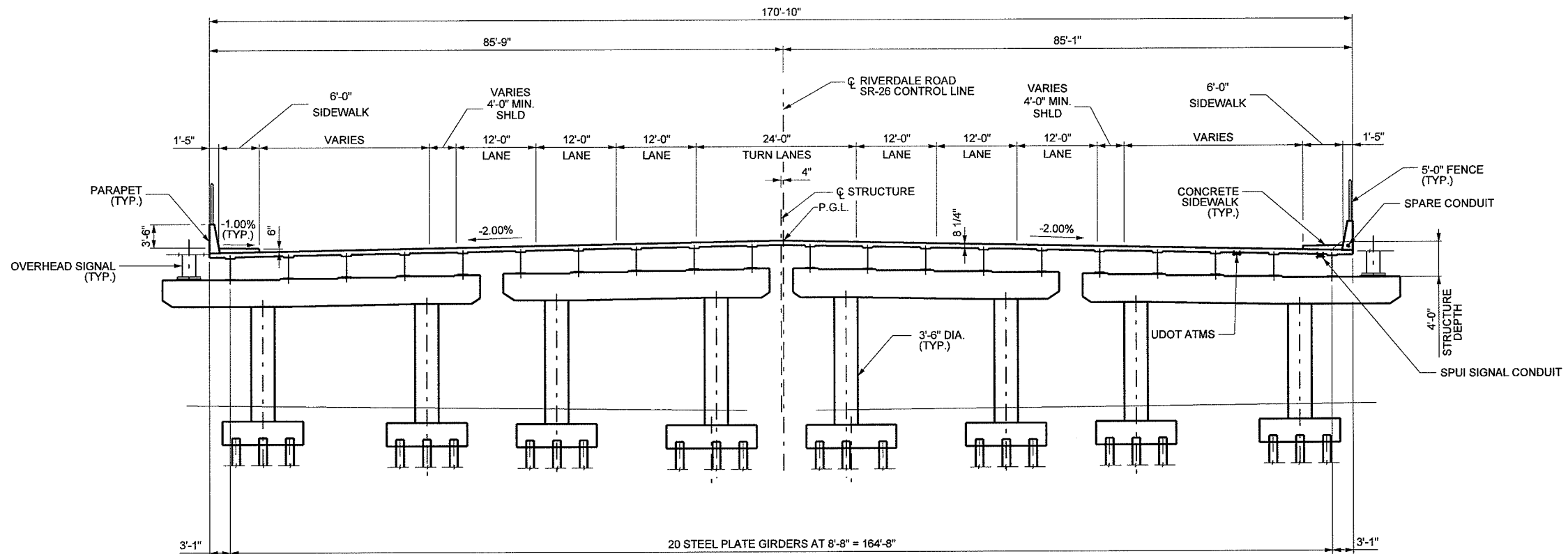
APPROVED FOR SUBMITTAL: [Signature]

DATE: 3/17/08

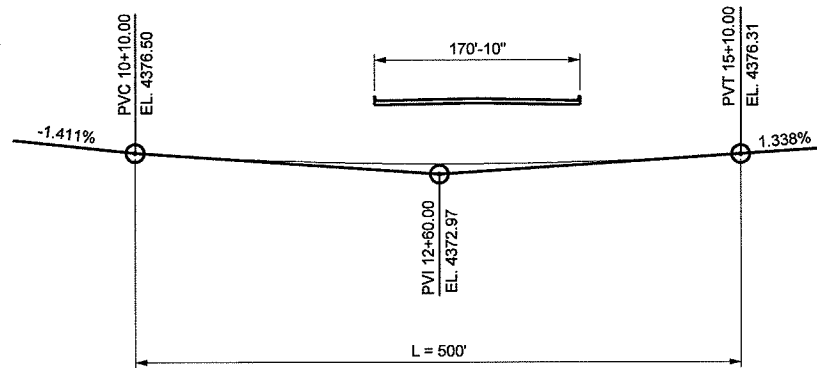
REVISIONS:

| NO. | DATE | BY | REMARKS |
|-----|------|----|---------|
| | | | |

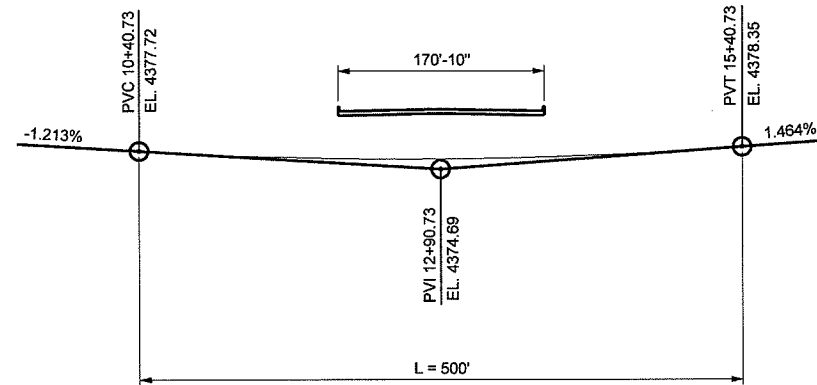
SHT. 1 OF 39



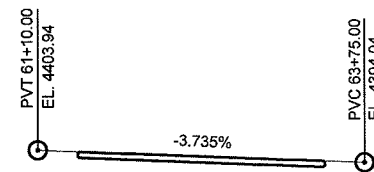
SECTION THRU STRUCTURE



I-84 NB PROFILE
(FROM SURVEY)



I-84 SB PROFILE
(FROM SURVEY)



RIVERDALE ROAD PROFILE

| I-84 SUPERELEVATION DATA | | |
|--------------------------|--------|-------|
| STATION | NB | SB |
| 11+75.00 | -3.57% | 4.86% |
| 12+91.00 | -4.49% | 4.78% |
| 14+00.00 | -4.98% | 4.84% |



I-84
CURVE DATA

$\Delta=10^{\circ}24'05''$ RT
R=2865.00
T=260.773
L=520.113
PI=12+81.08
N=307002.551
E=1859832.864

A3
CURVE DATA

$\Delta=27^{\circ}28'46''$ RT
R=520.00
T=127.14
L=249.40
PI=16+55.12
N=307036.0602
E=1859843.1187

B2
CURVE DATA

$\Delta=33^{\circ}42'24''$ LT
R=600.00
T=181.76
L=352.97
PI=12+42.57
N=307034.0217
E=1859782.5867

C1
CURVE DATA

$\Delta=32^{\circ}44'03''$ RT
R=600.00
T=176.21
L=342.79
PI=6+76.21
N=307003.7416
E=1859896.4570

D1
CURVE DATA

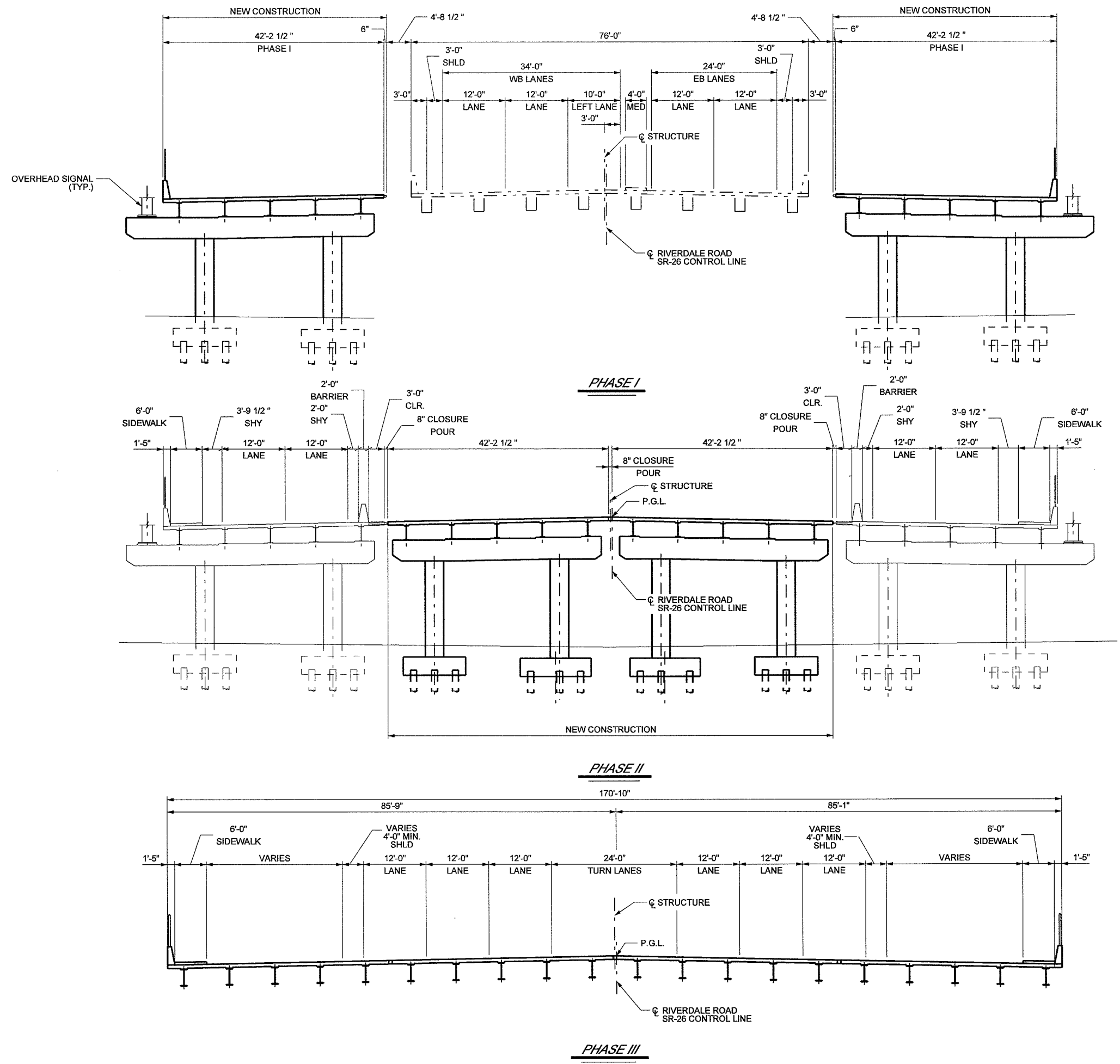
$\Delta=24^{\circ}23'44''$ LT
R=520.00
T=112.41
L=221.41
PI=6+12.4066
N=306993.5051
E=1859818.5676

D2
CURVE DATA

$\Delta=81^{\circ}22'31''$ LT
R=280.00
T=240.73
L=397.67
PI=9+62.14
N=307262.7105
E=1860047.1195

| | |
|--|--|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR. INC. |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD | DESIGN: MSA 02/08 |
| RIVERDALE ROAD OVER I-84 | CHECK: JIK 02/08 |
| SITUATION AND LAYOUT 2 OF 2 | DRAWN: AA 02/08 |
| PROJECT NUMBER: SP-0026-(4)0 | CHECK: JIK 02/08 |
| WEBER COUNTY | DATE: 02/08 |
| C-966 | BY: [Signature] |
| DRG. NO. | REVISIONS |
| SHT. 2 OF 39 | NO. DATE |

DGN File: P:\P\dmx01856\2495.c-966-03_Phasann_Plan.dgn 17-MAR-2008



| | | | | | |
|--|--|----------------|--|------------------------|--|
| UTAH DEPARTMENT OF TRANSPORTATION | | PREPARED BY: | | MICHAEL BAKER JR. INC. | |
| SALT LAKE CITY, UTAH | | DESIGN MSA | | 02/08 | |
| STRUCTURES DIVISION | | CHECK JK | | 02/08 | |
| DRAWN AA | | CHECK JK | | 02/08 | |
| DATE 3-17-08 | | QUANT. | | BY | |
| APPROVAL FOR USE | | DATE 3-17-08 | | DATE | |
| BY MICHAEL S. ARENS | | DATE 3-17-08 | | REVISIONS | |
| PROJECT NUMBER SP-0026(4)0 | | DRG. NO. C-966 | | REMARKS | |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. | | COUNTY WEBER | | NO. | |
| RIVERDALE ROAD OVER I-84 | | DRG. NO. C-966 | | DATE | |
| PHASING PLAN | | SHT. 3 | | OF 39 | |

LOG OF BORING NO. B-01 Page 1 of 2

| | | | | | | | | |
|--|------------|---------------------------|--------|---------------|------------------------------------|------------------|----------------------|-------|
| CLIENT Michael Baker Jr. | | PROJECT Riverdale Road | | | | | | |
| SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | PROJECT Riverdale Road | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | TESTS | | | | |
| | | USCS Soil Symbol | NUMBER | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER |
| Boring Location: South side of Riverdale Rd. East of I-84 Approximate Surface Elevation: 4377.7 ft DESCRIPTION 0.2 TOPSOIL: sand with gravel, brown GRAVEL (GP-GM): with sand, dense, brown-orange 15 CLAYEY GRAVEL (GC): dense, brown 20 LEAN CLAY (CL): with gravel, very stiff, brown with black mottling 30 CLAYEY SAND (SC): very dense, brown with orange and black mottling 35 SAND (SP-SM): with gravel, dense, gray 40 CLAYEY SAND (SC): dense, gray with orange and black mottling Continued Next Page | 1 | | | | | | | |
| | 2 | | | | | | | |
| | 3 | | | | | | | |
| | 4 | | | | | | | |
| | 5 | 1 | SS | 4 | 31 | | | |
| | 6 | | | | | | | |
| | 7 | | | | | | | |
| | 8 | | | | | | | |
| | 9 | | | | | | | |
| | 10 | 2 | SS | 5 | 33 | | | |
| | 11 | | | | | | | |
| | 12 | | | | | | | |
| | 13 | | | | | | | |
| | 14 | | | | | | | |
| | 15 | 3 | SS | 5 | 46 | | | |
| | 16 | | | | | | | |
| | 17 | | | | | | | |
| | 18 | | | | | | | |
| | 19 | | | | | | | |
| | 20 | 4 | SS | 6 | 23 | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | 5 | SS | 16 | 22 | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | 6 | SS | 8 | 51 | | | | |
| 31 | | | | | | | | |
| 32 | | | | | | | | |
| 33 | | | | | | | | |
| 34 | | | | | | | | |
| 35 | 7 | SS | 8 | 50 | 21 | | | |
| 36 | | | | | | | | |
| 37 | | | | | | | | |
| 38 | | | | | | | | |
| 39 | | | | | | | | |
| 40 | 8 | SS | 8 | 42 | | | | |
| 41 | | | | | | | | |
| 42 | | | | | | | | |

LOG OF BORING NO. B-01 Page 2 of 2

| | | | | | | | |
|--|------------|---------------------------|--------|---------------|------------------------------------|------------------|----------------------|
| CLIENT Michael Baker Jr. | | PROJECT Riverdale Road | | | | | |
| SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | PROJECT Riverdale Road | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | TESTS | | | |
| | | USCS Soil Symbol | NUMBER | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| CLAYEY SAND (SC): dense, gray with orange and black mottling 55 LEAN CLAY (CL): very stiff, brown and gray 65 CLAYEY SAND (SC): medium dense, gray 70 SANDY CLAY (CL): hard, gray 81.5 BOTTOM OF BORING AT APPROXIMATELY 81.5 FEET | 43 | | | | | | |
| | 44 | | | | | | |
| | 45 | 9 | SS | 8 | 45 | 19 | |
| | 46 | | | | | | |
| | 47 | | | | | | |
| | 48 | | | | | | |
| | 49 | | | | | | |
| | 50 | 10 | SS | 10 | 39 | | |
| | 51 | | | | | | |
| | 52 | | | | | | |
| | 53 | | | | | | |
| | 54 | | | | | | |
| | 55 | 11 | SS | 14 | 14 | 26 | |
| | 56 | | | | | | |
| | 57 | | | | | | |
| | 58 | | | | | | |
| | 59 | | | | | | |
| | 60 | 12 | SS | 12 | 13 | | |
| | 61 | | | | | | |
| | 62 | | | | | | |
| 63 | | | | | | | |
| 64 | | | | | | | |
| 65 | 13 | SS | 8 | 27 | | | |
| 66 | | | | | | | |
| 67 | | | | | | | |
| 68 | | | | | | | |
| 69 | | | | | | | |
| 70 | 14 | SS | 10 | 26 | | | |
| 71 | | | | | | | |
| 72 | | | | | | | |
| 73 | | | | | | | |
| 74 | | | | | | | |
| 75 | 15 | SS | 12 | 60 | 21 | | |
| 76 | | | | | | | |
| 77 | | | | | | | |
| 78 | | | | | | | |
| 79 | | | | | | | |
| 80 | 16 | SS | 10 | 24 | | | |
| 81 | | | | | | | |

LOG OF BORING NO. B-05 Page 1 of 3

| | | | | | | | | |
|--|------------|---------------------------|--------|---------------|------------------------------------|------------------|----------------------|-------|
| CLIENT Michael Baker Jr. | | PROJECT Riverdale Road | | | | | | |
| SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | PROJECT Riverdale Road | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | TESTS | | | | |
| | | USCS Soil Symbol | NUMBER | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER |
| Boring Location: North side of Riverdale Rd. East of I-84 Approximate Surface Elevation: 4377.8 ft DESCRIPTION 0.4 TOPSOIL: sand, light brown CLAYEY SAND (SC): medium dense, brown 10 GRAVEL (GP-GM): with sand, dense, brown 20 SILTY SAND (SM): medium dense to very dense, brown with orange mottling and organics 4377.4 4367.8 4357.8 WL | 1 | | | | | | | |
| | 2 | | | | | | | |
| | 3 | | | | | | | |
| | 4 | | | | | | | |
| | 5 | | | | | | | |
| | 6 | 1 | SS | 12 | 13 | 8 | | |
| | 7 | | | | | | | |
| | 8 | | | | | | | |
| | 9 | | | | | | | |
| | 10 | 2 | SS | 6 | 34 | | | |
| | 11 | | | | | | | |
| | 12 | | | | | | | |
| | 13 | | | | | | | |
| | 14 | | | | | | | |
| | 15 | 3 | SS | 4 | 35 | 12 | | |
| | 16 | | | | | | | |
| | 17 | | | | | | | |
| | 18 | | | | | | | |
| | 19 | | | | | | | |
| | 20 | 4 | SS | 8 | 15 | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | 5 | SS | 8 | 19 | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | 6 | SS | 10 | 42 | 20 | | | |
| 31 | | | | | | | | |
| 32 | | | | | | | | |
| 33 | | | | | | | | |
| 34 | | | | | | | | |
| 35 | 7 | SS | 8 | 45 | | | | |
| 36 | | | | | | | | |
| 37 | | | | | | | | |
| 38 | | | | | | | | |
| 39 | | | | | | | | |
| 40 | 8 | SS | 8 | 27 | | | | |
| 41 | | | | | | | | |
| 42 | | | | | | | | |

LOG OF BORING NO. B-05 Page 2 of 3

| | | | | | | | |
|---|------------|---------------------------|--------|---------------|------------------------------------|------------------|----------------------|
| CLIENT Michael Baker Jr. | | PROJECT Riverdale Road | | | | | |
| SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | PROJECT Riverdale Road | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | TESTS | | | |
| | | USCS Soil Symbol | NUMBER | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| SILTY SAND (SM): medium dense to very dense, brown with orange mottling and organics 63 SANDY CLAY (CL): very stiff to hard, brown with orange mottling and red and black lenses 4314.8 4294.8 | 43 | | | | | | |
| | 44 | | | | | | |
| | 45 | 9 | SS | 8 | 37 | | |
| | 46 | | | | | | |
| | 47 | | | | | | |
| | 48 | | | | | | |
| | 49 | | | | | | |
| | 50 | 10 | SS | 10 | 60 | 15 | |
| | 51 | | | | | | |
| | 52 | | | | | | |
| | 53 | | | | | | |
| | 54 | | | | | | |
| | 55 | 11 | SS | 10 | 51 | | |
| | 56 | | | | | | |
| | 57 | | | | | | |
| | 58 | | | | | | |
| | 59 | | | | | | |
| | 60 | 12 | SS | 8 | 50 | | |
| | 61 | | | | | | |
| | 62 | | | | | | |
| 63 | 13 | SS | 12 | 25 | 22 | | |
| 64 | | | | | | | |
| 65 | | | | | | | |
| 66 | | | | | | | |
| 67 | | | | | | | |
| 68 | | | | | | | |
| 69 | | | | | | | |
| 70 | 14 | SS | 16 | 23 | | | |
| 71 | | | | | | | |
| 72 | | | | | | | |
| 73 | | | | | | | |
| 74 | | | | | | | |
| 75 | 15 | SS | 10 | 32 | | | |
| 76 | | | | | | | |
| 77 | | | | | | | |
| 78 | | | | | | | |
| 79 | | | | | | | |
| 80 | 16 | SS | 12 | 37 | 25 | | |
| 81 | | | | | | | |
| 82 | | | | | | | |
| 83 | | | | | | | |
| 84 | | | | | | | |

KEY TO BORING LOG

| | |
|---|---|
| <p>CONSISTENCY (PLASTIC - SILT & CLAY)</p> <p>SOFT 2-3 MEDIUM STIFF 4-6 STIFF 7-12 VERY STIFF 13-26 HARD 26+</p> | <p>RELATIVE DENSITY (NON-PLASTIC - SAND & SILT)</p> <p>VERY LOOSE 0-3 LOOSE 4-9 MED DENSE 10-29 DENSE 30-49 VERY DENSE 50+</p> |
|---|---|

GENERAL NOTES:

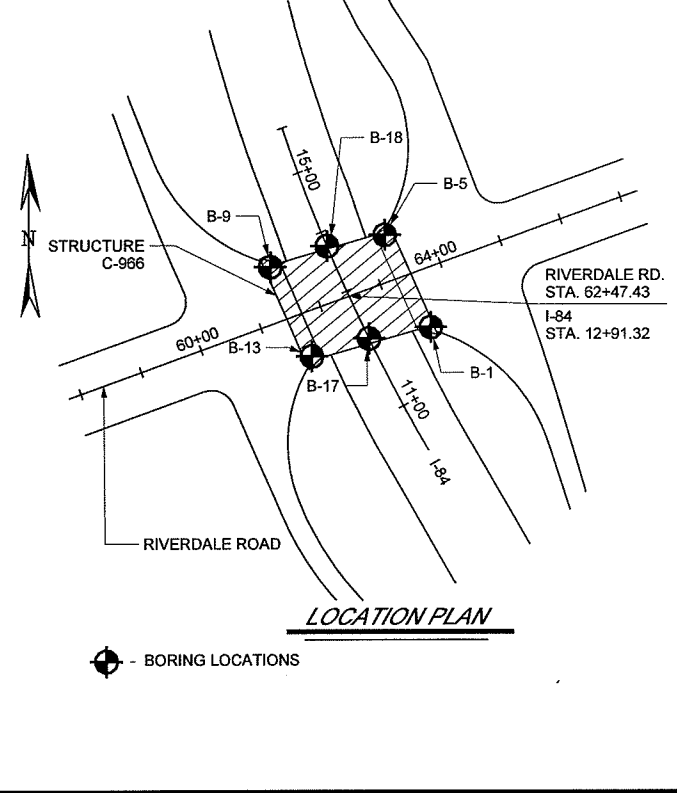
- THESE BORING LOGS REPRESENT A SYNOPSIS OF THE SOIL DEPOSITS ENCOUNTERED WITHIN EACH BORING AND ARE BASED ON SOUND GEOLOGICAL AND ENGINEERING JUDGMENT. BECAUSE SOIL IS A COMPLEX MEDIUM, THESE BORING LOGS MAY OR MAY NOT REPRESENT THE SOIL CONDITIONS AT THIS SITE. THIS SUBSURFACE INTERPRETATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION AND JUDGEMENT OF THE CONTRACTOR.
- THE WATER LEVELS AND CONDITIONS INDICATED ON THE BORING LOGS REPRESENT HOLE CONDITIONS ON THE DATE SHOWN, HOWEVER, IT SHOULD BE NOTED, THAT AT LOCATIONS AWAY FROM THE BORINGS OR AT ANOTHER TIME THE WATER LEVELS AND CONDITIONS MAY VARY SIGNIFICANTLY.
- THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.
- COBBLE - A ROCK WITH AN AVERAGE DIMENSION BETWEEN 3 INCHES AND 12 INCHES
- BOULDER - A ROCK WITH AN AVERAGE DIMENSION OF 12 INCHES OR GREATER

NOTE: DRILL RIG USED - CME 55 HAMMER E=0.76

REGISTERED PROFESSIONAL ENGINEER
No. 313118
RICK L. CHESNUT
CIVIL
STATE OF UTAH
GEOTECHNICAL ENGINEER

LOG OF BORING NO. B-05 Page 3 of 3

| | | | | | | | |
|--|------------|---------------------------|--------|---------------|------------------------------------|------------------|----------------------|
| CLIENT Michael Baker Jr. | | PROJECT Riverdale Road | | | | | |
| SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | PROJECT Riverdale Road | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | TESTS | | | |
| | | USCS Soil Symbol | NUMBER | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| CLAYEY SAND (SC): very dense, brown with red and black lenses 91.5 BOTTOM OF BORING AT APPROXIMATELY 91.5 FEET | 85 | | | | | | |
| | 86 | | | | | | |
| | 87 | | | | | | |
| | 88 | | | | | | |
| | 89 | | | | | | |
| | 90 | 17 | SS | 10 | 50/4 | | |
| | 91 | | | | | | |
| | 92 | | | | | | |
| | 93 | | | | | | |
| | 94 | | | | | | |
| | 95 | | | | | | |
| | 96 | | | | | | |
| | 97 | | | | | | |
| | 98 | | | | | | |
| | 99 | | | | | | |
| | 100 | 18 | SS | 8 | 50/4 | | |
| | 101 | | | | | | |
| | 102 | | | | | | |



| | |
|--|---|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | |
| PREPARED BY: MICHAEL BAKER JR. INC. | CHECK C/JT 02/08 CHECK R/LC 02/08 CHECK |
| DESIGN R/LC 02/08 DRAWN G/K 02/08 QUANT. | DATE 2/08 DATE 2/08 DATE |
| APPROVAL RECOMM. DATE 2/08 FOR USE BY UDOT | APPROVED BY: [Signature] UDOT BRIDGE ENGR.</ |

17-MAR-2008 10:00 AM D:\Projects\01558\2495_C-966-03-Soil Data Sheet 2 of 3.dgn

LOG OF BORING NO. B-09 Page 1 of 3

CLIENT Michael Baker Jr.

SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah

PROJECT Riverdale Road

Boring Location: North side west abutment I-84
Approximate Surface Elevation: 4373.1 ft

| DEPTH, ft. | USCS Soil Symbol | SAMPLES | | | TESTS | | |
|------------|------------------|---------|------|---------------|------------------------------------|------------------|----------------------|
| | | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| 0.4 | | | | | | | |
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LOG OF BORING NO. B-09 Page 2 of 3

CLIENT Michael Baker Jr.

SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah

PROJECT Riverdale Road

| DEPTH, ft. | USCS Soil Symbol | SAMPLES | | | TESTS | | |
|------------|------------------|---------|------|---------------|------------------------------------|------------------|----------------------|
| | | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| 43 | | | | | | | |
| 44 | | | | | | | |
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Continued Next Page

LOG OF BORING NO. B-09 Page 3 of 3

CLIENT Michael Baker Jr.

SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah

PROJECT Riverdale Road

| DEPTH, ft. | USCS Soil Symbol | SAMPLES | | | TESTS | | |
|------------|------------------|---------|------|---------------|------------------------------------|------------------|----------------------|
| | | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| 85 | | | | | | | |
| 86 | | | | | | | |
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| 101.5 | | | | | | | |

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LOG OF BORING NO. B-13 Page 1 of 3

CLIENT Michael Baker Jr.

SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah

PROJECT Riverdale Road

Boring Location: South side west abutment I-84
Approximate Surface Elevation: 4377.6 ft

| DEPTH, ft. | USCS Soil Symbol | SAMPLES | | | TESTS | | |
|------------|------------------|---------|------|---------------|------------------------------------|------------------|----------------------|
| | | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| 0.4 | | | | | | | |
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LOG OF BORING NO. B-13 Page 2 of 3

CLIENT Michael Baker Jr.

SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah

PROJECT Riverdale Road

| DEPTH, ft. | USCS Soil Symbol | SAMPLES | | | TESTS | | |
|------------|------------------|---------|------|---------------|------------------------------------|------------------|----------------------|
| | | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| 43 | | | | | | | |
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LOG OF BORING NO. B-13 Page 3 of 3

CLIENT Michael Baker Jr.

SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah

PROJECT Riverdale Road

| DEPTH, ft. | USCS Soil Symbol | SAMPLES | | | TESTS | | |
|------------|------------------|---------|------|---------------|------------------------------------|------------------|----------------------|
| | | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| 85 | | | | | | | |
| 86 | | | | | | | |
| 87 | | | | | | | |
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| 100 | | | | | | | |
| 101.5 | | | | | | | |

Continued Next Page

LOG OF BORING NO. B-13 Page 2 of 3

CLIENT Michael Baker Jr.

SITE Riverdale Road; I-15 to Washington Blvd Riverdale, Utah

PROJECT Riverdale Road

| DEPTH, ft. | USCS Soil Symbol | SAMPLES | | | TESTS | | |
|------------|------------------|---------|------|---------------|------------------------------------|------------------|----------------------|
| | | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF |
| 43 | | | | | | | |
| 44 | | | | | | | |
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| 47 | | | | | | | |
| 48 | | | | | | | |

17-MAR-2008 DGN File: J:\P\Projects\0185\2495_C-966-06_Soil_Data_Sheet_3_of_3.dgn

| LOG OF BORING NO. B-17 Page 1 of 3 | | | | | | | | | |
|---|---------------------|---|--------|------|---------------|------------------------------------|------------------|----------------------|-------|
| CLIENT | | Michael Baker Jr. | | | | | | | |
| SITE | | Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | | | | | | |
| PROJECT | | Riverdale Road | | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | | | TESTS | | | |
| | | USCS Soil Symbol | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER |
| <p>0.4 TOPSOIL: clayey sand with gravel, brown</p> <p>CLAYEY SAND (SC): very dense, brown</p> <p>10 GRAVEL (GP-GM): with clayey sand, dense, brown</p> <p>15 SILTY SAND (SM): loose to very dense, brown with orange and black mottling</p> | 4374.4 | | | | | | | | |
| | 4364.8 | 1 | SS | 2 | 50 | 4 | | | |
| | 4359.8 | 2 | SS | 6 | 44 | | | | |
| | | 3 | SS | 8 | 18 | | | | |
| | | 4 | SS | 16 | 23 | 25 | | | |
| | | 5 | SS | 12 | 47 | | | | |
| | | 6 | SS | 12 | 50 | | | | |
| | | 7 | SS | 16 | 40 | 22 | | | |
| | | 8 | SS | 18 | 17 | | | | |
| | | | | | | | | | |
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| LOG OF BORING NO. B-17 Page 2 of 3 | | | | | | | | | | |
|---|---------------------|---|--------|------|---------------|------------------------------------|------------------|----------------------|-------|--|
| CLIENT | | Michael Baker Jr. | | | | | | | | |
| SITE | | Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | | | | | | | |
| PROJECT | | Riverdale Road | | | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | | | TESTS | | | | |
| | | USCS Soil Symbol | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER | |
| <p>48 SILTY SAND (SM): loose to very dense, brown with orange and black mottling</p> <p>80 SANDY CLAY: very stiff to hard, brown with red mottling</p> <p>80 CLAYEY SAND: very dense, brown</p> | 4326.8 | | | | | | | | | |
| | 4294.8 | 9 | SS | 15 | 9 | | | | | |
| | | 10 | SS | 12 | 29 | 23 | | | | |
| | | 11 | SS | 16 | 14 | | | | | |
| | | 12 | ST | 18 | -- | 24 | 100 | Consol | UU | |
| | | 13 | SS | 18 | 27 | | | | | |
| | | 14 | SS | 18 | 22 | 25 | | | | |
| | | 15 | SS | 16 | 21 | | | | | |
| | | 16 | SS | 10 | 54 | | | | | |
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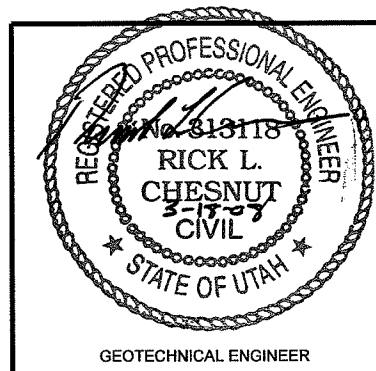
| LOG OF BORING NO. B-18 Page 1 of 3 | | | | | | | | | | |
|---|---------------------|---|--------|------|---------------|------------------------------------|------------------|----------------------|-------|--|
| CLIENT | | Michael Baker Jr. | | | | | | | | |
| SITE | | Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | | | | | | | |
| PROJECT | | Riverdale Road | | | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | | | TESTS | | | | |
| | | USCS Soil Symbol | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER | |
| <p>0.4 TOPSOIL: sand with gravel, brown, weeds at surface</p> <p>SILTY SAND (SM): with gravel, loose to very dense, brown, with red and black mottling, some organics</p> | 4374.2 | | | | | | | | | |
| | | 1 | SS | 14 | 11 | | | | | |
| | | 2 | SS | 12 | 16 | | | | | |
| | | 3 | SS | 6 | 22 | | | | | |
| | | 4 | SS | 16 | 14 | | | | | |
| | | 5 | SS | 14 | 34 | 19 | | | | |
| | | 6 | SS | 10 | 42 | | | | | |
| | | 7 | SS | 10 | 40 | | | | | |
| | | 8 | SS | 12 | 8 | | | | | |
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| LOG OF BORING NO. B-18 Page 2 of 3 | | | | | | | | | | |
|--|---------------------|---|--------|------|---------------|------------------------------------|------------------|----------------------|-------|--|
| CLIENT | | Michael Baker Jr. | | | | | | | | |
| SITE | | Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | | | | | | | |
| PROJECT | | Riverdale Road | | | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | | | TESTS | | | | |
| | | USCS Soil Symbol | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER | |
| <p>55 SANDY CLAY (CL): with sand lenses, very stiff to hard, brown, with red and black mottling</p> <p>80 SILTY SAND (SM): medium dense to very dense, brown with red mottling</p> | 4319.6 | | | | | | | | | |
| | 4294.6 | 9 | SS | 14 | 53 | 19 | | | | |
| | | 10 | SS | 14 | 27 | | | | | |
| | | 11 | SS | 16 | 20 | 25 | | | | |
| | | 12 | SS | 14 | 31 | | | | | |
| | | 13 | SS | 18 | 21 | | | | | |
| | | 14 | ST | 10 | -- | | | | | |
| | | 15 | SS | 10 | 24 | | | | | |
| | | 16 | SS | 10 | 40 | | | | | |
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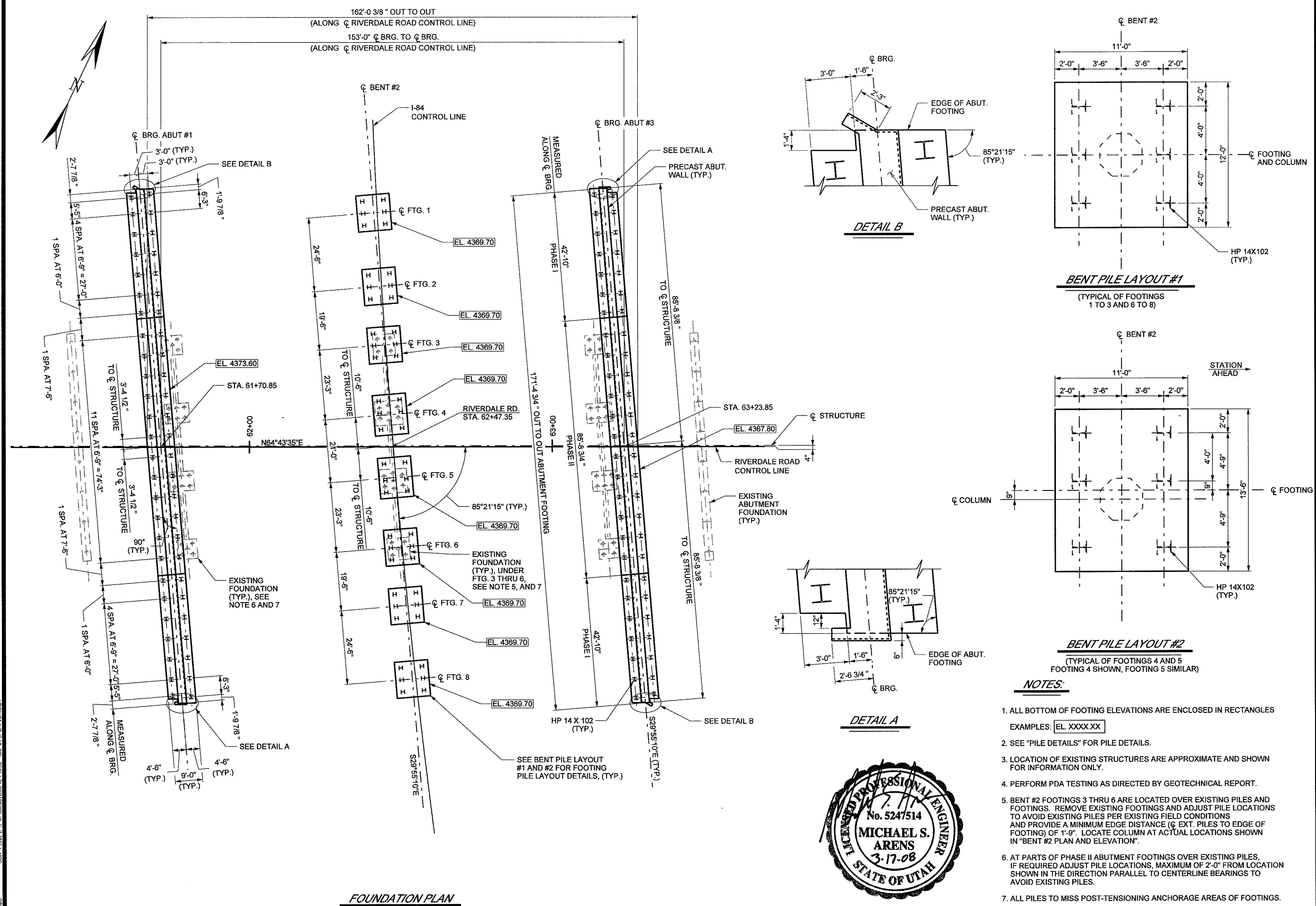
| LOG OF BORING NO. B-17 Page 3 of 3 | | | | | | | | | |
|---|------------|---|--------|------|---------------|------------------------------------|------------------|----------------------|-------|
| CLIENT | | Michael Baker Jr. | | | | | | | |
| SITE | | Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | | | | | | |
| PROJECT | | Riverdale Road | | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | | | TESTS | | | |
| | | USCS Soil Symbol | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER |
| <p>88 CLAYEY SAND: very dense, brown</p> <p>LEAN CLAY (CL): very stiff to hard, brown</p> <p>101.5 BOTTOM OF BORING AT APPROXIMATELY 101.5 FEET</p> | 4286.8 | 17 | SS | 8 | 50 | 25 | | | |
| | | 18 | SS | 15 | 29 | 24 | | | |
| | | 19 | SS | 8 | 21 | | | | |
| | | 20 | SS | 16 | 30 | | | | |
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| LOG OF BORING NO. B-18 Page 3 of 3 | | | | | | | | | |
|--|------------|---|--------|------|---------------|------------------------------------|------------------|----------------------|-------|
| CLIENT | | Michael Baker Jr. | | | | | | | |
| SITE | | Riverdale Road; I-15 to Washington Blvd Riverdale, Utah | | | | | | | |
| PROJECT | | Riverdale Road | | | | | | | |
| GRAPHIC LOG | DEPTH, ft. | SAMPLES | | | | TESTS | | | |
| | | USCS Soil Symbol | NUMBER | TYPE | RECOVERY, in. | PENETRATION RESISTANCE BLOWS / ft. | WATER CONTENT, % | DRY UNIT WEIGHT, PCF | OTHER |
| <p>SILTY SAND (SM): medium dense to very dense, brown with red mottling</p> <p>98 SANDY CLAY (CL): hard, brown</p> <p>101.5 BOTTOM OF BORING AT APPROXIMATELY 101.5 FEET</p> | 4276.6 | 17 | SS | 14 | 24 | 23 | | | |
| | | 18 | SS | 14 | 36 | | | | |
| | | 19 | SS | 12 | 59 | | | | |
| | | 20 | SS | 18 | 43 | 20 | | | |
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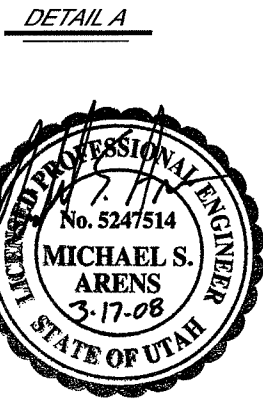
| | | | |
|---|----------------------------------|-------------------------------------|----------------------------------|
| UTAH DEPARTMENT OF TRANSPORTATION | | PREPARED BY: MICHAEL BAKER JR. INC. | |
| SALT LAKE CITY, UTAH | | CHECK C/JT 02/08 | |
| STRUCTURES DIVISION | | CHECK R/LC 02/08 | |
| DESIGN R/LC 02/08 | DRAWN GCK 02/08 | CHECK R/LC 02/08 | CHECK |
| DATE 3/18/08 | DATE 3/18/08 | DATE | DATE |
| APPROVED BY: [Signature] | APPROVED BY: [Signature] | APPROVED BY: [Signature] | APPROVED BY: [Signature] |
| REGISTERED PROFESSIONAL ENGINEER | REGISTERED PROFESSIONAL ENGINEER | REGISTERED PROFESSIONAL ENGINEER | REGISTERED PROFESSIONAL ENGINEER |
| RIVERDALE ROAD, I-84 TO WASHINGTON BLVD | RIVERDALE ROAD OVER I-84 | SOIL DATA SHEET 3 OF 3 | PROJECT NUMBER SP-0026(4)0 |
| WEBER COUNTY | C-966 | DRG. NO. | SHT. 6 OF 39 |



17-MAR-2088 DGN File: P:\P\Drawings\B5A\2495.C-966-07.F.dwg

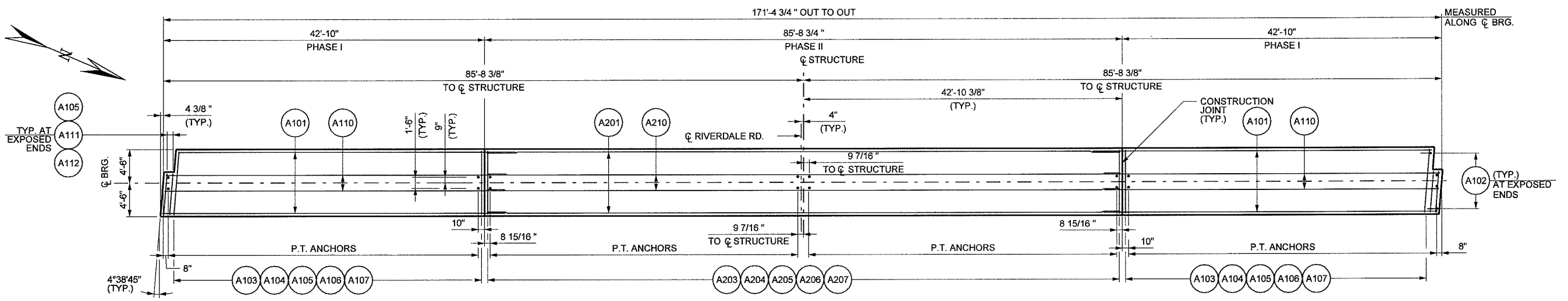


FOUNDATION PLAN

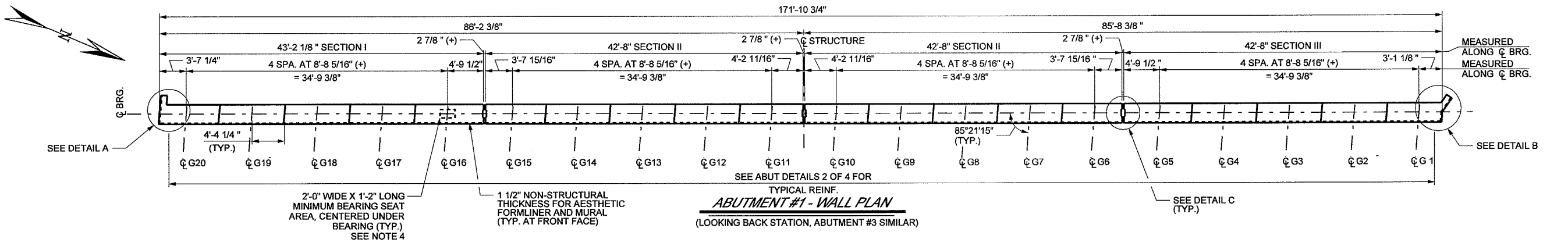


- NOTES:**
- ALL BOTTOM OF FOOTING ELEVATIONS ARE ENCLOSED IN RECTANGLES
EXAMPLES: [EL. XXXX.XX]
 - SEE "PILE DETAILS" FOR PILE DETAILS.
 - LOCATION OF EXISTING STRUCTURES ARE APPROXIMATE AND SHOWN FOR INFORMATION ONLY.
 - PERFORM PDA TESTING AS DIRECTED BY GEOTECHNICAL REPORT.
 - BENT #2 FOOTINGS 3 THRU 6 ARE LOCATED OVER EXISTING PILES AND FOOTINGS. REMOVE EXISTING FOOTINGS AND ADJUST PILE LOCATIONS TO AVOID EXISTING PILES PER EXISTING FIELD CONDITIONS AND PROVIDE A MINIMUM EDGE DISTANCE (C EXT. PILES TO EDGE OF FOOTING) OF 1'-9". LOCATE COLUMN AT ACTUAL LOCATIONS SHOWN IN "BENT #2 PLAN AND ELEVATION".
 - AT PARTS OF PHASE II ABUTMENT FOOTINGS OVER EXISTING PILES, IF REQUIRED ADJUST PILE LOCATIONS, MAXIMUM OF 2'-0" FROM LOCATION SHOWN IN THE DIRECTION PARALLEL TO CENTERLINE BEARINGS TO AVOID EXISTING PILES.
 - ALL PILES TO MISS POST-TENSIONING ANCHORAGE AREAS OF FOOTINGS.
 - USE LIGHT WEIGHT FILL BEHIND ABUTMENTS. SEE PROJECT GEOTECH REPORT.

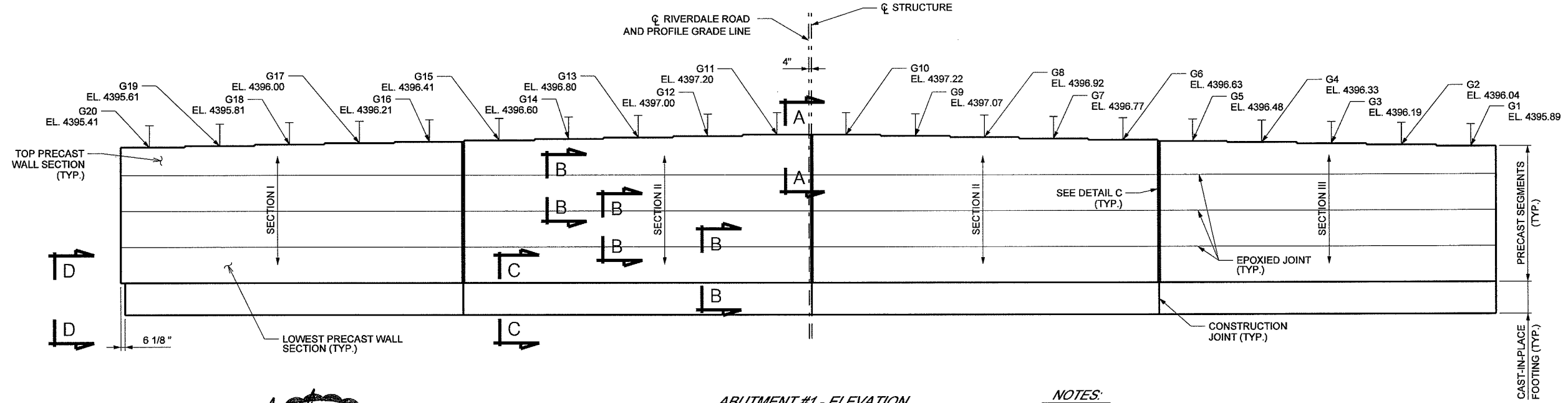
| | | | | |
|--|--|-----------------------------------|-----------------|-----------|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | | DESIGN MSA 09/07 | CHECK DAP 02/08 | REVISIONS |
| RIVERDALE ROAD, I-84 TO WASHINGTON BLVD | | DRAWN AA 09/07 | CHECK DAP 02/08 | BY |
| RIVERDALE ROAD OVER I-84 | | APPROVAL RECOMM. 3/10/08 | CHECK DAP 02/08 | DATE |
| FOUNDATION PLAN | | APPROVED FOR CONSTRUCTION 3/18/08 | CHECK | NO. |
| PROJECT NUMBER SP-0026(4)0 | | SENIOR DESIGN ENGR. [Signature] | QUANT. | REMARKS |
| WEBER COUNTY | | DATE | | |
| C-966 DRG. NO. | | | | |
| SHT. 7 OF 39 | | | | |



ABUTMENT #1 - FOOTING PLAN
(LOOKING BACK STATION, ABUTMENT #3 SIMILAR)



ABUTMENT #1 - WALL PLAN
(LOOKING BACK STATION, ABUTMENT #3 SIMILAR)



ABUTMENT #1 - ELEVATION
(LOOKING BACK STA.)

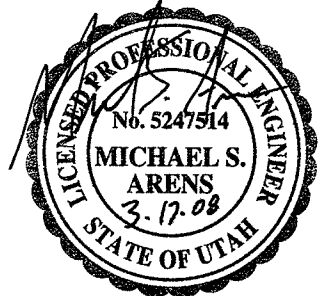
NOTES:

- ALL DIMENSIONS ARE TAKEN ALONG Q BRG.
- SEE "ABUTMENT DETAILS 2 OF 4" FOR SECTION A-A AND B-B. SEE "ABUTMENT DETAILS 3 OF 4" FOR SECTION C-C AND FOOTING ELEVATION AND REINFORCEMENT. SEE "ABUTMENT DETAILS 4 OF 4" FOR DETAIL A, B AND C.
- SEE "FOUNDATION PLAN" FOR PILE LAYOUT AND ADDITIONAL ABUTMENT FOOTING DETAILS.
- FINISH BEARING SEAT AREA HIGH & RUB OR GRIND LEVEL TO ELEVATION SHOWN +/- 0.125 INCH. GROUTING NOT PERMITTED.
- SEE "ABUTMENT BEARING DETAILS" FOR ANCHOR BOLT DETAILS.
- ADJUST REINFORCING BAR SPACING TO MISS PILES AND P.T. DUCTS, CONNECTIONS AND ANCHOR POCKETS.

| QUANTITIES STRUCTURAL CONCRETE | |
|-----------------------------------|--------|
| CAST-IN-PLACE FOOTINGS | 455 CY |
| PRECAST WALLS | 638 CY |
| CAST-IN-PLACE CHEEKWALL | 3 CY |

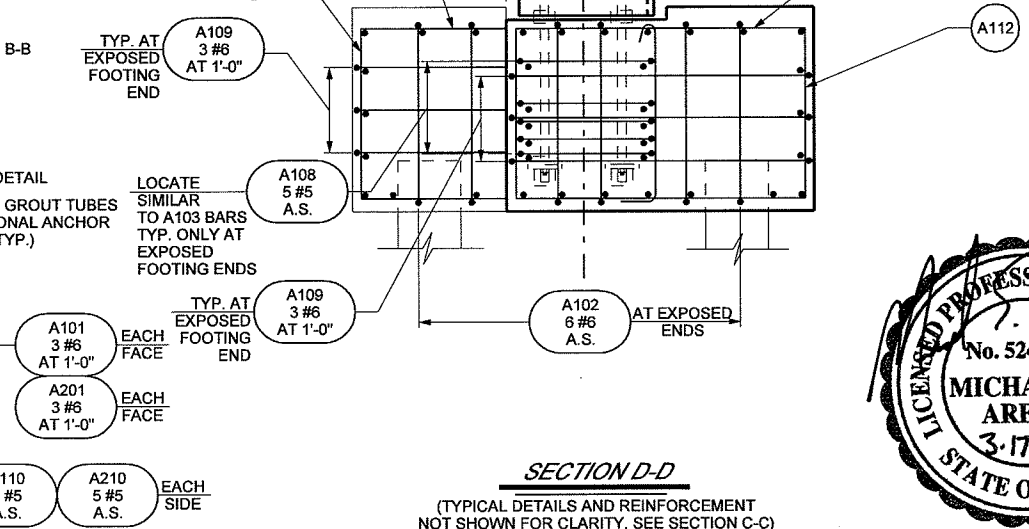
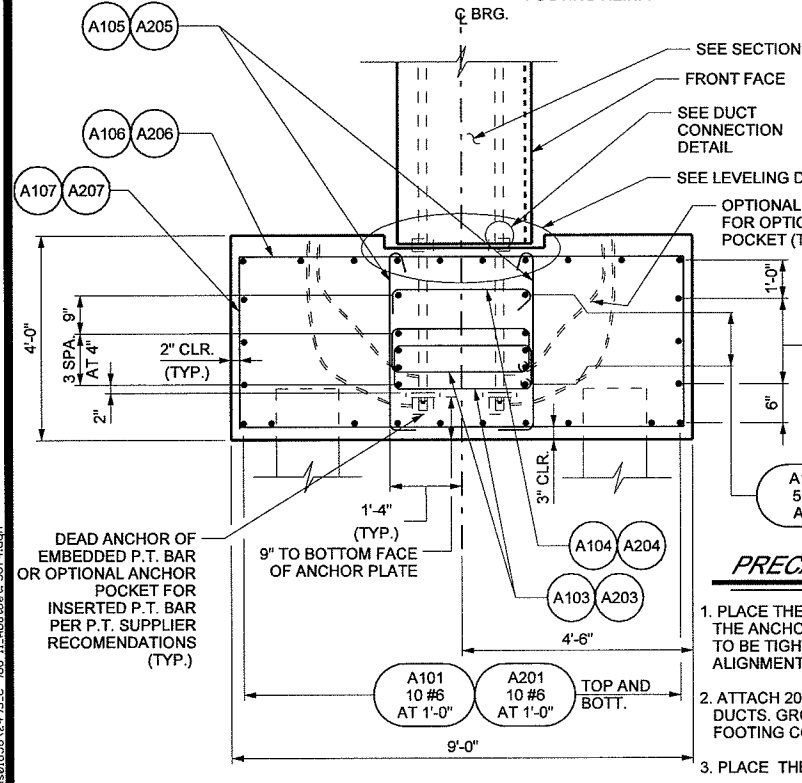
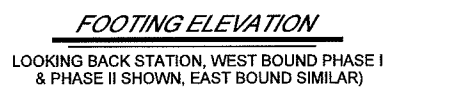
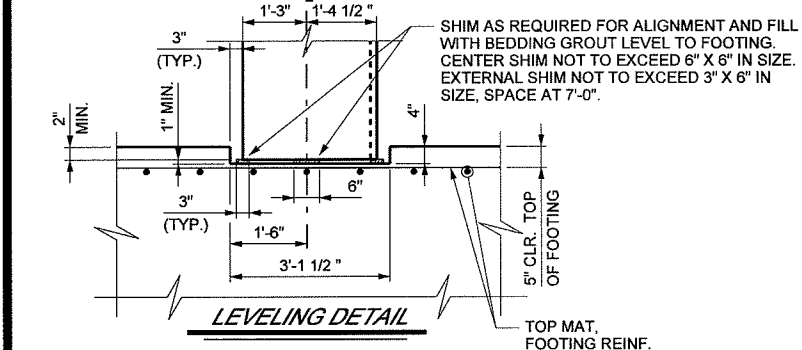
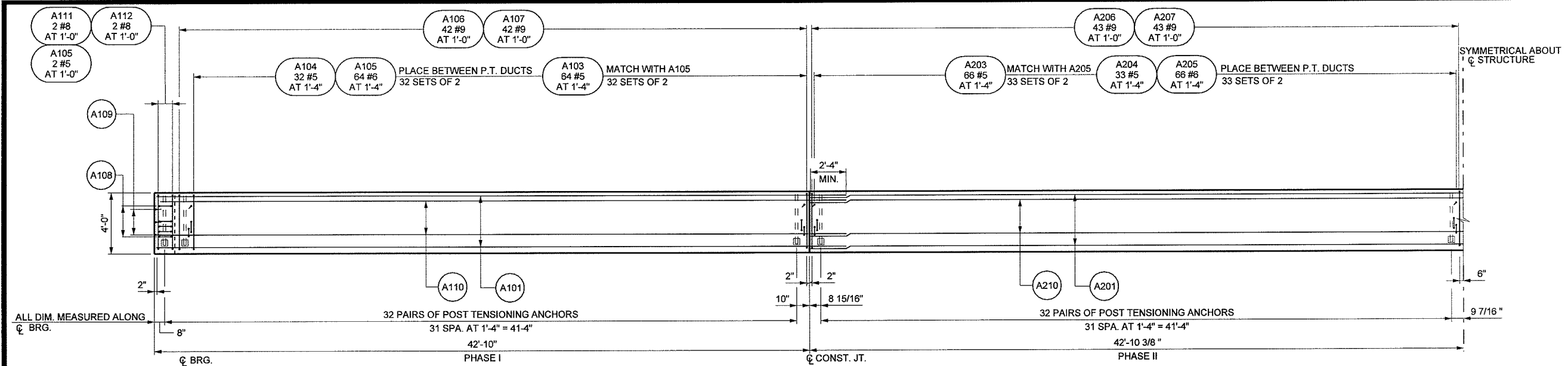
LEGEND

- A.S. AS SHOWN
- B.F. BACK FACE
- E.F. EACH FACE
- F.F. FRONT FACE
- P.T. POST-TENSIONING



| | | | |
|---|--|--|---------------------------------------|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | | DESIGN JK 02/08 | CHECK DAP 02/08 |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 ABUTMENT DETAILS 1 OF 4 | | DRAWN AA 02/08 | CHECK DAP 02/08 |
| PROJECT NUMBER SP-0026(4)0 | | APPROVAL REC'D. DATE 3-17-08 | APPROVAL FOR USE BY UDOT DATE 3-17-08 |
| WEBER COUNTY C-966 DRG. NO. | | PREPARED BY: MICHAEL BAKER JR. INC. | REVISIONS |
| SHT. 9 OF 39 | | BY | DATE |
| | | NO. | REMARKS |

17-MAR-2008 DGN: Files: IP: P:\P\mms01858\2495_C-966-09_AbutDet_1of4.dgn



PRECAST SEQUENCE ASSUMED FOR DESIGN

1. PLACE THE EMBEDDED P.T. BARS AND P.T. DUCTS, DEAD ANCHOR ACCESSORIES, AND THE ANCHORAGE ZONE REINFORCEMENT IN THE FOOTING. PLACEMENT TOLERANCE TO BE TIGHTLY CONTROLLED TO MATCH THE PRECAST WALL SEGMENT P.T. DUCT ALIGNMENT.
2. ATTACH 200 PSI RATED GROUT VENTS (INLET) TO LOWEST POSSIBLE POINT OF THE P.T. DUCTS. GROUT VENTS NEED TO BE SECURED TO WITHSTAND POSSIBLE DAMAGE FROM FOOTING CONCRETE PLACEMENT.
3. PLACE THE REINFORCING STEEL OF THE FOOTING AND THE FOOTING CONCRETE.
4. SET LOWEST PRECAST WALL SECTION IN PLACE OVER THE FOOTINGS ONLY AFTER THE FOOTING CONCRETE HAS REACHED A MINIMUM STRENGTH OF 3.5 KSI. ALIGN PRECAST SECTION AND SHIM AS REQUIRED. GROUT THE JOINT BETWEEN PRECAST SECTION AND FOOTING.
5. APPLY EPOXY TO TOP JOINT OF THE LOWEST PRECAST WALL SECTION, THEN PLACE THE NEXT SECTION.

6. ASSEMBLE THE LAST (TOP) SECTION AS DESCRIBED IN NOTE 5, AND STRESS P.T. BARS SUCH THAT THE MINIMUM COMPRESSIVE STRESS (APPROXIMATELY UNIFORM) IN THE PRECAST CONCRETE SECTIONS IS 50 PSI. WITHIN THE OPEN (CONTACT) TIME OF EPOXY, IF THE CONTRACTOR CANNOT ERECT THE THREE SECTIONS WITHIN THIS PERIOD OF TIME, THEN ADDITIONAL INTERMEDIATE BAR STRESSING OPERATION WILL BE NECESSARY IN WHICH CASE THE CONTRACTOR MUST DEVELOP THE PROCEDURE. ANY ADDITIONAL HARDWARE, EQUIPMENT, GROUTING AND LABOR WILL BE PROVIDED AT NO ADDITIONAL EXPENSE AND IS INCIDENTAL TO THE COST OF THE POST-TENSIONING SYSTEM AND PRECAST SUBSTRUCTURE CONCRETE PAY ITEMS.
7. STRESS ALL P.T. BARS COMPLETELY AFTER THE EPOXY HAS REACHED A MINIMUM STRENGTH OF 4.0 KSI. GROUT ALL THE DUCTS AND DUCT CONNECTIONS IN BETWEEN SECTIONS OF THE STRESSED P.T. BARS.
8. PLACE CAST-IN-PLACE CHEEKWALL.

PRECAST ABUTMENT SECTIONS AND CAST-IN-PLACE FOOTING CONSTRUCTION NOTES

1. PERFORM PRESTRESSING IN ACCORDANCE WITH CHAPTER 10 OF AASHTO LRFD CONSTRUCTION SPECIFICATIONS.
2. VERIFY ALL GRADES, DIMENSIONS AND ELEVATIONS PRIOR TO START OF WORK.
3. USE THREADED P.T. BARS OF GRADE 150 KSI CONFORMING TO REQUIREMENTS OF ASTM A-722.
4. ALL PRECAST CONCRETE STRENGTH, $f_c = 5.0$ KSI, ALL CAST-IN PLACE FOOTING CONCRETE $f_c = 5.0$ KSI.
5. USE 26 GAUGE GALVANIZED CORRUGATED STEEL DUCTS FOR P.T. BARS. FABRICATED WITH EITHER WELDED OR INTERLOCKING SEAMS WITH SUFFICIENT RIGIDITY TO MAINTAIN THE CORRECT PROFILE BETWEEN SUPPORTS DURING THE CONCRETE PLACEMENT. USE GALVANIZED FERROUS METAL CONNECTORS THAT PREVENT ANGLE CHANGES AT JOINTS TO CONNECT SECTIONS OF DUCT.
6. INLET VENTS SHALL BE PROVIDED FOR INJECTING GROUT INTO THE DUCTS AND OUTLET VENTS FOR ESCAPE OF AIR, WATER, GROUT AND BLEED WATER.
7. NO MORE THAN 50 PERCENT OF THE P.T. TENDONS CAN BE COUPLED AT ONE SECTION. SPACING BETWEEN ADJACENT COUPLER LOCATIONS ALONG CENTERLINE BEARING MUST NOT BE CLOSER THAN 4'-0\".
8. ALL ANCHORAGE PROTECTION ITEMS AND ALL/ANY ADDITIONAL HARDWARE EQUIPMENT, GROUTING AND LABOR ARE INCIDENTAL TO THE COST OF THE POST-TENSIONING SYSTEM IN THE STRUCTURAL CONCRETE PAY ITEMS.
9. CONTRACTOR TO SUBMIT DETAILED SHOP DRAWINGS FOR THE PRECAST ABUTMENT SECTIONS INCLUDING THE POST-TENSIONING METHODS AND DETAILS FOR THE PRECAST AND CAST-IN-PLACE COMPONENTS, BAR ELONGATION/STRESSING CALCULATIONS, DESIGN CALCULATION FOR LOCAL ANCHORAGE ZONE REINFORCEMENT, MATERIALS USED AND ANY VARIANCE FROM THE CONTRACT PLANS.
10. THE ERECTION TOLERANCE OF PRECAST ABUTMENT AT TOP (DEVIATION FROM PLUMB) TO BE ± 0.25 INCHES PER 20 FEET.
11. FINAL PRE STRESSING FORCES AFTER LOSSES = 142.2 K / BAR (EQUIVALENT TENSILE STRESS IN P.T. BARS = 90 KSI)

SHIM PLATE, GROUT, AND EPOXY NOTES

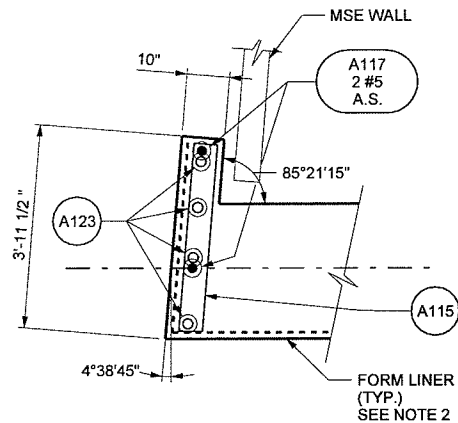
1. DETERMINE AS-BUILT FOOTING ELEVATION, CENTERLINE LINE LOCATION, AS CAST ALIGNMENTS AND HEIGHTS FOR PRECAST WALL SECTIONS. ADJUST THE SHIMS THICKNESS AS REQUIRED TO ACHIEVE PRECAST WALL ALIGNMENT. SUBMIT AS-BUILT CALCULATIONS TO ENGINEER FOR APPROVAL.
2. USE GALVANIZED STEEL SHIM PLATES.
3. THE GROUT IN BETWEEN THE FOOTING AND LOWEST PRECAST WALL SECTION TO BE A HIGH PERFORMANCE GROUT THAT IS PACKAGED, NON-SHRINK, NON-CORROSIVE, NON-METALLIC AND SHALL ACHIEVE A HIGH EARLY STRENGTH OF 5 KSI IN ONE DAY. MEET THE REQUIREMENTS OF ASTM C-1107.
4. THE GROUT FOR P.T. BAR DUCTS SHALL CONSIST OF PREPACKAGED CEMENTITIOUS NON-SHRINK GROUT IN ACCORDANCE WITH AASHTO CONSTRUCTION SPECIFICATIONS SECTION 10.9.3.
5. USE SIKADUR 32, HI-MOD LPL OF APPROVED EQUIVALENT PER MANUFACTURER'S RECOMMENDATIONS FOR EPOXIED JOINTS.

LEGEND

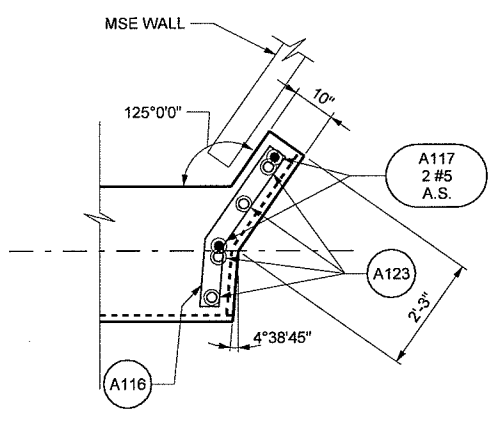
| | |
|------|-----------------|
| A.S. | AS SHOWN |
| B.F. | BACK FACE |
| E.F. | EACH FACE |
| F.F. | FRONT FACE |
| P.T. | POST-TENSIONING |



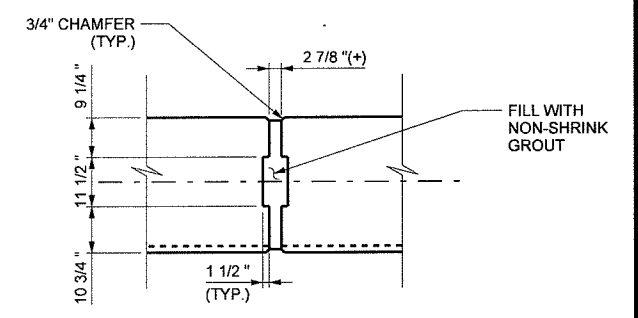
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| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR. INC. | CHECK DAP 02/08 | CHECK DAP 02/08 | CHECK | REVISIONS |
| RIVERDALE ROAD, I-15 TO WASHINGTONBLVD. RIVERDALE ROAD OVER I-84 | APPROVAL RECOMM. DATE: 3-17-08 | DESIGN JWK 02/08 | DRAWN AA 02/08 | QUANT. | NO. |
| ABUTMENT DETAILS 3 OF 4 | APPROVED BY: [Signature] | DATE: 3/17/08 | DATE: 3/17/08 | DATE: 3/17/08 | DATE: 3/17/08 |
| PROJECT NUMBER: SP-0026(4)0 | BY: [Signature] | DATE: 3/17/08 | DATE: 3/17/08 | DATE: 3/17/08 | DATE: 3/17/08 |
| WEBER COUNTY | C-966 | DRG. NO. | | | |
| SHT. 11 | OF 39 | | | | |



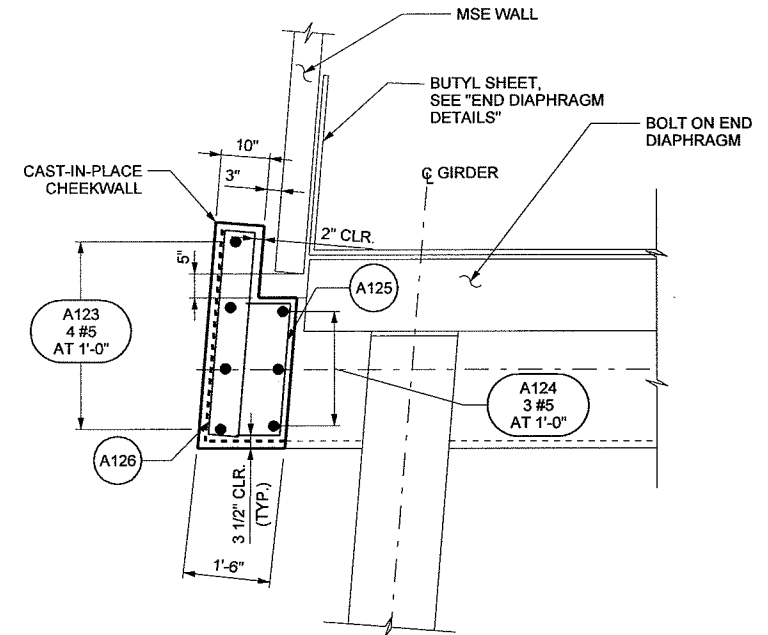
DETAIL A



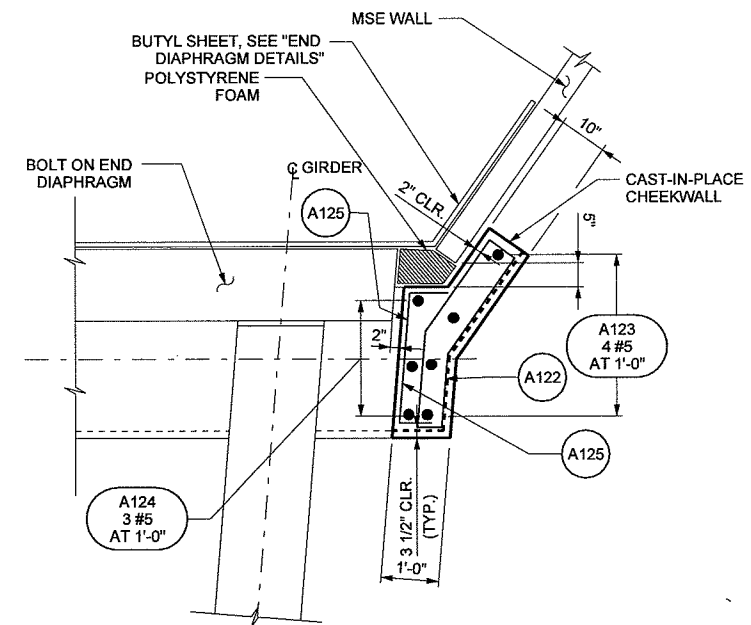
DETAIL B



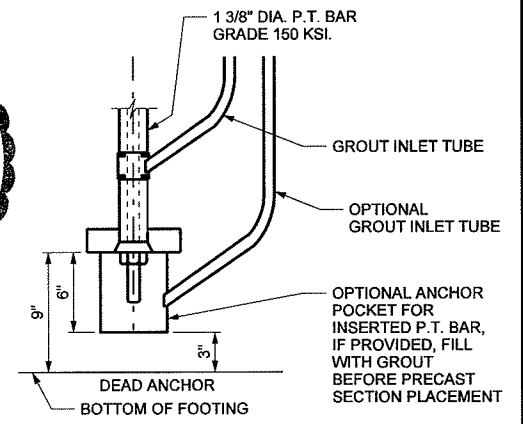
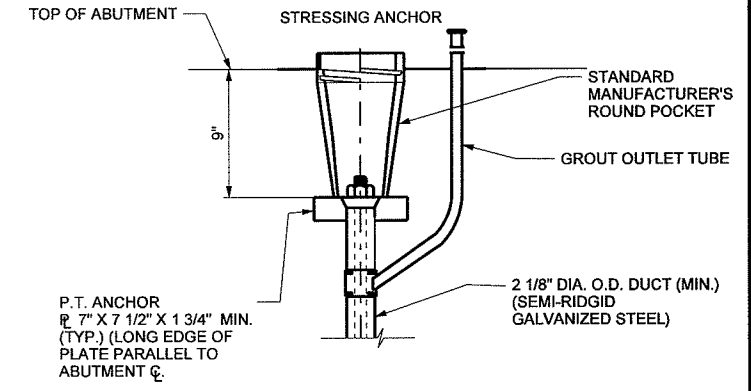
DETAIL C



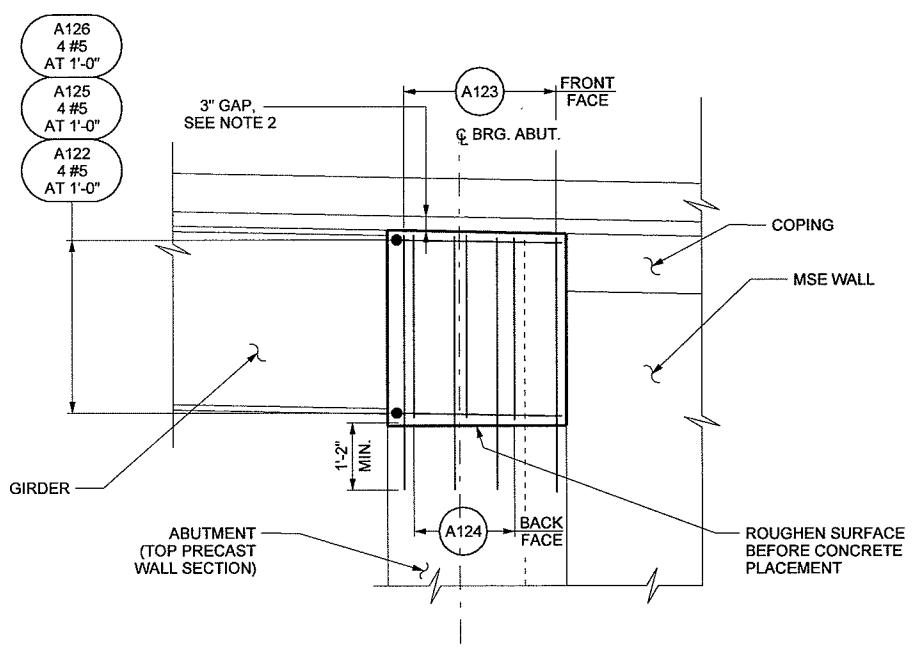
ABUTMENT CHEEKWALL - OVER DETAIL A



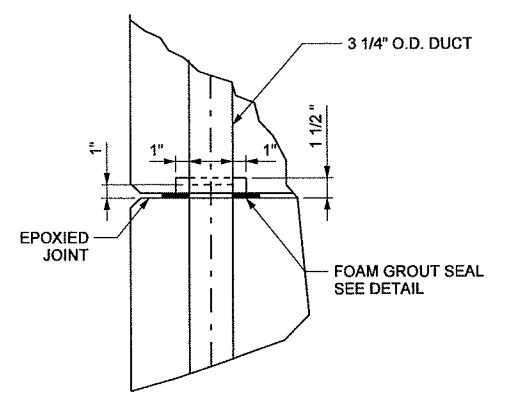
ABUTMENT CHEEKWALL - OVER DETAIL B



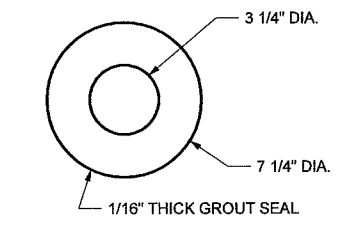
POST TENSIONING (P.T.) BAR DETAIL



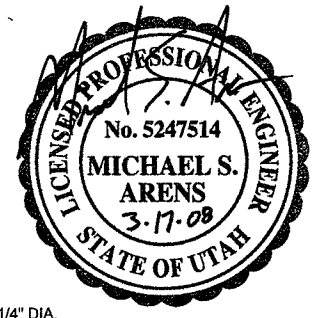
TYP. ABUTMENT CHEEKWALL - ELEVATION



DUCT CONNECTION DETAIL



FOAM SEAL DETAIL

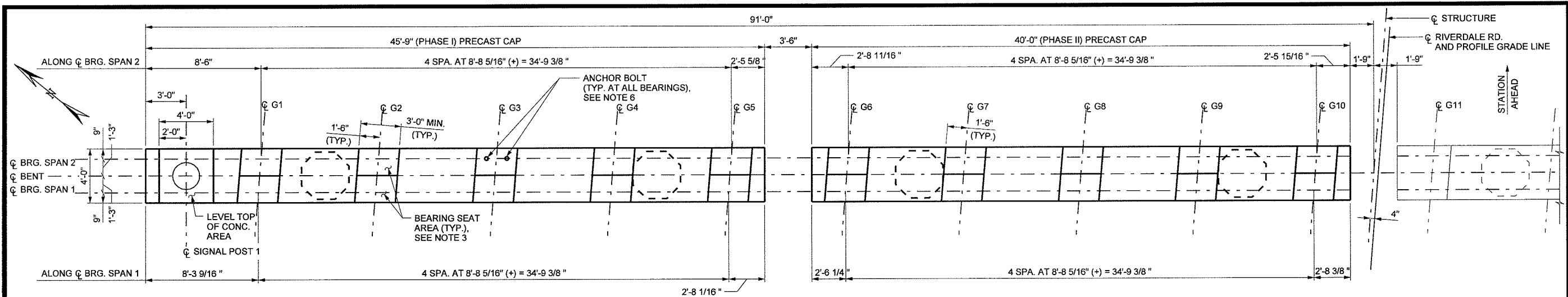


NOTES:

1. CHAMFER ALL CHEEKWALL EXPOSED EDGES 3/4".
2. TOP OF CHEEKWALL TO MATCH TOP OF MSE WALL COPING. CHEEKWALL FORM LINER SIMILAR TO PRECAST ABUTMENT FORMLINER, TOP PORTION OF CHEEKWALL FORMLINER SIMILAR TO MSE WALL COPING.

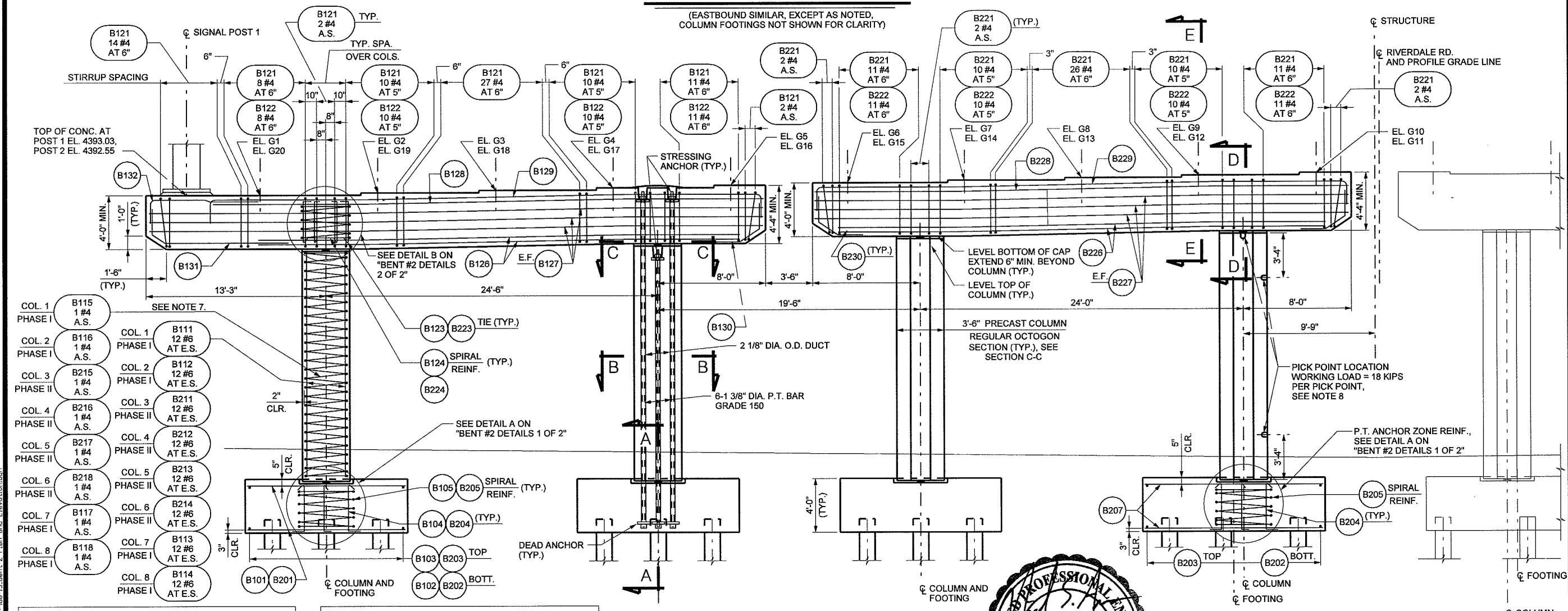
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| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR. INC. | DESIGN JK | CHECK DAP | DATE 02/08 | REVISIONS |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 ABUTMENT DETAILS 4 OF 4 | APPROVAL RECOMM. 3-17-08 | DATE 3-17-08 | FOR USE BY SUB | DATE 3-17-08 | QUANT. |
| PROJECT NUMBER SP-0026(4)0 | APPROVED DATE 3-17-08 | BY DATE | CHECK DATE | CHECK DATE | REMARKS |
| WEBER COUNTY | C-966 | DRG. NO. | SHT. 12 | OF 39 | |

17-MAR-2008 DGN: F:\aer\IP_PWP\pms\01856\2495.c-966-12-Abu\01856.dwg 4 of 4.dwg



WESTBOUND PHASE I AND II - PLAN

(EASTBOUND SIMILAR, EXCEPT AS NOTED, COLUMN FOOTINGS NOT SHOWN FOR CLARITY)



WESTBOUND PHASE I AND II - ELEVATION

(EASTBOUND SIMILAR, EXCEPT AS NOTED)

WESTBOUND BENT #2 - TOP OF BEARING SEAT ELEVATIONS

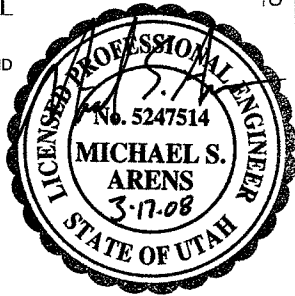
| PHASE | GIRDER NUMBER | SPAN1 | SPAN2 |
|----------|---------------|---------|---------|
| PHASE I | GIRDER #1 | 4393.12 | 4393.03 |
| | GIRDER #2 | 4393.27 | 4393.18 |
| | GIRDER #3 | 4393.42 | 4393.33 |
| | GIRDER #4 | 4393.57 | 4393.47 |
| | GIRDER #5 | 4393.71 | 4393.62 |
| PHASE II | GIRDER #6 | 4393.86 | 4393.77 |
| | GIRDER #7 | 4394.01 | 4393.91 |
| | GIRDER #8 | 4394.15 | 4394.06 |
| | GIRDER #9 | 4394.30 | 4394.21 |
| | GIRDER #10 | 4394.45 | 4394.35 |

EASTBOUND BENT #2 - TOP OF BEARING SEAT ELEVATIONS

| PHASE | GIRDER NUMBER | SPAN1 | SPAN2 |
|----------|---------------|---------|---------|
| PHASE II | GIRDER #11 | 4394.44 | 4394.34 |
| | GIRDER #12 | 4394.24 | 4394.14 |
| | GIRDER #13 | 4394.04 | 4393.94 |
| | GIRDER #14 | 4393.84 | 4393.74 |
| | GIRDER #15 | 4393.64 | 4393.54 |
| PHASE I | GIRDER #16 | 4393.44 | 4393.34 |
| | GIRDER #17 | 4393.24 | 4393.14 |
| | GIRDER #18 | 4393.04 | 4392.95 |
| | GIRDER #19 | 4392.84 | 4392.75 |
| | GIRDER #20 | 4392.64 | 4392.55 |

QUANTITIES STRUCTURAL CONCRETE

| | |
|------------------------|--------|
| CAST IN PLACE FOOTINGS | 182 CY |
| PRECAST COLUMNS | 48 CY |
| PRECAST CAPS | 108 CY |



LEGEND

- A.S. AS SHOWN
- B.F. BACK FACE
- E.S. EQUAL SPACES
- F.F. FRONT FACE
- P.T. POST TENSION

NOTES:

1. SPIRAL LAP SPLICES ARE NOT PERMITTED IN FOOTING AND CAP.
2. NO SPLICING PERMITTED IN VERTICAL COLUMN REINFORCING.
3. FINISH BEARING SEAT AREA HIGH AND RUB OR GRIND LEVEL TO ELEVATION SHOWN +/- 0.125". NO GROUTING ALLOWED.
4. COLUMN REINFORCING SHOWN IS TYPICAL OF ALL COLUMNS, EXCEPT AS NOTED.
5. THE P.T. BARS SHOWN ARE TYPICAL OF ALL COLUMNS, EXCEPT AS NOTED. SEE "BENT DETAILS SHEET 2 OF 2" FOR P.T. BAR DETAILS AND NOTES.
6. SEE "BENT BEARING DETAILS" FOR ANCHOR BOLT AND BEARING DETAILS.
7. LOCATE ANY SPIRAL SPLICES IN MIDDLE THIRD OF COLUMN HEIGHT.
8. PICK POINT LOCATIONS SHOWN ARE TYPICAL.

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
STRUCTURES DIVISION

PREPARED BY: MICHAEL BAKER JR. INC.

RIVERDALE ROAD, I-15 TO WASHINGTON BLVD.
RIVERDALE ROAD OVER I-84
BENT #2 PLAN & ELEVATION

PROJECT NUMBER: SP-0026(4)0

| NO. | DATE | BY | REVISIONS |
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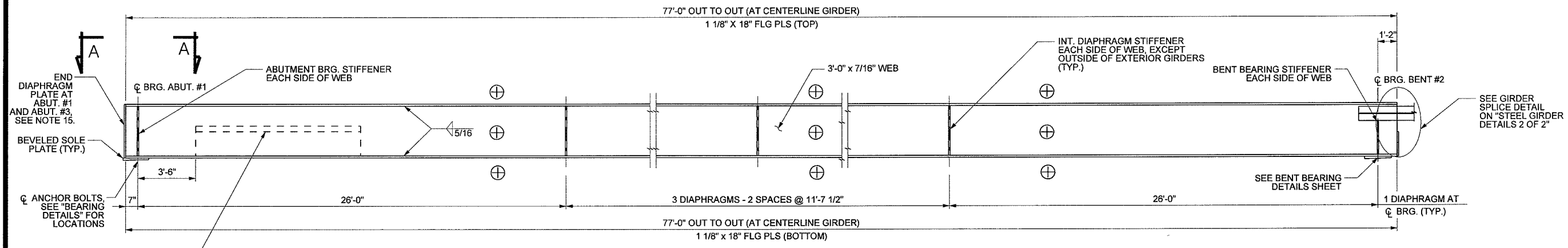
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CHECK: MSA 02/08
DRAWN: AA 02/08
QUANT.: TM 03/08
CHECK: MSA 03/08

APPROVAL: [Signature] 3/17/08
DATE: 3/17/08
FOR USE BY: [Signature]
DATE: 3/17/08

WEBER COUNTY
C-966
DRG. NO.

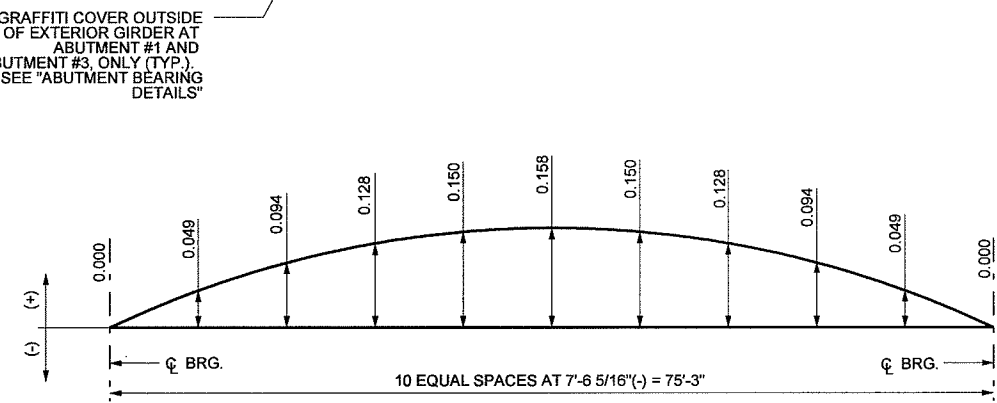
SHT. 13 OF 39

17-MAR-2008 DGN: F:\es:\p\p\dms01\B58\2495_C-966-16_SteelGirder-Dtl102.dgn



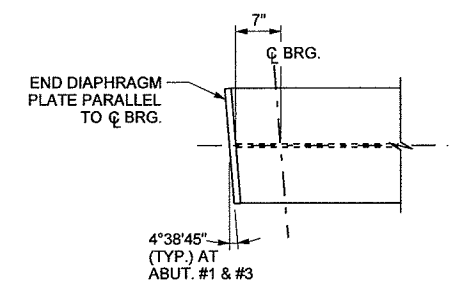
GIRDER ELEVATION
(SPAN 1 SHOWN, SPAN 2 OPPOSITE HAND UNLESS NOTED OTHERWISE)

| QUANTITIES | |
|------------------|-------------|
| STRUCTURAL STEEL | |
| GIRDERS | 631,577 LBS |

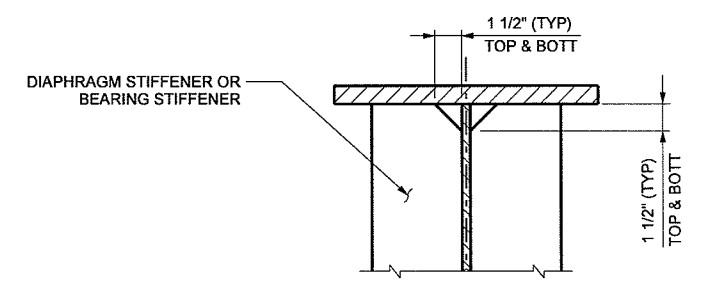


CAMBER DIAGRAM

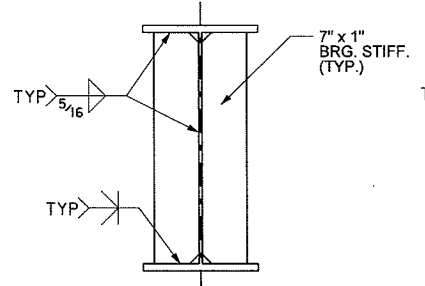
NOTE: CAMBER ORDINATES SHOWN IN FEET.



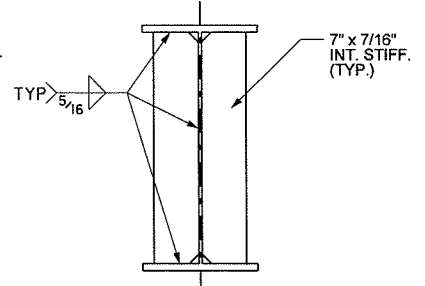
SECTION A-A
(TYPICAL AT ABUTMENTS)



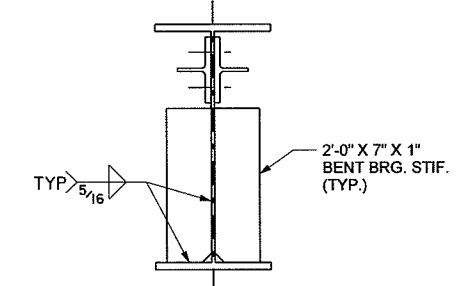
STIFFENER DETAIL



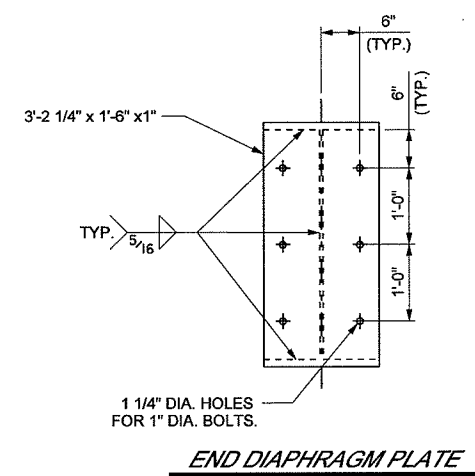
ABUTMENT BEARING STIFFENER



INTERMEDIATE DIAPHRAGM STIFFENER



BENT BEARING STIFFENER



END DIAPHRAGM PLATE

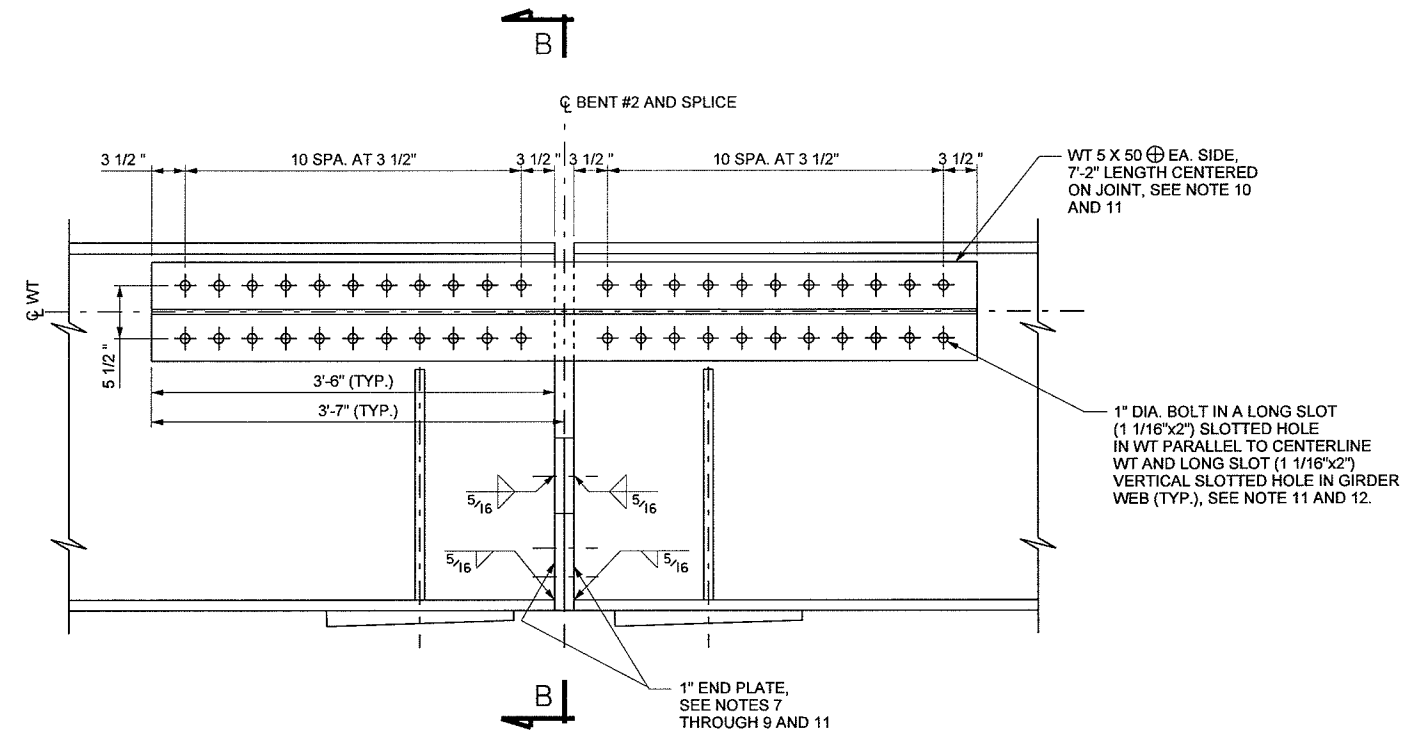
NOTES:

- CAMBER ORDINATE IS FOR DL+SDL AT THE TENTH POINTS ALONG THE GIRDER. THE FABRICATOR IS RESPONSIBLE FOR CORRECTIONS TO CAMBER BASED ON GRADE.
- PERFORM CHARPY V-NOTCH TOUGHNESS TESTS ON ALL MAIN LOAD CARRYING MEMBERS SUBJECT TO TENSION STRESS, INDICATED BY ⊕. TEST RESULTS MUST MEET REQUIREMENTS FOR ZONE 2.
- ALL DIMENSIONS SHOWN ARE HORIZONTAL. TAKE VERTICAL GRADE INTO ACCOUNT WHEN DETERMINING FINAL LENGTH FOR FABRICATION.
- DIMENSIONS SHOWN ON THE PLANS ASSUME THE AMBIENT TEMPERATURE OF THE GIRDER TO BE 70°F. CORRECT THE LENGTH USED IN FABRICATION AT THE RATE OF 1/16" ± PER EACH 100' OF LENGTH FOR EVERY 10°F DIFFERENCE IN TEMPERATURE TO ALLOW FOR EXPANSION AND CONTRACTION.
- ALL CONNECTION PLATES AND BEARING STIFFENERS ARE PARALLEL TO THE ABUTMENT CENTERLINE OF BEARINGS.
- SEE "ABUTMENT BEARING DETAILS" AND "BENT BEARING DETAILS" FOR SOLE PLATE AND BEARING DETAILS.
- USE GRADE 50 STRUCTURAL STEEL FOR GIRDER WEBS, FLANGES, SPLICE WT AND SPLICE END PLATES, DIAPHRAGM STIFFENERS AND BEARING STIFFENERS. ALL OTHER STEEL GRADE 36 MINIMUM.
- CONFORM TO THE REQUIREMENTS OF THE ANSIAASHTO/AWS BRIDGE WELDING CODE D1.5. FOR WELDING, WELDER QUALIFICATIONS, PREQUALIFICATION OF WELD DETAILS AND INSPECTION OF WELDS
- THE METHODS OF JOINT PREPARATION FOR WELDING SHOWN ON THE PLANS ARE BASED ON THE USE OF MANUAL SHIELDED METAL-ARC WELDING. THE USE OF THIS OR ANY OTHER WELDING PROCESS IS SATISFACTORY ONLY AFTER THE WELDING PROCEDURE HAS BEEN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- USE THE MINIMUM SIZED WELDS REQUIRED BY ANSIAASHTO/AWS BRIDGE WELDING CODE D1.5 FOR THE THICKNESS OF THE MATERIAL JOINED FOR ALL STRENGTH FILLET WELDS UNLESS OTHERWISE SPECIFIED.
- FIELD WELDING TO GIRDERS IS NOT PERMITTED.
- ALL BEARING STIFFENERS TO BE VERTICAL AFTER DEAD LOAD IS APPLIED. ALL INTERIOR DIAPHRAGMS CAN BE NORMAL TO THE GRADE.
- LOCATE ANCHOR BOLTS AT WEST END OF GIRDERS FOR SPAN 1 AND AT EAST END FOR SPAN 2.
- GIRDER SPLICE LOCATED AT EAST END OF SPAN 1 GIRDER, WEST END OF SPAN 2 GIRDER.
- CUT WEB AND FLANGE END AT ABUTMENTS SO END DIAPHRAGM PLATE IS VERTICAL AFTER DEAD LOAD IS APPLIED AND PARALLEL TO ABUTMENT CENTERLINE.
- SEE "STEEL GIRDER DETAILS 2 OF 2" FOR SPLICE DETAILS AND ADDITIONAL NOTES.

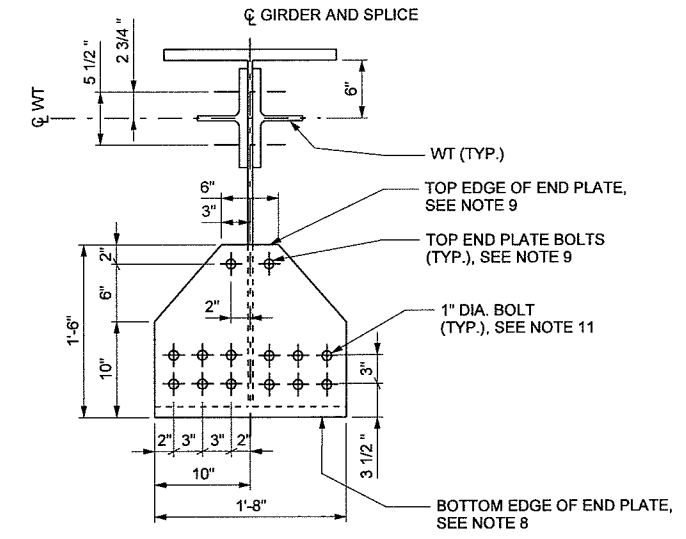


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| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR., INC. |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 STEEL GIRDER DETAILS 1 OF 2 | DESIGN JWK 10/07 DRAW AA 10/07 QUANT. JK 03/08 |
| PROJECT NUMBER SP-0026(4)0 | CHECK DAP 02/08 CHECK DAP 02/08 CHECK DAP 03/08 |
| WEBER COUNTY C-966 DRG. NO. | DATE DATE DATE |
| SHT. 16 OF 39 | REVISIONS |

17-MAR-2008 DGN: F:\ec\ip\p\p\dms018581\2495_C-966-17_SteelGirder-012012.dgn



GIRDER SPLICE DETAIL

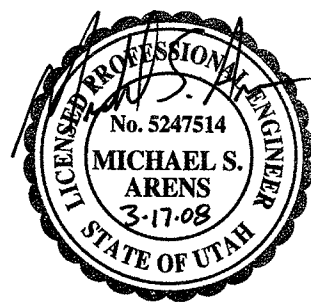


SECTION B-B
(BOLT SPACING SYMMETRIC ABOUT \bar{C} SPLICE)

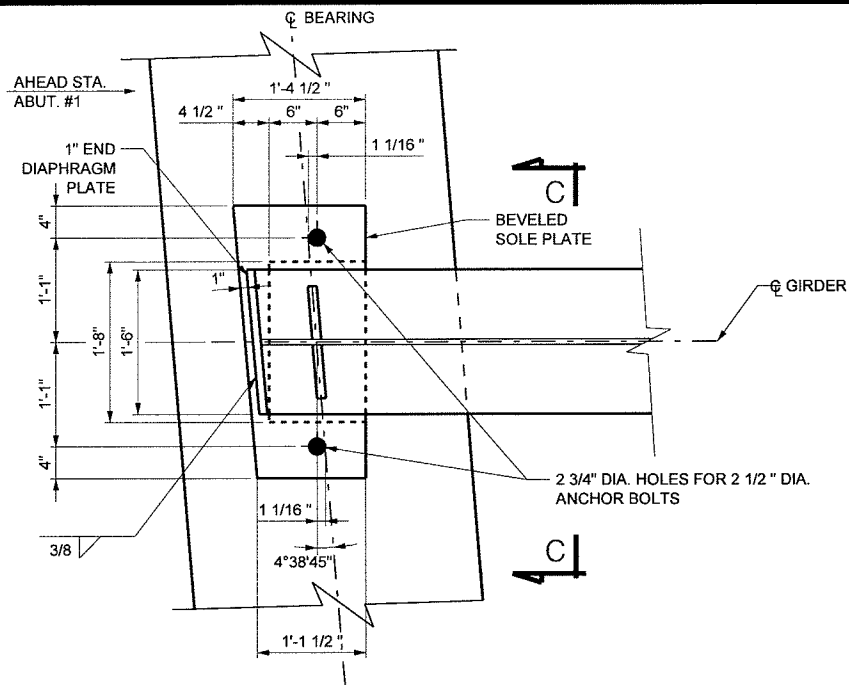
| QUANTITIES | |
|------------------|------------|
| STRUCTURAL STEEL | |
| SPLICE | 14,328 LBS |

GIRDER SPLICE NOTES:

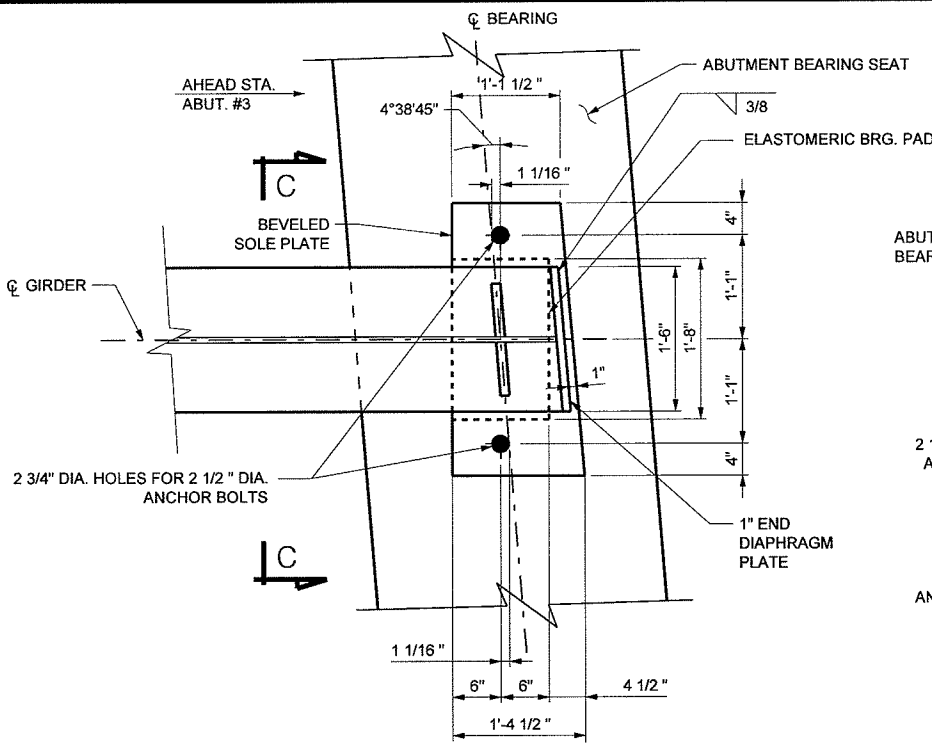
- PERFORM CHARPY V-NOTCH TOUGHNESS TESTS ON WT MEMBERS SUBJECT TO TENSION STRESS, INDICATED BY \oplus . TEST RESULTS MUST MEET REQUIREMENTS FOR ZONE 2.
- ALL BOLTED CONNECTIONS ARE SLIP-CRITICAL.
- ALL BOLTS ARE 1" DIA. CONFORMING TO ASTM A490. USE 1 1/8" DIA. HOLES UNLESS NOTED OTHERWISE.
- USE GRADE 50 STRUCTURAL STEEL FOR PLATES AND WT SECTIONS.
- SEE NOTES ON "STEEL GIRDER DETAILS 1 OF 2" FOR WELD NOTES.
- INCLUDE SPLICE CONNECTIONS IN THE CONTRACT PRICE FOR STRUCTURAL STEEL.
- END PLATES ARE PERPENDICULAR TO CENTERLINE OF GIRDER AND TO BE VERTICAL AFTER DEAD LOAD IS APPLIED.
- LINE UP BOTTOM EDGE OF END PLATES WITH BOTTOM FACE OF BOTTOM FLANGE.
- PROVIDE FULL CONTACT BETWEEN THE TWO END PLATES AT THE TOP EDGES OF THE END PLATES AFTER GIRDER PLACEMENT. TIGHTEN ONLY THE TOP TWO BOLTS OF THE END PLATES AFTER GIRDER PLACEMENT AND BEFORE WELDING GIRDERS TO SOLE PLATES AT ABUTMENTS.
- LOCATE BOLT HOLES IN WEB PLATES TO ALIGN WITH WT SECTION BOLT HOLES AFTER DECK PLACEMENT. THE WT SECTION TO BE PARALLEL TO TOP FLANGE IN THE VERTICAL PLANE AFTER DECK PLACEMENT.
- TIGHTEN ALL BOLTS AFTER DECK PLACEMENT, END PLATE BOLTS TO BE TIGHTENED BEFORE WT SECTION BOLTS.
- PLACE BOLT HEAD ON EXTERIOR WEB FACE OF EXTERIOR BEAMS.
- SEE "STEEL GIRDER DETAILS 1 OF 2" FOR GIRDER DETAILS AND ADDITIONAL NOTES.



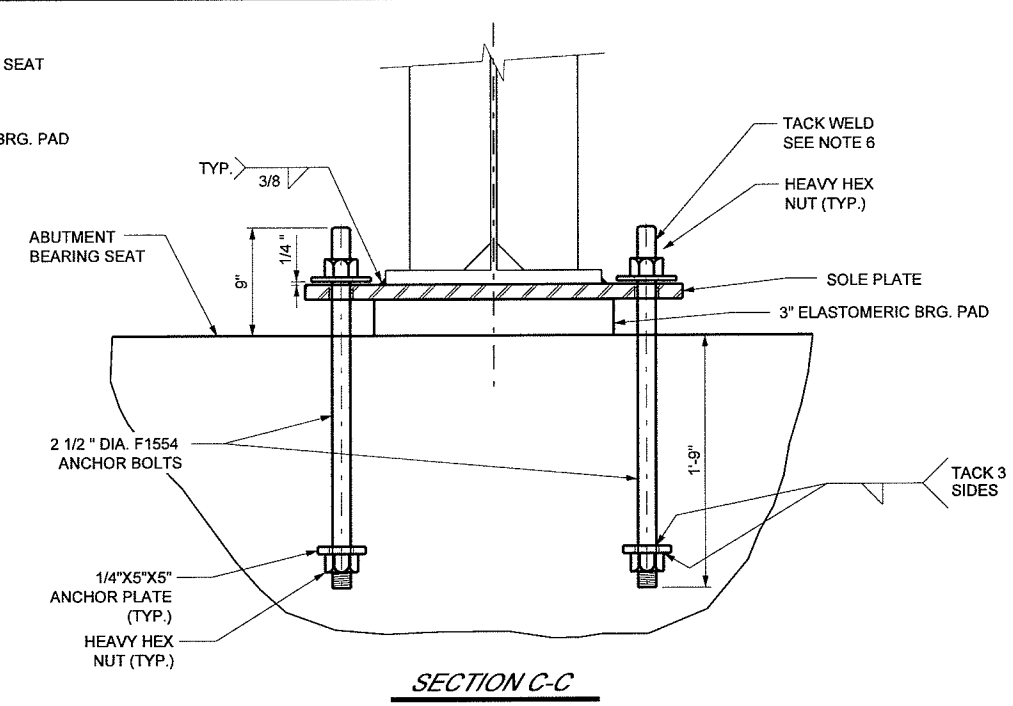
| | |
|--|--|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION PREPARED BY: MICHAEL BAKER JR. INC. | CHECK: JK 02/08 CHECK: JK 02/08 DESIGN: DAP 10/07 DRAWN: AA 10/07 QUANT.: JK 03/08 CHECK: MSA 03/08 |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 STEEL GIRDER DETAILS 2 OF 2 | PROJECT NUMBER: SP-0026(4)0 |
| WEBER COUNTY | C-966 DRG. NO. |
| SHT. 17 OF 39 | |



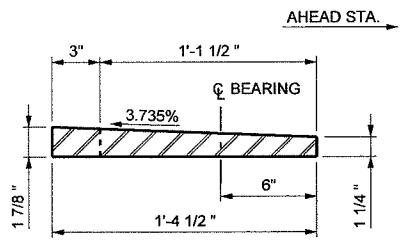
PARTIAL PLAN - ABUT. #1



PARTIAL PLAN - ABUT. #3

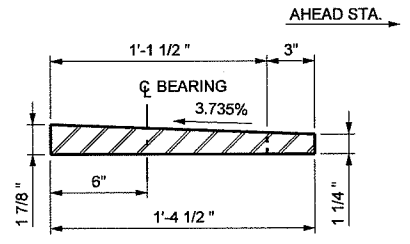


SECTION C-C



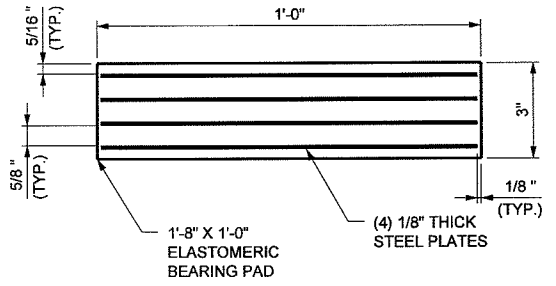
BEVELED SOLE PLATE DETAIL - ABUT. #1

(SEE PARTIAL PLAN FOR HOLE LOCATIONS AND BEVELED SOLE PLATE PLAN)

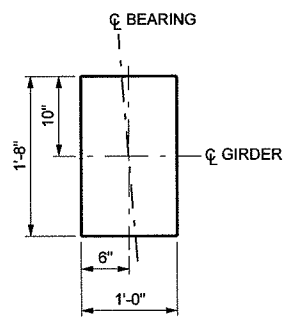


BEVELED SOLE PLATE DETAIL - ABUT. #3

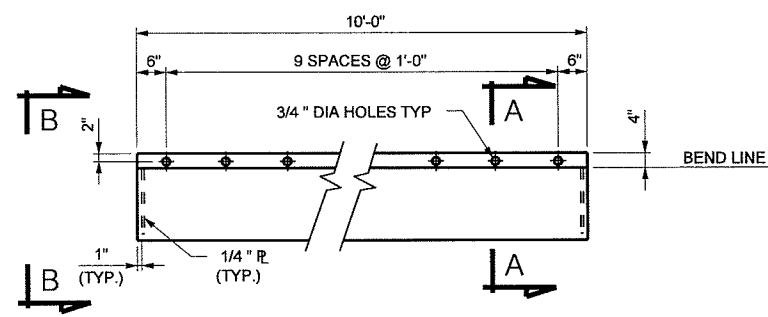
(SEE PARTIAL PLAN FOR HOLE LOCATIONS AND BEVELED SOLE PLATE PLAN)



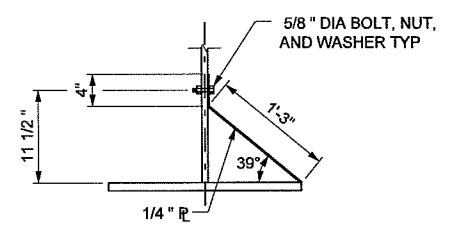
ELASTOMERIC BEARING PAD DETAIL - ELEVATION



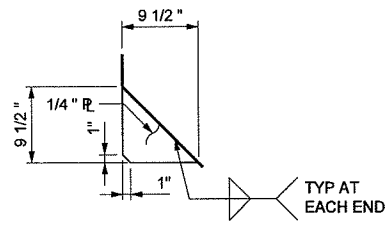
ELASTOMERIC PAD DETAIL - PLAN



GRAFFITI COVER DETAIL



SECTION A-A



SECTION B-B



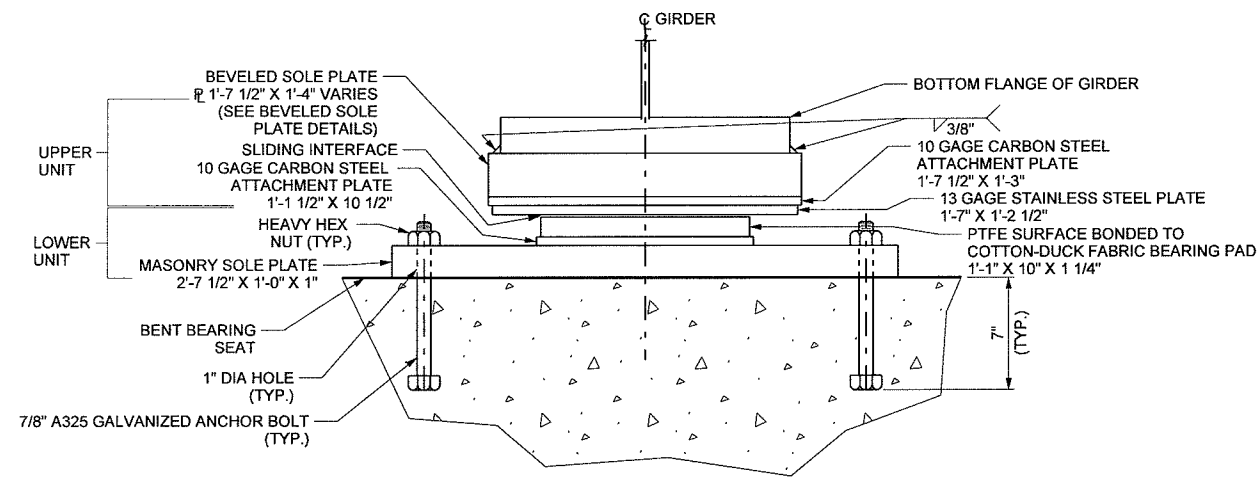
NOTES:

1. INCLUDE ANCHOR BOLTS AND BEARING ASSEMBLIES IN THE CONTRACT PRICE FOR STRUCTURAL STEEL.
2. ELASTOMER FOR BEARING PADS 50 DUROMETER.
3. USE ASTM F-1554-99, GRADE 105 ANCHOR BOLTS.
4. GALVANIZE NUTS, WASHERS, AND ANCHOR BOLTS IN ACCORDANCE WITH AASHTO M232 (ASTM A153). ALL GALVANIZED STEEL THREADS ARE TO BE FREE FROM DEFECTS ALLOWING NUTS TO BE FREE RUNNING BY HAND FOR THE ENTIRE LENGTH OF THREADS.
5. FILL ANCHOR BOLT SOLE PLATE HOLES WITH SILICONE JOINT SEALER.
6. PROVIDE 1/4" GAP BETWEEN TOP OF BEVELED SOLE PLATE AND BOTTOM OF NUT AFTER BOLT IS TACK WELDED.
7. FIELD WELDING OF THE BEVELED SOLE PLATE TO BE CONTROLLED SO THAT THE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

| | | | |
|--|--|-----------------|-----------|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR. INC. | CHECK DAP 02/08 | REVISIONS |
| APPROVAL RECOMM. 3-17-08 | DESIGN JK 10/07 | CHECK DAP 02/08 | NO. |
| APPROVED FOR USE DATE 3/17/08 | DRAWN AA 10/07 | CHECK DAP 02/08 | DATE |
| BY [Signature] | QUANT. | CHECK | REMARKS |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. | PROJECT NUMBER SP-0026(4)0 | | |
| RIVERDALE ROAD OVER I-84 | | | |
| ABUTMENT BEARING DETAILS | | | |
| WEBER COUNTY | | | |
| C-966 DRG. NO. | | | |
| SHT. 18 OF 39 | | | |

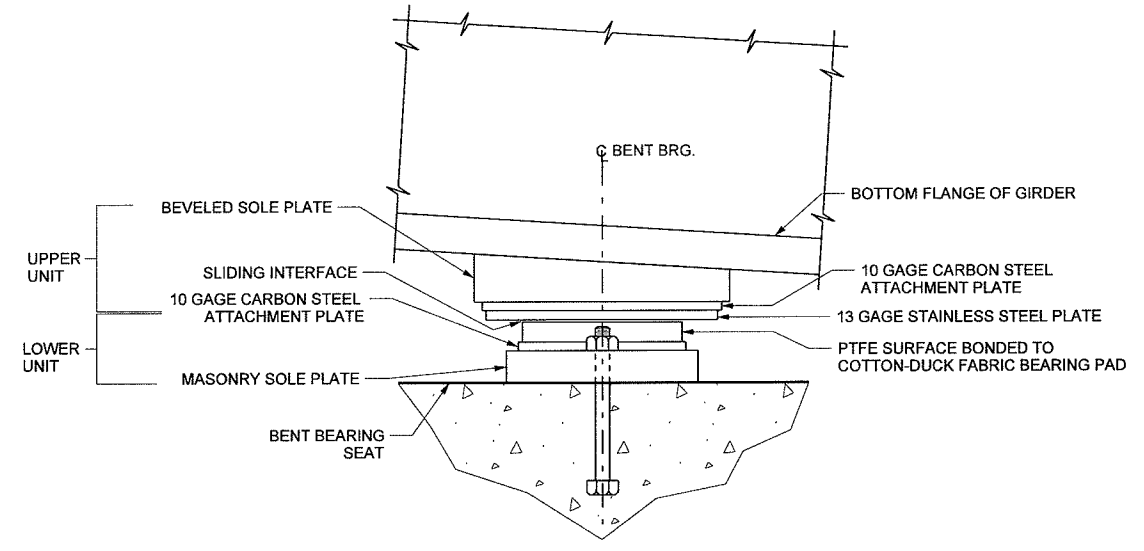
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17-MAR-2008 DCN: F:\as\IP: P:\P\dm\01856\2495_C-966-19_BentBearing.dwg

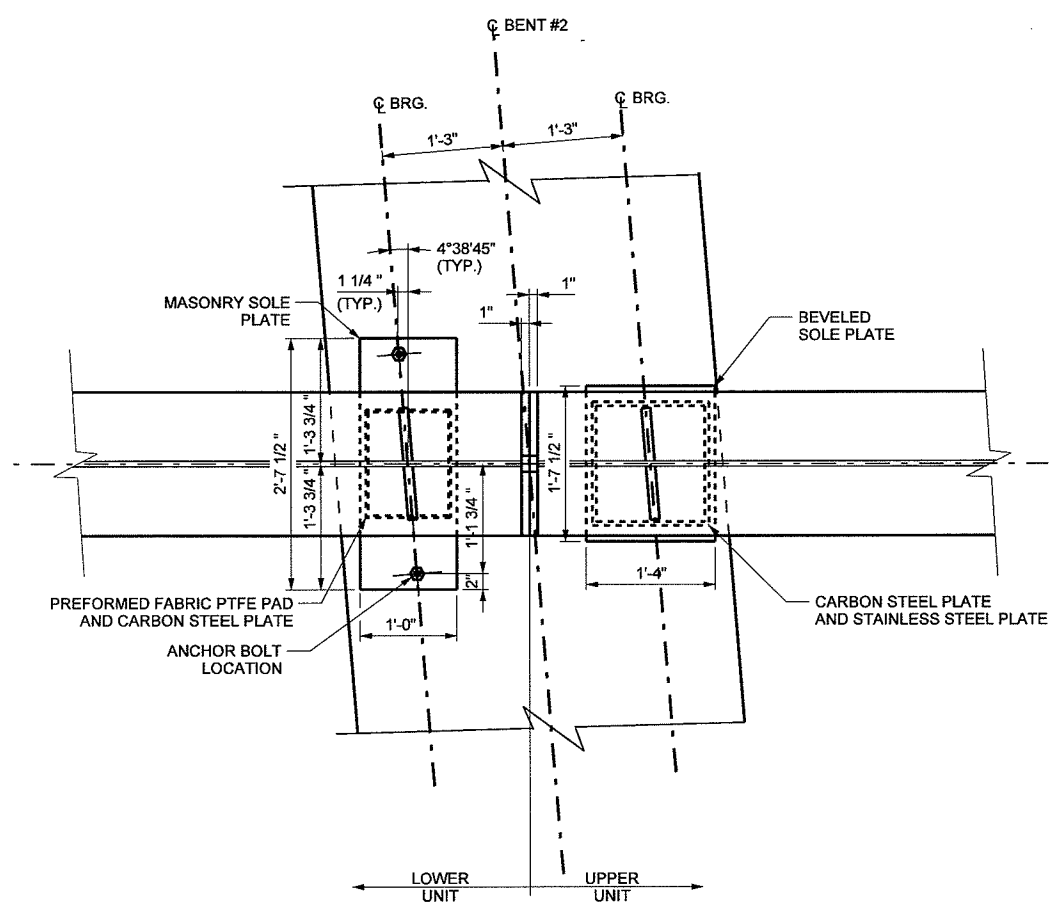


BENT BEARING END VIEW

(DIMENSIONS PROVIDED ARE PERP. TO WEB X PARALLEL TO WEB X THICK.)

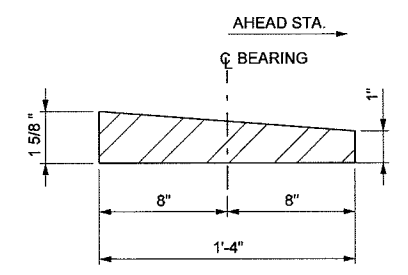


BENT BEARING SIDE VIEW



PARTIAL PLAN AT BENT

(BEARING COMPONENTS SIMILAR, UPPER AND LOWER UNIT SHOWN SEPARATE FOR CLARITY, SPLICE NOT SHOWN FOR CLARITY)



BEVELED SOLE PLATE DETAIL

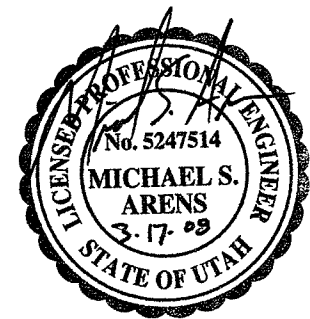
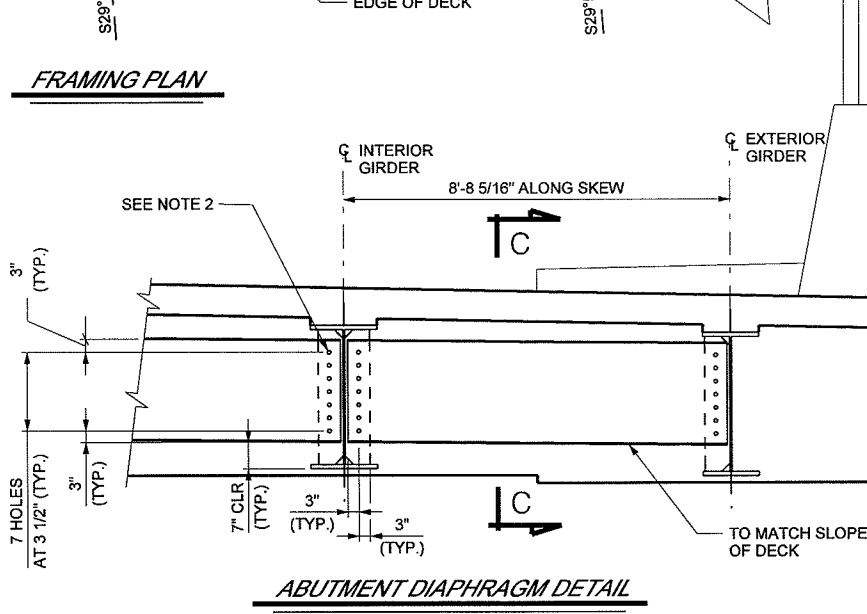
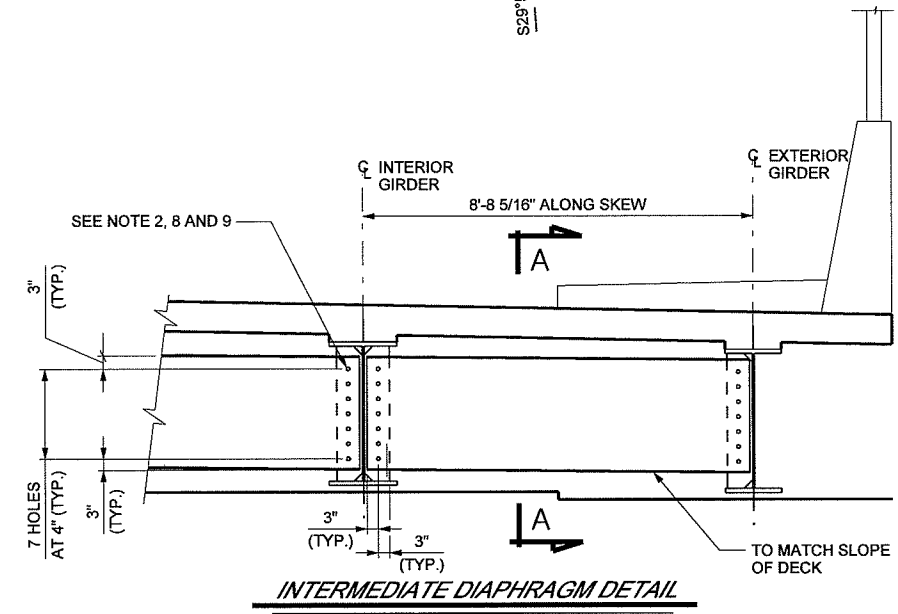
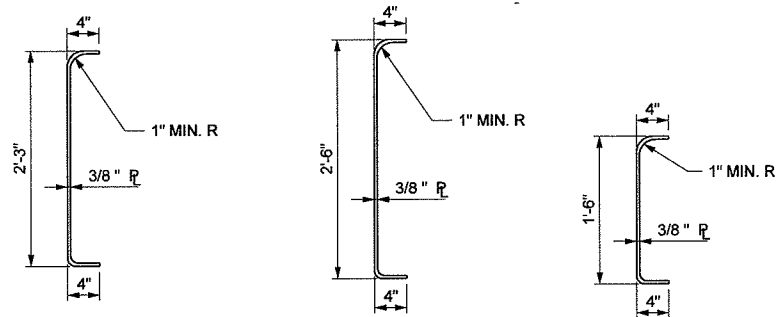
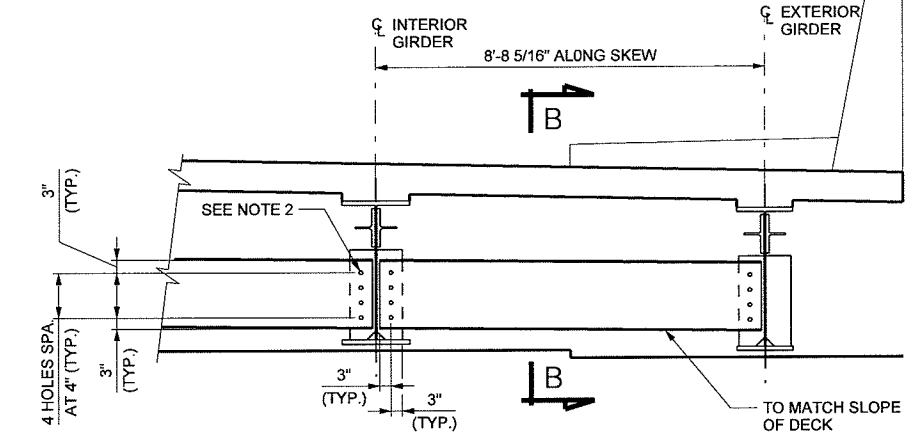
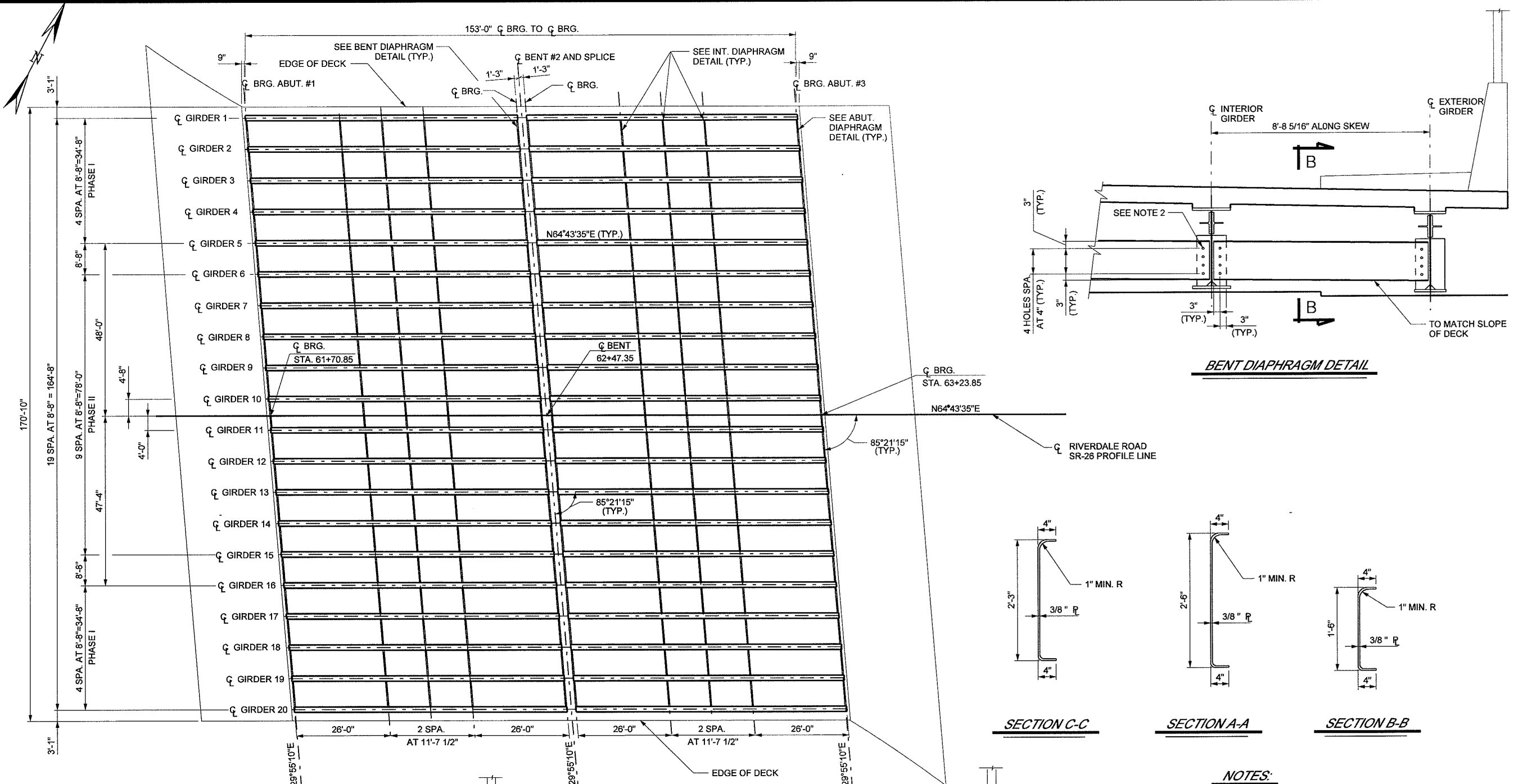


NOTES:

1. USE FABREEKA SBX STRUCTURAL EXPANSION BEARING OR EQUIVALENT UNLUBRICATED PAD RATED FOR BRIDGE USE.
2. USE TYPE A304 STAINLESS STEEL WITH A SURFACE FINISH OF 8 MICRO-IN RMS OR BETTER. CONTRACTOR TO ENSURE STAINLESS STEEL MEETS OR EXCEEDS PTFE BEARING FABRICATION REQUIREMENTS.
3. BEARING FABRICATOR TO PROVIDE PTFE SURFACE THICKNESS. THE MINIMUM ALLOWABLE THICKNESS IS 0.1875 IN AS PER AASHTO 14.7.2.3.1.
4. BOND PTFE TO COTTON DUCK BEARING PAD WITH DUROMETER HARDNESS OF 90 WITH A METHOD AND MATERIALS APPROVED BY AASHTO. COTTON DUCK PAD SHOULD MEET MILITARY SPECIFICATION MIL-C-882.
5. MATE SLIDING SURFACES IN ACCORDANCE WITH AASHTO 14.7.2.6.2.
6. BEARING UNITS INCLUDING ALL ACCESSORIES TO BE INCLUDED IN THE CONTRACT PRICE FOR STRUCTURAL STEEL.

| | | | | | |
|--|------------------------------|--|-----------------|-----------------|-----------|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | | PREPARED BY: MICHAEL BAKER JR. INC. | CHECK DAP 02/08 | CHECK DAP 02/08 | REVISIONS |
| DESIGN JK 02/08 | DRAWN GCK 02/08 | CHECK DAP 02/08 | CHECK DAP 02/08 | DATE | BY |
| APPROVAL RECORDING DATE 3-17-08 | SENDER DESIGN ENGR DATE 3/18 | APPROVED FOR USE BY UDOT DATE | QUANT. | NO. | REMARKS |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD | RIVERDALE ROAD OVER I-84 | BENT BEARING DETAILS | PROJECT NUMBER | SP-0026(4)0 | |
| WEBER COUNTY | C-966 | DRG. NO. | SHT. 19 | OF 39 | |

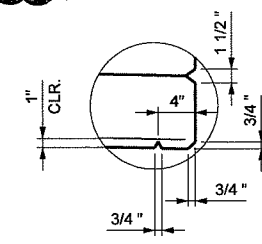
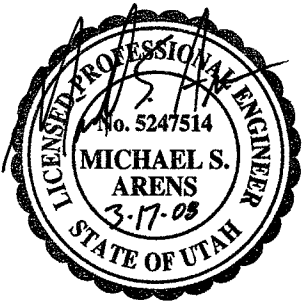
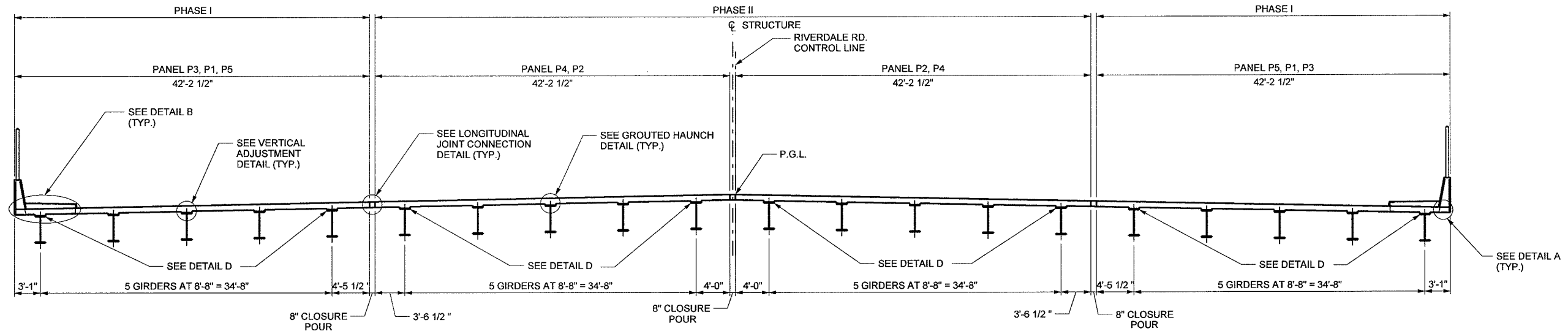
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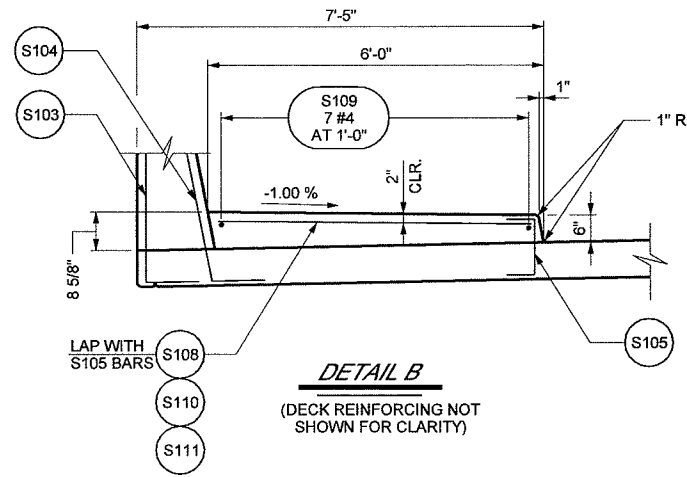
| QUANTITIES STRUCTURAL STEEL | |
|-----------------------------|------------|
| DIAPHRAGMS | 73,540 LBS |

- NOTES:**
- ALL BOLTED CONNECTIONS ARE SLIP CRITICAL.
 - ALL BOLTS ARE 7/8" DIA. CONFORMING TO ASTM A325. USE 15/16" DIA. HOLES UNLESS NOTED OTHERWISE.
 - BLAST CLEAN (CLASS A) ALL BOLTED CONTACT SURFACES.
 - INTERMEDIATE & END DIAPHRAGMS ARE PARALLEL TO BEARING LINE.
 - CENTERLINES OF GIRDERS ARE PARALLEL TO BEARING: N64°43'35"E
 - WEBS, FLANGES AND BEARING STIFFENERS = GRADE 50 STEEL. INTERMEDIATE DIAPHRAGMS AND INTERMEDIATE STIFFENERS = GRADE 36 STEEL MIN.
 - INCLUDE DIAPHRAGM CONNECTIONS IN THE CONTRACT PRICE FOR STRUCTURAL STEEL.
 - PLACE INTERMEDIATE DIAPHRAGMS THAT ARE PRESENT IN BETWEEN GIRDERS 5 AND 6 AND IN BETWEEN GIRDERS 15 AND 16 AFTER POST-TENSIONING OF PHASE II DECK PANELS AND BEFORE PLACEMENT OF CLOSURE POUR IN BETWEEN PHASES. SEE ASSEMBLY PROCEDURE ON "DECK PLAN" FOR ADDITIONAL NOTES.
 - PROVIDE 7/8" BOLT IN A SHORT-SLOT (15/16" X 1 1/4") SLOTTED HOLE IN STIFFENER AND DIAPHRAGM OF INTERMEDIATE DIAPHRAGMS THAT ARE PRESENT IN BETWEEN GIRDERS 5 AND 6 AND IN BETWEEN GIRDERS 15 AND 16.

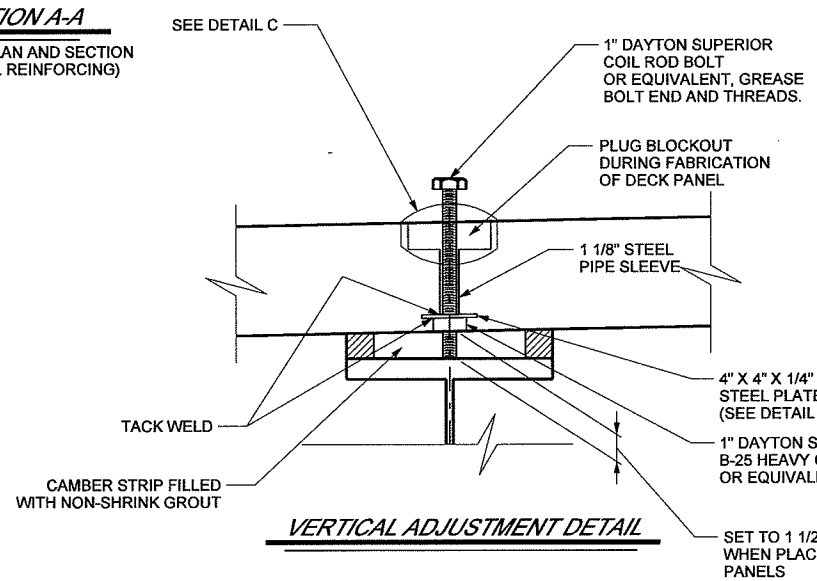
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|--|--|------------------------|-----|-----------|-------|
| UTAH DEPARTMENT OF TRANSPORTATION | | PREPARED BY: | | REVISIONS | |
| SALT LAKE CITY, UTAH | | MICHAEL BAKER JR. INC. | | | |
| STRUCTURES DIVISION | | DESIGN | JWK | 10/07 | CHECK |
| | | DRAWN | AA | 10/07 | DAP |
| | | QUANT. | JK | 03/08 | DAP |
| | | BY | | DATE | |
| | | NO. | | | |
| | | REMARKS | | | |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. | | PROJECT NUMBER | | | |
| RIVERDALE ROAD OVER I-84 | | SP-0026(4)0 | | | |
| FRAMING PLAN | | WEBER COUNTY | | | |
| | | C-966 DRG. NO. | | | |
| | | SHT. 20 OF 39 | | | |



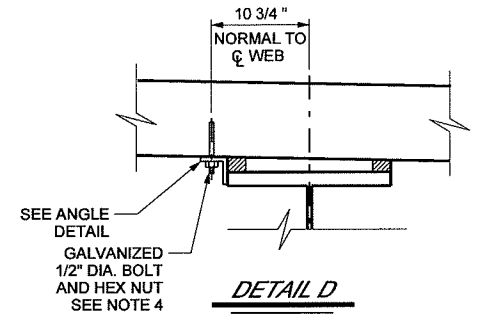
DETAIL A



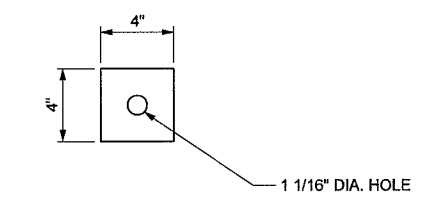
DETAIL B
(DECK REINFORCING NOT SHOWN FOR CLARITY)



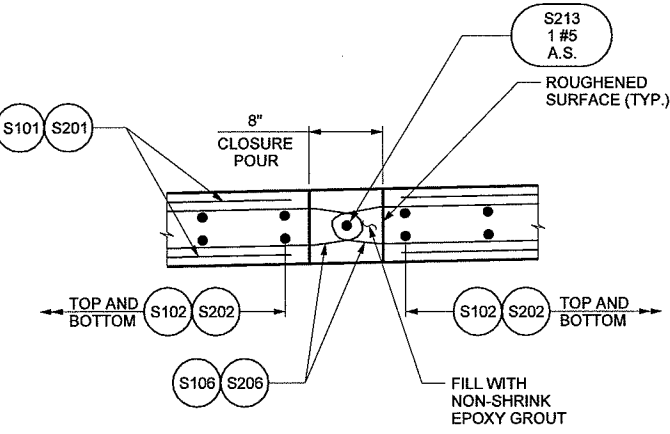
VERTICAL ADJUSTMENT DETAIL



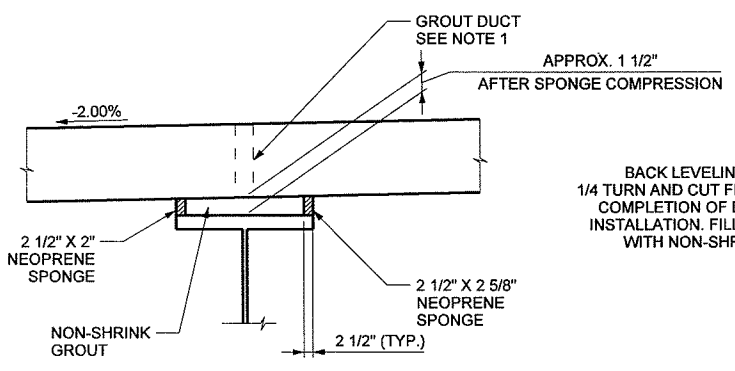
DETAIL D



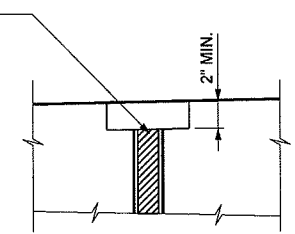
WASHER DETAIL



LONGITUDINAL JOINT CONNECTION DETAIL



GROUTED HAUNCH DETAIL



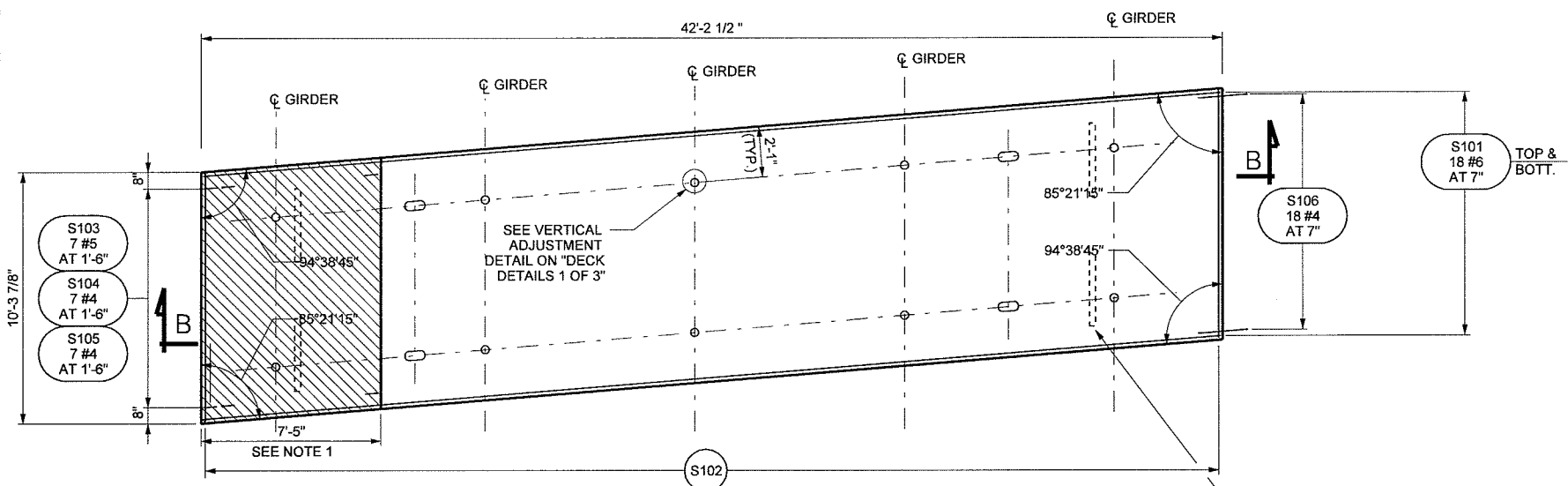
DETAIL C

- NOTES:**
1. PROVIDE GROUT PUMP/BLEED HOLES OVER TOP FLANGE OF EACH GIRDER. CONTRACTOR WILL DETERMINE REQUIRED DIAMETER. PLACE HOLES TO AVOID P.T. DUCTS.
 2. PLACE VERTICAL ADJUSTMENT SCREW WITHIN 5" OF ϕ OF WEB OF EACH GIRDER AS SHOWN ON "DECK DETAILS 2 OF 3".
 3. USE VERTICAL ADJUSTMENT SCREWS TO SET PANELS AT PROPER ELEVATION. SET EDGE OF PANELS TO MATCH EXISTING PHASE I PANELS WHEN PLACING PHASE II PANELS. CONTRACTOR TO ENSURE PANEL NEVER HAS CANTILEVERED SECTION GREATER THAN 8'-0" AND INTERIOR SPAN GREATER THAN 26'-0" DURING ADJUSTMENT.
 4. USE CONCRETE WEDGE ANCHOR OR THREADED ANCHOR INSERT. ANCHOR MUST BE RATED TO AN ULTIMATE LOAD OF 5 KIP SHEAR AND 7 KIP TENSION. PEEN THREADS AFTER TIGHTENING BOLT. CAST ANCHOR IN PLACE AVOIDING P.T. DUCTS.

| | | | | |
|--|--|--------------------------|--------------------------|-----------|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR. INC. | CHECK MSA 02/08 | CHECK MSA 02/08 | REVISIONS |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 | DESIGN JWK 02/08 | CHECK MSA 02/08 | CHECK MSA 02/08 | NO. |
| DECK DETAILS 1 OF 3 | DATE 3/17/08 | DATE 3/18/08 | DATE | BY |
| PROJECT NUMBER SP-0026(4)0 | APPROVED BY: [Signature] | APPROVED BY: [Signature] | APPROVED BY: [Signature] | DATE |
| WEBER COUNTY | C-966 | DRG. NO. | | |
| SHT. 22 | OF 39 | | | |

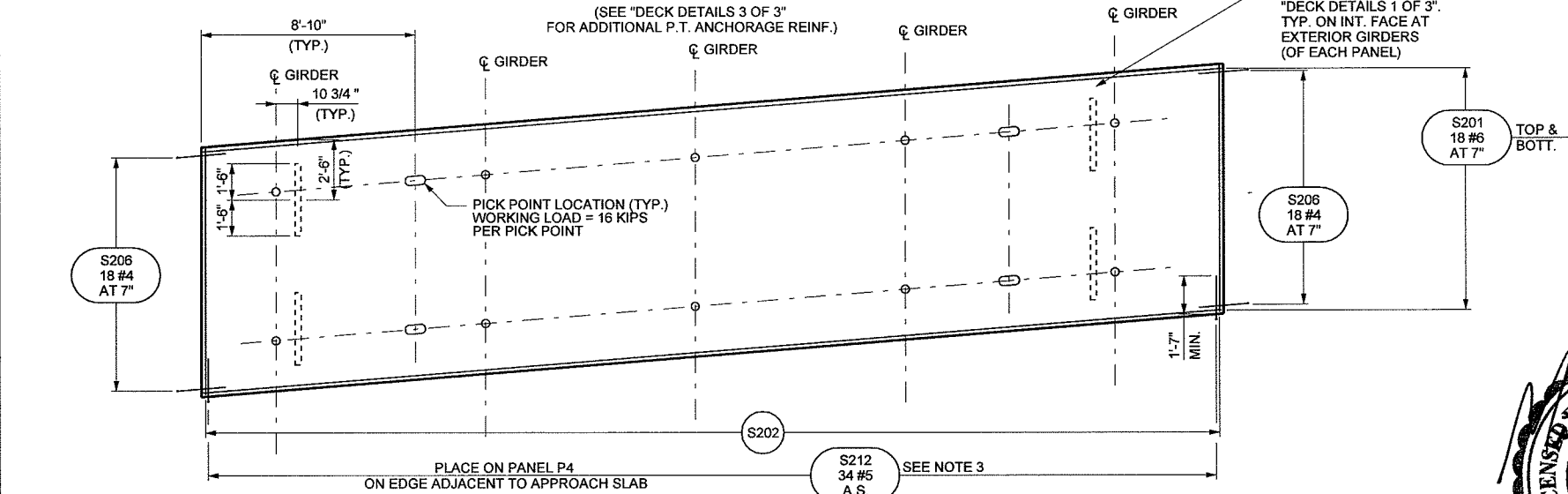
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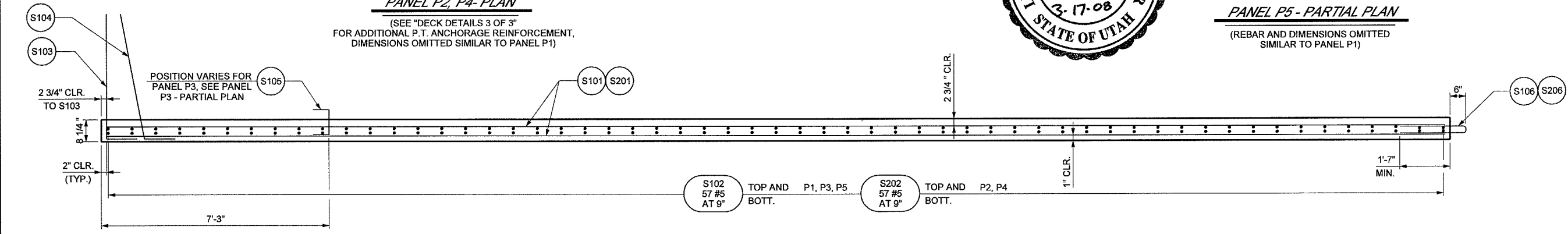
PANEL P1 - PLAN

(SEE "DECK DETAILS 3 OF 3" FOR ADDITIONAL P.T. ANCHORAGE REINF.)



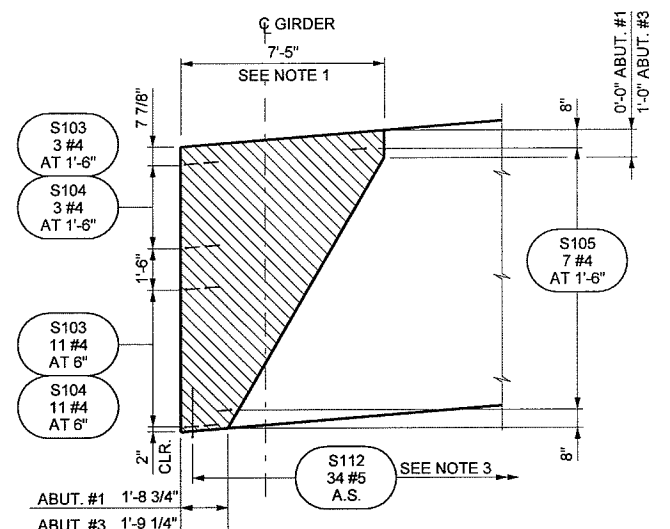
PANEL P2, P4 - PLAN

(SEE "DECK DETAILS 3 OF 3" FOR ADDITIONAL P.T. ANCHORAGE REINFORCEMENT, DIMENSIONS OMITTED SIMILAR TO PANEL P1)



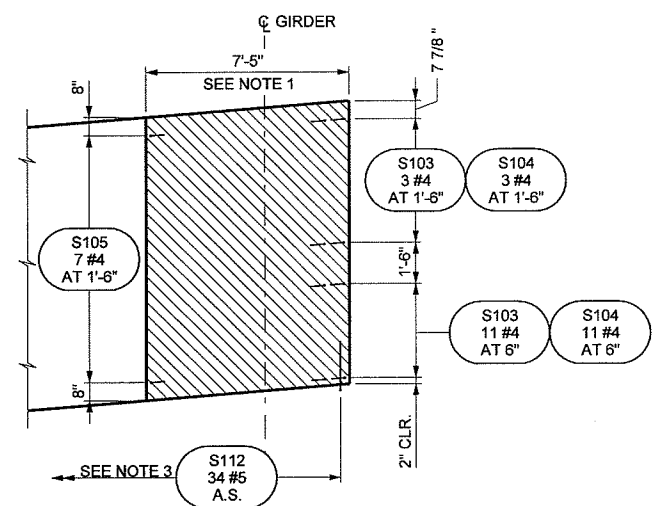
SECTION B-B

(P1 SHOWN, ALL OTHER PANELS SIMILAR)



PANEL P3 - PARTIAL PLAN

(REBAR AND DIMENSIONS OMITTED SIMILAR TO PANEL P1)



PANEL P5 - PARTIAL PLAN

(REBAR AND DIMENSIONS OMITTED SIMILAR TO PANEL P1)

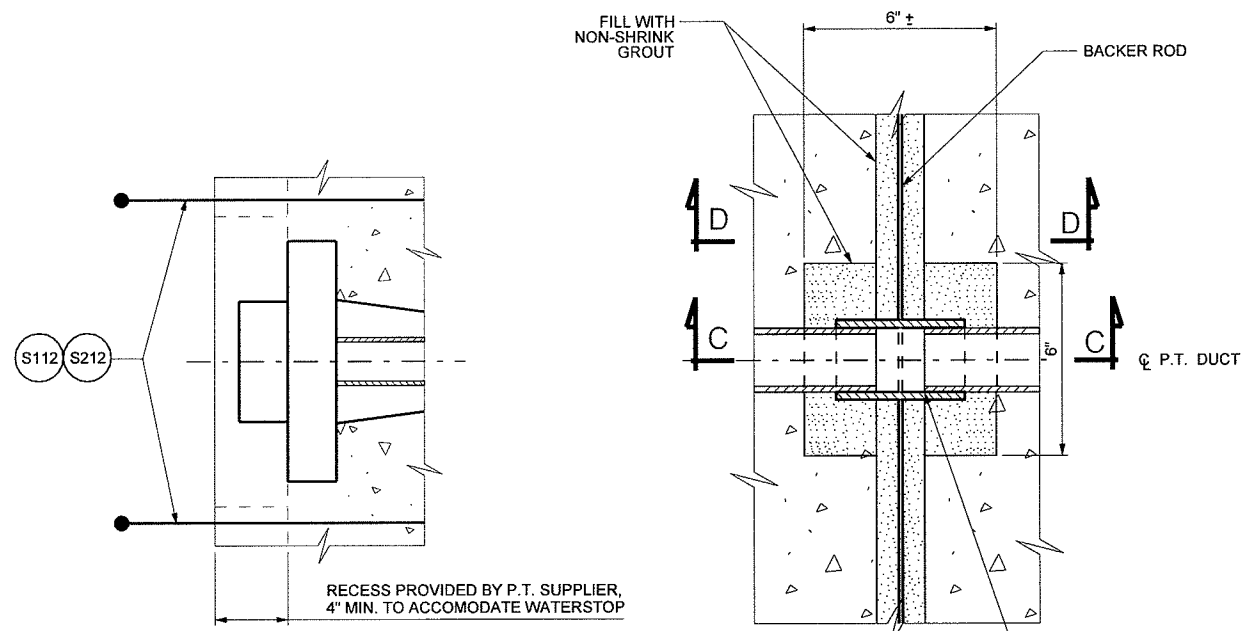


| PRECAST DECK QUANTITIES (FOR INFORMATION ONLY) | |
|---|----------|
| SINGLE PANEL | 11.09 CY |
| TOTAL | 666 CY |

NOTES:

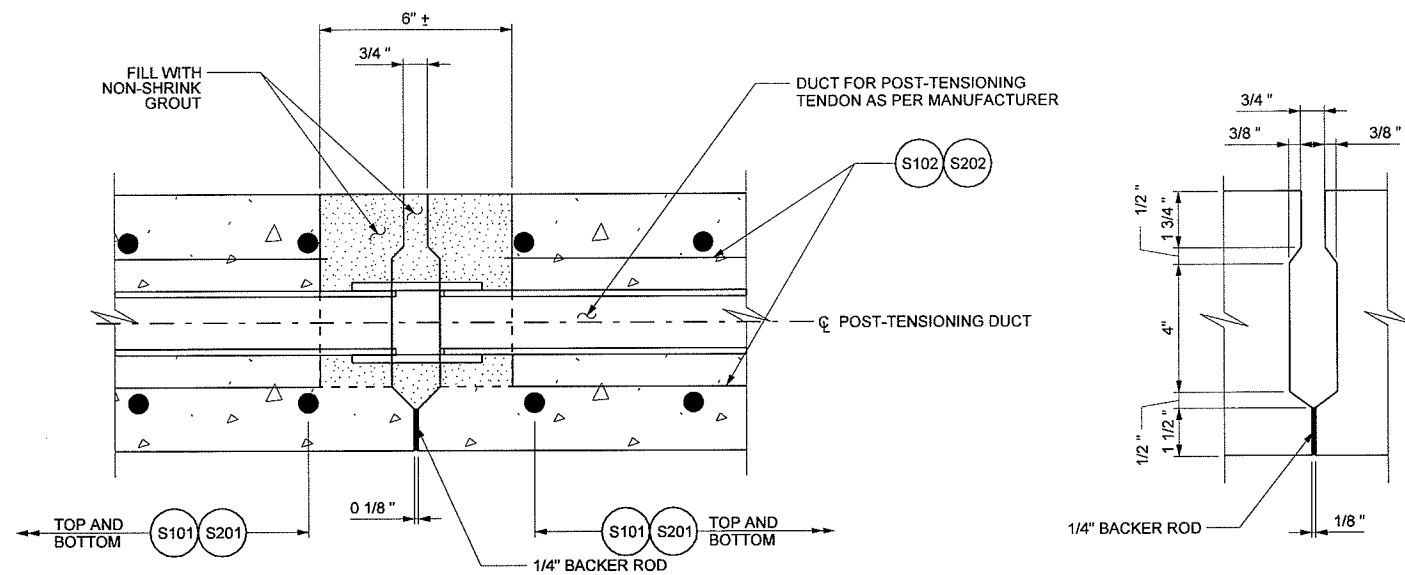
- ROUGHEN SURFACES UNDER PARAPET AND SIDEWALK AT EXTERIOR SIDES OF PANELS P1, P3 AND P5. SEE "DECK PLAN".
- SEE "DECK PLAN" AND "DECK DETAILS 3 OF 3" FOR POST-TENSIONING DUCT SPACING AND ANCHORAGE ZONE REINFORCING.
- PLACE TWO S112 OR S212 BARS BETWEEN EACH PT ANCHOR AND ONE S112 OR S212 BAR BETWEEN EDGE OF PANEL AND EXTERIOR ANCHOR. SEE "END DIAPHRAGM DETAILS" FOR PLACEMENT.

| | | | |
|---|--|--|-------------------------------------|
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 DECK DETAILS 2 OF 3 PROJECT NUMBER SP-0026(4) | PREPARED BY: MICHAEL BAKER JR. INC. STRUCTURES DIVISION APPROVAL RECORDING DATE: 3/19/08 APPROVED FOR USE DATE: 3/16/08 BY: [Signature] | UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH DESIGN: JJK 02/08 DRAWN: AA 02/08 QUANT.: JJK 02/08 CHECK: MSA 02/08 CHECK: MSA 02/08 CHECK: MSA 02/08 | REVISIONS NO. DATE BY REMARKS |
| SHEET 23 OF 39 | | | |



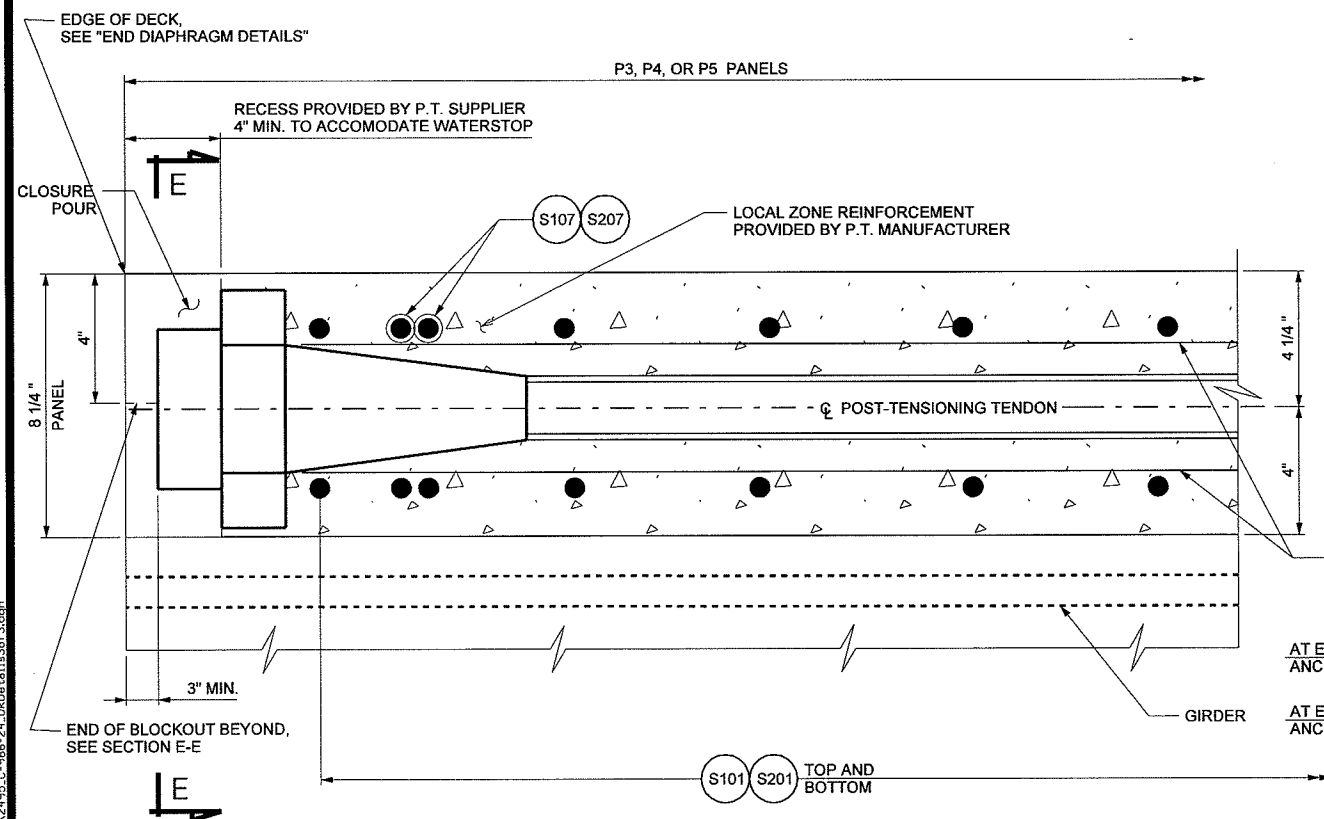
PRESTRESSING TENDON DETAIL PLAN VIEW

DETAIL AT DUCT CONNECTION

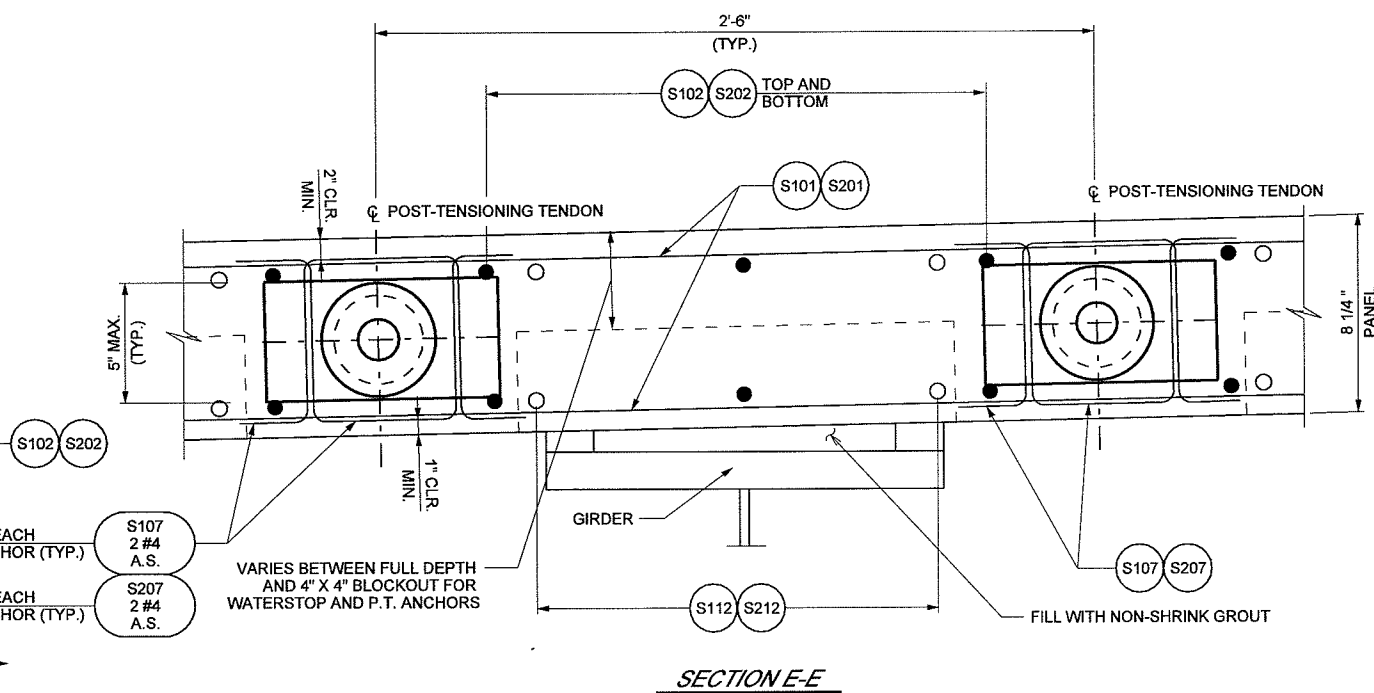


SECTION C-C

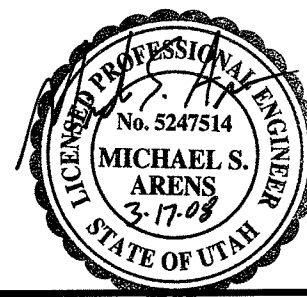
SECTION D-D



PRESTRESSING TENDON DETAIL IN END PANELS



SECTION E-E

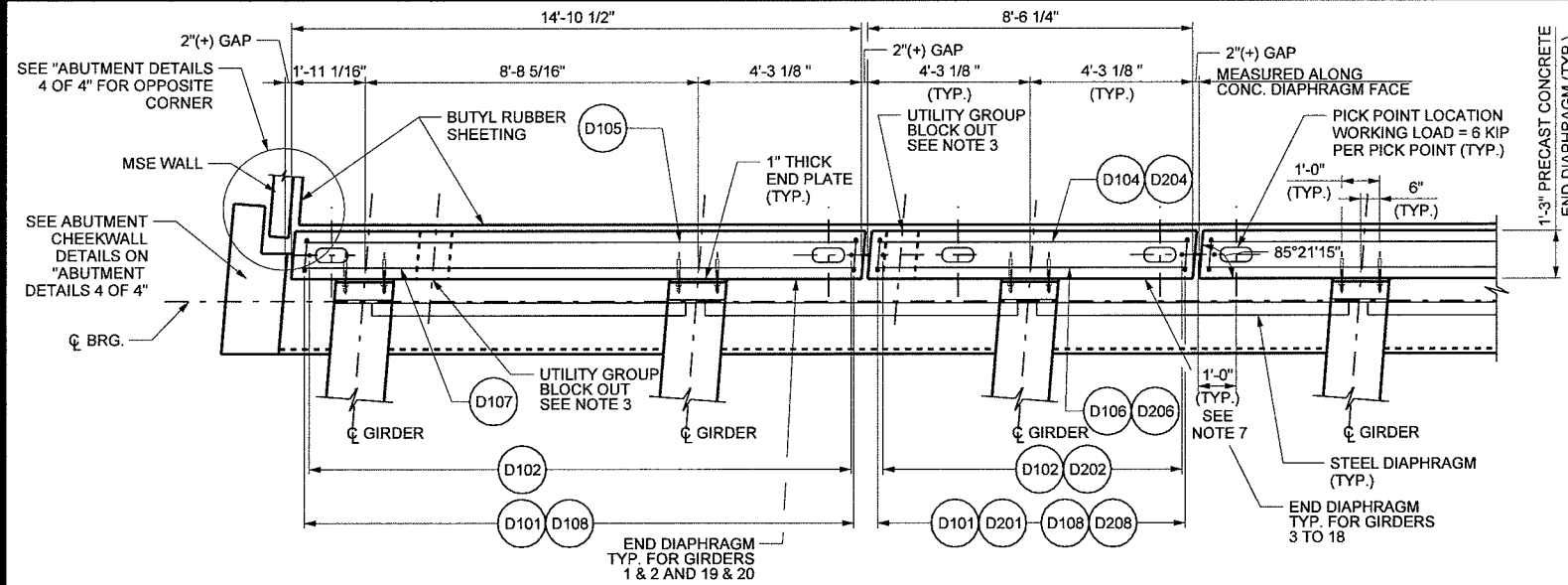


NOTES:

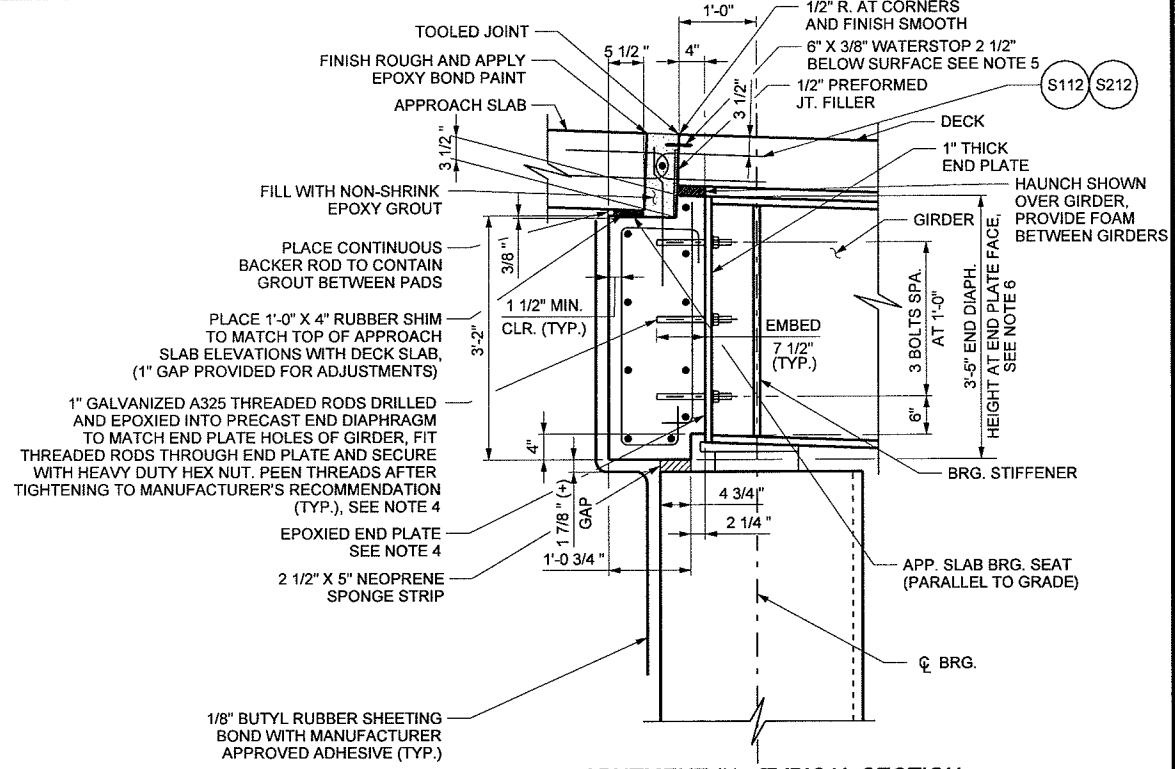
1. ADJUST REBAR AT P.T. ANCHORS.
2. ADDITIONAL REINFORCEMENT AT ANCHORAGE ZONES IS NOT SHOWN. SEE POST-TENSIONING NOTES ON "DECK PLAN".
3. POST-TENSIONING SUPPLIER TO PROVIDE DUCT JOINT BLEED HOLE LOCATIONS REQUIRED FOR GROUTING.

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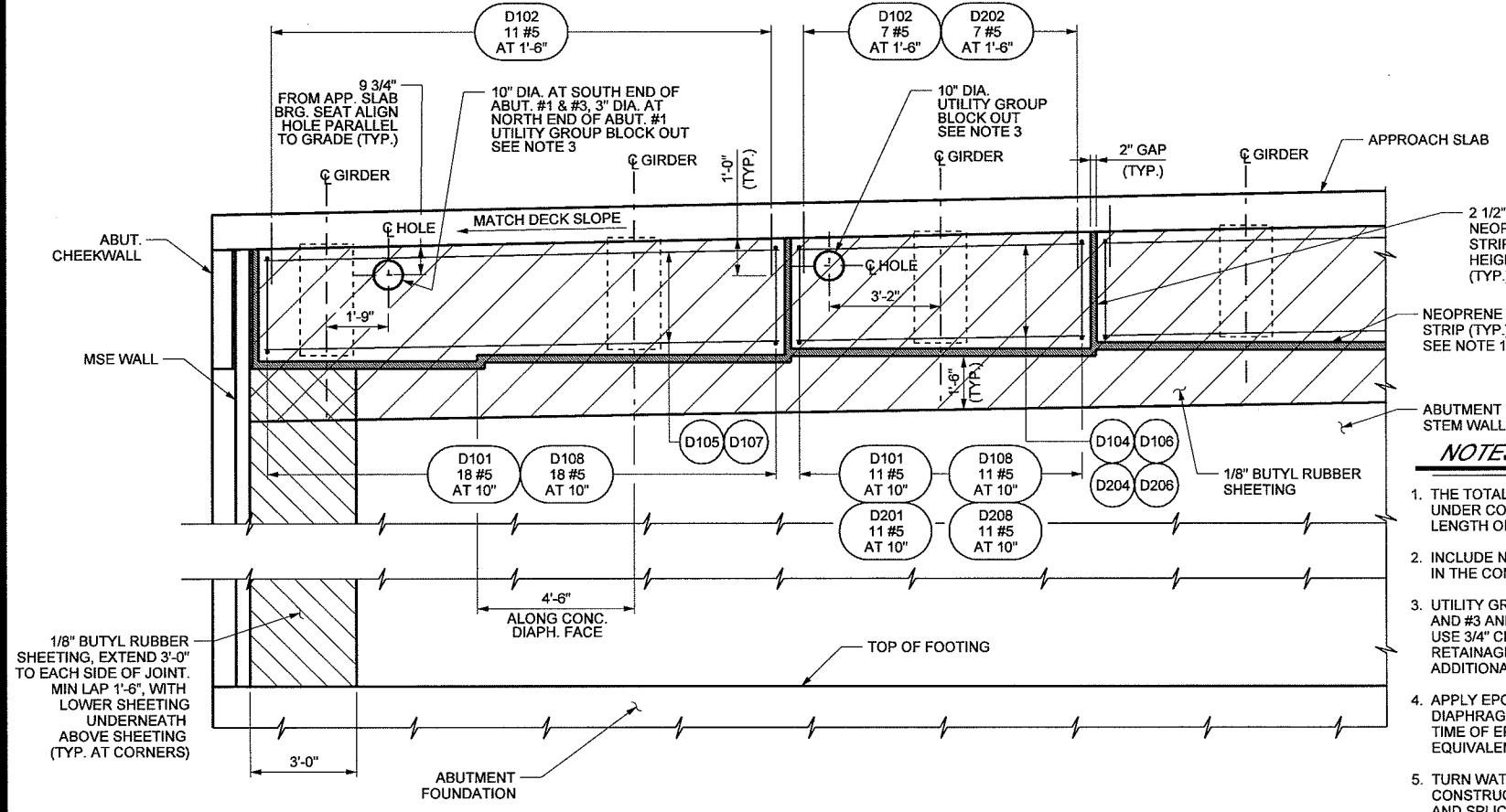
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|--|--|--------------|--|------------------------|--|
| UTAH DEPARTMENT OF TRANSPORTATION | | PREPARED BY: | | MICHAEL BAKER JR. INC. | |
| SALT LAKE CITY, UTAH | | DESIGN | | JK 02/08 | |
| STRUCTURES DIVISION | | DRAWN | | AA 02/08 | |
| APPROVAL | | DATE | | 3-17-08 | |
| FOR USE | | BY | | 3/16/08 | |
| PROJECT NUMBER | | QUANT. | | JK 02/08 | |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. | | CHECK | | MSA 02/08 | |
| RIVERDALE ROAD OVER I-84 | | CHECK | | MSA 02/08 | |
| DECK DETAILS 3 OF 3 | | CHECK | | MSA 02/08 | |
| SP-0026(4)0 | | CHECK | | MSA 02/08 | |
| WEBER COUNTY | | DATE | | BY | |
| C-966 | | NO. | | REVISIONS | |
| DRG. NO. | | DATE | | BY | |
| SHT. 24 | | OF 39 | | REMARKS | |



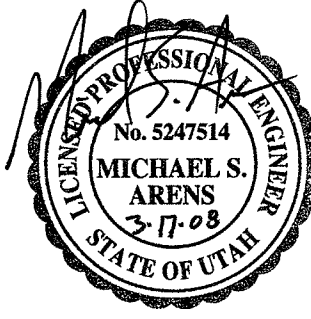
ABUTMENT #1 END DIAPHRAGM - PARTIAL PLAN
(ABUTMENT #3 SIMILAR)



ABUTMENT #1 - TYPICAL SECTION
(SEE ABUT #3 - TYPICAL SECTION FOR REINFORCEMENT)

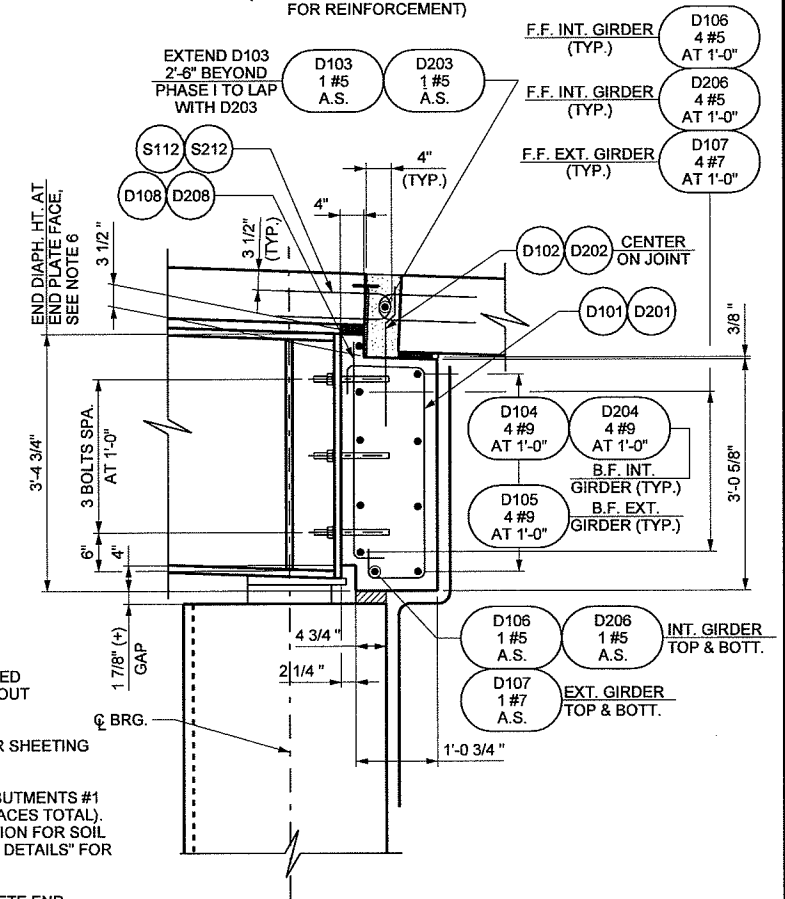


ABUTMENT #1 END DIAPHRAGM - PARTIAL ELEVATION VIEW LOOKING UP STATION
(BACK FACE SHOWN, ABUTMENT #3 SIMILAR)



NOTES:

1. THE TOTAL LENGTH OF NEOPRENE SPONGE STRIP PLACED UNDER CONCRETE DIAPHRAGM TO MATCH THE OUT TO OUT LENGTH OF ABUTMENT DIAPHRAGMS.
2. INCLUDE NEOPRENE SPONGE STRIP AND BUTYL RUBBER SHEETING IN THE CONTRACT PRICE FOR STRUCTURAL CONCRETE.
3. UTILITY GROUP BLOCK OUT 2 PLACES SOUTH END OF ABUTMENTS #1 AND #3 AND ONE ON NORTH END OF ABUTMENT #1 (5 PLACES TOTAL). USE 3/4" CHAMFER (TYP.). INSTALL RIGID FOAM INSULATION FOR SOIL RETAINAGE AFTER CONDUIT IS INSTALLED. SEE "UTILITY DETAILS" FOR ADDITIONAL DETAILS.
4. APPLY EPOXY TO END PLATE SURFACE BEFORE CONCRETE END DIAPHRAGM PLACEMENT, TIGHTEN BOLTS WITHIN THE OPEN CONTACT TIME OF EPOXY. USE SIKADUR 32, HI MOD L PL OR APPROVED EQUIVALENT PER MANUFACTURER'S RECOMMENDATIONS.
5. TURN WATERSTOP ENDS UP 3" MIN. INTO PARAPET AND BETWEEN CONSTRUCTION PHASES EXTEND WATER STOP REQUIRED LENGTH AND SPLICE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS WITHIN THE CLOSURE POUR WIDTH.
6. CONCRETE DIAPHRAGM SECTION DIMENSIONS SHOWN ARE AT CENTERLINE GIRDER. TOP OF DIAPHRAGM TO MATCH DECK SLOPE.
7. ADJUST PICK POINTS TO A MINIMUM OF 1'-6" FROM THE EDGE OF ANY UTILITY BLOCKOUTS.



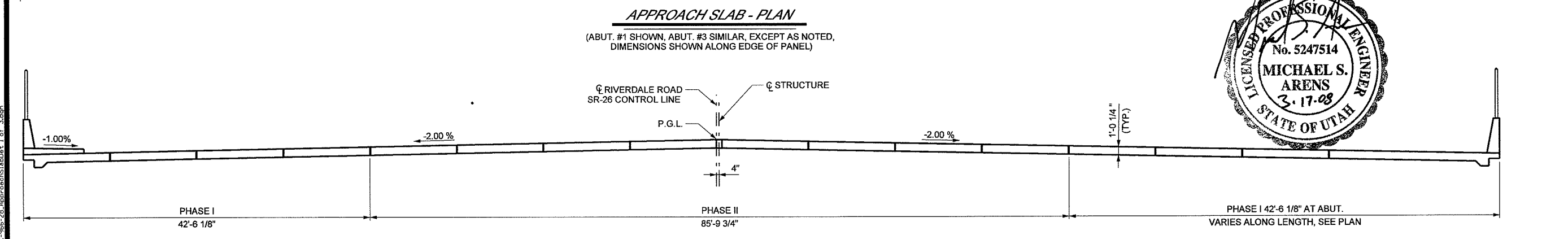
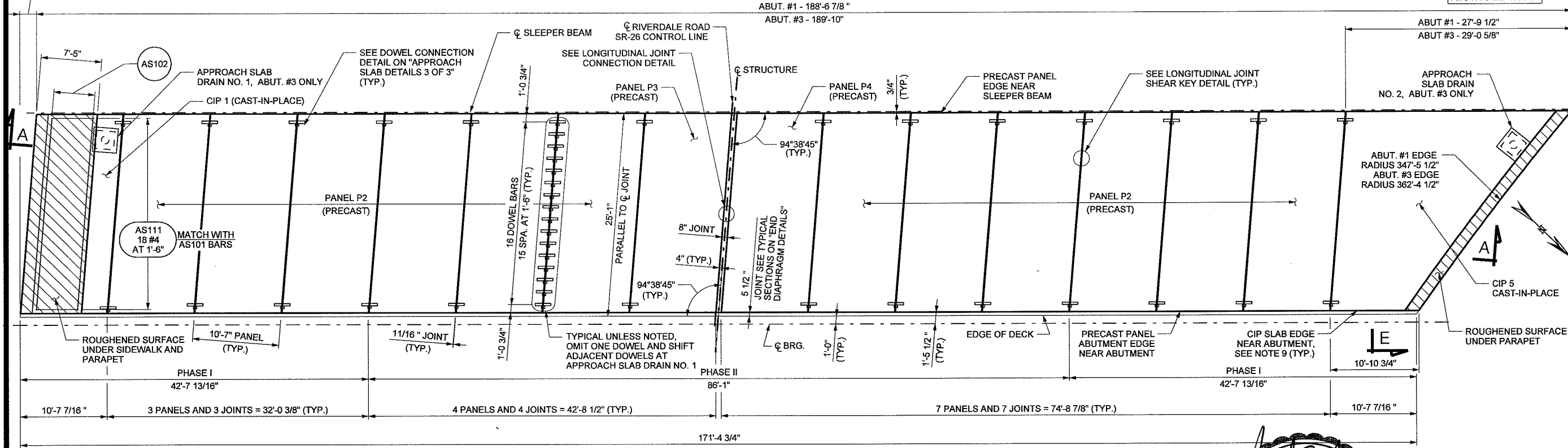
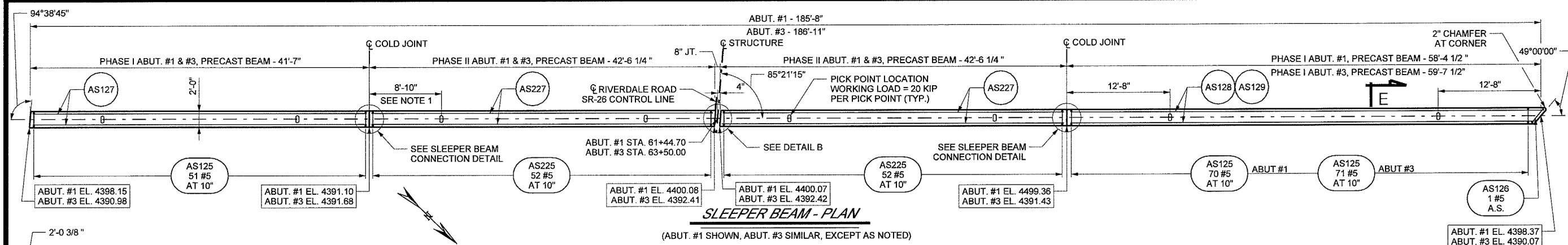
ABUTMENT #3 - TYPICAL SECTION
(SEE ABUT #1 - TYPICAL SECTION FOR ADDITIONAL NOTES)

| QUANTITIES STRUCTURAL CONCRETE | |
|-----------------------------------|-------|
| END DIAPHRAGMS | 51 CY |

LEGEND

| | |
|------|--------------|
| A.S. | AS SHOWN |
| B.F. | BACK FACE |
| E.S. | EQUAL SPACES |
| F.F. | FRONT FACE |

| | | | |
|--|--|---|----------------------|
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 END DIAPHRAGM DETAILS PROJECT NUMBER SP-0026(4) | PREPARED BY: MICHAEL BAKER JR. INC. | CHECK DAP 03/08 CHECK DAP 03/08 CHECK MSA 03/08 | REMARKS REVISIONS |
| | UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | DESIGN JWK 03/08 DRAWN AA 03/08 QUANT. JK 03/08 | DATE NO. |
| | APPROVAL RECOMM. DATE 3-17-08 APPROVED BY: [Signature] DATE 3/18/08 | CHECKED BY: [Signature] DATE 3/18/08 | BY DATE |
| | RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 END DIAPHRAGM DETAILS PROJECT NUMBER SP-0026(4) | WEBER COUNTY C-966 DRG. NO. | SHT. 26 OF 39 |



QUANTITIES STRUCTURAL CONCRETE

| | |
|-----------------------------|--------|
| PRECAST SLEEPER BEAM | 42 CY |
| PRECAST APPROACH SLAB | 276 CY |
| CAST-IN-PLACE APPROACH SLAB | 56 CY |

LEGEND

A.S. AS SHOWN
 B.F. BACK FACE
 E.S. EQUAL SPACES
 F.F. FRONT FACE

NOTES:

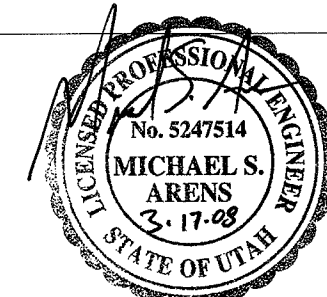
- TYPICAL PICK POINT LOCATION FOR SLEEPER BEAMS UNDER 43'-0" IN LENGTH.
- SEE "APPROACH SLAB DRAIN DETAILS" AND DRAINAGE PLANS FOR APPROACH SLAB DRAIN, DRAINAGE PIPE AND GRATE DETAILS.
- WHERE REQUIRED, FIELD CUT OR BEND APPROACH SLAB REINFORCEMENT TO CLEAR APPROACH SLAB DRAIN GRATES.
- SEE "SCREED ELEVATIONS" FOR TOP OF SLAB ELEVATIONS.
- INCLUDE GROUT, BEDDING SAND, GEOTEXTILE FABRIC AND DOWELS IN CONTRACT PRICE FOR PRECAST CONCRETE APPROACH SLAB.

CONTRACTORS OPTIONS:

- FOR OMITTING LONGITUDINAL JOINTS, ROUGHEN PRECAST SLAB SIDES AND APPLY EPOXY BOND PAINT, PROVIDE DOWELS AS SHOWN BEFORE CONCRETE POUR.
- FOR OMITTING TRANSVERSE JOINT AT ABUTMENTS, ROUGHEN PRECAST DECK ENDS AND APPLY EPOXY BOND PAINT, PROVIDE REINFORCEMENT, PREFORMED JOINT FILLER AND WATER STOP PER DETAILS SHOWN, SEE "END DIAPHRAGM DETAILS" FOR ADDITIONAL DETAILS.

6. ALL BOTTOM OF SLEEPER BEAM ELEVATIONS ARE ENCLOSED IN RECTANGLES, EXAMPLE: [ABUT. #1 EL. XXXX.XX]. PROVIDE CONSTANT SLOPE BETWEEN ELEVATIONS SHOWN. VERIFY AND MATCH ELEVATIONS TO ACTUAL DIMENSIONS OF PRECAST PANELS AND BEAMS, FOR ANY VARIATIONS FROM PLAN DIMENSIONS.

7. LONGITUDINAL SHEAR KEY JOINTS AND TRANSVERSE JOINTS AT ABUTMENTS SHOWN BETWEEN PRECAST AND CAST-IN-PLACE CONCRETE MAY BE OMITTED AT CONTRACTORS OPTION... HOWEVER, IN SUCH CASE, CONTRACTOR ASSUMES RESPONSIBILITY FOR PLACEMENT AND FEASIBILITY.



UTAH DEPARTMENT OF TRANSPORTATION
 SALT LAKE CITY, UTAH
 STRUCTURES DIVISION

PREPARED BY: MICHAEL BAKER JR. INC.

RIVERDALE ROAD, I-15 TO WASHINGTON BLVD.
 RIVERDALE ROAD OVER I-84
 APPROACH SLAB DETAILS 1 OF 3

PROJECT NUMBER: SP-0026(4)0

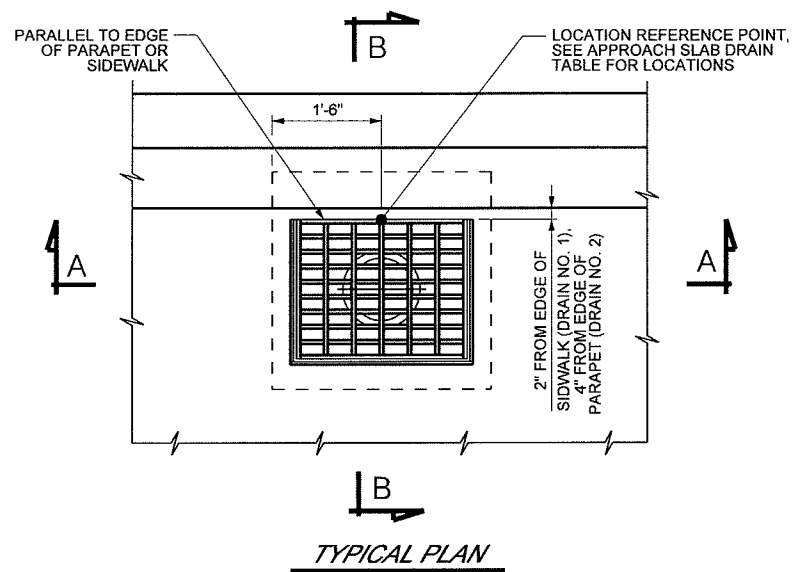
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| DESIGN | JK | 02/08 | CHECK | DAP | 03/08 |
| DRAWN | GCK | 02/08 | CHECK | DAP | 03/08 |
| QUANT. | JK | 03/08 | CHECK | MSA | 03/08 |

APPROVAL RECORD: 3.17.08 DATE: 3.17.08 BY: [Signature]
 APPROVED FOR USE BY UDOT: [Signature] DATE: 3/17/08

REVISIONS: [Table with columns for NO., DATE, BY, and REVISIONS]

WEBER COUNTY
 C-966
 DRG. NO.

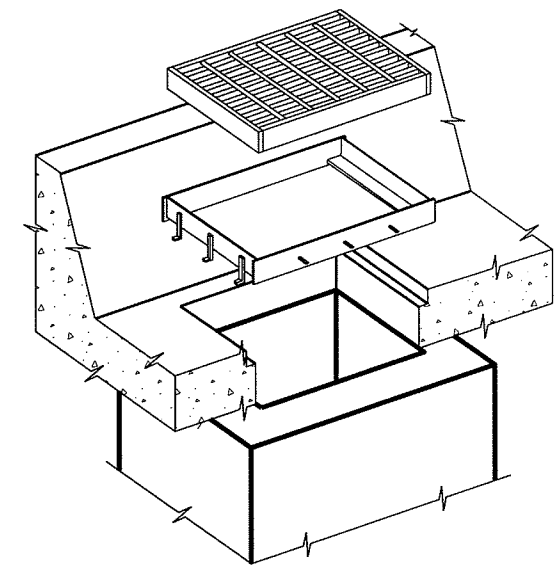
SHT. 28 OF 39



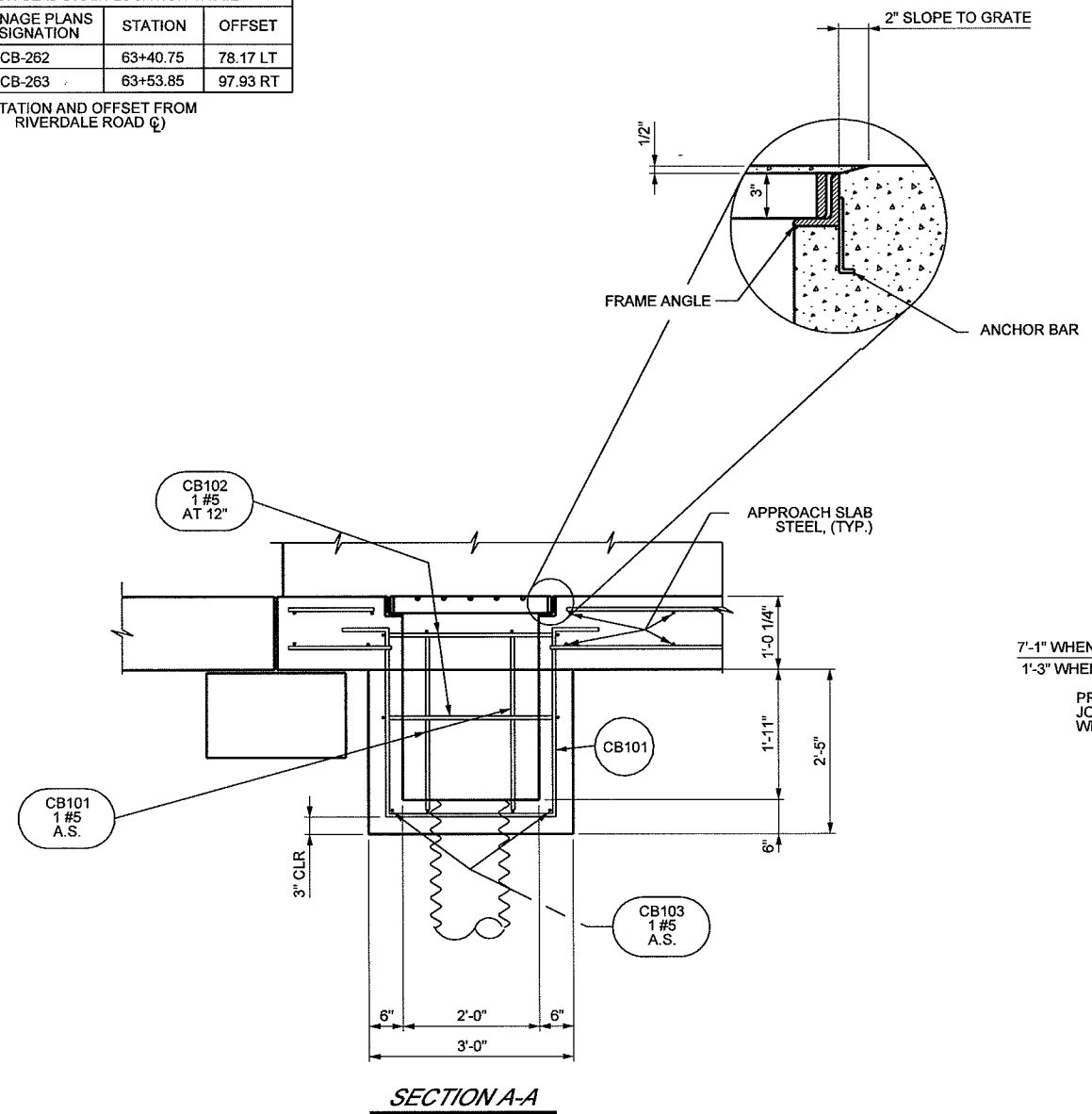
TYPICAL PLAN
 (ABUT. #3 DRAIN NO. 2 SHOWN,
 ABUT. #3 DRAIN NO. 1 SIMILAR, EXCEPT AS NOTED)

| APPROACH SLAB DRAIN LOCATION TABLE | | | |
|------------------------------------|----------------------------|----------|----------|
| DRAIN NO. | DRAINAGE PLANS DESIGNATION | STATION | OFFSET |
| 1 | CB-262 | 63+40.75 | 78.17 LT |
| 2 | CB-263 | 63+53.85 | 97.93 RT |

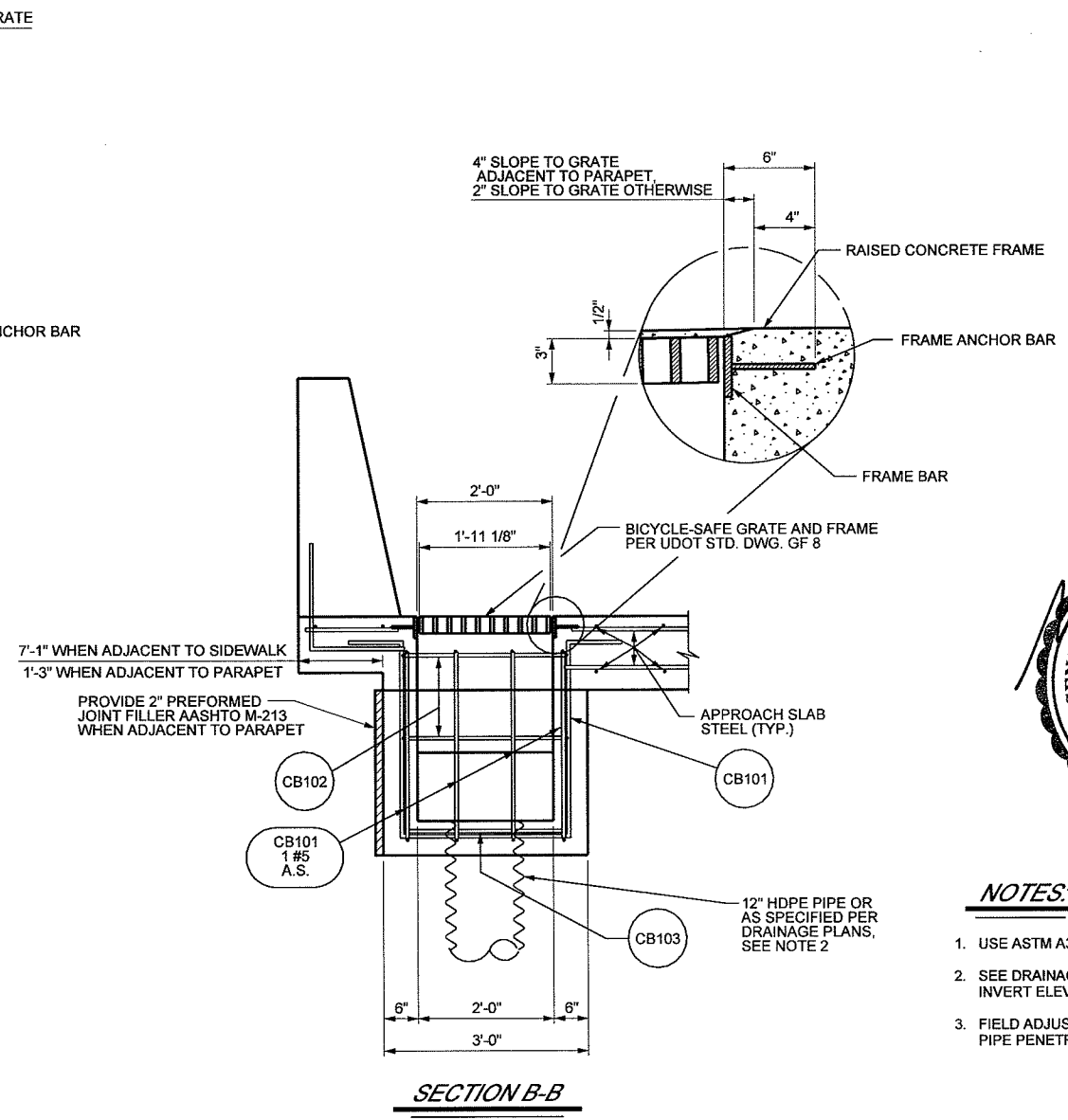
(STATION AND OFFSET FROM RIVERDALE ROAD @)



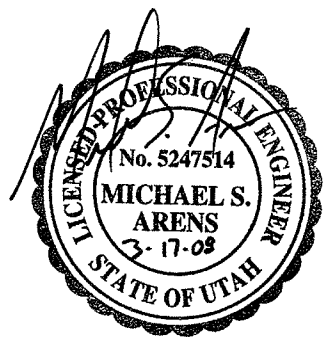
ISOMETRIC



SECTION A-A



SECTION B-B



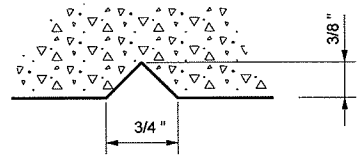
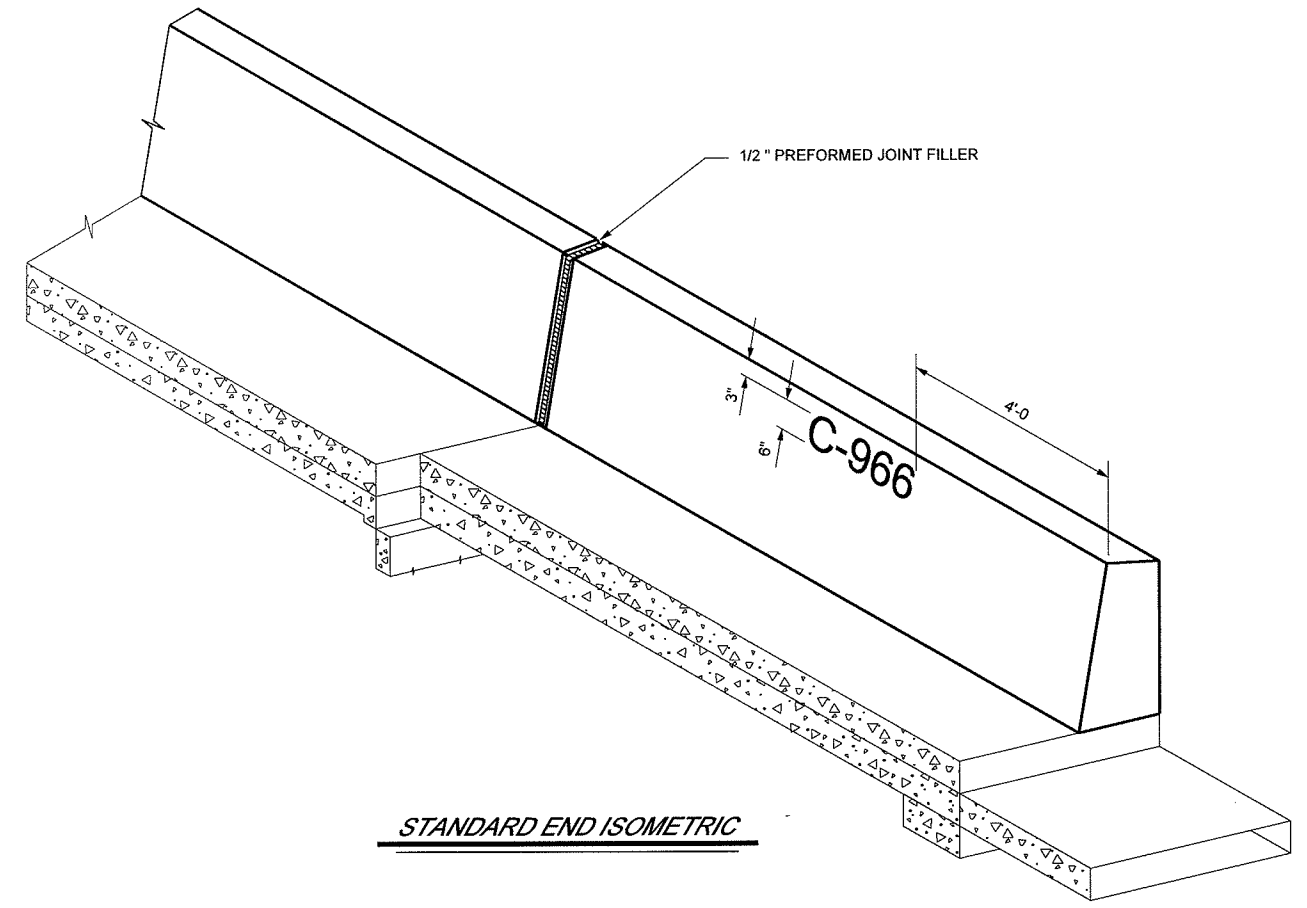
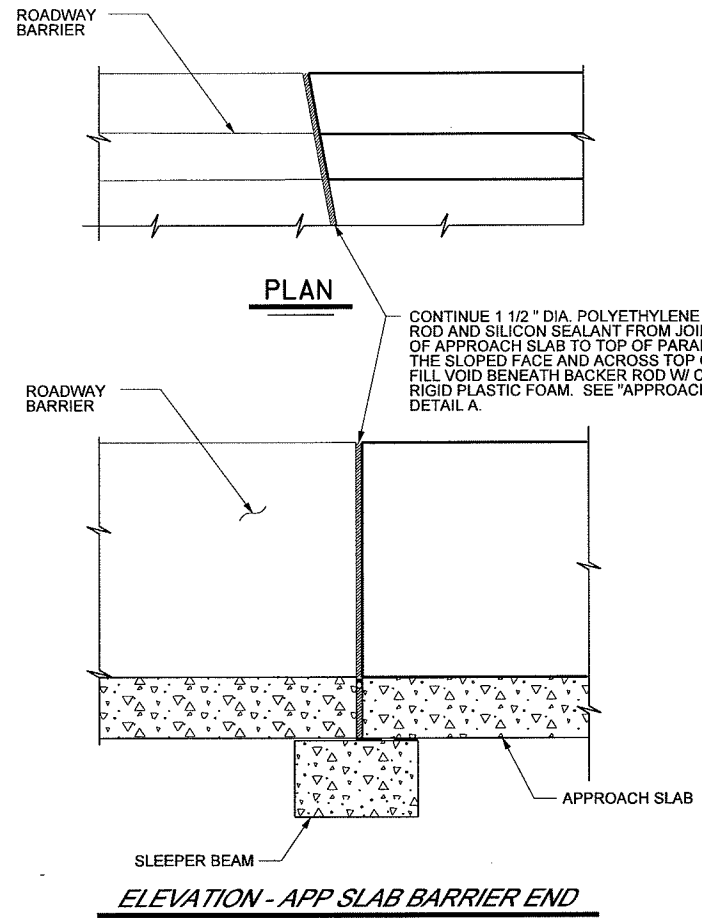
NOTES:

1. USE ASTM A36 OR A572 GR 50 FOR GRATE AND FRAME.
2. SEE DRAINAGE PLANS FOR DRAIN PIPE SIZES, ORIENTATIONS, INVERT ELEVATIONS AND ADDITIONAL DETAILS.
3. FIELD ADJUST REBAR LOCATIONS AS REQUIRED TO MISS PIPE PENETRATIONS IN CATCH BASIN BOTTOM SLAB.

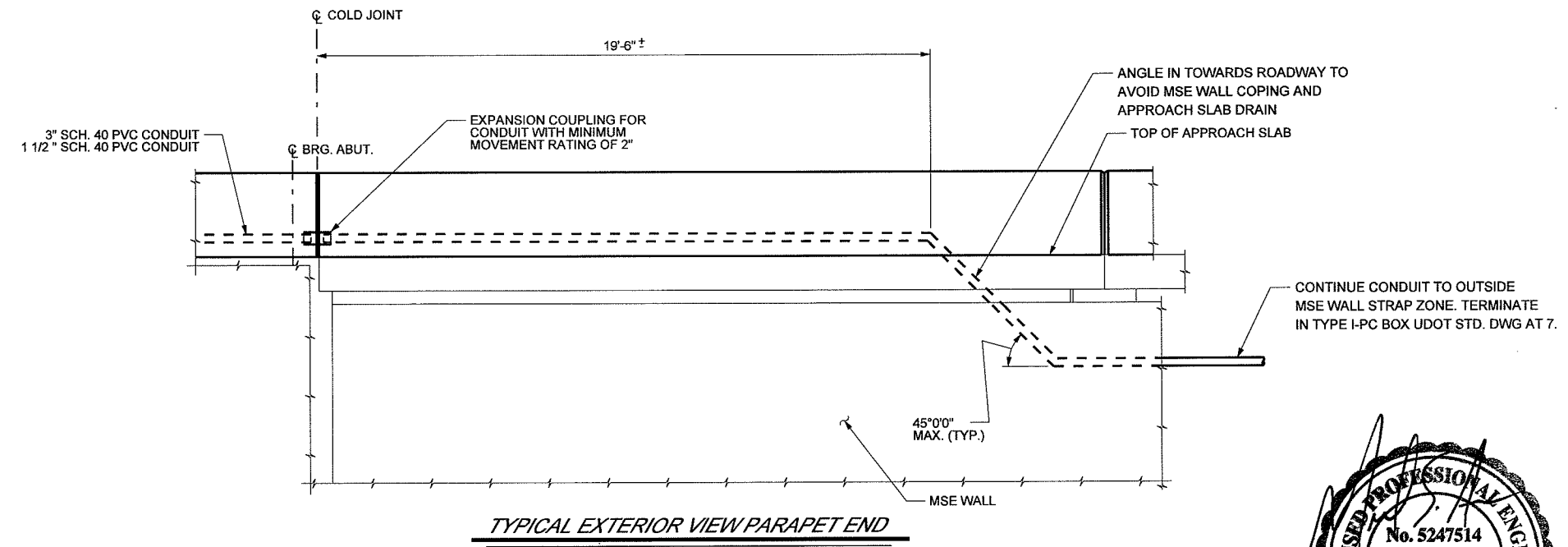
LEGEND

- A.S. AS SHOWN
- B.F. BACK FACE
- E.S. EQUAL SPACES
- F.F. FRONT FACE

| | | | | |
|--|--|--|---|--------------------------|
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 APPROACH SLAB DRAIN DETAILS PROJECT NUMBER SP-0026(4)0 | UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION PREPARED BY: MICHAEL BAKER JR. INC. | APPROVAL RECORD: 3-17-08 APPROVED BY: [Signature] DATE: 3/16/08 UDOT BRIDGE ENGR. | DESIGN: JWK 02/07 DRAWN: GCK 02/07 CHECK: DAP 03/08 CHECK: DAP 03/08 | REVISIONS NO. DATE BY |
| WEBER COUNTY C-966 DRG. NO. SHT. 31 OF 39 | | | | |



**TYPICAL SECTION
THRU STRUCTURE NUMBER**

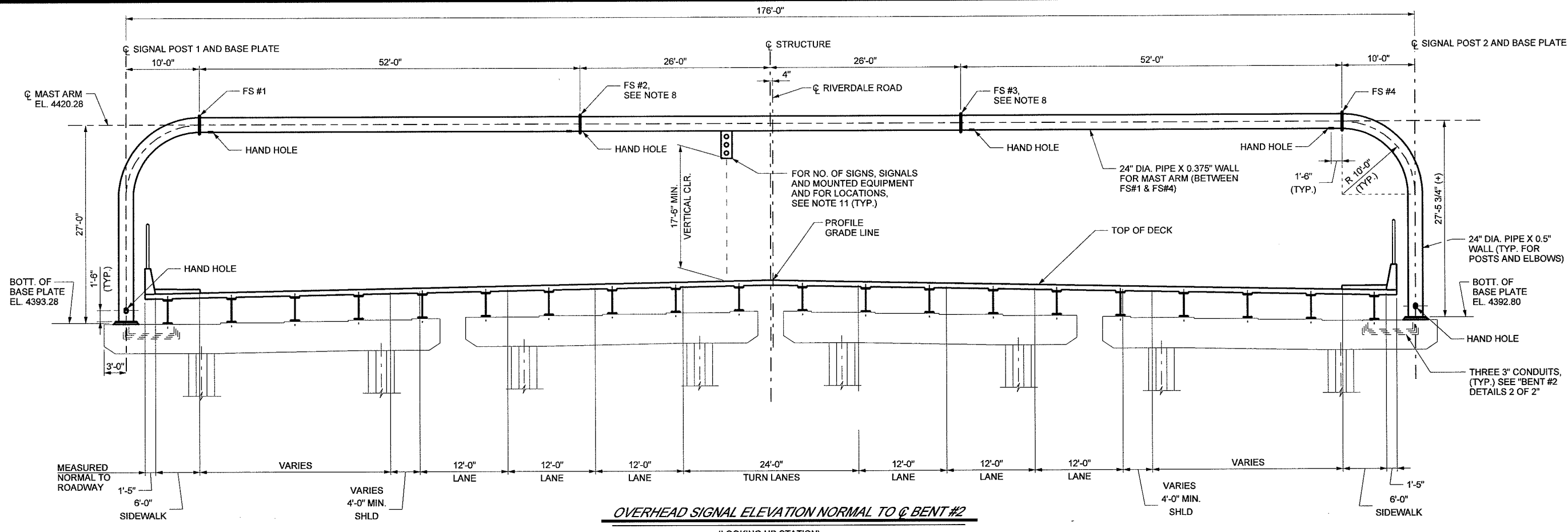


TYPICAL EXTERIOR VIEW PARAPET END

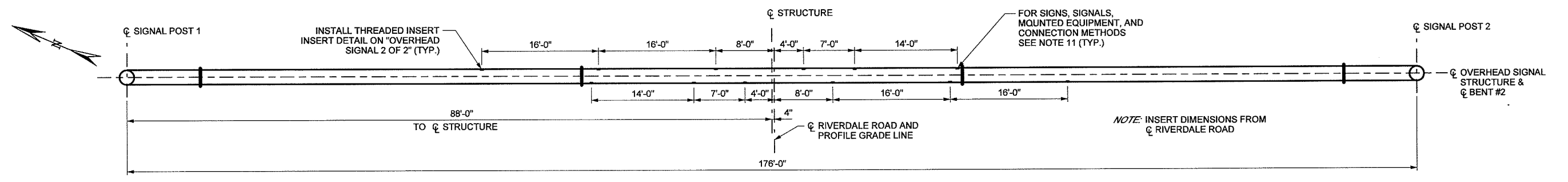


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|--|--|-----------------|-----------|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR. INC. | CHECK MSA 03/08 | REVISIONS |
| APPROVAL RECORDING: 2-17-08 | DESIGN JK 03/08 | CHECK MSA 03/08 | NO. |
| APPROVED FOR USE: 3-17-08 | DRAWN GCK 03/08 | CHECK MSA 03/08 | DATE |
| DATE 3/17/08 | QUANT. | CHECK | BY |
| DATE 3/17/08 | UDOT BRIDGE ENGR. | | |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. | PROJECT NUMBER | | |
| RIVERDALE ROAD OVER I-84 | SP-0026(4)0 | | |
| PARAPET END DETAILS | | | |
| WEBER COUNTY | | | |
| C-966 | | | |
| DRG. NO. | | | |
| SHT. 33 | OF 39 | | |

17-MAR-2008 DGN File: IP_PWP.dms@1856.V2495.C-966-33_ParapetEnd.dwg



OVERHEAD SIGNAL ELEVATION NORMAL TO BENT #2
(LOOKING UP STATION)



OVERHEAD SIGNAL PLAN

DESIGN DATA:

LOADS IN ACCORDANCE WITH CURRENT AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 2001 EDITION WITH INTERIMS THROUGH 2003.

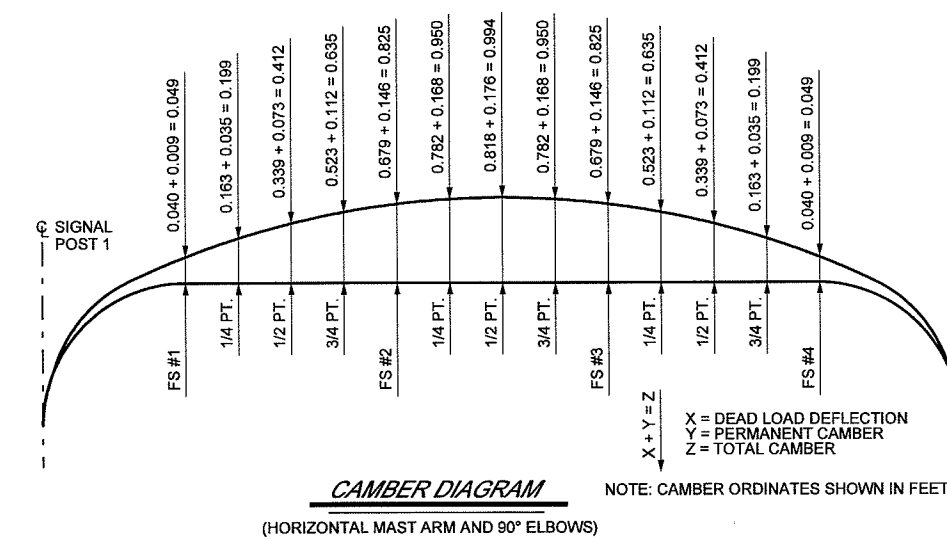
FATIGUE CATEGORY I

STRUCTURAL STEEL:

$f_y = 35,000$ PSI (STRUCTURAL TUBING)
 $f_y = 50,000$ PSI (PLATES & SHAPES)

NOTES:

1. USE STRUCTURAL TUBING CONFORMING TO ASTM A 53 GRADE B OR API-5L-X42. CHEMICAL COMPOSITION FOR THE STRUCTURAL TUBING WILL SATISFY:
CARBON $\leq 0.25\%$
PHOSPHORUS $\leq 0.04\%$
MANGANESE $\leq 1.35\%$
SILICON $\leq 0.05\%$
2. ALL OTHER SHAPES AND PLATES ARE TO CONFORM TO ASTM A 572 GR 50 OR ASTM A 992 UNLESS NOTED OTHERWISE.
3. ALL STRUCTURAL STEEL WILL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123). STRUCTURAL STEEL MAY BE METALIZED USING ELECTRIC ARC SPRAYED ZINC WIRE AS AN ALTERNATIVE TO HOT DIP GALVANIZING.
4. FURNISH ANCHOR BOLTS CONFORMING TO ASTM F-1554 GRADE 55. ANCHOR BOLTS ARE NOT TO BE WELDED TO REINFORCING STEEL. THE HEAVY HEX NUTS AND WASHERS ACCOMPANYING THE ANCHOR BOLTS ARE TO CONFORM TO ASTM A 563 AND F 436 SPECIFICATIONS RESPECTIVELY. GALVANIZE NUTS, WASHERS AND THE ANCHOR BOLTS IN ACCORDANCE WITH AASHTO M 232 (ASTM A 153). ALL GALVANIZED STEEL THREADS ARE TO BE FREE FROM DEFECTS ALLOWING NUTS TO BE FREE RUNNING BY HAND FOR THE ENTIRE LENGTH OF THREADS.
5. PROVIDE SHOP DRAWINGS IN ACCORDANCE WITH CURRENT UDOT STANDARD SPECIFICATIONS.
6. WELDING DESIGN AND FABRICATION WILL BE IN ACCORDANCE WITH AWS D1.1 SPECIFICATIONS FOR STRUCTURAL TUBING, ALL OTHER WELDING IN ACCORDANCE WITH AWS D1.5.
7. DURING ERECTION THE POST WILL BE ADJUSTED AS NECESSARY WITH THE USE OF LEVELING NUTS TO MAKE THE POST LEVEL. AT FINAL POSITION, LEVELING NUTS (BELOW BASE PLATE) TO BE IN FULL CONTACT WITH BASE PLATE. AFTER THIS, TIGHTEN TOP NUTS (ABOVE BASE PLATE) TO ONE-SIXTH TURN BEYOND SNUG TIGHT. AFTER TOP NUTS ARE FULLY TIGHTENED, RETIGHTEN LEVELING NUTS TO ENSURE FULL CONTACT WITH BASE PLATE HAS BEEN MAINTAINED.
8. MANUFACTURER CAN ADJUST LOCATION OF FIELD SPLICES. LOCATE TO MISS SIGNS AND SIGNALS.
9. SEE "OVERHEAD SIGNAL 2 OF 2". FOR ADDITIONAL DETAILS.
10. SEE "BENT #2 PLAN AND ELEVATION" AND "BENT #2 DETAILS 1 OF 2 TO 2 OF 2" FOR BENT CONNECTION DETAILS.
11. SEE SHEET NO. SG-06-2 FOR SIGN, SIGNAL AND MOUNTED EQUIPMENT DETAILS AND LOCATIONS AND FOR INSERT LOCATIONS. ALL CONNECTIONS PER ACCEPTABLE UDOT STANDARDS.



CAMBER DIAGRAM
(HORIZONTAL MAST ARM AND 90° ELBOWS)



| | | | | | |
|--|---|---------------------------------|----------------------------------|------|-----------|
| UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION | PREPARED BY: MICHAEL BAKER JR., INC. | DESIGN DAP 02/08 | CHECK DFM 02/08 | DATE | REVISIONS |
| RIVERDALE ROAD, I-15 TO WASHINGTON BLVD. RIVERDALE ROAD OVER I-84 OVERHEAD SIGNAL 1 OF 2 | PROJECT NUMBER SP-0026(4)0 | APPROVAL RECORDING DATE 3/17/08 | APPROVED FOR USE BY UDOT 3/17/08 | BY | NO. |
| DRG. NO. C-966 | QUANT. | DATE | BY | NO. | REVISIONS |
| SHT. 34 OF 39 | | | | | |

