

LOCATION PLAN

GENERAL NOTES:

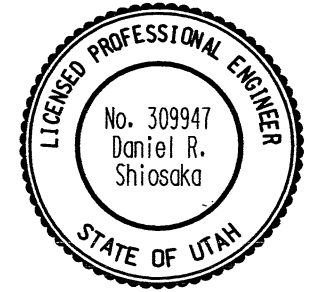
1. ALL REINFORCING STEEL SHALL BE COATED DEFORMED BILLET-STEEL BARS CONFORMING TO AASHTO M 284 OR M 111, AND M 31 GRADE 60 RESPECTIVELY.
2. CHAMFER ALL EXPOSED CONCRETE CORNERS $\frac{3}{4}$ ". EXCEPT WHERE NOTED OTHERWISE.
3. PROVIDE 2" CONCRETE COVER TO REINFORCING STEEL EXCEPT WHERE NOTED OTHERWISE.
4. ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS AA(AE).
5. ALL DIMENSIONS SHOWN ARE IN FEET-INCHES UNLESS SPECIFIED OTHERWISE. ALL STATIONS AND ELEVATIONS ARE SHOWN IN FEET.
6. CONTRACTOR RESPONSIBLE TO FIELD VERIFY ALL ELEVATIONS PRIOR TO CONSTRUCTION.

QUANTITIES:

ITEM	ESTIM.	UNIT	AS CONST.
MSE RETAINING WALL (R-434A) (ESTIMATED EXPOSED SURFACE AREA 2954 SQ. FT.)	1	LUMP	

DESIGN DATA:

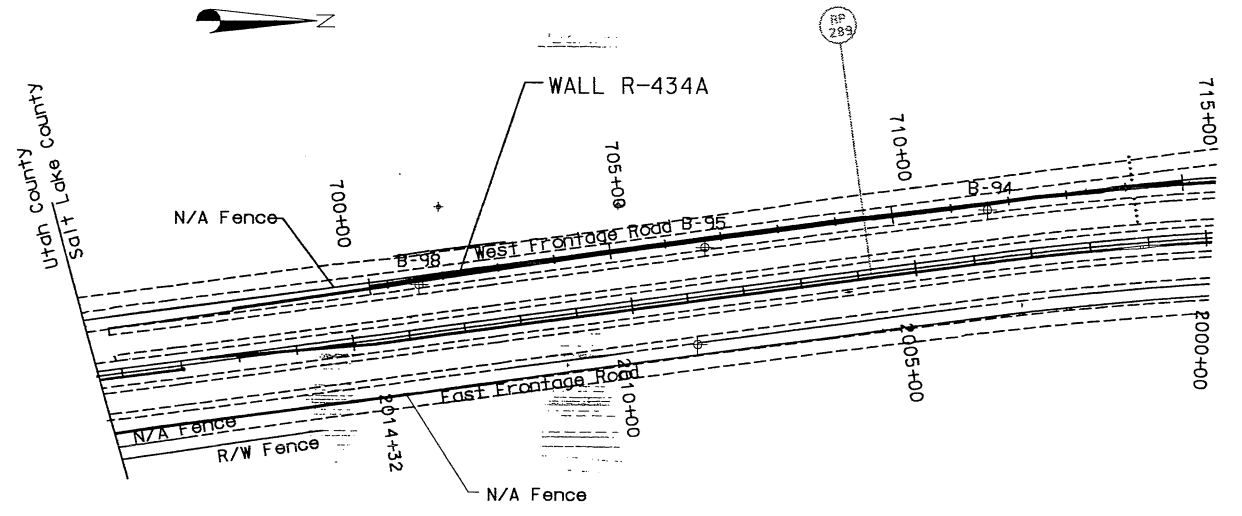
CAST-IN-PLACE CONCRETE: $f'_c = 3650$ psi; $f'_s = 1200$ psi;
(FOR COPING) f'_s (REINF.) = 24,000 psi; $n=9$



I-15 UTAH CO. LINE TO 10600 SO. WALL R-434A SITUATION AND LAYOUT PROJECT NUMBER SP-15-7(167)288	UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGN</td> <td>BPD</td> <td>01/04</td> <td>CHECK</td> <td>DBS</td> <td>01/04</td> </tr> <tr> <td>DRAWN</td> <td>NRD</td> <td>01/04</td> <td>CHECK</td> <td>DBS</td> <td>01/04</td> </tr> <tr> <td>QUANT.</td> <td>NRD</td> <td>01/04</td> <td>CHECK</td> <td>DBS</td> <td>01/04</td> </tr> </table>	DESIGN	BPD	01/04	CHECK	DBS	01/04	DRAWN	NRD	01/04	CHECK	DBS	01/04	QUANT.	NRD	01/04	CHECK	DBS	01/04
DESIGN	BPD	01/04	CHECK	DBS	01/04															
DRAWN	NRD	01/04	CHECK	DBS	01/04															
QUANT.	NRD	01/04	CHECK	DBS	01/04															
SALT LAKE COUNTY R-434A DRG. NO.		APPROVAL DATE: 1/12/04 SENIOR DESIGN ENGR. APPROVED FOR USE BY UDOT: [Signature] UDOT BRIDGE ENGR.																		
SHT. 1 OF 7		REVISIONS NO. DATE BY REMARKS																		

KLEINFELDER PROJECT NO. 33948.98D			
NO.	BY	DATE	REMARKS
REVISIONS			

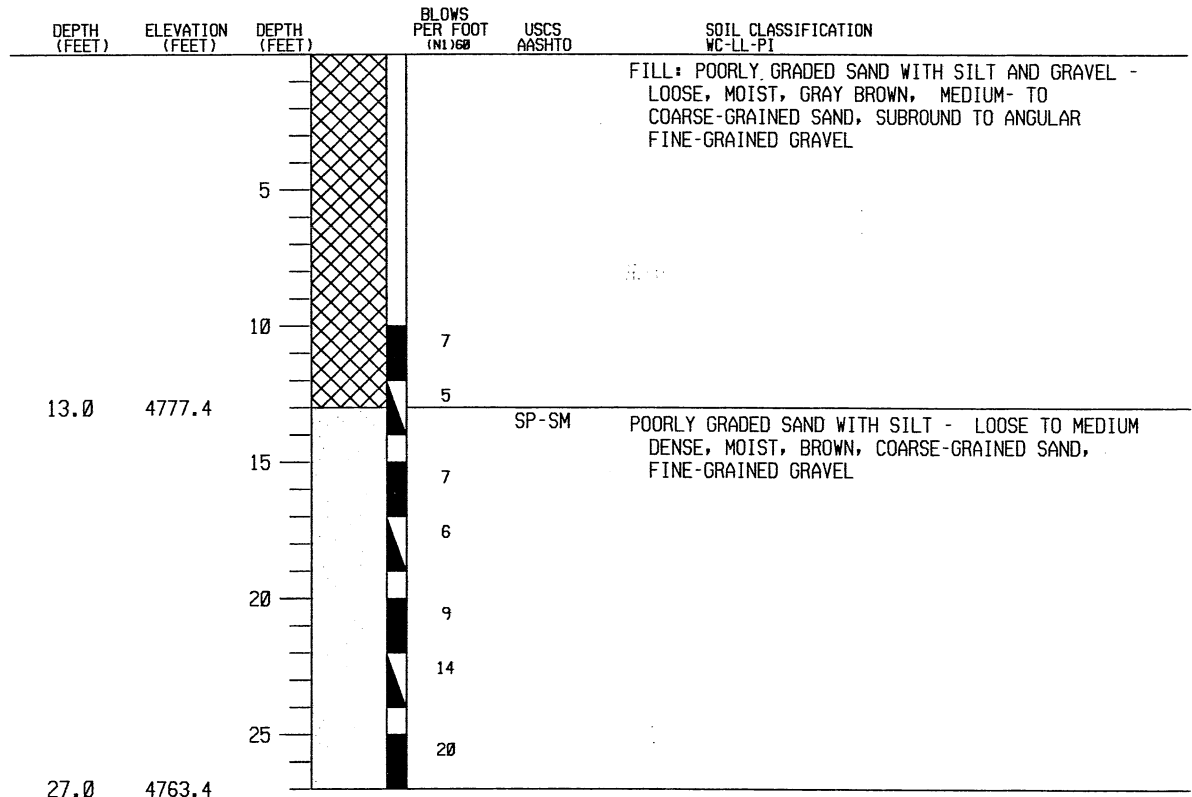
BORING LOCATION PLAN



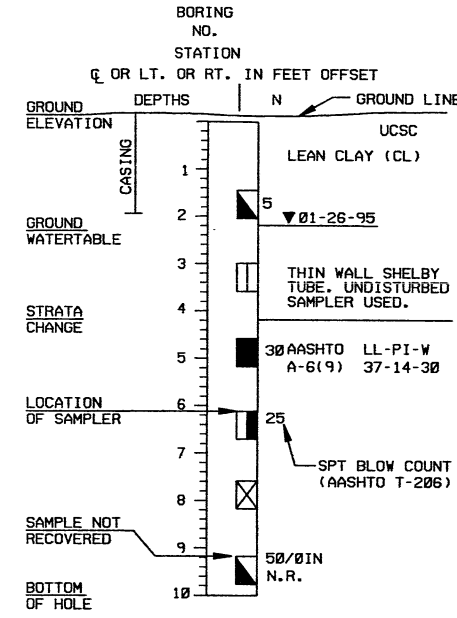
GENERAL NOTES

- THE SUBSURFACE EXPLORATIONS SHOWN WERE CONDUCTED ON AUGUST 20, 2003 BY KLEINFELDER.
- THESE BORING LOGS REPRESENT A SYNOPSIS OF THE SOIL DEPOSITS ENCOUNTERED WITHIN EACH 8 INCH DIAMETER BORING AND ARE BASED ON SOUND GEOLOGICAL AND ENGINEERING JUDGEMENT. 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 DRILL LOGS REPRESENT BORING CONDITIONS ON THE DATE SHOWN, WITH AUGER IN PLACE. IT SHOULD BE NOTED, HOWEVER, THAT AT LOCATIONS AWAY FROM THE TEST BORINGS OR AT OTHER TIMES OF THE YEAR 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 FRAGMENT WITH AN AVERAGE DIMENSION BETWEEN 3 AND 12 INCHES.
- BOULDER - A ROCK FRAGMENT WITH AN AVERAGE DIMENSION GREATER THAN 12 INCHES.
- IN ORDER TO PROVIDE MORE CONSISTENCY AND UNIFORMITY WITH GEOTECHNICAL AND CONSTRUCTION INDUSTRY STANDARDS, UDOT HAS ADOPTED THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) ON BOTH THE SOIL EXPLORATION LOGS AND IN THE REPORT'S SOIL DESCRIPTIONS. HOWEVER, THE AASHTO GROUP CLASSIFICATIONS WILL ALSO CONTINUE TO BE USED AS SHOWN HEREIN.

BORING
B-98
ELEVATION 4790.4 FEET
STATION 701+28.569 83.186 LT.



LEGEND



- #### ABBREVIATIONS
- L.L. - LIQUID LIMIT
 - P.I. - PLASTIC INDEX
 - W. - NATURAL MOISTURE CONTENT IN %
 - PEN. - PENETRATION
 - G.W.T. - GROUND WATER TABLE
 - N - SPT BLOW COUNT-BLOWS PER 12IN
 - N.P. - NON PLASTIC
 - AASHTO - SOIL CLASSIFICATION SYSTEM
 - USCS - UNIFIED CLASSIFICATION SYSTEM
 - N.V. - NO VALUE
 - N.R. - NO SAMPLE RECOVERED
 - E.R. - SAMPLING HAMMER ENERGY RATIO
- #### LOG KEY SYMBOLS
- BULK, BAG, OR GRAB SAMPLE
 - STANDARD PENETRATION SPLIT SPOON SAMPLER (2" OUTSIDE DIAMETER)
 - MODIFIED CALIFORNIA SAMPLER (2-1/2" OUTSIDE DIAMETER)
 - CALIFORNIA SAMPLER (3" OUTSIDE DIAMETER)
 - SHELBY TUBE (3" OUTSIDE DIAMETER)
 - WATER LEVEL (MEASURED OR FIRST ENCOUNTERED)

UNIFIED SOIL CLASSIFICATION SYSTEM

GROUP	DESCRIPTION	USCS	AASHTO
COARSE-GRAINED SOILS	GRAVELS < 50% COARSE FRACTION PASSES #4 SIEVE	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	GRAVELS WITH LITTLE OR NO FINES	GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	GRAVELS WITH > 12% FINES	GM	SILTY GRAVELS, POORLY-GRADED GRAVEL-SAND-SILT MIXTURES
FINE-GRAINED SOILS	GRAVELS < 50% COARSE FRACTION PASSES #4 SIEVE	GC	CLAYEY GRAVELS, POORLY-GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS WITH LITTLE OR NO FINES	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
	SANDS WITH > 12% FINES	SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SILTS & CLAYS	SILTS & CLAYS LIQUID LIMIT < 50	SM	SILTY SANDS, POORLY-GRADED SAND-GRAVEL-SILT MIXTURES
	SILTS & CLAYS LIQUID LIMIT > 50	SC	CLAYEY SANDS, POORLY-GRADED SAND-GRAVEL-CLAY MIXTURES
		ML	INORGANIC SILT & VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
HIGHLY ORGANIC SOILS	OL	ORGANIC SILTS & CLAYS OF LOW PLASTICITY	
	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT	
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
OH	ORGANIC SILTS & CLAYS OF MEDIUM-TO-HIGH PLASTICITY		
PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT		

APPARENT/RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPT (* BLOWS/FT)	MODIFIED CALIFORNIA SAMPLER (* BLOWS/FT)	CALIFORNIA SAMPLER (* BLOWS/FT)	RELATIVE DENSITY (%)	FIELD TEST
VERY LOOSE	< 4	< 4	< 5	0 - 15	EASILY PENETRATED WITH 1/2 IN. REINFORCING ROD PUSHED BY HAND.
LOOSE	4 - 10	4 - 12	5 - 15	15 - 35	DIFFICULT TO PENETRATE WITH 1/2 IN. REINFORCING ROD PUSHED BY HAND.
MEDIUM DENSE	10 - 30	12 - 35	15 - 40	35 - 65	EASILY PENETRATED A FOOT WITH 1/2 IN. REINFORCING ROD DRIVEN WITH 5 LB. HAMMER.
DENSE	30 - 50	36 - 60	40 - 70	65 - 85	DIFFICULT TO PENETRATE A FOOT WITH 1/2 IN. REINFORCING ROD DRIVEN WITH 5 LB. HAMMER.
VERY DENSE	> 50	> 60	> 70	85 - 100	PENETRATED ONLY A FEW INCHES WITH 1/2 IN. REINFORCING ROD DRIVEN WITH 5 LB. HAMMER.

CONSISTENCY - FINE-GRAINED SOIL

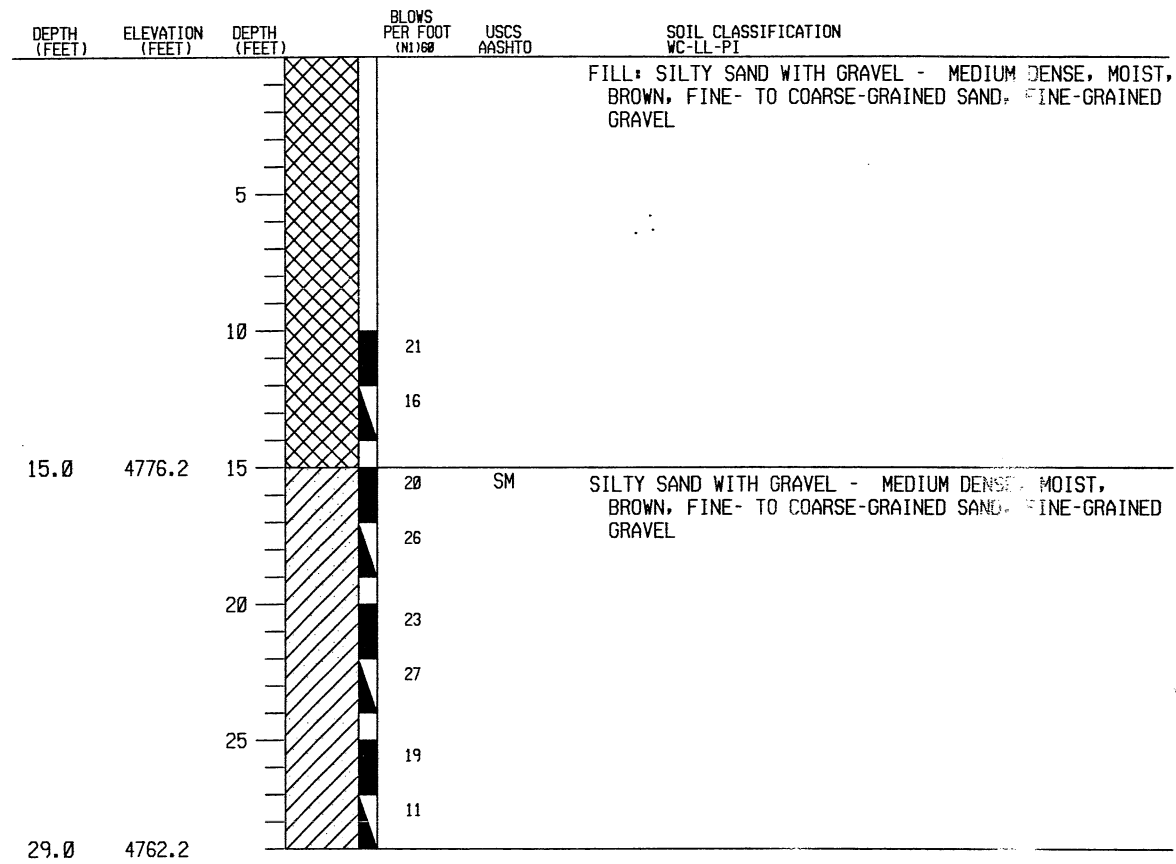
CONSISTENCY	SPT (* BLOWS/FT)	UNDRAINED SHEAR STRENGTH (TSF)	POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH (TSF)	FIELD TEST
VERY SOFT	< 2	< 0.125	< 0.25	EASILY PENETRATED SEVERAL CENTIMETERS BY THUMB. EXUDES BETWEEN THUMB AND FINGERS WHEN SQUEEZED IN HAND.
SOFT	2 - 4	0.125 - 0.25	0.25 - 0.5	EASILY PENETRATED ONE INCH BY THUMB. MOLDED BY LIGHT FINGER PRESSURE.
MEDIUM STIFF	4 - 8	0.25 - 0.5	0.5 - 1.0	PENETRATED OVER 1/2 IN. BY THUMB WITH MODERATE EFFORT. MOLDED BY STRONG FINGER PRESSURE.
STIFF	8 - 15	0.5 - 1.0	1.0 - 2.0	INDENTED ABOUT 1/2 IN. BY THUMB BUT PENETRATED ONLY WITH GREAT EFFORT.
VERY STIFF	15 - 30	1.0 - 2.0	2.0 - 4.0	READILY INDENTED BY THUMB.
HARD	> 30	> 2.0	> 4.0	INDENTED WITH DIFFICULTY BY THUMB.

I-15, UTAH CO LINE TO 10600
 SUTAH DEPARTMENT OF TRANSPORTATION
 KLEINFELDER, INC.
 SALT LAKE CITY, UTAH

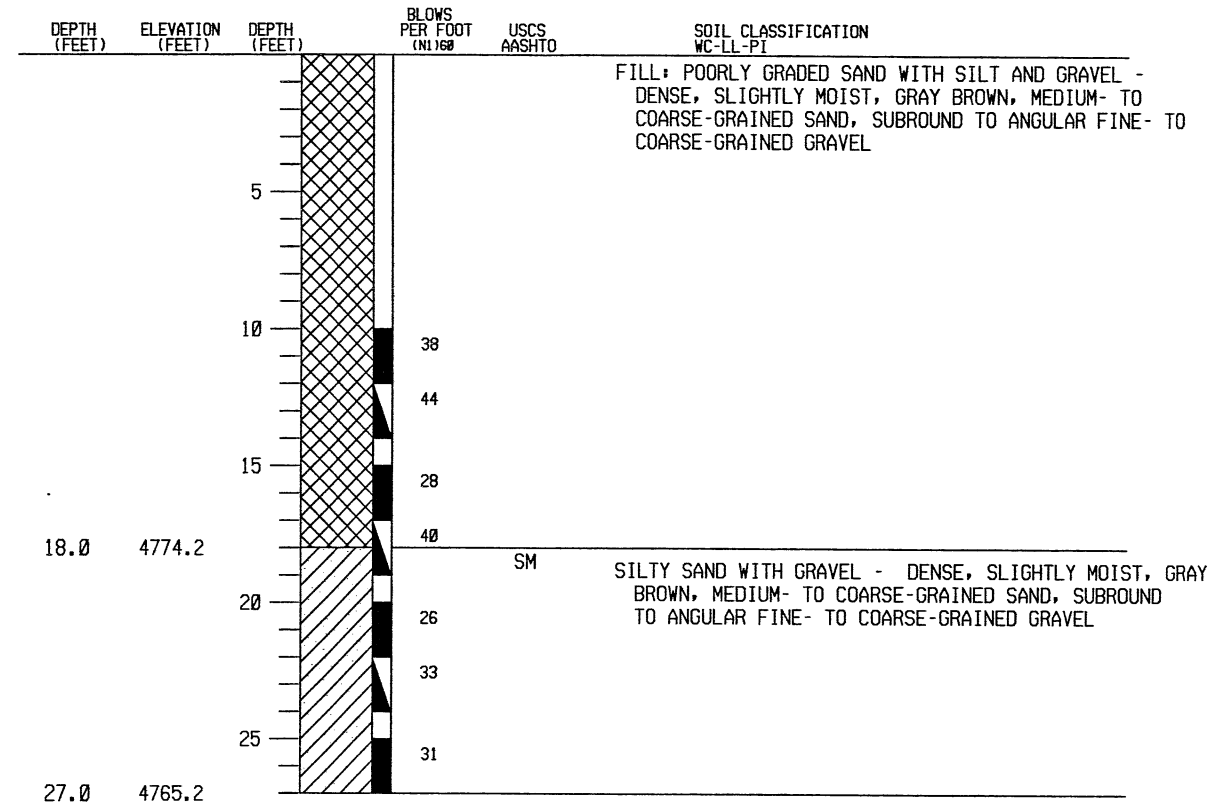
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DESIGN ENGR.		CHECK	CC	12/03
DATE		APPROVAL	DATE	
PROJECT NUMBER	SP-15-7(167)288	APPROVED	DATE	
SALT LAKE COUNTY				
R-434A				
DRG. NO.				
SHT. 2 OF 7				

NO.	BY	DATE	REMARKS
REVISIONS			

BORING
B- 95
ELEVATION 4791.2 FEET
STATION 706+43.125 81.200 LT.



BORING
B- 94
ELEVATION 4792.2 FEET
STATION 711+34.284 82.784 LT.



LOG KEY SYMBOLS

	BULK, BAG, OR GRAB SAMPLE		CALIFORNIA SAMPLER (3" OUTSIDE DIAMETER)
	STANDARD PENETRATION SPLIT SPOON SAMPLER (2" OUTSIDE DIAMETER)		SHELBY TUBE (3" OUTSIDE DIAMETER)
	MODIFIED CALIFORNIA SAMPLER (2-1/2" OUTSIDE DIAMETER)		WATER LEVEL (MEASURED OR FIRST ENCOUNTERED)

GENERAL NOTES

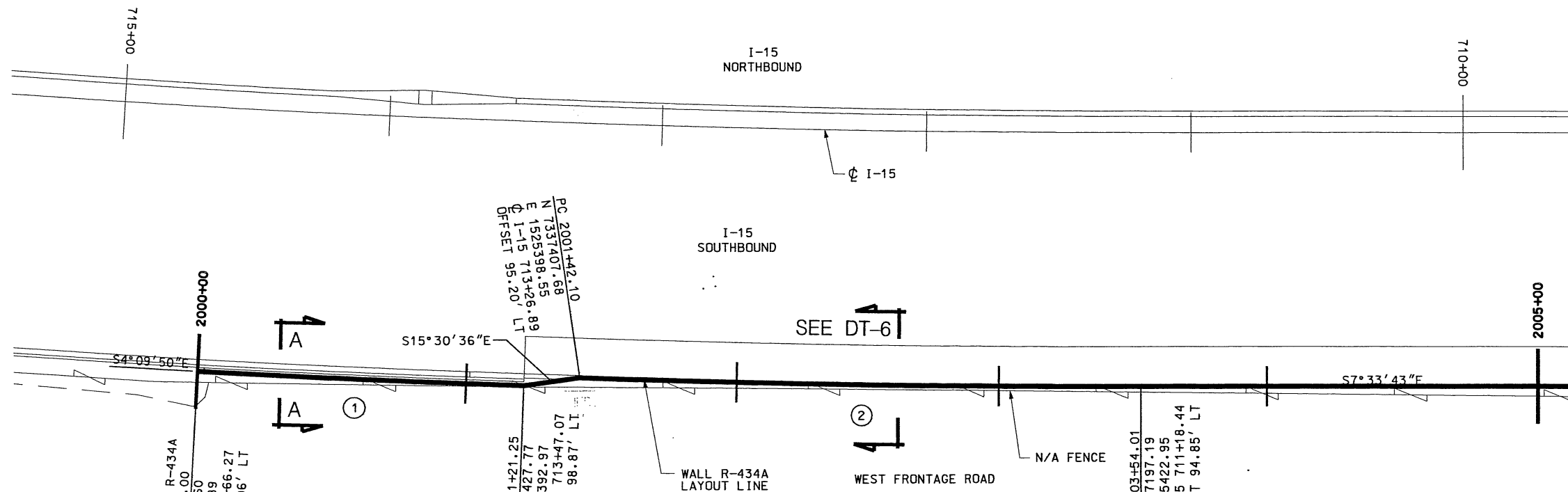
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SUTAH DEPARTMENT OF TRANSPORTATION
 KLEINFELDER, INC.
 SALT LAKE CITY, UTAH

I-15, UTAH CO LINE TO 10600
 I-15
 SOIL DATA SHEET
 PROJECT NUMBER SP-15-7(167)288

DESIGN CC	12/03	DESIGN ENGR.	DATE
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CHECK NGT	12/03	CHECK CC	12/03
CHECK CC	12/03	CHECK	

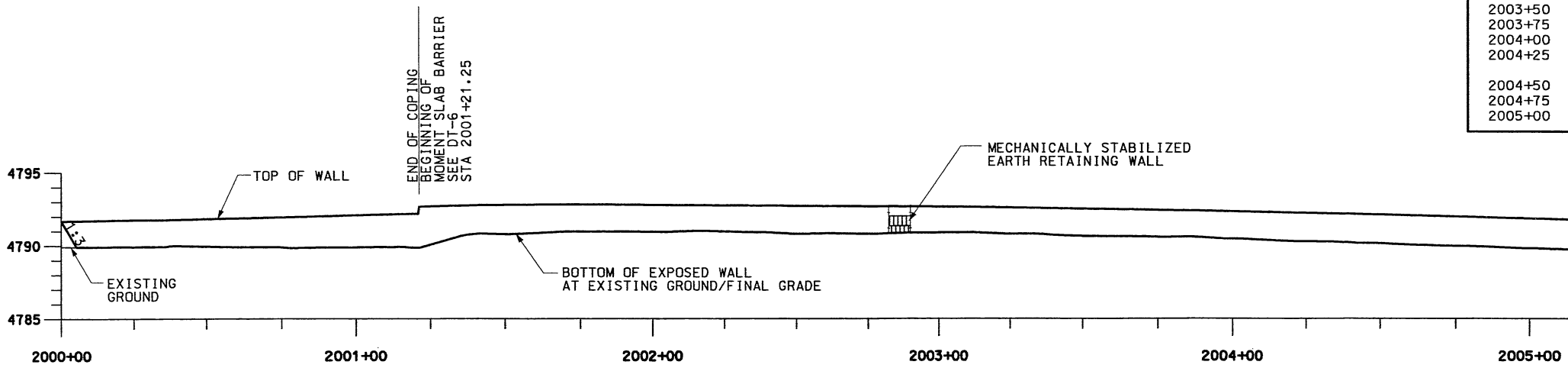
SALT LAKE COUNTY
 R-434A
 DRG. NO.
 SHT. 3 OF 7



① CURVE DATA
 DELTA 1°12'51" LT
 R 5721.50
 T 60.63
 L 121.25
 PI STA 2000+60.63
 N 7337488.13
 E 1525387.29

② CURVE DATA
 DELTA 2°05'12" LT
 R 5818.77
 T 105.97
 L 211.91
 PI STA 2002+48.06
 N 7337302.22
 E 1525408.83

WALL R-434A		
STA	TOP OF WALL ELEV	BOTTOM OF EXPOSED WALL ELEV
2000+00	4791.69	4791.69
2000+25	4791.76	4789.93
2000+50	4791.83	4789.95
2000+75	4791.94	4789.87
2001+00	4792.07	4789.87
2001+25	4792.67	4790.05
2001+50	4792.78	4790.77
2001+75	4792.80	4790.95
2002+00	4792.77	4790.93
2002+25	4792.74	4790.96
2002+50	4792.70	4790.79
2002+75	4792.67	4790.80
2003+00	4792.64	4790.88
2003+25	4792.58	4790.78
2003+50	4792.50	4790.64
2003+75	4792.41	4790.56
2004+00	4792.32	4790.45
2004+25	4792.21	4790.26
2004+50	4792.10	4790.12
2004+75	4791.96	4789.96
2005+00	4791.83	4789.79



ELEVATION

NOTE:
 COORDINATE WALL REINFORCING SYSTEM PLACEMENT WITH STORM DRAIN CONSTRUCTION

I-15 UTAH CO. LINE TO 10600 SO.
 WALL R-434A
 SITUATION AND LAYOUT
 PROJECT NUMBER: SP-15-7(167)288

UTAH DEPARTMENT OF TRANSPORTATION
 SALT LAKE CITY, UTAH
 STRUCTURES DIVISION

DESIGN	BPD	01/04	CHECK	DRS	01/04
DRAWN	NFD	01/04	CHECK	DRS	01/04
QUANT.	NFD	01/04	CHECK	DRS	01/04

APPROVAL: 1/12/04 DATE: 1/12/04
 SENIOR DESIGN ENGR.
 APPROVED BY: [Signature] DATE: [Date]
 UDOT BRIDGE ENGR.

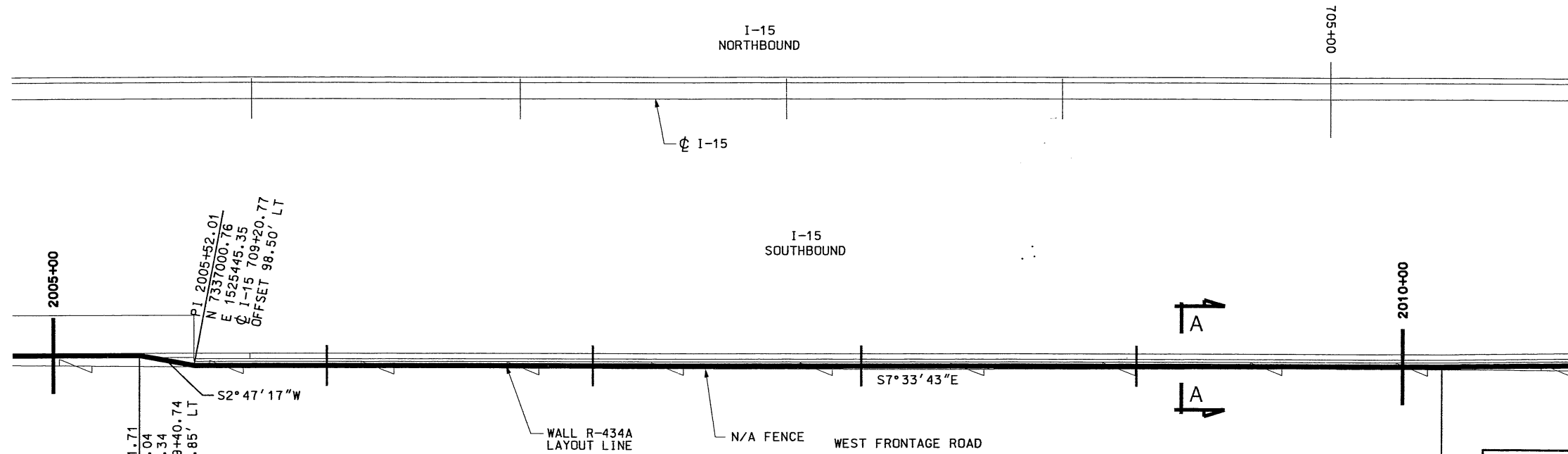
NO.	DATE	BY	REVISIONS	REMARKS

SALT LAKE COUNTY
 R-434A
 DRG. NO.

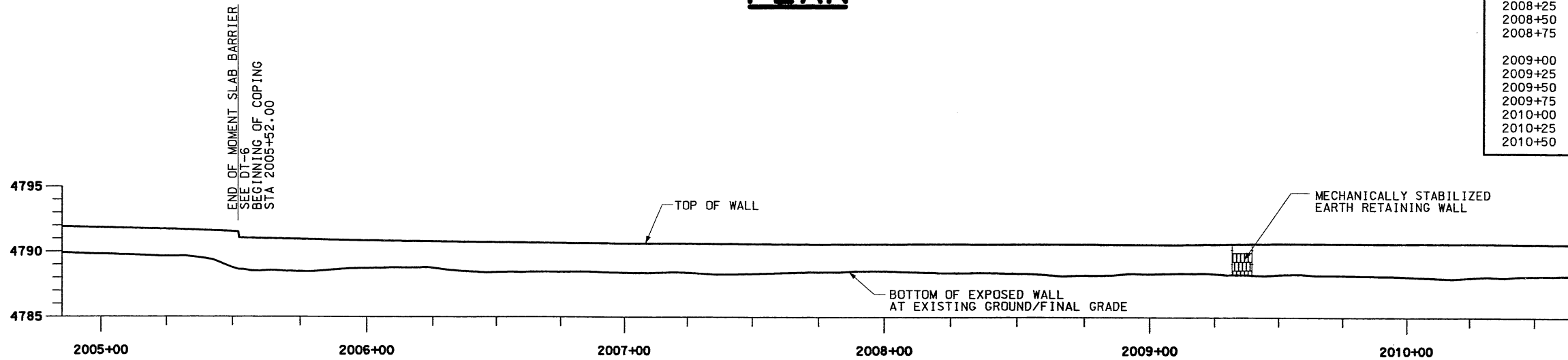
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22-JAN-2004 09:14:38 21:38:25 03:Sheet:Files:Structure:Wall:R-434A:R434A.dgn



PLAN



ELEVATION

WALL R-434A		
STA	TOP OF WALL ELEV	BOTTOM OF EXPOSED WALL ELEV
2005+00	4791.83	4789.79
2005+25	4791.71	4789.64
2005+50	4791.52	4788.76
2005+75	4790.93	4788.46
2006+00	4790.82	4788.72
2006+25	4790.77	4788.73
2006+50	4790.71	4788.41
2006+75	4790.65	4788.44
2007+00	4790.62	4788.37
2007+25	4790.61	4788.37
2007+50	4790.59	4788.30
2007+75	4790.56	4788.43
2008+00	4790.57	4788.51
2008+25	4790.58	4788.38
2008+50	4790.57	4788.34
2008+75	4790.56	4788.20
2009+00	4790.55	4788.31
2009+25	4790.58	4788.32
2009+50	4790.63	4788.25
2009+75	4790.64	4788.21
2010+00	4790.64	4788.11
2010+25	4790.63	4788.04
2010+50	4790.62	4788.16

NOTE:
COORDINATE WALL REINFORCING SYSTEM PLACEMENT WITH STORM DRAIN CONSTRUCTION

UTAH DEPARTMENT OF TRANSPORTATION SALT LAKE CITY, UTAH STRUCTURES DIVISION		DESIGN: BPD 01/04 CHECK: DRS 01/04
I-15 UTAH CO. LINE TO 10600 SO. WALL R-434A		DRAWN: NRD 01/04 CHECK: DRS 01/04
SITUATION AND LAYOUT		QUANT.: NRD 01/04 CHECK: DRS 01/04
PROJECT NUMBER SP-15-7(167)288		APPROVAL DATE: 1/12/04 RECOMM. DATE: 1/12/04
SALT LAKE COUNTY		APPROVED BY: JDOT DATE: 1/12/04
R-434A DRG. NO.		DESIGNER: SENIOR DESIGN ENGR. DRAWN: JDOT BRIDGE ENGR.
SHT. 5 OF 7		REVISIONS
		NO. BY DATE
		REMARKS

