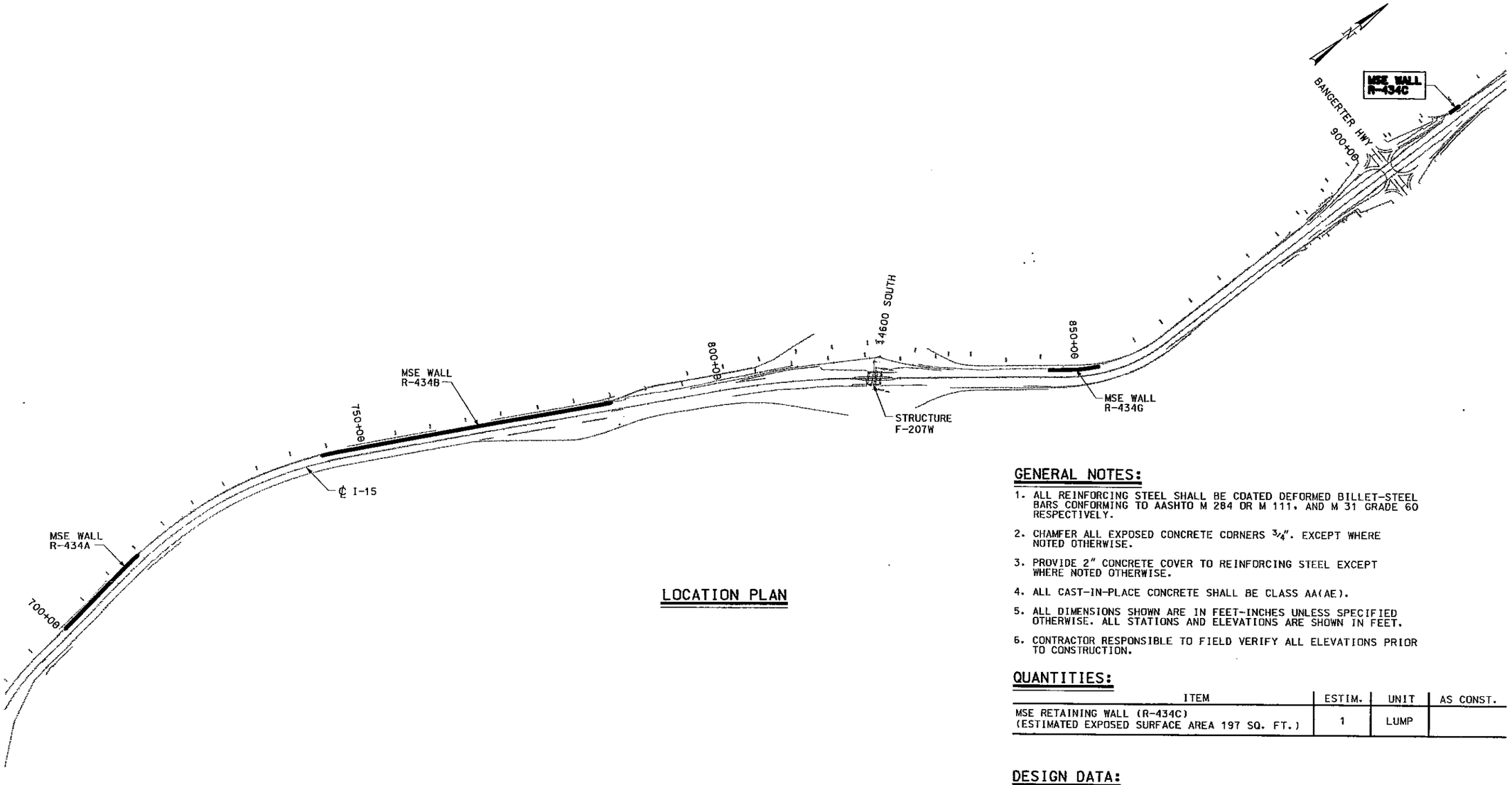


LOCATION PLAN

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 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-434C) (ESTIMATED EXPOSED SURFACE AREA 197 SQ. FT.)	1	LUMP	

DESIGN DATA:

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

LICENSED PROFESSIONAL ENGINEER
No. 309947
Daniel R. Shiosaka
STATE OF UTAH

REVISIONS

NO.	DATE	BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
STRUCTURES DIVISION

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

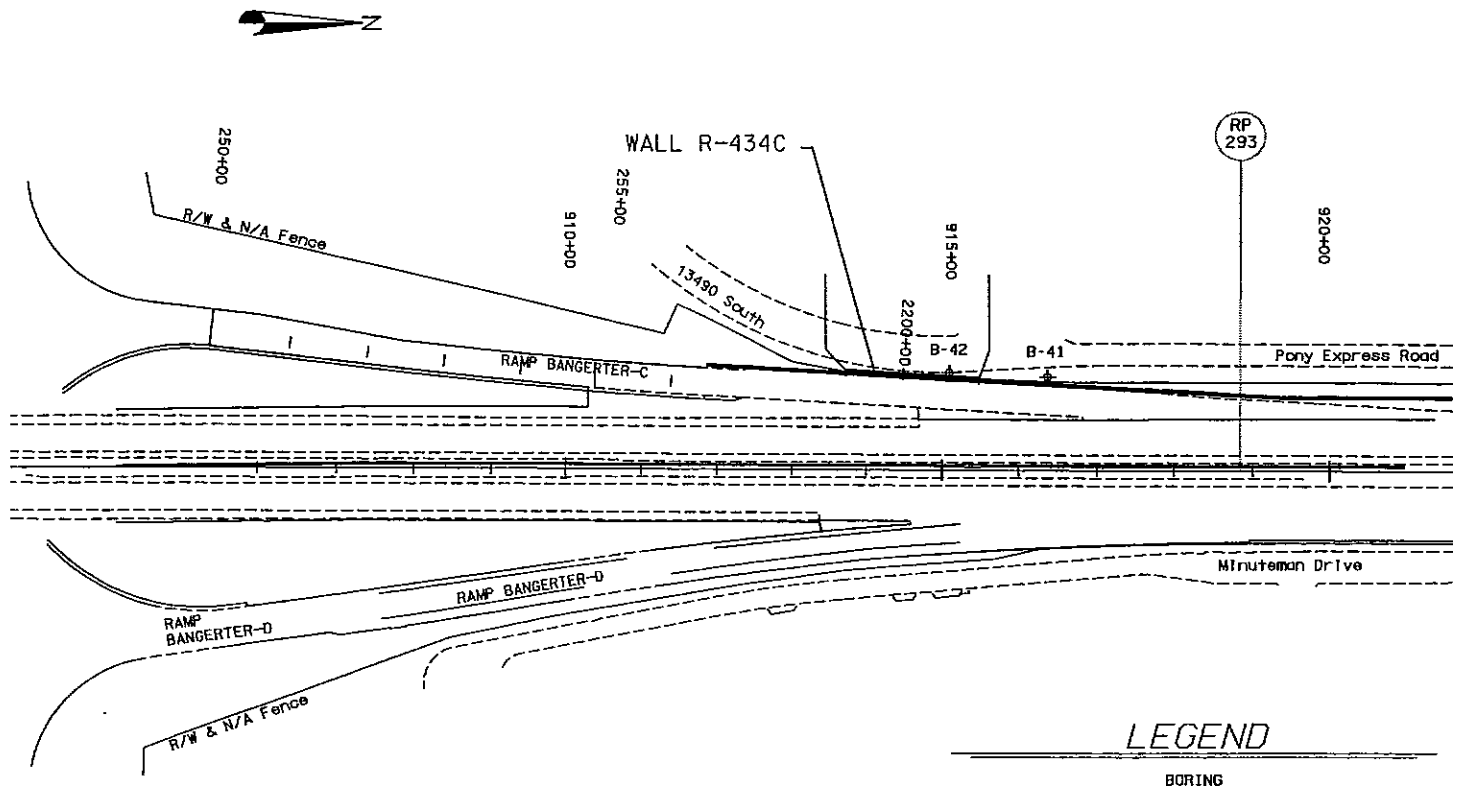
APPROVAL RECOM. 1/12/04 DATE SENIOR BRIDGE ENGR.
APPROVED FOR USE BY UDOT DATE LOCAT BRIDGE ENGR.

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

SALT LAKE COUNTY
R-434C DRG. NO.
SHT. 1 OF 5

DGN File:D:\5244\3926.03\Sheet Files\Structures\Walls\3926_Wall_R-434C_si.dgn

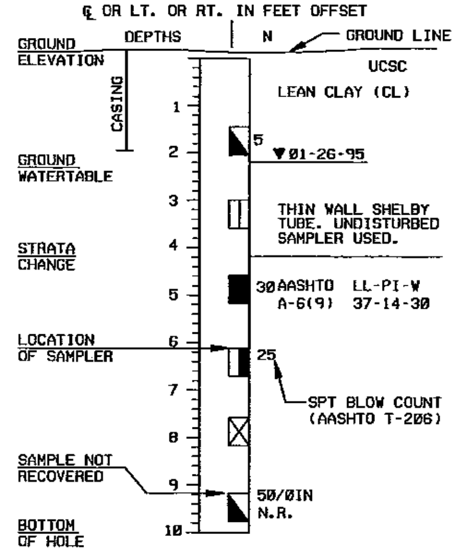
BORING LOCATION PLAN



BORING
B- 41
ELEVATION 4429.6 FEET
STATION 916+36.948 119.728 LT.

DEPTH (FEET)	ELEVATION (FEET)	BLOWS PER FOOT (N1)60	USCS AASHTO	SOIL CLASSIFICATION WC-LL-PI
				FILL: SILTY SAND - MEDIUM DENSE, MOIST, BROWN
2.0	4427.6	27	SM	SILTY SAND - MEDIUM DENSE, MOIST, BROWN
		20		
5.5	4424.1		CL	LEAN CLAY - FIRM TO STIFF, MOIST, BROWN
		9		
9.5	4420.1	11	SP	POORLY GRADED SAND - MEDIUM DENSE, MOIST, BROWN
11.0	4418.6	16	CL	LEAN CLAY - STIFF, MOIST, BROWN
14.0	4415.6			

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	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)

KLEINFELDER PROJECT NO: 33948.98D

NO.	BY	DATE	REMARKS

REVISIONS

GENERAL NOTES

1. THE SUBSURFACE EXPLORATIONS SHOWN WERE CONDUCTED ON SEPTEMBER 5, 2003 BY KLEINFELDER.
2. 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.
3. 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.
4. THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.
5. COBBLE - A ROCK FRAGMENT WITH AN AVERAGE DIMENSION BETWEEN 3 AND 12 INCHES.
6. BOULDER - A ROCK FRAGMENT WITH AN AVERAGE DIMENSION GREATER THAN 12 INCHES.
7. IN ORDER TO PROVIDE MORE CONSISTENCY AND UNIFORMITY WITH GEOTECHNICAL AND CONSTRUCTION INDUSTRY STANDARDS, UDOT HAS ADOPTED THE UNIFIED SOIL CLASSIFICATION SYSTEM (USING BOTH THE USCS SYMBOLS AND MAJOR SOIL DESCRIPTION STANDARDS) 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.

UNIFIED SOIL CLASSIFICATION SYSTEM

COARSE-GRAINED SOILS < 50% PASSES #200 SIEVE	GRAVELS <50% COARSE FRACTION PASSES #4 SIEVE	GRAVELS WITH LITTLE OR NO FINES	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, 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
			GC	CLAYEY GRAVELS, POORLY-GRADED GRAVEL-SAND-CLAY MIXTURES
	GRAVELS <50% COARSE FRACTION PASSES #4 SIEVE	SANDS WITH LITTLE OR NO FINES	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH > 12% FINES	SM	SILTY SANDS, POORLY-GRADED SAND-GRAVEL-SILT MIXTURES
			SC	CLAYEY SANDS, POORLY-GRADED SAND-GRAVEL-CLAY MIXTURES
FINE-GRAINED SOILS > 50% PASSES #200 SIEVE	SILTS & CLAYS LIQUID LIMIT < 50		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
			OL	ORGANIC SILTS & CLAYS OF LOW PLASTICITY
	SILTS & CLAYS LIQUID LIMIT > 50		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
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT

APPARENT/RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPT (# BLOWS/FT)	MODIFIED CA 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)	TORVANE 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 THUMBNAIL.
HARD	> 30	> 2.0	> 4.0	INDENTED WITH DIFFICULTY BY THUMBNAIL.

REVISIONS

NO.	DATE	BY	REMARKS

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

DESIGN CC 12/03 CHECK WOT 12/03
DRAWN SC 12/03 CHECK CC 12/03
QUANT. ___ CHECK ___

APPROVAL RECOMM. ___ DATE ___ DESIGN ENGR.
APPROVED ___ DATE ___ CHIEF STRUCTURAL ENGR.

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

SALT LAKE COUNTY
R-434C
DRG. NO.
SHT. 2 OF 5

KLEINFELDER PROJECT NO. 33948.98D

NO.	BY	DATE	REMARKS

REVISIONS

BORING
B- 42
ELEVATION 4428.3 FEET
STATION 915+08.992 125.646 LT.

DEPTH (FEET)	ELEVATION (FEET)	DEPTH (FEET)	BLOWS PER FOOT (N)60	USCS AASHTO	SOIL CLASSIFICATION WC-LL-PI
					FILL: SILTY SAND - MEDIUM DENSE, SLIGHTLY MOIST, YELLOW BROWN
2.0	4426.3		10	SM	SILTY SAND - VERY LOOSE TO MEDIUM DENSE, SLIGHTLY MOIST TO MOIST, YELLOW BROWN TO BROWN WITH RUST COLORING
		5	2		
			14		
		10	10		
11.5	4416.8			ML	SANDY SILT - FIRM TO STIFF, MOIST, BROWN WITH RUST COLORING
			9		
		15			
16.0	4412.3				

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)

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

DESIGN CC 12/03 CHECK WDT 12/03
DRAWN SC 12/03 CHECK CC 12/03
QUANT. CHECK

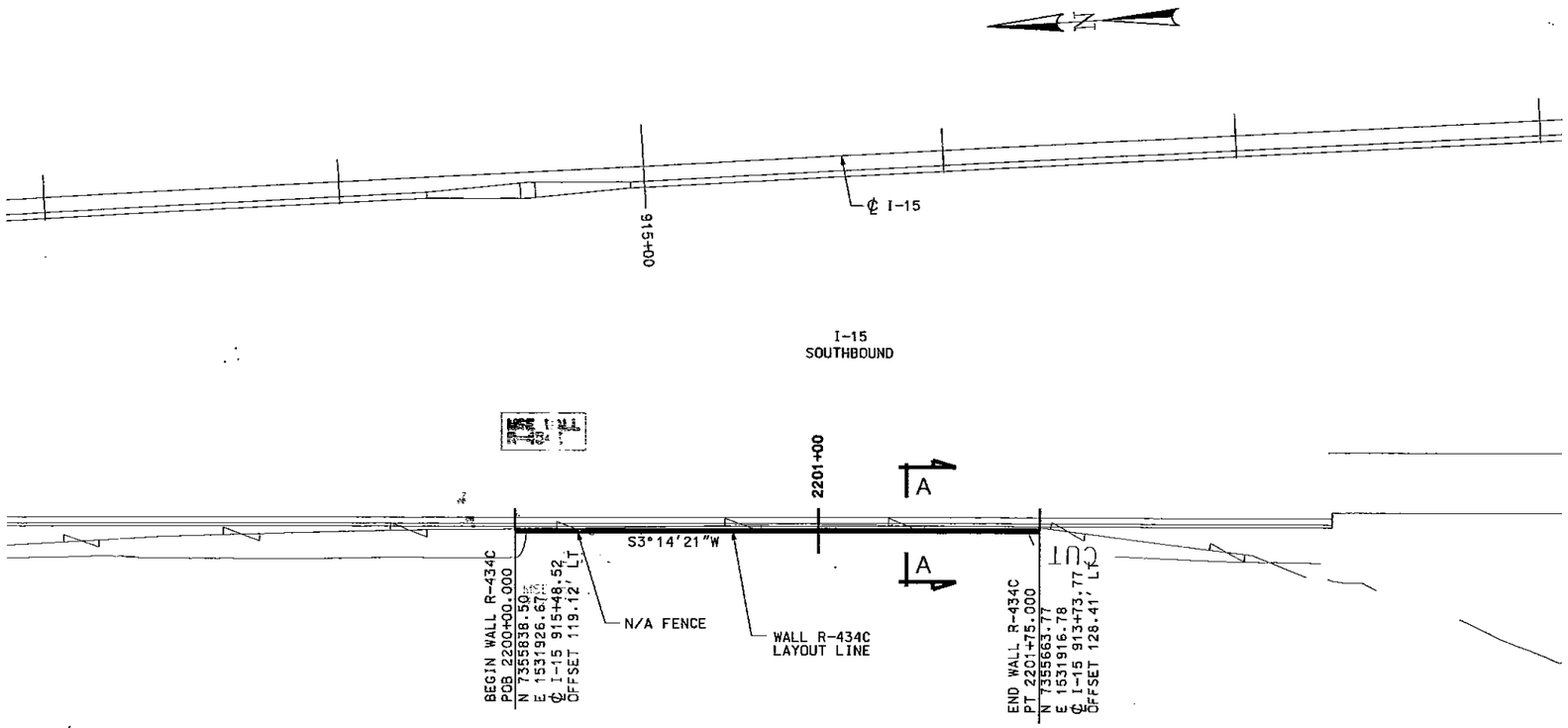
APPROVAL RECOMM. DATE DESIGN ENGR.
APPROVED DATE CHIEF STRUCTURAL ENGR.

REVISIONS

NO.	DATE	BY	REMARKS

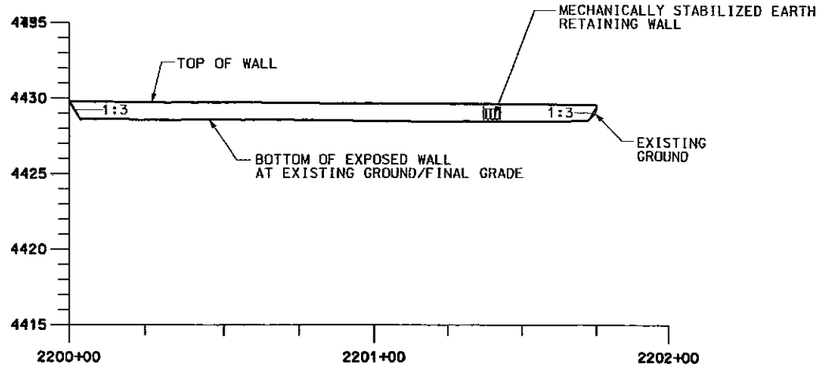
I-15, UTAH CO LINE TO 10600
I-15
SOIL DATA SHEET
PROJECT NUMBER SP-15-7(167)288

SALT LAKE COUNTY
R-434C
DRG. NO.
SHT. 3 OF 5



WALL R-434C		
STA	TOP OF WALL ELEV	BOTTOM OF EXPOSED WALL ELEV
2200+00	4429.80	4429.80
2200+25	4429.73	4428.64
2200+50	4429.73	4428.66
2200+75	4429.70	4428.70
2201+00	4429.66	4428.63
2201+25	4429.64	4429.57
2201+50	4429.61	4428.55
2201+75	4429.56	4429.56

PLAN



ELEVATION

REVISIONS

NO.	DATE	BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
STRUCTURES DIVISION

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

APPROVAL RECOMM. 1/12/04 DATE SENIOR DESIGN ENGR.
APPROVED FOR USE BY UDOT DATE UDOT BRIDGE ENGR.

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

SALT LAKE
COUNTY

R-434C
DRG. NO.

SHT. 4 OF 5

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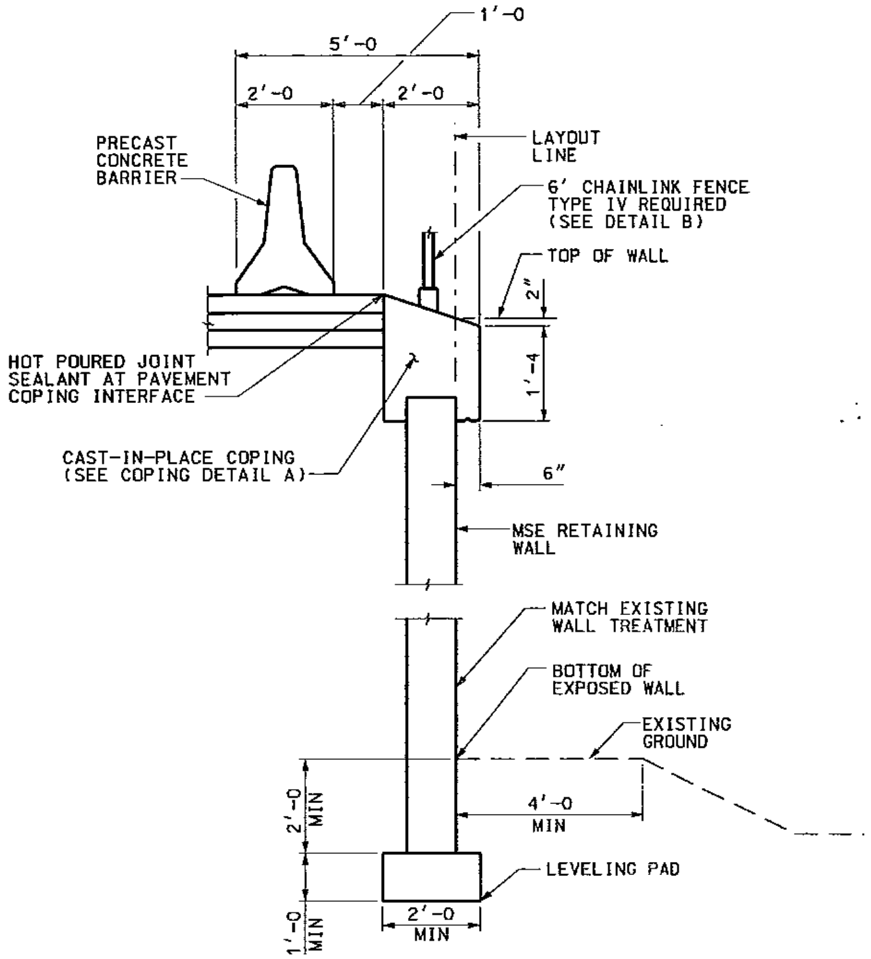
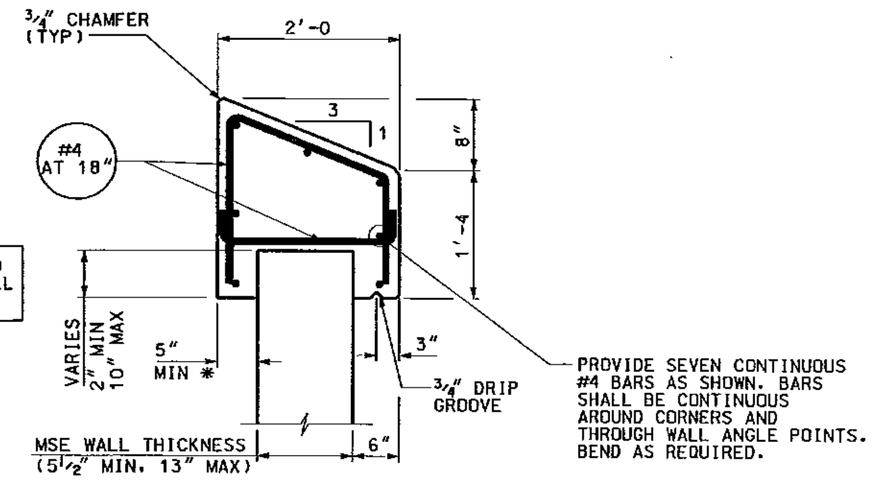
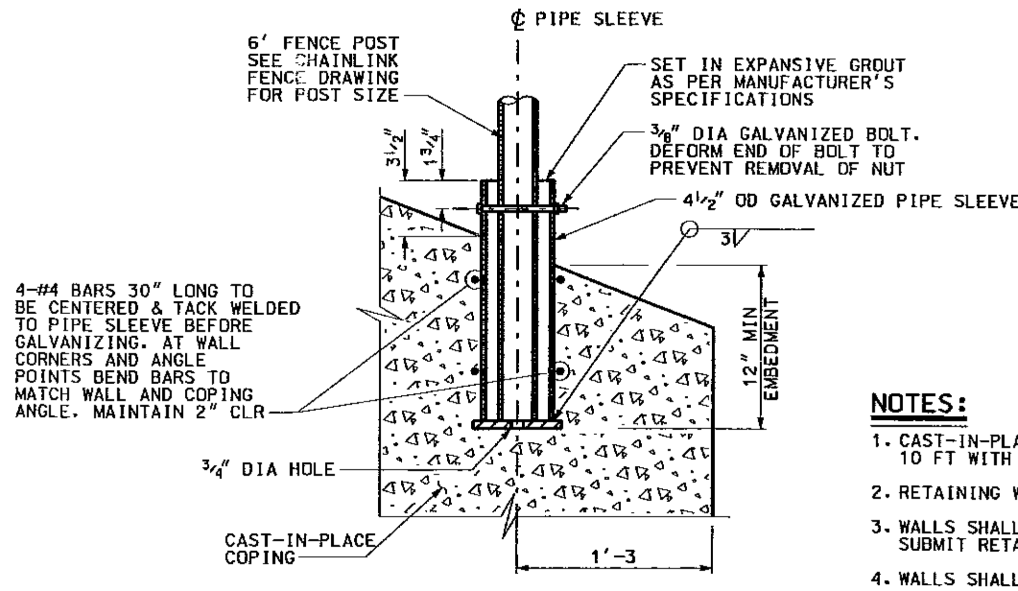


SECTION A-A



COPING DETAIL "A"

(ENGINEER APPROVAL REQUIRED TO MODIFY COPING DIMENSIONS)



DETAIL "B"

NOTE:
THE PIPE SLEEVE ASSEMBLY SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO SPECIFICATION M-111. INCLUDE PIPE SLEEVE ASSEMBLY IN COST FOR CHAIN LINK FENCE.

NOTES:

1. CAST-IN-PLACE COPING CONTROL JOINTS TO BE SPACED AT 10 FT WITH 1/2" EXPANSION JOINTS SPACED AT 30 FT.
2. RETAINING WALL SHALL BE BUILT ENTIRELY INSIDE N/A FENCE.
3. WALLS SHALL BE DESIGNED FOR TRAFFIC SURCHARGE. CONTRACTOR SHALL SUBMIT RETAINING WALL DESIGN TO ENGINEER.
4. WALLS SHALL BE CONSTRUCTED VERTICAL.

REVISIONS
NO. | DATE | BY | REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
STRUCTURES DIVISION

DESIGN BPD 01/04 CHECK DRS 01/04
DRAWN NRD 01/04 CHECK DRS 01/04
QUANT. NRD 01/04 CHECK DRS 01/04
APPROVAL RECOM. 1/12/04 DATE SENIOR DESIGN ENGR.
APPROVED FOR USE BY UDOT DATE UDOT BRIDGE ENGR.

I-15 UTAH CO. LINE TO 10600 SO.
WALL R-434C
DETAILS
PROJECT NUMBER SP-15-7(167)288

SALT LAKE
COUNTY
R-434C
DRG. NO.