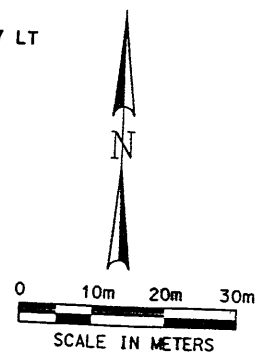
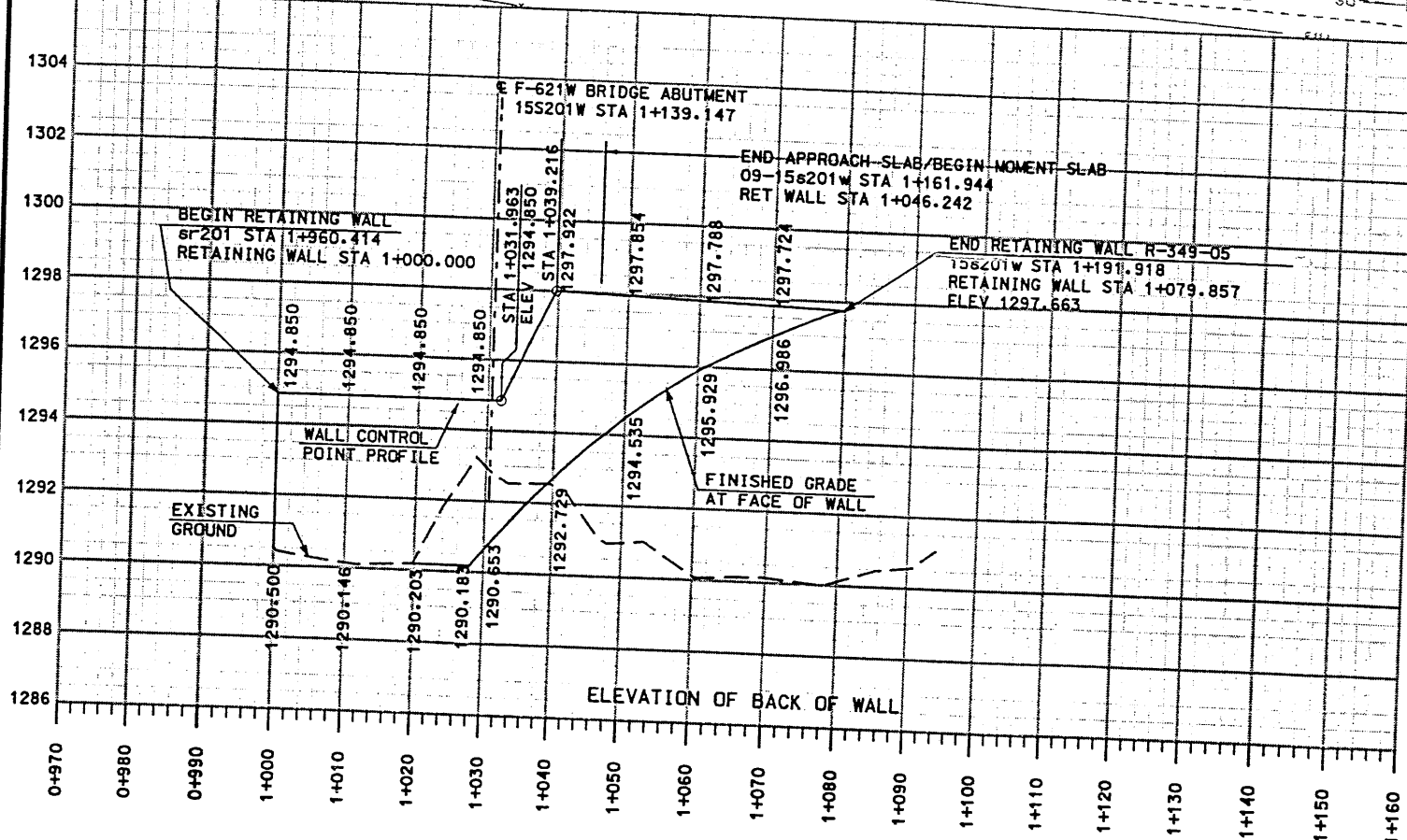
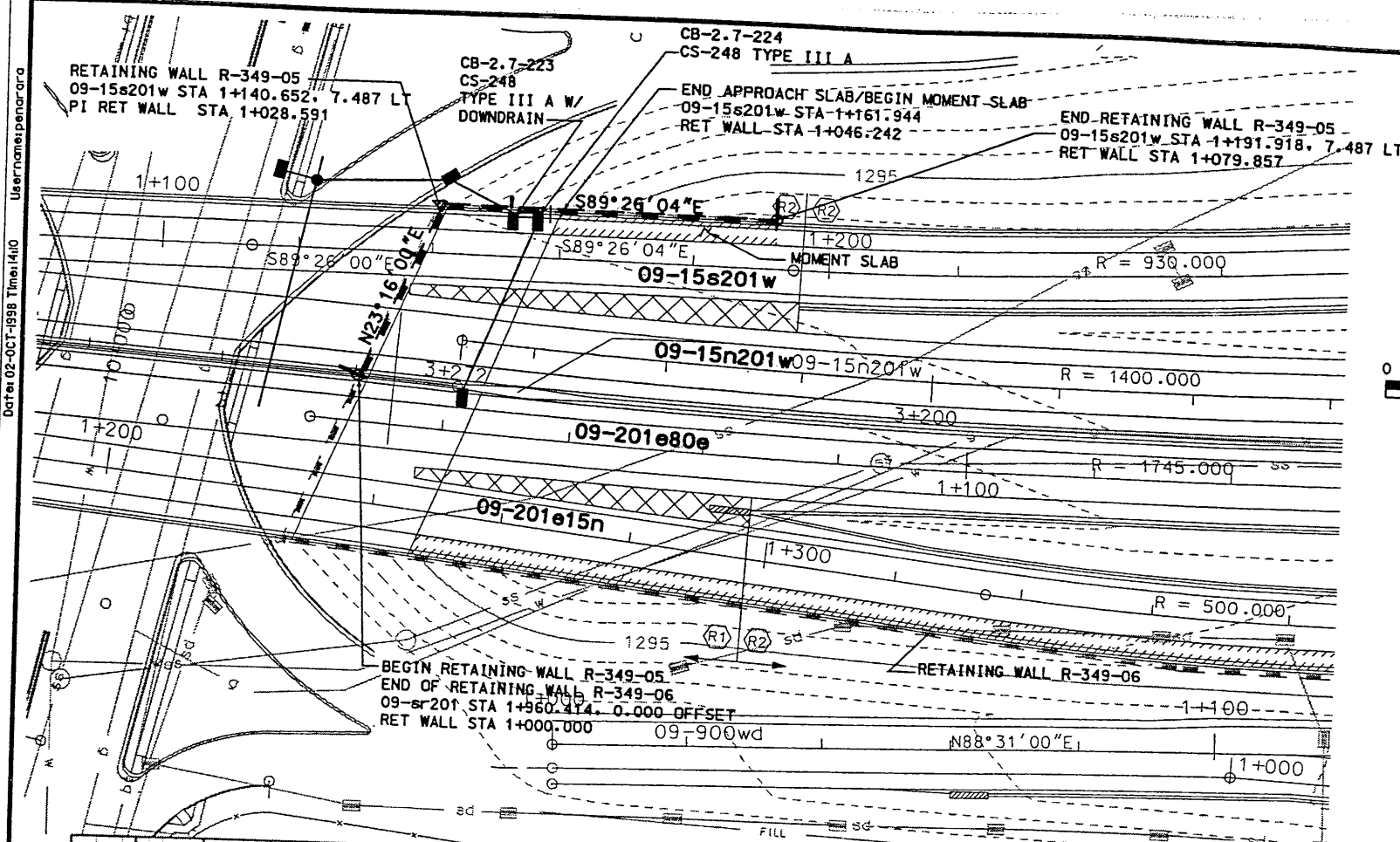
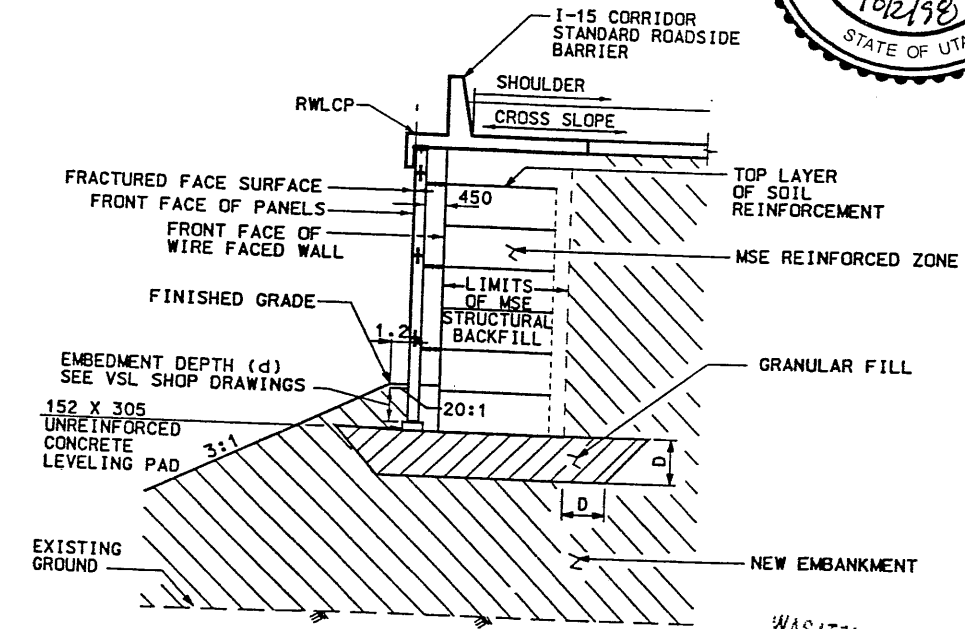


Users: mspenarora
Date: 02-OCT-1998 Time: 14:10



NOTES:

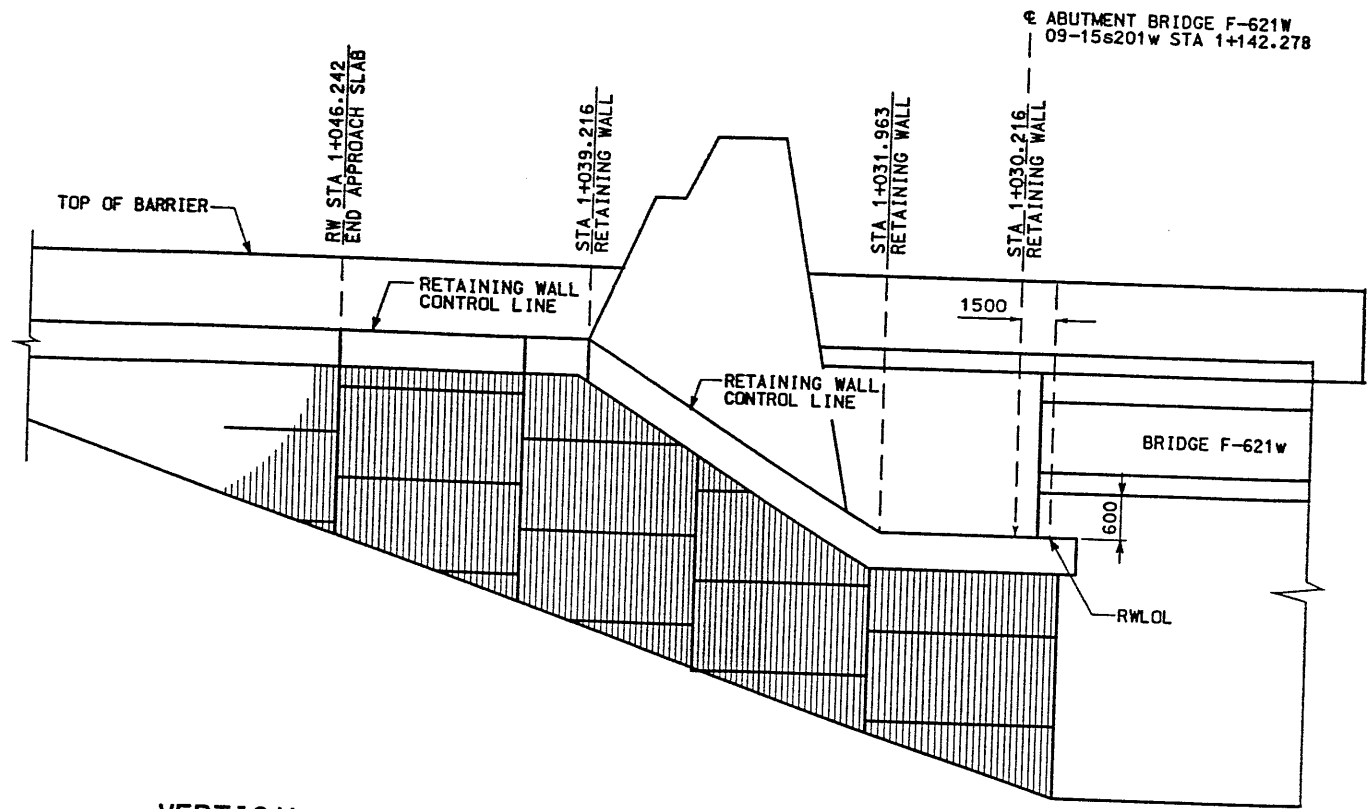
1. CONSTRUCT WALL TO DESIGN PAVEMENT ELEVATION AND SETTLEMENT ALLOWANCE.
2. REFER TO CS SHEET 54 FOR MOMENT SLAB DETAILS.
3. REFER TO DRAINAGE PLANS TO CONFIRM FINAL LOCATION OF DRAINAGE STRUCTURE.
4. LOCATE RETRIEVABLE SAMPLE AT RETAINING WALL STA 1+060.000.
5. THE FOUNDATION BEARING MATERIALS SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER DURING SITE PREPARATION. ANY UNDESIRABLE MATERIALS WILL NEED TO BE REMOVED AND REPLACED WITH BORROW TO DEPTH (D) IN ORDER TO ACHIEVE ACCEPTABLE CONDITIONS AT THE BASE OF THE WALL.
6. MINIMUM CLEARANCE BETWEEN DOWN DRAIN PIPE IS 100 mm BELOW FOOTING OF WALL.
7. CONTRACTOR TO ADJUST STATION LOCATION OF INLETS NEXT TO MSE WALL TO MISS THE MSE WALL STRAPS. SEE VSL SHOP DRAWINGS FOR INLET LOCATIONS NEXT TO MSE WALLS.



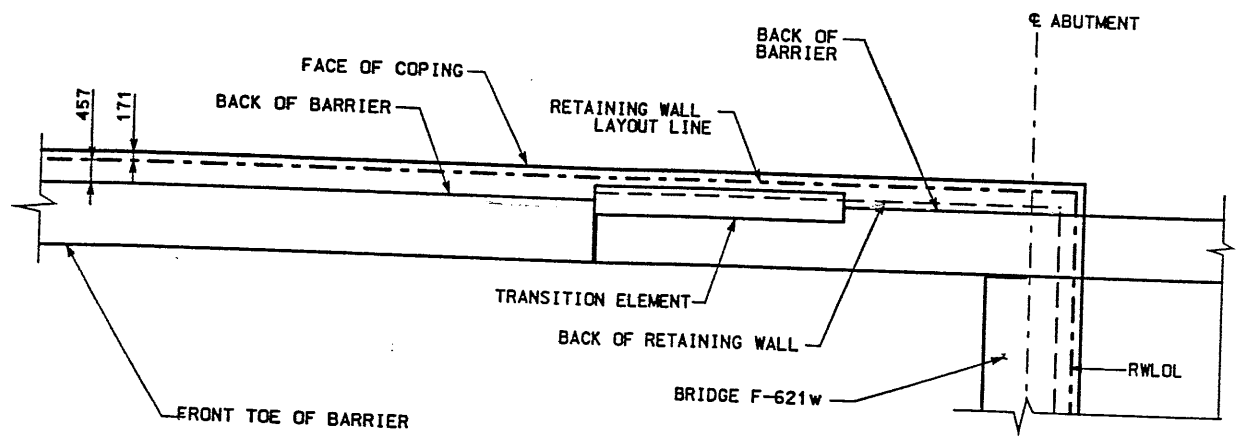
(REFER TO CS-29 FOR DETAILS)
MSE TWO STAGE WITH MOMENT SLAB
 RET WALL STA 1+046.242 TO STA 1+079.857 NTS
 WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION

DRAINAGE STRUCTURE DATA R-349-05					
ID NO.	STATION 15s201w	OFFSET TO CONTROL POINT	OFFSET TO E OF BOX	STATION R-349-05	ELEV AT BOTTOM OF BOX
CB-2.7-223	1+152.457	-6.60	-	1+040.395	1295.82
CB-2.7-224	1+156.406	-6.60	-	1+044.344	1295.95

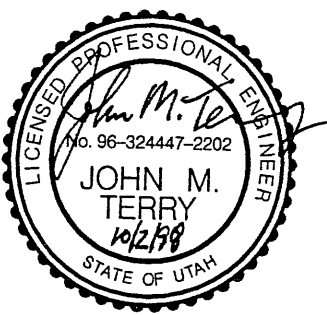
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL	RELEASE
1	10/2/98		
UTAH DEPARTMENT OF TRANSPORTATION		SYNDRUP/DE LEUW	2713404
SECTION 2.7	SECTION 2.7	SECTION 2.7	SECTION 2.7
PROJECT NUMBER #SP-15-7(135)296	PROJECT DESIGN ENGINEER JOHN TERRY	SECTION MANAGER	QUANT.
I-15 CORRIDOR RECONSTRUCTION	SALT LAKE COUNTY	DWG. NO. 2.7-R-349-05.1	SHT. 1 OF 18



VERTICAL CONTROL LINE TRANSITION DETAIL
NTS



HORIZONTAL CONTROL LINE TRANSITION DETAIL
NTS

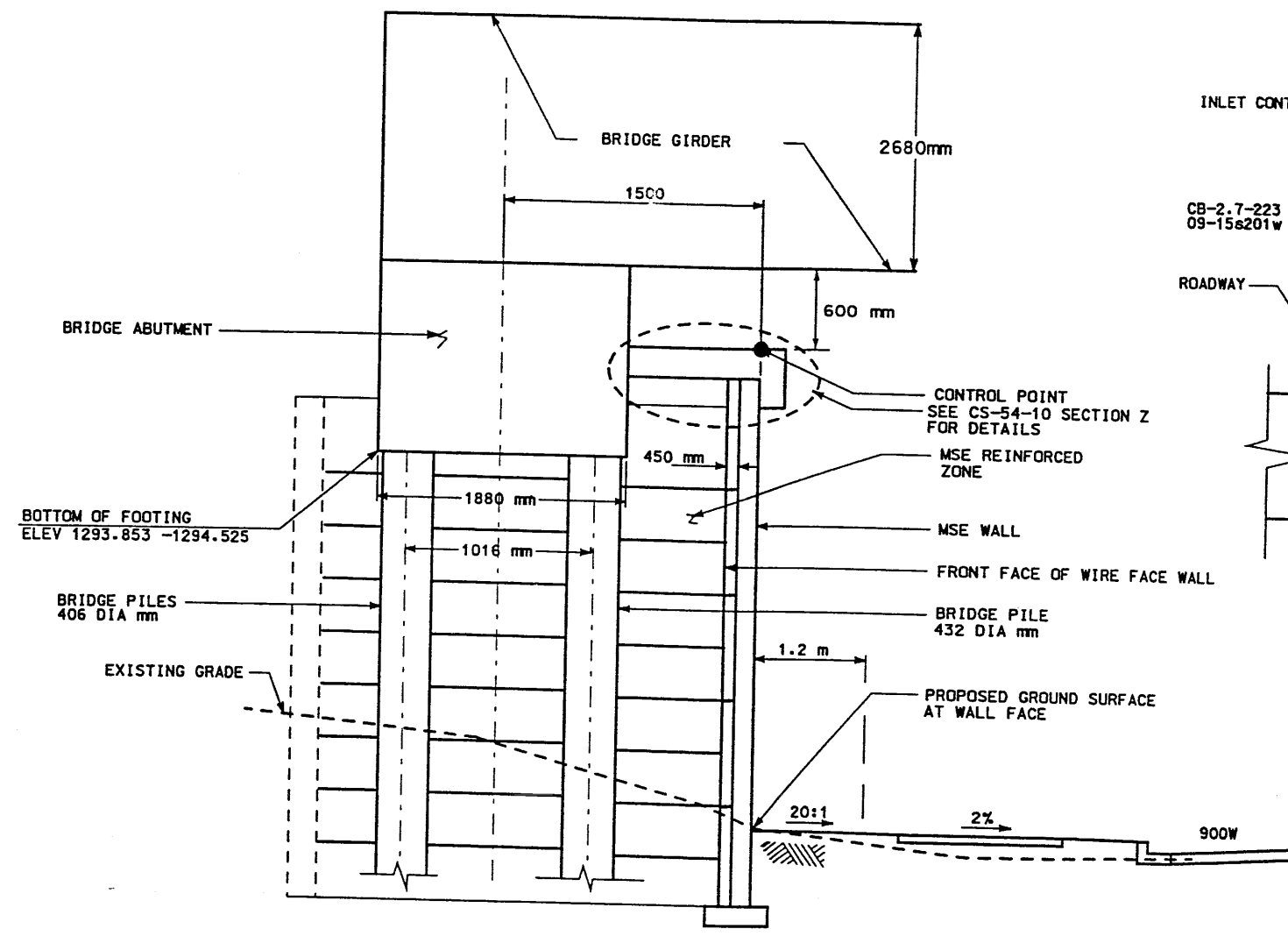
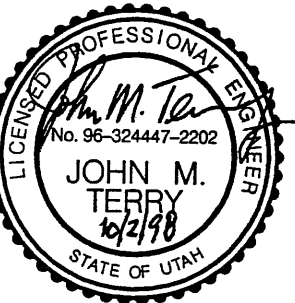


WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION

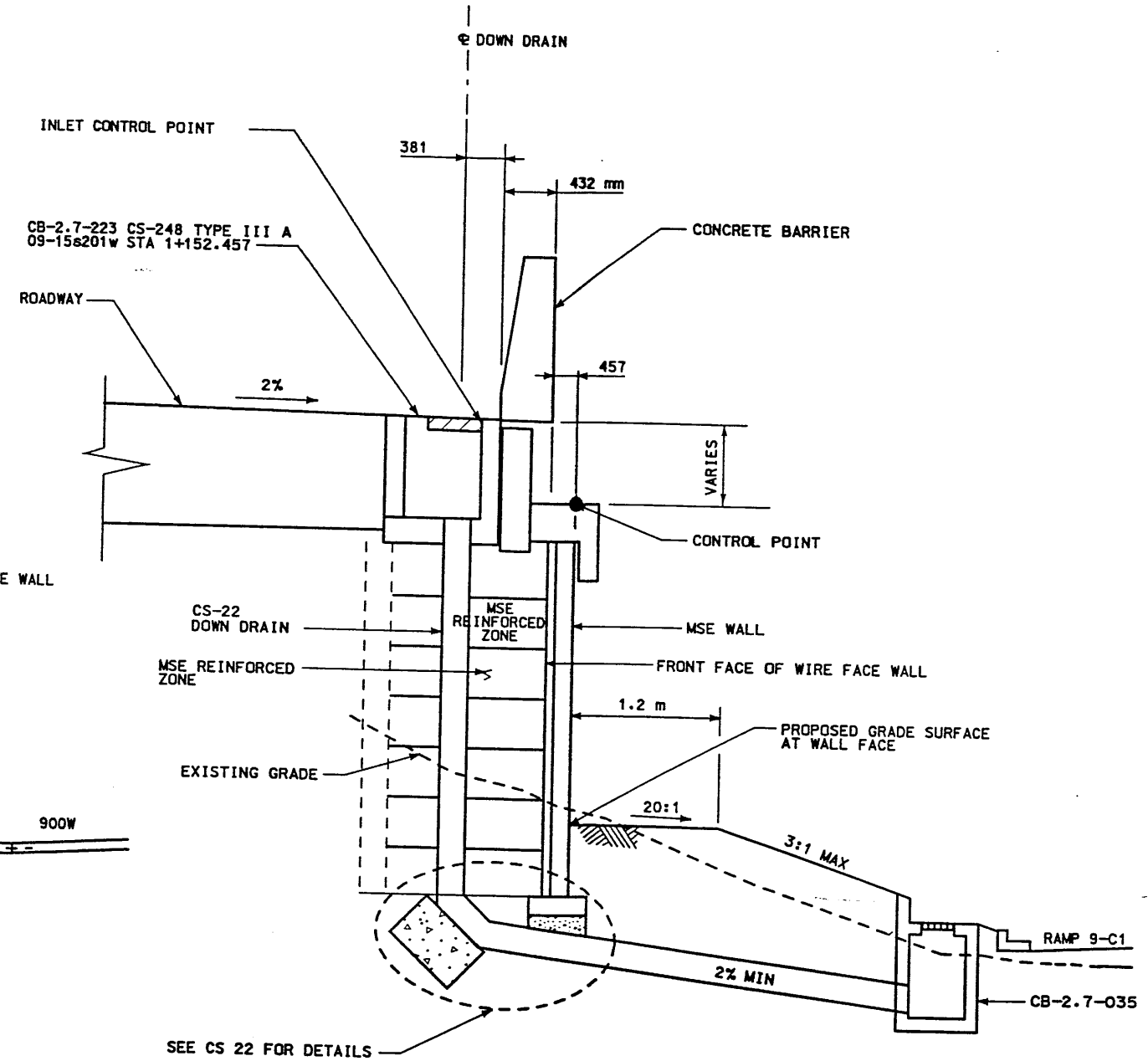
APPROVED FOR CONSTRUCTION		NO. DATE		DESCRIPTION	
		10/2/98		INITIAL RELEASE	
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW		TRACKING NO.	
I-15 CORRIDOR RECONSTRUCTION		DESIGN RMP 2/98		CHECK MSC 2/98	
SITUATION & LAYOUT R-349-05		DATE 2/4/98		CHECK RAP 2/98	
SECTION 2.7		PROJECT DESIGN ENGINEER		CHECK RAP 2/98	
PROJECT NUMBER #SP-15-7(135)296		DRAWN YLR 2/98		CHECK RAP 2/98	
SALT LAKE COUNTY		DATE 2/4/98		CHECK 1/1	
DWG. NO. 2.7-R-349-05.2		SECTION MANAGER		CHECK 1/1	
SHT. 2 OF 18		JOHN TERRY		QUANT. / /	
		SECTION MANAGER		2713404	

Doc# 02-OCT-1998 Time: 14:05 User: name.pencar.crg

File name: c:\dgn\115_cadd\09_57\sheet7_files\walla\09_walldet_005.3.dgn



SECTION AT BRIDGE
RW STA 1+000.00 TO 1+028.591 NTS



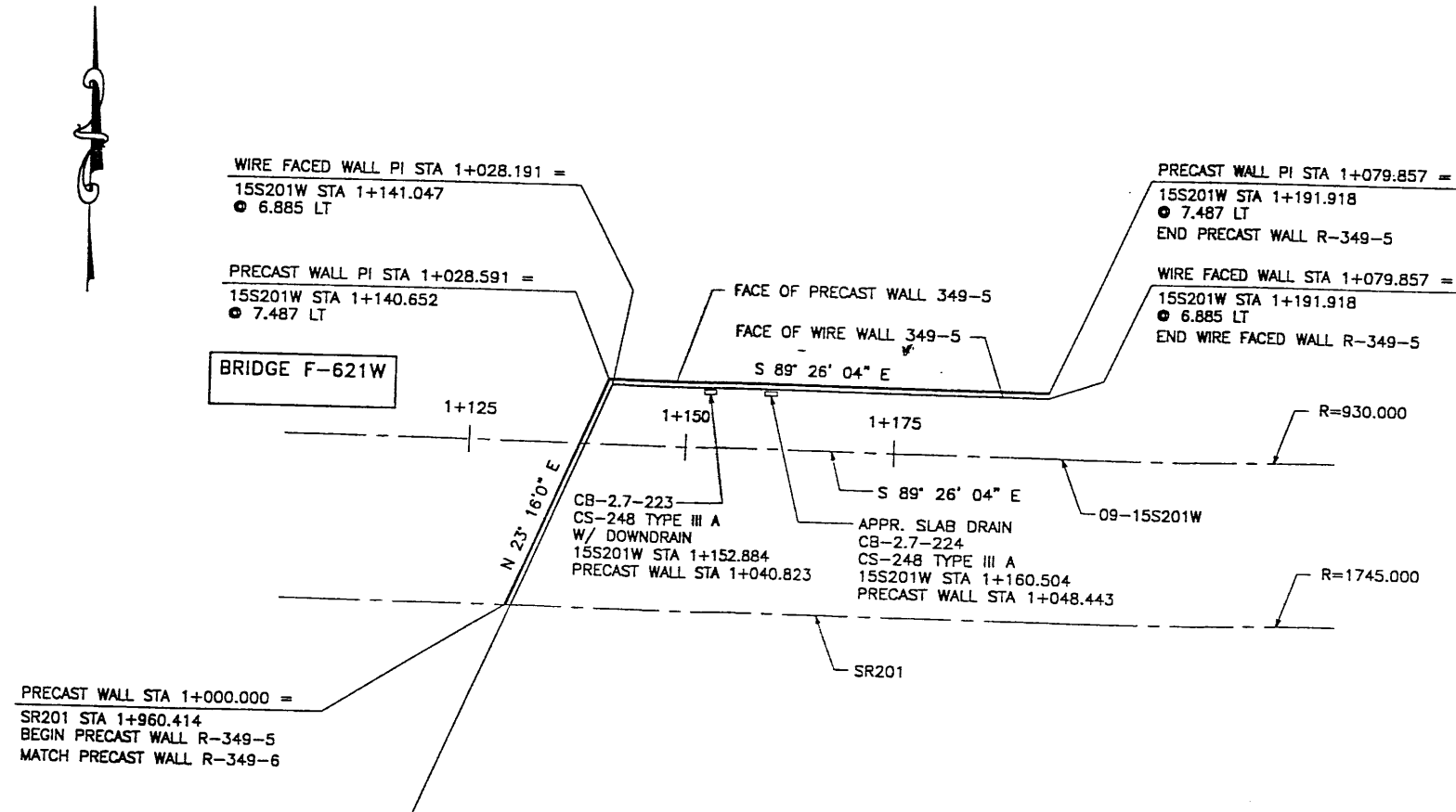
SECTION AT DOWN DRAIN
RW STA 1+040.395 NTS

RETAINING WALL DETAIL
FOR R-349-05 NTS

WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		NO. DATE		10/2/98 INITIAL RELEASE	
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUIW		TRACKING NO. 2713404	
I-15 CORRIDOR RECONSTRUCTION		DESIGN R/W		CHECK R/W	
SITUATION & LAYOUT R-349-05		SECTION 2.7		CHECK R/W	
SECTION 2.7		PROJECT DESIGN ENGINEER		CHECK	
PROJECT NUMBER #SP-15-7(135)296		DATE		DATE	
SALT LAKE COUNTY		APPROVAL		APPROVED	
DWG. NO. 2.7-R-349-05.3		DATE		DATE	
SHT. 3 OF 10		MARGARET SIMMONS-CROSE		SECTION MANAGER	
		DATE		DATE	
		PROJECT DESIGN ENGINEER		SECTION MANAGER	
		DATE		DATE	
		APPROVAL		APPROVED	
		DATE		DATE	

FINAL 09-17-98 H:\RE_EARTH\PROJECT\239\RE-1.DWG 1998\9SERIES\9W-05\SUBMTL-3\RE-1.DWG ACE (X-UTAH.DWG)



PLAN VIEW MSE WALL "R-349-5"
SCALE: 1=400 (FULL SIZE)
SCALE: 1=800 (HALF SIZE)

DESIGN PARAMETERS	
ANGLE OF INTERNAL FRICTION (SELECT)	= 34°
ANGLE OF INTERNAL FRICTION (BASE)	= 31°
ANGLE OF INTERNAL FRICTION (RANDOM)	= 34°
UNIT WEIGHT BACKFILL	= 135 PCF. (21.2 KN/M ³)
TRAFFIC SURCHARGE	= 250 PSF (12 KPa)
SEISMIC ACCELERATION COFF.	= 0.12g (TYP)
SEISMIC ACCELERATION COFF.	= 0.32g (AT BRIDGE ABUTMENTS 250 YEAR SEISMIC)
DESIGN CRITERIA	
SAFETY FACTOR (OVERTURNING)	= 2.0
SAFETY FACTOR (SLIDING)	= 1.5
SAFETY FACTOR (PULLOUT)	= 1.5
DESIGN LIFE	= 75 YEARS

RETAINED EARTH INDEX	
RE-1	PLAN WIRE FACED WALL R-349-5, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTIONS ● WIRE FACED WALL
RE-3	TYPICAL CROSS SECTION
RE-4	TYPICAL CROSS SECTION
RE-5	TYPICAL CROSS SECTION
RE-6	WIRE FACED WALL R-349-5
RE-7	WIRE FACED WALL R-349-5

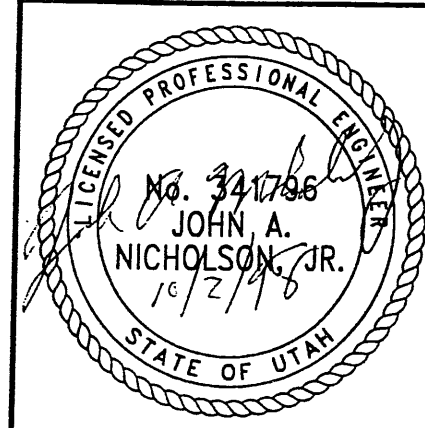
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	09-17-98	RELEASE FOR 1ST STAGE CONST. ONLY

VSL CORPORATION
2640 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6272
Fax: (919) 781-6669

ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA



WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION



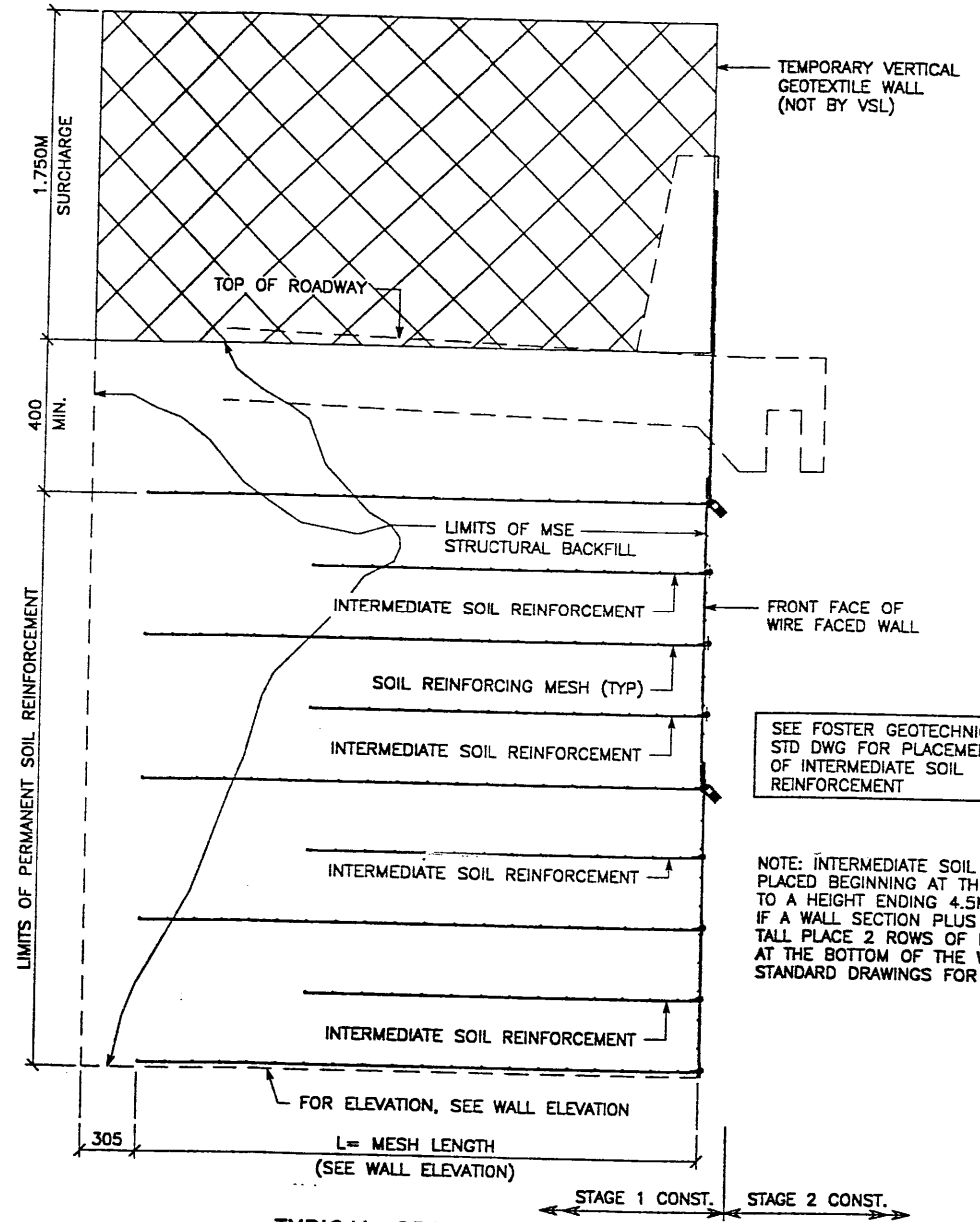
RETAINED EARTH™ WALLS PLAN VIEW MSE WALL "R-349-5"
UTAH I-15 RECONSTRUCTION SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.
DWG. NO. 2.7R-349-5.4
JOB NO. 239-0007
SHT. NO. RE-1

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

H:\RE_EARTH\PROJECT\239\1998\9WSERIES\9W-05\SUBMTL-3\RE-2.DWG
 .1998\9WSERIES\9W-05\SUBMTL-3\RE-2.DWG
 09-17-98
 FINAL

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-17-98	RELEASE FOR 1ST STAGE CONST. ONLY

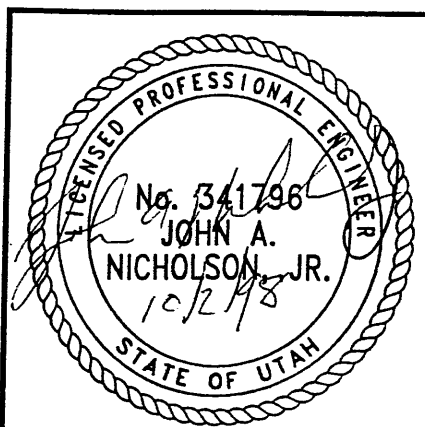


**TYPICAL CROSS SECTION
 AT FINAL PHASE OF WIRE FACE WALL**
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

NOTE: INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF SURCHARGE. IF A WALL SECTION PLUS SURCHARGE IS LESS THAN 4.5M, TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.

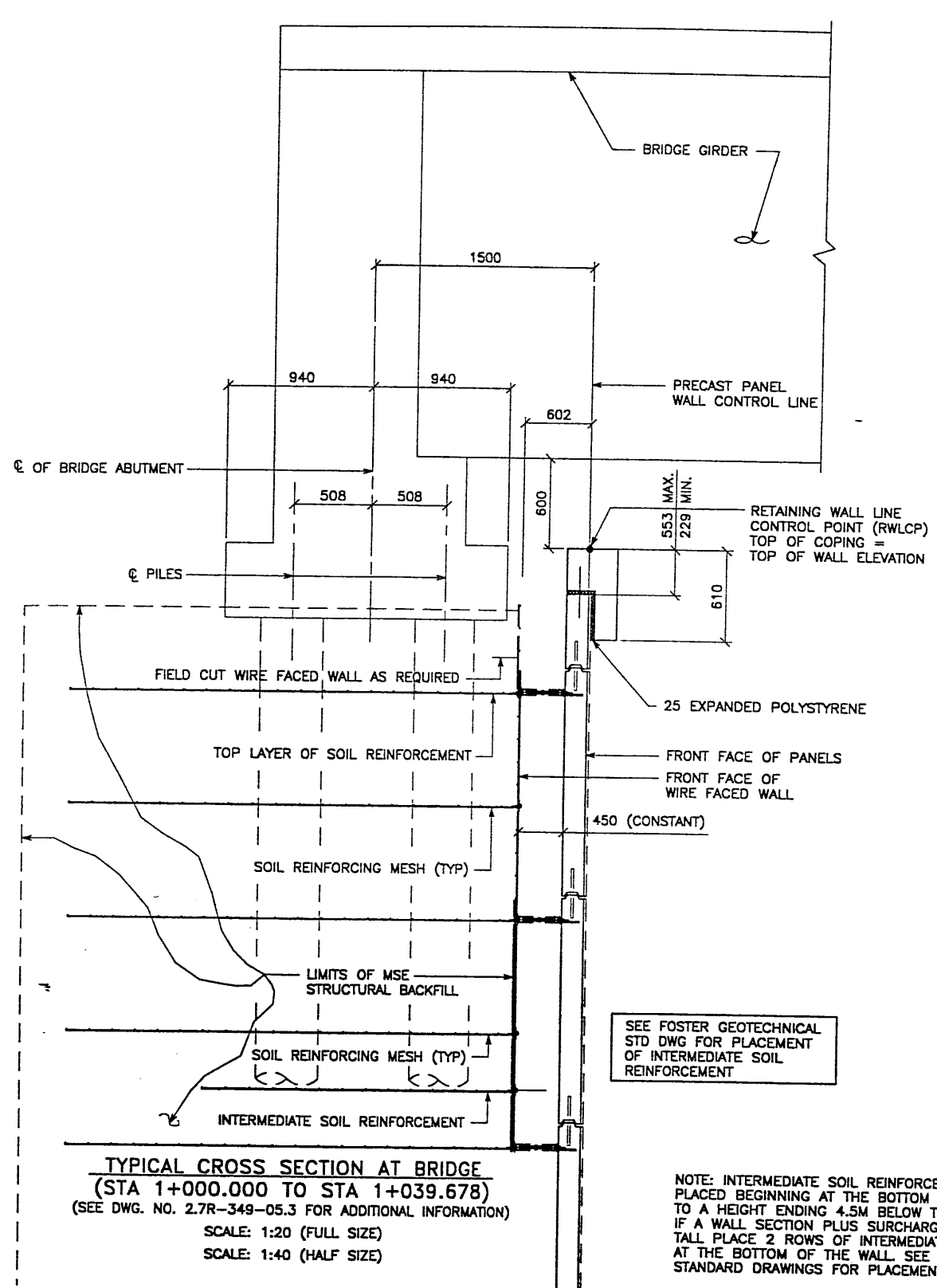
SEE FOSTER GEOTECHNICAL STD DWG FOR PLACEMENT OF INTERMEDIATE SOIL REINFORCEMENT

RELEASED FOR CONSTRUCTION
 WASATCH CONSTRUCTORS
 OCT 07 1998



METRIC
 CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

DES. 09-17-98 JL		RETAINED EARTH™		NO.	DATE	BY	
DRN. 09-17-98 DDL		VSL					REVISION
CHK. 09-17-98 JL		VSL					
<p>VSL CORPORATION 2840 Photo Plaza, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-8772 Fax: (919) 781-4669</p> <p>ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>							
<p>RELEASED FOR CONSTRUCTION</p> <p>UTAH 1-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSPORTATION</p>							
<p>DWG. NO. 2.7-R-349-5.5 JOB NO. 239-0007 SH. NO. RE-2</p>							

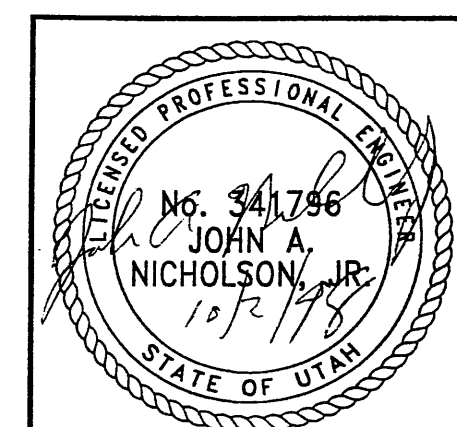


TYPICAL CROSS SECTION AT BRIDGE
 (STA 1+000.000 TO STA 1+039.678)
 (SEE DWG. NO. 2.7R-349-05.3 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

NOTE: INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF SURCHARGE. IF A WALL SECTION PLUS SURCHARGE IS LESS THAN 4.5M, TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-17-98	RELEASE FOR 1ST STAGE CONST. ONLY

WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION

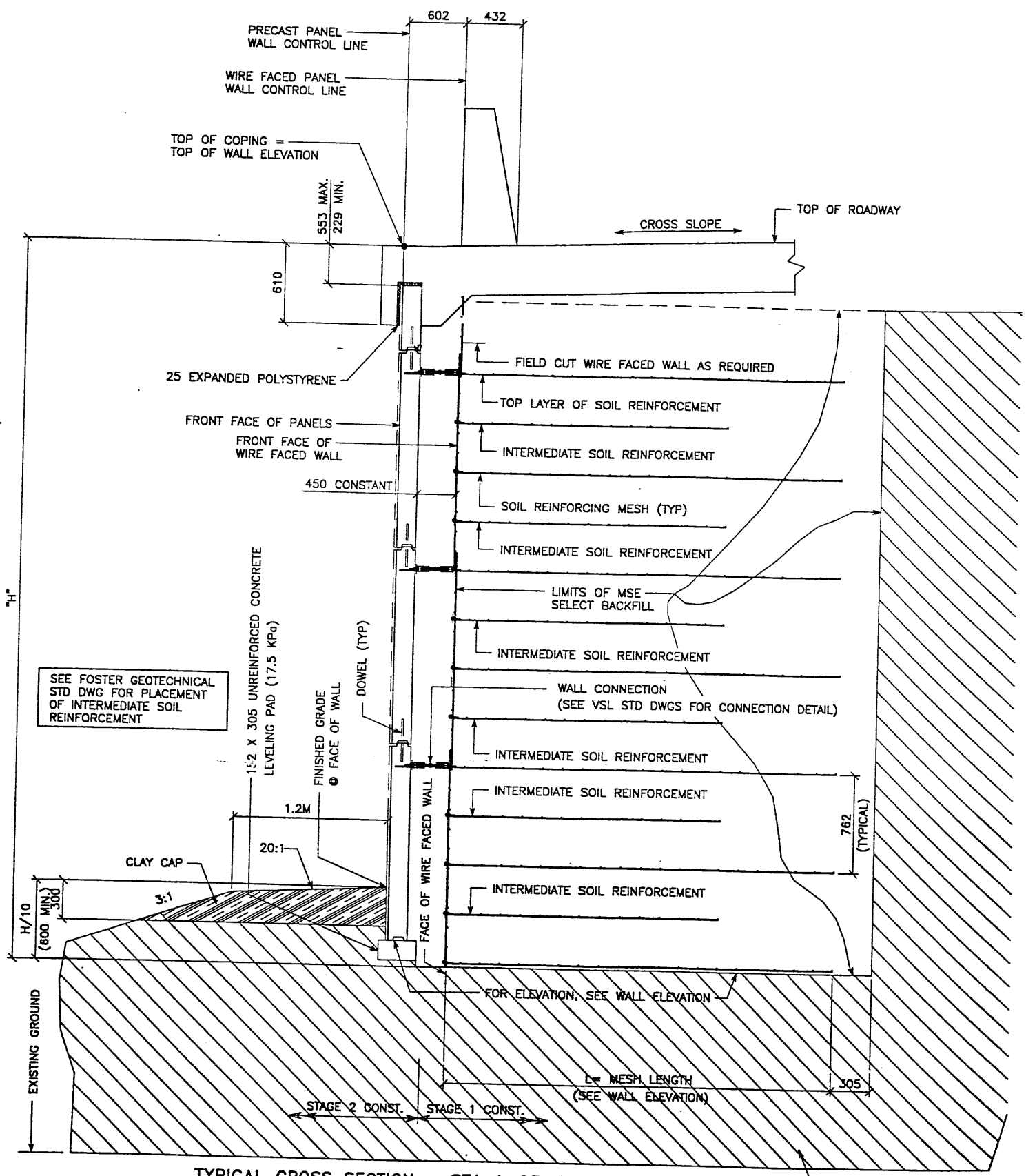


CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

METRIC

DES.	09-17-98	JL	RETAINED EARTH™
DRN.	09-17-98	DDL	
CHK.	09-17-98	JL	
VSL CORPORATION 2840 Plaza Place, Suite 200 Dallas, TX 75244 Tel: (972) 701-8272 Fax: (972) 701-8889			
VSL ATLANTA, GA / DALLAS, TX / BALDWIN, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, IL			
VSL CORPORATION (VSL) is a wholly owned subsidiary of the VSL Group, a public company listed on the New York Stock Exchange (NYSE) under the symbol VSL. VSL is not responsible for the use of its products or services in any project, or any injury or damage resulting from the use of its products or services. VSL disclaims any liability for any injury or damage resulting from the use of its products or services. THERE IS NO WARRANTY.			
RETAINED EARTH™ WALLS WIRE FACED WALL™ R-349-5 TYPICAL CROSS SECTIONS UTAH 1-15 RECONSTRUCTION SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.			
DWG. NO. 2.7R-349-5.6			
JOB NO. 239-0007			
SHT. NO. RE-3			

NOTE: INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF SURCHARGE. IF A WALL SECTION PLUS SURCHARGE IS LESS THAN 4.5M, TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.



TYPICAL CROSS SECTION - STA 1+031.764 TO STA 1+079.857
(SEE DWG. NO. 2.7R-349-05.1 FOR ADDITIONAL INFORMATION)

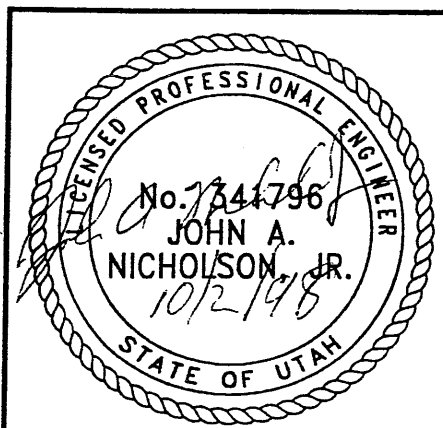
SCALE: 1:20 (FULL SIZE)
SCALE: 1:40 (HALF SIZE)

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

METRIC

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-17-98	RELEASE FOR 1ST STAGE CONST. ONLY

WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION



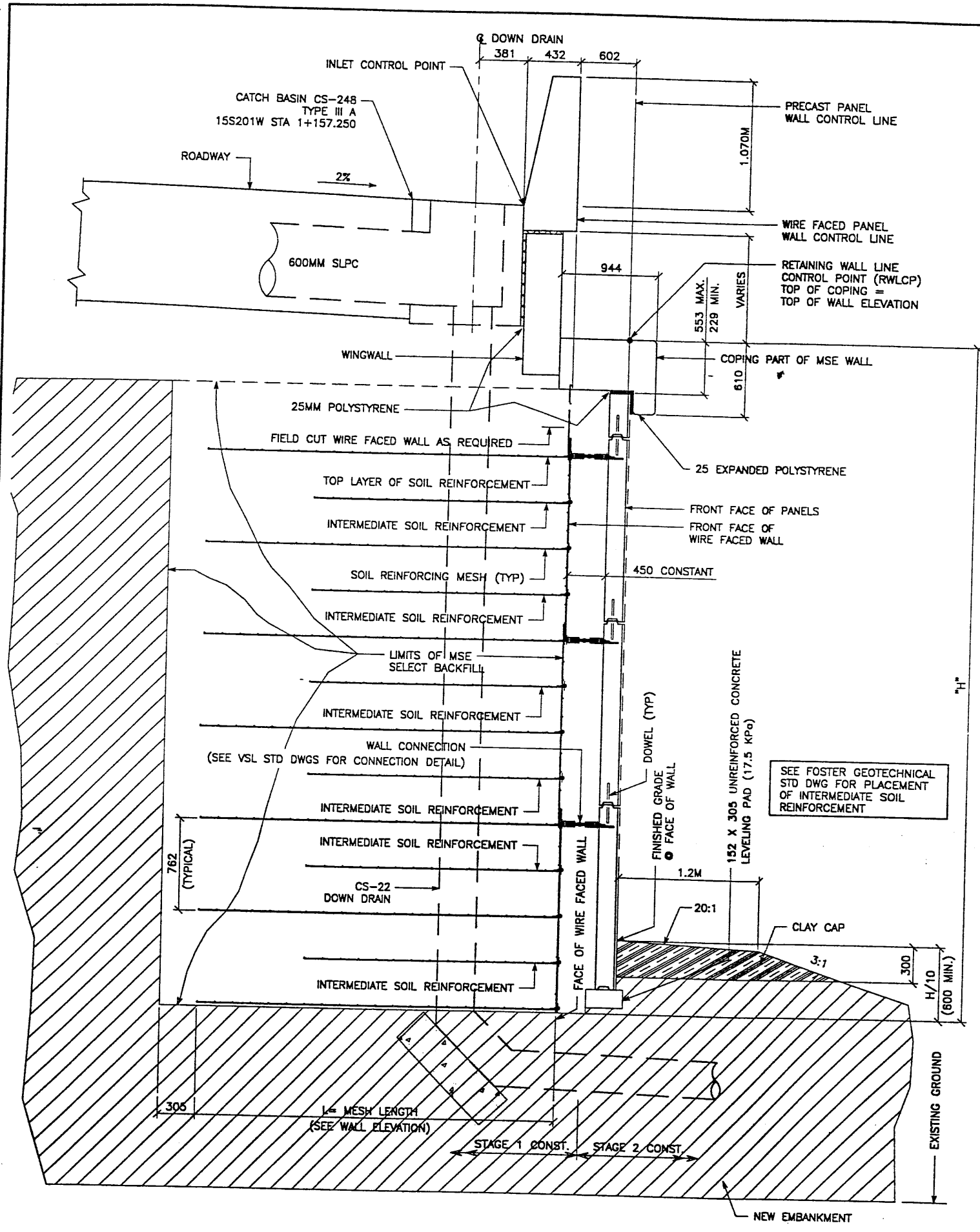
VSL CORPORATION
2840 Pines Road, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-4272
Fax: (919) 781-4869

ARLANTA, GA / DALLAS, TX / BALDWIN, MS (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, IL

RETAINED EARTH™ WALLS
WIRE FACED WALL "R-349-5"
TYPICAL CROSS SECTION
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7-R-349-5.7
JOB NO.	239-0007
SHT. NO.	RE-4

FINAL 09-17-98 H:\RE_EARTH\PROJECT 22 7\1998\9WSERIES\9W-05\SUBMITL-3\RE-5.DWG



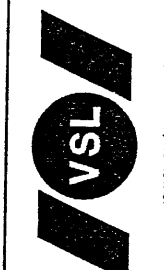
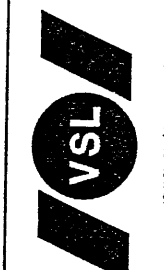
NOTE: INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF SURCHARGE. IF A WALL SECTION PLUS SURCHARGE IS LESS THAN 4.5M, TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.

TYPICAL CROSS SECTION - STA 1+152.884
 (SEE DWG. NO. 2.7R-349-05.3 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

METRIC

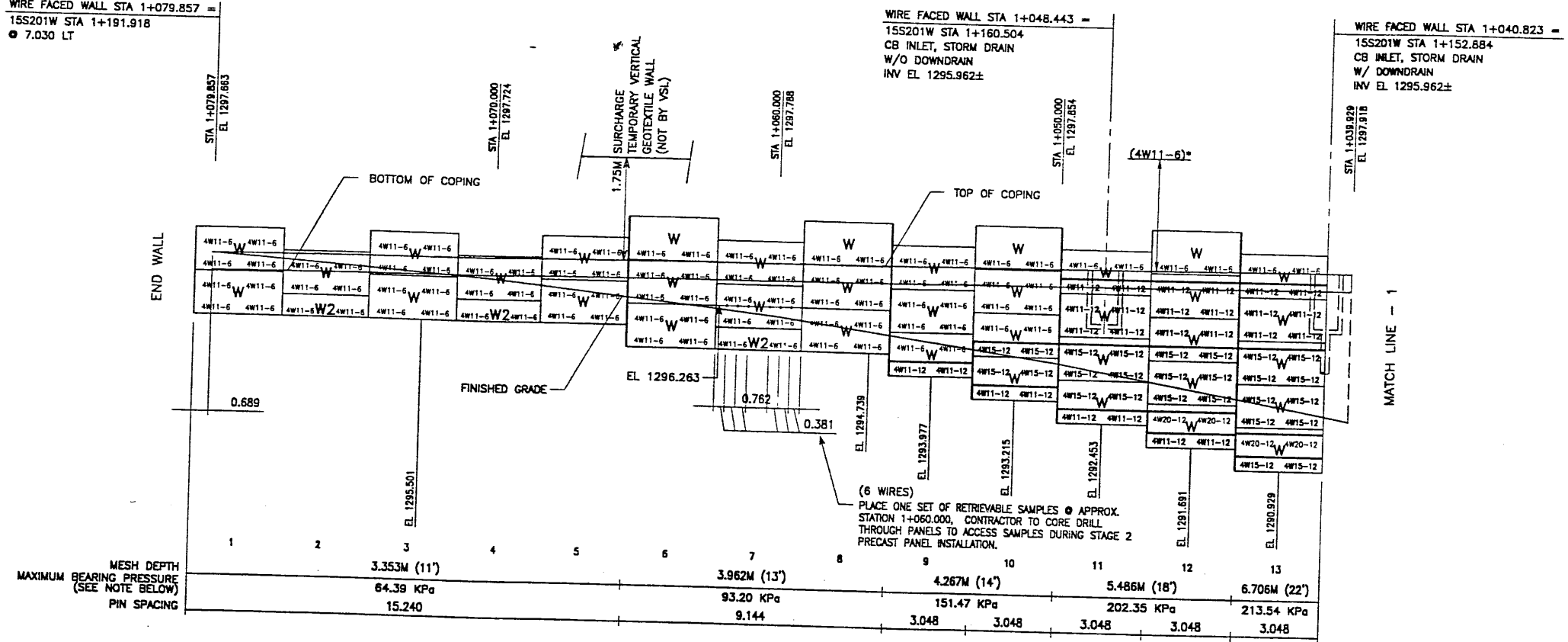
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	09-17-98	RELEASE FOR 1ST STAGE CONST. ONLY

VSL CORPORATION 2840 Plaza Place, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-6072 Fax: (919) 781-0659		ATLANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA	
			
DES.	09-17-98	JL	RETAINED EARTH™
DRN.	09-17-98	DDL	
CHK.	09-17-98	JL	
WASATCH CONSTRUCTORS OCT 07 1998 RELEASED FOR CONSTRUCTION		RETAINED EARTH™ WALLS WIRE FACED WALL "R-349-5" TYPICAL CROSS SECTION UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.	
LICENSED PROFESSIONAL ENGINEER No. 341796 JOHN A. NICHOLSON, JR. 10/2/98 STATE OF UTAH		DWG. NO. 2.7R-349-05.8 JOB NO. 239-0007 SHEET NO. RE-5	

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	09-17-98	RELEASE FOR 1ST STAGE CONST. ONLY <i>dl</i>

END WIRE FACED WALL R-349-5
 WIRE FACED WALL STA 1+079.857 =
 15S201W STA 1+191.918
 ● 7.030 LT



RETAINING WALL "R-349-5" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 425.43 SM)
 SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

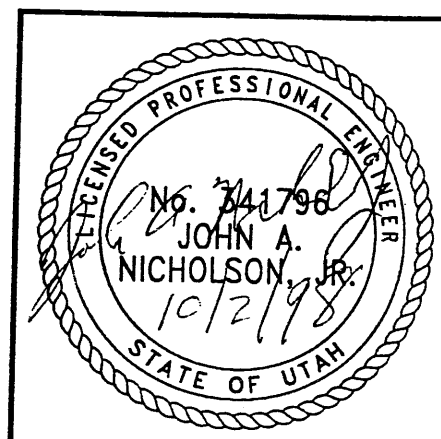
WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASE FOR CONSTRUCTION

* INDICATES SOIL REINFORCING TYPE
 MESH TO BE USED ON ADDITIONAL
 WIRE WALL FACING ADDED AFTER
 SETTLEMENT.

NOTE:
 THE INDICATED MAXIMUM BEARING PRESSURES
 AT FINAL STAGE FOR STATIC LOAD CONDITION.

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY.
 EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE
 STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
 ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.

METRIC



DES.	09-17-98	JL	RETAINED EARTH™
DRN	09-17-98	DDL	VSL
CHK	09-17-98	JL	
<p>VSL CORPORATION 2840 Phoebe Place, Suite 200 Raleigh, NC 27617 Telephone: (919) 781-8772 Fax: (919) 781-8989</p> <p>ATLANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>			
<p>RETAINED EARTH™ WALLS WALL "R-349-5" - 1ST STAGE: WIRE FACED WALL UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.</p>			
<p>DWG. NO. 2.7R-349-5.9</p>			
<p>JOB NO. 239-0007</p>			
<p>SHT. NO. RE-6</p>			

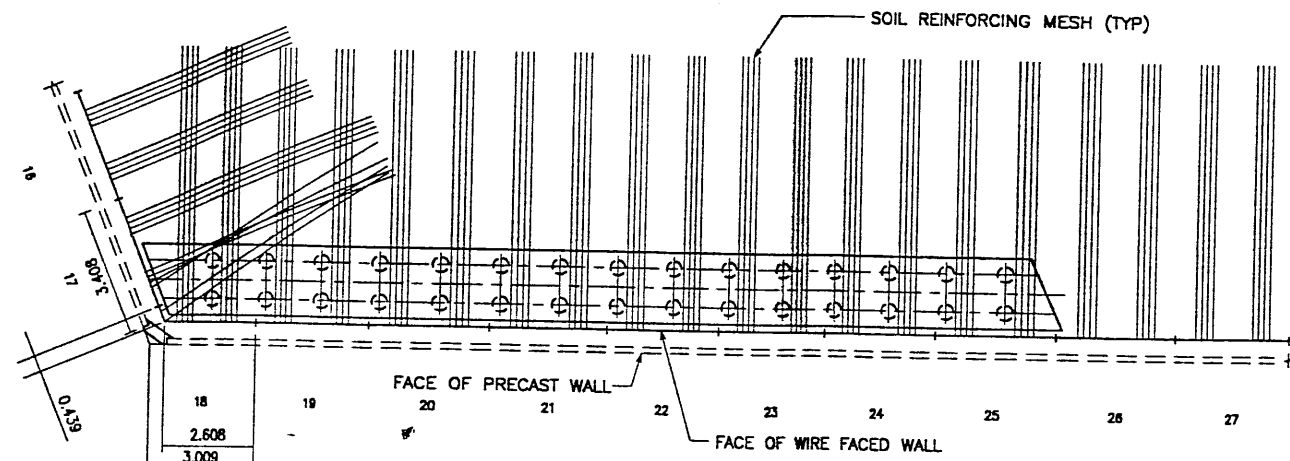
NCE (X-UTM.DWG)

\\9WSERIES\9W-05\SUBMTL-3\9W-05.DWG

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09-17-98

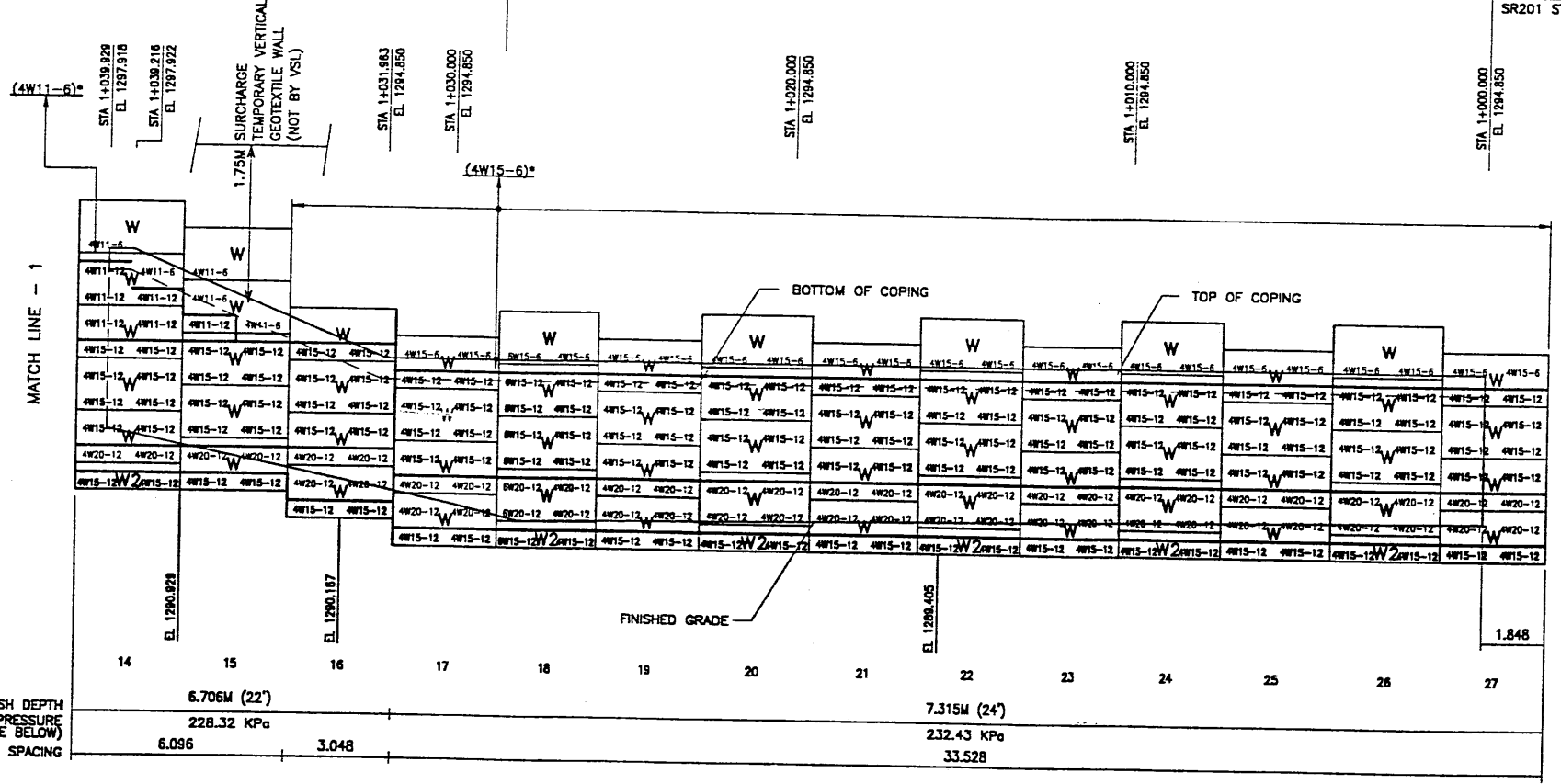
FINAL



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-17-98	RELEASE FOR 1ST STAGE CONST. ONLY

WIRE FACED WALL PI STA 1+028.591 =
15S201W STA 1+140.652
● 7.487 LT

BEGIN WIRE FACED WALL R-349-5
WIRE FACED WALL STA 1+000.000 =
SR201 STA 1+961.067



MATCH BRIDGE F621W

BEGIN WALL (MATCH WALL R-349-B)

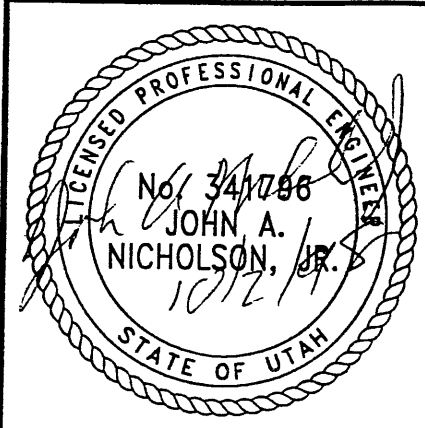
RETAINING WALL "R-349-5" - 1ST STAGE: WIRE FACED WALL
(FRONT FACE SHOWN)
(TOTAL SURFACE AREA OF FACING = 425.43 SM)
SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)

* INDICATES SOIL REINFORCING TYPE MESH TO BE USED ON ADDITIONAL WIRE WALL FACING ADDED AFTER SETTLEMENT.

NOTE: THE INDICATED MAXIMUM BEARING PRESSURES AT FINAL STAGE FOR STATIC LOAD CONDITION.

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

METRIC



WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION

RETAINED EARTH™ WALLS
WALL "R-349-5" - 1ST STAGE: WIRE FACED WALL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-5.10
JOB NO.	239-0007
SHT. NO.	RE-7



VSL CORPORATION
2810 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6272
Fax: (919) 781-6969

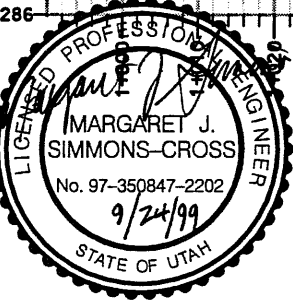
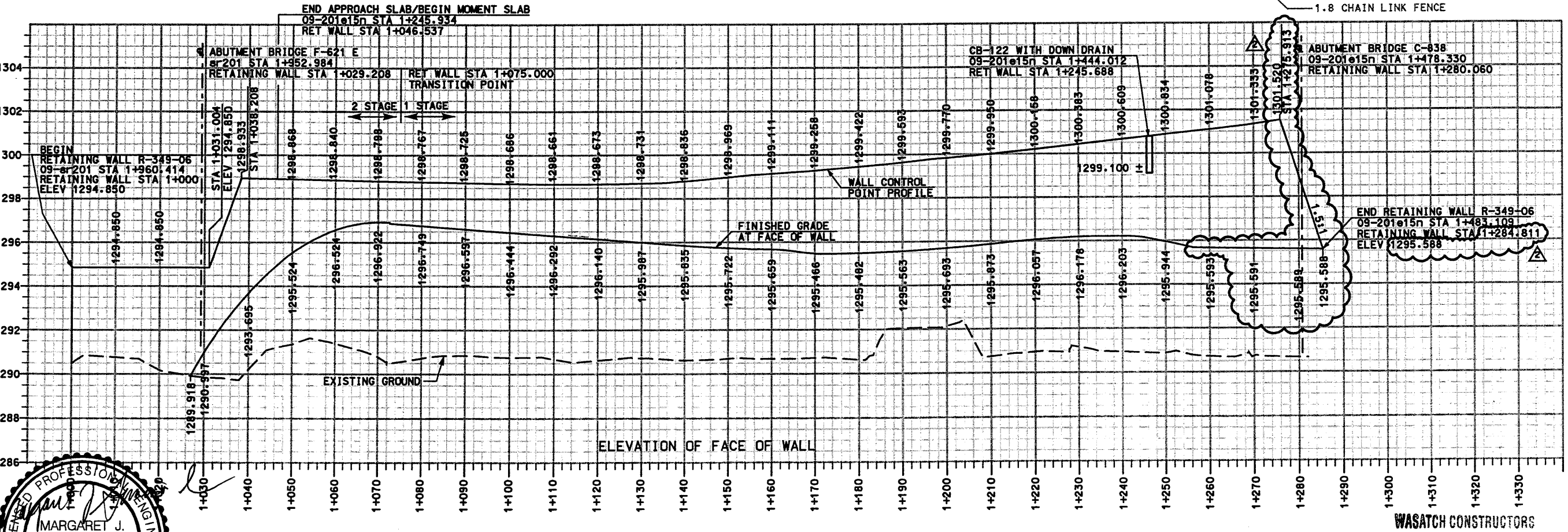
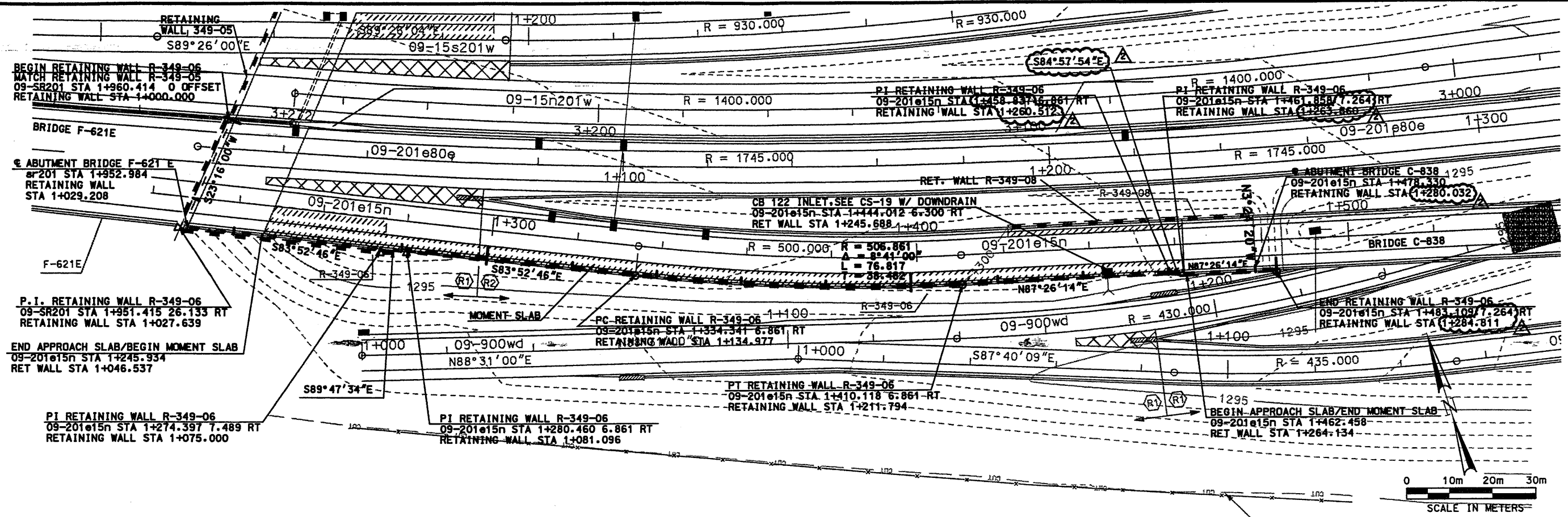
ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
WALL "R-349-5" - 1ST STAGE: WIRE FACED WALL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	CHK
JL	DDL	JL					
09-17-98	09-17-98	09-17-98					

Username: fr-amptr-d

File name: o:\dgt\115_ood\09_sit\sheet\files\wds\09_wddef_006_1.rvw



MSE WALL R-349-06

OCT 04 1999

RELEASED FOR CONSTRUCTION

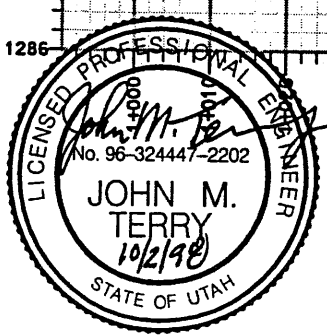
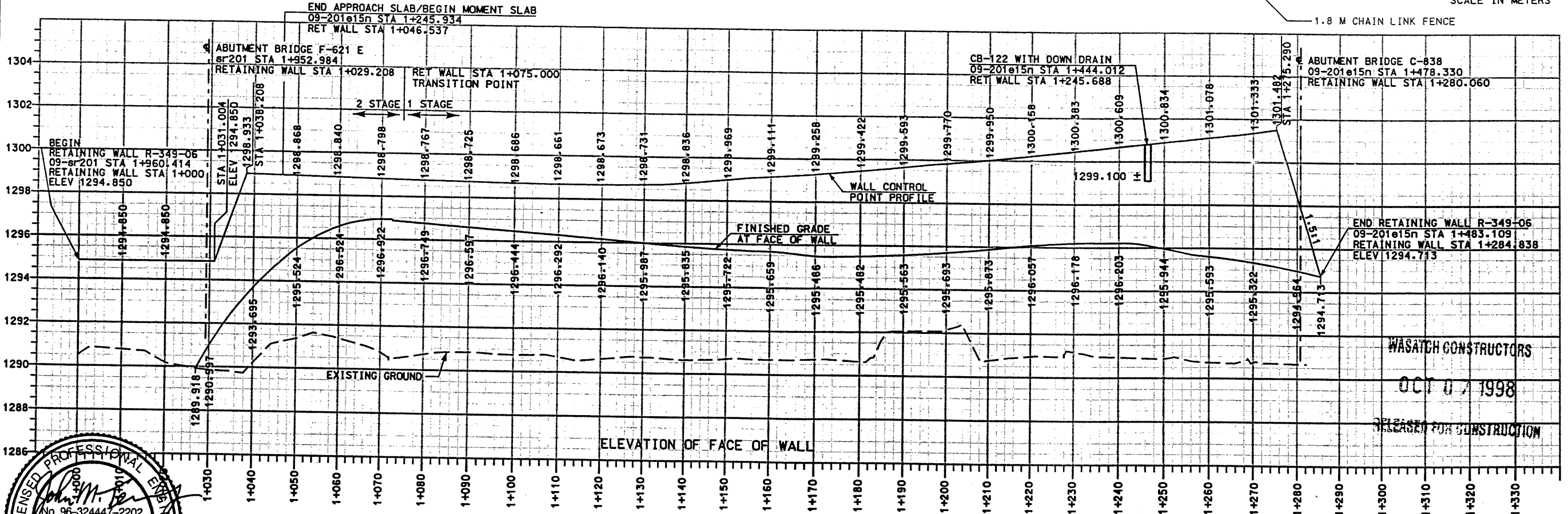
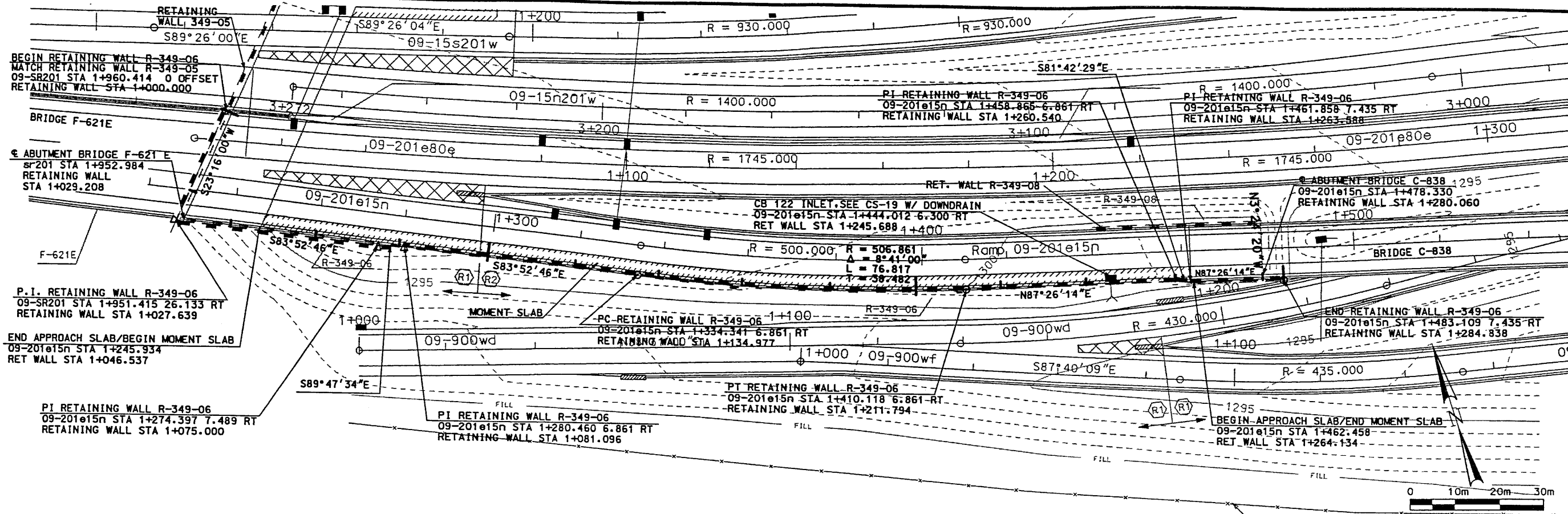
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL RELEASE	REVISED PROFILE
1	10/2/99		
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
APPROVAL RECORD:	DATE	BY	SECTION MANAGER
MARGARET SIMMONS-CROSS	9/24/99	JOHN TERRY	
PROJECT NUMBER	PROJECT NAME	SECTION NUMBER	QUANT.
2713407	I-15 CORRIDOR RECONSTRUCTION	SITUATION & LAYOUT R-349-06	SECTION 2.7
2713407			PROJECT #PSP-15-7(135)296
SALT LAKE COUNTY		DWG. NO. 2.7-R-349-06.1	
SHT. 1 OF 4			

RFC After Final Approval

User: name.pancor.cora

Date: 02-01-98 Time: 14:03

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MSE WALL R-349-06

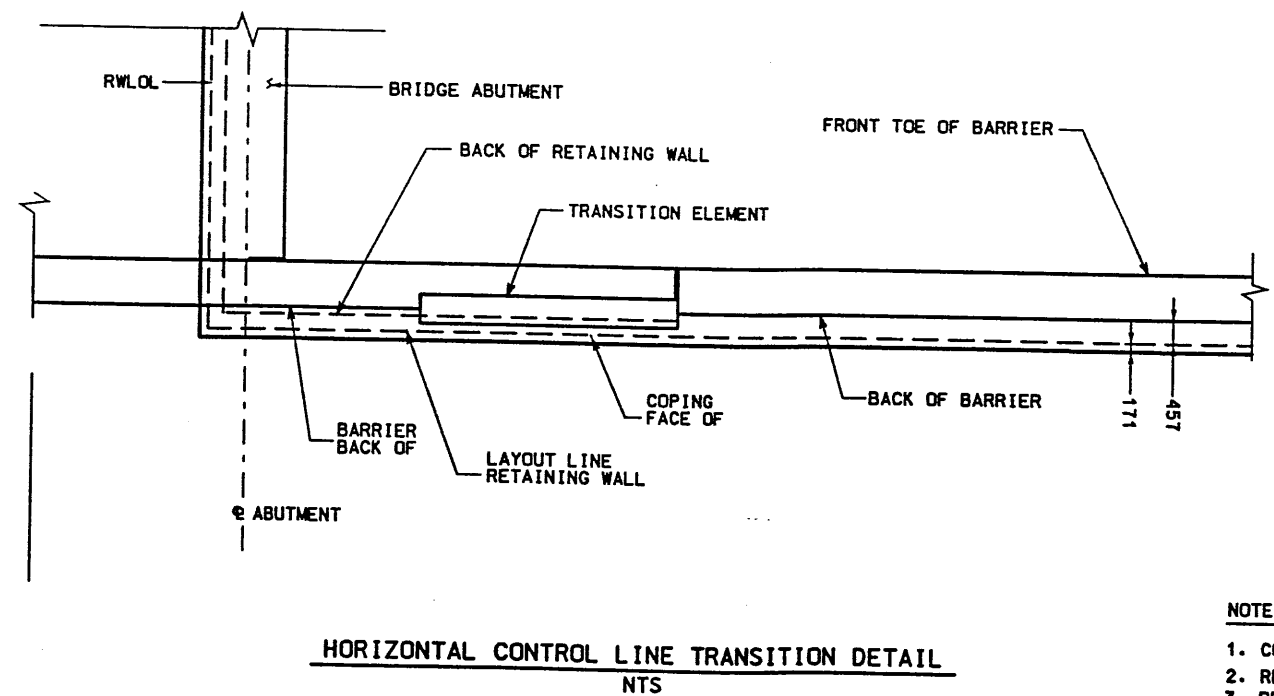
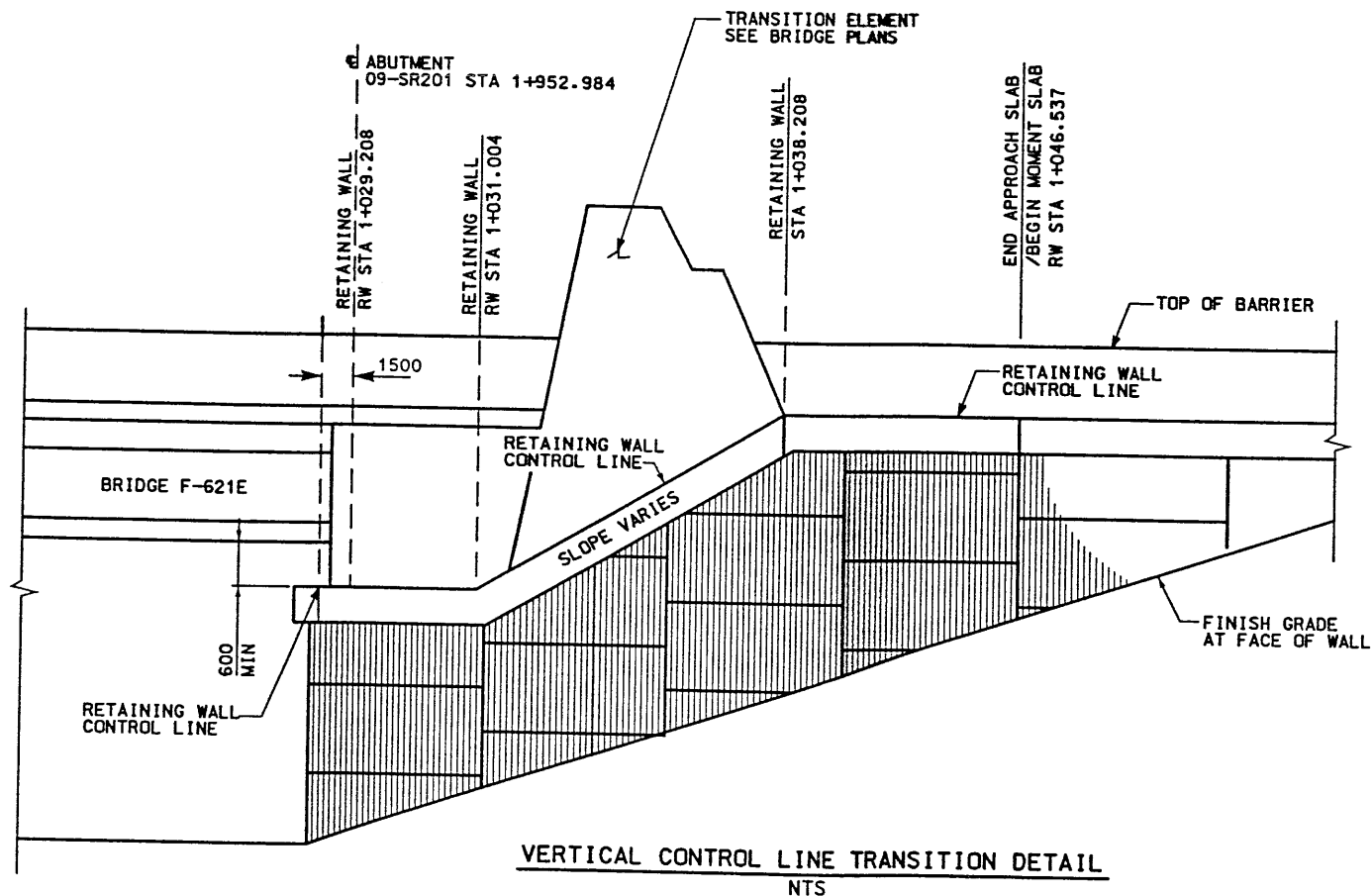
APPROVED FOR CONSTRUCTION

UTAH DEPARTMENT OF TRANSPORTATION
SVERDRUP/DE LEUW

I-15 CORRIDOR RECONSTRUCTION
SITUATION & LAYOUT R-349-06
SECTION 2.7

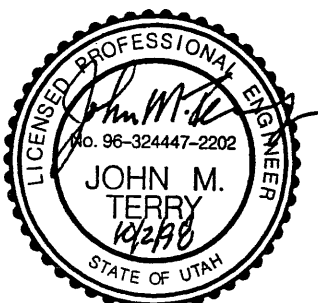
SALT LAKE COUNTY
DWG. NO. 2.7-R-349-06.1
SHT. 1 OF 18

NO.	DATE	DESCRIPTION
1	10/2/98	INITIAL RELEASE
DESIGN	JMS	8/98
CHECK	MSC	8/98
DRAWN	VLR	8/98
CHECK	RIP	
APPROVED	8/17/98	DATE
PROJECT NUMBER	*SP-15-7(135)296	
SECTION MANAGER	JOHN TERRY	
QUANT.		
TRACKING NO.	2713407	

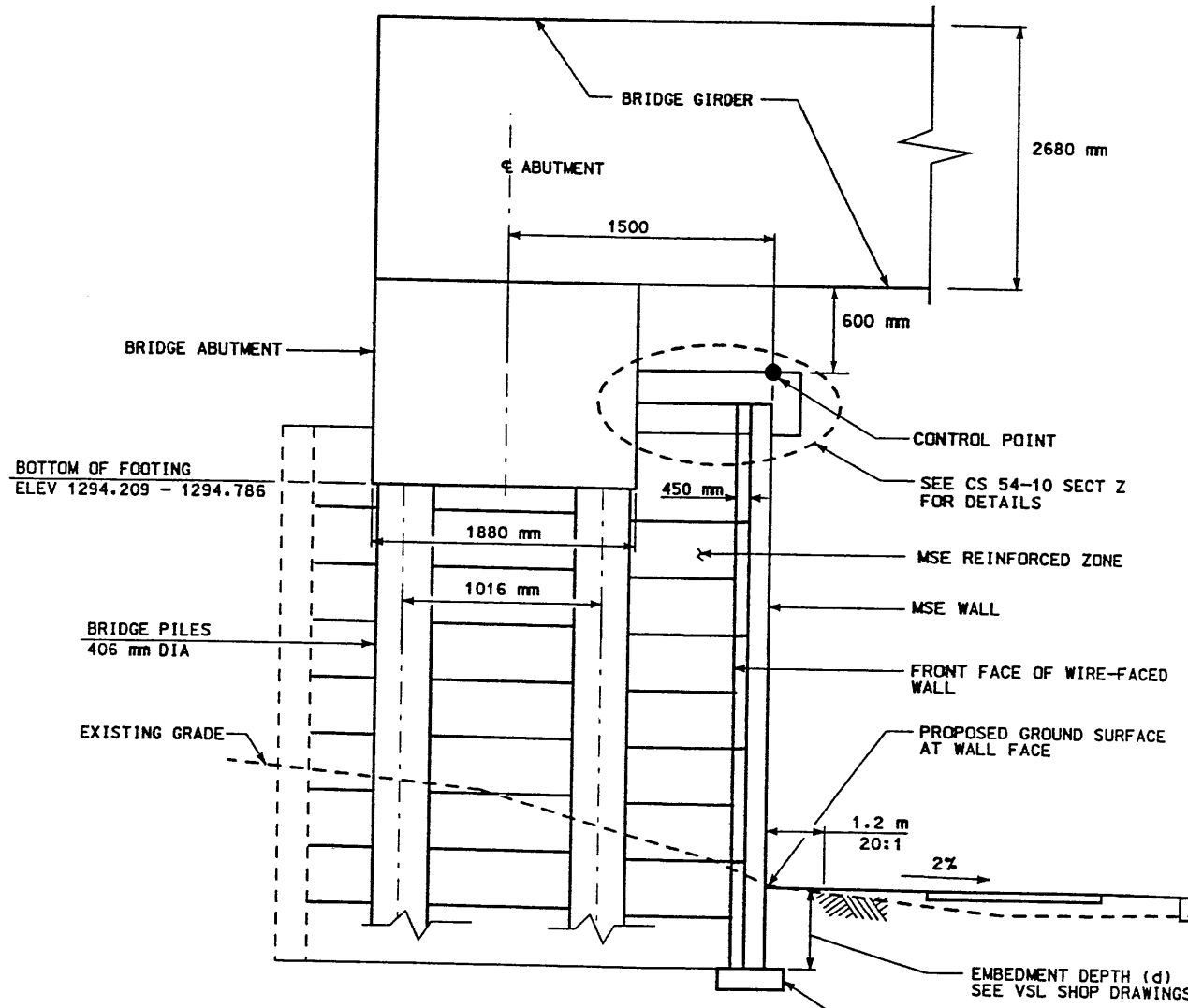


- NOTES:**
1. CONSTRUCT WALL TO DESIGN PAVEMENT ELEVATION.
 2. REFER TO CS-54 FOR COPING DETAILS AT BRIDGE.
 3. REFER TO DRAINAGE PLANS AND PROFILES FOR ADDITIONAL INFORMATION REGARDING PROPOSED DRAINAGE INSTALLATIONS.
 4. LOCATE RETREIVABLE SAMPLES AT RETAINING WALL STA 1+090.000 AND 1+240.000
 5. CONTRACTOR TO ADJUST STATION LOCATION OF INLETS NEXT TO MSE WALL TO MISS THE MSE WALL STRAPS. SEE VSL SHOP DRAWINGS FOR INLET LOCATIONS NEXT TO MSE WALLS.

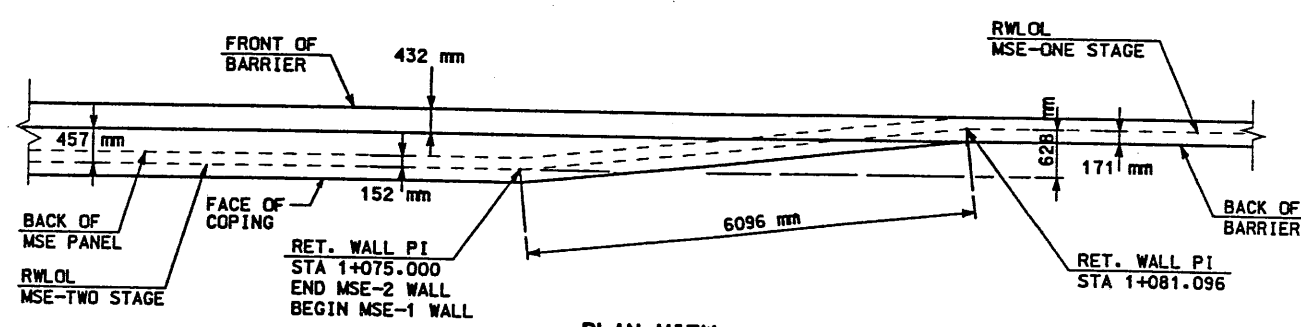
WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION



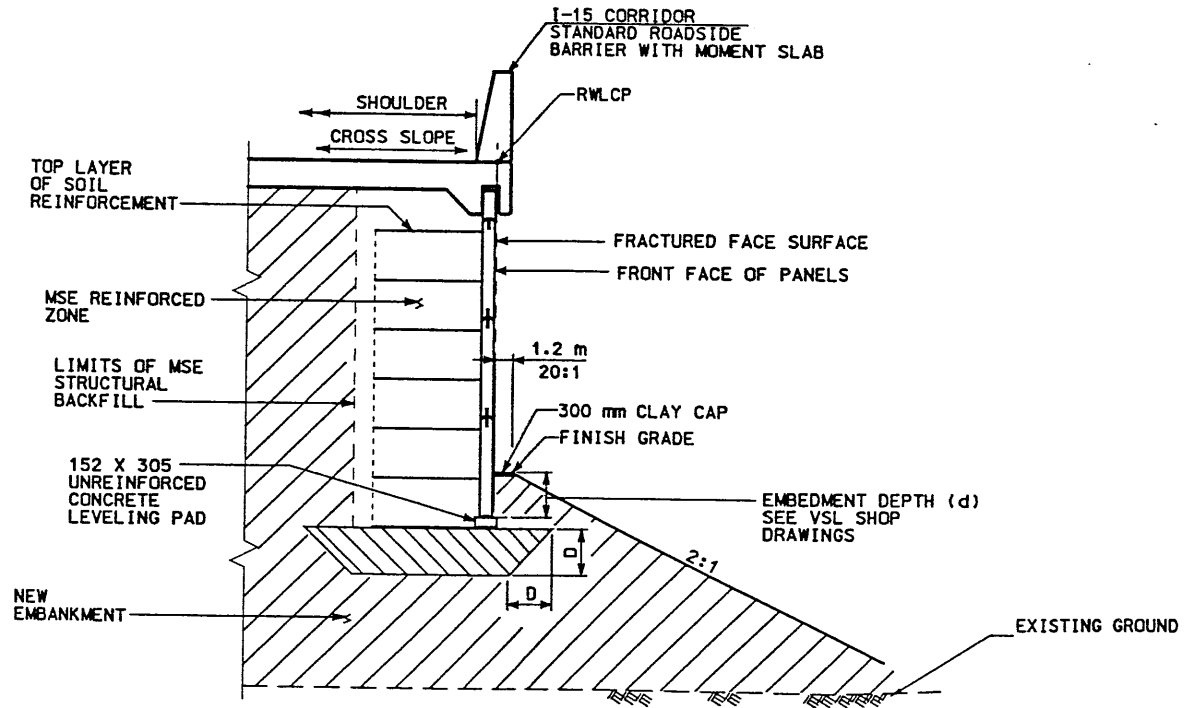
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NO.	DATE	NO.	DATE
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INITIAL RELEASE			
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
DESIGN	RF	8/98	CHECK
DRAWN	MLR	8/98	CHECK
QUANT.			CHECK
TRACKING NO.	2713407		
PROJECT NO.	#SP-15-7(135)296		
SECTION	SECTION 2.7		
PROJECT NUMBER			
APPROVAL	DATE	PROJECT DESIGN ENGINEER	DATE
RECD.	8/17/98	MARGARET SIMMONS-CROSS	8/17/98
APPROVED	DATE	SECTION MANAGER	DATE
	8/17/98	JOHN TERRY	8/17/98
I-15 CORRIDOR RECONSTRUCTION		SALT LAKE COUNTY	
SITUATION & LAYOUT R-349-06		Dwg. No.	
		2.7-R-349-06.2	
SHT.	2	OF	18



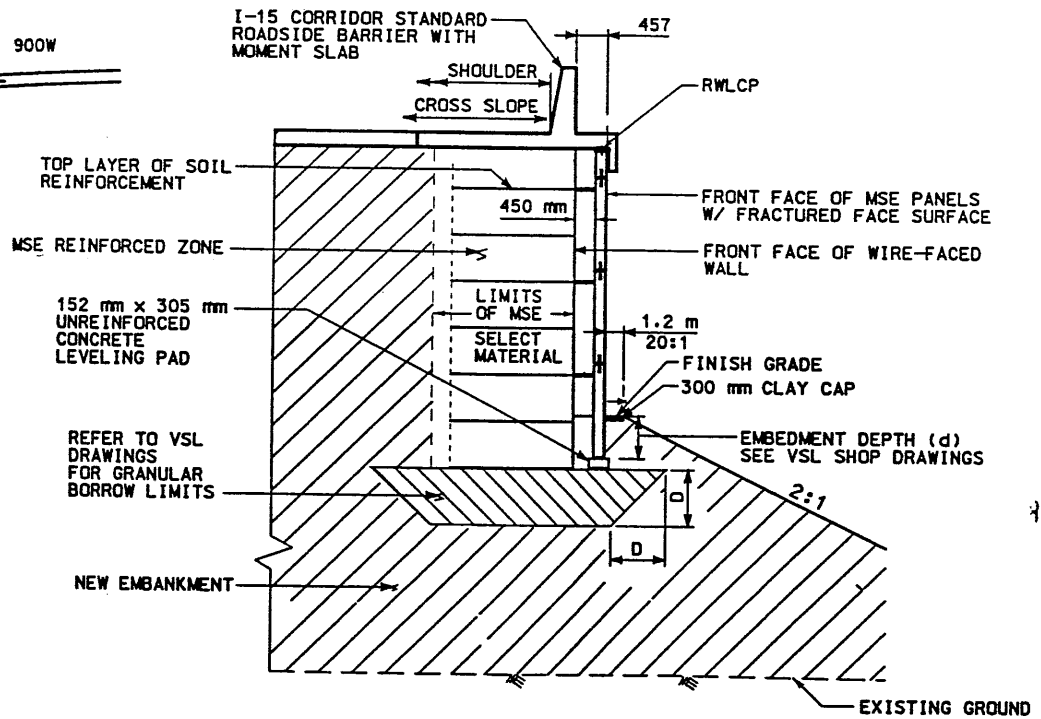
SECTION AT BRIDGE
RET WALL STA 1+000 TO 1+027.639 NTS
(SEE MSE TWO-STAGE WITH MOMENT SLAB FOR FOUNDATION TREATMENT)



PLAN VIEW WALL TRANSITION ONE STAGE TO TWO STAGE
NTS



MSE SINGLE STAGE WITH MOMENT SLAB CAP
RET WALL STA 1+075.000 TO STA 1+260.540 NTS



MSE TWO-STAGE WITH MOMENT SLAB CAP
RET WALL STA 1+046.537 TO STA 1+075.000 NTS

- NOTES:**
1. THE FOUNDATION BEARING MATERIALS SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER DURING SITE PREPARATION. ANY UNDESIRABLE MATERIALS WILL NEED TO BE REMOVED AND REPLACED WITH BORROW TO DEPTH (D) IN ORDER TO ACHIEVE ACCEPTABLE CONDITIONS AT THE BASE OF THE WALL.

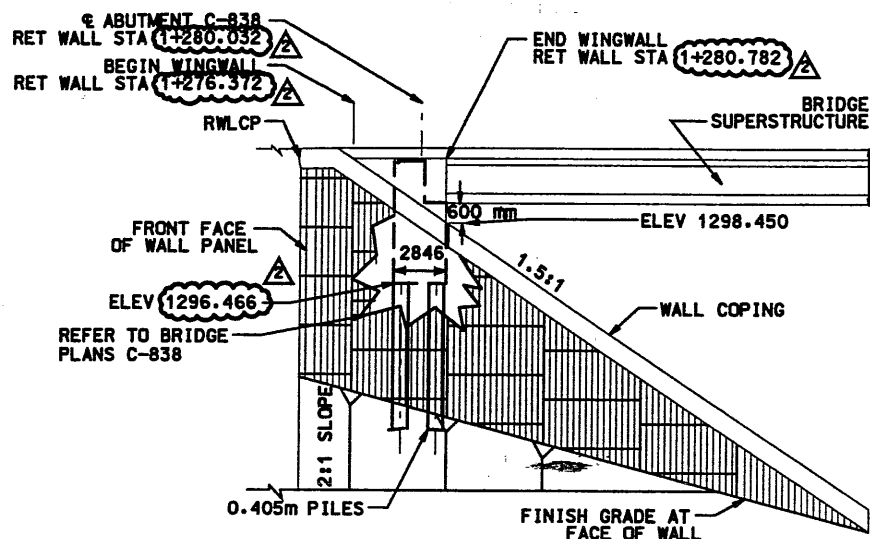


WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION

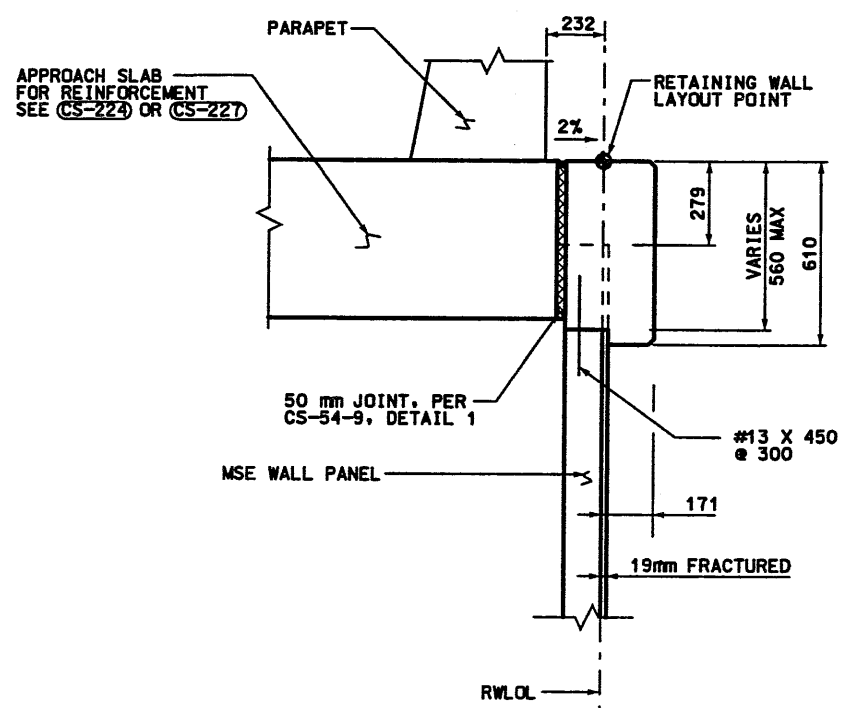
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
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UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
TRACKING NO.	2713407	DESIGN	RP
CHECK	RP	CHECK	RP
CHECK	MSC	CHECK	MSC
CHECK	QUANT.	CHECK	QUANT.
I-15 CORRIDOR RECONSTRUCTION		SECTION 2.7	
SITUATION & LAYOUT R-349-06		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. 2.7-R-349-06.3	
SHT. 3		OF 18	

Date: 23-SEP-1999 Time: 15:06 User: noma from ptr d

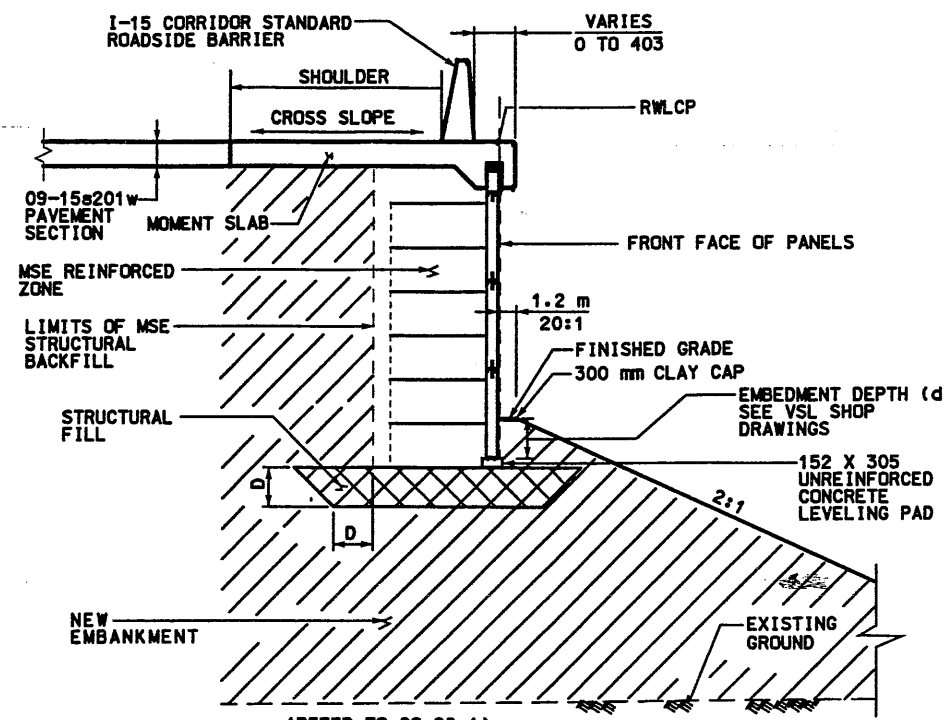
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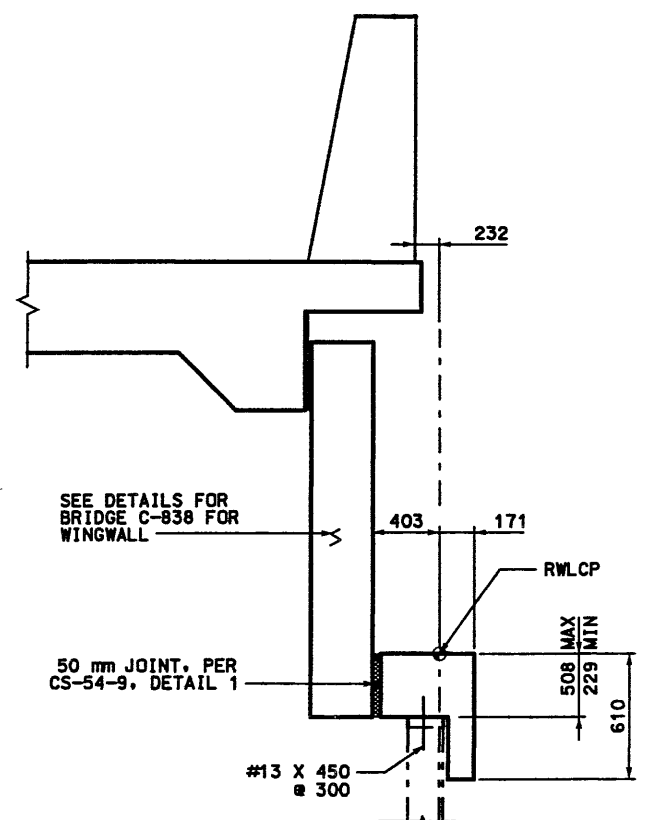
BRIDGE (C-838) ABUTMENT DETAIL
NTS



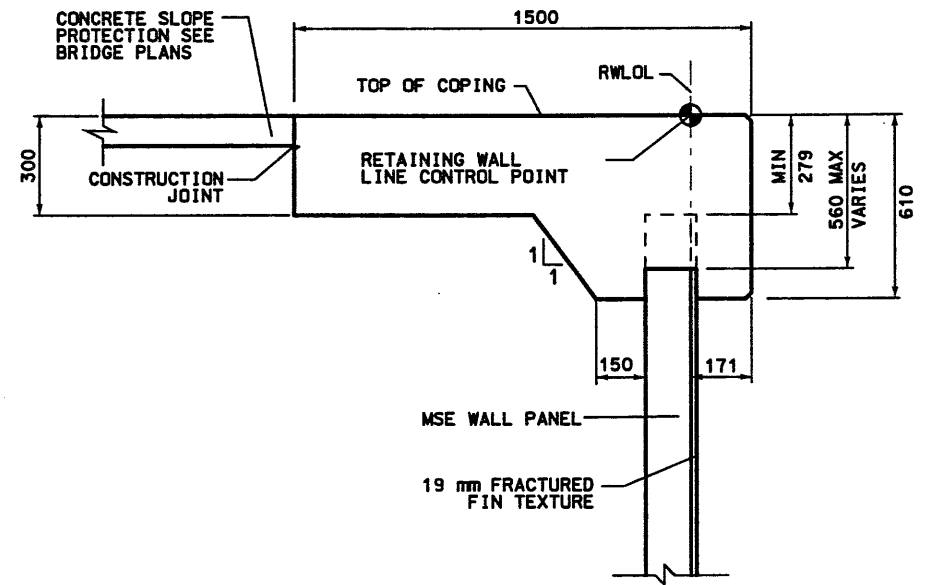
MSE SINGLE STAGE WALL SECTION
RET WALL STA 1+264.134 - 1+276.372 NTS



MSE SINGLE STAGE WITH MOMENT SLAB CAP
RET WALL STA 1+260.540 - 1+264.134 NTS

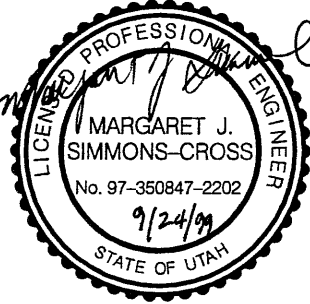


COPING DETAILS AT WINGWALL
RET WALL STA 1+276.372 - 1+280.782 NTS



SLOPE PAVING/COPING DETAILS
RET WALL STA 1+280.782 - 1+284.811 NTS

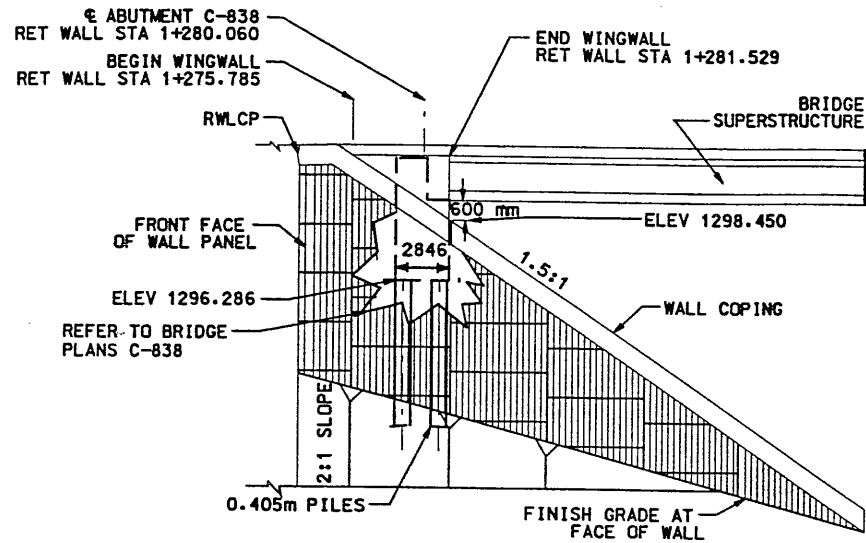
- NOTES:**
1. REFER TO CS-28-1 FOR MOMENT SLAB DETAILS.
 2. REFER TO CS-54 FOR DETAILS OF REINFORCING FOR WALL COPING.
 3. ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.



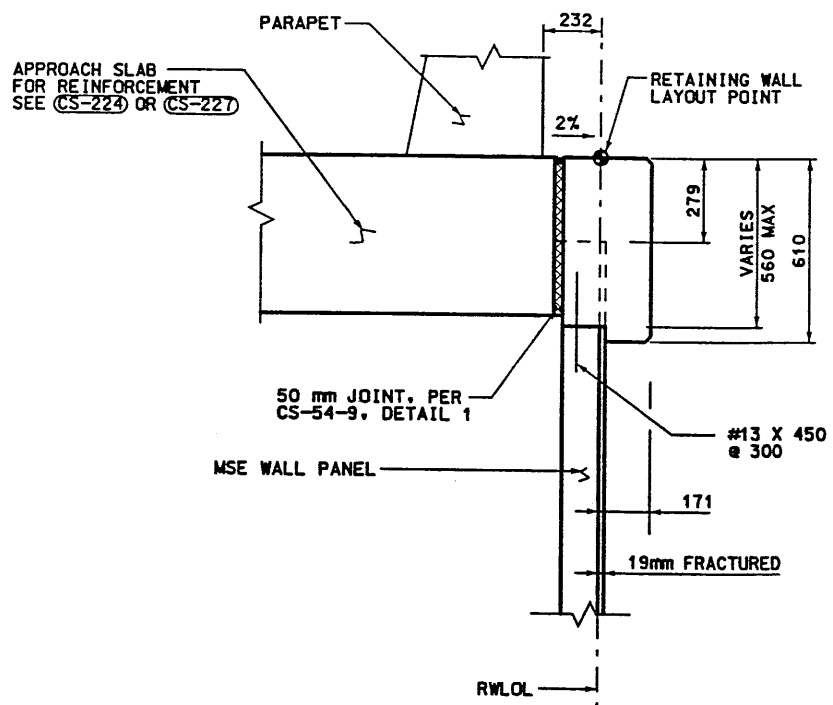
WASATCH CONSTRUCTORS
OCT 04 1999
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL RELEASE	REVISOR PROFILE
1	10/2/98		
2	09/24/98		
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
DESIGN NO.	CHECK NO.	DATE	QUANT.
2713407			
DESIGNER	PROJECT DESIGN ENGINEER	DATE	SECTION MANAGER
MARGARET SIMMONS-CROSS	JOHN TERRY		
APPROVAL	DATE	APPROVED	DATE
I-15 CORRIDOR RECONSTRUCTION		SITUATION & LAYOUT R-349-06	
SECTION 2.7		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. 2.7-R-349-06.4	
SHT. 4		OF 4	

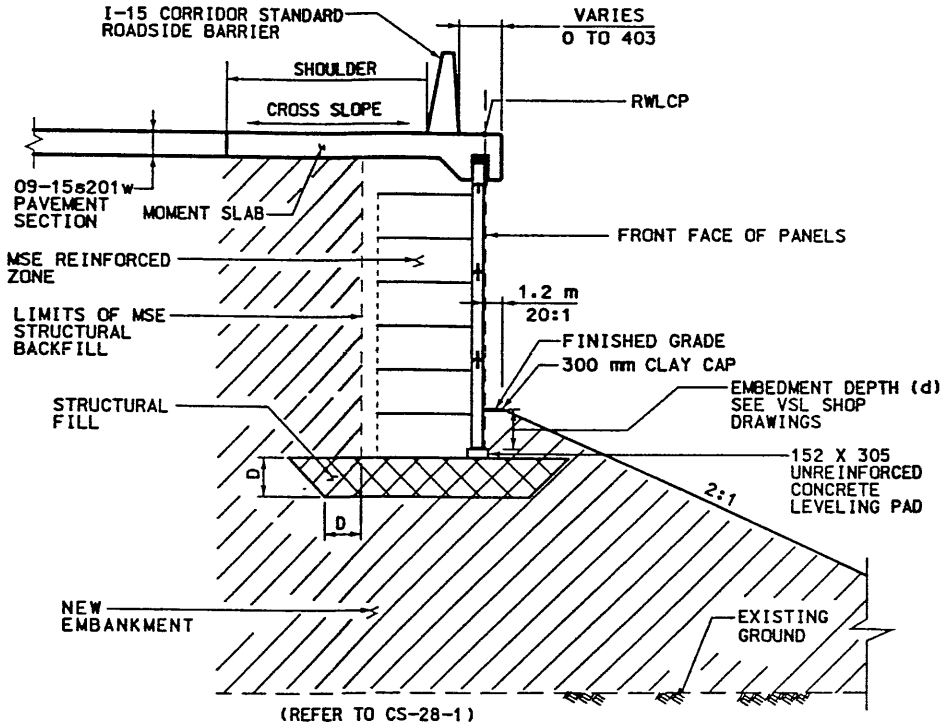
RFC After Final Approval



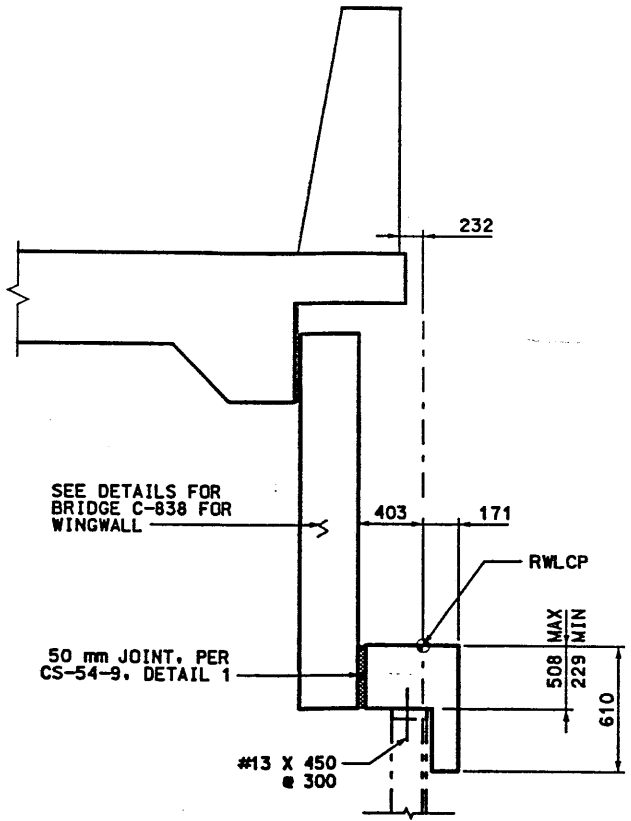
BRIDGE (C-838) ABUTMENT DETAIL
NTS



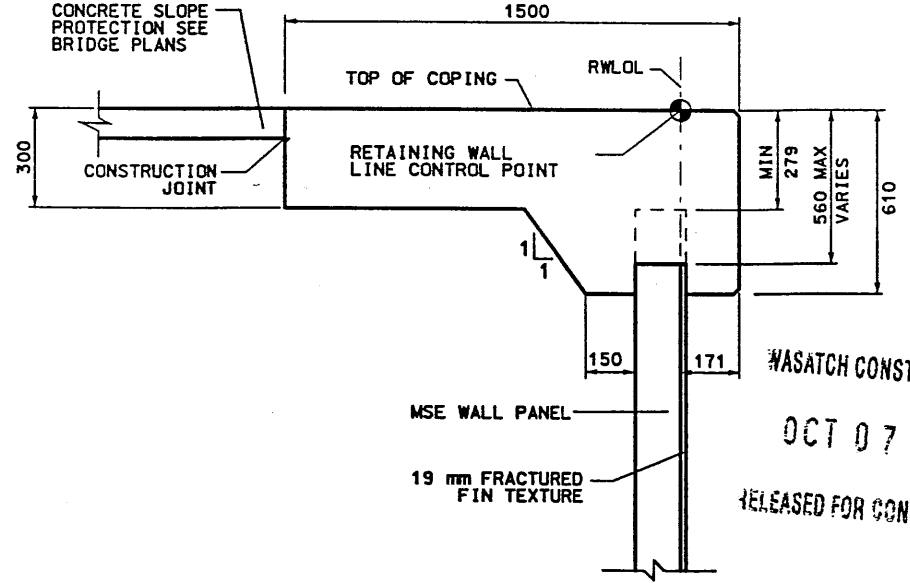
MSE SINGLE STAGE WALL SECTION
RET WALL STA 1+264.134 - 1+275.785 NTS



MSE SINGLE STAGE WITH MOMENT SLAB CAP
RET WALL STA 1+260.540 - 1+264.134 NTS

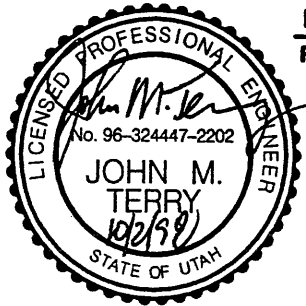


COPING DETAILS AT WINGWALL
RET WALL STA 1+275.785 - 1+281.529 NTS



SLOPE PAVING/COPING DETAILS
RET WALL STA 1+281.529 - 1+284.838 NTS

- NOTES:**
1. REFER TO CS-28-1 FOR MOMENT SLAB DETAILS.
 2. REFER TO CS-54 FOR DETAILS OF REINFORCING FOR WALL COPING.
 3. ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

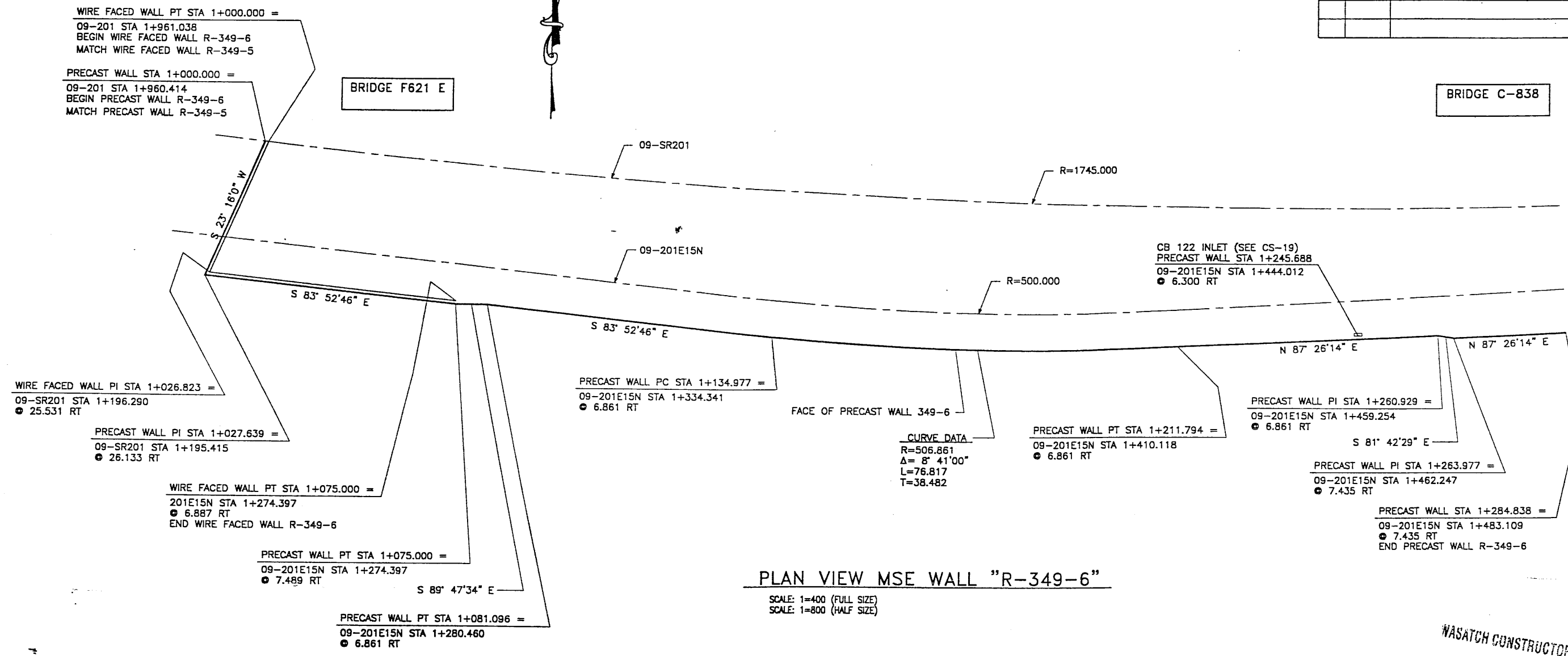


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NO.	DATE	INITIAL RELEASE	
1	10/2/98		
UTAH DEPARTMENT OF TRANSPORTATION		SVERRUP/DE LEUW	
DESIGN NO.	CHECK NO.	TRACKING NO.	2713407
8/17/98	8/98		
MARGARET SIMMONS-CROSS			
DATE	PROJECT DESIGN ENGINEER	CHECK MISC	/ /
8/17/98	JOHN TERRY	CHECK	/ /
DATE	SECTION MANAGER	QUANT.	/ /
8/17/98			
I-15 CORRIDOR RECONSTRUCTION		SALT LAKE COUNTY	
SITUATION & LAYOUT R-349-06		DWG. NO.	
SECTION 2.7		2.7-R-349-06.4	
PROJECT NUMBER #SP-15-7(135)296		SHT. 4 OF 18	

WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION

FINAL 09-18-98 H:\RE_EARTH\PROJECT\2.0\1998\9WSERIES\9W-06\SUBMITL-3\RE-1.DWG

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY



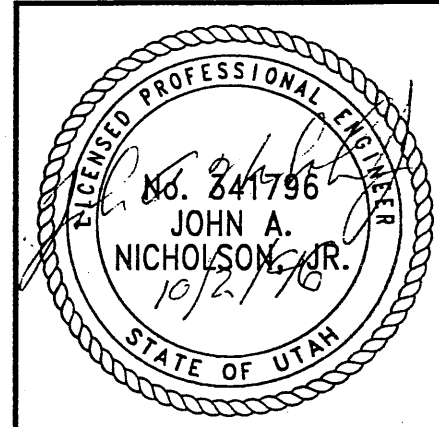
PLAN VIEW MSE WALL "R-349-6"
 SCALE: 1=400 (FULL SIZE)
 SCALE: 1=800 (HALF SIZE)

DESIGN PARAMETERS
ANGLE OF INTERNAL FRICTION (SELECT) = 34°
ANGLE OF INTERNAL FRICTION (BASE) = 31°
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°
UNIT WEIGHT BACKFILL = 135 PCF. (21.2 KN/M ³)
TRAFFIC SURCHARGE = 250 PSF (12 KPa)
SEISMIC ACCELERATION COFF. = 0.12g (TYP)
SEISMIC ACCELERATION COFF. = 0.32g (AT BRIDGE ABUTMENTS 250 YEAR SEISMIC)
DESIGN CRITERIA
SAFETY FACTOR (OVERTURNING) = 2.0
SAFETY FACTOR (SLIDING) = 1.5
SAFETY FACTOR (PULLOUT) = 1.5
DESIGN LIFE = 75 YEARS

RETAINED EARTH INDEX	
RE-1	PLAN WIRE FACED WALL R-349-6, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTIONS @ WIRE FACED WALL
RE-3	TYPICAL CROSS SECTIONS
RE-4	TYPICAL CROSS SECTIONS
RE-5	TYPICAL CROSS SECTIONS
RE-6	TYPICAL CROSS SECTIONS
RE-7	WIRE FACED WALL R-349-6
RE-8	WIRE FACED WALL R-349-6
RE-9	WIRE FACED WALL R-349-6
RE-10	WIRE FACED WALL R-349-6
RE-11	WIRE FACED WALL R-349-6
RE-12	SPECIAL PANEL DETAILS
RE-13	SPECIAL PANEL DETAILS
RE-14	Y & TALL PANEL DETAILS

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION

DESIGN		DATE		NO.	DATE	REVISION	BY
DES.	09-18-98	JL					
DRN.	09-18-98	DDL					
CHK.	09-18-98	JL					

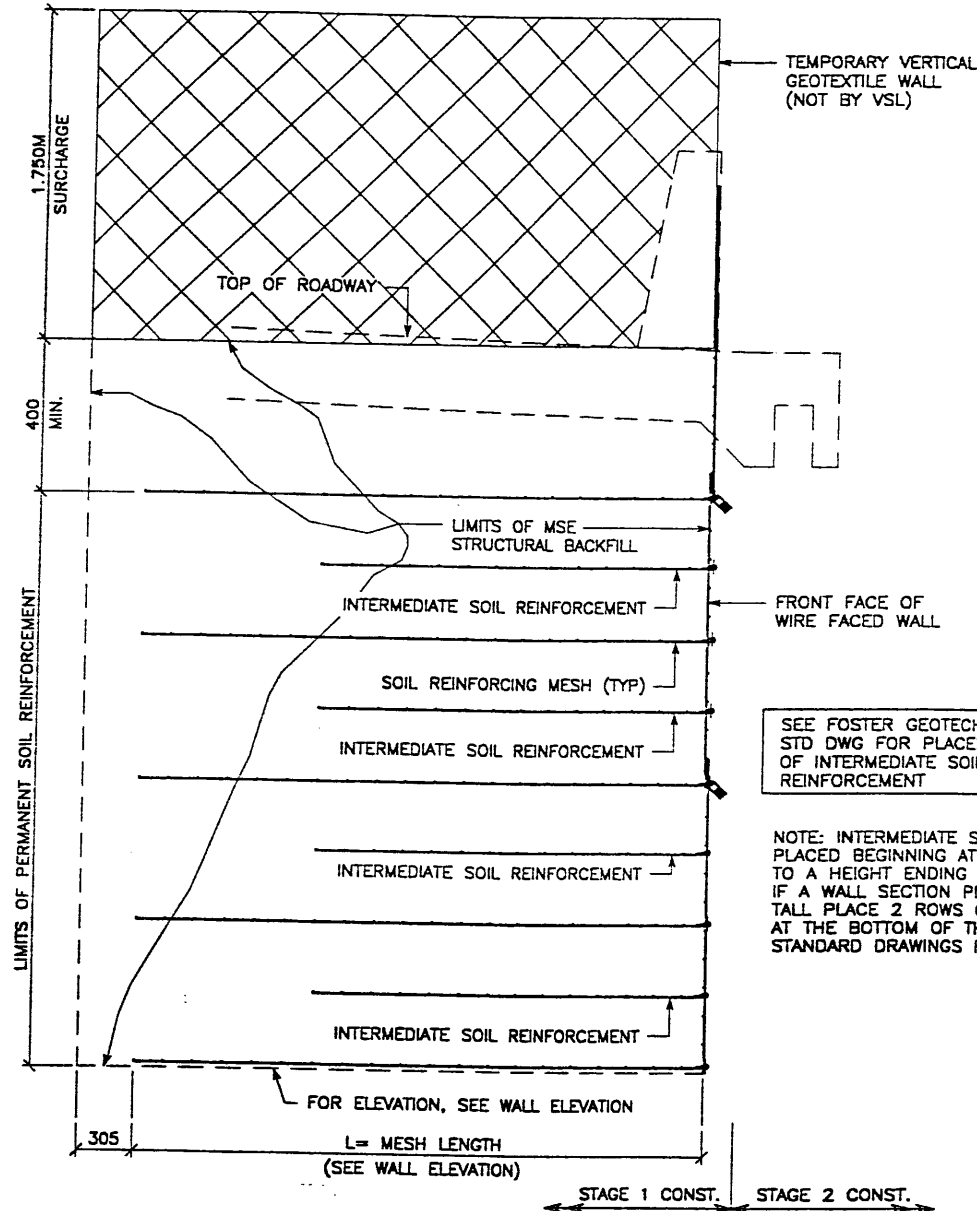
VSL CORPORATION 2810 Pico Place, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-6272 Fax: (919) 781-6889	
ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE) MINN. AP. / SAN JOSE, CA / SPRINGFIELD, VA	

RETAINED EARTH™ WALLS
 PLAN VIEW MSE WALL "R-349-6"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-6.5
JOB NO.	239-0007
SHT. NO.	RE-1

FINA 0T 09-18-98 H:\RE_EARTH\PROJECT\2\7\1998\9WSERIES\9W-06\SUBMTL-3\RE-2.DWG IENCE (X-UTAH.DWG)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY



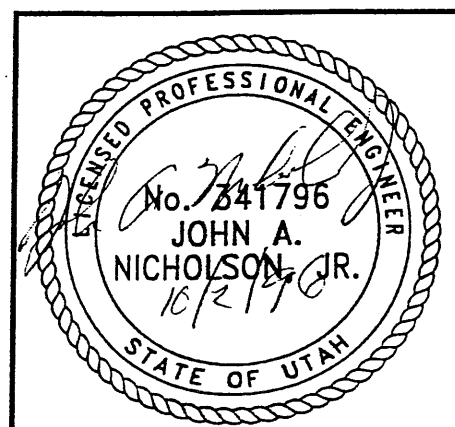
SEE FOSTER GEOTECHNICAL STD DWG FOR PLACEMENT OF INTERMEDIATE SOIL REINFORCEMENT

NOTE: INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF SURCHARGE. IF A WALL SECTION PLUS SURCHARGE IS LESS THAN 4.5M, TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.



TYPICAL CROSS SECTION
AT FINAL PHASE OF WIRE FACE WALL
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

METRIC

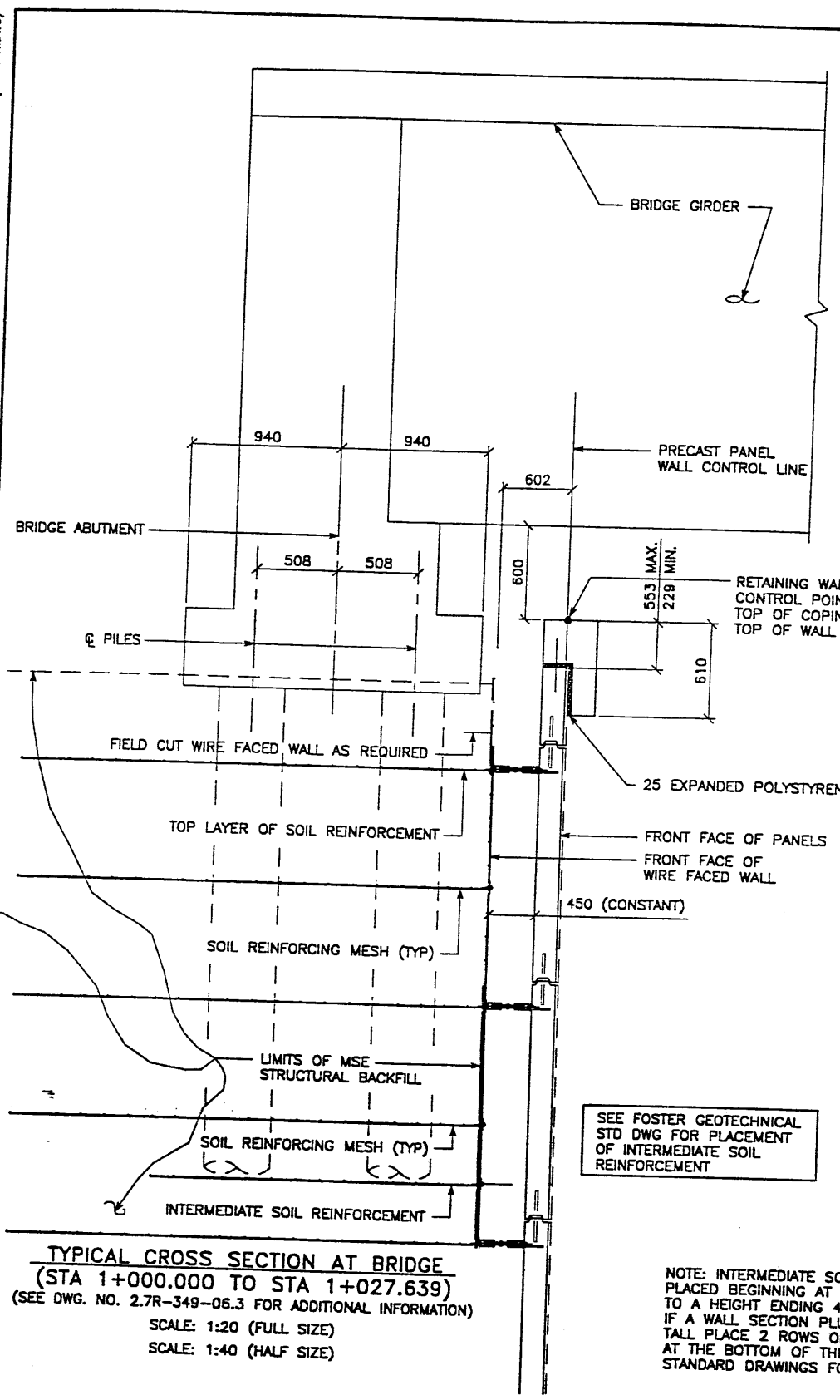
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



RELEASED FOR CONSTRUCTION
 OCT 07 1998
 WASATCH CONSTRUCTORS

 VSL CORPORATION 1810 Piedmont Drive, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-8277 Fax: (919) 781-9859		DES: 09-18-98 JL DRN: 09-18-98 DDL CLK: 09-18-98 JL RETAINED EARTH™ 	NO. DATE REVISION BY CLK
RETAINED EARTH™ WALLS WIRE FACED WALL "R-349-6" TYPICAL SECTIONS @ WIRE FACED WALL		DWG. NO. 2.7-R-349-6.6	NO. DATE REVISION BY CLK
UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.		JOB NO. 239-0007	NO. DATE REVISION BY CLK
FINA 0T 09-18-98		SHE. NO. RE-2	NO. DATE REVISION BY CLK

H:\RE_EARTH\PROJECT\27\1998\9W\SERIES\9W-06\SUBMTL-3\RE-3.DWG
 FIN 09-18-98



TYPICAL CROSS SECTION AT BRIDGE
 (STA 1+000.000 TO STA 1+027.639)
 (SEE DWG. NO. 2.7R-349-06.3 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

SEE FOSTER GEOTECHNICAL
 STD DWG FOR PLACEMENT
 OF INTERMEDIATE SOIL
 REINFORCEMENT

NOTE: INTERMEDIATE SOIL REINFORCEMENT SHALL BE
 PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION
 TO A HEIGHT ENDING 4.5M BELOW THE TOP OF SURCHARGE.
 IF A WALL SECTION PLUS SURCHARGE IS LESS THAN 4.5M,
 TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT
 AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL
 STANDARD DRAWINGS FOR PLACEMENT DETAILS.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY

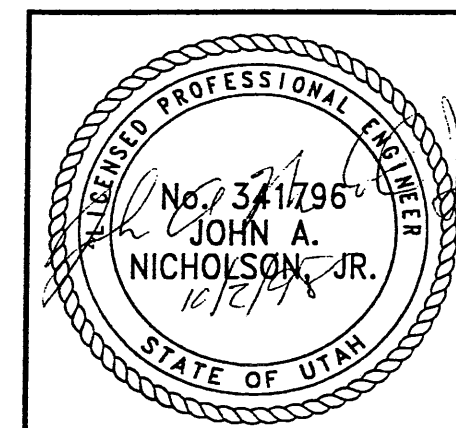
DES.	DRN.	CHK.	DATE	NO.	DATE	REVISION	CHK
JL	DOL	JL	09-18-98	09-18-98	09-18-98		

VSL CORPORATION
 4010 Pinedale Drive, Suite 200
 Overland Park, KS 66211
 Telephone: (913) 761-8277
 Fax: (913) 761-4959

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 explicitly or implicitly,
 that the design or
 construction of any
 structure will be free
 from defects or errors
 or that it will conform
 to the design or
 specifications. VSL
 Corporation and its
 employees accept no
 liability for any
 consequences of the
 use of the design or
 construction.

WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION

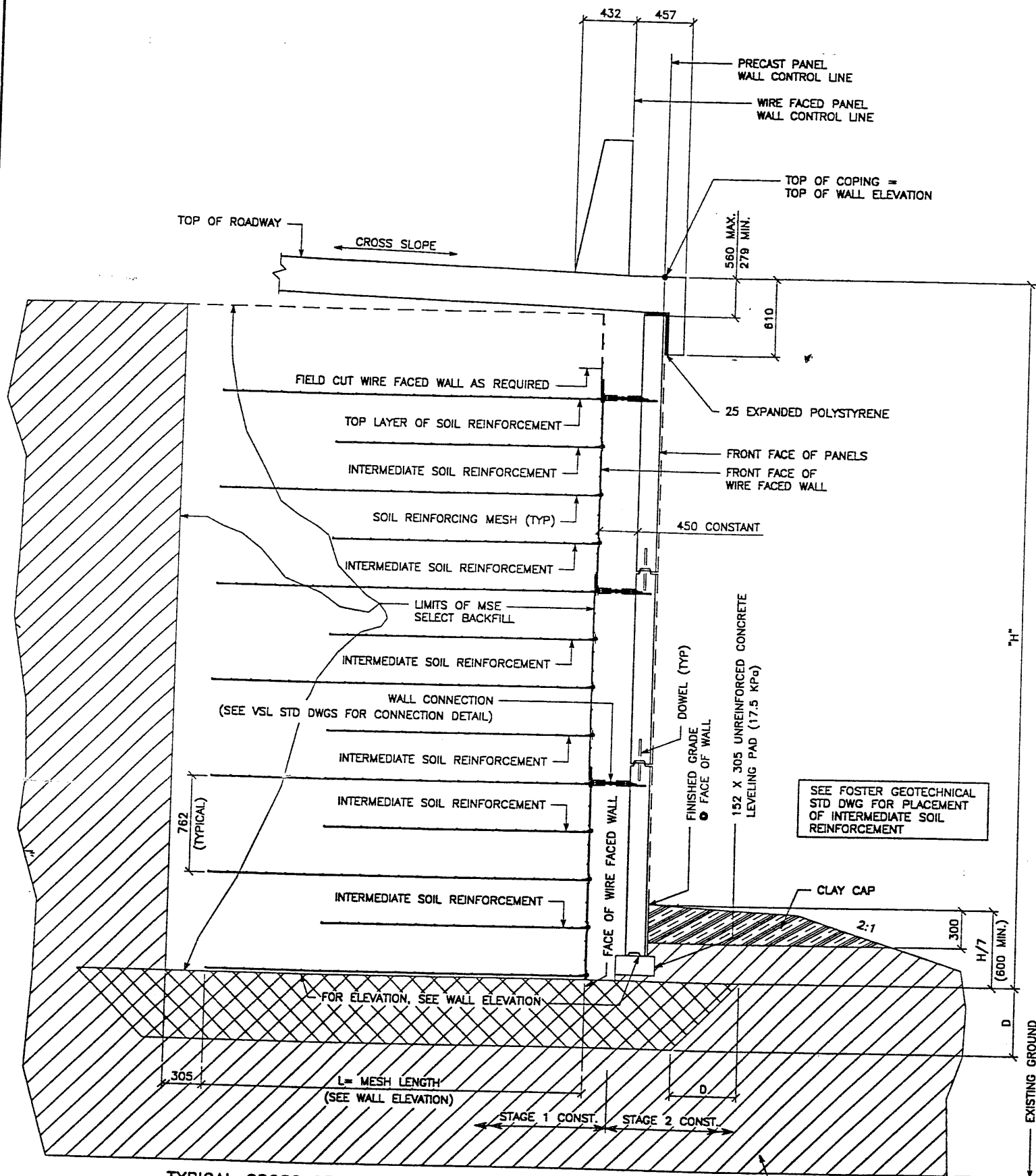


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 STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
 ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.

METRIC

RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-349-6"
 TYPICAL CROSS SECTIONS
 UTAH 1-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-6.7
JOB NO.	239-0007
SHT. NO.	RE-3



TYPICAL CROSS SECTION - STA 1+046.537 TO STA 1+075.000
 (SEE DWG. NO. 2.7R-349-06.3 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

NOTE: INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF SURCHARGE. IF A WALL SECTION PLUS SURCHARGE IS LESS THAN 4.5M, TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.

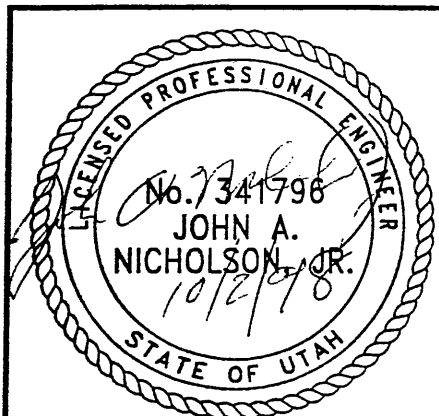
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY <i>a</i>

NO.	DATE	REVISION

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27617-7812
 Telephone: (919) 781-8272
 Fax: (919) 781-4889

ATLANTA, GA / DENVER, CO / SAN JOSE, CA / SPRINGFIELD, VA

WASATCH CONSTRUCTORS
 OCT 07 1998
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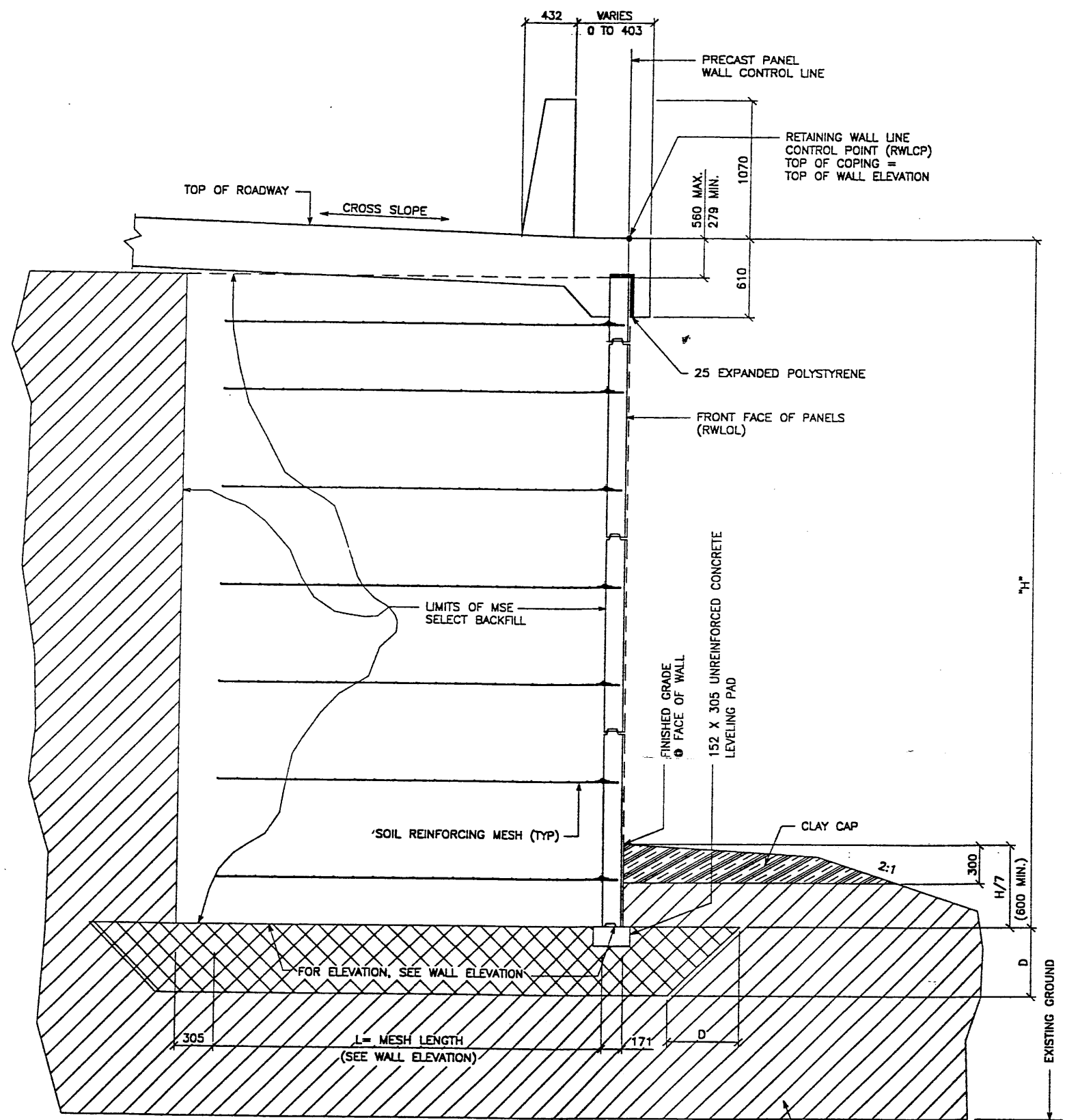
METRIC

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RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-349-6"
 TYPICAL CROSS SECTION
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7-R-349-5.B
JOB NO.	239-0007
SHT. NO.	RE-4



TYPICAL CROSS SECTION
 STA 1+260.540 TO STA 1+264.134
 (SEE DWG. NO. 2.7R-349-06.3 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

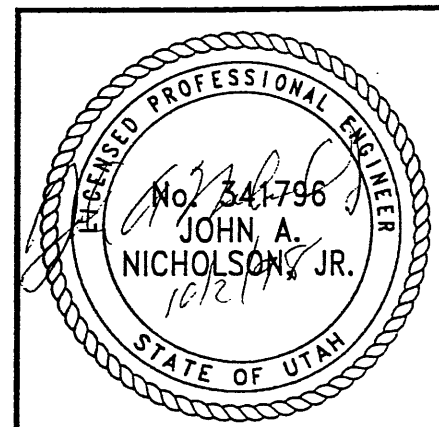
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	09-18-98	RELEASE FOR CONSTRUCTION <i>al</i>

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY
JL	DDL	JL					CHK

VSL CORPORATION
 2810 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
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METRIC

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RETAINED EARTH™ WALLS PRECAST WALL "R-349-6" TYPICAL CROSS SECTION	UTAH I-15 RECONSTRUCTION SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.
DWG. NO. 2.7R-349-6.9	JOB NO. 239-0007
SHT. NO. RE-5	

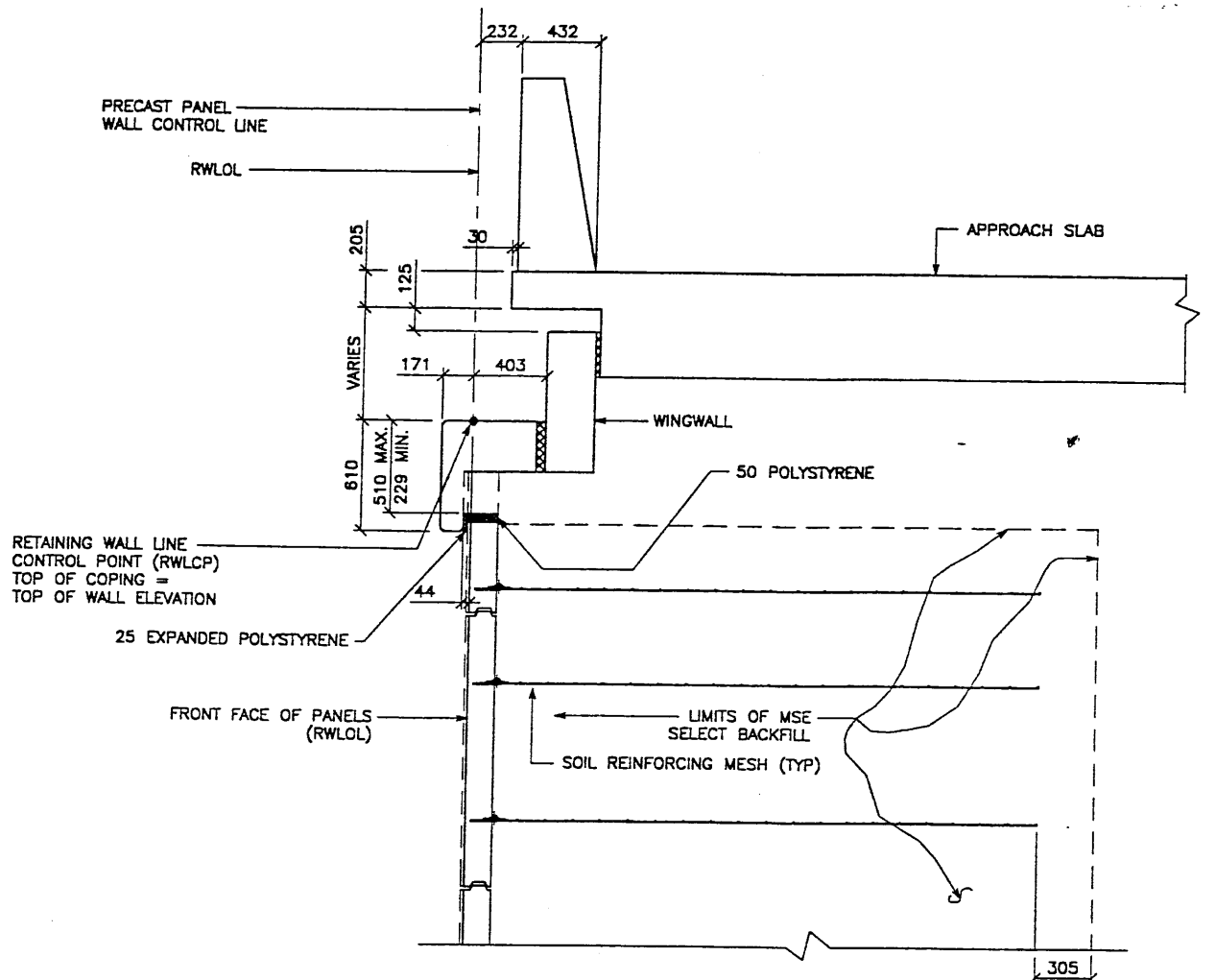
ACE (X-UTAH.DWG)

H:\RE_EARTH\PROJECT\239-1998\9WSERIES\9W-06\SUBMTL-3\RE-6.DWG

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YT 09-18-98

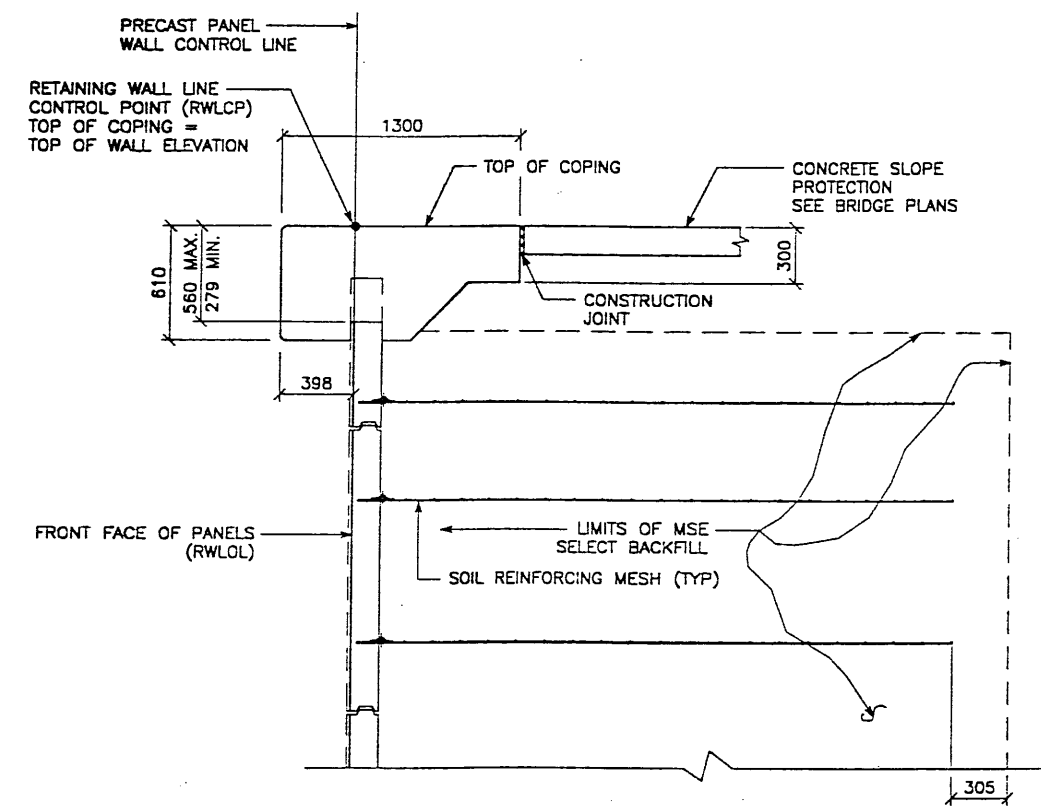
FINAL



TYPICAL CROSS SECTION W/WINGWALL - STA 1+275.785 TO STA 1+281.529

(SEE DWG. NO. 2.7-R-349-06.2 FOR ADDITIONAL INFORMATION)

SCALE: 1:20 (FULL SIZE)
SCALE: 1:40 (HALF SIZE)



TYPICAL CROSS SECTION - STA 1+281.529 TO 1+284.838

(SEE DWG. NO. 2.7R-349-06.2 FOR ADDITIONAL INFORMATION)

SCALE: 1:20 (FULL SIZE)
SCALE: 1:40 (HALF SIZE)

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NO.	DATE	DESCRIPTION
1	09-18-98	RELEASE FOR CONSTRUCTION

NO.	DATE	REVISION

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 2840 Pura Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-5772
 Fax: (919) 781-6959



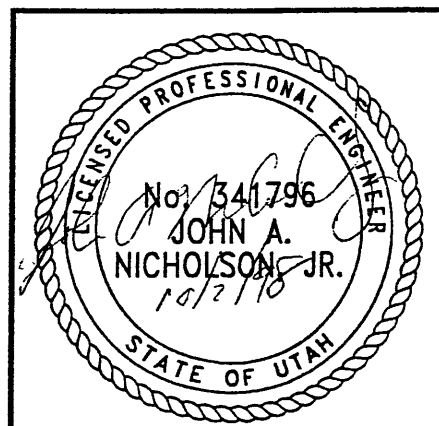
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 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

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VASATCH CONSTRUCTORS

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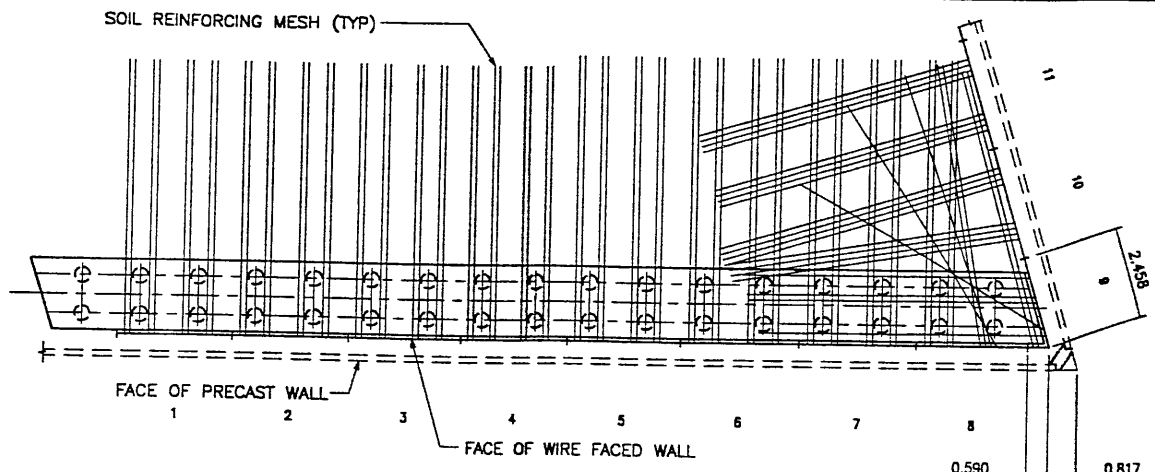


METRIC

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RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-349-07"
 TYPICAL CROSS SECTION
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-6.10
JOB NO.	239-0007
SHT. NO.	RE-6

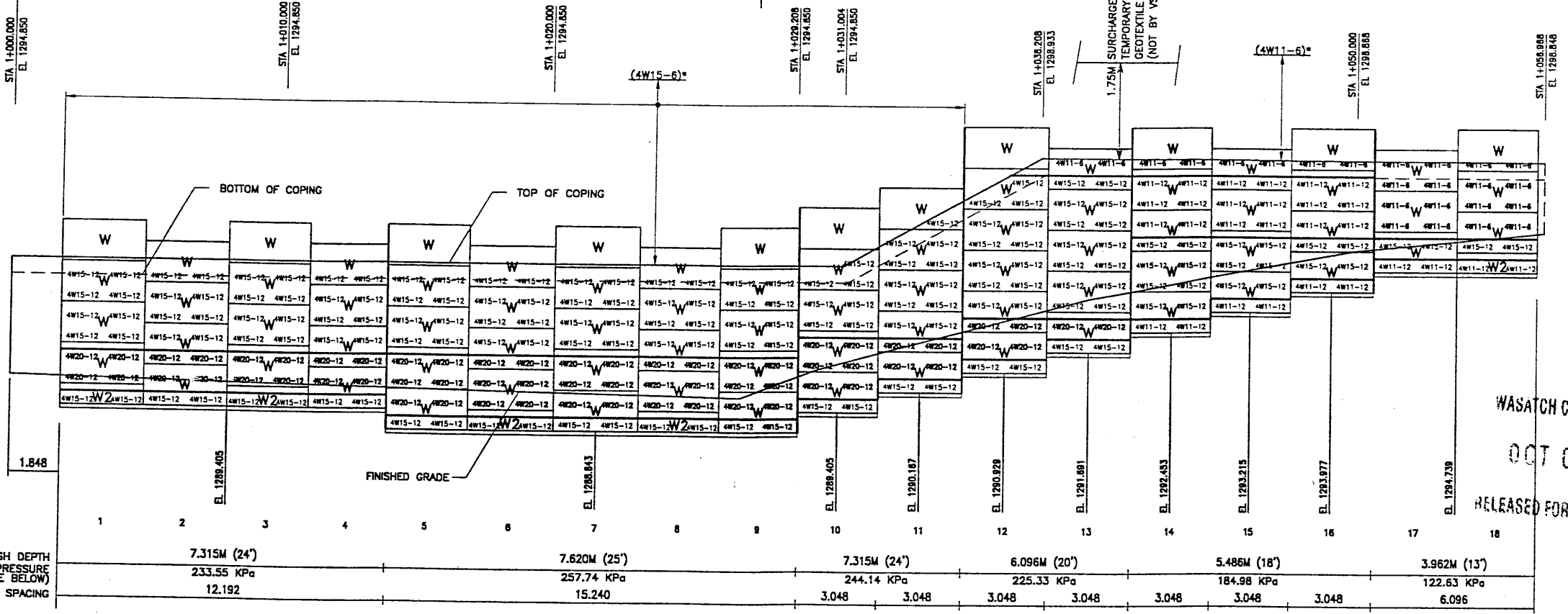


APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY

BEGIN WIRE FACED WALL R-349-6
 WIRE FACED WALL STA 1+000.000 =
 09SR201 STA 1+961.038

MATCH BRIDGE F621 E

WIRE FACED WALL PI STA 1+027.639 =
 09SR201 STA 1+195.415
 @ 26.133 RT



MESH DEPTH
 MAXIMUM BEARING PRESSURE
 (SEE NOTE BELOW)
 PIN SPACING

RETAINING WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 1378.97 SM)

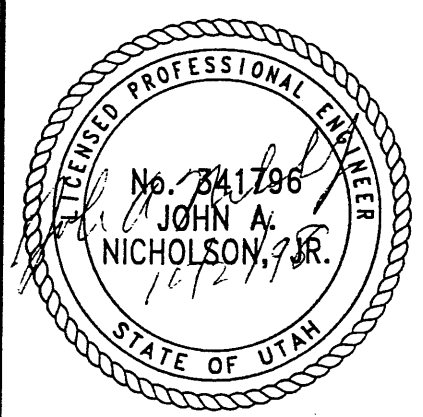
SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

* INDICATES SOIL REINFORCING TYPE
 MESH TO BE USED ON ADDITIONAL
 WIRE WALL FACING ADDED AFTER
 SETTLEMENT.

NOTE:
 THE INDICATED MAXIMUM BEARING PRESSURES
 AT FINAL STAGE FOR STATIC LOAD CONDITION.

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REVISION

NO.	DATE	DESCRIPTION

DES. 09-18-98 JL
 DRN. 09-18-98 DDL
 CHK. 09-18-98 JL

VSL CORPORATION
 2840 Plaza Pkwy, Suite 200
 Raleigh, NC 27613
 Telephone: (919) 781-6772
 Fax: (919) 781-6889

ALUMINUM CO. / DANIELS, JR. / RALEIGH, NC (CORPORATE OFFICE)
 WALKER, IL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
 WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO. 2.7R-349-6.11
 JOB NO. 239-0007
 SHEET NO. RE-7

11 of 18

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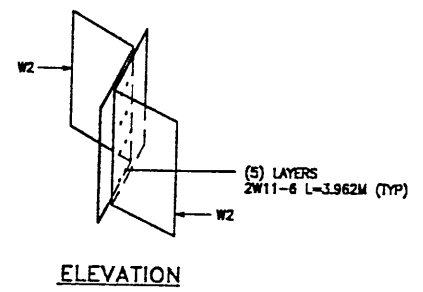
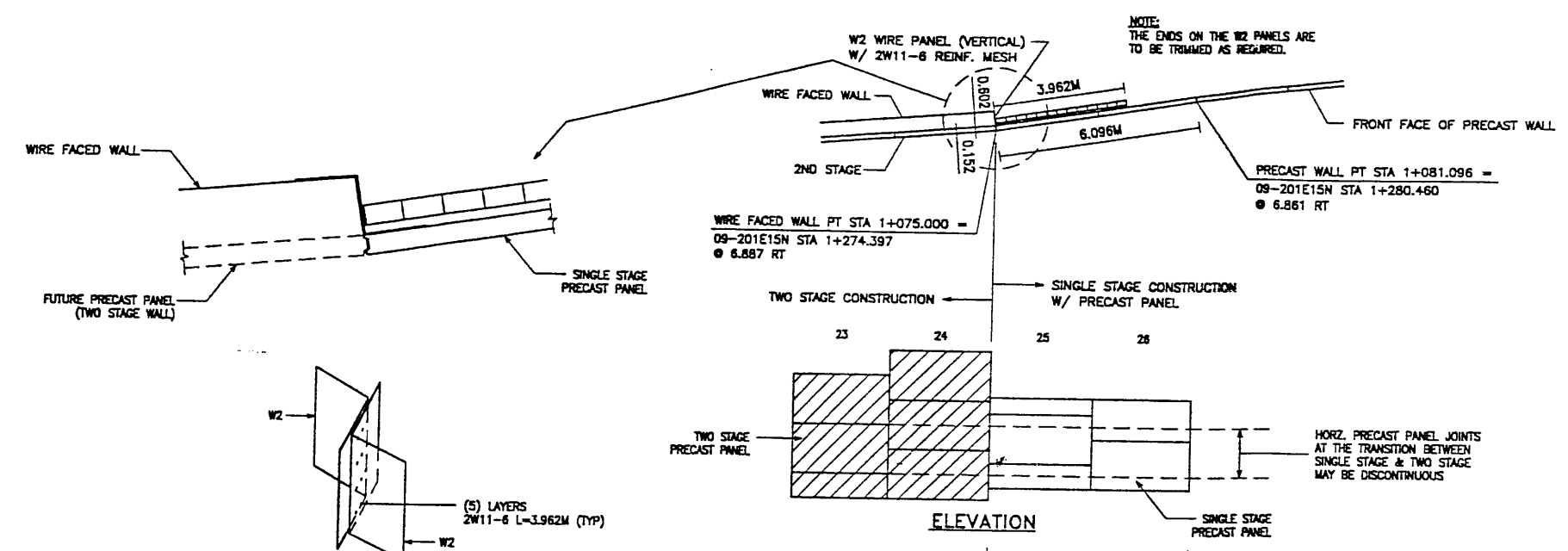
WASATCH CONSTRUCTORS
 OCT 07 1998
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ANCE (X-UTAH.DWG)

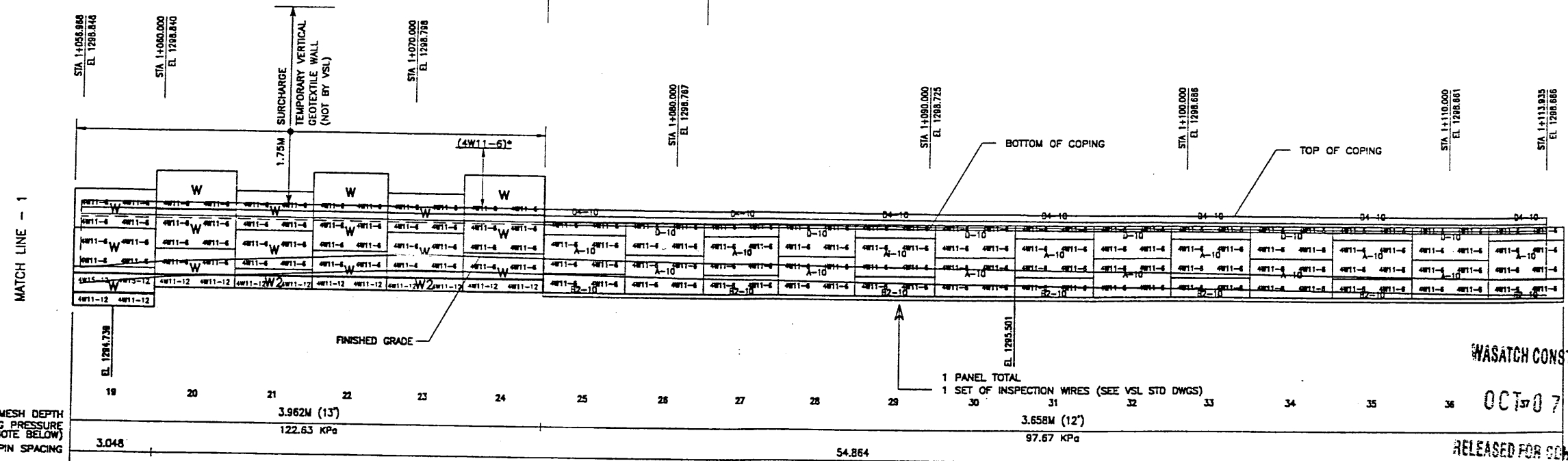
AWSERIES\9W-06\SUBMITL-3\9W-06.DWG

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FINA 09-18-98



ELEVATION

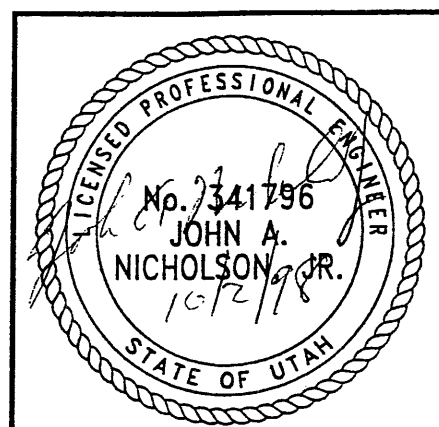


RETAINING WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL

(FRONT FACE SHOWN)
(TOTAL SURFACE AREA OF FACING = 1378.97 SM)

SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)

METRIC



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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY

DES.	CHK.	DATE	NO.	REVISION
JL	JL	09-18-98		
DDL	DDL	09-18-98		
JL	JL	09-18-98		

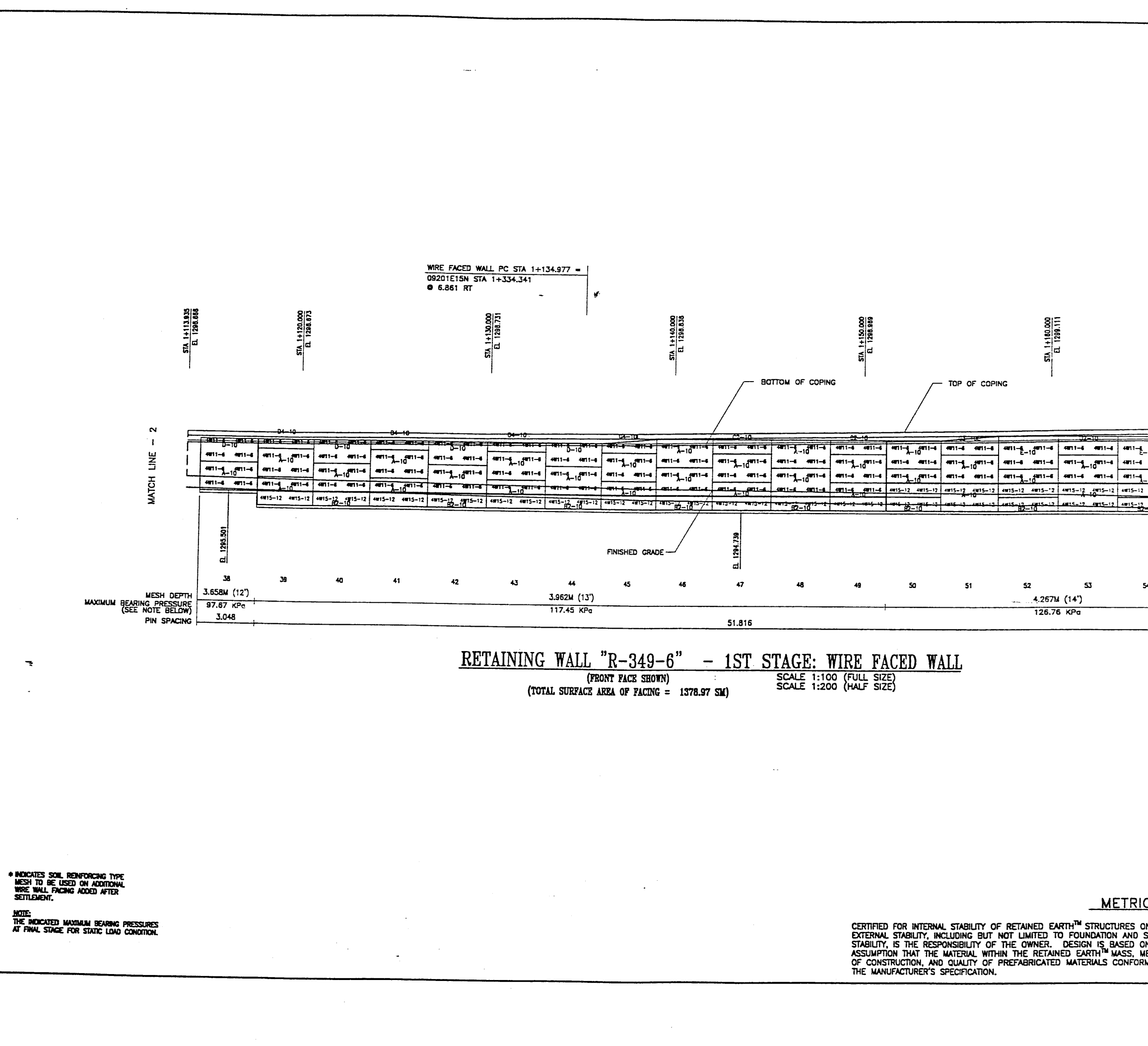
VSL CORPORATION
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Raleigh, NC 27612
Telephone: (919) 781-6772
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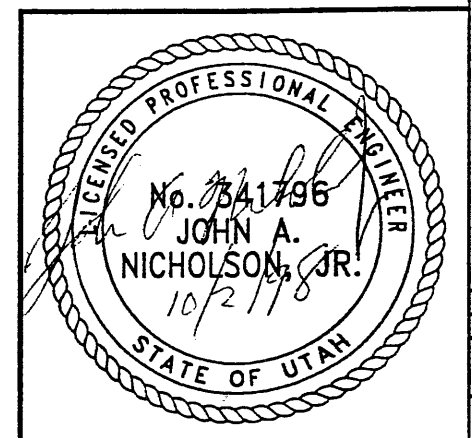
WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION

RETAINED EARTH™ WALLS	DWG. NO.
WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL	2.7R-349-6.12
UTAH 1-15 INTERCHANGE	JOB NO.
SALT LAKE COUNTY, UTAH	239-0007
UTAH DEPARTMENT OF TRANSP.	SHT. NO.
	RE-8



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
Δ	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY <i>NJ</i>

WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION



RETAINING WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF FACING = 1378.97 SM) SCALE 1:200 (HALF SIZE)

METRIC

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NO.	DATE	DESCRIPTION	BY

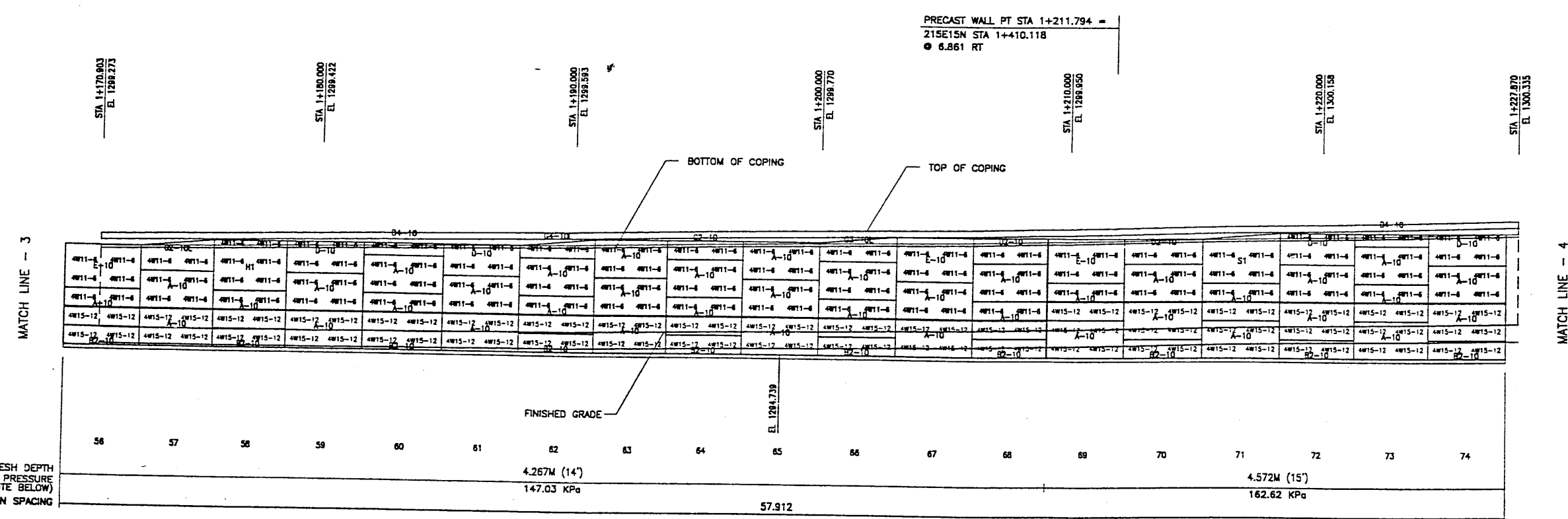
DES. 09-18-98	JL	RETAINED EARTH™	
DRN. 09-18-98	DDL		
CHK. 09-18-98	JL		

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VSL	

RETAINED EARTH™ WALLS WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.
DWG. NO. 2.7R-349-6.13
JOB NO. 239-0007
SHEET NO. RE-9

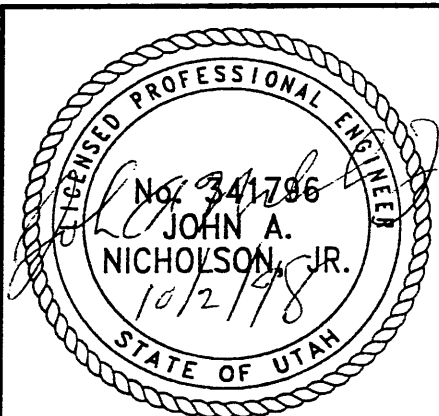
ICE (X-UTAH.DWG)
 \9WSERIES\9W-06\SUBMITL-3\9W-06.DWG
 H:\RE_EARTH\PROJECT\239-00
 09-18-98
 FINAL

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲ 09-18-98		RELEASE FOR 1ST STAGE CONST. ONLY



RETAINING WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 1378.97 SM)
 SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION



METRIC

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DES. 09-18-98	JL	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
DRH. 09-18-98	DDL						
CHK. 09-18-98	JL						

VSL CORPORATION
 2610 Plaza Office, Suite 200
 Raleigh, NC 27617 Tel. 6772
 Fax (919) 751-6889
 Tel. (919) 751-6889

VSL
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 MADE IN U.S.A. / MADE IN U.S.A.

RETAINED EARTH™ WALLS
 WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO. 2.7R-349-6.14
 JOB NO. 239-0007
 SHE. NO. RE-10

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY
2	03-09-00	S & L REVISED 28

DES.	DRN.	CHK.	NO.	DATE
JL	DDL	JL		
09-18-98	09-18-98	09-18-98		

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Raleigh, NC 27607
Tel: (919) 781-4872
Fax: (919) 781-4869

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RETAINED EARTH™ WALLS
WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL

DWG. NO.	2.7R-349-6.15
JOB NO.	239-0007
SHT. NO.	REF-11

NOTE: PILES TO BE LOCATED PRIOR TO ERECTION OF PRECAST WALL SOIL REINFORCEMENT TO BE FIELD ADJUSTED TO AVOID PILES.

SOIL REINFORCING MESH (TYP)

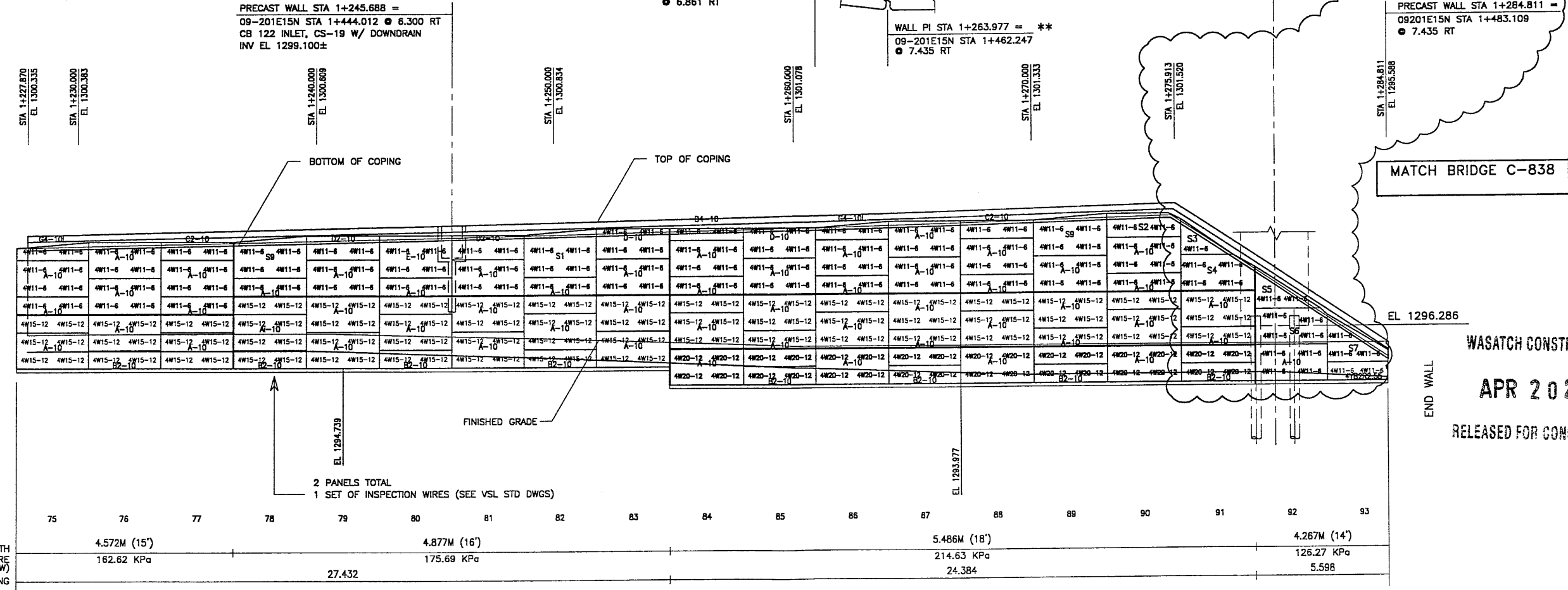
FACE OF PRECAST WALL

REMOVE BACK OF GROOVE AS REQUIRED

WALL STA 1+280.060
09201E15N STA 1+478.330

END PRECAST WALL R-349-6
PRECAST WALL STA 1+284.811 =
09201E15N STA 1+483.109
● 7.435 RT

MATCH BRIDGE C-838



PRECAST WALL STA 1+245.688 =
09-201E15N STA 1+444.012 ● 6.300 RT
CB 122 INLET, CS-19 W/ DOWNDRAIN
INV EL. 1299.100±

** WALL PI STA 1+260.929 =
09-201E15N STA 1+459.254
● 6.861 RT

WALL PI STA 1+263.977 = **
09-201E15N STA 1+462.247
● 7.435 RT

MATCH LINE - 4

EL. 1296.286

END WALL

WASATCH CONSTRUCTORS
APR 20 2000
RELEASED FOR CONSTRUCTION

RETAINING WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
(TOTAL SURFACE AREA OF FACING = 1378.97 SM) SCALE 1:200 (HALF SIZE)

MESH DEPTH	4.572M (15')	4.877M (16')	5.486M (18')	4.267M (14')
MAXIMUM BEARING PRESSURE (SEE NOTE BELOW)	162.62 KPa	175.69 KPa	214.63 KPa	125.27 KPa
PIN SPACING		27.432	24.384	5.598

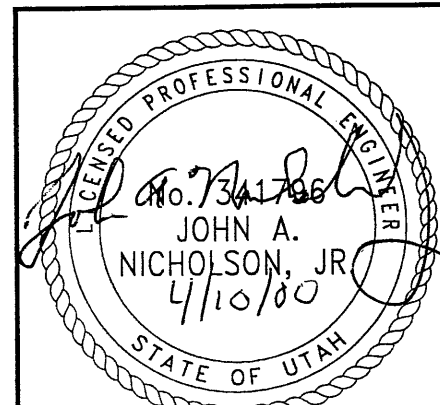
** RELOCATE TO PI STATION TO MATCH PANEL VERTICAL JOINT.

* INDICATES SOIL REINFORCING TYPE MESH TO BE USED ON ADDITIONAL WIRE WALL FACING ADDED AFTER SETTLEMENT.

NOTE: THE INDICATED MAXIMUM BEARING PRESSURES AT FINAL STAGE FOR STATIC LOAD CONDITION.

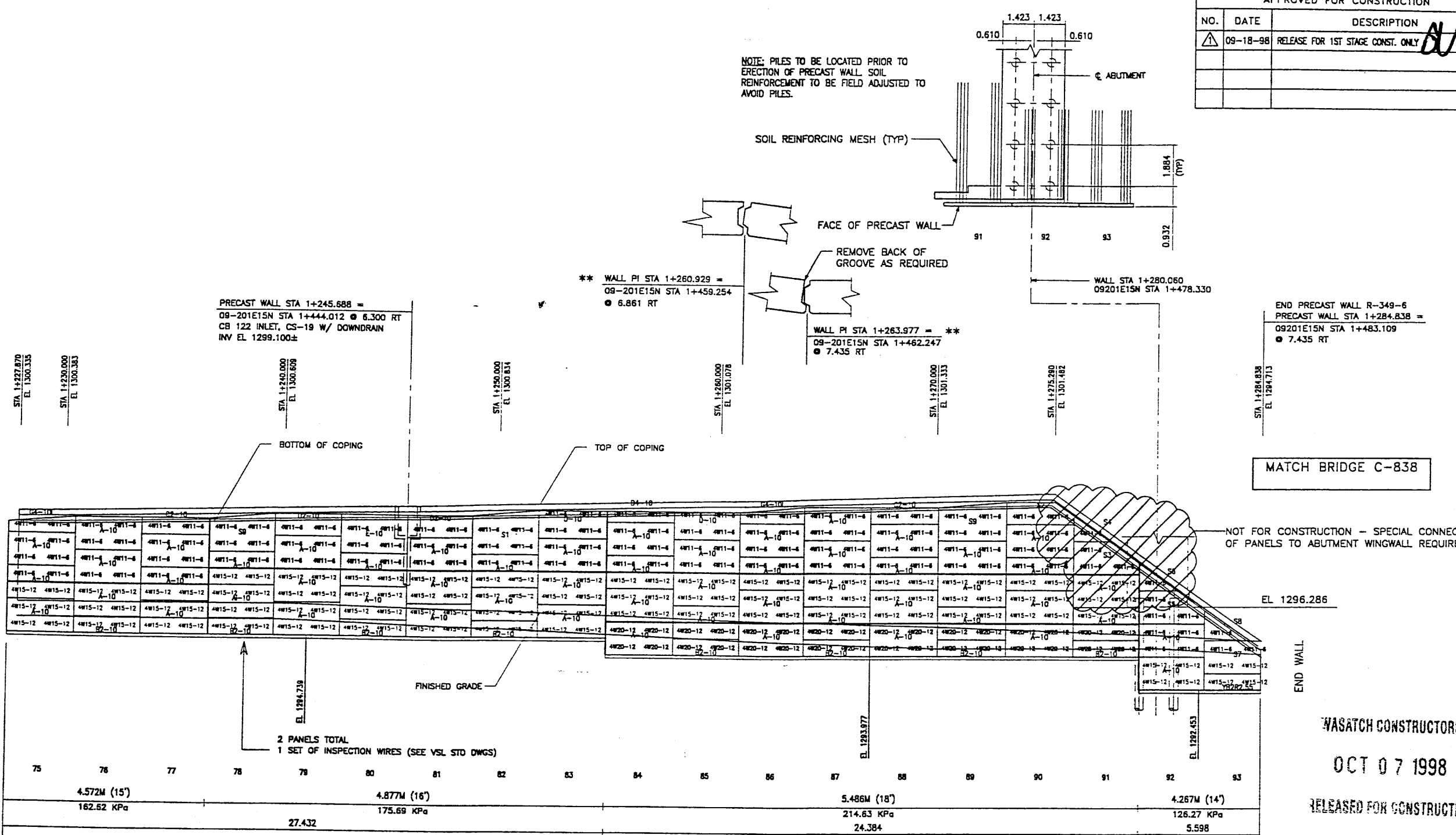
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METRIC



REF ATTENTION APPROVAL

9WSERIES\9W-06\SUBMITL-3\9W-06.DWG
H:\RE_EARTH\PROJECT\239-0007
09-18-98
FINAL



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△ 09-18-98		RELEASE FOR 1ST STAGE CONST. ONLY

NO.	DATE	REVISION

VSL CORPORATION
2840 Poca Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6272
Fax: (919) 781-4869

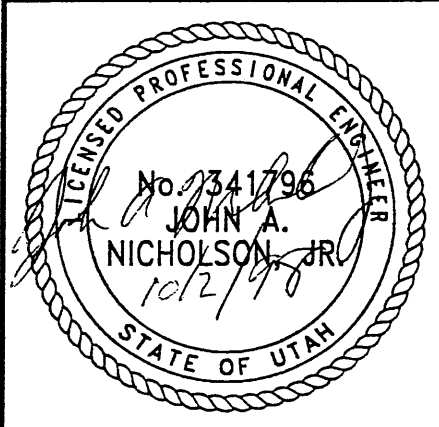
ALABAMA, CA / ILLINOIS, TX / INDIANA, NC (CORPORATE OFFICE)
MINN. / N.J. / OHIO, VA / SPRINGFIELD, VA

RETAINING WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
(FRONT FACE SHOWN)
(TOTAL SURFACE AREA OF FACING = 1378.97 SM)

SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

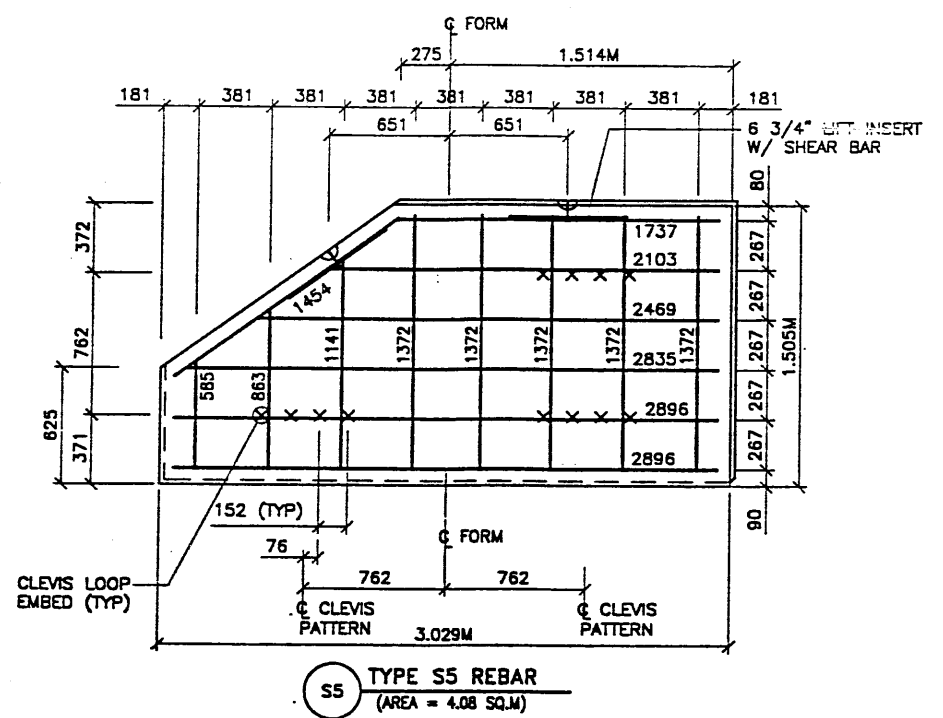
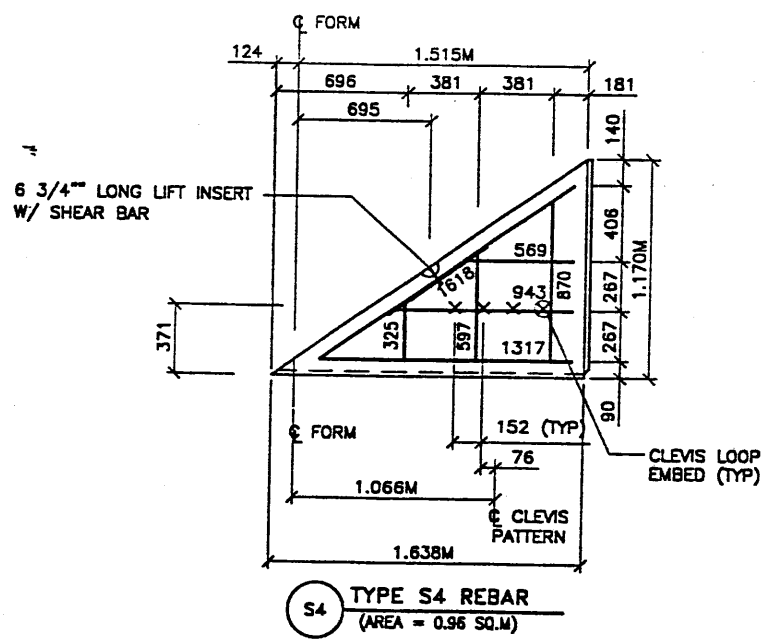
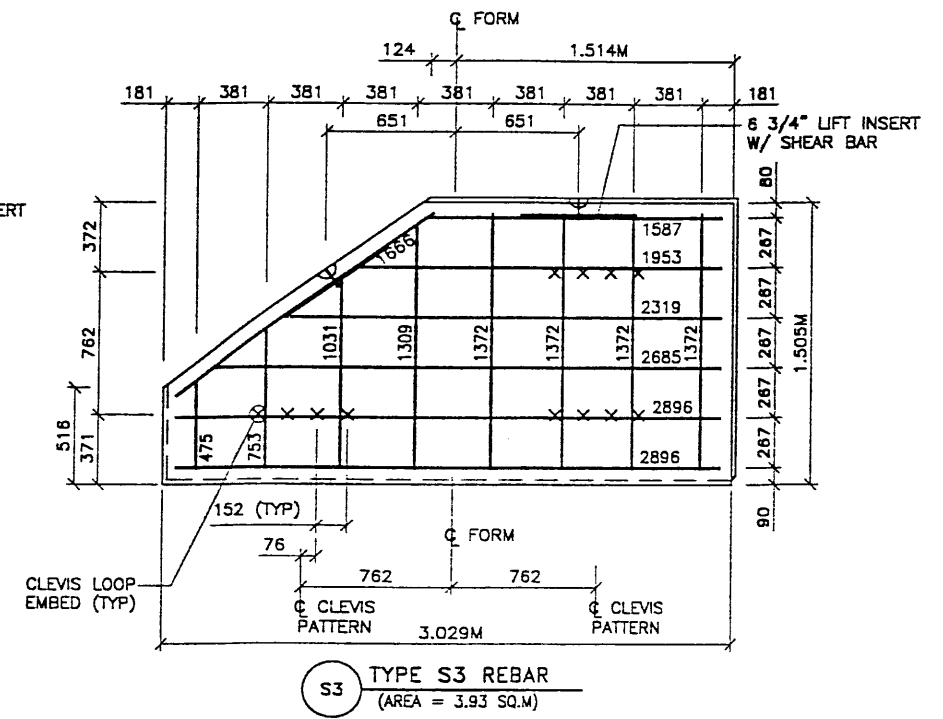
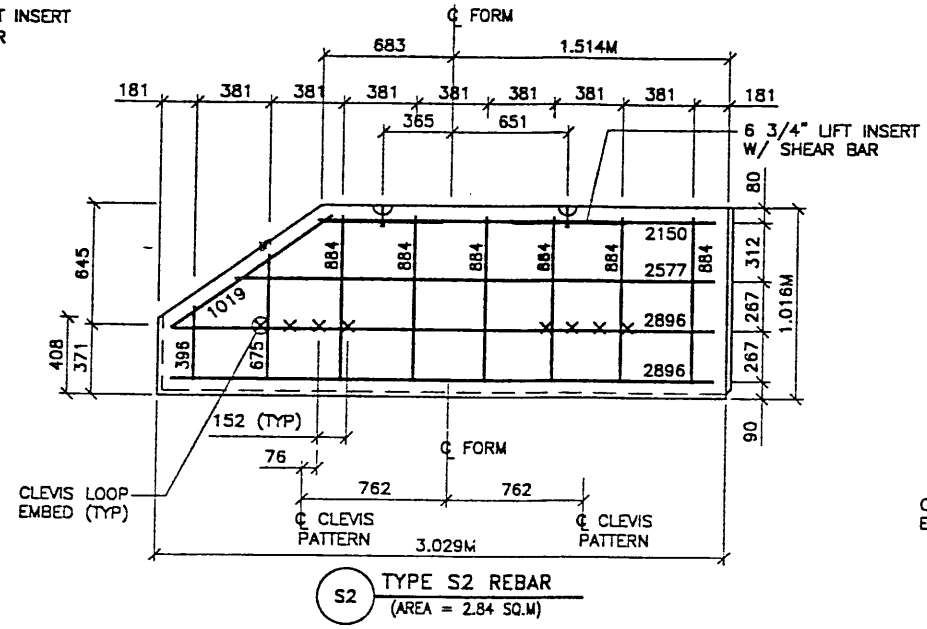
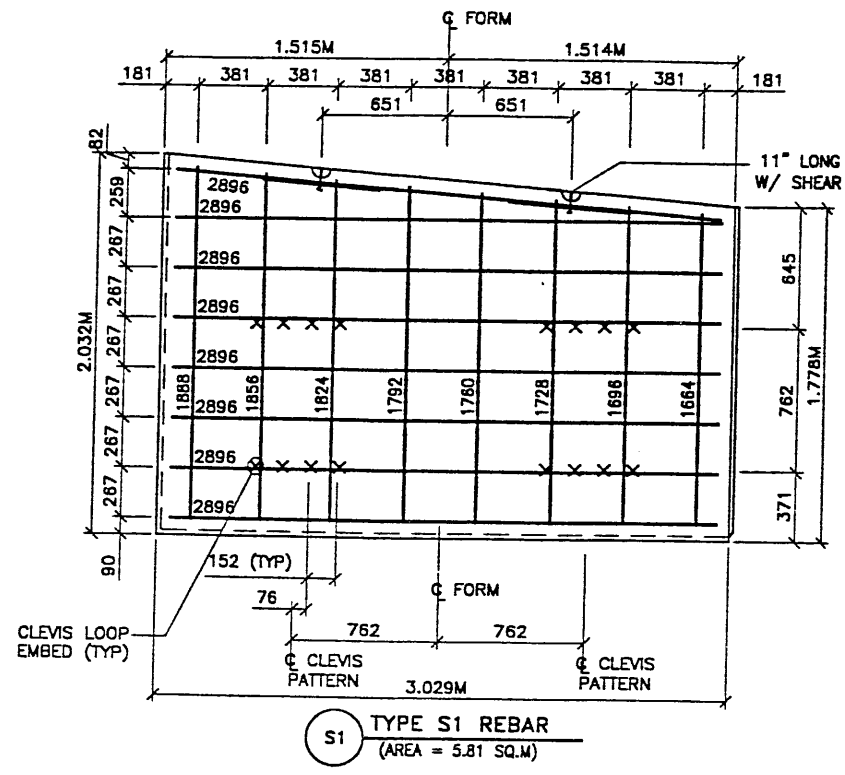


WASATCH CONSTRUCTORS
OCT 07 1998
RELEASED FOR CONSTRUCTION

RETAINED EARTH™ WALLS WALL "R-349-6" - 1ST STAGE: WIRE FACED WALL
UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.
DWG. NO. 2.7R-349-6.15
JOB NO. 239-0007
SHT. NO. RE-11

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY

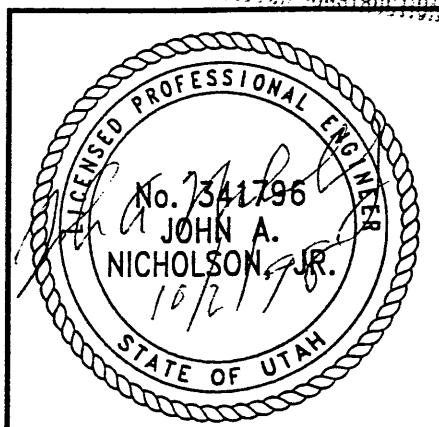
NO.	DATE	REVISION	CHK



- PANEL REINFORCEMENT NOTES:**
1. PANELS ARE SHOWN BACK FACE.
 2. HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 3. ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 4. ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 BAR 1345 mm LONG.
 5. PANEL REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION A615, GRADE 60.
 6. ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS 1.
 7. CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 20,700 KPa.
 8. EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 9. ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
 10. LIFT INSERTS ARE 6 3/4" LONG IN ALL PANELS LESS THAN 1.524M TALL. PANELS TALLER THAN 1.524M SHALL HAVE 11" LONG LIFT ANCHORS.

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



RETAINED EARTH™ WALLS
PRECAST WALL R-349-06
SPECIAL PANEL DETAILS

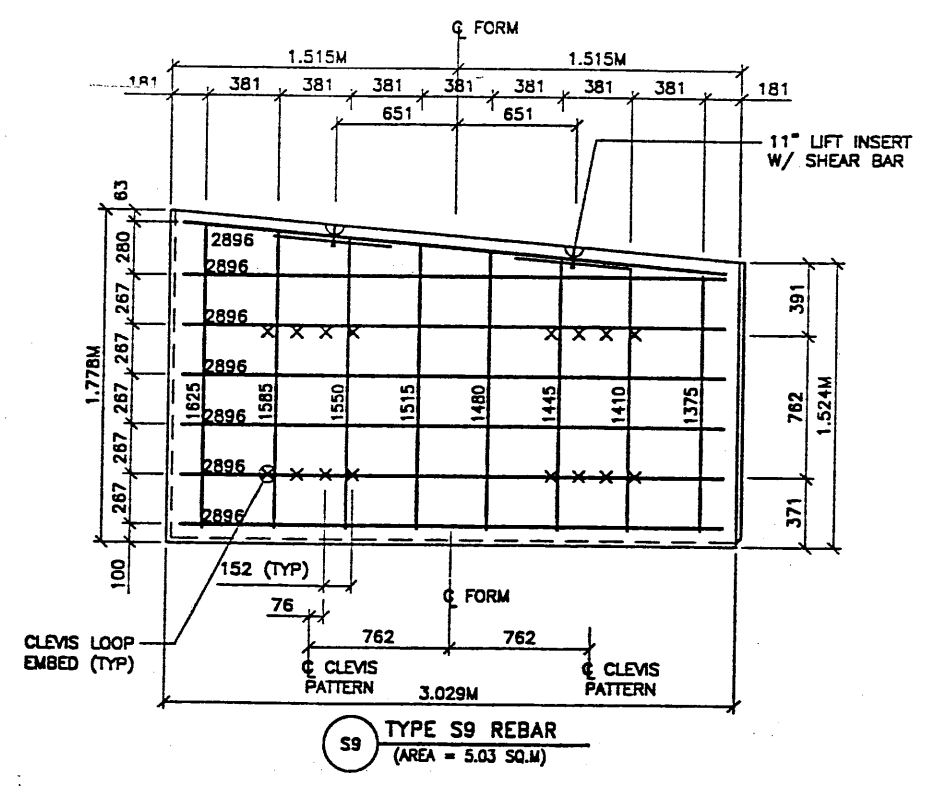
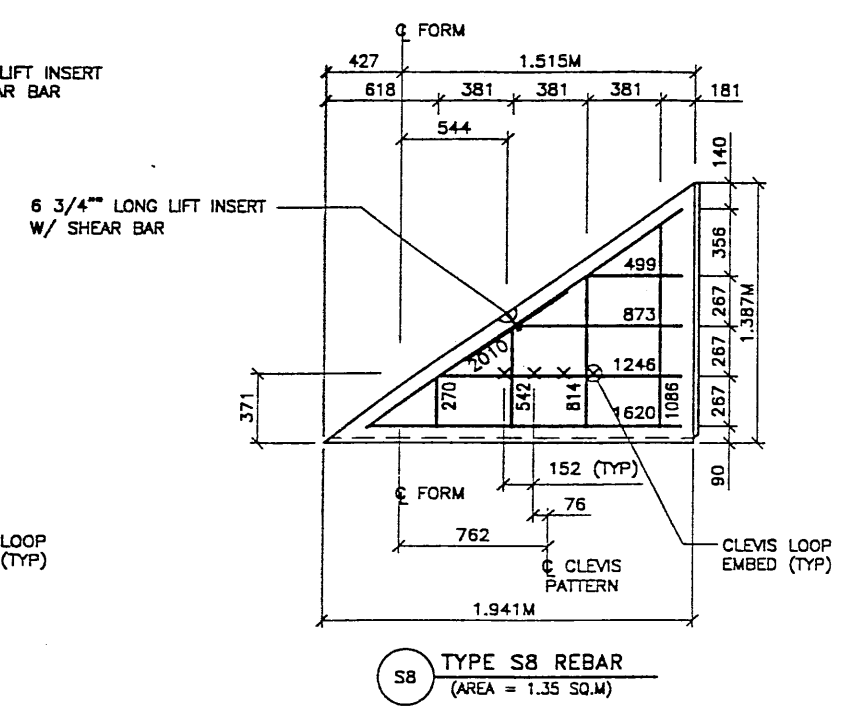
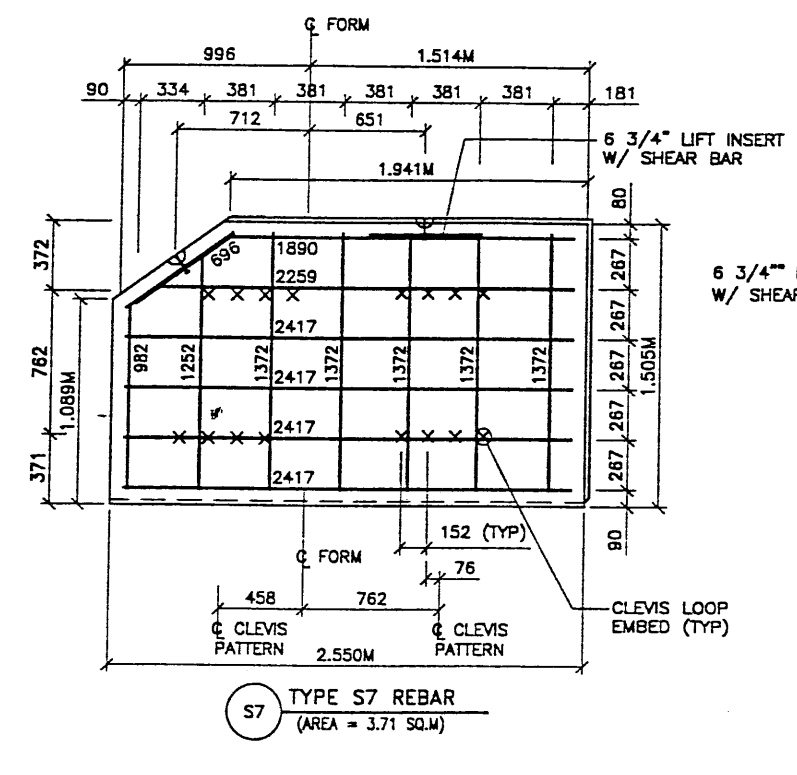
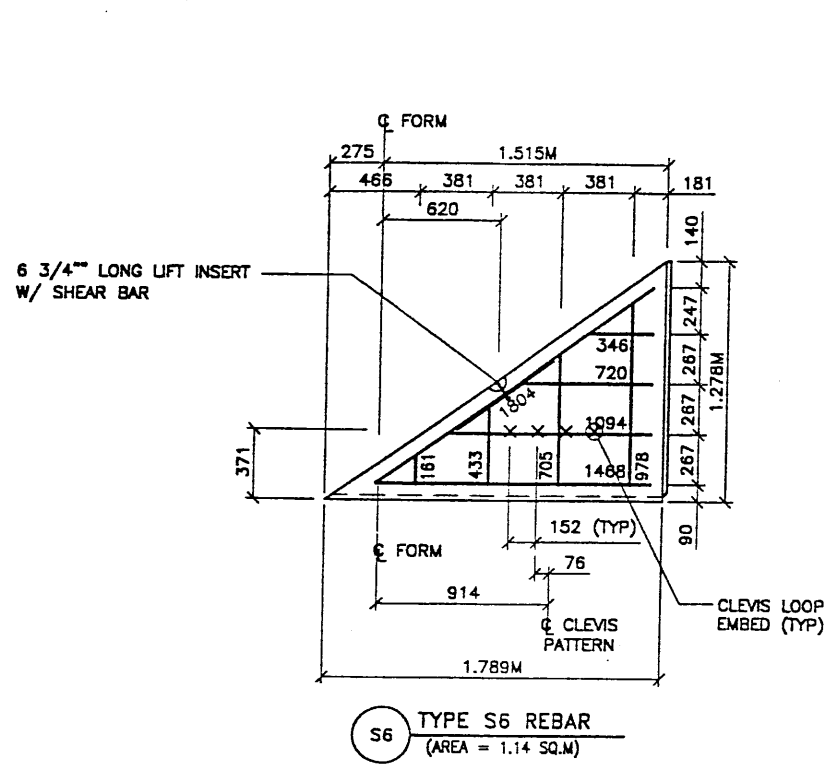
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.
2.7R-349-6.16

JOB NO.
239-0007

SHT. NO.
RE-12

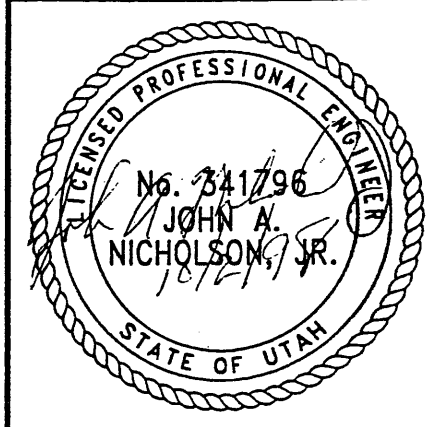
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY



- PANEL REINFORCEMENT NOTES:
- PANELS ARE SHOWN BACK FACE.
 - HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 - ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 - ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 BAR 1345 mm LONG.
 - PANEL REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION A615, GRADE 60.
 - ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS I.
 - CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 20,700 KPa.
 - EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 - ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS.
 - VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
 - LIFT INSERTS ARE 6 3/4" LONG IN ALL PANELS LESS THAN 1.524M TALL. PANELS TALLER THAN 1.524M SHALL HAVE 11" LONG LIFT ANCHORS.

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



VASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION

REVISION		NO.	DATE	BY

DES.	09-18-98	JL	RETAINED EARTH™
DRN.	09-18-98	DDL	
CHK.	09-18-98	JL	


VSL CORPORATION 2000 Plaza Place, Suite 200 Boulder, CO (303) 440-8272 Fax: (303) 440-4869	
ALUMINIA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA	

OWG. NO.	2.7R-349-6.17
JOB NO.	239-0007
SHT. NO.	RE-13

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-18-98	RELEASE FOR 1ST STAGE CONST. ONLY

DES.	DRN.	CHK.	NO.	DATE	REVISION	BY
JL	DDL	JL				

VSL CORPORATION
 2610 Plaza Place, Suite 200
 Raleigh, NC 27617
 Telephone: (919) 881-8777
 Fax: (919) 881-4925

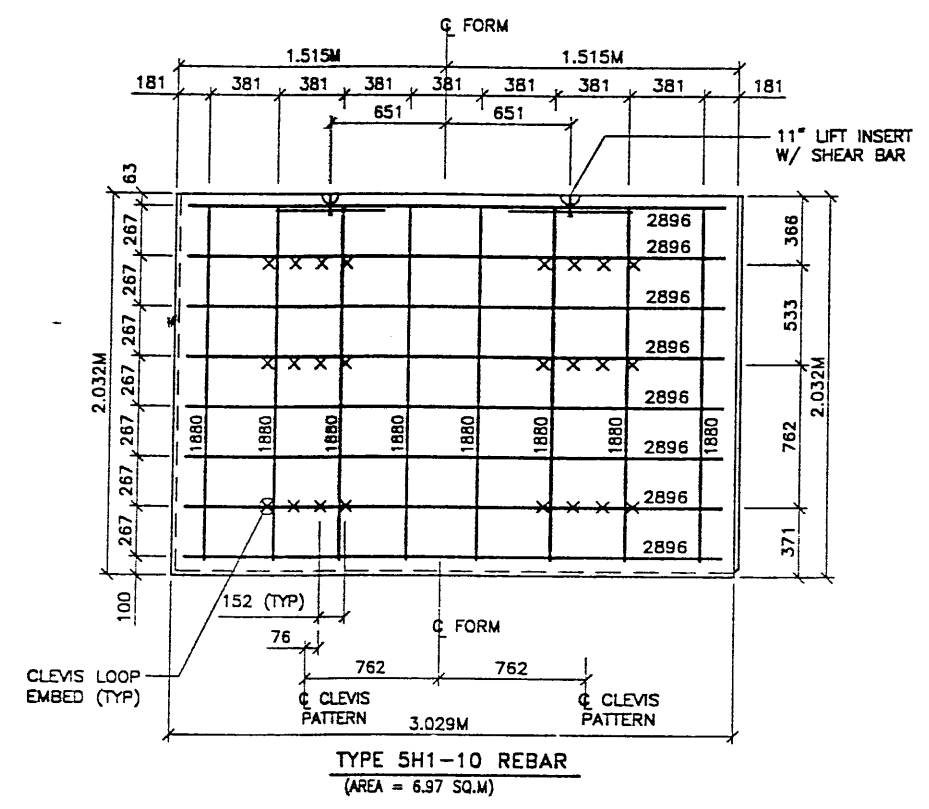
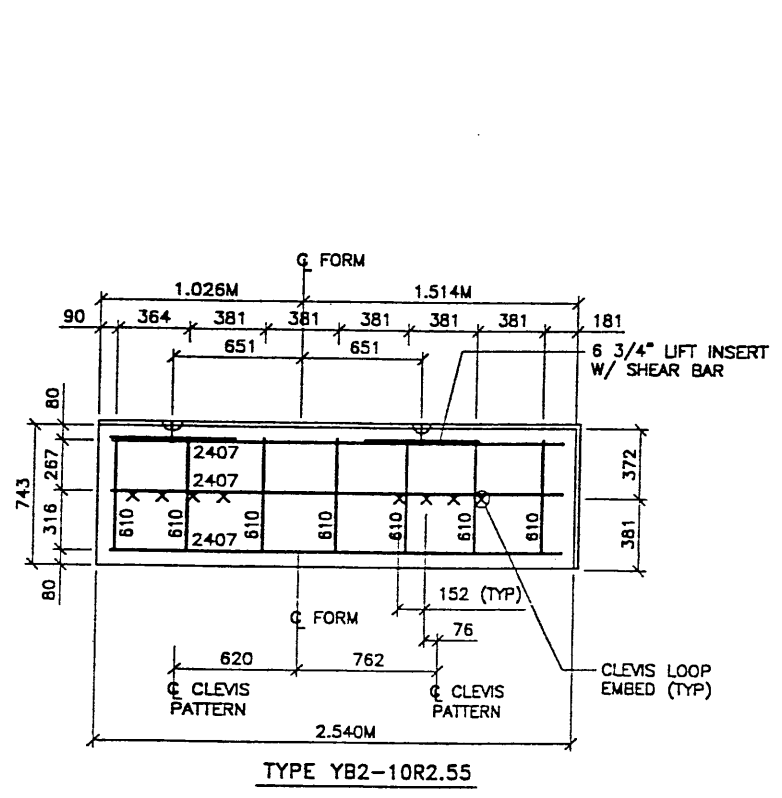


ATLANTA, GA / DALLAS, TX / PALMDALE, CA / SPRINGFIELD, VA
 WASHINGTON, DC / SAN JOSE, CA / BRIDGEFORD, VT

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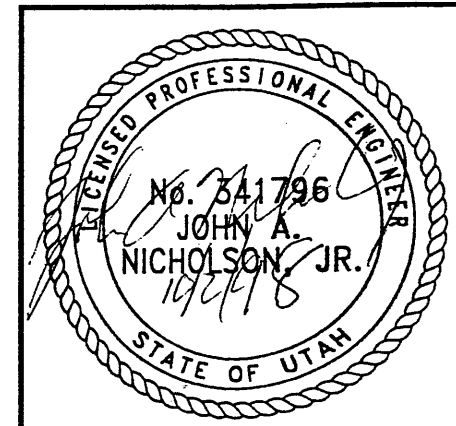
RETAINED EARTH™ WALLS
 PRECAST WALL R-349-06
 Y & TALL PANEL DETAILS
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-6.18
JOB NO.	239-0007
SHT. NO.	RE-14



- PANEL REINFORCEMENT NOTES:
1. PANELS ARE SHOWN BACK FACE.
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 6. ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS 1.
 7. CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 20,700 KPa.
 8. EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 9. ALL PANELS TO USE 9.5mm# CLEVIS LOOPS.
 10. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
 11. LIFT INSERTS ARE 6 3/4" LONG IN ALL PANELS LESS THAN 1.524M TALL. PANELS TALLER THAN 1.524M SHALL HAVE 11" LONG LIFT ANCHORS.

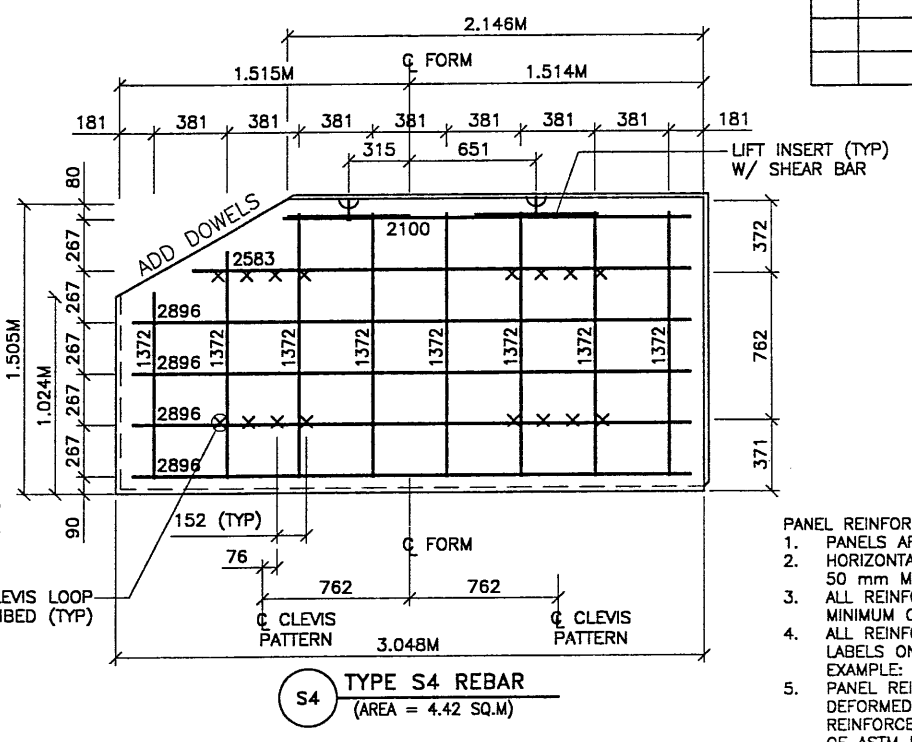
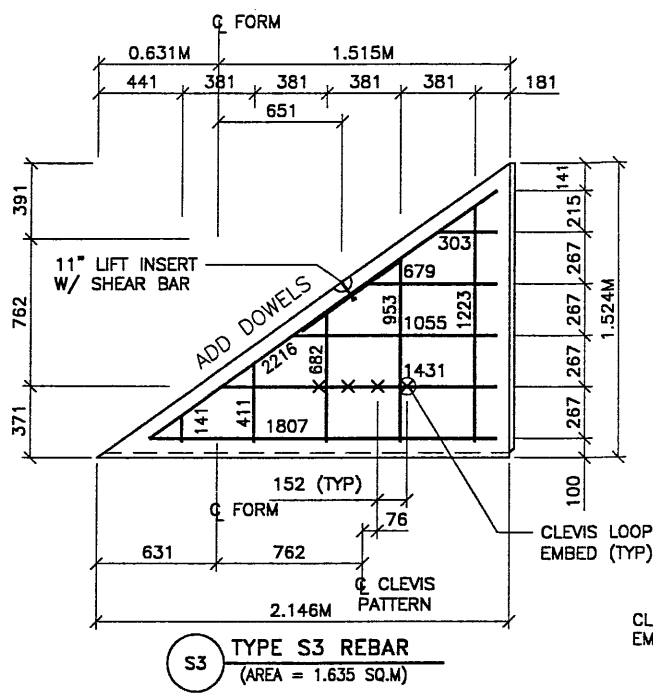
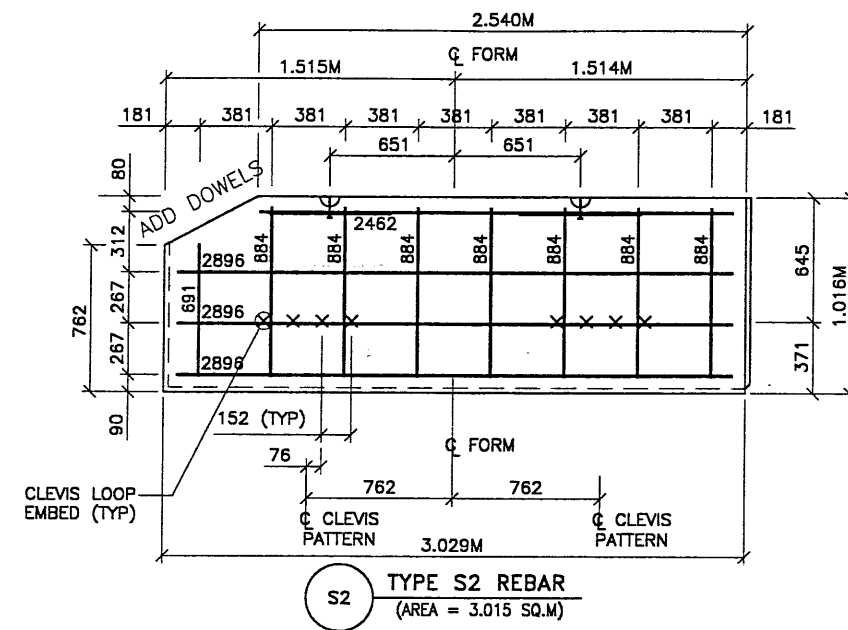
WASATCH CONSTRUCTORS
 OCT 07 1998
 RELEASED FOR CONSTRUCTION



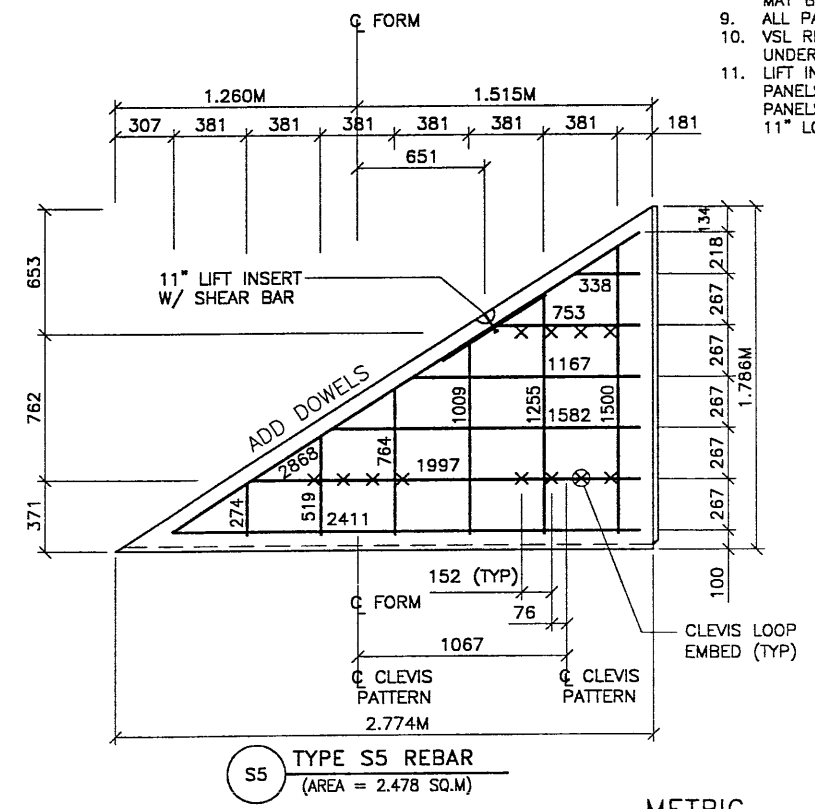
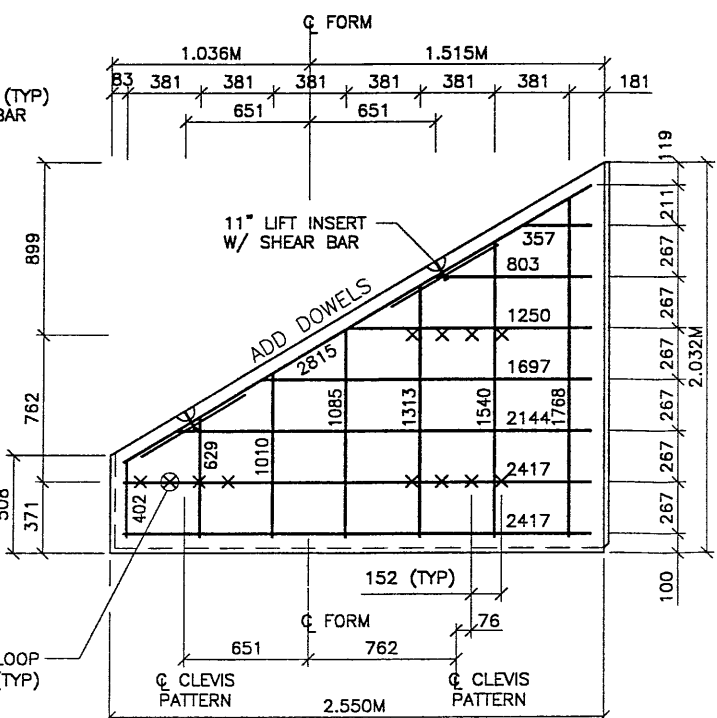
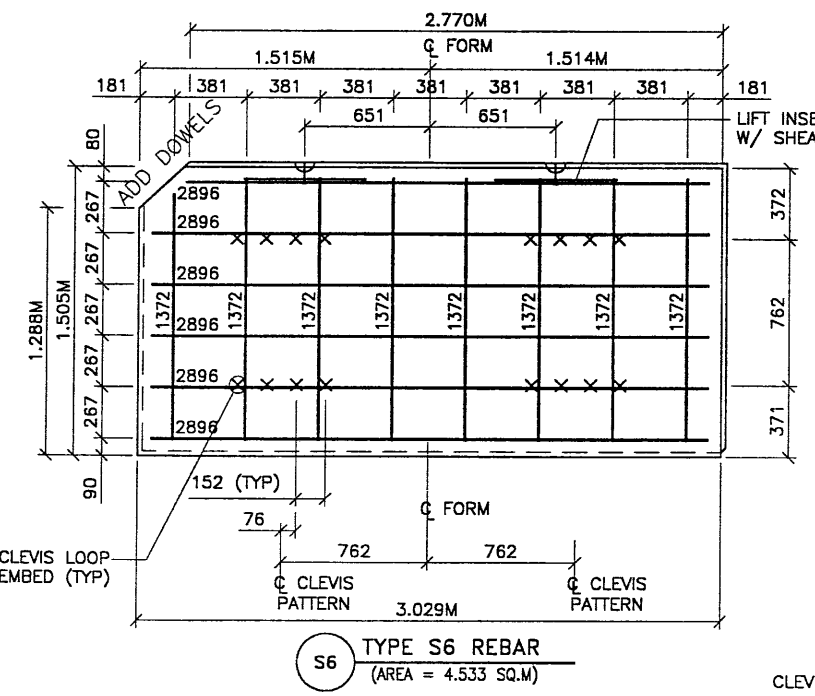
METRIC

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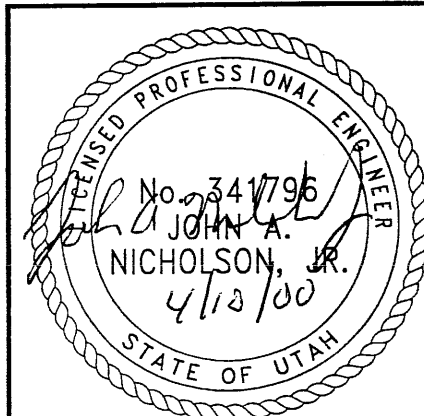
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△ 03-09-00	S & L REVISED	<i>JF</i>



- PANEL REINFORCEMENT NOTES:
- PANELS ARE SHOWN BACK FACE.
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 - ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS 1.
 - CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 27,500 KPa.
 - EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 - ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS.
 - VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
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WASATCH CONSTRUCTORS
 APR 20 2000
 RELEASED FOR CONSTRUCTION

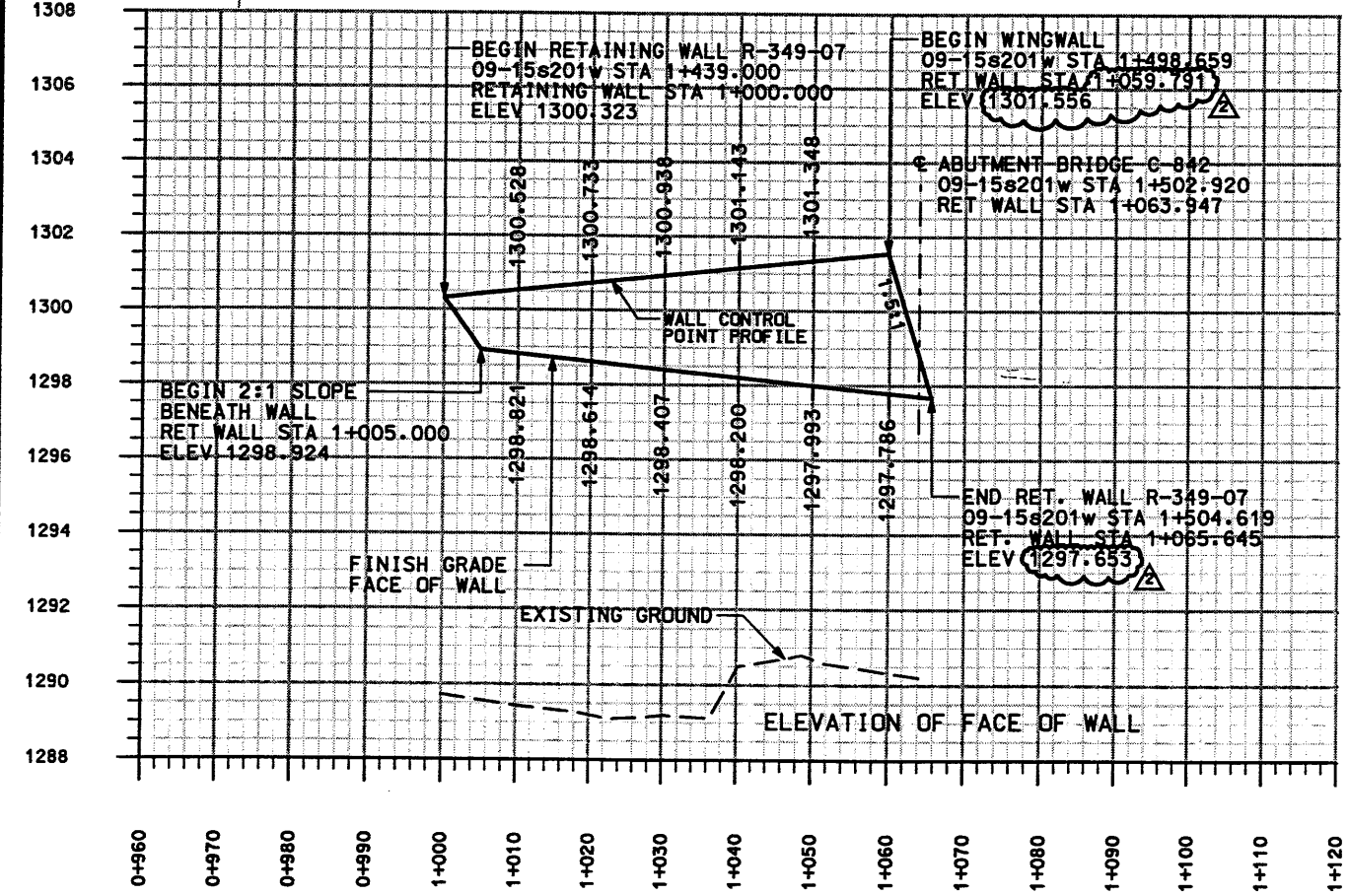
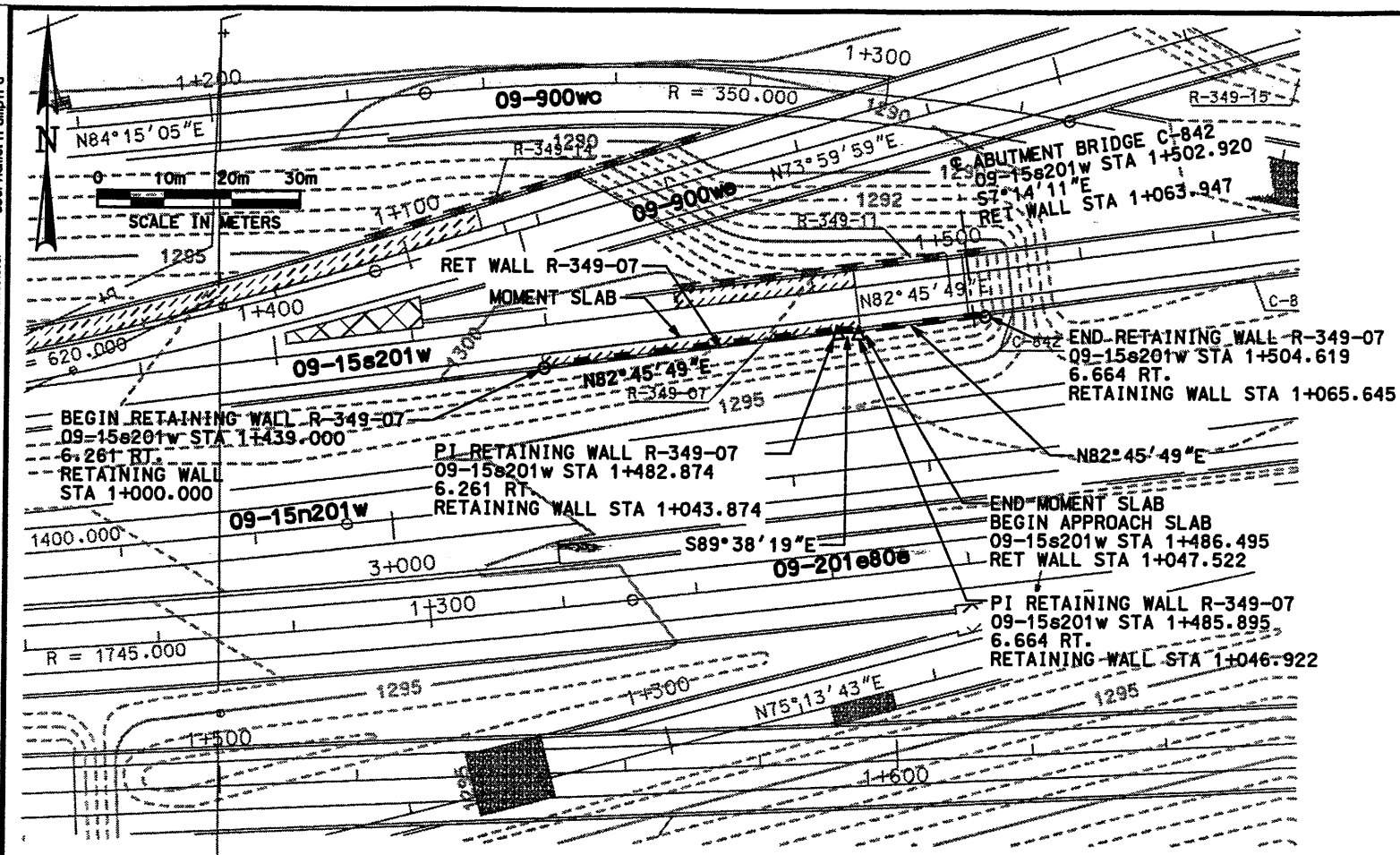


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DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK.
	WM	SW	VSL					
VSL CORPORATION 2840 Plaza Place, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-8272 Fax: (919) 781-4889								
ALUMINA, CA / DALLAS, TX / AUSTIN, TX (SEPARATE OFFICE) MINN. TX / SAN JOSE, CA / SPRINGFIELD, WA								
RETAINED EARTH™ WALLS PRECAST WALL R-349-06 SPECIAL PANEL DETAILS								
UTAH I-15 RECONSTRUCTION SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.								
DWG. NO. 2.7R-349-6.19								
JOB NO. 239-0007								
SHT. NO. RE-15								

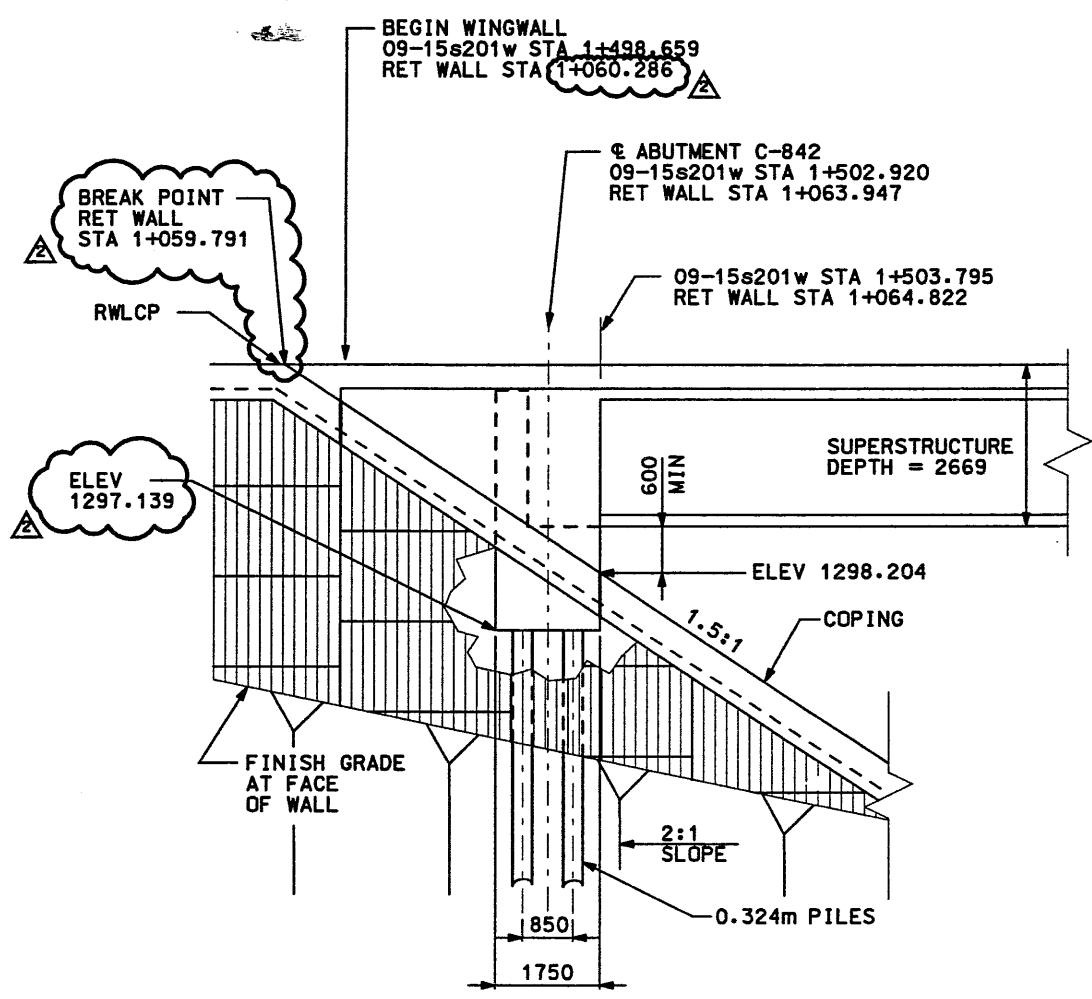
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User: jmm1533 Date: 23-SEP-1999 Time: 15:33
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NOTES:

1. CONSTRUCT WALL TO DESIGN PAVEMENT ELEVATION
2. LOCATE RETRIEVABLE WIRE SAMPLES AT 15s201w STA 1+480.000, RET. WALL STA 1+041.000
3. ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.



BRIDGE C-842 ABUTMENT & PILE DETAIL
NTS

WASATCH CONSTRUCTORS

OCT 04 1999

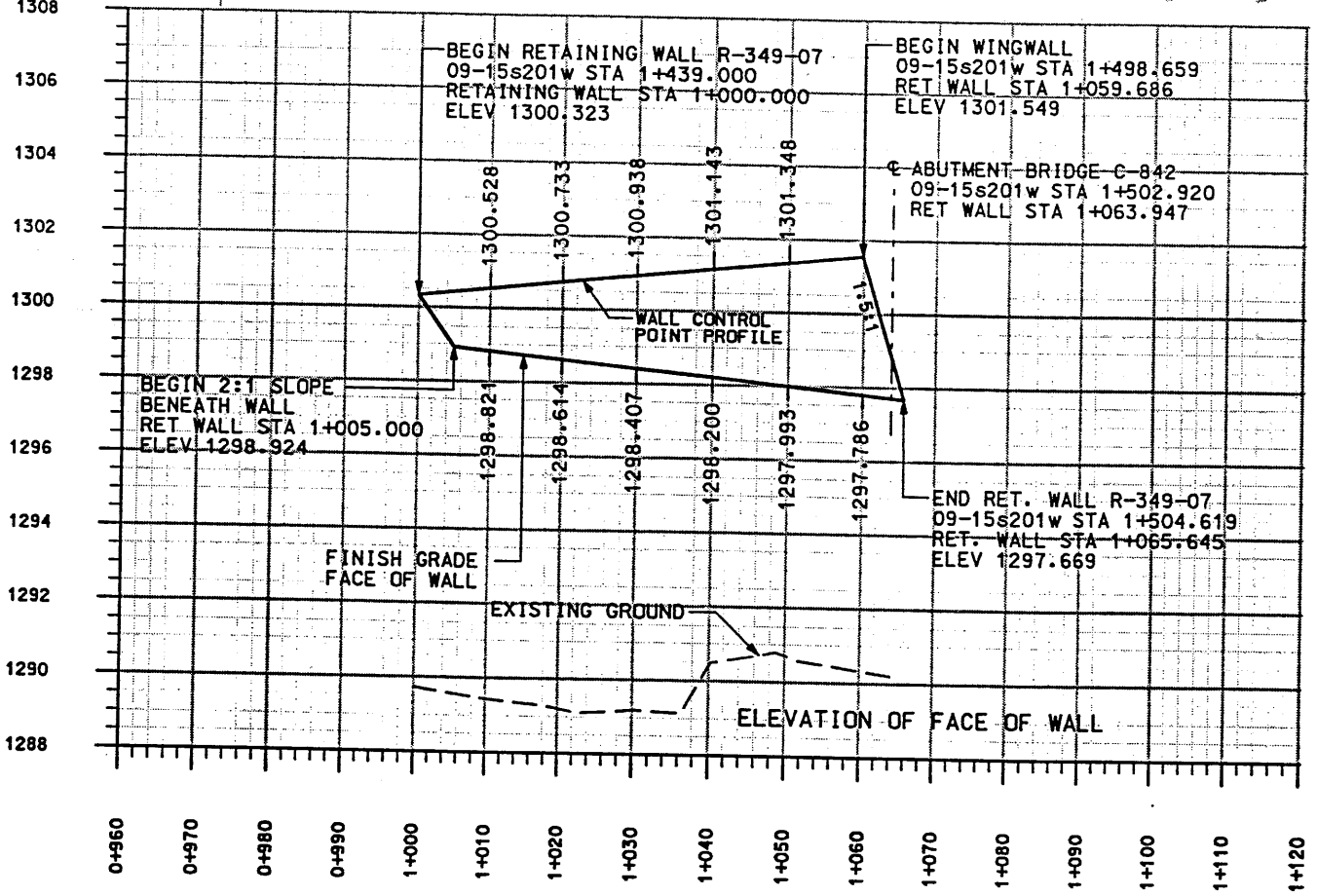
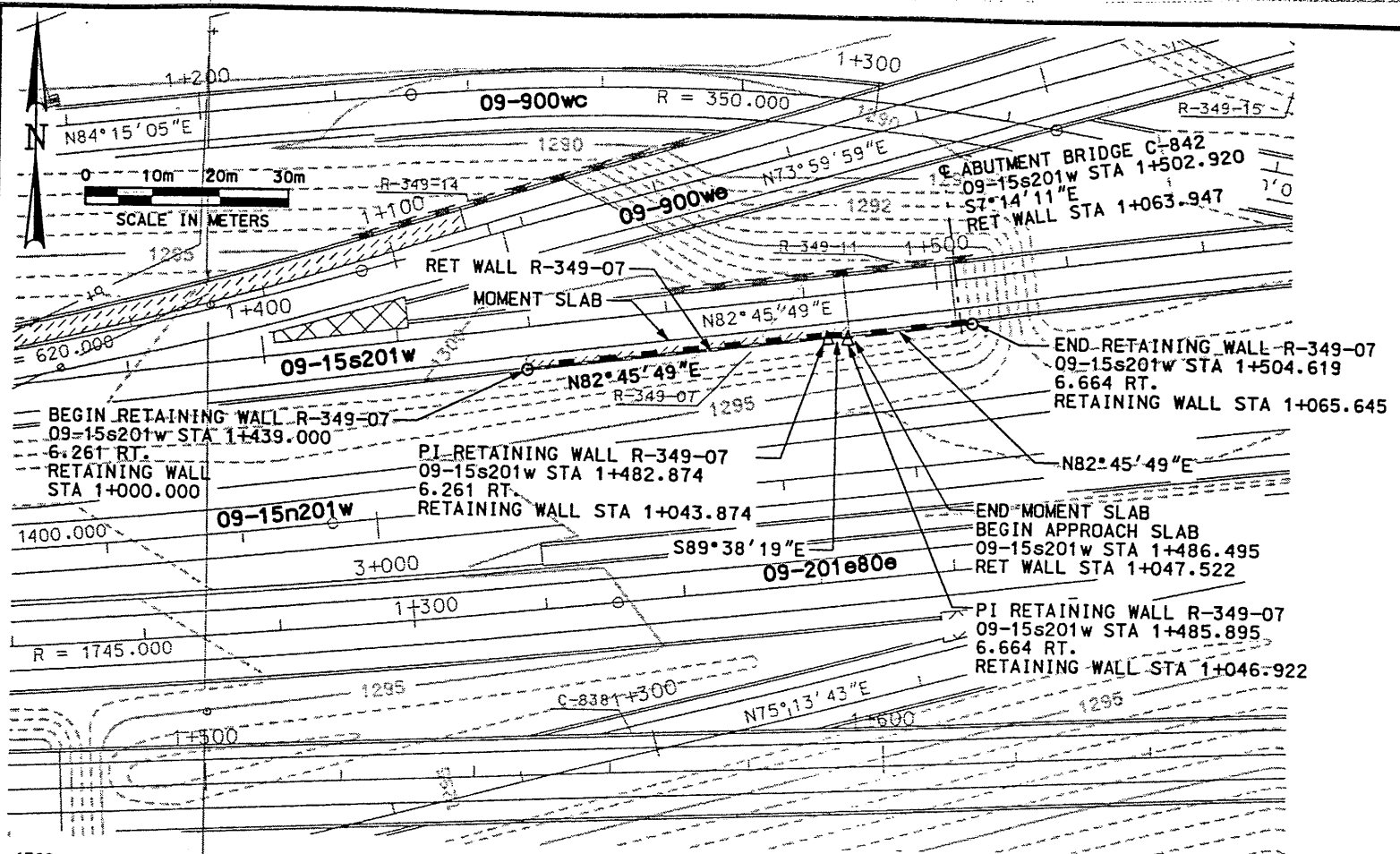
RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION		DESCRIPTION	
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UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		TRACKING NO.	2713405
APPROVAL RECORD:	DATE	DESIGN	CHECK
6/98	MARGARET J. SIMMONS-CROSS	6/98	4/98
DATE	PROJECT DESIGN ENGINEER	DRAWN	CHECK
6/98	MARGARET J. SIMMONS-CROSS	6/98	4/98
APPROVED	DATE	SECTION MANAGER	CHECK
6/98	9/24/99	JOHN TERRY	[Signature]
I-15 CORRIDOR RECONSTRUCTION		SECTION 2.7	
SITUATION & LAYOUT R-349-07		PROJECT NUMBER *SP-15-7(135)296	
SALT LAKE COUNTY		DWC. NO. 2.7-R-349-07.1	
SHT. 1	OF 2		

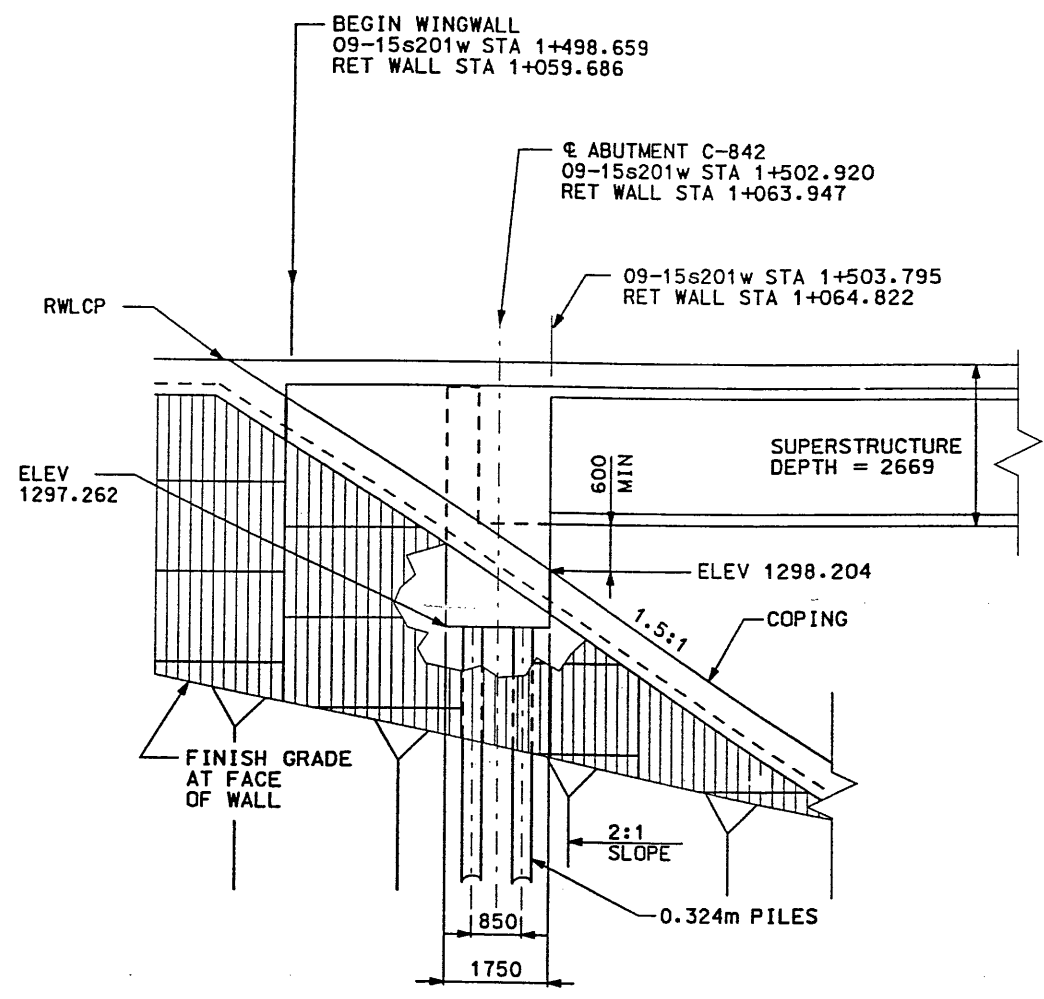
RFC After Final Approval

Date: 01-OCT-1998 Time: 14:49 User: rmpenarara



NOTES:

1. CONSTRUCT WALL TO DESIGN PAVEMENT ELEVATION
2. LOCATE RETREIVABLE WIRE SAMPLES AT 15s201w STA 1+480.000, RET. WALL STA 1+041.000
3. ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.



BRIDGE C-842 ABUTMENT & PILE DETAIL

NTS

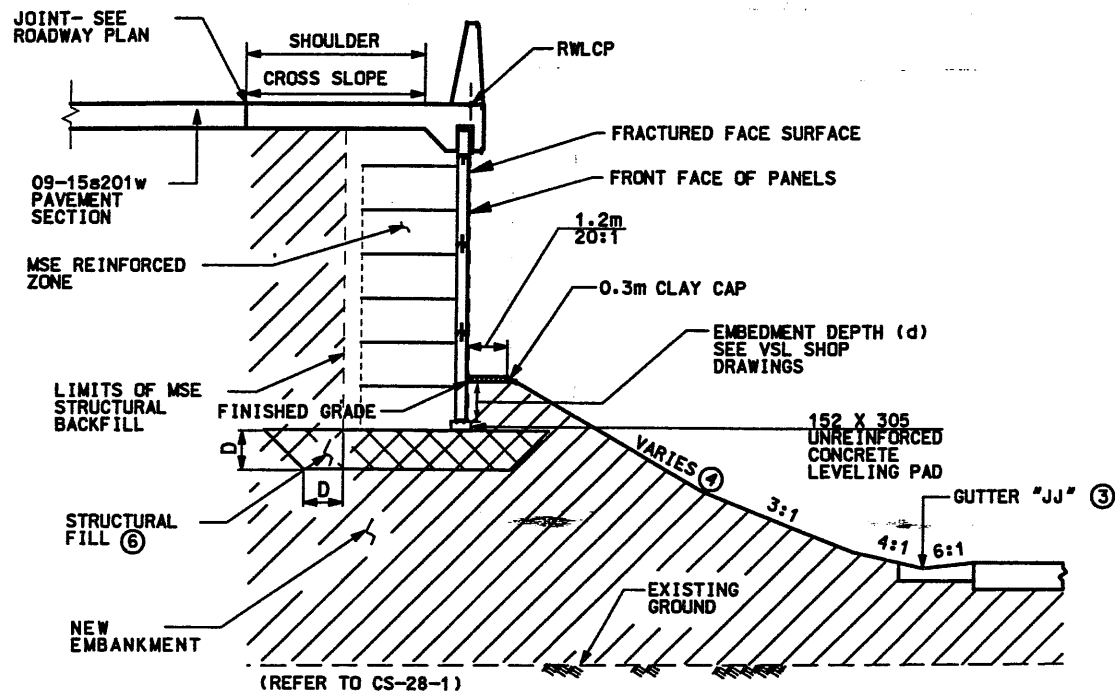
WASATCH CONSTRUCTORS
OCT 12 1998
RELEASED FOR CONSTRUCTION



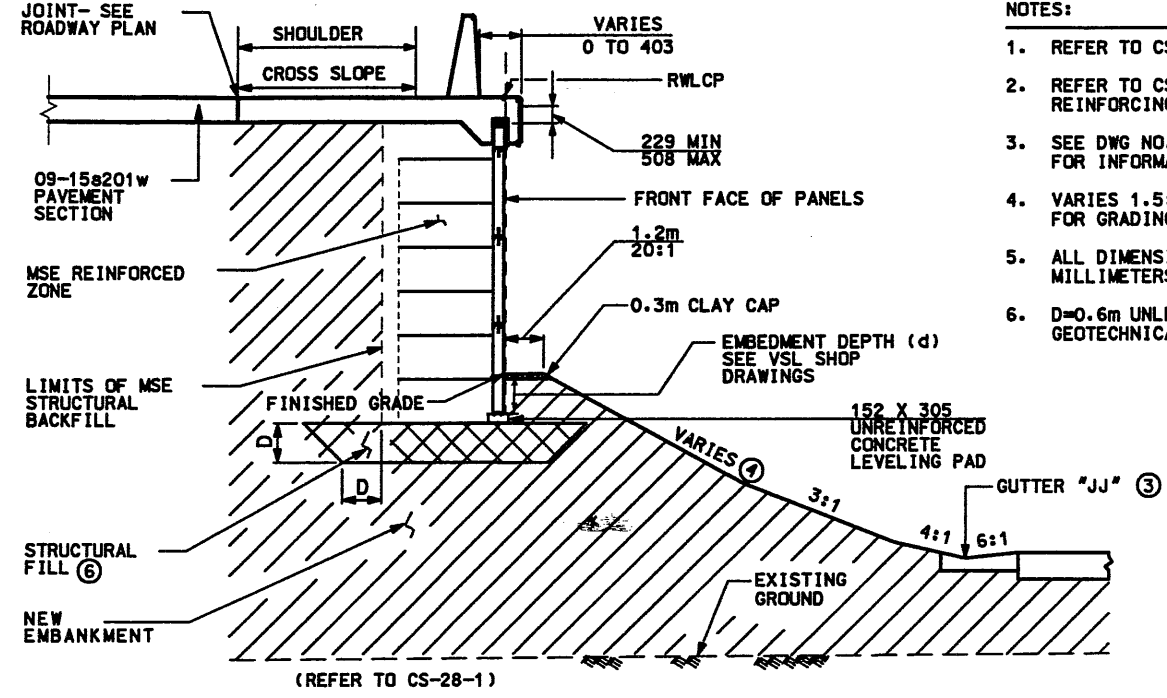
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I-15 CORRIDOR RECONSTRUCTION	SITUATION & LAYOUT R-349-07	DESIGN	CHECK
SECTION 2.7	PROJECT DESIGN ENGINEER	MEH 6/98	DJP 4/98
DATE	APPROVED	DATE	CHECK
6/98	JOHN TERRY	6/98	JOHN TERRY
PROJECT NUMBER #SP-15-7(135)296		SECTION MANAGER	
SALT LAKE COUNTY		DWG. NO. 2.7-R-349-07.1	
SHT. 1 OF 4			

Filename: o:\dgn\115.cadd\09_37\street_files\wall\09_walldet_007.dgn

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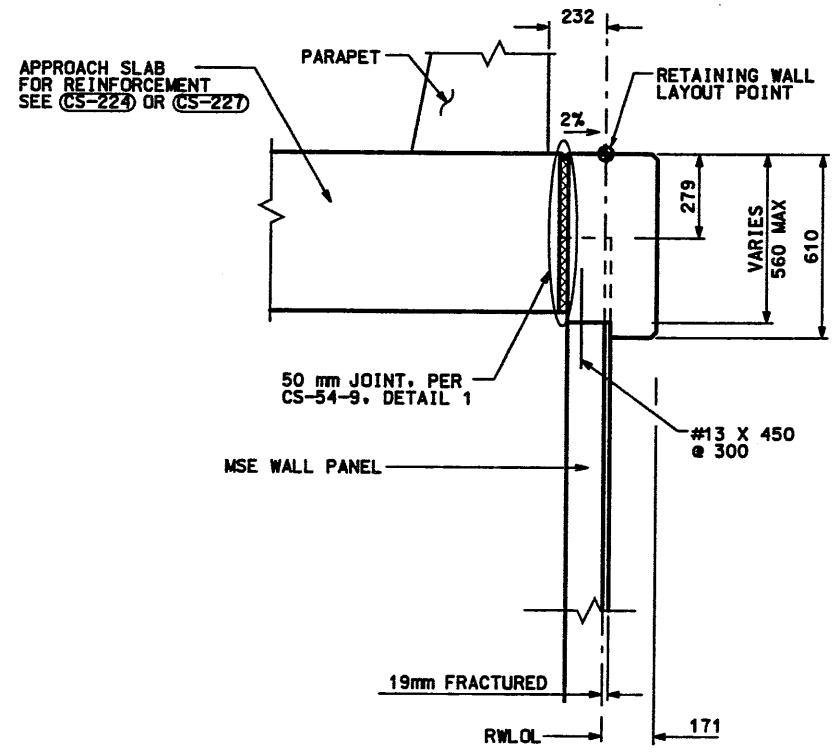


(REFER TO CS-28-1)
MSE SINGLE STAGE WITH MOMENT SLAB CAP
 RET WALL STA 1+000.000 TO 1+043.875 NTS

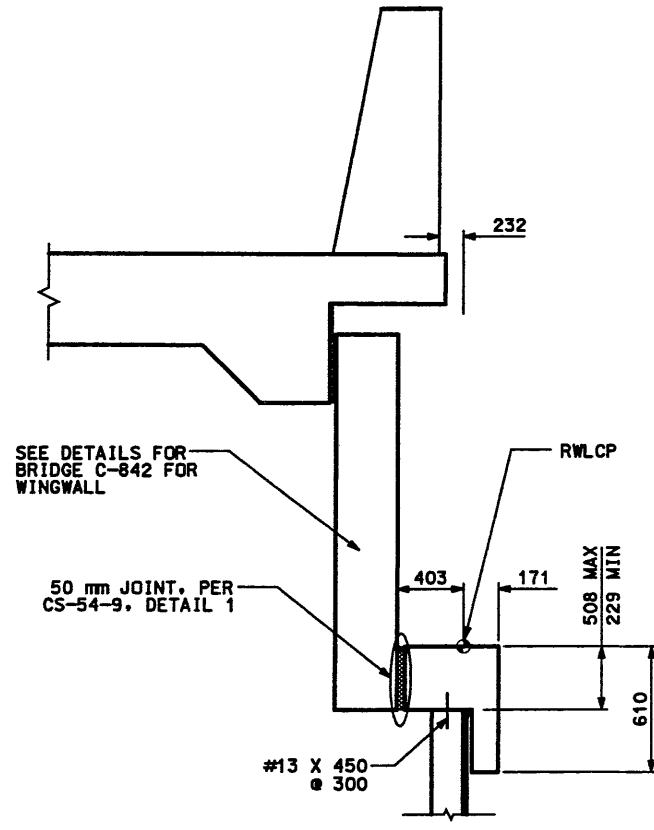


(REFER TO CS-28-1)
MSE SINGLE STAGE WITH MOMENT SLAB CAP
 RET WALL STA 1+043.874 TO 1+047.522 NTS

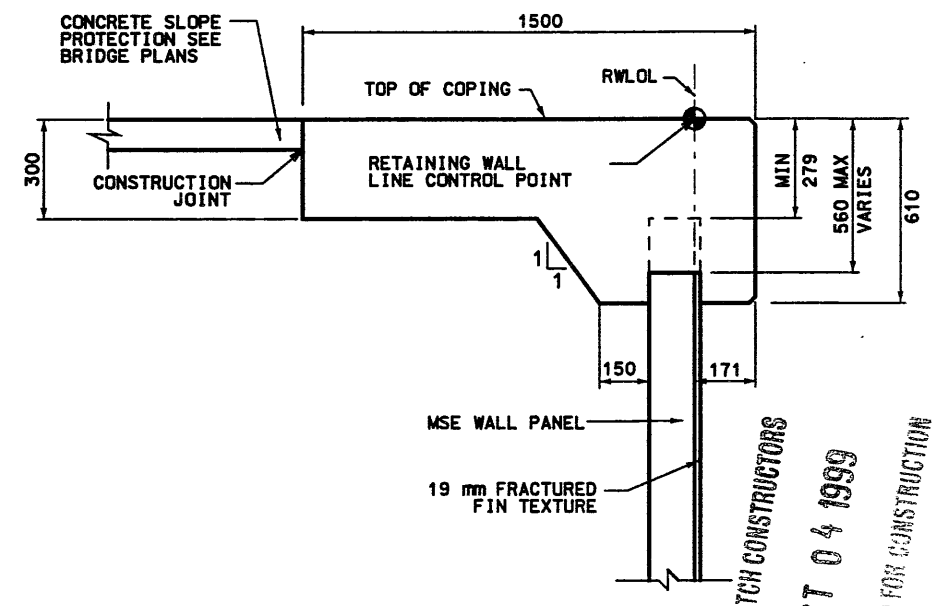
- NOTES:
- REFER TO CS-28-1 FOR MOMENT SLAB DETAILS.
 - REFER TO CS-54-5 FOR DETAILS OF REINFORCING FOR WALL COPING.
 - SEE DWG NO. CS-59 GUTTER "JJ" DETAIL FOR INFORMATION AND DETAILS ON GUTTER.
 - VARIES 1.5:1 TO 2:1. SEE DWG NO. 2.7-GR5 FOR GRADING ADJACENT TO WALL.
 - ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 - D=0.6m UNLESS DIRECTED OTHERWISE BY GEOTECHNICAL FIELD ENGINEER.



(REFER TO CS-54-6 SECTION O)
MSE SINGLE STAGE WALL SECTION
 RET WALL STA 1+047.522 TO 1+060.286 NTS



(REFER TO CS-54-6 SECTION N)
COPING DETAILS AT WINGWALL
 RET WALL STA 1+060.286 TO 1+064.822 NTS



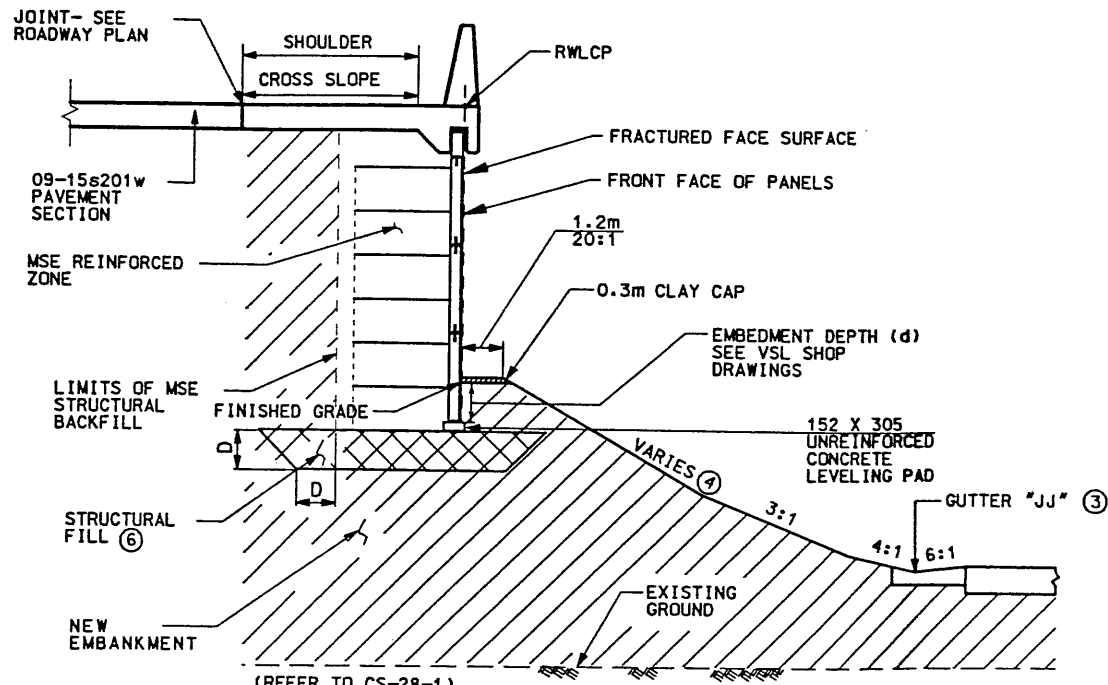
(REFER TO CS-54-5 SECTION J)
SLOPE PAVING/COPING DETAIL
 RET WALL STA 1+064.822 TO 1+065.645 NTS



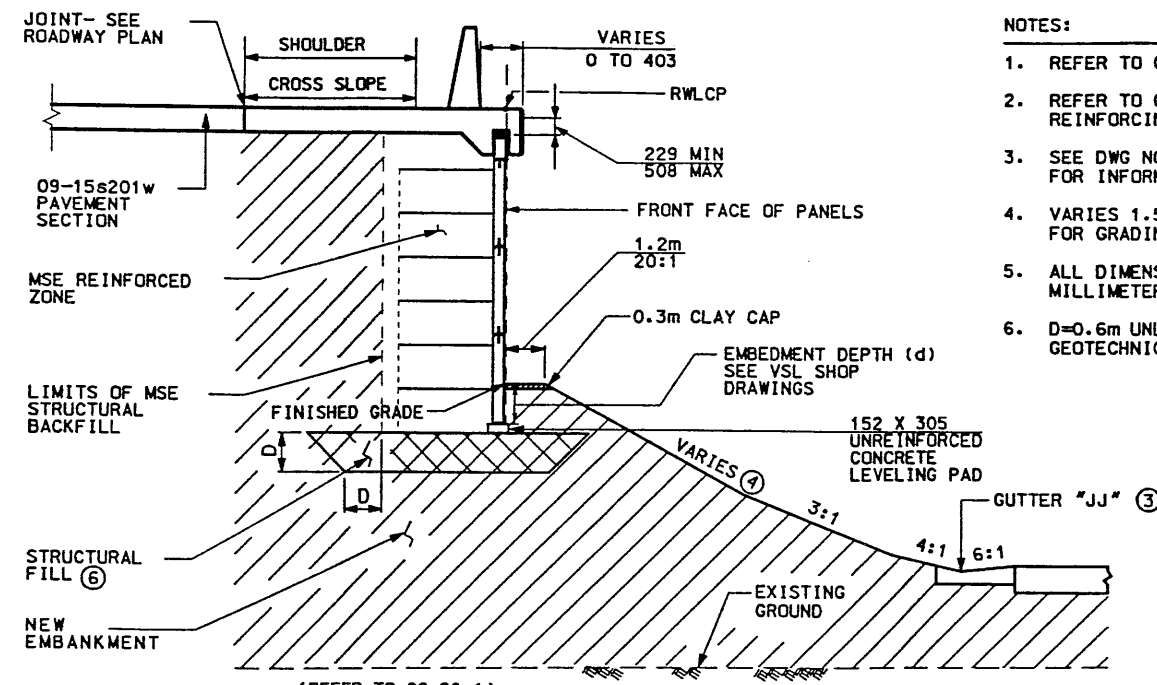
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NO.	DATE	INITIAL	RELEASE
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2	09/24/98		
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CHECK	DATE	CHECK	DATE
DESIGN	4/98	DRN	4/98
APPROVAL	4/22/98	SECTION MANAGER	
DATE	4/22/98	DATE	
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW			
I-15 CORRIDOR RECONSTRUCTION			
SITUATION & LAYOUT 349-07			
SECTION 2.7			
PROJECT #SP-15-7(135)296			
SALT LAKE COUNTY			
DWC NO. 2.7-R-349-7.2			
SHT. 2		OF 2	

RFC After Final Approval

Date: 01-OCT-1998 Time: 14:5 User: name.pantor@rd
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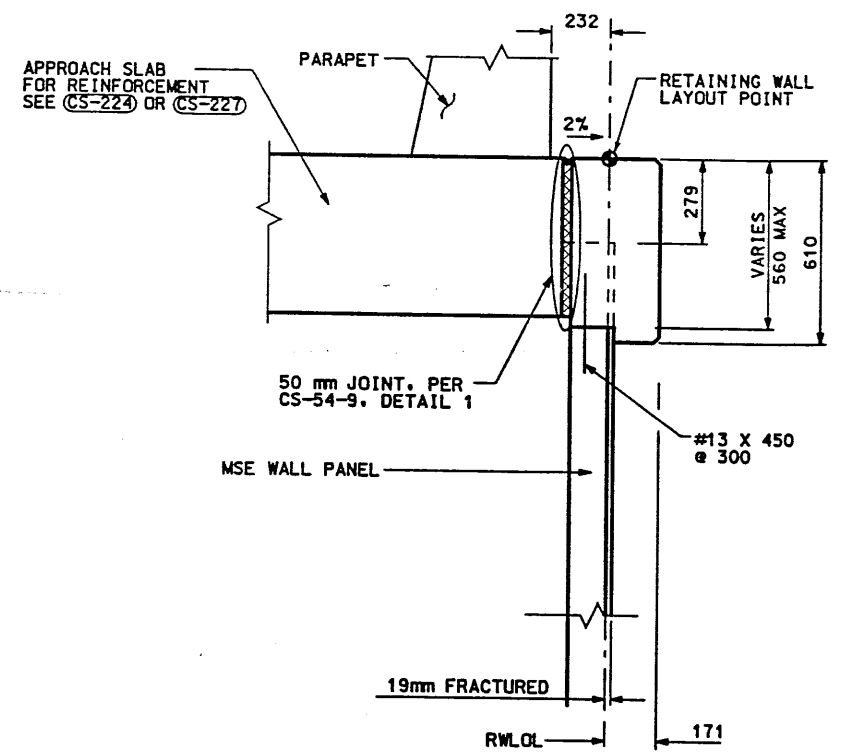


(REFER TO CS-28-1)
MSE SINGLE STAGE WITH MOMENT SLAB CAP
 RET WALL STA 1+000.000 TO 1+043.875 NTS

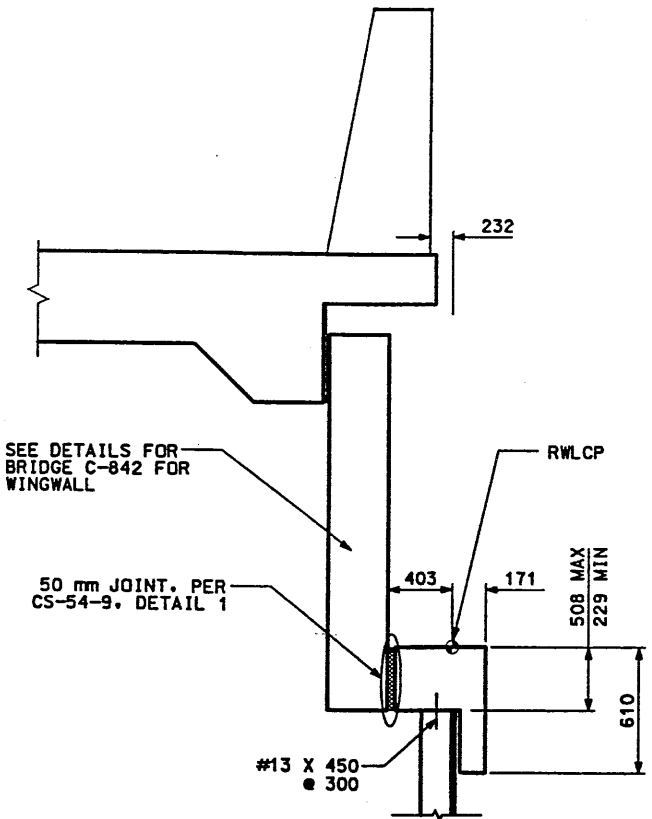


(REFER TO CS-28-1)
MSE SINGLE STAGE WITH MOMENT SLAB CAP
 RET WALL STA 1+043.874 TO 1+047.522 NTS

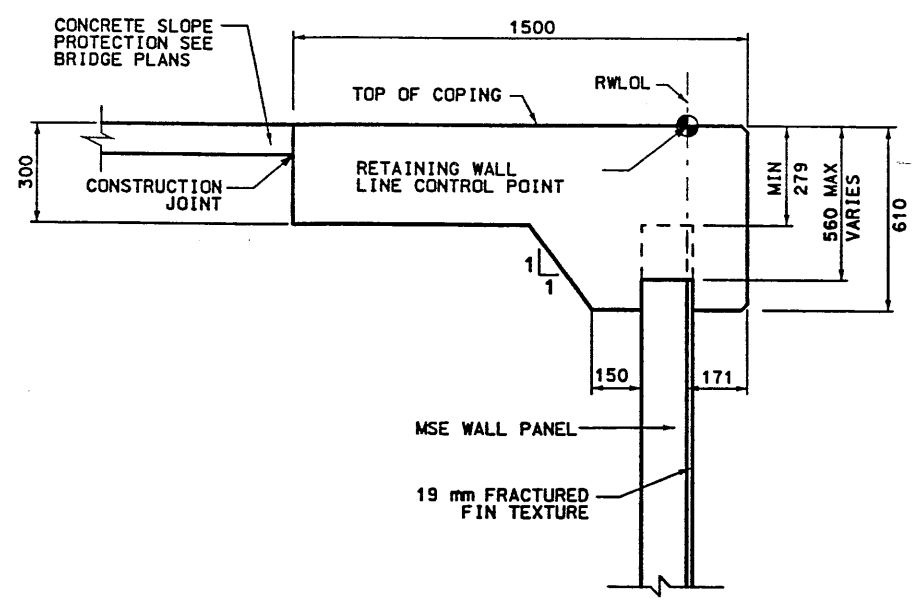
- NOTES:**
1. REFER TO CS-28-1 FOR MOMENT SLAB DETAILS.
 2. REFER TO CS-54-5 FOR DETAILS OF REINFORCING FOR WALL COPING.
 3. SEE DWG NO. CS-59 GUTTER "JJ" DETAIL FOR INFORMATION AND DETAILS ON GUTTER.
 4. VARIES 1.5:1 TO 2:1. SEE DWG NO. 2.7-GR5 FOR GRADING ADJACENT TO WALL.
 5. ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 6. D=0.6m UNLESS DIRECTED OTHERWISE BY GEOTECHNICAL FIELD ENGINEER.



(REFER TO CS-54-6 SECTION O)
MSE SINGLE STAGE WALL SECTION
 RET WALL STA 1+047.522 TO 1+059.686 NTS



(REFER TO CS-54-6 SECTION N)
COPING DETAILS AT WINGWALL
 RET WALL STA 1+059.686 TO 1+064.822 NTS



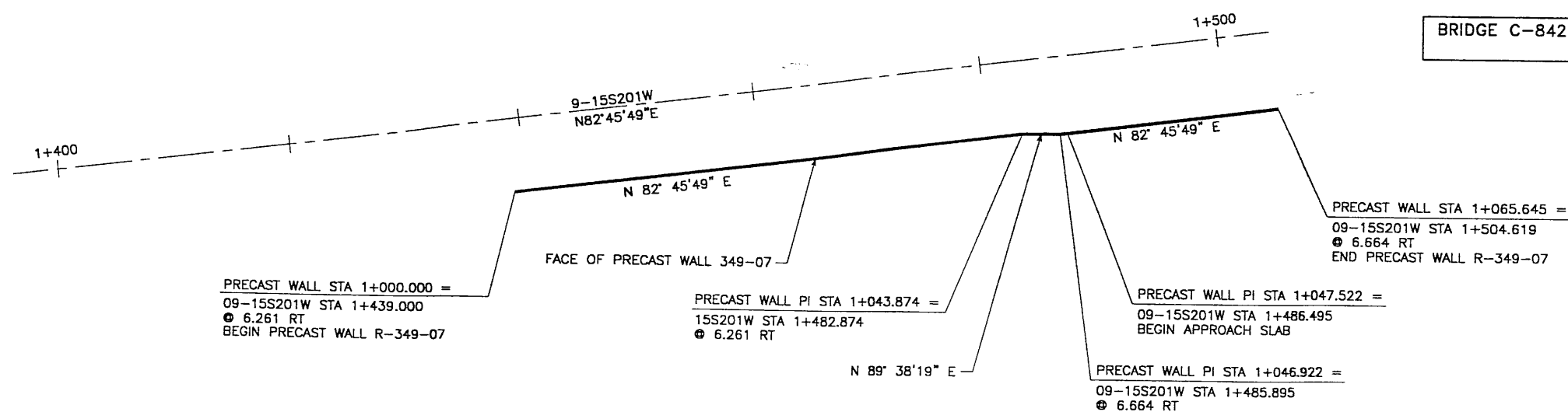
(REFER TO CS-54-5 SECTION J)
SLOPE PAVING/COPING DETAIL
 RET WALL STA 1+064.822 TO 1+065.645 NTS



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL	RELEASE
1	10/2/98		
UTAH DEPARTMENT OF TRANSPORTATION		TRACKING NO.	2713405
PERSONAL RECORD	DESIGN	CHECK	CHECK
4/22/98	6/98	MSC	4/98
MARGARET SIMMONS-CROSS	MEH	6/98	4/98
PROJECT DESIGN ENGINEER	MEH	6/98	4/98
APPROVED	DATE	SECTION MANAGER	QUANT.
4/22/98	10/2/98	JOHN TERRY	
1-15 CORRIDOR RECONSTRUCTION		SVERDRUP/DE LEUW	
SITUATION & LAYOUT 349-07		DESIGN	
SECTION 2.7		DRAWN	
PROJECT NUMBER #SP-15-7(135)296		DATE	
SALT LAKE COUNTY		DWG. NO.	
2.7-R-349-7.2		DATE	
SHT. 2 OF 4			

WASATCH CONSTRUCTORS
 OCT 12 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-28-98	RELEASE FOR CONSTRUCTION <i>d</i>



BRIDGE C-842

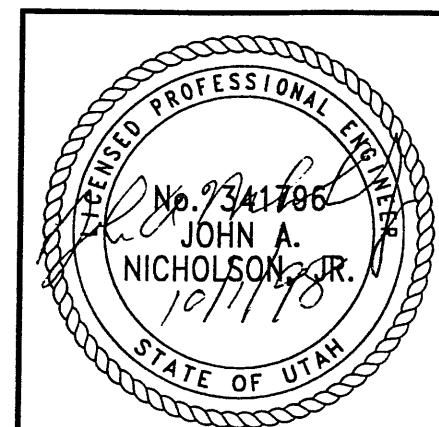
PLAN VIEW WALL "R-349-7"

SCALE: 1=200 (FULL SIZE)
SCALE: 1=400 (HALF SIZE)

- GENERAL NOTES
- ALL WALLS ARE SHOWN FRONT FACE. NOTE STATIONING.
 - PANEL TYPE IS DESIGNATED ON EACH PANEL. CONNECTOR LABELS INDICATE NUMBER OF CONNECTORS PER ROW.
EXAMPLE: 5B2-10 IS A "B2-10" PANEL WITH FIVE (5) CONNECTORS PER ROW.
IF NO CONNECTORS ARE SHOWN, FOUR (4) CONNECTOR PANELS SHALL BE USED:
 - SOIL REINFORCING MESH TYPE IS DESIGNATED ON EACH PANEL. MESH LABELS INDICATE WIRE SIZE AND SPACING. LONGITUDINAL WIRE AND CROSSBAR SIZES ARE THE SAME UNLESS NOTED OTHERWISE.
EXAMPLE: 4W11-6 MESH HAS FOUR (4) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 6" CENTERS.
EXAMPLE: 5W11-12 MESH HAS FIVE (5) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 12" CENTERS.
EXAMPLE: 5W15-12 MESH HAS FIVE (5) W11 LONGITUDINAL WIRES WITH W15 CROSSBARS AT 12" CENTERS.
 - SEE RETAINED EARTH INSTALLATION MANUAL FOR PROPER WALL ERECTION PROCEDURES AND GUIDELINES.
 - CONSTRUCTION PROCEDURES SHALL PREVENT BACKFILL SATURATION AND PONDING.
 - HEAVY EQUIPMENT SHALL NOT BE USED WITHIN ONE METER OF THE BACK OF THE RETAINED EARTH PANELS. HAND COMPACTORS SHALL BE USED IN THIS AREA.
 - CARE SHALL BE TAKEN TO PREVENT DAMAGE TO GALVANIZING. DAMAGED GALVANIZING SHALL BE COATED WITH ZINC RICH PAINT.
 - BEARING PADS AND FILTER FABRIC ARE NOT REQUIRED BETWEEN THE LEVELING PAD AND THE FIRST ROW OF PANELS. TEMPORARY WEDGES MAY BE USED TO PROVIDE PROPER ALIGNMENT.
 - VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.
 - ALL PANELS SHALL HAVE AN ARCHITECTURAL FINISH, SEE VSL STANDARD SHEET STD-7 FOR DETAILS.

DESIGN PARAMETERS
ANGLE OF INTERNAL FRICTION (SELECT) = 34°
ANGLE OF INTERNAL FRICTION (BASE) = 31°
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°
UNIT WEIGHT BACKFILL = 135 PCF. (21.2 KN/M ³)
TRAFFIC SURCHARGE = 250 PSF (12 KPa)
SEISMIC ACCELERATION COFF. = 0.12g (TYP)
SEISMIC ACCELERATION COFF. = 0.32g (AT BRIDGE ABUTMENTS)
DESIGN CRITERIA
SAFETY FACTOR (OVERTURNING) = 2.0
SAFETY FACTOR (SLIDING) = 1.5
SAFETY FACTOR (PULLOUT) = 1.5
DESIGN LIFE = 75 YEARS

RETAINED EARTH INDEX
RE-1 PLAN PRECAST FACE WALL R-349-07, NOTES & DESIGN CRITERIA
RE-2 TYPICAL CROSS SECTION
RE-3 TYPICAL CROSS SECTIONS
RE-4 ELEVATION PRECAST WALL "R-349-07"
RE-5 ELEVATION PRECAST WALL "R-349-07"
RE-6 SPECIAL PANEL DETAILS
RE-7 TALL & Y - PANEL DETAILS



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METRIC

WASATCH CONSTRUCTORS
OCT 12 1998
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION				NO.	DATE	REVISION	CHK
DES.	DRN.	CHK.	RETAINED EARTH™				

VSL CORPORATION
2840 Pico Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6272
Fax: (919) 781-6989

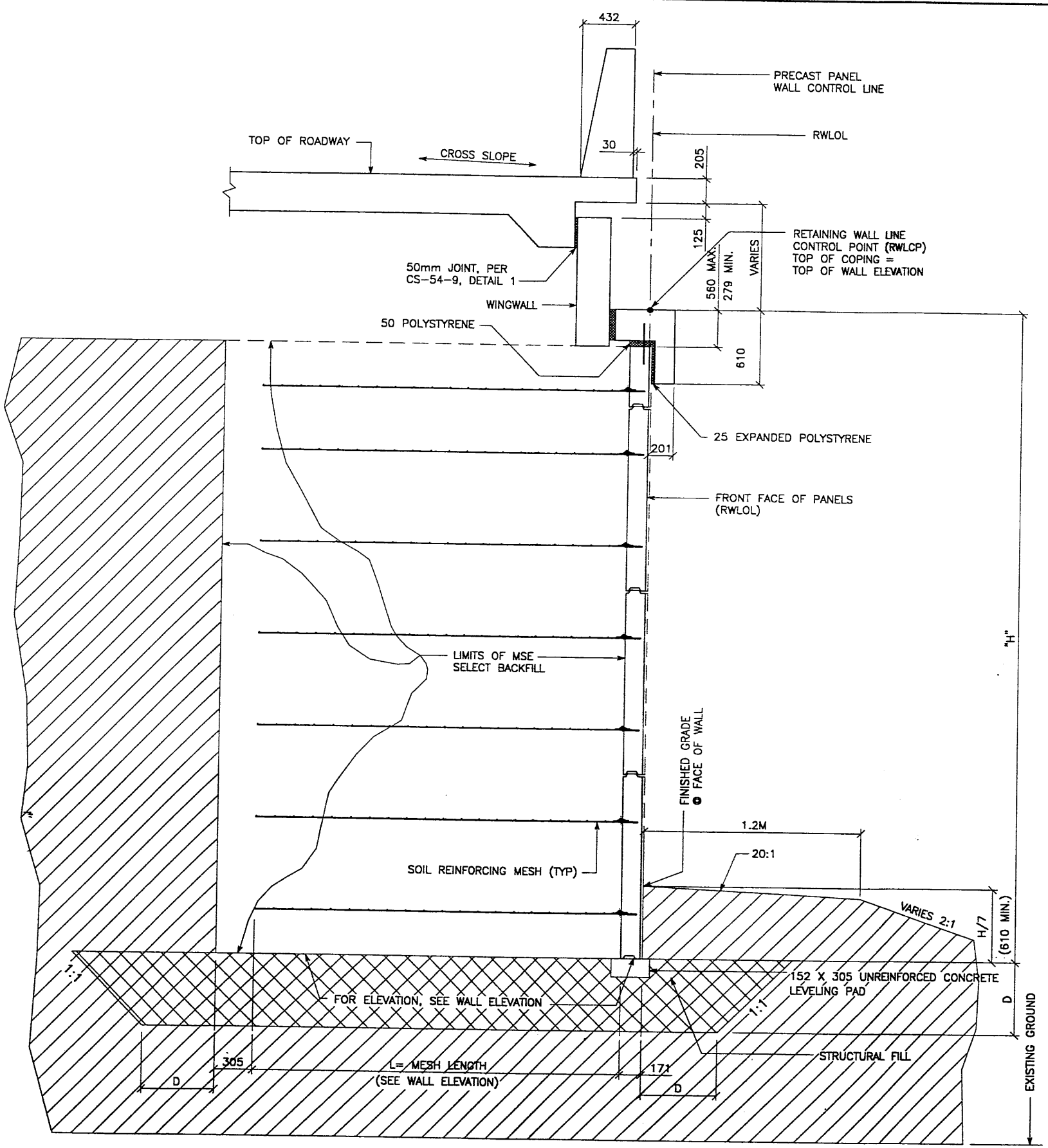
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MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
PLAN VIEW PRECAST WALL "R-349-07"
UTAH I-15 RECONSTRUCTION
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO. 2.7R-349-7.3
JOB NO. 239-0007
SHT. NO. RE-1

3 of 9

FINAL 09-28-98 H:\RE_EARTH\PROJECT\239 \1998\9WSERIES\9W-07\SUBMTL-5\RE-2.DWG NCE (X-UTAH.DWG)




TYPICAL CROSS SECTION - STA 1+059.686 TO STA 1+064.822
 (SEE DWG. NO. 2.7R-349-7.2 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	09-28-98	RELEASE FOR CONSTRUCTION

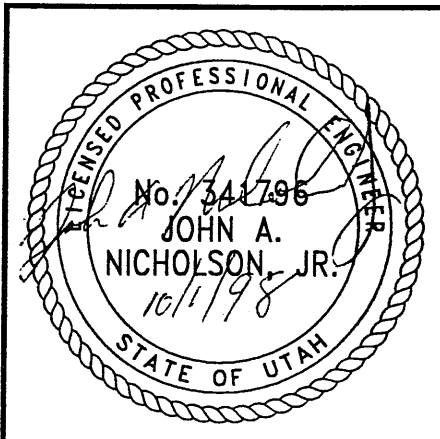
DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
JL	DDL	JL						
09-28-98	09-28-98	09-28-98						

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27617 Tel: 919-872-6772
 Fax: (919) 871-6889



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WASATCH CONSTRUCTORS
 OCT 12 1998
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METRIC
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RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-349-07"
 TYPICAL CROSS SECTION
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-7.4
JOB NO.	239-0007
SHT. NO.	RE-2

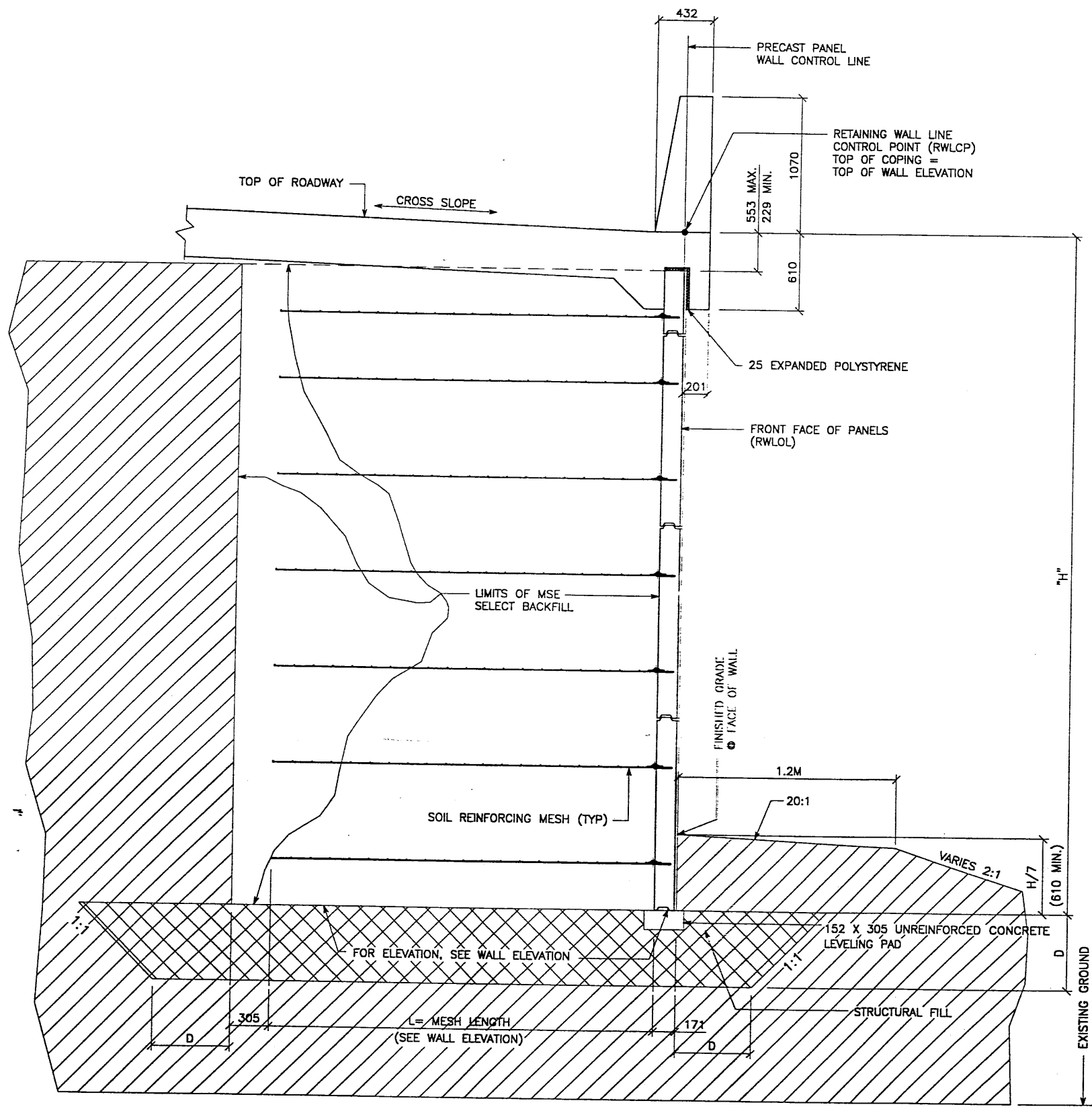
NCE (X-UTAH.DWG)

H:\RE_EARTH\PROJECT\27\1998\9WSERIES\9W-07\SUBMTL-5\RE-3.DWG

H:\RE_EARTH\PROJECT\27

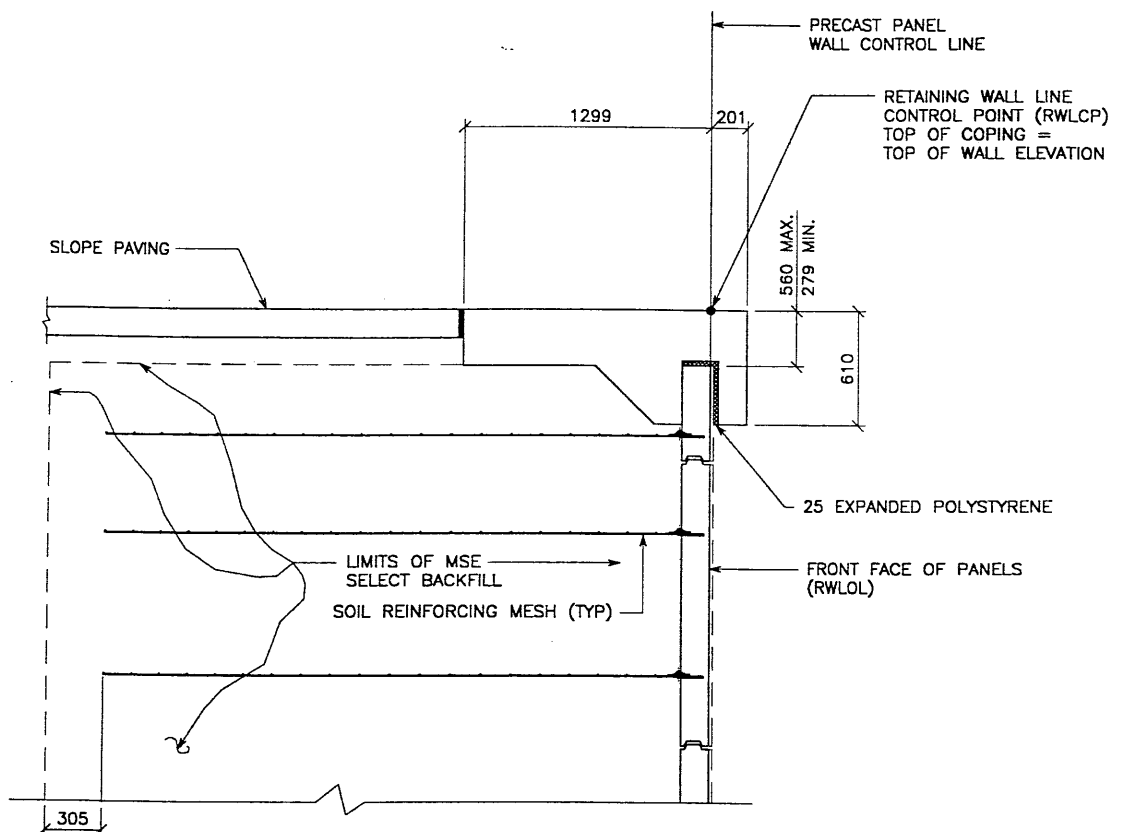
09-28-98

FINAL



TYPICAL CROSS SECTION - STA 1+000.000 TO STA 1+043.875
 (SEE DWG. NO. 2.7R-349-7.1 FOR ADDITIONAL INFORMATION)

SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)



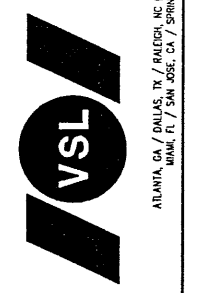
TYPICAL CROSS SECTION - STA 1+064.822 TO 1+065.645
 (SEE DWG. NO. 2.7R-349-7.2 FOR ADDITIONAL INFORMATION)

SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-28-98	RELEASE FOR CONSTRUCTION

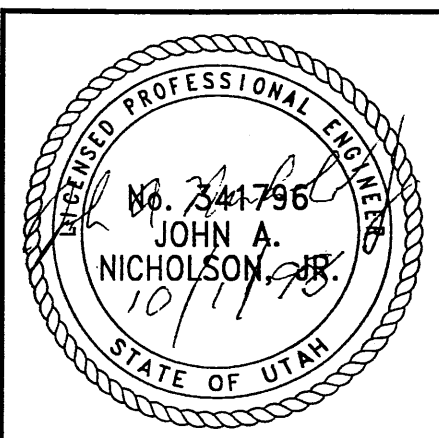
DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	BY	CHK.
JL	DOL	JL	VSL				

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8272
 Fax: (919) 781-4869



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OCT 12 1998
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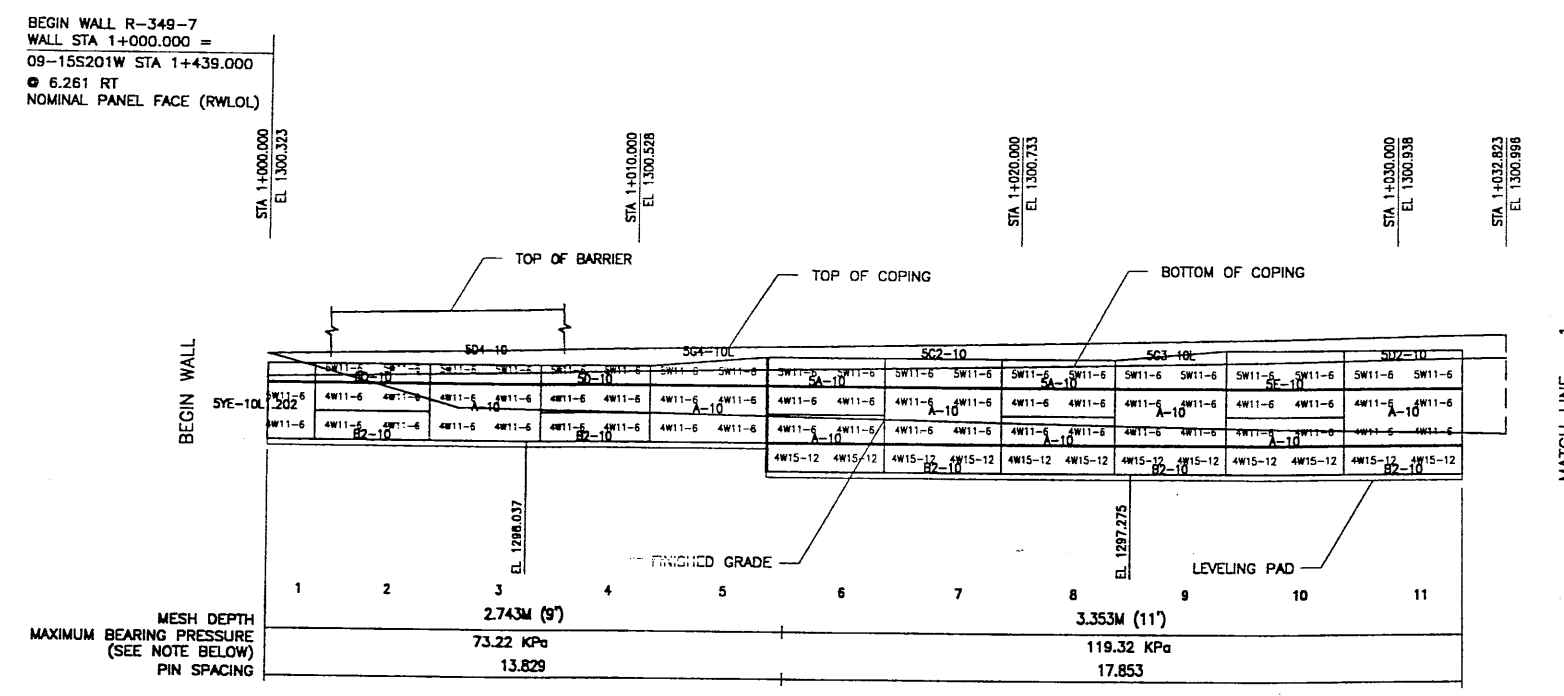


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 EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE
 STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
 ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.

RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-349-07"
 TYPICAL CROSS SECTION
 UTAH 1-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-7.5
JOB NO.	239-0007
SHT. NO.	RE-3

NCE (X-UTAH.DWG)
 \9SERIES\9W-07\SUBMITL-5\9W-07.DWG
 H:\RE_EARTH\PROJECT\239-000
 09-28-98
 FINAL



ELEVATION PRECAST WALL R-349-07
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 207.53 SM) SCALE 1:200 (HALF SIZE)

APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

METRIC

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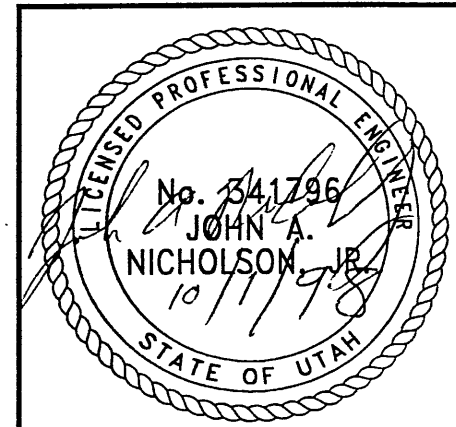
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-28-98	RELEASE FOR CONSTRUCTION

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
JL	DDL	JL						

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27617
 Telephone: (919) 781-6272
 Fax: (919) 781-4989

VSL
 ALUMINA, GA. / DANVILLE, VA. (CORPORATE OFFICE)
 WILMINGTON, DE. / SAN JOSE, CA. / SPRINGFIELD, VA.

WASATCH CONSTRUCTORS
 OCT 12 1998
 RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS
 PRECAST WALL "R-349-07"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-7.6
JOB NO.	239-0007
SHT. NO.	RE-4

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	09-28-98	RELEASE FOR CONSTRUCTION
▲	04-10-00	REVISED COPING PROFILE <i>[Signature]</i>

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE
09-28-98	JL	09-28-98	DDL	09-28-98	JL
VSL CORPORATION					

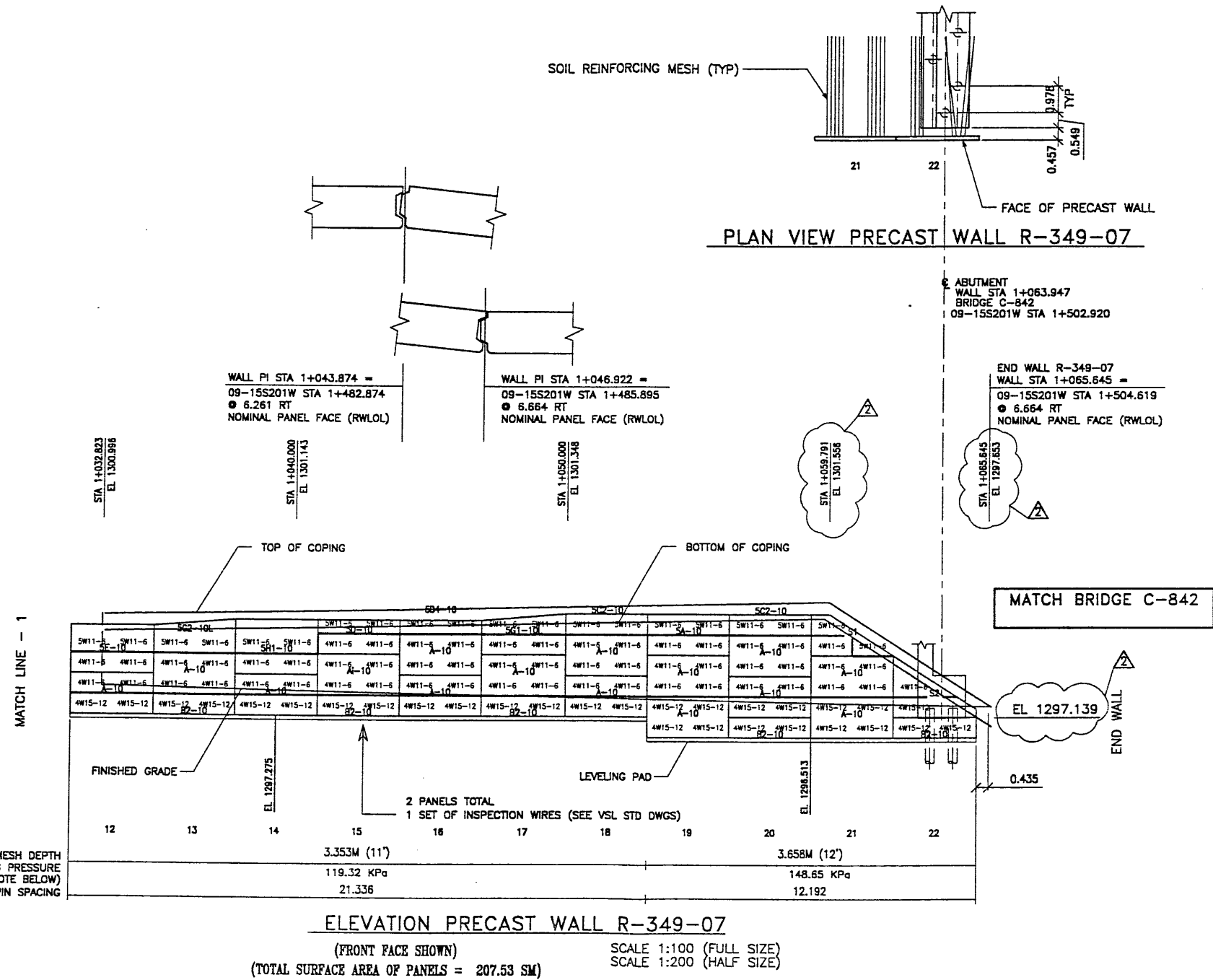
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8272
 Fax: (919) 781-4959

ALUMINA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE)
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RETAINED EARTH™ WALLS
 PRECAST WALL "R-349-07"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

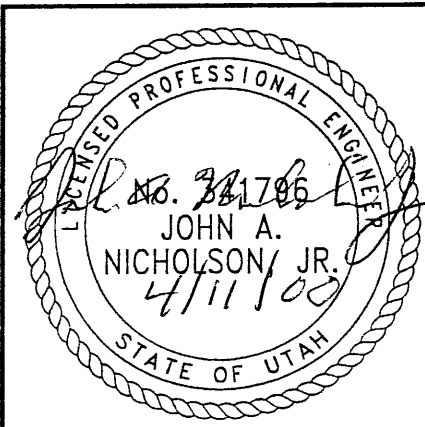
DWG. NO.	2.7R-349-7.7
JOB NO.	239-0007
SHT. NO.	RE-5



APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

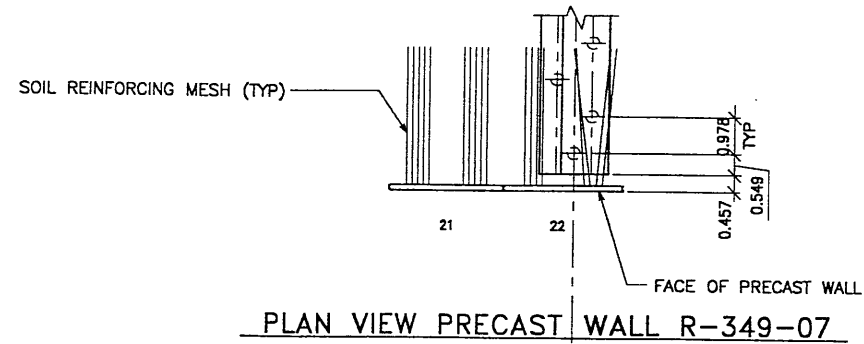
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 STABILITY, IS TO BE VERIFIED BY OTHERS. DESIGN IS BASED ON THE
 ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.

METRIC



RFC After Final Approval

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-28-98	RELEASE FOR CONSTRUCTION



ABUTMENT
WALL STA 1+063.947
BRIDGE C-842
09-15S201W STA 1+502.920

WALL PI STA 1+043.874 =
09-15S201W STA 1+482.874
● 6.261 RT
NOMINAL PANEL FACE (RWLOL)

WALL PI STA 1+046.922 =
09-15S201W STA 1+485.895
● 6.664 RT
NOMINAL PANEL FACE (RWLOL)

END WALL R-349-07
WALL STA 1+065.645 =
09-15S201W STA 1+504.619
● 6.664 RT
NOMINAL PANEL FACE (RWLOL)

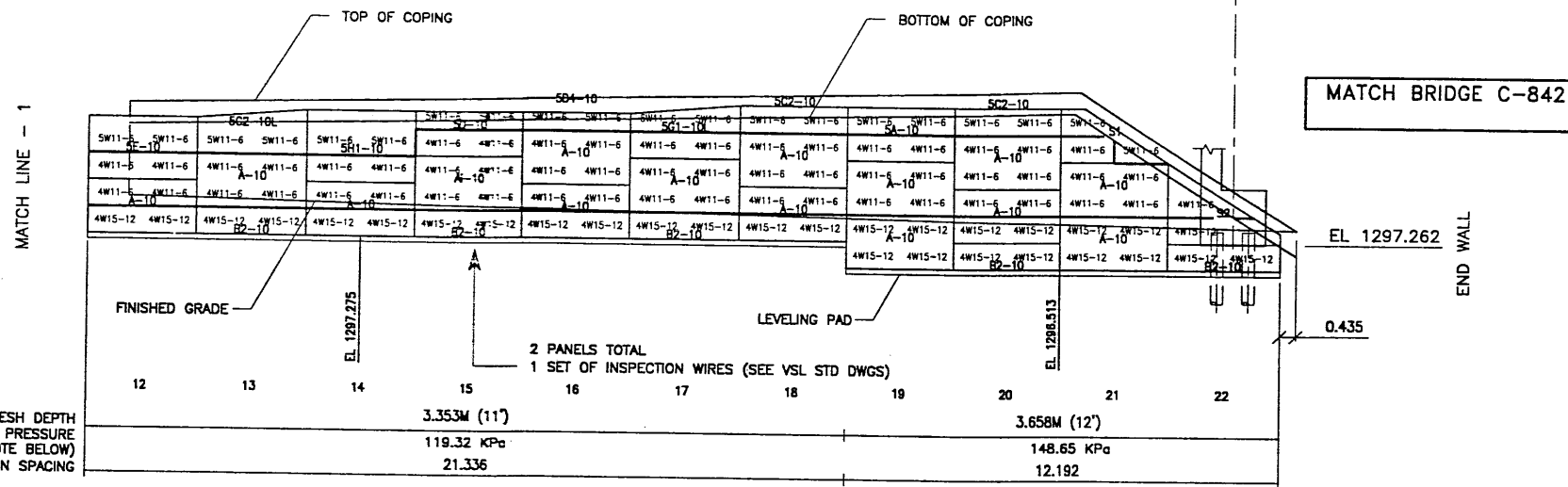
STA 1+032.823
EL 1300.986

STA 1+040.000
EL 1301.143

STA 1+050.000
EL 1301.348

STA 1+059.886
EL 1301.548

STA 1+065.645
EL 1297.669



ELEVATION PRECAST WALL R-349-07

(FRONT FACE SHOWN)

(TOTAL SURFACE AREA OF PANELS = 207.53 SM)

SCALE 1:100 (FULL SIZE)

SCALE 1:200 (HALF SIZE)

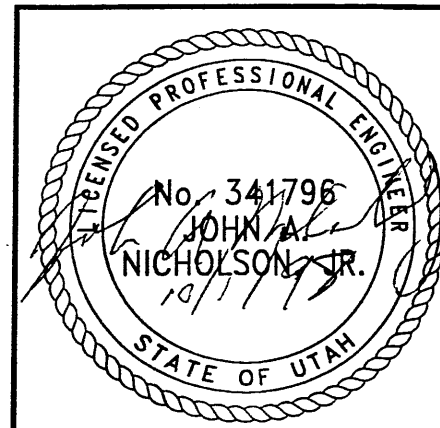
MESH DEPTH
MAXIMUM BEARING PRESSURE
(SEE NOTE BELOW)
PIN SPACING

3.353M (11')
119.32 KPa
21.336

3.658M (12')
148.65 KPa
12.192

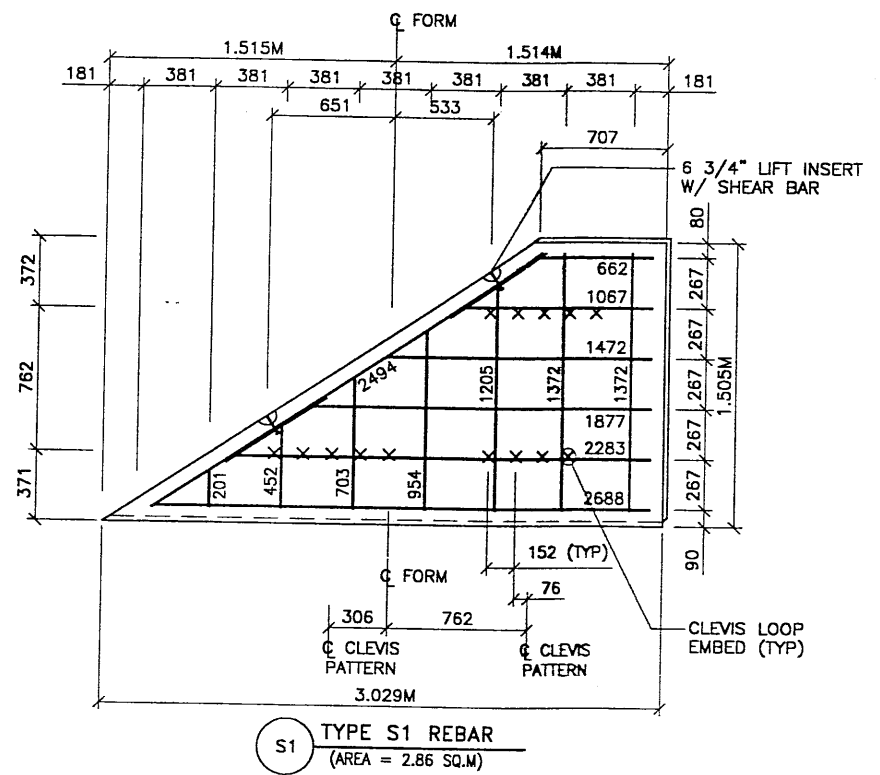
METRIC

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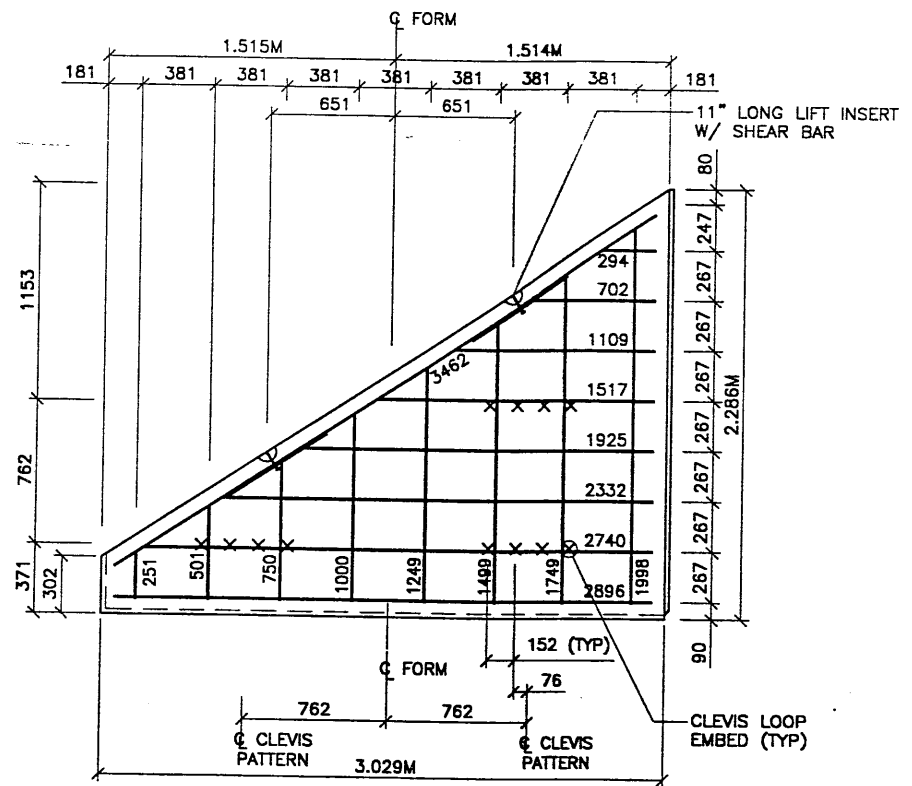


WASATCH CONSTRUCTORS
OCT 12 1998
RELEASED FOR CONSTRUCTION

DES.	JL	09-28-98	JL	RETAINED EARTH™	NO.	DATE
DRN.	DDL	09-28-98	DDL		NO.	DATE
CHK.	JL	09-28-98	JL		NO.	DATE
<p>VSL CORPORATION 2810 Peach Street, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-8272 Fax: (919) 781-4889</p> <p>ALABAMA, CA / DALLAS, TX / DENVER, CO (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>						
<p>RETAINED EARTH™ WALLS PRECAST WALL "R-349-07" UTAH I-15 RECONSTRUCTION SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.</p>						
<p>DWG. NO. 2.7R-349-7.7</p>						
<p>JOB NO. 239-0007</p>						
<p>SHT. NO. RE-5</p>						



S1 TYPE S1 REBAR
(AREA = 2.86 SQ.M)



S2 TYPE S2 REBAR
(AREA = 3.94 SQ.M)

- PANEL REINFORCEMENT NOTES:**
1. PANELS ARE SHOWN BACK FACE.
 2. HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 3. ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 4. ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 BAR 1345 mm LONG.
 5. PANEL REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION A615, GRADE 60.
 6. ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS I.
 7. CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 20,700 KPa.
 8. EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 9. ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS.
 10. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

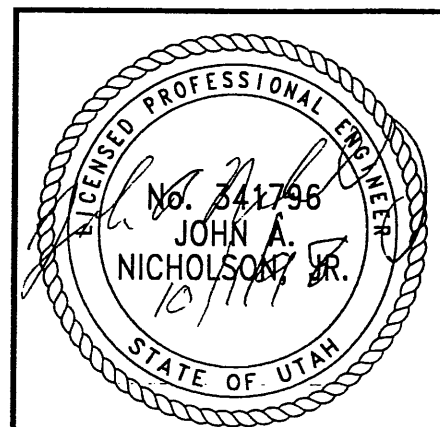
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△ 09-28-98		RELEASE FOR CONSTRUCTION

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 Fax: (919) 981-4989

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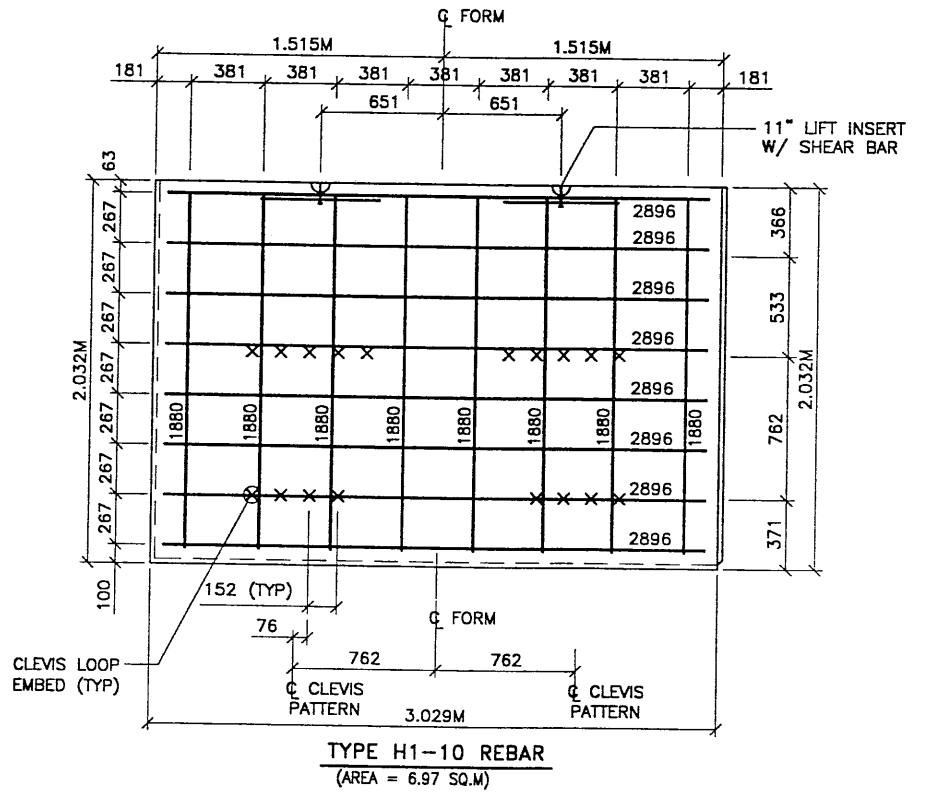
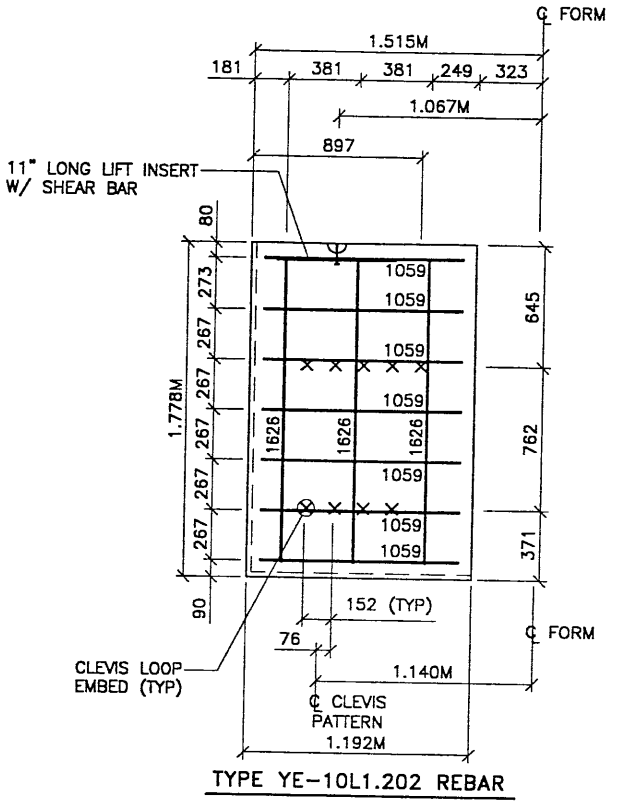
WASATCH CONSTRUCTORS
OCT 12 1998
RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS PRECAST WALL R-349-07 SPECIAL PANEL DETAILS	
UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.	
DWG. NO.	2.3R-349-7.8
JOB NO.	239-0007
SHT. NO.	RE-6

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METRIC



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	09-28-98	RELEASE FOR CONSTRUCTION

- PANEL REINFORCEMENT NOTES:
1. PANELS ARE SHOWN BACK FACE.
 2. HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 3. ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 4. ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 BAR 1345 mm LONG.
 5. PANEL REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION A615, GRADE 60.
 6. ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS I.
 7. CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 20,700 KPa.
 8. EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 9. ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS.
 10. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

VSL CORPORATION
 2810 Peachtree Road, Suite 200
 Roswell, NC 27063
 Telephone: (919) 781-8272
 Fax: (919) 781-4669

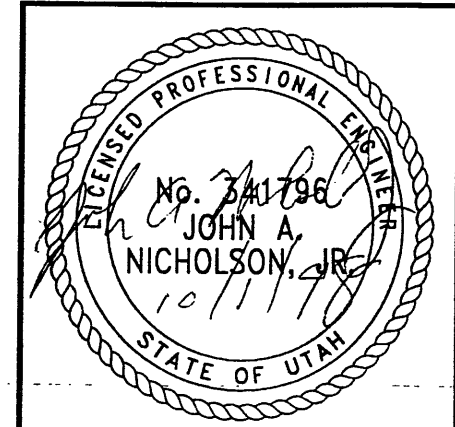


ATLANTA, GA / DALLAS, TX / BALDWIN, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

WASATCH CONSTRUCTORS

OCT 12 1998

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CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

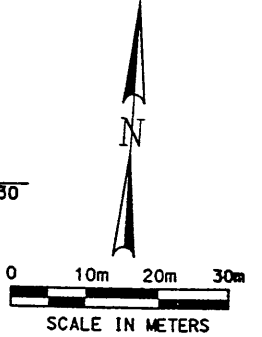
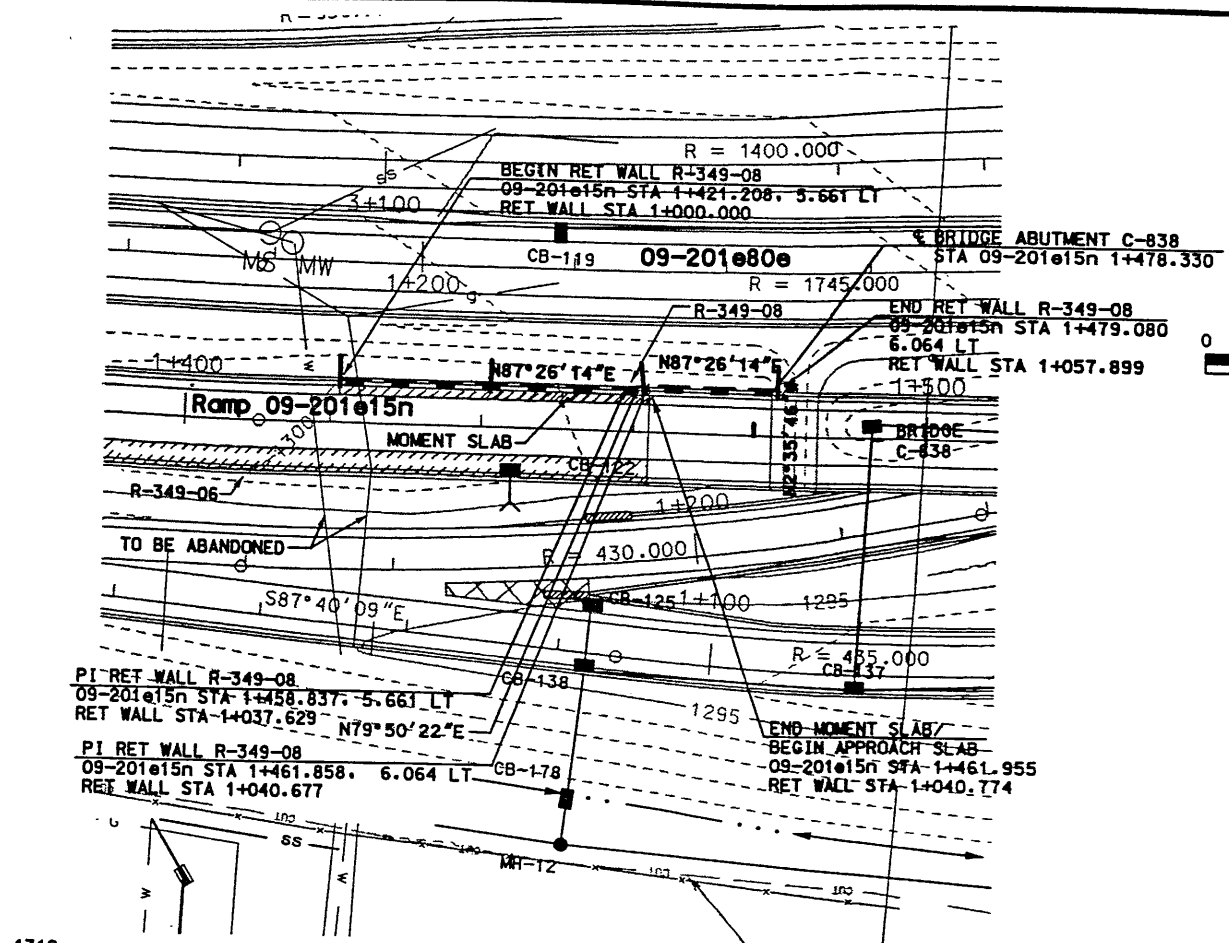
METRIC

RETAINED EARTH™ WALLS
 PRECAST WALL R-349-07
 TALL & Y-PANEL DETAILS
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

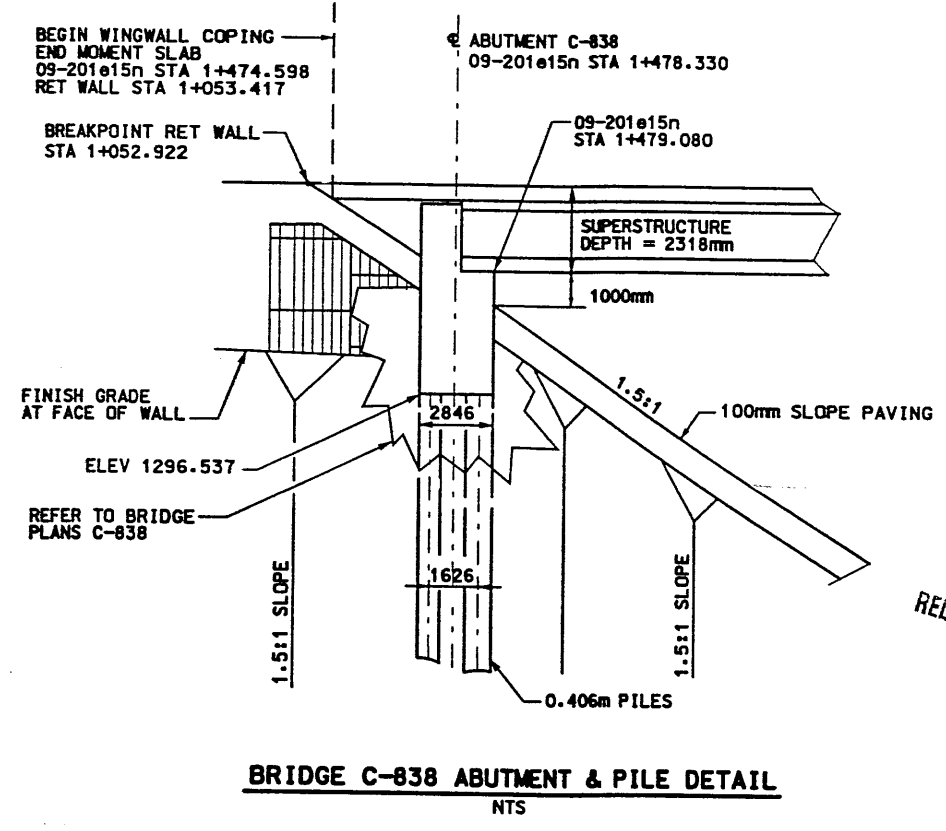
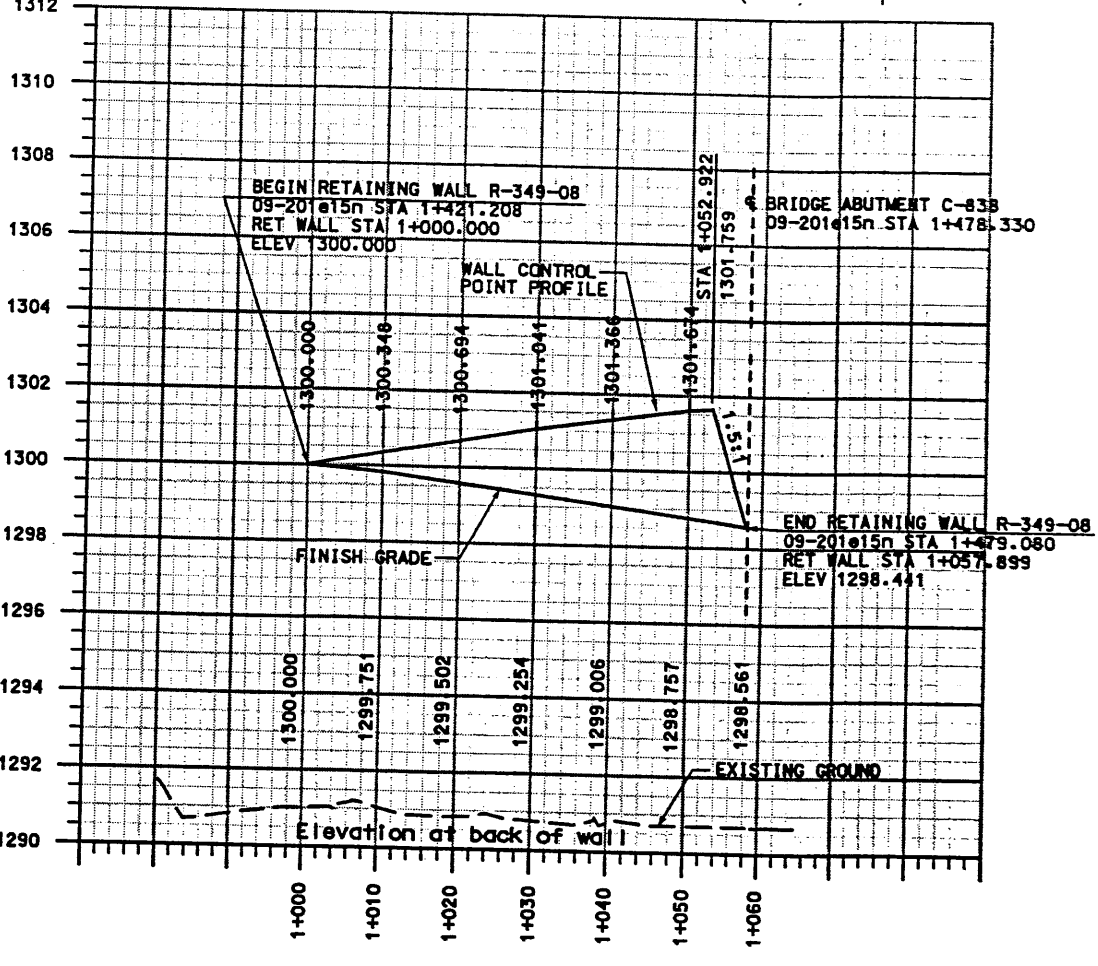
DWG. NO.	2.7R-349-7.9
JOB NO.	239-0007
SHT. NO.	RE-7

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- NOTES:
1. REFER TO CS-28 FOR MOMENT SLAB DETAILS.
 2. REFER TO CS-54 FOR COPING DETAILS.
 3. REFER TO BRIDGE PLANS C-838 FOR WINGWALL DETAILS

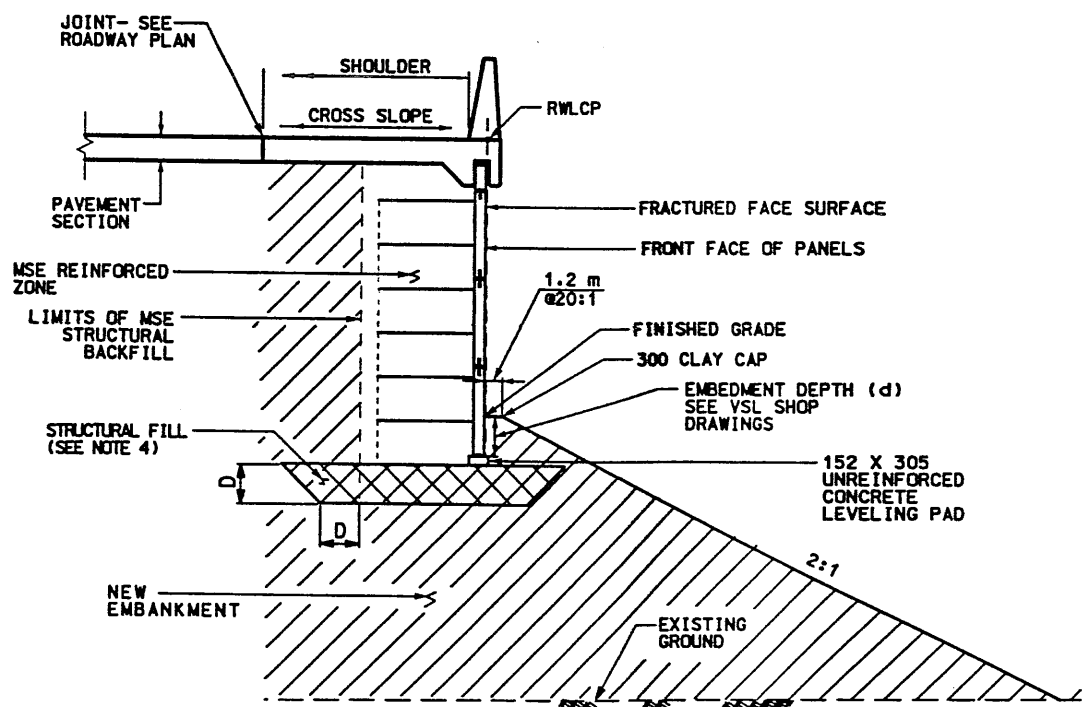


WASATCH CONSTRUCTORS
 DEC 0 2 1998
 RELEASED FOR CONSTRUCTION

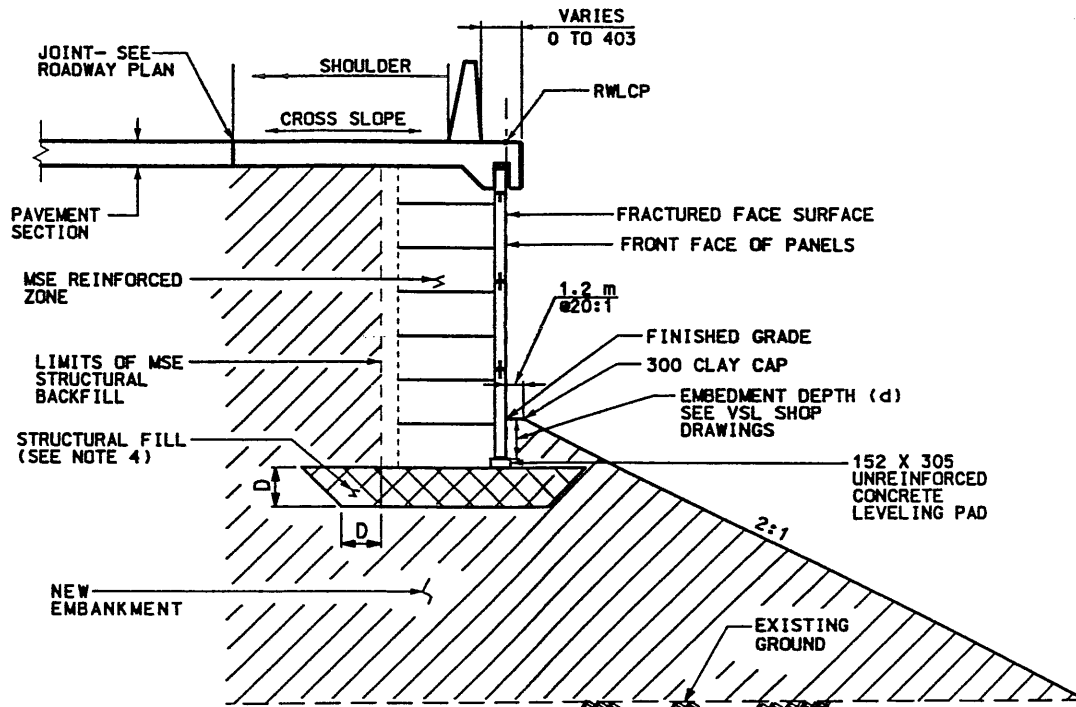


APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	11/20/98		
INITIAL RELEASE			
TRACKING NO.		2713408	
DESIGN		DESIGN	11/78
CHECK		CHECK	11/78
DRAWN		DRAWN	11/78
CHECK		CHECK	11/78
QUANT.			
SECTION MANAGER		JOHN TERRY	
DATE		11/22/98	
APPROVED		11/22/98	
PROJECT NUMBER		#SP-15-7(135)296	
SECTION 2.7			
SITUATION & LAYOUT R-349-8			
I-15 CORRIDOR RECONSTRUCTION			
SALT LAKE COUNTY			
DWG. NO.		2.7-R-349-08.1	
SHT.		1 OF 7	

Users: name: frcamptrd Date: 20-NOV-1998 Time: 10:09



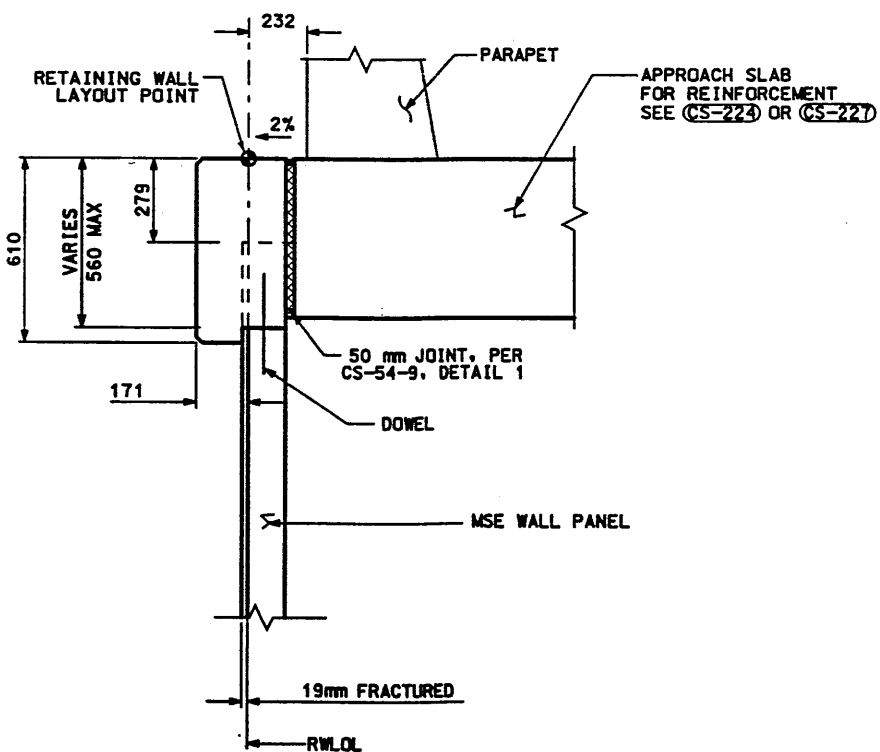
(REFER TO CS-28-1)
MSE SINGLE STAGE WITH MOMENT SLAB CAP
 RET WALL STA 1+000.000 TO 1+037.629 NTS



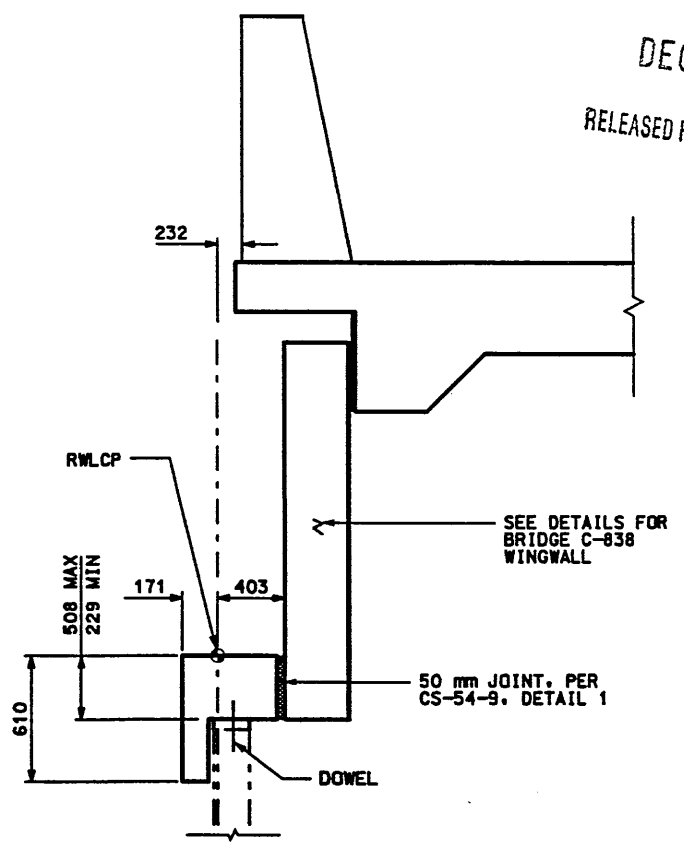
(REFER TO CS-28-1)
MSE SINGLE STAGE WITH MOMENT SLAB CAP
 RET WALL STA 1+037.629 - 1+040.774 NTS

NOTES:

1. REFER TO CS-28-1 FOR MOMENT SLAB DETAILS.
2. REFER TO CS-54 FOR DETAILS OF REINFORCING FOR WALL COPING.
3. ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
4. STRUCTURAL FILL LIMITS (D) TO BE 0.5M MINIMUM AND SHALL BE VERIFIED BY FIELD GEOTECHNICAL ENGINEER. SEE VSL PLANS FOR ADDITIONAL INFORMATION.



(REFER TO CS-54-6 SECTION O)
MSE SINGLE STAGE WALL SECTION
 RET WALL STA 1+040.774 - 1+053.417 NTS



(REFER TO CS-54-6 SECTION N)
COPING DETAILS AT WINGWALL
 RET WALL STA 1+053.417 - 1+057.899 NTS



WASATCH CONSTRUCTORS
 DEC 0 2 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	11/20/98	1	11/20/98
			INITIAL RELEASE
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
I-15 CORRIDOR RECONSTRUCTION		DESIGN NO. 11/98	
SITUATION & LAYOUT R-349-08		CHECK MSC 11/98	
SECTION 2.7		DRAWN MEN 11/98	
PROJECT NUMBER #SP-15-7(135)296		CHECK MSC 11/98	
SALT LAKE COUNTY		CHECK	
DWG. NO. 2.7-R-349-08.2		QUANT. N/A	
SHT. 2 OF 7		TRACKING NO. 2713408	

ICE (X-UTAH.DWG)

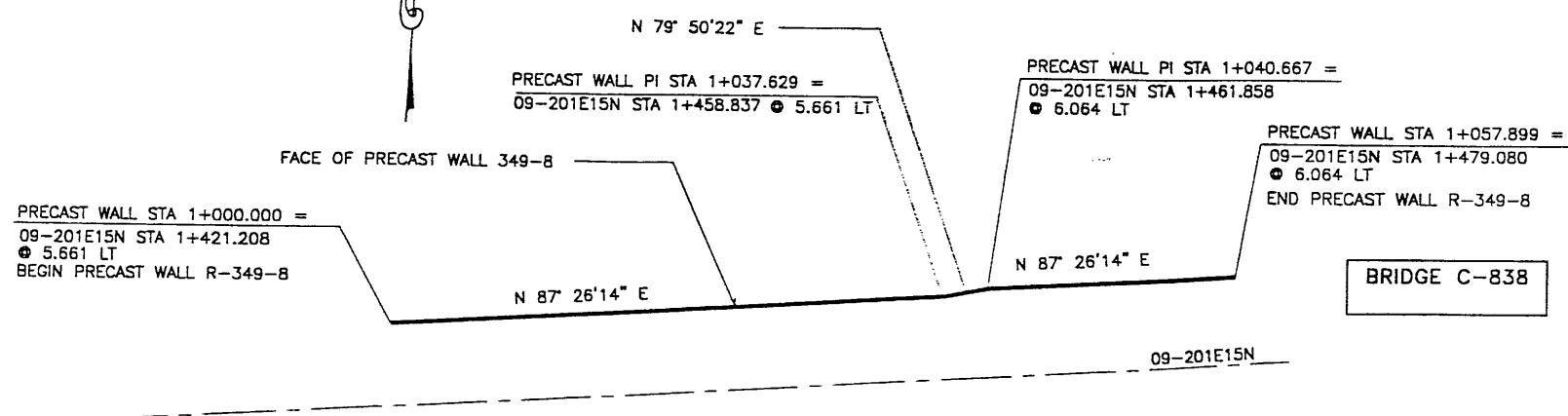
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T 11-19-98

FINAL

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	11-19-98	RELEASE FOR CONSTRUCTION



BRIDGE C-838

WASATCH CONSTRUCTORS
 DEC 0 2 1998
 RELEASED FOR CONSTRUCTION

PLAN VIEW WALL "R-349-8"

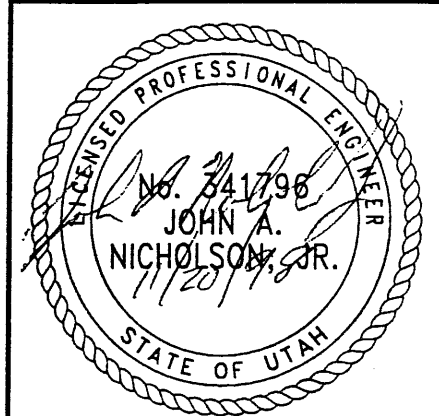
SCALE: 1"=25' (PLAN)
 SCALE: 1"=50' (ELEV)

- GENERAL NOTES
- ALL WALLS ARE SHOWN FRONT FACE. NOTE STATIONING.
 - PANEL TYPE IS DESIGNATED ON EACH PANEL. CONNECTOR LABELS INDICATE NUMBER OF CONNECTORS PER ROW.
 EXAMPLE: 5B2-10 IS A "B2-10" PANEL WITH FIVE (5) CONNECTORS PER ROW.
 IF NO CONNECTORS ARE SHOWN, FOUR (4) CONNECTOR PANELS SHALL BE USED:
 - SOIL REINFORCING MESH TYPE IS DESIGNATED ON EACH PANEL. MESH LABELS INDICATE WIRE SIZE AND SPACING. LONGITUDINAL WIRE AND CROSSBAR SIZES ARE THE SAME UNLESS NOTED OTHERWISE.
 EXAMPLE: 5W11-6 MESH HAS FIVE (5) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 6" CENTERS.
 - SEE RETAINED EARTH INSTALLATION MANUAL FOR PROPER WALL ERECTION PROCEDURES AND GUIDELINES.
 - CONSTRUCTION PROCEDURES SHALL PREVENT BACKFILL SATURATION AND PONDING.
 - HEAVY EQUIPMENT SHALL NOT BE USED WITHIN ONE METER OF THE BACK OF THE RETAINED EARTH PANELS. HAND COMPACTORS SHALL BE USED IN THIS AREA.
 - CARE SHALL BE TAKEN TO PREVENT DAMAGE TO GALVANIZING. DAMAGED GALVANIZING SHALL BE COATED WITH ZINC RICH PAINT.
 - BEARING PADS AND FILTER FABRIC ARE NOT REQUIRED BETWEEN THE LEVELING PAD AND THE FIRST ROW OF PANELS. TEMPORARY WEDGES MAY BE USED TO PROVIDE PROPER ALIGNMENT.
 - VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.
 - ALL PANELS SHALL HAVE AN ARCHITECTURAL FINISH. SEE VSL STANDARD SHEET STD-7 FOR DETAILS.

DESIGN PARAMETERS
ANGLE OF INTERNAL FRICTION (SELECT) = 34°
ANGLE OF INTERNAL FRICTION (BASE) = 30°
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°
UNIT WEIGHT BACKFILL = 135 PCF. (21.2 KN/M ³)
TRAFFIC SURCHARGE = 250 PSF (12 KPa)
SEISMIC ACCELERATION COFF. = 0.134g (TYP)
SEISMIC ACCELERATION COFF. = 0.34g (AT BRIDGE ABUTMENTS)
DESIGN CRITERIA
SAFETY FACTOR (OVERTURNING) = 2.0
SAFETY FACTOR (SLIDING) = 1.5
SAFETY FACTOR (PULLOUT) = 1.5
DESIGN LIFE = 75 YEARS

RETAINED EARTH INDEX	
RE-1	PLAN PRECAST FACE WALL R-349-8, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTION
RE-3	TYPICAL CROSS SECTIONS
RE-4	ELEVATION PRECAST WALL "R-349-8"
RE-5	SPECIAL PANEL DETAILS

METRIC



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

NO.	DATE	DESCRIPTION	BY	CHK

DES.	JN	RSW	JN	RETAINED EARTH™
DRN.	11-09-98	11-09-98	11-09-98	VSL
CHK.				

VSL CORPORATION
 2810 Plaza Place, Suite 200
 Raleigh, NC 27617
 Telephone: (919) 781-6772
 Fax: (919) 781-1889

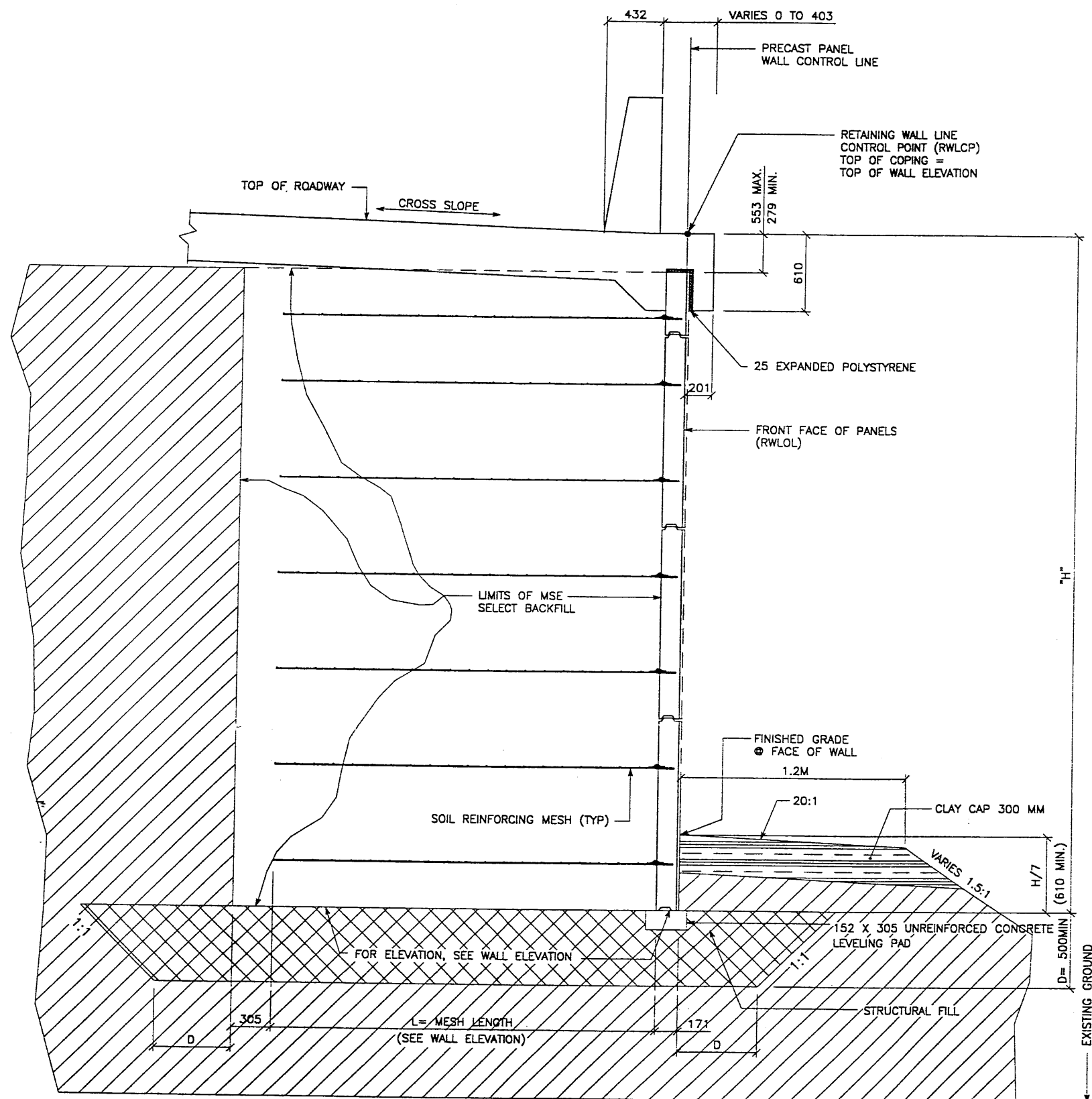
ATLANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE)
 CHICAGO, IL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
 PLAN VIEW PRECAST WALL "R-349-8"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

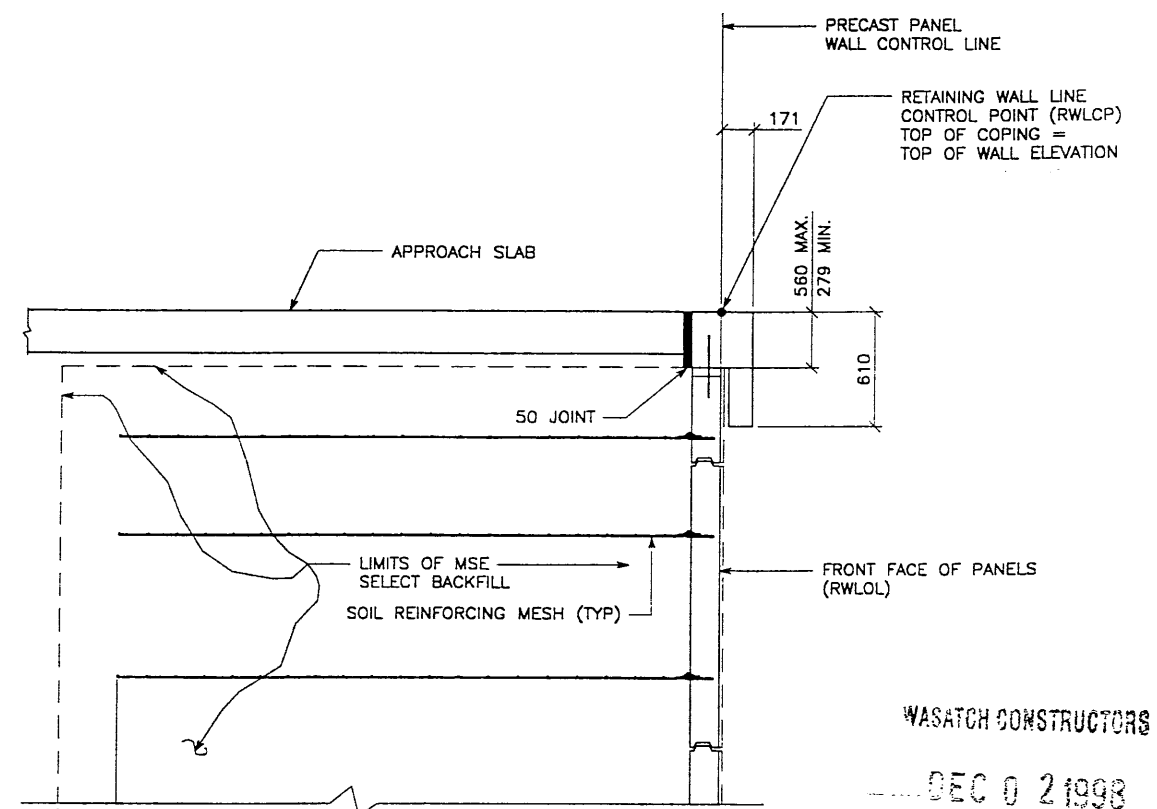
DWG. NO.
 2.7R-349-8.3

JOB NO.
 239-0007

Sht. NO.
 RE-1



TYPICAL CROSS SECTION - STA 1+000.000 TO STA 1+040.774
 (SEE DWG. NO. 2.7R-349-8.2 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)



TYPICAL CROSS SECTION - STA 1+040.774 TO 1+053.417 RELEASED FOR CONSTRUCTION
 (SEE DWG. NO. 2.7R-349-8.2 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	11-19-98	RELEASE FOR CONSTRUCTION

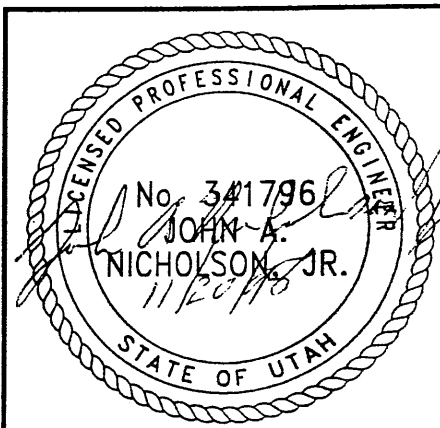
NO.	DATE	REVISION

VSL CORPORATION
 2840 Plaza Place, Suite 210
 Raleigh, NC 27617 Tel: 919-881-8372
 Fax: 919-881-0959

VSL

ALBANY, CA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

WASATCH CONSTRUCTORS
 DEC 0 2 1998



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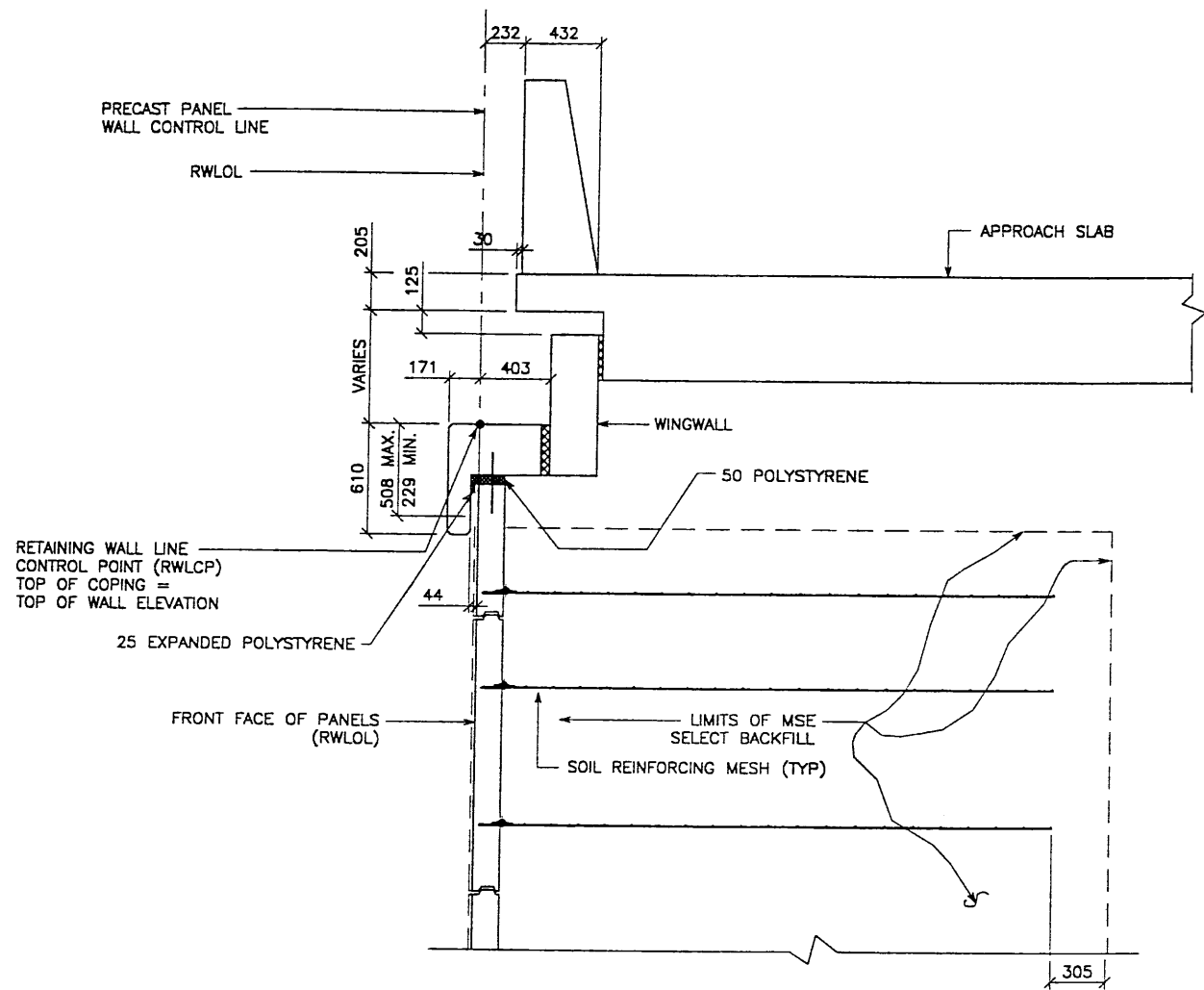
METRIC

RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-349-08"
 TYPICAL CROSS SECTION

UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO. 2.7R-349-8.4
 JOB NO. 239-0007
 SH. NO. RE-2

11-19-98 FINAL H:\RE_EARTH\PROJECT\239 1998\9SERIES\9W-06\SUBMTL-3\RE-6.DWG



TYPICAL CROSS SECTION W/WINGWALL - STA 1+053.417 TO STA 1+057.899
 (SEE DWG. NO. 2.7-R-349-08.2 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

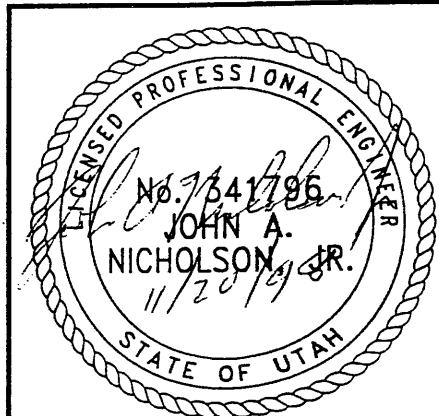
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-19-98	RELEASE FOR CONSTRUCTION

NO.	DATE	REVISION

VSL CORPORATION
 2640 Plaza Place, Suite 200
 Raleigh, NC 27617
 Tel: (919) 871-8372
 Fax: (919) 871-8859

ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

WASATCH CONSTRUCTORS
 DEC 0 2 1998
 RELEASED FOR CONSTRUCTION



METRIC


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RETAINED EARTH™ WALLS PRECAST WALL "R-349-08" TYPICAL CROSS SECTION	UTAH I-15 RECONSTRUCTION SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.
DWG. NO. 2.7R-349-8.5	JOB NO. 239-0007
	SH# NO RE-3

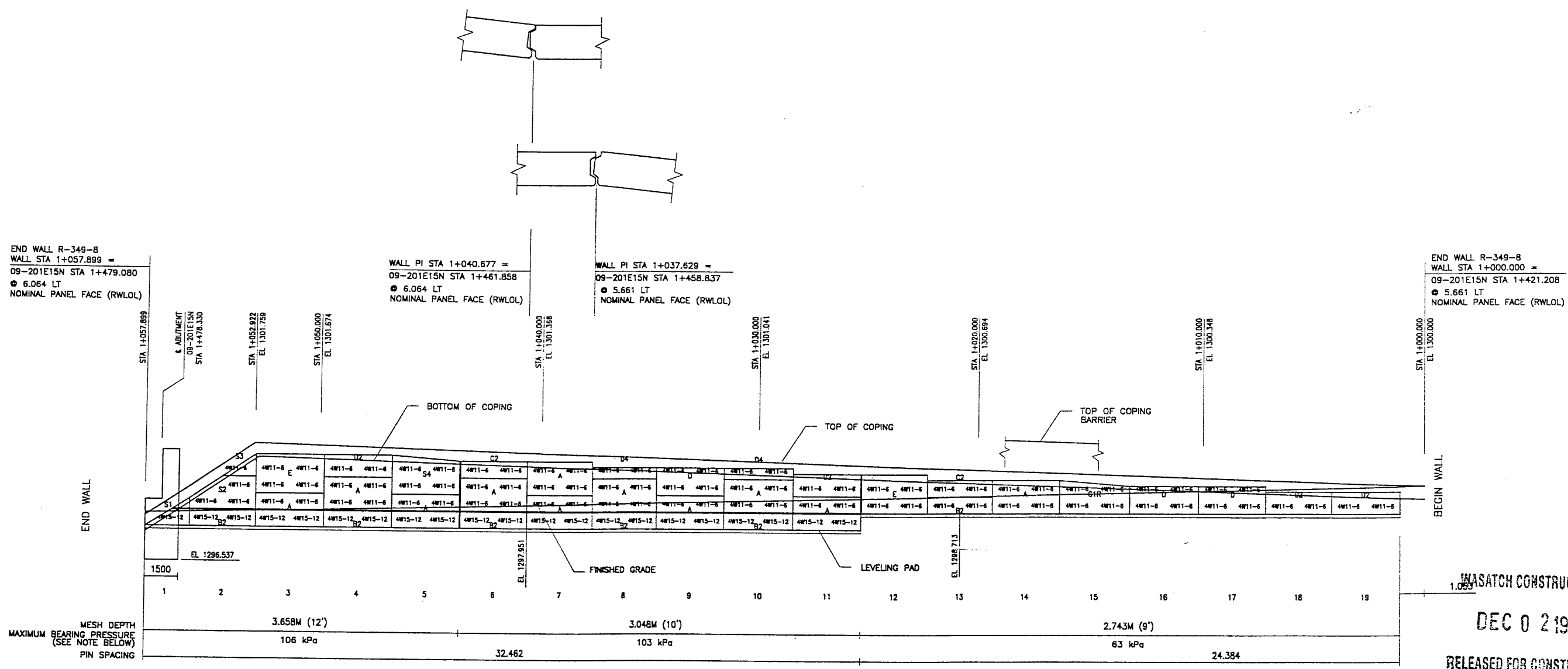
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-19-98	RELEASE FOR CONSTRUCTION

DCS.	DRN.	CHK.	NO.	DATE	REVISION	BY
11-09-98	JN					
11-09-98	RSW					
11-09-98	JN					

VSL CORPORATION
 2510 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6772
 Fax: (919) 781-4989



ATLANTA, GA / DALLAS, TX / PATRICK, NC (CORPORAL OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

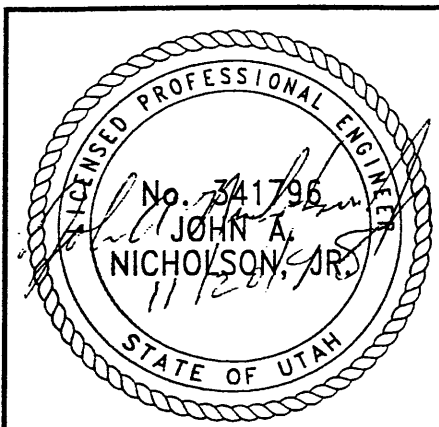


ELEVATION PRECAST WALL R-349-8
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 122.85 SM) SCALE 1:200 (HALF SIZE)

APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

METRIC

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 DEC 02 1998
 WASATCH CONSTRUCTORS

RETAINED EARTH™ WALLS
 PRECAST WALL "R-349-8"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	2.7R-349-8.6
JOB NO.	239-0007
SHT. NO.	RE-4

11-19-98

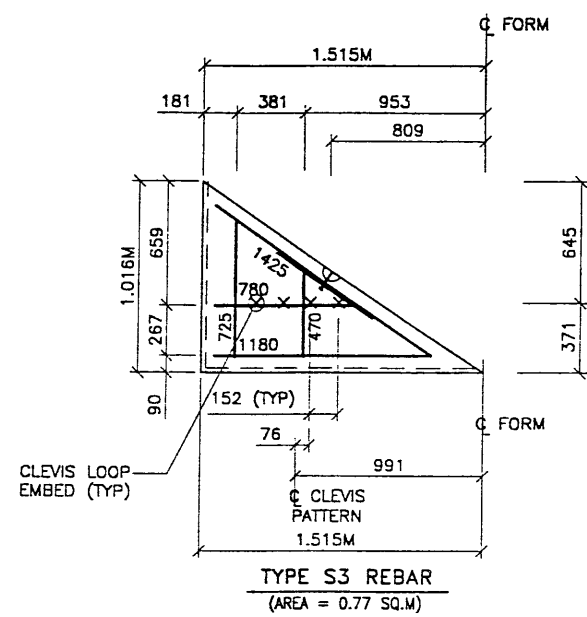
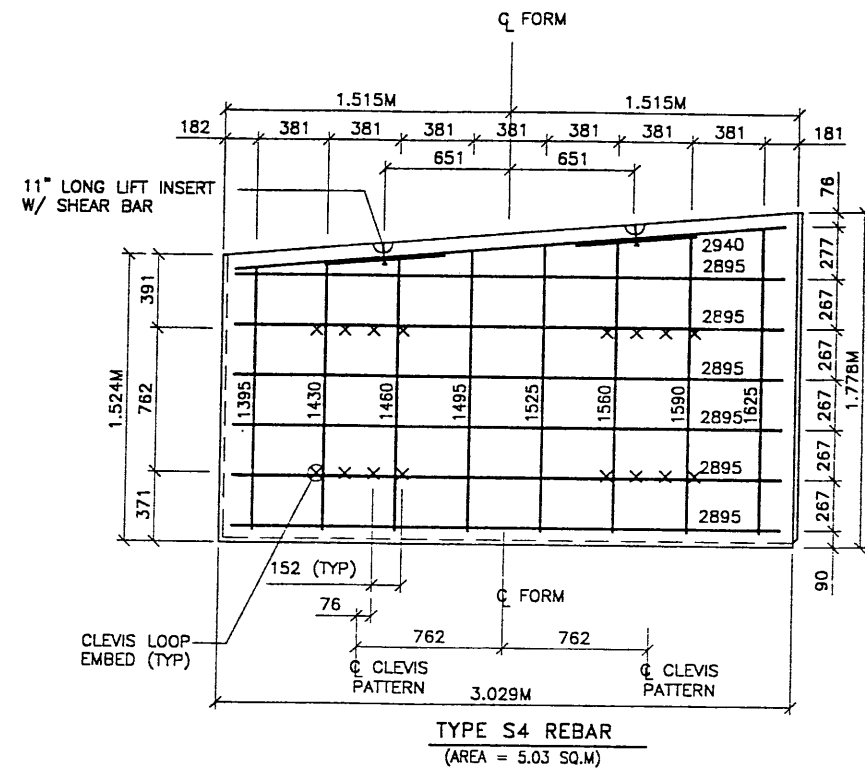
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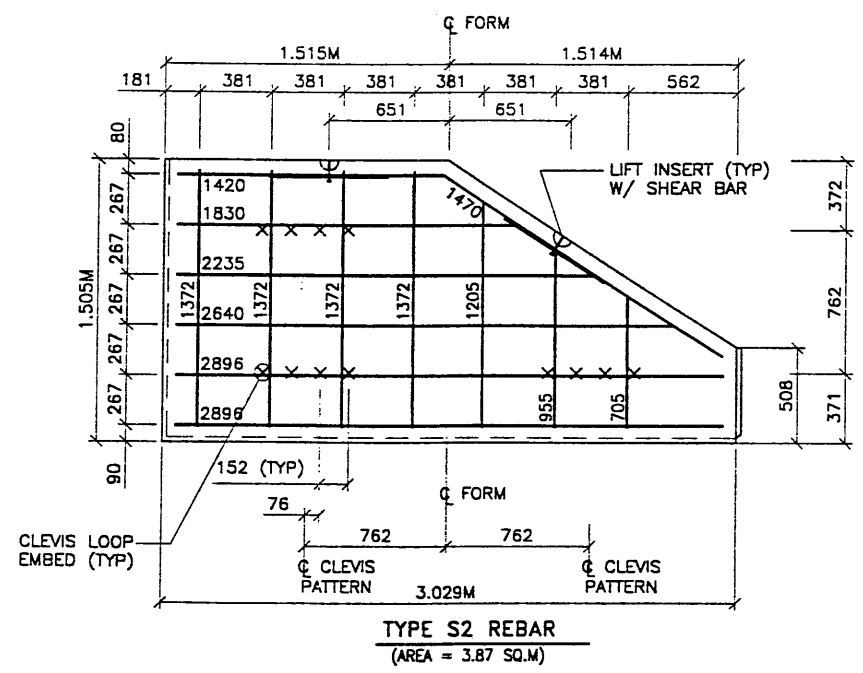
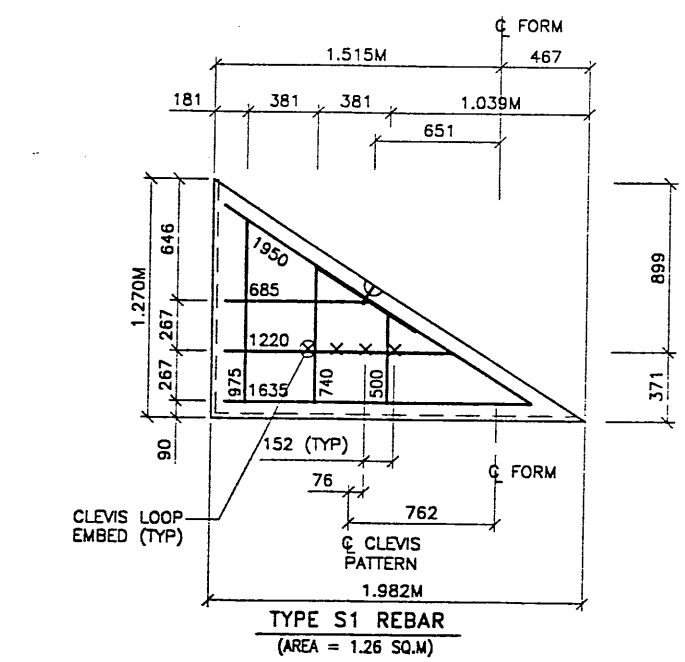
11-19-98

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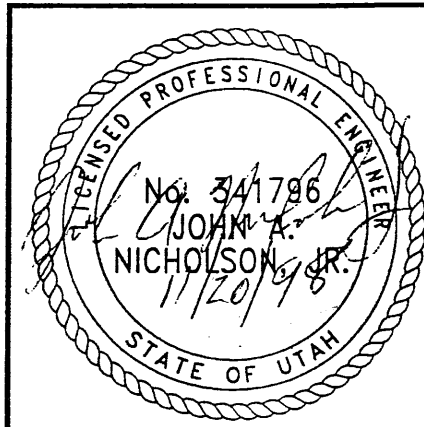
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-19-98	RELEASE FOR CONSTRUCTION



- PANEL REINFORCEMENT NOTES:**
- PANELS ARE SHOWN BACK FACE.
 - HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 - ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 - ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 BAR 1345 mm LONG.
 - PANEL REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION A615, GRADE 60.
 - ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS I.
 - CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 25,200 KPa.
 - EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 - ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS.
 - VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
 - LIFT INSERTS ARE 6 3/4" LONG IN ALL PANELS LESS THAN 1.524M TALL. PANELS TALLER THAN 1.524M SHALL HAVE 11" LONG LIFT ANCHORS.
 - SEE FOSTER GEOTECHNICAL STD. PLANS FOR ADD'L PANEL DETAILS



WASATCH CONSTRUCTORS
DEC 0 2 1998
RELEASED FOR CONSTRUCTION



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METRIC

DES.	JN	11-09-98	REVISION	NO.	DATE
DRN.	RSW	11-09-98			
CHK.	JN	11-09-98			

VSL CORPORATION
2810 Plaza Place, Suite 200
Ft. Worth, TX 76107-8818
Tel: (817) 341-6500
Fax: (817) 341-6509

VSL

ATLANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
PRECAST WALL "R-349-8"
SPECIAL PANEL DETAILS

UTAH I-15 RECONSTRUCTION
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.
2.7R-349-8.7

JOB NO.
239-0007

SHT NO
RE-5