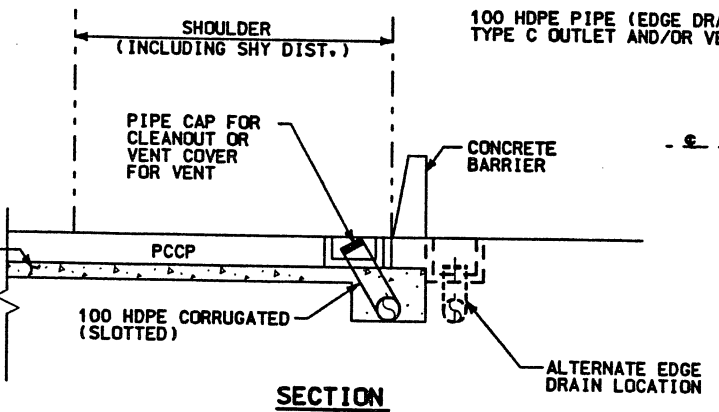
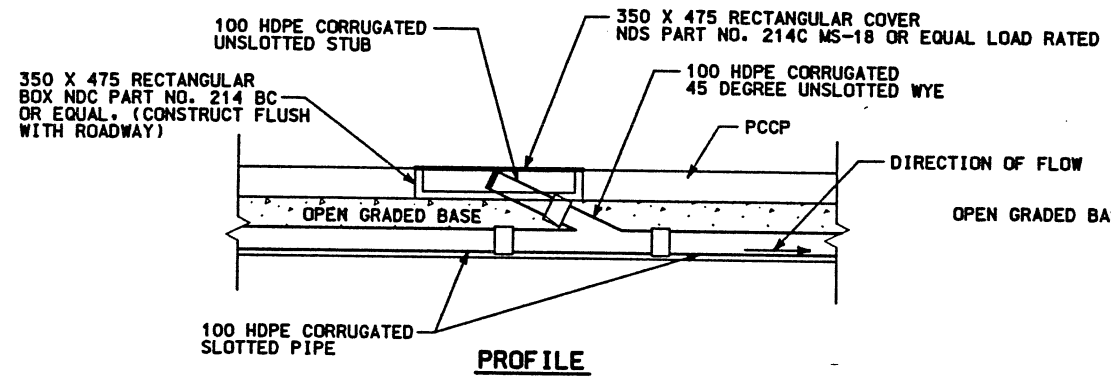
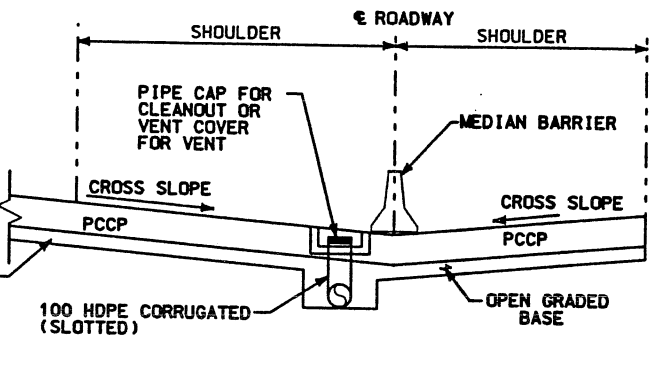
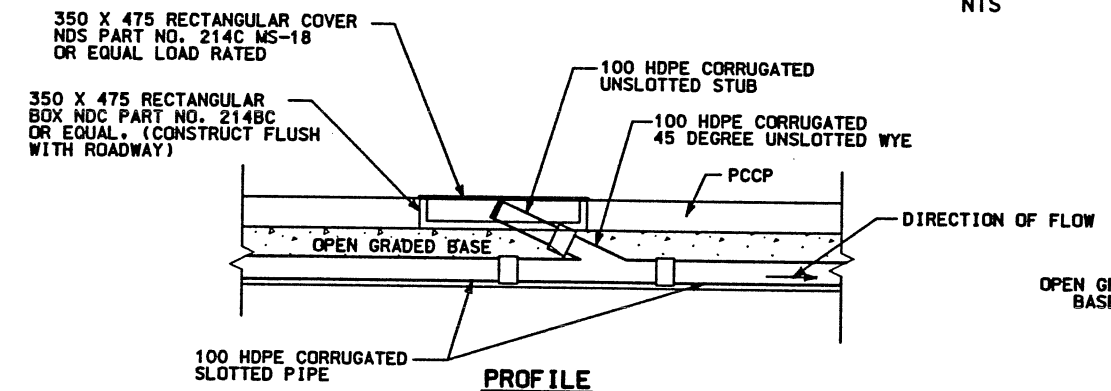


Users: james\_young

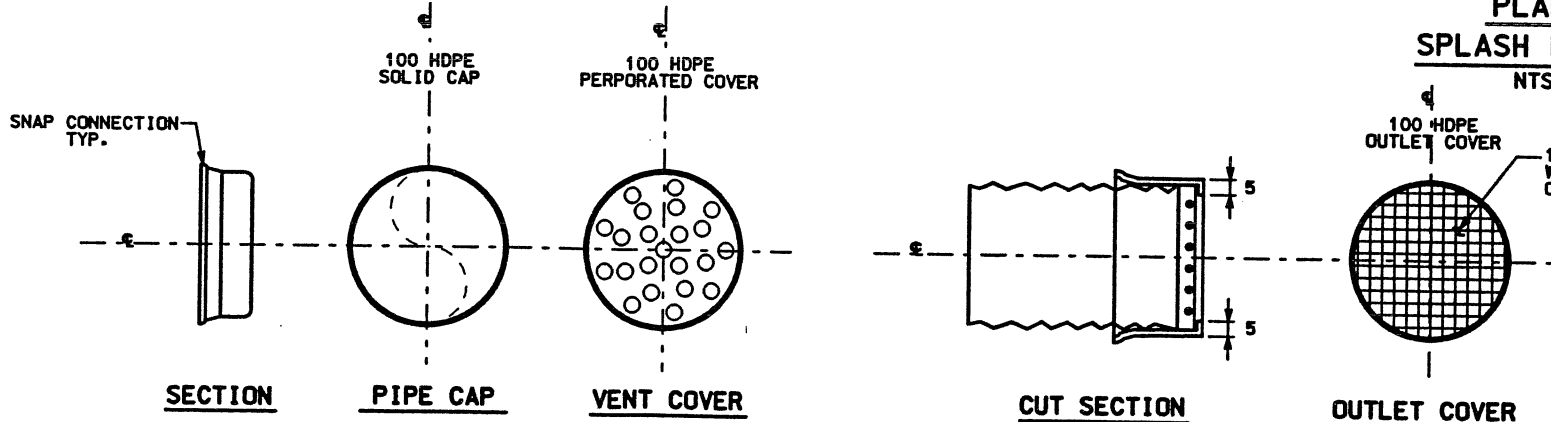
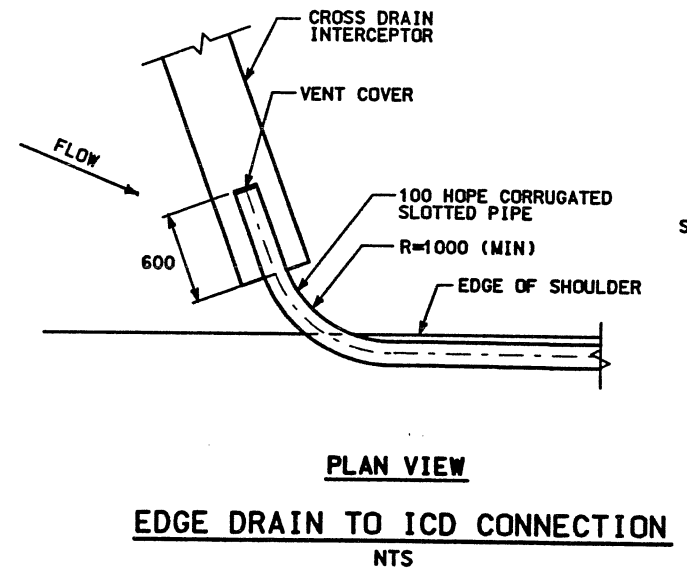
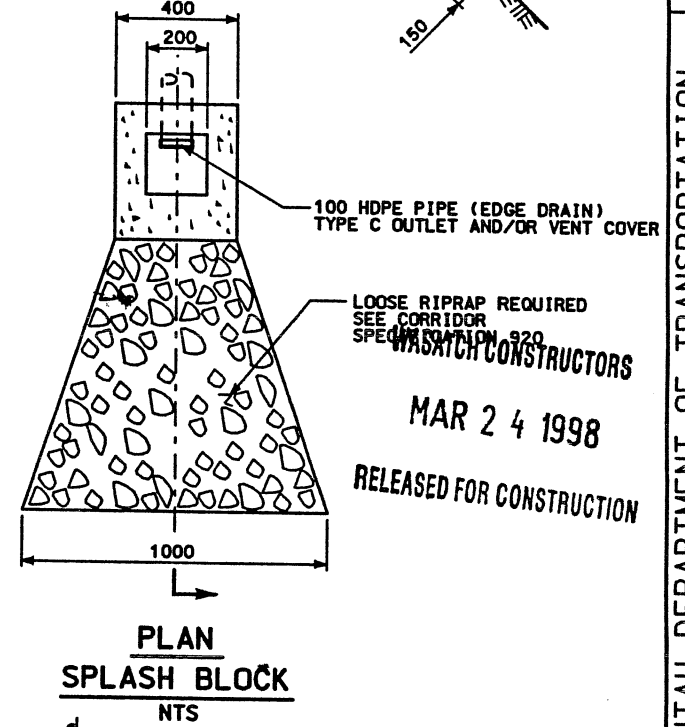
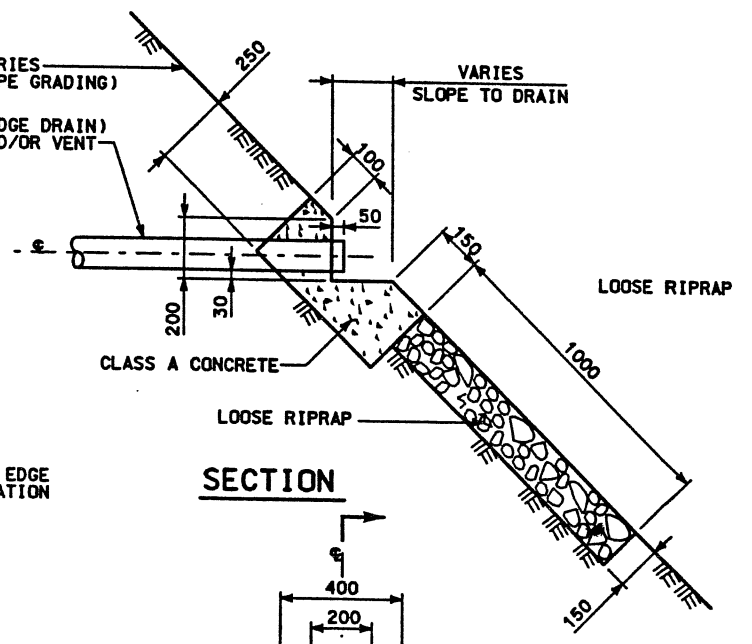
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**TYPE A CLEANOUT/VENT**  
NTS

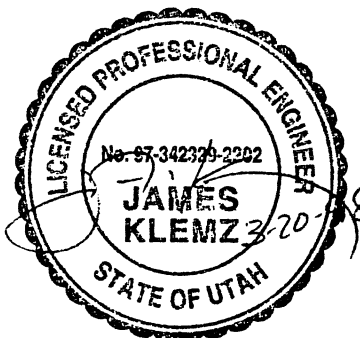


**TYPE B CLEANOUT/VENT**  
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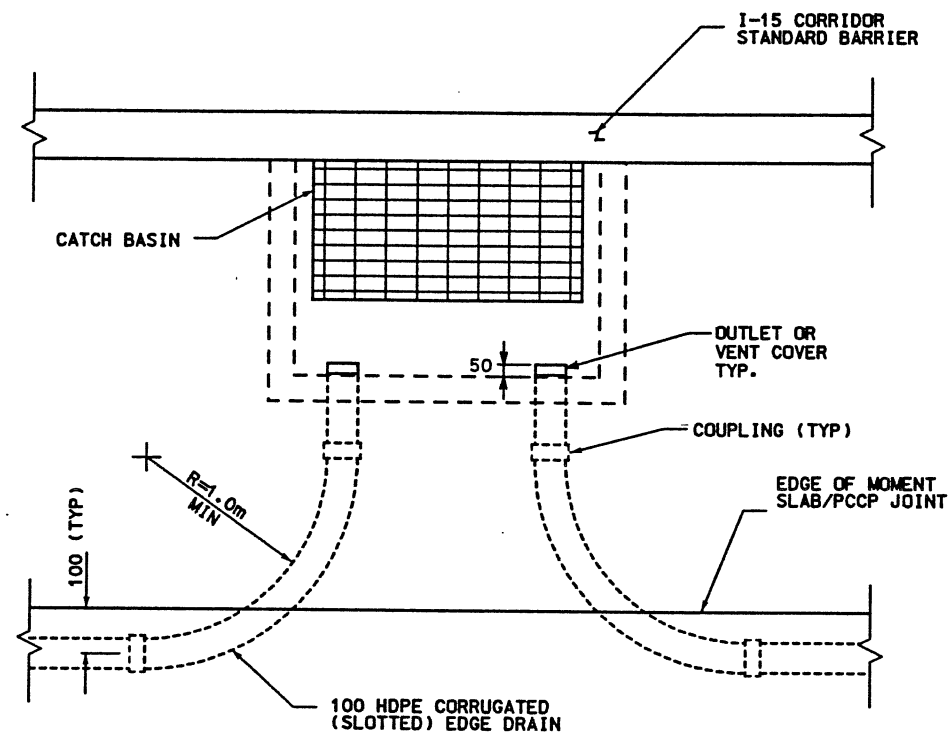


**EXTERNAL END PLUG/VENT COVER AND OUTLET COVER**  
NTS

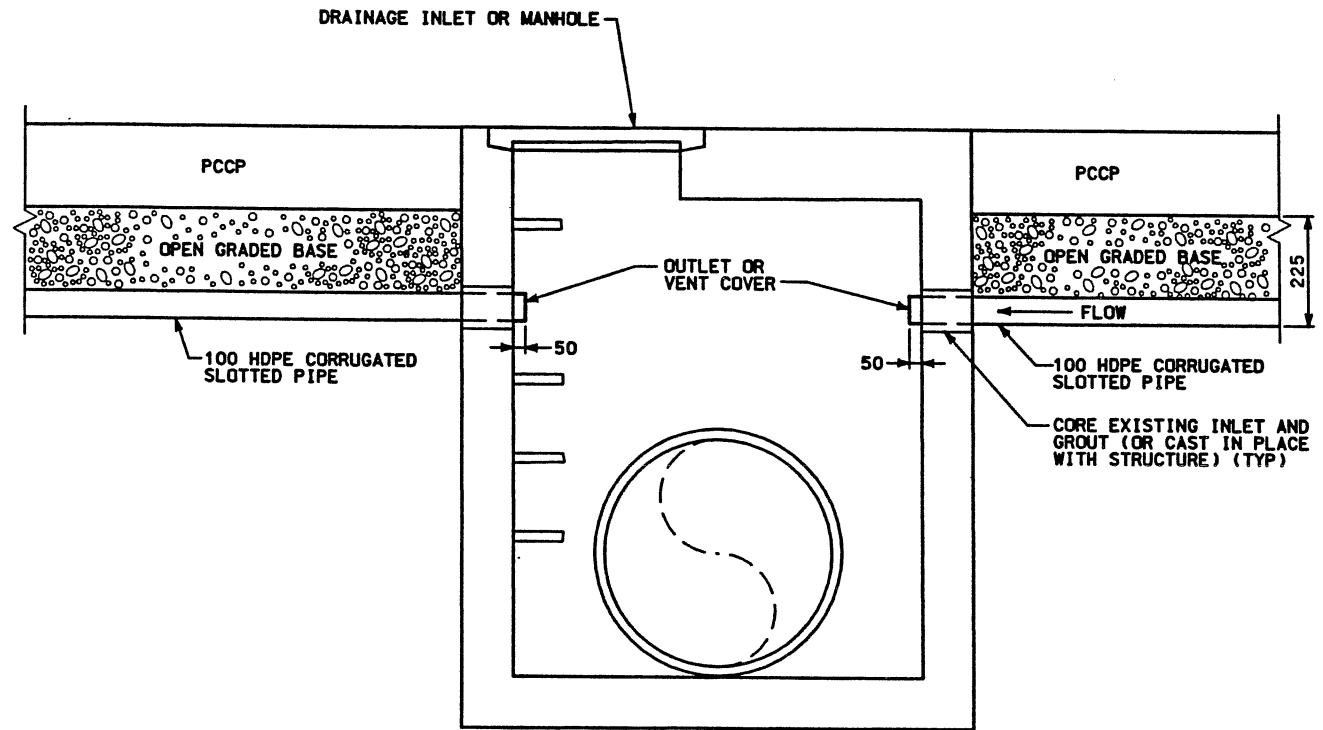
NOTES:  
1. SEE EDGE DRAIN PLAN FOR LOCATION AND TYPE OF OUTLET OR VENT INSTALLATIONS



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
A	3/13/98		
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
DESIGN	MR. 2/98	CHECK	MR. 2/98
DRAWN	W.R. 2/98	CHECK	W.R. 2/98
QUANT.		CHECK	
DESIGNER	W.R. 2/98	PROJECT DESIGN ENGINEER	JIM KLEMEZ
DRAWN	W.R. 2/98	SECTION MANAGER	
QUANT.		DATE	
MAR 24 1998 RELEASED FOR CONSTRUCTION			
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
VENT & CLEANOUT DETAILS		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. CS-61-1	
SHT. _____ OF _____			

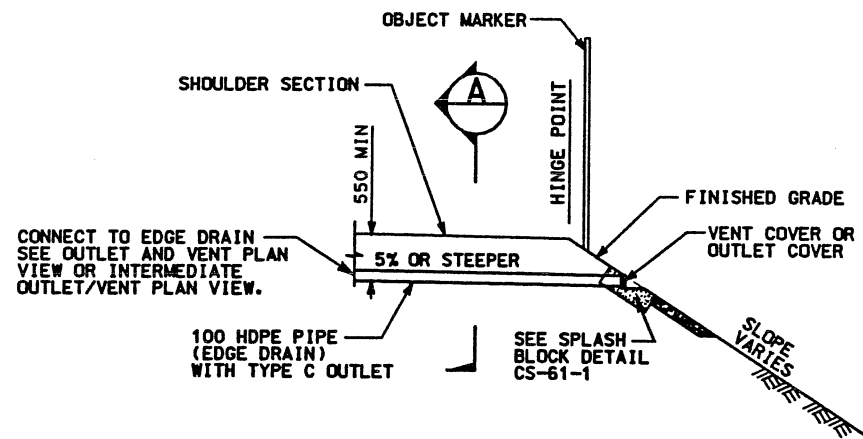


**PLAN VIEW**  
**TYPE D OUTLET/VENT CONNECTION AT MSE WALLS**  
 NTS

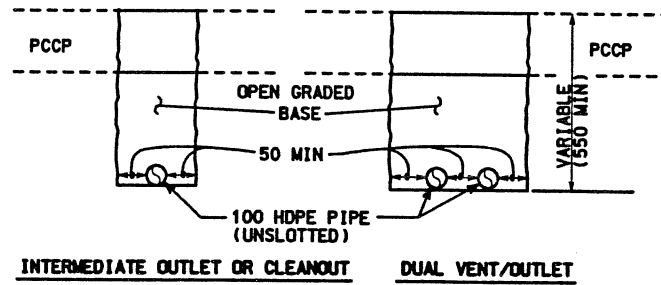


**ELEVATION**  
**TYPE D OUTLET/VENT CONNECTION TO DRAINAGE INLET**  
 NTS

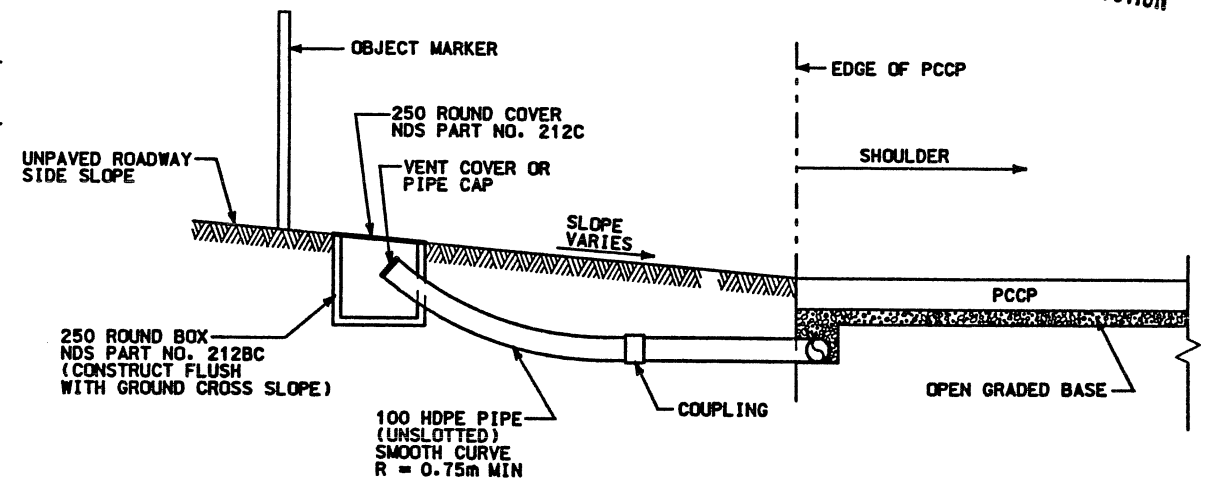
WASATCH CONSTRUCTORS  
 MAR 24 1998  
 RELEASED FOR CONSTRUCTION



**ELEVATION**  
**TYPE C OUTLET AND/OR VENT**  
 NTS

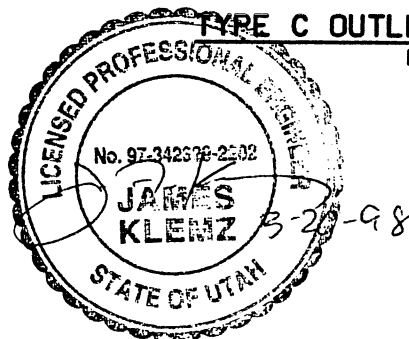


**SECTION A**  
**OUTLET EXCAVATION AND BACKFILL IN PAVED SHOULDERS**  
 NTS



**TYPE F CLEANOUT/VENT**  
 NTS

**NOTE:**  
 1. SEE EDGE DRAIN PLAN FOR LOCATION AND TYPE OF OUTLET OR VENT INSTALLATIONS.

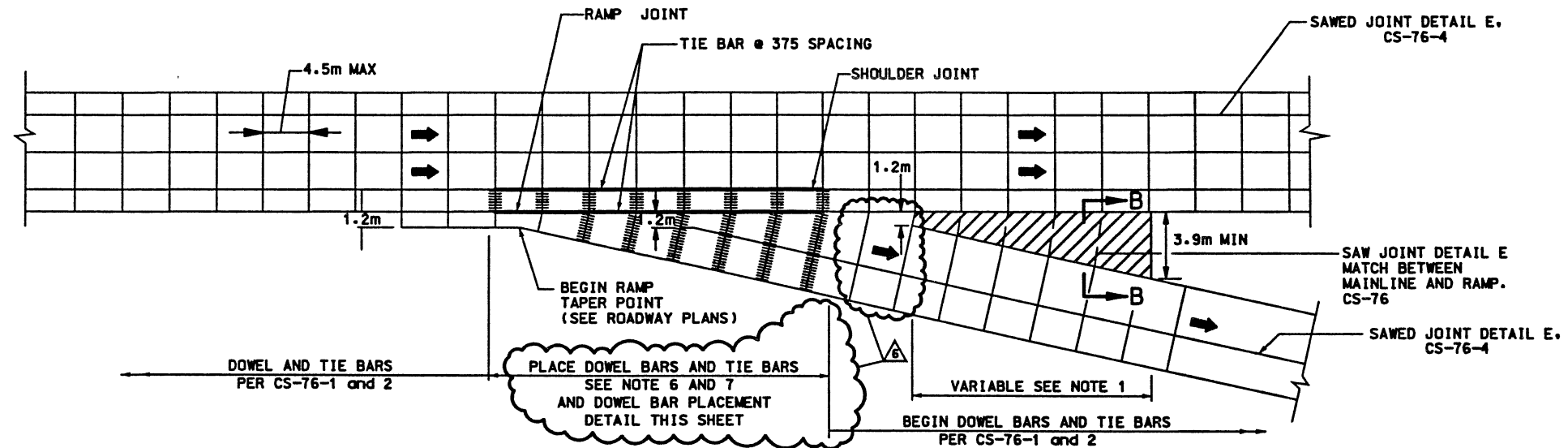


APPROVED FOR CONSTRUCTION	
NO.	DATE
1	3/13/98
	ORIGINAL RELEASE

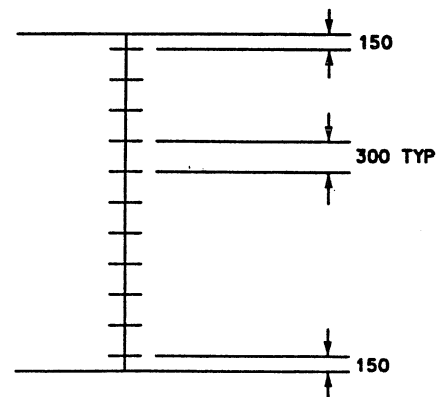
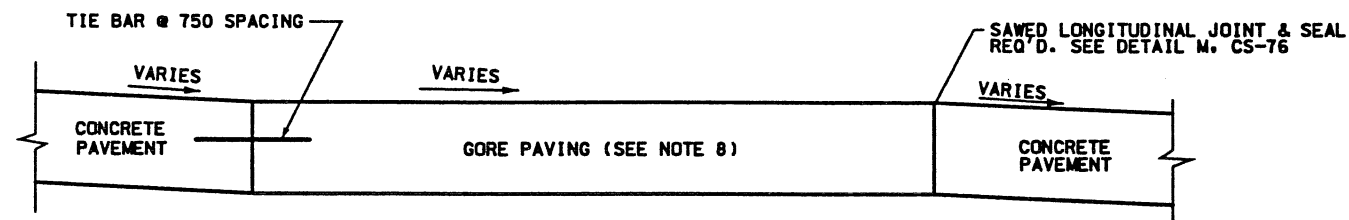
UTAH DEPARTMENT OF TRANSPORTATION			
DESIGN	DATE	CHECK	DATE
SV	3/13/98	MR	2/98
DESIGN	3/13/98	DR	2/98
PROJECT DESIGN ENGINEER		SECTION MANAGER	
JIM KLENZ		JIM KLENZ	
QUANT.		QUANT.	

APPROVAL	DATE	APPROVED	DATE
RECONSTRUCTION	3/13/98	3/13/98	3/13/98
VENT & CLEANOUT DETAILS			
CORRIDOR STANDARD PLAN			
PROJECT NUMBER	#SP-15-7(135)296		

# JOINTS FOR HIGHWAYS WITH CONCRETE TRAFFIC LANES AND SHOULDERS



**ONE LANE EXIT RAMP**  
NTS



**DOWEL BAR PLACEMENT DETAIL**  
NTS



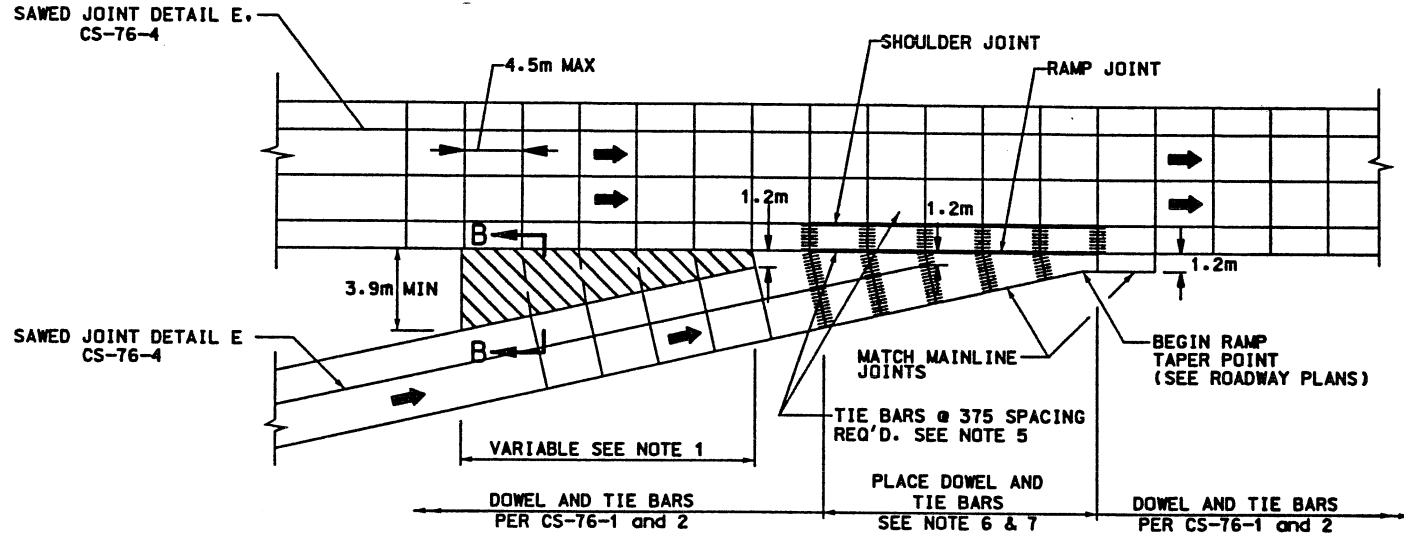
**NOTES:**

- ESTIMATED QUANTITIES FOR CONCRETE FLATWORK ARE CALCULATED ON TANGENT SECTION. IN ALL CASES LENGTH OF GORE PAVING WILL BE CARRIED AHEAD UNTIL THE DISTANCE BETWEEN PAVING IS 3.9m MIN.
- SLOPE MAY VARY TO MEET DESIGN CONDITIONS ON RAMP AND MAINLINE. SEE CS-76 FOR TIE BAR & DOWEL BAR CONFIGURATION.
- NO INDIVIDUAL SLAB SHALL HAVE A DIMENSION LARGER THAN 4.5m IN LENGTH.
- MINIMUM SLAB WIDTH IS 1.2m.
- TIE GORE PAVING ON PRINCIPAL ROADWAY SIDE ONLY @ 750 SPACING.
- DOWELS SHALL BE PLACED IN SHOULDER AND RAMP TAPER AREA FROM BEGIN RAMP TAPER POINT ± 30m BEFORE GORE. SEE SPACING DETAIL.
- TIE BARS SHALL BE PLACED @ 375 SPACING IN SHOULDER JOINT AND RAMP JOINT FROM BEGIN RAMP TAPER POINT TO ± 30m BEFORE BEGINNING OF GORE PAVING.
- GORE PAVING SHALL HAVE BULL FLOAT FINISH SURFACE. GORE PAVING STRUCTURAL SECTION SHALL BE M1, SEE CS-71, OR AS PER THE GORE PAVEMENT SECTION, SEE CS-73.
- FOR ALL OTHER DETAILS ON JOINTING SEE CS-76.
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.

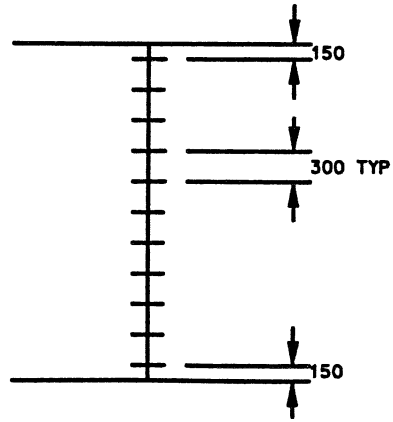
WASATCH CONSTRUCTORS  
DEC 07 1998  
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
A	9/28/98	A	9/28/98
B	11/16/98	B	11/16/98
REVISED DIMENSION		UPDATES FOR CLARIFICATION	
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
TRACKING NO.	11/98	CHECK FOR	11/98
DESIGN	LT	DESIGN	LT
DRAWN	MP	CHECK	MC
QUANT.		CHECK	MC
APPROVAL	DATE	APPROVAL	DATE
LOLENE TERRY	11/16/98	JOHN TERRY	11/16/98
PROJECT DESIGN ENGINEER		SECTION MANAGER	
APPROVED	DATE	APPROVED	DATE
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
PAVEMENT JOINTING PLAN		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. CS-62-1	
SHT. _____ OF _____			

# JOINTS FOR HIGHWAYS WITH CONCRETE TRAFFIC LANES AND SHOULDERS



**ONE LANE ENTRANCE RAMP**  
NTS



**DOWEL BAR PLACEMENT DETAIL**  
NTS



WASATCH CONSTRUCTORS  
**DEC 07 1998**  
RELEASED FOR CONSTRUCTION

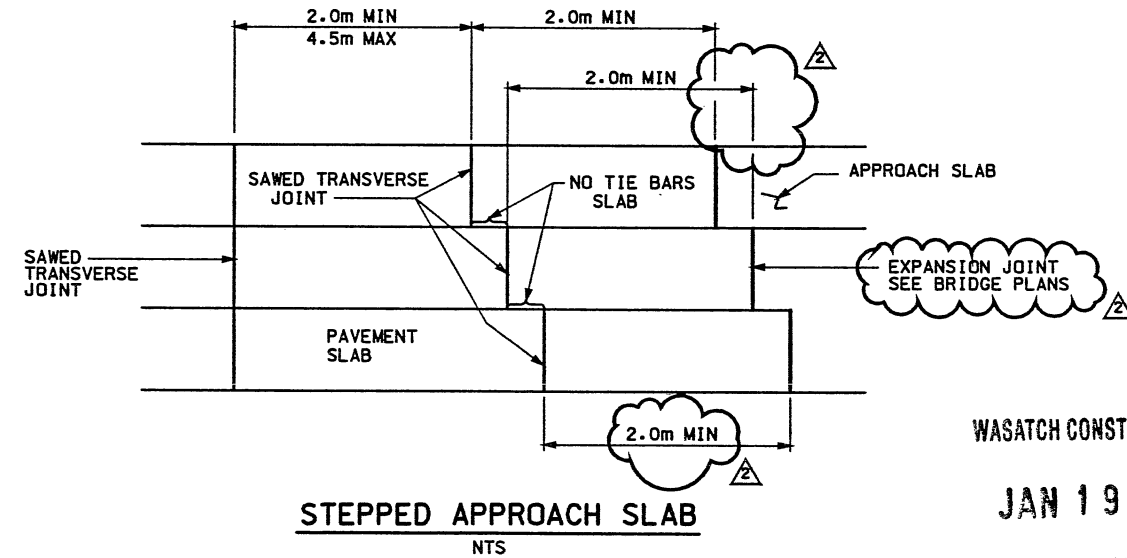
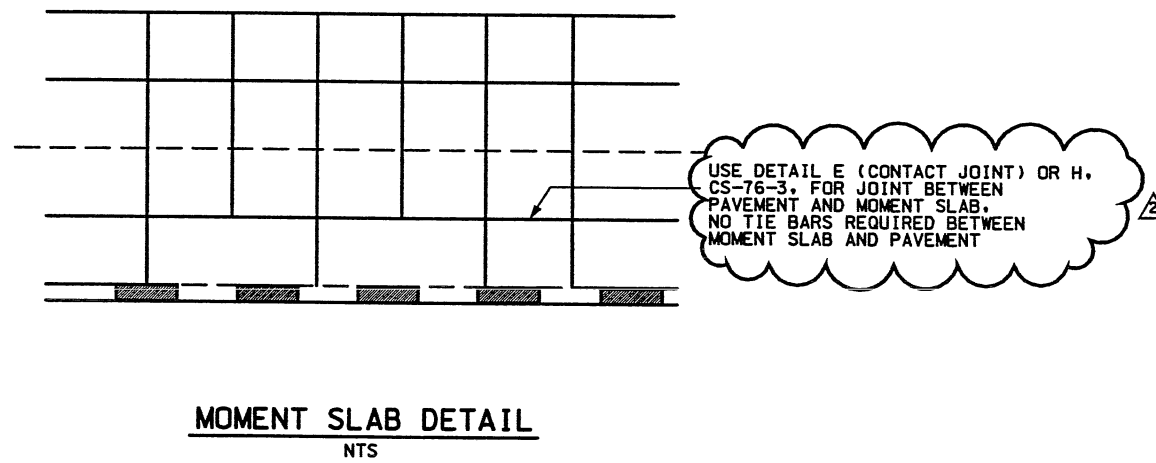
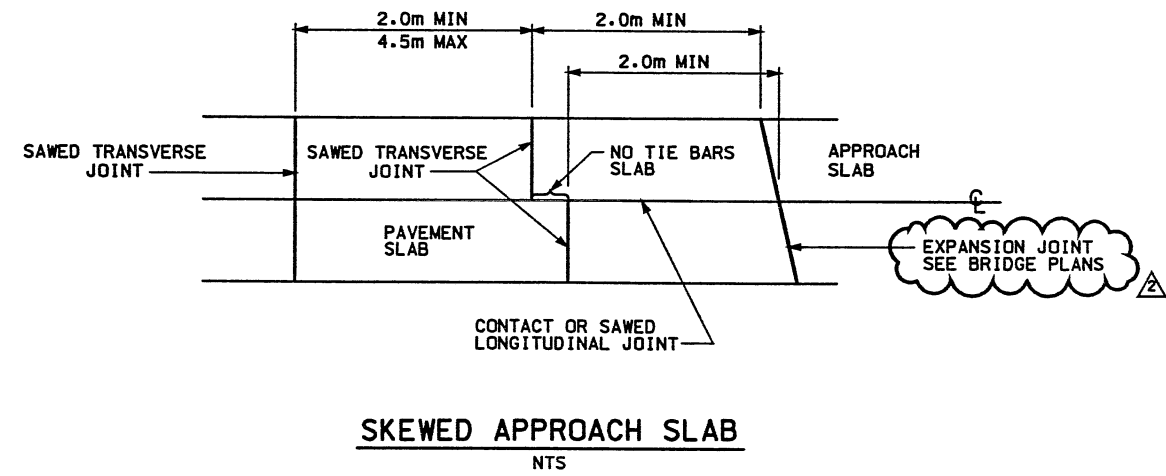
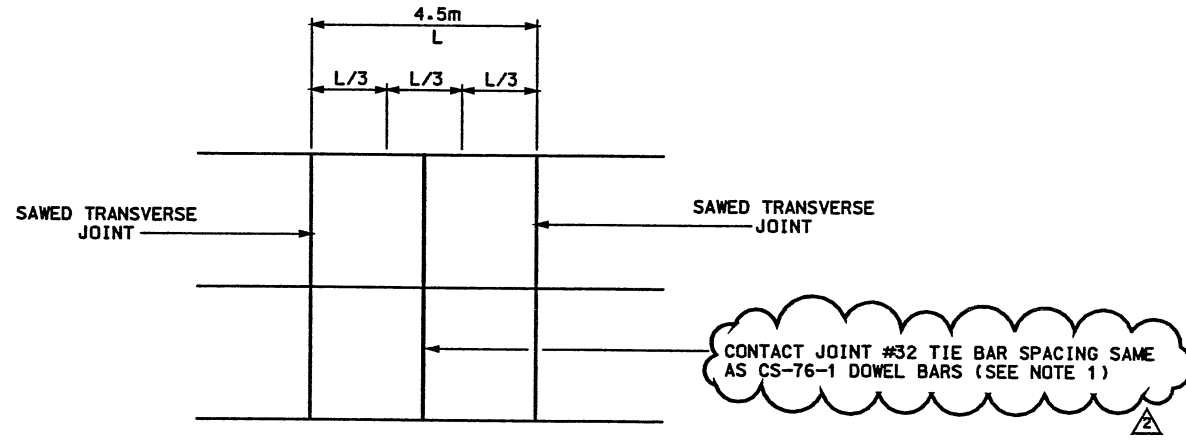
**NOTES:**

1. ESTIMATED QUANTITIES FOR CONCRETE FLATWORK ARE CALCULATED ON TANGENT SECTION. IN ALL CASES LENGTH OF GORE PAVING WILL BE CARRIED AHEAD UNTIL THE DISTANCE BETWEEN PAVING IS 3.9m.
2. SLOPE MAY VARY TO MEET DESIGN CONDITIONS ON RAMP AND MAINLINE. SEE GORE STAKING PLAN OR IF INDICATED ON PLAN USE DETAIL B-B ON CS-62-1 AND GRADE TO DRAIN - ADJUST FOR FIELD CONDITIONS.
3. NO INDIVIDUAL SLAB SHALL HAVE A DIMENSION LARGER THAN 4.5m IN WIDTH OR LENGTH.
4. MINIMUM SLAB WIDTH IS 1.2m.
5. TIE GORE PAVING ON PRINCIPAL ROADWAY SIDE ONLY @ 750 SPACING.
6. DOWELS SHALL BE PLACED IN SHOULDER AND RAMP TAPER AREA FROM BEGIN RAMP TAPER POINT ± 30m BEFORE GORE. SEE SPACING DETAIL CS-62-4.
7. TIE BARS SHALL BE PLACED @ 375 SPACING IN SHOULDER JOINT AND RAMP JOINT FROM BEGIN RAMP TAPER POINT TO ± 30m BEFORE BEGINNING OF GORE PAVING.
8. FOR ALL OTHER DETAILS ON JOINTING SEE CS-76.
9. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	ORIGINAL RELEASE	REVISED DOWELS AND TIE BARS
1	5/6/98		
2	9/1/98		UPDATES FOR CLARIFICATION
3	11/16/98		
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		TRACKING NO.	
DESIGN LT	CHECK PWB	CHECK MGC	CHECK
11/98	11/98	11/98	11/98
L. LOLENE TERRY	PROJECT DESIGN ENGINEER	J. JOHN TERRY	SECTION MANAGER
DATE	DATE	DATE	DATE
8/1/98	8/1/98	8/1/98	8/1/98
I-15 CORRIDOR RECONSTRUCTION		PROJECT NUMBER #SP-15-7(135)296	
PAVEMENT JOINTING PLAN		CORRIDOR STANDARD PLAN	
SALT LAKE COUNTY		DWG. NO. CS-62-2	
SHT. _____ OF _____			



# JOINTS FOR HIGHWAYS WITH CONCRETE TRAFFIC LANES AND SHOULDERS



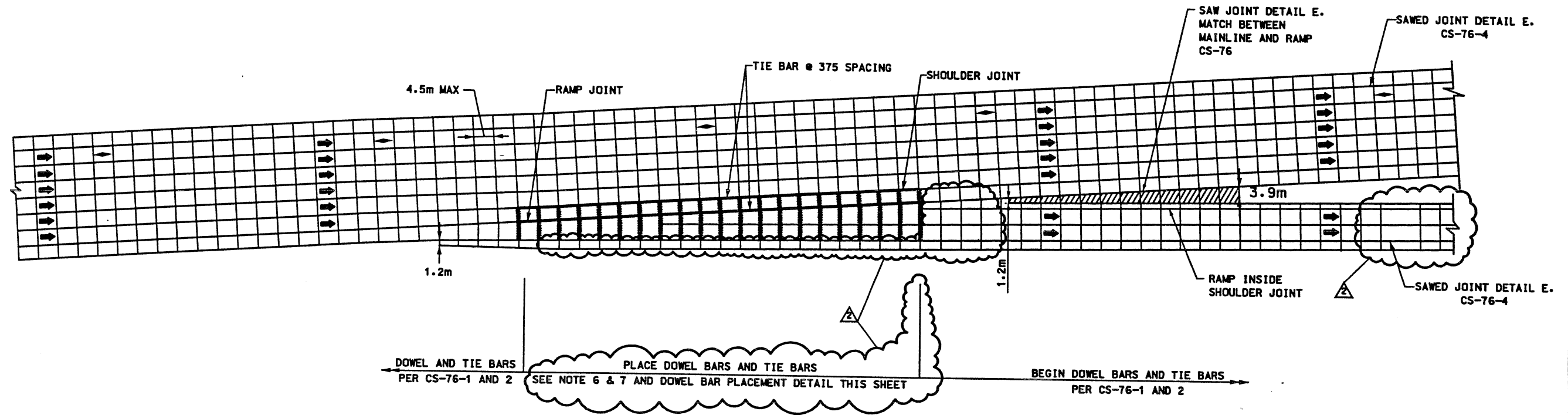
- NOTE:**
1. A CONTACT JOINT IS PERMITTED TO END PAVING POUR. THE JOINT MUST BE PLACED IN THE MIDDLE THIRD OF THE 4.5 METER SLAB.
  2. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.



WASATCH CONSTRUCTORS  
**JAN 19 1999**  
RELEASED FOR CONSTRUCTION

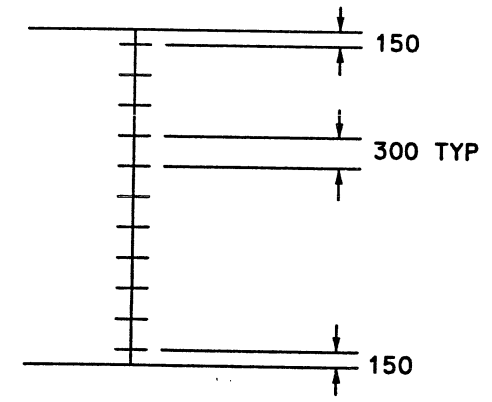
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2	01/14/99	CHECK	5/98
APPROVED FOR CONSTRUCTION		DESCRIPTION	
		ORIGINAL RELEASE	
		MOMENT SLAB JOINT REVISIONS	
		QUANT.	
		SECTION MANAGER	
		DATE	
		PROJECT DESIGN ENGINEER	
		DATE	
		DESIGN	
		LT	
		5/98	
		DRAWN	
		VLR	
		5/98	
		JOHN TERRY	
		SECTION MANAGER	
		DATE	
		PROJECT NUMBER	
		*SP-15-7(135)296	
I-15 CORRIDOR RECONSTRUCTION		SALT LAKE COUNTY	
PAVEMENT JOINTING PLAN		DWG. NO.	
CORRIDOR STANDARD PLAN		CS-62-3	
SHT. 3 OF 3			

# JOINTS FOR HIGHWAYS WITH CONCRETE TRAFFIC LANES AND SHOULDERS



DOWEL AND TIE BARS PER CS-76-1 AND 2      PLACE DOWEL BARS AND TIE BARS SEE NOTE 6 & 7 AND DOWEL BAR PLACEMENT DETAIL THIS SHEET      BEGIN DOWEL BARS AND TIE BARS PER CS-76-1 AND 2

**TWO LANE OFF RAMP JOINTS FOR RAMPS**



**DOWEL BAR PLACEMENT DETAIL**  
NTS



**NOTES:**

1. ESTIMATED QUANTITIES FOR CONCRETE FLATWORK ARE CALCULATED ON TANGENT SECTION. IN ALL CASES LENGTH OF GORE PAVING WILL BE CARRIED AHEAD UNTIL THE DISTANCE BETWEEN PAVING IS 3.9m.
2. SLOPE MAY VARY TO MEET DESIGN CONDITIONS ON RAMP AND MAINLINE. SEE GORE STAKING PLAN OR IF INDICATED ON PLAN USE DETAIL B-B ON CS-62.1 AND GRADE TO DRAIN - ADJUST FOR FIELD CONDITIONS.
3. NO INDIVIDUAL SLAB SHALL HAVE A DIMENSION LARGER THAN 4.5m IN WIDTH OR LENGTH.
4. MINIMUM SLAB WIDTH IS 1.2m.
5. TIE GORE PAVING ON PRINCIPAL ROADWAY SIDE ONLY @ 750 SPACING.
6. DOWELS SHALL BE PLACED IN SHOULDER AND RAMP TAPER AREA FROM BEGIN RAMP TAPER POINT TO BEGINNING OF INSIDE RAMP JOINT. SEE SPACING DETAIL.
7. TIE BARS SHALL BE PLACED @ 375 SPACING IN SHOULDER JOINT AND RAMP JOINT FROM BEGIN RAMP TAPER POINT TO BEGINNING OF RAMP INSIDE SHOULDER JOINT.
8. FOR ALL OTHER DETAILS ON JOINTING SEE CS-76.
9. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.

**WASATCH CONSTRUCTORS**  
**DEC 07 1998**  
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION	NO.	DATE	DESCRIPTION
	A	8/31/98	ORIGINAL RELEASE
	A	11/16/98	UPDATES FOR CLARIFICATION

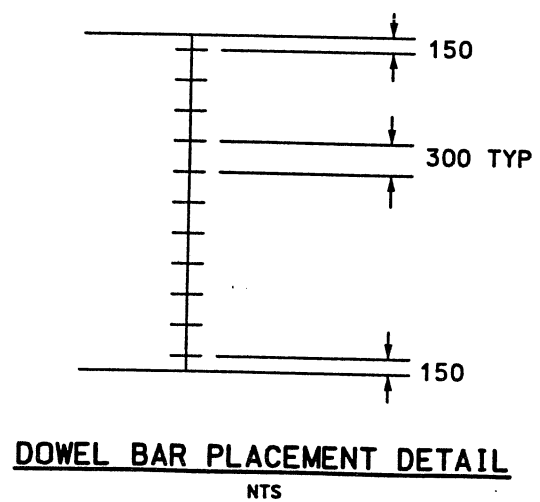
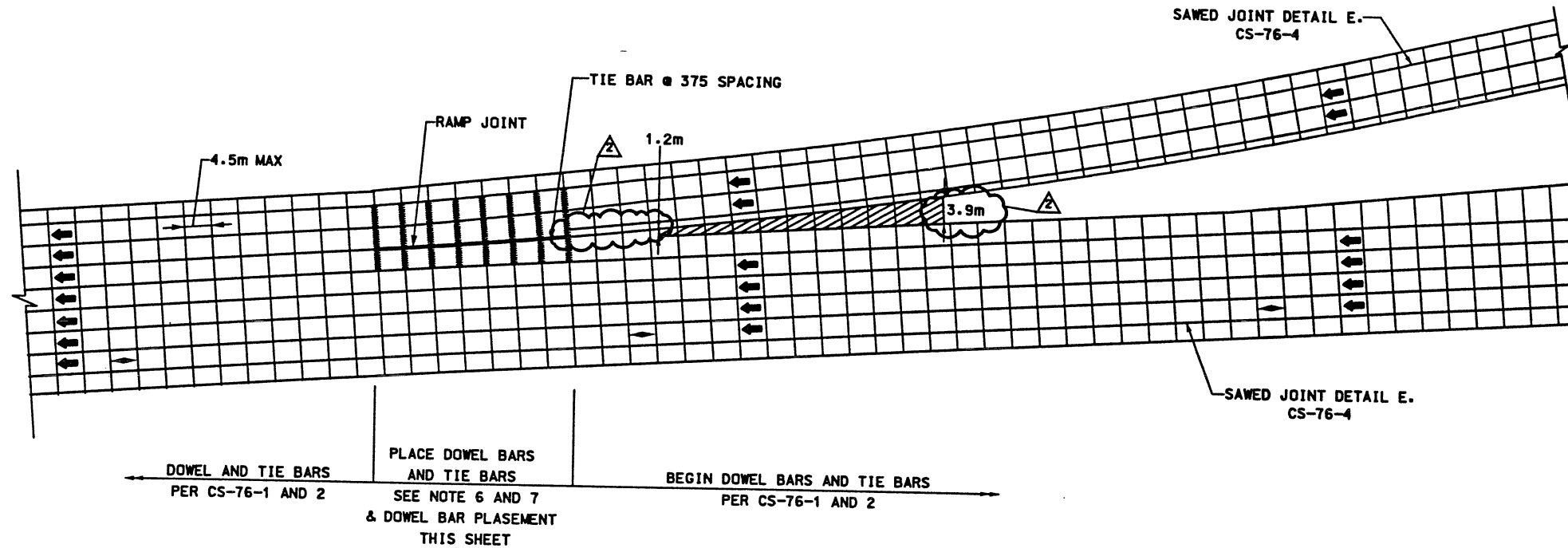
UTAH DEPARTMENT OF TRANSPORTATION	SVERDRUP/DE LEUW
APPROVAL RECORD DATE: 8/31/98 DESIGNER: LOLENE TERRY PROJECT DESIGN ENGINEER: JOHN TERRY APPROVED DATE: 8/31/98 SECTION MANAGER:	TRACKING NO. DESIGN: 11/98 CHECK: JMT DRAWN: RDP QUANT.: CHECK: JMT CHECK:

I-15 CORRIDOR RECONSTRUCTION	PAVEMENT JOINTING PLAN	CORRIDOR STANDARD PLAN
		PROJECT NUMBER #SP-15-7(135)296
SALT LAKE COUNTY		
DWG. NO. CS-62-4		
SHT. _____	OF _____	

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# JOINTS FOR HIGHWAYS WITH CONCRETE TRAFFIC LANES AND SHOULDERS



### TWO LANE ON RAMP JOINTS FOR RAMP



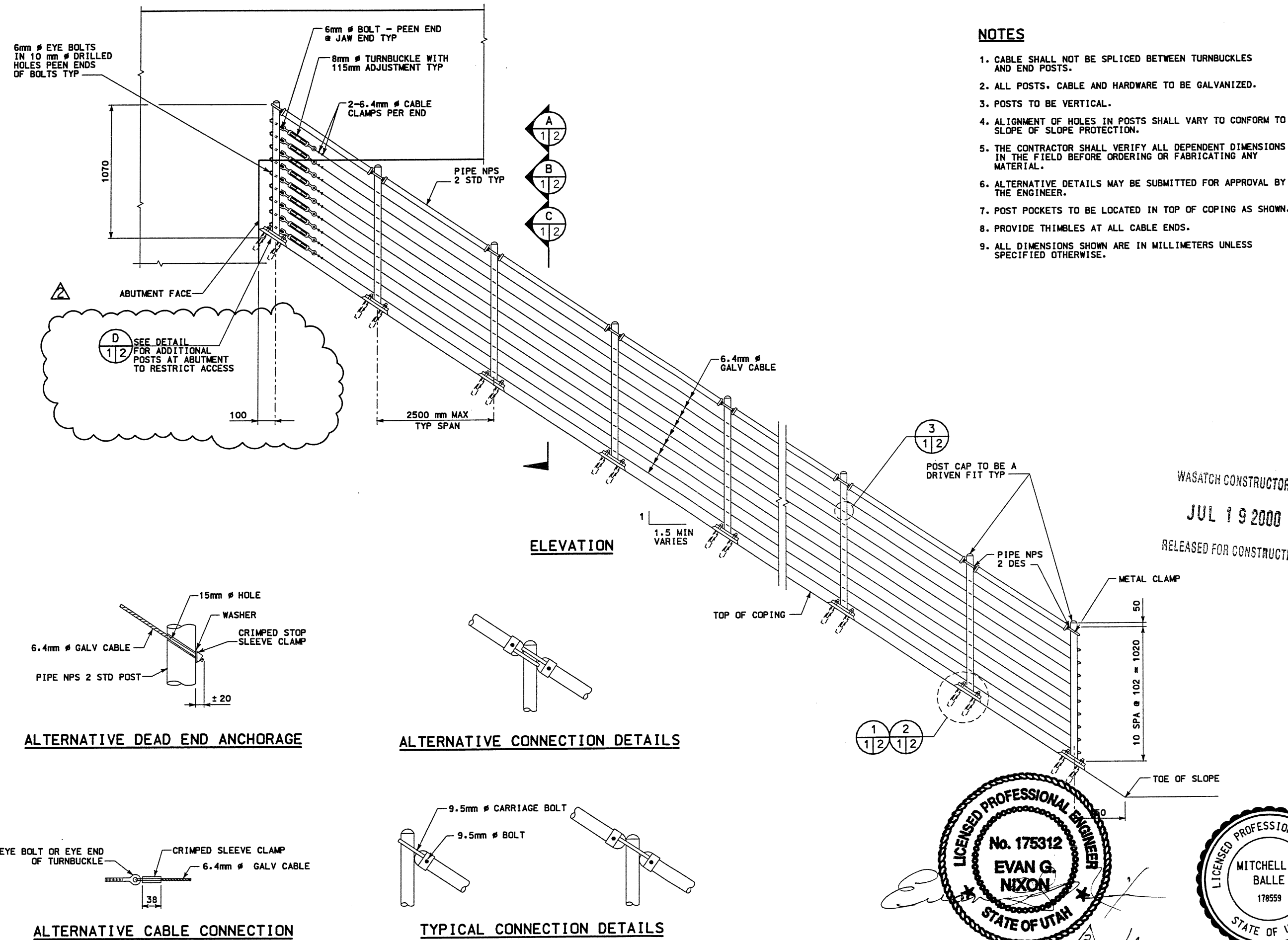
**NOTES:**

1. ESTIMATED QUANTITIES FOR CONCRETE FLATWORK ARE CALCULATED ON TANGENT SECTION. IN ALL CASES LENGTH OF GORE PAVING WILL BE CARRIED AHEAD UNTIL THE DISTANCE BETWEEN PAVING IS 3.9m.
2. SLOPE MAY VARY TO MEET DESIGN CONDITIONS ON RAMP AND MAINLINE. SEE GORE STAKING PLAN OR IF INDICATED ON PLAN USE DETAIL B-B ON CS-62.1 AND GRADE TO DRAIN - ADJUST FOR FIELD CONDITIONS.
3. NO INDIVIDUAL SLAB SHALL HAVE A DIMENSION LARGER THAN 4.5m IN WIDTH OR LENGTH.
4. MINIMUM SLAB WIDTH IS 1.2m.
5. TIE GORE PAVING ON PRINCIPAL ROADWAY SIDE ONLY @ 750 SPACING.
6. DOWELS SHALL BE PLACED IN SHOULDER AND RAMP TAPER AREA FROM BEGIN RAMP TAPER POINT TO BEGINNING OF INSIDE RAMP SHOULDER. SEE SPACING DETAIL.
7. TIE BARS SHALL BE PLACED @ 375 SPACING IN SHOULDER JOINT AND RAMP JOINT FROM BEGIN RAMP TAPER POINT TO BEGINNING OF INSIDE SHOULDER RAMP JOINT.
8. FOR ALL OTHER DETAILS ON JOINTING SEE CS-76.
9. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.

WASATCH CONSTRUCTORS  
 DEC 07 1998  
 RELEASED FOR CONSTRUCTION

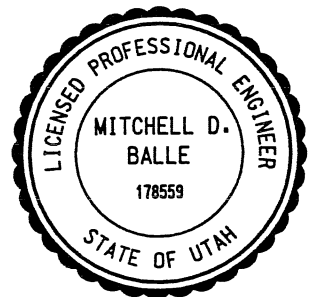
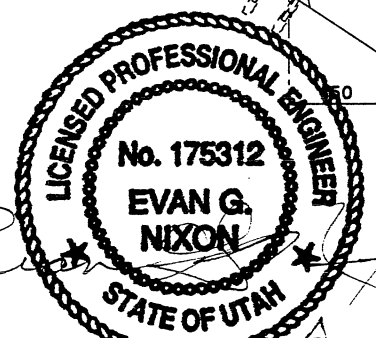
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UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		DESIGN	CHECK
NO.	DATE	NO.	DATE
1	11/7/98	1	11/7/98
PROJECT #SP-15-7(135)296		SECTION MANAGER	
I-15 CORRIDOR RECONSTRUCTION		PAVEMENT JOINTING PLAN	
CORRIDOR STANDARD PLAN		CORRIDOR STANDARD PLAN	
SALT LAKE COUNTY		Dwg. No. CS-62-5	
SHT. 9		9	

Date: 17-NOV-1998 Time: 09:44 User: noma1ramptrfd  
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- NOTES**
1. CABLE SHALL NOT BE SPLICED BETWEEN TURNBUCKLES AND END POSTS.
  2. ALL POSTS, CABLE AND HARDWARE TO BE GALVANIZED.
  3. POSTS TO BE VERTICAL.
  4. ALIGNMENT OF HOLES IN POSTS SHALL VARY TO CONFORM TO SLOPE OF SLOPE PROTECTION.
  5. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.
  6. ALTERNATIVE DETAILS MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
  7. POST POCKETS TO BE LOCATED IN TOP OF COPING AS SHOWN.
  8. PROVIDE THIMBLES AT ALL CABLE ENDS.
  9. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.

WASATCH CONSTRUCTORS  
 JUL 19 2000  
 RELEASED FOR CONSTRUCTION



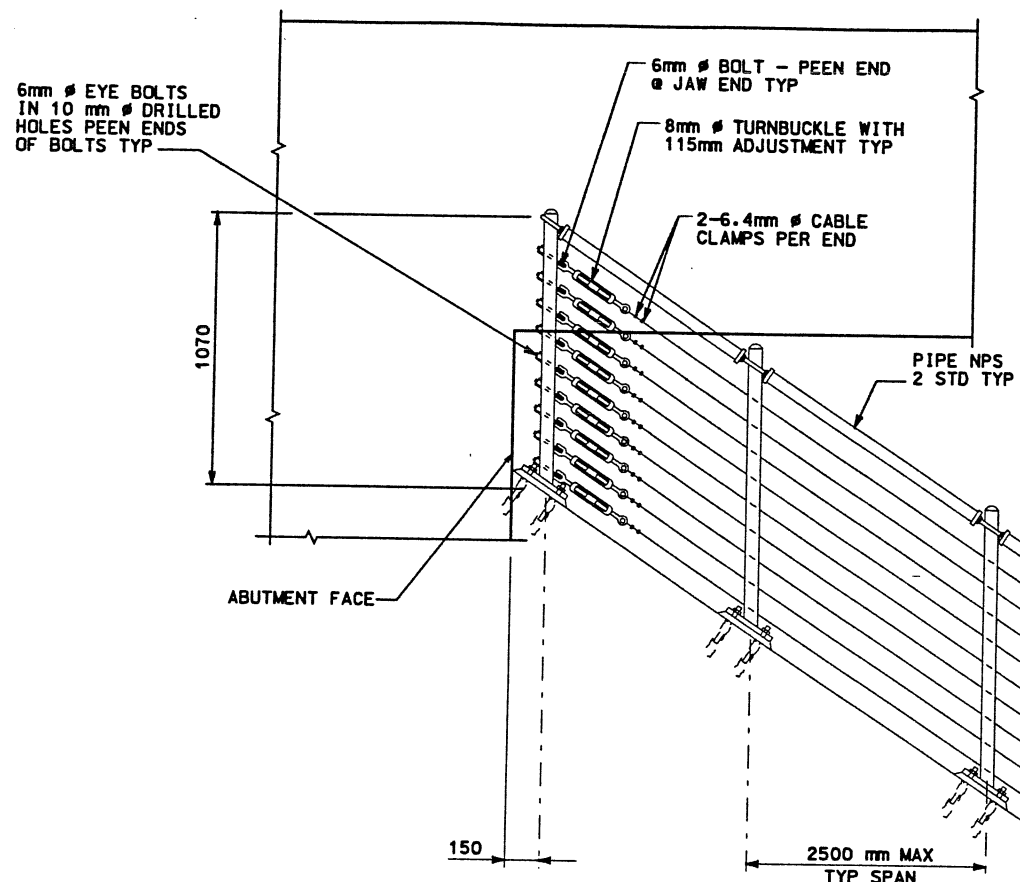
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APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
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UTAH DEPARTMENT OF TRANSPORTATION		UTAH DEPARTMENT OF TRANSPORTATION	
DE LEUW CATHER SVERDRUP/DE LEUW		DESIGN MJS 08/12/98 CHECK MB 08/12/98	
PROJECT DESIGN ENGINEER		DRAWN DKC 12/09/97 CHECK MB 08/12/98	
QUANT.		QUANT.	
SECTION MANAGER		SECTION MANAGER	
1-15 CORRIDOR RECONSTRUCTION		CABLE RAILING	
CORRIDOR STANDARD		CORRIDOR STANDARD	
PROJECT NUMBER #SP-15-7(135)296		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		SALT LAKE COUNTY	
DWG. NO. CS-63-1		DWG. NO. CS-63-1	
SHT. OF		SHT. OF	

PTC After Final Approval

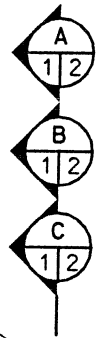
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**NOTES**

1. CABLE SHALL NOT BE SPLICED BETWEEN TURNBUCKLES AND END POSTS.
2. ALL POSTS, CABLE AND HARDWARE TO BE GALVANIZED.
3. POSTS TO BE VERTICAL.
4. ALIGNMENT OF HOLES IN POSTS SHALL VARY TO CONFORM TO SLOPE OF SLOPE PROTECTION.
5. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.
6. ALTERNATIVE DETAILS MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
7. POST POCKETS TO BE LOCATED IN TOP OF COPING AS SHOWN.
8. PROVIDE THIMBLES AT ALL CABLE ENDS.
9. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.

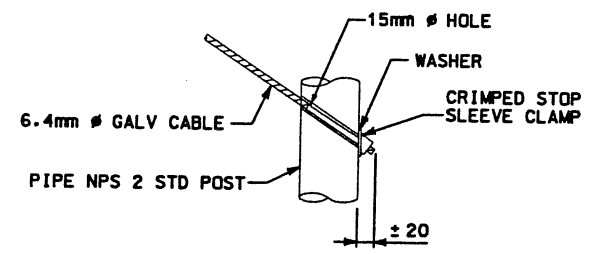


**ELEVATION**

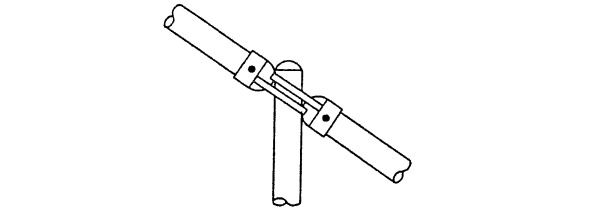
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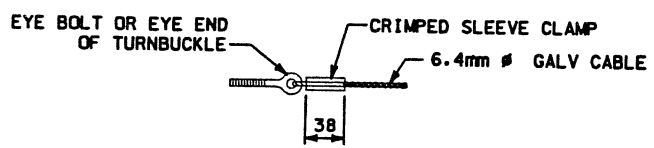
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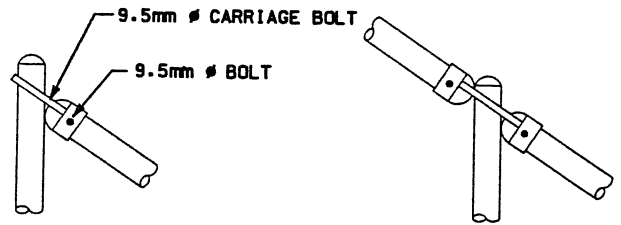
**ALTERNATIVE DEAD END ANCHORAGE**



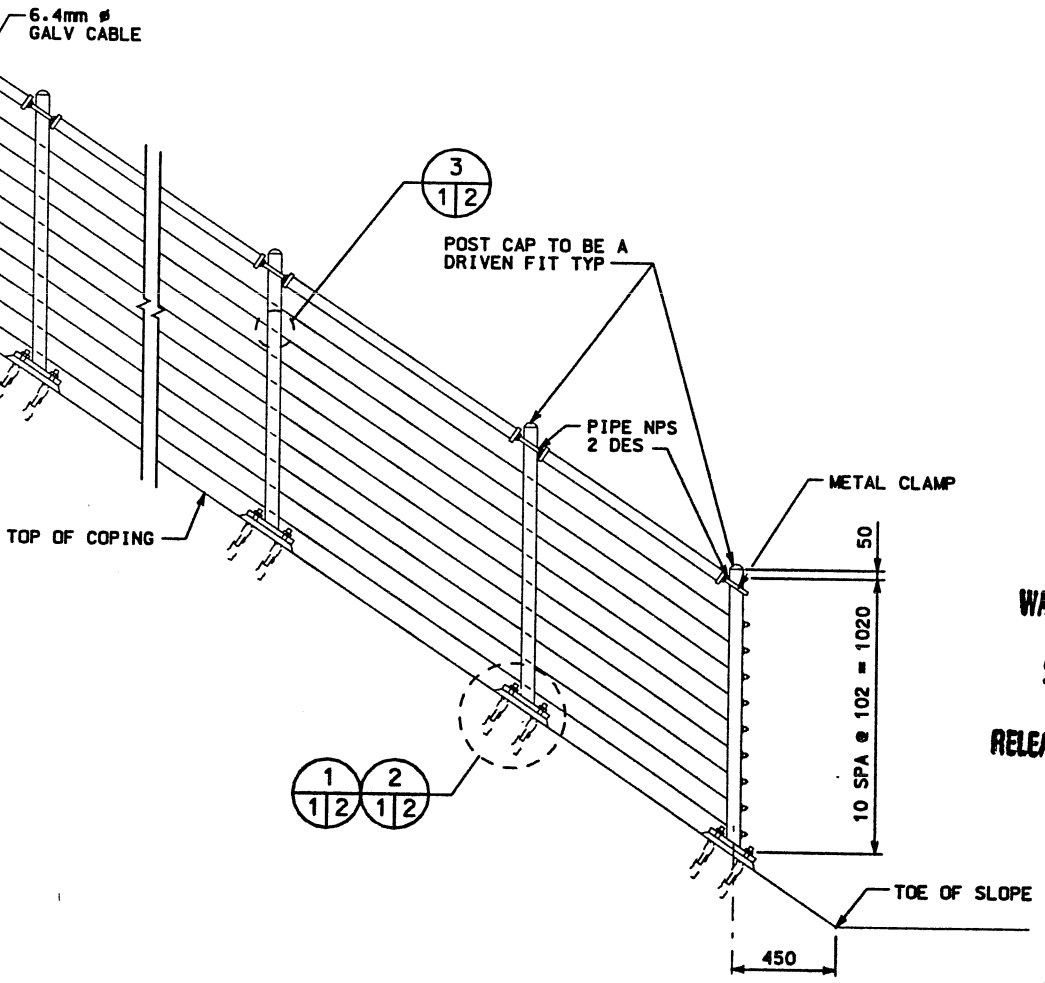
**ALTERNATIVE CONNECTION DETAILS**



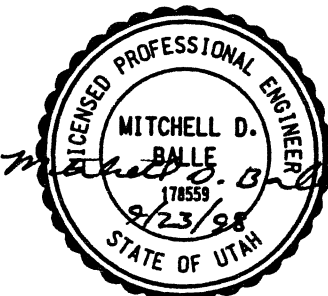
**ALTERNATIVE CABLE CONNECTION**



**TYPICAL CONNECTION DETAILS**



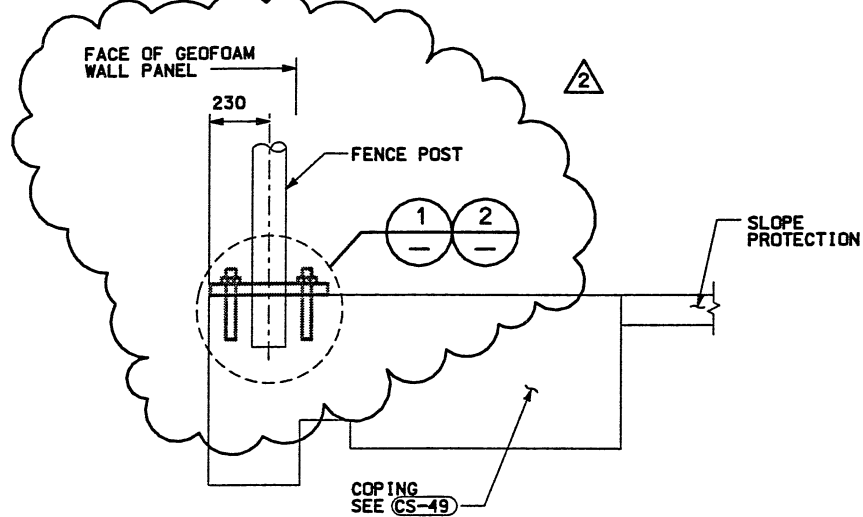
**WASATCH CONSTRUCTORS**  
**SEP 24 1998**  
**RELEASED FOR CONSTRUCTION**



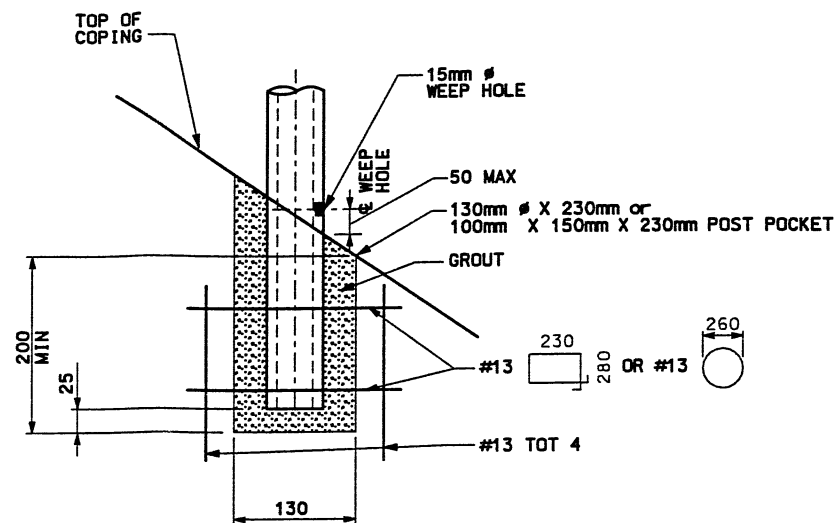
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APPROVAL RECORD	DATE	DESIGN	CHECK
09/98	MITCHELL BALLE	MJS 08/12/98	MB 08/12/98
DATE	PROJECT DESIGN ENGINEER	DRAWN	CHECK
09/98	STAN POLASIK	DKC 12/09/97	MB 08/12/98
DATE	SECTION MANAGER	QUANT.	CHECK
I-15 CORRIDOR RECONSTRUCTION		CABLE RAILING	
CORRIDOR STANDARD		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. CS-63-1	
SHT. OF			

Date: 30 JUN 2000 Time: 10:09:26 Username: tuser@utah.gov

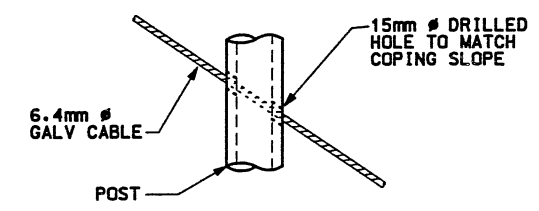
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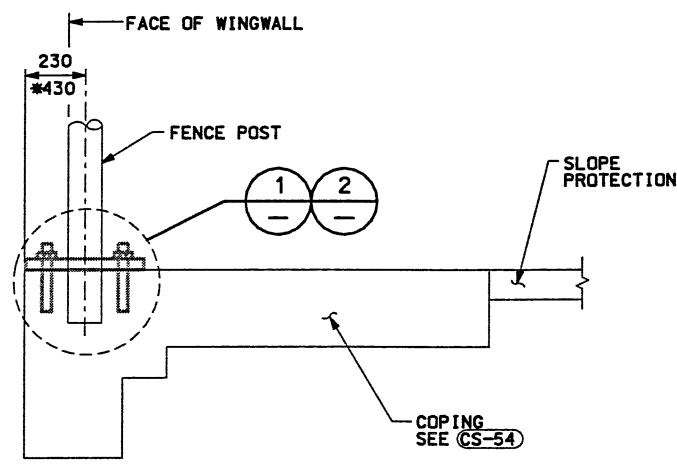
SECTION AT GEOFOAM WALL PANEL **A**  
1/2



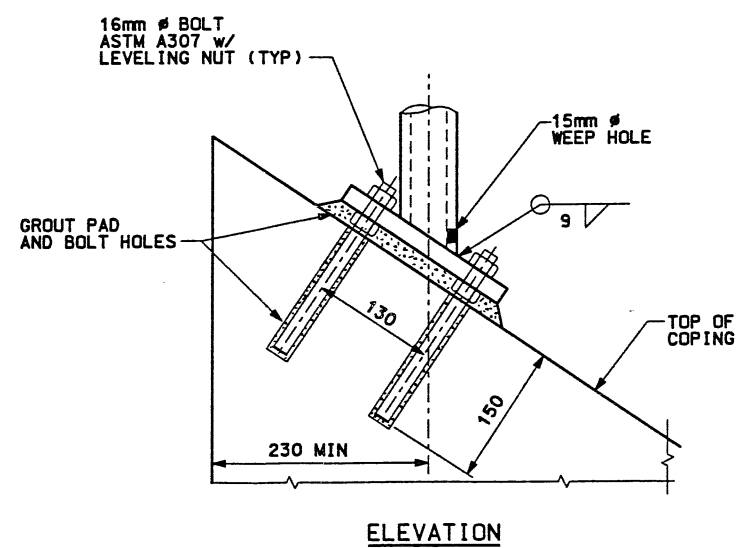
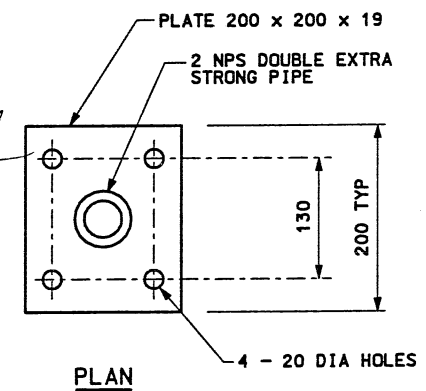
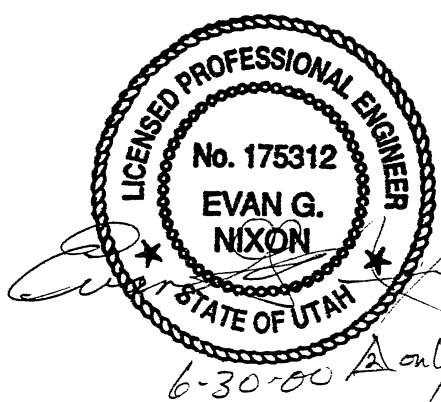
ANCHORAGE DETAIL **1**  
1/2



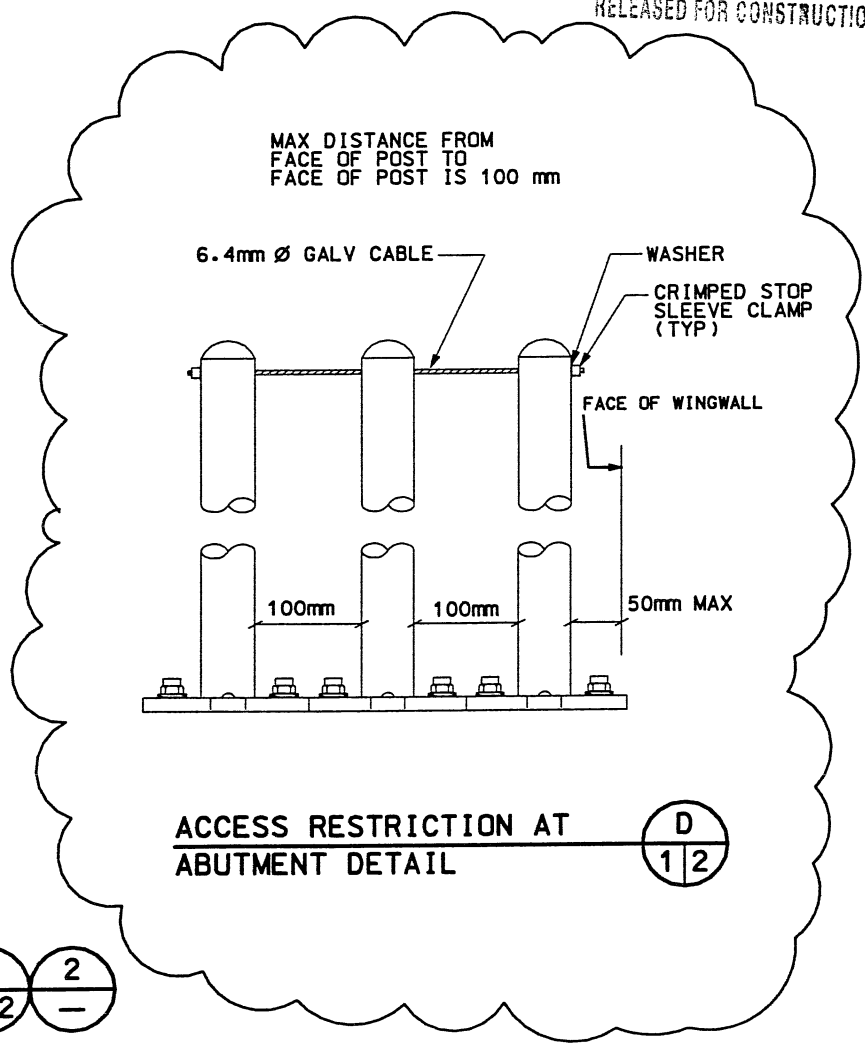
CABLE-POST DETAIL **3**  
1/2



SECTION AT MSE SINGLE STAGE WALL PANEL **B**  
\* DIMENSION WHEN TRANSITION ELEMENT IS USED  
1/2



ALTERNATE ANCHORAGE DETAIL **2**  
1/2

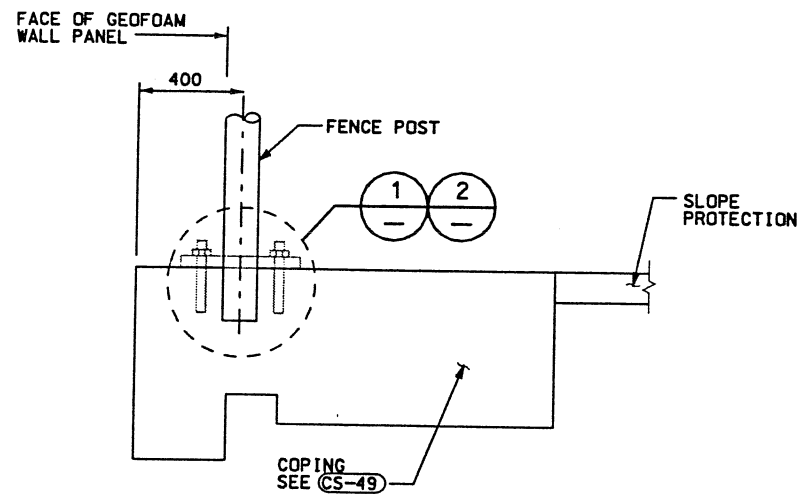


ACCESS RESTRICTION AT ABUTMENT DETAIL **D**  
1/2

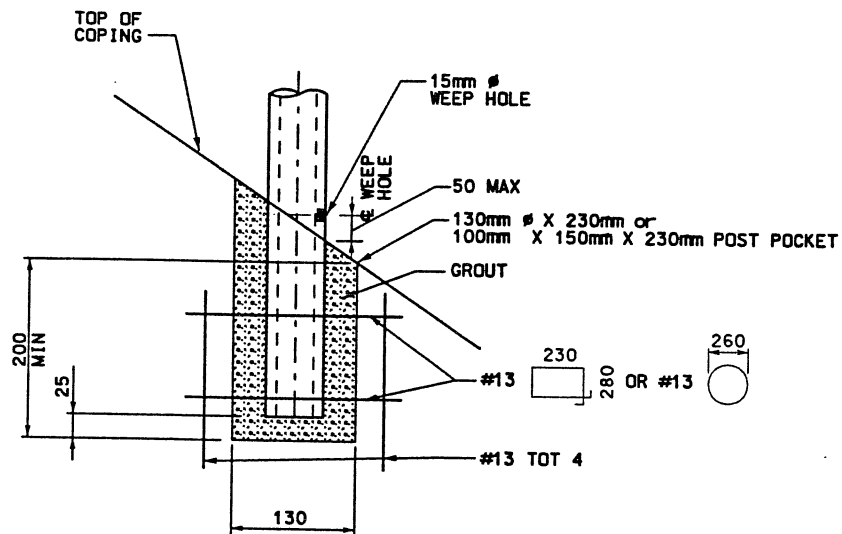
WASATCH CONSTRUCTORS  
JUL 19 2000  
RELEASED FOR CONSTRUCTION

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UTAH DEPARTMENT OF TRANSPORTATION		DESIGNER: MJS 08/12/98	
DE LEUW CATHER SVERDRUP/DE LEUW		CHECK: MB 08/12/98	
PROJECT DESIGN ENGINEER		DRAWN: DKC 12/06/97	
MITCHELL BALLE		SECTION MANAGER	
DATE: 09/98		DATE: 09/98	
PROJECT NUMBER: *SP-15-7(135)296		QUANT.	
CORRIDOR STANDARD		SALT LAKE COUNTY	
CABLE RAILING		DWG. NO. CS-63-2	
I-15 CORRIDOR RECONSTRUCTION		SHT. OF	

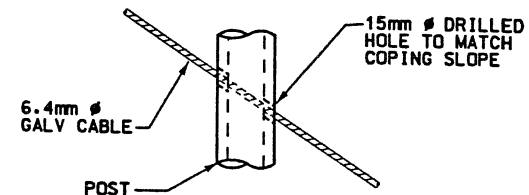
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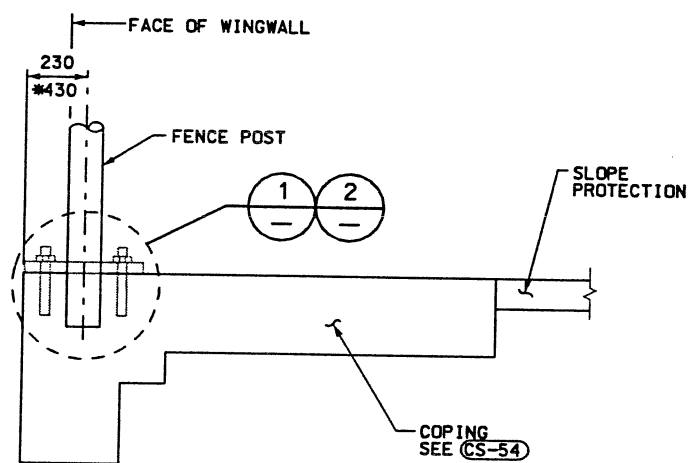
SECTION AT GEOFOAM WALL PANEL **A**  
1/2



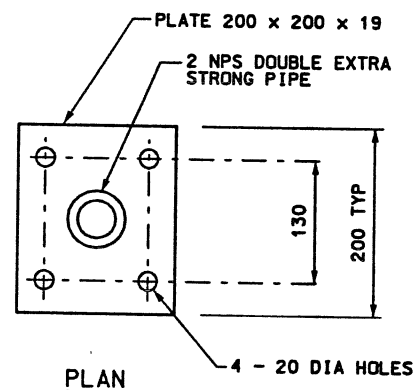
ANCHORAGE DETAIL **1**  
1/2



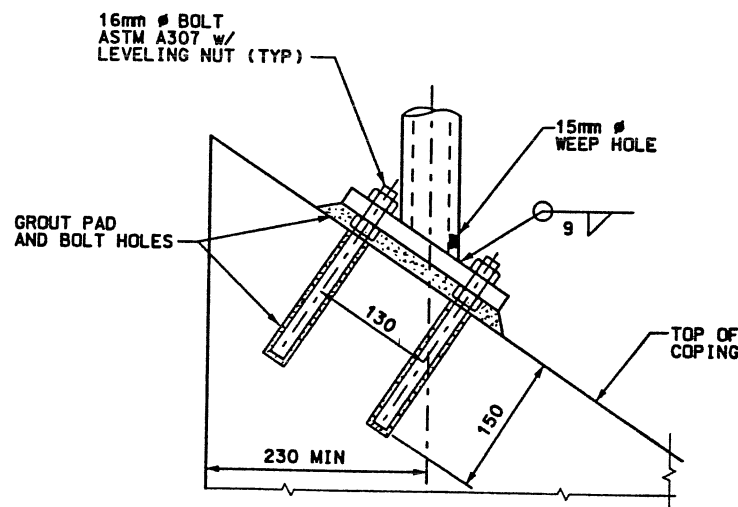
CABLE-POST DETAIL **3**  
1/2



SECTION AT MSE SINGLE STAGE WALL PANEL **B**  
\* DIMENSION WHEN TRANSITION ELEMENT IS USED  
1/2

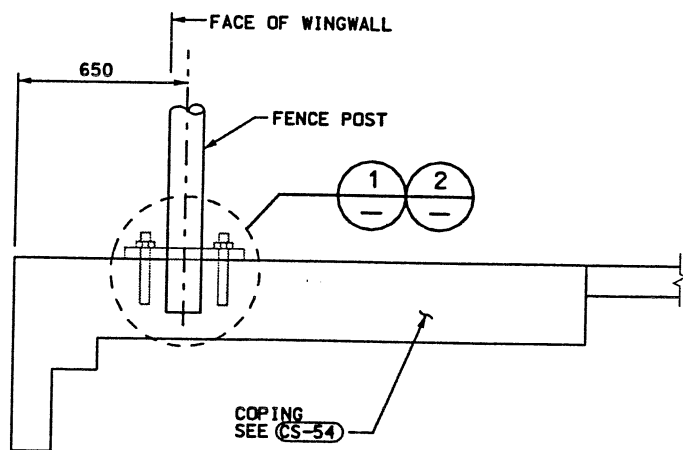


PLAN



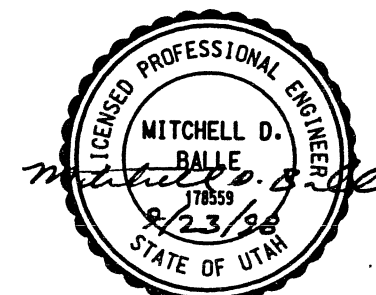
ELEVATION

ALTERNATE ANCHORAGE DETAIL **2**  
1/2



SECTION AT MSE TWO STAGE WALL PANEL **C**  
1/2

WASATCH CONSTRUCTORS  
SEP 24 1998  
RELEASED FOR CONSTRUCTION

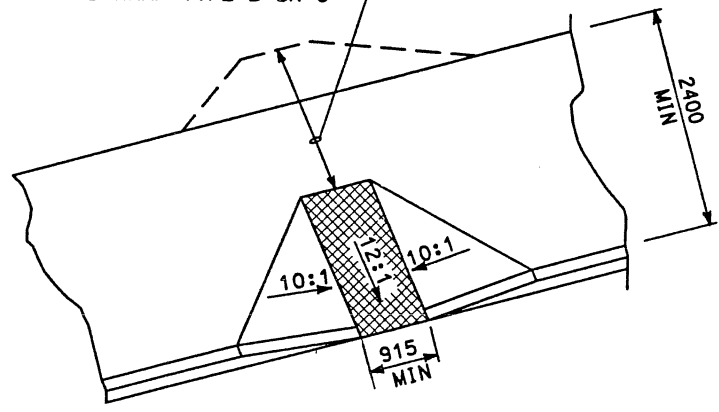


APPROVED FOR CONSTRUCTION		DESCRIPTION	
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DE LEUW CATHER SVERDRUP/DE LEUW			
DESIGN	MB	08/12/98	CHECK
DRAWN	DKC	12/09/97	CHECK
PROJECT DESIGN ENGINEER	SECTION MANAGER		
MITCHELL BALLE	STAN POLASIK		
DATE	DATE		
09/08	09/08		
APPROVAL RECORD	PROJECT NUMBER	#SP-15-7(135)296	
I-15 CORRIDOR RECONSTRUCTION		SALT LAKE COUNTY	
CABLE RAILING		DWG. NO. CS-63-2	
CORRIDOR STANDARD		SHT. OF	

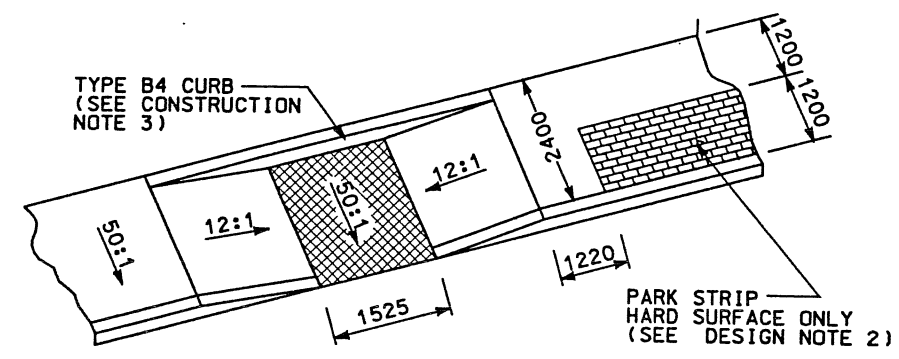


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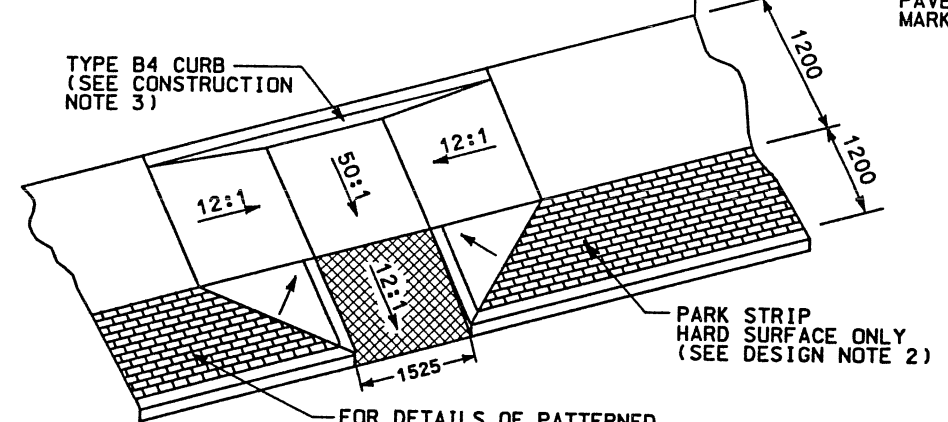
LANDING 1200 MIN.  
WHEN LANDING IS  
LESS THAN 1200, USE  
CURB RAMP TYPE B OR C



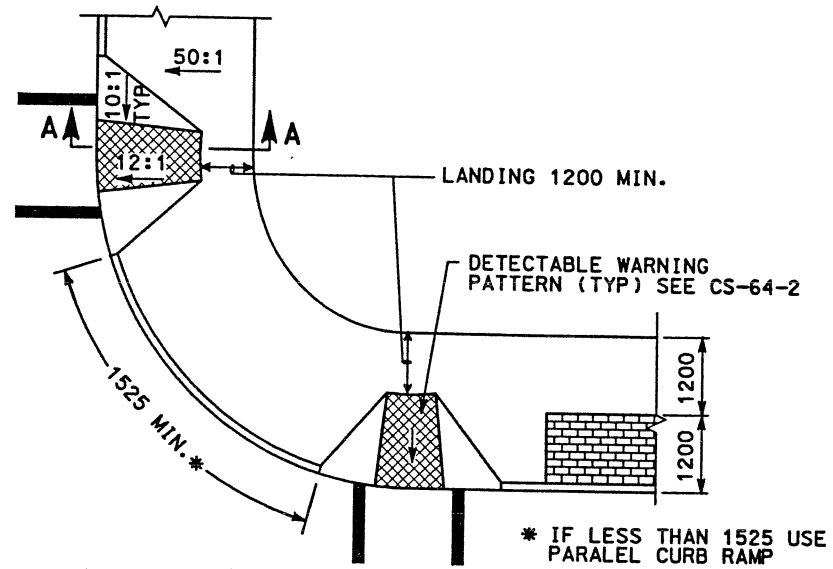
**SIDEWALK CURB RAMP  
TYPE A** NTS



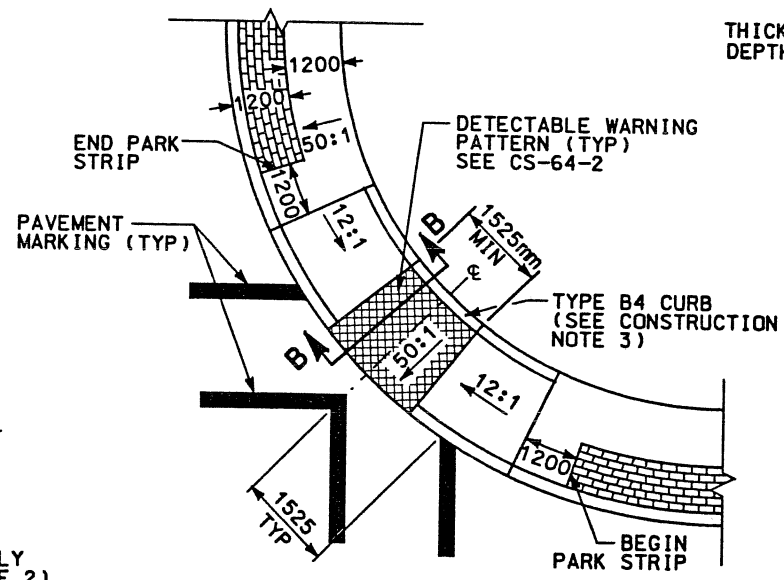
**SIDEWALK CURB RAMP  
TYPE B** NTS



**SIDEWALK CURB RAMP  
TYPE C** NTS



**CURB RAMP AT MARKED CROSSING  
CLASS I INSTALLATION** NTS



**CURB RAMP AT MARKED CROSSING  
CLASS II INSTALLATION** NTS

**DESIGN NOTES:**

1. DIMENSIONS AND SLOPES SHOWN ARE MINIMUM REQUIRED. LARGER DIMENSION OR FLATTER SLOPES MAY BE USED IF SITUATION WARRANTS.
2. IF PARK STRIP IS NOT A HARD SURFACE EASILY TRAVERSED BY WHEELCHAIR, THE SIDEWALK WIDTH MUST BE INCREASED TO 1525 OR "PASSING AREAS" A MINIMUM OF 1525 BY 1525 MUST BE PROVIDED.

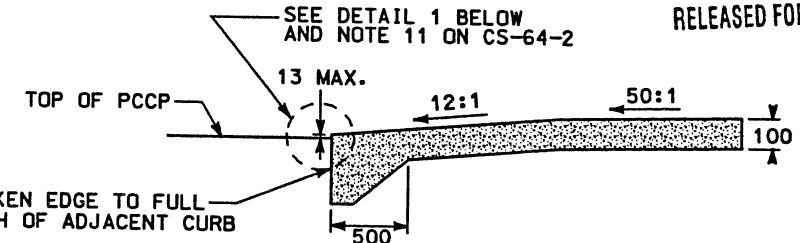
**CONSTRUCTION NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
2. SEE SHEET CS-64-2 FOR ADDITIONAL NOTES.
3. CONTRACTOR HAS OPTION OF CASTING A CURB SECTION MONOLITHICALLY WITH SIDEWALK SECTION AND OMITTING UDOT TYPE B4 CURB.
4. FOR SIDEWALK RAMPS AT SPU INTERCHANGES, SEE CS-65-2.
5. FOR LOCATION OF CURB RAMPS SEE CROSS ROAD PLANS AND DETAILS.
6. THIS DRAWING SUPERCEDES UDOT STANDARD 715-2A.

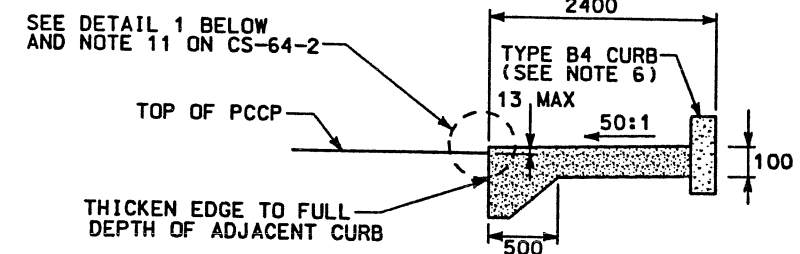
WASATCH CONSTRUCTORS

OCT 07 1998

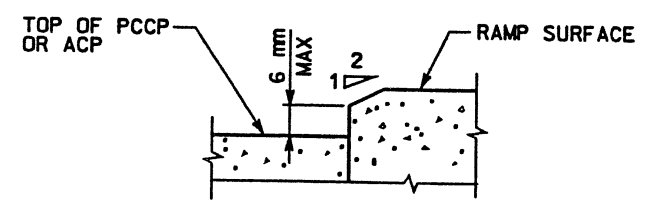
RELEASED FOR CONSTRUCTION



**SECTION A-A**  
NTS



**SECTION B-B**  
NTS

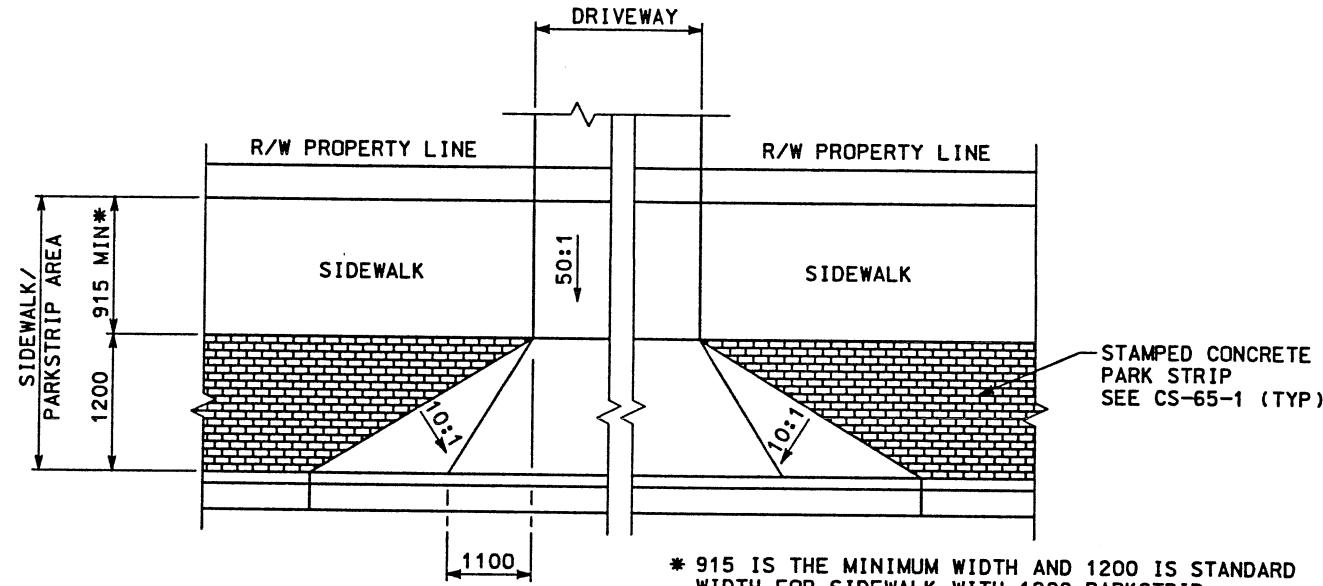


**DETAIL 1  
BEVELED EDGE AT SIDEWALK FOR 6-13mm**  
NTS



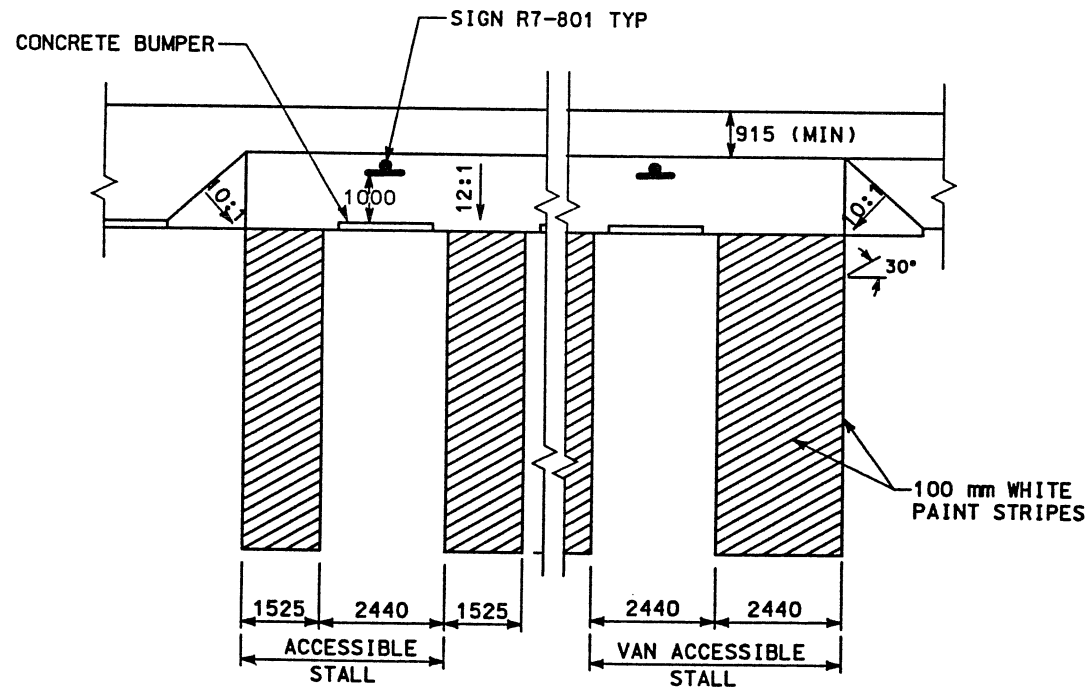
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UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		DESIGN	CHECK
LT	10/9/98	MSC	10/9/98
DR	10/9/98	MM	10/9/98
QUANT.	10/9/98	MANAGER	CHECK
APPROVAL		DATE	DATE
RECON.	10/6/98	LOLENE TERRY	PROJECT DESIGN ENGINEER
APPROVED	10/6/98	JOHN TERRY	SECTION MANAGER
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
TYPICAL CURB RAMP DETAILS		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. CS-64-1	
SHT. _____		OF _____	

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 Date: 06-OCT-1998 Time: 08:59 User name: f.ramp.trd



\* 915 IS THE MINIMUM WIDTH AND 1200 IS STANDARD WIDTH FOR SIDEWALK WITH 1200 PARKSTRIP. USE 915 ONLY IF REQUIRED TO MATCH DRIVEWAY.

**ACCESSIBLE SIDEWALK ACROSS FLARED DRIVEWAY PLAN**  
NTS



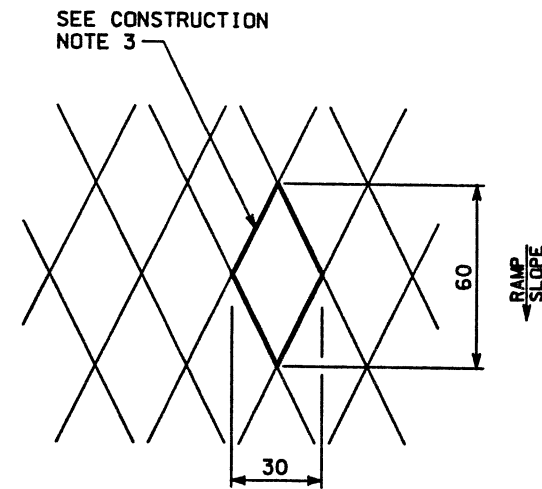
**ACCESSIBLE PARKING DETAIL**  
NTS

**DESIGN NOTES:**

1. A MINIMUM OF 915 MM WIDE ACCESSIBLE ROUTE SHALL BE MAINTAINED IN ALL PEDESTRIAN ACCESSIBLE AREAS.
2. PUBLIC SIDEWALKS LESS THAN 1525 MM IN CONTINUOUS WIDTH SHALL PROVIDE PASSING SPACE "1525 MM BY 1525 MM" AT REASONABLE INTERVALS NOT TO EXCEED 61 M. THE PARK STRIP MAY BE CONSIDERED PART OF SIDEWALK WIDTH AS LONG AS IT IS A HARD SURFACE EASILY TRAVERSED BY WHEELCHAIR.
3. PUBLIC SIDEWALK CROSS SLOPE SHALL NOT EXCEED 1:50.
4. SINGLE SIDEWALK CURB RAMPS SERVING TWO STREET CROSSING DIRECTIONS ARE NOT PERMITTED IN NEW CONSTRUCTION, UNLESS MEETING THE REQUIREMENTS OF CLASS II INSTALLATION SHOWN ON CS-64-1.
5. IF RIGHT OF WAY DOES NOT ACCOMMODATE A PERPENDICULAR TYPE SIDEWALK CURB RAMP, A PARALLEL TYPE OR, A COMBINED TYPE SIDEWALK CURB RAMP MAY BE PROVIDED.
6. AT MARKED CROSSINGS, THE BOTTOM OF THE RAMP RUN, EXCLUSIVE OF FLARED SIDES SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS.
7. GRATINGS AND SIMILAR ACCESS COVERS SHALL NOT BE LOCATED ON SIDEWALK CURB RAMPS.
8. INLETS SHALL BE LOCATED OUTSIDE ACCESS LIMITS OF CURB RAMPS. RUNOFF SHALL BE MINIMIZED PAST CURB RAMP TO MINIMIZE ADVERSE CONDITIONS FOR PEDESTRIANS.
9. CHANGES IN LEVEL UP TO 6 MM MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 6 MM AND 13 MM SHALL BE BEVELED WITH A SLOPE NO STEEPER THAN 1:2.
10. PARKING SPACES AND ACCESSIBLE AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50.
11. SEE UDOT STANDARD DRAWING 715-1A AND 715-2A FOR CURB & SIDEWALK AND DRIVEWAYS FOR ALL OTHER DETAILS NOT SHOWN.

**CONSTRUCTION NOTES:**

1. THE SURFACE OF SIDEWALK CURB RAMP SHALL RECEIVE A TRANSVERSE BROOM FINISH.
2. MOUNTING HEIGHT FOR SIGN R7-801 SHALL BE 1200 MM TO BOTTOM OF SIGN.
3. PROVIDE DETECTABLE WARNING AREA ON THE SECTION OF RAMP ADJACENT TO THE GUTTER. TEXTURE MAY BE ACHIEVED BY IMPRESSING AND REMOVING EXPANDED METAL REGULAR INDUSTRIAL MESH INTO THE SURFACE OF THE RAMP WHILE THE CONCRETE IS IN PLASTIC STATE. (SEE FIG. A).
4. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
5. THIS DRAWING SUPERCEDES UDOT STANDARD 715-2A.



**DETECTABLE WARNING AREA**  
FIGURE A

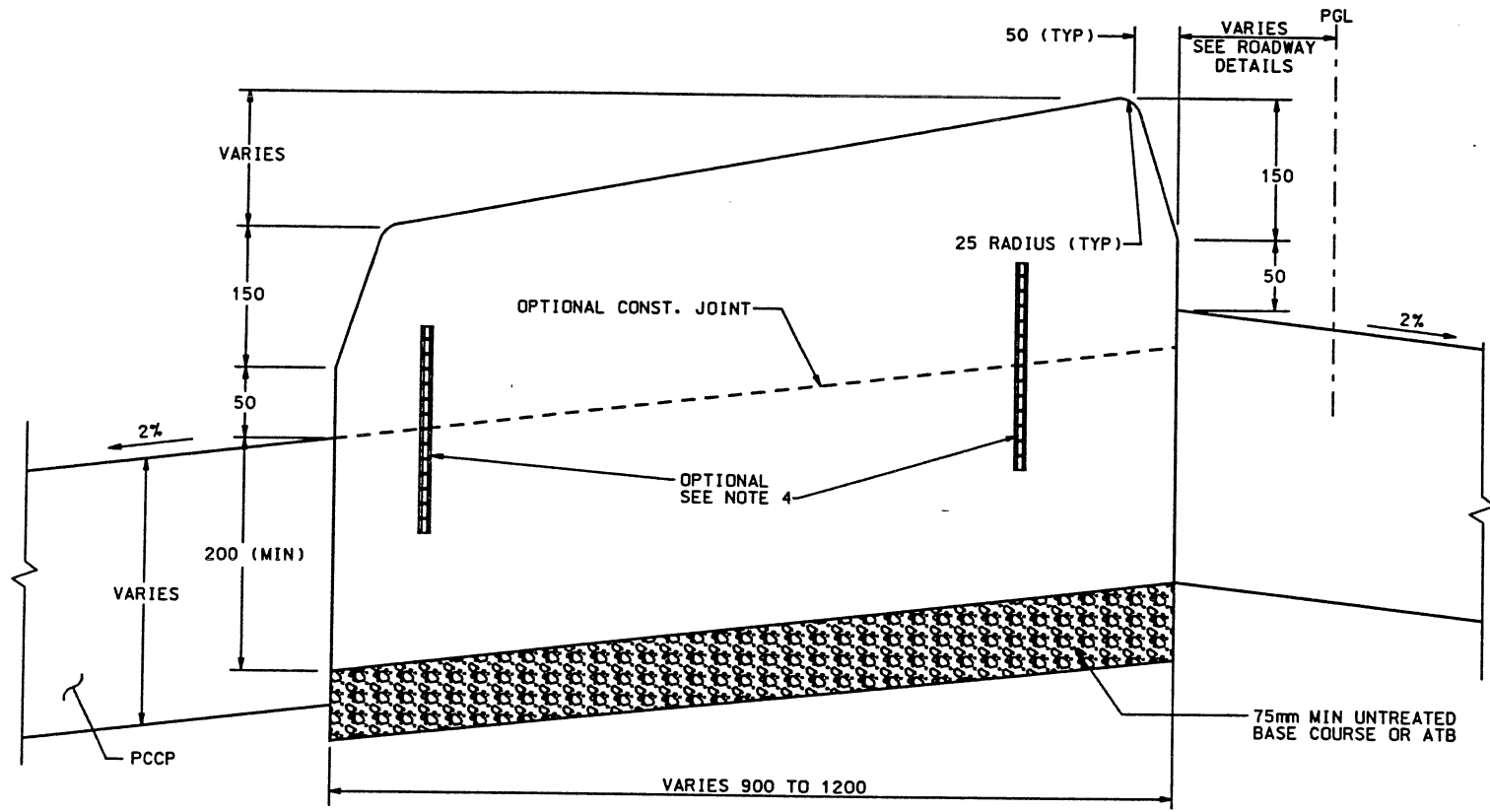
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 OCT 07 1998  
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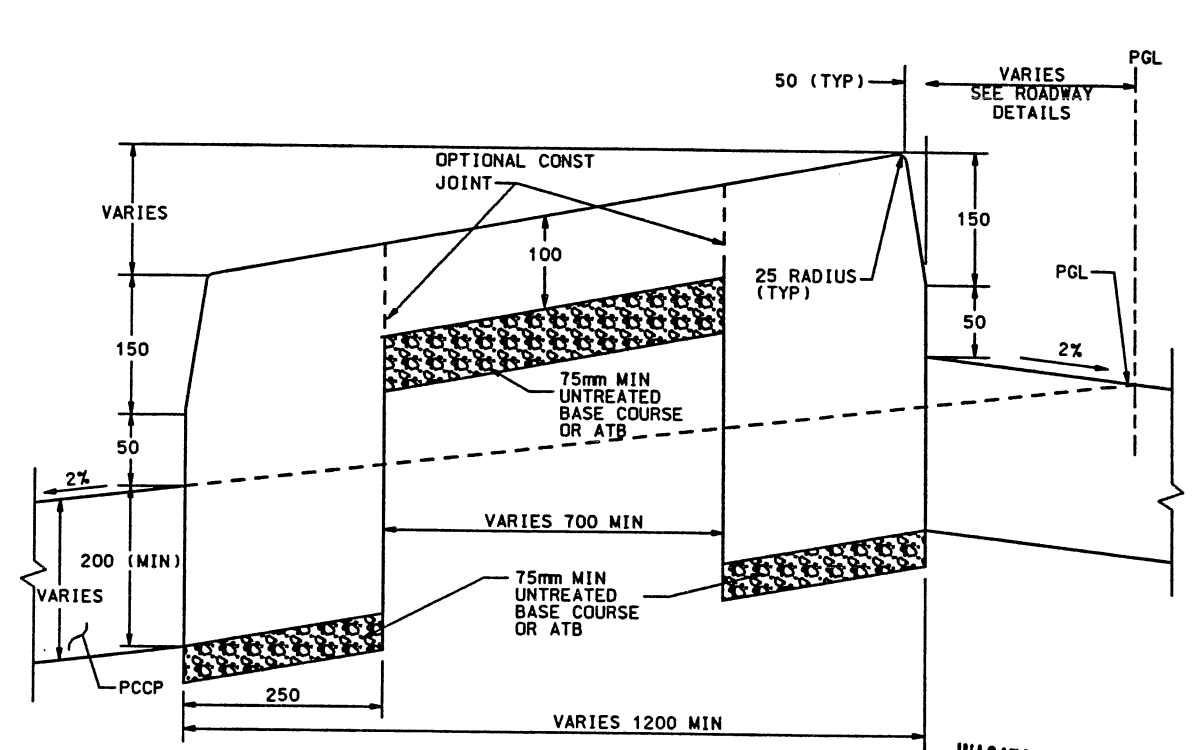
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UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		DESIGN LT	CHECK
1-15 CORRIDOR RECONSTRUCTION		10/6/98	10/98
TYPICAL CURB RAMP DETAILS		CHECK	10/98
CORRIDOR STANDARD PLAN		10/6/98	10/98
PROJECT NUMBER #SP-15-7(135)296		DRAWN	CHECK
SALT LAKE COUNTY		MM	MM
DWG. NO. CS-64-2		QUANT.	N/A
SHT. _____ OF _____		APPROVAL REGIONAL	DATE
		10/6/98	10/6/98
		LOLWEN TERRY	PROJECT DESIGN ENGINEER
		JOHN TERRY	SECTION MANAGER

Doc: 24-SEP-1998 11:05:54 User: name: jamila000

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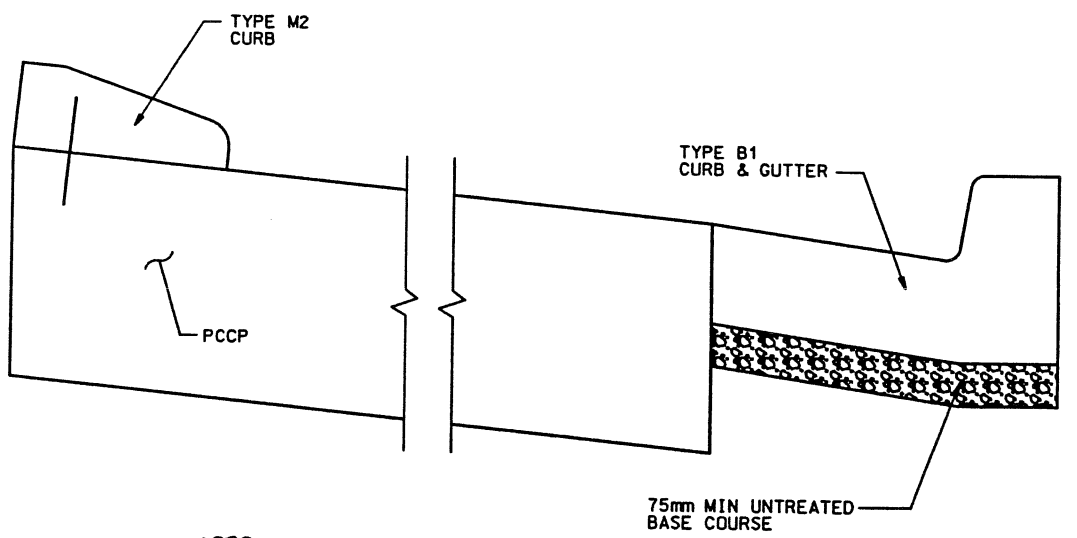


**TYPICAL SECTION RAISED PAVED MEDIAN ISLAND  
NTS**

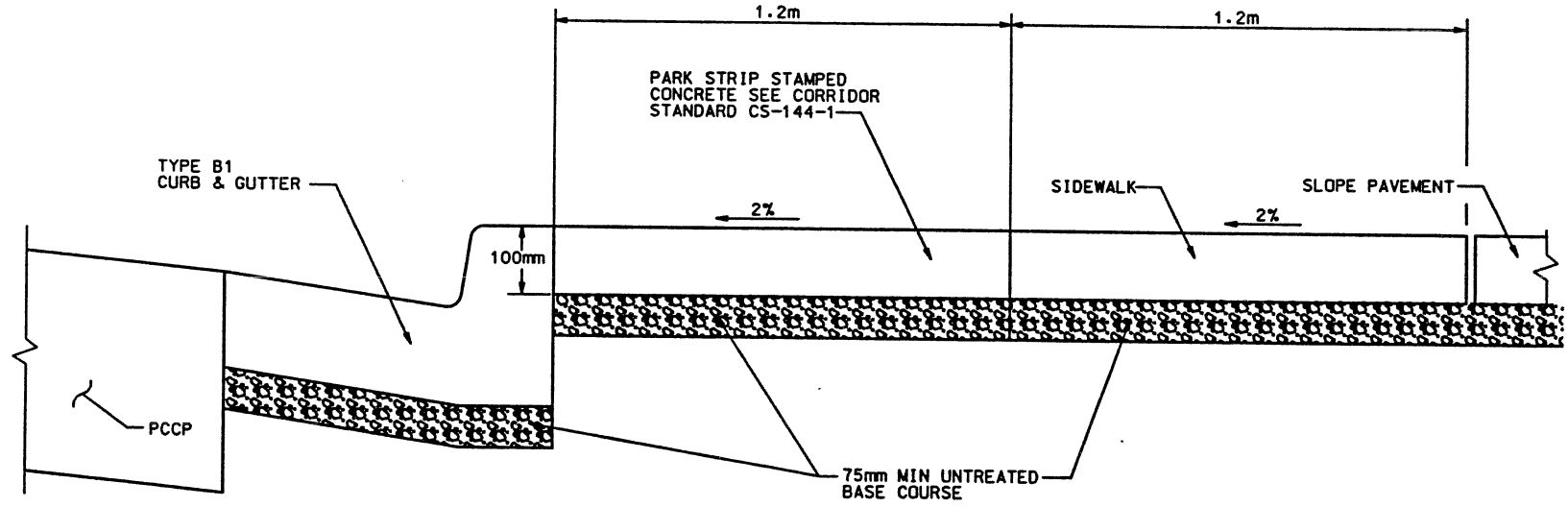


**TYPICAL SECTION RAISED PAVED MEDIAN ISLAND  
NTS**

OPTIONAL CONSTRUCTION FOR MEDIAN WIDTHS GREATER THAN 1200MM

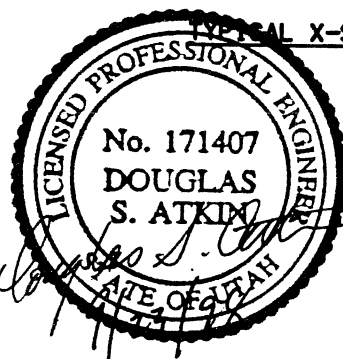


**TYPICAL X-SECTION SPUI RAMP  
NTS**



**TYPICAL X-SECTION CURB, GUTTER & SIDEWALK  
NTS**

- NOTES:**
1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
  2. REFER TO DT DETAIL SHEETS FROM SECTION ROADWAY PLANS FOR STATIONS AND OFFSETS OF RADIUS POINTS.
  3. FOR TYPICAL CURB TYPES M2 & B1 SEE UDOT STANDARD DRAWING 615-1A.
  4. WHEN OPTIONAL CONSTRUCTION JT. IS USED 19mm DEFORMED DOWEL BARS ON 1.5m MAX CENTERS ARE REQUIRED. SEE UDOT STD DWG 615-1A.

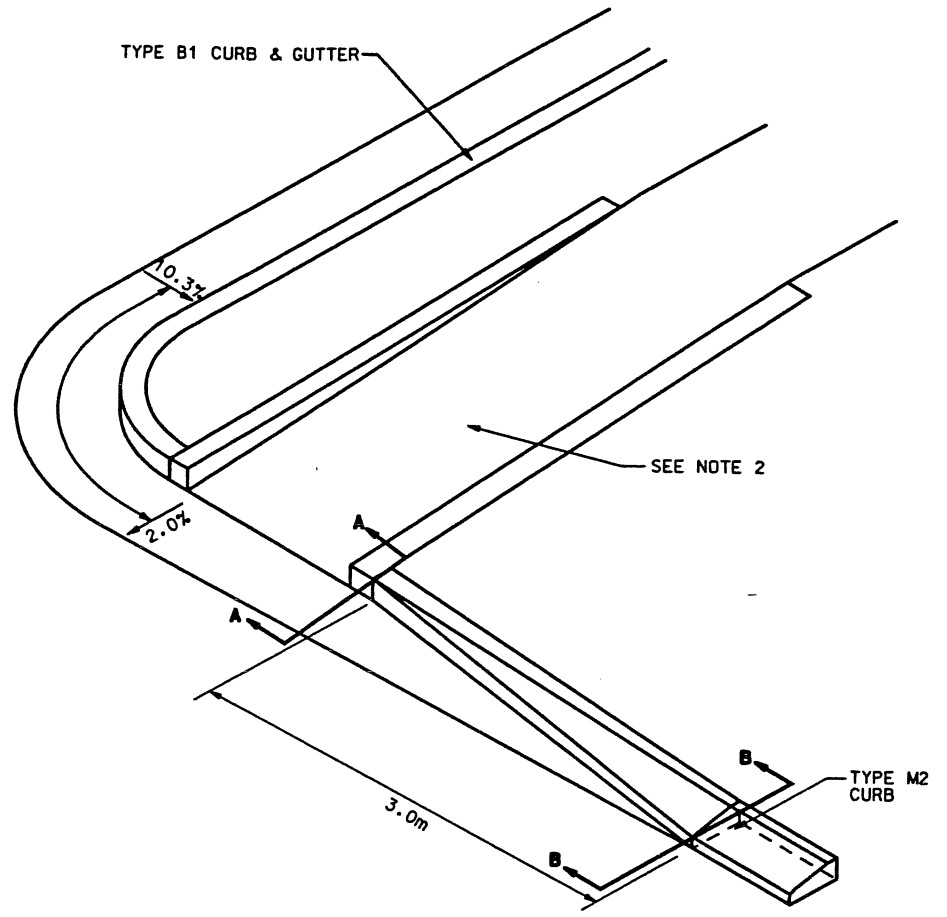


**TYPICAL SPUI DETAILS**

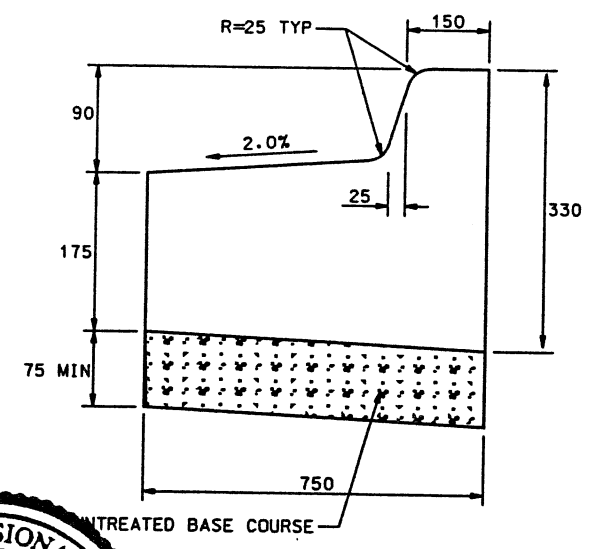
WASATCH CONSTRUCTORS  
SEP 24 1998  
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
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UTAH DEPARTMENT OF TRANSPORTATION			
URS Greiner			
SVERDRUP/DE LEUW			
DESIGN BY	03/98	CHECK BY	03/98
DESIGNER	RICK CHAPMAN	CHECKER	
DATE	03/98	PROJECT DESIGN ENGINEER	
APPROVED	03/98	DATE	03/98
APPROVER		SECTION MANAGER	
I-15 CORRIDOR RECONSTRUCTION			
SPUI ISLAND DETAILS			
CORRIDOR STANDARD PLANS			
PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY			
DWG. NO. CS-65-1			
SHT. OF			

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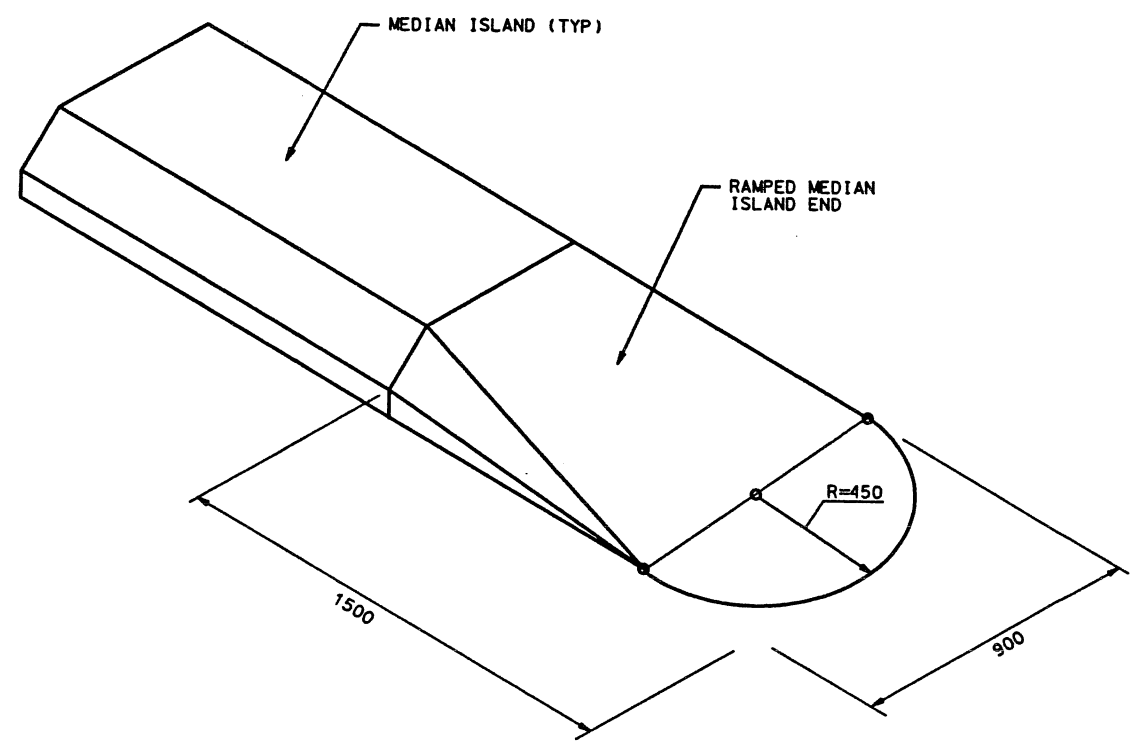
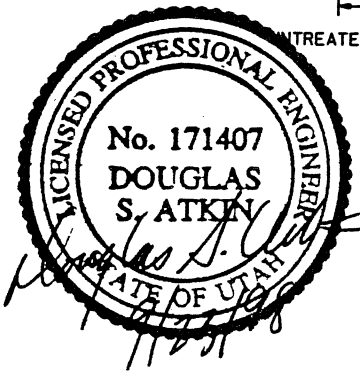


**CURB & GUTTER TRANSITION  
DETAIL**

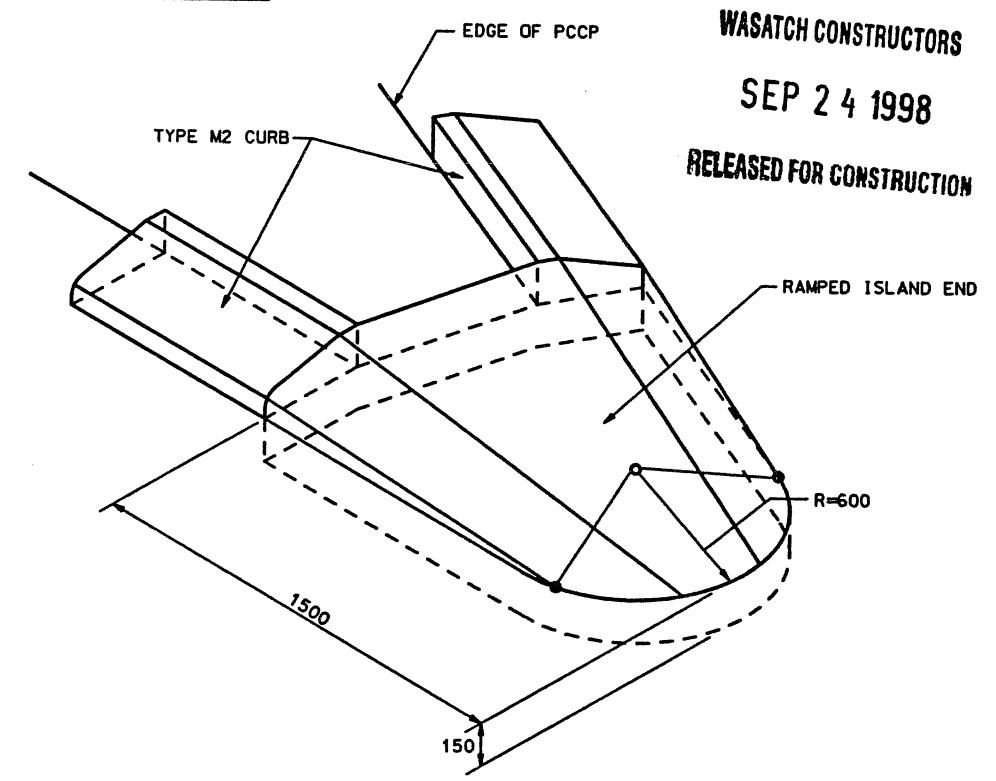


**SECTION A-A**

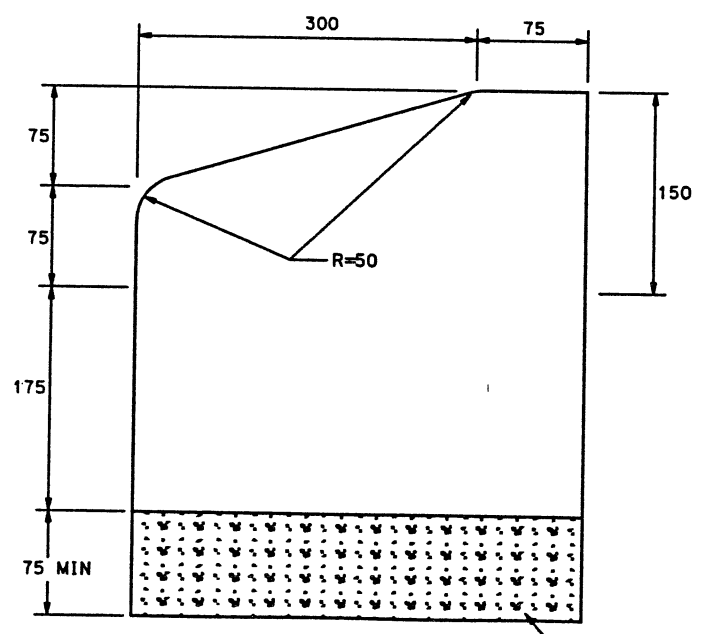
- NOTES:
1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
  2. FOR DISABLED PEDESTRIAN ACCESS SEE UDOT STD. DWG 715-2A TYPE A.
  3. PLACE RAMPED MEDIAN & ISLAND ENDS ON 75mm OF UNTREATED BASE COURSE.
  4. FOR TYPICAL CURB TYPES, SEE UDOT STANDARD DRAWING 615-1A.



**RAMPED MEDIAN ISLAND END  
DETAIL**



**RAMPED ISLAND END  
DETAIL**



**SECTION B-B**

APPROVED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
1	9-31-98	INITIAL RELEASE

UTAH DEPARTMENT OF TRANSPORTATION  
URS Grainer  
SVERDRUP/DE LEUW

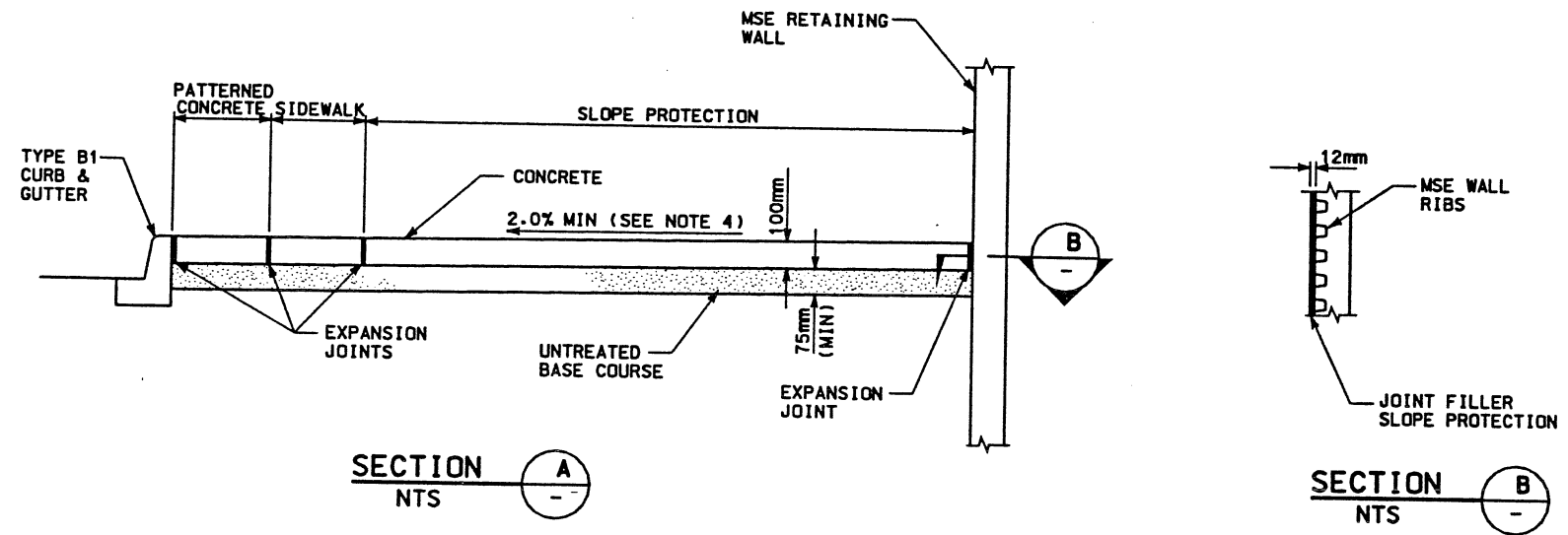
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DESIGN	CHECK	
DRUM	CHECK	
QUANT.	CHECK	

**WASATCH CONSTRUCTORS  
SEP 24 1998  
RELEASED FOR CONSTRUCTION**

I-15 CORRIDOR RECONSTRUCTION  
SPUI ISLAND DETAILS  
CORRIDOR STANDARD PLANS  
PROJECT NUMBER #SP-15-7(135)296

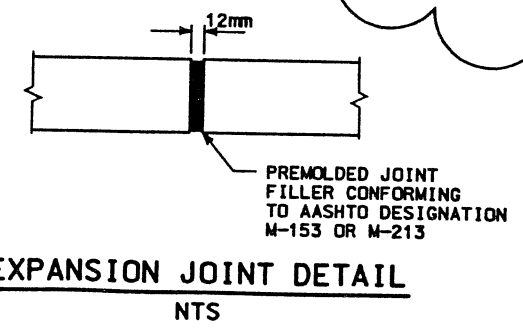
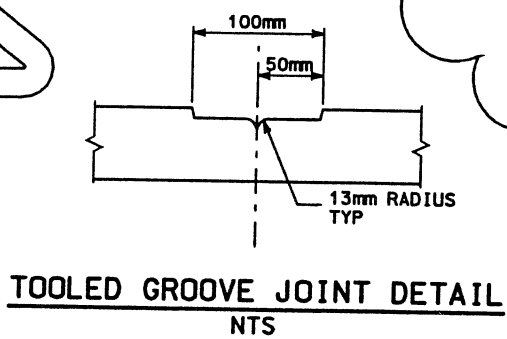
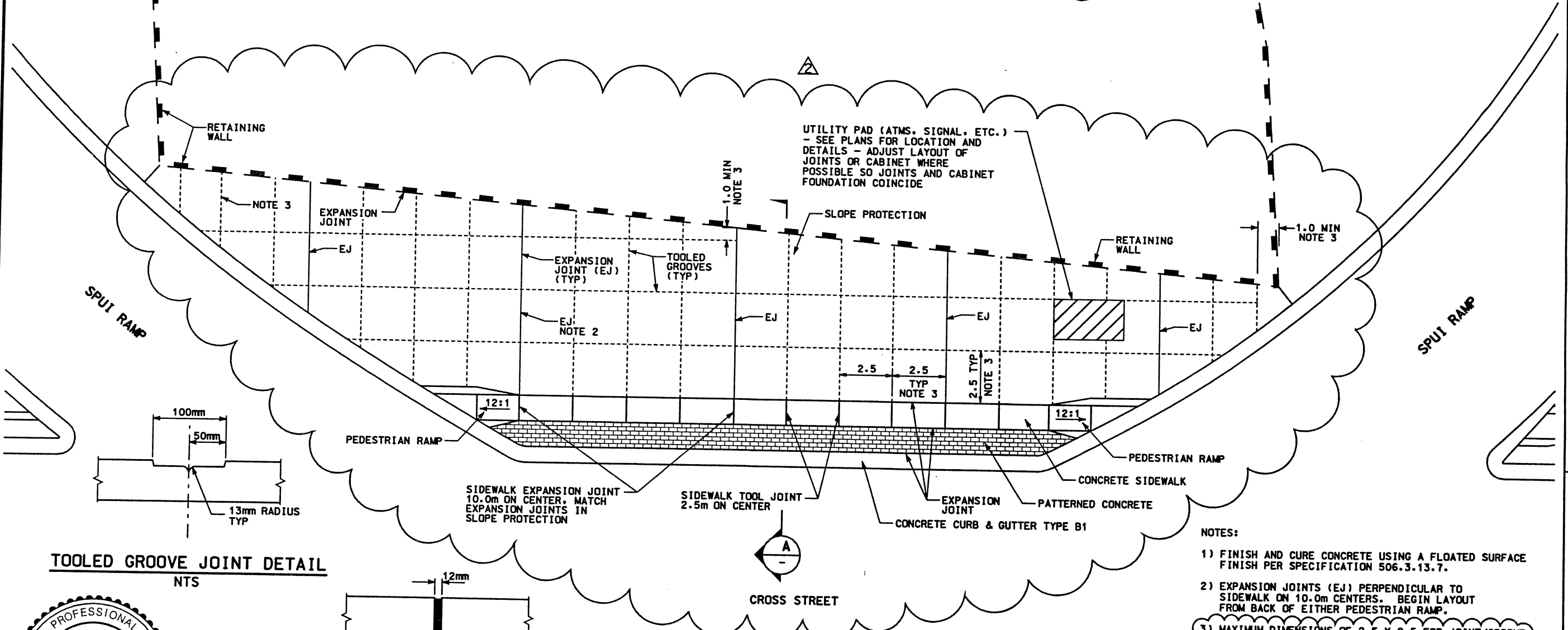
SALT LAKE COUNTY  
DWG. NO. CS-65-2  
SHT. OF

Date: 21-OCT-1998 Times: 11:17 User: namer@oleanoj



WASATCH CONSTRUCTORS  
OCT 22 1998  
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
Δ	9/15/98	Δ	10/21/98
Δ	10/21/98	Δ	10/21/98
Δ	10/21/98	Δ	10/21/98



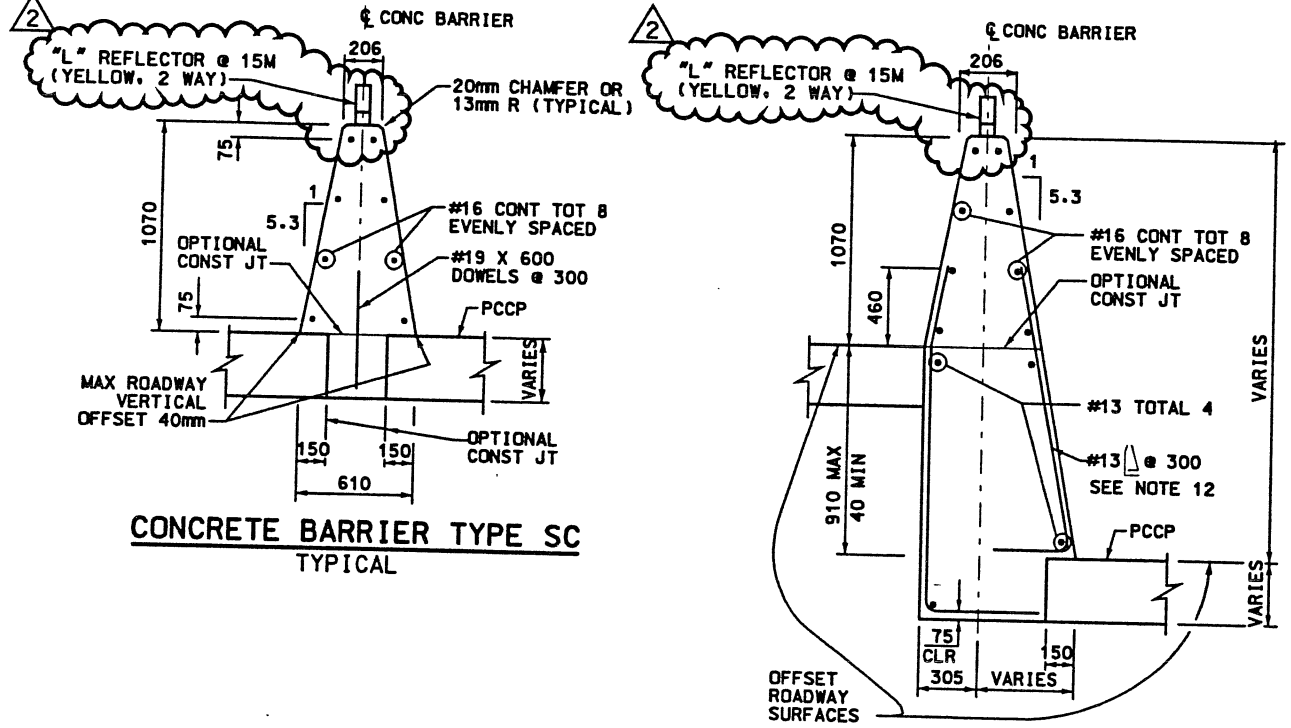
- NOTES:**
- 1) FINISH AND CURE CONCRETE USING A FLOATED SURFACE FINISH PER SPECIFICATION 506.3.13.7.
  - 2) EXPANSION JOINTS (EJ) PERPENDICULAR TO SIDEWALK ON 10.0m CENTERS. BEGIN LAYOUT FROM BACK OF EITHER PEDESTRIAN RAMP.
  - 3) MAXIMUM DIMENSIONS OF 2.5 X 2.5 FOR JOINT/GROOVE SPACINGS ARE PREFERRED. VARY SPACING AS REQUIRED TO PROVIDE MINIMUM JOINT/GROOVE SPACING OF 1 METER LONG BY 1 METER WIDE. LAYOUT SHOWN IS TYPICAL. SEE ROADWAY PLANS FOR ACTUAL LAYOUT AND LIMITS.
  - 4) 2.0% MINIMUM SLOPE. SEE ROADWAY PLANS FOR GRADING DETAILS.
  - 5) USE CLASS AA (AE) CONCRETE.
  - 6) SEE SPECIFICATION 601 FOR ADDITIONAL REQUIREMENTS.

UTAH DEPARTMENT OF TRANSPORTATION			
M.K. CENTENNIAL			
SVERRUP/DE LEUW			
NO.	DATE	NO.	DATE
Δ	9/15/98	Δ	10/21/98
Δ	10/21/98	Δ	10/21/98
Δ	10/21/98	Δ	10/21/98

I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
SPUI SLOPE PROTECTION DETAIL		PROJECT NUMBER #SP-15-7(135)296	
APPROVAL DATE	9/12/98	DESIGN BAR	9/12/98
RECORD DATE	9/12/98	CHECK CJO	9/12/98
PROJECT DESIGN ENGINEER	Bret A. Reynolds	CHECK DAF	9/12/98
SECTION MANAGER	Randle L. Ross	CHECK	9/12/98
DATE	9/12/98	QUANT.	1/1
DATE	9/12/98	QUANT.	1/1



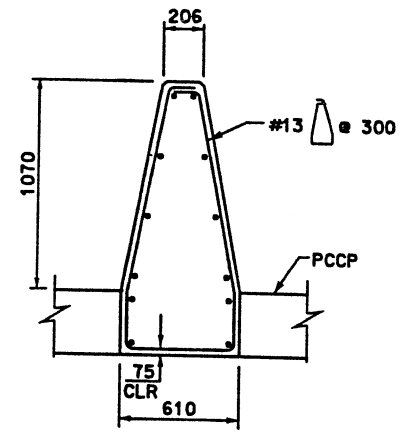
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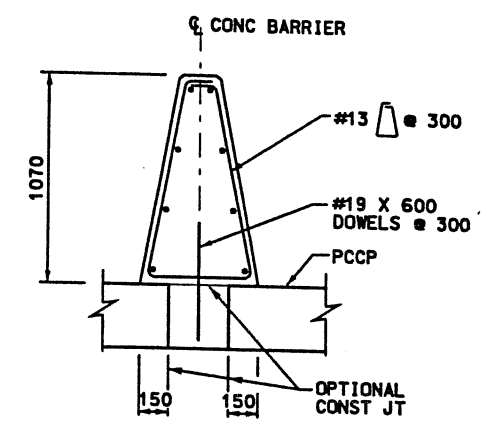
**CONCRETE BARRIER TYPE SC**  
TYPICAL

**CONCRETE BARRIER TYPE SCs**

DETAILS SIMILAR TO TYPE SC EXCEPT AS NOTED.  
CONCRETE BARRIER END ANCHOR WHEN NECESSARY.

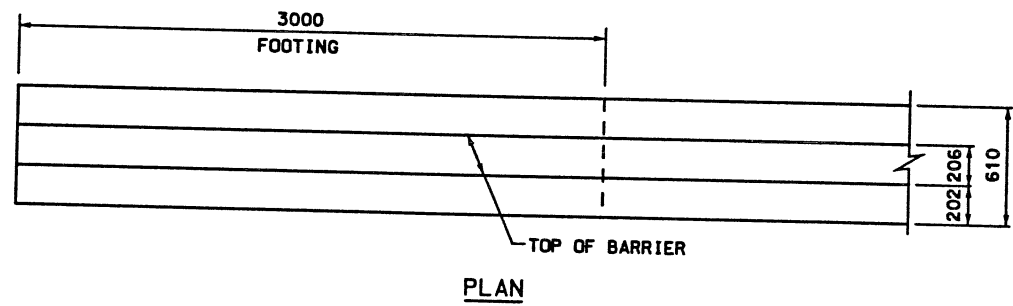


SECTION A

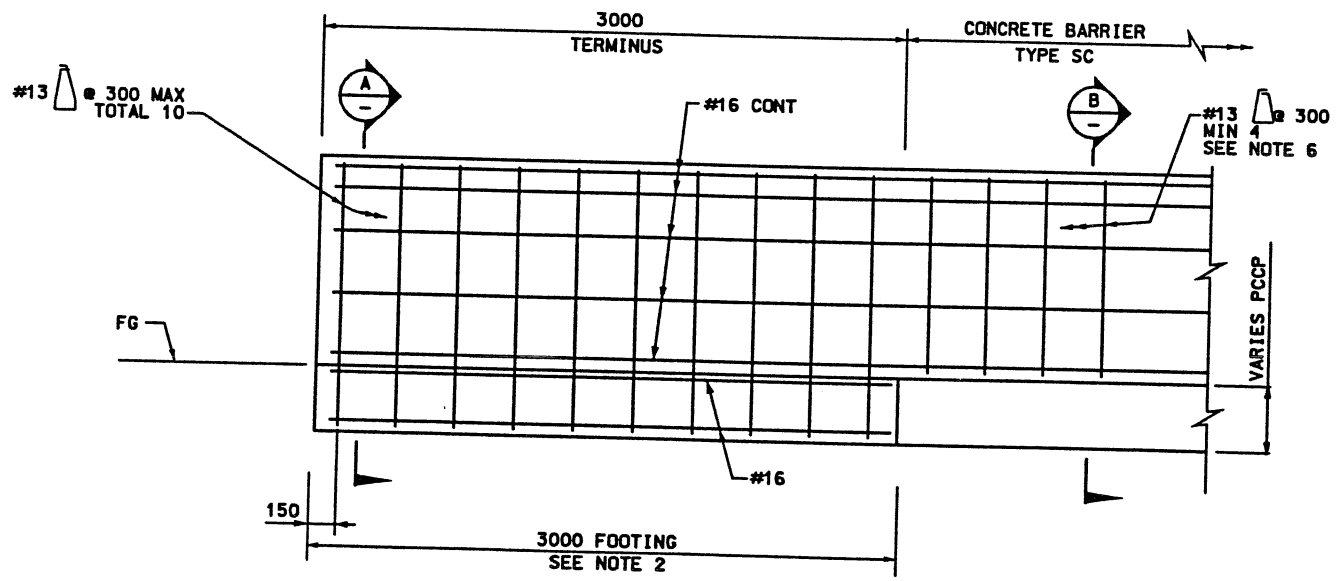


SECTION B

WASATCH CONSTRUCTORS  
NOV 11 1998  
RELEASED FOR CONSTRUCTION



PLAN

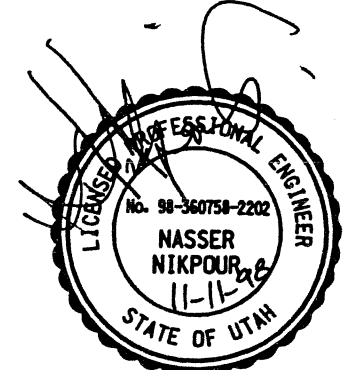


ELEVATION

NOTE:  
SEE CORRIDOR STANDARD PLANS (CS-69) & (CS-87) FOR  
BARRIER TERMINUS DETAIL OR ATTENUATOR DETAILS  
REQUIRED AT BARRIER INTERRUPTIONS.

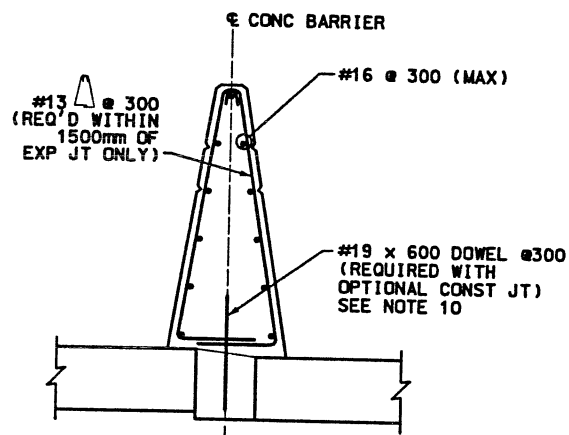
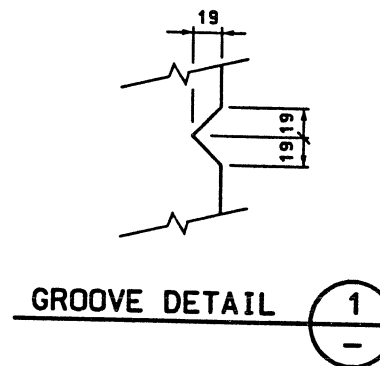
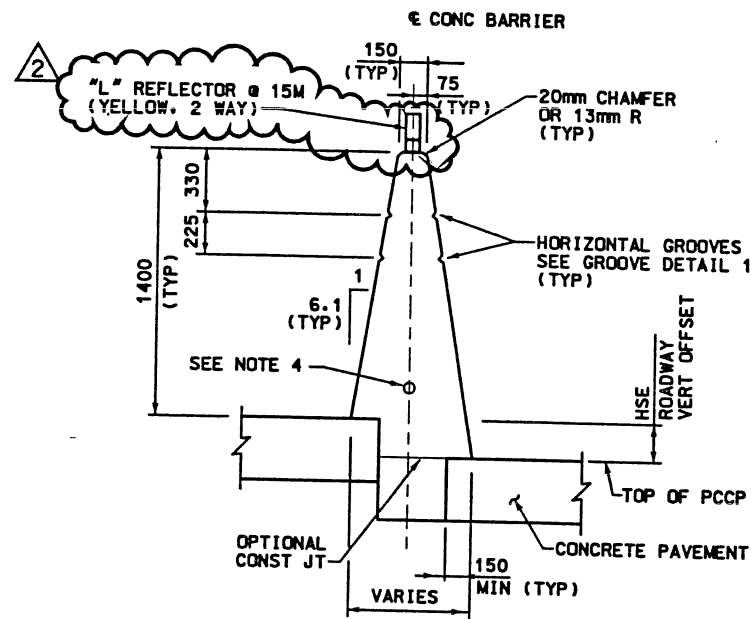
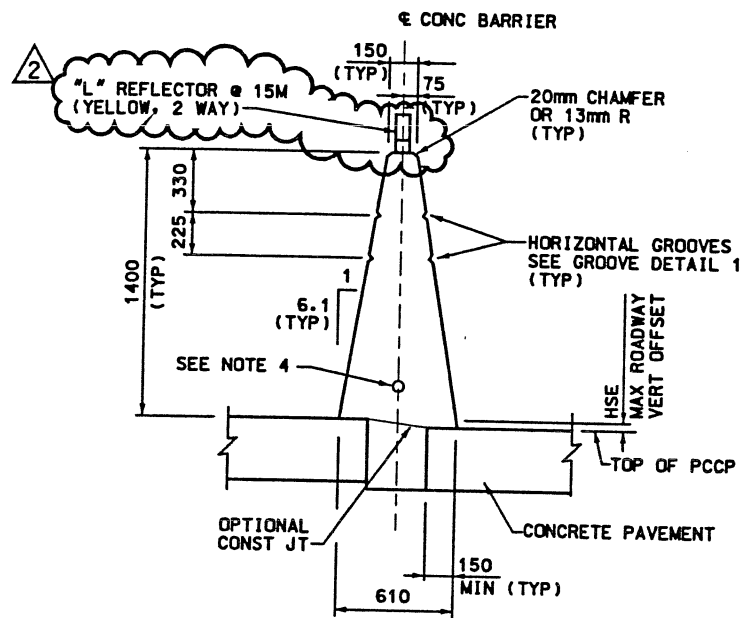
**CONCRETE BARRIER TYPE SC**  
**CONNECTION TO STRUCTURE OR END ANCHORAGE**

- NOTES:
- 1) EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL TRANSITIONS AND APPROACH SLABS. USE 13mm PREMOLDED EXPANSION JOINT FILLER UNLESS OTHER THICKNESS AND/OR MATERIAL IS SPECIFIED ELSEWHERE.
  - 2) THE FOOTING IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN THE CONCRETE BARRIER INCLUDING EXPANSION JOINTS.
  - 3) ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS AA (AE) EXCEPT WHERE OTHERWISE NOTED.  $f'c = 28$  MPa. CHAMFER ALL EXPOSED CONCRETE CORNERS 20mm OR 13mm RADIUS. PROVIDE 50mm CONCRETE COVER TO REINFORCING STEEL EXCEPT WHERE SPECIFIED OTHERWISE.
  - 4) PLACE CONSTRUCTION JOINT AT END OF DAY'S POUR AND WHEN WORK IS HALTED FOR 2 HOURS OR MORE. EXTEND LONGITUDINAL REINFORCEMENT TO MEET LAP SPLICE REQUIREMENTS PER CORRIDOR STANDARD SPECIFICATIONS.
  - 5) INSTALL ELECTRICAL/ATMS CONDUITS AND PULLBOXES AS REQUIRED. SEE LIGHTING AND ATMS DRAWINGS.
  - 6) ADDITIONAL #13 STIRRUPS TO SECURE LONGITUDINAL REINFORCEMENT ARE OPTIONAL OVER LENGTH OF CONCRETE BARRIER.
  - 7) CONCRETE BARRIER SHALL BE CONSTRUCTED BY THE SLIP FORM OR FORMED CAST-IN-PLACE METHODS.
  - 8) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
  - 9) NO VERTICAL SCORING SHALL BE ALLOWED ON BARRIER FACE EXCEPT @ EXPANSION JOINTS.
  - 10) TRANSITION IS REQUIRED AT ALL BRIDGE APPROACH SLABS AND CONNECTIONS TO OTHER BARRIER TYPES.
  - 11) DOWEL REBAR MAY BE DRILLED AND BONDED. SEE SPECIFICATIONS. HOOKS FOR SAFETY ARE OPTIONAL.
  - 12) REINFORCING STIRRUP IS NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 305mm.
  - 13) SEE STD DWG NO. 726-1 FOR BARRIER REFLECTORS.

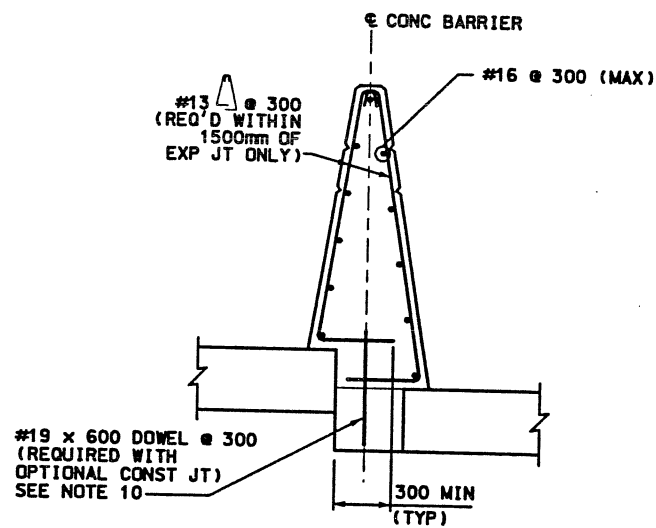


APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
A	09/04/98	A	11/06/98
	INITIAL RELEASE		ADDED REFLECTORS
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
DE LEUW CATHER		SVERDRUP/DE LEUW	
DESIGN	DATE	CHECK	DATE
N. NIKPOUR	07/98	RH	7/98
PROJECT DESIGN ENGINEER		CHECK	
J. KLEMZ	07/98	RH	7/98
SECTION MANAGER		CHECK	
QUANT.			
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
CONCRETE BARRIER TYPE SC		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. CS-66	
SHT. _____ OF _____			





**HSE ≤ 40**



**40 < HSE ≤ 305**

**NOTES:**

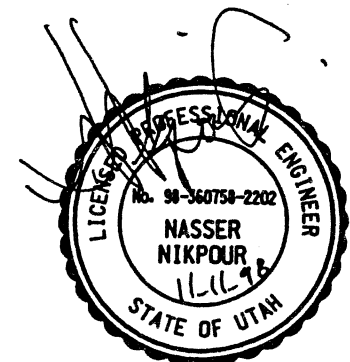
- 1) EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL TRANSITIONS AND APPROACH SLABS. USE 13mm PREMOLED EXPANSION JOINT FILLER UNLESS OTHER THICKNESS AND/OR MATERIAL IS SPECIFIED ELSEWHERE.
- 2) ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS AA (AE) EXCEPT WHERE OTHERWISE NOTED.  $f'_c = 28$  MPa. CHAMFER ALL EXPOSED CONCRETE CORNERS 20mm OR 13mm RADIUS. PROVIDE 50mm CONCRETE COVER TO REINFORCING STEEL EXCEPT WHERE SPECIFIED OTHERWISE.
- 3) PLACE CONSTRUCTION JOINT AT END OF DAY'S POUR AND WHEN WORK IS HALTED FOR 2 HOURS OR MORE. EXTEND LONGITUDINAL REINFORCEMENT TO MEET LAP SPLICE REQUIREMENTS PER CORRIDOR STANDARD SPECIFICATIONS.
- 4) INSTALL ELECTRICAL/ATMS CONDUITS AND PULLBOXES AS REQUIRED. SEE LIGHTING AND ATMS DRAWINGS.
- 5) ADDITIONAL #13 STIRRUPS TO SECURE LONGITUDINAL REINFORCEMENT ARE OPTIONAL OVER LENGTH OF CONCRETE BARRIER.
- 6) CONCRETE BARRIER MAY BE CONSTRUCTED BY THE SLIP FORM OR FORMED CAST-IN-PLACE METHODS.
- 7) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
- 8) COORDINATE PAVING LIMITS WITH CONSTRUCTION OF ROADWAY DRAINAGE INLET AND EDGE DRAIN REQUIREMENTS. SEE DRAINAGE AND EDGE DRAIN PLANS.
- 9) TRANSITION IS REQUIRED AT ALL BRIDGE APPROACH SLABS AND CONNECTIONS TO OTHER BARRIER TYPES.
- 10) DOWEL REBAR MAY BE DRILLED AND BONDED. SEE SPECIFICATIONS. HOOKS FOR SAFETY ARE OPTIONAL.
- 11) HOOKS MAY BE TURNED IN-LINE WITH THE BARRIER.
- 12) SEE STD DWG NO. 726-1 FOR BARRIER REFLECTORS.



WASATCH CONSTRUCTORS

NOV 11 1998

RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
1	09/04/98	INITIAL RELEASE
2	11/06/98	ADDED REFLECTORS

UTAH DEPARTMENT OF TRANSPORTATION

SYVERDRUP/DE LEUW

I-15 CORRIDOR RECONSTRUCTION  
CONCRETE BARRIER PLAN

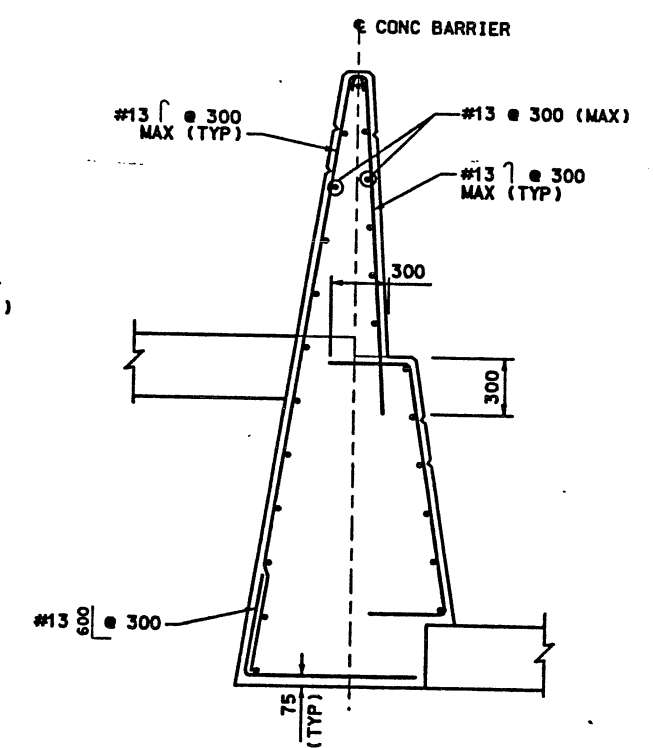
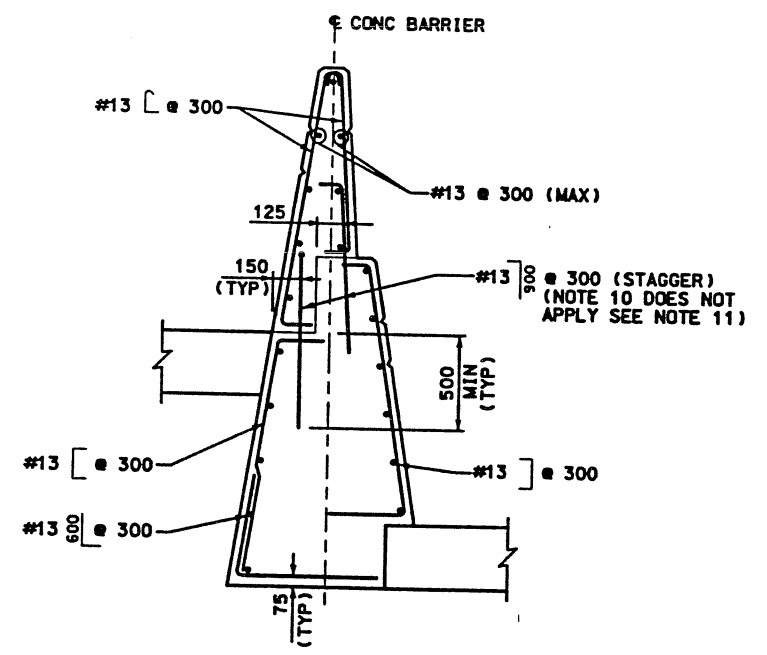
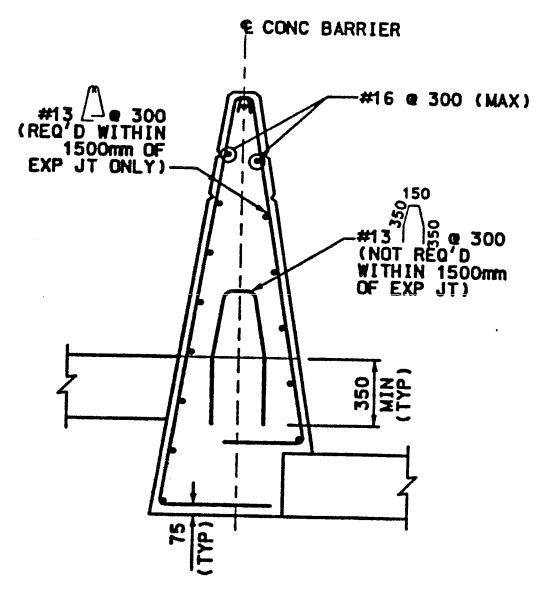
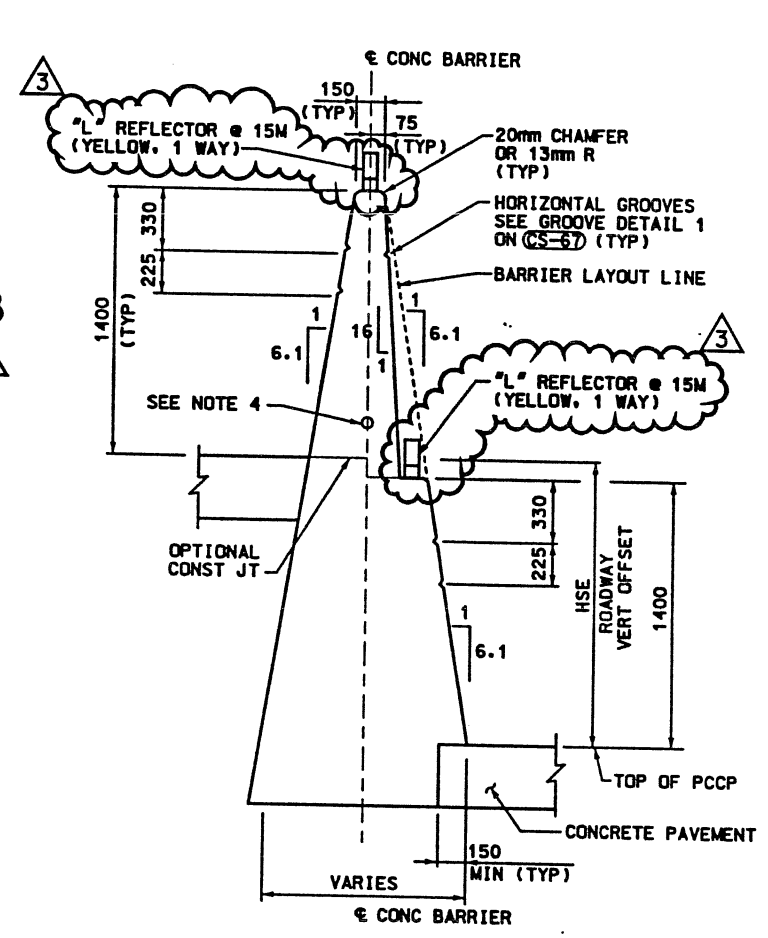
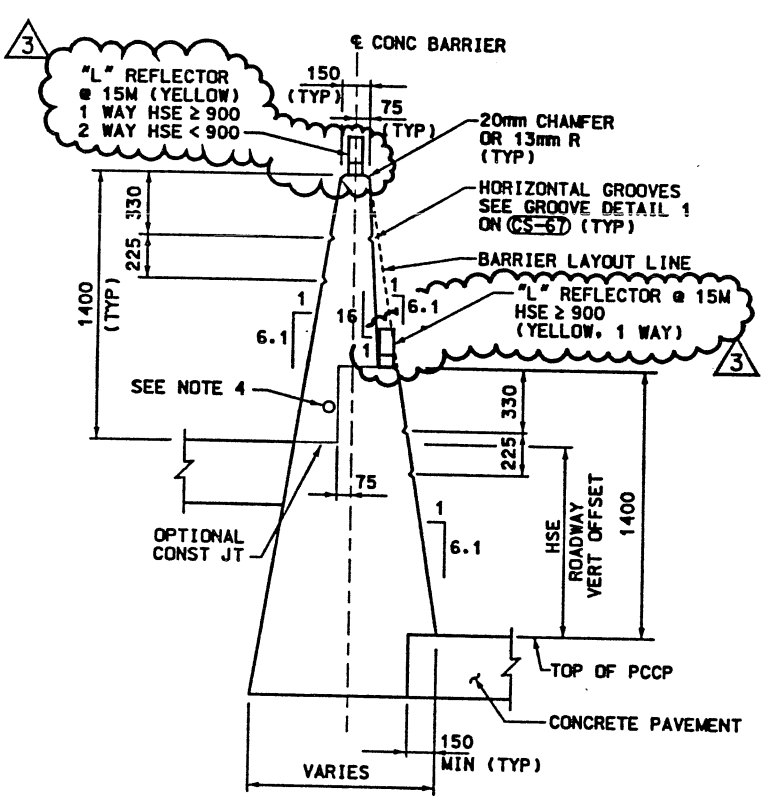
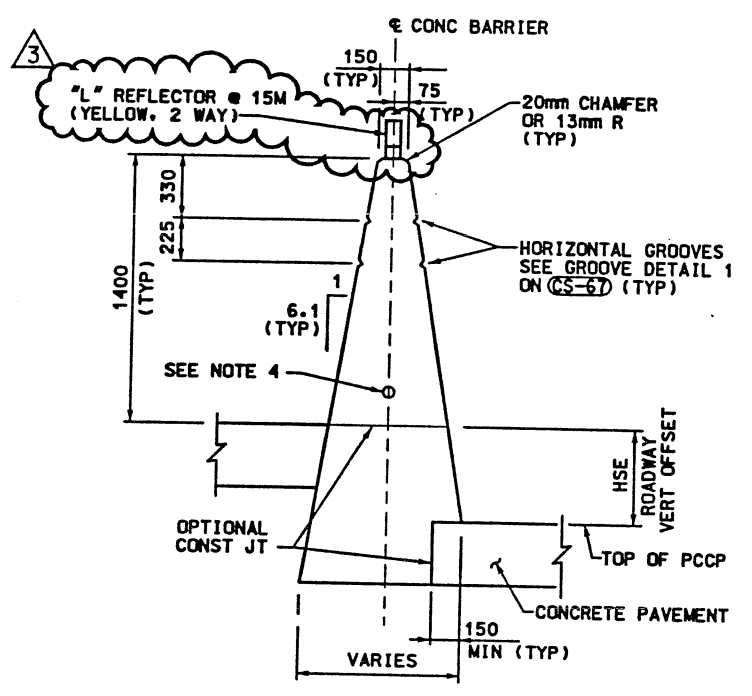
CORRIDOR STANDARD PLAN

PROJECT NUMBER #SP-15-7(135)296

SALT LAKE COUNTY  
DWG. NO. CS-67

SHT. \_\_\_\_\_ OF \_\_\_\_\_





305 < HSE ≤ 692

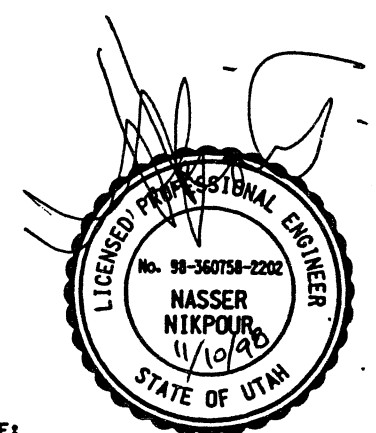
692 < HSE ≤ 1350

WASATCH CONSTRUCTORS .

NOV 11 1998

1350 < HSE ≤ 1750

RELEASED FOR CONSTRUCTION

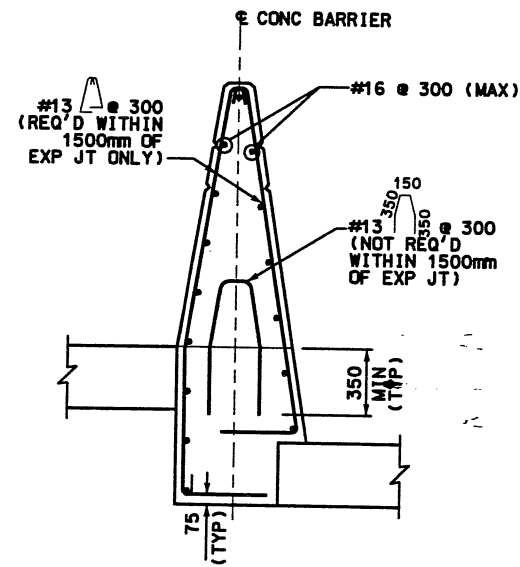
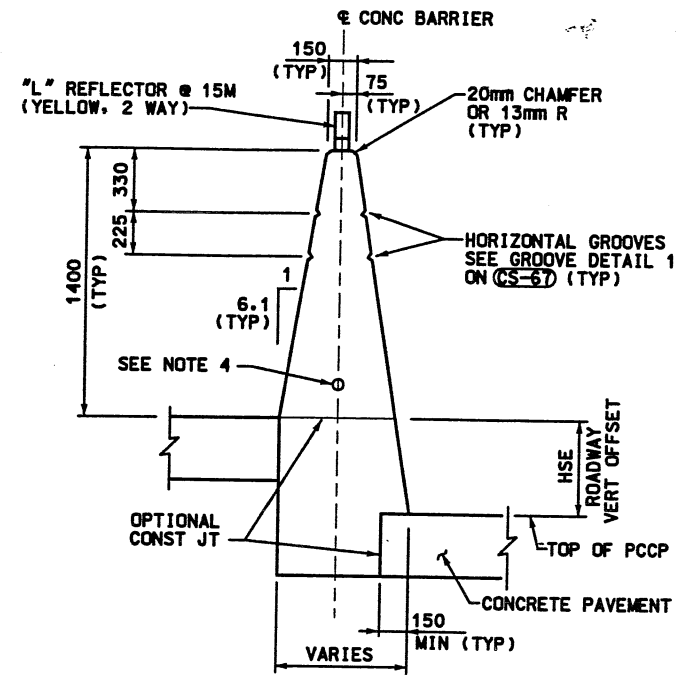


NOTE:  
REFER TO CS-67 FOR GENERAL NOTES.

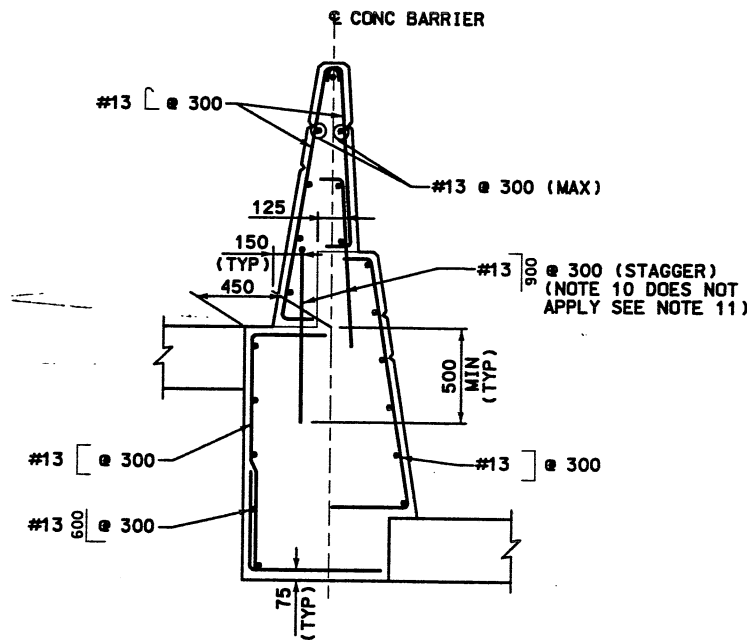
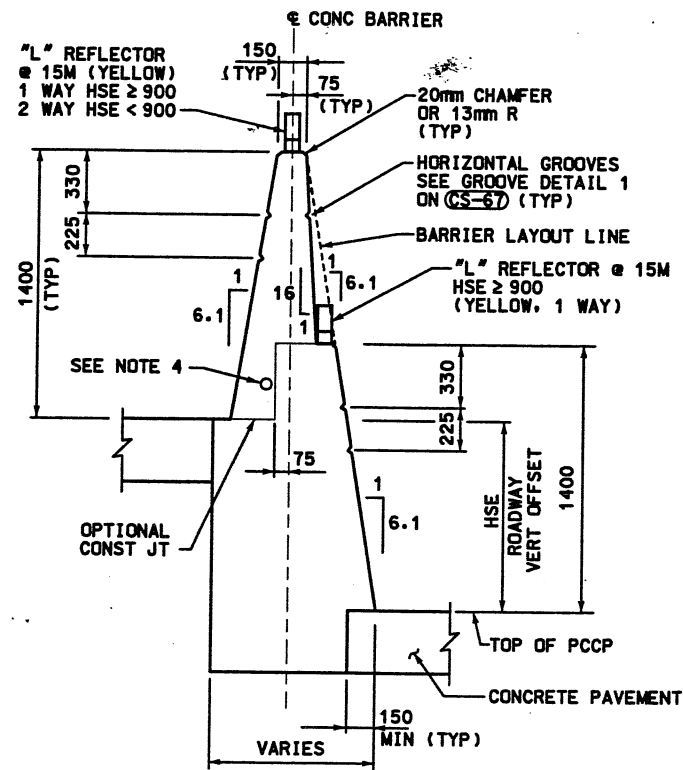
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
Δ	09/04/98	Δ	INITIAL RELEASE
Δ	09/08/98	Δ	TOTAL SHEET REPLACEMENT
Δ	11/10/98	Δ	ADDED REFLECTORS
UTAH DEPARTMENT OF TRANSPORTATION			
SVERRUP/DE LEUW		DESIGN	MIN. 8/98
		CHECK	RH 8/98
		DRAWN	DKC 8/98
		CHECK	RH 8/98
		QUANT.	CHECK
APPROVAL RECORD		PROJECT DESIGN ENGINEER	
DATE	BY	DATE	BY
	N. NIKPOUR		J. KLEINZ
APPROVED		SECTION MANAGER	
DATE	BY	DATE	BY
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR BARRIER TYPE M	
CONCRETE BARRIER TYPE M		CORRIDOR STANDARD PLAN	
PROJECT NUMBER		#SP-15-7(135)296	
SALT LAKE COUNTY			
DWG. NO. CS-67-1			
SHT. _____		OF _____	

User name: tramprtd

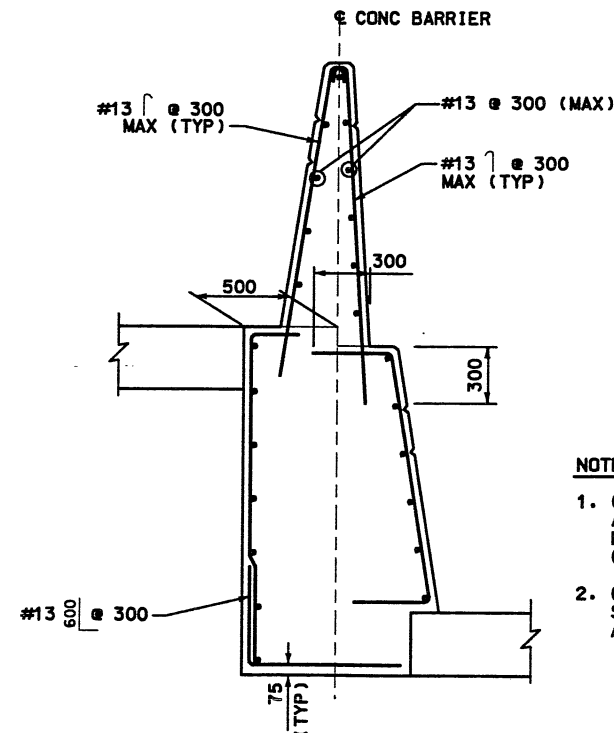
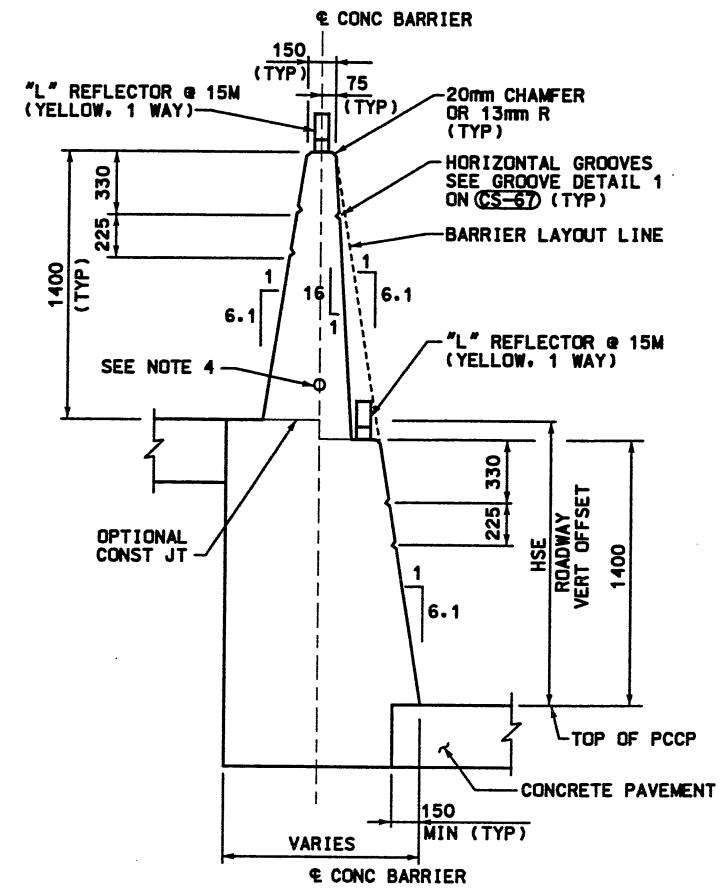
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305 < HSE ≤ 692



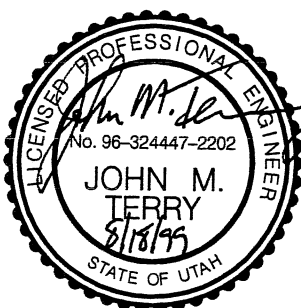
692 < HSE ≤ 1350



1350 < HSE ≤ 1750

- NOTE:**
- CONTRACTOR MAY USE MEDIAN ALTERNATE OPTION ON MEDIAN BARRIER FLARE SECTIONS SHOWN ON CS-67-3 & CS-67-5.
  - CONTRACTOR TO SHOW CORRESPONDING STATIONS FOR TYPE MA BARRIER ON AS-BUILT ROADWAY PLANS.

**GENERAL NOTE:**  
REFER TO CS-67 FOR GENERAL NOTES.



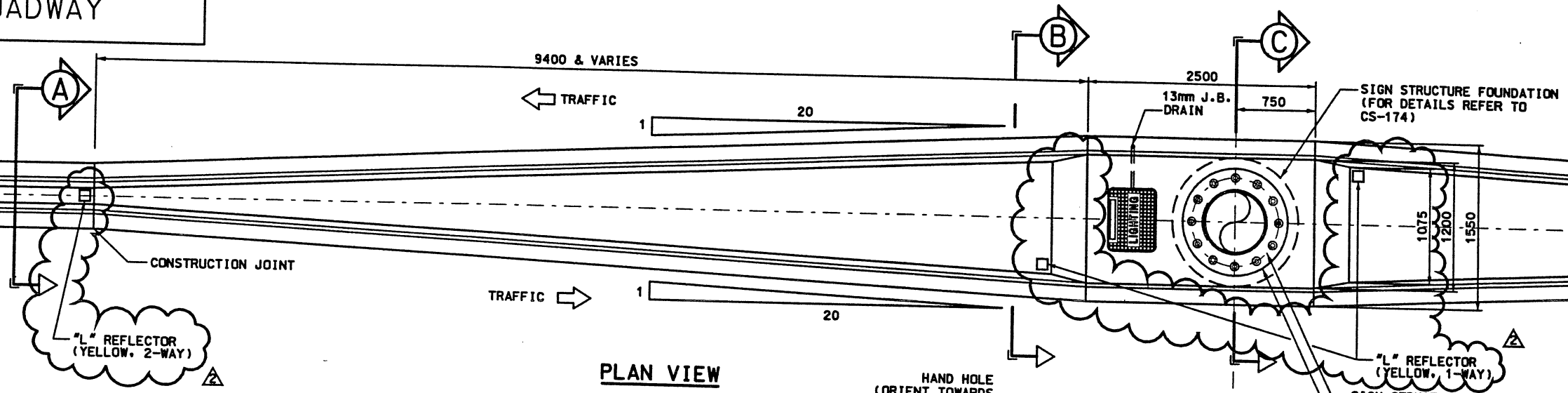
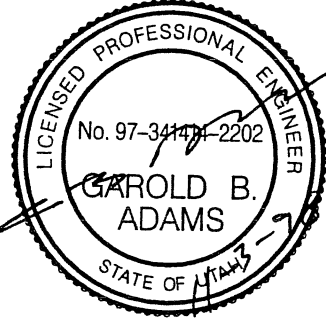
WASATCH CONSTRUCTORS  
AUG 20 1999  
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
	07/22/98		INITIAL RELEASE
			FDG 1-0767
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
DESIGN	WM	CHECK	RH
DATE	0/98	CHECK	RH
PROJECT	N. NIKPOUR	CHECK	RH
ENGINEER	J. KLEWZ	CHECK	RH
DRAWN	DKC	CHECK	RH
SECTION	MANAGER	CHECK	RH
QUANT.		CHECK	RH
APPROVAL	RECOMM.	APPROVED	DATE
I-15 CORRIDOR RECONSTRUCTION	CONCRETE BARRIER TYPE MA	PROJECT NUMBER	#SP-15-7(135)296
		COUNTY	SALT LAKE
		DWG. NO.	CS-67-1A
SHT.		OF	

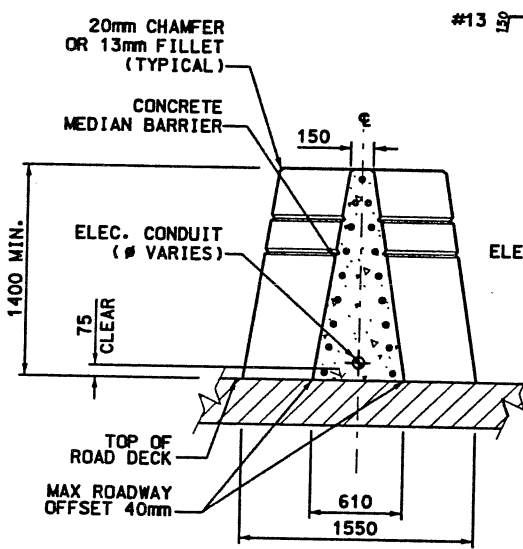
RFC After Final Approval

# OVERHEAD SIGN FOUNDATIONS ON TANGENT ROADWAY

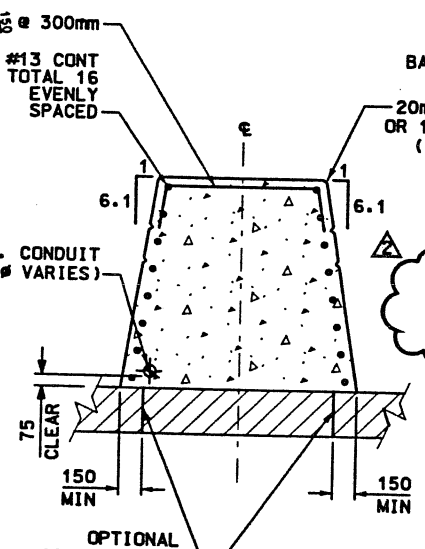
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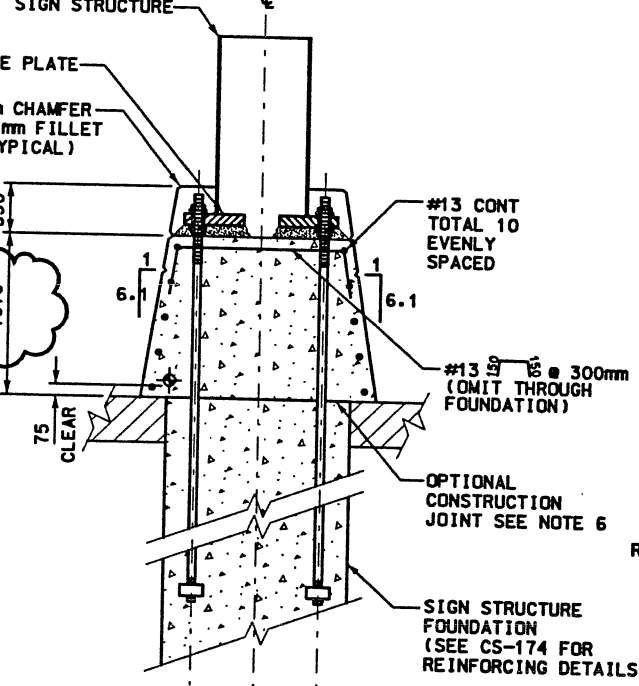
**PLAN VIEW**



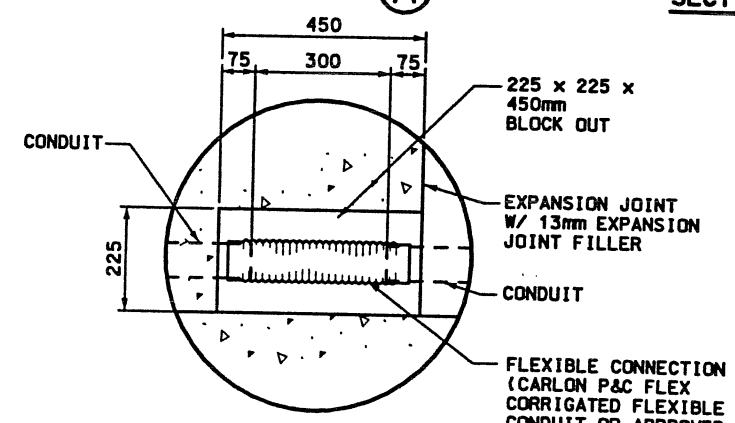
**SECTION A**



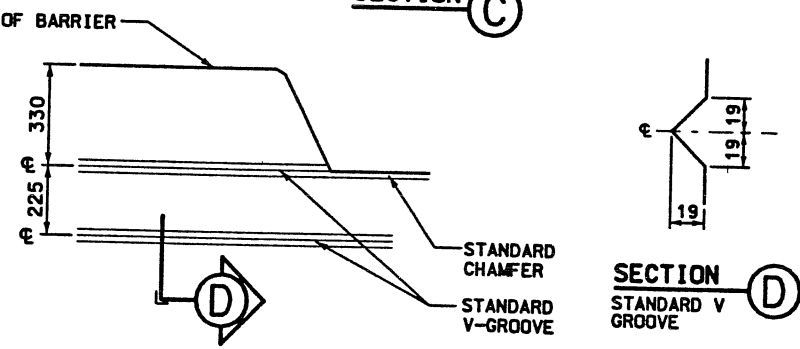
**SECTION B**



**SECTION C**

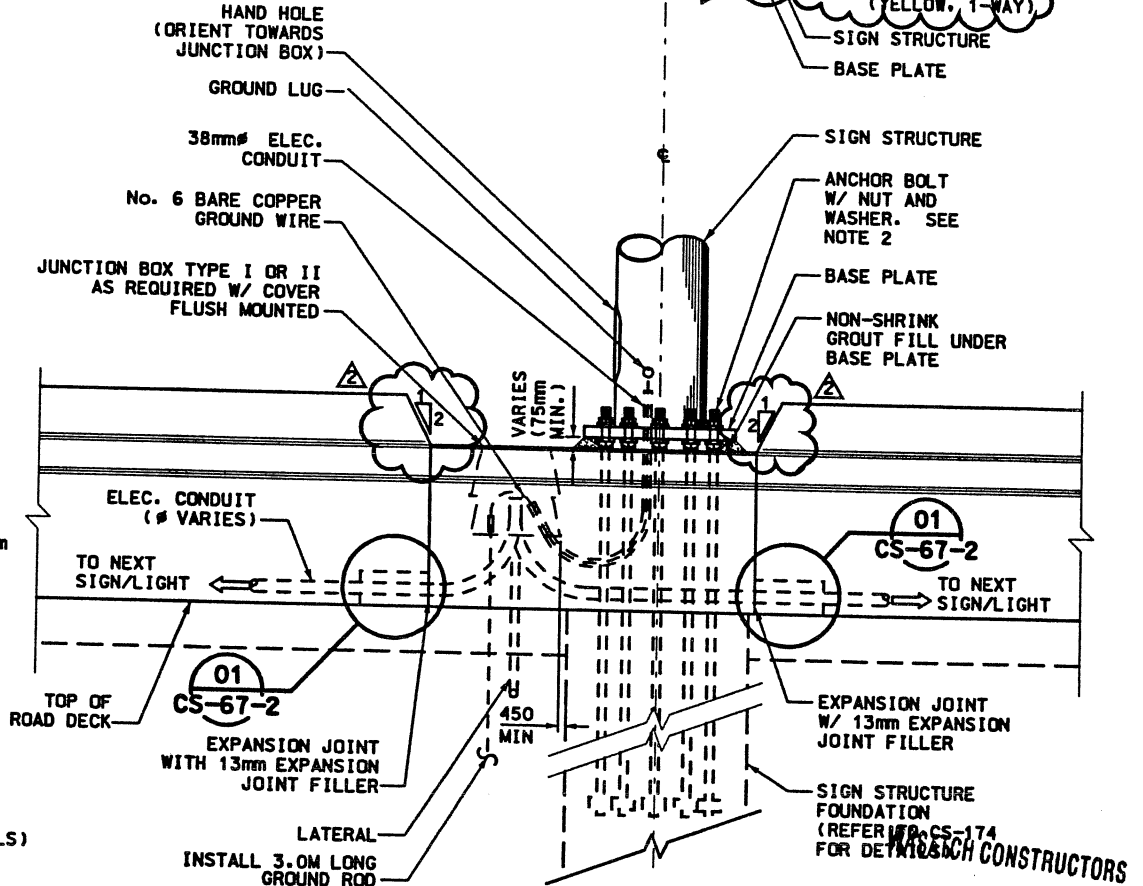


**BLOCK OUT DETAIL 01 (TYP) CS-67-2**



**SECTION D STANDARD V GROOVE**

**MEDIAN BARRIER PARTIAL ELEVATION 02 (TYP) CS-67-2**



**ELEVATION**

- NOTES:**
- 1) FOUNDATION BOLT PATTERN IS SCHEMATIC. REFER TO CS-174 FOR BOLT PATTERNS AND REINFORCEMENT LAYOUT.
  - 2) NUT AND WASHERS TO BE PLACED TOP AND BOTTOM OF BASE PLATE TO ALLOW FOR ADJUSTMENT.
  - 3) ALL REINFORCEMENT SHALL BE EPOXY COATED PER CORRIDOR STANDARD SPECIFICATIONS.
  - 4) ALL REINFORCING STEEL SHALL HAVE 50mm MINIMUM COVER.
  - 5) WHEN OVERHEAD SIGNS ARE PAIRED WITH LIGHTS. PLACE JUNCTION BOXES BETWEEN FOUNDATIONS. FOR SINGLE INSTALLATIONS. PLACE JUNCTION BOXES SOUTH OR EAST OF FOUNDATION.
  - 6) BEFORE RESUMING CONCRETE POURING AT CONSTRUCTION JOINTS THE CONTRACTOR SHALL PERFORM THOSE STEPS OUTLINED IN STANDARD SPECIFICATION NO. 506.3.12.3.
  - 7) ELECTRICAL CONDUIT MAY BE PLACED IN BARRIER OR UNDER PAVEMENT PER CS-179-1.

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	09/03/98	1	11/6/98
ORIGINAL ISSUE		ISSUED FOR NOC-0271	
UTAH DEPARTMENT OF TRANSPORTATION			
BARTON-ASCHMAN ASSOCIATES, INC.			
SVERDRUP/DE LEUW			
DESIGN	SO	10/15/98	CHECK
DATE	BY	DATE	BY
10/15/98	BARRY ERLANDSON	10/15/98	10/15/98
PROJECT DESIGN ENGINEER	CHECK	DATE	CHECK
DATE	BY	DATE	BY
10/15/98	GAROLD ADAMS	10/15/98	10/15/98
APPROVED	SECTION MANAGER	DATE	CHECK
10/15/98	GAROLD ADAMS	10/15/98	10/15/98
I-15 CORRIDOR RECONSTRUCTION			
MEDIAN BARRIER FLARE			
CORRIDOR STANDARD PLAN			
PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY			
DWC. NO. CS-67-2			
SHT. OF			

NOV 10 1998

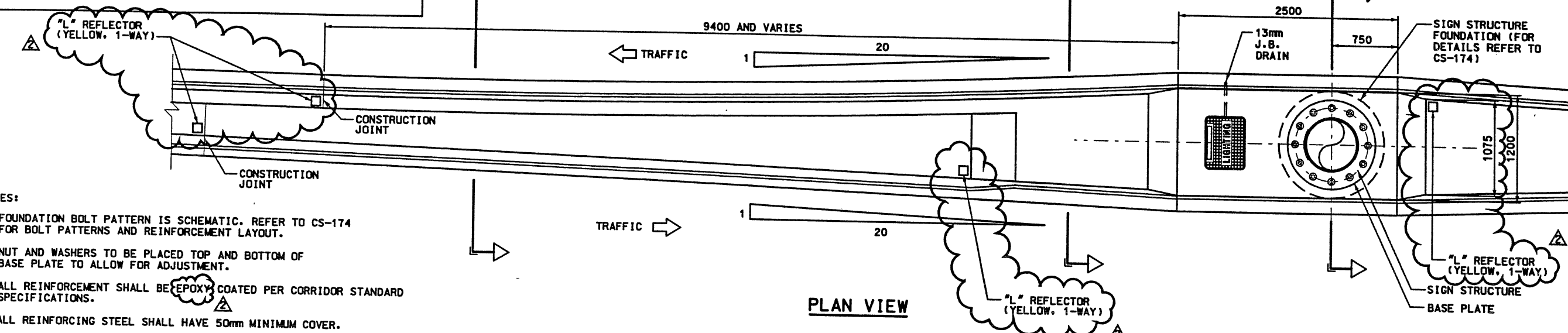
RELEASED FOR CONSTRUCTION

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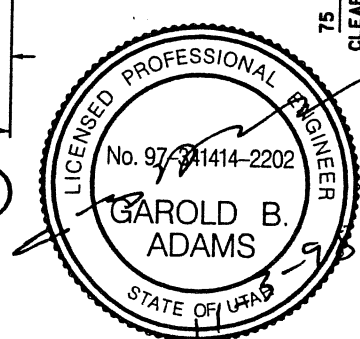
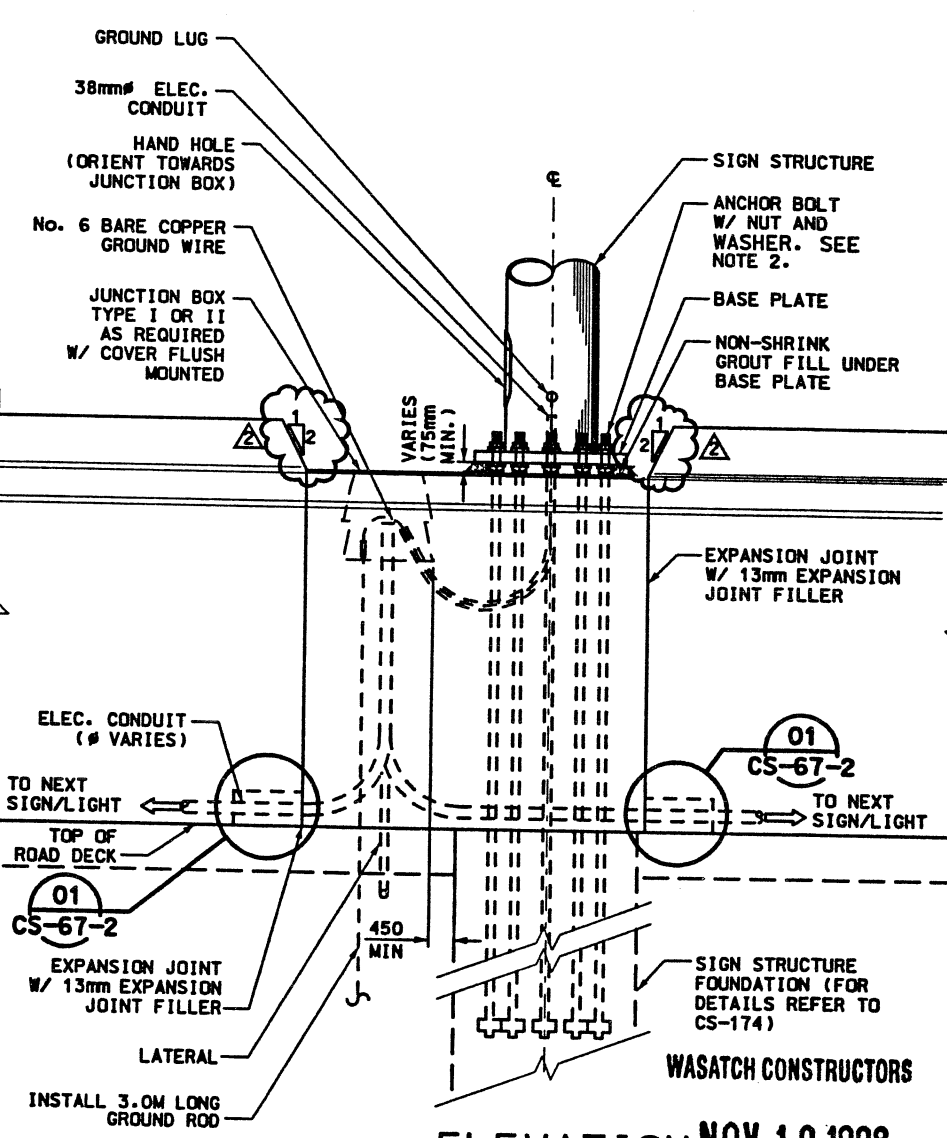
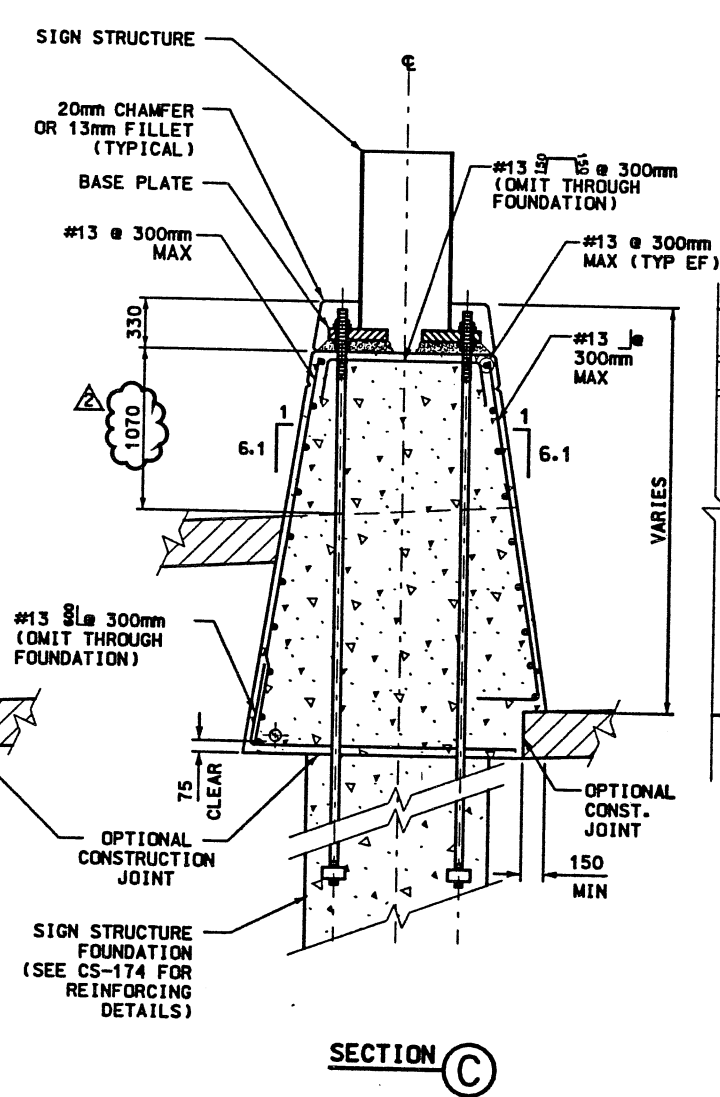
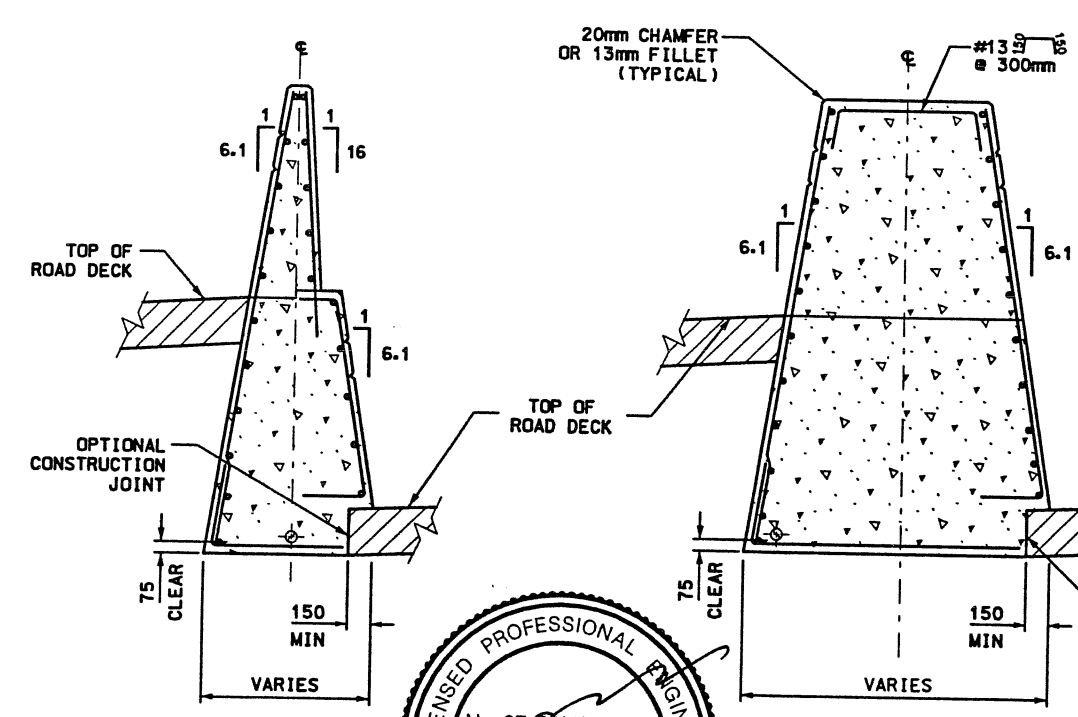
# OVERHEAD SIGN FOUNDATIONS ON SUPERELEVATED ROADWAY

User name: h01010101 Date: 02-NOV-1998 Time: 17:38

File name: c:\dgn\115\_cadd\signing\atondor\da\oa-67-3.dgn



- NOTES:**
- 1) FOUNDATION BOLT PATTERN IS SCHEMATIC. REFER TO CS-174 FOR BOLT PATTERNS AND REINFORCEMENT LAYOUT.
  - 2) NUT AND WASHERS TO BE PLACED TOP AND BOTTOM OF BASE PLATE TO ALLOW FOR ADJUSTMENT.
  - 3) ALL REINFORCEMENT SHALL BE EPOXY COATED PER CORRIDOR STANDARD SPECIFICATIONS.
  - 4) ALL REINFORCING STEEL SHALL HAVE 50mm MINIMUM COVER.
  - 5) WHEN OVERHEAD SIGNS ARE PAIRED WITH LIGHTS, PLACE JUNCTION BOXES BETWEEN FOUNDATIONS. FOR SINGLE INSTALLATIONS, PLACE JUNCTION BOXES SOUTH OR EAST OF FOUNDATION.
  - 6) REINFORCING STEEL AND CONSTRUCTION JOINTS IN TAPERS SHALL CONFORM TO CS-67 AND CS-67-1.
  - 7) SEE CS-67-2 FOR GROOVE DETAILS.
  - 8) BEFORE RESUMING CONCRETE POURING AT CONSTRUCTION JOINTS THE CONTRACTOR SHALL PERFORM THOSE STEPS OUTLINED IN STANDARD SPECIFICATION NO. 506.3.12.3.
  - 9) ELECTRICAL CONDUIT MAY BE PLACED IN BARRIER OR UNDER PAVEMENT PER CS-179-1.
  - 10) REFER TO DESIGN PLANS, CS-67, CS-67-1, AND CS-69-2 THROUGH 5 FOR LAYOUT OF SHELF AND GROOVES AT EACH LOCATION.

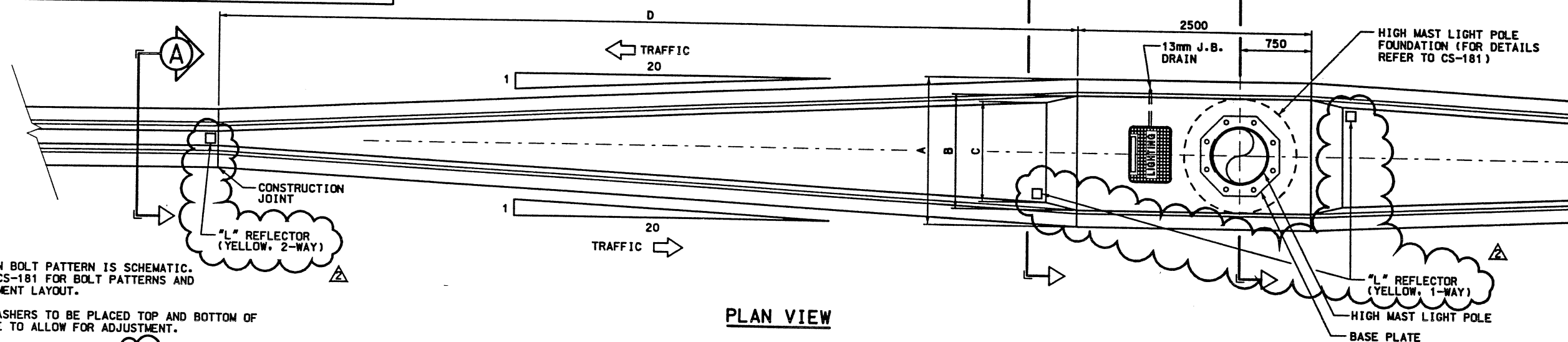


APPROVED FOR CONSTRUCTION		DATE	09/04/98
DESCRIPTION		ORIGINAL ISSUE	11/6/98
NO.		ISSUED FOR NOC-0271	5/1
UTAH DEPARTMENT OF TRANSPORTATION BARTON-ASCHMAN ASSOCIATES, INC. SVERDRUP/DE LEUW			
REVISION	DATE	DESIGN	CHECK
10/13/98	BARRY ERLANDSON	56	10/13/98
10/13/98	PROJECT DESIGN ENGINEER	56	10/13/98
10/13/98	GAROLD ADAMS	56	10/13/98
10/13/98	SECTION MANAGER	56	10/13/98
I-15 CORRIDOR RECONSTRUCTION			
MEDIAN BARRIER FLARE			
CORRIDOR STANDARD PLAN			
PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY			
DWG. NO. CS-67-3			
SHT. OF			

ELEVATION NOV 10 1998  
RELEASED FOR CONSTRUCTION

# HIGH MAST LIGHTING FOUNDATIONS ON TANGENT ROADWAY

Date: 03-NOV-1998 Time: 09:36 User: name: hcr:tert1

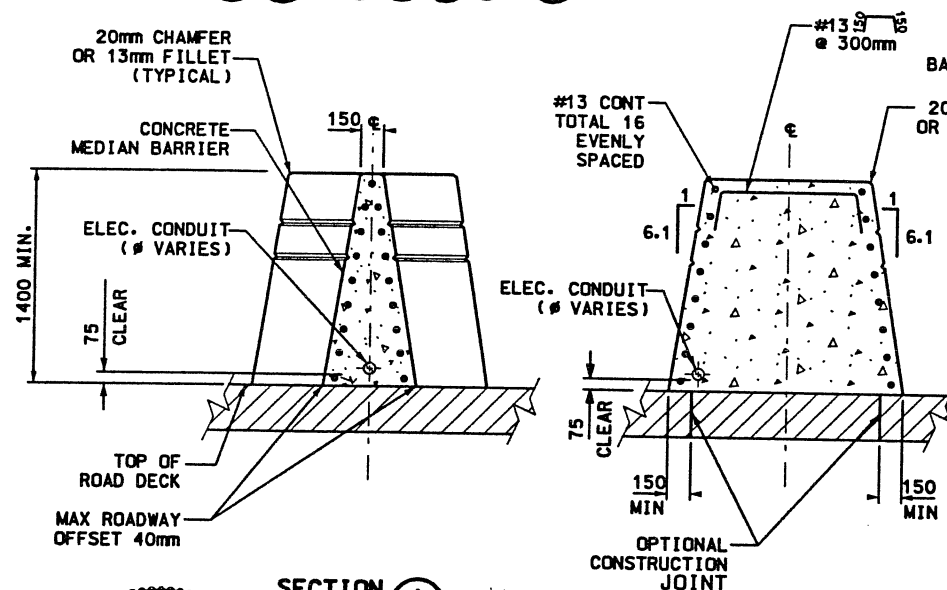


- NOTES:**
- 1) FOUNDATION BOLT PATTERN IS SCHEMATIC. REFER TO CS-181 FOR BOLT PATTERNS AND REINFORCEMENT LAYOUT.
  - 2) NUT AND WASHERS TO BE PLACED TOP AND BOTTOM OF BASE PLATE TO ALLOW FOR ADJUSTMENT.
  - 3) ALL REINFORCEMENT SHALL BE EPOXY COATED PER CORRIDOR STANDARD SPECIFICATIONS.
  - 4) ALL REINFORCING STEEL SHALL HAVE 50mm MINIMUM COVER.
  - 5) WHEN OVERHEAD SIGNS ARE PAIRED WITH LIGHTS. PLACE JUNCTION BOXES BETWEEN FOUNDATIONS. FOR SINGLE INSTALLATIONS. PLACE JUNCTION BOXES SOUTH OR EAST OF FOUNDATION.
  - 6) SEE CS-67-2 FOR GROOVE DETAILS.
  - 7) ELECTRICAL CONDUIT MAY BE PLACED IN BARRIER OR UNDER PAVEMENT PER CS-179-1.
  - 8) BEFORE RESUMING CONCRETE POURING AT CONSTRUCTION JOINTS THE CONTRACTOR SHALL PERFORM THOSE STEPS OUTLINED IN STANDARD SPECIFICATION NO. 506.3.12.3.

**PLAN VIEW**

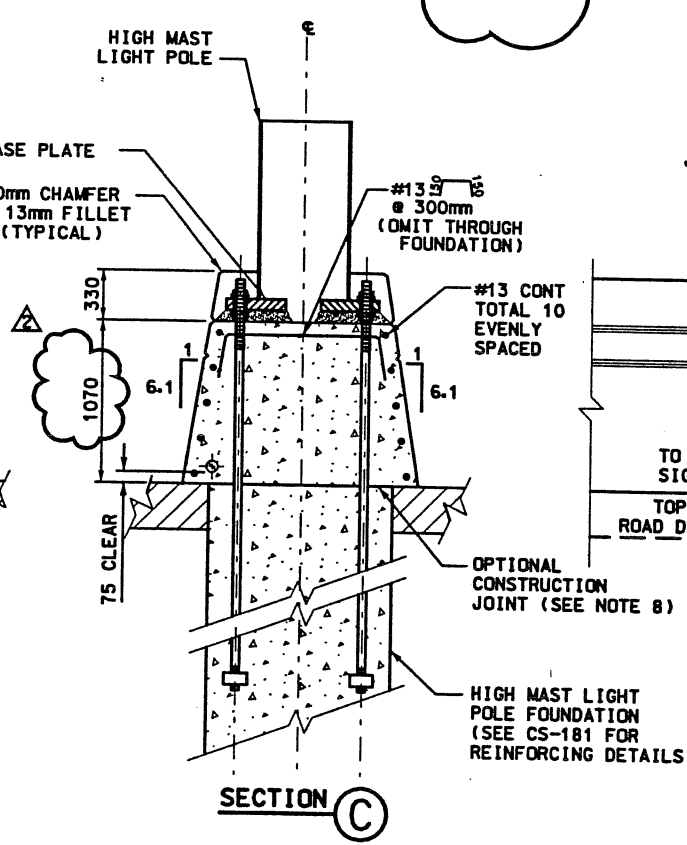
**FLARED BARRIER DIMENSION CHART**

POLE HEIGHT	DIMENSIONS			
	A	B	C	D
30m	1.420m	1.070m	0.945m	8.100m
37m	1.420m	1.070m	0.945m	8.100m
46m	1.550m	1.200m	1.075m	9.400m

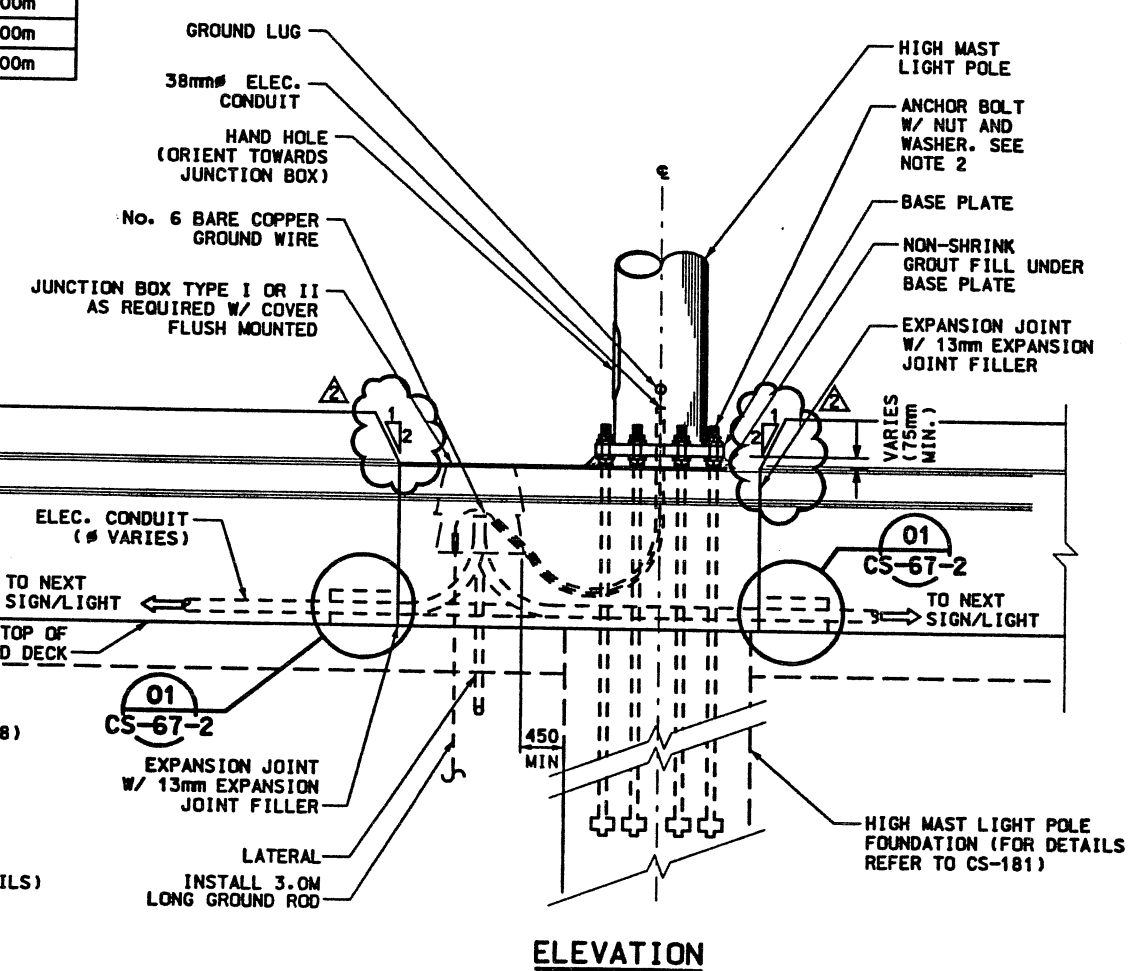


**SECTION A**

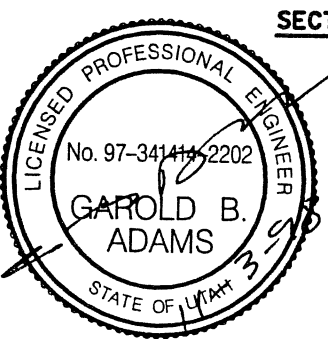
**SECTION B**



**SECTION C**



**ELEVATION**



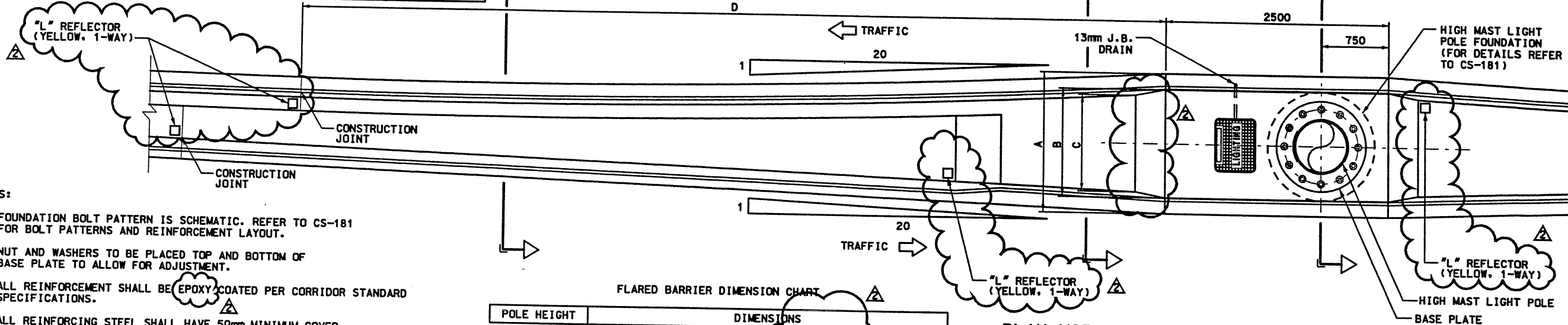
**WASATCH CONSTRUCTORS**  
**NOV 10 1998**

APPROVED FOR CONSTRUCTION	
NO. DATE	DESCRIPTION
1 08/04/98	ORIGINAL ISSUE
2 11/6/98	ISSUED FOR NDC-0271
UTAH DEPARTMENT OF TRANSPORTATION BARTON-ASCHMAN ASSOCIATES, INC. SVERDRUP/DE LEUW	
DESIGN DATE	CHECK DATE
10/19/98	10/19/98
DESIGN BY	CHECK BY
BARRY ERLANDSON	B.J.E.
PROJECT DESIGN ENGINEER	PROJECT DESIGN ENGINEER
DATE	DATE
10/19/98	10/19/98
DRAWN BY	CHECK BY
GAROLD ADAMS	RL
SECTION MANAGER	QUANT.
DATE	CHECK
10/19/98	
I-15 CORRIDOR RECONSTRUCTION MEDIAN BARRIER FLARE CORRIDOR STANDARD PLAN PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY DWG. NO. CS-67-4	
RELEASED FOR CONSTRUCTION	



# HIGH MAST LIGHTING FOUNDATIONS ON SUPERELEVATED ROADWAY

Date: 03-NOV-98 Time: 09:44 Username: harte71

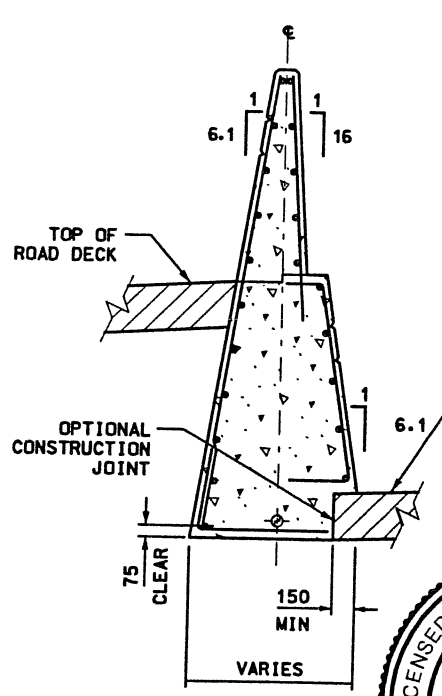


- NOTES:**
- 1) FOUNDATION BOLT PATTERN IS SCHEMATIC. REFER TO CS-181 FOR BOLT PATTERNS AND REINFORCEMENT LAYOUT.
  - 2) NUT AND WASHERS TO BE PLACED TOP AND BOTTOM OF BASE PLATE TO ALLOW FOR ADJUSTMENT.
  - 3) ALL REINFORCEMENT SHALL BE EPOXY COATED PER CORRIDOR STANDARD SPECIFICATIONS.
  - 4) ALL REINFORCING STEEL SHALL HAVE 50mm MINIMUM COVER.
  - 5) WHEN OVERHEAD SIGNS ARE PAIRED WITH LIGHTS, PLACE JUNCTION BOXES BETWEEN FOUNDATIONS. FOR SINGLE INSTALLATIONS, PLACE JUNCTION BOXES SOUTH OR EAST OF FOUNDATION.
  - 6) REINFORCING STEEL AND CONSTRUCTION JOINTS IN TAPERS SHALL CONFORM TO CS-67 AND CS-67-1.
  - 7) SEE CS-67-2 FOR GROOVE DETAILS.
  - 8) BEFORE RESUMING CONCRETE POURING AT CONSTRUCTION JOINTS THE CONTRACTOR SHALL PERFORM THOSE STEPS OUTLINED IN STANDARD SPECIFICATION NO. 506.3-12-3.
  - 9) ELECTRICAL CONDUIT MAY BE PLACED IN BARRIER OR UNDER PAYEMENT PER CS-179-1.
  - 10) REFER TO DESIGN PLANS, CS-67, CS-67-1, AND CS-69-2 THROUGH 5 FOR LAYOUT OF SHELF AND GROOVES AT EACH LOCATION.

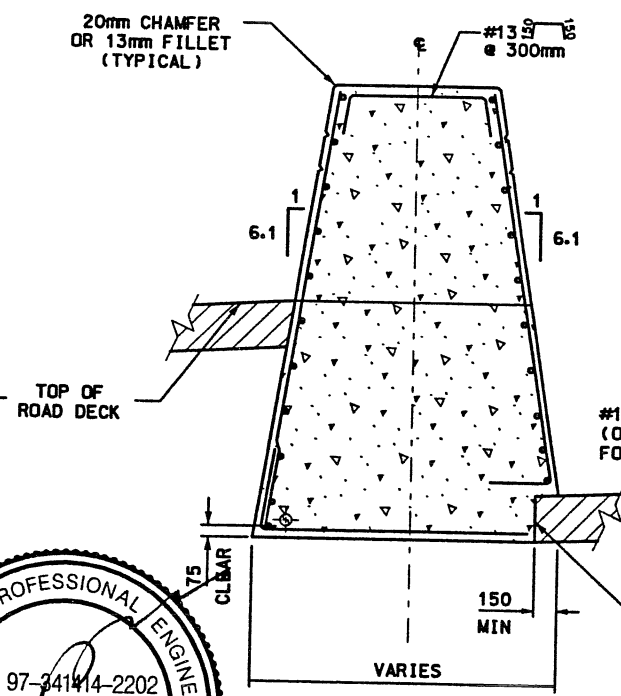
**FLARED BARRIER DIMENSION CHART**

POLE HEIGHT	DIMENSIONS			
	A	B	C	D
30m	VARIES	1.070m	0.945m	8.100m
37m	VARIES	1.070m	0.945m	8.100m
46m	VARIES	1.200m	1.075m	9.400m

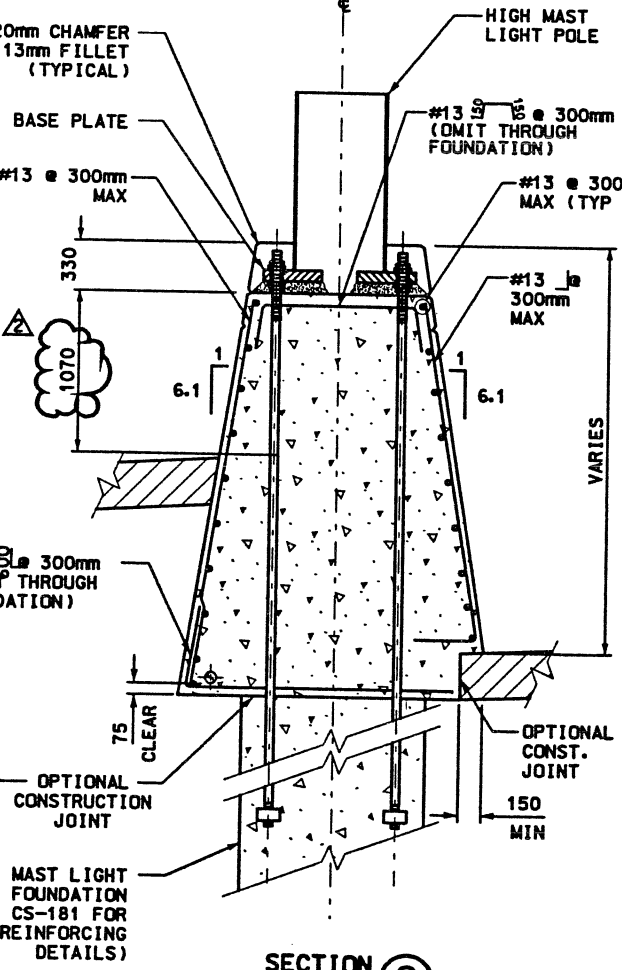
**PLAN VIEW**



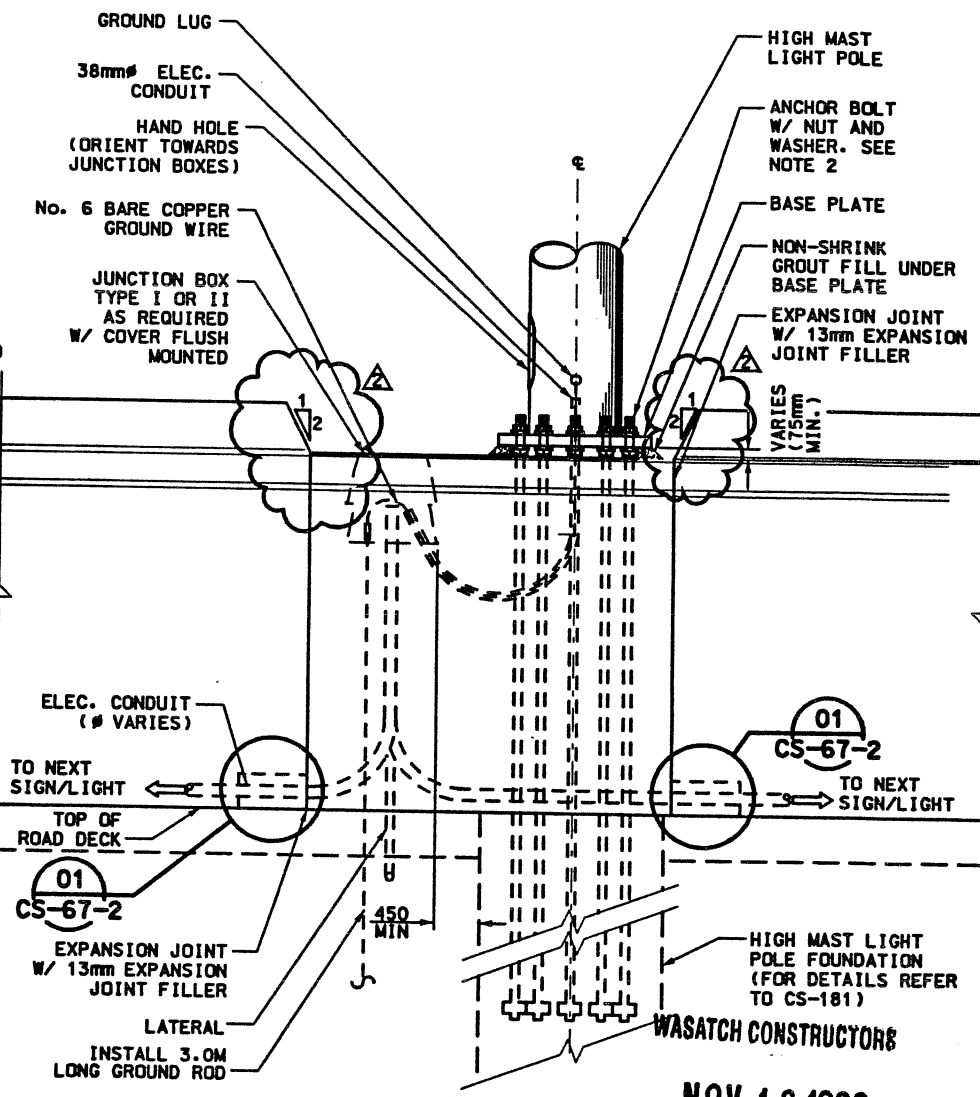
**SECTION A**



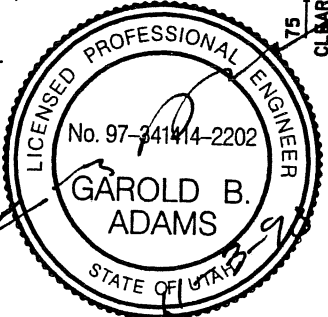
**SECTION B**



**SECTION C**



**ELEVATION**



**APPROVED FOR CONSTRUCTION**

NO.	DATE	DESCRIPTION
1	09/04/98	ORIGINAL ISSUE
2	11/6/98	ISSUED FOR NDC-0271

**UTAH DEPARTMENT OF TRANSPORTATION**  
BARTON-ASCHMAN ASSOCIATES, INC.  
SVERDRUP/DE LEUW

APPROVAL	DATE	PROJECT DESIGN ENGINEER	DATE	SECTION MANAGER	QUANT.
RECORD	10/19/98	BARRY ERLANDSON	10/19/98		
DESIGN	10/19/98	BARRY ERLANDSON	10/19/98		
DRANK	10/19/98	GAROLD ADAMS	10/19/98		
CHECK	10/19/98		10/19/98		

I-15 CORRIDOR RECONSTRUCTION  
MEDIAN BARRIER FLARE  
CORRIDOR STANDARD PLAN  
PROJECT NUMBER #SP-15-7(135)296

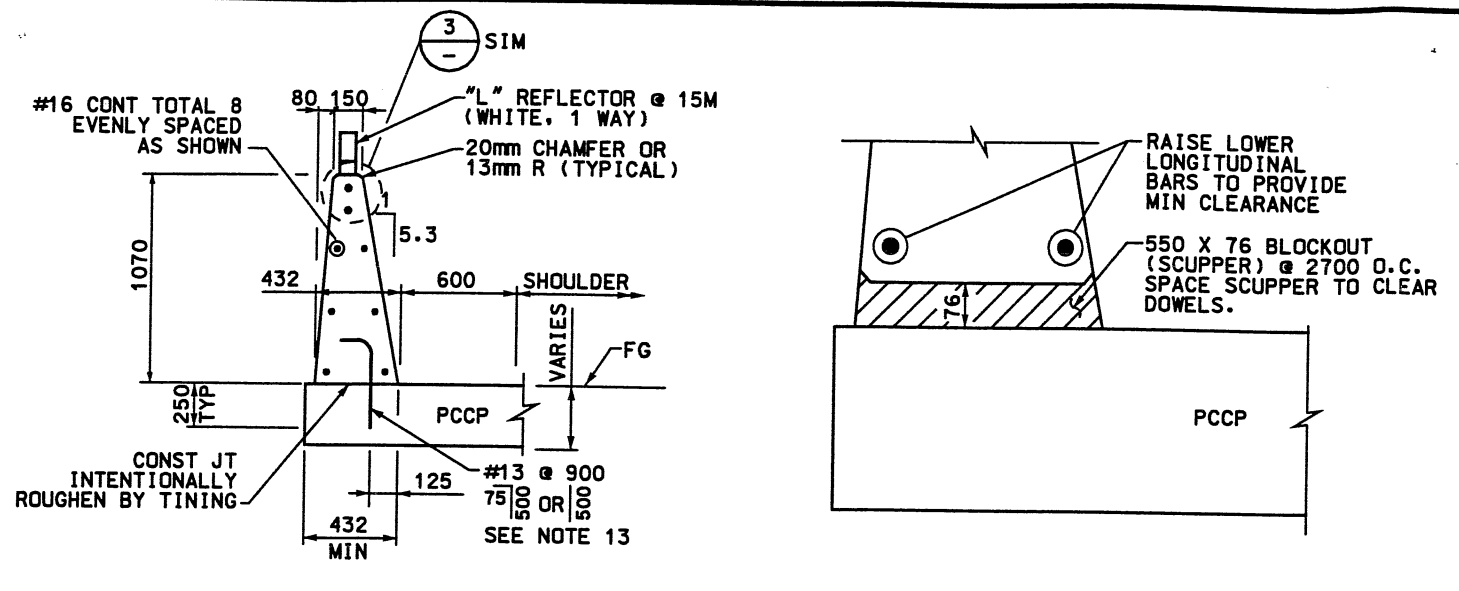
SALT LAKE COUNTY  
DWG. NO. CS-67-5

NOV 10 1998

RELEASED FOR CONSTRUCTION

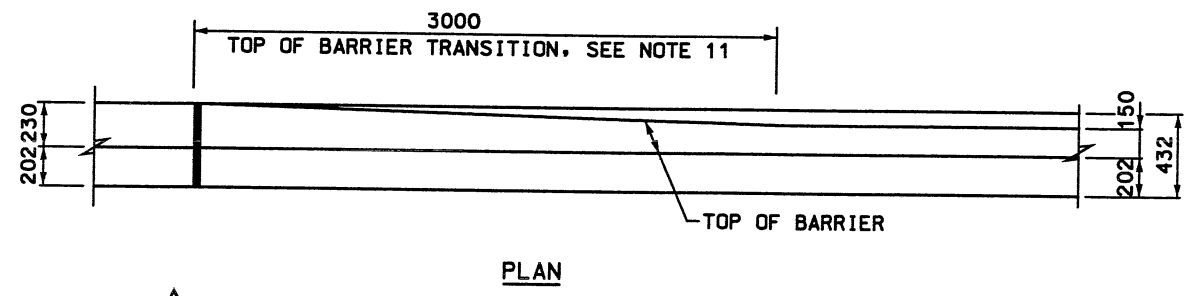
SHT. OF

Date: 25-JAN-2000 Time: 15:29 User: nme: framptr-d  
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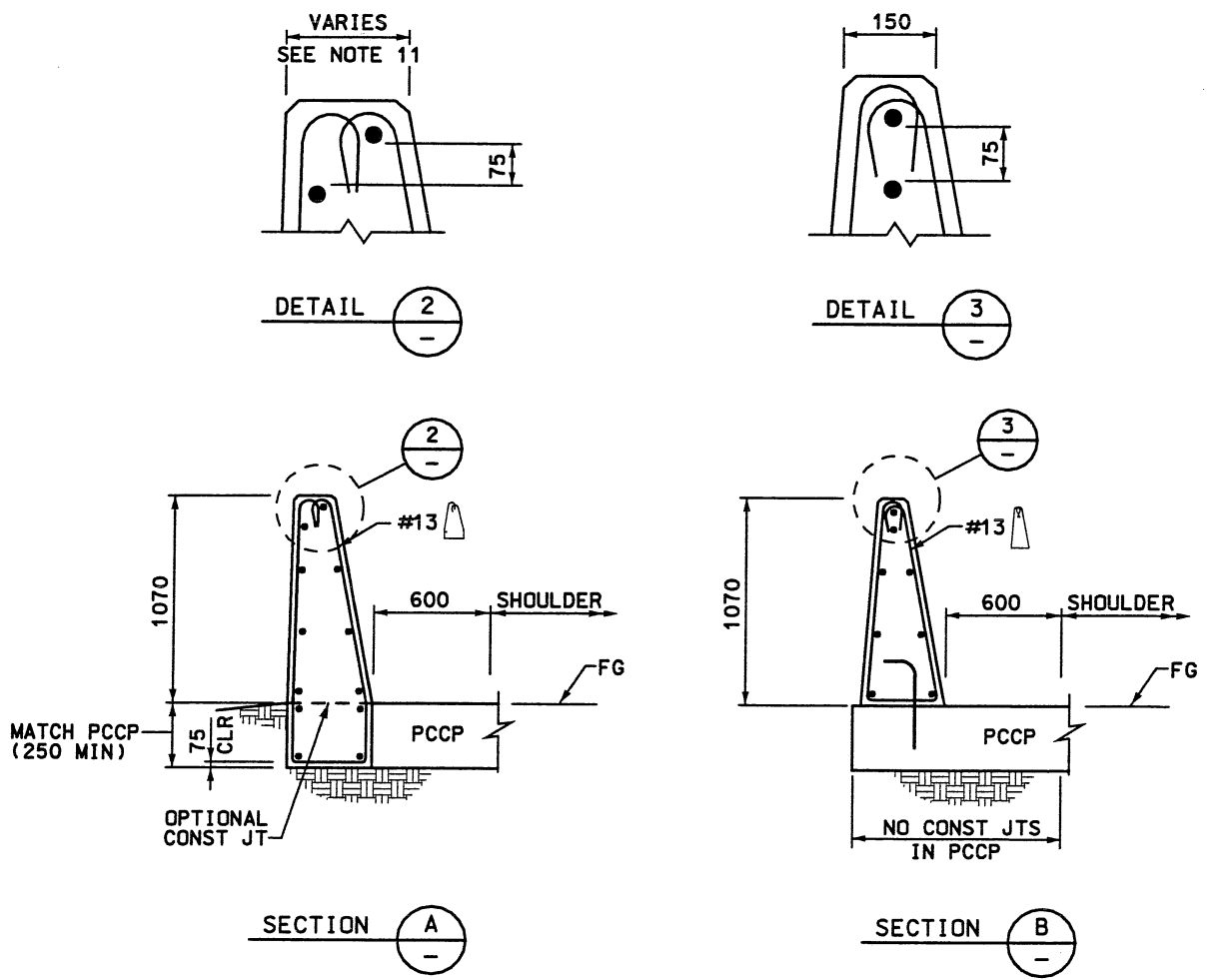


**CONCRETE BARRIER TYPE HC**

**CONCRETE BARRIER TYPE HC W/ SCUPPER**  
(SCUPPER REQUIRED ONLY WHERE SHOWN ON ROADWAY PLANS)



**PLAN**

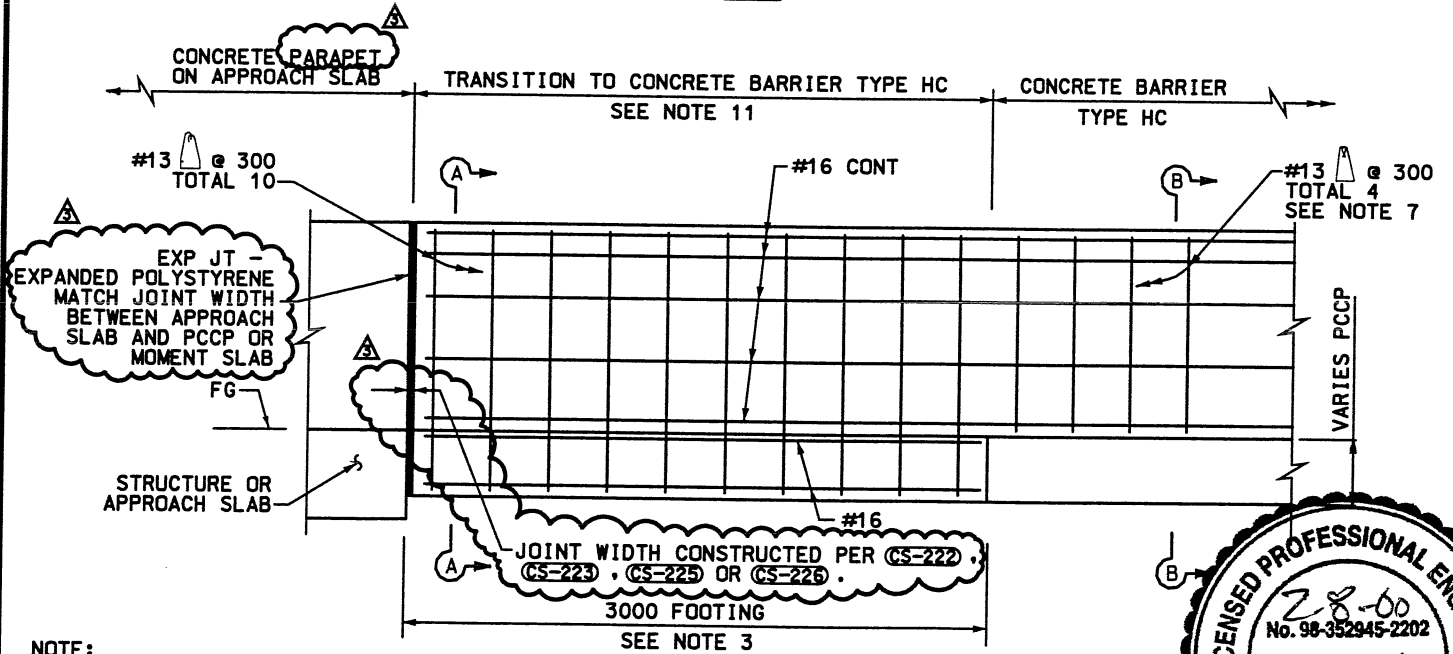


**SECTION A**

**SECTION B**

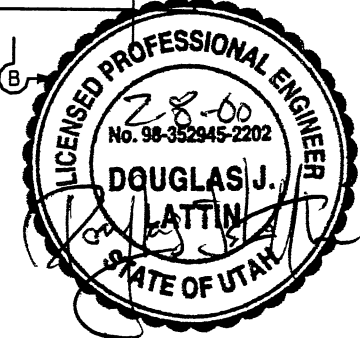
**NOTES:**

- 1) EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL TRANSITIONS AND APPROACH SLABS, AND SHALL MATCH CIP WALL OR MSE MOMENT SLAB EXPANSION JOINTS. USE 13mm PREMOLDED EXPANSION JOINT FILLER UNLESS OTHER THICKNESS AND/OR MATERIAL IS SPECIFIED ELSEWHERE. PROVIDE 20mm CHAMFER ON EXPOSED CONCRETE EDGES.
- 2) EXPANSION JOINTS ALONG THE LENGTH OF THE BARRIERS SHALL BE SPACED GREATER THAN OR EQUAL TO 50 M.
- 3) THE FOOTING IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN THE CONCRETE BARRIER INCLUDING EXPANSION JOINTS.
- 4) CLASS AA (AE)  $f'c=27.5$  MPa CONCRETE PER CORRIDOR STANDARD SPECIFICATIONS. ALL REINFORCING STEEL SHALL BE EPOXY-COATED OR GALVANIZED DEFORMED BILLET-STEEL CONFORMING TO THE CORRIDOR STANDARD SPECIFICATIONS. COVER TO REINFORCING STEEL SHALL BE 50mm MIN EXCEPT WHERE OTHERWISE NOTED.
- 5) PLACE CONSTRUCTION JOINT AT END OF DAY'S POUR AND WHEN WORK IS HALTED FOR 2 HOURS OR MORE. EXTEND LONGITUDINAL REINFORCEMENT TO MEET LAP SPLICE REQUIREMENTS PER CORRIDOR STANDARD SPECIFICATIONS.
- 6) INSTALL ELECTRICAL/ATMS CONDUITS AND PULLBOXES AS REQUIRED. SEE ATMS DRAWINGS.
- 7) ADDITIONAL #13 STIRRUPS TO SECURE LONGITUDINAL REINFORCEMENT ARE OPTIONAL OVER LENGTH OF CONCRETE BARRIER.
- 8) CONCRETE BARRIER SHALL BE CONSTRUCTED BY THE SLIP FORM OR FORMED CAST-IN-PLACE METHODS.
- 9) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
- 10) NO VERTICAL SCORING SHALL BE ALLOWED ON BARRIER FACE EXCEPT @ EXPANSION JOINTS.
- 11) TRANSITION IS REQUIRED AT ALL BRIDGE APPROACH SLABS, BARRIERS WITH SOUNDWALLS (SEE CS 28-2), AND RETAINING WALLS.
- 12) BEND STIRRUPS OUT OF PLANE IF NECESSARY TO MEET MINIMUM CLEARANCE CRITERIA.
- 13) THE #13 DOWEL REBAR MAY BE DRILLED AND BONDED, SEE SPECIFICATIONS.
- 14) SEE STD DWG NO. 726-1 FOR BARRIER REFLECTORS.



**ELEVATION**

**NOTE:**  
 CONNECTION TO STRUCTURE APPROACH SLAB SHOWN.  
 SEE CORRIDOR STANDARD PLANS (CS-69 & CS-87) FOR  
 BARRIER TERMINUS DETAIL OR ATTENUATOR DETAILS  
 REQUIRED AT BARRIER INTERRUPTIONS.



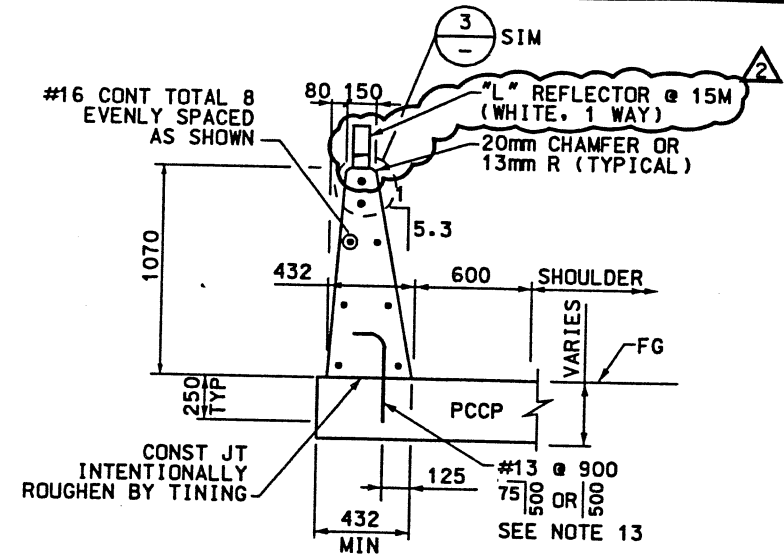
**CONCRETE BARRIER TYPE HC**  
**CONNECTION TO STRUCTURE OR END ANCHORAGE**

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	06/26/98	1	06/26/98
2	11/06/98	2	11/06/98
3	12/10/99	3	12/10/99
INITIAL RELEASE		ADDED REFLECTORS	
CLARIFIED JOINT WIDTH		FOC 7-0105	
UTAH DEPARTMENT OF TRANSPORTATION DE LEUW CATHER SVERDRUP/DE LEUW DESIGN: MC 08/98 CHECK: J. KLENZ DRAW: DKC 08/98 CHECK: J. KLENZ QUANT.: DATE: DATE: SECTION MANAGER:			
I-15 CORRIDOR RECONSTRUCTION		CONCRETE BARRIER TYPE HC	
CORRIDOR STANDARD PLAN		PROJECT #SP-15-7(135)296	
SALT LAKE COUNTY		DWC. NO. CS-68	
MAR 08 2000		WASATCH CONSTRUCTORS	

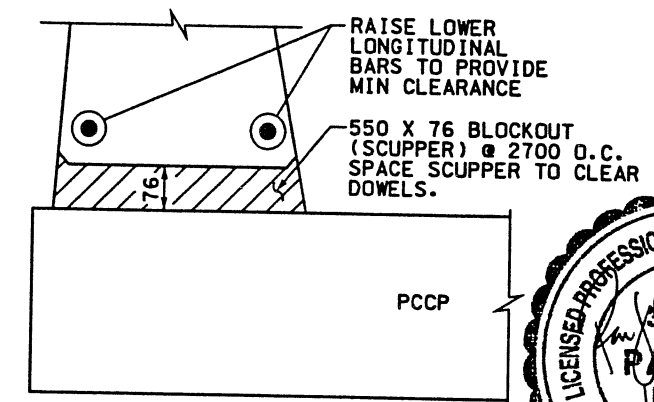
REC After Final Approval



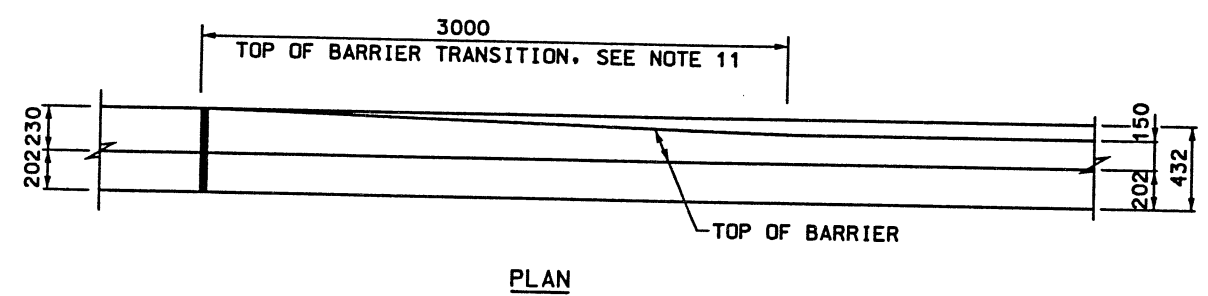
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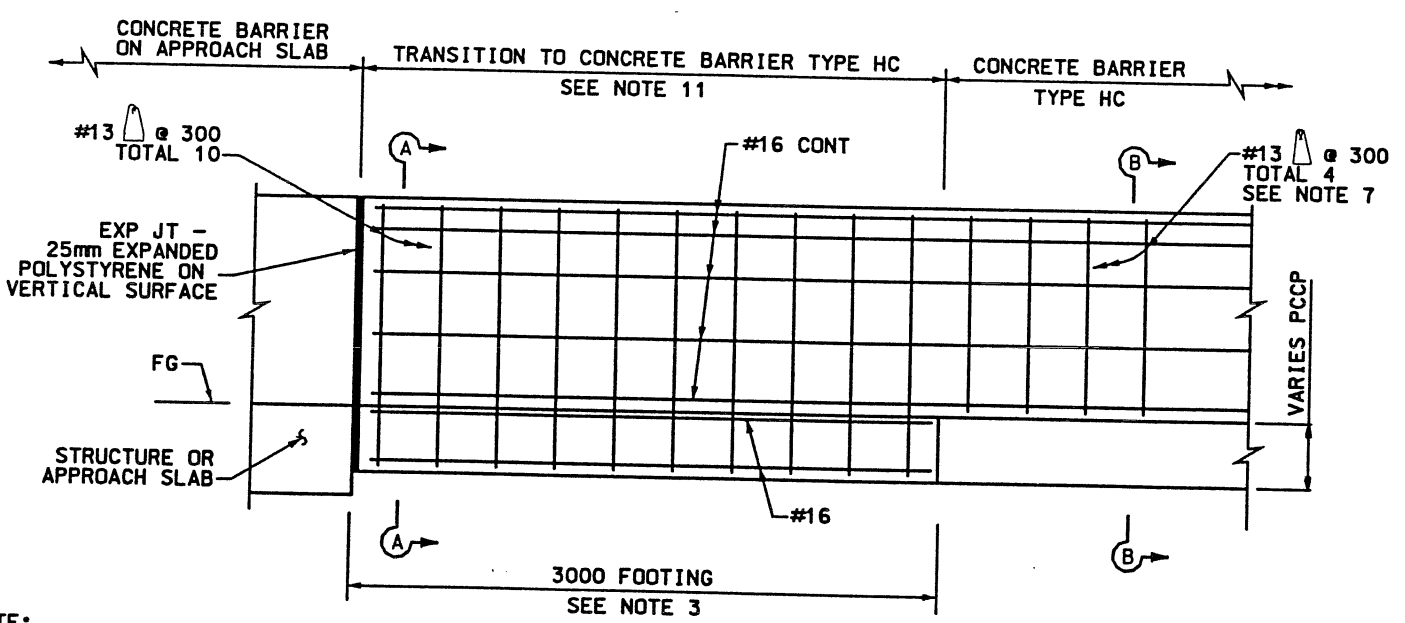
**CONCRETE BARRIER TYPE HC**



**CONCRETE BARRIER TYPE HC W/ SCUPPER**  
(SCUPPER REQUIRED ONLY WHERE SHOWN ON ROADWAY PLANS)

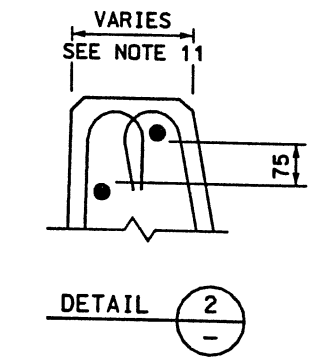


**PLAN**

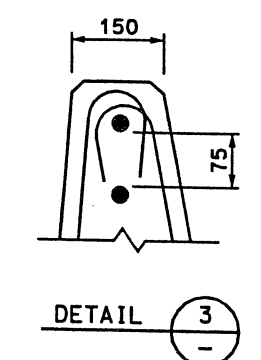


**ELEVATION**

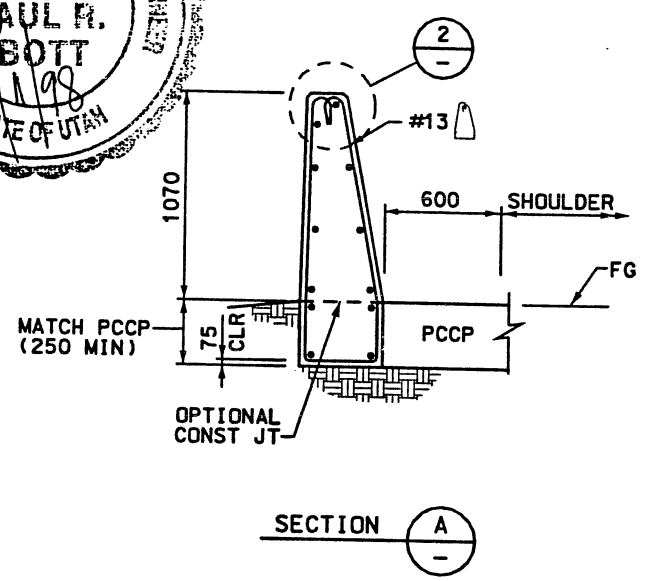
NOTE: CONNECTION TO STRUCTURE APPROACH SLAB SHOWN. SEE CORRIDOR STANDARD PLANS (CS-69) & (CS-87) FOR BARRIER TERMINUS DETAIL OR ATTENUATOR DETAILS REQUIRED AT BARRIER INTERRUPTIONS.



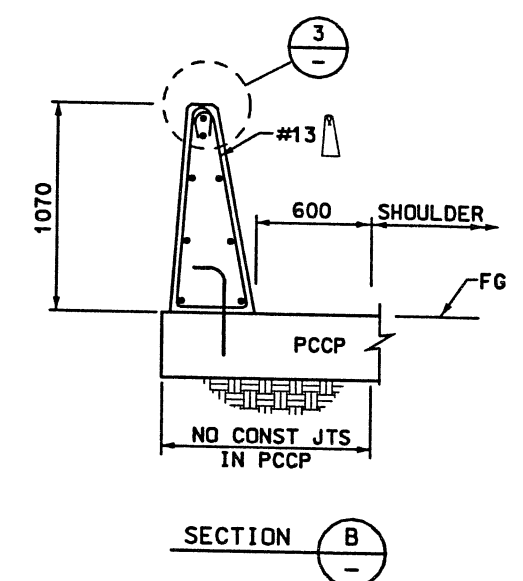
DETAIL 2



DETAIL 3



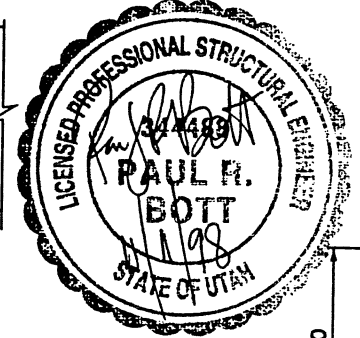
SECTION A



SECTION B

**NOTES:**

- 1) EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL TRANSITIONS AND APPROACH SLABS, AND SHALL MATCH CIP WALL OR MSE MOMENT SLAB EXPANSION JOINTS. USE 13mm PREMOLDED EXPANSION JOINT FILLER UNLESS OTHER THICKNESS AND/OR MATERIAL IS SPECIFIED ELSEWHERE. PROVIDE 20mm CHAMFER ON EXPOSED CONCRETE EDGES.
- 2) EXPANSION JOINTS ALONG THE LENGTH OF THE BARRIERS SHALL BE SPACED GREATER THAN OR EQUAL TO 50 M.
- 3) THE FOOTING IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN THE CONCRETE BARRIER INCLUDING EXPANSION JOINTS.
- 4) CLASS AA (AE) f'c=27.5 MPa CONCRETE PER CORRIDOR STANDARD SPECIFICATIONS. ALL REINFORCING STEEL SHALL BE EPOXY-COATED OR GALVANIZED DEFORMED BILLET-STEEL CONFORMING TO THE CORRIDOR STANDARD SPECIFICATIONS. COVER TO REINFORCING STEEL SHALL BE 50mm MIN EXCEPT WHERE OTHERWISE NOTED.
- 5) PLACE CONSTRUCTION JOINT AT END OF DAY'S POUR AND WHEN WORK IS HALTED FOR 2 HOURS OR MORE. EXTEND LONGITUDINAL REINFORCEMENT TO MEET LAP SPLICE REQUIREMENTS PER CORRIDOR STANDARD SPECIFICATIONS.
- 6) INSTALL ELECTRICAL/ATMS CONDUITS AND PULLBOXES AS REQUIRED. SEE ATMS DRAWINGS.
- 7) ADDITIONAL #13 STIRRUPS TO SECURE LONGITUDINAL REINFORCEMENT ARE OPTIONAL OVER LENGTH OF CONCRETE BARRIER.
- 8) CONCRETE BARRIER SHALL BE CONSTRUCTED BY THE SLIP FORM OR FORMED CAST-IN-PLACE METHODS.
- 9) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
- 10) NO VERTICAL SCORING SHALL BE ALLOWED ON BARRIER FACE EXCEPT @ EXPANSION JOINTS.
- 11) TRANSITION IS REQUIRED AT ALL BRIDGE APPROACH SLABS, BARRIERS WITH SOUNDWALLS (SEE CS 28-2), AND RETAINING WALLS.
- 12) BEND STIRRUPS OUT OF PLANE IF NECESSARY TO MEET MINIMUM CLEARANCE CRITERIA.
- 13) THE #13 DOWEL REBAR MAY BE DRILLED AND BONDED. SEE SPECIFICATIONS.
- 14) SEE STD DWG NO. 726-1 FOR BARRIER REFLECTORS.



**CONCRETE BARRIER TYPE HC  
CONNECTION TO STRUCTURE OR END ANCHORAGE**

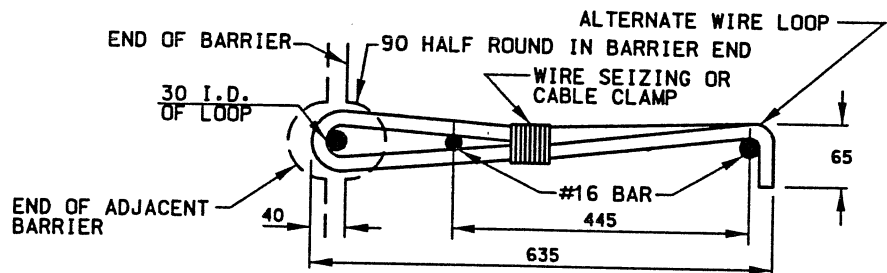
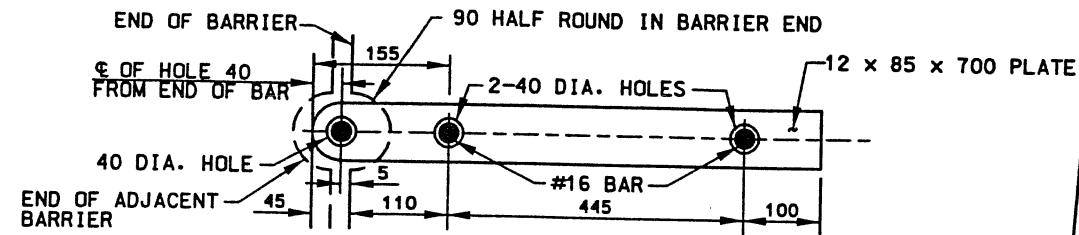
WASATCH CONSTRUCTORS

NOV 11 1998

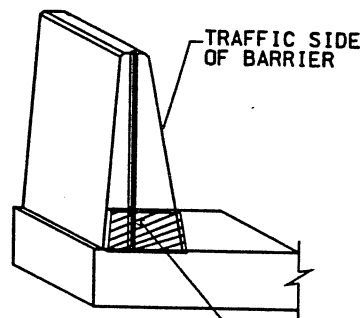
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
Δ	06/26/98	Δ	11/06/98
	INITIAL RELEASE		ADDED REFLECTORS
UTAH DEPARTMENT OF TRANSPORTATION			
DE LEUW CATHER SVERDRUP/DE LEUW			
DESIGN	MC	DR	MC
DATE	08/98	DATE	08/98
PROJECT DESIGN ENGINEER	P. BOTT	SECTION MANAGER	J. KLEMZ
APPROVED	DATE	APPROVED	DATE
I-15 CORRIDOR RECONSTRUCTION		CONCRETE BARRIER TYPE HC	
CORRIDOR STANDARD PLAN		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY			
DWG. NO. CS-68			
SHT. _____		OF _____	

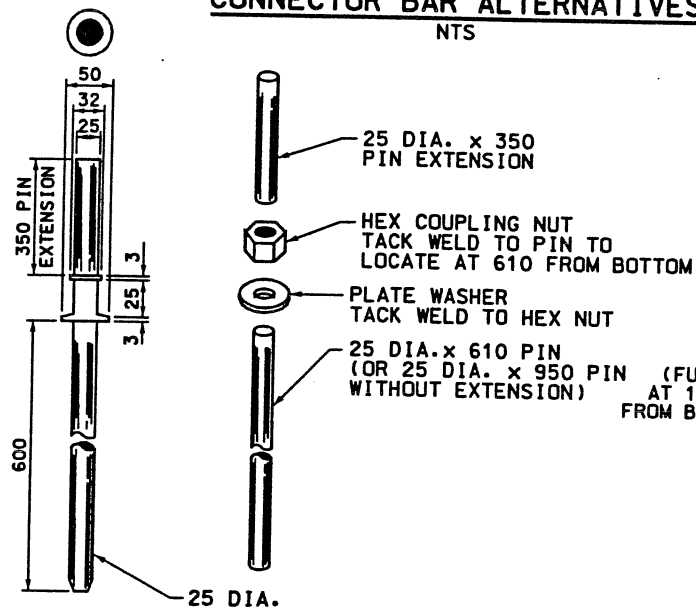
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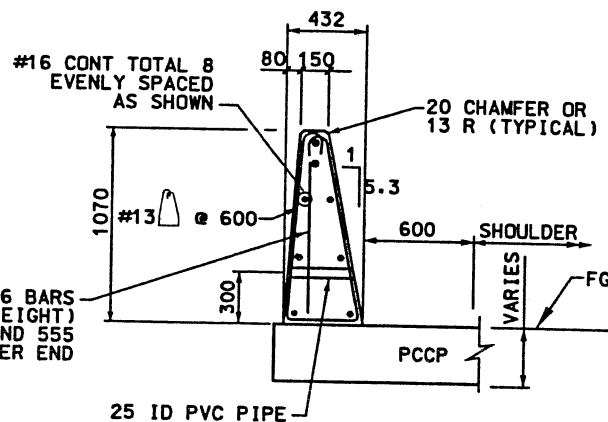
**CONNECTOR BAR ALTERNATIVES**  
NTS



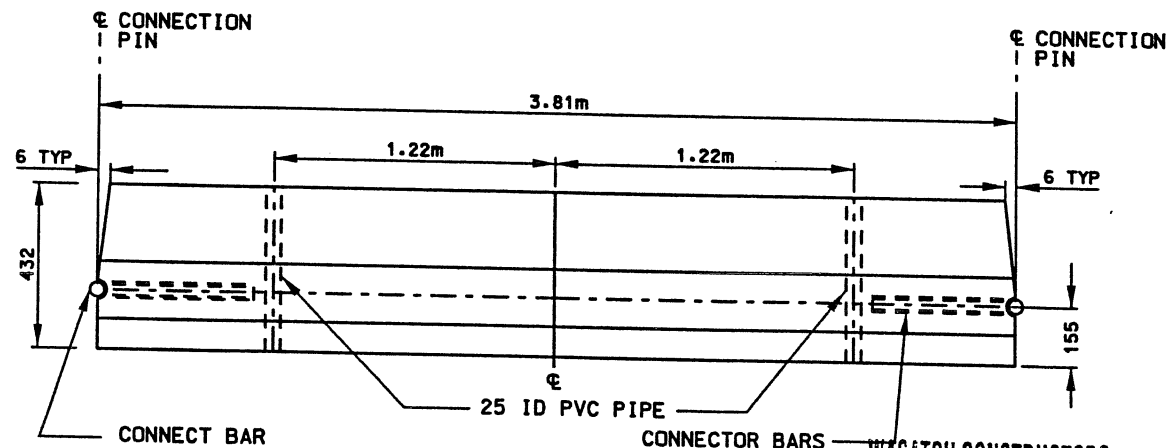
**BARRIER SEAL**  
NTS



**CONNECTION PIN ALTERNATIVES**  
NTS

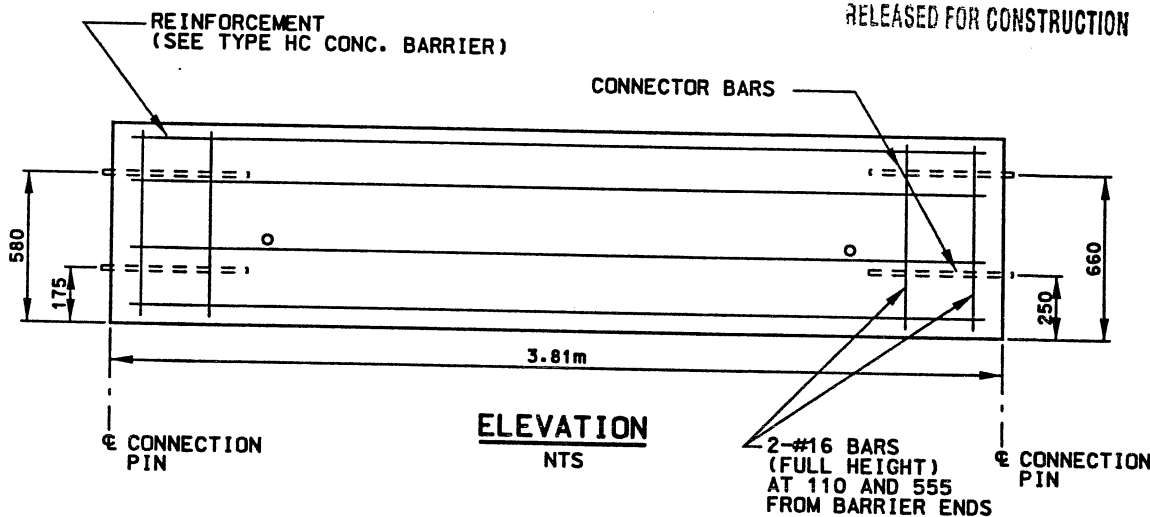


**SECTION CONCRETE BARRIER TYPE HCR**  
NTS



**PLAN**  
NTS

NOV 02 1998

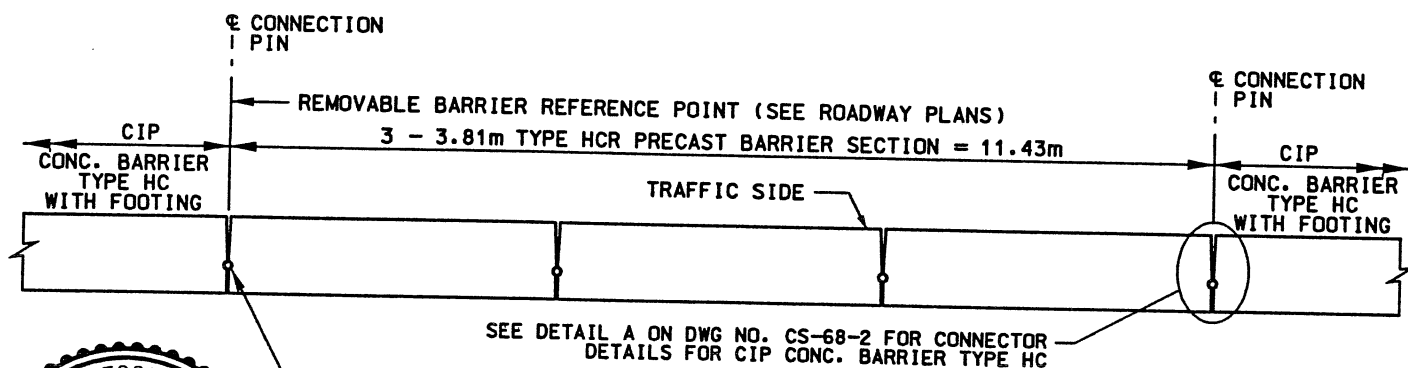


**ELEVATION**  
NTS

RELEASED FOR CONSTRUCTION

**NOTES:**

- 1) REFER TO CS-68 FOR ADDITIONAL DETAILS OF HC BARRIER AND FOOTING CONSTRUCTION.
- 2) EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 20mm.
- 3) PLACE AN ADEQUATE AMOUNT OF SILICONE ADHESIVE ON BOTTOM OF WASHER BEFORE INSERTING.
- 4) CLASS AA (AE)  $f'c=28.0$  MPa CONCRETE PER CORRIDOR STANDARD SPECIFICATIONS. ALL REINFORCING STEEL SHALL BE EPOXY-COATED OR GALVANIZED DEFORMED BILLET-STEEL CONFORMING TO THE CORRIDOR STANDARD SPECIFICATIONS. COVER TO REINFORCING STEEL SHALL BE 50mm MIN EXCEPT WHERE OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
- 6) BEND STIRRUPS OUT OF PLANE IF NECESSARY TO MEET MINIMUM CLEARANCE CRITERIA.
- 7) ALL STEEL HARDWARE AND PINS SHALL BE HOT-DIPPED GALVANIZED.
- 8) REPLACE ASPHALT IMPREGNATED POLYURETHANE FOAM FOLLOWING EACH REMOVAL AND REPLACEMENT.



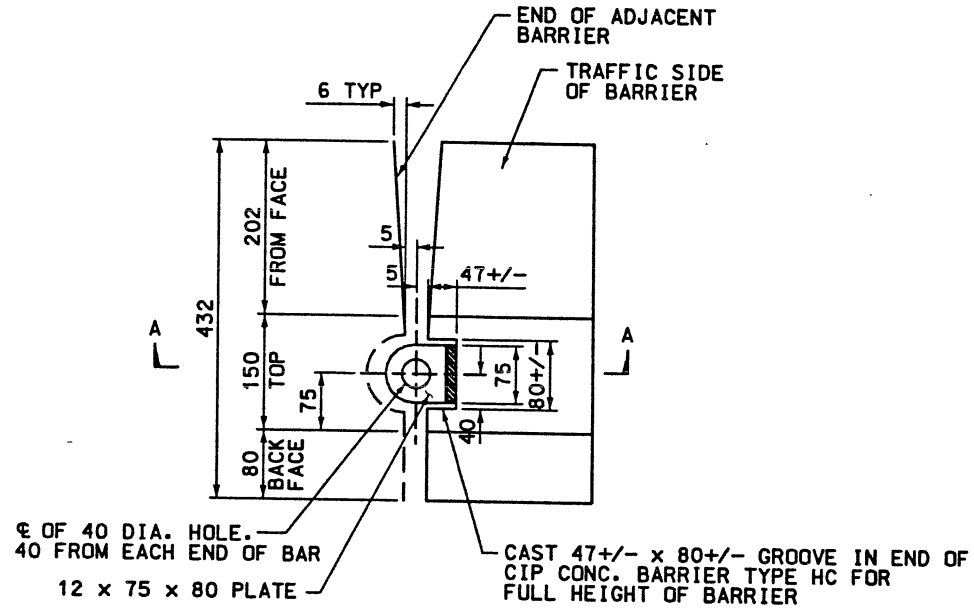
SEE DETAIL A ON DWG NO. CS-68-2 FOR CONNECTOR BAR DETAILS FOR CIP CONC. BARRIER TYPE HC

CONNECTION PIN IN CIP CONC. BARRIER

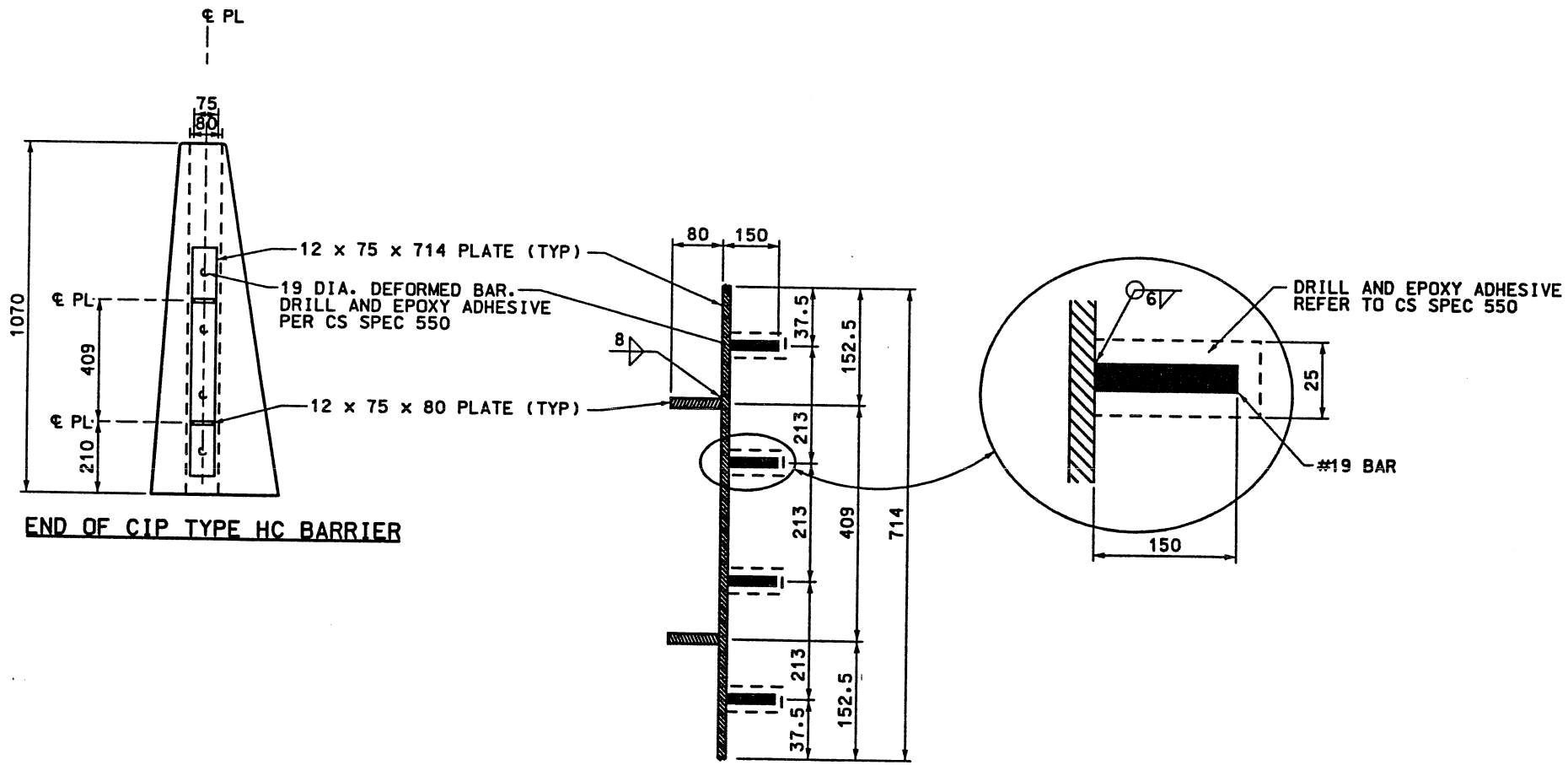
**PLAN**  
NTS



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	10/28/98		
		INITIAL RELEASE	
I-15 CORRIDOR RECONSTRUCTION PRECAST CONC. BARRIER TYPE HCR PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY		DWG. NO. CS-68-1	
SHT. _____ OF _____			



PLAN



END OF CIP TYPE HC BARRIER

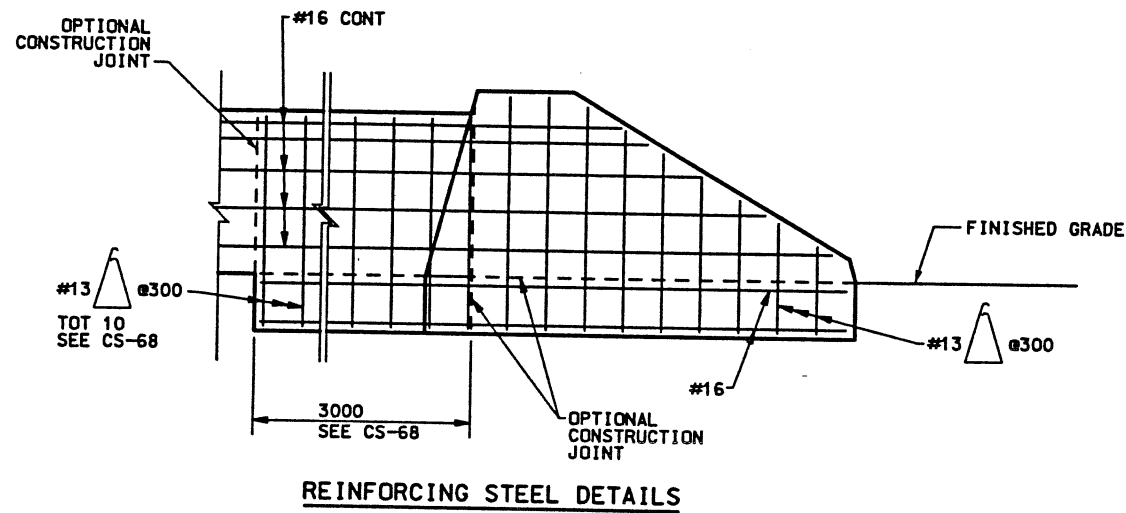
SECTION A-A

DETAIL A

WASATCH CONSTRUCTORS  
NOV 02 1998  
RELEASED FOR CONSTRUCTION

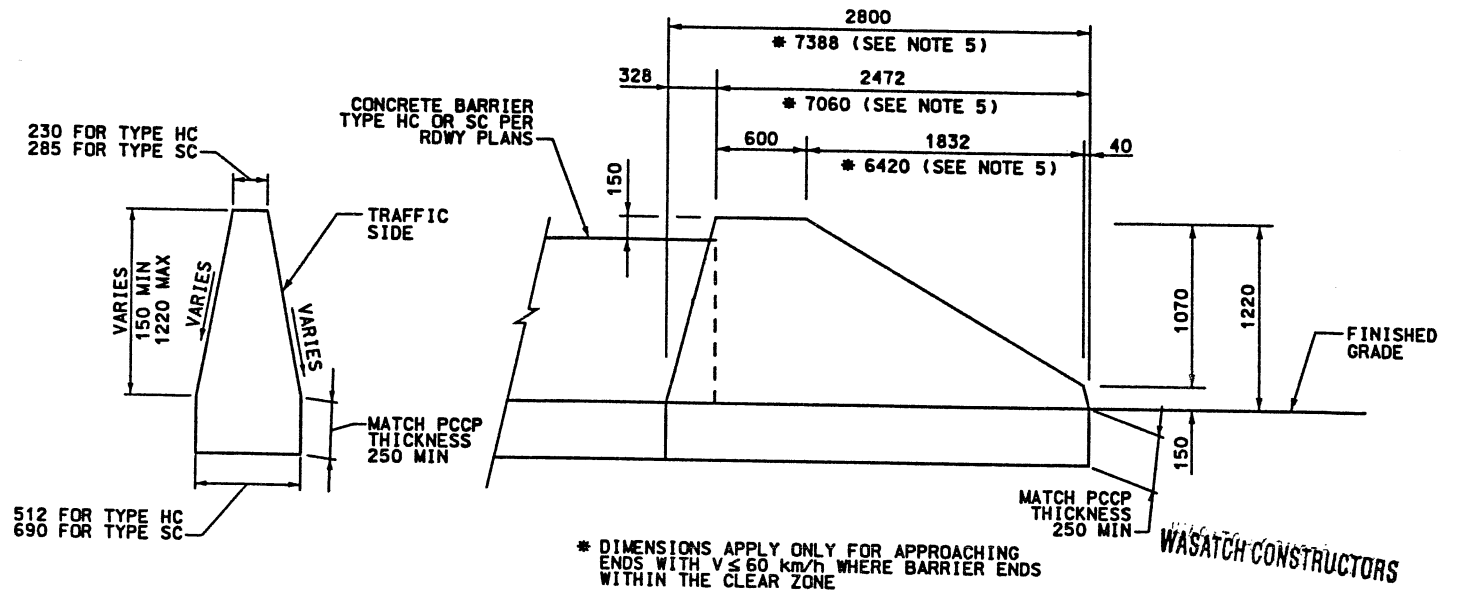


APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL	RELEASE
1	10/28/98		
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		CHECK	JOB
DESIGN	IBC	CHECK	IBC
DRAWN	RF	CHECK	IBC
QUANT.		CHECK	
APPROVAL	DATE	APPROVED	DATE
RECORD			
B/P/B	MANAGEMENT & TIMING - CHAIRS	PROJECT DESIGN ENGINEER	SECTION MANAGER
DATE		JOHN TORRY	
APPROVED		DATE	
I-15 CORRIDOR RECONSTRUCTION			
PRECAST CONC. BARRIER			
TYPE HCR			
PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY			
DWG. NO. CS-68-2			
SHT. _____ OF _____			



REINFORCING STEEL DETAILS

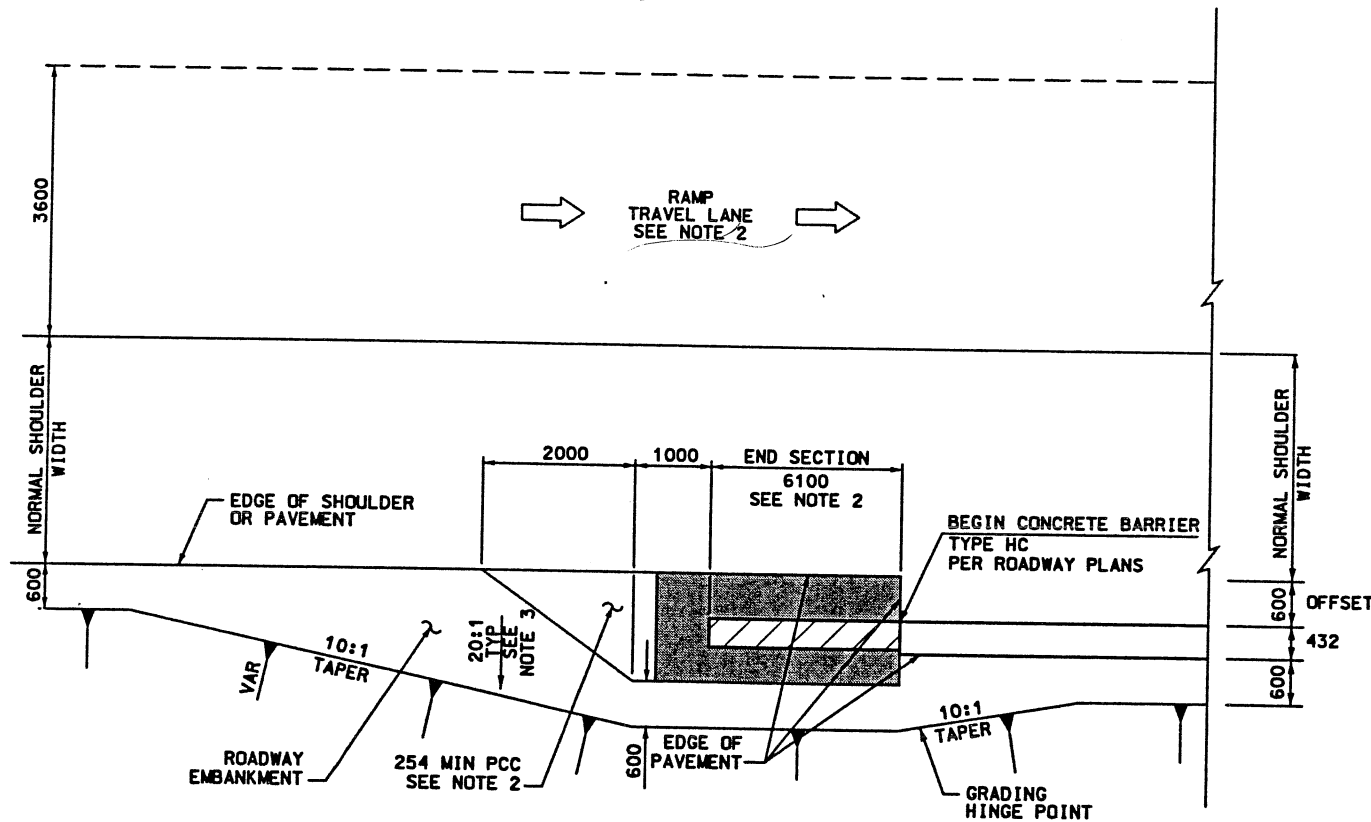
BARRIER TERMINUS DETAIL  
NTS



BARRIER TERMINUS DETAIL  
NTS

WASATCH CONSTRUCTORS  
JUL 24 1998  
RELEASED FOR CONSTRUCTION

\* DIMENSIONS APPLY ONLY FOR APPROACHING ENDS WITH V ≤ 60 km/h WHERE BARRIER ENDS WITHIN THE CLEAR ZONE

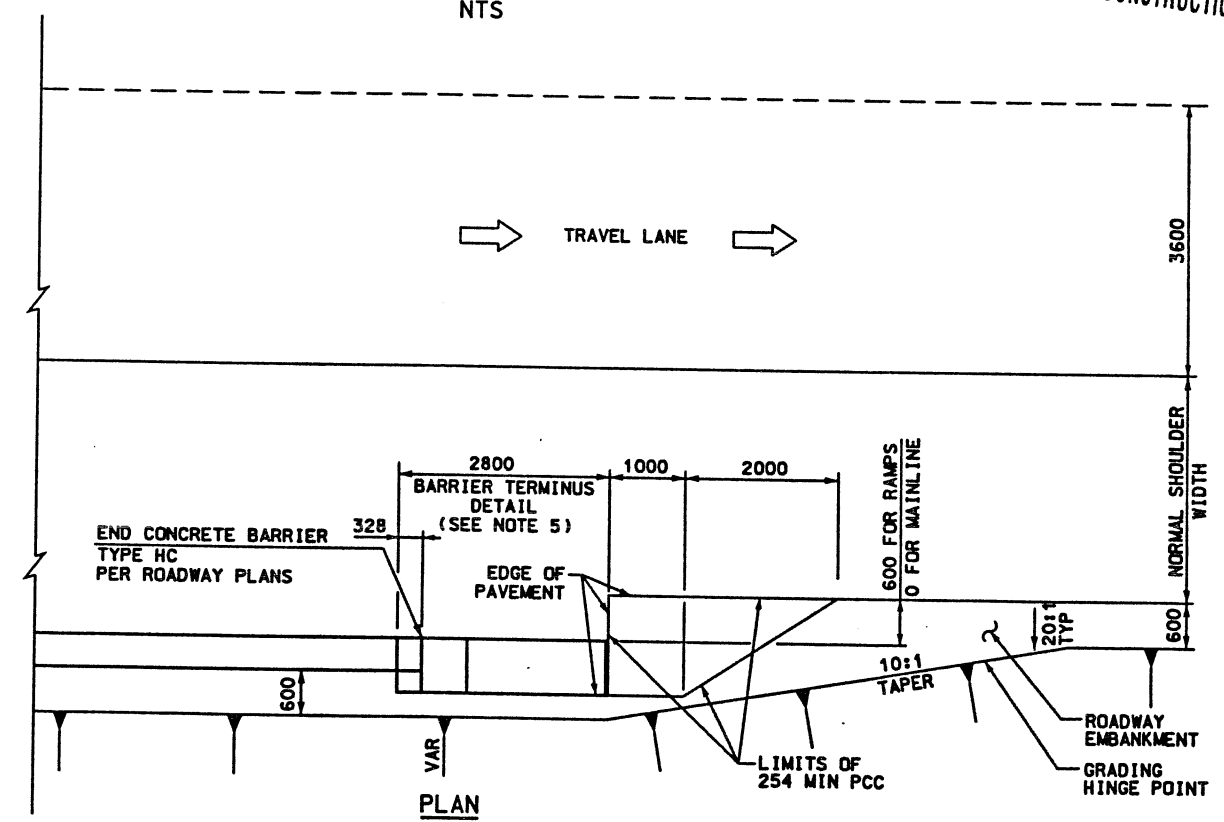


BEGIN BARRIER DETAIL

END SECTION PCC PAD LIMITS PER MANUFACTURER SEE CS-87-2 OR CS-87-3 FOR DIMENSIONS

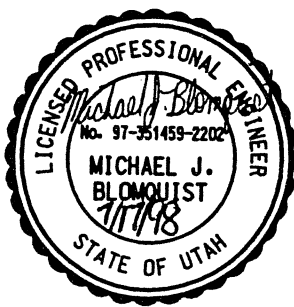
END SECTION

NO SCALE  
ALL DIMENSIONS IN MILLIMETERS  
UNLESS OTHERWISE NOTED

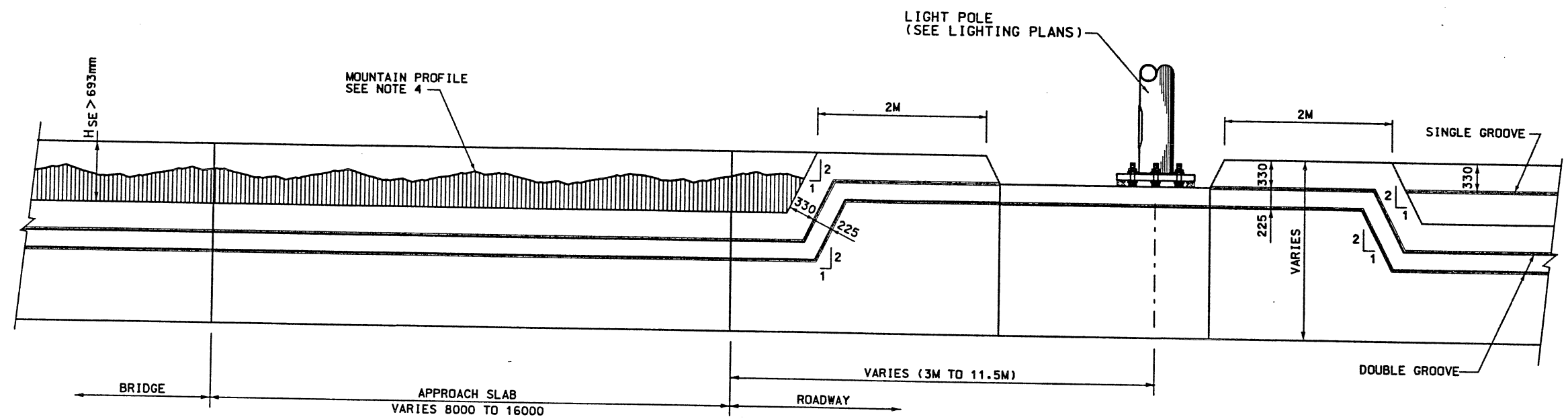


BARRIER TERMINUS DETAIL  
NTS

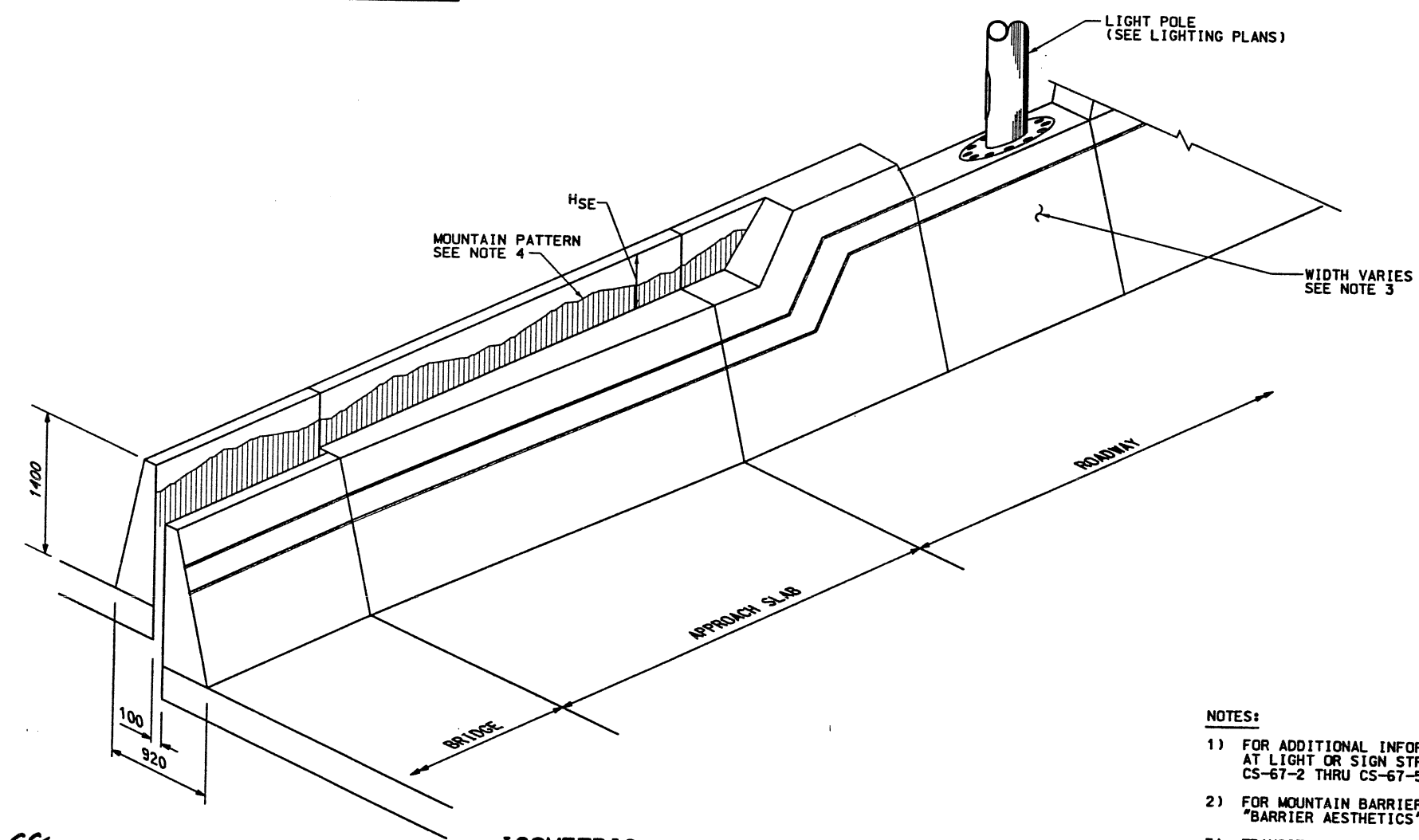
- NOTES:
- 1) USE BARRIER TERMINUS DETAIL AT LOCATIONS SHOWN ON RDWY PLANS.
  - 2) RAMP CASE SHOWN. SEE CORRIDOR STANDARDS CS-87-1, CS-87-2, & CS-87-3 FOR OTHER END SECTION AND IMPACT ATTENUATOR DETAILS.
  - 3) GRADE APPROACH TO SYSTEM TO BE 12:1 OR FLATTER.
  - 4) SEE CS-68 FOR REINFORCING DETAILS NOT SHOWN.
  - 5) BARRIER TERMINUS DETAIL TYPE 1 LENGTH = 2800  
BARRIER TERMINUS DETAIL TYPE 2 LENGTH = 7388



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	07/17/98	1	07/17/98
DE LEUW CATHER SVERDRUP/DE LEUW		DESIGN MJB 06/19/98	
CARL CUSHNIE PROJECT DESIGN ENGINEER		DRAWN DKC 06/19/98	
DATE		QUANT.	
APPROVED DATE		SECTION MANAGER	
KEITH SABOL			
UTAH DEPARTMENT OF TRANSPORTATION			
1-15 CORRIDOR RECONSTRUCTION			
CONCRETE BARRIER DETAILS			
CORRIDOR STANDARD PLAN			
PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY			
DWC. NO. CS-69-1			
SHT. _____ OF _____			

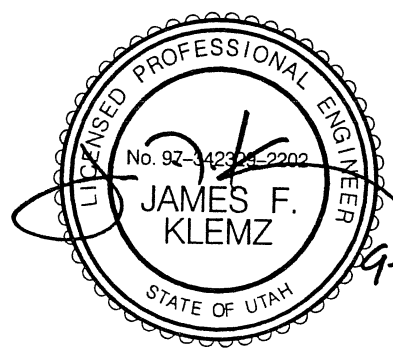


**ELEVATION**



**ISOMETRIC**

**TYPE 1 MEDIAN BARRIER TRANSITION (BRIDGE TO ROADWAY)**  
**HSE ≥ 693mm - LIGHT POLE 3M TO 11.5 M FROM APPROACH SLAB**



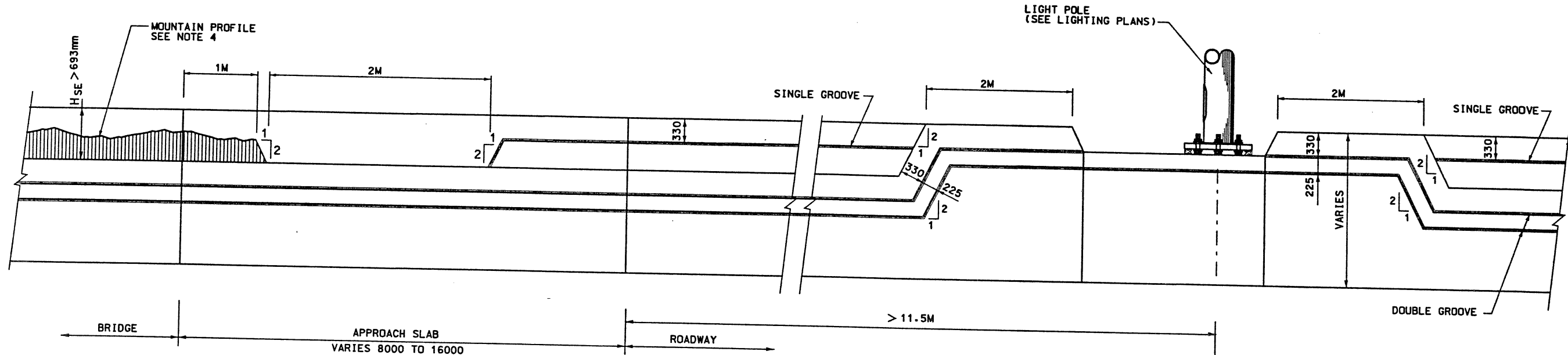
9-25-98

**NOTES:**

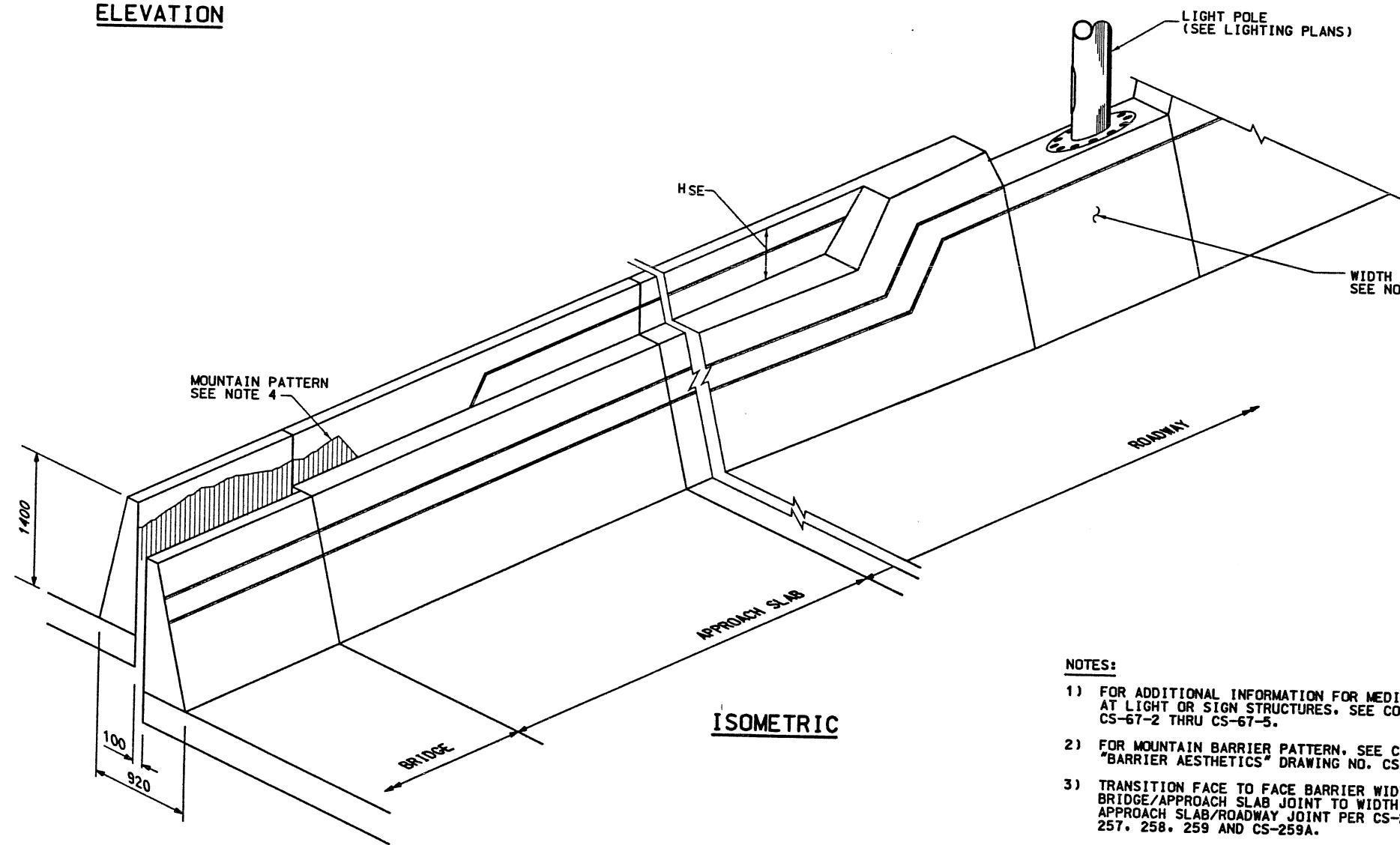
- 1) FOR ADDITIONAL INFORMATION FOR MEDIAN TRANSITION AT LIGHT OR SIGN STRUCTURES, SEE CORRIDOR STANDARDS CS-67-2 THRU CS-67-5.
- 2) FOR MOUNTAIN BARRIER PATTERN, SEE CORRIDOR STANDARD "BARRIER AESTHETICS" DRAWING NO. CS-6.
- 3) TRANSITION FACE TO FACE BARRIER WIDTH OF 920MM AT BRIDGE/APPROACH SLAB JOINT TO WIDTH REQUIRED AT APPROACH SLAB/ROADWAY JOINT PER CS-252, 252A, 253, 254, 257, 258, 259 AND CS-259A.
- 4) USE MOUNTAIN PATTERN ON BARRIER FOR H<sub>se</sub> = 693mm OR GREATER ONLY. FOR H<sub>se</sub> < 693mm, USE STANDARD BARRIER FINISH.
- 5) SEE ROADWAY PLANS FOR TRANSITION LOCATIONS.
- 6) FOR MEDIAN BARRIER DETAILS, SEE CS-67 AND CS-67-1.

WASATCH CONSTRUCTORS  
 SEP 28 1998  
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	9/25/98	ORIGINAL ISSUE
Δ			
UTAH DEPARTMENT OF TRANSPORTATION			
DE LEUW CATHER SVERDRUP/DE LEUW			
DESIGN	CHECK	DESIGN	CHECK
DRAWN	DKC	12/12/97	CHECK
QUANT.			CHECK
APPROVAL RECORD	DATE	P. BELUE	PROJECT DESIGN ENGINEER
APPROVED	DATE	J. KLEMZ	SECTION MANAGER
I-15 CORRIDOR RECONSTRUCTION			
MEDIAN BARRIER TRANSITION			
CORRIDOR STANDARD PLAN			
PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY			
DWG. NO. CS-69-2			
SHT. OF			



**ELEVATION**

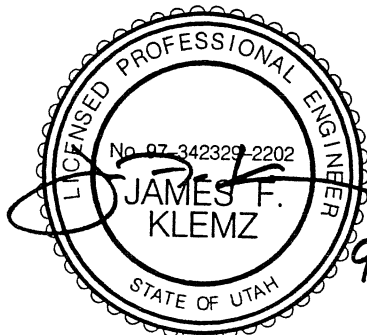


**ISOMETRIC**

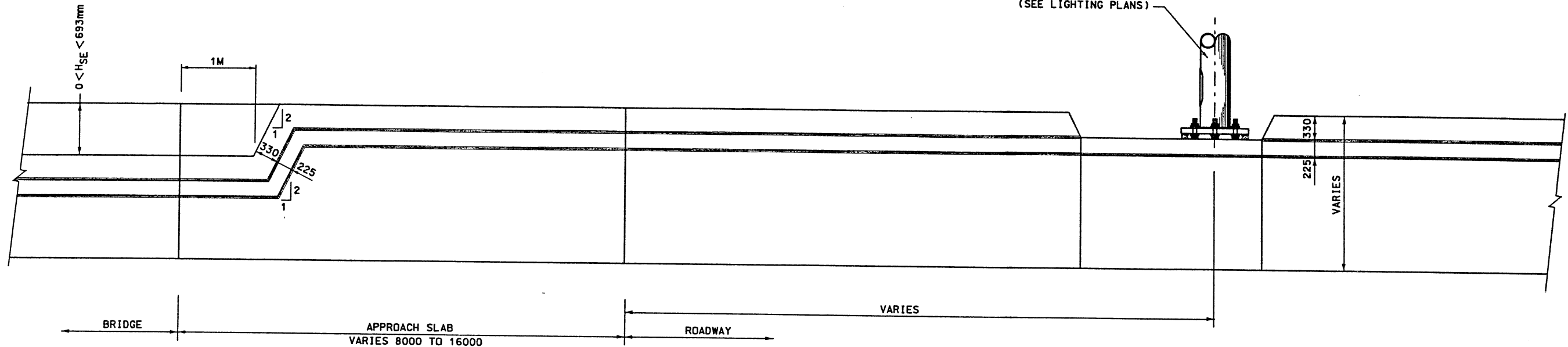
**TYPE 2 MEDIAN BARRIER TRANSITION (BRIDGE TO ROADWAY)**  
**HSE ≥ 693mm - LIGHT POLE > 11.5 M FROM APPROACH SLAB**

**NOTES:**

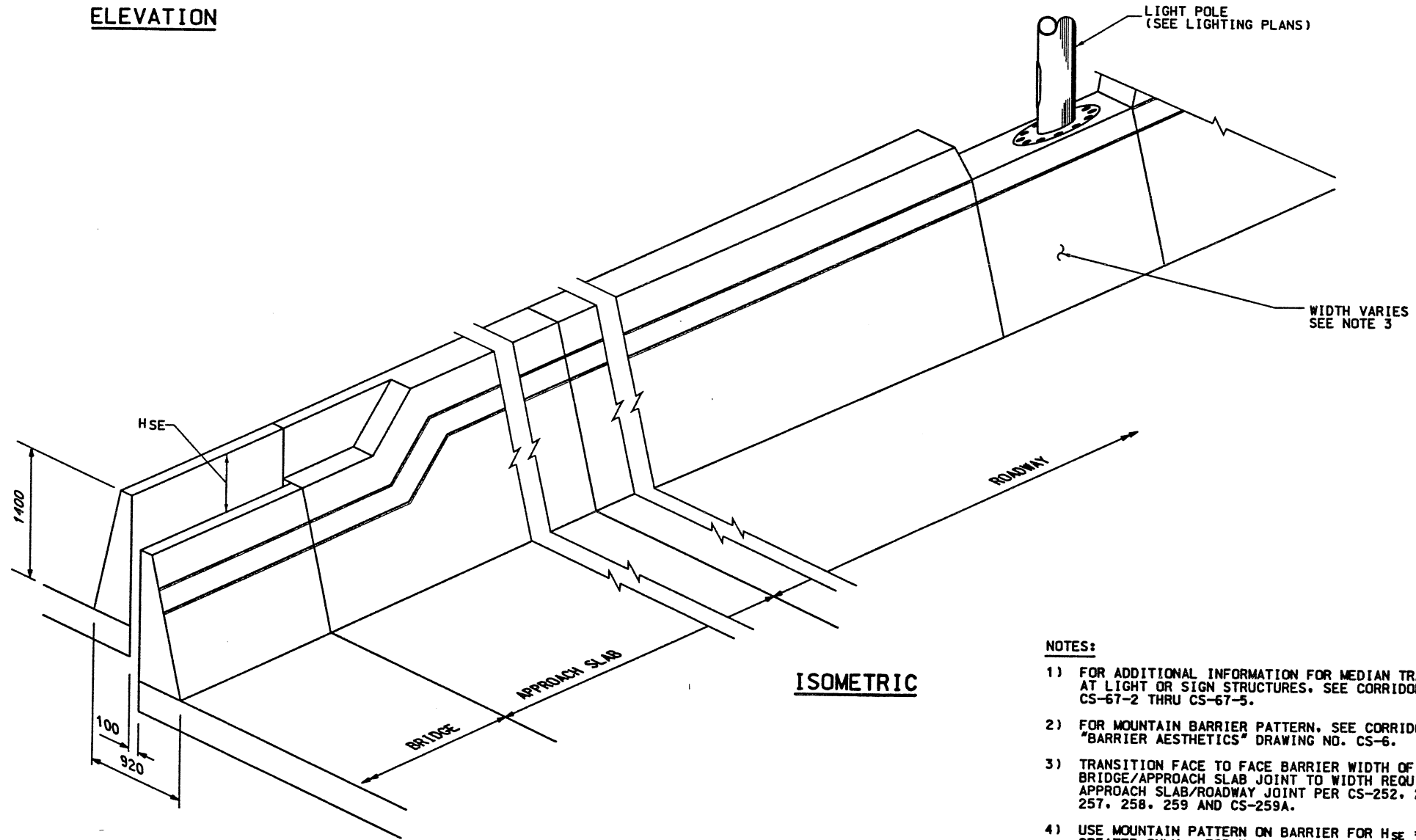
- 1) FOR ADDITIONAL INFORMATION FOR MEDIAN TRANSITION AT LIGHT OR SIGN STRUCTURES. SEE CORRIDOR STANDARDS CS-67-2 THRU CS-67-5.
- 2) FOR MOUNTAIN BARRIER PATTERN. SEE CORRIDOR STANDARD "BARRIER AESTHETICS" DRAWING NO. CS-6.
- 3) TRANSITION FACE TO FACE BARRIER WIDTH OF 920MM AT BRIDGE/APPROACH SLAB JOINT TO WIDTH REQUIRED AT APPROACH SLAB/ROADWAY JOINT PER CS-252, 252A, 253, 254, 257, 258, 259 AND CS-259A.
- 4) USE MOUNTAIN PATTERN ON BARRIER FOR H<sub>se</sub> = 693mm OR GREATER ONLY. FOR H<sub>se</sub> < 693mm, USE STANDARD BARRIER FINISH.
- 5) SEE ROADWAY PLANS FOR TRANSITION LOCATIONS.
- 6) FOR MEDIAN BARRIER DETAILS. SEE CS-67 AND CS-67-1.



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
Δ	9/25/98		
ORIGINAL ISSUE			
UTAH DEPARTMENT OF TRANSPORTATION			
DE LEUW CATHER SVERDRUP/DE LEUW			
DESIGN	CHECK	DESIGN	CHECK
DE LEUW CATHER SVERDRUP/DE LEUW		DE LEUW CATHER SVERDRUP/DE LEUW	
PROJECT DESIGN ENGINEER	DATE	PROJECT DESIGN ENGINEER	DATE
J. KLEMZ		J. KLEMZ	
SECTION MANAGER	DATE	SECTION MANAGER	DATE
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
MEDIAN BARRIER TRANSITION		CORRIDOR STANDARD PLAN	
PROJECT NUMBER		PROJECT NUMBER	
*SP-15-7(135)296		*SP-15-7(135)296	
SALT LAKE COUNTY			
DWG. NO. CS-69-3			
SHT. OF			



**ELEVATION**



**ISOMETRIC**

**TYPE 3 MEDIAN BARRIER TRANSITION (BRIDGE TO ROADWAY)**

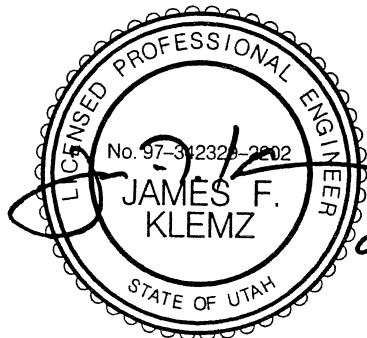
**0 < HSE < 693mm**

**NOTES:**

- 1) FOR ADDITIONAL INFORMATION FOR MEDIAN TRANSITION AT LIGHT OR SIGN STRUCTURES, SEE CORRIDOR STANDARDS CS-67-2 THRU CS-67-5.
- 2) FOR MOUNTAIN BARRIER PATTERN, SEE CORRIDOR STANDARD "BARRIER AESTHETICS" DRAWING NO. CS-6.
- 3) TRANSITION FACE TO FACE BARRIER WIDTH OF 920MM AT BRIDGE/APPROACH SLAB JOINT TO WIDTH REQUIRED AT APPROACH SLAB/ROADWAY JOINT PER CS-252, 252A, 253, 254, 257, 258, 259 AND CS-259A.
- 4) USE MOUNTAIN PATTERN ON BARRIER FOR H<sub>SE</sub> = 693mm OR GREATER ONLY. FOR H<sub>SE</sub> < 693mm, USE STANDARD BARRIER FINISH.
- 5) SEE ROADWAY PLANS FOR TRANSITION LOCATIONS.
- 6) FOR MEDIAN BARRIER DETAILS, SEE CS-67 AND CS-67-1.

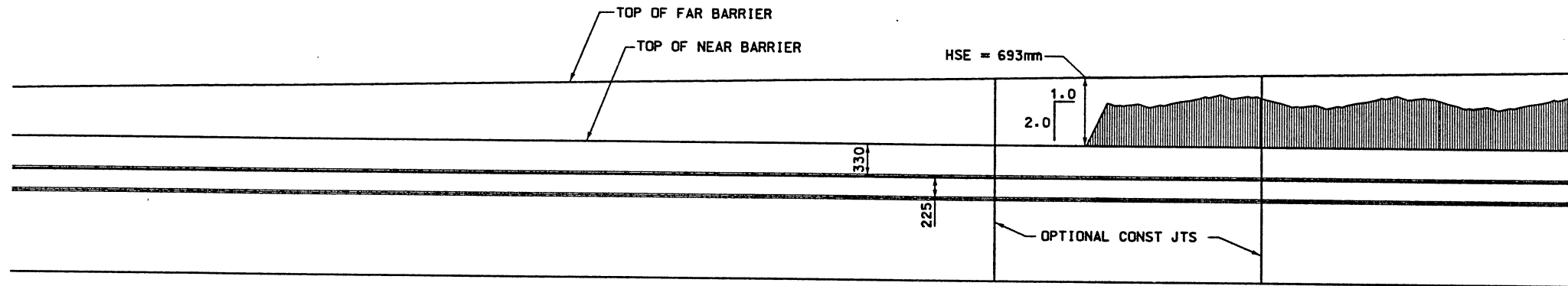
WASATCH CONSTRUCTORS  
SEP 28 1998

RELEASED FOR CONSTRUCTION



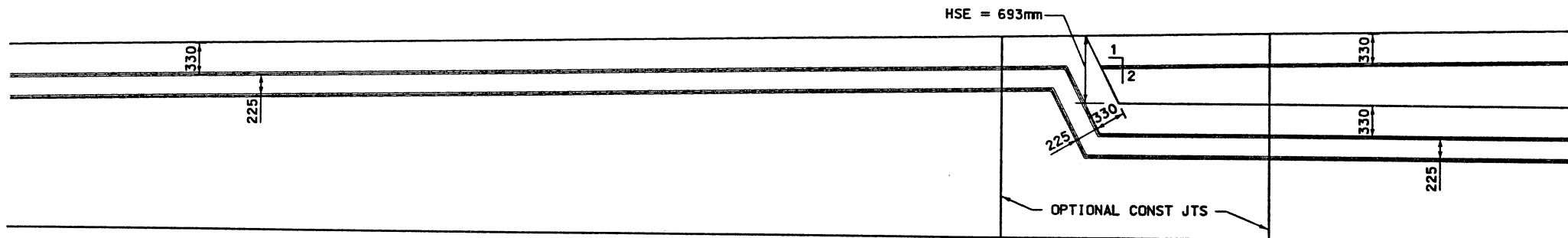
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
Δ	9/25/98		
UTAH DEPARTMENT OF TRANSPORTATION		DESIGN	
DE LEUW CATHER		DESIGNER	
SVERDRUP/DE LEUW		DRAWN	
		DATE	
		QUANT.	
		CHECK	
		CHECK	
		CHECK	
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
MEDIAN BARRIER TRANSITION		PROJECT NUMBER	
		#SP-15-7(135)296	
SALT LAKE		COUNTY	
DWG. NO.		CS-69-4	
SHT.	OF		





ELEVATION

**TYPE 4 MEDIAN BARRIER TRANSITION (BRIDGE)**  
**HSE = 693mm**

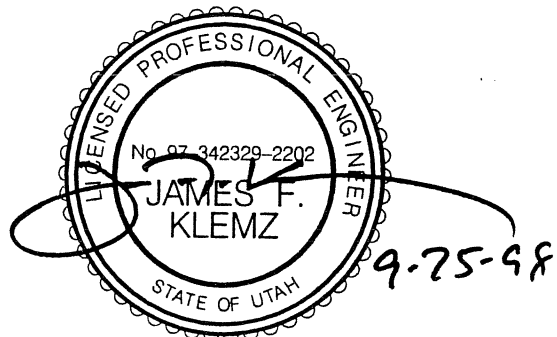


ELEVATION

**TYPE 5 MEDIAN BARRIER TRANSITION (ROADWAY)**  
**HSE = 693mm**

WASATCH CONSTRUCTORS  
 SEP 28 1998

RELEASED FOR CONSTRUCTION



NOTES:

- 1) FOR ADDITIONAL INFORMATION FOR MEDIAN TRANSITION AT LIGHT OR SIGN STRUCTURES. SEE CORRIDOR STANDARDS CS-67-2 THRU CS-67-5.
- 2) FOR MOUNTAIN BARRIER PATTERN, SEE CORRIDOR STANDARD "BARRIER AESTHETICS" DRAWING NO. CS-6.
- 3) TRANSITION FACE TO FACE BARRIER WIDTH OF 920MM AT BRIDGE/APPROACH SLAB JOINT TO WIDTH REQUIRED AT APPROACH SLAB/ROADWAY JOINT PER CS-252, 252A, 253, 254, 257, 258, 259 AND CS-259A.
- 4) USE MOUNTAIN PATTERN ON BARRIER FOR H<sub>SE</sub> = 693mm OR GREATER ONLY. FOR H<sub>SE</sub> < 693mm, USE STANDARD BARRIER FINISH.
- 5) SEE ROADWAY PLANS FOR TRANSITION LOCATIONS.
- 6) FOR MEDIAN BARRIER DETAILS. SEE CS-67 AND CS-67-1.

APPROVED FOR CONSTRUCTION

NO. DATE  
 Δ 9/25/98

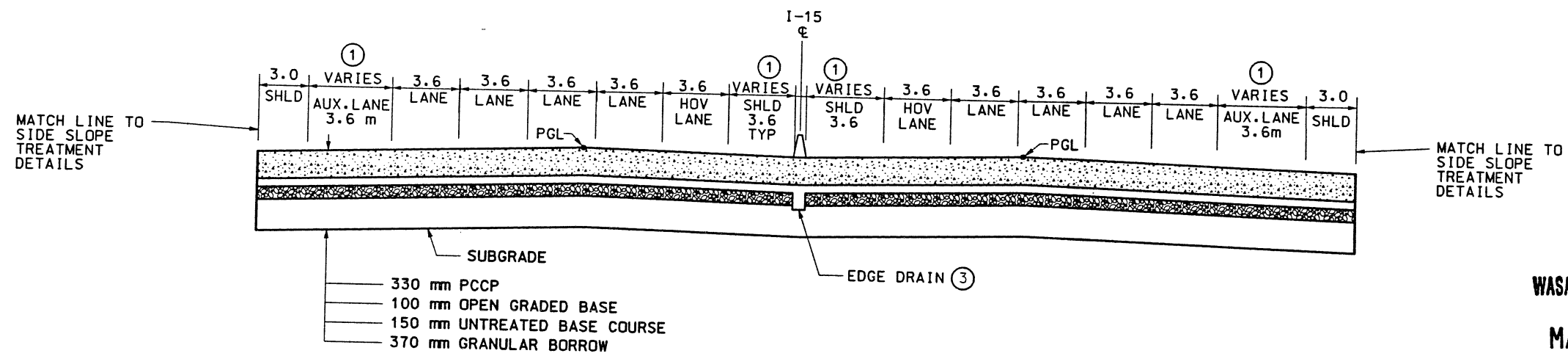
DESCRIPTION  
 ORIGINAL ISSUE

UTAH DEPARTMENT OF TRANSPORTATION

I-15 CORRIDOR RECONSTRUCTION  
 MEDIAN BARRIER TRANSITION  
 CORRIDOR STANDARD PLAN  
 PROJECT NUMBER #SP-15-7(135)296

SALT LAKE COUNTY  
 DWG. NO. CS-69-5

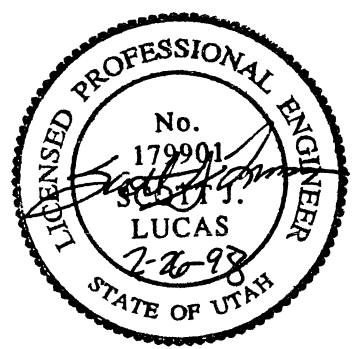
SHT. OF



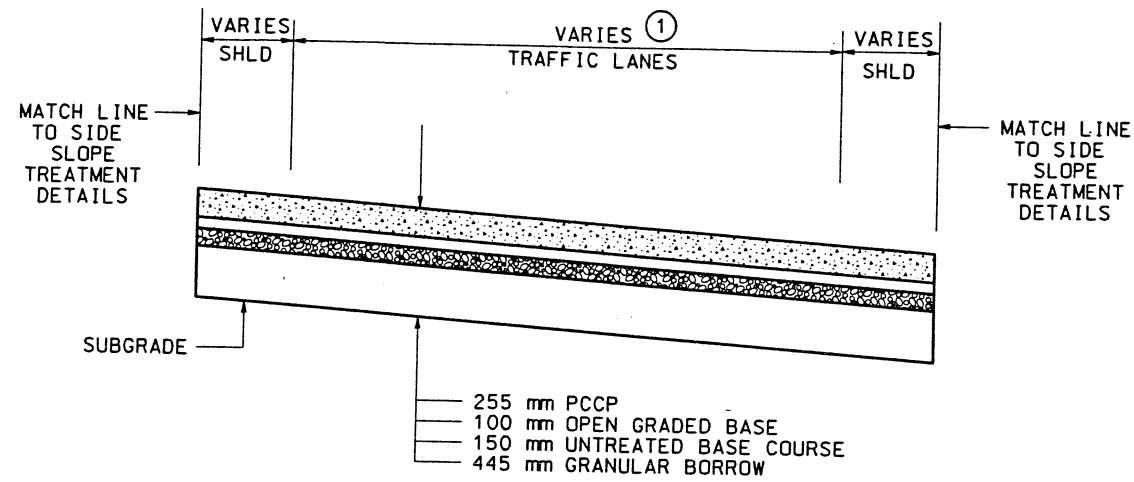
**PAVEMENT SECTION M1**

**WASATCH CONSTRUCTORS**  
**MAR 04 1998**  
**RELEASED FOR CONSTRUCTION**

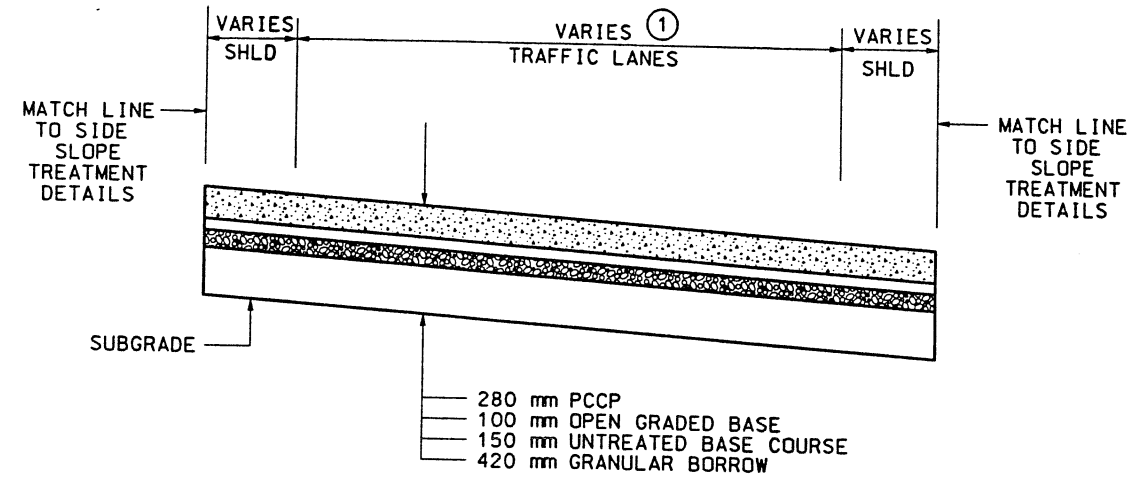
- NOTES:**
- ① FOR NUMBER OF TRAFFIC LANES, SHOULDER WIDTHS AND CROSS SLOPE, SEE TYPICAL SECTIONS AND ROADWAY PLAN SHEETS.
  - ② ALL DIMENSIONS IN METERS UNLESS OTHERWISE NOTED.
  - ③ SEE DRAINAGE PLANS FOR EDGE DRAIN LOCATIONS AND DETAILS.
  - ④ PAVEMENT SECTION IN MAINLINE TO RAMP GORES TO MATCH MAINLINE PAVEMENT SECTION. SEE CS-62-1.



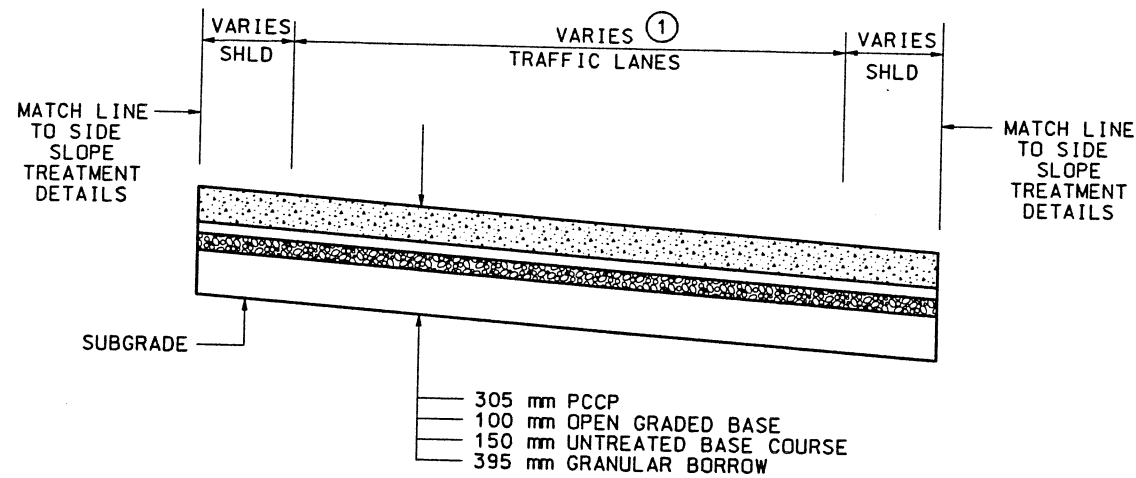
I-15 CORRIDOR RECONSTRUCTION PAVEMENT SECTIONS - MAINLINE CORRIDOR STANDARD PLANS	APPROVAL RECORD	2/98	DATE	SCOTT LUCAS	PROJECT DESIGN ENGINEER	DESIGN	SJL 10/97	CHECK	BV 2/98
	APPROVED	2/98	DATE	BRUCE VANA	SECTION MANAGER	DRAWN	JLS 10/97	CHECK	BV 2/98
PROJECT NUMBER #SP-15-(135)296		QUANT.	N/A	CHECK	N/A	QUANT.	N/A	CHECK	N/A
SALT LAKE COUNTY		UTAH DEPARTMENT OF TRANSPORTATION							
DWG. NO. CS-71		H. W. LOCHNER, INC. SVERDRUP/DE LEUW							
SHT. _____ OF _____		APPROVED FOR CONSTRUCTION							
		DATE 2/27/98 ORIGINAL RELEASE							
		DESCRIPTION							



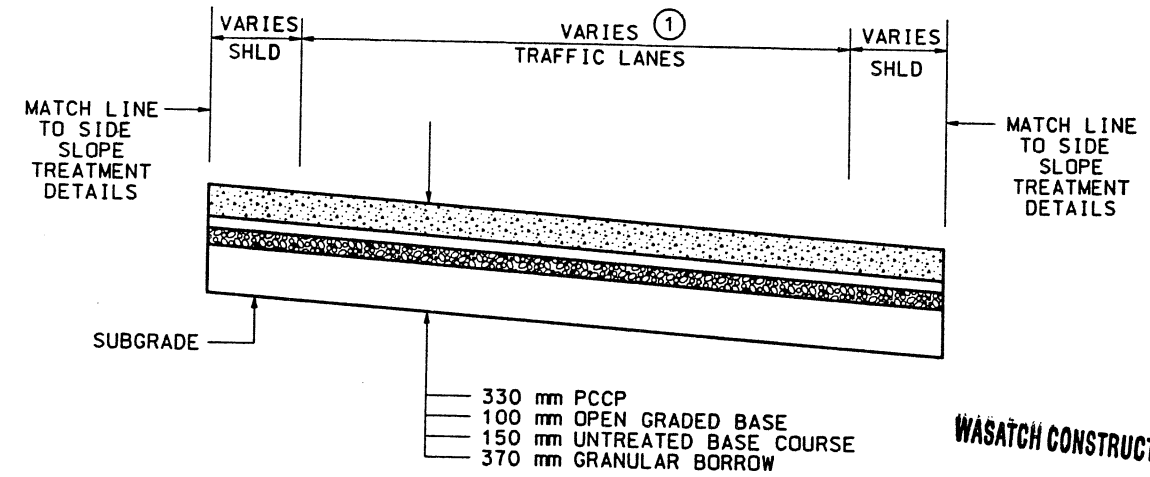
PAVEMENT SECTION R1



PAVEMENT SECTION R2



PAVEMENT SECTION R3



PAVEMENT SECTION R4

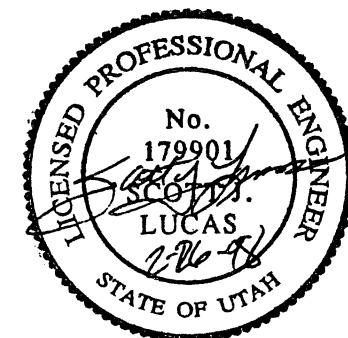
**NOTES:**

- ① FOR NUMBER OF TRAFFIC LANES, SHOULDER WIDTHS AND CROSS SLOPES, SEE TYPICAL SECTIONS AND ROADWAY PLAN SHEETS.
- ② ALL DIMENSIONS IN METERS UNLESS OTHERWISE NOTED.
- ③ PAVEMENT SECTION IN RAMP TO RAMP GORES TO MATCH RAMP PAVEMENT SECTION. SEE CS-62-1.

WASATCH CONSTRUCTORS

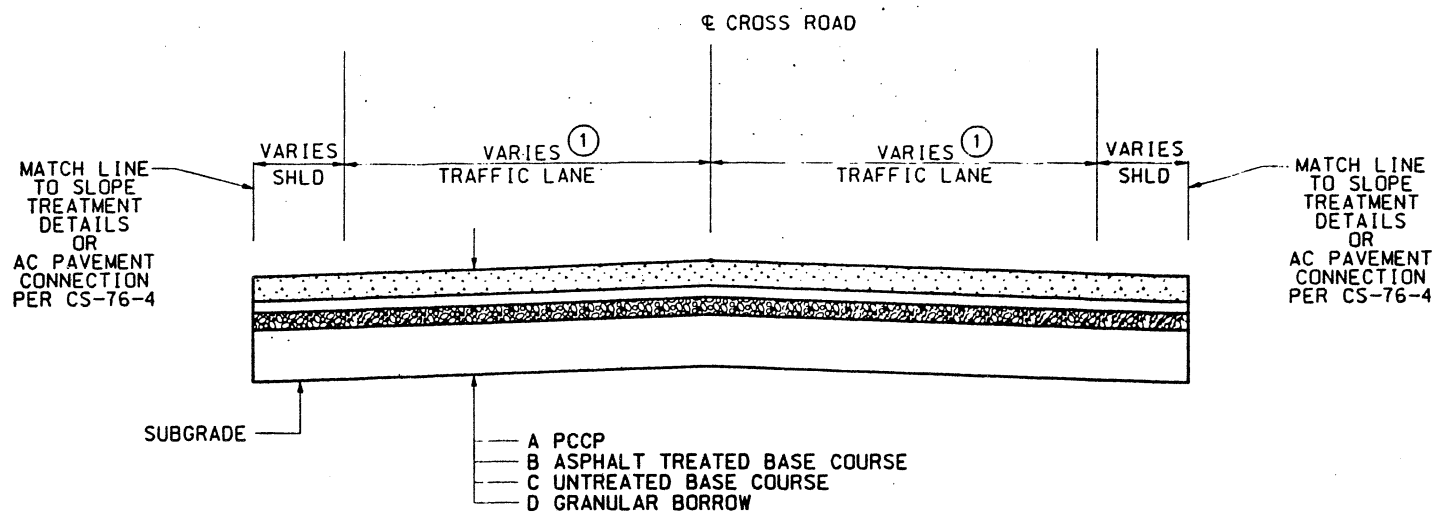
MAR 04 1998

RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	2/27/98	ORIGINAL RELEASE
UTAH DEPARTMENT OF TRANSPORTATION			
H. W. LOCHNER, INC. SVERDRUP/DE LEUW			
DESIGN	J.L.S. 10/97	CHECK	B.D.V. 2/98
DRAWN	J.L.S. 10/97	CHECK	B.D.V. 2/98
PROJECT DESIGN ENGINEER	SCOTT LUCAS	SECTION MANAGER	BRUCE VANVA
DATE	2/98	DATE	
APPROVED	2/98	DATE	
I-15 CORRIDOR RECONSTRUCTION			
PAVEMENT SECTIONS - RAMPS			
CORRIDOR STANDARD PLAN			
PROJECT NUMBER #SP-15-7(135)296			
SALT LAKE COUNTY			
DWG. NO. CS-72			
SHT.	OF		

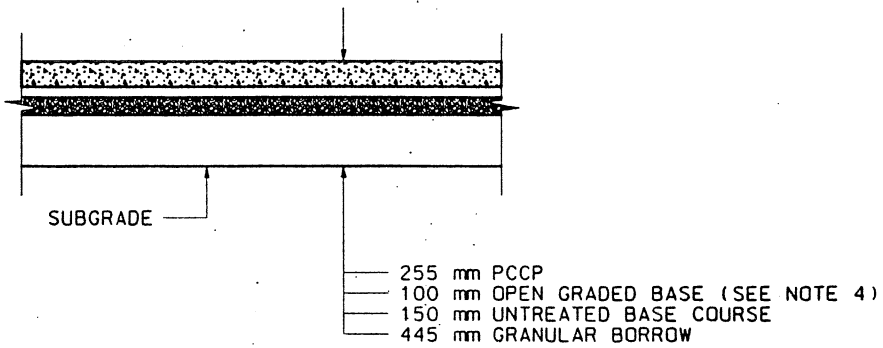
File name: c:\dgn\115\_cadd\115\_97\sheet\_115\_97\corridor\_115\_97\typical\_071.dgn  
Date: 08-APR-1999 Time: 10:36 User name: kmatttyr



**RIGID PAVEMENT SECTION**

TABLE 1

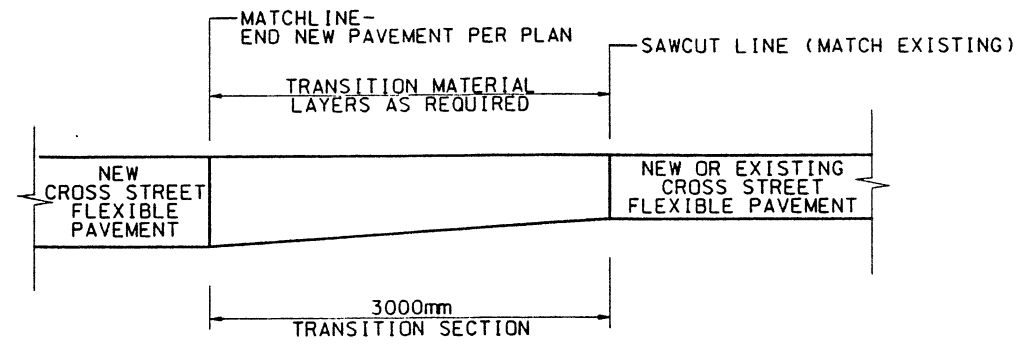
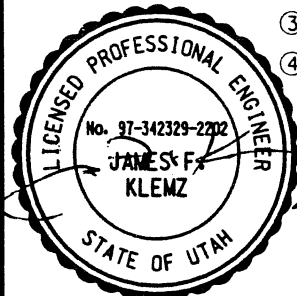
PAVEMENT SECTION	A	B	C	D	LOCATION
C1	255 mm	100 mm	100 mm	310 mm	2100 S, 3300 S, 4500 S, 5300 S, 10600 S
C2	280 mm	100 mm	100 mm	285 mm	9000 S
C3	280 mm	0 mm	150 mm	150 mm	600 N
C24	255 mm	100 mm	100 mm	150 mm	900 W
C24A	255 mm	100 mm	100 mm	150 mm	7200 S
C25	150 mm	0 mm	100 mm	0 mm	RESIDENTIAL DRIVEWAYS
C26	175 mm	0 mm	75 mm	0 mm	COMMERCIAL DRIVEWAYS



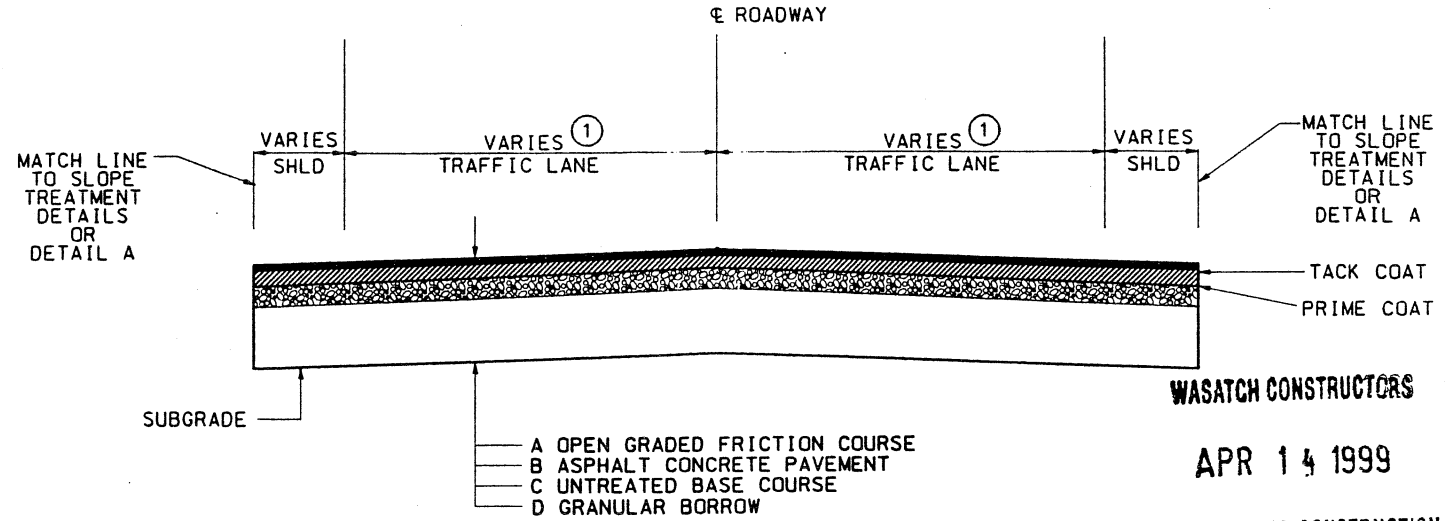
**GORE PAVEMENT SECTION**

**NOTES:**

- ① FOR NUMBER OF LANES, SHOULDER WIDTHS AND CROSS SLOPES, SEE TYPICAL SECTIONS AND ROADWAY PLAN SHEETS
- ② USE SS1h FOR TACK COAT (0.679 l/sq m) - (ASPHALT PAVEMENT ONLY)
- ③ USE MC-70 FOR PRIME COAT (0.181 l/sq m) - (ASPHALT PAVEMENT ONLY)
- ④ DEPTH OF OPEN GRADED BASE VARIES TO ACCOMMODATE DRAINAGE OF THE LAYER TO EDGE OF PAVEMENT OR EDGE DRAIN.



**DETAIL A - FLEXIBLE PAVEMENT TRANSITION**



**FLEXIBLE PAVEMENT SECTION**

TABLE 2

PAVEMENT SECTION	A	B	C	D	LOCATION	PG GRADE
C4	25 mm	280 mm	100 mm	205 mm	9000 S	64-28
C5	25 mm	230 mm	100 mm	255 mm	10600 S, 2100 S (SEC 2.7)	64-28
C6	25 mm	180 mm	100 mm	230 mm	FRONTAGE RD @ 10600 S, 600W (SEC 2.3)	64-28
C7	25 mm	150 mm	100 mm	280 mm	700 W, 800 W, DAVIS RD, OLD 2100 S (SEC 2.7)	64-28
C8	25 mm	150 mm	100 mm	255 mm	FRONTAGE RD @ 9000 S	64-28
C9	25 mm	255 mm	100 mm	230 mm	5300 S	64-28
C9A	25 mm	255 mm	100 mm	250 mm	7200 S	64-28
C10	25 mm	150 mm	100 mm	230 mm	COTTONWOOD ST	64-28
C11	25 mm	180 mm	100 mm	305 mm	320 W, 400 S UNDER VIADUCT	64-28
C12	25 mm	255 mm	100 mm	230 mm	2100 S (SEC 2.3), 4500 S	64-28
C12A	25 mm	255 mm	100 mm	180 mm	900W	64-28
C13	25 mm	150 mm	100 mm	255 mm	300 W	64-28
C14	25 mm	230 mm	100 mm	255 mm	3300 S	64-28
C15	25 mm	230 mm	100 mm	180 mm	500 W	64-28
C16					NOT USED	
C17	25 mm	205 mm	100 mm	280 mm	400 S WEST OF VIADUCT, 500 S UNDER VIADUCT, 600 S UNDER VIADUCT	64-28
C18	25 mm	305 mm	100 mm	180 mm	LAR-1, LAR-2, LAR-3	64-28
C19	25 mm	230 mm	255 mm	0 mm	300 W (GATEWAY)	64-28
C19A	25 mm	205 mm	255 mm	125 mm	500S, 600S (GATEWAY)	64-28
C20	25 mm	180 mm	255 mm	0 mm	400 W, 400 S (GATEWAY)	64-28
C21	25 mm	140 mm	255 mm	0 mm	500 W (GATEWAY)	64-28
C22	25 mm	100 mm	100 mm	280 mm	PARK AND RIDE LOT	64-28
C23	0 mm	100 mm	100 mm	0 mm	RESIDENTIAL DRIVEWAYS	64-28

APPROVED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
1	8/3/98	ORIGINAL RELEASE
2	9/23/98	ENTIRE SHEET REVISION
3	4/9/99	FINAL SUBMITTAL COMMENTS

UTAH DEPARTMENT OF TRANSPORTATION  
H. W. LOCHNER, INC.  
SVERDRUP/DE LEUW

DESIGN: J.L.S. 10/97  
DRAWN: J.L.S. 10/97  
CHECK: B.D.V. 2/98  
QUANT.:  
CHECK: B.D.V. 2/98  
CHECK:

I-15 CORRIDOR RECONSTRUCTION  
PAVEMENT SECTIONS - CROSSROADS  
CORRIDOR STANDARD PLAN  
PROJECT NUMBER #SP-15-7(135)296

SALT LAKE COUNTY  
DWG. NO. CS-73  
SHT. \_\_\_\_ OF \_\_\_\_

**CONSTRUCTION NOTES FOR PLACEMENT OF TENSAR® GEOGRIDS AND BACKFILL SOILS FOR SIERRA® SLOPE RETENTION SYSTEM**

- 1.0 **MATERIALS**
- 1.1 **BACKFILL SOILS**
- 1.1.1 REINFORCED BACKFILL MATERIAL SHALL BE BORROW CONFORMING TO AASHTO M-145, A-1-a THRU A-4, 150 mm MINUS BACKFILL AS DIRECTED BY THE ENGINEER. REINFORCED BACKFILL MATERIALS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE STRENGTH REQUIREMENTS AS DEFINED IN SECTION 6.0.  
  
THE PORTION OF THE REINFORCED BACKFILL MATERIAL PASSING THE No. 40 SIEVE SHALL HAVE A LIQUID LIMIT LESS THAN 30 AND A PLASTICITY INDEX LESS THAN 10. REINFORCED BACKFILL MATERIAL SHALL BE CLASSIFIED PER THE UNIFIED SOIL CLASSIFICATION SYSTEM AS LOW PLASTICITY OR NON-PLASTIC SOILS.
- 1.1.2 FURTHERMORE, REINFORCED BACKFILL AND RETAINED SOIL/FILL MATERIALS SHALL BE FREE OF EXCESS MOISTURE, ROOTS, MUCK, SOD, SNOW, FROZEN LUMPS, ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS. ALL ROCK PARTICLES AND HARD EARTH CLODS SHALL BE LESS THAN 150 mm IN THE LONGEST DIMENSION. REINFORCED BACKFILL MATERIALS WHICH DO NOT MEET THIS CRITERIA SHALL BE CONSIDERED UNSUITABLE AND SHALL BE REMOVED.
- 1.2 GEOGRID REINFORCING SHALL BE TENSAR BIAXIAL GEOGRIDS MANUFACTURED BY THE TENSAR CORPORATION, MORROW, GEORGIA.
- 1.3 EROSION PROTECTION SHALL BE THE RESPONSIBILITY OF WASATCH CONSTRUCTORS. SEE LANDSCAPING PLANS FOR DETAILS.
- 1.4 SURFACE AND SUB-SURFACE DRAINAGE SHALL BE THE RESPONSIBILITY OF WASATCH CONSTRUCTORS. SEE DRAINAGE PLANS FOR DETAILS.
- 2.0 **TECHNICAL REQUIREMENTS**
- 2.1 WASATCH CONSTRUCTORS SHALL SUBMIT TO TENSAR EARTH TECHNOLOGIES, INC. REINFORCED BACKFILL MATERIAL AND RETAINED SOIL/FILL GRADATIONS FOR APPROVAL PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 2.2 PRIOR TO CONSTRUCTION OF THE TENSAR REINFORCED SLOPE, THE CONTRACTOR SHALL CLEAR AND GRUB THE REINFORCED BACKFILL ZONE AREA, REMOVING TOP SOILS, BRUSH, SOD OR OTHER ORGANIC OR DELETERIOUS MATERIALS. ANY UNSUITABLE SOILS SHALL BE OVER-EXCAVATED, REPLACED AND COMPACTED WITH REINFORCED BACKFILL MATERIAL TO PROJECT SPECIFICATIONS OR AS OTHERWISE DIRECTED BY THE ENGINEER.
- 2.3 FOUNDATION SHALL BE PROOF ROLL INSPECTED USING A LOADED TRUCK WITH 80 kN AXLE LOADS OR PER PROJECT SPECIFICATIONS. THE ENGINEER SHALL CONFIRM THAT THE SITE HAS BEEN PROPERLY PREPARED AND THE DESIGN PARAMETERS IN SECTION 6.0 ARE APPROPRIATE PRIOR TO FILL PLACEMENT.
- 2.4 FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 300 mm IN UNCOMPACTED THICKNESS FOR HEAVY COMPACTION EQUIPMENT. FOR ZONES WHERE COMPACTION IS ACCOMPLISHED WITH HAND OPERATED EQUIPMENT, FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 300 mm IN UNCOMPACTED THICKNESS.

- 2.5 FILL MATERIALS SHALL BE ADVANCED IN SUCH A MANNER TO MITIGATE FORMATION OF SLACK IN THE GEOGRID.
- 2.6 FILL SHALL BE COMPACTED AS SPECIFIED BY PROJECT SPECIFICATIONS, SECTION 225. TYPE A-1 SOILS SHALL CONFORM TO TEST STANDARD AASHTO T-100. ALL OTHER SOILS SHALL CONFORM TO TEST STANDARD AASHTO T-99. SOILS SHALL BE COMPACTED TO NOT LESS THAN 96 PERCENT OF MAXIMUM LABORATORY DENSITY AND WHEN NO SINGLE DETERMINATION IS LOWER THAN 92 PERCENT MAXIMUM LABORATORY DENSITY.
- 2.7 ANY FILL MATERIALS PLACED ON SLOPE FACE DURING COMPACTION AND FILL PLACEMENT OPERATIONS SHALL BE REMOVED PRIOR TO INSTALLATION OF EROSION CONTROL SYSTEMS. GEOGRID SHALL BE BROUGHT TO A MINIMUM POSITION FLUSH WITH THE FINISHED FACE OF THE BORROW FILL DURING CONSTRUCTION.
- 2.8 TESTING METHODS AND FREQUENCY, AND VERIFICATION OF MATERIAL SPECIFICATIONS AND COMPACTION SHALL BE THE RESPONSIBILITY OF THE ENGINEER AND SHALL CONFORM TO THE PROJECT SPECIFICATION, SECTION 225.
- 2.9 A COMPLETE SET OF TENSAR'S CONSTRUCTION DRAWINGS AND CONTRACT SPECIFICATIONS SHALL BE ON THE PROJECT SITE AT ALL TIMES, DURING CONSTRUCTION OF THE SIERRA SLOPE SYSTEM.
- 3.0 **TENSAR GEOGRID PLACEMENT**
- 3.1 TENSAR GEOGRID SHALL BE PLACED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE DRAWINGS.
- 3.2 TENSAR GEOGRID LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS. REINFORCED FILL ZONE LENGTH IS MEASURED FROM THE FINISHED FACE OF THE BORROW FILL, EXTENDING TO THE TAIL OF THE GEOGRIDS.
- 3.2.1 TENSAR GEOGRID REINFORCEMENT SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTH(S).
- 3.2.2 TENSAR GEOGRID REINFORCEMENT SHALL BE OVERLAPPED A MINIMUM OF 300 mm AT LONGITUDINAL ROLL ENDS.
- 3.3 PRIOR TO PLACING FILL, THE GEOGRID MATERIALS SHALL BE PLACED TO LAY FLAT AND PULLED TAUT TO REMOVE ANY SLACK IN THE GEOGRIDS.
- 3.4 TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID. A MINIMUM BACKFILL THICKNESS OF 150 mm IS REQUIRED FOR OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TURNING OF TRACKED VEHICLES SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND/OR THE GEOGRID.
- 3.5 RUBBER-TIRED VEHICLES MAY PASS OVER THE GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 16 Km/H. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.
- 3.6 TENSAR BIAXIAL GEOGRIDS SHALL BE ROLLED OUT PARALLEL TO THE CENTERLINE STATION OF THE ROAD SO THE ROLL WIDTH PROVIDES THE GEOGRID EMBEDMENT LENGTH.

- 4.0 **CHANGES TO GEOGRID LAYOUT OR PLACEMENT**
- 4.1 NO CHANGES TO THE TENSAR GEOGRID LAYOUT, INCLUDING, BUT NOT LIMITED TO, LENGTH, GEOGRID TYPE, OR ELEVATION, SHALL BE MADE WITHOUT THE EXPRESSED PRIOR WRITTEN CONSENT OF TENSAR EARTH TECHNOLOGIES, INC.
- 5.0 **DRAINAGE**
- 5.1 AT THE END OF EACH WORK DAY, BACKFILL SURFACE SHALL BE GRADED AWAY FROM THE SLOPE FACE A MINIMUM OF 2 PERCENT SLOPE AND A TEMPORARY SOIL BERM SHALL BE CONSTRUCTED NEAR THE SLOPE CREST TO PREVENT SURFACE WATER RUNOFF FROM OVERTOPPING THE SLOPE.
- 5.2 AT THE END OF EACH WORK DAY, BACKFILL SURFACE SHALL BE COMPACTED WITH A SMOOTH WHEEL ROLLER TO MINIMIZE PONDING OF WATER AND SATURATION OF THE BACKFILL.
- 5.3 THE ENGINEERING, DESIGN, ANALYSIS, DETAILING AND MITIGATION OF BOTH SURFACE DRAINAGE AND SEEPAGE OF GROUNDWATER SHALL BE THE RESPONSIBILITY OF THE ENGINEER.
- 5.4 PERMANENT SURFACE WATER DIVERSION SHALL BE REQUIRED AND PROVIDED BY THE ENGINEER.
- 5.5 THE TENSAR REINFORCED SLOPE HAS BEEN DESIGNED ON THE ASSUMPTION THAT THE REINFORCED BACKFILL MATERIAL SHALL BE FREE OF SUBSURFACE DRAINAGE OF WATER (SEEPAGE). PERMANENT SUBSURFACE WATER (SEEPAGE) COLLECTION AND DIVERSION SHALL BE THE RESPONSIBILITY OF THE ENGINEER.
- 6.0 **DESIGN PARAMETERS (AS PROVIDED BY WASATCH CONSTRUCTORS):**
- 6.1 DESIGN OF THE REINFORCED SOIL STRUCTURE IS BASED ON THE FOLLOWING PARAMETERS:
 

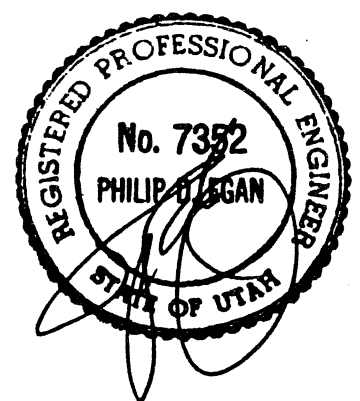
	EFFECTIVE FRICTION ANGLE	EFFECTIVE COHESION	MOIST UNIT WT
REINFORCED SLOPE FILL	34°	0 psf	135 pcf
RETAINED FILL/SOL	34°	0 psf	135 pcf
FOUNDATION SOIL**	34°	0 psf	135 pcf

\*\* THE FOUNDATION SHALL BE MODIFIED AS DIRECTED BY THE ENGINEER. THE TENSAR SLOPE HAS BEEN DESIGNED ASSUMING NO FAILURE WITHIN THE FOUNDATION SOIL.
- 6.2 **FACTORS OF SAFETY:**
  - MINIMUM FACTOR OF SAFETY FOR INTERNAL/COMPOUND FAILURE
    - STATIC = 1.3
    - SEISMIC = 1.0
  - MINIMUM FACTOR OF SAFETY FOR GEOGRID PULLOUT = 1.5
  - SOIL-GEOGRID INTERACTION COEFFICIENT = 0.8
  - PERCENT COVERAGE OF GEOGRID = 100%
- 6.3 **GLOBAL STABILITY:**

GLOBAL STABILITY IS THE RESPONSIBILITY OF THE ENGINEER. TENSAR EARTH TECHNOLOGIES, INC. ACCEPTS NO LIABILITY OR RESPONSIBILITY FOR GLOBAL STABILITY.
- 6.4 **LOADINGS:**
  - UNIFORM SURCHARGE = 250 psf

- 6.5 HYDROSTATIC FORCES = NONE
- 6.6 SEISMIC DESIGN ACCELERATION = 0.12g
- 7.0 **SPECIAL PROVISIONS**
- 7.1 THE DESIGN PRESENTED HEREIN IS BASED ON SOIL PARAMETERS, FOUNDATION CONDITIONS, GROUNDWATER CONDITIONS, AND LOADINGS STATED IN SECTION 6.0.
- 7.2 SLOPE ELEVATION VIEWS AND LOCATIONS AND GEOMETRY OF EXISTING STRUCTURES MUST BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- 7.3 TENSAR EARTH TECHNOLOGIES, INC. ASSUMES NO LIABILITY FOR INTERPRETATION OR VERIFICATION OF SUBSURFACE CONDITIONS, SUITABILITY OF SOIL DESIGN PARAMETERS AND INTERPRETATION OF SUBSURFACE GROUNDWATER CONDITIONS.
- 7.4 THE ENGINEER IS RESPONSIBLE FOR REVIEWING AND VERIFYING THAT THE ACTUAL SITE CONDITIONS ARE AS DESCRIBED IN SECTION 6.0 PRIOR TO AND DURING CONSTRUCTION. THE ENGINEER SHALL BE ON-SITE TO ASSURE THE PROVISIONS OF THE CONSTRUCTION NOTES ARE FOLLOWED.
- 7.5 THE SOIL DESIGN PARAMETERS STATED IN SECTION 6.0 SHALL BE VERIFIED BY THE ENGINEER. IN THE EVENT OF A DEVIATION FROM THE PARAMETERS OUTLINED IN SECTION 6.0, PROCEEDING WITH CONSTRUCTION WITHOUT FIRST PROVIDING TENSAR EARTH TECHNOLOGIES, INC. A WRITTEN NOTIFICATION FOR PURPOSES OF EVALUATING THE DESIGN, SHALL ABSOLVE TENSAR EARTH TECHNOLOGIES, INC. FROM ALL LIABILITY FOR THE DESIGN AND CONSTRUCTION OF THIS STRUCTURE AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS TENSAR EARTH TECHNOLOGIES, INC. FROM ALL RESULTING CLAIMS, DAMAGES, LOSSES AND EXPENSES.
- 7.9 THIS DESIGN IS ONLY VALID FOR THE PROPOSED SIERRA SLOPE SYSTEM SHOWN HEREIN.

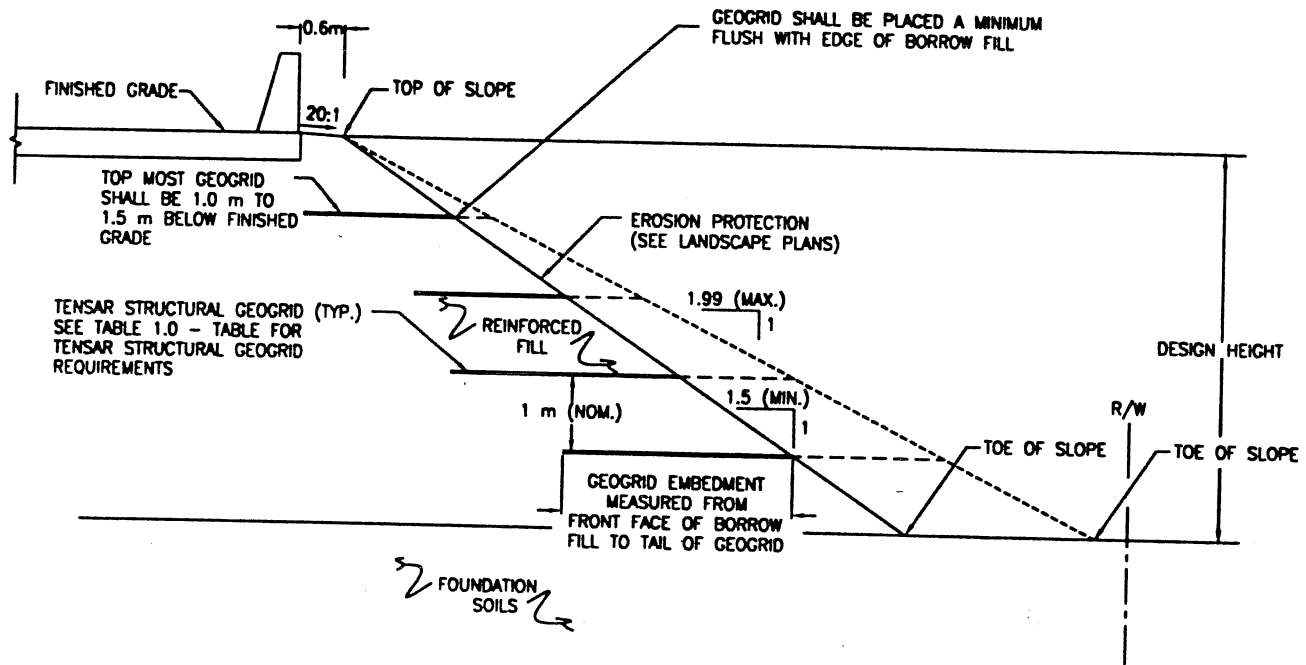
**WASATCH CONSTRUCTORS**  
 JAN 20 1998  
 RELEASED FOR CONSTRUCTION



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 Third Release File Loaded  
 Fourth Release File Loaded  
 Scale Released  
 Pen Tool  
 Cursor

UTAH DEPARTMENT OF TRANSPORTATION		TENSAR EARTH TECHNOLOGIES, INC.	
APPROVED FOR CONSTRUCTION	DESCRIPTION	NO.	DATE
		1	10/8/97
		2	10/27/97
CONSTRUCTION NOTES		DESIGN BY	CHECK BY
PROJECT NUMBER *SP-15-7(135)256		DATE	DATE
SALT LAKE COUNTY		DWC. NO. CS-74-1	
SHT. _____ OF _____			

Date: 10/27/97



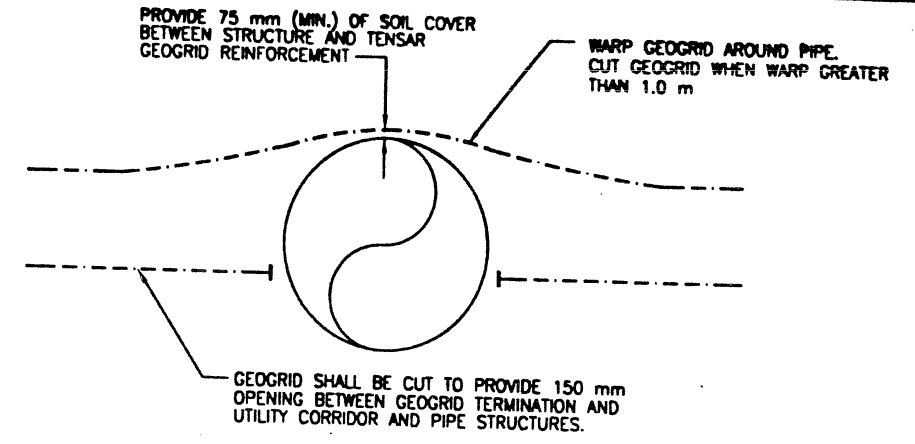
**TYPICAL SECTION**  
SCALE: 1 : 100  
SEE GRADING PLANS AND DETAILS

- NOTES:
- 1.) GEOGRID REINFORCEMENT REQUIRED FOR SLOPES STEEPER THAN 2H:1V
  - 2.) TOP MOST LAYER OF GEOGRID REINFORCEMENT SHALL BE 1.0 m TO 1.5 m BELOW FINISHED GRADE (TOP OF SLOPE).
  - 3.) MAXIMUM VERTICAL SPACING BETWEEN LAYERS OF GEOGRID REINFORCEMENT SHALL BE 1.1 m.

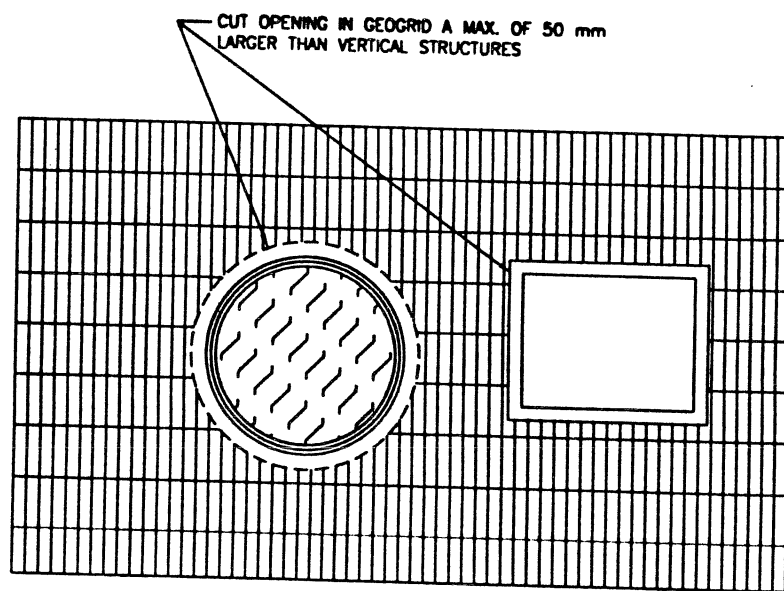
**TABLE 1.0**  
**TABLE FOR TENSAR STRUCTURAL GEOGRID REQUIREMENTS**

SLOPE DESIGN HEIGHT

ELEVATION ABOVE TOE OF SLOPE (m)	8 m		7 m		6 m		5 m		4 m		3 m		2 m		ELEVATION ABOVE TOE OF SLOPE (m)
	GEOGRID TYPE	GEOGRID EMBEDMENT	GEOGRID TYPE	GEOGRID EMBEDMENT	GEOGRID TYPE	GEOGRID EMBEDMENT	GEOGRID TYPE	GEOGRID EMBEDMENT	GEOGRID TYPE	GEOGRID EMBEDMENT	GEOGRID TYPE	GEOGRID EMBEDMENT	GEOGRID TYPE	GEOGRID EMBEDMENT	
7	BX1200	4 m													7
6	BX1200	4 m	BX1200	3 m											6
5	BX1200	4 m	BX1200	3 m	BX1200	3 m									5
4	BX1200	4 m	BX1200	3 m	BX1200	3 m	BX1200	2 m							4
3	BX1200	4 m	BX1200	3 m	BX1200	3 m	BX1200	2 m							3
2	BX1200	4 m	BX1200	4 m	BX1200	3 m	BX1200	2 m	BX1200	2 m					2
1.5					BX1200	3 m	BX1200	3 m	BX1200	2 m	BX1200	2 m			1.5
1	BX1200	4 m	BX1200	4 m	BX1200	3 m	BX1200	3 m	BX1200	3 m	BX1200	2 m	BX1200	2 m	1
0.5					BX1200	3 m	BX1200	3 m	BX1200	3 m	BX1200	2 m	BX1200	2 m	0.5



**PIPE PENETRATION AND REROUTING DETAIL**  
NOT TO SCALE



**GEOGRID PENETRATION - PLAN VIEW**  
NOT TO SCALE

**WASATCH CONSTRUCTORS**  
JAN 20 1998  
RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION

UTAH DEPARTMENT OF TRANSPORTATION  
TENSAR EARTH TECHNOLOGIES, INC.

1-15 CORRIDOR RECONSTRUCTION  
TENSAR REINFORCED SIERRA SLOPE  
TYPICAL SECTION AND DETAILS

SALT LAKE COUNTY  
DWG. NO. CS-74-2

SHT. 9

NO.	DATE	DESCRIPTION
1	10/8/97	ISSUED FOR REVIEW
2	10/27/97	ISSUED FOR CONSTRUCTION

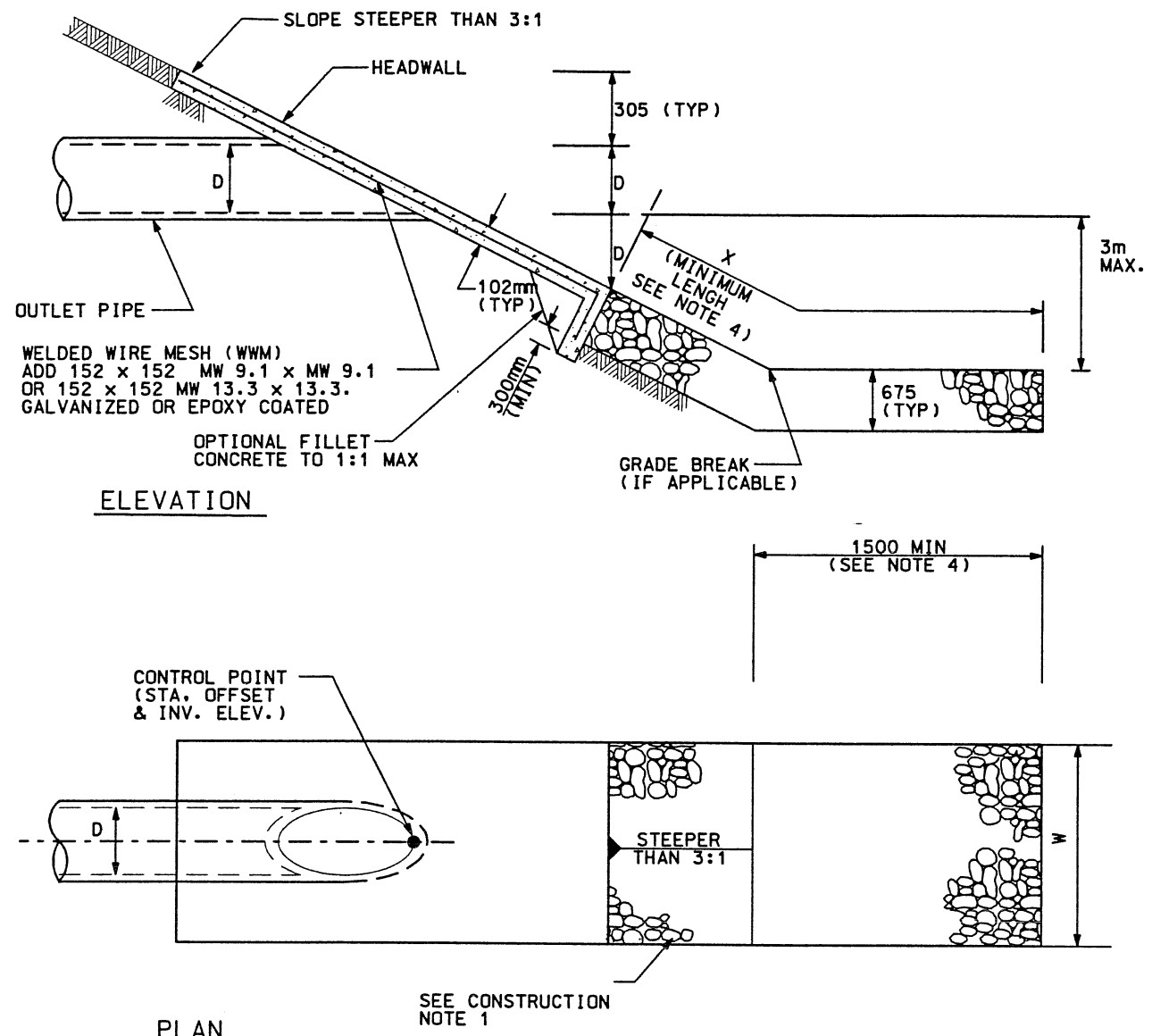
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10/27/97	10/27/97	10/27/97	10/27/97	10/27/97	10/27/97

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Revisions: Pen Table  
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ELEVATION

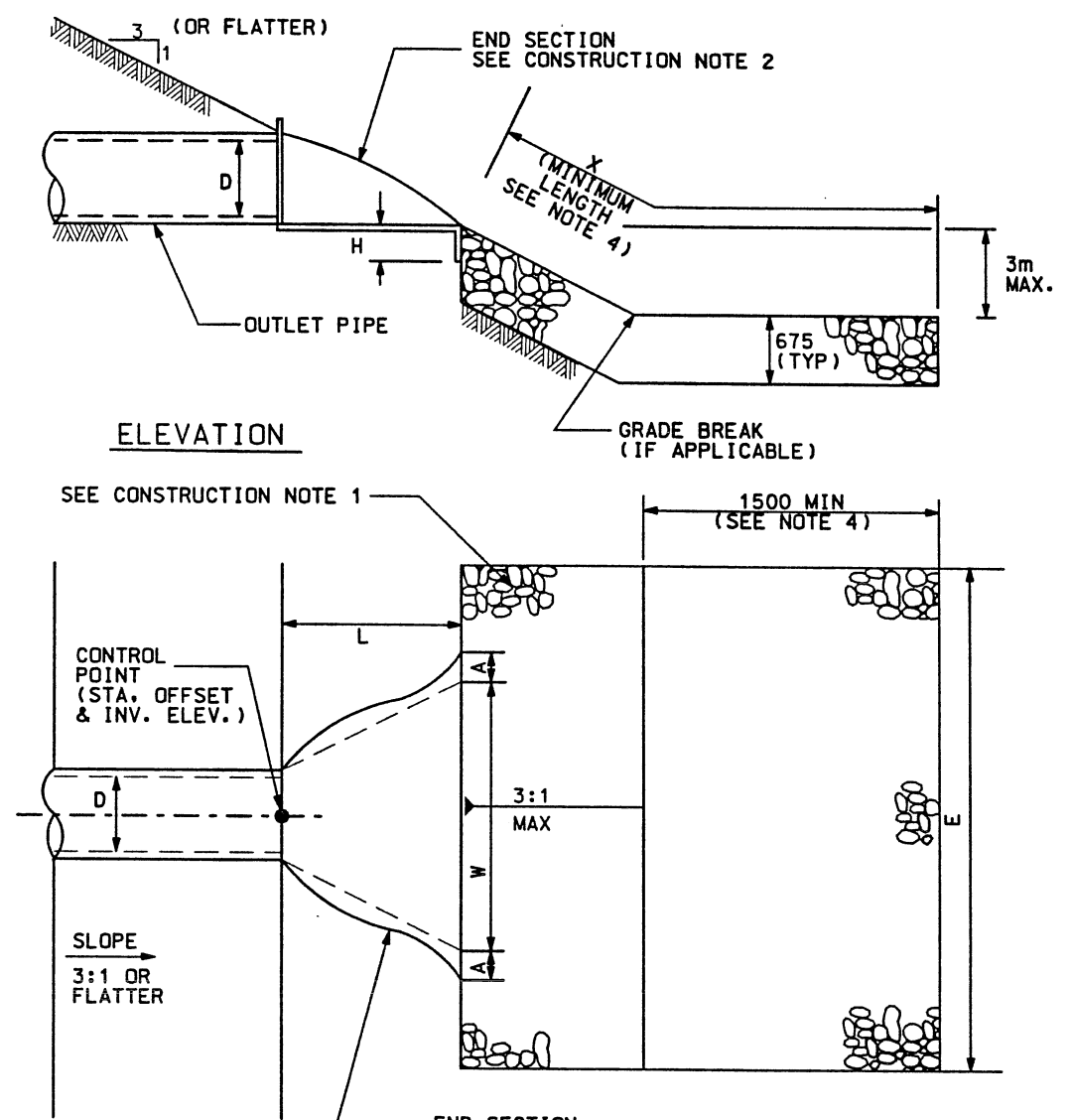
PLAN

DIMENSION TABLE

D mm	W mm (MIN)
300	900
450	1350
600	1800
750	2250
900	2700
1050	3150
1200	3600
1350	4050
1500	4500

W = 3D  
X - SEE TABLE BELOW AND NOTE 4

TYPE PS--(A OR B)  
(SEE NOTE 1)



ELEVATION

PLAN

DIMENSION TABLE

D mm	A mm	H mm	W mm	L mm	E mm (MIN)
300	121	152	610	533	1143
450	178	152	914	787	1701
600	241	152	1219	1067	2286
750	305	191	1524	1334	2858
900	356	229	1829	1600	3429
1050	406	267	2134	1867	4001
1200	457	305	2286	1981	4267
1350	457	305	2591	2134	4725
1500	457	305	2896	2210	5106

E = W + L  
X - SEE TABLE BELOW AND NOTE 4

TYPE PF--(A OR B)  
(SEE NOTE 1)

RIPRAP DETAIL FOR PIPE OUTLET INTO POND  
NTS

CONSTRUCTION NOTES:

- PLACE RIPRAP ON DRY COMPACTED BASE. DEWATER LIMITS OF RIPRAP PRIOR TO PLACEMENT IF NECESSARY.
- FOR END SECTION SEE UDOT STD DWG 605-02, 605-2B.

DESIGN NOTES:

- RIPRAP DETAIL CALL OUT:  
PF = OUTLET INTO POND FROM SLOPE 3:1 OR FLATTER  
PS = OUTLET INTO POND FROM SLOPE STEEPER THAN 3:1  
A, B (TYPE OF RIPRAP, A=LOOSE, 920, B=COMPACTED, 921, SEE NOTE 2)
- USE LOOSE RIPRAP (920) IF FLOW IS CONTINUOUS  
USE COMPACTED RIPRAP (921) IF FLOW IS INTERMITTENT.
- OUTLET VELOCITY:  $V \leq 3.0m/s$ , RIPRAP THICKNESS (T)=675  
 $V > 3.0m/s$ , ENERGY DISSIPATOR REQ'D
- PROVIDE CONTINUOUS RIPRAP LAYER BETWEEN END SECTION OR HEADWALL AND AT LEAST 1.5m PROJECTION INTO POND BEYOND TOE OF SLOPE. IF NO GRADE BREAK EXISTS, USE MINIMUM LENGTH GIVEN IN TABLE.

RIPRAP MIN. LENGTH (X)

D mm	X (MIN DIST) mm
300	2600
450	2600
600	2600
750	2600
900	2600
1050	3200
1200	3800
1350	4400
1500	5000



APPROVED FOR CONSTRUCTION

DATE: 08/14/98

NO. 1

DESCRIPTION: ORIGINAL RELEASE

UTAH DEPARTMENT OF TRANSPORTATION

SVERRUP/DE LEUW

DESIGNER: MARK V. GOGA

PROJECT DESIGN ENGINEER: JOHN TERRY

SECTION MANAGER: [ ]

DATE: [ ]

WASATCH CONSTRUCTORS

AUG 21 1998

RELEASED FOR CONSTRUCTION

I-15 CORRIDOR RECONSTRUCTION

RIPRAP DET FOR PIPE OUTLET

CORRIDOR STANDARD PLAN

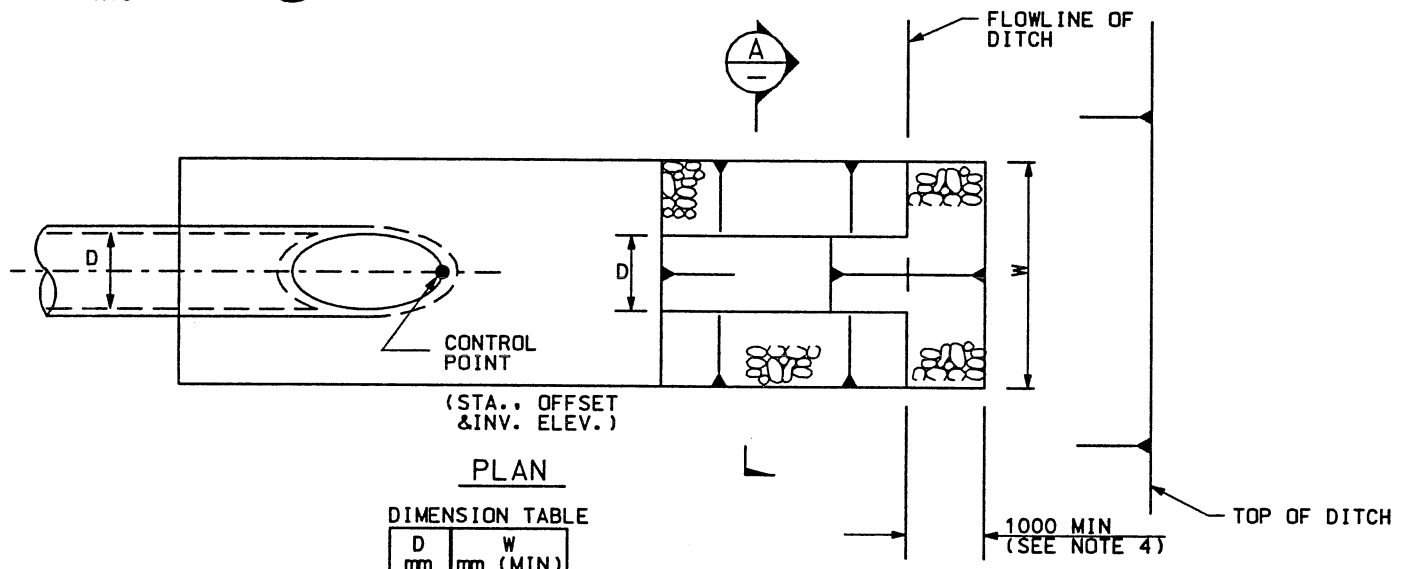
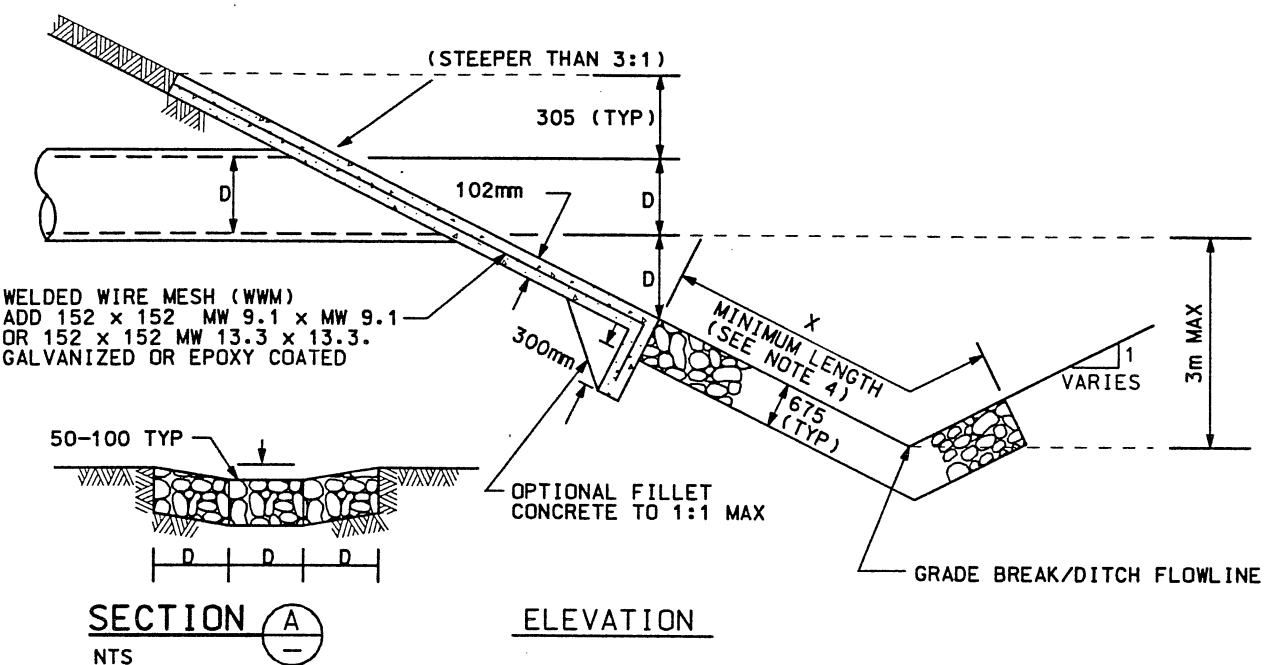
PROJECT NUMBER: #SP-15-7(135)296

SALT LAKE COUNTY

DWG. NO. CS-75-1

SHT. OF

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**DIMENSION TABLE**

D mm	W mm (MIN)
300	900
450	1350
600	1800
750	2250
900	2700
1050	3150
1200	3600
1350	4050
1500	4500

W = 3D  
X - SEE TABLE BELOW AND NOTE 4

**DIMENSION TABLE**

D mm	W mm (MIN)	L mm (MIN)	E mm (MIN)
300	610	533	1143
450	914	787	1701
600	1219	1067	2286
750	1524	1334	2858
900	1829	1600	3429
1050	2134	1867	4001
1200	2286	1981	4267
1350	2591	2134	4725
1500	2896	2210	5106

E = W + L  
X - SEE TABLE BELOW AND NOTE 4

**TYPE DS- (A OR B)**  
(SEE NOTE 1)

WASATCH CONSTRUCTORS  
AUG 21 1998  
RELEASED FOR CONSTRUCTION  
TYPE DF- (A OR B)  
(SEE NOTE 1)

**RIPRAP DETAIL FOR PIPE OUTLET INTO DITCH**  
NTS

- CONSTRUCTION NOTES:**
- PLACE RIPRAP ON DRY COMPACTED BASE. DEWATER LIMITS OF RIPRAP PRIOR TO PLACEMENT IF NECESSARY.
  - FOR END SECTION SEE UDOT STD DWG 605-02, 605-28.

- DESIGN NOTES:**
- RIPRAP DETAIL CALL OUT:  
DF = OUTLET INTO DITCH FROM SLOPE 3:1 OR FLATTER  
DS = OUTLET INTO DITCH FROM SLOPE STEEPER THAN 3:1  
A, B (TYPE OF RIPRAP, A=LOOSE, 920, B=COMPACTED, 921, SEE NOTE 2)
  - USE LOOSE RIPRAP (920) IF FLOW IS CONTINUOUS  
USE COMPACTED RIPRAP (921) IF FLOW IS INTERMITTENT.
  - OUTLET VELOCITY:  $V \leq 3.0\text{m/s}$ , RIPRAP THICKNESS (T)=675  
 $V \geq 3.0\text{m/s}$ , ENERGY DISSIPATOR REQUIRED
  - PROVIDE CONTINUOUS RIPRAP LAYER BETWEEN END SECTION OR HEADWALL AND AT LEAST 1.0m UP DITCH OPPOSITE SLOPE FROM GRADE BREAK. TOTAL LENGTH OF RIPRAP SHALL NOT BE LESS THAN MINIMUM LENGTH SHOWN IN TABLE.

**RIPRAP MIN. LENGTH (X)**

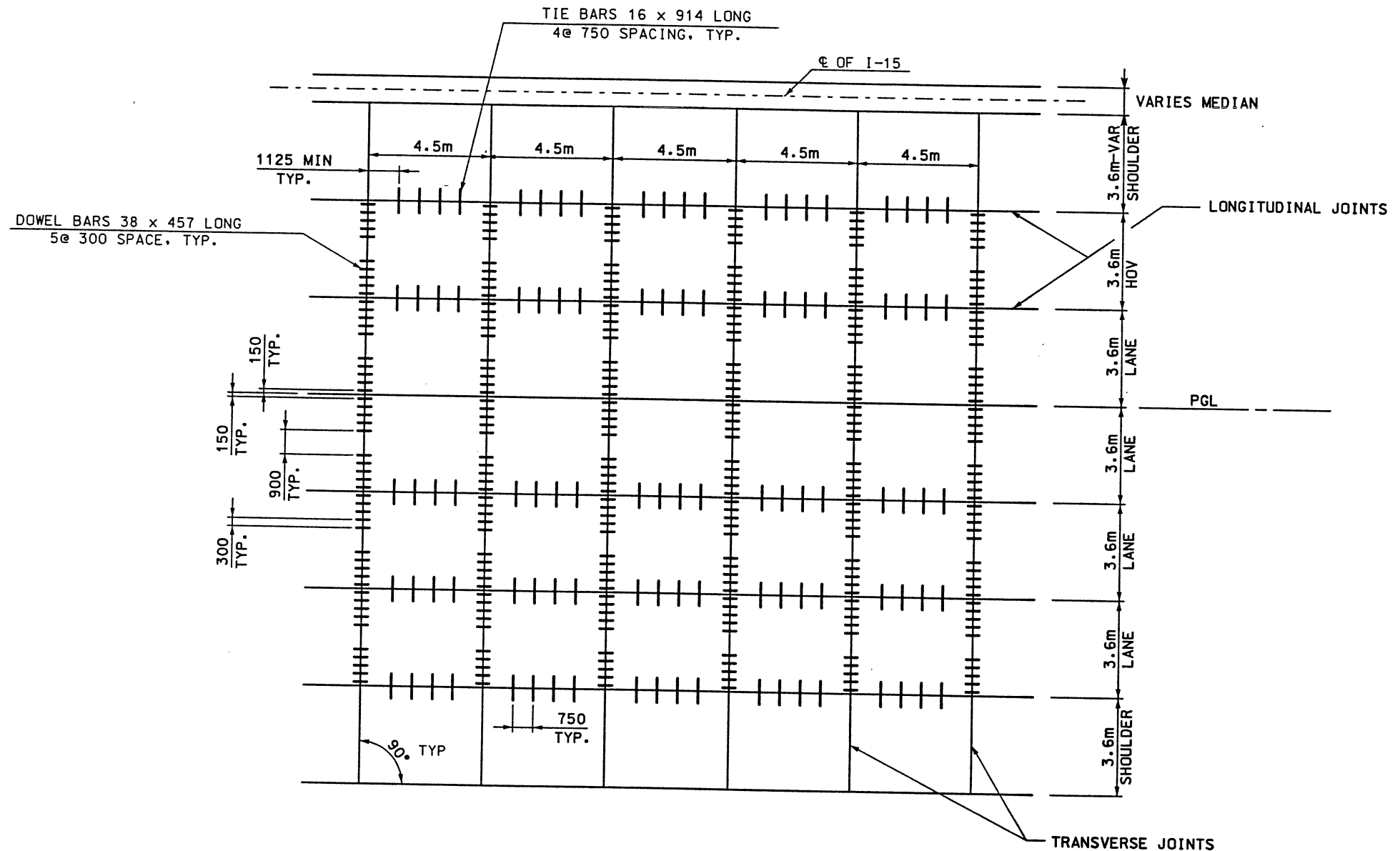
D mm	X (MIN DIST)
300	1=675
300	2600
450	2600
600	2600
750	2600
900	2600
1050	3200
1200	3800
1350	4400
1500	5000



APPROVED FOR CONSTRUCTION  
 UTAH DEPARTMENT OF TRANSPORTATION  
 SVERDRUP/DE LEUW  
 I-15 CORRIDOR RECONSTRUCTION  
 RIPRAP DET FOR PIPE OUTLET  
 CORROR STANDARD PLAN  
 PROJECT #SP-15-7(135)296  
 SALT LAKE COUNTY  
 DWG. NO. CS-75-2  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_

NO.	DATE	DESCRIPTION
1	08/14/98	ORIGINAL RELEASE

DESIGN	MARK V. GOGA	CHECK	MARK
PROJECT DESIGN ENGINEER	JOHN TERRY	CHECK	JOHN
DRAWN	JOHN TERRY	CHECK	JOHN
QUANT.	SECTION MANAGER	CHECK	



**DOWEL BAR/TIE BAR MAIN LINE LAYOUT PLAN**  
NTS

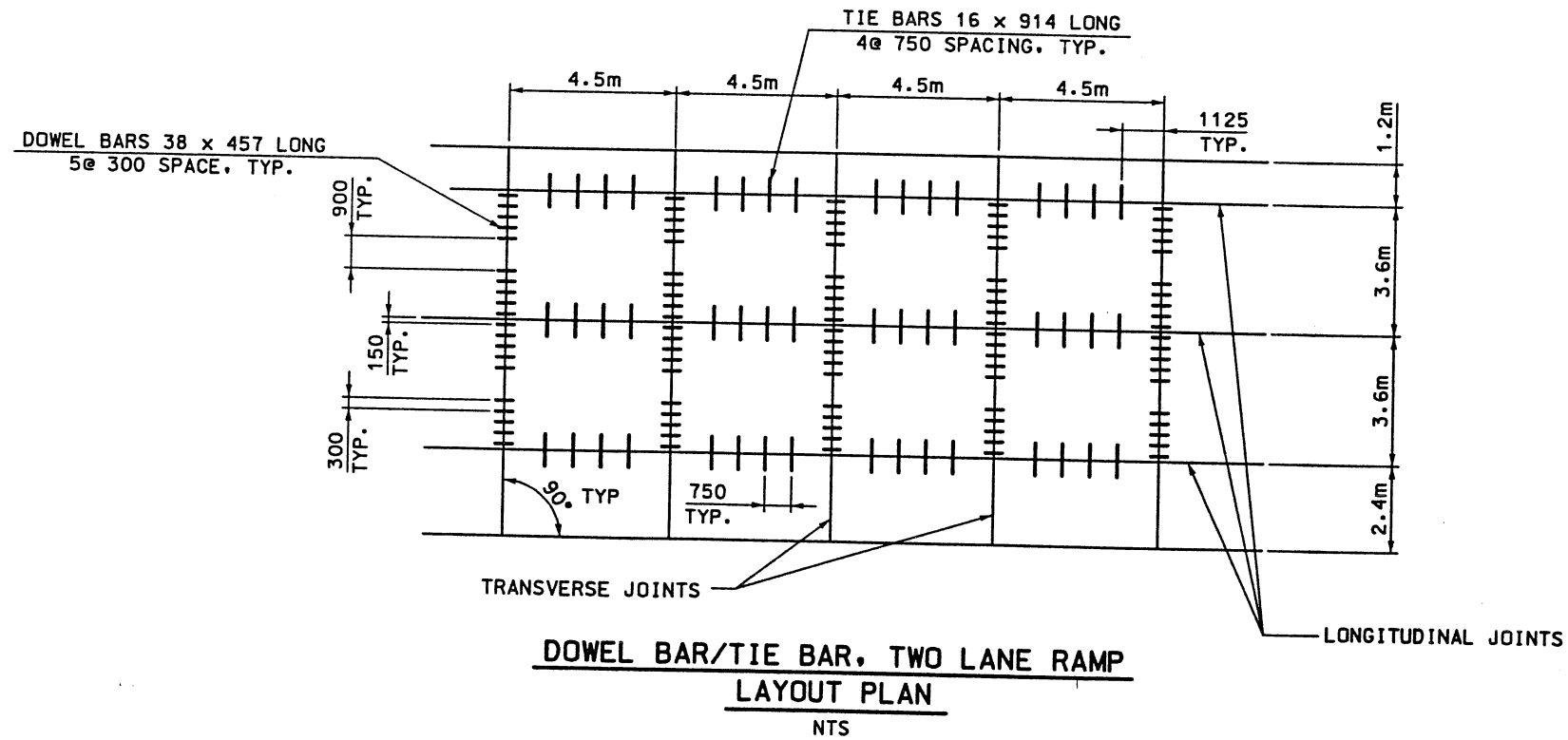
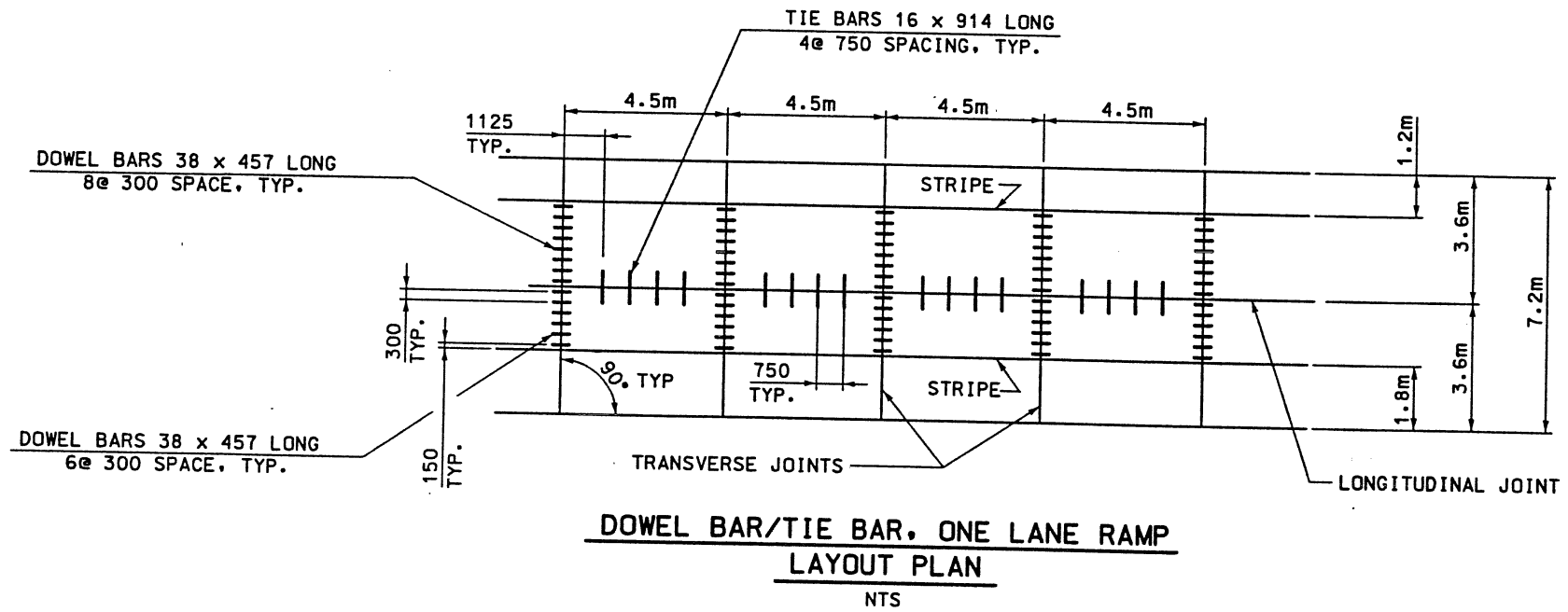
**NOTES:**

1. MEDIAN VARIES FOR LIGHT AND SIGN POLES AND SUPERELEVATION. SEE PLAN SHEETS.
2. SEE ROADWAY PLANS FOR EXACT DIMENSIONS.
3. SEE CS-76-2 TO CS-76-4 AND CS-62-1, 2, 3 & 4 FOR OTHER JOINTING PLANS AND DETAILS.
4. TIE GORE PAVING ON PRINCIPAL ROADWAY SIDE ONLY @ 750 SPACING.
5. GORE PAVING SHALL HAVE BULL FLOAT FINISH SURFACE.
6. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
7. DOWEL BARS REQ'D IN ALL SHOULDERS WHERE TRAFFIC IS LIKELY TO CROSS PREVIOUSLY DUE TO RAMP ENTRANCE OR EXIT (300MM SPACING, 150MM FROM GOOD, NO GAP) (SEE CS-62-1, CS-62-2)
8. TIE BARS @ 375 REQ'D WHERE TRAFFIC IS LIKELY TO CROSS. (SEE CS-62-1 & CS-62-2)

WASATCH CONSTRUCTORS  
AUG 31 1998  
RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	ORIGINAL RELEASE	REVISED REFERENCE DWG NO.
1	5/6/98		
2	8/13/98		
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		DESIGN	TRACKING NO.
DESIGN	LT	5/98	5/98
CHECK	POV	5/98	5/98
CHECK	MSC	5/98	5/98
CHECK	CHECK		
PROJECT #SP-15-7(135)296			
SALT LAKE COUNTY			
DWG. NO. CS-76-1			
SHT. _____ OF _____			



WASATCH CONSTRUCTORS  
AUG 31 1998  
RELEASED FOR CONSTRUCTION



**NOTE:**

1. SEE CS-76-1 TO CS-76-4 AND CS-62-1, 2, 3 & 4 FOR OTHER JOINTING PLANS AND DETAILS.
2. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
3. DOWEL BARS REQ'D IN ALL SHOULDERS TRANSITIONING ON TO MAINLINE OR CD WHERE TRAFFIC CROSSES. (300MM SPACING, 150MM FROM EDGES, NO GAP) SEE CS-62-1 & CS-62-2.

APPROVED FOR CONSTRUCTION	
NO.	DATE
1	5/6/98
2	8/13/98
DESCRIPTION	
ORIGINAL RELEASE	
REVISED REFERENCE DWG NO.	

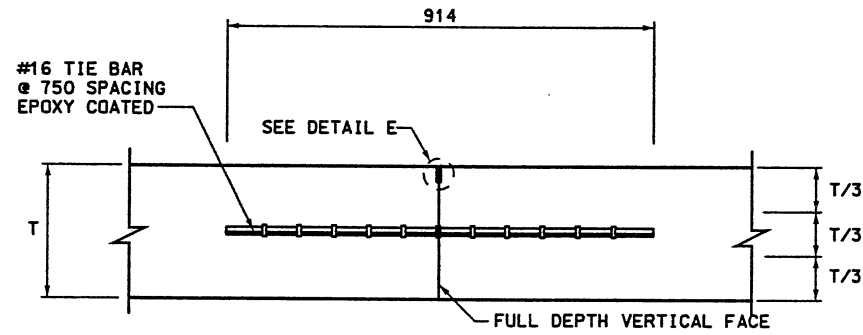
UTAH DEPARTMENT OF TRANSPORTATION

SVERDRUP/DE LEUW	
DESIGN	LT
PROJECT DESIGN ENGINEER	LODGE TERRY
DATE	8/13/98
APPROVED	8/13/98
DATE	8/13/98
SECTION MANAGER	JOHN TERRY
CHECK	POW
CHECK	BSC
CHECK	B/PW
CHECK	B/PW
CHECK	QUANT.
CHECK	QUANT.

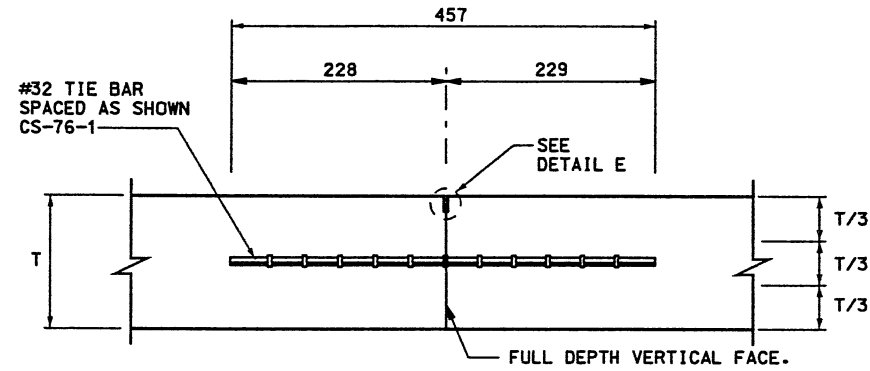
I-15 CORRIDOR RECONSTRUCTION  
DOWEL/TIE BAR LAYOUT PLAN  
CORRIDOR STANDARD PLAN

PROJECT NUMBER	#SP-15-7(135)296
COUNTY	SALT LAKE
DWG. NO.	CS-76-2

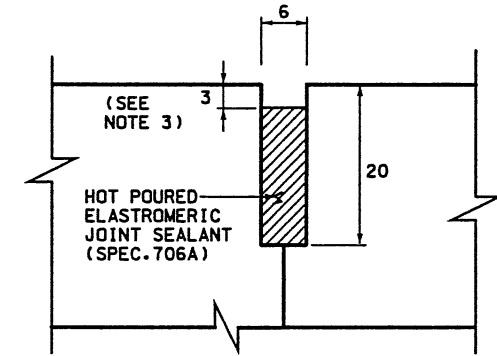
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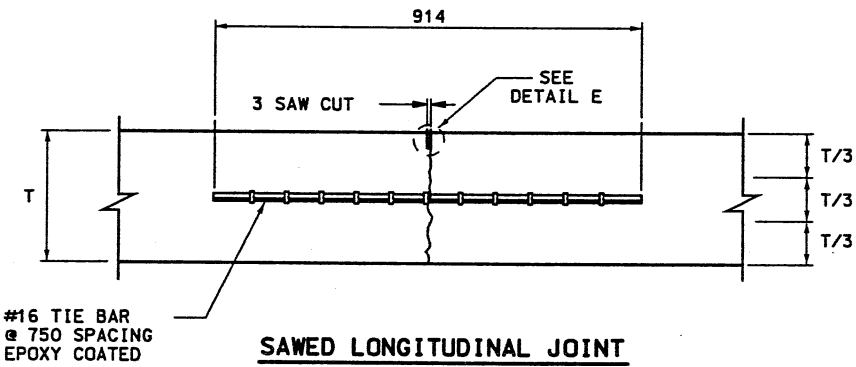
**LONGITUDINAL CONTACT JOINT**  
**DETAIL A**  
NTS



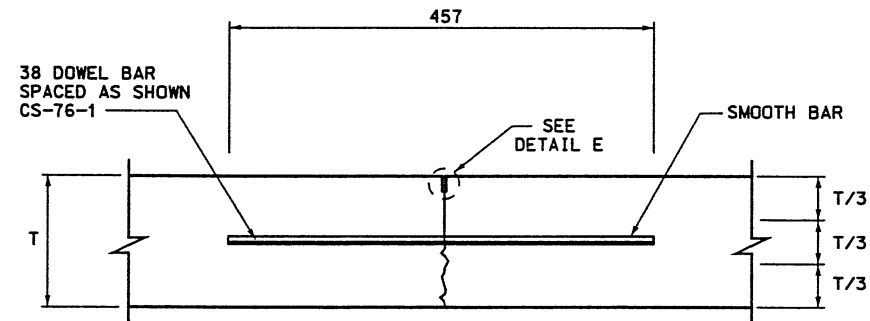
**CONTACT JOINT (NIGHT HEADER)**  
**DETAIL B**  
NTS



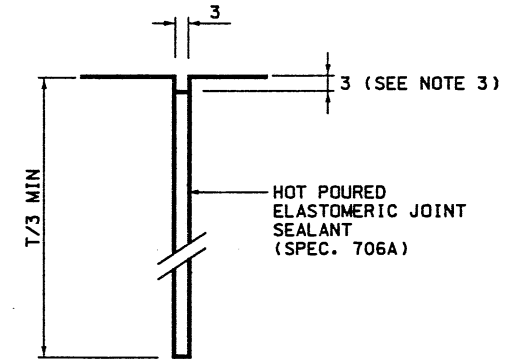
**(CONTACT JOINTS ONLY)**  
**DETAIL E**  
NTS WASATCH CONSTRUCTORS



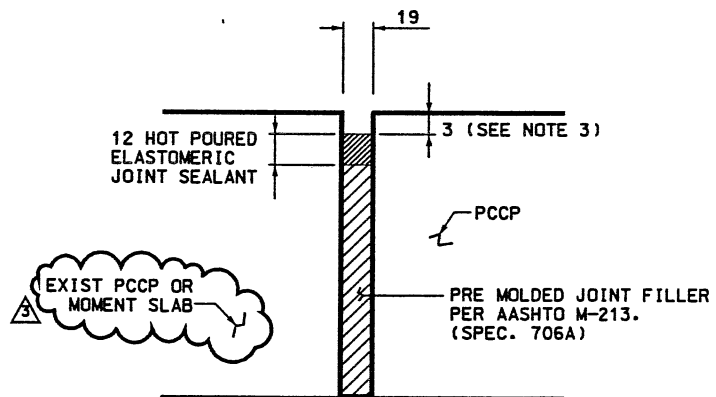
**SAWED LONGITUDINAL JOINT**  
**DETAIL C**  
NTS



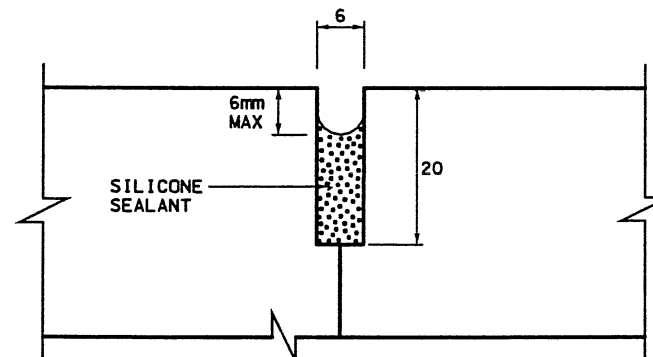
**SAWED TRANSVERSE JOINT**  
**DETAIL D**  
NTS



**DETAIL E**  
NTS



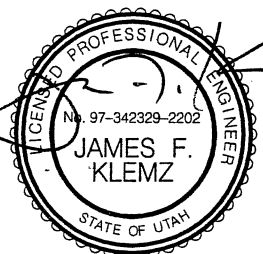
**DETAIL H**  
NTS



**DETAIL M**  
NTS

**NOTES:**

1. PLACE DOWEL OR TIE BARS IN MIDDLE THIRD OF THE SLAB.
2. TOLERANCE FOR DOWEL AND TIE BAR PLACEMENT IS ±6 IN ANY DIRECTION.
3. TOLERANCE FOR SEALANT MATERIAL DEPTH IN JOINTS ±3.
4. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.



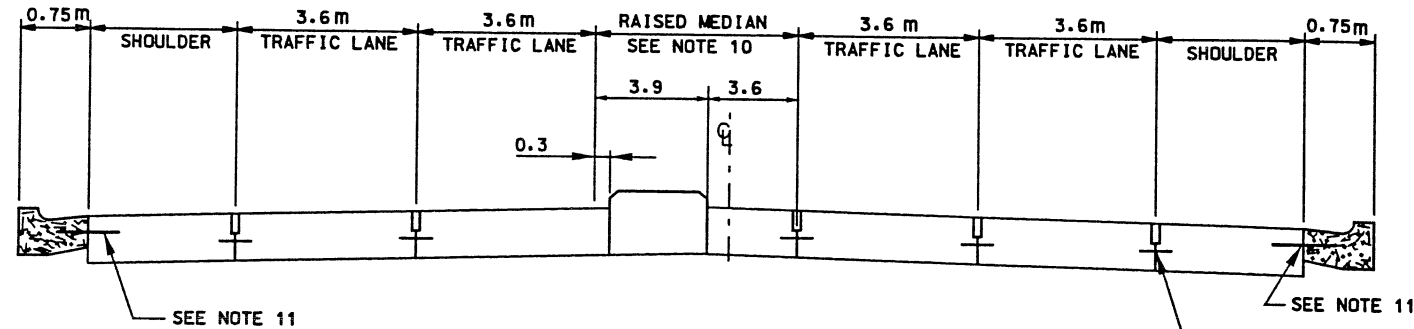
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	ORIGINAL RELEASE	DELETE TRANSITION DETAIL & ADD DETAIL M
1	5/6/98		
2	8/3/98		DETAIL H REVISIONS
3	01/14/99		
UTAH DEPARTMENT OF TRANSPORTATION		TRACKING NO.	
SVERDRUP/DE LEUW		CHECK P.O.W.	5/98
APPROVAL	DATE	DESIGN	LT
RECOMM.	5/16/98	L. L. TERRY	5/98
DATE	8/17/98	PROJECT DESIGN ENGINEER	QUANT.
APPROVED	DATE	DRAWN	VLR
		JAMES F. KLEBZ	5/98
		SECTION MANAGER	CHECK
I-15 CORRIDOR RECONSTRUCTION	JOINT DETAILS		
CORRIDOR STANDARD PLAN			
PROJECT NUMBER	*SP-15-7(135)296		
SALT LAKE COUNTY			
DWG. NO. CS-76-3			
SHT.	OF		

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 Date: 27-AUG-1998 Time: 10:23 User name: Framptd

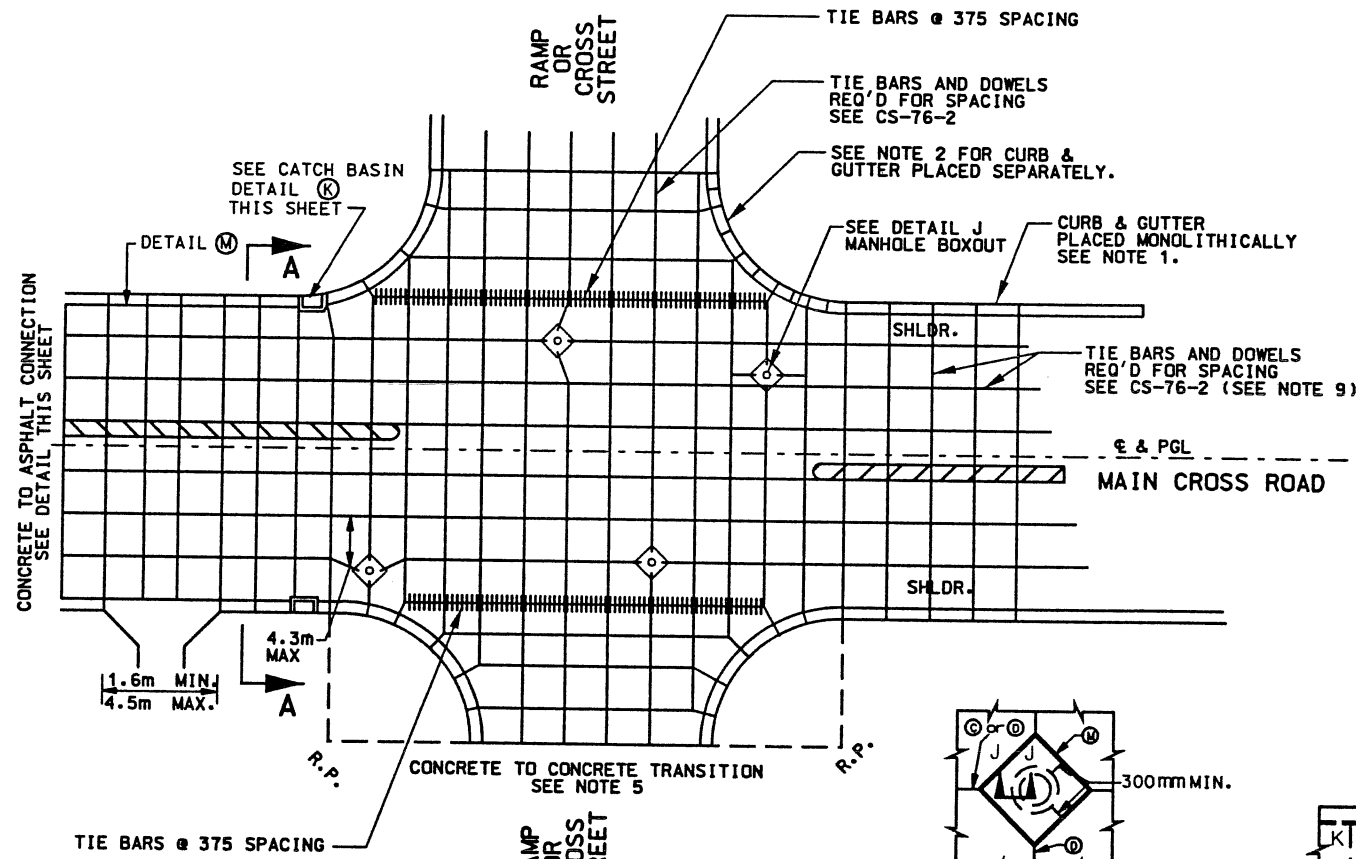
# CONCRETE PAVEMENT DETAILS

## NOTES:

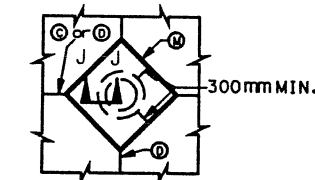
1. WHEN CURB & GUTTER IS PLACED MONOLITHICALLY WITH PAVEMENT, THE CURB & GUTTER JOINTS SHALL BE CONTINUOUS WITH THE PAVEMENT.
2. WHEN CURB & GUTTER IS PLACED SEPARATELY FROM THE PAVEMENT THE JOINTS WILL BE NORMAL TO THE FLOWLINE AND AT ONE HALF THE PAVEMENT JOINT SPACING.
3. PREFERRED TRANSVERSE JOINT LOCATIONS ARE: MORE THAN 1.5m FROM LARGE APPURTENANCES WITH NO BOXOUT; OR AT THE CORNER OF RECTANGULAR BOXOUTS OR APPURTENANCES.
4. WHEN A JOINT FALLS WITHIN 1.5m OF OR CONTACTS BASINS, MANHOLES, OR OTHER STRUCTURES, SHORTEN ONE OR MORE PANELS EITHER SIDE OF OPENING TO PERMIT JOINT TO FALL AT CORNERS OF RECTANGULAR STRUCTURES.
5. DETAIL "H" REQ'D. WHEN CROSS STREET IS CONCRETE AND AT APPROACH SLAB OR MOMENT SLAB, SEE CS-76-3.
6. SEE UDOT STD. DWG. NO. 615-1B FOR CURB & GUTTER DETAILS.
7. SEE UDOT STD. DWG. NO. 715-1A FOR DRIVEWAY DETAILS.
8. LETTER INSIDE CIRCLE DENOTES DETAIL. CS-76-3 AND CS-76-4
9. DOWEL BARS MAY BE ELIMINATED AROUND AREAS OF UTILITY BOXES, DRAINAGE AND OTHER MAN HOLES.
10. REFER TO CS-65-1, CS-65-2 FOR RAISED MEDIAN DETAILS.
11. TIE BARS (#16 @ 750) REQUIRED AT ELEVATED INTERSECTIONS ONLY (106+HS AND 600N)



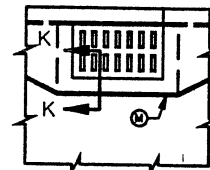
**SECTION A-A**  
NTS



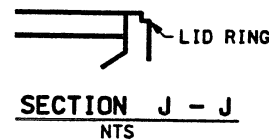
**PLAN**  
NTS



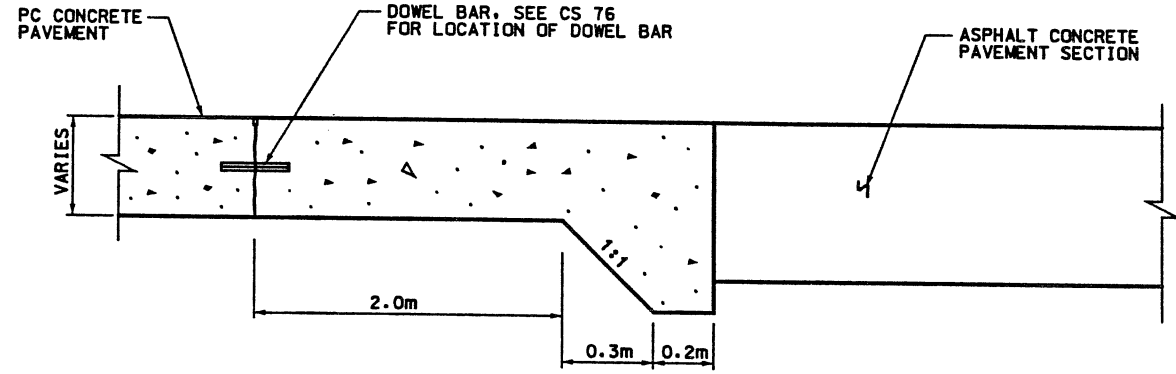
**MANHOLE BOXOUT DETAIL J**  
NTS



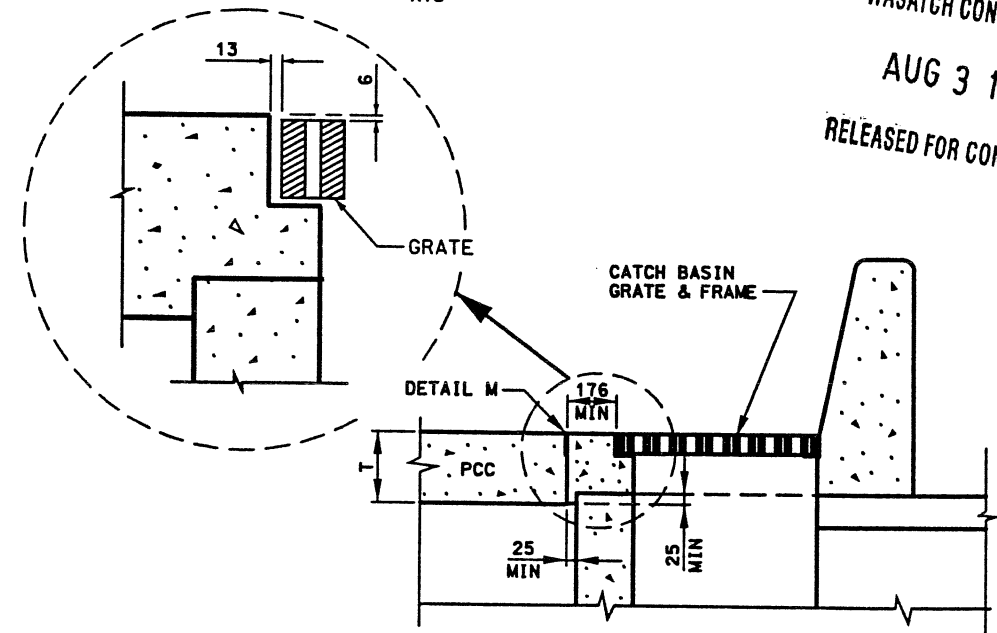
**CATCHBASIN DETAIL K**  
NTS



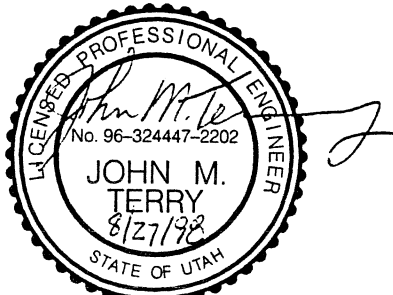
**SECTION J - J**  
NTS



**PCCP TO ASPHALT CONCRETE PAVEMENT CONNECTION**  
(NEW OR EXISTING)  
NTS



**SECTION K - K**  
NTS



ALL DIMENSIONS ARE SHOWN IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

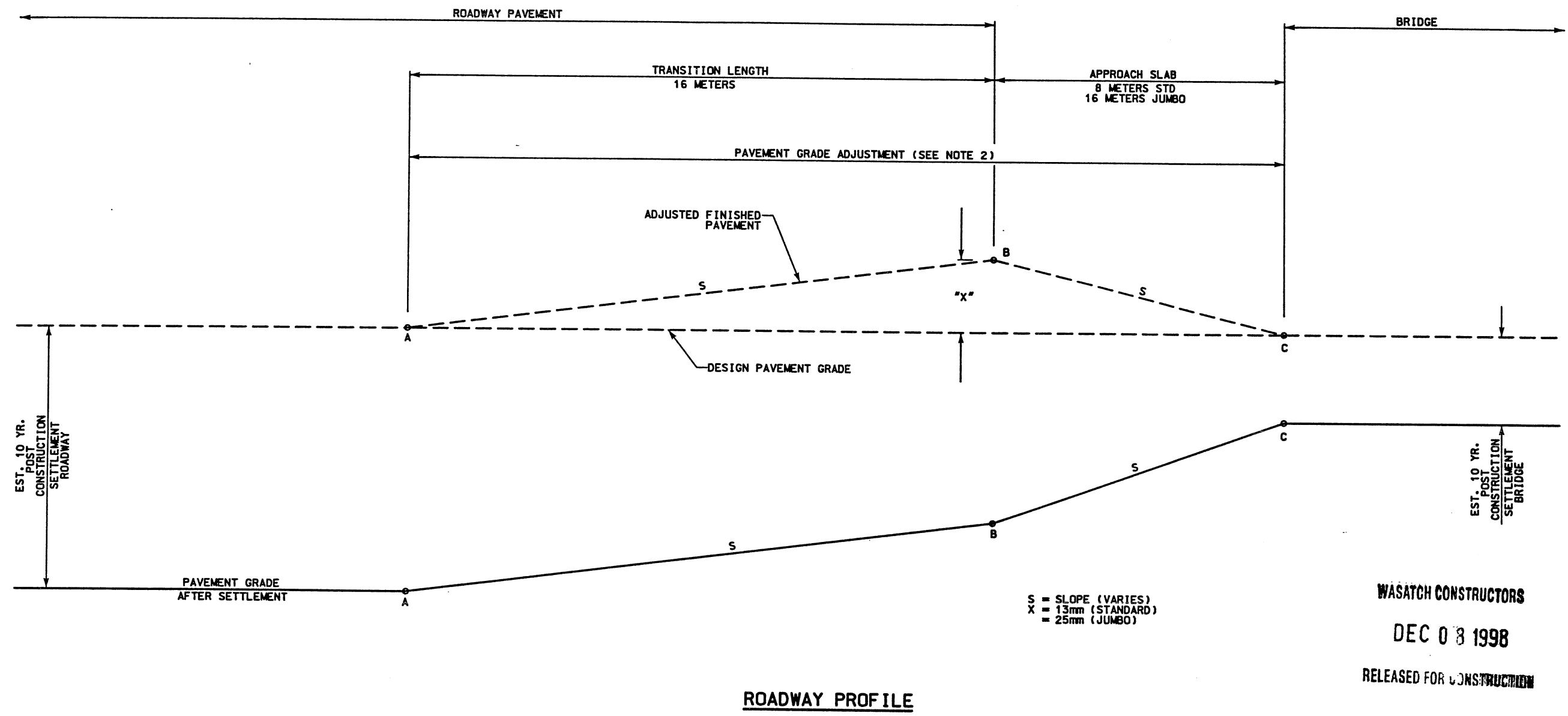
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	8/31/98		
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
DESIGN	LT	DR	LT
DRWN	ML	CHKD	JR
DATE		DATE	
APPROVAL	DATE	APPROVAL	DATE
LOLONE J. TERRY		JAMES F. BLAKE	
PROJECT DESIGN ENGINEER		SECTOR MANAGER	
1-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
INTERSECTION JOINT & DOWEL DETAILS		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. CS-76-4	
SHT. 1 OF 1			

WASATCH CONSTRUCTORS  
 AUG 31 1998  
 RELEASED FOR CONSTRUCTION



Date: 01-DEC-1998 Time: 14:52 User: name: oleanoj  
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# BRIDGE APPROACH SLAB CAMBER



**ROADWAY PROFILE**

**WASATCH CONSTRUCTORS**  
**DEC 08 1998**  
 RELEASED FOR CONSTRUCTION



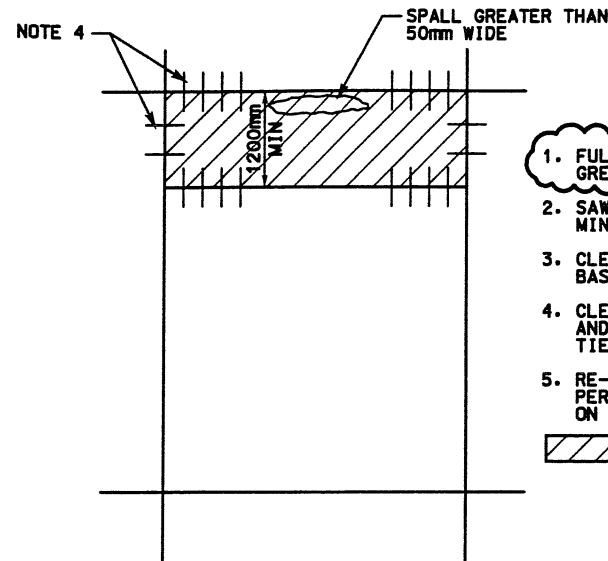
**NOTES**

1. LIMIT MAXIMUM GRADE BREAK AT POINTS A, B AND C TO 0.5% BY REDUCING "X" VALUE OR INCREASING TRANSITION LENGTH.
2. CONTRACTOR TO CONSTRUCT CAMBER TO PCC PAVING AND APPROACH SLAB. MAKE ADJUSTMENTS IN "X" VALUE AS REQUIRED.

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	ORIGINAL ISSUE	REVISE NOTE NO. 2
A	10/20/98	/ /	/ /
A	12/02/98	/ /	/ /
A	/ /	/ /	/ /
UTAH DEPARTMENT OF TRANSPORTATION MK CENTENNIAL SVERDRUP/DE LEUW		WBS NO.	/ /
APPROVAL DATE 10/20/98	DESIGNER Bret A. Reynolds	DESIGN DATE 6/16/98	CHECK DATE 6/16/98
APPROVED DATE 10/20/98	PROJECT DESIGN ENGINEER Randy L. Ross	DRAWN DATE 6/16/98	CHECK DATE 6/16/98
		SECTION MANAGER	/ /
1-15 CORRIDOR RECONSTRUCTION	BRIDGE APPROACH SLAB CAMBER	CORRIDOR STANDARD PLAN	PROJECT NUMBER #SP-15-7(135)296
SALT LAKE COUNTY		DWG. NO. CS-76-8	
SHT.	OF		

**NOTE:**

1. MAXIMUM SPALL SIZE THAT MAY BE HOT SEALED IS 50mm WIDE BY 150mm LONG BY 75mm DEEP.



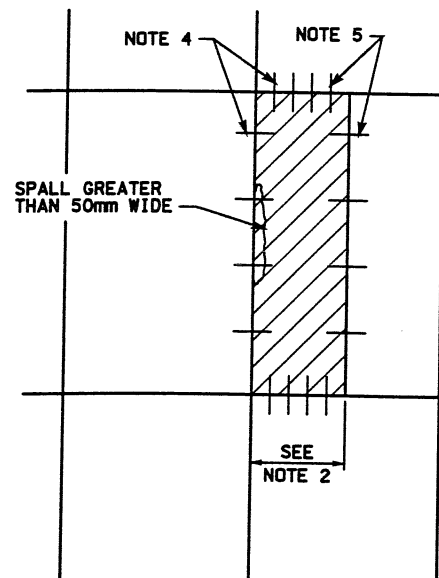
1. FULL DEPTH REPLACEMENT FOR SPALLS GREATER THAN 50mm WIDE x 150mm LONG.
  2. SAWCUT SLAB AND REMOVE PCCP A MINIMUM OF 1200mm FROM TRANSVERSE JOINTS.
  3. CLEAN, SMOOTH AND RE-CONSOLIDATE BASE TO THE PROPER DENSITY.
  4. CLEAN AND REUSE EXISTING DOWELS AND TIE BARS. DAMAGED DOWELS OR TIE BARS SHALL BE REPLACED.
  5. RE-INSTALL DOWEL AND TIE BARS PER CS-76. DO NOT INSTALL TIE BARS ON PGL PER CS-76-1.
- ▨ LIMITS OF REMOVE AND REPLACE PCCP.

**TRANSVERSE SPALLS  
DETAIL 2**

WASATCH CONSTRUCTORS

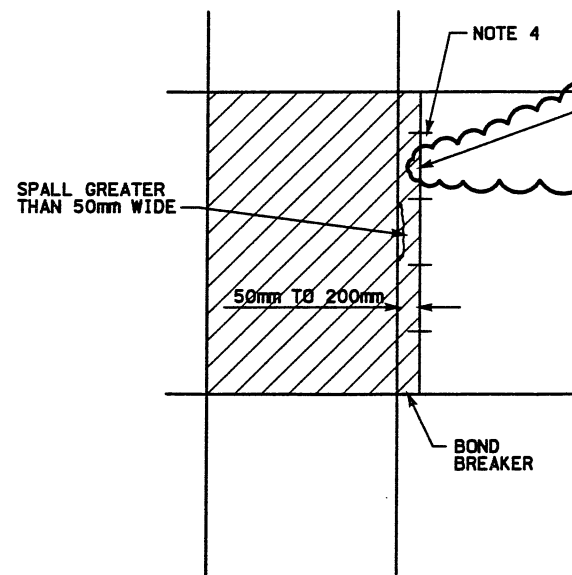
APR 25 2000

RELEASED FOR CONSTRUCTION



1. FULL DEPTH REPLACEMENT FOR SPALLS GREATER THAN 50mm WIDE x 150mm LONG.
  2. SAWCUT SLAB AND REMOVE PCCP A MINIMUM OF 1200mm FROM LONGITUDINAL JOINT. IF SPALL IS IN A TRAVEL LANE REMOVE SLAB TO CENTER OF TRAVEL LANE.
  3. CLEAN, SMOOTH AND RE-CONSOLIDATE BASE TO THE PROPER DENSITY.
  4. CLEAN AND REUSE EXISTING DOWELS AND TIE BARS. DAMAGED DOWELS OR TIE BARS SHALL BE REPLACED.
  5. INSTALL DOWELS AND TIE BARS PER CS-76. DO NOT INSTALL TIE BARS ON PGL PER CS-76-1.
- ▨ LIMITS OF REMOVE AND REPLACE PCCP.

**LONGITUDINAL SPALLS  
WITHIN COMPLETED PORTION OF PCCP  
DETAIL 1**



1. FULL DEPTH REPLACEMENT FOR SPALLS GREATER THAN 50mm WIDE x 150mm LONG.
  2. SAWCUT AND REMOVE PCCP 300mm FROM LONGITUDINAL JOINT.
  3. CLEAN, SMOOTH AND RE-CONSOLIDATE BASE TO THE PROPER DENSITY.
  4. RE-INSTALL TIE BARS PER CS-76. DO NOT INSTALL TIE BARS ON PGL PER CS-76-1.
- ▨ LIMITS OF REMOVE AND REPLACE PCCP. POURED MONOLITHICALLY WITH ADJACENT SLAB.

**LONGITUDINAL SPALLS  
PRIOR TO COMPANION POUR  
DETAIL 3**



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	ORIGINAL ISSUE	ADDED NOTE ON SPALL SIZE
△	10/28/99		
△	12/13/99		
△	04/19/00		

UTAH DEPARTMENT OF TRANSPORTATION	SVERRUP/DE LEUW	DESIGN	///	WBS NO.	///
		DRAWN	///	CHECK	///
APPROVAL	DATE	PROJECT DESIGN ENGINEER	DATE	SECTION MANAGER	DATE
07/07/99	07/07/99	JOHN M. TERRY	07/07/99	JOHN M. TERRY	07/07/99

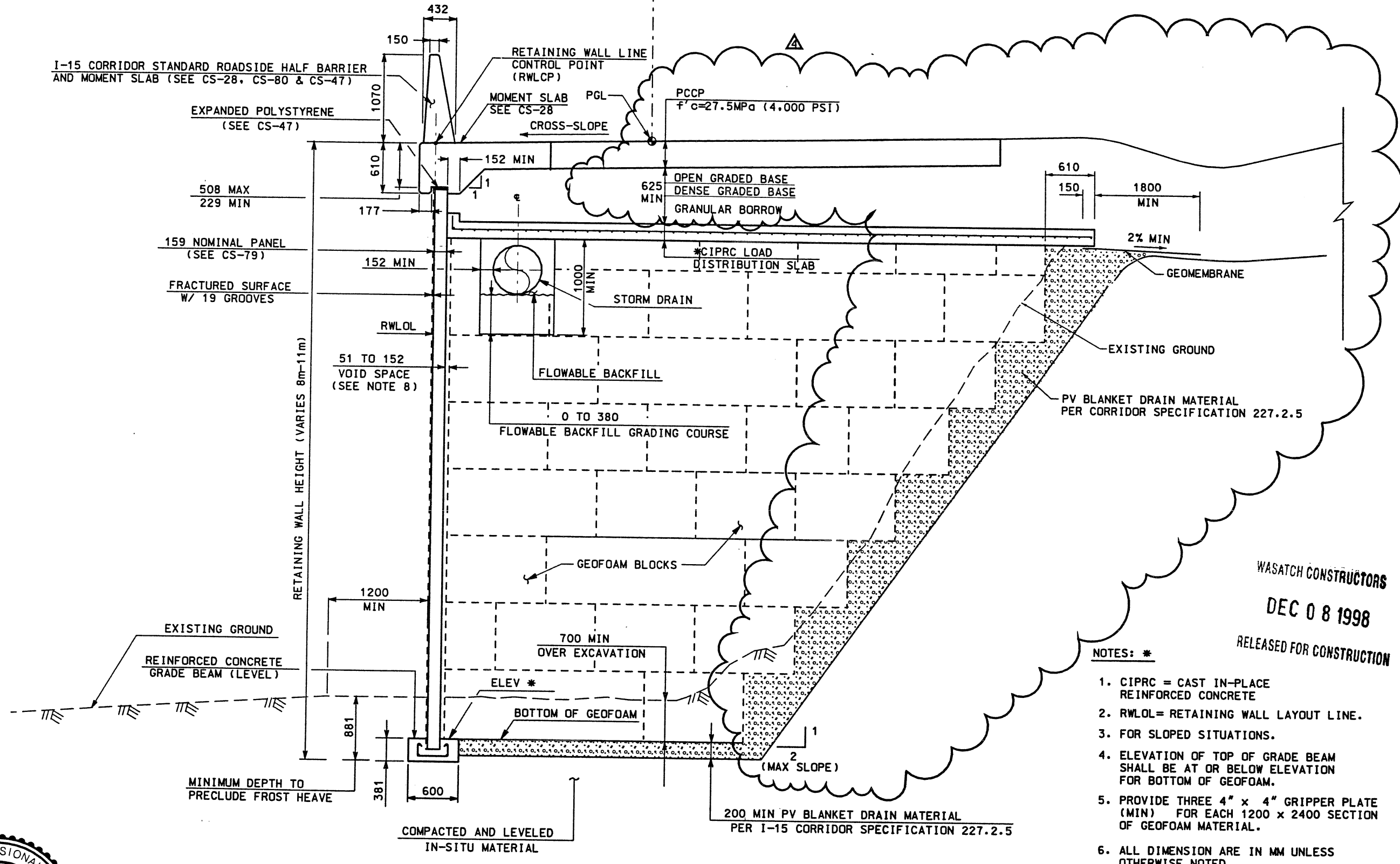
  

I-15 CORRIDOR RECONSTRUCTION	PCCP SPALL REPAIR DETAILS
CORRIDOR STANDARD PLAN	PROJECT NUMBER #SP-15-7(135)296
SALT LAKE COUNTY	DWG. NO. CS-76-9

RFC After Final Approval

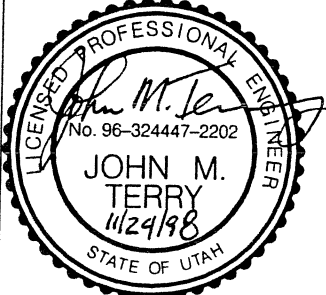
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**TYPICAL SECTION GEOFOAM (EPS) WALL**  
(WALL HEIGHT 8m-11m) NTS

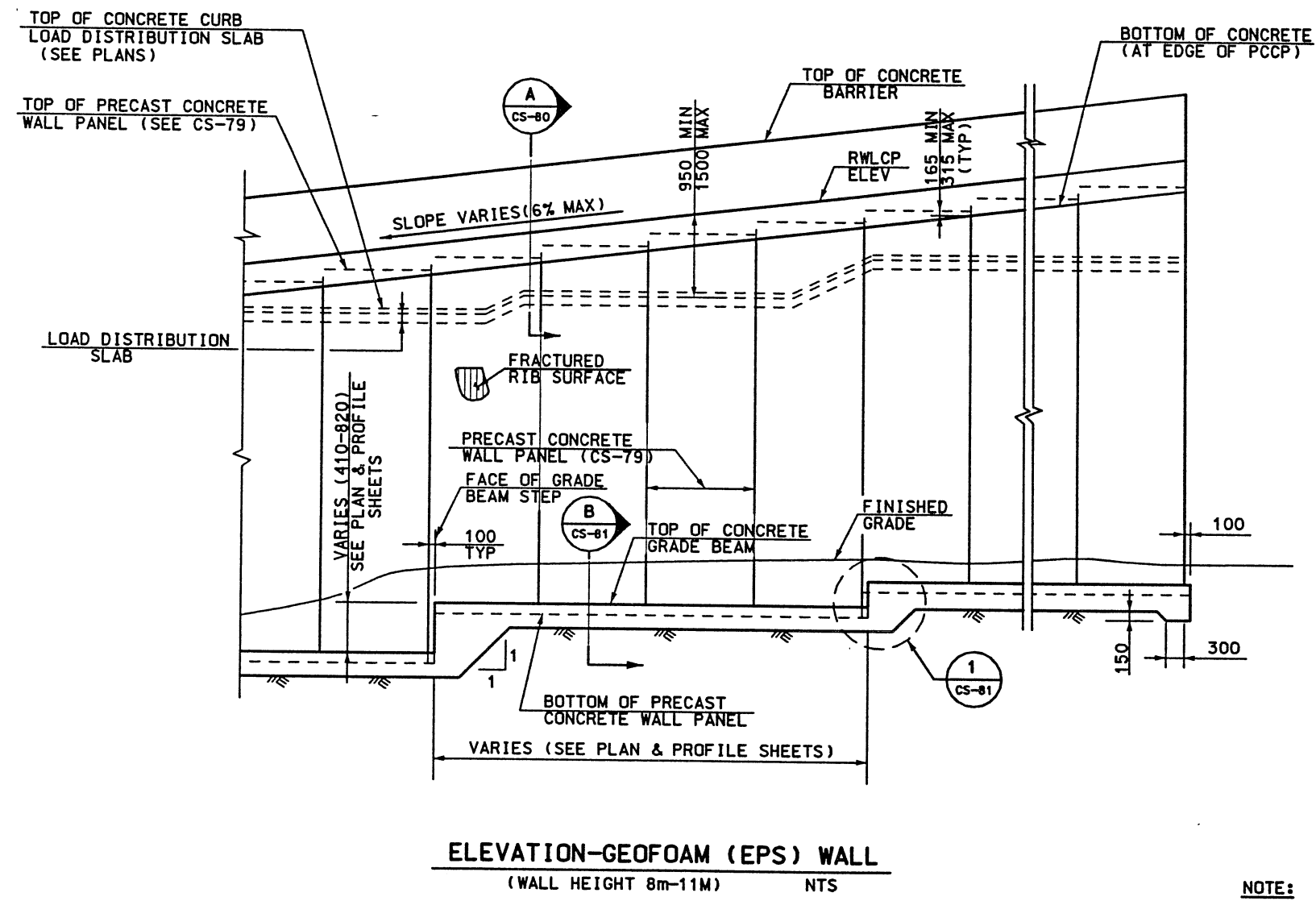
- NOTES: \***
1. CIPRC = CAST IN-PLACE REINFORCED CONCRETE
  2. RWLOL = RETAINING WALL LAYOUT LINE.
  3. FOR SLOPED SITUATIONS.
  4. ELEVATION OF TOP OF GRADE BEAM SHALL BE AT OR BELOW ELEVATION FOR BOTTOM OF GEOFOAM.
  5. PROVIDE THREE 4" x 4" GRIPPER PLATE (MIN) FOR EACH 1200 x 2400 SECTION OF GEOFOAM MATERIAL.
  6. ALL DIMENSION ARE IN MM UNLESS OTHERWISE NOTED.
  7. FOR DETAILS UNDER APPROACH SLABS AND BRIDGES SEE CS-49
  8. FOR TOP BLOCK OF GEOFOAM BELOW LOAD DISTRIBUTION SLAB 0 TO 152 VOID SPACE.
  9. FOR EXISTING LOAD DISTRIBUTION SLABS, ATTACH GEOMEMBRANE TO THE TOP OF THE LOAD DISTRIBUTION SLAB WITH CIM1000.



WASATCH CONSTRUCTORS  
DEC 08 1998  
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE		
1	12/01/97	RELEASE FOR GEOFOAM ONLY.	
2	2/29/98	APPROVED FOR CONSTRUCTION AT BRIDGES	
3	7/28/98	REVISED EPS DETAILS	
4	11/25/98	REVISED GEOFOAM SLOPE	
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW			
DESIGN	CHECK	DESIGN	CHECK
12/01/97	12/01/97	12/01/97	12/01/97
JOHN TERRY	JOHN TERRY	JOHN TERRY	JOHN TERRY
PROJECT DESIGN ENGINEER	PROJECT DESIGN ENGINEER	PROJECT DESIGN ENGINEER	PROJECT DESIGN ENGINEER
DATE	DATE	DATE	DATE
12/01/97	12/01/97	12/01/97	12/01/97
APPROVED	APPROVED	APPROVED	APPROVED
12/01/97	12/01/97	12/01/97	12/01/97
JOHN TERRY	JOHN TERRY	JOHN TERRY	JOHN TERRY
SECTION MANAGER	SECTION MANAGER	SECTION MANAGER	SECTION MANAGER
DATE	DATE	DATE	DATE
12/01/97	12/01/97	12/01/97	12/01/97
I-15 CORRIDOR RECONSTRUCTION			
TYP GEOFOAM SECT (8m-11m)			
CORRIDOR STANDARD PLAN			
PROJECT NUMBER *SP-15-7(135)296			
SALT LAKE COUNTY			
DWG. NO. CS-77			
SHT. OF			

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 Date: 18-MAR-1998 Time: 09:03 User name: rtiguerc



**ELEVATION-GEOFOAM (EPS) WALL**  
(WALL HEIGHT 8m-11M) NTS

WASATCH CONSTRUCTORS  
 MAR 20 1998  
 RELEASED FOR CONSTRUCTION

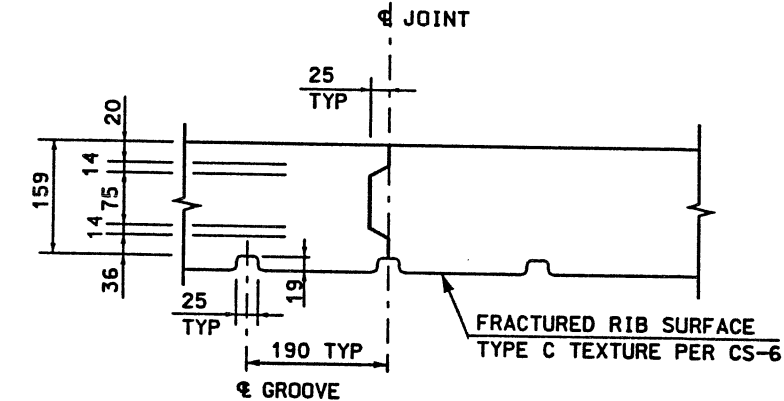
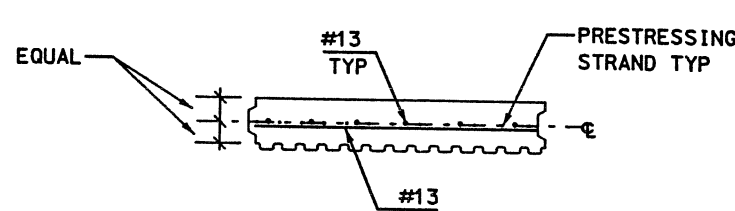
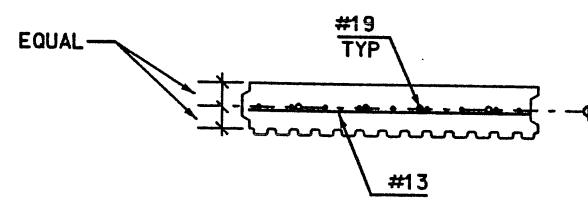
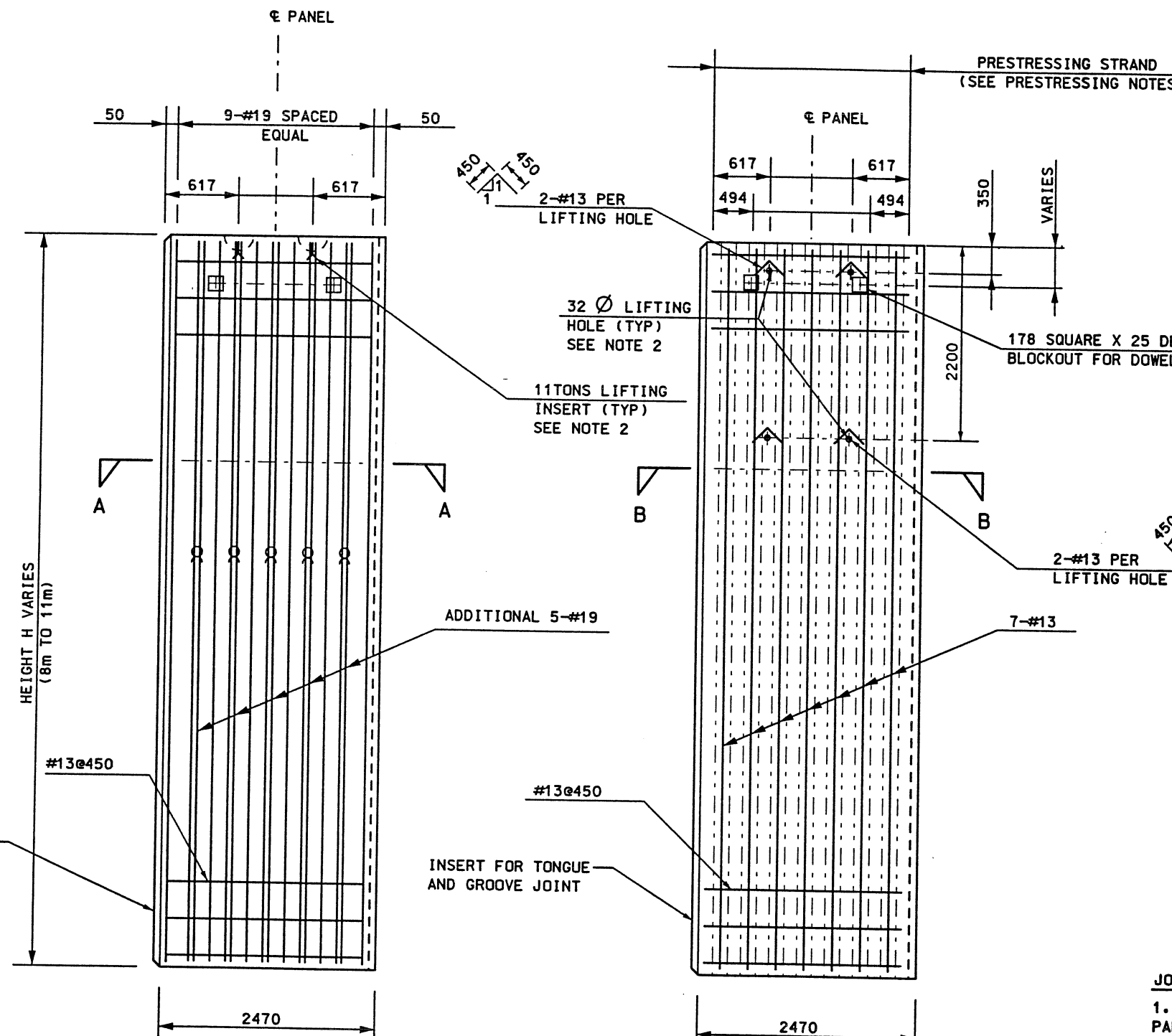
- NOTE:**
1. ALL DIMENSION ARE IN MM UNLESS OTHERWISE NOTED.
  2. FOR DETAILS UNDER APPROACH SLABS AND BRIDGES SEE CS-49

2 DELETED NOT APPROVED FOR CONSTRUCTION NOTE



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	RELEASE FOR GEOFOAM WALL ONLY.	
1	12/01/97		
2	2/29/98	APPROVAL FOR CONSTRUCTION AT BRIDGES	
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW			
DESIGN	JOB	12/97	CHECK
DRAIN	VAL	12/97	CHECK
QUANT.			CHECK
APPROVAL	DATE	PROJECT DESIGN ENGINEER	SECTION MANAGER
12/01/97		JOHN WILSON	JOHN TERRY
APPROVED	DATE		
12/01/97			
I-15 CORRIDOR RECONSTRUCTION	CORRIDOR STANDARD PLAN		
ELEV-GEOFOAM WALL (8m-11m)	PROJECT NUMBER #SP-15-7(135)296		
SALT LAKE COUNTY			
DWG. NO. CS-78			
SHT. OF			

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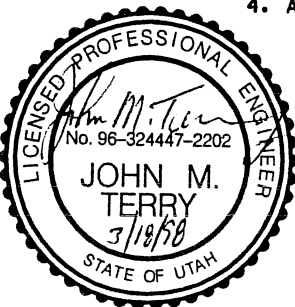
- NOTES:**
- J BARS @ BOTTOM OF PANEL NOT SHOWN FOR CLARITY, SEE SECTION B & SHEET CS 46
  - LIFTING INSERTS OR LIFTING HOLES MAY BE UTILIZED FOR EITHER PANEL AT CONTRACTORS OPTION
  - CONTRACTOR TO PROVIDE DOWEL LOCATIONS
  - ALL DIMENSION ARE IN MM UNLESS OTHERWISE NOTED.

- JOINT DETAIL NOTES:**
- FACE OF PANELS TO MATCH FACE OF MSE WALL PANELS AT INTERFACES

- PRESTRESSING NOTES:**
- CONCRETE STRENGTH :  $f_c' = 34 \text{ MPa}$  AT 28 DAYS  
 $f_c' = 28 \text{ MPa}$  AT TIME OF PRESTRESSING

PRESTRESSING STEEL : GRADE 270 LOW RELAXATION STRAND  
 $P_f =$  FORCE REQUIRED AT CENTER OF SPAN AFTER ALL LOSSES  
 = 761 KN PER PANEL

2 DELETED NOT APPROVED FOR CONSTRUCTION NOTE



**PRECAST REINFORCED  
CONCRETE OPTION**

**PRECAST PRESTRESSED  
CONCRETE OPTION**

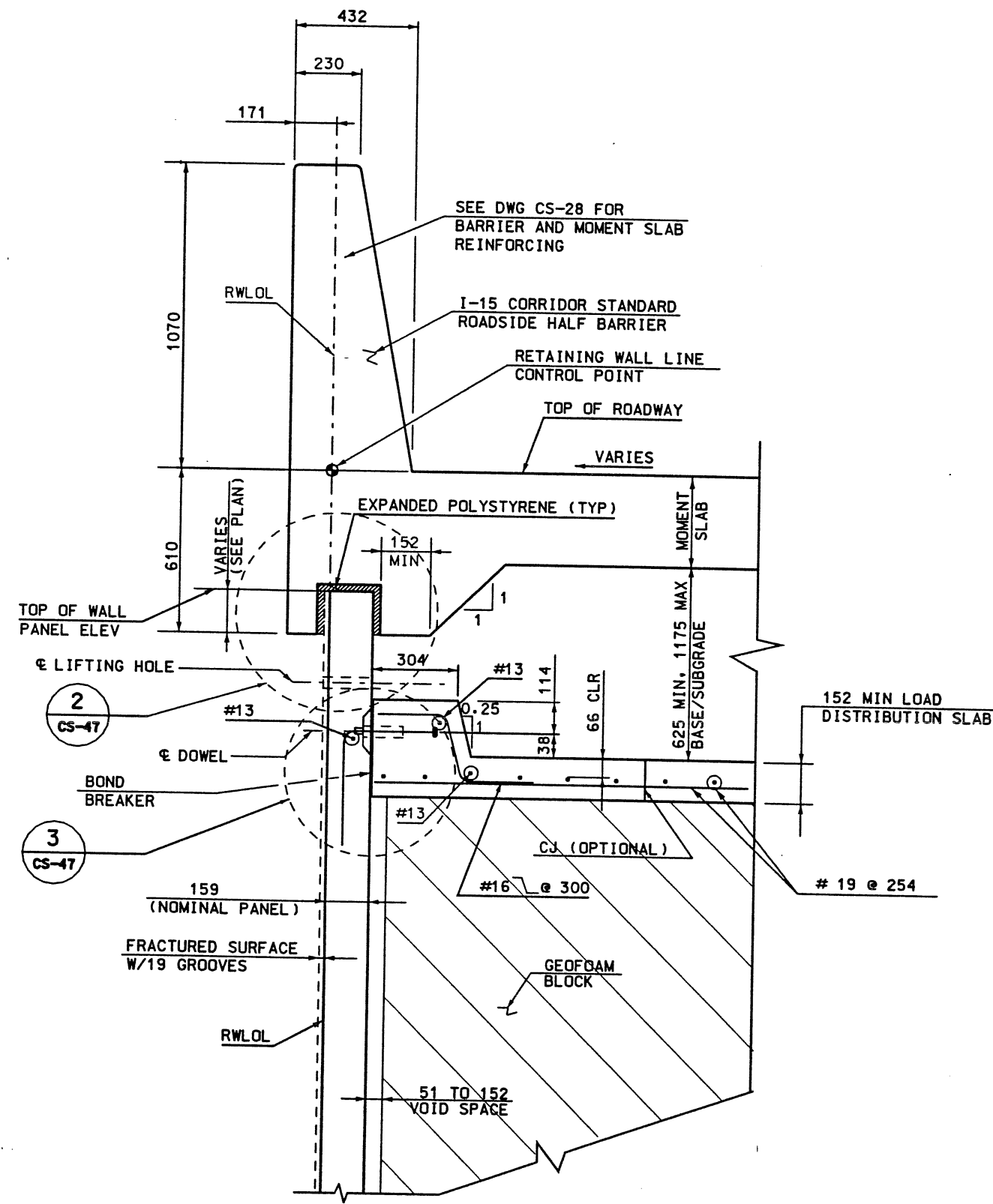
**PRECAST WALL PANEL  
(WALL HEIGHT 8m-11m) NTS**

**WASATCH CONSTRUCTORS**

**MAR 20 1998**

**RELEASED FOR CONSTRUCTION**

APPROVED FOR CONSTRUCTION NO. DATE 12/01/97 2/23/98	DESCRIPTION RELEASE FOR GEOFOAM WALL ONLY. APPROVED FOR CONSTRUCTION AT BRIDGES	UTAH DEPARTMENT OF TRANSPORTATION SVERDRUP/DE LEUW
APPROVAL DATE 12/01/97	DESIGNER JOHN WILSON	CHECK JOB 12/97
APPROVAL DATE 12/01/97	PROJECT DESIGN ENGINEER JOHN TERRY	CHECK JES 12/97
APPROVAL DATE 12/01/97	SECTION MANAGER JOHN TERRY	CHECK MTP 12/97
I-15 CORRIDOR RECONSTRUCTION GEOFOAM WALL PANEL DETAILS	CORRIDOR STANDARD PLAN PROJECT NUMBER #SP-15-7(135)296	SALT LAKE COUNTY DWG. NO. CS-79
SHEET ____ OF ____		



**LOAD DISTRIBUTION SLAB RESTRAINT SECTION**  
 (WALL HEIGHT 8m-11m) NTS A

**WASATCH CONSTRUCTORS**  
**APR 13 1998**  
 RELEASED FOR CONSTRUCTION

- NOTES:**
- LOAD DISTRIBUTION SLAB DESIGNED FOR HS-20 LOADING.
  - WHEEL LOADS ARE NOT PERMITTED WITHIN 1500 OF FREE EDGE OF LOAD DISTRIBUTION SLAB PRIOR TO PLACING PCCP SLAB.
  - LIFTING HOLES TO BE DRY PACKED.
  - ALL DIMENSION ARE IN MM UNLESS OTHERWISE NOTED.
  - SEE CS-28 FOR MOMENT SLAB REINFORCING.
  - FOR DETAILS UNDER APPROACH SLABS AND BRIDGES SEE CS-49.
  - TRANSVERSE CONSTRUCTION JOINTS ARE ALLOWED IN THE LOAD DISTRIBUTION SLAB AT THE OPTION OF THE CONTRACTOR.
  - ALL CRACKS OVER 0.5 MM SHALL BE SEALED WITH A HIGH MOLECULAR WEIGHT METHYL METHACRYLATE SEALANT (TRANPO T-70 OR EQUAL).
  - CONCRETE SHALL BE CLASS AA(AE) EXCEPT AS MODIFIED FOR  $f'_c=27.5 \text{ MPa}$  (4,000 PSI). NO CONSTRUCTION LOADS SHALL BE PERMITTED ON THE LOAD DISTRIBUTION SLAB UNTIL AFTER 7 DAYS OF CURING.

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	RELEASE FOR GEOFOAM WALL ONLY.	
1	12/01/97	APPROVED FOR CONSTRUCTION AT BRIDGE	
2	2/29/98	ADD NOTES	
3	04/10/98		
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW		CHECK	DATE
DESIGN	JOB	11/97	12/97
DRAWN	CHK	11/97	12/97
QUANT.	MANAGER		
I-15 CORRIDOR RECONSTRUCTION		CORRIDOR STANDARD PLAN	
GEOFOAM WALL RESTRAINT DETAILS (8-11m)		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY			
DWC. NO. CS-80			
SHT. 9			