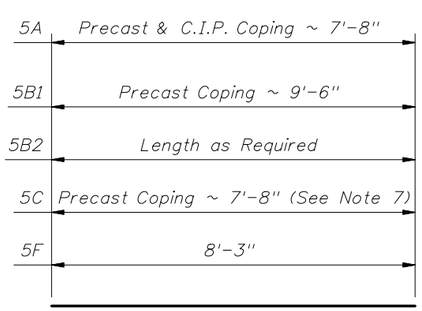
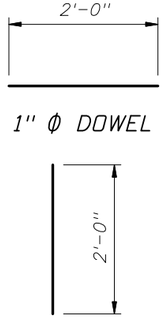
REINFORCING STEEL BENDING DIAGRAMS - JUNCTION SLAB

BILL OF REINFORCING STEEL

MARK	SIZE	LENGTH		
		PRECAST COPING		C.I.P. COPING
		(32" F-SHAPE)	(42" F-SHAPE)	
A	5	7'-8"	7'-8"	7'-8"
B1	5	9'-6"	9'-6"	N/A
B2	5	AS REQD.	AS REQD.	AS REQD.
C	5	7'-8"	7'-8"	N/A
D	4	2'-0"	2'-0"	N/A
F	5	8'-3"	8'-3"	8'-3"
L	6	5'-4"	5'-7"	10'-2"
U1	6	3'-8"	3'-8"	3'-8"
1" ϕ Dowel	Smooth Steel Bar	2'-0"	2'-0"	2'-0"

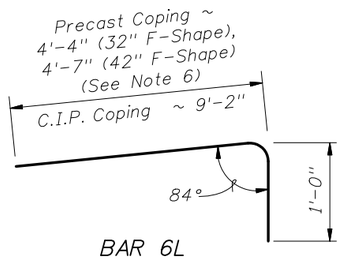


BARS 5A, 5B1, 5B2, 5C & F

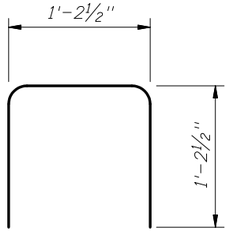


1" ϕ DOWEL

DOWEL BAR 4D



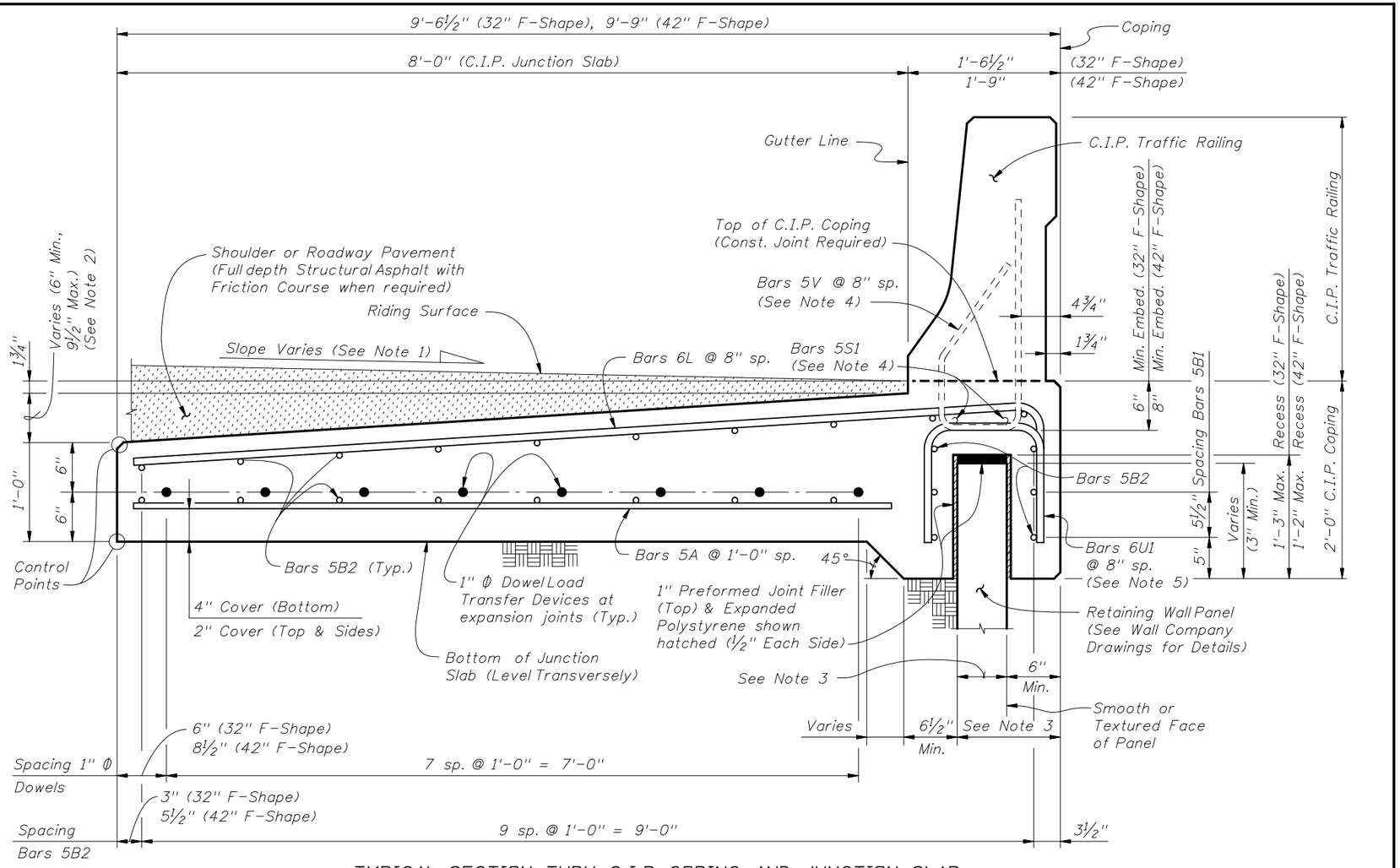
BAR 6L



BAR 6U1

REINFORCING STEEL NOTES:

1. All bar dimensions in the bending diagrams are out to out.
2. All reinforcing steel at expansion joints will have a 2" minimum cover.
3. Lap splices for Bars 5B2 will be a minimum of 2'-2".
4. For Precast Coping only, lap splice Bars 6L with Bars 5C. Lap splices will be a minimum of 2'-9".
5. See Index No. 420 and Index No. 425 for Bars 5S and 5V.
6. Dimension shown is for lap splice option. For mechanical coupler option, this dimension is 1'-4½" (32" F-Shape) or 1'-7" (42" F-Shape).
7. Dimension shown is for lap splice option. For mechanical coupler option, this dimension is 7'-9".
8. The Contractor may use Welded Wire Reinforcement when approved by the Engineer. Welded Wire Reinforcement will conform to ASTM A 497.



TYPICAL SECTION THRU C.I.P. COPING AND JUNCTION SLAB AND RETAINING WALL AT EXPANSION JOINTS

ESTIMATED QUANTITIES FOR C.I.P. COPING

ITEM	UNIT	QUANTITY
Concrete	CY/Ft.	0.468
Reinforcing Steel (Typical) excluding Bars 5V and 5S (Typ.)	Lb./Ft.	64.20
Additional Reinf. @ Expansion Joint	Lb./Ft.	42.72

(The above concrete quantities are based on a superelevation of 6.25% and a 5" wide retaining wall panel, beneath a 32" F-Shape Traffic Railing).

JUNCTION SLAB NOTES:

1. Match Cross Slope of Travel Lane or Shoulder.
2. The minimum dimension of 6" corresponds to a superelevation of 6.25%. For superelevations exceeding 6.25%, increase this dimension (i.e., shift control points down) as required to match roadway superelevation.
3. Actual width varies depending on type of Retaining Wall used.
4. See Index No. 420 and Index No. 425 for Bars 5S and 5V.
5. Increase the width (1'-2½") of Bars 6U1 as required to maintain 2" minimum cover when recess width exceeds 8".

PRECAST OR C.I.P. COPING WITH C.I.P. JUNCTION SLAB DETAILS (F-SHAPE TRAFFIC RAILINGS)

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
01/01/08	SJN	Changed "Shoulder or Roadway Pavement" note; and "6"" to "6" Min." in TYPICAL SECTION detail.			
07/01/09	SJN	Changed "Continuous Neoprene Strip" to "Preformed Joint Filler" in TYPICAL SECTION detail.			

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2008 Interim Design Standard

PERMANENT RETAINING WALL SYSTEMS

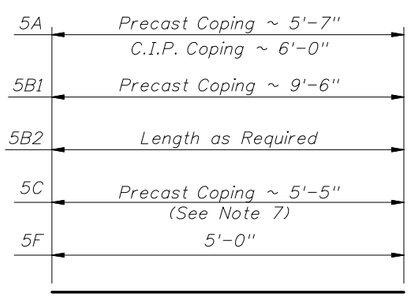
Interim Date 07/01/09

Index No. 5300

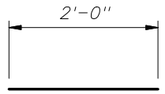
REINFORCING STEEL BENDING DIAGRAMS - RAISED SIDEWALK

BILL OF REINFORCING STEEL

MARK	SIZE	LENGTH	
		PRECAST COPING	C.I.P. COPING
A	5	5'-7"	6'-0"
B1	5	9'-6"	N/A
B2	5	AS REQD.	AS REQD.
C	5	5'-5"	N/A
D	4	2'-0"	N/A
F	5	5'-0"	5'-0"
L	5	5'-0"	8'-1"
U1	5	3'-8"	3'-8"
1" Ø Dowel	Smooth Steel Bar	2'-0"	2'-0"

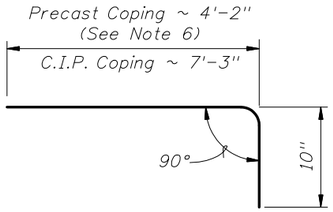


BARS 5A, 5B1, 5B2, 5C & 5F

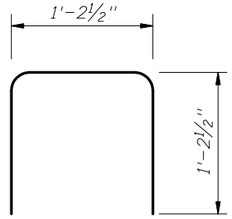


1" Ø DOWEL

DOWEL BAR 4D



BAR 5L



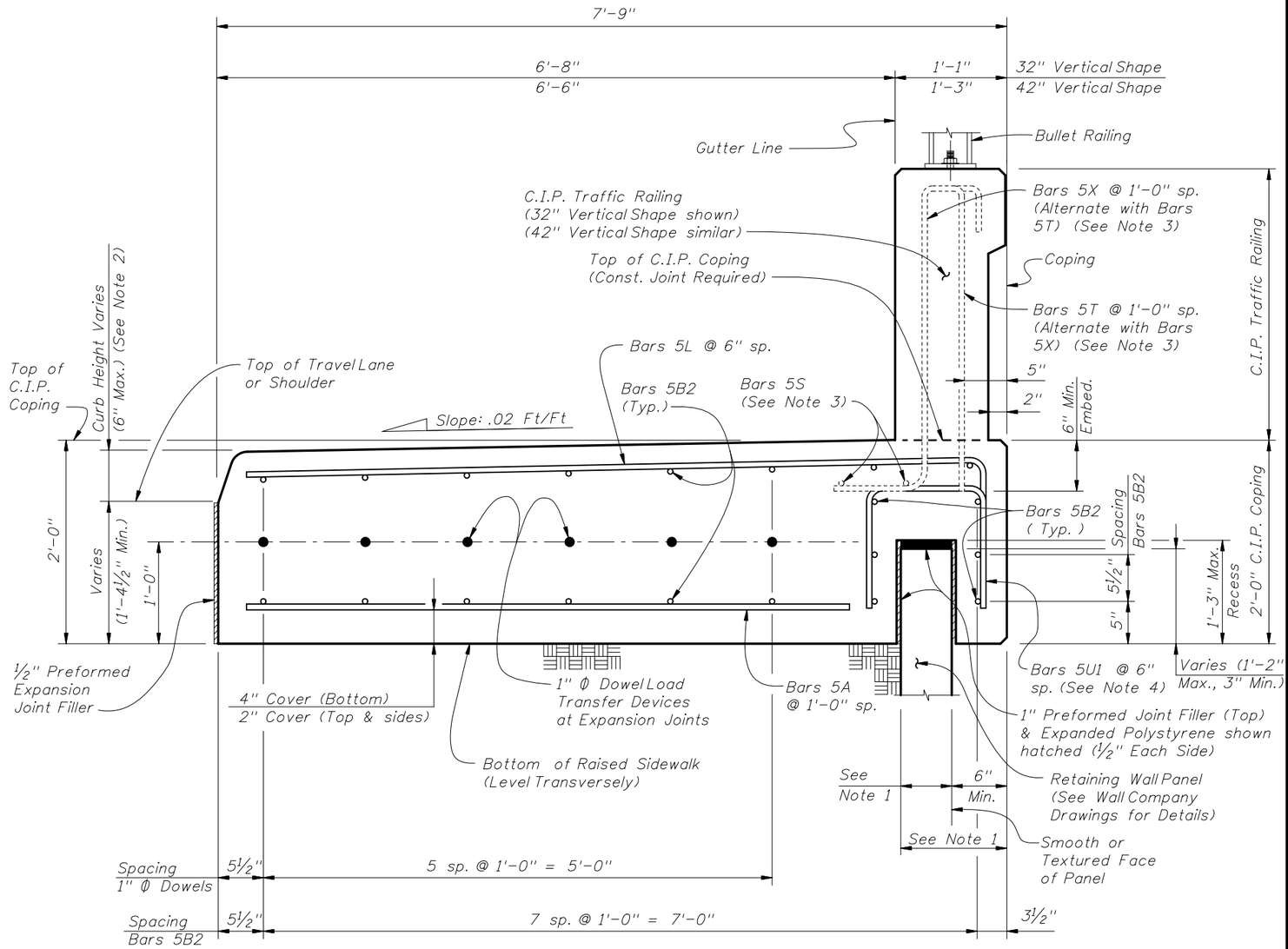
BAR 5U1

REINFORCING STEEL NOTES:
1. All bar dimensions in the bending diagrams are out to out.
2. All reinforcing steel at expansion joints will have a 2" minimum cover.
3. Lap splices for Bars 5B will be a minimum of 2'-2".
4. Lap splice Bars 5L with Bars 5C. Lap splices will be a minimum of 2'-2".
5. See Index No. 422 and Index No. 423 for Bars 5S, 5T and 5X. Adjust vertical dimensions of Stirrup Bars 5T and 5X to 3'-0" for 32" Vertical Shape or 3'-10" for 42" Vertical Shape.
6. Dimension shown is for lap splice option. For mechanical coupler option, this dimension is 1'-8".
7. Dimension shown is for lap splice option. For mechanical coupler option, this dimension is 5'-8".
8. The Contractor may use Welded Wire Reinforcement when approved by the Engineer. Welded Wire Reinforcement will conform to ASTM A 497.

ESTIMATED QUANTITIES FOR C.I.P. COPING

ITEM	UNIT	QUANTITY
Concrete	CY/Ft.	0.538
Reinforcing Steel (Typical) excluding Bars 5T, 5X and 5S (Typ.)	Lb./Ft.	51.63
Additional Reinf. @ Expansion Joints	Lb.	32.04

The above concrete quantities are based on a 5" wide retaining wall panel and a Type D Concrete Curb (See Note 2).



TYPICAL SECTION THRU C.I.P. COPING AND RAISED SIDEWALK AND RETAINING WALL AT EXPANSION JOINTS

RAISED SIDEWALK NOTES:
1. Actual width varies depending on type of Retaining Wall used.
2. Match roadway curb shape (Type) and height. See Roadway Plans and Index No. 300. 6'-8" dimension is based on a 32" Vertical Shape Traffic Railing with a Type D curb adjacent to a 6'-0" wide sidewalk. Adjust this dimension as required for other curb types or transitions at Begin or End Retaining Wall.
3. See Index No. 422 and Index No. 423 for Bars 5S, 5T & 5X and Bullet Railing details. Adjust vertical dimension of Bars 5T and 5X, see Reinforcing Steel Note 5.
4. Increase the width (1'-2½") of Bars 5U1 as required to maintain 2" minimum cover when recess width exceeds 8".

PRECAST OR C.I.P. COPING WITH C.I.P. RAISED SIDEWALK DETAILS (VERTICAL SHAPE TRAFFIC RAILINGS)

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
01/01/08	TJB	Changed "6"" to "6" Min." in TYPICAL SECTION detail.			
07/01/09	SJN	Changed "Continuous Neoprene Strip" to "Preformed Joint Filler" in TYPICAL SECTION detail.			

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