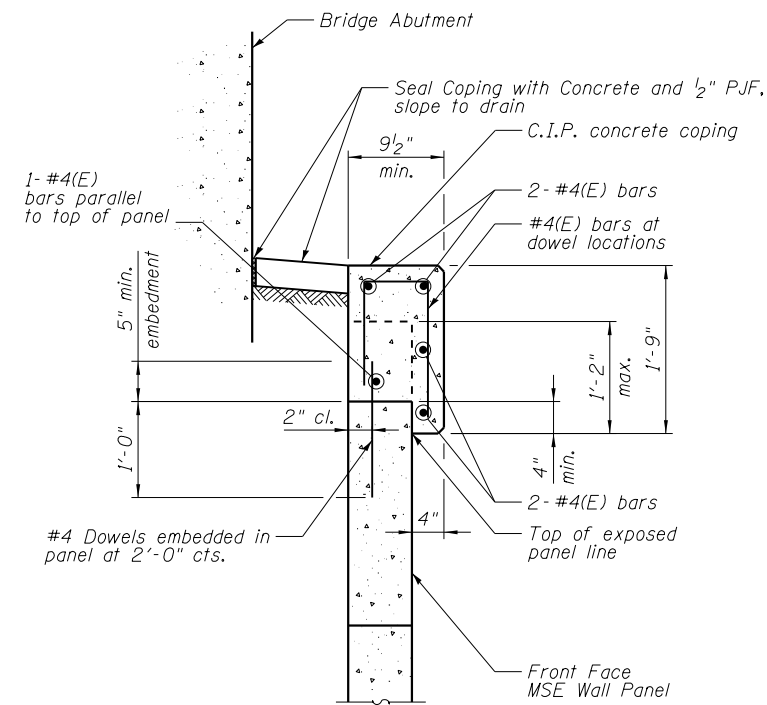


**C.I.P. COPING DETAIL**



**C.I.P. CONCRETE COPING**

(MSE Wall Panels along Bridge Abutment, see Note 1)

**Note:**

1. Reinforcing bars in C.I.P. coping (except anchor slab coping) to be designed by MSE Wall Supplier.



# SOIL BORING LOG

Page 1 of 2

Date 12/6/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 303+93.26 to 309+50  
BORING NO. R-235-RWB-01  
Station 305+75.81  
Offset 9.5 ft RT.  
Northing 1,937,130.39  
Easting 1,068,855.40  
Ground Surface Elev. 707.8 ft

DEPTH (ft)	BLOW S	UCS Qu (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW S	UCS Qu (tsf)	MOIST (%)
707.3				TOPSOIL				
707.3	4	4.1	26	Hard, Brown, Gray and Black CLAY trace - gravel, roots	67.3	4	2.9	20
704.8	6	B		FILL	67.3	7	B	
704.8	3			Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel	682.3	4		
701.8	4	5.0	20	Gray below 6 feet	679.8	5	3.1	18
701.8	5	B		Stiff, Gray SILTY CLAY LOAM trace - gravel	679.8	8	B	
701.8	2			Gray below 6 feet	677.3	6		
701.8	4	2.5	20	Stiff, Gray SILTY CLAY LOAM trace - gravel	677.3	4	1.6	21
701.8	5	B		Very Stiff, Gray SILTY CLAY trace - gravel	677.3	6	B	
701.8	2			Stiff, Gray SILTY CLAY LOAM trace - gravel	674.8	3		
701.8	3	2.1	17	Very Stiff, Gray SILTY CLAY trace - gravel	674.8	4	2.0	17
701.8	4	B		Stiff, Gray SILTY CLAY LOAM trace - gravel	674.8	6	B	
701.8	5			Very Stiff to Hard, Gray SILTY CLAY trace to little - gravel	674.8	3		
701.8	7	B	17	Stiff, Gray SILTY CLAY LOAM trace - gravel	674.8	4	1.2	17
701.8	5	3.3	21	Very Stiff to Hard, Gray SILTY CLAY trace to little - gravel	674.8	5	B	
701.8	5	B		Stiff, Gray SILTY CLAY LOAM trace - gravel	674.8	9	5.0	14
701.8	4			Very Stiff, Gray CLAY	674.8	12	B	
701.8	5	2.5	16	Very Stiff, Gray CLAY	674.8	5		
701.8	6	P		Very Stiff, Gray CLAY	674.8	8	3.6	14
701.8	6			Very Stiff, Gray CLAY	674.8	10	B	
701.8	3			Very Stiff, Gray CLAY	674.8	4		
701.8	4	1.7	19	Very Stiff, Gray CLAY	674.8	6	2.5	15
701.8	5	B		2-inch medium sand layer	674.8	7	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/6/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 303+93.26 to 309+50  
BORING NO. R-235-RWB-01  
Station 305+75.81  
Offset 9.5 ft RT.  
Northing 1,937,130.39  
Easting 1,068,855.40  
Ground Surface Elev. 707.8 ft

DEPTH (ft)	BLOW S	UCS Qu (tsf)	MOIST (%)	DESCRIPTION
667.3				Very Stiff, Gray CLAY (continued)
667.3	5			Stiff to Very Stiff, Gray SILTY CLAY trace - gravel
667.3	9	2.8	13	Stiff to Very Stiff, Gray SILTY CLAY trace - gravel
667.3	10	B		Stiff to Very Stiff, Gray SILTY CLAY trace - gravel
667.3	4			Stiff to Very Stiff, Gray SILTY CLAY trace - gravel
667.3	5	1.7	13	Stiff to Very Stiff, Gray SILTY CLAY trace - gravel
667.3	7	B		Stiff to Very Stiff, Gray SILTY CLAY trace - gravel
667.3	3			Medium Dense, Gray SILTY LOAM little - gravel
667.3	6		15	Medium Dense, Gray SILTY LOAM little - gravel
667.3	7			Medium Dense, Gray SILTY LOAM little - gravel
667.3	5			Medium Dense, Gray SILTY LOAM little - gravel
667.3	8		13	Medium Dense, Gray SILTY LOAM little - gravel
667.3	10			Medium Dense, Gray SILTY LOAM little - gravel
657.8				END OF BORING

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 12/7/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 303+93.26 to 309+50  
 BORING NO. R-235-RWB-02  
 Station 306+31.39  
 Offset 11.3 ft RT.  
 Northing 1,937,113.67  
 Easting 1,068,906.73  
 Ground Surface Elev. 707.7 ft

DEPTH (ft)	SOIL DESCRIPTION	U (tsf)	S (%)	P (%)	DEPTH (ft)	U (tsf)	S (%)	P (%)
707.2	TOPSOIL							
4	Very Stiff, Brown, Gray and Black SILTY CLAY trace - gravel, roots	2.3	20		2	3.0	22	
5	FILL	B			6	B		
704.7	Stiff to Very Stiff, Brown and Gray SILTY CLAY trace - gravel				4			
3					5	1.7	17	
4		B			7	B		
701.7	Gray below 6 feet				3			
4		3.1	17		4	2.5	16	
5		B			6	B		
679.7	Medium Dense, Gray SILTY LOAM little - gravel				3			
3		3.5	17		4		15	
4		B			6			
697.2	Stiff to Very Stiff, Gray CLAY trace - gravel				7			
2					8	3.5	14	
4		2.9	19		8	B		
2					5			
3	Dry Density=109 pcf	2.2	20		6	3.7	16	
4		B			14	B		
3					6			
3		2.1	20		6	2.0	16	
6		B			8	B		
669.7	Very Stiff, Gray CLAY				2			
3					5	2.1	17	
4		B			4	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/7/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 303+93.26 to 309+50  
 BORING NO. R-235-RWB-02  
 Station 306+31.39  
 Offset 11.3 ft RT.  
 Northing 1,937,113.67  
 Easting 1,068,906.73  
 Ground Surface Elev. 707.7 ft

DEPTH (ft)	SOIL DESCRIPTION	U (tsf)	S (%)	P (%)	DEPTH (ft)	U (tsf)	S (%)	P (%)
8	Medium Dense, Gray Fine SAND				4		19	
665.7					7			
664.7	Very Stiff, Gray SILTY CLAY LOAM trace - gravel	2.1	13		5			
662.2	Medium Dense, Gray SILTY LOAM little - gravel				5		15	
662.2					7			
662.2	Very Stiff to Hard, Gray SILTY CLAY trace - gravel				5			
657.7		4.5	12		12	4.5	12	
657.7		B			17	B		
657.7					5			
657.7		2.5	16		7	2.5	16	
657.7		B			8	B		
657.7	END OF BORING							
	Note: Shelby Tube obtained adjacent to the borehole							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 12/7/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 303+93.26 to 309+50  
 BORING NO. R-235-RWB-03  
 Station 306+81.51  
 Offset 10.7 ft RT.  
 Northing 1,937,089.59  
 Easting 1,068,954.28  
 Ground Surface Elev. 708.1 ft

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)
707.1				TOPSOIL				
	6			Very Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel		3		
	6	6.6	19			4	2.1	21
	6	B				6	B	
	4					4		
	8	7.0	19			7	5.1	20
	10	B				10	B	
702.1				Gray below 6 feet				
	3					5		
	5	2.5	17			6	2.6	18
	6	B				8	B	
700.1				Loose, Gray Fine SAND				
	5					3	0.9	20
	4		25			3	B	
	3					5		
697.6				Medium Dense, Gray SANDY LOAM little - gravel				
	4					10		
	5	1.9	19			10	4.5+	13
	5	B				19	P	
	2					6		
	4	3.4	19			8	5.4	15
	5	B				12	B	
	3					6		
	4	1.2	21			7	2.3	16
	6	B				11	B	
	2					3		
	3	1.7	21			8	1.2	18
	5	B				5	B	

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)
707.1				TOPSOIL				
	6			Very Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel		3		
	6	6.6	19			4	2.1	21
	6	B				6	B	
	4					4		
	8	7.0	19			7	5.1	20
	10	B				10	B	
702.1				Gray below 6 feet				
	3					5		
	5	2.5	17			6	2.6	18
	6	B				8	B	
700.1				Loose, Gray Fine SAND				
	5					3	0.9	20
	4		25			3	B	
	3					5		
697.6				Medium Dense, Gray SANDY LOAM little - gravel				
	4					10		
	5	1.9	19			10	4.5+	13
	5	B				19	P	
	2					6		
	4	3.4	19			8	5.4	15
	5	B				12	B	
	3					6		
	4	1.2	21			7	2.3	16
	6	B				11	B	
	2					3		
	3	1.7	21			8	1.2	18
	5	B				5	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/7/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 303+93.26 to 309+50  
 BORING NO. R-235-RWB-03  
 Station 306+81.51  
 Offset 10.7 ft RT.  
 Northing 1,937,089.59  
 Easting 1,068,954.28  
 Ground Surface Elev. 708.1 ft

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)
				Dense, Gray Fine SAND				
	13							
	21		19					
	14							
665.1				Medium Dense, Gray SILTY LOAM trace - gravel				
	3							
	4		13					
	7							
662.6				Stiff to Very Stiff, Gray SILTY CLAY trace - gravel				
	5							
	8	3.4	12					
	10	B						
	8							
	9	1.0	17					
	9	P						
658.1				END OF BORING				
				Note: Shelby Tube obtained adjacent to the borehole				

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)
				Dense, Gray Fine SAND				
	13							
	21		19					
	14							
665.1				Medium Dense, Gray SILTY LOAM trace - gravel				
	3							
	4		13					
	7							
662.6				Stiff to Very Stiff, Gray SILTY CLAY trace - gravel				
	5							
	8	3.4	12					
	10	B						
	8							
	9	1.0	17					
	9	P						
658.1				END OF BORING				
				Note: Shelby Tube obtained adjacent to the borehole				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 12/11/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 303+93.26 to 309+50  
BORING NO. R-235-RWB-04  
Station 307+31.47  
Offset 10.9 ft RT.  
Northing 1,937,077.40  
Easting 1,069,001.56  
Ground Surface Elev. 708.0 ft

DEPTH (ft)	BLOW S	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOW S	UCS (tsf)	MOIST (%)
TOPSOIL 707.5				Gray below 6 feet(continued)			
Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel, roots							
4				3			
6	5.8	18		5	3.3	20	
6	B			6	B		
3				4			
7	7.0	18		5	2.5	21	
9	B			7	B		
Gray below 6 feet 702.0							
4				3			
5	2.3	16		4	2.4	17	
7	B			6	B		
3				3			
4	3.5	16		6	1.7	17	
6	S			6	B		
3				7			
4	3.1	20		10	5.0	16	
5	B			18	B		
3				6			
3	1.7	19		11	6.6	16	
4	B			14	B		
3				4			
5	2.9	19		7	2.9	17	
7	B			10	B		
3				5			
4	1.7	19		8	3.3	23	
6	B			10	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/11/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 303+93.26 to 309+50  
BORING NO. R-235-RWB-04  
Station 307+31.47  
Offset 10.9 ft RT.  
Northing 1,937,077.40  
Easting 1,069,001.56  
Ground Surface Elev. 708.0 ft

DEPTH (ft)	BLOW S	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOW S	UCS (tsf)	MOIST (%)
Gray below 6 feet(continued) 667.5				Medium Dense, Gray Fine SAND			
6				6			
6		17		5			
665.0	Stiff, Gray SILTY CLAY LOAM trace - gravel			3			
4	1.1	14		4	1.1	14	
6	B			6	B		
662.5	Medium Dense, Gray SILTY LOAM trace - gravel			4			
4		11		4			
6				6			
660.0	Very Stiff, Gray SILTY CLAY trace - gravel			5			
7	3.1	15		7	3.1	15	
8	B			8	B		
END OF BORING 658.0							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 12/6/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-05  
 Station 139+54.58  
 Offset 24.1 ft LT.  
 Northing 1,937,190.61  
 Easting 1,068,866.32  
 Ground Surface Elev. 712.8 ft

DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)
712.3				TOPSOIL				
5				Hard, Black and Brown SILTY CLAY trace - gravel	2			
5	4.5+	17			4	2.6	21	
6	P				4	B		
709.8				FILL				
3				Very Stiff, Brown and Gray SILTY CLAY trace - gravel	4			
4	2.5	22			5	3.1	22	
5	B				6	B		
707.3				Loose, Brown SANDY LOAM trace - gravel				
3					4			
4		16			7	3.7	18	
5					9	B		
704.8				Stiff, Brown CLAY LOAM trace - gravel				
2				ST-4 (8'-10')	4			
2	1.1	25		Grain Size	5	3.5	18	
3	B			LL=28, PI=11, A-6(5)	8	B		
-10				Triaxial CU				
2				c'=0.217 tsf, φ'=34.9 deg	4			
2	1.2	20		Dry Density=100 pcf	5	2.5	20	
2	B				6	B		
699.8				Stiff, Gray SILTY CLAY LOAM trace - gravel				
2				Grain Size	3			
3	1.5	19		LL=29, PI=10, A-4(7)	5	3.7	20	
-15	P			Dry Density=110 pcf	6	B		
697.3				Stiff to Very Stiff, Gray SILTY CLAY trace - gravel				
2					4			
4	1.7	18			6	1.5	19	
4	B				6	B		
2					2			
4	1.7	19			3	1.7	18	
4	B				5	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/6/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-05  
 Station 139+54.58  
 Offset 24.1 ft LT.  
 Northing 1,937,190.61  
 Easting 1,068,866.32  
 Ground Surface Elev. 712.8 ft

DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)
672.3				Loose, Gray SILTY LOAM trace to little - gravel				
3					4			
4		15			5			
3					3			
4		14			4			
5					5			
667.3				Stiff, Gray SILTY CLAY trace - gravel				
3					4	1.6	16	
4					5	B		
3					3			
5		15			5	1.7	15	
9					9	B		
662.3				Loose, Gray Fine to Medium SAND				
3					4			
4		20			4			
659.8				Medium Dense, Gray SILTY LOAM little - gravel				
3					3			
4		14			4			
6					6			
654.8				Very Stiff, Gray SILTY CLAY trace - gravel				
4					4			
7		14			7			
8					8			
9					9			
652.8				END OF BORING				
8		14			7	2.9	14	
8	B				8	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: Shelby Tube obtained adjacent to the borehole

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 12/7/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. R-235-RWB-06  
Station 140+07.25  
Offset 21.3 ft LT.  
Northing 1,937,172.51  
Easting 1,068,915.86  
Ground Surface Elev. 712.4 ft

DEPTH	BLOW	UCS	MOIST	DEPTH	BLOW	UCS	MOIST
(ft)	(/6")	(tsf)	(%)	(ft)	(/6")	(tsf)	(%)
TOPSOIL 711.9				Gray below 11 feet (continued) 691.9			
Very Stiff, Brown and Black SILTY CLAY				Stiff to Hard, Gray SILTY CLAY			
little - gravel				trace - gravel			
3				3			
4	2.2	17		5	2.2	20	
6	B			6	B		
FILL 709.4							
Medium Stiff to Very Stiff, Brown and Gray CLAY							
trace - gravel, roots							
3				3			
5	2.2	26		5	1.6	20	
5	B			6	B		
trace - organics from 5.5 to 10.5 feet							
2				3			
2	1.0	30		6	1.9	21	
3	B			7	B		
ST-4 (8'-10')							
Grain Size							
LL=38, PI=19, A-6(15)							
Triaxial CU							
c'=0.026 tsf, φ'=27.2 deg							
1				2			
2	0.5	20		4	1.2	21	
3	P			5	B		
Gray below 11 feet 701.4							
2				4			
3	1.8	16		4	1.7	15	
4	B			7	B		
3				3			
3	2.3	16		5	2.1	20	
5	B			6	B		
4				7			
5	3.3	20		8	7.0	15	
8	B			11	B		
3				6			
5	3.1	21		9	5.8	16	
7	S			14	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/7/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. R-235-RWB-06  
Station 140+07.25  
Offset 21.3 ft LT.  
Northing 1,937,172.51  
Easting 1,068,915.86  
Ground Surface Elev. 712.4 ft

DEPTH	BLOW	UCS	MOIST	DEPTH	BLOW	UCS	MOIST
(ft)	(/6")	(tsf)	(%)	(ft)	(/6")	(tsf)	(%)
Stiff to Hard, Gray SILTY CLAY (continued)				Surface Water Elev. _____ ft			
little - gravel from 41 to 42.5 feet				Stream Bed Elev. _____ ft			
5				Groundwater Elev.:			
8	3.0	15		First Encounter	686.9	ft	▽
11	P			Upon Completion	707.4	ft	▽
4				After 72 Hrs.	712.4	ft	▽
6	2.9	20		END OF BORING			
10	B			Note: Shelby Tube obtained adjacent to the borehole			
-45							
Very Stiff, Gray CLAY							
4							
7	2.8	23					
10	B						
Loose, Gray SILTY LOAM							
trace - gravel							
3							
4							
5							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 12/10/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. R-235-RWB-07  
Station 140+57.66  
Offset 19.0 ft LT.  
Northing 1,937,155.57  
Easting 1,068,963.39  
Ground Surface Elev. 712.1 ft

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)
711.6							
3				3			
6	4.25	13		3	2.1	14	
10	P			5	B		
709.1				689.1			
3				2			
6	3.7	19		3	2.0	20	
7	B			5	B		
2							
3	1.5	23		3			
4	B			6	1.3	22	
704.1				7	B		
2							
4	4.3	22		2			
6	B			4	1.9	21	
10				6	B		
3							
4	2.1	18		3			
5	B			5	2.3	19	
2				7	B		
2	1.7	18					
4	B			2	2.0	13	
15				4	P		
3							
5	2.1	18		4			
6	B			8	4.5	15	
694.1				12	B		
3	1.8"	17					
3	B			6	3.3	15	
5				9	B		
692.1				40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/10/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. R-235-RWB-07  
Station 140+57.66  
Offset 19.0 ft LT.  
Northing 1,937,155.57  
Easting 1,068,963.39  
Ground Surface Elev. 712.1 ft

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)
6							
10	5.8	17					
14	B						
5							
8	4.1	18					
10	B						
666.6							
4							
6	2.1	23					
9	B						
664.1							
3							
5	1.7	14					
5	B						
662.1							
50							
60							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.





# SOIL BORING LOG

Page 1 of 2

Date 12/10/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-08  
 Station 141+07.82  
 Offset 11.5 ft LT.  
 Northing 1,937,133.71  
 Easting 1,069,009.16  
 Ground Surface Elev. 712.4 ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	MOIST (%)	DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	MOIST (%)
711.9	TOPSOIL						
4	Very Stiff, Brown, Gray and Black SILTY CLAY trace - gravel, roots	2.5	24	3	Stiff to Very Stiff, Gray SILTY CLAY LOAM trace - gravel(continued)	2.1	19
5	FILL	B		6		B	
709.4	Very Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel, roots	2.0	22	688.9	Very Stiff, Gray SILTY CLAY trace - gravel	2.0	23
-5		B		-25		B	
3				3			
6		5.6	19	5		2.6	23
6		B		7		B	
704.4	Gray below 8 feet						
5				3			
9		4.5	18	5		2.8	22
11		B		8		B	
-10				-30			
701.9	Medium Dense, Gray SANDY LOAM little - gravel		10	681.4	Stiff to Hard, Gray SILTY CLAY LOAM trace - gravel		19
3				4			
8				6		2.2	
6				8		B	
699.4	Stiff to Very Stiff, Gray SILTY CLAY LOAM trace - gravel		21				
3				3			
4		2.2		4		1.2	16
5		B		5		B	
-15				-35			
4				9			
4		2.2	18	11		3.0	15
6		B		11		P	
ST-8 (18'-20') Grain Size LL=35, PI=16, A-6(13) Dry Density=109 Pcf		1.6"	20	5			
4		B		8		3.0	16
-20				11		B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 12/10/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-08  
 Station 141+07.82  
 Offset 11.5 ft LT.  
 Northing 1,937,133.71  
 Easting 1,069,009.16  
 Ground Surface Elev. 712.4 ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	MOIST (%)	DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	MOIST (%)
	Stiff to Hard, Gray SILTY CLAY LOAM trace - gravel(continued)						
5				9		5.4	19
14		B		6			
666.9	Very Stiff, Gray CLAY			7		2.7	21
4				10		B	
6		2.7	23	-45			
10		B		666.9			
664.4	Medium Dense, Gray SILTY LOAM trace - gravel		15				
6				4			
6				6		2.7	23
8				10		B	
662.4	END OF BORING						
-50							
Note: Shelby Tube obtained adjacent to the borehole							
-55							
-60							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 1

Date 12/19/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-10  
 Station 142+12.35  
 Offset 23.7 ft LT.  
 Northing 1,937,114.88  
 Easting 1,069,112.71  
 Ground Surface Elev. 722.4 ft

DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)
721.4				CRUSHED STONE AND RECYCLED ASPHALT PAVEMENT				
720.4	7		6	Loose, Black and Brown SANDY LOAM trace - recycled asphalt pavement		6		
720.4	4			FILL		10	3.7	19
	5		18	Very Stiff to Hard, Brown, Gray and Black CLAY LOAM trace - gravel occasional pieces of wood		11	B	
	3				698.9	5		
	4	3.5	22	Gray below 23.5 feet		7	4.1	19
-5	5	P			697.4	11	B	
				END OF BORING				
	4							
	6	4.5+	14					
	7	P						
	5							
	7	2.6	18					
-10	10	B			-30			
				FILL 711.9				
	7			Very Stiff to Hard, Gray and Brown CLAY LOAM trace - gravel				
	9	4.5+	14					
	10	P						
	4							
	5	3.0	20					
-15	7	P			-35			
	6							
	11	7.2	17					
	14	B						
	7							
	9	4.5	19					
-20	12	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 1 of 1

Date 12/12/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-11  
 Station 142+76.18  
 Offset 25.8 ft LT.  
 Northing 1,937,098.27  
 Easting 1,069,174.36  
 Ground Surface Elev. 721.3 ft

DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)
720.8				TOPSOIL				
	2			Stiff to Hard, Brown, Gray and Black SILTY CLAY trace - gravel				
	3	1.2	20		700.3	5		
	4	B				6	4.5	13
						9	B	
	2					6		
	4	4.1	20			7	3.7	19
-5	6	B			696.3	10	B	
				END OF BORING				
	3							
	5	2.1	18					
	6	B						
	4							
	7	3.5	13	Dry Density=123 pcf				
-10	8	P			-30			
				FILL 710.8				
	10			Medium Dense, Gray Medium to Coarse SAND and Gravel Grain Size Non Plastic, A-1-a(1)				
	15		5					
	10							
				FILL 708.3				
	3			Very Stiff, Black CLAY				
	3	3.1	28					
-15	8	B			-35			
				705.8				
	4			Very Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel				
	7	7.4	19					
	9	B						
	4							
	6	3.6	17					
-20	7	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 6/21/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-13  
 Station 137+77.52  
 Offset 18.4 ft LT.  
 Northing 1,937,240.69  
 Easting 1,068,696.48  
 Ground Surface Elev. 710.2 ft

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	DESCRIPTION
710.0				TOPSOIL					
4				Very Stiff, Brown and Black CLAY trace - gravel	4				Medium Dense, Gray Medium to Coarse SAND trace - gravel(continued)
5	3.0	18			8			18	
8	B				10				
707.2				FILL	687.2				
3				Stiff to Very Stiff, Gray CLAY trace - gravel	4				Very Stiff, Gray CLAY trace - gravel
4	2.6	18			8	3.5	18		
6	B				10	B			
2					4				
4	2.5	18			7	3.7	19		
6	B				8	B			
3					5				
4	2.3	19			6	3.4	23		
6	B				9	B			
2					5				
4	2.1	17			6	3.1	22		
5	B				7	B			
5					5				
6	1.9	18		Gravel in spoon tip	6	2.6	21		
7	B				15	B			
3				Sand seam at 16 feet	5				
5	2.7	21			7	3.5	14		
8	B				8	B			
3				Medium Dense, Gray Medium to Coarse SAND trace - gravel	7				
5		21			8	5.8	15		
5					12	B			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 6/21/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. R-235-RWB-13  
 Station 137+77.52  
 Offset 18.4 ft LT.  
 Northing 1,937,240.69  
 Easting 1,068,696.48  
 Ground Surface Elev. 710.2 ft

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	DESCRIPTION
				Very Stiff to Hard, Gray CLAY LOAM trace - gravel(continued)					
5					5				
7	2.9	14			7				
9	B				9				
6					6				
7	2.8	13		Silt seam at 44 feet	7				
8	B				8				
5					5				
7	2.8	16			7				
8	B				8				
7					7				
9	3.4	12			9	3.4	12		
12	B				12	B			
7					7				
8	5.2	13			8	5.2	13		
9	B				9	B			
6					6				
8	3.2	15			8	3.2	15		
10	B				10	B			
654.7				Medium Dense, Gray Fine SAND	8				
8					9				
11		18			11				
652.2				Medium Dense, Gray LOAM trace - gravel	8				
7					7				
9		11			9				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 6/25/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. R-235-RWB-14  
Station 138+64.30  
Offset 18.4 ft LT.  
Northing 1,937,211.47  
Easting 1,068,778.29  
Ground Surface Elev. 712.1 ft

DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)
0				0			
3				5			
4	2.2	17		9	5.8	18	
5	B			14	B		
3				6			
5	2.1	17		6	4.3	16	
-5	6	B		-25	9	B	
5				6			
7	3.9	15		8	4.0	21	
9	B			11	B		
3				6			
7	4.1	15		7	3.9	22	
-10	8	B		-30	9	B	
3				5			
5	2.4	15		5	3.1	17	
6	B			6	B		
3				4			
6	2.7	16		6	3.4	20	
7	B			-35	8	B	
4				4			
6	3.1	19		6	4.5	12	
8	B			10	B		
5				10			
7	2.9	25		14	5.8	15	
-20	7	B		-40	16	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 6/25/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp G1 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. R-235-RWB-14  
Station 138+64.30  
Offset 18.4 ft LT.  
Northing 1,937,211.47  
Easting 1,068,778.29  
Ground Surface Elev. 712.1 ft

DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (blows/6")	UCS (tsf)	MOIST (%)
0				0			
6				6			
9	4.5	21		9	5.8	18	
14	B			14	B		
4				6			
7	3.1	21		6	4.3	16	
-45	7	B		-25	9	B	
666.6				6			
Medium Dense, Gray Fine to Medium SAND trace - gravel	7			8	4.0	21	
14		16		11	B		
664.1				6			
Very Stiff, Gray CLAY LOAM trace - gravel	5			7	3.9	22	
6	2.9	13		-30	9	B	
-50	8	B		5			
661.6				5	3.1	17	
Medium Dense, Gray SILT	5			6	B		
7		16		6			
9				4			
659.1				6	3.4	20	
Very Stiff, Gray CLAY LOAM trace - gravel	7			-35	8	B	
11	3.8	13		4			
-55	13	B		6	4.5	12	
6				10	B		
8	3.2	15		10			
10	B			14	5.8	15	
5				-40	16	B	
6	3.1	19					
9	B						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 6/19/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 303+93.26 to 309+50  
BORING NO. R-235-RWB-15  
Station 304+37.80  
Offset 11.4 ft RT.  
Northing 1,937,173.34  
Easting 1,068,724.23  
Ground Surface Elev. 706.1 ft

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)
705.3							
4				4			
7	2.8	17		7	2.6	15	
9	B			8	B		
5				4			
6	3.1	16		5	2.4	21	
10	B			8	B		
2				4			
3	2.1	18		5	2.5	22	
7	B			6	B		
698.1							
3				3			
3	1.7	14		5	2.3	16	
6	B			8	B		
695.6							
3				5			
7	4.5	15		6	2.4	17	
11	B			9	B		
673.1							
4				5			
5	2.6	20		10	6.8	12	
7	B			13	B		
691.1							
4				11			
5		18		15	7.4	17	
5				20	B		
688.1							
5				7			
8	4.0	17		8	6.0	15	
12	B			12	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 6/19/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-235, Ramp K3 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 303+93.26 to 309+50  
BORING NO. R-235-RWB-15  
Station 304+37.80  
Offset 11.4 ft RT.  
Northing 1,937,173.34  
Easting 1,068,724.23  
Ground Surface Elev. 706.1 ft

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)
665.6							
7				7			
8		15		8			
9				9			
662.6							
6				6			
10	2.6	13		10	2.6	13	
13	B			13	B		
7				7			
8	5.0	15		8	5.0	15	
12	B			12	B		
15				15			
18	6.2	12		18	6.2	12	
29	B			29	B		
650.6							
8				8			
15	5.2	16		15	5.2	16	
17	B			17	B		
7				7			
9	3.2	15		9	3.2	15	
11	B			11	B		
648.1							
10				10			
14		18		14		18	
19				19			
646.1							
10				10			
10		18		10		18	
15				15			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 6/7/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY M. Baig

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0557  
 Station 131+09.79  
 BORING NO. B-21-BSB-06  
 Station 137+76.95  
 Offset 24.3 ft RT.  
 Northing 1,937,200.07  
 Easting 1,068,683.17  
 Ground Surface Elev. 705.4 ft (ft) (6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	U (tsf)	S (%)	P (ft)	U (tsf)	S (%)	P (ft)	U (tsf)	S (%)	P (ft)
705.2	TOPSOIL									
701.4	FILL									
699.4	Very Stiff to Hard, Gray and Brown SILTY CLAY trace - gravel	6	5.0	16	5	2.6	19	8	B	
695.4	Gray below 6 feet	3			2			4	2.5	16
695.4	Medium Dense, Gray SILT trace to little - gravel	4			3			5	2.2	16
689.4	Very Stiff, Gray SILTY CLAY trace - gravel	3			10			13		19
687.4	Medium Dense, Gray SANDY GRAVEL	5			5			7	1.7	18

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 6/7/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY M. Baig

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0557  
 Station 131+09.79  
 BORING NO. B-21-BSB-06  
 Station 137+76.95  
 Offset 24.3 ft RT.  
 Northing 1,937,200.07  
 Easting 1,068,683.17  
 Ground Surface Elev. 705.4 ft (ft) (6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	U (tsf)	S (%)	P (ft)	U (tsf)	S (%)	P (ft)	U (tsf)	S (%)	P (ft)
664.9	Dense, Gray Fine to Medium SAND									
662.4	Stiff to Hard, Gray CLAY LOAM trace - gravel									
649.9	Dense, Gray Fine SAND									
647.4	Stiff, Gray SILTY CLAY LOAM trace - gravel									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.





# SOIL BORING LOG

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. B-21-BSB-08  
 Station 305+32.46  
 Offset 0.7 ft RT.  
 Northing 1,937,152.76  
 Easting 1,068,817.24  
 Ground Surface Elev. 708.0 ft (ft) (/6") (tsf) (%)

Surface Water Elev. \_\_\_\_\_ ft  
 Stream Bed Elev. \_\_\_\_\_ ft

Groundwater Elev.:  
 First Encounter Mud Rotary ft  
 Upon Completion Mud Rotary ft  
 After Hrs. \_\_\_\_\_ ft (ft) (/6") (tsf) (%)

DEPTH	BLOW	UCS	M	DEPTH	BLOW	UCS	M
ft	(/6")	(tsf)	TS	ft	(/6")	(tsf)	TS
TOPSOIL 707.8							
Very Stiff, Black and Brown SILTY CLAY trace - gravel							
5	5	3.3	18	2	4	2.1	21
FILL 705.0							
Very Stiff to Hard, Brown and Gray CLAY trace - gravel							
2	3	4.1	22	2	5	2.9	21
-5	4	B		-25	8	B	
2	5	2.9	18	3	5	3.2	22
7	7	B		9	9	B	
699.5							
Gray below 8.5 feet							
3	6	4.5	16	2	4	1.6	19
-10	9	B		-30	7	B	
3	4	3.3	17	6	3	1.6	18
5	5	B		5	5	B	
675.0							
2-inch Sand layer at 29 feet							
2	5	3.5	22	5	5		17
-15	7	P		-35	5		
675.0							
Medium Dense, Gray LOAM trace - gravel							
2	5	3.5	22	5	5		17
-15	7	P		-35	5		
692.5							
Very Stiff to Hard, Gray CLAY LOAM trace - gravel							
2	3	3.75	17	5	5		17
3	5	P		5	5		17
692.5							
Gravel in spoon tip							
3	4	4.0	17	5	9	4.1	18
4	4	B		12	12	B	
-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. B-21-BSB-08  
 Station 305+32.46  
 Offset 0.7 ft RT.  
 Northing 1,937,152.76  
 Easting 1,068,817.24  
 Ground Surface Elev. 708.0 ft (ft) (/6") (tsf) (%)

Surface Water Elev. \_\_\_\_\_ ft  
 Stream Bed Elev. \_\_\_\_\_ ft

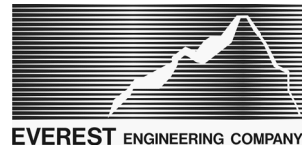
Groundwater Elev.:  
 First Encounter Mud Rotary ft  
 Upon Completion Mud Rotary ft  
 After Hrs. \_\_\_\_\_ ft (ft) (/6") (tsf) (%)

DEPTH	BLOW	UCS	M	DEPTH	BLOW	UCS	M
ft	(/6")	(tsf)	TS	ft	(/6")	(tsf)	TS
687.5							
Stiff to Very Stiff, Gray CLAY trace - gravel							
2	4	2.1	21	2	5	B	
666.0							
Medium Dense, Gray SANDY LOAM little - gravel							
6	6			6	6		12
-45	6			-45	6		
661.0							
Loose, Gray LOAM little - gravel							
2	2			2	2		13
-50	4			-50	4		
656.0							
Very Stiff, Gray CLAY LOAM trace - gravel							
4	8	2.9	17	4	8	2.9	17
-55	12	B		-55	12	B	
651.0							
Medium Dense, Gray SILT							
5	5			5	5		11
8	8		18	7	7		11
-60	10			-80	13		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.





# SOIL BORING LOG

Page 3 of 3

Date 6/10/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. B-21-BSB-08  
 Station 305+32.46  
 Offset 0.7 ft RT.  
 Northing 1,937,152.76  
 Easting 1,068,817.24  
 Ground Surface Elev. 708.0 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	BLOW COUNT	UCS (tsf)	SPT (N)	GROUNDWATER ELEV. (ft)
0 - 626.0	Medium Dense to Dense, Gray SANDY LOAM little - gravel (continued)				
5					
6		2.9		17	
7		B			
626.0	Stiff to Very Stiff, Gray CLAY LOAM				
5					
6		2.9		17	
7		B			
-85					
616.0	Medium Dense, Gray Fine SAND trace - gravel				
7					
9				23	
8					
613.0	Gravel in spoon tip				
8					
-95					
	END OF BORING				
-100					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 1 of 3

Date 6/20/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
 Station 137+79.24 to 145+20  
 BORING NO. B-21-BSB-09  
 Station 138+19.12  
 Offset 28.7 ft LT.  
 Northing 1,937,234.55  
 Easting 1,068,738.10  
 Ground Surface Elev. 713.3 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	BLOW COUNT	UCS (tsf)	SPT (N)	GROUNDWATER ELEV. (ft)
0 - 692.8	TOPSOIL Very Stiff to Hard, Brown and Gray CLAY trace - gravel				
4					
6		4.3		19	
9		B			
6					
7		4.7		15	
9		B			
-5					
3					
5		2.6		20	
5		B			
705.3	FILL Very Stiff, Gray CLAY trace - gravel				
2					
4		2.6		16	
6		B			
-10					
2					
4		2.2		17	
6		B			
680.3	Medium Dense, Gray Fine SAND				
3					
4		2.2		19	
6		B			
697.8	Medium Dense, Gray Medium to Coarse SAND trace - gravel				
2					
4		2.0		20	
5		B			
-15					
676.3	Hard, Gray CLAY trace - gravel				
7					
10		5.8		16	
14		B			
-40					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

NOTE: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Date 6/20/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553					
Station 137+79.24 to 145+20					
BORING NO. B-21-BSB-09					
Station 138+19.12					
Offset 28.7 ft LT.					
Northing 1,937,234.55					
Easting 1,068,738.10					
Ground Surface Elev. 713.3 ft	(ft)	(/6")	(tsf)	(%)	

	D	B	U	M		D	B	U	M
	P	L	C	O		P	L	C	O
	T	O	S	I		H	S	Q	T
	H	W	Qu	S		H	S	Qu	T
						(ft)	(/6")	(tsf)	(%)
Hard, Gray CLAY trace - gravel (continued)									
671.3									
Gray Fine SAND									
669.8									
Very Stiff, Gray CLAY LOAM trace - gravel		10					13		
	8			15			20		15
	6						21		
	-45						-65		
	7								
	9	2.3		13					
	12	B							
646.3									
Very Stiff, Gray CLAY LOAM									
	4						6		
	8	2.1		16			9	3.0	18
	15	B					12	B	
	-50						-70		
661.3									
Medium Dense to Dense, Gray Fine SAND									
	17						9		
	23			20			14	3.6	19
	17						20	B	
	-55						-75		
636.3									
Dense, Gray SILT									
	6						8		
	9			19			17		16
	11						24		
	-60						-80		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Date 6/20/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553					
Station 137+79.24 to 145+20					
BORING NO. B-21-BSB-09					
Station 138+19.12					
Offset 28.7 ft LT.					
Northing 1,937,234.55					
Easting 1,068,738.10					
Ground Surface Elev. 713.3 ft	(ft)	(/6")	(tsf)	(%)	

Dense, Gray SILT (continued)					
631.3					
Very Stiff, Gray CLAY					
	4				
	5	2.4		19	
	7	B			
	-85				
	6				
	7	2.6		18	
	9	B			
	-90				
616.3					
Medium Dense, Gray Medium SAND trace - gravel					
	8				
	11			15	
	18				
613.3					
END OF BORING					
	-100				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 6/19/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. B-21-BSB-10  
Station 304+84.94  
Offset 11.5 ft LT.  
Northing 1,937,157.97  
Easting 1,068,768.79  
Ground Surface Elev. 707.2 ft

DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)
706.6				TOPSOIL				
5				Very Stiff to Hard, Brown CLAY trace - gravel	3			
7	4.3	16			6	2.6	14	
8	B				6	B		
684.2				Very Stiff, Gray CLAY trace - gravel	4			
4					7	3.1	20	
8	3.9	16			11	B		
9	B							
701.2				Gray below 6 feet	5			
3					7	2.9	21	
7	6.0	14			10	B		
12	B							
4					4			
8	6.6	14			5	2.2	17	
12	B				7	B		
674.2				Very Stiff to Hard, Gray CLAY LOAM trace - gravel	5			
3					7	2.9	19	
7					11	B		
674.2				Very Stiff to Hard, Gray CLAY LOAM trace - gravel	6			
3					6	2.1	14	
7	6.8	18			15	B		
12	B							
689.2				Very Stiff, Gray SILTY CLAY trace - gravel	7			
2					10	4.7	18	
4	2.1	22			13	B		
6	B							
689.2				Very Stiff, Gray SILTY CLAY trace - gravel	7			
2					10	4.7	18	
5	2.0	17			13	B		
6	B							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 2 of 2

Date 6/19/13

CONTRACT 1-11-4031 DESCRIPTION Bridge B-21, Ramp G1 over Ramp G7, EO Expy and I-290 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0553  
Station 137+79.24 to 145+20  
BORING NO. B-21-BSB-10  
Station 304+84.94  
Offset 11.5 ft LT.  
Northing 1,937,157.97  
Easting 1,068,768.79  
Ground Surface Elev. 707.2 ft

DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)
684.2				Very Stiff to Hard, Gray CLAY LOAM trace - gravel(continued)				
6					6	2.6	14	
6	B							
645.2				Medium Dense, Gray Fine to Medium SAND trace - gravel(continued)				
7					20			
6	2.7	14		Dense, Gray SANDY LOAM little - gravel	20		8	
9	B				19			
640.2				Dense, Gray LOAM little - gravel				
9					8			
13	5.2	14			20		15	
24	B				20			
635.2				Very Stiff, Gray CLAY LOAM trace - gravel				
7					6			
10	2.4	17			7	3.2	12	
13	B				11	B		
650.2				Medium Dense, Gray Fine to Medium SAND trace - gravel				
8					6			
10					9	3.7	13	
14					18	B		
627.2				END OF BORING				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 1

Date 12/19/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0552  
 Station 143+01.09 to 148+79.93  
 BORING NO. R-222-RWB-01  
 Station 142+57.69  
 Offset 11.9 ft RT.  
 Northing 1,937,067.15  
 Easting 1,069,145.24  
 Ground Surface Elev. 721.7 ft

DEPTH (ft)	SOIL TYPE	UCS (tsf)	SPT (blows)
0	ASPHALT PAVEMENT		
3	Loose, Black SANDY LOAM some - gravel		
4	FILL		
3	Very Stiff to Hard, Brown and Gray CLAY LOAM trace - gravel occasional pieces of wood	2.7 B	20
4		3.0 P	19
7			
7	Brown, Gray and Black below 6 feet		
8		5.0 B	15
9			
4			
6		2.5 B	21
9			
5			
6		2.9 B	19
7			
13	FILL		
40	Very Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel	4.5 B	15
13			
7			
8	Grain Size LL=39, PI=15, A-6(18)	4.1 B	18
11			
6			
7		3.3 B	15
10			

DEPTH (ft)	SOIL TYPE	UCS (tsf)	SPT (blows)
720.5	Very Stiff to Hard, Brown and Gray SILTY CLAY trace - gravel(continued)		
719.8	Gray below 21.5 feet		
700.2			
696.7			
715.7			
708.7			
697.8			
705.3			
697.8			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Page 1 of 1

Date 12/12/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0552  
 Station 143+01.09 to 148+79.93  
 BORING NO. R-222-RWB-02  
 Station 143+38.06  
 Offset 10.8 ft RT.  
 Northing 1,937,045.24  
 Easting 1,069,222.58  
 Ground Surface Elev. 715.8 ft

DEPTH (ft)	SOIL TYPE	UCS (tsf)	SPT (blows)
0	TOPSOIL		
3	Stiff to Very Stiff, Brown, Gray and Black SILTY CLAY trace - gravel		
4		1.8 B	15
4			
3			
5		3.5 B	22
7			
5			
6		2.1 B	14
6			
7		3.3 B	22
7			
3			
6		2.6 B	22
7			
4			
7		5.8 B	17
8			
11		4.1 B	16
4			
6		4.1 B	19
10			

DEPTH (ft)	SOIL TYPE	UCS (tsf)	SPT (blows)
715.3	Gray below 18 feet(continued)		
692.8			
691.3			
690.8			
705.3			
697.8			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Date 3/22/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY J. Frederick

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0552		D E P T H	B L O W S	U C S Qu	M O I S T %	Surface Water Elev.		D E P T H	B L O W S	U C S Qu	M O I S T %
Station 143+01.09 to 148+79.93						ft	ft				
BORING NO. R-222-RWB-03		ft (ft) (/6")	(tst)	%	Groundwater Elev.:		ft	(ft) (/6")	(tst)	%	
Station 144+13.07					ft	ft					
Offset 10.9 ft RT.											
Northing 1,937,019.36											
Easting 1,069,305.65											
Ground Surface Elev. 721.7											
ASPHALT PAVEMENT 721.2						701.2					
CONCRETE PAVEMENT											
Stiff to Hard, Brown, Black and Gray CLAY trace - gravel		4									
		9	4.0	22							
		7	P								
Stiff to Hard, Gray CLAY trace - gray occasional sand partings		6				698.7					
		5	2.1	20							
		7	B								
		6									
		7	3.3	17							
		9	B								
		5									
		6	2.8	16							
		9	B								
trace - organics and topsoil below 11 feet		6									
		6	1.8	28							
		5	B								
		5									
		5	2.1	24							
		8	B								
		3									
		5	2.4	28							
		8	B								
FILL 703.7											
Stiff to Very Stiff, Black SILTY CLAY trace - gravel, organics		6									
		6	1.3	27							
		5	B								
END OF BORING						681.7					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

Date 11/26/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

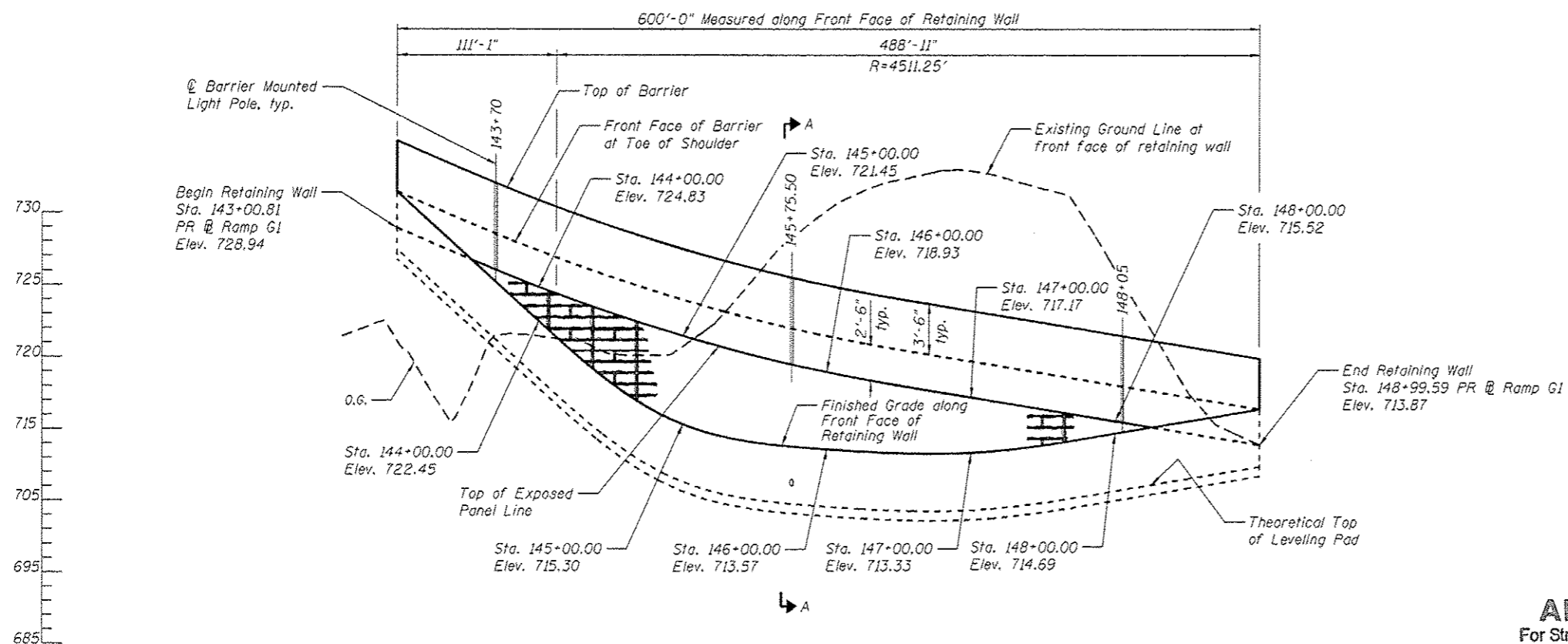
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0552		D E P T H	B L O W S	U C S Qu	M O I S T %	Surface Water Elev.		D E P T H	B L O W S	U C S Qu	M O I S T %
Station 143+01.09 to 148+79.93						ft	ft				
BORING NO. R-222-RWB-04		ft (ft) (/6")	(tst)	%	Groundwater Elev.:		ft	(ft) (/6")	(tst)	%	
Station 144+87.88					ft	ft					
Offset 10.7 ft RT.											
Northing 1,937,002.08											
Easting 1,069,366.24											
Ground Surface Elev. 720.4											
TOPSOIL 719.9											
Very Stiff, Brown, Gray and Black CLAY trace - roots, gravel, crushed stone, asphalt grindings		4									
		6	2.2	18							
		8	B								
		3									
		3	2.1	18							
		5	B								
END OF BORING						695.4					
FILL 707.4											
Stiff to Very Stiff, Gray and Black SILTY CLAY trace - gravel		3									
		5	2.0	23							
		6	B								
		3									
		4	1.2	24							
		5	B								
FILL 702.4											
Stiff to Hard, Brown and Gray SILTY CLAY trace - roots, gravel		3									
		4	1.8	23							
		6	B								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

Bench Mark: BM#716 - Cut square in the Northwest end of bridge wall. Approximately 65 feet North of the centerline of Thorndale Ave. and 168 feet West of the centerline of I-290. Approximately 12 feet West of bridge deck. Elev. 731.40' (NAVD88)



ELEVATION

**Notes:**

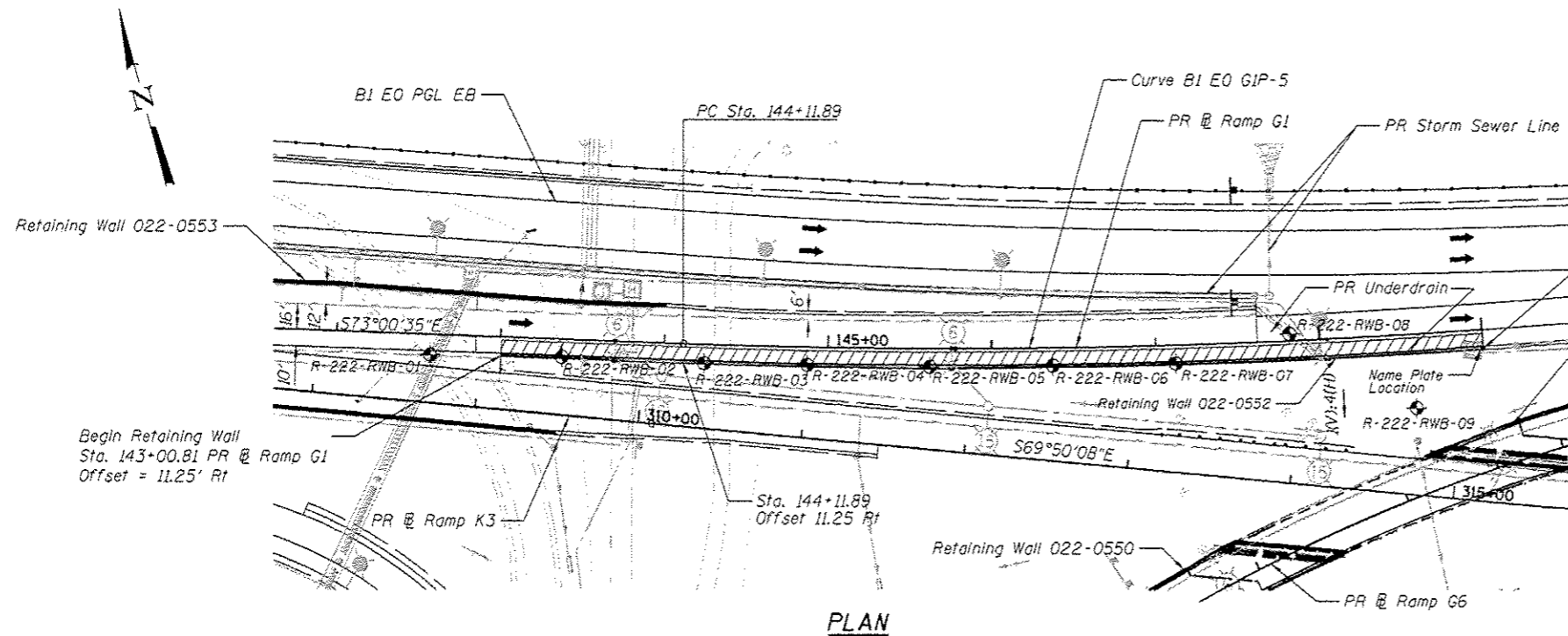
1. Wall stations and offsets are given to the front face of the wall and are measured from the baseline of Ramp G1.
2. Top of wall elevations are given to the bottom of coping along face of coping. Bottom of wall elevations are measured to top of finish grade along front face of MSE Wall Panels.
3. All exposed faces of MSE wall panels shall have a formliner simulated limestone surface, see special provisions for additional details.
4. For Section A-A, see Drawing No. SQ-03.
5. For additional notes, see Drawing No. SQ-02.

**LEGEND**

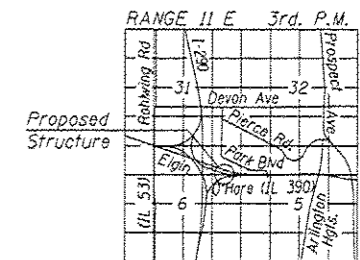
- Reinforced Soil Mass, Approximate Limits
- MSE Wall Panels (See Note 3)
- Soil Borings

**APPROVED**  
For Structural Adequacy Only

*Jeffrey S. Aldrich*  
Engineer of Bridges & Structures



PLAN



LOCATION SKETCH



*Jeffrey S. Aldrich*  
Jeffrey S. Aldrich  
Licensed Structural Engineer  
State of Illinois No. 081-007301  
Expires 11/30/2016

GENERAL PLAN & ELEVATION  
ELGIN O'HARE (IL-390) AT I-290  
DUPAGE COUNTY  
RAMP G1 STA 143+00.81 TO  
RAMP G1 STA 148+99.59  
STRUCTURE NO. 022-0552

FILE NAME = 0220552-60Y95-001-CPE.dgn	USER NAME = astanting	DESIGNED - EJM	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION STRUCTURE NO. 022-0552	F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 522
CH2MHILL	PLOT SCALE = 1/8" = 10'-0"	CHECKED - BGA	REVISD -			DRAWING NO. SQ-01	CONTRACT NO. 60Y95			
	PLOT DATE = 10/20/2014	DRAWN - EJM	REVISD -			ILLINOIS FED. AID PROJECT				
		CHECKED - BGA	REVISD -							

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications with 2013 Interims

Tollway Structure Design Manual, March 2013 with latest Tollway Design Bulletins

Illinois Department of Transportation Bridge Manual, January 2012

**DESIGN STRESSES**

FIELD UNITS

$f'_c$  = 3,500 PSI Class BS (Barrier Rail and Anchor Slab)  
 $f'_c$  = 3,500 PSI Class SI (All other CIP Concrete)  
 $f_y$  = 60,000 PSI (Reinforcement)

PRECAST UNITS

$f'_c$  = 4,500 PSI (Precast Face Panel)

**TRAFFIC BARRIER LOADING**

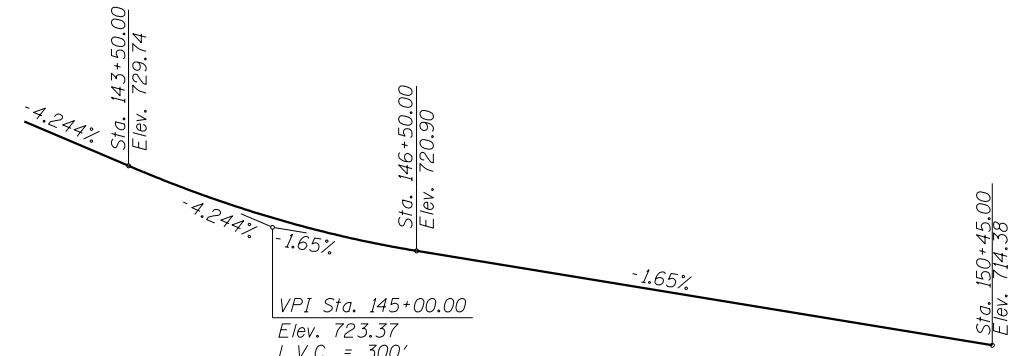
Traffic Impact per AASHTO LRFD Bridge Design Specifications

**GENERAL NOTES**

- The contractor shall design and construct MSE Wall per the Special Provisions.
- Reinforcing bar bending details shall be in accordance with the latest "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, latest edition.
- Reinforcing bars designated "(E)" shall be epoxy coated.
- Reinforcement bar bending dimensions are out to out.
- Apply Protective Coat to top and traffic face of barrier and anchor slab.
- All exposed concrete edges shall have a  $\frac{3}{4}$ " x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
- Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths of bars per line.
- No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.
- It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
- It shall be the Contractor's responsibility to verify the location of all fiber optic utilities prior to starting construction. The Contractor shall initiate the location process for the fiber optic cable by completing a "Request Tollway Utilities Locate" form filled in online at the Tollway website under "Doing Business" at least four (4) business days prior to starting any underground operations, excavations or digging of any type in the general area of the fiber optic cable.
- Slipforming of barriers is not allowed.

**INDEX OF SHEETS**

SO-01	General Plan & Elevation
SO-02	General Data
SO-03	Wall Sections
SO-04	Anchorage Slab Plan & Elevation No. 1
SO-05	Anchorage Slab Plan & Elevation No. 2
SO-06	Anchorage Slab & Barrier Details No. 1
SO-07	Anchorage Slab & Barrier Details No. 2
SO-08	Anchorage Slab & Barrier Details No. 3
SO-09	Soil Boring Logs 1
SO-10	Soil Boring Logs 2
SO-11	Soil Boring Logs 3
SO-12	Soil Boring Logs 4
SO-13	Soil Boring Logs 5
SO-14	Soil Boring Logs 6



**PROFILE GRADE**  
(Ramp G1)

**HORIZONTAL CURVE DATA**

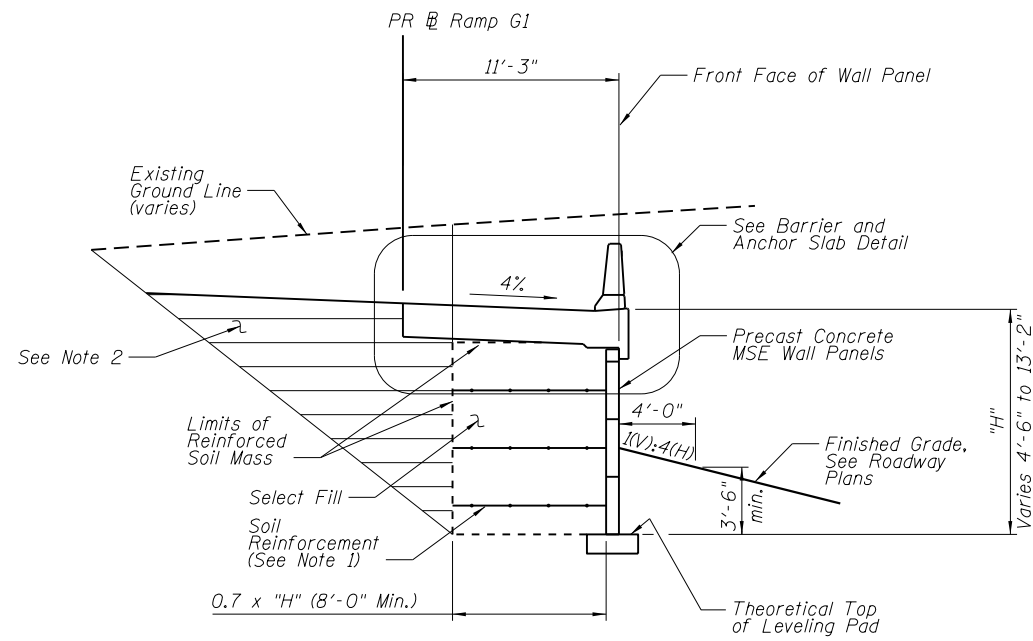
Curve B1 E0 G1P-5  
 along B Ramp G1  
 PI Sta. = 148+18.36  
 $\Delta$  = 10° 18' 56.57" (LT)  
 D = 1° 16' 23.66"  
 R = 4,500.00'  
 L = 810.19'  
 E = 18.30'  
 T = 406.20'  
 S.E. = 3.0%  
 P.C. Sta. = 144+12.17  
 P.T. Sta. = 152+22.36

**TOTAL BILL OF MATERIALS**

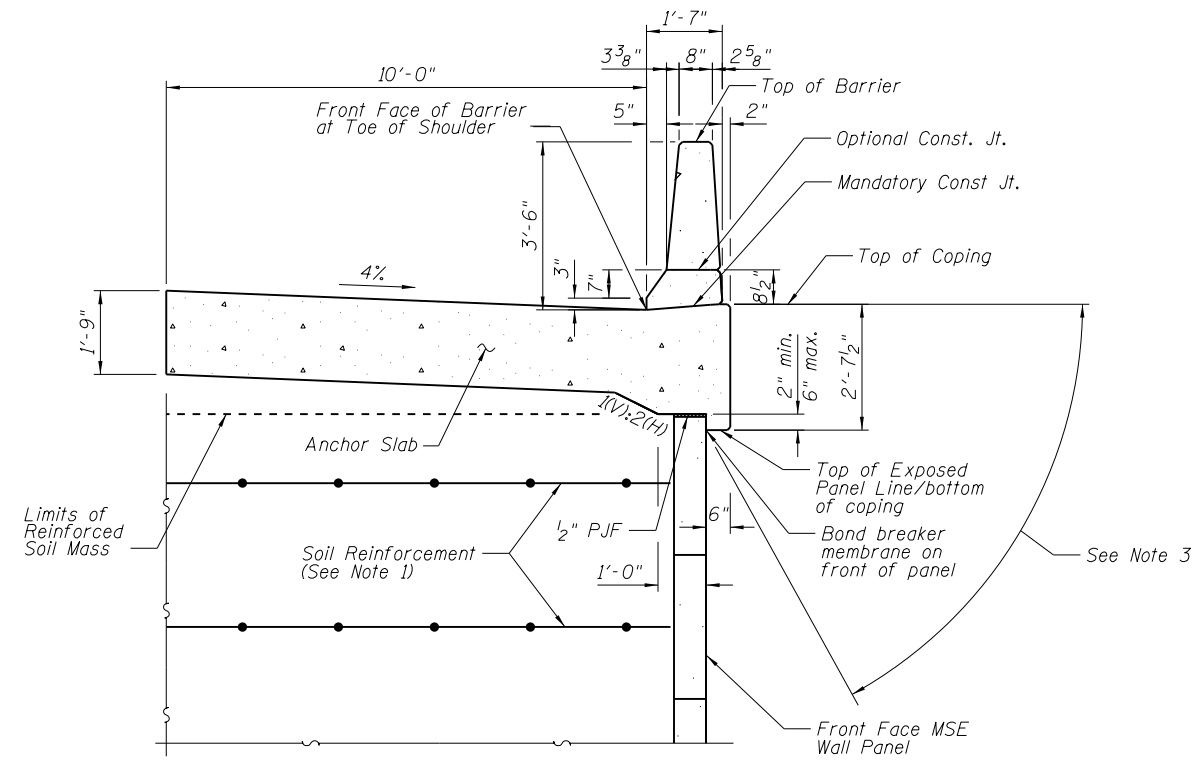
ITEM	UNIT	QUANTITY
Protective Coat	SQ YD	954
Structure Excavation	CU YD	3138
Concrete Superstructure	CU YD	559.4
Reinforcement Bars, Epoxy Coated	POUND	77,450
Name Plates	EACH	1
Mechanically Stabilized Earth Retaining Wall	SQ FT	4382

STATION 148+98  
 BUILT 201\_ BY  
 STATE OF ILLINOIS  
 F.A.I. RT. 290  
 SEC. 2013-083-R&B  
 STRUCTURE NO. 022-0552

NAME PLATE  
 See Std. 515001



**TYPICAL SECTION**  
(SECTION A-A)

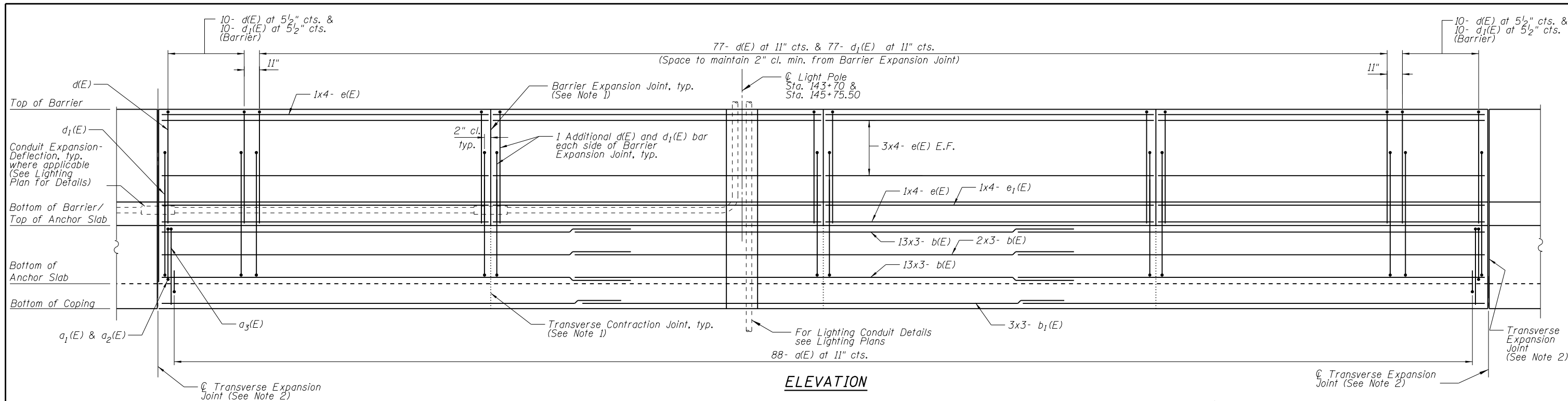


**BARRIER AND ANCHOR SLAB DETAIL**

**Notes:**

1. The MSE wall supplier's internal stability design shall account for the anchor slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 1.15 kips/ft. of wall.
2. Overexcavation beyond the limits of structure excavation. Backfill overexcavation with same material used for select fill.
3. Apply concrete stain entire length of wall, see form liner special provisions for requirements.



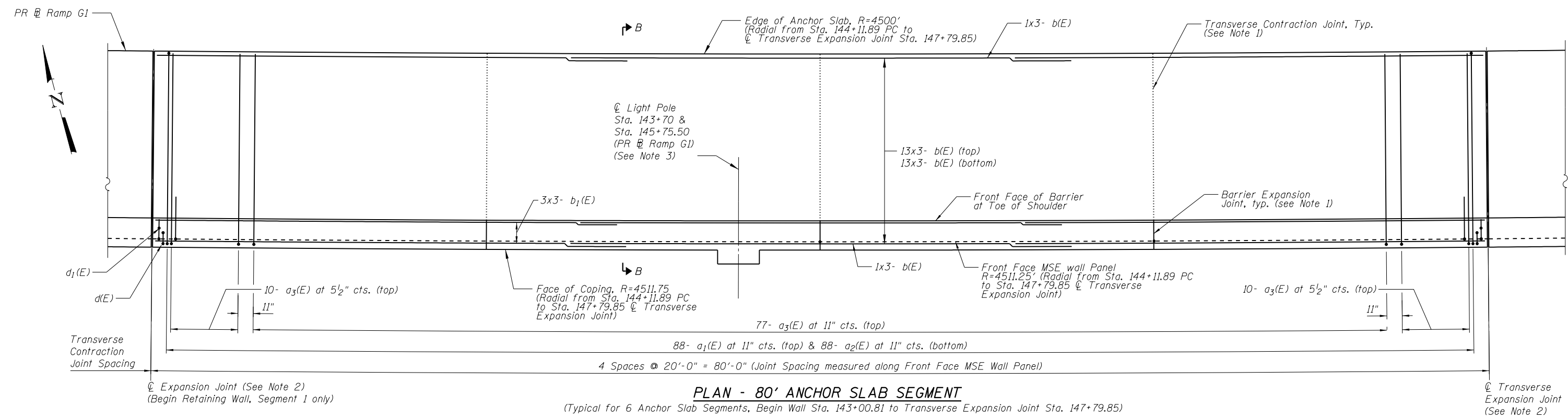


**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

**Notes:**

1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SQ-06.
2. Place Transverse Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SQ-06.
3. For Light Pole Foundation details, see Drawing No. SQ-07.
4. For Section B-B, see Drawing No. SQ-08.
5. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panels.
6. Barrier longitudinal reinforcement not shown in Plan for clarity.



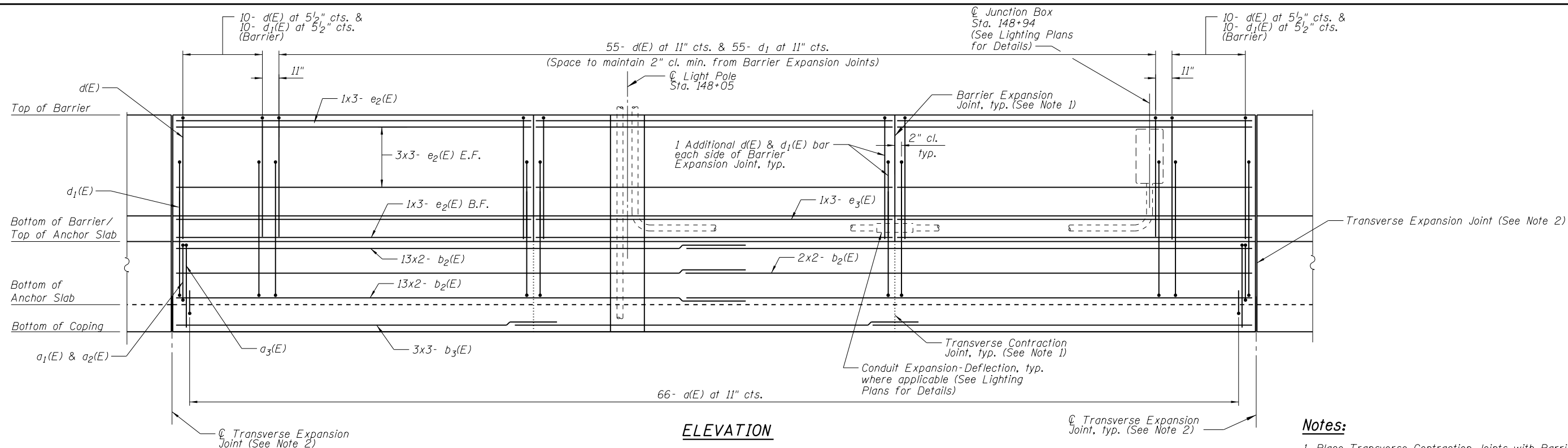
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**CH2MHILL**

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PLOT SCALE = 6.0000' / in.	CHECKED - BGA	REVISED -
PLOT DATE = 10/28/2014	DRAWN - EJM	REVISED -
	CHECKED - BGA	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ANCHORAGE SLAB PLAN & ELEVATION No. 1**  
**STRUCTURE NO. 022-0552**  
SHEET NO. 04 OF 14 SHEETS

F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 525
DRAWING NO. SQ-04			CONTRACT NO. 60Y95	
ILLINOIS FED. AID PROJECT				



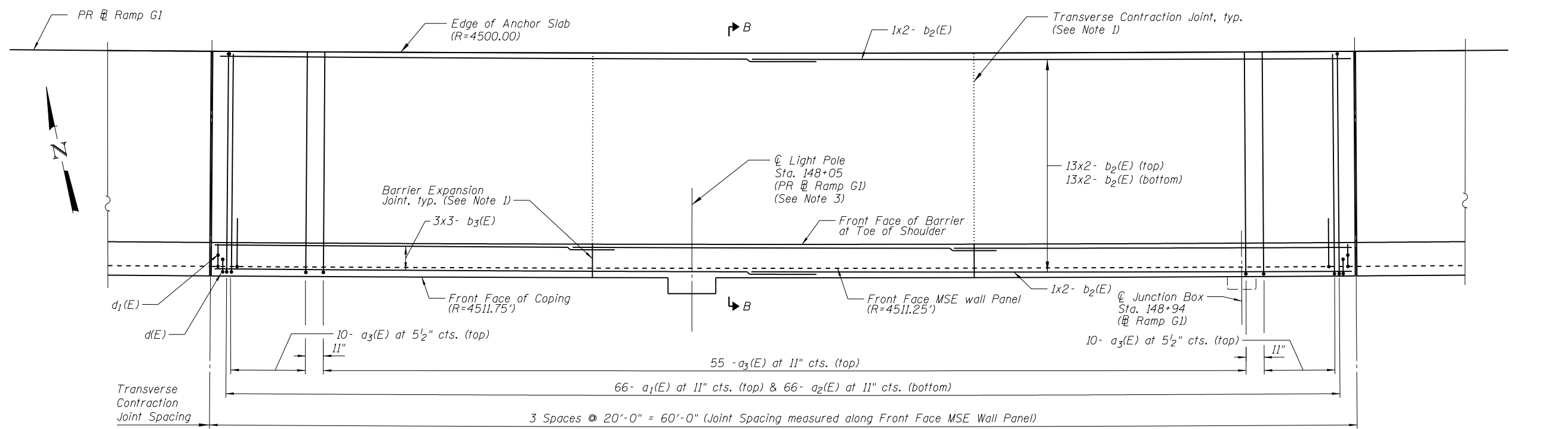
**ELEVATION**

**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

**Notes:**

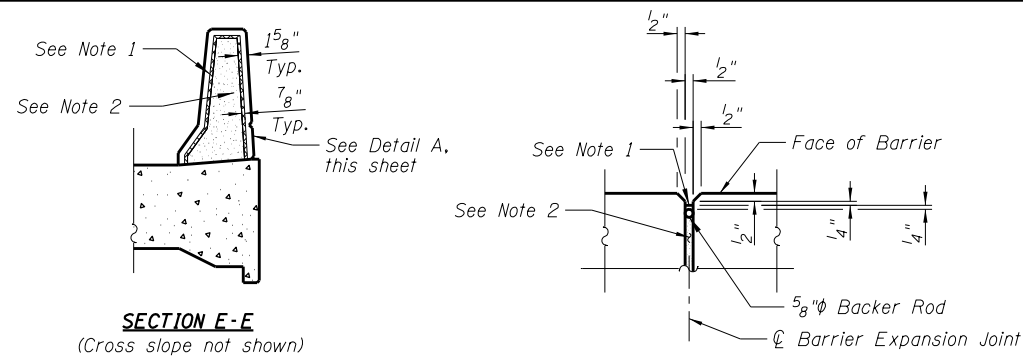
1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SQ-06.
2. Place Transverse Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SQ-06.
3. For Light Pole Foundation details, see Drawing No. SQ-07.
4. For Section B-B, see Drawing No. SQ-08.
5. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panels.
6. Barrier longitudinal reinforcement not shown in Plan for clarity.



**PLAN - 60' ANCHOR SLAB SEGMENT**

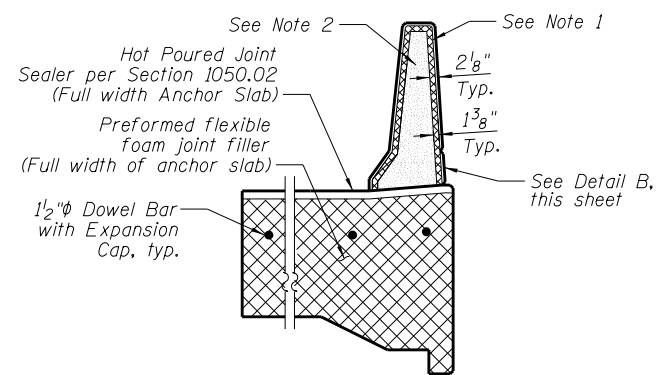
(Typical for 2 Anchor Slab Segments, Transverse Expansion Joint Sta. 147+79.85 to End Wall Sta. 148+99.59)

FILE NAME = 0220552-60Y95-005-AnchSlabP&E2.dgn <b>CH2MHILL</b>	USER NAME = asantiag	DESIGNED - EJM CHECKED - BGA	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ANCHORAGE SLAB PLAN &amp; ELEVATION No. 2 STRUCTURE NO. 022-0552</b>	F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 526
	PLOT SCALE = 6.0000' / in.	DRAWN - EJM CHECKED - BGA	PLOT DATE = 11/18/2014			DRAWING NO. SQ-05	CONTRACT NO. 60Y95	SHEET NO. 05 OF 14 SHEETS	ILLINOIS FED. AID PROJECT	

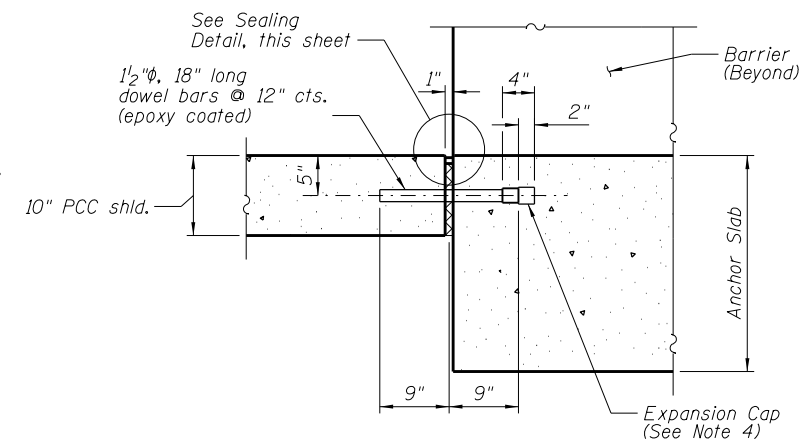


**SECTION E-E**  
(Cross slope not shown)

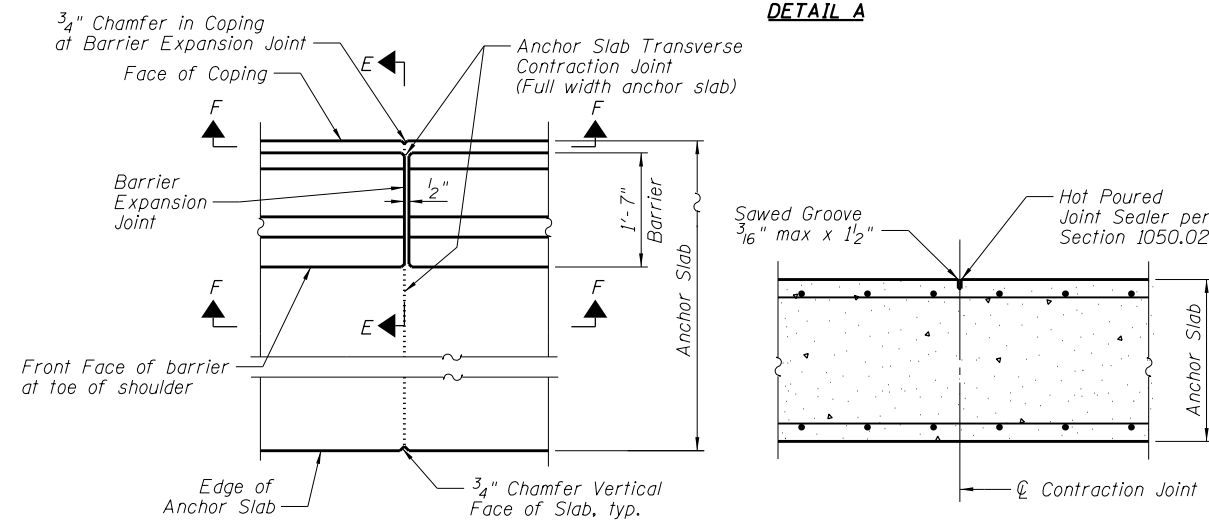
**DETAIL A**



**TYPICAL SECTION**  
(Cross slope not shown)



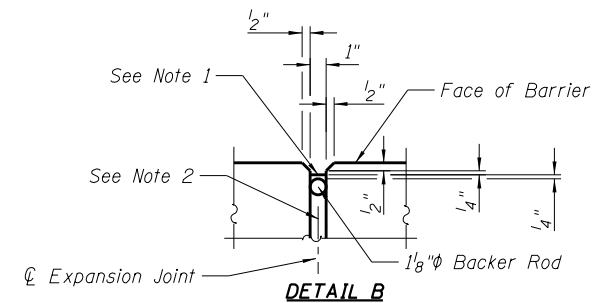
**ANCHOR SLAB TO PCC SHLD.**



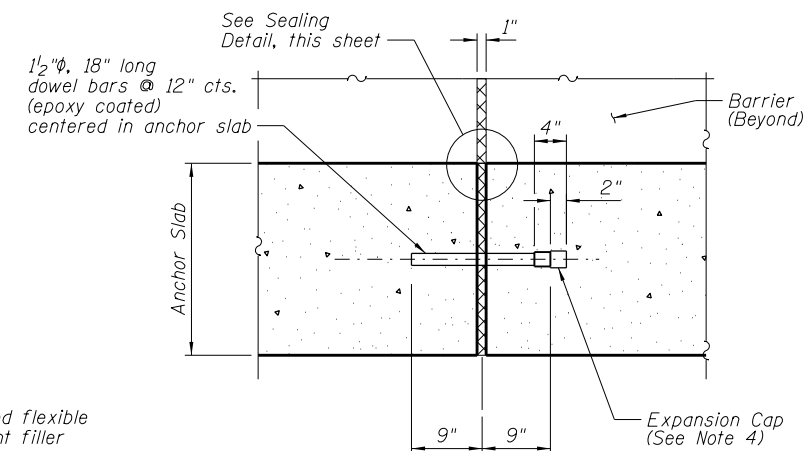
**PLAN**

**SECTION F-F**

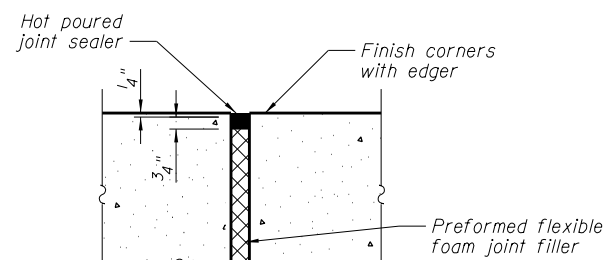
**TRANSVERSE CONTRACTION JOINT**



**DETAIL B**

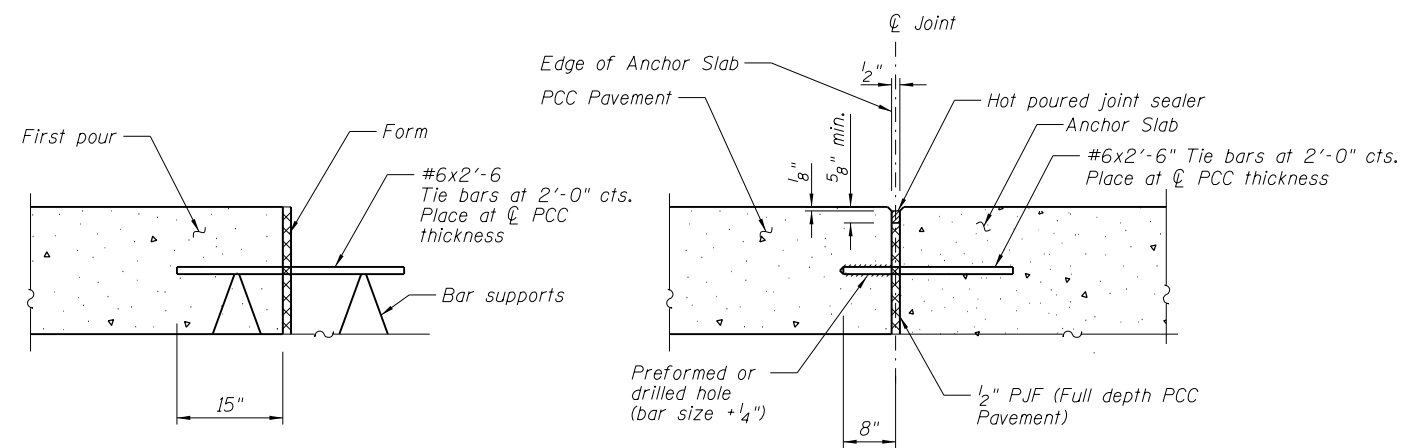


**ANCHOR SLAB TO ANCHOR SLAB**



**SEALING DETAIL**

**TRANSVERSE EXPANSION JOINT**



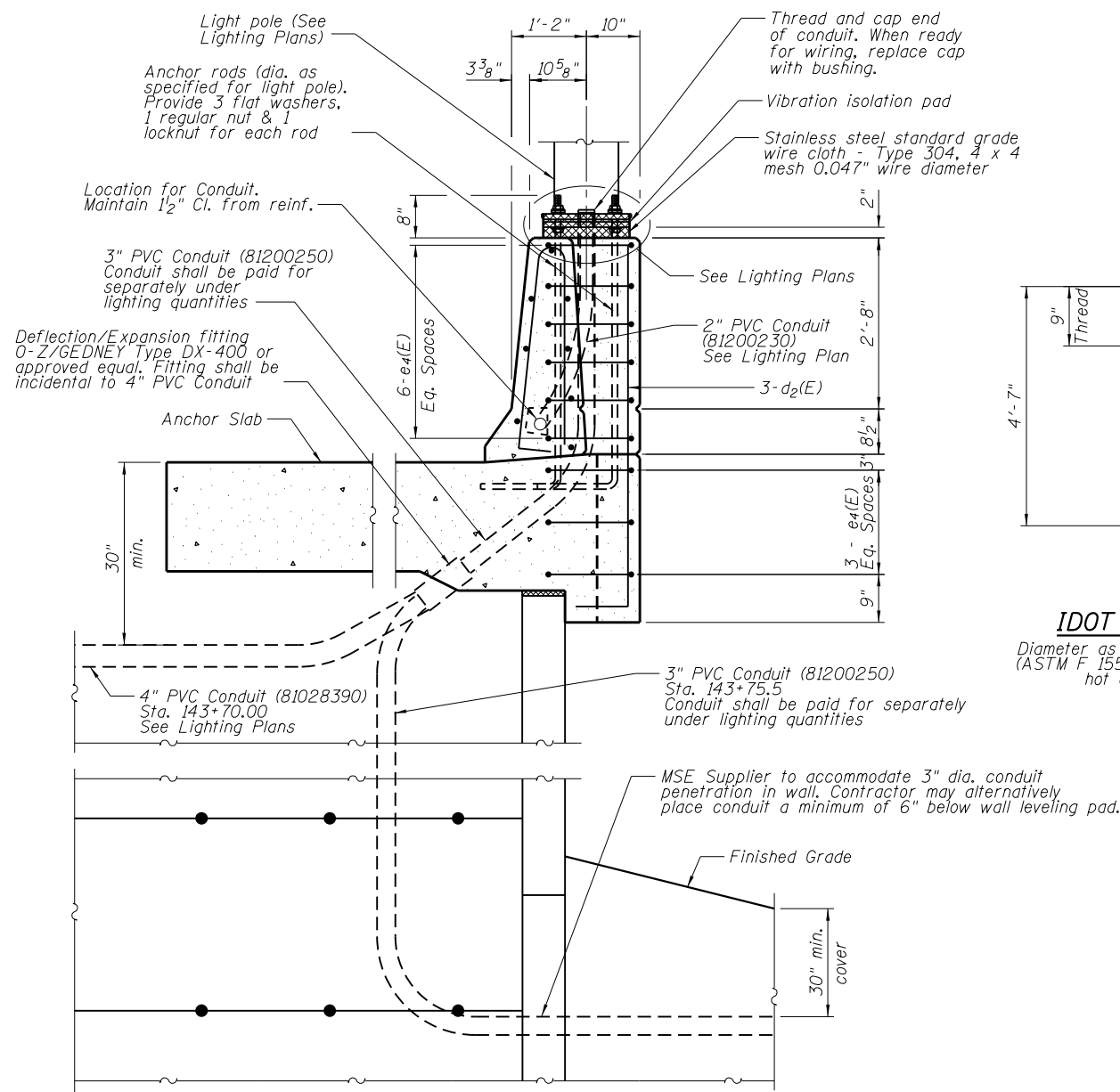
**TIE BAR PREFORMED IN PLACE**

**TIE BAR GROUTED IN PLACE**

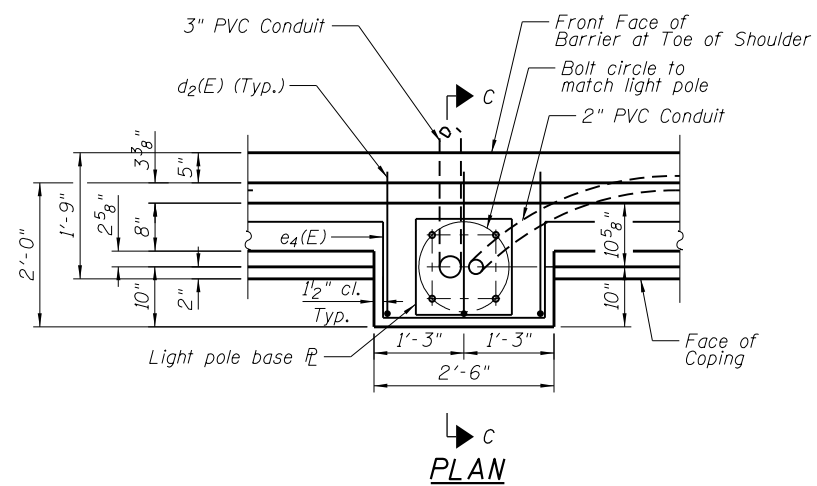
**LONGITUDINAL CONSTRUCTION JOINT**

**Notes:**

1. Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a backer rod.
2. Preformed Self-Expanding Cork Joint Filler according to Article 1051.07 of Std. Spec.
3. Dowel bars and tie bars are not included in Bill of Materials. Cost included in Concrete Superstructure.
4. Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.



**SECTION C-C**

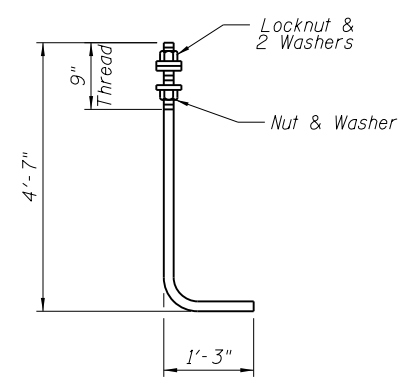


**PLAN**

Light Pole - Sta. 143+70.00 (Ramp G1)

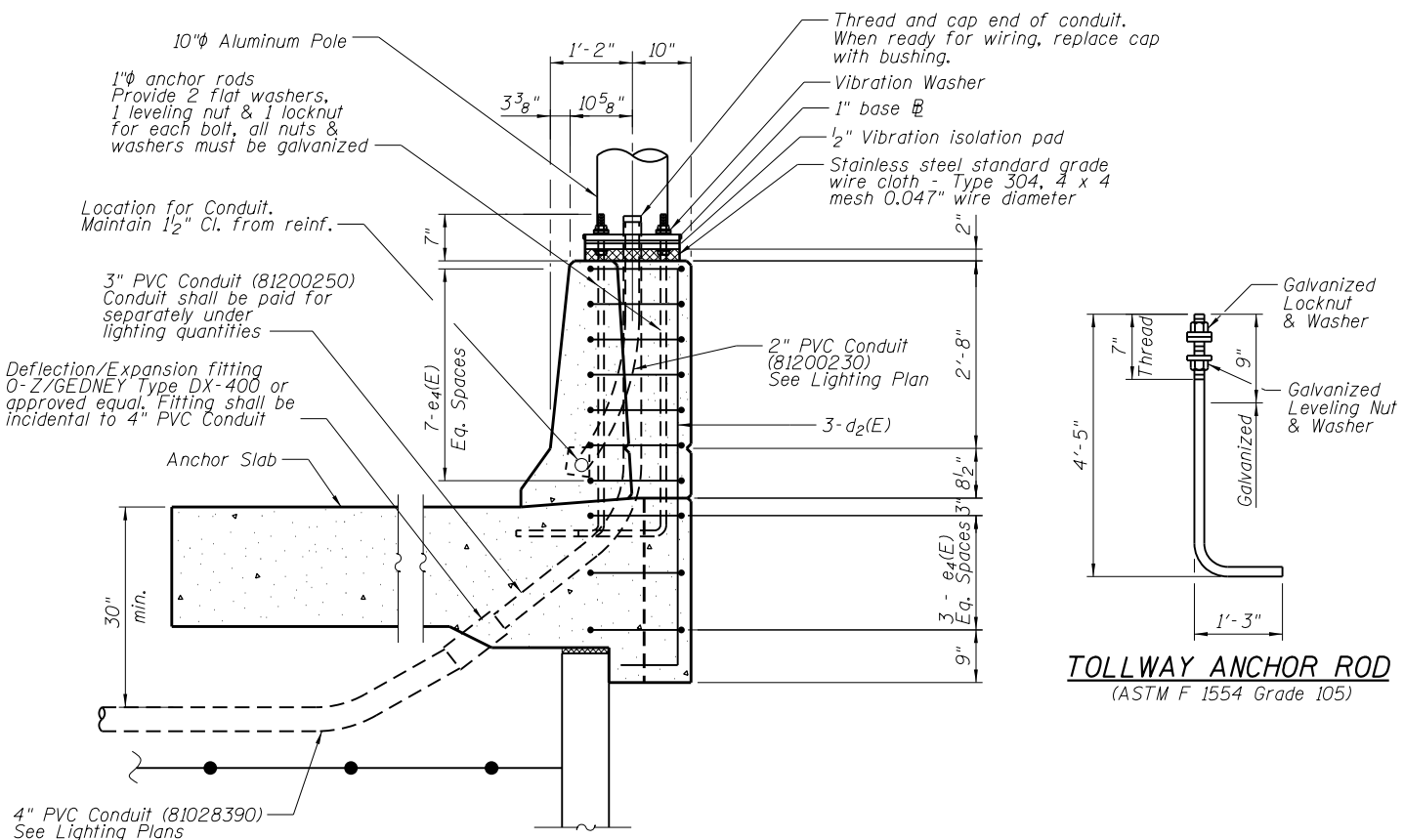
**PLAN AT IDOT LIGHT POLE FOUNDATION**

For Lighting details, see Lighting Plans

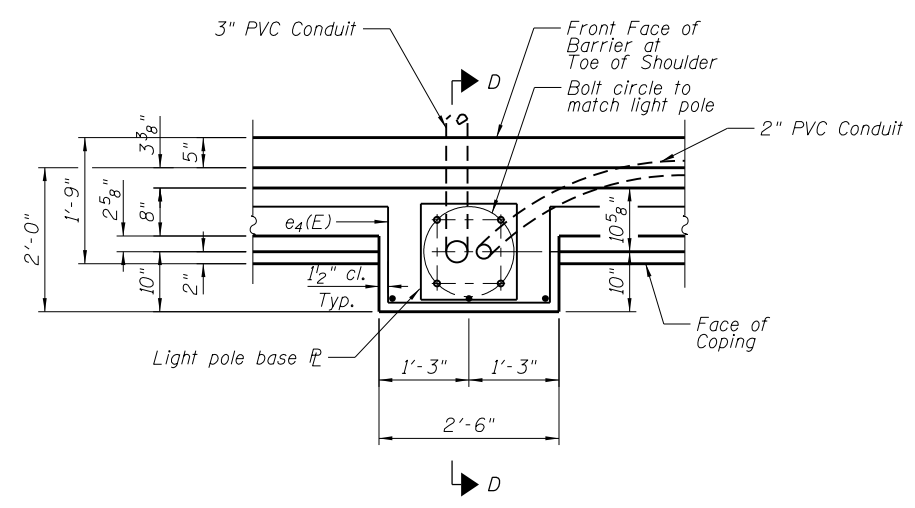


**IDOT ANCHOR ROD**

Diameter as specified for light poles. (ASTM F 1554 Grade 105), Full length hot dipped galvanized



**SECTION D-D**



**PLAN**

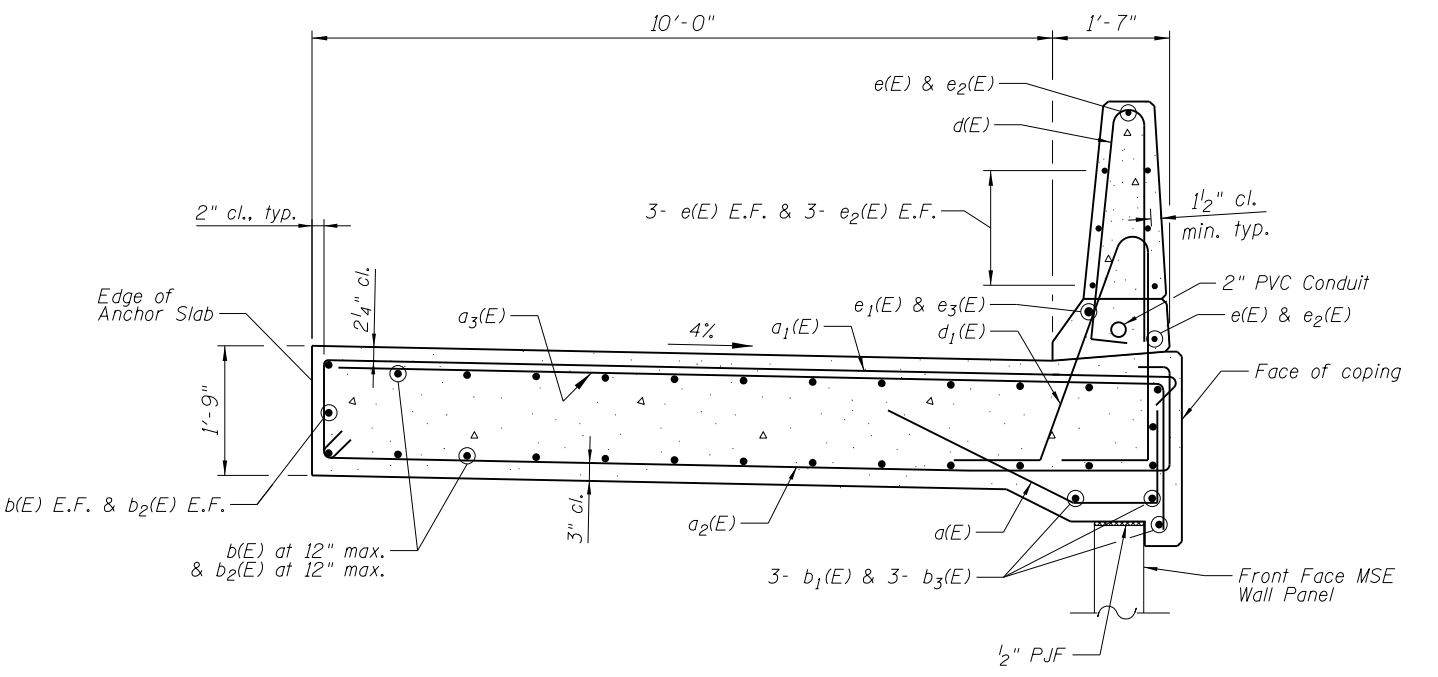
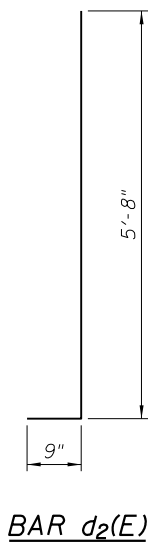
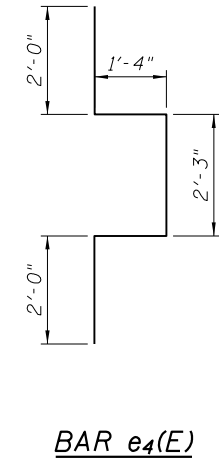
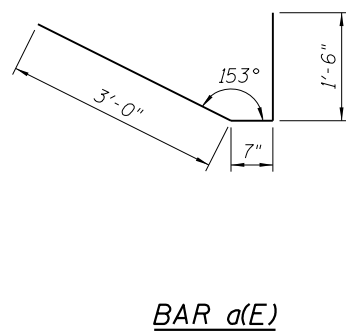
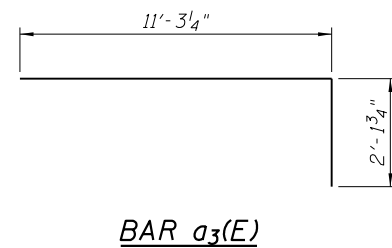
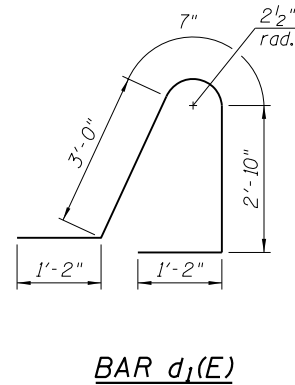
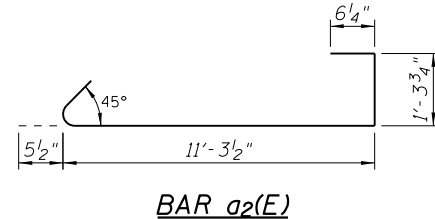
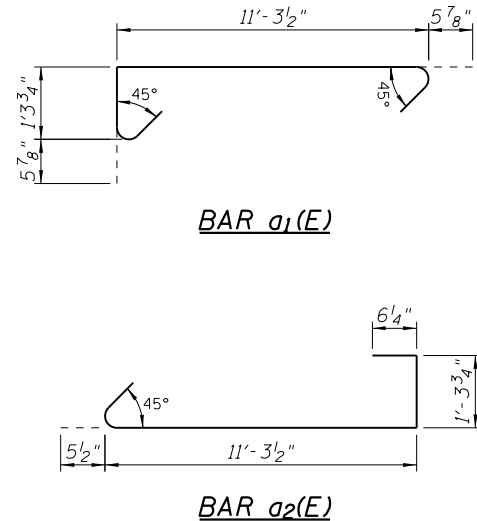
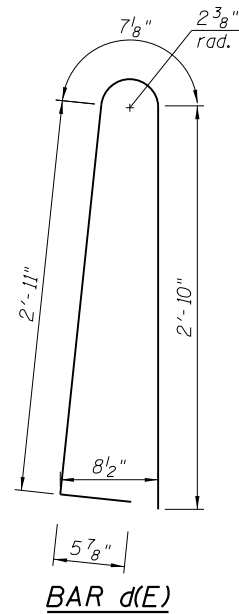
**PLAN AT TOLLWAY LIGHT POLE FOUNDATION**

For lighting details, see lighting Plans. Light Pole - Sta. 148+05.00 (Ramp G1)

**Notes:**

- 1. For lighting layout, quantities, and payment, see Lighting Plans.

FILE NAME = 0220552-60Y95-007-AnchSlabBarrDet2.dgn <b>CH2MHILL</b>	USER NAME = asantiag	DESIGNED - EJM	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ANCHORAGE SLAB & BARRIER DETAILS No. 2 STRUCTURE NO. 022-0552	F.A.P. RTE. = 345	SECTION = 2013-083-R&B	COUNTY = DUPAGE	TOTAL SHEETS = 759	SHEET NO. = 528
	PLOT SCALE = 2.6667' / in.	DRAWN - EJM	REVISIONS -			DRAWING NO. = SO-07	CONTRACT NO. = 60Y95			
PLOT DATE = 11/18/2014	CHECKED - BGA	REVISIONS -		SHEET NO. 07 OF 14 SHEETS		ILLINOIS FED. AID PROJECT				



**Notes:**

1. Reinforcement in MSE wall panels not included in Bill of Materials.
2. For Anchor Slab dimensions not shown, see Barrier and Anchor Slab Detail on Drawing No. SO-03.
3. For anchor slab details not provided, see Anchorage Plan & Elevation sheets.
4. For locations of Section B-B, see Anchorage Slab Plan & Elevation sheets.
5. Cost of P.J.F included in Concrete Superstructure.

**ANCHOR SLAB  
BILL OF MATERIAL**

BAR	No.	SIZE	LENGTH	SHAPE
a (E)	660	# 4	5'-1"	
a1(E)	660	# 5	13'-7"	
a2(E)	660	# 5	13'-7"	
a3(E)	732	# 5	13'-5"	
b (E)	504	# 6	28'-11"	—
b1(E)	51	# 4	28'-2"	—
b2(E)	112	# 6	31'-7"	—
b3(E)	18	# 4	21'-6"	—
d (E)	776	# 5	6'-10"	
d1(E)	776	# 5	8'-9"	
d2(E)	9	# 6	6'-5"	
e (E)	192	# 4	19'-7"	—
e1(E)	24	# 8	19'-7"	—
e2(E)	48	# 4	19'-7"	—
e3(E)	6	# 8	19'-7"	—
e4(E)	28	# 6	8'-11"	
DESCRIPTION		UNIT	QUANTITY	
Concrete Superstructure		CU YD	559.4	
Reinforcement Bars Epoxy Coated		POUND	77,450	
Protective Coat		SQ YD	954	

SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY E. Slusser
ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for DEPTH, B, U, M, Surface Water Elev., Stream Bed Elev., Groundwater Elev., and HOURS.

Main soil log table with columns for depth (ft), blow count (B), penetration (U), and moisture content (M). Includes soil descriptions like ASPHALT PAVEMENT, SANDY LOAM, and CLAY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug
ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for DEPTH, B, U, M, Surface Water Elev., Stream Bed Elev., Groundwater Elev., and HOURS.

Main soil log table with columns for depth (ft), blow count (B), penetration (U), and moisture content (M). Includes soil descriptions like TOPSOIL, SILTY CLAY, and CLAY.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.







# SOIL BORING LOG

Page 2 of 2

Date 11/26/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	022-0552	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft
Station	143+01.09 to 148+79.93					Stream Bed Elev.	ft
BORING NO.	R-222-RWB-06					Groundwater Elev.:	
Station	146+37.64					First Encounter	Dry ft
Offset	10.6 ft RT.					Upon Completion	Dry ft
Northing	1,936,963.16					After	24 Hrs. Dry ft
Easting	1,069,511.21						
Ground Surface Elev.	732.1 ft	(ft)	(/6")	(tsf)	(%)		

691.6	Medium Stiff to Stiff, Gray CLAY LOAM trace - gravel	3					
		3	1.75	20			
		5	P				
		3					
		3	0.7	17			
		4	B				
686.6	Very Stiff to Hard, Gray SILTY CLAY trace to little - gravel	4					
		7	5.4	19			
		10	B				
		4					
		7	4.1	17			
		9	B				
		4					
		5	3.1	18			
		9	B				
		7					
		8	3.0	18			
		10	B				
677.1	END OF BORING						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 1 of 2

Date 11/27/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 feet HAMMER TYPE Automatic

STRUCT. NO.	022-0552	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft
Station	143+01.09 to 148+79.93					Stream Bed Elev.	ft
BORING NO.	R-222-RWB-07					Groundwater Elev.:	
Station	147+12.52					First Encounter	Mud Rotary ft
Offset	10.8 ft RT.					Upon Completion	Mud Rotary ft
Northing	1,936,945.26					After	Hrs. ft
Easting	1,069,584.11						
Ground Surface Elev.	733.0 ft	(ft)	(/6")	(tsf)	(%)		

732.6	TOPSOIL						
	Medium Stiff to Hard, Brown, Gray and Black CLAY trace - gravel, roots	4					
		4	3.2	22			
		5	B				
	some - gravel from 3 to 5.5 feet	7					
		7	4.5	12			
		6	B				
		4					
		4	2.5	17			
		5	B				
		4					
		5	2.1	19			
		7	B				
		4					
		4	2.5	26			
		6	B				
		7					
		6					
		9	1.5	24			
		12	P				
		4					
		5	1.0ST	20			
		8					
		11	B				
		4					
		2	0.7	20			
		3	B				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

Page 2 of 2

Date 11/27/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0552  
 Station 143+01.09 to 148+79.93  
 BORING NO. R-222-RWB-07  
 Station 147+12.52  
 Offset 10.8 ft RT.  
 Northing 1,936,945.26  
 Easting 1,069,584.11  
 Ground Surface Elev. 733.0 ft

DEPTH (ft)	U (tsf)	M (%)	DESCRIPTION	DEPTH (ft)	U (tsf)	M (%)
7	1.25 P	23	Dense to Extremely Dense, Gray SANDY LOAM some - gravel(continued)	11		
8				17		13
11				20		
5			Very Stiff, Gray SANDY CLAY trace - gravel	9		
8	1.5 P	23		13	2.8 B	16
9				15		
4			Very Stiff to Hard, Gray SILTY CLAY trace to little - gravel	14		
7	1.5 P	23		20	3.1 B	11
10				20		
5				12		
8	2.5 B	20		14	6.2 B	13
9				18		
4						
6	2.6 B	20				
8						
4						
7	2.1 B	20				
9						
12						
24		10				
25						
10						
28		10				
50/5"						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 1 of 2

Date 11/27/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 Feet HAMMER TYPE Automatic

STRUCT. NO. 022-0552  
 Station 143+01.09 to 148+79.93  
 BORING NO. R-222-RWB-08  
 Station 147+82.59  
 Offset 4.5 ft LT.  
 Northing 1,936,944.72  
 Easting 1,069,655.87  
 Ground Surface Elev. 731.5 ft

DEPTH (ft)	U (tsf)	M (%)	DESCRIPTION	DEPTH (ft)	U (tsf)	M (%)
7			TOPSOIL	7		
8			Hard to Very Hard, Brown and Gray SILTY CLAY trace - gravel	8		
9	9.6 S	16		9		
9				9		
5				5		
7	8.2 B	17		7		
8				8		
7				7		
6	4.5 B	17		6		
5				5		
4				4		
6	2.5 B	24		6		
8				8		
3				3		
5	3.0 B	18		5		
6				6		
7	1.4 S	24		7		
9				9		
2				2		
3	0.8 B	20		3		
4				4		
	0.8ST S	19				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

Page 2 of 2

Date 11/27/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug  
 ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd  
 COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 Feet HAMMER TYPE Automatic

STRUCT. NO. 022-0552  
 Station 143+01.09 to 148+79.93  
 BORING NO. R-222-RWB-08  
 Station 147+82.59  
 Offset 4.5 ft LT.  
 Northing 1,936,944.72  
 Easting 1,069,655.87  
 Ground Surface Elev. 731.5 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	U (tsf)	M (%)
0-4	Gray below 38 feet(continued)		
4-6		1.5	20
6-8		P	
8-3			
3-5		2.9	20
5-6		B	
6-686.5	END OF BORING		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 1 of 1

Date 12/4/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-222, Ramp G1 LOGGED BY K. Krug  
 ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3rd  
 COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

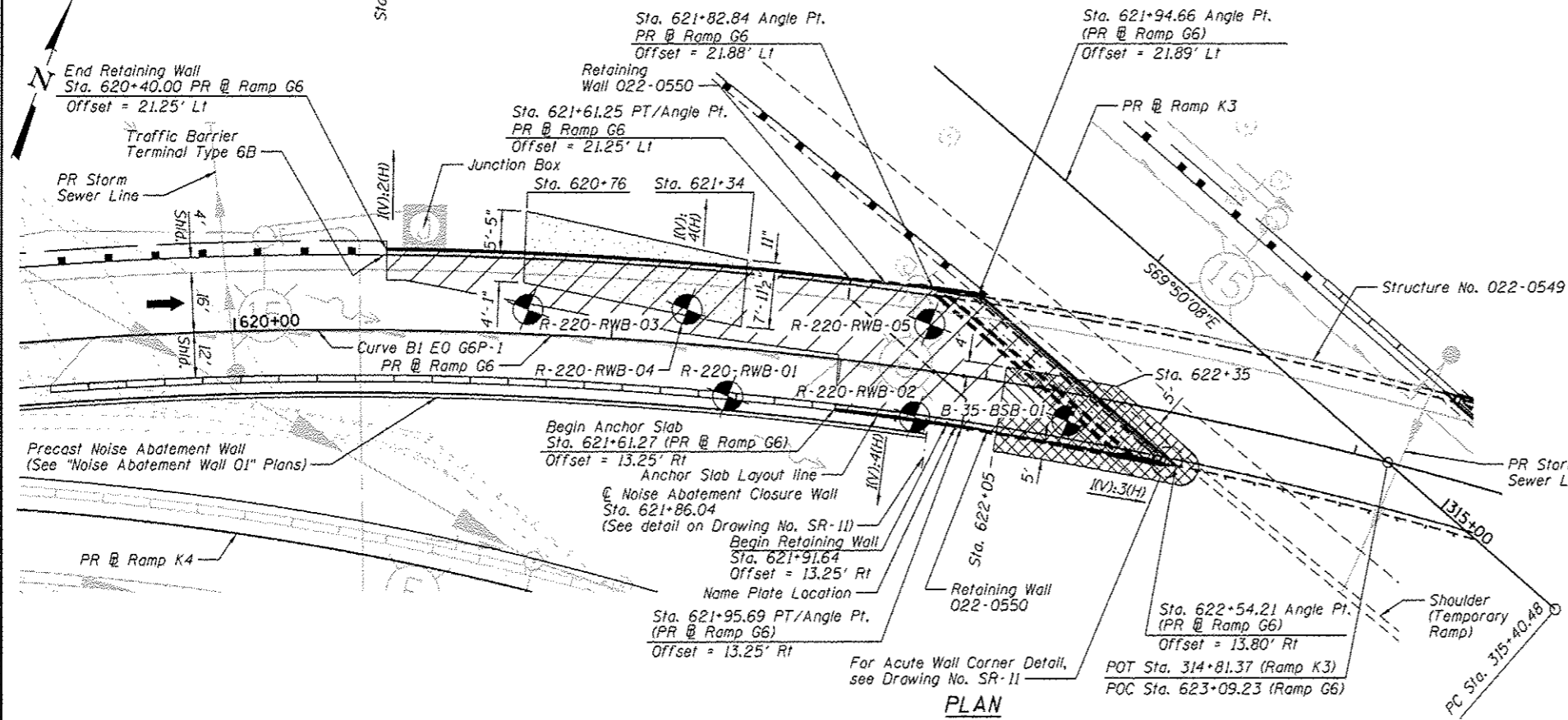
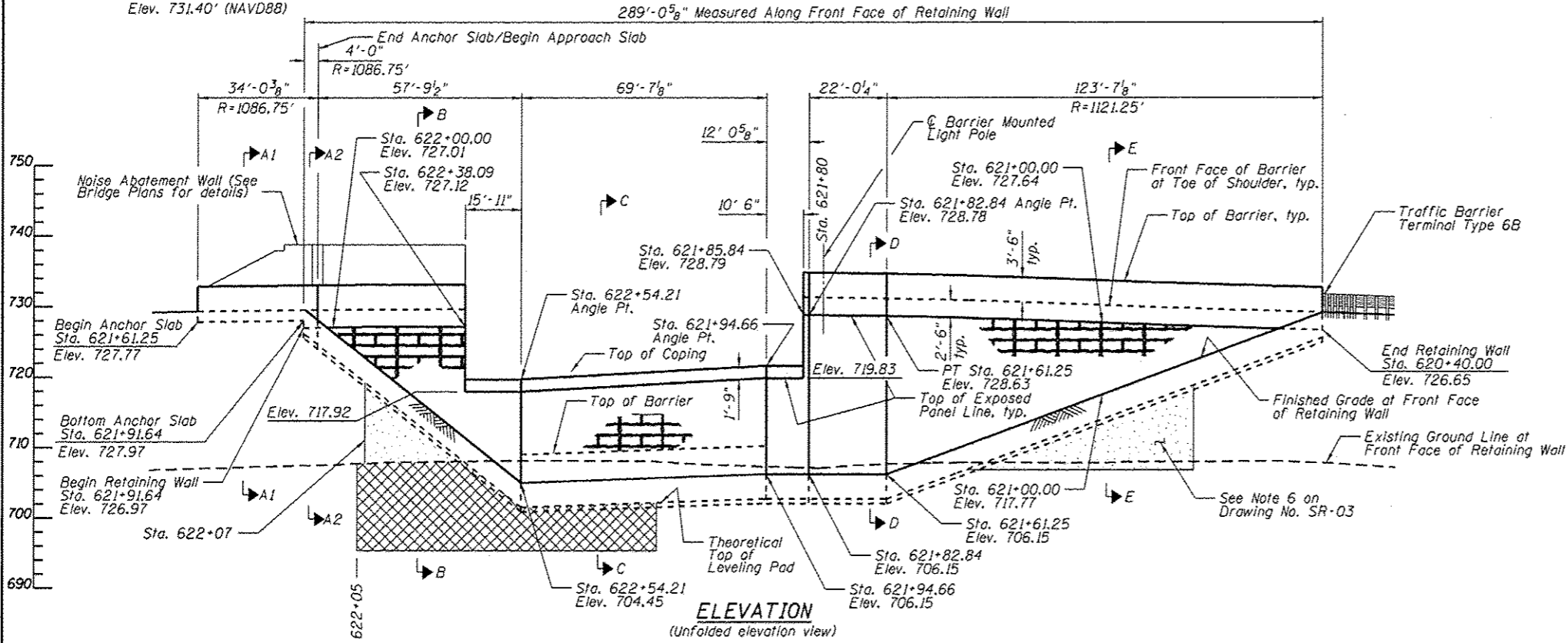
STRUCT. NO. 022-0552  
 Station 143+01.09 to 148+79.93  
 BORING NO. R-222-RWB-09  
 Station 148+57.41  
 Offset 44.6 ft RT.  
 Northing 1,936,881.37  
 Easting 1,069,719.40  
 Ground Surface Elev. 709.1 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	U (tsf)	M (%)
0-4	Gray below 11 feet(continued)		
4-6		2.9	18
6-7		B	
7-4			
4-5		3.3	18
5-6		B	
6-684.1	END OF BORING		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

Bench Mark: BM#716 - Cut square in the Northwest end of bridge wall. Approximately 65 feet North of the centerline of Thorndale Ave. and 168 feet West of the centerline of I-290. Approximately 12 feet West of bridge deck. Elev. 731.40' (NAVD88)



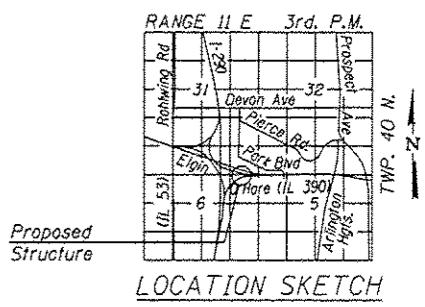
**Notes:**

1. Stations and offsets are given to the Front Face of the wall or Anchor Slab Layout Line and are measured from the baseline of Ramp G6.
2. Top of wall elevations are given to the top of exposed panel line along Front Face of MSE wall panels. Bottom of wall elevations are measured to top of Finish Grade along Front Face of MSE wall Panels.
3. All exposed faces of the MSE wall panels shall have a formliner simulated limestone surface. See Special Provisions for additional details.
4. For Section A1-A1, Section A2-A2, Section B-B, Section C-C, Section D-D, and Section E-E, see Drawing No. SR-03.
5. For additional notes, see Drawing No. SR-02.

**LEGEND**

- Reinforced Soil Mass, Approximate Limits
- Indicates Zone of Removal and Disposal of Unsuitable Material for Structures and Replacement with Granular Backfill for Structures (See Drawing No. SR-03) (Cost associated with Backfill included with Removal and Disposal of Unsuitable Material for Structures)
- Indicates Granular Backfill for Structures
- MSE Wall Panels (See Note 3)
- Soil Borings

**APPROVED**  
For Structural Adequacy Only  
*D. Carl Purjes* JEs  
Engineer of Bridges & Structures



**GENERAL PLAN & ELEVATION**  
**ELGIN O'HARE (IL-390) AT I-290**  
**DUPAGE COUNTY**  
**RAMP G6 STA 620+40.00 TO**  
**RAMP G6 STA 622+54.21**  
**STRUCTURE NO. 022-0550**

FILE NAME: 0220550-00195-001-GPE.dgn	USER NAME: amoschie	DESIGNED - EJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION STRUCTURE NO. 022-0550	F.A.P. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
	CH2MHILL	PLOT SCALE: 1/8" = 1'-0"	CHECKED - JLT			REVISED -	345	2013-093-R&B	DUPAGE	759
	PLOT DATE: 12/18/2014	DRAWN - EJM	REVISED -			DRAWING NO. SR-01		CONTRACT NO. 60Y95		
		CHECKED - JLT	REVISED -			ILLINOIS FED. AID PROJECT				

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications with 2013 Interims

Tollway Structure Design Manual, March 2014 with latest Tollway Design Bulletins

Illinois Department of Transportation Bridge Manual, January 2012

**DESIGN STRESSES**

FIELD UNITS

$f'_c = 3,500$  PSI Class BS (Barrier Rail and Anchor Slab)  
 $f'_c = 3,500$  PSI Class SI (All other CIP Concrete)  
 $f_y = 60,000$  PSI (Reinforcement)

PRECAST UNITS

$f'_c = 4,500$  PSI (Precast Face Panel)

**TRAFFIC BARRIER LOADING**

Traffic Impact per AASHTO LRFD Bridge Design Specifications

**NOISE ABATEMENT WALL LOADING**

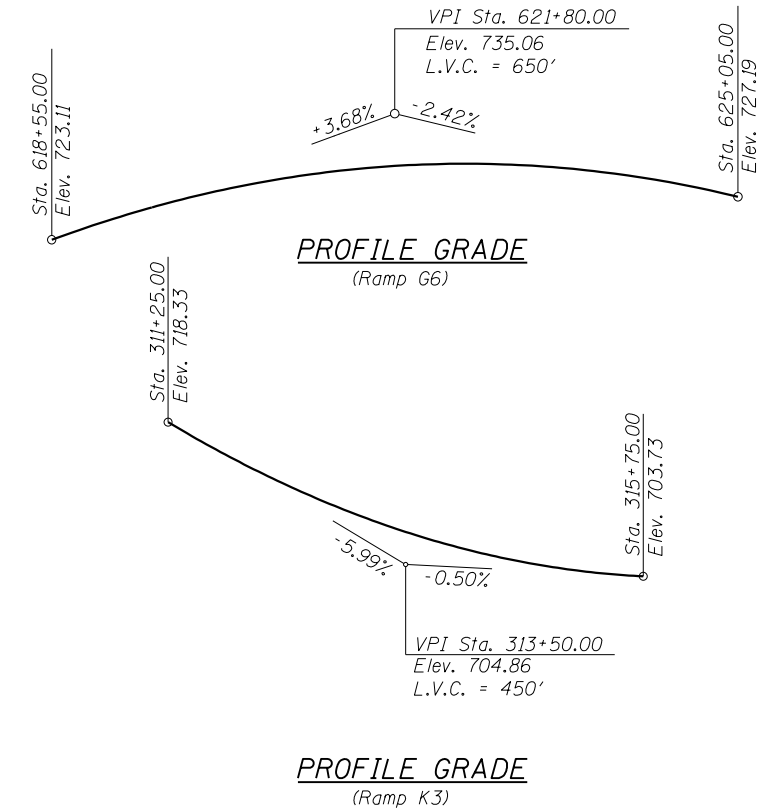
Wind = 35 psf (Structure Mounted)  
 Truck collision TL-4 load  
 Max. Dead Load = 30 psf (Structure Mounted)  
 Max. Post Spacing is 12'-0"

**GENERAL NOTES**

- The Contractor shall design and construct MSE Wall per the Special Provisions.
- Reinforcing bar bending details shall be in accordance with the latest "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, latest edition.
- Reinforcing bars designated "(E)" shall be epoxy coated.
- Reinforcement bar bending dimensions are out to out.
- Apply Protective Coat to top and traffic face of barrier and anchor slab.
- All exposed concrete edges shall have a  $\frac{3}{4}$ " x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
- Bars noted thus, 3x2- #5 indicates 3 lines of bars with 2 lengths of bars per line.
- No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.
- It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
- It shall be the Contractor's responsibility to verify the location of all fiber optic utilities prior to starting construction. The Contractor shall initiate the location process for the fiber optic cable by completing a "Request Tollway Utilities Locate" form filled in online at the Tollway website under "Doing Business" at least four (4) business days prior to starting any underground operations, excavations or digging of any type in the general area of the fiber optic cable.
- Slipforming of barriers is not allowed.

**INDEX OF SHEETS**

- SR-01 General Plan & Elevation
- SR-02 General Data
- SR-03 Wall Sections
- SR-04 Anchorage Slab Plan & Elevation No. 1
- SR-05 Anchorage Slab Plan & Elevation No. 2
- SR-06 Anchorage Slab Plan & Elevation No. 3
- SR-07 Anchorage Slab & Barrier Details No. 1
- SR-08 Anchorage Slab & Barrier Details No. 2
- SR-09 Anchorage Slab & Barrier Details No. 3
- SR-10 Anchorage Slab & Barrier Details No. 4
- SR-11 Miscellaneous Details
- SR-12 Soil Boring Logs No. 1
- SR-13 Soil Boring Logs No. 2
- SR-14 Soil Boring Logs No. 3
- SR-15 Soil Boring Logs No. 4
- SR-16 Soil Boring Logs No. 5



**HORIZONTAL CURVE DATA**

Curve B1 E0 G6P-1  
 along PR  $\square$  Ramp G6

PI Sta. = 619+44.27  
 $\Delta = 88^\circ 27' 45''$  (RT)  
 $D = 5^\circ 12' 31''$   
 $R = 1100.00'$   
 $L = 1698.36'$   
 $E = 435.18'$   
 $T = 1070.87'$   
 $S.E. = 5.80\%$   
 $P.C. Sta. = 608+73.39$   
 $P.T. Sta. = 625+71.75$

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
Protective Coat	SQ YD	416
Structure Excavation	CU YD	451
Removal and Disposal of Unsuitable Material for Structures	CU YD	441
Concrete Superstructure	CU YD	171.7
Reinforcement Bars, Epoxy Coated	POUND	26,260
Name Plates	EACH	1
Performance Based Acrylic Noise Abatement Wall	-	See Bridge Plans
Granular Backfill for Structures	CU YD	317
Mechanically Stabilized Earth Retaining Wall	SQ FT	4,603

STATION 621+94  
 BUILT 20\_\_ BY  
 STATE OF ILLINOIS  
 F.A.I. RT. 290  
 SEC. 2013-083-R&B  
 STRUCTURE NO. 022-0550

NAME PLATE  
 See Std. 515001

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		CHECKED - JLT	REVISED -
	PLOT SCALE = 80.0000' / in.	DRAWN - EJM	REVISED -
	PLOT DATE = 11/18/2014	CHECKED - JLT	REVISED -

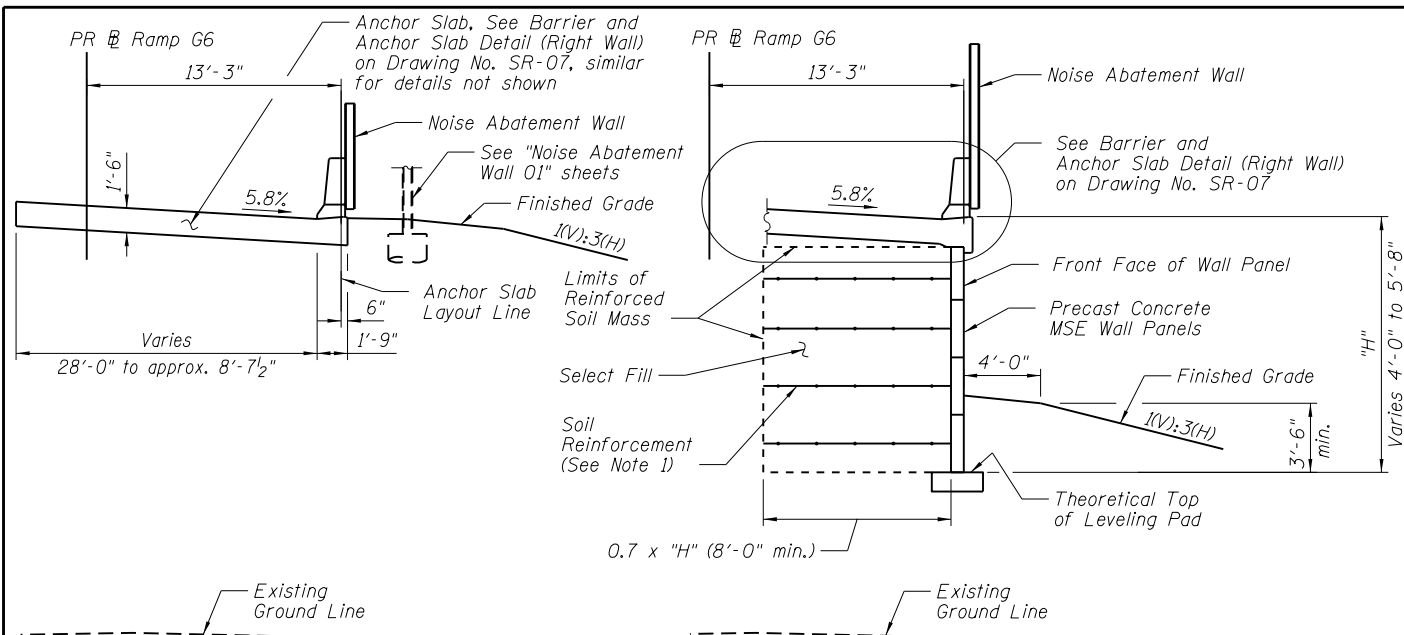
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL DATA  
 STRUCTURE NO. 022-0550

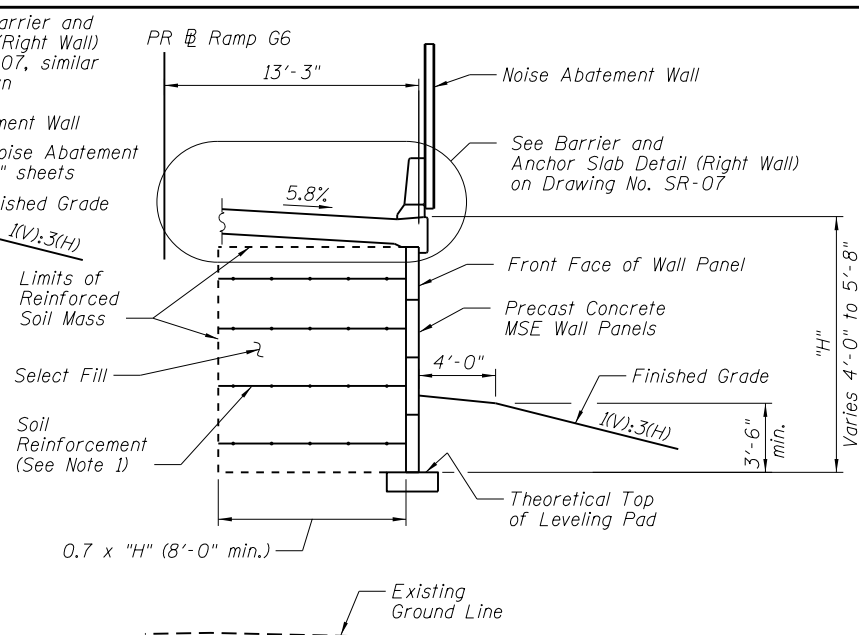
SHEET NO. 02 OF 16 SHEETS

F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 537
DRAWING NO. SR-02		CONTRACT NO. 60Y95		
ILLINOIS FED. AID PROJECT				

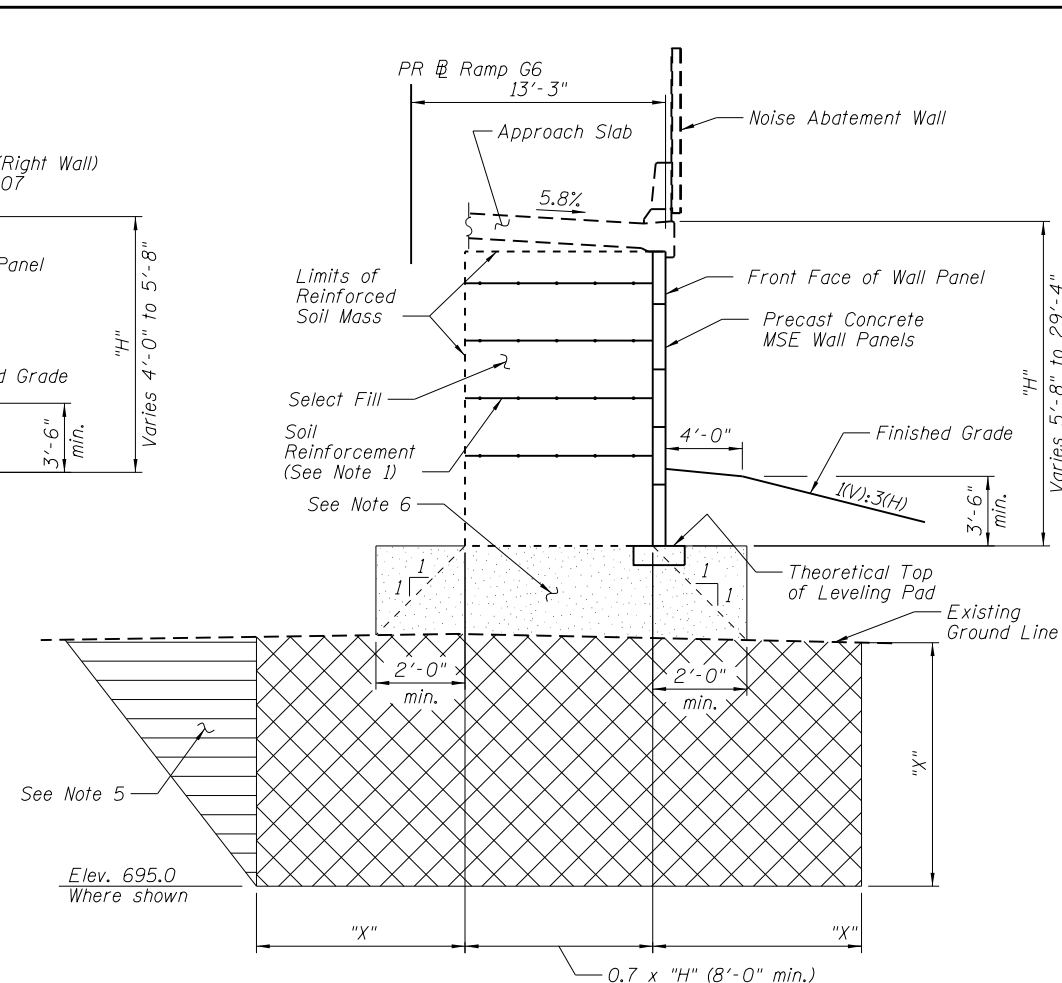




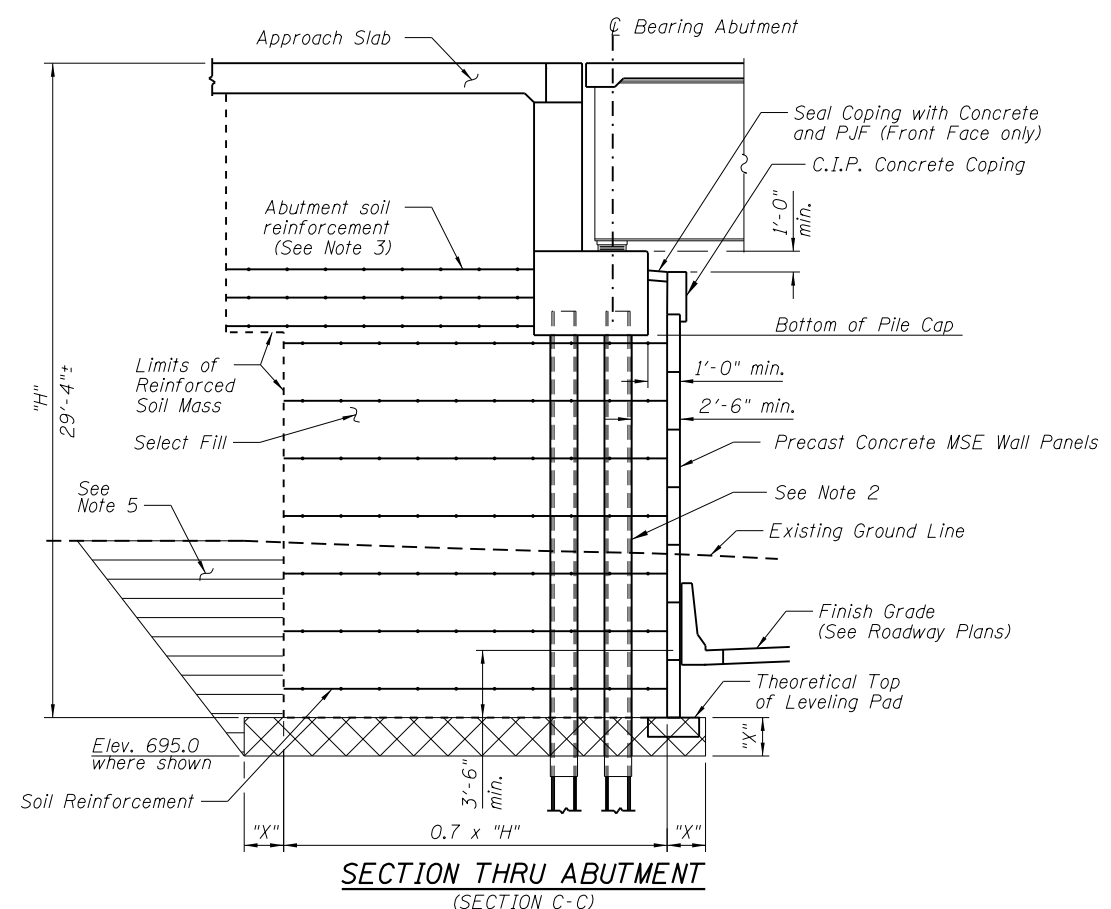
**TYPICAL SECTION**  
(SECTION A1-A1)



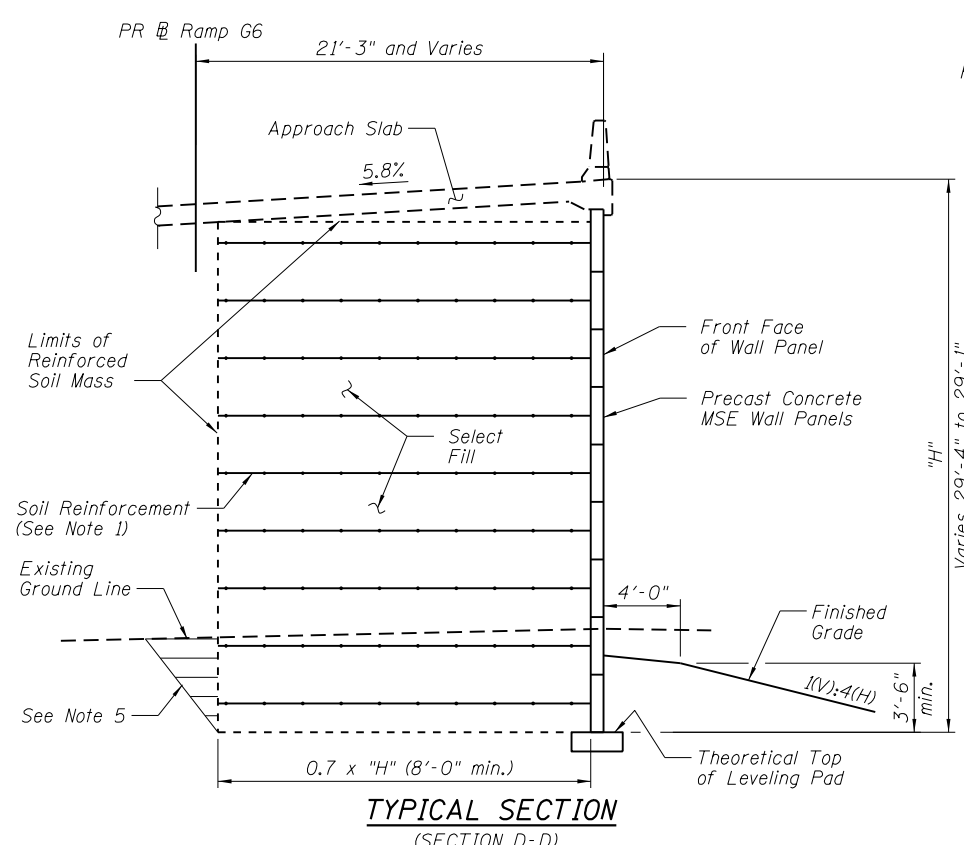
**TYPICAL SECTION**  
(SECTION A2-A2)



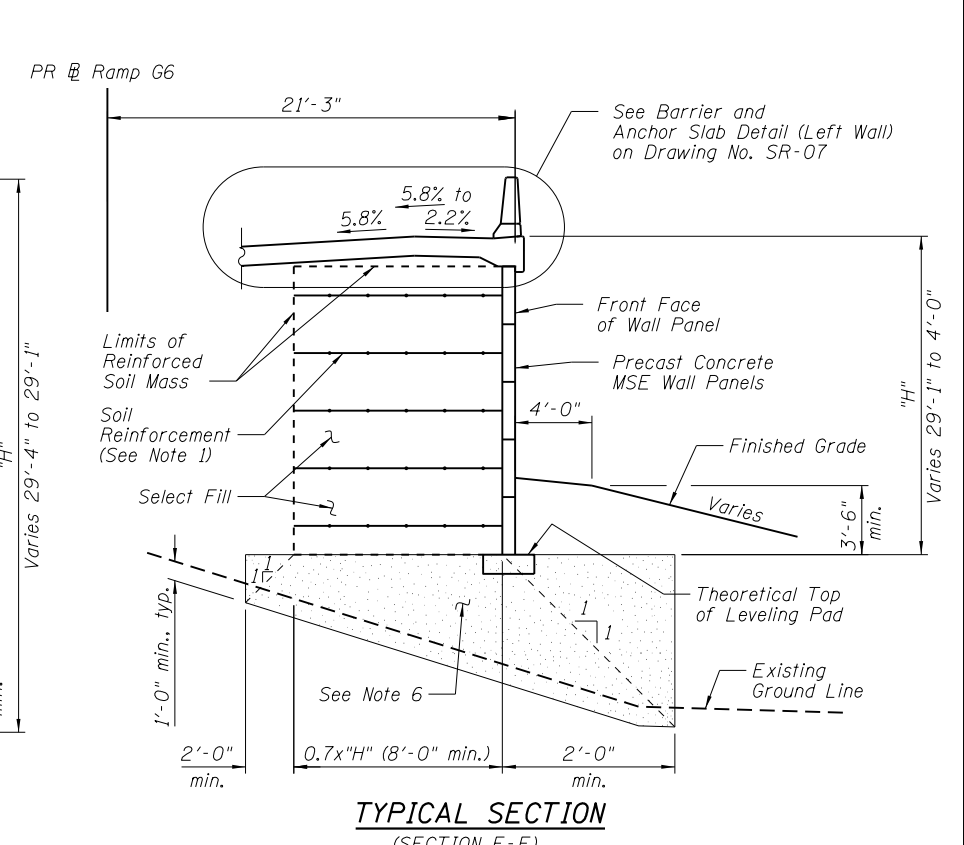
**TYPICAL SECTION**  
(SECTION B-B)



**SECTION THRU ABUTMENT**  
(SECTION C-C)



**TYPICAL SECTION**  
(SECTION D-D)

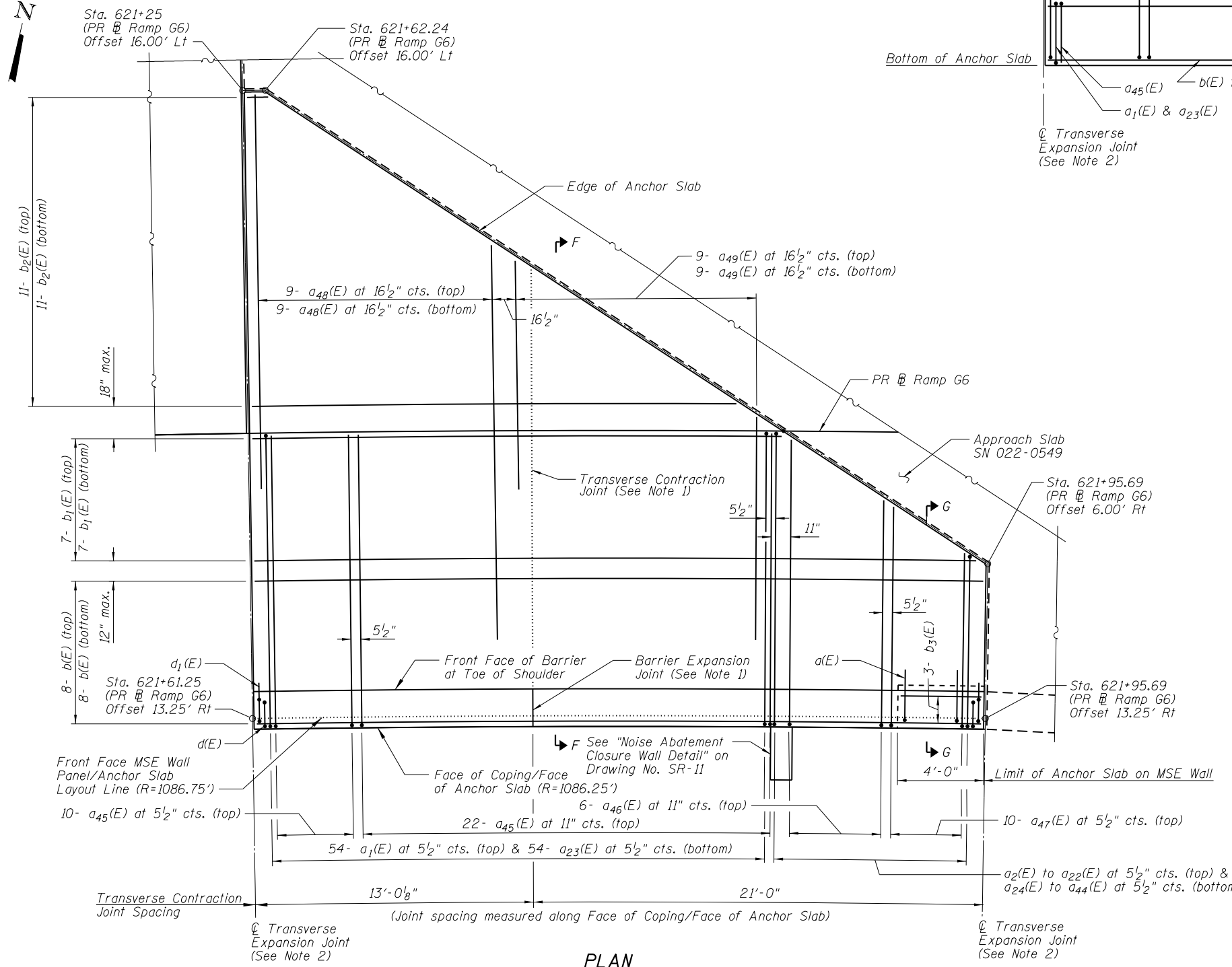
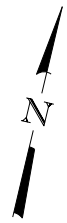


**TYPICAL SECTION**  
(SECTION E-E)

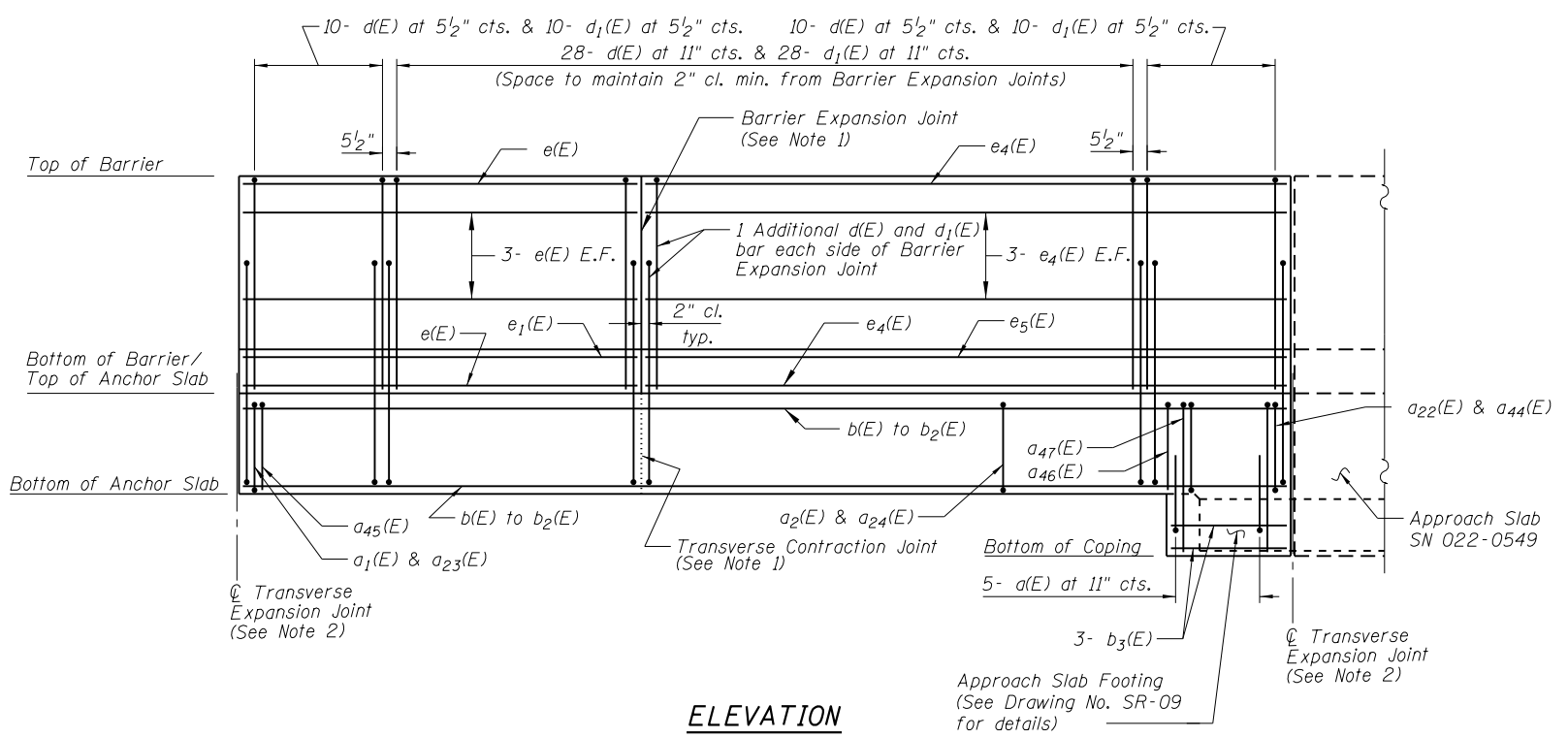
**Notes:**

1. The MSE wall supplier's internal stability design shall account for the anchor slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 1.15 kips/ft. of wall.
2. Pile Sleeve (See Bridge Plans).
3. The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 5.5 kips/ft. of abutment for the Service I limit state. The specified horizontal force includes abutment loads from bridge forces and active soil pressure.
4. The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions in the field.
5. Overexcavation beyond the limits of structure excavation not measured for payment. Backfill overexcavation with same material used for Select Fill.
6. Granular Backfill for Structures required for wall height, "H" ≥ 11'.
7. For Noise Abatement Wall details, see Bridge Plans.

FILE NAME = 0220550-60Y95-003-WallSections.dgn <b>CH2MHILL</b>	USER NAME = asantiag	DESIGNED - EJM	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>WALL SECTIONS</b> <b>STRUCTURE NO. 022-0550</b>	F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 538
	PLOT SCALE = 80.0008' / in.	DRAWN - EJM	REVISED -			DRAWING NO. SR-03	CONTRACT NO. 60Y95			
	PLOT DATE = 11/26/2014	CHECKED - JLT	REVISED -			SHEET NO. 03 OF 16 SHEETS				
	ILLINOIS FED. AID PROJECT									



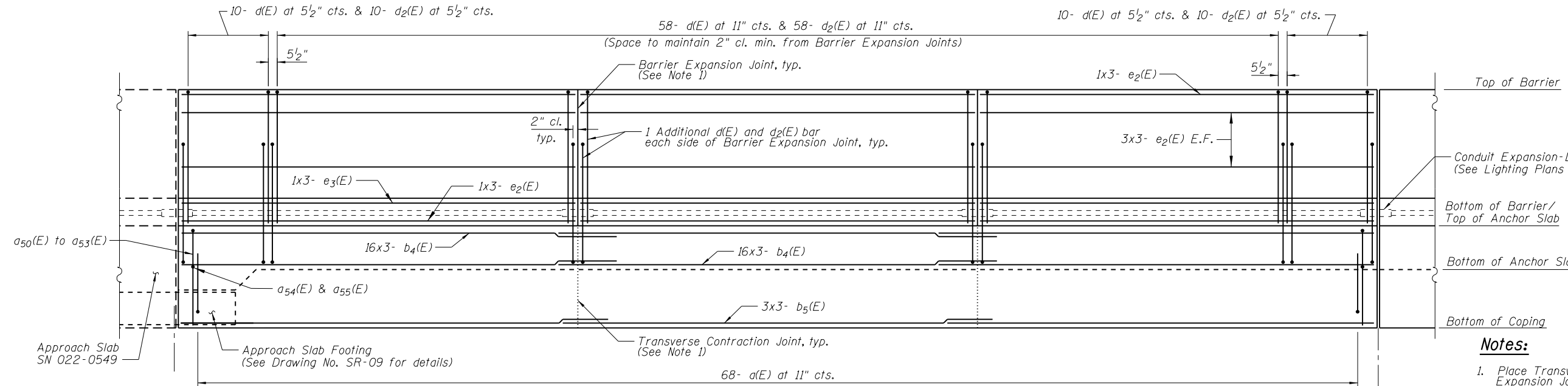
**PLAN**



**ELEVATION**

- Notes:**
1. Place Transverse Contraction Joint with Barrier Expansion Joint perpendicular to Face of Coping. For details, see Drawing No. SR-09.
  2. Place Transverse Expansion Joint perpendicular to Face of Coping. For details, see Drawing No. SR-09.
  3. For Section F-F and Section G-G, see Drawing No. SR-08.
  4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel or Anchor Slab Layout Line.
  5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
  6. For details of Anchor Slab at Approach Slab Footing, see Drawing No. SR-09.
  7. Field cut a<sub>47</sub>(E) hooks outside coping as needed to fit reinforcing in anchor slab.

FILE NAME = 0220550-60Y95-004-AnchSlabP&E1.dgn <b>CH2MHILL</b>	USER NAME = asantiag	DESIGNED - EJM	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ANCHORAGE SLAB PLAN &amp; ELEVATION No. 1</b> <b>STRUCTURE NO. 022-0550</b> SHEET NO. 04 OF 16 SHEETS	F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 6.0000' / in.	CHECKED - JLT	REVISED -			345	2013-083-R&B	DUPAGE	759	539
	PLOT DATE = 10/28/2014	DRAWN - EJM	REVISED -			<b>DRAWING NO. SR-04</b>		<b>CONTRACT NO. 60Y95</b>		
		CHECKED - JLT	REVISED -			ILLINOIS FED. AID PROJECT				



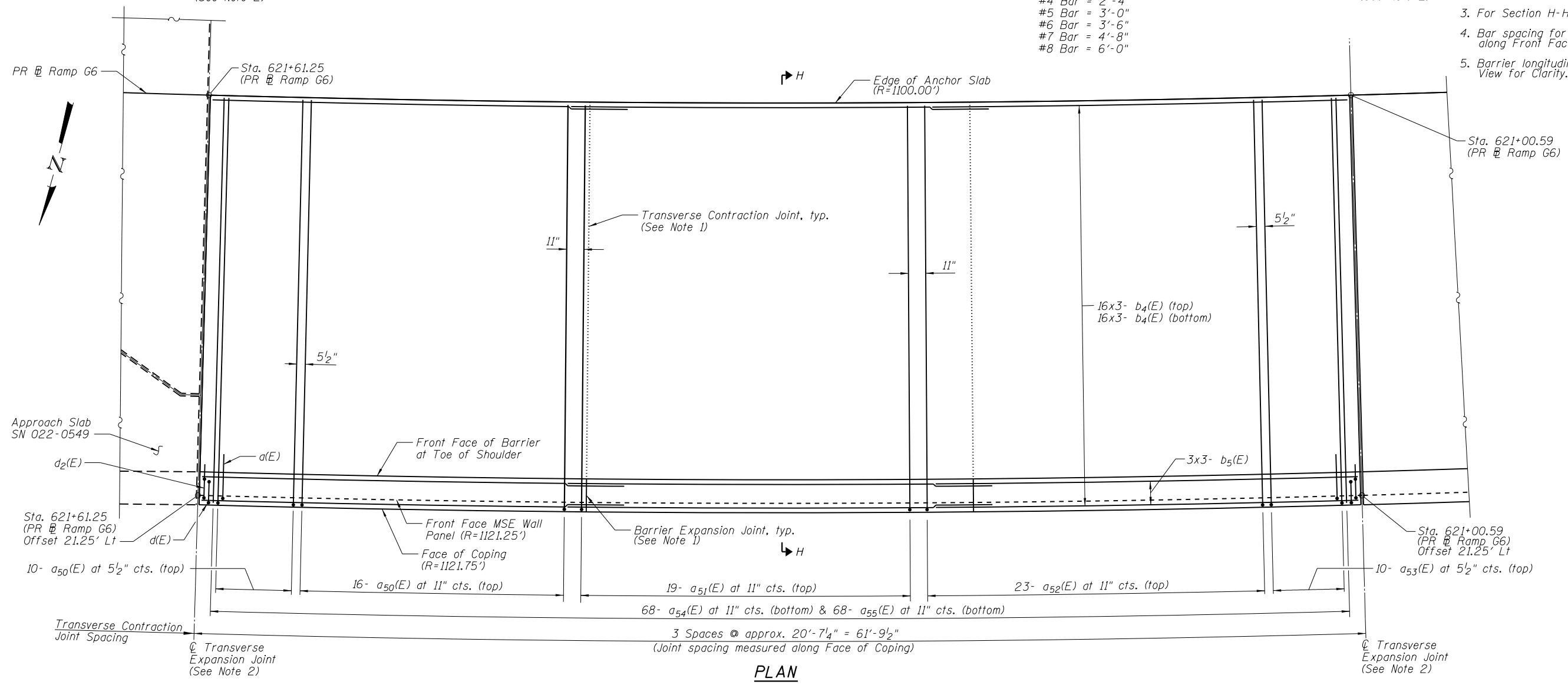
**ELEVATION**

**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

**Notes:**

1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Face of Coping. For details, see Drawing No. SR-09.
2. Place Transverse Expansion Joints perpendicular to Face of Coping. For details, see Drawing No. SR-09.
3. For Section H-H, see Drawing No. SR-08.
4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.



**PLAN**

FILE NAME = 0220550-60Y95-005-AnchSlabP&E2.dgn  
**CH2MHILL**

USER NAME = asantiag  
 DESIGNED - EJM  
 CHECKED - JLT  
 DRAWN - EJM  
 CHECKED - JLT  
 PLOT SCALE = 6.0000' / in.  
 PLOT DATE = 10/28/2014

DESIGNED - EJM  
 CHECKED - JLT  
 DRAWN - EJM  
 CHECKED - JLT

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

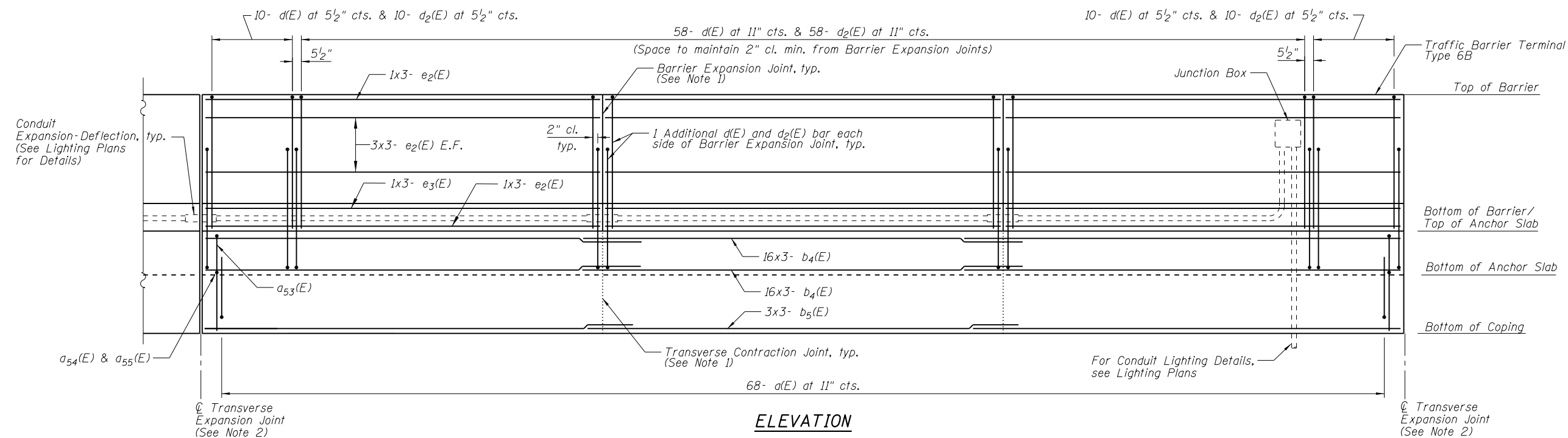
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ANCHORAGE SLAB PLAN & ELEVATION No. 2  
 STRUCTURE NO. 022-0550**

SHEET NO. 05 OF 16 SHEETS

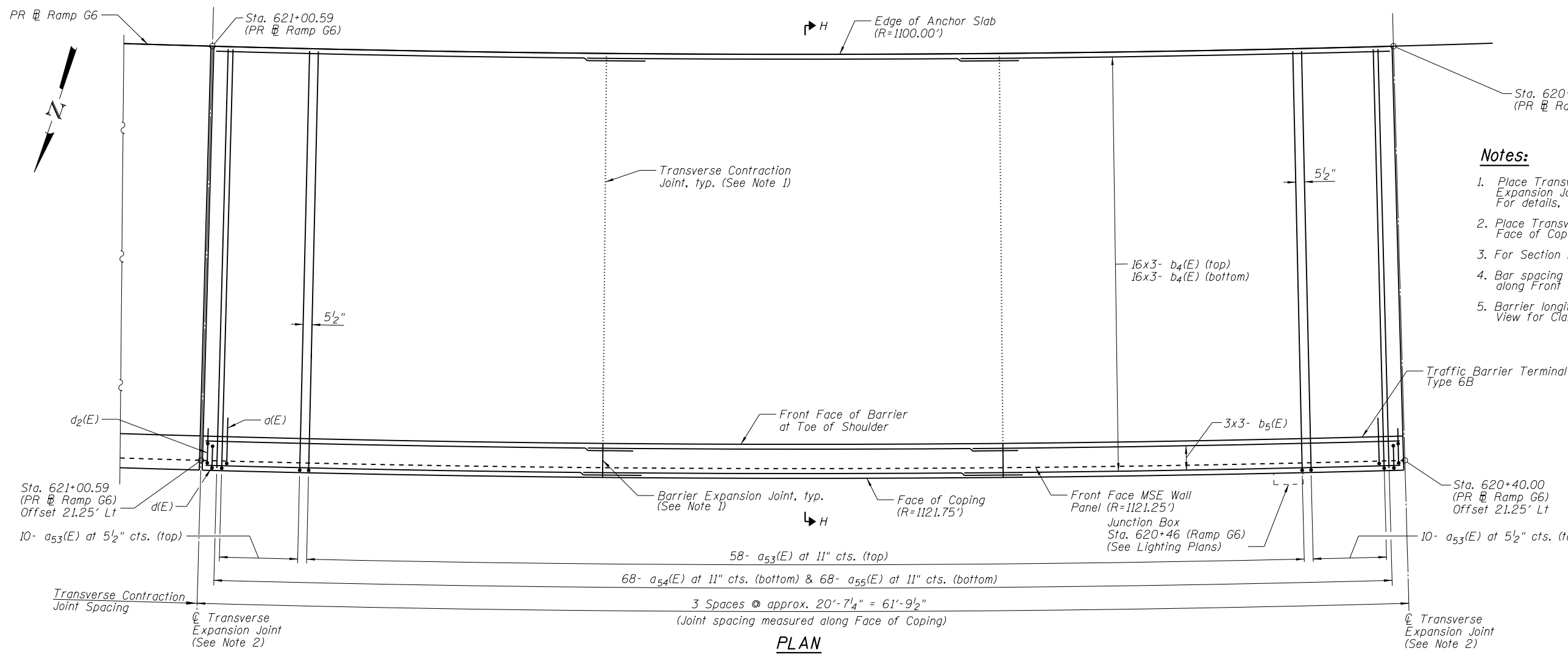
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2013-083-R&B	DUPAGE	759	540
DRAWING NO. SR-05			CONTRACT NO. 60Y95	
ILLINOIS FED. AID PROJECT				





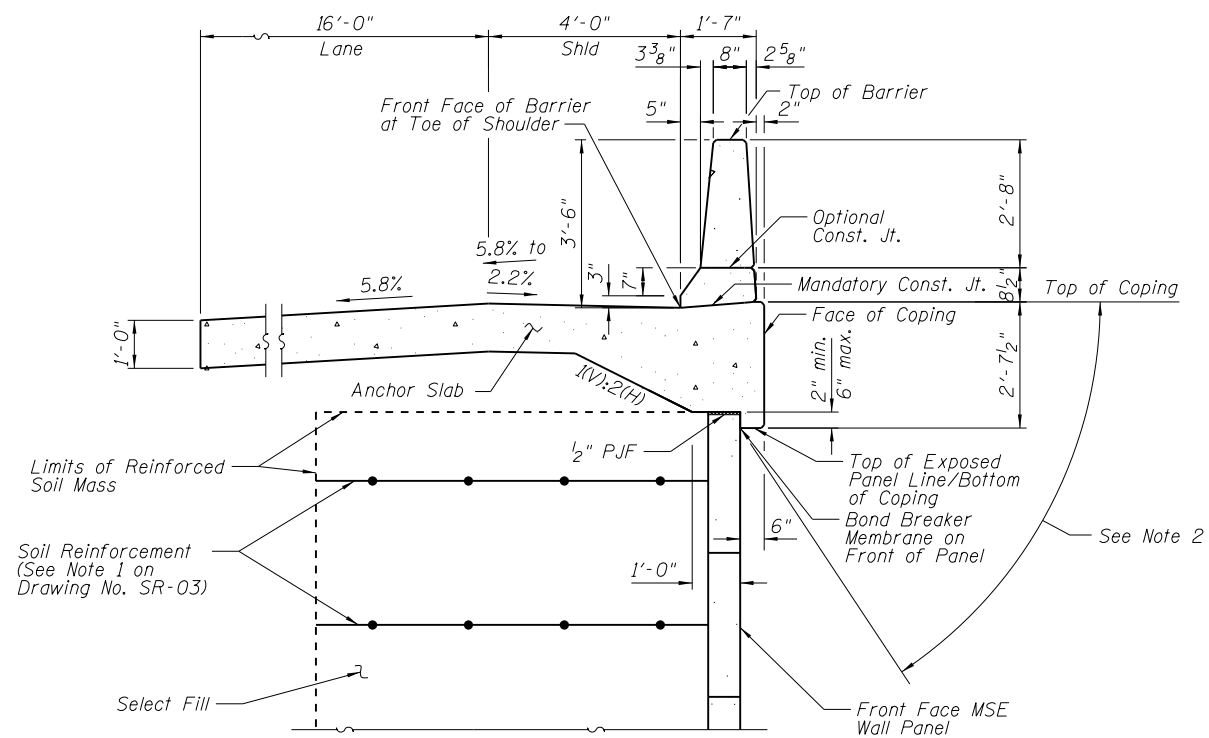
**Minimum Bar Lap**

#4 Bar	= 2'-4"
#5 Bar	= 3'-0"
#6 Bar	= 3'-6"
#7 Bar	= 4'-8"
#8 Bar	= 6'-0"

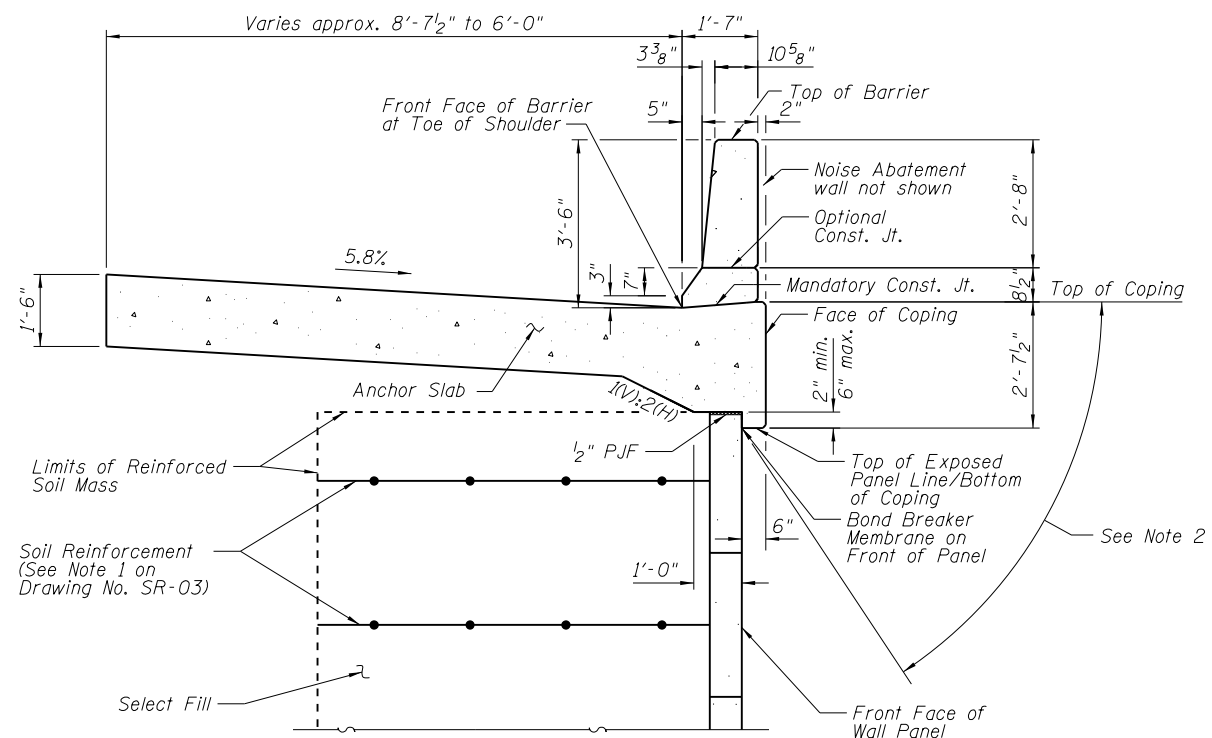


- Notes:**
1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Face of Coping. For details, see Drawing No. SR-09.
  2. Place Transverse Expansion Joints perpendicular to Face of Coping. For details, see Drawing No. SR-09.
  3. For Section H-H, see Drawing No. SR-08.
  4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
  5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.

FILE NAME = 0220550-60Y95-006-AnchSlabP&E3.dgn	USER NAME = asantiag	DESIGNED - EJM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ANCHORAGE SLAB PLAN &amp; ELEVATION No. 3 STRUCTURE NO. 022-0550</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
<b>CH2MHILL</b>	PLOT SCALE = 6.0000' / in.	CHECKED - JLT	REVISED -			345	2013-083-R&B	DUPAGE	759	541
PLOT DATE = 10/28/2014		DRAWN - EJM	REVISED -			DRAWING NO. SR-06		CONTRACT NO. 60Y95		
		CHECKED - JLT	REVISED -			SHEET NO. 06 OF 16 SHEETS		ILLINOIS FED. AID PROJECT		



**BARRIER AND ANCHOR SLAB DETAIL**  
(Left Wall)

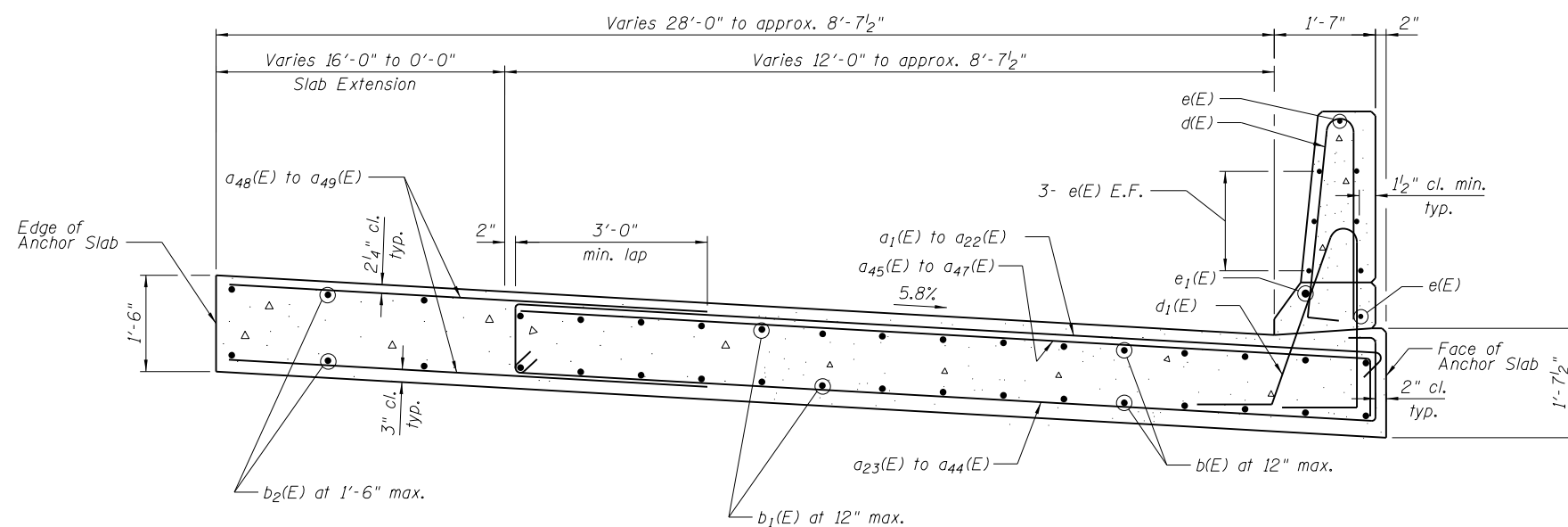


**BARRIER AND ANCHOR SLAB DETAIL**  
(Right Wall)

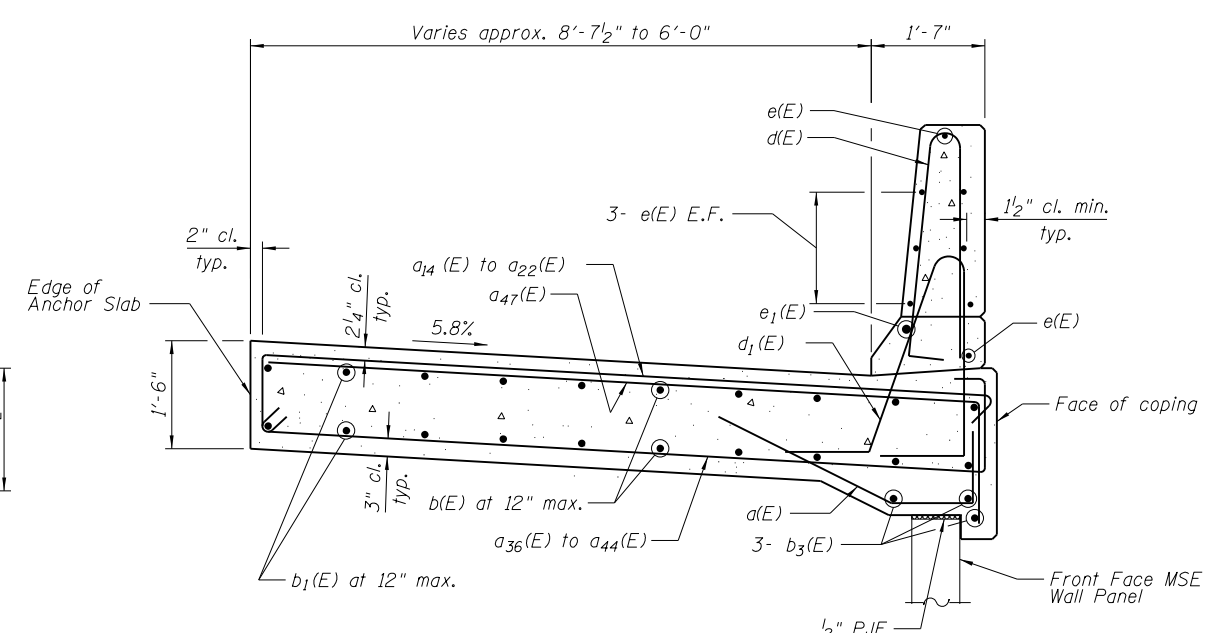
**Notes:**

- For anchor slab details not provided, see Anchorage Slab Plan and Elevation sheets.
- Apply concrete stain entire length of wall. See Form Liner Special Provisions for requirements.

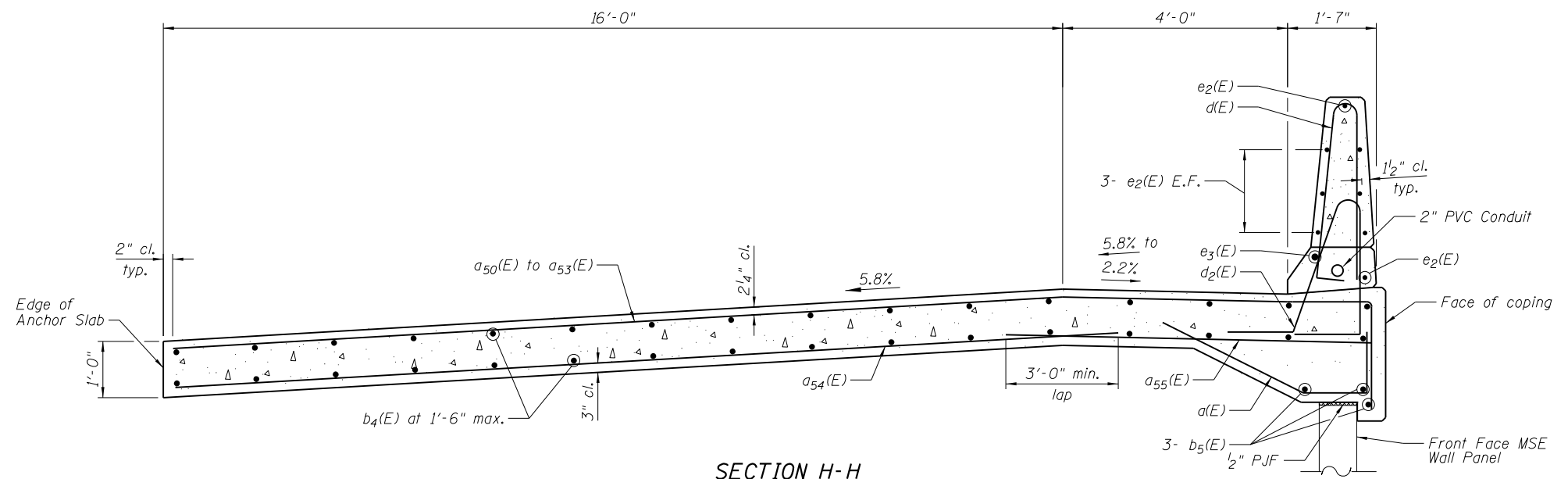
FILE NAME = 0220550-60Y95-007-AnchSlabBarrDet1.dgn	USER NAME = asantiag	DESIGNED - EJM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ANCHORAGE SLAB &amp; BARRIER DETAILS No. 1 STRUCTURE NO. 022-0550</b>	F.A.P. RTE. = 345	SECTION = 2013-083-R&B	COUNTY = DUPAGE	TOTAL SHEETS = 759	SHEET NO. = 542
<b>CH2MHILL</b>	PLOT SCALE = 4.0000' / in.	DRAWN - EJM	REVISED -			<b>DRAWING NO. SR-07 CONTRACT NO. 60Y95</b>				
PLOT DATE = 10/28/2014	CHECKED - JLT	REVISED -				SHEET NO. 07 OF 16 SHEETS				
						ILLINOIS FED. AID PROJECT				



**SECTION F-F**



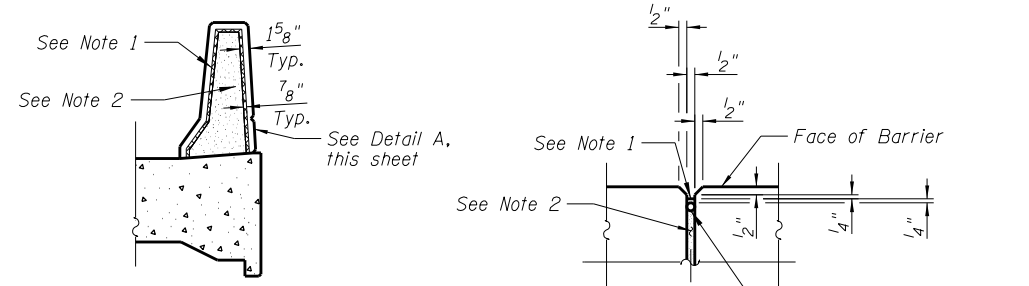
**SECTION G-G**



**SECTION H-H**

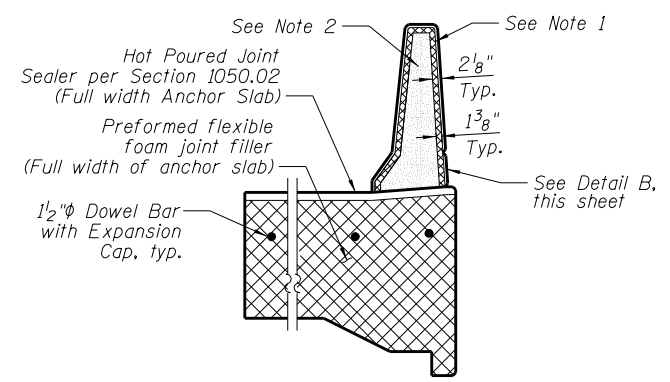
- Notes:**
- For anchor slab details not provided, see Anchorage Slab Plan and Elevation sheets.
  - For locations of Section F-F, Section G-G, and Section H-H, see Anchorage Slab Plan and Elevation sheets.
  - For Anchor Slab Bill of Materials and Bar Details, see Drawing No. SR-10.
  - For Anchor Slab dimensions not shown, see Barrier and Anchor Slab Detail on Drawing No. SR-07.
  - Cost of P.J.F. included in Concrete Superstructure.

FILE NAME = 0220550-60Y95-008-AnchSlabBarrDet2.dgn	USER NAME = asantiag	DESIGNED - EJM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ANCHORAGE SLAB &amp; BARRIER DETAILS No. 2 STRUCTURE NO. 022-0550</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
<b>CH2MHILL</b>	PLOT SCALE = 4.0000' / in.	CHECKED - JTL	REVISED -			345	2013-083-R&B	DUPAGE	759	543	
PLOT DATE = 10/28/2014	DRAWN - EJM	CHECKED - JLT	REVISED -			DRAWING NO. SR-08		CONTRACT NO. 60Y95		ILLINOIS FED. AID PROJECT	
						SHEET NO. 08 OF 16 SHEETS					

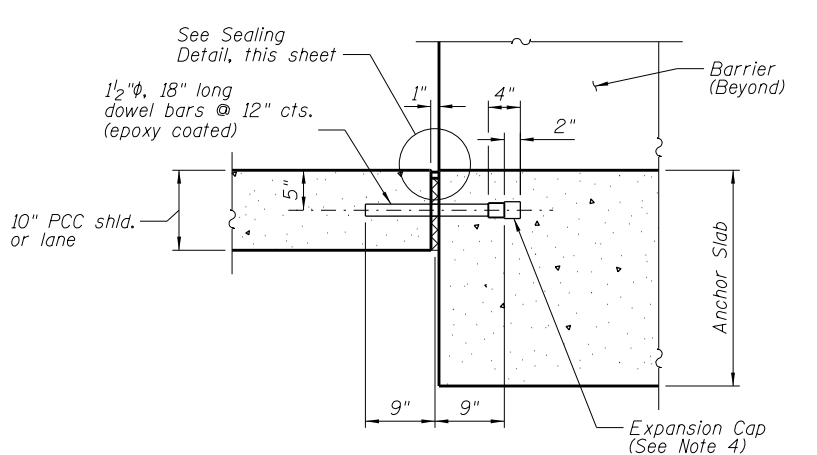


**SECTION I-I**  
(Cross slope not shown)

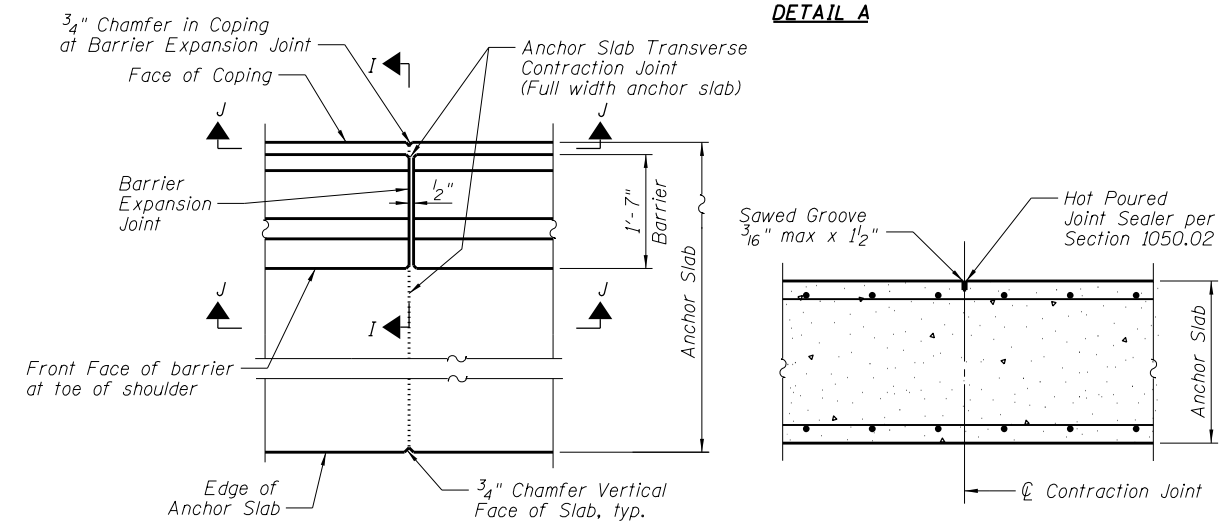
**DETAIL A**



**TYPICAL SECTION**  
(Cross slope not shown)



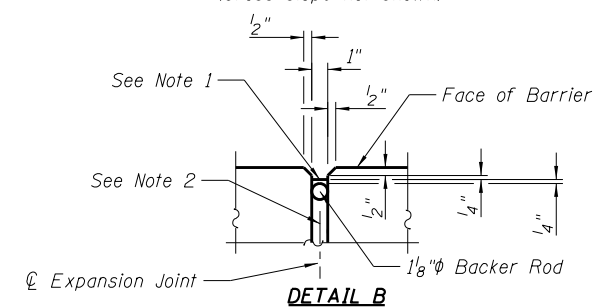
**ANCHOR SLAB TO PCC SHLD. OR LANE**



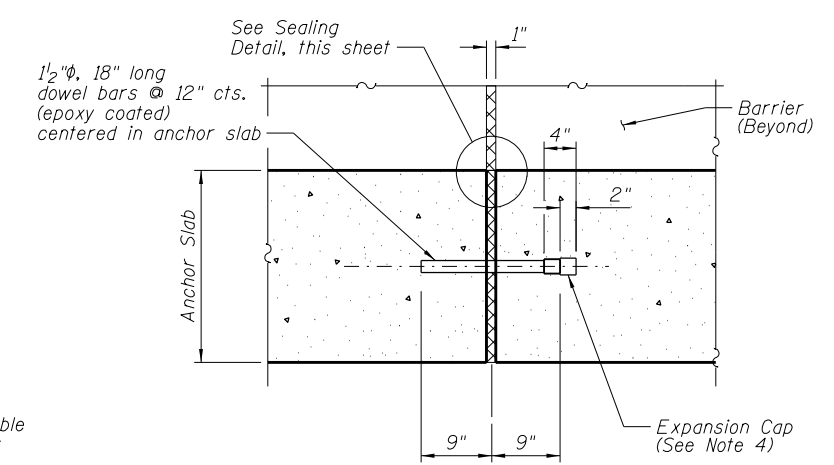
**PLAN**

**SECTION J-J**

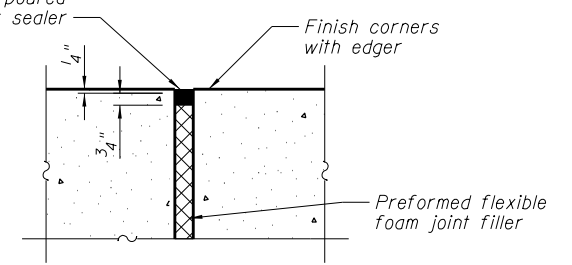
**TRANSVERSE CONTRACTION JOINT**



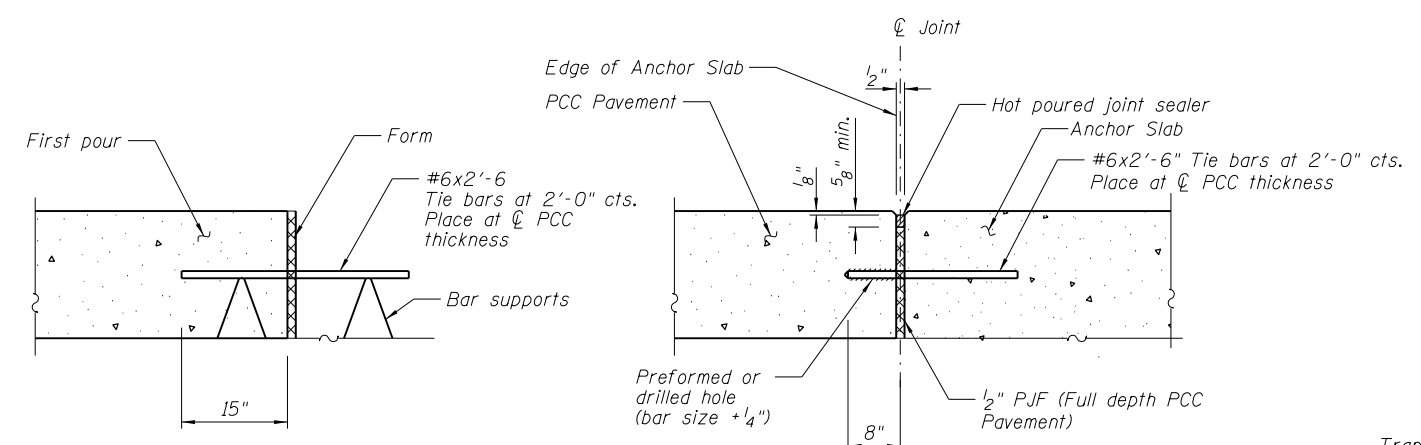
**DETAIL B**



**ANCHOR SLAB TO ANCHOR SLAB**



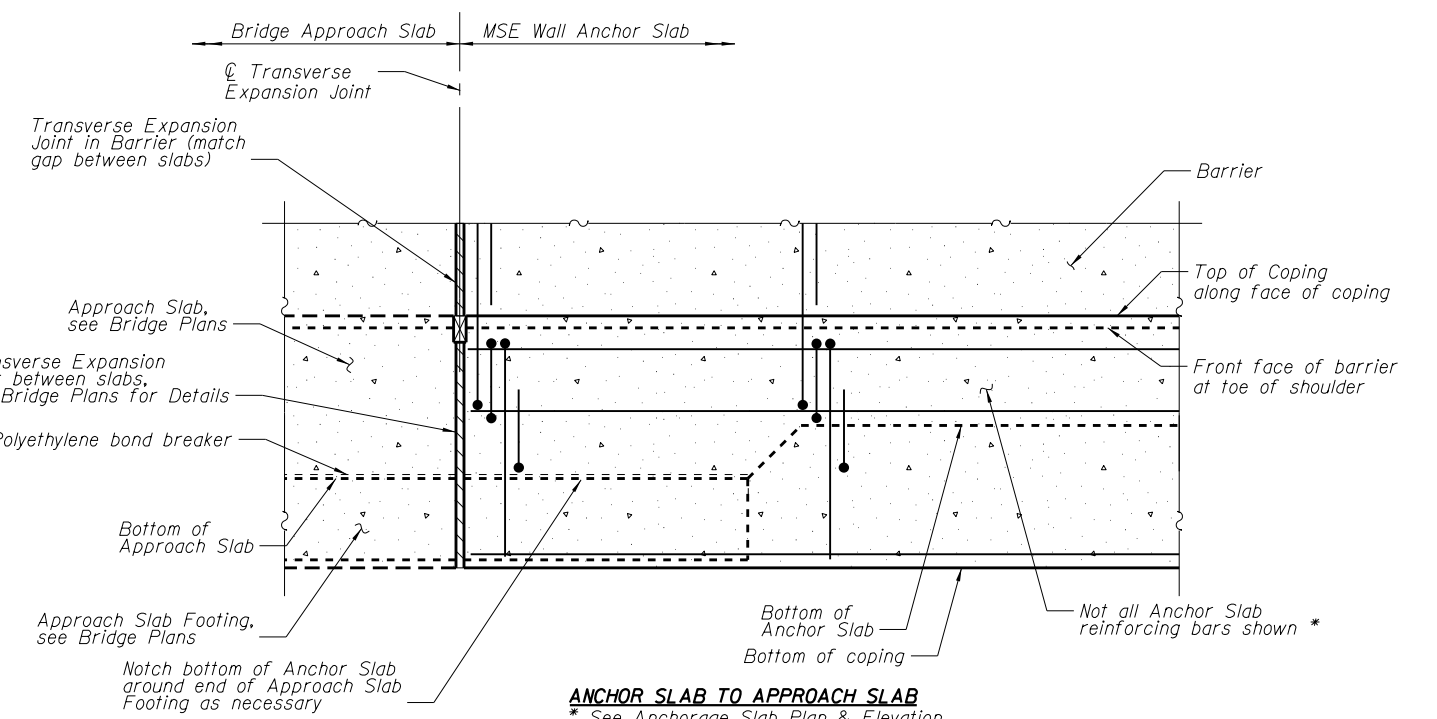
**SEALING DETAIL**



**TIE BAR PREFORMED IN PLACE**

**TIE BAR GROUTED IN PLACE**

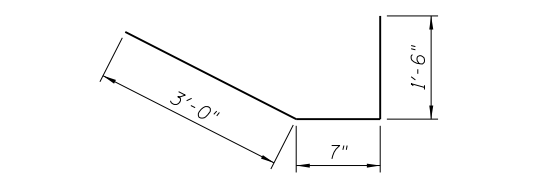
**LONGITUDINAL CONSTRUCTION JOINT**



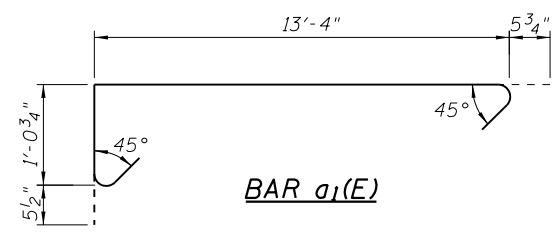
**ANCHOR SLAB TO APPROACH SLAB**  
\* See Anchorage Slab Plan & Elevation sheets for reinforcing details not shown.  
**TRANSVERSE EXPANSION JOINT**

**Notes:**

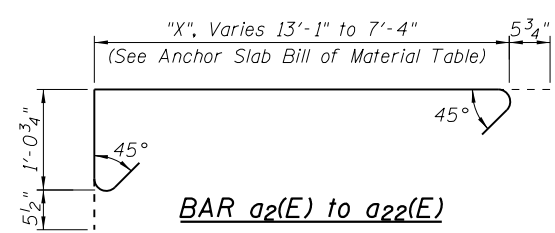
1. Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a backer rod.
2. Preformed Self-Expanding Cork Joint Filler according to Article 1051.07 of Std. Spec.
3. Dowel bars and tie bars are not included in Bill of Materials. Cost included in Concrete Superstructure.
4. Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.



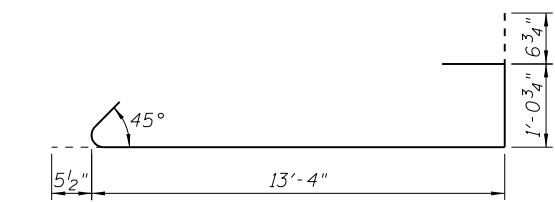
**BAR a(E)**



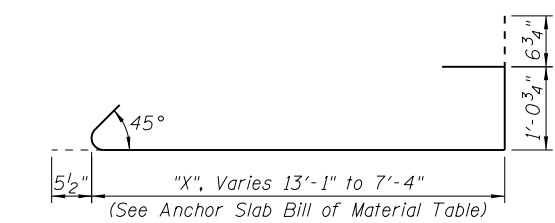
**BAR a1(E)**



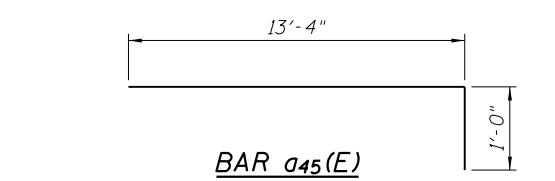
**BAR a2(E) to a22(E)**



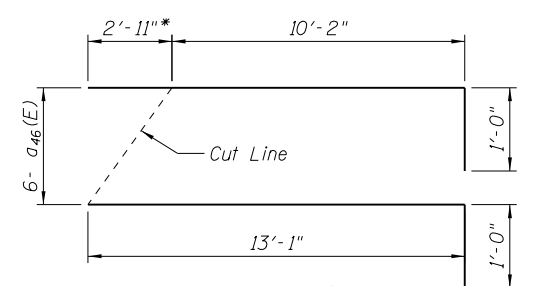
**BAR a23(E)**



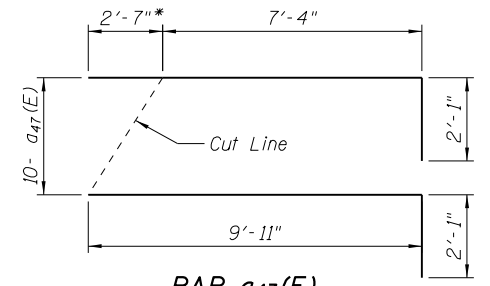
**BAR a24(E) to a44(E)**



**BAR a45(E)**

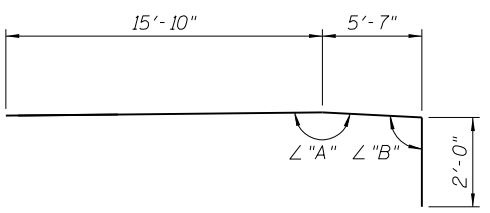


**BAR a46(E)**

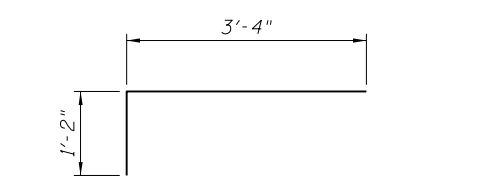


**BAR a47(E)**

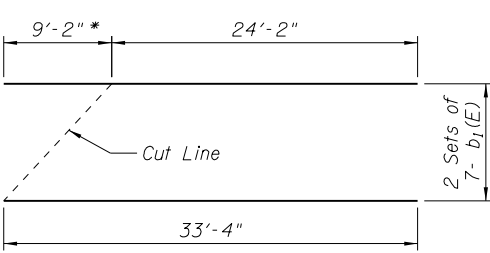
ANGLE TABLE		
BAR	∠ "A"	∠ "B"
a50(E)	178.9°	87.8°
a51(E)	177.7°	89.0°
a52(E)	176.6°	90.1°
a53(E)	175.4°	91.3°



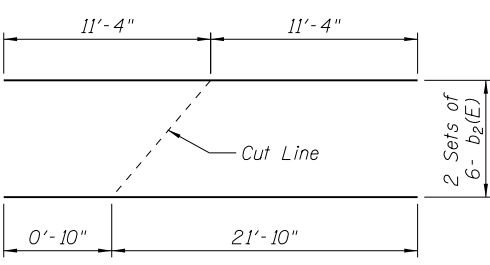
**BAR a50(E) thru a53(E)**  
(See Angle Table)



**BAR a56(E)**

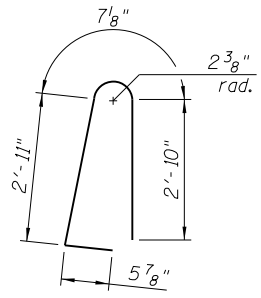


**BAR b1(E)**

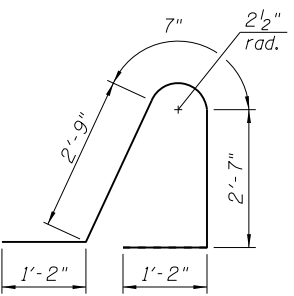


**BAR b2(E)**

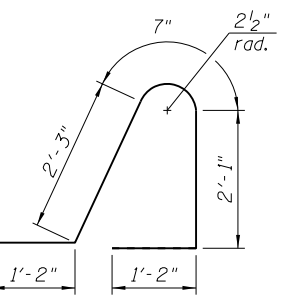
Order b2(E) bars full length and cut to fit as shown. Use remainder of bars at other face where needed.



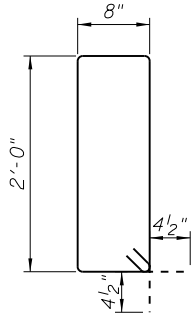
**BAR d(E)**



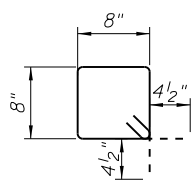
**BAR d1(E)**



**BAR d2(E)**



**BAR d3(E)**



**BAR d4(E)**

**ANCHOR SLAB BILL OF MATERIAL**

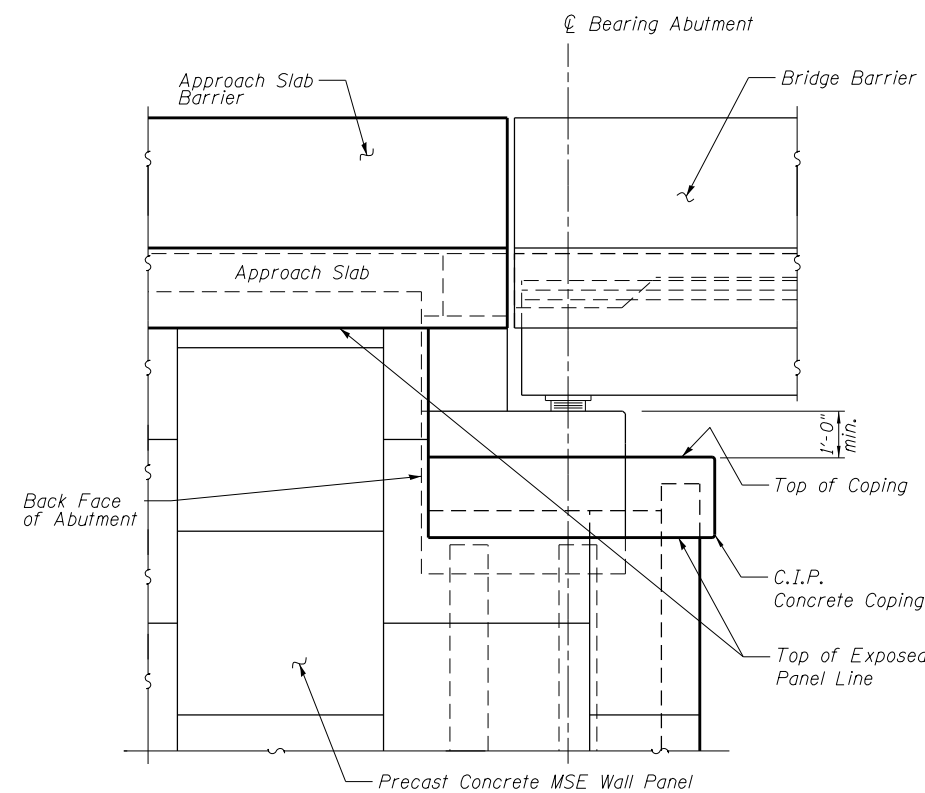
BAR	No.	SIZE	"X"	LENGTH	SHAPE
a(E)	141	4	-	5'-1"	└─┘
a1(E)	54	5	-	15'-4"	└─┘
a2(E)	1	5	13'-1"	15'-1"	└─┘
a3(E)	1	5	12'-9"	14'-9"	└─┘
a4(E)	1	5	12'-6"	14'-6"	└─┘
a5(E)	1	5	12'-2"	14'-2"	└─┘
a6(E)	1	5	11'-11"	13'-11"	└─┘
a7(E)	1	5	11'-7"	13'-7"	└─┘
a8(E)	1	5	11'-4"	13'-4"	└─┘
a9(E)	1	5	11'-0"	13'-0"	└─┘
a10(E)	1	5	10'-9"	12'-9"	└─┘
a11(E)	1	5	10'-5"	12'-5"	└─┘
a12(E)	1	5	10'-2"	12'-2"	└─┘
a13(E)	1	5	9'-11"	11'-11"	└─┘
a14(E)	1	5	9'-7"	11'-7"	└─┘
a15(E)	1	5	9'-4"	11'-4"	└─┘
a16(E)	1	5	9'-0"	11'-0"	└─┘
a17(E)	1	5	8'-9"	10'-9"	└─┘
a18(E)	1	5	8'-5"	10'-5"	└─┘
a19(E)	1	5	8'-2"	10'-2"	└─┘
a20(E)	1	5	7'-10"	9'-10"	└─┘
a21(E)	1	5	7'-7"	9'-7"	└─┘
a22(E)	1	5	7'-4"	9'-4"	└─┘
a23(E)	54	5	-	15'-5"	└─┘
a24(E)	1	5	13'-1"	15'-2"	└─┘
a25(E)	1	5	12'-9"	14'-10"	└─┘
a26(E)	1	5	12'-6"	14'-7"	└─┘
a27(E)	1	5	12'-2"	14'-3"	└─┘
a28(E)	1	5	11'-11"	14'-0"	└─┘
a29(E)	1	5	11'-7"	13'-8"	└─┘
a30(E)	1	5	11'-4"	13'-5"	└─┘
a31(E)	1	5	11'-0"	13'-1"	└─┘
a32(E)	1	5	10'-9"	12'-10"	└─┘
a33(E)	1	5	10'-5"	12'-6"	└─┘
a34(E)	1	5	10'-2"	12'-3"	└─┘
a35(E)	1	5	9'-11"	12'-0"	└─┘
a36(E)	1	5	9'-7"	11'-8"	└─┘
a37(E)	1	5	9'-4"	11'-5"	└─┘
a38(E)	1	5	9'-0"	11'-1"	└─┘
a39(E)	1	5	8'-9"	10'-10"	└─┘
a40(E)	1	5	8'-5"	10'-6"	└─┘
a41(E)	1	5	8'-2"	10'-3"	└─┘
a42(E)	1	5	7'-10"	9'-11"	└─┘
a43(E)	1	5	7'-7"	9'-8"	└─┘
a44(E)	1	5	7'-4"	9'-5"	└─┘
a45(E)	32	6	-	14'-4"	└─┘
a46(E)	6	6	-	14'-1"	└─┘
a47(E)	10	6	-	12'-0"	└─┘
a48(E)	18	5	-	18'-4"	└─┘
a49(E)	18	5	-	10'-9"	└─┘
a50(E)	26	7	-	23'-5"	└─┘
a51(E)	19	7	-	23'-5"	└─┘
a52(E)	23	7	-	23'-5"	└─┘
a53(E)	88	7	-	23'-5"	└─┘
a54(E)	136	5	-	17'-4"	└─┘
a55(E)	136	5	-	7'-1"	└─┘
a56(E)	2	7	-	4'-6"	└─┘
a57(E)	4	4	-	3'-6"	└─┘

**ANCHOR SLAB BILL OF MATERIAL**

BAR	No.	SIZE	LENGTH	SHAPE
b(E)	16	6	33'-8"	└─┘
b1(E)	14	6	33'-4"	└─┘
b2(E)	12	5	22'-8"	└─┘
b3(E)	3	4	3'-8"	└─┘
b4(E)	192	5	22'-6"	└─┘
b5(E)	18	4	22'-1"	└─┘
d(E)	214	5	6'-10"	└─┘
d1(E)	50	5	8'-3"	└─┘
d2(E)	164	5	7'-3"	└─┘
d3(E)	3	4	6'-1"	└─┘
d4(E)	1	4	3'-5"	└─┘
e(E)	8	4	12'-7"	└─┘
e1(E)	1	8	12'-7"	└─┘
e2(E)	48	4	20'-2"	└─┘
e3(E)	6	8	20'-2"	└─┘
e4(E)	8	4	20'-7"	└─┘
e5(E)	1	8	20'-7"	└─┘

DESCRIPTION	UNIT	QUANTITY
Concrete Superstructure	CU YD	171.7
Reinforcement Bars, Epoxy Coated	Pounds	26260
Protective Coat	SQ YD	416

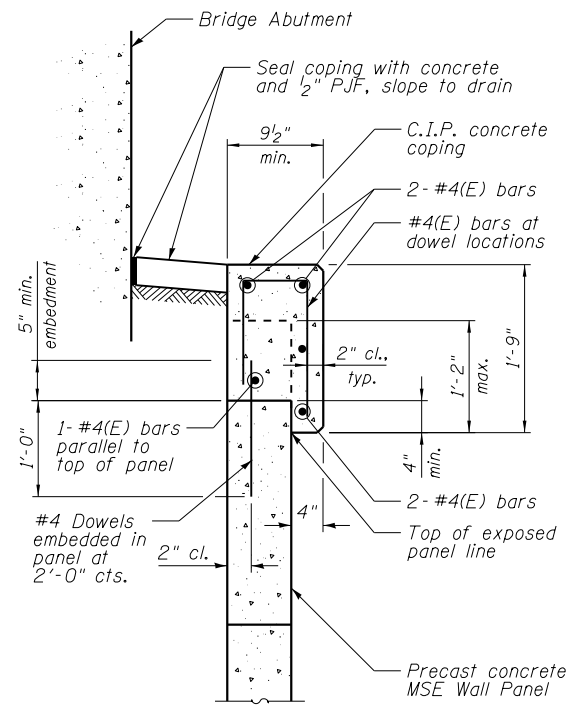
**Notes:**  
 1. Reinforcement in MSE wall panels and C.I.P. Coping (except anchor slab coping) not included in Bill of Materials. Cost included in Mechanically Stabilized Earth Retaining Wall.  
 \* Denotes remainder of bar unused.



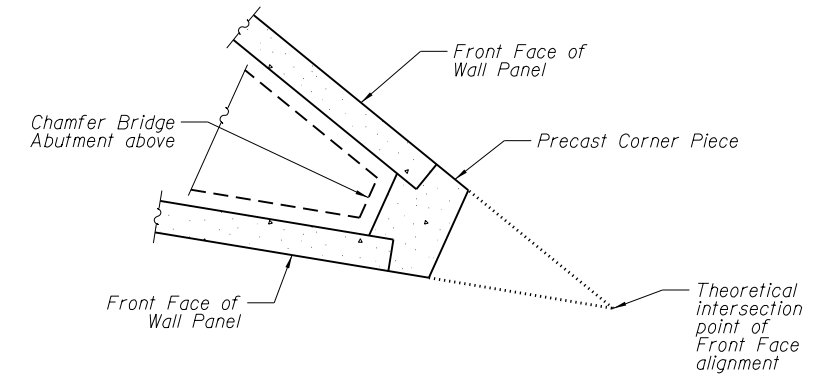
**C.I.P. COPING DETAIL AT ENDS OF ABUTMENT**

**Note:**

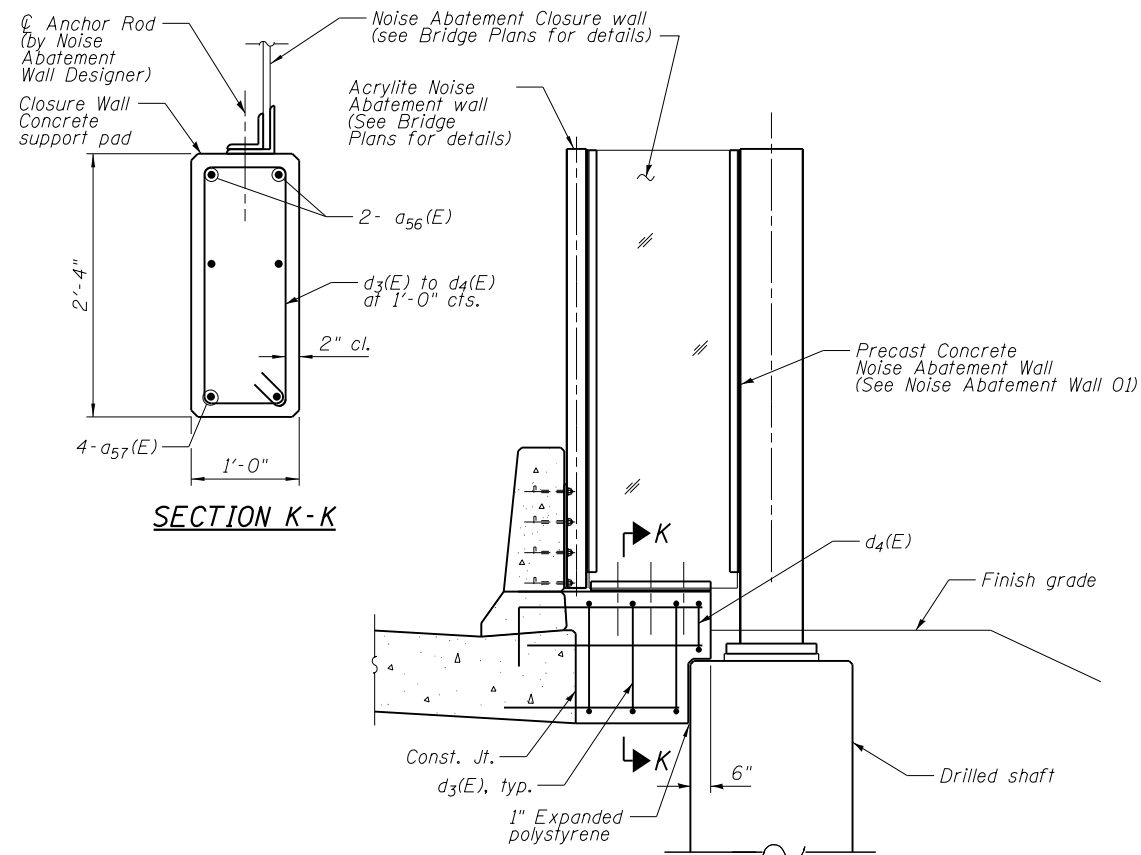
1. Reinforcing bars in C.I.P. coping (except anchor slab coping) to be designed by MSE Wall Supplier.



**C.I.P. CONCRETE COPING**



**ACUTE WALL CORNER DETAIL**



**SECTION K-K**

**NOISE ABATEMENT CLOSURE WALL DETAIL**

# SOIL BORING LOG

Page 1 of 1

Date 12/5/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-220, Ramp G6 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0550  
 Station 621+22.73 to 622+54.08  
 BORING NO. R-220-RWB-01  
 Station 621+32.29  
 Offset 12.9 ft RT.  
 Northing 1,936,782.86  
 Easting 1,069,539.25  
 Ground Surface Elev. 706.8 ft

DEPTH (ft)	SOIL DESCRIPTION	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)
0	TOPSOIL 706.3								
0-5	Very Stiff to Hard, Black SILTY CLAY trace - gravel, asphalt grindings	3	5	4.5+ P	18				
5-6		4	4	3.0 P	28				
6-7	FILL 701.3								
7-8	Stiff to Hard, Brown and Gray CLAY trace - gravel	3	5	5.0 B	16				
8-9		4	8						
9-10		6	6	6.0 B	18				
10-11		7	7						
11-12	Gray below 11 feet	3	6	7.4 B	18				
12-13		6	10						
13-14		7	7						
14-15	Grain Size LL=35, PI=17, A-6(13) Dry Density=112 pcf	3	5	2.5 B	18				
15-16		6	6						
16-17		3	4	4.1 B	19				
17-18		5	5						
18-19		3	3	1.7 B	20				
19-20		5	5						
20	END OF BORING 666.8	11	11						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 1 of 1

Date 12/5/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-220, Ramp G6 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0550  
 Station 621+22.73 to 622+54.08  
 BORING NO. R-220-RWB-02  
 Station 621+82.29  
 Offset 12.6 ft RT.  
 Northing 1,936,795.49  
 Easting 1,069,587.57  
 Ground Surface Elev. 707.9 ft

DEPTH (ft)	SOIL DESCRIPTION	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOWS	UCS (tsf)	MOIST (%)
0	TOPSOIL 707.4								
0-4	Very Stiff, Brown and Black SILTY CLAY trace - gravel	3	5	3.0 B	20				
4-5		4	8						
5-6	Black below 3 feet Grain Size LL=58, PI=29, A-7-6(30) Dry Density=90 pcf	3	4	3.0 P	29				
6-7		5	6						
7-8	FILL 702.4								
8-9	Stiff to Hard, Brown and Gray CLAY trace - gravel, roots	3	4	3.0 B	20				
9-10		4	5						
10-11		2	4	2.9 B	20				
11-12		4	5						
12-13	Gray below 11 feet	3	6	5.0 B	19				
13-14		8	8						
14-15		3	3						
15-16		4	5	2.9 B	18				
16-17		3	3	2.1 B	19				
17-18		5	5						
18-19		3	3	2.4 B	18				
19-20		5	5						
20	END OF BORING 667.9	11	11						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.





# SOIL BORING LOG

Page 1 of 2

Date 12/4/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-220, Ramp G6 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0550  
 Station 621+22.73 to 622+54.08  
 BORING NO. R-220-RWB-04  
 Station 621+19.47  
 Offset 9.2 ft LT.  
 Northing 1,936,800.52  
 Easting 1,069,520.88  
 Ground Surface Elev. 706.3 ft

DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)
705.8				TOPSOIL				
5				Hard, Brown and Black SILTY CLAY trace - gravel, roots	4			
6	4.4	27			9	3.4	21	
8	S				12	B		
703.3				Black below 3 feet				
6					3			
8	4.5+	21			9	6.2	19	
8	P				11	B		
700.8				FILL				
6				Very Stiff to Hard, Brown and Gray CLAY trace - gravel, roots	3			
8	5.2	17			6	2.6	19	
9	B				9	B		
5					3			
5	3.3	23			6	3.0	21	
6	B				8	B		
695.3				Gray below 11 feet Dry Density=106 pcf				
4					3			
8	4.1	21			13	2.2	22	
10	B				8	B		
673.3				Stiff to Very Stiff, Gray LOAM little - gravel Grain Size LL=23, PI=8, A-4(2) Dry Density=118 pcf				
29					6			
13	3.5	22			9	2.0	16	
14	P				10	B		
5					4			
8	3.6	18			7	1.3	14	
9	B				18	B		
668.3				Stiff to Hard, Gray SILTY CLAY LOAM trace to little - gravel Sandy Loam seam at 39 feet				
3					8			
8	3.1	18			9	4.0	12	
9	B				10	P		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 2 of 2

Date 12/4/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-220, Ramp G6 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0550  
 Station 621+22.73 to 622+54.08  
 BORING NO. R-220-RWB-04  
 Station 621+19.47  
 Offset 9.2 ft LT.  
 Northing 1,936,800.52  
 Easting 1,069,520.88  
 Ground Surface Elev. 706.3 ft

DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)
				Stiff to Hard, Gray SILTY CLAY LOAM trace to little - gravel(continued)				
5					9	1.2	11	
6	4.4	27			13	B		
663.3				Very Stiff, Gray SILTY CLAY trace - gravel				
10					10			
12	3.3	19			12	3.3	19	
12	B				12	B		
660.8				Stiff, Gray SILTY CLAY LOAM little - gravel				
3					3			
3	1.6	13			3	1.6	13	
5	B				5	B		
656.3				END OF BORING				
8	1.6	13			8	1.6	13	
8	B				8	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

Page 1 of 2

Date 12/3/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-220, Ramp G6 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION \_\_\_\_\_ LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0550  
 Station 621+22.73 to 622+54.08  
 BORING NO. R-220-RWB-05  
 Station 621+83.34  
 Offset 12.3 ft LT.  
 Northing 1,936,819.92  
 Easting 1,069,582.46  
 Ground Surface Elev. 707.4 ft

	D E P T H	B L O W S	U C S Qu	M O I S T		D E P T H	B L O W S	U C S Qu	M O I S T
	(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
TOPSOIL	706.9				Stiff to Very Stiff, Gray CLAY LOAM little to some - gravel(continued)				
Hard, Brown, Gray and Black SILTY CLAY trace - gravel		4				2			
		7	4.5+	16		4	2.0	20	
		9	P			4	B		
		4				3			
		5	4.5+	20		5	1.9	20	
		5	P			6	B		
FILL	701.9				Dry Density=108 pcf				
Stiff to Hard, Brown and Gray CLAY trace - roots, gravel		7				3			
		10	5.4	17		5	1.7	20	
		11	B			6	B		
		7			Grain Size LL=31, PI=14, A-6(4) Dry Density=116 pcf	3			
		8	5.8	21		6	1.1	12	
		10	B			6	B		
		4				6			
		8	5.0	20		6	1.7	17	
		12	B			8	B		
Gray below 13 feet	694.4				Very Stiff to Hard, Gray SILTY CLAY trace - gravel				
		3				6			
		6	3.7	20		7	2.0	16	
		6	B			15	P		
		2							
		4	1.9	20					
		5	B						
		3				7			
		4	2.5	20		8	2.6	15	
		5	B			8	B		
Stiff to Very Stiff, Gray CLAY LOAM little to some - gravel	689.4								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 2 of 2

Date 12/3/12

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-220, Ramp G6 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION \_\_\_\_\_ LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary Below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0550  
 Station 621+22.73 to 622+54.08  
 BORING NO. R-220-RWB-05  
 Station 621+83.34  
 Offset 12.3 ft LT.  
 Northing 1,936,819.92  
 Easting 1,069,582.46  
 Ground Surface Elev. 707.4 ft

	D E P T H	B L O W S	U C S Qu	M O I S T		D E P T H	B L O W S	U C S Qu	M O I S T
	(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
Very Stiff to Hard, Gray SILTY CLAY trace - gravel(continued)					Very Stiff to Hard, Gray SILTY CLAY trace - gravel(continued)				
		6							
		7	2.0	20					
		10	P						
		4							
		6							
		10	4.1	14					
		13	B						
		6							
		10	7.0	14					
		13	S						
		14							
		10							
		12	3.0	12					
		10	P						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

CONTRACT 1-11-4031 DESCRIPTION Bridge B-35, Ramp G6 Over Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0549  
 Station 622+98.86  
 BORING NO. B-35-BSB-01  
 Station 622+23.53  
 Offset 7.4 ft RT.  
 Northing 1,936,808.97  
 Easting 1,069,625.69  
 Ground Surface Elev. 708.4 ft

DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION
0				TOPSOIL 707.9	0				687.9
7				Stiff to Very Stiff, Brown, Black and Gray SILTY CLAY trace - gravel, asphalt grindings	2				Stiff to Very Stiff, Gray CLAY LOAM trace - gravel
8	3.0	22			4	1.4	20		
8	P				5	B			
12					2				
6	2.0	10			3	1.2	21		
5	P				4	B			
-5					-25				
3					3				
5	1.2	22			4	2.1	21		
5	B				7	B			
FILL 700.4									
3				Medium Stiff to Stiff, Brown, Black and Gray CLAY trace - gravel, rocks, organics	3				
3	1.2	29			6	2.3	20		
3	B				7	B			
-10					-30				
				ST-5 (10'-12') Grain Size LL=43, PI=19, A-7-6(17) Dry Density=94 pcf					
	0.5"	30							
	S				4				little - gravel below 31 feet
					5	2.1	18		
					8	B			
695.4					672.9				
5				Stiff to Very Stiff, Gray SILTY CLAY trace - gravel	4				Medium Dense, Gray Medium SAND
7	3.9	21			7				
10	B				8				
-15					9				
3					7				
5	2.5	19			8				
6	B				9				
670.4					670.4				
2				Stiff, Gray SILTY CLAY trace to little - gravel	7				
4	1.7	19			15	1.5	15		
5	B				7	B			
-20					-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT 1-11-4031 DESCRIPTION Bridge B-35, Ramp G6 Over Ramp K3 LOGGED BY K. Krug

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Solid Stem Auger / Mud Rotary below 10 feet HAMMER TYPE Automatic

STRUCT. NO. 022-0549  
 Station 622+98.86  
 BORING NO. B-35-BSB-01  
 Station 622+23.53  
 Offset 7.4 ft RT.  
 Northing 1,936,808.97  
 Easting 1,069,625.69  
 Ground Surface Elev. 708.4 ft

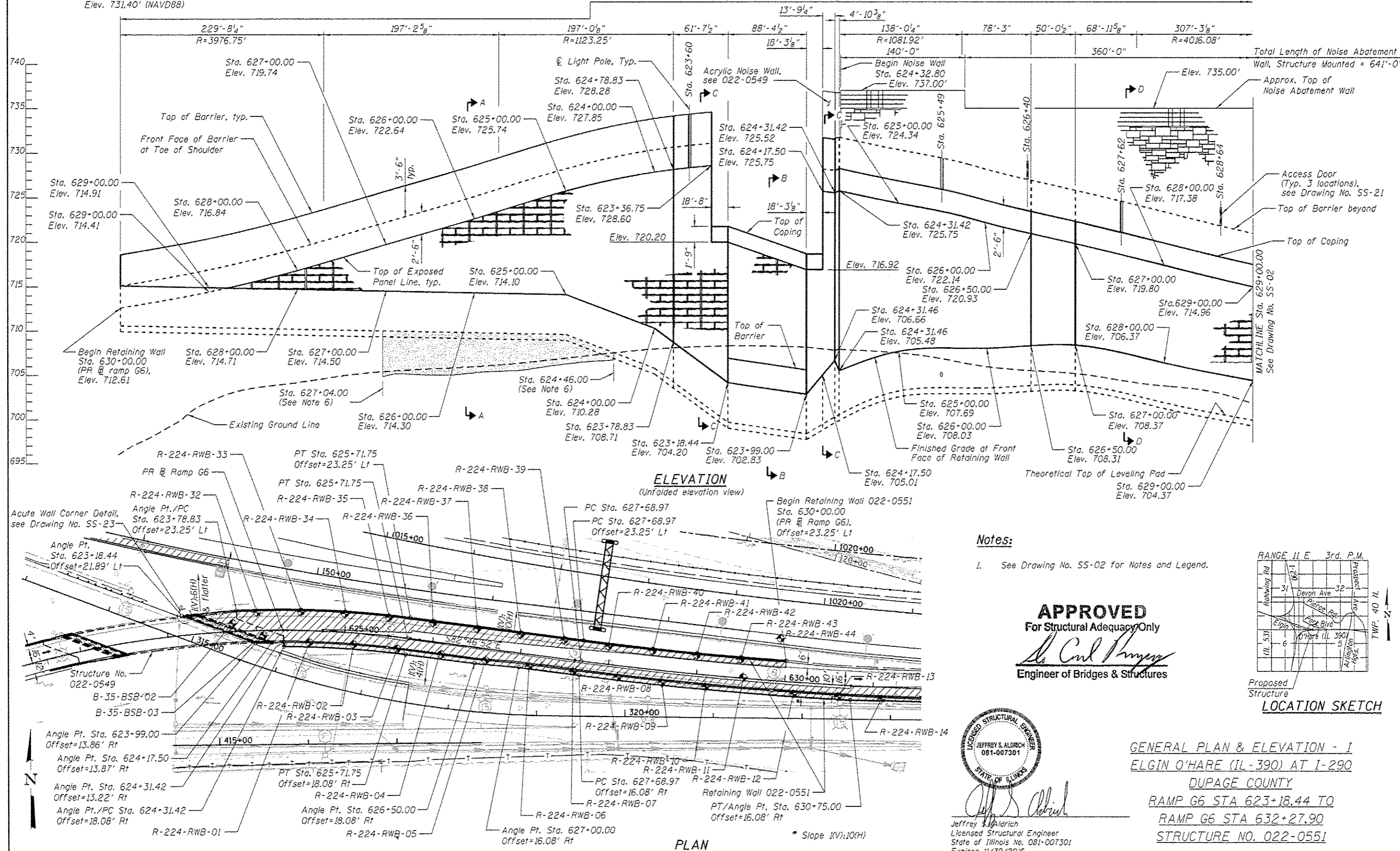
DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION
				Stiff, Gray SILTY CLAY trace to little - gravel (continued)					647.9
3					5				Medium Dense, Gray LOAM little - gravel
3	1.5	24			6				
5	B				7				
665.4					645.4				
				Loose, Gray SILTY LOAM trace - gravel					Stiff to Very Stiff, Gray SILTY CLAY little - gravel
3					6				
3					8	2.5	15		
5					11	B			
-45					-65				
662.9					662.9				
				Stiff to Very Stiff, Gray SILTY CLAY trace - gravel					
6					7				
8	1.1	14			11	2.6	14		
9	B				14	B			
657.9					657.9				
				Medium Dense, Gray LOAM trace to little - gravel					
4					6				
4					9	1.7	13		
6					11	B			
650.4					635.4				
				Stiff, Gray SILTY CLAY trace to little - gravel					Dense to Extremely Dense, Gray SANDY LOAM
5					14				
5	1.7	14			24				
6	B				25				
-60					-75				
650.4					650.4				
				Stiff, Gray SILTY CLAY trace to little - gravel					
5					8				
5	1.7	14			26				
6	B				50/5"				
-60					-80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

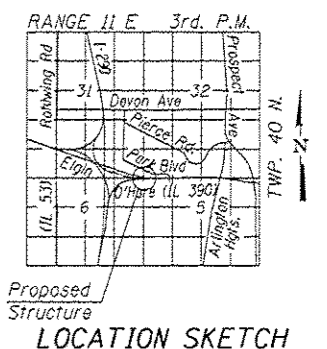
Bench Mark: BM#716 - Cut square in the Northwest end of bridge wall. Approximately 65 feet North of the centerline of Thorndale Ave. and 168 feet West of the centerline of I-290. Approximately 12 feet West of bridge deck. Elev. 731.40' (NAVD88)

1606'-10" Measured Along Front Face of Retaining Wall



**Notes:**  
1. See Drawing No. SS-02 for Notes and Legend.

**APPROVED**  
For Structural Adequacy Only  
*Jeffrey S. Aldrich*  
Engineer of Bridges & Structures



*Jeffrey S. Aldrich*  
Jeffrey S. Aldrich  
Licensed Structural Engineer  
State of Illinois No. 081-007301  
Expires 11/30/2016

**GENERAL PLAN & ELEVATION - I**  
**ELGIN O'HARE (IL-390) AT I-290**  
DUPAGE COUNTY  
RAMP G6 STA 623+18.44 TO  
RAMP G6 STA 632+27.90  
STRUCTURE NO. 022-0551

FILE NAME: 8228551-02Y95-001-CPE1.dgn  
**CH2MHILL**

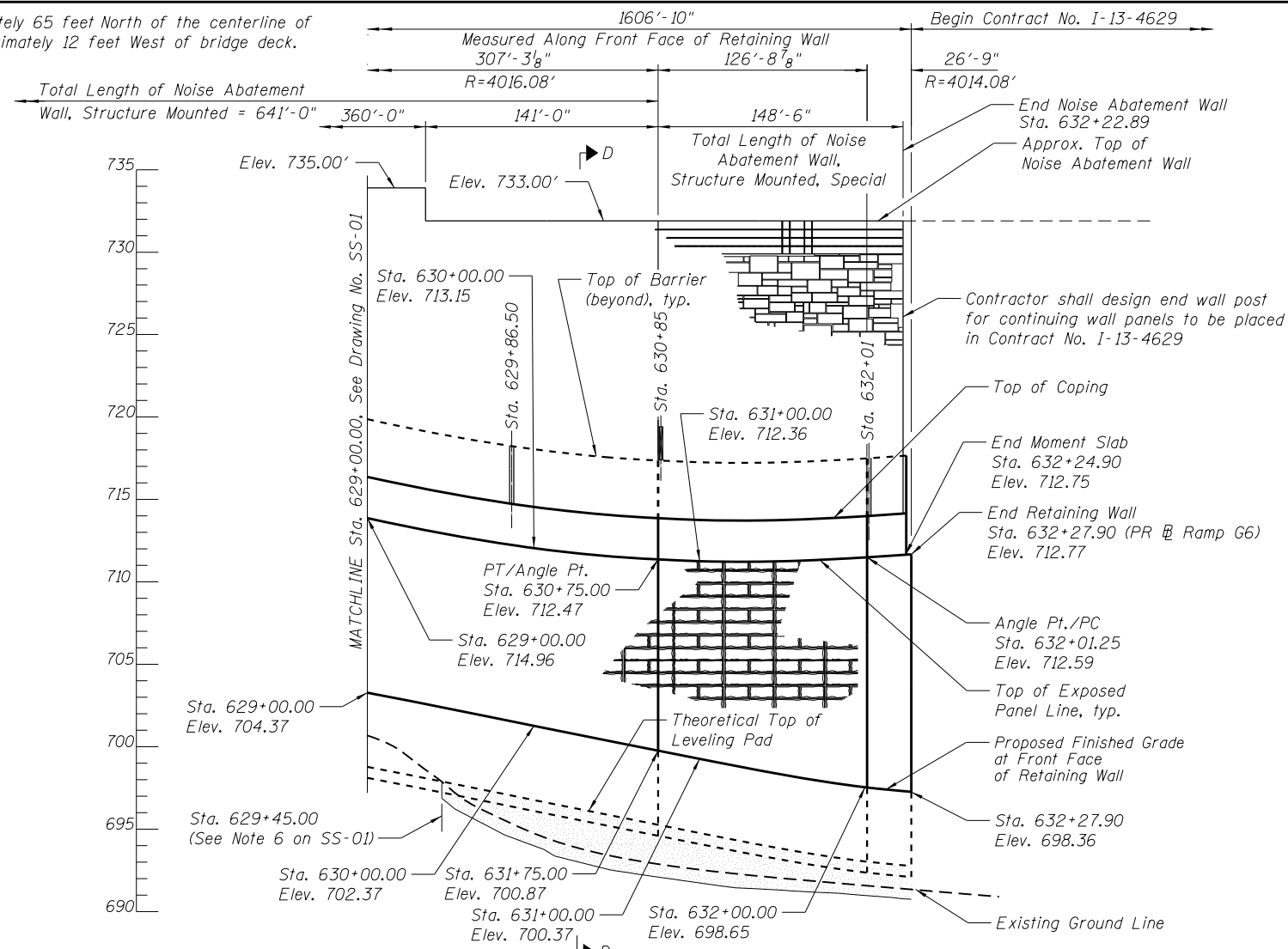
USER NAME: asenting	DESIGNED: EJM	REVISED: -
PLOT SCALE: 1/8" = 1'-0"	CHECKED: BGA	REVISED: -
PLOT DATE: 11/26/2014	DRAWN: EJM	REVISED: -
	CHECKED: BGA	REVISED: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

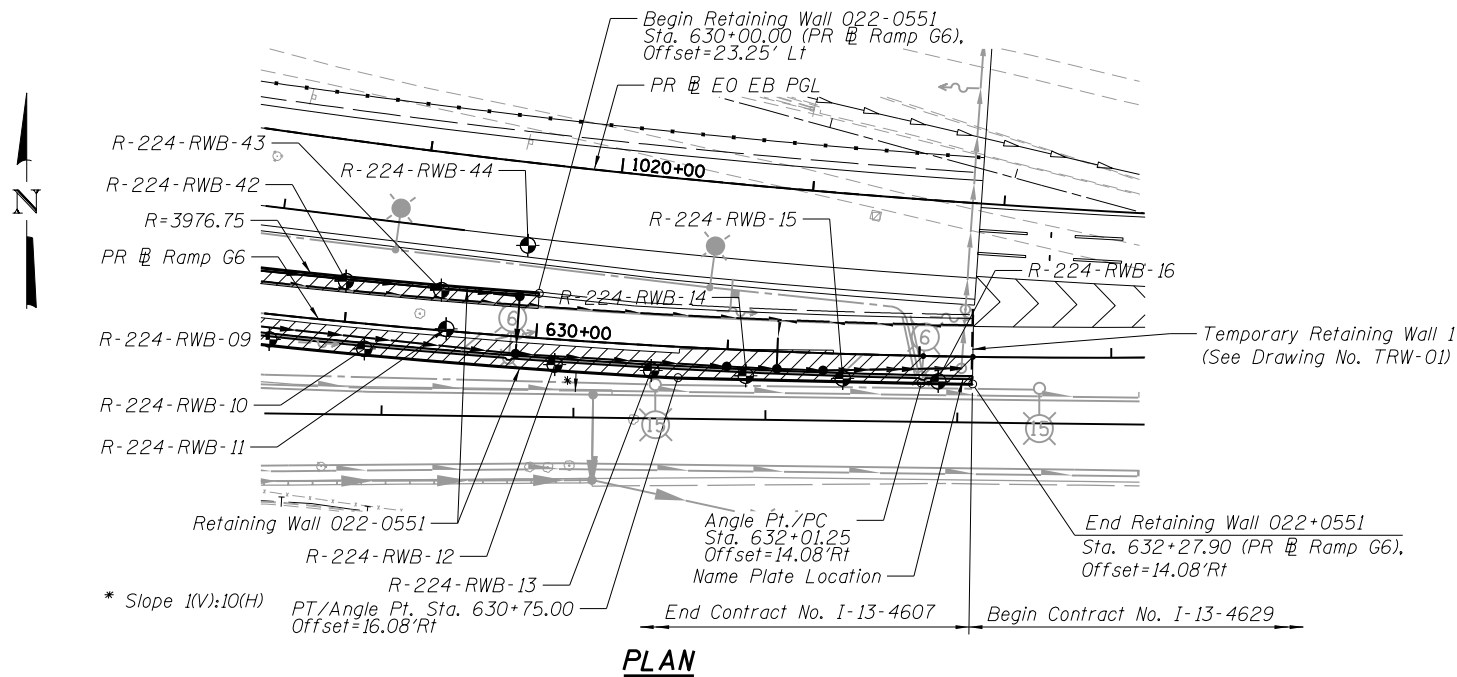
GENERAL PLAN & ELEVATION I  
STRUCTURE NO. 022-0551  
SHEET NO. 01 OF 57 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2013-083-R&B	DUPAGE	759	552
DRAWING NO. SS-01			CONTRACT NO. 60Y95	
ILLINOISIFIED, A10 PROJECT				

Bench Mark: BM#716 - Cut square in the Northwest end of bridge wall. Approximately 65 feet North of the centerline of Thorndale Ave. and 168 feet West of the centerline of I-290. Approximately 12 feet West of bridge deck. Elev. 731.40' (NAVD88)



**ELEVATION**  
(Unfolded elevation view)



**PLAN**

**Notes:**

1. Wall stations and offsets are given to the front face of the wall and are measured from the baseline of Ramp G6.
2. All exposed faces of MSE panels shall have a formliner simulated limestone surface.
3. All exposed faces of Noise Wall precast panels shall have a formliner finish.
4. For Section A-A, Section B-B, Section C-C, and Section D-D, see Drawing No. SS-04.
5. For additional Notes, see Drawing No. SS-03.
6. Limits may vary depending upon Contractor's retaining wall design.

**LEGEND**

- Reinforced Soil Mass, Approximate Limits
- Indicates Granular Backfill for Structures (See Note 3 on Drawing No. SS-04)
- MSE Wall Panels (See Note 2)
- Noise Abatement Wall (See Note 3)
- Soil Borings

GENERAL PLAN & ELEVATION - II  
ELGIN O'HARE (IL-390) AT I-290  
DUPAGE COUNTY  
RAMP G6 STA 623+18.44 TO  
RAMP G6 STA 632+27.90  
STRUCTURE NO. 022-0551

FILE NAME = 0220551-60Y95-002-GPE2.dgn <b>CH2MHILL</b>	USER NAME = asantiag	DESIGNED - EJM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION II STRUCTURE NO. 022-0551</b>	F.A.P. RTE. = 345	SECTION = 2013-083-R&B	COUNTY = DUPAGE	TOTAL SHEETS = 759	SHEET NO. = 553
	PLOT SCALE = 100.0000' / in.	DRAWN - EJM	REVISED -			DRAWING NO. SS-02	CONTRACT NO. 60Y95			
	PLOT DATE = 11/26/2014	CHECKED - BGA	REVISED -			ILLINOIS FED. AID PROJECT				
	SHEET NO. 02 OF 57 SHEETS									

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications with 2013 Interims

Tollway Structure Design Manual, March 2014 with latest Tollway Design Bulletins

Illinois Department of Transportation Bridge Manual, January 2012

**DESIGN STRESSES**

FIELD UNITS

$f'_c = 3,500$  PSI Class BS (Barrier Rail and Anchor Slab)  
 $f'_c = 3,500$  PSI Class SI (All other CIP Concrete)  
 $f_y = 60,000$  PSI (Reinforcement)

PRECAST UNITS

$f'_c = 4,500$  PSI (Precast Face Panel)

**TRAFFIC BARRIER LOADING**

Traffic Impact per AASHTO LRFD Bridge Design Specifications

**NOISE WALL LOADING/CRITERIA**

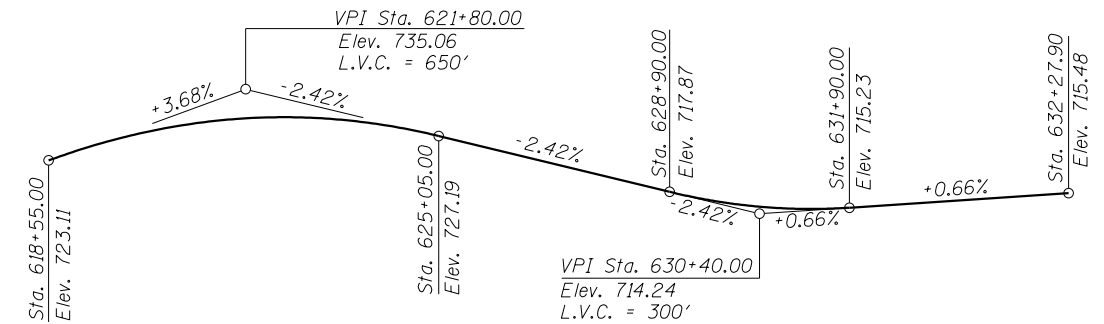
Wind = 35 psf (Structure Mounted)  
 Maximum Dead Load (Structure Mounted)  
 70 psf typical  
 163 psf (Sta. 630+75 to Sta. 632+22.89)  
 Traffic impact per AASHTO Specifications (TL-4 Collision Vehicle, Load Case 3) Sta. 630+75 to Sta. 632+22.89)  
 Maximum Post spacing is 15'-0"  
 Minimum Post Spacing from  $\mathcal{C}$  Transverse Expansion Joint is 2'-0"  
 Minimum Post Spacing from  $\mathcal{C}$  drainage structure is 6'-0"

**GENERAL NOTES**

- The contractor shall design and construct MSE Wall per the Special Provisions.
- Reinforcing bar bending details shall be in accordance with the latest "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, latest edition.
- Reinforcing bars designated "(E)" shall be epoxy coated.
- Reinforcement bar bending dimensions are out to out.
- Apply Protective Coat to top and traffic face of barrier and anchor slab for North Wall. Apply Protective Coat to anchor slab, barrier and snow storage to  $\mathcal{C}$  of Noise Abatement Wall for South Wall.
- All exposed concrete edges shall have a  $\frac{3}{4}$ " x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
- Bars noted thus, 3x2- #5 indicates 3 lines of bars with 2 lengths of bars per line.
- No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.
- It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
- It shall be the Contractor's responsibility to verify the location of all fiber optic utilities prior to starting construction. The Contractor shall initiate the location process for the fiber optic cable by completing a "Request Tollway Utilities Locate" form filled in online at the Tollway website under "Doing Business" at least four (4) business days prior to starting any underground operations, excavations or digging of any type in the general area of the fiber optic cable.
- Slipforming of barriers is not allowed.

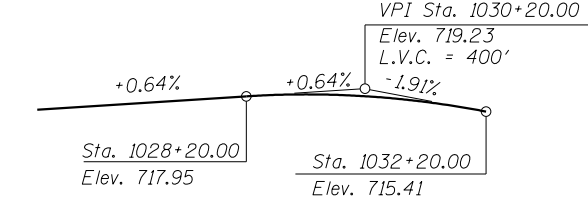
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**PROFILE GRADE**

(Ramp G6)



**PROFILE GRADE**

(EO EB PGL)

**HORIZONTAL CURVE DATA**

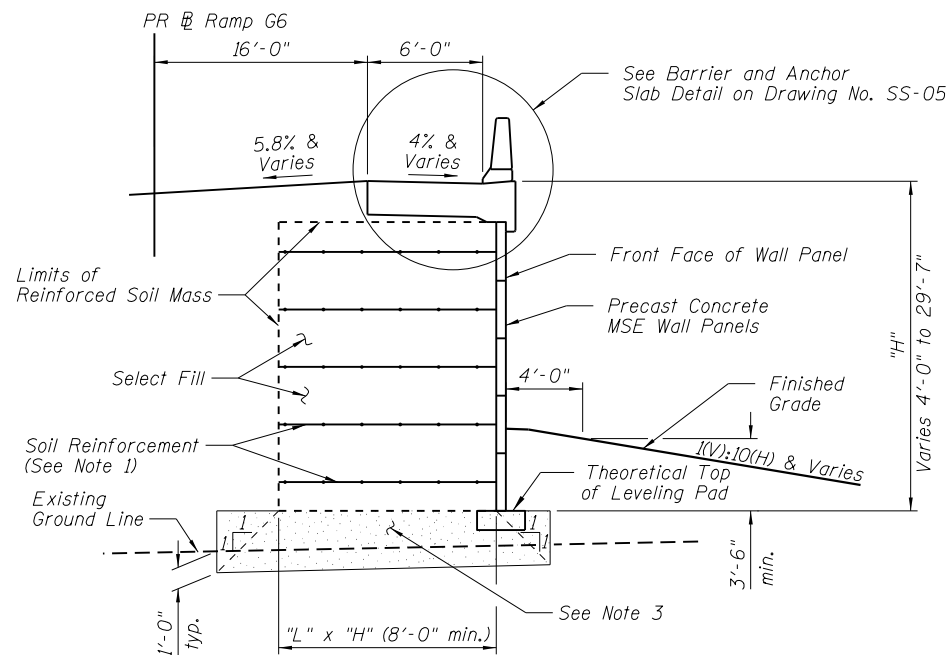
Curve B1 EO G6P-1 along $\mathcal{C}$ Ramp G6 PI Sta. = 619+44.27 $\Delta = 88^\circ 27' 45''$ (RT) $D = 5^\circ 12' 31''$ $R = 1,100.00'$ $L = 1,698.36'$ $E = 435.18'$ $T = 1,070.87'$ $S.E. = 5.8\%$ P.C. Sta. = 608+73.39 P.T. Sta. = 625+71.75	Curve B1 EO G6P-2 along $\mathcal{C}$ Ramp G6 PI Sta. = 631+14.17 $\Delta = 9^\circ 51' 53''$ (LT) $D = 1^\circ 25' 57''$ $R = 4,000.00'$ $L = 688.68'$ $E = 14.87'$ $T = 345.19'$ $S.E. = 3.0\%$ P.C. Sta. = 627+68.97 P.T. Sta. = 634+57.65	Curve B1 EO PGL EB-4 along $\mathcal{C}$ EO EB PGL PI Sta. = 1017+48.79 $\Delta = 20^\circ 30' 00.00''$ (LT) $D = 1^\circ 07' 55''$ $R = 5,062.00'$ $L = 1,811.15'$ $E = 82.10'$ $T = 915.36'$ $S.E. = 3.0\%$ P.C. Sta. = 1008+33.44 P.T. Sta. = 1026+44.58
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**TOTAL BILL OF MATERIALS**

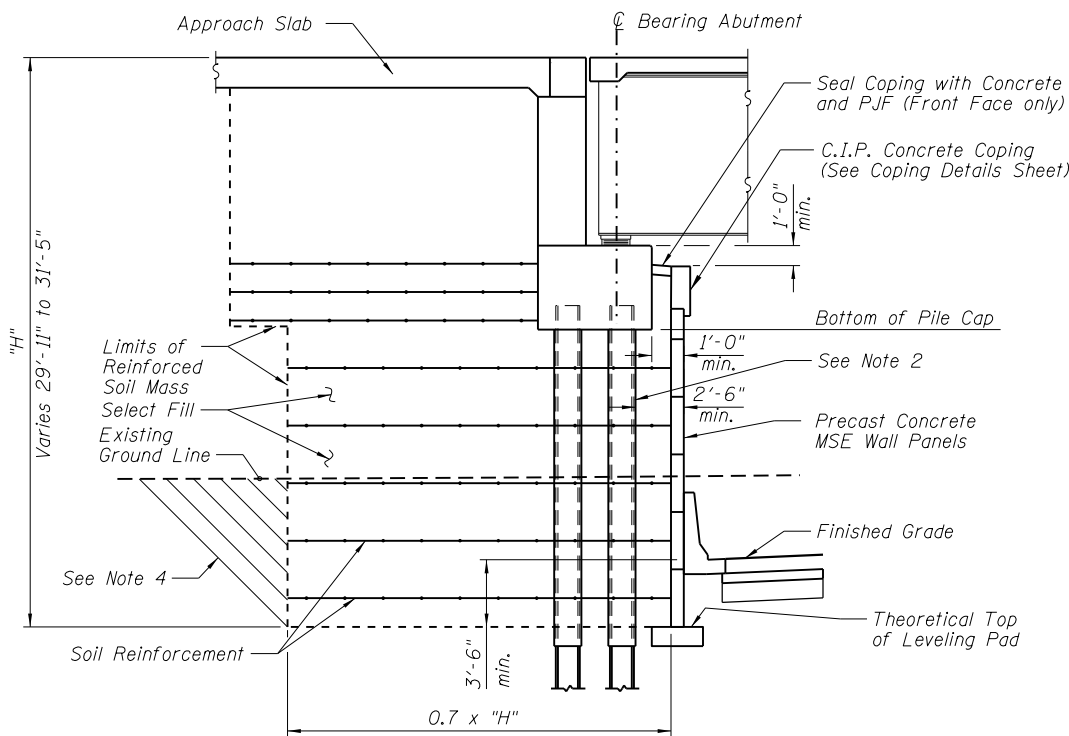
ITEM	UNIT	QUANTITY
Protective Coat	SQ YD	2,632
Structure Excavation	CU YD	2,126
Concrete Superstructure	CU YD	1,327
Reinforcement Bars, Epoxy Coated	POUND	247,670
Name Plate	EACH	1
Sign Panel-Type 1	SQ FT	27
Noise Abatement Wall, Structure Mounted	SQ FT	8,933
Noise Abatement Wall, Structure Mounted, Special	SQ FT	2,682
Granular Backfill for Structures	CU YD	1,364
Architectural Form Liner Leaf	SQ FT	325
Mechanically Stabilized Earth Retaining Wall	SQ FT	24,392

STATION 632+23  
 BUILT 201\_ BY  
 STATE OF ILLINOIS  
 F.A.P. RT. 345  
 SEC. 2013-083-R&B  
 STRUCTURE NO. 022-0551

NAME PLATE  
 See Std. 515001



**TYPICAL SECTION**  
(SECTION A-A)

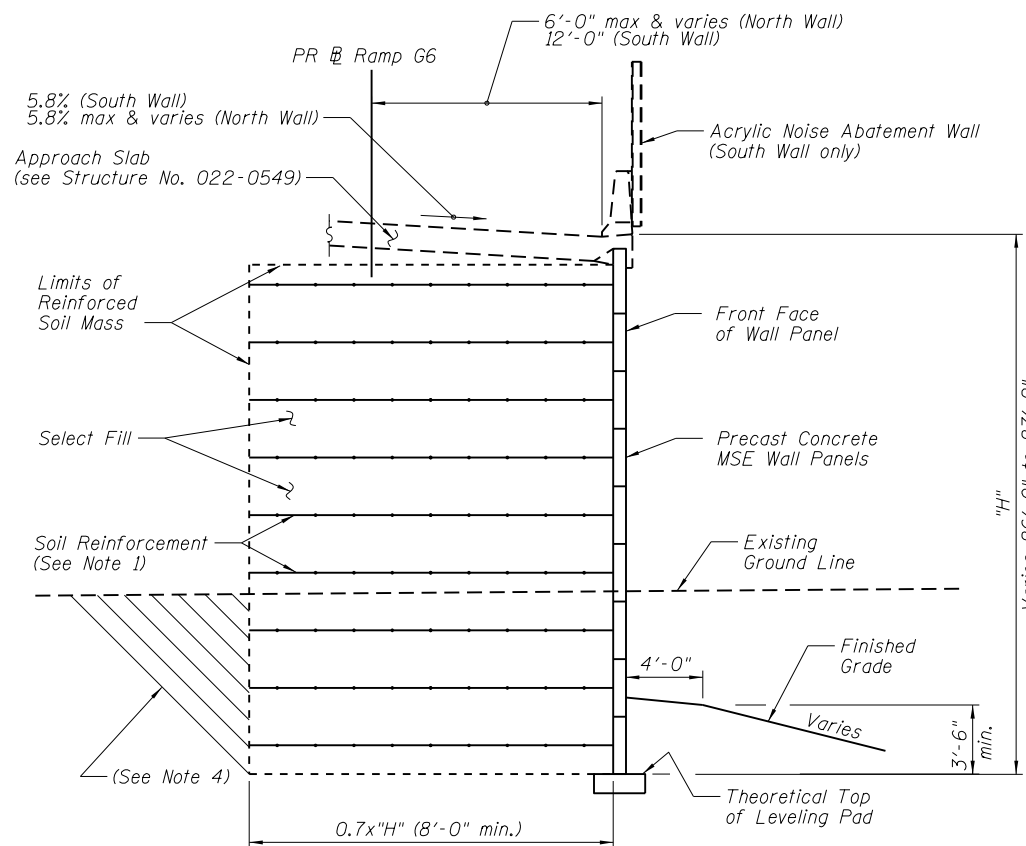


**TYPICAL SECTION THRU ABUTMENT**  
(SECTION B-B)

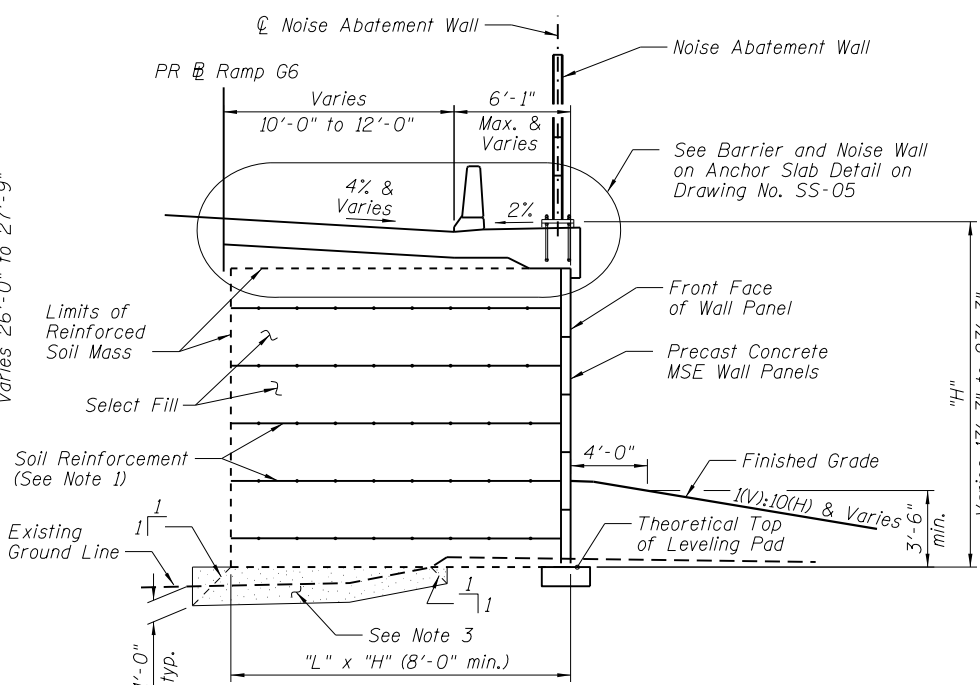
**Notes:**

- The MSE wall supplier's internal stability design shall account for the anchor slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 1.15 kips/ft. of wall. Additionally, the MSE wall supplier's internal stability design shall account for the loads shown in the "Bearing Pressure Surcharge" table on Drawing No. SS-05 for segments 9 thru 21.
- Pile Sleeve (See Bridge Plans).
- Granular Backfill for Structures required for wall height, "H" ≥ 12'.
- Overexcavation beyond the limits of structure excavation. Backfill with same material used for Select Fill.
- The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 5.3 kips/ft. of abutment and shall account for this load in the internal stability design for the Service II limit state. The specified horizontal force includes abutment loads from bridge forces and active soil pressure.

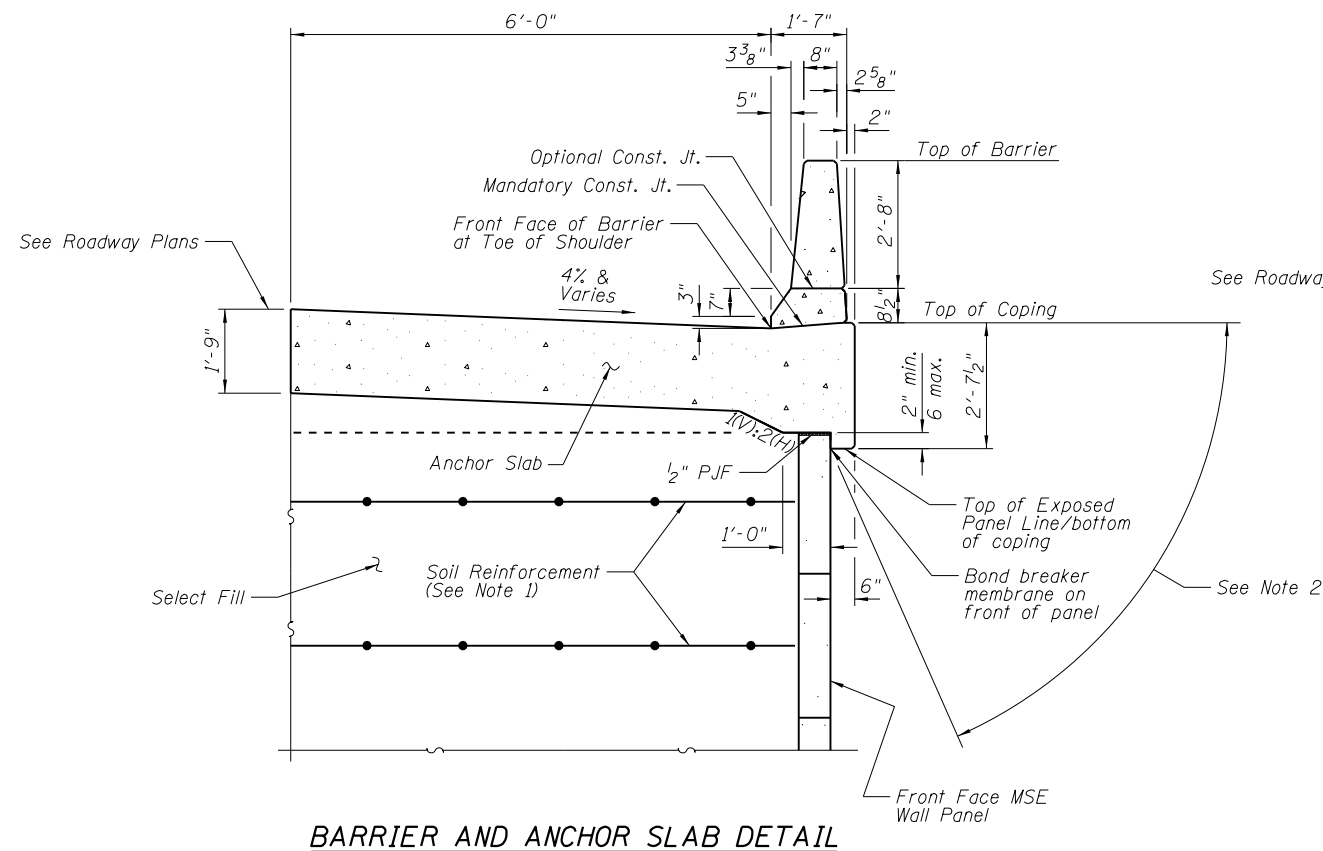
"L"	Wall, Station Limits
0.7	Typical (unless noted otherwise)
0.8	North Wall 624+45 - 625+83
0.8	South Wall 624+40 - 625+85
0.8	South Wall 630+75 - 631+85



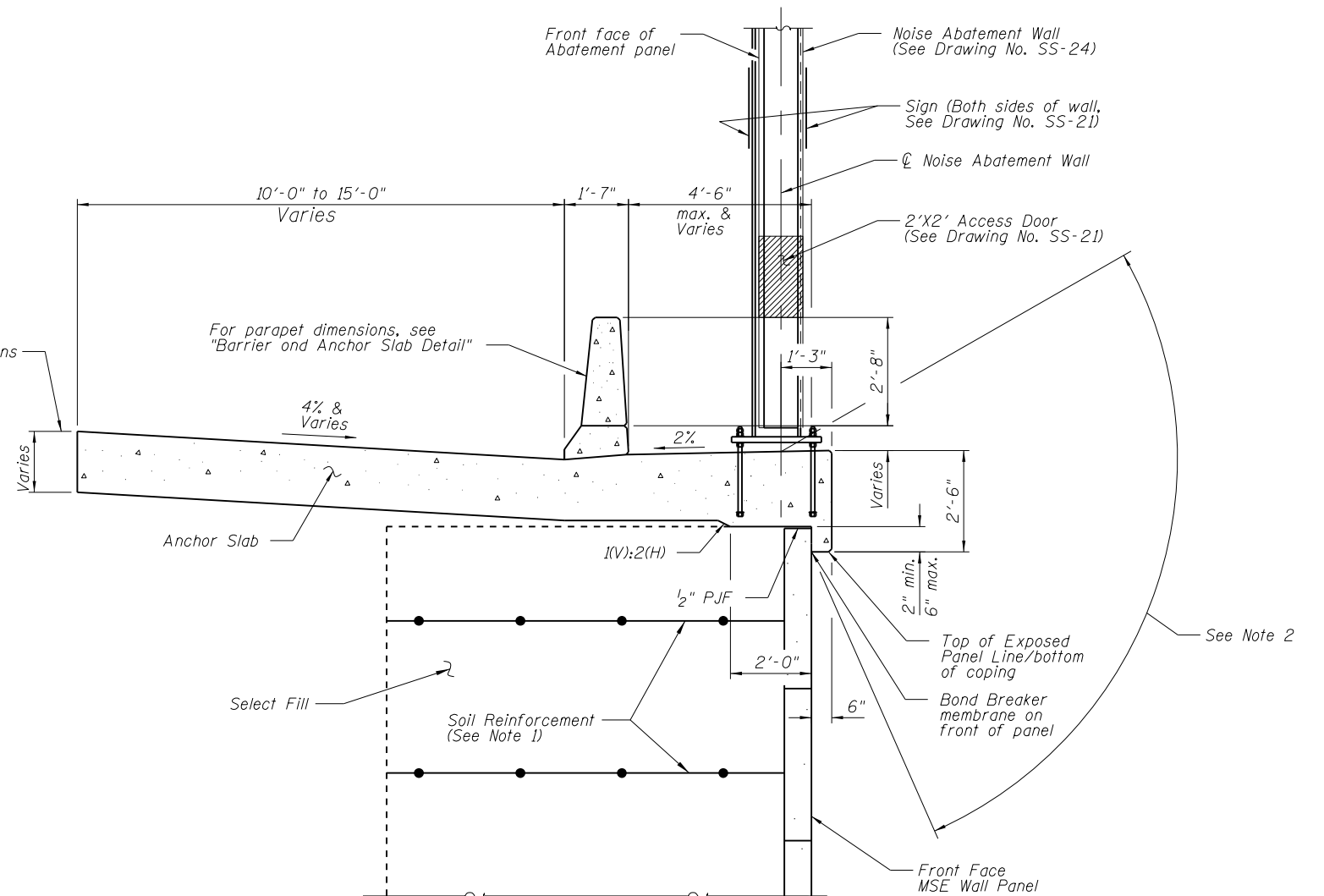
**TYPICAL SECTION THRU APPROACH SLAB**  
(SECTION C-C)



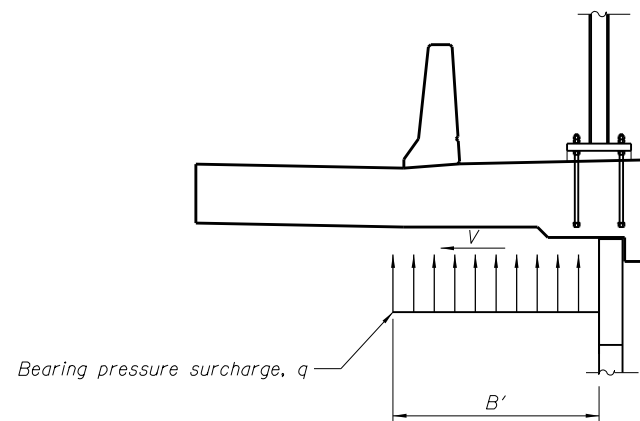
**TYPICAL SECTION**  
(SECTION D-D)



**BARRIER AND ANCHOR SLAB DETAIL**



**BARRIER AND NOISE WALL ON ANCHOR SLAB DETAIL**



**BEARING PRESSURE SURCHARGE**

CONTROLLING LOAD CASE	MAX. DL FACTORS		MIN. DL FACTORS		MAX. LATERAL LOAD V (kips/ft)
	q (ksf)	B' (ft)	q (ksf)	B' (ft)	
Strength III	1.30	7.04	1.07	6.18	0.90

**Notes:**

1. The MSE wall supplier's internal stability design shall account for the anchor slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 1.15 kips/ft. of wall. Additionally, the MSE wall supplier's internal stability design shall account for the loads shown in the "Bearing Pressure Surcharge" table on this sheet for segments 9 thru 21.
2. Apply concrete stain entire length of wall. See form liner Special Provisions for requirements.

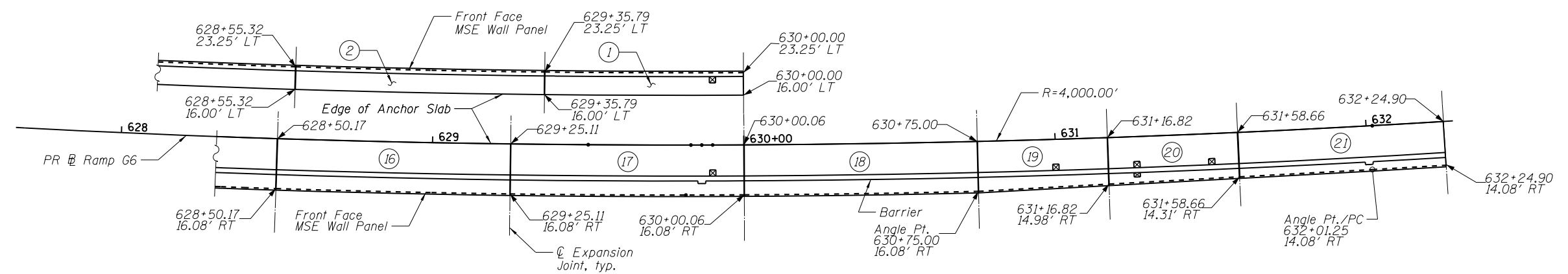
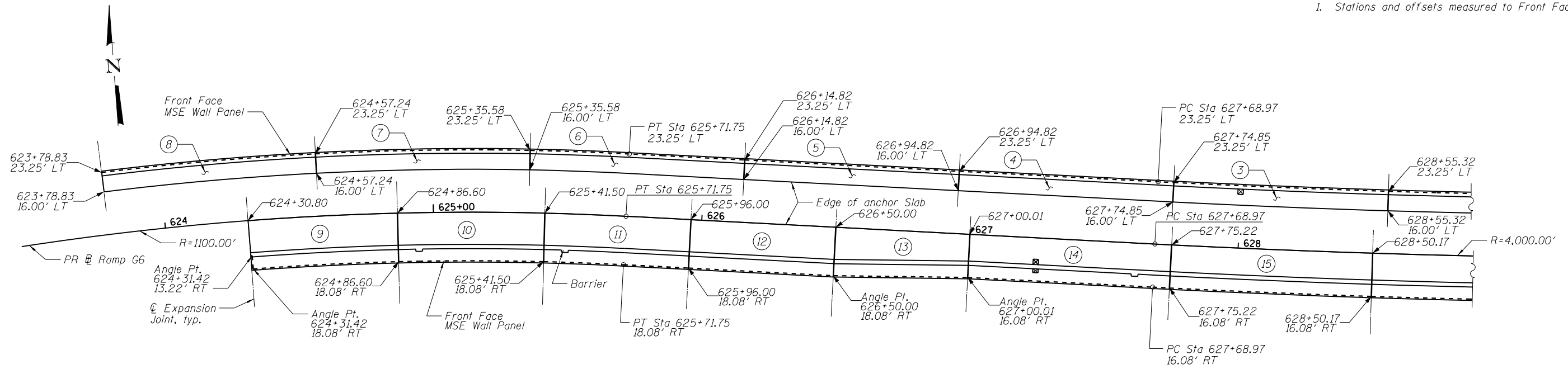


**Legend:**

(XX) - Indicates Anchor Slab Segment number

**Notes:**

1. Stations and offsets measured to Front Face MSE Wall Panel.



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**CH2MHILL**

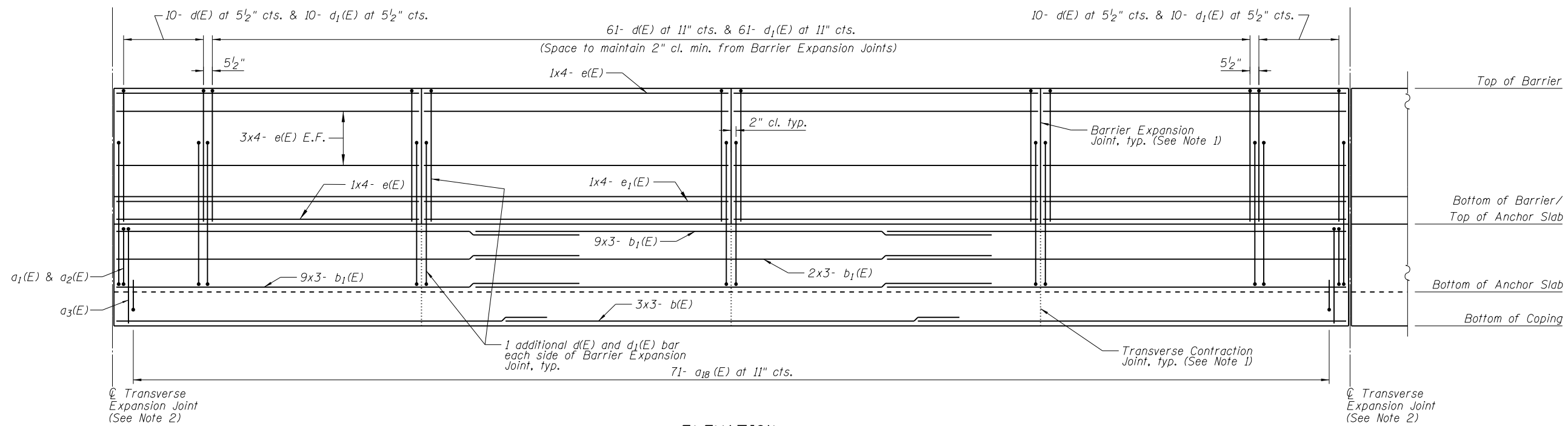
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PLOT DATE = 10/28/2014	DRAWN - EJM	REVISED -
	CHECKED - BGA	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ANCHORAGE SLAB LAYOUT  
 STRUCTURE NO. 022-0551**

SHEET NO. 06 OF 57 SHEETS

F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 557
DRAWING NO. SS-06			CONTRACT NO. 60Y95	
ILLINOIS FED. AID PROJECT				



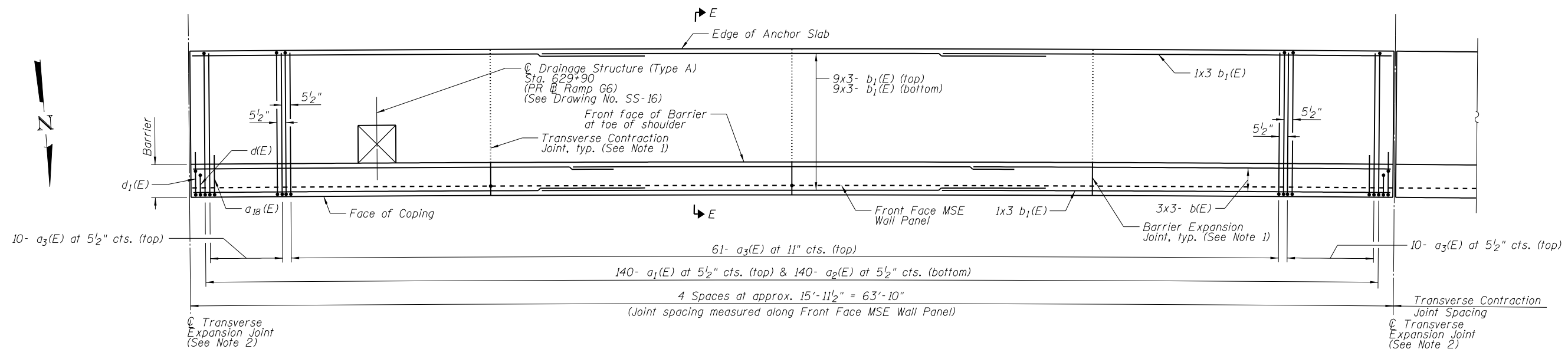
**ELEVATION**  
Segment 1

**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

**Notes:**

1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
3. For Section E-E, see Drawing No. SS-15.
4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
6. For Anchorage Slab Layout geometry see Drawing No. SS-06.



**PLAN**  
Segment 1

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**CH2MHILL**

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PLOT DATE = 10/28/2014

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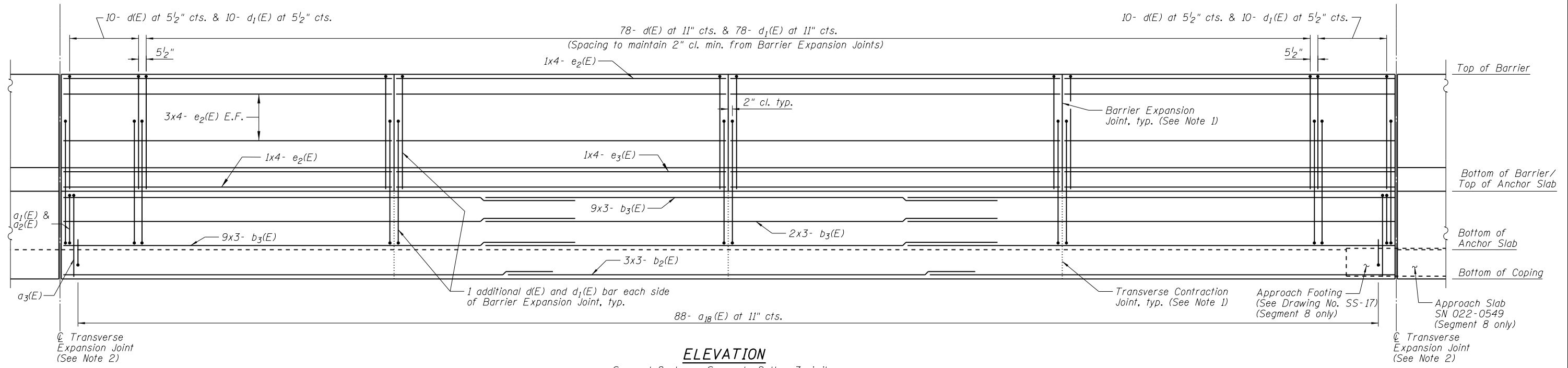
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ANCHORAGE SLAB PLAN & ELEVATION No. 1**  
**STRUCTURE NO. 022-0551**

SHEET NO. 07 OF 57 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2013-083-R&B	DUPAGE	759	558
DRAWING NO. SS-07			CONTRACT NO. 60Y95	

ILLINOIS FED. AID PROJECT



**ELEVATION**

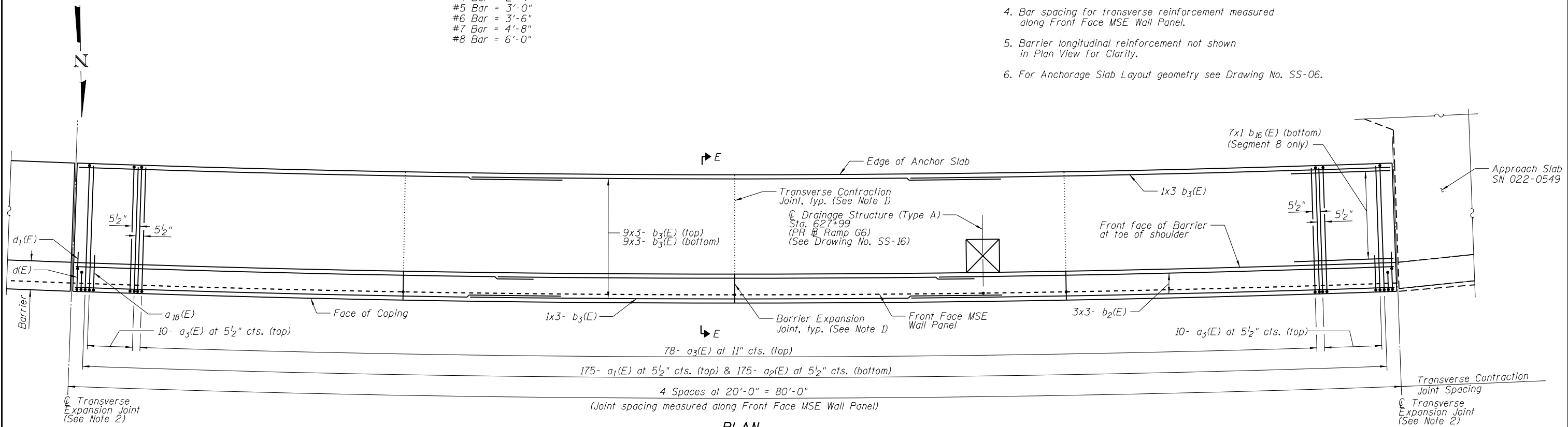
Segment 8 shown, Segments 2 thru 7 similar

**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

**Notes:**

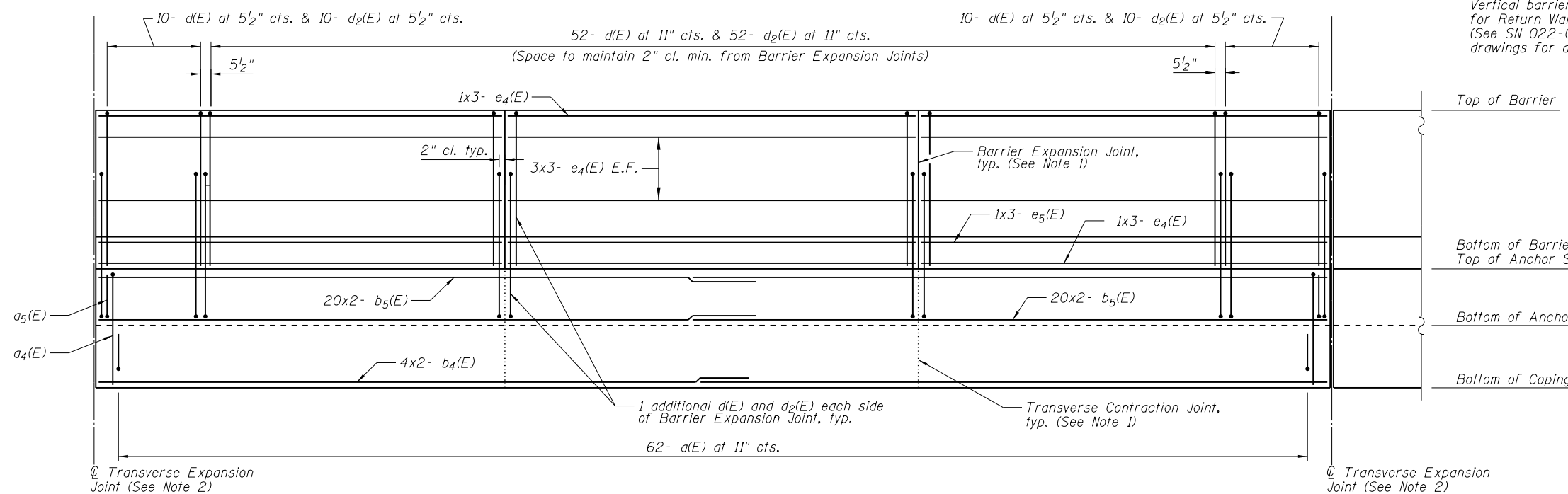
1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
3. For Section E-E, see Drawing No. SS-15.
4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
6. For Anchorage Slab Layout geometry see Drawing No. SS-06.



**PLAN**

Segment 8 shown, Segments 2 thru 7 similar

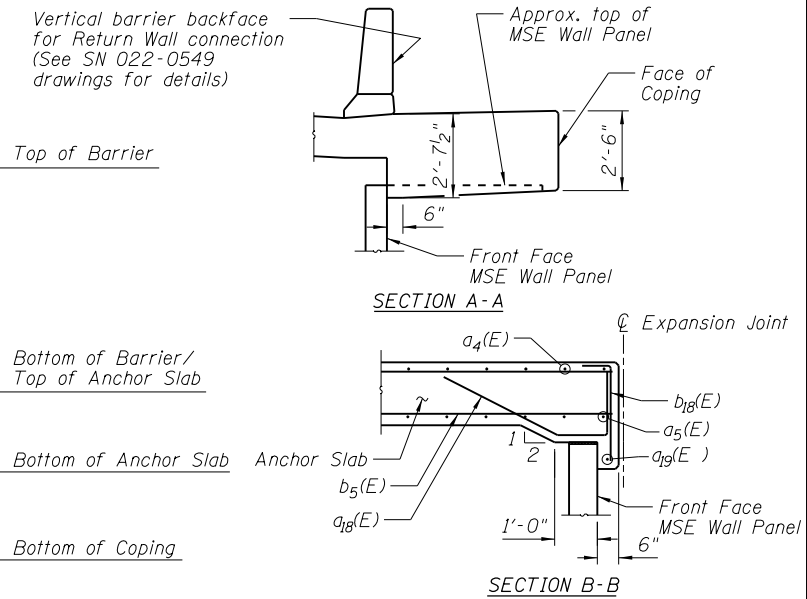
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	PLOT DATE = 10/28/2014	CHECKED - BGA	REVISED -			SHEET NO. 08 OF 57 SHEETS				



**ELEVATION**  
Segment 9

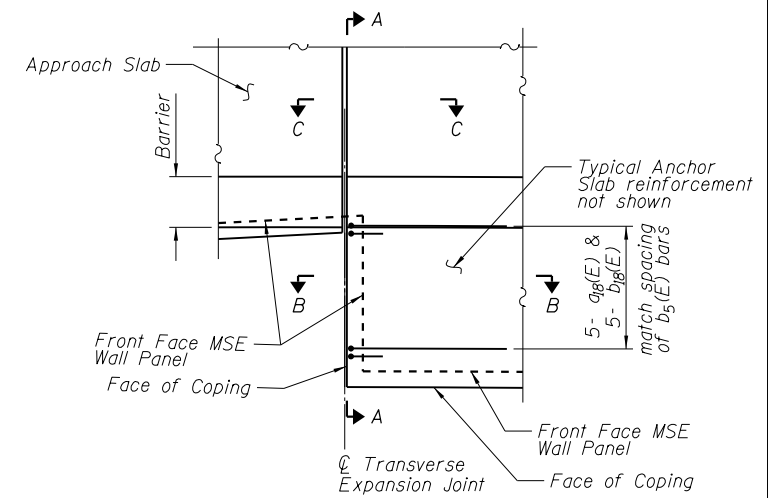
**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"



Approach Slab Footing  
(See Drawing No. SS-17  
for details)

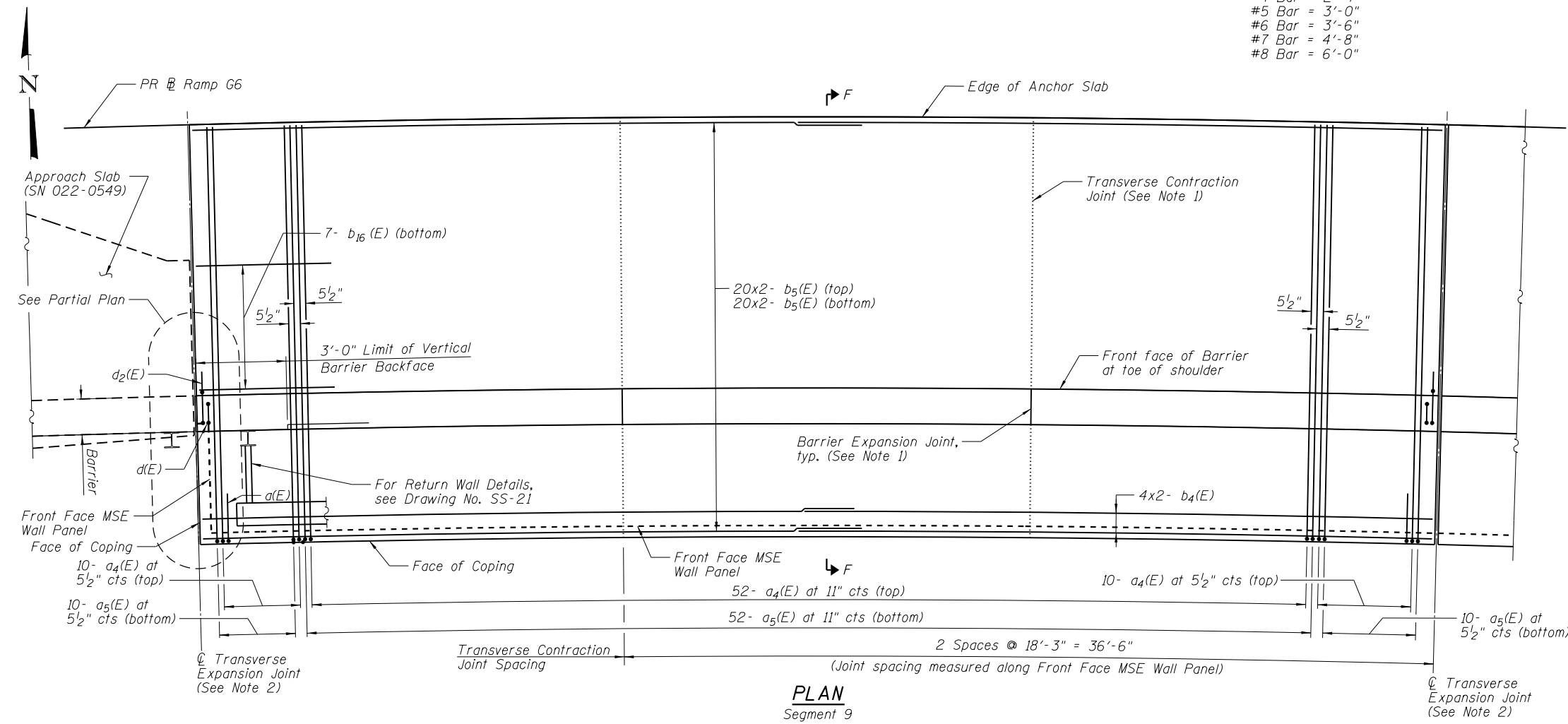
**SECTION C-C**



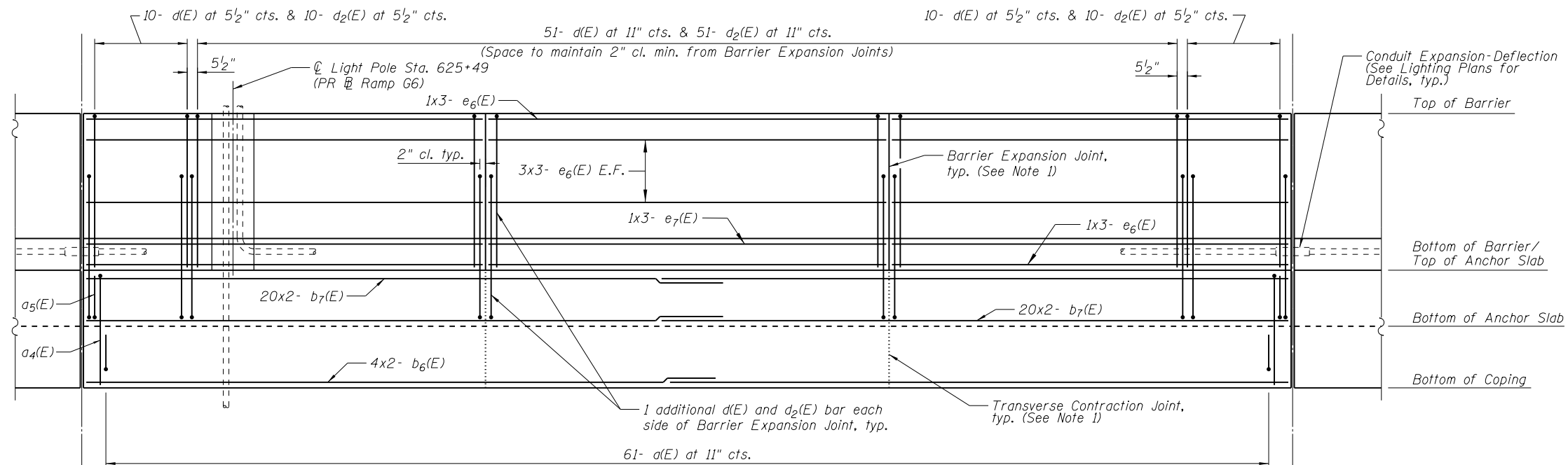
**PARTIAL PLAN**

**Notes:**

1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Face of Copping. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Face of Copping. For details see Drawing No. SS-17.
3. For Section F-F, see Drawing No. SS-15.
4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
6. For Anchor Slab Layout geometry see Drawing No. SS-06.
7. Additional transverse Anchor Slab reinforcing at noise abatement posts not shown, See Drawing No. SS-20 for details.



**PLAN**  
Segment 9



Transverse Expansion Joint (See Note 2)

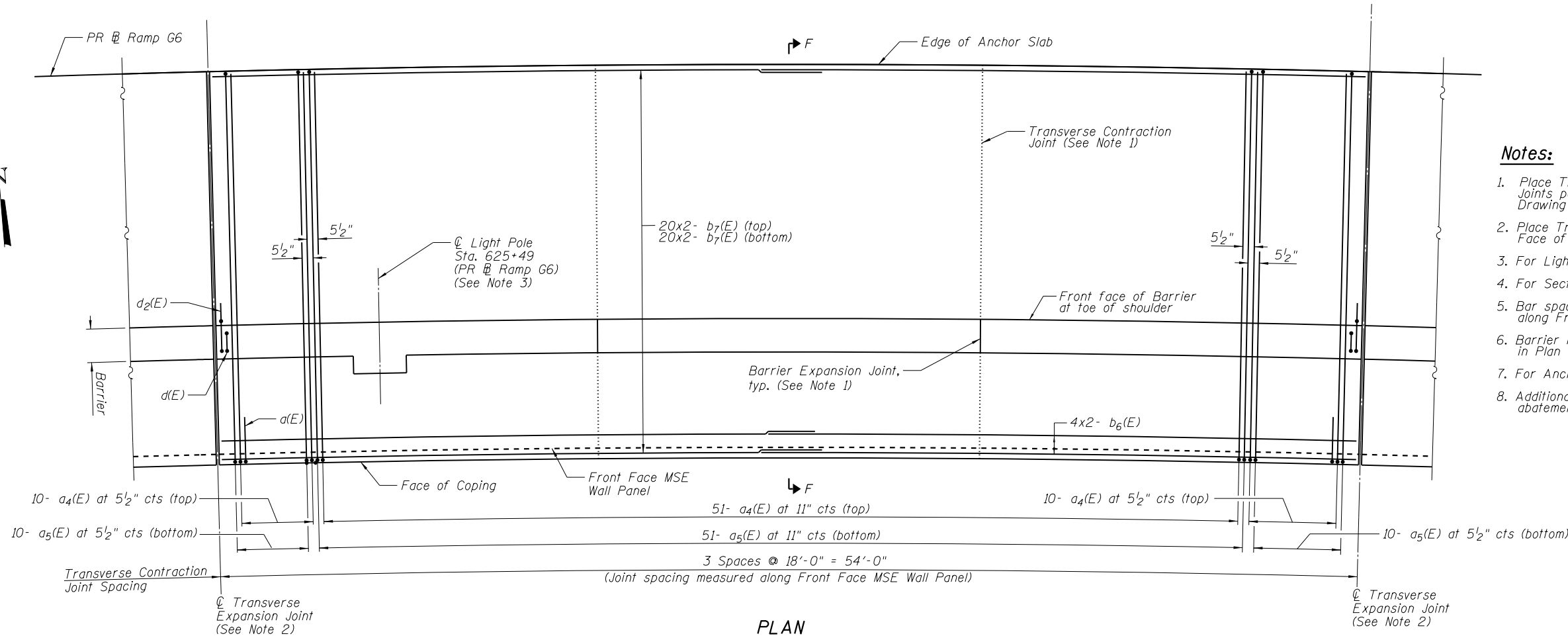
**ELEVATION**

Segment 10 shown, Segments 11 and 12 similar

Transverse Expansion Joint (See Note 2)

**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

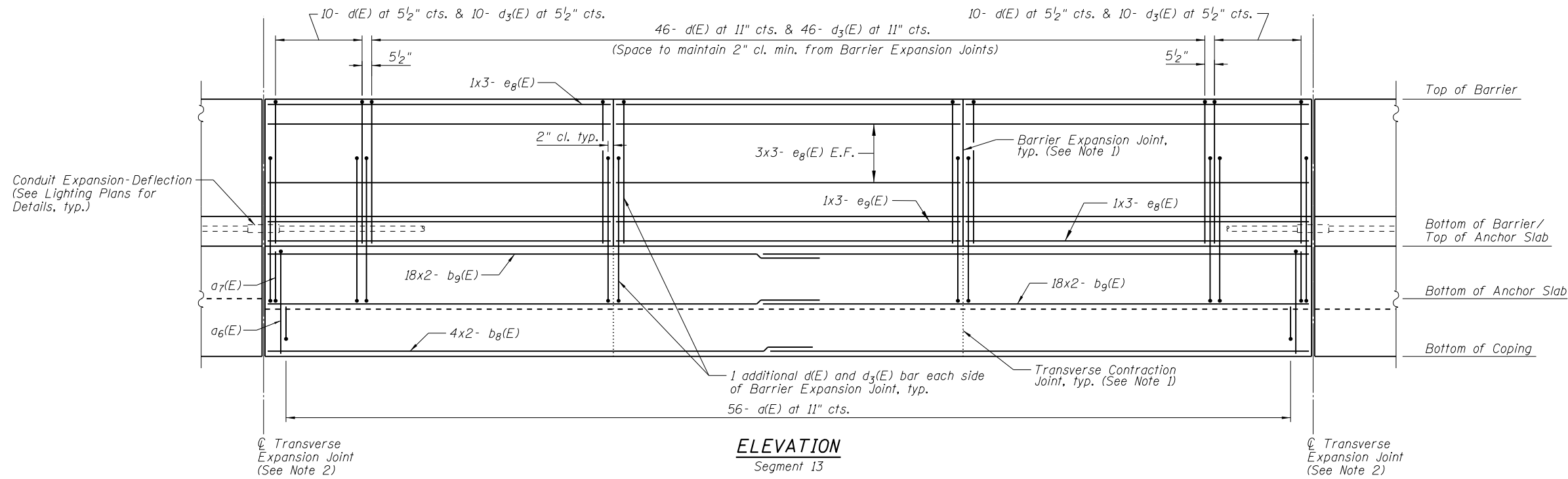


**PLAN**

Segment 10 shown, Segments 11 and 12 similar

**Notes:**

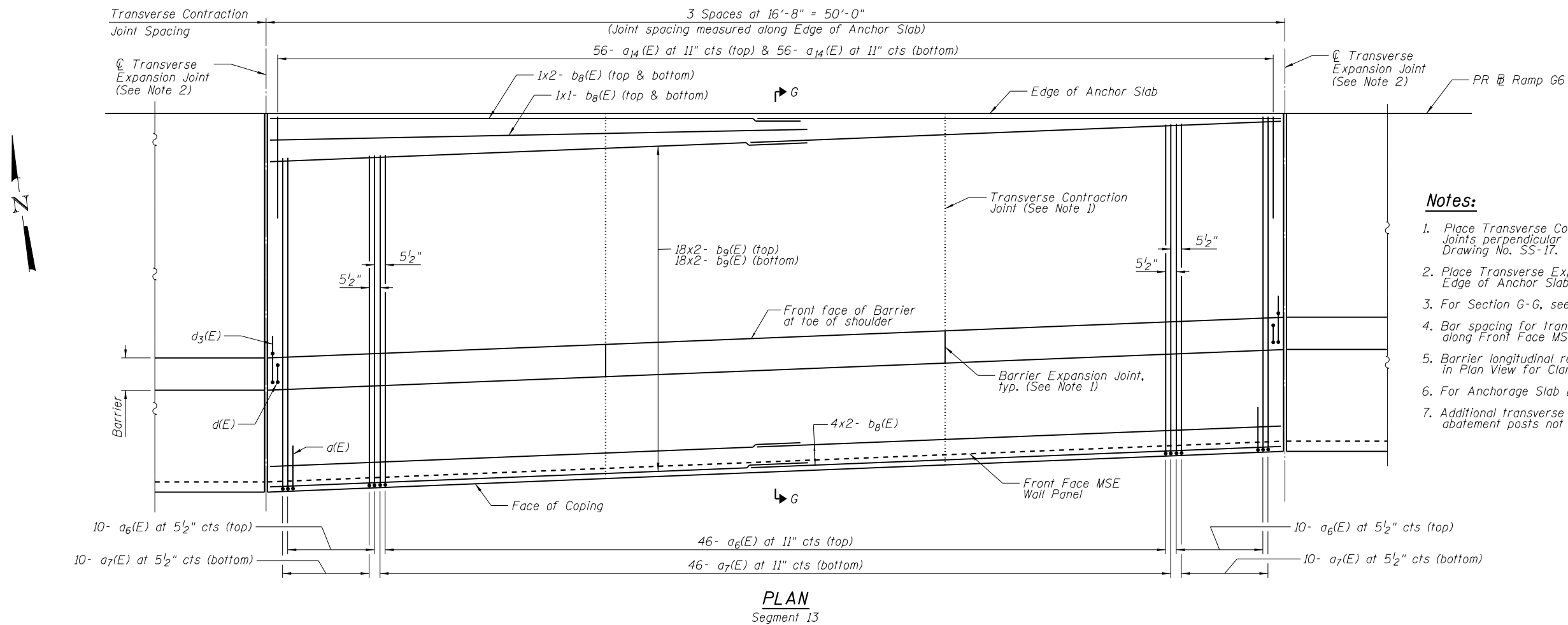
1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SS-17.
3. For Light Pole Foundation details, see Drawing No. SS-18.
4. For Section F-F, see Drawing No. SS-15.
5. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
6. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
7. For Anchorage Slab Layout geometry see Drawing No. SS-06.
8. Additional transverse Anchorage Slab reinforcing at noise abatement posts not shown, See Drawing No. SS-20 for details.



**ELEVATION**  
Segment 13

**Minimum Bar Lap**

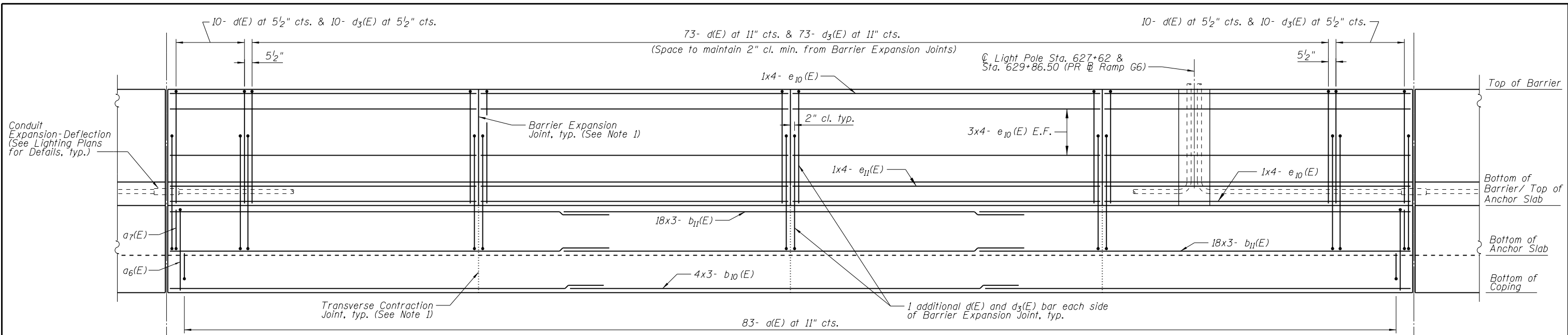
#4 Bar	= 2'-4"
#5 Bar	= 3'-0"
#6 Bar	= 3'-6"
#7 Bar	= 4'-8"
#8 Bar	= 6'-0"



**PLAN**  
Segment 13

**Notes:**

1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
3. For Section G-G, see Drawing No. SS-15.
4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
6. For Anchorage Slab Layout geometry see Drawing No. SS-06.
7. Additional transverse Anchorage Slab reinforcing at noise abatement posts not shown, See Drawing No. SS-20 for details.



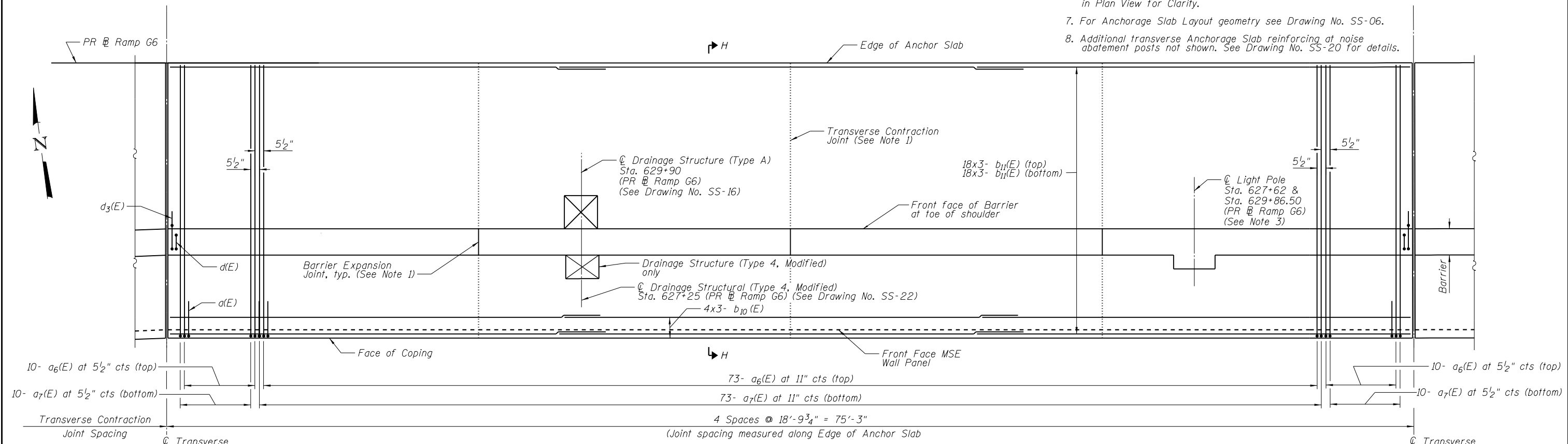
**ELEVATION**  
Segment 14 shown, Segments 15 thru 18 similar

**Notes:**

1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Face of Coping. For details see Drawing No. SS-17.
3. For Light Pole Foundation details, see Drawing No. SS-18.
4. For Section H-H, see Drawing No. SS-15.
5. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
6. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
7. For Anchorage Slab Layout geometry see Drawing No. SS-06.
8. Additional transverse Anchorage Slab reinforcing at noise abatement posts not shown. See Drawing No. SS-20 for details.

**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"



**PLAN**  
Segment 14 shown, Segments 15 thru 18 similar

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**CH2MHILL**

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CHECKED - BGA  
DRAWN - EJM  
CHECKED - BGA

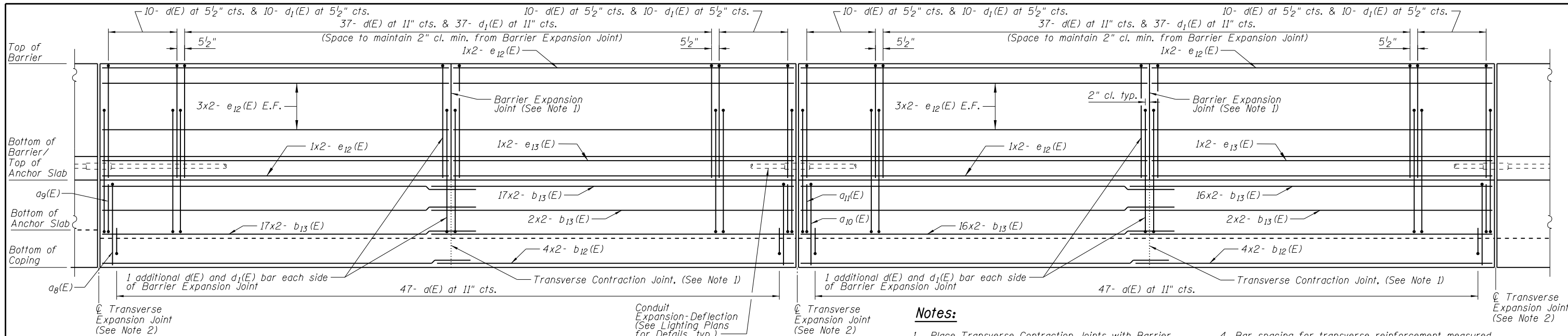
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ANCHORAGE SLAB PLAN & ELEVATION No. 6  
STRUCTURE NO. 022-0551**

SHEET NO. 12 OF 57 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2013-083-R&B	DUPAGE	759	563
DRAWING NO. SS-12			CONTRACT NO. 60Y95	
ILLINOIS FED. AID PROJECT				



**Minimum Bar Lap**

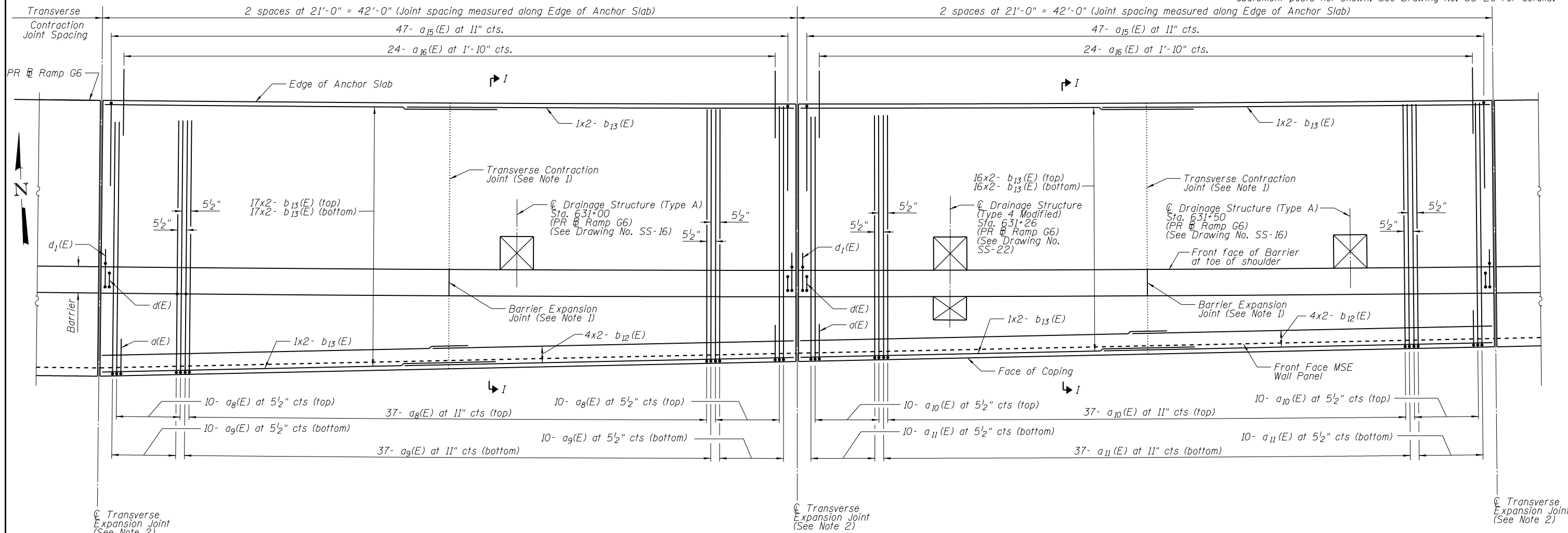
- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

**ELEVATION**

Segment 19 & Segment 20

**Notes:**

1. Place Transverse Contraction Joints with Barrier Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
3. For Section I-I, see Drawing No. SS-16.
4. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
5. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
6. For Anchorage Slab Layout geometry see Drawing No. SS-06.
7. Additional transverse Anchorage Slab reinforcing at noise abatement posts not shown. See Drawing No. SS-20 for details.



**PLAN**

Segment 19 & Segment 20

FILE NAME = 0220551-60Y95-013-AnchSlabP&E7.dgn  
**CH2MHILL**

USER NAME = asontag  
 PLOT SCALE = 6.0000' / in.  
 PLOT DATE = 11/18/2014

DESIGNED - EJM  
 CHECKED - BGA  
 DRAWN - EJM  
 CHECKED - BGA

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

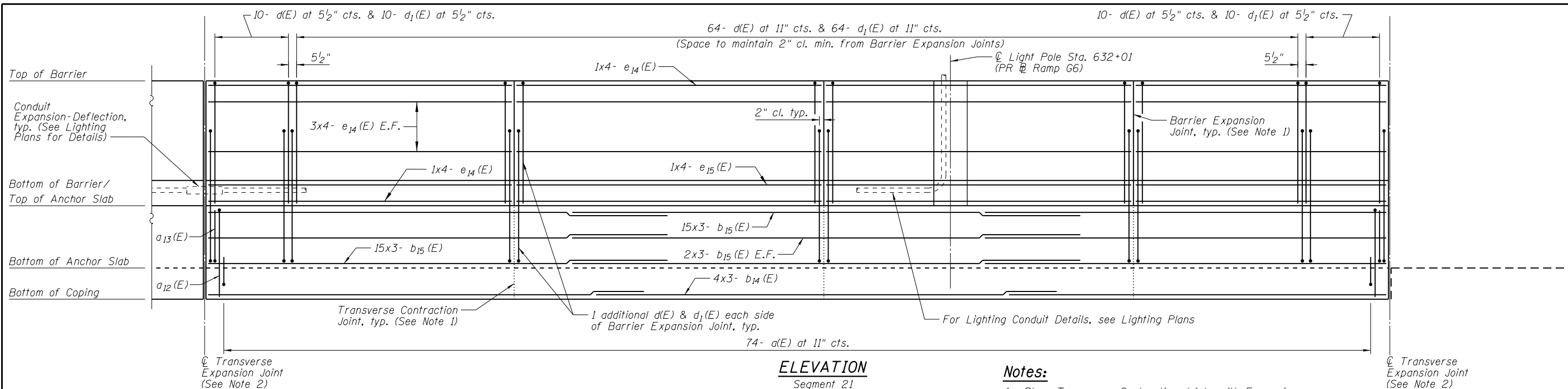
**ANCHORAGE SLAB PLAN & ELEVATION No. 7  
 STRUCTURE NO. 022-0551**

SHEET NO. 13 OF 57 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2013-083-R&B	DUPAGE	759	564
DRAWING NO. SS-13			CONTRACT NO. 60Y95	

ILLINOIS FED. AID PROJECT





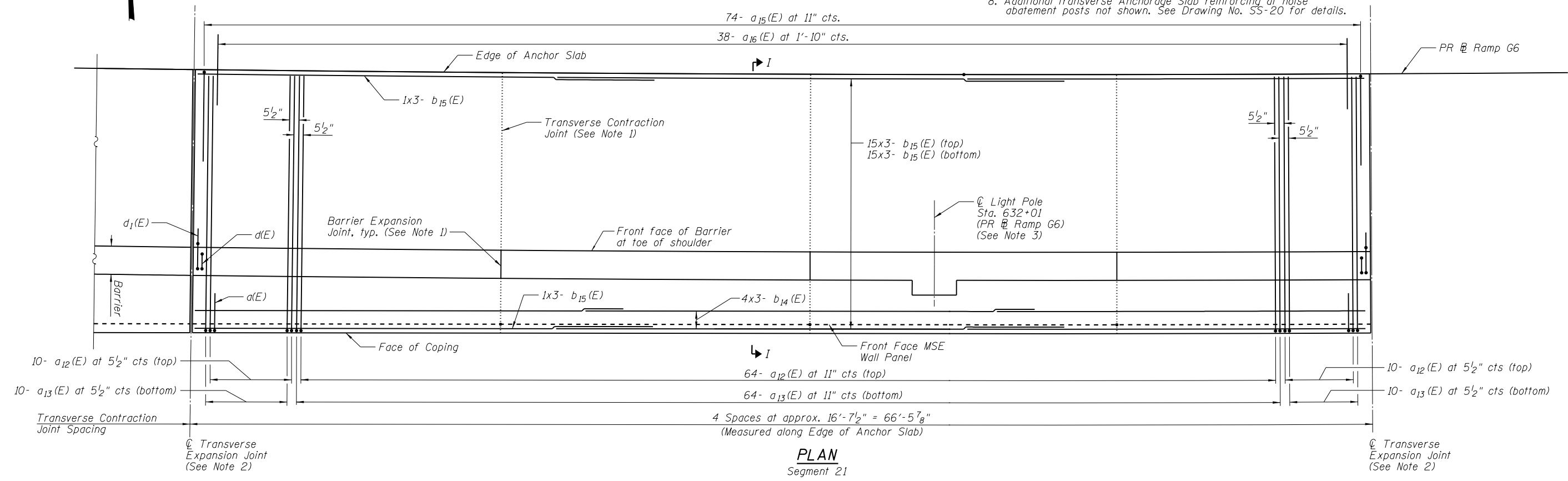
**ELEVATION**  
Segment 21

**Notes:**

1. Place Transverse Contraction Joints with Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
2. Place Transverse Expansion Joints perpendicular to Edge of Anchor Slab. For details see Drawing No. SS-17.
3. For Light Pole Foundation details, see Drawing No. SS-18.
4. For Section I-1, see Drawing No. SS-16.
5. Bar spacing for transverse reinforcement measured along Front Face MSE Wall Panel.
6. Barrier longitudinal reinforcement not shown in Plan View for Clarity.
7. For Anchorage Slab Layout geometry see Drawing No. SS-06.
8. Additional transverse Anchorage Slab reinforcing at noise abatement posts not shown. See Drawing No. SS-20 for details.

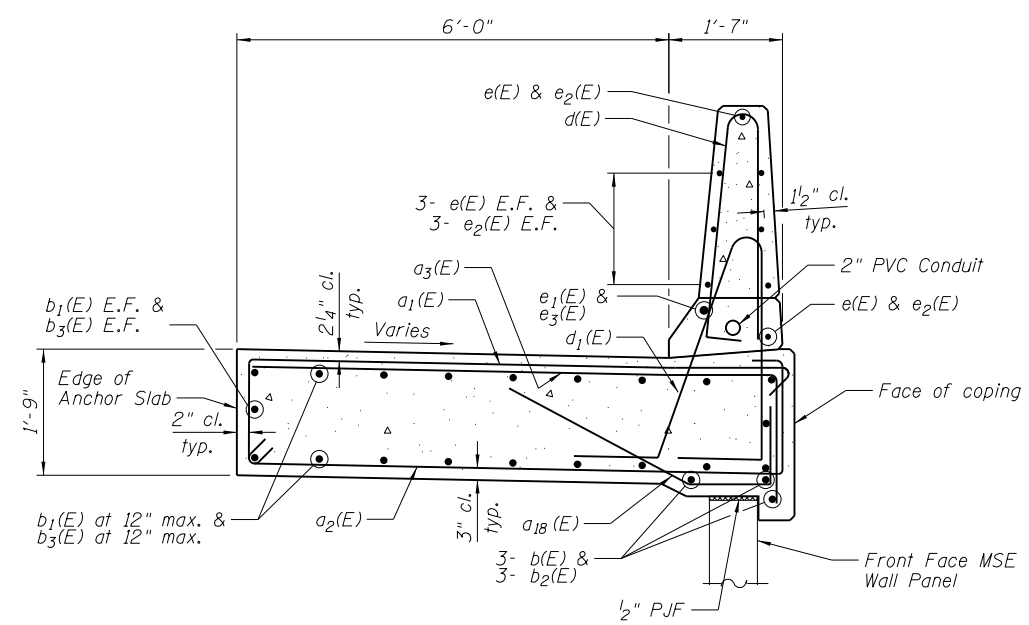
**Minimum Bar Lap**

- #4 Bar = 2'-4"
- #5 Bar = 3'-0"
- #6 Bar = 3'-6"
- #7 Bar = 4'-8"
- #8 Bar = 6'-0"

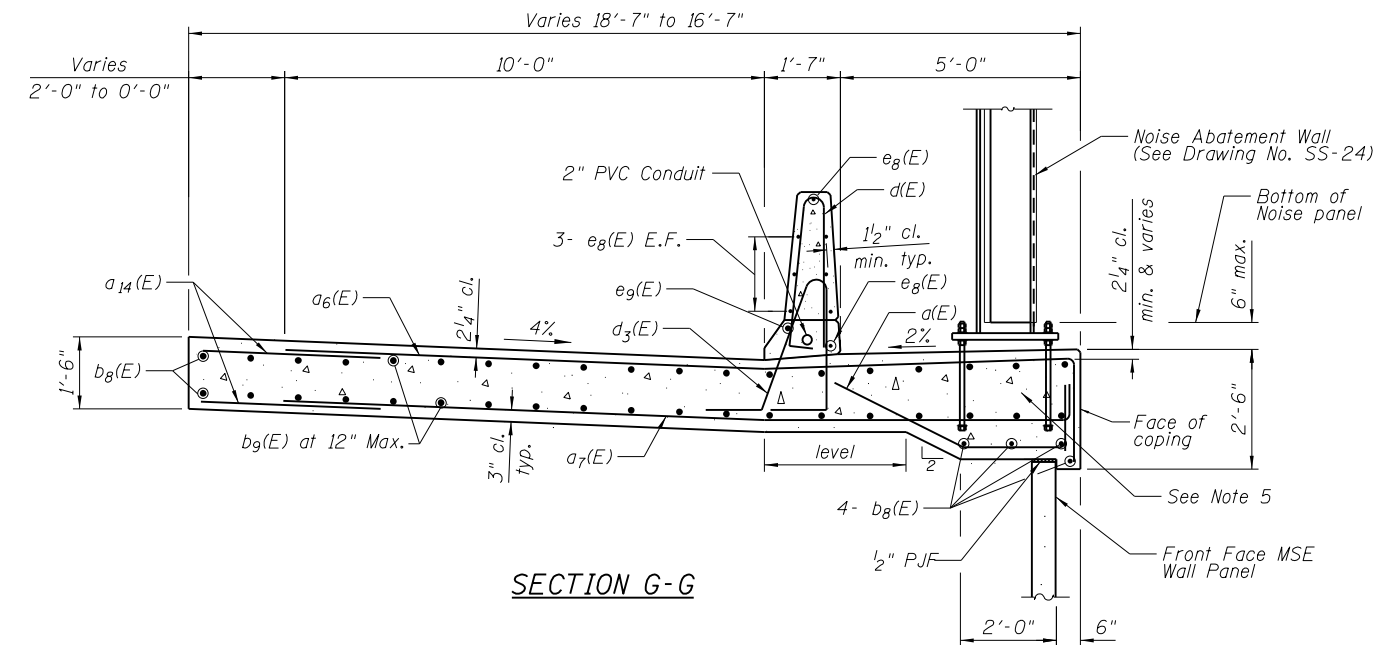


**PLAN**  
Segment 21

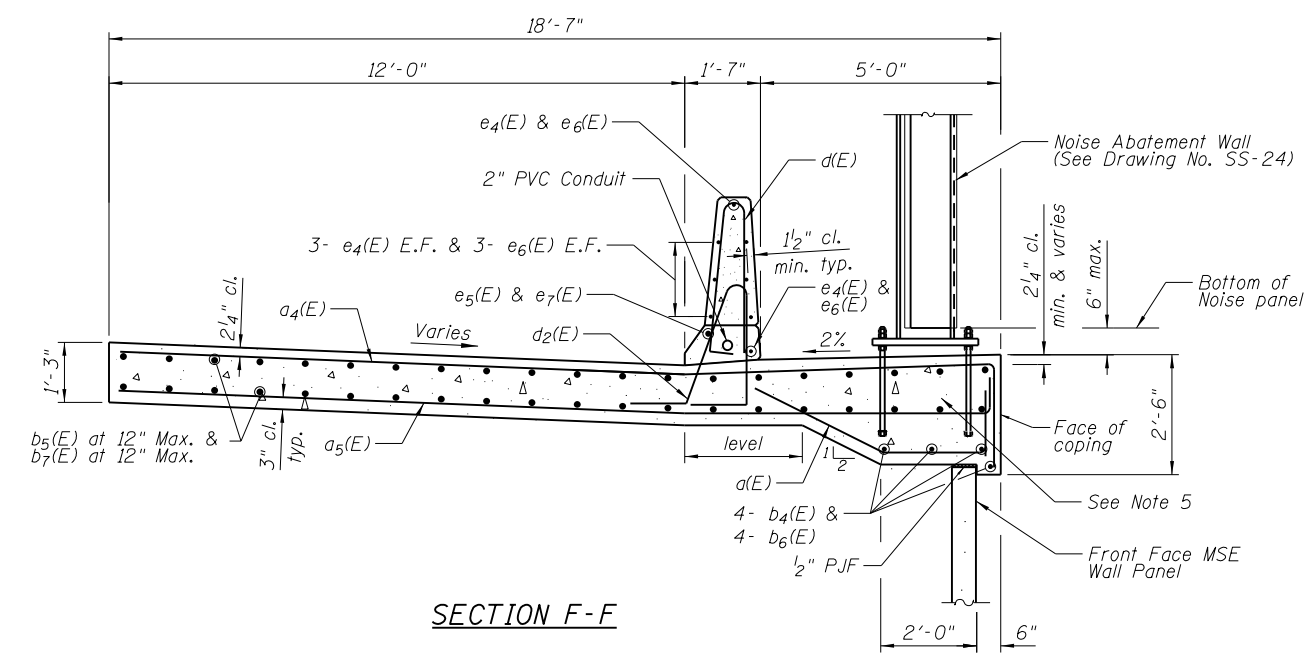
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	PLOT SCALE = 6.0000' / in.	DRAWN - EJM	REVISED -			DRAWING NO. SS-14	CONTRACT NO. 60Y95			
	PLOT DATE = 11/18/2014	CHECKED - BGA	REVISED -			SHEET NO. 14 OF 57 SHEETS				
	ILLINOIS FED. AID PROJECT									



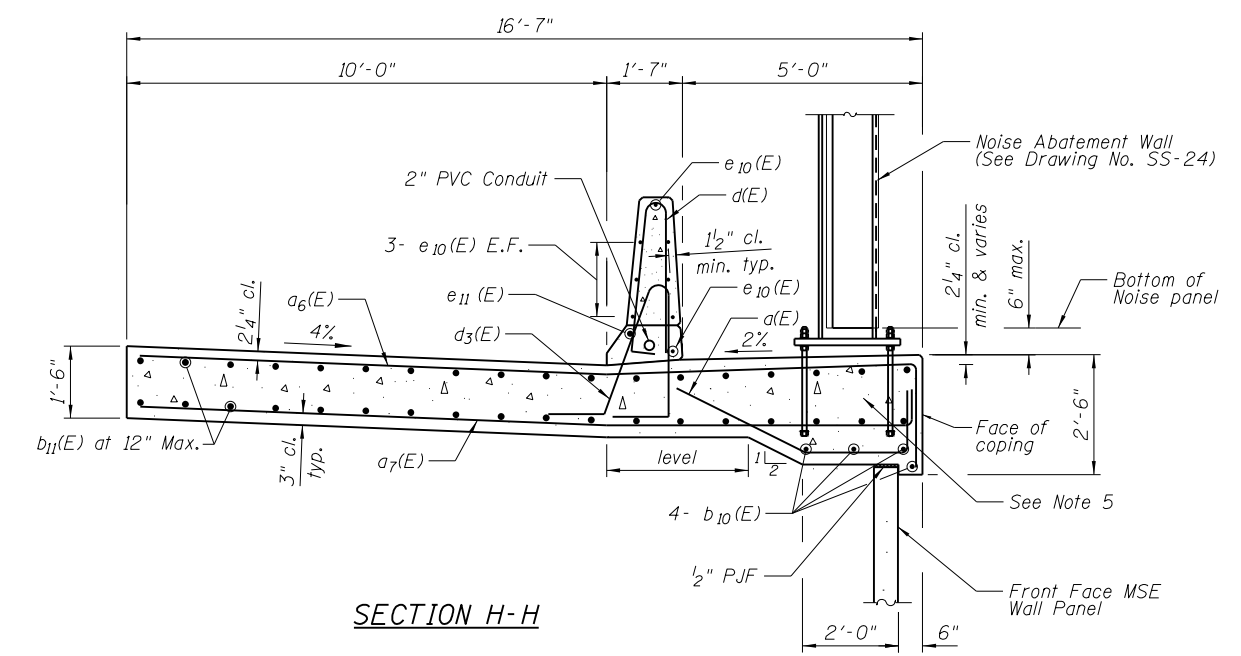
**SECTION E-E**



**SECTION G-G**



**SECTION F-F**

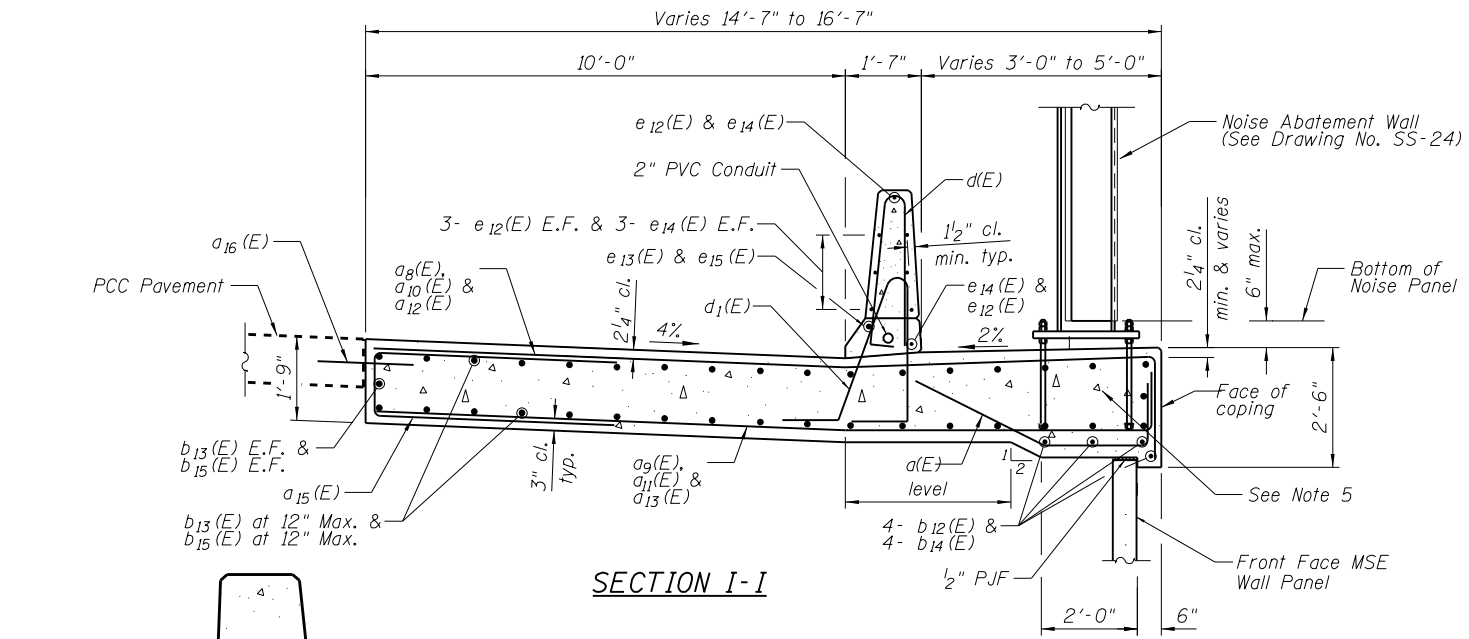


**SECTION H-H**

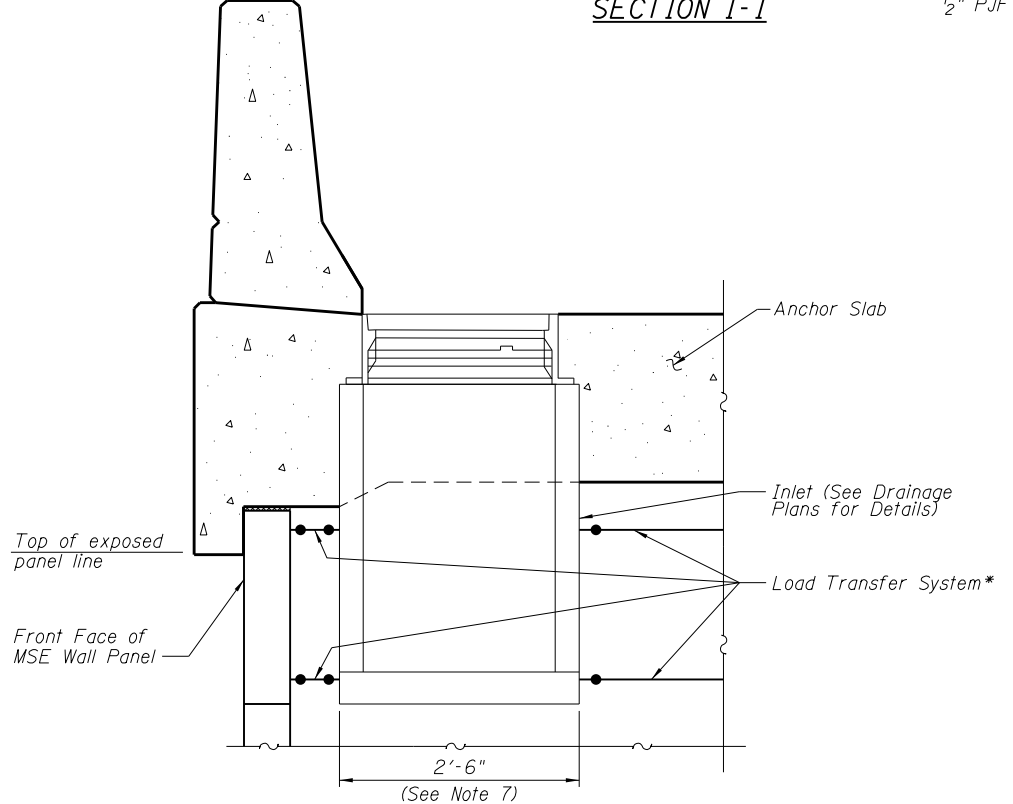
**Notes:**

1. For anchor slab details not provided, see Anchorage Slab Plan and Elevation sheets.
2. For locations of Section E-E, Section F-F, Section G-G and Section H-H, see Anchorage Slab Plan and Elevation sheets.
3. For Anchor Slab Bill of Materials and Bar Details, see Drawing No. SS-19 and Drawing No. SS-20.
4. For Anchor Slab dimensions not shown, see Barrier and Anchor Slab Detail on Drawing No. SS-05.
5. The noise wall supplier shall design all additional reinforcing required to prevent concrete breakout around the noise wall post anchor bolts in the anchorage slab. Calculation and drawings signed and sealed by an Illinois licensed Structural Engineer shall be submitted to the Engineer for approval.
6. Cost of P.J.F included in Concrete Superstructure.

FILE NAME = 0220551-60Y95-015-AnchSlabBarrDet1.dgn <b>CH2MHILL</b>	USER NAME = asontag	DESIGNED - EJM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ANCHORAGE SLAB &amp; BARRIER DETAILS No. 1 STRUCTURE NO. 022-0551</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 11/18/2014	CHECKED - BGA	REVISED -			DRAWING NO. SS-15 CONTRACT NO. 60Y95			SHEET NO. 15 OF 57 SHEETS	



**SECTION I-I**

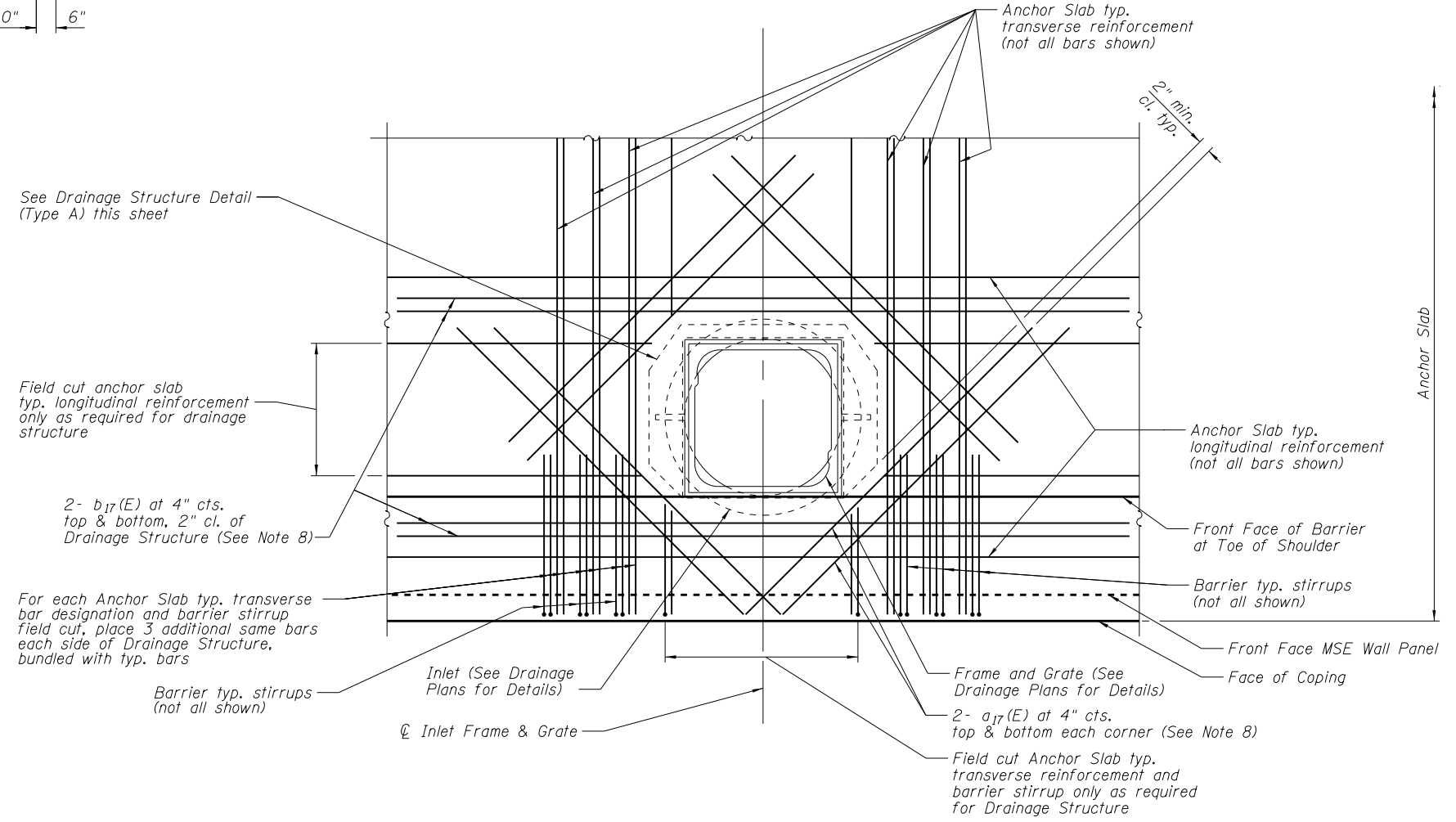


**DRAINAGE STRUCTURE DETAIL (TYPE A)**

(Cross slope not shown)(Segment 1-8 shown, Segment 9-21 Similar)  
 \* MSE supplier to design load transfer system to accommodate drainage structure.

**Notes:**

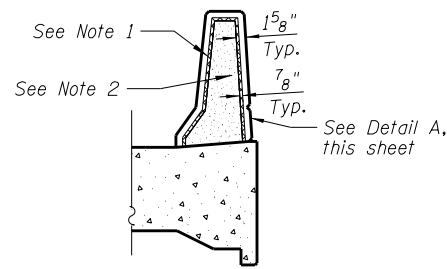
1. For anchor slab details not provided, see Anchorage Slab Plan and Elevation sheets.
2. For locations of Section I-I, see Anchorage Slab Plan and Elevation sheets.
3. For Anchor Slab Bill of Materials and Bar Details, see Drawing No. SS-19 and Drawing No. SS-20.
4. For Anchor Slab dimensions not shown, see Barrier and Anchor Slab Detail on Drawing No. SS-05.
5. The noise wall supplier shall design all additional reinforcing required to prevent concrete breakout around the noise wall post anchor bolts in the anchorage slab. Calculation and drawings signed and sealed by an Illinois licensed Structural Engineer shall be submitted to the Engineer for approval.
6. Cost of PJF included in Concrete Superstructure.
7. Size and shape of drainage structure approximate, see Drainage Plans for details.
8. Place bars symmetric about  $\phi$  drainage inlet as space permits, see Anchor Slab Bill of Materials for bar lengths.



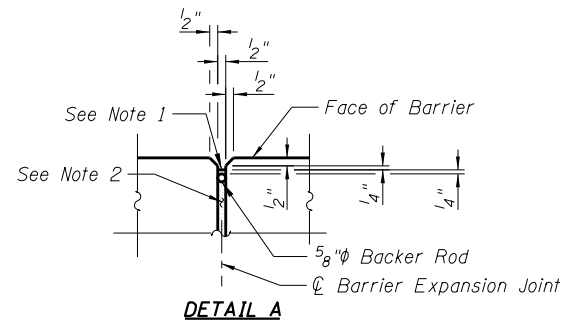
**PLAN AT DRAINAGE STRUCTURE (TYPE A)**

- Inlet - Sta. 629+90 Lt. (Ramp G6)
- Inlet - Sta. 627+99 Lt. (Ramp G6)
- Inlet - Sta. 629+90 Rt. (Ramp G6)
- Inlet - Sta. 631+00 Rt. (Ramp G6)
- Inlet - Sta. 631+50 Rt. (Ramp G6)

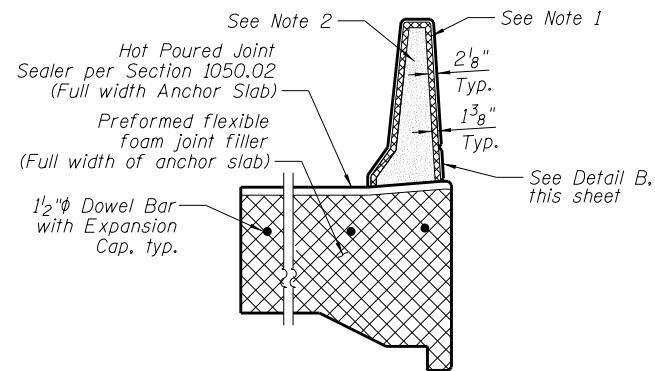
FILE NAME = 0220551-60Y95-016-AnchSlabBarrDet2.dgn <b>CH2MHILL</b>	USER NAME = asontag DESIGNED - EJM CHECKED - BGA DRAWN - NSM CHECKED - BGA PLOT SCALE = 4.0000' / in. PLOT DATE = 11/18/2014	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>ANCHORAGE SLAB &amp; BARRIER DETAILS No. 2          STRUCTURE NO. 022-0551</b>	F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO. 345 2013-083-R&B DUPAGE 759 567 DRAWING NO. SS-16 CONTRACT NO. 60Y95	
	SHEET NO. 16 OF 57 SHEETS					
	ILLINOIS FED. AID PROJECT					



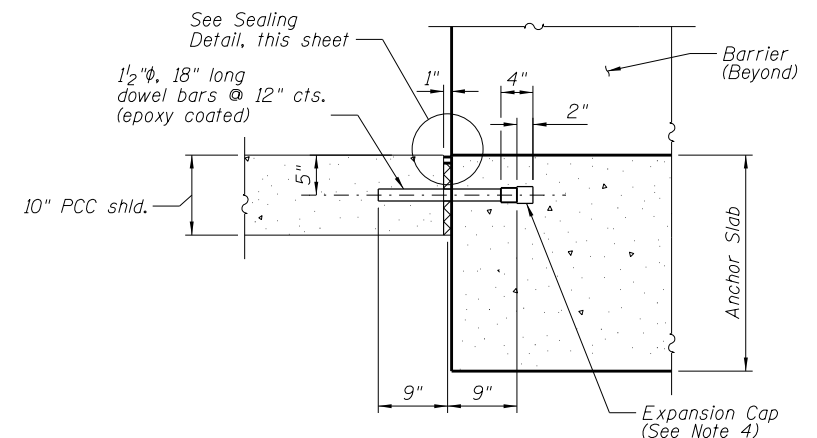
**SECTION J-J**  
(Cross slope not shown)  
(Segment 1 thru 8 shown,  
(Segment 9 thru 21 similar)



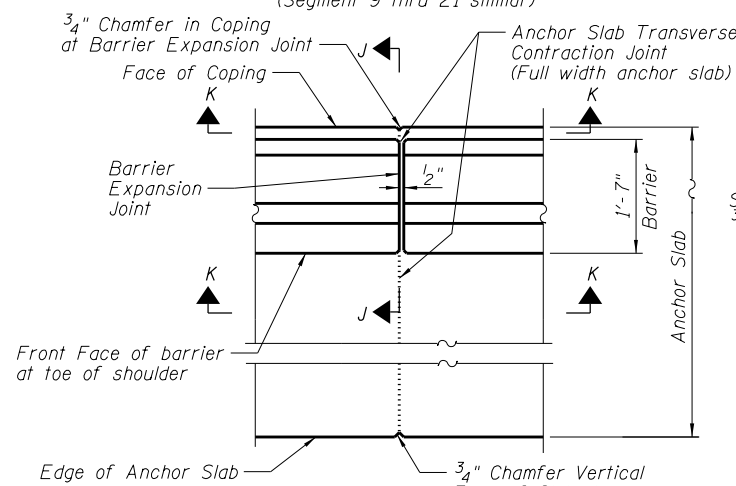
**DETAIL A**



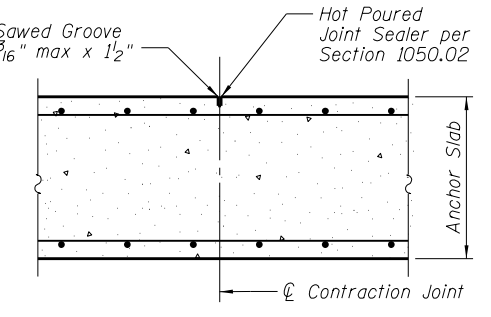
**TYPICAL SECTION**  
(Cross slope not shown)  
(Segment 1 thru 8 shown,  
(Segment 9 thru 21 similar)



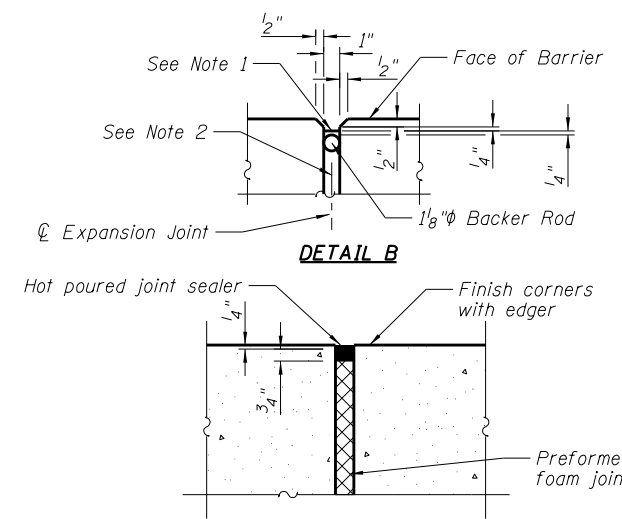
**ANCHOR SLAB TO PCC SHLD.**



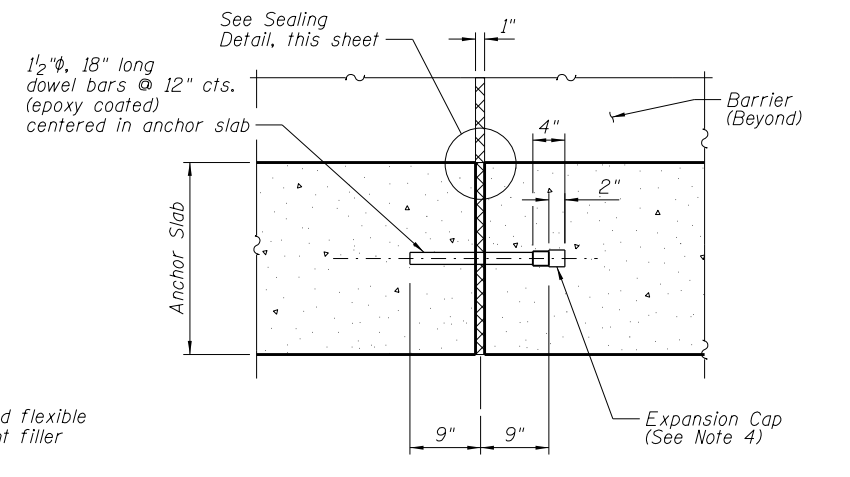
**PLAN**  
**TRANSVERSE CONTRACTION JOINT**



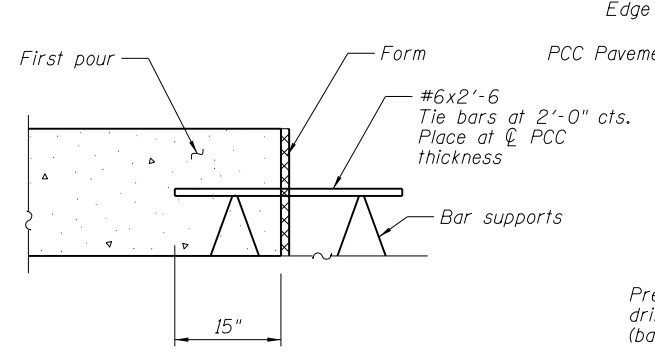
**SECTION K-K**



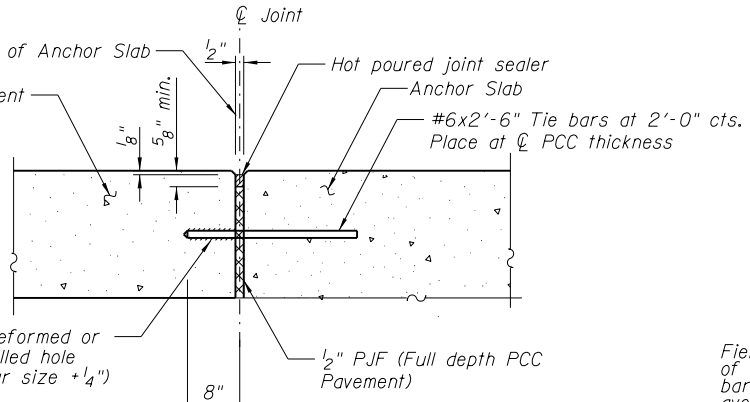
**DETAIL B**



**ANCHOR SLAB TO ANCHOR SLAB**

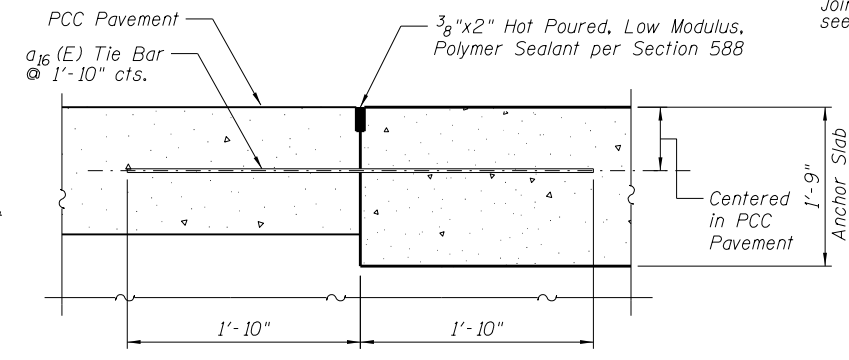


**TIE BAR PREFORMED IN PLACE**



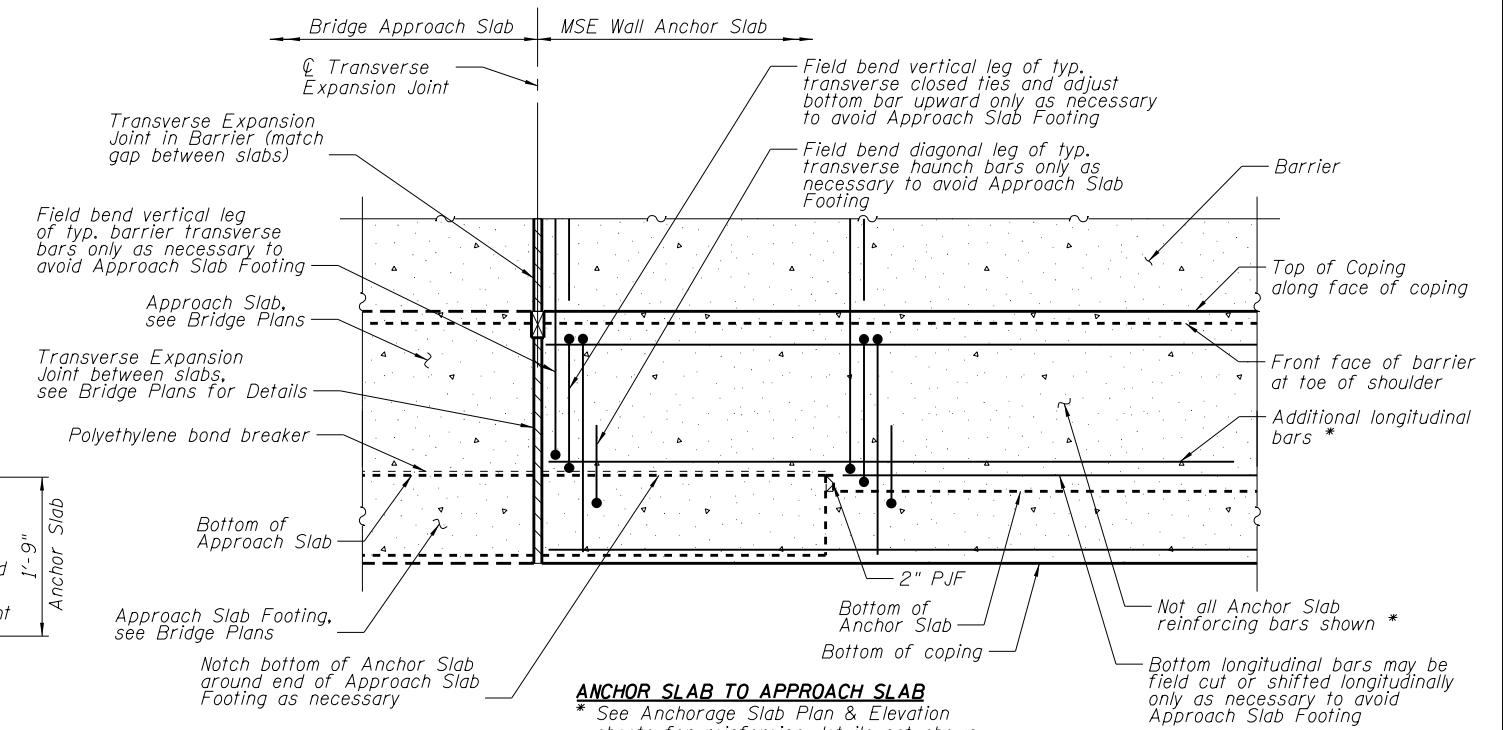
**TIE BAR GROUTED IN PLACE**

**TYPICAL LONGITUDINAL CONSTRUCTION JOINT (UNO)**



**LONGITUDINAL CONSTRUCTION JOINT**

(Sta 630+70 to Sta 632+27.90,  
for other location, see Typical Longitudinal Construction Joint)

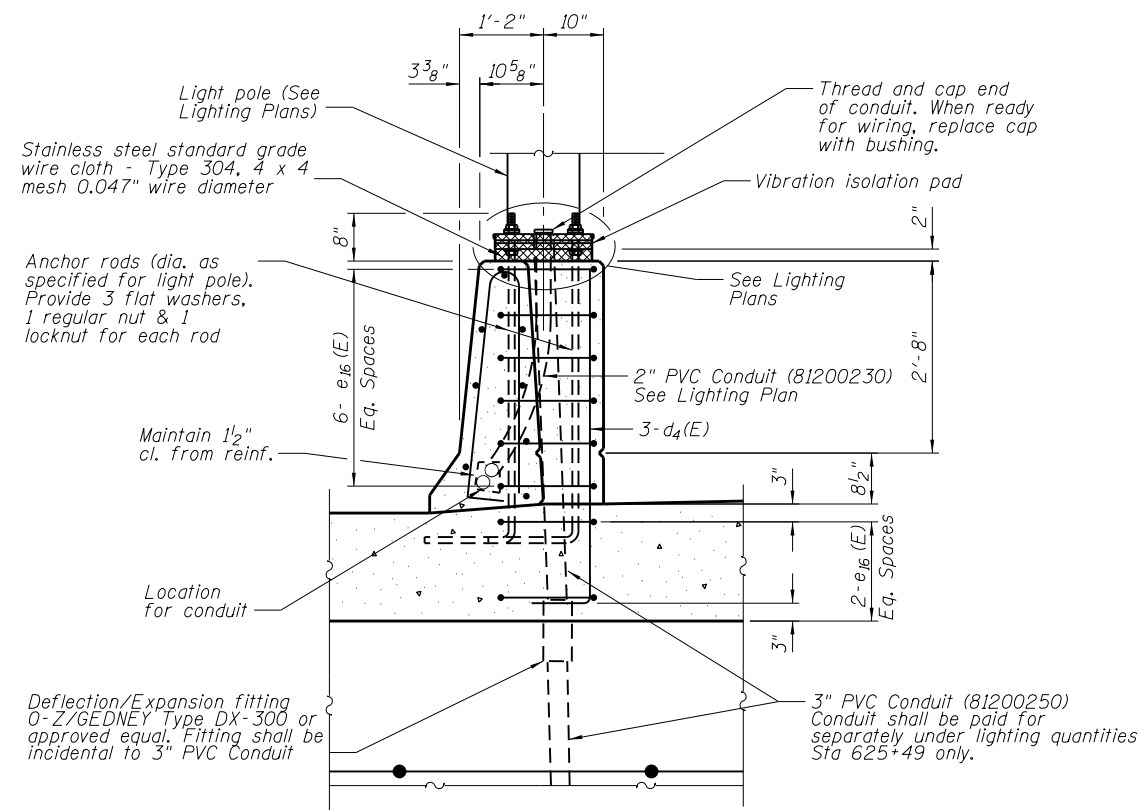


**ANCHOR SLAB TO APPROACH SLAB**  
**TRANSVERSE EXPANSION JOINT**

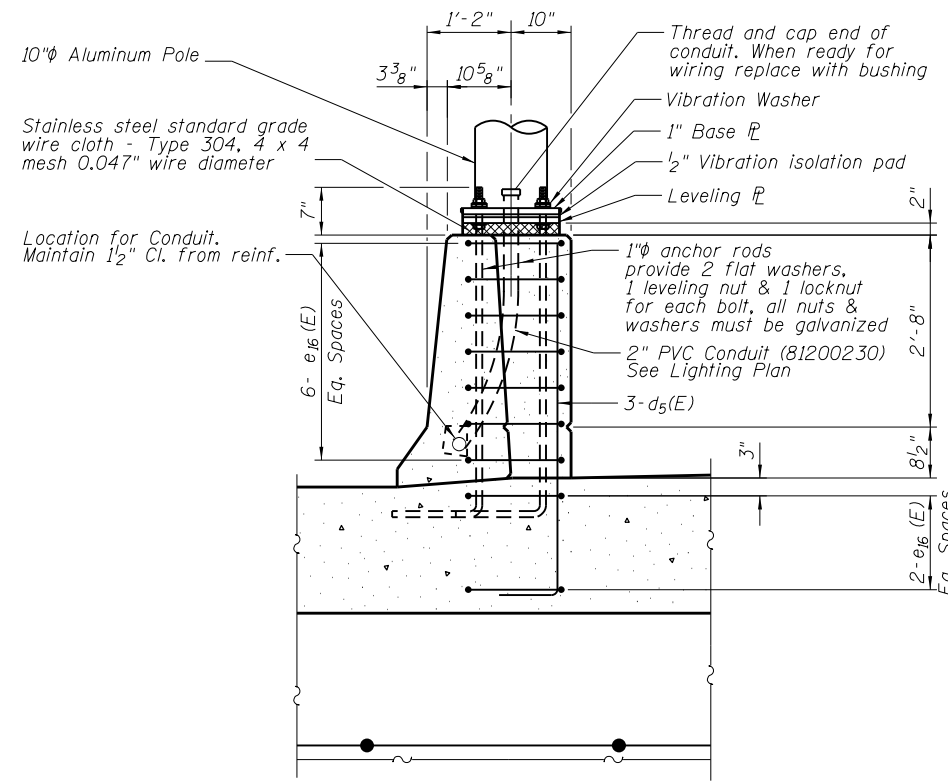
**Notes:**

1. Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a backer rod.
2. Preformed Self-Expanding Cork Joint Filler according to Article 1051.07 of Std. Spec.
3. Typical Tie and dowel bars are not included in Bill of Materials. Cost included in Concrete Superstructure.
4. Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.

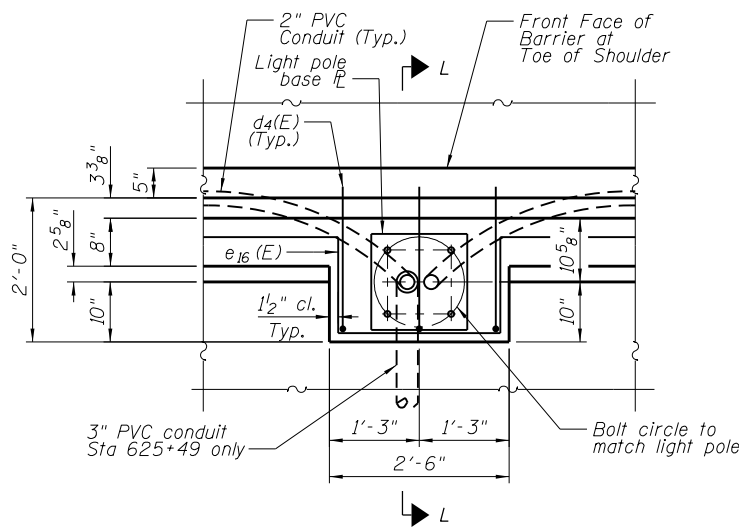
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<b>CH2MHILL</b>	PLOT SCALE = 80.0000' / in.	DRAWN - NSM	REVISIONS -			DRAWING NO. SS-17 CONTRACT NO. 60Y95				
	PLOT DATE = 10/28/2014	CHECKED - BGA	REVISIONS -			SHEET NO. 17 OF 57 SHEETS				
						ILLINOIS FED. AID PROJECT				



**SECTION L-L**



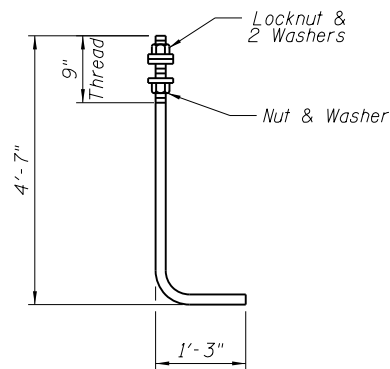
**SECTION M-M**



**PLAN**

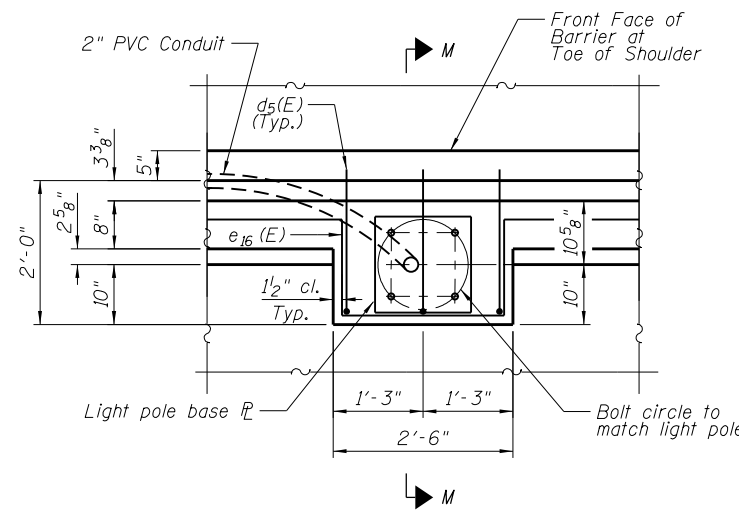
**PLAN AT IDOT LIGHT POLE FOUNDATION**

For Lighting details, see Lighting Plans  
 Light Pole - Sta. 625+49 Rt (Ramp G6)  
 Light Pole - Sta. 627+62 Rt (Ramp G6)  
 Light Pole - Sta. 629+86.50 Rt (Ramp G6)



**IDOT ANCHOR ROD**

Diameter as specified for light poles. (ASTM F 1554 Grade 105). Full length hot dipped galvanized



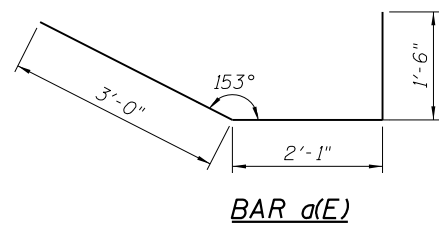
**PLAN**

**PLAN AT IDOT LIGHT POLE FOUNDATION**

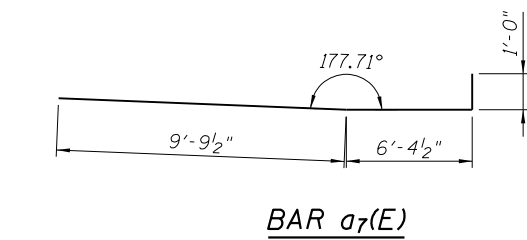
For lighting details, see lighting Plans.  
 Light Pole - Sta. 632+01 Rt (Ramp G6)

**Notes:**

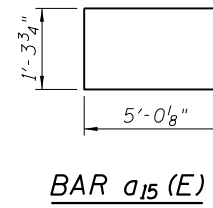
- For lighting layout, quantities, and payment, see Lighting Plans.



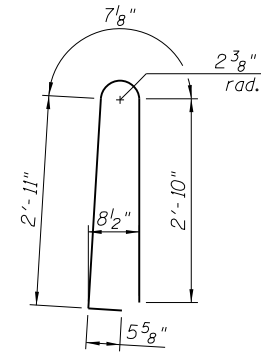
BAR a1(E)



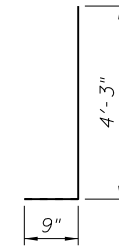
BAR a7(E)



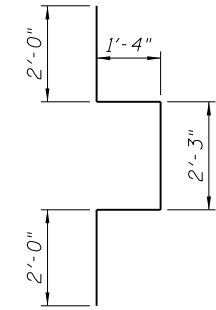
BAR a15(E)



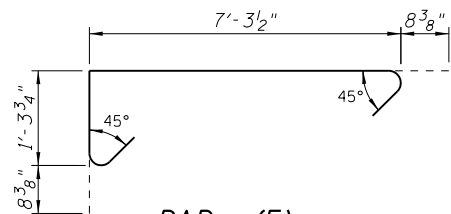
BAR d(E)



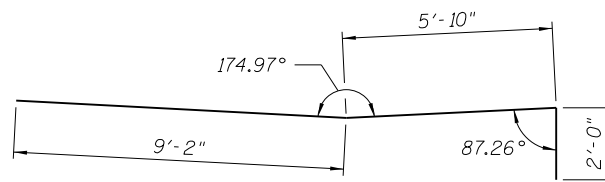
BAR d4(E)



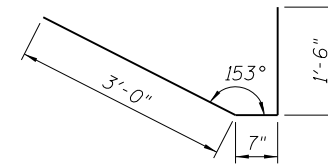
BAR e16(E)



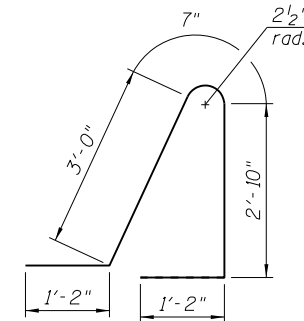
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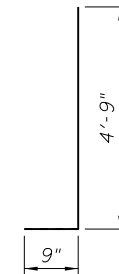
BAR a8(E)



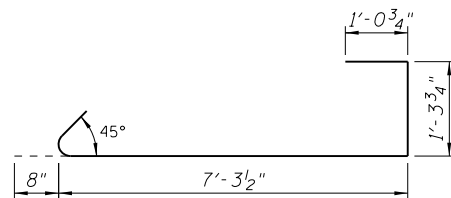
BAR a18(E)



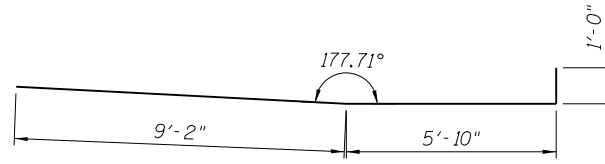
BAR d1(E)



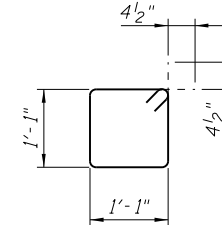
BAR d5(E)



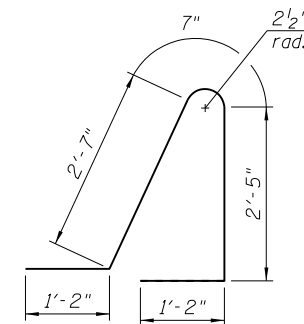
BAR a2(E)



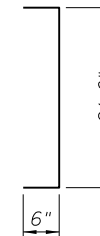
BAR a9(E)



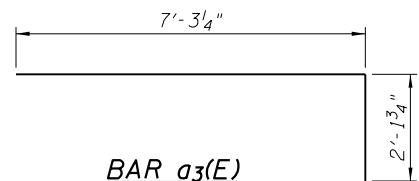
BAR a20(E)



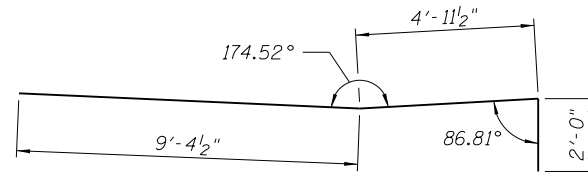
BAR d2(E)



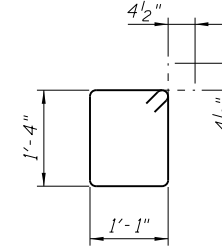
BAR d6(E)



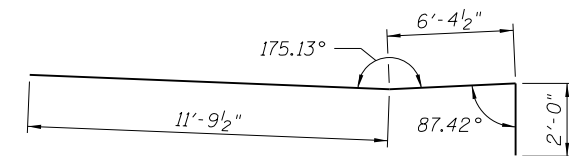
BAR a3(E)



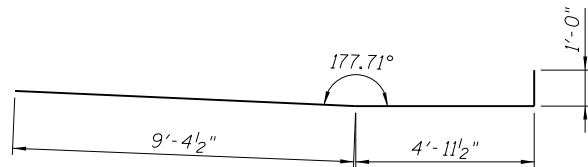
BAR a10(E)



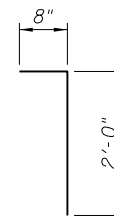
BAR a21(E)



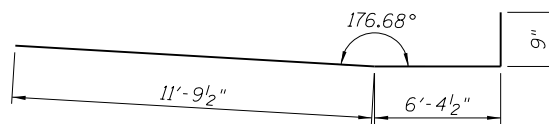
BAR a4(E)



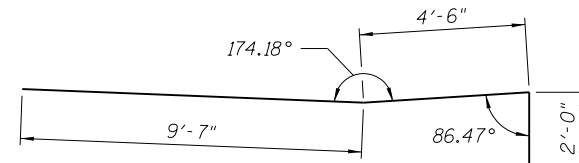
BAR a11(E)



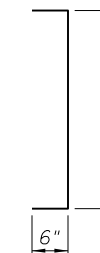
BAR b18(E)



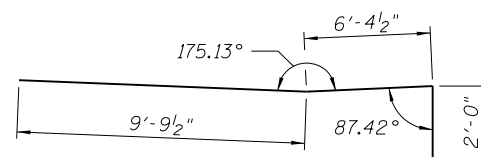
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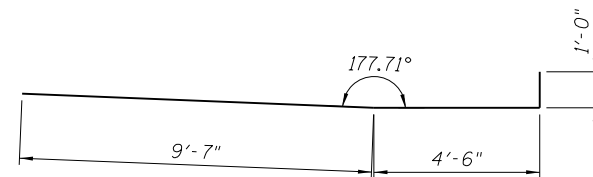
BAR a12(E)



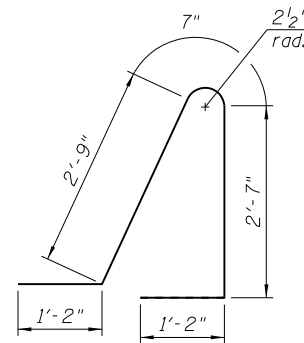
BAR d7(E)



BAR a6(E)

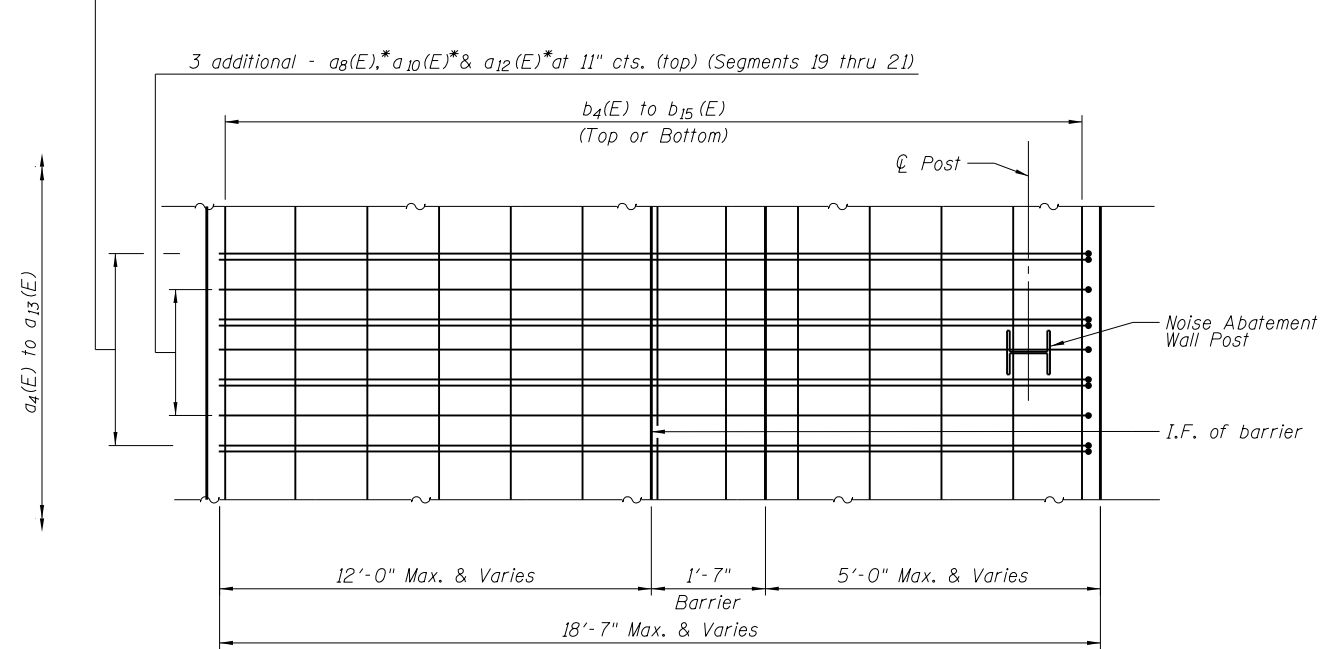


BAR a13(E)



BAR d3(E)

4 additional-  $a_4(E)$ \* to  $a_{13}(E)$ \* bundled with Typ.  $a_4(E)$  to  $a_{13}(E)$  bars @ 11" cts. (top and bottom) (Segments 9 thru 21)



**PLAN AT NOISE ABATEMENT WALL POST**

\*Additional transverse anchor slab reinforcing required at each Noise Abatement Wall post. For estimating reinforcing quantities, it is assumed that 45 posts will be required for the Noise Abatement Wall in segments 9 thru 18 and 11 posts will be required for the Noise Abatement Wall in segments 19 thru 21. Final number of posts will be determined by the noise wall supplier.

**Notes:**

1. For anchor slab details not provided, See Anchorage Slab Plan and Elevation Sheets.
2. Reinforcement in MSE Wall Panels and CIP coping (except anchor slab coping) not included in Bill of Material. Cost included in Mechanically Stabilized Earth Retaining Wall.

**ANCHORAGE SLAB  
BILL OF MATERIAL**

BAR	No.	SIZE	LENGTH	SHAPE
$a(E)$	884	4	6'-7"	
$a_1(E)$	1,377	6	10'-0"	
$a_2(E)$	1,377	6	10'-4"	
$a_3(E)$	779	5	9'-5"	
$a_4(E)$	349	6	20'-2"	
$a_5(E)$	349	6	18'-11"	
$a_6(E)$	659	6	16'-4"	
$a_7(E)$	659	6	17'-2"	
$a_8(E)$	84	6	17'-0"	
$a_9(E)$	75	6	16'-0"	
$a_{10}(E)$	90	6	16'-4"	
$a_{11}(E)$	81	6	15'-4"	
$a_{12}(E)$	119	6	16'-1"	
$a_{13}(E)$	104	6	15'-1"	
$a_{14}(E)$	112	4	5'-0"	
$a_{15}(E)$	168	6	11'-4"	
$a_{16}(E)$	86	6	3'-8"	
$a_{17}(E)$	144	6	5'-2"	
$a_{18}(E)$	692	4	5'-1"	
$a_{19}(E)$	1	4	5'-0"	
$a_{20}(E)$	13	4	5'-1"	
$a_{21}(E)$	13	4	5'-7"	
$b(E)$	9	4	22'-9"	
$b_1(E)$	60	8	25'-3"	
$b_2(E)$	63	4	28'-2"	
$b_3(E)$	420	8	30'-7"	
$b_4(E)$	8	4	28'-10"	
$b_5(E)$	80	5	29'-2"	
$b_6(E)$	24	4	28'-5"	
$b_7(E)$	240	5	28'-9"	
$b_8(E)$	14	4	26'-0"	
$b_9(E)$	72	5	26'-4"	
$b_{10}(E)$	60	4	26'-6"	
$b_{11}(E)$	540	5	27'-0"	
$b_{12}(E)$	16	4	22'-0"	
$b_{13}(E)$	140	5	22'-4"	
$b_{14}(E)$	12	4	23'-8"	
$b_{15}(E)$	96	5	24'-1"	
$b_{16}(E)$	14	6	6'-0"	
$b_{17}(E)$	72	8	16'-0"	
$b_{18}(E)$	5	4	2'-8"	
$d(E)$	1,889	5	6'-10"	
$d_1(E)$	1,053	5	8'-9"	
$d_2(E)$	301	5	7'-11"	
$d_3(E)$	577	5	8'-3"	
$d_4(E)$	9	6	5'-0"	
$d_5(E)$	3	6	5'-6"	
$d_6(E)$	7	5	3'-6"	
$d_7(E)$	7	5	3'-9"	
$e(E)$	32	4	15'-6"	
$e_1(E)$	4	8	15'-6"	
$e_2(E)$	224	4	19'-7"	
$e_3(E)$	28	8	19'-7"	
$e_4(E)$	24	4	17'-10"	
$e_5(E)$	3	8	17'-10"	
$e_6(E)$	72	4	17'-7"	
$e_7(E)$	9	8	17'-7"	
$e_8(E)$	24	4	16'-3"	
$e_9(E)$	3	8	16'-3"	
$e_{10}(E)$	160	4	18'-5"	
$e_{11}(E)$	20	8	18'-5"	
$e_{12}(E)$	32	4	20'-7"	
$e_{13}(E)$	4	8	20'-7"	
$e_{14}(E)$	32	4	16'-2"	
$e_{15}(E)$	4	8	16'-2"	
$e_{16}(E)$	32	6	18'-11"	
DESCRIPTION	UNIT	QUANTITY		
Concrete Superstructure	CU YD	1,327		
Reinforcement Bars, Epoxy Coated	POUND	247,670		
Protective Coat	SQ YD	2,632		

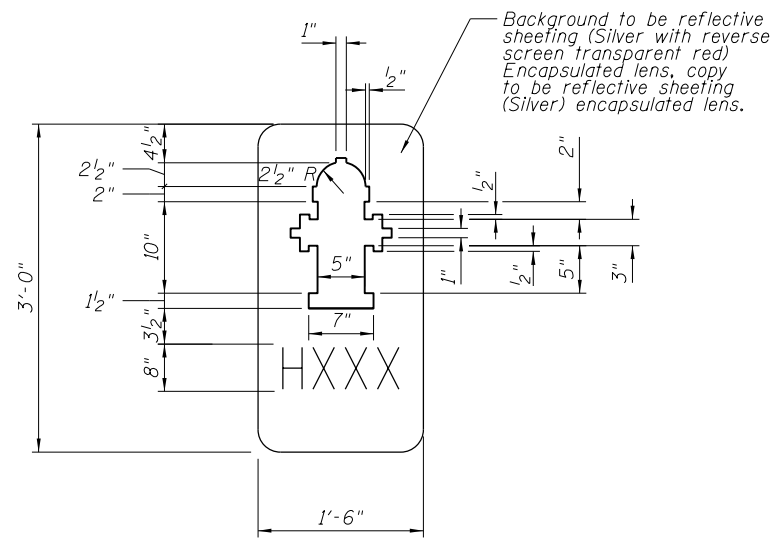
FILE NAME = 0220551-60Y95-020-AnchSlab9arr-Det6.dgn	USER NAME = asontag	DESIGNED - EJM	REVISED -
CH2MHILL®	PLOT SCALE = 2.6667' / in.	CHECKED - BGA	REVISED -
	PLOT DATE = 11/26/2014	DRAWN - SL	REVISED -
		CHECKED - BGA	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

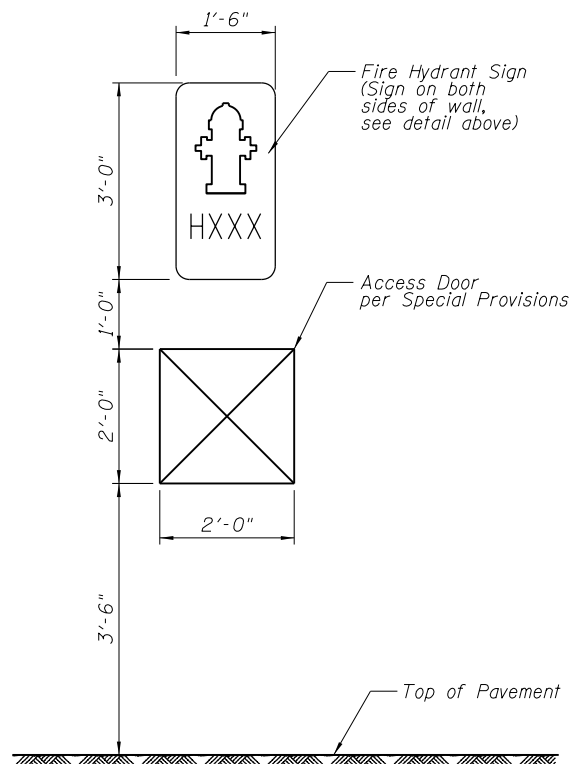
ANCHORAGE SLAB & BARRIER DETAILS No. 6  
STRUCTURE NO. 022-0551

SHEET NO. 20 OF 57 SHEETS

F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 571
DRAWING NO. SS-20		CONTRACT NO. 60Y95		
ILLINOIS FED. AID PROJECT				

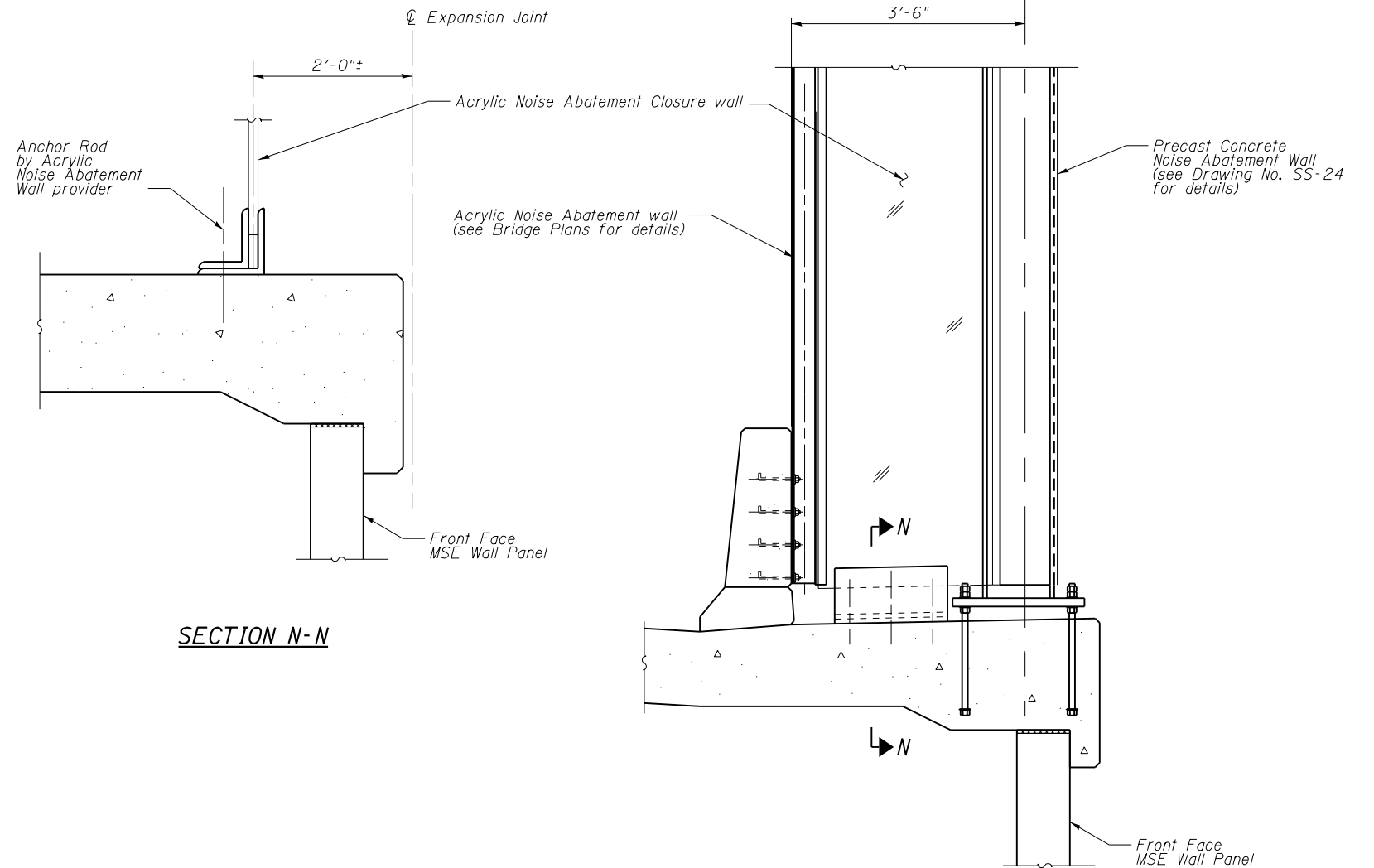


**FIRE HYDRANT ACCESS DOOR SIGN DETAIL**  
(N.T.S, see note 1)



**ACCESS DOOR DETAIL**  
N.T.S

Access Door Locations  
Hydrant No. H478, Sta. 626+40 Rt (Ramp G6)  
Hydrant No. H479, Sta. 628+64 Rt (Ramp G6)  
Hydrant No. H480, Sta. 630+85 Rt (Ramp G6)



**NOISE ABATEMENT CLOSURE WALL DETAIL**

**Notes:**

1. Signs shall be fastened to wall with 4-3/8" diameter all-threaded rod conforming to ASTM A307, each with one plate washer and locknut and be hot dipped galvanized per AASHTO M232. They shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 3".
2. For anchor slab details not provided, See Anchorage Slab Plan and Elevation Sheets.

FILE NAME = 0220551-60Y95-021-AnchSlabBarrDet7.dgn	USER NAME = asantiag	DESIGNED - EJM	REVISED -
<b>CH2MHILL</b>	PLOT SCALE = 2.6667' / in.	CHECKED - BGA	REVISED -
	PLOT DATE = 10/28/2014	DRAWN - SL	REVISED -
		CHECKED - BGA	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

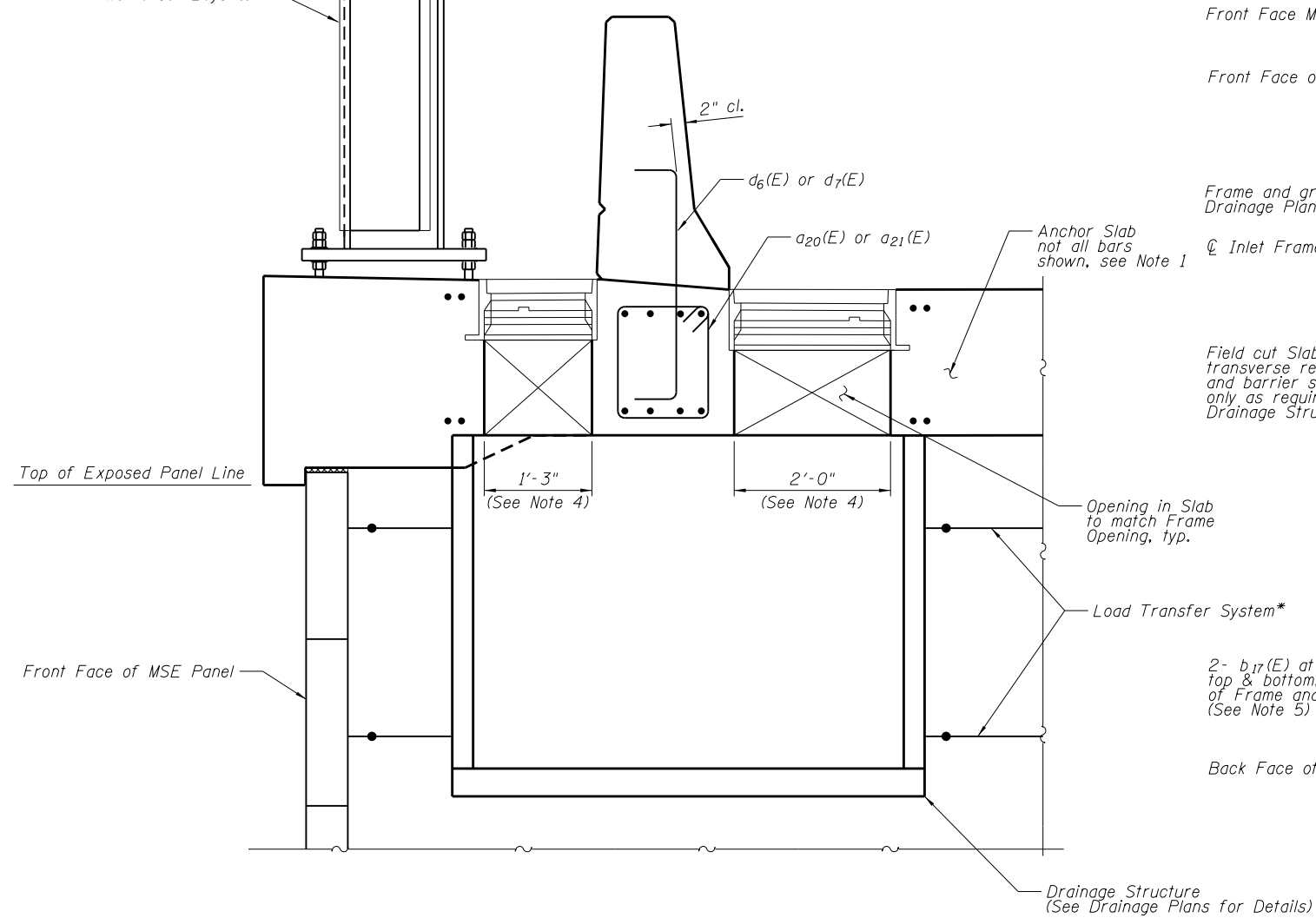
**ANCHORAGE SLAB & BARRIER DETAILS No. 7  
STRUCTURE NO. 022-0551**

SHEET NO. 21 OF 57 SHEETS

F.A.P. RTE. 345	SECTION 2013-083-R&B	COUNTY DUPAGE	TOTAL SHEETS 759	SHEET NO. 572
DRAWING NO. SS-21		CONTRACT NO. 60Y95		
ILLINOIS FED. AID PROJECT				

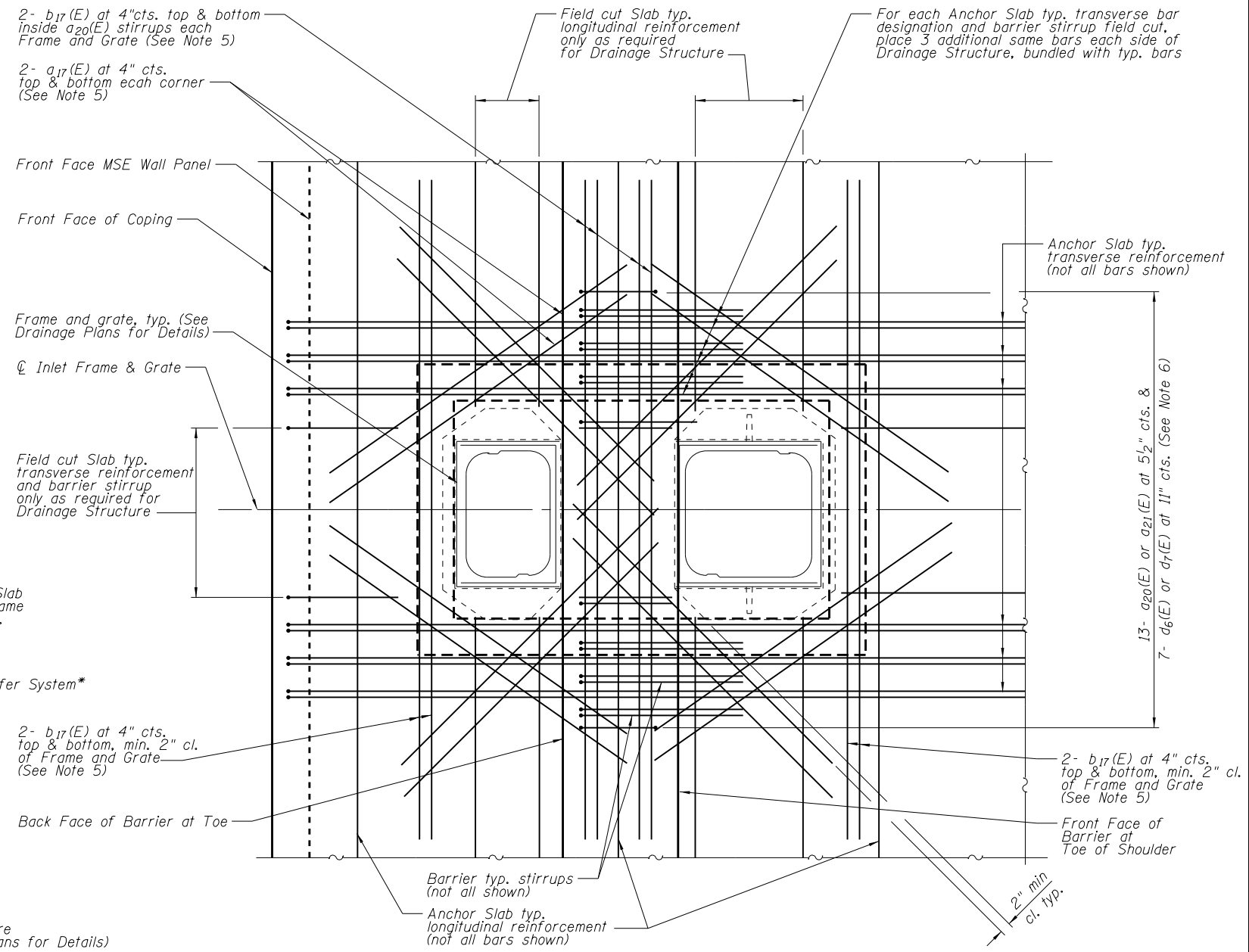


Noise Abatement Wall (Post Beyond)



**DRAINAGE STRUCTURE DETAIL (TYPE 4, MODIFIED)**

(Cross slope not shown)  
 \* MSE supplier to design load transfer system to accommodate drainage structure.

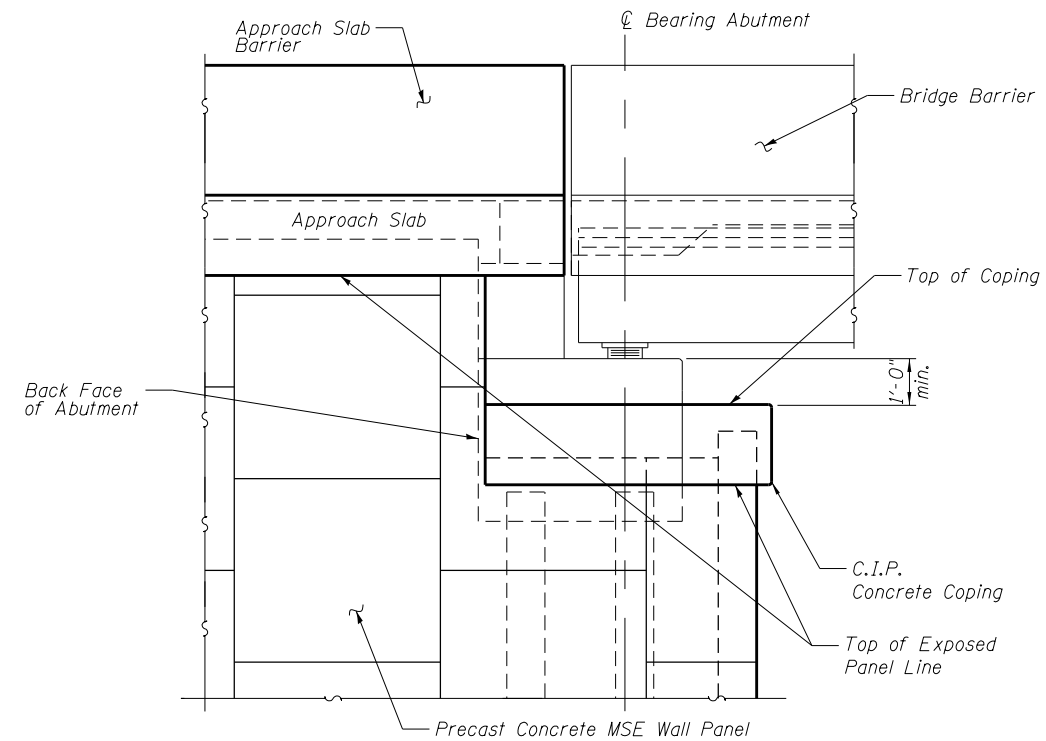


**PLAN AT DRAINAGE STRUCTURE (TYPE 4, MODIFIED)**

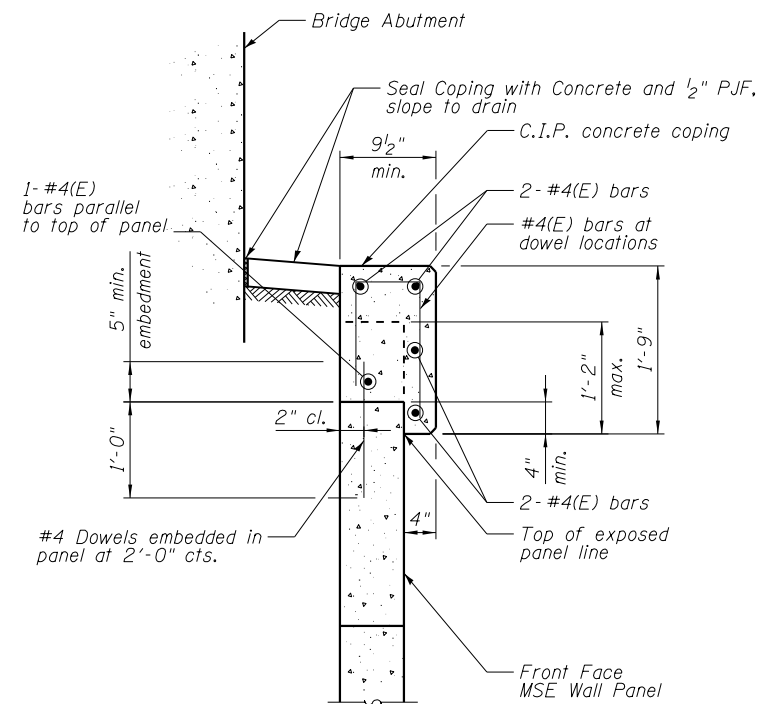
Inlet - Sta. 627+25 Rt. (Ramp G6)  
 Inlet - Sta. 631+26 Rt. (Ramp G6)

**Notes:**

- For anchor slab details not provided, see Anchorage Slab Plan and Elevation sheets.
- For Anchor Slab Bill of Materials and Bar Details, see Drawing No. SS-19 and Drawing No. SS-20.
- For Anchor Slab dimensions not shown, see Barrier and Anchor Slab Detail on Drawing No. SS-05.
- Size and shape of drainage structure approximate, see Drainage Plans for details.
- Place bars symmetric about Ø drainage inlet as space permits, see Anchor Slab Bill of Materials for bar lengths.
- Use  $a_{20}(E)$  &  $d_6(E)$  at Sta. 627+25 Rt. and use  $a_{21}(E)$  &  $d_7(E)$  at Sta. 631+26 Rt.

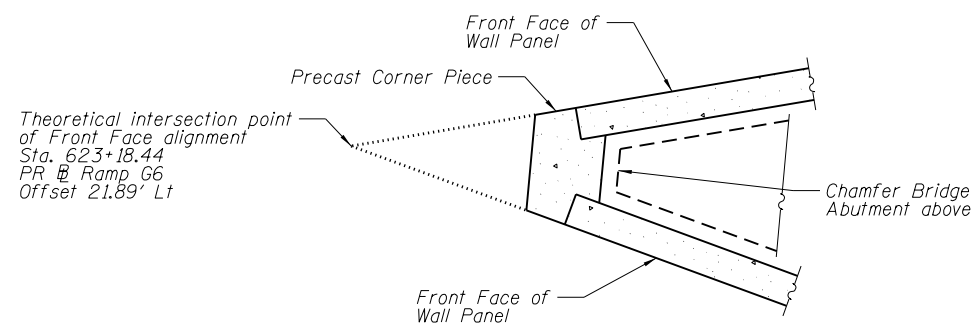


**C.I.P. COPING DETAIL**



**C.I.P. CONCRETE COPING**

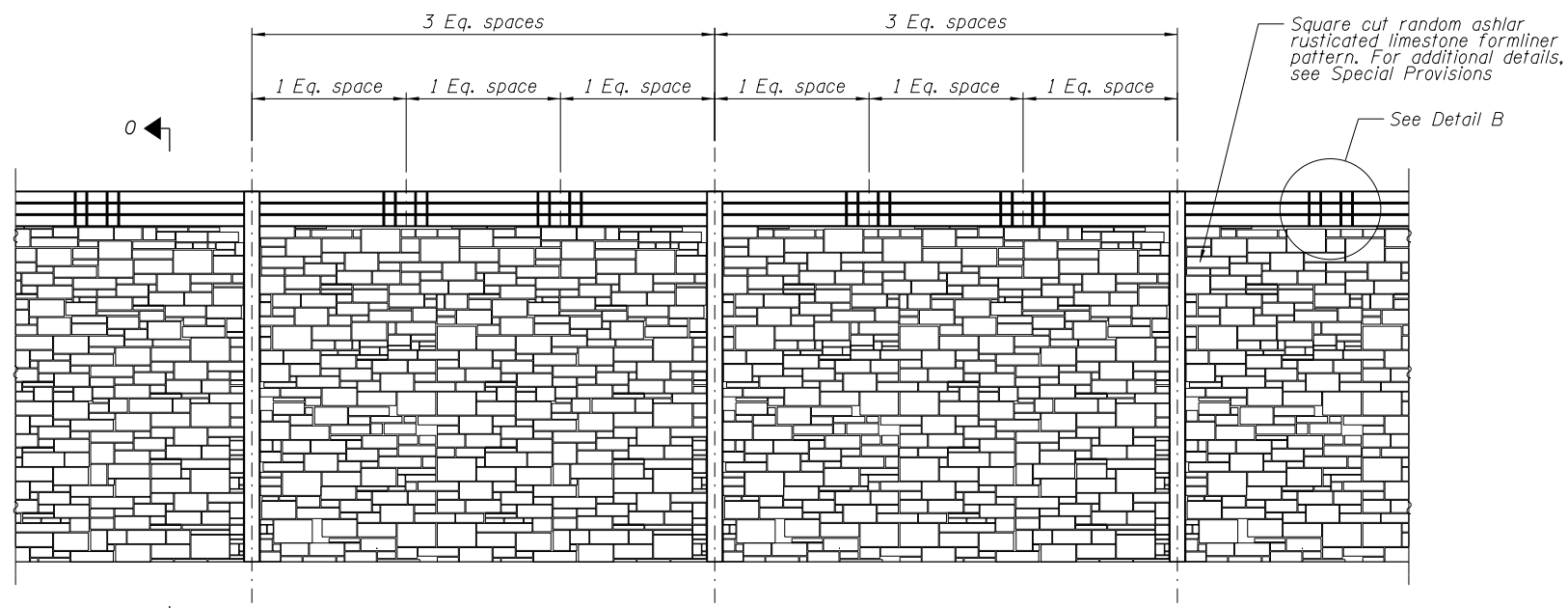
(MSE Wall Panels along Bridge Abutment, see Note 1)



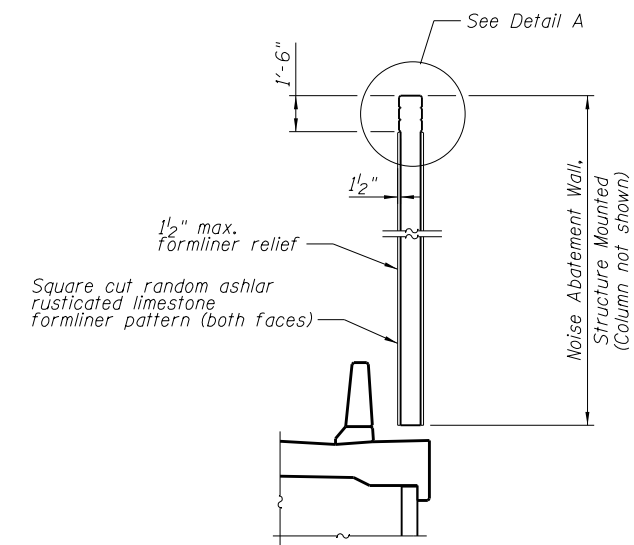
**ACUTE WALL CORNER DETAIL**

**Note:**

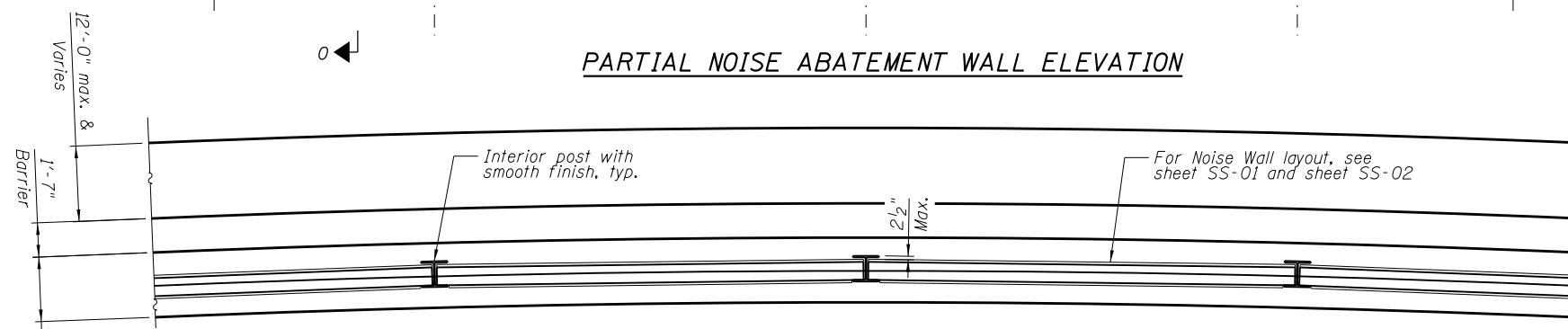
1. Reinforcing bars in C.I.P. coping (except anchor slab coping) to be designed by MSE Wall Supplier.



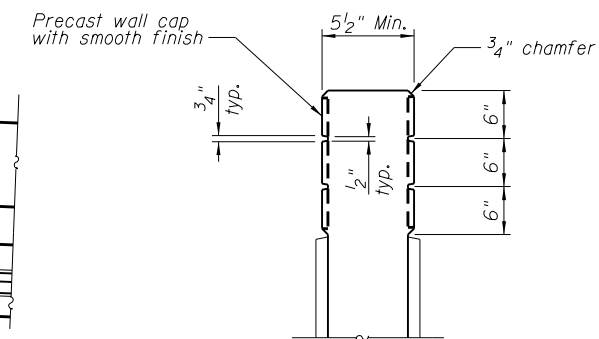
**PARTIAL NOISE ABATEMENT WALL ELEVATION**



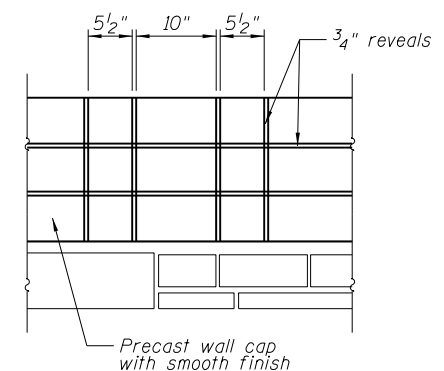
**SECTION 0-0**



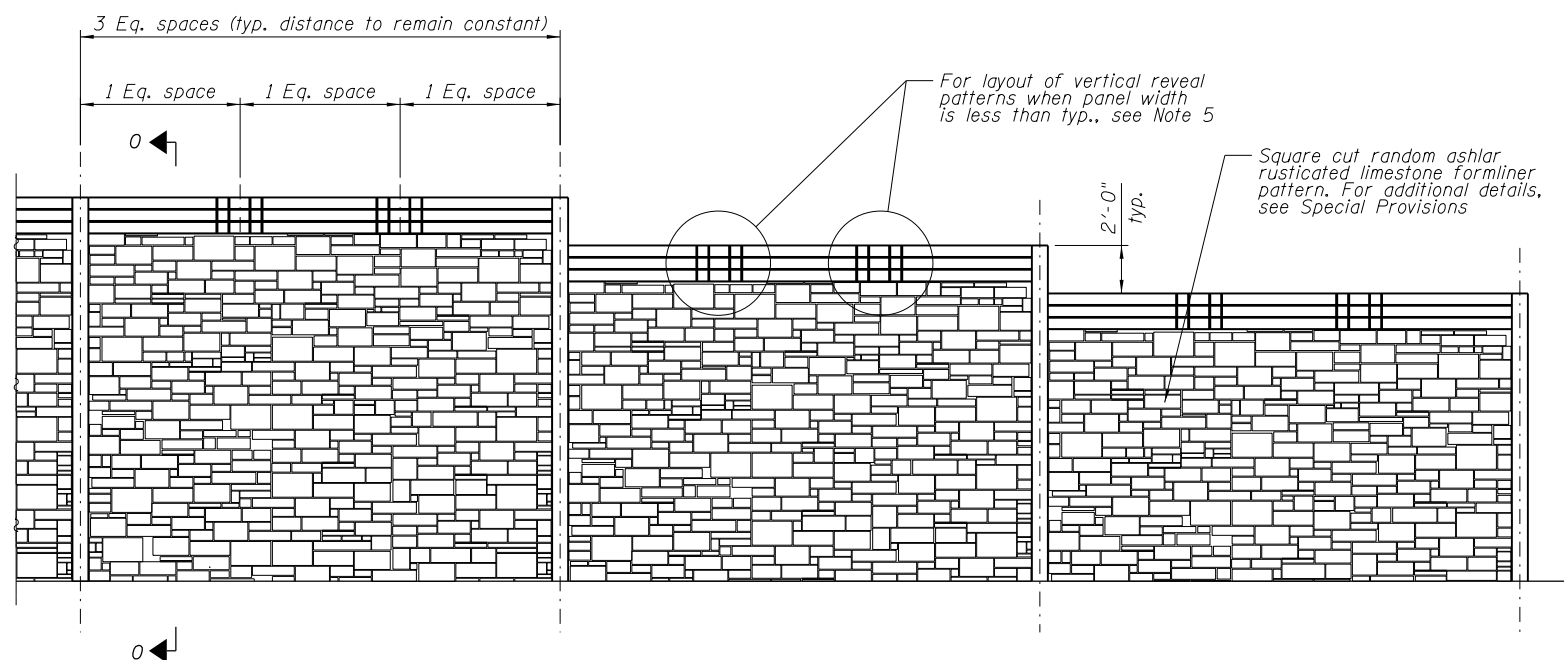
**PARTIAL NOISE ABATEMENT WALL PLAN**



**DETAIL A**



**DETAIL B**  
Vertical Reveal Pattern

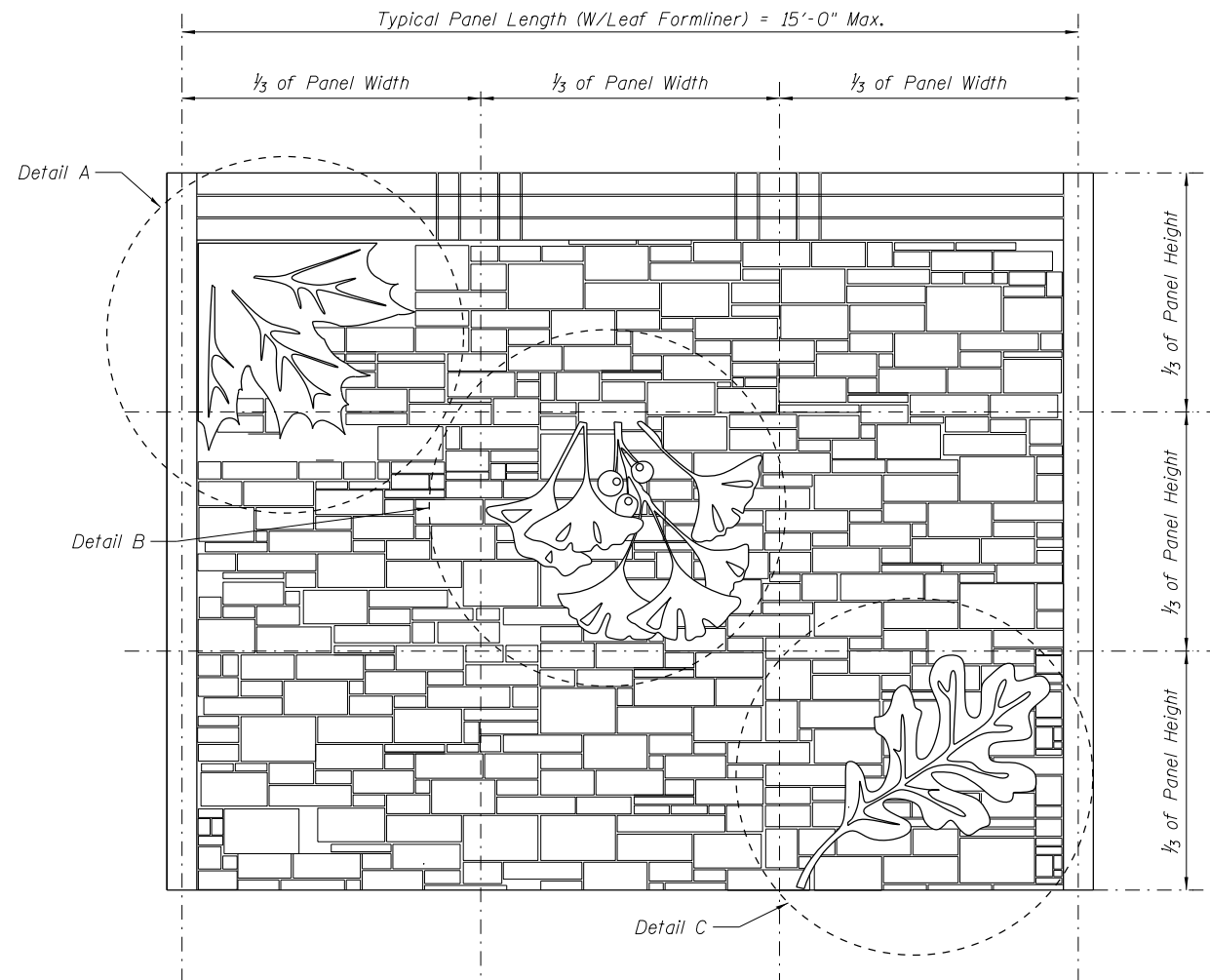


**PARTIAL NOISE ABATEMENT WALL ELEVATION @ FREE END**

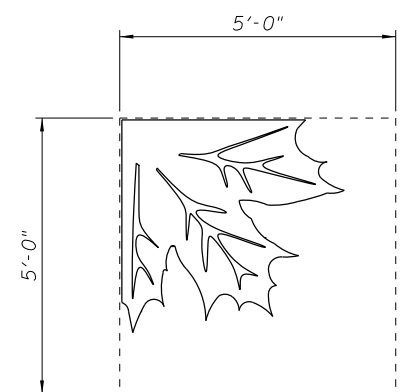
**Notes:**

1. All reinforcement including the welded wire fabric shall be epoxy coated.
2. Reinforcement bars shall satisfy ASTM A706 Grade 60.
3. Welded fabric shall be according to AASHTO M 55.
4. Type, size and spacing of posts, noise wall panels and connection details and wall limits, including top and bottom of wall shall be determined by System Supplier. Cost included with Noise Abatement Wall, Structure Mounted or Crashworthy Noise Abatement Wall, Structure Mounted. Max. post spacing is 15'-0". Posts shall be located a minimum of 6'-0" from the centerlines of each drainage structure.
5. When the panel width is less than that of a typical panel (less than 12 feet), only one vertical reveal image may be applied to that panel to maintain the desired appearance.  
If the width of the panel is less than 1/3 of a typical panel, no vertical reveal image may be required on the panel cap.  
Panel stepping should reflect grading with a desired minimum end panel height of 8 feet.  
The Noise Abatement Wall System Supplier shall be responsible for providing a system in accordance with these step criteria which substantially matches the approximate top of noise abatement wall panel outline as shown on the General Plan & Elevation.

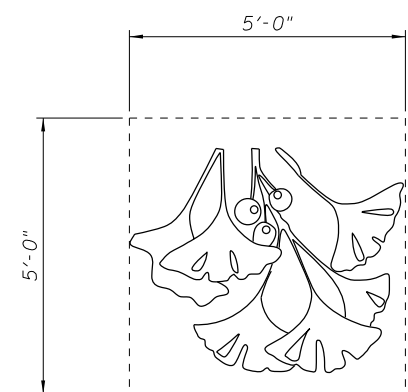
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	PLOT SCALE = 8.0001' / in.	DRAWN - SL	REVISED -			345	2013-083-R&B	DUPAGE	759	575
PLOT DATE = 10/28/2014	CHECKED - BGA	REVISED -		SHEET NO. 24 OF 57 SHEETS		DRAWING NO. SS-24		CONTRACT NO. 60Y95		ILLINOIS FED. AID PROJECT



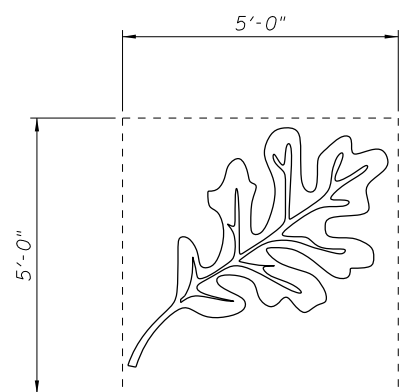
**LEAF FORMLINER LAYOUT**



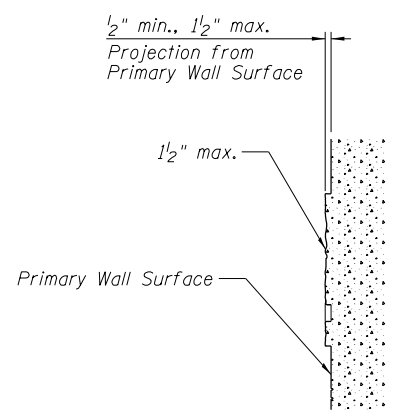
**DETAIL A  
MAPLE LEAF DETAIL**



**DETAIL B  
GINGKO LEAF DETAIL**



**DETAIL C  
OAK LEAF DETAIL**



**SECTION P-P**

**ARCHITECTURAL FORMLINER NOTES:**

This layout shall be applied approximately every 150 feet (overall 6 accent noise wall panels), between Ramp G6 Sta 624+32.80 and Ramp G6 Sta 632+22.89, as "accent" noise wall panel with leaf formliner, only on residential side of noise wall (not on mainline side).

Max. length of Accent Noise Wall Panel shall be 15 feet.

For "accent" noise wall panels that are between 11'-6" and 16'-6" (H) apply only two leaf images, "Detail A" and "Detail C" (Maple and Oak) placed diagonally (as shown on "Leaf Formliner Layout"). For "accent" noise wall panels that are less than 11'-6" (H) apply zero leaf images.

Holes created by form ties shall be filled flush and smooth architectural surface shall be created in accordance with the special provisions.

Transitions between formwork, leaf panels and primary wall surfaces (ashlar pattern) shall be rubbed smooth to eliminate any grid marks and form marks in accordance with the Standard Specifications, Section 503.

Leaf image within the ashlar formliner shall have smooth finish and shall be sculptured to create a three-dimensional character in accordance with the special provisions.

Level of detail for leaf images within the formliners shall include, but shall be not limited to, overall character of the leaf, stems, veining, edge detailing and separations, and general contouring of the leaf.

All joints, fins, irregular projections, holes, and honeycombs shall be repaired and rubbed smooth until all form marks, projections, and irregularities have been removed, all voids filled properly and uniform color has been obtained.

FILE NAME = 0220551-60Y95-025-AestheticDets.dgn	USER NAME = asantiag	DESIGNED - AT	REVISED -
<b>CH2MHILL</b>	PLOT SCALE = 8.0001' / in.	CHECKED - BGA	REVISED -
	PLOT DATE = 11/18/2014	DRAWN - AT	REVISED -
		CHECKED - BGA	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**AESTHETIC DETAILS  
STRUCTURE NO. 022-0551**

SHEET NO. 25 OF 57 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2013-083-R&B	DUPAGE	759	576
DRAWING NO. 55-25			CONTRACT NO. 60Y95	
ILLINOIS FED. AID PROJECT				

# SOIL BORING LOG

Date 4/9/13

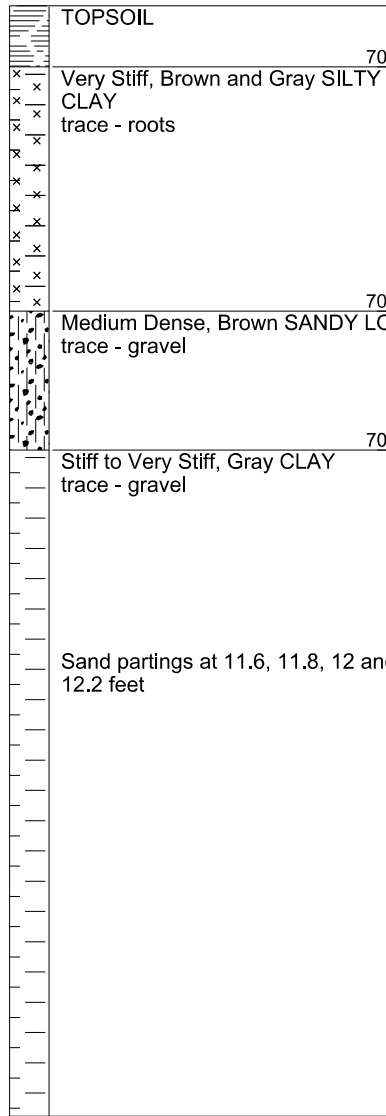
CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
Station 623+18.81 to 640+23.12  
BORING NO. **R-224-RWB-01**  
Station 624+60.39  
Offset 13.2 ft RT.  
Northing 1,936,822.61  
Easting 1,069,859.81  
Ground Surface Elev. 708.0 ft

DEPTH (ft)	BLOW COUNT (Blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)	Surface Water Elev.	DEPTH (ft)	BLOW COUNT (Blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)
				ft	ft			



The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Date 4/9/13

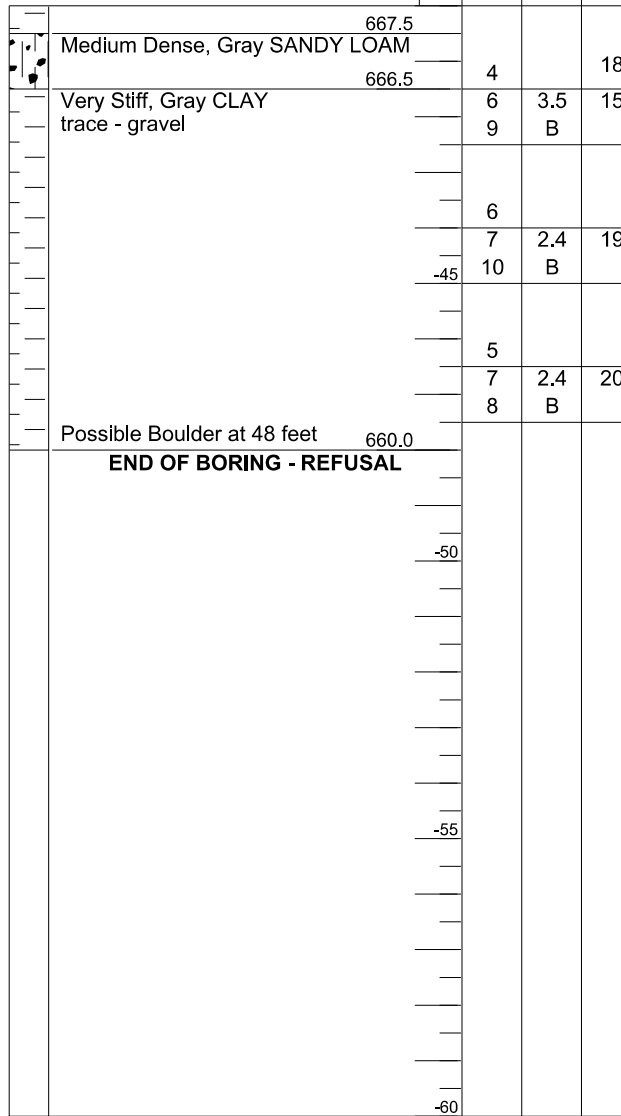
CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
Station 623+18.81 to 640+23.12  
BORING NO. **R-224-RWB-01**  
Station 624+60.39  
Offset 13.2 ft RT.  
Northing 1,936,822.61  
Easting 1,069,859.81  
Ground Surface Elev. 708.0 ft

DEPTH (ft)	BLOW COUNT (Blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)	Surface Water Elev.	DEPTH (ft)	BLOW COUNT (Blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)
				ft	ft			



The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.81 to 640+23.12  
 BORING NO. R-224-RWB-02  
 Station 625+10.93  
 Offset 13.0 ft RT.  
 Northing 1,936,820.45  
 Easting 1,069,909.70  
 Ground Surface Elev. 707.7 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)	SOIL TYPE	DEPTH (ft)	BLOW COUNT (blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)	SOIL TYPE
------------	-----------------------	------------------------------	--------------	-----------	------------	-----------------------	------------------------------	--------------	-----------

706.6				TOPSOIL					Stiff to Very Stiff, Gray CLAY trace - gravel(continued)
	5			Very Stiff, Brown SILTY CLAY trace - gravel		2			
	6	3.1	18			4	2.1	21	
	6	B				5	B		
704.7				Loose, Brown SILTY LOAM trace - gravel					
	2					3			
	3		19			5	2.5	19	
	4					8	B		
702.2				Loose, Brown SANDY LOAM little - gravel					
	3					4			
	3		16			5	2.4	19	
	3					7	B		
699.2				Gray below 8.5 feet					
	2					3			
	3		19			4	1.9	19	
	4					5	B		
697.2				Medium Dense, Gray Fine to Coarse SAND trace - gravel					
	9					4			
	5		22			8	2.9	19	
	5					8	B		
694.7				Very Stiff, Gray CLAY trace - gravel					
	2					2			
	4	2.1	17			5	2.7	19	
	5	B				6	B		
692.2				Loose, Gray SILT					
	2					4			
	3		15			5	2.0	20	
	3					5	B		
689.7				Stiff to Very Stiff, Gray CLAY trace - gravel					
	2					4			
	4	1.6	19			4	2.1	20	
	5	B				7	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.81 to 640+23.12  
 BORING NO. R-224-RWB-02  
 Station 625+10.93  
 Offset 13.0 ft RT.  
 Northing 1,936,820.45  
 Easting 1,069,909.70  
 Ground Surface Elev. 707.7 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)	SOIL TYPE	DEPTH (ft)	BLOW COUNT (blows/6")	UNIFORMITY COEFFICIENT (tsf)	MOISTURE (%)	SOIL TYPE
------------	-----------------------	------------------------------	--------------	-----------	------------	-----------------------	------------------------------	--------------	-----------

				Stiff to Very Stiff, Gray CLAY trace - gravel(continued)					
	3								
	6	2.3	19						
	7	B							
664.7				Medium Dense, Gray Fine to Medium SAND					
	5								
	10		15						
	10								
662.2				Dense, Gray SANDY LOAM trace - gravel					
	20								
	18		14						
	14								
	13								
	35		10						
	10								
657.7				END OF BORING					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.







# SOIL BORING LOG

Page 1 of 2

Date 4/22/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.81 to 640+23.12  
 BORING NO. R-224-RWB-05  
 Station 626+62.00  
 Offset 12.9 ft RT.  
 Northing 1,936,803.29  
 Easting 1,070,059.05  
 Ground Surface Elev. 705.7 ft

DEPTH (ft)	SOIL DESCRIPTION	BLOWS (tsf)	MOISTURE (%)	DEPTH (ft)	SOIL DESCRIPTION	BLOWS (tsf)	MOISTURE (%)
704.6	TOPSOIL						
704.6	Stiff to Very Stiff, Brown SILTY CLAY trace - gravel	4				3	
		5	2.1			5	2.5
		6	B			8	B
702.2	Brown and Gray below 3.5 feet	2				3	
		3	1.6			5	2.5
		3	B			8	B
700.2	Stiff, Brown and Gray CLAY trace - gravel	2				5	
		3	1.9			7	2.7
		4	B			9	B
697.7	Loose, Brown LOAM trace - gravel Grain Size LL=40, PI=17, A-6(7)	2				6	
		2				7	3.7
		2				11	B
695.2	Loose, Brown Fine to Coarse SAND little - gravel	3				4	
		3				7	2.5
		5				10	B
692.7	Stiff to Very Stiff, Gray CLAY trace gravel Sand partings at 13.8 and 14.1 feet	4				6	
		5	1.8			12	3.0
		6	B			13	B
		4				5	
		6	2.5			7	2.5
		8	B			9	B
		3				3	
		3	2.7			5	2.1
		6	B			8	B

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 2 of 2

Date 4/22/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.81 to 640+23.12  
 BORING NO. R-224-RWB-05  
 Station 626+62.00  
 Offset 12.9 ft RT.  
 Northing 1,936,803.29  
 Easting 1,070,059.05  
 Ground Surface Elev. 705.7 ft

DEPTH (ft)	SOIL DESCRIPTION	BLOWS (tsf)	MOISTURE (%)	DEPTH (ft)	SOIL DESCRIPTION	BLOWS (tsf)	MOISTURE (%)
665.2	Medium Dense, Gray SANDY LOAM some - gravel	6					
		7					
		12				10	
662.7	Medium Dense to Dense, Gray Fine to Coarse SAND trace to little - gravel	8					
		11					
		23				16	
		5					
		8					
		17				12	
		17					
		17					
		27				12	
655.7	END OF BORING						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-07  
 Station 627+61.66  
 Offset 13.2 ft RT.  
 Northing 1,936,790.46  
 Easting 1,070,157.87  
 Ground Surface Elev. 704.7 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	MOISTURE (%)
704.0				TOPSOIL				
702.2	2			RECYCLED ASPHALT PAVEMENT FILL		3		
702.2	4	2.1	24	Very Stiff, Brown and Black SILTY CLAY		4	2.9	18
702.2	6	B		CLAY trace - gravel		4	B	
				FILL				
	4			Hard, Brown SILTY CLAY		3		
	5	4.3	18	CLAY trace - gravel		4	2.5	19
	7	B				6	B	
699.2				Medium Dense, Gray SILT				
	4					3		
	5		19			5	4.1	19
	8					6	B	
696.7				Very Stiff, Gray SILTY CLAY				
	3			CLAY trace - gravel		3		
	4	2.9	15			5	2.5	18
	6	B				6	B	
694.2				Medium Dense, Gray SILT				
	4					4		
	5		16			7	3.5	16
	8					8	B	
691.7				Very Stiff to Hard, Gray CLAY	671.7			
	4			CLAY trace - gravel		4		
	4	3.7	16			12		20
	6	B				24		
	3					12		
	5	2.1	19			16		17
	7	B				16		
	3					10		
	4	2.6	17			17		20
	7	B				20		

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-07  
 Station 627+61.66  
 Offset 13.2 ft RT.  
 Northing 1,936,790.46  
 Easting 1,070,157.87  
 Ground Surface Elev. 704.7 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	MOISTURE (%)	DESCRIPTION
				Surface Water Elev. _____ ft
				Stream Bed Elev. _____ ft
				Groundwater Elev.:
				First Encounter 671.2 ft
				Upon Completion 686.7 ft
				After 24 Hrs. 701.2 ft
				Dense, Gray Fine to Coarse SAND
				trace to little - gravel (continued)
	16			
	23		10	
	8			
	14			
	15		12	
	18			
659.2				Hard, Gray CLAY
				trace - gravel
	7			
	11	4.5	18	
	23	B		
656.7				Medium Dense, Gray Fine SAND
				trace - silt partings
	7			
	7		19	
654.7	10			
				END OF BORING

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Date 4/26/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-09  
 Station 628+61.86  
 Offset 13.1 ft RT.  
 Northing 1,936,779.00  
 Easting 1,070,257.72  
 Ground Surface Elev. 703.5 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	MOISTURE (%)
702.7				TOPSOIL				
	3			Very Stiff, Brown, Gray and Black SILTY CLAY trace - topsoil little - gravel		4		
701.0	5	P	26	FILL		7	B	19
	3			Hard, Brown SILTY CLAY trace - gravel		3		
	4	4.5	19			4	1.7	19
	6	B				6	B	
698.0				Stiff, Brown, Gray and Black CLAY				
	2					4		
	4	1.1	25			5	2.5	18
	6					8	B	
695.5				Medium Dense, Gray SANDY LOAM trace - gravel				
	4					6		
	4		13			6	3.0	20
	6					8	B	
693.0				Stiff to Very Stiff, Gray CLAY trace - gravel				
	3					7		
	5	2.9	17			11		20
	7	B				13		
	4					7		
	5	3.5	17			10		20
	7	B				11		
	4					7		
	6	2.5	18			10		21
	8	B				11		
	4					7		
	4	3.0	18			10		12
	6	B				11		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Date 4/26/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-09  
 Station 628+61.86  
 Offset 13.1 ft RT.  
 Northing 1,936,779.00  
 Easting 1,070,257.72  
 Ground Surface Elev. 703.5 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	MOISTURE (%)	SOIL DESCRIPTION
				Medium Dense to Dense, Gray Fine to Coarse SAND trace to some - gravel(continued)
	22			
	27		11	
	16			
660.5				Very Stiff, Gray CLAY trace - gravel
	3			
	6	2.5	14	
	9	B		
658.5				END OF BORING

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

Date 4/29/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-10  
 Station 629+11.49  
 Offset 13.1 ft RT.  
 Northing 1,936,774.25  
 Easting 1,070,307.28  
 Ground Surface Elev. 701.9 ft

DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
H	S	Qu	T	ft	H	S	Qu	T
(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)

701.3				Gray below 11 feet(continued)				
Very Stiff to Hard, Brown SILTY CLAY trace - gravel	4				4			
	6	3.75	23	Sand partings at 21.5, 22, 23.3, 23.8 and 24.2 feet	5	3.5	18	
	7	P			9	B		
698.4								
Brown and Gray below 3.5 feet	3				4			
	6	4.5+	18		7	3.3	16	
	7	P			11	B		
696.4								
Stiff to Hard, Brown and Gray CLAY trace - gravel	2				3			
	2	3.5	22		5	2.6	18	
	6	B			7	B		
	6				6			
	9	4.5	18		9	3.0	19	
	13	B			11	B		
690.9								
Gray below 11 feet	3			Loose to Medium Dense, Gray Fine to Coarse SAND	3			
	4	1.6	19		3		20	
	6	B			4			
	2				2			
	4	1.9	18		4		20	
	5	B			5			
	2				5			
	4	2.1	19		9		8	
	6	B			9			
	3				4			
	4	2.5	16		9		13	
	6	B			10			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Date 4/29/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-10  
 Station 629+11.49  
 Offset 13.1 ft RT.  
 Northing 1,936,774.25  
 Easting 1,070,307.28  
 Ground Surface Elev. 701.9 ft

DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
H	S	Qu	T	ft	H	S	Qu	T
(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)

661.4				Very Stiff, Gray CLAY trace - gravel				
	3				4	2.5	23	
	4	B			7	B		
	2				2	2.4	17	
	2	B			8	B		
656.9				END OF BORING				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-11  
 Station 629+52.94  
 Offset 1.1 ft LT.  
 Northing 1,936,784.81  
 Easting 1,070,349.85  
 Ground Surface Elev. 699.1 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)
698.4				TOPSOIL				
698.1	3			Black and Brown SILTY CLAY FILL		3		
	4	3.1	24	Very Stiff to Hard, Brown and Gray SILTY CLAY LOAM trace - gravel		3	2.5	17
	5	B				4	B	
	3			Grain Size LL=33, PI=12, A-6(9)		4		
	4	2.0	20			6	3.6	18
	6	B				10	B	
693.1	4			Brown below 6 feet		3		
	6	5.8	18			4	2.7	19
	8	B				6	B	
691.6				Medium Dense, Gray SILT				
	4				671.1	1		
	5		19	Loose, Gray Fine to Coarse SAND		2		21
	6					5		
	-10					-30		
688.6				Stiff to Very Stiff, Gray CLAY trace - gravel				
	2					3		
	5	2.1	18			4		21
	5	B			666.6	5		
	3			Loose, Gray SILTY LOAM little - gravel				
	4	2.0	20			2		10
	5	B				3		
	-15					2		
	3			Very Stiff, Gray CLAY LOAM trace - gravel	663.6			
	5	1.8	18			4		
	5	B				7	2.5	15
						10	B	
	3					5		
	5	2.5	18			8	2.9	15
	6	B				13	B	
	-20					-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-11  
 Station 629+52.94  
 Offset 1.1 ft LT.  
 Northing 1,936,784.81  
 Easting 1,070,349.85  
 Ground Surface Elev. 699.1 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)
658.6				Medium Dense, Gray SILT trace - gravel				
	4					8		14
	6					6		
656.1				Medium Dense, Gray SANDY LOAM little - gravel				
	6					9		11
	11					-45		
653.6				Medium Dense to Dense, Gray SILTY LOAM trace - gravel				
	11					16		11
	21					21		
	7					7		
	6					6		10
	7					7		
649.1	-50			END OF BORING				
						-55		
						-60		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:  
 The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-12  
 Station 630+10.64  
 Offset 13.2 ft RT.  
 Northing 1,936,766.42  
 Easting 1,070,406.45  
 Ground Surface Elev. 696.1 ft

DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)
0				TOPSOIL	0			
1	1			Stiff to Hard, Brown, Gray and Black CLAY	1	3		
2	2	1.1	22	trace - roots, organics	2	3	1.2	20
3	3	B			3	4	B	
4	4			Brown and Gray from 3.5 to 9.3 feet	4	4		
3	3	2.5	20		3	4	2.5	21
4	4	B			4	7	B	
5	5			Medium Dense, Gray Fine to Medium SAND	5	4		
9	9	4.5	20	trace - gravel	9	12		20
4	4				4	24		
5	5	2.1	20	Very Stiff, Gray CLAY	5	8	2.4	22
6	6	B		trace - gravel	6	10	B	
3	3				3	3		
3	3	1.9	18		3	4	2.1	22
5	5	B			5	7	B	
3	3				3	4		
3	3	1.9	18		3	6	3.7	15
6	6	B			6	11	B	
3	3				3	2		
4	4	2.9	16		4	4	2.9	20
6	6	B			6	7	B	
4	4			Loose, Gray SILT	4	3		
5	5	4.0	18	trace - gravel	5	3		15
8	8	B			8	6		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-12  
 Station 630+10.64  
 Offset 13.2 ft RT.  
 Northing 1,936,766.42  
 Easting 1,070,406.45  
 Ground Surface Elev. 696.1 ft

DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)
0				Surface Water Elev. _____ ft	0			
				Stream Bed Elev. _____ ft				
				Groundwater Elev.: _____ ft				
				First Encounter 677.6 ft				
				Upon Completion 691.1 ft				
				After _____ Hrs. _____ ft				
4	4			Medium Dense to Dense, Gray SANDY LOAM	4			
10	10			little to some - gravel	10	10		
9	9				9			
5	5				5			
15	15				15	11		
20	20				20			
6	6			Medium Dense, Gray LOAM	6			
8	8			little - gravel	8	9		
10	10				10			
9	9			Stiff, Gray CLAY LOAM	9			
7	7	1.8	13	trace - gravel	7	1.8	13	
10	10	B			10	B		
END OF BORING								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

Page 1 of 2

Date 5/1/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-13  
 Station 630+60.87  
 Offset 13.1 ft RT.  
 Northing 1,936,763.55  
 Easting 1,070,456.76  
 Ground Surface Elev. 694.9 ft

DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
H	S	Qu	T	ft	H	S	Qu	T
(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
				694.3				
				693.9				
	3					3		
	4	2.5	20			4	2.7	16
	5	B				5	B	
	3					4		
	4	2.1	23			6	2.2	19
	4	B				9	B	
	4			688.4		3		
	4	2.5	15			8	2.3	19
	5	B				10	B	
	2					3		
	3	2.4	18			9	2.0	17
	6	B				5	P	
	2					3		
	3	2.1	18			4	1.1	15
	4	B				6	B	
	2					5		
	4	2.2	18			8	1.5	10
	5	B				11	P	
	4					4		
	5	2.4	19			7		10
	7	B				4		
	4			676.9		2		
	8					4		9
	10			674.9		6		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 2 of 2

Date 5/1/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-13  
 Station 630+60.87  
 Offset 13.1 ft RT.  
 Northing 1,936,763.55  
 Easting 1,070,456.76  
 Ground Surface Elev. 694.9 ft

DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
H	S	Qu	T	ft	H	S	Qu	T
(ft)	(/6")	(tsf)	(%)		(ft)	(/6")	(tsf)	(%)
	14							
	13		9					
	21							
	18							
	20		12					
	16							
				649.4				
	4					4		
	6	1.8	14			7	B	
	7	B						
				646.9				
	4					4		
	5		13			5		
	4					4		
				644.9				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-15  
 Station 631+60.45  
 Offset 12.8 ft RT.  
 Northing 1,936,759.73  
 Easting 1,070,556.59  
 Ground Surface Elev. 693.8 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)
693.2				TOPSOIL				
692.8				Brown and Black SILTY CLAY				
692.3	2			Stiff to Very Stiff, Black CLAY trace - organics, roots	3	1.5	29	
	3	B		Brown, Gray and Black from 1.5 to 6 feet	4			
	1							
	2	1.1	31		5	2.3	15	
	3	B			7	B		
687.8				Gray below 6 feet				
	2	2.1	21		9	B		
	5	B						
	4							
	5	3.1	18	Loose, Gray SILT				
	8	B						
683.3				Medium Dense, Gray SILT				
	5							
	6		19	Very Stiff, Gray CLAY trace - gravel				
	8							
	5							
	6		20					
	7							
678.3				Stiff to Very Stiff, Gray CLAY trace - gravel				
	3			Medium Dense, Gray SANDY LOAM little - gravel				
	4	2.3	19					
	5	B		Medium Dense to Dense, Gray Fine to Coarse SAND little - gravel				
	4							
	5	2.4	19					
	7	B						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-15  
 Station 631+60.45  
 Offset 12.8 ft RT.  
 Northing 1,936,759.73  
 Easting 1,070,556.59  
 Ground Surface Elev. 693.8 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)
				Medium Dense, Gray SILTY LOAM little - gravel				
	14							
	14		10					
	10							
650.8				Dense, Gray LOAM little - gravel				
	8							
	26		12					
	14							
648.3				Stiff, Gray CLAY LOAM trace - gravel				
	3							
	6	1.9	14					
	6	B						
645.8				Medium Dense, Gray LOAM little - gravel				
	3							
	8		10					
	11							
643.8				END OF BORING				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-16  
 Station 632+09.99  
 Offset 13.0 ft RT.  
 Northing 1,936,758.43  
 Easting 1,070,606.27  
 Ground Surface Elev. 693.4 ft

DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)
692.9				TOPSOIL	672.9			
692.4				Black and Brown SILTY CLAY LOAM				
692.1	3			Stiff to Hard, Brown, Black and Gray CLAY		6		
	4	4.0	26	trace - roots, organics, gravel		8		13
689.9	2			Brown and Gray below 3.5 feet		10		
	2	1.4	28			8		6
	3	B				9		
687.9	4			Very Stiff, Brown SILTY CLAY trace - gravel		4		
	4	3.5	21			2		7
	6	B				3		
685.4	5			Very Stiff, Gray CLAY trace - gravel		3		
	5	2.9	17			3	0.8"	14
	6	B				4	B	
	5						2.0"	13
	5	3.5	17				10 S	
	8	B						
680.4	4			Very Stiff, Gray SILTY CLAY trace - gravel		21		
	4	2.4	17	2-inch Sand layer at 13.7 feet		50/5"	4.5+	16
	4	B				3		
	8	B				5	2.0	21
	8	B				7	B	
677.9	4			Very Stiff, Gray CLAY trace - gravel		3		
	7	2.9	19			4		12
	10	B				4		
	3					3		
	11	3.3	19			6		8
	13	B				8		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-16  
 Station 632+09.99  
 Offset 13.0 ft RT.  
 Northing 1,936,758.43  
 Easting 1,070,606.27  
 Ground Surface Elev. 693.4 ft

DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (/6")	UCS (tsf)	MOISTURE (%)
672.9				Loose to Medium Dense, Gray LOAM little - gravel(continued)				
	7					7		9
	7					7		
650.4	4			Stiff to Very Stiff, Gray CLAY trace - gravel		4		
	3	1.9	21			3	1.9	21
	6	B				6	B	
	5					5		
	5	2.1	20			5	2.1	20
	5	B				5	B	
645.4	5			Stiff, Gray SILTY CLAY LOAM trace - gravel		5		
	11	1.8	13			11	1.8	13
	8	B				8	B	
643.4				END OF BORING				
				Note: ST - Shelby Tube obtained adjacent to borehole				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-32  
 Station 624+01.54  
 Offset 20.4 ft LT.  
 Northing 1,936,856.07  
 Easting 1,069,800.70  
 Ground Surface Elev. 707.9 ft

DEPTH (ft)	BLOW (6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW (6")	UCS (tsf)	MOIST (%)
				TOPSOIL				
706.8	3			Very Stiff, Brown and Black SILTY CLAY		3		
	3	3.5	22	trace - roots, gravel		4	2.1	19
	4	B				6	B	
704.4	3			Brown and Gray below 3.5 feet		3		
	6	3.7	21			4	3.2	17
	6	B				5	B	
	4					3		
	5	3.1	21			5	2.3	19
	8	B				6	B	
699.9				Very Stiff to Hard, Brown and Gray CLAY		3		
698.9	8	4.1	18	trace - gravel		4	2.1	19
	11	B		Gray below 9 feet		6	B	
	9					3		
	9	2.1	19			5	B	
	9	B		Medium Dense, Gray SANDY LOAM		6		18
	2			trace - gravel		3		
	5	2.1	18	Stiff to Very Stiff, Gray CLAY		5	2.1	18
	6	B		trace - gravel		7	B	
	3					3		
	4	2.9	18			5	1.8	17
	5	B		Sand parting at 37 feet		8	B	
	3					3		
	4	2.6	18			6	1.8	18
	6	B				9	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-32  
 Station 624+01.54  
 Offset 20.4 ft LT.  
 Northing 1,936,856.07  
 Easting 1,069,800.70  
 Ground Surface Elev. 707.9 ft

DEPTH (ft)	BLOW (6")	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW (6")	UCS (tsf)	MOIST (%)
				TOPSOIL				
667.4				Medium Dense, Gray Medium to Coarse SAND				
	10			some - gravel		11		9
	14					6		
665.4				Hard, Gray CLAY				
	6			trace - gravel		12	4.5	18
	14	B				14	B	
	13					10		10
	10					10		
662.4				Medium Dense, Gray Medium to Coarse, SAND				
	13			some - gravel		10		10
	10					10		
659.9				Medium Dense, Gray SILT				
	7					15		17
	15					10		
657.9	-50			END OF BORING				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

Page 1 of 2

Date 4/9/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-33  
 Station 624+50.34  
 Offset 20.8 ft LT.  
 Northing 1,936,856.86  
 Easting 1,069,850.41  
 Ground Surface Elev. 707.7 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)
706.2	3			TOPSOIL				
	4	1.6	28	Stiff to Very Stiff, Gray SILTY CLAY trace - roots		5	2.6	20
	4	B				23	B	
704.2	3			Brown and Gray below 3.5 feet		5		
	4	2.7	20			6	2.7	19
	5	B				8	B	
702.2				Loose, Brown and Gray Fine to Coarse SAND trace - gravel		5		
	2		19			5	2.6	19
	4					6	B	
699.7				Stiff to Very Stiff, Gray CLAY trace - gravel		4		
	4	1.8	22			5	1.1	21
	6	B				6	B	
	4					2		
	4	1.5	19			4	2.6	21
	6	B				5	B	
	3					11		
	3	2.0	18			10	1.7	20
	6	B				8	B	
	3					3		
	4	2.3	19			5	2.2	20
	5	B				8	B	
	3					3		
	4	2.8	18			5	2.1	18
	7	B				7	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 2 of 2

Date 4/9/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-33  
 Station 624+50.34  
 Offset 20.8 ft LT.  
 Northing 1,936,856.86  
 Easting 1,069,850.41  
 Ground Surface Elev. 707.7 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)
	3			Stiff to Very Stiff, Gray CLAY trace - gravel(continued)				
	4	2.0	17			5	B	
	5	B						
664.7				Medium Dense to Dense, Gray SANDY GRAVEL		2		
	4		12			4		12
	6					6		
				Grain Size Non-Plastic, A-1-b(0)		10		
			13			12		13
						13		
						10		
			10			16		10
						16		
657.7				END OF BORING				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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# SOIL BORING LOG

Page 1 of 2

Date 4/12/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-34  
 Station 624+99.20  
 Offset 20.8 ft LT.  
 Northing 1,936,854.91  
 Easting 1,069,900.19  
 Ground Surface Elev. 707.3 ft

DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)
				Surface Water Elev. _____ ft				
				Stream Bed Elev. _____ ft				
				Groundwater Elev.:				
				First Encounter 702.3 ft				
				Upon Completion 703.8 ft				
				After 72 Hrs. 704.3 ft				
706.2	3			Stiff to Very Stiff, Gray CLAY trace - gravel (continued)		2		
	4	1.8	24			4	1.7	21
	5	B				5	B	
684.8				Loose, Dark Gray Fine to Medium SAND		2		
	2		22			2	1.9	20
704.3	2			Stiff to Very Stiff, Gray CLAY trace - gravel		4	B	
	3					3		
	4		16			4	2.8	20
	5					6	B	
	3					3		
	4		14			5	1.8	20
	6					7	B	
696.3	3			Gray below 11 feet		4		
	3		11			5	2.6	19
	4					8	B	
694.3	2			Loose, Gray SILT		5		
	2		19			7	2.9	19
	5					9	B	
691.8	3			Stiff to Very Stiff, Gray CLAY trace - gravel		6		
	4	1.4	21			7	2.5	19
	6	B				9	B	
	3					5		
	4	2.1	20			7	2.5	20
	5	B				9	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

Page 2 of 2

Date 4/12/13

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-34  
 Station 624+99.20  
 Offset 20.8 ft LT.  
 Northing 1,936,854.91  
 Easting 1,069,900.19  
 Ground Surface Elev. 707.3 ft

DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)
				Surface Water Elev. _____ ft				
				Stream Bed Elev. _____ ft				
				Groundwater Elev.:				
				First Encounter 702.3 ft				
				Upon Completion 703.8 ft				
				After 72 Hrs. 704.3 ft				
666.8	8			Medium Dense, Gray SANDY LOAM little to some - gravel		6		12
	6					7		
	8					8		
	12		12			12		12
	17					17		
661.8	5			Medium Dense, Gray Fine to Coarse SAND trace - gravel		12		15
	12					16		
	7					7		
	11		18			11		18
	16					16		
657.3				END OF BORING				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-35  
 Station 625+48.05  
 Offset 20.7 ft LT.  
 Northing 1,936,850.76  
 Easting 1,069,949.74  
 Ground Surface Elev. 706.7 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)
0				TOPSOIL little - gravel	0			
2	2			Loose, Brown SILTY LOAM trace - gravel Grain Size Non-Plastic, A-4(0)	2	2	1.2	16
3	3	20	3		3	4	B	
4	4				4	4	B	
2	2			Sand partings at 23.6, 26.9, 27.1 and 27.4 feet	2	2	2.5	19
2	2	19			2	2	2.5	19
3	3				3	4	P	
5	5			Medium Dense, Gray SANDY LOAM trace to little - gravel	5	3		
5	5	11			6	4	2.1	20
5	5				6	6	B	
3	3			Stiff to Very Stiff, Gray CLAY trace - gravel	3	7		
4	4	11			7	7	1.8	20
6	6				8	8	B	
2	2			Stiff to Very Stiff, Gray CLAY trace - gravel	2	4		
3	3	2.0	18		3	6	2.9	20
4	4	B			4	8	B	
2	2				2	4		
3	3	1.6	20		3	5	2.2	19
4	4	B			4	8	B	
2	2				2	4		
2	2	1.4	20		6	6	2.6	18
5	5	B			8	8	B	
2	2				2	5		
2	2	1.3	21		7	7	2.2	19
4	4	B			9	9	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SE 1/4 SEC. 6 TWP. 40N RNG. 11E PM. 3"

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-35  
 Station 625+48.05  
 Offset 20.7 ft LT.  
 Northing 1,936,850.76  
 Easting 1,069,949.74  
 Ground Surface Elev. 706.7 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)
0				666.2				
7	7			Dense, Gray SANDY LOAM little - gravel	7	7		
15	15	14			15	15		
18	18				18	18		
13	13			Medium Dense, Gray Fine to Coarse SAND trace - gravel	13	13		
11	11	22			11	11		
13	13				13	13		
7	7			Hard, Gray SILTY CLAY trace - gravel	7	7		
11	11	4.5	12		11	11	4.5	12
15	15	B			15	15	B	
10	10			Very Stiff, Gray CLAY trace - gravel	10	10		
10	10	2.9	14		10	10	2.9	14
13	13	B			13	13	B	
END OF BORING					656.7	-50		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note: The soil boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.



# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-36  
 Station 625+97.98  
 Offset 21.1 ft LT.  
 Northing 1,936,845.03  
 Easting 1,069,999.82  
 Ground Surface Elev. 706.5 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)
0				TOPSOIL (SILTY CLAY)	0			
2				Grain Size LL=29, PI=11, A-6(8) OC=3.7%	4			
3	3.25	24		Stiff to Very Stiff, Gray CLAY trace - gravel (continued)	5	3.3	18	
4	P		8		B			
1				Very Stiff, Brown and Gray SILTY CLAY trace - gravel	3			
3	3.5	20	4		2.1	18		
4	P			6	B			
2				Stiff to Very Stiff, Gray CLAY trace - gravel	4			
3	2.3	18	5		2.5	18		
5	B			6	B			
4				Loose, Gray Fine SAND	3			
7	2.6	16	4			24		
9	B			5				
3				Very Stiff, Gray CLAY trace - gravel	4			
4	2.5	19	5		2.1	17		
6	B			8	B			
3				Medium Dense, Gray Fine to Coarse SAND	4			
4	2.5	16	5		3.0	17		
7	B			10	B			
2				4				
3	1.9	20		6			14	
4	B			9				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-36  
 Station 625+97.98  
 Offset 21.1 ft LT.  
 Northing 1,936,845.03  
 Easting 1,069,999.82  
 Ground Surface Elev. 706.5 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION
0				Very Stiff, Gray CLAY trace - gravel
4				Gravel in spoon tip
6	2.1	20	9	
11				END OF BORING
15	2.75	21	25	
6				END OF BORING
9	3.7	15	12	
4				END OF BORING
6	2.1	20	9	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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# SOIL BORING LOG

CONTRACT I-11-4031 DESCRIPTION Retaining Wall R-224, Ramp G6 LOGGED BY E. Slusser

ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 022-0551  
 Station 623+18.80 to 640+23.03  
 BORING NO. R-224-RWB-38  
 Station 626+97.82  
 Offset 20.9 ft LT.  
 Northing 1,936,832.31  
 Easting 1,070,098.82  
 Ground Surface Elev. 706.1 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)
705.3				TOPSOIL				
705.3	3			RECYCLED ASPHALT PAVEMENT FILL		3		
703.1	5	2.6	21	Very Stiff, Gray and Black SILTY CLAY trace - gravel		5	2.1	19
703.1	6	B				8	B	
703.1	2			Stiff to Very Stiff, Brown and Gray SILTY CLAY trace - gravel, roots		4		
703.1	3	2.1	26			6	2.3	18
703.1	4	B				9	B	
703.1	2					5		
703.1	2	1.2	27			7	2.1	20
703.1	3	B				10	B	
698.1				Loose, Brown and Gray SILTY LOAM trace - gravel		6		
698.1	2					9	2.6	17
698.1	3		19			11	B	
698.1	5							
695.6				Medium Dense, Brown and Gray SANDY LOAM trace - gravel		4		
695.6	3					6	2.8	18
695.6	5		14			9	B	
695.6	7							
693.1				Medium Dense, Gray SILT trace - gravel		4		
693.1	4					6	2.5	20
693.1	5		15			7	B	
693.1	7							
690.6				Stiff to Very Stiff, Gray CLAY trace - gravel		3		
690.6	4					6	1.9	18
690.6	6	2.0	18			9	B	
690.6	7	B						
690.6	3					13	1.2	21
690.6	5	2.6	17			14	B	10
690.6	8	B				18		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

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ROUTE Elgin O'Hare (IL 390) SECTION LOCATION SW 1/4 SEC. 5 TWP. 40N RNG. 11E PM. 3'

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 Northing 1,936,832.31  
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 Ground Surface Elev. 706.1 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/ft)	UCS (tsf)	MOISTURE (%)
663.6				Medium Dense to Dense, Gray Fine to Coarse SAND some - gravel(continued)		10		
663.6	13		11			12		
663.6	12			Very Stiff, Gray CLAY LOAM trace - gravel		12		
663.6	7	3.0	13			7	3.0	13
663.6	7	P				7	P	
663.6	5					5		
663.6	9	3.5	15			9	3.5	15
663.6	13	B				13	B	
658.1				Medium Dense, Gray SILT		6		
658.1	8					8		17
658.1	10					10		
656.1				END OF BORING				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
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