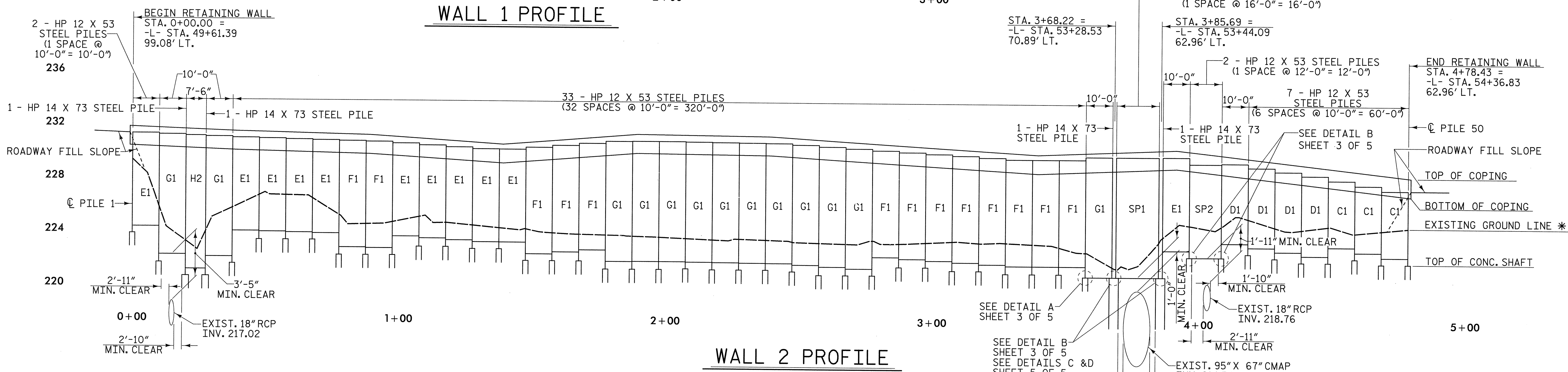
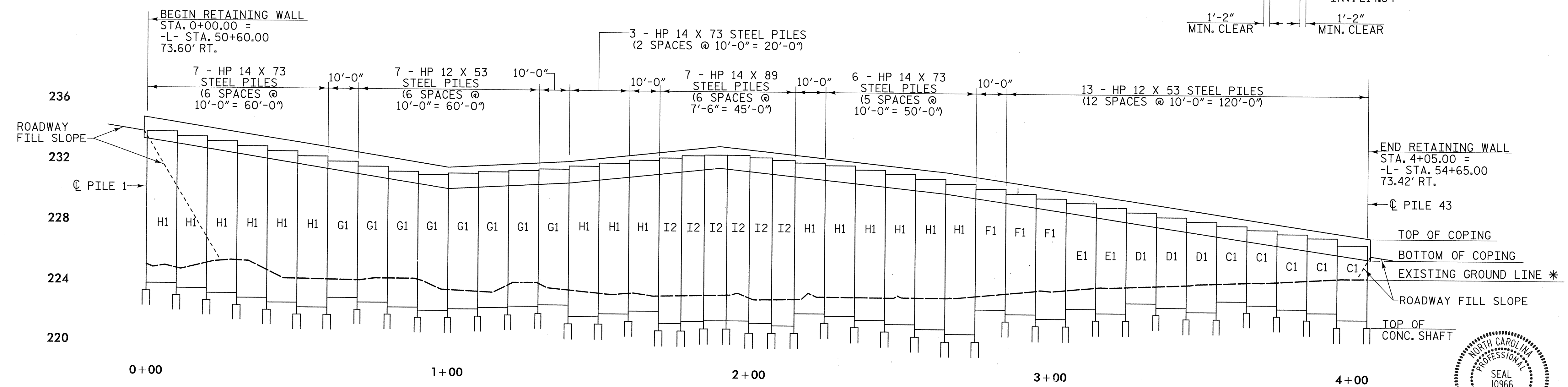


WALL 1 PROFILE



WALL 2 PROFILE



WALL 3 PROFILE

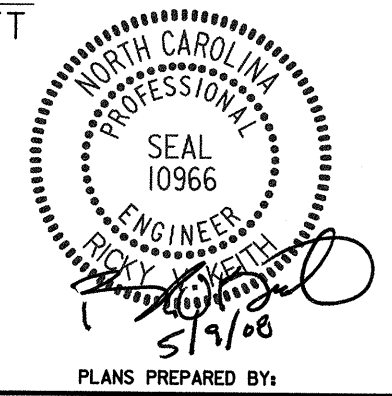
* FINISHED GROUND LINE ELEVATIONS IN FRONT OF THE WALL ARE TO MATCH THE EXISTING GROUND LINE AS CLOSELY AS POSSIBLE.

PROJECT NO. U-4756
CUMBERLAND COUNTY

SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**PILE / PANEL
RETAINING WALL**

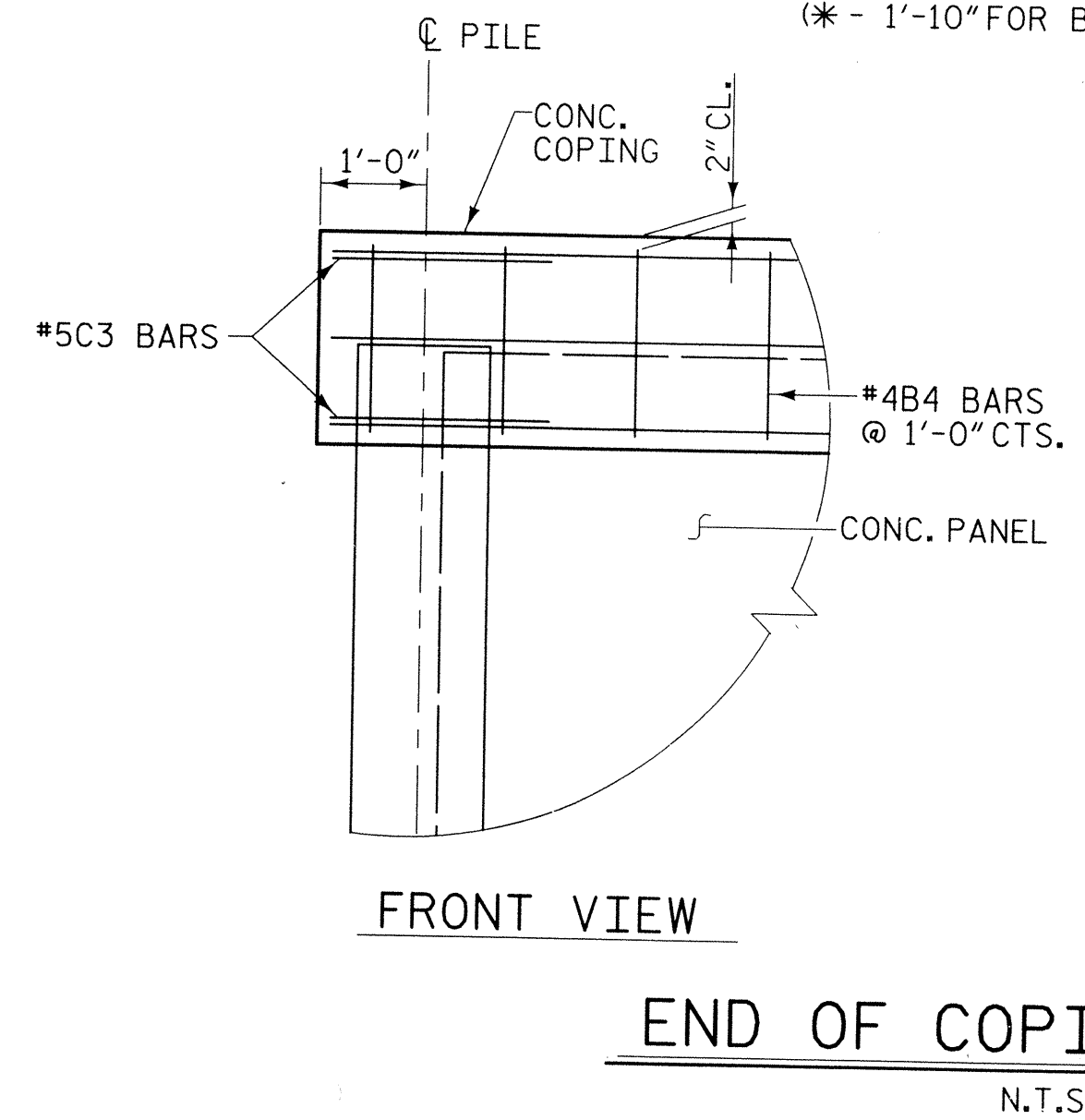
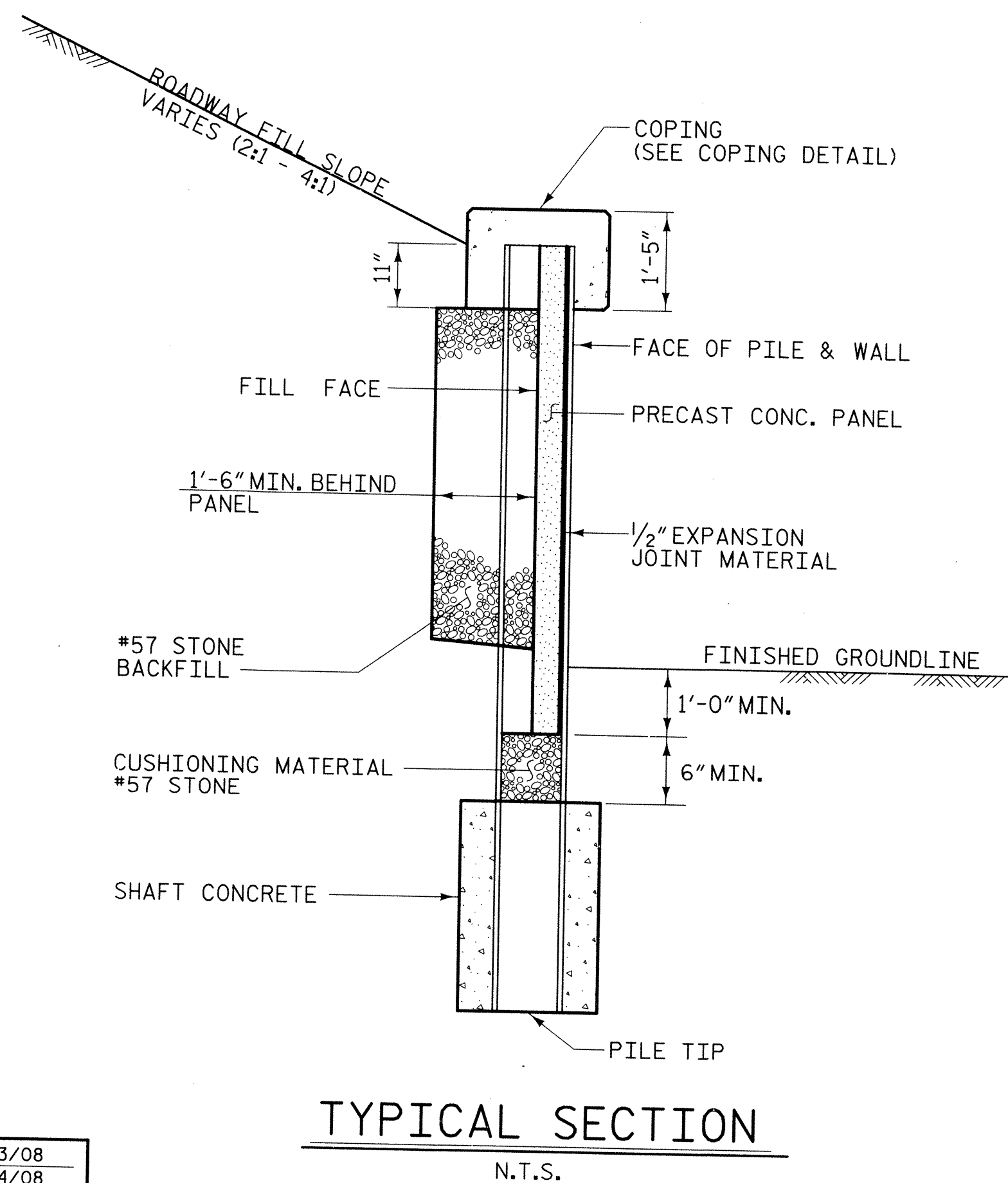
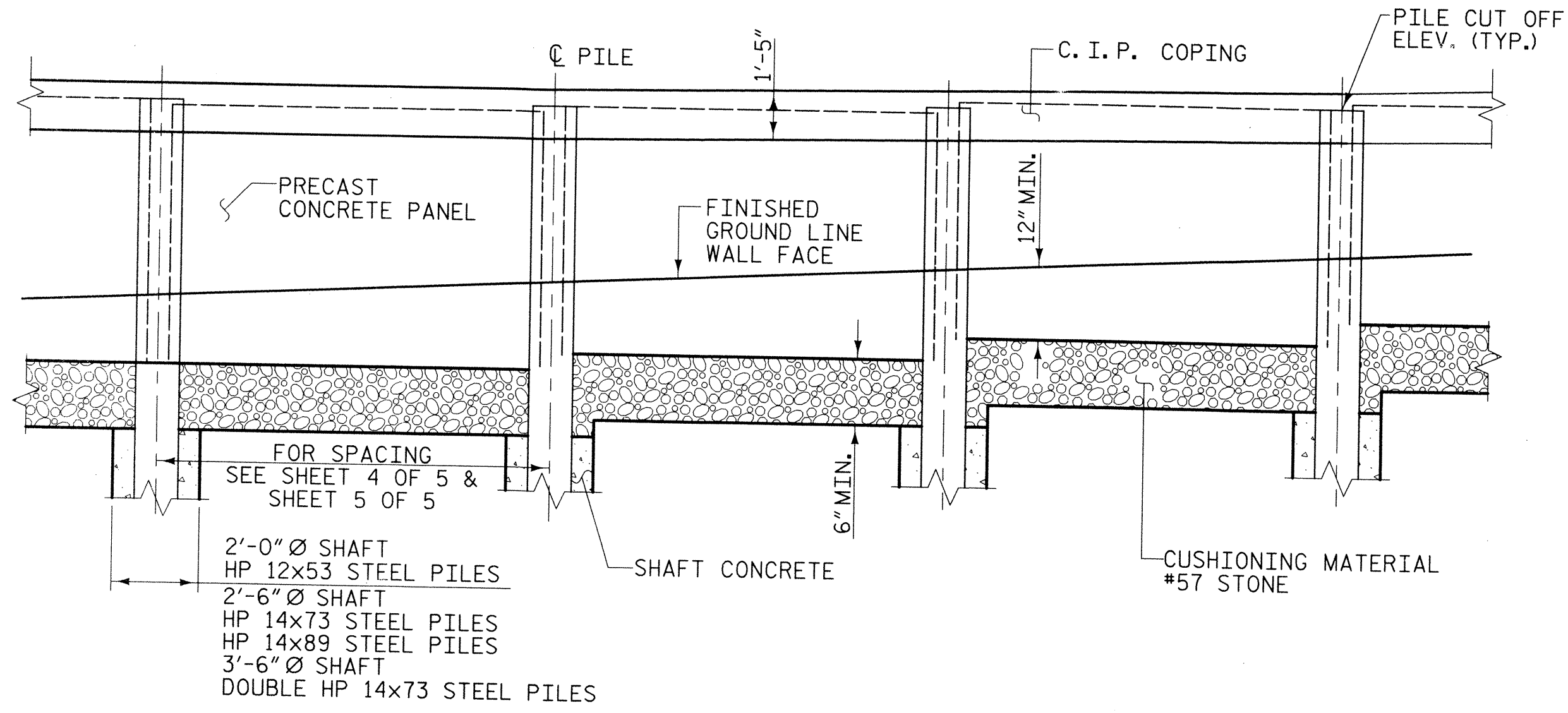
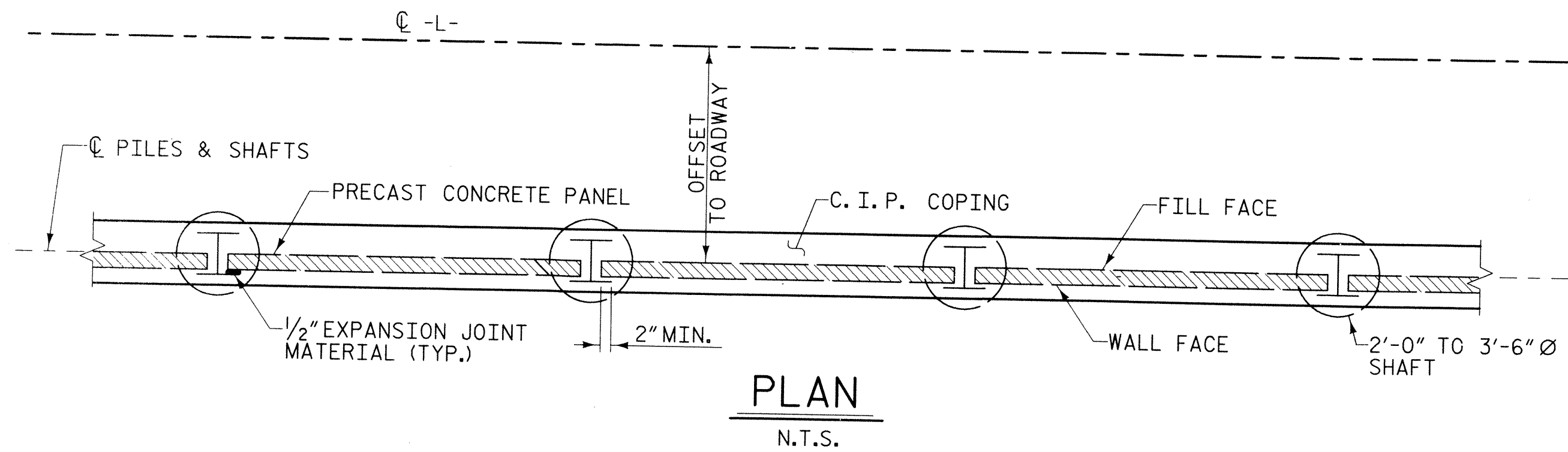


PLANS PREPARED BY:
MULKEY
ENGINEERS & CONSULTANTS
PO BOX 35127
RALEIGH, N.C. 27636
(919) 251-1513
(919) 251-1518 (FAX)
WWW.MULKEYINC.COM

DRAWN BY: W. B. ALLEN DATE: 3/08
CHECKED BY: R.V. KEITH DATE: 4/08

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	W-1
1			3			TOTAL SHEETS
2			4			

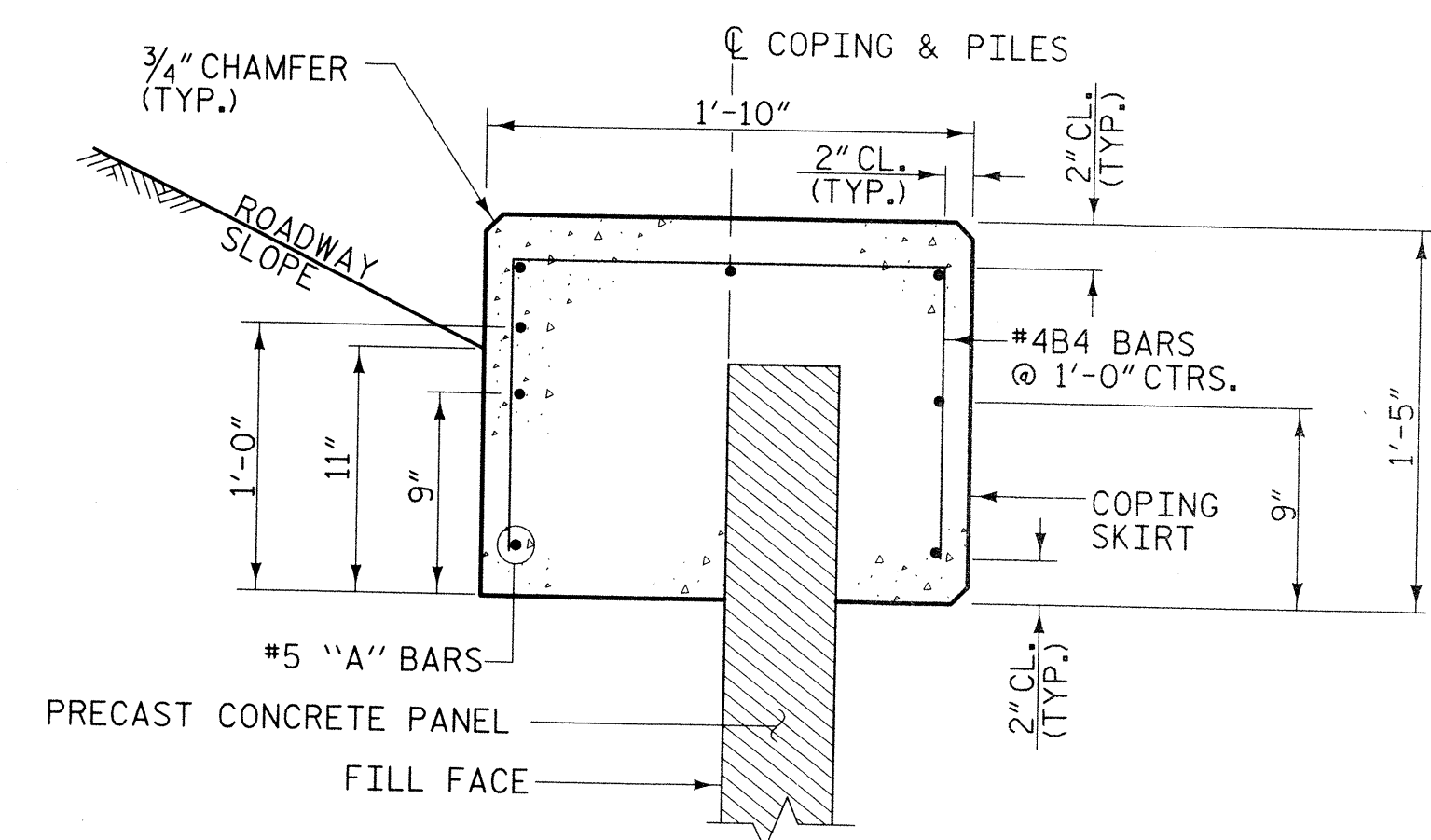
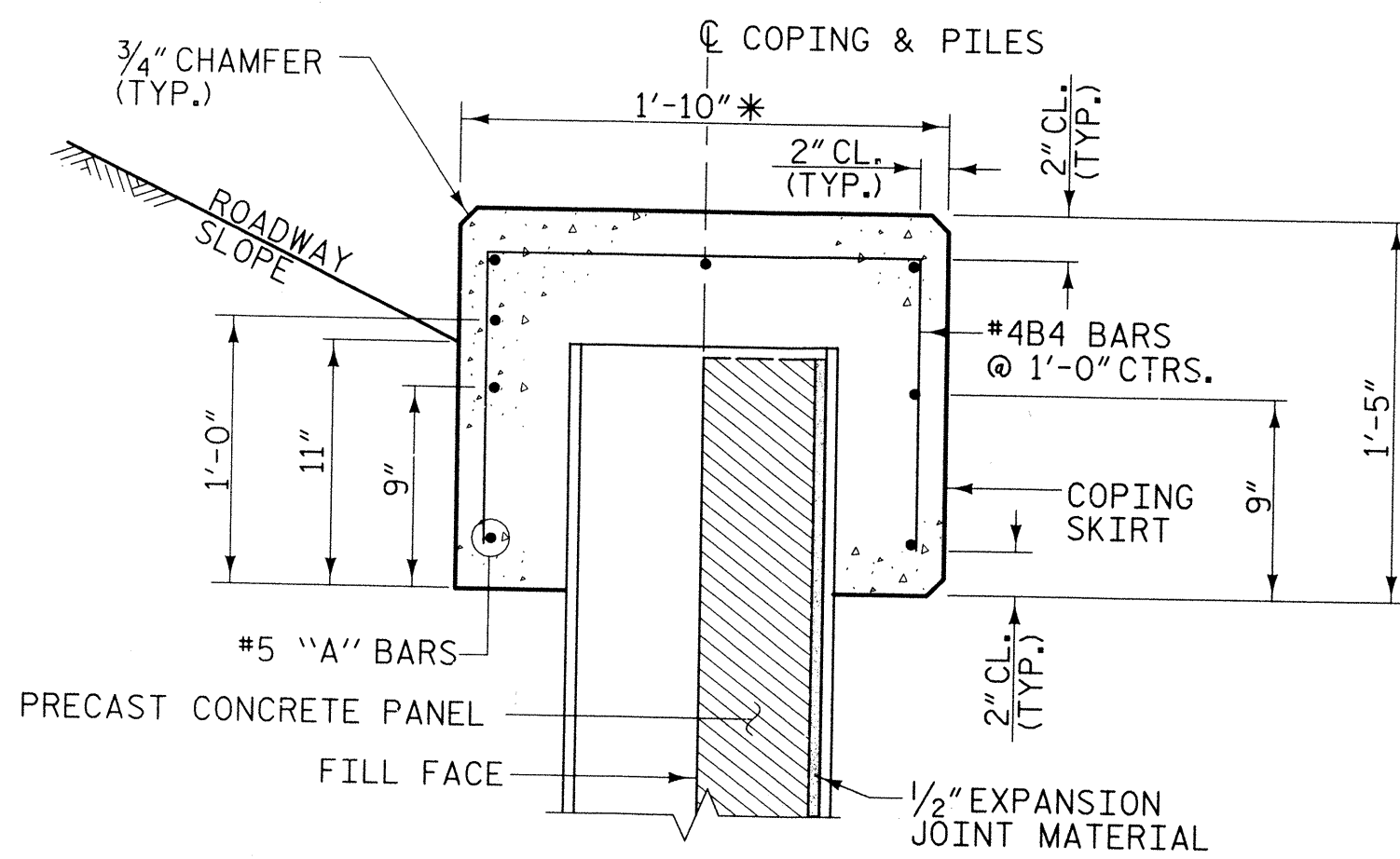
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NOTES:

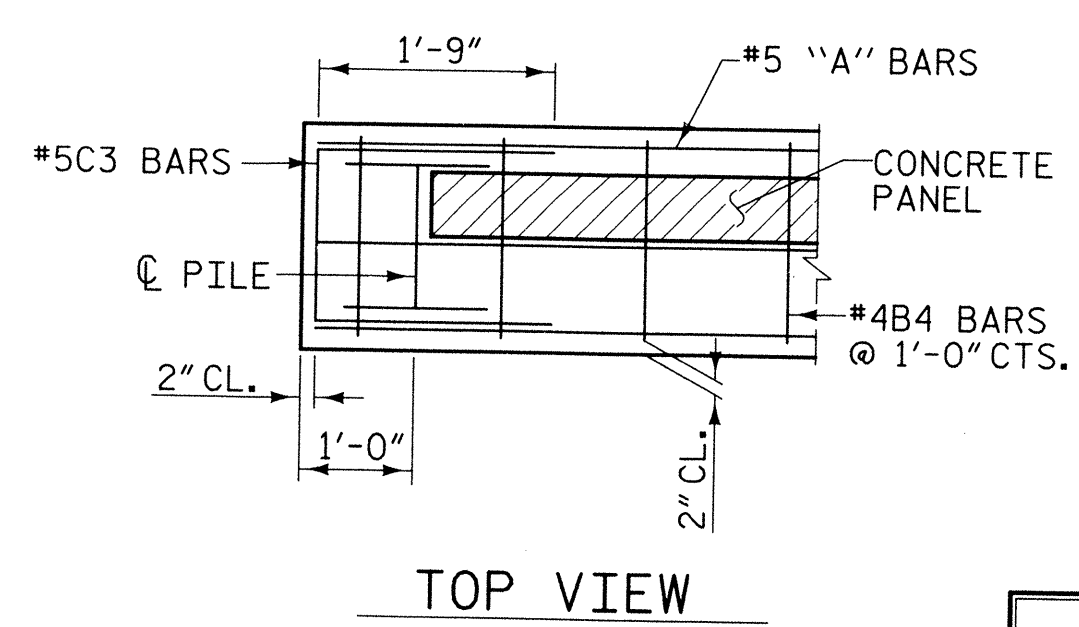
1. PILES SHALL BE INSTALLED TO THE CUT OFF ELEVATIONS AND LENGTHS SHOWN ON THE PLANS.
2. SPLICING OF PILES IS NOT ALLOWED.
3. THE TOP OF THE INSTALLED PILES SHALL BE WITHIN 2 INCHES OF THEIR PLAN LOCATION IN ANY DIRECTION.
4. STEEL PILES SHALL BE ASTM A572 GRADE 50 WITH THE ADDITION OF 0.2% MINIMUM COPPER.
5. PILES SHALL BE PAINTED BLACK FROM THE TOP OF THE PILE DOWN TO 18" BELOW GRADE. SEE SPECIAL PROVISIONS
6. CONCRETE PANELS SHALL HAVE A MINIMUM BEARING DISTANCE OF 2 INCHES ON THE PILE FLANGE. 1/2" THICK EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE CONCRETE PANELS AND PILE FLANGES FOR THE WIDTH OF THE BEARING SURFACE.
7. CONCRETE PANELS SHALL BE HELD SECURELY AGAINST THE PILES UNTIL THE BACKFILL IS PLACED. BACKFILL SHALL BE BROUGHT UP UNIFORMLY.
8. BACKFILL MATERIAL, BOTH CUSHIONING MATERIAL AND BACKFILL SHALL BE COMPACTED AS REQUIRED BY THE ENGINEER. THE STONE SHALL BE RODDED AND SPREAD IN ORDER TO FILL ALL VOIDS AND INSURE MAXIMUM DENSITY. FLUSHING THE STONE WITH WATER TO AID COMPACTION WILL NOT BE ALLOWED.
9. THE CONCRETE PANELS SHALL HAVE A DARK GRAY EXPOSED AGGREGATE FACE. SEE SPECIAL PROVISIONS FOR COLOR, TEXTURE AND AGGREGATE REQUIREMENTS.
10. TOP OF COPING TO BE ADJUSTED BY ENGINEER TO GIVE A UNIFORM APPEARANCE.
11. CONCRETE FOR COPING SHALL BE COLORED TO MATCH THE PRECAST PANELS.
12. CONSTRUCTION JOINTS IN COPING ARE PERMITTED AT LOCATIONS WHERE COPING CHANGES SLOPE AND AT 90 FOOT CENTERS. EXPANSION JOINTS ARE NOT PERMITTED.

13. THE RESIDENT ENGINEER SHALL VERIFY THE LOCATION OF DRAINAGE STRUCTURES AND UTILITIES PRIOR TO INSTALLING PILES. THE LAYOUT OF THE WALL MAY NEED TO BE ADJUSTED TO AVOID UNANTICIPATED INTERFERENCE.
14. FOR SHAFT EXCAVATION, SEE SPECIAL PROVISIONS.
15. IF NECESSARY, SPECIAL MEASURES SHALL BE TAKEN TO INSURE THE STABILITY OF THE SHAFT SUCH AS INSTALLING TEMPORARY CASING PRIOR TO DRILLING, INSTALLING THE PILE AND PLACING CONCRETE IMMEDIATELY AFTER A SHAFT IS EXCAVATED BEFORE CAVING OCCURS. INSTALLING WELL POINTS OR OTHER MEASURES, IF CAVING OCCURS. THE SHAFT EXCAVATION OPERATION SHALL BE HALTED UNTIL SPECIAL MEASURES ARE IMPLEMENTED.
16. PILE/PANEL WALL MUST BE BUILT BEFORE PLACING ANY FILL MATERIAL BEHIND THE WALL.
17. DO NOT BACKFILL BEHIND THE WALL UNTIL THE SHAFT CONCRETE DEVELOPS A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI. PLACE BACKFILL SO AS NOT TO CAUSE LATERAL FORCES AGAINST THE WALL BY HEAVY EQUIPMENT OR FROM EARTH MASSES TRANSMITTING PRESSURES CAUSED BY EARTH MOVING EQUIPMENT. PLACE BACKFILL IMMEDIATELY ADJACENT TO THE WALL BY HAND OPERATED EQUIPMENT. DO NOT OPERATE HEAVY EARTH MOVING EQUIPMENT WITHIN 10 FEET OF THE WALL IN BACKFILLING OPERATIONS.
18. FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
19. FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
20. FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
21. CONCRETE FOR PANELS SHALL BE CLASS AA. CONCRETE FOR THE SHAFTS AND FOR THE COPING SHALL BE CLASS A.
22. THE CONTRACTOR SHALL TAKE CARE TO MINIMIZE THE EXCAVATION NECESSARY TO PLACE THE CUSHIONING MATERIAL AND PANELS. FINISHED GROUNDLINE ELEVATIONS IN FRONT OF THE WALL ARE TO MATCH THE EXISTING GROUNDLINE AS CLOSELY AS POSSIBLE.
23. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING ABOVE EXISTING PIPES LOCATED BENEATH THE PROPOSED WALL TO PREVENT DAMAGE TO THE EXISTING DRAINAGE STRUCTURES.

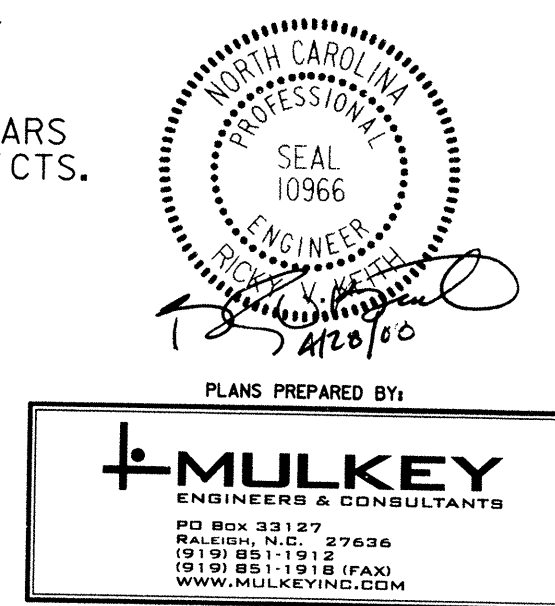


SECTION AT PILES
(* - 1'-10" FOR BOTH HP12X53 AND HP14X73 PILES)

FULL COPING DETAIL
N.T.S.



END OF COPING DETAIL
N.T.S.



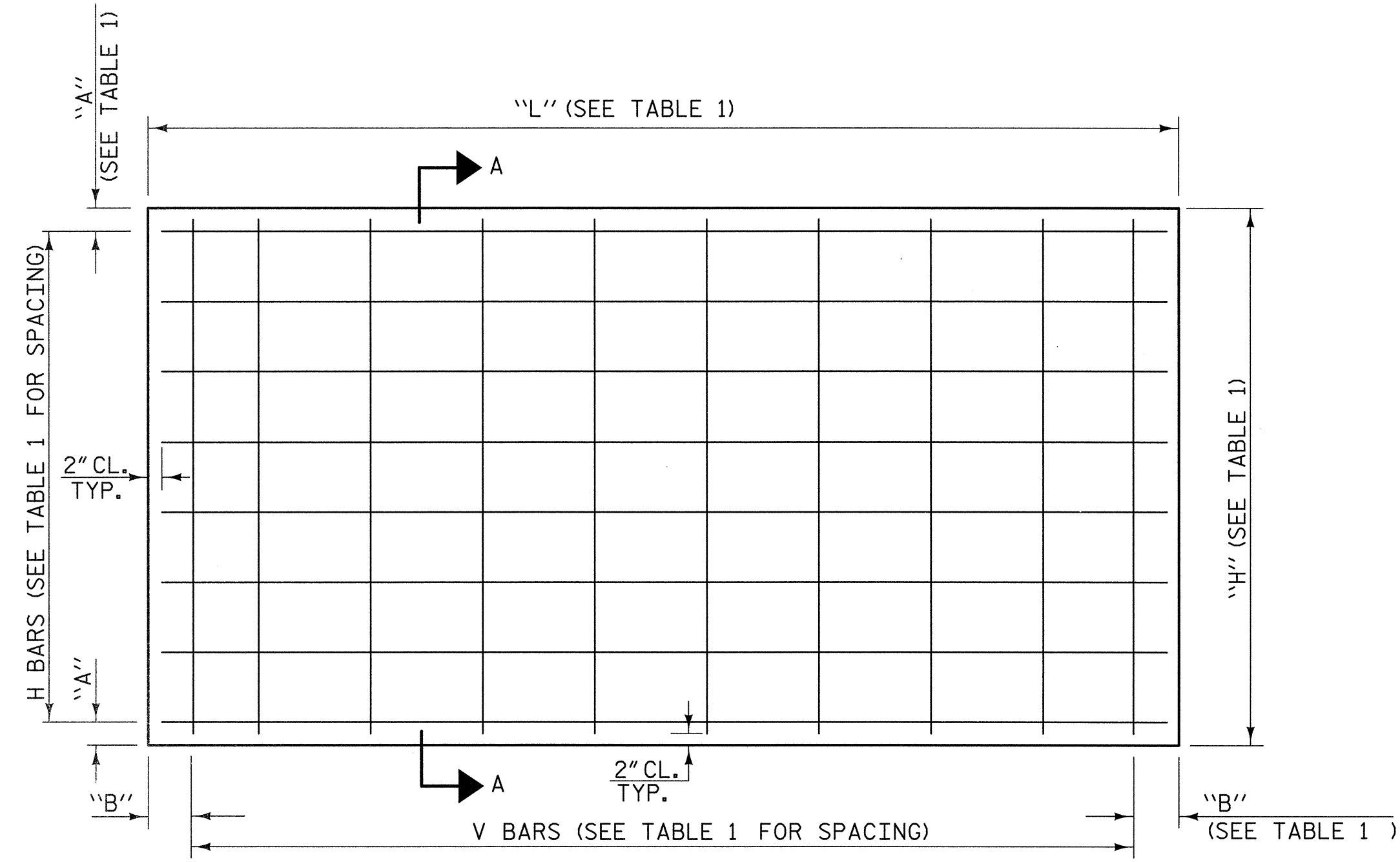
PROJECT NO. U-4756
CUMBERLAND COUNTY

SHEET 2 OF 5

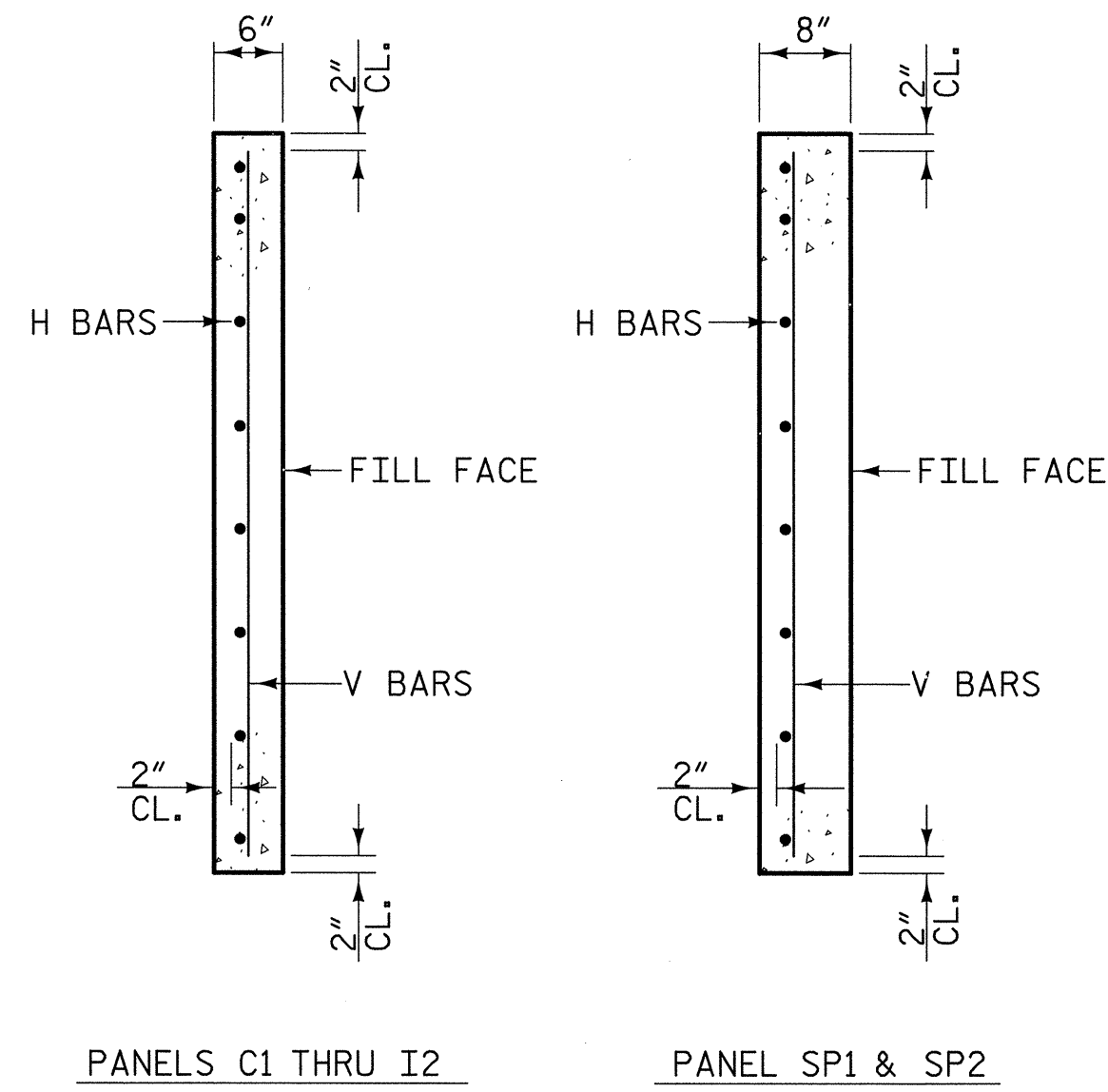
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PILE / PANEL RETAINING WALL					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. W-2
					TOTAL SHEETS

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DRAWN BY: W. B. ALLEN DATE: 3/08
CHECKED BY: R. V. KEITH DATE: 4/08

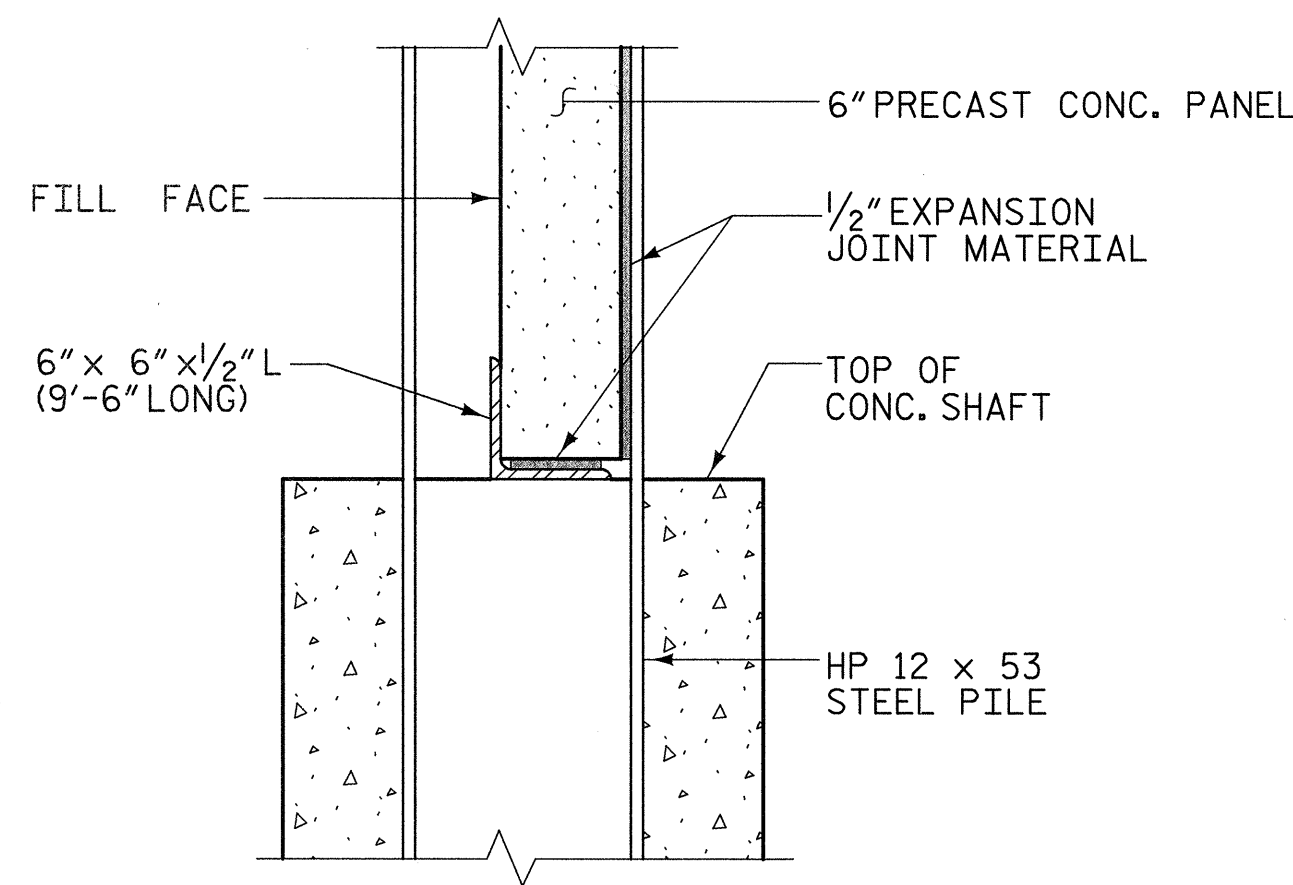


TYPICAL PRECAST PANEL DETAIL
N.T.S.

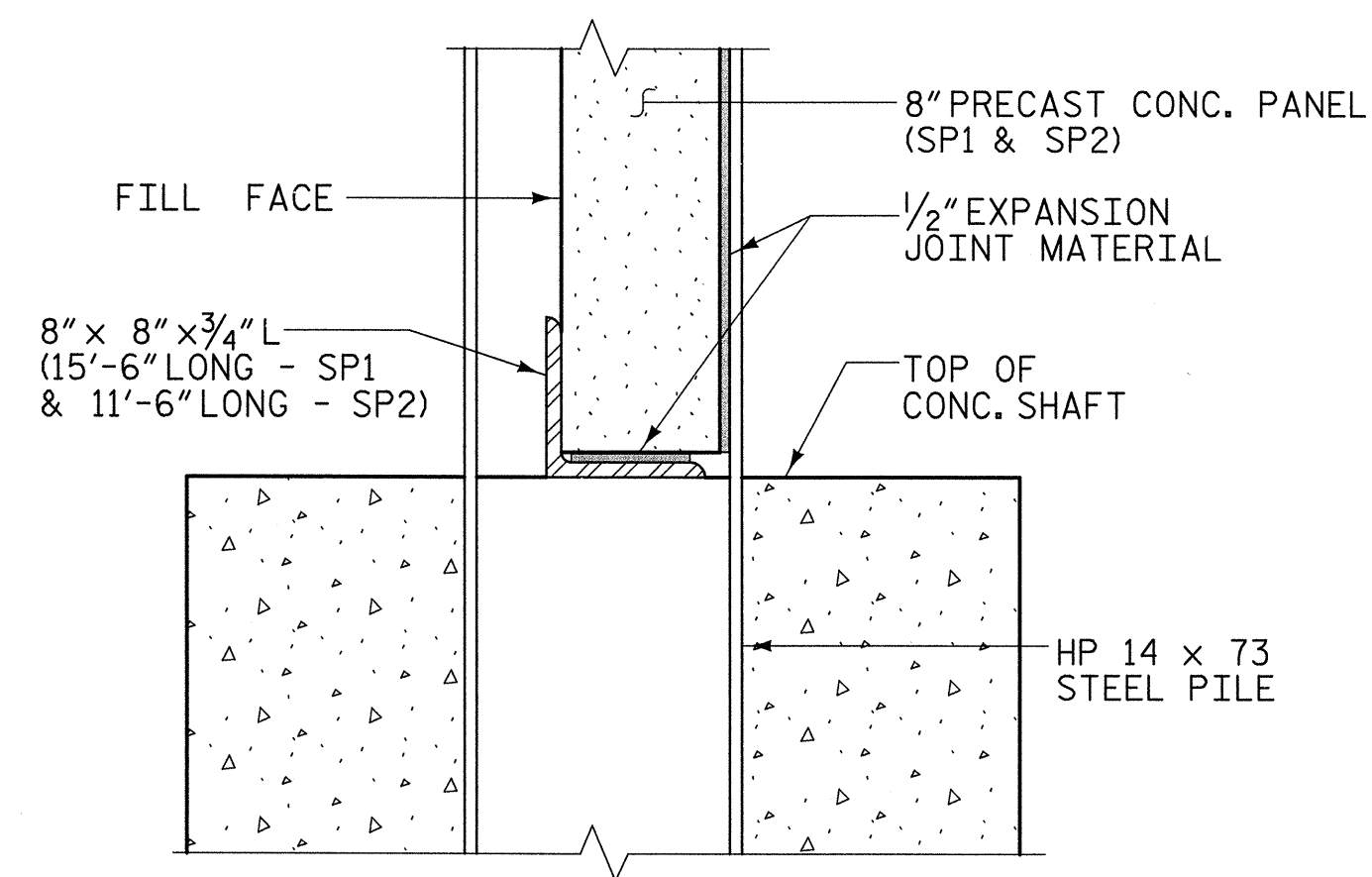


SECTION A-A

TABLE 1 PRECAST PANELS FOR WALL 1										
PANEL TYPE	NO. REQ'D	"H"	"L"	BAR TYPES				"A"	"B"	CONC. CUBIC YARDS PER PANEL
				HORIZONTAL		VERTICAL				
				NO. PER PANEL	SPACING C-C	NO. PER PANEL	SPACING C-C			
C1	10	5'-0"	9'-6"	10-H1	6"	19-V3	6"	3"	3"	0.88
D1	11	6'-0"	9'-6"	17-H1	4"	19-V4	6"	4"	3"	1.06
E1	8	7'-0"	9'-6"	20-H1	4"	19-V5	6"	4"	3"	1.23
PRECAST PANELS FOR WALL 2										
PANEL TYPE	NO. REQ'D	"H"	"L"	BAR TYPES				"A"	"B"	CONC. CUBIC YARDS PER PANEL
				HORIZONTAL		VERTICAL				
				NO. PER PANEL	SPACING C-C	NO. PER PANEL	SPACING C-C			
C1	3	5'-0"	9'-6"	10-H1	6"	19-V3	6"	3"	3"	0.88
D1	4	6'-0"	9'-6"	17-H1	4"	19-V4	6"	4"	3"	1.06
E1	11	7'-0"	9'-6"	20-H1	4"	19-V5	6"	4"	3"	1.23
F1	13	8'-0"	9'-6"	19-H1A	5"	19-V6	6"	3"	3"	1.41
G1	13	9'-0"	9'-6"	21-H1A	5"	19-V7	6"	4"	3"	1.58
H2	1	10'-0"	7'-0"	24-H2	5"	14-V8	6"	2 1/2"	3"	1.30
SP1	1	9'-0"	15'-6"	21-H3	5"	31-V10	6"	4"	3"	3.44
SP2	1	7'-0"	11'-6"	16-H4	5"	23-V5	6"	4 1/2"	3"	1.99
PRECAST PANELS FOR WALL 3										
PANEL TYPE	NO. REQ'D	"H"	"L"	BAR TYPES				"A"	"B"	CONC. CUBIC YARDS PER PANEL
				HORIZONTAL		VERTICAL				
				NO. PER PANEL	SPACING C-C	NO. PER PANEL	SPACING C-C			
C1	5	5'-0"	9'-6"	10-H1	6"	19-V3	6"	3"	3"	0.88
D1	3	6'-0"	9'-6"	17-H1	4"	19-V4	6"	4"	3"	1.06
E1	2	7'-0"	9'-6"	20-H1	4"	19-V5	6"	4"	3"	1.23
F1	3	8'-0"	9'-6"	19-H1A	5"	19-V6	6"	3"	3"	1.41
G1	8	9'-0"	9'-6"	21-H1A	5"	19-V7	6"	4"	3"	1.58
H1	15	10'-0"	9'-6"	24-H1A	5"	19-V8	6"	2 1/2"	3"	1.76
I2	6	11'-0"	7'-0"	26-H2	5"	14-V9	6"	3 1/2"	3"	1.42

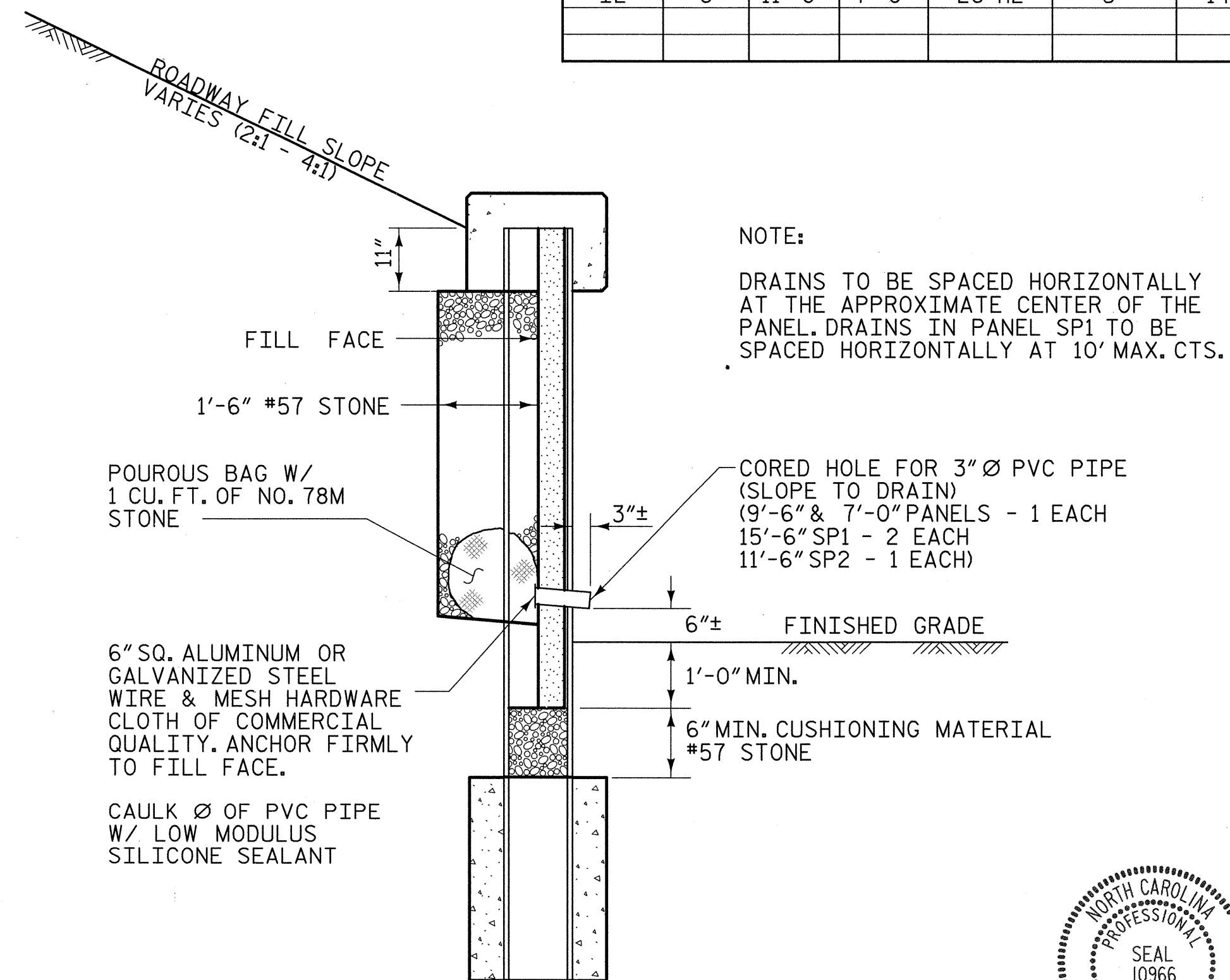


DETAIL A
N.T.S.



DETAIL B
N.T.S.

NOTE:
PLACE ANGLE AS SHOWN IN SECTION ABOVE.
1/2" THICK EXPANSION JOINT MATERIAL TO BE PLACED BETWEEN PRECAST CONC. PANEL AND STEEL ANGLE.
STEEL FOR ANGLE SHALL BE A572 GRADE 50 AND PAINTED IN ACCORDANCE WITH THE PROVISIONS FOR PAINTING STEEL PILES.

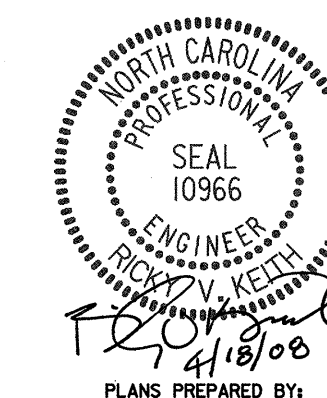


DRAIN DETAIL
N.T.S.

NOTE:
DRAINS TO BE SPACED HORIZONTALLY AT THE APPROXIMATE CENTER OF THE PANEL. DRAINS IN PANEL SP1 TO BE SPACED HORIZONTALLY AT 10' MAX. CTS.

PROJECT NO. U-4756
CUMBERLAND COUNTY

SHEET 3 OF 5
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PILE / PANEL
RETAINING WALL



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	W-3
1			3			TOTAL SHEETS
2			4			

DRAWN BY: W. B. ALLEN DATE: 3/08
CHECKED BY: R. V. KEITH DATE: 4/08

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WALL 1

WALL 2

BILL OF MATERIALS						PILE ELEVATIONS AND PANEL TYPES									BILL OF MATERIALS						PILE ELEVATIONS AND PANEL TYPES								
PRECAST CONCRETE PANELS															PRECAST CONCRETE PANELS														
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	PILE STATION	PILE NO.	PILE SIZE	PILE SPACE	PILE LENGTH	TOP CONC SHAFT ELEV	CUTOFF ELEV	PILE TIP ELEV	PANEL TYPE	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	PILE STATION	PILE NO.	PILE SIZE	PILE SPACE	PILE LENGTH	TOP CONC SHAFT ELEV	CUTOFF ELEV	PILE TIP ELEV	PANEL TYPE
H1	447	#4	STR	9'-2"	2737	0+00.00	1	HP 12x53	-	25.97	222.91	229.51	203.54		H1A	520	#5	STR	9'-2"	4972	0+00.00	1	HP 12x53	-	24.96	223.99	231.49	206.53	
V3	190	#4	STR	4'-8"	592	0+10.00	2	HP 12x53	10'-0"	26.05	222.91	229.51	203.46	D1	H2	24	#4	STR	6'-8"	107	0+10.00	2	HP 12x53	10'-0"	28.51	221.83	231.49	202.98	E1
V4	209	#4	STR	5'-8"	791	0+20.00	3	HP 12x53	10'-0"	26.03	222.82	229.41	203.38	D1	H3	21	#6	STR	15'-2"	478	0+20.00	3	HP 14x73	10'-0"	31.01	220.83	231.41	200.40	G1
V5	152	#4	STR	6'-8"	677	0+30.00	4	HP 12x53	10'-0"	26.02	222.82	229.32	203.30	D1	H4	14	#4	STR	11'-2"	104	0+27.50	4	HP 14x73	7'-6"	30.17	220.83	231.33	201.16	H2
						0+40.00	5	HP 12x53	10'-0"	25.98	223.56	229.22	203.24	C1							0+37.50	5	HP 12x53	10'-0"	28.34	221.77	231.27	202.93	G1
						0+50.00	6	HP 12x53	10'-0"	25.53	223.56	229.14	203.61	C1	V3	57	#4	STR	4'-8"	178	0+47.50	6	HP 12x53	10'-0"	27.31	223.54	231.19	203.88	E1
						0+60.00	7	HP 12x53	10'-0"	25.14	223.32	229.06	203.92	C1	V4	76	#4	STR	5'-8"	288	0+57.50	7	HP 12x53	10'-0"	27.25	223.54	231.14	203.89	E1
						0+70.00	8	HP 12x53	10'-0"	25.20	223.32	228.98	203.78	C1	V5	232	#4	STR	6'-8"	1033	0+67.50	8	HP 12x53	10'-0"	27.43	223.54	231.09	203.66	E1
						0+80.00	9	HP 12x53	10'-0"	25.73	223.32	228.90	203.17	C1	V6	247	#4	STR	7'-8"	1265	0+77.50	9	HP 12x53	10'-0"	28.61	222.45	231.04	202.43	E1
						0+90.00	10	HP 12x53	10'-0"	25.95	222.08	228.82	202.87	C1	V7	278	#4	STR	8'-8"	1609	0+87.50	10	HP 12x53	10'-0"	29.24	222.45	231.00	201.76	F1
						1+00.00	11	HP 12x53	10'-0"	26.39	222.08	228.74	202.35	D1	V8	14	#4	STR	9'-8"	90	0+97.50	11	HP 12x53	10'-0"	29.03	222.45	230.95	201.92	F1
						1+10.00	12	HP 12x53	10'-0"	26.42	222.08	228.66	202.24	D1							1+07.50	12	HP 12x53	10'-0"	28.51	223.08	230.83	202.32	E1
						1+20.00	13	HP 12x53	10'-0"	26.39	221.88	228.58	202.19	D1							1+17.50	13	HP 12x53	10'-0"	28.81	223.08	230.70	201.89	E1
						1+30.00	14	HP 12x53	10'-0"	26.51	221.88	228.50	201.99	D1							1+27.50	14	HP 12x53	10'-0"	28.87	222.94	230.58	201.71	E1
						1+40.00	15	HP 12x53	10'-0"	26.80	221.88	228.42	201.62	D1							1+37.50	15	HP 12x53	10'-0"	28.93	222.94	230.45	201.52	E1
						1+50.00	16	HP 12x53	10'-0"	26.97	220.68	228.34	201.37	D1							1+47.50	16	HP 12x53	10'-0"	29.11	222.10	230.60	201.49	E1
						1+60.00	17	HP 12x53	10'-0"	27.29	220.68	228.26	200.97	E1							1+57.50	17	HP 12x53	10'-0"	29.58	222.10	230.76	201.18	F1
						1+70.00	18	HP 12x53	10'-0"	27.05	220.68	228.18	201.13	E1							1+67.50	18	HP 12x53	10'-0"	29.85	222.10	230.92	201.07	F1
						1+80.00	19	HP 12x53	10'-0"	26.35	221.52	228.10	201.75	D1							1+77.50	19	HP 12x53	10'-0"	30.04	221.50	231.08	201.04	F1
						1+90.00	20	HP 12x53	10'-0"	25.66	221.52	228.02	202.36	D1							1+87.50	20	HP 12x53	10'-0"	30.13	221.50	231.09	200.96	G1
						2+00.00	21	HP 12x53	10'-0"	25.17	222.21	227.95	202.78	C1							1+97.50	21	HP 12x53	10'-0"	30.20	221.50	231.09	200.89	G1
						2+10.00	22	HP 12x53	10'-0"	25.23	222.21	227.87	202.64	C1							2+07.50	22	HP 12x53	10'-0"	30.28	221.50	231.09	200.81	G1
						2+20.00	23	HP 12x53	10'-0"	25.57	222.21	227.79	202.22	C1							2+17.50	23	HP 12x53	10'-0"	30.35	221.50	231.07	200.72	G1
						2+30.00	24	HP 12x53	10'-0"	25.91	220.15	227.71	201.80	C1							2+27.50	24	HP 12x53	10'-0"	30.26	221.50	231.05	200.79	G1
						2+40.00	25	HP 12x53	10'-0"	26.93	220.15	227.67	200.74	E1							2+37.50	25	HP 12x53	10'-0"	30.30	221.50	231.03	200.73	G1
						2+50.00	26	HP 12x53	10'-0"	27.07	220.15	227.70	200.63	E1							2+47.50	26	HP 12x53	10'-0"	30.43	221.40	231.00	200.57	G1
						2+60.00	27	HP 12x53	10'-0"	27.23	220.15	227.73	200.50	E1							2+57.50	27	HP 12x53	10'-0"	30.37	221.15	230.90	200.53	G1
						2+70.00	28	HP 12x53	10'-0"	27.43	220.15	227.76	200.33	E1							2+67.50	28	HP 12x53	10'-0"	30.30	221.15	230.78	200.48	G1
						2+80.00	29	HP 12x53	10'-0"	27.60	220.15	227.79	200.19	E1							2+77.50	29	HP 12x53	10'-0"	29.92	221.15	230.65	200.73	G1
						2+90.00	30	HP 12x53	10'-0"	27.76	220.15	227.79	200.03	E1							2+87.50	30	HP 12x53	10'-0"	30.02	221.78	230.53	200.51	F1
																					2+97.50	31	HP 12x53	10'-0"	29.80	221.78	230.40	200.60	F1
																					3+07.50	32	HP 12x53	10'-0"	29.54	221.54	230.28	200.74	F1
																					3+17.50	33	HP 12x53	10'-0"	29.58	221.54	230.16	200.58	F1
																					3+27.50	34	HP 12x53	10'-0"	29.41	221.34	230.14	200.73	F1
																					3+37.50	35	HP 12x53	10'-0"	29.38	221.34	229.92	200.54	F1
																					3+47.50	36	HP 12x53	10'-0"	29.59	221.34	229.92	200.33	F1
																					3+57.50	37	HP 12x53	10'-0"	30.19	221.14	230.14	199.95	F1
																					3+67.50	38	HP 14x73	10'-0"	43.42	221.14	230.14	186.72	G1
																					3+68.94	39	HP 14x73	1'-5 1/4"	43.42	221.14	230.14	186.72	
																					3+84.94	40	HP 14x73	16'-0"	41.43	221.14	230.14	188.71	SP1
																					3+86.43	41	HP 14x73	1'-5 7/8"	41.44	221.14	230.16	188.72	
																					3+96.43	42	HP 12x53	10'-0"	28.14	222.66	230.16	202.02	E1
																					4+08.43	43	HP 12x53	12'-0"	27.77	222.66	229.71	201.94	SP2
																					4+18.43	44	HP 12x53	10'-0"	27.17	222.91	229.71	202.54	D1
																					4+28.43	45	HP 12x53	10'-0"	27.48	222.62	229.41	201.93	D1
																					4+38.43	46	HP 12x53	10'-0"	27.37	222.33	229.12	201.75	D1
																					4+48.43	47	HP 12x53	10'-0"	26.74	222.33	228.83	202.09	D1
																					4+58.43	48	HP 12x53	10'-0"	26.96	222.60	228.48	201.52</	

WALL 3

BILL OF MATERIALS

PRECAST CONCRETE PANELS

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	141	#4	STR	9'-2"	863
H1A	585	#5	STR	9'-2"	5593
H2	156	#4	STR	6'-8"	695
V3	95	#4	STR	4'-8"	296
V4	57	#4	STR	5'-8"	216
V5	38	#4	STR	6'-8"	169
V6	57	#4	STR	7'-8"	292
V7	152	#4	STR	8'-8"	880
V8	285	#4	STR	9'-8"	1840
V9	84	#4	STR	10'-8"	599

TOTAL REINFORCING STEEL = 11443 lbs.

CLASS "A" CONCRETE - CU. YARDS 61.8

CAST-IN-PLACE COPING

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A5	64	#5	STR	53'-6"	3571
B4	407	#4	1	3'-8"	997
C3	4	#5	1	5'-0"	21

TOTAL REINFORCING STEEL (COPING) 4589 lbs.

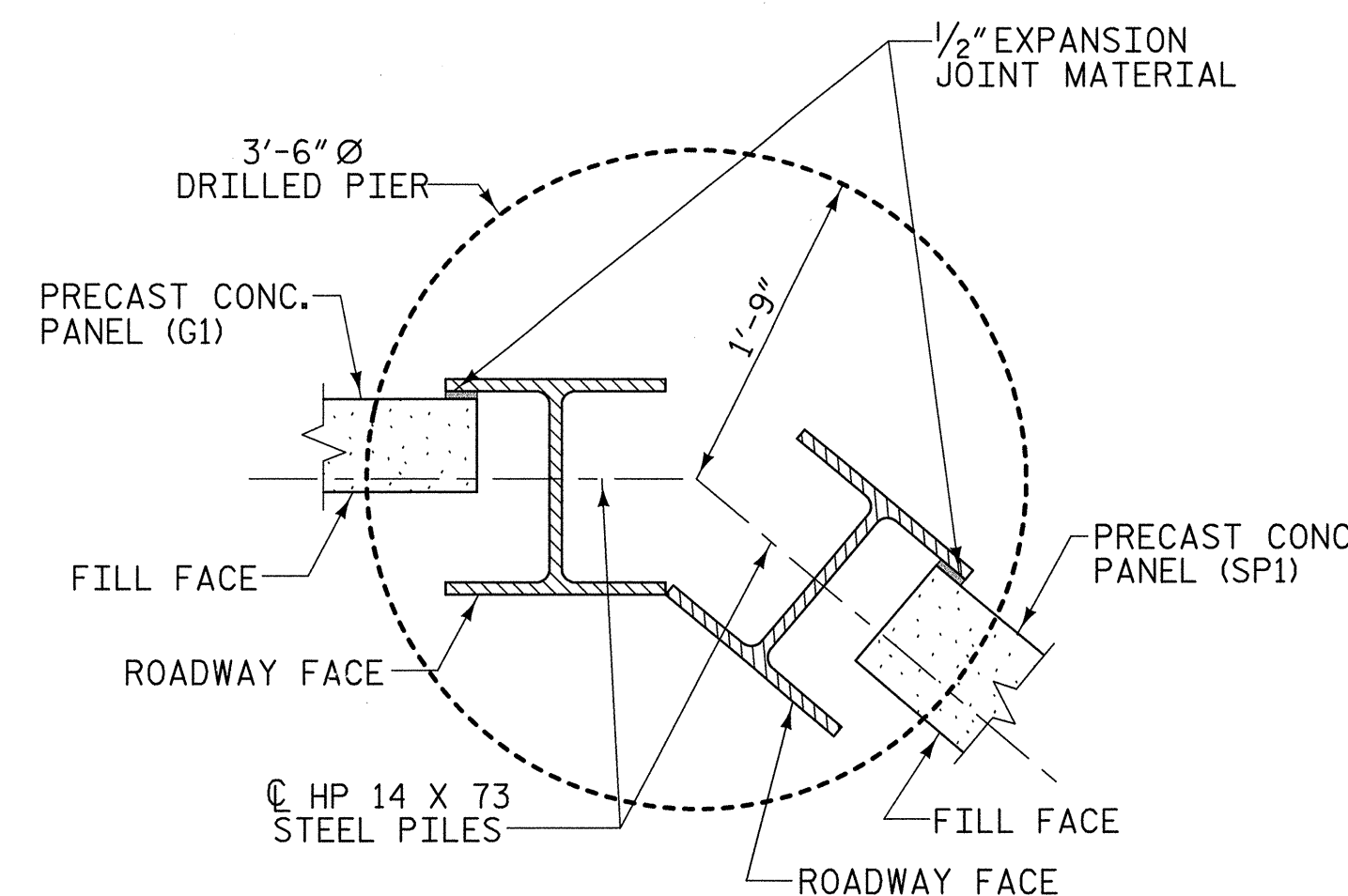
CLASS "A" CONCRETE (COPING) - CU. YARDS 32.5

ESTIMATED QUANTITIES

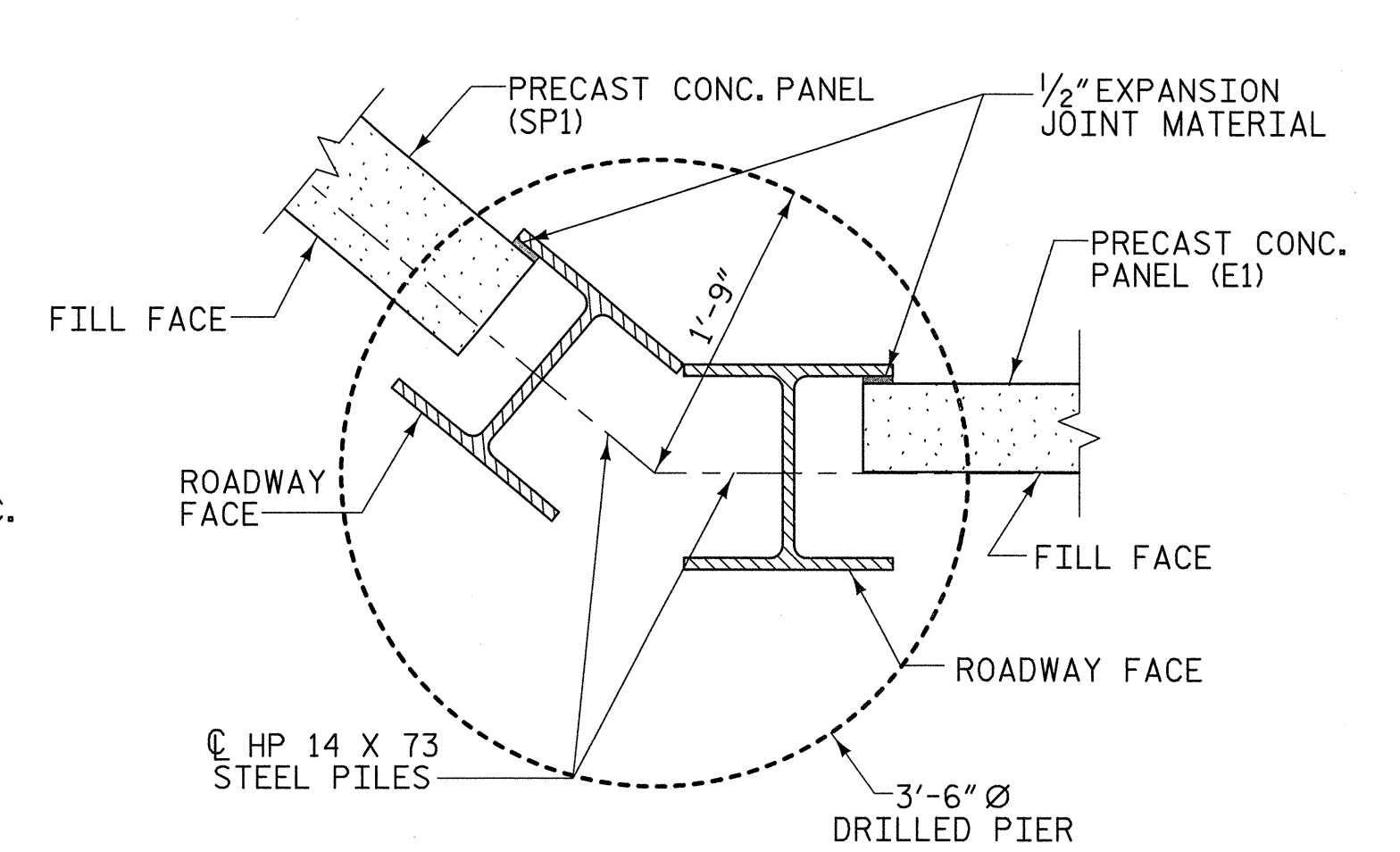
CAST-IN-PLACE COPING - LIN. FT.	407'-0"
#57 STONE BACKFILL - CU. YARDS	141.5
SHAFT EXCAVATION - LIN. FT.	1199
SHAFT CONCRETE - CU. YARDS	169.4
PRECAST CONCRETE PANEL TYPE C1 - NO.	5
PRECAST CONCRETE PANEL TYPE D1 - NO.	3
PRECAST CONCRETE PANEL TYPE E1 - NO.	2
PRECAST CONCRETE PANEL TYPE F1 - NO.	3
PRECAST CONCRETE PANEL TYPE G1 - NO.	8
PRECAST CONCRETE PANEL TYPE H1 - NO.	15
PRECAST CONCRETE PANEL TYPE I2 - NO.	6
HP 12 X 53 STEEL PILES - EA.	20
HP 12 X 53 STEEL PILES - LIN. FT.	620
HP 14 X 73 STEEL PILES - EA.	16
HP 14 X 73 STEEL PILES - LIN. FT.	614
HP 14 X 89 STEEL PILES - EA.	7
HP 14 X 89 STEEL PILES - LIN. FT.	275

PILE ELEVATIONS AND PANEL TYPES

PILE STATION	PILE NO.	PILE SIZE	PILE SPACE	PILE LENGTH	TOP CONC SHAFT ELEV	CUTOFF ELEV	PILE TIP ELEV	PANEL TYPE
0+00.00	1	HP 14x73	-	38.77	223.58	234.08	195.31	
0+10.00	2	HP 14x73	10'-0"	39.00	223.26	234.08	195.08	H1
0+20.00	3	HP 14x73	10'-0"	38.34	222.95	233.76	195.42	H1
0+30.00	4	HP 14x73	10'-0"	37.84	222.63	233.45	195.61	H1
0+40.00	5	HP 14x73	10'-0"	38.16	222.31	233.13	194.97	H1
0+50.00	6	HP 14x73	10'-0"	38.38	221.99	232.81	194.43	H1
0+60.00	7	HP 14x73	10'-0"	38.09	221.99	232.49	194.40	H1
0+70.00	8	HP 12x53	10'-0"	37.81	222.36	232.17	194.36	G1
0+80.00	9	HP 12x53	10'-0"	37.36	222.04	231.86	194.50	G1
0+90.00	10	HP 12x53	10'-0"	37.11	221.83	231.54	194.43	G1
1+00.00	11	HP 12x53	10'-0"	37.68	221.83	231.44	193.76	G1
1+10.00	12	HP 12x53	10'-0"	37.89	221.94	231.55	193.66	G1
1+20.00	13	HP 12x53	10'-0"	37.54	222.05	231.66	194.12	G1
1+30.00	14	HP 12x53	10'-0"	37.53	222.16	231.77	194.24	G1
1+40.00	15	HP 14x73	10'-0"	38.17	221.48	231.98	193.81	G1
1+50.00	16	HP 14x73	10'-0"	38.58	221.48	232.20	193.62	H1
1+60.00	17	HP 14x73	10'-0"	38.78	221.70	232.41	193.63	H1
1+70.00	18	HP 14x89	10'-0"	39.11	221.07	232.57	193.46	H1
1+77.50	19	HP 14x89	7'-6"	39.23	221.07	232.73	193.50	I2
1+85.00	20	HP 14x89	7'-6"	39.26	221.23	232.79	193.53	I2
1+92.50	21	HP 14x89	7'-6"	39.22	221.23	232.79	193.57	I2
2+00.00	22	HP 14x89	7'-6"	39.42	220.97	232.79	193.37	I2
2+07.50	23	HP 14x89	7'-6"	39.36	220.97	232.63	193.27	I2
2+15.00	24	HP 14x89	7'-6"	39.18	220.97	232.47	193.29	I2
2+25.00	25	HP 14x73	10'-0"	38.84	221.66	232.32	193.48	H1
2+35.00	26	HP 14x73	10'-0"	38.69	221.40	232.16	193.47	H1
2+45.00	27	HP 14x73	10'-0"	38.44	221.13	231.90	193.46	H1
2+55.00	28	HP 14x73	10'-0"	38.17	220.82	231.63	193.46	H1
2+65.00	29	HP 14x73	10'-0"	37.87	220.51	231.32	193.45	H1
2+75.00	30	HP 14x73	10'-0"	37.40	220.51	231.01	193.61	H1
2+85.00	31	HP 12x53	10'-0"	36.89	221.88	230.69	193.80	F1
2+95.00	32	HP 12x53	10'-0"	29.39	221.57	230.38	200.99	F1
3+05.00	33	HP 12x53	10'-0"	29.01	221.57	230.07	201.06	F1
3+15.00	34	HP 12x53	10'-0"	28.54	221.99	229.78	201.24	E1
3+25.00	35	HP 12x53	10'-0"	28.19	221.99	229.49	201.30	E1
3+35.00	36	HP 12x53	10'-0"	27.82	222.41	229.20	201.38	D1
3+45.00	37	HP 12x53	10'-0"	26.45	222.13	228.91	202.46	D1
3+55.00	38	HP 12x53	10'-0"	26.06	222.13	228.63	202.57	D1
3+65.00	39	HP 12x53	10'-0"	25.73	222.63	228.38	202.65	C1
3+75.00	40	HP 12x53	10'-0"	25.42	222.37	228.13	202.71	C1
3+85.00	41	HP 12x53	10'-0"	25.05	222.12	227.87	202.82	C1
3+95.00	42	HP 12x53	10'-0"	24.69	221.65	227.62	202.93	C1
4+05.00	43	HP 12x53	10'-0"	24.20	221.65	227.15	202.95	C1



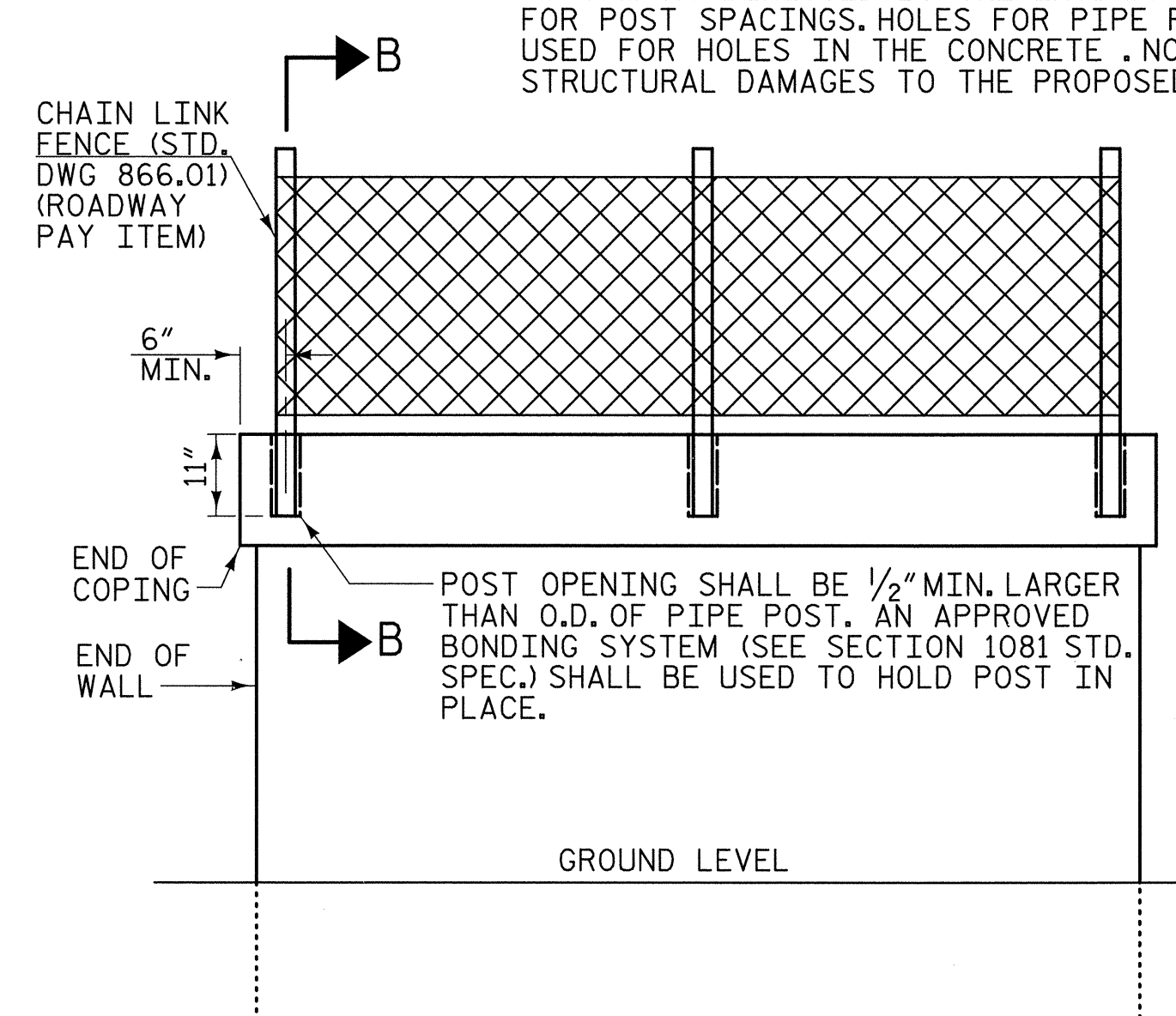
DETAIL C
(CONCAVE TOWARD ROADWAY)
N.T.S.



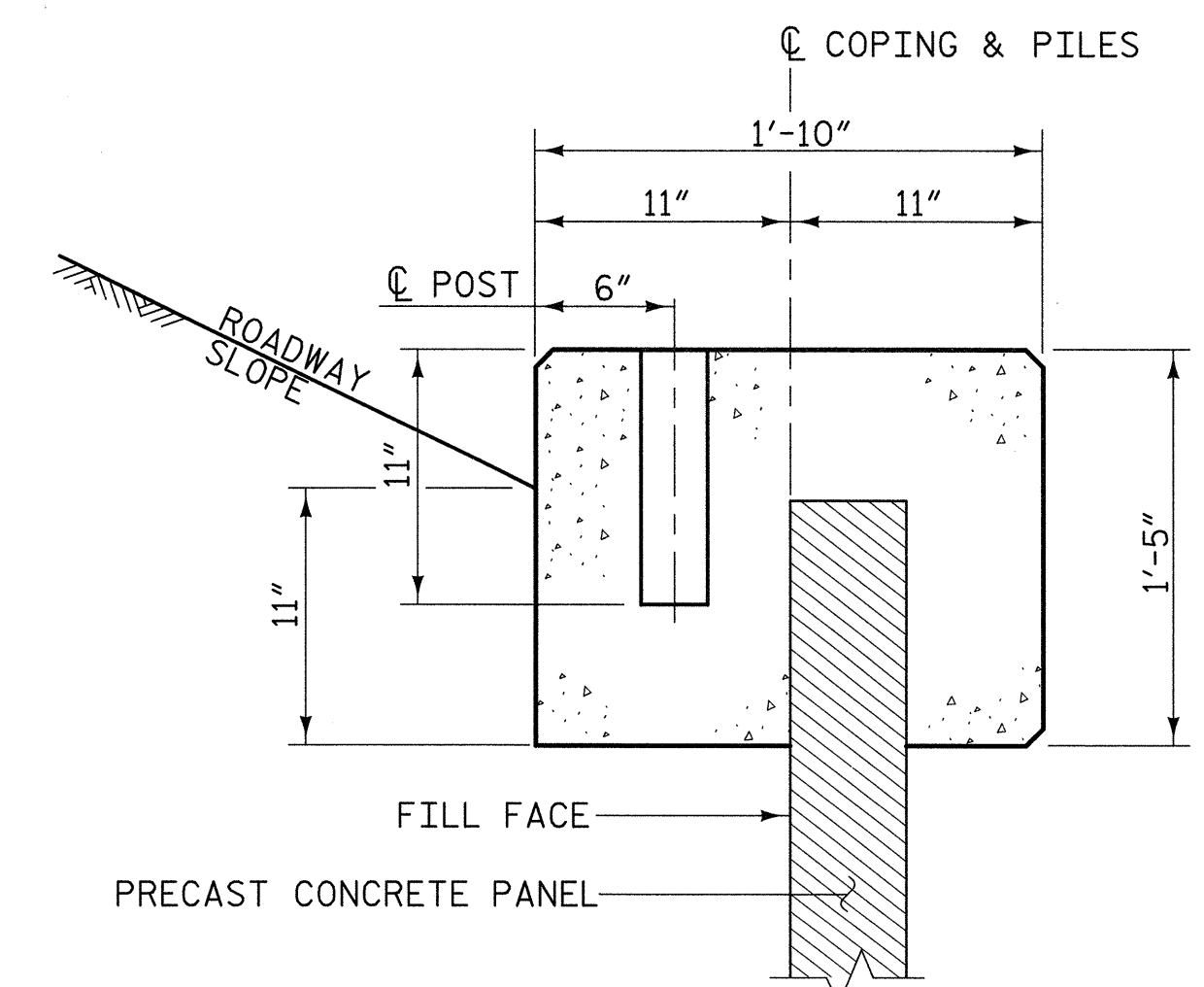
DETAIL D
(CONVEX TOWARD ROADWAY)
N.T.S.

NOTE:

CHAIN LINK FENCE SHALL BE EMBEDDED 11" INTO PROPOSED WALL WITH EPOXY OR CONCRETE GROUT ANCHORING SYSTEM AS DIRECTED BY THE ENGINEER. THE PROPOSED RAILING SHALL BE PRE-MEASURED AND ON TOP OF WALL FOR POST SPACINGS. HOLES FOR PIPE POSTS MAY BE FORMED OR DRILLED. IF DRILLED, A ROTARY DRILL SHALL BE USED FOR HOLES IN THE CONCRETE. NO IMPACT DRILLS SHALL BE ALLOWED, TO ELIMINATE ANY POSSIBILITY OF STRUCTURAL DAMAGES TO THE PROPOSED WALL.



ELEVATION VIEW

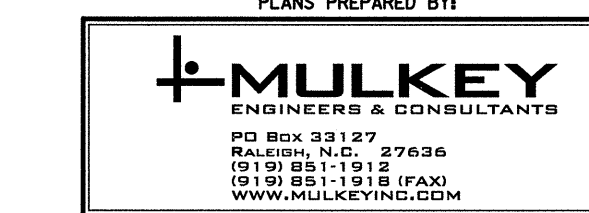
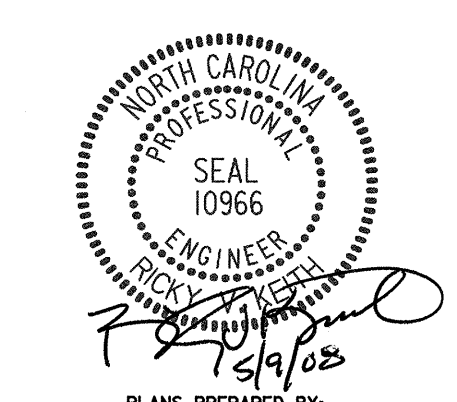


SECTION B-B

CHAIN LINK FENCE ATTACHMENT DETAIL
N.T.S.

PROJECT NO. U-4756
CUMBERLAND COUNTY

SHEET 5 OF 5



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PILE / PANEL
RETAINING WALL

REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

W-5
TOTAL SHEETS

5/9/2008 8:55:29 AM C:\cur\as\Wall3-08-U-4756.SD.PP Wall5.dgn

DRAWN BY: W. B. ALLEN DATE: 3/08
CHECKED BY: R.V. KEITH DATE: 4/08