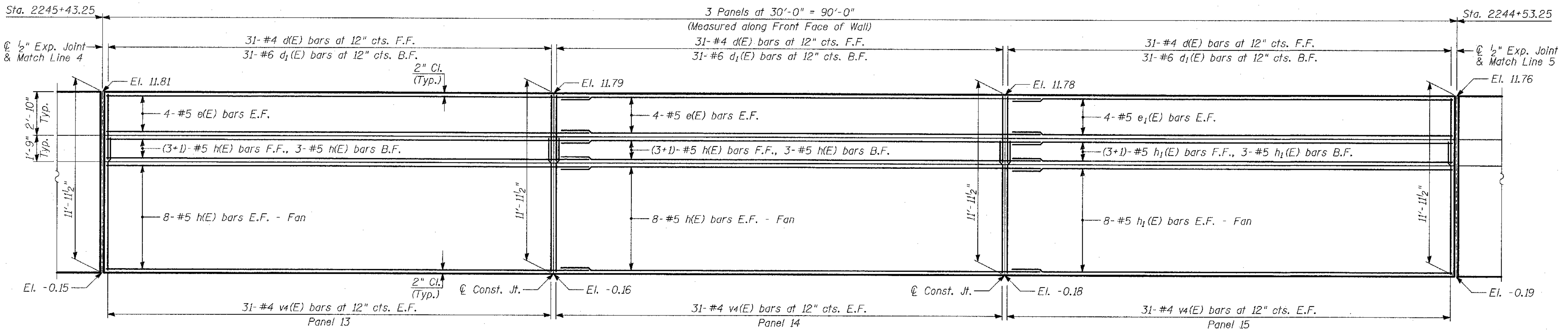
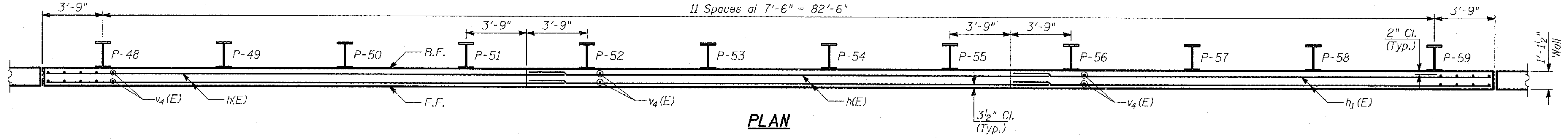
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	501
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

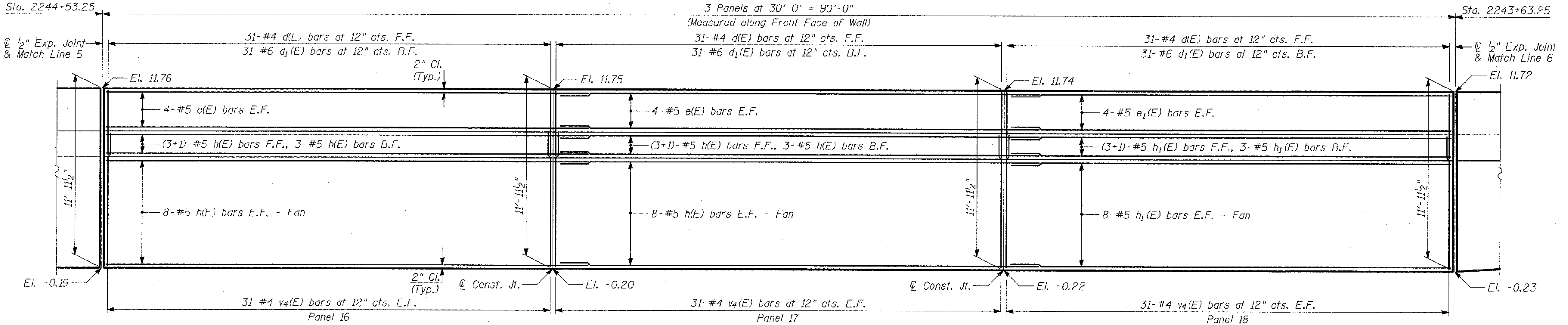
62694



ELEVATION



PLAN



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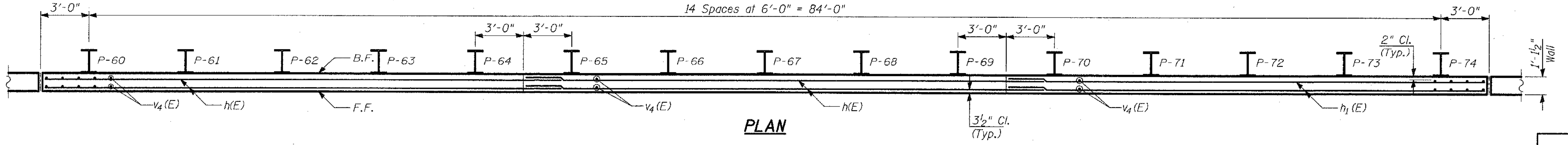

PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 6 and 9 thru 11 of 20.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 6 of 20.

SHEET 4 OF 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1 - PLAN AND ELEVATION
STA. 2245+43.25 TO STA. 2243+63.25

S.N. 016-W954
DESIGNED BY: MI, MAF
SCALE: N.T.S.
DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

T·Y·LIN INTERNATIONAL

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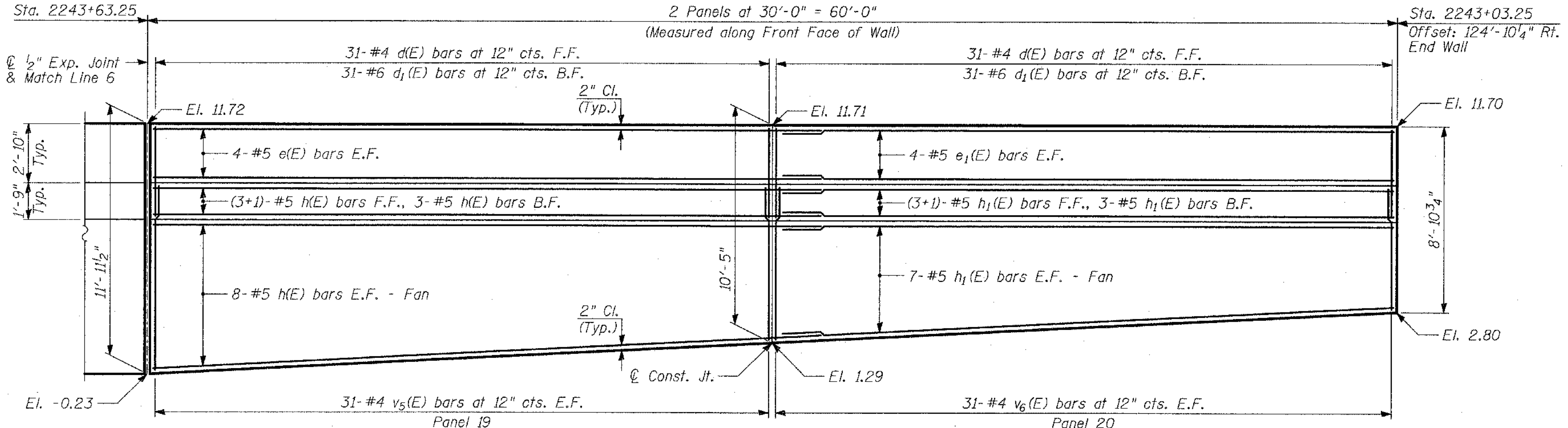
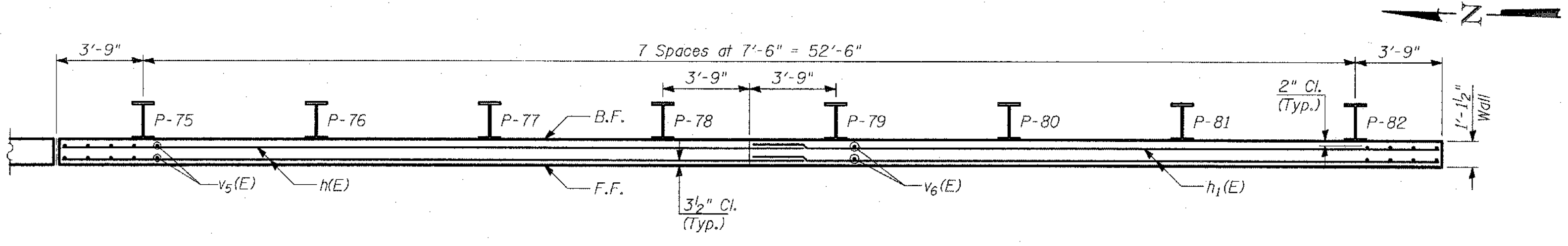
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	502
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

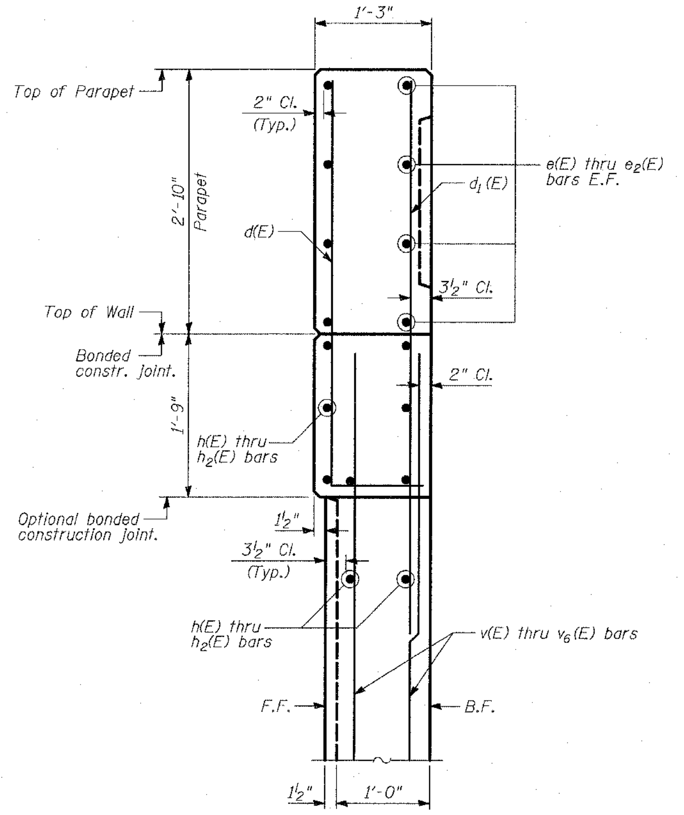
62694



ELEVATION



PLAN



FLUTED PARAPET DETAIL

T·Y·LIN INTERNATIONAL

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 6 and 9 thru 11 of 20.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 6 of 20.

SHEET 5 OF 20

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1 - PLAN AND ELEVATION
STA. 2243+63.25 TO STA. 2243+03.25

S.N. 016-W954	DESIGNED BY: MI, MAF
SCALE: N.T.S.	DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005	CHECKED BY: TD, MI

03/27/2005 02:29:11 PM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	503
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

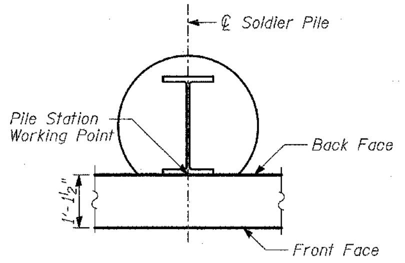
62694

PILE LAYOUT

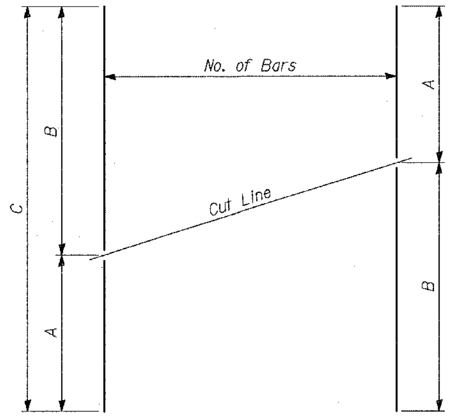
Pile	Station at Working Point	Top of Parapet El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-1	2248+99.50	11.40	7.23	4.17	HP14x117	-18.85	26'-1"
P-2	2248+92.00	11.40	7.24	4.17	↑	-18.85	26'-1"
P-3	2248+84.50	11.41	7.25	4.18		-18.84	26'-1"
P-4	2248+77.00	11.42	7.25	4.19		-18.83	26'-1"
P-5	2248+69.50	11.43	7.26	4.20		-18.82	26'-1"
P-6	2248+62.00	11.44	7.27	4.21		-18.81	26'-1"
P-7	2248+54.50	11.45	7.28	4.22		-18.80	26'-1"
P-8	2248+47.00	11.46	7.29	4.23		-18.79	26'-1"
P-9	2248+39.50	11.46	7.30	4.23		-18.79	26'-1"
P-10	2248+32.00	11.47	7.31	4.24		-18.78	26'-1"
P-11	2248+24.50	11.48	7.32	4.25		-18.77	26'-1"
P-12	2248+17.00	11.49	7.32	4.26		-18.76	26'-1"
P-13	2248+09.50	11.50	7.33	4.27		-18.75	26'-1"
P-14	2248+02.00	11.51	7.34	4.28		-18.74	26'-1"
P-15	2247+94.50	11.52	7.35	4.29		-18.73	26'-1"
P-16	2247+87.00	11.53	7.36	4.30		-18.73	26'-1"
P-17	2247+79.50	11.53	7.37	4.30		-18.72	26'-1"
P-18	2247+72.00	11.54	7.38	4.31		-18.71	26'-1"
P-19	2247+64.50	11.55	7.38	4.32		-18.70	26'-1"
P-20	2247+57.00	11.56	7.39	4.33		-18.69	26'-1"
P-21	2247+49.50	11.57	7.40	4.34		-18.68	26'-1"
P-22	2247+42.00	11.58	7.41	4.35		-18.67	26'-1"
P-23	2247+34.50	11.59	7.42	4.36	↓	-18.66	26'-1"
P-24	2247+27.00	11.59	7.43	4.36	HP14x117	-18.66	26'-1"
P-25	2247+19.75	11.60	7.44	4.20	W18x130	-19.81	27'-3"
P-26	2247+12.00	11.61	7.44	3.82	↑	-20.22	27'-8"
P-27	2247+04.25	11.62	7.45	3.44		-20.63	28'-1"
P-28	2246+96.50	11.63	7.46	3.07		-20.95	28'-5"
P-29	2246+88.75	11.64	7.47	2.69		-21.36	28'-10"
P-30	2246+81.00	11.65	7.48	2.31		-21.77	29'-3"
P-31	2246+73.25	11.66	7.49	1.93		-22.09	29'-7"
P-32	2246+65.50	11.67	7.50	1.56		-22.50	30'-0"
P-33	2246+57.75	11.67	7.51	1.18		-22.83	30'-4"
P-34	2246+50.00	11.68	7.52	0.80		-23.23	30'-9"
P-35	2246+42.25	11.69	7.53	0.42	↓	-23.64	31'-2"
P-36	2246+29.50	11.71	7.54	-0.11	W18x130	-24.13	31'-8"
P-37	2246+21.00	11.72	7.55	-0.11	W21x132	-26.12	33'-8"
P-38	2246+11.75	11.73	7.56	-0.12	W21x132	-26.19	33'-9"
P-39	2246+05.25	11.73	7.57	-0.12	W18x130	-24.18	31'-9"
P-40	2245+97.75	11.74	7.58	-0.12	↑	-24.17	31'-9"
P-41	2245+90.25	11.75	7.59	-0.13		-24.16	31'-9"
P-42	2245+82.75	11.76	7.59	-0.13		-24.16	31'-9"
P-43	2245+75.25	11.77	7.60	-0.13		-24.15	31'-9"
P-44	2245+67.75	11.78	7.61	-0.14		-24.14	31'-9"
P-45	2245+60.25	11.79	7.62	-0.14		-24.21	31'-10"
P-46	2245+52.75	11.80	7.63	-0.14		-24.20	31'-10"
P-47	2245+45.25	11.80	7.64	-0.15		-24.20	31'-10"
P-48	2245+39.50	11.80	7.64	-0.15		-24.20	31'-10"
P-49	2245+32.00	11.80	7.63	-0.15		-24.20	31'-10"
P-50	2245+24.50	11.80	7.63	-0.16		-24.20	31'-10"
P-51	2245+17.00	11.79	7.63	-0.16		-24.21	31'-10"
P-52	2245+09.50	11.79	7.62	-0.16		-24.21	31'-10"
P-53	2245+02.00	11.79	7.62	-0.17		-24.21	31'-10"
P-54	2244+94.50	11.78	7.62	-0.17		-24.22	31'-10"
P-55	2244+87.00	11.78	7.61	-0.17		-24.22	31'-10"
P-56	2244+79.50	11.78	7.61	-0.18		-24.22	31'-10"
P-57	2244+72.00	11.77	7.61	-0.18		-24.23	31'-10"
P-58	2244+64.50	11.77	7.60	-0.18	↓	-24.23	31'-10"
P-59	2244+57.00	11.77	7.60	-0.19	W18x130	-24.23	31'-10"
P-60	2244+50.25	11.76	7.60	-0.19	W18x106	-22.24	29'-10"
P-61	2244+44.25	11.76	7.59	-0.19	↑	-22.24	29'-10"
P-62	2244+38.25	11.76	7.59	-0.20		-22.24	29'-10"
P-63	2244+32.25	11.75	7.59	-0.20		-22.25	29'-10"
P-64	2244+26.25	11.75	7.59	-0.20	↓	-22.25	29'-10"
P-65	2244+20.25	11.75	7.58	-0.20	W18x106	-22.25	29'-10"

PILE LAYOUT

Pile	Station at Working Point	Top of Parapet El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-66	2244+14.25	11.75	7.58	-0.21	W18x106	-22.25	29'-10"
P-67	2244+08.25	11.74	7.58	-0.21	↑	-22.26	29'-10"
P-68	2244+02.25	11.74	7.57	-0.21		-22.26	29'-10"
P-69	2243+96.25	11.74	7.57	-0.22		-22.26	29'-10"
P-70	2243+90.25	11.74	7.57	-0.22		-22.26	29'-10"
P-71	2243+84.25	11.73	7.57	-0.22		-22.27	29'-10"
P-72	2243+78.25	11.73	7.56	-0.22		-22.27	29'-10"
P-73	2243+72.25	11.73	7.56	-0.23	↓	-22.27	29'-10"
P-74	2243+66.25	11.72	7.56	-0.23	W18x106	-22.28	29'-10"
P-75	2243+59.50	11.72	7.55	-0.04	W18x130	-26.11	33'-8"
P-76	2243+52.00	11.72	7.55	0.34	↑	-25.70	33'-3"
P-77	2243+44.50	11.71	7.55	0.72		-25.29	32'-10"
P-78	2243+37.00	11.71	7.54	1.10		-24.96	32'-6"
P-79	2243+29.50	11.71	7.54	1.47		-24.54	32'-1"
P-80	2243+22.00	11.70	7.54	1.85		-24.21	31'-9"
P-81	2243+14.50	11.70	7.53	2.23	↓	-23.80	31'-4"
P-82	2243+07.00	11.70	7.53	2.61	W18x130	-23.47	31'-0"



SOLDIER PILE WORKING POINT



SERIES OF BAR CUTTING DIAGRAM

See table for dimensions.
Make all cuts normal to bar axis

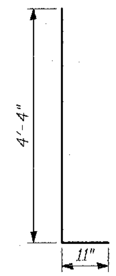
BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	No. of Bars Per Set	A	B	C
v_1(E)	1	31	4'-1"	5'-7"	9'-8"
v_2(E)	1	31	5'-7"	7'-1"	12'-8"
v_3(E)	1	26	7'-1"	8'-4"	15'-5"
v_5(E)	1	31	8'-10"	7'-4"	16'-2"
v_6(E)	1	31	7'-4"	5'-9"	13'-1"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	615	#4	5'-3"	L
d_1(E)	615	#6	6'-6"	—
e(E)	104	#5	32'-2"	—
e_1(E)	48	#5	29'-8"	—
e_2(E)	8	#5	24'-7"	—
h(E)	263	#5	32'-2"	—
h_1(E)	120	#5	29'-8"	—
h_2(E)	23	#5	24'-7"	—
v(E)	372	#4	4'-1"	—
v_1(E)	31	#4	9'-8"	—
v_2(E)	31	#4	12'-8"	—
v_3(E)	26	#4	15'-5"	—
v_4(E)	558	#4	8'-9"	—
v_5(E)	31	#4	16'-2"	—
v_6(E)	31	#4	13'-1"	—
v_7(E)	4	#4	5'-1"	—
Reinforcement Bars, Epoxy Coated			POUND	32,100
Concrete Structures			CU YD	261
Protective Coat			SQ YD	798
Furnishing Soldier Piles (HP Section)			FOOT	627
Furnishing Soldier Piles (W Section)			FOOT	1,795
Drilling and Setting Soldier Piles (in Soil)			CU FT	12,306

Reinforcement bars designated (E) shall be epoxy coated.



BAR d(E)

LAP SPLICES

Bar	Lap
#4	1'-8"
#5	2'-2"
#6	2'-7"
#8	4'-6"

SHEET 6 OF 20

REVISIONS	
NAME	DATE

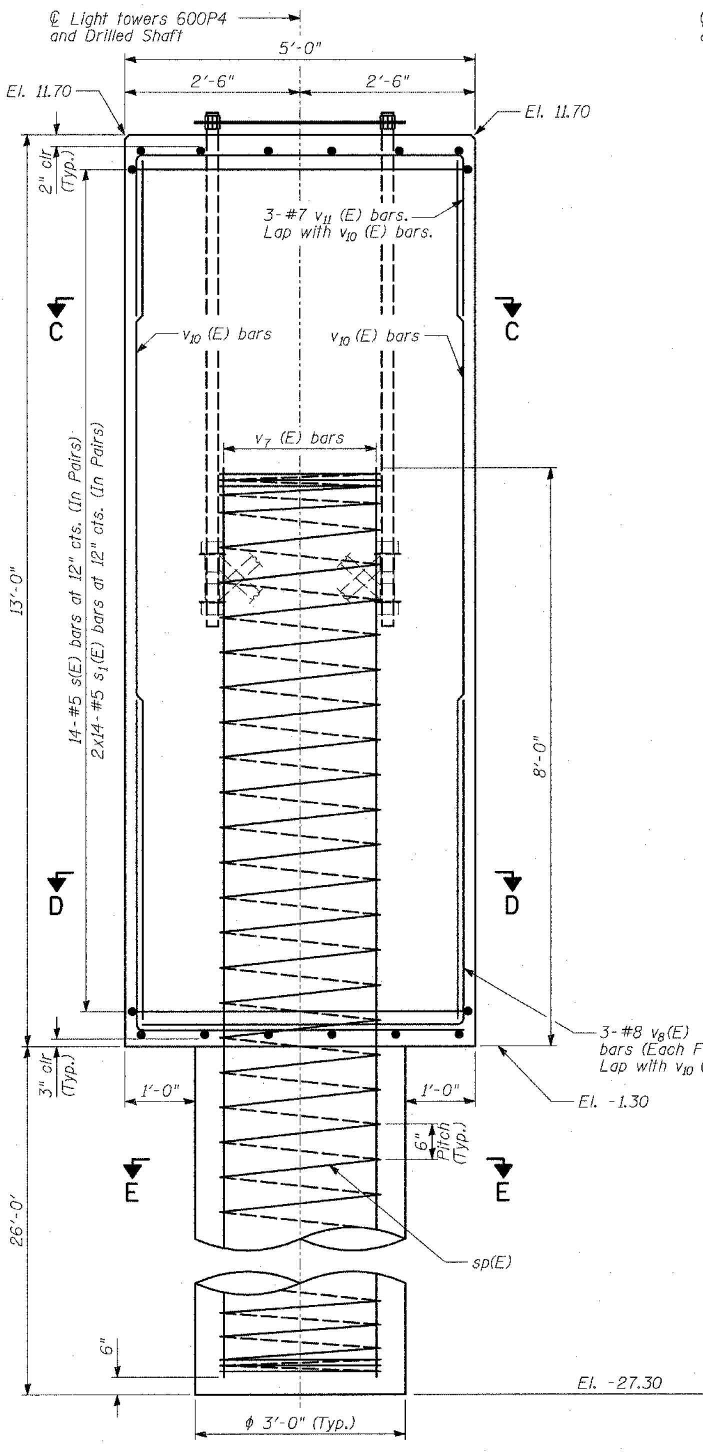
TYLIN INTERNATIONAL

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
PILE LAYOUT, DETAILS & BILL OF MATERIAL
S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

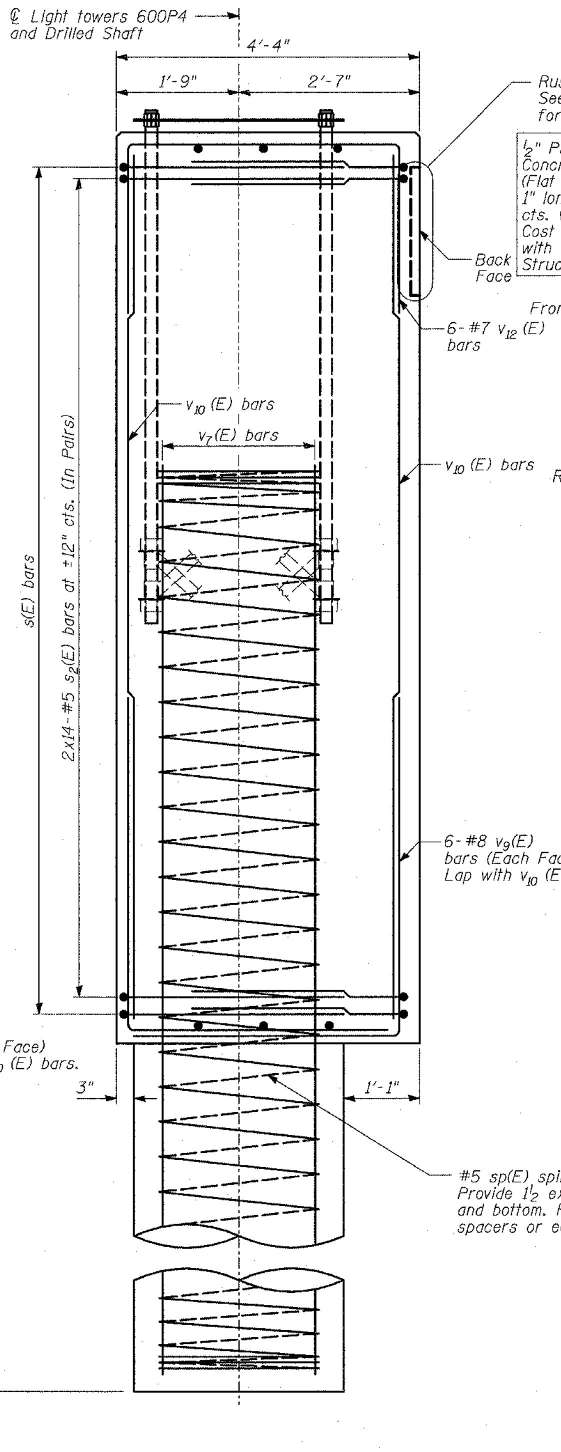
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	504
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

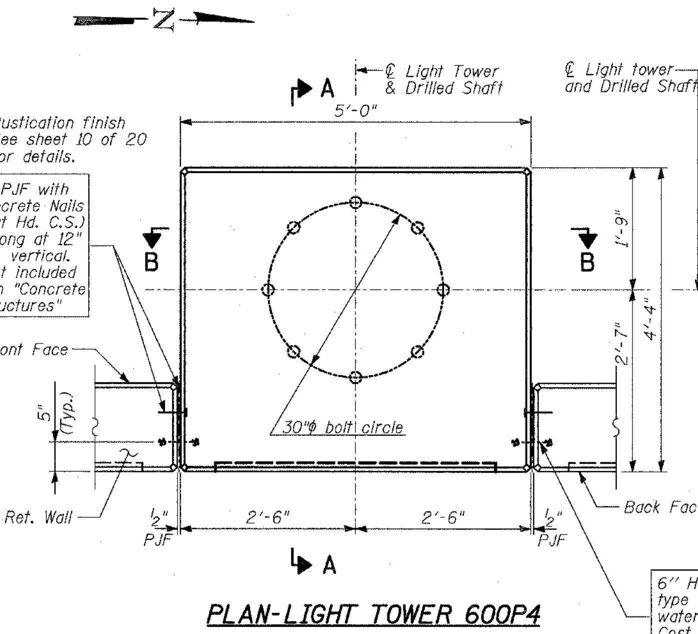
62694



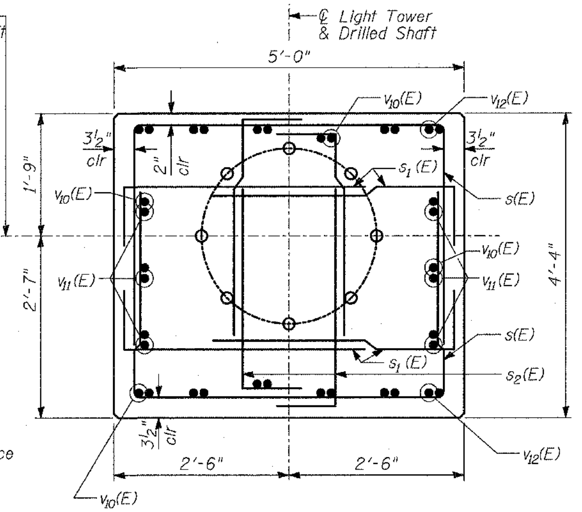
SECTION B-B



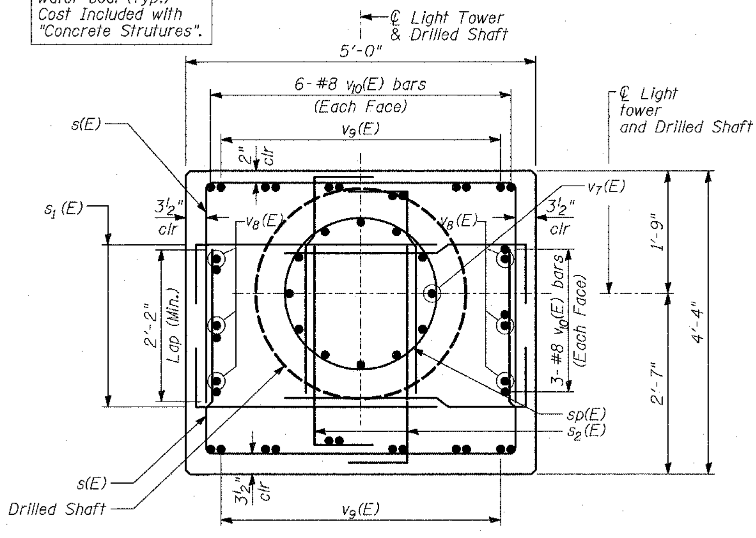
SECTION A-A



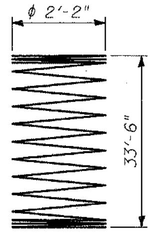
PLAN-LIGHT TOWER 600P4



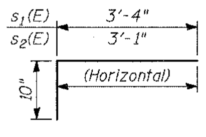
SECTION C-C



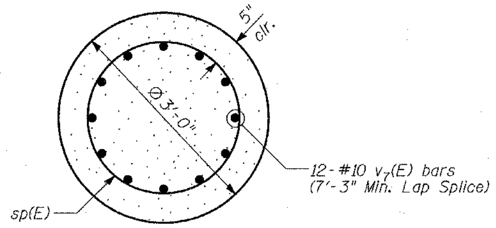
SECTION D-D



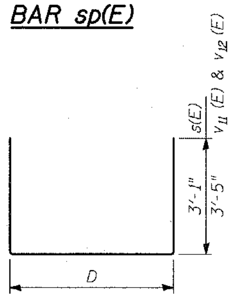
BAR sp(E)



BARS s1(E) & s2(E)



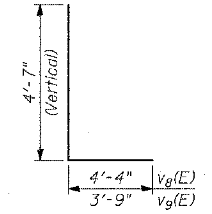
SECTION E-E



BARS s(E), v11 (E) & v12 (E)

MARK TABLE

Bar	D
s (E)	4'-5"
v11 (E)	4'-4"
v12 (E)	3'-10"



BARS v8(E) & v9(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
s (E)	28	#5	10'-7"	⊔
s_1(E)	56	#5	4'-2"	┌─
s_2(E)	56	#5	3'-11"	┌─
sp (E)	1	#5	33'-6"	WWWW
v_7(E)	12	#10	33'-6"	──
v_8(E)	6	#8	8'-11"	L
v_9(E)	12	#8	8'-4"	L
v_{10}(E)	18	#8	12'-6"	──
v_{11}(E)	3	#7	11'-2"	⊔
v_{12}(E)	6	#7	10'-8"	⊔
Reinforcement Bars, Epoxy Coated			POUND	4,220
Structure Excavation			CU YD	16
Concrete Structures			CU YD	11
Protective Coat			SQ YD	15
Rustication Finish			SQ FT	8
Drilled Shaft in Soil 36"			FOOT	26

Reinforcement bars designated (E) shall be epoxy coated.

NOTES:

1. The design loads are based on AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminares and Traffic Signals-2001.
2. Drilled shafts shall be installed according to IDOT special provisions for "Drilled Shafts".
3. Protective Coat shall be applied to exposed surfaces of the new concrete wall and tower base.
4. At all locations where reinforcement bar laps are not in direct contact, the Contractor shall provide sufficient spacing between the vertical bars, equal to the size of the largest concrete aggregate plus ½ inch.
5. For location of drilled shaft, see Sheet 3 of 20.
6. Conduit is not shown for clarity. For location of conduit, see Sheet 8 of 20.
7. Cost of anchor rod assembly, conduit and wires for grounding are included with "Concrete Structures".
8. Minimum lap for spirals = 2'-6"

SHEET 7 OF 20

REVISIONS	
NAME	DATE

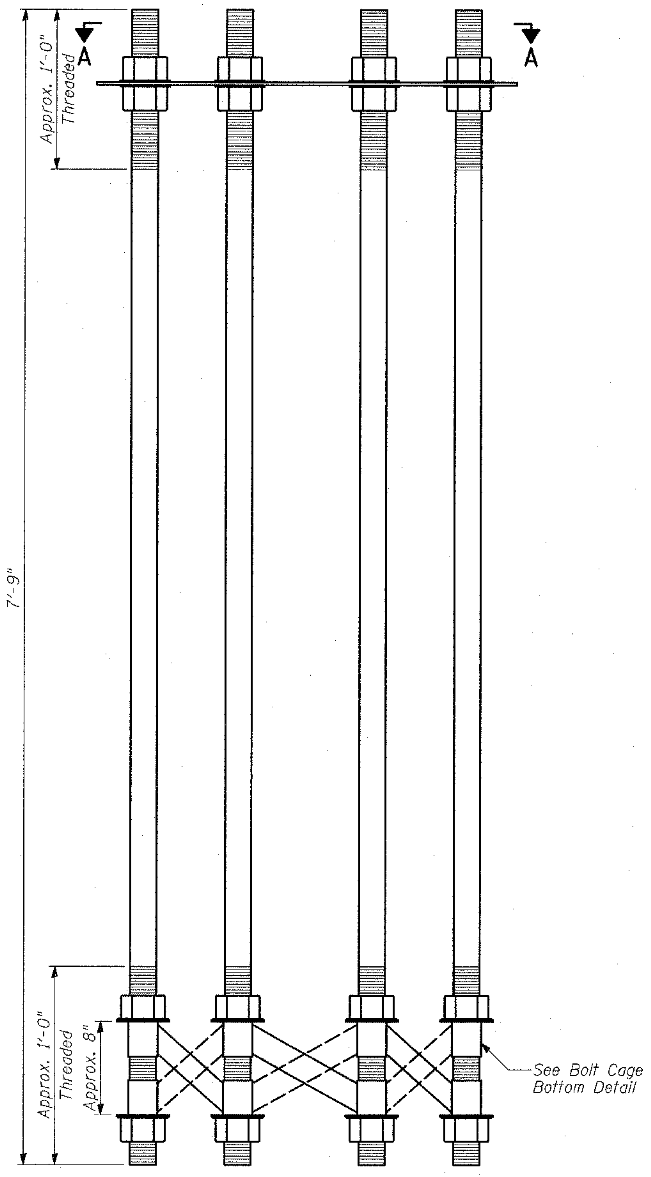
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
LIGHT TOWER 600P4 FOUNDATION DETAILS
S.N. 016-W954 DESIGNED BY: MI, MAF
SCALE: N.T.S. DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

TYLININTERNATIONAL

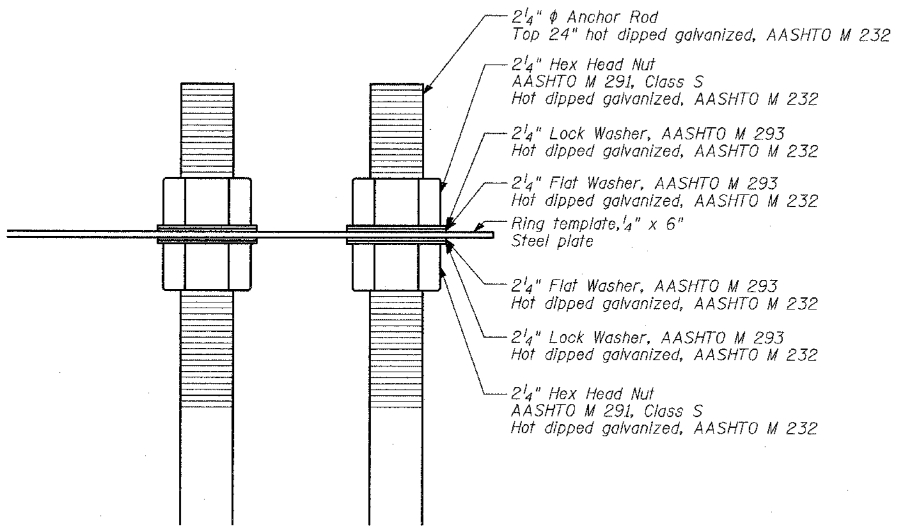
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	505
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

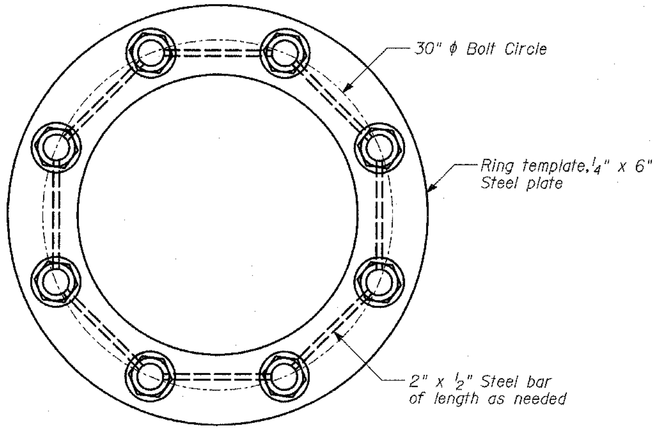
62694



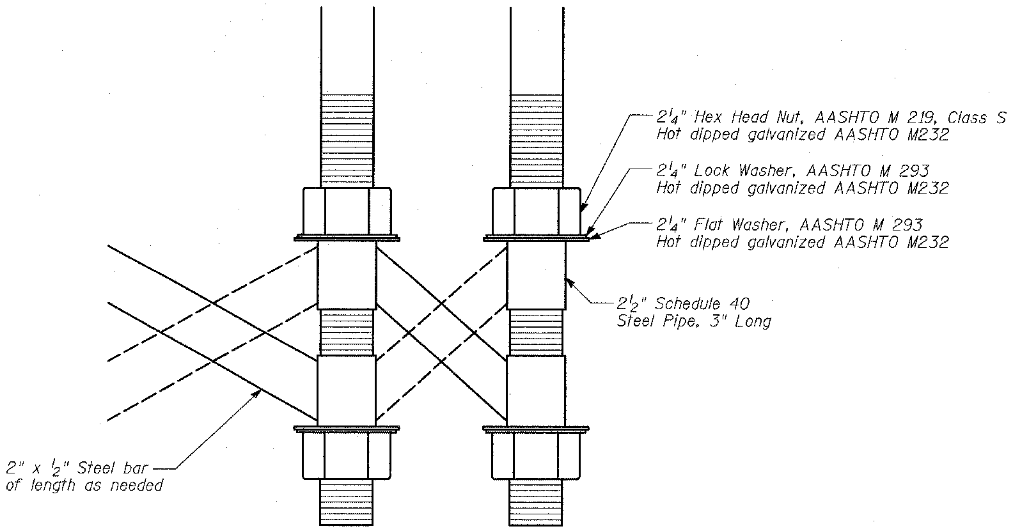
ANCHOR BOLT CAGE



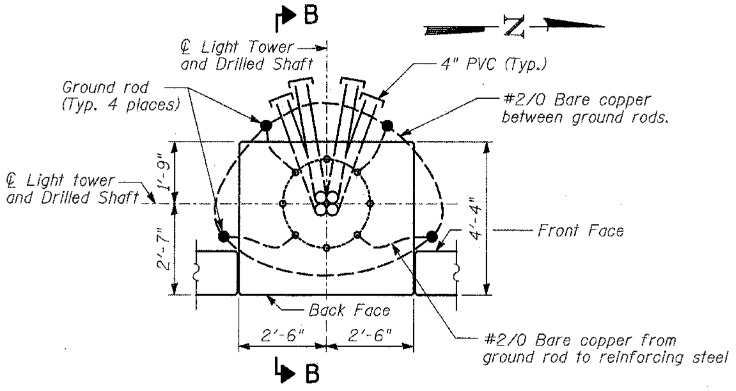
BOLT CAGE TOP



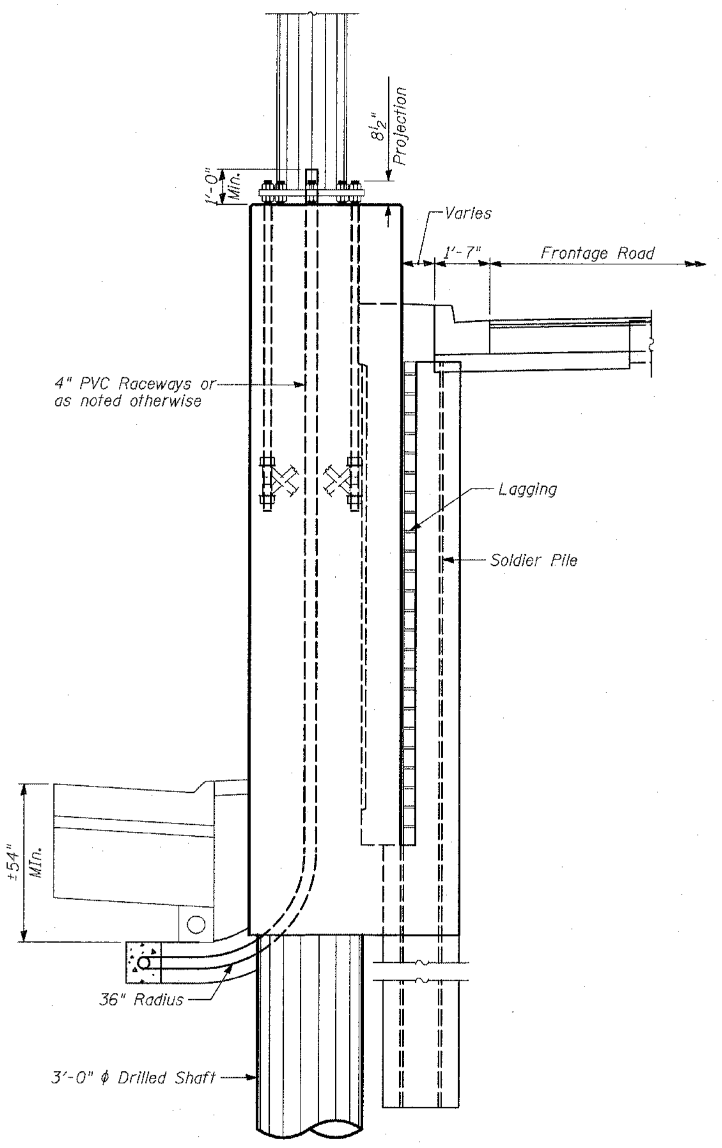
SECTION A-A



BOLT CAGE BOTTOM



PLAN - 600P4 CONDUIT PLACEMENT



SECTION B-B

NOTES:

1. Anchor rods shall be straight and shall be according to AASHTO M 314 or ASTM FI554, Grade 105 and galvanized according to Article 1006.09.
2. Anchor rod information shall be submitted for approval and shall be fully coordinated with tower manufacturer's requirements.
3. The Anchor Rods shall be vertical. No adjustment shall be allowed after the foundation is placed.
4. The gap between the foundation and the base plate shall be enclosed with a stainless steel screen fastened with a stainless steel band.
5. The Light Tower shall not be erected until after the concrete has been cured according to Article 1020.13.
6. Two anchor rods opposite each other shall have the anchor rod threads peened after nuts are installed.
7. Refer to BE501 for details.

SHEET 8 OF 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
LIGHT TOWER DETAILS

S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

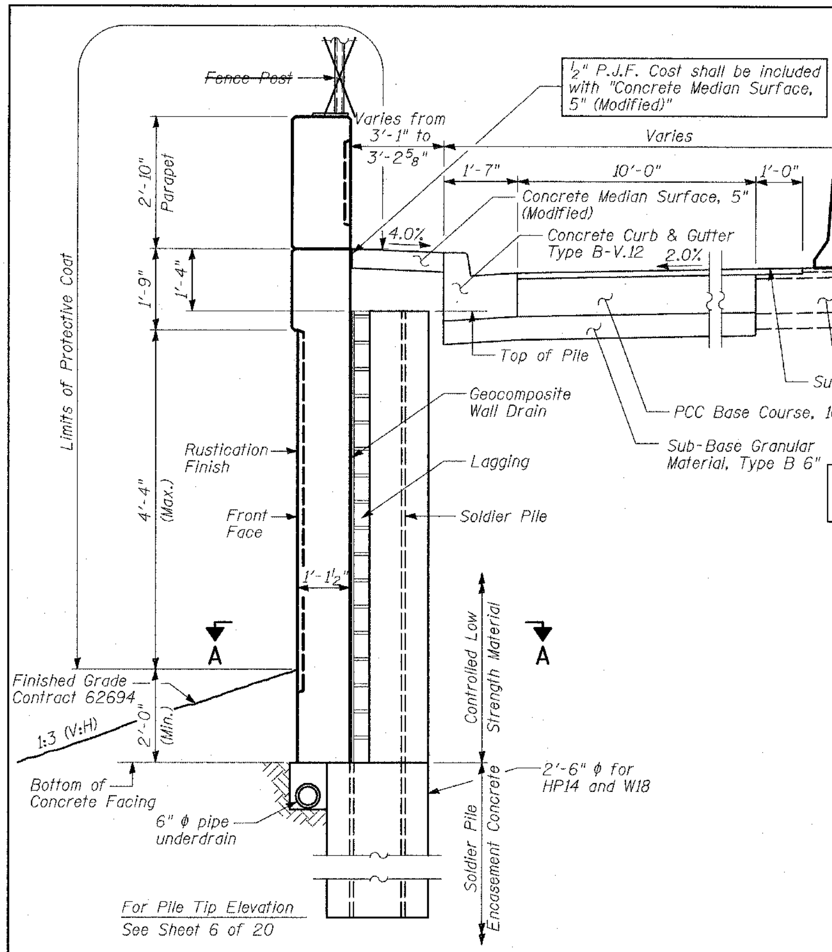
TYLIN INTERNATIONAL

03/27/2005 02:29:12 PM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	506

STA. 2200+00.00 TO STA. 2362+00.00

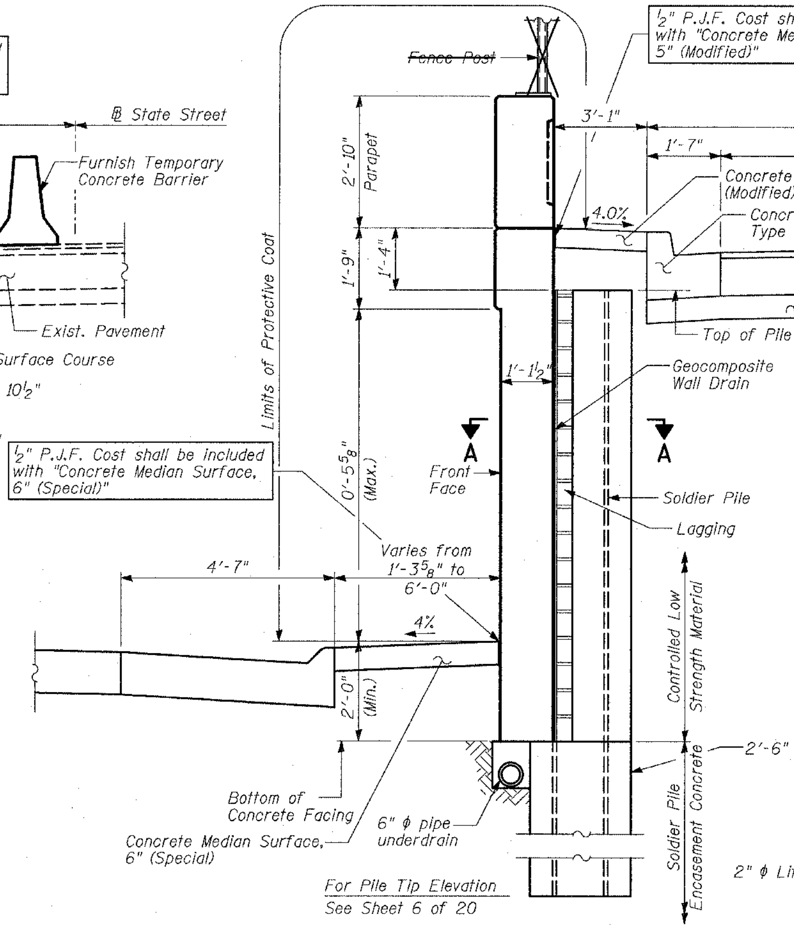
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
• (1516.1, 1717 & 1818) R-8		62694



CROSS SECTION THRU WALL

**** (From Sta. 2243+03.25 to Sta. 2243+25.91)
(From Sta. 2246+33.25 to Sta. 2248+26.24)

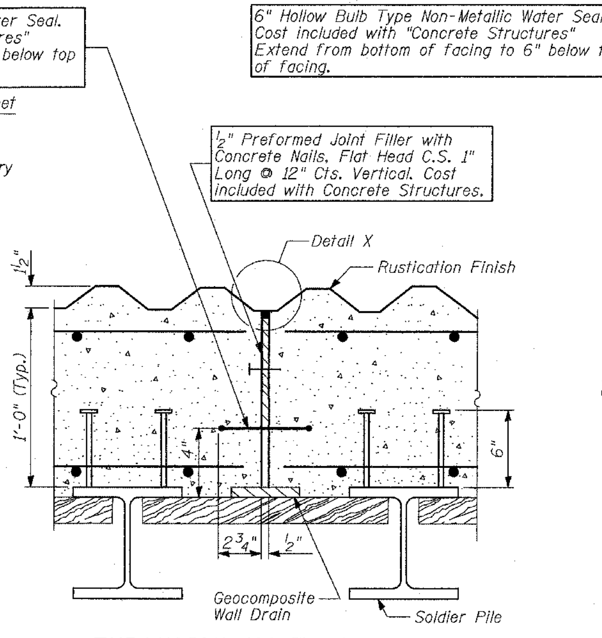
**** Light Tower Foundation not shown for clarity



CROSS SECTION THRU WALL

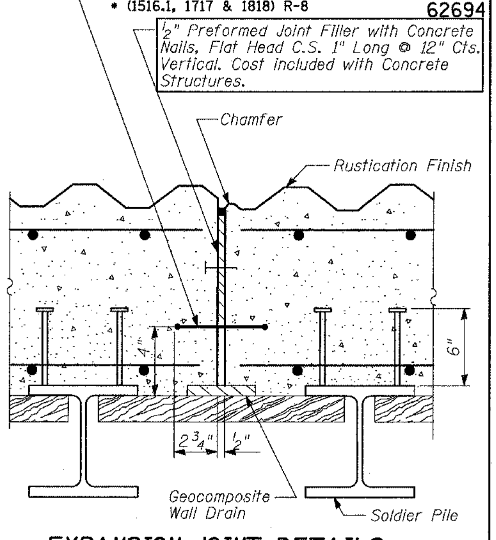
(From Sta. 2248+26.24 to Sta. 2249+03.25)

6" Hollow Bulb Type Non-Metallic Water Seal. Cost included with "Concrete Structures" Extend from bottom of facing to 6" below top of facing.



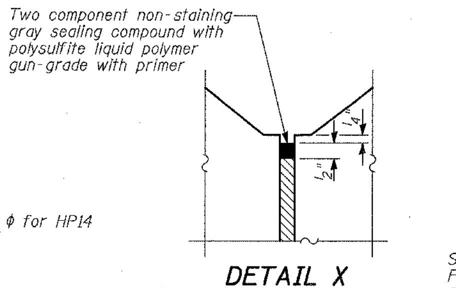
EXPANSION JOINT DETAILS

(Joint in Valley)

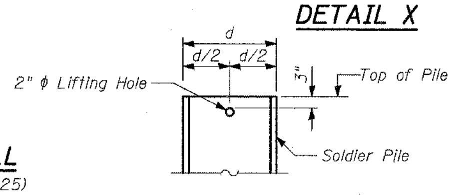


EXPANSION JOINT DETAILS

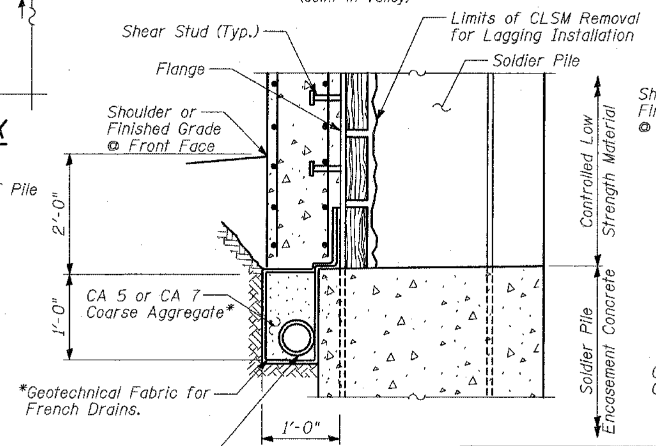
(Joint on Diagonal)

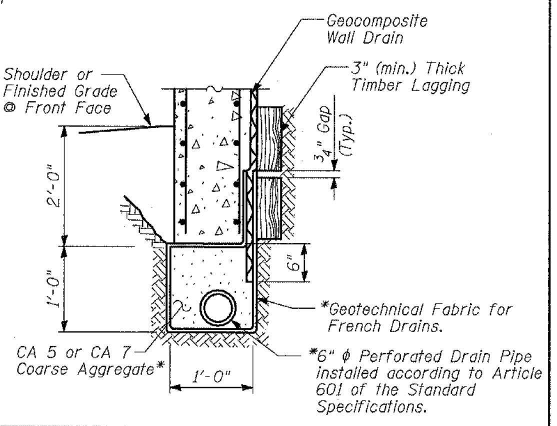


DETAIL X



LIFTING HOLE DETAIL



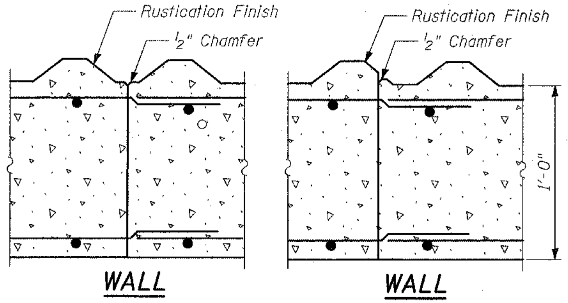


*6" ϕ Perforated Drain Pipe installed according to Article 601 of the Standard Specifications.

* Cost included with "Pipe Underdrains for Structures, 6""

PIPE UNDERDRAIN DETAIL AT SOLDIER PILE

PIPE UNDERDRAIN DETAIL BETWEEN SOLDIER PILES



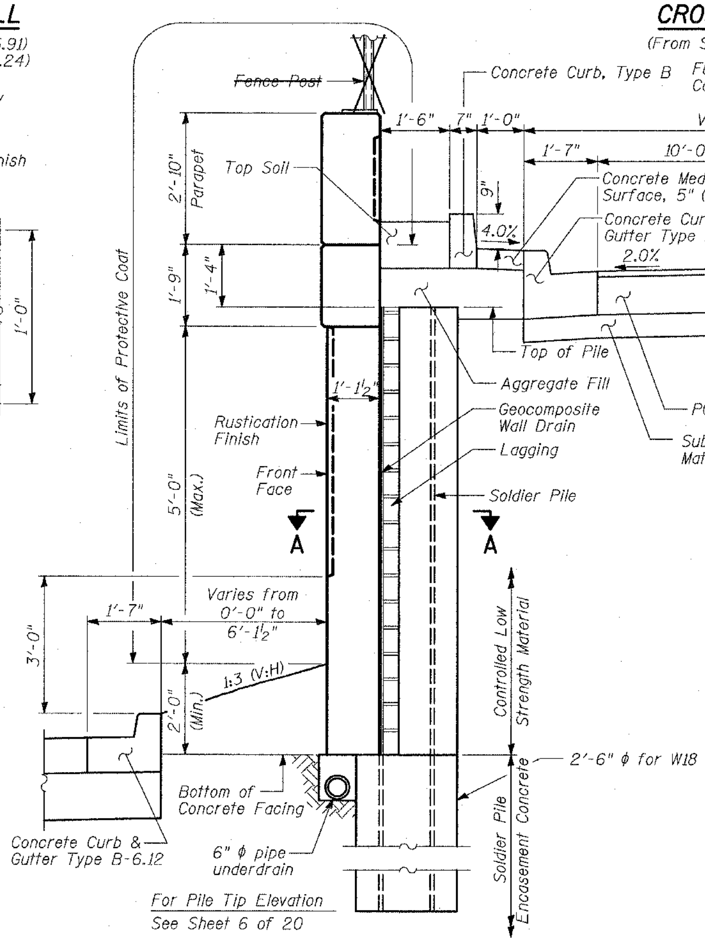
WALL
(Joint in Valley)

WALL
(Joint on Diagonal)

CONSTRUCTION JOINT DETAILS

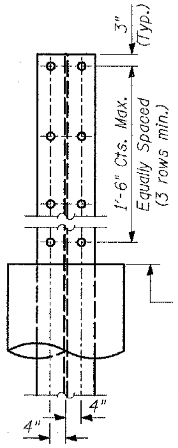
NOTES:

1. The geocomposite wall drain shall be constructed according to Section 591 of the Standard Specifications.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
3. Stud shear connectors shall be ¾" ϕ x 6" granular or solid flux filled headed studs, automatically end welded to the front flange of the soldier piles.

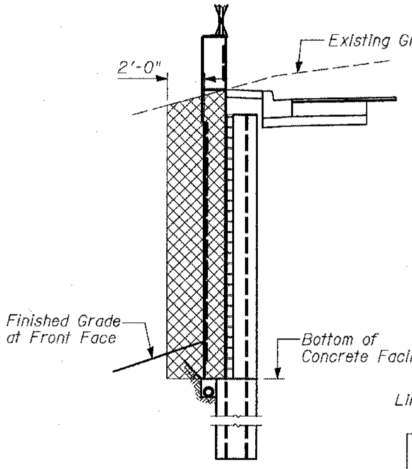


CROSS SECTION THRU WALL

(From Sta. 2243+25.91 to Sta. 2246+33.25)

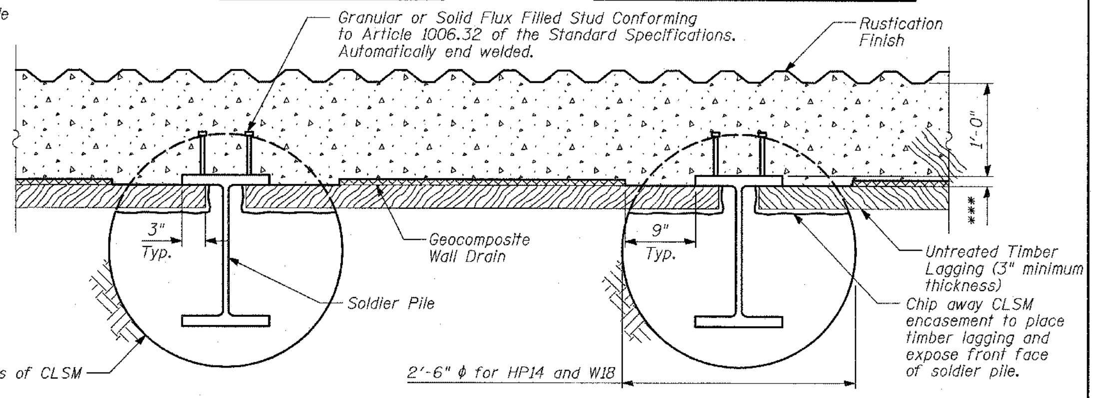


SHEAR STUD CONNECTOR DETAIL



STRUCTURE EXCAVATION

(For Proposed Wall)



SECTION A-A

*** Cost of additional concrete between face of untreated timber lagging and face of pile included with "Concrete Structures".

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	473
Stud Shear Connectors	EACH	792
Untreated Timber Lagging	SQ FT	3,463
Geocomposite Wall Drain	SQ YD	418
Pipe Underdrains for Structures, 6"	FOOT	600

SHEET 9 OF 20

TY·LININTERNATIONAL

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
WALL CROSS SECTIONS & DETAILS

S.N. 016-W954 DESIGNED BY: MI, MAF
SCALE: N.T.S. DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	507
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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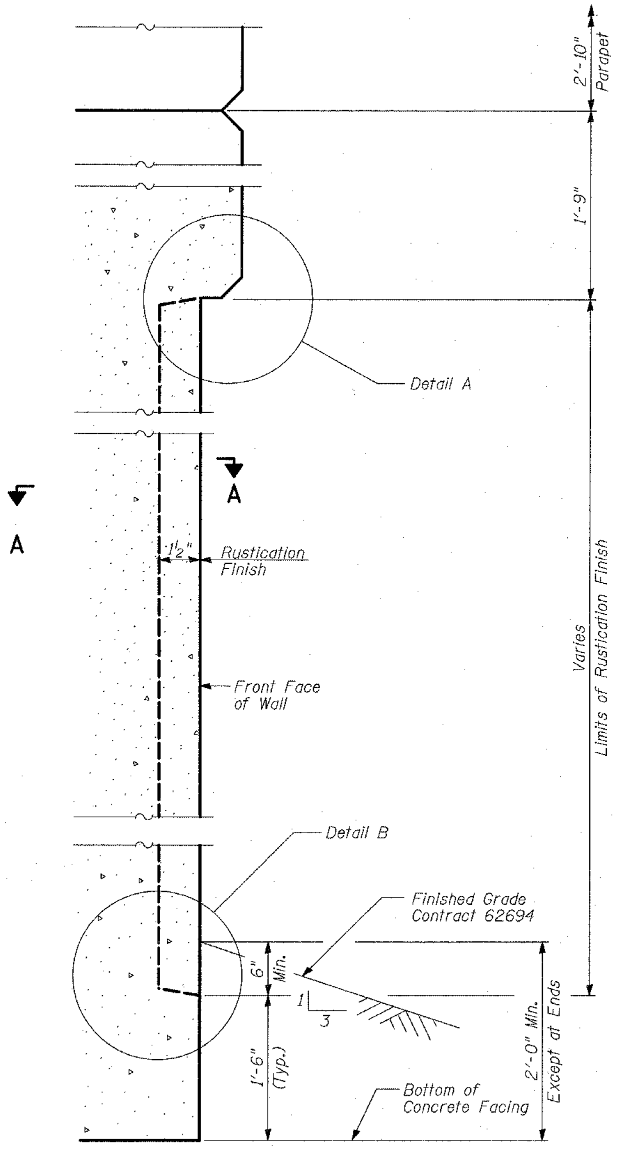
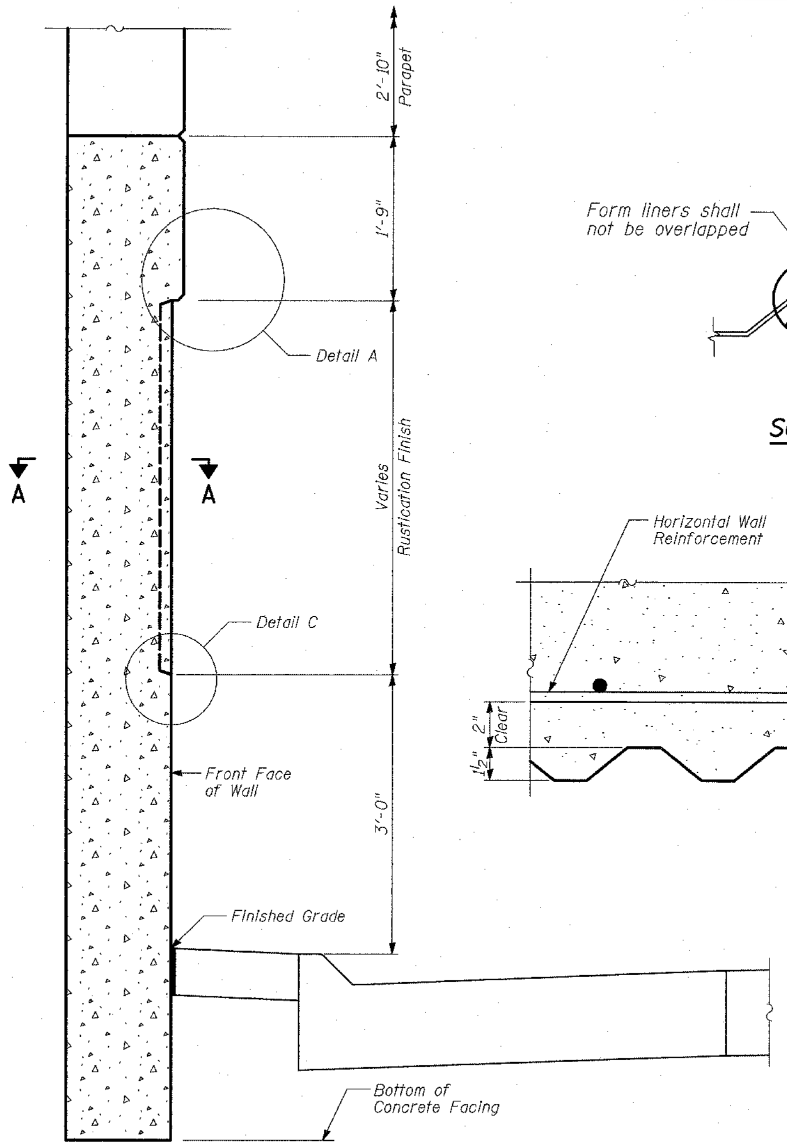
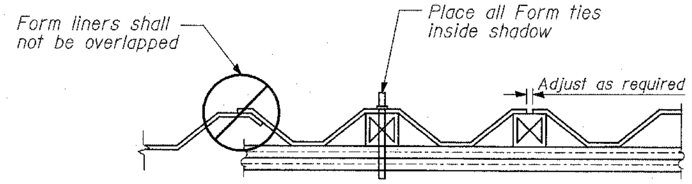


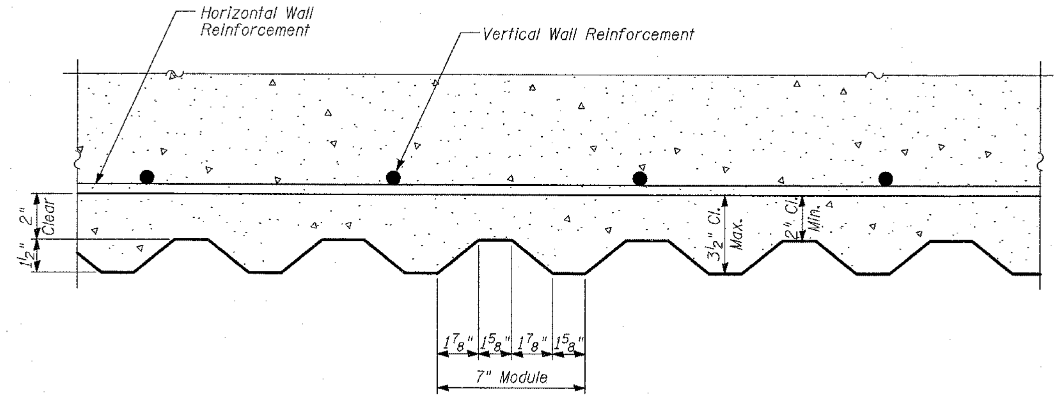
WALL DETAIL
(Wall at Embankment)



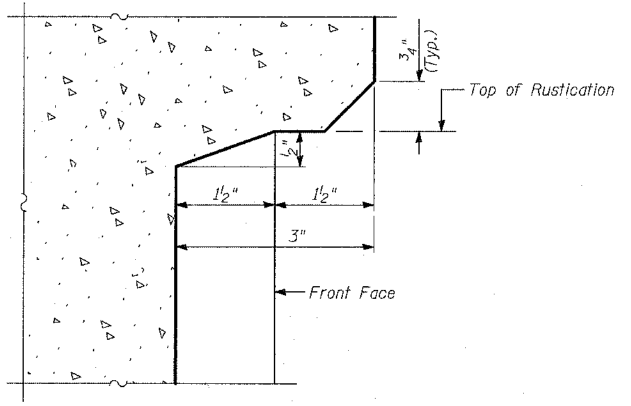
WALL DETAIL
(Wall at Curb)



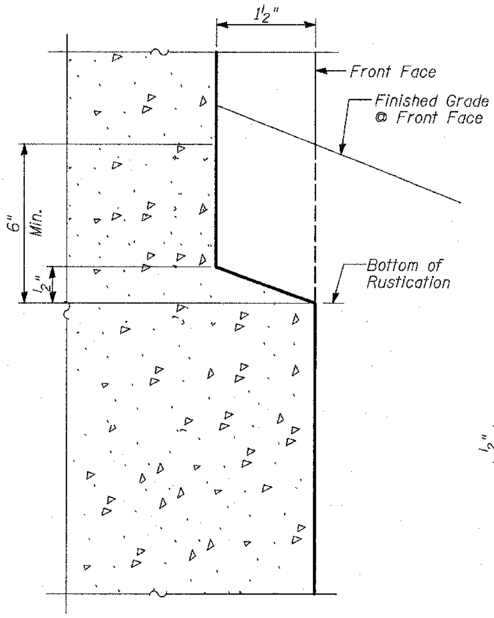
SUGGESTED FORMWORK DETAIL



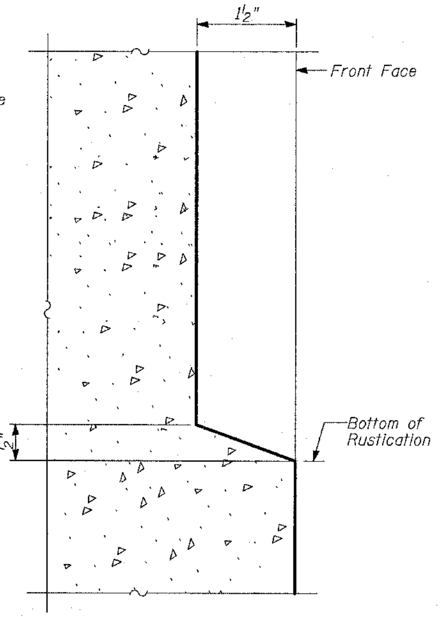
SECTION A-A



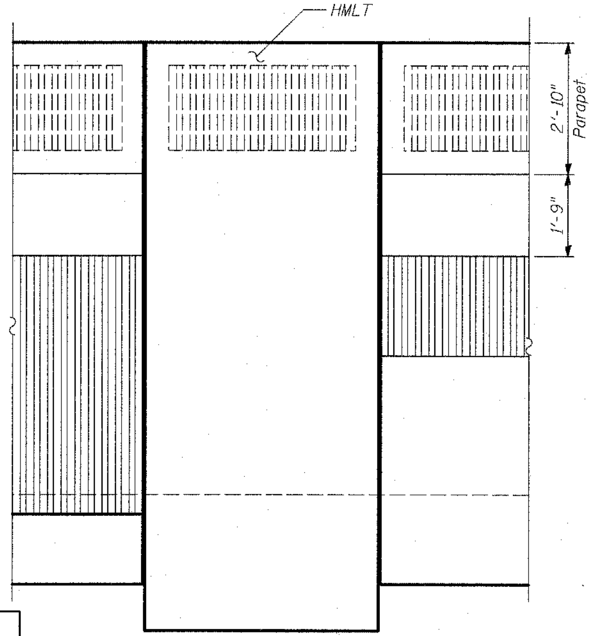
DETAIL A



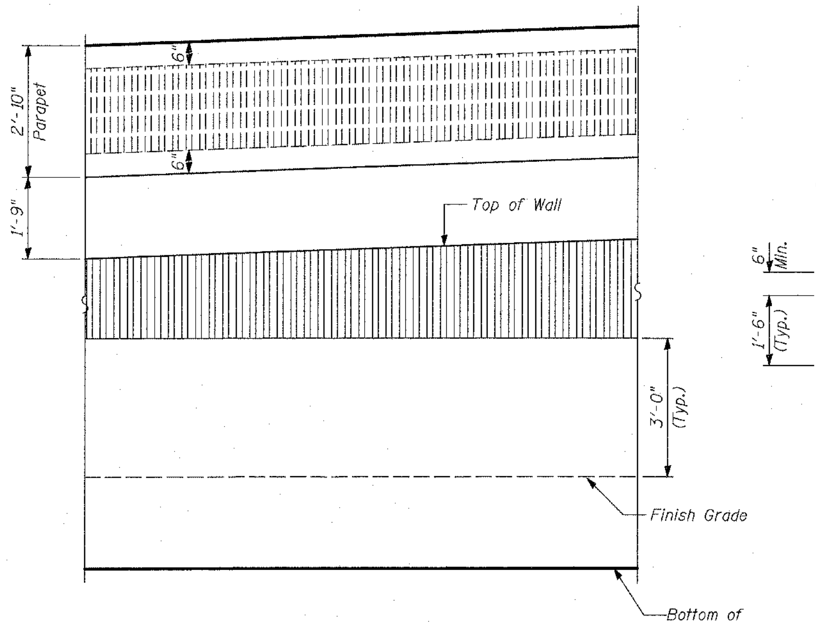
DETAIL B



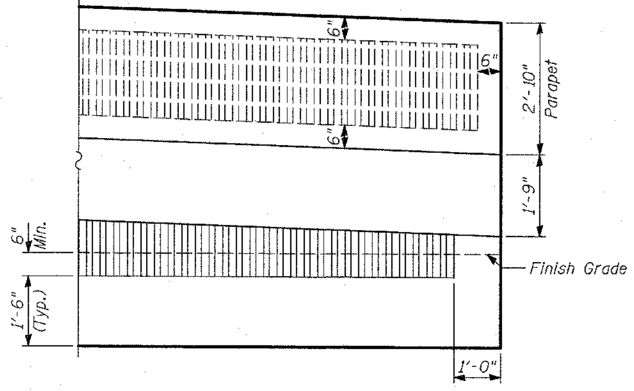
DETAIL C



RUSTICATION DETAIL
(At HMLT Panel with Embankment and Curb)



RUSTICATION DETAIL
(At Interior Panel with Curb)



RUSTICATION DETAIL
(At End Panel with Embankment)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Rustication Finish	SQ FT	2,001

NOTES

1. See Sheet 9 of 20 for expansion and construction joint details.

LEGEND

HMLT - denotes High Mast Light Tower.

SHEET 10 OF 20

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
RUSTICATION DETAILS

S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

T·Y·LIN INTERNATIONAL

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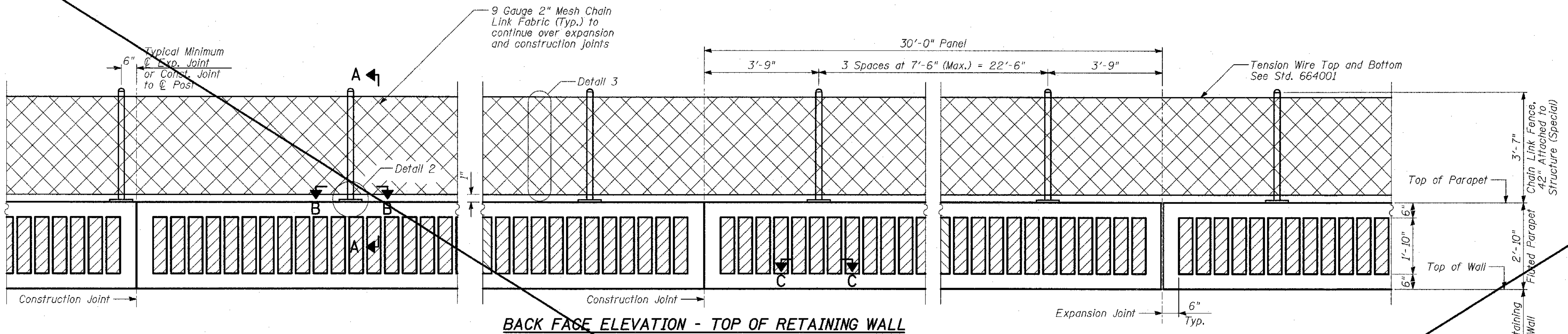
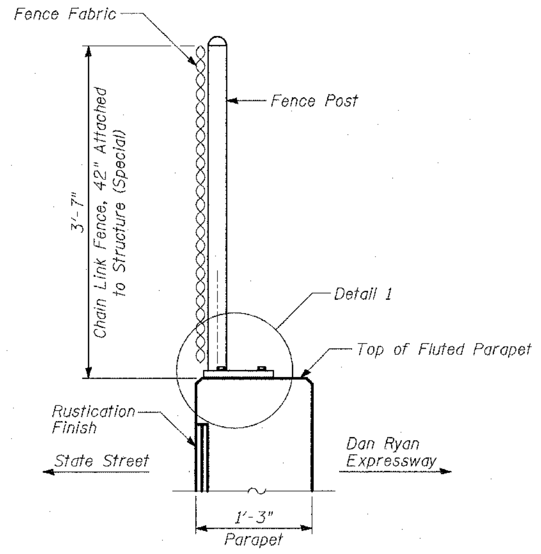
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	508
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

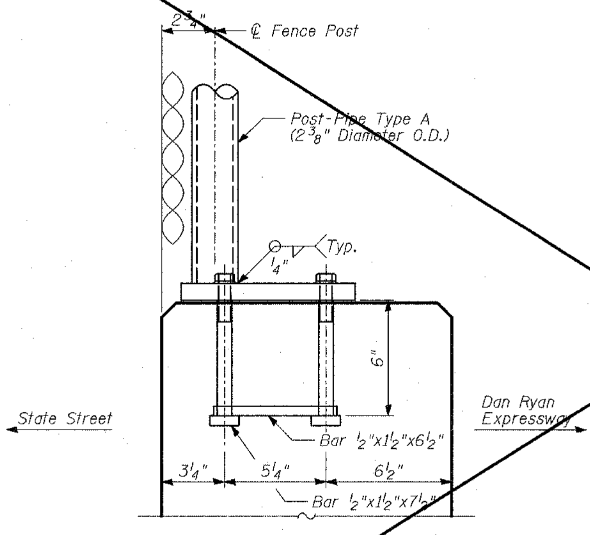
62694



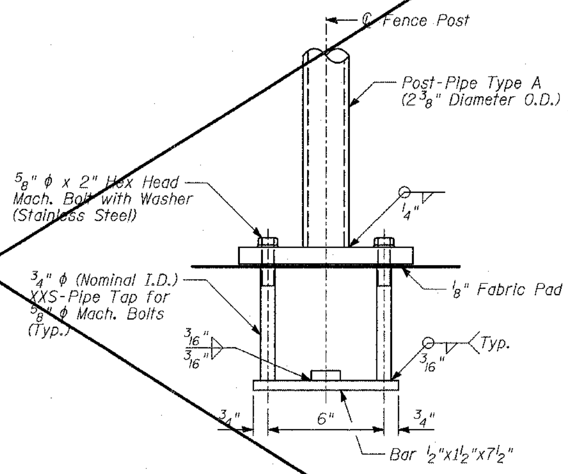
BACK FACE ELEVATION - TOP OF RETAINING WALL FLUTED PARAPET AND CHAIN LINK FENCE



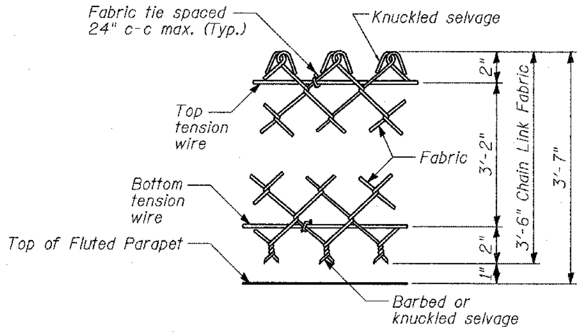
SECTION A-A



DETAIL 1



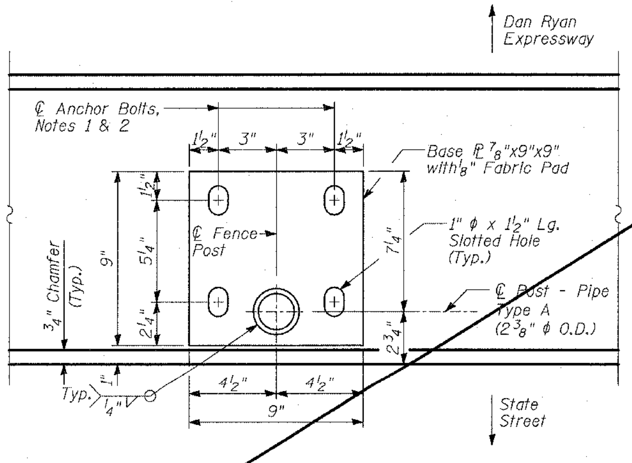
DETAIL 2



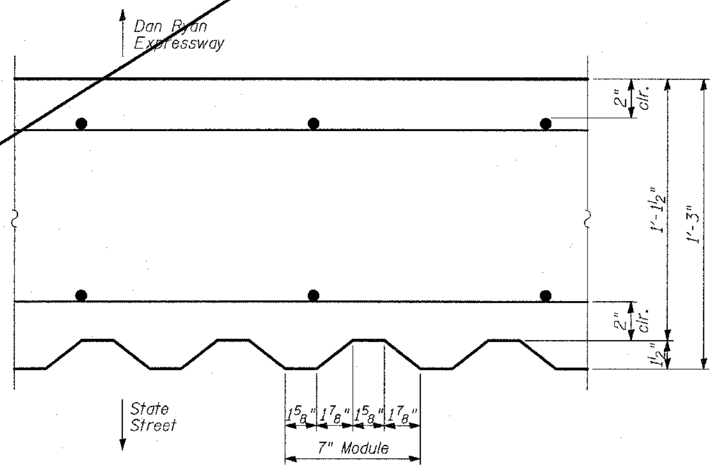
DETAIL 3

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Fence, 42" Attached to Structure (Special)	FOOT	585



SECTION B-B
BASE PLATE PLAN



SECTION C-C

NOTES:

1. In lieu of the cast-in-place anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting $\frac{5}{8}$" diameter anchor rods with $1\frac{1}{4}$" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.

2. For additional chain link details, see Standard 664001.

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SHEET 11 OF 20

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1 - CHAIN LINK FENCE, 42" ATTACHED TO STRUCTURE (SPECIAL)

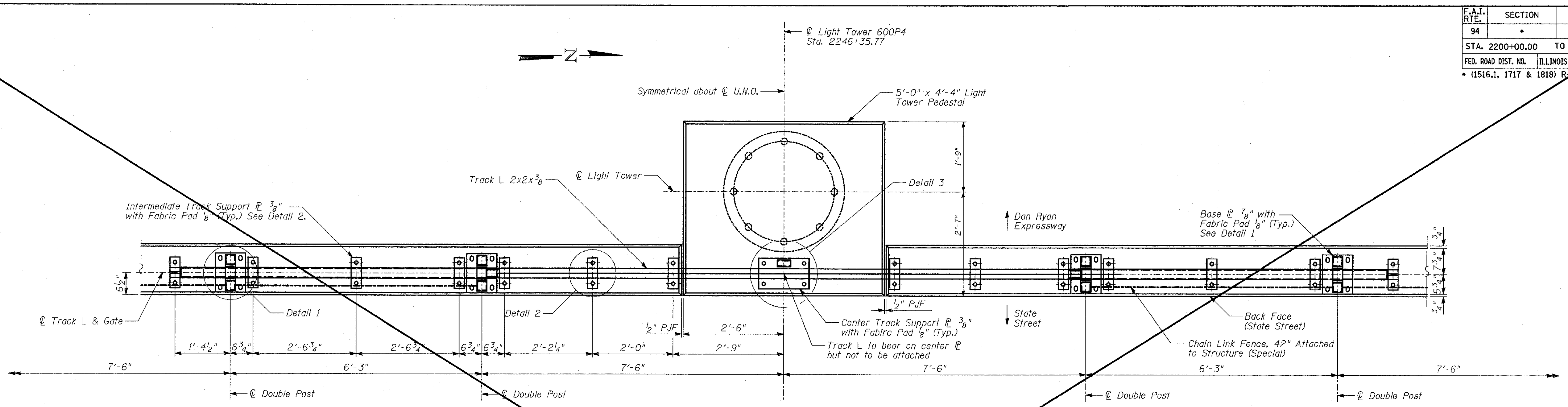
S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

$FILE$
$TIME$
$DATE$

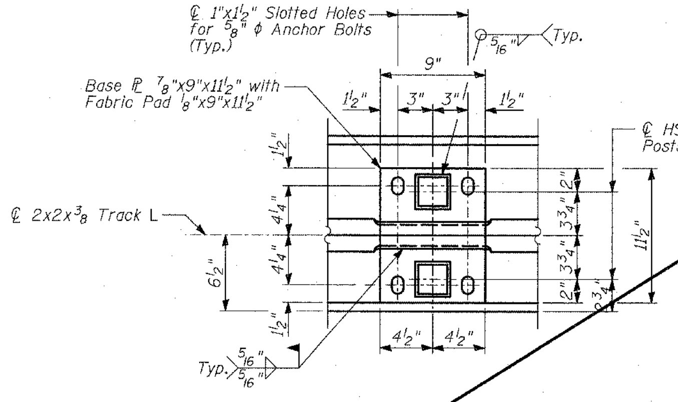
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	509
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

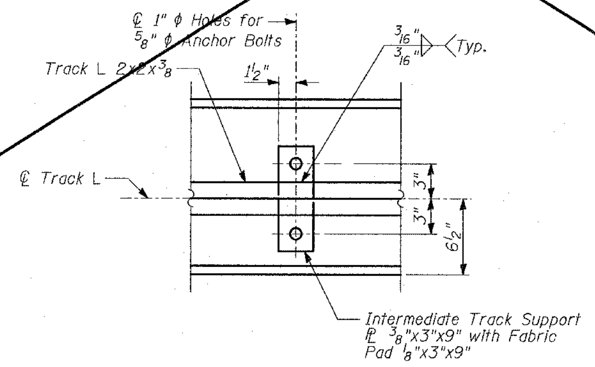
62694



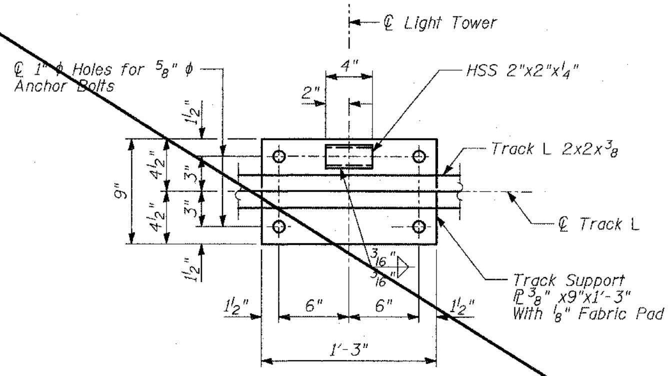
PLAN - GATE IN OPEN POSITION



DETAIL 1 - BASE ℙ PLAN



DETAIL 2



DETAIL 3

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Gate Assembly (Special)	EACH	1

NOTES:

1. All bolts shall be stainless steel conforming to ASTM F593-98 and F594-98.
2. All pipes and bars shall be hot dipped galvanized after fabrication.
3. For Back Face Elevations, see Sheet 13 of 20.
4. For Anchor Bolt Details, see Sheet 14 of 20.

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SHEET 12 OF 20

REVISIONS NAME	DATE
REVISED	04/15/05

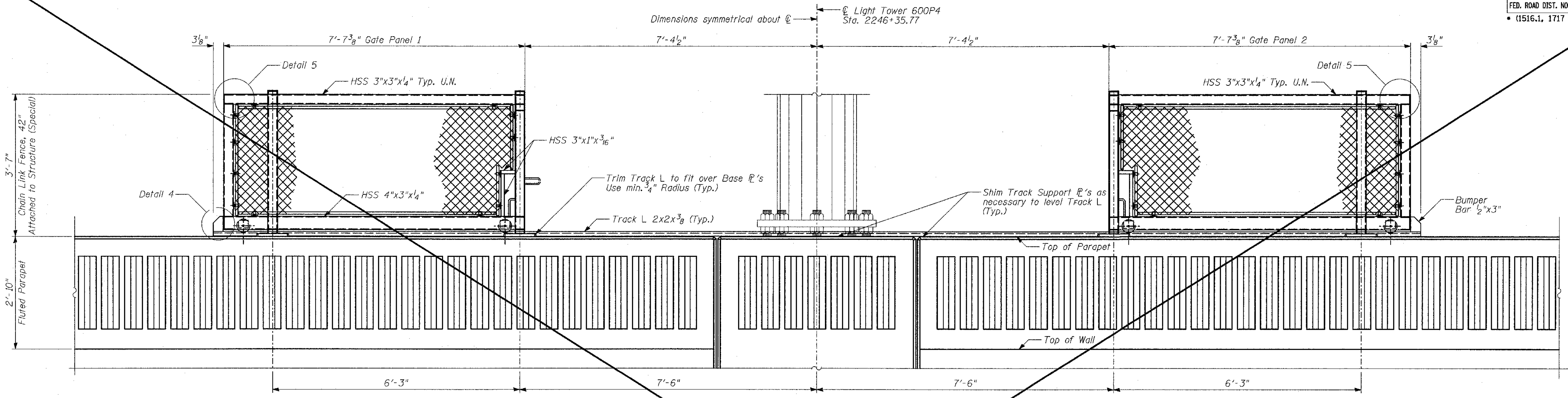
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
GATE PLAN AND NOTES

S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

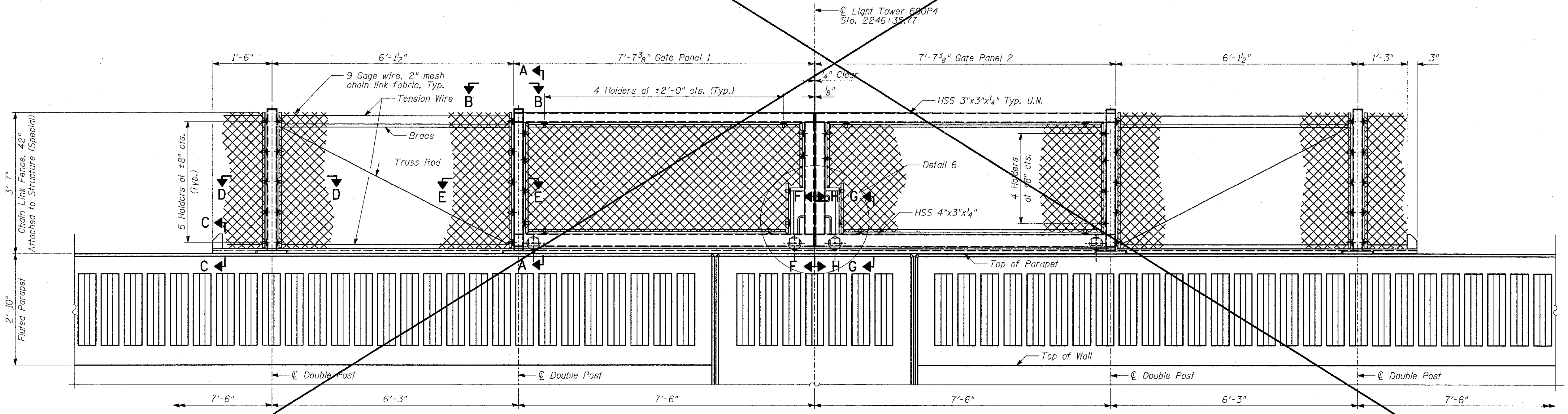
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	510
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



BACK FACE ELEVATION - GATE IN OPEN POSITION



BACK FACE ELEVATION - GATE IN CLOSED POSITION

SHEET 13 OF 20

TYLININTERNATIONAL

NOTES:

1. For notes, see Sheet 12 of 20.
2. For Sections A-A, B-B, D-D & E-E, see Sheet 14 of 20.
3. For Sections C-C, F-F, G-G, H-H, J-J and Details 4, 5, 6 & 7, see Sheet 15 of 20.

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
GATE ELEVATIONS

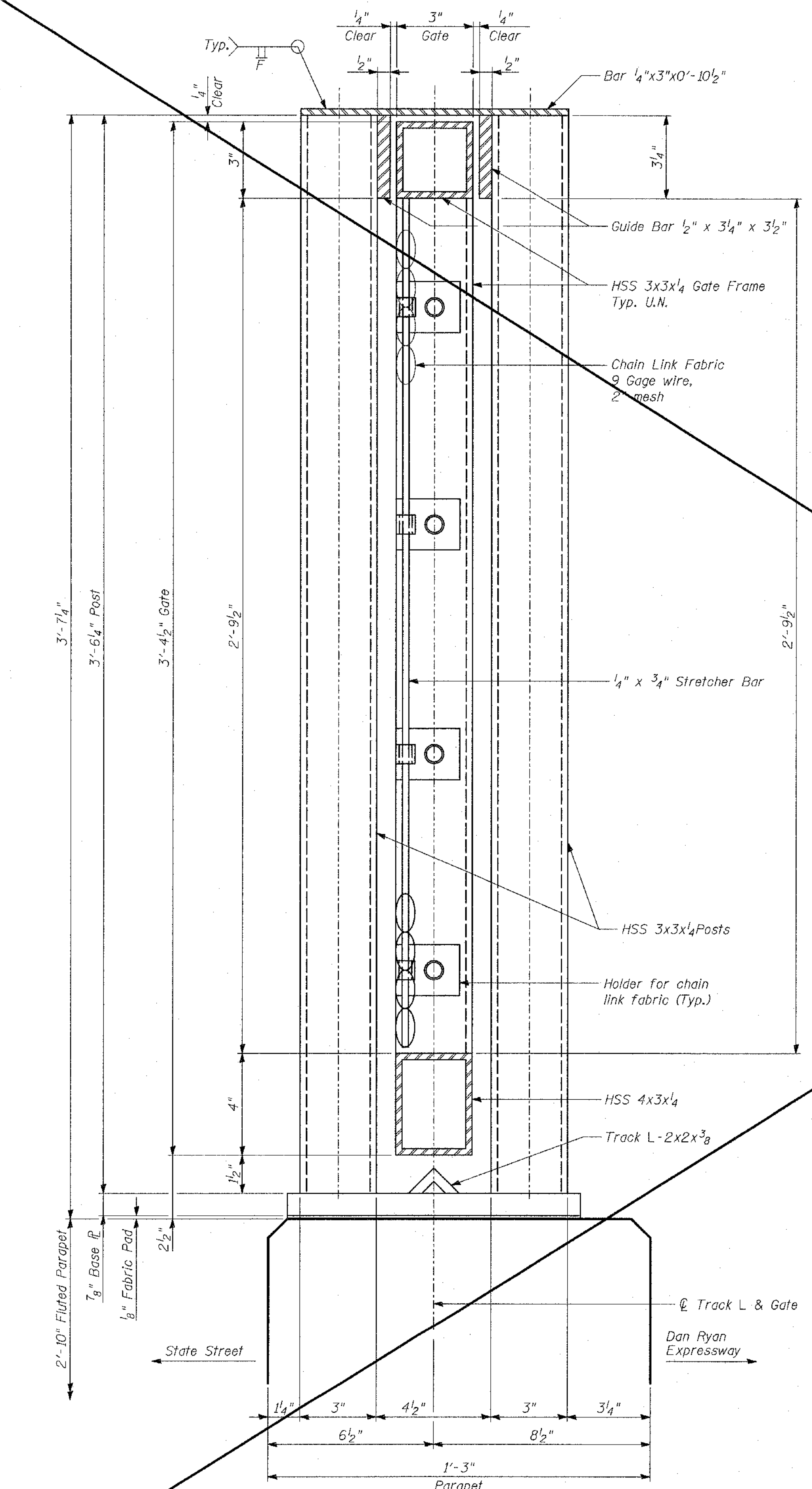
S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MAF

$FILE$ $TIME$ $DATE$

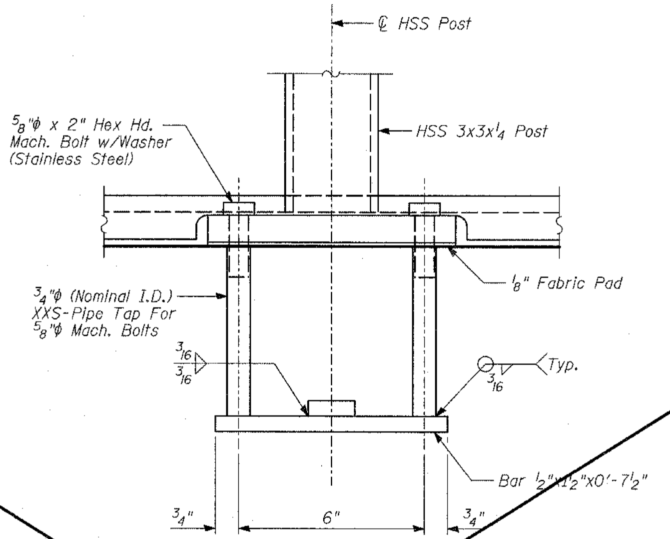
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	511
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

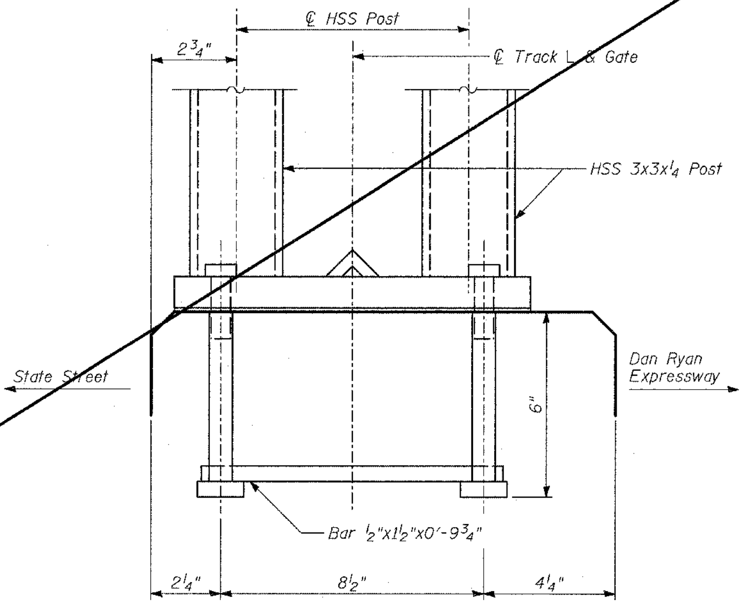
* (1516.1, 1717 & 1818) R-8

62694



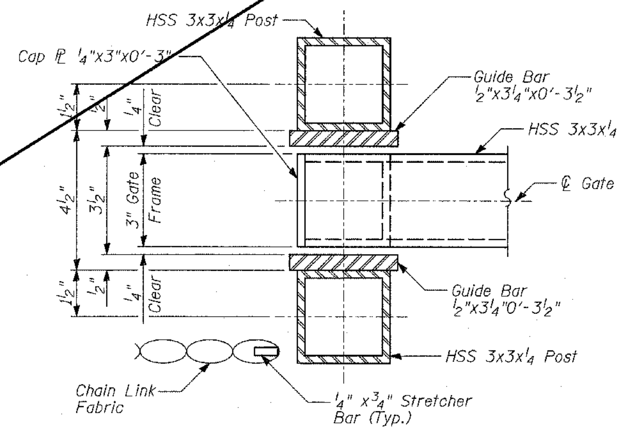
SECTION A-A



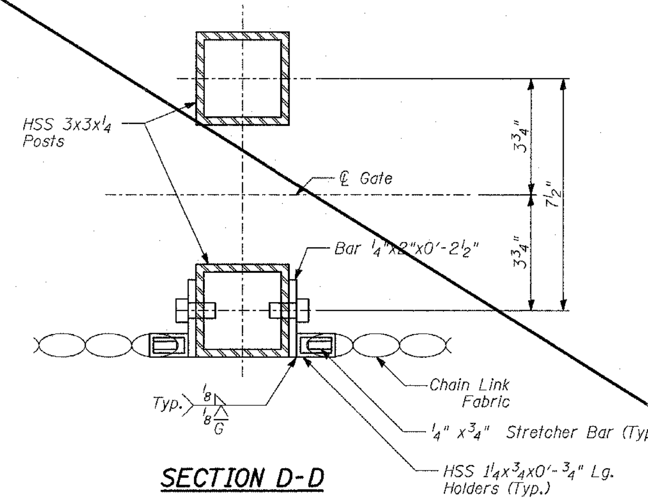


ANCHOR BOLT DETAILS

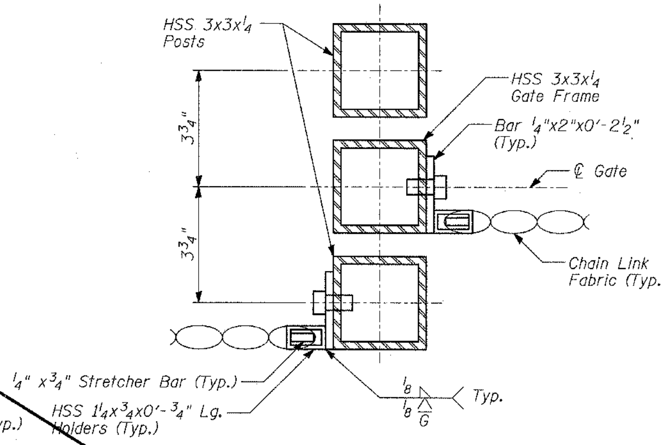
In lieu of the cast-in-place anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting ⅝" diameter anchor rods with 1¼" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.



SECTION B-B



SECTION D-D



SECTION E-E

NOTES:

1. For Notes See Sheet 12 of 20.
2. For Anchor Bolt locations, see Details 1, 2 & 3 on Sheet 12 of 20.

TYLIN INTERNATIONAL

SHEET 14 OF 20

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
GATE SECTIONS

S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

$FILE$
$TIME$
$DATE$

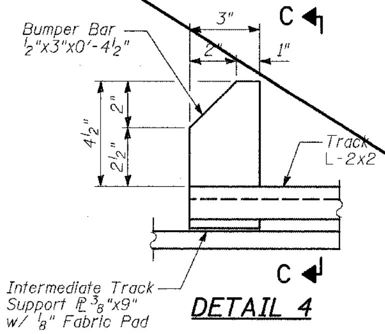
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	512

STA. 2200+00.00 TO STA. 2362+00.00

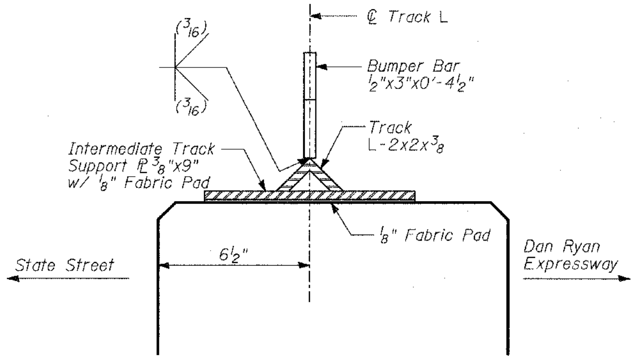
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

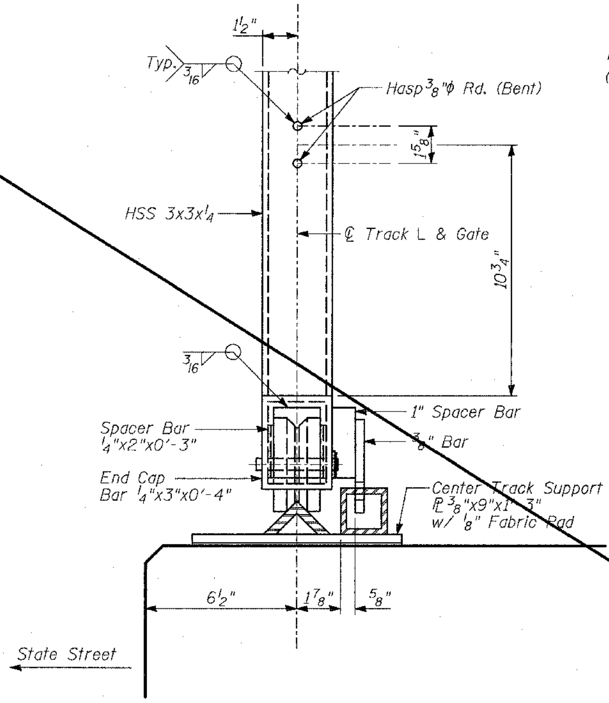
62694



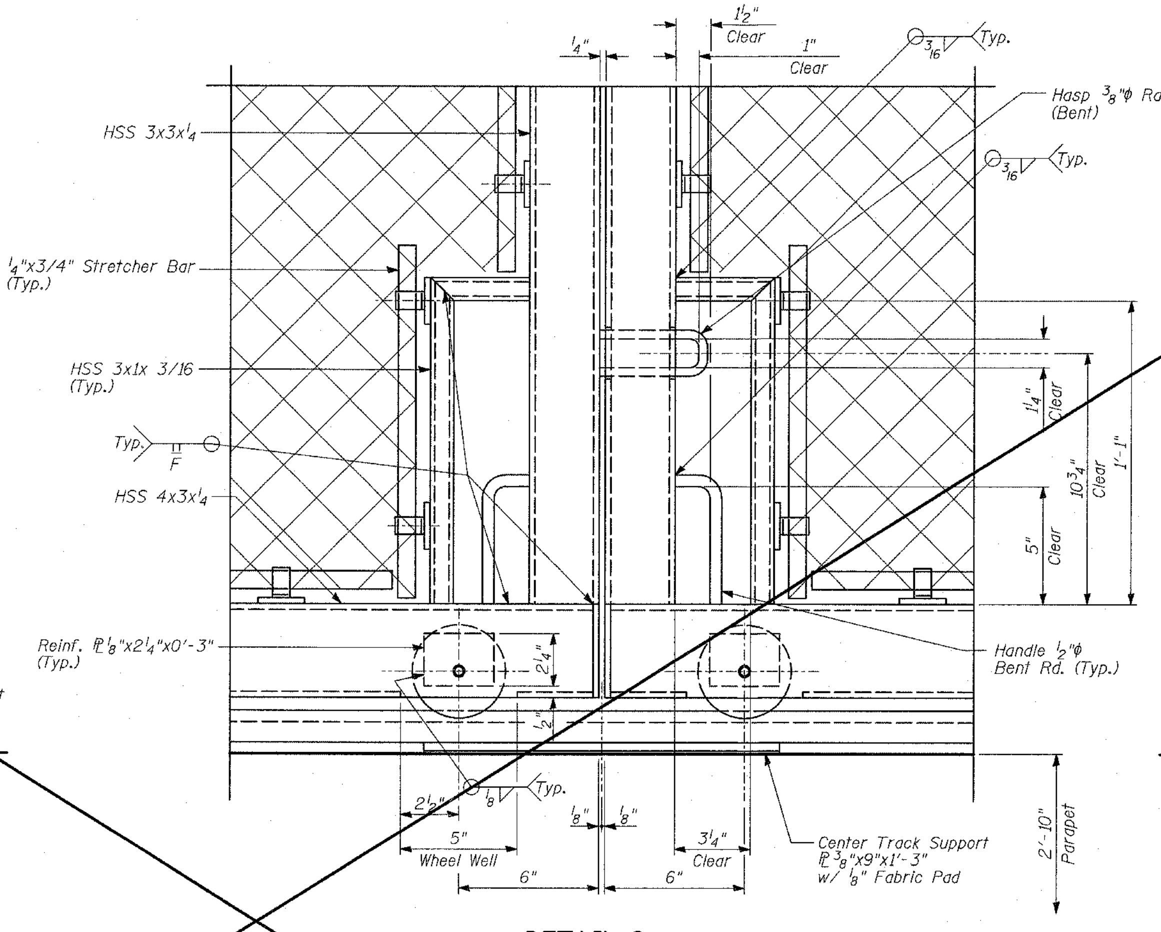
DETAIL 4



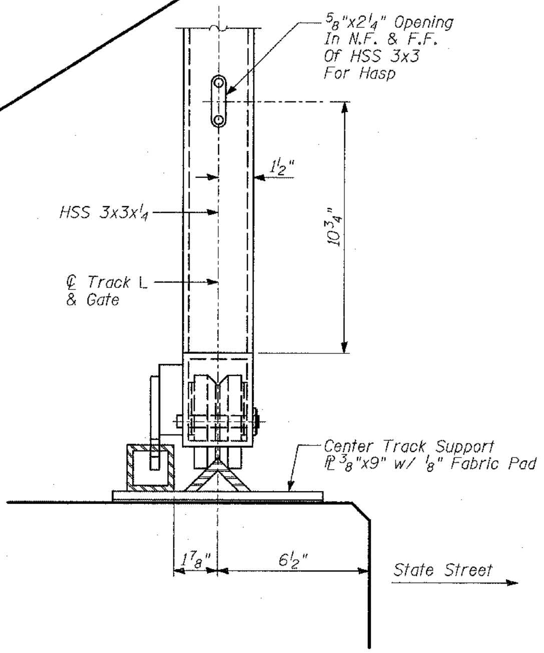
SECTION C-C



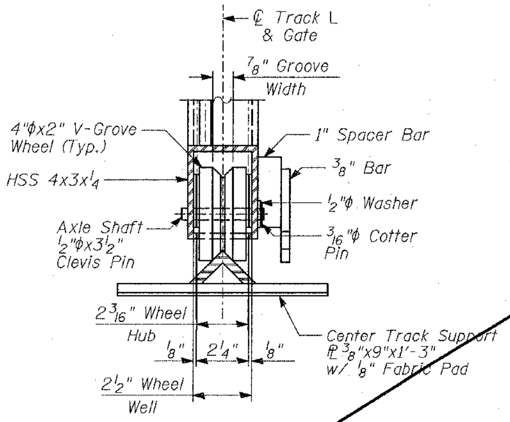
SECTION F-F



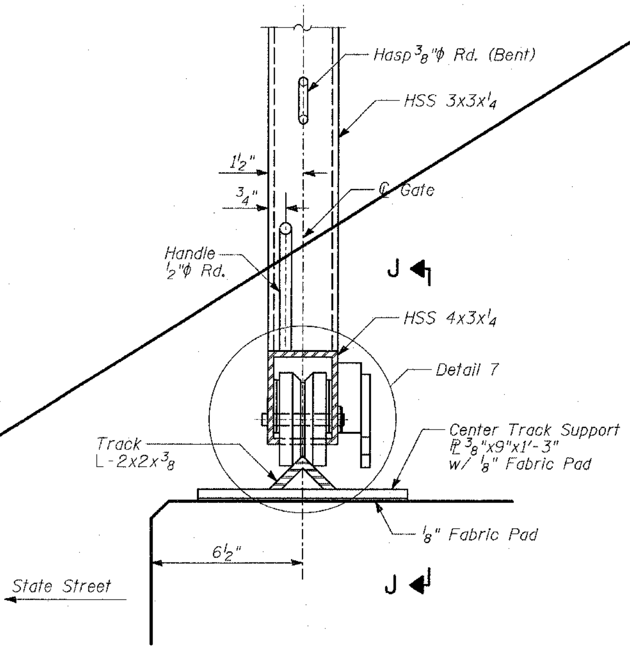
DETAIL 6



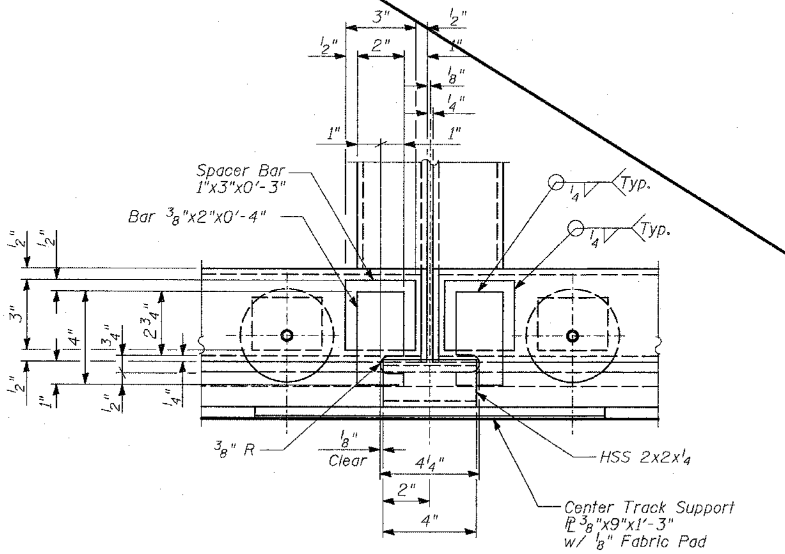
SECTION H-H



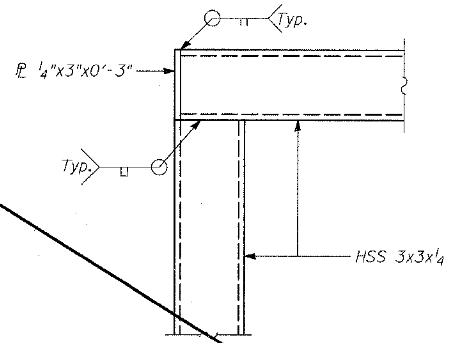
DETAIL 7



SECTION G-G



SECTION J-J



DETAIL 5

SHEET 15 OF 20

NOTES:

1. For notes, see Sheet 12 of 20.
2. For Anchor Bolt locations, see Sheet 12 of 20.
3. For Anchor Bolt details, see Sheet 14 of 20.
4. N.F. - denotes Near Face.
5. F.F. - denotes Far Face.

TYLIN INTERNATIONAL

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
GATE SECTIONS AND DETAILS

S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	513
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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Page 1 of 1

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Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB A1-01

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.40 ft
North: ft
East: ft
Station: 2249+00.82
Offset: 126.91' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
7.4	3-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--					
7.2	3-inch thick CRUSHED STONE --BASE COURSE--		1	5 4 3	NP	17
5.4	Loose, brown Loam --FILL--					
	Stiff, black and brown CLAY --FILL--	5	2	4 2 2	1.50 P	25
3.4	Medium stiff, brown and gray CLAY		3	3 3 3	0.50 P	21
		10	4	3 3 5	0.90 B	20
-3.1	Stiff, gray CLAY		5	3 4 5	1.89 B	19
-5.6	Hard, gray SILTY CLAY	15	6	4 11 11	> 4.50 P	18
			7	5 12 12	6.15 S	11
		20	8	7 12 15	8.77 S	11
			9	7 11 13	7.63 B	11
		25	10	7 13 15	8.12 S	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	9 16 20	4.35 S	12
		30	12	20 27 31	12.38 S	10
-25.1	--AUGER REFUSAL-- Boring terminated at 33.50 ft		13	50/0		
		35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 04-13-2004 Complete Drilling 04-13-2004
Drilling Contractor Patrick Drill Rig CME 75 TMR
Driller J&L Logger S. Janowski Checked by MLS
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ∇ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

Page 1 of 1

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BORING LOG SB A1-02

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.40 ft
North: ft
East: ft
Station: 2248+25.82
Offset: 126.91' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
7.4	3-inch thick ASPHALT over 8-inch thick CONCRETE --PAVEMENT--					
7.2	3-inch thick CRUSHED STONE --BASE COURSE--		1	3 8 6	NP	
	Loose, brown LOAM --FILL--		2	4 3 3	NP	18
3.9	Very soft, brown and gray CLAY with Trace Organics	5	3	2 2 3	0.16 B	26
0.4	Medium stiff to stiff, gray CLAY	10	4	2 4 4	0.98 B	22
			5	2 4 5	1.72 B	19
-5.6	Hard, gray SILTY CLAY	15	6	2 10 13	5.17 B	17
-7.1	Medium dense, gray SILT		7	8 12 17	NP	19
-8.6	Hard, gray SILTY CLAY	∇				
		20	8	6 12 11	7.46 S	13
			9	8 16 20	5.99 B	11
		25	10	10 14 18	6.15 S	11

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	10 13 14	6.81 B	10
		30	12	14 20 35	9.43 S	10
-25.4	--AUGER REFUSAL-- Boring terminated at 33.75 ft		13	50/3		
		35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 04-13-2004 Complete Drilling 04-13-2004
Drilling Contractor Patrick Drill Rig CME 75 TMR
Driller J&L Logger S. Janowski Checked by MLS
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 17.75 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ∇ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

TY·LIN INTERNATIONAL

SHEET 16 OF 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
BORING LOGS SB A1-01 & SB A1-02

S.N. 016-W954 DESIGNED BY: DJR
SCALE: N.T.S. DRAWN BY: DJR
DATE: MARCH 18, 2005 CHECKED BY: TD

03/25/2005 11:08:44 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	514

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

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Page 1 of 1

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BORING LOG SB A1-03

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.41 ft
North: 1846078.78 ft
East: 1177837.88 ft
Station: 2247+09
Offset: 133.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--					
7.5	Loose to medium dense, brown GRAVELLY SAND --FILL--		1	12 6 5	NP	7
		5	2	8 2 2	NP	11
2.9	Medium stiff to very stiff, gray CLAY		3	1 1 1	0.75 P	25
		10	4	1 2 3	2.13 B	21
			5	2 5 6	3.44 B	23
-4.6	Medium dense, gray SILT	15	6	10 14 6	NP	19
-7.1	Very stiff to hard, gray SILTY CLAY		7	4 7 12	3.69 B	11
		20	8	5 8 12	> 4.50 P	10
			9	6 13 20	6.97 B	12
		25	10	12 15 19	6.97 S	12
			11	10 16 19	7.13 S	12
		30	12	22 35 59	8.28 S	10
-24.1	--AUGER REFUSAL Boring terminated at 32.50 ft		13	50/0		
		35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 03-09-2004 Complete Drilling 04-13-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ --
At Completion of Drilling ▼ --
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

Page 1 of 1

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BORING LOG SB A1-04

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.43 ft
North: 1846007.20 ft
East: 1177838.16 ft
Station: 2246+38
Offset: 132.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 8-inch thick CONCRETE --PAVEMENT--					
7.6	8-inch thick CRUSHED STONE --BASE COURSE--					
6.9	Stiff, brown and gray CLAY		1	4 4 3	NP	11
		5	2	2 2 4	1.04 B	25
			3	1 2 3	1.72 B	22
		10	4	1 2 4	1.31 B	19
-3.1	Medium dense, gray SILT		5	4 10 16	NP	19
		15	6	6 10 16	NP	19
-7.6	Hard, gray SILTY CLAY with Gravel		7	8 13 16	7.05 B	11
		20	8	7 10 15	7.79 B	11
			9	7 14 18	5.66 S	12
		25	10	10 17 21	6.64 S	11
			11	11 16 19	7.71 S	11
		30	12	20 45 50/3	> 4.50 P	10
-24.6	Very dense, gray SANDY GRAVEL		13	50/5	NP	8
-27.1	--AUGER REFUSAL-- Boring terminated at 35.50 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 03-09-2004 Complete Drilling 04-13-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ --
At Completion of Drilling ▼ --
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

TYLIN INTERNATIONAL

SHEET 17 OF 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
BORING LOGS SB A1-03 & SB A1-04

S.N. 016-W954
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

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03/25/2005 11:08:45 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	515
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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Page 1 of 1

BORING LOG SB A1-05

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.51 ft
North: 1845928.86 ft
East: 1177841.38 ft
Station: 2245+60
Offset: 133.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--					
7.7	Very stiff, black, brown, and gray CLAY --FILL--		1	11 3 3	3.50 P	27
		5	2	4 2 2	2.75 P	25
3.0	Stiff, brown and gray CLAY		3	3 1 2	1.48 B	21
		10	4	2 2 2	1.15 B	21
-2.7	Medium dense, gray SILT		5	1 4 9	NP	12
-4.5	Medium dense, gray medium SAND	15 ▼	6	2 7 10	NP	13
-8.3	Medium dense, gray SILT	∇	7	5 10 11	NP	14
		20	8	9 14 15	NP	17
-12.0	Very stiff to hard, gray gravelly SILTY CLAY		9	6 8 12	4.59 B	14
		25	10	9 14 15	> 4.50 P	11

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	8 11 16	6.89 B	14
		30	12	12 28 50	2.30 S	13
			13	34 50/5	2.00 P	17
-26.5	--AUGER REFUSAL-- Boring terminated at 35.00 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 03-09-2004 Complete Drilling 03-09-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 16.75 ft
At Completion of Drilling ▼ 15.00 ft
Time After Drilling NA
Depth to Water ∇ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

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Page 1 of 1

BORING LOG SB A1-06

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.32 ft
North: 1845855.16 ft
East: 1177843.97 ft
Station: 2244+86
Offset: 133.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 10-inch thick CONCRETE --PAVEMENT--					
7.3 7.1	Medium dense, brown medium SAND --FILL--		1	21 8 5	1.75 P	17
	Stiff, brown and gray gravelly CLAY --FILL--	5	2	3 2 1	1.25 P	26
2.8	Soft, brown and gray CLAY		3	0 0 0	0.33 B	24
0.3	Stiff to very stiff, gray CLAY to SILTY CLAY	10	4	2 3 4	1.48 B	20
			5	1 2 4	3.28 B	18
		15	6	3 6 8	3.36 B	18
-7.9	Loose to medium dense, gray SILTY LOAM		7	4 7 7	NP	23
		∇ 20	8	3 4 5	NP	19
-12.2	BEDROCK		9	50/1		
-12.8	--AUGER REFUSAL-- Boring terminated at 21.10 ft					
		25				

GENERAL NOTES

Begin Drilling 03-09-2004 Complete Drilling 03-09-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 19.25 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ∇ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

TYLIN INTERNATIONAL

SHEET 18 OF 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
BORING LOGS SB A1-05 & SB A1-06

S.N. 016-W954 DESIGNED BY: DJR
SCALE: N.T.S. DRAWN BY: DJR
DATE: MARCH 18, 2005 CHECKED BY: TD

03/25/2005 11:08:45 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	516
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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BORING LOG SB A1-07

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.43 ft
North: 1845779.57 ft
East: 1177846.00 ft
Station: 2244+10
Offset: 133.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
7.5	2-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--					
	Medium stiff to very stiff, black, brown, and gray CLAY to CLAY LOAM --FILL--		1	7 6 4	3.75 P	12
2.9		5	2	4 2 3	0.66 B	37
	Stiff to very stiff, gray CLAY		3	2 2 3	1.64 B	23
		10	4	1 4 3	1.31 B	20
			5	2 4 6	3.12 B	19
-7.1		15	6	3 5 9	3.53 B	20
-10.3	Medium dense, gray gravelly SILT		7	5 9 12	NP	19
	Very stiff to hard, gray gravelly SILTY CLAY	20	8	4 6 7	2.95 B	12
			9	4 9 11	3.44 B	11
		25	10	5 10 12	2.95 B	11

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-19.6			11	7 13 16	5.58 B	10
-21.6	Very dense, gray gravelly SILTY LOAM	30	12	14 30 44	NP	9
	Boring terminated at 30.00 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 03-09-2004 Complete Drilling 03-09-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB A1-08

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.70 ft
North: 1845706.97 ft
East: 1177841.46 ft
Station: 2243+38
Offset: 126.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
8.0	9-inch thick, brown SILTY LOAM --TOPSOIL--					
5.7	Dense, gray GRAVELLY SAND --FILL--		1	3 10 23	NP	9
3.2	Stiff, brown and gray CLAY --FILL--	5	2	1 2 4	1.00 P	24
	Stiff to very stiff, gray CLAY		3	2 3 3	1.72 B	23
		10	4	1 2 3	1.31 B	20
			5	2 3 5	2.21 B	18
-6.8		15	6	2 4 9	3.85 B	13
	Medium dense, gray SILTY LOAM		7	5 9 14	NP	16
-11.8		20	8	4 6 10	NP	12
	Hard, gray gravelly SILTY CLAY		9	5 7 11	4.84 B	11
		25	10	6 11 15	5.33 B	14

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-16.8	Dense to very dense, gray SILTY LOAM		11	8 16 21	NP	11
-21.3		30	12	27 50/3	NP	8
	--AUGER REFUSAL-- Boring terminated at 30.00 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 03-09-2004 Complete Drilling 03-09-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/22/04

TY·LIN INTERNATIONAL

SHEET 19 OF 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP AT AIS #1
AIS 1
BORING LOGS SB A1-07 & SB A1-08

S.N. 016-W954 DESIGNED BY: DJR
SCALE: N.T.S. DRAWN BY: DJR
DATE: MARCH 18, 2005 CHECKED BY: TD

03/25/2005 11:08:46 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	517
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB A1-09

WEI Job No.: 414-07-01

Page 1 of 1

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.49 ft
North: 1845631.65 ft
East: 1177844.90 ft
Station: 2242+62
Offset: 128.0' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		18-inch thick brown SILTY LOAM --TOPSOIL--						
	7.0	Stiff, brown and gray CLAY to SILTY CLAY --FILL--			1	1 2 2	1.25 P	17
			5		2	1 2 4	1.07 B	31
	3.0	Medium stiff, brown and gray CLAY			3	1 2 4	0.74 B	23
			10		4	0 2 4	0.98 B	24
					5	1 2 5	0.98 B	19
	-4.5	Hard, gray CLAY			6	2 5 14	NP	17
	-6.0	Medium dense to dense, gray SILTY LOAM	15		7	5 12 20	NP	17
			20		8	6 8 10	NP	12
	-11.7	Medium dense, gray SAND	▽					
	-12.1	Medium dense to very dense, gray SILTY LOAM			9	5 9 13	NP	15
			25		10	6 12 13	NP	12

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
					11	8 18 27	NP	10
			30		12	33 42 50/3	NP	8
			35		13	48 50/3	NP	3
	-27.5	Gray, finely crystalline, medium bedded, moderately weathered, strong DOLOSTONE --BEDROCK-- RUN 1: 36'-37' REC=50%			14	C O R		
	-28.5	Boring terminated at 37.00 ft	40					
			45					
			50					

GENERAL NOTES

Begin Drilling 03-09-2004 Complete Drilling 03-09-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ 20.50 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 10/5/04

TYLIN INTERNATIONAL

SHEET 20 OF 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST. EXIT RAMP AT AIS #1
AIS 1
BORING LOG SB A1-09

S.N. 016-W954 DESIGNED BY: DJR
SCALE: N.T.S. DRAWN BY: DJR
DATE: MARCH 18, 2005 CHECKED BY: TD

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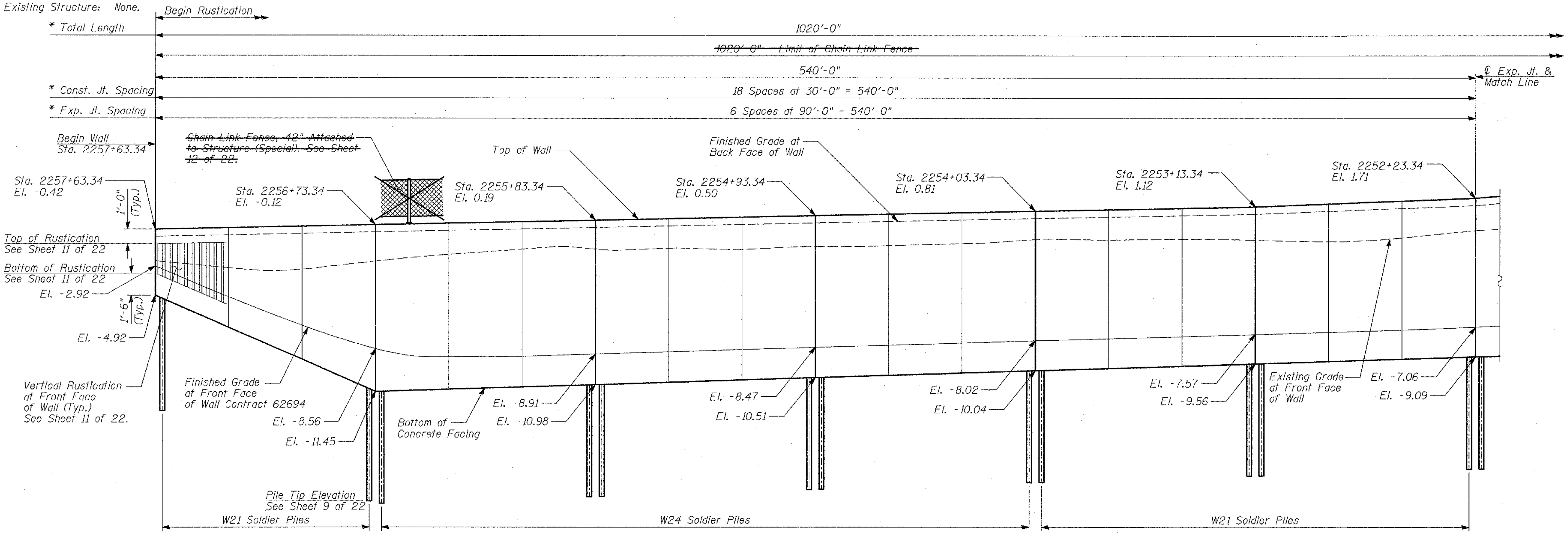
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	518
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

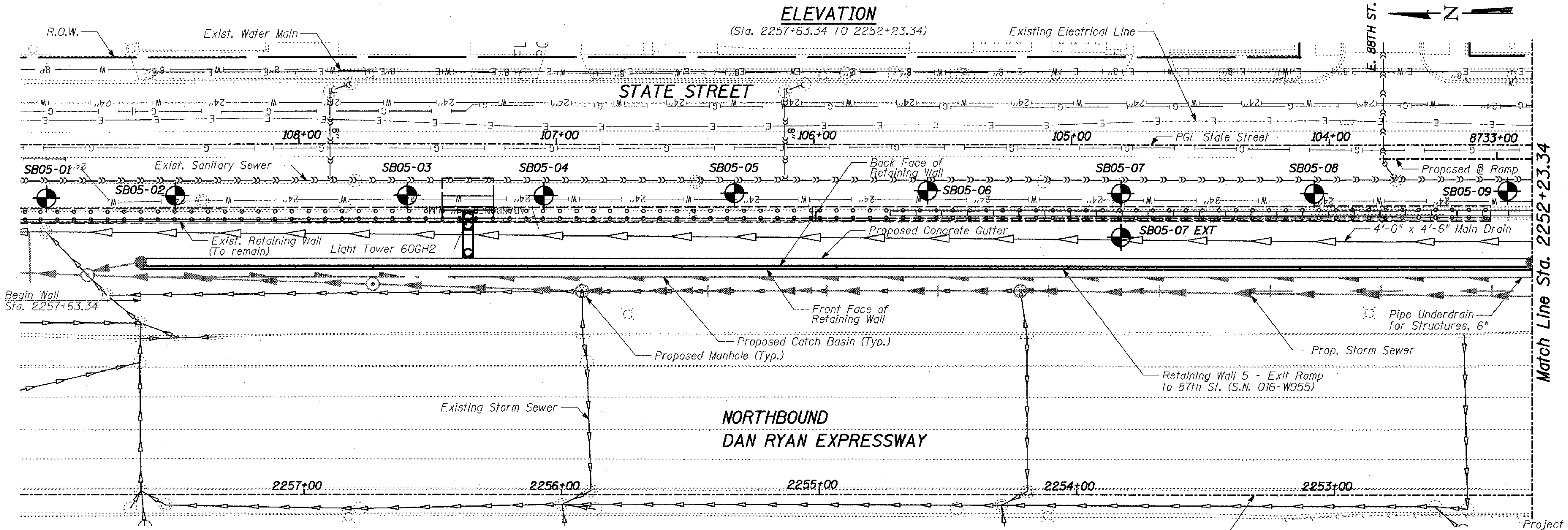
Benchmarks: BM 3553 Set "+" northwest bolt of traffic signal/light base at northeast intersection of 87th St. and State St. El. 8.47

Existing Structure: None.



ELEVATION

(Sta. 2257+63.34 TO 2252+23.34)



PLAN

(Sta. 2257+63.34 TO 2252+23.34)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	966
Concrete Structures	CU YD	429
Protective Coat	SQ YD	1,125
Rustication Finish	SQ FT	7,737
Stud Shear Connectors	EACH	1,738
Untreated Timber Lagging	SQ FT	8,253
Furnishing Soldier Piles (HP Section)	FOOT	444
Furnishing Soldier Piles (W Section)	FOOT	4,275
Reinforcement Bars, Epoxy Coated	POUND	39,030
Geocomposite Wall Drain	SQ YD	974
Pipe Underdrains for Structures, 6"	FOOT	1,020
Drilling and Setting Soldier Piles (in Soil)	CU FT	27,959
~~Chain Link Fence, 42" Attached to Structure (Special)~~	~~FOOT~~	~~1,020~~

DESIGN SPECIFICATION

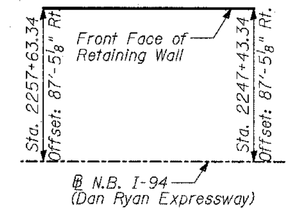
AASHTO 2002 Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36) Soldier Piles

INDEX OF SHEETS



OFFSET SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PHILLIP D. FREY 081-004826

Signed Phillip D. Frey
Phillip D. Frey, S.E. Il. Lic. No. 081-004826 Expires 11-30-2006.
Date 3/18/05

For drawings 1 thru 22 of 22

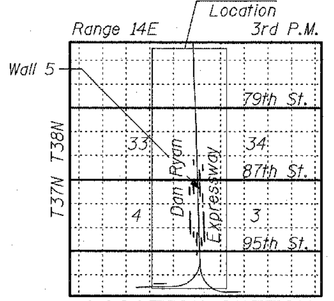
LEGEND

⯐ Boring Location

* Measured along Front Face of Wall.

GENERAL NOTES:

1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
3. The soldier piles shall be cleaned and given one shop coat of Inorganic Zinc-Rich primer.
4. All exposed concrete edges shall be chamfered $^3_4$" except as noted.
5. Protective coat shall be applied to exposed surfaces of the concrete facing.
6. Existing utilities in conflict with soldier pile wall construction shall be abandoned or relocated according to directions given on the roadway plans.
7. All construction joints shall be bonded.
8. All elevations shown are based on the Chicago City Datum of 0.00, which is 579.19 feet above mean tide New York. (NAVD 88)
9. The wall shall be backfilled (where applicable) prior to placing the concrete facing.
10. The Contractor is responsible to coordinate all electrical crossings with this Contract and with Contract 62583.



LOCATION SKETCH

TY·LIN INTERNATIONAL

SHEET 1 OF 22

REVISIONS	
NAME	DATE
REVISED	04/15/05

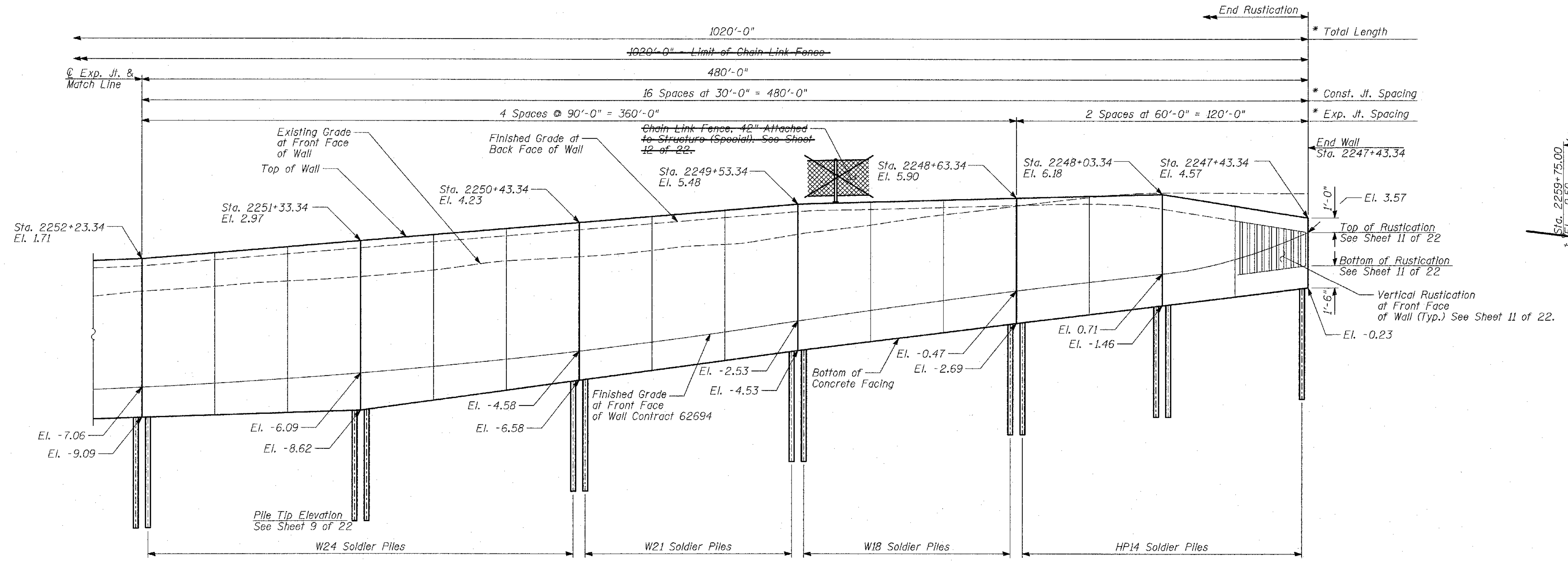
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - GENERAL PLAN
STA. 2257+63.34 TO STA. 2247+43.34

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	519
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

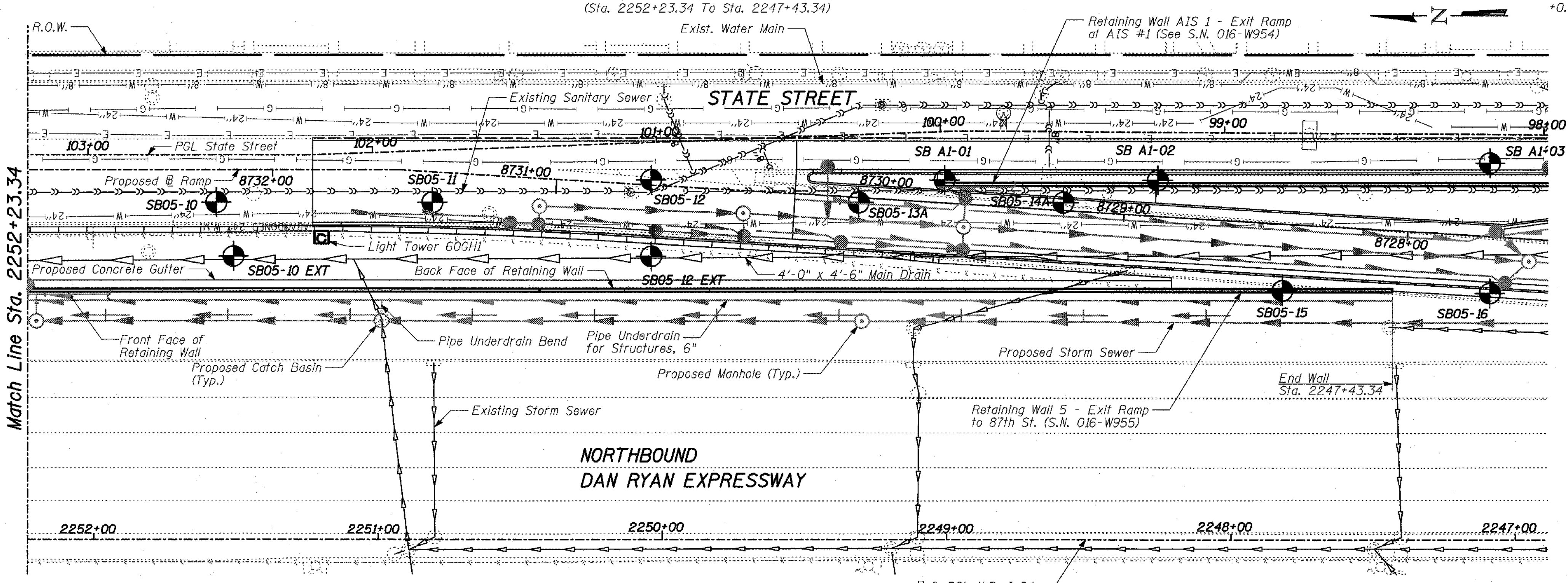
* (1516.1, 1717 & 1818) R-8

62694



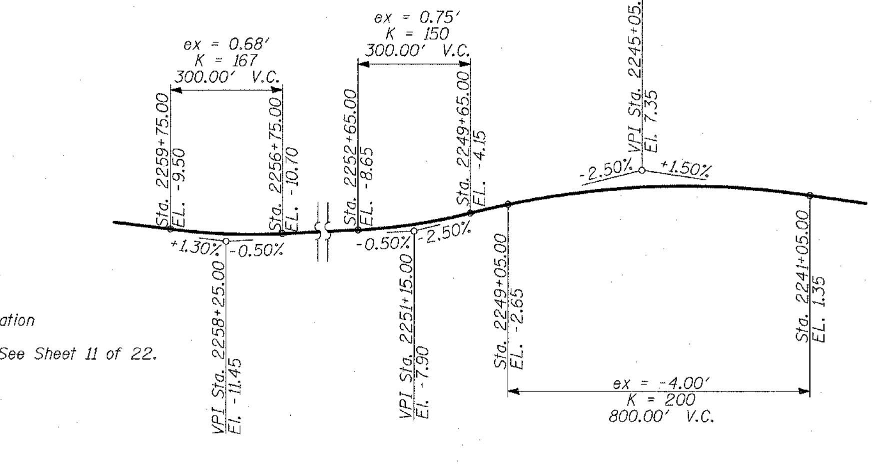
ELEVATION

(Sta. 2252+23.34 To Sta. 2247+43.34)



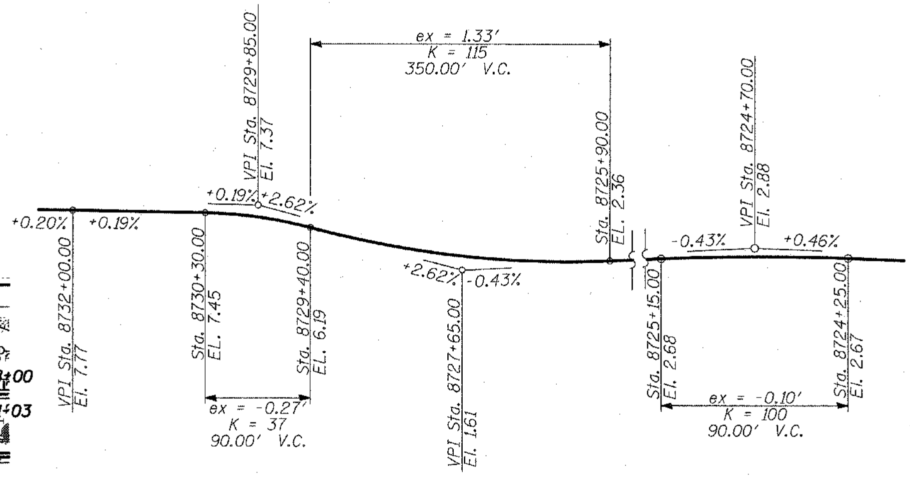
PLAN

(Sta. 2252+23.34 To Sta. 2247+43.34)



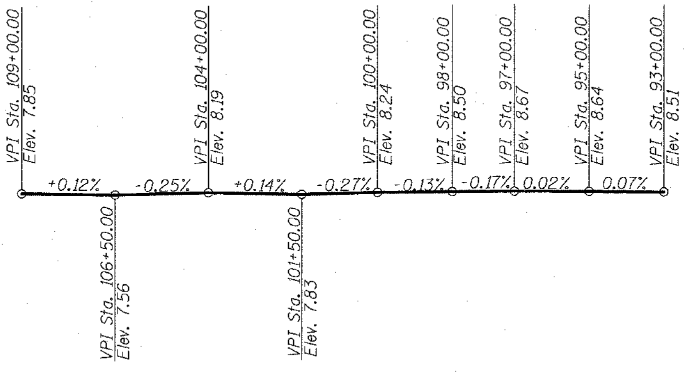
PROFILE GRADE

(N.B. I-94)



PROFILE GRADE

(Ramp)



PROFILE GRADE

(State Street)

LEGEND

⊕ Boring Location

* Measured along Front Face of Wall.

T·Y·LIN INTERNATIONAL

SHEET 2 OF 22

REVISIONS	
NAME	DATE
REVISED	05/06/05
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - GENERAL PLAN
STA. 2257+63.34 TO STA. 2247+43.34

S.N. 016-W955 DESIGNED BY: MI, TB
SCALE: N.T.S. DRAWN BY: TB, DJR
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	520

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

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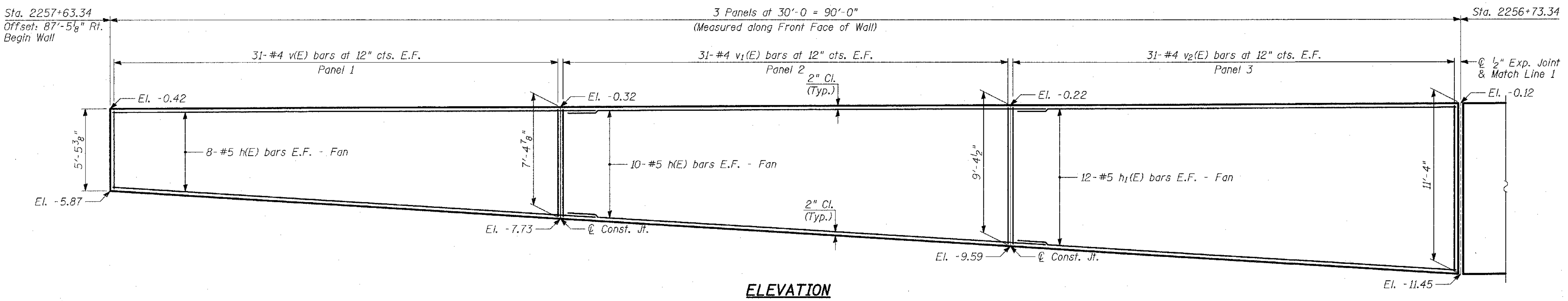

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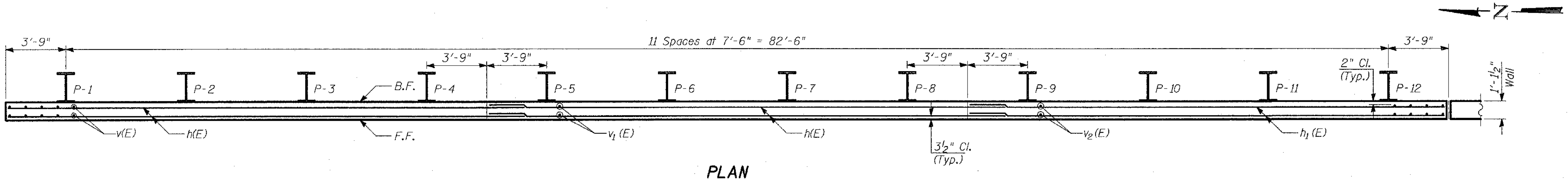
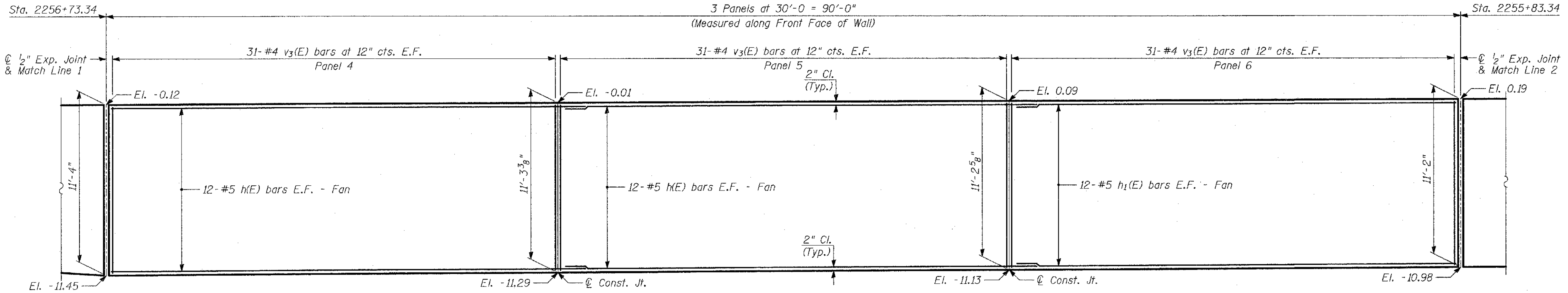
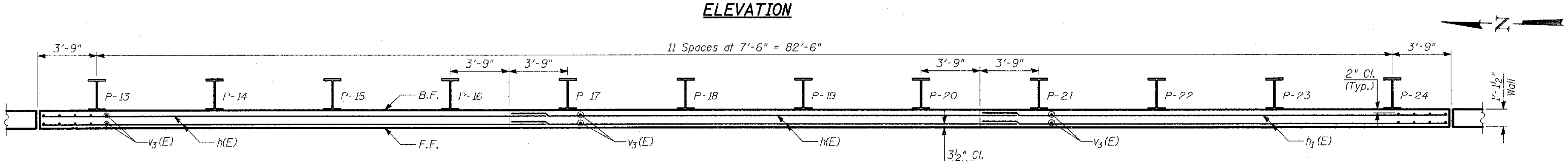


PLAN



ELEVATION



PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 9 thru 12 of 22.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 9 of 22.

SHEET 3 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - PLAN AND ELEVATION
STA. 2257+63.34 TO STA. 2255+83.34

S.N. 016-W955
DESIGNED BY: MI, TB
SCALE: N.T.S.
DRAWN BY: TB, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	521
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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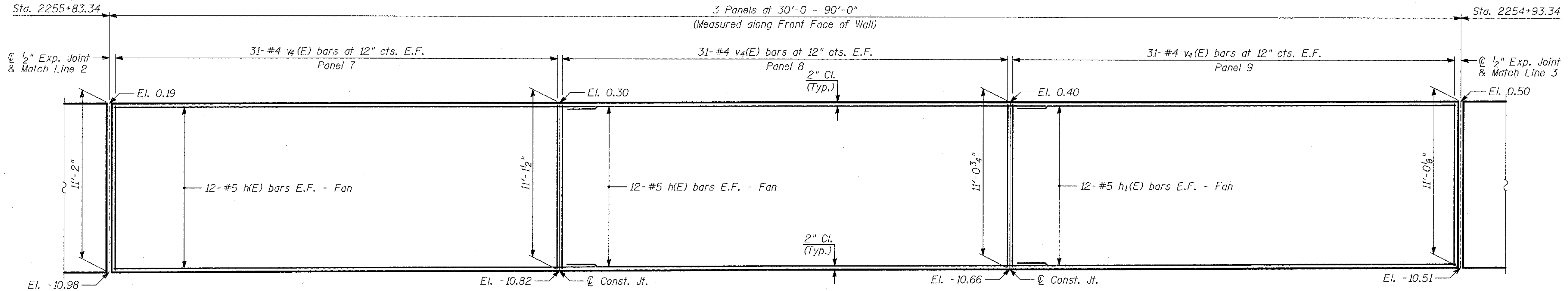

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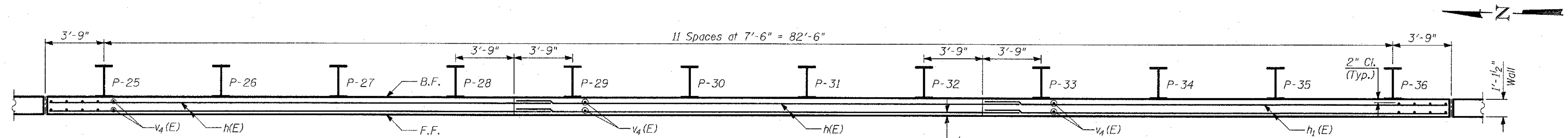

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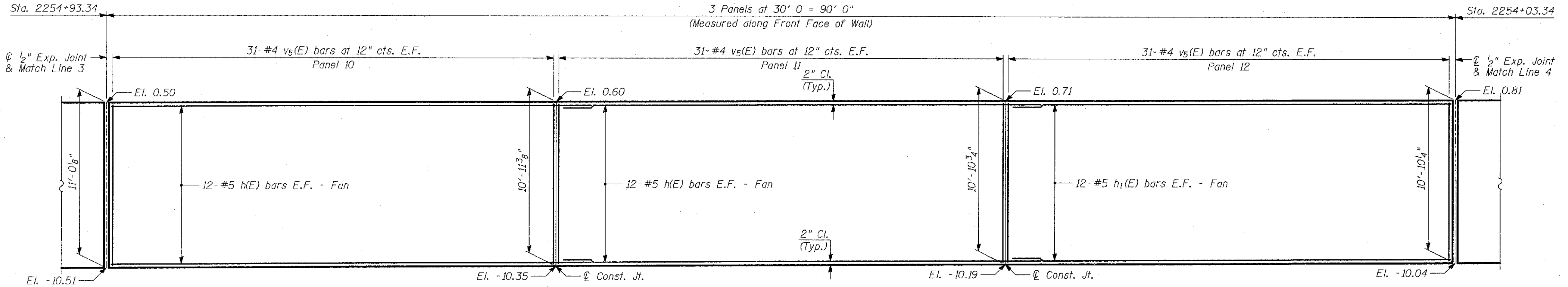

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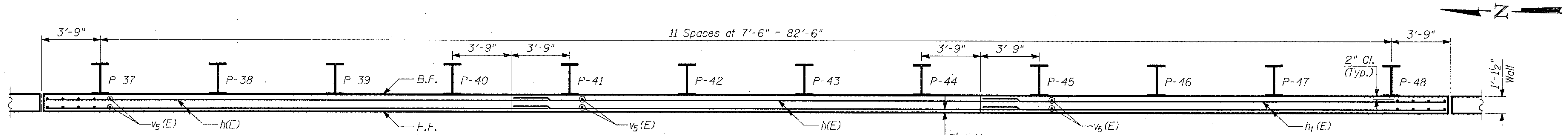

PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 9 thru 12 of 22.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 9 of 22.

SHEET 4 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - PLAN AND ELEVATION
STA. 2255+83.34 TO STA. 2254+03.34

S.N. 016-W955
DESIGNED BY: MI, TB
SCALE: N.T.S.
DRAWN BY: TB, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

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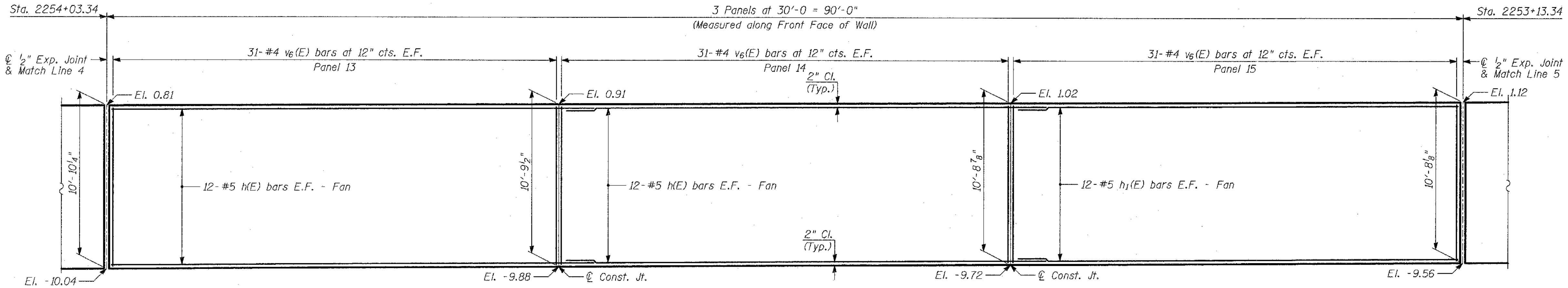
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	522
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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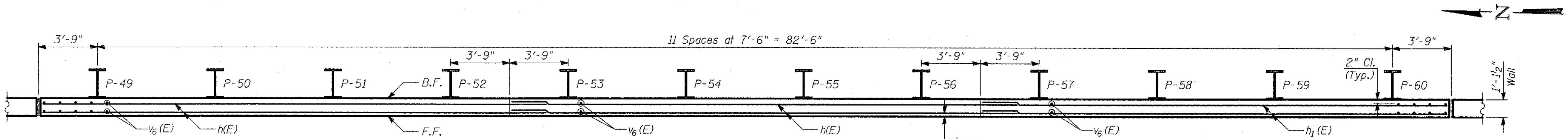

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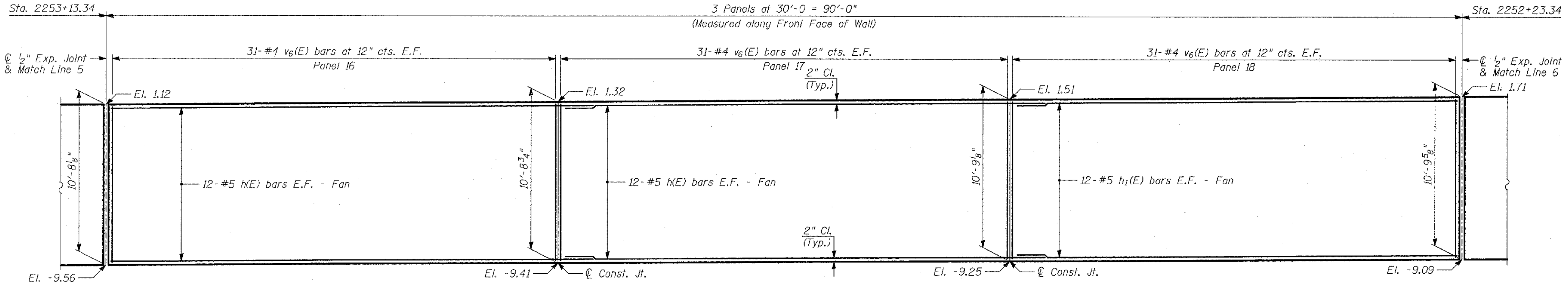

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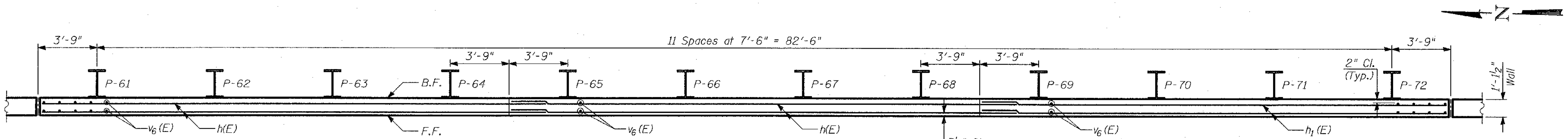

PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 9 thru 12 of 22.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 9 of 22.

SHEET 5 OF 22

REVISIONS	
NAME	DATE

TYLININTERNATIONAL

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - PLAN AND ELEVATION
STA. 2254+03.34 TO STA. 2252+23.34

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	523
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

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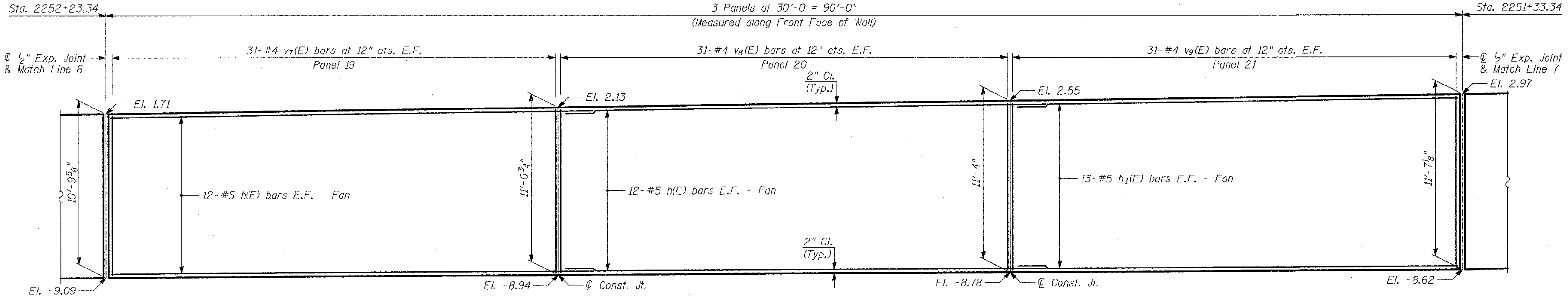

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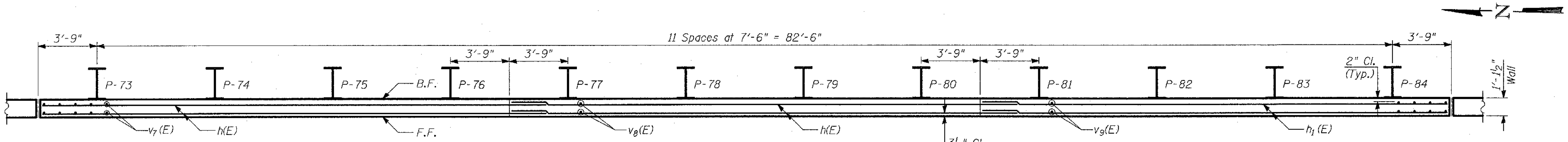

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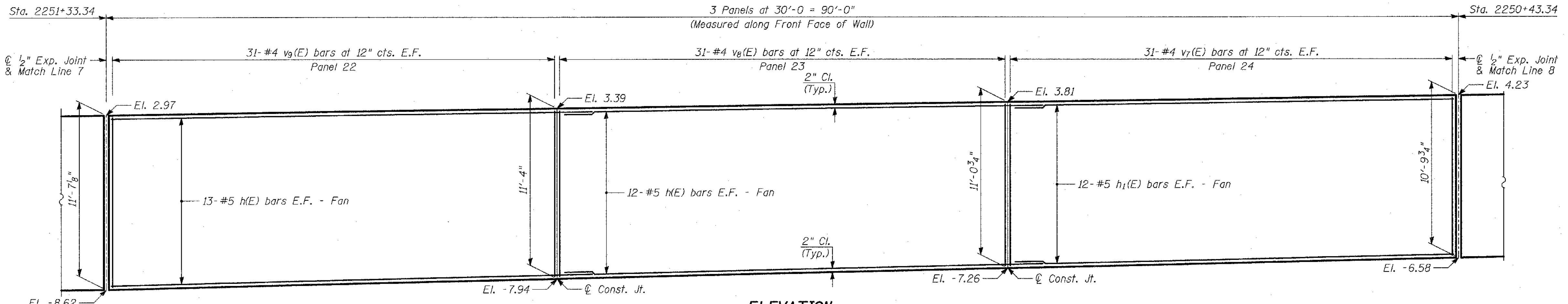
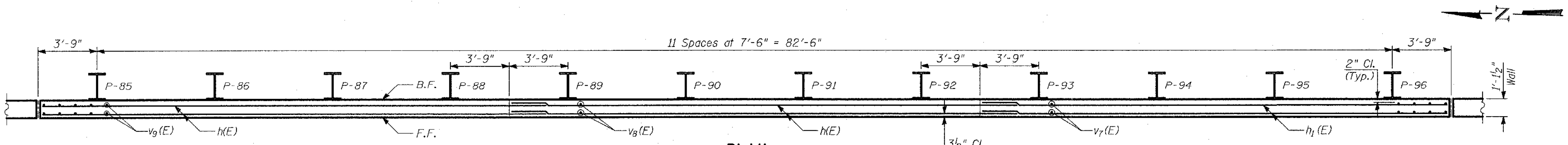


ELEVATION



PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 9 thru 22 of 22.
5. Pile spacing is measured along front face of wall.
6. For Lap Splices, see Sheet 9 of 22.

SHEET 6 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - PLAN AND ELEVATION
STA. 2252+23.34 TO STA. 2250+43.34

S.N. 016-W955
DESIGNED BY: MI, TB
SCALE: N.T.S.
DRAWN BY: TB, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

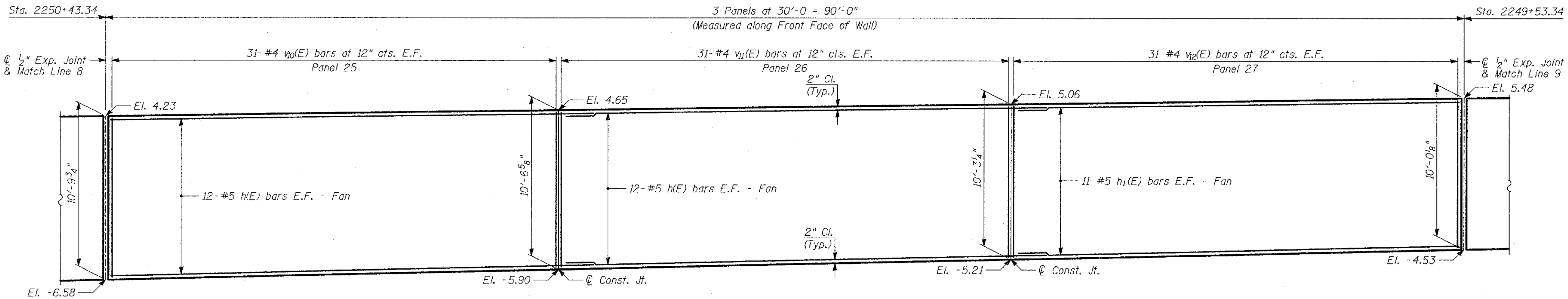
03/27/2005 02:29:51 PM

TYLININTERNATIONAL

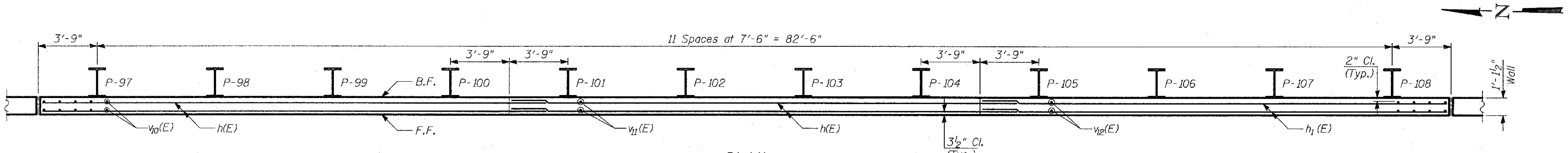
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	524
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (1516.1, 1717 & 1818) R-8

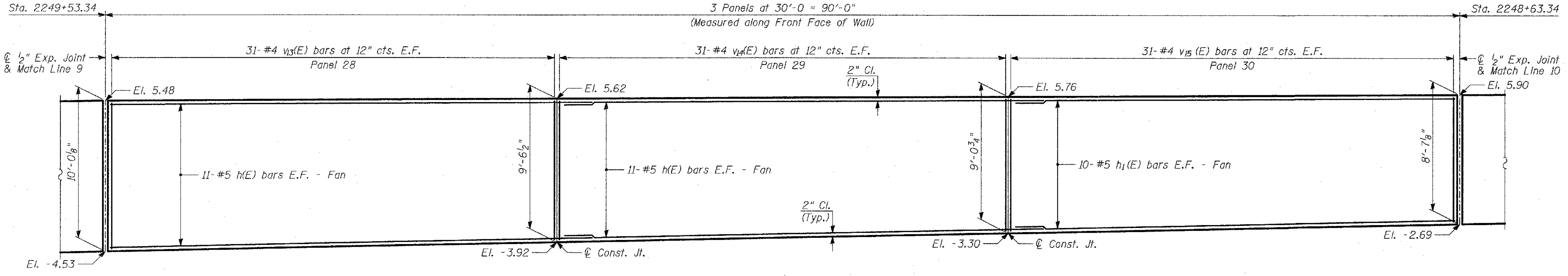
62694



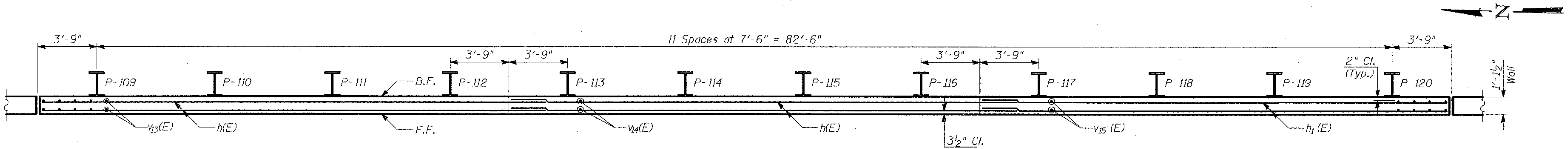
ELEVATION



PLAN



ELEVATION



PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 9 thru 12 of 22.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 9 of 22.

SHEET 7 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - PLAN AND ELEVATION
STA. 2250+43.34 TO STA. 2248+63.34

S.N. 016-W955
DESIGNED BY: MI, TB
SCALE: N.T.S.
DRAWN BY: TB, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

TYLININTERNATIONAL

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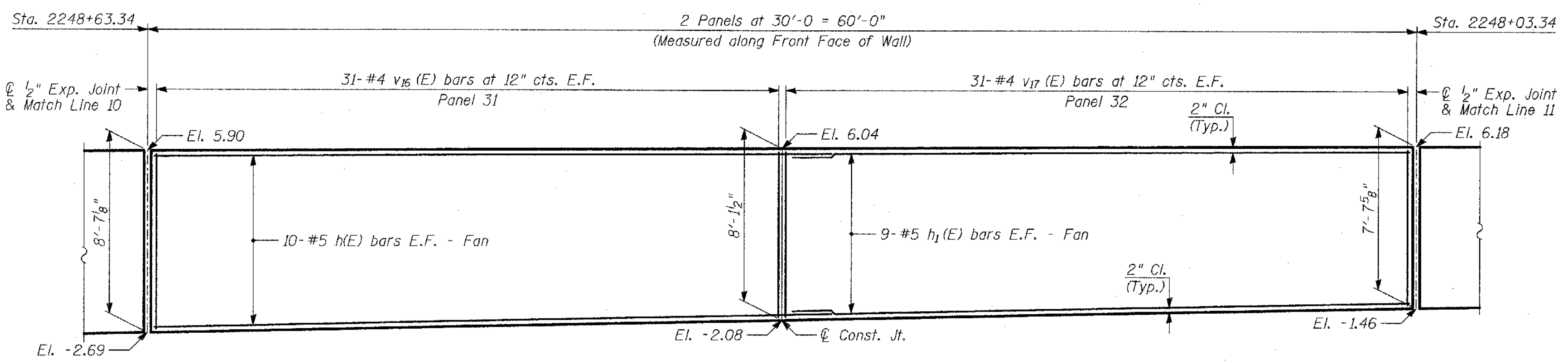
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	525
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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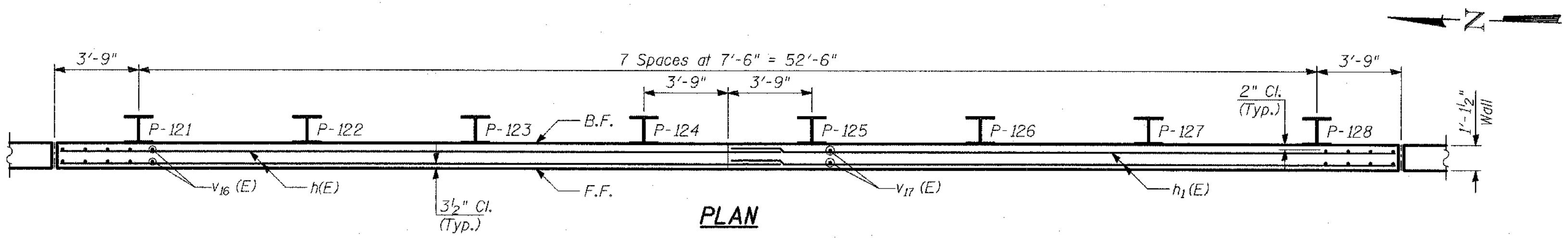

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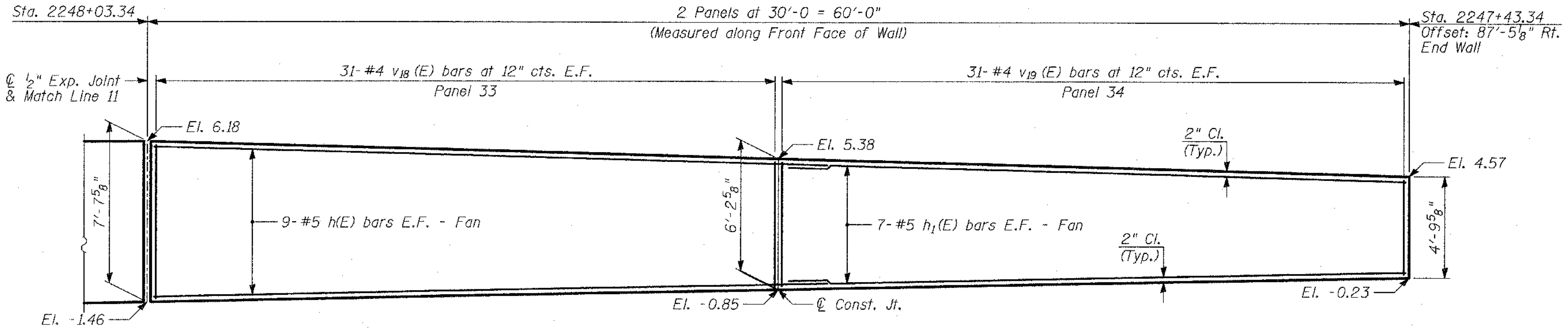
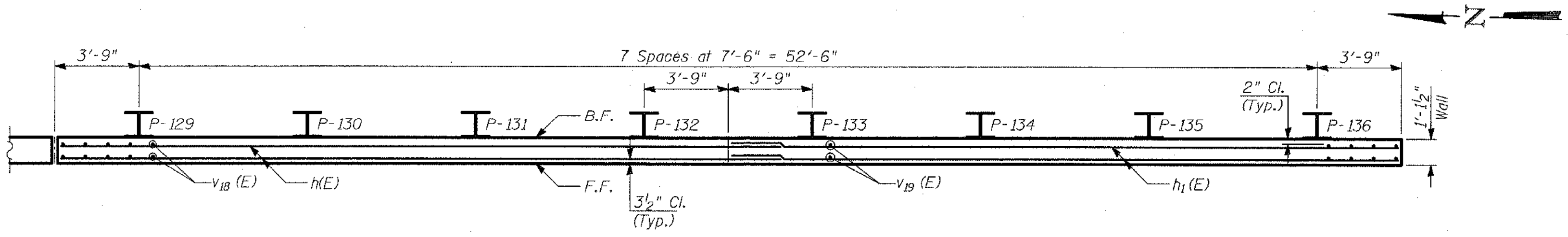


ELEVATION



PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 9 thru 12 of 22.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 9 of 22.

SHEET 8 OF 22

TY·LIN INTERNATIONAL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - PLAN AND ELEVATION
STA. 2248+63.34 TO STA.2247+43.34

S.N. 016-W955
DESIGNED BY: MI, TB
SCALE: N.T.S.
DRAWN BY: TB, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	526

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

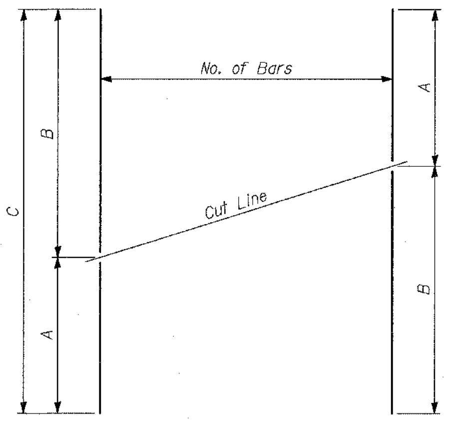
PILE LAYOUT

Pile	Station at Working Point	Top of Wall El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-1	2257+59.59	-0.41	-2.41	-5.20	W21x147	-31.24	28'-10"
P-2	2257+52.09	-0.39	-2.39	-5.74	↑	-31.80	29'-5"
P-3	2257+44.59	-0.36	-2.36	-6.28		-32.36	30'-0"
P-4	2257+37.09	-0.33	-2.33	-6.83		-32.83	30'-6"
P-5	2257+29.59	-0.31	-2.31	-7.37		-33.39	31'-1"
P-6	2257+22.09	-0.28	-2.28	-7.91		-33.95	31'-8"
P-7	2257+14.59	-0.26	-2.26	-8.46		-34.51	32'-3"
P-8	2257+07.09	-0.23	-2.23	-9.00		-35.06	32'-10"
P-9	2256+99.59	-0.21	-2.21	-9.55		-35.62	33'-5"
P-10	2256+92.09	-0.18	-2.18	-10.09		-36.10	33'-11"
P-11	2256+84.59	-0.15	-2.15	-10.63	↓	-36.65	34'-6"
P-12	2256+77.09	-0.13	-2.13	-11.18	W21x147	-37.21	35'-1"
P-13	2256+69.59	-0.10	-2.10	-11.43	W24x176	-39.44	37'-4"
P-14	2256+62.09	-0.08	-2.08	-11.39	↑	-39.41	37'-4"
P-15	2256+54.59	-0.05	-2.05	-11.35		-39.38	37'-4"
P-16	2256+47.09	-0.03	-2.03	-11.31		-39.36	37'-4"
P-17	2256+39.59	0.00	-2.00	-11.27		-39.33	37'-4"
P-18	2256+32.09	0.03	-1.97	-11.23		-39.31	37'-4"
P-19	2256+24.59	0.05	-1.95	-11.19		-39.20	37'-3"
P-20	2256+17.09	0.08	-1.92	-11.15		-39.17	37'-3"
P-21	2256+09.59	0.10	-1.90	-11.11		-39.15	37'-3"
P-22	2256+02.09	0.13	-1.87	-11.08		-39.12	37'-3"
P-23	2255+94.59	0.15	-1.85	-11.04		-39.10	37'-3"
P-24	2255+87.09	0.18	-1.82	-11.00		-39.07	37'-3"
P-25	2255+79.59	0.21	-1.79	-10.96		-38.96	37'-2"
P-26	2255+72.09	0.23	-1.77	-10.92		-38.94	37'-2"
P-27	2255+64.59	0.26	-1.74	-10.88		-38.91	37'-2"
P-28	2255+57.09	0.28	-1.72	-10.84		-38.88	37'-2"
P-29	2255+49.59	0.31	-1.69	-10.80		-38.86	37'-2"
P-30	2255+42.09	0.33	-1.67	-10.76		-38.83	37'-2"
P-31	2255+34.59	0.36	-1.64	-10.72		-38.72	37'-1"
P-32	2255+27.09	0.39	-1.61	-10.68		-38.70	37'-1"
P-33	2255+19.59	0.41	-1.59	-10.64		-38.67	37'-1"
P-34	2255+12.09	0.44	-1.56	-10.60		-38.65	37'-1"
P-35	2255+04.59	0.46	-1.54	-10.57		-38.62	37'-1"
P-36	2254+97.09	0.49	-1.51	-10.53		-38.59	37'-1"
P-37	2254+89.59	0.51	-1.49	-10.49		-38.57	37'-1"
P-38	2254+82.09	0.54	-1.46	-10.45		-38.46	37'-0"
P-39	2254+74.59	0.57	-1.43	-10.41		-38.43	37'-0"
P-40	2254+67.09	0.59	-1.41	-10.37		-38.41	37'-0"
P-41	2254+59.59	0.62	-1.38	-10.33		-38.38	37'-0"
P-42	2254+52.09	0.64	-1.36	-10.29		-38.36	37'-0"
P-43	2254+44.59	0.67	-1.33	-10.25		-38.33	37'-0"
P-44	2254+37.09	0.69	-1.31	-10.21		-38.22	36'-11"
P-45	2254+29.59	0.72	-1.28	-10.17		-38.20	36'-11"
P-46	2254+22.09	0.75	-1.25	-10.13		-38.17	36'-11"
P-47	2254+14.59	0.77	-1.23	-10.09	↓	-38.15	36'-11"
P-48	2254+07.09	0.80	-1.20	-10.06	W24x176	-38.12	36'-11"
P-49	2253+99.59	0.82	-1.18	-10.02	W21x147	-38.09	36'-11"
P-50	2253+92.09	0.85	-1.15	-9.98	↑	-37.99	36'-10"
P-51	2253+84.59	0.87	-1.13	-9.94		-37.96	36'-10"
P-52	2253+77.09	0.90	-1.10	-9.90		-37.93	36'-10"
P-53	2253+69.59	0.93	-1.07	-9.86		-37.91	36'-10"
P-54	2253+62.09	0.95	-1.05	-9.82		-37.88	36'-10"
P-55	2253+54.59	0.98	-1.02	-9.78		-37.86	36'-10"
P-56	2253+47.09	1.00	-1.00	-9.74		-37.75	36'-9"
P-57	2253+39.59	1.03	-0.97	-9.70		-37.72	36'-9"
P-58	2253+32.09	1.05	-0.95	-9.66		-37.70	36'-9"
P-59	2253+24.59	1.08	-0.92	-9.62		-37.67	36'-9"
P-60	2253+17.09	1.11	-0.89	-9.58		-37.64	36'-9"
P-61	2253+09.59	1.14	-0.86	-9.55		-37.61	36'-9"
P-62	2253+02.09	1.19	-0.81	-9.51		-37.56	36'-9"
P-63	2252+94.59	1.24	-0.76	-9.47		-37.51	36'-9"
P-64	2252+87.09	1.29	-0.71	-9.43	↓	-37.46	36'-9"
P-65	2252+79.59	1.34	-0.66	-9.39	W21x147	-37.41	36'-9"

TYLIN INTERNATIONAL

PILE LAYOUT

Pile	Station at Working Point	Top of Wall El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-66	2252+72.09	1.39	-0.61	-9.35	W21x147	-37.36	36'-9"
P-67	2252+64.59	1.44	-0.56	-9.31	↑	-37.31	36'-9"
P-68	2252+57.09	1.49	-0.51	-9.27		-37.35	36'-10"
P-69	2252+49.59	1.54	-0.46	-9.23		-37.30	36'-10"
P-70	2252+42.09	1.59	-0.41	-9.19		-37.25	36'-10"
P-71	2252+34.59	1.64	-0.36	-9.15	↓	-37.20	36'-10"
P-72	2252+27.09	1.69	-0.31	-9.11	W21x147	-37.15	36'-10"
P-73	2252+19.59	1.76	-0.24	-9.07	W24x176	-37.15	36'-11"
P-74	2252+12.09	1.87	-0.13	-9.03	↑	-37.05	36'-11"
P-75	2252+04.59	1.97	-0.03	-9.00		-37.03	37'-0"
P-76	2251+97.09	2.08	0.08	-8.96		-37.01	37'-1"
P-77	2251+89.59	2.18	0.18	-8.92		-36.98	37'-2"
P-78	2251+82.09	2.29	0.29	-8.88		-36.88	37'-2"
P-79	2251+74.59	2.39	0.39	-8.84		-36.86	37'-3"
P-80	2251+67.09	2.50	0.50	-8.80		-36.84	37'-4"
P-81	2251+59.59	2.60	0.60	-8.76		-36.82	37'-5"
P-82	2251+52.09	2.71	0.71	-8.72		-36.79	37'-6"
P-83	2251+44.59	2.81	0.81	-8.68		-36.69	37'-6"
P-84	2251+37.09	2.92	0.92	-8.64		-36.67	37'-7"
P-85	2251+29.59	3.02	1.02	-8.54		-34.56	35'-7"
P-86	2251+22.09	3.13	1.13	-8.37		-34.37	35'-6"
P-87	2251+14.59	3.23	1.23	-8.20		-34.27	35'-6"
P-88	2251+07.09	3.33	1.33	-8.03		-34.08	35'-5"
P-89	2250+99.59	3.44	1.44	-7.86		-33.89	35'-4"
P-90	2250+92.09	3.54	1.54	-7.69		-33.71	35'-3"
P-91	2250+84.59	3.65	1.65	-7.52		-33.52	35'-2"
P-92	2250+77.09	3.75	1.75	-7.34		-33.41	35'-2"
P-93	2250+69.59	3.86	1.86	-7.17		-33.22	35'-1"
P-94	2250+62.09	3.96	1.96	-7.00		-33.04	35'-0"
P-95	2250+54.59	4.07	2.07	-6.83	↓	-32.85	34'-11"
P-96	2250+47.09	4.17	2.17	-6.66	W24x176	-32.74	34'-11"
P-97	2250+39.59	4.28	2.28	-6.49	W21x147	-32.55	34'-10"
P-98	2250+32.09	4.38	2.38	-6.32	↑	-32.37	34'-9"
P-99	2250+24.59	4.49	2.49	-6.15		-32.18	34'-8"
P-100	2250+17.09	4.59	2.59	-5.98		-31.99	34'-7"
P-101	2250+09.59	4.70	2.70	-5.81		-31.89	34'-7"
P-102	2250+02.09	4.80	2.80	-5.64		-31.70	34'-6"
P-103	2249+94.59	4.91	2.91	-5.47		-31.51	34'-5"
P-104	2249+87.09	5.01	3.01	-5.30		-31.32	34'-4"
P-105	2249+79.59	5.12	3.12	-5.13		-31.13	34'-3"
P-106	2249+72.09	5.22	3.22	-4.96		-31.03	34'-3"
P-107	2249+64.59	5.33	3.33	-4.79	↓	-30.84	34'-2"
P-108	2249+57.09	5.43	3.43	-4.62	W21x147	-30.65	34'-1"
P-109	2249+49.59	5.50	3.50	-4.46	W18x143	-29.50	33'-0"
P-110	2249+42.09	5.54	3.54	-4.30	↑	-29.38	32'-11"
P-111	2249+34.59	5.57	3.57	-4.15		-29.18	32'-9"
P-112	2249+27.09	5.61	3.61	-4.00		-29.06	32'-8"
P-113	2249+19.59	5.64	3.64	-3.84		-28.86	32'-6"
P-114	2249+12.09	5.68	3.68	-3.69		-28.74	32'-5"
P-115	2249+04.59	5.71	3.71	-3.53		-28.54	32'-3"
P-116	2248+97.09	5.75	3.75	-3.38		-28.42	32'-2"
P-117	2248+89.59	5.78	3.78	-3.23		-28.30	32'-1"
P-118	2248+82.09	5.82	3.82	-3.07		-28.10	31'-11"
P-119	2248+74.59	5.85	3.85	-2.92	↓	-27.98	31'-10"
P-120	2248+67.09	5.88	3.88	-2.77	W18x143	-27.78	31'-8"
P-121	2248+59.59	5.92	3.92	-2.61	HP14x117	-25.66	29'-7"
P-122	2248+52.09	5.95	3.95	-2.46	↑	-25.46	29'-5"
P-123	2248+44.59	5.99	3.99	-2.31		-25.34	29'-4"
P-124	2248+37.09	6.02	4.02	-2.15		-25.23	29'-3"
P-125	2248+29.59	6.06	4.06	-2.00		-25.02	29'-1"
P-126	2248+22.09	6.09	4.09	-1.85		-24.91	29'-0"
P-127	2248+14.59	6.13	4.13	-1.69		-24.70	28'-10"
P-128	2248+07.09	6.16	4.16	-1.54		-24.59	28'-9"
P-129	2247+99.59	6.08	4.08	-1.38		-23.42	27'-6"
P-130	2247+92.09	5.88	3.88	-1.23		-23.29	27'-2"
P-131	2247+84.59	5.68	3.68	-1.08		-23.16	26'-10"
P-132	2247+77.09	5.48	3.48	-0.92		-22.94	26'-5"
P-133	2247+69.59	5.28	3.28	-0.77		-22.81	26'-1"
P-134	2247+62.09	5.07	3.07	-0.62		-22.68	25'-9"
P-135	2247+54.59	4.87	2.87	-0.46	↓	-22.54	25'-5"
P-136	2247+47.09	4.67	2.67	-0.31	HP14x117	-22.33	25'-0"



SERIES OF BAR CUTTING DIAGRAM

See table for dimensions.
Make all cuts normal to bar axis

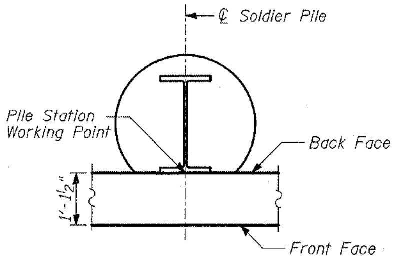
BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	No. of Bars Per Set	A	B	C
v(E)	1	31	5'-2"	7'-1"	12'-3"
v_1 (E)	1	31	7'-1"	9'-1"	16'-2"
v_2(E)	1	31	9'-1"	11'-0"	20'-1"
v_7(E)	2	31	10'-6"	10'-9"	21'-3"
v_8(E)	2	31	10'-9"	11'-0"	21'-9"
v_9(E)	2	31	11'-0"	11'-4"	22'-4"
v_{10}(E)	1	31	10'-6"	10'-3"	20'-9"
v_{11}(E)	1	31	10'-3"	10'-0"	20'-3"
v_{12}(E)	1	31	10'-0"	9'-9"	19'-9"
v_{13}(E)	1	31	9'-9"	9'-3"	19'-0"
v_{14}(E)	1	31	9'-3"	8'-9"	18'-0"
v_{15}(E)	1	31	8'-9"	8'-4"	17'-1"
v_{16}(E)	1	31	8'-4"	7'-10"	16'-2"
v_{17}(E)	1	31	7'-10"	7'-4"	15'-2"
v_{18}(E)	1	31	7'-4"	5'-11"	13'-3"
v_{19}(E)	1	31	5'-11"	4'-6"	10'-5"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	504	#5	32'-2"	———
h_1(E)	268	#5	29'-8"	———
v(E)	31	#4	12'-3"	———
v_1(E)	31	#4	16'-2"	———
v_2(E)	31	#4	20'-1"	———
v_3(E)	186	#4	10'-11"	———
v_4(E)	186	#4	10'-9"	———
v_5(E)	186	#4	10'-7"	———
v_6(E)	372	#4	10'-5"	———
v_7(E)	62	#4	21'-3"	———
v_8(E)	62	#4	21'-9"	———
v_9(E)	62	#4	22'-4"	———
v_{10}(E)	31	#4	20'-9"	———
v_{11}(E)	31	#4	20'-3"	———
v_{12}(E)	31	#4	19'-9"	———
v_{13}(E)	31	#4	19'-0"	———
v_{14}(E)	31	#4	18'-0"	———
v_{15}(E)	31	#4	17'-1"	———
v_{16}(E)	31	#4	16'-2"	———
v_{17}(E)	31	#4	15'-2"	———
v_{18}(E)	31	#4	13'-3"	———
v_{19}(E)	31	#4	10'-5"	———
Reinforcement Bars, Epoxy Coated			POUND	39,030
Concrete Structures			CU YD	429
Protective Coat			SQ YD	1,125
Furnishing Soldier Piles (W Section)			FOOT	4,275
Furnishing Soldier Piles (HP Section)			FOOT	444
Drilling and Setting Soldier Piles (in Soil)			CU FT	27,959

Reinforcement bars designated (E) shall be epoxy coated.



SOLDIER PILE WORKING POINT

LAP SPLICES

Bar	Lap
#4	1'-8"
#5	2'-2"
#6	2'-7"
#8	4'-6"

SHEET 9 OF 22

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
PILE LAYOUT, DETAILS & BILL OF MATERIAL

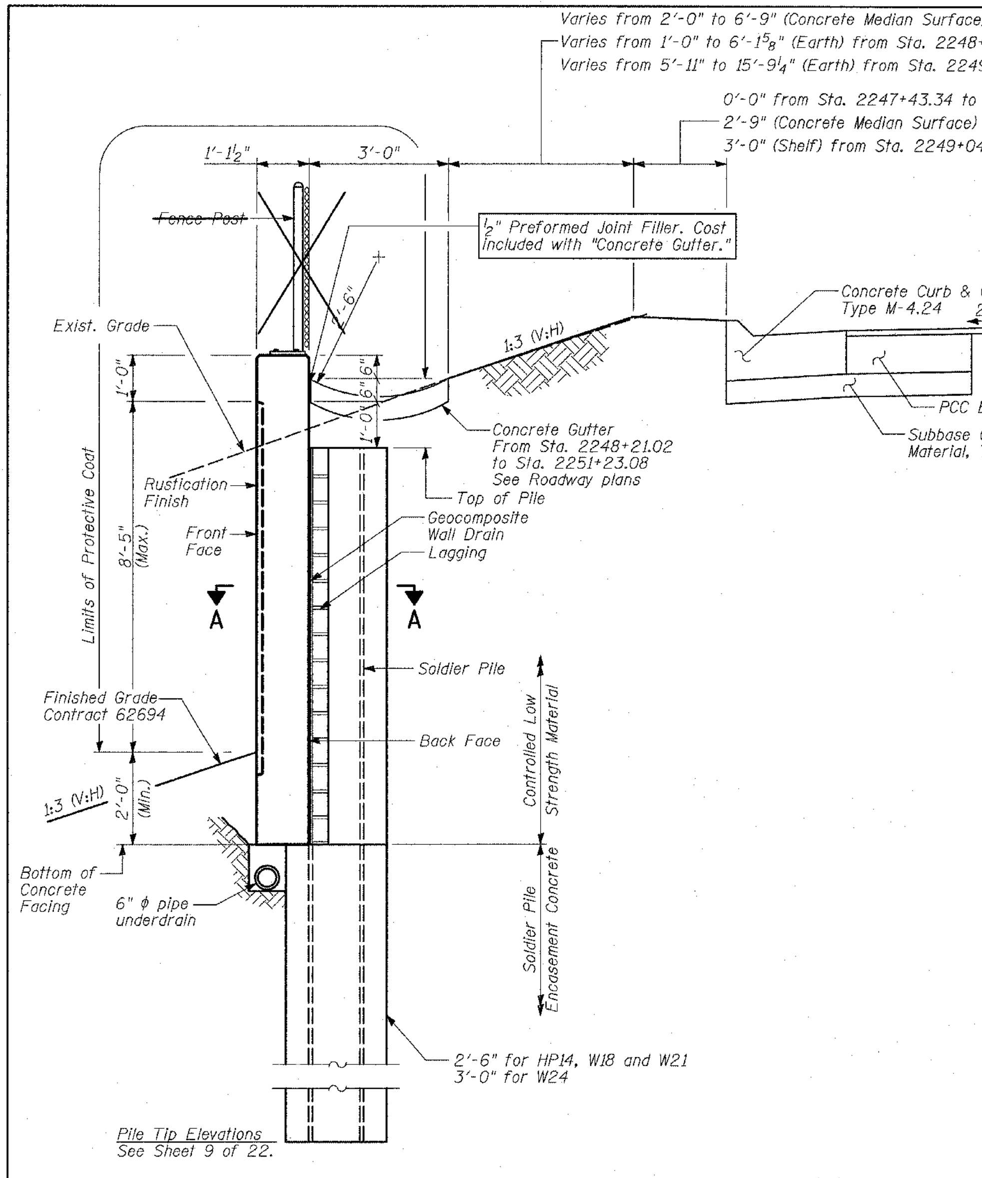
S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	527

STA. 2200+00.00 TO STA. 2362+00.00

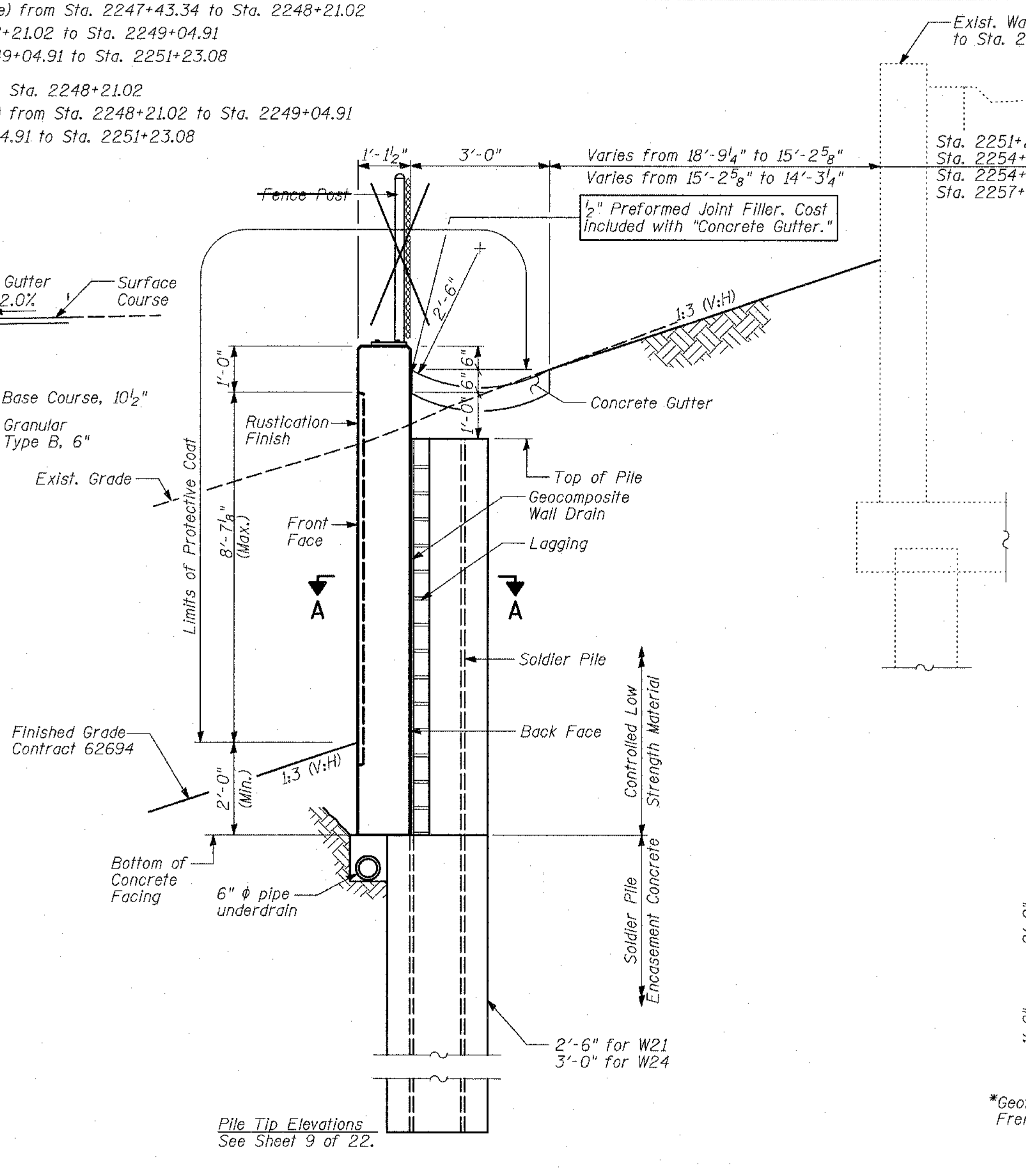
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

• (1516.1, 1717 & 1818) R-8 62694



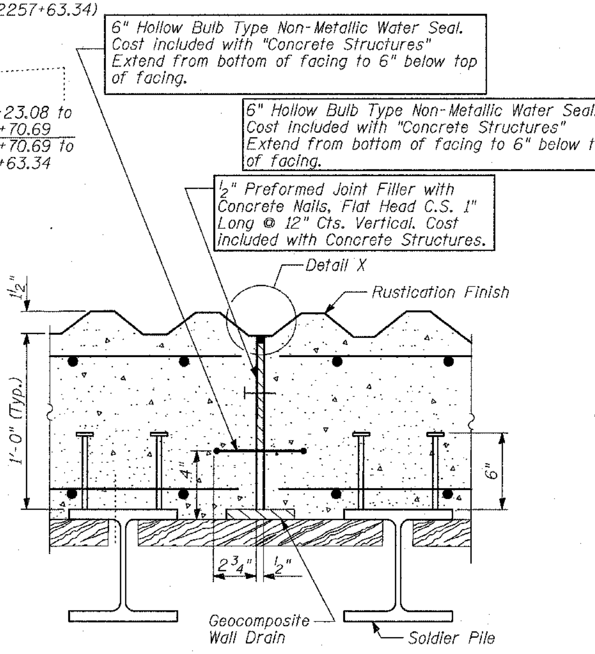
TYPICAL CROSS-SECTION

(Sta. 2247+43.34 to Sta. 2251+23.08)



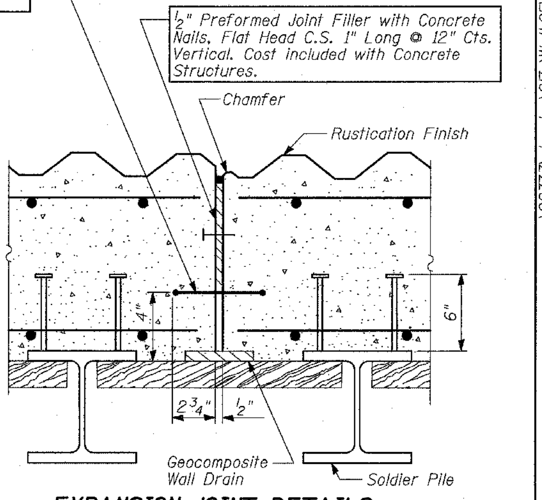
TYPICAL CROSS-SECTION

(Sta. 2251+23.08 to Sta. 2257+63.34)



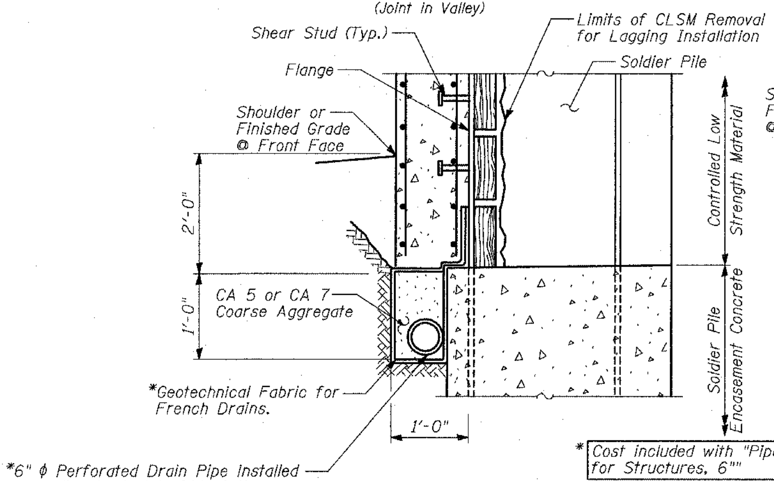
EXPANSION JOINT DETAILS

(Joint in Valley)

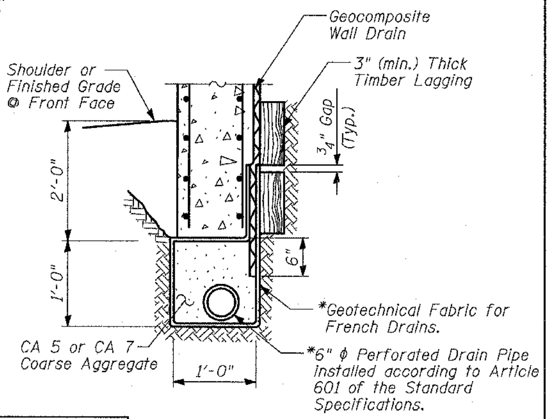


EXPANSION JOINT DETAILS

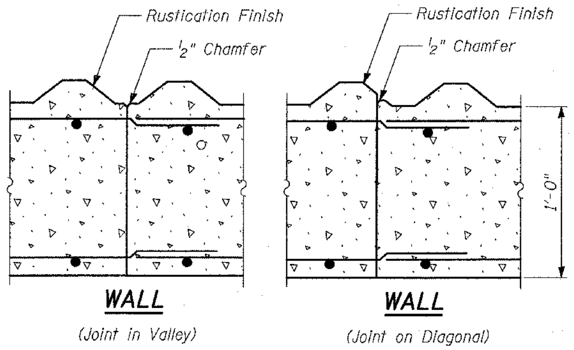
(Joint on Diagonal)



PIPE UNDERDRAIN DETAIL AT SOLDIER PILE



PIPE UNDERDRAIN DETAIL BETWEEN SOLDIER PILES



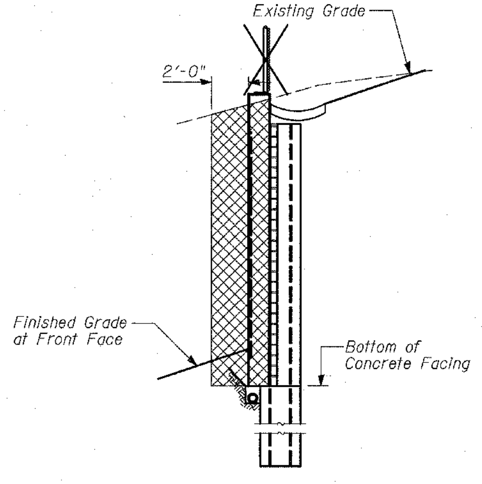
WALL

(Joint in Valley)

WALL

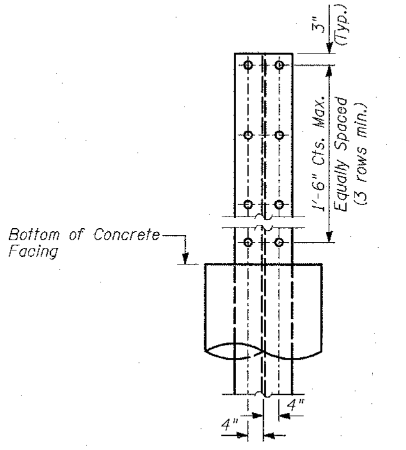
(Joint on Diagonal)

CONSTRUCTION JOINT DETAILS

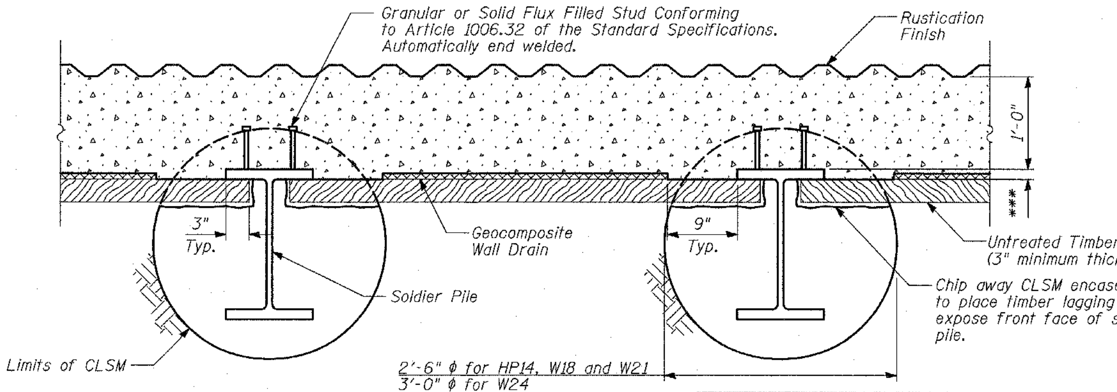


STRUCTURE EXCAVATION

(For Proposed Wall)

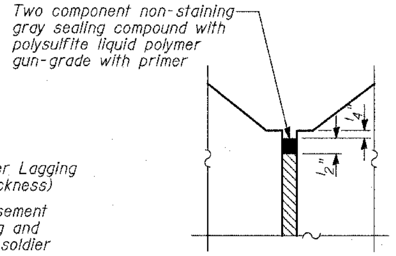


SHEAR STUD CONNECTOR DETAIL



SECTION A-A

*** Cost of additional concrete between face of untreated timber lagging and face of pile included with "Concrete Structures".

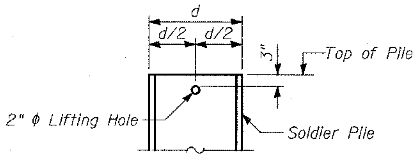


DETAIL X

SHEET 10 OF 22

NOTES:

1. The geocomposite wall drain shall be constructed according to Section 591 of the Standard Specifications.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
3. Stud shear connectors shall be ¾" ϕ x 6" granular or solid flux filled headed studs, automatically end welded to the front flange of the soldier piles.



LIFTING HOLE DETAIL

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	966
Stud Shear Connectors	EACH	1,738
Untreated Timber Lagging	SQ FT	8,253
Geocomposite Wall Drain	SQ YD	974
Pipe Underdrains for Structures, 6"	FOOT	1,020

TYLIN INTERNATIONAL

REVISIONS NAME	DATE
REVISED	05/06/05
REVISED	04/15/05

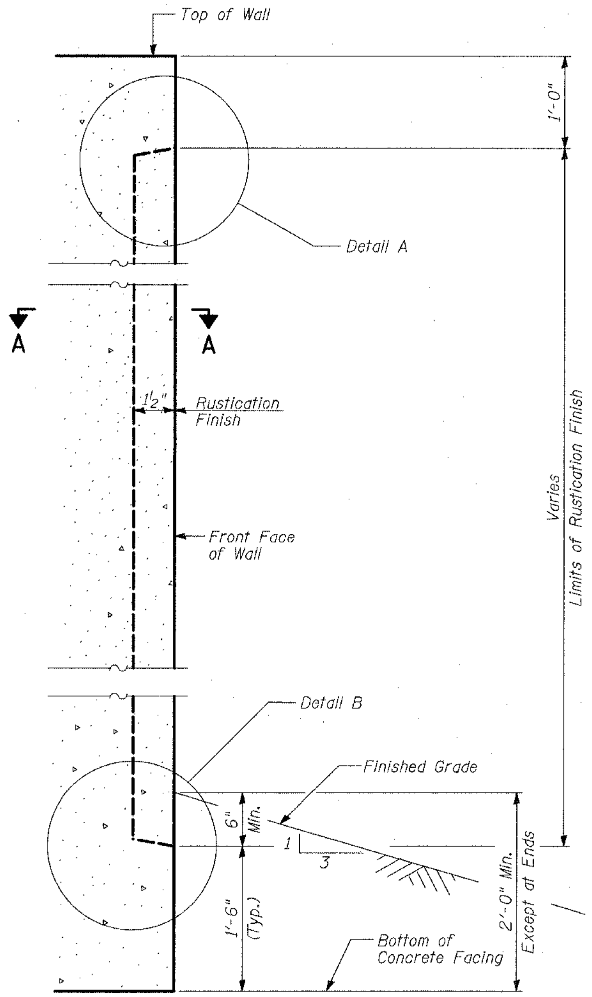
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
WALL CROSS SECTIONS & DETAILS

S.N. 016-W955
DESIGNED BY: MI, TB
SCALE: N.T.S.
DRAWN BY: TB, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

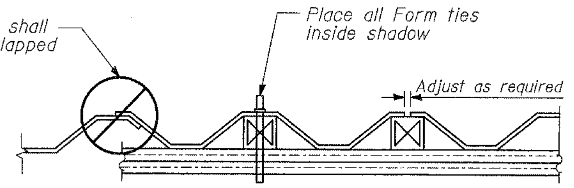
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	528
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

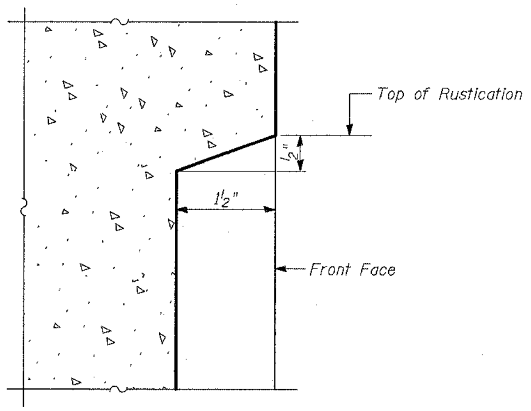
62694



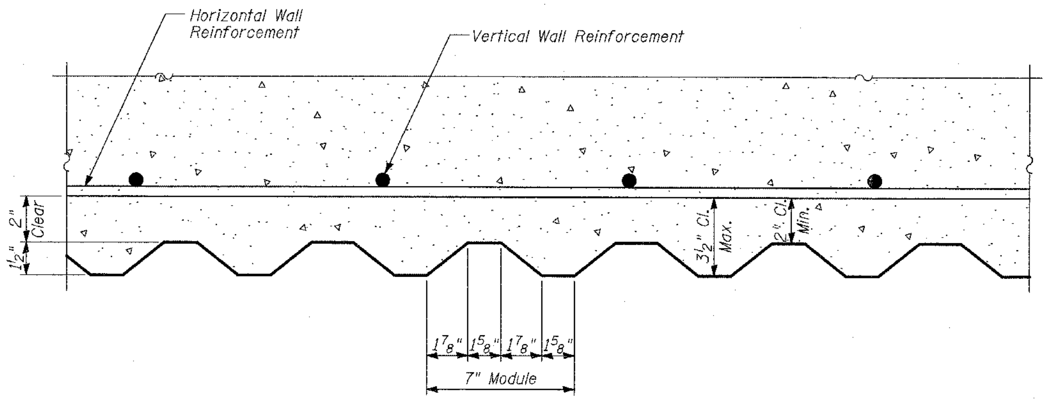
WALL DETAIL



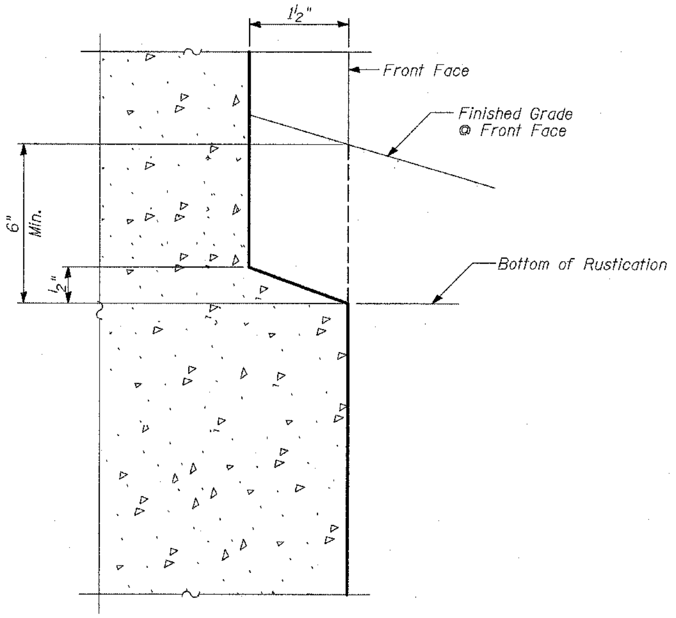
SUGGESTED FORMWORK DETAIL



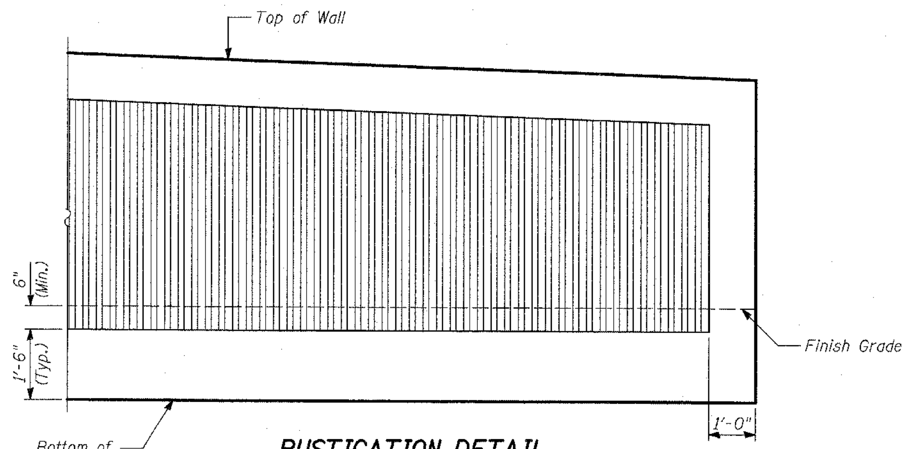
DETAIL A



SECTION A-A



DETAIL B



RUSTICATION DETAIL

(At End Panel with Embankment)

NOTES:

1. See Sheet 10 of 22 for expansion and construction joint details.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Rustication Finish	SQ FT	7,737

SHEET 11 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
RUSTICATION DETAILS

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005

DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

TYLININTERNATIONAL

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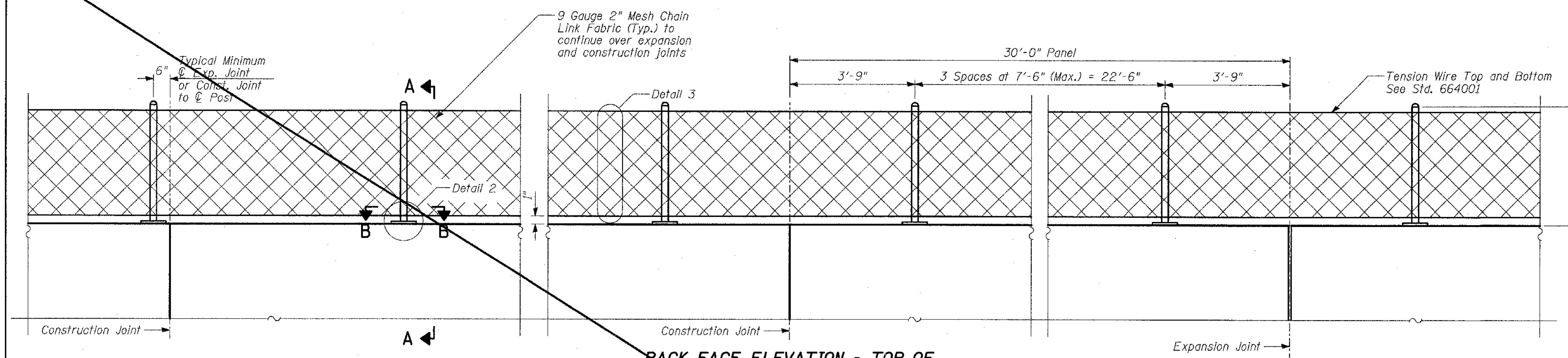
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	529

STA. 2200+00.00 TO STA. 2362+00.00

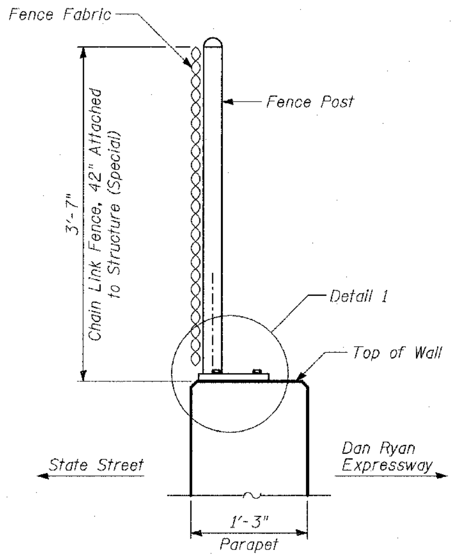
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

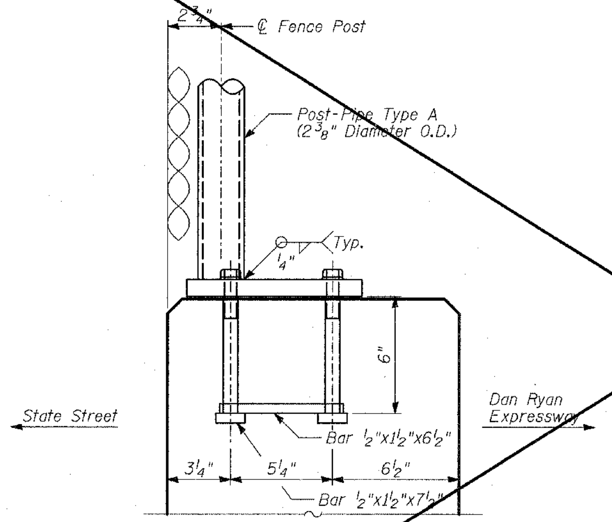
62694



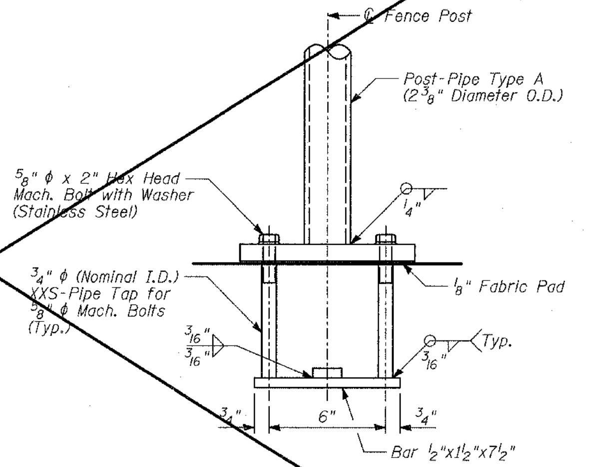
BACK FACE ELEVATION - TOP OF RETAINING WALL CHAIN LINK FENCE



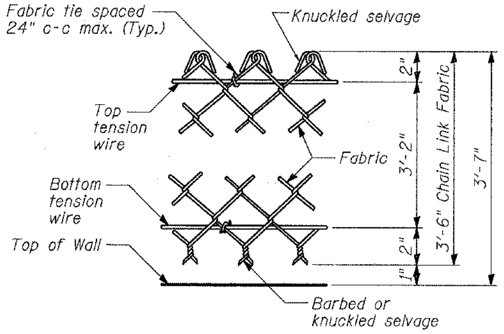
SECTION A-A



DETAIL 1



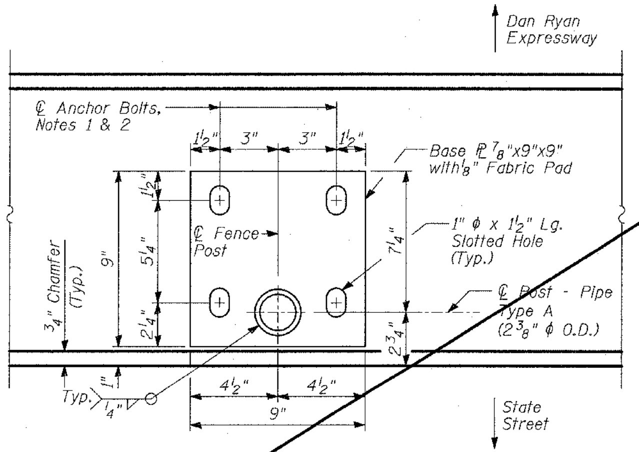
DETAIL 2



DETAIL 3

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Fence, 42" Attached to Structure (Special)	FOOT	1,020



SECTION B-B
BASE PLATE PLAN

NOTES:

1. In lieu of the castiiniplace anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting $\frac{5}{8}$" diameter anchor rods with $1\frac{1}{4}$" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.
2. For additional chain link details, see Standard 664001.

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SHEET 12 OF 22

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5 - CHAIN LINK FENCE, 42" ATTACHED
TO STRUCTURE (SPECIAL)

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	530

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

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Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB 05-01

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.90 ft
North: 1847192.63 ft
East: 1177788.10 ft
Station: 2258+24
Offset: 115.0' RT

Page 1 of 1

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
7.0	2-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--				
6.7	3-inch thick CRUSHED STONE --BASE COURSE--	1	15 7 6	NP	3
	Loose to medium dense, brown SAND --FILL--	2	6 2 2	NP	2
1.4	Medium stiff to very stiff, gray CLAY	3	5 2 2	NP	3
		4	4 2 2	0.74 B	20
		5	2 2 3	2.05 B	20
		6	3 4 5	2.38 B	19
-7.6	Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM	7	5 9 9	> 4.50 P	14
		8	4 5 6	2.30 S	14
		9	4 6 10	4.10 S	13
		10	5 7 10	4.10 S	12
		11	4 8 11	> 4.50 P	12
-20.1	Very dense, gray gravelly SILTY LOAM	12	14 27 33	NP	13
-24.6	Very stiff, gray gravelly SILTY CLAY LOAM	13	6 8 13	2.05 S	14
-29.6 -29.8	--AUGER REFUSAL--	14	50/2	NP	
	Boring terminated at 37.70 ft				

GENERAL NOTES

Begin Drilling 02-23-2004 Complete Drilling 02-23-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger N. Davis Checked by L. Iordache
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

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BORING LOG SB 05-02

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.38 ft
North: 1847118.32 ft
East: 1177790.71 ft
Station: 2257+50
Offset: 116.0' RT

Page 1 of 1

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
6.6	2-inch thick ASPHALT over 8-inch thick CONCRETE --PAVEMENT--				
	Loose to medium dense, brown SAND --FILL--	1	7 6 7	NP	6
		2	7 3 3	NP	4
1.1	Stiff, gray CLAY to SILTY CLAY	3	3 1 3	1.23 B	19
		4	5 3 7	1.80 B	19
		5	3 3 5	1.89 B	17
-6.4	Very stiff to hard, gray gravelly SILTY CLAY to SILTY CLAY LOAM	6	9 9 10	> 4.50 P	12
		7	8 10 11	> 4.50 P	12
		8	4 5 10	2.54 S	13
		9	4 7 11	3.69 S	13
		10	7 13 16	4.10 S	11
		11	4 7 9	4.10 S	12
		12	4 16 23	> 4.50 P	10
-25.1	Very dense, gray gravelly SILTY LOAM	13	9 20 30	NP	10
-30.9 -31.4	--AUGER REFUSAL--	14	50/3	NP	5
	Boring terminated at 38.75 ft				

GENERAL NOTES

Begin Drilling 02-23-2004 Complete Drilling 02-23-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger N. Davis Checked by L. Iordache
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 13 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-01 & SB05-02

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

03/25/2005 11:08:56 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	531

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

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Lombard, IL 60148
Telephone: 630 953-9928
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BORING LOG SB 05-03

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.01 ft
North: 1847028.10 ft
East: 1177793.63 ft
Station: 2256+60
Offset: 116.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3-inch thick ASPHALT over 10-inch thick CONCRETE					
5.9	--FILL-- Loose to medium dense, brown SAND --FILL--		1	16 17 10	NP	5
		5 ∇	2	5 4 4	NP	16
1.5	Stiff to very stiff gray CLAY		3	1 3 7	1.15 B	21
		10	4	1 3 6	1.89 B	18
			5	4 6 13	2.21 B	20
-6.0	Very stiff, gray SILTY CLAY	15	6	7 11 16	2.95 B	10
-9.2	Medium dense, gray SILT		7	6 10 12	2.30 B	20
-10.0	Stiff to very stiff, gray gravelly SILTY CLAY	20	8	4 8 14	3.20 B	12
	--LL=24%, PL=17%--		9	8 11 16	1.89 S	10
		25	10	9 15 14	1.89 B	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	5 10 14	3.03 B	12
-21.0	Very dense, gray gravelly SILT, with interbeds of silty clay loam	30	12	11 26 33	NP	10
		35	13	23 32 40	NP	14
-31.7	Boring terminated at 38.75 ft	40	14	50/3	NP	5
		45				
		50				

GENERAL NOTES

Begin Drilling 02-23-2004 Complete Drilling 02-23-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 5.00 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
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Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB 05-04

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.17 ft
North: 1846975.14 ft
East: 1177794.49 ft
Station: 2256+07
Offset: 116.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3-inch thick ASPHALT over					
6.3	8-inch thick CONCRETE --PAVEMENT--					
5.7	Hard, brown gravelly CLAY		1	11 19 10	NP	6
	Medium dense, brown, medium SAND --FILL--					
		5 ∇	2	4 4 22	NP	5
1.7	Medium stiff to stiff, gray CLAY		3	5 3 2	0.82 B	21
		10	4	2 4 6	0.82 B	19
			5	2 5 8	1.56 B	20
		15	6	6 5 8	1.89 B	18
-8.3	Stiff to hard, gray gravelly SILTY CLAY		7	5 10 14	1.39 B	11
		20	8	7 9 12	2.71 B	12
			9	6 10 13	3.20 B	13
		25	10	8 11 14	3.03 B	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	8 9 15	4.10 B	12
-20.8	Very dense, gray gravelly SILT	30	12	11 24 30	NP	10
		35	13	33 47 57	NP	9
-31.6	Boring terminated at 38.75 ft	40	14	50/3	NP	9
		45				
		50				

GENERAL NOTES

Begin Drilling 02-23-2001 Complete Drilling 02-23-2001
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 5.00 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 14 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-03 & SB05-04

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

03/25/2005 11:08:57 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	532
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

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Page 1 of 1

BORING LOG SB 05-05

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.13 ft
North: 1846901.73 ft
East: 1177798.16 ft
Station: 2255+33
Offset: 117.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 8-inch thick CONCRETE						
6.1	--PAVEMENT--						
	Very loose to medium dense, brown SAND --FILL--		☒	1	12 7 7	NP	3
		5	☒	2	7 2 2	NP	5
			○	3	3 1 2		
-0.4	Stiff to very stiff, gray CLAY						
		10	☒	4	2 1 3	1.39 B	19
			☒	5	1 1 4	2.38 B	19
		15	☒	6	1 4 6	2.38 B	16
			☒	7	3 5 7	2.79 B	12
-12.3	Medium dense, gray SAND						
-12.5	Very stiff, gray SILTY CLAY	20	☒	8	4 8 12	3.20 B	12
			☒	9	5 8 8	3.77 B	12
		25	☒	10	7 10 12	3.94 B	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			☒	11	6 8 10	3.77 B	12
-20.9	Dense to very dense, gray SILT						
		30	☒	12	9 18 22	NP	10
		35	☒	13	20 37 54	NP	10
			○	14	50/3	NP	
-31.6	Boring terminated at 38.75 ft	40					
		45					
		50					

GENERAL NOTES

Begin Drilling 02-20-2004 Complete Drilling 02-20-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling	▽	DRY
At Completion of Drilling	▼	DRY
Time After Drilling		NA
Depth to Water	▽	NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

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Page 1 of 1

BORING LOG SB 05-06

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.19 ft
North: 1846826.63 ft
East: 1177801.09 ft
Station: 2254+58
Offset: 118.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	4-inch thick ASPHALT over 10-inch thick CONCRETE						
6.0	--PAVEMENT--						
5.2	Medium dense, brown and gray		☒	1	8 7 8	NP	3
4.7	GRAVELLY SAND --FILL--						
	Hard, gray CLAY --FILL--						
	Very loose, brown SAND --FILL--	5	☒	2	7 2 1	NP	3
1.7	Medium stiff to very stiff, gray CLAY		☒	3	6 1 1	1.00 P	21
		10	☒	4	2 2 3	1.97 B	20
			☒	5	3 4 0	3.44 B	17
		15	☒	6	1 4 3	2.46 B	18
-8.3	Very stiff to hard, gray SILTY CLAY		☒	7	4 10 11	0.82 B	13
		20	☒	8	5 10 10	3.77 B	11
			☒	9	7 10 13	2.95 B	12
		25	☒	10	7 10 13	2.87 B	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			☒	11	6 10 13	3.36 B	11
		30	☒	12	7 17 20	4.25 P	12
-25.3	Very dense, gray SILT						
		35	☒	13	21 37 52	NP	11
				14	50/1	NP	10
-31.4	Boring terminated at 38.60 ft	40					
		45					
		50					

GENERAL NOTES

Begin Drilling 02-20-2004 Complete Drilling 02-20-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling	▽	DRY
At Completion of Drilling	▼	DRY
Time After Drilling		NA
Depth to Water	▽	NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 15 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-05 & SB05-06

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

03/25/2005 11:08:57 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	533
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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Page 1 of 1

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BORING LOG SB 05-07

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.32 ft
North: 1846751.09 ft
East: 1177802.17 ft
Station: 2253+83
Offset: 117.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3-inch thick ASPHALT over 9-inch thick CONCRETE				
6.3	--PAVEMENT--				
	Very loose to medium dense, brown SAND --FILL--	1	8 9 14	NP	8
		2	1 2 4	NP	9
0.3		3	1 1 1	NP	23
	Stiff to very stiff, gray CLAY	4	2 2 3	1.07 B	19
		5	2 3 5	2.05 B	18
-6.7	Very stiff to hard, gray gravelly SILTY CLAY	6	3 7 11	1.97 B	18
		7	5 11 13	> 4.50 P	9
		8	5 11 12	2.30 S	11
		9	8 9 13	2.46 B	13
		10	10 10 13	4.67 B	13
		11	6 8 11	3.36 B	12
		12	12 22 31	> 4.50 P	9
		13	20 34 51	1.75 P	9
		14	21 50/4	> 4.50 P	10
-32.1	Boring terminated at 39.40 ft				

GENERAL NOTES

Begin Drilling 02-19-2003 Complete Drilling 02-20-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger N. Davis Checked by L. Iordache
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 5.50 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

Page 1 of 1

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BORING LOG SB 05-07ext

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: -9.76 ft
North: ft
East: ft
Station: 2253+83
Offset: 100' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	BLIND DRILLED				
-48.3	Very dense, gray gravelly SILTY LOAM, with cobbles	1	50/0	-	
	--POSSIBLE BEDROCK-- --AUGER REFUSAL--				
-53.4	Boring terminated at 43.60 ft	2	50/1	NP	

GENERAL NOTES

Begin Drilling 11-23-2004 Complete Drilling 11-23-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller K&A Logger Y. Shiu Checked by
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 37.00 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 11/24/04

TYLIN INTERNATIONAL

SHEET 16 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOG SB05-07 & SB05-07EXT

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

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03/25/2005 11:08:58 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	534
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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BORING LOG SB 05-08

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.60 ft
North: 1846676.72 ft
East: 1177804.42 ft
Station: 2253+08
Offset: 117.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION
	2-inch thick ASPHALT over 10-inch thick CONCRETE --PAVEMENT--
6.6 6.4	2-inch thick CRUSHED STONE --BASE COURSE--
	Loose, brown SAND --FILL--
3.8	Stiff, gray CLAY
3.1	Very loose, brown SAND
0.6	Stiff to very stiff, gray CLAY
-8.9	Very stiff to hard, gray gravelly SILTY CLAY to SILTY CLAY LOAM
-21.4	Dense to very dense, gray gravelly SILTY LOAM
-31.9 -32.2	--AUGER REFUSAL-- Boring terminated at 39.75 ft

Depth (ft): 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	2 3 5	NP	6
2	3 2 2	1.25 P	18
3	4 1 1	NP	17
4	2 2 3	1.80 B	18
5	1 2 3	1.64 B	19
6	1 4 6	2.95 B	18
7	4 7 11	4.18 B	11
8	4 8 10	3.44 S	12
9	5 8 10	3.03 S	11
10	6 10 13	> 4.50 P	12
11	6 9 12	3.03 S	12
12	11 21 24	NP	10
13	14 25 40	NP	9
14	22 45 50/3	NP	9

GENERAL NOTES

Begin Drilling 02-19-2004 Complete Drilling 02-19-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger N. Davis Checked by L. Iordache
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ 6.00 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

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BORING LOG SB 05-09

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.67 ft
North: 1846602.13 ft
East: 1177807.73 ft
Station: 2252+33
Offset: 118.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION
	2-inch thick ASPHALT over 9-inch CONCRETE --PAVEMENT--
6.8 6.2	Hard, brown and gray CLAY --FILL--
	Medium dense, brown SAND --FILL--
3.7	Very soft to medium stiff, gray CLAY
-2.8	Very stiff, gray gravelly CLAY
-8.5	Very stiff, gray gravelly SILTY CLAY
-14.3	Medium dense, gray SILT
-15.3	Very stiff to hard, gray gravelly SILTY CLAY to SILTY CLAY LOAM, with interbeds of silt
-30.3 -30.4	--AUGER REFUSAL-- Boring terminated at 38.10 ft

Depth (ft): 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	9 8 9	NP	3
2	8 2 2	< 0.25 P	26
3	2 2 2	0.50 P	20
4	2 1 3	0.98 B	19
5	2 2 4	2.38 B	18
6	2 3 6	2.87 B	18
7	2 6 9	3.44 S	12
8	4 7 10	3.03 S	12
9	5 10 14	NP	16
10	6 8 10	3.69 S	12
11	3 6 9	3.85 S	12
12	6 12 21	> 4.50 P	10
13	9 27 37	> 4.50 P	9
14	50/1	NP	

GENERAL NOTES

Begin Drilling 02-19-2004 Complete Drilling 02-19-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger N. Davis Checked by L. Iordache
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 17 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST. EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-08 & SB05-09

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	535
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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BORING LOG SB 05-10

Page 1 of 1

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WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.57 ft
North: 1846526.14 ft
East: 1177810.84 ft
Station: 2251+57
Offset: 119.00' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		3-inch thick ASPHALT over 9-inch thick CONCRETE						
	6.6	--PAVEMENT--						
	6.4	2-inch thick CRUSHED STONE --BASE COURSE--			1	8 10 6	NP	3
		Medium dense, brown, medium SAND --FILL--						
	3.6	Medium stiff to stiff, brown and gray CLAY	5		2	4 2 3	1.38 B	26
					3	2 2 2	0.82 B	19
			10		4	2 3 3	1.56 B	18
					5	2 4 5	1.89 B	18
	-6.6	Hard, gray SILTY CLAY, with interbeds of silt	15		6	2 5 8	> 4.50 P	15
					7	5 7 10	4.92 B	11
			20		8	4 7 7	5.49 B	12
					9	8 10 12	5.90 B	12
			25		10	6 10 12	5.25 S	12

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
					11	7 9 10	6.48 B	12
			30		12	8 12 19	5.33 S	11
	-24.4	Very dense, gray SILTY LOAM			13	31 70 50/0	NP	9
	-26.9	Boring terminated at 34.50 ft	35					
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling 02-19-2004 Complete Drilling 02-19-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&D Logger S. Janowski Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

BORING LOG SB 05-10ext

Page 1 of 1

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WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: -9.76 ft
North: ft
East: ft
Station: 2251+57
Offset: 100' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		BLIND DRILLING						
			5					
			10					
			15					
			20					
			25					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	-35.8	Hard, gray gravelly SILTY CLAY			1	55 50/2	> 4.50 P	
	-37.8	Very dense, gravelly SILTY LOAM			2	38 100/6	NP	
			30					
					3	100/1	NP	
		Run 1: 33.5-38.5 feet bgs Recovery =13 % RQD = 0% --GRAVEL and SILT RECOVERED--	35		4	C O R E	--	
	-48.3	Run 2: 38.5-43.5 feet bgs Recovery = 26% RQD = 21%	40		5	C O R E	--	
	-53.3	Run 3: 43.5-48 feet bgs Recovery = 44% RQD = 39%	45		6	C O R E	--	
	-57.8	Boring terminated at 48.00 ft	50					

GENERAL NOTES

Begin Drilling 11-23-2004 Complete Drilling 11-23-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger H. Suhail Checked by
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ --
At Completion of Drilling ▼ --
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 11/24/04

TYLIN INTERNATIONAL

SHEET 18 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-10 & SB05-10EXT

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

03/25/2005 11:08:59 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	536
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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Page 1 of 1

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BORING LOG SB 05-11

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.47 ft
North: 1846450.08 ft
East: 1177812.51 ft
Station: 2250+81
Offset: 119.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
6.6	2-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--					
6.0	7-inch thick CRUSHED STONE --BASE COURSE--		1	5 10 10	NP	5
	Loose to medium dense, brown SAND --FILL--	5	2	4 4 4	NP	2
2.0	Medium stiff to hard, gray CLAY		3	2 1 2	0.57 B	17
		10	4	1 3 4	1.72 B	18
			5	2 6 11	4.02 B	18
		15	6	3 6 15	3.69 B	18
-7.0	Hard, gray SILTY CLAY, with interbeds of silt					
			7	8 13 15	5.00 S	11
		20	8	6 9 12	4.92 B	11
			9	7 11 15	6.31 S	11
		25	10	8 9 13	6.31 S	11

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	7 9 15	5.99 S	12
-21.2	Very dense, gray SILTY LOAM	30	12	17 23 35	NP	10
-22.3	Hard, gray gravelly SILTY CLAY LOAM					
-24.5	Very dense, gray SILTY LOAM		13	29 50/5	NP	9
-26.9	Boring terminated at 34.40 ft	35				
		40				
		45				
		50				

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

GENERAL NOTES

Begin Drilling 02-19-2004 Complete Drilling 02-19-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&D Logger S. Janowski Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Page 1 of 1

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BORING LOG SB 05-12

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.66 ft
North: 1846373.25 ft
East: 1177823.14 ft
Station: 2250+04
Offset: 127.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
6.8	3-inch thick ASPHALT over 8-inch thick CONCRETE --PAVEMENT--					
	Very stiff, black and brown SILTY CLAY LOAM --FILL--		1	5 3 5	2.05 B	16
4.7	Medium stiff to very stiff, brown and gray CLAY	5	2	4 4 5	0.90 B	27
			3	2 4 3	1.56 B	19
		10	4	2 4 4	2.21 B	19
			5	3 4 6	2.13 B	18
-5.3	Hard, gray gravelly SILTY CLAY LOAM					
-6.3	Medium dense, gray SANDY LOAM	15	6	3 12 15	> 4.50 P	11
-7.8	Hard, gray gravelly SILTY CLAY		7	7 13 18	5.82 S	10
-9.3	Dense, gray gravelly SAND					
-9.7	Hard, gray gravelly SILTY CLAY to SILTY CLAY LOAM	20	8	5 10 12	4.51 B	11
			9	5 12 22	4.10 S	11
		25	10	14 15 16	> 4.50 P	10

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	7 10 15	5.74 S	12
		30	12	15 24 25	6.15 S	10
-24.8	Very dense, gray SILTY LOAM		13	39 28 50	NP	7
-27.3	--AUGER REFUSAL--	35				
	Boring terminated at 35.00 ft					
		40				
		45				
		50				

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

GENERAL NOTES

Begin Drilling 02-20-2004 Complete Drilling 02-20-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&D Logger J. Kasnick Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

SHEET 19 OF 22

T·Y·LIN INTERNATIONAL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-11 & SB05-12

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	537
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

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BORING LOG SB 05-12ext

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: -9.76 ft
North: ft
East: ft
Station: 2250+04
Offset: 100' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	BLIND DRILLING					
		5				
		10				
		15				
		20				
-32.8						
	Run 1: 23-28 feet bgs Recovery = 30% RQD = 0% --GRAVEL and SILT	25		CORE		

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	RECOVERED--		1			
-37.8						
	Run 1: 28-33 feet bgs Recovery = 50% RQD = 0% --GRAVEL and SILT	30		CORE		
	RECOVERED--		2			
-42.8						
	Very dense, gray medium SAND					
-44.0						
	Very dense, gray SILT	35	3	58 62 73	NP	
-48.6			4	100/4	NP	
	Boring terminated at 38.80 ft	40				
		45				
		50				

WANGENGINC 4140701.GPJ WANGENG.GDT 11/24/04

GENERAL NOTES

Begin Drilling 11-23-2004 Complete Drilling 11-23-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger H. Suhail Checked by
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ --
At Completion of Drilling ▼ --
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG SB 05-13A

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.62 ft
North: 1846299.50 ft
East: 1177817.69 ft
Station: 2249+31
Offset: 119.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3-inch thick ASPHALT over					
6.7	8-inch thick CONCRETE					
	--FILL--					
	Stiff, black and gray SILTY CLAY		1	3 4 4	1.89 B	28
	--FILL--					
3.9						
	Stiff, brown and gray CLAY	5	2	1 2 3	1.15 B	24
			3	1 1 3	1.31 B	22
-0.4						
	Soft, gray CLAY	10	4	1 2 3	0.41 B	21
-2.9						
	Very stiff, gray SILTY CLAY to SILTY CLAY LOAM		5	4 6 13	3.44 B	18
-6.4						
	Dense, gray GRAVELLY SANDY LOAM	15	6	4 13 20	NP	6
-7.9						
	Very stiff to hard, gray gravelly SILTY CLAY		7	6 7 14	3.94 S	13
		20	8	7 9 12	2.62 S	12
			9	7 8 11	5.90 B	13
			10	5 13 15	5.33 S	13
-16.9						
	Medium dense, gray SILTY	25				

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-17.9	LOAM					
	Hard, gray SILTY CLAY to SILTY CLAY LOAM		11	7 12 16	5.74 S	10
-21.4						
	Very dense, gray SILTY LOAM	30	12	19 34 42	NP	8
-22.9						
	Hard, gray gravelly SILTY CLAY		13	26 36 50	4.84 S	10
			14	19 50/4	> 4.50 P	9
-26.7						
	Boring terminated at 34.30 ft	35				
		40				
		45				
		50				

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

GENERAL NOTES

Begin Drilling 02-20-2003 Complete Drilling 02-20-2003
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&D Logger J. Kasnick Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

TYLIN INTERNATIONAL

SHEET 20 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-12EXT & SB05-13A

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005

DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

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03/25/2005 11:09:00 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	538
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (1516.1, 1717 & 1818) R-8

62694

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Page 1 of 1

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BORING LOG SB 05-14A

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 6.98 ft
North: 1846227.54 ft
East: 1177816.71 ft
Station: 2248+59
Offset: 116.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
6.0	2-inch thick ASPHALT over 10-inch thick CONCRETE --PAVEMENT--					
5.5	6-inch thick CRUSHED STONE --BASE COURSE--		1	5 5 5	NP	5
1.5	Loose to medium dense, brown SAND --FILL--	5	2	8 2 2	NP	6
	Stiff to hard, gray CLAY		3	2 1 2	1.07 B	21
-4.7		10	4	2 2 2	1.31 B	19
-5.7	Medium dense, gray SILT		5	2 5 13	4.35 B	16
-6.2	Medium dense, gray SAND ▽					
	Medium dense, gray SILT to SILTY LOAM	15	6	3 6 7	NP	24
-11.0			7	3 9 10	NP	12
	Hard, gray SILTY CLAY	20	8	4 7 10	4.43 B	12
-16.0			9	5 11 11	5.25 B	12
	Dense to very dense, gravelly SILT	25	10	5 17 25	NP	16

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	8 14 23	NP	11
		30	12	13 26 38	NP	10
-26.6	--AUGER REFUSAL--		13	100/1	NP	
	Boring terminated at 33.60 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-26-2004 Complete Drilling 02-26-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ 13.00 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

Page 1 of 1

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BORING LOG SB 05-15

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 6.37 ft
North: 1846149.58 ft
East: 1177790.57 ft
Station: 2247+82
Offset: 88.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
5.9	6-inch thick, black and brown SILTY CLAY LOAM --TOPSOIL--					
4.9	Very stiff, black and brown SILTY CLAY		1	2 3 4	2.71 B	21
	Stiff to very stiff, brown and gray CLAY	5	2	2 2 4	2.13 B	19
			3	1 3 7	1.31 B	21
-4.1		10	4	1 2 3	1.48 B	18
-6.6	Medium dense, gray SILT		5	6 10 12	NP	19
-8.3	Very stiff, gray SILTY CLAY LOAM, with interbeds of silt	15	6	4 8 10	2.62 S	11
-9.1	Medium dense, gray GRAVELLY SAND					
	Very stiff, gray gravelly SILTY CLAY		7	5 8 11	3.85 S	12
		20	8	4 8 12	3.61 B	11
-15.6			9	11 20 24	2.30 S	10
-16.6	Dense, gray gravelly LOAM					
	Hard, gray gravelly SILTY CLAY to SILTY CLAY LOAM	25	10	7 10 15	4.43 S	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-19.8						
	Very dense, gray gravelly SILT		11	14 26 37	NP	9
-23.6		30	12	25 44 70	NP	8
	Boring terminated at 30.00 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-18-2004 Complete Drilling 02-18-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&D Logger J. Kasnick Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

T·Y·LIN INTERNATIONAL

SHEET 21 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOGS SB05-14A & SB05-15

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

03/25/2005 11:09:00 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	539

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8 62694

Page 1 of 1

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BORING LOG SB 05-16

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 5.34 ft
North: 1846076.99 ft
East: 1177791.56 ft
Station: 2247+09
Offset: 87.0' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		2-inch thick ASPHALT over 10-inch thick CONCRETE --PAVEMENT--						
	4.3	Very stiff, brown and gray, CLAY --FILL--			1	4 3 4	2.38 B	20
	2.3	Stiff to very stiff, brown and gray CLAY	5		2	2 2 3	1.31 B	22
					3	2 3 5	2.13 B	20
	-2.1	Medium dense, gray GRAVELLY SANDY LOAM						
	-3.4	Stiff, gray gravelly CLAY to SILTY CLAY	10		4	2 3 7	1.89 B	18
	-6.0	Medium dense, gray SILT, with interbeds of silty clay			5	7 12 15	NP	23
	-7.9	Medium dense, gray GRAVELLY SAND	∇		6	4 6 9	NP	16
	-9.2	Hard, gray SILTY CLAY	15					
	-9.7	Medium dense, gray GRAVELLY SAND						
	-11.2	Very stiff to hard, gray gravelly SILTY CLAY to SILTY CLAY LOAM			7	5 11 13	4.92 B	15
			▼ 20		8	7 9 14	4.67 B	14
					9	9 12 13	> 4.50 P	11
			25		10	8 11 12	3.20 S	12

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	-20.2	Very dense, gray gravelly SILTY LOAM			11	12 27 39	NP	10
			30		12	27 50/5	NP	9
	-25.2	WEATHERED BEDROCK --AUGER REFUSAL--						
	-28.2	Boring terminated at 33.50 ft	35		13	50/0		
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling 02-18-2004 Complete Drilling 02-18-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&L Logger N. Davis Checked by L. Iordache
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ 13.60 ft
At Completion of Drilling ▼ 19.00 ft
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

SHEET 22 OF 22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 5
BORING LOG SB05-16

S.N. 016-W955
SCALE: N.T.S.
DATE: MARCH 18, 2005

DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

TYLIN INTERNATIONAL

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03/25/2005 11:09:01 AM

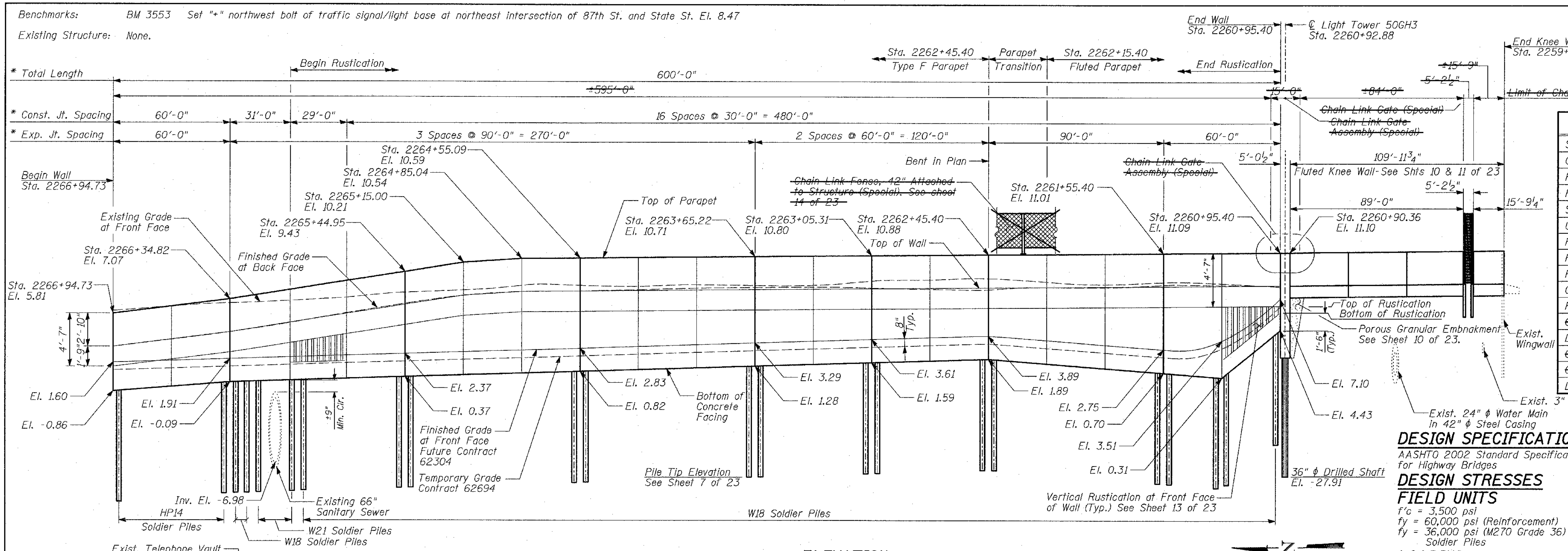
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	540
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

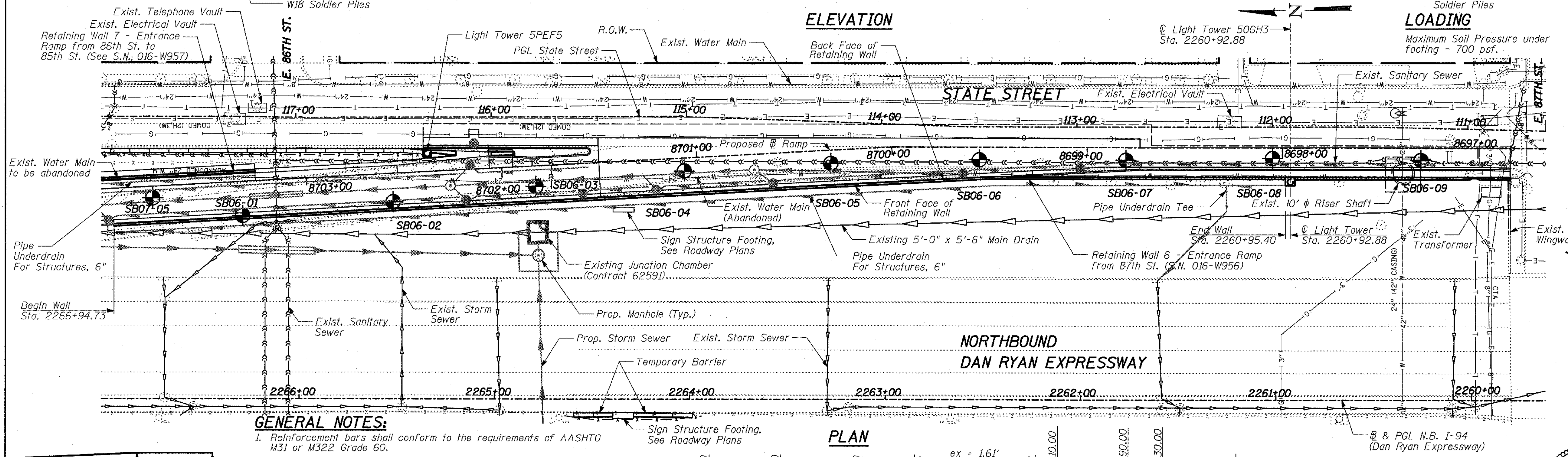
62694

Benchmarks: BM 3553 Set "+" northwest bolt of traffic signal/light base at northeast intersection of 87th St. and State St. El. 8.47

Existing Structure: None.



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	535
Concrete Structures	CU YD	270
Protective Coat	SQ YD	892
Rustication Finish	SQ FT	2,101
Stud Shear Connectors	EACH	682
Untreated Timber Lagging	SQ FT	2,928
Furnishing Soldier Piles (HP Section)	FOOT	199
Furnishing Soldier Piles (W Section)	FOOT	2,264
Reinforcement Bars, Epoxy Coated	POUND	39,090
Geocomposite Wall Drain	SQ YD	359
Pipe Underdrains for Structures, 6"	FOOT	600
~~Chain Link Gates (Special)~~	~~EACH~~	~~1~~
Drilling and Setting Soldier Piles (in Soil)	CU FT	12,953
~~Chain Link Fence, 42" Attached to Structure (Special)~~	~~FOOT~~	~~695~~
~~Chain Link Gate Assembly (Special)~~	~~EACH~~	~~1~~
Drilled Shaft in Soil 36"	FOOT	30

DESIGN SPECIFICATION

AASHTO 2002 Standard Specifications for Highway Bridges

DESIGN STRESSES

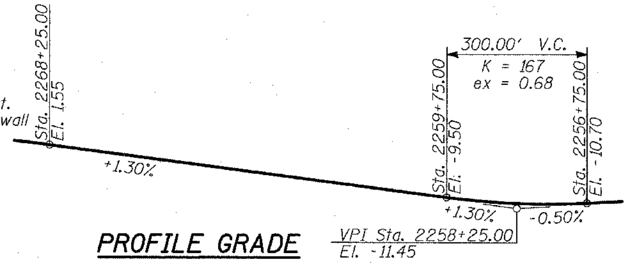
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36) Soldier Piles

LOADING

Maximum Soil Pressure under footing = 700 psf.

INDEX OF SHEETS



PROFILE GRADE

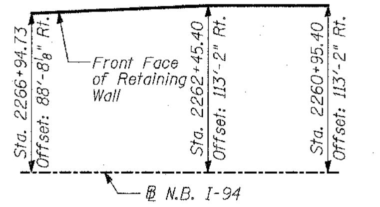
(N.B. I-94)

LEGEND

- ● Boring Location
- * Measured along Front Face of Wall.

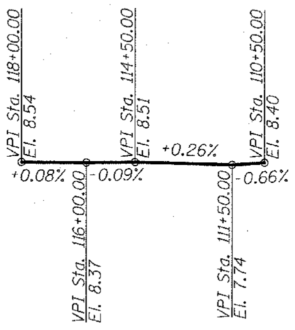
GENERAL NOTES:

1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
3. The soldier piles shall be cleaned and given one shop coat of Inorganic Zinc-Rich primer.
4. All exposed concrete edges shall be chamfered 3/4" except as noted.
5. Protective coat shall be applied to exposed surfaces of the concrete facing.
6. Existing utilities in conflict with soldier pile wall construction shall be abandoned or relocated according to directions given on the roadway plans.
7. All construction joints shall be bonded.
8. All elevations shown are based on the Chicago City Datum of 0.00, which is 579.19 feet above mean tide New York. (NAVD 88)
9. The wall shall be backfilled (where applicable) prior to placing the concrete facing.
10. The Contractor is responsible to coordinate all electrical crossings with this Contract and with Contract 62583.



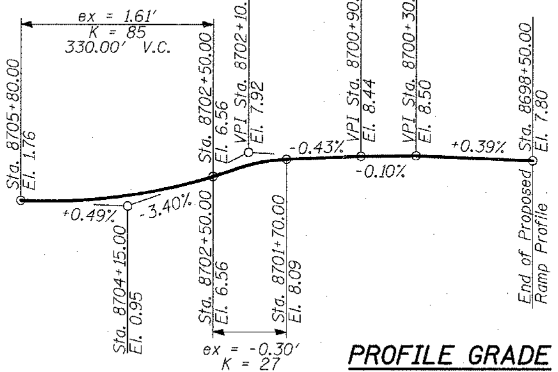
OFFSET SKETCH

TYLIN INTERNATIONAL



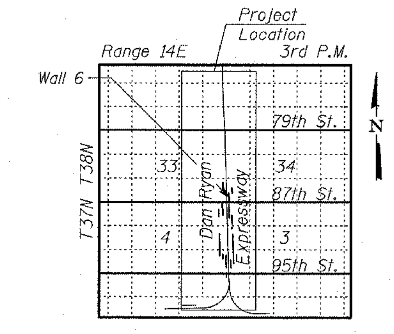
PROFILE GRADE

(State Street)



PROFILE GRADE

(Ramp)



LOCATION SKETCH

Signed Phillip D. Frey
Phillip D. Frey, S.E. Il. Lic. No. 081-004826 Expires 11-30-2006.
For drawings 1 thru 23 of 23

Date 3/18/05

PHILLIP D. FREY 081-004826 CHICAGO, ILLINOIS

SHEET 1 OF 23

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6 - GENERAL PLAN
STA. 2266+94.73 TO STA. 2260+95.40

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

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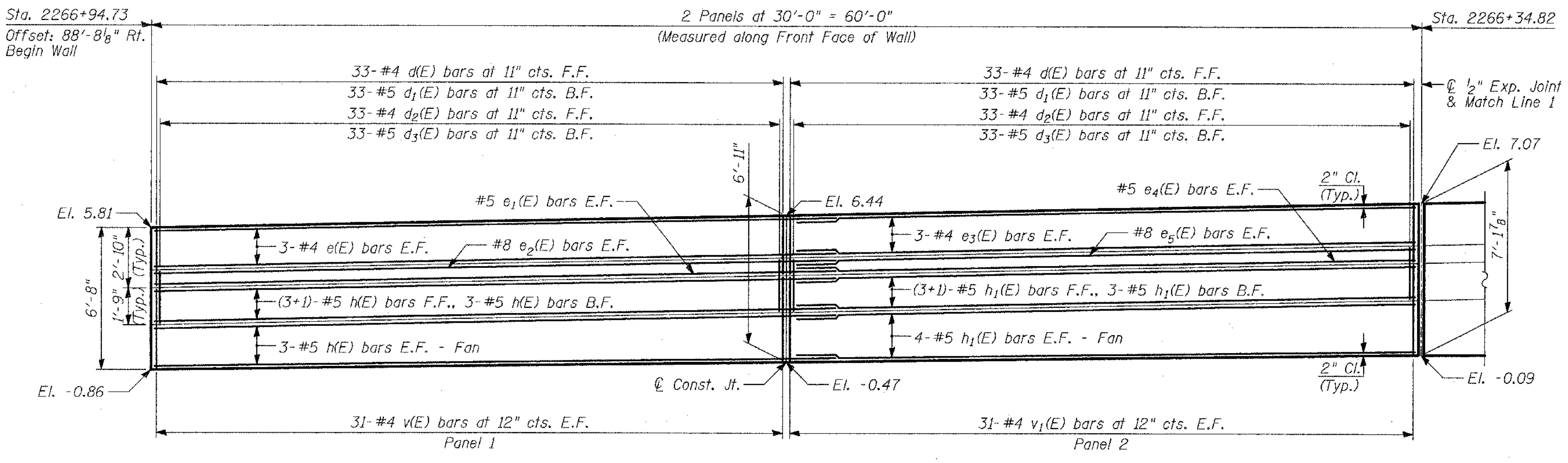
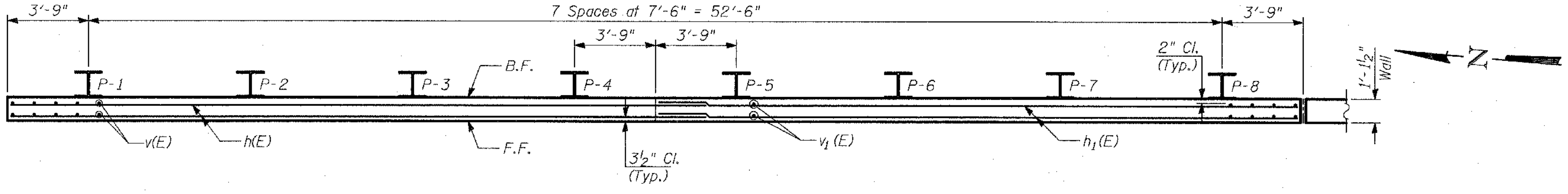
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	541
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

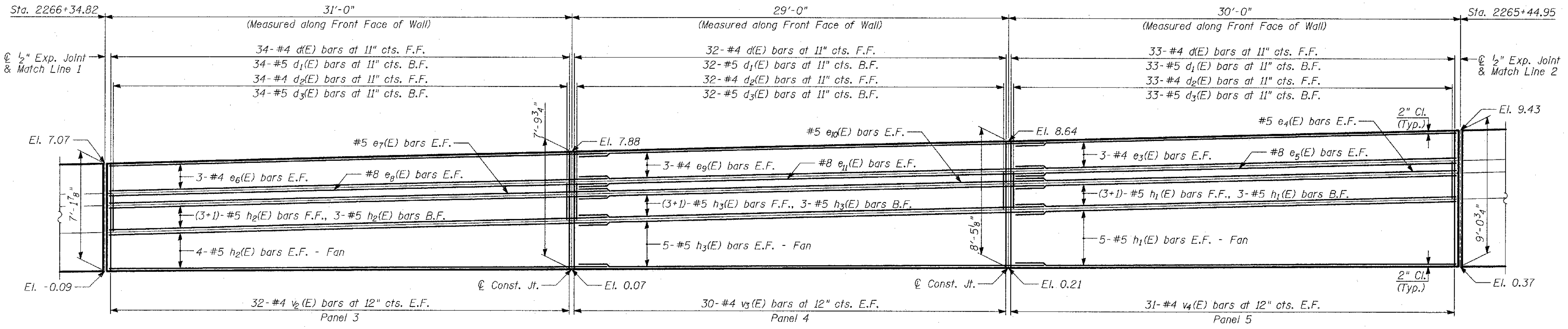
* (1516.1, 1717 & 1818) R-8 62694



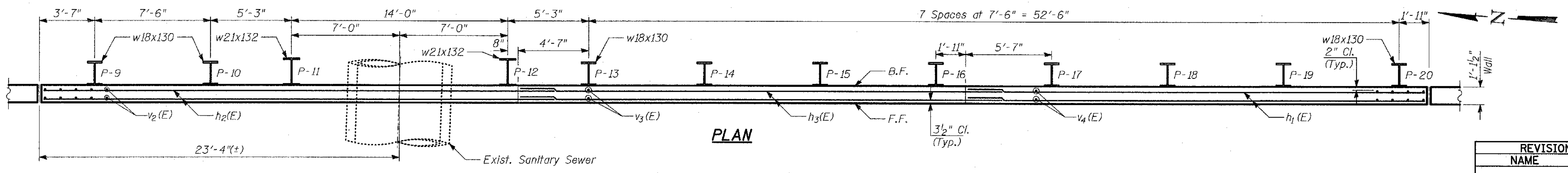
ELEVATION



PLAN



ELEVATION



PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 6 thru 18 of 23.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 7 of 23.

SHEET 2 OF 23

TYLININTERNATIONAL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

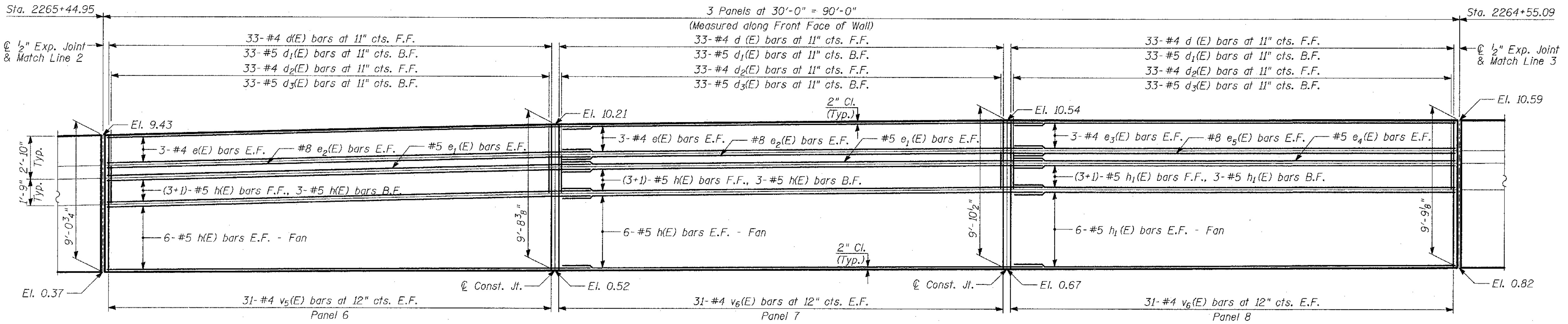
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6 - PLAN AND ELEVATION
STA. 2266+94.73 TO STA. 2265+44.95

S.N. 016-W956 DESIGNED BY: MI, MAF
SCALE: N.T.S. DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

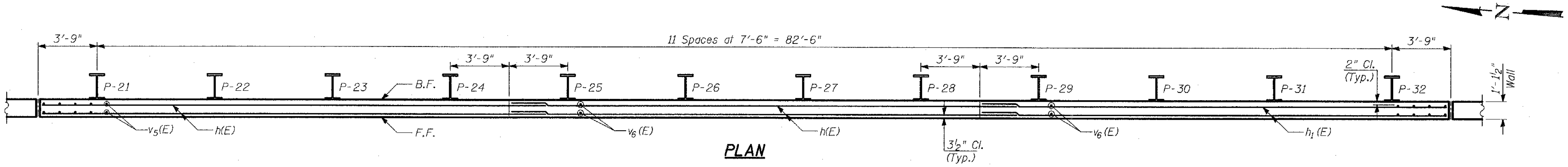
03/27/2005 02:30:18 PM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	542
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

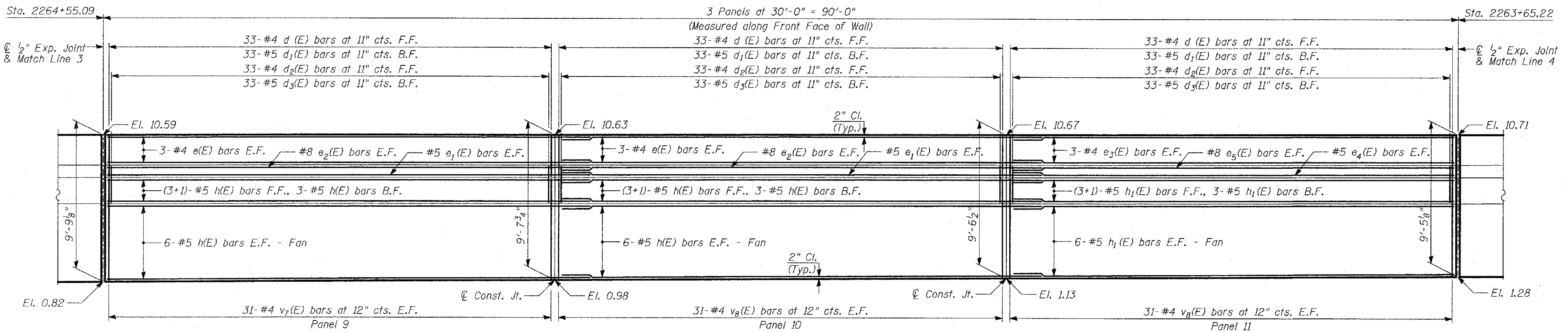
• (1516.1, 1717 & 1818) R-8 62694



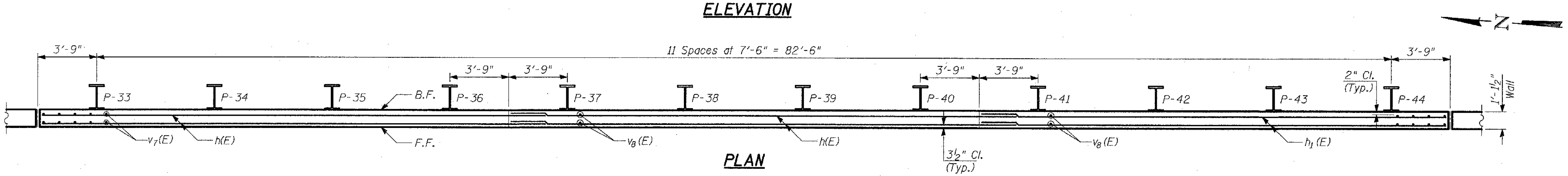
ELEVATION



PLAN



ELEVATION



PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 6 thru 18 of 23.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 7 of 23.

SHEET 3 OF 23

REVISIONS	
NAME	DATE

TYLININTERNATIONAL

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
NORTHBOUND ENTRANCE RAMP FROM 87TH ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6 - PLAN AND ELEVATION
STA. 2265+44.95 TO STA. 2263+65.22

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

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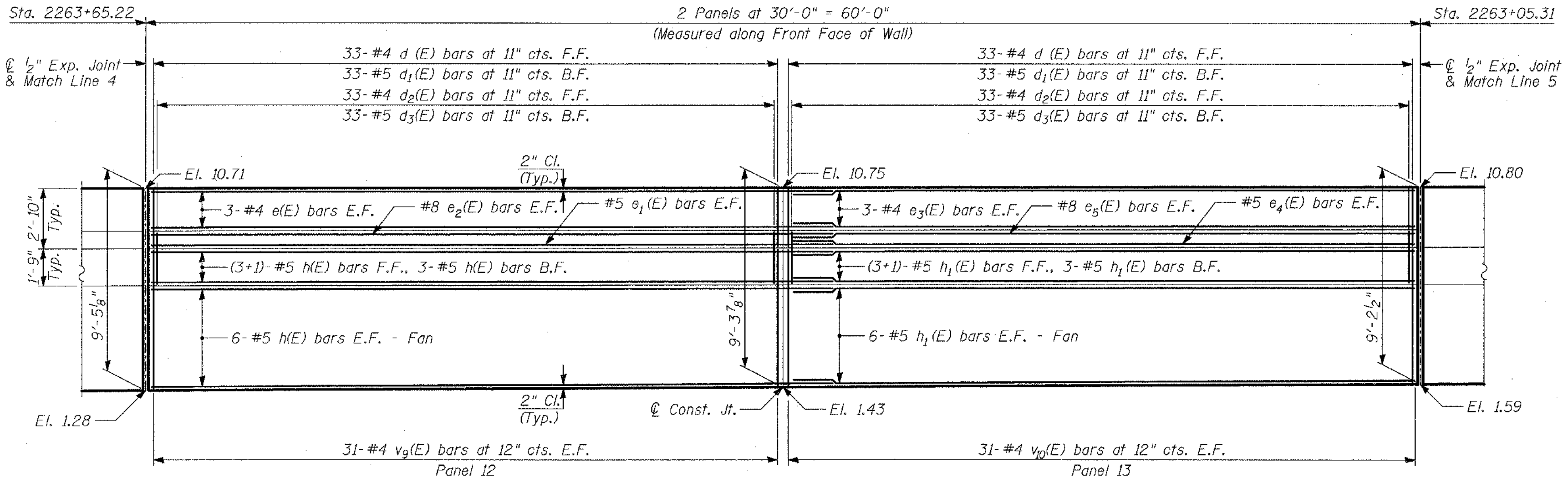
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	543

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
• (1516.1, 1717 & 1818) R-8		62694



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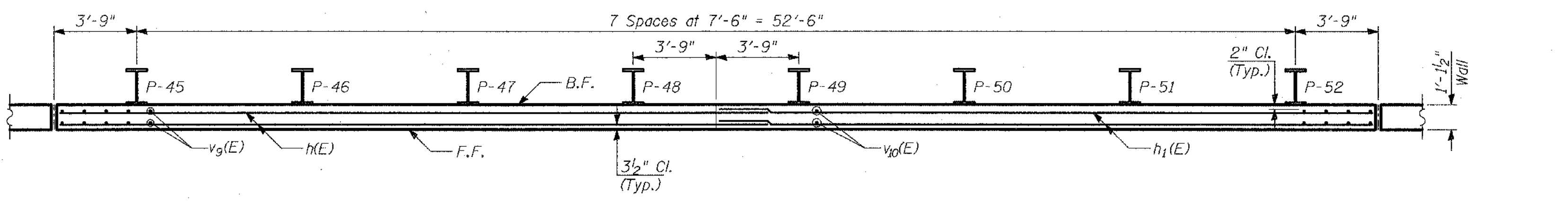
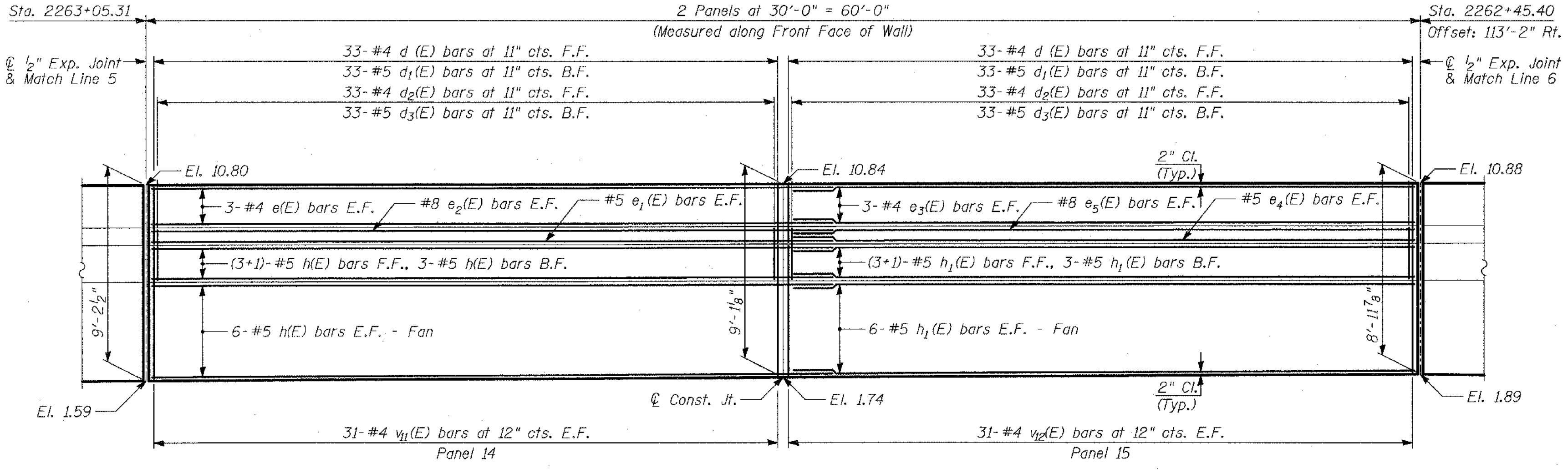


PLAN



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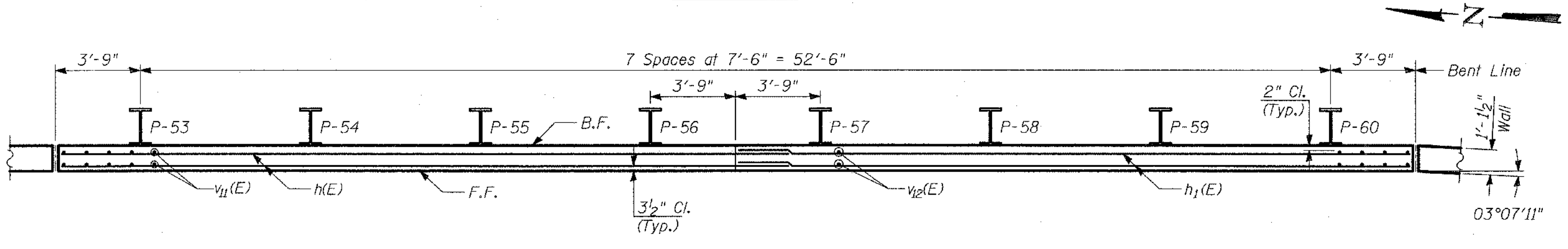

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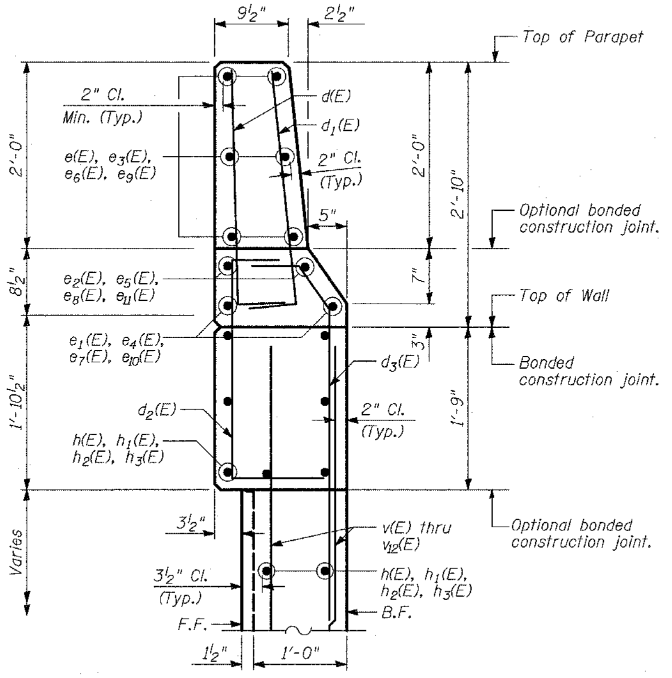


TYPE F BARRIER DETAIL

(Sta. 2266+94.73 to Sta. 2262+45.40)

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 6 thru 18 of 23.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 7 of 23.

SHEET 4 OF 23

REVISIONS	
NAME	DATE

TY·LIN INTERNATIONAL

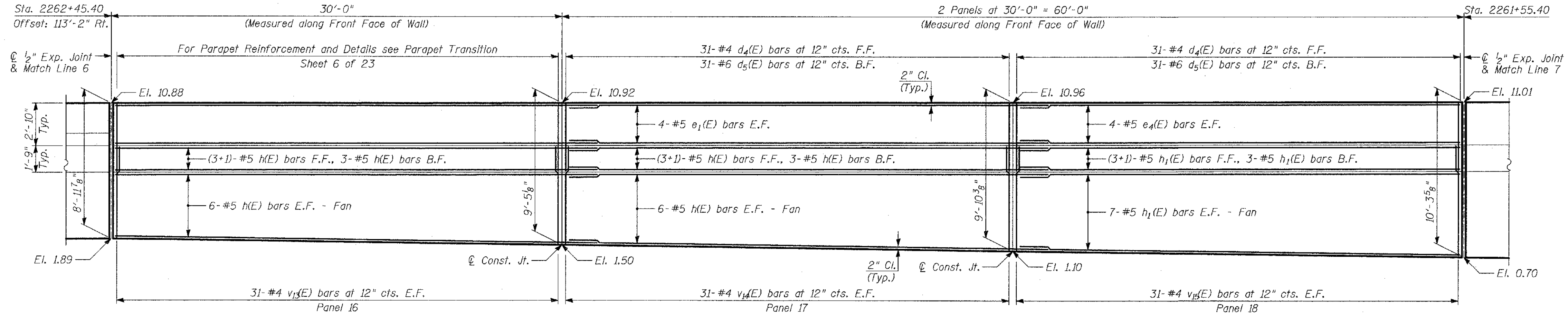
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6 - PLAN AND ELEVATION
STA. 2263+65.22 TO STA. 2262+45.40

S.N. 016-W956
DESIGNED BY: MI, MAF
SCALE: N.T.S.
DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

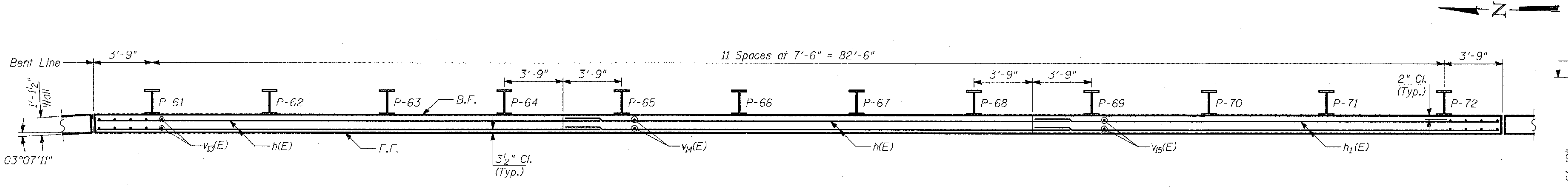
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	544
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

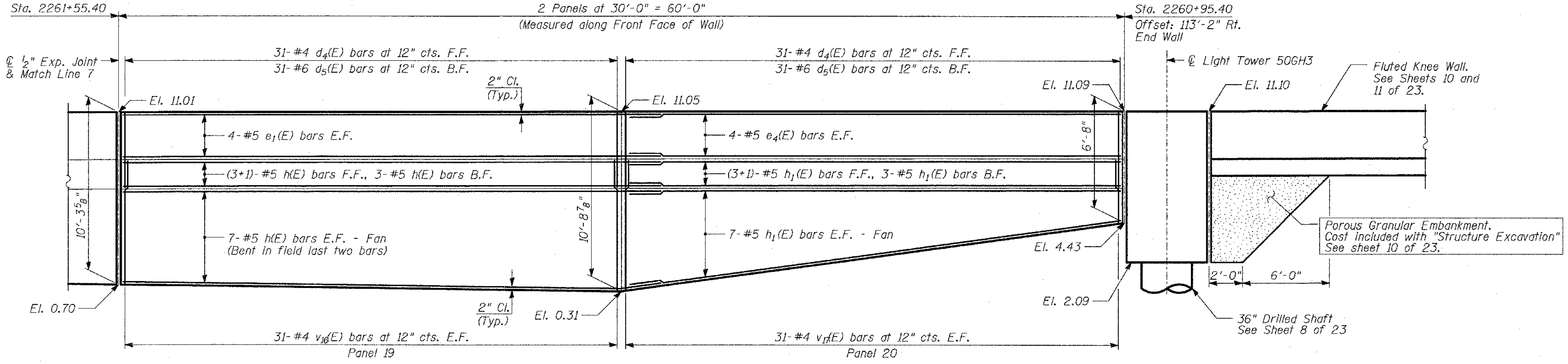
62694



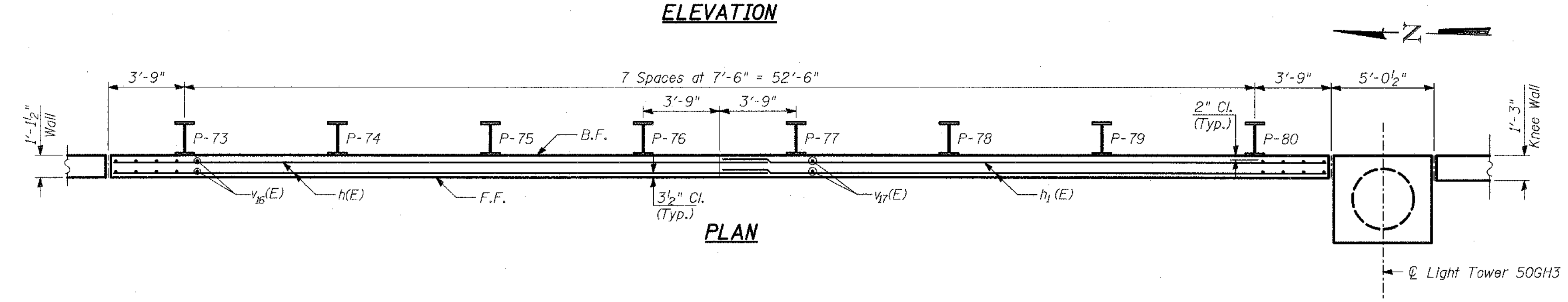
ELEVATION



PLAN



ELEVATION



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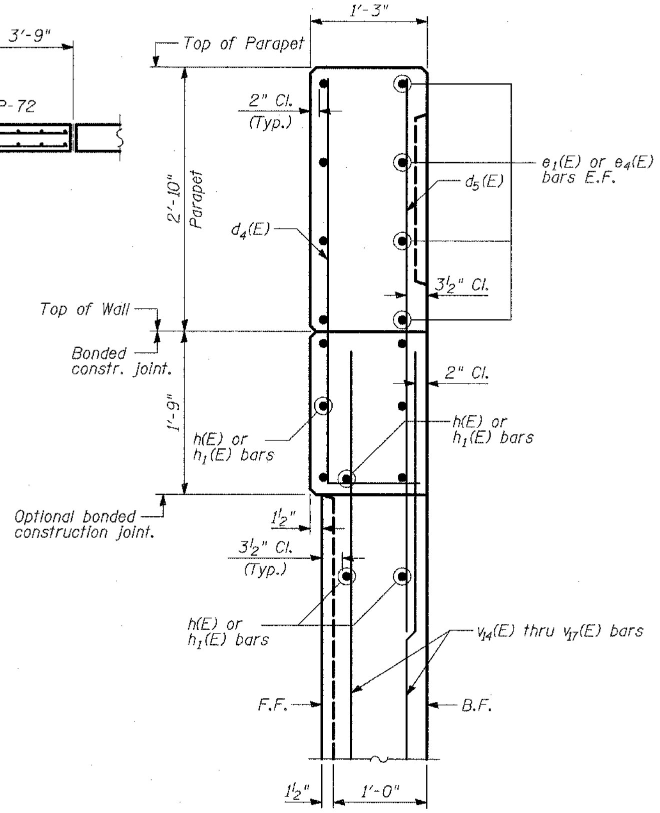

FLUTED PARAPET DETAIL

(Sta. 2262+15.40 to Sta. 2260+95.40)

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 6 thru 18 of 23.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 7 of 23.

SHEET 5 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6 - PLAN AND ELEVATION
STA. 2262+45.40 TO STA. 2260.95.40

S.N. 016-W956
DESIGNED BY: MI, MAF
SCALE: N.T.S.
DRAWN BY: DJR, MAF
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

TYLININTERNATIONAL

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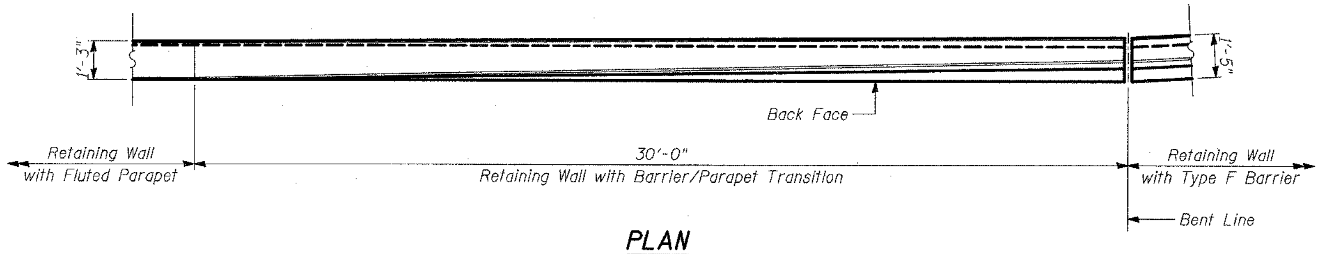
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	545
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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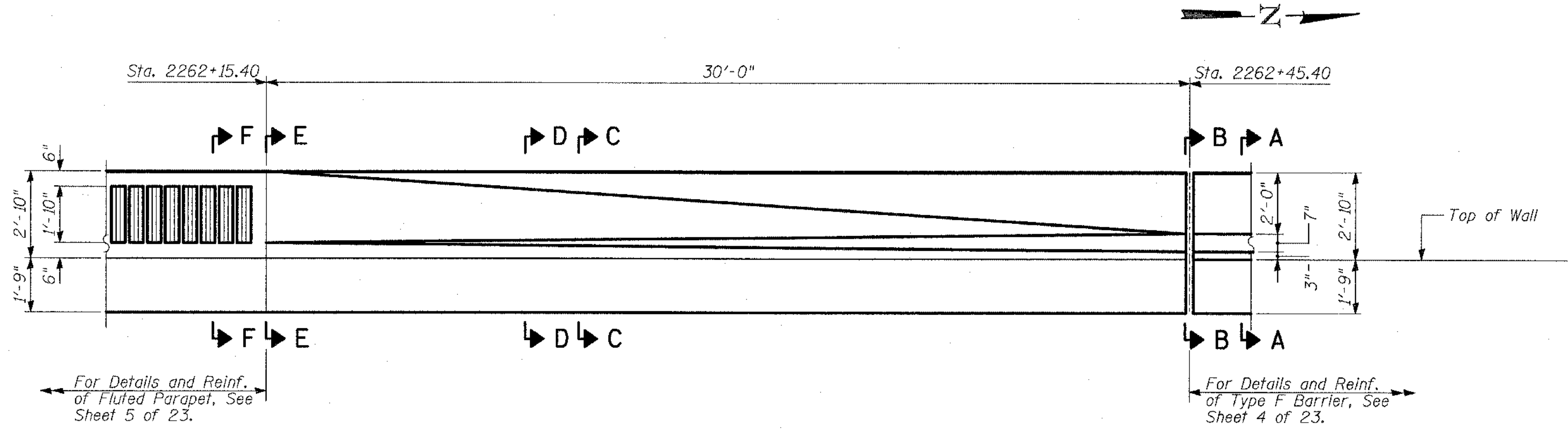
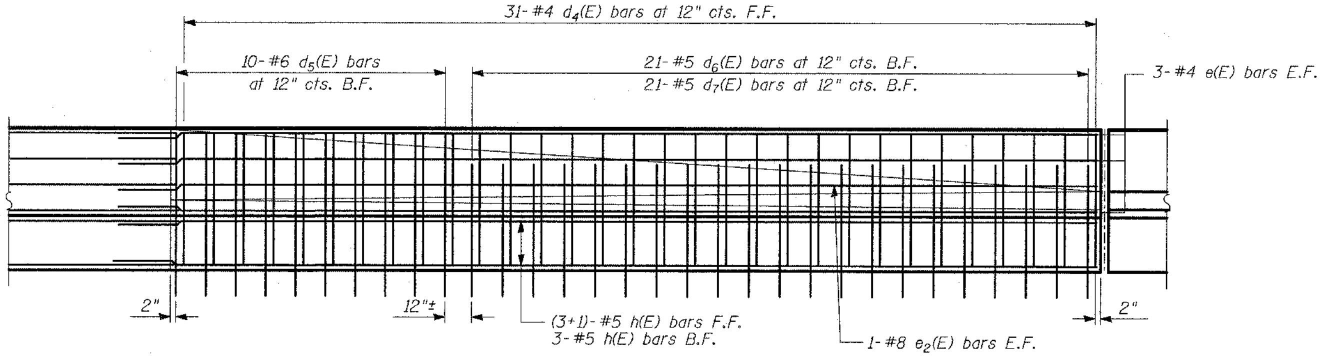


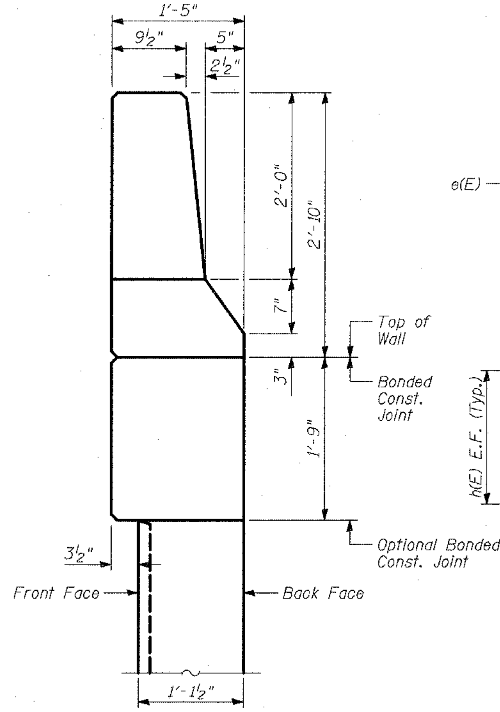
BACK FACE ELEVATION - TRANSITION - MODIFIED TYPE F BARRIER TO FLUTED PARAPET - CONCRETE DIMENSIONS

(From Sta. 2262+15.40 to Sta. 2262+45.40)

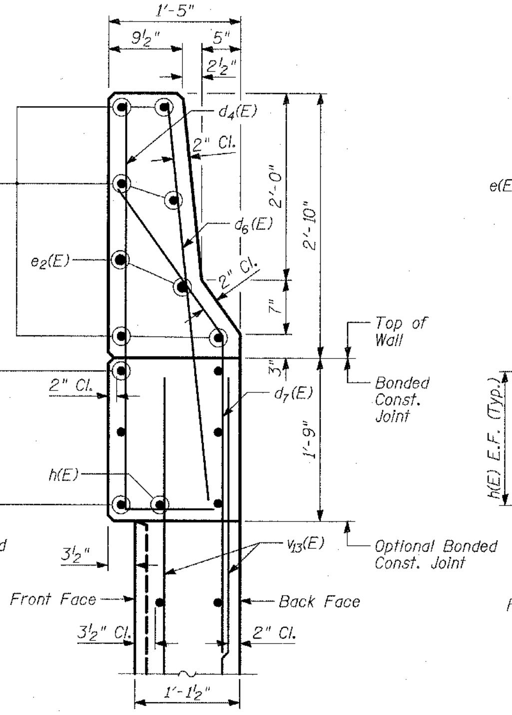


BACK FACE ELEVATION - TRANSITION - MODIFIED TYPE F BARRIER TO FLUTED PARAPET - REINFORCEMENT

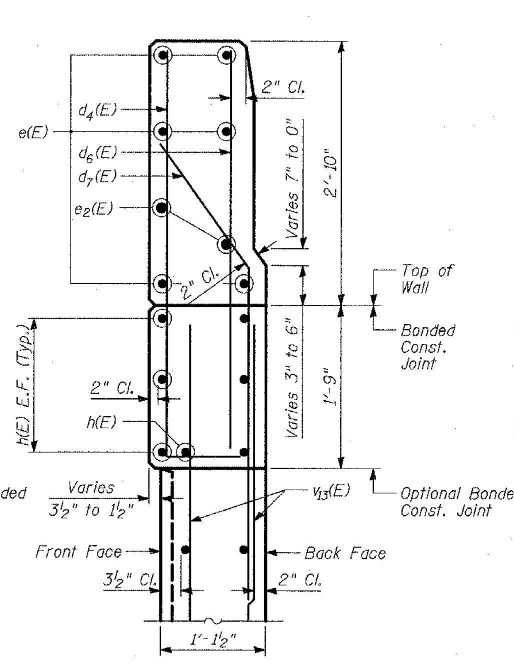
(From Sta. 2262+15.40 to Sta. 2262+45.40)



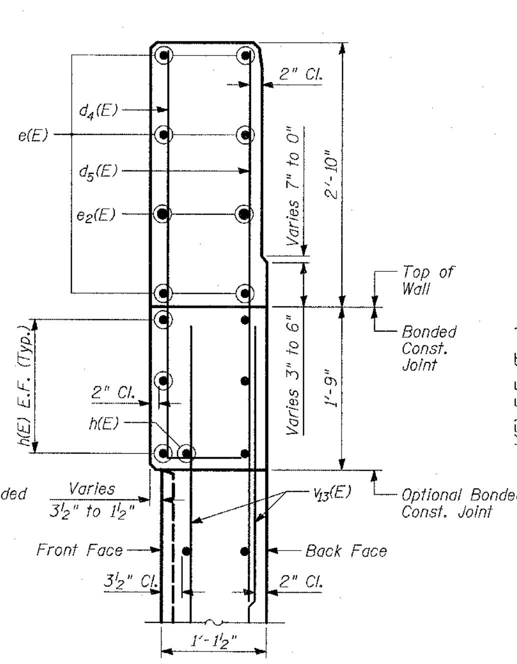
SECTION A-A



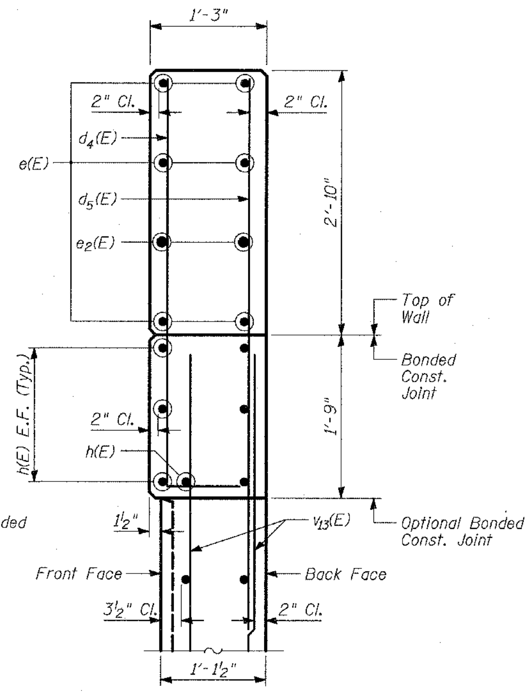
SECTION B-B



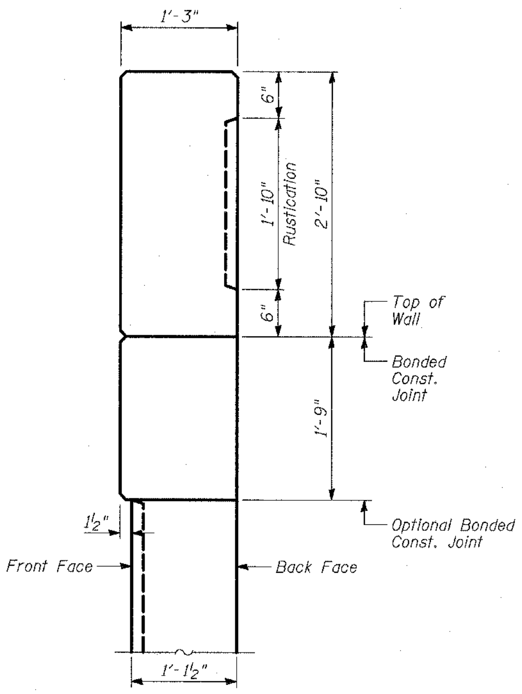
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

SHEET 6 OF 23

T·Y·LIN INTERNATIONAL

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this sheet with Sheets 4, 5 and 7 of 23.
5. For Lap Splices, see Sheet 7 of 23.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
PARAPET TRANSITION

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

03/27/2005 02:30:20 PM

PILE LAYOUT

Pile	Station at Working Point	Top of Parapet El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-1	2266+91.05	5.89	1.72	-0.81	HP14x117	-22.86	24'-7"
P-2	2266+83.56	6.05	1.88	-0.71	↑	-22.79	24'-8"
P-3	2266+76.07	6.20	2.04	-0.62		-22.63	24'-8"
P-4	2266+68.58	6.36	2.19	-0.52		-22.56	24'-9"
P-5	2266+61.09	6.52	2.35	-0.43		-22.48	24'-10"
P-6	2266+53.60	6.67	2.51	-0.33		-22.41	24'-11"
P-7	2266+46.12	6.83	2.66	-0.23	↓	-22.25	24'-11"
P-8	2266+38.63	6.99	2.82	-0.14	HP14x117	-22.18	25'-0"
P-9	2266+31.32	7.16	2.99	-0.07	W18x130	-25.09	28'-1"
P-10	2266+23.83	7.36	3.19	-0.03	W18x130	-25.06	28'-3"
P-11	2266+18.59	7.49	3.33	-0.01	W21x132	-27.09	30'-5"
P-12	2266+04.61	7.86	3.69	0.06	W21x132	-26.97	30'-8"
P-13	2265+99.37	8.00	3.83	0.09	W18x130	-24.92	28'-9"
P-14	2265+91.88	8.20	4.03	0.13	↑	-24.89	28'-11"
P-15	2265+84.39	8.39	4.23	0.17		-24.86	29'-1"
P-16	2265+76.90	8.59	4.42	0.20		-24.83	29'-3"
P-17	2265+69.41	8.79	4.62	0.24		-24.80	29'-5"
P-18	2265+61.92	8.98	4.82	0.28		-24.77	29'-7"
P-19	2265+54.43	9.18	5.01	0.32		-24.74	29'-9"
P-20	2265+46.94	9.38	5.21	0.36		-24.71	29'-11"
P-21	2265+41.27	9.53	5.36	0.39		-26.64	32'-0"
P-22	2265+33.78	9.72	5.56	0.42		-26.61	32'-2"
P-23	2265+26.29	9.92	5.75	0.46		-26.58	32'-4"
P-24	2265+18.80	10.12	5.95	0.50		-26.55	32'-6"
P-25	2265+11.32	10.26	6.09	0.54		-26.49	32'-7"
P-26	2265+03.83	10.34	6.17	0.58		-26.50	32'-8"
P-27	2264+96.34	10.42	6.25	0.61		-26.41	32'-8"
P-28	2264+88.85	10.50	6.34	0.65		-26.41	32'-9"
P-29	2264+81.36	10.55	6.38	0.69		-26.37	32'-9"
P-30	2264+73.87	10.56	6.39	0.73		-26.27	32'-8"
P-31	2264+66.38	10.57	6.40	0.77		-26.26	32'-8"
P-32	2264+58.89	10.58	6.41	0.81		-26.25	32'-8"
P-33	2264+51.40	10.59	6.42	0.84		-26.16	32'-7"
P-34	2264+43.92	10.60	6.43	0.88		-26.15	32'-7"
P-35	2264+36.43	10.61	6.44	0.92		-26.14	32'-7"
P-36	2264+28.94	10.62	6.46	0.96		-26.04	32'-6"
P-37	2264+21.45	10.63	6.47	1.00		-26.03	32'-6"
P-38	2264+13.96	10.64	6.48	1.03		-26.02	32'-6"
P-39	2264+06.47	10.65	6.49	1.07		-25.93	32'-5"
P-40	2263+98.98	10.66	6.50	1.11		-25.92	32'-5"
P-41	2263+91.49	10.67	6.51	1.15		-25.91	32'-5"
P-42	2263+84.00	10.68	6.52	1.19		-25.82	32'-4"
P-43	2263+76.52	10.70	6.53	1.22		-25.80	32'-4"
P-44	2263+69.03	10.71	6.54	1.26		-25.79	32'-4"
P-45	2263+61.54	10.72	6.55	1.30		-25.70	32'-3"
P-46	2263+54.05	10.73	6.56	1.34		-25.69	32'-3"
P-47	2263+46.56	10.74	6.57	1.38		-25.68	32'-3"
P-48	2263+39.07	10.75	6.58	1.42		-25.59	32'-2"
P-49	2263+31.58	10.76	6.59	1.45		-25.58	32'-2"
P-50	2263+24.09	10.77	6.60	1.49		-25.56	32'-2"
P-51	2263+16.60	10.78	6.61	1.53		-25.47	32'-1"
P-52	2263+09.12	10.79	6.62	1.57		-25.46	32'-1"
P-53	2263+01.63	10.80	6.63	1.61		-25.45	32'-1"
P-54	2262+94.14	10.81	6.64	1.64		-25.36	32'-0"
P-55	2262+86.65	10.82	6.65	1.68		-25.35	32'-0"
P-56	2262+79.16	10.83	6.67	1.72		-25.33	32'-0"
P-57	2262+71.67	10.84	6.68	1.76		-25.32	32'-0"
P-58	2262+64.18	10.85	6.69	1.80		-25.23	31'-11"
P-59	2262+56.69	10.86	6.70	1.83		-25.22	31'-11"
P-60	2262+49.20	10.87	6.71	1.87		-25.21	31'-11"
P-61	2262+41.65	10.88	6.72	1.84		-23.20	29'-11"
P-62	2262+34.15	10.89	6.73	1.74		-23.27	30'-0"
P-63	2262+26.65	10.91	6.74	1.64		-23.43	30'-2"
P-64	2262+19.15	10.92	6.75	1.55	↓	-23.50	30'-3"
P-65	2262+11.65	10.93	6.76	1.45	W18x130	-23.57	30'-4"

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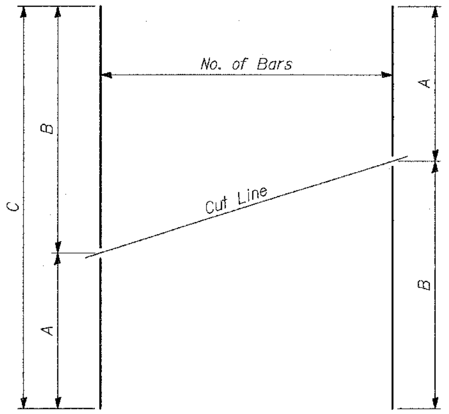
PILE LAYOUT

Pile	Station at Working Point	Top of Parapet El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-66	2262+04.15	10.94	6.77	1.35	W18x130	-23.73	30'-6"
P-67	2261+96.65	10.95	6.78	1.25	↑	-23.80	30'-7"
P-68	2261+89.15	10.96	6.79	1.15		-23.88	30'-8"
P-69	2261+81.65	10.97	6.80	1.05		-24.03	30'-10"
P-70	2261+74.15	10.98	6.81	0.95		-24.10	30'-11"
P-71	2261+66.65	10.99	6.82	0.85		-24.18	31'-0"
P-72	2261+59.15	11.00	6.83	0.75		-24.25	31'-1"
P-73	2261+51.65	11.01	6.84	0.65		-25.41	32'-3"
P-74	2261+44.15	11.02	6.85	0.55		-25.48	32'-4"
P-75	2261+36.65	11.03	6.86	0.46		-25.55	32'-5"
P-76	2261+29.15	11.04	6.88	0.36		-25.71	32'-7"
P-77	2261+21.65	11.05	6.89	0.82		-25.20	32'-1"
P-78	2261+14.15	11.06	6.90	1.85		-24.19	31'-1"
P-79	2261+06.65	11.07	6.91	2.88	↓	-23.18	30'-1"
P-80	2260+99.15	11.08	6.92	3.91	W18x130	-22.17	29'-1"

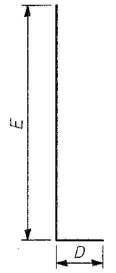


SERIES OF BAR CUTTING DIAGRAM

See table for dimensions.
Make all cuts normal to bar axis

BAR TABLE SCHEDULE

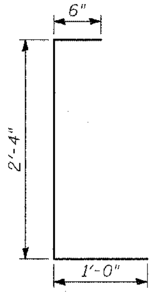
Bar	No. of Sets Req'd	No. of Bars Per Set	A	B	C
v_1(E)	1	31	3'-9"	4'-0"	7'-9"
v_2(E)	1	32	4'-0"	4'-8"	8'-8"
v_3(E)	1	30	4'-8"	5'-4"	10'-0"
v_4(E)	1	31	5'-4"	5'-11"	11'-3"
v_5(E)	1	31	5'-11"	6'-7"	12'-6"
v_{13}(E)	1	31	5'-10"	6'-4"	12'-2"
v_{14}(E)	1	31	6'-4"	6'-9"	13'-1"
v_{15}(E)	1	31	6'-9"	7'-2"	13'-11"
v_{16}(E)	1	31	7'-2"	7'-7"	14'-9"
v_{17}(E)	1	31	7'-7"	3'-6"	11'-1"



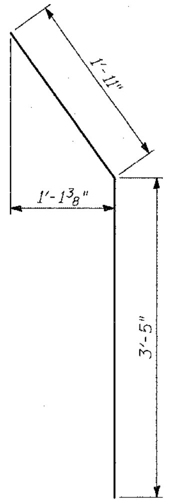
MARK TABLE

Bar	D	E
d (E)	6"	2'-6"
d_1(E)	6"	2'-6"
d_4(E)	11"	4'-4"

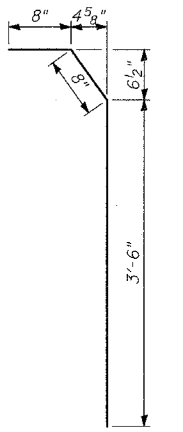
BARS d(E), d_1(E) & d_4(E)



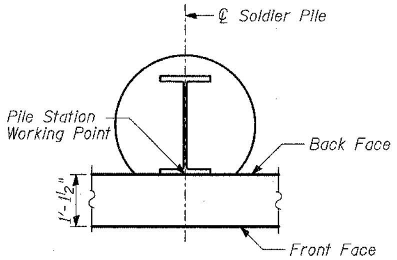
BAR d_2(E)



BARS d_7(E)



BAR d_3(E)



SOLDIER PILE WORKING POINT

LAP SPLICES

Bar	Lap
#4	1'-8"
#5	2'-2"
#6	2'-7"
#8	4'-6"

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	546

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	495	#4	3'-0"	L
d_1(E)	495	#5	3'-0"	L
d_2(E)	495	#4	3'-10"	[
d_3(E)	495	#5	4'-10"	]
d_4(E)	155	#4	5'-3"	L
d_5(E)	134	#6	6'-6"	—
d_6(E)	21	#5	4'-3"	—
d_7(E)	21	#5	5'-4"	)
e(E)	48	#4	31'-8"	—
e_1(E)	30	#5	32'-2"	—
e_2(E)	16	#8	34'-6"	—
e_3(E)	36	#4	29'-8"	—
e_4(E)	28	#5	29'-8"	—
e_5(E)	12	#8	29'-8"	—
e_6(E)	6	#4	32'-8"	—
e_7(E)	2	#5	33'-2"	—
e_8(E)	2	#8	35'-6"	—
e_9(E)	6	#4	30'-8"	—
e_{10}(E)	2	#5	31'-2"	—
e_{11}(E)	2	#8	33'-6"	—
h(E)	193	#5	32'-2"	—
h_1(E)	150	#5	29'-8"	—
h_2(E)	15	#5	33'-2"	—
h_3(E)	17	#5	31'-2"	—
v(E)	62	#4	3'-8"	—
v_1(E)	31	#4	7'-9"	—
v_2(E)	32	#4	8'-8"	—
v_3(E)	30	#4	10'-0"	—
v_4(E)	31	#4	11'-3"	—
v_5(E)	31	#4	12'-6"	—
v_6(E)	124	#4	6'-8"	—
v_7(E)	62	#4	6'-7"	—
v_8(E)	124	#4	6'-5"	—
v_9(E)	62	#4	6'-3"	—
v_{10}(E)	62	#4	6'-2"	—
v_{11}(E)	62	#4	6'-1"	—
v_{12}(E)	62	#4	5'-11"	—
v_{13}(E)	31	#4	12'-2"	—
v_{14}(E)	31	#4	13'-1"	—
v_{15}(E)	31	#4	13'-11"	—
v_{16}(E)	31	#4	14'-9"	—
v_{17}(E)	31	#4	11'-1"	—
Reinforcement Bars, Epoxy Coated			POUND	32,240
Concrete Structures			CU YD	232
Protective Coat			SQ YD	770
Furnishing Soldier Piles (W Section)			FOOT	2,264
Furnishing Soldier Piles (HP Section)			FOOT	199
Drilling and Setting Soldier Piles (in Soil)			CU FT	12,953

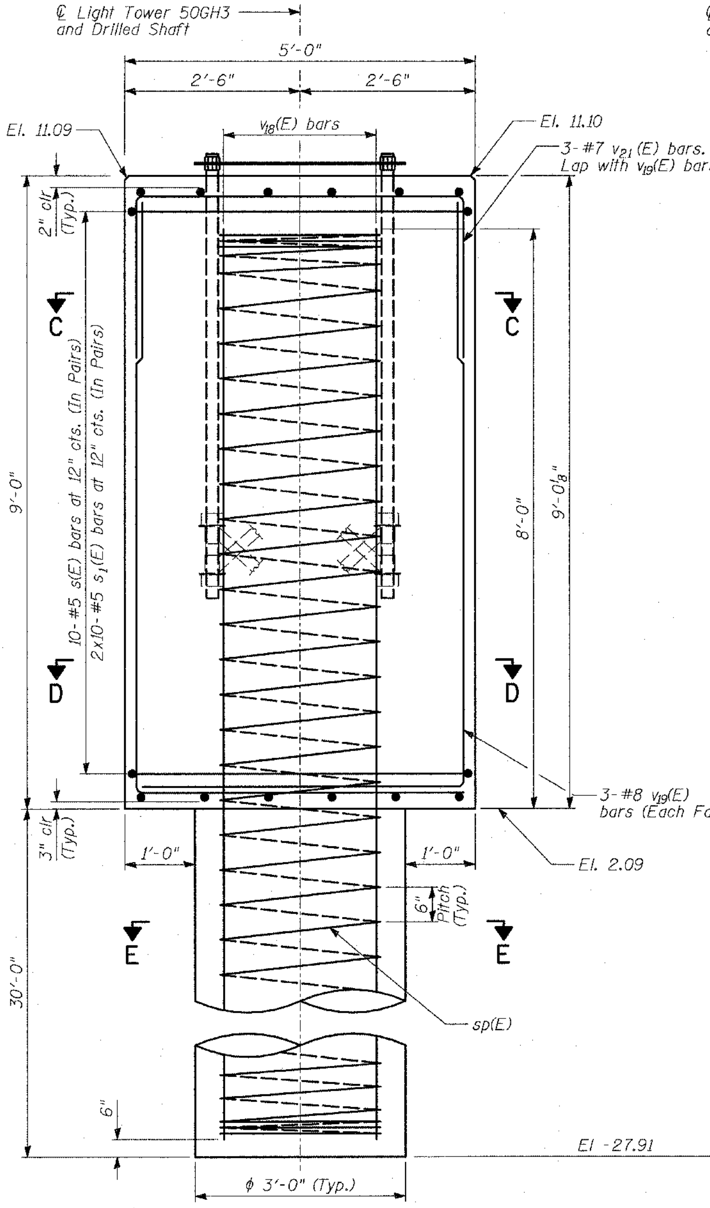
Reinforcement bars designated (E) shall be epoxy coated.

SHEET 7 OF 23

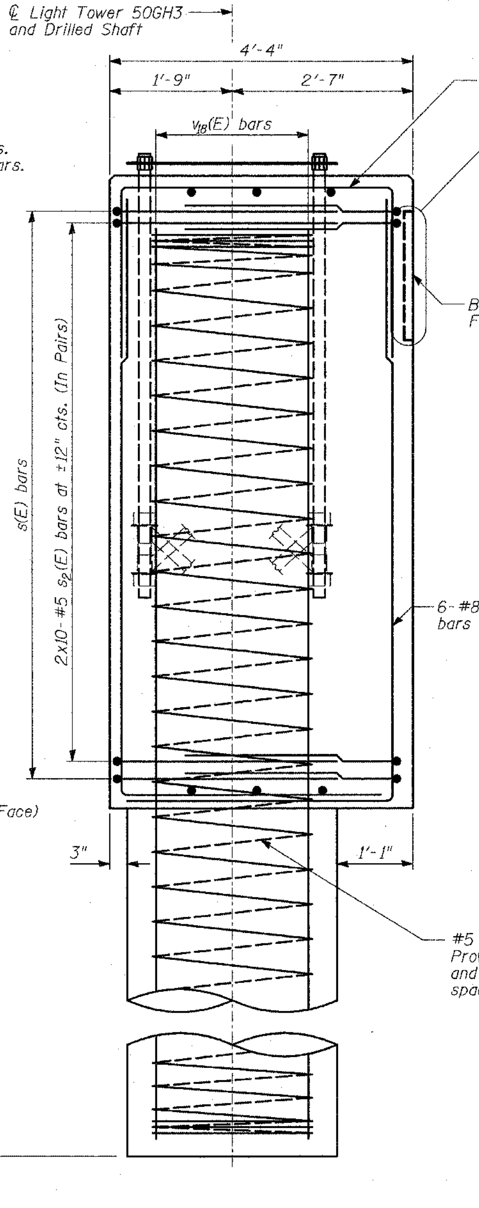
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
PILE LAYOUT, DETAILS & BILL OF MATERIAL

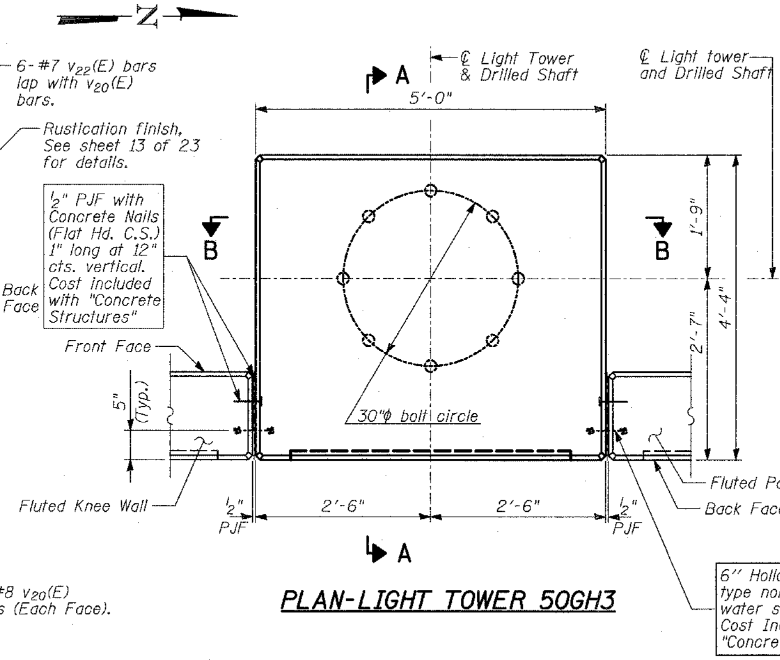
S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI



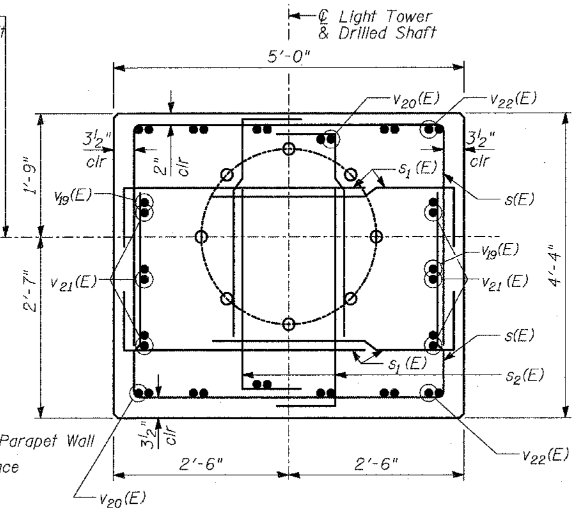
SECTION B-B



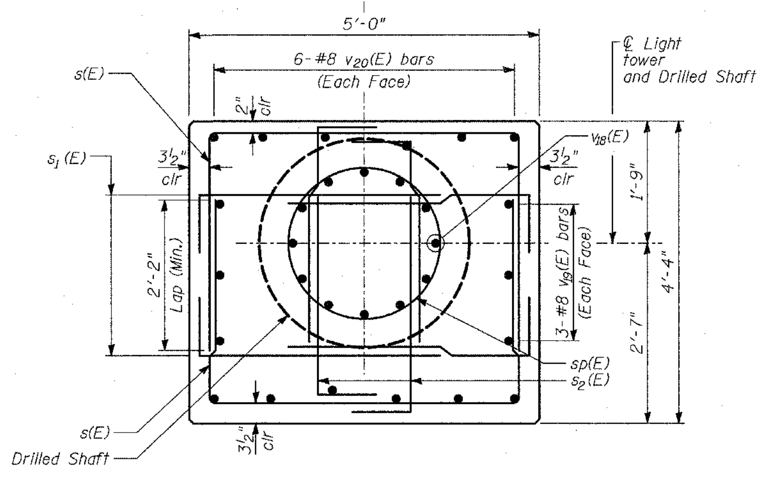
SECTION A-A



PLAN-LIGHT TOWER 50GH3



SECTION C-C



SECTION D-D

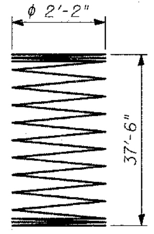
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
s (E)	20	#5	10'-7"	⊔
s_1(E)	40	#5	4'-2"	┌
s_2(E)	40	#5	3'-11"	┌
sp (E)	1	#5	37'-6"	WWWWW
v_{18}(E)	12	#10	37'-6"	—
v_{19}(E)	6	#8	12'-10"	L
v_{20}(E)	12	#8	12'-3"	L
v_{21}(E)	3	#7	11'-2"	⊔
v_{22}(E)	6	#7	10'-8"	⊔
Reinforcement Bars, Epoxy Coated		POUND	3,850	
Structure Excavation		CU YD	10	
Concrete Structures		CU YD	8	
Protective Coat		SQ YD	9	
Rustication Finish		SQ FT	8	
Drilled Shaft in Soil 36"		FOOT	30	

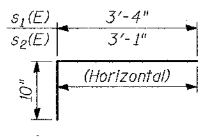
Reinforcement bars designated (E) shall be epoxy coated.

NOTES:

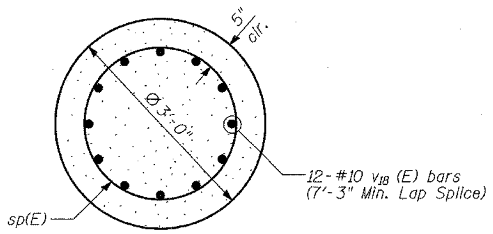
1. The design loads are based on AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminares and Traffic Signals-2001.
2. Drilled shafts shall be installed according to IDOT special provisions for "Drilled Shafts".
3. Protective Coat shall be applied to exposed surfaces of the new concrete wall and tower base.
4. At all locations where reinforcement bar laps are not in direct contact, the Contractor shall provide sufficient spacing between the vertical bars, equal to the size of the largest concrete aggregate plus ½ inch.
5. For location of drilled shaft, see Sheet 5 of 23.
6. Conduit is not shown for clarity. For location of conduit, see Sheet 9 of 23.
7. Cost of anchor rod assembly, conduit and wires for grounding are included with "Concrete Structures".
8. Minimum lap for spirals = 2'-6"



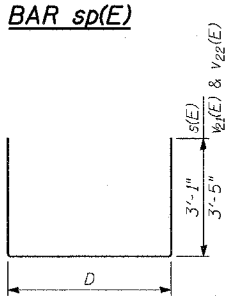
BAR sp(E)



BARS s_1(E) & s_2(E)



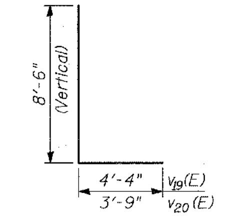
SECTION E-E



BARS s(E), v_{21}(E) & v_{22}(E)

MARK TABLE

Bar	D
s (E)	4'-5"
v_{21} (E)	4'-4"
v_{22} (E)	3'-10"



BARS v_{19}(E)& v_{20}(E)

SHEET 8 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
LIGHT TOWER 50GH3 FOUNDATION DETAILS

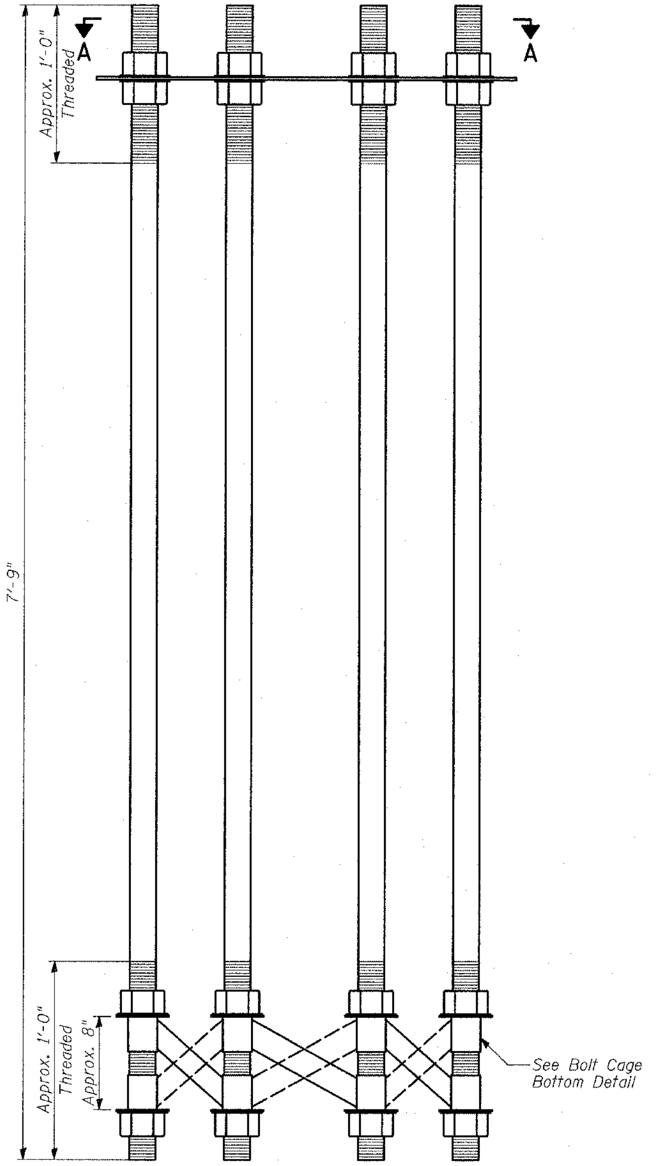
S.N. 016-W956
DESIGNED BY: MI, MAF
SCALE: N.T.S.
DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

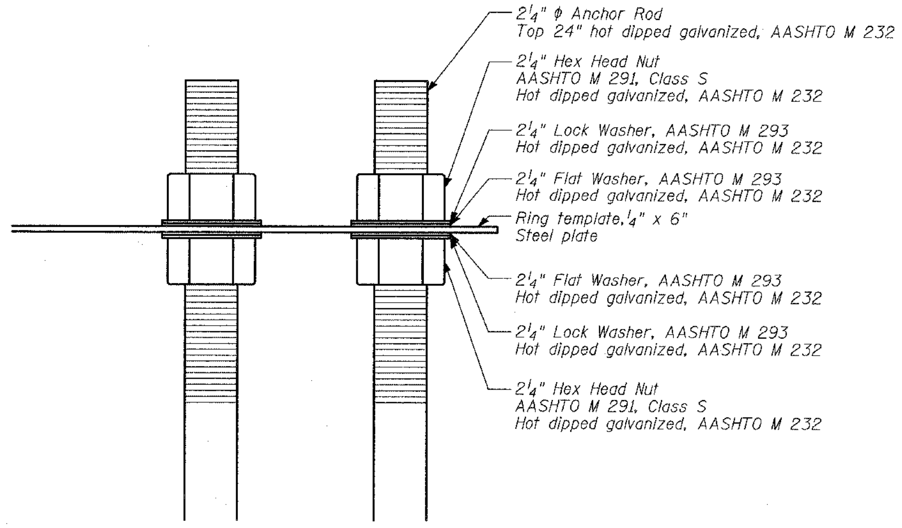
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	548
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

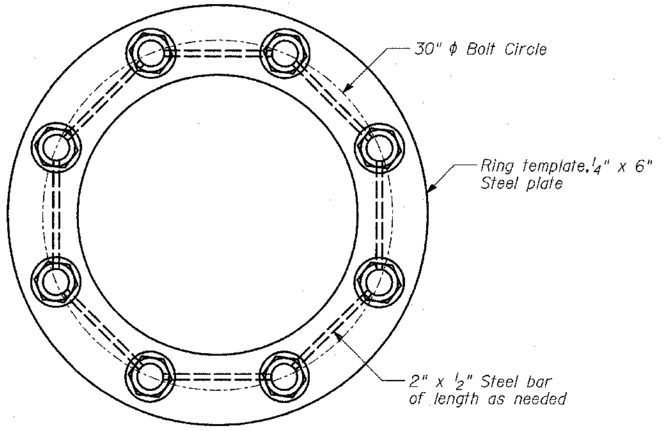
62694



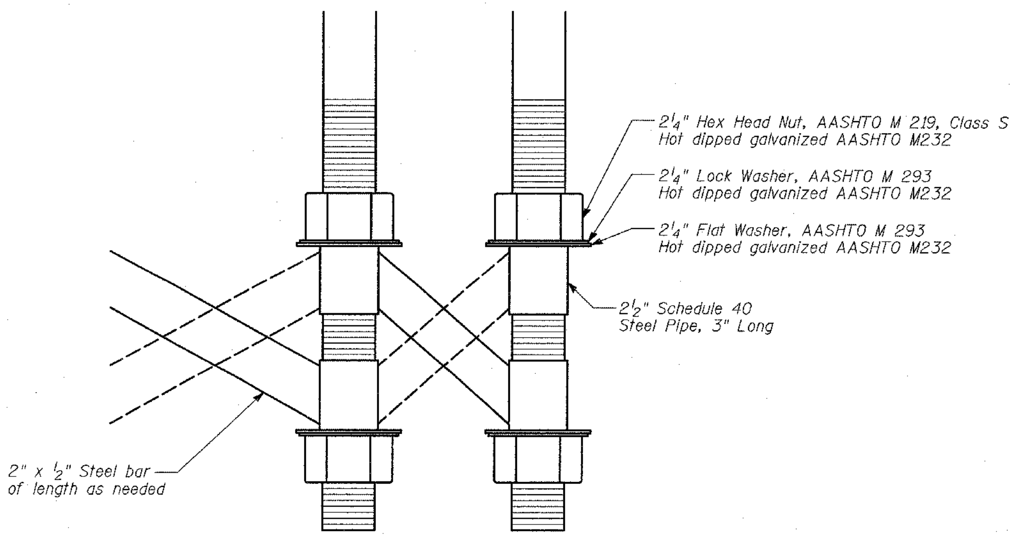
ANCHOR BOLT CAGE



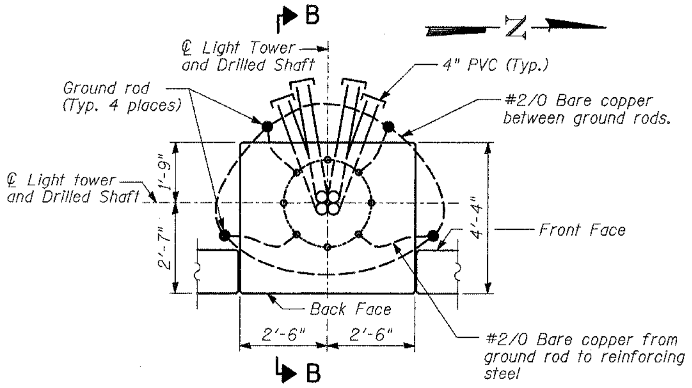
BOLT CAGE TOP



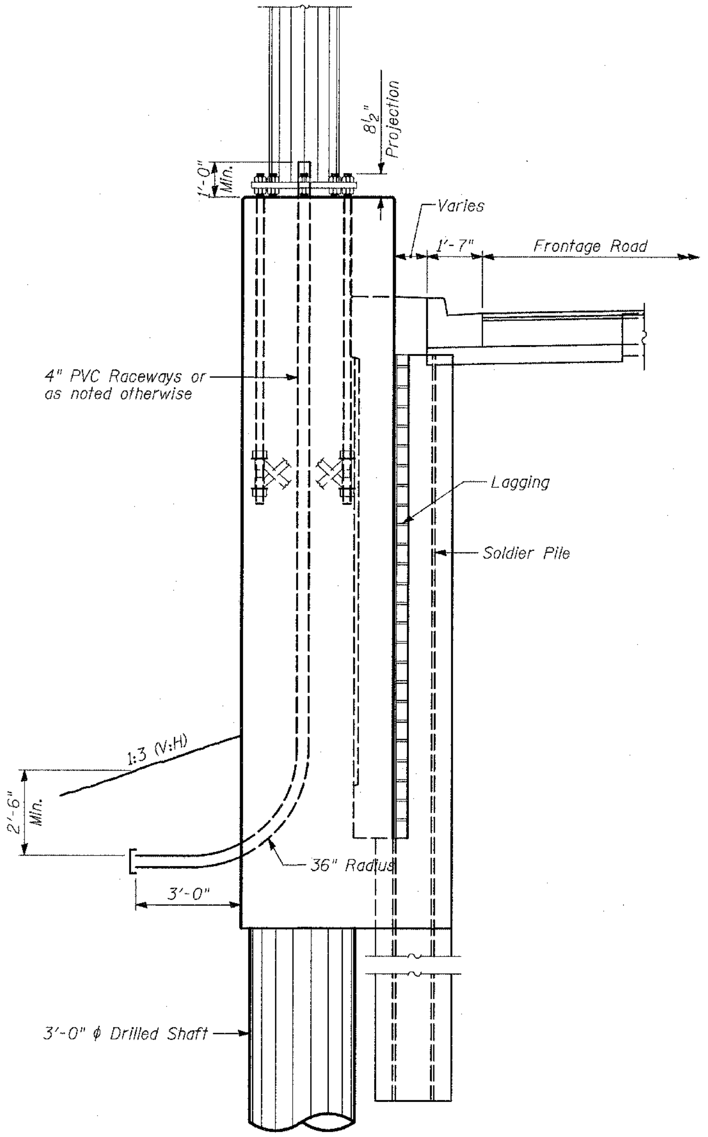
SECTION A-A



BOLT CAGE BOTTOM



PLAN - 50GH3 CONDUIT PLACEMENT



SECTION B-B

NOTES:

1. Anchor rods shall be straight and shall be according to AASHTO M 314 or ASTM FI554, Grade 105 and galvanized according to article 1006.09.
2. Anchor rod information shall be submitted for approval and shall be fully coordinated with tower manufacturer's requirements.
3. The Anchor Rods shall be vertical. No adjustment shall be allowed after the foundation is placed.
4. The gap between the foundation and the base plate shall be enclosed with a stainless steel screen fastened with a stainless steel band.
5. The Light Tower shall not be erected until after the concrete has been cured according to Article 1020.13.
6. Two anchor rods opposite each other shall have the anchor rod threads peened after nuts are installed.
7. Refer to BE501 for details.

SHEET 9 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
LIGHT TOWER DETAILS

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

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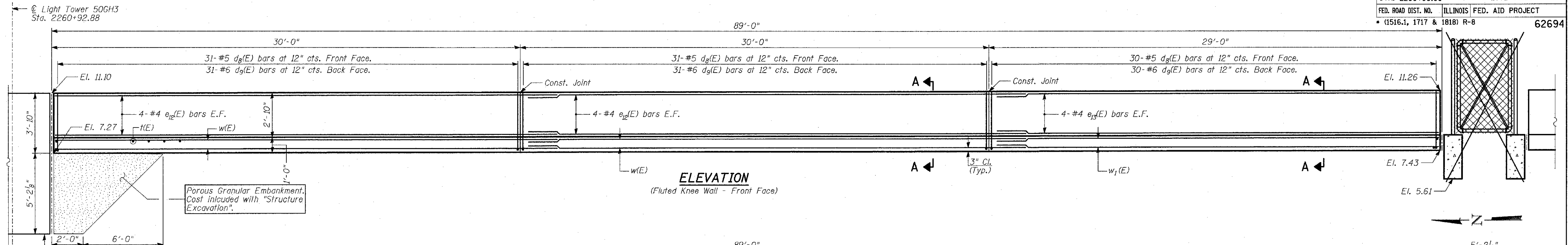
03/27/2005 02:30:21 PM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	549
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

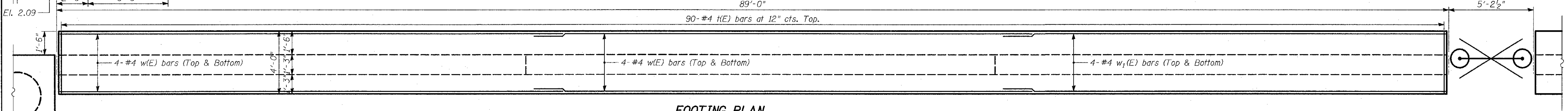
* (1516.1, 1717 & 1818) R-8

62694



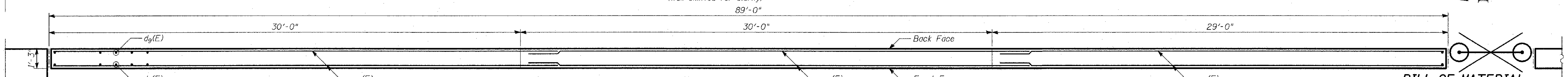
ELEVATION

(Fluted Knee Wall - Front Face)



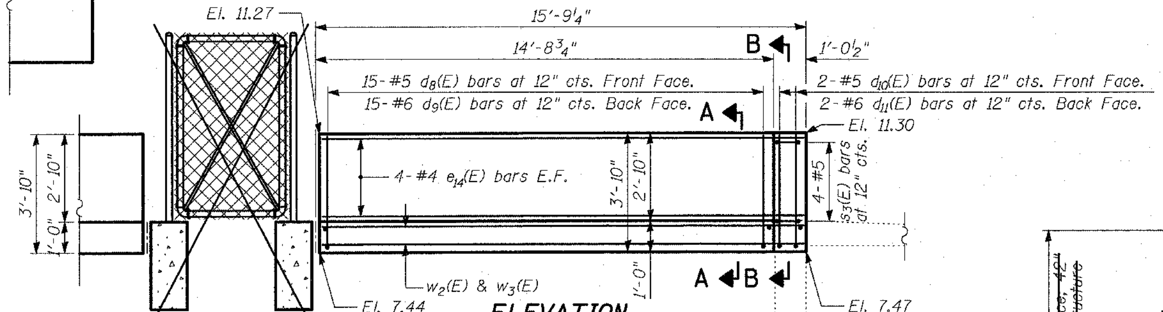
FOOTING PLAN

(Wall omitted for clarity)



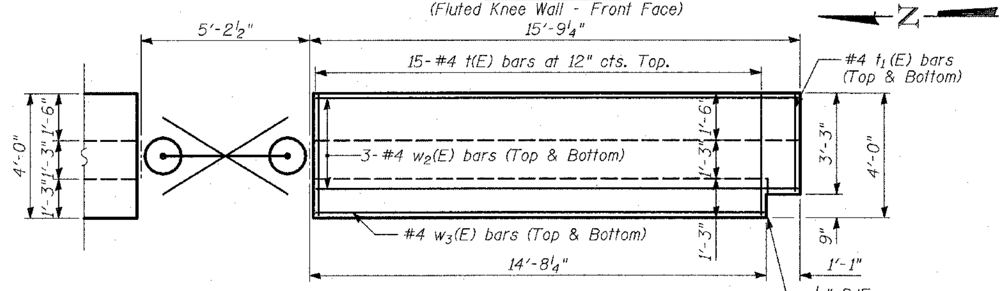
WALL PLAN

(Footing omitted for clarity)



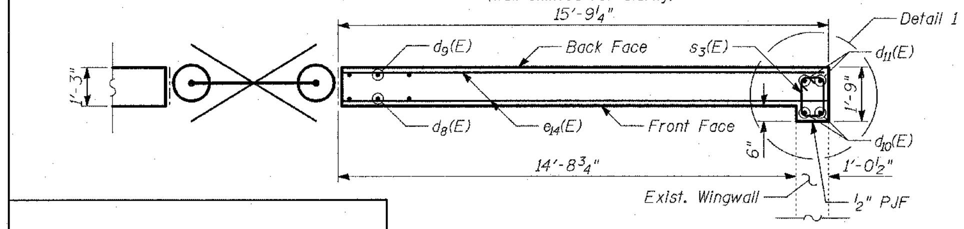
ELEVATION

(Fluted Knee Wall - Front Face)



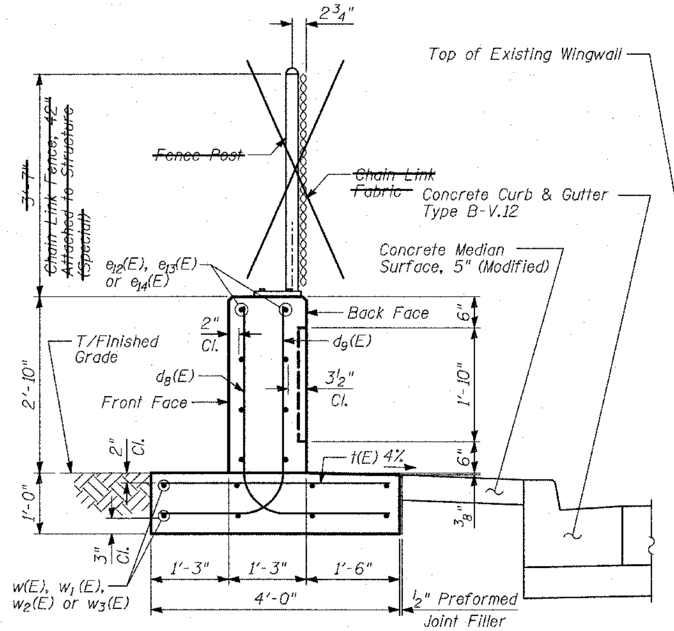
FOOTING PLAN

(Wall omitted for clarity)



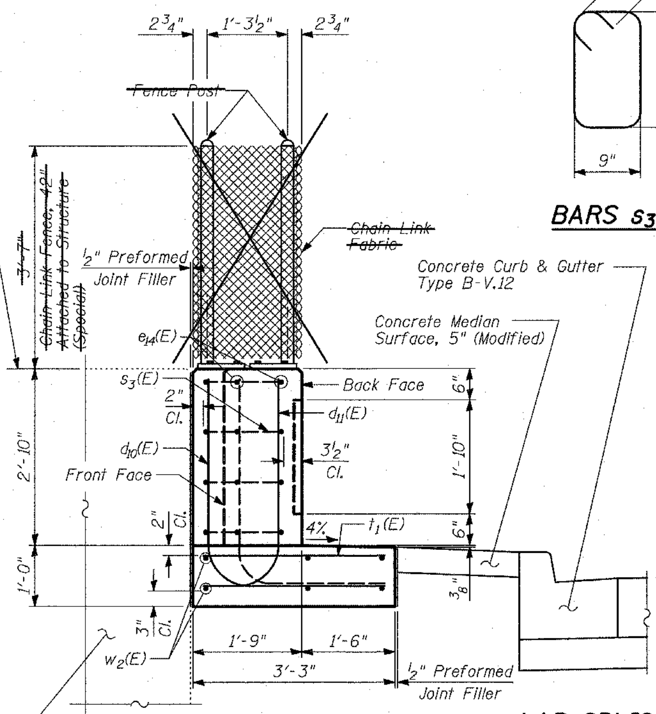
WALL PLAN

(Footing omitted for clarity)

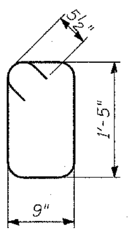


SECTION A-A

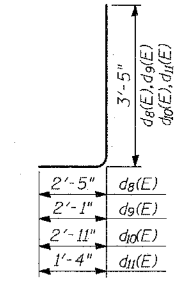
Existing Wingwall Stem



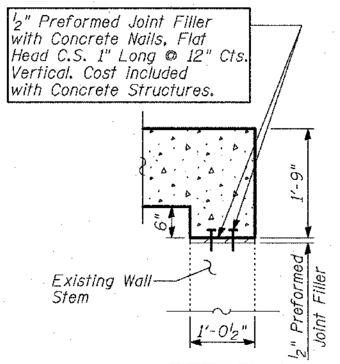
SECTION B-B



BARS s_3(E)



BARS d_8(E), d_9(E), d_{10}(E) and d_{11}(E)



DETAIL 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d_8(E)	107	#5	5'-10"	┐
d_9(E)	107	#6	5'-6"	┐
d_{10}(E)	2	#5	6'-4"	┐
d_{11}(E)	2	#6	4'-9"	┐
e_{12}(E)	16	#4	31'-8"	—
e_{13}(E)	8	#4	28'-8"	—
e_{14}(E)	8	#4	15'-5"	—
s_3(E)	4	#5	5'-3"	▭
t(E)	105	#4	3'-8"	—
t_1(E)	2	#4	2'-11"	—
w(E)	16	#4	31'-8"	—
w_1(E)	8	#4	28'-8"	—
w_2(E)	6	#4	15'-5"	—
w_3(E)	2	#4	14'-5"	—
Reinforcement Bars, Epoxy Coated			POUND	3,000
Structure Excavation			CU YD	32
Concrete Structures			CU YD	30
Protective Coat			SQ YD	113
Rustication Finish			SQ FT	193

Reinforcement bars designated (E) shall be epoxy coated.

SHEET 10 OF 23

NOTES:

1. Work this sheet with Sheet 11 of 23.

2. Exposed top of footing towrds State Street to have "California Finish" treatment. Refer to Roadway Plans for details. Cost included with "Concrete Structures".

LAP SPLICES

Bar	Lap
#4	1'-8"
#5	2'-2"
#6	2'-7"
#8	4'-6"

REVISIONS	
NAME	DATE
REVISED	04/15/05

TYLININTERNATIONAL

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
PLAN AND ELEVATION - FLUTED KNEE WALL

S.N. 016-W956
DESIGNED BY: MI, MAF
SCALE: N.T.S.
DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

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04/12/2005 10:16:56 AM

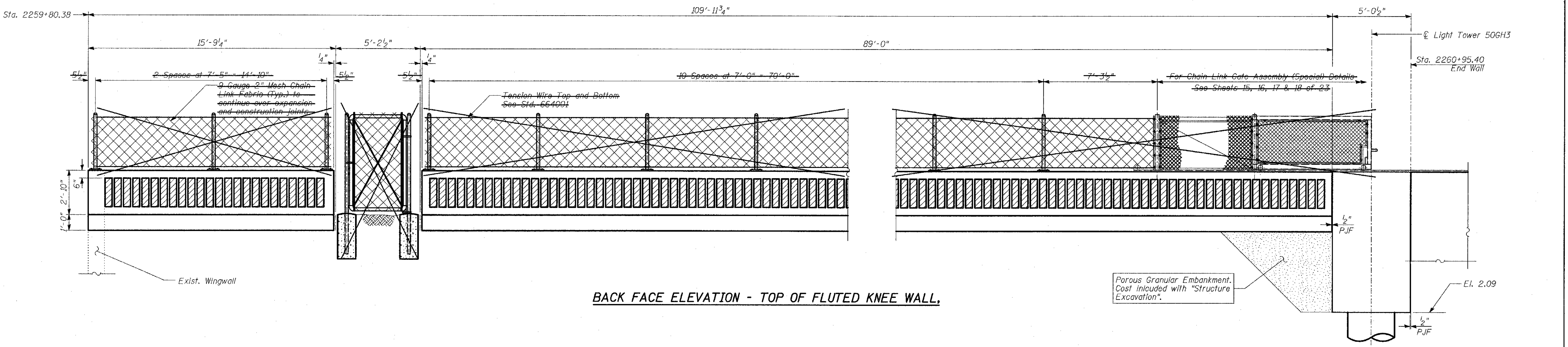
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	550

STA. 2200+00.00 TO STA. 2362+00.00

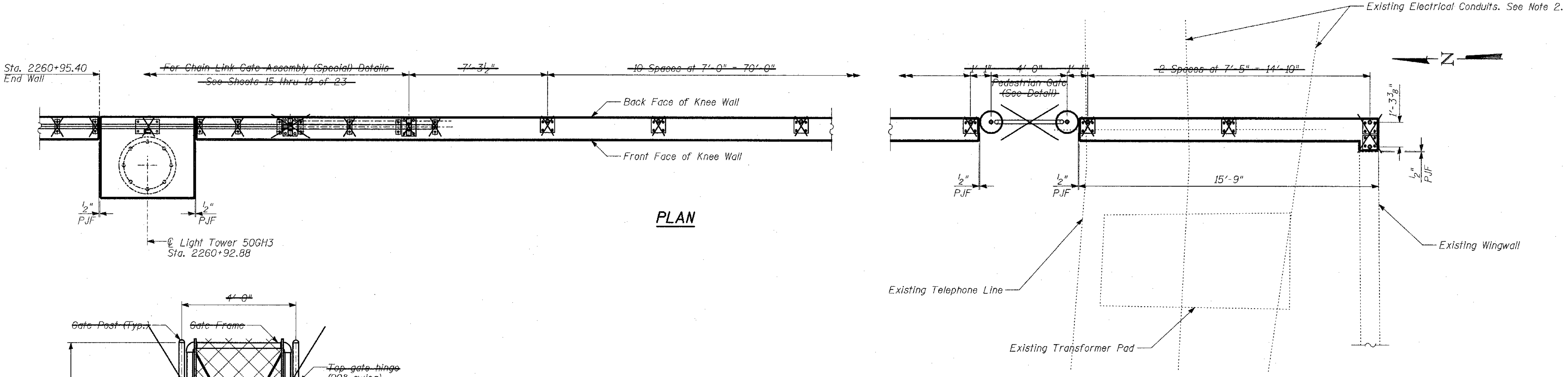
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

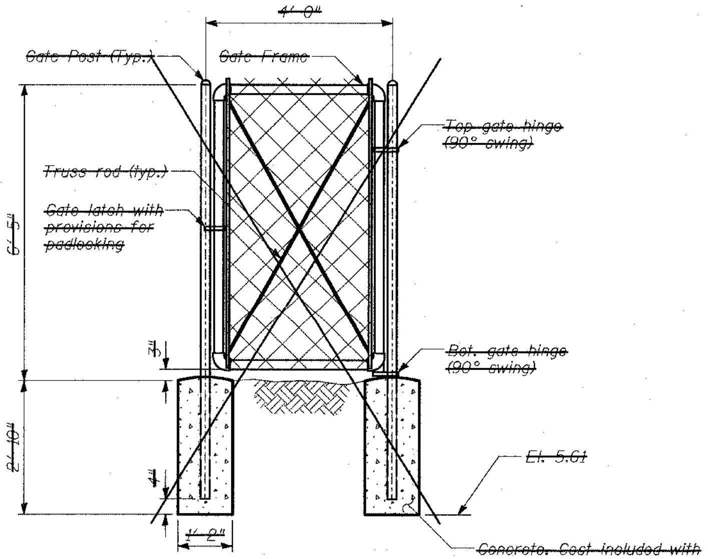
62694



BACK FACE ELEVATION - TOP OF FLUTED KNEE WALL.



PLAN



~~PEDESTRIAN GATE~~

NOTES:

1. Manual excavation shall be performed to limit disturbance to the existing CTA transformer and servicing conduit(s). Service to the CTA transformer shall not be interrupted.
2. The Contractor shall inform the Engineer 5 days in adavance when manual excavation is anticipated in the area of the ComEd conduits servicing the CTA Transformer. The Engineer shall contact ComEd and request their presence during excavation. and to determine if any conduit sleeves are required in the area under the kneewall, or possibly in the kneewall itself. ComEd shall determine the type, size, number and location of any sleeve(s). The cost of the sleeve(s), their installation, and any associated labor and equipment shall all be included in the cost of "Concrete Structures".
3. Work this sheet with Sheets 10, and 12 thru 18 of 23.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
~~Chain Link Gates (Special)~~	~~Each~~	~~1~~

SHEET 11 OF 23

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6 - TYPICAL SECTIONS, ELEVATIONS
AND DETAILS - FLUTED KNEE WALL

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

TY·LIN INTERNATIONAL

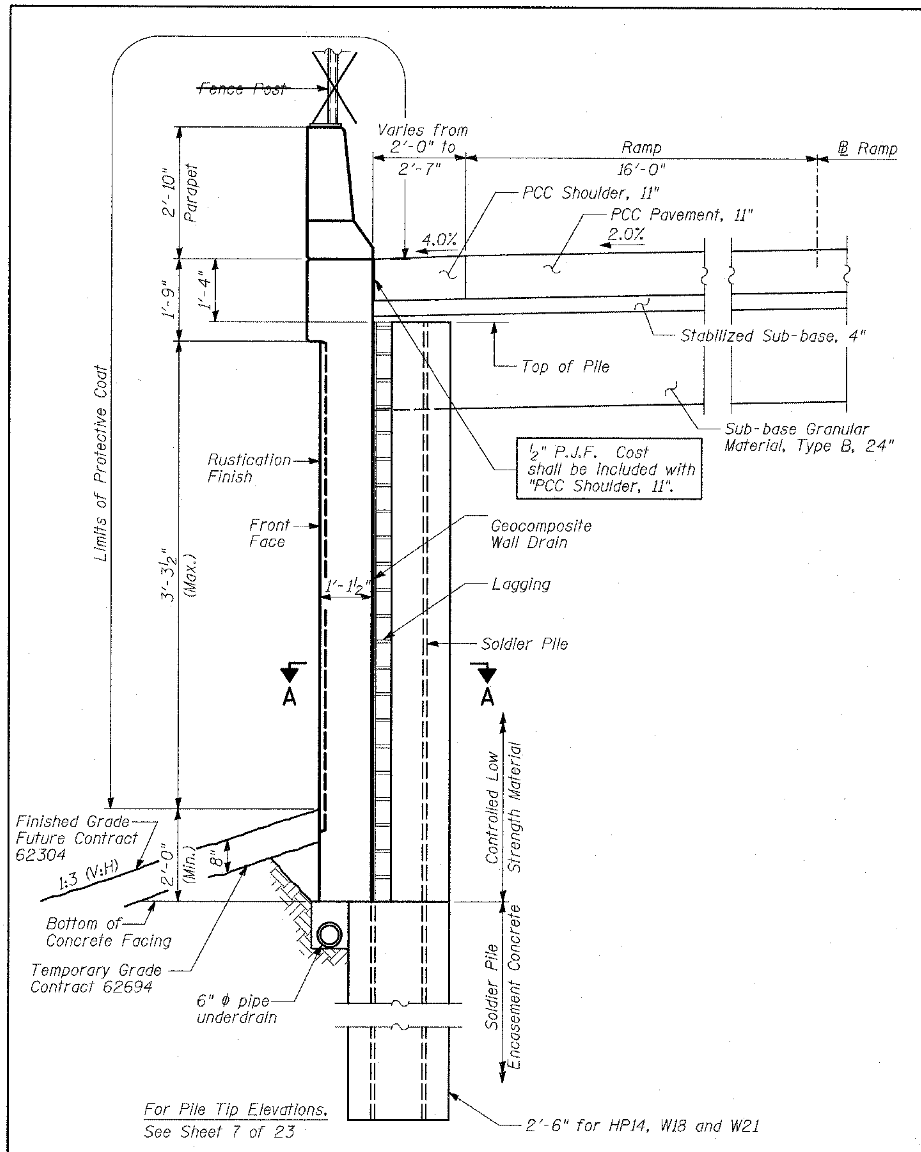
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	551

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

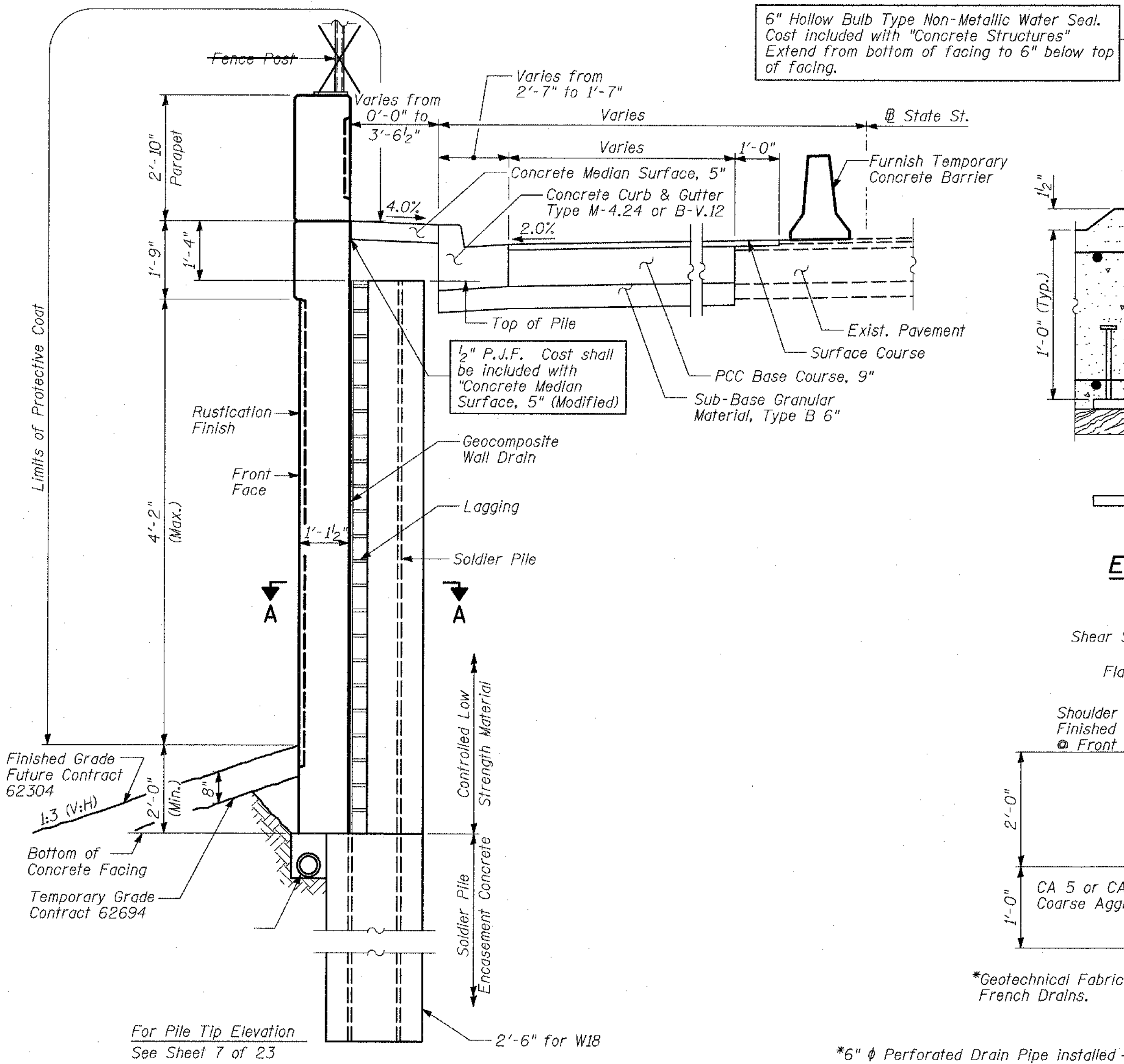
* (1516.1, 1717 & 1818) R-8

62694



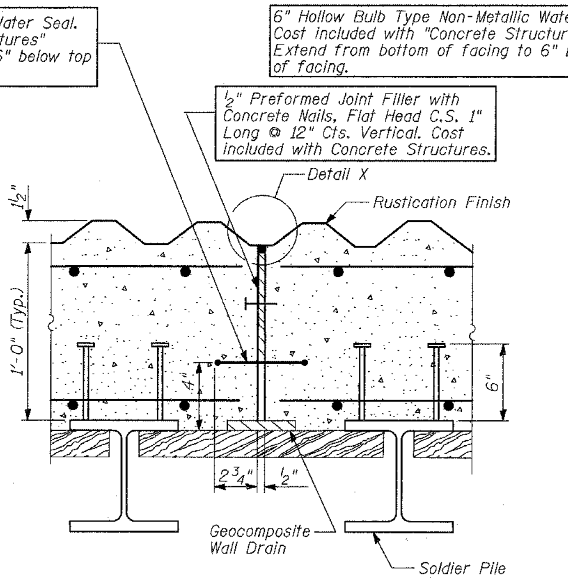
CROSS SECTION THRU WALL

**(Sta. 2266+94.73 to Sta. 2262+34.71)



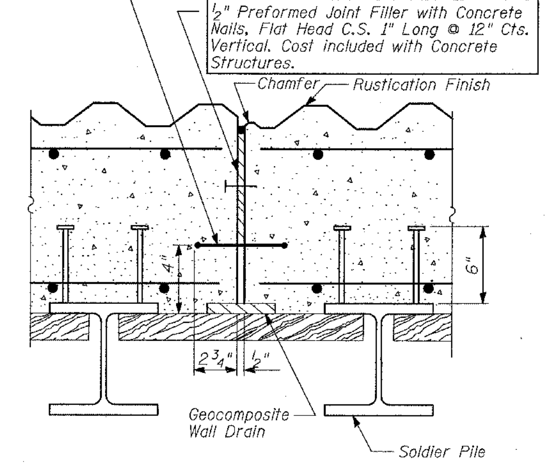
CROSS SECTION THRU WALL

**(Sta. 2262+34.71 to Sta. 2260+95.40)



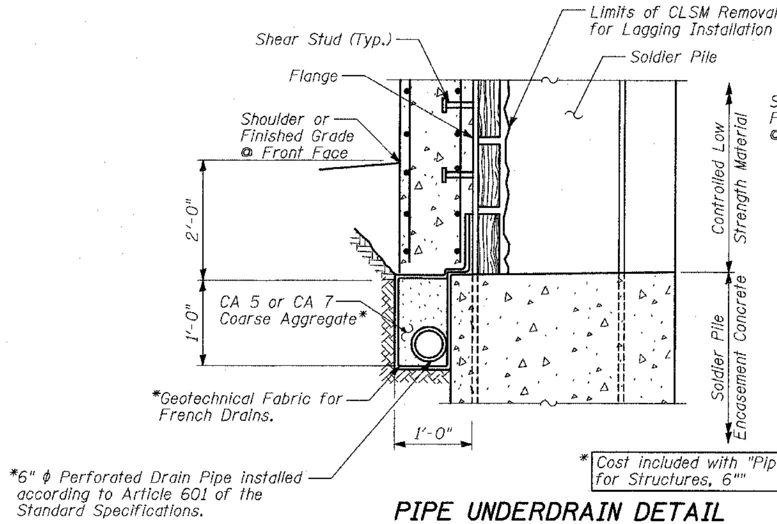
EXPANSION JOINT DETAILS

(Joint in Valley)

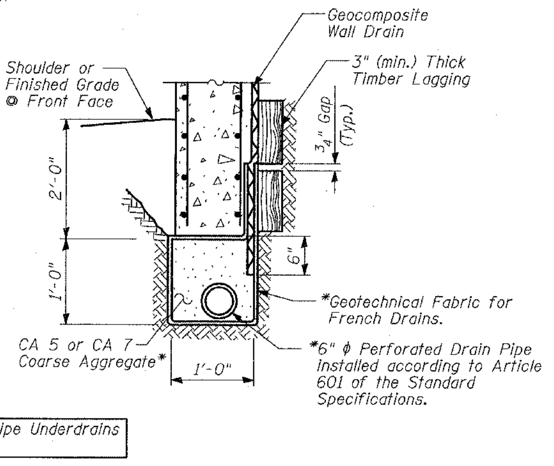


EXPANSION JOINT DETAILS

(Joint on Diagonal)



PIPE UNDERDRAIN DETAIL AT SOLDIER PILE

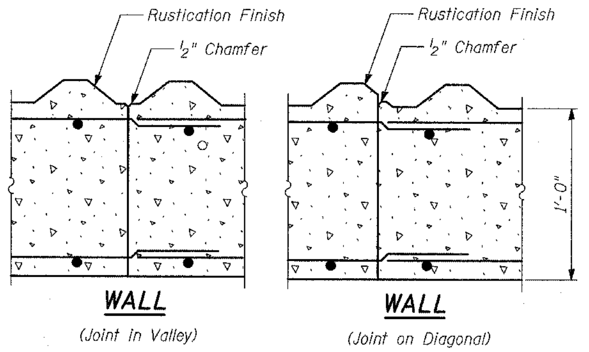


PIPE UNDERDRAIN DETAIL BETWEEN SOLDIER PILES

NOTES:

1. The geocomposite wall drain shall be constructed according to Section 591 of the Standard Specifications.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
3. Stud shear connectors shall be ¾" ϕ x 6" granular or solid flux filled headed studs, automatically end welded to the front flange of the soldier piles.

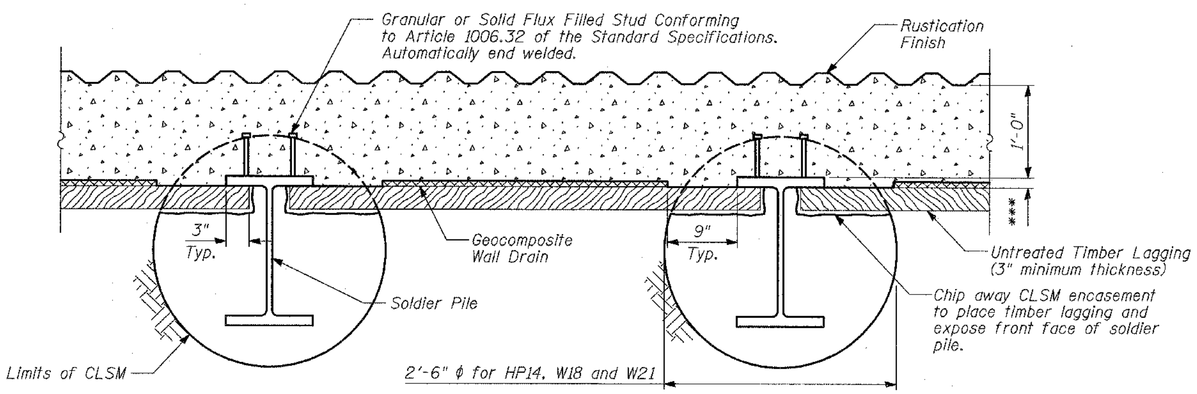
** For parapet transition details, see Sheet 6 of 23.



WALL (Joint in Valley)

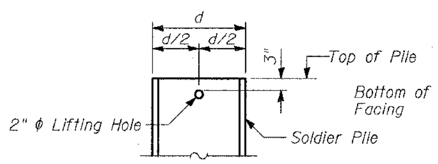
WALL (Joint on Diagonal)

CONSTRUCTION JOINT DETAILS

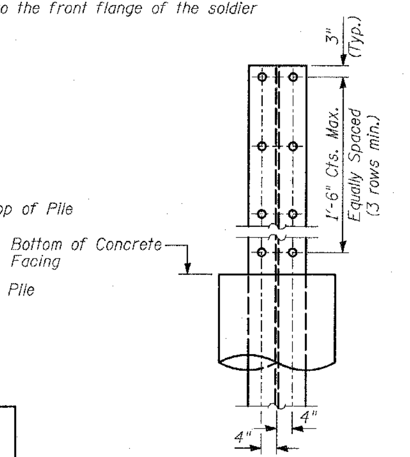


SECTION A-A

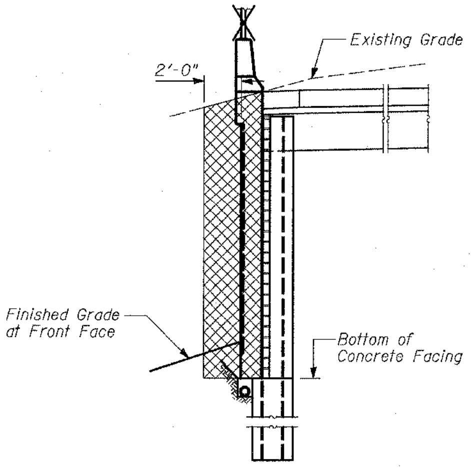
*** Cost of additional concrete between face of untreated timber lagging and face of pile included with "Concrete Structures".



LIFTING HOLE DETAIL

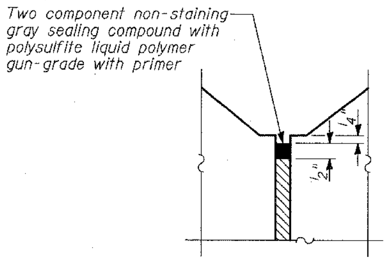


SHEAR STUD CONNECTOR DETAIL



STRUCTURE EXCAVATION

(For Proposed Wall)



DETAIL X

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	493
Stud Shear Connectors	EACH	682
Untreated Timber Lagging	SQ FT	2,928
Geocomposite Wall Drain	SQ YD	359
Pipe Underdrains for Structures, 6"	FOOT	600

SHEET 12 OF 23

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
WALL CROSS SECTIONS & DETAILS

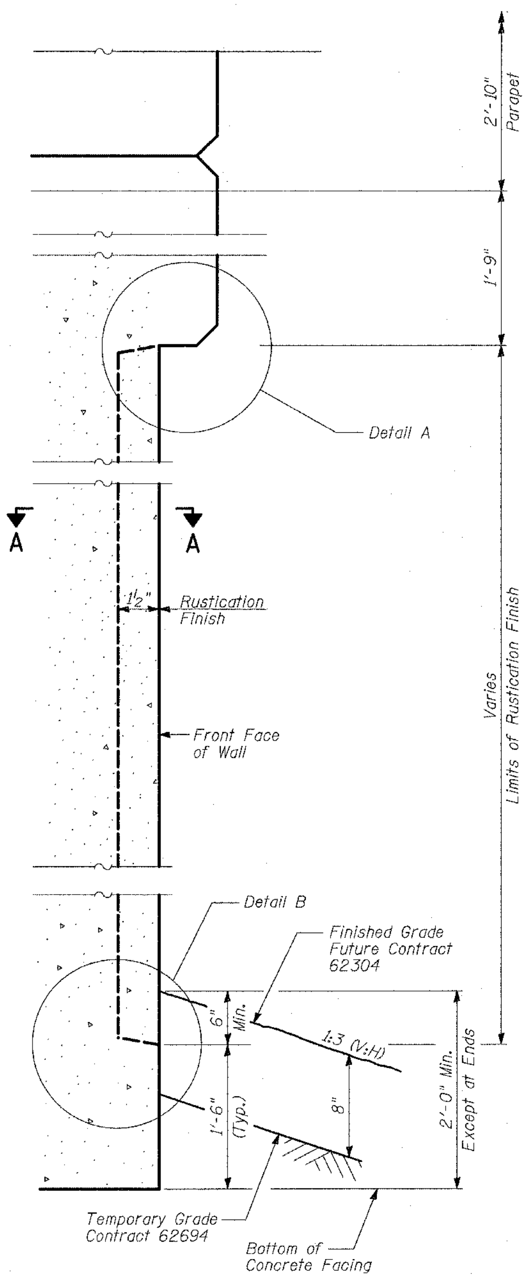
S.N. 016-W956 DESIGNED BY: MI, MAF
SCALE: N.T.S. DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

TYLIN INTERNATIONAL

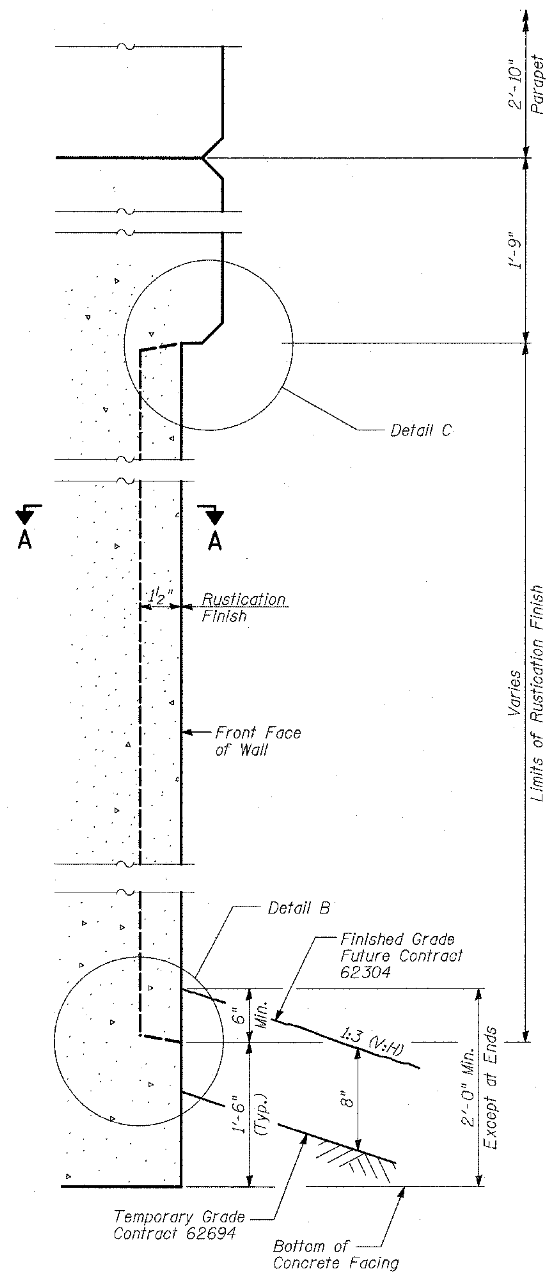
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	552
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (1516.1, 1717 & 1818) R-8

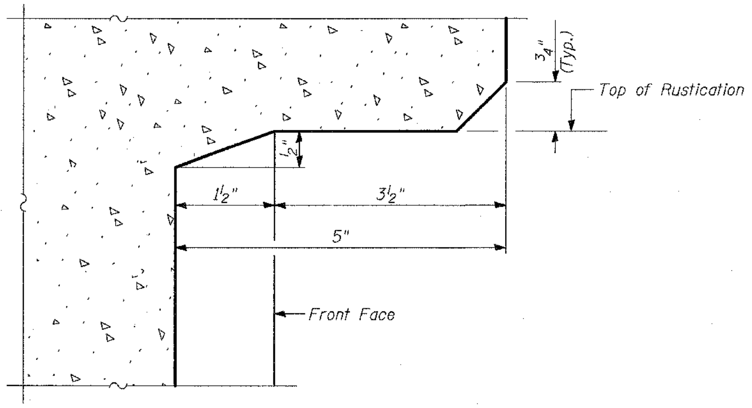
62694



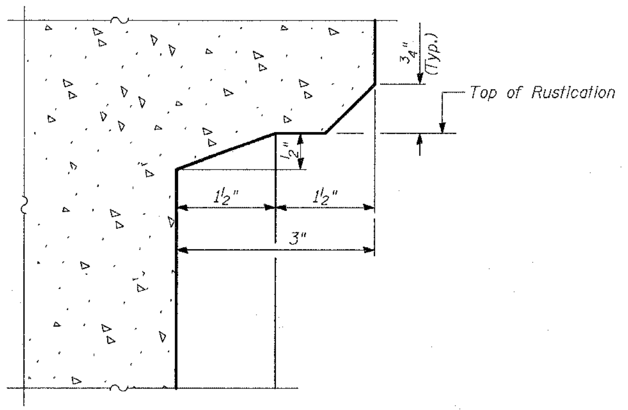
WALL DETAIL AT TYPE F PARAPET



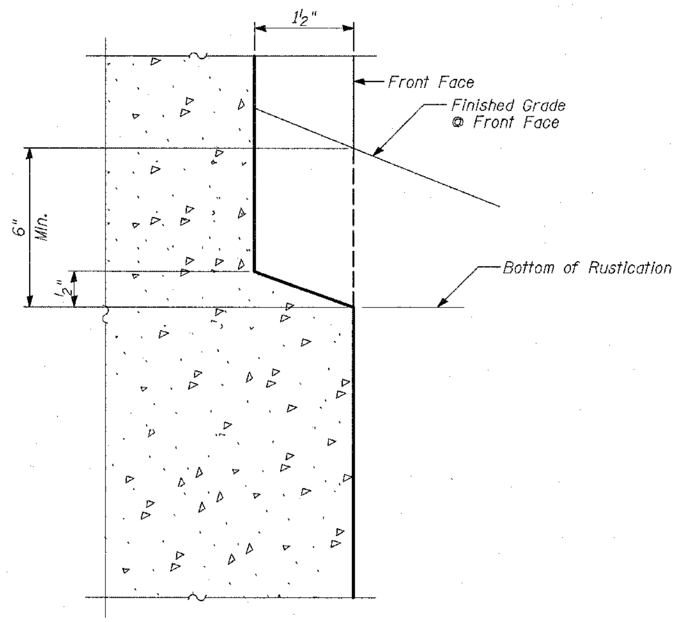
WALL DETAIL AT FLUTED PARAPET



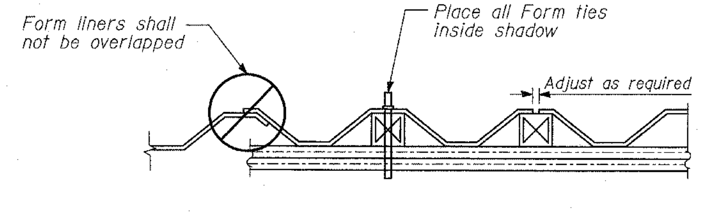
DETAIL A



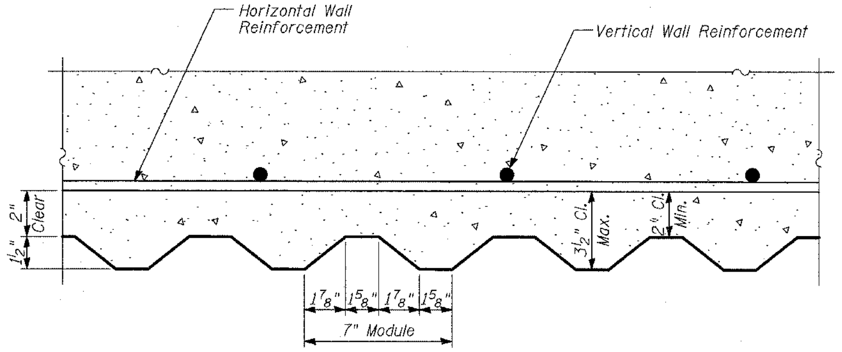
DETAIL C



DETAIL B



SUGGESTED FORMWORK DETAIL



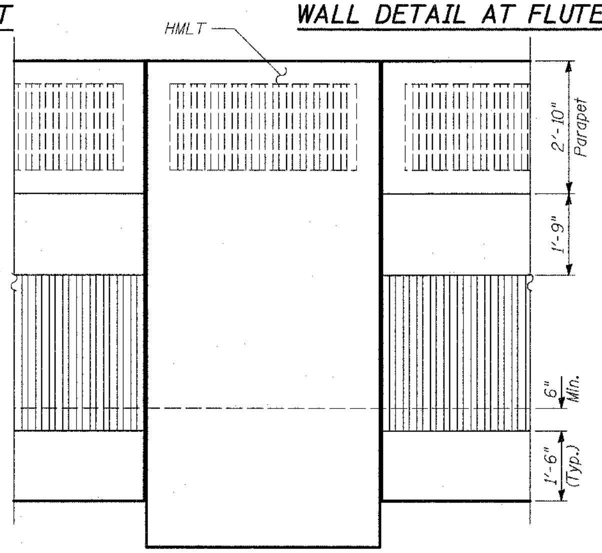
SECTION A-A

LEGEND

HMLT - denotes High Mast Light Tower.

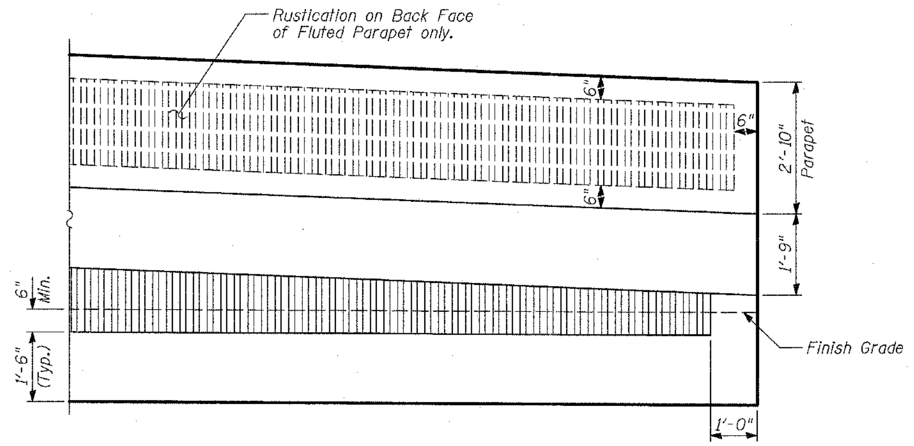
NOTES:

1. See Sheet 12 of 23 for expansion and construction joint details.



RUSTICATION DETAIL

(At HMLT)



RUSTICATION DETAIL

(At End Panel with Embankment)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Rustication Finish	SQ FT	1,900

SHEET 13 OF 23

REVISIONS	
NAME	DATE

TYLININTERNATIONAL

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
RUSTICATION DETAILS

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	553
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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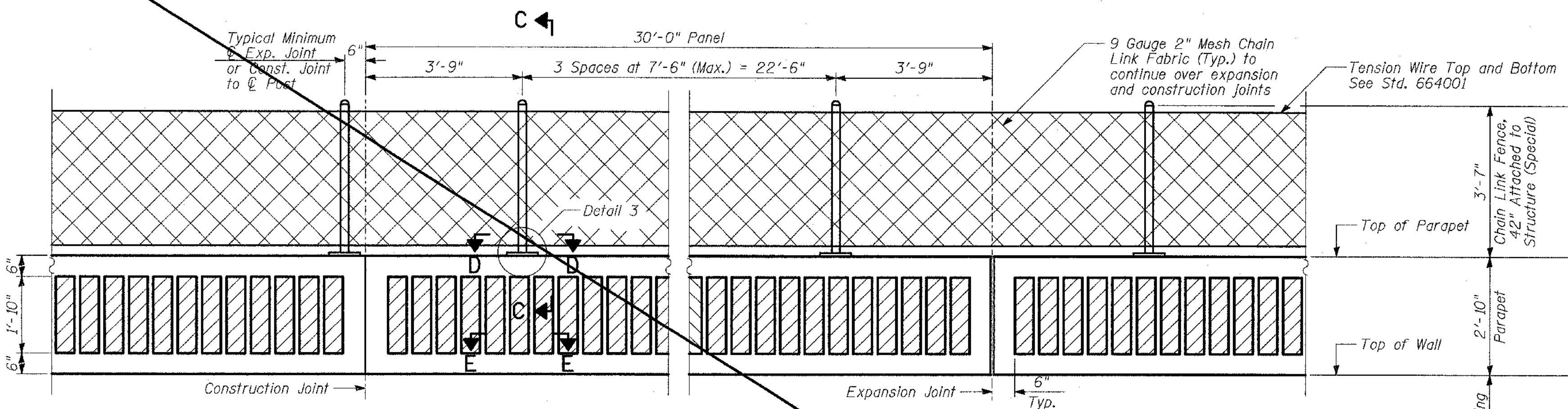
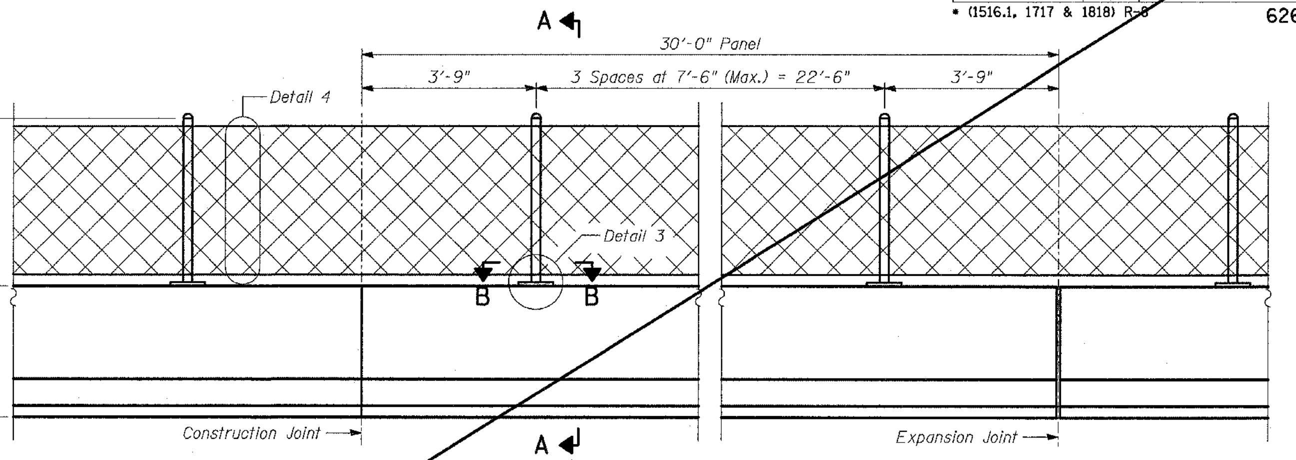
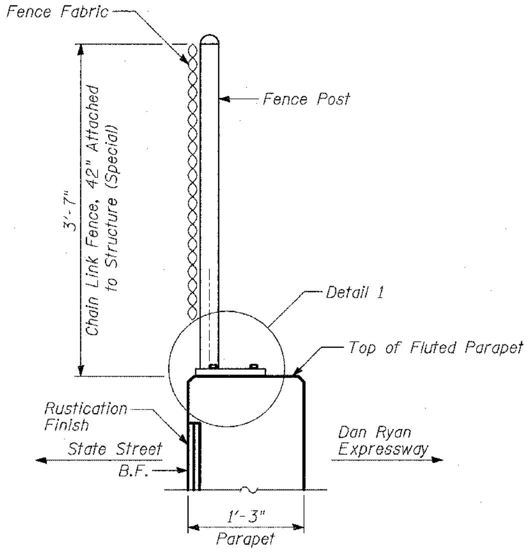


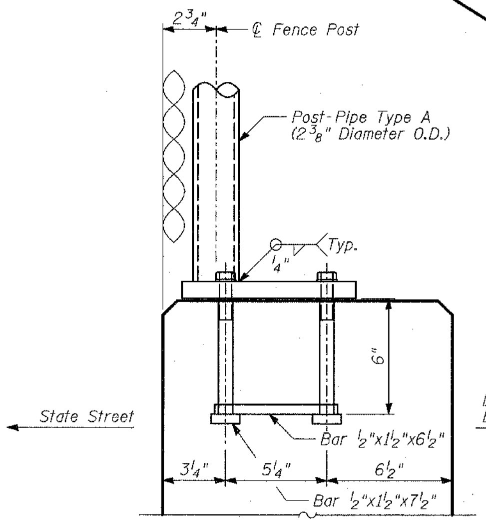
BACK FACE ELEVATION - TOP OF RETAINING WALLS
FLUTED PARAPET AND CHAIN LINK FENCE



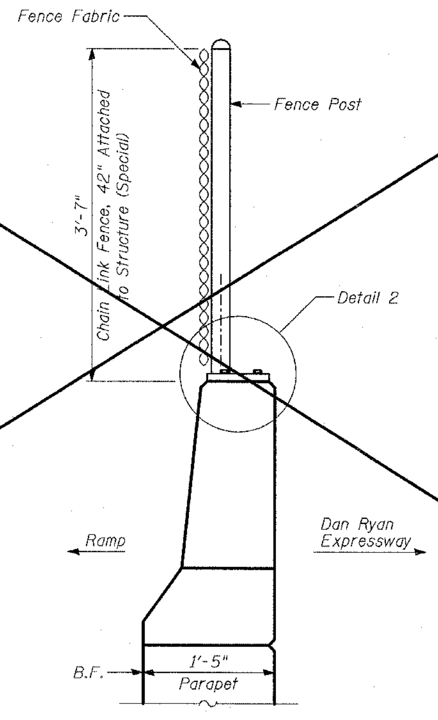
BACK FACE ELEVATION - TOP OF RETAINING WALLS
TYPE F PARAPET AND CHAIN LINK FENCE



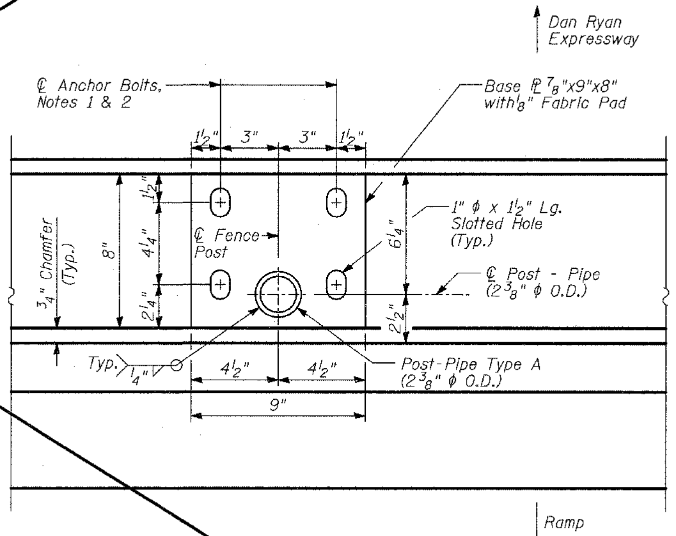
SECTION C-C



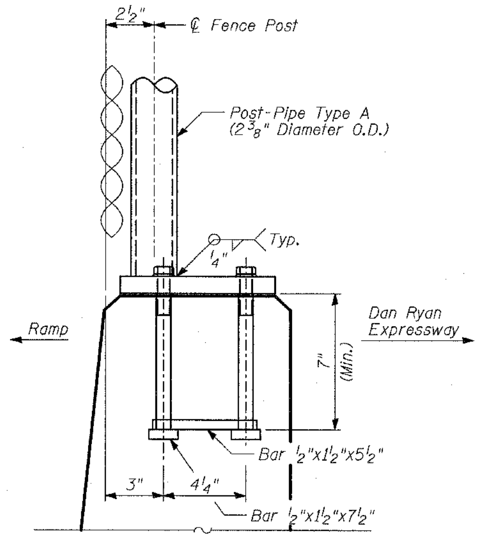
DETAIL 1



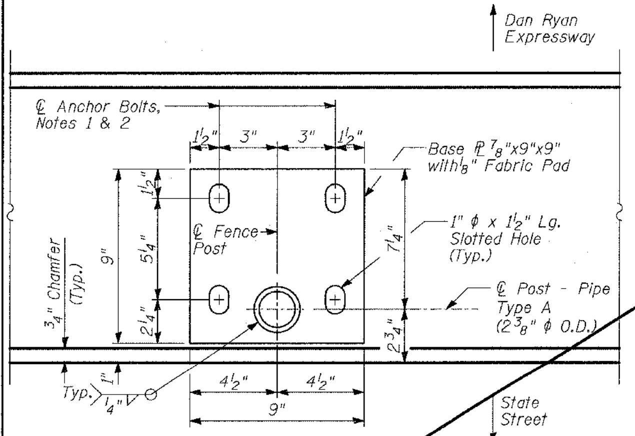
SECTION A-A



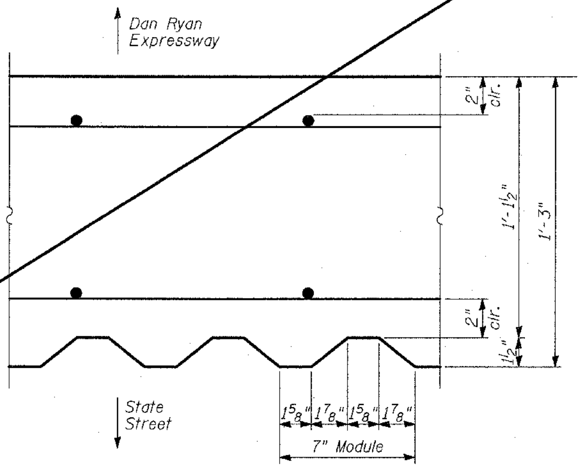
SECTION B-B
BASE PLATE PLAN



DETAIL 2



SECTION D-D
BASE PLATE PLAN

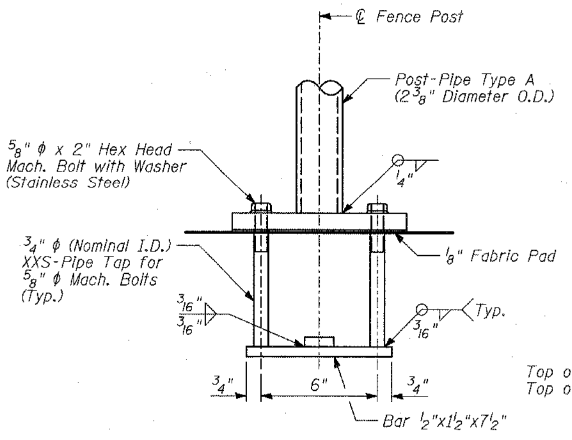


SECTION E-E

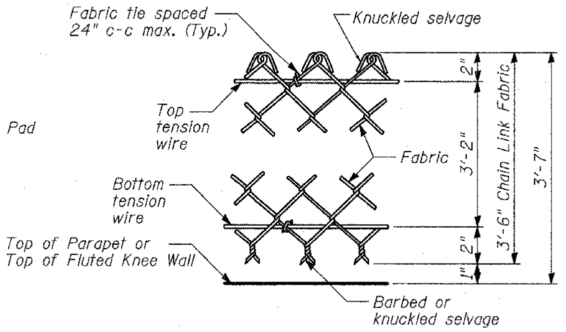
NOTES:

1. In lieu of the castiniplace anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting ⅝" diameter anchor rods with 1¼" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.

2. For additional chain link details, see Standard 664001.



DETAIL 3



DETAIL 4

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Fence, 42" Attached to Structure (Special)	FOOT	695

SHEET 14 OF 23

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6 - CHAIN LINK FENCE, 42" ATTACHED
TO STRUCTURE (SPECIAL)

S.N. 016-W956 DESIGNED BY: MI, MAF
SCALE: N.T.S. DRAWN BY: MAF, DJR
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

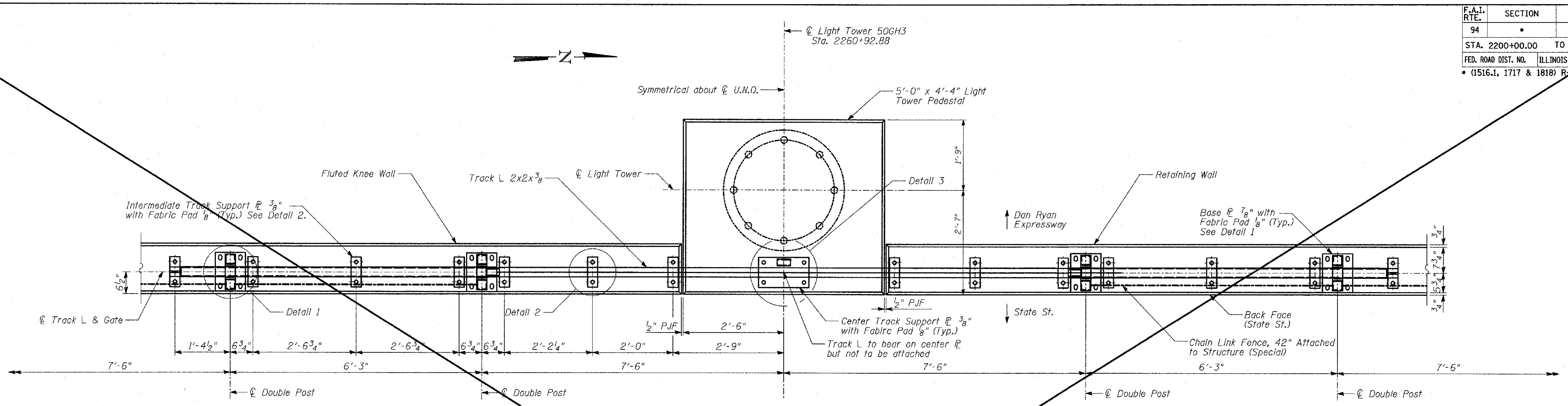
TYLIN INTERNATIONAL

$FILE$ $TIME$ $DATE$

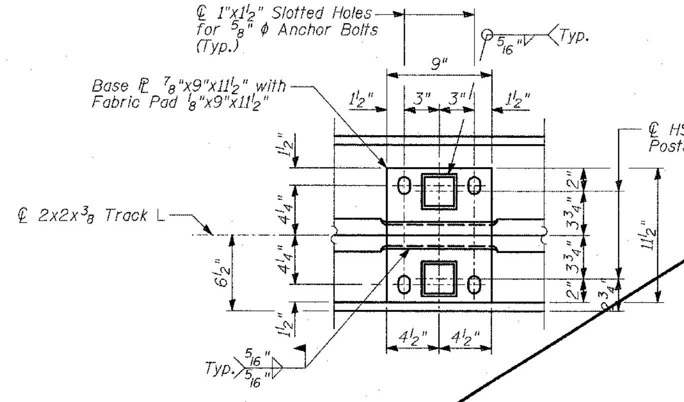
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	554
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-6

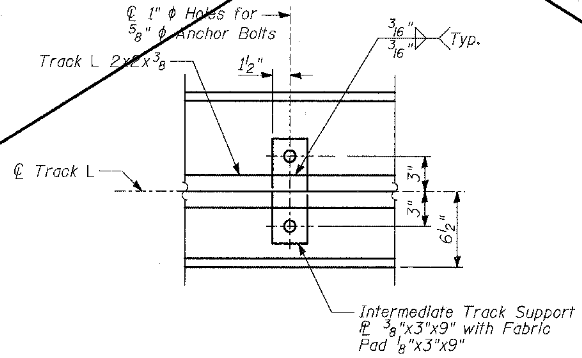
62694



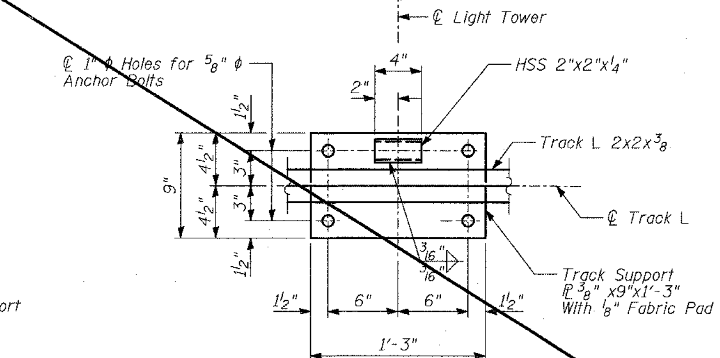
PLAN - GATE IN OPEN POSITION



DETAIL 1 - BASE PL PLAN



DETAIL 2



DETAIL 3

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Gate Assembly (Special)	EACH	1

NOTES:

1. All bolts shall be stainless steel conforming to ASTM F593-98 and F594-98.
2. All pipes and bars shall be hot dipped galvanized after fabrication.
3. For Back Face Elevations, see Sheet 16 of 23.
4. For Anchor Bolt Details, see Sheet 17 of 23.

TY·LIN INTERNATIONAL

SHEET 15 OF 23

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
GATE PLAN AND NOTES

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

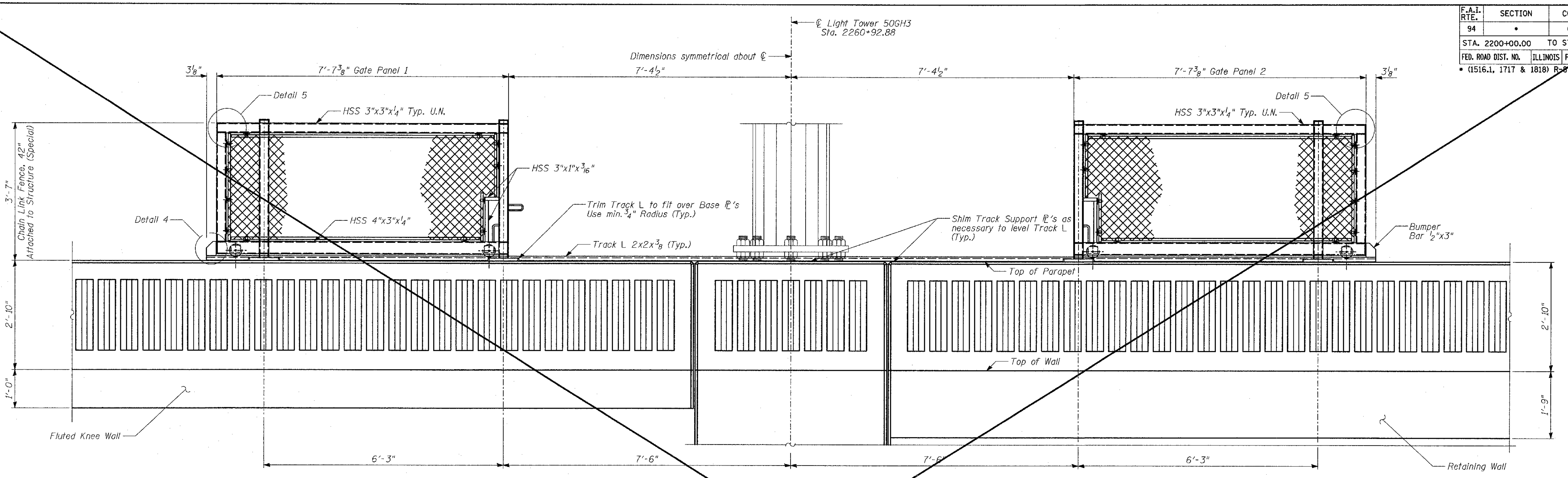
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	555

STA. 2200+00.00 TO STA. 2362+00.00

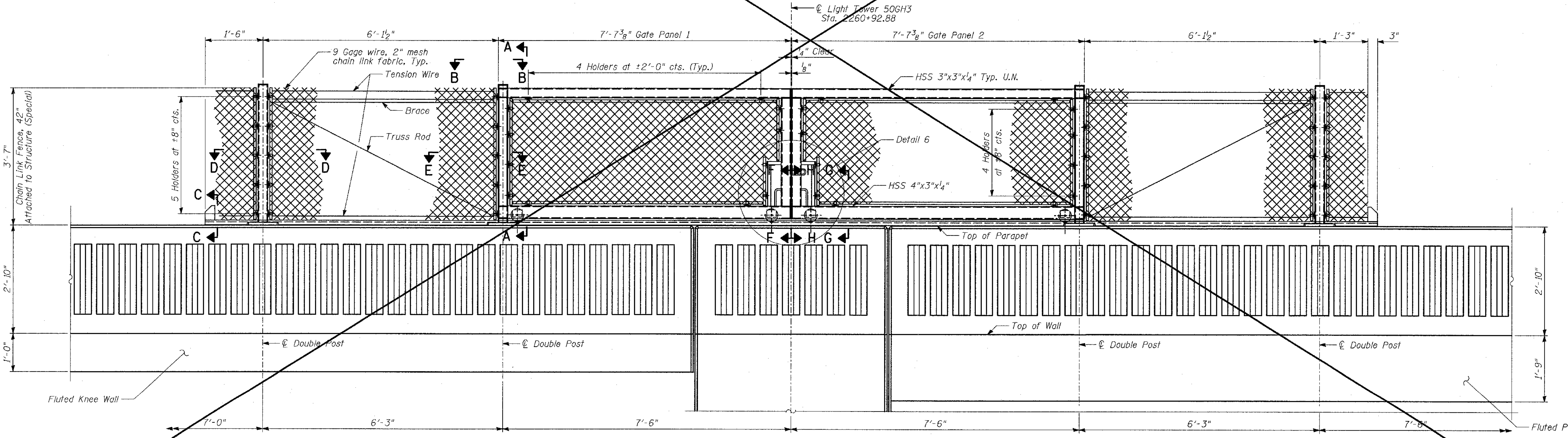
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694



BACK FACE ELEVATION - GATE IN OPEN POSITION



SHEET 16 OF 23

BACK FACE ELEVATION - GATE IN CLOSED POSITION

NOTES:

1. For notes, see Sheet 15 of 23.
2. For Sections A-A, B-B, D-D & E-E, see Sheet 17 of 23.
3. For Sections C-C, F-F, G-G, H-H, J-J and Details 4, 5, 6 & 7, see Sheet 18 of 23.

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
GATE ELEVATIONS

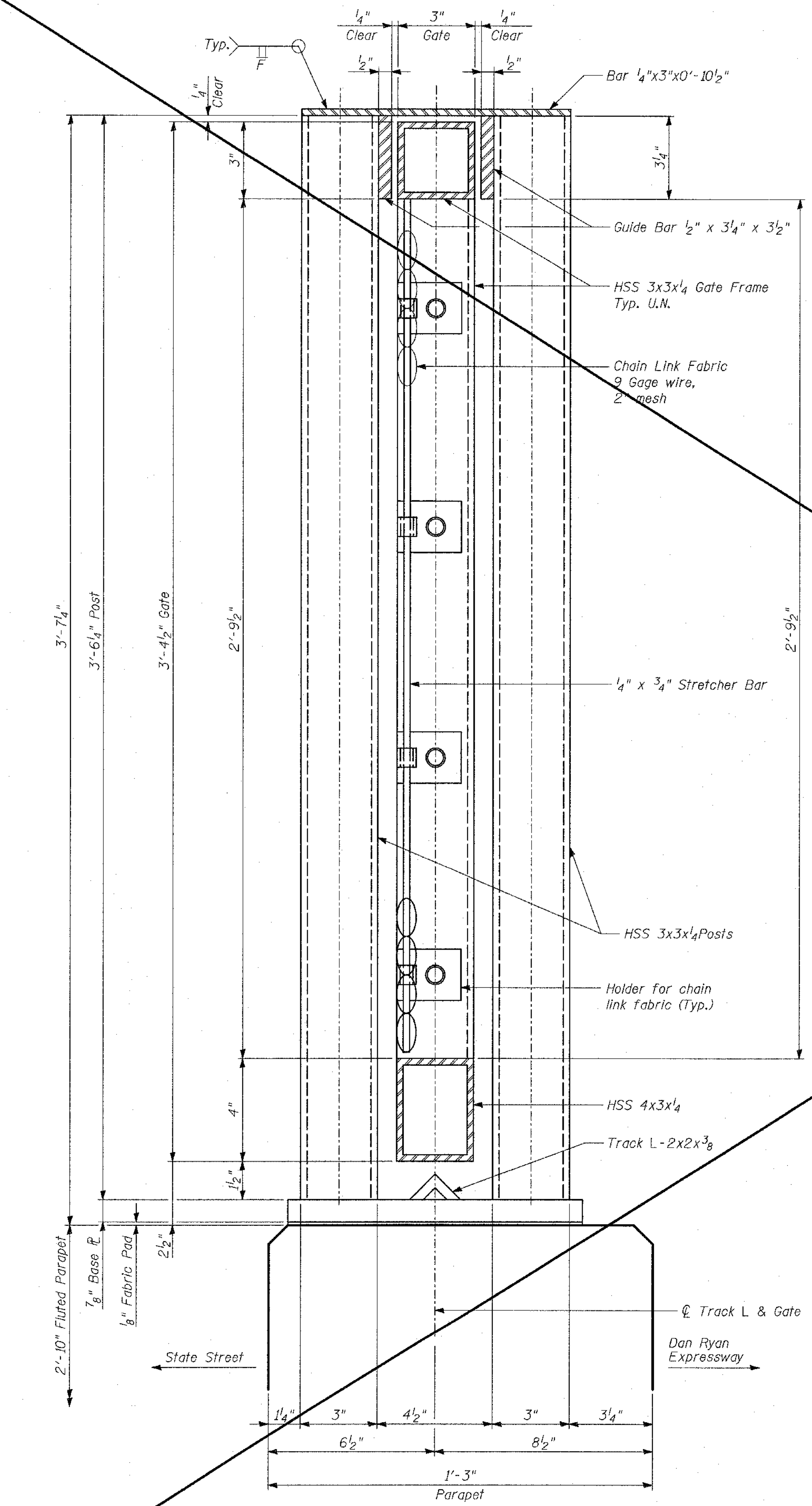
S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

TY·LIN INTERNATIONAL

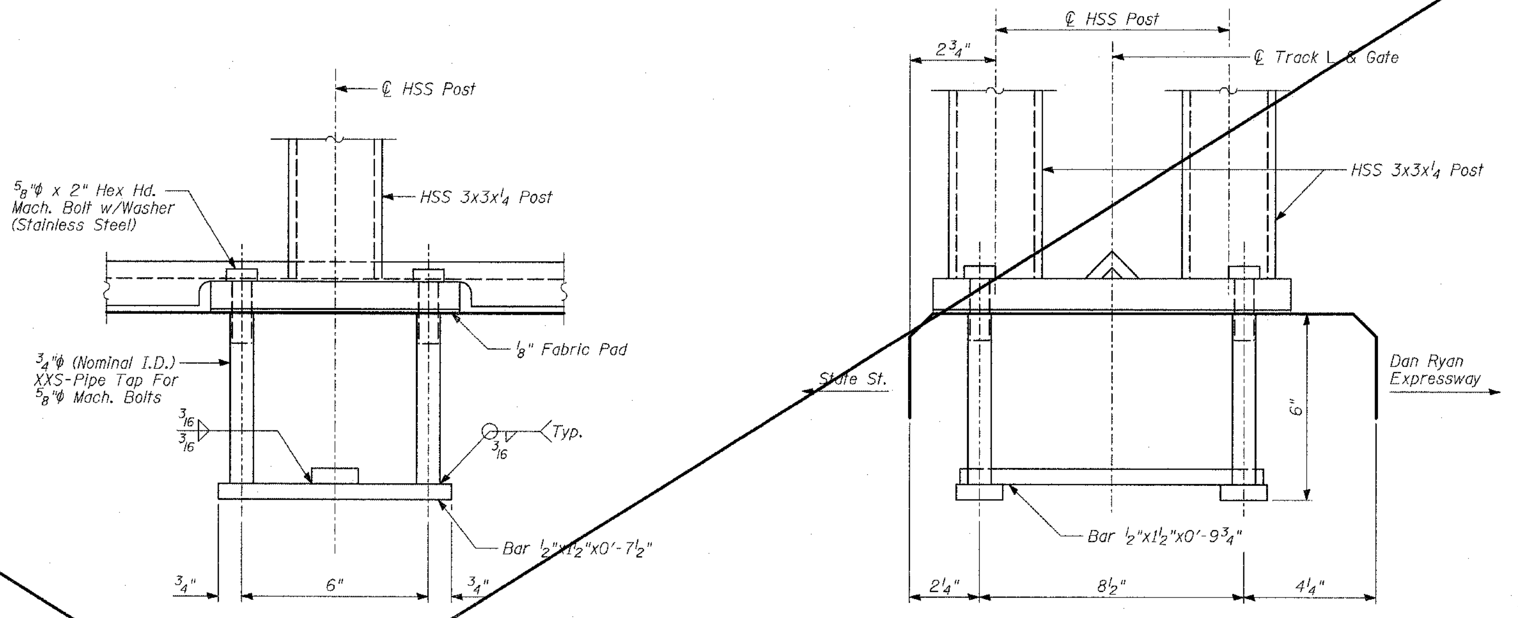
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	556
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

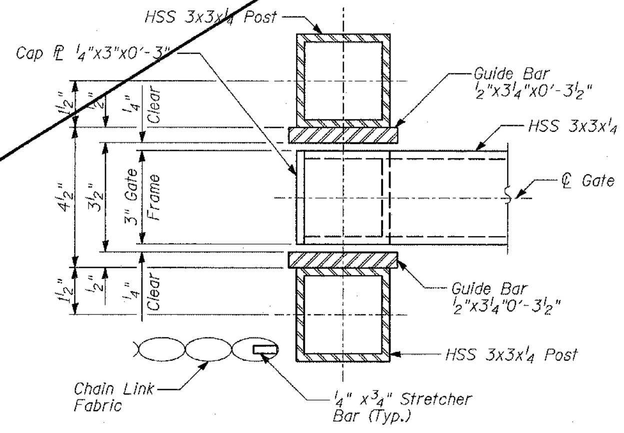


SECTION A-A

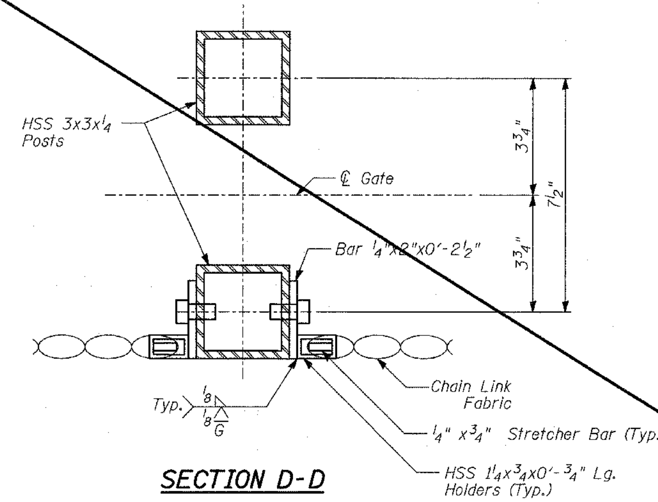


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting 5/8" diameter anchor rods with 1 1/4" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.



SECTION B-B



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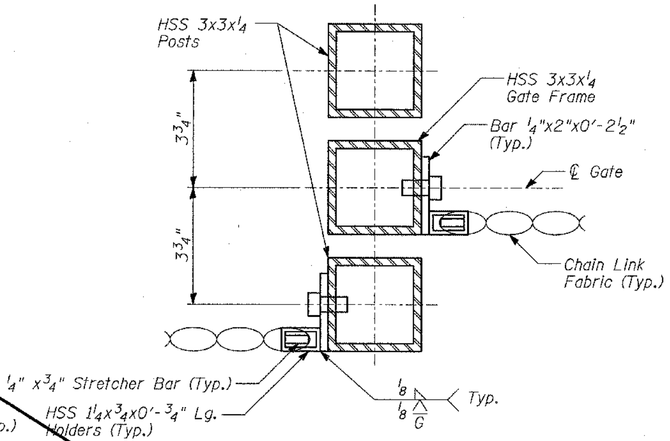


SECTION E-E

SHEET 17 OF 23

NOTES:

1. For Notes See Sheet 15 of 23.
2. For Anchor Bolt locations, see Details 1, 2 & 3 on Sheet 15 of 23.

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
GATE SECTIONS

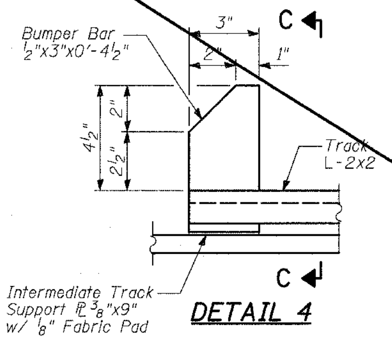
S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

T·Y·LIN INTERNATIONAL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	557
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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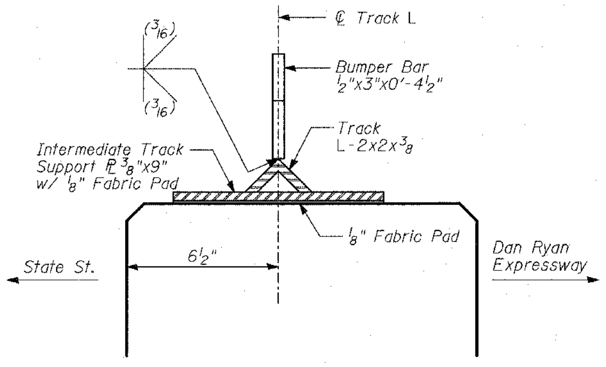

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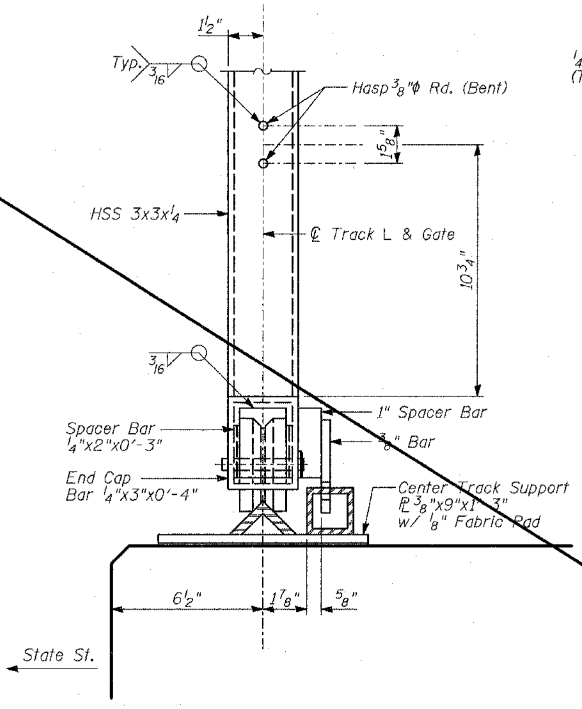
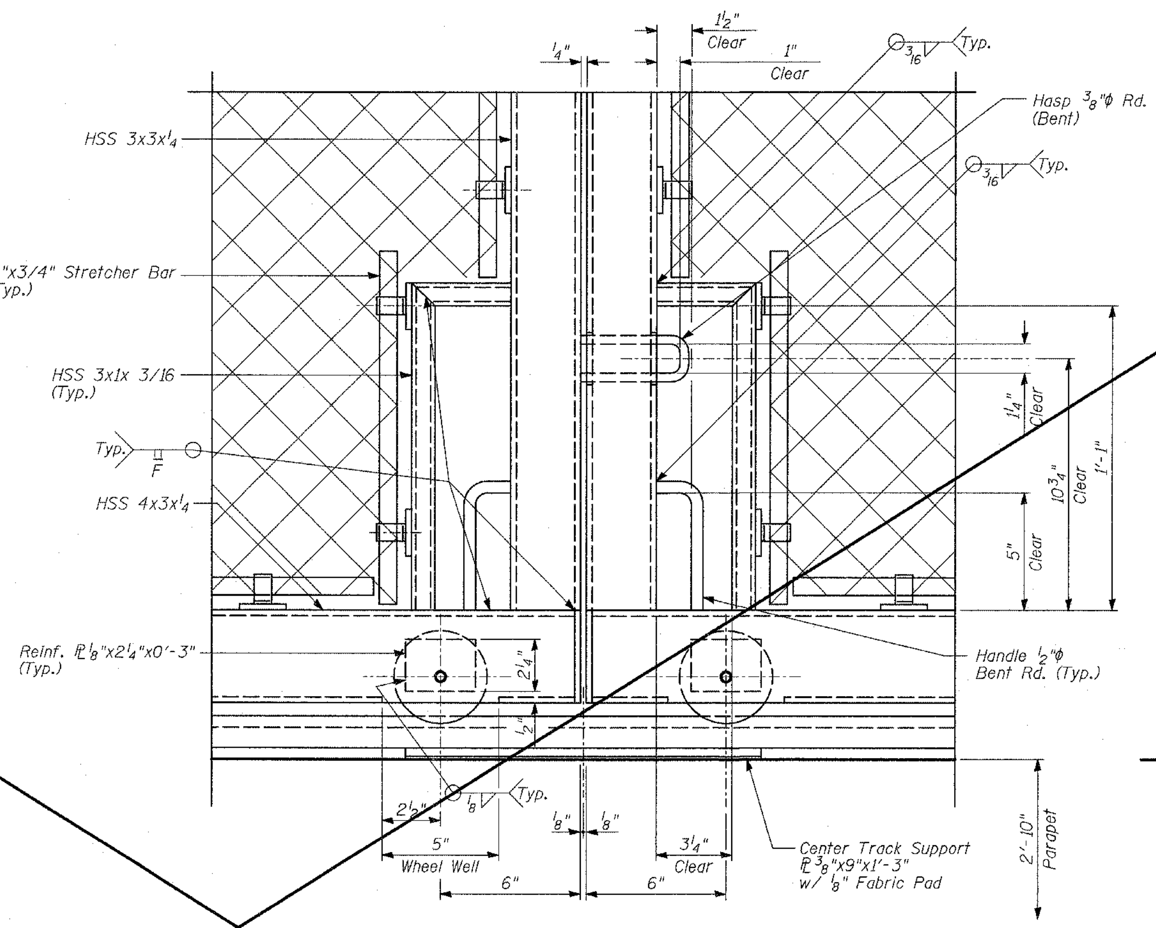
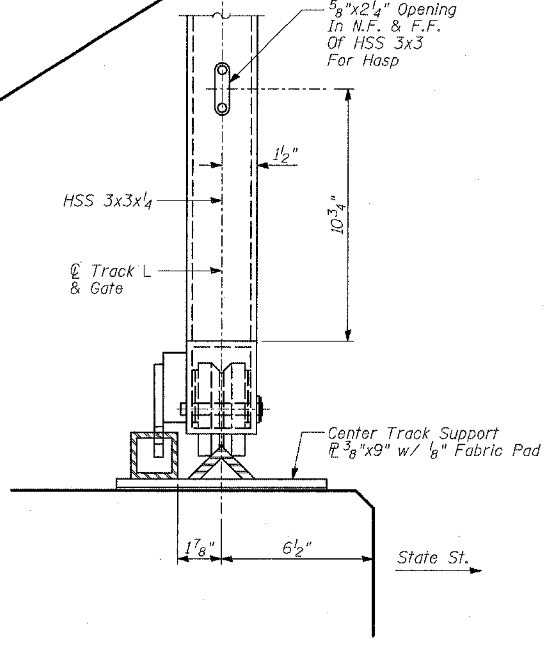


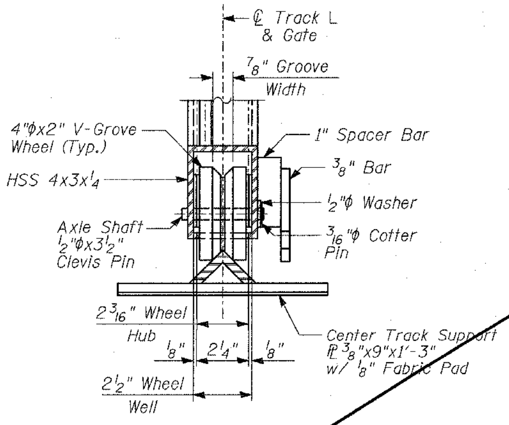
SECTION F-F



DETAIL 6



SECTION H-H



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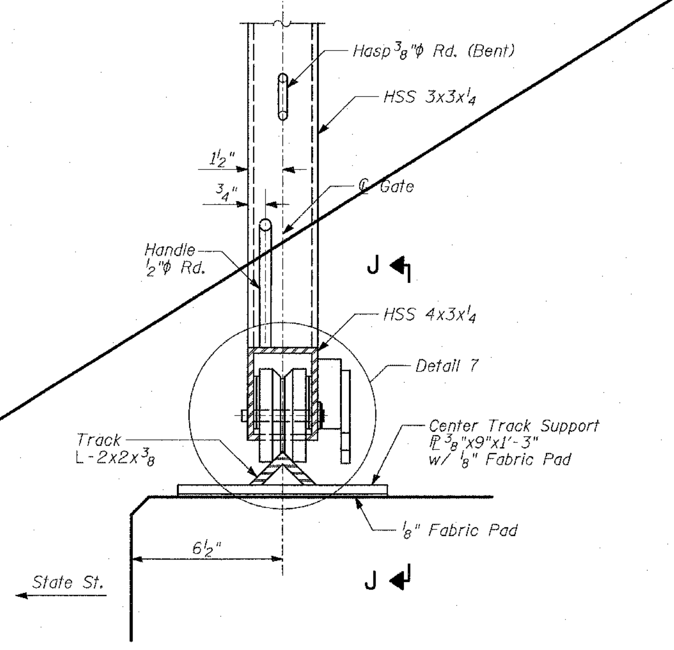
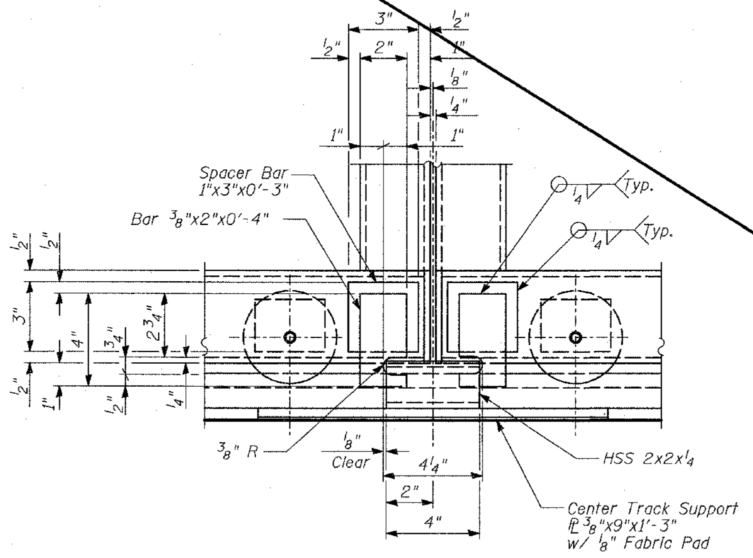
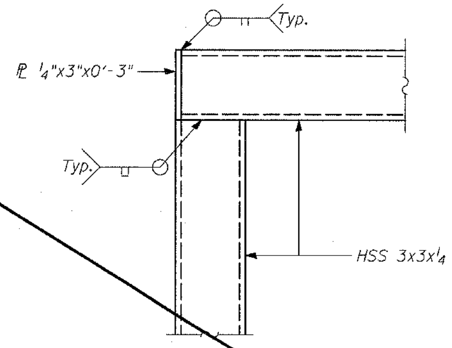


SECTION G-G



SECTION J-J



DETAIL 5

NOTES:

1. For notes, see Sheet 15 of 23.
2. For Anchor Bolt locations, see Sheet 15 of 23.
3. For Anchor Bolt details, see Sheet 17 of 23.
4. N.F. - denotes Near Face.
5. F.F. - denotes Far Face.

SHEET 18 OF 23

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
GATE SECTIONS AND DETAILS

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

TY·LIN INTERNATIONAL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	558

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

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BORING LOG SB 06-01

Page 1 of 1

WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 6.76 ft
North: 1847996.51 ft
East: 1177743.25 ft
Station: 2266+29
Offset: 94.0' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		2-inch thick ASPHALT over 10-inch thick CONCRETE --PAVEMENT--						
	5.8	Stiff, brown and gray CLAY --FILL--			1	8 6 7	1.72 B	20
			5		2	5 2 3	1.39 B	24
	1.3	Medium stiff, gray CLAY			3	2 1 3	0.66 B	22
			10		4	2 2 4	0.98 B	19
	-3.7	Very stiff, gray CLAY to SILTY CLAY, with interbeds of silt			5	2 3 4	2.05 B	15
			15		6	2 4 7	2.21 B	22
	-8.7	Medium dense, gray SILT						
	-9.7	Very stiff to hard, gray gravelly SILTY CLAY			7	4 6 12	2.75 P	21
			20		8	5 5 7	3.03 B	17
					9	4 31 27	3.61 B	13
			25		10	4 12 10	2.87 B	10

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
					11	7 8 8	4.02 B	12
			30		12	8 11 19	3.28 B	11
	-23.2	Boring terminated at 30.00 ft						
			35					
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling 02-25-2004 Complete Drilling 02-25-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

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BORING LOG SB 06-02

Page 1 of 1

WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.51 ft
North: 1847920.02 ft
East: 1177752.75 ft
Station: 2265+52
Offset: 101.0' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		2-inch thick ASPHALT over 11-inch thick CONCRETE --PAVEMENT--						
	6.4	5-inch thick CRUSHED STONE --BASE COURSE--						
	6.0	Very stiff, brown and gray CLAY --FILL--			1	5 4 4	NP	10
			5		2	9 3 4	2.46 B	21
	2.0	Soft to stiff, gray CLAY			3	3 2 3	1.15 B	18
			10		4	3 1 2	0.66 B	21
					5	2 2 2	0.41 B	21
	-5.5	Very stiff, gray SILTY CLAY	15		6	2 4 7	2.79 B	17
					7	3 5 9	3.94 B	16
	-9.5	Medium dense, gray SILT						
	-10.5	Very stiff to hard, gray gravelly SILTY CLAY	20		8	4 5 6	3.12 B	11
					9	3 5 7	2.13 B	11
			25		10	4 7 13	3.44 B	12

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
					11	4 8 10	3.03 B	12
			30		12	5 11 16	2.05 B	10
					13	50 50/5	> 4.50 P	9
	-26.9	Boring terminated at 34.40 ft	35					
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling 02-25-2004 Complete Drilling 02-25-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ∇ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 19 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
BORING LOGS SB06-01 & SB06-02

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

03/25/2005 11:09:08 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	559
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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Page 1 of 1

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BORING LOG SB 06-03

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.62 ft
North: 1847846.89 ft
East: 1177762.47 ft
Station: 2264+79
Offset: 109.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3-inch thick ASPHALT over 6-inch thick CONCRETE --PAVEMENT--					
6.9	9-inch thick CRUSHED STONE --BASE COURSE--		1	5 3 3	NP	18
6.1	Loose, gray SANDY LOAM --FILL--	5	2	1 2 3	NP	23
2.1	Stiff, brown and gray CLAY		3	1 2 2	1.23 B	23
-0.4	Medium stiff, brown and gray CLAY	10	4	1 2 3	0.74 B	24
			5	1 2 4	0.66 B	21
-6.4	Very stiff, gray CLAY	15	6	2 5 9	2.62 B	17
-7.9	Dense, gray SILT		7	6 12 21	NP	14
-10.4	Very stiff to hard, gray SILTY CLAY	20	8	4 6 8	3.44 B	13
			9	6 8 12	3.77 B	12
		25	10	9 12 15	> 4.50 P	11

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	8 11 15	3.85 B	11
		30	12	6 11 25	4.26 B	11
-24.4	Very dense, gray SILTY LOAM		13	20 50/5	NP	8
-26.9	Boring terminated at 34.50 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-25-2004 Complete Drilling 02-25-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

Page 1 of 1

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BORING LOG SB 06-04

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.19 ft
North: 1847771.50 ft
East: 1177773.43 ft
Station: 2264+03
Offset: 117.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 10-inch thick CONCRETE --PAVEMENT--					
7.2	Stiff, black and gray CLAY --FILL--		1	5 4 3	1.75 P	20
5.2	Very loose, gray SANDY LOAM --FILL--	5	2	4 1 2	NP	14
2.7	Stiff, gray CLAY --FILL--		3	2 1 2	1.07 B	20
0.2	Soft, gray CLAY --LL=29%, PL=17%--	10	4	1 2 2	0.49 B	22
			5	0 1 1	0.41 B	22
-4.8	Stiff, gray CLAY	15	6	0 2 3	1.39 B	20
-8.0	Very stiff, gray SILTY CLAY		7	1 3 5	2.13 B	18
-10.3	Medium dense, gray SILT	20	8	4 7 10	NP	19
-12.3	Stiff to hard, gray SILTY CLAY		9	6 7 9	3.44 B	12
		25	10	6 12 12	1.89 S	11

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	8 10 12	3.28 B	12
		30	12	7 10 12	2.95 B	11
		35	13	16 25 33	> 4.50 P	10
-26.8	Boring terminated at 35.00 ft					
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-24-2004 Complete Drilling 02-24-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

T·Y·LIN INTERNATIONAL

SHEET 20 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST. ENTRANCE RAMP FROM 87TH ST.
WALL 6
BORING LOGS SB06-03 & SB06-04

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

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03/25/2005 11:09:09 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	560
STA. 2200+00.00	TO STA. 2362+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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BORING LOG SB 06-05

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.34 ft
North: 1847696.41 ft
East: 1177779.54 ft
Station: 2263+28
Offset: 121.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION
	2-inch thick ASPHALT over 10-inch thick CONCRETE
7.3	--PAVEMENT--
6.7	Medium dense, brown GRAVELLY SAND --FILL--
	Stiff, brown and gray CLAY --FILL--
-0.7	
-1.2	Loose, gray GRAVEL, with pieces of brick --FILL--
-2.2	Medium stiff, brown and gray CLAY --FILL--
	Medium dense, black and brown SAND --FILL--
-4.7	Stiff, gray CLAY
-7.2	Stiff to hard, gray SILTY CLAY
-29.9	
-30.4	--AUGER REFUSAL--
	Boring terminated at 38.75 ft

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	8 6 4	NP	13
2	6 2 2	1.50 P	26
3	2 1 2	1.50 P	29
4	1 7 1	0.66 B	15
5	27 6 4	NP	29
6	5 2 4	1.48 B	15
7	8 13 13	3.75 P	13
8	6 8 9	4.10 B	12
9	4 9 10	3.85 B	10
10	8 15 13	1.80 B	15

Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
11	6 10 11	5.58 B	13
12	7 9 12	6.07 B	15
13	16 29 35	1.64 B	14
14	50/3	NP	6

GENERAL NOTES

Begin Drilling 02-24-2004 Complete Drilling 02-24-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ 10.75 ft
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

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BORING LOG SB 06-06

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 8.10 ft
North: 1847620.23 ft
East: 1177783.35 ft
Station: 2262+52
Offset: 123.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION
	2-inch thick ASPHALT over 10-inch thick CONCRETE
7.1	--PAVEMENT--
	Medium stiff to stiff, brown and gray CLAY --FILL--
-2.4	Medium stiff, gray CLAY
-4.9	Stiff to very stiff, gray SILTY CLAY
-9.9	Medium dense, gray SILT
-12.4	Stiff to hard, gray SILTY CLAY
-23.9	Very dense, gray SILTY LOAM
-31.3	
	Boring terminated at 39.40 ft

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	13 7 2	1.00 P	20
2	3 3 5	1.00 P	16
3	2 1 1	1.50 P	30
4	2 1 2	0.50 P	27
5	1 1 2	0.82 B	21
6	2 3 5	1.48 B	16
7	3 6 5	2.71 B	15
8	6 11 10	NP	12
9	5 6 8	1.89 B	11
10	6 8 9	4.10 B	12

Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
11	5 9 16	2.87 B	13
12	5 9 13	4.10 B	11
13	12 34 50	NP	8
14	39 55/5	NP	11

GENERAL NOTES

Begin Drilling 02-24-2004 Complete Drilling 02-24-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 21 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST. ENTRANCE RAMP FROM 87TH ST.
WALL 6
BORING LOGS SB06-05 & SB06-06

S.N. 016-W956 DESIGNED BY: DJR
SCALE: N.T.S. DRAWN BY: DJR
DATE: MARCH 18, 2005 CHECKED BY: TD

03/25/2005 11:09:09 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	561
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

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Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB 06-07

Page 1 of 1

WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.87 ft
North: 1847545.46 ft
East: 1177785.21 ft
Station: 2261+77
Offset: 123.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3-inch thick ASPHALT over 6-inch thick CONCRETE --PAVEMENT--					
7.1	8-inch thick CRUSHED STONE --BASE COURSE--		1	11 4 3	0.25 P	26
6.5	Soft, gray CLAY --FILL--	5	2	2 2 3	0.25 P	26
2.4	Loose, gray SILTY LOAM --FILL--		3	1 2 2	NP	20
-0.1	Medium dense, BRICKS and GRAVEL --FILL--	10	4	2 13 15	NP	20
-2.6	Stiff to hard, gray CLAY		5	2 3 4	1.00 P	22
		15	6	6 10 14	4.00 P	19
-7.6	Medium dense, gray SILTY LOAM		7	4 9 15	NP	15
		20	8	7 11 14	NP	13
-12.6	Hard, gray SILTY CLAY		9	3 5 8	> 4.50 P	12
		25	10	7 9 12	> 4.50 P	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	5 9 12	4.00 P	12
-20.1	Dense to very dense, gray SILTY LOAM	30	12	7 12 22	NP	11
	--AUGER REFUSAL--	35	13	23 43 50/2	NP	11
-27.6	Boring terminated at 35.50 ft					
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-24-2004 Complete Drilling 02-24-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

Wang Engineering, INC
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB 06-08

Page 1 of 1

WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.81 ft
North: 1847470.54 ft
East: 1177789.12 ft
Station: 2261+02
Offset: 124.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--					
6.9 6.6	Medium dense, brown SANDY LOAM --FILL--		1	9 6 4	4.00 P	17
4.8	Hard, black and gray CLAY --FILL--					
	Medium stiff to stiff, gray CLAY	5	2	2 4 4		
			3	0 0 0	0.66 B	20
		10	4	0 0 0	0.66 B	20
			5	2 2 4	0.98 B	16
		15	6	2 3 5	1.97 B	18
-8.4	Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM		7	4 7 9	2.79 S	14
		20	8	4 10 10	> 4.50 P	13
			9	3 4 6	3.28 S	13
		25	10	2 4 11	3.69 S	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-18.7	Dense, gray gravelly LOAM		11	9 14 18	NP	9
-20.2	Very stiff, gray gravelly SILTY CLAY LOAM, with interbeds of silt	30	12	8 14 20	3.69 S	10
-26.2	Very dense, gray gravelly SILTY LOAM	35	13	11 30 60	NP	13
-28.7 -28.8	--AUGER REFUSAL--		14	34 50/1	NP	8
	Boring terminated at 36.60 ft					
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-23-2004 Complete Drilling 02-23-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger N. Davis Checked by L. Iordache
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

SHEET 22 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST. ENTRANCE RAMP FROM 87TH ST.
WALL 6
BORING LOGS SB06-07 & SB06-08

S.N. 016-W945
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

TYLIN INTERNATIONAL

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	562
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

p:\02373\structur\C17aWall 06\sbl7aDRsh053a w956.dgn

Page 1 of 1

BORING LOG SB 06-09

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 7.97 ft
North: 1847394.32 ft
East: 1177789.92 ft
Station: 2260+26
Offset: 123.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3-inch thick ASPHALT over					
7.2	6-inch thick CONCRETE --PAVEMENT--					
6.8	5-inch thick, CRUSHED STONE --BASE COURSE--		1	13 10 3	1.00 P	21
	Medium stiff to stiff, gray CLAY --FILL--	5	2	3 2 2	0.50 P	21
			3	1 2 5	1.00 P	23
0.0	Very dense, BRICK and GRAVEL --FILL--	10	4	15 38 26	NP	19
-2.5	Very stiff, gray CLAY		5	2 3 4	2.75 P	22
		15	6	2 7 16	NP	18
-6.5	Medium dense, gray SILT to SILTY LOAM		7	8 4 16	NP	15
-10.0	Hard, gray CLAY	20	8	4 8 14	NP	10
-11.5	Medium dense, gray SANDY LOAM					
-12.5	Hard, gray SILTY CLAY		9	8 10 13	> 4.50 P	12
		25	10	7 11 14	> 4.50 P	10

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			11	7 11 14	> 4.50 P	12
-20.0	Dense to very dense, gray SILTY LOAM	30	12	7 13 20	NP	11
		35	13	50/1	NP	7
			14	100/6	NP	7
-31.0	Boring terminated at 39.00 ft	40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-24-2004 Complete Drilling 02-24-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling	▽	DRY
At Completion of Drilling	▼	DRY
Time After Drilling		NA
Depth to Water	▽	NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 23 OF 23

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 87TH ST.
WALL 6
BORING LOG SB06-09

S.N. 016-W956
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

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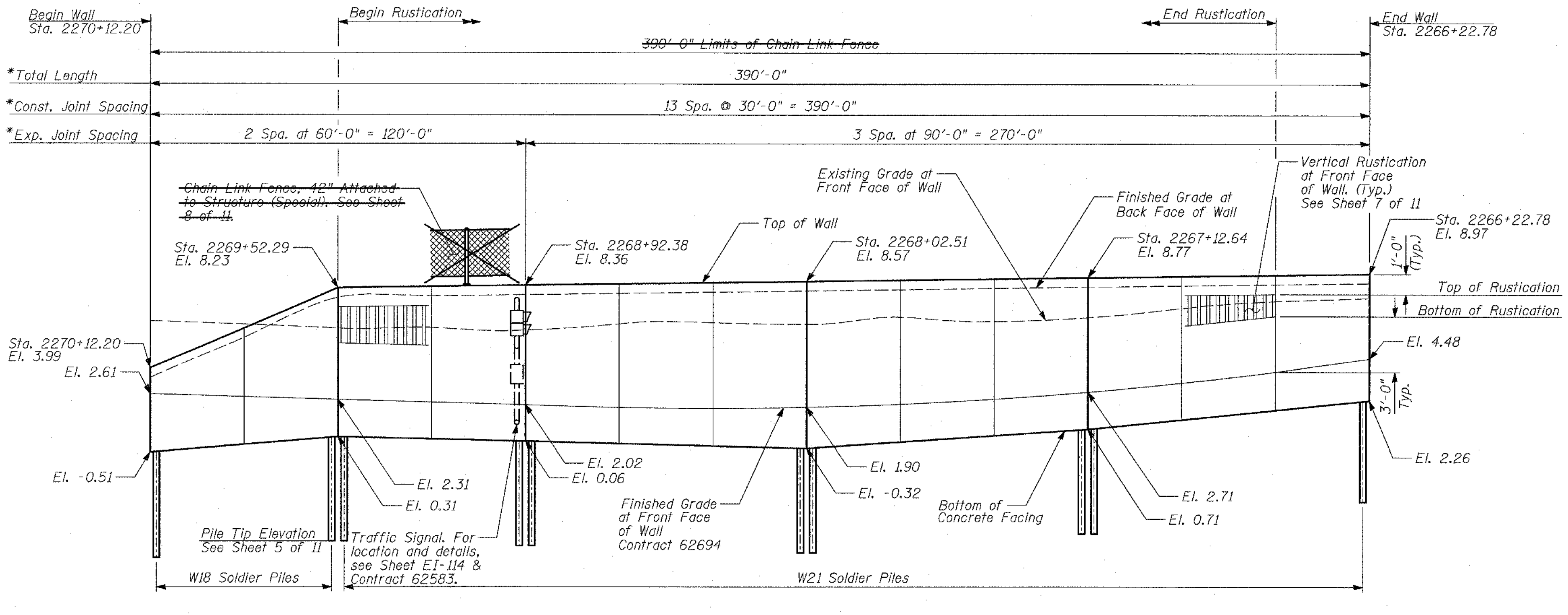
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	563
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

Benchmarks: BM 3553 Set "+" northwest bolt of traffic signal/light base at northeast intersection of 87th St. and State St. El. 8.47

Existing Structure: None.



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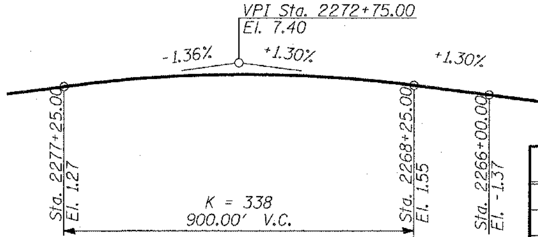
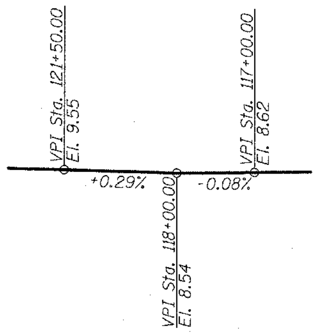


PROFILE GRADE

(N.B. I-94)



PROFILE GRADE

(State Street)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	280
Concrete Structures	CU YD	128
Protective Coat	SQ YD	324
Rustication Finish	SQ FT	680
Stud Shear Connectors	EACH	532
Untreated Timber Lagging	SQ FT	2,280
Furnishing Soldier Piles (W Section)	FOOT	1,900
Reinforcement Bars, Epoxy Coated	POUND	11,740
Geocomposite Wall Drain	SQ YD	275
Pipe Underdrains for Structures, 6"	FOOT	390
Drilling and Setting Soldier Piles (In Soil)	CU FT	9,414
~~Chain Link Fence, 42" Attached to Structure (Special)~~	~~FOOT~~	~~390~~

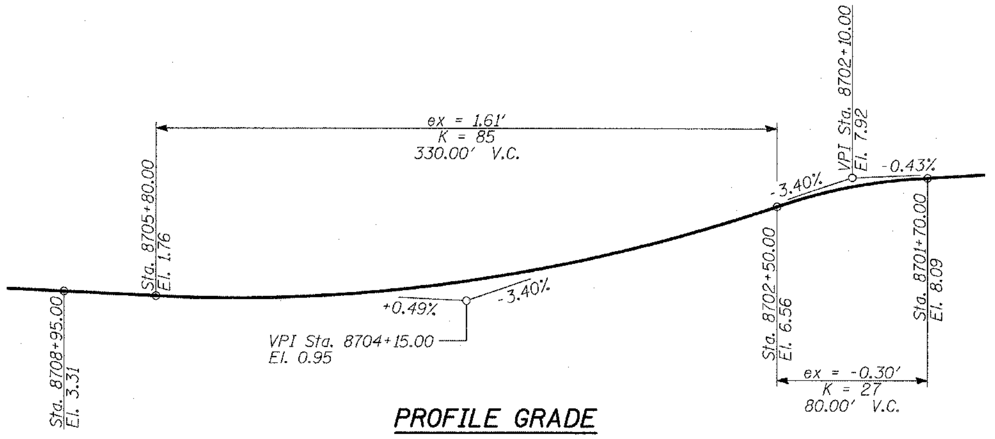
DESIGN SPECIFICATION

AASHTO 2002 Standard Specifications for Highway Bridges

DESIGN STRESSES

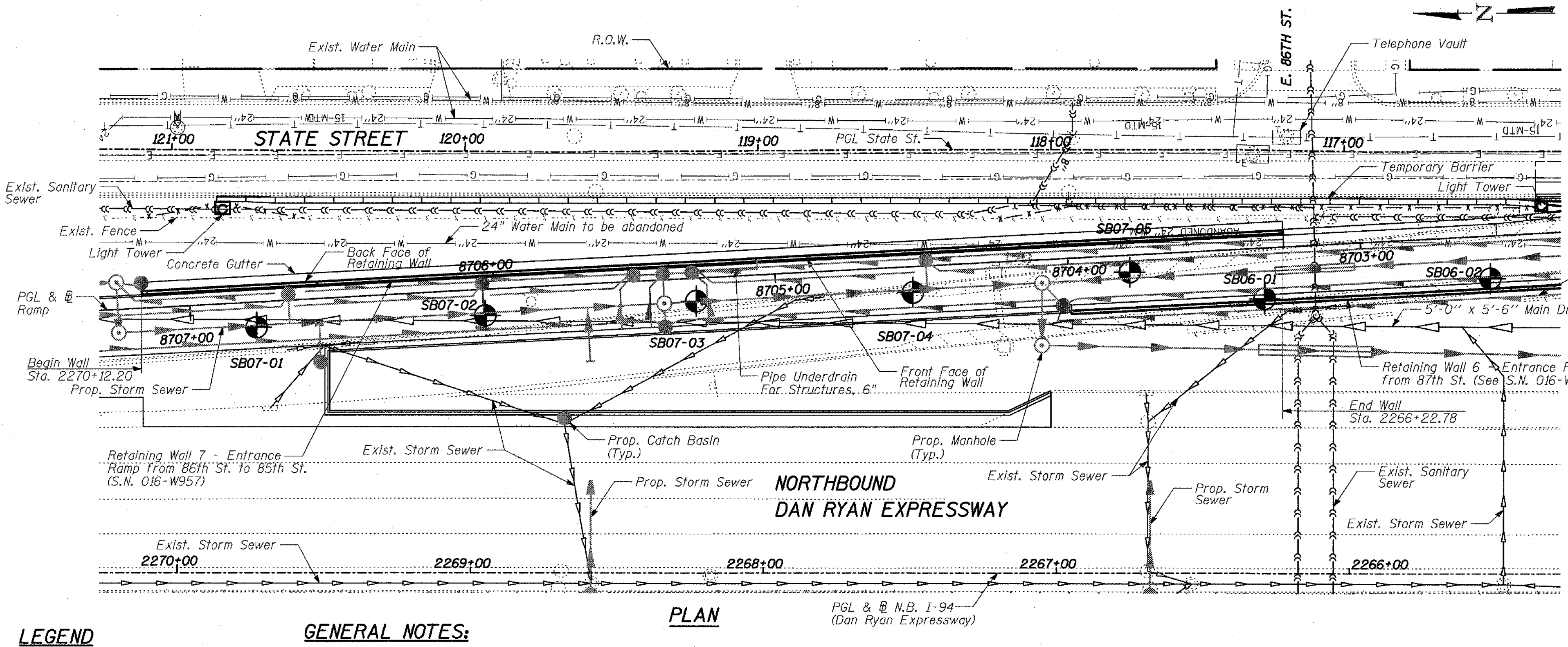
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36) Soldier Piles

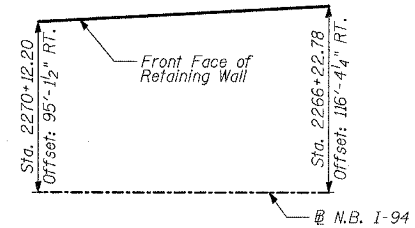


PROFILE GRADE

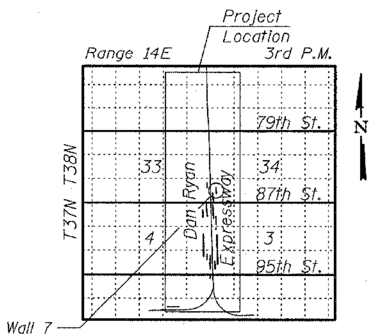
(Ramp)



PLAN



OFFSET SKETCH



LOCATION SKETCH

INDEX OF SHEETS

1. GENERAL PLAN
2. PLAN AND ELEVATION STA. 2270+12.20 TO STA. 2268+92.38
3. PLAN AND ELEVATION STA. 2268+92.38 TO STA. 2267+12.64
4. PLAN AND ELEVATION STA. 2267+12.64 TO STA. 2266+22.78
5. PILE LAYOUT, DETAILS & BILL OF MATERIAL
6. WALL CROSS SECTIONS & DETAILS
7. RUSTICATION DETAILS
8. ~~CHAIN LINK FENCE, 42" ATTACHED TO STRUCTURE (SPECIAL)~~
9. BORING LOGS SB07-01 & SB07-02
10. BORING LOGS SB07-03 & SB07-04
11. BORING LOG SB07-05

LEGEND

⊕ Boring Location

* Measured along Front Face of Wall.

GENERAL NOTES:

1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
3. The soldier piles shall be cleaned and given one shop coat of Inorganic Zinc-Rich primer.
4. All exposed concrete edges shall be chamfered ¾" except as noted.
5. Protective Coat shall be applied to exposed surfaces of the concrete facing.
6. Existing utilities in conflict with soldier pile wall construction shall be abandoned or relocated according to directions given on the roadway plans.
7. All construction joints shall be bonded.
8. All elevations shown are based on the Chicago City Datum of 0.00, which is 579.19 feet above mean tide New York. (NAVD 88)
9. The wall shall be backfilled (where applicable) prior to placing the concrete facing.
10. The Contractor is responsible to coordinate all electrical crossings with this Contract and with Contract 62583.

T·Y·LIN INTERNATIONAL

PHILLIP D. FREY 081-004826 CHICAGO, ILLINOIS

Signed Phillip D. Frey
Phillip D. Frey, S.E. Il. Lic. No. 081-004826
Expires 11-30-2006.

Date 3/18/05

For drawings 1 thru 11 of 11

SHEET 1 OF 11

REVISIONS	
NAME	DATE
REVISED	04/15/05

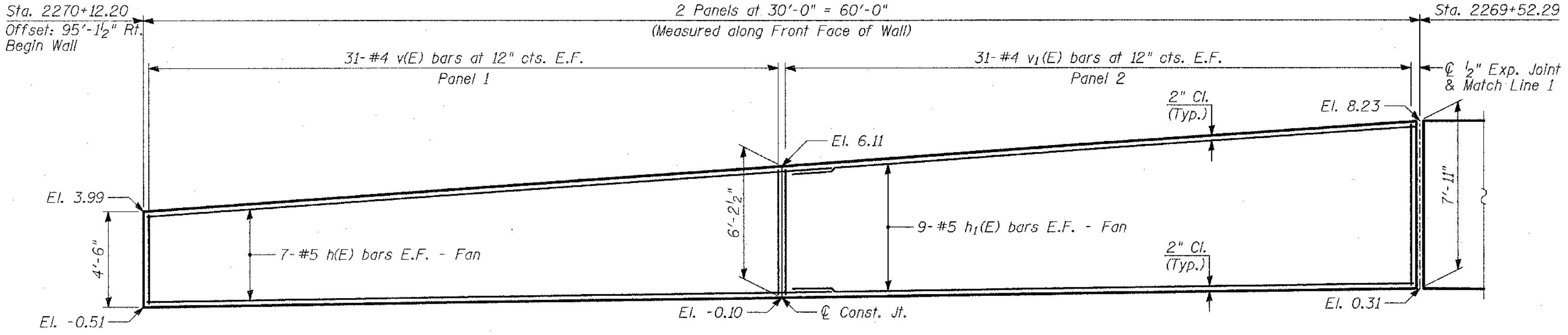
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7 - GENERAL PLAN
STA. 2270+12.20 TO STA. 2266+22.78

S.N. 016-W957 — DESIGNED BY: MI. TB
SCALE: N.T.S. — DRAWN BY: TB, DJR
DATE: MARCH 18, 2005 — CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	564
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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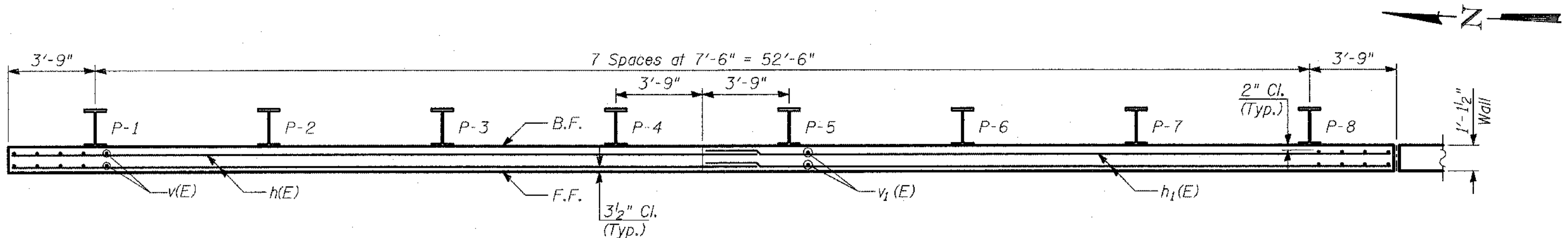
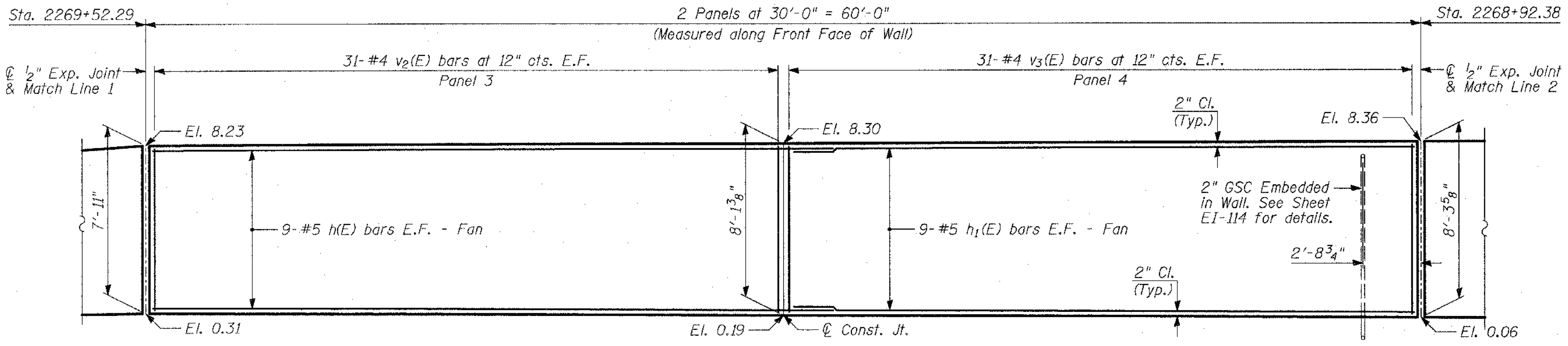


PLAN



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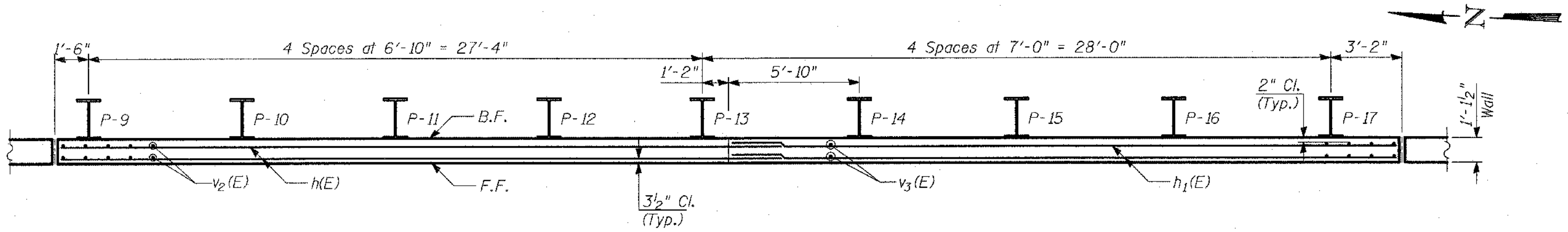


PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 5 thru 8 of 11.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 5 of 11.

SHEET 2 OF 11

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7 - PLAN AND ELEVATION
STA. 2270+12.20 TO STA. 2268+92.38

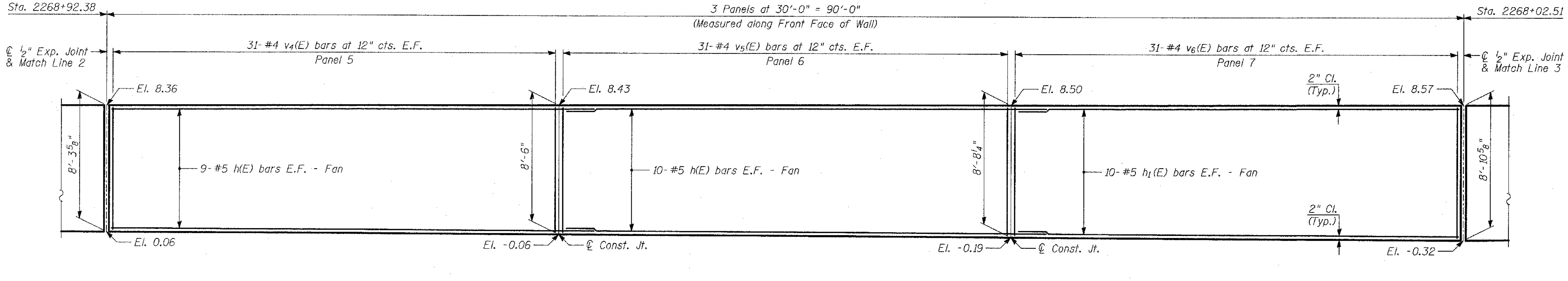
S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

TY·LIN INTERNATIONAL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	565
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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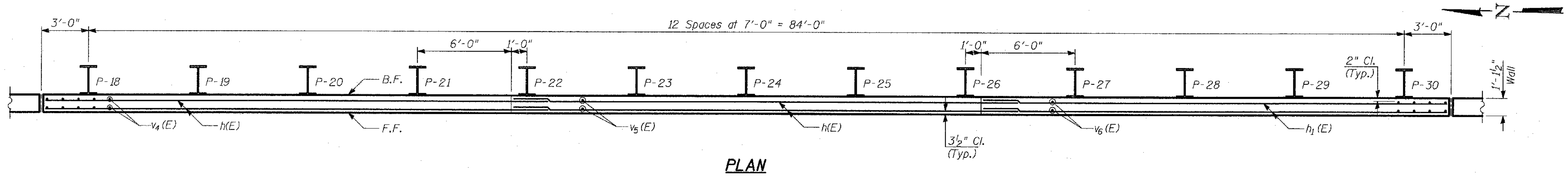

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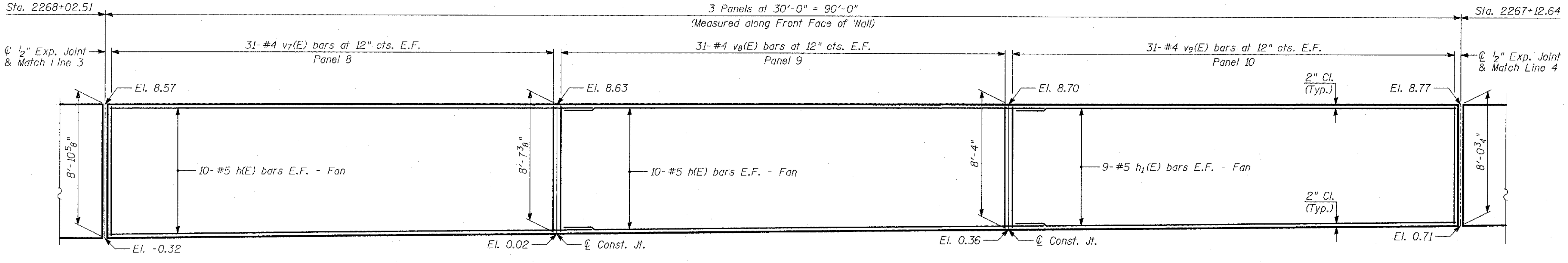

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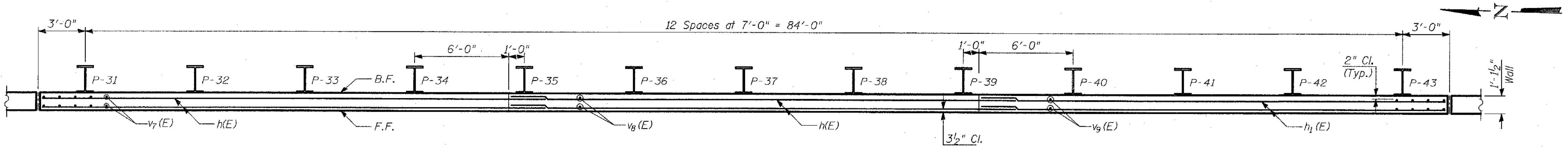

PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 5 thru 8 of 11.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 5 of 11.

SHEET 3 OF 11

T·Y·LIN INTERNATIONAL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7 - PLAN AND ELEVATION
STA. 2268+92.38 TO STA. 2267+12.64

S.N. 016-W957
DESIGNED BY: MI, TB
SCALE: N.T.S.
DRAWN BY: TB, DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

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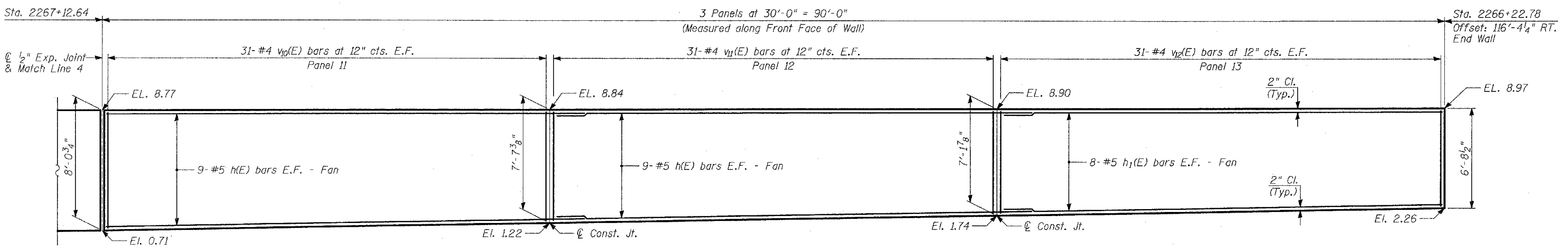
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	566
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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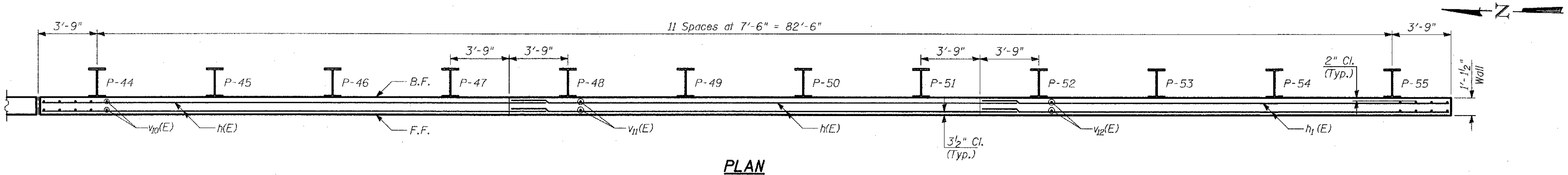

PLAN

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 5 thru 8 of 11.
5. Pile spacing measured along front face of wall.
6. For Lap Splices, see Sheet 5 of 11.

SHEET 4 OF 11

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7 - PLAN AND ELEVATION
STA. 2267+12.64 TO STA. 2266+22.78

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

TYLININTERNATIONAL

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	567

STA. 2200+00.00 TO STA. 2362+00.00

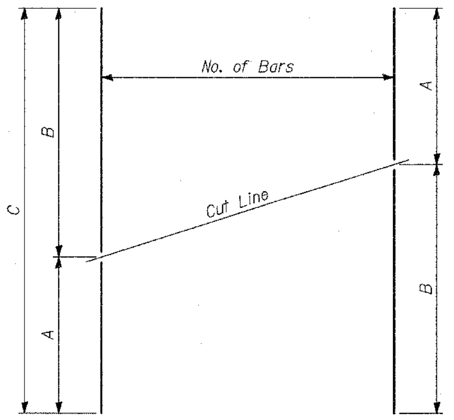
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

PILE LAYOUT

Pile	Station at Working Point	Top of Wall El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-1	2270+08.51	4.25	2.25	-0.46	W18x143	-28.50	30'-9"
P-2	2270+01.03	4.78	2.78	-0.36		-28.38	31'-2"
P-3	2269+93.54	5.31	3.31	-0.25		-28.27	31'-7"
P-4	2269+86.05	5.84	3.84	-0.15		-28.16	32'-0"
P-5	2269+78.56	6.37	4.37	-0.05		-28.13	32'-6"
P-6	2269+71.07	6.90	4.90	0.06		-28.01	32'-11"
P-7	2269+63.58	7.43	5.43	0.16		-27.90	33'-4"
P-8	2269+56.09	7.96	5.96	0.26	W18x143	-27.79	33'-9"
P-9	2269+50.85	8.23	6.23	0.31	W21x147	-28.77	35'-0"
P-10	2269+44.03	8.25	6.25	0.28		-28.75	35'-0"
P-11	2269+37.20	8.26	6.26	0.25		-28.82	35'-1"
P-12	2269+30.38	8.28	6.28	0.22		-28.81	35'-1"
P-13	2269+23.56	8.29	6.29	0.19		-28.87	35'-2"
P-14	2269+16.57	8.31	6.31	0.16		-28.86	35'-2"
P-15	2269+09.58	8.32	6.32	0.13		-28.93	35'-3"
P-16	2269+02.59	8.34	6.34	0.10		-28.91	35'-3"
P-17	2268+95.60	8.36	6.36	0.07		-28.98	35'-4"
P-18	2268+89.44	8.37	6.37	0.05		-28.96	35'-4"
P-19	2268+82.45	8.39	6.39	0.02		-29.03	35'-5"
P-20	2268+75.46	8.40	6.40	-0.01		-29.02	35'-5"
P-21	2268+68.47	8.42	6.42	-0.04		-29.08	35'-6"
P-22	2268+61.48	8.43	6.43	-0.07		-29.15	35'-7"
P-23	2268+54.49	8.45	6.45	-0.10		-29.13	35'-7"
P-24	2268+47.50	8.46	6.46	-0.13		-29.20	35'-8"
P-25	2268+40.51	8.48	6.48	-0.16		-29.19	35'-8"
P-26	2268+33.52	8.50	6.50	-0.19		-29.25	35'-9"
P-27	2268+26.53	8.51	6.51	-0.22		-29.24	35'-9"
P-28	2268+19.54	8.53	6.53	-0.25		-29.31	35'-10"
P-29	2268+12.55	8.54	6.54	-0.27		-29.29	35'-10"
P-30	2268+05.57	8.56	6.56	-0.30		-29.36	35'-11"
P-31	2267+99.58	8.57	6.57	-0.28		-29.34	35'-11"
P-32	2267+92.59	8.59	6.59	-0.20		-29.24	35'-10"
P-33	2267+85.60	8.60	6.60	-0.12		-29.15	35'-9"
P-34	2267+78.61	8.62	6.62	-0.04		-29.05	35'-8"
P-35	2267+71.62	8.64	6.64	0.04		-29.03	35'-8"
P-36	2267+64.63	8.65	6.65	0.11		-28.93	35'-7"
P-37	2267+57.64	8.67	6.67	0.19		-28.83	35'-6"
P-38	2267+50.65	8.68	6.68	0.27		-28.73	35'-5"
P-39	2267+43.66	8.70	6.70	0.35		-28.72	35'-5"
P-40	2267+36.67	8.71	6.71	0.43		-28.62	35'-4"
P-41	2267+29.68	8.73	6.73	0.51		-28.52	35'-3"
P-42	2267+22.69	8.75	6.75	0.59		-28.42	35'-2"
P-43	2267+15.70	8.76	6.76	0.67		-28.40	35'-2"
P-44	2267+08.96	8.78	6.78	0.82		-27.22	34'-0"
P-45	2267+01.47	8.80	6.80	0.95		-27.12	33'-11"
P-46	2266+93.98	8.82	6.82	1.08		-26.93	33'-9"
P-47	2266+86.49	8.84	6.84	1.21		-26.83	33'-8"
P-48	2266+79.00	8.85	6.85	1.34		-26.73	33'-7"
P-49	2266+71.51	8.87	6.87	1.47		-26.55	33'-5"
P-50	2266+64.02	8.89	6.89	1.60		-26.45	33'-4"
P-51	2266+56.53	8.90	6.90	1.73		-26.35	33'-3"
P-52	2266+49.04	8.92	6.92	1.86		-26.16	33'-1"
P-53	2266+41.55	8.94	6.94	1.99		-26.06	33'-0"
P-54	2266+34.07	8.95	6.95	2.12		-25.96	32'-11"
P-55	2266+26.58	8.97	6.97	2.25	W21x147	-25.78	32'-9"

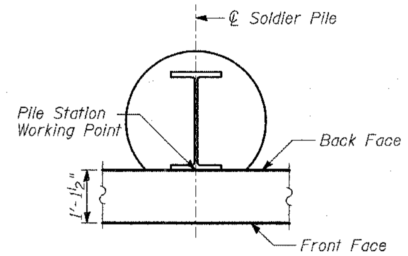


SERIES OF BAR CUTTING DIAGRAM

See table for dimensions.
Make all cuts normal to bar axis

BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	No. of Bars Per Set	A	B	C
v(E)	1	31	4'-2"	5'-11"	10'-1"
v_1(E)	1	31	5'-11"	7'-7"	13'-6"
v_2(E)	1	31	7'-7"	7'-10"	15'-5"
v_5(E)	1	31	8'-2"	8'-5"	16'-7"
v_7(E)	1	31	8'-7"	8'-4"	16'-11"
v_8(E)	1	31	8'-4"	8'-0"	16'-4"
v_9(E)	1	31	8'-0"	7'-9"	15'-9"
v_{10}(E)	1	31	7'-9"	7'-4"	15'-1"
v_{11}(E)	1	31	7'-4"	6'-10"	14'-2"
v_{12}(E)	1	31	6'-10"	6'-5"	13'-3"



SOLDIER PILE WORKING POINT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	146	#5	32'-2"	———
h_1(E)	90	#5	29'-8"	———
v(E)	31	#4	10'-1"	———
v_1(E)	31	#4	13'-6"	———
v_2(E)	31	#4	15'-5"	———
v_3(E)	62	#4	7'-10"	———
v_4(E)	62	#4	8'-0"	———
v_5(E)	31	#4	16'-7"	———
v_6(E)	62	#4	8'-5"	———
v_7(E)	31	#4	16'-11"	———
v_8(E)	31	#4	16'-4"	———
v_9(E)	31	#4	15'-9"	———
v_{10}(E)	31	#4	15'-1"	———
v_{11}(E)	31	#4	14'-2"	———
v_{12}(E)	31	#4	13'-3"	———
Reinforcement Bars, Epoxy Coated			POUND	11,740
Concrete Structures			CU YD	128
Protective Coat			SQ YD	324
Furnishing Soldier Piles (W Section)			FOOT	1,900
Drilling and Setting Soldier Piles (in Soil)			CU FT	9,414

Reinforcement bars designated (E) shall be epoxy coated.

LAP SPLICES

Bar	Lap
#4	1'-8"
#5	2'-2"
#6	2'-7"
#8	4'-6"

SHEET 5 OF 11

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7
PILE LAYOUT, DETAILS & BILL OF MATERIAL

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

03/27/2005 02:30:49 PM

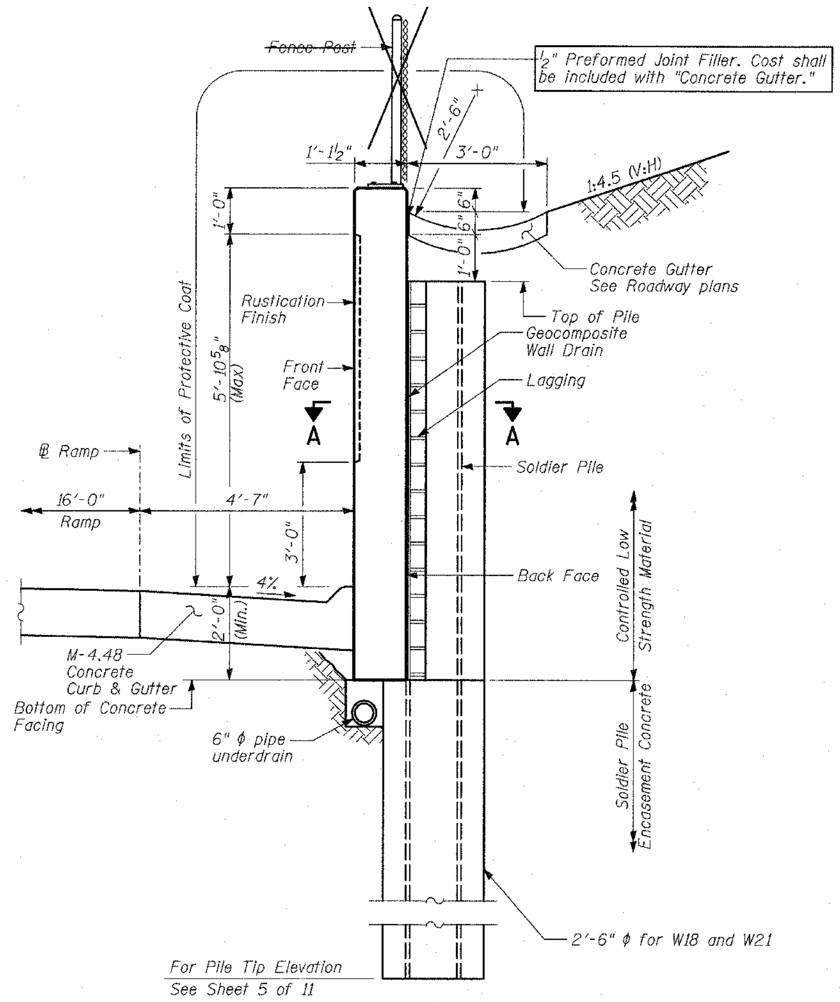
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	568

STA. 2200+00.00 TO STA. 2362+00.00

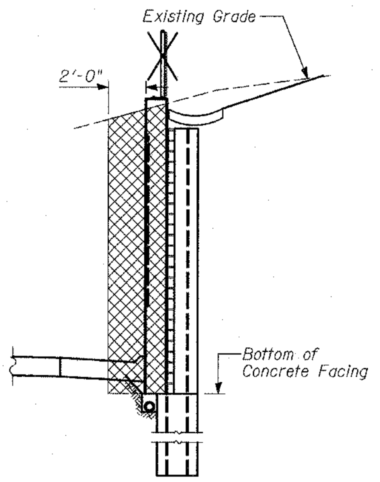
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

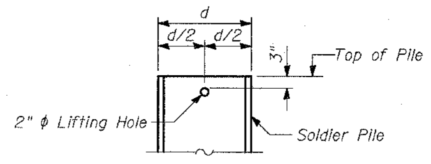


TYPICAL CROSS-SECTION

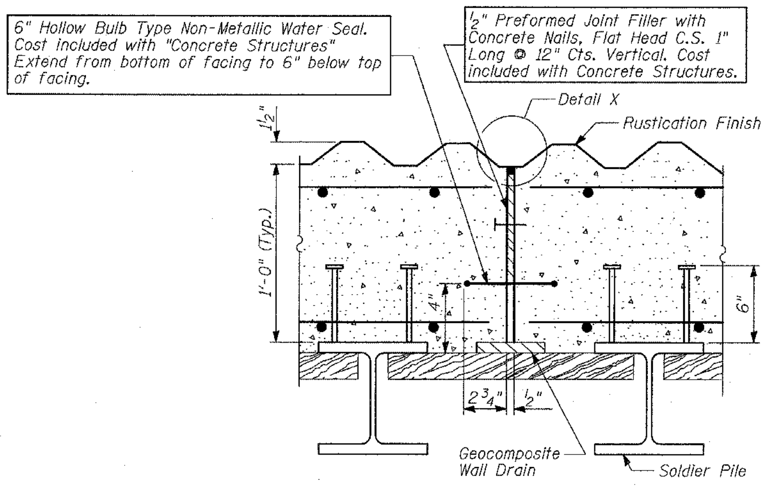


STRUCTURE EXCAVATION

(For Proposed Wall)

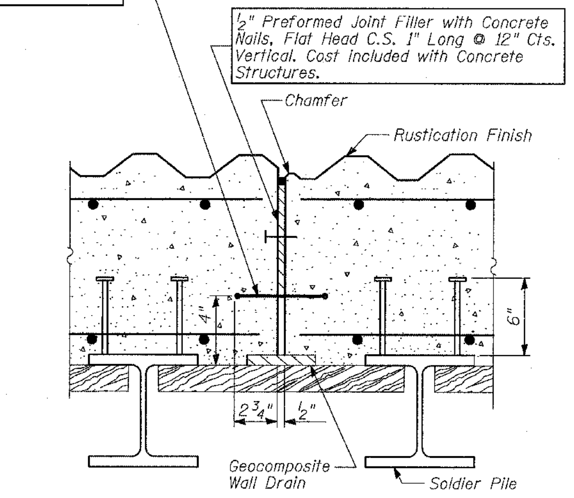


LIFTING HOLE DETAIL



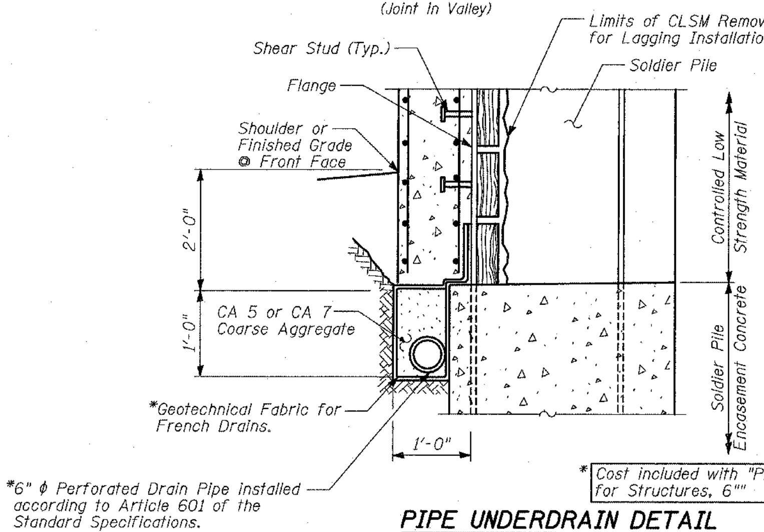
EXPANSION JOINT DETAILS

(Joint in Valley)



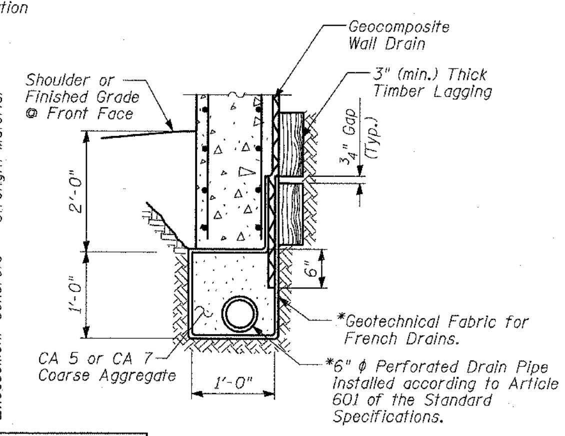
EXPANSION JOINT DETAILS

(Joint on Diagonal)

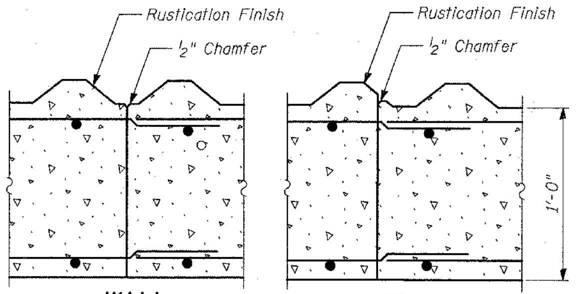


* Cost included with "Pipe Underdrains for Structures, 6""

PIPE UNDERDRAIN DETAIL AT SOLDIER PILE



PIPE UNDERDRAIN DETAIL BETWEEN SOLDIER PILES



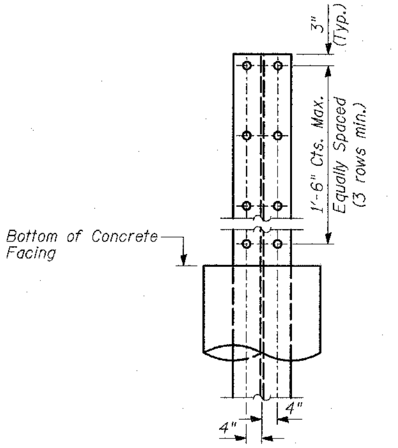
WALL

(Joint in Valley)

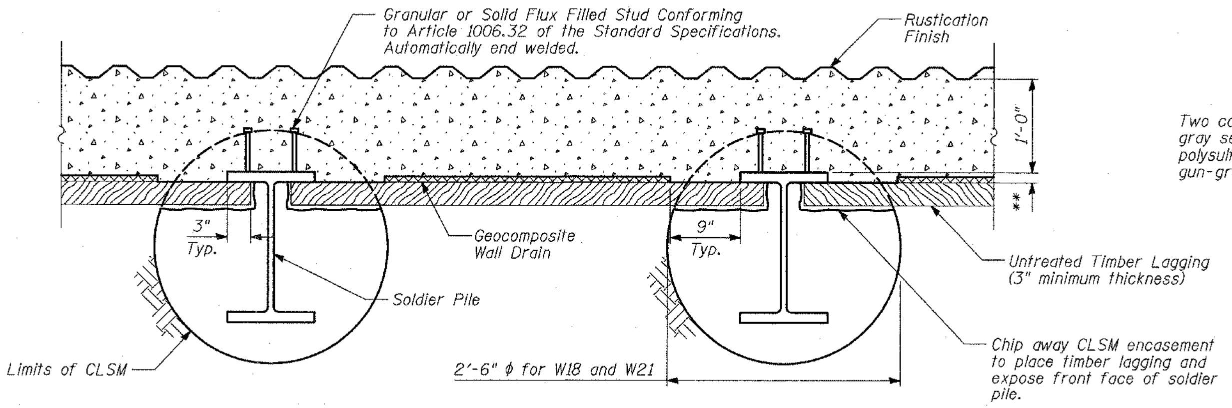
WALL

(Joint on Diagonal)

CONSTRUCTION JOINT DETAILS

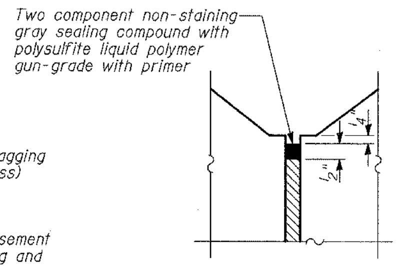


SHEAR STUD CONNECTOR DETAIL



SECTION A-A

** Cost of additional concrete between face of untreated timber lagging and face of pile included with "Concrete Structures".



DETAIL X

NOTES:

1. The geocomposite wall drain shall be constructed according to Section 591 of the Standard Specifications.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
3. Stud shear connectors shall be ¾" ϕ x 6" granular or solid flux filled headed studs, automatically end welded to the front flange of the soldier piles.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	280
Stud Shear Connectors	EACH	532
Untreated Timber Lagging	SQ FT	2,280
Geocomposite Wall Drain	SQ YD	275
Pipe Underdrains for Structures, 6"	FOOT	390

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SHEET 6 OF 11

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7
WALL CROSS SECTIONS & DETAILS

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

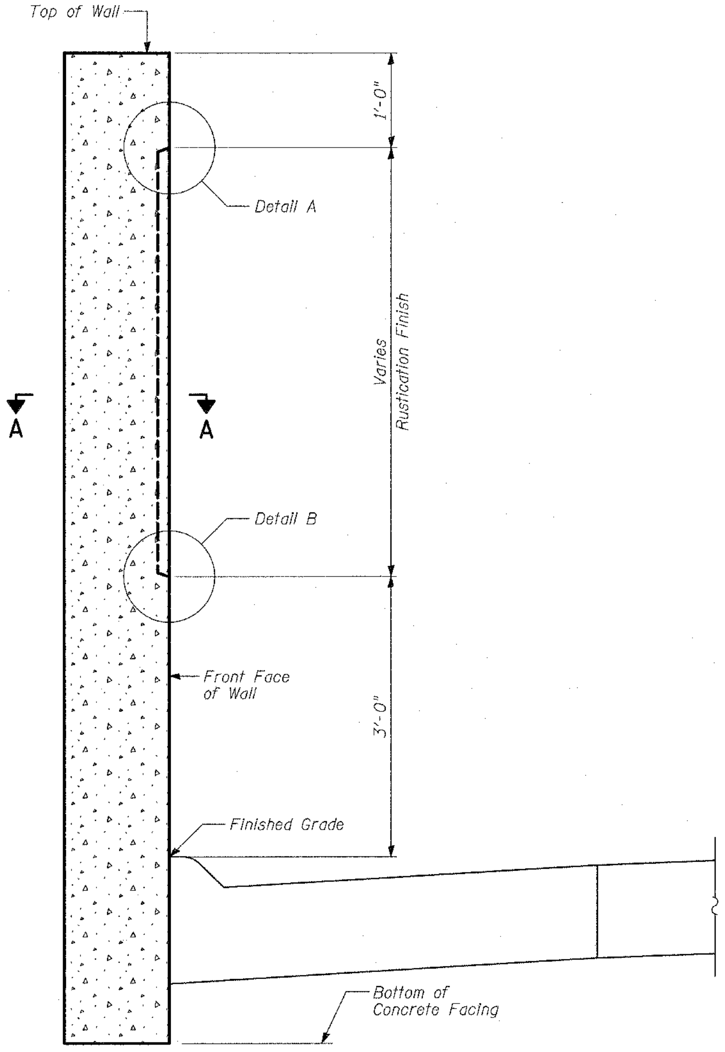
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	569

STA. 2200+00.00 TO STA. 2362+00.00

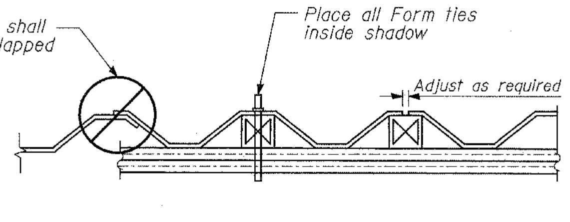
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

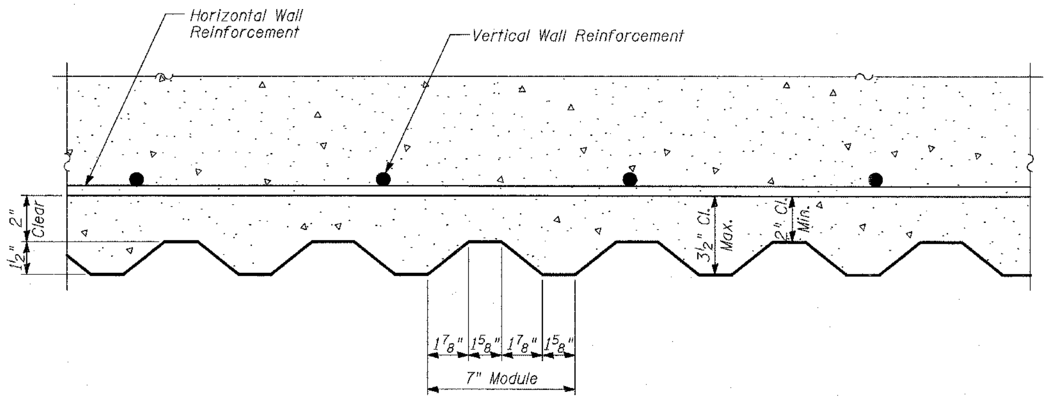
62694



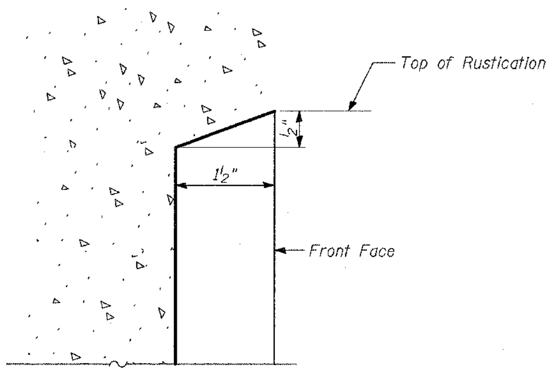
WALL DETAIL



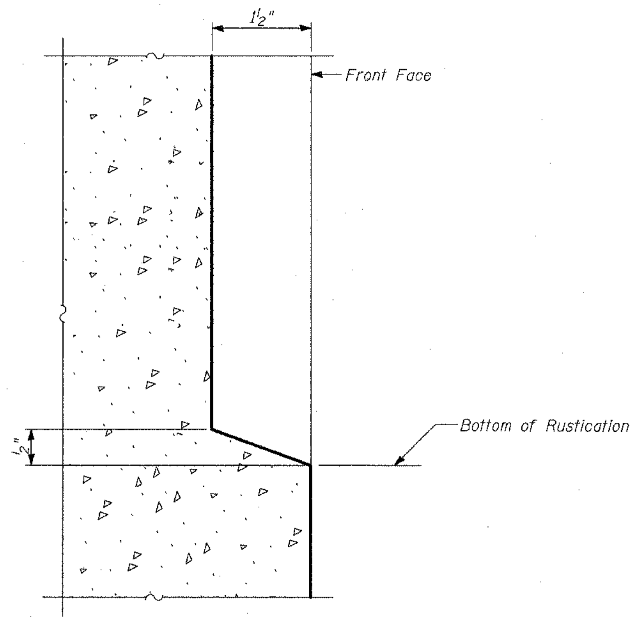
SUGGESTED FORMWORK DETAIL



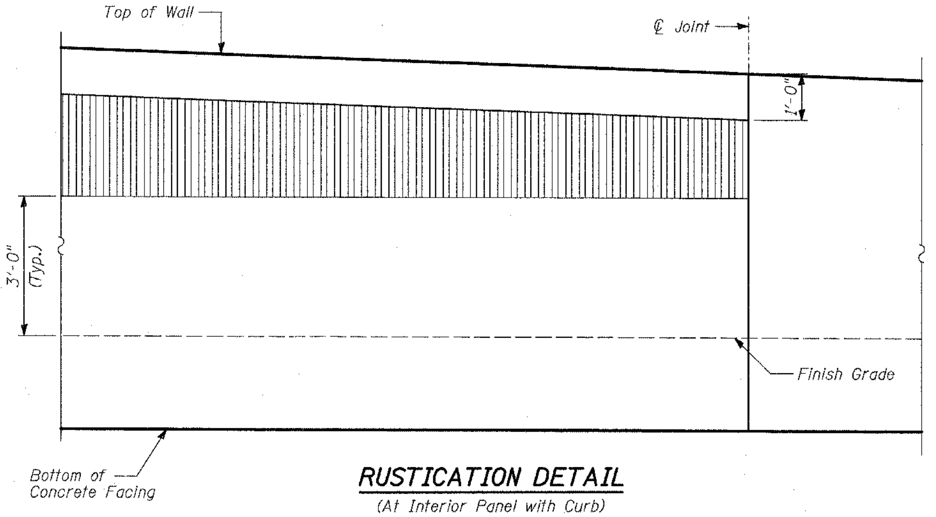
SECTION A-A



DETAIL A



DETAIL B



RUSTICATION DETAIL

(At Interior Panel with Curb)

NOTES:

1. See Sheet 6 of 11 for expansion and construction joint details.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Rustication Finish	SQ FT	680

SHEET 7 OF 11

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7
RUSTICATION DETAILS

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, TB
DRAWN BY: TB, DJR
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

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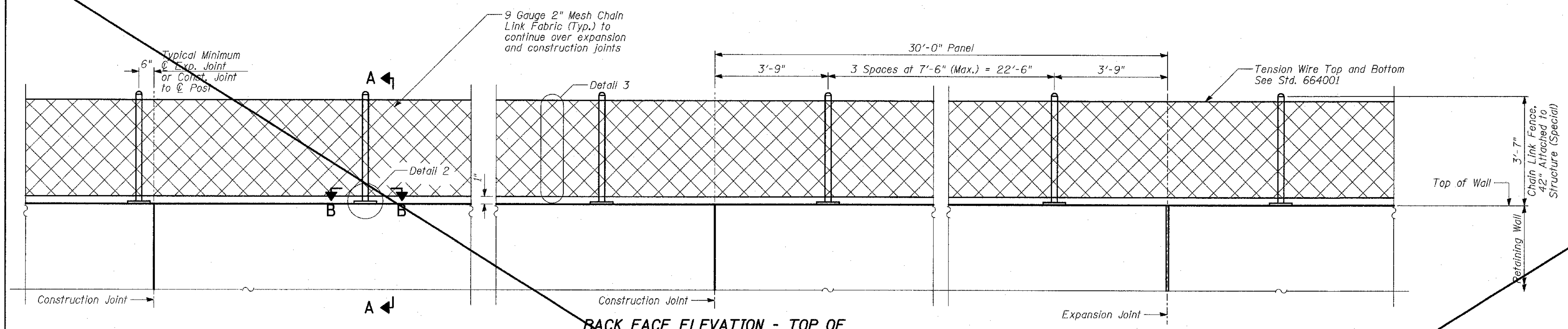
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	570

STA. 2200+00.00 TO STA. 2362+00.00

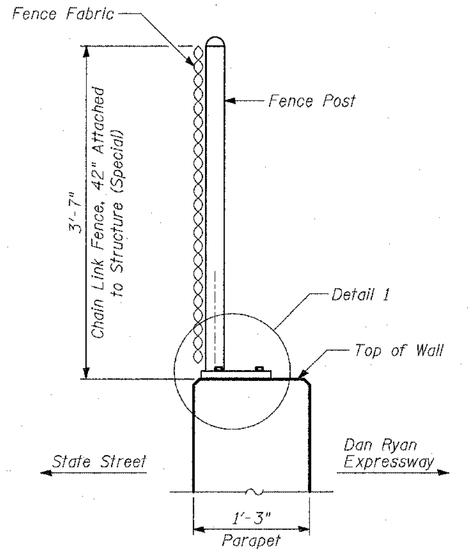
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

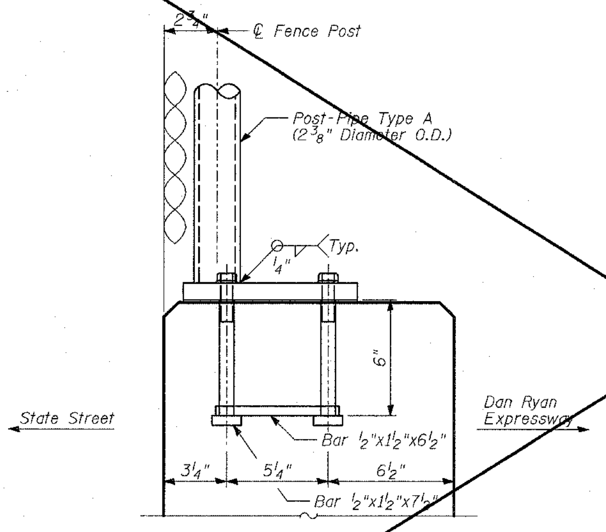
62694



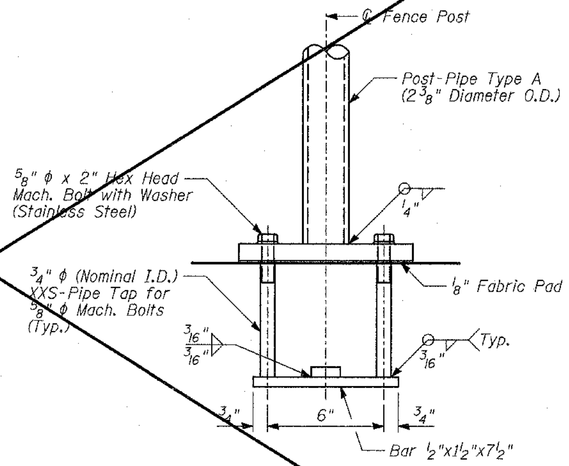
BACK FACE ELEVATION - TOP OF RETAINING WALL CHAIN LINK FENCE



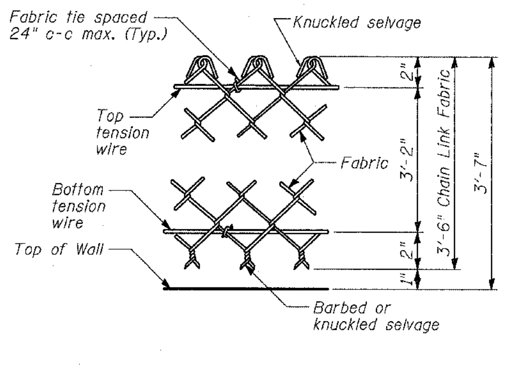
SECTION A-A



DETAIL 1



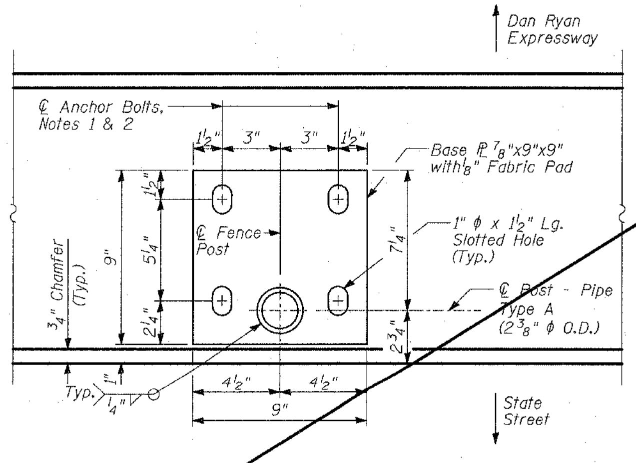
DETAIL 2



DETAIL 3

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Fence, 42" Attached to Structure (Special)	FOOT	390



SECTION B-B
BASE PLATE PLAN

NOTES:

1. In lieu of the castiniplace anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting 5/8" diameter anchor rods with 1 1/4" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.

2. For additional chain link details, see Standard 664001.

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SHEET 8 OF 11

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
EXIT RAMP TO 87TH ST.
WALL 7 - CHAIN LINK FENCE, 42" ATTACHED TO STRUCTURE (SPECIAL)

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF, DJR
CHECKED BY: TD, MI

$FILE$ $TIME$ $DATE$

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	571
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

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Wang Engineering, INC
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB 07-01

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 4.23 ft
North: 1848340.37 ft
East: 1177723.49 ft
Station: 2269+73
Offset: 84.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
3.6	7-inch thick, black SILTY LOAM --TOPSOIL--					
	Very stiff, gray CLAY		1	2 5 5	2.54 B	18
		5	2	3 4 5	2.13 B	19
-1.3	Soft, gray CLAY		3	0 0 0	0.33 B	22
		10	4	0 0 3	0.41 B	23
-7.3	Medium dense, gray SILTY LOAM		5	4 7 14	NP	14
		15 ▼	6	6 9 15	NP	19
			7	8 13 13	NP	12
-13.8	Very stiff, gray CLAY	20	8	5 9 11	3.53 B	12
-16.0	Loose, gray SAND	▽				
-16.4	Medium stiff, gray CLAY		9	2 1 4	0.50 P	20
-18.8	WOODEN OBSTRUCTION	25	10	27 12 29		12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-21.8	Dense to very dense, gray SILTY LOAM		11	3 14 17	NP	14
		30	12	20 35 46	NP	13
			13	21 50/5	NP	11
-30.3	Boring terminated at 34.50 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-25-2004 Complete Drilling 02-25-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ 20.50 ft
At Completion of Drilling ▼ 15.00 ft
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

Wang Engineering, INC
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB 07-02

Page 1 of 1

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 3.28 ft
North: 1848262.01 ft
East: 1177729.83 ft
Station: 2268+95
Offset: 88.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
2.9	5-inch thick, brown SILTY LOAM --TOPSOIL--					
	Medium stiff to very stiff, gray CLAY		1	3 5 7	2.62 B	18
		5	2	2 3 4	0.82 B	20
			3	0 0 3	0.57 B	21
		10	4	1 2 4	1.23 B	20
-7.2	Medium dense, gray SILTY LOAM		5	5 9 14	NP	17
		15	6	5 11 14	NP	12
-12.2	Very stiff, gray SILTY CLAY		7	4 5 7	2.46 B	14
		20	8	4 6 50/3	3.77 B	13
-16.7	--AUGER REFUSAL--		9	50/1	NP	
-17.8	Boring terminated at 21.10 ft	25				

GENERAL NOTES

Begin Drilling 02-25-2004 Complete Drilling 02-25-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

T·Y·LIN INTERNATIONAL

SHEET 9 OF 11

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7
BORING LOGS SB07-01 & SB07-02

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

03/25/2005 11:09:19 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	572

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

BORING LOG SB 07-03

Page 1 of 1

Wang Engineering, INC
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 4.12 ft
North: 1848190.00 ft
East: 1177736.76 ft
Station: 2268+23
Offset: 93.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	13-inch thick, black SILTY LOAM --TOPSOIL--					
3.0	Stiff, gray CLAY		1	2 5 6 10	3.00 P	18
			2	3 4 5 6	1.64 B	21
		5	3	2 4 4 5	1.23 B	21
-1.9	Medium stiff, gray CLAY		4	0 0 1 4	0.66 B	21
			5	0 0 2 5	0.82 B	21
-5.9	Stiff, gray CLAY	10	6	1 2 3 5	1.07 B	22
			7	1 4 4 8	1.80 B	13
-10.9	Medium dense, gray SILT to SILTY LOAM	15	8	4 5 9 11	NP	21
			9	5 7 9	NP	15
-13.9	Very stiff, gray CLAY		10	4 5 7	3.12 B	12
		20	11	5 6 9	3.50 P	12
		25	12	5 7 9	3.50 P	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-21.4	Medium dense to very dense, gray gravelly SILTY LOAM		13	12 14 35	NP	9
		30	14	31 48 50	NP	7
-28.1			15	75/3	NP	5
	Boring terminated at 32.25 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-26-2004 Complete Drilling 02-26-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller T&B Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

BORING LOG SB 07-04

Page 1 of 1

Wang Engineering, INC
Consulting Geotechnical and Environmental Engineers
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1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 414-07-01
Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 5.00 ft
North: 1848116.13 ft
East: 1177742.21 ft
Station: 2267+49
Offset: 96.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
4.4	2-inch thick ASPHALT over 6-inch thick CONCRETE --PAVEMENT--					
3.8	6-inch thick CRUSHED STONE --BASE COURSE--		1	7 4 3	3.00 P	16
	Medium stiff to very stiff, brown and gray CLAY --FILL--	5	2	5 2 3	0.50 P	19
-0.5	Soft to medium stiff, gray CLAY --LL=32%, PL=19%--		3	1 1 1	0.41 B	23
		10	4	1 1 2	0.74 B	21
-6.5	Very stiff, gray CLAY		5	1 3 5	2.79 B	13
-9.0	Medium dense, gray SILT to SILTY LOAM	15	6	6 9 11	NP	22
			7	7 15 12	NP	12
		20	8	5 7 8	NP	13
-15.5	Hard, gray SILTY CLAY		9	8 7 10	4.35 B	12
		25	10	9 12 14	>4.50 P	13

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-21.5	Medium dense to very dense, gray gravelly SILTY LOAM		11	5 10 14	NP	11
		30	12	13 25 36	NP	9
-27.5			13	23 33 44	NP	9
	Boring terminated at 32.50 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-26-2004 Complete Drilling 02-26-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▼ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 10 OF 11

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST. ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7
BORING LOGS SB07-03 & SB07-04

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

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03/25/2005 11:09:19 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	573
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

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Wang Engineering, INC
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
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Page 1 of 1

BORING LOG SB 07-05

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 6.26 ft
North: 1848042.46 ft
East: 1177751.23 ft
Station: 2266+75
Offset: 103.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	2-inch thick ASPHALT over 10-inch thick CONCRETE --PAVEMENT--					
5.3	Loose, brown SAND --FILL--		1	9 3 3	NP	17
3.3	Stiff, gray CLAY --FILL--	5	2	5 3 3	1.00 P	17
0.8	Soft, gray CLAY		3	2 1 2		
		10	4	1 1 1	0.50 P	19
-5.2	Medium dense, gray SILT		5	1 7 9	NP	20
-7.7	Medium dense, gray SANDY LOAM	15	6	6 7 8	NP	17
-9.2	Stiff to hard, gray SILTY CLAY		7	5 6 7	> 4.50 P	13
		20	8	5 13 11	1.64 B	12
			9	7 7 11	2.30 B	23
-17.3	Dense, gray GRAVELLY SAND	25	10	9 17 18	NP	12

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
-19.2	Very stiff to hard, gray SILTY CLAY		11	5 12 11	3.94 B	11
		30	12	10 20 31	> 4.50 P	10
			13	13 50/3	> 4.50 P	9
-28.0	Boring terminated at 34.25 ft	35				
		40				
		45				
		50				

GENERAL NOTES

Begin Drilling 02-25-2004 Complete Drilling 02-25-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger Y. Shiu Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

T·Y·LIN INTERNATIONAL

SHEET 11 OF 11

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP FROM 86TH ST. TO 85TH ST.
WALL 7
BORING LOG SB07-05

S.N. 016-W957
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD

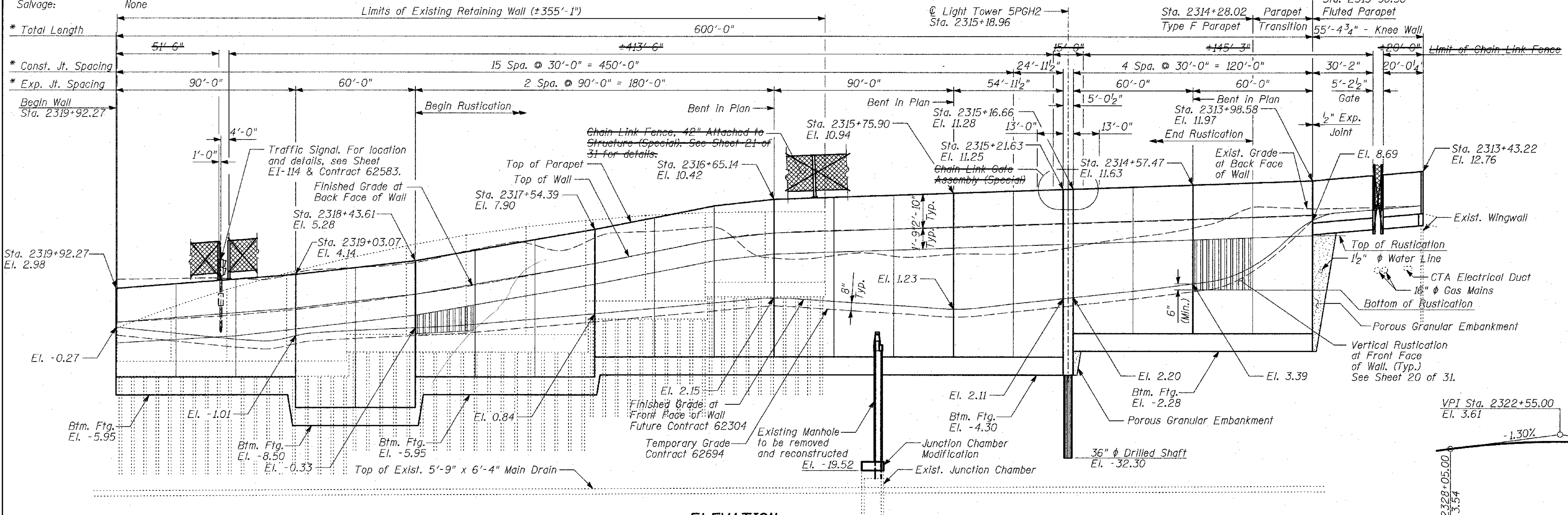
03/25/2005 11:09:19 AM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	574
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

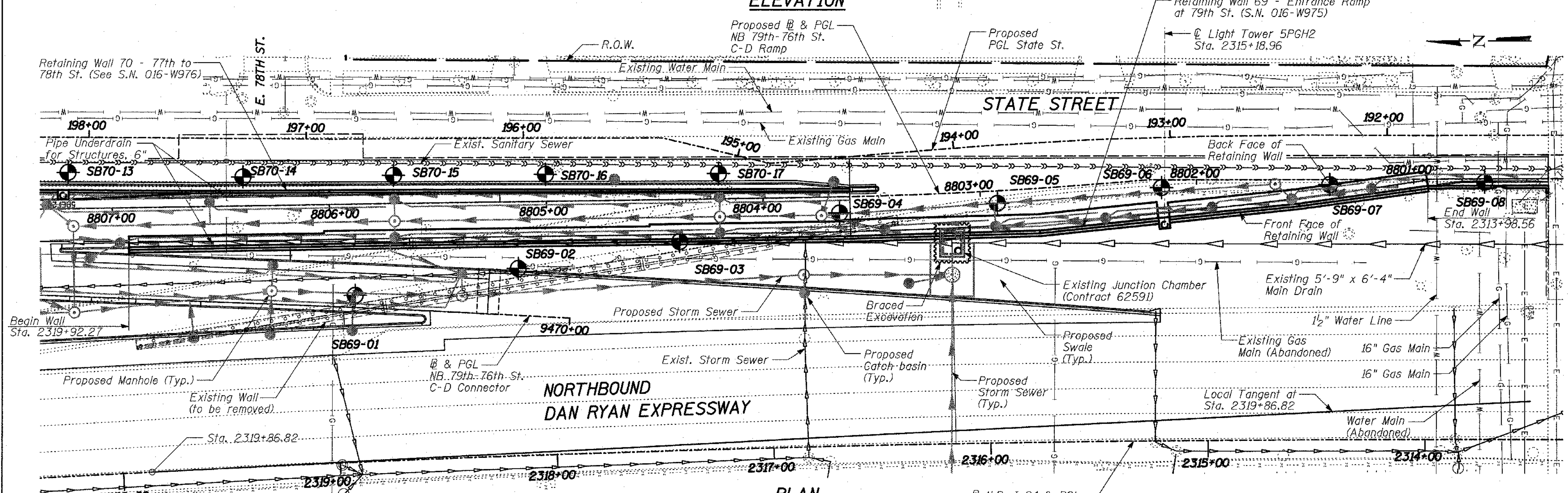
* (1516.1, 1717 & 1818) R-8

62694

Benchmarks: BM 2251 Found cross on east bolt of fire hydrant on the east side of State St. Approximately 135 feet north of 79th St. El.=0.95 Feet
Existing Structure: Reinforced concrete cantilever retaining wall, supported on concrete pile footings, along the Northbound Dan Ryan entrance ramp at 79th Street. Built in 1960. Total length ±355'-1"
Salvage: None



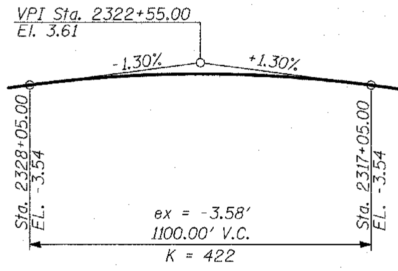
ELEVATION



PLAN

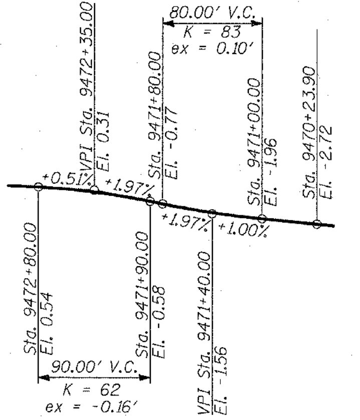
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	CU YD	1,219
Removal of Existing Structures No. 2	EACH	1
Structure Excavation	CU YD	3,205
Concrete Structures	CU YD	645
Protective Coat	SQ YD	824
Rustication Finish	SQ FT	1,765
Reinforcement Bars, Epoxy Coated	POUND	79,170
Geocomposite Wall Drain	SQ YD	527
Pipe Underdrains for Structures, 6"	FOOT	600
~~Chain Link Gates (Special)~~	~~EACH~~	~~1~~
Braced Excavation	CU YD	218
~~Chain Link Fence,42" Attached to Structure (Special)~~	~~FOOT~~	~~631~~
~~Chain Link Gate Assembly (Special)~~	~~EACH~~	~~1~~
Drilled Shaft in Soil 36"	FOOT	28
Modified Junction Chamber	EACH	1



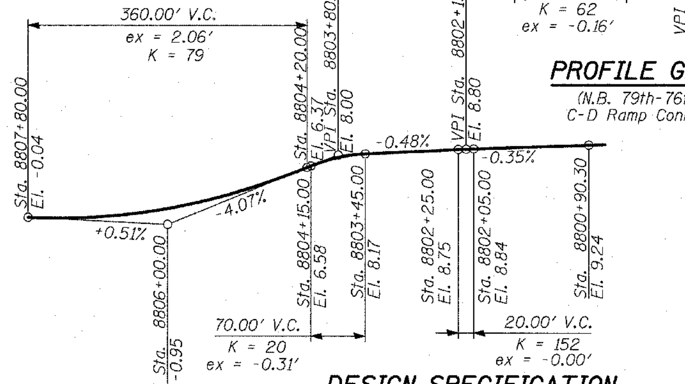
PROFILE GRADE

(N.B. I-94)



PROFILE GRADE

(N.B. 79th-76th St. C-D Ramp Connector)



PROFILE GRADE

(N.B. 79th-76th St. C-D Ramp)

DESIGN SPECIFICATION

AASHTO 2002 Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING

Maximum soil pressure under retaining wall footing is 2,650 psf.
Maximum soil pressure under knee wall is 700 psf.

PHILLIP D. FREY
081-004826

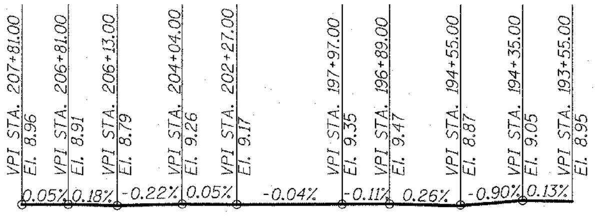
Signed Phillip D. Frey
Phillip D. Frey S.E. Il. Lic. No. 081-004826
Expires 11-30-2006.

For drawings 1 thru 31 of 31

Date 3/18/05

LEGEND

- ⊕ Boring Location
- * Measured along Front Face of Wall.

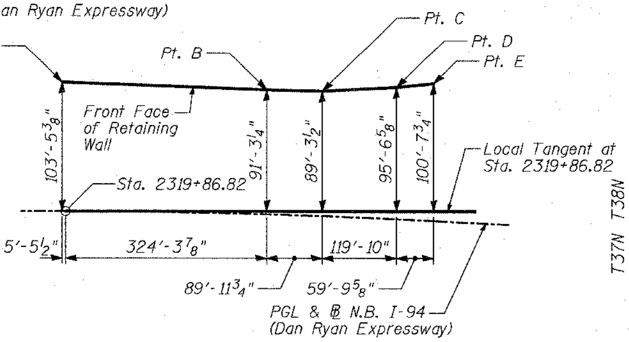


PROFILE GRADE

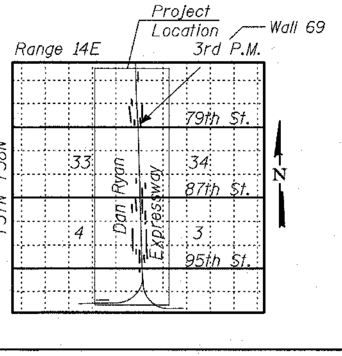
(State Street)

OFFSET SKETCH

Point	Station	Offset to ℄ N.B. I-94
A	2319+92.27	103'-5⅜" Rt.
B	2316+65.14	95'-9⅞" Rt.
C	2315+75.90	96'-8½" Rt.
D	2314+57.47	107'-10⅝" Rt.
E	2313+98.56	115'-10⅝" Rt.



OFFSET SKETCH



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

T·Y·LIN INTERNATIONAL

NOTES:

1. For General Notes and Index of Sheets, see Sheet 2 of 31.

SHEET 1 OF 31

REVISIONS	
NAME	DATE
REVISED	05/06/05
REVISED	04/15/05

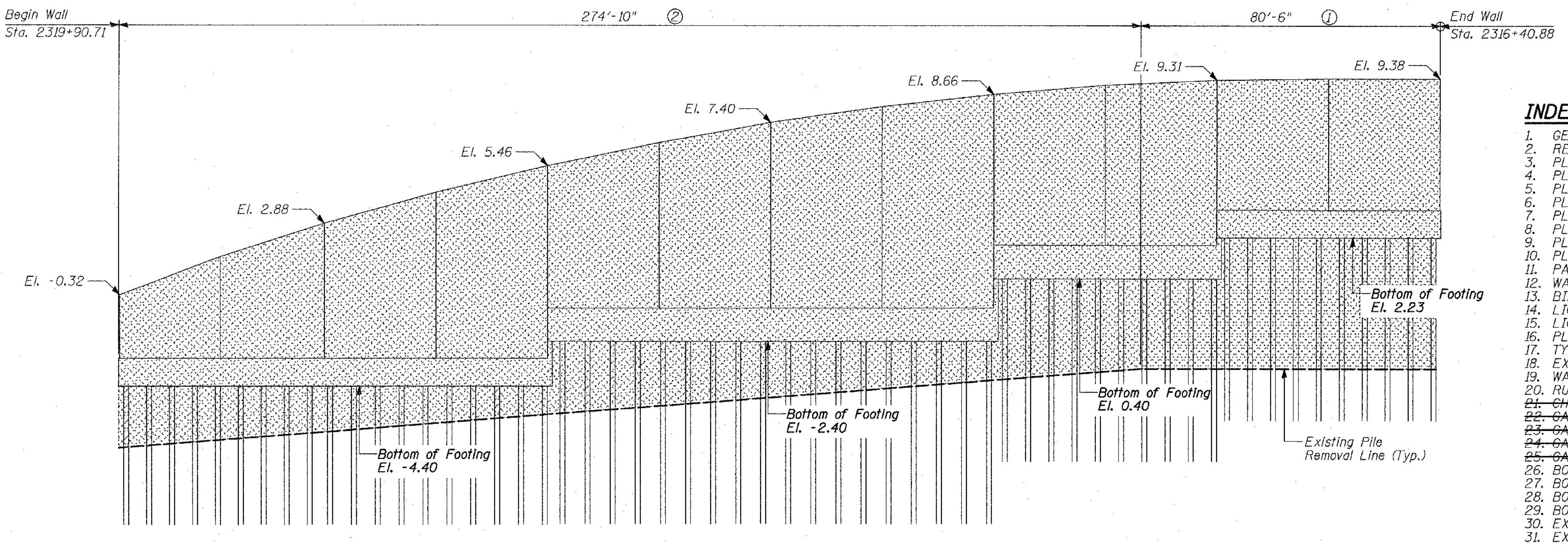
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - GENERAL PLAN
STA. 2319+92.27 TO STA. 2313+98.56

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR, PAL
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	575
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



ELEVATION

INDEX OF SHEETS

1. GENERAL PLAN
2. REMOVAL PLAN AND DETAILS
3. PLAN AND ELEVATION STA. 2319+92.27 TO STA. 2319+03.07
4. PLAN AND ELEVATION STA. 2319+03.07 TO STA. 2318+43.61
5. PLAN AND ELEVATION STA. 2318+43.61 TO STA. 2317+54.39
6. PLAN AND ELEVATION STA. 2317+54.39 TO STA. 2316+65.14
7. PLAN AND ELEVATION STA. 2316+65.14 TO STA. 2315+75.90
8. PLAN AND ELEVATION STA. 2315+75.90 TO STA. 2315+16.66
9. PLAN AND ELEVATION STA. 2315+16.66 TO STA. 2314+57.47
10. PLAN AND ELEVATION STA. 2314+57.47 TO STA. 2313+98.56
11. PARAPET TRANSITION
12. WALL SECTIONS AND DETAILS
13. BILL OF MATERIAL
14. LIGHT TOWER 5PGH2 FOUNDATION DETAILS
15. LIGHT TOWER DETAILS
16. PLAN AND ELEVATION - FLUTED KNEE WALL
17. TYPICAL SECTIONS, ELEVATIONS AND DETAILS - FLUTED KNEE WALL
18. EXISTING JUNCTION CHAMBER MODIFICATION
19. WALL CROSS SECTIONS & DETAILS
20. RUSTICATION DETAILS
~~21. CHAIN LINK FENCE, 42" ATTACHED TO STRUCTURE (SPECIAL)~~
~~22. GATE PLAN AND NOTES~~
~~23. GATE ELEVATIONS~~
~~24. GATE SECTIONS~~
~~25. GATE SECTIONS AND DETAILS~~
26. BORING LOGS SB69-01 & SB69-02
27. BORING LOGS SB69-03 & SB69-04
28. BORING LOGS SB69-05 & SB69-06
29. BORING LOGS SB69-07 & SB69-08
30. EXISTING RETAINING WALL (1 OF 2)
31. EXISTING RETAINING WALL (2 OF 2)

NOTES:

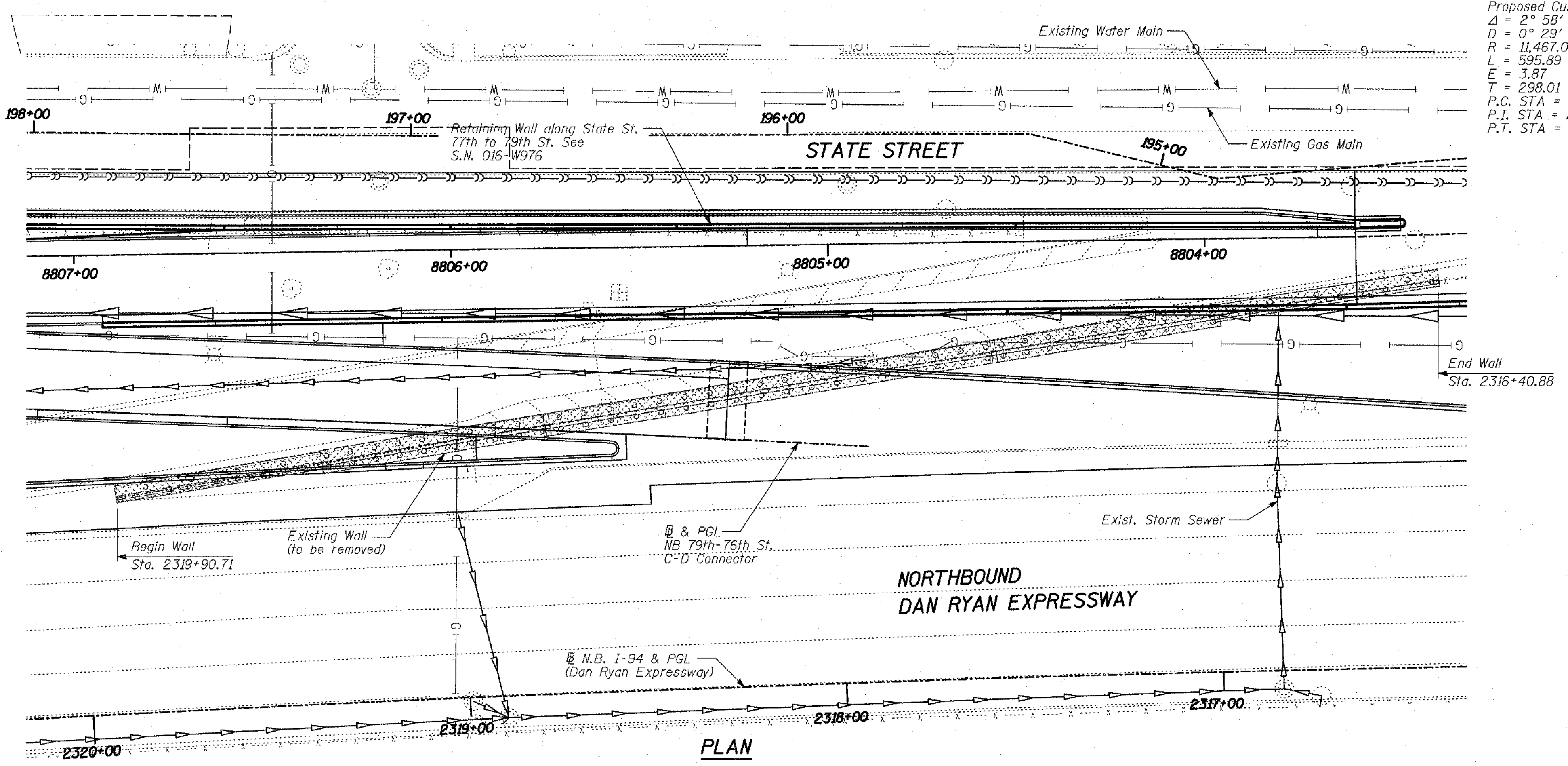
1. For parts of existing wall interfering with the new wall, remove the wall and cut-off existing piles 1 foot (maximum) below the bottom of proposed wall footing.
2. All existing piles are 16"ϕ concrete piles.
3. During removal of the existing retaining wall and piles, soil disturbance shall be kept at a minimum, and coordinated and approved by the Engineer.
4. All backfilling material placed after wall removal shall be Porous Granular Embankment. Cost of Porous Granular Embankment included with Removal of Existing Structures.

GENERAL NOTES:

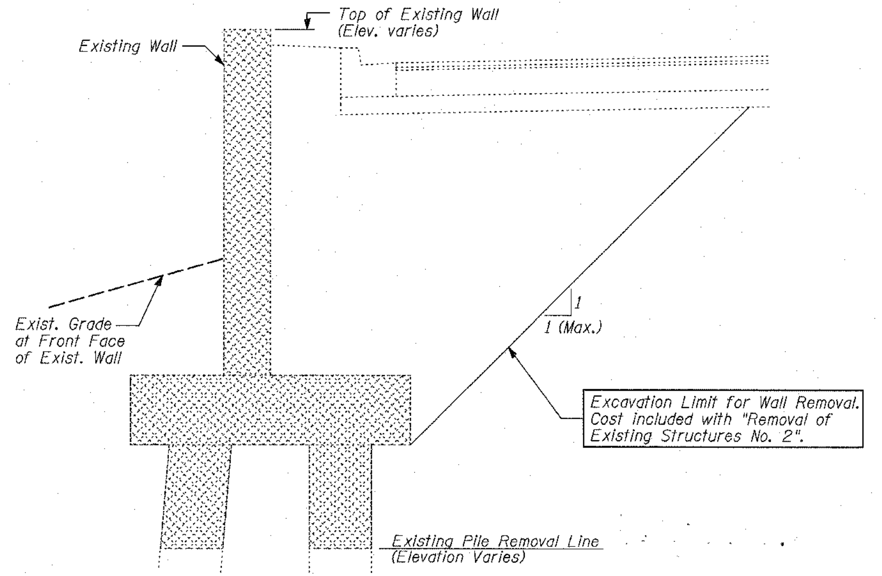
1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additonal compensation for a change in the scope of the work. However, the Contractor will be paid for the quantity actually finished at the unit price bid for the work.
3. All exposed concrete edges shall be chamfered $^3{}_4$" except as noted.
4. Protective Coat shall be applied to exposed surfaces of the retaining wall.
5. Existing utilities in conflict with retaining wall construction shall be abandoned or relocated according to directions given on the roadway plans.
6. All construction joints shall be bonded.
7. All elevations shown are based on the Chicago City Datum of 0.00, which is 579.19 feet above mean tide New York. (NAVD 88)
8. The Contractor is responsible to coordinate all electrical crossings with this Contract and with Contract 62583.
9. Backfill voids below spread footings for voids left after cut-off and removal of piles with Porous Granular Embankment FA1 or FA2.

CURVE DATA

Proposed Curve NBDR01	Proposed Curve 79B76C-1	Proposed Curve CD7976A-1
Δ = 2° 58′ 38.60" (LT)	Δ = 4° 25′ 49.28" (RT)	Δ = 0° 44′ 21.14" (LT)
D = 0° 29′ 58.77"	D = 2° 51′ 53.24"	D = 0° 29′ 51.43"
R = 11,467.00	R = 2,000.00	R = 11,514.00
L = 595.89	L = 154.65	L = 148.55
E = 3.87	E = 1.50	E = 0.24
T = 298.01	T = 77.36	T = 74.28
P.C. STA = 2313+90.93	P.C. STA. = 8802+22.95	P.C. STA. = 9470+00.00
P.I. STA = 2316+88.94	P.I. STA. = 8803+00.31	P.I. STA. = 9470+74.28
P.T. STA = 2319+86.82	P.T. STA. = 8803+77.60	P.T. STA. = 9471+48.55



PLAN



REMOVAL OF EXISTING STRUCTURE

REMOVAL LIMITS

① Remove existing wall and cut-off existing piles 1'-0" (max.) below the location of proposed concrete footing.

② Cut-off and remove existing wall and piles to a depth which will not interfere with new construction, or a minimum of 1'-0" below finished grade.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 2	EACH	1

LEGEND

▨	Removal of Existing Structure

TY·LIN INTERNATIONAL

SHEET 2 OF 31

REVISIONS	
NAME	DATE
REVISED	05/06/05
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - REMOVAL PLAN AND DETAILS

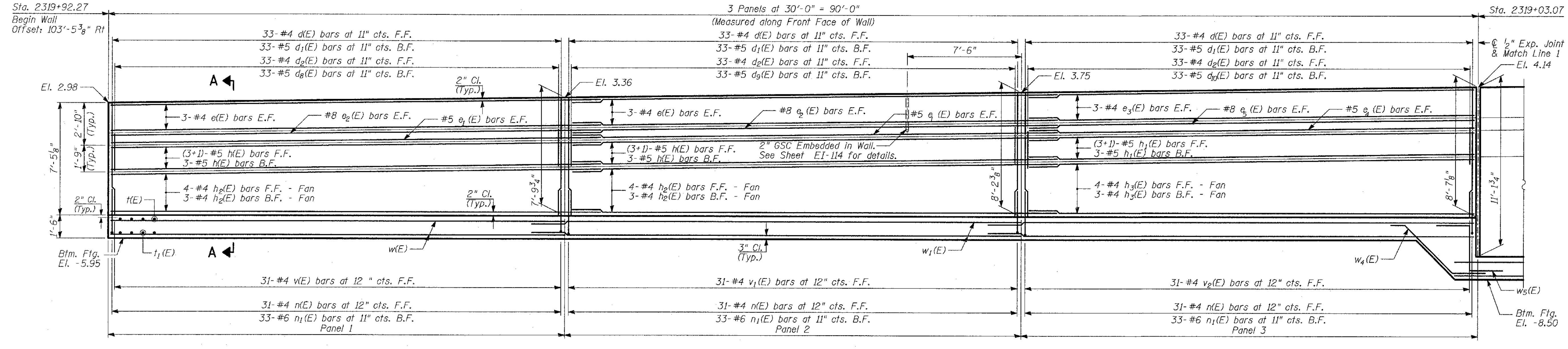
S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005

DESIGNED BY: MI, DJR
DRAWN BY: DJR, PPL
CHECKED BY: TD, MI

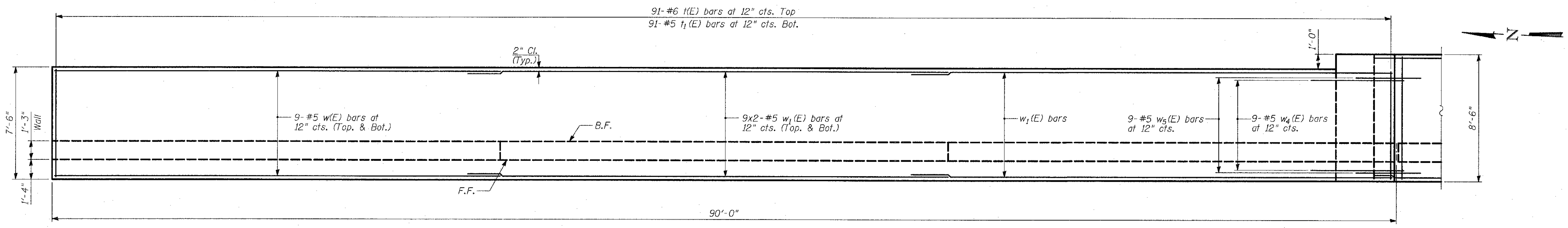
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	576
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



ELEVATION



PLAN

NOTES:

1. Work this Sheet with Sheets 12, 13, 16, and 19 thru 21 of 31.
2. For Lap Splices, see Sheet 13 of 31.
3. Bars indicated thus 8x3-#5 etc. indicates 8 lines of bars with 3 lengths per line.
4. B.F. - denotes Back Face.
5. E.F. - denotes Each Face.
6. F.F. - denotes Front Face.

SHEET 3 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2319+92.27 TO STA. 2319+03.07

S.N. 016-W975	DESIGNED BY: MAF, SNB
SCALE: N.T.S.	DRAWN BY: MAF, SNB
DATE: MARCH 18, 2005	CHECKED BY: TD, MI

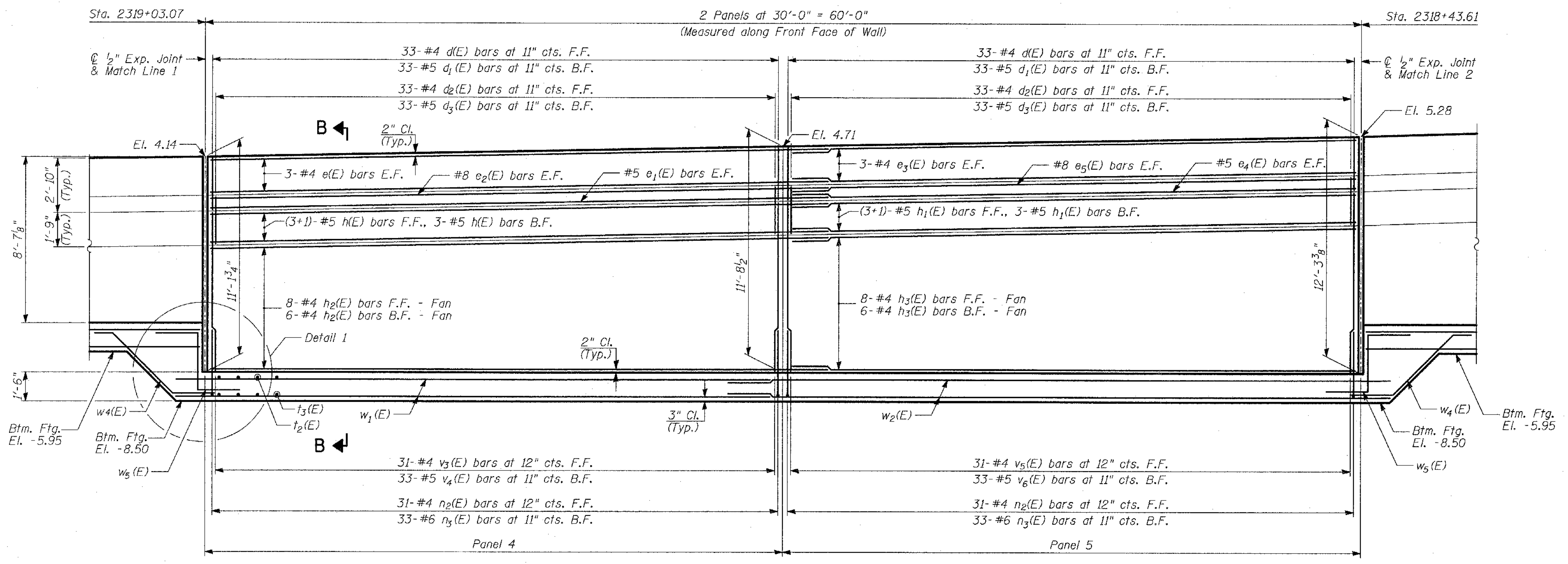
TYLIN INTERNATIONAL

03/27/2005 02:31:23 PM

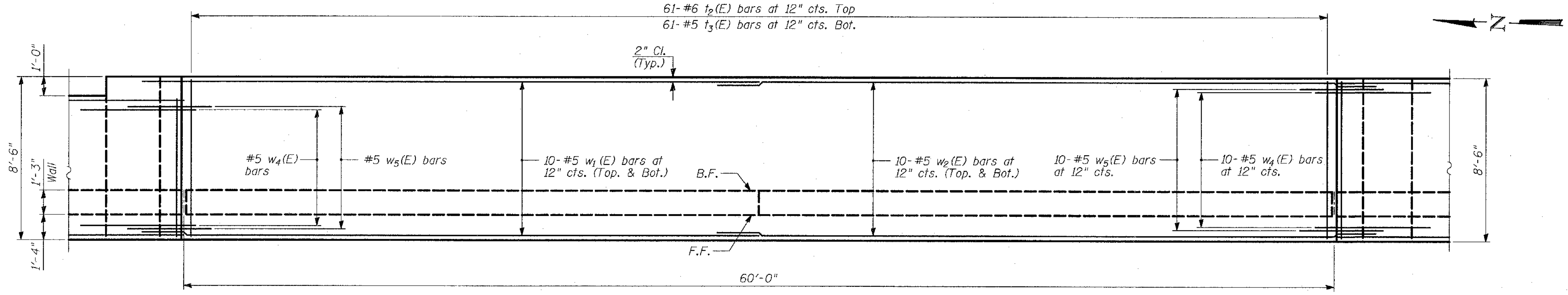
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	577
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

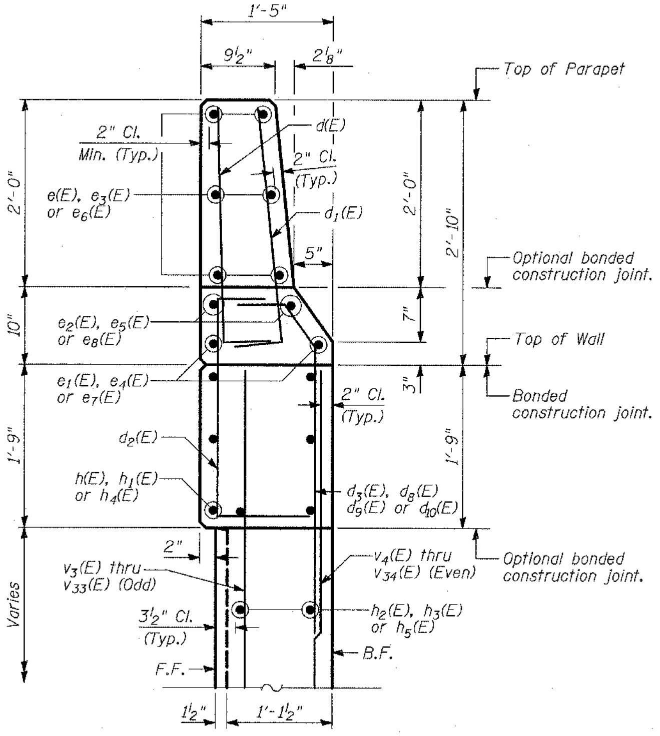
62694



ELEVATION



PLAN



TYPICAL PARAPET DETAIL

NOTES:

1. Work this Sheet with Sheets 12, 13, 16, and 19 thru 21 of 31.
2. For Lap Splices, see Sheet 13 of 31.
3. B.F. - denotes Back Face.
4. E.F. - denotes Each Face.
5. F.F. - denotes Front Face.

TYLININTERNATIONAL

SHEET 4 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2319+03.07 TO STA. 2318+43.61

S.N. 016-W975
DESIGNED BY: MAF, SNB
SCALE: N.T.S.
DRAWN BY: MAF, SNB
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

p:\02373\structur\CIZa\Wall 69\rdl7aDBsh0333a_w975.dgn

03/27/2005 02:31:24 PM

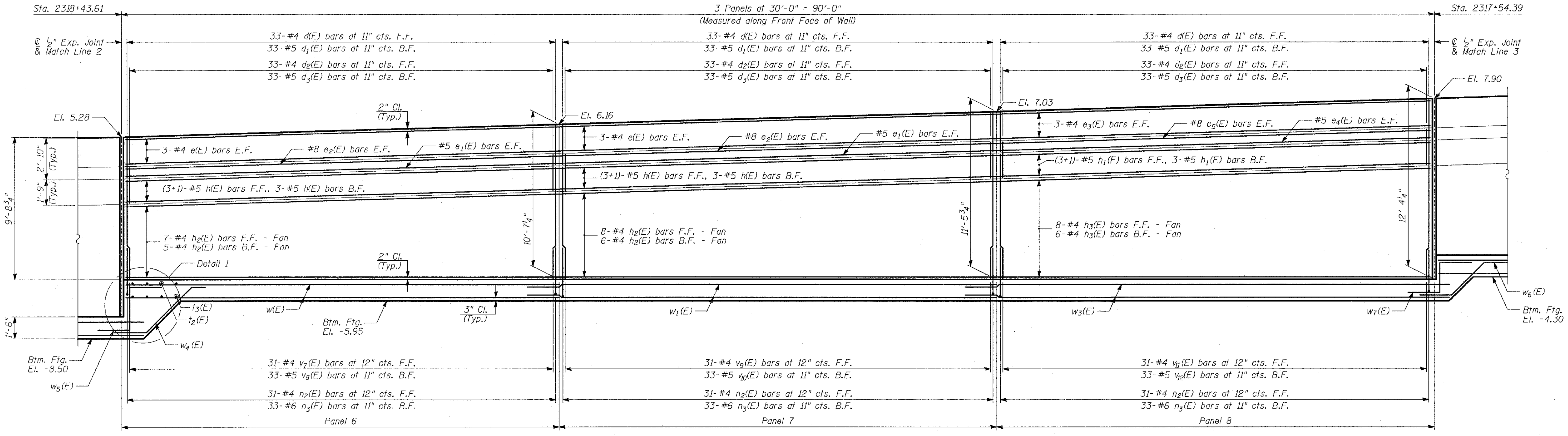
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	578

STA. 2200+00.00 TO STA. 2362+00.00

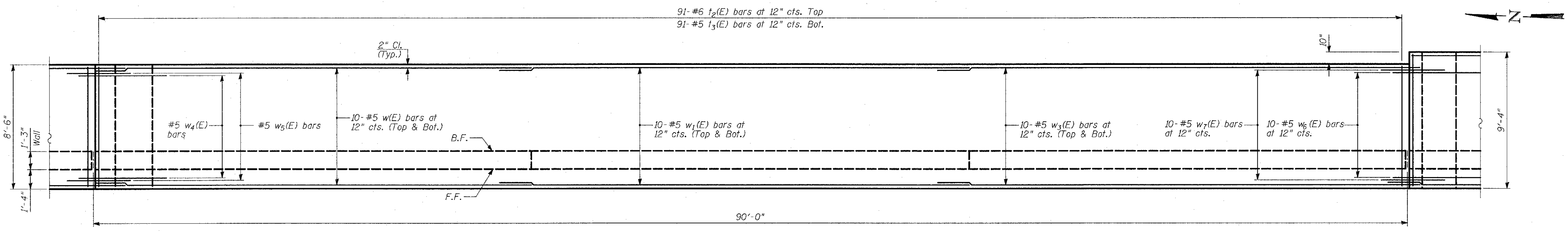
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694



ELEVATION



PLAN

SHEET 5 OF 31

NOTES:

1. Work this Sheet with Sheets 12, 13, 16, and 19 thru 21 of 31.
2. For Lap Splices, see Sheet 13 of 31.
3. B.F. - denotes Back Face.
4. E.F. - denotes Each Face.
5. F.F. - denotes Front Face.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2318+43.61 TO STA. 2317+54.39

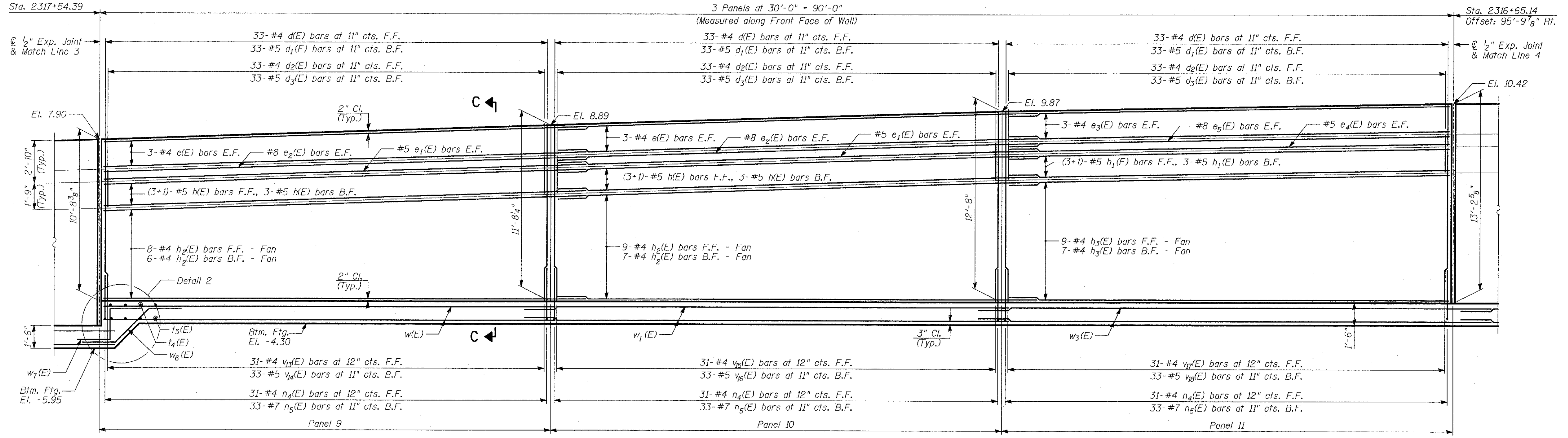
S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MAF, SNB
DRAWN BY: MAF, SNB
CHECKED BY: TD, MI

TYLININTERNATIONAL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	579
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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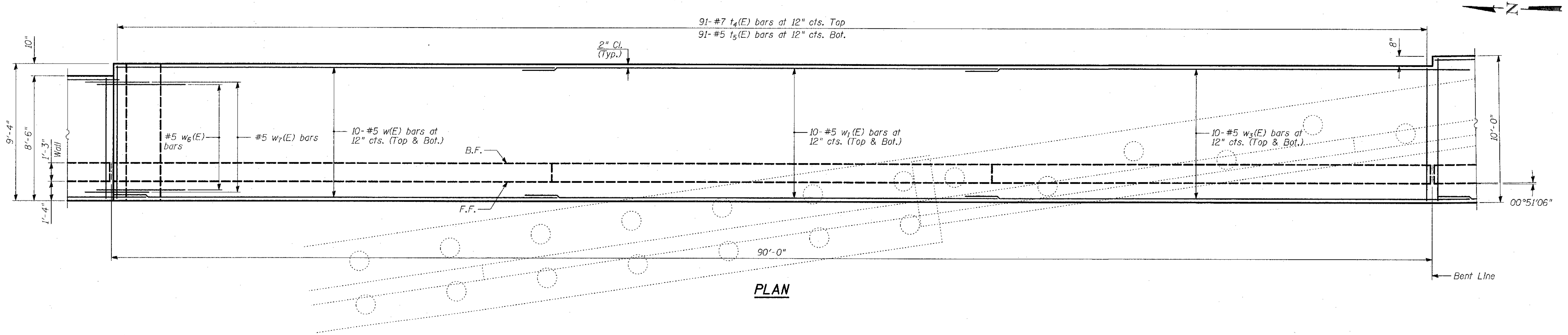


PLAN

NOTES:

1. Work this Sheet with Sheets 12, 13, 16, and 19 thru 21 of 31.
2. For Lap Splices, see Sheet 13 of 31.
3. B.F. - denotes Back Face.
4. E.F. - denotes Each Face.
5. F.F. - denotes Front Face.

TYLININTERNATIONAL

SHEET 6 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2317+54.39 TO STA. 2316+65.14

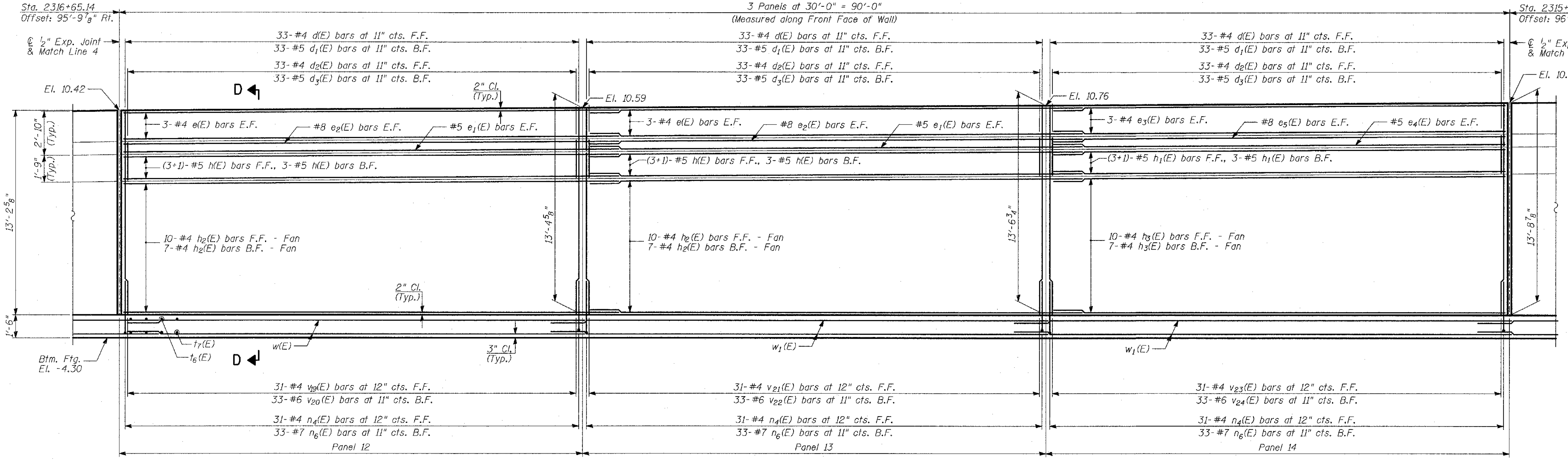
S.N. 016-W975 DESIGNED BY: MAF, SNB
SCALE: N.T.S. DRAWN BY: MAF, SNB
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

03/27/2005 02:31:25 PM

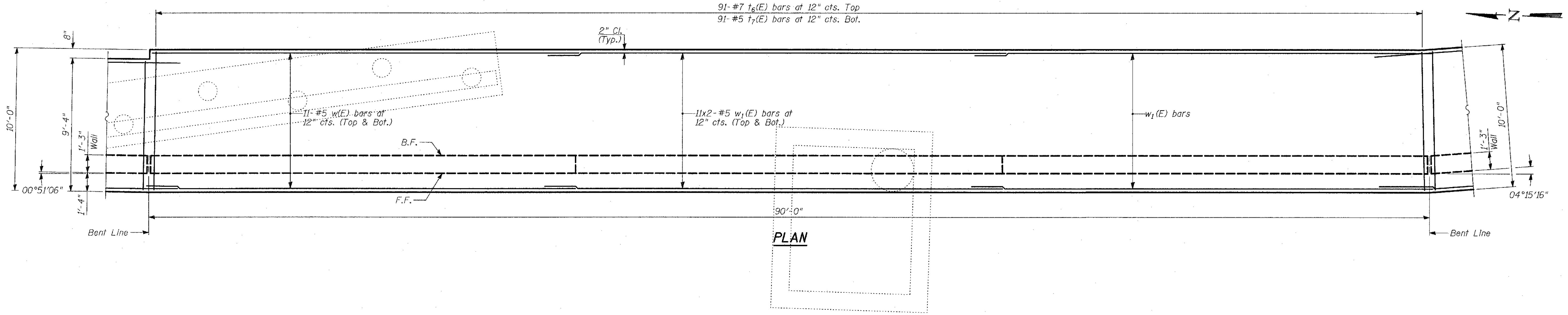
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	580
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



ELEVATION



PLAN

SHEET 7 OF 31

NOTES:

1. Work this Sheet with Sheets 12, 13, 16, and 19 thru 21 of 31.
2. For Lap Splices, see Sheet 13 of 31.
3. Bars indicated thus 11x2-#5 etc. indicates 11 lines of bars with 2 lengths per line.
4. B.F. - denotes Back Face.
5. E.F. - denotes Each Face.
6. F.F. - denotes Front Face.

REVISIONS	
NAME	DATE

TYLININTERNATIONAL

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2316+65.14 TO STA. 2315+75.90

S.N. 016-W975
DESIGNED BY: MAF, SNB
SCALE: N.T.S.
DRAWN BY: MAF, SNB
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

03/27/2005 02:31:26 PM

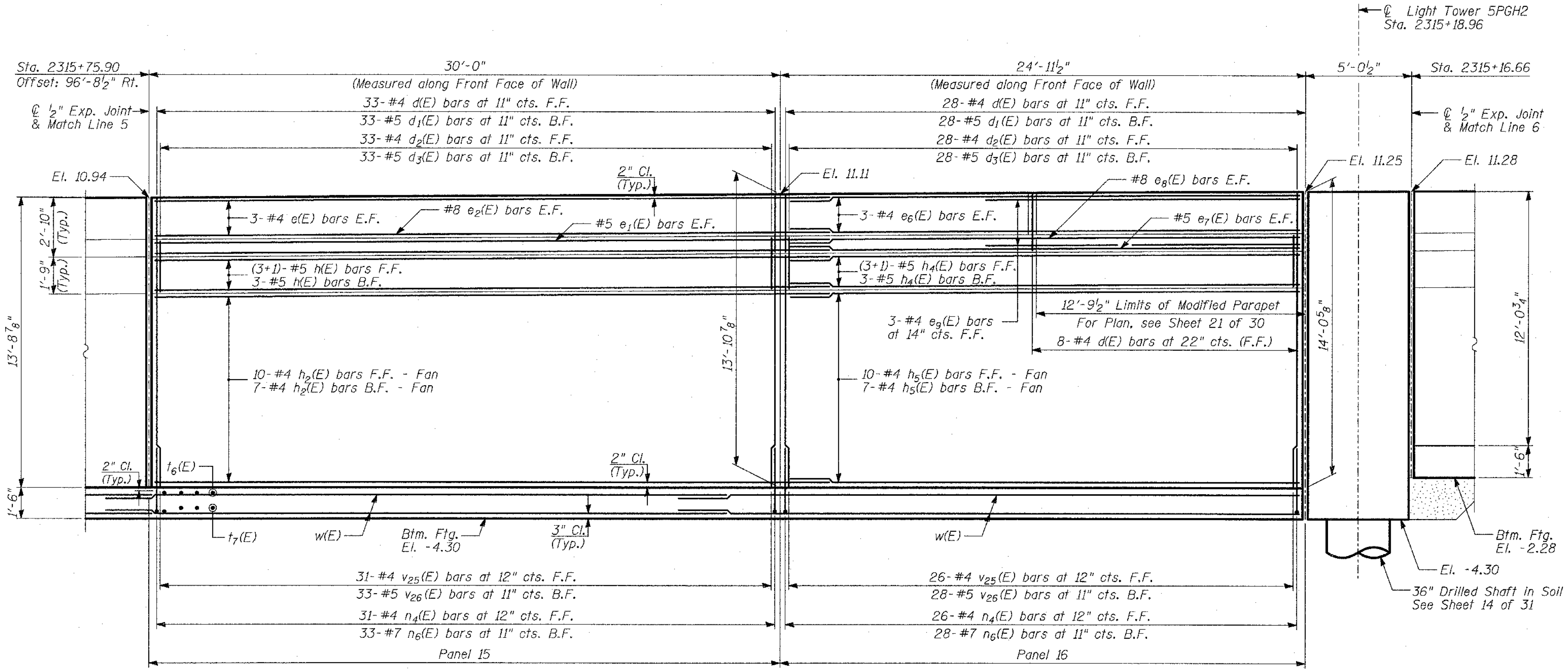
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	581

STA. 2200+00.00 TO STA. 2362+00.00

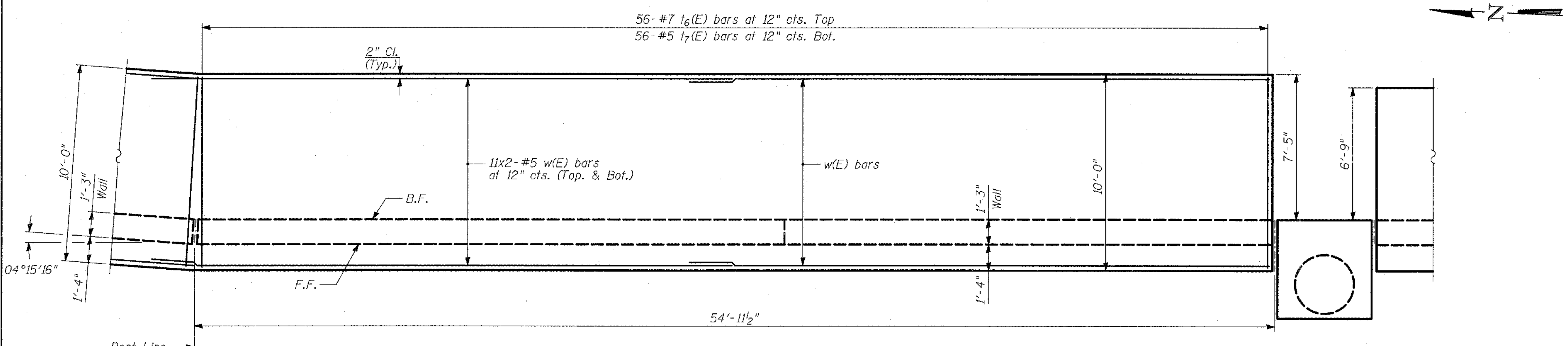
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

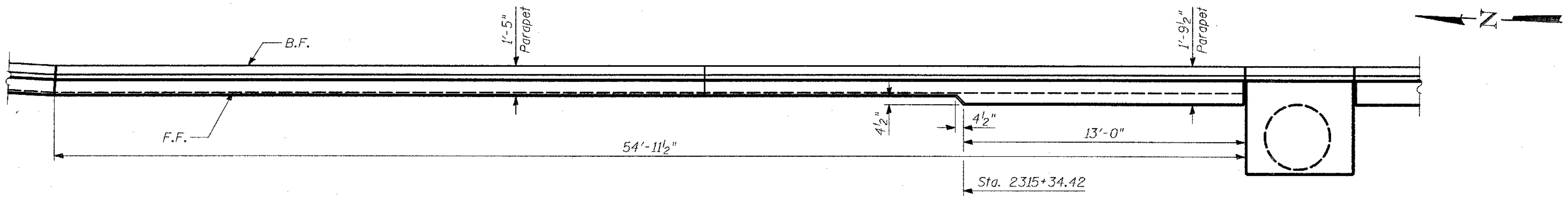
62694



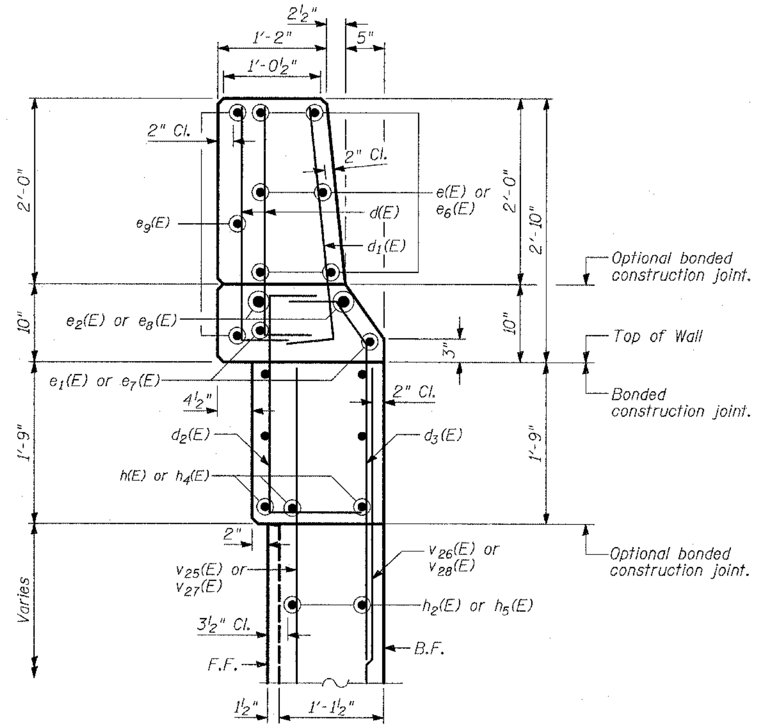
ELEVATION



PLAN



PARAPET PLAN



PARAPET DETAIL AT CHAIN LINK GATE ASSEMBLY (SPECIAL)

Sta. 2315+34.42 to Sta 2315+03.78

NOTES:

1. Work this Sheet with Sheets 12 thru 25 of 31.
2. For Lap Splices, see Sheet 13 of 31.
3. Bars indicated thus 11x2-#5 etc. indicates 11 lines of bars with 2 lengths per line.
4. B.F. - denotes Back Face.
5. E.F. - denotes Each Face.
6. F.F. - denotes Front Face.

SHEET 8 OF 31

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2315+75.90 TO STA. 2315+16.66

S.N. 016-W975
DESIGNED BY: MAF, SNB
SCALE: N.T.S.
DRAWN BY: MAF, SNB
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

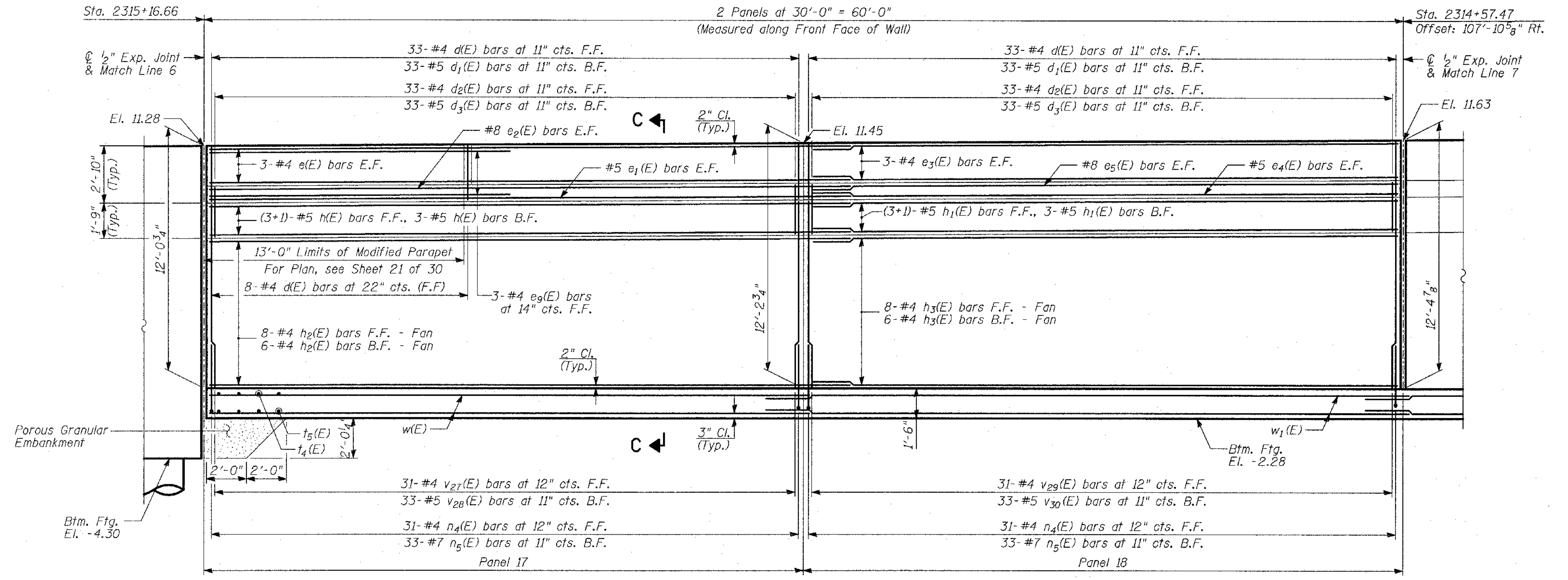
TYLIN INTERNATIONAL

$FILE$ $TIME$ $DATE$

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	582
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



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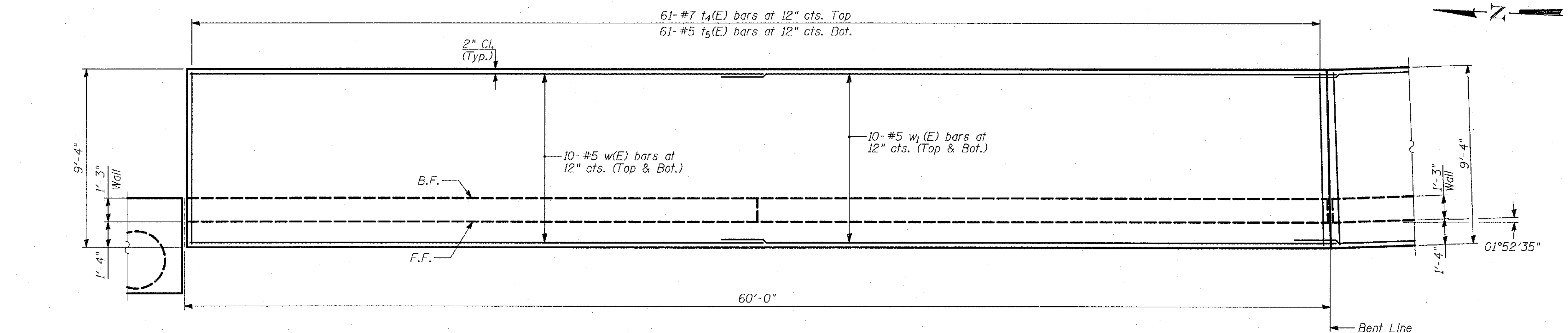
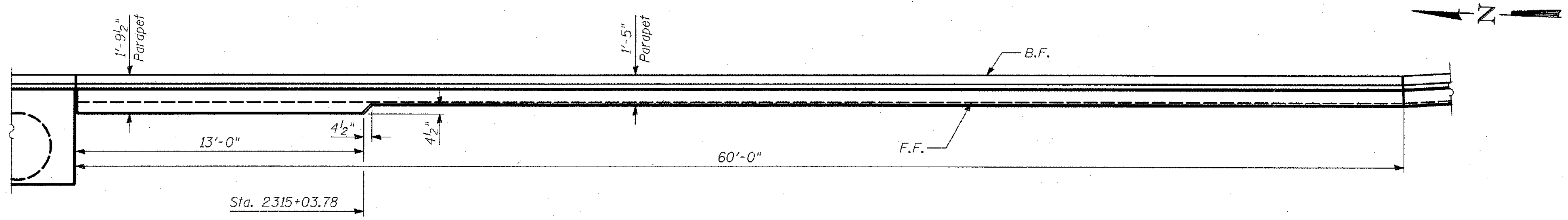


PLAN



PARAPET PLAN

NOTES:

1. Work this Sheet with Sheets 12 thru 25 of 31. For Lap Splices, see Sheet 13 of 31.
2. B.F. - denotes Back Face.
3. E.F. - denotes Each Face.
4. F.F. - denotes Front Face.

SHEET 9 OF 31

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2315+16.66 TO STA. 2314+57.47

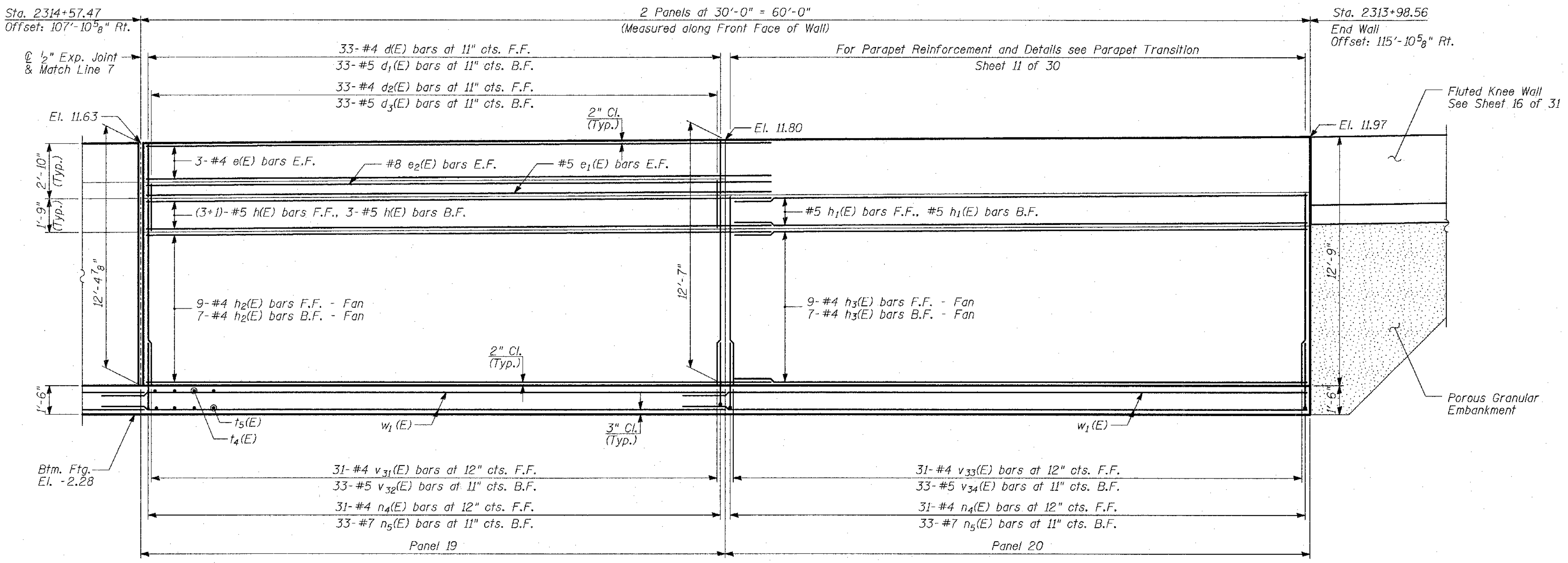
S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MAF, SNB
DRAWN BY: MAF, SNB
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

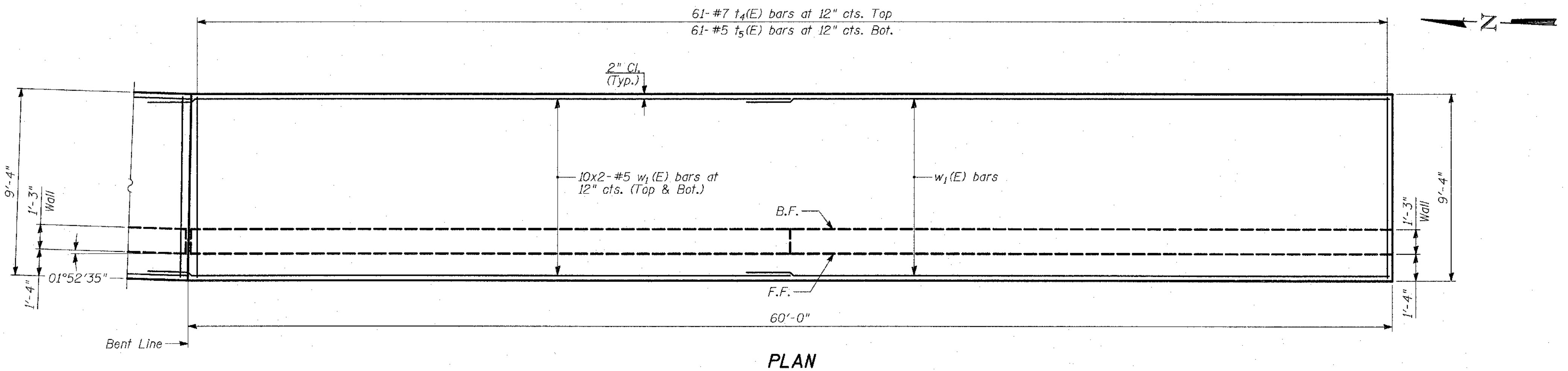
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	583
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694



ELEVATION



PLAN

NOTES:

1. Work this Sheet with Sheets 11 thru 13, 16, and 19 thru 21 of 31.
2. For Lap Splices, see Sheet 13 of 31.
3. Bars indicated thus 10x2-#5 etc. indicates 10 lines of bars with 2 lengths per line.
4. B.F. - denotes Back Face.
5. E.F. - denotes Each Face.
6. F.F. - denotes Front Face.

TYLIN INTERNATIONAL

SHEET 10 OF 31

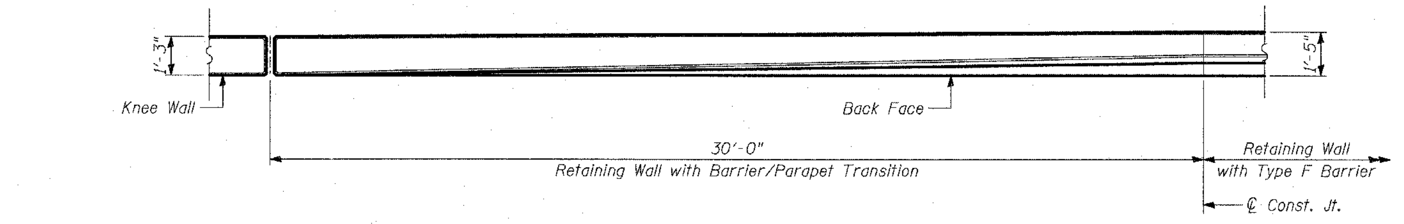
REVISIONS NAME	DATE
REVISED	05/06/05
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION
STA. 2314+57.47 TO STA. 2313+98.56

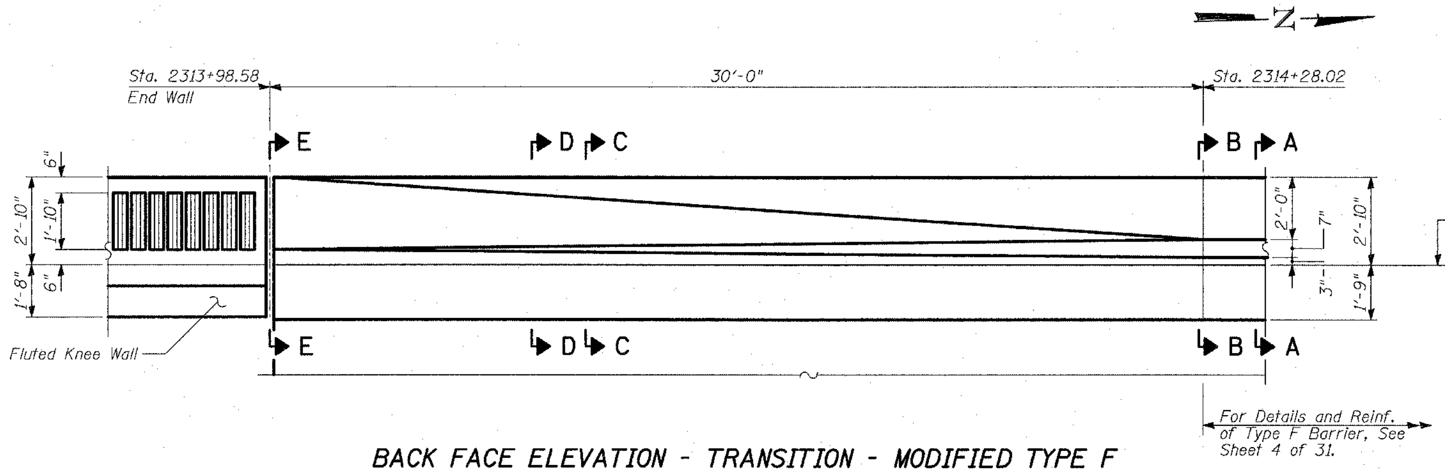
S.N. 016-W975
DESIGNED BY: MAF, SNB
SCALE: N.T.S.
DRAWN BY: MAF, SNB
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	584
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8 62694

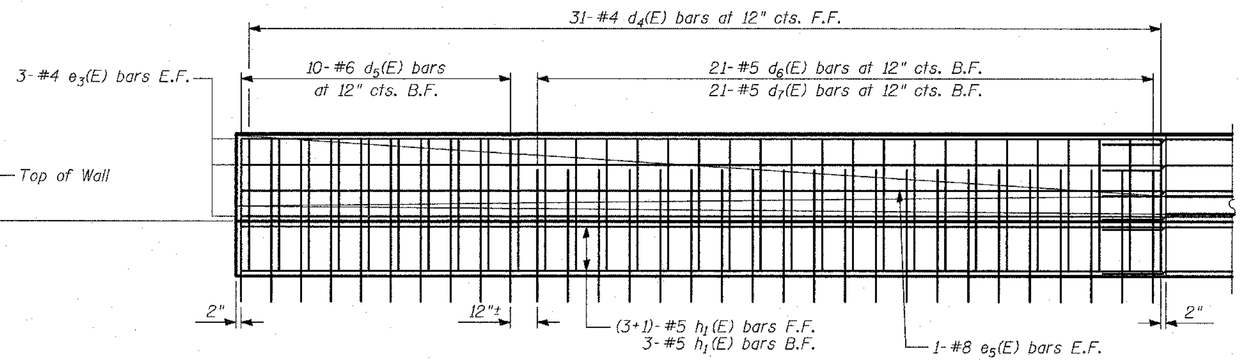


PLAN



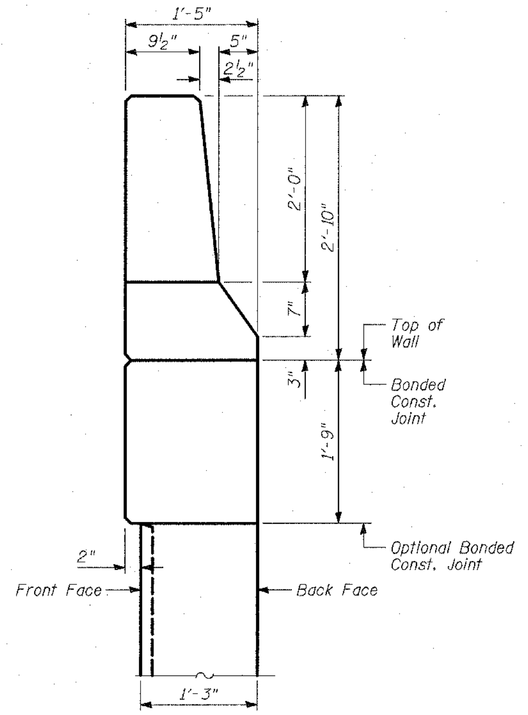
BACK FACE ELEVATION - TRANSITION - MODIFIED TYPE F BARRIER TO FLUTED PARAPET - CONCRETE DIMENSIONS

(From Sta. 2313+98.58 to Sta. 2314+28.02)

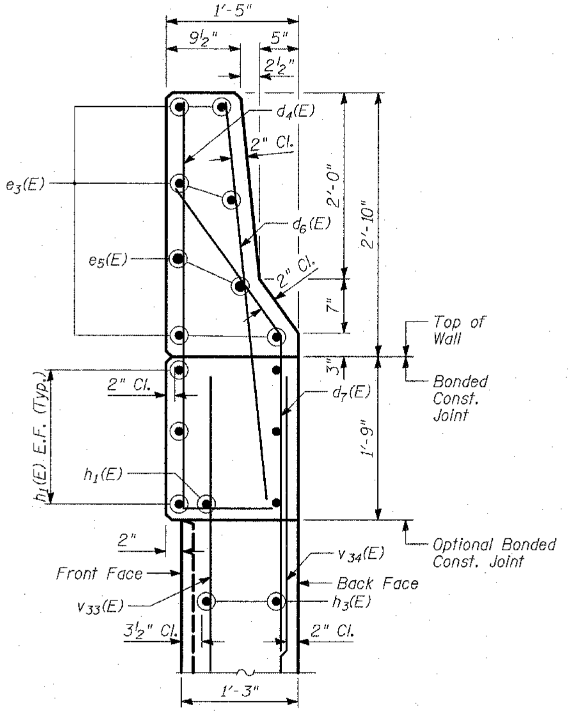


BACK FACE ELEVATION - TRANSITION - MODIFIED TYPE F BARRIER TO FLUTED PARAPET - REINFORCEMENT

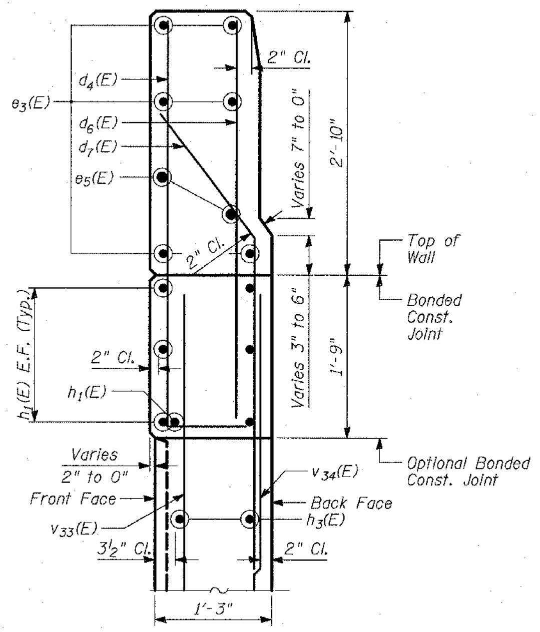
(From Sta. 2313+98.58 to Sta. 2314+28.02)



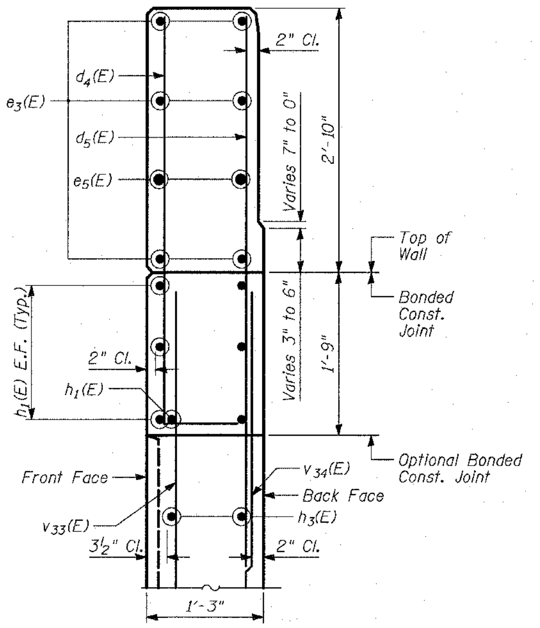
SECTION A-A



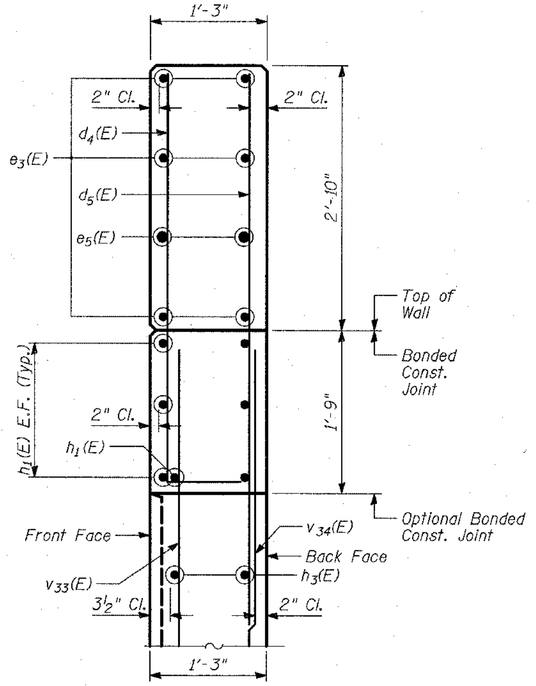
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

SHEET 11 OF 31

NOTES:

1. B.F. - denotes Back Face.
2. E.F. - denotes Each Face.
3. F.F. - denotes Front Face.
4. Work this Sheet with Sheets 12 thru 25 of 31.
5. For Lap Splices, see Sheet 13 of 31.

TYLIN INTERNATIONAL

REVISIONS NAME	DATE
REVISED	05/06/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
PARAPET TRANSITION

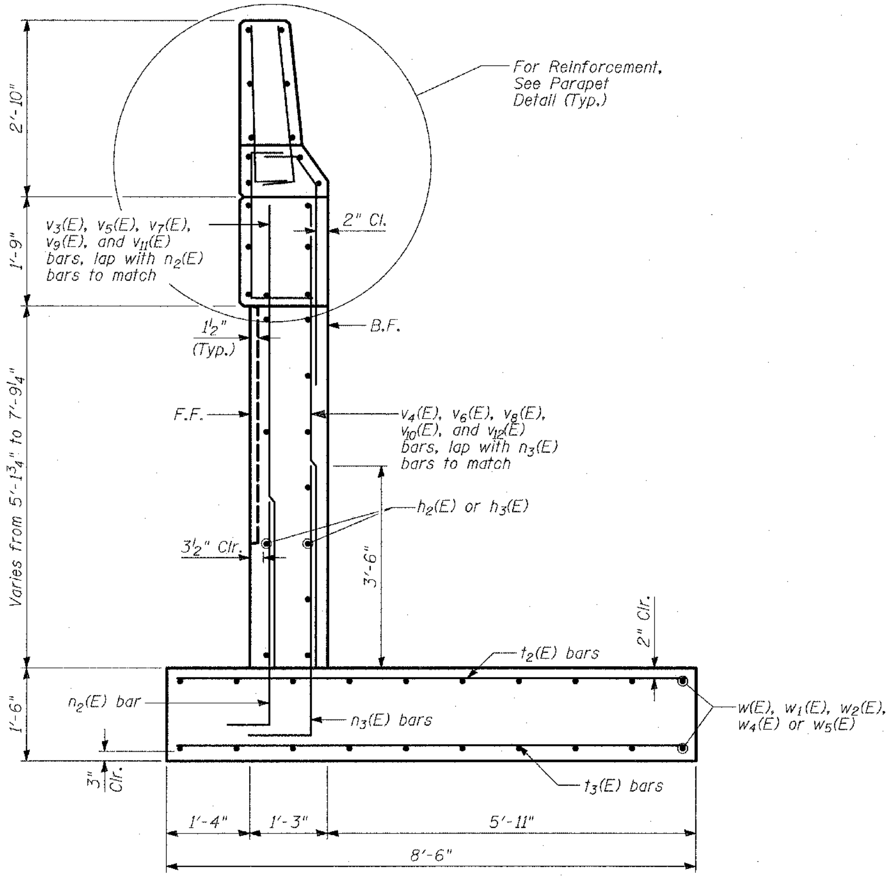
S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005

DESIGNED BY: MAF, SNB
DRAWN BY: MAF, SNB
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	585
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

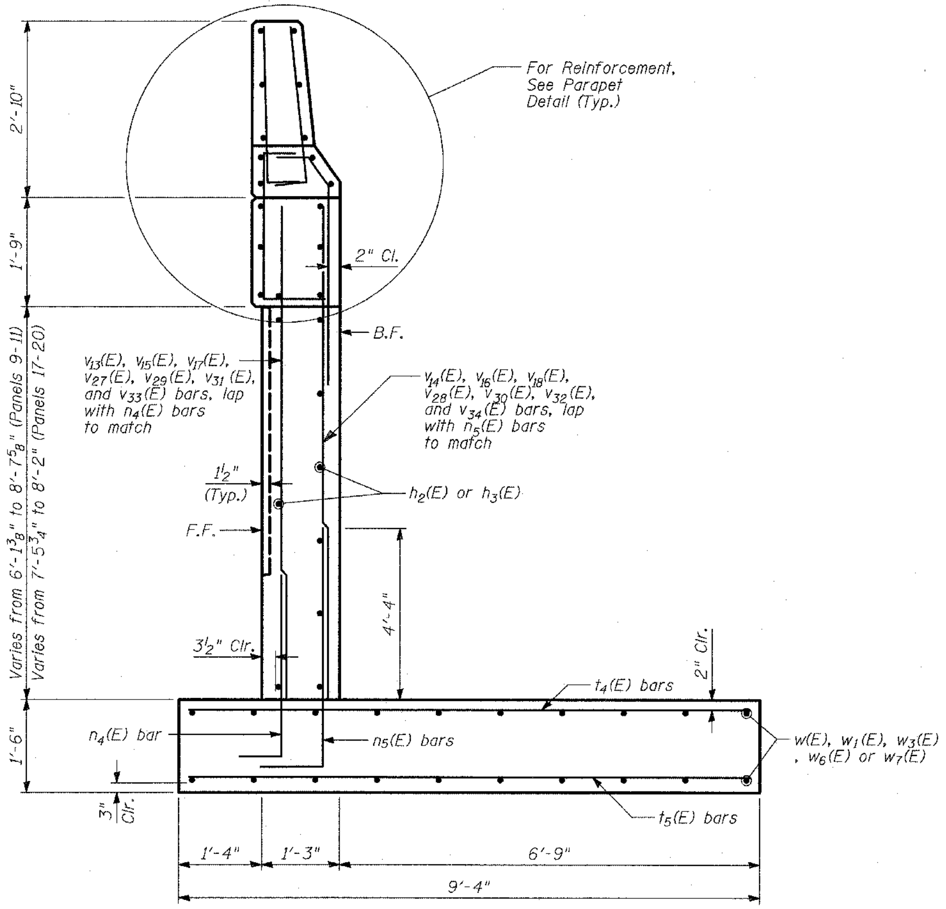
* (1516.1, 1717 & 1818) R-8

62694



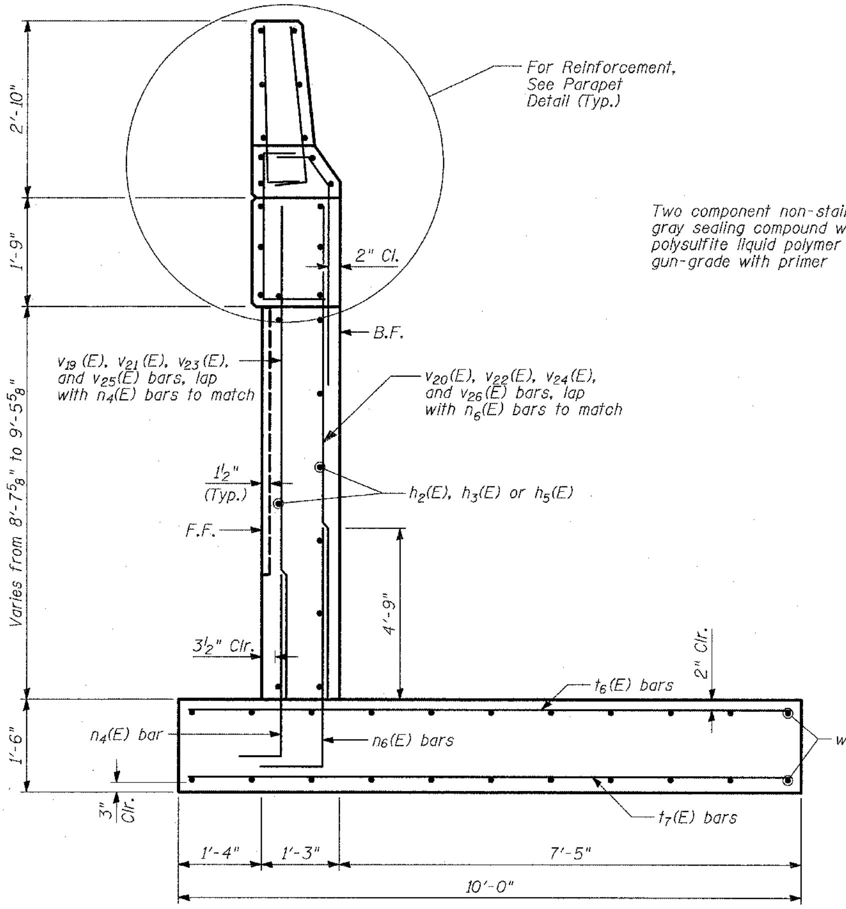
SECTION B-B

(Sta. 2319+03.07 to Sta. 2317+54.39)



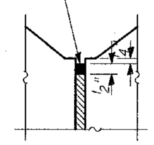
SECTION C-C

(Sta. 2317+54.39 to Sta. 2316+65.14)
(Sta. 2315+16.66 to Sta. 2313+98.58)

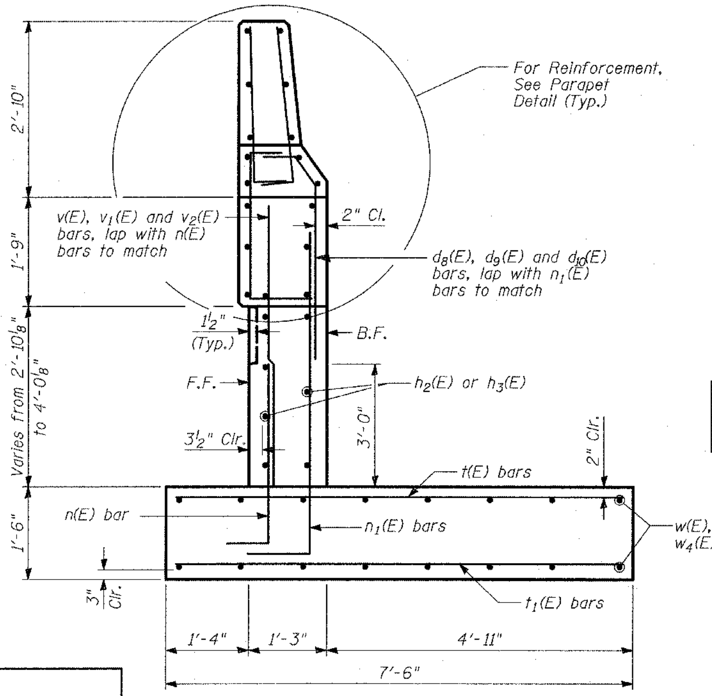


SECTION D-D

(Sta. 2316+65.14 to Sta. 2315+21.63)

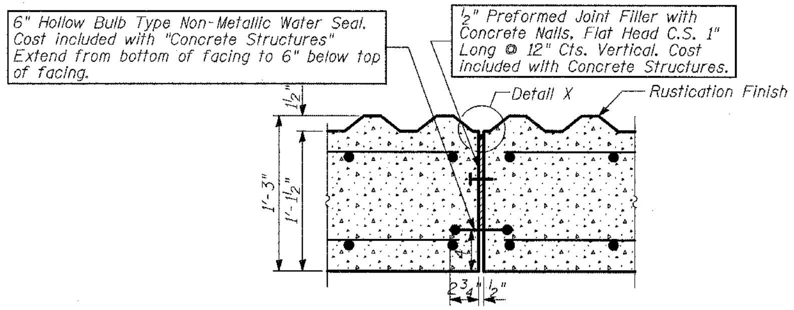


DETAIL X



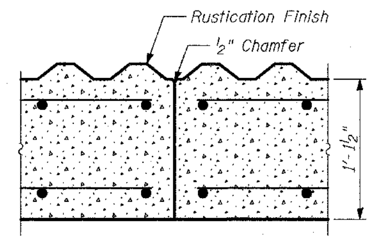
SECTION A-A

(Sta. 2319+92.27 to Sta. 2319+03.07)



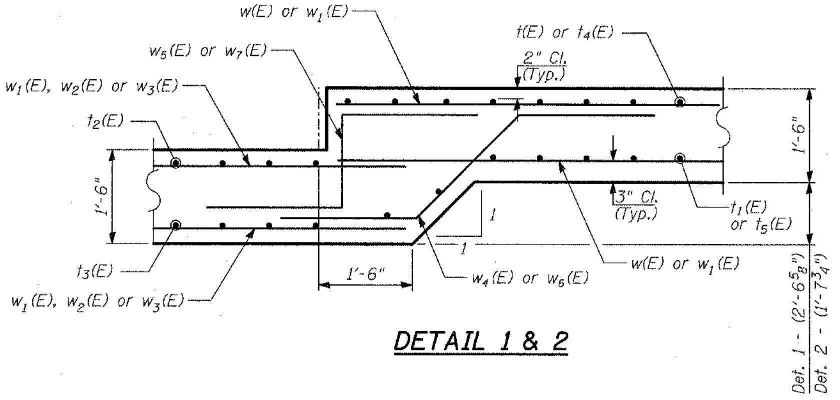
EXPANSION JOINT DETAILS

(Joint in Valley)

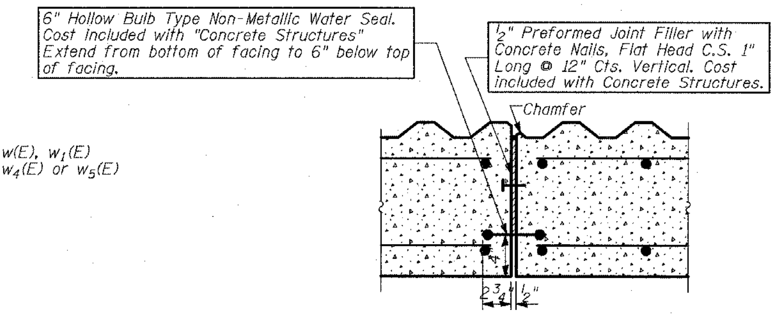


CONSTRUCTION JOINT DETAILS

(Joint in Valley)

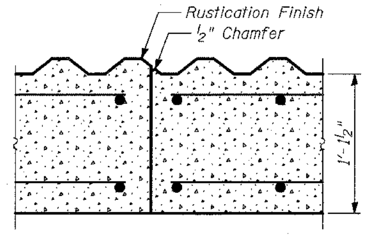


DETAIL 1 & 2



EXPANSION JOINT DETAILS

(Joint on Diagonal)



CONSTRUCTION JOINT DETAILS

(Joint in Diagonal)

TYLIN INTERNATIONAL

SHEET 12 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - WALL SECTIONS AND DETAILS

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MAF, SNB
DRAWN BY: MAF, SNB
CHECKED BY: TD, MI

03/27/2005 02:31:30 PM

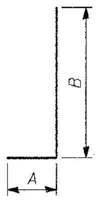
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	586

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

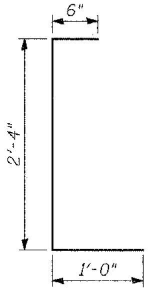
62694



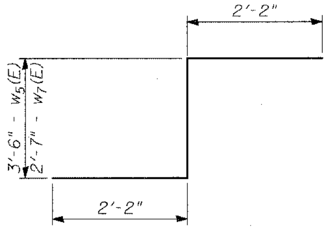
MARK TABLE

Bar	A	B
d(E)	6"	2'-6"
d_1(E)	6"	2'-6"
d_4(E)	11"	4'-4"
n(E)	8"	3'-4"
n_1(E)	1'-0"	4'-3"
n_2(E)	8"	3'-9"
n_3(E)	1'-0"	4'-9"
n_4(E)	8"	4'-0"
n_5(E)	1'-2"	5'-7"
n_6(E)	1'-2"	6'-0"

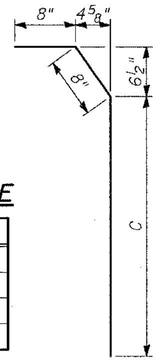
BARS d(E), d_1(E), d_4(E)
n(E), n_1(E), n_2(E), n_3(E)
n_4(E), n_5(E) & n_6(E)



BAR d_2(E)



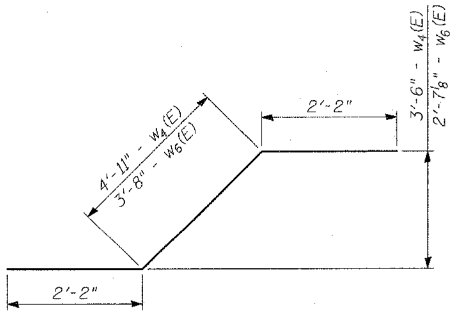
BAR w_5(E) and w_7(E)



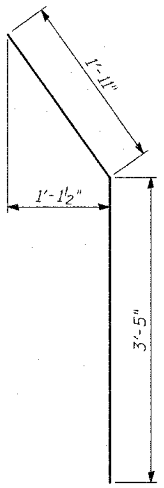
MARK TABLE

Bar	B
d_3(E)	3'-6"
d_8(E)	4'-4"
d_9(E)	4'-9"
d_{10}(E)	5'-1"

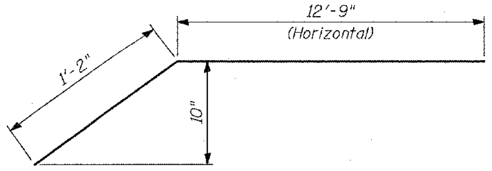
BARS d_3(E), d_8(E), d_9(E) & d_{10}(E)



BAR w_4(E) and w_6(E)



BAR d_7(E)



BAR e_9(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	638	#4	3'-0"	L
d_1(E)	622	#5	3'-0"	L
d_2(E)	622	#4	3'-10"	[
d_3(E)	523	#5	4'-10"	⌉
d_4(E)	31	#4	5'-3"	L
d_5(E)	10	#6	6'-6"	—
d_6(E)	21	#5	4'-3"	—
d_7(E)	21	#5	5'-4"	⌉
d_8(E)	33	#5	5'-8"	⌉
d_9(E)	33	#5	6'-1"	⌉
d_{10}(E)	33	#5	6'-5"	⌉
e(E)	72	#4	31'-8"	—
e_1(E)	24	#5	32'-2"	—
e_2(E)	24	#8	34'-6"	—
e_3(E)	42	#4	29'-8"	—
e_4(E)	12	#5	29'-8"	—
e_5(E)	14	#8	29'-8"	—
e_6(E)	6	#4	24'-8"	—
e_7(E)	2	#5	24'-8"	—
e_8(E)	2	#8	24'-8"	—
e_9(E)	6	#4	13'-11"	⟍—
h(E)	84	#5	32'-2"	—
h_1(E)	49	#5	29'-8"	—
h_2(E)	165	#4	31'-8"	—
h_3(E)	98	#4	29'-8"	—
h_4(E)	7	#5	24'-8"	—
h_5(E)	17	#4	24'-8"	—
n(E)	93	#4	4'-0"	L
n_1(E)	99	#6	5'-3"	L
n_2(E)	155	#4	4'-5"	L
n_3(E)	165	#6	5'-9"	L
n_4(E)	367	#4	4'-8"	L
n_5(E)	231	#7	6'-9"	L
n_6(E)	160	#7	7'-2"	L
t(E)	91	#6	7'-2"	—
t_1(E)	91	#5	7'-2"	—
t_2(E)	152	#6	8'-2"	—
t_3(E)	152	#5	8'-2"	—
t_4(E)	213	#7	9'-0"	—
t_5(E)	213	#5	9'-0"	—
t_6(E)	147	#7	9'-8"	—
t_7(E)	147	#5	9'-8"	—
v(E)	31	#4	4'-5"	—
v_1(E)	31	#4	4'-9"	—
v_2(E)	31	#4	5'-2"	—
v_3(E)	31	#4	7'-11"	—
v_4(E)	33	#5	7'-6"	—
v_5(E)	31	#4	8'-6"	—
v_6(E)	33	#5	8'-0"	—
v_7(E)	31	#4	6'-9"	—
v_8(E)	33	#5	6'-4"	—
v_9(E)	31	#4	7'-8"	—
v_{10}(E)	33	#5	7'-2"	—
v_{11}(E)	31	#4	8'-6"	—
v_{12}(E)	33	#5	8'-1"	—
v_{13}(E)	31	#4	7'-8"	—
v_{14}(E)	33	#5	6'-7"	—
v_{15}(E)	31	#4	8'-8"	—

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
v_{16}(E)	33	#5	7'-7"	—
v_{17}(E)	31	#4	9'-2"	—
v_{18}(E)	33	#5	8'-1"	—
v_{19}(E)	31	#4	9'-4"	—
v_{20}(E)	33	#6	8'-4"	—
v_{21}(E)	31	#4	9'-6"	—
v_{22}(E)	33	#6	8'-6"	—
v_{23}(E)	31	#4	9'-9"	—
v_{24}(E)	33	#6	8'-9"	—
v_{25}(E)	57	#4	10'-0"	—
v_{26}(E)	61	#6	9'-0"	—
v_{27}(E)	31	#4	8'-2"	—
v_{28}(E)	33	#5	7'-2"	—
v_{29}(E)	31	#4	8'-5"	—
v_{30}(E)	33	#5	7'-5"	—
v_{31}(E)	31	#4	8'-6"	—
v_{32}(E)	33	#5	7'-6"	—
v_{33}(E)	31	#4	8'-8"	—
v_{34}(E)	33	#5	7'-7"	—
w(E)	144	#5	30'-0"	—
w_1(E)	200	#5	32'-2"	—
w_2(E)	20	#5	34'-4"	—
w_3(E)	40	#5	33'-6"	—
w_4(E)	19	#5	9'-3"	_/‾
w_5(E)	19	#5	7'-10"	_|‾
w_6(E)	10	#5	8'-0"	_/‾
w_7(E)	10	#5	6'-11"	_|‾
Reinforcement Bars, Epoxy Coated			CU YD	72,920
Protective Coat			SQ YD	764
Concrete Structures			CU YD	612

Reinforcement bars designated (E) shall be epoxy coated.

LAP SPLICES

Bar	Lap
#4	1'-8"
#5	2'-2"
#6	2'-7"
#8	4'-6"

SHEET 13 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - BILL OF MATERIAL

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005

DESIGNED BY: MAF, SNB
DRAWN BY: MAF, SNB
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

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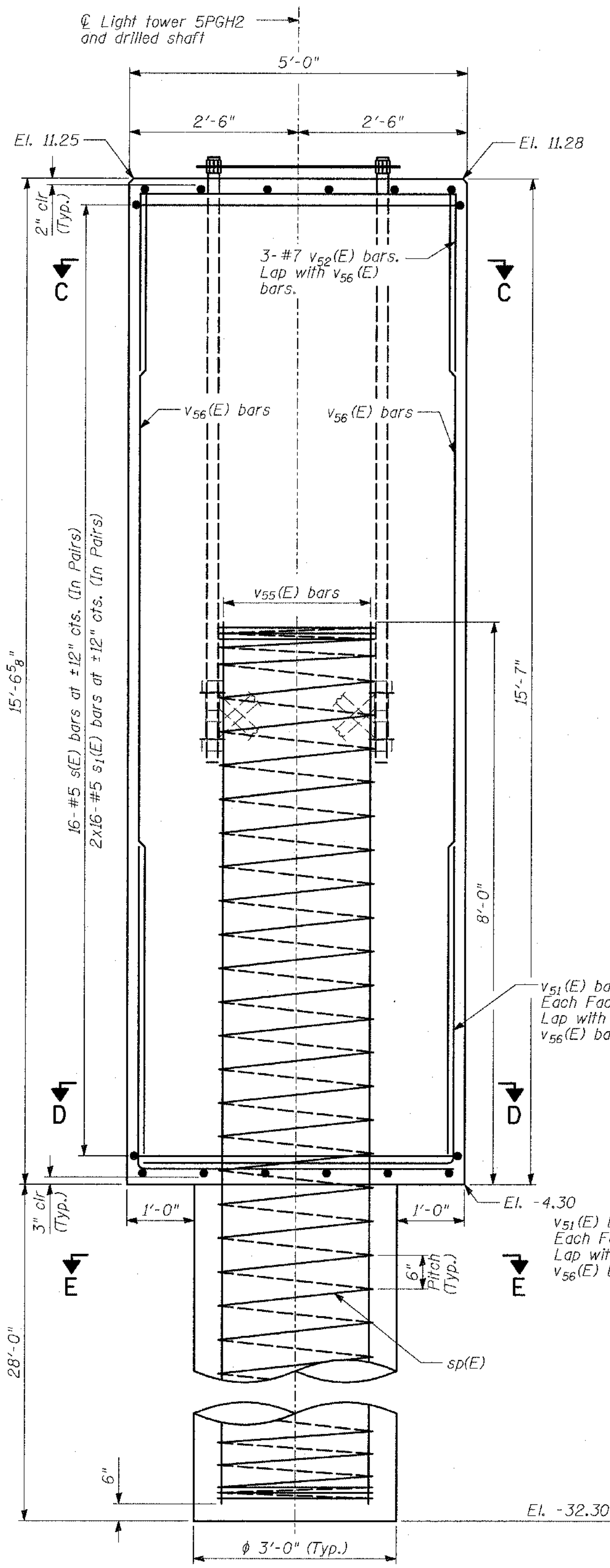
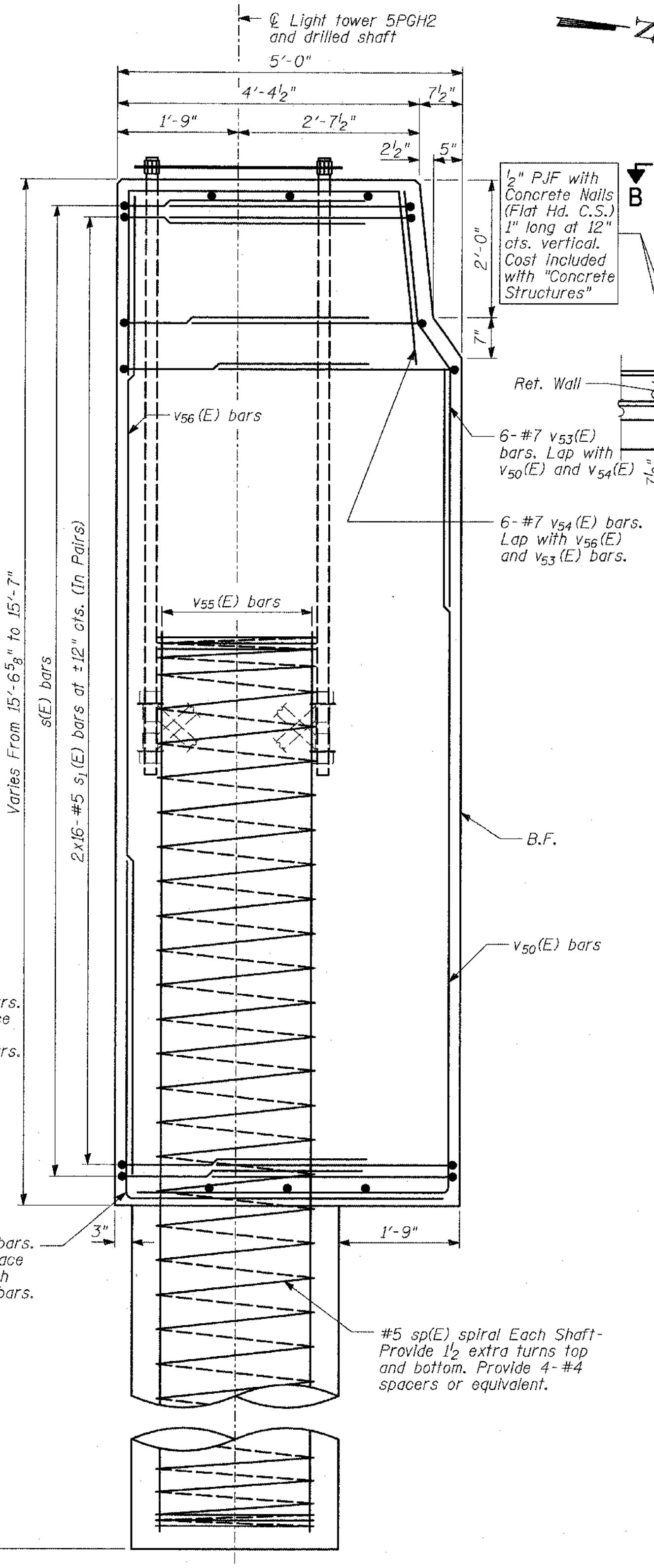
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	587
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

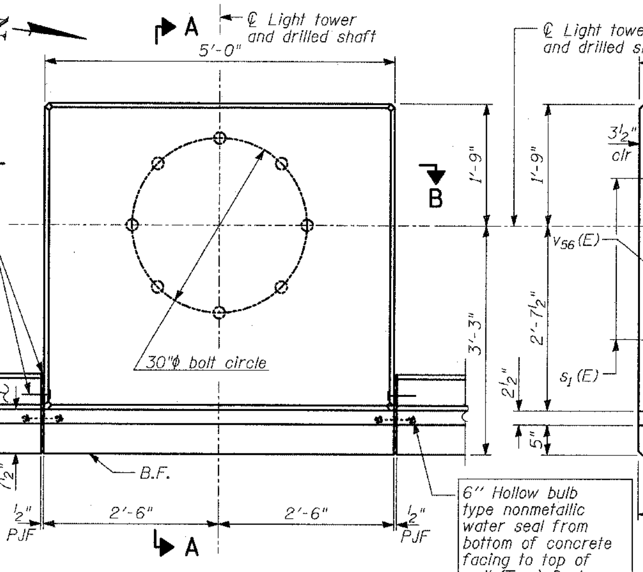
62694



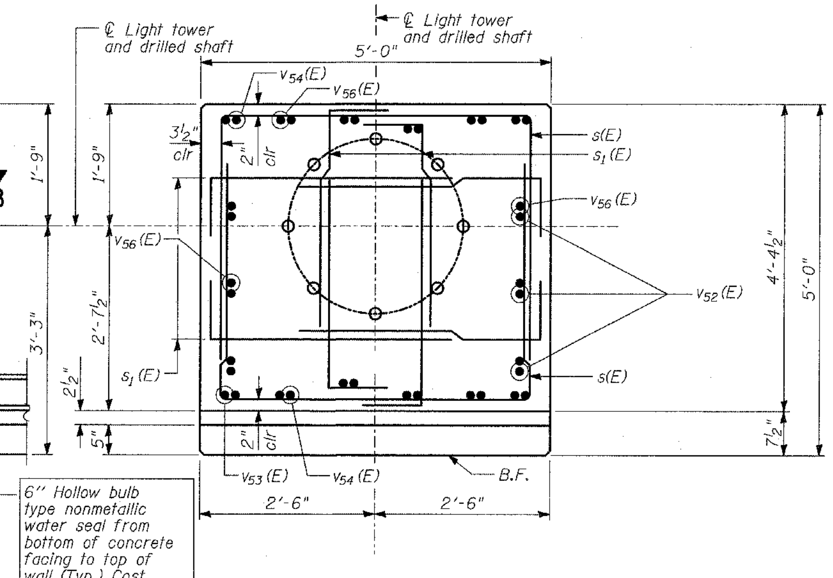
SECTION B-B



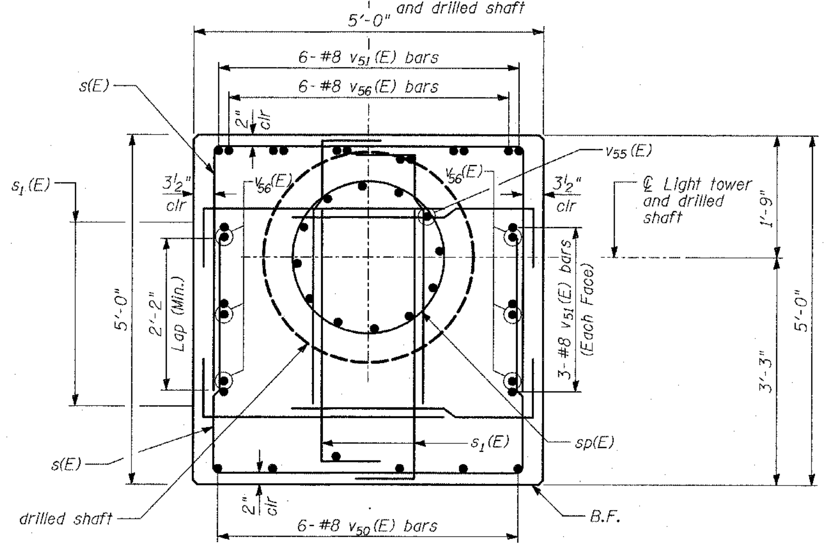
SECTION A-A



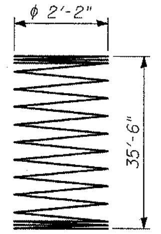
PLAN-LIGHT TOWER 5PGH2



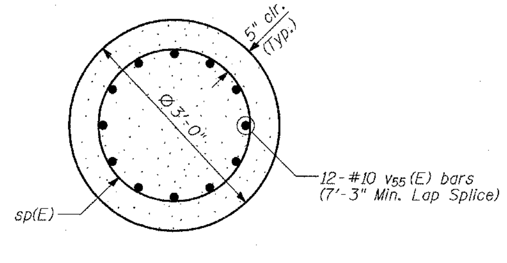
SECTION C-C



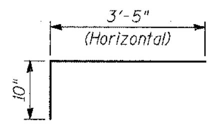
SECTION D-D



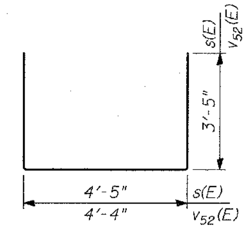
BAR sp(E)



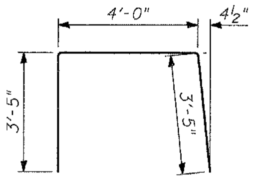
SECTION E-E



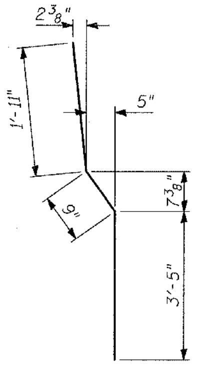
BAR s_1(E)



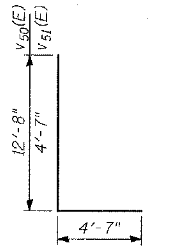
BARS s(E) & v_{52}(E)



BAR v_{54}(E)



BAR v_{53}(E)



BARS v_{50}(E)& v_{51}(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
s(E)	32	#5	11'-3"	⊔
s_1(E)	128	#5	4'-3"	┌
sp (E)	1	#5	35'-6"	⌇
v_{50}(E)	6	#8	17'-3"	└
v_{51}(E)	12	#8	9'-2"	└
v_{52}(E)	3	#7	11'-2"	⊔
v_{53}(E)	6	#7	6'-1"	⌇
v_{54}(E)	6	#7	10'-10"	⊓
v_{55}(E)	12	#10	35'-6"	—
v_{56}(E)	12	#8	15'-0"	—
Reinforcement Bars, Epoxy Coated			POUND	4,630
Structure Excavation			CU YD	18
Concrete Structures			CU YD	15
Protective Coat			SQ YD	18
Drilled Shaft in Soil 36"			FOOT	28

Reinforcement bars designated (E) shall be epoxy coated.

NOTES:

1. The design loads are based on AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminares and Traffic Signals-2001.
2. Drilled shafts shall be installed according to IDOT special provisions for "Drilled Shafts".
3. Protective Coat shall be applied to exposed surfaces of the new concrete wall and tower base.
4. At all locations where reinforcement bar laps are not in direct contact, the Contractor shall provide sufficient spacing between the vertical bars, equal to the size of the largest concrete aggregate plus ½ inch.
5. For location of drilled shaft, see Sheet 8 of 31.
6. Conduit is not shown for clarity. For location of conduit, see Sheet 15 of 31.
7. Cost of anchor rod assembly, conduit and wires for grounding are included with "Concrete Structures".
8. Minimum lap for spirals = 2'-6"

SHEET 14 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
SECTION (1717 & 1818) K COOK COUNTY
RETAINING WALL ALONG STATE ST.
WALL 69
LIGHT TOWER 5PGH2 FOUNDATION DETAILS
S.N. 016-W975 DESIGNED BY: TD, MAF
SCALE: N.T.S. DRAWN BY: MAF,DJR
DATE: MARCH 18, 2005 CHECKED BY: TD, MI

TYLIN INTERNATIONAL

03/27/2005 02:31:31 PM

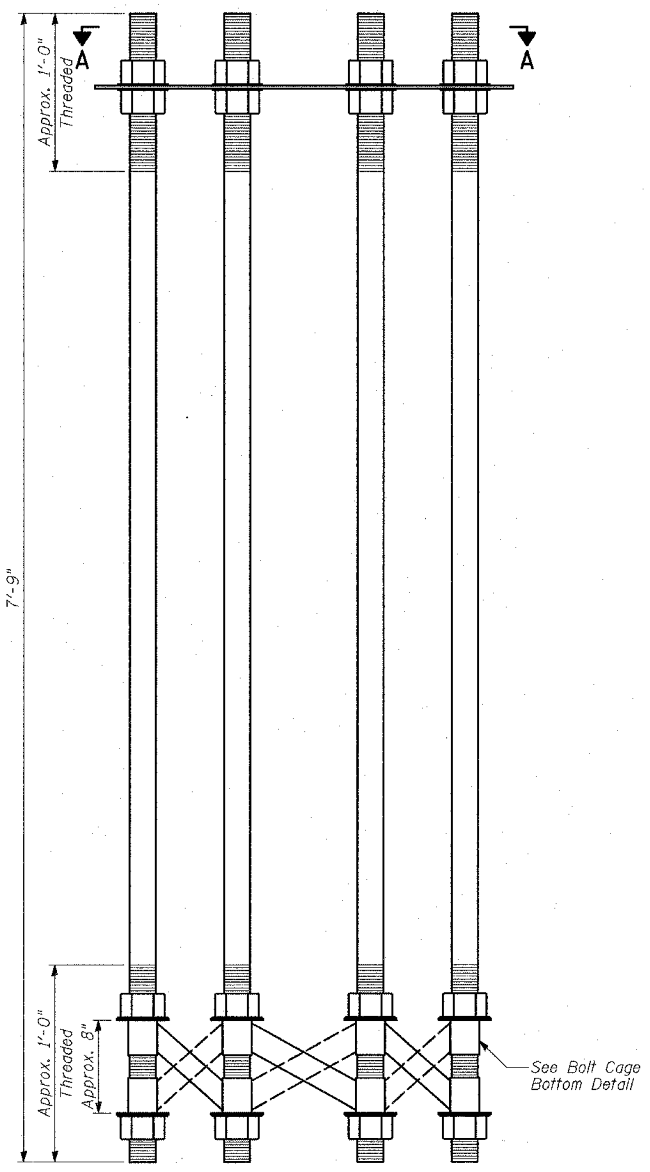
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	588

STA. 2200+00.00 TO STA. 2362+00.00

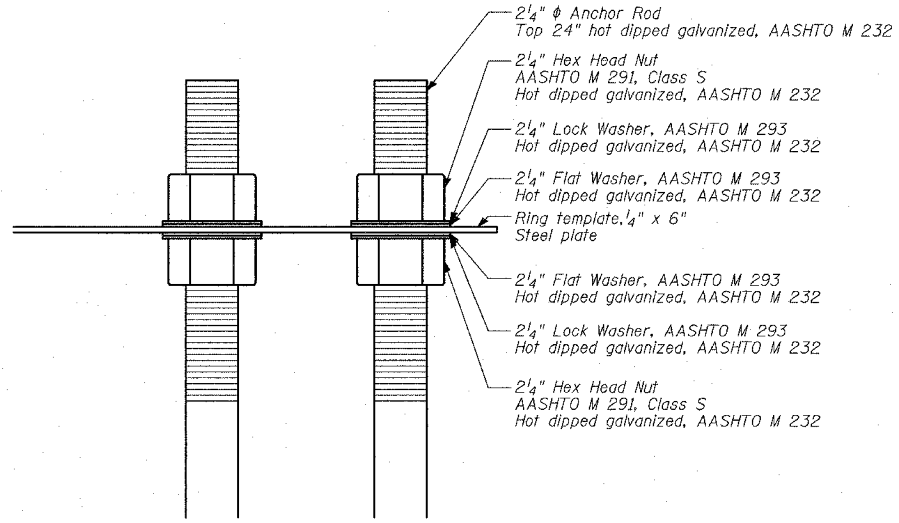
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

• (1516.1, 1717 & 1818) R-8

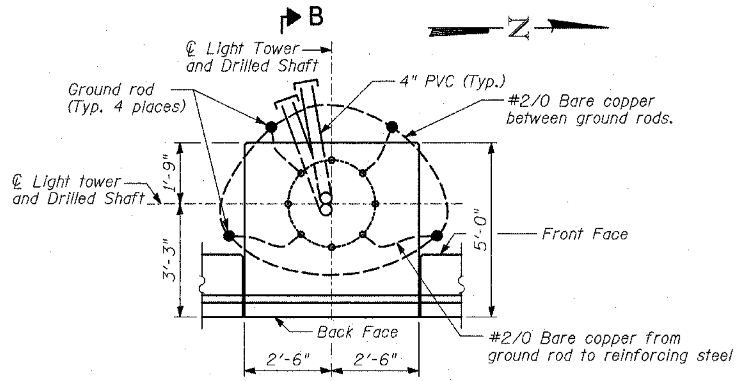
62694



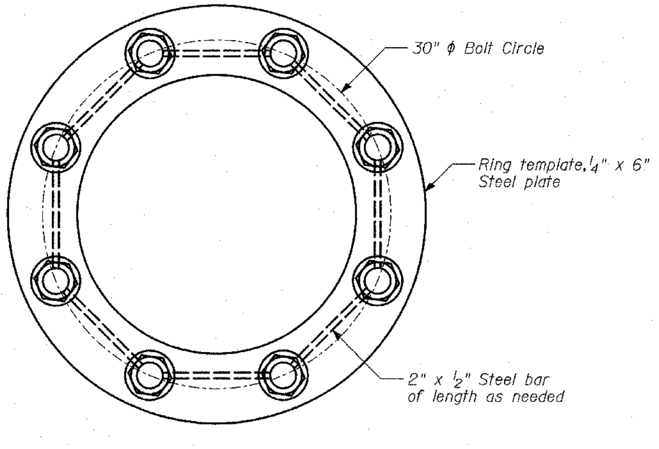
ANCHOR BOLT CAGE



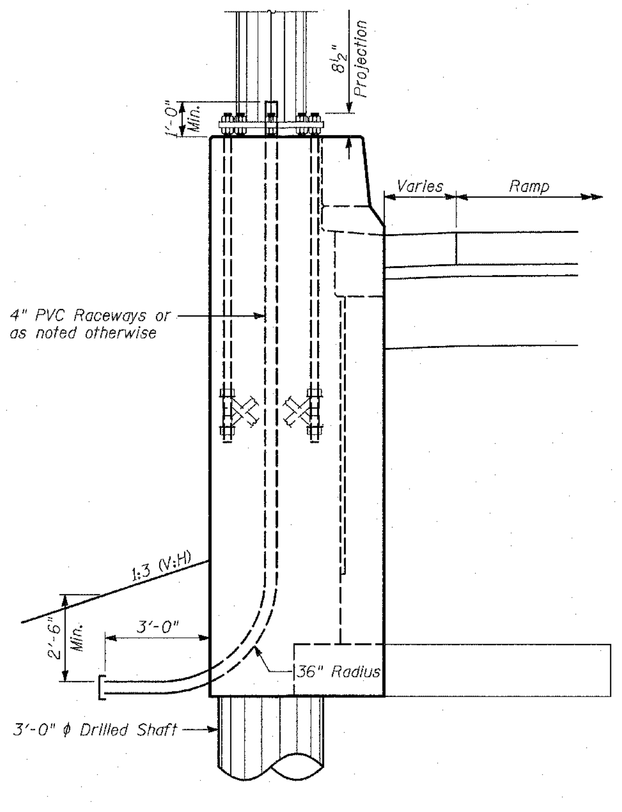
BOLT CAGE TOP



PLAN - 5PGH2 CONDUIT PLACEMENT



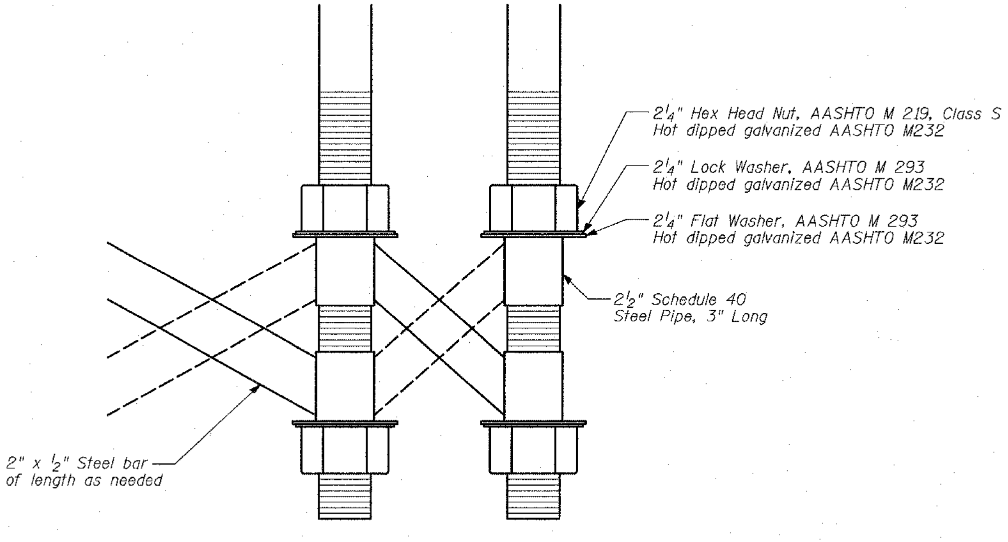
SECTION A-A



SECTION B-B

NOTES:

1. Anchor rods shall be straight and shall be according to AASHTO M 314 or ASTM F1554, Grade 105 and galvanized according to Article 1006.09.
2. Anchor rod information shall be submitted for approval and shall be fully coordinated with tower manufacturer's requirements.
3. The Anchor Rods shall be vertical. No adjustment shall be allowed after the foundation is placed.
4. The gap between the foundation and the base plate shall be enclosed with a stainless steel screen fastened with a stainless steel band.
5. The Light Tower shall not be erected until after the concrete has been cured according to Article 1020.13.
6. Two anchor rods opposite each other shall have the anchor rod threads peened after nuts are installed.
7. Refer to BE501 for details.



BOLT CAGE BOTTOM

SHEET 15 OF 31

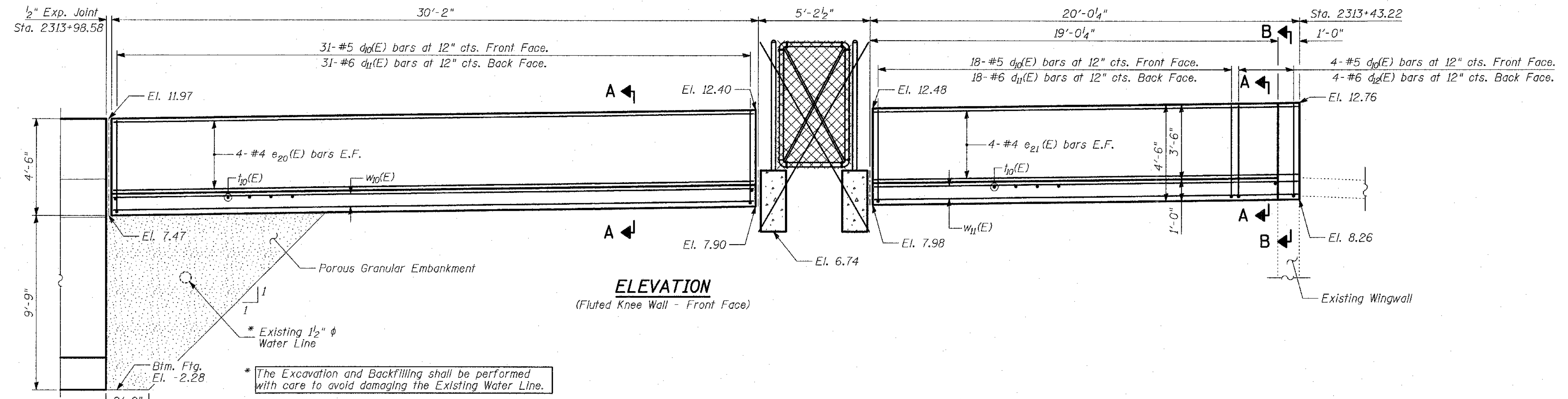
REVISIONS	
NAME	DATE

TY·LIN INTERNATIONAL

ILLINOIS DEPARTMENT OF TRANSPORTATION

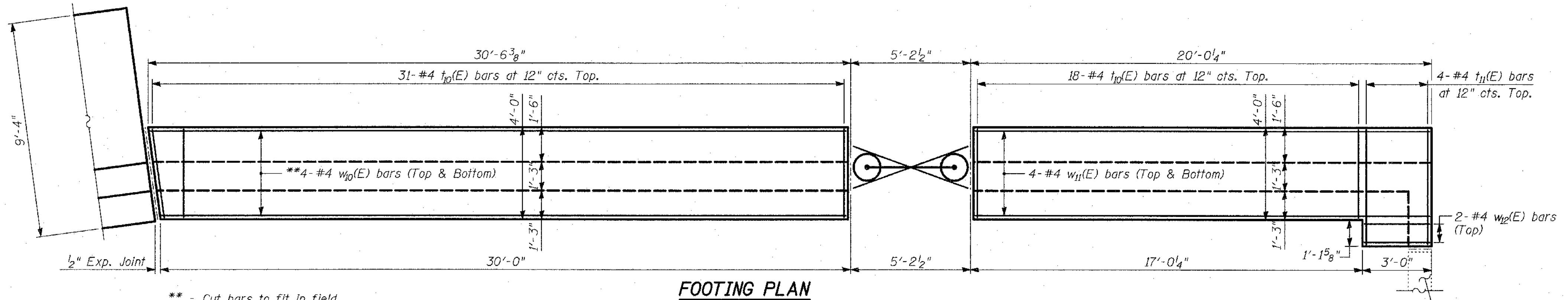
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
LIGHT TOWER DETAILS

S.N. 016-W975
DESIGNED BY: MI, DJR
SCALE: N.T.S.
DRAWN BY: DJR
DATE: MARCH 18, 2005
CHECKED BY: TD, MI



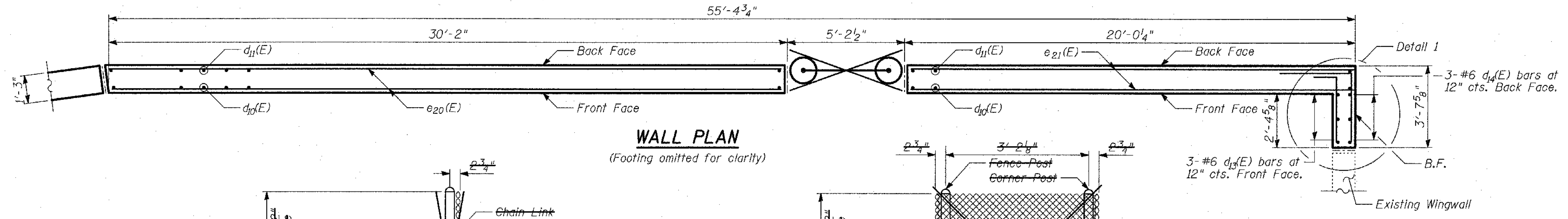
ELEVATION

(Fluted Knee Wall - Front Face)



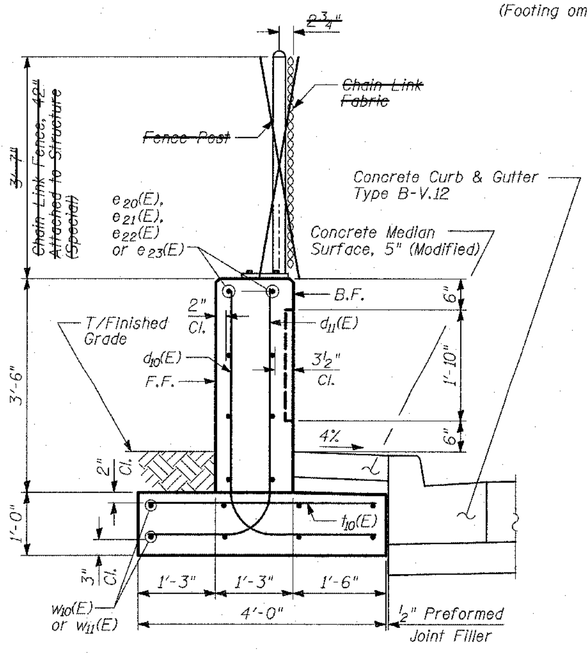
FOOTING PLAN

(Wall omitted for clarity)

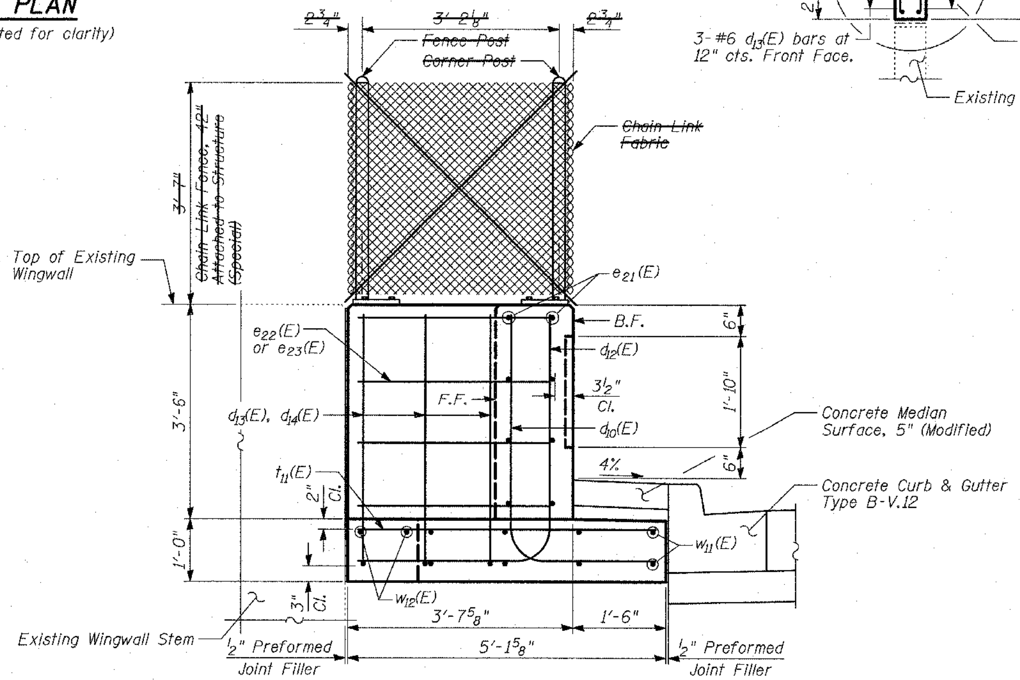


WALL PLAN

(Footing omitted for clarity)



SECTION A-A



SECTION B-B

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	589

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

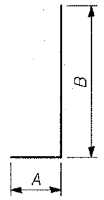
* (1516.1, 1717 & 1818) R-8

62694

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d_{10}(E)	53	#5	6'-6"	┐
d_{11}(E)	49	#6	6'-2"	┐
d_{12}(E)	4	#6	7'-3"	┐
d_{13}(E)	3	#5	6'-0"	┐
d_{14}(E)	3	#6	6'-8"	┐
e_{20}(E)	8	#4	28'-10"	—
e_{21}(E)	8	#4	19'-8"	—
e_{22}(E)	4	#5	6'-8"	┐
e_{23}(E)	4	#5	4'-2"	┐
t_{10}(E)	49	#4	3'-8"	—
t_{11}(E)	4	#4	4'-10"	—
w_{10}(E)	8	#4	30'-2"	—
w_{11}(E)	8	#4	19'-8"	—
w_{12}(E)	2	#4	2'-8"	—
Reinforcement Bars, Epoxy Coated			POUND	1,620
Porous Granular Embankment			SQ YD	21
Structure Excavation			CU YD	28
Concrete Structures			CU YD	18
Protective Coat			SQ YD	42
Rustication Finish			SQ FT	107

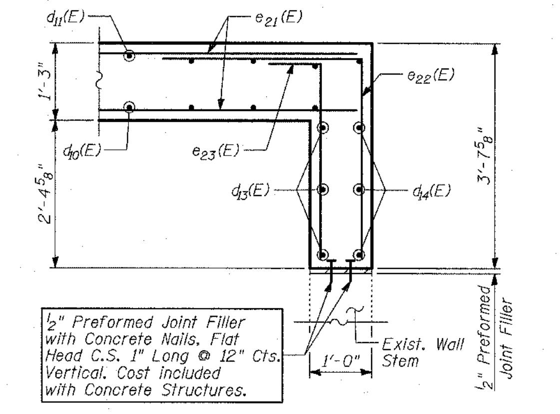
Reinforcement bars designated (E) shall be epoxy coated.



MARK TABLE

Bar	A	B
d_{10}(E)	2'-5"	4'-1"
d_{11}(E)	2'-1"	4'-1"
d_{12}(E)	3'-2"	4'-1"
d_{13}(E)	1'-11"	4'-1"
d_{14}(E)	2'-7"	4'-1"
e_{22}(E)	3'-4"	3'-4"
e_{23}(E)	10"	3'-4"

BARS d_{10}(E), d_{11}(E), d_{12}(E) d_{13}(E), d_{14}(E), e_{22}(E) & e_{23}(E)



DETAIL 1

NOTES:

1. Work this sheet with Sheet 17 of 31.
2. For Lap Splices, See Sheet 13 of 31.

SHEET 16 OF 31

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - PLAN AND ELEVATION-
FLUTED KNEE WALL

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, MAF
DRAWN BY: MAF
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

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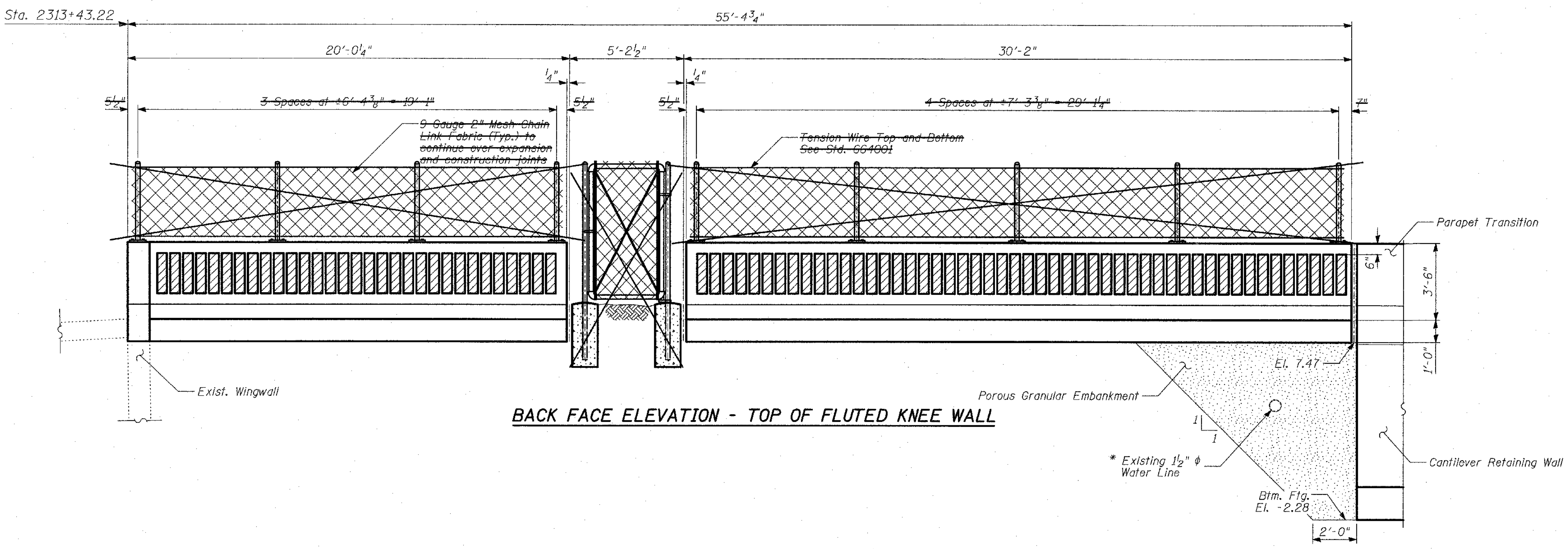
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	590
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

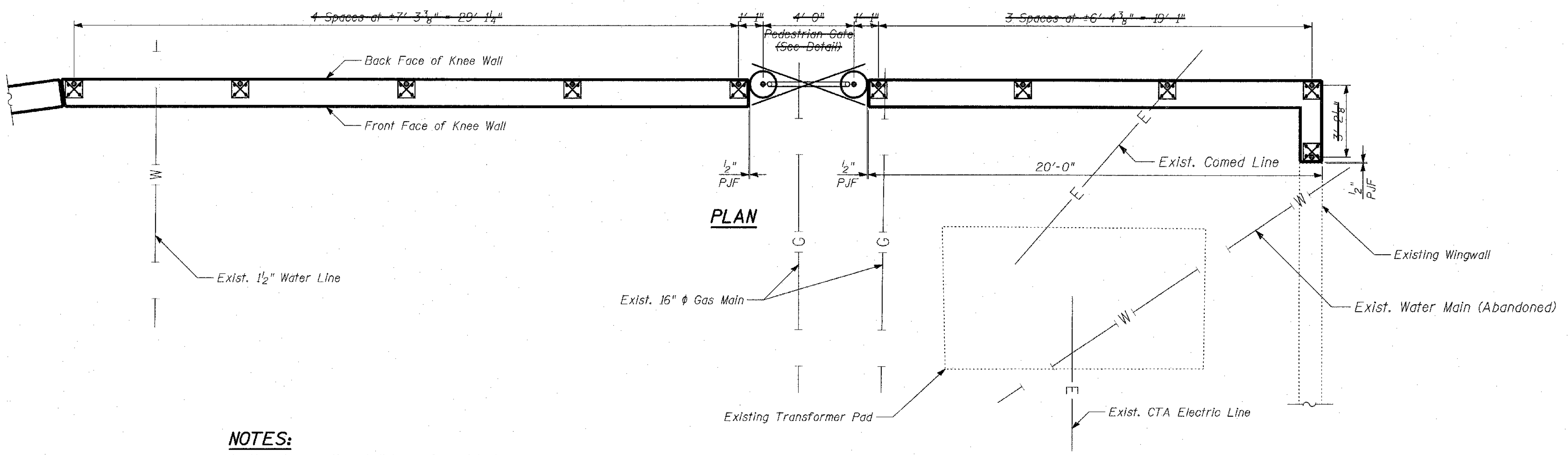
62694



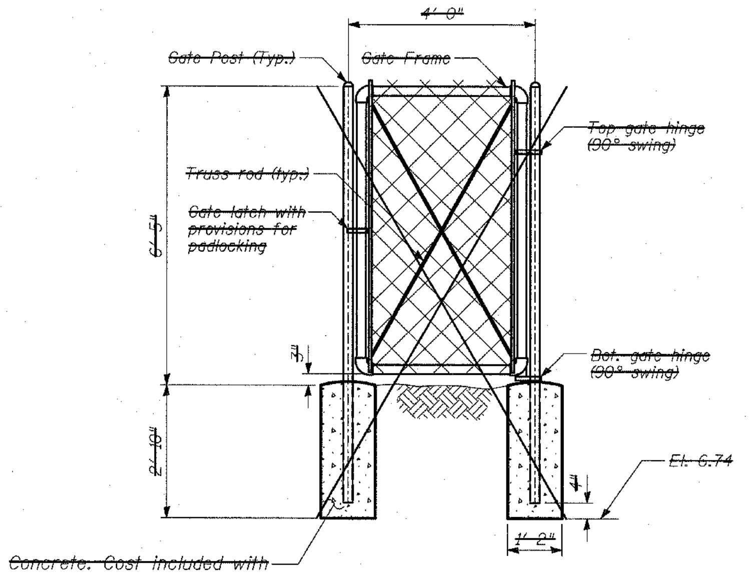
BACK FACE ELEVATION - TOP OF FLUTED KNEE WALL

~~BILL OF MATERIAL~~

~~ITEM~~	~~UNIT~~	~~TOTAL~~
~~Chain Link Gate (Special)~~	~~EACH~~	~~1~~



PLAN



~~PEDESTRIAN GATE~~

NOTES:

1. Manual excavation shall be performed to limit disturbance to the Existing CTA transformer and servicing conduit(s). Service to the CTA transformer shall not be interrupted.
2. The Contractor shall inform the Engineer 5 days in adavance when manual excavation is anticipated in the area of the ComEd conduits servicing the CTA Transformer. The Engineer shall contact ComEd and request their presence during excavation, and to determine if any conduit sleeves are required in the area under the kneewall, or possibly in the kneewall itself. ComEd shall determine the type, size, number and location of any sleeve(s). The cost of the sleeve(s), their installation, and any associated labor and equipment shall all be included in the cost of "Concrete Structures".
3. Work this sheet with Sheets 10, 12, 13, and 16 of 31.

TYLIN INTERNATIONAL

SHEET 17 OF 31

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - TYPICAL SECTIONS, ELEVATIONS
AND DETAILS - FLUTED KNEE WALL

S.N. 016-W975
DESIGNED BY: MI, MAF
SCALE: N.T.S.
DRAWN BY: MAF
DATE: MARCH 18, 2005
CHECKED BY: TD, MI

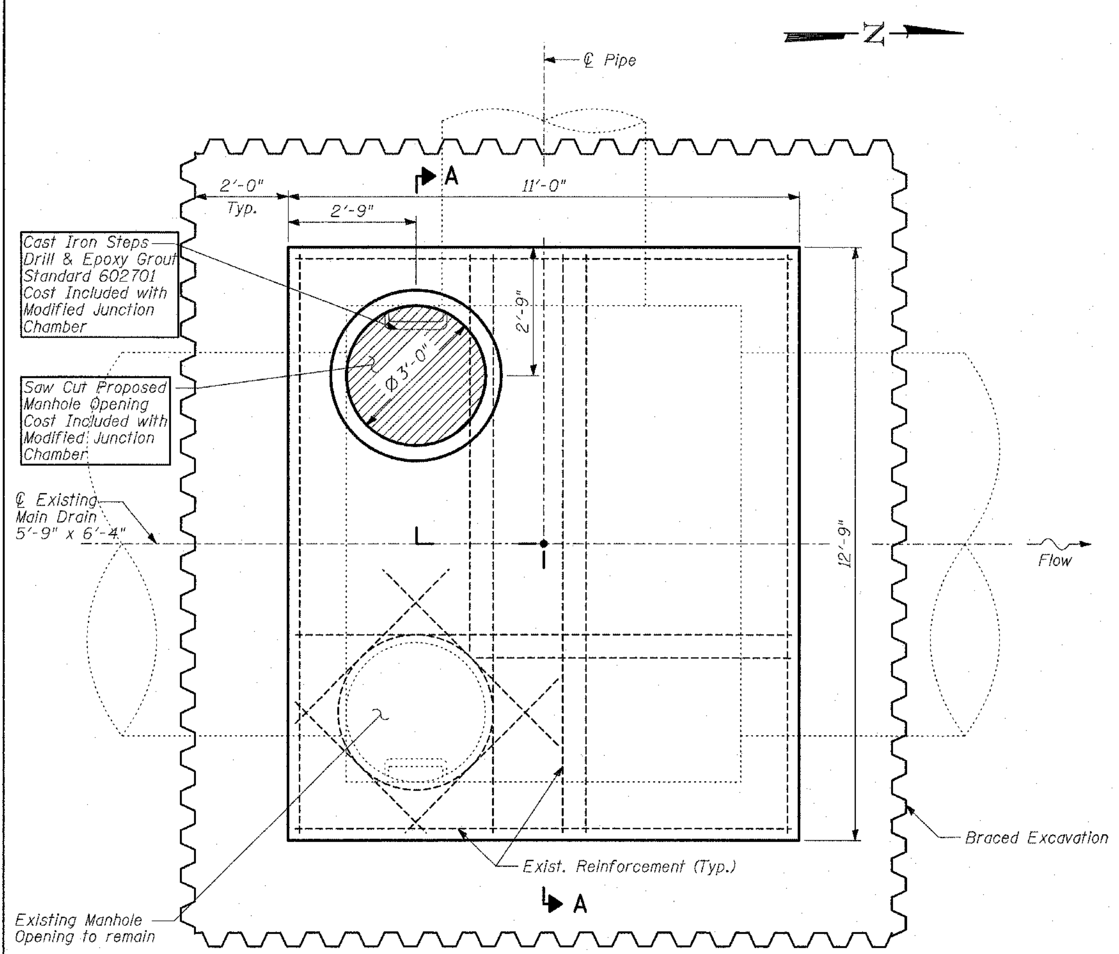
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	591

STA. 2200+00.00 TO STA. 2362+00.00

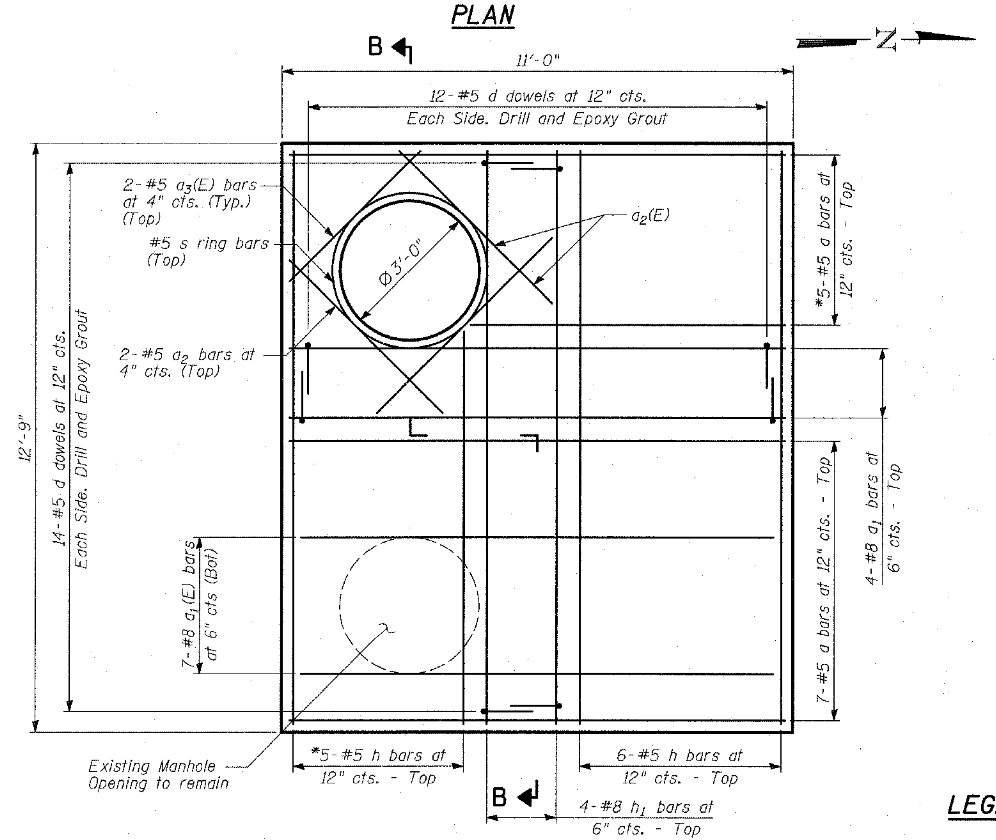
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

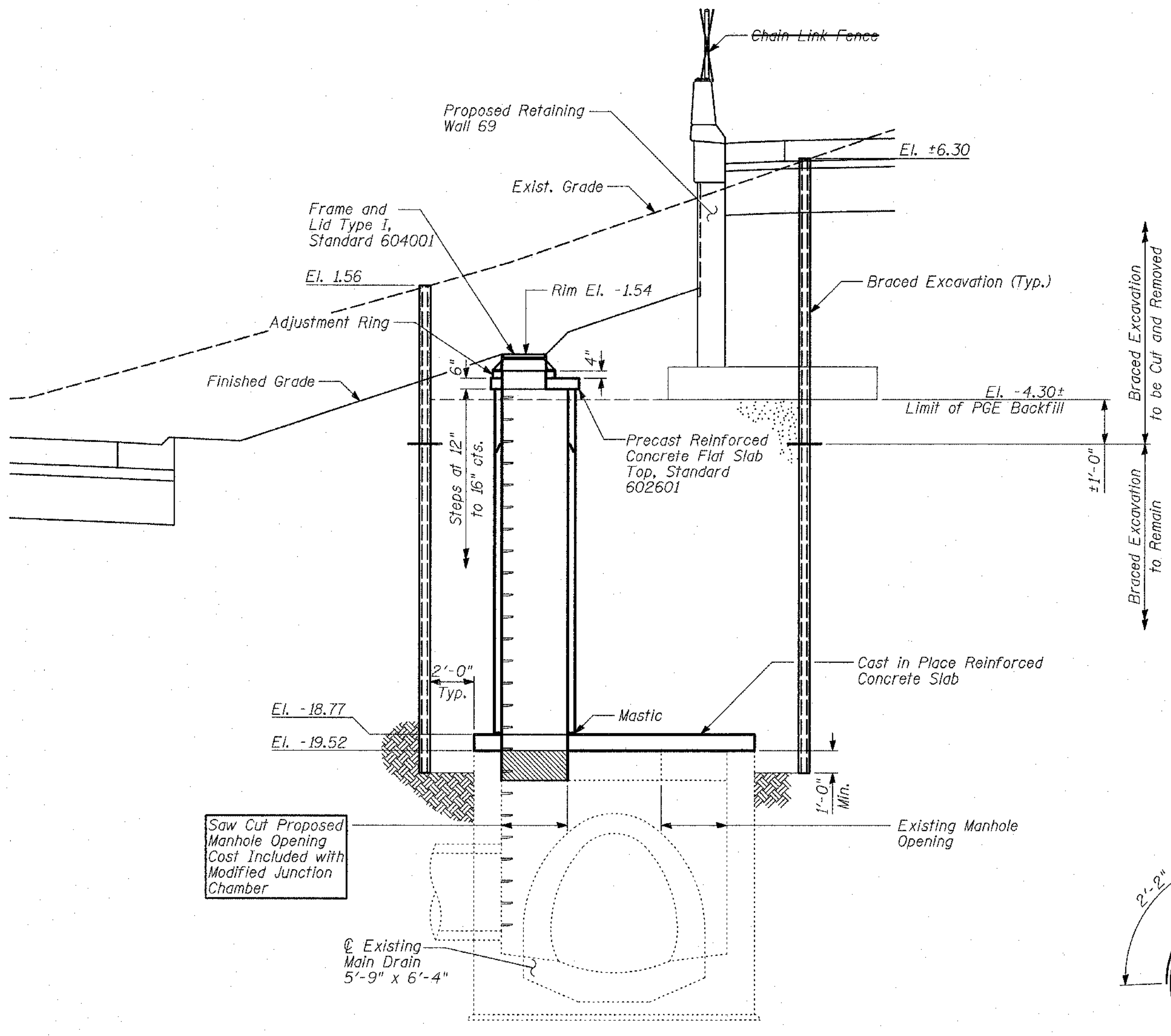
62694



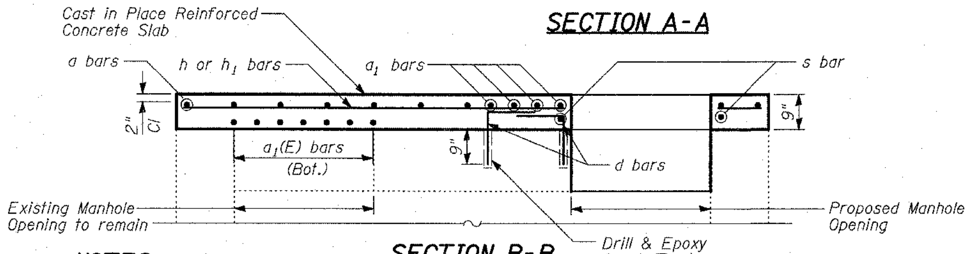
PLAN



SECTIONAL PLAN



SECTION A-A

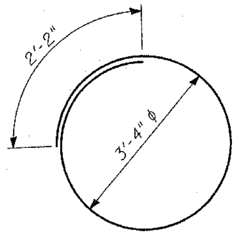


SECTION B-B

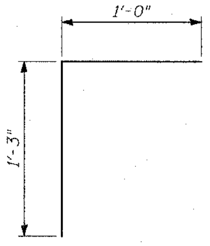
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	12	#5	10'-8"	—
a1	11	#8	10'-8"	—
a2	6	#5	5'-4"	—
a3	2	#5	4'-0"	—
d	52	#5	2'-3"	L
h	11	#5	12'-5"	—
h1	4	#8	12'-5"	—
s	1	#5	12'-8"	○
Reinforcement Bars		POUND	780	
Concrete Removal		CU YD	1	
Concrete Structures		CU YD	4	

See Note 8



BAR s



BAR d

NOTES:

1. Height adjustments to the manhole riser shall be made as required by the Contractor to meet the proposed rim elevation. Cost included with "Modified Junction Chamber".

2. All dimensions and elevations shall be field verified prior to construction.

3. Concrete cover for reinforcement steel to be 2" unless otherwise noted.

4. All concrete edges shall be chamfered 1 inch.

5. It is the Contractor's responsibility to locate existing junction chamber and utilities, especially the existing main drain. Any repairs due to damage of the junction chamber, sewers, or main drain shall be the Contractor's responsibility.

6. Fill material used in backfilling the Junction Chamber to attain the bottom of retaining wall footing elevation should be structural fill material, IDOT gradation CA-6. Fill material should be free of organic matter and debris. Fill should be placed in loose lifts not exceeding 8-inch thickness and compacted to minimum 95 percent maximum dry density, as determined in accordance with AASHTO T-99, Standard Proctor Method.

7. The design of the braced excavation is the responsibility of the Contractor. The Contractor shall submit drawings and design for the braced excavation to the Engineer for approval. The braced excavation design and drawings shall be signed and sealed by an Illinois Licensed Structural Engineer, submitted and approved prior to the start of any work. The Engineer's approval shall not relieve the Contractor from the sole responsibility of the structural integrity of the braced excavation system.

8. Quantities of Concrete Structures, Concrete Removal and Reinforcement Bars are shown only for constructibility and are included with "Modified Junction Chamber and will not be paid for separately.

9. Cut and Remove Braced Excavation interfering with Proposed Wall. 1'-0" below bottom of proposed footing.

* Cut bars to fit in field.

LEGEND

▨	Concrete Removal
░	Porous Granular Embankment

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Modified Junction Chamber	EACH	1
Braced Excavation	CU YD	218
Porous Granular Embankment	CU YD	139

SHEET 18 OF 31

TY·LIN INTERNATIONAL

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

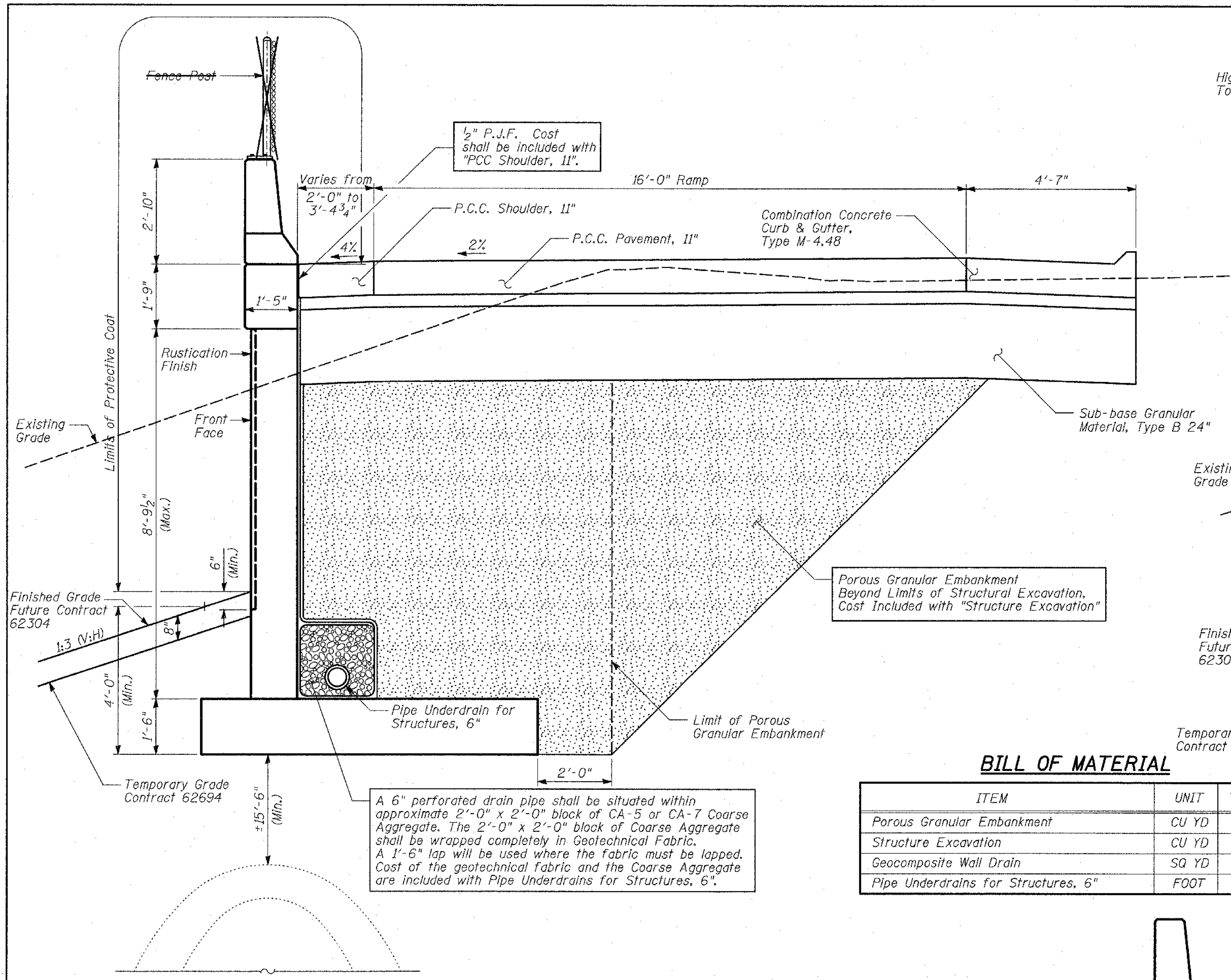
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - EXISTING JUNCTION
CHAMBER MODIFICATION

S.N. 016-W975
SCALE:
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	592
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

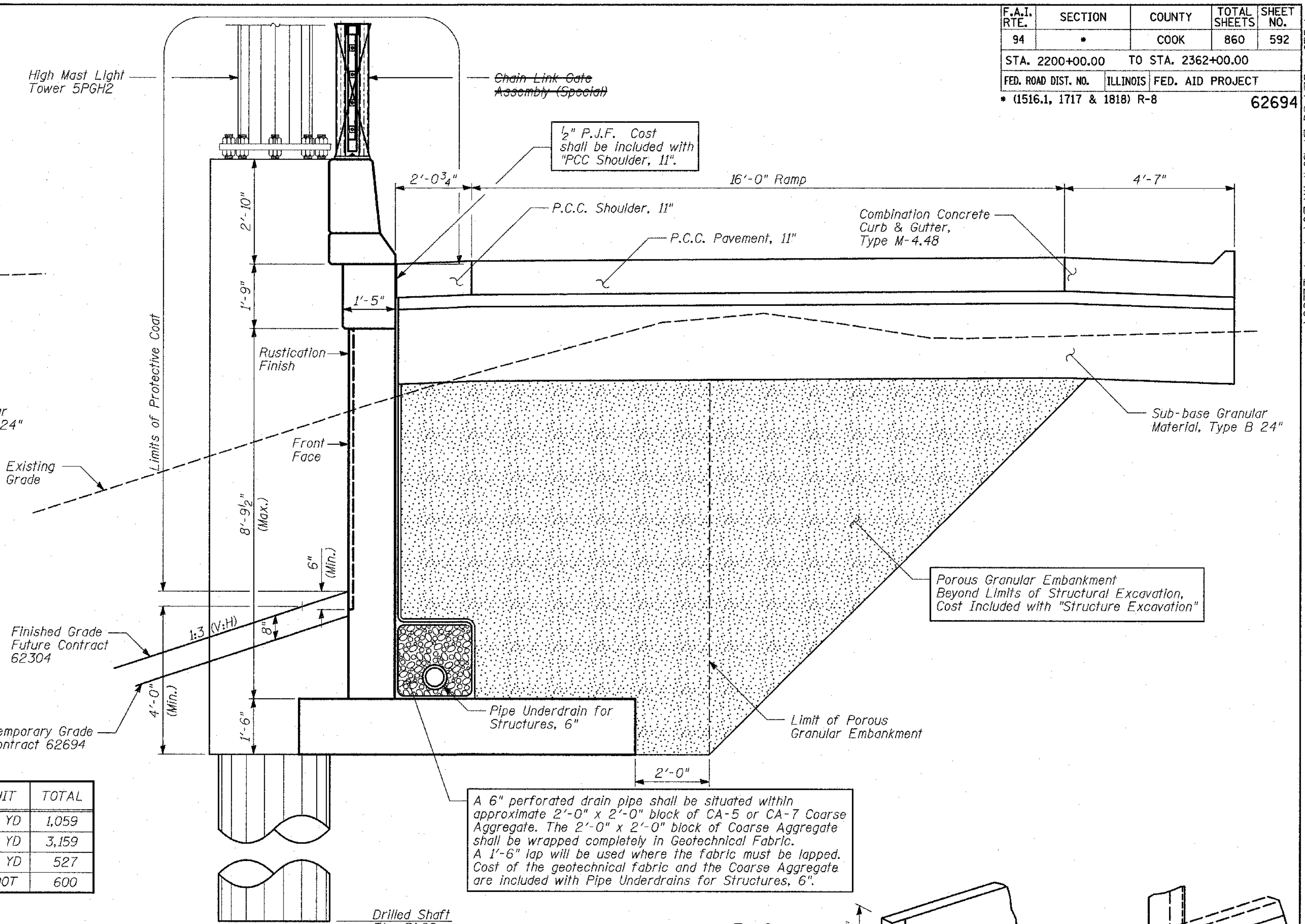


A 6" perforated drain pipe shall be situated within approximate 2'-0" x 2'-0" block of CA-5 or CA-7 Coarse Aggregate. The 2'-0" x 2'-0" block of Coarse Aggregate shall be wrapped completely in Geotechnical Fabric. A 1'-6" lap will be used where the fabric must be lapped. Cost of the geotechnical fabric and the Coarse Aggregate are included with Pipe Underdrains for Structures, 6".

TYPICAL CROSS SECTION

BILL OF MATERIAL

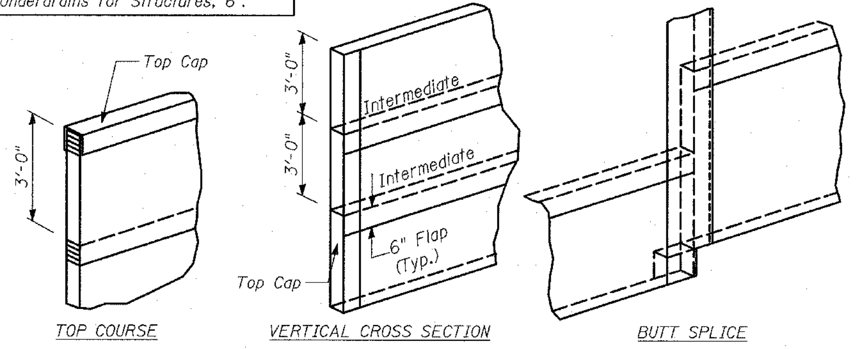
ITEM	UNIT	TOTAL
Porous Granular Embankment	CU YD	1,059
Structure Excavation	CU YD	3,159
Geocomposite Wall Drain	SQ YD	527
Pipe Underdrains for Structures, 6"	FOOT	600



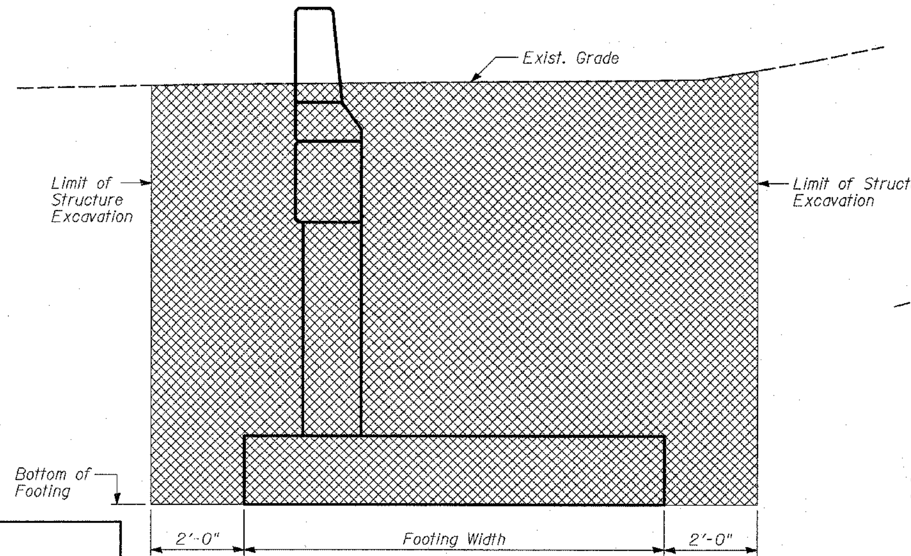
A 6" perforated drain pipe shall be situated within approximate 2'-0" x 2'-0" block of CA-5 or CA-7 Coarse Aggregate. The 2'-0" x 2'-0" block of Coarse Aggregate shall be wrapped completely in Geotechnical Fabric. A 1'-6" lap will be used where the fabric must be lapped. Cost of the geotechnical fabric and the Coarse Aggregate are included with Pipe Underdrains for Structures, 6".

TYPICAL CROSS SECTION

(Through High Mast Light Tower)

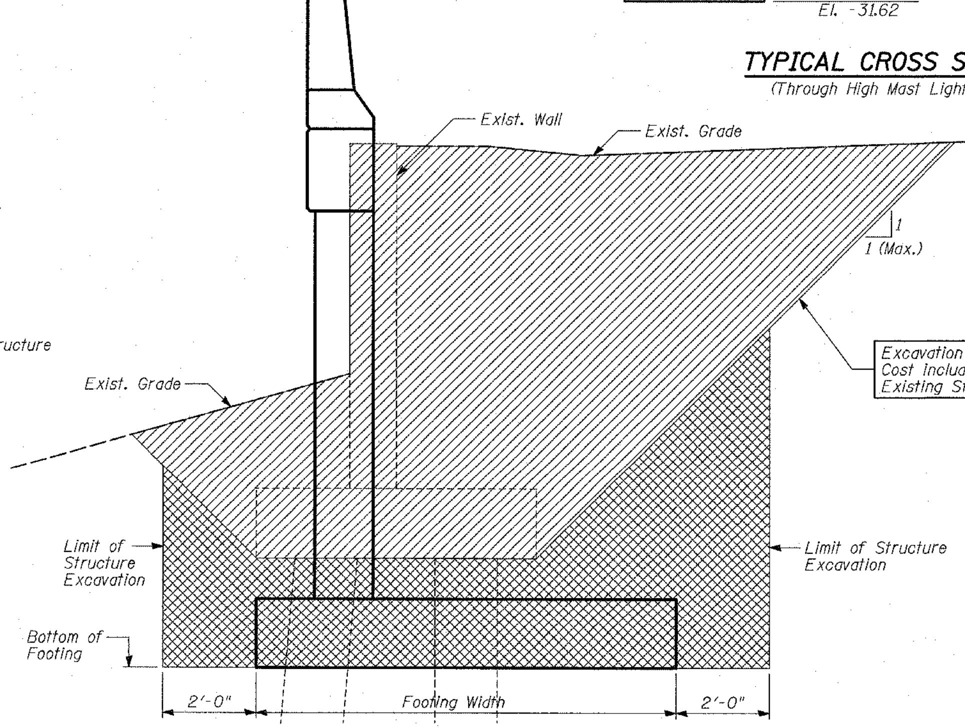


GEOCOMPOSITE WALL DRAIN DETAILS



STRUCTURE EXCAVATION

(Sta. 2319+92.27 to Sta. 2317+54.39
Sta. 2316+35.39 to Sta. 2313+98.58)



Excavation Limit for Wall Removal. Cost Included with "Removal of Existing Structures No. 2"

STRUCTURE EXCAVATION

(Sta. 2317+54.39 to Sta. 2316+35.39)

LEGEND

░	Porous Granular Embankment
▩	Structure Excavation
▨	Excavation for Wall Removal

SHEET 19 OF 31

T·Y·LIN INTERNATIONAL

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
WALL CROSS SECTIONS & DETAILS

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD, MI

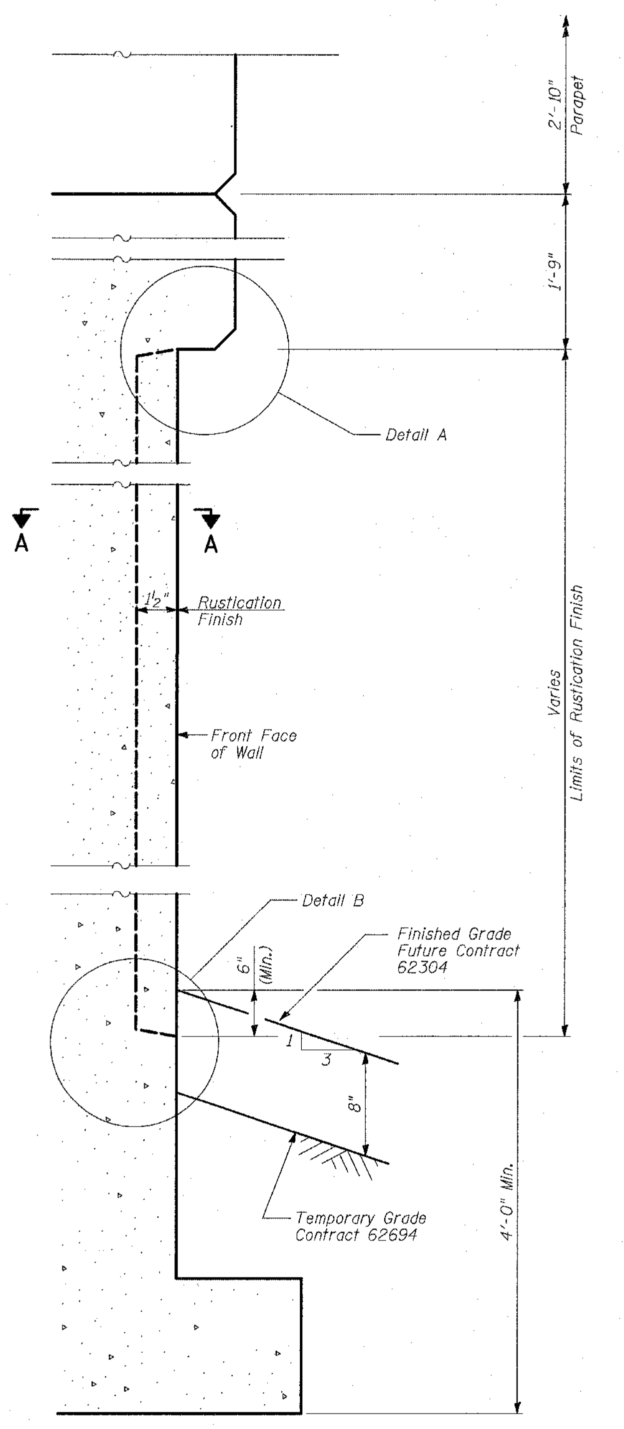
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	593

STA. 2200+00.00 TO STA. 2362+00.00

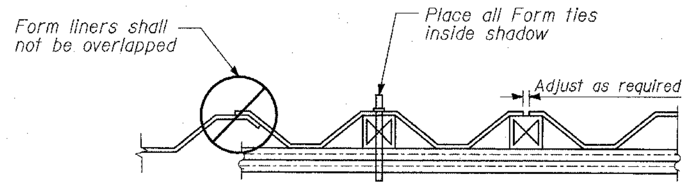
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

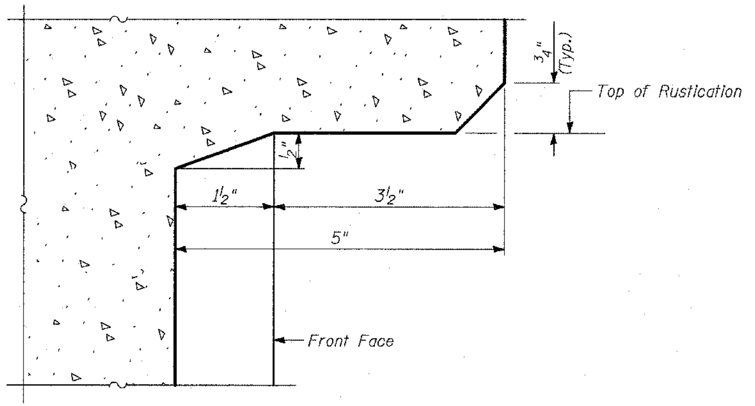
62694



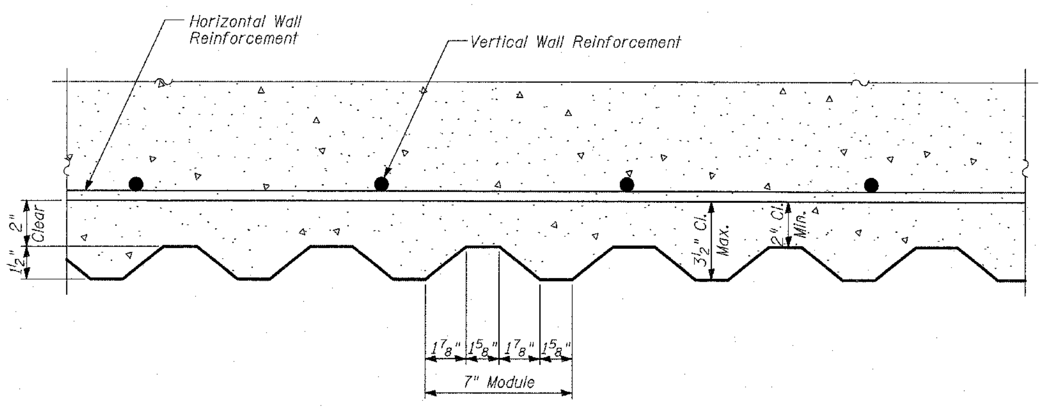
WALL DETAIL



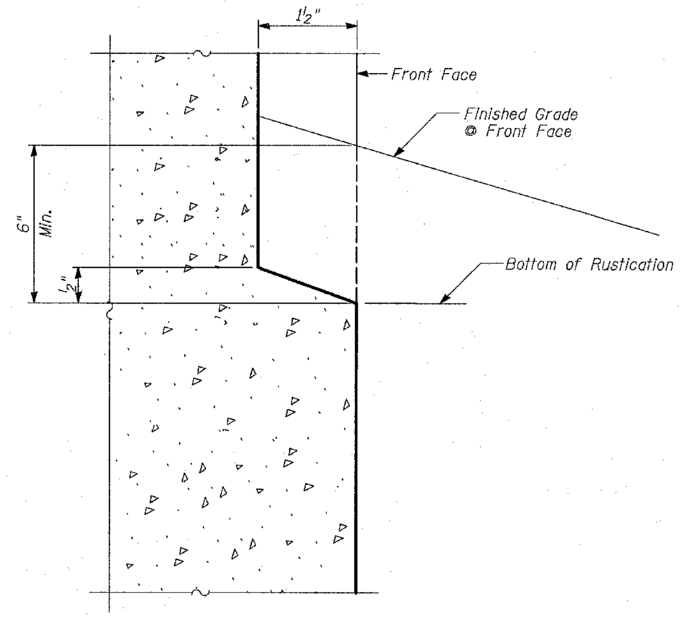
SUGGESTED FORMWORK DETAIL



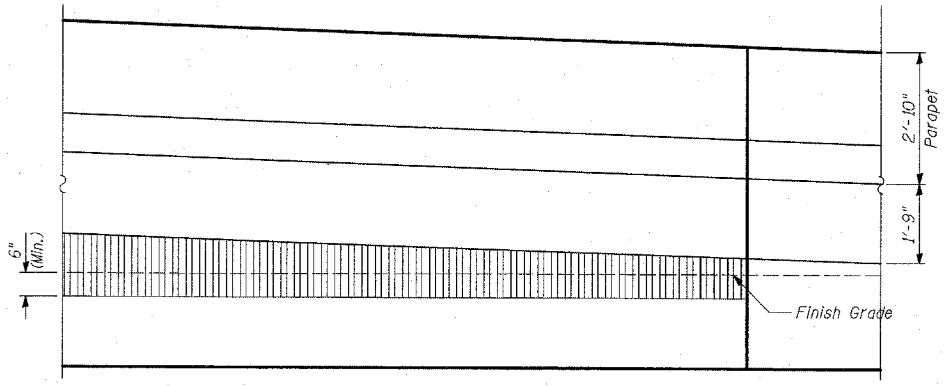
DETAIL A



SECTION A-A



DETAIL B



RUSTICATION DETAIL

(At Interior Panel with Embankment)

NOTES:

1. See Sheet 12 of 31 for expansion and construction joint details.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Rustication Finish	SQ FT	1,658

SHEET 20 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
RUSTICATION DETAILS

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005

DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

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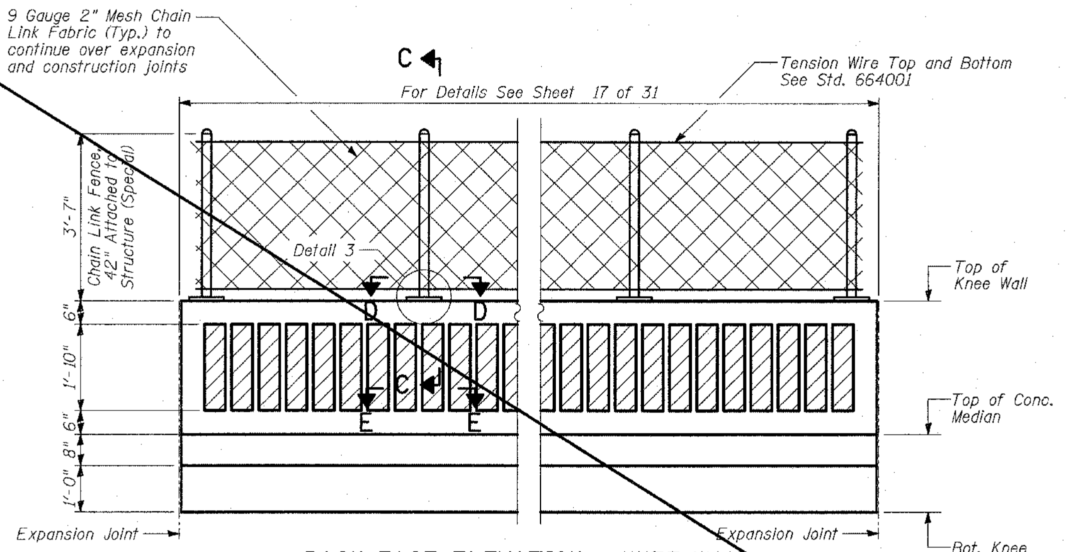
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	594

STA. 2200+00.00 TO STA. 2362+00.00

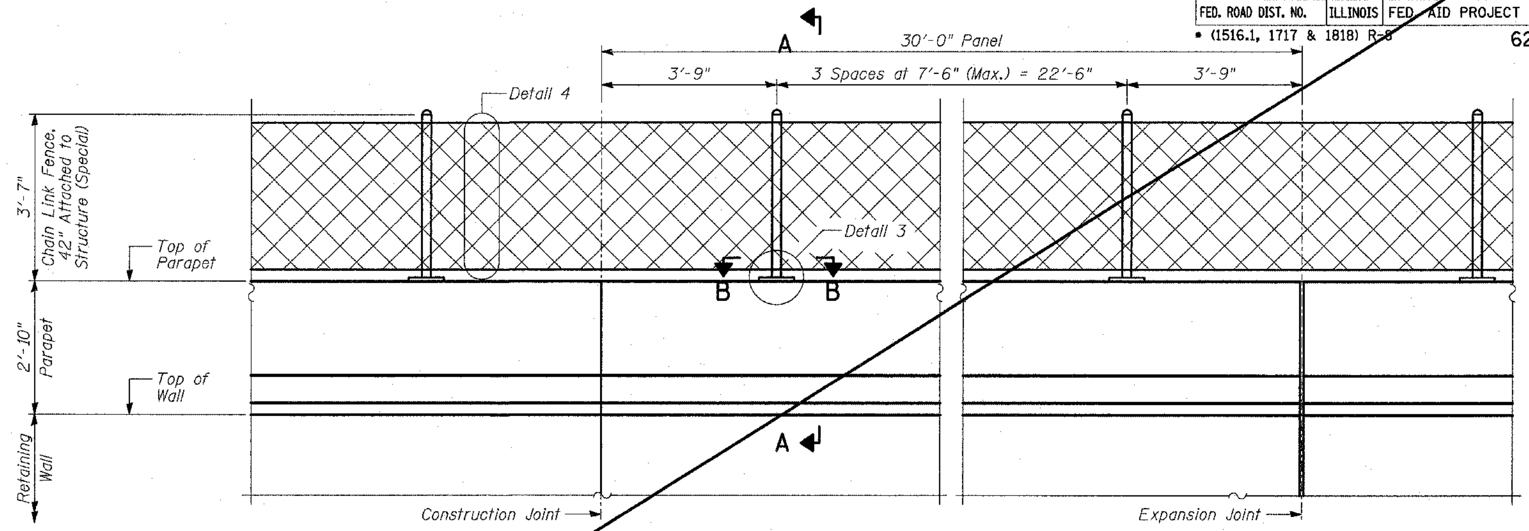
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

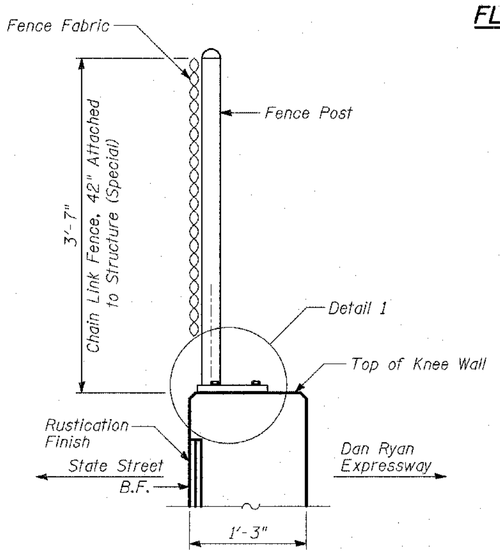
62694



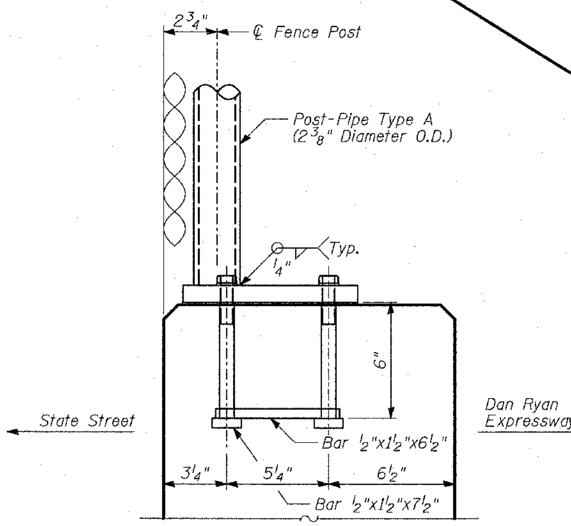
BACK FACE ELEVATION - KNEE WALL FLUTED KNEE WALL AND CHAIN LINK FENCE



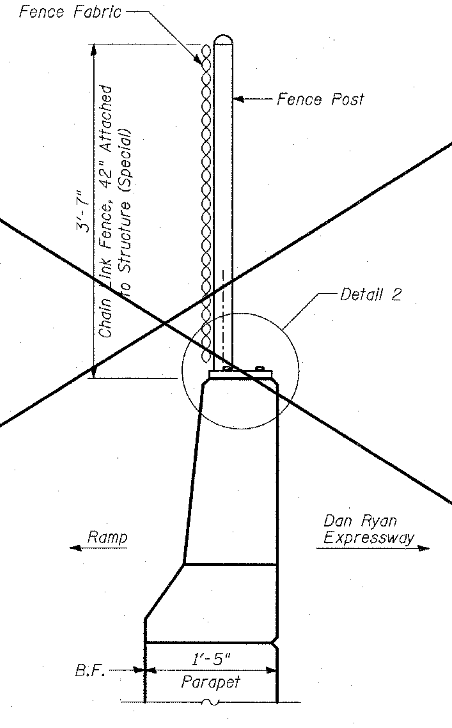
BACK FACE ELEVATION - TOP OF RETAINING WALLS TYPE F PARAPET AND CHAIN LINK FENCE



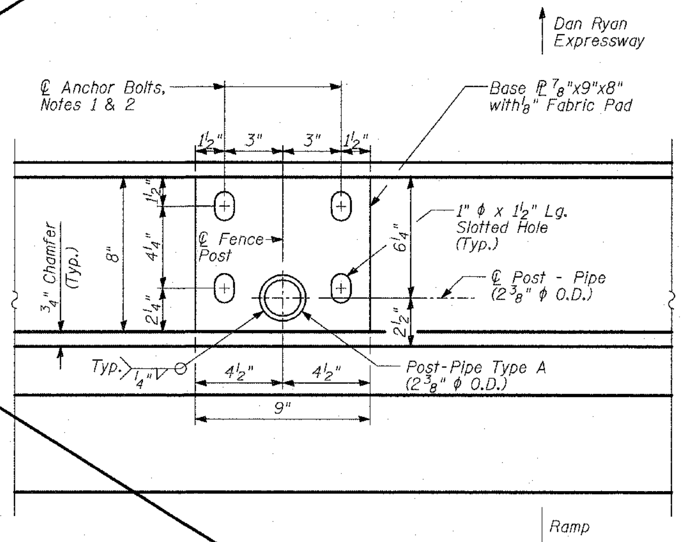
SECTION C-C



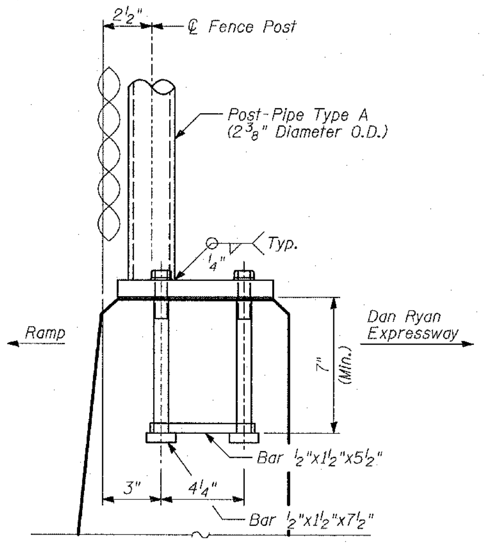
DETAIL 1



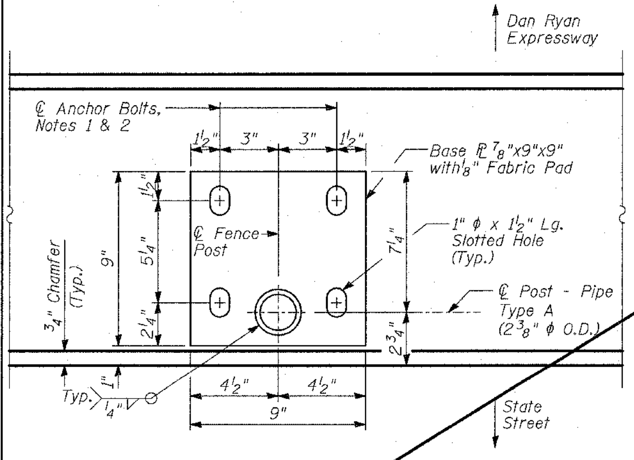
SECTION A-A



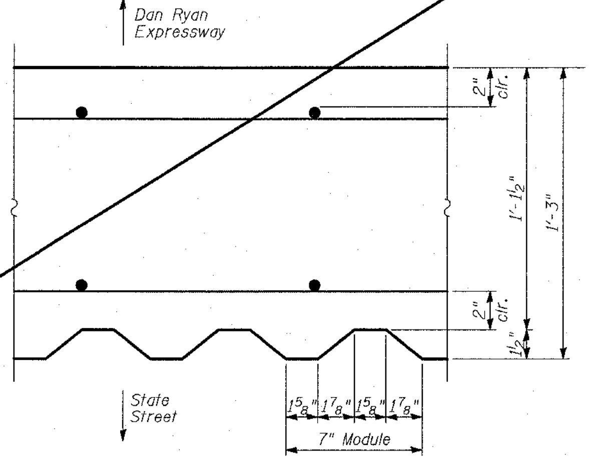
SECTION B-B BASE PLATE PLAN



DETAIL 2



SECTION D-D BASE PLATE PLAN



SECTION E-E

NOTES:

1. In lieu of the cast-in-place anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting $\frac{5}{8}$" diameter anchor rods with $1\frac{1}{4}$" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.
2. For additional chain link details, see Standard 664001.

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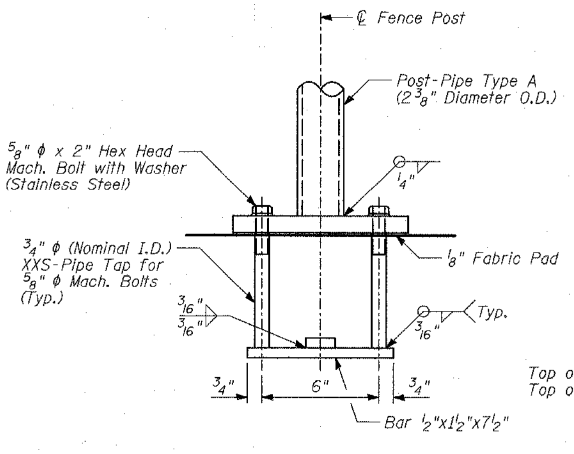
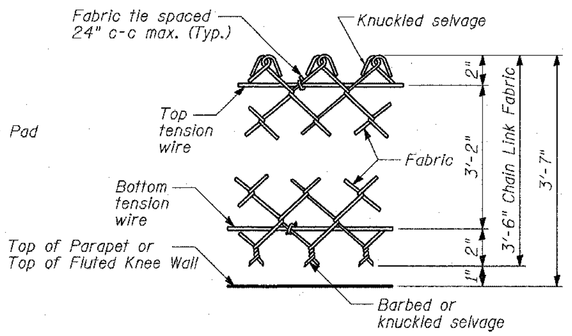


DETAIL 3



DETAIL 4

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Fence, 42" Attached to Structure (Special)	FOOT	631

SHEET 21 OF 31

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69 - CHAIN LINK FENCE, 42" ATTACHED
TO STRUCTURE (SPECIAL)

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD, MI

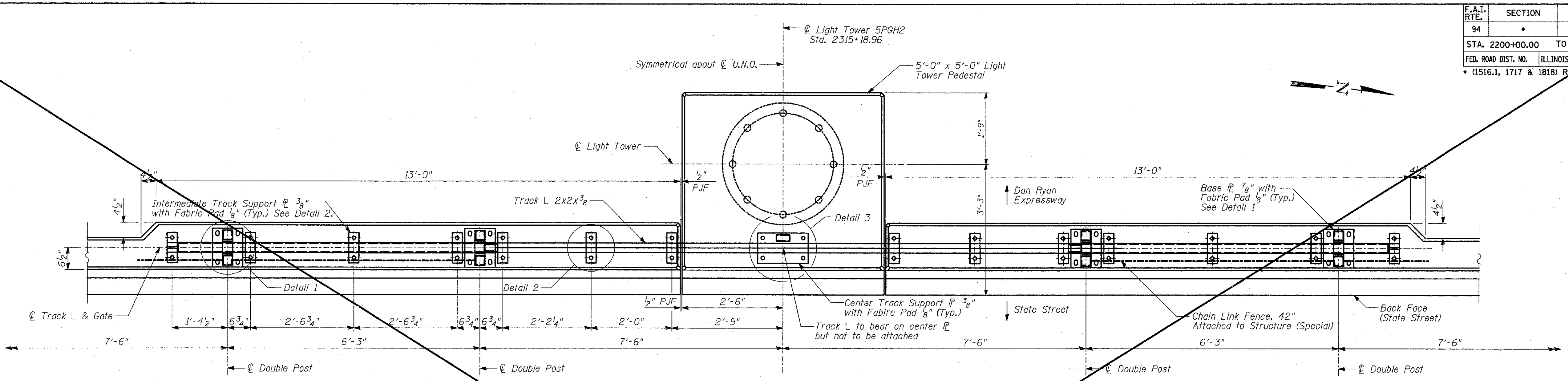
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	595

STA. 2200+00.00 TO STA. 2362+00.00

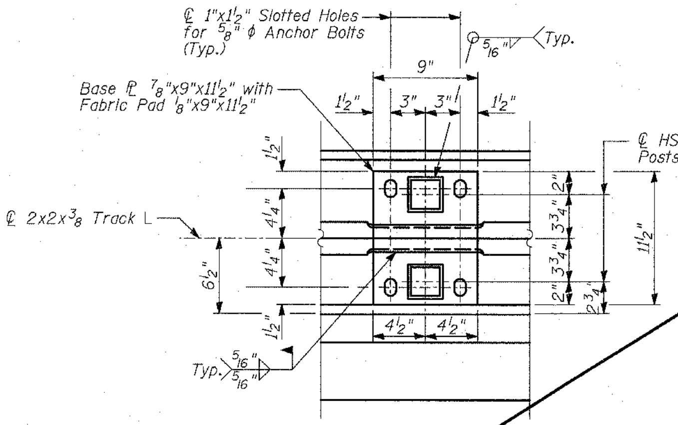
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

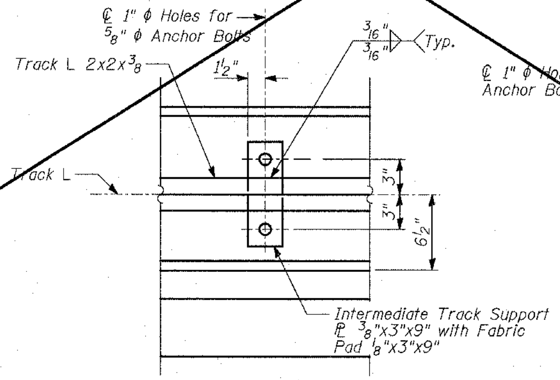
62694



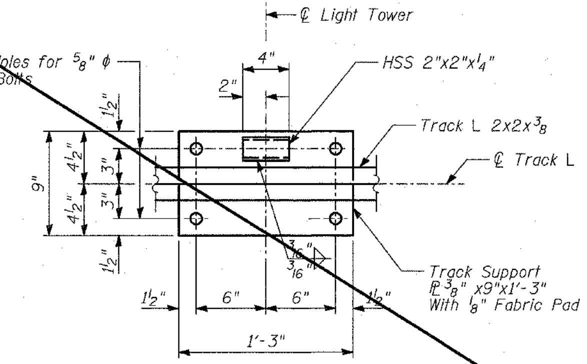
PLAN - GATE IN OPEN POSITION



DETAIL 1 - BASE ℙ PLAN



DETAIL 2



DETAIL 3

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Chain Link Gate Assembly (Special)	EACH	1

NOTES:

1. All bolts shall be stainless steel conforming to ASTM F593-98 and F594-98.
2. All pipes and bars shall be hot dipped galvanized after fabrication.
3. For Back Face Elevations, see Sheet 23 of 31.
4. For Anchor Bolt Details, see Sheet 24 of 31.

SHEET 22 OF 31

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
GATE PLAN AND NOTES

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD, MI

TYLIN INTERNATIONAL

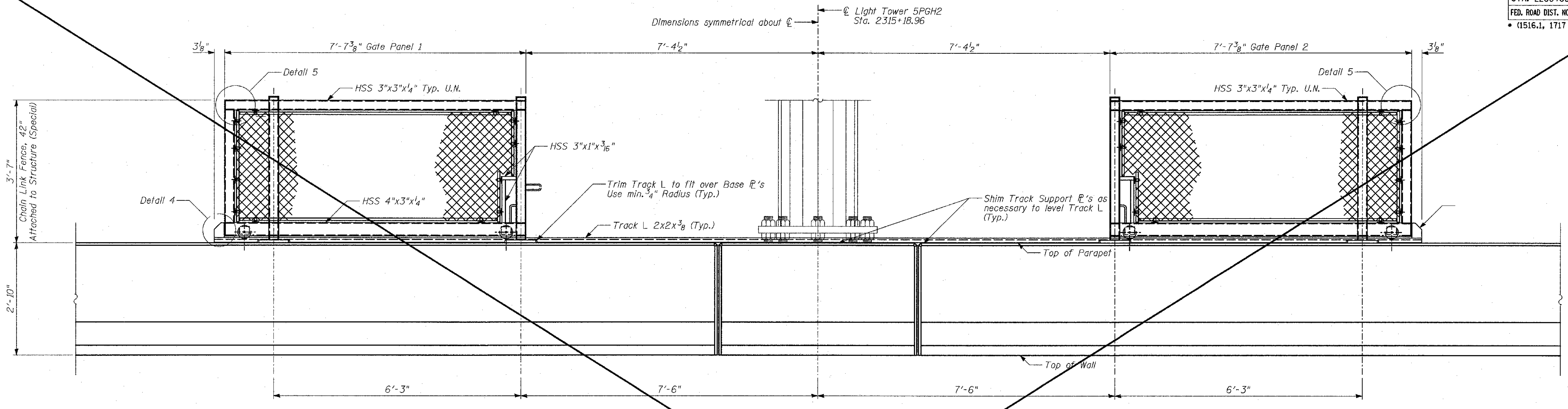
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	596

STA. 2200+00.00 TO STA. 2362+00.00

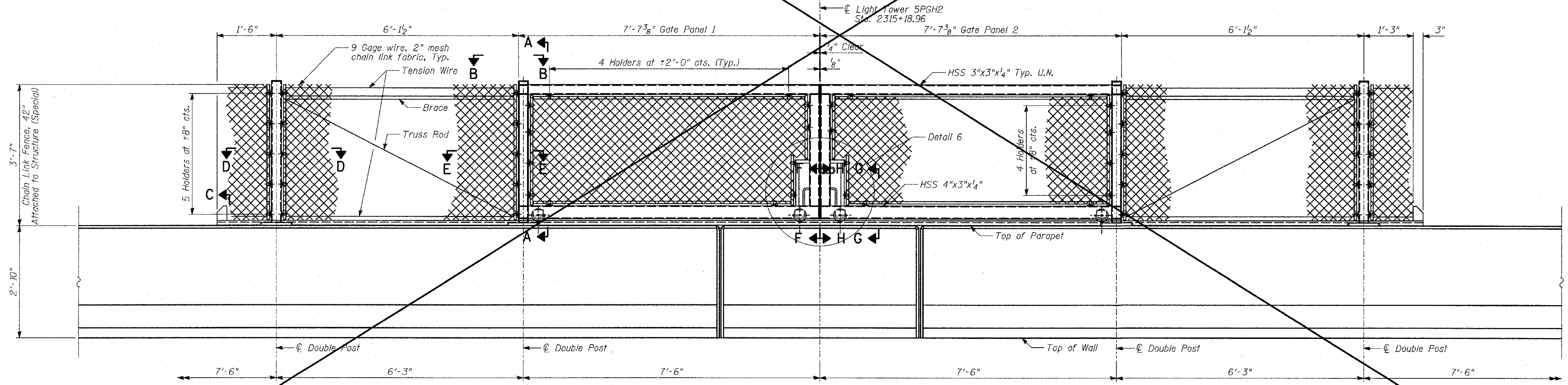
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694



BACK FACE ELEVATION - GATE IN OPEN POSITION



BACK FACE ELEVATION - GATE IN CLOSED POSITION

SHEET 23 OF 31

TYLIN INTERNATIONAL

NOTES:

1. For notes, see Sheet 22 of 31.
2. For Sections A-A, B-B, D-D & E-E, see Sheet 24 of 31.
3. For Sections C-C, F-F, G-G, H-H, J-J and Details 4, 5, 6 & 7, see Sheet 25 of 31.

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
GATE ELEVATIONS

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD, MI

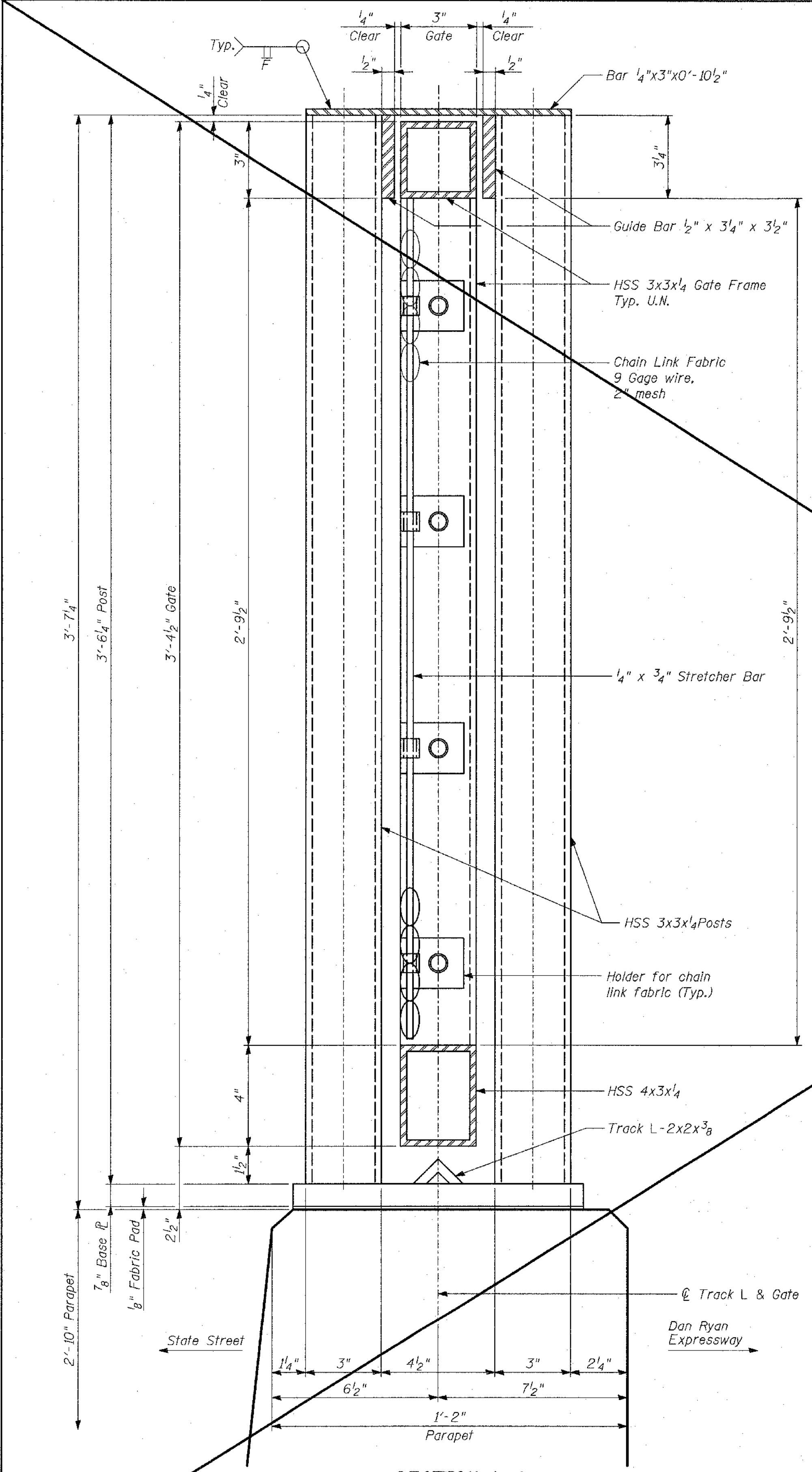
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	597

STA. 2200+00.00 TO STA. 2362+00.00

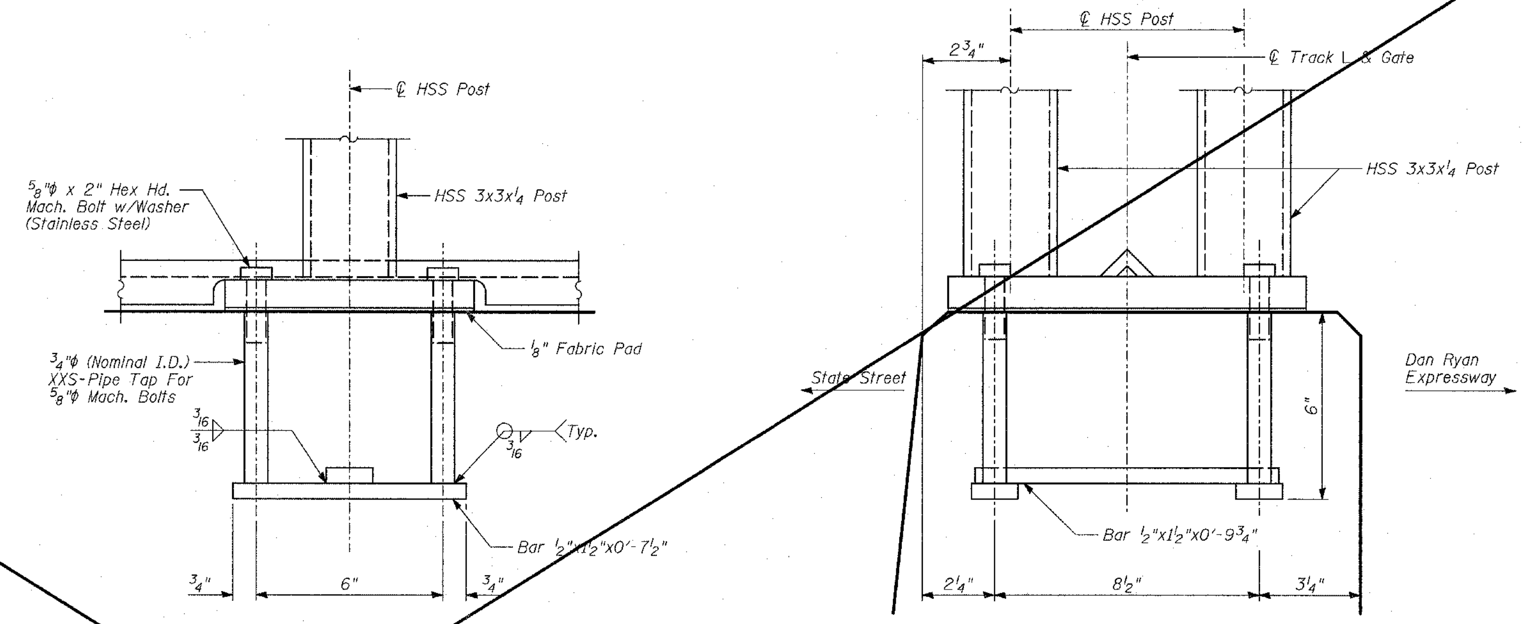
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

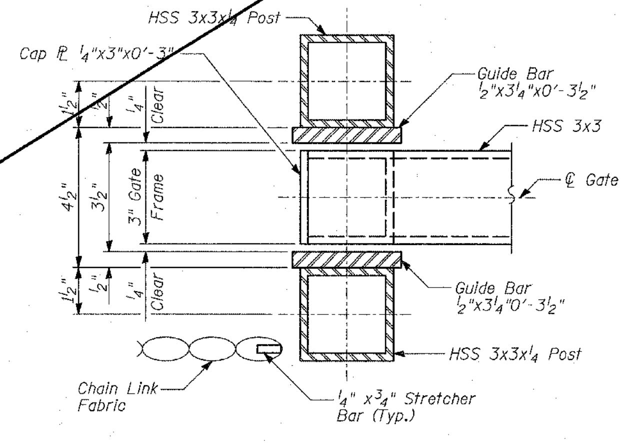


SECTION A-A

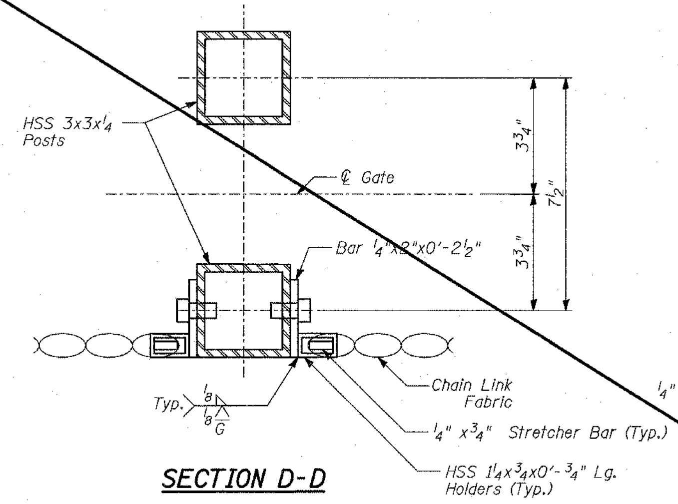


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor bolt assembly shown, the Contractor has the option of drilling and epoxy grouting $^5/_8$" diameter anchor rods with $1^1/_4$" diameter washers. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or adhesive cartridge shall be sealed with pre-measured amounts of adhesive chemical. Anchor rod threading to be peened after nuts are installed.



SECTION B-B



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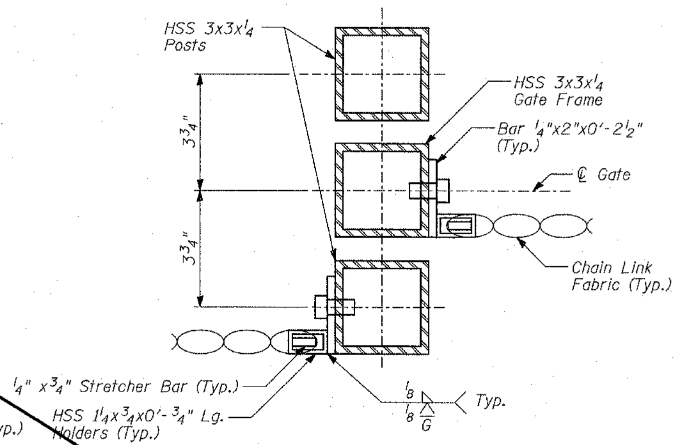


SECTION E-E

NOTES:

1. For Notes See Sheet 22 of 31.
2. For Anchor Bolt locations, see Details 1, 2 & 3 on Sheet 22 of 31.

T·Y·LIN INTERNATIONAL

SHEET 24 OF 31

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
GATE SECTIONS

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD, MI

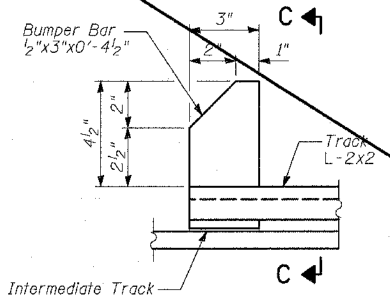
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	860	598

STA. 2200+00.00 TO STA. 2362+00.00

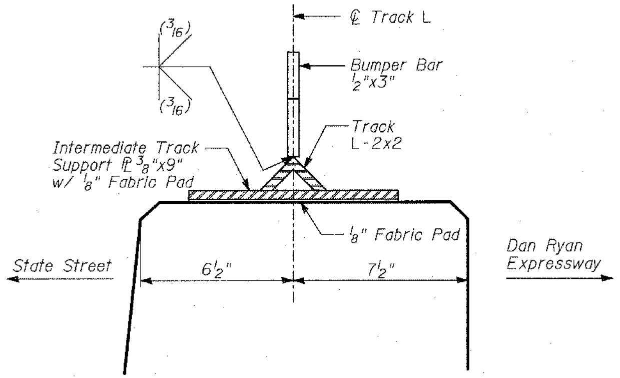
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

• (1516.1, 1717 & 1818) R-6

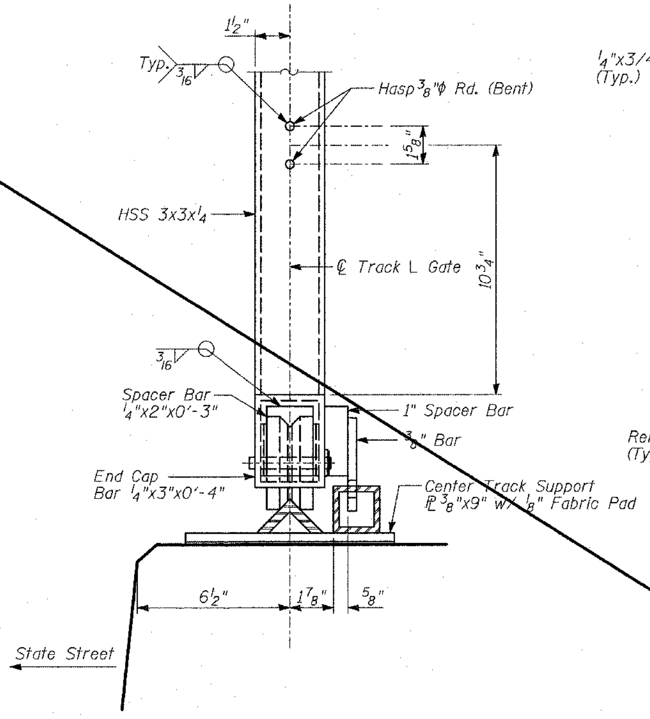
62694



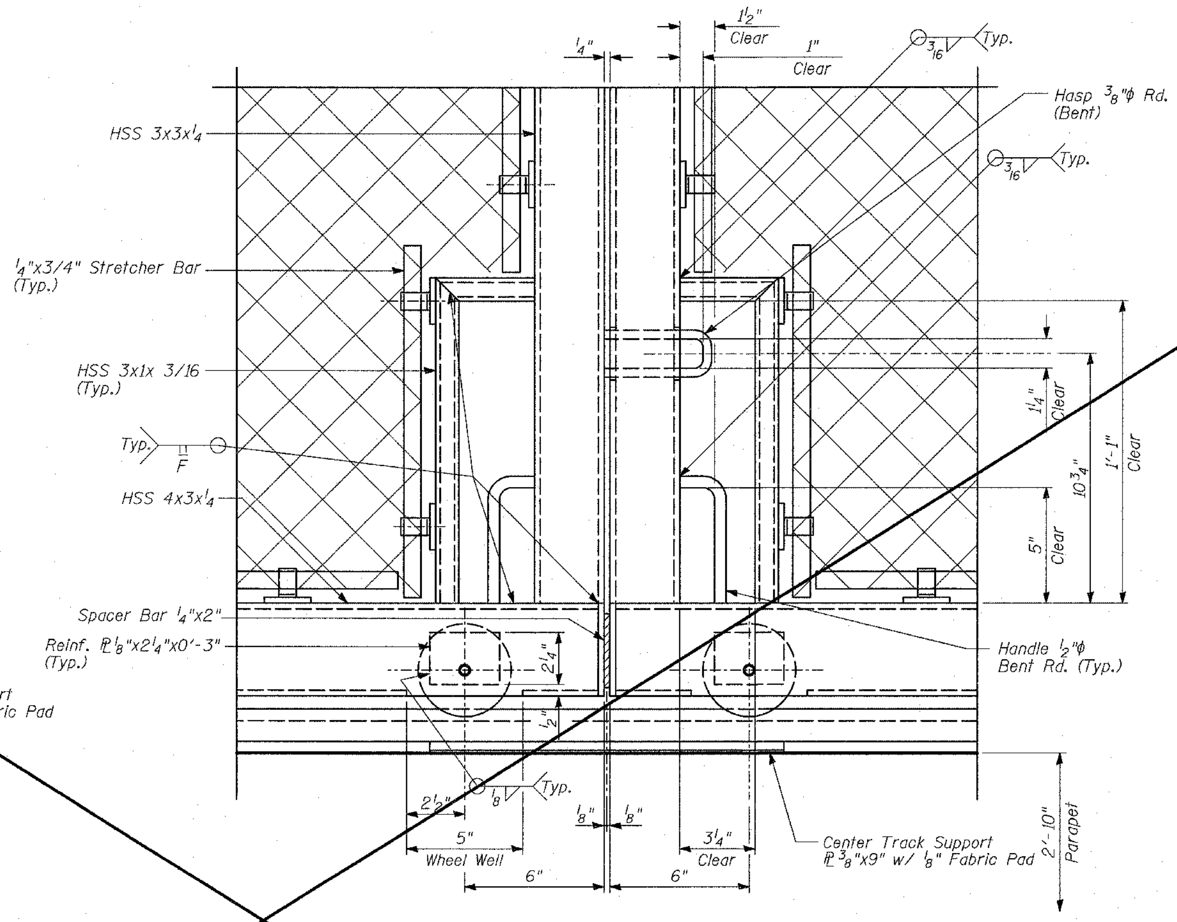
DETAIL 4



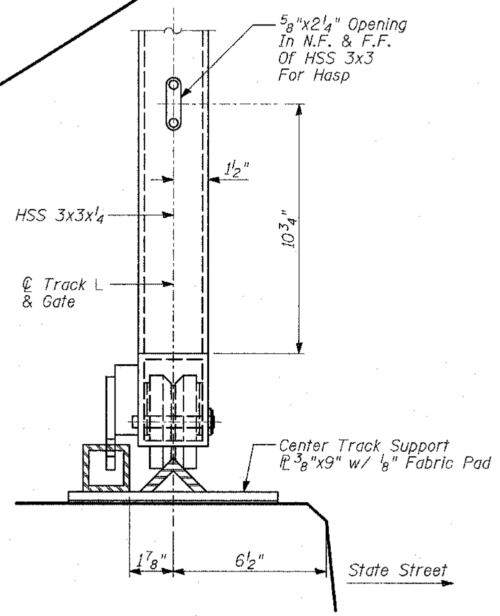
SECTION C-C



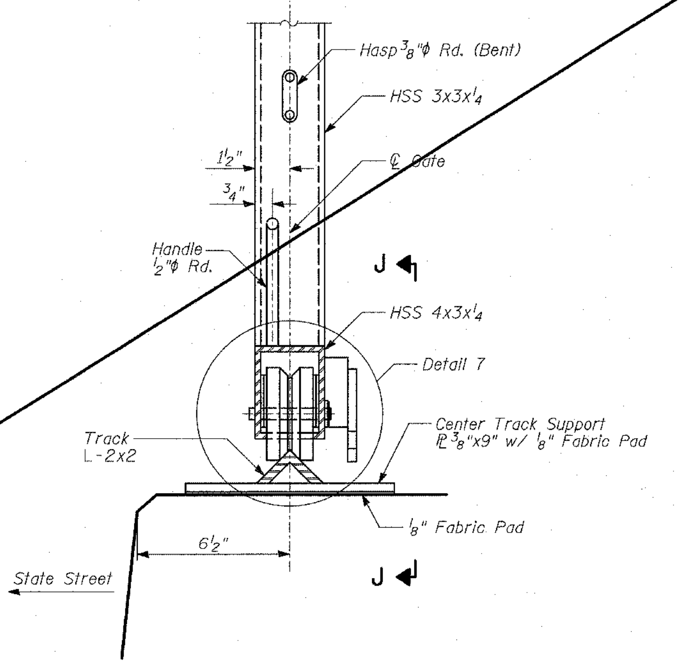
SECTION F-F



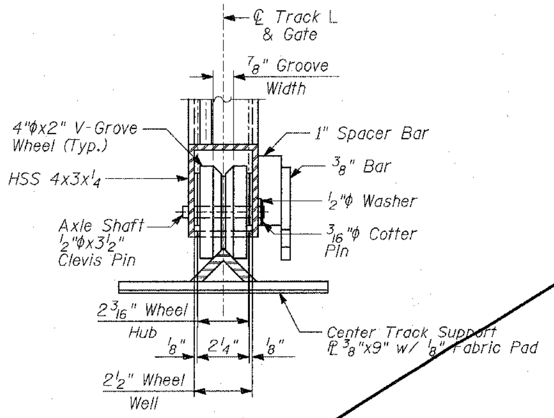
DETAIL 6



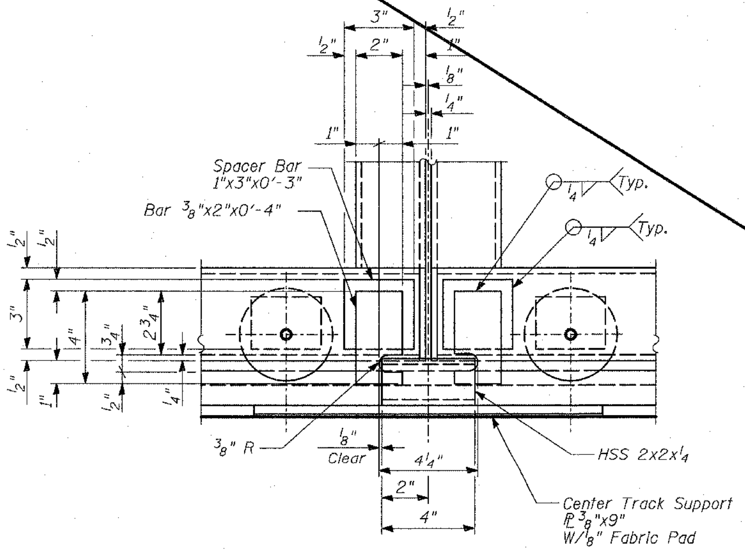
SECTION H-H



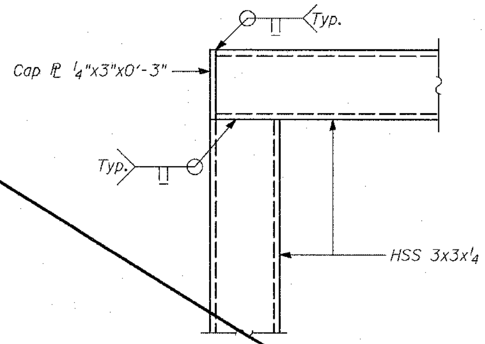
SECTION G-G



DETAIL 7



SECTION J-J



DETAIL 5

NOTES:

1. For notes, see Sheet 22 of 31.
2. For Anchor Bolt locations, see Sheet 22 of 31.
3. For Anchor Bolt details, see Sheet 24 of 31.
4. N.F. - denotes Near Face.
5. F.F. - denotes Far Face.

TYLIN INTERNATIONAL

SHEET 25 OF 31

REVISIONS NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
GATE SECTIONS AND DETAILS

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: MI, DJR
DRAWN BY: DJR
CHECKED BY: TD, MI

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	599
STA. 2200+00.00 TO STA. 2362+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (1516.1, 1717 & 1818) R-8

62694

Page 1 of 1

Wang Engineering, INC.
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wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB 69-01

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT D-91-421-01
Location From 95th Street to 69th Street

Datum: CCD
Elevation: 3.90 ft
North: 1853257.60 ft
East: 1177565.40 ft
Station: 2318+89.93
Offset: 77.36' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	3.7	3-inch thick ASPHALT --PAVEMENT--						
	2.8	10-inch thick CONCRETE --PAVEMENT--			1	5 7 7	NP	15
	2.3	6-inch thick CRUSHED STONE --BASE COURSE--						
		Loose to medium dense, brown SAND	5		2	3 3 3	NP	23
	-1.6	Stiff to hard, gray CLAY			3	3 4 5	1.56 B	20
			10		4	3 5 7	2.95 B	18
					5	3 5 5	3.20 B	18
			15		6	5 9 10	4.26 B	16
					7	8 11 15	6.23 S	15
			20		8	8 10 12	5.99 B	14
	-17.6	Hard, gray gravelly SILTY CLAY			9	8 15 19	5.08 B	9
	-21.1		25		10	11 15 19	6.15 B	9

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Boring terminated at 25.00 ft						
			30					
			35					
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling 01-27-2005 Complete Drilling 01-27-2005
Drilling Contractor DLZ Drilling Drill Rig D-120 TMR
Driller J&R Logger K. Jacob Checked by MLS
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 2/2/05

Page 1 of 1

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BORING LOG SB 69-02

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT D-91-421-01
Location From 95th Street to 69th Street

Datum: CCD
Elevation: 6.36 ft
North: 1853182.86 ft
East: 1177580.00 ft
Station: 2318+14.90
Offset: 86.78' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	6.1	3-inch thick ASPHALT --PAVEMENT--						
	5.4	9-inch thick CONCRETE --PAVEMENT--			1	23 12 9	NP	15
	4.9	6-inch thick CRUSHED STONE --BASE COURSE--						
	3.4	Medium dense, brown SAND						
		Medium stiff to hard, gray CLAY	5		2	2 3 4	0.74 B	21
					3	2 4 4	1.64 B	20
			10		4	2 3 5	1.39 B	20
					5	3 4 7	1.97 B	19
			15		6	4 7 9	3.69 B	18
					7	5 7 11	3.53 B	16
	-13.1	Dense, gray SILT	20		8	7 13 24	5.08 B	14
	-14.1	Hard, gray gravelly SILTY CLAY			9	13 16 17	6.97 B	12
	-18.6		25		10	13 15 17	6.40 B	13

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Boring terminated at 25.00 ft						
			30					
			35					
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling 01-27-2005 Complete Drilling 01-27-2005
Drilling Contractor DLZ Drilling Drill Rig D-120 TMR
Driller J&R Logger K. Jacob Checked by MLS
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 2/2/05

T·Y·LIN INTERNATIONAL

SHEET 26 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST.
ENTRANCE RAMP AT 79TH ST.
WALL 69
BORING LOGS SB69-01 & SB69-02

S.N. 016-W975 DESIGNED BY: DJR
SCALE: N.T.S. DRAWN BY: DJR
DATE: MARCH 18, 2005 CHECKED BY: TD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	*	COOK	860	600

STA. 2200+00.00 TO STA. 2362+00.00

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

* (1516.1, 1717 & 1818) R-8

62694

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Page 1 of 1

BORING LOG SB 69-03

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT D-91-421-01
Location From 95th Street to 69th Street

Datum: CCD
Elevation: 7.73 ft
North: 1853108.77 ft
East: 1177594.54 ft
Station: 2317+40.65
Offset: 96.68' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
7.4	4-inch thick ASPHALT --PAVEMENT--					
6.4	12-inch thick CONCRETE --PAVEMENT--					
	Medium dense, brown SANDY LOAM		1	10 7 9		18
		5	2	8 7 7	NP	23
2.2	Stiff to very stiff, gray CLAY		3	2 3 4	1.10 B	22
		10	4	3 3 4	1.20 B	22
			5	3 4 6	1.30 B	20
		15	6	4 4 5	1.40 B	19
			7	3 6 8	2.10 B	19
		20	8	6 7 7	1.90 B	19
-12.8	Very stiff, gry SILTY CLAY		9	3 6 9	2.10 B	15
-17.3		25	10	4 8 9	2.90 B	12
	Boring terminated at 25.00 ft					

Depth scale continues: 30, 35, 40, 45, 50

GENERAL NOTES

Begin Drilling 01-27-2005 Complete Drilling 01-27-2005
Drilling Contractor DLZ Drilling Drill Rig Diedrich D-120 TMR
Driller E&C Logger B. Panozzo Checked by MLS
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 2/2/05

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Page 1 of 1

BORING LOG SB 07-04

WEI Job No.: 414-07-01

Client T. Y. LIN International
Project Dan Ryan Improvements; IDOT No. D-91-421-01
Location From 95th Street to South of 69th Street

Datum: CCD
Elevation: 5.00 ft
North: 1848116.13 ft
East: 1177742.21 ft
Station: 2267+49
Offset: 96.0' RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
4.4	2-inch thick ASPHALT over 6-inch thick CONCRETE --PAVEMENT--					
3.8	6-inch thick CRUSHED STONE --BASE COURSE--		1	7 4 3	3.00 P	16
	Medium stiff to very stiff, brown and gray CLAY --FILL--	5	2	5 2 3	0.50 P	19
-0.5	Soft to medium stiff, gray CLAY --LL=32%, PL=19%--		3	1 1 1	0.41 B	23
		10	4	1 1 2	0.74 B	21
-6.5	Very stiff, gray CLAY		5	1 3 5	2.79 B	13
-9.0	Medium dense, gray SILT to SILTY LOAM	15	6	6 9 11	NP	22
			7	7 15 12	NP	12
		20	8	5 7 8	NP	13
-15.5	Hard, gray SILTY CLAY		9	8 7 10	4.35 B	12
		25	10	9 12 14	> 4.50 P	13
-21.5	Medium dense to very dense, gray gravelly SILTY LOAM		11	5 10 14	NP	11
		30	12	13 25 36	NP	9
-27.5			13	23 33 44	NP	9
	Boring terminated at 32.50 ft	35				

Depth scale continues: 40, 45, 50

GENERAL NOTES

Begin Drilling 02-26-2004 Complete Drilling 02-26-2004
Drilling Contractor Patrick Drilling Drill Rig CME 75 TMR
Driller J&L Logger H. Suhail Checked by N. Davis
Drilling Method 3.25" ID HSA; Boring backfilled with bentonite upon completion

WATER LEVEL DATA

While Drilling ▽ DRY
At Completion of Drilling ▼ DRY
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140701.GPJ WANGENG.GDT 4/6/04

TYLIN INTERNATIONAL

SHEET 27 OF 31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG STATE ST. ENTRANCE RAMP AT 79TH ST.
WALL 69
BORING LOGS SB69-03 & SB69-04

S.N. 016-W975
SCALE: N.T.S.
DATE: MARCH 18, 2005
DESIGNED BY: DJR
DRAWN BY: DJR
CHECKED BY: TD