F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	907	522
STA. 1200+00.00	TO STA. 1365+00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (1516.1, 1717 & 1818) R-9

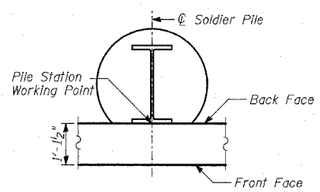
62695

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	1248+06.20	12.35	8.19	5.62	HP14x117	-20.40	28'-7"
P-2	1248+13.70	12.32	8.16	5.47		-20.59	28'-9"
P-3	1248+21.20	12.30	8.13	5.32		-20.70	28'-10"
P-4	1248+28.70	12.27	8.10	5.17		-20.90	29'-0"
P-5	1248+36.20	12.24	8.07	5.02		-21.01	29'-1"
P-6	1248+43.70	12.21	8.04	4.87		-21.21	29'-3"
P-7	1248+51.20	12.18	8.01	4.72		-21.32	29'-4"
P-8	1248+58.70	12.15	7.98	4.57		-21.43	29'-5"
P-9	1248+66.20	12.12	7.96	4.42		-21.63	29'-7"
P-10	1248+73.70	12.09	7.93	4.27		-21.74	29'-8"
P-11	1248+81.20	12.06	7.90	4.12		-21.94	29'-10"
P-12	1248+88.70	12.04	7.87	3.97		-22.05	29'-11"
P-13	1248+96.20	12.01	7.84	3.82		-22.24	30'-1"
P-14	1249+03.70	11.98	7.81	3.67		-22.35	30'-2"
P-15	1249+11.20	11.95	7.78	3.52		-22.55	30'-4"
P-16	1249+18.70	11.92	7.75	3.37	HP14x117	-22.66	30'-5"
P-17	1249+26.20	11.89	7.73	3.22	W18x130	-22.86	30'-7"
P-18	1249+33.70	11.86	7.70	3.07		-22.97	30'-8"
P-19	1249+41.20	11.83	7.67	2.92		-23.08	30'-9"
P-20	1249+48.70	11.81	7.64	2.77		-23.28	30'-11"
P-21	1249+56.20	11.78	7.61	2.62		-23.39	31'-0"
P-22	1249+63.70	11.75	7.58	2.47		-23.59	31'-2"
P-23	1249+71.20	11.72	7.55	2.32		-23.70	31'-3"
P-24	1249+78.70	11.69	7.52	2.17		-23.89	31'-5"
P-25	1249+86.20	11.66	7.50	2.02		-24.00	31'-6"
P-26	1249+93.70	11.63	7.47	1.87		-24.20	31'-8"
P-27	1250+01.20	11.60	7.44	1.72		-24.31	31'-9"
P-28	1250+08.70	11.58	7.41	1.57		-24.51	31'-11"
P-29	1250+16.20	11.54	7.38	1.46		-24.54	31'-11"
P-30	1250+23.45	11.51	7.34	1.39		-24.66	32'-0"
P-31	1250+30.70	11.48	7.31	1.32		-24.69	32'-0"
P-32	1250+37.95	11.44	7.27	1.25		-24.81	32'-1"
P-33	1250+45.20	11.41	7.24	1.18		-24.84	32'-1"
P-34	1250+52.45	11.37	7.21	1.11		-24.96	32'-2"
P-35	1250+59.70	11.34	7.17	1.04		-24.99	32'-2"
P-36	1250+66.95	11.31	7.14	0.97		-25.11	32'-3"
P-37	1250+74.20	11.27	7.10	0.90		-25.15	32'-3"
P-38	1250+81.45	11.24	7.07	0.83		-25.18	32'-3"
P-39	1250+88.70	11.20	7.04	0.76		-25.30	32'-4"
P-40	1250+94.87	11.17	7.01	0.70		-25.33	32'-4"
P-41	1251+06.20	11.12	6.95	0.65		-25.38	32'-4"
P-42	1251+13.70	11.09	6.92	0.69		-25.33	32'-3"
P-43	1251+21.20	11.05	6.88	0.74		-25.28	32'-2"
P-44	1251+28.70	11.01	6.85	0.79		-25.24	32'-1"
P-45	1251+36.20	10.98	6.81	0.84		-25.19	32'-0"
P-46	1251+43.70	10.94	6.78	0.89		-25.14	31'-11"
P-47	1251+51.20	10.91	6.74	0.94		-25.09	31'-10"
P-48	1251+58.70	10.87	6.71	0.98		-25.04	31'-9"
P-49	1251+66.20	10.84	6.67	1.03		-24.99	31'-8"
P-50	1251+73.70	10.80	6.64	1.08		-24.95	31'-7"
P-51	1251+81.20	10.77	6.60	1.13		-24.90	31'-6"
P-52	1251+88.70	10.73	6.57	1.18	W18x130	-24.85	31'-5"
P-53	1251+96.20	10.70	6.53	1.27	HP14x117	-24.80	31'-4"
P-54	1252+03.70	10.66	6.50	1.41		-24.67	31'-2"
P-55	1252+11.20	10.63	6.46	1.55		-24.46	30'-11"
P-56	1252+18.70	10.59	6.43	1.68		-24.32	30'-9"
P-57	1252+26.20	10.56	6.39	1.82		-24.19	30'-7"
P-58	1252+33.70	10.52	6.35	1.96		-24.06	30'-5"
P-59	1252+41.20	10.49	6.32	2.09		-23.93	30'-3"
P-60	1252+48.70	10.45	6.28	2.23		-23.80	30'-1"
P-61	1252+56.20	10.42	6.25	2.37		-23.67	29'-11"
P-62	1252+63.70	10.38	6.21	2.51		-23.54	29'-9"
P-63	1252+71.20	10.35	6.18	2.64		-23.40	29'-7"
P-64	1252+78.70	10.31	6.14	2.78		-23.27	29'-5"
P-65	1252+86.17	10.28	6.11	2.86	HP14x117	-23.14	29'-3"

PILE LAYOUT

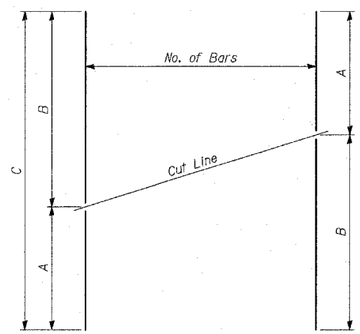
Pile	Station	Top of Parapet El.	Top of Pile El.	Bot. of Wall El.	Section	Pile Tip El.	Pile Length
P-66	1252+93.66	10.24	6.07	2.89	HP14x117	-23.18	29'-3"
P-67	1253+01.16	10.20	6.04	2.92		-23.13	29'-2"
P-68	1253+08.66	10.17	6.00	2.95		-23.08	29'-1"
P-69	1253+16.16	10.13	5.97	2.98		-23.03	29'-0"
P-70	1253+23.65	10.10	5.93	3.01		-23.07	29'-0"
P-71	1253+31.15	10.06	5.90	3.04		-23.02	28'-11"
P-72	1253+38.65	10.03	5.86	3.07		-22.97	28'-10"
P-73	1253+46.14	9.99	5.83	3.10		-22.92	28'-9"
P-74	1253+53.64	9.96	5.79	3.13		-22.88	28'-8"
P-75	1253+61.14	9.92	5.76	3.16		-22.91	28'-8"
P-76	1253+68.63	9.89	5.72	3.19	HP14x117	-22.86	28'-7"



SOLDIER PILE WORKING POINT

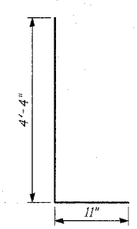
BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	No. of Bars Per Set	A	B	C
v(E)	1	31	3'-7"	4'-0"	7'-7"
v_1(E)	1	31	4'-0"	4'-6"	8'-6"
v_2(E)	1	31	4'-6"	5'-0"	9'-6"
v_3(E)	1	31	5'-0"	5'-6"	10'-6"
v_4(E)	1	31	5'-6"	6'-0"	11'-6"
v_5(E)	1	31	6'-0"	6'-5"	12'-5"
v_6(E)	1	31	6'-5"	6'-11"	13'-4"
v_{10}(E)	1	31	7'-5"	7'-1"	14'-6"
v_{11}(E)	1	31	7'-1"	6'-9"	13'-10"
v_{12}(E)	1	31	6'-9"	6'-5"	13'-2"
v_{13}(E)	1	31	6'-5"	5'-8"	12'-1"
v_{14}(E)	1	31	5'-8"	5'-0"	10'-8"
v_{15}(E)	1	31	5'-0"	4'-4"	9'-4"
v_{16}(E)	1	31	4'-4"	4'-1"	8'-5"
v_{17}(E)	1	31	4'-1"	3'-10"	7'-11"
v_{17}(E)	1	31	3'-10"	3'-7"	7'-5"



SERIES OF BAR CUTTING DIAGRAM

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



BARS d(E)

LAP SPLICES

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

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	584	#4	5'-3"	L
d_1(E)	584	#6	6'-6"	—
e(E)	96	#5	32'-2"	—
e_1(E)	48	#5	29'-8"	—
e_2(E)	8	#5	24'-8"	—
h(E)	220	#5	32'-2"	—
h_1(E)	100	#5	29'-8"	—
h_2(E)	21	#5	24'-8"	—
v(E)	31	#4	7'-7"	—
v_1(E)	31	#4	8'-6"	—
v_2(E)	31	#4	9'-6"	—
v_3(E)	31	#4	10'-6"	—
v_4(E)	31	#4	11'-6"	—
v_5(E)	31	#4	12'-5"	—
v_6(E)	31	#4	13'-4"	—
v_7(E)	62	#4	6'-11"	—
v_8(E)	62	#4	7'-1"	—
v_9(E)	52	#4	7'-3"	—
v_{10}(E)	31	#4	14'-6"	—
v_{11}(E)	31	#4	13'-10"	—
v_{12}(E)	31	#4	13'-2"	—
v_{13}(E)	31	#4	12'-1"	—
v_{14}(E)	31	#4	10'-8"	—
v_{15}(E)	31	#4	9'-4"	—
v_{16}(E)	31	#4	8'-5"	—
v_{17}(E)	31	#4	7'-11"	—
v_{18}(E)	31	#4	7'-5"	—
Reinforcement Bars, Epoxy Coated			POUND	28,050
Concrete Structures			CU YD	218
Protective Coat			SQ YD	679
Furnishing Soldier Piles (HP Section)			FOOT	1,184
Furnishing Soldier Piles (W Section)			FOOT	1,143
Drilling and Setting Soldier Piles (in Soil)			CU FT	11,787

Reinforcement bars designated (E) shall be epoxy coated.

SHEET 6 OF 19

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG LAFAYETTE AVE.
89TH ST. TO 88TH ST.
WALL 38

PILE LAYOUT, DETAILS & BILL OF MATERIAL

S.N. 016-W950 — DESIGNED BY: MI, MAF
SCALE: N.T.S. — DRAWN BY: MAF, TB
DATE: MARCH 25, 2005 — CHECKED BY: TD, MI

TY·LIN INTERNATIONAL

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