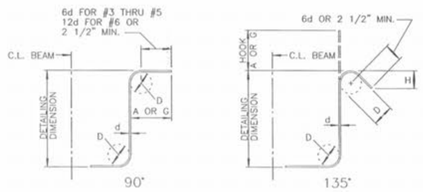
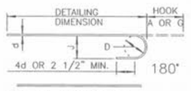


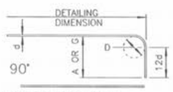
STIRRUP HOOK DIMENSIONS GRADES 40–50–60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	APPROX. H
#3	1 1/2"	4"	4"	2 1/2"
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	7 3/4"	4 1/2"
#7	5 1/4"	14"	9"	5 1/4"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



SIZE OF 180° HOOKS (GRADE 40 KSI)

D=5d FOR #3 THRU #11
D=10d FOR #14 AND #18



SIZE OF 90° HOOKS ALL GRADES AND 180° HOOKS (GRADE 60 KSI)

D=6d FOR #3 THRU #8
D=8d FOR #9 THRU #11
D=10d FOR #14 AND #18

END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	180° HOOKS ALL GRADES		90° HOOKS ALL GRADES
		A OR G	J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"

NOTES:

ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEG. STANDARD HOOKS.

HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.

E--EPOXY COATED REINFORCEMENT.

S--STIRRUP.

X--BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.

V--BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.

NO. EACH--NUMBER OF BARS OF EACH LENGTH.

ACTUAL LENGTHS – ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.

WEIGHT = ACTUAL WEIGHT X WEIGHT PER LINEAR FOOT X NUMBER REQUIRED.

PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.

CITY OF O'FALLON PROJECT #210-005

BILL OF REINFORCING STEEL

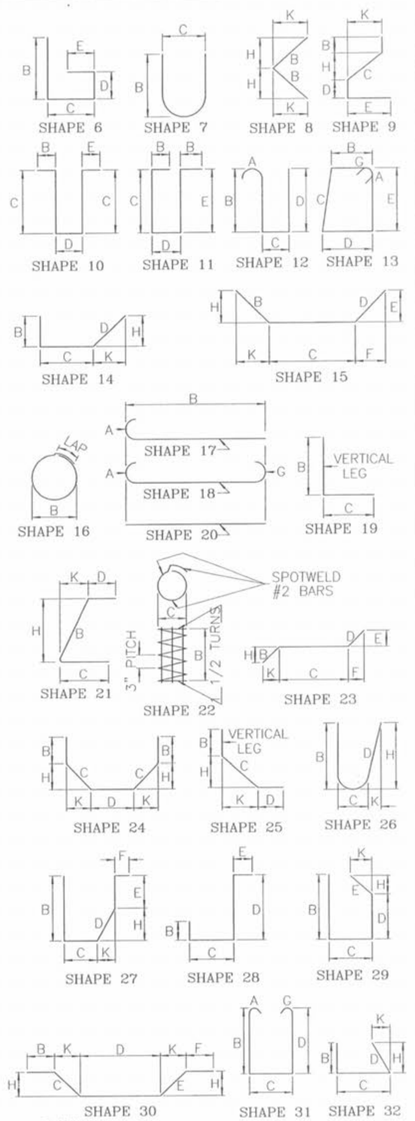
										B		C		D		E		F		H		K		ACTUAL LENGTH		WEIGHT
	EPOXY (E)	NO. REQUIRED	SIZE	MARK	LOCATION	SHAPE NO.	STIRRUP	SUBSTRUCTURE	VARIES	NO. EACH	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Lbs.
		8	8	H11	BEAM	20					35	0.000													35	0	748
		4	6	H12	BEAM	20					34	4.000													34	4	206
		8	8	H13	BEAM	20					20	4.000													20	4	434
		4	8	H14	BEAM	20					31	0.000													31	0	331
	E	10	7	H15	DIAPHRAGM	20					35	0.000													35	0	715
		6	6	H16	DIAPHRAGM	20					7	9.000													7	9	70
		15	6	H17	DIAPHRAGM	20					7	0.000													7	0	158
		6	6	H18	DIAPHRAGM	20					34	4.000													34	4	309
		2	4	H19	APPROACH HAUNCH	20					27	3.000													27	3	36
		53	5	H110	APPROACH SLAB	20					2	6.000													2	6	138
		6	5	H111	STRAND TIE BAR	20					4	6.000													4	6	28
		90	5	U11	BEAM	10	S						5	2.000	2	3.000									12	5	1,166
		10	4	U12	BEAM	13	S				2	3.000	2	7.500	2	3.000	2	7.500							10	2	68
		20	4	U13	BEAM	13	S				2	3.000	2	9.750	2	3.000	2	9.750							10	7	141
	E	90	5	U14	DIAPHRAGM	10	S						4	11.000	2	3.000									11	11	1,119
		70	4	U15	APPROACH HAUNCH	10							1	5.500	0	6.000									3	3	152
	E	66	6	U16	DIAPHRAGM	19					4	11.000	3	10.000											8	7	851
		12	6	F12	BEAM	6					4	11.000	2	2.000											7	2	129
		12	6	F11	WINGS	24							1	0.000	2	3.125					0	8.500	0	8.500	4	3	77
	E	4	6	H112	WINGS	20					13	10.000													13	10	83
		8	6	H113	WINGS	20					13	10.000													13	10	166
		36	6	H114	WINGS	20			V	4	4	5.000													4	5	---
					INCR. = 13.625 INS.						13	6.000													13	6	484
		4	6	T11	WINGS	25					2	3.000	12	0.250	3	5.000					5	11.625	10	5.625	17	6	105
		64	6	V13	WINGS	20			V	4	2	0.000													2	0	---
					INCR. = 4.625 INS.						7	9.375													7	9	469
		8	6	V12	WINGS	20					7	11.500													8	0	96
		8	8	H61	BEAM	20					35	0.000													35	0	748
		4	6	H62	BEAM	20					34	4.000													34	4	206
		8	8	H63	BEAM	20					20	4.000													20	4	434
		4	8	H64	BEAM	20					31	0.000													31	0	331
	E	8	7	H65	DIAPHRAGM	20					35	0.000													35	0	572
		6	6	H66	DIAPHRAGM	20					7	9.000													7	9	70
		15	6	H67	DIAPHRAGM	20					7	0.000													7	0	158
		6	6	H68	DIAPHRAGM	20					34	4.000													34	4	309
		2	4	H69	APPROACH HAUNCH	20					27	3.000													27	3	36
		53	5	H610	APPROACH SLAB	20					2	6.000													2	6	138
		6	5	H611	STRAND TIE BAR	20					4	6.000													4	6	28
		90	5	U61	BEAM	10	S						5	2.000	2	3.000									12	5	1,166
		10	4	U62	BEAM	13	S				2	3.000	2	7.500	2	3.000	2	7.500							10	2	68
		20	4	U63	BEAM	13	S				2	3.000	2	9.750	2	3.000	2	9.750							10	7	141
	E	90	5	U64	DIAPHRAGM	10	S						4	11.000	2	3.000									11	11	1,119
		70	4	U65	APPROACH HAUNCH	10							1	5.500	0	6.000									3	3	152
	E	66	6	U66	DIAPHRAGM	19					4	11.000	3	10.000											8	7	851
		12	6	F62	BEAM	6					4	11.000	2	2.000											7	2	129
		12	6	F61	WINGS	24							1	0.000	2	3.125					0	8.500	0	8.500	4	3	77
	E	4	6	H612	WINGS	20					13	10.000													13	10	83
		8	6	H613	WINGS	20					13	10.000													13	10	166
		36	6	H614	WINGS	20			V	4	4	5.000													4	5	---
					INCR. = 13.625 INS.						13	6.000													13	6	484
		4	6	T61	WINGS	25					2	3.000	11	9.875	3	5.000					5	6.875	10	5.000	17	3	104
		64	6	V63	WINGS	20			V	4	2	0.000													2	0	---
					INCR. = 4.625 INS.						7	9.375													7	9	469
		8	6	V62	WINGS	20					7	11.500													8	0	96

END BENT NO. 1

SUPERSTRUCTURE

END BENT NO. 6

NOTE: This drawing is not to scale; follow dimensions.



BENDING DIAGRAMS

SHANNON J. HOWE NUMBER E-2000162117 REGISTERED PROFESSIONAL ENGINEER

10-28-2003

ENGINEER'S AUTHENTICATION: The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date, unless reauthenticated.