

**PIER 1
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h310(E)	38	#5	10'-11"	—
h311(E)	3	#5	11'-3"	—
s310(E)	12	#5	6'-8"	U
*sp310(E)	2	#5	35'-3"	W
u350(E)	4	#5	9'-0"	U
u351(E)	8	#5	5'-4"	J
u352(E)	12	#5	5'-6"	J
u353(E)	14	#5	5'-10"	J
u355(E)	18	#5	15'-6"	L
v312(E)	26	#6	12'-8"	—
v313(E)	26	#6	18'-6"	—
v314(E)	20	#8	41'-6"	—
Concrete Removal	Cu. Yd.	1.0		
Structure Excavation	Cu. Yd.	11		
Concrete Structures	Cu. Yd.	27.4		
Reinforcement Bars, Epoxy Coated	Pound	5,280		
Permanent Casing	Foot	64		
Drilled Shaft in Soil	Cu. Yd.	11.6		
Drilled Shaft in Rock	Cu. Yd.	0.7		

* Length is height of spiral.

**PIER 2
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h320(E)	40	#5	13'-10"	—
h321(E)	3	#5	13'-2"	—
s320(E)	23	#5	6'-4"	U
*sp320(E)	2	#5	36'-1"	W
u350(E)	4	#5	9'-0"	U
u351(E)	8	#5	5'-4"	J
u352(E)	12	#5	5'-6"	J
u353(E)	14	#5	5'-10"	J
u354(E)	26	#5	19'-5"	L
v322(E)	26	#9	43'-0"	—
v323(E)	48	#6	19'-2"	—
v324(E)	48	#6	16'-3"	—
Concrete Removal	Cu. Yd.	1.1		
Structure Excavation	Cu. Yd.	14		
Concrete Structures	Cu. Yd.	36.1		
Reinforcement Bars, Epoxy Coated	Pound	9,170		
Permanent Casing	Foot	58		
Drilled Shaft in Soil	Cu. Yd.	20.1		
Drilled Shaft in Rock	Cu. Yd.	4.2		

* Length is height of spiral.

**PIER 3
BILL OF MATERIAL**

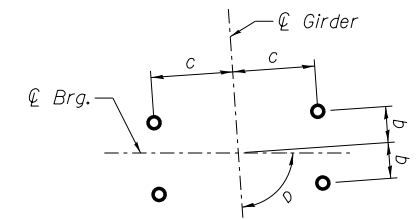
Bar	No.	Size	Length	Shape
h330(E)	40	#5	16'-3"	—
h331(E)	3	#5	16'-7"	—
s330(E)	18	#5	6'-2"	U
*sp330(E)	2	#5	23'-8"	W
u350(E)	4	#5	9'-0"	U
u351(E)	10	#5	5'-4"	J
u352(E)	12	#5	5'-6"	J
u353(E)	14	#5	5'-10"	J
u356(E)	24	#5	20'-10"	L
v332(E)	38	#6	15'-6"	—
v333(E)	38	#6	19'-5"	—
v334(E)	20	#8	30'-0"	—
Concrete Removal	Cu. Yd.	1.1		
Structure Excavation	Cu. Yd.	15		
Concrete Structures	Cu. Yd.	48.0		
Reinforcement Bars, Epoxy Coated	Pound	5,740		
Permanent Casing	Foot	42		
Drilled Shaft in Soil	Cu. Yd.	7.4		
Drilled Shaft in Rock	Cu. Yd.	0.7		

* Length is height of spiral.

**PIER 4
BILL OF MATERIAL**

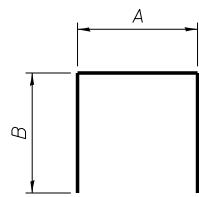
Bar	No.	Size	Length	Shape
d345(E)	6	#8	7'-0"	—
h347(E)	4	#5	16'-6"	—
p344(E)	8	#9	18'-10"	U
p345(E)	4	#8	16'-8"	U
s341(E)	4	#5	10'-5"	□
s342(E)	4	#5	10'-11"	□
s343(E)	4	#5	11'-5"	□
s344(E)	4	#5	11'-11"	□
s345(E)	22	#5	12'-3"	□
s346(E)	38	#4	11'-0"	○
*sp340(E)	2	#5	22'-10"	W
u343(E)	6	#5	10'-4"	U
v340(E)	26	#8	21'-3"	—
v341(E)	26	#8	14'-0"	—
v342(E)	26	#9	22'-1"	—
Concrete Structures	Cu. Yd.	16.6		
Reinforcement Bars, Epoxy Coated	Pound	6,900		
Permanent Casing	Foot	22		
Drilled Shaft in Soil	Cu. Yd.	11.7		
Drilled Shaft in Rock	Cu. Yd.	3.2		
Concrete Sealer	Sq. Ft.	616		

* Length is height of spiral.



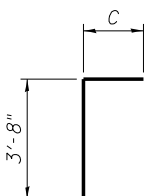
ANCHOR BOLT DETAIL

PIER	Dimension	Girder 1	Girder 2
Pier 1	a	88°51'15"	89°25'39"
	b	7 1/4"	7 1/4"
	c	11 3/4"	11 3/4"
Pier 2	a	88°51'15"	89°25'39"
	b	0"	0"
	c	11 1/2"	11 1/2"
Pier 3	a	90°00'00"	90°00'00"
	b	7 1/4"	7 1/4"
	c	11 3/4"	11 3/4"
Pier 4 (SN 016-0483)	a	90°00'00"	90°00'00"
	b	0"	0"
	c	11"	11"
Pier 4 (SN 016-2457)	a	88°29'15"	87°44'22"
	b	0"	0"
	c	10"	10"



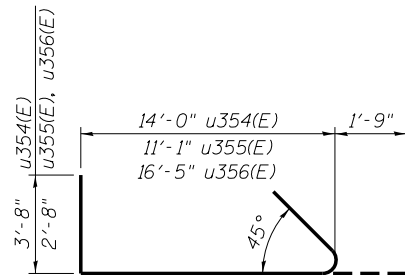
Bar	A	B
s310(E)	1'-8"	2'-6"
s320(E)	1'-8"	2'-4"
s330(E)	1'-8"	2'-3"
u350(E)	1'-8"	3'-8"
u343(E)	3'-0"	3'-8"

**s310(E), s320(E), s330(E),
u350(E), u343(E) BARS**

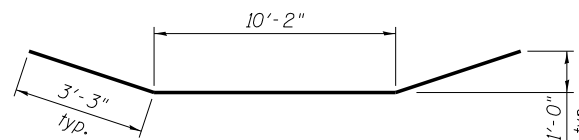


Bar	C
u351(E)	1'-8"
u352(E)	1'-10"
u353(E)	2'-2"

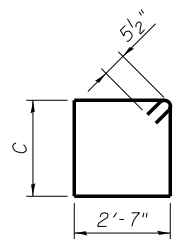
u351(E), u352(E), u353(E) BARS



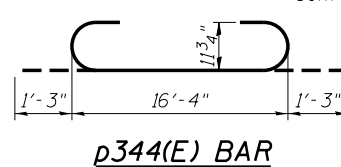
u354(E), u355(E), u356(E) BARS



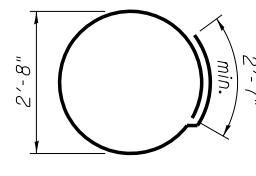
p345(E) BAR



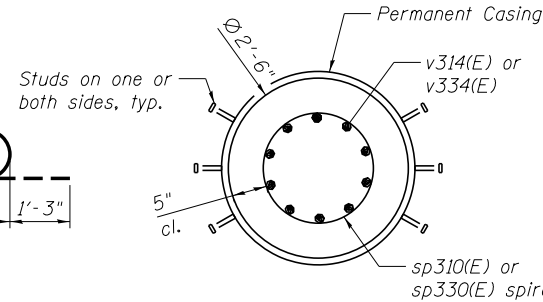
s341(E) - s345(E) BARS



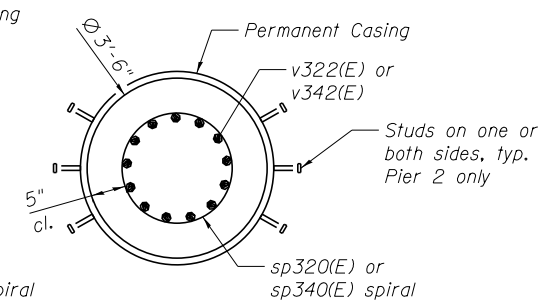
p344(E) BAR



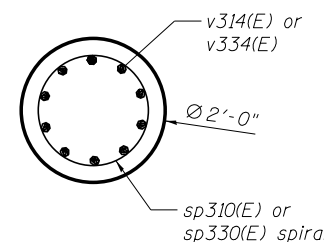
s346(E) BAR



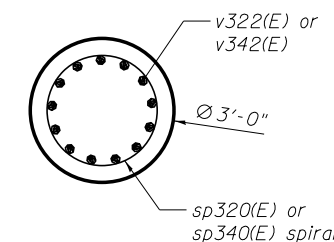
**SECTION E-E
(Shaft in soil)**



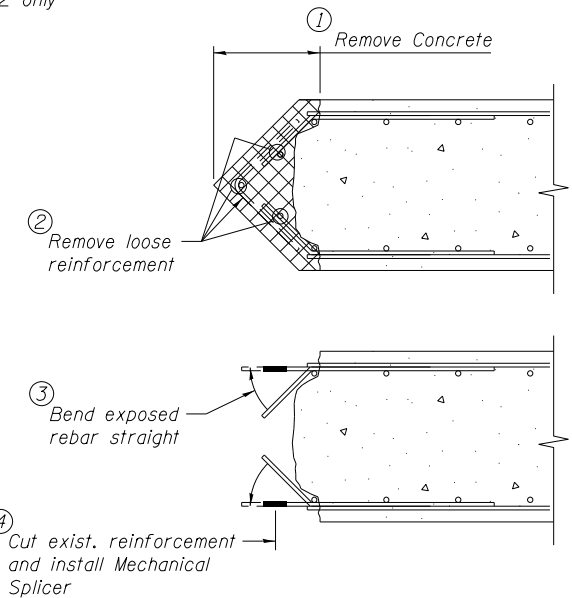
**SECTION G-G
(Shaft in soil)**



**SECTION F-F
(Shaft in rock)**



**SECTION H-H
(Shaft in rock)**



SECTION D-D