EMPAS

EMPRESA PUBLICA DE ALCANTARILLADO DE SANTANDER S.A. E.S.P.

DISEÑO Y CALCULO: MAURICIO ALBERTO SANTOS REY
MSc. INGENIERO CIVIL

REVISO: ING. GLADYS E. RUEDA

DIBUJO : L.F.A.B.
DISEÑO : L.C.C.
FECHA : Abril de 2009
ESCALA : 1:50

APROBADO: ING. LUDWING URIBE GARCIA

REVISIONES

REFERENCIA	FECHA	RESPONS.

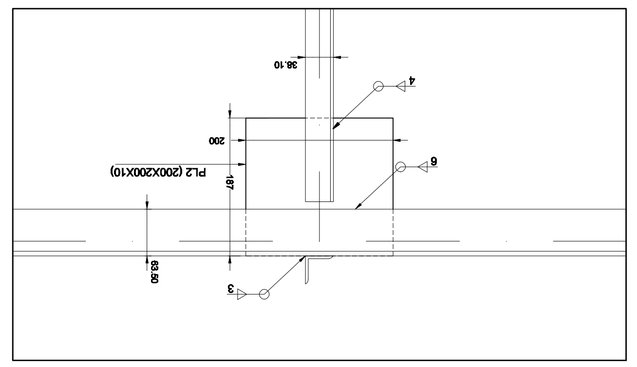
CONSULTORIA PARA EL DISEÑO DEL SISTEMA SANITARIO MENSULI – ARANZOQUE
CONTRATO DE CONSULTORIA N° 000288 DE 2008

PASO A DESNIVEL P(MEN)R116 – P(MEN)R117 , FLORIDABLANCA
DEPSPICE ESTRUCTURAL DE CERCHA
DETALLES DE CONEXIONES
ESPECIFICACIONES DE MATERIALES Y DE CONSTRUCCION

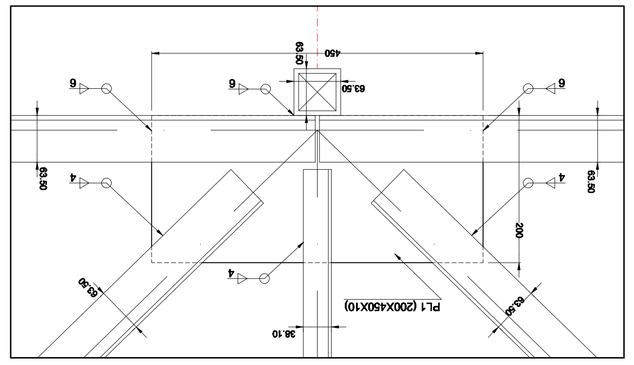
PLANO: 17 SON: 18

EMPAS-289-08-EST-17

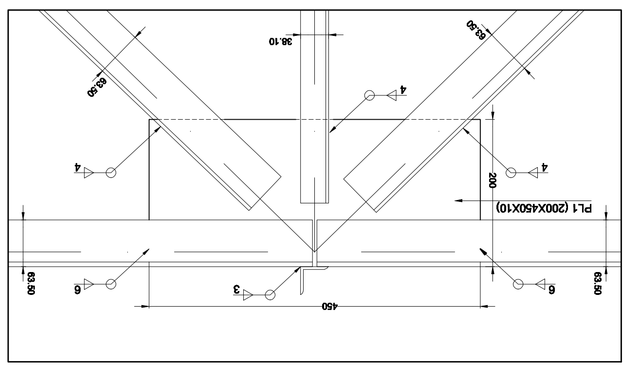
DETALLE 1
VISTA LATERAL DE NODOS INTERMEDIOS SUPERIORES EN CH5
ESC 1:5



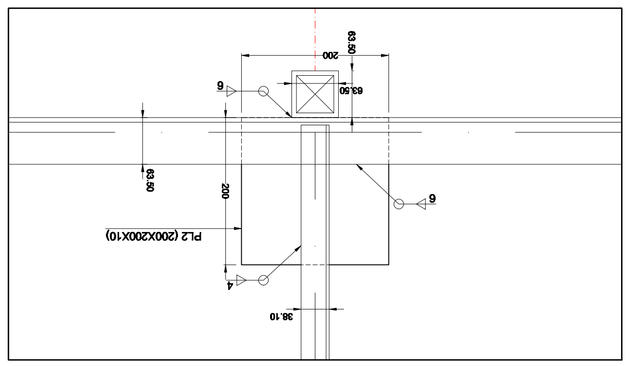
DETALLE 2
VISTA LATERAL DE NODOS INFERIORES EN CH5
ESC 1:5



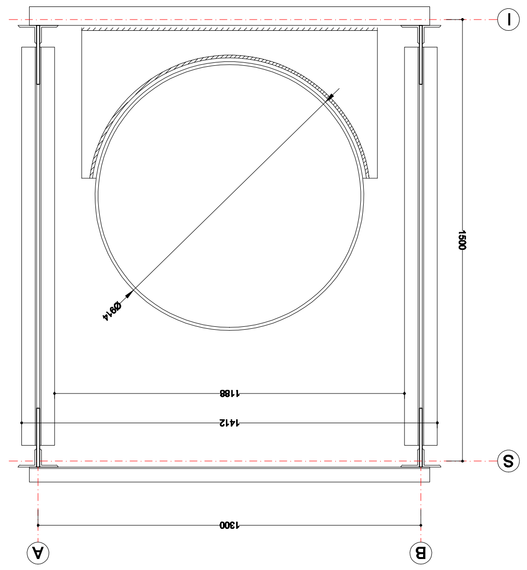
DETALLE 3
VISTA LATERAL DE NODOS SUPERIORES EN CH5
ESC 1:5



DETALLE 4
VISTA LATERAL DE NODOS INTERMEDIOS INFERIORES EN CH5
ESC 1:5

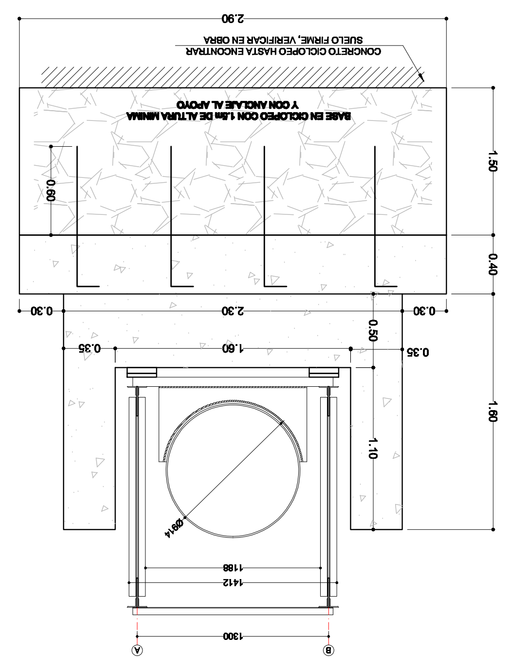


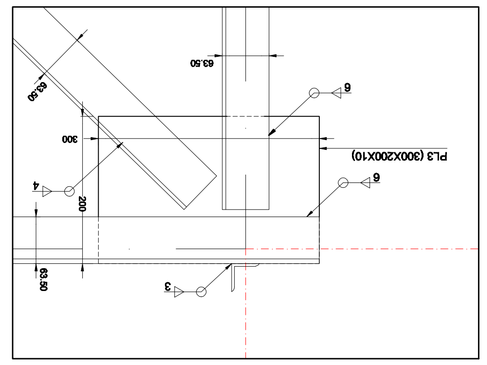
CORTE A-A
VISTA FRONTAL DE CH5
ESC 1:12.5



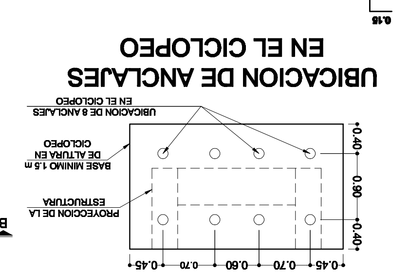
CANTIDADES DE MATERIALES PARA EL APOYO DE UNA CERCHA CH5																		
FIGURA																		
FORMA	1		2		3		4		5		6							
ELEMENTO	MARCA	FORMA	DIAMETRO OCTAVOS PULG	Nº BARRAS ELEMENTO	Nº ELEMENTOS	Nº TOTAL DE BARRAS	LONGITUD PARCIAL (m) A	B	C	LONGITUD TOTAL (m)	PESO TOTAL (kg)							
ESTRIBOS A Y B DE APOYO	1	1	1/2	24	2	48	1.60	0.30		2.00	95.0							
	2	1	1/2	16	2	32	2.80	0.30		3.20	101.4							
	3	1	1/2	6	2	12	2.20	0.20		2.60	30.9							
	4	1	1/2	14	2	28	0.80	0.20		1.20	33.3							
PASO PARA ELEVADO	5	1	3/8	12	4	48	1.90	0.20		2.30	61.8							
	6	1	3/8	16	4	64	1.00	0.15		1.30	46.6							
	7	4	1/2	8	2	16	0.95	0.15		1.10	17.4							
APOYO	1	3	5/8	4	1	4	0.25			0.25	1.6							
	2	2	3/8	6	1	6	0.41	0.25	0.08	1.44	4.8							
									TOTAL kg		392.5							

VISTA SUPERIOR
VISTA ALZADO DE ESTRIBO
ESC 1:12.5

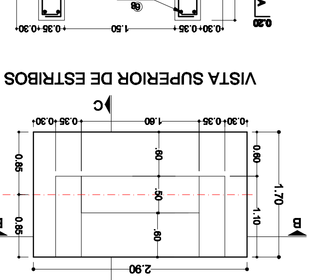


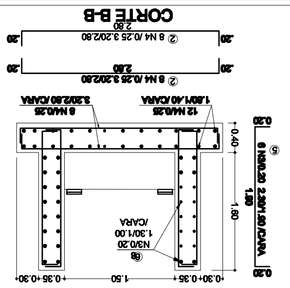


DETALLES DE ESTRIBOS



UBICACION DE ANCLAJES EN EL CICLOPEO




⑦ 8 ml 1.10MLB
DETALLE DEL ANCLAJE AL CICLOPEO
Ø19
⑥ 8 MLB 2.90ML
VARILLA DE 19 Ø
1.50
0.30+0.35+1.50+0.35+0.30
⑤ 8 MLB 2.90ML
VARILLA DE 19 Ø
1.50
0.30+0.35+1.50+0.35+0.30
④ 8 ml 0.25 2.00ml 60
12 ml 0.25 2.00ml 60
1.60
0.20
0.20
0.50
0.50
0.20
0.20
0.50
0.50
0.20
0.20
③ 8 ml 0.25 2.00ml 60
12 ml 0.25 2.00ml 60
1.60
0.20
0.20
0.50
0.50
0.20
0.20
② 8 ml 0.25 3.20ml 60
2.60
0.20
0.20
0.50
0.50
0.20
0.20
① 8 ml 0.25 2.00ml 60
1.60
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0.20