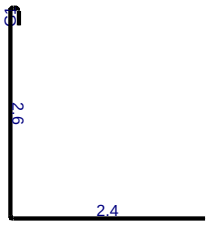
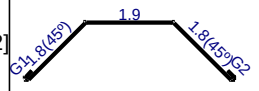
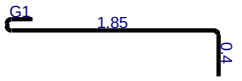
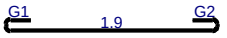
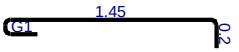
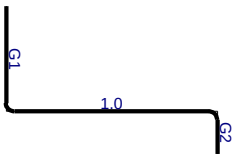
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

REFUERZO MURO EXTERIOR Y ZARPA INFERIOR (Es 1) Peso/Elemento= 218.73Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[1]	 G1(180º)=0.20m	18	1/2"	5.20	93.0	
[2]	 G1(180º)=0.20m G2(180º)=0.20m	6	1/2"	5.90	35.2	
[3]	 G1(180º)=0.20m	10	1/2"	2.45	24.4	
[4]	 G1(180º)=0.20m	6	1/2"	4.70	28.0	

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

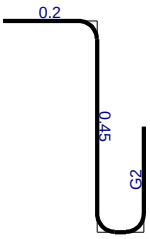
[5]		G1(180º)=0.20m	5	1/2"	1.50	7.5	
[6]		G1(180º)=0.20m G2(180º)=0.20m	2	1/2"	2.30	4.6	
[7]		G1(180º)=0.20m	5	1/2"	1.85	9.2	
[8]		G1(90º)=0.50m G2(90º)=0.20m	10	1/2"	1.70	16.9	

REFUERZO DENTELLON (Es 1) Peso/Elemento= 36.55Kg

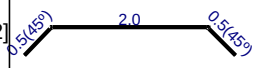
DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

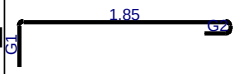
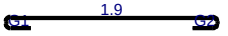
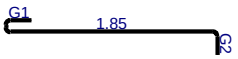
	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[9]	 G2(180º)=0.20m	21	1/2"	0.85	17.7	
[10]		4	1/2"	4.73	18.8	

REFUERZO MURO INTERIOR Y ZARPA SUPERIOR (Es 1) Peso/Elemento= 214.04Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[11]	 G1(180º)=0.20m G2(90º)=0.20m	18	1/2"	3.00	53.7	
[12]		4	1/2"	3.00	11.9	

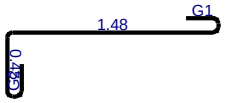
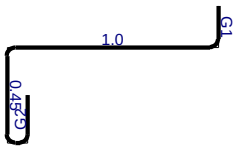
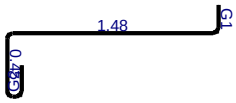
Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
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[13]		G1(90º)=0.40m G2(180º)=0.20m	10	1/2"	2.45	24.4	
[14]		G1(180º)=0.20m	5	1/2"	1.50	7.5	
[15]		G1(180º)=0.20m G2(90º)=0.20m	6	1/2"	3.30	19.7	
[16]		G1(180º)=0.20m G2(180º)=0.20m	2	1/2"	2.30	4.6	
[17]		G1(180º)=0.20m G2(90º)=0.20m	8	1/2"	2.25	17.9	

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

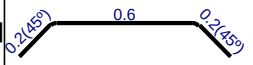
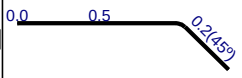
[18]		G1(90º)=0.20m G2(90º)=0.20m	8	1/2"	3.85	30.6	
[19]		G1(180º)=0.20m G2(180º)=0.20m	5	1/2"	2.33	11.6	
[20]		G1(90º)=0.20m G2(180º)=0.20m	10	1/2"	1.85	18.4	
[21]		G1(90º)=0.20m G2(180º)=0.20m	6	1/2"	2.33	13.9	

REFUERZO EN TUBERIA (Es 1) Peso/Elemento= 9.54Kg

DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS

Acero colombiano hecho con el corazón

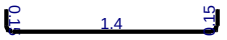
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
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[22]		4	1/2"	1.00	4.0	
[23]		8	1/2"	0.70	5.6	

PazdelRío
Votorantim Siderurgia
2016

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

REFUERZO MURO (Es 1) Peso/Elemento= 527.52Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[1]	 G1(180º)=0.20m	34	1/2"	2.75	92.9	
[2]	 G1(180º)=0.20m	30	1/2"	2.45	73.1	
[3]		74	1/2"	1.70	125.0	
[4]	 G1(180º)=0.20m	24	1/2"	2.20	52.5	

Acero colombiano hecho con el corazón

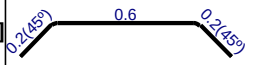
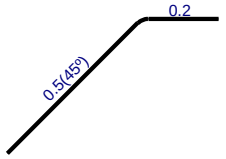
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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[5]	4.0	2	1/2"	4.00	8.0	
[6]	10.85	12	1/2"	10.85	129.4	
[7]	7.6	4	1/2"	7.60	30.2	
[8]	 0.20 1.3 0.15 G1(180º)=0.20m	10	1/2"	1.65	16.4	

REFUERZO TUBERIA (Es 1) Peso/Elemento= 9.54Kg

DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS

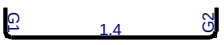
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

[9]		4	1/2"	1.00	4.0	
[10]		8	1/2"	0.70	5.6	

PazdelRío
Votorantim Siderurgia
2016

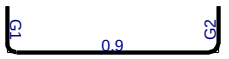
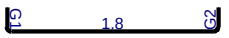
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

REFUERZO MURO (Es 1) Peso/Elemento= 457.04Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[1]	 G1(180º)=0.20m G2(90º)=0.20m	22	1/2"	2.85	62.3	
[2]	 G1(180º)=0.20m	24	1/2"	3.00	71.6	
[3]	 G1(180º)=0.20m G2(90º)=0.20m	10	1/2"	2.90	28.8	
[4]	 G1(90º)=0.20m G2(90º)=0.20m	32	1/2"	1.80	57.3	

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

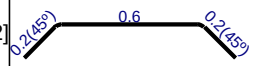
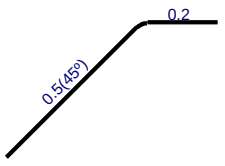
[5]		G1(90º)=0.20m G2(90º)=0.20m	24	1/2"	1.30	31.0	
[6]		G1(90º)=0.20m G2(90º)=0.20m	24	1/2"	2.20	52.5	
[7]		G1(180º)=0.20m	18	1/2"	1.45	25.9	
[8]			10	1/2"	8.80	87.5	
[9]			6	1/2"	4.20	25.0	

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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CALAMAR
ELEMENTO POR ELEMENTO

[10]		8	1/2"	1.40	11.1	
[11]		2	1/2"	2.00	4.0	

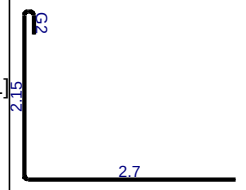
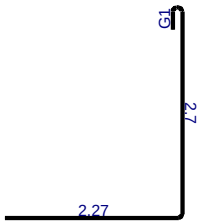
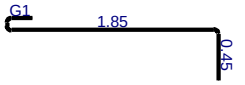
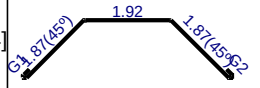
REFUERZO TUBERIA (Es 1) Peso/Elemento= 9.54Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[12]		4	1/2"	1.00	4.0	
[13]		8	1/2"	0.70	5.6	

Acero colombiano hecho con el corazón

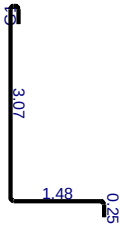
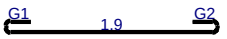
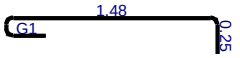
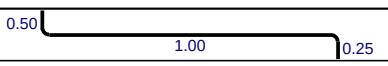
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

ACERO MURO EXTERIOR Y ZARPA INFERIOR (Es 1) Peso/Elemento= 324.81Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[1]	 G2(180º)=0.25m	9	5/8"	5.10	71.2	
[2]	 G1(180º)=0.25m	9	5/8"	5.22	72.9	
[3]	 G1(180º)=0.20m	10	1/2"	2.50	24.9	
[4]	 G1(180º)=0.20m G2(180º)=0.20m	8	1/2"	6.06	48.2	

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
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ELEMENTO POR ELEMENTO

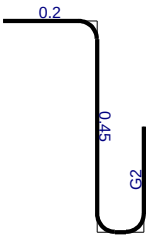
	DIAGRAMA		CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[5]		G1(180º)=0.25m	5	5/8"	5.05	39.2	
[6]		G1(180º)=0.25m	5	5/8"	2.05	15.9	
[7]		G1(180º)=0.20m G2(180º)=0.20m	2	1/2"	2.30	4.6	
[8]		G1(180º)=0.25m	5	5/8"	1.98	15.4	
[9]			12	5/8"	1.75	32.6	

REFUERZO DENTELLON (Es 1) Peso/Elemento= 37.27Kg

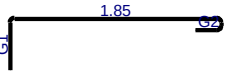
DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
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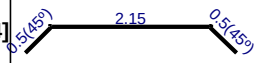
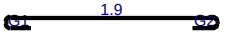
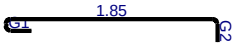
	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[10]	 G2(180º)=0.20m	22	1/2"	0.85	18.6	
[11]		4	1/2"	4.70	18.7	

ACERO MURO INTERIOR Y ZARPA EXTERIOR (Es 1) Peso/Elemento= 237.76Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[12]	 G1(180º)=0.20m G2(90º)=0.20m	18	1/2"	3.10	55.5	
[13]	 G1(90º)=0.45m G2(180º)=0.20m	10	1/2"	2.50	24.9	

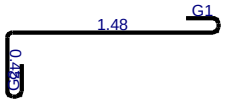
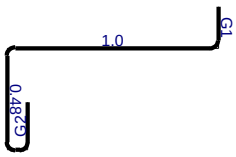
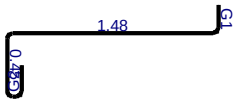
Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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CALAMAR
ELEMENTO POR ELEMENTO

[14]			7	1/2"	3.15	21.9	
[15]		G1(180º)=0.20m	5	1/2"	2.00	9.9	
[16]		G1(180º)=0.20m G2(90º)=0.20m	5	1/2"	3.47	17.2	
[17]		G1(180º)=0.20m G2(180º)=0.20m	2	1/2"	2.30	4.6	
[18]		G1(180º)=0.20m G2(90º)=0.20m	14	1/2"	2.25	31.3	

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

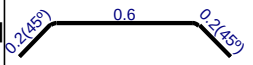
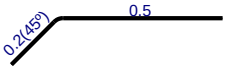
	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[19]	 G1(90º)=0.20m G2(90º)=0.20m	8	1/2"	3.85	30.6	
[20]	 G1(180º)=0.20m G2(180º)=0.20m	5	1/2"	2.33	11.6	
[21]	 G1(90º)=0.20m G2(180º)=0.20m	10	1/2"	1.88	18.7	
[22]	 G1(90º)=0.20m G2(180º)=0.20m	5	1/2"	2.33	11.6	

REFUERZO TUBERIA (Es 1) Peso/Elemento= 9.54Kg

DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS

Acero colombiano hecho con el corazón

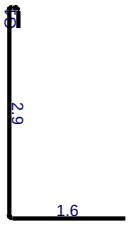
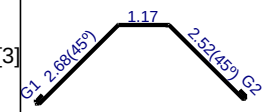
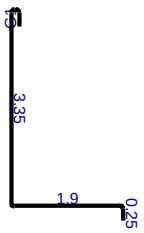
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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[23]		4	1/2"	1.00	4.0	
[24]		8	1/2"	0.70	5.6	

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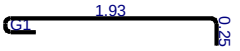
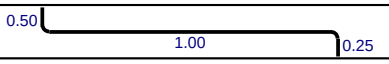
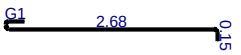
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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CALAMAR
ELEMENTO POR ELEMENTO

ACERO MURO EXTERIOR Y ZARPA INFERIOR (Es 1) Peso/Elemento= 348.17Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[1]	 G1(180º)=0.25m	22	5/8"	4.75	162.2	
[2]	 G1(90º)=0.20m G2(180º)=0.20m	4	1/2"	2.92	11.6	
[3]	 G1(180º)=0.20m G2(180º)=0.20m	10	1/2"	6.77	67.3	
[4]	 G1(180º)=0.25m	4	5/8"	5.75	35.7	

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PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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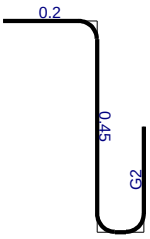
	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[5]	 G1(180º)=0.25m	4	5/8"	2.25	14.0	
[6]	 G1(180º)=0.20m G2(180º)=0.20m	2	1/2"	1.57	3.1	
[7]	 G1(180º)=0.25m	4	5/8"	2.43	15.1	
[8]		10	5/8"	1.75	27.2	
[9]	 G1(180º)=0.20m	4	1/2"	3.03	12.0	

REFUERZO DENTELLON (Es 1) Peso/Elemento= 31.11Kg

DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS

Acero colombiano hecho con el corazón

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	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[10]	 G2(180º)=0.20m	18	1/2"	0.85	15.2	
[11]		4	1/2"	4.00	15.9	

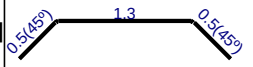
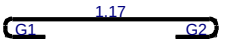
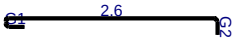
ACERO MURO INTERIOR Y ZARPA EXTERIOR (Es 1) Peso/Elemento= 270.00Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[12]	 G1(180º)=0.20m G2(90º)=0.20m	22	1/2"	3.30	72.2	
[13]	 G1(90º)=0.15m** G2(180º)=0.20m	4	1/2"	3.03	12.0	

**** Gancho fuera de norma - comunicarse con ACERIAS PAZ DEL RIO**

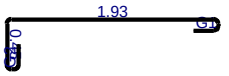
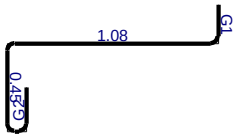
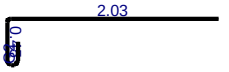
Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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[14]			9	1/2"	2.30	20.6	
[15]		G1(180º)=0.20m	4	1/2"	2.20	8.7	
[16]		G1(180º)=0.20m G2(90º)=0.20m	4	1/2"	3.75	14.9	
[17]		G1(180º)=0.20m G2(180º)=0.20m	2	1/2"	1.57	3.1	
[18]		G1(180º)=0.20m G2(90º)=0.20m	18	1/2"	3.00	53.7	

Acero colombiano hecho con el corazón

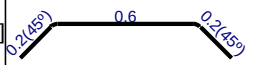
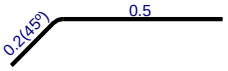
PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
EL RETORNO
CALAMAR
ELEMENTO POR ELEMENTO

[19]		G1(90º)=0.20m G2(90º)=0.20m	11	1/2"	2.95	32.3	
[20]		G1(180º)=0.20m G2(180º)=0.20m	4	1/2"	2.78	11.1	
[21]		G1(90º)=0.20m G2(180º)=0.20m	10	1/2"	1.93	19.2	
[22]		G2(180º)=0.20m	4	1/2"	2.68	10.7	
[23]		G1(180º)=0.20m G2(90º)=0.20m	4	1/2"	2.92	11.6	

Acero colombiano hecho con el corazón

PAVIMENTACION SAN JOSE- CALAMAR TRAMO II
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CALAMAR
ELEMENTO POR ELEMENTO

REFUERZO TUBERIA (Es 1) Peso/Elemento= 9.54Kg

	DIAGRAMA	CANTIDAD	DIAMETRO	LONGITUD	PESO TO	NOTAS
[24]		4	1/2"	1.00	4.0	
[25]		8	1/2"	0.70	5.6	

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