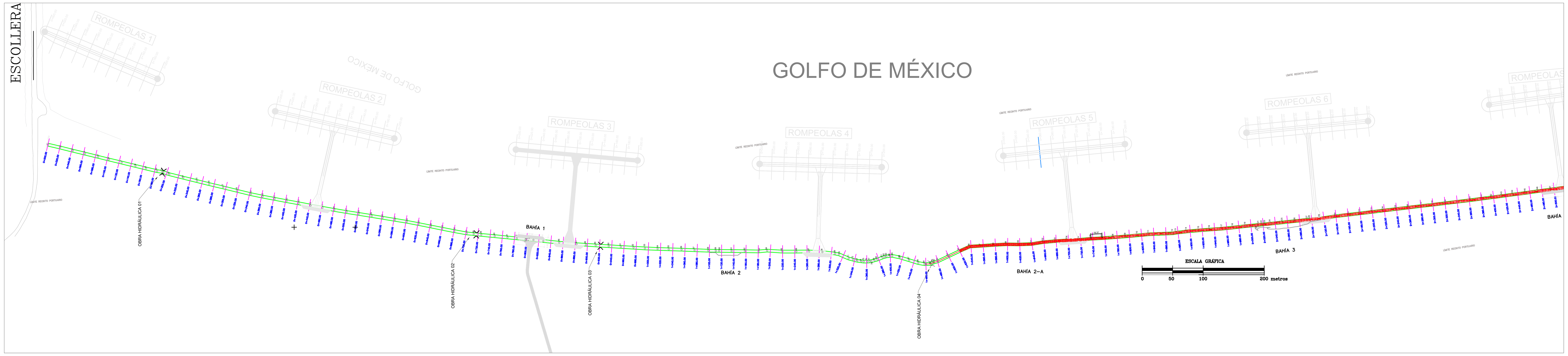

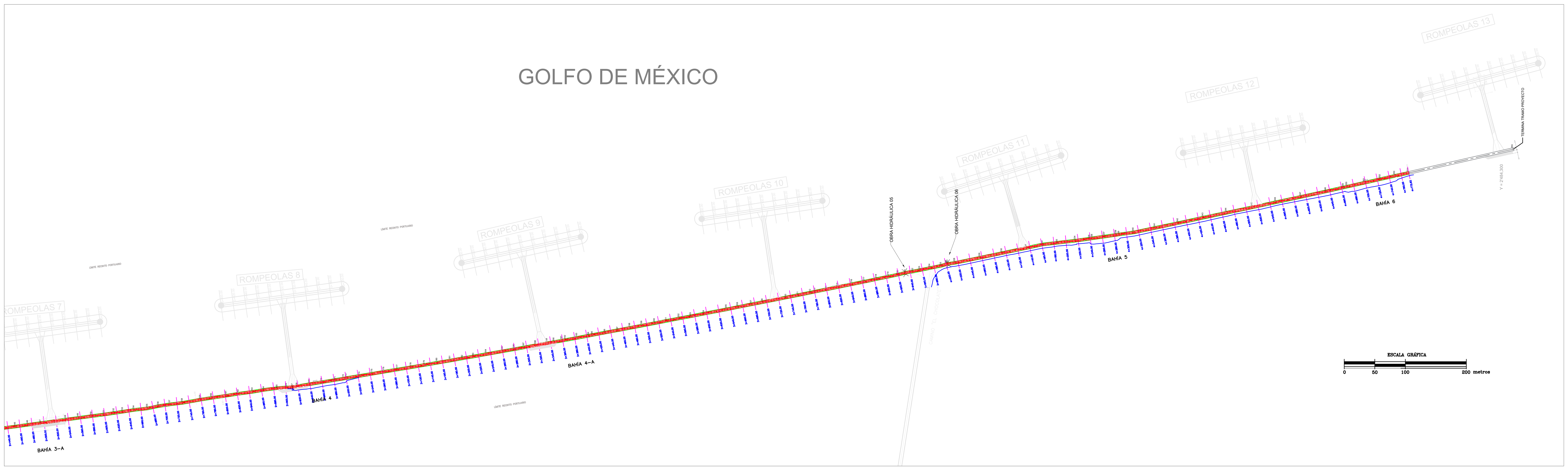

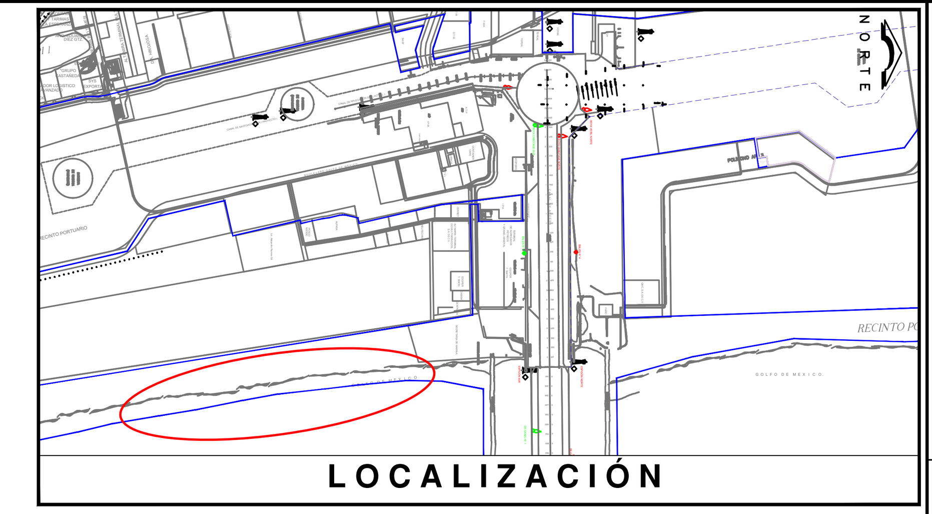

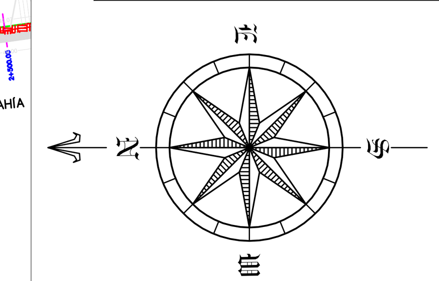

SIMBOLOGIA

- EJE DE PROYECTO
- HOMBRO DE CAMINO EXISTENTE
- OBRAS HIDRAULICAS
- TRAMO A REPARAR
- ROMPEOLAS

CUADRO DE CONSTRUCCIÓN EJE

LADO P.V.	LADO EST.	RUMBO	DISTANCIA	VERT.	Y	X
	1	S 13°06'31.03" W	20.37	1	2,486,603.16	617,535.08
1	2	S 14°03'55.55" W	21.55	2	2,486,583.33	617,530.47
2	3	S 13°37'54.70" W	20.42	3	2,486,562.43	617,525.23
3	4	S 13°44'28.96" W	22.13	4	2,486,542.58	617,520.42
4	5	S 13°44'58.44" W	18.11	5	2,486,521.08	617,515.16
5	6	S 13°34'41.93" W	21.58	6	2,486,503.49	617,510.85
6	7	S 13°37'06.20" W	23.36	7	2,486,482.51	617,505.79
7	8	S 13°34'41.21" W	17.67	8	2,486,459.81	617,500.29
8	9	S 13°34'37.82" W	18.60	9	2,486,442.63	617,496.14
9	10	S 08°11'07.99" W	8.45	10	2,486,424.56	617,491.77
10	11	S 13°39'57.07" W	2.02	11	2,486,416.19	617,490.57
11	12	S 19°04'35.79" W	10.15	12	2,486,414.23	617,490.09
12	13	S 13°58'22.09" W	23.82	13	2,486,404.64	617,486.78
13	14	S 13°50'50.81" W	23.08	14	2,486,381.53	617,481.03
14	15	S 13°57'08.06" W	20.46	15	2,486,359.12	617,475.50
15	16	S 13°13'19.76" W	23.50	16	2,486,339.26	617,470.57
16	17	S 13°44'32.26" W	23.52	17	2,486,316.38	617,465.19
17	18	S 13°42'24.68" W	23.27	18	2,486,293.54	617,459.61
18	19	S 11°46'36.06" W	19.65	19	2,486,270.93	617,454.09
19	20	S 10°39'26.93" W	20.05	20	2,486,251.70	617,450.08
20	21	S 10°32'52.32" W	19.80	21	2,486,232.00	617,446.38
21	22	S 10°27'51.55" W	20.00	22	2,486,212.53	617,442.75
22	23	S 10°46'43.14" W	20.15	23	2,486,192.86	617,439.12
23	24	S 10°29'21.91" W	19.74	24	2,486,173.07	617,435.35
24	25	S 10°22'58.77" W	19.78	25	2,486,153.66	617,431.76
25	26	S 09°17'37.01" W	20.38	26	2,486,134.20	617,428.19
26	27	S 08°54'40.34" W	20.09	27	2,486,114.09	617,424.90
27	28	S 09°08'18.62" W	21.46	28	2,486,094.24	617,421.79
28	29	S 09°08'37.06" W	18.07	29	2,486,073.05	617,418.38
29	30	S 09°25'55.25" W	20.52	30	2,486,055.21	617,415.51
30	31	S 09°26'08.77" W	19.62	31	2,486,034.97	617,412.14
31	32	S 10°52'44.92" W	19.61	32	2,486,015.61	617,408.93
32	33	S 11°09'21.32" W	20.59	33	2,485,996.35	617,405.23
33	34	S 11°30'08.00" W	18.99	34	2,485,976.14	617,401.24
34	35	S 11°01'59.01" W	20.07	35	2,485,957.53	617,397.45
35	36	S 10°24'29.53" W	20.62	36	2,485,937.83	617,393.61
36	37	S 05°18'15.92" W	11.59	37	2,485,917.55	617,389.89
37	38	S 06°00'03.57" W	12.42	38	2,485,906.02	617,388.82
38	39	S 05°32'21.78" W	22.15	39	2,485,893.66	617,387.52
39	40	S 05°39'52.36" W	21.00	40	2,485,871.61	617,385.38
40	41	S 05°44'42.57" W	15.30	41	2,485,850.71	617,383.31
41	42	S 05°42'58.83" W	14.63	42	2,485,835.49	617,381.78
42	43	S 05°42'58.83" W	12.83	43	2,485,820.93	617,380.32

CUADRO DE CONSTRUCCIÓN EJE

LADO P.V.	LADO EST.	RUMBO	DISTANCIA	VERT.	Y	X
44	45	S 05°53'18.47" W	26.08	45	2,485,792.04	617,377.43
45	46	S 04°58'52.28" W	28.64	46	2,485,766.09	617,374.75
46	47	S 03°36'07.49" W	15.45	47	2,485,737.56	617,372.26
47	48	S 03°40'14.95" W	15.98	48	2,485,722.14	617,371.29
48	49	S 03°30'56.76" W	21.29	49	2,485,706.19	617,370.27
49	50	S 03°31'41.68" W	19.85	50	2,485,684.94	617,368.96
50	51	S 03°17'53.60" W	20.89	51	2,485,665.12	617,367.74
51	52	S 03°37'20.77" W	18.62	52	2,485,644.27	617,366.54
52	53	S 02°23'15.48" W	20.80	53	2,485,625.69	617,365.36
53	54	S 01°57'13.30" W	18.22	54	2,485,604.90	617,364.50
54	55	S 01°42'43.53" W	21.09	55	2,485,586.69	617,363.88
55	56	S 02°09'11.30" W	21.22	56	2,485,565.62	617,363.25
56	57	S 02°04'25.90" W	22.45	57	2,485,544.41	617,362.45
57	58	S 00°55'54.05" W	12.48	58	2,485,521.97	617,361.64
58	59	S 01°26'56.66" W	5.25	59	2,485,509.50	617,361.43
59	60	S 00°42'17.05" W	20.51	60	2,485,504.25	617,361.30
60	61	S 00°45'51.53" W	21.73	61	2,485,483.74	617,361.05
61	62	S 01°00'17.51" W	22.72	62	2,485,462.02	617,360.76
62	63	S 05°51'38.33" E	13.93	63	2,485,439.30	617,360.36
63	64	S 03°48'53.66" W	24.87	64	2,485,425.45	617,361.78
64	65	S 00°04'19.59" E	22.93	65	2,485,400.63	617,360.13
65	66	S 00°30'38.55" E	21.03	66	2,485,377.70	617,360.16
66	67	S 02°39'56.54" W	21.64	67	2,485,356.68	617,360.34
67	68	S 06°37'26.33" W	21.02	68	2,485,335.06	617,359.34
68	69	S 10°58'13.21" W	6.51	69	2,485,314.18	617,356.91
69	70	S 23°21'01.01" W	17.11	70	2,485,307.80	617,355.68
70	71	S 15°16'55.65" W	7.62	71	2,485,292.09	617,348.89
71	72	S 14°03'12.03" W	7.39	72	2,485,284.74	617,346.89
72	73	S 08°02'23.71" W	6.59	73	2,485,277.57	617,345.09
73	74	S 05°10'05.94" W	3.73	74	2,485,271.05	617,344.17
74	75	S 00°10'49.83" W	5.74	75	2,485,267.33	617,343.83
75	76	S 03°33'45.73" E	3.94	76	2,485,261.60	617,343.82
76	77	S 08°27'18.71" E	2.91	77	2,485,257.66	617,344.06
77	78	S 14°18'21.55" E	5.38	78	2,485,254.78	617,344.49
78	79	S 16°07'16.26" E	4.55	79	2,485,249.57	617,345.82
79	80	S 20°19'27.08" E	9.39	80	2,485,245.20	617,347.08
80	81	S 19°02'35.37" E	3.66	81	2,485,236.40	617,350.34
81	82	S 14°57'15.05" E	2.88	82	2,485,232.93	617,351.54
82	83	S 07°15'46.50" E	5.74	83	2,485,230.15	617,352.28
83	84	S 01°36'40.21" E	3.83	84	2,485,224.46	617,353.01
84	85	S 10°59'11.76" W	12.70	85	2,485,220.63	617,353.11
85	86	S 16°54'10.40" W	15.72	86	2,485,208.16	617,350.69
86	87	S 17°04'43.56" W	15.89	87	2,485,193.12	617,346.12
87	88	S 10°14'13.96" W	10.35	88	2,485,177.94	617,341.46
88	89	S 02°35'15.50" E	10.32	89	2,485,167.75	617,339.62

CUADRO DE CONSTRUCCIÓN EJE

LADO P.V.	LADO EST.	RUMBO	DISTANCIA	VERT.	Y	X
89	90	S 26°46'39.88" E	3.78	90	2,485,157.44	617,340.08
90	91	S 22°15'28.44" E	2.09	91	2,485,154.06	617,341.79
91	92	S 15°07'17.96" E	6.33	92	2,485,152.13	617,342.58
92	93	S 24°56'48.69" E	19.79	93	2,485,146.02	617,344.23
93	94	S 25°16'52.38" E	20.64	94	2,485,128.08	617,352.57
94	95	S 23°48'20.88" E	17.28	95	2,485,109.42	617,361.39
95	96	S 03°45'10.69" E	17.51	96	2,485,093.61	617,368.36
96	97	S 03°47'01.42" E	22.02	97	2,485,076.14	617,369.51
97	98	S 03°01'51.70" E	20.68	98	2,485,054.17	617,370.96
98	99	S 00°56'34.00" W	20.14	99	2,485,033.52	617,372.06
99	100	S 02°12'59.71" E	21.21	100	2,485,013.38	617,371.72
100	101	S 09°01'08.81" E	19.34	101	2,484,992.18	617,372.54
101	102	S 04°58'33.20" E	20.12	102	2,484,973.08	617,375.58
102	103	S 03°38'06.81" E	19.08	103	2,484,953.04	617,377.32
103	104	S 02°46'27.53" E	19.15	104	2,484,933.99	617,378.53
104	105	S 04°50'15.53" E	19.88	105	2,484,914.87	617,379.46
105	106	S 03°06'54.20" E	18.37	106	2,484,895.06	617,381.14
106	107	S 03°55'53.12" E	18.53	107	2,484,876.71	617,382.13
107	108	S 04°43'26.95" E	19.98	108	2,484,858.22	617,383.40
108	109	S 04°34'42.94" E	19.71	109	2,484,838.31	617,385.05
109	110	S 05°43'47.80" E	18.20	110	2,484,818.66	617,386.62
110	111	S 02°23'02.78" E	39.92	111	2,484,800.56	617,388.44
111	112	S 09°30'45.20" E	5.07	112	2,484,760.67	617,390.10
112	113	S 07°02'25.91" E	17.47	113	2,484,755.66	617,390.94
113	114	S 05°10'25.25" E	20.29	114	2,484,738.32	617,393.08
114	115	S 04°14'40.06" E	17.66	115	2,484,718.11	617,394.91
115	116	S 04°03'45.58" E	20.34	116	2,484,700.50	617,396.22
116	117	S 05°46'58.59" E	18.03	117	2,484,680.21	617,397.66
117	118	S 06°20'29.32" E	20.57	118	2,484,662.27	617,399.48
118	119	S 05°44'27.36" E	19.21	119	2,484,641.82	617,401.75
119	120	S 05°53'14.13" E	1.19	120	2,484,622.71	617,403.67
120	121	S 05°53'14.13" E	6.39	121	2,484,621.53	617,403.79
121	122	S 05°09'19.68" E	5.32	122	2,484,615.18	617,404.45
122	123	S 05°55'44.20" E	8.58	123	2,484,609.89	617,404.92
123	124	S 05°55'44.20" E	20.55	124	2,484,601.35	617,405.81
124	125	S 05°55'44.20" E	20.39	125	2,484,580.91	617,407.93
125	126	S 05°55'44.20" E	19.83	126	2,484,560.63	617,410.04
126	127	S 05°55'44.20" E	5.02	127	2,484,540.91	617,412.09
127	128	S 05°55'44.20" E	15.88	128	2,484,535.91	617,412.61
128	129	S 08°29'19.92" E	26.04	129	2,484,520.12	617,414.25
129	130	S 06°32'18.74" E	21.94	130	2,484,494.36	617,418.09
130	131	S 06°36'28.09" E	18.11	131	2,484,472.56	617,420.59
131	132	S 06°54'30.23" E	19.95	132	2,484,454.58	617,422.67
132	133	S 06°46'35.53" E	18.59	133	2,484,434.78	617,425.07
133	134	S 06°42'03.35" E	21.09	134	2,484,416.31	617,427.27

CUADRO DE CONSTRUCCIÓN EJE

LADO P.V.	LADO EST.	RUMBO	DISTANCIA	VERT.	Y	X
135	136	S 06°49'18.16" E	21.37	136	2,484,375.54	617,432.14
136	137	S 06°25'02.23" E	19.90	137	2,484,354.33	617,434.68
137	138	S 06°55'55.52" E	20.87	138	2,484,334.55	617,436.90
138	139	S 06°57'38.36" E	40.46	139	2,484,313.84	617,439.42
139	140	S 07°23'09.68" E	18.83	140	2,484,273.67	617,444.32
140	141	S 07°29'16.79" E	16.14	141	2,484,255.00	617,446.74
141	142	S 07°16'52.70" E	17.29	142	2,484,239.00	617,448.85
142	143	S 07°37'25.94" E	18.04	143	2,484,221.85	617,451.04
143	144	S 07°22'39.08" E	20.70	144	2,484,203.97	617,453.43
144	145	S 08°01'28.70" E	20.55	145	2,484,183.44	617,456.09
145	146	S 07°41'06.80" E	21.13	146	2,484,163.09	617,458.96
146	147	S 07°40'08.15" E	41.69	147	2,484,142.15	617,461.79
147	148	S 07°40'17.97" E	20.85	148	2,484,100.84	617,467.35
148	149	S 08°00'22.97" E	21.51	149	2,484,080.18	617,470.13
149	150	S 07°13'54.47" E	20.76	150	2,484,058.88	617,473.13
150	151	S 08°35'34.60" E	16.63	151	2,484,038.28	617,475.74
151	152	S 08°28'36.58" E	14.43	152	2,484,021.84	617,478.23
152	153	S 08°49'03.59" E	18.82	153	2,484,007.57	617,480.35
153	154	S 06°31'54.87" E	22.17	154	2,483,988.97	617,483.24
154	155	S 11°55'36.05" E	18.52	155	2,483,966.95	617,485.76
155	156	S 08°20'03.77" E	18.63	156	2,483,948.83	617,489.59
156	157	S 07°09'07.66" E	20.76	157	2,483,930.39	617,492.29
157	158	S 10°02'14.97" E	29.92	158	2,483,909.80	617,494.87
158	159	S 09°05'44.75" E	18.50	159	2,483,880.33	617,500.09
159	160	S 08°19'38.43" E	24.63	160	2,483,862.07	617,503.01
160	161	S 09°08'55.68" E	19.59	161	2,483,837.70	617,506.58
161	162	S 07°40'54.49" E	23.61	162	2,483,818.35	617,509.69
162	163	S 09°49'20.15" E	18.78	163	2,483,794.95	617,512.85
163	164	S 07°12'13.57" E	22.00	164	2,483,776.45	617,516.05
164	165	S 04°34'49.01" E	15.07	165	2,483,754.62	617,518.81
165	166	S 04°12'21.44" E	10.23	166	2,483,739.60	617,520.02
166	167	S 09°21'07.55" E	7.38	167	2,483,729.40	617,520.77
167	168	S 09°27'50.82" E	21.32	168	2,483,722.11	617,521.97
168	169	S 09°14'51.96" E	20.32	169	2,483,701.08	617,525.47
169	170	S 09°17'59.67" E	22.14	170	2,483,681.03	617,528.74
170	171	S 09°27'59.13" E	13.59	171	2,483,659.18	617,532.31
171	172	S 09°56'35.34" E	4.86	172	2,483,645.77	617,534.55
172	173	S 09°22'43.54" E	21.89	173	2,483,640.99	617,535.39
173	174	S 09°34'41.63" E	20.86	174	2,483,619.39	617,538.96
174	175	S 09°40'55.50" E	19.62	175	2,483,598.83	617,542.43
175	176	S 09°23'20.12" E	22.34	176	2,483,579.49	617,545.73
176	177	S 09°25'17.20" E	22.69	177	2,483,557.44	617,549.37
177	178	S 09°51'26.70" E	22.05	178	2,483,535.05	617,553.09
178	179	S 09°38'07.17" E	21.06	179	2,483,513.33	617,556.86
179	180	S 09°46'46.47" E	21.70	180	2,483,492.57	617,560.38

CUADRO DE CONSTRUCCIÓN EJE

LADO P.V.	LADO EST.	RUMBO	DISTANCIA	VERT.	Y	X
181	182	S 09°53'52.58" E	18.49	182	2,483,451.44	617,567.55
182	183	S 10°02'45.06" E	21.45	183	2,483,433.23	617,570.73
183	184	S 10°04'33.60" E	27.10	184	2,483,412.11	617,574.47
184	185	S 10°02'00.24" E	20.05	185	2,483,385.42	617,579.21
185	186	S 10°25'17.91" E	15.62	186	2,483,365.68	617,582.70
186	187	S 10°18'45.00" E	19.47	187	2,483,350.32	617,585.53
187	188	S 09°59'46.20" E	19.08	188	2,483,331.17	617,589.01
188	189	S 09°35'21.95" E	11.39	189	2,483,312.38	617,592.33
189	190	S 10°11'50.87" E	12.86	190	2,483,301.15	617,594.22
190	191	S 10°32'11.51" E	6.15	191	2,483,288.49	617,596.50
191	192	S 10°22'11.70" E	19.37	192	2,483,282.45	617,597.62
192	193	S 10°45'14.81" E	19.08	193	2,483,263.40	617,601.11
193	194	S 10°37'32.94" E	6.26	194	2,483,244.65	617,604.67
194	195	S 10°47'25.40" E	20.83	195	2,483,238.50	617,605.82
195	196	S 10°38'14.86" E	21.23	196	2,483,218.04	617,609.72
196	197	S 10°36'00.13" E	20.76	197	2,483,197.17	617,613.64
197	198	S 10°46'32.15" E	19.85	198	2,483,176.77	617,617.46
198	199	S 10°49'06.21" E	21.36	199	2,483,157.28	617,621.17
199	200	S 11°04'50.60" E	19.17	200	2,483,136.30	617,625.18
200	201	S 10°55'03.91" E	21.41	201	2,483,117.49	617,628.86
201	202	S 10°31'28.52" E	19.48	202	2,483,096.46	617,632.92
202	203	S 11°12'02.24" E	21.63	203	2,483,077.31	617,636.48
203	204	S 10°48'12.49" E	38.13	204	2,483,056.10	617,640.68
204	205	S 11°21'52.61" E	18.78	205	2,483,018.64	617,647.83
205	206	S 11°24'50.65" E	22.37	206	2,483,000.23	617,651.53
206	207	S 11°03'32.43" E	18.60	207	2,482,978.30	617,655.95
207	208	S 11°04'10.33" E	19.87	208	2,482,960.05	617,659.52
208	209	S 11°19'02.26" E	19.45	209	2,482,940.55	617,663.34
209	210	S 11°15'25.25" E	19.94	210	2,482,921.48	617,667.15
210	211	S 11°27'49.00" E	20.74	211	2,482,901.92	617,671.04
211	212	S 11°45'22.84" E	7.19	212	2,482,881.60	617,675.17
212	213	S 11°22'50.57" E	19.03	213	2,482,874.57	617,676.63
213	214	S 11°20'21.10" E	19.85	214	2,482,855.91	617,680.39
214	215	S 11°27'05.91" E	23.73	215	2,482,836.44	617,684.29
215	216	S 11°17'25.17" E	20.39	216	2,482,813.18	617,689.00
216	217	S 12°17'03.74" E	20.84	217	2,482,793.19	617,692.99
217	218	S 11°22'25.57" E	19.77	218	2,482,772.82	617,697.43
218	219	S 11°56'05.70" E	16.35	219	2,482,753.44	617,701.33
219	220	S 13°52'03.99" E	11.59	220	2,482,737.45	617,704.71
220	221	S 09°49'52.30" E	12.48	221	2,482,726.20	617,707.48

CUADRO DE CONSTRUCCIÓN EJE

LADO P.V.	LADO EST.	RUMBO	DISTANCIA	VERT.	Y	X
221	222	S 11°15'51.38" E	12.05	222	2,482,713.90	617,709.62
222	223	S 11°34'44.12" E	17.22	223	2,482,702.08	617,711.97
223	224	S 11°46'12.57" E	19.02	224	2,482,685.21	617,715.43
224	225	S 16°27'04.27" E	9.25	225	2,482,666.59	617,719.31
225	226	S 06°43'39.39" E	1.66	226	2,482,657.73	617,721.92
226	227	S 08°11'53.39" E	11.19	227	2,482,656.07	617,722.12
227	228	S 11°35'51.90" E	42.00	228	2,482,644.99	617,723.71
228	229	S 11°51'29.62" E	36.89	229	2,482,603.85	617,732.16
229	230	S 11°54'53.93" E	40.37	230	2,482,567.75	617,739.74
230	231	S 11°54'52.47" E	27.54	231	2,482,528.25	617,748.07
231	232	S 06°46'49.89" E	23.88	232	2,482,501.31	617,753.76
232	233	S 06°28'51.01" E	30.02	233	2,482,477.59	617,756.58
233	234	S 08°06'16.99" E	23.39	234	2,482,447.76	617,759.97
234	235	S 07°45'46.62" E	4.89	235	2,482,424.61	617,763.26
235	236	S 08°06'52.76" E	19.92	236	2,482,419.77	617,763.92
236	237	S 08°03'13.44" E	19.37	237	2,482,400.04	617,766.74
237	238	S 09°10'35.52" E	4.71	238	2,482,380.87	617,769.45
238	239	S 07°49'22.76" E	24.05	239	2,482,376.22	617,770.20
239	240	S 11°50'36.88" E	36.08	240	2,482,352.40	617,773.47
240	241	S 11°53'18.08" E	38.54	241	2,482,317.08	617,780.88
241	242	S 12°07'18.64" E	41.96	242	2,482,279.37	617,788.82
242	243	S 11°59'09.76" E	38.90	243	2,482,238.35	617,797.63
243	244	S 11°56'36.56" E	43.12	244	2,482,200.30	617,805.71
244	245	S 12°06'30.41" E	39.43	245	2,482,158.11	617,814.63
245	246	S 12°02'48.48" E	42.15	246	2,482,119.56	617,822.90
246	247	S 12°16'28.51" E	42.11	247	2,482,078.34	617,831.70
247	248	S 12°49'46.19" E	29.70	248	2,482,037.20	617,840.65
248	249	S 12°04'10.70" E	5.56	249	2,482,008.24	617,847.24
249	250	S 12°39'06.94" E	29.00	250	2,482,002.80	617,848.41
250	251	S 12°46'46.03" E	26.85	251	2,481,974.50	617,854.76
251	252	S 12°35'28.55" E	24.35	252	2,481,948.32	617,860.70
252	253	S 12°08'46.68" E	23.11	253	2,481,924.56	617,866.01
253	254	S 12°47'45.16" E	175.53	254	2,481,901.96	617,870.87
254	255	S 19°18'22.00" W	0.63	255	2,481,730.79	617,909.75

LONGITUD = 4,948.42 m

FECHA	REVISIÓN	ZONA.	DESCRIPCIÓN DE MODIFICACIÓN	POR	APROBÓ

MARINA
SECRETARÍA DE MARINA

ADMINISTRACIÓN DEL SISTEMA PORTUARIO NACIONAL ALTAMIRA S.A. DE C.V.

ADMINISTRACIÓN DEL SISTEMA PORTUARIO NACIONAL – ALTAMIRA

DIRECTOR GENERAL	GERENCIA DE INGENIERIA	SUBGERENCIA TECNICA DE PROYECTOS
OSCAR MIGUEL OCHOA GORENA CAPITAN ALTURA	ALBERTO TREJO SALDAÑA INGENIERO	JULIO CÉSAR GONZÁLEZ VALDERRAMA INGENIERO

REVISÓ: MA DE MONSERRAT VALADEZ SILVA, INGENIERO

DIBUJÓ: ELVIA OLIVIA PEREZ HERNANDEZ, INGENIERO

NOMBRE DEL PROYECTO: "CONSTRUCCIÓN DE ROMPEOLAS PARA PROTECCIÓN DE LITORAL COSTERO, 1ª ETAPA EN LA PLAYA SUR DEL PUERTO INDUSTRIAL DE ALTAMIRA, TAM."

NOMBRE DEL PLANO: "PLANTA GENERAL REPARACIÓN DE CAMINO PRINCIPAL EXISTENTE"

ACOTACIONES	FECHA	ESCALA	NUMERO DE PLANO
METROS	JULIO–2021	INDICADA	ASPN-ALT-GI-I-P581-22-0