

Appendix 13: CNP Preliminary Construction Cost Estimates

Appendix 12 contains the Engineer's Preliminary Opinion of Probable Construction Cost for the twenty selected Critical Needs Projects.

Appendix 13 - Critical Needs Projects Preliminary Construction Cost Estimates

City of Miami Beach Engineer's Preliminary Opinion of Probable Construction Cost North Nautilus F

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 18"	LF	350	\$ 130	\$ 45,500	\$ 46,000
2	Reinforced Concrete Pipe 24"	LF	832	\$ 180	\$ 149,760	\$ 150,000
3	Reinforced Concrete Pipe 36"	LF	1,060	\$ 280	\$ 296,800	\$ 297,000
4	Reinforced Concrete Pipe 48"	LF	641	\$ 425	\$ 272,425	\$ 272,000
5	Concrete Manhole - 8'	Each	23	\$ 10,650	\$ 244,950	\$ 245,000
6	Drainage Inlet	Each	44	\$ 8,475	\$ 372,900	\$ 373,000
7	1-1/2" Asphalt	Ton	811	\$ 172	\$ 139,168	\$ 139,000
8	10" Base	SY	3,076	\$ 75	\$ 230,700	\$ 231,000
9	12" Subgrade	SY	3,200	\$ 6	\$ 18,781	\$ 19,000
10	Fill for Road Raising (6")	CY	1,126	\$ 25	\$ 28,150	\$ 28,000
11	Sod	SY	4,757	\$ 4	\$ 19,028	\$ 19,000
12	Replace Asphalt/Concrete Driveway	SY	763	\$ 63	\$ 48,069	\$ 48,000
13	Remove & Reinstall Paver Driveway	SY	296	\$ 10	\$ 2,960	\$ 3,000
14	Concrete Sidewalk for Service Line Replacement	SY	162	\$ 70	\$ 11,340	\$ 11,000
15	Speed Tables (Replacement)	Each	2	\$ 4,000	\$ 8,000	\$ 8,000
16	Bike Lane Paint (Green)	SF	11,600	\$ 8	\$ 92,800	\$ 93,000
17	Pavement Markings	GM	1	\$ 10,000	\$ 10,000	\$ 10,000
18	Landscaping/Tree Protection	LS	1	\$ 30,000	\$ 30,000	\$ 30,000
19	Sidewalk Replacement (5-ft width)	SY	112	\$ 70	\$ 7,840	\$ 8,000
Subtotal						\$ 2,030,000
20	Mobilization	%	1.5%	\$ 2,030,000	\$ 30,450	\$ 30,000
21	Maintenance of Traffic	%	4%	\$ 2,030,000	\$ 81,200	\$ 81,000
22	Material Testing	%	1%	\$ 2,030,000	\$ 20,300	\$ 20,000
23	Utility Relocations	%	0%	\$ 2,030,000	\$ -	\$ -
24	Aboveground Components	%	0%	\$ 2,030,000	\$ -	\$ -
25	Water Main Distribution/Transmission System Improvements	%	26%	\$ 2,030,000	\$ 527,800	\$ 528,000
26	Sanitary Sewer Collection System Improvements	%	0%	\$ 2,030,000	\$ -	\$ -
Subtotal						\$ 659,000
27	Estimating Contingency (10%)					\$ 269,000
Total Construction Subtotal						\$ 2,958,000
28	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 2,958,000	\$ 177,480	\$ 177,000
29	Permitting Fee (5%)	%	5%	\$ 2,958,000	\$ 147,900	\$ 148,000
30	Architect/Engineering (A/E) Fee (10%)	LS	1	\$ 263,415	\$ 263,415	\$ 263,000
31	CEI Management (Owner's Representative) (5%)	%	5%	\$ 2,958,000	\$ 147,900	\$ 148,000
32	Construction Contingency (10%)	%	10%	\$ 2,958,000	\$ 295,800	\$ 296,000
Subtotal						\$ 1,032,000
Total						\$ 3,990,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Nautilus B - Muss Park

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	96	\$ 180	\$ 17,280	\$ 17,000
2	Reinforced Concrete Pipe 54"	LF	150	\$ 505	\$ 75,750	\$ 76,000
3	Reinforced Concrete Pipe 72"	LF	337	\$ 925	\$ 311,725	\$ 312,000
4	Reinforced Concrete Pipe 84"	LF	355	\$ 1,200	\$ 426,000	\$ 426,000
5	Exfiltration Trench Removal	LF	533	\$ 520	\$ 277,160	\$ 277,000
6	Concrete Manhole - 8'	EA	5	\$ 10,650	\$ 53,250	\$ 53,000
7	Curb Inlet	EA	10	\$ 8,475	\$ 84,750	\$ 85,000
8	1-1/2" Asphalt	Ton	35	\$ 172	\$ 6,036	\$ 6,000
9	10" Base	SY	11,725	\$ 20	\$ 234,500	\$ 235,000
10	12" Subgrade	SY	12,194	\$ 6	\$ 71,566	\$ 72,000
11	Fill for Road Raising (6")	CY	552	\$ 25	\$ 13,800	\$ 14,000
12	Curb	LF	1,684	\$ 31	\$ 52,204	\$ 52,000
Subtotal						\$ 1,625,000

13	Mobilization	%	1.5%	\$ 1,625,000	\$ 24,375	\$ 24,000
14	Maintenance of Traffic	%	4%	\$ 1,625,000	\$ 65,000	\$ 65,000
15	Material Testing	%	1%	\$ 1,625,000	\$ 16,250	\$ 16,000
16	Utility Relocations	%	0%	\$ 1,625,000	\$ -	\$ -
17	Aboveground Components	%	10%	\$ 1,625,000	\$ 162,500	\$ 163,000
18	Water Main Distribution/Transmission System Improvements	%	0%	\$ 1,625,000	\$ -	\$ -
19	Sanitary Sewer Collection System Improvements	%	0%	\$ 1,625,000	\$ -	\$ -
Subtotal						\$ 268,000

Water Quality Pump Station (4.5 cfs)						
20	Membrane Filtration	cfs	4.5	\$ 56,000	\$ 252,000	\$ 252,000
21	Hydrodynamic Separators	cfs	4.5	\$ 11,000	\$ 49,500	\$ 50,000
22	Wet Well / Weir Structure	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
23	In-Line Check Valve	EA	1.0	\$ 35,000	\$ 35,000	\$ 35,000
24	Junction Box/ Manhole	EA	1.0	\$ 30,000	\$ 30,000	\$ 30,000
25	Force Main	LF	50.0	\$ 120	\$ 6,000	\$ 6,000
26	Storm Drainage Bypass Piping	LF	50.0	\$ 400	\$ 20,000	\$ 20,000
27	Watertight/Submersible Control Panel	EA	1.0	\$ 175,000	\$ 175,000	\$ 175,000
28	Watertight Wet Well Hatches	EA	3.0	\$ 12,500	\$ 37,500	\$ 38,000
29	Site Electrical Work	LS	1.0	\$ 75,000	\$ 75,000	\$ 75,000
30	Submersible Pump	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
Subtotal						\$ 981,000

31	Estimating Contingency (10%)					\$ 287,400
Total Construction Subtotal						\$ 3,161,400

32	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 3,161,400	\$ 189,684	\$ 190,000
33	Permitting Fee (5%)	%	5%	\$ 3,161,400	\$ 158,070	\$ 158,000
34	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 3,161,400	\$ 316,140	\$ 316,000
35	CEI Management (Owner's Representative) (5%)	%	5%	\$ 3,161,400	\$ 158,070	\$ 158,000
36	Construction Contingency (10%)	%	10%	\$ 3,161,400	\$ 316,140	\$ 316,000
Subtotal						\$ 1,138,000

Total \$ 4,299,400

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
La Gorce C - N Bay Rd 1

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	245	\$ 180	\$ 44,100	\$ 44,000
2	Reinforced Concrete Pipe 60"	LF	930	\$ 580	\$ 539,400	\$ 539,000
3	Concrete Manhole - 8'	Each	2	\$ 10,650	\$ 20,856	\$ 21,000
4	Curb Inlet	Each	4	\$ 8,475	\$ 33,194	\$ 33,000
5	1-1/2" Asphalt	Ton	44	\$ 172	\$ 7,561	\$ 8,000
6	10" Base	SY	20,750	\$ 20	\$ 415,000	\$ 415,000
7	12" Subgrade	SY	21,580	\$ 6	\$ 126,651	\$ 127,000
8	Fill for Road Raising (6")	CY	738	\$ 25	\$ 18,444	\$ 18,000
9	Curb	LF	465	\$ 31	\$ 14,415	\$ 14,000

Subtotal \$ **1,219,000**

10	Mobilization	%	7%	\$ 1,219,000	\$ 85,330	\$ 85,000
11	Maintenance of Traffic	%	5%	\$ 1,219,000	\$ 60,950	\$ 61,000
12	Material Testing	%	1%	\$ 1,219,000	\$ 12,190	\$ 12,000
13	Utility Relocations	%	10%	\$ 1,219,000	\$ 121,900	\$ 122,000
14	Aboveground Components	%	10%	\$ 1,219,000	\$ 121,900	\$ 122,000
15	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,219,000	\$ 243,800	\$ 244,000
16	Sanitary Sewer Collection System Improvements	%	0%	\$ 1,219,000	\$ -	\$ -

Subtotal \$ **646,000**

Water Quality Pump Station (6 cfs)						
17	Membrane Filtration	cfs	6.0	\$ 56,000	\$ 336,000	\$ 336,000
18	Hydrodynamic Separators	cfs	6.0	\$ 11,000	\$ 66,000	\$ 66,000
19	Wet Well / Weir Structure	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
20	In-Line Check Valve	EA	1.0	\$ 35,000	\$ 35,000	\$ 35,000
21	Junction Box/ Manhole	EA	1.0	\$ 30,000	\$ 30,000	\$ 30,000
22	Force Main	LF	50.0	\$ 120	\$ 6,000	\$ 6,000
23	Storm Drainage Bypass Piping	LF	50.0	\$ 400	\$ 20,000	\$ 20,000
24	Watertight/Submersible Control Panel	EA	1.0	\$ 175,000	\$ 175,000	\$ 175,000
25	Watertight Wet Well Hatches	EA	3.0	\$ 12,500	\$ 37,500	\$ 38,000
26	Site Electrical Work	LS	1.0	\$ 75,000	\$ 75,000	\$ 75,000
27	Submersible Pump	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000

Subtotal \$ **1,081,000**

28	Estimating Contingency (10%)					\$ 187,000
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Total Construction Subtotal \$ **3,133,000**

29	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 3,133,000	\$ 187,980	\$ 188,000
30	Permitting Fee (5%)	%	5%	\$ 3,133,000	\$ 156,650	\$ 157,000
31	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 3,133,000	\$ 313,300	\$ 313,000
32	CEI Management (Owner's Representative) (5%)	%	5%	\$ 3,133,000	\$ 156,650	\$ 157,000
33	Construction Contingency (10%)	%	10%	\$ 3,133,000	\$ 313,300	\$ 313,000

Subtotal \$ **1,128,000**

Total \$ **4,261,000**

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
La Gorce A

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	205	\$ 180	\$ 36,900	\$ 37,000
2	Reinforced Concrete Pipe 36"	LF	350	\$ 280	\$ 98,000	\$ 98,000
3	Reinforced Concrete Pipe 48"	LF	300	\$ 425	\$ 127,500	\$ 128,000
4	Exfiltration Trench Removal	LF	100	\$ 520	\$ 52,000	\$ 52,000
5	Concrete Manhole - 8'	Each	4	\$ 10,650	\$ 42,600	\$ 43,000
6	Curb Inlet	Each	8	\$ 8,475	\$ 67,800	\$ 68,000
7	1-1/2" Asphalt	Ton	482	\$ 172	\$ 82,671	\$ 83,000
8	10" Base	SY	6,345	\$ 20	\$ 126,898	\$ 127,000
9	12" Subgrade	SY	6,572	\$ 6	\$ 38,571	\$ 39,000
10	Fill for Road Raising (6")	CY	513	\$ 25	\$ 12,833	\$ 13,000
Subtotal						\$ 688,000
11	Mobilization	%	7%	\$ 688,000	\$ 48,160	\$ 48,000
12	Maintenance of Traffic	%	5%	\$ 688,000	\$ 34,400	\$ 34,000
13	Material Testing	%	1%	\$ 688,000	\$ 6,880	\$ 7,000
14	Utility Relocations	%	10%	\$ 688,000	\$ 68,800	\$ 69,000
15	Aboveground Components	%	10%	\$ 688,000	\$ 68,800	\$ 69,000
16	Water Main Distribution/Transmission System Improvements	%	20%	\$ 688,000	\$ 137,600	\$ 138,000
17	Sanitary Sewer Collection System Improvements	%	20%	\$ 688,000	\$ 137,600	\$ 138,000
Subtotal						\$ 503,000
Water Quality Pump Station (3 cfs)						
18	Membrane Filtration	cfs	3.0	\$ 56,000	\$ 168,000	\$ 168,000
19	Hydrodynamic Separators	cfs	3.0	\$ 11,000	\$ 33,000	\$ 33,000
20	Wet Well / Weir Structure	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
21	In-Line Check Valve	EA	1.0	\$ 35,000	\$ 35,000	\$ 35,000
22	Junction Box/ Manhole	EA	1.0	\$ 30,000	\$ 30,000	\$ 30,000
23	Force Main	LF	50.0	\$ 120	\$ 6,000	\$ 6,000
24	Storm Drainage Bypass Piping	LF	50.0	\$ 400	\$ 20,000	\$ 20,000
25	Watertight/Submersible Control Panel	EA	1.0	\$ 175,000	\$ 175,000	\$ 175,000
26	Watertight Wet Well Hatches	EA	3.0	\$ 12,500	\$ 37,500	\$ 38,000
27	Site Electrical Work	LS	1.0	\$ 75,000	\$ 75,000	\$ 75,000
28	Submersible Pump	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
Subtotal						\$ 880,000
29	Estimating Contingency (10%)					\$ 119,000
Total Construction Subtotal						\$ 2,190,000
30	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 2,190,000	\$ 131,400	\$ 131,000
31	Permitting Fee (5%)	%	5%	\$ 2,190,000	\$ 109,500	\$ 110,000
32	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 2,190,000	\$ 219,000	\$ 219,000
33	CEI Management (Owner's Representative) (5%)	%	5%	\$ 2,190,000	\$ 109,500	\$ 110,000
34	Construction Contingency (10%)	%	10%	\$ 2,190,000	\$ 219,000	\$ 219,000
Subtotal						\$ 789,000
Total						\$ 2,979,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
La Gorce C - N Bay Rd 2

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	420	\$ 180	\$ 75,600	\$ 76,000
2	Reinforced Concrete Pipe 60"	LF	620	\$ 580	\$ 359,600	\$ 360,000
3	Exfiltration Trench Removal	LF	40	\$ 520	\$ 20,800	\$ 21,000
4	Concrete Manhole - 8'	Each	10	\$ 10,650	\$ 101,175	\$ 101,000
5	Curb Inlet	Each	19	\$ 8,475	\$ 161,025	\$ 161,000
6	1-1/2" Asphalt	Ton	39	\$ 172	\$ 6,692	\$ 7,000
7	10" Base	SY	13,000	\$ 20	\$ 260,000	\$ 260,000
8	12" Subgrade	SY	13,520	\$ 6	\$ 79,348	\$ 79,000
9	Fill for Road Raising (6")	CY	889	\$ 25	\$ 22,222	\$ 22,000
10	Curb	LF	450	\$ 31	\$ 13,950	\$ 14,000
Subtotal						\$ 1,101,000
11	Mobilization	%	7%	\$ 1,101,000	\$ 77,070	\$ 77,000
12	Maintenance of Traffic	%	5%	\$ 1,101,000	\$ 55,050	\$ 55,000
13	Material Testing	%	1%	\$ 1,101,000	\$ 11,010	\$ 11,000
14	Utility Relocations	%	10%	\$ 1,101,000	\$ 110,100	\$ 110,000
15	Aboveground Components	%	10%	\$ 1,101,000	\$ 110,100	\$ 110,000
16	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,101,000	\$ 220,200	\$ 220,000
17	Sanitary Sewer Collection System Improvements	%	0%	\$ 1,101,000	\$ -	\$ -
Subtotal						\$ 583,000
Water Quality Pump Station (6 cfs)						
18	Membrane Filtration	cfs	6.0	\$ 56,000	\$ 336,000	\$ 336,000
19	Hydrodynamic Separators	cfs	6.0	\$ 11,000	\$ 66,000	\$ 66,000
20	Wet Well / Weir Structure	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
21	In-Line Check Valve	EA	1.0	\$ 35,000	\$ 35,000	\$ 35,000
22	Junction Box/ Manhole	EA	1.0	\$ 30,000	\$ 30,000	\$ 30,000
23	Force Main	LF	50.0	\$ 120	\$ 6,000	\$ 6,000
24	Storm Drainage Bypass Piping	LF	50.0	\$ 400	\$ 20,000	\$ 20,000
25	Watertight/Submersible Control Panel	EA	1.0	\$ 175,000	\$ 175,000	\$ 175,000
26	Watertight Wet Well Hatches	EA	3.0	\$ 12,500	\$ 37,500	\$ 38,000
27	Site Electrical Work	LS	1.0	\$ 75,000	\$ 75,000	\$ 75,000
28	Submersible Pump	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
Subtotal						\$ 1,081,000
29	Estimating Contingency (10%)					\$ 168,000
Total Construction Subtotal						\$ 2,933,000
30	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 2,933,000	\$ 175,980	\$ 176,000
31	Permitting Fee (5%)	%	5%	\$ 2,933,000	\$ 146,650	\$ 147,000
32	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 2,933,000	\$ 293,300	\$ 293,000
33	CEI Management (Owner's Representative) (5%)	%	5%	\$ 2,933,000	\$ 146,650	\$ 147,000
34	Construction Contingency (10%)	%	10%	\$ 2,933,000	\$ 293,300	\$ 293,000
Subtotal						\$ 1,056,000
Total						\$ 3,989,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
City Center A - Palm View

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	350	\$ 180	\$ 63,000	\$ 63,000
2	Reinforced Concrete Pipe 30"	LF	200	\$ 220	\$ 44,000	\$ 44,000
3	Reinforced Concrete Pipe 66"	LF	570	\$ 690	\$ 393,300	\$ 393,000
4	Reinforced Concrete Pipe 84"	LF	580	\$ 1,200	\$ 696,000	\$ 696,000
5	Concrete Manhole - 8'	Each	6	\$ 10,650	\$ 63,900	\$ 64,000
6	Curb Inlet	Each	10	\$ 8,475	\$ 84,750	\$ 85,000
7	1-1/2" Asphalt	Ton	64	\$ 172	\$ 10,940	\$ 11,000
8	10" Base	SY	14,000	\$ 20	\$ 280,000	\$ 280,000
9	12" Subgrade	SY	14,560	\$ 6	\$ 85,451	\$ 85,000
10	Fill for Road Raising (6")	CY	1,350	\$ 25	\$ 33,750	\$ 34,000
11	Curb	LF	2,700	\$ 31	\$ 83,700	\$ 84,000
Subtotal						\$ 1,839,000
12	Mobilization	%	7%	\$ 1,839,000	\$ 128,730	\$ 129,000
13	Maintenance of Traffic	%	5%	\$ 1,839,000	\$ 91,950	\$ 92,000
14	Material Testing	%	1%	\$ 1,839,000	\$ 18,390	\$ 18,000
15	Utility Relocations	%	10%	\$ 1,839,000	\$ 183,900	\$ 184,000
16	Aboveground Components	%	10%	\$ 1,839,000	\$ 183,900	\$ 184,000
17	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,839,000	\$ 367,800	\$ 368,000
18	Sanitary Sewer Collection System Improvements	%	20%	\$ 1,839,000	\$ 367,800	\$ 368,000
Subtotal						\$ 1,343,000
19	Estimating Contingency (10%)					\$ 318,000
Total Construction Subtotal						\$ 3,500,000
20	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 3,500,000	\$ 210,000	\$ 210,000
21	Permitting Fee (5%)	%	5%	\$ 3,500,000	\$ 175,000	\$ 175,000
22	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 3,500,000	\$ 350,000	\$ 350,000
23	CEI Management (Owner's Representative) (5%)	%	5%	\$ 3,500,000	\$ 175,000	\$ 175,000
24	Construction Contingency (10%)	%	10%	\$ 3,500,000	\$ 350,000	\$ 350,000
Subtotal						\$ 1,260,000
Total						\$ 4,760,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Flamingo/Lumms E - Lenox Ave

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	144	\$ 180	\$ 25,920	\$ 26,000
2	Reinforced Concrete Pipe 30"	LF	500	\$ 220	\$ 110,000	\$ 110,000
3	Concrete Manhole - 8'	Each	3	\$ 10,650	\$ 31,950	\$ 32,000
4	Curb Inlet	Each	6	\$ 8,475	\$ 50,850	\$ 51,000
5	1-1/2" Asphalt	Ton	24	\$ 172	\$ 4,144	\$ 4,000
6	10" Base	SY	8,750	\$ 20	\$ 175,000	\$ 175,000
7	12" Subgrade	SY	9,100	\$ 6	\$ 53,407	\$ 53,000
8	Fill for Road Raising (6")	CY	1,244	\$ 25	\$ 31,111	\$ 31,000
9	Curb	LF	1,000	\$ 31	\$ 31,000	\$ 31,000

Subtotal **\$ 513,000**

10	Mobilization	%	7%	\$ 513,000	\$ 35,910	\$ 36,000
11	Maintenance of Traffic	%	5%	\$ 513,000	\$ 25,650	\$ 26,000
12	Material Testing	%	1%	\$ 513,000	\$ 5,130	\$ 5,000
13	Utility Relocations	%	10%	\$ 513,000	\$ 51,300	\$ 51,000
14	Aboveground Components	%	10%	\$ 513,000	\$ 51,300	\$ 51,000
15	Water Main Distribution/Transmission System Improvements	%	20%	\$ 513,000	\$ 102,600	\$ 103,000
16	Sanitary Sewer Collection System Improvements	%	20%	\$ 513,000	\$ 102,600	\$ 103,000

Subtotal **\$ 375,000**

17	Estimating Contingency (10%)					\$ 89,000
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Total Construction Subtotal **\$ 977,000**

18	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 977,000	\$ 58,620	\$ 59,000
19	Permitting Fee (5%)	%	5%	\$ 977,000	\$ 48,850	\$ 49,000
20	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 977,000	\$ 97,700	\$ 98,000
21	CEI Management (Owner's Representative) (5%)	%	5%	\$ 977,000	\$ 48,850	\$ 49,000
22	Construction Contingency (10%)	%	10%	\$ 977,000	\$ 97,700	\$ 98,000

Subtotal **\$ 353,000**

Total **\$ 1,330,000**

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Nautilus F - Nautilus Dr

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 18"	LF	175	\$ 130	\$ 22,750	\$ 23,000
2	Reinforced Concrete Pipe 36"	LF	175	\$ 280	\$ 49,000	\$ 49,000
3	Concrete Manhole - 8'	Each	3	\$ 10,650	\$ 26,625	\$ 27,000
4	Curb Inlet	Each	5	\$ 8,475	\$ 42,375	\$ 42,000
5	1-1/2" Asphalt	Ton	26	\$ 172	\$ 4,505	\$ 5,000
6	10" Base	SY	4,375	\$ 20	\$ 87,500	\$ 88,000
7	12" Subgrade	SY	4,550	\$ 6	\$ 26,704	\$ 27,000
8	Fill for Road Raising (6")	CY	1,831	\$ 25	\$ 45,778	\$ 46,000
9	Injection Well Regeneration	Each	1	\$ 75,000	\$ 75,000	\$ 75,000
Subtotal						\$ 382,000
10	Mobilization	%	7%	\$ 382,000	\$ 26,740	\$ 27,000
11	Maintenance of Traffic	%	5%	\$ 382,000	\$ 19,100	\$ 19,000
12	Material Testing	%	1%	\$ 382,000	\$ 3,820	\$ 4,000
13	Utility Relocations	%	10%	\$ 382,000	\$ 38,200	\$ 38,000
14	Aboveground Components	%	10%	\$ 382,000	\$ 38,200	\$ 38,000
15	Water Main Distribution/Transmission System Improvements	%	0%	\$ 382,000	\$ -	\$ -
16	Sanitary Sewer Collection System Improvements	%	0%	\$ 382,000	\$ -	\$ -
Subtotal						\$ 126,000
17	Estimating Contingency (10%)					\$ 51,000
Total Construction Subtotal						\$ 559,000
18	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 559,000	\$ 33,540	\$ 34,000
19	Permitting Fee (5%)	%	5%	\$ 559,000	\$ 27,950	\$ 28,000
20	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 559,000	\$ 55,900	\$ 56,000
21	CEI Management (Owner's Representative) (5%)	%	5%	\$ 559,000	\$ 27,950	\$ 28,000
22	Construction Contingency (10%)	%	10%	\$ 559,000	\$ 55,900	\$ 56,000
Subtotal						\$ 202,000
Total						\$ 761,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
N Shore B & C - Dickens Ave

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	175	\$ 180	\$ 31,500	\$ 32,000
2	Reinforced Concrete Pipe 48"	LF	360	\$ 425	\$ 153,000	\$ 153,000
3	Reinforced Concrete Pipe 84"	LF	360	\$ 1,200	\$ 432,000	\$ 432,000
4	Concrete Manhole - 8'	Each	4	\$ 10,650	\$ 42,600	\$ 43,000
5	Curb Inlet	Each	8	\$ 8,475	\$ 67,800	\$ 68,000
6	1-1/2" Asphalt	Ton	27	\$ 172	\$ 4,633	\$ 5,000
7	10" Base	SY	9,000	\$ 20	\$ 180,000	\$ 180,000
8	12" Subgrade	SY	9,360	\$ 6	\$ 54,933	\$ 55,000
9	Curb	LF	1,440	\$ 31	\$ 44,640	\$ 45,000
<i>Subtotal</i>						<i>\$ 1,013,000</i>
10	Mobilization	%	7%	\$ 1,013,000	\$ 70,910	\$ 71,000
11	Maintenance of Traffic	%	5%	\$ 1,013,000	\$ 50,650	\$ 51,000
12	Material Testing	%	1%	\$ 1,013,000	\$ 10,130	\$ 10,000
13	Utility Relocations	%	10%	\$ 1,013,000	\$ 101,300	\$ 101,000
14	Aboveground Components	%	10%	\$ 1,013,000	\$ 101,300	\$ 101,000
15	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,013,000	\$ 202,600	\$ 203,000
16	Sanitary Sewer Collection System Improvements	%	20%	\$ 1,013,000	\$ 202,600	\$ 203,000
<i>Subtotal</i>						<i>\$ 740,000</i>
17	Estimating Contingency (10%)					\$ 175,000
<i>Total Construction Subtotal</i>						<i>\$ 1,928,000</i>
18	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 1,928,000	\$ 115,680	\$ 116,000
19	Permitting Fee (5%)	%	5%	\$ 1,928,000	\$ 96,400	\$ 96,000
20	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 1,928,000	\$ 192,800	\$ 193,000
21	CEI Management (Owner's Representative) (5%)	%	5%	\$ 1,928,000	\$ 96,400	\$ 96,000
22	Construction Contingency (10%)	%	10%	\$ 1,928,000	\$ 192,800	\$ 193,000
<i>Subtotal</i>						<i>\$ 694,000</i>
<i>Total</i>						<i>\$ 2,622,000</i>

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Flamingo/Lummus A - 6th St

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	210	\$ 180	\$ 37,800	\$ 38,000
2	Reinforced Concrete Pipe 30"	LF	840	\$ 220	\$ 184,800	\$ 185,000
3	Concrete Manhole - 8'	Each	5	\$ 10,650	\$ 53,250	\$ 53,000
4	Curb Inlet	Each	4	\$ 8,475	\$ 33,900	\$ 34,000
5	1-1/2" Asphalt	Ton	39	\$ 172	\$ 6,757	\$ 7,000
6	10" Base	SY	13,125	\$ 20	\$ 262,500	\$ 263,000
7	12" Subgrade	SY	13,650	\$ 6	\$ 80,111	\$ 80,000
8	Fill for Road Raising (6")	CY	373	\$ 25	\$ 9,333	\$ 9,000
9	Curb	LF	1,680	\$ 31	\$ 52,080	\$ 52,000
<i>Subtotal</i>						<i>\$ 721,000</i>
10	Mobilization	%	7%	\$ 721,000	\$ 50,470	\$ 50,000
11	Maintenance of Traffic	%	5%	\$ 721,000	\$ 36,050	\$ 36,000
12	Material Testing	%	1%	\$ 721,000	\$ 7,210	\$ 7,000
13	Utility Relocations	%	10%	\$ 721,000	\$ 72,100	\$ 72,000
14	Aboveground Components	%	10%	\$ 721,000	\$ 72,100	\$ 72,000
15	Water Main Distribution/Transmission System Improvements	%	20%	\$ 721,000	\$ 144,200	\$ 144,000
16	Sanitary Sewer Collection System Improvements	%	20%	\$ 721,000	\$ 144,200	\$ 144,000
<i>Subtotal</i>						<i>\$ 525,000</i>
17	Estimating Contingency (10%)					\$ 125,000
<i>Total Construction Subtotal</i>						<i>\$ 1,371,000</i>
18	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 1,371,000	\$ 82,260	\$ 82,000
19	Permitting Fee (5%)	%	5%	\$ 1,371,000	\$ 68,550	\$ 69,000
20	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 1,371,000	\$ 137,100	\$ 137,000
21	CEI Management (Owner's Representative) (5%)	%	5%	\$ 1,371,000	\$ 68,550	\$ 69,000
22	Construction Contingency (10%)	%	10%	\$ 1,371,000	\$ 137,100	\$ 137,000
<i>Subtotal</i>						<i>\$ 494,000</i>
<i>Total</i>						<i>\$ 1,865,000</i>

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
North Shore A - Byron Ave

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	245	\$ 180	\$ 44,100	\$ 44,000
2	Reinforced Concrete Pipe 72"	LF	1,465	\$ 925	\$ 1,355,125	\$ 1,355,000
3	Concrete Manhole - 8'	Each	5	\$ 10,650	\$ 53,250	\$ 53,000
4	Curb Inlet	Each	7	\$ 8,475	\$ 59,325	\$ 59,000
5	1-1/2" Asphalt	Ton	64	\$ 172	\$ 11,004	\$ 11,000
6	10" Base	SY	21,375	\$ 20	\$ 427,500	\$ 428,000
7	12" Subgrade	SY	22,230	\$ 6	\$ 130,466	\$ 130,000
8	Curb	LF	2,930	\$ 31	\$ 90,830	\$ 91,000

Subtotal **\$ 2,171,000**

9	Mobilization	%	7%	\$ 2,171,000	\$ 151,970	\$ 152,000
10	Maintenance of Traffic	%	5%	\$ 2,171,000	\$ 108,550	\$ 109,000
11	Material Testing	%	1%	\$ 2,171,000	\$ 21,710	\$ 22,000
12	Utility Relocations	%	10%	\$ 2,171,000	\$ 217,100	\$ 217,000
13	Aboveground Components	%	10%	\$ 2,171,000	\$ 217,100	\$ 217,000
14	Water Main Distribution/Transmission System Improvements	%	20%	\$ 2,171,000	\$ 434,200	\$ 434,000
15	Sanitary Sewer Collection System Improvements	%	20%	\$ 2,171,000	\$ 434,200	\$ 434,000

Subtotal **\$ 1,585,000**

16	Estimating Contingency (10%)					\$ 376,000
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Total Construction Subtotal **\$ 4,132,000**

17	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 4,132,000	\$ 247,920	\$ 248,000
18	Permitting Fee (5%)	%	5%	\$ 4,132,000	\$ 206,600	\$ 207,000
19	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 4,132,000	\$ 413,200	\$ 413,000
20	CEI Management (Owner's Representative) (5%)	%	5%	\$ 4,132,000	\$ 206,600	\$ 207,000
21	Construction Contingency (10%)	%	10%	\$ 4,132,000	\$ 413,200	\$ 413,000
22	CIP Management Fee (6.5%)	%	6.5%	\$ 4,132,000	\$ 268,580	\$ 269,000

Subtotal **\$ 1,757,000**

Total **\$ 5,889,000**

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Nautilus D - N Bay Rd

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 18"	LF	140	\$ 130	\$ 18,200	\$ 18,000
2	Reinforced Concrete Pipe 60"	LF	745	\$ 580	\$ 432,100	\$ 432,000
3	Concrete Manhole - 8'	Each	4	\$ 10,650	\$ 42,600	\$ 43,000
4	Curb Inlet	Each	8	\$ 8,475	\$ 67,800	\$ 68,000
5	1-1/2" Asphalt	Ton	33	\$ 172	\$ 5,695	\$ 6,000
6	10" Base	SY	11,063	\$ 20	\$ 221,250	\$ 221,000
7	12" Subgrade	SY	11,505	\$ 6	\$ 67,522	\$ 68,000
8	Fill for Road Raising (6")	CY	1,498	\$ 25	\$ 37,450	\$ 37,000
Subtotal						\$ 893,000
9	Mobilization	%	7%	\$ 893,000	\$ 62,510	\$ 63,000
10	Maintenance of Traffic	%	5%	\$ 893,000	\$ 44,650	\$ 45,000
11	Material Testing	%	1%	\$ 893,000	\$ 8,930	\$ 9,000
12	Utility Relocations	%	10%	\$ 893,000	\$ 89,300	\$ 89,000
13	Aboveground Components	%	10%	\$ 893,000	\$ 89,300	\$ 89,000
14	Water Main Distribution/Transmission System Improvements	%	20%	\$ 893,000	\$ 178,600	\$ 179,000
15	Sanitary Sewer Collection System Improvements	%	0%	\$ 893,000	\$ -	\$ -
Subtotal						\$ 474,000
Water Quality Pump Station (6 cfs)						
16	Membrane Filtration	cfs	6.0	\$ 56,000	\$ 336,000	\$ 336,000
17	Hydrodynamic Separators	cfs	6.0	\$ 11,000	\$ 66,000	\$ 66,000
18	Wet Well / Weir Structure	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
19	In-Line Check Valve	EA	1.0	\$ 35,000	\$ 35,000	\$ 35,000
20	Junction Box/ Manhole	EA	1.0	\$ 30,000	\$ 30,000	\$ 30,000
21	Force Main	LF	50.0	\$ 120	\$ 6,000	\$ 6,000
22	Storm Drainage Bypass Piping	LF	50.0	\$ 400	\$ 20,000	\$ 20,000
23	Watertight/Submersible Control Panel	EA	1.0	\$ 175,000	\$ 175,000	\$ 175,000
24	Watertight Wet Well Hatches	EA	3.0	\$ 12,500	\$ 37,500	\$ 38,000
25	Site Electrical Work	LS	1.0	\$ 75,000	\$ 75,000	\$ 75,000
26	Submersible Pump	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
Subtotal						\$ 1,081,000
27	Estimating Contingency (10%)					\$ 136,000
Total Construction Subtotal						\$ 2,584,000
28	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 2,584,000	\$ 155,040	\$ 155,000
29	Permitting Fee (5%)	%	5%	\$ 2,584,000	\$ 129,200	\$ 129,000
30	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 2,584,000	\$ 258,400	\$ 258,000
31	CEI Management (Owner's Representative) (5%)	%	5%	\$ 2,584,000	\$ 129,200	\$ 129,000
32	Construction Contingency (10%)	%	10%	\$ 2,584,000	\$ 258,400	\$ 258,000
Subtotal						\$ 929,000
Total						\$ 3,513,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Flamingo/Lummus C - North

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	42	\$ 180	\$ 7,560	\$ 8,000
2	Reinforced Concrete Pipe 48"	LF	1,280	\$ 425	\$ 544,000	\$ 544,000
3	Concrete Manhole - 8'	Each	3	\$ 10,650	\$ 31,950	\$ 32,000
4	Curb Inlet	Each	6	\$ 8,475	\$ 50,850	\$ 51,000
5	1-1/2" Asphalt	Ton	50	\$ 172	\$ 8,507	\$ 9,000
6	10" Base	SY	16,525	\$ 20	\$ 330,500	\$ 331,000
7	12" Subgrade	SY	17,186	\$ 6	\$ 100,863	\$ 101,000
8	Fill for Road Raising (6")	CY	1,333	\$ 25	\$ 33,333	\$ 33,000
9	Curb	LF	2,560	\$ 31	\$ 79,360	\$ 79,000
Subtotal						\$ 1,188,000
10	Mobilization	%	7%	\$ 1,188,000	\$ 83,160	\$ 83,000
11	Maintenance of Traffic	%	5%	\$ 1,188,000	\$ 59,400	\$ 59,000
12	Material Testing	%	1%	\$ 1,188,000	\$ 11,880	\$ 12,000
13	Utility Relocations	%	10%	\$ 1,188,000	\$ 118,800	\$ 119,000
14	Aboveground Components	%	10%	\$ 1,188,000	\$ 118,800	\$ 119,000
15	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,188,000	\$ 237,600	\$ 238,000
16	Sanitary Sewer Collection System Improvements	%	20%	\$ 1,188,000	\$ 237,600	\$ 238,000
Subtotal						\$ 868,000
17	Estimating Contingency (10%)					\$ 206,000
Total Construction Subtotal						\$ 2,262,000
18	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 2,262,000	\$ 135,720	\$ 136,000
19	Permitting Fee (5%)	%	5%	\$ 2,262,000	\$ 113,100	\$ 113,000
20	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 2,262,000	\$ 226,200	\$ 226,000
21	CEI Management (Owner's Representative) (5%)	%	5%	\$ 2,262,000	\$ 113,100	\$ 113,000
22	Construction Contingency (10%)	%	10%	\$ 2,262,000	\$ 226,200	\$ 226,000
Subtotal						\$ 814,000
Total						\$ 3,076,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Nautilus A - Royal Palm Ave

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	175	\$ 180	\$ 31,500	\$ 32,000
2	Reinforced Concrete Pipe 36"	LF	325	\$ 280	\$ 91,000	\$ 91,000
3	Reinforced Concrete Pipe 42"	LF	185	\$ 325	\$ 60,125	\$ 60,000
4	Reinforced Concrete Pipe 48"	LF	150	\$ 425	\$ 63,750	\$ 64,000
5	Reinforced Concrete Pipe 66"	LF	150	\$ 690	\$ 103,500	\$ 104,000
6	Concrete Manhole - 8'	Each	10	\$ 10,650	\$ 106,500	\$ 107,000
7	Curb Inlet	Each	20	\$ 8,475	\$ 169,500	\$ 170,000
8	1-1/2" Asphalt	Ton	31	\$ 172	\$ 5,373	\$ 5,000
9	10" Base	SY	10,438	\$ 20	\$ 208,750	\$ 209,000
10	12" Subgrade	SY	10,855	\$ 6	\$ 63,707	\$ 64,000
11	Fill for Road Raising (6")	CY	711	\$ 25	\$ 17,778	\$ 18,000
Subtotal						\$ 924,000
12	Mobilization	%	7%	\$ 924,000	\$ 64,680	\$ 65,000
13	Maintenance of Traffic	%	5%	\$ 924,000	\$ 46,200	\$ 46,000
14	Material Testing	%	1%	\$ 924,000	\$ 9,240	\$ 9,000
15	Utility Relocations	%	10%	\$ 924,000	\$ 92,400	\$ 92,000
16	Aboveground Components	%	10%	\$ 924,000	\$ 92,400	\$ 92,000
17	Water Main Distribution/Transmission System Improvements	%	20%	\$ 924,000	\$ 184,800	\$ 185,000
18	Sanitary Sewer Collection System Improvements	%	20%	\$ 924,000	\$ 184,800	\$ 185,000
Subtotal						\$ 674,000
19	Estimating Contingency (10%)					\$ 159,000
Total Construction Subtotal						\$ 1,757,000
20	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 1,757,000	\$ 105,420	\$ 105,000
21	Permitting Fee (5%)	%	5%	\$ 1,757,000	\$ 87,850	\$ 88,000
22	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 1,757,000	\$ 175,700	\$ 176,000
23	CEI Management (Owner's Representative) (5%)	%	5%	\$ 1,757,000	\$ 87,850	\$ 88,000
24	Construction Contingency (10%)	%	10%	\$ 1,757,000	\$ 175,700	\$ 176,000
Subtotal						\$ 633,000
Total						\$ 2,390,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
North Lakeview A

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	140	\$ 180	\$ 25,200	\$ 25,000
2	Reinforced Concrete Pipe 48"	LF	400	\$ 425	\$ 170,000	\$ 170,000
3	Reinforced Concrete Pipe 60"	LF	690	\$ 580	\$ 400,200	\$ 400,000
4	Reinforced Concrete Pipe 66"	LF	300	\$ 690	\$ 207,000	\$ 207,000
5	Concrete Manhole - 8'	Each	4	\$ 10,650	\$ 37,275	\$ 37,000
6	Curb Inlet	Each	7	\$ 8,475	\$ 59,325	\$ 59,000
7	1-1/2" Asphalt	Ton	57	\$ 172	\$ 9,846	\$ 10,000
8	10" Base	SY	19,125	\$ 20	\$ 382,500	\$ 383,000
9	12" Subgrade	SY	19,890	\$ 6	\$ 116,733	\$ 117,000

Subtotal **\$ 1,408,000**

10	Mobilization	%	7%	\$ 1,408,000	\$ 98,560	\$ 99,000
11	Maintenance of Traffic	%	5%	\$ 1,408,000	\$ 70,400	\$ 70,000
12	Material Testing	%	1%	\$ 1,408,000	\$ 14,080	\$ 14,000
13	Utility Relocations	%	10%	\$ 1,408,000	\$ 140,800	\$ 141,000
14	Aboveground Components	%	10%	\$ 1,408,000	\$ 140,800	\$ 141,000
15	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,408,000	\$ 281,600	\$ 282,000
16	Sanitary Sewer Collection System Improvements	%	0%	\$ 1,408,000	\$ -	\$ -

Subtotal **\$ 747,000**

17	Estimating Contingency (10%)					\$ 216,000
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Total Construction Subtotal **\$ 2,371,000**

18	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 2,371,000	\$ 142,260	\$ 142,000
19	Permitting Fee (5%)	%	5%	\$ 2,371,000	\$ 118,550	\$ 119,000
20	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 2,371,000	\$ 237,100	\$ 237,000
21	CEI Management (Owner's Representative) (5%)	%	5%	\$ 2,371,000	\$ 118,550	\$ 119,000
22	Construction Contingency (10%)	%	10%	\$ 2,371,000	\$ 237,100	\$ 237,000

Subtotal **\$ 854,000**

Total **\$ 3,225,000**

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Nautilus G - N Bay Rd

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 42"	LF	615	\$ 325	\$ 199,875	\$ 200,000
2	Exfiltration Trench Removal	LF	160	\$ 520	\$ 83,200	\$ 83,000
3	Concrete Manhole - 8'	Each	2	\$ 10,650	\$ 15,975	\$ 16,000
4	Curb Inlet	Each	3	\$ 8,475	\$ 25,425	\$ 25,000
5	1-1/2" Asphalt	Ton	23	\$ 172	\$ 3,958	\$ 4,000
6	10" Base	SY	7,688	\$ 20	\$ 153,750	\$ 154,000
7	12" Subgrade	SY	7,995	\$ 6	\$ 46,922	\$ 47,000
8	Fill for Road Raising (6")	CY	1,093	\$ 25	\$ 27,333	\$ 27,000
9	Injection Well	Each	1	\$ 750,000	\$ 750,000	\$ 750,000
Subtotal						\$ 1,306,000
10	Mobilization	%	7%	\$ 1,306,000	\$ 91,420	\$ 91,000
11	Maintenance of Traffic	%	5%	\$ 1,306,000	\$ 65,300	\$ 65,000
12	Material Testing	%	1%	\$ 1,306,000	\$ 13,060	\$ 13,000
13	Utility Relocations	%	10%	\$ 1,306,000	\$ 130,600	\$ 131,000
14	Aboveground Components	%	10%	\$ 1,306,000	\$ 130,600	\$ 131,000
15	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,306,000	\$ 261,200	\$ 261,000
16	Sanitary Sewer Collection System Improvements	%	20%	\$ 1,306,000	\$ 261,200	\$ 261,000
Subtotal						\$ 953,000
17	Estimating Contingency (10%)					\$ 226,000
Total Construction Subtotal						\$ 2,485,000
18	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 2,485,000	\$ 149,100	\$ 149,000
19	Permitting Fee (5%)	%	5%	\$ 2,485,000	\$ 124,250	\$ 124,000
20	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 2,485,000	\$ 248,500	\$ 249,000
21	CEI Management (Owner's Representative) (5%)	%	5%	\$ 2,485,000	\$ 124,250	\$ 124,000
22	Construction Contingency (10%)	%	10%	\$ 2,485,000	\$ 248,500	\$ 249,000
Subtotal						\$ 895,000
Total						\$ 3,380,000

City of Miami Beach

Engineer's Preliminary Opinion of Probable Costruction Cost Bayshore B

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 18"	LF	105	\$ 130	\$ 13,650	\$ 14,000
2	Reinforced Concrete Pipe 48"	LF	350	\$ 425	\$ 148,750	\$ 149,000
3	Reinforced Concrete Pipe 72"	LF	805	\$ 925	\$ 744,625	\$ 745,000
4	Exfiltration Trench Removal	LF	251	\$ 520	\$ 130,520	\$ 131,000
5	Concrete Manhole - 8'	Each	5	\$ 10,650	\$ 53,250	\$ 53,000
6	Curb Inlet	Each	10	\$ 8,475	\$ 84,750	\$ 85,000
7	1-1/2" Asphalt	Ton	47	\$ 172	\$ 8,108	\$ 8,000
8	10" Base	SY	15,750	\$ 20	\$ 315,000	\$ 315,000
9	12" Subgrade	SY	16,380	\$ 6	\$ 96,133	\$ 96,000
10	Fill for Road Raising (6")	CY	622	\$ 25	\$ 15,556	\$ 16,000
<i>Subtotal</i>						<i>\$ 1,612,000</i>
11	Mobilization	%	7%	\$ 1,612,000	\$ 112,840	\$ 113,000
12	Maintenance of Traffic	%	5%	\$ 1,612,000	\$ 80,600	\$ 81,000
13	Material Testing	%	1%	\$ 1,612,000	\$ 16,120	\$ 16,000
14	Utility Relocations	%	10%	\$ 1,612,000	\$ 161,200	\$ 161,000
15	Aboveground Components	%	10%	\$ 1,612,000	\$ 161,200	\$ 161,000
16	Water Main Distribution/Transmission System Improvements	%	20%	\$ 1,612,000	\$ 322,400	\$ 322,000
17	Sanitary Sewer Collection System Improvements	%	20%	\$ 1,612,000	\$ 322,400	\$ 322,000
<i>Subtotal</i>						<i>\$ 1,176,000</i>
18	Estimating Contingency (10%)					\$ 279,000
<i>Total Construction Subtotal</i>						<i>\$ 3,067,000</i>
19	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 3,067,000	\$ 184,020	\$ 184,000
20	Permitting Fee (5%)	%	5%	\$ 3,067,000	\$ 153,350	\$ 153,000
21	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 3,067,000	\$ 306,700	\$ 307,000
22	CEI Management (Owner's Representative) (5%)	%	5%	\$ 3,067,000	\$ 153,350	\$ 153,000
23	Construction Contingency (10%)	%	10%	\$ 3,067,000	\$ 306,700	\$ 307,000
<i>Subtotal</i>						<i>\$ 1,104,000</i>
<i>Total</i>						<i>\$ 4,171,000</i>

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Normandy Shores A - Shore Lane

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 24"	LF	300	\$ 180	\$ 54,000	\$ 54,000
2	Reinforced Concrete Pipe 48"	LF	230	\$ 425	\$ 97,750	\$ 98,000
3	Exfiltration Trench Removal	LF	79	\$ 520	\$ 41,080	\$ 41,000
4	Concrete Manhole - 8'	Each	2	\$ 10,650	\$ 21,300	\$ 21,000
5	Curb Inlet	Each	4	\$ 8,475	\$ 33,900	\$ 34,000
6	1-1/2" Asphalt	Ton	20	\$ 172	\$ 3,411	\$ 3,000
7	10" Base	SY	6,625	\$ 20	\$ 132,500	\$ 133,000
8	12" Subgrade	SY	6,890	\$ 6	\$ 40,437	\$ 40,000
9	Fill for Road Raising (6")	CY	791	\$ 25	\$ 19,778	\$ 20,000
10	Curb	LF	460	\$ 31	\$ 14,260	\$ 14,000
Subtotal						\$ 458,000
11	Mobilization	%	7%	\$ 458,000	\$ 32,060	\$ 32,000
12	Maintenance of Traffic	%	5%	\$ 458,000	\$ 22,900	\$ 23,000
13	Material Testing	%	1%	\$ 458,000	\$ 4,580	\$ 5,000
14	Utility Relocations	%	10%	\$ 458,000	\$ 45,800	\$ 46,000
15	Aboveground Components	%	10%	\$ 458,000	\$ 45,800	\$ 46,000
16	Water Main Distribution/Transmission System Improvements	%	20%	\$ 458,000	\$ 91,600	\$ 92,000
17	Sanitary Sewer Collection System Improvements	%	20%	\$ 458,000	\$ 91,600	\$ 92,000
Subtotal						\$ 336,000
18	Estimating Contingency (10%)					\$ 80,000
Total Construction Subtotal						\$ 874,000
19	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 874,000	\$ 52,440	\$ 52,000
20	Permitting Fee (5%)	%	5%	\$ 874,000	\$ 43,700	\$ 44,000
21	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 874,000	\$ 87,400	\$ 87,000
22	CEI Management (Owner's Representative) (5%)	%	5%	\$ 874,000	\$ 43,700	\$ 44,000
23	Construction Contingency (10%)	%	10%	\$ 874,000	\$ 87,400	\$ 87,000
Subtotal						\$ 314,000
Total						\$ 1,188,000

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
Lower North Bay Rd A

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 18"	LF	210	\$ 130	\$ 27,300	\$ 27,000
2	Concrete Manhole - 8'	Each	3	\$ 10,650	\$ 31,950	\$ 32,000
3	Curb Inlet	Each	6	\$ 8,475	\$ 50,850	\$ 51,000
4	1-1/2" Asphalt	Ton	8	\$ 172	\$ 1,351	\$ 1,000
5	10" Base	SY	2,625	\$ 20	\$ 52,500	\$ 53,000
6	12" Subgrade	SY	2,730	\$ 6	\$ 16,022	\$ 16,000
7	Fill for Road Raising (6")	CY	4,276	\$ 25	\$ 106,889	\$ 107,000
8	Curb	LF	420	\$ 31	\$ 13,020	\$ 13,000
<i>Subtotal</i>						<i>\$ 300,000</i>
9	Mobilization	%	7%	\$ 300,000	\$ 21,000	\$ 21,000
10	Maintenance of Traffic	%	5%	\$ 300,000	\$ 15,000	\$ 15,000
11	Material Testing	%	1%	\$ 300,000	\$ 3,000	\$ 3,000
12	Aboveground Components	%	10%	\$ 300,000	\$ 30,000	\$ 30,000
<i>Subtotal</i>						<i>\$ 69,000</i>
13	Membrane Filtration	cfs	16	\$ 56,000	\$ 896,000	\$ 896,000
<i>Subtotal</i>						<i>\$ 896,000</i>
14	Estimating Contingency (10%)					\$ 37,000
<i>Total Construction Subtotal</i>						<i>\$ 1,302,000</i>
15	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 1,302,000	\$ 78,120	\$ 78,000
16	Permitting Fee (5%)	%	5%	\$ 1,302,000	\$ 65,100	\$ 65,000
17	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 1,302,000	\$ 130,200	\$ 130,000
18	CEI Management (Owner's Representative) (5%)	%	5%	\$ 1,302,000	\$ 65,100	\$ 65,000
19	Construction Contingency (10%)	%	10%	\$ 1,302,000	\$ 130,200	\$ 130,000
<i>Subtotal</i>						<i>\$ 468,000</i>
<i>Total</i>						<i>\$ 1,770,000</i>

City of Miami Beach
Engineer's Preliminary Opinion of Probable Costruction Cost
La Gorce Island

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost	Total Cost Rounded to the Nearest 1000
1	Reinforced Concrete Pipe 18"	LF	275	\$ 130	\$ 35,750	\$ 36,000
2	Reinforced Concrete Pipe 30"	LF	180	\$ 220	\$ 39,600	\$ 40,000
3	Reinforced Concrete Pipe 36"	LF	210	\$ 280	\$ 58,800	\$ 59,000
4	Reinforced Concrete Pipe 42"	LF	105	\$ 325	\$ 34,125	\$ 34,000
5	Reinforced Concrete Pipe 60"	LF	785	\$ 580	\$ 455,300	\$ 455,000
6	Reinforced Concrete Pipe 72"	LF	300	\$ 925	\$ 277,500	\$ 278,000
7	Reinforced Concrete Pipe 84"	LF	330	\$ 1,200	\$ 396,000	\$ 396,000
8	Exfiltration Trench Removal	LF	105	\$ 520	\$ 54,600	\$ 55,000
9	Concrete Manhole - 8'	EA	8	\$ 10,650	\$ 85,200	\$ 85,000
10	Curb Inlet	EA	16	\$ 8,475	\$ 135,600	\$ 136,000
11	1-1/2" Asphalt	Ton	790	\$ 172	\$ 135,568	\$ 136,000
12	10" Base	SY	10,500	\$ 20	\$ 210,008	\$ 210,000
13	12" Subgrade	SY	10,969	\$ 6	\$ 64,375	\$ 64,000
14	Fill for Road Raising (6")	CY	2,702	\$ 25	\$ 67,556	\$ 68,000
Subtotal						\$ 2,052,000
15	Mobilization	%	7%	\$ 2,052,000	\$ 143,640	\$ 144,000
16	Maintenance of Traffic	%	5%	\$ 2,052,000	\$ 102,600	\$ 103,000
17	Material Testing	%	1%	\$ 2,052,000	\$ 20,520	\$ 21,000
18	Utility Relocations	%	10%	\$ 2,052,000	\$ 205,200	\$ 205,000
19	Aboveground Components	%	10%	\$ 2,052,000	\$ 205,200	\$ 205,000
20	Water Main Distribution/Transmission System Improvements	%	20%	\$ 2,052,000	\$ 410,400	\$ 410,000
21	Sanitary Sewer Collection System Improvements	%	20%	\$ 2,052,000	\$ 410,400	\$ 410,000
Subtotal						\$ 1,498,000
Water Quality Pump Station (6 cfs)						
22	Membrane Filtration	cfs	6.0	\$ 56,000	\$ 336,000	\$ 336,000
23	Hydrodynamic Separators	cfs	6.0	\$ 11,000	\$ 66,000	\$ 66,000
24	Wet Well / Weir Structure	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
25	In-Line Check Valve	EA	1.0	\$ 35,000	\$ 35,000	\$ 35,000
26	Junction Box/ Manhole	EA	1.0	\$ 30,000	\$ 30,000	\$ 30,000
27	Force Main	LF	50.0	\$ 120	\$ 6,000	\$ 6,000
28	Storm Drainage Bypass Piping	LF	50.0	\$ 400	\$ 20,000	\$ 20,000
29	Watertight/Submersible Control Panel	EA	1.0	\$ 175,000	\$ 175,000	\$ 175,000
30	Watertight Wet Well Hatches	EA	3.0	\$ 12,500	\$ 37,500	\$ 38,000
31	Site Electrical Work	LS	1.0	\$ 75,000	\$ 75,000	\$ 75,000
32	Submersible Pump	EA	1.0	\$ 150,000	\$ 150,000	\$ 150,000
Subtotal						\$ 1,081,000
33	Estimating Contingency (10%)					\$ 355,000
Total Construction Subtotal						\$ 4,986,000
34	Program/Construction Management (PM) Fee (6%)	%	6%	\$ 4,986,000	\$ 299,160	\$ 299,000
35	Permitting Fee (5%)	%	5%	\$ 4,986,000	\$ 249,300	\$ 249,000
36	Architect/Engineering (A/E) Fee (10%)	%	10%	\$ 4,986,000	\$ 498,600	\$ 499,000
37	CEI Management (Owner's Representative) (5%)	%	5%	\$ 4,986,000	\$ 249,300	\$ 249,000
38	Construction Contingency (10%)	%	10%	\$ 4,986,000	\$ 498,600	\$ 499,000
Subtotal						\$ 1,795,000
Total						\$ 6,781,000