

A. R. TOUSSAINT & ASSOC., INC.  
 Land Surveyors  
 Miami, Florida

Order # 14481 Date 06-05-09 Sec 20 Twp 54 Rge 42 Sheet 1 of       
 City of MIAMI Project VIRGINIA KEY BEACH PARK F.B.# 546-1 Calc by AT  
 Client VIRGINIA KEY BEACH PARK County MIAMI-DADE

Station	Distance	Azimuth Bearing	Sin	Cos.	X East	Y North	File
87-91-DA31AZ MK	2578.88'	S 45° 40' 54" E	+ 1849.299	- 1797.421	932,162.327'	509,567.654'	0.01
87-91-DA31	202.80'	134° 11' 06" (1)	- 145.426	+ 141.347	934,011.626	507,770.233	0.02
TRAV. POINT -1	1977.82(A)	X 34° 32' 47" (4)			933,866.200	507,911.580	0.03
35SF = 1,00003080	1977.88G	168° 43' 53" ✓					
	1977.85'	- 02" ✓	- 386.514	+ 1939.742 ✓	933,479.686	509,851.726 ✓	
TRAV PT R-87	1977.88'	168° 43' 50" ✓			- 0.005	- 0.036	0.04
	1114.18'	X = 244° 17' 45" (8)			933,479.681'	509,851.290	
	1114.21G	233° 01' 38" ✓					
	1114.20'	- 05" ✓	+ 896.156	+ 670.147 ✓	934,369.836 ✓	510,521.473 ✓	
TRAV PT R-86	3092.11'	233° 01' 36" ✓			- 0.008	- 0.056	
	425.77'	X = 193° 32' 43" (6)			934,869.828	510,521.417 ✓	0.05
	425.80G	246° 34' 21" ✓					
	425.80	- 07	+ 390.693	+ 169.806 ✓	934,760.529	510,690.779 ✓	
TRAV PT, R-86A	3517.71'	246° 34' 17" ✓			- 0.009	- 0.063	
	544.87'	160° 51' 58" (7)			934,760.520 ✓	510,690.716 ✓	0.06
	544.89G	227° 26' 19" ✓					
	544.88	- 10" ✓	+ 401.323" ✓	+ 308.572 ✓	935,161.852	511,059.351 ✓	
TRAV PT, R-85	4062.80'	227° 26' 12" ✓			- 0.010	- 0.073	
		202° 24' 11" (9)			935,161.842 ✓	511,059.278" ✓	0.07

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 CITY OF MIAMI Project VIRGINIA KEY BEACH PARK F.B.# 546-1-  
 Client VIRGINIA KEY BEACH PARK County MIAMI - DDBE

Sheet 2 of

Station	Distance	Azimuth Bearing	Sin	Cos.	X East	Y North
	972.93	249°50'30"				
	992.96	- 12"				
		249°50'18"	+ 932.115	+ 342.244	936,093.967	511,401.595
	992.95	249°50'21"			- 0.013	- 0.091
TRAV Pt R-84	5055.76	106°43'21" (60)			936,093.954	511,401.504
	980.29	236°33'59"				
	980.326	- 14"				
		236°33'37"	+ 818.044	+ 540.215	936,912.011	511,941.810
	980.31	236°33'40" (11)			- 0.015	- 0.109
TRAV Pt R-83	6036.08	164°29'25"			936,911.996	511,941.701
	1176.29	221°03'16"				
	1176.336	- 17"				
		221°02'59"	+ 772.512	+ 887.117	937,684.523	512,828.927
	1176.31	221°03'01"			- 0.018	- 0.130
TRAV Pt R-82	7212.41	163°56'18" (12)			937,684.505	512,828.797
	1507.57	204°59'34"				
	1507.646	- 19"				
		204°59'15"	+ 636.858	+ 1366.525	938,321.381	514,195.452
	1507.61	204°59'16"			- 0.022	- 0.157
DEP Mon 87-71-DA-28	8720.05	343°12'30" (14)			938,321.359	514,195.295
Σ EC = 10" 79" = 30"		38°12'04"		EC =	70.022 + 0.157 = 0.159	8720.05 = 1:55,004
CLOSURE OK		- 0' 22"			CORR = -0.022/8720.05 = -0.00000252	
		38°11'42"	+ 14,146.388	- 28,794.828	- 0.157/8720.05 = -0.00001808	
CAPE FLORIDA LIGHT HOUSE OLD TOWER		Σ 9" = -02.4"			934,174.471	485,400.967

Station	Distance	Azimuth Bearing	Sin	Cos.	X East	Y North
TRAV PT R-86		53°01'36"	TRAVERSE TIE	FDEP T-87	FB 546-15	
TRAV PT R-87	13.15	233°01'36"	+ 10.506'	+ 7.909'	933,479.681	509,851.290
TRAV PT, R-87-1	178.27	4 281°54'25"	- 75.527	+ 161.480'	933,490.187	509,859.199
FOUND CONC. MGN B.N.R. - T-87		154°56'01"			933,414.660'	510,070.679'
FDEP T-87					-0.24	+ 0.089
					933,414.900	510,020.590
TRAV PT R-87		TRAVVERSE TIE		FDEP T-86	FB 546-16	
TRAV PT R-86	14.73	233°01'36"	+ 11.768	+ 8.859	934,369.228	510,521.417
TRAV PT R-86-1	187.52	4 154°56'18"	- 77.432	+ 169.865	934,381.596	510,530.276
FOUND CONC. MGN B.N.R. T-86					934,302.164	510,700.141
FDEP T-86					-0.296	+0.191
					934,302.460	510,699.950

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Sheet 4 of

Order # 14481 Date 06-28-07 Sec 20 Twp 54 Rge 42 Calc by AT  
 CITY OF MIAMI Sub'd VIRGINIA KEY BEACH PARK F. B. # 546-(150)  
 Client VIRGINIA KEY BEACH PARK County MIAMI-DADE

Station	Distance	Azimuth Bearing	Sin	Cos.	X East	Y North
TRAV PT R-84			TRVERSE TIE FD SH-2		EP R-85, MONUMENT DESTROYED, SET 1/2" I.P. #LB-273 CAP	FB 546-17
TRAV PT R-85	103.05'	69° 50' 21"	+ 18974	+ 161,288	935,160.816'	511,059.278'
SET 1/2" I.P. #LB-273 CAP R-85		4300' 46' 15"			935,160.816'	511,160.566'
FDEP R-85		190° 36' 36"			-0.054	+0.096
TRAV PT R-83			TIE FDEP SH-2	R-84, MON. FOUND	FB 546-18	
TRAV PT R-84-1	124.05'	56° 33' 40"	+ 103.517	+ 68.357'	936,093.934'	511,401.504'
TRAV PT R-84-1	38.47'	236° 33' 44"	- 33.216'	+ 19.407'	936,197.471'	511,469.861'
FB CONC. MON DNR R-84		4 = 243' 44' 09"			936,164,255'	511,489,268'
FDEP R-84		120° 17' 49"			-0.015	+0.108
TRAV PT R-82			TIE FDEP SH-2		FB 546-19	
TRAV PT R-83	161.39'	41° 03' 01"	+ 33.210	+ 157.936	936,911.996'	511,941,701'
FB CONC. MON DNR T-83		4320' 49' 29"			936,945,206'	512,099,637'
FDEP, T-83		191° 52' 30"			-0.954	+ 0.557
					936,946,160	512,099,080

Station	Distance	Azimuth Bearing	Sin	Cos.	X East	Y North
DEP 87-91-DA-28		TRAVERSE	TIE FDEP	R-82 RESET	FB 546-20	
		24° 59' 16"				
TRAV PT, R-82	257.10	-0-	+ 108.605	+ 239.035	937,684.505'	512,828.797
TRAV PT, R-82-1	39.90	X 274° 56' 03"	- 34.582	+ 19.903	937,793.110'	513,061.832
FP. CONC. MON DNR R-82, RESET		119° 55' 19"			937,758.528'	513,081.735'
FDEP R-82,					-0.112	+0.195
					937,758.640'	513,081.540'
TRAV PT, R-82		TRAVERSE	TIE FDEP	R-81	FB 546-21#22	
		204° 59' 16"	S4-2			
DEP 87-91-DA-28	646.68	X 18° 40' 07"	- 446.424'	- 467.868	938,321.359'	514,195.295'
TRAV PT R-81-1	5.14	Z 74° 59' 48"	+ 4.511'	- 2.464	937,874.935'	513,727.427'
FB CONC. MON DNR, R-81, DADE CO		298° 39' 02"			937,879.446'	513,724.963'
FDEP R-81					+0.006	+0.153
					937,879.440	513,724.810

Station	Distance	Azimuth Bearing	Sin	Cos.	X East	Y North
TRAV PT R-82		TRVERSE 264° 59' 16"	FDEP, R-80	FB 546-23		
DEP 87-91-DA-28	384.70	149° 08' 52"	- 39.307	+ 382.687	938, 321, 359	514, 195.295 0.111
FD CONC MON DNR-88					938, 282, 052	514, 577.982 0.124
FDEP, R-80					- 6.078	- 6.128
DEP 87-91-DA31-A2-MK		TRVERSE	FDEP R-88, FB 546-24		938, 282, 130	514, 578, 110
TP R-88	313.73	314° 11' 66"	SH-1 + 224.974	- 218, 663	932, 162, 327	509, 567.654 0.01
FD CONC MON DNR-88	13.52	223° 39' 16"	+ 9.333	+ 9.782	932, 387, 301	509, 348, 991 0.25
FDEP R-88					932, 396, 634	509, 358, 773 0.124
					- 0.176	+ 0.023
					932, 396, 810	509, 358, 750