VILLAGE OF KEY BISCAYNE

Office of the Village Manager

Village Council
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Village Manager
Genaro "Chip" Iglesias

MEMORANDUM

DATE: April 27, 2010

TO: Honorable Mayor and Members of the Village Council

FROM: Genaro "Chip" Iglesias, Village Manager

RE: Underground Power, Telephone, and Cable Lines

In March 2007, the Village considered the logistics and feasibility of converting all existing overhead power, telephone, and cable TV facilities within the Village boundaries to underground facilities. Based on ballpark figures provided by the utilities and comparative analysis, the total cost was estimated to be approximately $17 million. This figure did not include the cost to convert the existing individual services to each home, which would add another $4 to $5 million.

At the time of this feasibility study, the Village was on the eve of starting the long-awaited water & sewer infrastructure project, with an un-funded project balance of between $7 and $8 million. The Village Council decided that given the uncertainty at the time regarding the sewer project funding, a pending Public Service Commission ruling on FPL cost-sharing for underground conversion, the on-going discussions in Tallahassee regarding property tax reform, and the major impact these items would have on the Village's proposed under-grounding project, the project was put on hold until the picture became clearer with respect to these issues. As an interim measure, the Council approved the expenditure of up to $30,000 to have FPL/Bellsouth & Comcast provide the Village with designs and binding cost estimates for underground conversion within two small representative areas within the Village, one residential area and the other commercial. These binding cost estimates would serve to validate and/or refine the preliminary estimates for the entire project, which would be needed in the future should the project move forward.

The Village received the last of these binding estimates in February 2010. Utilizing the cost proposals provided by the utilities, more accurate and detailed construction cost estimates were prepared. The current estimate is roughly $15.8 million plus $4 to $5 million for the service lines.

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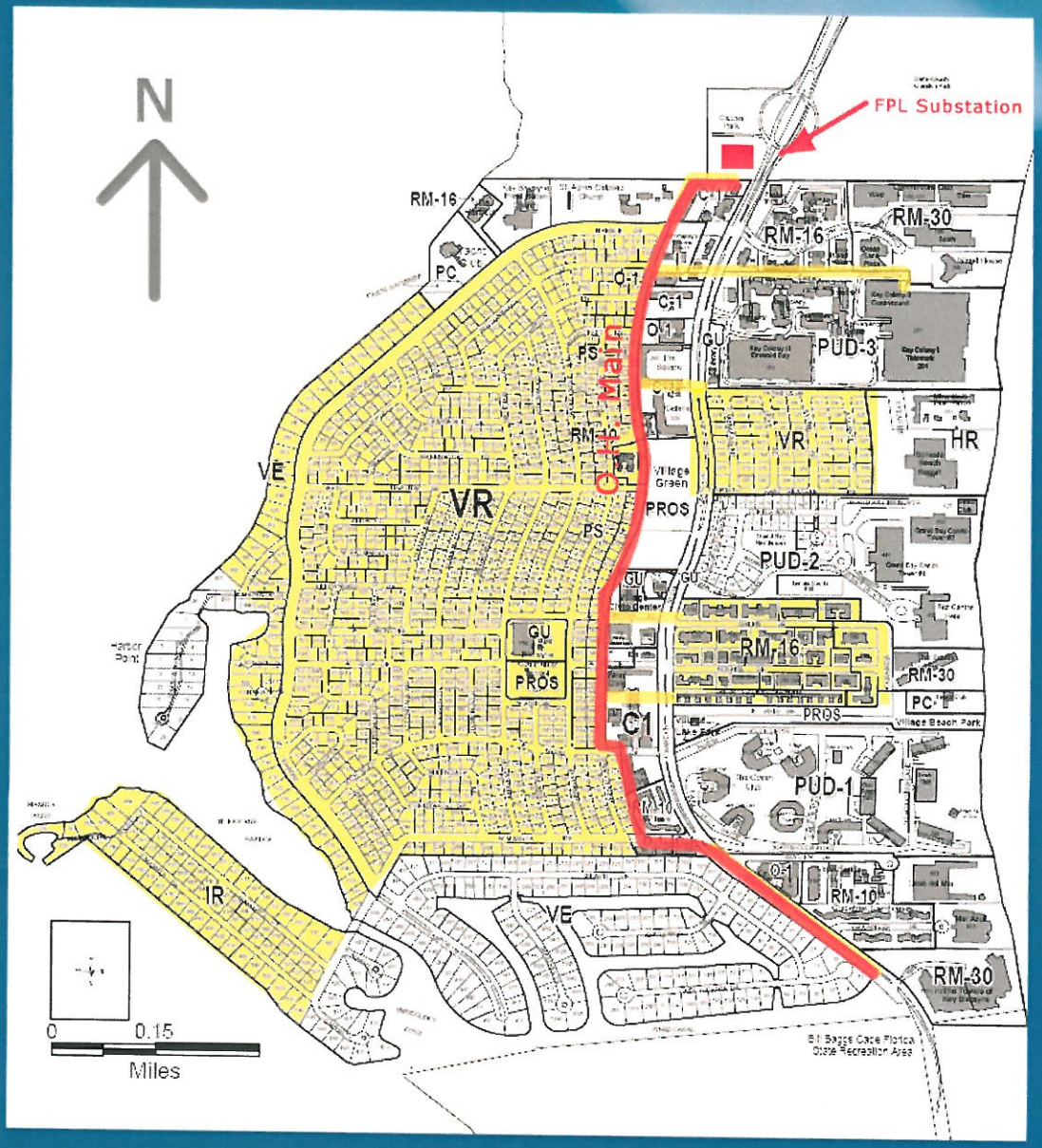
Village of *Key Biscayne*

Electrical, Telephone and Cable Facilities

Conversion from Overhead to Underground

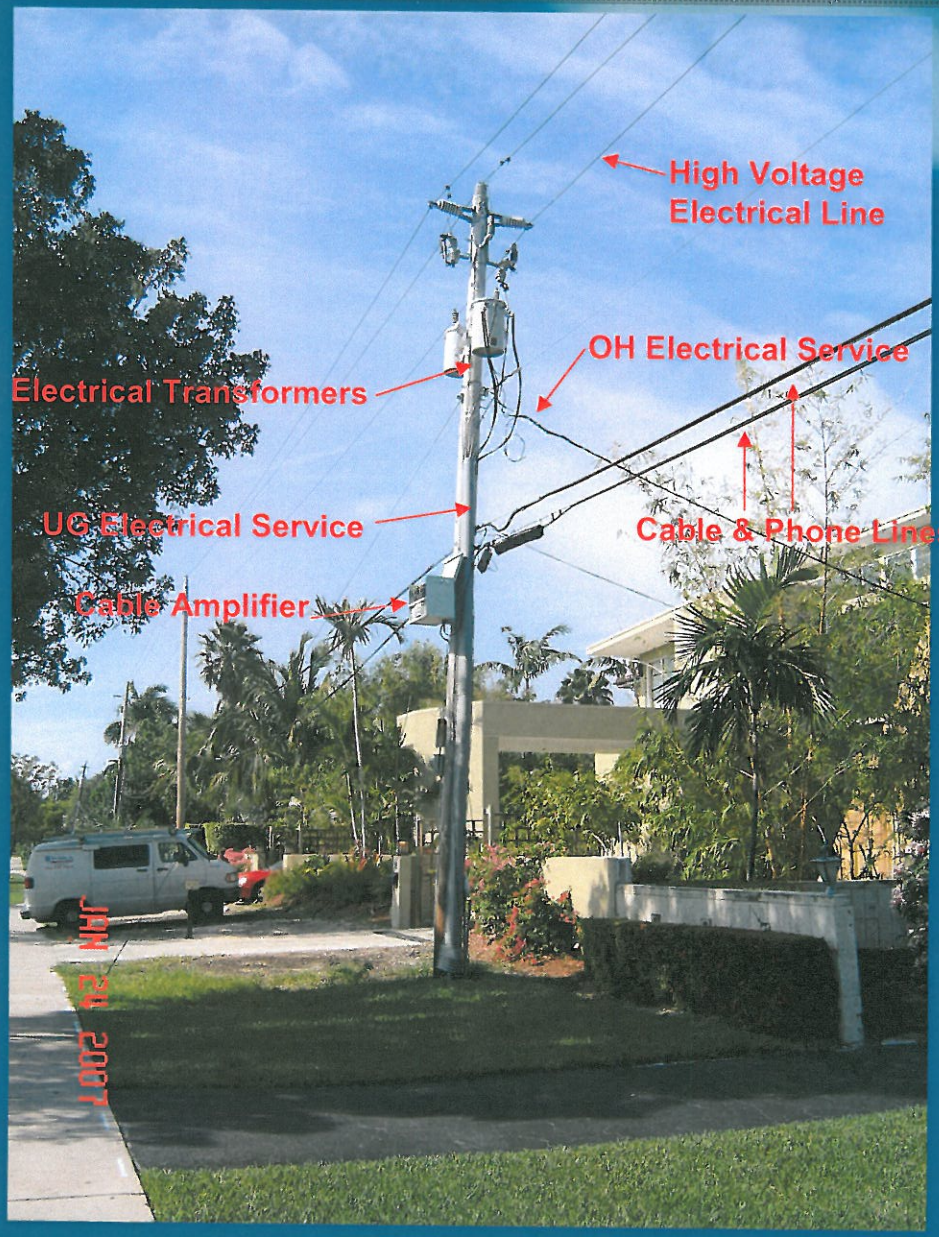
April 27, 2010

Existing areas served by overhead facilities



Overhead Feeder on Fernwood Road

Overhead Feeder on Harbor Drive



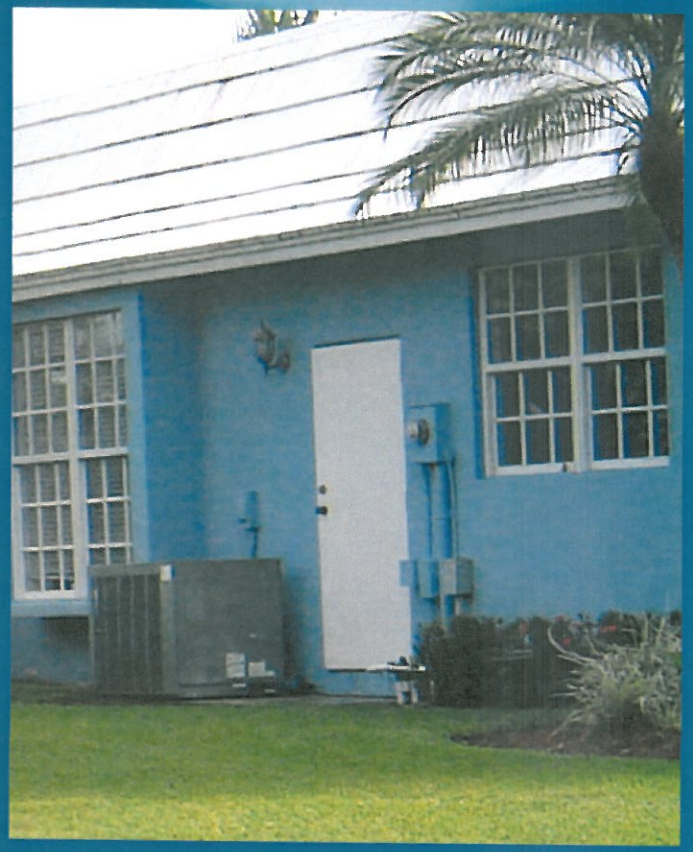
Overhead Feeder behind apartments on Galen

Ground mounted electrical transformer- Island Drive

Ground mounted electrical telephone & cable equipment- Island Drive

Conversion to underground

Overhead service



Underground service

FPL Storm Secure Plan
Hardening of overhead systems & increased maintenance

- Long Range FPL Plan (10 yrs+) –started 2007
- First priority given to critical infrastructure
- Hardening – upgrade poles & lines to 150 mph hurricane
- Hardened systems are still vulnerable to wind-blown vegetation and debris
- Improved pole inspections
- Accelerated line clearing, critical infrastructure priority
- Encouraged Underground Facilities

Underground conversion advantages

- Standard of service
  - Storm Secure Plan encourages underground conversion
  - 37% of FPL facilities are currently underground vs. 20% nationwide
- Life Safety
  - Reduced likelihood of electrocution during tree trimming activities or due to downed power lines
- More resilient to wind and weather
  - Even hardened above-ground systems are vulnerable to windblown vegetation and flying debris
- Less frequent outages
  - Difference of 1% for normal weather, but minimum 20% difference for major storms
  - Reduced outages means lighting is maintained for safety
- Aesthetics / Community Enhancement

Underground conversion disadvantages

- High cost (FPL 25% contribution)
- Construction inconvenience and disruption
- Damaged lines are difficult to locate
  - Consequently outages typically last longer
- Susceptible to flooding
  - Ground mounted equipment is vulnerable to storm surge
- Shorter life expectancy

Cost analysis and comparison for underground conversion – 2007 estimate

COST ANALYSIS & COMPARISON for UNDERGROUND CONVERSION							
MUNICIPALITY	FPL Electrical Estimate (with 25% Credit and Restoration Costs	Bell South Telephone Estimate	Cable Estimate	TOTAL for all 3 Utilities	Number of Home Connections	AVERAGE COST per HOME for Connection up to PROPERTY LINE	Additional COST per Home for Lateral Connection from PROPERTY LINE to METER
	A	B	C	D = A+B+C	E	F = D ÷ E	
Town of Golden Beach	$6,396,775	$387,666	$98,750	$6,883,191	394	**$17,470**	$2,000 to $3,000
Town of Palm Beach	$38,642,760	$6,261,750	$6,261,750	$51,166,260	2851	**$17,947**	$5,000 to $5,300
Town of Jupiter Island (1000 foot test project)	$8,000,000	N/A	N/A	$8,000,000	575	**$13,913**	N/A to N/A
Sunny Isles (Atlantic Isle Phase Budget)	$1,000,000	N/A	N/A	$1,000,000	61	**$16,393**	N/A to N/A
Village of Key Biscayne	$11,200,000	$2,946,000	$2,946,000	$17,092,000	982	**$17,405**	$3,000 to $4,500

COST ANALYSIS - KEY BISCAYNE UNDERGROUND CONVERSION

		COST (In Thousands)				
	HOMES	FPL	AT&T	COMCAST	Restoration	TOTAL
WEST SIDE						
Feeder - Fernwood Drive	-	786	221	170	294	1471
Feeder - Harbor Drive	-	370	104	80	139	693
Feeder - Crandon (south of Mashta)	-	148	42	32	56	278
Residential Area 1 (north of Heather)	302	1612	426	688	682	3408
Residential Area 2 (Heather to Mcintyre)	289	1410	497	602	627	3136
Residential Area 3 (McIntyre to Mashta)	319	1650	435	705	698	3488
Mashta Island	74	403	142	172	179	896
EAST SIDE						
Feeder - between Ocean Ln DR and Key Colony	-	231	65	50	87	433
Feeder - north of Galen	-	209	59	45	78	391
Feeder - between Galen & Sunrise	-	277	78	60	2	417
Feeder - between Sunrise & Enid	-	222	63	48	83	416
Holiday Colony	56	325	115	140	145	725
		7643	2247	2792	3068.75	***15751***