



Florida Power
A Progress Energy Company

JAMES A. MCGEE
ASSOCIATE GENERAL COUNSEL

March 30, 2001

Ms. Blanca S. Bayó, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

010384-EI

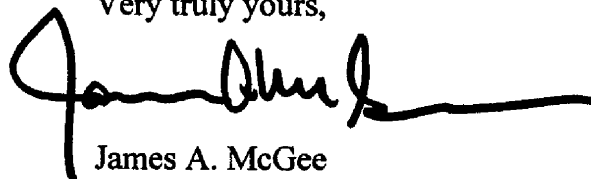
Re: Petition of Florida Power Corporation for approval
of revised tariffs containing updated underground
residential distribution charges.

Dear Ms. Bayó:

Enclosed for filing pursuant to Rule 25-6.078, F.A.C., are an original and
fifteen copies of Florida Power Corporation's petition in the subject matter.

Please acknowledge your receipt of the above filing on the enclosed copy of this
letter and return to the undersigned. Also enclosed is a 3.5 inch diskette containing the
above-referenced document in WordPerfect format. Thank you for your assistance in
this matter.

Very truly yours,



James A. McGee

JAM/scc
Enclosure

DOCUMENT NUMBER-DATE
04022 APR-20
FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Florida Power Corporation for approval of revised tariffs containing updated underground residential distribution charges.

Docket No. 010384-EL

Submitted for filing:
April 2, 2001

P E T I T I O N

Florida Power Corporation (Florida Power or the Company), pursuant to Rule 25-6.078, F.A.C., hereby petitions the Florida Public Service Commission (the Commission) for approval of revised tariff sheets that contain updated Underground Residential Distribution (URD) charges based on the differential between the cost of overhead and underground facilities installed to provide residential service in typical low and high density subdivision layouts. The revised tariff sheets for which approval is sought are a part of Florida Power's URD policy established pursuant to Commission Rule 25-6.078 and contained in Part XI of the Company's tariff rules governing electric service. These revised tariff sheets are attached hereto as Exhibit A and are also shown with legislative formatting in Exhibit B. In support of this petition, Florida Power states as follows:

1. Florida Power is a public utility subject to the jurisdiction of the Commission under Chapter 366, Florida Statutes. Florida Power's General Offices are located at One Progress Plaza, St. Petersburg, Florida, 33701.

2. All notices, pleadings and correspondence required to be served on petitioner should be directed to:

James A. McGee, Esquire
Post Office Box 14042
St. Petersburg, FL 33733-4042
Facsimile: (727) 820-5519

For express deliveries by private courier, the address is:

One Progress Plaza
Suite 1500
St. Petersburg, FL 33701

3. The updated URD charges shown on the revised tariff sheets contained in Exhibit A have been calculated in accordance with Commission Rule 25-6.078, as demonstrated by the detailed supporting data and analyses contained in the Commission form specified by the rule, Form PSC/EAG 13, entitled "Overhead/Underground Residential Differential Cost Data." The schedules comprising Form PSC/EAG 13 are attached hereto as Exhibit C.

4. The proposed URD charges have increased over the current charges established in 1998 from \$264 to \$292, or 10.6%, for a 210-lot low density subdivision; from \$181 to \$270, or 49.2%, for a 176-lot high density individually metered subdivision; and from \$65 to \$116, or 78.5%, for a 176-lot high density gang metered subdivision. The primary reason for the higher URD charges is a dramatic increase in the contract labor rate for the installation of a specially manufactured conductor used in URD subdivisions known as Cable-In-Conduit

(CIC), in which polyethylene conduit is extruded over the cable, thereby allowing the conduit to be installed with the cable already in place. The CIC labor rate has risen from \$0.10 per foot in 1998 to the current rate of \$0.54 per foot, an increase of over 400%.

WHEREFORE, Florida Power Corporation respectfully requests that the Commission grant this petition and approve the revised tariff sheets and updated URD charges contained in Exhibit A, effective in accordance with the provisions of Section 366.06(4), Florida Statutes.

Respectfully submitted,

FLORIDA POWER CORPORATION

By _____

James A. McGee
Post Office Box 14042
St. Petersburg, FL 33733-4042
Telephone: (727) 820-5184
Facsimile: (727) 820-5519

EXHIBIT A

REVISED URD TARIFF SHEETS

Tenth Revised Sheet No. 4.113

Tenth Revised Sheet No. 4.114

Tenth Revised Sheet No. 4.115



(2) Contribution by Applicant:

(a) Schedule of Charges:

Company standard design underground residential distribution 120/240 volt single-phase service (see also Part 11.03(7)):

To subdivisions with a density of 1.0 or more
but less than six (6) dwelling units per acre, taking
service at each dwelling unit..... \$292.00 per point of delivery

To subdivisions with a density of six (6) or more
dwelling units per acre taking service at each
dwelling unit \$270.00 per point of delivery

To subdivisions with a density of
six (6) or more dwelling units per acre taking service
at grouped meter pedestals..... \$ 116.00 per dwelling unit

To multi-occupancy buildings..... See Part 11.06(2)

- (b) The above costs are based upon arrangements that will permit serving the local underground distribution system within the subdivision from overhead feeder mains. If feeder mains within the subdivision are deemed necessary by the Company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the Company the average differential cost between such underground feeder mains within the subdivision and equivalent overhead feeder mains as follows:

Three-phase primary main or feeder charge per trench-foot within subdivision:

(U.G. - Underground, O.H. - Overhead)

#1/0 AWG U.G. vs. #1/0 AWG O.H..... \$ 5.18 per foot

500 MCM U.G. vs. 336 MCM O.H..... \$13.81 per foot

1000 MCM U.G. vs. 795 MCM O.H..... \$14.67 per foot

The above costs assume that underground feeder construction utilizes system conduit but does not require the use of pad-mounted switchgear(s) or terminal pole(s). If such facilities are required, a differential cost for same will be determined by the Company on an individual basis and added to charges determined above.

- (c) Credits (not to exceed the "average differential costs" stated above) will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling for the use of the Company's facilities in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are:

Primary and/or Secondary Systems,
for each Foot of Trench..... \$ 1.11

Service Laterals,
for each Foot of Trench..... \$ 1.11



(3) Point of Delivery:

The point of delivery shall be determined by the Company and will be on the side of the building that is nearest the point at which the underground secondary electric supply is available to the property. The point of delivery will only be allowed on the rear of the building by special exception. The Applicant shall pay the estimated full cost of service lateral length required in excess of that which would have been needed to reach the Company's designated point of service.

(4) Location of Meter and Socket:

The Applicant shall install a meter socket at the point designated by the Company in accordance with the Company's specifications. Every effort shall be made to locate the meter socket in unobstructed areas in order that the meter can be read without going through fences, etc.

(5) Development of Subdivisions:

The above charges are based on reasonably full use of the land being developed. Where the Company is required to construct underground electric facilities through a section or sections of the subdivision or development where service will not be required for at least two (2) years, the Company may require a deposit from the Applicant before construction is commenced. This deposit, to guarantee performance, will be based on the estimated total cost of such facilities rather than the differential cost. The amount of the deposit, without interest, in excess of any charges for underground service will be returned to the Applicant on a prorata basis at quarterly intervals on the basis of installations to new customers. Any portion of such deposit remaining unrefunded, after five (5) years from the date the Company is first ready to render service from the extension, will be retained by the Company.

(6) Relocation or Removal of Existing Facilities:

If the Company is required to relocate or remove existing overhead and/or underground distribution facilities in the implementation of these Rules, all costs thereof shall be borne exclusively by the Applicant. These costs shall include the costs of relocation or removal, the in-place value (less salvage) of the facilities so removed, and any additional costs due to existing landscaping, pavement or unusual conditions.

(7) Other Provisions:

If soil compaction is required by the Applicant at locations where Company trenching is done, an additional charge may be added to the charges set forth in this tariff. The charge will be estimated based on the Applicant's compaction specifications.

11.04 UNDERGROUND SERVICE LATERALS FROM OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS.

(1) New Underground Service Laterals:

When requested by the Applicant, the Company will install underground service laterals from overhead systems to newly constructed residential buildings containing less than five (5) separate dwelling units.

(2) Contribution by Applicant:

- (a) The Applicant shall pay the Company the following average differential cost between an overhead service and an underground service lateral:

For Service Lateral up to 80 feet \$409.00

For each foot over 80 feet up to 200 feet..... \$ 1.34 per foot

Service laterals in excess of 200 feet shall be based on a specific cost estimate.

- (b) Credits will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling in accordance with the Company specifications and for the use of the Company facilities, in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are as follows:

For each Foot of Trench..... \$ 1.11

The provisions of Paragraphs 11.03(3) and 11.03(4) are also applicable.



11.05 UNDERGROUND SERVICE LATERALS REPLACING EXISTING RESIDENTIAL OVERHEAD SERVICES:

(1) Applicability:

When requested by the Applicant, the Company will install underground service laterals from existing overhead lines as replacements for existing overhead services to existing residential buildings containing less than five (5) separate dwelling units.

(2) Rearrangement of Service Entrance:

The Applicant shall be responsible for any necessary rearranging of his existing electric service entrance facilities to accommodate the proposed underground service lateral in accordance with the Company's specifications.

(3) Trenching:

The Applicant shall also provide, at no cost to the Company, a suitable trench and perform the backfilling and any landscaping, pavement, or other suitable repairs. If the Applicant requests the Company to supply the trench, the charge to the Applicant for this work shall be based on a specific cost estimate.

(4) Contribution by Applicant:

The charge excluding trenching costs shall be as follows:

For Service Lateral up to 80 feet \$389.49

For each foot over 80 feet up to 200 feet \$1.21 per foot

Service laterals in excess of 200 feet shall be based on a specific cost estimate.

11.06 UNDERGROUND DISTRIBUTION FACILITIES TO MULTIPLE-OCCUPANCY RESIDENTIAL BUILDINGS:

(1) Availability:

Underground electric distribution facilities may be installed within the tract of land upon which multiple-occupancy residential buildings containing five (5) or more separate dwelling units will be constructed.

(2) Contribution by Applicant:

There will be no contribution from the Applicant so long as the Company is free to construct the extension in the most economical manner, and reasonably full use is made of the tract of land upon which the multiple-occupancy buildings will be constructed. Other conditions will require special arrangements.

(3) Responsibility of Applicant:

(a) Furnish details and specifications of the proposed building or complex of buildings. The Company will use these in the design of the electric distribution facilities required to render service.

(b) Where the Company determines that transformers are to be located inside the building, the Applicant shall provide:

- i. The vault or vaults necessary for the transformers and the associated equipment, including the ventilation equipment.
- ii. The necessary raceways or conduit for the Company's supply cables from the vault or vaults to a suitable point five (5) feet outside the building in accordance with the Company's plans and specifications.
- iii. Conduits underneath all buildings when required for the Company's supply cables. Such conduits shall extend five (5) feet beyond the edge of the buildings for joining to the Company's facilities.
- iv. The service entrance conductors and raceways from the Applicant's service equipment to the designated point of delivery within the vault.

**REVISED URD TARIFF SHEETS
(Legislative Format)**

Tenth Revised Sheet No. 4.113

Tenth Revised Sheet No. 4.114

Tenth Revised Sheet No. 4.115



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Company standard design underground residential distribution 120/240 volt single-phase service (see also Part 11.03(7)):

To subdivisions with a density of 1.0 or more
but less than six (6) dwelling units per acre, taking
service at each dwelling unit ~~\$264.00~~ ~~\$292.00~~ per point of delivery

To subdivisions with a density of six (6) or more
dwelling units per acre taking service at each
dwelling unit ~~\$181.00~~ ~~\$270.00~~ per point of delivery

To subdivisions with a density of
six (6) or more dwelling units per acre taking service
at grouped meter pedestals ~~\$.65.00~~ ~~\$116.00~~ per dwelling unit

To multi-occupancy buildings See Part 11.06(2)

- (b) The above costs are based upon arrangements that will permit serving the local underground distribution system within the subdivision from overhead feeder mains. If feeder mains within the subdivision are deemed necessary by the Company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the Company the average differential cost between such underground feeder mains within the subdivision and equivalent overhead feeder mains as follows:

Three-phase primary main or feeder charge per trench-foot within subdivision:

(U.G. - Underground, O.H. - Overhead)

#1/0 AWG U.G. vs. #1/0 AWG O.H. ~~\$ 3.65~~ ~~\$6.18~~ per foot

500 MCM U.G. vs. 336 MCM O.H. ~~\$12.46~~ ~~\$13.81~~ per foot

1000 MCM U.G. vs. 795 MCM O.H. ~~\$13.32~~ ~~\$14.87~~ per foot

The above costs assume that underground feeder construction utilizes system conduit but does not require the use of pad-mounted switchgear(s) or terminal pole(s). If such facilities are required, a differential cost for same will be determined by the Company on an individual basis and added to charges determined above.

- (c) Credits (not to exceed the "average differential costs" stated above) will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling for the use of the Company's facilities in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are:

Primary and/or Secondary Systems,
for each Foot of Trench ~~\$ 1.40~~ ~~\$1.11~~

Service Laterals,
for each Foot of Trench ~~\$ 1.40~~ ~~\$1.11~~



(3) Point of Delivery:

The point of delivery shall be determined by the Company and will be on the side of the building that is nearest the point at which the underground secondary electric supply is available to the property. The point of delivery will only be allowed on the rear of the building by special exception. The Applicant shall pay the estimated full cost of service lateral length required in excess of that which would have been needed to reach the Company's designated point of service.

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(6) Relocation or Removal of Existing Facilities:

If the Company is required to relocate or remove existing overhead and/or underground distribution facilities in the implementation of these Rules, all costs thereof shall be borne exclusively by the Applicant. These costs shall include the costs of relocation or removal, the in-place value (less salvage) of the facilities so removed, and any additional costs due to existing landscaping, pavement or unusual conditions.

(7) Other Provisions:

If soil compaction is required by the Applicant at locations where Company trenching is done, an additional charge may be added to the charges set forth in this tariff. The charge will be estimated based on the Applicant's compaction specifications.

11.04 UNDERGROUND SERVICE LATERALS FROM OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS.

(1) New Underground Service Laterals:

When requested by the Applicant, the Company will install underground service laterals from overhead systems to newly constructed residential buildings containing less than five (5) separate dwelling units.

(2) Contribution by Applicant:

- (a) The Applicant shall pay the Company the following average differential cost between an overhead service and an underground service lateral:

For Service Lateral up to 80 feet..... ~~\$349.00~~ ~~\$409.00~~

For each foot over 80 feet up to 200 feet ~~\$ 0.91~~ ~~\$1.34~~ per foot

Service laterals in excess of 200 feet shall be based on a specific cost estimate.

- (b) Credits will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling in accordance with the Company specifications and for the use of the Company facilities, in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are as follows:

For each Foot of Trench ~~\$ 1.40~~ ~~\$1.11~~

The provisions of Paragraphs 11.03(3) and 11.03(4) are also applicable.



11.05 UNDERGROUND SERVICE LATERALS REPLACING EXISTING RESIDENTIAL OVERHEAD SERVICES:

(1) Applicability:

When requested by the Applicant, the Company will install underground service laterals from existing overhead lines as replacements for existing overhead services to existing residential buildings containing less than five (5) separate dwelling units.

(2) Rearrangement of Service Entrance:

The Applicant shall be responsible for any necessary rearranging of his existing electric service entrance facilities to accommodate the proposed underground service lateral in accordance with the Company's specifications.

(3) Trenching:

The Applicant shall also provide, at no cost to the Company, a suitable trench and perform the backfilling and any landscaping, pavement, or other suitable repairs. If the Applicant requests the Company to supply the trench, the charge to the Applicant for this work shall be based on a specific cost estimate.

(4) Contribution by Applicant:

The charge excluding trenching costs shall be as follows:

For Service Lateral up to 80 feet	\$325.04 \$389.40
For each foot over 80 feet up to 200 feet	\$0.76 \$1.21 per foot

Service laterals in excess of 200 feet shall be based on a specific cost estimate.

11.06 UNDERGROUND DISTRIBUTION FACILITIES TO MULTIPLE-OCCUPANCY RESIDENTIAL BUILDINGS:

(1) Availability:

Underground electric distribution facilities may be installed within the tract of land upon which multiple-occupancy residential buildings containing five (5) or more separate dwelling units will be constructed.

(2) Contribution by Applicant:

There will be no contribution from the Applicant so long as the Company is free to construct the extension in the most economical manner, and reasonably full use is made of the tract of land upon which the multiple-occupancy buildings will be constructed. Other conditions will require special arrangements.

(3) Responsibility of Applicant:

(a) Furnish details and specifications of the proposed building or complex of buildings. The Company will use these in the design of the electric distribution facilities required to render service.

(b) Where the Company determines that transformers are to be located inside the building, the Applicant shall provide:

- i. The vault or vaults necessary for the transformers and the associated equipment, including the ventilation equipment.
- ii. The necessary raceways or conduit for the Company's supply cables from the vault or vaults to a suitable point five (5) feet outside the building in accordance with the Company's plans and specifications.
- iii. Conduits underneath all buildings when required for the Company's supply cables. Such conduits shall extend five (5) feet beyond the edge of the buildings for joining to the Company's facilities.
- iv. The service entrance conductors and raceways from the Applicant's service equipment to the designated point of delivery within the vault.

DEVELOPMENT OF UPDATED URD COSTS

**PSC/EAG Form 13
Schedules 1 through 13**

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST ESTIMATE**

OVERHEAD vs. UNDERGROUND SUMMARY SHEET

SCHEDULE NO. 1

***LOW DENSITY 210 LOT SUBDIVISION
COST PER SERVICE LATERALS***

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	201	385	184
Material	325	433	108
TOTAL	526	818	292

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

COST PER SERVICE LATERAL OVERHEAD MATERIAL AND LABOR

SCHEDULE NO. 2

LOW DENSITY 210 LOT SUBDIVISION

ITEM	MATERIAL	LABOR	TOTAL
Service(2)	57.99	44.52	102.51
Primary	23.44	28.97	52.41
Secondary	43.81	15.75	59.56
Initial Tree Trim	0.00	21.89	21.89
Poles	87.99	29.75	117.74
Transformers	91.71	12.68	104.39
Sub-Total(1)	304.94	153.56	458.50
Stores Handling(3)	20.29	0.00	20.29
Sub-Total	325.23	153.56	478.79
Engineering(5)	0.00	47.12	47.12
TOTAL	325.23	200.68	525.91

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-10% of all material except transformer units with a cost of: 70.02
and meters with a cost of: 32.00

4-Includes Administration, General and Transportation.

5-13% of all matl. and labor except transformer units with a cost of: 74.87
and meters with a cost of: 41.45

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

COST PER SERVICE LATERAL UNDERGROUND MATERIAL AND LABOR

SCHEDULE NO. 3

LOW DENSITY 210 LOT SUBDIVISION

ITEM	MATERIAL	LABOR	TOTAL
Service (2)	100.57	97.49	198.06
Primary	68.15	19.16	87.31
Secondary	126.66	56.57	183.23
Transformers	108.74	15.50	124.24
TRENCHING:			
Prim. & Secondary	0.00	73.14	73.14
Service	0.00	43.60	43.60
Sub-Total	404.12	305.46	709.58
Stores Handling(3)	28.71	0.00	28.71
Sub-Total	432.83	305.46	738.29
Engineering(5)	0.00	79.19	79.19
TOTAL	432.83	384.65	817.47

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-10% of all material except transformer units with a cost of: 85.06
and meters with a cost of: 32.00

4-Includes Administration, General and Transportation.

5-13% of all matl. and labor except transformer units with a cost of: 87.72
and meters with a cost of: 41.45

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

**LOW DENSITY - 210 LOT SUBDIVISION TYPICAL LAYOUT
OVERHEAD AND UNDERGROUND DESIGNS**

SCHEDULE NO. 4



NOTES:

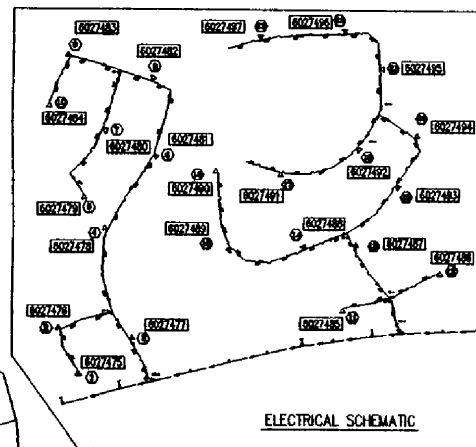
1. ALL HOMES TO BE CLASS E (2000 sq. ft.), ALL ELECTRIC WITH 3.5 TON AIR CONDITIONING UNIT.
2. SERVICES FROM TRANSFORMER POLES ARE #2 ALUMINUM AND SERVICES FROM SECONDARY POLES ARE TO BE 1/0 ALUMINUM.
3. ALL PRIMARY POLES ARE 40 FT. POLES AND LIFT POLES ARE 35 FT. POLES. THEY ARE TO BE INSTALLED 2.5 FT. INSIDE THE ROAD RIGHT-OF-WAY.
4. SUBDIVISION IS OFF THE MAIN FEEDER AND SIZING OF PROTECTIVE DEVICES IS NOT AN ISSUE.
5. DEVELOPER PROVIDES ALL NECESSARY EASEMENTS (FRONT-LOT AND SIDE-LOT).
6. CABLE MAKEUP = 7% ADD-ON INCLUDED
7. AC START FLICKER LESS THAN 6%.

Transformer Summary

- 1 - 25 KVA
- 14 - 50 KVA
- 6 - 75 KVA
- 28 - 125 KVA

TRANSFORMER INFORMATION

LOC	ID NUMBER	#	KVA
1	6027475	A	25 KVA
2	6027476	A	50 KVA
3	6027477	A	50 KVA
4	6027478	A	75 KVA
5	6027479	A	50 KVA
6	6027480	A	75 KVA
7	6027481	A	75 KVA
8	6027482	A	50 KVA
9	6027483	A	50 KVA
10	6027484	A	50 KVA
11	6027485	A	50 KVA
12	6027486	A	50 KVA
13	6027487	A	50 KVA
14	6027488	A	75 KVA
15	6027489	A	50 KVA
16	6027490	A	50 KVA
17	6027491	A	75 KVA
18	6027492	A	50 KVA
19	6027493	A	75 KVA
20	6027494	A	50 KVA
21	6027495	A	50 KVA
22	6027496	A	50 KVA
23	6027497	A	75 KVA



ELECTRICAL SCHEMATIC

SYMBOL	DESCRIPTION
○	WOOD POLE
○	FUSE
—	SPAN-GUY
—	DOWN-GUY
—	OVERHEAD WIRE
△	OVERHEAD TRANSFORMER
⚡	LIGHTNING ARRESTER

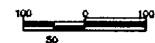
LOAD ESTIMATE

Page 1-F-16 LOAD CURVES
CLASS E HOME @ 5.5 KVA /HOME
TOTAL LOAD = 210 * 5.5 KVA = 1155 KVA EST.

NOTES:

- 14,022 PRIMARY & NEUTRAL 1/0 AAC (INCL 7% MAKE-UP)
- 7,206 SECONDARY CABLE 4/0 (INCL 7% MAKE-UP)
- 2,712 SECONDARY CABLE 1/0 (INCL 7% MAKE-UP)
- 184 SERVICES 1/0 (40' + 5' MAKE-UP)
- 46 SERVICES #2 (40' + 5' MAKE-UP)
- 66 40' WOOD POLES
- 48 35' WOOD POLES

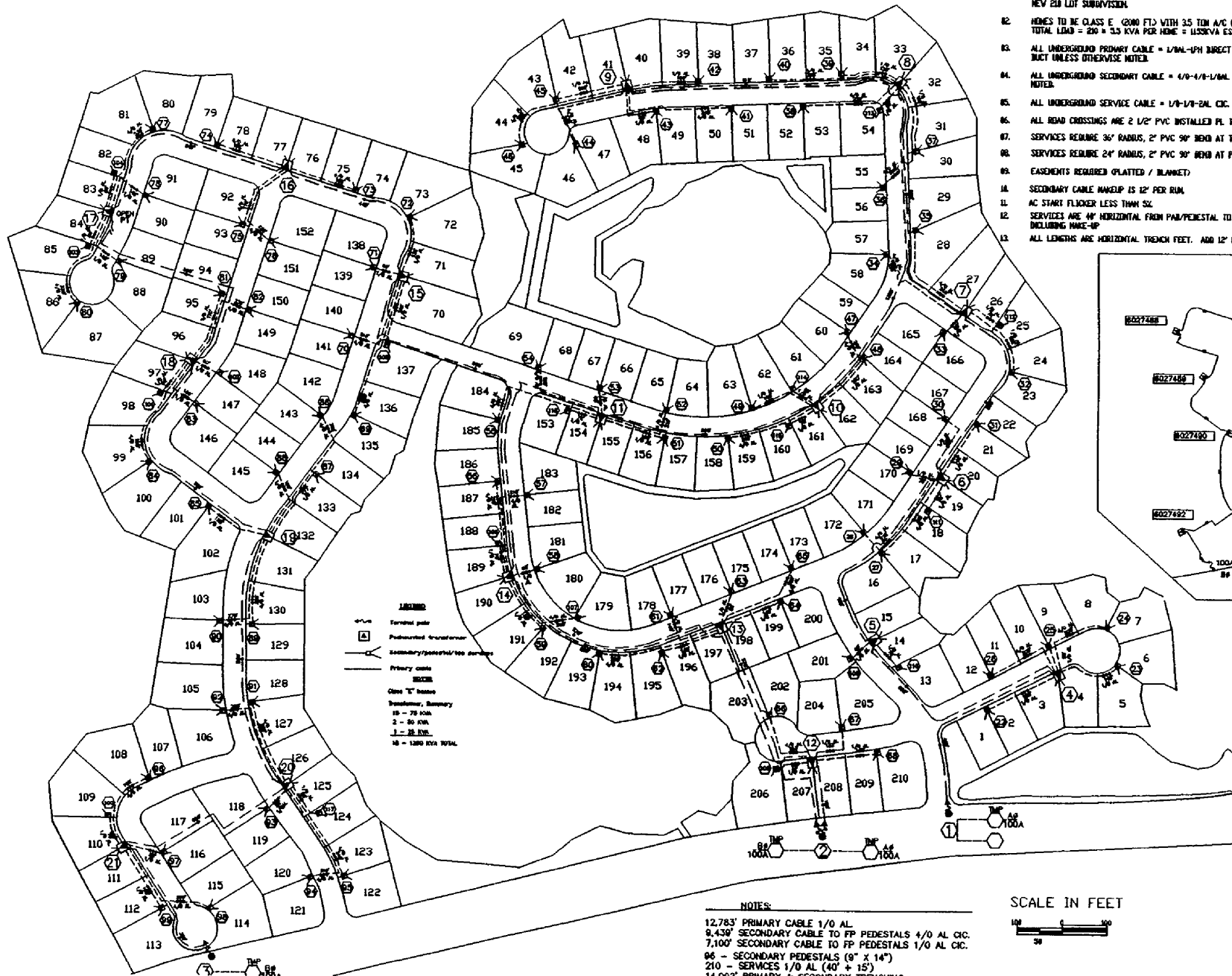
SCALE IN FEET



(Low Density Subdivision)

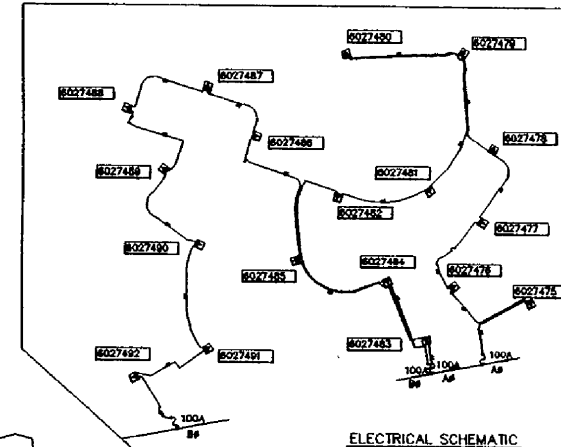
FLORIDA POWER
A PROGRESS ENERGY COMPANY
DISTRIBUTION ENGINEERING DEPARTMENT
TYPICAL 210 LOT
RESIDENTIAL SUBDIVISION
OVERHEAD

W.O.No. PSC FILING Date 2/19/01
Drawn L. L. WRIGHT Checked
Approved E. E. Bokar
Scale 1" = 100' Dwg.No 210SC-2



- NOTES**
- THIS WORK ORDER WILL PROVIDE FOR 120/240V-4PH UNDERGROUND SERVICE TO A NEW 210 LOT SUBDIVISION.
 - HOUSES TO BE CLASS E (2000 FTD) WITH 3.5 TON A/C UNITS. TOTAL LOAD = 200 x 5.5 KVA PER HOME = 1100KVA EST.
 - ALL UNDERGROUND PRIMARY CABLE = 1/16"-1PH DIRECT BURIED WITH NO SPARE BUCT UNLESS OTHERWISE NOTED.
 - ALL UNDERGROUND SECONDARY CABLE = 1/8"-1/8-1/16" C/C UNLESS OTHERWISE NOTED.
 - ALL UNDERGROUND SERVICE CABLE = 1/8"-1/8-2AL C/C.
 - ALL ROAD CROSSINGS ARE 2 1/2" PVC INSTALLED PL TO PL.
 - SERVICES REQUIRE 36" RADIUS, 2" PVC 90° BEND AT TRANSFORMERS.
 - SERVICES REQUIRE 24" RADIUS, 2" PVC 90° BEND AT PEDESTALS.
 - EASEMENTS REQUIRED (PLATTED / BLANKET)
 - SECONDARY CABLE MAKEUP IS 12" PER RUN.
 - AC START FLICKER LESS THAN 5%.
 - SERVICES ARE 40' HORIZONTAL FROM P/PEDESTAL TO METER & USE 35' OF C/C INCLUDING MAKE-UP.
 - ALL LENGTHS ARE HORIZONTAL TRENCH FEET. ADD 12" OF SECONDARY FOR MAKE-UP.

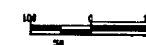
TRANSFORMER INFORMATION				
LIC.	ID NUMBER	8	9	KVA
4	6027475	A	75	
5	6027476	A	25	
6	6027477	A	75	
7	6027478	A	75	
8	6027479	A	75	
9	6027480	A	75	
10	6027481	A	75	
11	6027482	A	75	
12	6027483	A	50	
13	6027484	A	75	
14	6027485	A	75	
15	6027486	A	75	
16	6027487	B	50	
17	6027488	B	75	
18	6027489	B	75	
19	6027490	B	75	
20	6027491	B	75	
21	6027492	B	75	



NOTES:

- 12,783' PRIMARY CABLE 1/0 AL
- 9,439' SECONDARY CABLE TO PP PEDESTALS 4/0 AL C/C
- 7,100' SECONDARY CABLE TO PP PEDESTALS 1/0 AL C/C
- 96 - SECONDARY PEDESTALS (9" x 14")
- 210 - SERVICES 1/0 AL (40' x 15')
- 14,092' PRIMARY & SECONDARY TRENCHING
- 6,400' SERVICE TRENCHING (210 x 40')

SCALE IN FEET



(Low Density Subdivision)

FLORIDA POWER & LIGHT COMPANY
 A FORTUNE COMPANY
 DISTRIBUTION DIVISION
 TYPICAL 210 LOT
 RESIDENTIAL SUBDIVISION
 UNDERGROUND

W.O.No. **PSC FILING** Date **03/01/01**
 Drawn **L.L. WRIGHT** Checked **L.L. WRIGHT**
 Approved **E.E. BAKER**

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST ESTIMATE**

OVERHEAD vs. UNDERGROUND SUMMARY SHEET

SCHEDULE NO. 5

***HIGH DENSITY 176 LOT SUBDIVISION
COMPANY OWNED SERVICE LATERALS
COST PER SERVICE LATERAL***

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	150	322	172
Material	244	342	98
TOTAL	394	664	270

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

COST PER SERVICE LATERAL OVERHEAD MATERIAL AND LABOR

SCHEDULE NO. 6

***HIGH DENSITY 176 LOT SUBDIVISION
CUSTOMER OWNED SERVICE LATERALS***

ITEM	MATERIAL	LABOR	TOTAL
Service(2)	55.84	48.38	104.22
Primary	19.03	15.43	34.46
Secondary	31.75	8.68	40.43
Initial Tree Trim	0.00	16.24	16.24
Poles	52.55	16.19	68.74
Transformers	70.44	11.42	81.86
Sub-Total(1)	229.61	116.34	345.95
Stores Handling(3)	14.34	0.00	14.34
Sub-Total	243.95	116.34	360.29
Engineering(5)	0.00	33.82	33.82
TOTAL	243.95	150.16	394.11

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-10% of all material except transformer units with a cost of: 54.20
and meters with a cost of: 32.00

4-Includes Administration, General and Transportation.

5-13% of all matl. and labor except transformer units with a cost of: 58.67
and meters with a cost of: 41.45

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

COST PER SERVICE LATERAL UNDERGROUND MATERIAL AND LABOR

SCHEDULE NO. 7

***HIGH DENSITY 176 LOT SUBDIVISION
COMPANY OWNED SERVICE LATERALS***

ITEM	MATERIAL	LABOR	TOTAL
Service (2)	91.37	91.20	182.57
Primary	29.14	6.80	35.94
Secondary	115.19	50.56	165.75
Transformers	83.96	12.30	96.26
TRENCHING:			
Prim. & Secondary	0.00	64.28	64.28
Service	0.00	32.70	32.70
Sub-Total	319.66	257.84	577.50
Stores Handling(3)	22.30	0.00	22.30
Sub-Total	341.96	257.84	599.80
Engineering(5)	0.00	63.91	63.91
TOTAL	341.96	321.75	663.71

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-10% of all material except transformer units with a cost of:	64.65
and meters with a cost of:	32.00

4-Includes Administration, General and Transportation.

5-13% of all matl. and labor except transformer units with a cost of:	66.77
and meters with a cost of:	41.45

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST ESTIMATE
3/5/01**

OVERHEAD vs. UNDERGROUND SUMMARY SHEET

SCHEDULE NO. 8

HIGH DENSITY 176 LOT SUBDIVISION

GANGED METERS

COST PER SERVICE

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	114	193	79
Material	213	250	37
TOTAL	327	443	116

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

COST PER SERVICE OVERHEAD MATERIAL AND LABOR

SCHEDULE NO. 9

***HIGH DENSITY 176 LOT SUBDIVISION
GANGED METERS***

ITEM	MATERIAL	LABOR	TOTAL
Service(2)	46.67	24.50	71.17
Primary	17.23	14.59	31.82
Secondary	22.73	6.76	29.49
Initial Tree Trim	0.00	16.24	16.24
Poles	41.56	13.64	55.20
Transformers	73.04	12.61	85.65
Sub-Total(1)	201.23	88.34	289.57
Stores Handling(3)	11.37	0.00	11.37
Sub-Total	212.60	88.34	300.94
Engineering(5)	0.00	25.89	25.89
TOTAL	212.60	114.23	326.83

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-10% of all material except transformer units with a cost of: 55.53
and meters with a cost of: 32.00

4-Includes Administration, General and Transportation.

5-13% of all matl. and labor except transformer units with a cost of: 60.36
and meters with a cost of: 41.45

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

COST PER SERVICE UNDERGROUND MATERIAL AND LABOR

SCHEDULE NO. 10

***HIGH DENSITY 176 LOT SUBDIVISION
GANGED METERS***

ITEM	MATERIAL	LABOR	TOTAL
Service (2)	122.54	71.33	193.87
Primary	29.14	6.80	35.94
Secondary	0.00	0.00	0.00
Transformers	83.96	12.30	96.26
TRENCHING:			
Prim. & Secondary	0.00	64.28	64.28
			0.00
Sub-Total	235.64	154.71	390.35
Stores Handling(3)	13.90	0.00	13.90
Sub-Total	249.54	154.71	404.25
Engineering(5)	0.00	38.48	38.48
TOTAL	249.54	193.19	442.73

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-10% of all material except transformer units with a cost of: 64.65
and meters with a cost of: 32.00

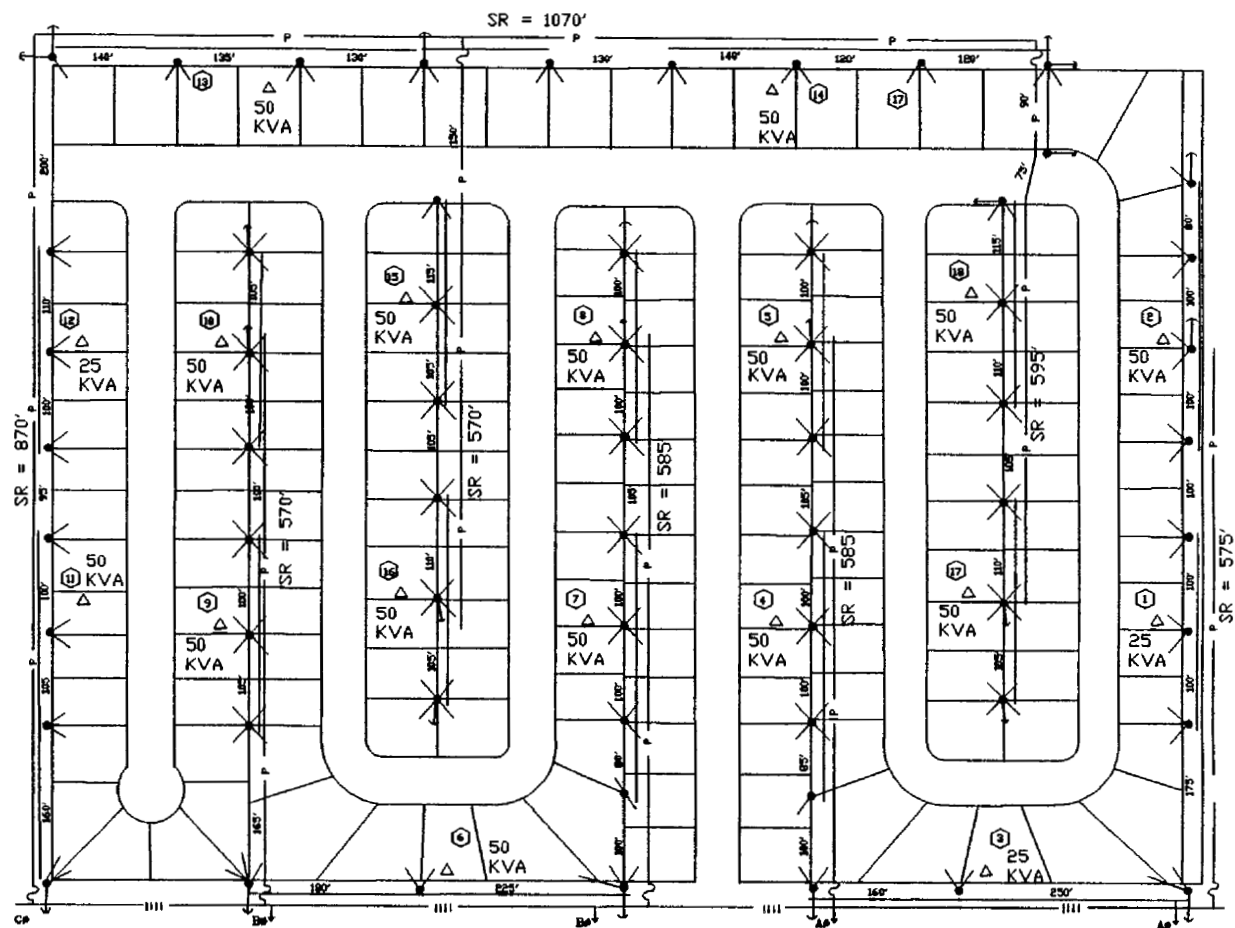
4-Includes Administration, General and Transportation.

5-13% of all matl. and labor except transformer units with a cost of: 66.77
and meters with a cost of: 41.45

**FLORIDA POWER CORPORATION
OVERHEAD/UNDERGROUND RESIDENTIAL COST DATA**

**HIGH DENSITY - 176 LOT SUBDIVISION TYPICAL LAYOUT
(Individual Metered and Gang Metered)
OVERHEAD AND UNDERGROUND DESIGNS**

SCHEDULE NO. 11



NOTES

CLASS "3" MOBILE HOMES
WITH 3.5 TON AC
TRANSFORMER, 4.8 KVA/LOT

3 - 25 KVA

15 - 50 KVA

18 - 825 KVA TOTAL

7,832' *PRIMARY & NEUTRAL WIRE IS 1/0 AAAC.

5,380' *ALL SECONDARY CABLE 4/0AL.

6,160' ALL SERVICES 1/0 AL. (30' + 5' MAKE-UP)

48 - 40' PRIMARY DISTRIBUTION POLES.

7 - 35' SECONDARY POLES.

* INCLUDES 7% MAKE-UP.

LEGEND

SR = PRIMARY SEGMENT RUN FROM POINT TO POINT

— FUSE PULL OFF

△ TRANSFORMER STATION

— P — PRIMARY WIRE

— SECONDARY/2 FPC SERVICES

→ ANCHOR

① LOCATION NUMBER

SCALE IN FEET

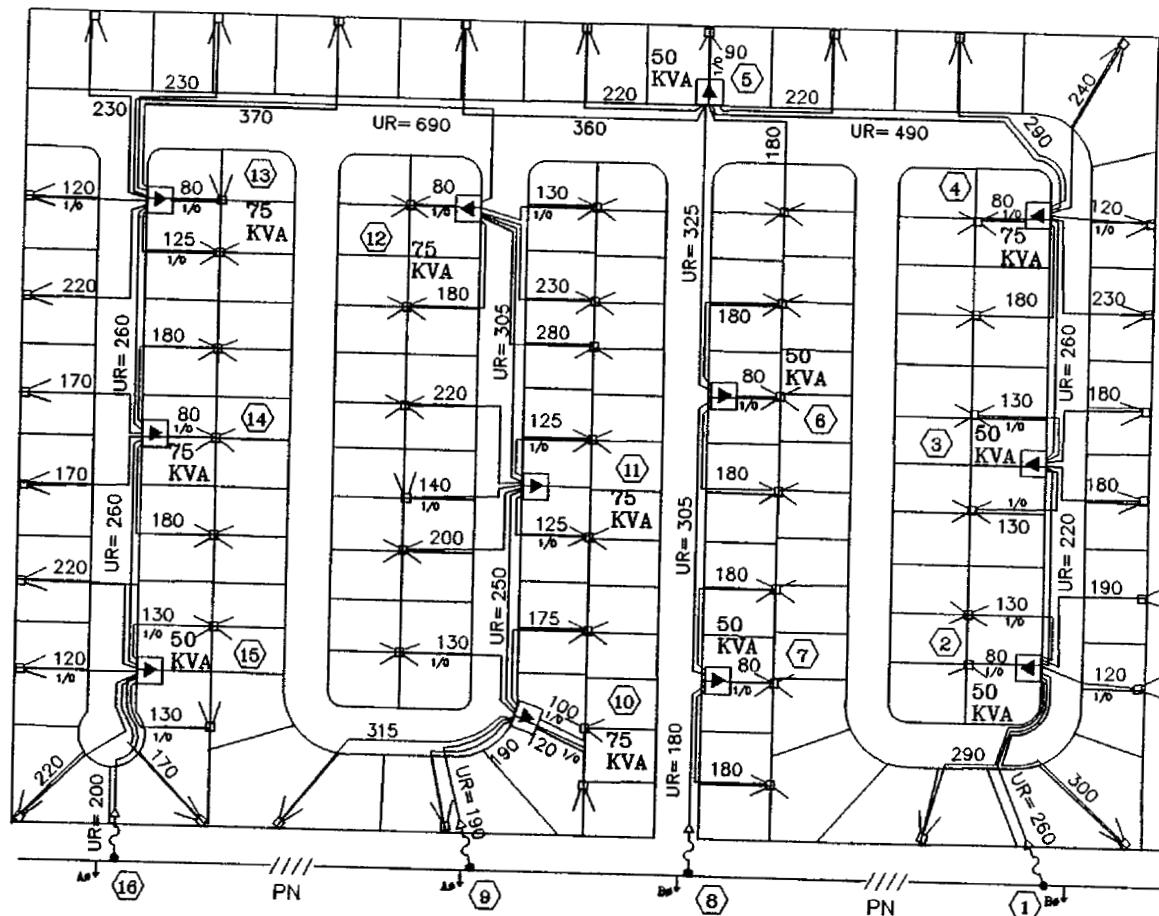


(HIGH DENSITY SUBDIVISION)

FLORIDA POWER
A PROGRESS ENERGY COMPANY
DISTRIBUTION ENGINEERING DEPARTMENT

Typical Mobile Home
Subdivision 176 Lots
OVERHEAD INDIVIDUAL

V.D. NO. DATE 3/01/01
DRAWN LLW CHECKED
APPROVED E E BAKER
SCALE 1" = 100' RUC NO. 176-01-01



NOTES:

Class "3" mobile homes
With 3.5 ton AC
Transformer, 4.8 KVA/lot

6 - 50 KVA

6 - 75 KVA

12 - 750 KVA TOTAL

4,494' *Primary cable 1/0 AL.

8,591' *Secondary cable to FP pedestal 4/0-4/0-1/0 AL CIC.

3,053' *Secondary cable to FP pedestal 1/0-1/0-2 AL CIC.

61 - FP Secondary pedestals

176 - SERVICES 1/0 AL (30' + 15' MAKE-UP)

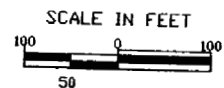
10,380' PRIMARY & SECONDARY TRENCHING

5,280' SERVICE TRENCHING (176 @ 30')

*Includes 10% make-up

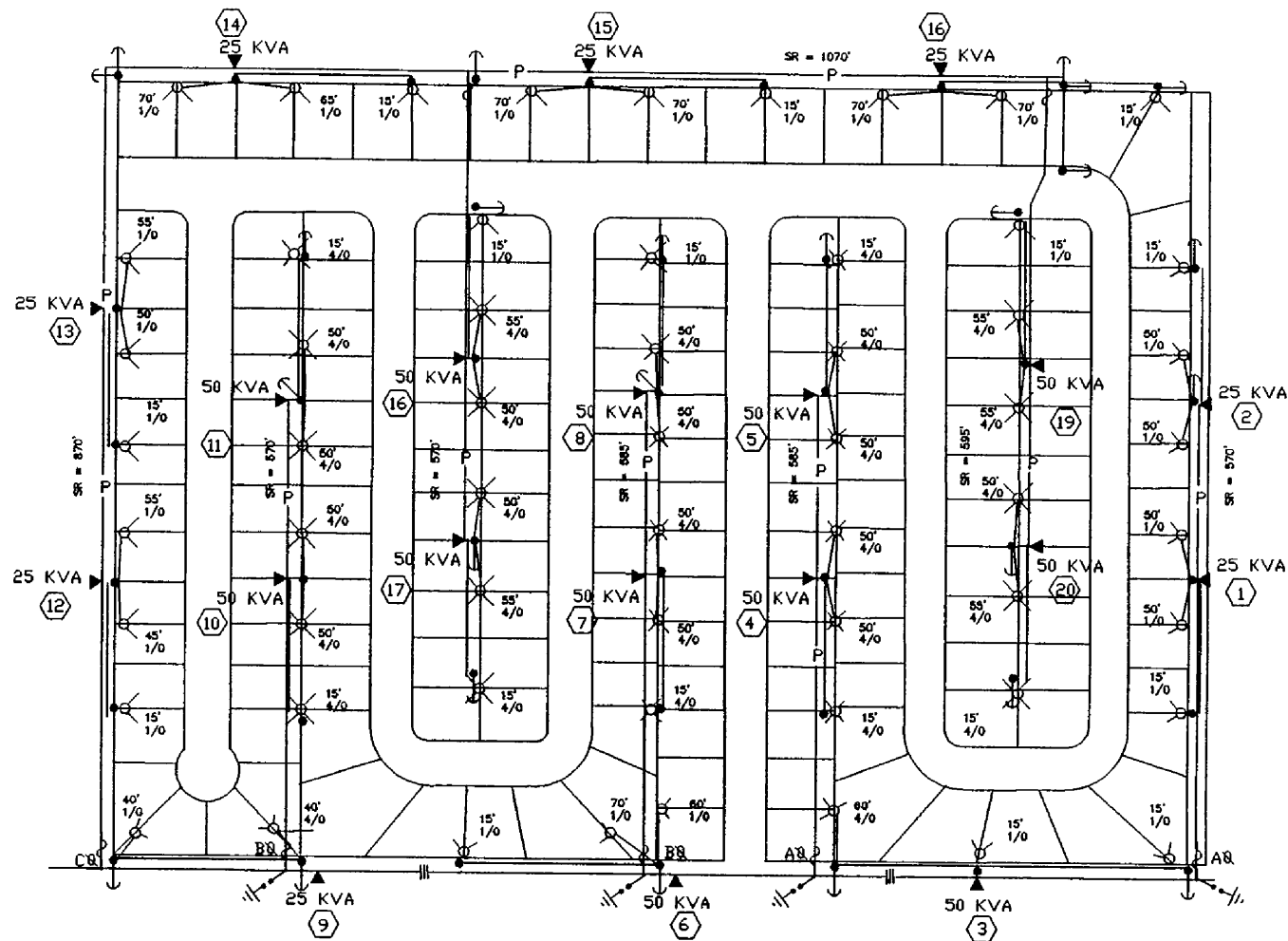
LEGEND

	Terminal pole
	Padmounted transformer
	Secondary/pedestal/two services
	Primary cable
UR	Unit Run (Horizontal length of primary circuit)
	Location number



(High Density Subdivision)

FLORIDA POWER A PROGRESS ENERGY COMPANY DISTRIBUTION ENGINEERING DEPARTMENT	
Typical Mobile Home Subdivision 176 Lots UNDERGROUND - INDIVIDUAL	
W.O. NO.	DATE 3/01/0
DRAWN LLW CAS	CHECKED
APPROVED E.E. BAKER	



NOTES:

Class "3" mobile homes
With 3.5 ton AC
Transformer, 4.8 KVA/lot

8 - 25 KVA

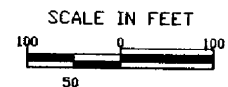
12 - 50 KVA

20 - 800 KVA TOTAL

7832' * PRIMARY & NEUTRAL WIRE IS 1/0 AAAC
3900' * SECONDARY CABLE IS 4/0-4/0-1/0 AL
1395' 4/0 AL SERVICE CABLE TO 3 & 4 GANG METERS (INCLUDES 5' MAKE-UP)
1360' 1/0 AL SERVICE CABLE TO 1& 2 GANG METERS (INCLUDES 5' MAKE-UP)
34 PRIMARY DISTRIBUTION POLES ARE 40'
7 SECONDARY POLES ARE 35'
INCLUDES 7% MAKE-UP

LEGEND

SR =	PRIMARY SEGMENT RUN FROM POINT
	FUSE PULL OFF
	TRANSFORMER STATION
	PRIMARY WIRE
	Secondary/2 FPC Services
	LOCATION NUMBER
	ANCHOR
	CUSTOMER METER POLE/2 CUSTOMER SERVICES
	ARRESTER



(High Density Subdivision)

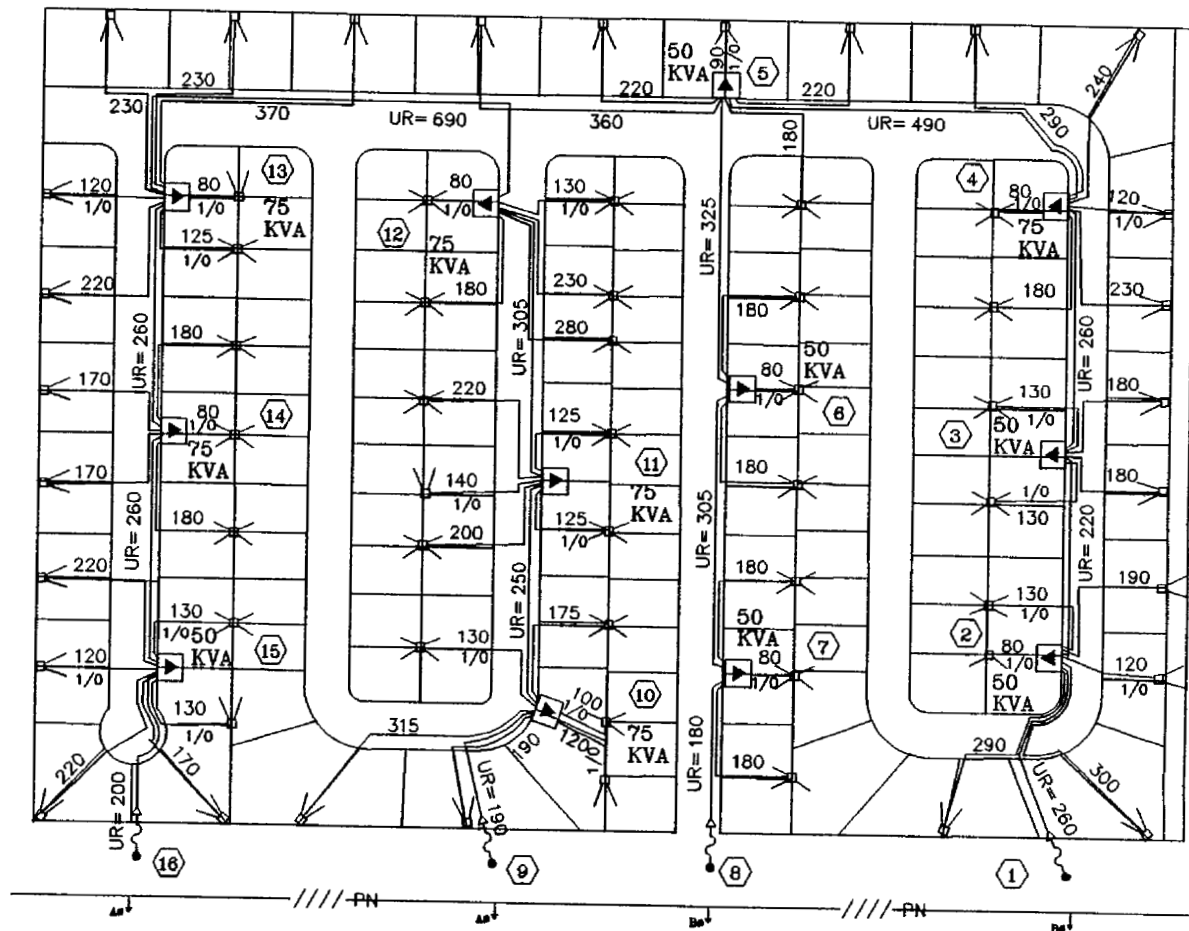
FLORIDA POWER
A PROGRESS ENERGY COMPANY
DISTRIBUTION ENGINEERING DEPARTMENT

Typical Mobile Home

Subdivision 176 Lots

OVERHEAD GANGED METERS

W.D. NO. CAD/CAS DATE 2/23/0
DRAWN J. E. ROBINSON CHECKED
APPROVED E. E. BAKER



NOTES:

Class "3" mobile homes
With 3.5 ton AC
Transformer, 4.8 KVA/lot

6 - 50 KVA

6 - 75 KVA

12 - 750 KVA TOTAL

4,494' *Primary cable 1/0 AL

8,591' *Secondary cable to FPC pedestal 4/0 - 4/0 - 1/0AL CIC.

3,053' *Secondary cable to FPC pedestal 1/0 - 1/0 - 2AL CIC.

10,380' Primary & secondary trenching.

* Includes 10% make-up.

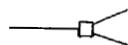
LEGEND



Terminal pole



Padmounted transformer



Utility secondary, customer meter pedestal/two customer services

Primary cable

UR

Unit Run (Horizontal length of primary circuit)



Location number

SCALE IN FEET



Customer owned meter
pedestals and services
(High Density Subdivision)

FLORIDA POWER A PROGRESS ENERGY COMPANY DISTRIBUTION ENGINEERING DEPARTMENT	
Typical Mobile Home Subdivision 176 Lots UNDERGROUND - GANGED METER	
W.O. NO. _____ DRAWN LLW APPROVED GENE BAKER	DATE 3/01 CHECKED _____

**FLORIDA POWER CORPORATION
OVERHEAD / UNDERGROUND RESIDENTIAL COST DATA**

AVERAGE UNDERGROUND FEEDER COSTS

SCHEDULE NO. 12

1/0 Al. Underground Cable

	<u>Material</u>	<u>Labor</u>	<u>Total</u>
From Computer Study	\$27,983.21	\$10,243.27	\$38,226.48
Stores 10%	\$2,798.32	\$0.00	\$2,798.32
Subtotal			\$41,024.80
Engineering & Supervision 13%			\$5,333.00
Total			\$46,357.80

1/0 AAAC Overhead Conductor

	<u>Material</u>	<u>Labor</u>	<u>Total</u>
From Computer Study	\$8,769.65	\$7,196.80	\$15,966.45
Stores 10%	\$876.97	\$0.00	\$876.97
Subtotal			\$16,843.42
Engineering & Supervision 13%			\$2,189.64
Total			\$19,033.06

$$\text{Differential} = (46,357.80 - 19,033.06) / 5280$$

$$= \$5.18 \text{ /ft.}$$

**FLORIDA POWER CORPORATION
OVERHEAD / UNDERGROUND RESIDENTIAL COST DATA**

AVERAGE UNDERGROUND FEEDER COSTS

SCHEDULE NO. 12

500 MCM Al. Underground Cable

	<u>Material</u>	<u>Labor</u>	<u>Total</u>
From Computer Study	\$61,317.46	\$19,616.44	\$80,933.90
Stores 10%	\$6,131.75	\$0.00	\$6,131.75
Subtotal			\$87,065.65
Engineering & Supervision 13%			\$11,318.53
Total			\$98,384.18

336 MCM AAAC Overhead Conductor

	<u>Material</u>	<u>Labor</u>	<u>Total</u>
From Computer Study	\$13,607.36	\$7,586.63	\$21,193.99
Stores 10%	\$1,360.74	\$0.00	\$1,360.74
Subtotal			\$22,554.73
Engineering & Supervision 13%			\$2,932.11
Total			\$25,486.84

$$\text{Differential} = (98,384.18 - 25,486.84) / 5280$$

$$= \$13.81 \text{ /ft.}$$

**FLORIDA POWER CORPORATION
OVERHEAD / UNDERGROUND RESIDENTIAL COST DATA**

AVERAGE UNDERGROUND FEEDER COSTS

SCHEDULE NO. 12

1000 MCM Al. Underground Cable

	<u>Material</u>	<u>Labor</u>	<u>Total</u>
From Computer Study	\$73,634.31	\$21,247.84	\$94,882.15
Stores 10%	\$7,363.43	\$0.00	\$7,363.43
Subtotal			\$102,245.58
Engineering & Supervision 13%			\$13,291.93
Total			\$115,537.51

795 MCM AAAC Overhead Conductor

	<u>Material</u>	<u>Labor</u>	<u>Total</u>
From Computer Study	\$23,009.25	\$8,406.88	\$31,416.13
Stores 10%	\$2,300.93	\$0.00	\$2,300.93
Subtotal			\$33,717.06
Engineering & Supervision 13%			\$4,383.22
Total			\$38,100.28

Differential = (115,537.51 - 38,100.28) / 5280

= \$14.67 /ft.

**FLORIDA POWER COPORATION
OVERHEAD / UNDERGROUND RESIDENTIAL COST DATA**

**DISTRIBUTION OPERATIONS AND MAINTENENCE EXPENSES
OVERHEAD AND UNDERGROUND - 2000**

SCHEDULE NO. 13

ACCOUNT	DESCRIPTION	TOTAL DOLLARS
583.00	Operation - O/H Distribution Lines	\$3,751,607
584.00	Operation - U/G Distribution Lines	\$3,559,159
593.10	Maintenance - O/H Distribution Lines Lines and Services	\$3,661,641
593.20	Maintenance - O/H Distribution Lines Tree Trimming Expense	\$9,814,117
594.00	Maintenance - U/G Lines	\$1,734,096
595.10	Maintenance - Transformers O/H	\$670,423
595.20	Maintenance - Transformers U/G Other	\$176,832
595.30	Maintenance - Transformers U/G - URD	\$74,369
	Total	\$23,442,244