

Asset Management Conference

National Housing & Rehabilitation Association

June 3-4, 2019 Minneapolis, MN



UTILITY ALLOWANCES

Utility Allowances



we make housing affordable

PHA Allowances

Allowances for Tenant-Furnished Utilities And Other Services

U.S. Department of Housing and Urban Development Office of Public and Indian Housing

Locality: Miami-Dade County	, FL (Exc. Homestead)		Single Fa	mily Detached	I; Manufactured	Home (4 expo	sed walls)			Date: 1/2019		
	Utility or Service	Monthly Dollar Allowances; Number of Bedrooms										
	ounty of Service	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR	7 BR	8 BR		
Heating	a. Natural Gas	\$1	\$1	\$2	\$2	\$2	\$3	\$3	\$4	\$4		
	b. Electric Resistance	\$1	\$1	\$1	\$2	\$3	\$3	\$3	\$4	\$4		
	c. Heat Pump	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1		
	d. Propane/LPG	\$2	\$3	\$3	\$4	\$5	\$6	\$7	\$8	\$8		
Cooking	a. Natural Gas	\$5	\$6	\$8	\$10	\$11	\$13	\$15	\$16	\$18		
	b. Electric	\$5	\$7	\$8	\$10	\$11	\$13	\$15	\$16	\$18		
	c. Propane/LPG	\$11	\$14	\$18	\$21	\$25	\$28	\$31	\$35	\$39		
Other Electric/Light	ing	\$31	\$41	\$50	\$60	\$70	\$80	\$90	\$100	\$112		
Air Conditioning		\$10	\$25	\$42	\$63	\$84	\$102	\$114	\$128	\$143		
Water Heating	a. Natural Gas	\$8	\$15	\$23	\$30	\$38	\$46	\$52	\$58	\$64		
	b. Electric	\$6	\$13	\$20	\$27	\$34	\$41	\$46	\$51	\$57		
	c. Propane/LPG	\$17	\$33	\$50	\$67	\$83	\$100	\$112	\$125	\$140		
Water	a. Miami	\$4	\$7	\$18	\$35	\$54	\$84	\$94	\$105	\$118		
	b. Hialeah	\$13	\$16	\$23	\$34	\$46	\$57	\$64	\$71	\$80		
	c. Opa Locka	\$15	\$20	\$31	\$49	\$103	\$176	\$197	\$220	\$246		
Sewer	a. Miami	\$8	\$14	\$34	\$65	\$95	\$126	\$141	\$158	\$176		
	b. Hialeah	\$23	\$31	\$47	\$73	\$100	\$127	\$142	\$159	\$178		
	c. Opa Locka	\$37	\$44	\$61	\$93	\$159	\$229	\$256	\$286	\$321		
Range/Microwave		\$7	\$7	\$7	\$7	\$7	\$7	\$8	\$9	\$10		
Refrigerator		\$7	\$7	\$7	\$7	\$7	\$7	\$8	\$9	\$10		
Gas Fixed Charge	Add for any use of natural gas	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14		
Trash	a1. Miami City	\$32	\$32	\$32	\$32	\$32	\$32	\$36	\$40	\$45		
	a2. Unincorporated Dade County	\$39	\$39	\$39	\$39	\$39	\$39	\$44	\$49	\$55		
	b. Hialeah	\$30	\$30	\$30	\$30	\$30	\$30	\$34	\$38	\$42		
	c. Opa Locka	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
				\$0	\$0	\$0	50	\$0	\$0			
Complete below for the	vances To be used by the family to co he actual unit rented.	mpute allowar	nce.						r Service	Monthl		
Name of Family								Heating				
								Cooking				
								Other Electri				
Address of Unit								Air Condition				
								Water Heating				
								Water & Sewe				
								Trash Collect				
								Range/Microw	wave			
Number of Bedroo	ms							Refrigerator				
								Gas fixed ch	arge			
								Total		\$		

 Note 1
 If using septic sewer system, substract charge found in sheet 6_Water Sewer

 Note 2
 I using gas for any purpose, add gas fixed charge

Approved Engineer (Simulated)



Janwary 20, 2019 Davie Flandary Contrauti, Wesport Administration

120 Forbes Bivd, Sin. 130 Manufield, MA 02048 RC: UA Energy Companyion Model Estimate- Coral Place Asts. = Mami.

MPCR: 2018-075 This letter is in regards to hern 87 of the Cartification of Completeness and Accuracyfor Utility Abveance Energy Concurrention Model Estimate News. The Indexing is a summary of our analysis

L computer program.

R.01-00703 through FL07-00302. 2. Unit sizes:

a. 1 bedroom: 565 57.
 b. 2 bedroom: 805 57.
 c. 3 bedroom: 1.176 57.

 Building orientation – The building has a general North to South orientation, worst case orientation, for each unit type, was used for the purposes of this

 Design and meterials: The extention walls are structed over concretes construction, R2 beam investigned, and interior dynamic Trackalin-ag nonfing systems monitor of a non-finanderschiligtes over T3D board invasion, UW concretes, medi-decking. Structural steel traces, and \$27 genum board collings, Staking systems are \$24°, closer, devake pane.

 Mechanical Systems – All units are served by a DX split, systems with the air handwr located i the Mechanical Chore and the condumining with interime of each unit. Each at handler is acquipped with a SICM classical coly handler. The system science/EER ratio group as fixed balance.

1 -Bedroom: 1.5 tan/13.00 SER.
 2 -Bedroom: 2.0 ton/13.00 SER.
 3 -Bedroom: 3.0 ton/13.00 SER.

 Appliances included (Energy Star): dathweather, refrigerat heater.

orporate Office: 130 Candace Drive, Maitland, Fiorida 32751-3331 Phone: 407.7403 Orlando | FortMyers | Jacksonville | Tampa | vvex.matem.net jakewal.FLORIDA * 0001704* LOUIDANA * MORTHY CAROLANA * BOUTHY CARO

P. GCd To The Provide Network State State

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MONTHLY UTILITY COSTS

Propel Name: Cora Place Ayls Extract Name: CoraPlace In TRACED 700 v4.2.1 cansided at 5417 PM or 51/02010 Obmotion 2. Marchin Grane Granewich march Page 1 / 2



Utility Allowances

PHA Allowances

• Calculated from averages within the district or zone.

• Not accurate for every property.

Approved Engineer (Simulated)

 Accurately simulated based on industry standards.

• Gives accurate results with a high degree of certainty.



Florida Housing Requirements



Florida Housing has an approved list of vendors. Vendors must submit a qualifications package showing:

- Either PE (Professional Engineer) or CEM (Certified Energy Manager) on staff.
- Document examples of relevant experience.
- List proposed methods (software).
- References.



Florida Housing Requirements



Energy Consumption Model Utility Allowance Procedures for Housing Credit Developments

An owner may calculate a utility allowance estimate using an energy and water and sewage consumption and analysis model. The model must take into account factors including unit size, building orientation, design and materials, mechanical systems, appliances, and characteristics of the building location. The Energy Consumption Model utility allowance schedule shall include all utility types paid for by the tenants. Florida Housing staff must approve this owner estimate prior to implementation.

The estimate must be calculated by an independent licensed engineer or qualified professional chosen from the pool approved by Florida Housing Finance Corporation (Florida Housing). The owner shall contract directly with the Provider in order to obtain the energy consumption model utility allowance estimate. The approved pool of utility allowance estimate Providers is:



Florida Housing Requirements



Diamond Property Consultants, Inc.

James Beats – President Diamond Property Consultants, Inc. 2113 Kings Pass Heath, TX 75032 Phone: (972) 475-9977, ext. 101 Fax: (972) 771-8288 Cell: (972) 672-7681 Jbeats@dpcservices.net

Florida Solar Energy Center

David Chasar, PE - Senior Research Engineer 1679 Clearlake Road Cocoa, FL 32922 Office: (321) 638-1453 Cell: (321) 506-8205 Fax: (321) 638-1439 dchasar@fsec.ucf.edu

KN Consultants, LLC

Sharon Kelly – Principal P.O. Box 1212 Safety Harbor, FL 34695 Phone: (727) 543-7873 sekelly@tampabay.rr.com

Matern Professional Engineering, Inc.

Todd Stoltz, CEM, CPMP, QCxP - Project Manager 130 Candace Drive Maitland, FL 32751 Phone: (813) 261-5157 Cell: (813) 380-0319 Fax: (407) 740-0365 tstoltz@matern.net



<u>Methodology – Electrical Utility Calculation</u>

Electric: building is built virtually within Energy Simulation Software.

- Size
- Orientation
- Wall construction
- Window construction
- Lights
- Plug loads (outlets)
- HVAC loads (cooling/heating)
- Water Heating
- People loads



<u>Methodology – Electrical Utility Calculation</u>

- T-stat setpoints: ASHRAE standards used:
 - 74F Cooling
 - 72F Heating
 - 50% RH
- Local utility rate

Utility	Jan	Feb	Mar	Apr	May	Monthly U June	tility Costs July	s Aug	Sept	Oct	Nov	Dec	Total
Alternative 1				·					·				
Electric													
On-Pk Cons. (\$)	45	42	53	50	53	55	58	61	60	57	54	51	637
Monthly Total (\$):	45	42	53	50	53	55	58	61	60	57	54	51	637
Building Area = 565 Utility Cost Per Area = 1.13													
Alternative 2													
Electric													
On-Pk Cons. (\$)	48	46	59	57	60	63	66	69	67	63	59	55	713
Monthly Total (\$):	48	46	59	57	60	63	66	69	67	63	59	55	713
Building Area = 805 Utility Cost Per Area = 0.89													
Alternative 3													
Electric													
On-Pk Cons. (\$)	53	51	68	66	71	75	77	80	76	71	66	61	814
Monthly Total (\$):	53	51	68	66	71	75	77	80	76	71	66	61	814
Building Area = 1,17 Utility Cost Per Area = 0.69	76 ft² 9 \$/ft²												

MONTHLY UTILITY COSTS

By Matern Eng



Methodology – Water Consumption

Each units water consuming fixtures entered into spreadsheet.

- Unit type x 150% (IRS standard)
- Toilets GPF
- Sinks GPM
- Shower GPM
- Dishwasher Gallons per load
- Washing Machine Gallons per load
- Human usage/behaviors based on DOE published standards
- Totals produces total gallons/month consumed
- Utility provider rate

DEVELOPMENT: Westview	
UNIT: 1-BEDROOM	
CIAIT: 1-DEDIGOOM	
TOTAL NUMBER OF PEOPLE IN HOUSEHOLD	1.5
SHOWERS & BATHS	
SHOWERS/DAY/PERSON	1
LENGTH OF SHOWER (MIN)	10
GPM OF SHOWERHEAD	1.5
MONTHLY USAGE (GAL)	675
TOILETS	_
FLUSHES/DAY/PERSON	4
GPF OF TOILET	1.28
MONTHLY USAGE (GAL)	230.4
FAUCETS	
TIMES PER DAY FAUCETS USED/PERSON	4
MINUTES FAUCET TURNED ON/USE	1
GPM OF FACET	0.5
MONTHLY USAGE (GAL)	90
WASHING DISHES	
TIMES DISHES WASHED BY HAND/DAY	2
MINUTES WATER RUNS EACH TIME	5
GPM OF FACET	1
DISHWASHER LOADS/MONTH	4.13
GALLON/LOAD	6
MONTHLY USAGE (GAL)	325
LAUNDRY	
LOADS OF LAUNDRY/WEEK	3
GALLON/LOAD	18
MONTHLY USAGE (GAL)	347
TOTAL MONTHLY WATER USAGE (GAL)	1,667
TOTAL MONTHLY WATER USAGE (KGAL)	1.67

WATER UTILITY BILL CALCULATOR	
Base Charge	\$10.71
Homeland Security Charge	\$2.37
Volume Rate \$/KGAL(0-7 KGAL)	\$3.22
Volume Charge (0-7 KGAL)	\$5.37
TOTAL MONTHLY WATER CHARGE	\$18.45

WASTEWATER UTILITY BILL CALCULATO	R
Base Charge	\$5.05
Volume Rate \$/kgal(0-3 KGAL)	\$1.85
Volume Charge \$/kgal(0-3 KGAL)	\$3.08
Volume Rate \$/kgal(>3 KGAL)	\$8.47
Volume Charge \$/kgal(>3 KGAL)	\$0.00
TOTAL MONTHLY WASTEWATER CHARGE	\$8.13



<u>Methodology – UA Package</u>

- Cover letter:
 - Lists everything about the property that was used to calculate UA.
 - Also lists housing requirements: BIN numbers, etc.
- Utility Allowance Worksheet:
 - Format provided by Florida Housing.
 - Lists only utilities tenant pays.
 - Lists each unit type: size, number, UA per utility type.
 - Certifications.
- Back-up information sheets:
 - Elec: Simulation software reports.
 - Water: Water consumption estimate.



Coral Place Apartments – Miami, FL



- Walls: Stucco over concrete R7 insulation.
- Roof: Built-up roof, R30 board insulation.
- Windows: Standard double pane clear.
- Lights: LED.
- HVAC: Dx split, elec. heat. 13 SEER.
- Water Heating: 4 KW.
- FPL.



<u>Coral Place Apartments – Miami, FL</u>

2019 PHA Table

Locality: Miami-Dade Count	ty, FL (Exc. Homestead)	Single Family Detached; Manufactured I							
	Utility or Service				Monthly Dollar Alle				
	ounty of Service	0 BR	1 BR	2 BR	3 BR				
Heating	a. Natural Gas	\$1	\$1	\$2	\$2				
	b. Electric Resistance	\$1	<mark>(\$1</mark>)	<mark>(\$1</mark>)	\$ <mark>2</mark>				
	c. Heat Pump	\$0	\$0	\$0	\$1				
	d. Propane/LPG	\$2	\$3	\$3	\$4				
Cooking	a. Natural Gas	\$ 5	\$6	\$8	\$10				
	b. Electric	\$5	<mark>\$7</mark>	<mark>(\$8</mark>	<mark>(\$10</mark>				
	c. Propane/LPG	\$11	\$14	\$18	\$21				
Other Electric/Ligh	nting	\$31	\$31 <mark>\$41</mark> <mark>\$50 \$60</mark>						
Air Conditioning		<mark>\$1</mark> 0	<mark>\$25</mark>	<mark>\$42</mark>	<mark>\$63</mark>				
Water Heating	a. Natural Gas	\$8	\$15	\$23	\$30				
	b. Electric	\$6	<mark>\$13</mark>	\$20	<mark>\$27</mark>				
	c. Propane/LPG	\$17	\$33	\$50	\$67				
Water	a. Miami	\$4	\$7	\$18	\$35				
	b. Hialeah	\$13	\$16	\$23	\$34				
	c. Opa Locka	<mark>\$1</mark> 5	\$20	\$31	\$49				
Sewer	a. Miami	\$8	\$14	\$34	\$65				
	b. Hialeah	\$23	\$31	\$47	\$73				
	c. Opa Locka	\$37	\$44	\$61	\$93				
Range/Microwave		\$7	<mark>.\$7</mark>	<mark>\$7</mark>	<mark>\$7</mark>				
Refrigerator		\$7	<mark>\$7</mark>	<mark>\$7</mark>	<mark>\$7</mark>				
Gas Fixed Charge	Add for any use of natural gas	\$14	\$14	\$14	\$14				
Trash	a1. Miami City	\$32	\$32	\$32	\$32				
	a2. Unincorporated Dade County	\$39	\$39	\$39	\$39				
	b. Hialeah	\$30	\$30	\$30	\$30				
	c. Opa Locka	\$0	\$0	\$0	\$0				

PHA	<u>ENG.</u>	<u>DIFF.</u>
\$101	\$54	\$47
, \$135	\$60	\$75
\$166	\$68	\$98

Engineers Calc. UA

Certification of C	ompleten	ess and Acc	uracy for Util						
	Developme	nt Informatio	'n						
Development Name	Coral Place	Apts.							
1001 NW 54th St. Development Address Miami, FL 33127									
Key Number									
Date of Study	1/10/2019								
Effective Date									
Unit Type	# of Units	Square Feet	Electric						
1 bedroom	68	565	54						
2 bedroom	28	805	60						
3 bedroom	4	1176	68						
-									



Coral Place Apartments – Miami, FL



January 10, 2019

Dave Pardey Contract/Report Administrator Coral Place Limited Partnership 120 Forbes Blvd, Ste. 180 Mansfield, MA 02048

RE: UA Energy Consumption Model Estimate- Coral Place Apts. - Miami, FL. - 2019

MPE#: 2018-075

This letter is in regards to Item #7 of the Certification of Completeness and Accuracy for Utility Allowance Energy Consumption Model Estimate form. The following is a summary of our analysis and findings for utility allowances. All energy consumption models were performed using Trane TRACE 700 v6.2.8 computer program.

1. The following Bin (Building Identification Numbers) are associated with this property:

FL07-00701 through FL07-00702.

2. Unit sizes:

- a. 1 bedroom: 565 SF.
- b. 2 bedroom: 805 SF.
- c. 3 bedroom: 1,176 SF.
- Building orientation The building has a general North to South orientation. The top floor worst case orientation, for each unit type, was used for the purposes of this estimate.
- 4. Design and materials: The exterior walls are stucco over concrete construction, R7 board insulation, and interior drywall. The built-up roofing systems consists of a roof membrane shingles over R30 board insulation, LW concrete, steel decking. Structural steel trusses, and 1/2" gypsum board ceilings. Glazing systems are 1/4", clear, double pane.
- Mechanical Systems All units are served by a DX split, systems with the air handler located in the Mechanical Closet and the condensing unit exterior of each unit. Each air handler is equipped with a 5 KW electric strip heater. The system sizes/SEER rating are as listed below:
 - a. 1 -Bedroom: 1.5 ton/13.00 SEER.
 - b. 2 -Bedroom: 2.0 ton/13.00 SEER.
 - c. 3-Bedroom: 3.0 ton/13.00 SEER.

 Appliances included (Energy Star): dishwasher, refrigerator/freezer, oven/range, and water heater.

Page 1 of 2

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Coral Place Apts. - Miami, FL - 2019

- 7. Lighting all units use average energy consumption. All units contain CFL lighting.
- The following energy data was used for the model: lighting 0.20 0.34 W/SF (varies by space); refrigerator – 0.13 W/SF; misc loads – 0.3 W/SF; laundry – 0.15 W/SF.
- 9. The current electric usage rate: Florida Power & Light (FPL) residential rate.
- Characteristics of the Building Location The development is located in Miami, FL. Weather data was used for this location from ASHRAE. Summer design conditions are 95F DB / 78 F WB. Winter design condition is 24 F DB.

Please see attached TRACE simulation reports for all units.

Sincerely,

MATERN PROFESSIONAL ENGINEERING, INC.



Todd Stoltz, сем, qcxp, срмp, сxA, свср Project Manager

Enclosed:

Monthly Utility Costs – all units. Monthly Energy Consumption –all units.

cc: TMS Perm/Contract File

Page 2 of 2

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Coral Place Apartments – Miami, FL

[Developme	nt Informatio	on		Tenant P	Tenant Paid Utilities Provider					
Development Name	Coral Place	Apts.			Yes 🔻	Electric	Florida Pow	ver & Light (FPL)		
Development Address	1001 NW 5 Miami, FL 3				No 🔻	Gas					
Development Address					No 🔻	Water					
Key Number					No 🔻	Sewer					
Date of Study	1/10/2019			No 🔻	Trash						
Effective Date					No 🔻	Other					
Unit Type	# of Units	Square Feet	Electric	Gas	Water	Sewer	Trash	Other	Total Per Month		
bedroom	68	565	54						\$54		
bedroom	28	805	60						\$60		
bedroom	4	1176	68						\$68		
									\$0		
									\$0		
									\$0		
									\$0		
Total Units	100										

The undersigned hereby certifies as follows:

Only utility costs paid directly by the resident(s) and not by or through the owner are included in the utility allowance calculation;
 Cable television, telephone and internet costs are excluded from utility allowance calculation;

3. This estimate is based on the most recent 12-month period;

4. In the case of new buildings with less than 12 months of consumption data, 12 months of data for units of similar size and construction in the properties geographic area was used;

5. Utility rates are based on local rates and utility supplier(s) for the above-named property and data is no older than 60 days at the time of this submission:

6. The owner and Engineer/Qualified Professional are not related, as defined in IRC Section 267(b) or 707(b);

7. The Energy Consumption Model, at a minimum, takes into account specific factors including, but not limited to, unit size, building orientation, design and materials, mechanical systems, appliances, characteristics of the building location.

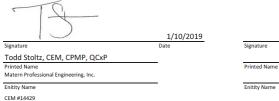
The following supporting documentation is included:

1. A letter from the Engineer/Qualified Professional explaining their analysis and findings for each Building Identification Number (BIN). The letter must explain how the specific factors in item #7 above were addressed.

Owner:

2. Copy of the 90-day notice to residents.

Engineer/Qualified Professional:



License # if applicable

Florida Housing Finance Corporation:

Signature - FHFC Asset Management & Compliance Dept. Date

					[Monthly U	tility Costs	\$					
Utility	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Alternative 1													
Electric													
On-Pk Cons. (\$)	45	42	53	50	53	55	58	61	60	57	54	51	637
Monthly Total (\$):	45	42	53	50	53	55	58	61	60	57	54	51	637
Building Area = 565	ft²												
Utility Cost Per Area = 1.13	8 \$/ft²												
Alternative 2													
Electric													
On-Pk Cons. (\$)	48	46	59	57	60	63	66	69	67	63	59	55	713
Monthly Total (\$):	48	46	59	57	60	63	66	69	67	63	59	55	713
Building Area = 805 Utility Cost Per Area = 0.89													
Alternative 3													
Electric													
On-Pk Cons. (\$)	53	51	68	66	71	75	77	80	76	71	66	61	814
Monthly Total (\$):	53	51	68	66	71	75	77	80	76	71	66	61	814

Building Area = 1,176 ft² Utility Cost Per Area = 0.69 \$/ft²

Project Name: Coral Place Apts Dataset Name: CoralPlace.trc TRACE® 700 v6.2.8 calculated at 04:17 PM on 01/10/2019 Monthly Utility Costs report Page 1 of 1



MONTHLY UTILITY COSTS

By Matern Eng

Lighting

Lighting Retrofits

- Incandescent (60 watts)/CFL(13 watts)
 → LED replacement (9 watts)
- Direct replacement.
- Choose soft colors vs. pure white.
- Coral Place = \$2.00 to \$3.00/unit type.





Warm White vs Cool White





<u>HVAC</u>

HVAC retrofits

- Upgrade to at least 13 SEER or better. (Most energy codes).
- Properly size systems (400 SF/ton max).
- Change both AHU (inside) & CU (outside) to maximize savings.
 - Investigate if new equipment fits in closets or on pad.
 - Investigate electric impacts (breaker/wire sizes).
- Proper choice of system.
 - Mid-Florida/north: Heat Pump or Gas furnace better option.
 - Southern-Florida/South Texas: Electric strip heat.
 - Change from hydronic heat to one of the above systems.



Plumbing Fixtures

Plumbing fixture retrofits:

- Toilet: 1.6 GPF > 1.28/0.80 GPF.
 - Saves water, but may cause more maintenance calls.
- Shower heads: 2.0 GPM > 1.0 GPM.
 - Choose higher quality head for dispersion = less complaints.
- Faucets: 2.5 GPM > 1.5 GPM.
 - Uses aerators to spread single stream into many.
- Dishwasher: ENERGY STAR saves almost 5,000 gallons/year.
- Washing Machine: 30-45 GPL > 15-20 GPL =
 - 1 person: 3 loads/week = 90 gal./week or \$2.00/ week.

= 360 gal./month or \$8.00/month.

= 4,320 gal./year or \$96.00/year.



Utility Rebates

Why are rebates given?

- Reduces load (demand) on grid.
- You help us, we help you.
- Accelerates payback.
- Most rebates require Energy Audit by utility before retro fits are completed.





QUESTIONS?

