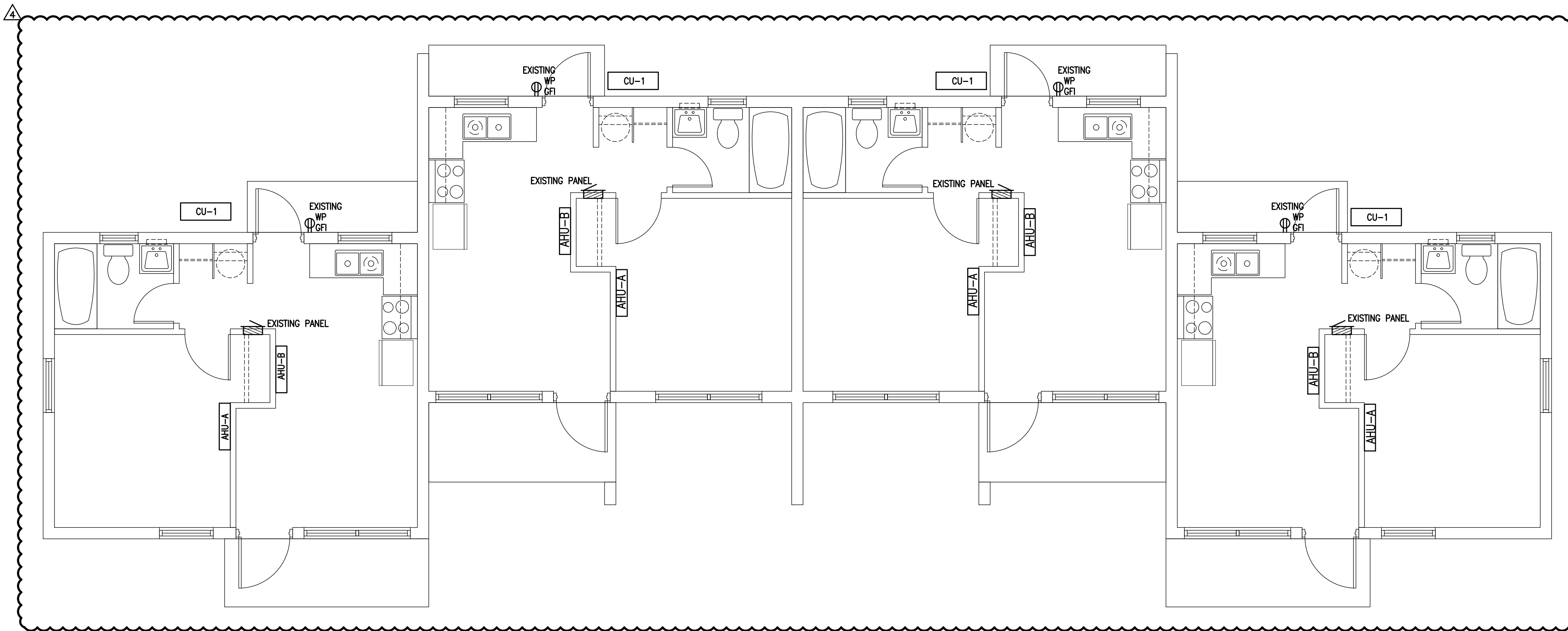


ELECTRICAL SCOPE OF WORK

1. DISCONNECT AND REMOVE THE ELECTRICAL SPACE HEATERS AND PATCH THE WALL.
2. REMOVE THE CIRCUIT BREAKERS FROM THE PANEL THAT FED THE EXISTING SPACE HEATERS INSTALL BLANKS IN UNUSED CIRCUIT BREAKER SPACES
3. FURNISH & INSTALL ONE (1) NEW CIRCUIT BREAKERS IN EACH PANEL TO FEED THE NEW MINI-SPLIT AIR HANDLING UNITS AND CONDENSER UNIT AS FOLLOWS:
 - A. ONE BEDROOM - CU, 2-POLE 25A
4. FURNISH AND INSTALL 1/2" EMT CONDUIT AND (2) #10 AWG, CU & (1) #10 AWG, CU GROUND FROM THE EXISTING PANEL TO THE CU
5. FURNISH & INSTALL A 30A, 2-POLE, NON-FUSED DISCONNECT SWITCH FOR THE CU. THE DISCONNECT SWITCH FOR THE CU SHALL BE NEMA 3R RATED. INDOOR UNITS ARE POWERED FROM THE EXTERIOR UNIT.



SECTION A - QUADPLEX MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

SERVICE ENTRANCE SIZE CALCULATIONS

UNIT DATA:			
THE DWELLING UNIT HAS AN AREA OF THE FOLLOWING:			
DWELLING UNIT FLOOR AREA:	408	SQ-FT	
UNIT HAS AN ELECTRIC RANGE			
THE LARGER LOAD OF ELECTRIC HEAT OR A/C IS USED FOR THE CALCULATIONS			
THERE WILL BE NO LAUNDRY FACILITIES IN THE DWELLING			
LOAD CALCULATIONS:			
(NEC ART. 220-11, 220-17 DWELLING LOAD CALCULATION)			
GENERAL LOAD			
GENERAL LIGHTING LOAD	AT 3.0 VA / SQ-FT	1,224.0	VA
SMALL APPLIANCE LOAD (2 CIRCUITS)		3,000.0	VA
ELECTRIC RANGE		8,000.0	VA
ELECTRIC WATER HEATER		3,600.0	VA
TOTAL GENERAL LOAD		11,600.0	VA
APPLICATION OF DEMAND FACTOR:			
FIRST 10,000 VA @ 100%		10,000.0	VA
REMAINDER OF LOAD AT 40%		640.0	VA
GENERAL LOAD WITH DEMAND FACTOR		10,640.0	VA
AIR CONDITIONING/HEATING LOAD			
HEATING / (FUTURE) A/C LOAD		4,320.0	VA
HVAC LOAD		4,320.0	VA
GENERAL LOAD WITH DEMAND FACTOR		10,640.0	VA
HVAC LOAD		4,320.0	VA
TOTAL DWELLING LOAD		14,960.0	VA
62.3 A @ 120/240V 1-PHASE			
SERVICE SIZE FOR EACH DWELLING UNIT: 100A			

EXISTING QUADPLEX PANEL SCHEDULE - SECTION A

COLLIER COUNTY HOUSING AUTHORITY IMMOKALEE / COLLIER COUNTY, FLORIDA													
PANEL RATING: 100A				MOUNTING: RECESS				VOLTAGE: 120 / 240					
NUMBER OF PHASES: 1				MAIN BREAKER RATING: MLO				GROUND STRAP REQ'D: NO					
SERVICE ENTRANCE RATED: NO				MANUFACTURER: AS SPECIFIED									
NO	A	P	NOTE	DESCRIPTION	WATTS	kw-L1	kw-L2	WATTS	DESCRIPTION	NOTE	P	A	NO
1	50	2		RANGE	6000	7.500	1500	1500	KITCHEN RECEPTACLES	GFCI	1	20	2
3					6000		7.500	1500	KITCHEN RECEPTACLES	GFCI	1	20	4
5	15	1		LIGHTS	1000	1.180	180	180	BATHROOM	GFCI	1	20	6
7	20	2		WATER HEATER	1500		2.700	1200	GENERAL PURPOSE RECEPTACLES	AFC	1	20	8
9					1500	3.000	1500	1500	GENERAL PURPOSE RECEPTACLES	AFC	1	20	10
11	20	2		SPACE HEATER	1920		1920	1920	SPACE HEATER		2	20	12
13					1920		1920	1920					14
15	20	1		REFRIGERATOR	1500		360	360	EXTERIOR RECEPTACLES	GFCI	1	20	16

SEE LOAD CALCULATIONS ON THIS SHEET

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PROJECT NAME:
Farm Worker Village
Collier County Housing Authority
 1800 Farm Worker Way
 Immokalee, Florida 34142

STAFFORD ENGINEERING, INC.
 3525 Bonita Beach Rd., Suite 110, Bonita Springs, FL 34134
 239-948-5941 / 239-948-5980 FAX
 Steven R. Stafford - PE - Florida License # 34664
 Certificate Of Authorization No. 26464

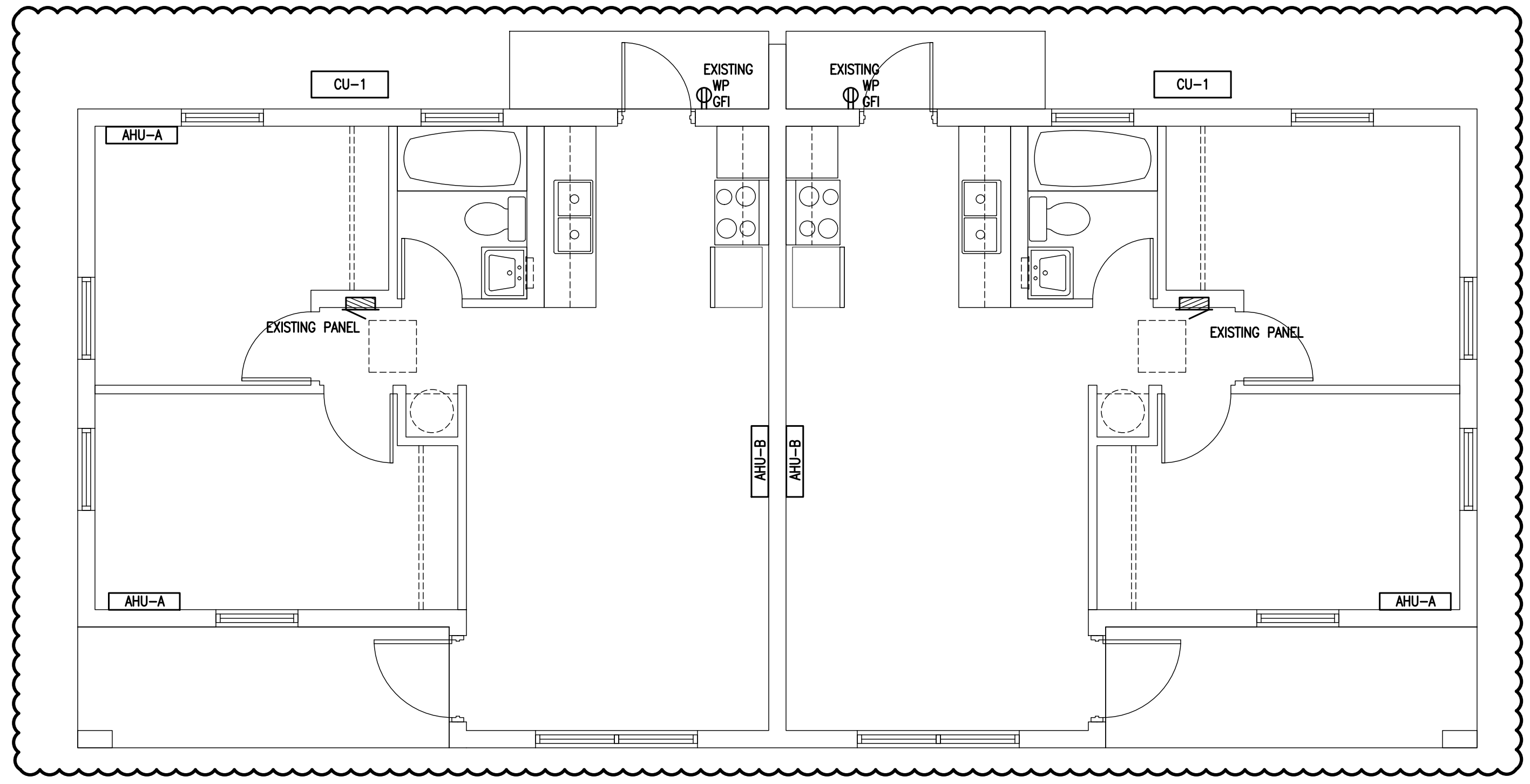
OWNER CHANGES	JUNE 26, 2020
#	REVISION DATE
DATE:	09/14/16
DRAWN BY:	R.A.M.
CHECKED BY:	S.R.S.
JOB NUMBER:	16079

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SERVICE ENTRANCE SIZE CALCULATIONS

UNIT DATA:	
THE DWELLING UNIT HAS AN AREA OF THE FOLLOWING:	
DWELLING UNIT FLOOR AREA:	607 SQ-FT
UNIT HAS AN ELECTRIC RANGE	
THE LARGER LOAD OF ELECTRIC HEAT OR A/C IS USED FOR THE CALCULATIONS	
THERE WILL BE NO LAUNDRY FACILITIES IN THE DWELLING	
LOAD CALCULATIONS: (NEC ART. 220-11, 220-17 DWELLING LOAD CALCULATION)	
GENERAL LOAD	
GENERAL LIGHTING LOAD AT 3.0 VA / SQ-FT	1,821.0 VA
SMALL APPLIANCE LOAD (2 CIRCUITS)	3,000.0 VA
ELECTRIC RANGE	8,000.0 VA
ELECTRIC WATER HEATER	3,600.0 VA
TOTAL GENERAL LOAD	11,600.0 VA
APPLICATION OF DEMAND FACTOR:	
FIRST 10,000 VA @ 100%	10,000.0 VA
REMAINDER OF LOAD AT 40%	640.0 VA
GENERAL LOAD WITH DEMAND FACTOR	10,640.0 VA
AIR CONDITIONING/HEATING LOAD	
HEATING / (FUTURE) A/C LOAD	4,320.0 VA
HVAC LOAD	4,320.0 VA
GENERAL LOAD WITH DEMAND FACTOR	10,640.0 VA
HVAC LOAD	4,320.0 VA
TOTAL DWELLING LOAD	14,960.0 VA
	62.3 A @ 120/240V 1-PHASE
SERVICE SIZE FOR EACH DWELLING UNIT: 100A	



SECTION A - DUPLEX MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

EXISTING DUPLEX PANEL SCHEDULE - SECTION A

COLLIER COUNTY HOUSING AUTHORITY IMMOKALEE / COLLIER COUNTY, FLORIDA													
PANEL RATING: 100A				MOUNTING: RECESS									
VOLTAGE: 120 / 240				MAIN BREAKER RATING: MLO									
NUMBER OF PHASES: 1				GROUND STRAP REQ'D: NO									
SERVICE ENTRANCE RATED: NO				MANUFACTURER: AS SPECIFIED									
NO	A	P	NOTE	DESCRIPTION	WATTS	kW-L1	kW-L2	WATTS	DESCRIPTION	NOTE	P	A	NO
1	50	2		RANGE	6000	7.500		1500	KITCHEN RECEPTACLES	GFCI	1	20	2
3					6000		7.500	1500	KITCHEN RECEPTACLES	GFCI	1	20	4
5	15	1		LIGHTS	1000	1.180		180	BATHROOM	GFCI	1	20	6
7	20	2		WATER HEATER	1500		2.700	1200	GENERAL PURPOSE RECEPTACLES	AFC	1	20	8
9					1500	3.000		1500	GENERAL PURPOSE RECEPTACLES	AFC	1	20	10
11	20	2		SPACE HEATER	1920			1920	SPACE HEATER		2	20	12
13					1920			1920					14
15	20	1		REFRIGERATOR	1500			360	EXTERIOR RECEPTACLES	GFCI	1	20	16

SEE LOAD CALCULATIONS ON THIS SHEET

ELECTRICAL SCOPE OF WORK

- DISCONNECT AND REMOVE THE ELECTRICAL SPACE HEATERS AND PATCH THE WALL.
- REMOVE THE CIRCUIT BREAKERS FROM THE PANEL THAT FED THE EXISTING SPACE HEATERS. INSTALL BLANKS IN UNUSED CIRCUIT BREAKER SPACES.
- FURNISH & INSTALL ONE (1) NEW CIRCUIT BREAKER IN EACH PANEL TO FEED THE NEW MINI-SPLIT AIR HANDLING UNITS AND CONDENSER UNIT AS FOLLOWS:
 - A. TWO BEDROOM - CU, 2-POLE 25A
- FURNISH AND INSTALL 1/2" EMT CONDUIT AND (2) #10 AWG, CU & (1) #10 AWG, CU GROUND FROM THE EXISTING PANEL TO THE CU.
- FURNISH & INSTALL A 30A, 2-POLE, NON-FUSED DISCONNECT SWITCH FOR THE CU. THE DISCONNECT SWITCH FOR THE CU SHALL BE NEMA 3R RATED. INDOOR UNITS ARE POWERED FROM THE EXTERIOR UNIT.
- NOT USED

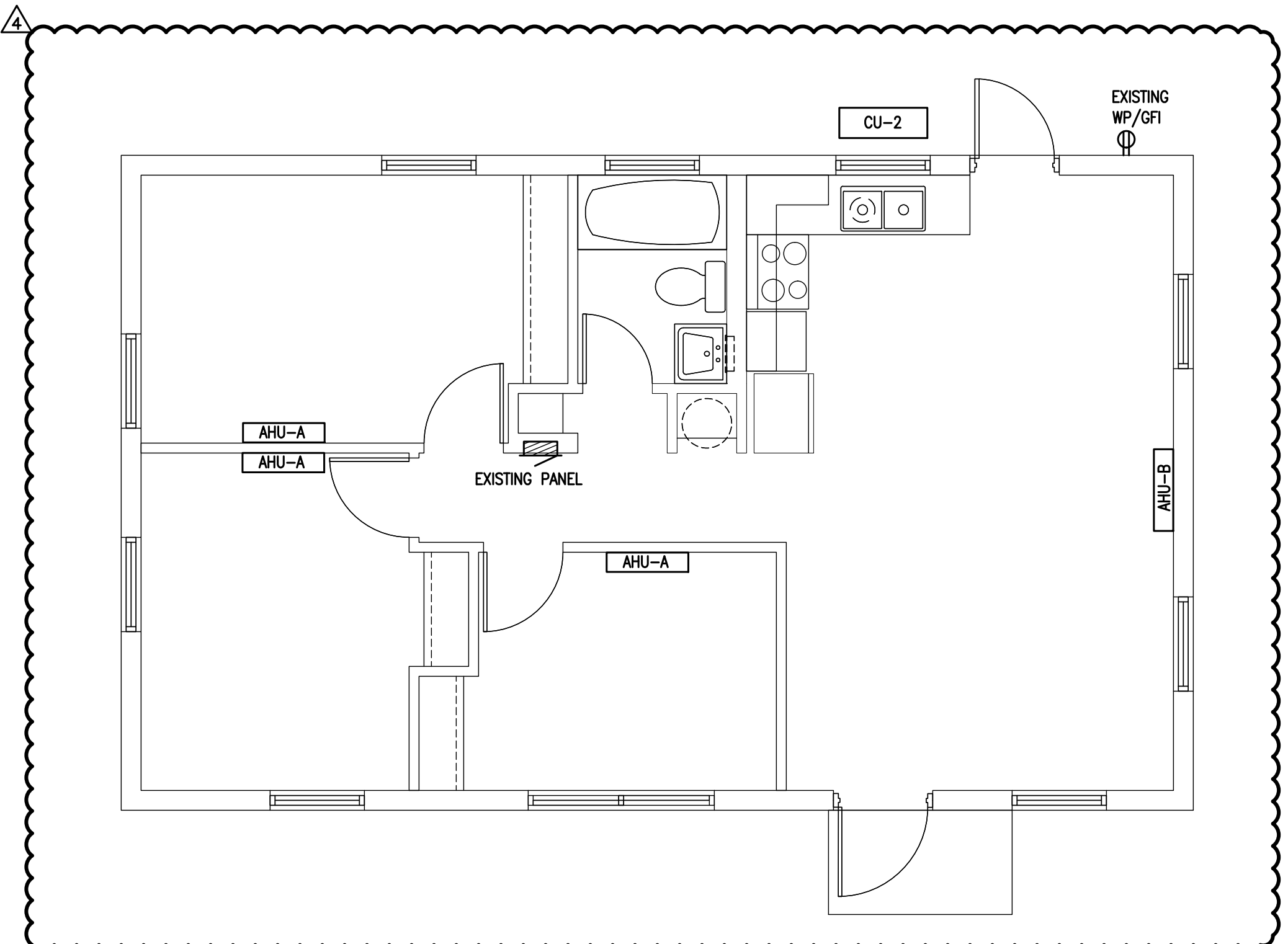
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239-948-5941 / 239-948-5980 FAX
Steven R. Stafford - PE - Florida License # 34664
Certificate Of Authorization No. 26464

#	REVISION	DATE
4	OWNER CHANGES	JUNE 26, 2020
DATE:	09/14/16	
DRAWN BY:	R.A.M.	
CHECKED BY:	S.R.S.	
JOB NUMBER:	16079	

SERVICE ENTRANCE SIZE CALCULATIONS			
UNIT DATA:			
THE DWELLING UNIT HAS AN AREA OF THE FOLLOWING:			
DWELLING UNIT FLOOR AREA:	792	SQ-FT	
UNIT HAS AN ELECTRIC RANGE			
THE LARGER LOAD OF ELECTRIC HEAT OR A/C IS USED FOR THE CALCULATIONS			
THERE WILL BE NO LAUNDRY FACILITIES IN THE DWELLING			
LOAD CALCULATIONS: (NEC ART. 220-11, 220-17 DWELLING LOAD CALCULATION)			
GENERAL LOAD			
GENERAL LIGHTING LOAD	AT 3.0 VA / SQ-FT	2,376.0	VA
SMALL APPLIANCE LOAD (2 CIRCUITS)		3,000.0	VA
ELECTRIC RANGE		8,000.0	VA
ELECTRIC WATER HEATER		3,600.0	VA
	TOTAL GENERAL LOAD	16,976.0	VA
APPLICATION OF DEMAND FACTOR:			
	FIRST 10,000 VA @ 100%	10,000.0	VA
	REMAINDER OF LOAD AT 40%	2,790.4	VA
	GENERAL LOAD WITH DEMAND FACTOR	12,790.4	VA
AIR CONDITIONING/HEATING LOAD			
HEATING / (FUTURE) A/C LOAD		7,200.0	VA
	HVAC LOAD	7,200.0	VA
	GENERAL LOAD WITH DEMAND FACTOR	12,790.4	VA
	HVAC LOAD	7,200.0	VA
	TOTAL DWELLING LOAD	19,990.4	VA
		83.3 A @ 120/240V 1-PHASE	
SERVICE SIZE FOR EACH DWELLING UNIT: 100A			



SECTION A - 3 BEDROOM MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

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PROJECT NAME:
Farm Worker Village
Collier County Housing Authority
1800 Farm Worker Way
Immokalee, Florida 34142

EXISTING 3-BERROOM PANEL - SECTION A																
COLLIER COUNTY HOUSING AUTHORITY IMMOKALEE / COLLIER COUNTY, FLORIDA																
BUS NUMBER:		AMPERE RATING: 100A		VOLTAGE (L-L): 240		PHASE: 1				VOLTAGE (L-N): 120		WIRE: 3				
SERVED FROM: MAIN		MAIN TYPE: MAIN LUGS ONLY										MIN. KAIC:				
MOUNTING: RECESS		LUG OPTIONS:														
CKT NO.	CIRCUIT BRKR TRIP	LOAD DESCRIPTION	C O D I E	LOAD KVA	BRANCH PHASE/NEUT. S	CIRCUIT COND. SIZE	MIN COND. SIZE	BRANCH PHASE/NEUT. S	CIRCUIT COND. SIZE	MIN COND. SIZE	LOAD KVA	C O D I E	LOAD DESCRIPTION	CIRCUIT BRKR TRIP	CKT NO.	
1	60 2	RANGE	K	4.00	1 3	3	8	1	1 3	10	10	3/4	1.80	N	WATER HEATER	30 2 2
3				4.00							1.80				4	
5	20 1	REFRIGERATOR	K	1.50	1 2	12	12	1/2	1 3	10	10	3/4	1.92	H	SPACE HEATER	30 2 6
7	20 1	GFCI-KITCHEN RECEPTALS	K	1.50	1 2	12	12	1/2	1 3	10	10	3/4	1.92	H	SPACE HEATER	30 2 10
9	20 1	GFCI-KITCHEN RECEPTALS	K	1.50	1 2	12	12	1/2							12	
11	20 1	GFCI-BATHROOM	R	0.36	1 2	12	12	1/2							12	
13	20 1	GFCI-EXTERIOR RECEPTALS	R	0.36	1 2	12	12	1/2	1 2	12	12	1/2	1.00	L	LIGHTS	20 1 14
15	20 1	GENERAL RECEPTALS	R	1.08	1 2	12	12	1/2							1 16	
17	20 1	GENERAL RECEPTALS	R	1.08	1 2	12	12	1/2							1 18	
19	20 1	GENERAL RECEPTALS	R	0.90	1 2	12	12	1/2							1 20	

SEE LOAD CALCULATIONS

- ELECTRICAL SCOPE OF WORK**
- DISCONNECT AND REMOVE THE ELECTRICAL SPACE HEATERS AND PATCH THE WALL.
 - REMOVE THE CIRCUIT BREAKERS FROM THE PANEL THAT FED THE EXISTING SPACE HEATERS INSTALL BLANKS IN UNUSED CIRCUIT BREAKER SPACES
 - FURNISH & INSTALL ONE (1) NEW CIRCUIT BREAKER IN EACH PANEL TO FEED THE NEW MINI-SPLIT AIR HANDLING UNITS AND CONDENSER UNIT AS FOLLOWS:
 - A. THREE BEDROOM - CU, 2-POLE 45A
 - FURNISH AND INSTALL 3/4" EMT CONDUIT AND (2) #8 AWG, CU & (1) #10 AWG, CU GROUND FROM THE EXISTING PANEL TO THE CU
 - FURNISH & INSTALL A 60A, 2-POLE, NON-FUSED DISCONNECT SWITCH FOR THE CU. THE DISCONNECT SWITCH FOR THE CU SHALL BE NEMA 3R RATED. INDOOR UNITS ARE POWERED FROM THE EXTERIOR UNIT.
 - NOT USED

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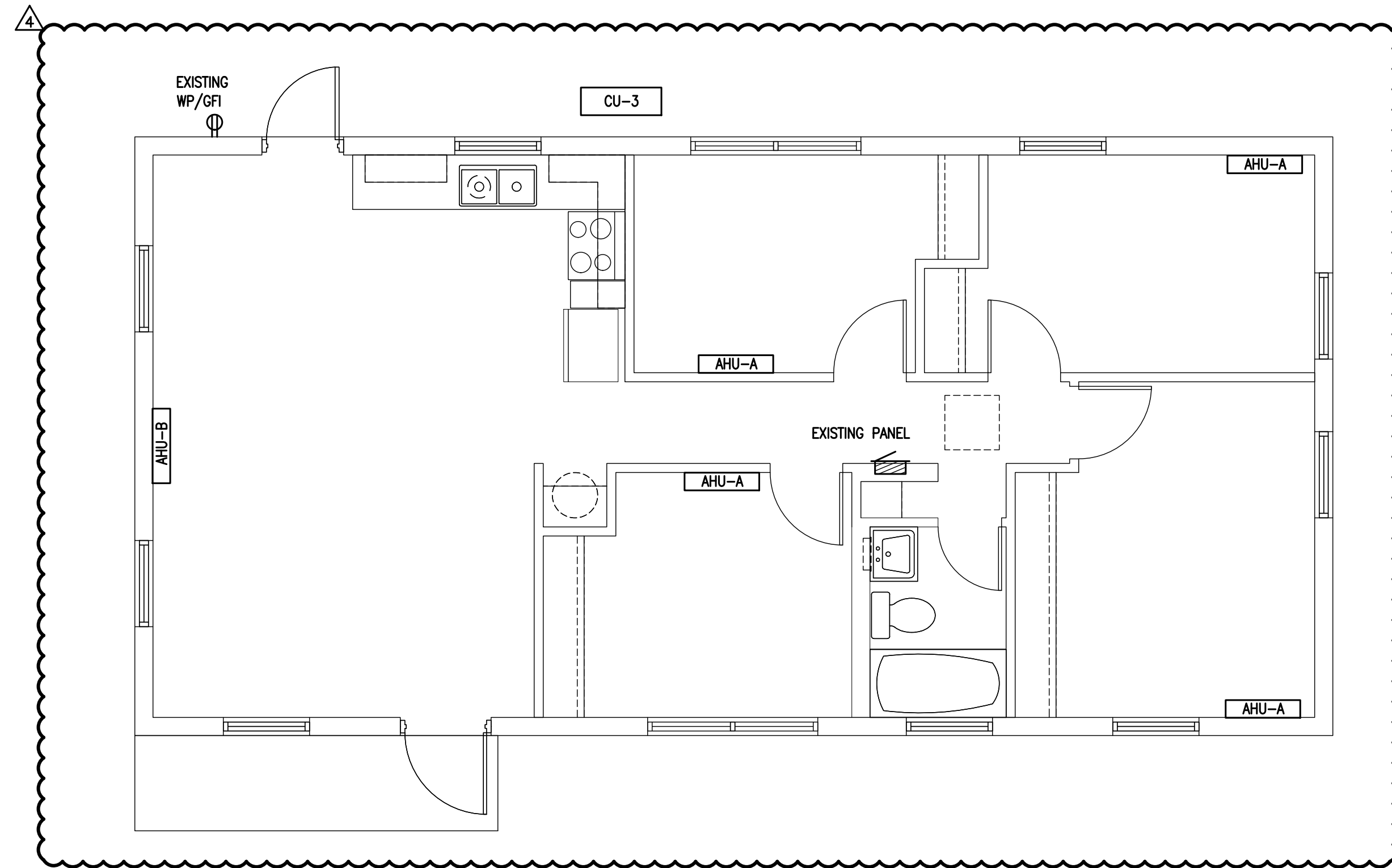
#	REVISION	DATE
4	OWNER CHANGES	JUNE 26, 2020

DATE: 09/14/16
DRAWN BY: R.A.M.
CHECKED BY: S.R.S.
JOB NUMBER: 16079

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SERVICE ENTRANCE SIZE CALCULATIONS			
UNIT DATA:			
THE DWELLING UNIT HAS AN AREA OF THE FOLLOWING:			
DWELLING UNIT FLOOR AREA:	968	SQ-FT	
UNIT HAS AN ELECTRIC RANGE			
THE LARGER LOAD OF ELECTRIC HEAT OR A/C IS USED FOR THE CALCULATIONS			
THERE WILL BE NO LAUNDRY FACILITIES IN THE DWELLING			
LOAD CALCULATIONS: (NEC ART. 220-11, 220-17 DWELLING LOAD CALCULATION)			
GENERAL LOAD			
GENERAL LIGHTING LOAD	AT 3.0 VA / SQ-FT	2,904.0	VA
SMALL APPLIANCE LOAD (2 CIRCUITS)		3,000.0	VA
ELECTRIC RANGE		8,000.0	VA
ELECTRIC WATER HEATER		3,600.0	VA
	TOTAL GENERAL LOAD	17,504.0	VA
APPLICATION OF DEMAND FACTOR:			
	FIRST 10,000 VA @ 100%	10,000.0	VA
	REMAINDER OF LOAD AT 40%	3,001.6	VA
	GENERAL LOAD WITH DEMAND FACTOR	13,001.6	VA
AIR CONDITIONING/HEATING LOAD			
HEATING / (FUTURE) A/C LOAD		8,400.0	VA
	HVAC LOAD	8,400.0	VA
	GENERAL LOAD WITH DEMAND FACTOR	13,001.6	VA
	HVAC LOAD	8,400.0	VA
	TOTAL DWELLING LOAD	21,401.6	VA
		89.2 A @ 120/240V 1-PHASE	
SERVICE SIZE FOR EACH DWELLING UNIT: 100A			



SECTION A - 4 BEDROOM MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

EXISTING 4-BEROOM PANEL - SECTION A																	
COLLIER COUNTY HOUSING AUTHORITY IMMOKALEE / COLLIER COUNTY, FLORIDA																	
BUS NUMBER:		AMPERE RATING: 100A		VOLTAGE (L-L): 240		PHASE: 1											
SERVED FROM: MAIN		MAIN TYPE: MAIN LUGS ONLY		VOLTAGE (L-N): 120		WIRE: 3											
MOUNTING: RECESS		LUG OPTIONS:				MIN. KAIC:											
CKT NO.	CIRCUIT BRKR	LOAD DESCRIPTION	C O D E	LOAD KVA	S PHASE / N	I NEUT / S	GND SIZE	MIN CND SIZE	S PHASE / N	I NEUT / S	GND SIZE	MIN CND SIZE	LOAD KVA	C O D E	LOAD DESCRIPTION	CIRCUIT BRKR	CKT NO.
1	60 2	RANGE	K	4.00	1 3	3	8	1	1 3	10	10	3/4	1.80	N	WATER HEATER	30 2	2
3				4.00									1.80				4
5	20 1	REFRIGERATOR	K	1.50	1 2	12	12	1/2	1 3	10	10	3/4	1.92	H	SPACE HEATER	30 2	6
7	20 1	GFCI-KITCHEN RECEPTICALS	K	1.50	1 2	12	12	1/2					1.92				8
9	20 1	GFCI-KITCHEN RECEPTICALS	K	1.50	1 2	12	12	1/2	1 3	10	10	3/4	1.92	H	SPACE HEATER	30 2	10
11	20 1	GFCI-BATHROOM	R	0.36	1 2	12	12	1/2					1.92				12
13	20 1	GFCI-EXTERIOR RECEPTICALS	R	0.36	1 2	12	12	1/2	1 3	10	10	3/4	1.92	H	SPACE HEATER	30 2	14
15	20 1	GENERAL RECEPTICALS	R	0.90	1 2	12	12	1/2					1.92				16
17	20 1	GENERAL RECEPTICALS	R	1.44	1 2	12	12	1/2	1 2	12	12	1/2	1.00	L	LIGHTS	20 1	18
19	20 1	GENERAL RECEPTICALS	R	1.26	1 2	12	12	1/2									20

SEE LOAD CALCULATIONS

- ELECTRICAL SCOPE OF WORK**
- DISCONNECT AND REMOVE THE ELECTRICAL SPACE HEATERS AND PATCH THE WALL.
 - REMOVE THE CIRCUIT BREAKERS FROM THE PANEL THAT FED THE EXISTING SPACE HEATERS. INSTALL BLANKS IN UNUSED CIRCUIT BREAKER SPACES.
 - FURNISH & INSTALL ONE (1) NEW CIRCUIT BREAKERS IN EACH PANEL TO FEED THE NEW AIR HANDLING UNIT AND CONDENSER UNIT AS FOLLOWS:
 - A. FOUR BEDROOM, SECTION A - CU, 2-POLE 50A
 - FURNISH AND INSTALL 3/4" EMT CONDUIT AND (2) #8 AWG, CU & (1) #10 AWG, CU GROUND FROM THE EXISTING PANEL TO THE AHU AND TO THE CU AS SEPARATE CIRCUITS.
 - FURNISH & INSTALL A 60A, 2-POLE, NON-FUSED DISCONNECT SWITCH FOR THE CU. THE DISCONNECT SWITCH FOR THE CU SHALL BE NEMA 3R RATED. INDOOR UNITS ARE POWERED FROM THE EXTERIOR UNIT.
 - NOT USED

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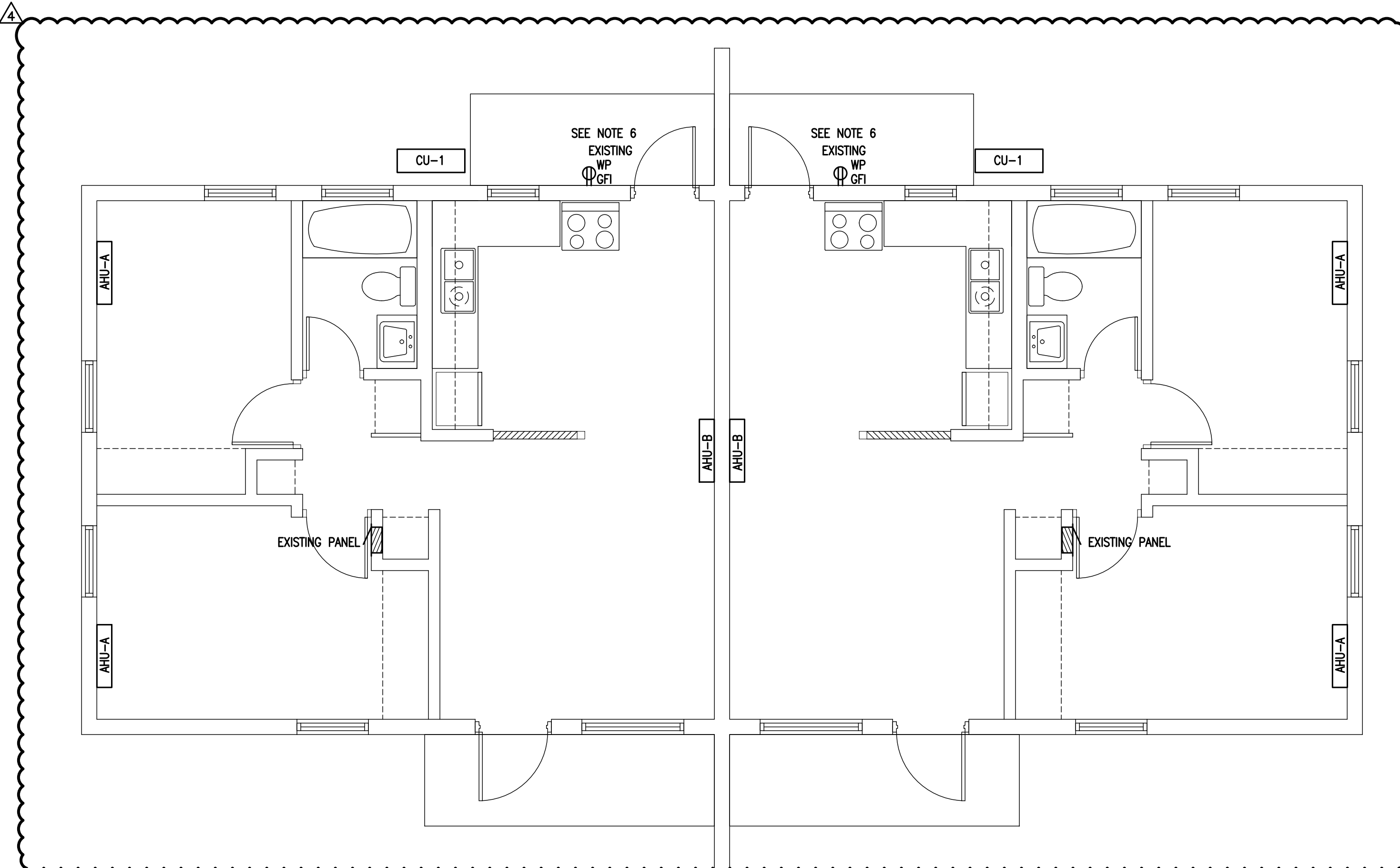
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OWNER CHANGES	JUNE 26, 2020
# REVISION	DATE
DATE:	09/14/16
DRAWN BY:	R.A.M.
CHECKED BY:	S.R.S.
JOB NUMBER:	16079

SERVICE ENTRANCE SIZE CALCULATIONS

UNIT DATA:			
THE DWELLING UNIT HAS AN AREA OF THE FOLLOWING:			
DWELLING UNIT FLOOR AREA:	607	SQ-FT	
UNIT HAS AN ELECTRIC RANGE			
THE LARGER LOAD OF ELECTRIC HEAT OR A/C IS USED FOR THE CALCULATIONS			
THERE WILL BE NO LAUNDRY FACILITIES IN THE DWELLING			
LOAD CALCULATIONS: (NEC ART. 220-11, 220-17 DWELLING LOAD CALCULATION)			
GENERAL LOAD			
GENERAL LIGHTING LOAD	AT 3.0 VA / SQ-FT	1,821.0	VA
SMALL APPLIANCE LOAD (2 CIRCUITS)		3,000.0	VA
ELECTRIC RANGE		8,000.0	VA
ELECTRIC WATER HEATER		3,600.0	VA
TOTAL GENERAL LOAD		11,600.0	VA
APPLICATION OF DEMAND FACTOR:			
FIRST 10,000 VA @ 100%		10,000.0	VA
REMAINDER OF LOAD AT 40%		640.0	VA
GENERAL LOAD WITH DEMAND FACTOR		10,640.0	VA
AIR CONDITIONING/HEATING LOAD			
HEATING / (FUTURE) A/C LOAD		4,320.0	VA
HVAC LOAD		4,320.0	VA
GENERAL LOAD WITH DEMAND FACTOR		10,640.0	VA
HVAC LOAD		4,320.0	VA
TOTAL DWELLING LOAD		14,960.0	VA
		62.3 A @ 120/240V 1-PHASE	
SERVICE SIZE FOR EACH DWELLING UNIT: 100A			



SECTION B - DUPLEX ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

EXISTING DUPLEX PANEL - SECTION B

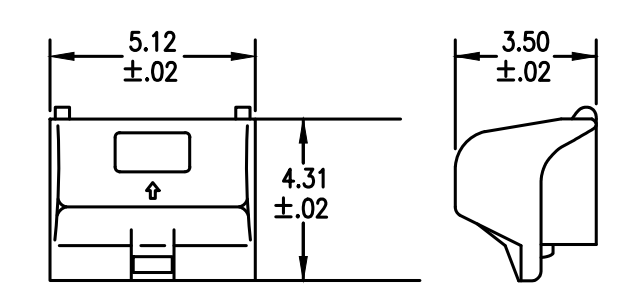
COLLIER COUNTY HOUSING AUTHORITY IMMOKALEE / COLLIER COUNTY, FLORIDA													
BUS NUMBER:		AMPERE RATING: 100		VOLTAGE (L-L): 240				PHASE: 1		SERVED FROM: MAIN			
MOUNTING: RECESS		LUG OPTIONS:		MAIN TYPE: MAIN LUGS ONLY				VOLTAGE (L-N): 120		WIRE: 3			
								MIN. KAIC:					
CKT NO.	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P
1	20 1	RECEPTACLES	20 1	REFRIGERATOR	20 1	2							
3	20 1	RECEPTACLES	30 2	WATER HEATER	30 2	4							
5	20 1	RECEPTACLES	30 2	WALL HEATER	30 2	8							
7	20 1	RECEPTACLES	20 1	RECEPTACLES	20 1	12							
9	20 1	RECEPTACLES	50 2	RANGE	50 2	14							
11	15 1	BATHROOM RECEPTACLE											
13	20 1	CLOTHES WASHING MACHINE											
15	20 1	RECEPTACLES											

REVISED DUPLEX PANEL - SECTION B

COLLIER COUNTY HOUSING AUTHORITY IMMOKALEE / COLLIER COUNTY, FLORIDA													
BUS NUMBER:		AMPERE RATING: 100		VOLTAGE (L-L): 240				PHASE: 1		SERVED FROM: MAIN			
MOUNTING: RECESS		LUG OPTIONS:		MAIN TYPE: MAIN LUGS ONLY				VOLTAGE (L-N): 120		WIRE: 3			
								MIN. KAIC:					
CKT NO.	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	CIRCUIT BRKR TRIP P
1	25 2	NEW CIRCUIT BREAKER FOR NEW CU-1	20 1	REFRIGERATOR	20 1	2							
3	20 1	RECEPTACLES	30 2	WATER HEATER	30 2	4							
5A	20 1	RECEPTACLES	30 2	WALL HEATER	30 2	8							
5B	20 1	RECEPTACLES	20 1	RECEPTACLES	20 1	12							
7A	20 1	RECEPTACLES	50 2	RANGE	50 2	14							
7B	20 1	RECEPTACLES											
9	20 1	RECEPTACLES											
11	15 1	BATHROOM RECEPTACLE											
13	20 1	CLOTHES WASHING MACHINE											
15	20 1	RECEPTACLES											

ELECTRICAL SCOPE OF WORK

- DISCONNECT AND REMOVE THE ELECTRICAL SPACE HEATERS AND PATCH THE WALL.
- REMOVE THE CIRCUIT BREAKERS FROM THE PANEL THAT FED THE EXISTING SPACE HEATERS. INSTALL BLANKS IN UNUSED CIRCUIT BREAKER SPACES.
- FURNISH & INSTALL ONE (1) NEW CIRCUIT BREAKERS IN EACH PANEL TO FEED THE NEW MINI-SPLIT AIR HANDLING UNITS AND CONDENSER UNIT AS FOLLOWS:
 - A. TWO BEDROOM - CU, 2-POLE 25A
- FURNISH AND INSTALL 1/2" EMT CONDUIT AND (2) #10 AWG, CU & (1) #10 AWG, CU GROUND FROM THE EXISTING PANEL TO THE CU.
- FURNISH & INSTALL A 30A, 2-POLE, NON-FUSED DISCONNECT SWITCH FOR THE CU. THE DISCONNECT SWITCH FOR THE CU SHALL BE NEMA 3R RATED. INDOOR UNITS ARE POWERED FROM THE EXTERIOR UNIT.
- VERIFY THE EXISTING EXTERIOR WEATHERPROOF RECEPTACLE HAS BEEN INSTALLED. IF NOT, THE ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL A NEW 20A, 120V WEATHERPROOF RECEPTACLE WITH WEATHERPROOF COVER.
- NOT USED.
- REMOVE EXISTING 20A, SINGLE POLE CIRCUIT BREAKERS FOR EXISTING CIRCUITS 1, 3, 5 & 7.
- FURNISH & INSTALL (1) 25A 2-POLE CIRCUIT BREAKER AND PLACE INTO POSITIONS NUMBERS 1 & 3 FOR NEW CU-1.
- FURNISH & INSTALL (2) NEW 20A PIGGY BACK CIRCUIT BREAKERS INTO POSITIONS 5 & 7 AND RECONNECT FOUR (4) EXISTING RECEPTACLE CIRCUITS.



DESCRIPTION	MATERIAL	FINISH
HOUSING	ALUMINUM	GRAY
COVER	ALUMINUM	GRAY
SCREWS	STEEL	ZINC PLT.
GASKET	CLOSED CELL FOAM	BLACK
INSTALLATION INSTRUCTIONS	PDS 1390	

RECEPTACLE WEATHERPROOF COVER DETAIL
NOT TO SCALE

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY STAFFORD R. STAFFORD ON THE DATE INDICATED USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

PROJECT NAME:
Farm Worker Village
Collier County Housing Authority
1800 Farm Worker Way
Immokalee, Florida 34142

STAFFORD ENGINEERING, INC.
3525 Bonita Beach Rd., Suite 110, Bonita Springs, FL 34134
239-948-5941 / 239-948-5900 FAX
Steven R. Stafford - PE - Florida License # 34664
Certificate Of Authorization No. 26464

DATE:	09/14/16
DRAWN BY:	R.A.M.
CHECKED BY:	S.R.S.
JOB NUMBER:	16079

E-5

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SERVICE ENTRANCE SIZE CALCULATIONS

UNIT DATA:
 THE DWELLING UNIT HAS AN AREA OF THE FOLLOWING:
 DWELLING UNIT FLOOR AREA: 792 SQ-FT
 UNIT HAS AN ELECTRIC RANGE
 THE LARGER LOAD OF ELECTRIC HEAT OR A/C IS USED FOR THE CALCULATIONS
 THERE WILL BE NO LAUNDRY FACILITIES IN THE DWELLING

LOAD CALCULATIONS: (NEC ART. 220-11, 220-17 DWELLING LOAD CALCULATION)

GENERAL LOAD

GENERAL LIGHTING LOAD	AT 3.0 VA / SQ-FT	2,376.0 VA
SMALL APPLIANCE LOAD (2 CIRCUITS)		3,000.0 VA
ELECTRIC RANGE		8,000.0 VA
ELECTRIC WATER HEATER		3,600.0 VA
TOTAL GENERAL LOAD		16,976.0 VA

APPLICATION OF DEMAND FACTOR:

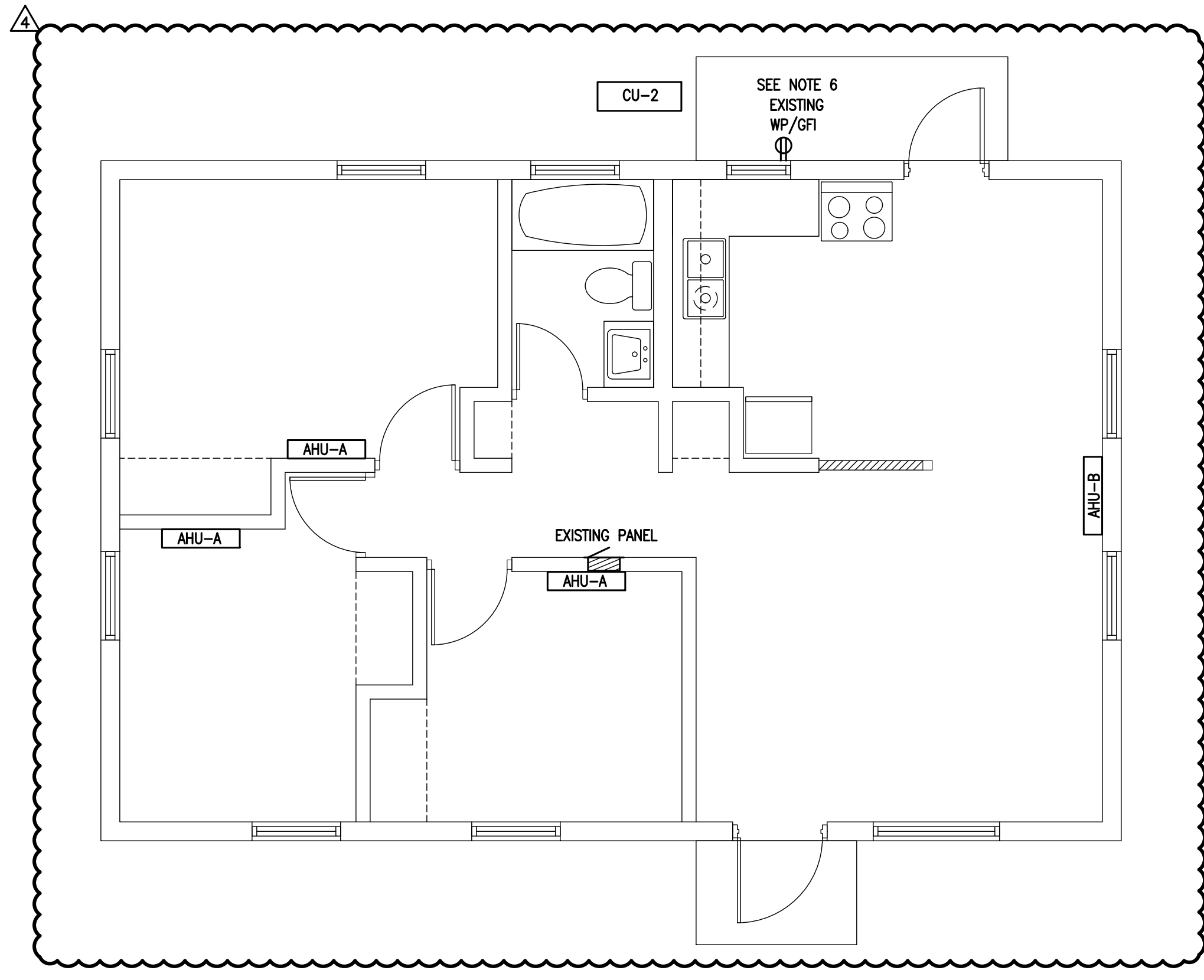
FIRST 10,000 VA @ 100%	10,000.0 VA	
REMAINDER OF LOAD AT 40%	2,790.4 VA	
GENERAL LOAD WITH DEMAND FACTOR		12,790.4 VA

AIR CONDITIONING/HEATING LOAD

HEATING / (FUTURE) A/C LOAD		7,200.0 VA
HVAC LOAD		7,200.0 VA
GENERAL LOAD WITH DEMAND FACTOR		12,790.4 VA
HVAC LOAD		7,200.0 VA
TOTAL DWELLING LOAD		19,990.4 VA

83.3 A @ 120/240V 1-PHASE

SERVICE SIZE FOR EACH DWELLING UNIT: 100A



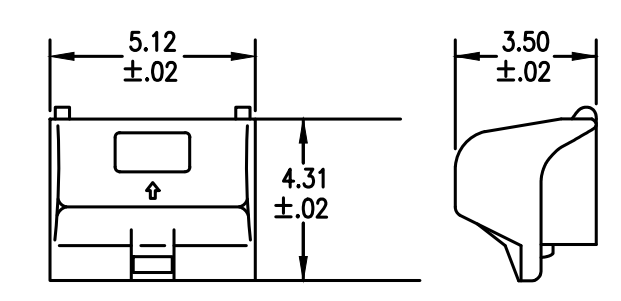
SECTION B - 3 BEDROOM ELECTRICAL PLAN
 SCALE: 1/4" = 1'-0"

EXISTING 3-BEROOM PANEL - SECTION B

COLLIER COUNTY HOUSING AUTHORITY
 IMMOKALEE / COLLIER COUNTY, FLORIDA

BUS NUMBER: AMPERE RATING: 100 VOLTAGE (L-L): 240 PHASE: 1
 SERVED FROM: MAIN MAIN TYPE: 100A MAIN CB VOLTAGE (L-N): 120 WIRE: 3
 MOUNTING: RECESS LUG OPTIONS: MIN. KAIC:

CKT NO.	CIRCUIT BRKR TRIP P	LOAD DESCRIPTION	LOAD KVA	BRANCH CIRCUIT			LOAD KVA	CIRCUIT BRKR TRIP P	CKT NO.
				PHASE	NEUT.	GND.			
1	20	1 RECEPTACLES	EXISTING CIRCUITRY	EXISTING CIRCUITRY			30	2	2
3	20	1 RECEPTACLES					30	2	4
5	20	1 RECEPTACLES					30	2	6
7	20	1 RECEPTACLES					30	2	8
9	20	1 RECEPTACLES					30	2	10
11	20	1 BATHROOM RECEPTACLE					30	2	12
13	20	1 CLOTHES WASHING MACHINE					50	2	14
15	20	1 REFRIGERATOR					50	2	16



HUBBELL CATALOG #WP26MH

LIST OF PARTS		
DESCRIPTION	MATERIAL	FINISH
HOUSING	ALUMINUM	GRAY
COVER	ALUMINUM	GRAY
SCREWS	STEEL	ZINC PLT.
GASKET	CLOSED CELL FOAM	BLACK
INSTALLATION INSTRUCTIONS	PDS 1390	

RECEPTACLE WEATHERPROOF COVER DETAIL
 NOT TO SCALE

ELECTRICAL SCOPE OF WORK

- DISCONNECT AND REMOVE THE ELECTRICAL SPACE HEATERS AND PATCH THE WALL.
- REMOVE THE CIRCUIT BREAKERS FROM THE PANEL THAT FED THE EXISTING SPACE HEATERS INSTALL BLANKS IN UNUSED CIRCUIT BREAKER SPACES
- FURNISH & INSTALL ONE (1) NEW CIRCUIT BREAKERS IN EACH PANEL TO FEED THE NEW MINI-SPLIT AIR HANDLING UNITS AND CONDENSER UNIT AS FOLLOWS:
 - A. TWO BEDROOM - CU, 2-POLE 45A
- FURNISH AND INSTALL 3/4" EMT CONDUIT AND (2) #8 AWG, CU & (1) #10 AWG, CU GROUND FROM THE EXISTING PANEL TO THE AHU AND TO THE CU AS SEPARATE CIRCUITS
- FURNISH & INSTALL A 60A, 2-POLE, NON-FUSED DISCONNECT SWITCH FOR THE CU. THE DISCONNECT SWITCH FOR THE CU SHALL BE NEMA 3R RATED. INDOOR UNITS ARE POWERED FROM THE EXTERIOR UNIT.
- VERIFY THE EXISTING EXTERIOR WEATHERPROOF RECEPTACLE HAS BEEN INSTALLED. IF NOT, THE ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL A NEW 20A, 120V WEATHERPROOF RECEPTACLE WITH WEATHERPROOF COVER.
- NOT USED

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY STEVEN R. STAFFORD ON THE DATE INDICATED USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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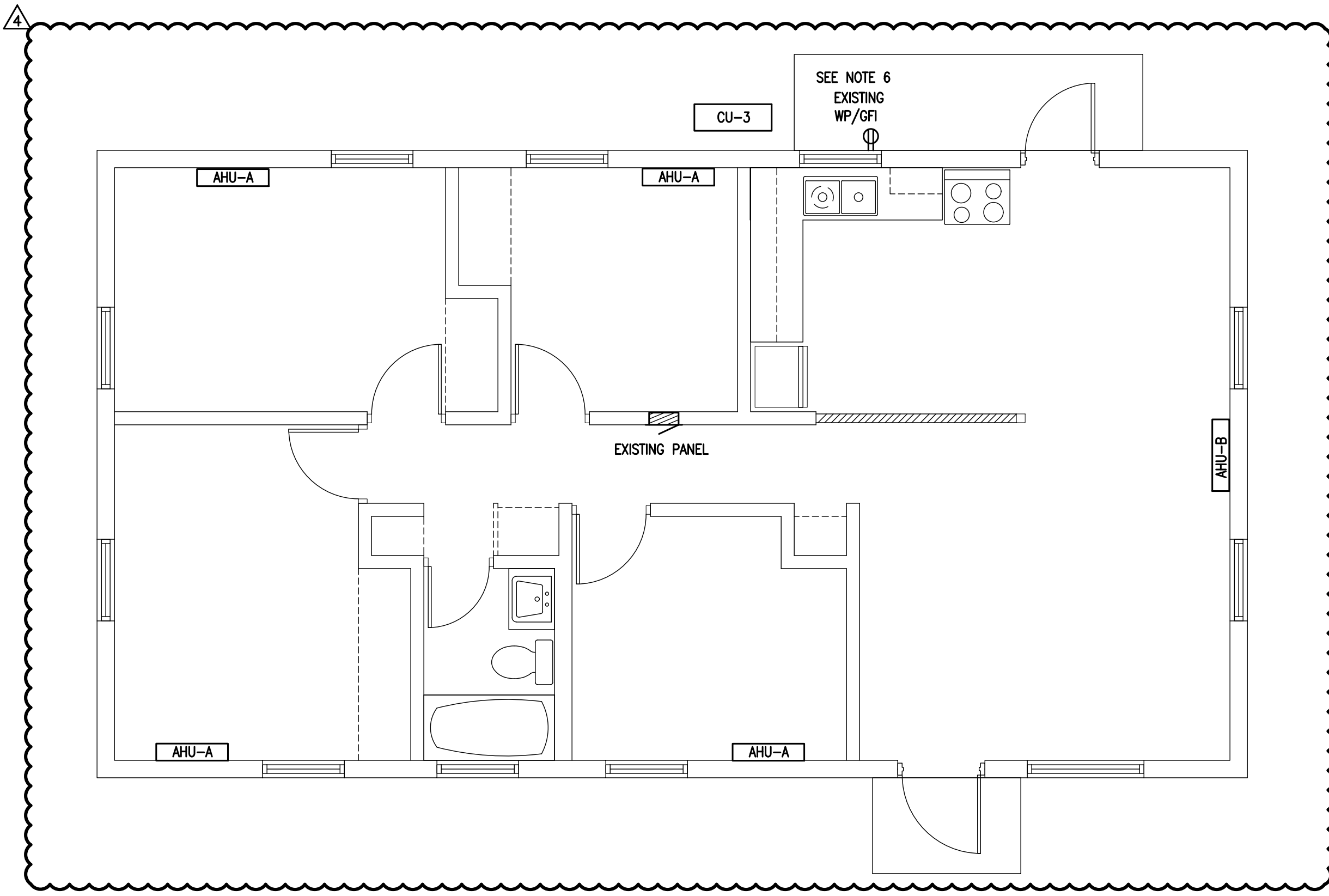
STAFFORD ENGINEERING, INC.
 3525 Bonita Beach Rd., Suite 110, Bonita Springs, FL 34134
 239-948-5941 / 239-948-5980 FAX
 Steven R. Stafford - PE - Florida License # 34664
 Certificate Of Authorization No. 26464

#	REVISION	DATE
4	OWNER CHANGES	JUNE 26, 2020

DATE: 09/14/16
 DRAWN BY: R.A.M.
 CHECKED BY: S.R.S.
 JOB NUMBER: 16079

SERVICE ENTRANCE SIZE CALCULATIONS

UNIT DATA:			
THE DWELLING UNIT HAS AN AREA OF THE FOLLOWING:			
DWELLING UNIT FLOOR AREA:	968	SQ-FT	
UNIT HAS AN ELECTRIC RANGE			
THE LARGER LOAD OF ELECTRIC HEAT OR A/C IS USED FOR THE CALCULATIONS			
THERE WILL BE NO LAUNDRY FACILITIES IN THE DWELLING			
LOAD CALCULATIONS: (NEC ART. 220-11, 220-17 DWELLING LOAD CALCULATION)			
GENERAL LOAD			
GENERAL LIGHTING LOAD	AT 3.0 VA / SQ-FT	2,904.0	VA
SMALL APPLIANCE LOAD (2 CIRCUITS)		3,000.0	VA
ELECTRIC RANGE		8,000.0	VA
ELECTRIC WATER HEATER		3,600.0	VA
TOTAL GENERAL LOAD		17,504.0	VA
APPLICATION OF DEMAND FACTOR:			
FIRST 10,000 VA @ 100%		10,000.0	VA
REMAINDER OF LOAD AT 40%		3,001.6	VA
GENERAL LOAD WITH DEMAND FACTOR		13,001.6	VA
AIR CONDITIONING/HEATING LOAD			
HEATING / (FUTURE) A/C LOAD		8,400.0	VA
HVAC LOAD		8,400.0	VA
GENERAL LOAD WITH DEMAND FACTOR		13,001.6	VA
HVAC LOAD		8,400.0	VA
TOTAL DWELLING LOAD		21,401.6	VA
		89.2 A @ 120/240V 1-PHASE	
SERVICE SIZE FOR EACH DWELLING UNIT: 100A			

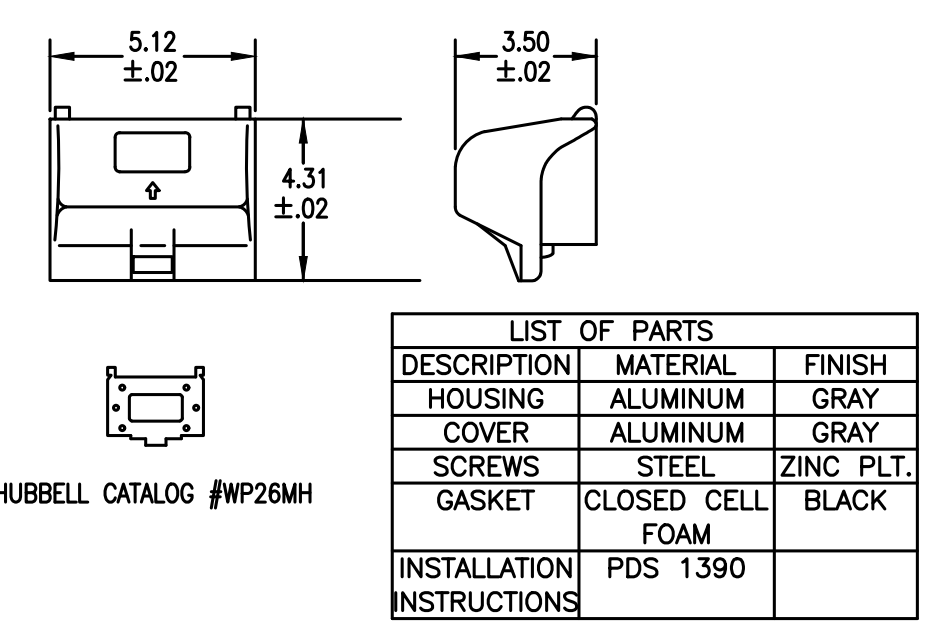


SECTION B - 4 BEDROOM ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

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PROJECT NAME:
Farm Worker Village
Collier County Housing Authority
1800 Farm Worker Way
Immokalee, Florida 34142

EXISTING 4-BEROOM PANEL - SECTION B												
COLLIER COUNTY HOUSING AUTHORITY IMMOKALEE / COLLIER COUNTY, FLORIDA												
BUS NUMBER:			AMPERE RATING: 100			VOLTAGE (L-L): 240			PHASE: 1			
SERVED FROM: MAIN			MAIN TYPE: MAIN LUGS ONLY			VOLTAGE (L-N): 120			WIRE: 3			
MOUNTING: RECESS			LUG OPTIONS:			MIN. KAIC:						
CKT NO.	CIRCUIT BRKR TRIP	LOAD DESCRIPTION	CIRCUIT LOAD KVA	BRANCH CIRCUIT PHASE/NEUTRAL SIZE	BRANCH CIRCUIT GROUND MIN SIZE	BRANCH CIRCUIT LOAD KVA	CIRCUIT LOAD KVA	LOAD DESCRIPTION	CIRCUIT BRKR TRIP	CKT NO.		
1	30	2	WALL HEATER	EXISTING CIRCUITRY	EXISTING CIRCUITRY	30	2	WALL HEATER	30	2		
3											4	
5	30	2	WATER HEATER					30	2	WALL HEATER	30	6
7												8
9	20	1	RECEPTACLES			50	2	RANGE	50	10		
11	20	1	BATHROOM RECEPTACLE							12		
13A	20	1	RECEPTACLES PIGGY			20	1	RECEPTACLES PIGGY	20	14a		
13B	20	1	RECEPTACLES BACK CB			20	1	RECEPTACLES BACK CB	20	14b		
15A	20	1	RECEPTACLES PIGGY			20	1	RECEPTACLES	20	16		
15B	20	1	REFRIGERATOR BACK CB									
NOTE - NOT APPLICABLE BECAUSE OF PIGGY BACK CIRCUIT BREAKERS												



RECEPTACLE WEATHERPROOF COVER DETAIL
NOT TO SCALE

ELECTRICAL SCOPE OF WORK	
1.	DISCONNECT AND REMOVE THE ELECTRICAL SPACE HEATERS AND PATCH THE WALL.
2.	REMOVE THE CIRCUIT BREAKERS FROM THE PANEL THAT FED THE EXISTING SPACE HEATERS INSTALL BLANKS IN UNUSED CIRCUIT BREAKER SPACES
3.	FURNISH & INSTALL ONE (1) NEW CIRCUIT BREAKERS IN EACH PANEL TO FEED THE NEW MINI-SPLIT AIR HANDLING UNITS AND CONDENSER UNIT AS FOLLOWS: A. FOUR BEDROOM, SECTION B - CU, 2-POLE 50A
4.	FURNISH AND INSTALL 3/4" EMT CONDUIT AND (2) #8 AWG, CU & (1) #10 AWG, CU GROUND FROM THE EXISTING PANEL TO THE CU
5.	FURNISH & INSTALL A 60A, 2-POLE, NON-FUSED DISCONNECT SWITCH FOR THE CU. THE DISCONNECT SWITCH FOR THE CU SHALL BE NEMA 3R RATED. INDOOR UNITS ARE POWERED FROM THE EXTERIOR UNIT.
6.	VERIFY THE EXISTING EXTERIOR WEATHERPROOF RECEPTACLE HAS BEEN INSTALLED. IF NOT, THE ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL A NEW 20A, 120V WEATHERPROOF RECEPTACLE WITH WEATHERPROOF COVER.
7.	NOT USED

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OWNER	JUNE	
CHANGES	26, 2020	
#	REVISION	DATE
DATE:	09/14/16	
DRAWN BY:	R.A.M.	
CHECKED BY:	S.R.S.	
JOB NUMBER:	16079	

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