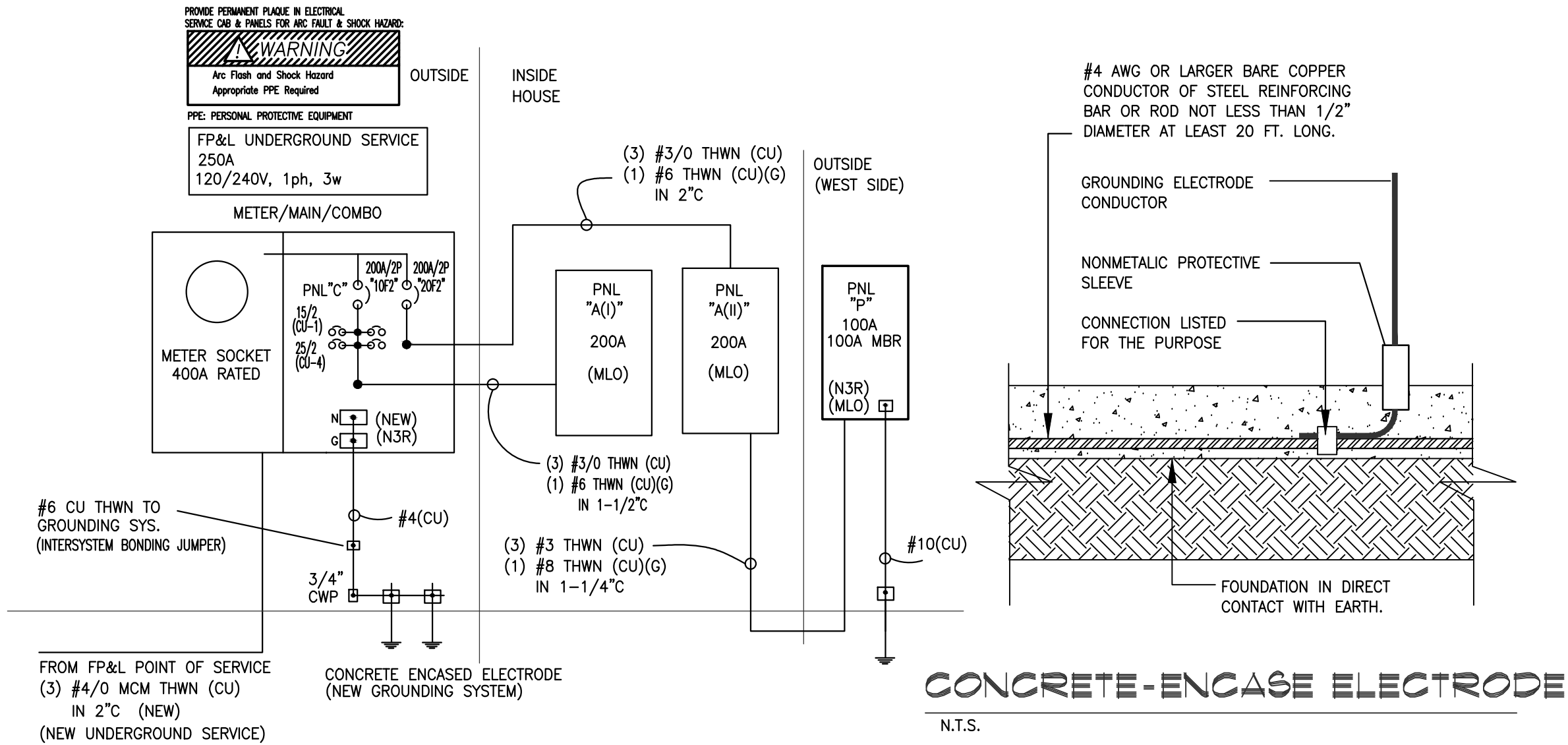


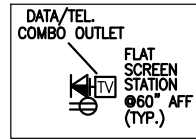


RISER DIAGRAM

ELECTRICAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH NFPA 70 (NEC 2017) AND FBC 2020 7th Ed.
2. PROVIDE ALL REQUIRED CONNECTIONS FOR OTHER TRUNKS, INCLUDING TEMPORARY POWER.
3. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR. IT WILL BE HIS RESPONSIBILITY TO SECURE AND PAY FOR ANY PERMITS, COPIES OF INSPECTION, AS REQUIRED. THE WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.
4. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS, WHEN APPLICABLE.
5. ALL EQUIPMENT HAS BEEN RATED AS INDICATED IN PANEL SCHEDULE. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE TO NOTIFY THE ELECTRICAL ENGINEER IF ANY CHANGE IN MANUFACTURER SPECIFICATIONS PRIOR ORDERING.
6. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR A COMPLETE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THESE DRAWINGS.
7. EQUIPMENT AND ELECTRICAL WIRING IN OR ADJACENT TO SWIMMING POOLS, WHIRLPOOLS, SPAS AND FOUNTAINS TO COMPLY WITH NEC 680. ALL UNDERWATER LUMINAIRES TO BE FED BY A LOW VOLTAGE TRANSFORMER.
8. DISCONNECTING MEANS ASSOCIATED WITH APPLIANCES TO COMPLY WITH NEC 422.8.
9. ALL ELECTRICAL WIRING IN CEILING PLenums SHALL BE PLenum RATED IN ACCORDANCE WITH FBC AND NEC. SEE A/C AND ARCHITECTURAL PLANS FOR EXACT AREA LOCATION.
10. COORDINATE ALL LIGHTING FIXTURES WITH MECHANICAL AND PLUMBING TRUNKS BEFORE ROUGH-IN, PARTICULARLY IN RECESSED TYPES. NOTIFY A/E OF ANY DISCREPANCIES.
11. COORDINATE EXACT LOCATION OF DROP AND LUMINAIRES CEILING AREAS WITH ARCHITECTURAL DRAWINGS.
12. VERIFY EXACT LOCATION OF LIGHTING FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLAN BEFORE ROUGH-IN.
13. COORDINATE ALL BOXES EXACT LOCATION WITH BUILDING ARCHITECTURAL FEATURES.
14. ALL OUTLETS MOUNTED ON COMMON WALL BETWEEN ROOMS SHALL NOT BE MOUNTED BACK TO BACK. THEY SHALL BE STAGGERED TO PREVENT SOUND TRANSMISSION.
15. THERMOSTAT WIRING SHALL BE DONE BY ELECTRICAL CONTRACTOR PER DIAGRAMS BY UNIT MANUFACTURER. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION.
16. ALL BATHROOMS, GARAGES, OUTDOOR LOCATIONS, KITCHEN AND WEI BARS RECEPTACLES SHALL BE PROTECTED BY GFCI.
17. RECEPTACLES AND ELECTRIC BOXES INSTALLED OUTDOORS TO BE WEATHERPROOF PROTECTED (NEC 406.8).
18. ALL WIRING SHALL BE COPPER THWN/THW/WH EXCEPT OTHERWISE NOTED. OTHER TYPES MAY BE USED IF ACCEPTED BY CODE.
19. INDOOR CONDUIT SHALL BE EMT, EXCEPT FOR BASEMENT. POWER MAY BE USED WHERE APPROVED BY CODE.

FLAT SCREEN STATION CLARIFICATION NOTE:
WHERE A FLAT SCREEN STATION IS USED, A STANDARD 4" AFF RECEPTACLE SHALL BE INSTALLED TO COMPLY WITH NEC SPACING USING THE SAME CIRCUIT BRANCH.



RECESSED LIGHTING INSTALLATION NOTE:

- RECESSED LIGHTING TO COMPLY WITH FBC REQUIRING A SEAL TO PREVENT LEAKAGE BETWEEN COMBINED AND UNCOMBINED SPACES.
- (C) RATED AND LABELED AS MEETING ASTM E 283
- A MINIMUM OF 80% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICIENCY LAMPS (AT LEAST 45 lm/W) OR NOT LESS THAN 85 lm/W) AS PER FBC REC 904.04, AND COMPLYING WITH NEC 410.16.
- RESIDENTIAL STAIRS AND MEANS OF EGRESS:
 - RESIDENTIAL STAIRS TO HAVE 1 ft MINIMUM INSIDE AND OUTSIDE (FBC 903.2.7)
 - THE MEANS OF EGRESS ILLUMINATION LEVEL SHALL NOT BE LESS THAN 1 ft AT THE WALKING SURFACE.

ELECTRICAL SYMBOL LEGEND

- JUNCTION BOX
- VAPOR PROOF (60 W/MAX.)
- GARBAGE DISPOSER
- EXHAUST FAN
- SINGLE RECEPTACLE (FLOOR MOUNTED)
- DUPLEX RECEPTACLE (+18" A.F.F.)
- GFCI OVER COUNTER RECEPTACLE (+44" A.F.F.)
- GFCI RECEPTACLE (+18" A.F.F.)
- SINGLE RECEPTACLE
- GFCI SINGLE RECEPTACLE
- 2-POLE OUTLET (240V RECEPTACLE)
- WEATHER PROOF @ RECEPTACLE BUBBLE COVER PROVIDED
- ELECTRICAL PANEL
- DISCONNECT SWITCH
- TOGGLE SWITCH
- 3 WAY AND 4 WAY TOGGLE SWITCH
- HOME RUN
- DATA/TELEPHONE OUTLET (+18" A.F.F.)
- CABLE/TV OUTLET (+18" A.F.F.)
- SMOKE DETECTOR
- COMBINATION SMOKE/CO DETECTOR

PANEL "A(I)"										MAIN BUS:				
TYPE: LOADCENTER TRIPLE PANEL										200 A				
SERVICE: DWELLING UNIT										NEUTRAL: 200 A				
VOLTAGE: 120/240 V, 1 ph, 3W										MAIN: 200 A MLO				
MOUNTING: SURFACE										AICS: 10,000				
AMPS	POLES	TOTAL V.A.	COND. SIZE	WIRE SIZE	REMARKS	CKT NO.	CKT NO.	REMARKS	WIRE SIZE	COND. SIZE	TOTAL V.A.	POLES	AMPS	
60	2	10560	R	6	AHU-2	1	2	CU-2	8	1/2	6200	2	50	NC
30	2	5200	R	10	AHU-3	5	6	CU-3	10	1/2	3230	2	25	NC
30	2	5200	R	10	AHU-4 (CU-4 IN MTR. COMBO, NC)	9	10	SPACE	-	-	-	-	-	
30	2	5200	R	10	AHU-5	13	14	CU-5	10	1/2	2700	2	25	NC
20	1	1500	Δ	R	SMALL APPLIANCES	17	18	GFI BATH	12	R	* Δ	1	20	
20	1	1500	Δ	R	SMALL APPLIANCES	19	20	GFI BATH	12	R	* Δ	1	20	
20	1	1500	Δ	R	SMALL APPLIANCES	21	22	GEN. LTNG. & REC. MASTER	14	R	* Δ	1	15	
20	1	1500	Δ	R	GEN. REC's	23	24	GEN. LTNG. & REC. MASTER	14	R	* Δ	1	15	
-	-	-	-	-	SPACE	25	26	GEN. LTNG. & REC. MASTER	14	R	* Δ	1	15	
20	1	600	Δ	R	REFRIGERATOR	27	28	GEN. LTNG. & REC. CORR.	14	R	* Δ	1	15	
20	1	1200	Δ	R	DISHWASHER	29	30	GEN. LTNG. & REC. BED#1	14	R	* Δ	1	15	
20	1	900	Δ	R	DISPOSER	31	32	GEN. LTNG. & REC. BED#2	14	R	* Δ	1	15	
20	1	1500	Δ	R	WASHER	33	34	GEN. LTNG. & REC. BED#3	14	R	* Δ	1	15	
20	1	900	Δ	R	GAR. DOOR OP.	35	36	GEN. LTNG. & REC. LIV. BD.	14	R	* Δ	1	15	
20	1	600	Δ	R	GEN. LTNG.	37	38	GEN. LTNG. & REC. LIVING	14	R	* Δ	1	15	
20	1	900	Δ	R	HOOD FAN & LTNG.	39	40	GEN. LTNG. & REC. KITCHEN	14	R	* Δ	1	15	

CONNECTED LOAD : AS SHOWN
LOAD CALCULATION : SEE LOAD CALCULATION TABLE

G: GFCI OCPD
R: ROMEX
NC: NONCOINCIDENT LOADS
Δ DENOTE ARC FAULT CIRCUIT BREAKER AS PER NEC 210.12(B)
* LIGHTING LOADS @ 3 VA/SF AS PER NEC 220.12

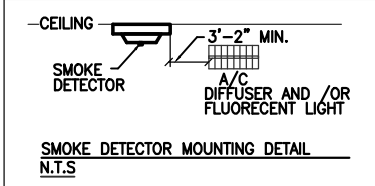
PANEL "A(II)"										MAIN BUS:				
TYPE: LOADCENTER TRIPLE PANEL										200 A				
SERVICE: DWELLING UNIT										NEUTRAL: 200 A				
VOLTAGE: 120/240 V, 1 ph, 3W										MAIN: 200 A MLO				
MOUNTING: SURFACE										AICS: 10,000				
AMPS	POLES	TOTAL V.A.	COND. SIZE	WIRE SIZE	REMARKS	CKT NO.	CKT NO.	REMARKS	WIRE SIZE	COND. SIZE	TOTAL V.A.	POLES	AMPS	
-	-	-	-	-	SPACE	41	42	GEN. LTNG. & REC. FOYER/ENTRY	14	R	* Δ	1	15	
20	1	900	R	12	GEN. REC's	43	44	GEN. LTNG. & REC. FULT	14	R	* Δ	1	15	
20	1	360	R	12	SEC. & VIDEO	45	46	GEN. LTNG. & REC. MLI	14	R	* Δ	1	15	
20	1	360	R	12	GEN. REC's	EXT. 47	48	GEN. LTNG. & REC. STAFF	14	R	* Δ	1	15	
20	1	540	R	12	GEN. REC's	EXT. 49	50	GEN. LTNG. & REC. DINING	14	R	* Δ	1	15	
-	-	-	-	-	SPACE	51	52	CAR CHARGER (FUTURE)	10	R	3300	2	30	
-	-	-	-	-	SPACE	53	54							
-	-	-	-	-	SPACE	55	56	SPACE	-	-	-	-	-	
-	-	-	-	-	SPACE	57	58							
20	1	1500	R	12	WHIRLPOOL	59	60	SPACE	-	-	-	-	-	
50	2	8000	R	8	UC MW OVEN	61	62	SPACE	-	-	-	-	-	
-	-	-	-	-	SPACE	63	64	SPACE	-	-	-	-	-	
-	-	-	-	-	SPACE	65	66	SPACE	-	-	-	-	-	
20	1	1200	1/2	12	GATE & ACCESS	67	68	SPACE	-	-	-	-	-	
20	1	1200	1/2	12	GATE & ACCESS	69	70	SPACE	-	-	-	-	-	
20	1	400	1/2	12	GEN. LTNG	EXT. REAR 71	72							
20	1	600	1/2	12	GEN. LTNG	LS FRONT 73	74	SPACE	-	-	-	-	-	
20	1	600	1/2	12	GEN. LTNG	LS FRONT 75	76							
-	-	-	-	-	SPACE	77	78	PNL"P"	3	1-1/4	AS SHOWN	2	100	
-	-	-	-	-	SPACE	79	80							

CONNECTED LOAD : AS SHOWN
LOAD CALCULATION : SEE LOAD CALCULATION TABLE

R: ROMEX
NC: NONCOINCIDENT LOADS
Δ DENOTE ARC FAULT CIRCUIT BREAKER AS PER NEC 210.12(B)
* LIGHTING LOADS @ 3 VA/SF AS PER NEC 220.12

CATV SPECIAL NOTES:

- COAXIAL CABLE FROM DO TO NU INSIDE BUILDING SHALL BE RG6 IF LESS THAN 150' OR RG11 IF 150' TO 250'.
- CABLE TYPE: STANDARD, 75-Ω SHIELD, SUPER SHIELD (QUAD).
- PROVIDE (2) 1" PVC CONDUIT WITH PULL STRING BETWEEN DO & NU.
- PROVIDE (2) 1" PVC SLEEVES FOR RISERS, IF REQUIRED.
- PROVIDE (2) 1" PVC CONDUITS FOR SERVICE ENTRANCE TO THE BUILDING.
- ALL CONDUIT DUCTS TO BE LIMITED TO (2) 90-DEG. SWEEPING BENDS.
- ALL HOME RUN LINE OUTLETS TO BE WIRED FROM THE NU NOT TO EXCEED 75'.
- ALL WALL PLATES SHOULD HAVE FSI CONNECTORS.
- DO NOT USE AIR DUCTS TO RUN THE CABLES.
- WALL PLATES AT THE SAME LEVEL AFF AS ELECTRICAL OUTLETS.



FIELD COORDINATION NOTE

EVERY CONTRACTOR SHALL COORDINATE IN FIELD W/ OTHER TRADES PRIOR START OF CONSTRUCTION FOR THE STRUCTURAL BEAM, SLAB, TRUSSES, ARCHITECTURAL DETAILS AS PRE-FAB FORMS, REVEALING, CEILING, ARCH WITH THE LOCATION OF CEILING OR WALL GRILLES, DUCT WORK, RETURN GRILLES, LIGHTING FIXTURES, SWITCHES, RECEPTACLES OR ANY OTHER DEVICES. AND TO NOTIFY ARCHITECT/ ENGINEERS IF ANY CONFLICT OCCUR PRIOR ITS INSTALLATION. NO ADDITIONAL COST TO OWNER CAN BE APPLIED.

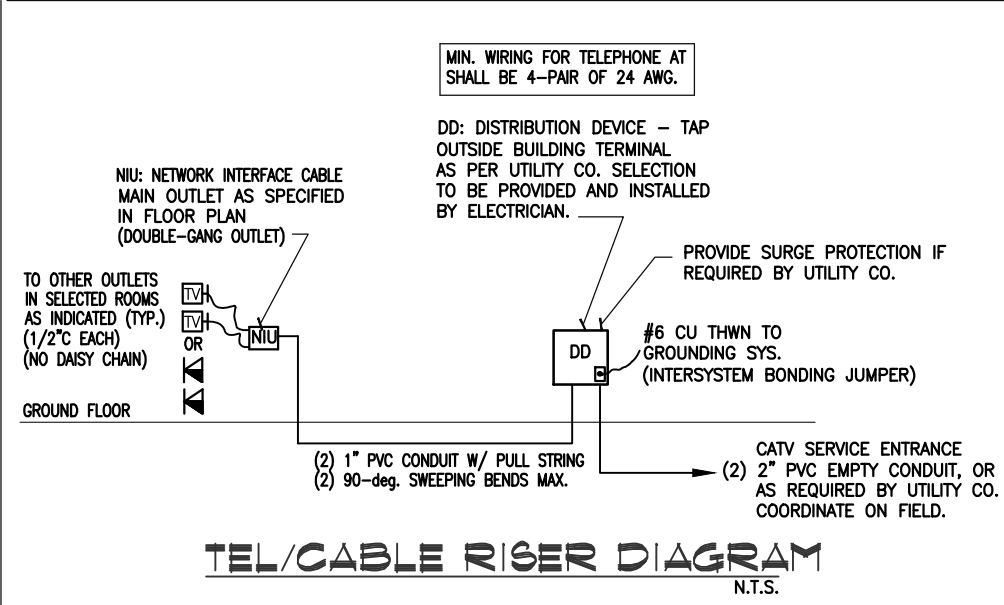
AFCI APPLICATION :

ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY LISTED ARC-FAULT CIRCUIT INTERRUPTER (AFCI), COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. BATHROOMS, UNFINISHED BASEMENTS, GARAGES AND OUTDOORS ARE NOT CONSIDERED TO BE AFCI PROTECTED.

TAMPER-RESISTANT RECEPTACLES IN DWELLING UNITS :

IN ALL AREAS OF A DWELLING UNIT, ALL 120-VOLT, 15- AND 20-AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

LOW VOLTAGE NOTE :
LOW VOLTAGE SYSTEMS ARE NOT PART OF THIS CONTRACT.
PROVISION FOR LOW VOLTAGE SYSTEMS ONLY (A-BOXES) AS PER OWNER REQUEST.
LOW VOLTAGE CONTRACTOR TO BE RESPONSIBLE OF SYSTEM INSTALLATION (WIRING & SET-UP).



LOAD CALCULATION (STANDARD METHOD)				PNL"A(I)"	PNL"A(II)"	PNL"P"
SQUARE FEET OF CONDITION SPACE				3,470	1,450	250
GENERAL LIGHTING AT 3 W.S.F				10,410	4,350	750
SMALL APPLIANCES CIRCUITS				3	0	0
SMALL APPLIANCES LOAD				4,500	0	0
OTHER LIGHTING				600	3,400	600
CEILING FANS				0	0	0
GARAGE DOOR OPENER & GATE MOTOR				900	2,400	0
LAUNDRY CIRCUIT LOAD				1,500	0	0
RANGE / OVEN OR COOK TOP				0	0	0
DOUBLE OVEN				0	8,000	0
DRYER				0	0	0
HOT WATER HEATER				0	11,200	11,200
SPRINKLER PUMP				0	2,200	2,200
POOL EQUIPMENT				0	4,400	4,400
SPA EQUIPMENT				0	0	0
REFRIGERATOR				600	0	0
DISHWASHER				1,200	0	0
DISPOSER				900	0	0
WHIRPOOL				0	1,500	0
OTHER LOAD 120V				2,400	2,760	0
OTHER LOAD 240V				0	3,300	0
HEATING OR A/C @ 100%(LARGEST LOAD)				28,360	2,200	2,200
DEMAND						
GENERAL LIGHTING & REC.				17,910	10,150	1,350
FIRST 3 KVA @ 100%				3,000	3,000	1,350
NEXT 117 KVA @ 35%				5,219	2,503	0
REMAINDER @ 25%				0	0	0
HEATING OR A/C @ 100%				28,360	2,200	2,200
APPLIANCE LOAD (75% IF > 4 APPLIANCES)				3,825	19,020	13,350
DRYER				0	0	0
RANGES				0	8,000	0
TOTAL				40,404	34,723	16,900
AMP AT 240 VOLT				168	145	70

LOAD CALCULATION (OPTIONAL METHOD)

	SERVICE
SQUARE FEET OF CONDITION SPACE	4,920
GENERAL LIGHTING AT 3 W.S.F	14,760
SMALL APPLIANCES CIRCUITS	3
SMALL APPLIANCES LOAD	4,500
OTHER LIGHTING	4,600
CEILING FANS	0
GARAGE DOOR OPENER & GATE MOTOR	3,300
LAUNDRY CIRCUIT LOAD	1,500
RANGE / OVEN OR COOK TOP	0
DOUBLE OVEN	8,000
DRYER	0
HOT WATER HEATER	11,200
SPRINKLER PUMP	2,200
POOL EQUIPMENT	4,400
SPA EQUIPMENT	0
REFRIGERATOR	600
DISHWASHER	1,200
DISPOSAL	900
WHIRPOOL	1,500
OTHER LOAD 120V	5,160
OTHER LOAD 240V	3,300
HEATING OR A/C @ 100%(LARGEST LOAD)	32,760
DEMAND	
CONNECTED LOAD WITHOUT A/C LOAD	67,120
FIRST 10000 AT 100%	10,000
REST AT 40%	22,848
A/C OR HEATING LOAD AS PER NEC 220.82 (C)	21,294
TOTAL	54,142
AT 240 VOLT	226