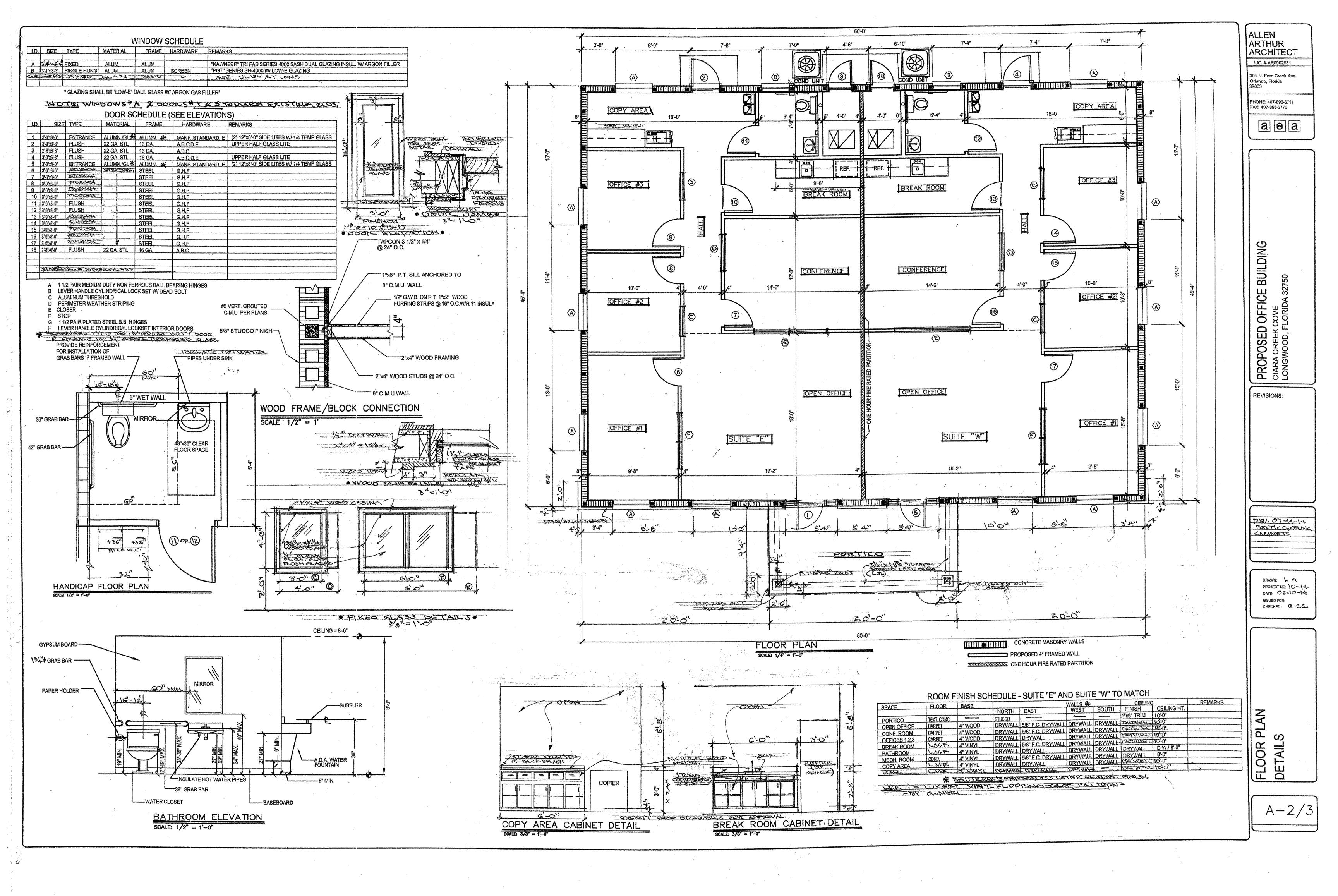
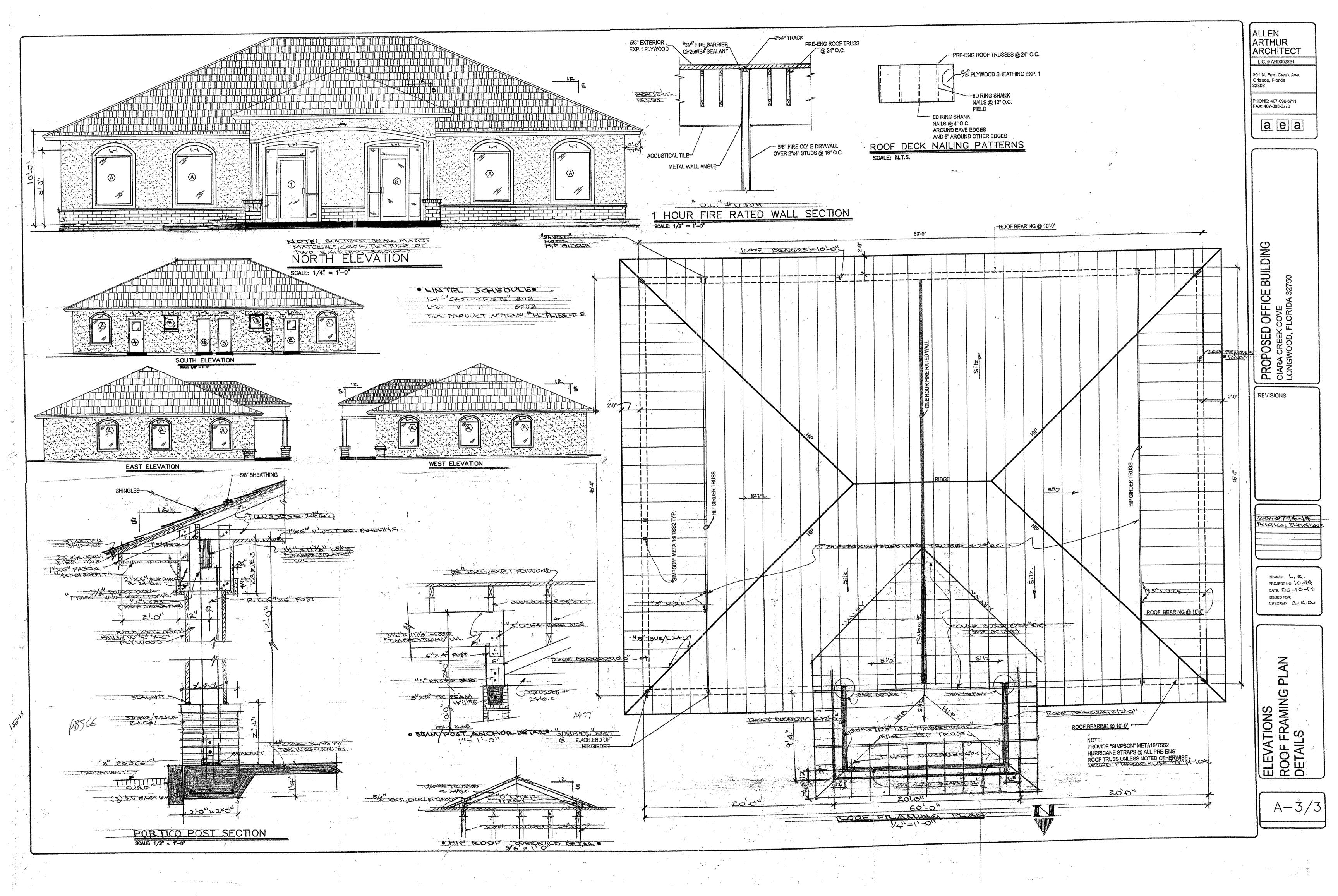
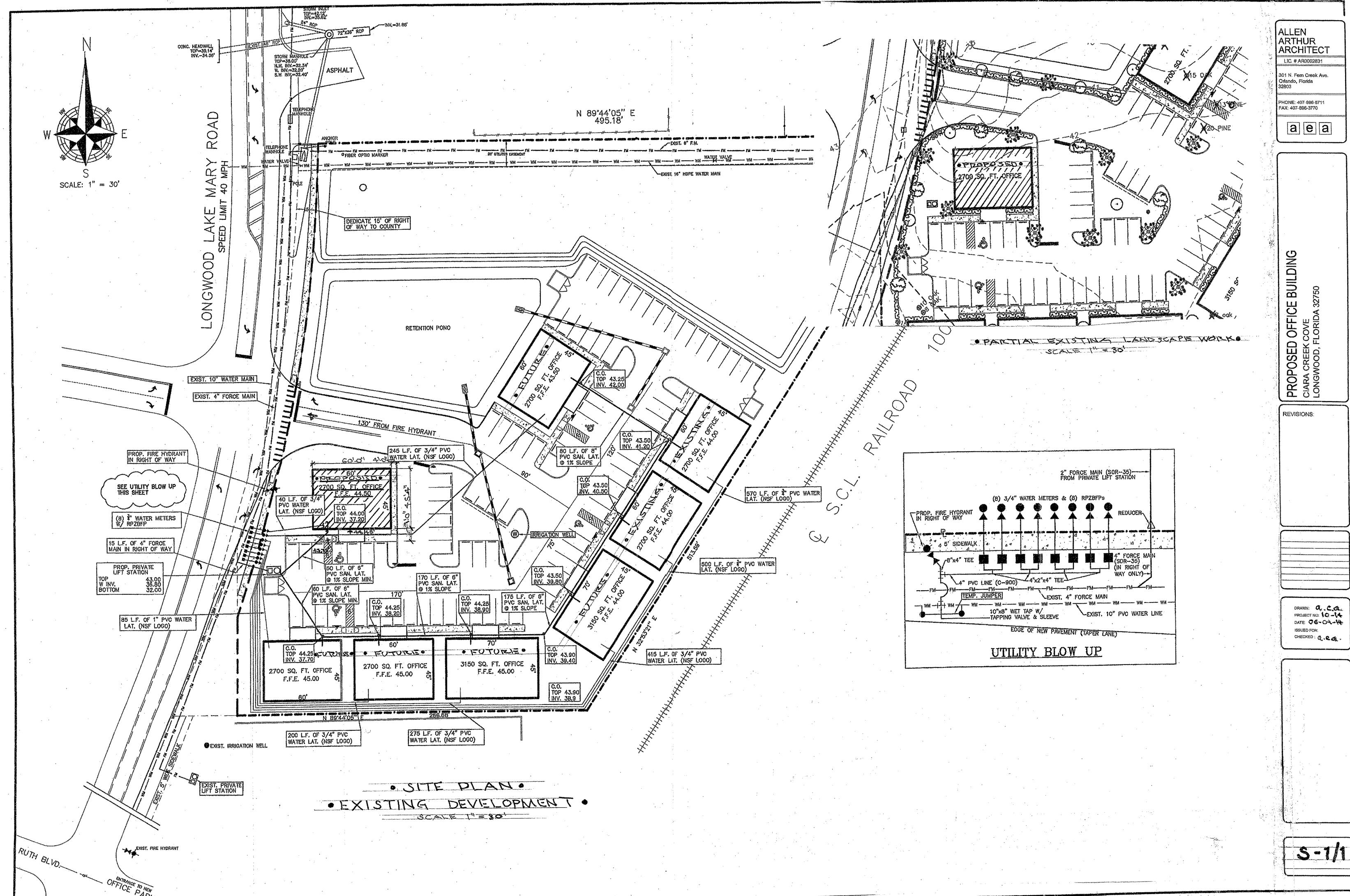
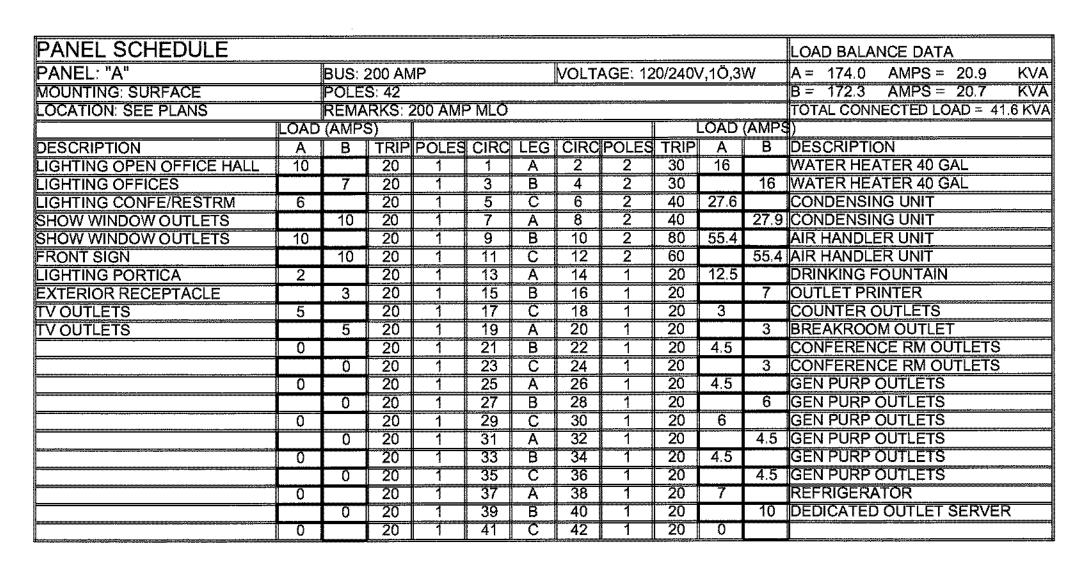


(14-14)

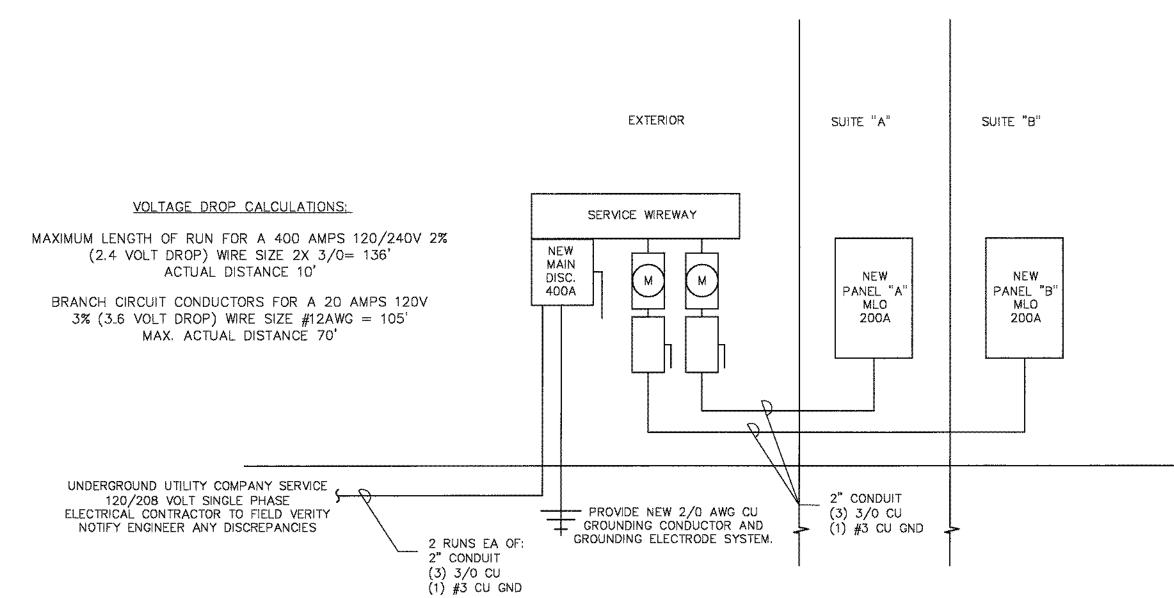


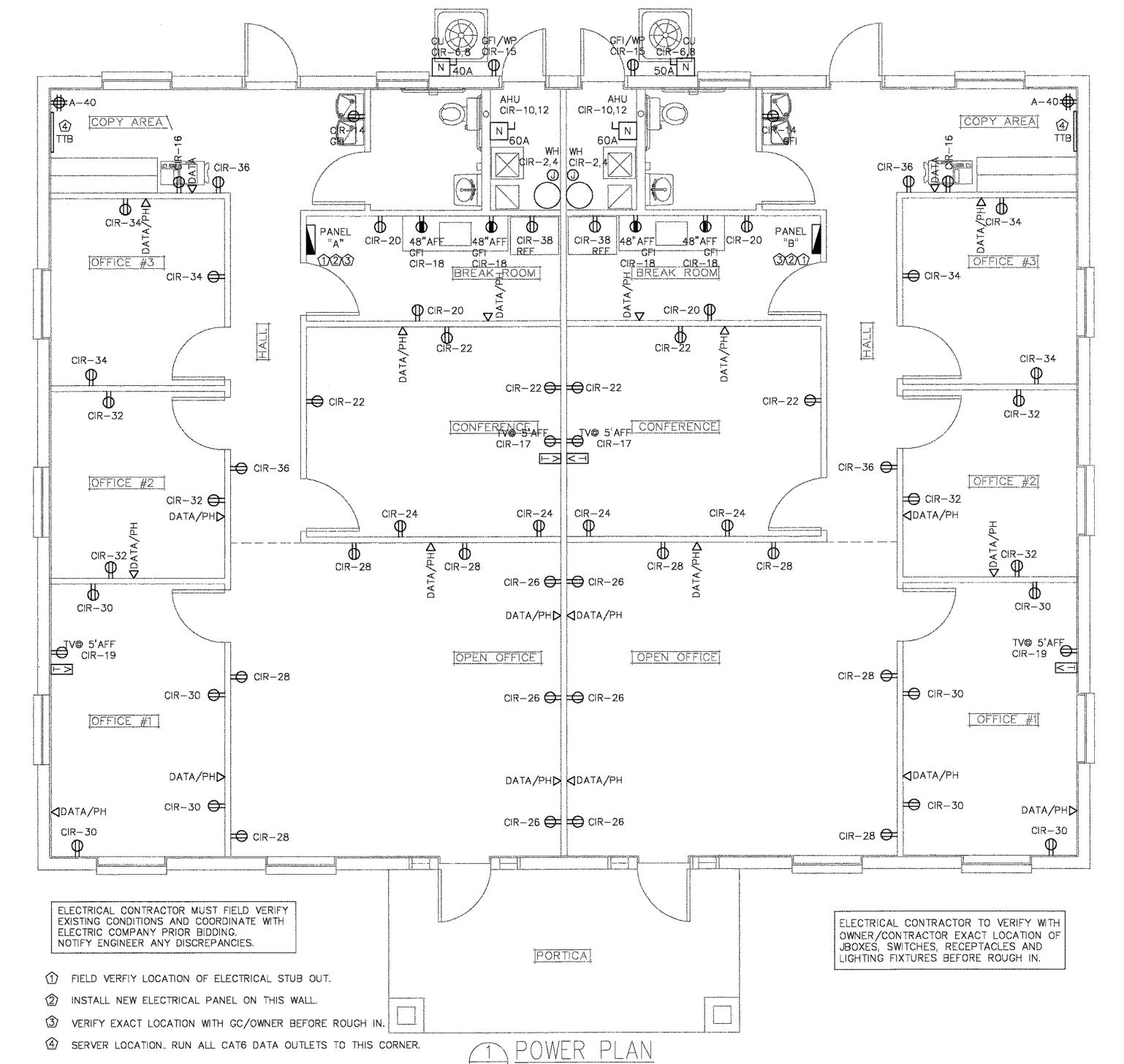






			trx									
PANEL SCHEDULE												
PANEL: "B"		BUS: 2	200 AN	/IP			VOLT	AGE: 12	0/240\	/,1Ö,3	W	A = 174.0 AMPS = 20.9 KVA
MOUNTING: SURFACE										B = 169.3 AMPS = 20.3 KVA		
LOCATION: SEE PLANS		REMA	RKS: 2	200 AMI	P MLO			<u> </u>				TOTAL CONNECTED LOAD = 41.2 KVA
	LOAD	(AMPS	3)					l l		LOAD	(AMPS	)
DESCRIPTION	Α	В	TRIP	POLES	CIRC	LEG	CIRC	POLES	TRIP	Α	В	DESCRIPTION
LIGHTING OPEN OFFICE HALL	10		20	1	1	Α	2	2	30	16		WATER HEATER 40 GAL
LIGHTING OFFICES		7	20	1	3	В	4	2	30		16	WATER HEATER 40 GAL
LIGHTING CONFE/RESTRM	6		20	1	5	С	6	2	40	27.8		CONDENSING UNIT
SHOW WINDOW OUTLETS		10	20	1	7	Α	8	2	40		27.9	CONDENSING UNIT
SHOW WINDOW OUTLETS	10		20	1	9	В	10	2	60	55.4		AIR HANDLER UNIT
FRONT SIGN		10	20	1	11	С	12	2	60		55.4	AIR HANDLER UNIT
LIGHTING PORTICA	2		20	1	13	Α	14	1	20	12.5		DRINKING FOUNTAIN
		0	20	1	15	В	16	1	20		7	OUTLET PRINTER
TV OUTLETS	5		20	1	17	C	18	1	20	3		COUNTER OUTLETS
TV OUTLETS		5	20	1	19	Α	20	1	20		3	BREAKROOM OUTLET
	0		20	1	21	В	22	1	20	4.5		CONFERENCE RM OUTLETS
		0	20	1	23	С	24	1	20		3	CONFERENCE RM OUTLETS
	0		20	1	25	Α	26	1	20	4.5		GEN PURP OUTLETS
		0	20	1	27	В	28	1	20		6	GEN PURP OUTLETS
	0		20	1	29	C	30	1	20	6		GEN PURP OUTLETS
		0	20	1	31	Α	32	1	20		4.5	GEN PURP OUTLETS
	0		20	1	33	В	34	1	20	4.5		GEN PURP OUTLETS
		0	20	1	35	С	36	1	20		4.5	GEN PURP OUTLETS
	0		20	1	37	Α	38	1	20	7		REFRIGERATOR
		0	20	1	39	В	40	1	20		10	DEDICATED OUTLET SERVER
	0		20	1	41	C	42	1 1	20	0		





2 ELECTRICAL RISER scale: NTS

Engineering, Inc

BUILDING

OFFICE COVE

PROPOSED (
CIARA CREEK C
LONGWOOD, FL

DATE: 06-04-2014

DRAWN: JA

CHECKED: JA

SCALE: AS SHOWN

SHEET No:

E-101

### ELECTRICAL LEGEND

- ELECTRIC PANEL
- T/C TELEPHONE/COMPUTER LINE SERVICE OUTLET
- TELEPHONE LINE SERVICE OUTLET
- DUPLEX CONVENIENCE OUTLET. 18"AFF
- 42" 42" A.F.F. DUPLEX CONVENIENCE OUTLET.
- 42" 42" A.F.F. GROUND FAULT INTERSECTOR (GFI)
  GFI DUPLEX CONVENIENCE OUTLET.
- DUPLEX CONVENIENCE OUTLET FOR EMERGENCY GENERATOR PURPOSE ONLY
- DUPLEX CONVENIENCE SPECIAL PURPOSE OUTLET
- CABLE/TELEVISION SPECIAL PURPOSE OUTLET EXHAUST FAN

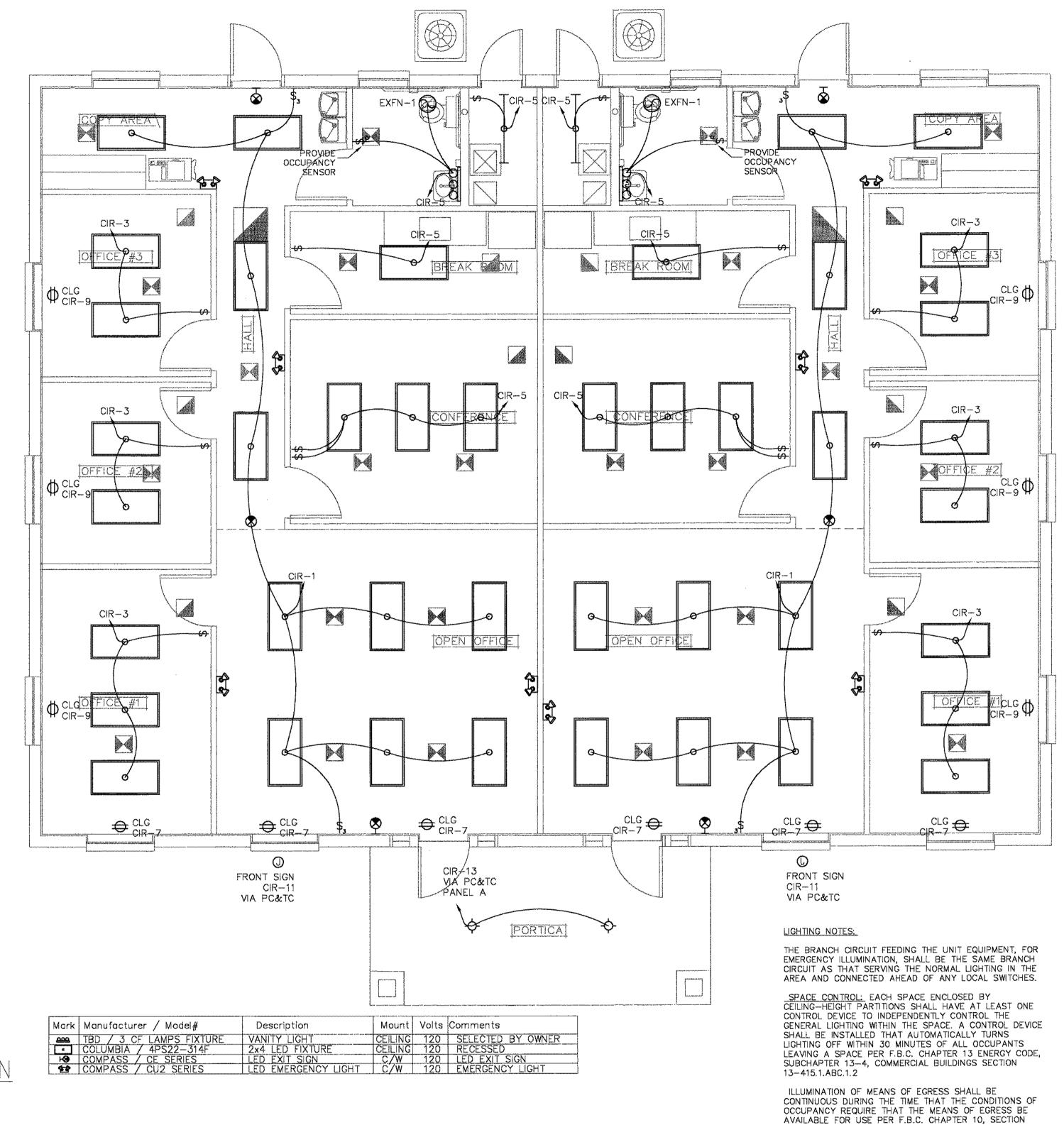
# ELECTRICAL LEGEND

0

24" X 48" (2),(3) OR (4)LAMPS LAY—IN FLUORESCENT

24" X 24" (2) OR (4)LAMPS LAY—IN FLUORESCENT

- CEILING-MOUNTED RECESSED LIGHT FIXTURE
- CEILING-MOUNTED CHANDELIER BY OWNER
- WALL-MOUNTED LIGHT FIXTURE
- EXIT LIGHTS AS PER CODE REQUIREMENTS W/BATTERY BACK-UP
- WALL-MOUNTED EMERGENCY LIGHT FIXTURE
- SINGLE POLE WALL MOUNTED SWITCH
- SINGLE POLE WALL MOUNTED DEAMER SWITCH
- SINGLE POLE WALL MOUNTED THREE WAY SWITCH
- ELECTRIC PANEL



1006.1.2 AND SECTION 1006.2.3.2

BUILDING

PROPOSED OFFICE CIARA CREEK COVE LONGWOOD, FLORIDA 33

Project no.

CHECKED:

SCALE:

SHEET No:

06-04-2014

AS SHOWN

E-102



#### SCOPE OF WORK

PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM. COMPONENTS NOT SHOWN, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE PROJECT. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND INSTALLING ALL LINE AND LOW VOLTAGE POWER AND CONTROL WIRING FOR THE MECHANICAL TRADE. COORDINATE WITH MECHANICAL CONTRACTOR ALL NECESSARY WIRING TO BE INSTALLED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL PLANS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL PLANS OR DIMENSIONED ON THE ELECTRICAL PLANS, VERIFY EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH—IN.

THE CONTRACTOR DURING BIDDING SHALL VISIT THE SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS. ANY DISCREPANCIES OR CODE VIOLATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMITTING THE BID.

ALL EXISTING CONDITIONS MUST BE FIELD VERIFIED BEFORE COMMENCING ANY WORK. INFORM ARCHITECT/ENGINEER OF ANY CHANGES BETWEEN EXISTING CONDITION ON PLANS AND ACTUAL CONDITIONS IN FIELD.

KEEP ONE SET OF ELECTRICAL PRINTS AT THE JOB SITE AND MARK THE DESIGN DRAWINGS WITH COLORED PENCILS AS ITEMS ARE INSTALLED. MARK DRAWINGS TO SHOW ACTUAL CONDUIT RUNS MADE DURING CONSTRUCTION. THESE MARKED PRINTS AND SHOP DRAWINGS SHALL SHOW PROGRESS TO DATE AND BE AN AS-BUILT RECORD. THESE DRAWINGS SHALL BE TURNED OVER TO THE OWNER AT THE COMPLETION OF THE PROJECT. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD.

THE CONTRACTOR SHALL PERFORM ALL ACCEPTANCE TESTS REQUIRED OR RECOMMENDED BY EOUIPMENT MANUFACTURERS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER SEVEN (7) DAYS PRIOR TO TESTING AND SHALL ALLOW OBSERVATION OF THE TESTING BY THE ENGINEER.

THE ELECTRICAL CONTRACTOR SHALL VERIFY THE ROUGH—IN REQUIREMENTS, LOCATIONS, ORIENTATION, VOLTAGE PHASE, HP, KW, ETC. FOR ALL ELECTRICAL, HVAC AND PLUMBING EQUIPMENT PRIOR TO ROUGH—IN.

THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENCINEER BEFORE CALLING FOR ANY INSPECTION BY THE LOCAL JURISDICTION AND SHALL GIVE THE ENGINEER THE OPPORTUNITY TO BE PRESENT AT EACH INSPECTION. THE ENGINEER, OR HIS REPRESENTATIVE, WILL VERIFY CIRCUITING IS IN COMPLIANCE WITH THESE DRAWINGS. ANY WORK NOT IN COMPLIANCE WITH THESE DRAWINGS WILL BE CORRECTED BY THE CONTRACTOR PRIOR TO COMPLETING ANY OTHER WORK, AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER UPON COMPLETION OF ANY REOUIRE CHANGES AND SHALL COMPENSATE THE OWNER FOR THE ENGINEER'S TIME TO RE—INSPECT THE WORK.

#### COORDINATION

THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, PLUMBING AND GENERAL CONTRACTORS, PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, TO VERIFY MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN. THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.

PRIOR TO TRENCHING IN ANY AREA, THE CONTRACTOR SHALL CONTACT ELECTRICAL, COMMUNICATIONS/DATA, CABLE TV, GAS, AND WATER UTILITY PROVIDERS (BLUE STAKE) AND HAVE ALL UTILITIES IN THE AREA IDENTIFIED. IN ADDITION, THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A SUBCONTRACTOR SPECIALIZING IN THE LOCATION OF UNDERGROUND STRUCTURES TO IDENTIFY ANY OBSTACLES IN THE PATH OF TRENCHING (PRIOR TO, COMMENCING WORK). DAMAGE TO ANY UNDERGROUND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.

#### SUBSTITUTION

SUBSTITUTIONS OF MATERIALS OR PRODUCTS SHOWN HERIN SHALL BE AT THE OWNER'S, ARCHITECT'S OR ENGINEER'S WRITTEN APPROVAL ONLY WITH COPIES OF APPROVAL SENT TO ARCHITECT FOR PROJECT FILE. DEVIATION FROM THESE DRAWINGS WILL NOT BE ALLOWED.

### RECORD DRAWINGS:

PROVIDE TWO (2) SETS OF "RECORD" DRAWINGS AND TWO (2) BOUND SETS OF ALL OPERATIONS MANUALS, DIAGRAMS, SERVICE CONTRACTS, GUARANTEES, ETC., ONE FOR THE OWNER AND ONE FOR BUILDING OPERATIONS DEPARTMENT. OBTAIN A COMPLETE SET OF RECORD DRAWINGS OF EXISTING CONSTRUCTION FROM THE OWNERS FOR INFORMATION ON EXITINC CONDITIONS. INCORPORATE ANY EXISTING CONDITIONS ON NEW RECORD DRAWINCS REQUIRED TO SHOW THE "INSTALLED" INSTALLATION.

# CODES AND PERMITS

PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE NEC, THE SPECIAL REQUIREMENTS AND AMENDMENTS OF THE GOVERNMENTAL BODY ISSUING THE ELECTRICAL PERMIT, AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES.

THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL FEES AND OBTAIN ALL PERMITS REQUIRED FOR THE ELECTRICAL WORK, AND CALL FOR ALL INSPECTIONS OF THE WORK. UTILITY COORDINATION

THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF DRAWINGS TO ELECTRICAL AND TELEPHONE COMPANY UTILITIES WITHIN ONE WEEK OF NOTICE TO PROCEED.

THE CONTRACTOR SHALL NOT TRENCH OR INSTALL CONDUITS (ON THE UTILITY OR LOAD SIDE) TO THE SES, THE UTILITY TRANSFORMER (PRIMARY OR SECONDARY), OR TO THE UTILITY CONNECTION POINT BEFORE RECEIVING A FINAL DESIGN FROM THE UTILITY.

THE CONTRACTOR SHALL NOT INSTALL EQUIPMENT PADS FOR THE SES OR ANY UTILITY EQUIPMENT (TRANSFORMERS, SWITCHING CABINETS, ETC) PRIOR TO RECEIPT OF FINAL PLANS FROM THE UTILITY.

THE CONTRACTOR SHALL NOT BE COMPENSATED FOR ADDITIONAL WORK REQUIRED TO MEET THE REQUIREMENTS OF THE UTILITY WHICH IS THE RESULT OF PROCEEDING PRIOR TO RECEIPT OF A FINAL UTILITY DESIGN.

TEMPORARY ELECTRICAL SERVICE IS TO BE FURNISHED BY ELECTRICAL SUB-CONTRACTOR.

ALL TEMPORARY WIRING IS TO BE REMOVED WHEN ROOM SERVICE IS COMPLETE.

# GUARANTEE

ALL WORK AND MATERIALS SHALL BE GUARANTEED FREE FROM DEFECTS FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE. REPAIRS, REPLACEMENT (EXCEPT LAMPS) AND ADJUSTMENTS SHALL BE MADE DURING THIS PERIOD AT NO COST TO THE OWNER.

## MATERIALS AND EQUIPMENT

ALL ELECTRICAL EQUIPMENT SHALL BE U.L. APPROVED AND COMMERCIAL GRADE.

COPIES OF SHOP DRAWINGS AND DATA SHEETS ON ALL EQUIPMENT SHALL BE FURNISHED TO THE ARCHITECT FOR APPROVAL BEFORE EQUIPMENT IS ORDERED.

ELECTRICAL EQUIPMENT EXPOSED TO WEATHER SHALL BE WEATHERPROOFED.

AIC RATING SHOWN AT PANEL BOARDS IS MINIMUM RATING FOR OVER CURRENT PROTECTIVE DEVICES. EACH DEVICE SHALL BE FULLY—RATED OR SERIES RATED WITH UPSTREAM DEVICE.

OPERATE EACH ITEM OF EQUIPMENT AND PERFORM ADJUSTMENTS AS REQUIRED. SUBMIT PERFORMANCE VERIFICATION INFORMATION ON SPECIAL EQUIPMENT. HAVE THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE PERFORM A CHECK ON SPECIAL EQUIPMENT AND SUBMIT A MEMO STATING THAT THE EQUIPMENT IS OPERATING PROPERLY.

MOUNT A TYPEWRITTEN DIRECTORY IN EACH PANEL SHOWING CIRCUIT NUMBERS, TYPE OF LOAD, AND AREA SERVED.

FOR EACH EQUIPMENT ITEM NOT PROVIDED WITH CORD AND PLUG CONNECTION, THE CONTRACTOR SHALL VERIFY THE EQUIPMENT CONTAINS AN INTEGRAL UNIT SWITCH COMPLYING WITH NEC, 422-25. IF THE EQUIPMENT HAS NO UNIT SWITCH, PROVIDE A LOCK-OFF DEVICE AT THE BRANCH CIRCUIT BREAKER FEEDING THE EQUIPMENT.

#### CONDUITS AND CONDUCTORS

CONDUIT LAYOUTS SHOWN ON THE PLANS ARE DIAGRAMMATIC, NOT INDICATING THE ROUTING REQUIRED. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF INSTALLATION.

ALL WIRING SHALL BE IN CONDUIT. ABOVE GRADE CONDUIT SHALL BE RIGID OR EMT, BX/MC CABLE MAY BE USED WHERE PERMITTED BY LOCAL CODE. WHEN USED, BX AND MC CABLE MUST BE CUT USING AN APPROVED ARMORED CABLE CUTTER TO MAINTAIN A CLEAN CUT. THE USE OF HACKSAWS, PLIERS OR TWISTING AND BREAKING SHALL NOT BE PERMITTED WHEN CUTTING BX OR MC CABLE.

CONDUIT EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE HEAVY WALLED GALVANIZED STEEL, ALL UNDERGROUND CONDUIT SHALL BE HEAVY WALLED GALVANIZED STEEL ASPHALTUM PAINTED, AND WRAPPED WITH ANTI-CORROSION TAPE (SLIPKNOT NO. 200 OR EQUAL) OR SCHEDULE 40 PVC WITH PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR.

ALL CONDUITS THROUGH THE ROOF SHALL PENETRATE ROOF USING PROPER APPROVED ROOF FLASHING.

NO CONDUITS TO BE RUN IN OR THROUGH DUCT WORK.

MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG. ALL CONDUCTORS SMALLER THAN #6 AWG SHALL BE COPPER. ALUMINUM CONDUCTORS MAY BE USED OVER #6 AWG. CONNECTORS SUITABLE FOR USE WITH ALUMINUM CONDUCTORS SHALL BE USED WITH ALL ALUMINUM CONDUCTORS.

SEALTITE OR LIQUIDITIE CANNOT EXCEED 6 FEET IN LENGTH AND MUST HAVE A COPPER GROUNDING CONDUCTOR EITHER INSIDE OR OUTSIDE THE CONDUIT. SEALTITE OR LIQUIDITIE CAN ONLY BE USED FOR SHORT FINAL CONNECTIONS TO INTERIOR LIGHTING FIXTURES AND EQUIPMENT. INSTALL SEPARATE EQUIPMENT AND GROUNDING CONDUCTORS IN EACH RACEWAY SIZED IN ACCORDANCE WITH NEC TABLE 250-95.

HOME RUNS MAY BE COMBINED IN COMMON CONDUITS AT CONTRACTOR'S DISCRETION, PROVIDED ALL N.E.C. DERATING REQUIREMENTS ARE MET.

CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.

SOME CONDUCTOR SIZES ARE BASED ON THE USE OF 75 DEGREE CENTIGRADE CONDUCTOR RATINGS. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THAT ALL ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE CENTIGRADE WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE CENTIGRADE CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.

J-BOX AND EMPTY CONDUIT WITH PULL STRING SHALL BE PROVIDED AND INSTALLED WHERE CONTROL WIRING IS REQUIRED IN CONCELED SPACES. COORDINATE WITH MECHANICAL CONTRACTOR.

PROVIDE CONDUIT FROM DATA AND PHONE RECEPTACLES TO 6" ABOVE CEILING. PROVIDE AND INSTALL CAT-5 FROM ALL DATA AND PHONE RECEPTACLES TO THE TELEPHONE TERMINAL BOARD OR ROUTER. COORDINATE TERMINATION WITH GENERAL CONTRACTOR.

#### DISCONNECTS AND RECEPTACLES

PROVIDE DISCONNECTING MEANS FOR ALL EQUIPMENT PER N.E.C.

UNLESS OTHERWISE NOTED, ALL EQUIPMENT DISCONNECTS SHALL BE NEMA TYPE 3R, FUSIBLE, 3 POLE. FUSE PER EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ALL RECEPTACLES MOUNTED WITHIN 6'-0" OF SINK, ALL REST ROOMS AND EXTERIOR MOUNTED SHALL BE GFI TYPE.

DEVICE BOXES SHOWN BACK-TO-BACK SHALL BE OFFSET A MINIMUM OF TWELVE (12) INCHES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.

#### LIGHTING

WHERE THE PLANS INDICATE A LICHT FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, EMERGENCY, THREE-LEVEL, ETC) THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE BALLASTING TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LICHTING FIXTURE SCHEDULE, WITH MODIFICATIONS AS REQUIRED BY PLAN

PROVIDE JUNCTION BOXES AS REQUIRED BY THE NEC FOR LIGHTING FIXTURES AND SPLICE LOCATIONS.

WIRE RATED AT 150 DECREES CENTIGRADE IS REQUIRED FOR ALL INCANDESCENT LIGHTING FIXTURES.

FIXTURE WIRE RUNNING PAST A BALLAST MUST BE RATED AT LEAST 90 DEGREES CENTIGRADE MINIMUM.

ALL EMERGENCY LIGHTING SHALL BE ON THE NORMAL LIGHTING CIRCUIT OF THE ROOM IT IS IN, AHEAD OF ANY SWITCHES.

EXIT SIGNS SHALL BE ILLUMINATED IN BOTH NORMAL AND EMERGENCY MODES. EMERGENCY LIGHTING FACILITIES SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS NO LESS THAN AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM AT ANY POINT OF 0.1 FOOTCANDLE MEASURED ALONC THE PATH OF EGRESS AT FLOOR LEVEL. NOTE: A FUNCTIONAL ILLUMINATION TEST OF THE EMERCENCY LIGHTING WILL BE MADE BY USING A LIGHT METER TO MEASURE FOOTCANDLES, PRIOR TO FINAL CERTIFICATE OF OCCUPANCY INSPECTION. (ADDITIONAL LIGHTING UNITS MAY BE NEEDED.)

LIGHT FIXTURES IN SUSPENDED CEILINGS SHALL BE INSTALLED IN COMPLIANCE WITH LOCAL BUILDING CODES. INSTALL (OR VERIFY THE EXISTENCE OF) A #12 GAGE HANGER WIRE WITHIN 3" OF EACH CORNER OF THE LIGHT FIXTURE TO THE STRUCTURE ABOVE. FOR FIXTURES WEIGHING LESS THAN 56 POUNDS, THESE WIRES MAY BE SLACK. FOR FIXTURES WEIGHING 56 POUNDS OR MORE THESE WIRES SHALL BE TIGHTENED TO CARRY THE FULL WEIGHT OF THE FIXTURE.

PENDANT-HUNG FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH A #9 GAGE WIRE OR OTHER APPROVED SUPPORT METHOD WHICH DOES NOT DEPEND ON THE CEILING SUPPORT SYSTEM.

LIGHT FIXTURES MOUNTED IN CEILINGS, WHICH FORM AN AIR-HANDLING SPACE (PLENUM), SHALL BE SPECIFICALLY LISTED FOR SUCH INSTALLATION.

LIGHT FIXTURES MOUNTED IN FIRE-RATED CEILINGS SHALL BE SPECIFICALLY LISTED TO MAINTAIN THE FIRE RATING.

# MOTORS WHERE A MANUAL MOTOR STARTER IS SHOWN ON THE PLANS, THE CONTRACTOR SHALL VERIFY THE DEVICE

PROVIDED IS LABELED "SUITABLE AS MOTOR DISCONNECT".

WHERE A COMBINATION CONTROLLER IS SHOWN ON THE DRAWINCS, THE CONTRACTOR SHALL VERIFY THE DEVICE PROVIDED IS LABELED "SUITABLE AS MOTOR DISCONNECT" AND IS LISTED AS A BRANCH CIRCUIT

## INTERCONNECTS

OVERLOAD AND SHORT-CIRCUIT PROTECTIVE DEVICE.

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDUIT AND WIRE INTERCONNECTS BETWEEN ANY ANSUL SYSTEMS, HOODS, LIGHTING AND HVAC.

### FIRE ALARM SYSTEM (WHERE APPLICABLE)

SYSTEM SHALL BE IN ACCORDANCE WITH STATE AND LOCAL AUTHORITIES

FIRE PROTECTION SYSTEMS SHALL BE INSTALLED BY A CONTRACTOR LICENSED TO PERFORM SUCH WORK, AND WHO ALSO HOLDS A CURRENT PERMIT FOR SUCH WORK.
SEE PLANS FOR QUANTITIES AND LOCATION OF DEVICES.

ONE SET OF APPROVED DRAWINGS MUST BE MAINTAINED ON-SITE AND MADE AVAILABLE TO THE INSPECTOR ON DEMAND.

THE CONTRACTOR SHALL SCHEDULE A COURTESY PRE-INSPECTION BY THE FIRE INSPECTOR AFTER DEVICES HAVE BEEN ROUGHED-IN, PRIOR TO CLOSING IN OF WALLS AND CEILINGS. PROVIDE AT LEAST 72 HOURS ADVANCED NOTICE TO THE INSPECTOR AND THE ELECTRICAL ENGINEER.

THE FIRE DEPARTMENT SHALL WITNESS THE FINAL ACCEPTANCE TEST OF THE ALARM SYSTEM. CALL TO SCHEDULE AN APPOINTMENT AT LEAST 72 HOURS IN ADVANCE.

THE CONTRACTOR SHALL PROVIDE THE FIRE INSPECTOR ONE COPY OF A "FIRE ALARMS SYSTEM CERTIFICATION AND DESCRIPTION" RECORD WITH SECTION 1 AND SECTIONS 3 THROUGH 9 FULLY FILLED OUT IMMEDIATELY PRIOR TO THE START OF THE FINAL ACCEPTANCE TEST. ONE COPY OF THE COMPLETED FORM WILL THEN BE GIVEN TO THE INSPECTOR IMMEDIATELY UPON SUCCESSFUL COMPLETION OF THE TEST.

THE ELECTRICAL CONTRACTOR SHALL FURNISH A COMPLETE PLAN OF THE FIRE ALARM SYSTEM TO THE AUTHORITY HAVING JURISDICTION AND THE ELECTRICAL ENGINEER FOR APPROVAL. THE PLAN SHALL INDICATE THE MOUNTING HEIGHT OF EACH DEVICE, IT'S AREA OF COVERAGE (AS LISTED BY THE MANUFACTURER FOR THE SPECIFIC INSTALLATION), AND ROUTING OF INTERCONNECTING CONDUITS.

THE ELECTRICAL CONTRACTOR SHALL FURNISH A COMPLETE POINT—TO—POINT WIRING DIAGRAM OF THE FIRE ALARM SYSTEM TO THE AUTHORITY HAVING JURISDICTION AND THE ELECTRICAL ENGINEER FOR APPROVAL.

THE CONTRACTOR SHALL SIZE ALL CIRCUITS (INITIATION AND NOTIFICATION) SO THAT AN ADDITIONAL 25% IN THE NUMBER OF DEVICES COULD BE ADDED WITHOUT HAVING TO INCREASE WIRE SIZE, POWER SUPPLY, OR BATTERY SIZE. FOR CALCULATION PURPOSES, ASSUME THE ADDITIONAL DEVICES HAVE THE SAME LOAD AS THE LARGEST DEVICE ON THE CIRCUIT, AS DESIGNED.

FIRE CONDUCTORS SHALL BE #14AWG MINIMUM, SHALL BE IN ACCORDANCE WITH ARTICLE 760-16 OF THE NEC, AND SHALL BE AS RECOMMENDED BY THE FIRE ALARM EQUIPMENT MANUFACTURER,

FIRE ALARM CONDUIT SHALL BE 3/4" MINIMUM

CONDUIT AND CABLE SHALL BE RUN IN A CLASS 'A' CONFIGURATION.

ALL RETURN WIRES SHALL BE PHYSICALLY SEPARATED FROM OUTGOING WIRES BY A DISTANCE OF NO LESS THAN 6'-0".

ELECTRICALLY OPERATED WATERFLOW ALARM DEVICES ATTACHED TO SPRINKLER SYSTEMS TO PROVIDE REQUIRED SUPERVISION SHALL BE INTERCONNECTED TO THE FIRE ALARM SYSTEM IN ACCORDANCE WITH THE APPROPRIATE NFPA STANDARD.

ALARM SYSTEM SUPERVISION OF SPRINKLER SYSTEM TROUBLE AND WATERFLOW INDICATIONS IN BUILDINGS MORE THAN ONE STORY HIGH, SHALL BE PROVIDED BY THE FIRE ALARMS SYSTEM IN ACCORDANCE WITH NFPA-13, SECTION 3-12.6.

ALL DEVICES AND MOUNTING HEIGHTS TO MEET ADA REQUIREMENTS.

#### DEMOLITION (WHERE APPLICABLE)

FOR EQUIPMENT BEING REMOVED AND REPLACED, THE CONTRACTOR SHALL DE-ENERGIZE THE EQUIPMENT AND MAKE IT SAFE PRIOR TO REMOVAL COMPLY WITH OSHA REQUIREMENTS FOR LOCKING-OUT AND TAGGING EQUIPMENT TO PREVENT INADVERTENT RE-ENERGIZING.

WHERE EQUIPMENT IS BEING REMOVED, BUT NOT REPLACED, REMOVE THE CONDUCTORS FEEDING THE EQUIPMENT BACK TO THE POINT WHERE THEY RECEIVE POWER (CIRCUIT BREAKER OR BRANCH CIRCUIT TAP). REMOVE ACCESSIBLE CONDUITS. ABANDON IN-PLACE INACCESSIBLE CONDUITS. AFTER REMOVAL OF EQUIPMENT, REPAIR ANY OPENING LEFT TO MATCH SURROUNDING WALLS, CEILINGS, OR FLOORS TO THE OWNER'S SATISFACTION.

COORDINATE WITH THE OTHER TRADES, PRIOR TO THE BID, AND INCLUDE IN THE BASE BID THE ELECTRICAL DISCONNECTION OF ANY EQUIPMENT BEING DEMOLISHED, EVEN IF NOT EXPLICITLY IDENTIFIED IN THE ELECTRICAL PLANS, UNLESS NOTED OTHERWISE.

REMOVE ALL DEMOLISHED EQUIPMENT FROM THE PROPERTY AND DISPOSE OF IT PROPERLY (IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS). FEES ASSOCIATED WITH DISPOSAL SHALL BE INCLUDED IN THE CONTRACTOR'S BASE BID.

## KITCHEN AREAS (WHERE APPLICABLE)

THE ELECTRICAL CONTRACTOR SHALL VERIFY ROUGH—IN REQUIREMENTS, LOCATIONS, MOUNTING HEIGHTS, VOLTAGE, PHASE, AMPS, HP, KW, ETC. FOR ALL FOOD SERVICE EQUIPMENT PRIOR TO ROUGH—IN.

THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT, SWITCHES, INTERLOCKS, CONDUIT, WIRING AND INSTALLATION AS SPECIFICALLY OUTLINED WITHIN THE KITCHEN EQUIPMENT DRAWNCS.

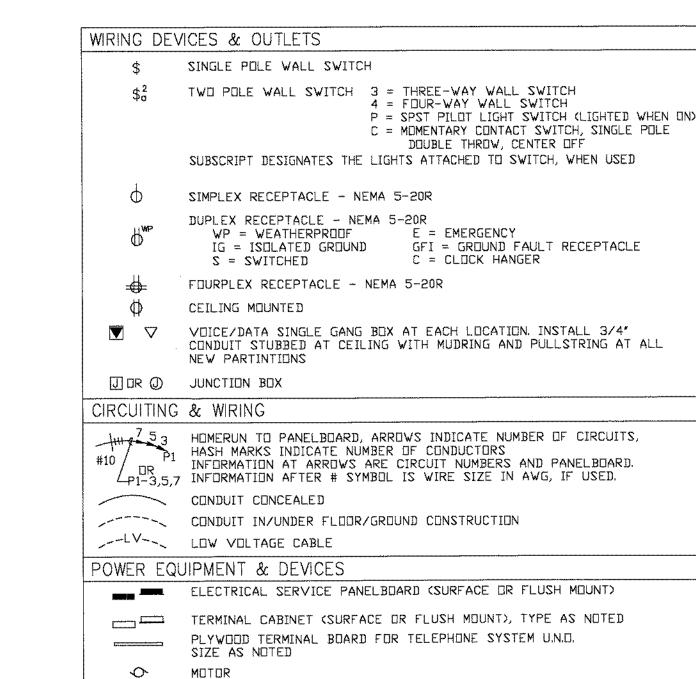
THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL ELECTRICAL CONNECTIONS TO ALL KITCHEN FOOD SERVICE

AND RELATED EQUIPMENT.

FINAL CONNECTION TO ALL KITCHEN EQUIPMENT SHALL BE MADE WITH "SEAL-TITE" FLEXIBLE CONDUIT.

PROVIDE SEAL-OFF'S FOR ALL CONDUITS ENTERING OR LEAVING WALK-IN BOXES.

FURNISH AND INSTALL ALL CONNECTIONS INCLUDING POWER AND CONTROL WIRING TO ALL WALK-IN BOXES AND TO THE REMOTE COMPRESSORS. REFER TO KITCHEN CONSULTANT DRAWINGS FOR SPECIFIC REQUIREMENTS.



ELECTRICAL SERVICE PANELBOARD (SURFACE OR FLUSH MOUNT)

TERMINAL CABINET (SURFACE OR FLUSH MOUNT), TYPE AS NOTED

PLYWOODD TERMINAL BOARD FOR TELEPHONE SYSTEM U.N.O.

SIZE AS NOTED

MOTOR

200/3/150 DISCONNECT SWITCH - '200/3/150' DENOTES AMPERES/POLE/FUSE

NF= NON-FUSED CB= CIRCUIT BREAKER (200/3/CB)

MOTOR RATED SWITCH

C MAGNETIC CONTACTOR, SIZE, COIL VOLTAGE AND NUMBER OF POLES

AS INDICATED (L= LIGHTING CONTACTOR P= POWER CONTACTOR)

PUSH BUTTON

TIME SWITCH

PC PHOTOCELL

LIGHTING (SEE LIGHT FIXTURE SCHEDULE)

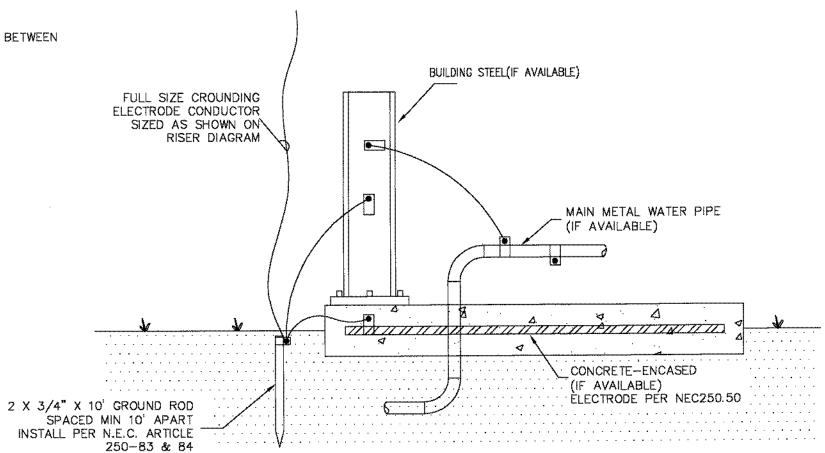
A O C A LIGHTING FIXTURE - CEILING / WALL MOUNTED

A = LIGHT FIXTURE TYPE 'A'

EXIT SIGN - CEILING / WALL MOUNTED, ARROWS AS INDICATED

A = LIGHT FIXTURE TYPE 'A'

	EMERGENCY BATTERY PACK LIGH	HTING FIXTURE	
<u> </u>	TRACK LIGHT WITH LIGHT TYPE	ES AS INDICATI	<b>ED</b>
RE ALAR	M	SECURITY	
	FIRE ALARM PULL STATION @ 4'-0' A.F.F. U.N.D.	(DB)	DOOR MONITOR
SsD	DUCT SMOKE DETECTOR (SD=SUPPLY RD=RETURN)		TRANSFORMER
	(31-30) ( E ( 10-KE ( 0K))	BO	BELL
		B	BUZZER



EXISTING GROUNDING ELECTRODE SYSTEM

SEAL:

REVISION

 $\mathbf{\Omega}$ 

 $\mathbf{C}$ 

O

8

PRO

REVISI	ON	
1		
2		
3		
4		
5		
6		

PROJECT NO.

DATE: 06--04-2014

DRAWN: JA

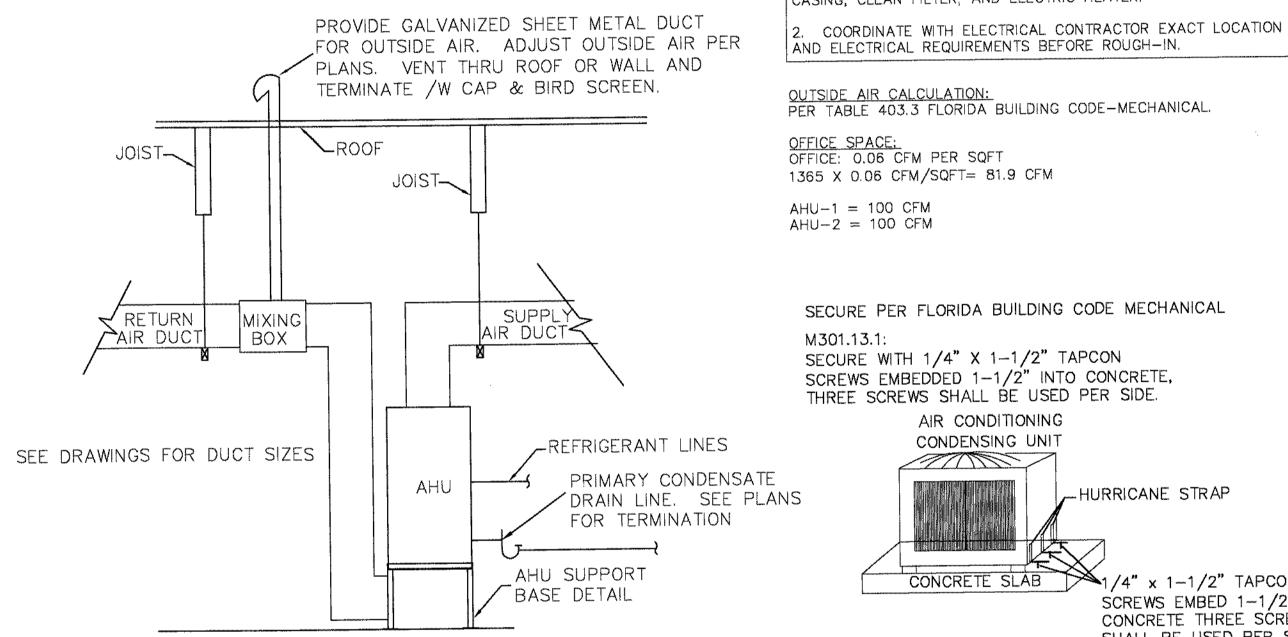
CHECKED: JA

SCALE: AS SHOWN

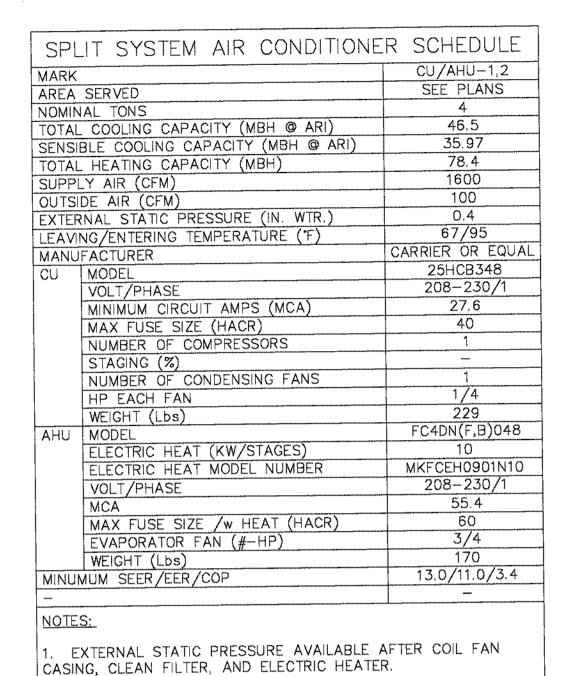
SHEET No:

E-301

	MECHANICAL LEGEND						
SYMBOL	DESCRIPTION						
	NEW RIGID FIBERGLASS DUCT BOARD						
	NEW FLEXIBLE FIBERGLASS DUCT						
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EXISTING RIGID FIBERGLASS DUCT BOARD						
	EXISTING FLEXIBLE FIBERGLASS DUCT						
	EXISTING FIRE DAMPER						
SAD 10°ø 400 CFM	MARK OF AIR DISTRIBUTION DEVICE, AND CFM'S						
T	THERMOSTAT DIGITAL PROGRAMABLE						
X	SUPPLY GRILL						
	RETURN GRILL						
	EXHAUST FAN						
<u>sp</u> —	EXISTING SMOKE DETECTOR						







OUTSIDE AIR CALCULATION: PER TABLE 403.3 FLORIDA BUILDING CODE-MECHANICAL.

OFFICE SPACE: OFFICE: 0.06 CFM PER SQFT 1365 X 0.06 CFM/SQFT= 81.9 CFM

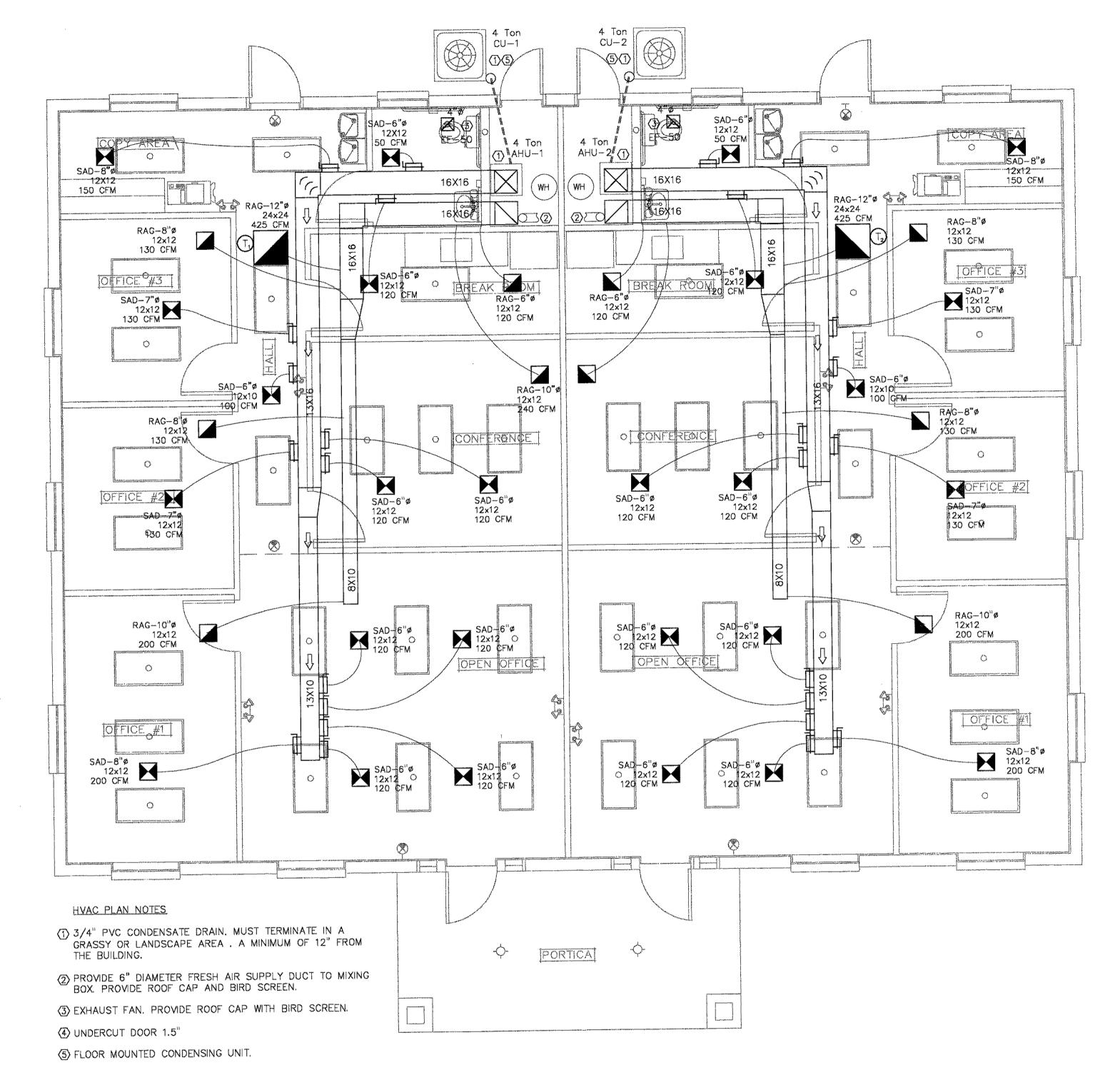
AHU-1 = 100 CFM AHU-2 = 100 CFM

SECURE PER FLORIDA BUILDING CODE MECHANICAL

SECURE WITH 1/4" X 1-1/2" TAPCON SCREWS EMBEDDED 1-1/2" INTO CONCRETE, THREE SCREWS SHALL BE USED PER SIDE.

AIR CONDITIONING CONDENSING UNIT -HURRICANE STRAP  $/4" \times 1-1/2"$  TAPCON SCREWS EMBED 1-1/2" INTO CONCRETE THREE SCREWS SHALL BE USED PER SIDE,

CONDENSING UNIT DETAIL SCALE: NTS

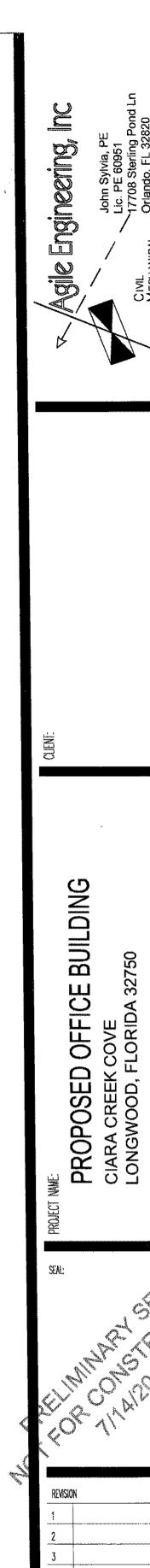


# MECHANICAL GENERAL NOTES:

MECHANICAL CONTRACTOR SHALL VISIT THE JOBSITE AND SHALL FAMILIARIZE THEMSELVES WITH EXISTING JOBSITE CONDITIONS AS IT RELATES TO CONSTRUCTABILITY AND CODE COMPLIANCE WITHIN THEIR RESPECTIVE TRADE AND SHALL BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO BID.



	AIR DISTR	IBUTION D	EVICE	SCHED	ULE	
SYMBOL	DESCRIPTION	MODEL	FRAME TYPE	MATERIAL	FINISH	REMARKS
SAD	SUPPLY AIR DIFFUSER	TITUS OR EQUAL 250-AA	DRIWALL	ALUM	COLOR	PROVIDE DIFFUSER WITH ALUMINUM CONES AND FRAME, ADJUSTABLE VANE CONTROLLERS, AND ROUND INLET.
RAG	RETURN AIR GRILLE	TITUS OR EQUAL 301FS SERIES	DRIWALL	ALUM	CEILING COLOR	GRILLE SHALL BE 3/4" EXTRUDED ALUMINUM LOUVER FACED WITH ALUMINUM FRAME, AND REMOVABLE HIGH EFFICENCY (ASHRAE 30%) FILTER.
	SPIN-IN TAKE OFF	JER-AIR DB-4	SPIN-IN	STEEL	GALVANIZED	FITTING WITH INTEGRAL SCOOP AND DAMPER.



3	
4	
5	
6	
PROJECT NO.	
DATE:	06-04-2014
DRAWN:	JA

CHECKED: AS SHOWN

M-101

#### SCOPE OF WORK:

1.) ALL WORK INCLUDED UNDER THIS SECTION CONSISTS OF FURNISHING ALL MATERIALS. EQUIPMENT AND LABOR, AND THE PERFORMING OF ALL FUNCTIONS, EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS TO BE PERFORMED BY OTHERS, FOR THE INSTALLATION OF ALL HEATING AND COOLING EQUIPMENT, PIPING AND ALL DUCTWORK, GRILLES, REGISTERS, ETS., INCLUDING ALL CONNECTIONS TO EACH SYSTEM AS SPECIFIED HEREIN AND SHOWN ON THE DRAWINGS. IT SHALL FURTHER INCLUDE FURNISHING AND INSTALLING ALL MISCELLANEOUS ITEMS REQUIRED FOR THE OPERATION OF THE SYSTEM, WHETHER SPECIFICALLY CALLED OUT OR NOT.

2.) INSTALL A COMPLETE AND WORKING MECHANICAL SYSTEM IN STRICT ACCORDANCE WITH THE FLORIDA MECHANICAL CODE AND SMACNA STANDARDS.

1.) ALL CONTRACTORS SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH OTHER TRADES AFFECTED BY EACH OTHER'S WORK.

## CODES AND PERMITS:

1.) ALL MATERIALS, EQUIPMENT AND INSTALLATION MUST COMPLY WITH ALL APPLICABLE LAWS, CODES, RULES AND REGULATIONS, REQUIRED BY CITY, COUNTY AND STATE, AS WELL AS FEDERAL

### 2.) PERMITS: OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES AND FEES.

3.) INSPECTIONS: FURNISH OWNER WITH CERTIFICATE OF INSPECTION AND APPROVAL BY LOCAL AUTHORITIES PRIOR TO FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL WORK MUST BE INSPECTED.

1.) ALL PRODUCTS SHALL BE NEW AND UNUSED, OF ESTABLISHED AND REPUTABLE AMERICAN MANUFACTURERS. ITEMS OF EQUIPMENT USED FOR THE SAME PURPOSE SHALL BE OF THE SAME MANUFACTURER.

2.) SYSTEMS SHALL BE COMPLETE AND OPERABLE. ANY ACCESSORIES REQUIRED FOR THE OPERATION OF THE SYSTEM SHALL BE INCLUDED AS THOUGH SPECIFICALLY INDICATED TO THE PROVIDED. SUCH ACCESSORIES WOULD INCLUDE FILTERS, CONDENSATE DRAINS, RELIEF VALVES, SERVICE VALVES, THERMOSTATS, VIBRATION INSULATORS, ETC. MOTOR STARTERS FOR PRE WIRED EQUIPMENT (AND OTHER PROTECTION AND CONTROL DEVICES) ARE ALSO INCLUDED IN THIS SPECIFICATION.

3.) SPECIFIC REFERENCE TO A MANUFACTURER'S PRODUCT IS ONLY TO ESTABLISH TYPE, QUALITY, AND PERFORMANCE REQUIRED. THESE QUALIFICATIONS ARE IN ADDITION TO THE REQUIREMENTS SHOWN ON THE DRAWINGS AND HEREIN THESE SPECIFICATIONS. LISTING OF ALTERNATE EQUIPMENT MANUFACTURERS SHALL NOT BE CONSTRUED AS AN UNCONDITIONAL APPROVAL OF THE PRODUCTS OF THOSE MANUFACTURERS.

1.) SUBSTITUTIONS OF MATERIALS OR PRODUCTS SHOWN HEREIN SHALL BE AT THE OWNER'S, ARCHITECTS, OR ENGINEER'S WRITTEN APPROVAL ONLY WITH COPIES OF APPROVAL SENT TO THE PROJECT FILE. ANY DEVIATION FROM THESE DRAWINGS WILL NOT BE ALLOWED.

### TEMPERATURE CONTROLS AND WIRING:

1.) ALL WIRING IS INCLUDED UNDER THE ELECTRICAL DIVISION OF THE SPECIFICATIONS. ALL INTEGRAL STARTERS, CONTROLS, RELAYS AND OTHER DEVICES ARE INCLUDED UNDER THE MECHANICAL DIVISION. ALL EQUIPMENT, DEVICES AND WIRING SHALL CONFORM TO THE NATIONAL ELECTRIC CODE. ALL CONTROLS SHALL BE FURNISHED AND PROPERLY IDENTIFIED WITH INSTRUCTIONS FOR PROPER CONNECTIONS. RESPONSIBILITY FOR PROPER CONNECTIONS AND OPERATION IS INCLUDED UNDER THE MECHANICAL CONTRACTORS RESPONSIBILITY. VERIFY ALL VOLTAGES, PHASES AND ELECTRICAL CONNECTIONS WITH THE ELECTRICAL CONTRACTOR BEFORE ORDERING ANY EQUIPMENT, AND IF DISCREPANCIES OCCUR, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND GENERAL CONTRACTOR FOR THEIR DECISION.

## DUCTWORK:

1.) ALL AIR CONDITIONING AND HEATING DUCT WORK SHALL BE CONSTRUCTED OF FIBERGLASS DUCT BOARD (R-6.0) IN ACCORDANCE WITH SMACNA STANDARDS, SEAMS SHALL BE STAPLED OR TAPED AND SEALED WITH GLASS FABRIC IMBEDDED IN MASTIC. USE OF PRESSURE SENSITIVE TAPES AS THE ONLY DUCT CLOSURE METHOD IS PROHIBITED. DUCT WORK SHALL BE SUPPORTED WITH 1-1/2" WIDE GALVANIZED CHANNEL, STRAPPED TO STRUCTURE WITH 1-1/2" WIDE, 18 GAUGE GALVANIZED STEEL BANDS, ETE WITH I BANDS SHALL BE SECURED DIRECTLY TO THE STRUCTURE USING SCREWS, RIVETS, OR BOLTS. MAXIMUM DISTACE BETWEEN SUPPORTS SHALL BE 4 FEET.

2.) FLEXIBLE DUCT WORK SHALL BE CONSTRUCTED OF U.L. CLASS I POLYESTER LINED, METAL HELIX SUPPORTED, INSULATED FIBERGLASS FLEXIBLE DUCT (R-6.0). MAXIMUM DEVELOPED LENGTH INSTALLED ON THIS PROJECT IS LIMITED TO FIFTEEN (15) FEET. DUCT WORK SHALL BE SUPPORTED WITH 1-1/2" WIDE, 18 GAUGE GALVANIZED STEEL BANDS. BANDS SHALL BE SECURED DIRECTLY TO THE STRUCTURE USING SCREWS, RIVETS, OR BOLTS. MAXIMUM DISTACE BETWEEN SUPPORTS SHALL BE 6 FFFT. MAXIMUM ALLOWABLE DUCT DROOP IS 1 INCH IN 10 FEET.

3.) EACH DUCT SYSTEM SHALL BE COMPLETE WITH ALL REQUIRED DUCTWORK FITTINGS, TURNING VANES, SPUTTER DAMPERS AND SUPPORTS, AND EXTRACTORS AT ALL RIGHT ANGLE TAKEOFFS AND

4.) PROVIDE DOUBLE THICKNESS, FACTORY FABRICATED GALVANIZED SHEET STEEL TURNING VANES WITH AIRFOIL CONTOUR IN ALL RIGHT ANGLE ELBOWS, TEES, AND ELBOWS WITH RADIUS LESS THE 1-1/2 TIMES THE WIDTH OF THE DUCT.

5.) ALL ROUND DUCT BRANCH TAKEOFFS SHALL BE PROVIDED WITH SPIN-IN WITH AIRSCOOP AND BALANCING DAMPER.

6.) ALL FRESH AIR SUPPLY AND EXHAUST DUCT SHALL BE GALVANIZED SHEET METAL.

7.) DUCT SIZES SHOWN ON THE DRAWINGS ARE TO THE INSIDE OF ACOUSTICAL/INSULATION LININGS. INCREASE SIZES OF DUCTS AS REQUIRED TO ALLOW FOR CLEAR INSIDE DISTANCE.

8,) DUCTWORK SHALL CONFORM TO DIMENSIONS ON THE DRAWINGS, UNLESS LOCATION OF STRUCTURAL MEMBERS PROHIBITED. IN CASE OF CHANGE IN DIMENSIONS, CROSS SECTIONAL AREAS SHALL BE MAINTAINED.

## GRILLES, REGISTERS AND DIFFUSERS:

1.) FURNISH AND INSTALL ALL GRILLES, REGISTERS, CEILING DIFFUSERS AND DOOR GRILLES WHERE INDICATED. THEY SHALL BE OF SIZE AND MODEL CALLED FOR ON THE DRAWINGS.

2.) ALL GRILLES, REGISTERS, AND CEILING DIFFUSERS MUST BE SET FLUSH AND TRUE TO WALL OR CEILING TO PREVENT AIR LEAKAGE AROUND EDGES. ALL UNITS SHALL BE PROVIDED WITH NEOPRENE GASKETING AROUND THE INSIDE OF THE FRAME.

3.) ALL UNITS SHALL BE FACTORY FINISHED, OF COLOR SELECTED BY THE ARCHITECT, OR AS OTHERWISE INDICATED.

4.) THE MECHANICAL CONTRACTOR SHALL PAINT ALL DUCTWORK, TURNING VANES, INSULATION, ETC. THAT IS VISIBLE THROUGH GRILLES, REGISTERS, OR CEILING DIFFUSERS FLAT BLACK.

#### EQUIPMENT:

1.) ALL EQUIPMENT SHALL BE LABELED WITH STEEL TAGS EMBOSSED WITH 1/4" HIGH LETTERS, PERMANENTLY ATTACHED. TAG SHALL CLEARLY INDICATE THE AREA SERVED BY THE EQUIPMENT.

1.) BEFORE ACCEPTANCE AND FINAL PAYMENT, IT SHALL BE DEMONSTRATED THAT ALL APPARATUS IS FUNCTIONING PROPERLY AND EFFICIENTLY.

2.) THE CONTRACTOR SHALL TEST AND BALANCE THE SYSTEM AND PROVIDED A REPORT. THIS SHALL INCLUDE A THOROUGH TEST OF EACH SUPPLY, RETURN, AND EXHAUST SYSTEMS TO ASSURE THAT EACH DIFFUSER AND REGISTER HAS THE PROPER QUANTITY OF AIR IN ACCORDANCE WITH AABC OR NEBB. BALANCED SYSTEM SHALL MEET THE OUTSIDE AIR MIX REQUIREMENTS OF ASRAE 62.

1.) THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FROM DÉFECT OF WORKMANSHIP, AND SHALL REPLACE OR REPAIR WITHOUT ADDITIONAL COST TO THE OWNER ALL DEFECTIVE MATERIAL AND WORKMANSHIP, FOR A PERIOD OF (1) YEAR AFTER COMPLETION

#### RECORD DRAWINGS:

1.) PROVIDE TWO (2) SETS OF "RECORD" DRAWINGS AND TWO (2) BOUND SETS OF ALL OPERATIONS MANUALS, DIAGRAMS, SERVICE CONTRACTS, GUARANTEES, ETC., ONE FOR THE OWNER AND ONE FOR BUILDING OPERATIONS DEPARTMENT, OBTAIN A COMPLETE SET OF RECORD DRAWINGS OF EXISTING CONSTRUCTION FROM THE OWNERS FOR INFORMATION ON EXITING CONDITIONS. INCORPORATE ANY EXISTING CONDITIONS ON NEW RECORD DRAWINGS REQUIRED TO SHOW THE "INSTALLED" INSTALLATION.

#### MECHANICAL GENERAL NOTES

1.) THE CONTRACTOR SHALL DO ALL THE NECESSARY CUTTING OF WALLS AND CEILING.

2.) NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT PERMISSION FROM THE ARCHITECT AND THE

3.) PATCH AROUND ALL OPENINGS TO MATCH EXISTING CONSTRUCTION.

4.) DUCTWORK CONSTRUCTION AND INSTALLATION INCLUDING SHEET METAL GAUGES, REINFORCEMENT, JOINT SEALING, AIR LEAKAGE, AND DETAILS NOT SPECIFICALLY SHOWN ON DRAWINGS SHALL BE IN ACCORDANCE WITH FLORIDA BUILDING CODE-MECHANICAL, LOW VELOCITY DUCT CONSTRUCTION

5.) COORDINATE EXACT LOCATION OF MECHANICAL EQUIPMENT, AIR DEVICES, PIPING, DUCTWORK, ETC., WITH PLUMBING, ELECTRICAL, STRUCTURAL, ARCHITECTURAL AND GENERAL CONTRACTORS DRAWINGS.

6.) WORKMANSHIP: ALL EQUIPMENT APPURTENANCES, DEVICES AND PIPING SHALL BE INSTALLED IN A WORKMANLIKE MANNER IN CONFORMITY WITH THE PROVISIONS AND INTENT OF THE LATEST APPROVED MECHANICAL CODE.

7.) LOCATE ALL EXHAUST AIR OUTLETS 10'-0" MIN. FROM MECHANICAL EQUIPMENT OUTSIDE AIR

8.) LIGHTING LOCATIONS TAKE PRECEDENCE OVER DIFFUSER LOCATION. CONTRACTORS SHALL MAKE NECESSARY ADJUSTMENTS TO DIFFUSERS TO AVOID ANY CONFLICT WITH LIGHTING LAYOUT.

9.) PROVIDE ALL EXHAUST AIR DUCTS WITH BACK DRAFT DAMPER.

10.) PROVIDE VOLUME DAMPER AT EACH AND EVERY SUPPLY AIR BRANCH DUCT TAKE-OFF, EXCEPT OVER HARD CEILINGS.

11.) TAKE-OFF FITTING SHALL BE BELL MOUTH SPIN-IN TYPE WITH QUADRANT DAMPER.

12.) CONTRACTOR SHALL CLEAN AND INSPECT ALL EXISTING EQUIPMENT PRIOR TO COMMENCING WORK. NOTIFY BUILDING OWNER OF ANY DYSFUNCTIONAL EQUIPMENT IMMEDIATELY.

13.) CONTRACTOR SHALL INSURE THAT ALL EXISTING MECHANICAL EQUIPMENT IS IN SATISFACTORY WORKING CONDITION SO HE MAY MAKE PROVISIONS IN HIS BID TO ACCOMMODATE ANY REPLACEMENTS

14.) VERIFY EXACT SIZE, LOCATION, ROUTING, ETC., OF ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AIR DEVICES, SENSORS, PIPING, ETC., WHICH ARE TO BE REMOVED REPLACED, ABANDONED, REWORKED, ETC., AS REQUIRED AND AS SHOWN ON DRAWINGS.

15.) ALL TEMPERATURE CONTROLS ARE TO BE TESTED, ADJUSTED AND CALIBRATED FOR PROPER OPERATION.

16.) THE GENERAL CONTRACTOR SHALL BRING ALL SURFACES (FLOOR, WALLS, AND CEILINGS) BACK TO ORIGINAL CONDITION AFTER MODIFICATIONS HAVE BEEN MADE.

17.) PROVIDE CLEARANCES AS PER MANUFACTURER'S RECOMMENDATIONS.

# 18.) PROVIDE EQUIPMENT IDENTIFICATION.

19.) INSTALL CLEANOUTS AT EVERY 90-DEGREE TURN ON AIR CONDITIONING CONDENSATE DRAIN

20.) MOUNT ALL SENSORS AT 54" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE, COORDINATE EXACT LOCATION WITH THE ARCHITECT.

STRAP EVERY 8 FT & AT CHANGES IN YDYRECTION\_ PROVIDE 22 GA. ANGLES — HANG FLEXIBLE DUCTS AT BOTTOM CORNERS OF HVAC DUCT WITH 1-3/8" WIDE 22 DUCT TO PREVENT GA, STEEL STRAPS GOUGING. ANGLES FIBERBOARD) WRAPPING UNDER SHALL BE 4" WIDE BY DUCT EVERY 5 FT. 2" HIGH BY 2" UNDER MAX. ALSO SUPPORT DUCT. TWO ANGLES PER 18" FROM ANY STRAP. CONNECTION. MINIMUM 2" WIDE NO BURN " WIDE 22 GAUGE 12 GAUGE WIRE RATE/SELF STRAP WRAPPING OR 1/4" ROD TO EXTINGUISHING FABRIC UNDER DUCT AND TOP CHORD OF -HANGER STRAP MAY IATTACHED TO TOP TRUSS BE USED IN LIEU OF CHORD OF TRUSS. METAL STRAPS AT LEAST ONE HANGER PER DUCT TRANSVERSE 1"X 2"X 22 GAUGE ANGLE 4"X -CHANNEL SOFFIT DUCT HANGING DETAIL

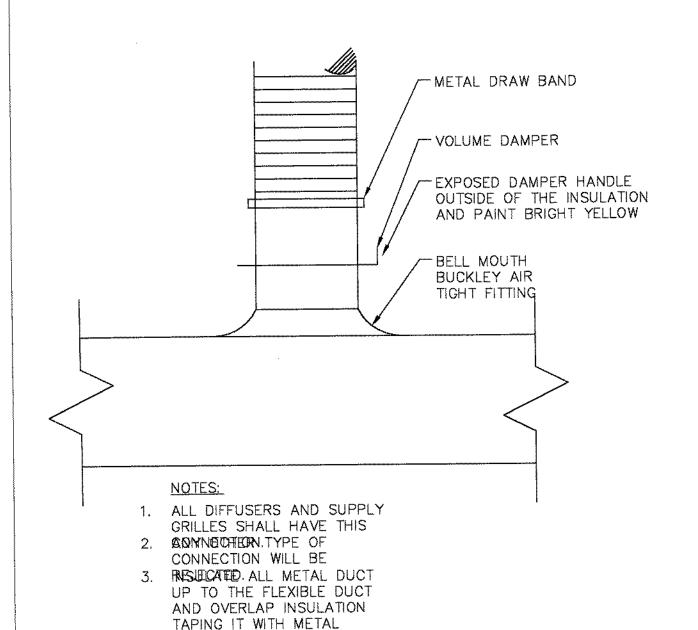
SCALE: NTS

22 GA. 1" WIDE STEEL

SUSPEND FROM STRUCTURE OR SLAB WITH 1/4" STEEL FLEXIBLE CONNECTION -TRANSITION DAMPER HOUSING ── CEILING EXHAUST GRILLE (METAL)

# **CEILING MOUNTED EXHAUST FAN DETAIL**

SCALE: N.T.S.



# TYPICAL DIFFUSER/GRILLE **DUCT CONNECTION DETAIL**

- STRAP SUPPORT

DIFFUSER CONNECTION DETAIL

MYLAR REINFORCED

PLANS, MAXIMUM

LENGTH IS 8'-0"

WITH STRAP.

CONNECTION

BLANKET.

REGULAR CEILING

SIZE TO MATCH

CAULK & SEAL AT

AND FLEXIBLE DUCT

CONNECTION. TIGHTEN

PROVIDE 5 PIECE ROUND

RIGID DUCT CONNECTION.

DIFFUSER NECK. FIELD

INSULATE ELBOW AND

TOP OF DIFFUSER WITH

2" THICK FIBERGLASS

INSULATE THE DUCT

BOTH DIFFUSER NECK

FACTORY INSULATED (1"

FOR SIZE AS NOTED ON

THICK) FLEXIBLE DUCT

NOT TO SCALE

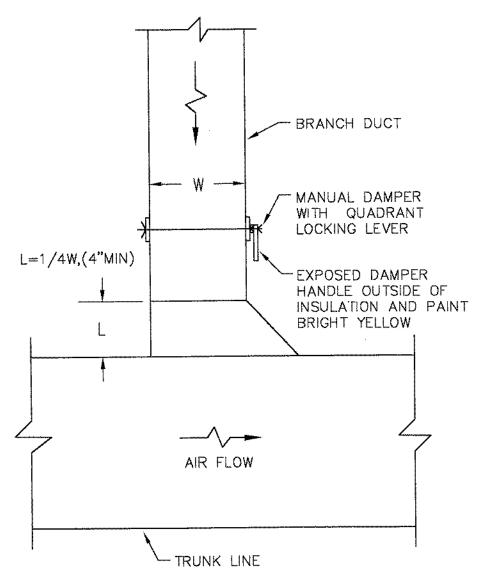
STRAP OR

DRAW BAND

PULL SLEEVE DUCT TIGHT

SCREWS TO MAKE AIR TIGHT

WITH C.D. NECK AND



# TYPICAL RETURN AND EXHAUST **DUCT CONNECTION DETAIL**

3. PROVIDE BIRD SCREEN AND OMIT BACKDRAFT DAMPER FOR BATH

SCALE: N.T.S.

GALV. STEEL OR ALUMINUM DUCT MADE WATERTIGHT. STIFFENERS MAY BE INSIDE. CAULK WEATHER TIGHT SLOPED ROOF AT THE JOINING OF THE PIPE AND THE COLLARED ROOFCAP, CONNECT DUCT INSIDE COLLAR AND SEAL WITH FOIL BACKED TAPE. 1. PRIME COAT AND PAINT TO MATCH ROOF COLOR. 2. PROVIDE FLASHING AND COUNTER FLASHING. EXHAUST USE.

EXHAUST ROOF CAP DETAIL

M-201

project no,

CHECKED:

06-04-2014

AS SHOWN

JA

JA

BUILDING

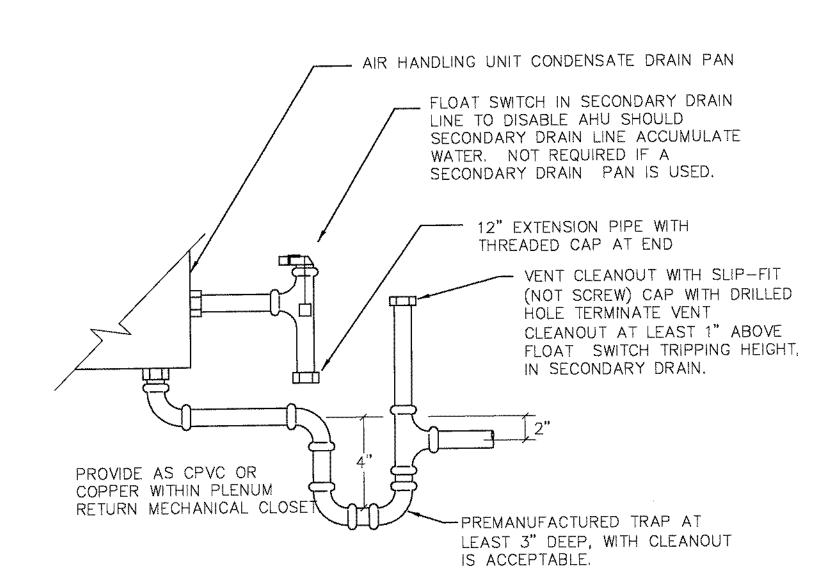
 $\underline{\circ}$ 

0斤

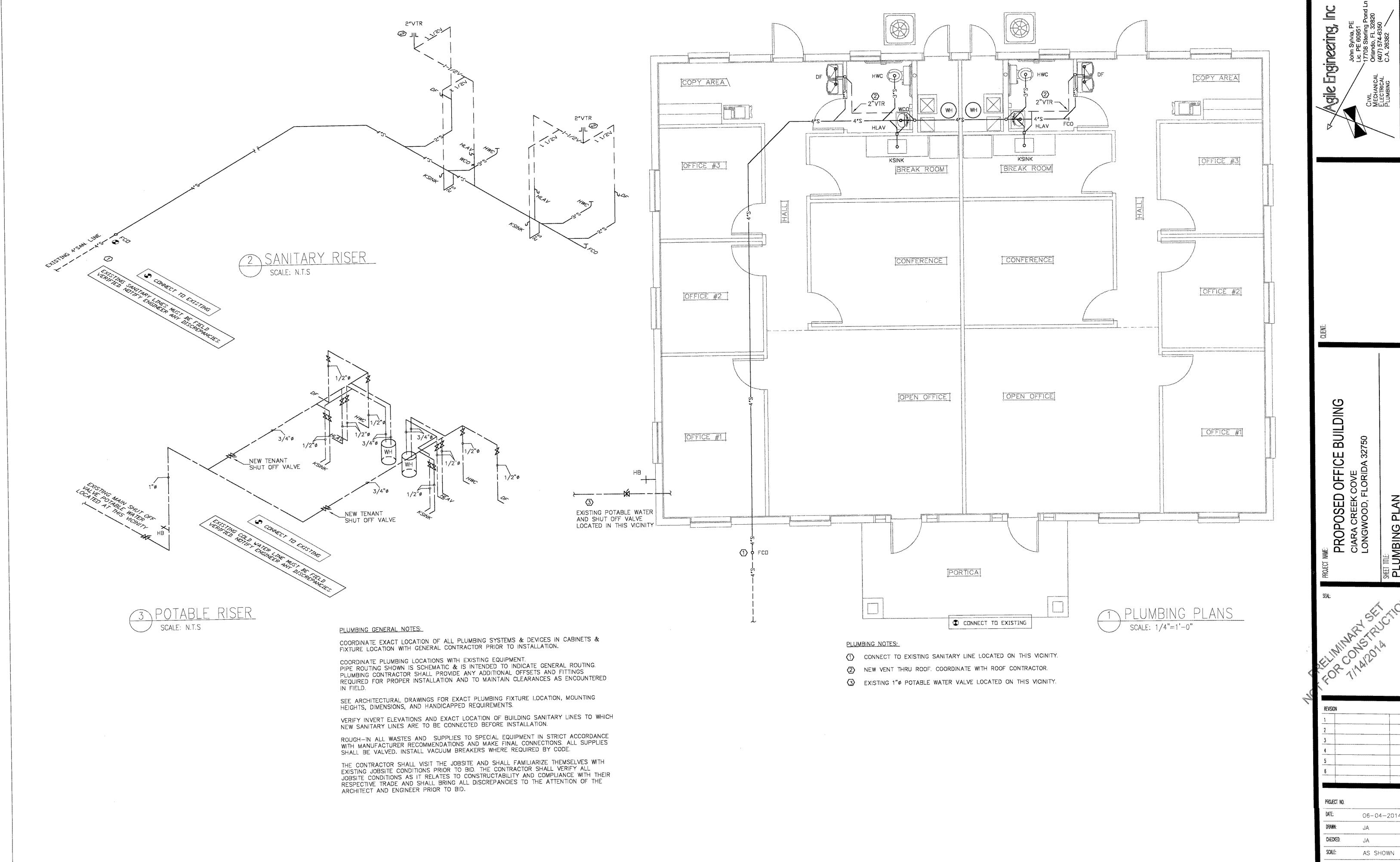
COVE FLORII

TO SOLVE TO

PROPOSED CIARA CREEK CLONGWOOD, FL



**CONDENSATE TRAP DETAIL** SCALE: N.T.S.

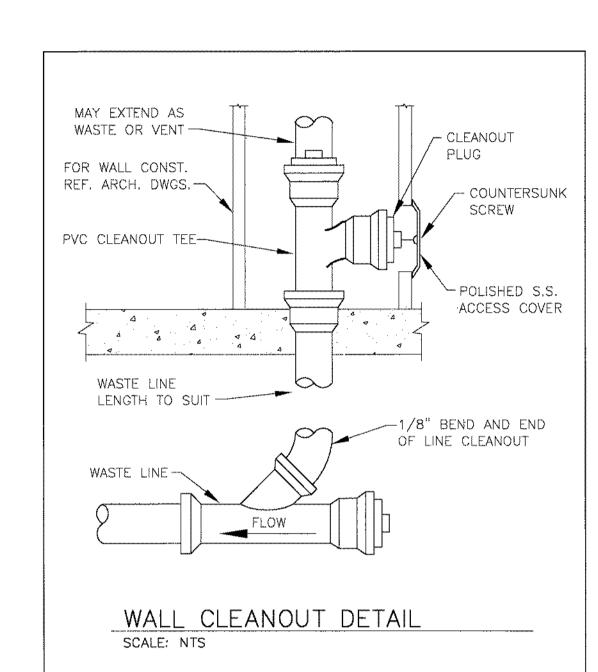


06-04-2014 SHEET No.

P-101

# GENERAL PLUMBING NOTES

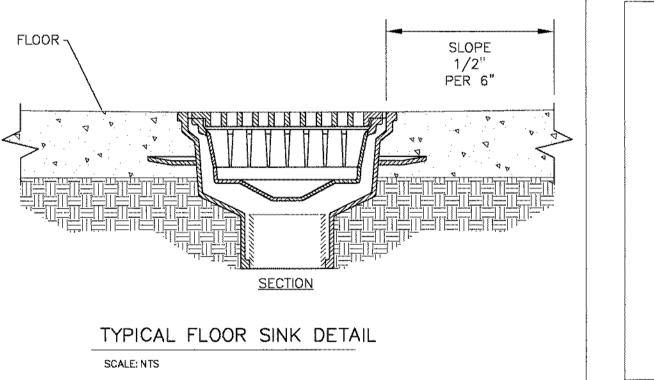
- 1. PLUMBING INSTALLATION SHALL COMPLY WITH ALL STATE LOCAL CODES, AND UTILITY COMPANY REGULATIONS.
- 2. PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND PAY ALL FEES RELATIVE TO THE INSTALLATION OF HIS WORK
- 3. PLUMBING CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS DURING PRE-BID SITE VISITS. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INCLUSION OF ALL REQUIRED DEMOLITION IN AREAS UNDERGOING MODIFICATION, WHETHER OR NOT SUCH WORK IS INDICATED ON THE DRAWINGS, DEMOLITION SHALL GENERALLY BE ARRANGED TO AGREE WITH THE ACCOMPLISHMENT OF WORK UNDER THE VARIOUS PHASES AND IN COORDINATION WITH THE WORK OF OTHER TRADES. CONTRACTOR SHALL EXAMINE ALL ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- 4. THE PLUMBING CONTRACTOR SHALL OBTAIN A FULL SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT, AND SHALL BE AWARE OF THE WORK OF ALL OTHER TRADES WHICH MAY REQUIRE COORDINATION.
- 5. PLUMBING CONTRACTOR SHALL VERIFY POINT OF CONNECTION TO, AND ELEVATION OF EXISTING PIPING, PRIOR TO INSTALLATION OF NEW PIPING.
- 6. PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER CONTRACTORS BEFORE INSTALLATION OF HIS WORK IN CHASES, CEILING SPACES AND OTHER AREAS WHERE CONFLICTS MAY OCCUR.
- 7. ALL PIPING SHOWN IS SCHEMATIC. IT IS NOT POSSIBLE TO INDICATE EVERY OFFSET, ELBOW, UNION, VALVE. TRAP, ACCESS PANEL, ETC. THAT IS REQUIRED FOR A PROPERLY WORKING SYSTEM. NO ADDITIONAL COST WILL BE ALLOWED FOR FITTINGS THAT ARE REQUIRED TO INSTALL THE PIPING SYSTEM WITHIN THE SPACE PROVIDED AND ARE REQUIRED FOR A COMPLETE WORKING SYSTEM IN ACCORDANCE WITH ALL OF THE REQUIREMENTS OF THE CODES AND REGULATIONS.
- 8. PERFORM ALL EXCAVATION REQUIRED FOR UNDERGROUND PLUMBING LINES. ALL EXCAVATION SHALL BE MADE IN A MANNER TO PROVIDE A UNIFORM BEARING FOR ALL PIPES. AFTER WORK HAS BEEN INSPECTED AND APPROVED, EXCAVATIONS SHALL BE BACKFILLED WITH CLEAN EARTH PLACED IN LAYERS NOT OVER SIX (6) INCHES DEEP AND THOROUGHLY COMPACTED TO PREVENT SETTLEMENT. EXCAVATION BELOW THE REQUIRED GRADE SHALL BE REFILLED WITH SAND OR GRAVEL. WHERE ROCK IS ENCOUNTERED, IT SHALL BE EXCAVATED TO THREE (3) INCHES BELOW THE REQUIRED GRADE AND FILLED WITH SAND AND FINE GRAVEL. EXCESS MATERIAL FROM EXCAVATIONS SHALL BE REMOVED FROM PROPERTY UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
- 9. SANITARY OR STORM DRAIN PIPE AND FITTINGS INSTALLED BELOW SLAB ON GRADE FLOOR SHALL BE SCHEDULE 40 PVC PIPE AND FITTINGS WITH SOLVENT WELD JOINTS.
- 10. SANITARY WASTE AND VENT PIPE, OR STORM DRAIN PIPE AND FITTINGS INSTALLED ABOVE GROUND SHALL BE SCHEDULE 40 PVC PIPE AND FITTINGS WITH SOLVENT WELD JOINTS.
- 11. SANITARY DRAINAGE SYSTEM SHALL BE WATER TESTED BEFORE FINAL CONNECTION TO THE SANITARY SEWER. ALL OPENINGS SHALL BE PLUGGED EXCEPT THE HICHEST OPENING, WHICH SHALL PRODUCE A MINIMUM OF A 10 FOOT HEAD. THE SYSTEM SHALL RETAIN THE WATER LEVEL FOR AT LEAST FIFTEEN (15) MINUTES AT WHICH TIME ALL JOINTS SHALL BE INSPECTED AND ALL OBSERVED LEAKS CORRECTED.
- 12. DOMESTIC WATER PIPING SHALL MEET THE REQUIREMENTS OF THE LOCAL BUILDING CODE.
- 13. PROVIDE "WATTS" NO. 8A 'VACUUM BREAKER ON ALL HOSE BIBS AND WALL HYDRANTS.
- 14. SOLDER SHALL BE LEAD FREE, HAVING A COMPOSITION SIMILAR TO 95.5 TIN, 4% COPPER, AND 0.5 % CORPORATION OR EQUAL, % SILVER AS MANUFACTURED BY ENGELHARD
- 15. VALVES IN DOMESTIC WATER PIPING, 2" AND SMALLER SHALL BE BRONZE BODY WITH FULL PORT STAINLESS STEEL BALL, AND LEVER HANDLE.
- 16. STERILIZE THE ENTIRE WATER DISTRIBUTION SYSTEM THOROUGHLY WITH A SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE. USE EITHER LIQUID CHLORINE CONFORMING TO FEDERAL SPECIFICATION BB-C-120 OR CALCIUM HYPOCHLORITE OR CHLORINATED LIME CONFORMING TO FEDERAL SPECIFICATION, O-C-114. INTRODUCE INTO THE SYSTEM IN AN APPROVED MANNER. ALLOW THE STERILIZING SOLUTION TO REMAIN IN THE SYSTEM FOR 24 HOURS, DURING WHICH TIME ALL VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER STERILIZATION, THE SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAN WATER UNTIL THE RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN 0.2 PARTS PER MILLION UNLESS OTHERWISE DIRECTED.
- 17. WATER PIPING SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE TEST OF NOT LESS THAN 100 PSI FOR A PERIOD OF 24 HOURS WITH A PRESSURE LOSS NOT IN EXCESS OF 1 PSI.
- 18. INSULATION FOR DOMESTIC WATER PIPING SHALL BE 3/4' THICK, PREFORMED FIBERGLASS WITH VAPOR BARRIER JACKET. AT CONTRACTOR'S OPTION HE MAY USE 3/8' THICK PRE-MOLDED FOAM PLASTIC SIMILAR TO "ARMAFLEX" INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 19.. THE CONTRACTOR SHALL FURNISH OWNER A CERTIFICATE STATING THAT ALL TESTS HAVE BEEN PERFORMED AND THAT ALL OF THE PIPING SYSTEMS ARE FREE OF DEFECTS, IN MATERIAL AND WORKMANSHIP AND ALL SYSTEMS HAVE SUCCESSFULLY PASSED THE TESTS. THIS CERTIFICATE SHALL BE SIGNED BY THIS CONTRACTOR.
- 20. FOR FACTORY—ASSEMBLED EQUIPMENT AND DEVICES ON WHICH THE MANUFACTURERS FURNISH STANDARD PUBLISHED GUARANTEES AS REGULAR TRADE PRACTICE, OBTAIN SUCH GUARANTEES AND REPLACE ANY SUCH EQUIPMENT WHICH PROVES DEFECTIVE DURING THE LIFE OF THESE GUARANTEES.
- 21. GUARANTEE ALL WORK FOR WHICH MATERIALS ARE FURNISHED, FABRICATED OR FIELD ERECTED BY THE CONTRACTOR. ALL FACTORY—ASSEMBLED EQUIPMENT FOR WHICH NO SPECIFIC MANUFACTURER'S GUARANTEE IS FURNISHED, AND ALL WORK IN CONNECTION WITH INSTALLING MANUFACTURER'S GUARANTEED EQUIPMENT. THIS PERSONAL GUARANTEE SHALL EXIST FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK AND SHALL APPLY TO DEFECTS IN MATERIAL AND TO DEFECTIVE WORKMANSHIP OF ANY KIND.
- FABRICATED OR FIELD ERECTED BY THE CONTRACTOR. ALL FACTORY—
  ASSEMBLED EQUIPMENT FOR WHICH NO SPECIFIC MANUFACTURER'S
  GUARANTEE IS FURNISHED, AND ALL WORK IN CONNECTION WITH INSTALLING
  MANUFACTURER'S GUARANTEED EQUIPMENT. THIS PERSONAL ,GUARANTEE
- ACCEPTANCE OF THE WORK AND SHALL APPLY TO DEFECTS IN MATERIAL AND TO DEFECTIVE WORKMANSHIP OF ANY KIND.

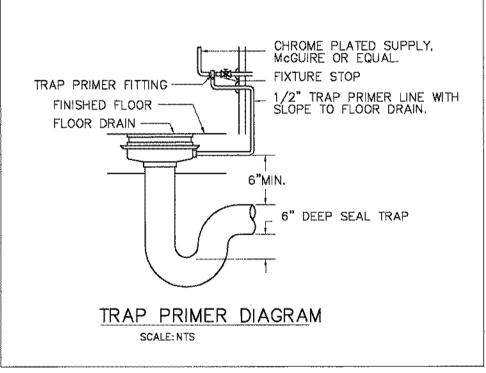


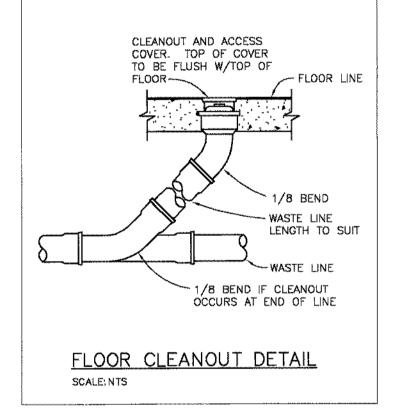
# PLUMBING EQUIPMENT & FIXTURE SCHEDULE

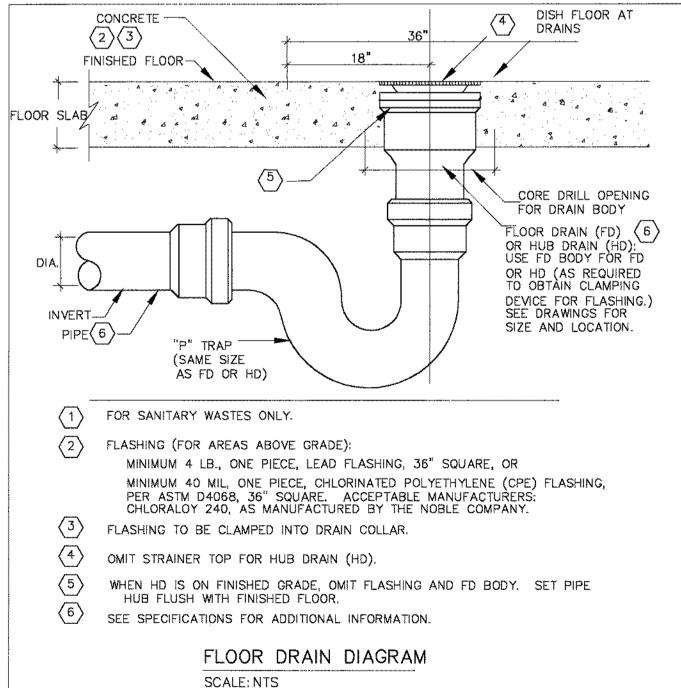
TEM NO. ITEM		DESCRIPTION					
HLAV	OVAL LAVATORY	AMERICAN STANDARD. MODEL RONDALYN 0491.019. 19" COUNTERTOP . VITREOUS CHINA, LAVATORY. AMERICAN STANDARD W/COLONY FAUCET # 2175.205 GRID DRAIN OR EQUAL.					
TP	TP TRAP PRIMER ZURN Z 1022 WATER SAVER TRAP PRIMER OR EQUAL.						
KSINK	KITCHEN SINK	SINGLE BOWL KITCHEN SINK WITH TWO HANDLED ADA COMPLIANCE BAR FAUCET.					
DF	DRINKING FOUNTAIN	ELKAY BI-LEVEL WATER COOLER - EZSTLBLC - HIGH AND LOW DRINKING FOUNTAIN.					
WH	WATER HEATER	40 GAL WATER HEATER 208/120 V 4.5 KW 30A 2 ELEMENTS.					
AAV	AIR ADMITTANCE VALVE	STUDOR MINI-VENT FOR SIZES 1 1/4" THROUGH 2": MAXI-VENT FOR VENT SIZES 2" THROUGH 4". VALVES FOR INDIVIDUAL & BRANCH FITTINGS SHALL CONFORM TO ASSE 1051. VALVES FOR VENT STACKS AND STACK VENTS SHALL CONFORM TO ASSE 1050 OR EQUAL.					
HWC	HANDICAP WATER CLOSET	AMERICAN STANDARD. 2377.100 CADETE/RIGHT HEIGHT 16.5"H PROV3109.016 BOWL, WITH TANK # 44098.100, SEAT 5324.019. SUPPLY WITH STOP OR EQUAL.					
FCO FLOOR ZURN Z-1400 D.C.C.I. BODY ADJUSTBALE TO FINISH FLOOR.		ZURN Z-1400 D.C.C.I. BODY ADJUSTBALE TO FINISH FLOOR.					

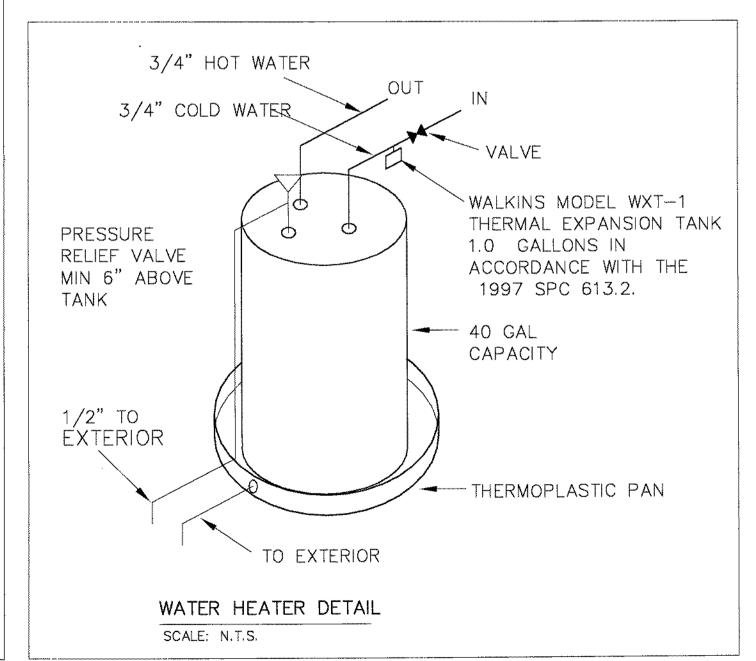
	PLUMBING LEGEND						
SYMBOL	MBOL DESCRIPTION						
SAN	SANITARY DRAIN PIPING						
	SANITARY VENT PIPING						
**************************************	POTABLE COLD WATER PIPING						
	POTABLE HOT WATER PIPING						
o	FLOOR DRAIN						
——∃FCO	FLOOR CLEAN OUT						











CIVIL Orlando, FL 32820
ELECTRICAL (407) 574-6350
PLUMBING C.A. 26382

DING.

 $\circ$ 

COVE FLORIDA 32750

PROPOSED OFF CIARA CREEK COVE LONGWOOD, FLORIE

FA:

VISION

PROJECT NO.

DATE: 06-04-2014

DRAWN: JA

CHECKED: JA

SCALE: AS SHOWN

SHEET No:

P-201