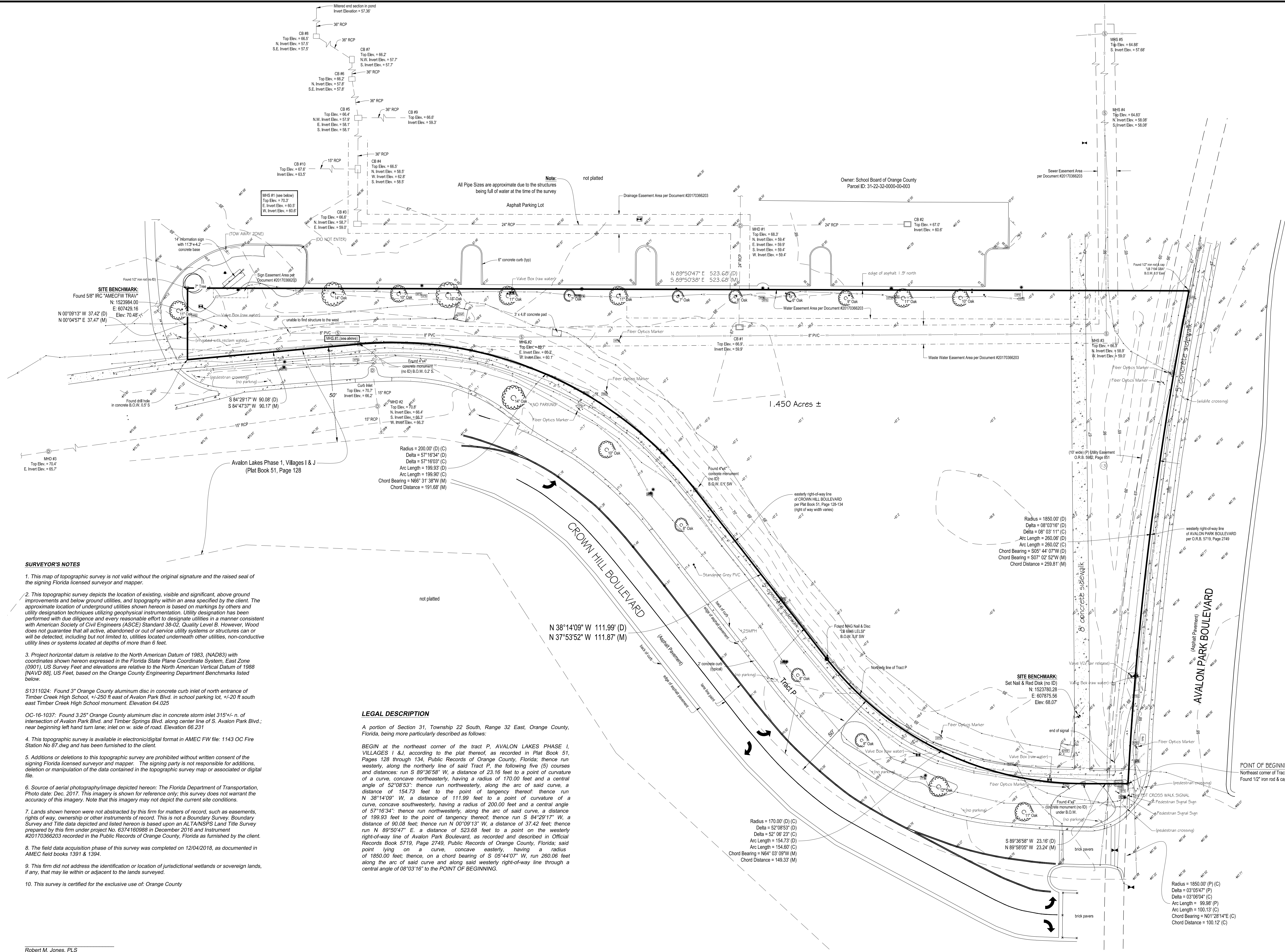


81143 - Fire Station 87 Top Survey/As-built Civil 3D 2017.dwg (PLT) 12/14/2018 11:25:06 AM



- Legend**
- = Found 4"x4" concrete monument (as labeled)
  - = Found 1/2" iron rod (as labeled)
  - = Found drill hole or MAG nail (as labeled)
  - = OUC = Orlando Utilities Commission
  - = ALTA = American Land Title Association
  - = NSPS = National Society of Professional Surveyors
  - (P) = Identification
  - (D) = Line Not To Scale
  - (C) = Calculated Dimension
  - (M) = Measured Dimension
  - = Overhead Utilities
  - = Description
  - R xx E = Range xx East
  - T xx S = Township xx South
  - (E) = Title exception (encumbrance) number
  - = sign lighting
  - MHS ⊕ = Sanitary Manhole
  - MHD ⊕ = Drainage Manhole
  - ⊕ = Sign
  - TRAF = Transformer
  - WFB = Wire Pull Box
  - B.C.W. = Back of concrete walk
  - ORB = Official Records Book
  - VB = Valve / Valve Box
  - Elev. = Elevation
  - CO = Cleanout
  - CB = Catch basin
  - EM = Electric Meter
  - RCP = Reinforced Concrete Pipe
  - ESB = Electric Service Box
  - = Concrete areas
  - = Buried Electric line
  - = Buried Communication line
  - = Buried Sanitary Force Main line
  - = Buried Reclaimed Water line
  - = Landscaped Area

**SURVEYOR'S NOTES**

- This map of topographic survey is not valid without the original signature and the raised seal of the signing Florida licensed surveyor and mapper.
- This topographic survey depicts the location of existing, visible and significant, above ground improvements and below ground utilities, and topography within an area specified by the client. The approximate location of underground utilities shown hereon is based on markings by others and utility designation techniques utilizing geophysical instrumentation. Utility designation has been performed with due diligence and every reasonable effort to designate utilities in a manner consistent with American Society of Civil Engineers (ASCE) Standard 38-02, Quality Level B. However, Wood does not guarantee that all active, abandoned or out of service utility systems or structures can or will be detected, including but not limited to, utilities located underneath other utilities, non-conductive utility lines or systems located at depths of more than 6 feet.
- Project horizontal datum is relative to the North American Datum of 1983, (NAD83) with coordinates shown hereon expressed in the Florida State Plane Coordinate System, East Zone (0901), US Survey Feet and elevations are relative to the North American Vertical Datum of 1988 (NAVD 88), US Feet, based on the Orange County Engineering Department Benchmarks listed below.
- S1311024: Found 3" Orange County aluminum disc in concrete curb inlet of north entrance of Timber Creek High School, +/-250 ft east of Avalon Park Blvd. in school parking lot, +/-20 ft south east Timber Creek High School monument. Elevation 64.025
- OC-16-1037: Found 3.25" Orange County aluminum disc in concrete storm inlet 315'+/- n. of intersection of Avalon Park Blvd. and Timber Springs Blvd. along center line of S. Avalon Park Blvd.; near beginning left hand turn lane; inlet on w. side of road. Elevation 66.231
- This topographic survey is available in electronic/digital format in AMEC FW file: 1143 OC Fire Station No 87.dwg and has been furnished to the client.
- Additions or deletions to this topographic survey are prohibited without written consent of the signing Florida licensed surveyor and mapper. The signing party is not responsible for additions, deletion or manipulation of the data contained in the topographic survey map or associated or digital file.
- Source of aerial photography/image depicted hereon: The Florida Department of Transportation, Photo date: Dec. 2017. This imagery is shown for reference only; this survey does not warrant the accuracy of this imagery. Note that this imagery may not depict the current site conditions.
- Drawn hereon were not abstracted by this firm for matters of record, such as easements, rights of way, ownership or other instruments of record. This is not a Boundary Survey, Boundary Survey and Title data depicted and listed hereon is based upon an ALTA/NSPS Land Title Survey prepared by this firm under project No. 6374180998 in December 2016 and Instrument #20170386203 recorded in the Public Records of Orange County, Florida as furnished by the client.
- The field data acquisition phase of this survey was completed on 12/04/2018, as documented in AMEC field books 1391 & 1394.
- This firm did not address the identification or location of jurisdictional wetlands or sovereign lands, if any, that may lie within or adjacent to the lands surveyed.
- This survey is certified for the exclusive use of: Orange County

**LEGAL DESCRIPTION**

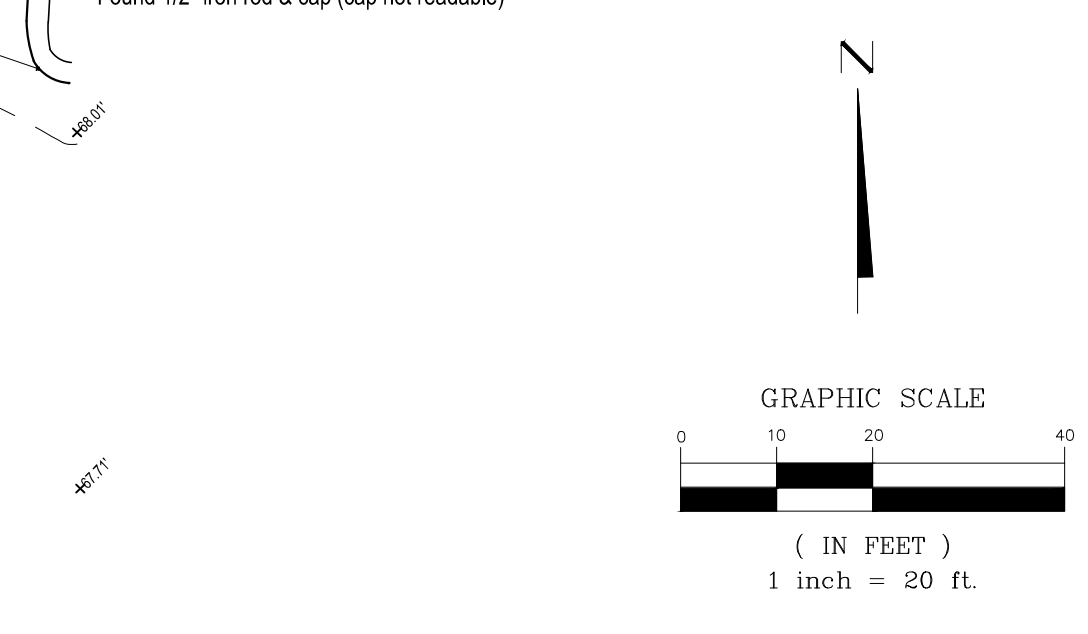
A portion of Section 31, Township 22 South, Range 32 East, Orange County, Florida, being more particularly described as follows:

BEGIN at the northeast corner of the tract P, AVALON LAKES PHASE I, VILLAGES I & J, according to the plat thereof, as recorded in Plat Book 51, Pages 128 through 134, Public Records of Orange County, Florida; thence run westerly, along the northerly line of said Tract P, the following five (5) courses and distances: run S 89°36'58" W, a distance of 23.16 feet to a point of curvature of a curve, concave northwesterly, having a radius of 170.00 feet and a central angle of 52°08'53"; thence run northwesterly, along the arc of said curve, a distance of 154.73 feet to the point of tangency thereof; thence run N 38°14'09" W, a distance of 111.99 feet to a point of curvature of a curve, concave southwesterly, having a radius of 200.00 feet and a central angle of 57°16'34"; thence run northwesterly, along the arc of said curve, a distance of 199.93 feet to the point of tangency thereof; thence run S 84°29'17" W, a distance of 90.08 feet; thence run N 00°09'13" W, a distance of 37.42 feet, thence run N 89°50'47" E, a distance of 523.68 feet to a point on the westerly right-of-way line of Avalon Park Boulevard, as recorded and described in Official Records Book 5719, Page 2749, Public Records of Orange County, Florida; said point lying on a curve, concave easterly, having a radius of 1850.00 feet; thence, on a chord bearing of S 05°44'07" W, run 280.06 feet along the arc of said curve and along said westerly right-of-way line through a central angle of 08°03'16" to the POINT OF BEGINNING.

Robert M. Jones, PLS  
Florida Licensed Surveyor and Mapper No. LS 04201

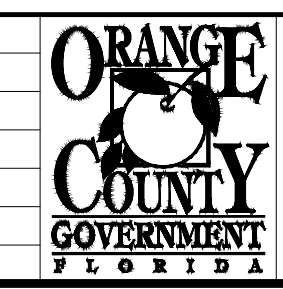
Southeast corner of the Southeast 1/4 of Section 31, Township 22 South, Range 32 East  
Found 4"x4" concrete monument (no ID)  
(1" under sidewalk)

S 89°54'53" W 2649.16' (C) (Bearing Basis)  
S 09°36'42" W 2649.17' (F)



DRAWN BY	CHKD BY	REV	DATE	DESCRIPTION
JMB	RLJ		12/15/2018	
03/24/18143	12/22/18			

NO.	DATE	DESCRIPTION
1	12/14/2018	Issue for Public Review
2	12/14/2018	Final



PREPARED FOR:  
**ORANGE COUNTY  
CAPITAL PROJECTS  
DIVISION**  
400 E. SOUTH STREET, 5th Floor ORLANDO, FL. 32801

2149 Crown Hill Boulevard  
Section 31, Township 22 South, Range 32 East  
Orlando, Florida

Map of Topographic Survey  
of  
**2149 Crown Hill Boulevard (Fire Station # 87)**  
Orange County, Florida

PREPARED BY:  
**Wood Environment & Infrastructure Solutions, Inc.**  
550 Normlake Blvd., Suite 1000  
Altamonte Springs, FL 32701 USA  
Phone: (407) 522-7570  
Fax: (407) 522-7576  
Certificate of Authorization Number LB-0007632

SCALE: AS NOTED  
DRAWING NO.:  
SHEET: 1 OF 1



ELECTRICAL SYMBOLS LEGEND

LIGHTING FIXTURES	LIGHTING CONTROL DEVICES	POWER DEVICES	MISCELLANEOUS SYMBOLS
<p>1x4' FLUORESCENT FIXTURE</p> <p>2x2' FLUORESCENT FIXTURE</p> <p>2x4' FLUORESCENT FIXTURE</p> <p>4' WALL MOUNT FLUORESCENT LUMINAIRE</p> <p>4' WALL MOUNT FLUORESCENT LUMINAIRE, EMERGENCY</p> <p>1x4' FLUORESCENT FIXTURE, BATTERY/EMERGENCY</p> <p>2x2' FLUORESCENT FIXTURE, BATTERY/EMERGENCY</p> <p>2x4' FLUORESCENT FIXTURE, BATTERY/EMERGENCY</p> <p>4' FLUORESCENT STRIP FIXTURE</p> <p>4' FLUORESCENT STRIP FIXTURE, BATTERY/EMERGENCY</p> <p>4' FLUORESCENT STRIP FIXTURE, WALL MOUNTED</p> <p>4' FLUORESCENT STRIP FIXTURE, WALL MOUNTED, BATTERY/EMERGENCY</p> <p>TRACK FIXTURE</p> <p>CEILING MOUNTED RECESSED, DOWN LIGHT</p> <p>CEILING MOUNTED RECESSED, EMERGENCY DOWN LIGHT</p> <p>CEILING MOUNTED RECESSED, WALL WASHER (ARROW INDICATES DIRECTION OF WASH)</p> <p>SURFACE MOUNTED LIGHTING FIXTURE</p> <p>WALL MOUNTED SCONCE FIXTURE, BATTERY/EMERGENCY</p> <p>FLOOR LIGHT FIXTURE</p> <p>EMERGENCY LIGHT FIXTURE</p> <p>SINGLE FACE EXIT LIGHT FIXTURE, ARROW INDICATES DIRECTION OF EGRESS</p> <p>DOUBLE FACE EXIT LIGHT FIXTURE, ARROW INDICATES DIRECTION OF EGRESS</p> <p>POLE MOUNTED SITE LIGHTING FIXTURE, RECTANGLES INDICATE NUMBER OF FIXTURES</p> <p>SINGLE POLE MOUNT LUMINAIRE, RECTANGLES INDICATE NUMBER OF FIXTURES</p> <p>POLE MOUNTED LUMINAIRE</p> <p>BOLLARD OR PENDANT LIGHT FIXTURE</p> <p>BOLLARD OR PENDANT LUMINAIRE, EMERGENCY</p>	<p>PC -PHOTOCELL</p> <p>TC -TIMECLOCK</p> <p>R9 LT -PIR-WALL MOUNT SENSOR, LOW TEMP, 24 VDC/AC, 20mA, WATTSTOPPER CB-100 OR EQUAL</p> <p>CI -PIR-CEILING MOUNT SENSOR 24 VDC/VAC, 11mA, WATTSTOPPER CI-205 OR EQUAL</p> <p>DT -DUAL ULTRASONIC/PIR-CEILING MOUNT SENSOR, 24 VDC/VAC, 35mA, WATTSTOPPER DT-305 OR EQUAL</p> <p>W -DUAL ULTRASONIC/PIR-WALL MOUNT SENSOR, 24 VDC/VAC, 40mA, WATTSTOPPER WT-2250 OR EQUAL</p> <p>C -ULTRASONIC-CEILING CORRIDOR MOTION SENSOR, 24 VDC/VAC, 800/1200W, WATTSTOPPER PW-100 OR EQUAL</p> <p>D1 -PIR-WALL SWITCH DECORATOR MOTION SENSOR, 120/277 VAC, 800/1200W, WATTSTOPPER PW-100 OR EQUAL</p> <p>D2 -DUAL ULTRASONIC/PIR-WALL SWITCH DECORATOR MOTION SENSOR, 120/277VAC, 800/1200W, WATTSTOPPER DW-200 OR EQUAL</p> <p>D3 -DUAL ULTRASONIC/PIR-MULTI-WAY WALL SWITCH DECORATOR MOTION SENSOR, 120/277VAC, 800/1200W, WATTSTOPPER DW-103 OR EQUAL</p> <p>P -POWER PACK 120/277 VAC; 20 AMPS, 225mA SECONDARY, WATTSTOPPER BZ-150 OR EQUAL</p> <p>*FOR LOW VOLTAGE OCCUPANCY SENSORS, PROVIDE POWER PACK(S) 120/277 VAC; 20 AMPS, 225mA SECONDARY AS NEEDED FOR ZONE/AREA CONTROL, WATTSTOPPER BZ-150 OR EQUAL.</p>	<p>SINGLE RECEPTACLE</p> <p>DUPLICATE RECEPTACLE</p> <p>DOUBLE DUPLICATE (QUAD) RECEPTACLE</p> <p>ABOVE COUNTER DUPLICATE RECEPTACLE</p> <p>DUPLICATE RECEPTACLE, HALF SWITCHED</p> <p>SPECIAL PURPOSE RECEPTACLE</p> <p>SINGLE 250V, NON-LOCKING TYPE RECEPTACLE</p> <p>BLACK DUPLICATE RECEPTACLE FOR COMPUTER WORKSTATION</p> <p>BLACK QUAD RECEPTACLE FOR COMPUTER WORKSTATION</p> <p>DUPLICATE RECEPTACLE FOR TV LOCATED AT 84" AFF, UNLESS NOTED OTHERWISE</p> <p>DUPLICATE RECEPTACLE FOR TV LOCATED AT 18" AFF, LOCATE IN COMMON BOX WITH CCTV</p> <p>CEILING MOUNTED RECEPTACLE</p> <p>RECESSED FLOOR RECEPTACLE</p> <p>DUPLICATE RECEPTACLE, GROUND FAULT, ABOVE COUNTER</p> <p>DUPLICATE RECEPTACLE, GROUND FAULT, ABOVE COUNTER</p> <p>QUAD RECEPTACLE, GROUND FAULT</p> <p>DUPLICATE RECEPTACLE, GROUND FAULT WITH CAST ALUMINUM WEATHERPROOF "IN USE" COVER</p> <p>QUAD RECEPTACLE, GROUND FAULT WITH CAST ALUMINUM WEATHERPROOF "IN USE" COVER</p> <p>DUPLICATE RECEPTACLE, GROUND FAULT LOCATE WITHIN ELECTRIC WATER COOLER PER MANUFACTURER'S INSTRUCTIONS</p> <p>CLOCK</p> <p>POWER/DATA POLE</p> <p>POWER POLE</p> <p>DISCONNECT SWITCH</p> <p>MOTOR STARTER</p> <p>STARTER/DISCONNECT SWITCH</p> <p>JUNCTION BOX</p> <p>FLOOR MOUNTED JUNCTION BOX</p> <p>PULL BOX</p> <p>EQUIPMENT CONNECTION</p> <p>DOOR BELL PUSH BUTTON</p> <p>TRANSFORMER</p> <p>DOOR BELL</p> <p>SHUNT TRIP</p> <p>ELECTRIC STRIKE</p> <p>MOTOR</p> <p>GENERATOR</p> <p>LOCKBOX</p> <p>GROUND BUS BAR</p> <p>5/8" X 30' L GROUND ROD WITH TEST INSPECTION WELL</p> <p>SURGE PROTECTION DEVICE, SEE SPECIFICATIONS</p>	<p>DETAIL NUMBER</p> <p>SCALE: DETAIL TITLE REFERENCE</p> <p>SHEET NUMBER WHERE DETAIL IS REFERENCED</p> <p>ADDITIONAL SHEET REFERENCES</p> <p>DETAIL NUMBER</p> <p>SHEET NUMBER TO WHERE DETAIL IS REFERENCED</p> <p>MATCH LINE</p>
SWITCHES	POWER DISTRIBUTION	LIGHTNING PROTECTION	ABBREVIATIONS
<p>SWITCH</p> <p>SWITCH, 2 POLE</p> <p>SWITCH, 3-WAY</p> <p>SWITCH, 4-WAY</p> <p>SWITCH - LINE VOLTAGE TIMER, 120/277 VAC, WATTSTOPPER TS-400 OR EQUAL</p> <p>SWITCH - PILOT LIGHT</p> <p>SWITCH LEG a FOR CONTROL OF THE INBOARD LAMP IN NORMAL AND EMERGENCY POWERED LUMINAIRE</p> <p>SWITCH LEG b FOR CONTROL OF THE OUTBOARD LAMP IN NORMAL AND EMERGENCY POWERED LUMINAIRE</p> <p>SWITCH, 3-WAY, LEG a FOR CONTROL OF THE INBOARD LAMP IN NORMAL AND EMERGENCY POWERED LUMINAIRE</p> <p>SWITCH, 3-WAY, LEG b FOR CONTROL OF THE OUTBOARD LAMP IN NORMAL AND EMERGENCY POWERED LUMINAIRE</p> <p>SWITCH, KEYSWITCH, 3-WAY</p> <p>SWITCH, DIMMING 0-10V</p> <p>SWITCH, KEYSWITCH</p> <p>MOTOR RATED SWITCH</p> <p>SWITCH, EXPLOSION PROOF</p>	<p>120/208V PANELBOARD, RECESSED</p> <p>120/208V PANELBOARD, SURFACE MOUNT</p> <p>277/480V PANELBOARD, SURFACE MOUNT</p> <p>277/480V PANELBOARD, RECESSED</p> <p>FEEDER OR BRANCH CIRCUIT CONCEALED IN WALL, CEILING OR FLOOR</p> <p>1R1-1 -HOMERUN CONSISTING OF ONE SINGLE-PHASE, 1-POLE CIRCUIT: (2) 12 AWG + (1) 12 AWG GND IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. PANELBOARD AND CIRCUIT DESIGNATION ARE INDICATED.</p> <p>1M1-1-3 -HOMERUN CONSISTING OF ONE SINGLE-PHASE, 2-POLE CIRCUIT: (2) 12 AWG + (1) 12 AWG GND IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.</p> <p>1R1-1,3 -HOMERUN CONSISTING OF TWO SINGLE-PHASE CIRCUITS: (3) 12 AWG + (1) 12 AWG GND IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. PANELBOARD AND CIRCUIT DESIGNATION ARE INDICATED.</p> <p>1R1-1,3,5 -HOMERUN CONSISTING OF THREE SINGLE-PHASE CIRCUITS: (4) 12 AWG + (1) 12 AWG GND IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.</p> <p>1M1-1:3:5 -HOMERUN CONSISTING OF ONE THREE-PHASE CIRCUITS: (3) 12 AWG + (1) 12 AWG GND IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.</p>	<p>AIR TERMINAL (ALUMINUM CLASS 1 MIN)</p> <p>ROOFTOP MAIN CONDUCTOR, RUN EXPOSED ACROSS ROOF</p> <p>DOWN CONDUCTOR, RUN CONCEALED IN STRUCTURE - COPPER CLASS 1</p> <p>3/4" X 20' COPPER-CLAD DRIVEN GROUND ROD AND TEST WELL</p> <p>BOLTED 3-WAY SPLICE</p> <p>BOLTED 4-WAY SPLICE</p>	<p>A -AMPERES</p> <p>AE -AUDIO ENHANCEMENT</p> <p>AFC -ABOVE FINISHED CEILING</p> <p>AFF -ABOVE FINISHED FLOOR</p> <p>AFG -ABOVE FINISHED GRADE</p> <p>AIC -AMPERES INTERRUPTING CAPACITY</p> <p>AL -ALUMINUM</p> <p>AWG -AMERICAN WIRE GAUGE</p> <p>BFC -BELOW FINISHED CEILING</p> <p>BFG -BELOW FINISHED GRADE</p> <p>C -CONDUIT</p> <p>CAB -CABINET</p> <p>CKT -CIRCUIT</p> <p>CLG -CEILING</p> <p>CLT -CENTERLINE</p> <p>CT's -CURRENT TRANSFORMERS</p> <p>CU -COPPER</p> <p>DISC -DISCONNECT(ING)</p> <p>DWG -DRAWING(S)</p> <p>EA -EACH</p> <p>ECB -ENCLOSED CIRCUIT BREAKER</p> <p>EF -EXHAUST FAN</p> <p>EMT -ELECTRICAL METALLIC TUBING</p> <p>EQUIP -EQUIPMENT</p> <p>EUH -ELECTRIC UNIT HEATER</p> <p>EW -ELECTRIC WATER COOLER</p> <p>EWL -ELECTRIC WATER HEATER</p> <p>EXH -EXHAUST</p> <p>EXIST -EXISTING</p> <p>EXP -EXPLOSION PROOF</p> <p>FAL -FIRE ALARM</p> <p>FLA -FULL LOAD AMPERES</p> <p>FLUOR -FLUORESCENT</p> <p>GFCI -GROUND FAULT CIRCUIT INTERRUPTER</p> <p>GFP -GROUND FAULT PROTECTION</p> <p>GND -GROUND</p> <p>HGT -HEIGHT</p> <p>HID -HIGH INTENSITY DISCHARGE</p> <p>HPS -HIGH PRESSURE SODIUM</p> <p>HQA -HAND-OFF-AUTOMATIC</p> <p>HP -HORSEPOWER</p> <p>HVAC -HEATING, VENTILATING, &amp; AIR CONDITIONING</p> <p>HV -HIGH VOLTAGE</p> <p>INC -INCANDESCENT</p> <p>JB -JUNCTION BOX</p> <p>KV -KILO-VOLTS</p> <p>KVA -KILO-VOLTS-AMPERES</p> <p>KVAR -KILO-VOLTS-AMPERES REACTIVE</p> <p>KW -KILO-WATTS</p> <p>KWH -KILO-WATT-HOURS</p> <p>LTG -LIGHTING</p> <p>m -METER</p> <p>mm -MILLIMETER</p> <p>MAX -MAXIMUM</p> <p>MCB -MAIN CIRCUIT BREAKER</p> <p>MCC -MOTOR CONTROL CENTER</p> <p>MCP -MOTOR CIRCUIT PROTECTOR</p> <p>MFR -MANUFACTURER</p> <p>MH -METAL HALIDE</p> <p>MIN -MINIMUM</p> <p>MISC -MISCELLANEOUS</p> <p>MMS -MANUAL MOTOR STARTER SWITCH</p> <p>MTR -MOTOR</p> <p>MTD -MOUNTED</p> <p>MTG -MOUNTING</p> <p>NAC -NOTIFICATION APPLIANCE CIRCUIT</p> <p>NEC -NATIONAL ELECTRICAL CODE</p> <p>NL -NIGHT LIGHT, UNSWITCHED</p> <p>PNL -PANEL</p> <p>PSI -PULL STATION INSIDE</p> <p>PVC -POLYVINYL CHLORIDE</p> <p>REC -RECEPTACLE</p> <p>RGS -RIGID GALVANIZED STEEL</p> <p>SPD -SURGE PROTECTION DEVICE</p> <p>TEL -TELEPHONE</p> <p>TYP -TYPICAL</p> <p>UNON -UNLESS OTHERWISE NOTED</p> <p>V -VOLTS</p> <p>VA -VOLT-AMPERES</p> <p>VFD -VARIABLE FREQUENCY DRIVE</p> <p>W -WATTS</p> <p>WP -WEATHER PROOF</p> <p>XFMR -TRANSFORMER</p>

GENERAL NOTES

- VOLTAGE DROP - FEEDERS AND BRANCH CIRCUITS SIZES ARE DESIGNED FOR A MAXIMUM COMBINED VOLTAGE DROP OF 5 PERCENT AT THE DESIGN LOAD PER F.B.C. ENERGY CONSERVATION C405.3
- DESIGNED IN ACCORDANCE WITH F.B.C. 6th EDITION (2017) AND NFPA 70 (2014 NEC)

PREMISE DISTRIBUTION SYSTEM

MOUNTING 3" ABOVE COUNTER OR BACK SPLASH

X = MOUNTING (F) LUSH, (S) URFACE, (M) ODULAR FURNITURE ADAPTER (P) OLE, (R) ACEWAY, (D) OUBLE GANG FLUSH, (PD) PEDESTAL  
N = # OF DATA JACKS

COMMUNICATIONS "INFORMATION OUTLET" MOUNTED. AT RECEPTACLE HEIGHT UNLESS OTHERWISE NOTED. MODULE AND FACEPLATE

SPECIAL NOTES:

- DATA JACKS: EACH RJ45 CAT6 JACK FOR DATA SHALL BE CONNECTED TO A DEDICATED UTP 4 PR CAT6 CABLE

WIRELESS ACCESS POINT. PROVIDE CAT 6 CABLE HOMERUN TO IDF AND TERMINATE WITH RJ45 JACK FLUSH CEILING MOUNTED, WITH 10' OF COILED CABLE ABOVE CEILING. AT CEILING PROJECTOR LOCATION PROVIDE TWO (2) RJ45 JACKS FLUSH MOUNTED IN PROJECTOR PLATE, HOMERUN TWO (2) CAT 6 CABLES TO IDF.

WAP

W F1 WALL TELEPHONE OUTLET FOR HOUSE PHONE. MOUNTED AT 52" ABOVE FINISHED FLOOR TO TOP.

WAP WIRELESS ACCESS POINT WALL MOUNTED 10'-0" TO 12'-0" ABOVE FINISHED FLOOR. PROVIDE CAT 6 CABLE HOMERUN TO IDF AND TERMINATE TO RJ45 JACK FLUSH ON WALL.

SX WALL DATA OUTLET. SURFACE MOUNTED AT 48" ABOVE FINISHED FLOOR TO TOP OF BACKBOX. X = # OF DATA JACKS

FLOOR BOX DATA OUTLET. DATA OUTLET INSTALLED IN FLOOR BOX WITH UTP HOMERUN TO COMM ROOM. X = # OF DATA JACKS

3/4" PLYWOOD BACKBOARD. BY DIVISION 16

IDF - 2 POST RACK

TELEVISION OUTLET, RG6 CABLE TO COMMUNICATIONS ROOM

FIRE ALARM SYSTEM

MANUAL FIRE ALARM PULL STATION

FIRE ALARM COMBINATION HORN/STROBE DEVICE (75 CANDELA MINIMUM, 110 CANDELA WHERE NOTED)

FIRE ALARM STROBE ONLY, 75 CANDELA MINIMUM UNLESS NOTED OTHERWISE

135" HEAT DETECTOR

SMOKE DETECTOR

DUCT SMOKE DETECTOR - "R" = RETURN, "S" = SUPPLY. PROVIDE LED SUPERVISORY INDICATOR FOR BOTH DETECTORS IN AN ACCESSIBLE LOCATION AND CLEARLY LABELED.

CONTROL MODULE RELAY

WEATHERPROOF WATER FLOW SWITCH MONITOR MODULE CONNECTED TO FIRE SPRINKLER SYSTEM

WEATHERPROOF TAMPER SWITCH MONITOR MODULE CONNECTED TO FIRE SPRINKLER SYSTEM

KNOXBOX WITH TAMPER SWITCH MOUNTED 8'-0" TO 12'-0" ABOVE FINISHED GRADE.

FIRE ALARM CONTROL PANEL "FACP"

ALERT SYSTEM

COORDINATE ALL ROUGHIN OF ALERT SYSTEM WITH USDD INSTALLATION DRAWINGS. ALL SYSTEM COMPONENTS ARE TO BE INSTALLED BY AUTHORIZED INSTALLER ONLY.

CEILING-MOUNTED SPEAKER

WEATHER PROOF SPEAKER

CEILING-MOUNTED SPEAKER WITH LED

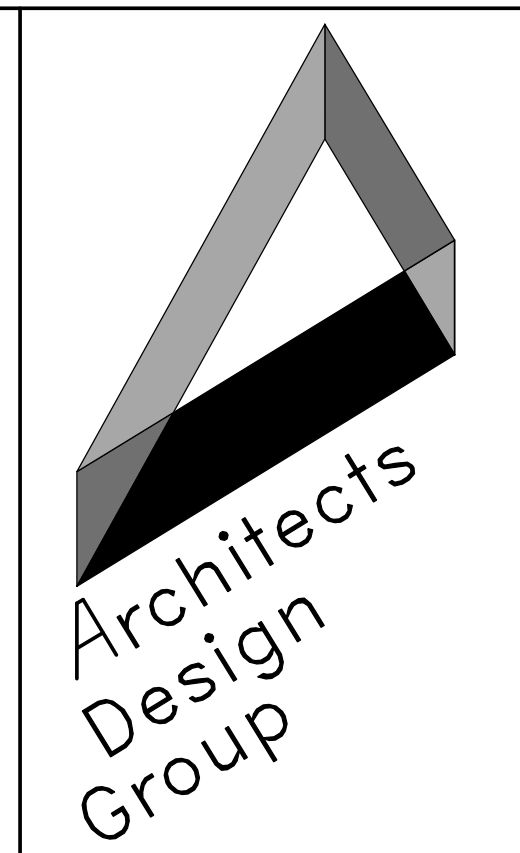
ROOM REMOTE

MESSAGE SIGN

G2 HDTV REMOTE

ALARM STROBE

PUSH BUTTON



**Architects and Planners**  
I.S.K. Reeves V, F.A.I.A.  
Ian A. Reeves, A.I.A.  
Susan Ganitt, A.I.A., LEED-AP  
333 N. Knowles Ave.  
Winter Park, Florida 32789  
P: (407) 647-1706  
Corporate Registration Number: AAC001197

**ORANGE COUNTY FIRE STATION 87**

**ORANGE COUNTY FIRE RESCUE**

**BID AND PERMIT SET**

The architect hereby expressly reserves his common law copyright and other property rights in these drawings. These drawings shall not be reproduced without written permission and consent of the architect, nor are they to be assigned to any party without first obtaining written permission and consent.

revisions/addenda

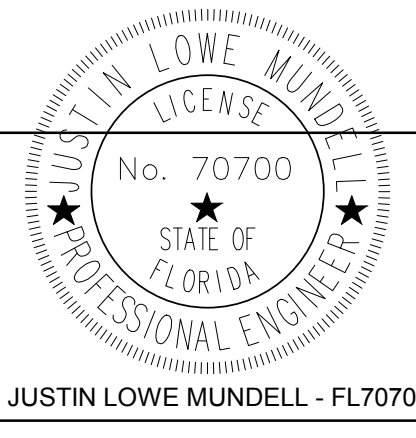
Number	Description	Date Issued
1	Permit Responses	July 18, 2019

sheet title  
**ELECTRICAL SYMBOL LEGEND**

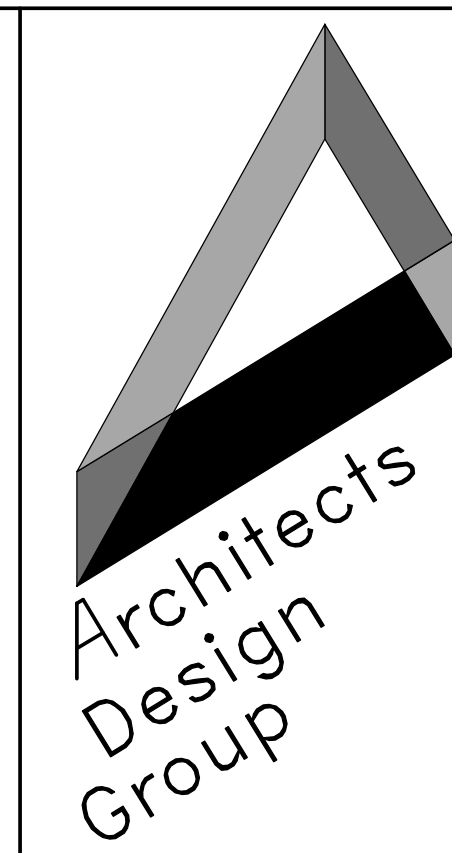
scale: 12" = 1'-0"  
drawn: SFD  
checked: JLM  
approved: JLM  
date: 06/12/19

project no.  
**963**  
sheet number:  
**E-001**

This item has been electronically signed and sealed by Justin Lowe Mundell, P.E., using a dated Digital Signature, per F.A.C. Rule 61015-23.004. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



**SGM ENGINEERING**  
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**ORANGE COUNTY  
 FIRE STATION 87**

**ORANGE COUNTY  
 FIRE RESCUE**

**BID AND PERMIT  
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• revisions/addenda

Number	Description	Date Issued
1	Permit Responses	July 18, 2019

• sheet title  
**POWER PLAN**

• scale: As indicated  
 • drawn: SFD  
 • checked: JLM  
 • approved: JLM  
 • date: 06/12/19

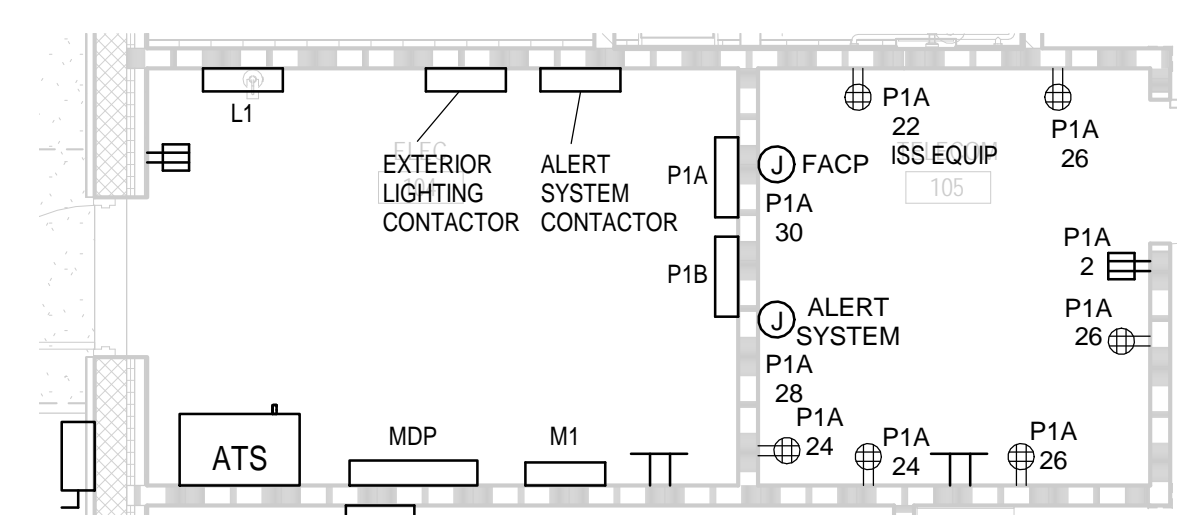
• project no.  
**963**  
 • sheet number:  
**E-202**

**GENERAL NOTES:**

- REFER TO SYMBOL LEGEND ON SHEET E.001.
- REFER TO BOOK SPECIFICATIONS.
- REFER TO ARCHITECTURAL INTERIOR ELEVATIONS TO COORDINATE EXACT PLACEMENT OF ALL DEVICES, EQUIPMENT, FIXTURES, SWITCHES AND OUTLETS.
- REFER TO EQUIPMENT FEEDER SCHEDULES FOR DISCONNECT, CONDUIT AND WIRE SIZES.
- ALL FEEDERS ARE TO HAVE LESS THAN 2% TOTAL VOLTAGE DROP AND ALL BRANCH CIRCUITS SHALL HAVE LESS THAN 3% VOLTAGE DROP.
- IF CIRCUITS ARE COMBINED AND RUN AS MULTI-WIRE BRANCH CIRCUITS SHARING A COMMON NEUTRAL, THEN EACH UNGROUNDED CONDUCTOR MUST BE DISCONNECTED SIMULTANEOUSLY BY A COMMON TRIP CIRCUIT BREAKER. CONTRACTOR MAY, AT THEIR OPTION, PROVIDE EITHER COMMON TRIP MULTI-POLE CIRCUIT BREAKERS OR UTILIZE MANUFACTURERS LISTED HANDLE TIES IN ORDER TO PROVIDE THE SIMULTANEOUS TRIP. THESE DEVICES ARE NOT SHOWN IN THE PANEL SCHEDULES AND MUST BE PROVIDED BY THIS SCOPE OF WORK. NO MORE THAN 3 CURRENT CARRYING CONDUCTORS MAY BE COMBINED IN A SINGLE RACEWAY WITHOUT PRIOR APPROVAL BY THE ENGINEER OF RECORD (EOR).

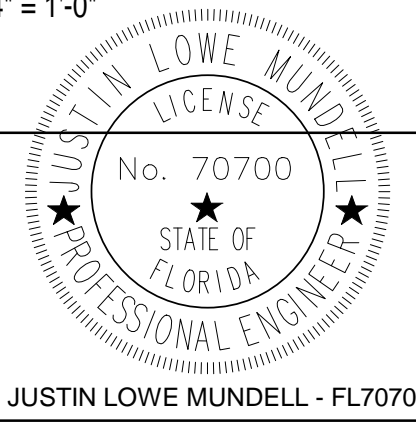
**PLAN KEY NOTES:**

- PROVIDE SERVICE DISCONNECT AND CONNECTION TO EQUIPMENT. SEE EQUIPMENT FEEDER SCHEDULE FOR CONDUIT, WIRE, AND DISCONNECT SIZES.
- PROVIDE 'SO' DROP CORD WITH BREAK-AWAY RECEPTACLE WITH #10 AWG CONDUCTORS FOR ENTIRE CIRCUIT. PROVIDE STRAIGHT BLADE RECEPTACLES.
- RECEPTACLE FOR MICROWAVE OVEN. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT.
- PROVIDE SERVICE DISCONNECT AND CONNECTION TO DOOR MOTOR. COORDINATE ALL CONTROL REQUIREMENTS WITH INSTALLER AND PROVIDE ALL NECESSARY CONDUIT AND WIRING FOR CONTROL STATIONS AND CONNECTION TO ALERT SYSTEM.
- RECEPTACLE FOR DISHWASHER. COORDINATE EXACT LOCATION WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- RECEPTACLE FOR DISPOSAL. PROVIDE ABOVE COUNTER SWITCH AND WIRING. COORDINATE EXACT LOCATIONS OF RECEPTACLE AND SWITCH WITH ARCHITECTURAL PLANS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE POWER CONNECTION TO RANGE HOOD AND PROVIDE ANY NECESSARY INTERCONNECTION WIRING TO HOOD SWITCH.
- RECEPTACLE FOR RANGE/OVEN. MATCH RECEPTACLE TYPE TO CORD PROVIDED PLUG. SEE EQUIPMENT FEEDER SCHEDULE FOR CONDUIT AND WIRE SIZES.
- MAIN SERVICE DISCONNECT. PROVIDE ENGRAVED SIGNAGE "MAIN SERVICE DISCONNECT".
- GENERATOR FUEL SHUT OFF. PROVIDE BREAK-GLASS TYPE SHUNT TRIP BUTTON PER NFPA 110.
- PROVIDE "MUSHROOM HEAD" TYPE BUTTON FOR TRAFFIC SIGNAL CONTROL.
- ALL BERTHING RECEPTACLES AND RECEPTACLES ADJACENT TO DATA OUTLETS TO INCLUDE USB CHARGING PORT. PROVIDE HUBBELL #USB20X OR APPROVED EQUAL.
- COORDINATE WITH ALERT SYSTEM INSTALLATION AND PROVIDE ALL CONDUITS WITH PULLSTRINGS AND JUNCTION BOXES REQUIRED FOR SYSTEM.
- SEE ALERT SYSTEM DETAIL AND ROUTE ALL POWER FOR COOKING EQUIPMENT THROUGH CONTACTOR. PROVIDE LOCAL RESET BUTTON FOR OVERRIDE OF ALERT SYSTEM.
- GENERATOR ANNUNCIATOR PANEL. COORDINATE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR QUANTITY AND SIZE OF WIRES.
- PROVIDE ALL REQUIRED CONNECTIONS TO GENERATOR, INCLUDING START WIRING, FUEL SHUT OFF, CONTROL POWER, BLOCK HEATER, ANNUNCIATOR WIRING. PROVIDE ONE 1" SPARE CONDUIT FROM GENERATOR TO ELECTRICAL ROOM. SEE ONE LINE DIAGRAM FOR SERVICE CONDUIT AND WIRE SIZES.
- COORDINATE LOCATION AND ELEVATION OF RECEPTACLE FOR THE KRONOS TIME CLOCK WITH OWNER PRIOR TO INSTALLATION.
- RECEPTACLE TO BE CONTROLLED BY OCCUPANCY SENSOR. SEE DETAIL 2 ON SHEET E-802.

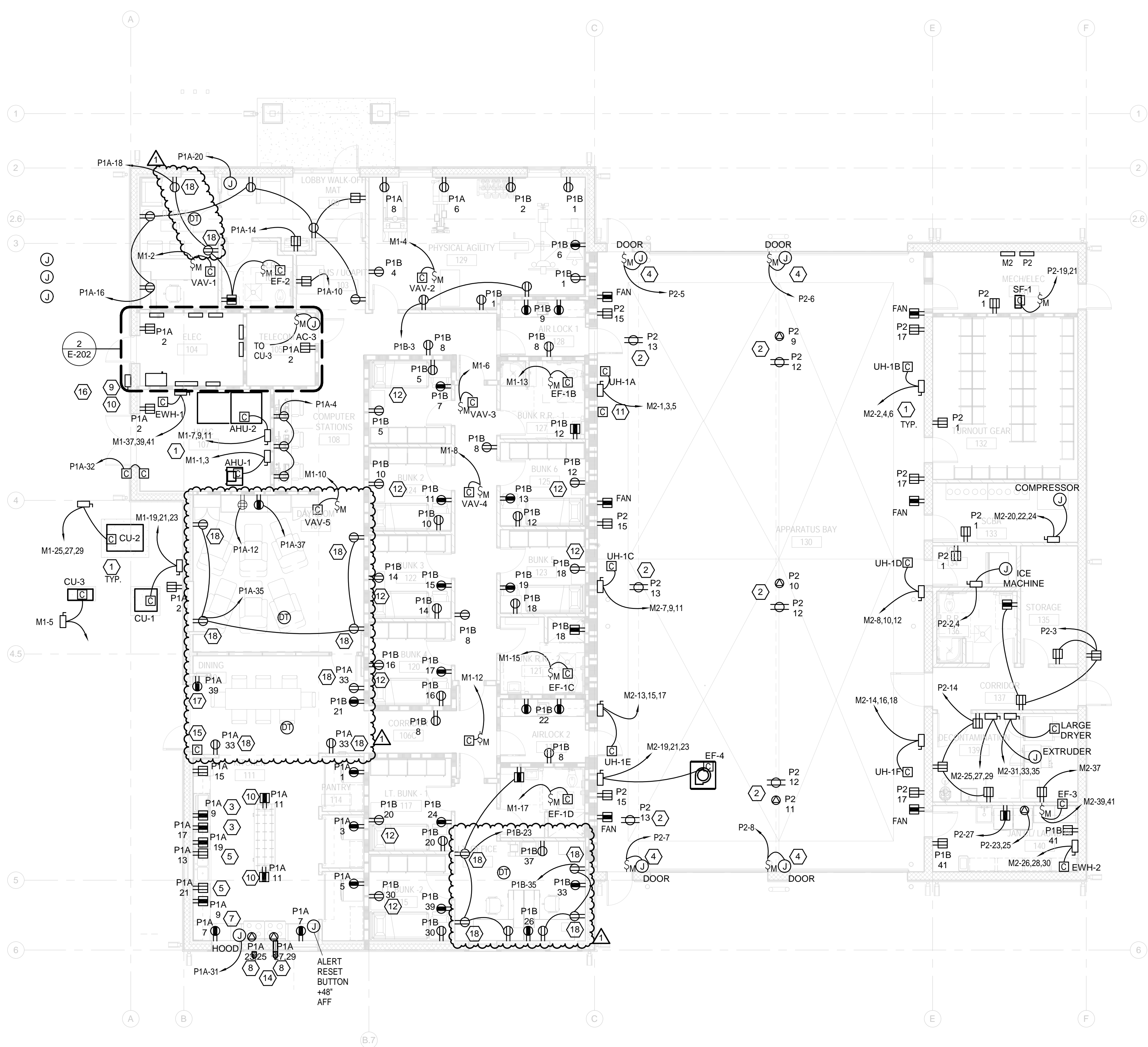


**ENLARGED MAIN ELECT ROOM**  
 1/4" = 1'-0"

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**POWER PLAN**  
 1/8" = 1'-0"

1  
 E-202



### Switchboard: MDP

Location: ELEC 104  
 Supply From: MDP  
 Mounting: Enclosure

Volts: 120/208V Wye  
 Phases: 3  
 Wires: 4

A.I.C. Rating: 35,000  
 Mains Type: MLO  
 Mains Rating: 800 A  
 MCB Rating:

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	PANEL M1	3	400 A	300 A	51.2	
2	PANEL L1	3	400 A	100 A	7.4	
3	PANELS P1A/P1B	3	400 A	350 A	46.8	
4	PANEL M2	3	400 A	400 A	90.8	
5	PANEL P2	3	400 A	150 A	19.1	
6	SURGE PROTECTION DEVICE	3	100 A	60 A	0.0	
7	SPARE	3	400 A	200 A	0.0	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
<b>Total Conn. Load:</b>					215289 VA	
<b>Total Amps:</b>					598 A	

Legend:	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	125254 VA	100.00%	125254 VA	
Lighting	5883 VA	125.00%	7354 VA	<b>Total Conn. Load:</b> 215.3 kVA
Other	1532 VA	100.00%	1532 VA	<b>Total Est. Demand:</b> 200.1 kVA
Receptacle	25560 VA	69.56%	17780 VA	<b>Total Conn. Current:</b> 598 A
Equipment	31560 VA	100.00%	31560 VA	<b>Total Est. Demand:</b> 555 A
Appliance	25500 VA	65.00%	16575 VA	

### Branch Panel: M1

Location: ELEC 104  
 Supply From: MDP  
 Mounting: Surface  
 Enclosure: Type 1

Volts: 120/208V Wye  
 Phases: 3  
 Wires: 4

A.I.C. Rating: 22,000  
 Mains Type: MLO  
 Mains Rating: 250 A  
 MCB Rating:

Notes:

CKT	Circuit Description	Trip	Poles	A (KW)	B (KW)	C (KW)	Poles	Trip	Circuit Description	CKT
1	AHU-1	15 A	2	1.87	2.00			1	25 A VAV-1	2
3								1	15 A VAV-2	4
5	AC-3 / CU-3	15 A	1		1.87	1.00		1	15 A VAV-3	6
7								1	25 A VAV-4	8
9	AHU-2	15 A	3	2.00	2.00	0.50		1	15 A VAV-5	10
11								1	15 A VAV-6	12
13	EF-1B	15 A	1	1.00	0.00			1	15 A SPARE	14
15	EF-1C	15 A	1		1.00	0.00		1	20 A SPARE	16
17	EF-1D	15 A	1			1.00	0.00	1	20 A SPARE	18
19				0.90	0.00			1	20 A SPARE	20
21	CU-1	25 A	3		0.90	0.00		1	20 A SPARE	22
23						0.90	0.00	1	20 A SPARE	24
25				4.01	0.90					26
27	CU-2	50 A	3		4.01	0.90		3	20 A SLIDING GATE	28
29							4.01	0.90		30
31	SPARE	20 A	1	0.00	0.90					32
33	SPARE	20 A	1		0.00	0.90		3	20 A SLIDING GATE	34
35	SPARE	20 A	1			0.00	0.90			36
37				3.00	0.00					38
39	EW-1	35 A	3		3.00	0.00		3	30 A SURGE PROTECTION DEVICE	40
41							3.00	0.00		42
<b>Total Load:</b>				18.58 kW	16.08 kW	16.58 kW				
<b>Total Amps:</b>				155 A	134 A	139 A				

Legend:	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	0 VA	0.00%	0 VA	
Receptacle	0 VA	0.00%	0 VA	<b>Total Conn. Load:</b> 51.24 kW
HVAC	45836 VA	100.00%	45836 VA	<b>Total Est. Demand:</b> 51.24 kW
Appliance	0 VA	0.00%	0 VA	<b>Total Conn. Current:</b> 142 A
Equipment	5400 VA	100.00%	5400 VA	<b>Total Est. Demand:</b> 142 A
Motor	0 VA	0.00%	0 VA	
Other	0 VA	0.00%	0 VA	
Spare	0 VA	0.00%	0 VA	

### Branch Panel: L1

Location: ELEC 104  
 Supply From: MDP  
 Mounting: Surface  
 Enclosure: Type 1

Volts: 120/208V Wye  
 Phases: 3  
 Wires: 4

A.I.C. Rating: 10,000  
 Mains Type: MLO  
 Mains Rating: 100 A  
 MCB Rating:

Notes:

CKT	Circuit Description	Trip	Poles	A (KW)	B (KW)	C (KW)	Poles	Trip	Circuit Description	CKT
1	LIGHTING ELECT/MECH/IT ROOMS	20 A	1	0.26	0.13			1	20 A LIGHTING RMS 101, 102, 104, 106	2
3	LIGHTING LOBBY 100	20 A	1		0.16	0.28		1	20 A LIGHTING RM 103	4
5	LIGHTING CORRIDORS	20 A	1			0.53	0.57	1	20 A LIGHTING DORMS	6
7	LIGHTING DORMS	20 A	1	0.37	0.68			1	20 A LIGHTING KIT/DINING/DAY ROOM	8
9	LIGHTING VEHICLE BAYS	20 A	1		1.15	0.51		1	20 A LIGHTING RMS 133 - 138	10
11	LIGHTING RMS 139 - 142	20 A	1			0.26	0.25	1	20 A LIGHTING BACK EXTERIOR	12
13	SPARE	20 A	1	0.00	0.29			1	20 A LIGHTING FRONT EXTERIOR	14
15	SPARE	20 A	1		0.00	0.35		1	20 A SIGN LIGHTING	16
17	SPARE	20 A	1			0.00	0.82	1	20 A SITE LIGHTING	18
19	SPARE	20 A	1	0.00	0.82			1	20 A SITE LIGHTING	20
21	SPARE	20 A	1		0.00	0.00		1	20 A SPARE	22
23	SPARE	20 A	1			0.00	0.00	1	20 A SPARE	24
25	SPARE	20 A	1	0.00	0.00			1	20 A SPARE	26
27	SPARE	20 A	1		0.00	0.00		1	20 A SPARE	28
29	SPARE	20 A	1			0.00	0.00	1	20 A SPARE	30
31	SPARE	20 A	1	0.00	0.00			1	20 A SPARE	32
33	SPARE	20 A	1		0.00	0.00		1	20 A SPARE	34
35	SPARE	20 A	1			0.00	0.00	1	20 A SPARE	36
37	SPARE	20 A	1	0.00	0.00			1	20 A SPARE	38
39	SPARE	20 A	1		0.00	0.00		3	30 A SURGE PROTECTION DEVICE	40
41	SPARE	20 A	1			0.00	0.00			42
<b>Total Load:</b>				2.55 kW	2.46 kW	2.41 kW				
<b>Total Amps:</b>				21 A	21 A	20 A				

Legend:	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	5883 VA	125.00%	7354 VA	<b>Total Conn. Load:</b> 7.42 kW
Receptacle	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b> 8.89 kW
HVAC	0 VA	0.00%	0 VA	<b>Total Conn. Current:</b> 21 A
Appliance	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b> 25 A
Equipment	0 VA	0.00%	0 VA	
Motor	0 VA	0.00%	0 VA	
Other	1532 VA	100.00%	1532 VA	
Spare	0 VA	0.00%	0 VA	

### Branch Panel: P1B

Location: ELEC 104  
 Supply From: P1A  
 Mounting: Surface  
 Enclosure: Type 1

Volts: 120/208V Wye  
 Phases: 3  
 Wires: 4

A.I.C. Rating: 22,000  
 Mains Type: MLO  
 Mains Rating: 250 A  
 MCB Rating:

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	RECEPTS TRAINING	20 A	1	0.54	0.18			1	20 A RECEPTS TRAINING	2
3	RECEPTS TRAINING	20 A	1		0.36	0.18		1	20 A RECEPTS TRAINING	4
5	RECEPTS BUNK 2, RR	20 A	1			0.36	0.18	1	20 A TRAINING TV	6
7	TV BUNK 2	20 A	1	0.18	1.08			1	20 A RECEPTS CORRIDORS	8
9	COUNTER RECEPT AIRLOCK 1	20 A	1		0.18	0.36		1	20 A RECEPTS BUNK 8	10
11	TV BUNK 8	20 A	1			0.18	0.54	1	20 A RECEPTS BUNK 6, RR	12
13	TV BUNK 6	20 A	1	0.18	0.36			1	20 A RECEPTS BUNK 7	14
15	TV BUNK 7	20 A	1		0.18	0.36		1	20 A RECEPTS BUNK 5	16
17	TV BUNK 5	20 A	1			0.18	0.54	1	20 A RECEPTS BUNK 4, RR	18
19	TV BUNK 4	20 A	1	0.18	0.54			1	20 A RECEPTS BUNK 3	20
21	TV BUNK 3	20 A	1		0.18	0.18		1	20 A COUNTER RECEPT AIRLOCK 2	22
23	RECEPTS BUNK 1, RR	20 A	1			0.72	0.18	1	20 A TV BUNK 1	24
25	SPARE	20 A	1	0.00	0.18			1	20 A RECEPTACLE	26
27	SPARE	20 A	1		0.00	0.00		1	20 A SPARE	28
29	SPARE	20 A	1			0.00	0.36	1	20 A RECEPTACLE	30
31	SPARE	20 A	1	0.00	0.00			1	20 A SPARE	32
33	RECEPTACLE	20 A	1		0.18	0.00		1	20 A SPARE	34
35	RECEPTACLE	20 A	1			0.54	0.00	1	20 A SPARE	36
37	RECEPTACLE	20 A	1	0.18	0.00			1	20 A SPARE	38
39	RECEPTACLE	20 A	1		0.18	0.00		1	20 A SPARE	40
41	RECEPTACLE	20 A	1			0.36	0.00	1	20 A SPARE	42
43	SPARE	20 A	1	0.00	0.00			1	20 A SPARE	44
45	SPARE	20 A	1		0.00	0.00		1	20 A SPARE	46
47	SPARE	20 A	1			0.00	0.00	1	20 A SPARE	48
49	SPARE	20 A	1	0.00	0.00			1	20 A SPARE	50
51	SPARE	20 A	1		0.00	0.00		1	20 A SPARE	52
53	SPARE	20 A	1			0.00	0.00	1	20 A SPARE	54
<b>Total Load:</b>				3.60 kW	2.34 kW	4.14 kW				
<b>Total Amps:</b>				32 A	20 A	36 A				

Legend:	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	0 VA	0.00%	0 VA	
Receptacle	10080 VA	99.60%	10040 VA	<b>Total Conn. Load:</b> 10.08 kW
HVAC	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b> 10.04 kW
Appliance	0 VA	0.00%	0 VA	<b>Total Conn. Current:</b> 28 A
Equipment	0 VA	0.00%	0 VA	<b>Total Est. Demand:</b> 28 A
Motor	0 VA	0.00%	0 VA	
Other	0 VA	0.00%	0 VA	
Spare	0 VA	0.00%	0 VA	

### Branch Panel: P1A

Location: ELEC 104  
 Supply From: MDP  
 Mounting: Surface  
 Enclosure: Type 1

Volts: 120/208V Wye  
 Phases: 3  
 Wires: 4

A.I.C. Rating: 22,000  
 Mains Type: MLO  
 Mains Rating: 250 A  
 MCB Rating:

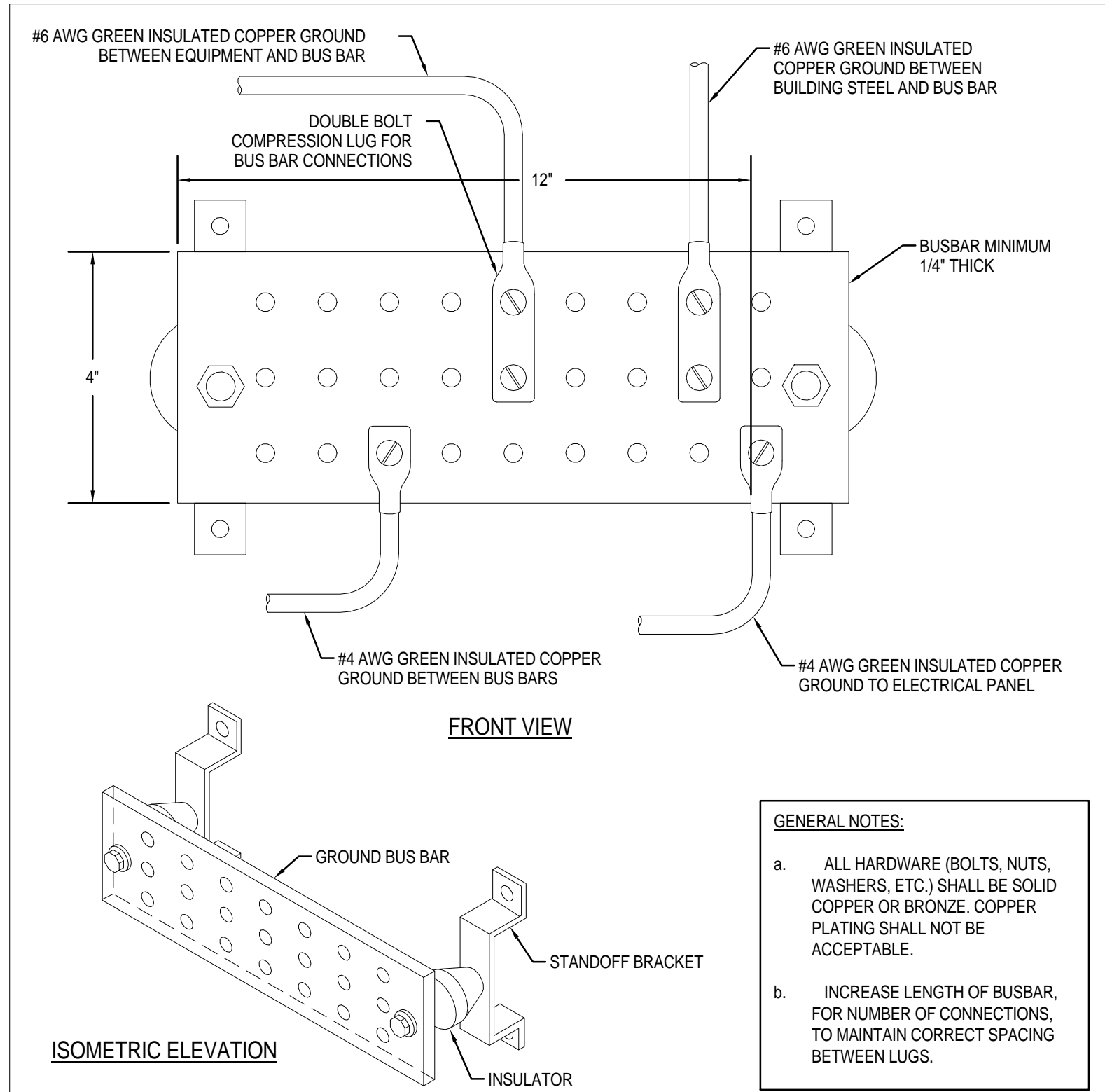
Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	REFRIGERATOR	20 A	1	0.18	0.72			1	20 A RECEPTS ELECT/MECH/COMM	2	
3	REFRIGERATOR	20 A	1		0.18	0.54		1	20 A RECEPTS COMP STATIONS	4	
5	REFRIGERATOR	20 A	1			0.18	0.18	1	20 A ELIPTICAL	6	
7	KITCHEN COUNTER RECEPTS	20 A	1	0.36	0.18			1	20 A TREADMILL	8	
9	KITCHEN COUNTER RECEPTS	20 A	1		0.36	0.18		1	20 A EMS VENDING	10	
11	KITCHEN ISLAND RECEPTS	20 A	1			0.36	0.36	1	20 A RECEPTACLE	12	
13	DISHWASHER	20 A	1	0.18	0.18			1	20 A EVC	14	
15	DISHWASHER	20 A	1		0.18	1.26		1	20 A RECEPTS LOBBY, OFFICE	16	
17	MICROWAVE	20 A	1			0.18	1.72	1	20 A RECEPTS OFFICE	18	
19	MICROWAVE	20 A	1	0.18	0.50			1	20 A LOBBY EQUIPMENT	20	
21	ICE MACHINE	20 A	1		0.18	0.54		1	20 A TELECOM RECEPTACLES	22	
23	KITCHEN RANGE	50 A	2		4.00	0.72		1	20 A TELECOM RECEPTACLES	24	
25	KITCHEN RANGE	50 A	2	4.00	1.08			1	20 A TELECOM RECEPTACLES	26	
27	KITCHEN RANGE	50 A	2		4.00	0.50		1	20 A ALERT SYSTEM	28	
29	RANGE HOOD	20 A	1	0.50	0.40		4.00	0.50	1	20 A FACP	30
31	DINING RECEPTS	20 A	1		0.54	1.00		1	20 A FIRE BELL	32	
33	DINING RECEPTS	20 A	1			0.72	0.50	1	20 A GEN. BATT. CHARG	34	
35	DAYROOM RECEPTS	20 A	1			0.72	0.50	1	20 A GEN CONTROL	36	
37	DAYROOM TV	20 A	1	0.18	2.50			2	20 A GEN BLOCK HTR	38	
39	KRONOS TIME CLOCK	20 A	1		0.18	2.50				40	
41	SPARE	20 A	1			0.00	0.00	1	20 A SPARE	42	
43	SPARE	20 A	1	0.00	0.00			1	20 A SPARE	44	
45	SPARE	20 A	1								





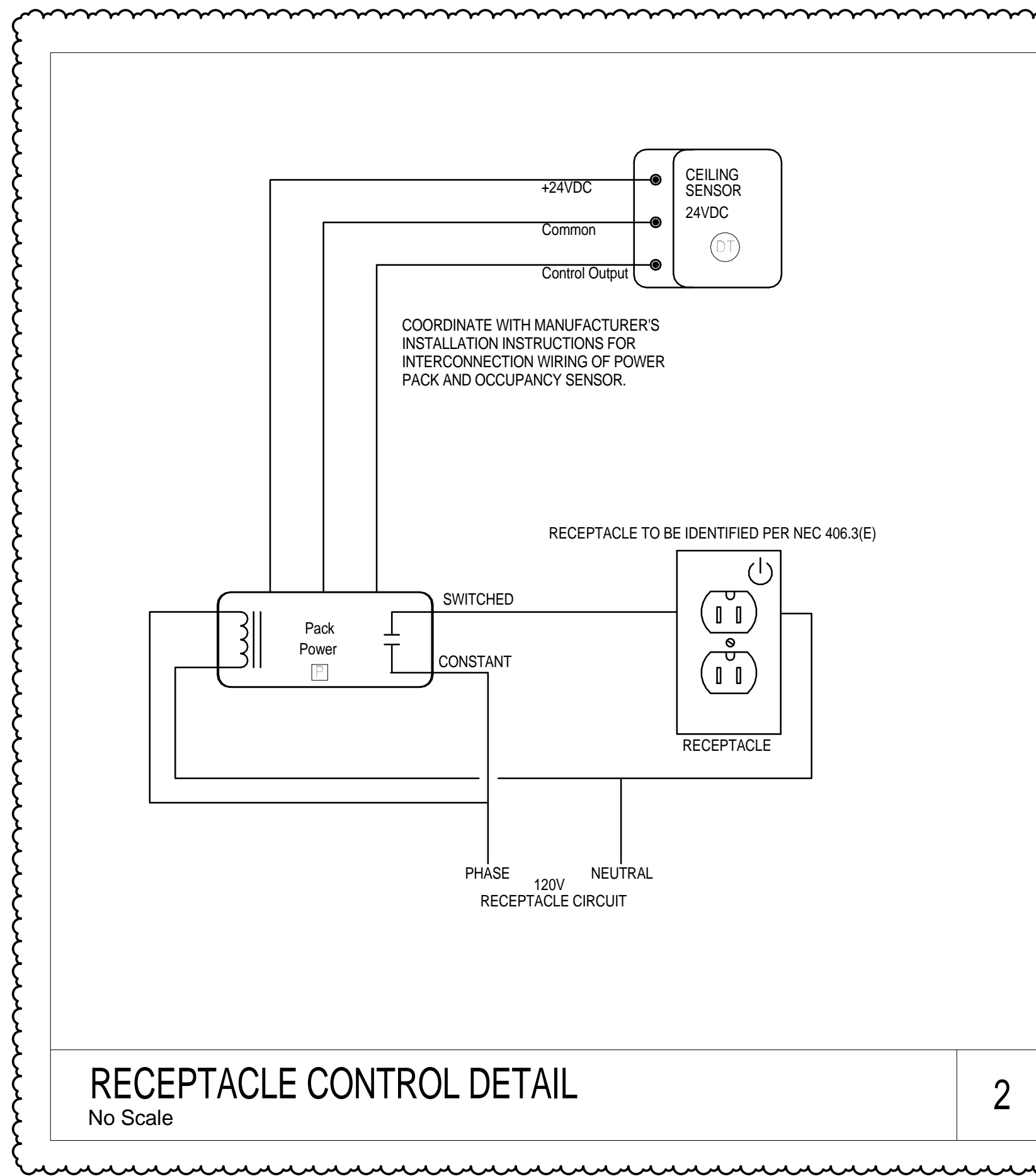




**GROUND BUSBAR**  
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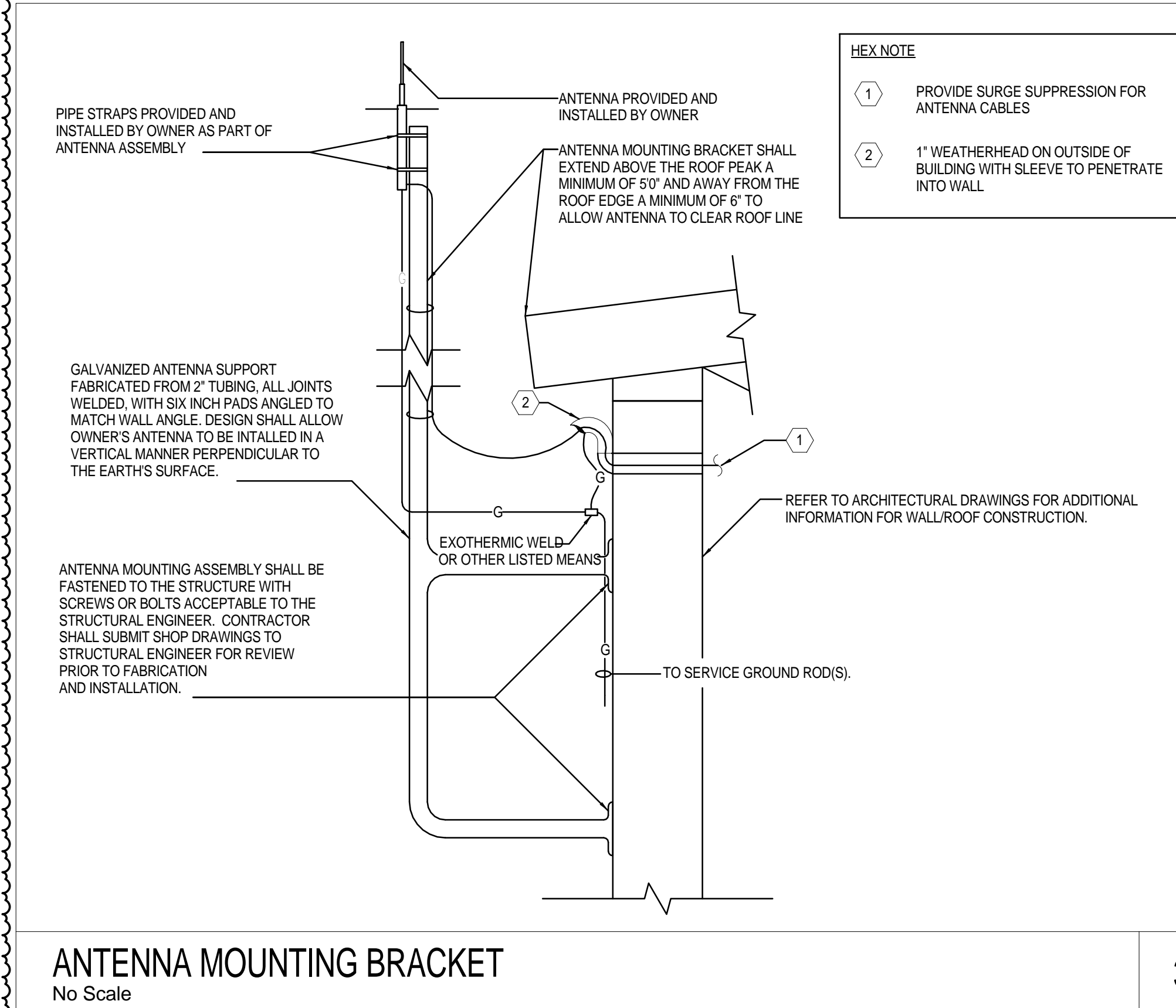
1

**GENERAL NOTES:**  
a. ALL HARDWARE (BOLTS, NUTS, WASHERS, ETC.) SHALL BE SOLID COPPER OR BRONZE. COPPER PLATING SHALL NOT BE ACCEPTABLE.  
b. INCREASE LENGTH OF BUSBAR, FOR NUMBER OF CONNECTIONS, TO MAINTAIN CORRECT SPACING BETWEEN LUGS.



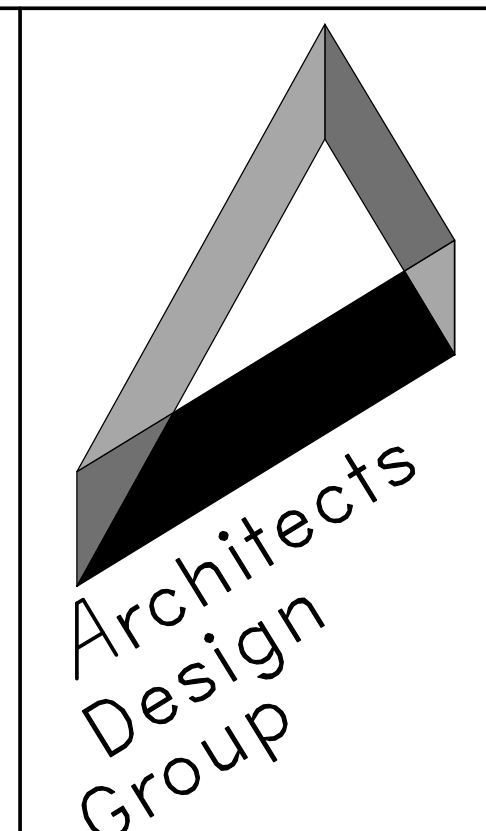
**RECEPTACLE CONTROL DETAIL**  
No Scale

2



**ANTENNA MOUNTING BRACKET**  
No Scale

3



**Architects and Planners**  
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Corporate Registration  
Number: AAC001197

**ORANGE COUNTY  
FIRE STATION 87**

**ORANGE COUNTY  
FIRE RESCUE**

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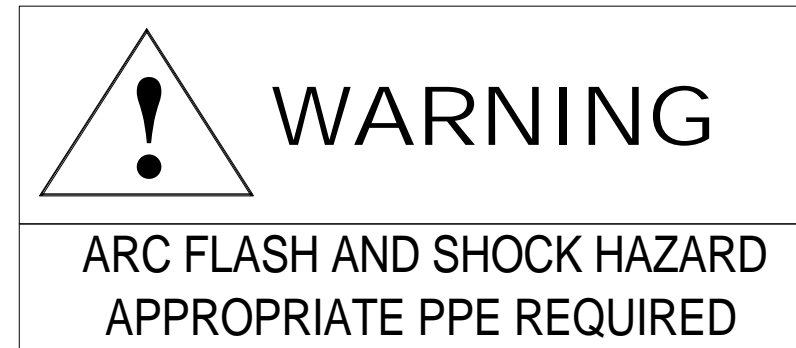
• revisions/addenda

Number	Description	Date Issued
1	Permit Responses	July 18, 2019

• sheet title  
**ELECTRICAL  
DETAILS**

• scale: 12" = 1'-0"  
• drawn: SFD  
• checked: JLM  
• approved: JLM  
• date: 06/12/19

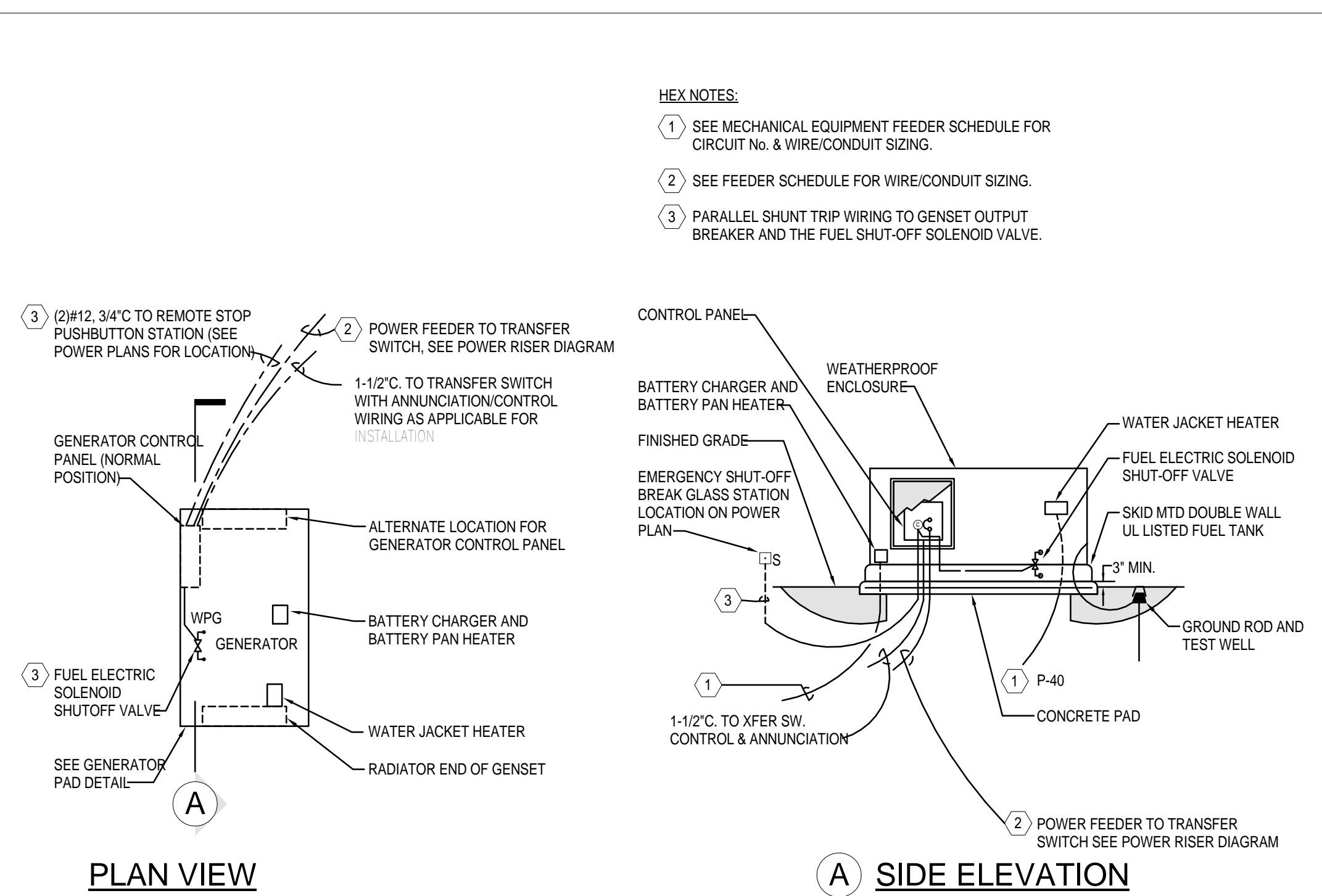
• project no.  
**963**  
• sheet number:  
**E-802**



**NOTES**  
PROVIDE/INSTALL SIGN ON ALL EQUIPMENT PER ANSI, NEC, AND OSHA.  
ANSI Z535.4-1998, PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR THE DESIGN OF SAFETY SIGNS AND LABELS FOR APPLICATION TO PRODUCTS.

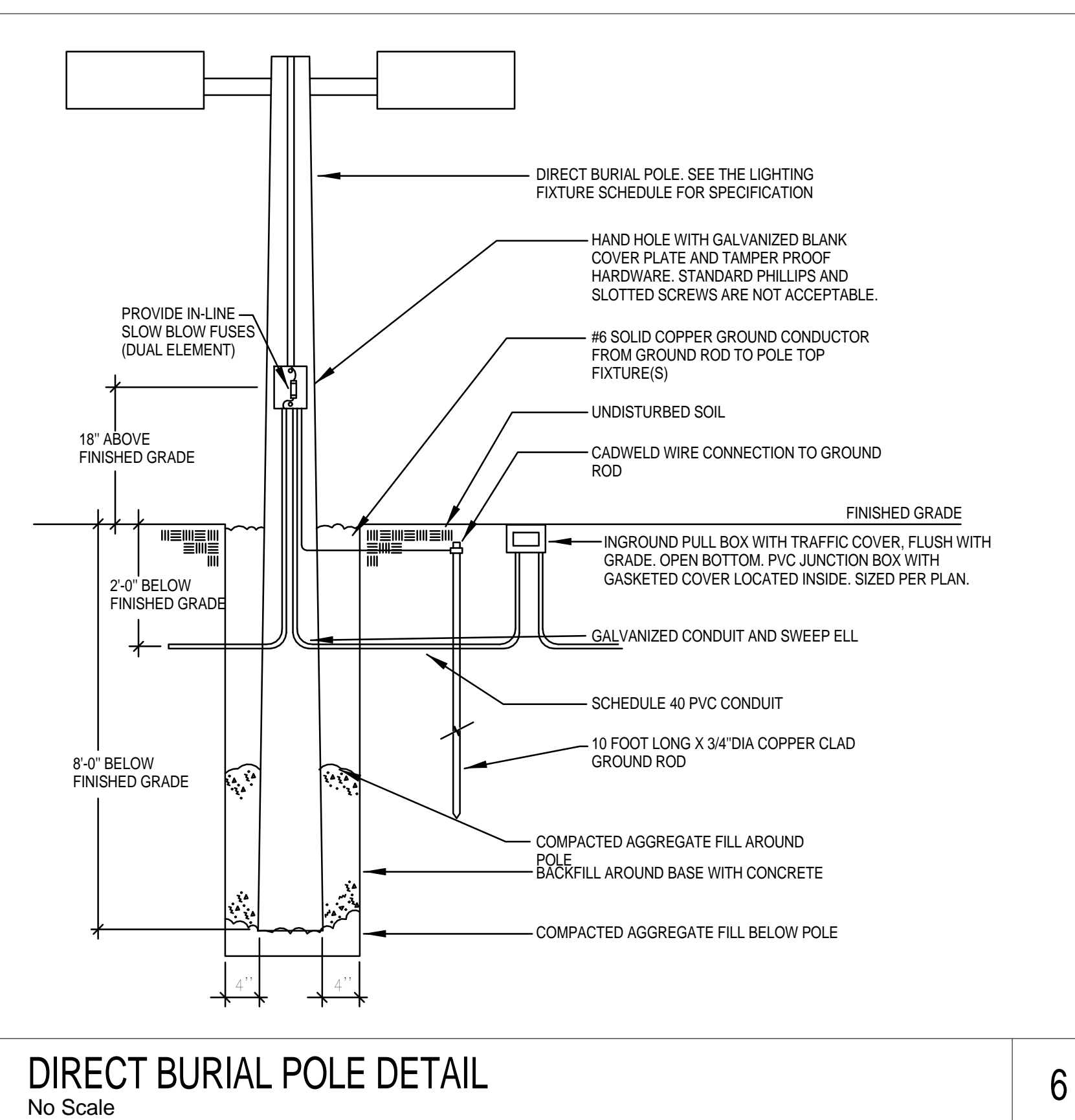
**ARC FLASH AND SHOCK HAZARD SIGN**  
No Scale

4



**EMERGENCY GENERATOR WIRING DETAIL**  
No Scale

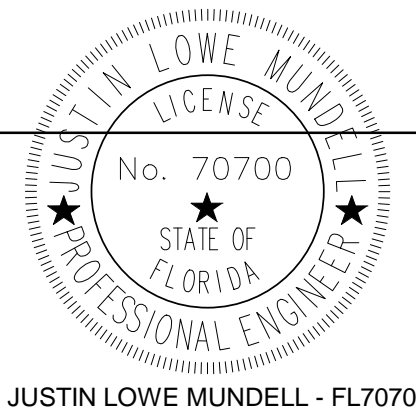
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**DIRECT BURIAL POLE DETAIL**  
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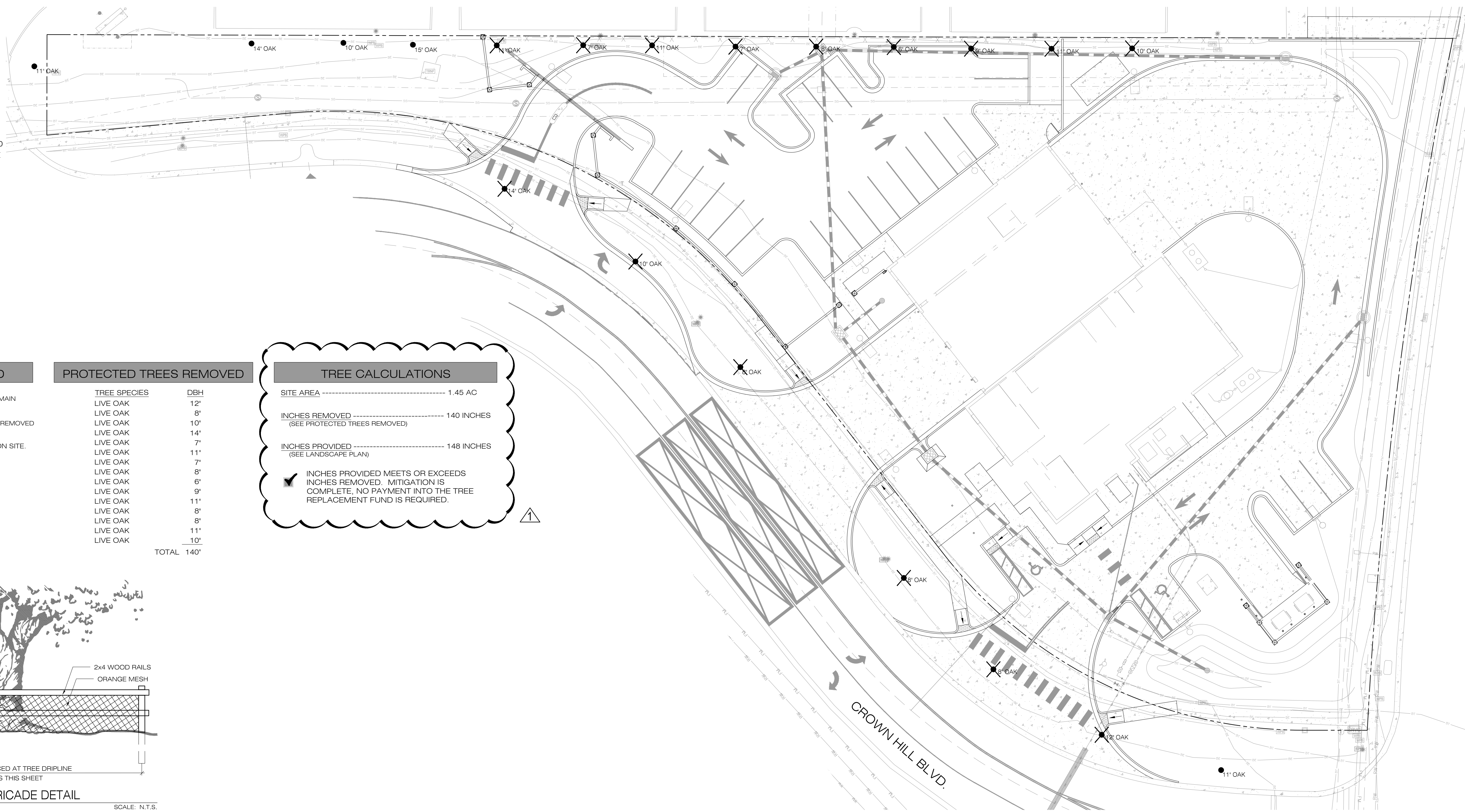
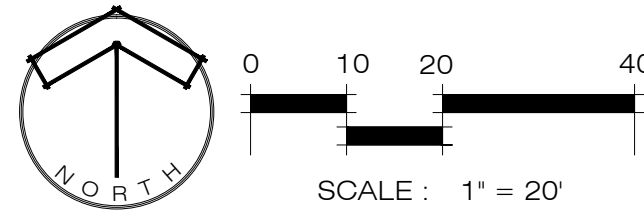
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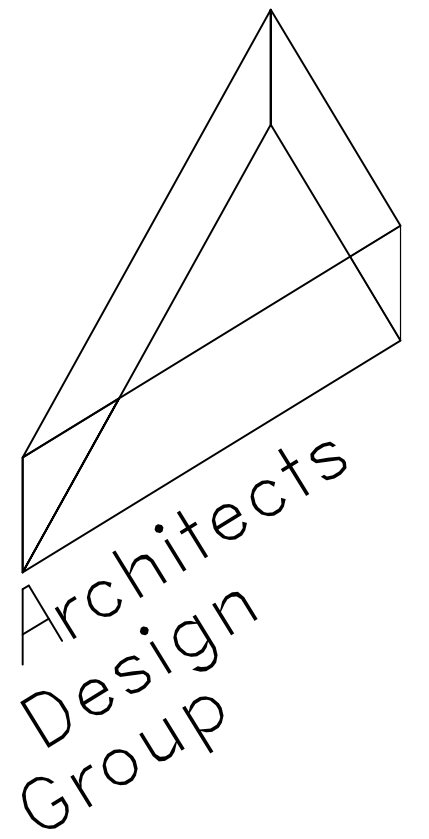


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AVALON PARK BLVD.



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 Number: AAC001197

**EXISTING TREE LEGEND**

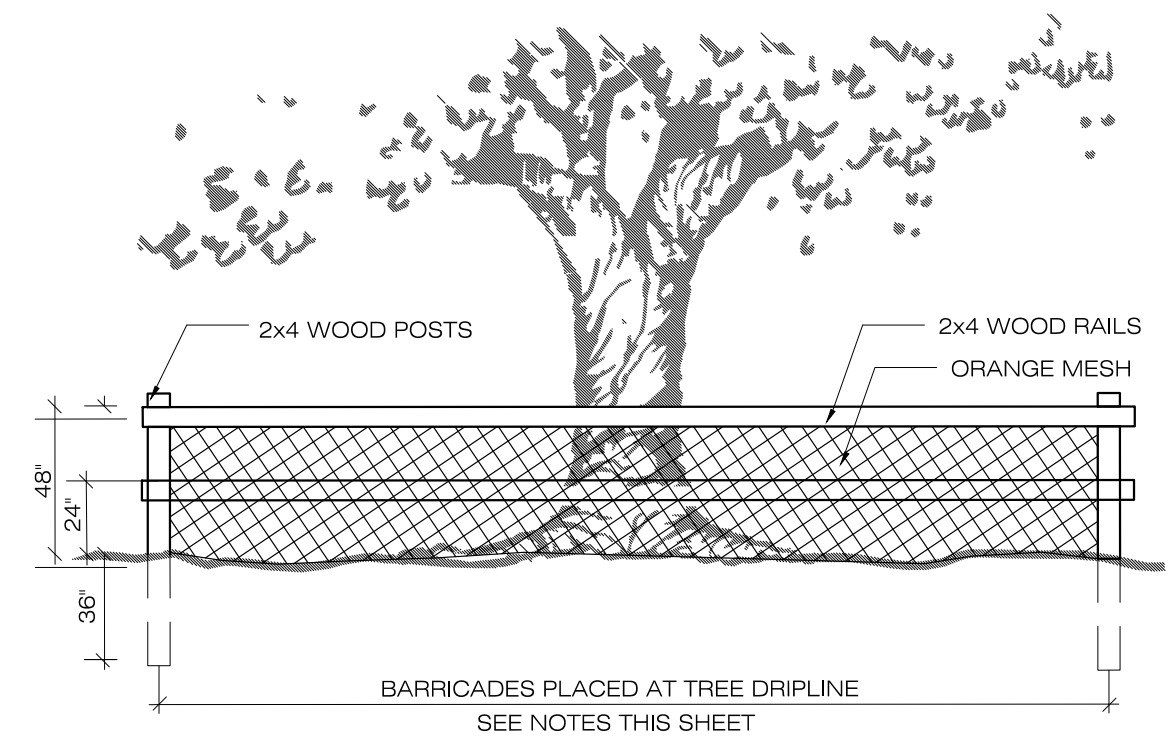
- OAK EXISTING PROTECTED TREE TO REMAIN
  - ✕ OAK EXISTING PROTECTED TREE TO BE REMOVED
- NOTE: NO SPECIMEN TREES ARE PRESENT ON SITE.

**PROTECTED TREES REMOVED**

TREE SPECIES	DBH
LIVE OAK	12"
LIVE OAK	8"
LIVE OAK	10"
LIVE OAK	14"
LIVE OAK	7"
LIVE OAK	11"
LIVE OAK	7"
LIVE OAK	8"
LIVE OAK	6"
LIVE OAK	9"
LIVE OAK	11"
LIVE OAK	8"
LIVE OAK	8"
LIVE OAK	11"
LIVE OAK	10"
LIVE OAK	10"
<b>TOTAL</b>	<b>140"</b>

**TREE CALCULATIONS**

SITE AREA ----- 1.45 AC  
 INCHES REMOVED ----- 140 INCHES  
 (SEE PROTECTED TREES REMOVED)  
 INCHES PROVIDED ----- 148 INCHES  
 (SEE LANDSCAPE PLAN)  
 ✓ INCHES PROVIDED MEETS OR EXCEEDS  
 INCHES REMOVED. MITIGATION IS  
 COMPLETE. NO PAYMENT INTO THE TREE  
 REPLACEMENT FUND IS REQUIRED.



1 TREE PROTECTION BARRICADE DETAIL SCALE: N.T.S.

- PROTECT DESIGNATED EXISTING TREES SCHEDULED TO REMAIN AGAINST:
  - UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS
  - SKINNING AND BRUISING OF BARK
  - SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION OR EXCAVATION MATERIALS WITHIN DRIPLINE
  - FOOT OR VEHICULAR TRAFFIC
  - PARKING VEHICLES WITHIN DRIPLINE
- ERECT TEMPORARY WOODEN BARRICADES AS SHOWN ON THIS SHEET, BEFORE COMMENCEMENT OF ANY SITE CLEARING OR GRADING. FENCE TO BE 4' HIGH MINIMUM WITH 2 X 4 POSTS AND 2-2X4 RAILS AT 2' AND 4' ABOVE GRADE AND SHALL BE SET DEEP ENOUGH IN THE GROUND TO BE STABLE WITHOUT ADDITIONAL SUPPORT. ALL FENCING SHOULD BE A MINIMUM CLEAR DISTANCE OF 8' FROM THE FACE OF ANY TREES 12" DBH AND UNDER AND SHALL FULLY ENCLOSE ALL TREES SCHEDULED TO REMAIN. NOTHING SHALL BE PLACED INSIDE OF PROTECTIVE BARRICADES, INCLUDING BUT NOT LIMITED TO CONSTRUCTION MATERIAL, MACHINERY, CHEMICALS, OR TEMPORARY SOIL DEPOSITS. ON TREES LARGER THAN 12" DBH, BARRICADES SHALL BE NO CLOSER THAN 10' FROM FACE OF TREE. WHEN PAVING, EXCAVATION, OR HARDSCAPE MUST BE DONE WITHIN BARRICADES, BARRICADES SHALL BE MOVED BACK TO A SECONDARY LOCATION AT EDGE OF WORK. EXTRA CARE MUST BE TAKEN AT THIS TIME BY THE CONTRACTOR TO INSURE THAT NO DAMAGE TO THE TREE OCCURS.
- PROVIDE WATER TO TREES AS REQUIRED TO MAINTAIN THEIR HEALTH DURING CONSTRUCTION WORK.
- NO GRADE CHANGES ARE TO BE MADE WITHIN THE BARRICADES WITHOUT PRIOR APPROVAL OF THE COUNTY FORESTER.

**ORANGE COUNTY  
 FIRE STATION #87  
 ORANGE COUNTY, FL**

**ORANGE  
 COUNTY, FL**

**BID PERMIT  
 DOCUMENTS**

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revisions/addenda

Number	Description	Date Issued
1	PERMIT RESPONSES	JULY 18, 2019

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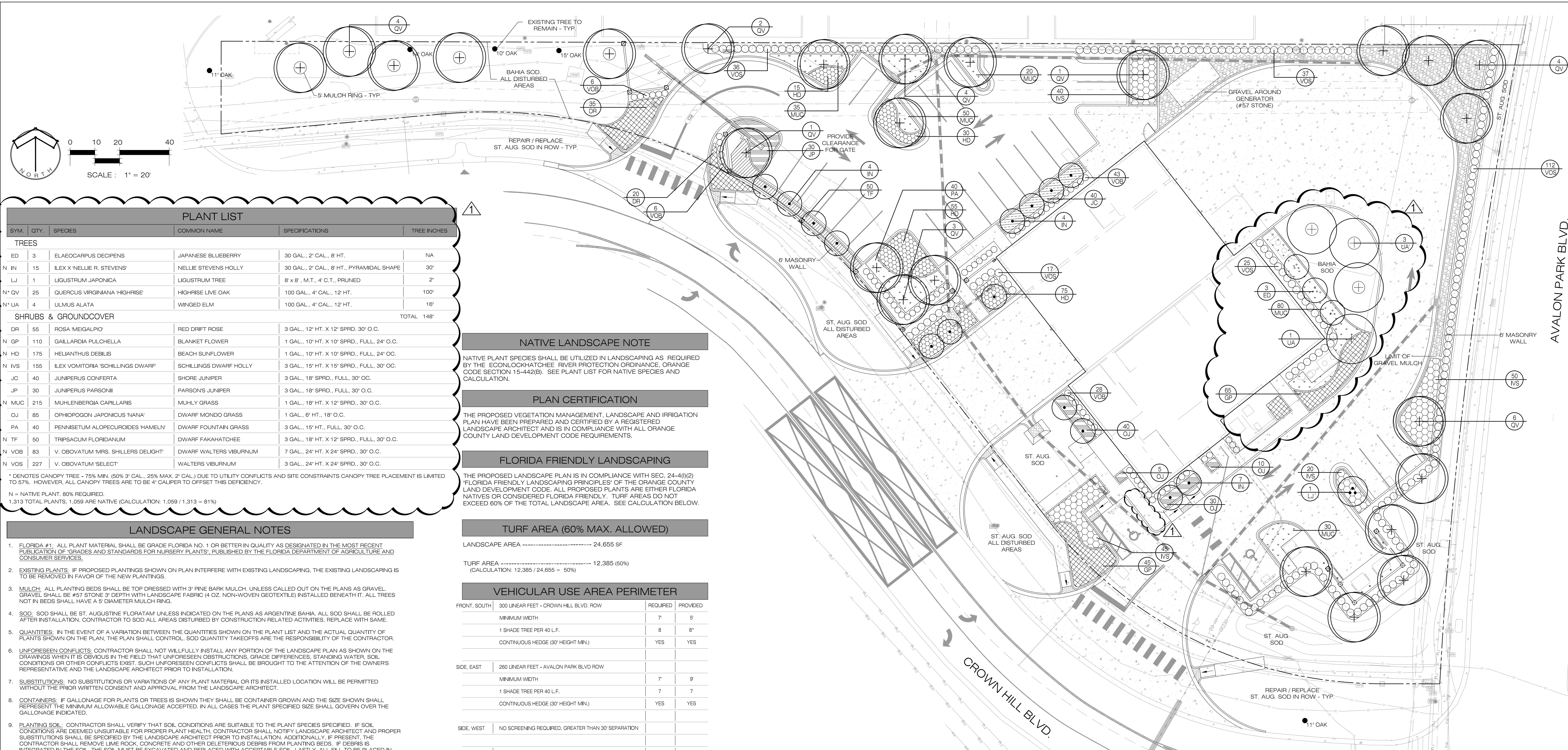
VEGETATION  
 MANAGEMENT  
 PLAN

- scale: 1" = 20'-0"
- drawn: JD
- checked: JD
- approved: SBK
- date: 6-12-2019

• project no.  
**842**

• sheet number:  
**L-1.01**





### PLANT LIST

SYM.	QTY.	SPECIES	COMMON NAME	SPECIFICATIONS	TREE INCHES
<b>TREES</b>					
ED	3	ELAEAGARPUS DECIPENS	JAPANESE BLUEBERRY	30 GAL., 2" CAL., 8' HT.	NA
N IN	15	ILEX X NELLIE R. STEVENS	NELLIE STEVENS HOLLY	30 GAL., 2" CAL., 8' HT., PYRAMIDAL SHAPE	30"
LJ	1	LIGUSTRUM JAPONICA	LIGUSTRUM TREE	8' x 8', M.T., 4 C.T., PRUNED	2'
N* OV	25	QUERCUS VIRGINIANA HIGHRISE	HIGHRISE LIVE OAK	100 GAL., 4" CAL., 12' HT.	100"
N* UA	4	ULMUS ALATA	WINGED ELM	100 GAL., 4" CAL., 12' HT.	16"
<b>SHRUBS &amp; GROUNDCOVER</b>					
DR	55	ROSA MEIGALPIO	RED DRIFT ROSE	3 GAL., 12" HT. X 12" SPRD., 30" O.C.	
N GP	110	GALLARDA PULCHELLA	BLANKET FLOWER	1 GAL., 10" HT. X 10" SPRD., FULL., 24" O.C.	
N HD	175	HELIANTHUS DEBILIS	BEACH SUNFLOWER	1 GAL., 10" HT. X 10" SPRD., FULL., 24" O.C.	
N IVS	155	ILEX VOMITORIA 'SCHILLINGS DWARF'	SCHILLINGS DWARF HOLLY	3 GAL., 15" HT. X 15" SPRD., FULL., 30" O.C.	
JC	40	JUNIPERUS CONFERTA	SHORE JUNIPER	3 GAL., 18" SPRD., FULL., 30" O.C.	
UP	30	JUNIPERUS PARSONII	PARSONS JUNIPER	3 GAL., 18" SPRD., FULL., 30" O.C.	
N MUC	215	MUHLENBERGIA CAPILLARIS	MUHLY GRASS	1 GAL., 18" HT. X 12" SPRD., 30" O.C.	
OJ	85	OPHOPOGON JAPONICUS 'NANA'	DWARF MONDO GRASS	1 GAL., 6" HT., 18" O.C.	
PA	40	PENNISETUM ALPECEUROIDES 'HAMELEN'	DWARF FOUNTAIN GRASS	3 GAL., 15" HT., FULL., 30" O.C.	
N TF	50	TRIPSAQUM FLORIDANUM	DWARF FAKAHATCHEE	3 GAL., 18" HT. X 12" SPRD., FULL., 30" O.C.	
N VOB	83	V. OBOVATUM 'MRS. SHILLERS DELIGHT'	DWARF WALTERS VIBURNUM	7 GAL., 24" HT. X 24" SPRD., 30" O.C.	
N VOS	227	V. OBOVATUM 'SELECT'	WALTERS VIBURNUM	3 GAL., 24" HT. X 24" SPRD., 30" O.C.	

\* DENOTES CANOPY TREE - 75% MIN. (50% 3" CAL., 25% MAX. 2" CAL.) DUE TO UTILITY CONFLICTS AND SITE CONSTRAINTS CANOPY TREE PLACEMENT IS LIMITED TO 57%. HOWEVER, ALL CANOPY TREES ARE TO BE 4" CALIPER TO OFFSET THIS DEFICIENCY.

N = NATIVE PLANT, 80% REQUIRED.  
1,313 TOTAL PLANTS, 1,059 ARE NATIVE (CALCULATION: 1,059 / 1,313 = 81%)

### LANDSCAPE GENERAL NOTES

- FLORIDA #1: ALL PLANT MATERIAL SHALL BE GRADE FLORIDA NO. 1 OR BETTER IN QUALITY AS DESIGNATED IN THE MOST RECENT PUBLICATION OF 'GRADES AND STANDARDS FOR NURSERY PLANTS', PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.
- EXISTING PLANTS: IF PROPOSED PLANTINGS SHOWN ON PLAN INTERFERE WITH EXISTING LANDSCAPING, THE EXISTING LANDSCAPING IS TO BE REMOVED IN FAVOR OF THE NEW PLANTINGS.
- MULCH: ALL PLANTING BEDS SHALL BE TOP DRESSED WITH 3" FINE BARK MULCH, UNLESS CALLED OUT ON THE PLANS AS GRAVEL. GRAVEL SHALL BE #57 STONE, 3" DEPTH WITH LANDSCAPE FABRIC (4 OZ. NON-WOVEN GEOTEXTILE) INSTALLED BENEATH IT. ALL TREES NOT IN BEDS SHALL HAVE A 5' DIAMETER MULCH RING.
- SOD: SOD SHALL BE ST. AUGUSTINE FLORATAM UNLESS INDICATED ON THE PLANS AS ARGENTINE BAHIA. ALL SOD SHALL BE ROLLED AFTER INSTALLATION. CONTRACTOR TO SOD ALL AREAS DISTURBED BY CONSTRUCTION RELATED ACTIVITIES, REPLACE WITH SAME.
- QUANTITIES: IN THE EVENT OF A VARIATION BETWEEN THE QUANTITIES SHOWN ON THE PLANT LIST AND THE ACTUAL QUANTITY OF PLANTS SHOWN ON THE PLAN, THE PLAN SHALL CONTROL. SOD QUANTITY TAKEOFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- UNFORESEEN CONFLICTS: CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY PORTION OF THE LANDSCAPE PLAN AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNFORESEEN OBSTRUCTIONS, GRADE DIFFERENCES, STANDING WATER, SOIL CONDITIONS OR OTHER CONFLICTS EXIST. SUCH UNFORESEEN CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE AND THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- SUBSTITUTIONS: NO SUBSTITUTIONS OR VARIATIONS OF ANY PLANT MATERIAL OR ITS INSTALLED LOCATION WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT AND APPROVAL FROM THE LANDSCAPE ARCHITECT.
- CONTAINERS: IF GALL GONAGE FOR PLANTS OR TREES IS SHOWN THEY SHALL BE CONTAINER GROWN AND THE SIZE SHOWN SHALL REPRESENT THE MINIMUM ALLOWABLE GALLONAGE ACCEPTED. IN ALL CASES THE PLANT SPECIFIED SIZE SHALL GOVERN OVER THE GALLONAGE INDICATED.
- PLANTING SOIL: CONTRACTOR SHALL VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO THE PLANT SPECIES SPECIFIED. IF SOIL CONDITIONS ARE DEEMED UNSUITABLE FOR PROPER PLANT HEALTH, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND PROPER SUBSTITUTIONS SHALL BE SPECIFIED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ADDITIONALLY, IF PRESENT, THE CONTRACTOR SHALL REMOVE LIME ROCK, CONCRETE AND OTHER DELETERIOUS DEBRIS FROM PLANTING BEDS. IF DEBRIS IS INTEGRATED IN THE SOIL, THE SOIL MUST BE EXCAVATED AND REPLACED WITH ACCEPTABLE SOIL. LASTLY, ALL FILL TO BE PLACED IN LANDSCAPE AREAS MUST HAVE A pH RANGE BETWEEN 5.8 AND 7.5, BE ORGANIC IN NATURE, AND BE FREE OF ROCKS AND DEBRIS.
- TOPSOIL: TOPSOIL MATERIAL, IF REQUIRED, SHALL BE FREE FROM ALL HARD CLODS, WEEDS, STONES OVER 1" IN DIAMETER, CLAY, HARD PAN, TOXICOUS PLANTS, SOD, INSECTS, OR OTHER UNDESIRABLE PLANTS, SEEDS, OR MATERIAL WHICH MAY BE HARMFUL FOR GROWTH AND SHALL BE CERTIFIED AS STEERLE.
- WEEDS: IF PRESENT, THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ANY WEEDS FROM PLANTING AREAS PRIOR TO THE INSTALLATION OF PROPOSED PLANT MATERIAL AND MULCH COVER. CONTRACTOR SHALL BE RESPONSIBLE TO KEEP BEDS FREE OF WEEDS FOR THE DURATION OF THE 90 DAY MAINTENANCE PERIOD.
- GRADING: UNLESS OTHERWISE STATED ON THESE PLANS, THE LANDSCAPE CONTRACTOR SHALL FINE GRADE ALL AREAS TO BE PLANTED AND SODDED IN ORDER TO ELIMINATE BUMPS AND DEPRESSIONS. FINE GRADING SHALL BE DEFINED AS THE FINAL 2" OF GRADE TO BE ACHIEVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REGRADING WASHOUT AREAS CAUSED BY EROSION UNTIL FINAL ACCEPTANCE OF THE PROJECT.
- STAKING: ALL TREES AND PALMS ARE TO BE STAKED ACCORDING TO THE DETAILS IN THESE PLANS. IF THE CONTRACTOR PREFERS TO USE OTHER STAKING METHODS THAN SHOWN IN THE DETAILS, HE OR SHE MUST SUBMIT PROPOSED STAKING DETAILS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. THE LANDSCAPE CONTRACTOR SHALL STRAIGHTEN, REPAIR, AND/OR REPLACE ANY PLANTS DAMAGED BY FAILURE TO PROPERLY STAKE OR GUY ANY TREES ON SITE, AT THEIR OWN EXPENSE.
- CURVILINEAR: CURVILINEAR LANDSCAPE BEDS ARE TO BE EDGED WITH SMOOTH FLOWING CURVES. STRAIGHT-LINE LANDSCAPE BEDS ARE TO BE EDGED IN A STRAIGHT LINE PARALLEL TO PARKING LOTS AND STRUCTURES UNLESS DESIGNED OTHERWISE.
- FERTILIZER: OSMOCOTE SLOW RELEASE FERTILIZER OR EQUIVALENT SHALL BE APPLIED TO ALL TREE, SHRUB, AND GROUND COVER PLANTING AREAS AT THE RATE OF THREE (3) TABLESPOONS PER 2 S.F. OF PLANTING AREA.
- DRAINAGE: THE LANDSCAPE CONTRACTOR SHALL ASSURE THAT THIS WORK DOES NOT INTERRUPT EXISTING OR PROPOSED DRAINAGE PATTERNS AND SHALL NOTIFY THE OWNERS REPRESENTATIVE IMMEDIATELY SHALL A CONFLICT ARISE.
- SPECIFICATIONS: THE LANDSCAPE ARCHITECT SHALL BE PERMITTED THE RIGHT DURING INSTALLATION, TO REJECT ANY AND ALL PLANT MATERIAL AND WORKMANSHIP WHICH IN HIS OR HER OPINION DOES NOT MEET THE REQUIREMENTS OF THESE SPECIFICATIONS.
- TURNOVER: CONTRACTOR SHALL CONTACT OWNERS REPRESENTATIVE FOR A TURNOVER DATE TO INCLUDE A WALK-THROUGH AND ACCEPTANCE OF WORK BY THE LANDSCAPE ARCHITECT. ANY WORK DEEMED UNACCEPTABLE SHALL BE CORRECTED IMMEDIATELY AND REINSPECTED AS SCHEDULED.
- MAINTENANCE: CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE TO BEGIN AFTER EACH PLANT HAS BEEN INSTALLED AND SHALL CONTINUE 90 DAYS AFTER FINAL WRITTEN ACCEPTANCE BY THE OWNER. MAINTENANCE SHALL INCLUDE WATERING, PRUNING, WEEDING, MULCHING, MOVING, REPLACEMENT OF SICK OR DEAD PLANTS, AND ANY OTHER CARE NECESSARY IN ORDER TO MAINTAIN PROPER PLANT HEALTH AND SOIL MOISTURE CONTENT.
- GUARANTEE: CONTRACTOR SHALL GUARANTEE ALL INSTALLED PLANT MATERIAL FOR ONE (1) CALENDAR YEAR STARTING FROM THE TURNOVER DATE SHOULD WORK BE FOUND ACCEPTABLE. ANY CORRECTED WORK SHALL HAVE A PROPORTIONAL EXTENSION OF WARRANTY ONCE APPROVED. ANY SICK OR DEAD MATERIAL SHALL BE REPLACED IMMEDIATELY. THE LANDSCAPE CONTRACTOR SHALL NOT BE RESPONSIBLE TO HONOR ANY WARRANTY FOR THE LOSS OF ANY PLANT MATERIAL CAUSED BY FLOODING, FIRE, FREEZING TEMPERATURES, WINDS OVER 50 MPH, LIGHTNING, ANY OTHER NATURAL DISASTER, OR ANY LOSS/DAMAGE CAUSED BY VANDALISM OR NEGLIGENCE ON THE PART OF THE OWNER.

### IRRIGATION GENERAL NOTES

- AN PERMANENT AUTOMATIC TIME CONTROLLED IRRIGATION SYSTEM WITH A RAIN SENSOR SHALL BE INSTALLED TO PROVIDE 100% HEAD TO HEAD COVERAGE OF ALL NEW PLANTINGS. SEE IRRIGATION PLAN.
- CONTRACTOR SHALL PROVIDE TEMPORARY IRRIGATION TO UNPLANTED BAHIA GRASS IF NATURAL RAINFALL IS INSUFFICIENT FOR ESTABLISHMENT. TO BE CONSIDERED ESTABLISHED, SOD SHALL BE GREEN, THRIVING AND FIRMLY ROOTED. CONTRACTOR SHALL REPLACE TURF WHICH DOES NOT MEET THE ABOVE SPECIFICATIONS AT TIME OF FINAL INSPECTION AND/OR TURNOVER.

### NATIVE LANDSCAPE NOTE

NATIVE PLANT SPECIES SHALL BE UTILIZED IN LANDSCAPING AS REQUIRED BY THE ECONLOCKHATCHEE RIVER PROTECTION ORDINANCE, ORANGE COUNTY SECTION 15-442(B). SEE PLANT LIST FOR NATIVE SPECIES AND CALCULATION.

### PLAN CERTIFICATION

THE PROPOSED VEGETATION MANAGEMENT, LANDSCAPE AND IRRIGATION PLAN HAVE BEEN PREPARED AND CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT AND IS IN COMPLIANCE WITH ALL ORANGE COUNTY LAND DEVELOPMENT CODE REQUIREMENTS.

### FLORIDA FRIENDLY LANDSCAPING

THE PROPOSED LANDSCAPE PLAN IS IN COMPLIANCE WITH SEC. 24-41(2) 'FLORIDA FRIENDLY LANDSCAPING PRINCIPLES' OF THE ORANGE COUNTY LAND DEVELOPMENT CODE. ALL PROPOSED PLANTS ARE EITHER FLORIDA NATIVES OR CONSIDERED FLORIDA FRIENDLY. TURF AREAS DO NOT EXCEED 60% OF THE TOTAL LANDSCAPE AREA. SEE CALCULATION BELOW.

### TURF AREA (60% MAX. ALLOWED)

LANDSCAPE AREA ----- 24,655 SF  
TURF AREA ----- 12,385 (50%)  
(CALCULATION: 12,385 / 24,655 = 50%)

### VEHICULAR USE AREA PERIMETER

FRONT, SOUTH	300 LINEAR FEET - CROWN HILL BLVD. ROW	REQUIRED	PROVIDED
MINIMUM WIDTH		7'	5'
1 SHADE TREE PER 40 LF.		8	8*
CONTINUOUS HEDGE (30" HEIGHT MIN.)		YES	YES
SIDE, EAST			
260 LINEAR FEET - AVALON PARK BLVD ROW			
MINIMUM WIDTH		7'	9'
1 SHADE TREE PER 40 LF.		7	7
CONTINUOUS HEDGE (30" HEIGHT MIN.)		YES	YES
SIDE, WEST			
NO SCREENING REQUIRED, GREATER THAN 30' SEPARATION			
REAR, NORTH			
335 LINEAR FEET - ADJACENT TO NON RESIDENTIAL USE			
MINIMUM WIDTH		7'	3'
1 SHADE TREE PER 50 LF.		7	7
CONTINUOUS HEDGE (30" HEIGHT MIN.)		YES	YES

\* UNDERSTORY TREES HAVE BEEN SUBSTITUTED FOR SHADE TREES AT A RATIO OF 2:1 DUE TO UTILITY AND SPACE CONFLICTS. (6 UNDERSTORY TREES = 3 SHADE TREES)

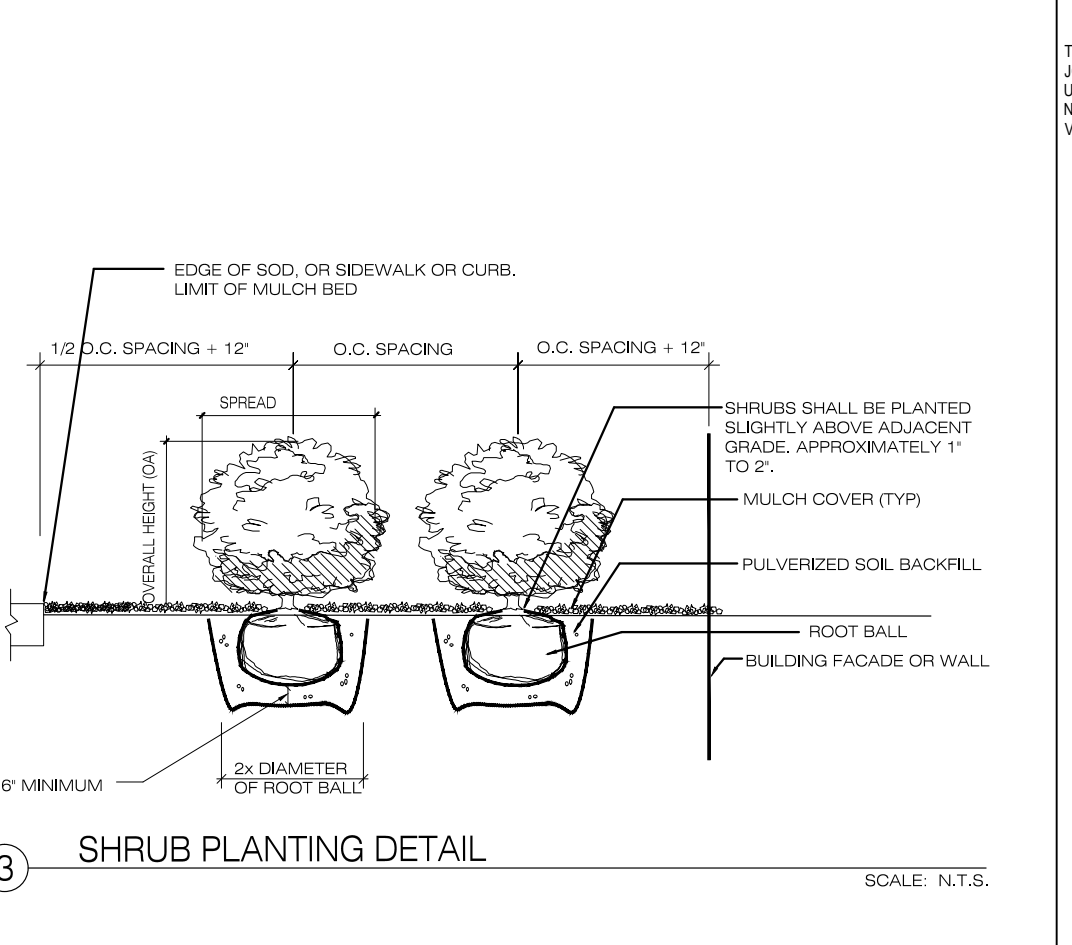
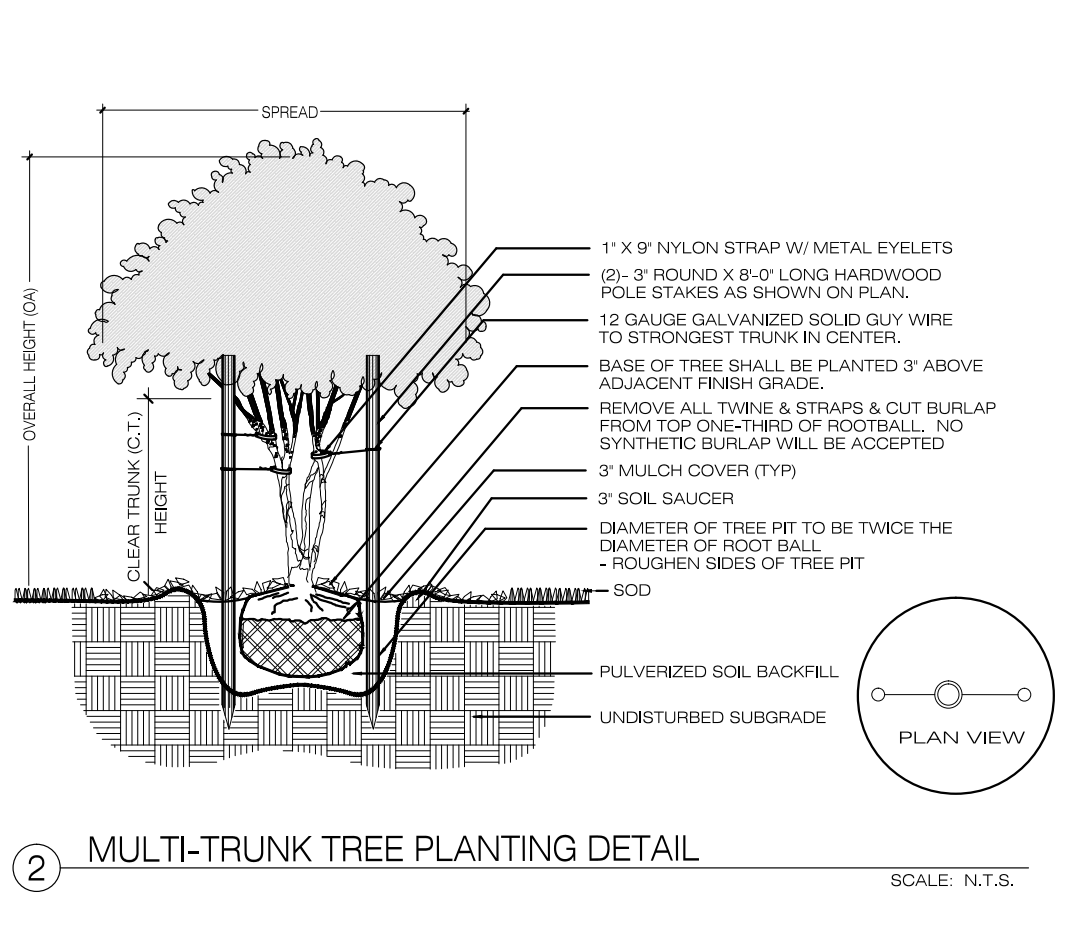
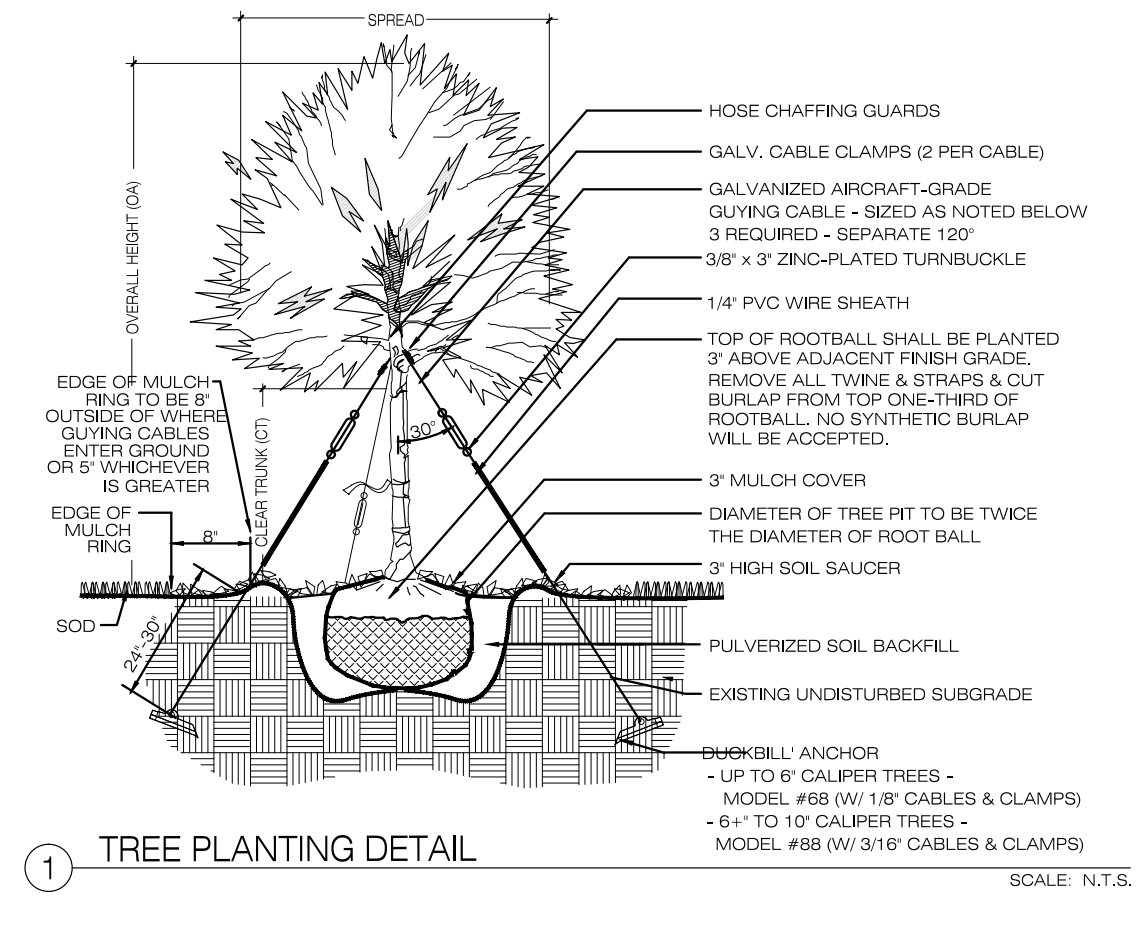
### INTERNAL LANDSCAPE CALCULATIONS

VEHICULAR USE AREA	25,244 SF
INTERIOR LANDSCAPE AREA REQUIRED (CALCULATION: 25,244 SF x 5% = 1,262)	1,262 SF
SHADE TREES REQUIRED (CALCULATION: 1,262 SF / 100 = 12.62)	13 TREES
INTERIOR LANDSCAPE AREA PROVIDED	2,000+ SF
SHADE TREES PROVIDED	13+ TREES

### BUILDING PERIMETER LANDSCAPE

BUILDING PERIMETER ORIENTED TOWARD PUBLIC RIGHT-OF-WAY	315 LF
LANDSCAPE AREA REQUIRED (CALCULATION: 315 LF x 8 = 2,520)	2,520 SF
SHRUB AREA REQUIRED (50% MIN.) (CALCULATION: 2,520 SF x .5 = 1,260)	1,260 SF
TREES REQUIRED SHADE / UNDERSTORY (CALCULATION: 215 LF / 25 = 8.6) (CALCULATION: 215 LF / 15 = 14.3)	9 SHADE / 15 UNDERSTORY
LANDSCAPE AREA PROVIDED	2,600 SF
SHRUB AREA PROVIDED	1,600 SF
SHADE TREES PROVIDED	9 TREES
UNDERSTORY TREES PROVIDED	15 TREES

\* DUE TO UTILITY CONFLICTS, 4 REQUIRED SHADE TREES HAVE BEEN PLANTED ON THE EASTERN PORTION OF THE SITE.



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### ORANGE COUNTY FIRE STATION #87 ORANGE COUNTY, FL

### ORANGE COUNTY, FL

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revisions/addenda

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1	PERMIT RESPONSES	JULY 18, 2019

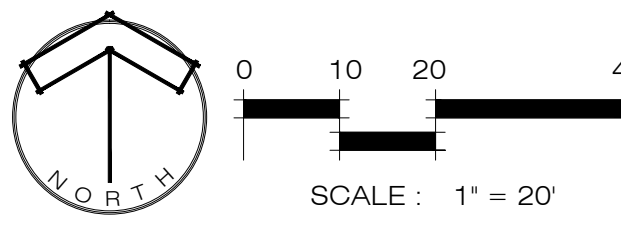
### LANDSCAPE PLAN

- scale: 1" = 20'-0"
- drawn: JD
- checked: JD
- approved: SBK
- date: 6-12-2019

project no.  
**842**  
sheet number:  
**L-3.01**

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DESIGN + STUDIO**  
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**ORANGE COUNTY REQUIRED NOTES:**

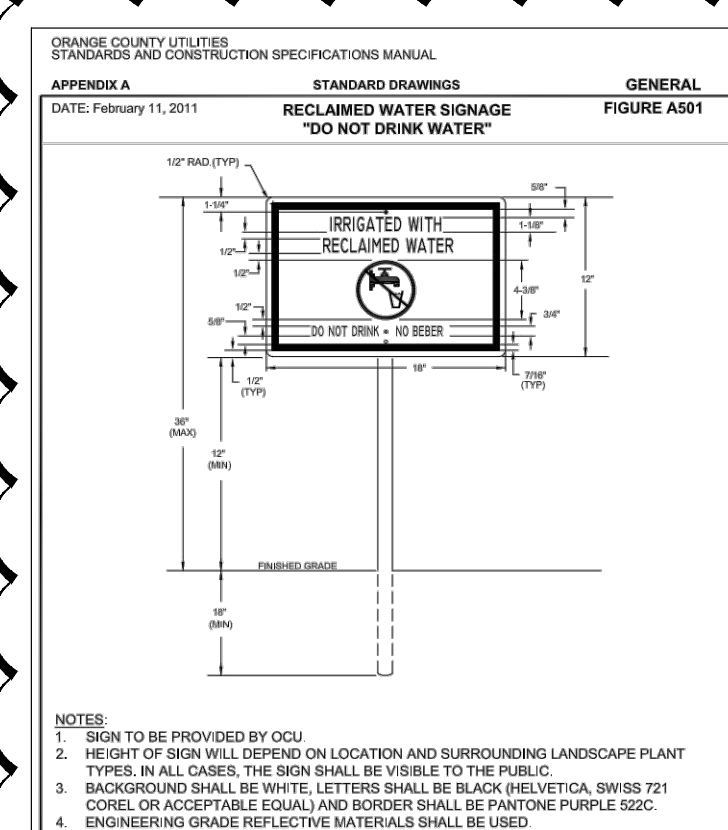
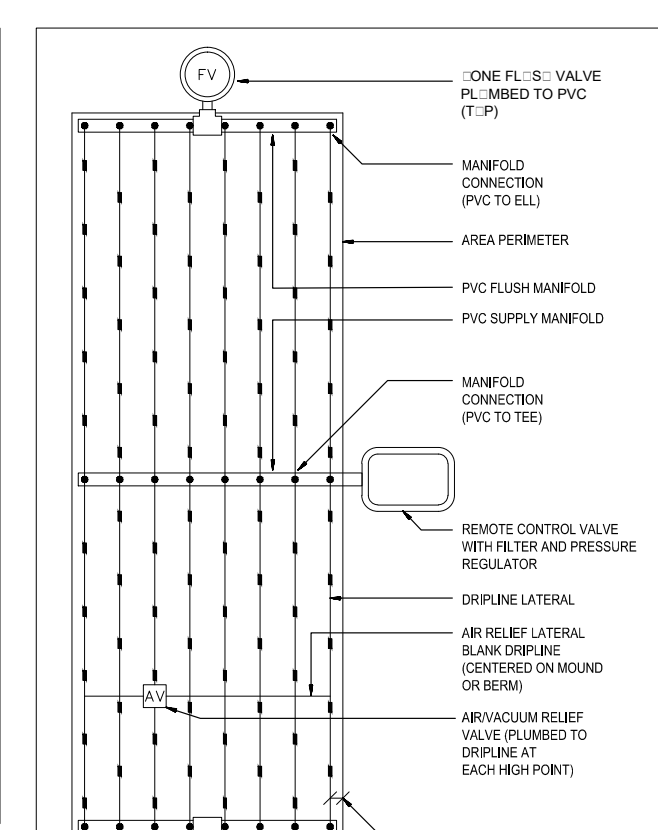
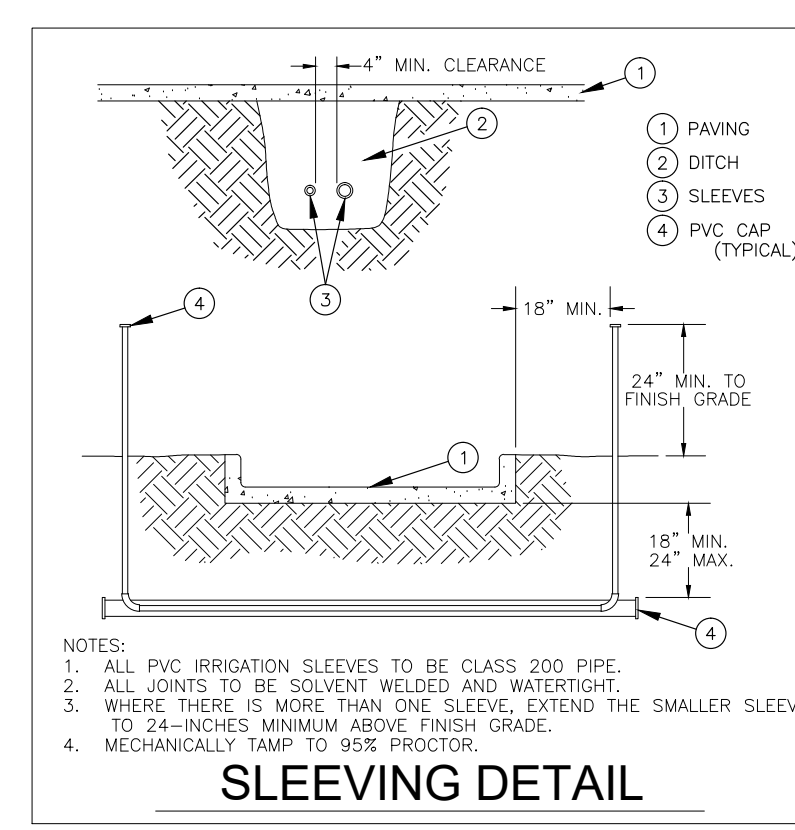
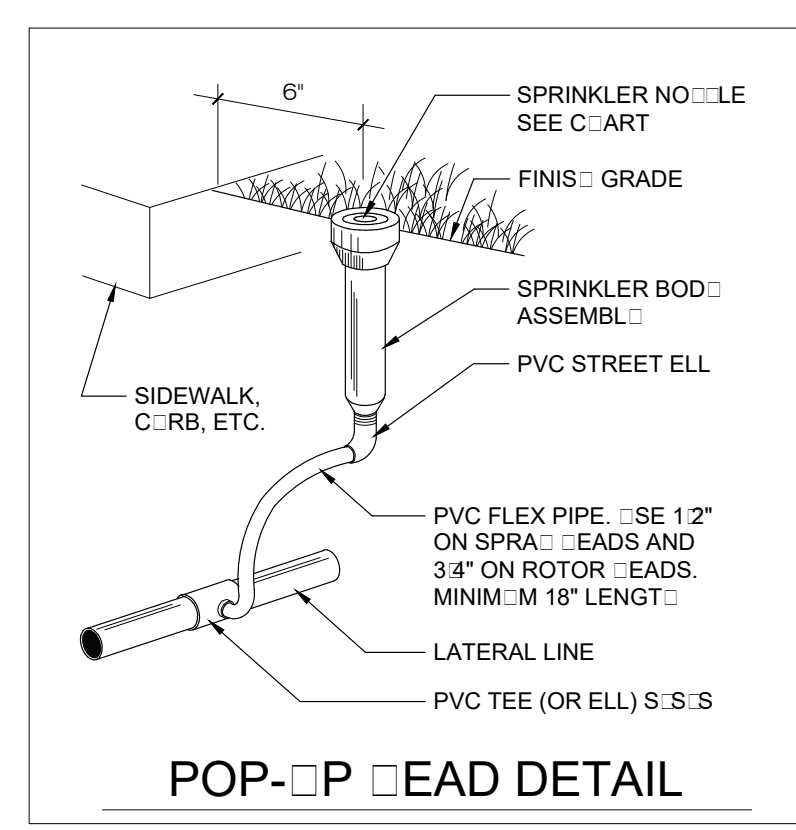
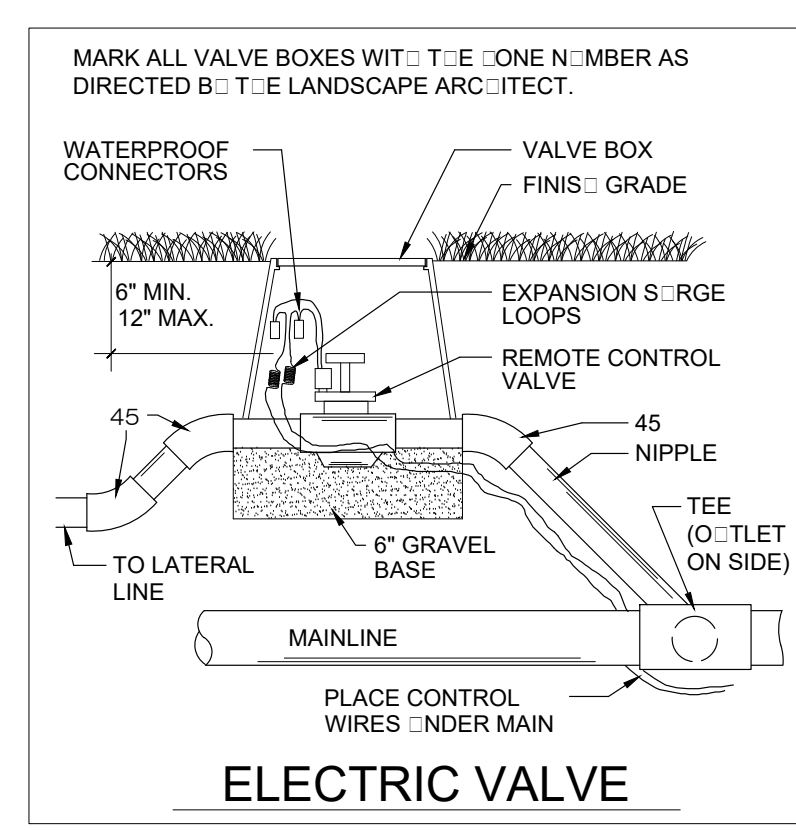
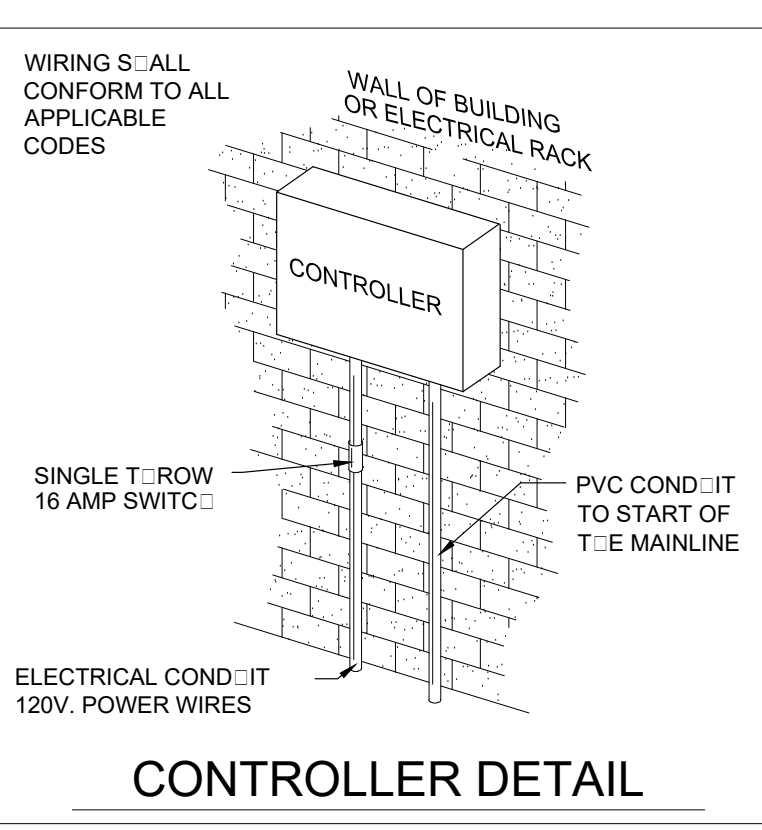
1. THE PROPOSED IRRIGATION SYSTEM IS INTENDED TO BE INSTALLED AS A PERMANENT SYSTEM AND IS CERTIFIED TO CONFORM WITH CHAPTER 37, SEC. 601 - 613 OF THE ORANGE COUNTY LAND DEVELOPMENT CODE.
2. CONTRACTOR SHALL INSTALL THE SYSTEM AS DESIGNED AND ENSURE ALL INSTALLATION PRACTICES CONFORM WITH CHAPTER 37, SEC. 601 - 613 OF THE ORANGE COUNTY LAND DEVELOPMENT CODE. NO SUBSTITUTIONS OR ALTERATIONS SHALL BE PERMITTED.

**GENERAL NOTES**

1. CONTRACTOR IS RESPONSIBLE FOR ALL APPLICABLE PERMITS REQUIRED TO INSTALL THE IRRIGATION SYSTEM. CONTRACTOR TO COORDINATE WITH THE OWNER TO OBTAIN ANY ADDITIONAL REQUIRED INFORMATION.
2. ALL SLEEVES SHALL BE INSTALLED SUCH THAT THE TOP OF THE SLEEVE SHALL BE A MINIMUM OF 18" BELOW THE BOTTOM OF THE PAVED SURFACE ABOVE. CONTRACTOR SHALL VERIFY MAIN LINE AND LATERAL SIZES PRIOR TO SLEEVE INSTALLATION. SEE DETAIL.
3. CONTRACTOR TO INSTALL 14-1 DIRECT BIRIAL CONTROL WIRE TO CONNECT THE EXISTING BATTER OPERATED VALVES INTO THE ADJACENT CONTROLLER. EACH CONNECTION SHALL CONTAIN ONE CONTROL WIRE (BLUE) FOR EACH VALVE AND ONE COMMON WIRE (YELLOW). COMMON WIRES MAY BE SPARED BETWEEN ADJACENT VALVES. CONTROL WIRE SHALL BE RIGID TO A MINIMUM DEPTH OF 12" AND SHALL NOT BE RIGID TO ROADSIDE LANDSCAPE AREAS UNLESS IT IS SLEEVED. CONTROL WIRE SHALL BE BIRIED WITH CAUTION TAPE INSTALLED 4" - 6" DIRECTLY ABOVE. CAUTION TAPE TO BE APPROVED FOR DIRECT BIRIAL.
4. ALL MAINLINE PIPING SHALL BE RIGID TO A MINIMUM DEPTH OF 18" OF COVER AND ALL LATERAL PIPING SHALL BE RIGID TO A MINIMUM DEPTH OF 12" OF COVER.
5. ALL POP-UP ROTOR AND SPRINKLER HEADS SHALL BE INSTALLED USING AN 18" PVC FLEX PIPE CONNECTION. CONTRACTOR SHALL NOT USE FIBERGLASS PIPE.
6. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. THE SMALLEST LATERAL PIPE SIZE TO A SINGLE SPRINKLER ROTOR HEAD SHALL BE 3/4".
7. ALL REMOTE CONTROL VALVES, GATE VALVES AND CHECK COUPLERS SHALL BE INSTALLED IN VALVE BOXES. ALL VALVE BOXES SHALL BE INSTALLED TO PROVIDE A NEAT AND ORDERED APPEARANCE. VALVE BOXES INSTALLED ADJACENT TO EACH OTHER SHALL BE ORIENTED IN THE SAME DIRECTION AND SHALL BE EVENLY SPACED.
8. CONTROL WIRE SHALL BE 14-1 DIRECT BIRIAL COLORED RED FOR CONTROL WIRES AND WHITE FOR COMMON WIRES UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS. NO CROSS CONNECTION BETWEEN CONTROLLERS SHALL BE ALLOWED. WIRE SPLICES SHALL BE MADE ONLY IN VALVE BOXES USING RAIN BIRD DB WIRE CONNECTORS.
9. IT IS THE RESPONSIBILITY OF ALL SITE CONTRACTORS TO FAMILIARIZE THEMSELVES WITH AND EXERCISE CARE SO AS TO NOT DAMAGE ANY EXISTING IRRIGATION COMPONENTS (TO REMAIN, BERMS, WALLS, STRUCTURES, PLANT MATERIALS AND UTILITIES). AN CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OR REPLACEMENT OF ALL ITEMS DAMAGED BY HIS WORK. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF SLEEVES AND PIPING THROUGH WALLS, UNDER ROADWAYS AND PAVING, ETC.
10. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN AREA DIMENSIONS EXIST THAT MAY NOT HAVE BEEN CONSIDERED IN THE SYSTEM DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS.
11. FINAL LOCATION OF THE AUTOMATIC CONTROLLER(S) SHALL BE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING POWER SUPPLY TO THE CONTROLLER LOCATION.
12. ELECTRICAL SERVICE TO ALL EQUIPMENT SHALL BE PROVIDED TO A LOCATION BOX AT THE EQUIPMENT LOCATION. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION FROM THE LOCATION BOX TO ALL EQUIPMENT.
13. THE IRRIGATION CONTRACTOR SHALL FURNISH AND ADJUST ALL SPRINKLER HEADS AND VALVES TO PROVIDE OPTIMUM COVERAGE WITH MINIMAL OVERSPRAYS ONTO WALKS, STREETS, WALLS, ETC. IN ORDER TO ACCOMPLISH THIS, THE CONTRACTOR MUST SUBMIT THE VARIABLE ARC NOZZLES IN PLACE OF THE SPECIFIED FIXED ARC NOZZLES WHERE NECESSARY.
14. THE CONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH ALL PREVAILING LAWS, CODES AND REGULATIONS.
15. ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
16. THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING. THE AS-BUILT DRAWINGS SHALL LOCATE ALL CONTROLLERS, WELLS, MAINLINE ROUTE AND VALVES SHOWING EXACT MEASUREMENTS FROM HARD SURFACES. HEADS TO BE SHOWN IN THEIR GENERAL LOCATION.
17. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP.
18. CONTRACTOR SHALL INSTALL GROUNDING AT EACH CONTROLLER LOCATION. CONTRACTOR TO FOLLOW ALL RAIN BIRD REQUIREMENTS AND AMERICAN SOCIETY OF IRRIGATION CONSULTANTS (ASIC) EARTH GROUNDING ELECTRONIC EQUIPMENT IN IRRIGATION SYSTEMS DESIGN GUIDE (DATED JANUARY 2, 2002) AND LOCAL CODE TO ENSURE THE SYSTEM IS GROUNDED PER SPECIFICATIONS. IT IS THE SOLE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO PROPERLY GROUND THE SYSTEM. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY VERIFICATION CERTIFICATION INDICATING THE ENTIRE SYSTEM IS GROUNDED TO MEET SPECIFICATIONS.

**LEGEND**

	RAIN BIRD 1806-PRS 6" POP-UP HEAD WITH VARIABLE ANGLE NOZZLES. SYMBOL INDICATES RADII'S FIXED ANGLE NOZZLES MAY BE USED WHERE APPROPRIATE
	RAIN BIRD XFS-09-12 DRIPLINE INSTALLED AT 12" O.C. WITH EMITTERS IN A TRIANGULAR PATTERN 1" BELOW GRADE. RAIN BIRD COMPRESSION FITTINGS AND BARBED TAPPING STAKES SHALL BE USED. EACH CONE SHALL HAVE A MIN. OF ONE FLOW VALVE, ONE AIR RELIEF VALVE, AND ONE OPERATION INDICATOR. INSTALL ALL DRIPLINE PER RAIN BIRD SPECIFICATIONS AND DETAILS.
	RAIN BIRD 1402 FULL CIRCLE BUBBLER HEAD. EACH SYMBOL REPRESENTS TWO BUBBLERS.
	RAIN BIRD PEB SERIES ELECTRIC CONTROL VALVE. INSTALL VALVE IN A RAIN BIRD VB-STD VALVE BOX. CONNECT WITH RAIN BIRD DB WIRE CONNECTORS. SEE GENERAL NOTE #18 FOR GROUNDING INFORMATION. INDICATE ONE NUMBER ON VALVE BOX LID.
	RAIN BIRD XC-150-COM CONTROL ONE KIT. INSTALL VALVE IN A RAIN BIRD VB-STD VALVE BOX. CONNECT WITH RAIN BIRD DB WIRE CONNECTORS AND. SEE GENERAL NOTE #18 FOR GROUNDING INFORMATION. INDICATE ONE NUMBER ON VALVE BOX LID.
	ZONE TAG
	SCHEDULE 40 PVC MAINLINE - 2 1/2"
	CLASS 160 PVC LATERAL LINE - SIZE AS SHOWN UNTIL A SMALLER SIZE IS SHOWN. (3/4" MIN.)
	SCHEDULE 40 PVC SLEEVE. CONTRACTOR TO CONFIRM SLEEVE SIZES. SLEEVES SHALL BE TWO SIZES LARGER THAN LATERAL SLEEVE UNDER ALL SIDEWALKS AND PAVEMENT. NO TUNNELING SETTING CONTROL WIRE SLEEVES SHALL BE 2". SEE GENERAL NOTE #2.
	RAIN BIRD ESP-12LXME MODULAR CONTROLLER. INSTALL WITH A RAIN BIRD WR2-RFC RAIN FREE E SENSOR. GROUND WITH A 8 MINIMUM COPPER CLAD ROD. SLEEVE TO AS REQUIRED.
	1 1/2" RECLAIMED WATER METER. CONTRACTOR TO CONNECT TO EXISTING WATER SOURCE AND VERIFY A MINIMUM OF 32 GPM AND 55 STATIC PSI. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF FIELD CONDITIONS ARE DIFFERENT.



**ONE CHART**

ZONE #	GPM	SPRINKLER ROTOR	RUN TIME (MIN.)	CYCLES PER YEAR	GALLONS PER YEAR
1	26	DRIP	20	77	40,040
2	28	DRIP	20	77	43,120
3	17	SPRINKLER	30	77	39,270
4	30	SPRINKLER	30	77	69,300
5	28	DRIP	20	77	43,120
6	28	DRIP	20	77	43,120
7	32	SPRINKLER	30	77	73,920
<b>TOTAL</b>					<b>351,890</b>

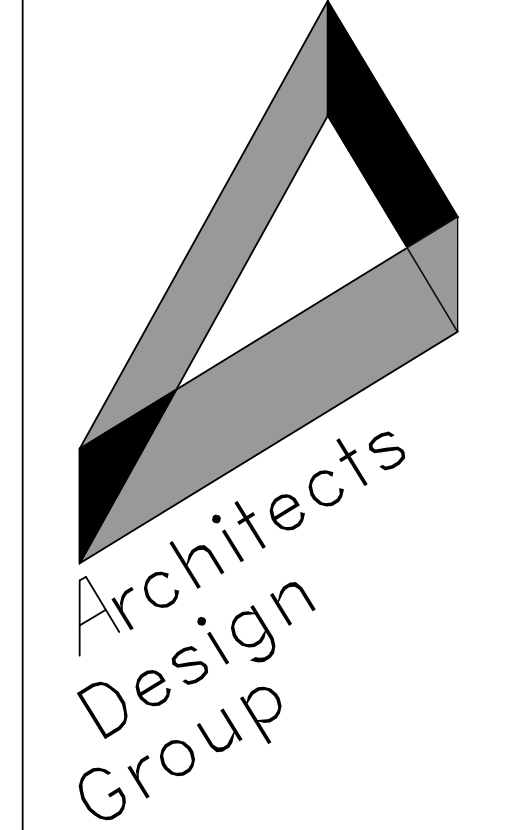
(AADF 0.000977 mgd OR 977 gpd)

TWICE A WEEK MARCH 10 - NOV. 2, 2019 ONCE A WEEK NOV. 3 - MARCH 9, 2019

NOTE: ONE ZONE TO BE OPERATED AT A TIME.

32 GALLONS PER MINUTE REQUIRES 1 1/2" WATER METER TO KEEP PRESSURE LOSS BELOW 5 PSI.

TOTAL IRRIGATED AREA 13,700 SF



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**ORANGE COUNTY FIRE STATION #87**  
**ORANGE COUNTY, FL**

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revisions/addenda

Number	Description	Date Issued
1	PERMIT RESPONSES	JULY 18, 2019

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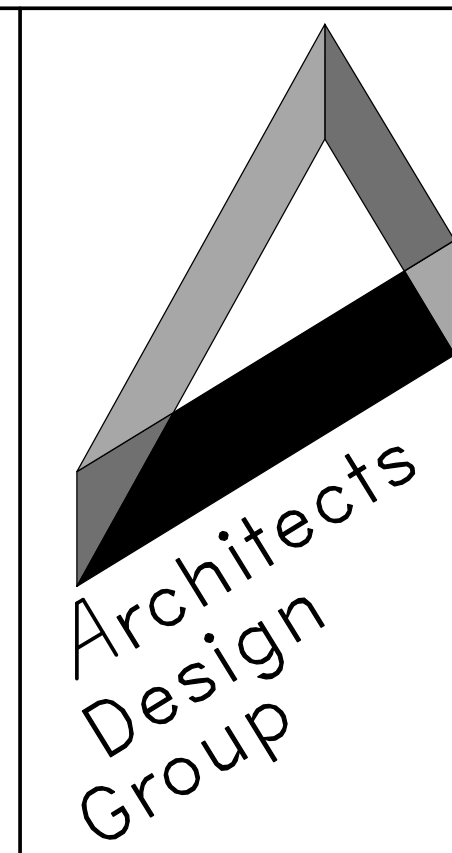
**IRRIGATION PLAN**

scale: 1" = 20'  
 drawn: JD  
 checked: JD  
 approved: SBK  
 date: 6-12-2019

project no. 842  
 sheet number: L-4.01







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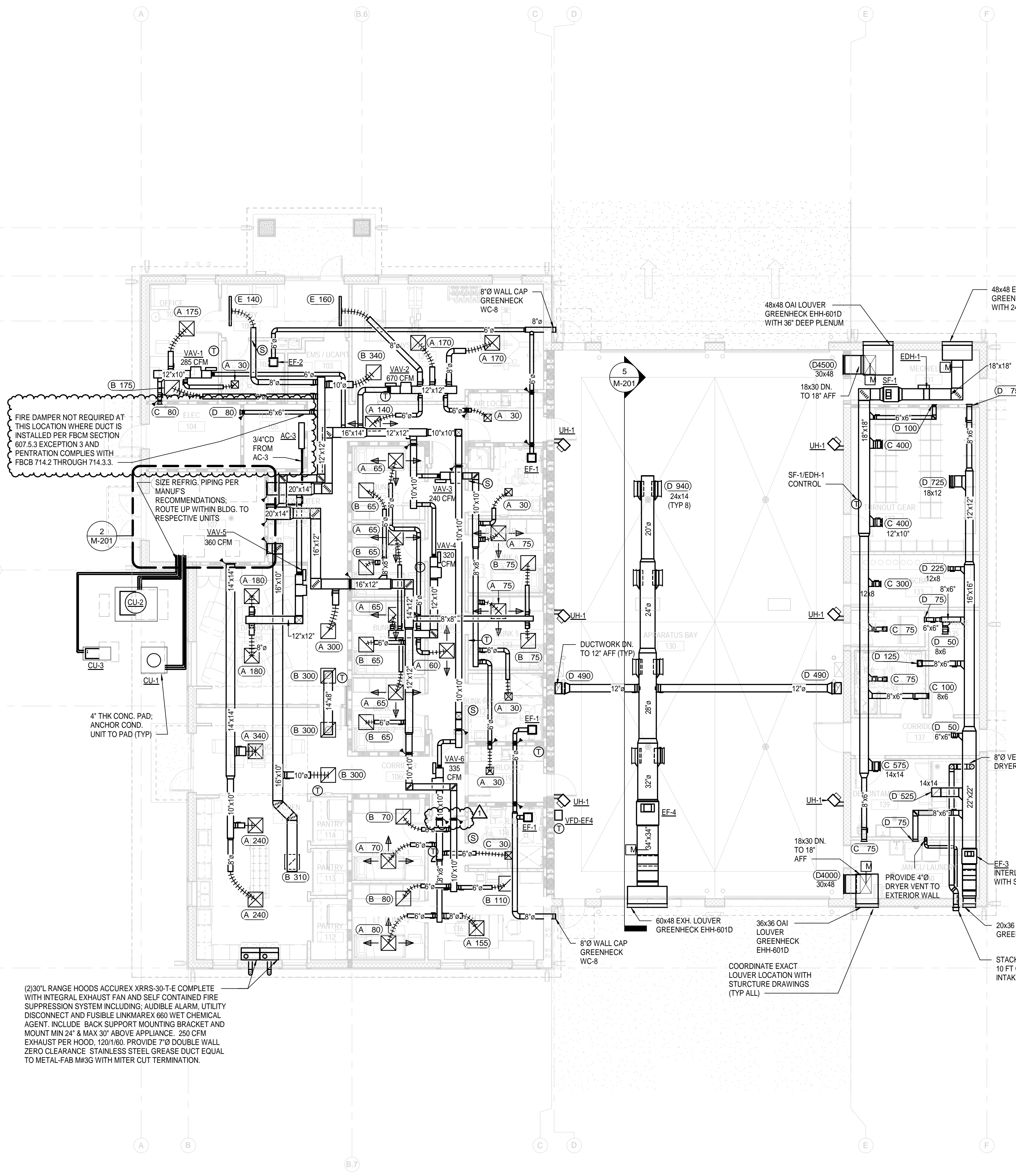
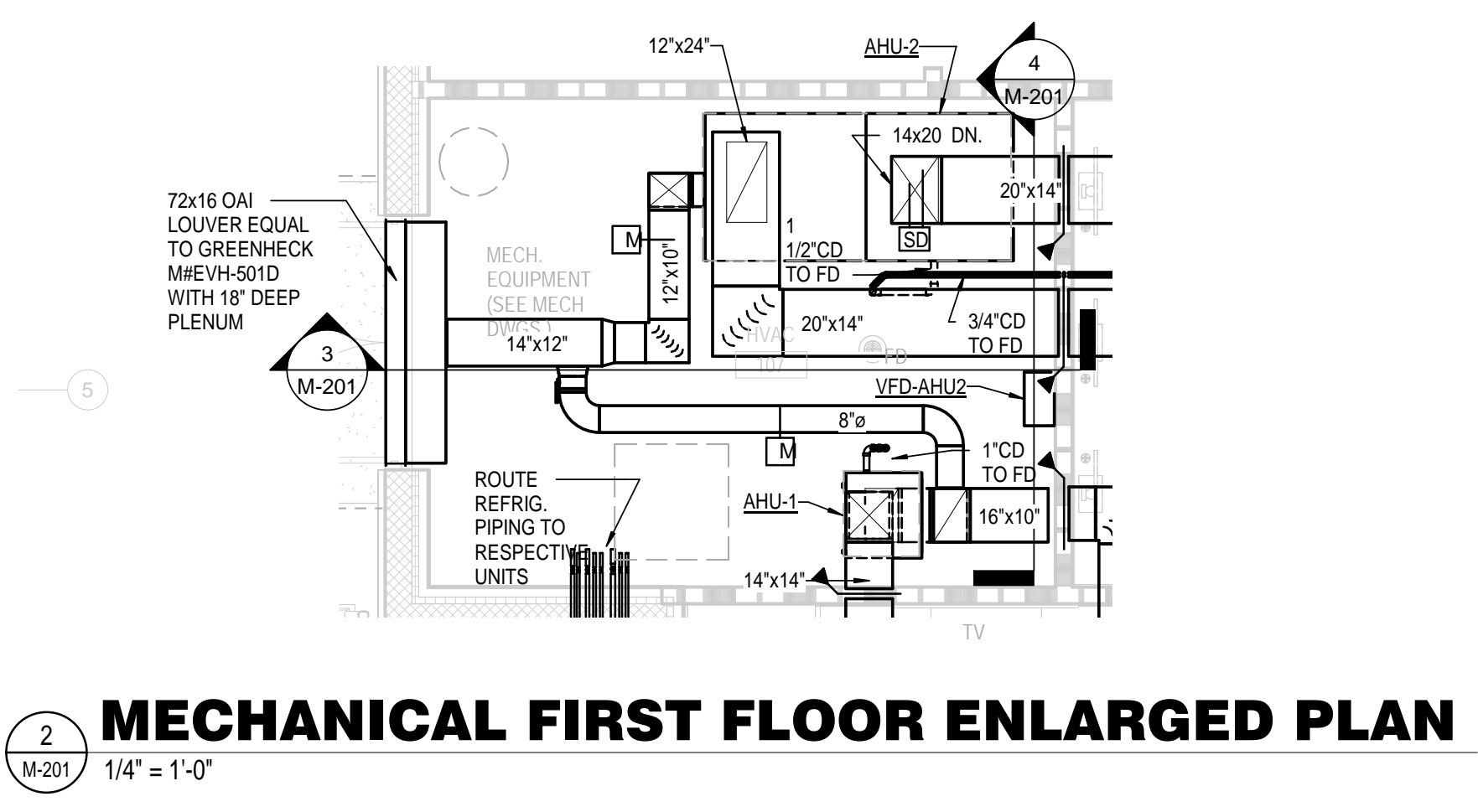
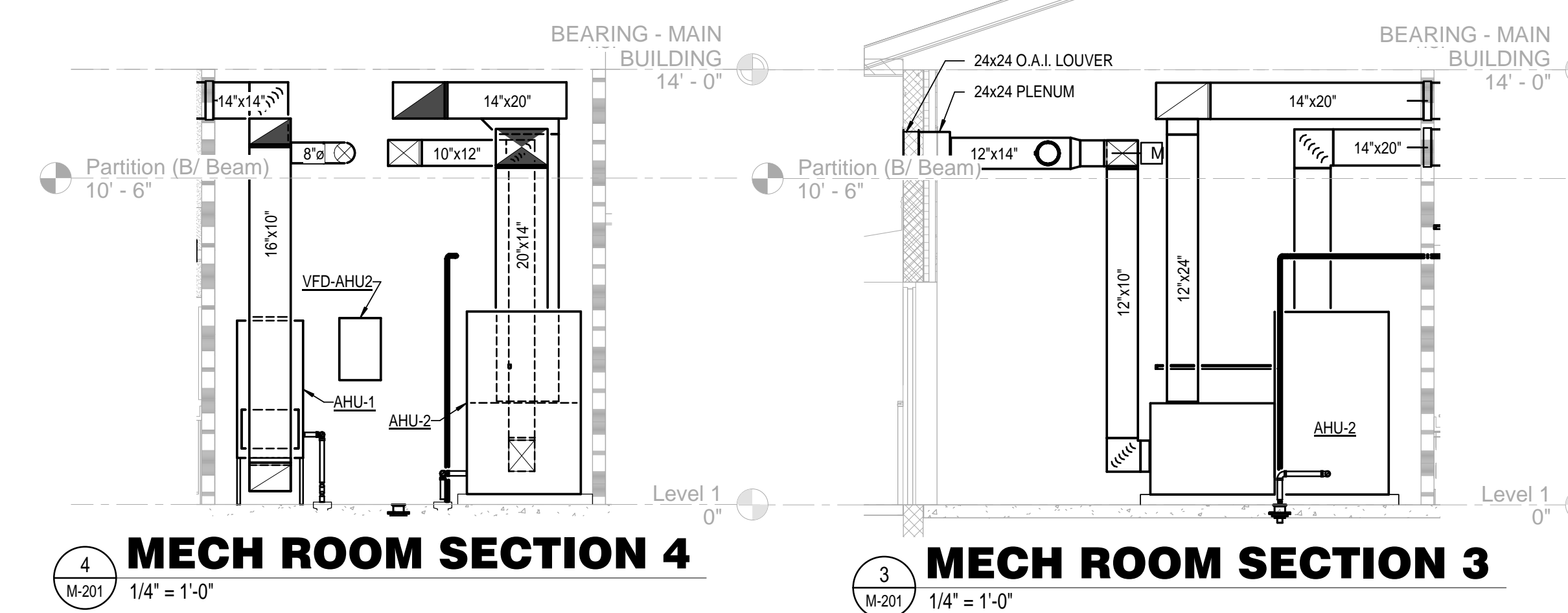
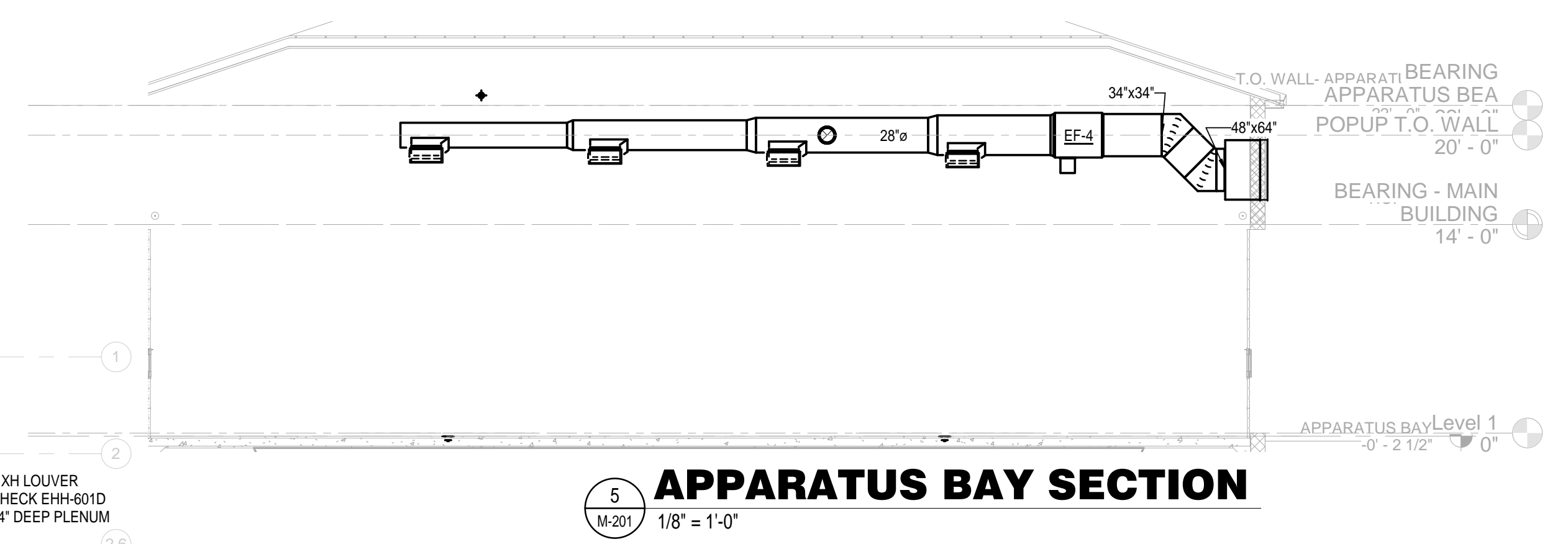
• revisions/addenda

Number	Description	Date Issued
1	Permit Responses	July 18, 2019

• sheet title  
**MECHANICAL  
 PLAN**

• scale: As indicated  
 • drawn: AD  
 • checked: JS  
 • approved: JS  
 • date: 06/12/19

• project no.  
**963**  
 • sheet number:  
**M-201**



FIRE DAMPER NOT REQUIRED AT THIS LOCATION WHERE DUCT IS INSTALLED PER FBCM SECTION 607.5.3 EXCEPTION 3 AND PENETRATION COMPLIES WITH FBCB 714.2 THROUGH 714.3.3.

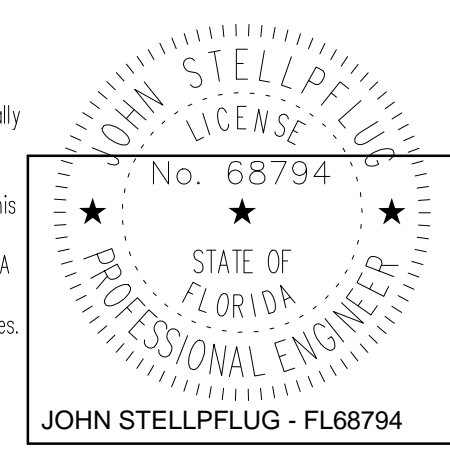
SIZE REFRIG. PIPING PER MANUF.'S RECOMMENDATIONS. ROUTE UP WITHIN BLDG. TO RESPECTIVE UNITS.

(2)30" RANGE HOODS ACCUREX XRRS-30-T-E COMPLETE WITH INTEGRAL EXHAUST FAN AND SELF CONTAINED FIRE SUPPRESSION SYSTEM INCLUDING: AUDIBLE ALARM, UTILITY DISCONNECT AND FUSIBLE LINK/MAREX 660 WET CHEMICAL AGENT. INCLUDE BACK SUPPORT MOUNTING BRACKET AND MOUNT MIN 24" & MAX 30" ABOVE APPLIANCE. 250 CFM EXHAUST PER HOOD. 120/1/60. PROVIDE 7"Ø DOUBLE WALL ZERO CLEARANCE STAINLESS STEEL GREASE DUCT EQUAL TO METAL-FAB M#3G WITH MITER CUT TERMINATION.

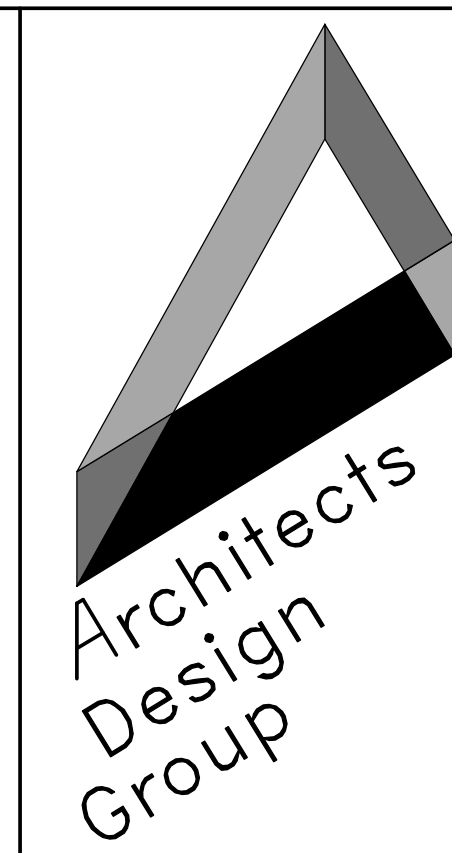
COORDINATE EXACT LOUVER LOCATION WITH STRUCTURE DRAWINGS (TYP ALL)

STACK DRY VENTS. MAINTAIN 10 FT CLEARANCE FROM INTAKE LOUVER

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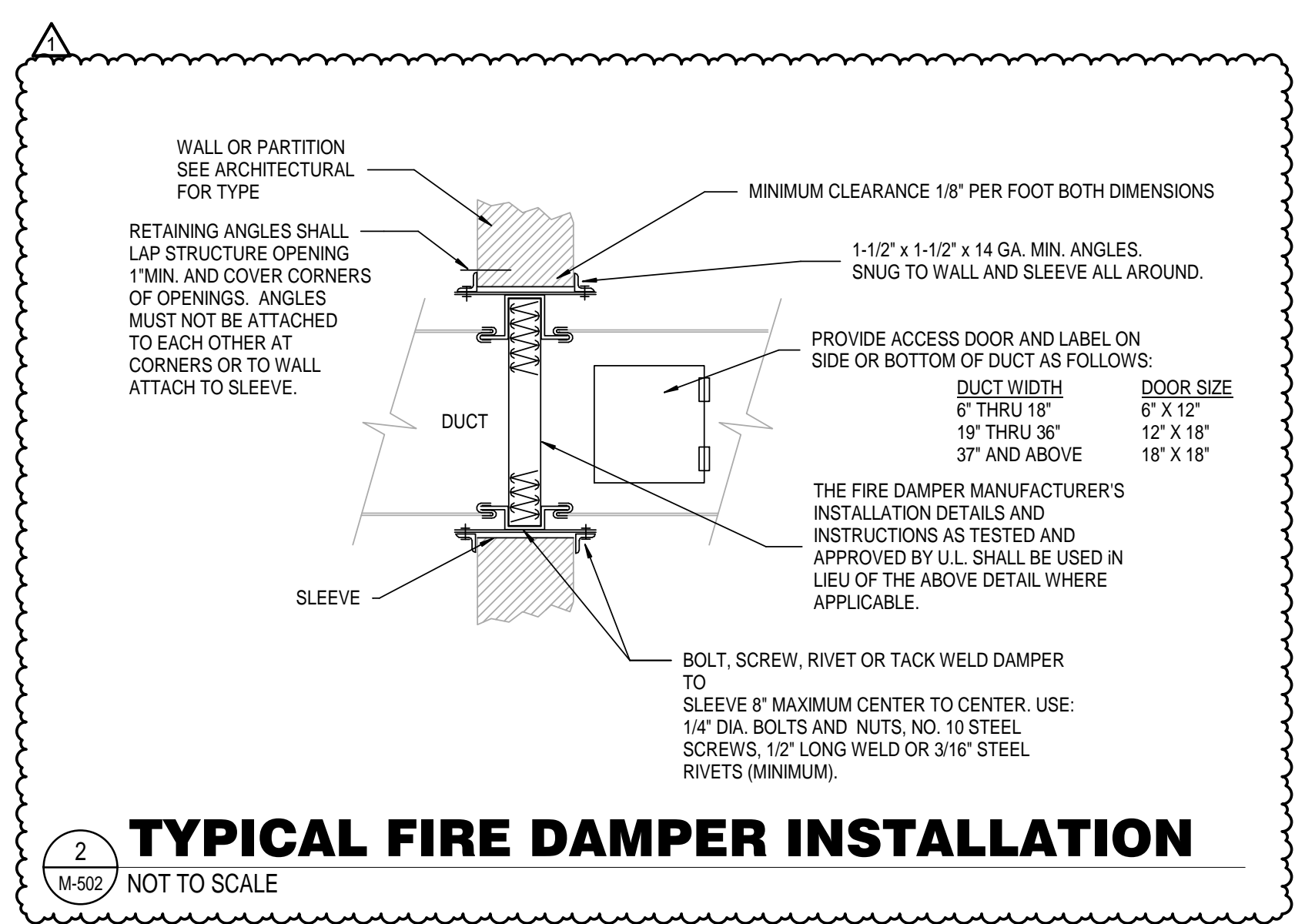
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Number	Description	Date Issued
1	Permit Responses	July 18, 2019

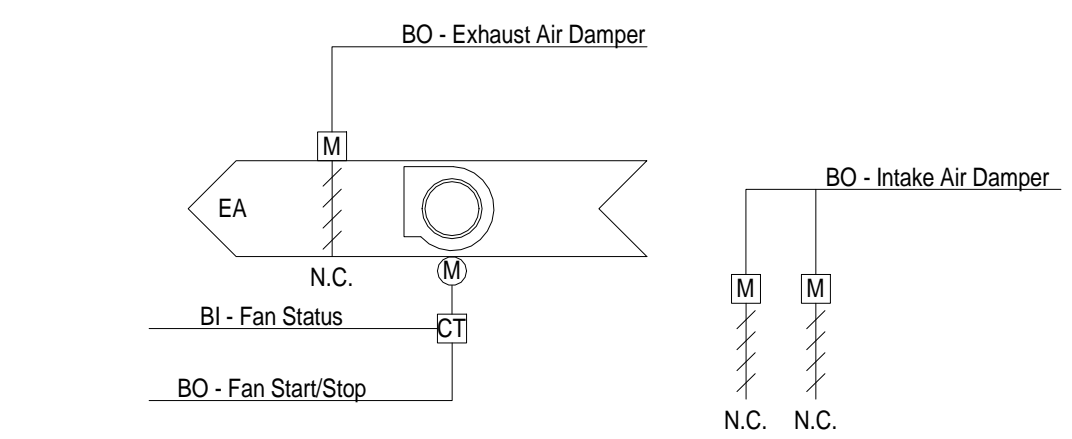
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**MECHANICAL  
 CONTROLS**

• scale: NOT TO SCALE  
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 • checked: JS  
 • approved: JS  
 • date: 06/12/19

• project no.  
**963**  
 • sheet number:  
**M-502**

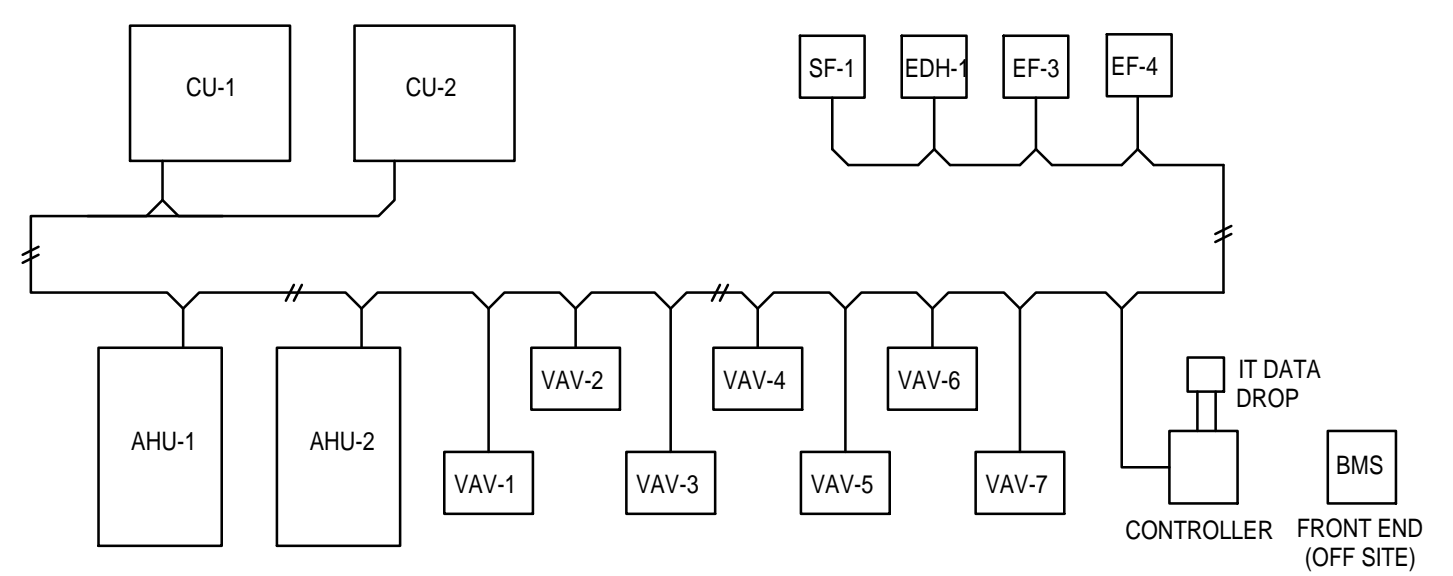


**TYPICAL FIRE DAMPER INSTALLATION**  
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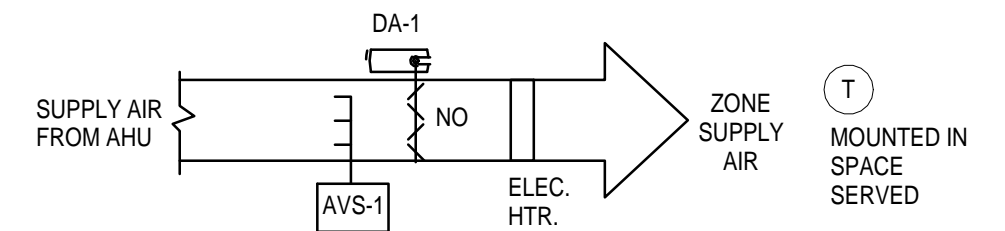
**APPARATUS BAY EF-4 SEQUENCE OF OPERATION:**  
 GENERAL - EXHAUST FAN SHALL HAVE A UNITARY CONTROLLER THAT PROVIDE CONTROLS TO MEET THE FOLLOWING SEQUENCE OF OPERATION:  
 FAN:  
 THE FAN SHALL ACTIVATE ON AN INCREASE IN SPACE TEMPERATURE ABOVE SETPOINT. FAN SHALL OPERATE AT MINIMUM SPEED AND VFD SHALL INCREASE FAN SPEED TO MAINTAIN SPACE TEMPERATURE. THE VFD SHALL INCREASE OR REDUCE SPEED INCREMENTS OF 10% SPEED EVERY 5 MINUTES UNTIL SPACE TEMPERATURE IS SATISFIED.  
 MOTORIZED DAMPERS:  
 THE EXHAUST AIR DAMPER AND (2)INTAKE DAMPERS SHALL OPEN PRIOR TO FAN ACTIVATION.  
 SF-1 / EDH-1: FAN SHALL BE ON A 24/7 SCHEDULE (ADJUSTABLE) TO MAINTAIN SPACE TEMPERATURE. MOTOR OPERATED DAMPER SHALL OPEN PRIOR TO FAN OPERATION. ON A CONTINUED DROP IN SPACE TEMPERATURE BELOW HEAT SETPOINT, THE ELECTRIC DUCT HEATER EDH-1 SHALL BE ACTIVATED AND MODULATE TO MAINTAIN HEAT SETPOINT.

**GENERAL FAN CONTROLS**  
 NOT TO SCALE



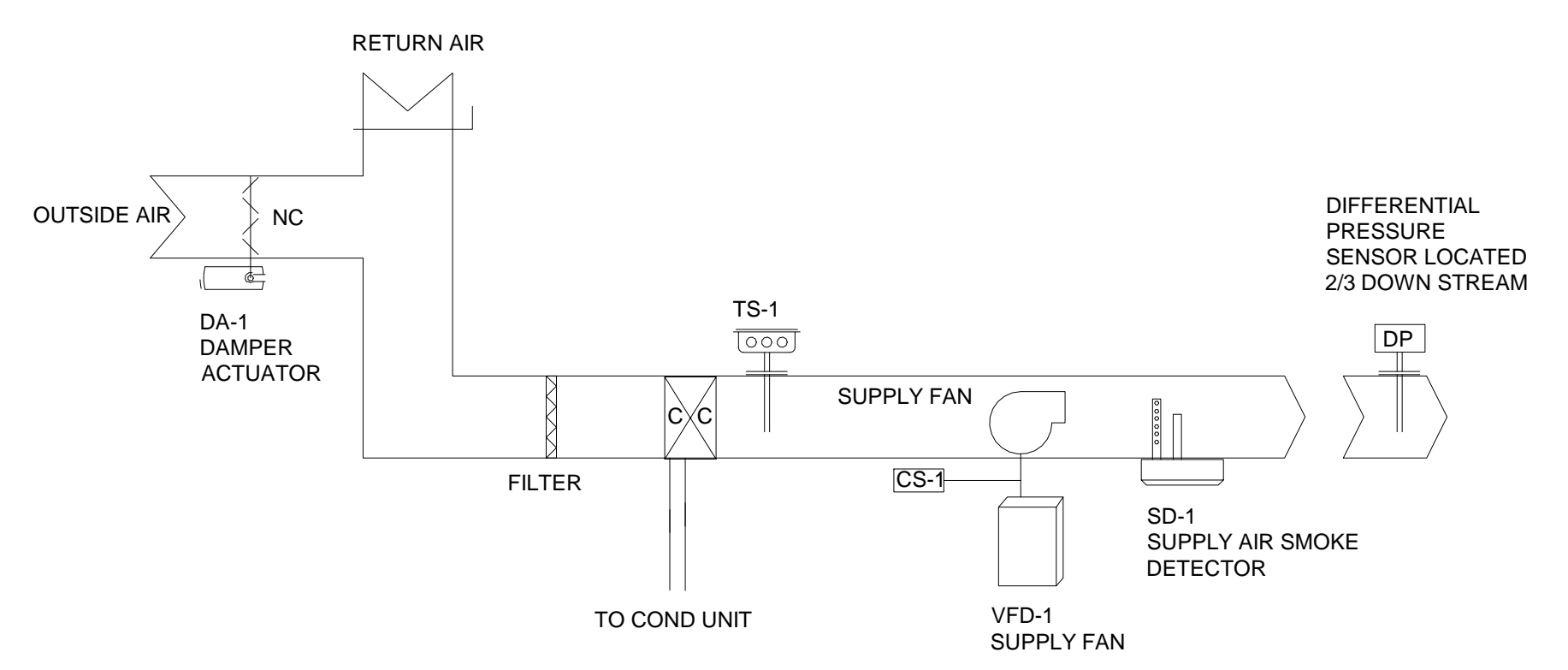
**BMS SYSTEM ARCHITECTURE**  
 No Scale

NOTE:  
 PROVIDE GRAPHICS AND CONTROL PROGRAMMING AS REQUIRED, TO DEPICT AND CONTROL NEW HVAC SYSTEMS PER SEQUENCES OF OPERATION. NEW GRAPHICS DEPICTING HVAC SYSTEMS SHALL INCLUDE INPUTS, OUTPUTS, FAULTS, SCHEDULING AND OTHER CONTROLS THAT ALLOW FOR FULL COMMUNICATION OF THE SYSTEMS. PROVIDE MONITORING OF HGR SYSTEM (AHU-2) AS ALLOWED FROM INTEGRAL AHU-2 CONTROLLER PROVIDED BY MANUFACTURER.



**VARIABLE VOLUME AIR TERMINAL - SEQUENCE OF OPERATION:**  
 DESCRIPTION:  
 1. EACH AIR TERMINAL VALVE CONSISTS OF AN INLET CONTROL DAMPER, INLET AIR VELOCITY SENSING DEVICE, ELEC. HEATING COIL AND UNIT MOUNTED DDC CONTROLLER. UNITS ARE VARIABLE AIR VOLUME DELIVERY WITH MINIMUM AIRFLOW SETPOINTS. ALL CONTROL WIRING CONNECTIONS BY CONTROLS CONTRACTOR.  
 2. THE AIR TERMINAL VALVE DAMPER SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE. AS SPACE TEMPERATURE DROPS TO THE SET POINT, THE INLET AIR DAMPER SHALL CLOSE TO THE MINIMUM AIR QUANTITY VALUE SCHEDULED. AS SPACE TEMPERATURE CONTINUES TO DROP THE ELECTRIC HEATER SHALL STAGE ON TO MAINTAIN THE HEATING SET POINT. A 5°F DEADBAND BETWEEN HEATING AND COOLING SHALL BE MAINTAINED. COORDINATE MAX. & MIN. AIRFLOW SET POINTS WITH SCHEDULES ON DRAWINGS.

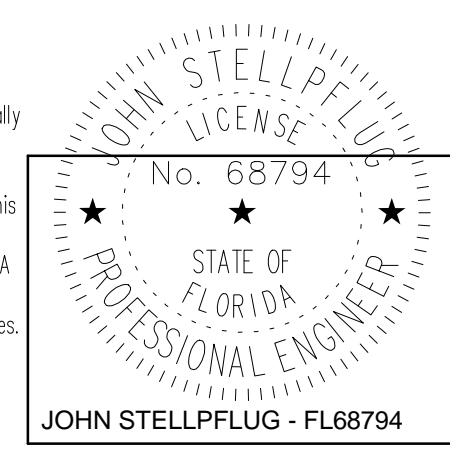
**VARIABLE AIR VOLUME AIR TERMINAL**  
 NOT TO SCALE



**VARIABLE AIR VOLUME AIR HANDLING UNIT SEQUENCE OF OPERATION**  
 THE VAV AIR HANDLING UNIT SHALL BE PROVIDED WITH A UNITARY CONTROLLER THAT SHALL MEET THE FOLLOWING SEQUENCE OF OPERATION. PROVIDE BMS MONITORING OF ALL AVAILABLE POINTS & ALARMS.  
**TEMPERATURE CONTROL:** THE CONDENSING UNIT SHALL STAGE COMPRESSORS TO MAINTAIN THE DISCHARGE AIR TEMPERATURE OF 55°F AS SENSED BY TS-1. THE FAN SPEED SHALL MODULATE TO MAINTAIN SUPPLY DUCT DIFFERENTIAL PRESSURE SETPOINT (0.75", ADJ.) WHEN ALL VAV TERMINALS AT MIN. POSITION. HOT GAS REHEAT SHALL BE ACTIVATED TO INCREASE DISCHARGE AIR TEMPERATURE 1° F EVERY 15 MINUTES UNTIL A VAV TERMINAL LEAVES ITS MINIMUM POSITION AT WHICH POINT THE REVERSE IS TRUE  
**SMOKE CONTROL:** SHOULD PRODUCTS OF COMBUSTION BE DETECTED BY THE SUPPLY AIR SMOKE DETECTOR (BY OTHERS), THE SUPPLY FAN SHALL BE DE-ENERGIZED BY THE FIRE ALARM SYSTEM. AIR HANDLING UNIT SHOULD AUTOMATICALLY START ONCE THE FIRE ALARM IS RESET. MANUAL RESET ARE NOT ACCEPTABLE.  
**FAN STATUS:** THE EMS SHALL MONITOR THE FAN STATUS AS SENSED BY THE CURRENT SWITCH (CS-1).

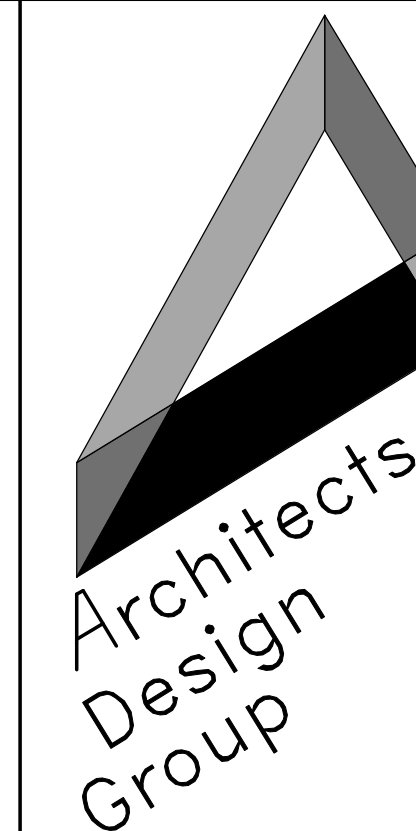
**AHU-2/CU-2 CONTROL DIAGRAM**  
 NTS

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Number	Description	Date Issued
1	Permit Responses	July 18, 2019

• sheet title  
**PLUMBING  
UNDERGROUND  
PLAN**

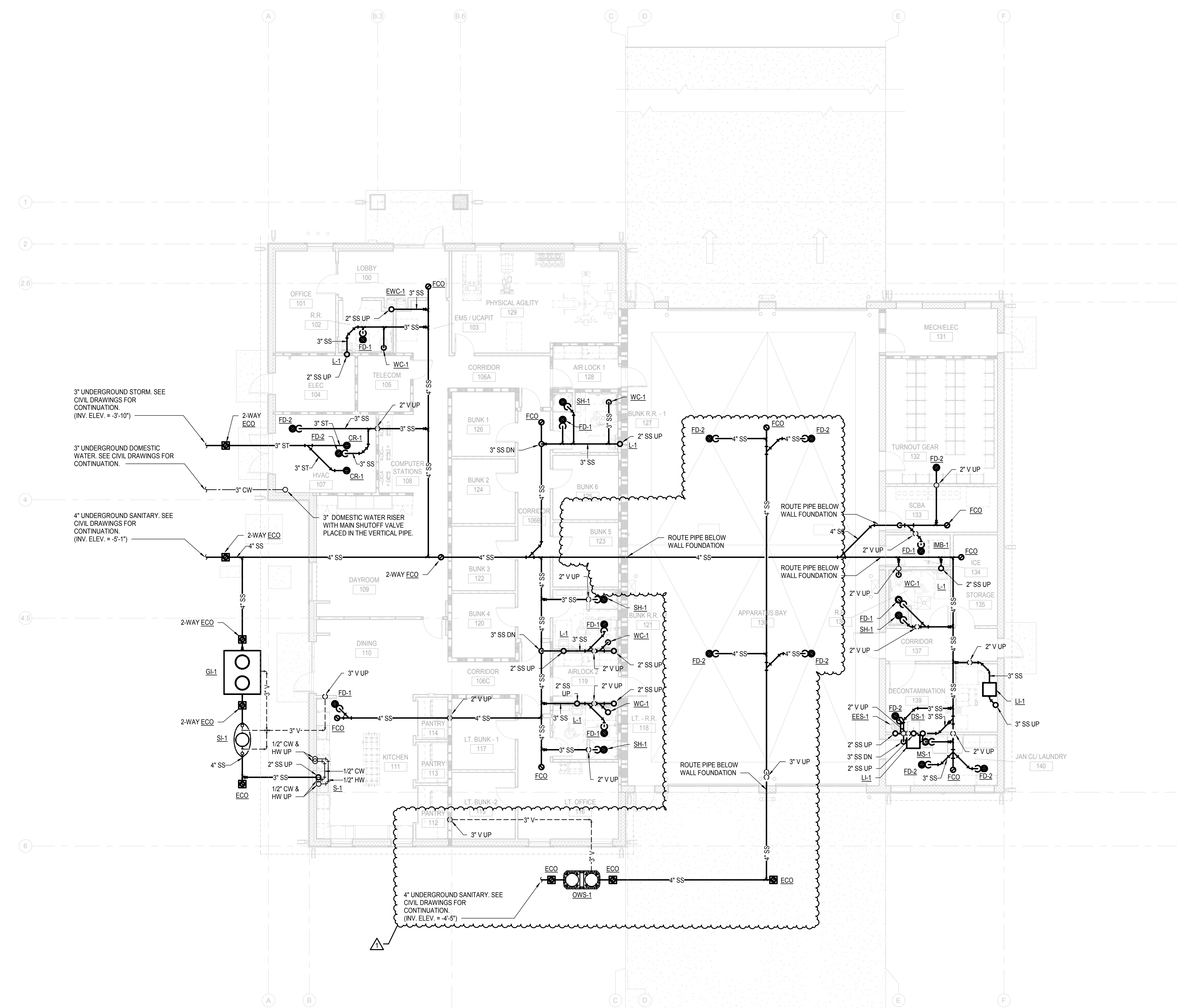
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• checked: JSS  
• approved: JS  
• date: 06/12/19

• project no.

**963**

• sheet number:

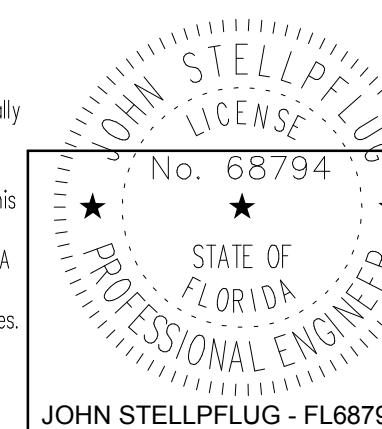
**P-201**



**PLUMBING UNDERGROUND PLAN**

1  
P-201 1/8" = 1'-0"

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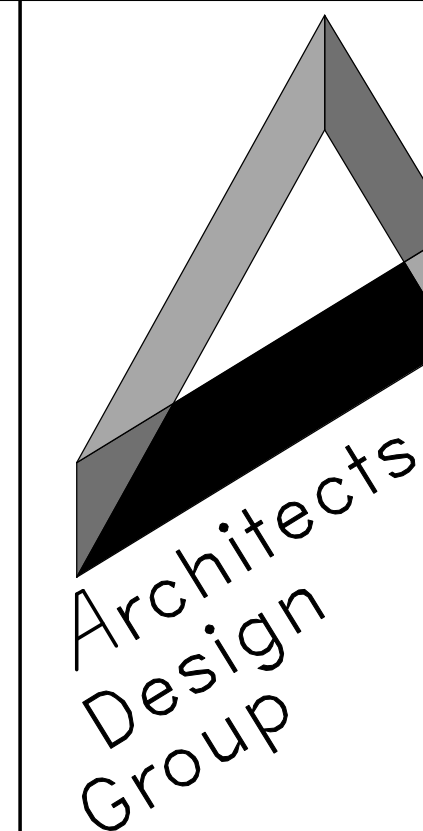


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Number	Description	Date Issued
1	Permit Responses	July 18, 2019

• sheet title  
**PLUMBING  
FLOOR PLAN**

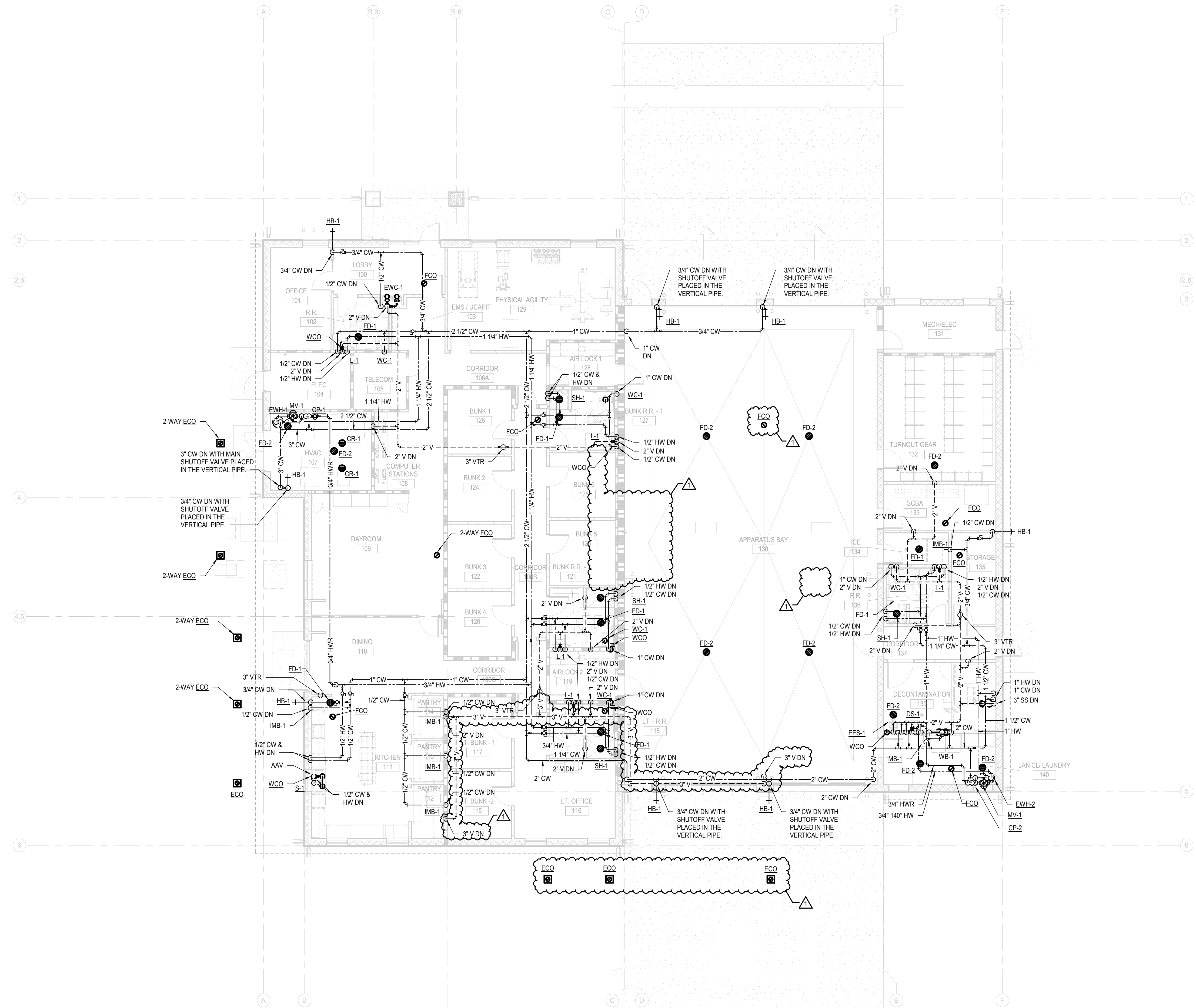
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• date: 06/12/19

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**963**

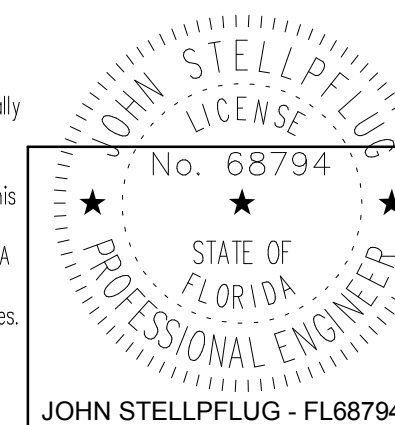
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**P-301**



**1 PLUMBING FLOOR PLAN**  
P-301 1/8" = 1'-0"

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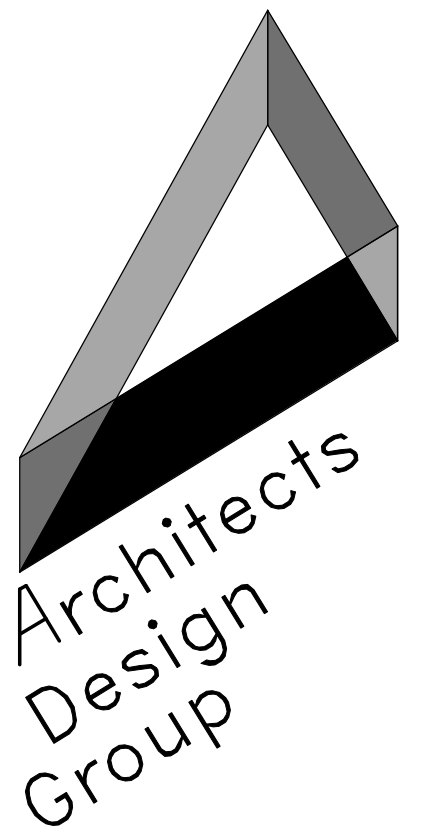


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**ORANGE COUNTY  
 FIRE STATION 87**

**ORANGE COUNTY  
 FIRE RESCUE**

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• revisions/addenda

Number	Description	Date Issued
1	Permit Responses	July 18, 2019

• sheet title  
**PLUMBING  
 RISER  
 DIAGRAMS**

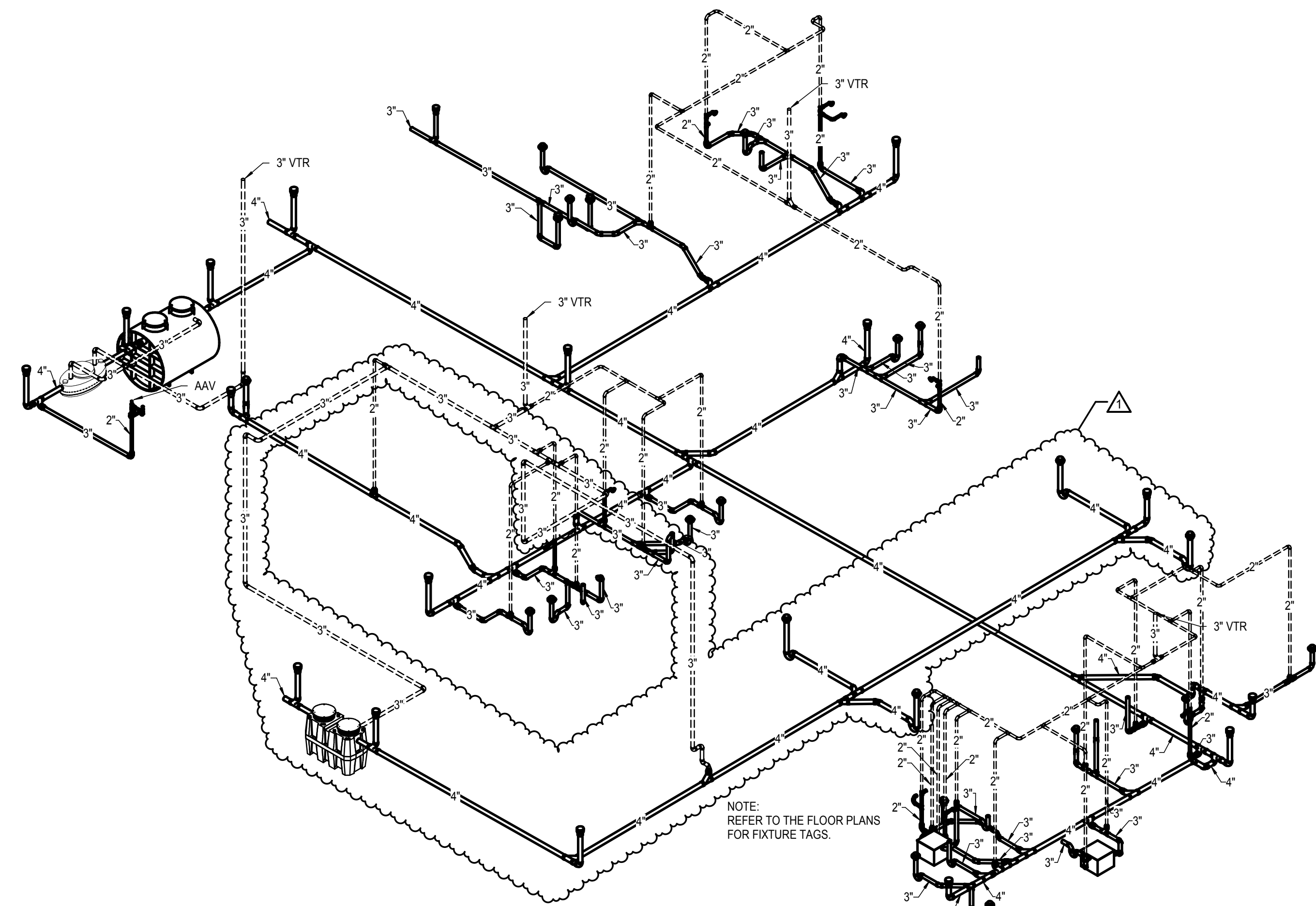
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 • drawn: FB  
 • checked: JSS  
 • approved: JS  
 • date: 06/12/19

• project no.

**963**

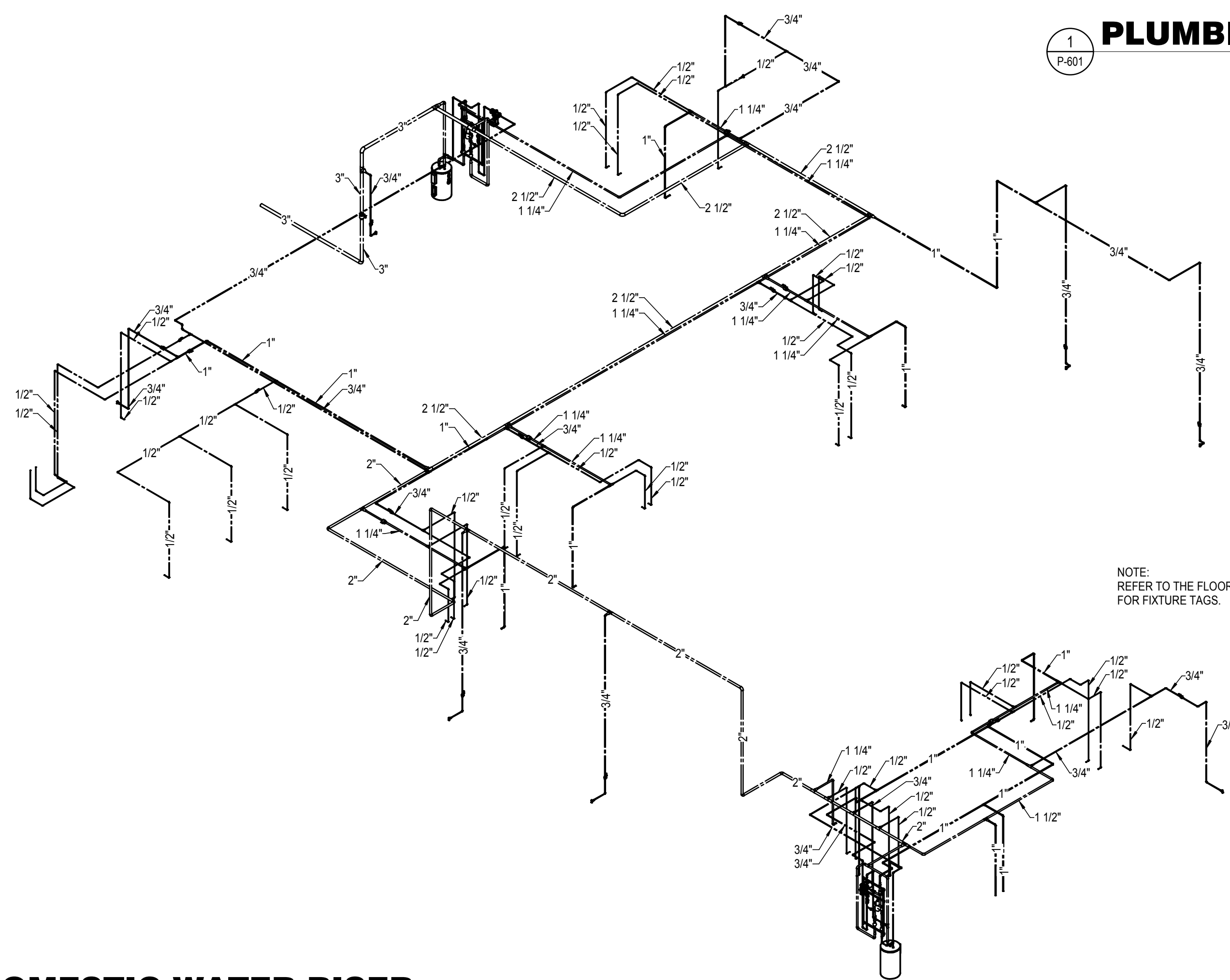
• sheet number:

**P-601**



**1 PLUMBING DWV RISER**

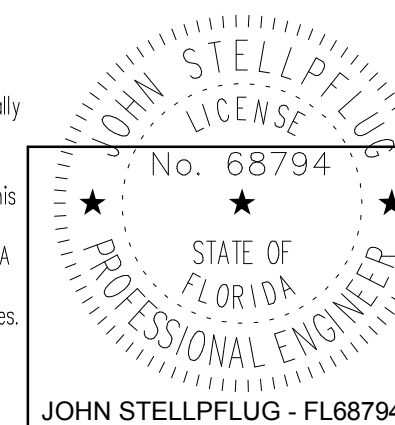
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P-601



**2 PLUMBING DOMESTIC WATER RISER**

2  
P-601

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GREASE INTERCEPTOR SCHEDULE	
MARK/UNIT	GI-1
MANUFACTURER	OLDCASTLE PRECAST
MODEL NUMBER	#4'-0X6'-6"X5'-0" MONO BOTTOM W/SLAB TOP
DESCRIPTION	CONSTRUCTED OF CONCRETE DESIGNED FOR 0 TO 5 FEET OF EARTH COVER.
GREASE CAPACITY	750 GALLONS
SIZE	48" X 78" X 60"
NOTE: CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER	
GREASE INTERCEPTOR CALCULATIONS	
SIZING: PER CHAPTER 64E-6 OF THE FLORIDA ADMINISTRATIVE CODE:	
INTERCEPTOR SIZE = M x GM x LF, WHERE	
M = MEALS PER DAY = 8 PEOPLE x 3 MEALS PER PERSON x 2 SHIFTS PER DAY = 48 MEALS PER DAY	
GM = GALLONS PER MEAL = 5 GALLONS PER MEAL (MANDATED BY 64E-6)	
LF = LOADING FACTOR = 1.00, WITH DISHWASHING (MANDATED BY 64E-6)	
MINIMUM INTERCEPTOR SIZE = 48 x 5 x 1.00 = 240 GALLONS	
MINIMUM INTERCEPTOR SIZE = 750 GALLONS (MANDATED BY 64E-6)	
INTERCEPTOR SIZE SELECTED = 750 GALLONS	

SOLIDS INTERCEPTOR SCHEDULE	
MARK/UNIT	SI-1
MANUFACTURER	ZURN
MODEL NUMBER	#SMC50
INLET/OUTLET SIZE	4"
VOLUME	50 GALLONS
SIZE	62" X 32" X 24"
NOTE: CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER	

LINT INTERCEPTOR SCHEDULE	
MARK/UNIT	LI-1
MANUFACTURER	ZURN
MODEL NUMBER	#Z1185
INLET/OUTLET SIZE	3"
FLOW RATE	70 GPM
SIZE	25" X 25" X 20"
NOTE: CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER	

OIL WATER SEPARATOR SCHEDULE	
MARK/UNIT	OWS-1
MANUFACTURER	STRIEM
MODEL NUMBER	#OS-100
DESCRIPTION	CONSTRUCTED OF SEAMLESS, ROTATIONALLY-MOLDED POLYETHYLENE WITH 16,000 LB LOAD RATED COVERS.
CAPACITY	250 GALLONS
SIZE	68" X 33" X 51 1/2"
NOTE: CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER	

CLEANOUT SCHEDULE		
MARK	APPLICATION	MANUFACTURER
FCO	FINISHED FLOORS	J.R. SMITH #4033L; WADE #W-6000-1; ZURN #ZN-1400
	FINISHED FLOORS, HEAVY DUTY	J.R. SMITH #4113L; WADE #W-6000-Z; ZURN #ZN-1400-HD
	CERAMIC AND TERRAZZO AREAS	J.R. SMITH #4193L; WADE #W-6000-U-1; ZURN #ZN-1400-Z
	UNFINISHED AREAS	J.R. SMITH #4239L; WADE #W-6000-Z; ZURN #Z-1400-HD
CO/ WCO	LINE CLEANOUTS	J.R. SMITH #4472T; WADE #W-8590-E; ZURN #ZS-1468
	STACK CLEANOUTS	J.R. SMITH #4532S; WADE #W-8560-E; ZURN #Z-1446
ECO	OUTSIDE AREAS	J.R. SMITH #4239L; WADE #W-6000-Z; ZURN #Z-1400-HD
NOTES:		
1. INSTALL ECO IN 24"x24"x4" THICK CONCRETE PAD. TOP OF PAD ELEVATION TO BE 2" ABOVE FINISHED GRADE.		
2. PROVIDE ALL CLEANOUTS WITH WIDE ANCHOR FLANGE & CLAMPING DEVICE. ATTACH CLEANOUTS TO MEMBRANE IN FLOOR. WHEN CLEANOUTS ARE LOCATED IN NON-MEMBRANE FLOORS, THEY SHALL BE FLASHED IN COMPLIANCE WITH SECTION 15140 OF THE SPECIFICATIONS.		
3. PROVIDE LINE & STACK TYPE WALL CLEANOUTS WITH ACCESS COVERS		

TRAP SEAL PROTECTION SCHEDULE			
PIPE SIZE	PIPE MATERIAL	INSTALLATION TYPE	MANUFACTURER
2"	PVC OR C.I.	F.D. OUTLET	J.R. SMITH #2692.02; PROSET #TG22G; SURSEAL #SS2009
3"	PVC OR C.I.	F.D. OUTLET	J.R. SMITH #2692.03; PROSET #TG33G; SURSEAL #SS3000
4"	PVC OR C.I.	F.D. OUTLET	J.R. SMITH #2692.04; PROSET #TG34G; SURSEAL #SS4009
WATER HAMMER ARRESTOR NOTES:			
1. SIZE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.			

ELECTRIC WATER HEATER SCHEDULE			
MARK/UNIT	EWH-1	EWH-2	
MANUFACTURER	A.O. SMITH	A.O. SMITH	
MODEL NUMBER	DRE-52-9	DRE-52-6	
TYPE	TALL MODEL - ELECTRIC	TALL MODEL - ELECTRIC	
CAPACITY	50 GALLONS	50 GALLONS	
VOLT/PHASE/HZ	208/3/60	208/3/60	
KILOWATTS	9	6.0	
NUMBER OF ELEMENTS	3	3	
RECOVERY @ 70 DEG. RISE	49 GPH	33 GPH	
DIMENSIONS	55-3/4" TALL X 27" WIDE	55-3/4" TALL X 27" WIDE	
WEIGHT (EMPTY)	260 POUNDS	260 POUNDS	
NOTES:			
1. PROVIDE ALL GAGES, THERMOSTATS, SHUT-OFF VALVES, EXPANSION TANK, AND TEMPERATURE AND PRESSURE RELIEF VALVE AS REQUIRED BY LOCAL CODES AND MANUFACTURER'S RECOMMENDATIONS.			
2. PROVIDE INVERTED HEAT TRAPS ON COLD AND HOT WATER CONNECTIONS.			
3. CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER.			

CIRCULATOR PUMP SCHEDULE		
MARK/UNIT	CP-1	CP-2
MANUFACTURER	BELL & GOSSETT	BELL & GOSSETT
DESCRIPTION	MODEL #NRF-33	MODEL #NRF-9F/LW
GPM	4	1
HEAD FT.	7	3
MOTOR	125 W/115 V/1 PH/60 HZ	41 W/115 V/1 PH/60 HZ
RPM	2950	2800
NOTE: CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER		

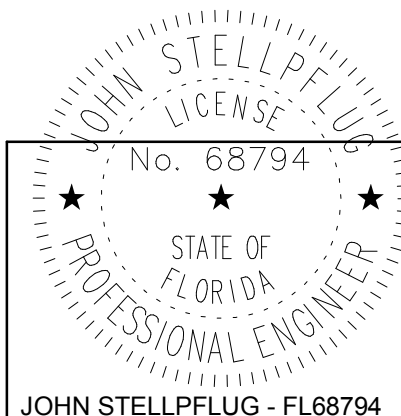
THERMOSTATIC MIXING VALVE SCHEDULE	
MARK/UNIT	MV-1
MANUFACTURER	BRADLEY
MODEL NUMBER	#SS9-3045
MAX OPERATING PRESSURE	125 PSI
MAX INLET TEMPERATURE	140 DEGREES
OUTLET TEMPERATURE	110 DEGREES
FLOW RATE	20 GPM
NOTE: CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER	

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE	SOIL/WASTE	VENT	COLD WATER	HOT WATER	DESCRIPTION
EWC-1	ELECTRIC WATER COOLER	1-1/2"	2"	1/2"	-	ELKAY #LZSTLW/SLK; ADA COOLER & BOTTLE FILLING STATION, BI-LEVEL, WALL HUNG.
S-1	KITCHEN SINK	1-1/2"	2"	1/2"	1/2"	ELKAY #GECR3321, 33" X 21-1/4" X 5-3/8" DOUBLE COMPARTMENT, REAR DRAIN, 20 GAUGE STAINLESS STEEL DELTA #141-SS-DST KITCHEN FAUCET SINGLE LEVEL, NO SPRAY, STAINLESS STEEL WITH 1.8 GPM AERATOR. BRASS CRAFT, 1/4" ROUGH BRASS STOPS, PLASTIC ESCUTCHEONS, SUPPLIES, TRAPS, AND DISPOSAL WASTE.
DS-1	DECONTAMINATION SINK	1-1/2"	2"	1/2"	1/2"	JUST MANUFACTURING #SB-124, 14 GAUGE STAINLESS STEEL 24" X 24" X 12", SINGLE COMPARTMENT SINK, 2-HOLE PUNCH 8" CENTERS. CHICAGO FAUCETS 540-LD317W/FABCP, WALL MOUNTED 8" FIXED CENTERS SINK FAUCET, 4" VANDAL PROOF WRISTRADE HANDLES. JUST MANUFACTURING #J-35 TYPE 304 STAINLESS STEEL STRAINER AND CHROME PLATED BRASS TAILPIECE. MCQUIRE #1000WC OFFSET GRID STRAINER AND #MCT1500752N P-TRAP.
L-1	LAVATORY - ADA	1-1/2"	2"	1/2"	1/2"	AMERICAN STANDARD #0356.015, VITREOUS CHINA WALL HUNG LAVATORY, FRONT OVERFLOW, D-SHAPED BOWL, SELF DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS. CHICAGO FAUCETS #3300-CP, METERMIX DECK MOUNTED FITTING, 4-3/4" INTEGRAL CAST SPOUT, VANDAL RESISTANT, METAL HANDLE WITH INTEGRAL TEMPERATURE CONTROL, 0.5 GPM. BRASS CRAFT, 1/4" ROUGH BRASS STOPS, PLASTIC ESCUTCHEONS, SUPPLIES, TRAPS AND DISPOSAL WASTE. PROWRAP: MCQUIRE #PW2125, INCLUDES PRE-WRAPPED 1-1/4" CAST BRASS J-BEND, PRE-WRAPPED 1-1/4" X 8-1/2" WALL BEND (17GA), TAIL PIECE COVER, 2 SUPPLY COVERS, AND CHROME PLATED FLANGE.
WC-1	WATER CLOSET - ADA	3"	2"	1"	-	TOILET: AMERICAN STANDARD #2854.128, "MADERA-FLOWISE", 1.28 GPF 16-1/2" HEIGHT BOWL AND MANUAL FLUSH VALVE, FLOOR MOUNTED. FOR ADA, INSTALL TOP OF SEAT AT 17" TO 19" FROM THE FINISHED FLOOR. SEAT: AMERICAN STANDARD #5901.100, ELONGATED SEAT OPEN FRONT LESS COVER, SOLID PLASTIC, CONCEALED CHECK STAINLESS STEEL HINGES.
SH-1	SHOWER - ADA	3"	2"	1/2"	1/2"	FAUCET: DELTA "PEERLESS" #PTR188700-W/S VALVE WITH #PTT88760 TRIM SHOWER VALVE WITH ALSONS HAND HELD SHOWER HEAD, SLIDE BAR, 6" OF HOSE & VACUUM BREAKER, SHOWERHEAD: 2.0 GPM SHOWER DRAIN: OATEY 130 SERIES, PVC PLASTIC. PROVIDE CHLORALOY #240 SHOWER PAN LINER.
MS-1	MOP SINK	3"	2"	3/4"	3/4"	FIAT #MSB-2424, 10" HIGH WALLS WITH 1" WIDE SHOULDERS, INCLUDES AN INTEGRALLY MOLDED SHELF 10-9/16" WIDE, STAINLESS STEEL FACTORY INSTALLED DRAIN BODY COMPLETE WITH A QDC-3 JOINT CONNECTOR FOR A 3" DRAIN PIPE. FIAT #330AA: HEAVY DUTY CAST BRASS WALLMOUNT SERVICE SINK FAUCET. FIAT #889CC: MOP BRACKET 24" X 3" WIDE, STAINLESS STEEL WITH THREE RUBBER GRIPS. FIAT #E-77-AA: VINYL BUMPER GUARDS IN 24" OR 36" FIAT #1453BB: FLAT STAINLESS STEEL STRAINER.
EES-1	EMERGENCY EYE WASH AND DRENCH SHOWER	3"	2"	1-1/4"	-	BRADLEY #S19-310AC COMBINATION DRENCH SHOWER AND EYE/FACE WASH.
NOTE: ALL FIXTURES SHALL COMPLY WITH TABLE 604.4 OF THE FLORIDA PLUMBING CODE FOR WATER CONSERVATION. CONTRACTOR MAY SUBMIT AN APPROVED EQUIVALENT MANUFACTURER.						

PLUMBING EQUIPMENT SCHEDULE						
MARK	FIXTURE	SOIL/WASTE	VENT	COLD WATER	HOT WATER	DESCRIPTION
FD-1	FLOOR DRAIN	3"	-	-	-	ZURN #ZN-415-6B, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH "TYPE B" POLISHED NICKEL BRONZE STRAINER WITH STAINLESS STEEL SCREWS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
FD-2	FLOOR DRAIN	4"	-	-	-	ZURN #ZN-415-6B-HD, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, HEAVY DUTY SLOTTED GRATE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
HB-1	HOSE BIBB	-	-	3/4"	-	WOODFORD #24, ANTI-SIPHON, VACUUM BREAKER, DESIGNED FOR MILD CLIMATE AREAS. ASSE STANDARD 1011 APPROVED, FURNISHED WITH POLYCARBONATE WHEEL HANDLE AND LOSE TEE KEY. ALUMINUM, BRASS OR CHROME BOX.
IMB-1	ICE MAKER BOX	-	-	1/2"	-	OATEY # 38143, HIGH IMPACT PLASTIC ICE MAKER BOX, 8 3/4" X 7 1/2" O.A. CPVC VALVE, MOUNTS HAMMER ARRESTORS.
WB-1	WASHER BOX	2"	2"	1/2"	1/2"	OATEY # 38748, RECESSED 9" X 8" X 3" HIGH IMPACT PLASTIC WASHER BOX W/2" OFFSET DRAIN, 1/4" TURN VALVES, MOUNTED WATER HAMMER ARRESTORS AND 12" X 11" FACE PLATE FRAME. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
CR-1	CONDENSATE RECEPTOR	3"	-	-	-	ZURN #Z-4151V, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, BACKWATER VALVE, COMBINATION INVERTIBLE MEMBRANE CLAMP, POLISHED NICKEL BRONZE STRAINER WITH RAISED FLANGE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

WATER HAMMER ARRESTOR SCHEDULE			
PIPE SIZE	PDI SIZE	FIXTURE UNIT RANGE	MANUFACTURER
1/2"	A	1-11	PPP #SC-500A; WILKINS #1250-A; WATTS #SG-050
3/4"	B	12-32	PPP #SC-750B; WILKINS #1250-B; WATTS #SG-075
1"	C	33-60	PPP #SC-1000C; WILKINS #1250-C; WATTS #SG-100
1-1/4"	D	61-113	PPP #SC-1250D; WILKINS #1250-D; WATTS #SG-125
1-1/2"	E	114-154	PPP #SC-1500E; WILKINS #1250-E; WATTS #SG-150
2"	F	155-330	PPP #SC-2000F; WILKINS #1250-F; WATTS #SG-200
WATER HAMMER ARRESTOR NOTES:			
1. AIR CHAMBERS ARE NOT AN ACCEPTABLE EQUAL TO WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED			
2. SIZE PER MANUFACTURER'S RECOMMENDATIONS			

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