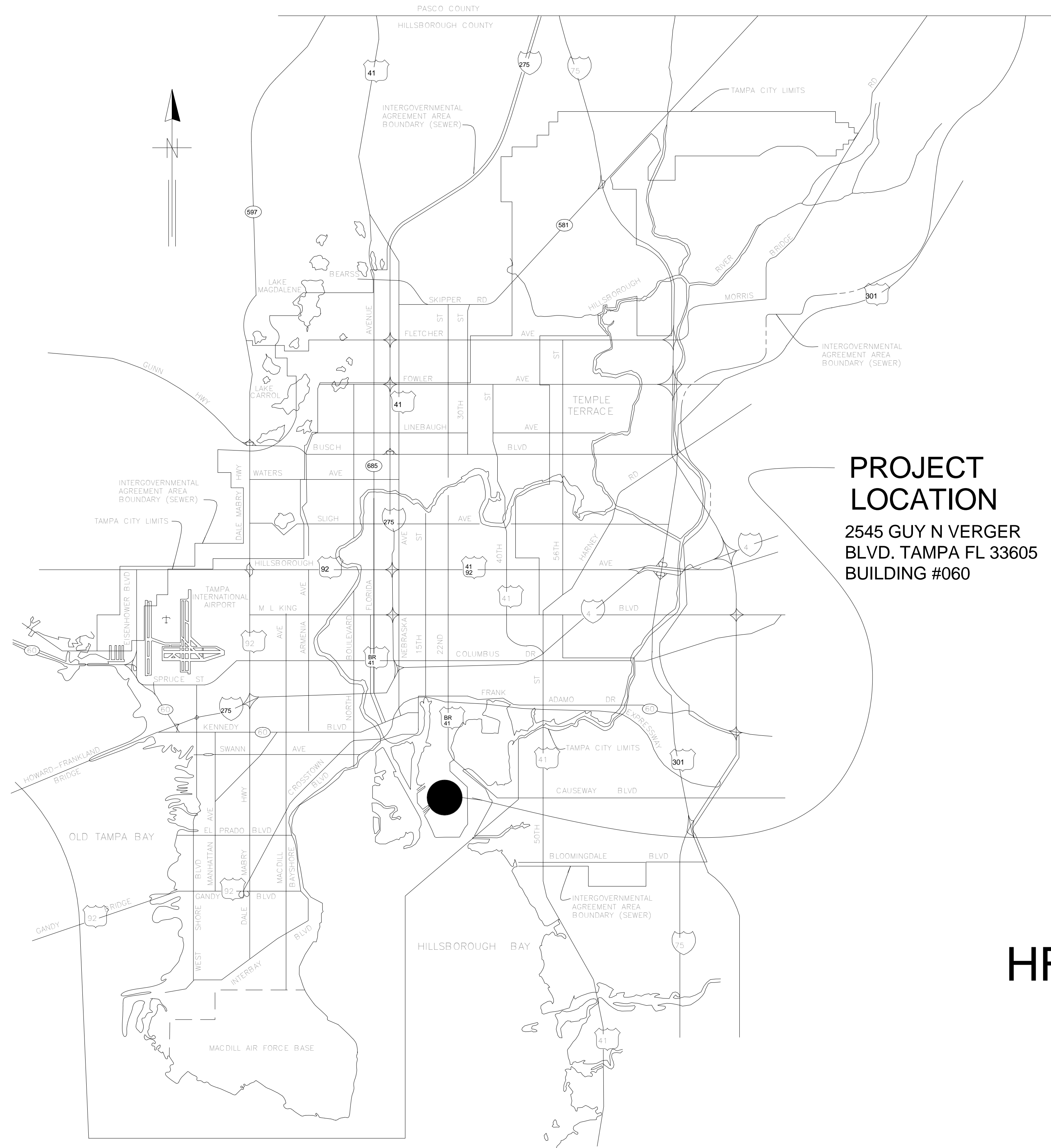


LOCATION MAP



**PROJECT LOCATION**  
 2545 GUY N VERGER  
 BLVD. TAMPA FL 33605  
 BUILDING #060

# CITY of TAMPA



## WASTEWATER DEPARTMENT

### PLANS FOR HFC AWTP ADMINISTRATION BUILDING AIR TREATMENT SYSTEM CONTRACT No. 18-C-00012

SHEET INDEX	
NUMBER	SHEET NAME
C000	COVER SHEET
M000	MECH. LEGENDS, SYMBOLS, AND NOTES
M102	PROPOSED DUCT LAYOUT - HVAC
M801	MECHANICAL DETAILS
S100	DUCT SUPPORT FRAMING

**VOLT AIR**  
 CONSULTING ENGINEERS  
 220 West 7th Avenue, Suite 210 Tampa,  
 Florida 33602 Tel: 888.891.9713  
 www.VoltAirInc.com  
 COA 27158 Project No. 15121

**MASTER CONSULTING ENGINEERS, INC.**  
 STRUCTURAL CONSULTANTS  
 5523 WEST CYPRESS ST., STE.200  
 TAMPA, FLORIDA 33607-1705  
 P | 813.287.3600 F | 813.287.3622  
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 CA: 8426 PROJ NO. 2030-115

No.	DATE	REVISIONS
3		
2		
1		

DES: AC WD  
 DRN:  
 CKD: DAC  
 DATE: 05/25/18

CITY of TAMPA  
 WASTEWATER DEPARTMENT

HFC AWTP ADMINISTRATION BUILDING  
 AIR TREATMENT SYSTEM  
 -  
 100% CONSTRUCTION DOCUMENTS

**COVER SHEET**

SHEET  
**C000**

AIR DISTRIBUTION	
SYMBOL	DESCRIPTION
	AIR DISTRIBUTION DEVICE: SUPPLY (4-WAY BLOW UNLESS INDICATED BY FLOW ARROWS)
	AIR DISTRIBUTION DEVICE: RETURN
	AIR DISTRIBUTION DEVICE: EXHAUST
	AIR TERMINAL DEVICE: SIDEWALL MOUNTED RETURN OR SUPPLY
	DOOR GRILLE: SEE ARCHITECTURAL DRAWINGS
	UNDERCUT DOOR: SEE ARCHITECTURAL DRAWINGS

GENERAL TAGS	
SYMBOL	DESCRIPTION
	AIR HANDLING UNIT
	FAN
	ROOF TOP UNIT
	CONDENSING UNIT
	VARIABLE AIR VOLUME TERMINAL UNIT
	FAN POWERED VARIABLE VOLUME TERMINAL UNIT
	ELECTRIC DUCT HEATER
	PUMP
	POLLUTION CONTROL UNIT
	REVISION REFERENCE
	DETAIL REFERENCE: TOP: DETAIL # BOTTOM: DRAWING # DETAIL SHOWN ON
	NEUTRAL RELATIVE PRESSURE
	POSITIVE RELATIVE PRESSURE
	NEGATIVE RELATIVE PRESSURE
	KEY NOTE CALLOUT

HVAC ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
BOP	BOTTOM OF PIPE
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CT	COOLING TOWER
CU	CONDENSING UNIT
DDC	DIRECT DIGITAL CONTROLS
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FCU	FAN COIL UNIT
FF	FINAL FILTERS
FLA	FULL LOAD AMPS
FBM	FEET PER MINUTE
GPM	GALLONS PER MINUTE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUs PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MOC	MAXIMUM OVER CURRENT PROTECTION
MOD	MOTOR OPERATED CONTROL DAMPER (MOD)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAL	OUTSIDE AIR LOUVER
PRV	PRESSURE REDUCING VALVE
PRS	PRESSURE REDUCING STATION
PSI	POUNDS PER SQUARE INCH
PSIG	PSI GAUGE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
RA	RETURN AIR
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE
TAB	TEST, ADJUST AND BALANCE
TEMP	TEMPERATURE
TSP	TOTAL STATIC PRESSURE
UNO	UNLESS NOTED OTHERWISE
VPH	VOLTS/PHASE
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE

LIFE SAFETY	
SYMBOL	DESCRIPTION
	FIRE DAMPER WITH ACCESS DOOR PANEL
	SMOKE DAMPER WITH ACCESS DOOR PANEL
	FIRE AND SMOKE DAMPER WITH ACCESS DOOR PANEL
	EXISTING FIRE DAMPER TO REMAIN WITH ACCESS DOOR PANEL, UNLESS OTHERWISE NOTED
	EXISTING FIRE AND SMOKE DAMPER TO REMAIN WITH ACCESS PANEL, UNLESS OTHERWISE NOTED
	DUCT SMOKE DETECTOR

EQUIPMENT	
SYMBOL	DESCRIPTION
	E-1 EXHAUST DUCT UP TO FAN ABOVE
	E-1 EXHAUST FAN ON ROOF AND DUCT DROP TO BELOW
	E-1 IN-LINE CENTRIFUGAL FAN
	EQUIP. P-TRAP

HVAC PIPING SYMBOL LEGEND	
	CHWS CHILLED WATER SUPPLY
	CHWR CHILLED WATER RETURN
	CD CONDENSATE
	CR CONDENSATE RETURN
	PC PUMPED CONDENSATE
	HWR HOT WATER RETURN
	HWS HOT WATER SUPPLY
	FLOW DIRECTION
	GATE VALVE
	BALL VALVE
	CALIBRATING BALANCING VALVE
	BUTTERFLY VALVE
	GAS COCK
	UNION
	STRAINER
	CONTROL VALVE
	SOLENOID VALVE
	PSI REG.
	CHECK VALVE
	FLOW SWITCH
	FLEX CONNECTION
	O.S.&Y. GATE VALVE
	THREE-WAY CONTROL VALVE
	THERMOMETER
	EQUIP. P-TRAP
	TWO-WAY CHECK VALVE
	MANUAL VENT
	PRESSURE GAUGE
	ELBOW, TURNED DOWN
	ELBOW, TURNED UP
	TEE, OUTLET DOWN
	TEE, OUTLET UP

CONTROLS	
SYMBOL	DESCRIPTION
	T THERMOSTAT / TEMPERATURE SENSOR
	H HUMIDISTAT / HUMIDITY SENSOR
	M MOTORIZED CONTROL DAMPER
	TS TEMPERATURE SENSOR
	P PRESSURE SENSOR
	CO2 CO2 SENSOR

DUCTWORK	
SYMBOL	DESCRIPTION
	24x12 NEW DUCTWORK, FIRST DIMENSION IS SIDE SHOWN PROVIDE EXTERNALLY INSULATED SHEET-METAL DUCT
	NEW DOUBLEWALL DUCTWORK DO NOT EXTERNALLY WRAP
	DOWN UP DUCT ELBOW POSITIVE PRESSURE (SUPPLY)
	DOWN UP DUCT ELBOW NEGATIVE PRESSURE (EXHAUST)
	DOWN UP DUCT ELBOW NEGATIVE PRESSURE (RETURN)
	UP DN CHANGE OF ELEVATION
	FLEXIBLE DUCT
	TRANSITION, CONCENTRIC
	TRANSITION, ECCENTRIC
	10x8 8 Transition, SQUARE TO ROUND
	SQUARE THROAT ELBOW WITH TURNING VANES
	RADIUS ELBOW
	RECTANGULAR / ROUND BRANCH TAKE-OFF OR ROUND / ROUND BRANCH TAKE-OFF
	24x12 RECTANGULAR DUCTWORK
	24x12 FLAT OVAL DUCTWORK
	8 ROUND DUCTWORK

DUCT ACCESSORIES	
SYMBOL	DESCRIPTION
	SA-1 SOUND ATTENUATOR
	M MOTOR OPERATED CONTROL DAMPER (MOD)
	FM AIR FLOW MEASURING STATION
	MANUAL BALANCING DAMPER
	ACCESS DOORS, VERTICAL OR HORIZONTAL
	FLEXIBLE CONNECTION
	CFM CFM SENSOR
	BD BACKDRAFT DAMPER

GENERAL NOTES	
<p>1. <b>SCOPE:</b> WORK SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY FOR A COMPLETE AND PROPERLY FUNCTIONING MECHANICAL INSTALLATION IN ACCORDANCE WITH ALL APPLICABLE CODES, AND CONTRACT DRAWINGS AND SPECIFICATIONS. WORK SHALL INCLUDE ALL WORK NORMALLY SPECIFIED IN DIVISION 15.</p> <p>PAY FOR ALL REQUIRED LICENSES, FEES, AND INSPECTIONS.</p> <p>2. <b>CODES:</b> INSTALL ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF ALL APPLICABLE REGULATIONS AND GOVERNING CODES, INCLUDING THE REGULATIONS OF THE UTILITY COMPANIES SERVING THE PROJECT.</p> <p>WHERE A CONFLICT IN CODE REQUIREMENTS OCCURS THE MORE STRINGENT REQUIREMENT SHALL GOVERN.</p> <p>WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) 6TH EDITION (2017), THE NATIONAL ELECTRICAL CODE (NEC) 2014 EDITION AND CHAPTER 5 OF THE CITY OF TAMPA CODE.</p> <p>3. <b>STANDARDS:</b> ALL EQUIPMENT AND DEVICES SHALL BEAR U.L. LABEL, THE LABEL OF AN INDUSTRY RECOGNIZED APPROVED TESTING AGENCY OR A.G.A. CERTIFICATION FOR SAID ITEM OF EQUIPMENT OR DEVICE.</p> <p>ALL ELECTRICAL DEVICES MUST BE U.L. APPROVED.</p> <p>4. <b>DRAWINGS:</b> DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT AND EXTENT OF WORK. EXACT LOCATIONS AND ARRANGEMENT OF MATERIALS AND EQUIPMENT SHALL BE DETERMINED WITH THE ACCEPTANCE OF THE ENGINEER, AS WORK PROGRESSES TO CONFORM IN THE BEST POSSIBLE MANNER WITH THE SURROUNDINGS AND WITH THE ADJOINING WORK OF OTHER TRADES, WHERE LOCATIONS OF EQUIPMENT, DEVICES OR FIXTURES ARE CONTROLLED BY ARCHITECTURAL FEATURES, ESTABLISH SUCH LOCATIONS BY REFERRING TO DIMENSIONS ON ARCHITECTURAL DRAWINGS AND NOT BY SCALING DRAWINGS.</p> <p>5. <b>DISCREPANCIES:</b> IN CASE OF DIFFERENCES BETWEEN DRAWINGS AND SPECIFICATIONS, OR WHERE DRAWINGS AND SPECIFICATIONS ARE NOT CLEAR OR DEFINITE, THE SUBJECT SHALL BE REFERRED TO ENGINEER FOR CLARIFICATION AND INSTRUCTIONS.</p> <p>6. <b>AUXILIARIES AND ACCESSORIES:</b> INCLUDE ALL AUXILIARIES AND ACCESSORIES FOR COMPLETE AND PROPERLY OPERATING SYSTEMS.</p> <p>7. <b>INVESTIGATION OF SITE:</b> CHECK SITE AND EXISTING CONDITIONS THOROUGHLY BEFORE PROVIDING A BID PRICE. ADVISE ENGINEER OF DISCREPANCIES OR QUESTIONS BEFORE BIDDING.</p> <p>8. <b>COORDINATION:</b> PROVIDE ALL REQUIRED COORDINATION AND SUPERVISION WHERE MECHANICAL WORK INTERFACES DIRECTLY OR INDIRECTLY WITH WORK OF ANY TRADES.</p> <p>9. <b>PROVISIONS FOR OPENINGS:</b> PROVIDE ALL REQUIRED OPENINGS TO ACCOMPLISH THE WORK. PROVIDE SLEEVES OR OTHER APPROVED METHODS TO ALLOW PASSAGE OF ITEMS INSTALLED.</p> <p>10. <b>INTERRUPTION OF EXISTING SERVICES:</b> ANY INTERRUPTION OF EXISTING MECHANICAL AND ELECTRICAL SERVICES SHALL BE COORDINATED IN ADVANCE WITH THE CITY REPRESENTATIVE. WEEKEND OR AFTER HOURS WORK IS ANTICIPATED TO PREVENT INTERRUPTION OF REGULAR OPERATION. EACH AHU MAY ONLY BE SHUT DOWN DURING WEEKEND HOURS. THIS INCLUDES, BUT IS NOT LIMITED TO, SERVICES PROVIDING CHILLED WATER, ELECTRICITY, OR OTHER CRITICAL SYSTEMS AS MAY BE PERTINENT TO THIS PARTICULAR PROJECT. SERVICE INTERRUPTION TIMES AND DURATION OF INTERRUPTION OF SERVICES SHALL BE DECIDED BY THE CITY. PROVIDE APPROPRIATE PROVISIONS (E.G., ISOLATION SHUT-OFF VALVES, DAMPERS, END CAPS, AND SIMILAR ITEMS) AS NECESSARY TO ACCOMMODATE THE REQUIRED SERVICE INTERRUPTIONS. IF SHUTDOWNS CANNOT BE ACCOMMODATED, PROVIDE MEANS FOR "WET" TAPPING OR "HOT" TAPPING OF PIPING SYSTEMS.</p> <p>11. <b>CLEANING AND PROTECTION:</b> EQUIPMENT: ALL MECHANICAL EQUIPMENT PROVIDED SHALL BE THOROUGHLY CLEANED OF ALL DIRT, OIL, CONCRETE, ETC. ANY DENTS, SCRATCHES OR OTHER VISIBLE BLEMISHES SHALL BE CORRECTED AND THE APPEARANCE OF THE EQUIPMENT MADE "LIKE NEW" AND TO THE SATISFACTION OF THE ENGINEER.</p> <p>UPON COMPLETION, AND BEFORE FINAL ACCEPTANCE OF THE WORK, ALL DEBRIS, RUBBISH, LEFTOVER MATERIALS, TOOLS AND EQUIPMENT SHALL BE REMOVED FROM THE SITE.</p> <p>PROTECTION OF WORK UNTIL FINAL ACCEPTANCE: PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE, ENTRANCE OF DIRT AND CONSTRUCTION DEBRIS FROM THE TIME OF INSTALLATION UNTIL FINAL ACCEPTANCE. ANY MATERIALS AND EQUIPMENT WHICH ARE DAMAGED SHALL BE REPAIRED TO "AS NEW" CONDITION OR REPLACED AT THE DIRECTION OF THE ENGINEER. WHERE FACTORY FINISHES OCCUR AND DAMAGE IS MINOR, FINISHES MAY BE TOUCHED UP. IF, IN THE OPINION OF THE ENGINEER THE DAMAGE IS EXCESSIVE, FACTORY FINISH SHALL BE REPLACED TO "NEW" CONDITION.</p> <p>USE TEMPORARY FILTERS ON ACU-2 DURING CONSTRUCTION WORK.</p>	<p>12. <b>SHOP DRAWINGS:</b> SUBMIT SHOP DRAWINGS FOR ALL WORK INCLUDING ALL ITEMS, SERVICES AND SYSTEMS PROVIDED FOR THE PROJECT.</p> <p>SHOP DRAWINGS SHALL CLEARLY SHOW THE FOLLOWING:</p> <p>TECHNICAL AND DESCRIPTIVE DATA IN DETAIL EQUAL TO OR GREATER THAN THE DATA GIVEN IN THE ITEM SPECIFICATION. INDICATE ALL CHARACTERISTICS, SPECIAL MODIFICATIONS AND FEATURES. WHERE PERFORMANCE AND CHARACTERISTIC DATA IS SHOWN ON THE DRAWINGS OR SPECIFIED, SUBMITTED DATA SHALL BE PROVIDED IN A DEGREE WHICH IS BOTH QUANTITATIVELY AND QUALITATIVELY EQUAL TO THAT SPECIFIED AND SHOWN SO THAT COMPARISON CAN BE MADE. PRESENT DATA IN DETAIL EQUAL TO OR GREATER THAN THAT GIVEN IN ITEM SPECIFICATION AND INCLUDE ALL WEIGHTS, DEFLECTIONS, SPEEDS, VELOCITIES, PRESSURE DROPS, OPERATING TEMPERATURES, OPERATING CURVES, TEMPERATURE RANGES, SOUND RATINGS, DIMENSIONS, SIZES, MANUFACTURERS' NAMES, MODEL NUMBERS, TYPES OF MATERIAL USED, OPERATING PRESSURES, FULL LOAD AMPERAGES, STARTING AMPERAGES, FOULING FACTORS, CAPACITIES, SET POINTS, CHEMICAL COMPOSITIONS, CERTIFICATIONS AND ENDORSEMENTS, OPERATING VOLTAGES, THICKNESS, GAUGES AND ALL OTHER RELATED INFORMATION AS APPLICABLE TO PARTICULAR ITEM.</p> <p>EXCEPTIONS TO OR DEVIATIONS FROM THE CONTRACT DOCUMENTS. SHOULD ENGINEER ACCEPT ANY ITEMS HAVING SUCH DEVIATIONS WHICH ARE NOT CLEARLY BROUGHT TO ENGINEER'S ATTENTION IN WRITING, ON ITEM SUBMITTAL, THEN CONTRACTOR IS RESPONSIBLE FOR CORRECTION OF SUCH DEVIATIONS REGARDLESS OF WHEN SUCH DEVIATIONS ARE DISCOVERED.</p> <p>13. <b>SHOP DRAWINGS TECHNICAL INFORMATION BROCHURE:</b> NEAR CONCLUSION OF WORK AND NOT LESS THAN 10 DAYS PRIOR TO SUBSTANTIAL COMPLETION INSPECTION, SUBMIT A TECHNICAL INFORMATION DOCUMENT (TID) CONTAINING ALL FINAL SHOP DRAWING AND SUBMITTAL INFORMATION FOR THE PROJECT. THIS TECHNICAL INFORMATION DOCUMENT SHALL CONSIST OF ONE ELECTRONIC PDF COPY AND ONE OR MORE ADEQUATELY SIZED, HARD-COVER, 3-RING BINDER FOR 8-1/2" X 11" SHEETS.</p> <p>SHOP DRAWING TECHNICAL AND DESCRIPTIVE DATA SHALL BE INSERTED IN THE TID IN PROPER ORDER ON ALL ITEMS. PROVIDE COMPLETE INFORMATION, INCLUDING, BUT NOT LIMITED TO, WIRING AND CONTROL DIAGRAMS, SCALE DRAWINGS SHOWING THAT PROPOSED SUBSTITUTE EQUIPMENT WILL FIT INTO ALLOTTED SPACE (INDICATE ALL SERVICE ACCESS, CONNECTIONS, ETC.), TEST DATA, AND OTHER DATA REQUIRED TO DETERMINE IF EQUIPMENT COMPLIES FULLY WITH THE SPECIFICATIONS.</p> <p>14. <b>OPERATING INSTRUCTIONS:</b> SUBMIT FOR CHECKING A SPECIFIC SET OF WRITTEN OPERATING INSTRUCTIONS ON EACH ITEM WHICH REQUIRES INSTRUCTIONS TO OPERATE. AFTER ACCEPTANCE, INSERT INFORMATION IN EACH TECHNICAL INFORMATION DOCUMENT.</p> <p>15. <b>MAINTENANCE INFORMATION:</b> SUBMIT FOR ACCEPTANCE MAINTENANCE INFORMATION CONSISTING OF MANUFACTURER'S PRINTED INSTRUCTION AND PARTS LISTS FOR EACH MAJOR ITEM OF EQUIPMENT. AFTER ACCEPTANCE, INSERT INFORMATION IN EACH TECHNICAL INFORMATION DOCUMENT.</p>

CODE COMPLIANCE	
1.	ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) 6TH EDITION (2017), THE NATIONAL ELECTRICAL CODE (NEC) 2014 EDITION AND CHAPTER 5 OF THE CITY OF TAMPA CODE.

SHEET INDEX	
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M801	MECHANICAL DETAILS

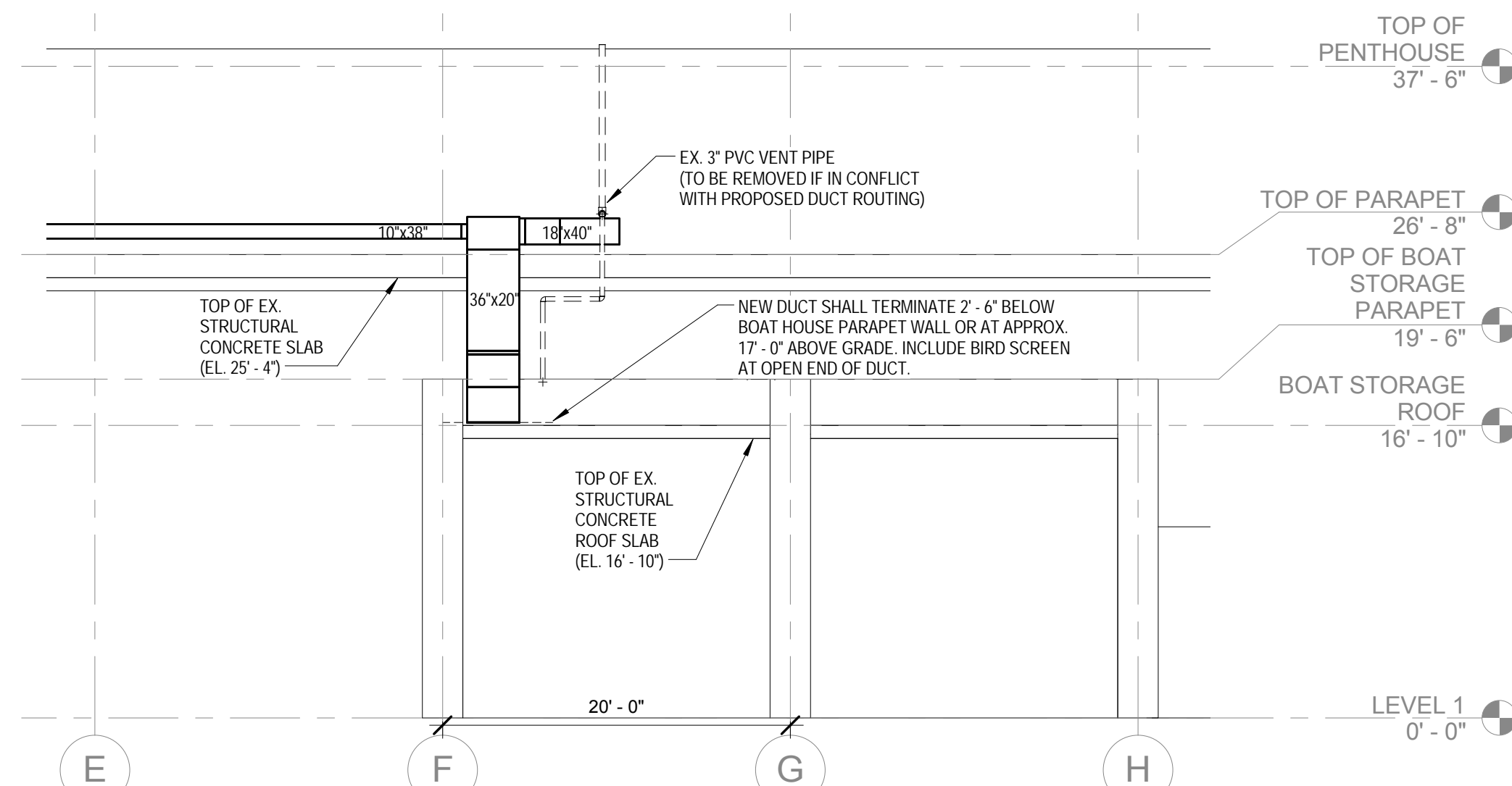
No.	DATE	REVISIONS
3		DES: AC WD
2		DRN: DAC
1		CKD: DAC DATE: 05/25/18

### GENERAL NOTES

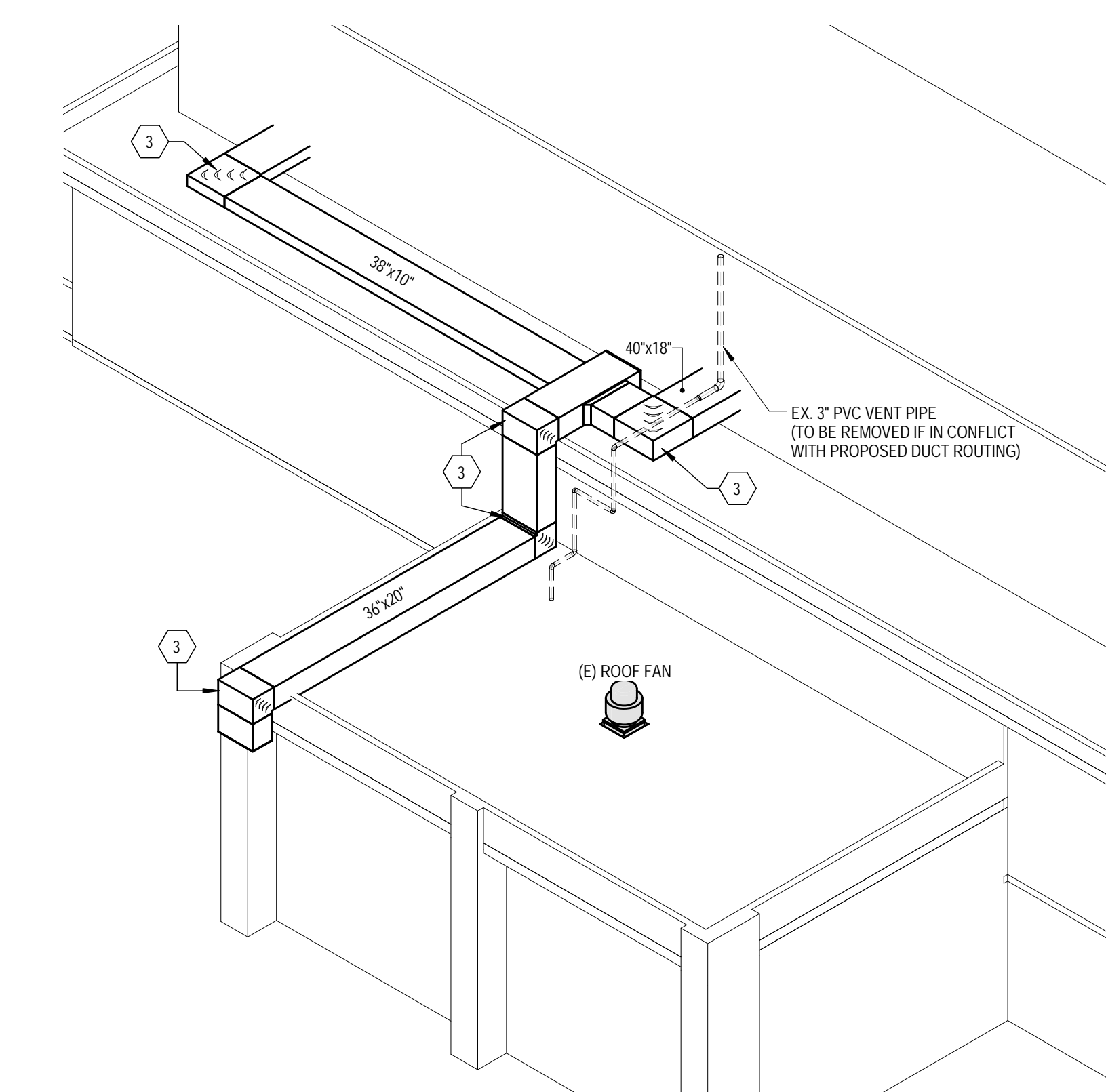
- A. PROVIDE VOLUME DAMPERS AT ALL BRANCH TAKEOFFS SERVING SINGLE DIFFUSER, GRILLE, OR REGISTER.
- B. PROVIDE TURNING VANES IN ALL RECTANGULAR ELBOWS.
- C. MAINTAIN MINIMUM 6" CLEARANCE BETWEEN DUCTWORK AND RATED WALLS.
- D. COORDINATE DUCTWORK WITH STRUCTURE. PREPARE COORDINATION DRAWINGS AS SPECIFIED.
- E. PROVIDE REMOTE DAMPER OPERATORS FOR VOLUME DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS.
- F. PROVIDE ALL CODE REQUIRED AND MANUFACTURER RECOMMENDED CLEARANCES FOR ALL EQUIPMENT.
- G. PROVIDE A TAB REPORT FOR ACU-1 AND ACU-3 AFTER CONSTRUCTION IS COMPLETED TO CONFIRM THEY ARE PERFORMING AS DESIGNED.
- H. ALL HARDWARE, MOUNTINGS, SUPPORTS, FASTENERS, DUCTWORK, ETC. SHALL BE STAINLESS STEEL.
- I. ALL DIMENSIONS SHOWN ON THIS PLAN ARE BASED ON OWNER PROVIDED FIELD MEASUREMENTS. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL DIMENSIONS BEFORE BIDDING.

### KEYNOTES

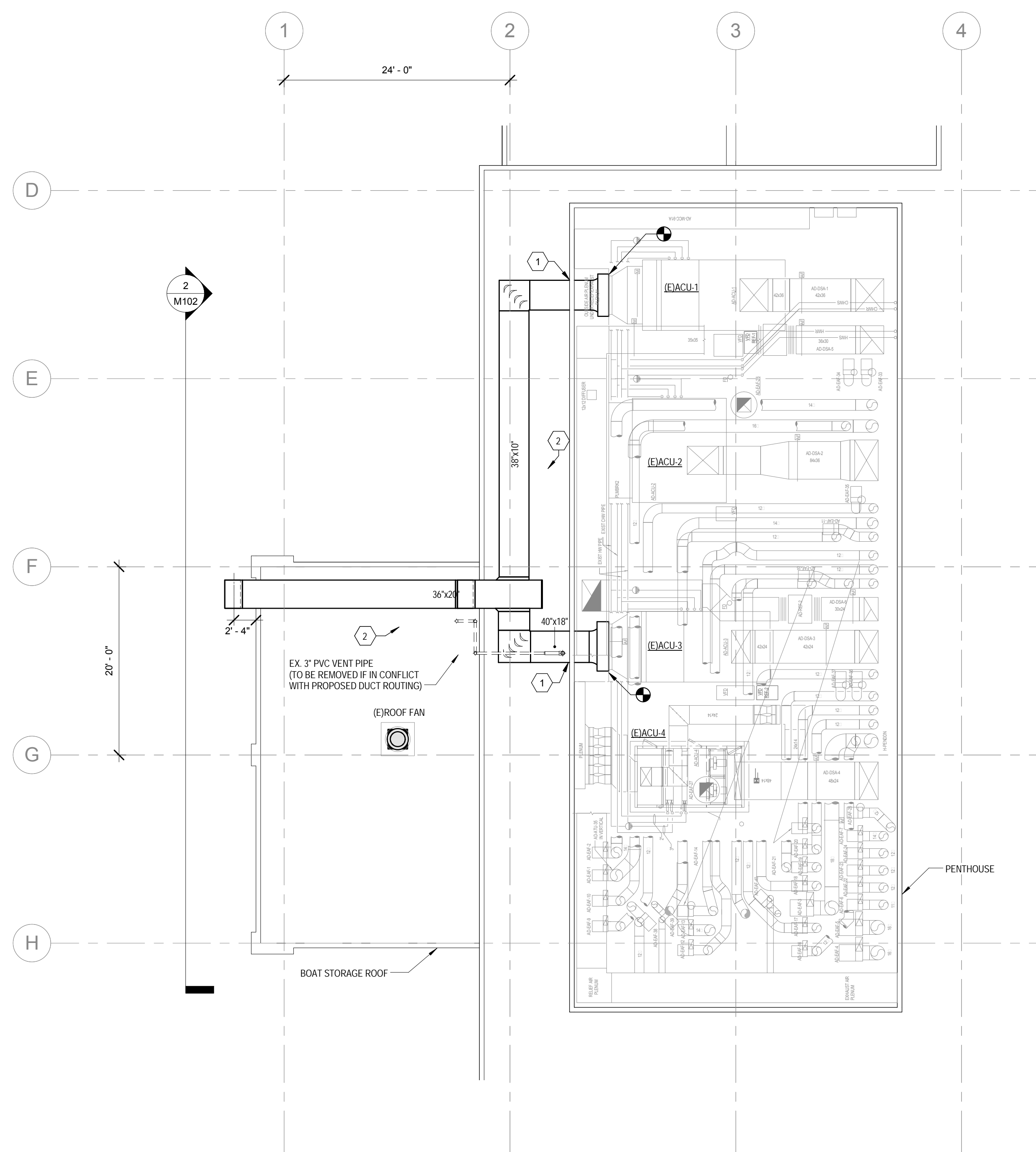
- 1. PENETRATE EXISTING LOUVER WITH NEW DUCTWORK AT THIS LOCATION.
- 2. EXISTING BUILT UP INSULATED ROOF SYSTEM WILL NEED TO BE REMOVED AT DUCT SUPPORTS' BASE LOCATIONS AND REPAIRED, AS PER MANUFACTURERS RECOMMENDATION, AFTER DUCT SUPPORTS ARE IN PLACE. SEE SPECIFICATIONS FOR FURTHER DETAILS.
- 3. RECTANGULAR 90° ELBOWS ARE REQUIRED AT THESE 5 POINTS TO MINIMIZE THE PROFILE OF THE PROPOSED DUCT BEYOND THE EXISTING PROFILE OF THE BUILDING, AND FOR OTHER DIMENSIONAL SPACING RESTRICTIONS.



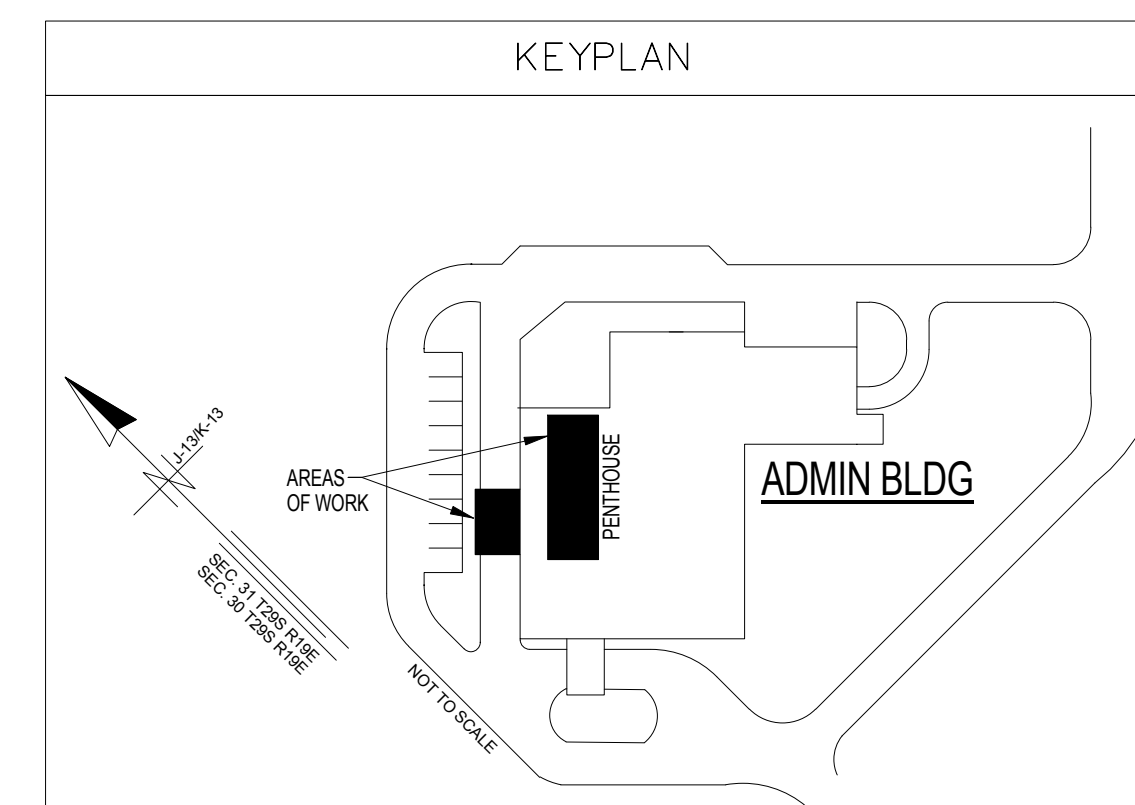
2 PROPOSED DUCT LAYOUT - NORTHWEST ELEVATION  
1/8" = 1'-0"



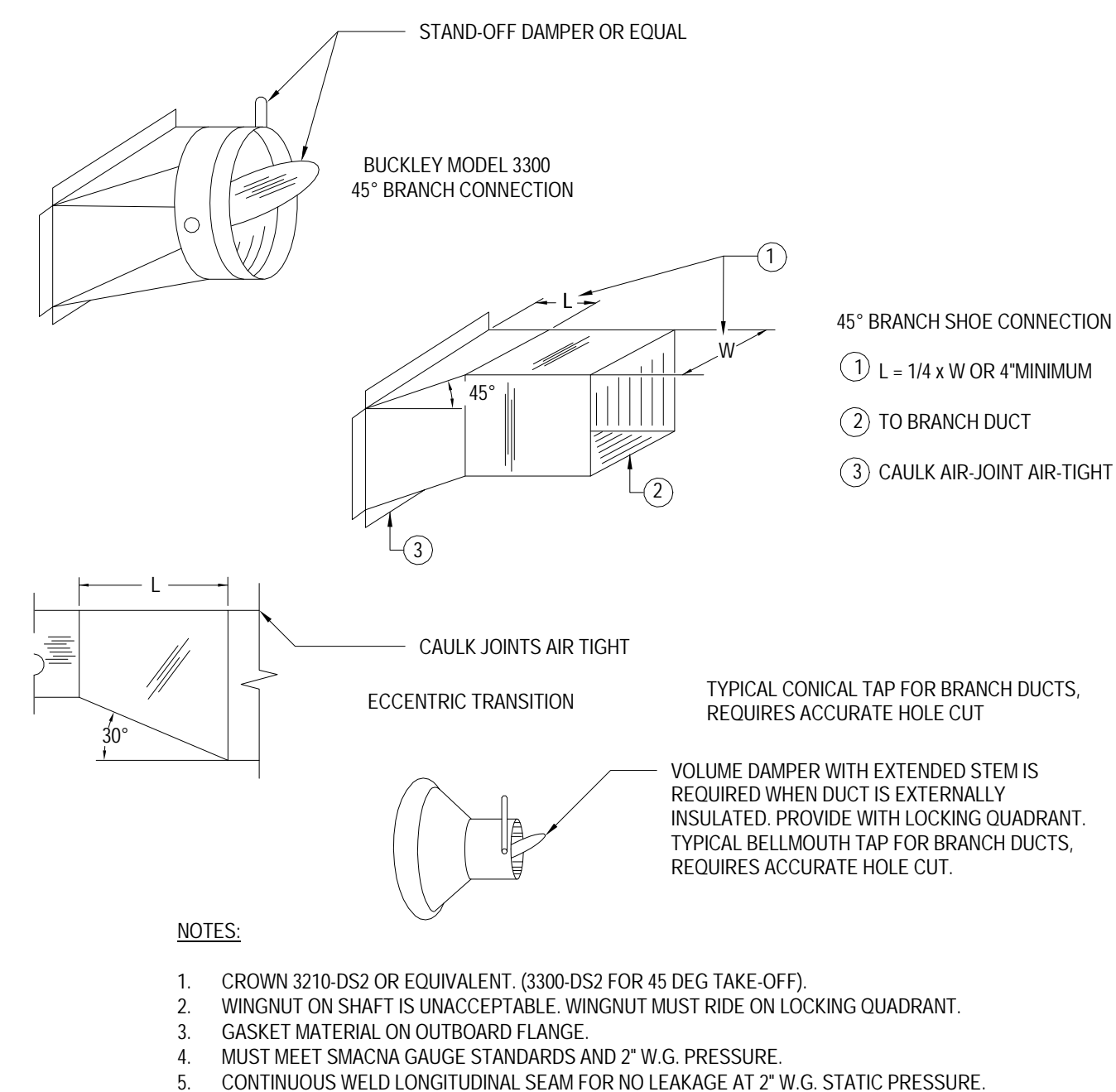
3 PROPOSED DUCT LAYOUT - ISOMETRIC



1 PROPOSED DUCT LAYOUT - HVAC  
1/8" = 1'-0"

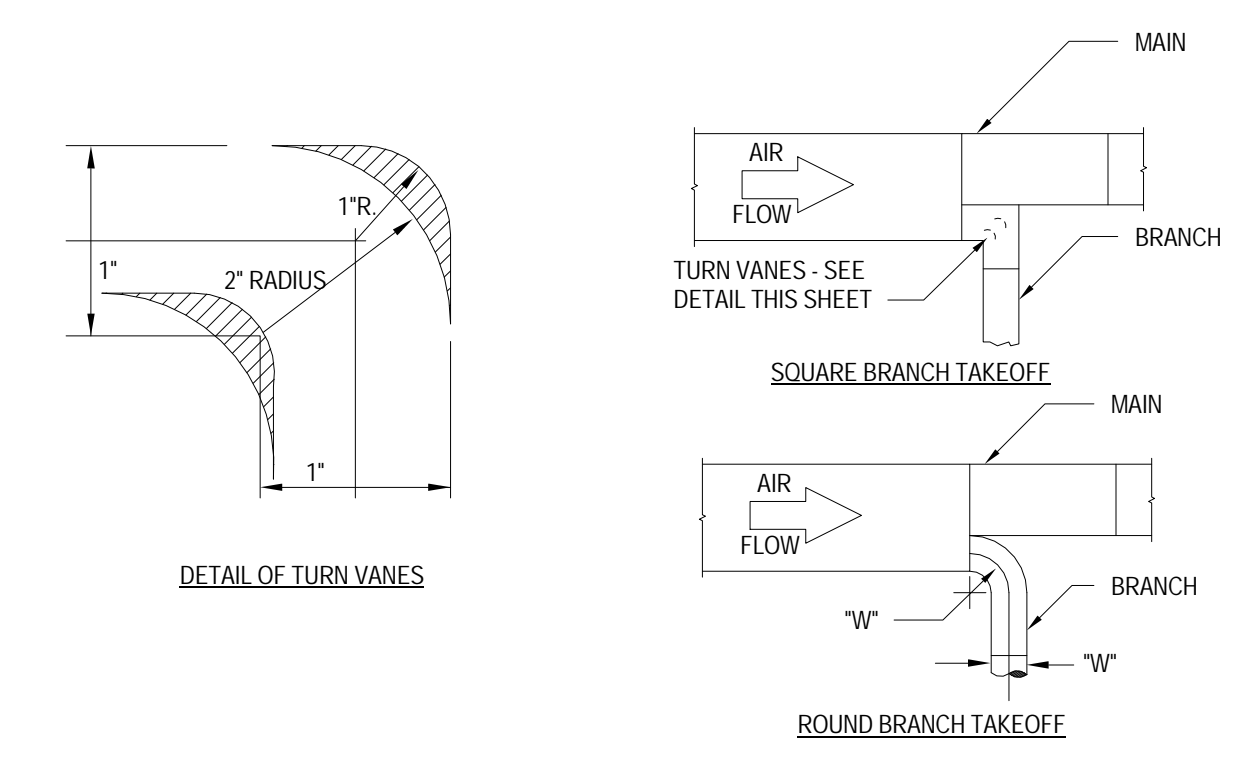
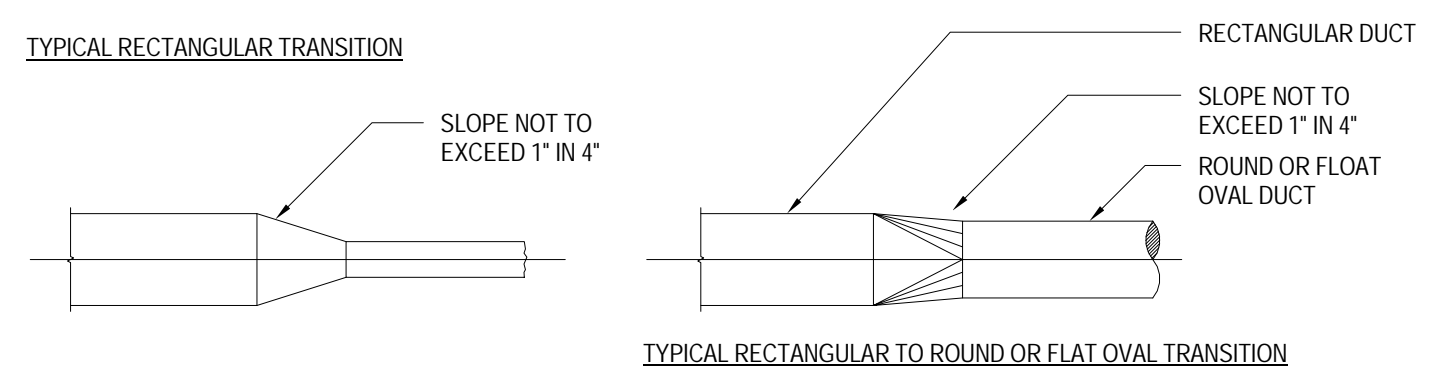
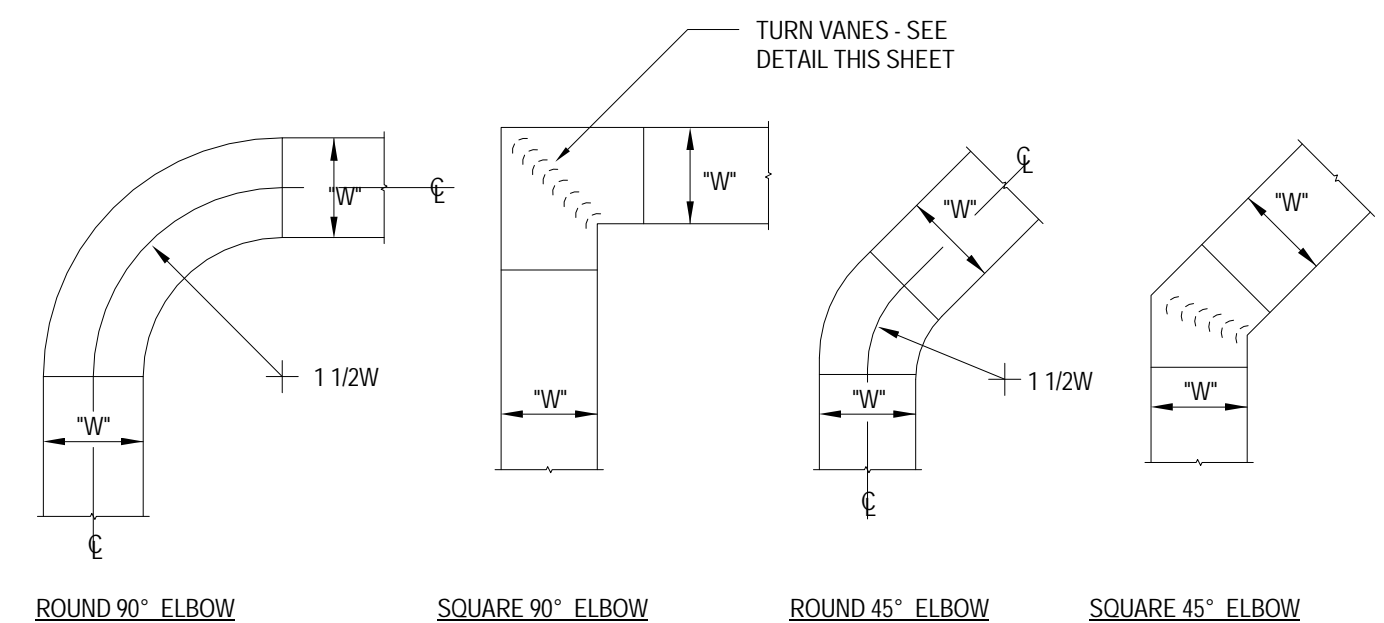


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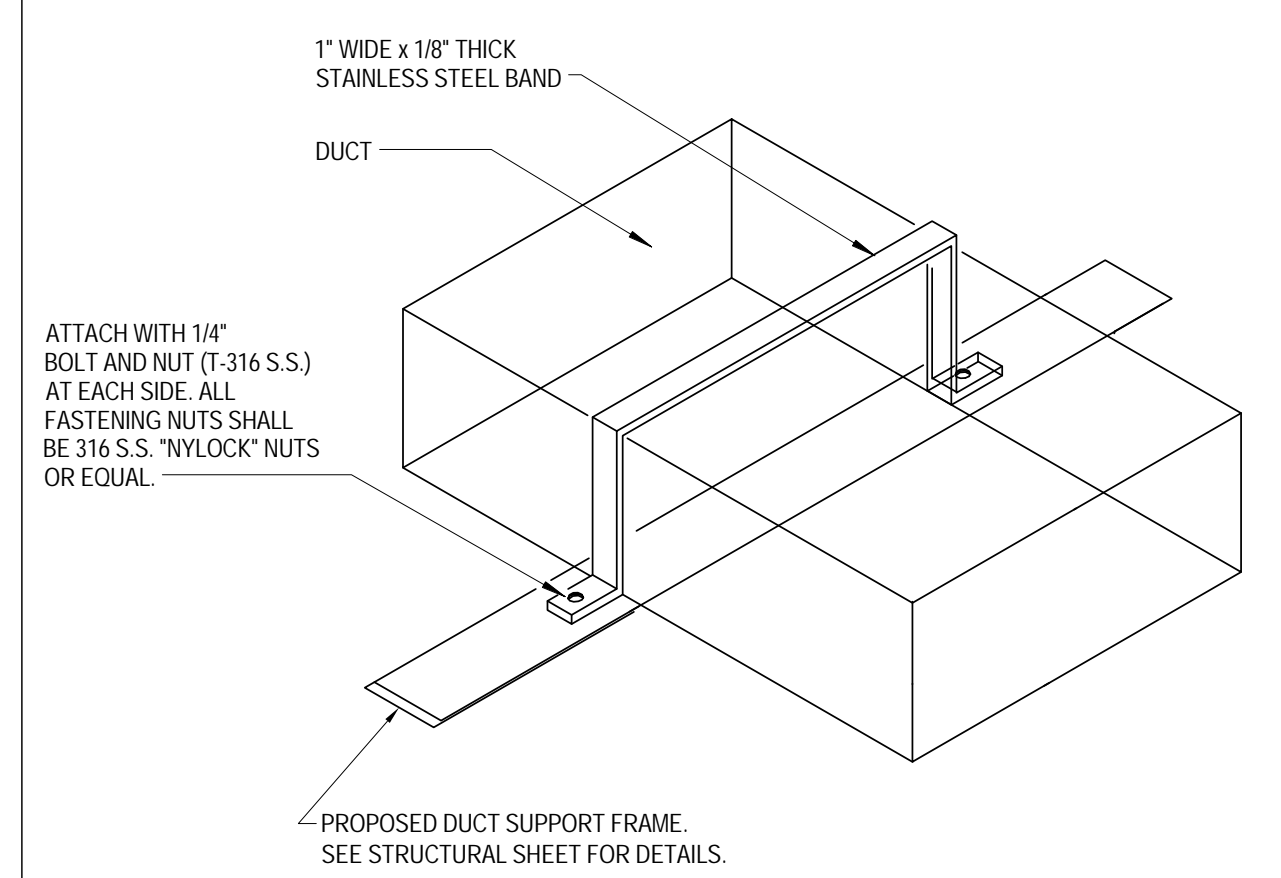


- NOTES:
1. CROWN 3210-DS2 OR EQUIVALENT. (3300-DS2 FOR 45 DEG TAKE-OFF).
  2. WINGNUT ON SHAFT IS UNACCEPTABLE. WINGNUT MUST RIDE ON LOCKING QUADRANT.
  3. GASKET MATERIAL ON OUTBOARD FLANGE.
  4. MUST MEET SMACNA GAUGE STANDARDS AND 2" W.G. PRESSURE.
  5. CONTINUOUS WELD LONGITUDINAL SEAM FOR NO LEAKAGE AT 2" W.G. STATIC PRESSURE.

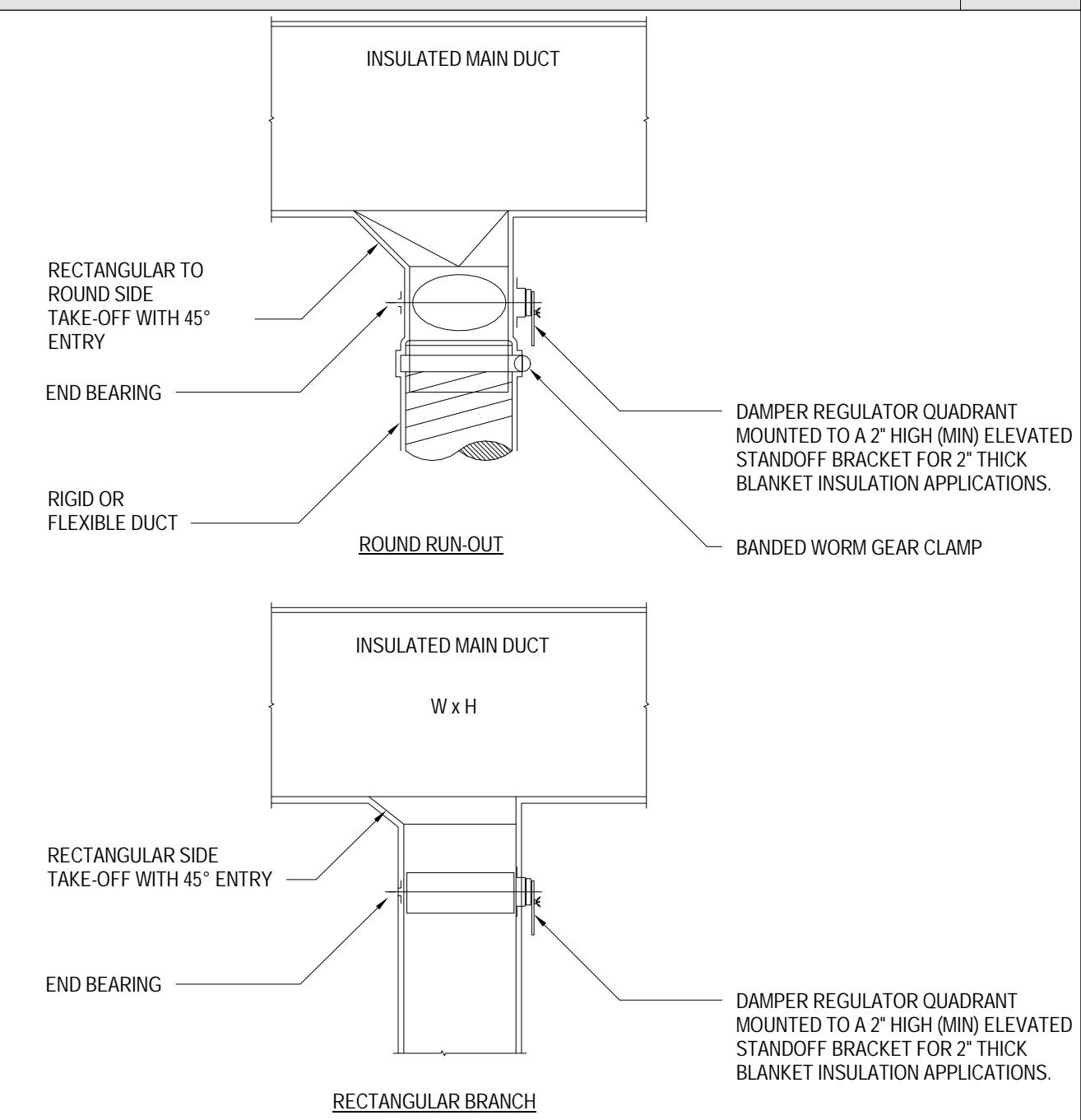
TAKEOFF FITTING DETAIL D



DUCT FITTINGS DETAIL C



ROOF DUCT ATTACHMENT TO SUPPORT A



BRANCH TAKE-OFFS B

No.	DATE	REVISIONS	DES:	AC WD
3			DRN:	
2			CKD:	DAC
1			DATE:	05/25/18

# GENERAL STRUCTURAL NOTES

## GENERAL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS BEFORE PROCEEDING WITH WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEERS.
- DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS AND CONDITIONS UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT ALL WORK IN PROGRESS UNTIL THE BUILDING IS COMPLETED.
- ALL STRUCTURAL ITEMS FOR THIS PROJECT HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROPRIATE PROVISIONS OF EACH OF THE FOLLOWING:
  - THE FLORIDA BUILDING CODE, (6TH EDITION) 2017.
  - ASCE 7-10 (WITH ERRATA DATED JANUARY 11, 2011) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES".
- THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH MECHANICAL DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER PRIOR TO PERFORMING WORK. IN CASE OF CONFLICT THE MOST STRINGENT CONDITION SHALL APPLY.
- AIR DUCT ROUTING AND AIR DUCT SUPPORT SYSTEM SHALL BE DESIGNED AND INSTALLED SO AS TO AVOID DISTURBING THE EXISTING ALUMINUM CLAD BASE FLASHING MEMBRANE THAT IS INSTALLED ON THE INNER PARAPET WALLS AND WHICH TRANSITIONS ONTO THE ROOFING SURFACES EXTENDING APPROXIMATELY 10-INCHES OUT FROM EACH WALL.

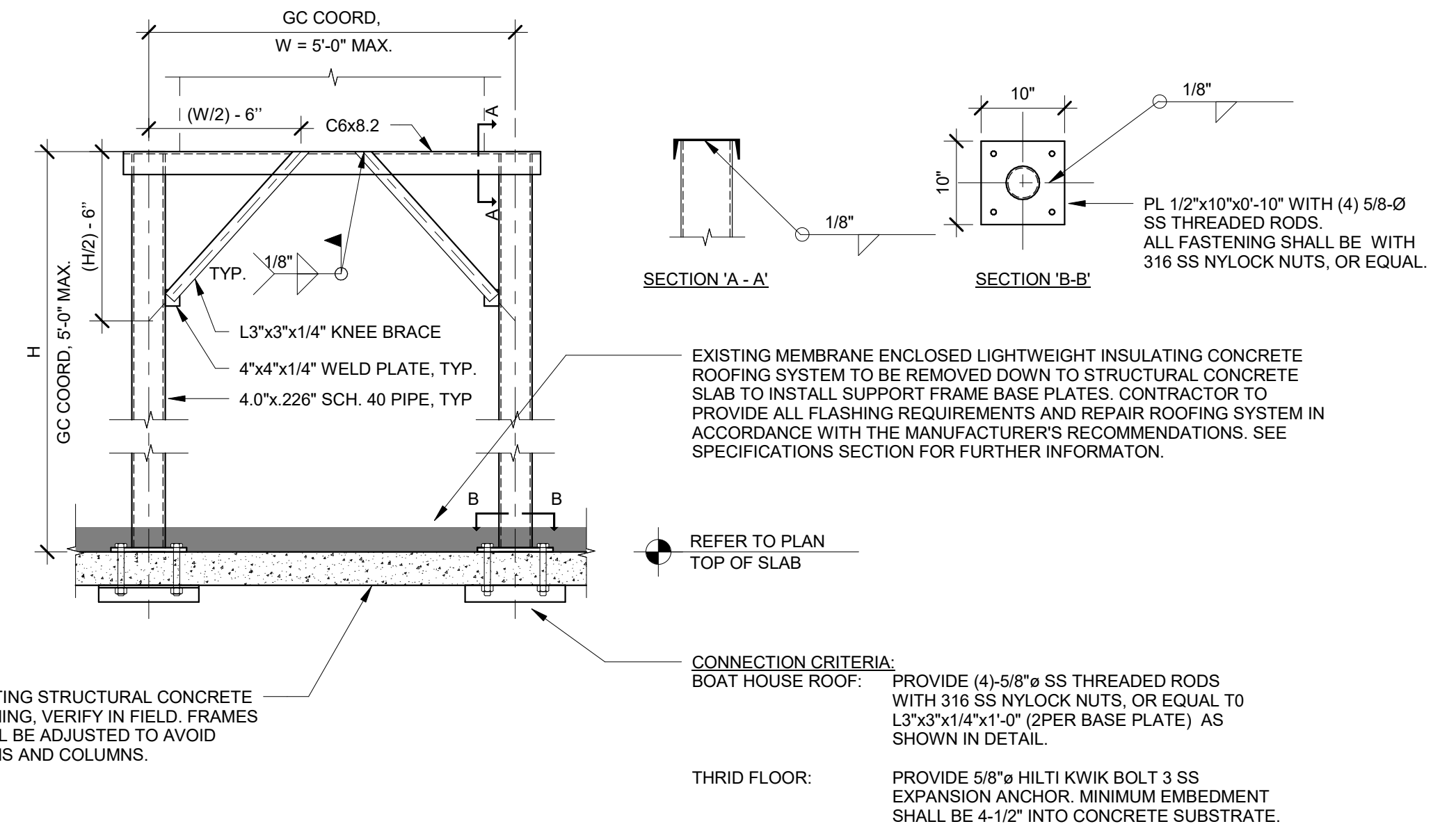
## WIND DESIGN DATA:

CODE: FLORIDA BUILDING CODE 2017, 6th Ed.  
ASCE/SEI 7-10

BASIC WIND SPEED	141 mph (ULT) 109 mph (ASD)
CATEGORY (RISK)	II
EXPOSURE	C
BUILDING HEIGHT	h < 30ft.
DESIGN WIND PRESSURE (PSF)	37.5 -PSF(ULTIMATE) 22.5 -PSF(SERVICE)

## SHOP DRAWINGS:

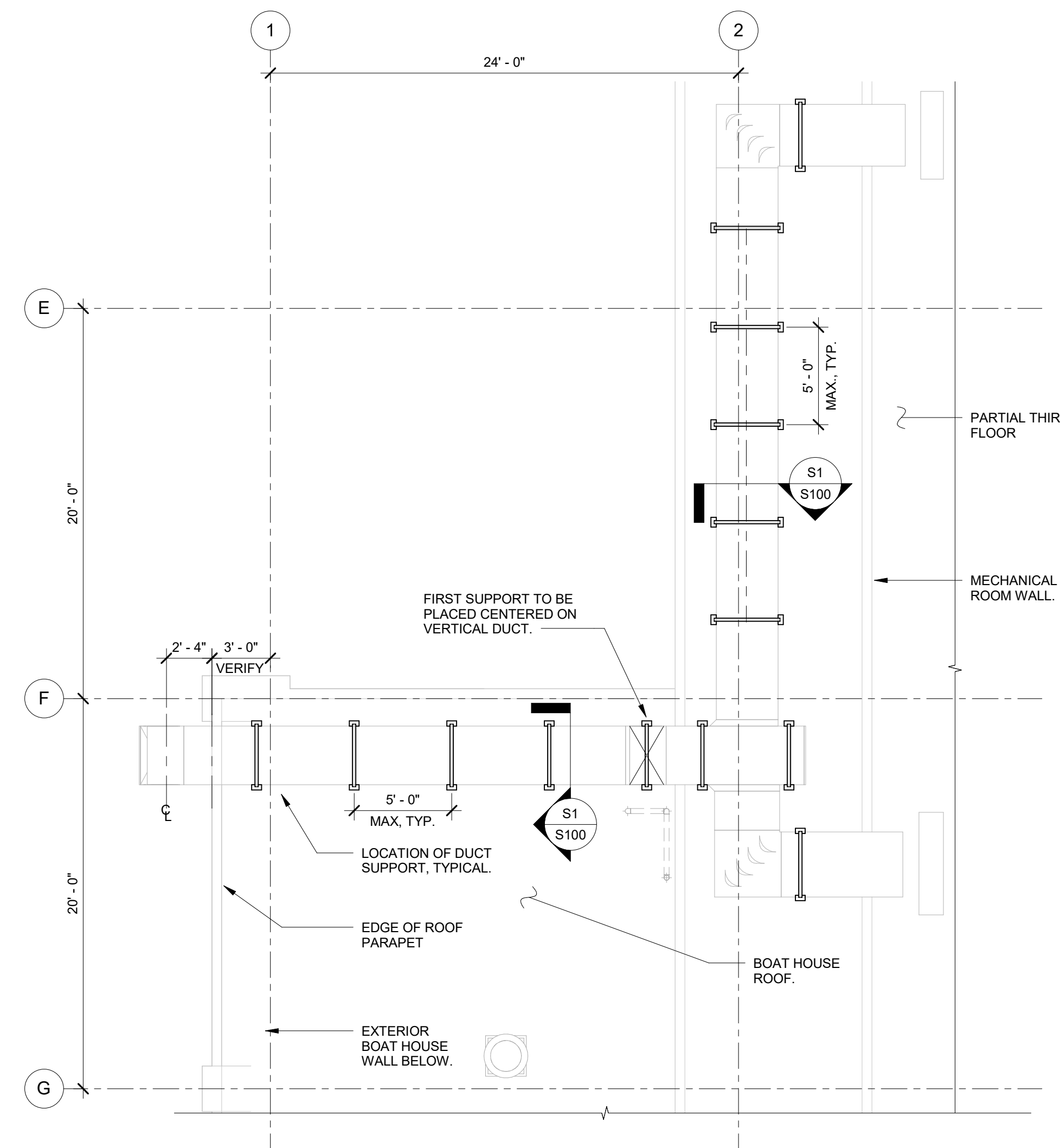
- NO STRUCTURAL DRAWINGS SHALL BE REPRODUCED FOR USE AS SHOP DRAWINGS.
- ALL DIMENSIONAL COORDINATION SHALL BE DONE BY THE CONTRACTOR AND/OR HIS DETAILER.
- DETAILER SHALL CHECK ALL MECHANICAL DRAWINGS FOR ALL ATTACHMENTS, CLIPS, OPENINGS, OR DUCT WORK AFFECTING STRUCTURAL MEMBERS. ALL ITEMS SHALL BE SHOWN ON SHOP DRAWINGS.
- ALL SHOP DRAWINGS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT.
- COMPLETED ERECTION PLANS SHALL BE SUBMITTED PRIOR TO OR IN CONJUNCTION WITH DETAIL DRAWINGS; BUT IN NO CASE SHALL DETAIL DRAWINGS BE SUBMITTED PRIOR TO ERECTION PLANS.
- DETAILER SHALL SUBMIT AN INDEX OF THE DETAIL DRAWINGS WITH EACH SHOP DRAWING SUBMITTAL.
- CONTRACTOR SHALL HAVE SHOP DRAWINGS WHICH HAVE BEEN SATISFACTORILY REVIEWED BY THE ARCHITECT AND/OR ENGINEER AND CONFIRMED BY THE CONTRACTOR BEFORE PROCEEDING WITH ANY WORK.
- DETAILER SHALL USE THE SAME STRUCTURAL ELEMENTS NUMBERS IN HIS DETAILS AS THOSE SHOWN ON CONTRACT DRAWINGS.
- CONTRACTOR TO SUBMIT DETAILS FOR THE REMOVAL OF BUILT-UP INSULATED ROOFING SYSTEM, IN ORDER TO INSTALL SUPPORT FRAMES, AND, FOR THE REPAIRING OF THE ROOFING SYSTEM AFTER SUPPORT FRAMES ARE INSTALLED. SEE SPECIFICATIONS FOR BALANCE OF CRITERIA.



### S1 - DUCT SUPPORT FRAME h<5'-0"

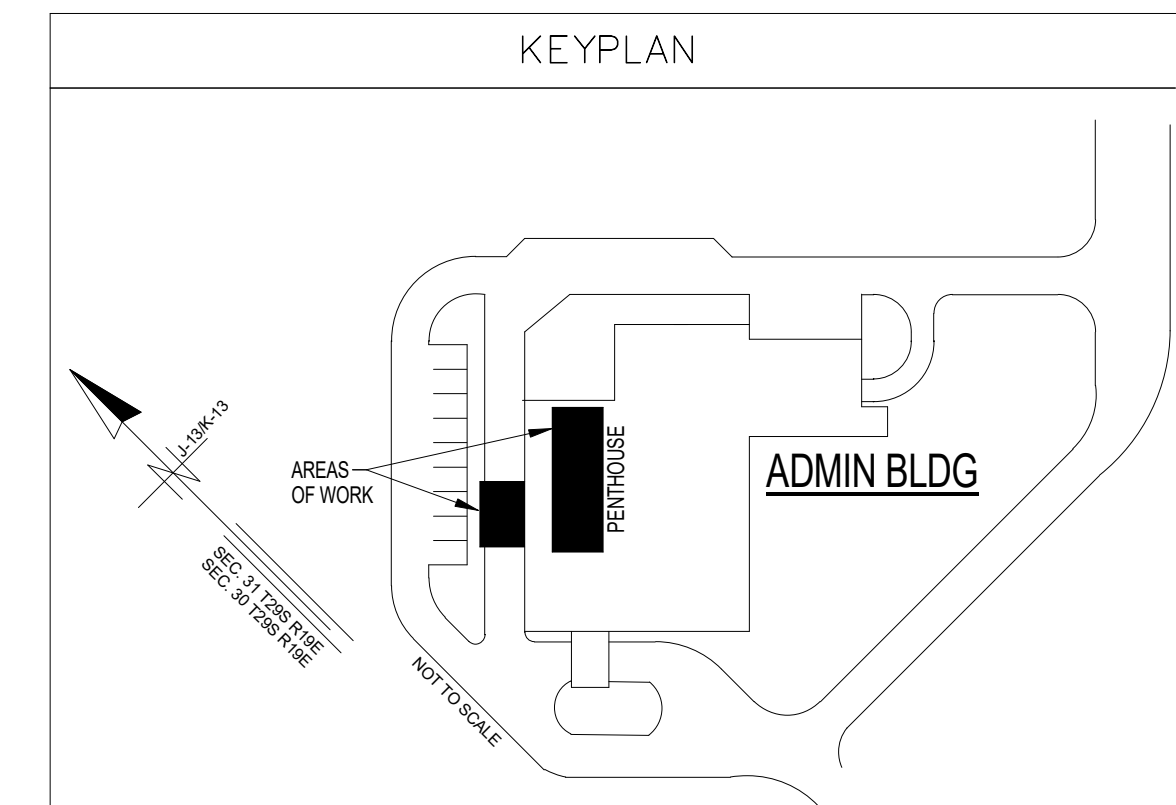
#### NOTES

- ALL FRAMING TO BE T-304L STAINLESS STEEL.
- GC TO COORDINATE WIDTH, HEIGHT, AND LOCATIONS BASED ON MECHANICAL REQUIREMENTS AND FIELD CONDITIONS.
- PROVIDE STAINLESS STEEL STRAP OVER DUCTWORK TO SUPPORT AS SHOWN IN MECHANICAL DRAWINGS.
- FOR FRAME HEIGHT H < 2'-0", DIAGONAL KNEE BRACING NOT REQUIRED.



EXISTING PARTIAL ROOF PLAN G

SCALE: 3/16" = 1'-0"



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No.	DATE	REVISIONS
5		
4		
3		
2		
1		

DES: RLB  
DRN:  
CKD: RLB  
DATE: 05/25/18

CITY of TAMPA  
WASTEWATER DEPARTMENT

HFC AWTP ADMINISTRATION BUILDING  
AIR TREATMENT SYSTEM  
100% CONSTRUCTION DOCUMENTS

## DUCT SUPPORT FRAMING

SHEET  
**S100**