

1

2

3

4

5

PLUMBING FIXTURE SCHEDULE – CONTRACTOR'S OPTION TO REUSE (E)LAVATORIES W/ACCESSORIES OR REPLACE IT AS NOTED								
MARK	FIXTURE	MANUFACTURER	MODEL NUMBER	DESCRIPTION	PIPE SIZE (INCHES)			
					CW	HW	SAN	VENT
P-3B	LAVATORY (HANDICAP)	AMERICAN STD.	0355.012	20"x18" WALL HUNG LAVATORY @ 34" AFF -- ADA INSULATION FOR SUPPLIES AND TRAP. PROVIDE CONCEALED ARM SUPPORT.	1/2	1/2	1-1/2	1-1/2
	FAUCET	DELTA	501-WFHGMHDF	SINGLE LEVER HANDLE FAUCET & CHROME SPOUT 4" CENTERS				
	SUPPLIES			1/2" COMPRESSION X 3/8" COMPRESSION WITH 3/8"x12" RISER TUBE				
	GRID DRAIN			1-1/4" CHROME PLATED GRID DRAIN WITH TAIL PIECE				
	P-TRAP			1-1/4" PVC P-TRAP				

WATER HAMMER ARRESTER SCHEDULE		
DESIGN	FIXTURE UNITS	PIPE SIZE
WHA-A	1-11	3/4
WHA-B	12-32	1
WHA-C	33-60	1
WHA-D	61-113	1

**REMARKS**

A PROVIDE BALL VALVE BETWEEN PIPE AND ARRESTER

B PROVIDE 16"x16" WALL OR CEILING ACCESS PANEL WHERE ARRESTER IS CONCEALED

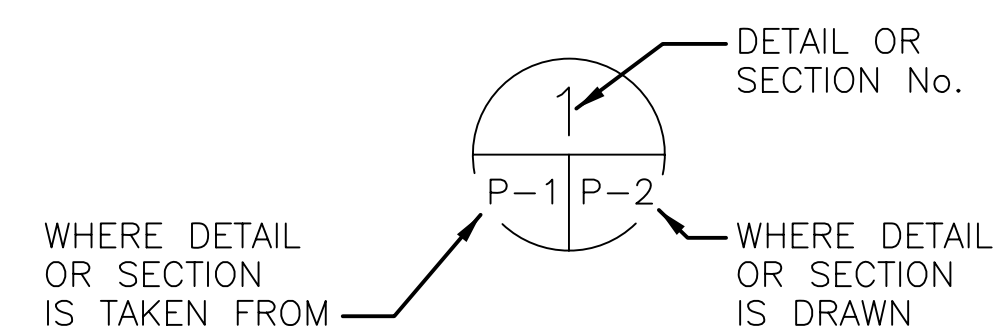
C PROVIDE WHA-A ABOVE ALL HOSE BIBBS (TYP. OF 3)

D PROVIDE WHA-C IN 2-1/2" SERVICE MAIN ABOVE HOSE BIBB

### LEGEND

- AD ACCESS DOOR
- CW COLD DOMESTIC WATER
- (E) EXISTING
- FCO/WCO FLOOR/WALL CLEAN OUT
- FD FLOOR DRAIN
- HB HOSE BIBB
- HW HOT DOMESTIC WATER
- HWR HOT DOMESTIC WATER RECIRCULATING
- R RELOCATE OR RELOCATED
- S SOIL
- V VENT
- VTR VENT THRU ROOF
- W WASTE
- E.W.H. ELECTRIC WATER HEATER
- WHA WATER HAMMER ARRESTER

- VENT
- SANITARY
- - - - - DOMESTIC COLD WATER
- - - - - DOMESTIC HOT WATER
- - - - - DOMESTIC HOT WATER RECIRCULATING
- (E)— EXISTING VENT
- (E)— EXISTING SANITARY
- - - (E) - - - EXISTING DOMESTIC COLD WATER
- - - (E) - - - EXISTING DOMESTIC HOT WATER
- - - (E) - - - EXISTING DOMESTIC HOT WATER RECIRCULATING
- ⊗ BALL VALVE, HAND OPERATOR
- ⌞ CHECK VALVE
- || WALL CLEAN OUT
- FLOOR DRAIN
- ||-C HOSE BIBB
- INSTANTANEOUS WATER HEATER
- ⊙ CONNECTION OF NEW WORK TO EXISTING



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#### CONSULTANTS

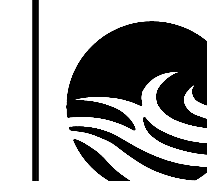
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Phone: 904-737-5700  
6510 Columbia Park Dr., Suite 104  
Jacksonville, FL 32258  
**PROJECT NO. 170004.00**

#### NOTES

#### PROJECT

BID NUMBER: BID-SJR-05-2019  
**RENOVATION WITH ADDITION TO BUILDING V ST. AUGUSTINE CAMPUS**

FOR



**ST. JOHNS RIVER STATE COLLEGE**  
PALATKA, FLORIDA

MARK	DATE	DESCRIPTION

ISSUE: NOVEMBER 19, 2019  
PROJECT NO: 1809  
CAD DWG FILE:  
DRAWN BY: SEI  
CHECKED BY: AG

BID DOCUMENTS PHASE

SHEET TITLE

**LEGEND AND SCHEDULES**

SHEET NUMBER

**P001**

1

2

3

4

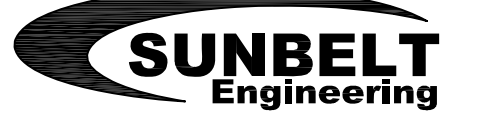
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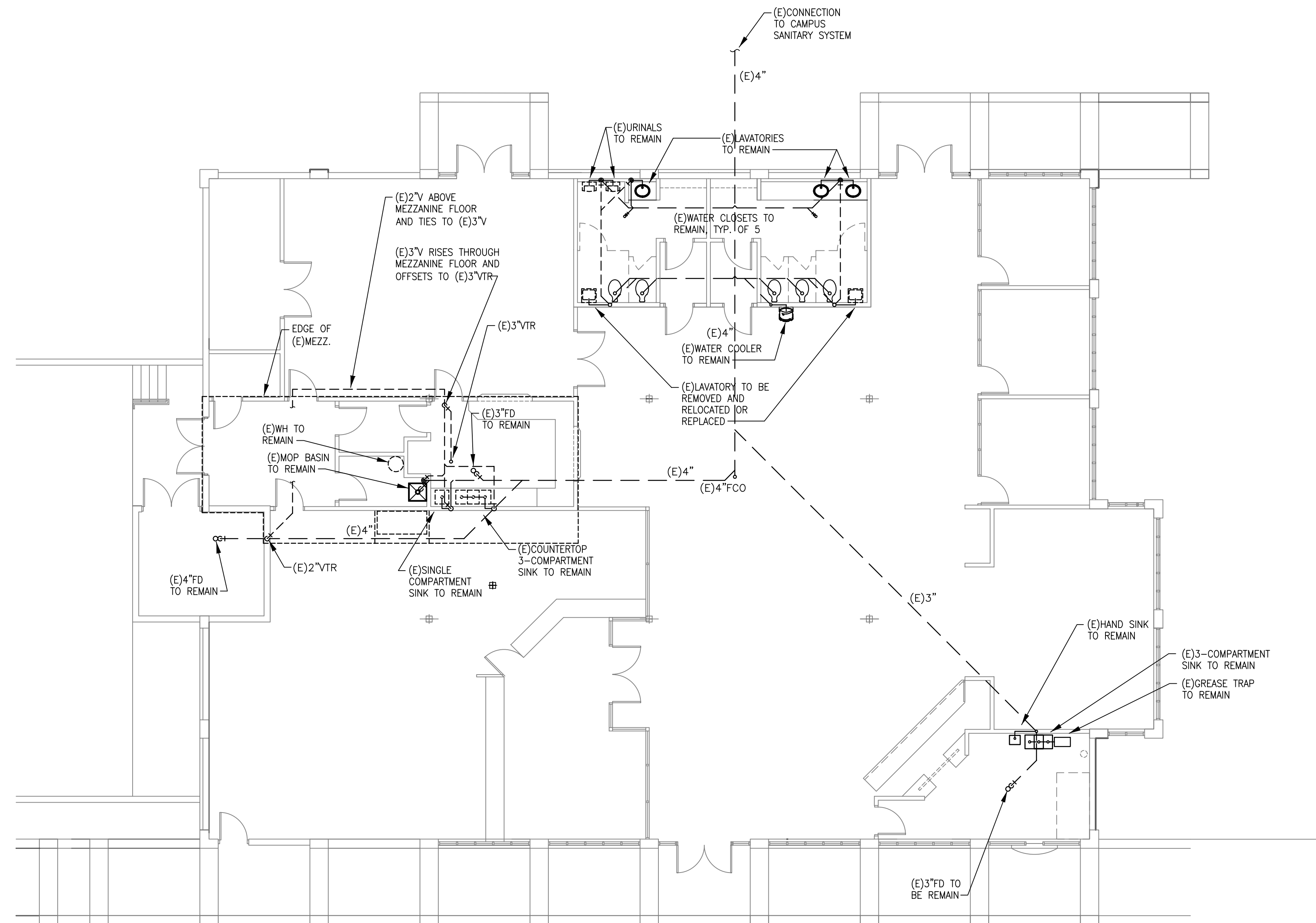


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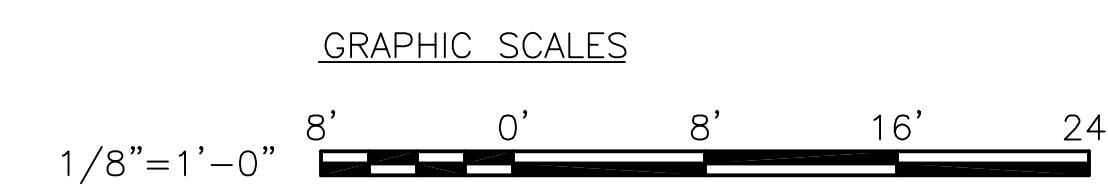
PROJECT NO. 170004.00

NOTES

- GENERAL NOTES
- REFER TO P001 FOR LEGEND AND SCHEDULES.
  - REFER TO P102 FOR DOMESTIC WATER DEMOLITION.
  - REFER TO P201 FOR NEW SANITARY WORK.
  - REFER TO P202 FOR NEW DOMESTIC WATER WORK.
  - REFER TO P301 FOR RISER DIAGRAMS.
  - ONLY WORK ON THIS SHEET IS TO REMOVE AND RELOCATE THE LAVATORIES IN THE HANDICAP STALLS OF THE TWO RESTROOMS. THE BALANCE OF THE SHEET IS FOR INFORMATION ONLY.



P1 FLOOR PLAN - BLDG. V  
SCALE: 1/8" = 1'-0"



PROJECT

BID NUMBER: BID-SJR-05-2019  
**RENOVATION WITH  
ADDITION TO BUILDING V  
ST. AUGUSTINE CAMPUS**

FOR



**ST. JOHNS RIVER  
STATE COLLEGE**  
PALATKA, FLORIDA

MARK	DATE	DESCRIPTION
ISSUE:	NOVEMBER 19, 2019	
PROJECT NO:	1809	
CAD DWG FILE:		
DRAWN BY:	SEI	
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BID DOCUMENTS PHASE

SHEET TITLE

**FLOOR PLAN  
SANITARY DEMO.**

SHEET NUMBER

**P101**



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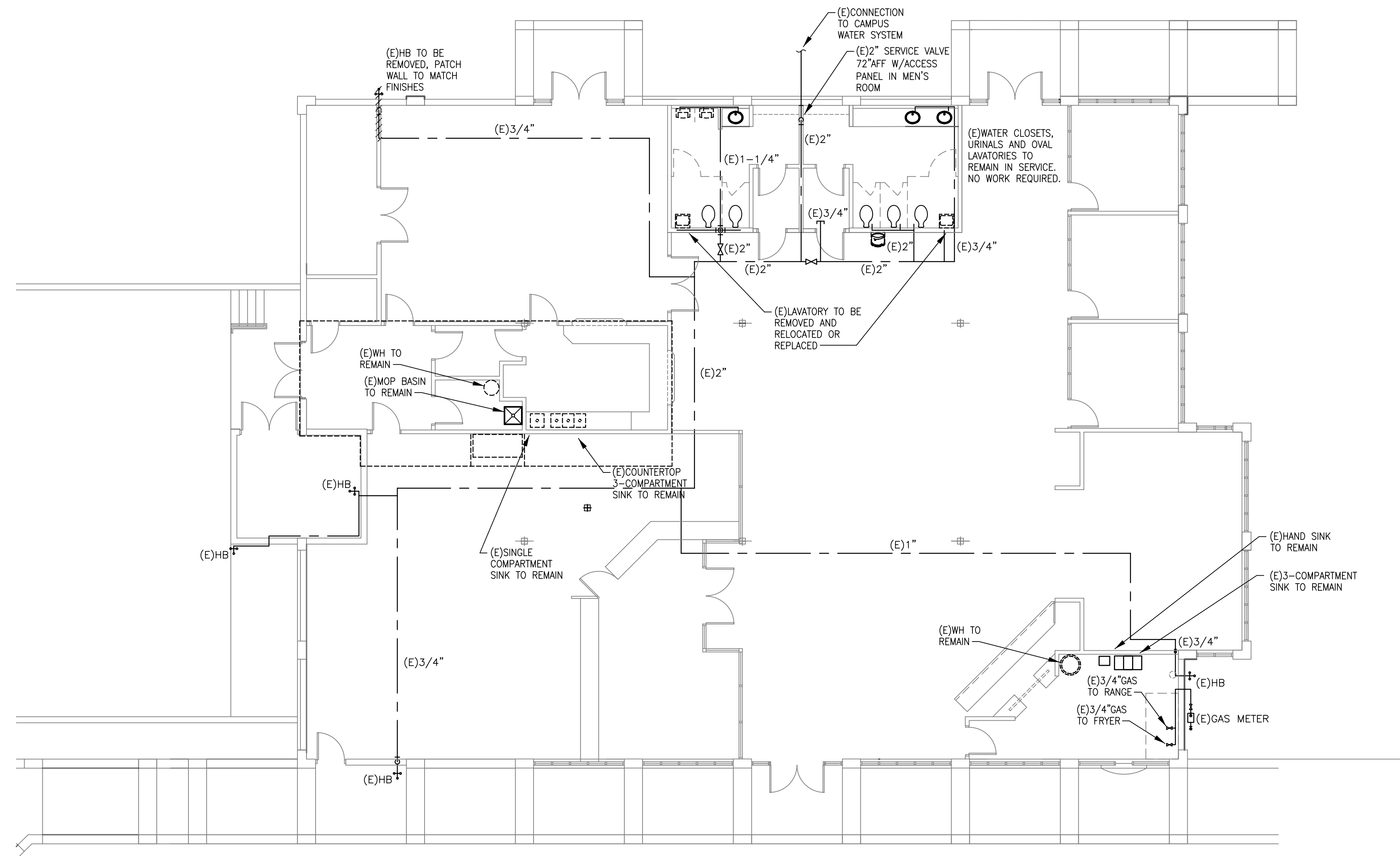
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PROJECT NO. 170004.00

NOTES

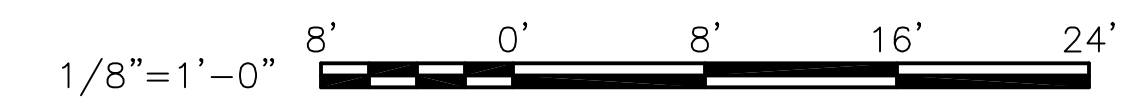
GENERAL NOTES

1. REFER TO P001 FOR LEGEND AND SCHEDULES.
2. REFER TO P101 FOR SANITARY DEMOLITION.
3. REFER TO P201 FOR NEW SANITARY WORK.
4. REFER TO P202 FOR NEW DOMESTIC WATER WORK.
5. REFER TO P301 FOR RISER DIAGRAMS.
6. ONLY WORK ON THIS SHEET IS TO REMOVE AND RELOCATE THE LAVATORIES IN THE HANDICAP STALLS OF THE TWO RESTROOMS AND TO REMOVE THE HOSE BIBS ON THE WEST FACE NEAR THE SOUTH END OF THE WALL. THE BALANCE OF THE SHEET IS FOR INFORMATION ONLY.



P1 FLOOR PLAN - BLDG. V  
SCALE: 1/8" = 1'-0"

GRAPHIC SCALES



PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH  
ADDITION TO BUILDING V  
ST. AUGUSTINE CAMPUS

FOR



ST. JOHNS RIVER  
STATE COLLEGE  
PALATKA, FLORIDA

MARK DATE DESCRIPTION

ISSUE: NOVEMBER 19, 2019

PROJECT NO: 1809

CAD DWG FILE:

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BID DOCUMENTS PHASE

SHEET TITLE

FLOOR PLAN  
DOM. WATER DEMO.

SHEET NUMBER

P102



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PROJECT NO. 170004.00

NOTES

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH  
ADDITION TO BUILDING V  
ST. AUGUSTINE CAMPUS

FOR



ST. JOHNS RIVER  
STATE COLLEGE  
PALATKA, FLORIDA

MARK DATE DESCRIPTION

ISSUE: NOVEMBER 19, 2019

PROJECT NO: 1809

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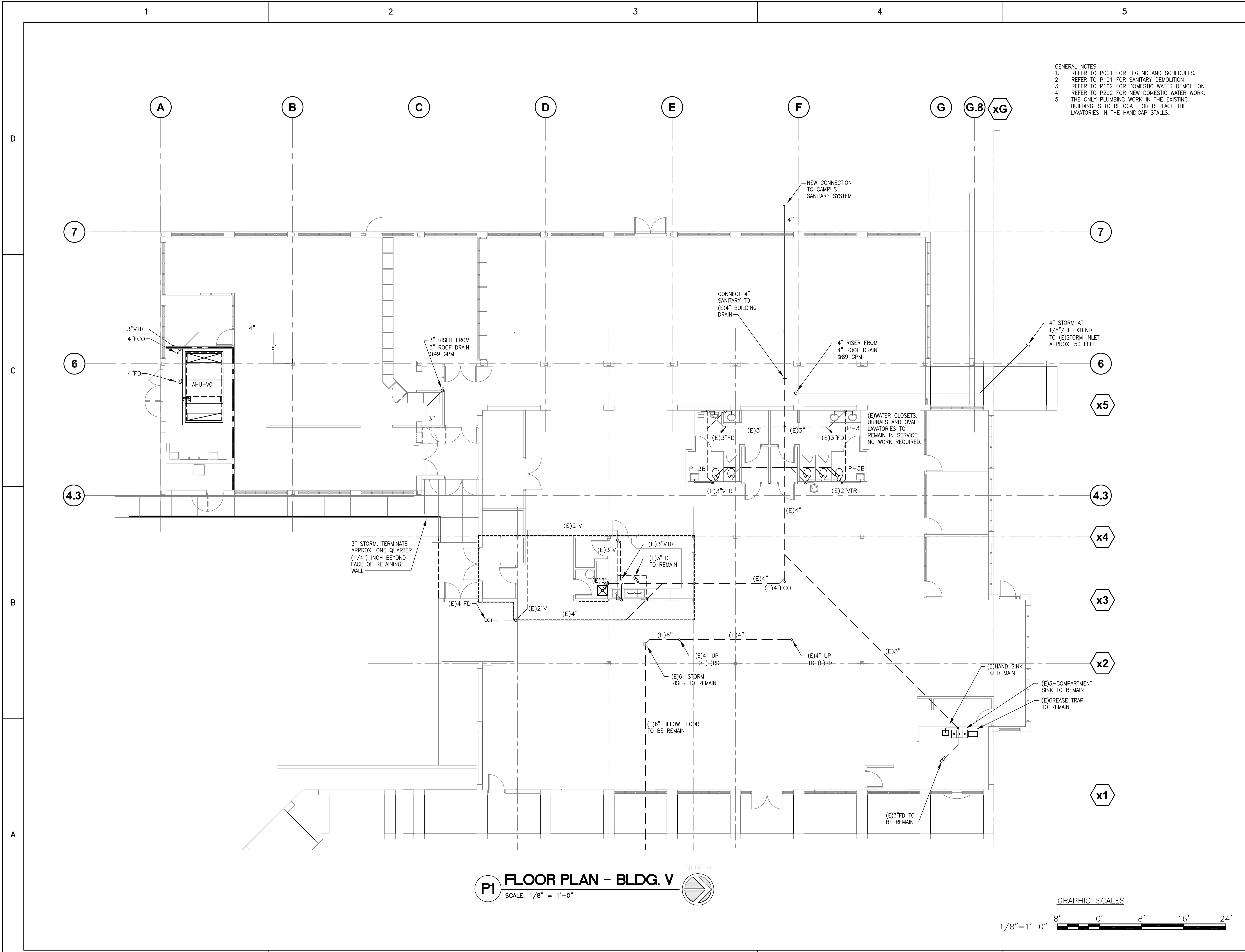
SHEET TITLE

FLOOR PLAN  
SANITARY

SHEET NUMBER

P201

- GENERAL NOTES
- REFER TO P001 FOR LEGEND AND SCHEDULES.
  - REFER TO P101 FOR SANITARY DEMOLITION
  - REFER TO P102 FOR DOMESTIC WATER DEMOLITION.
  - REFER TO P202 FOR NEW DOMESTIC WATER WORK.
  - THE ONLY PLUMBING WORK IN THE EXISTING BUILDING IS TO RELOCATE OR REPLACE THE LAVATORIES IN THE HANDICAP STALLS.



P1 FLOOR PLAN - BLDG. V  
SCALE: 1/8" = 1'-0"





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**PROJECT NO. 170004.00**

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FOR  
  
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PALATKA, FLORIDA

ISSUE: NOVEMBER 19, 2019  
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**ST. JOHNS RIVER STATE COLLEGE**  
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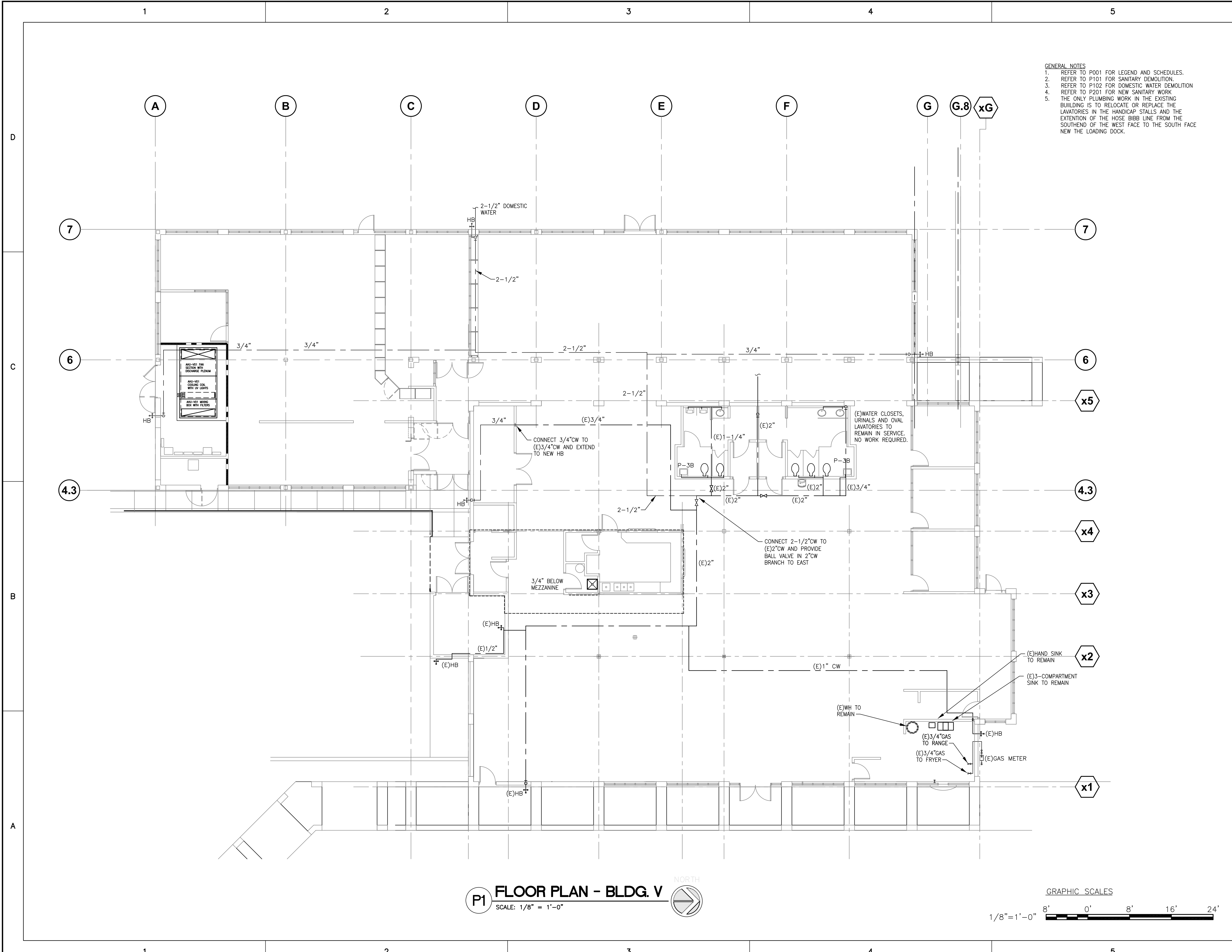
SHEET TITLE

**PLUMBING PLAN DOMESTIC WATER**

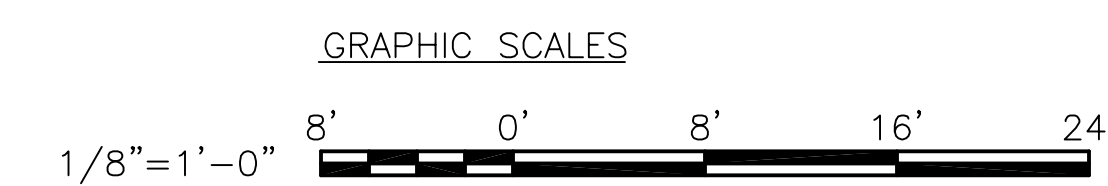
SHEET NUMBER

**P202**

- GENERAL NOTES**
- REFER TO P001 FOR LEGEND AND SCHEDULES.
  - REFER TO P101 FOR SANITARY DEMOLITION.
  - REFER TO P102 FOR DOMESTIC WATER DEMOLITION
  - REFER TO P201 FOR NEW SANITARY WORK
  - THE ONLY PLUMBING WORK IN THE EXISTING BUILDING IS TO RELOCATE OR REPLACE THE LAVATORIES IN THE HANDICAP STALLS AND THE EXTENSION OF THE HOSE BIBB LINE FROM THE SOUTHWEST OF THE WEST FACE TO THE SOUTH FACE NEW THE LOADING DOCK.



**P1 FLOOR PLAN - BLDG. V**  
SCALE: 1/8" = 1'-0"





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FOR



ST. JOHNS RIVER  
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SHEET TITLE

LEGEND AND  
SCHEDULES

SHEET NUMBER

M001

AIR DISTRIBUTION DEVICE SCHEDULE									
MARK	DESCRIPTION	FACE SIZE	FLEX/NECK SIZE	MAX. CFM	MATERIAL	FINISH	MANUF.	MODEL	NOTES
A	CEILING DIFFUSER	24x24	6" ø	80	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	AMD	1,2,3
B	CEILING DIFFUSER	24x24	8" ø	200	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	AMD	1,2,3
C	CEILING DIFFUSER	24x24	10" ø	340	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	AMD	1,2,3
D	CEILING DIFFUSER	24x24	12" ø	500	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	AMD	1,2,3
E	CEILING DIFFUSER	12x12	6" ø	80	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	AMD	1,2,3
F	CEILING RETURN	24x12		400	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	80-TB	1,3
G	CEILING EXHAUST	12x12	6" ø	80	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	80-TB	1,3
H	CEILING EXHAUST	12x12	8" ø	200	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	80-TB	1,3
J	CEILING RETURN	24x24	10" ø	340	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	80-TB	1,3
K	CEILING RETURN	24x24	12" ø	500	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	80-TB	1,3
L	CEILING RETURN	24x24	14" ø	800	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	80-TB	1,3
R	SIDEWALL RETURN	AS NOTED	AS NOTED	-	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	630-FLA	1,3
S	SIDEWALL SUPPLY	AS NOTED	AS NOTED	-	ALUMINUM	OFF-WHITE BAKED ENAMEL	PRICE	620-DAL-FSA	1,3

**REMARKS**  
A MAXIMUM NC 25  
B PROVIDE PRICE LAY-IN FRAME FOR ALL SURFACE MOUNT DIFFUSERS AND CEILING EXHAUST GRILLES

**NOTES**  
1. THE PLAN SYMBOLS DENOTE THE DIFFUSER TYPE, FLEX/NECK SIZE AND CFM  
2. ALL DIFFUSERS ARE 4-WAY UNLESS OTHERWISE INDICATED, 1W FOR 1 WAY, 2W FOR 2 WAY, OR 3W FOR 3 WAY  
3. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE.

DESIGN CONDITIONS							
LOCATION	LATITUDE	ELEVATION FT	WINTER		SUMMER		
			OUTDOOR *FdB	INDOOR *FdB	OUTDOOR *FdB	*FwB	INDOOR *FdB
SAINT AUGUSTINE, FL	35N	35	28	68	95	78	75

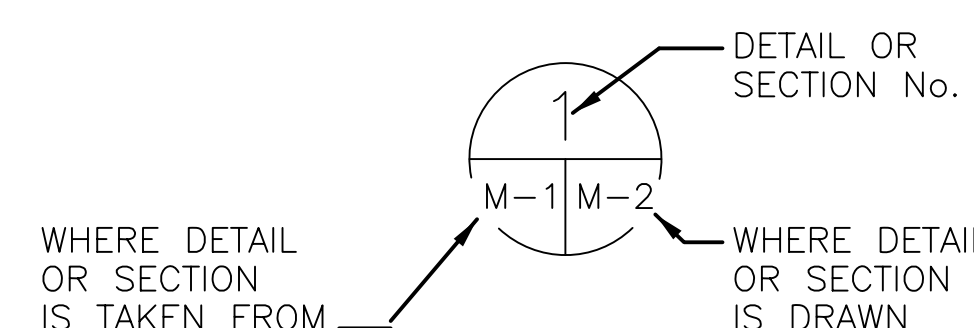
### LEGEND

#### SYMBOLS

- NEW DUCTWORK
- (E) EXISTING DUCTWORK
- ELBOW W/TURNING VANES
- DUCT TURNS UP
- DUCT TURNS DOWN
- DUCT RISES (R) OR DROPS (D)
- HIGH PRESSURE FLEX DUCT
- FIRE DAMPER
- FIRE/SMOKE DAMPER
- EXISTING FIRE DAMPER
- EXISTING FIRE/SMOKE DAMPER
- CEILING SUPPLY DIFFUSER
- RETURN / EXHAUST GRILLE
- ACCESS PANEL
- LOW PRESSURE FLEX DUCT
- SUPPLY AIR
- EXHAUST/RETURN AIR
- OUTSIDE AIR
- SENSOR
- THERMOSTAT
- MANUAL VOLUME DAMPER
- OPPOSED BLADE VOLUME DAMPER
- CONNECTION OF NEW WORK TO EXISTING

#### ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR
- AHU AIR HANDLING UNIT
- AP ACCESS PANEL
- BHP BRAKE HORSEPOWER
- BTUH BTU PER HOUR
- CFM CUBIC FEET PER MINUTE
- CHWS CHILLED WATER SUPPLY
- CHWR CHILLED WATER RETURN
- CONT CONTINUATION
- CVB CONSTANT VOLUME BOX
- D DOWN
- db DRY BULB
- DIFF DIFFUSER
- ΔT WATER TEMPERATURE RISE OR DROP
- (E) EXISTING
- EAT ENTERING AIR TEMPERATURE
- EF EXHAUST FAN
- EWT ENTERING WATER TEMPERATURE
- EXH EXHAUST
- EXIST EXISTING
- EXT EXTERNAL
- FD FIRE DAMPER OR FLOOR DRAIN
- FTU FAN TERMINAL UNIT
- FPM FEET PER MINUTE
- GA GAUGE
- HP HORSEPOWER
- IN INCHES
- LAT LEAVING AIR TEMPERATURE
- LWT LEAVING WATER TEMPERATURE
- MFR MANUFACTURER
- MTD MOUNTED
- MVD MANUAL VOLUME DAMPER
- OA OUTSIDE AIR
- ø OVAL
- PH PHASE
- R RELOCATE OR RELOCATED
- RA RETURN AIR
- REQ'D REQUIRED
- RHC REHEAT COIL
- ø ROUND
- SA SUPPLY AIR
- SCH SCHEDULE
- SD SMOKE DAMPER
- SHT SHEET
- SP STATIC PRESSURE
- TYP TYPICAL
- V VOLTS
- wb WET BULB
- WG WATER GAUGE
- RD ROOF DRAIN
- T-STAT THERMOSTAT
- FC FORWARD CURVE
- OBVD OPPOSED BLADE VOLUME DAMPER
- VD MANUAL VOLUME DAMPER





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FOR



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STATE COLLEGE  
PALATKA, FLORIDA

AIR HANDLING UNIT SCHEDULE – EQUIPMENT TO BE FURNISHED BY OWNER

MARK	AREA SERVED	FAN										UNIT COOLING										FILTER DATA			VOLTS/PHASE	MANUF.	MODEL NUMBER	
		TOTAL AIR (CFM)	OUTSIDE AIR (CFM)	S.P. (N.W.G.)		FAN WALL ARR	TYPE	FANS	FAN HP	TOTAL FAN (HP)	AIR SIDE				WATER SIDE			PRE-FILTERS	FINAL FILTERS	MIN. FILTER SQ.FT.								
				EXT.	TOTAL						ENT AIR to COIL (db (°F))	LVG AIR from COIL (wb (°F))	MAX FPM	ROWS / FINS	SENSIBLE MBH	TOTAL MBH	EWT (°F)				LWT (°F)	?PD (°F)	COIL FLOW (GPM)	MERV 7 TYPE				MERV 13 TYPE
AHU-V01	BUILDING V	12,000	2,600	2.50	5.75	2R / 2 C	AF	4	5	20	82.5	65.8	51.9	50.5	400	8 / 10	396.6	534.7	46.0	60.0	9.3	89.0	2" PLEATS	12" CARTRIDGE	36	480/3	TEMTROL	-

**REMARKS**  
 A TYPE 304 S.S. SOLID INTERIOR LINER, PAINTED GALVANIZED EXTERIOR, TYPE - I THERMAL BREAK.  
 B FAN HP IS ESTIMATED FOR ELECTRICAL SERVICING REQUIREMENTS ONLY. MANUFACTURER/CONTRACTOR SHALL DETERMINE FAN HP BASED ON SCHEDULED EXT. S.P., MANUFACTURER'S ESTIMATED INTERNAL S.P., AND CFM.  
 C PROVIDE FANWALL TYPE FANS WITH BACKDRAFT DAMPER FOR FAILED FAN OPTION.  
 D PROVIDE SINGLE POINT CONNECTION FACTORY WIRED UNIT MOUNTED CONTROL PANEL WITH VARIABLE SPEED DRIVES FOR EACH FAN MOTOR WITH DISCONNECT SWITCHES AHEAD OF EACH VARIABLE SPEED DRIVE.  
 E MAX. WATER PRESSURE DROP FOR COOLING COIL IS 15 FT.  
 F MAX. AIR VELOCITY FOR COOLING COIL IS 450 FPM.  
 G PROVIDE CU COILS WITH 0.008" AL FINS / 5/8" OD / 0.020" WALL / 304 S.S. CASING  
 H PROVIDE STAINLESS STEEL DRAIN PAN WITH POSITIVE DRAINAGE.  
 I FILTER RATING BASED ON ASHRAE 52.2  
 J UNIT CONFIGURATION IS: AIR PLENUM W/ACCESS DOOR - 2 STAGE FLAT WITH PLEATED AND CARTRIDGE FILTER - COOLING COIL WITH ACCESS DOOR - FAN SECTION WITH UPBLAST FRONT DISCHARGE.  
 K PROVIDE UV LIGHTS AND BIPOLAR IONIZATION FOR COOLING COIL PROTECTION

PARALLEL FAN TERMINAL UNIT SCHEDULE – EQUIPMENT TO BE FURNISHED BY OWNER

MARK	SERVICE	COOLING CFM	MIN CFM	HEATING CFM	OUTLET (INCHES)	INLET (INCHES)	FLEX (INCHES)	BOX SIZE WxLxH	FAN				HEATING			MANUFACTURER	MODEL NUMBER	NOTES	
									CFM	SIZE	HP	FLA	VOLTS	KW	STAGES				VOLTS
FTU-V01	BOOK STORE OFFICES	640	135	385	14x11	10	12	41x36x17	250	2	1/8	1.3	277/1	4.0	2	277/1	TITUS	DTQP	1
FTU-V02	BOOK STORE EAST STACKS	900	190	540	14x11	10	12	41x36x17	350	2	1/8	1.3	277/1	4.0	2	277/1	TITUS	DTQP	1
FTU-V03	BOOK STORE W. STACKS & STORE	1200	255	705	14x11	12	14	41x36x17	450	3	1/4	2.2	277/1	6.0	2	277/1	TITUS	DTQP	1
FTU-V04	COMMUNITY FLEX SPACE	1500	320	770	14x11	14	16	41x36x17	450	3	1/4	2.2	277/1	9.0	2	480/3	TITUS	DTQP	1
FTU-V05	COMMUNITY FLEX SPACE ALT	1275	275	725	14x11	12	14	41x36x17	450	3	1/4	2.2	277/1	8.0	2	480/3	TITUS	DTQP	1

**REMARKS**  
 A MANUFACTURER SHALL MOUNT DIGITAL CONTROL MODULE AND ACTUATOR ON UNIT AT FACTORY. CONTROL CONTRACTOR SHALL PROVIDE CONTROL MODULE AND ACTUATOR TO MANUFACTURER, AND CONTROL CONTRACTOR SHALL BE RESPONSIBLE FOR ADDRESSING, CALIBRATING, AND SECURING EXTERNAL CONTROL WIRING TO THE CONTROL PANEL.  
 B PROVIDE 75 VA 277/24 VOLT XFMR CLASS II MOUNTED IN CONTROL PANEL.  
 C PROVIDE FLEX DUCT CONNECTED TO FILTER GRILLE ON FAN INLET SIDE.  
 D PROVIDE 2" LARGER CONICAL REDUCER 12" LONG AT THE TERMINAL UNIT INLET  
 E HEATING CFM INCLUDES MINIMUM COOLING CFM + FAN CFM  
 F PROVIDE AND WIRE UNIT MOUNTED DISCONNECT.

**NOTES**  
 1 BASIS OF DESIGN FOR CONTROLS IS ANDOVER BY FACILITY AUTOMATION

VWU TERMINAL UNIT SCHEDULE – EQUIPMENT TO BE FURNISHED BY OWNER

MARK	SERVICE	COOLING CFM	HEATING CFM	INLET (INCHES)	OUTLET (INCHES)	HEATING			MANUFACTURER	MODEL NUMBER	NOTES
						KW	STAGES	VOLTS			
VWU-V01	DATA & MECH. ROOM	830	230	10	14x12.5	2.0	2	277/1	TITUS	DESV	-

**REMARKS**  
 A MANUFACTURER SHALL MOUNT DIGITAL CONTROL MODULE AND ACTUATOR ON UNIT AT FACTORY. CONTROL CONTRACTOR SHALL PROVIDE CONTROL MODULE AND ACTUATOR TO MANUFACTURER, AND CONTROL CONTRACTOR SHALL BE RESPONSIBLE FOR ADDRESSING, CALIBRATING, AND SECURING EXTERNAL CONTROL WIRING TO THE CONTROL PANEL.  
 B PROVIDE 75 VA 277/24 VOLT XFMR CLASS II MOUNTED IN CONTROL PANEL.  
 C 0.5" MAXIMUM DOWNSTREAM STATIC PRESSURE.  
 D PROVIDE 2" LARGER CONICAL REDUCER 12" LONG AT THE TERMINAL UNIT INLET  
 E MINIMUM PRIMARY VALVE CFM IS 30% OF COOLING CFM DURING OCCUPIED MODE; UNOCCUPIED VAV MAY GO TO ZERO  
 F PROVIDE UNIT MOUNTED FACTORY DISCONNECT.

**NOTES**  
 1. BASIS OF DESIGN FOR CONTROLS IS ANDOVER BY FACILITY AUTOMATION

CVU OUTSIDE AIR TERMINAL UNIT SCHEDULE – EQUIPMENT TO BE FURNISHED BY OWNER

MARK	SERVICE	COOLING CFM	HEATING CFM	INLET (INCHES)	OUTLET (INCHES)	HEATING			MANUFACTURER	MODEL NUMBER	NOTES
						KW	STAGES	VOLTS			
CVU-V01.1	AHU-V01	1300	1300	14	20x17.5	13.0	3	480/3	TITUS	DESV	1
CVU-V01.2	AHU-V01	1300	1300	14	20x17.5	13.0	3	480/3	TITUS	DESV	1

**REMARKS**  
 A MANUFACTURER SHALL MOUNT DIGITAL CONTROL MODULE AND ACTUATOR ON UNIT AT FACTORY. CONTROL CONTRACTOR SHALL PROVIDE CONTROL MODULE AND ACTUATOR TO MANUFACTURER, AND CONTROL CONTRACTOR SHALL BE RESPONSIBLE FOR ADDRESSING, CALIBRATING, AND SECURING EXTERNAL CONTROL WIRING TO THE CONTROL PANEL.  
 B PROVIDE 75 VA 277/24 VOLT XFMR CLASS II MOUNTED IN CONTROL PANEL.  
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 E PROVIDE UNIT MOUNTED FACTORY DISCONNECT.

**NOTES**  
 1. BASIS OF DESIGN FOR CONTROLS IS ANDOVER BY FACILITY AUTOMATION

MARK DATE DESCRIPTION

ISSUE: NOVEMBER 19, 2019

PROJECT NO: 1809

CAD DWG FILE:

DRAWN BY: SEI

CHECKED BY: AG

BID DOCUMENTS PHASE

SHEET TITLE

SCHEDULES

SHEET NUMBER

M002







AKEL LOGAN SHAFER ARCHITECTS AND PLANNERS

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AAC002135

CONSULTANTS



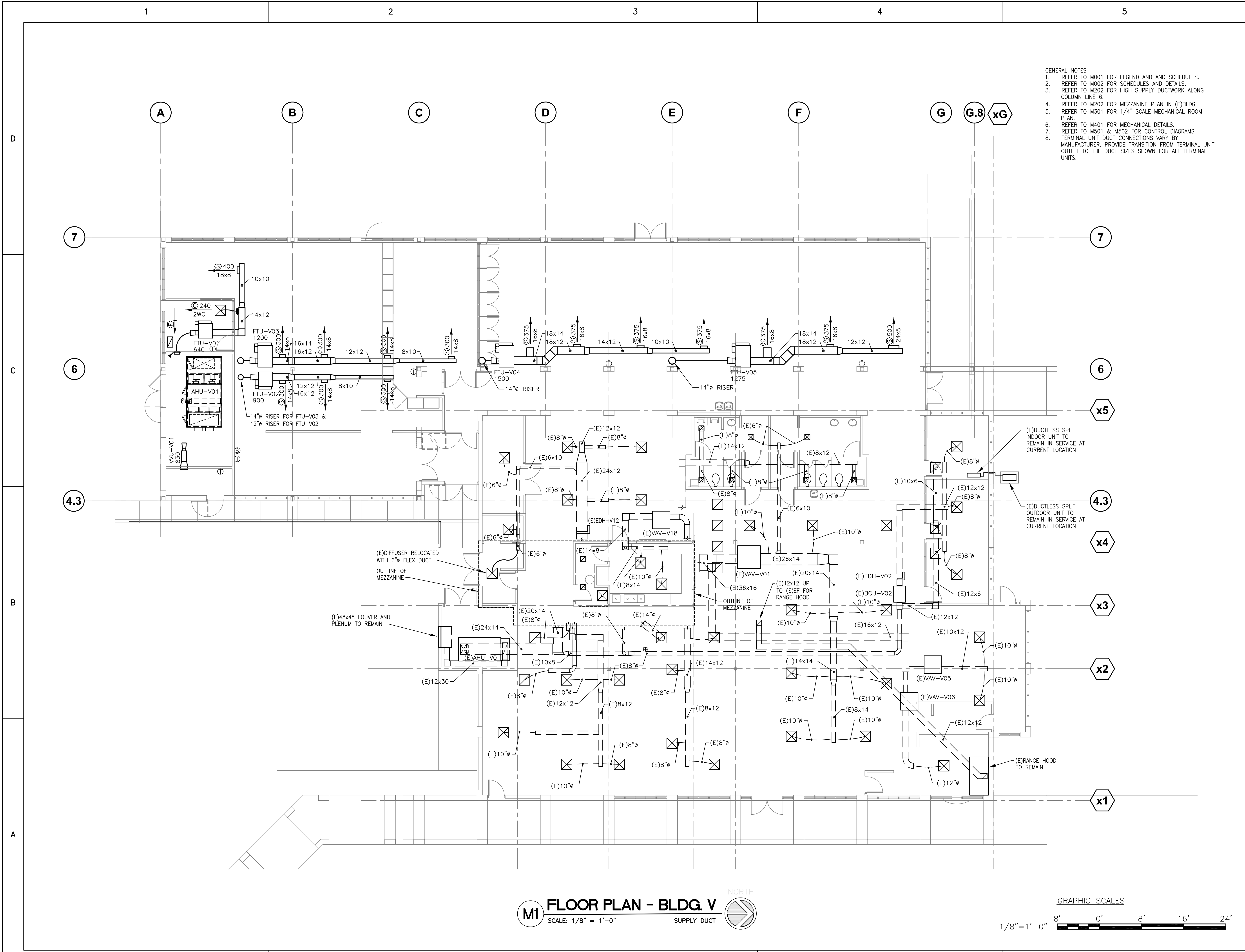
License No. 4551 Corp. Auth. No. J36478  
Phone: 904-737-5700  
6510 Columbia Park Dr., Suite 104  
Jacksonville, FL 32258

PROJECT NO. 170004.00

NOTES

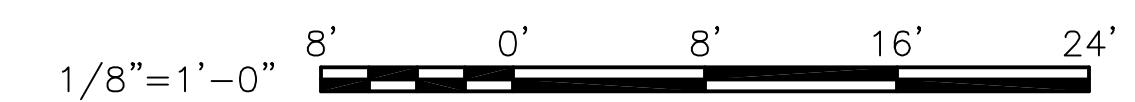
GENERAL NOTES

- REFER TO M001 FOR LEGEND AND AND SCHEDULES.
- REFER TO M002 FOR SCHEDULES AND DETAILS.
- REFER TO M202 FOR HIGH SUPPLY DUCTWORK ALONG COLUMN LINE 6.
- REFER TO M202 FOR MEZZANINE PLAN IN (E)BLDG.
- REFER TO M301 FOR 1/4" SCALE MECHANICAL ROOM PLAN.
- REFER TO M401 FOR MECHANICAL DETAILS.
- REFER TO M501 & M502 FOR CONTROL DIAGRAMS.
- TERMINAL UNIT DUCT CONNECTIONS VARY BY MANUFACTURER, PROVIDE TRANSITION FROM TERMINAL UNIT OUTLET TO THE DUCT SIZES SHOWN FOR ALL TERMINAL UNITS.



M1 FLOOR PLAN - BLDG. V  
SCALE: 1/8" = 1'-0"  
SUPPLY DUCT

GRAPHIC SCALES



PROJECT

BID NUMBER: BID-SJR-05-2019  
RENOVATION WITH  
ADDITION TO BUILDING V  
ST. AUGUSTINE CAMPUS

FOR



ST. JOHNS RIVER  
STATE COLLEGE  
PALATKA, FLORIDA

MARK	DATE	DESCRIPTION
ISSUE:	NOVEMBER 19, 2019	
PROJECT NO:	1809	
CAD DWG FILE:		
DRAWN BY:	SEI	
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BID DOCUMENTS PHASE

SHEET TITLE

MECHANICAL PLAN

SHEET NUMBER

M201



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FOR



ST. JOHNS RIVER STATE COLLEGE  
PALATKA, FLORIDA

MARK DATE DESCRIPTION

ISSUE: NOVEMBER 19, 2019

PROJECT NO: 1809

CAD DWG FILE:

DRAWN BY: SEI

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BID DOCUMENTS PHASE

SHEET TITLE

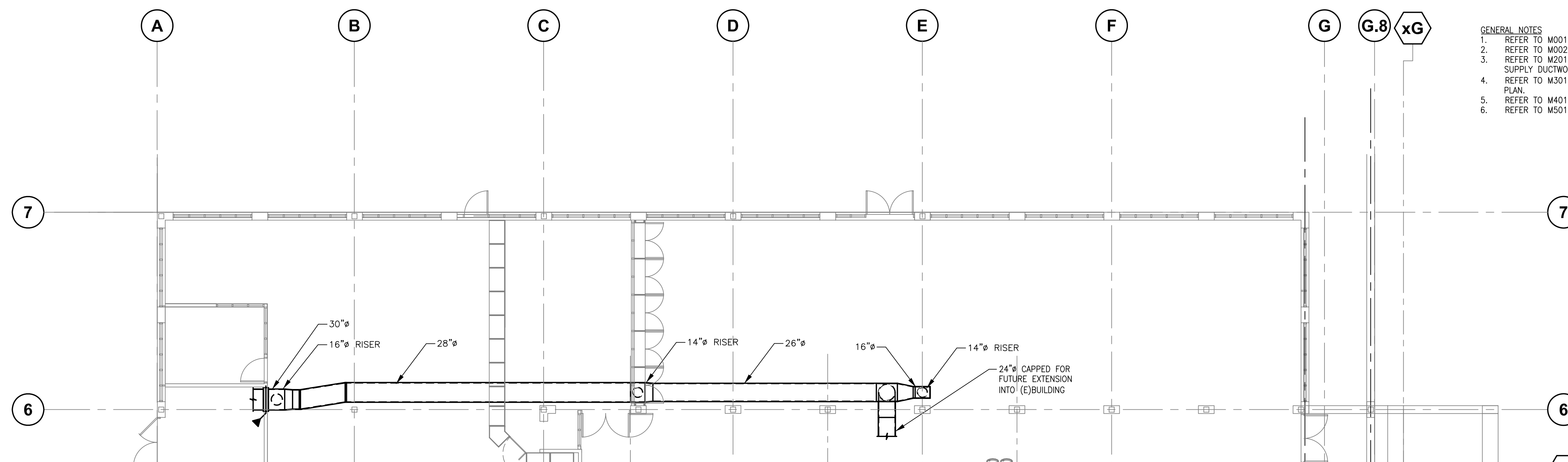
PARTIAL MECHANICAL PLANS

SHEET NUMBER

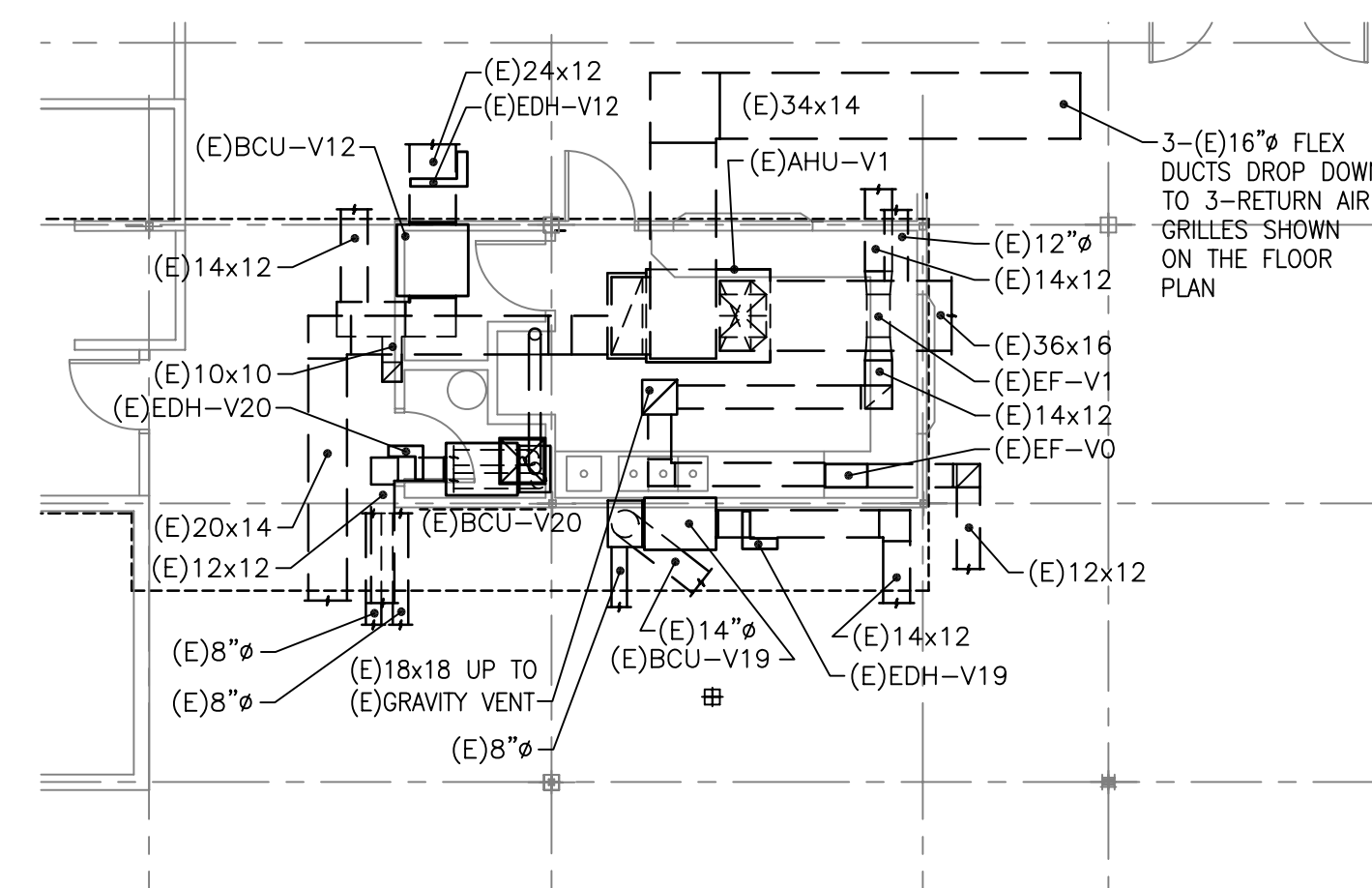
M202

GENERAL NOTES

1. REFER TO M001 FOR LEGEND AND SCHEDULES.
2. REFER TO M002 FOR SCHEDULES AND DETAILS.
3. REFER TO M201 FOR TERMINAL UNIT LOCATIONS AND SUPPLY DUCTWORK.
4. REFER TO M301 FOR 1/4" SCALE MECHANICAL ROOM PLAN.
5. REFER TO M401 FOR MECHANICAL DETAILS.
6. REFER TO M501 & M502 FOR CONTROL DIAGRAMS.

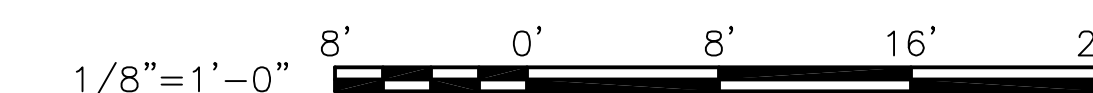


**M2 PARTIAL FLOOR PLAN - BLDG. V**  
 SCALE: 1/8" = 1'-0"  
 CTWORK IN ADDITION



**M1 PARTIAL FLOOR PLAN - BLDG. V**  
 SCALE: 1/8" = 1'-0"  
 MEZZANINE PLAN

GRAPHIC SCALES



A



AKEL LOGAN SHAFER ARCHITECTS AND PLANNERS

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PROJECT NO. 170004.00

NOTES

PROJECT

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RENOVATION WITH  
ADDITION TO BUILDING V  
ST. AUGUSTINE CAMPUS

FOR



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STATE COLLEGE  
PALATKA, FLORIDA

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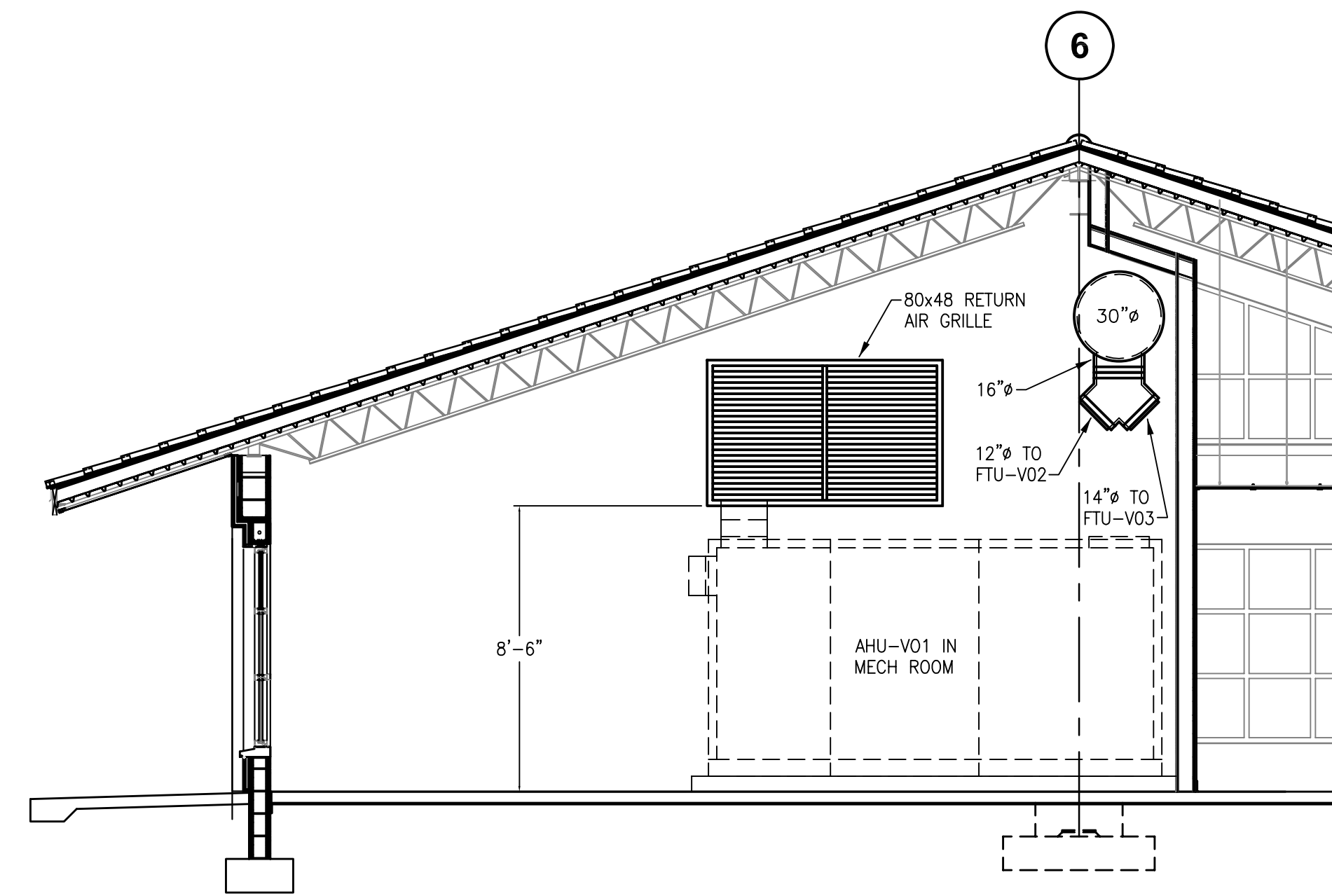
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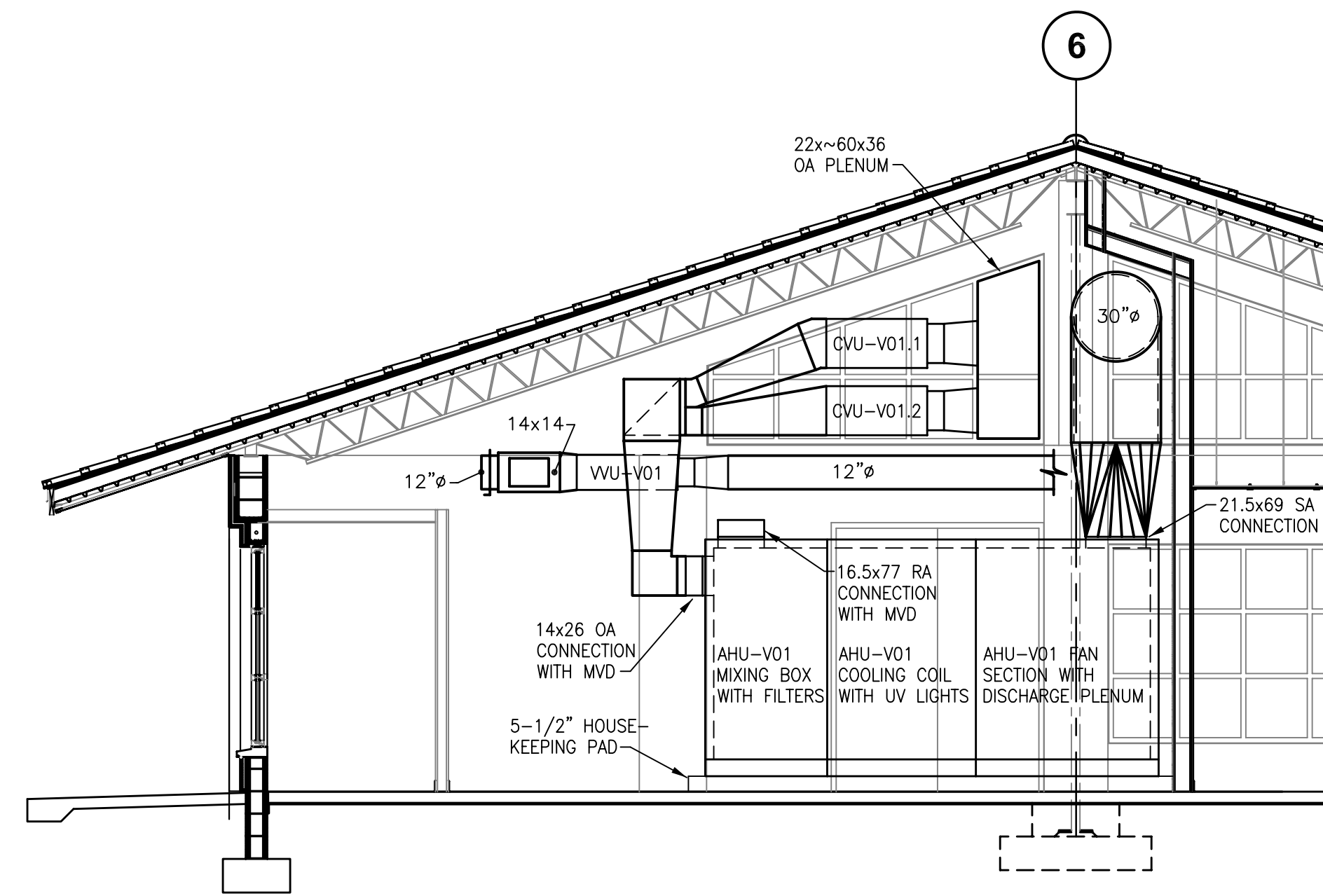
FLOOR PLANS AND  
SECTIONS

SHEET NUMBER

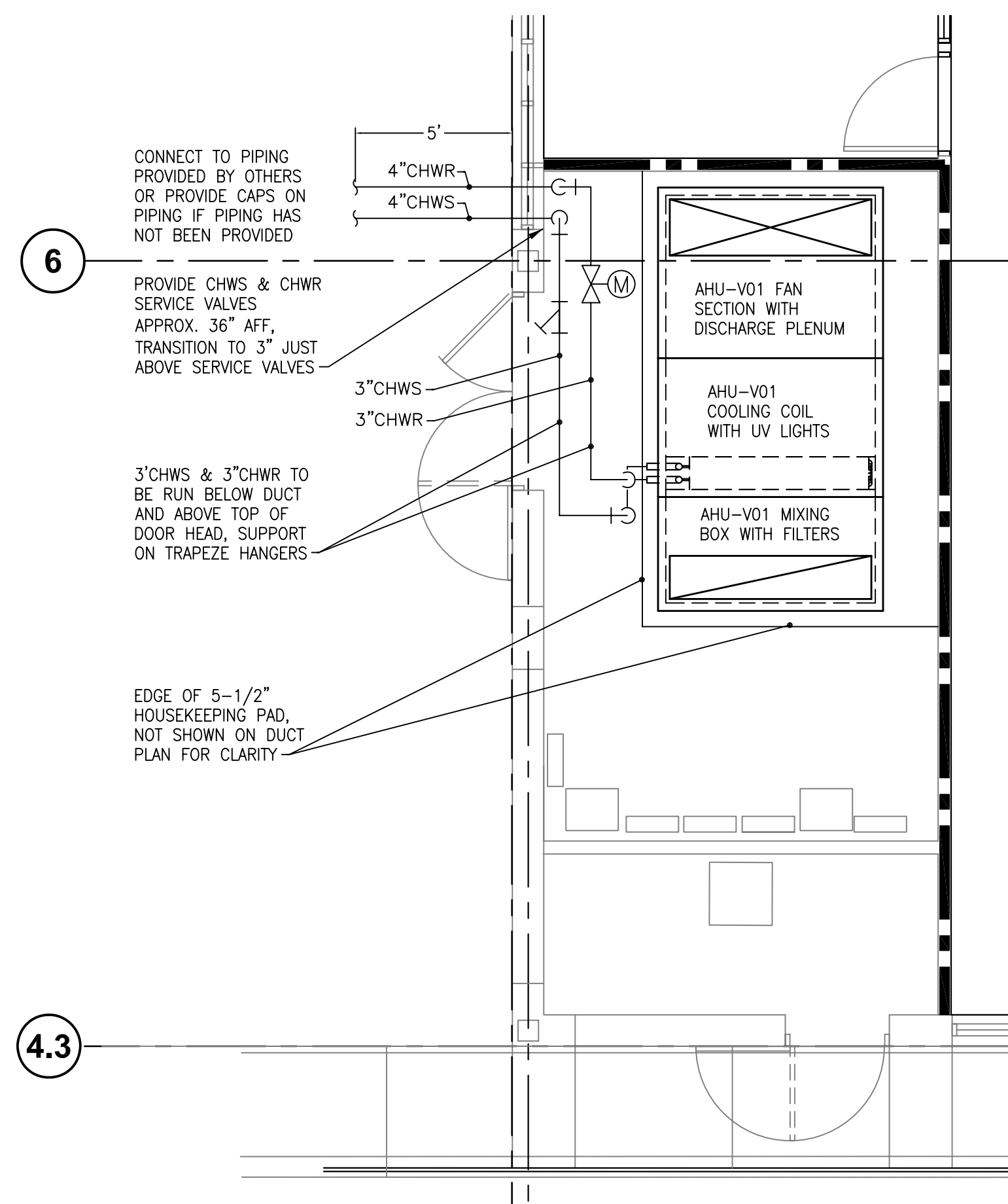
M301



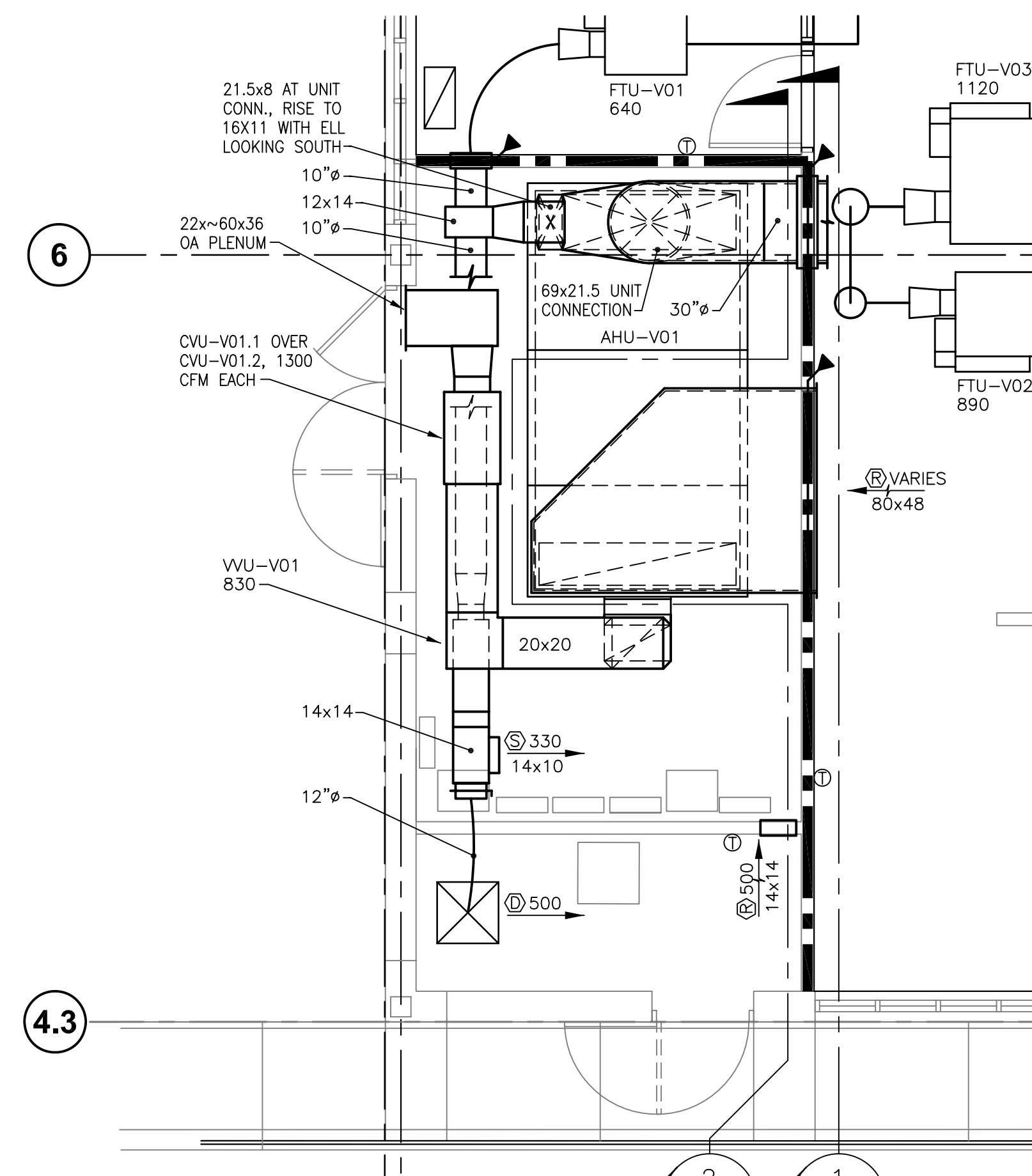
M1 SECTION - BLDG. V  
SCALE: 1/4" = 1'-0"  
M301 M301



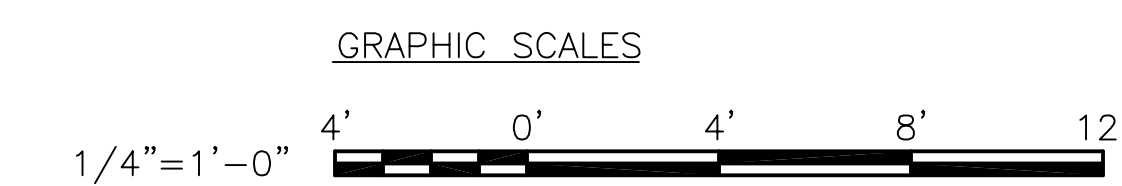
M2 SECTION - BLDG. V  
SCALE: 1/4" = 1'-0"  
M301 M301



M1 PARTIAL FLOOR PLAN - BLDG. V  
SCALE: 1/4" = 1'-0"  
PIPING NORTH



M2 PARTIAL FLOOR PLAN - BLDG. V  
SCALE: 1/4" = 1'-0"  
DUCTWORK NORTH

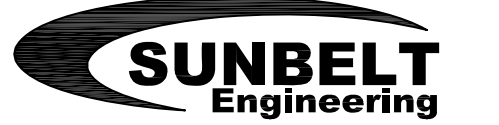




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PROJECT NO. 170004.00

NOTES

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH  
ADDITION TO BUILDING V  
ST. AUGUSTINE CAMPUS

FOR



ST. JOHNS RIVER  
STATE COLLEGE  
PALATKA, FLORIDA

MARK DATE DESCRIPTION

ISSUE: NOVEMBER 19, 2019

PROJECT NO: 1809

CAD DWG FILE:

DRAWN BY: SEI

CHECKED BY: AG

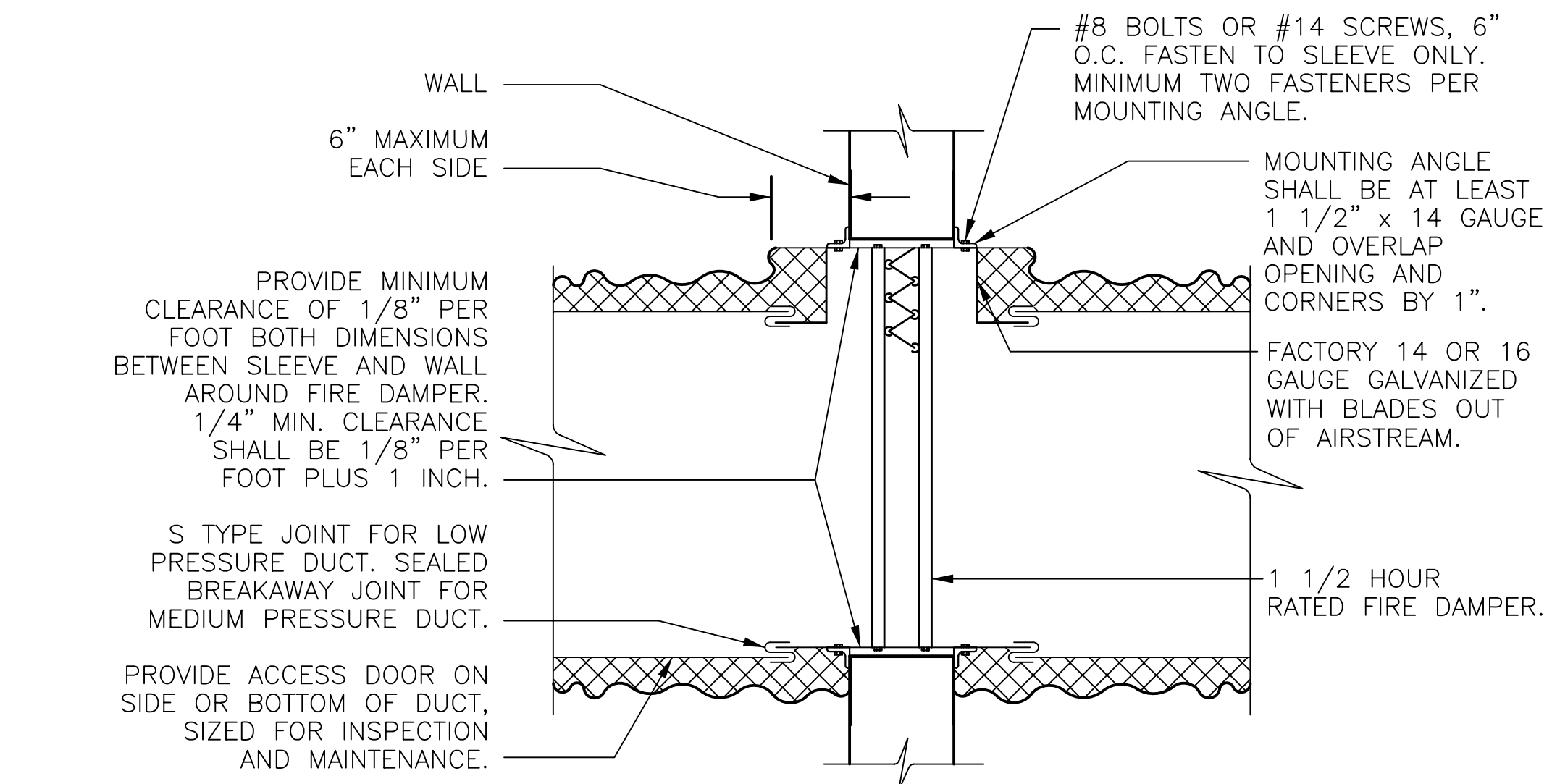
BID DOCUMENTS PHASE

SHEET TITLE

MECHANICAL  
DETAILS

SHEET NUMBER

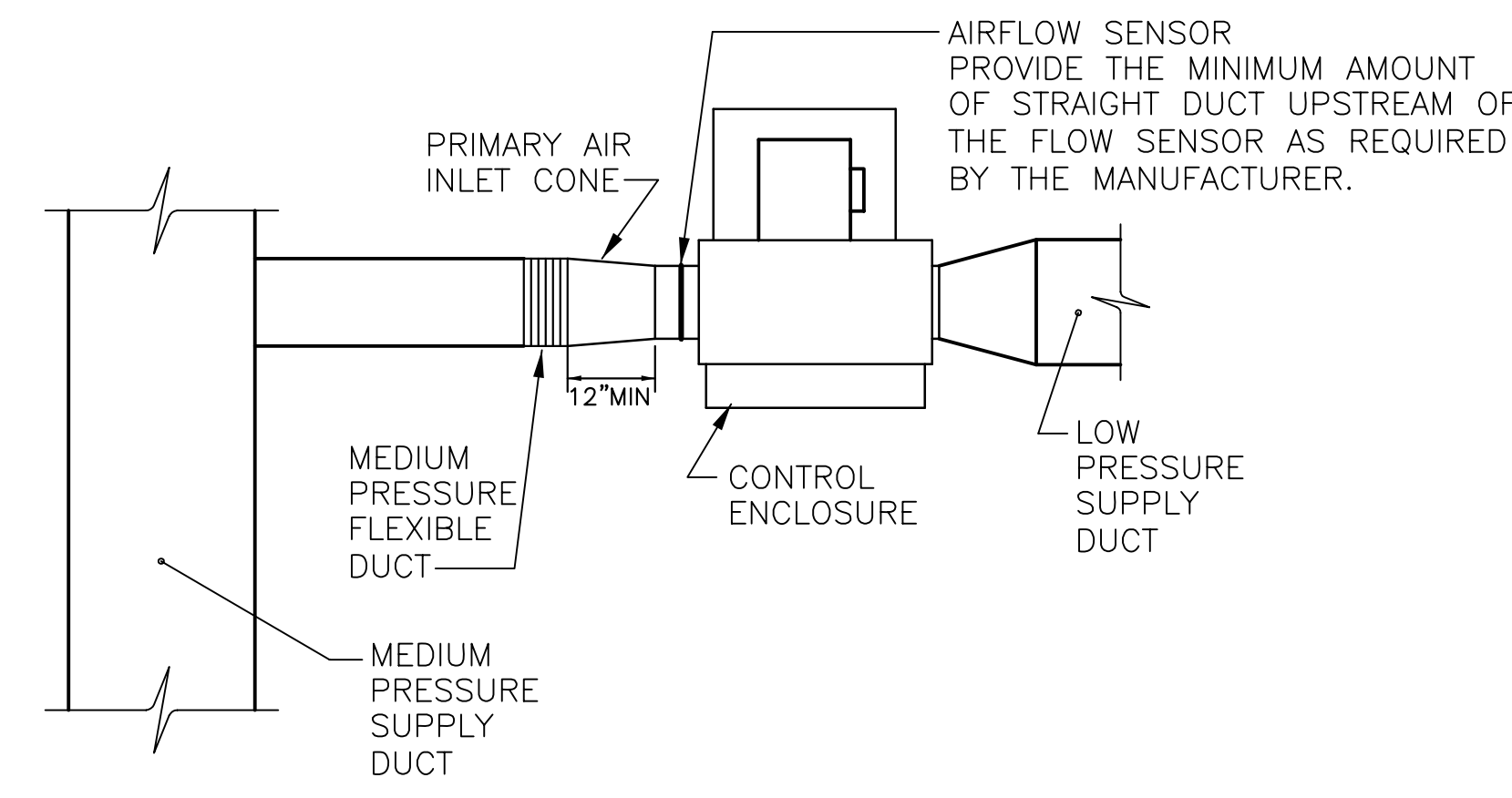
M401



VERTICAL TYPE "B" OR "C" FIRE DAMPER DETAIL  
NOT TO SCALE

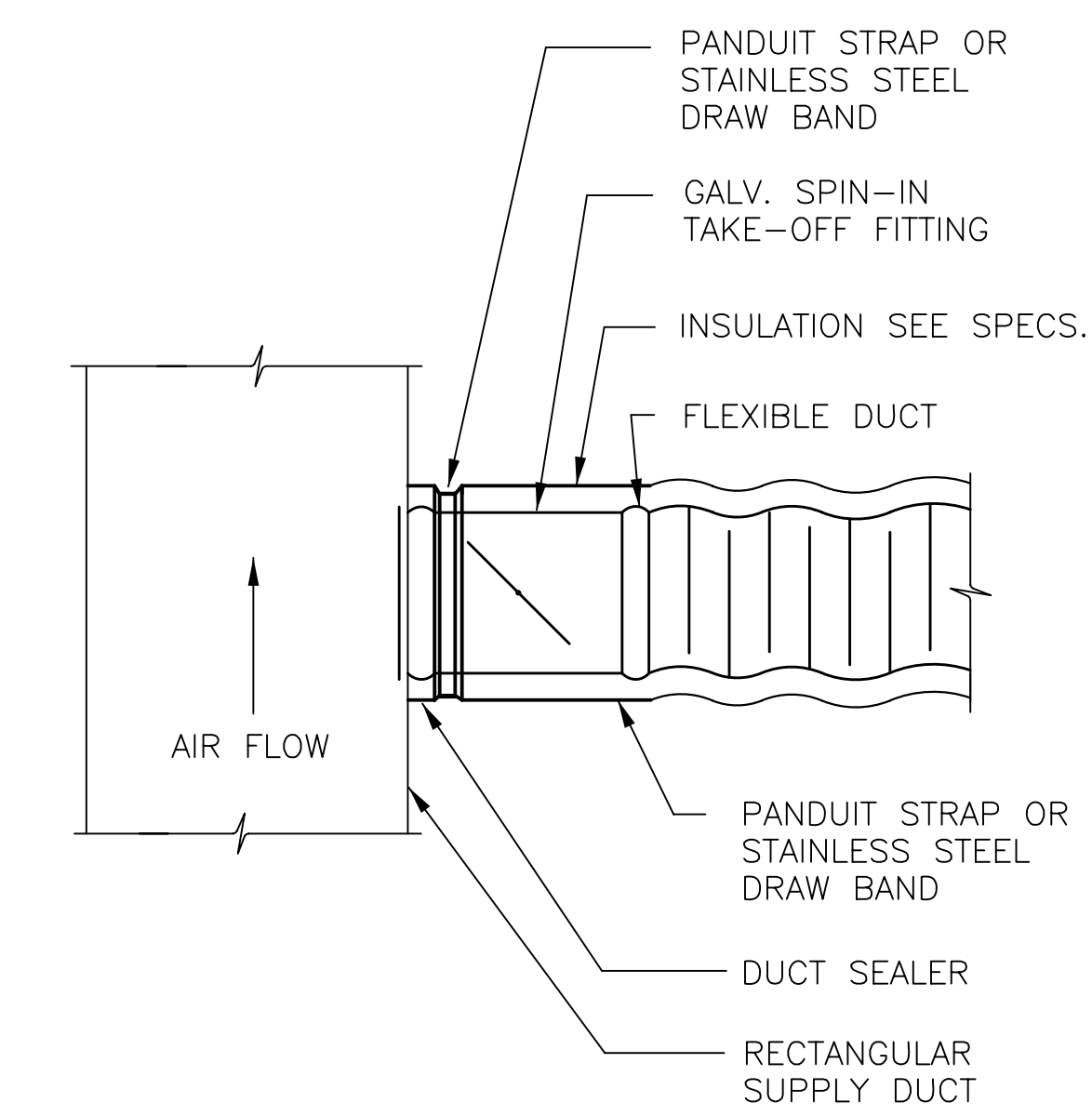
FIRE & FIRE/SMOKE DAMPER ACCESS DOOR SCHEDULE

DUCT SIZE	FREE OPENING SIZE
6x6	4x12
8x8	6x12
10x10	8x16
12x12	10x16
14x14	12x16
16x16	14x16
LARGER DUCT	16x16

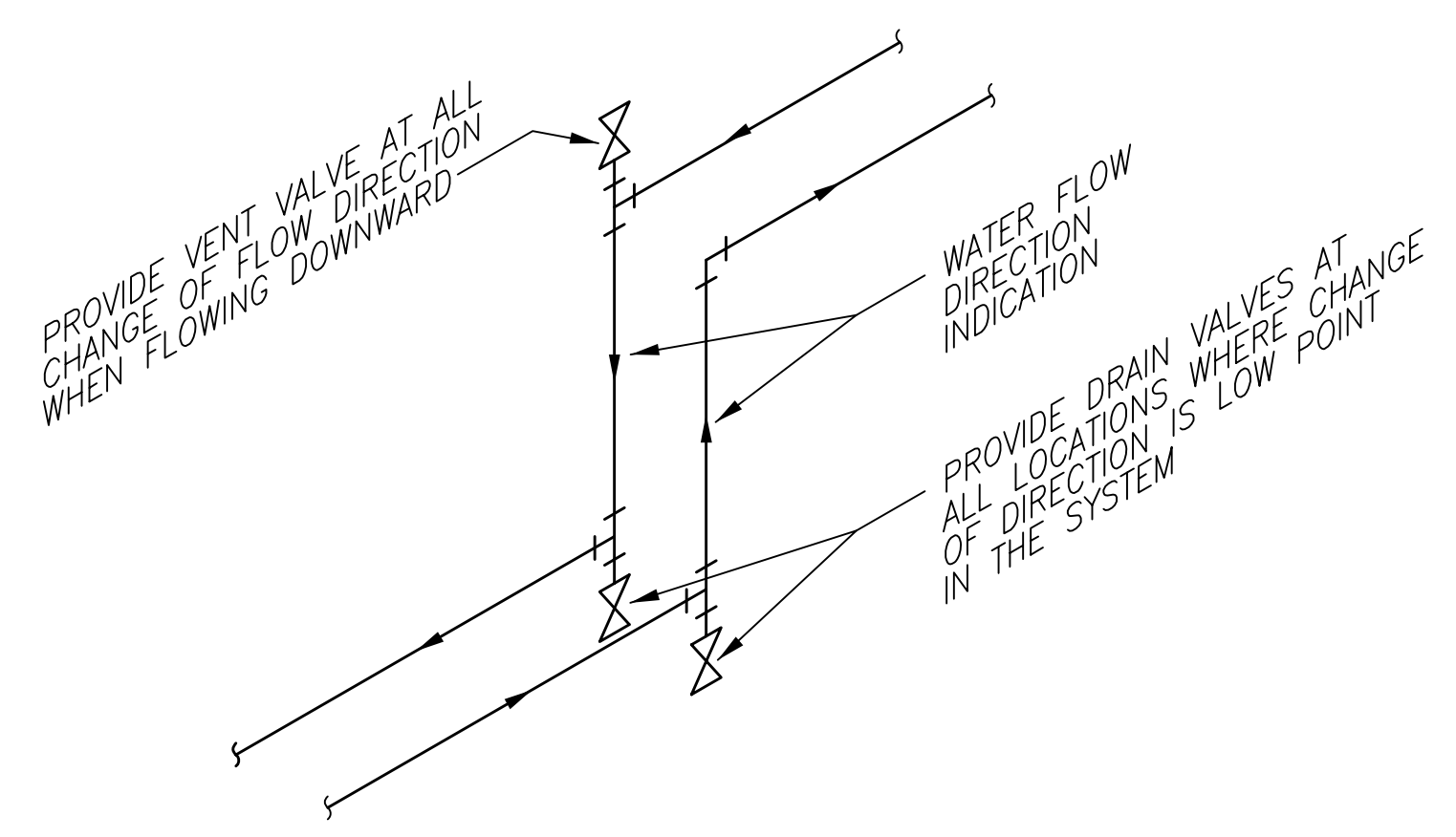


TERMINAL UNIT DETAIL  
NOT TO SCALE

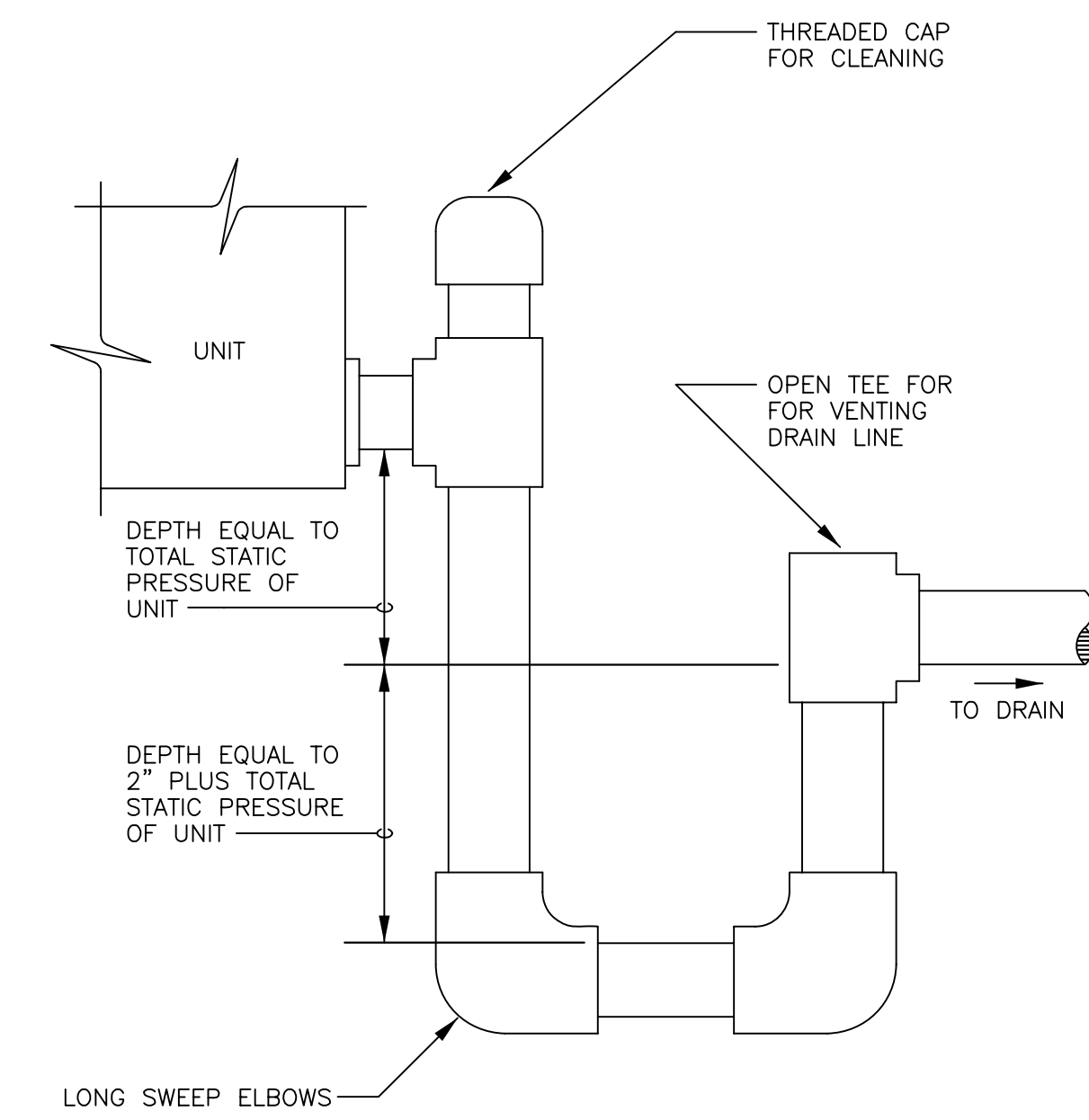
- TYPICAL REQUIREMENTS FOR CONSTANT VOLUME FAN TERMINAL UNIT & VARIABLE VOLUME UNIT. VARIABLE VOLUME FAN TERMINAL UNIT SHOWN ABOVE.
- MEDIUM PRESSURE FLEXIBLE & PRIMARY AIR INLET CONE SHALL BE A MINIMUM OF 2" LARGER THAN THE UNIT INLET. PROVIDE LARGER FLEXIBLE & INLET CONES AS REQUIRED BY THE MECHANICAL FLR. PLAN.



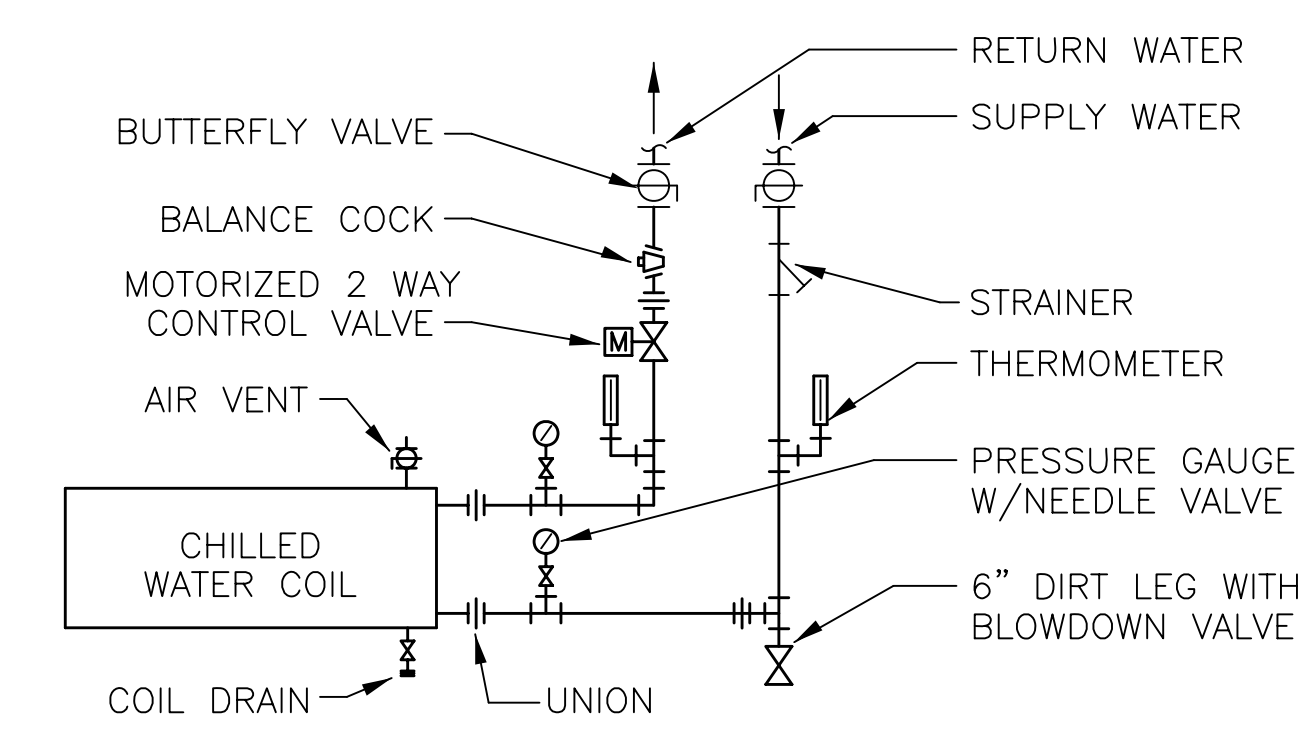
FLEXIBLE DUCT DETAIL  
NOT TO SCALE



CHILLED & HOT WATER PIPING  
VENT & DRAIN DETAIL  
NOT TO SCALE



COIL CONDENSATE TRAP DETAIL  
SCALE: NONE



AIR HANDLING UNIT  
COIL PIPING DETAIL  
NOT TO SCALE

GRAPHICAL INTERFACE & POINTS MONITOR

THE GRAPHICAL PRESENTATION SHOWN ON THE COMPUTER SCREEN SHALL HAVE AT THE MINIMUM THE FOLLOWING GRAPHICS:

FLOOR PLAN; SHOWING THE WALLS, ROOM NUMBERS, VVU LOCATION, FTU LOCATION, T-SENSOR LOCATION, ROOM SPACE TEMP, ROOM SPACE TEMP SETPOINT.

EACH VVU; SHOWING THE GRAPHIC OF THE VVU, BOX CFM, DAMPER POSITION IN PERCENT OPEN, SPACE TEMP, SPACE TEMP SETPOINT, BOX MINIMUM CFM & MAXIMUM FOR COOLING, BOX MINIMUM CFM HEATING, HEATING STAGE(S) IN OPERATION.

EACH FTU; SHOWING THE GRAPHIC OF THE FTU, PRIMARY CFM, PRIMARY DAMPER POSITION IN PERCENT OPEN, SPACE TEMP, SPACE TEMP SETPOINT, BOX MINIMUM CFM & MAXIMUM, HEATING STAGE(S) IN OPERATION.

EACH AHU; SHOWING FAN SPEED OR SPEEDS WHEN AHU HAS MULTIPLE FANS, FAN CFM (BASED ON FLOW SENSORS AT FAN INLET), LEAVING AIR TEMP, RETURN AIR TEMP, MIXED AIR TEMP, OUTSIDE AIR TEMP, OUTSIDE AIR QUANTITY AT EACH OA-VVU FOR THE AHU, TOTAL OA (SUM OF 2), SUPPLY DUCT (AT THE FAN) STATIC PRESSURE & SETPOINT ALARM, FAN STATIC PRESSURE (DOWNSTREAM) & SETPOINT, CHILLED WATER VALVE POSITION, DIFFERENTIAL PRESSURE ACROSS THE FILTER, CO2 IN THE RETURN AIR, UPPER CO2 LIMIT.

TREND DATA

THE FOLLOWING TREND SHALL BE PROGRAMMED AND SAVED TO THE COMPUTER HARD DISK:

FOR EACH AHU: START/STOP STATUS, SAT, RAT, OAT, SAP, FAN AMPS

FOR EACH AHU: SUPPLY AIR QTY BASED ON THE AIR VOLUME SENSORS IN THE FAN, SUPPLY AIR QTY BASED ON THE SUM OF THE VVUs & FTUs, DOWNSTREAM STATIC PRESSURE

FOR EACH TREND LISTED ABOVE, THE DATA SHALL BE ACCUMULATED EVERY 1/4 HOUR. ALL POINTS IN EACH TREND SHALL BE REPRESENTED ON A SINGLE EXCEL GRAPH (IE. SUPERIMPOSED ON A SINGLE GRAPH), AND EASILY RETRIEVABLE FROM THE OPERATOR STATION

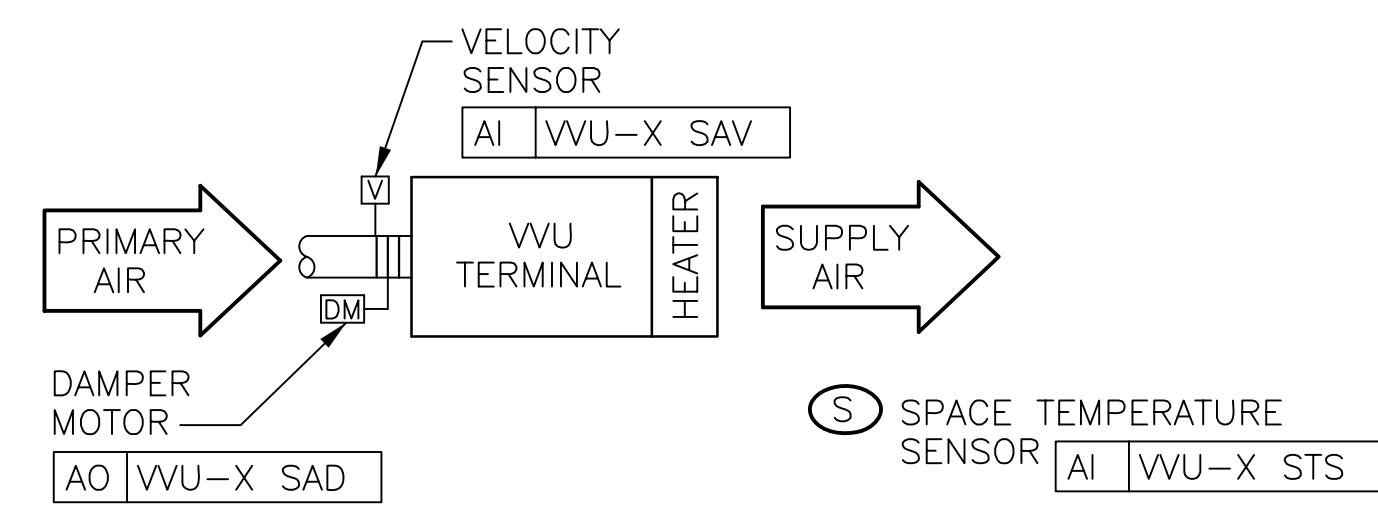
SPACE TEMP SENSOR

FOR SUPERVISED AREAS, THE SPACE TEMP SENSOR SHALL HAVE AN LCD DISPLAY SHOWING ROOM TEMP, ROOM SETPOINT, OUTSIDE TEMP. EACH SPACE TEMP SENSOR SHALL HAVE BOTH AN UP & DOWN BUTTON, ONE BUTTON THAT SWITCHES DISPLAY BETWEEN (ROOM TEMP, ROOM SETPOINT, OAT), ONE BUTTON THAT MAY BE PROGRAMMED TO FORCE THE AHU TO GO INTO A 2HR COOLING OVERRIDE.

FOR UNSUPERVISED AREAS, SUCH AS CORRIDORS AND REST ROOMS, THE SPACE TEMP SENSOR SHALL BE A FLAT PLATE WITHOUT DISPLAY OR BUTTONS.

CONTROLS LEGEND

AHU-X	AIR HANDLING UNIT No. X
C-X	CHILLER No. X
CA	CHILLER ALARM
CCV	COOLING CONTROL VALVE
CE	CHILLER ENABLE/DISABLE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CO	CHILLER OPERATION INDICATION
CO2	CARBON DIOXIDE SENSOR
CR	CURRENT SENSING RELAY
CRA	COMPUTER ROOM ALARM
CRU	COMPUTER ROOM UNIT
DAP	DISCHARGE AIR PRESSURE
DAX	DAMPER ACTUATOR, No. X
DM	DAMPER ACTUATOR
DPS	DIFFERENTIAL PRESSURE SENSOR
ES	END SWITCH
FCU-X	FAN COIL UNIT No. X
FDP	FILTER DIFFERENTIAL PRESSURE SENSOR
FTU-X	FAN TERMINAL UNIT No. X
HC	HEATING COIL
HCT	HEATING COIL TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MIV	MOTORIZED ISOLATION VALVE
OAT	OUTSIDE AIR TEMPERATURE
P-X	PUMP No. X
PO	PUMP OPERATION INDICATION
PS	PUMP START/STOP
RAT	RETURN AIR TEMPERATURE
RRH	RETURN AIR RELATIVE HUMIDITY
RWT	RETURN WATER TEMPERATURE
SAD	SUPPLY AIR DAMPER
SAP	SUPPLY AIR PRESSURE
SAT	SUPPLY AIR TEMPERATURE
SAV	SUPPLY AIR VOLUME
SDET	SMOKE DETECTOR
SFA	SUPPLY FAN ALARM STATUS
SFO	SUPPLY FAN OPERATION INDICATION
SFR	SUPPLY FAN START/STOP
SFS	SUPPLY FAN SPEED
SFTU-X	SERIES FAN TERMINAL UNIT No. X
SP-3	PRESSURE SENSOR 24VDC, 0-3.0" wgSP
SP-6	PRESSURE SENSOR 24VDC, 0-6.0" wgSP
SRH	SPACE RELATIVE HUMIDITY SENSOR
SSD	SMOKE DAMPER
STS	SPACE TEMPERATURE SENSOR
SWT	SUPPLY WATER TEMPERATURE
T	THERMISTOR 10K@77°F
VAV-X	VARIABLE AIR VOLUME TERMINAL No. X
VFD	VARIABLE FREQUENCY DRIVE
DP	0-2.0" wgSP SENSOR 24VDC

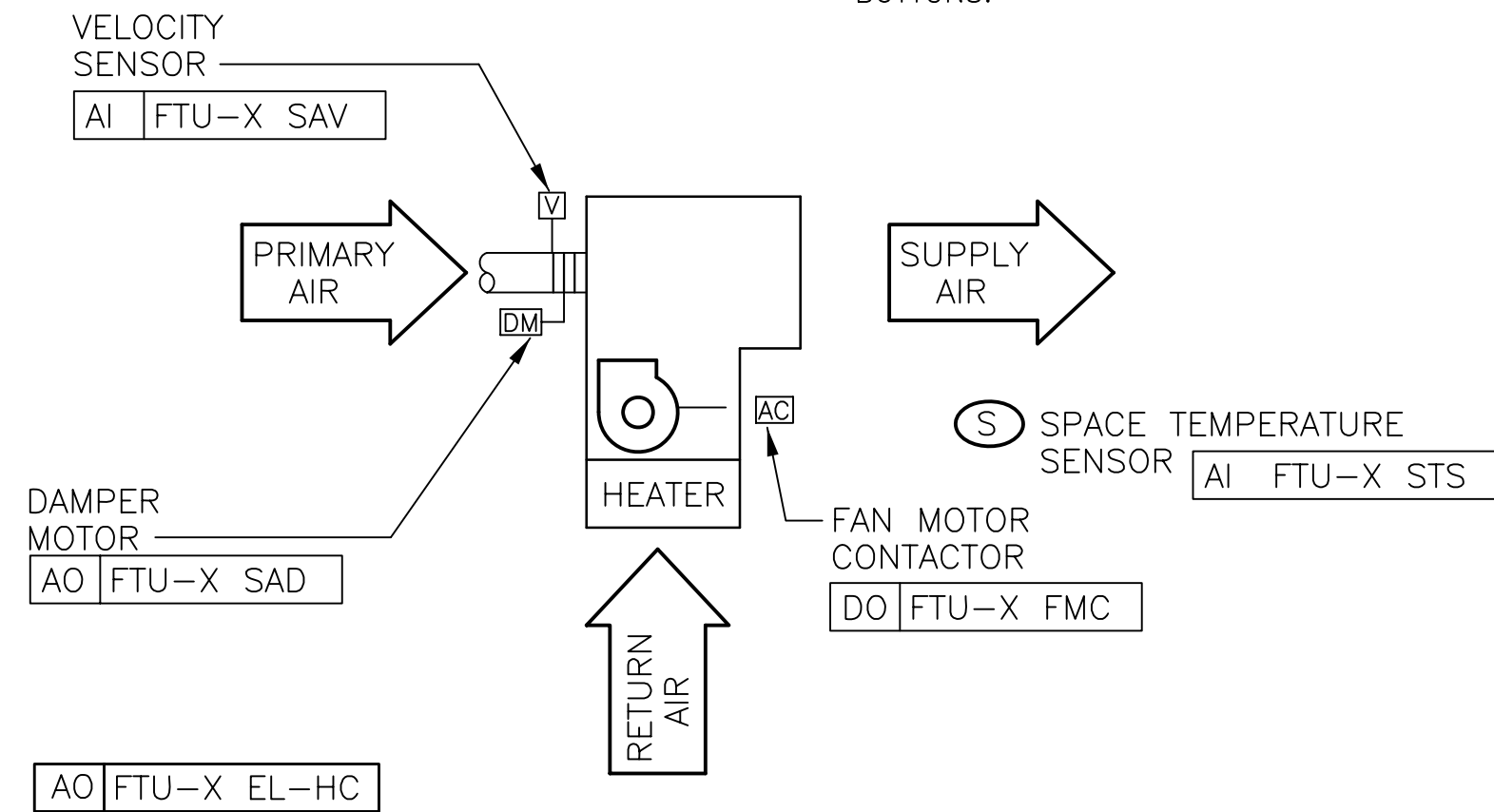


VVU TERMINAL UNIT  
NOT TO SCALE

1  
M501

VVU WITH ELECTRIC REHEAT COIL

THESE VARIABLE VOLUME UNITS (VVUs) ARE USED FOR COOLING AND HEATING OF INTERIOR OR PERIMETER ZONES. EACH VVU HAS ITS OWN 24 VAC CONTROL XFMR LOCATED IN THE CONTROL PANEL WITH THE VVU CONTROLLER. THE VVU PRIMARY VALVE MODULATES BASED ON SPACE TEMP & SPACE SETPT. AS THE COOLING IS SATISFIED, THE VVU MODULATES BACK TO ITS MINIMUM POSITION OF 20%, ADJ. IF THE ROOM SENSOR CALLS FOR HEATING, THE PRIMARY VALVE OPENS TO AIRFLOW NOTED IN THE SCHEDULE AND THE ELECTRIC HEAT IS ENERGIZED TO SATISFY THE HEATING CYCLE.  
THE INITIAL ROOM SETPOINT SHALL BE 74°F FOR COOLING AND 71°F FOR HEATING. THE SETPOINTS SHALL BE ADJUSTABLE IN SOFTWARE AND WHERE NOTED ON THE TEMPERATURE SENSOR PLUS OR MINUS 3°F.

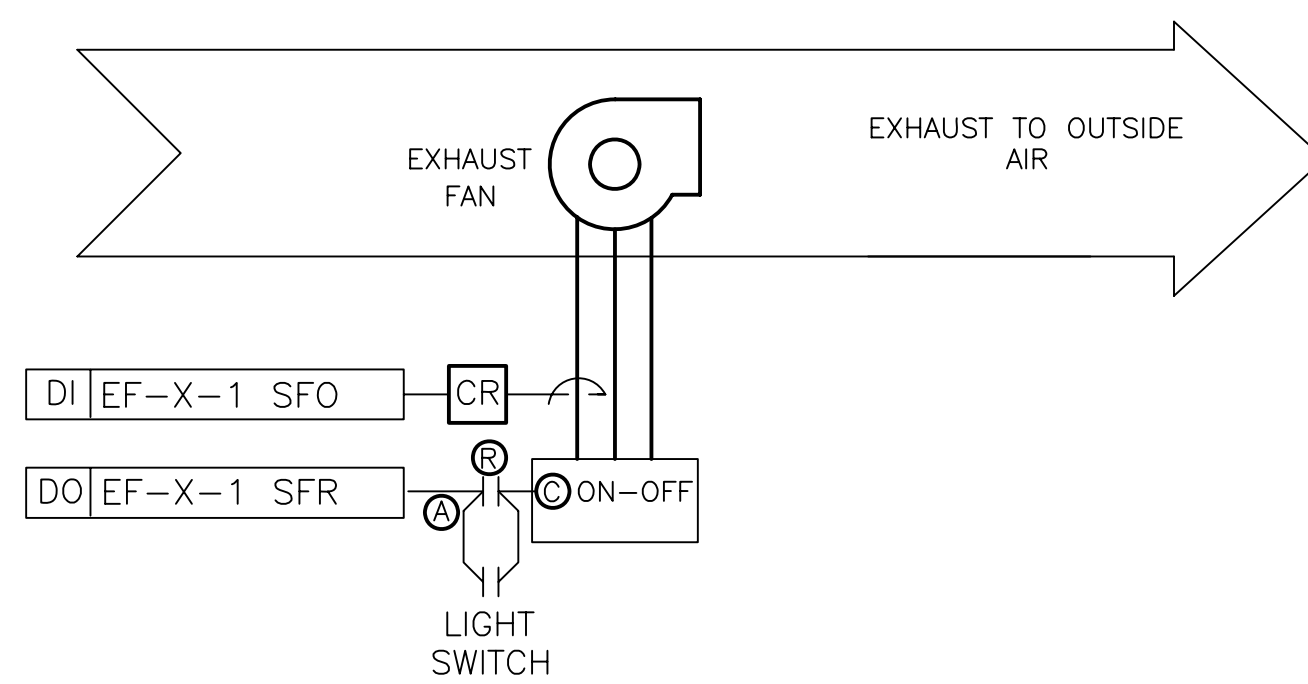


VAV FAN TERMINAL UNIT (FTU)  
NOT TO SCALE

2  
M501

FTU (PARALLEL)

THESE FAN TERMINAL UNITS (FTUs) ARE USED FOR COOLING & HEATING OF THE PERIMETER ZONES. EACH FTU HAS ITS OWN CONTROLLER POWERED BY A 24 VAC XFMR LOCATED IN THE CONTROL PANEL. THE VVU PRIMARY VALVE MODULATES BASED ON ROOM TEMP AND ROOM SETPT. AS THE ROOM CALLS FOR COOLING THE VVU BOX OPENS TO MAINTAIN SPACE TEMP. AS THE COOLING IS SATISFIED, THE VVU MODULATES BACK TO ITS MINIMUM POSITION OF 20%, ADJ. IF THE ROOM SENSOR CALLS FOR HEATING, THE FAN STARTS AND CIRCULATES RETURN AIR TO THE SPACE. ON A CONTINUED CALL FOR HEATING THE ELECTRIC HEATING COIL IS ENERGIZED, WHILE THE FAN CONTINUES TO RUN. THE PRIMARY VALVE REMAINS AT ITS MINIMUM POSITION DURING THE HEATING CYCLE.  
THE INITIAL ROOM SETPOINT SHALL BE 74°F FOR COOLING AND 71°F FOR HEATING. THE SETPOINTS SHALL BE ADJUSTABLE IN SOFTWARE AND WHERE NOTED ON THE TEMPERATURE SENSOR PLUS OR MINUS 3°F.



EXHAUST FAN CONTROL DIAGRAM  
NOT TO SCALE

3  
M501

EXHAUST FAN

THE EXHAUST FANS SHALL RUN CONTINUOUSLY DURING OCCUPIED MODE OR WITH MOTION ACTIVATED TIME DELAYED LIGHT SWITCH.

CONSULTANTS

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Jacksonville, FL 32258  
PROJECT NO. 170004.00

NOTES

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH  
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ST. AUGUSTINE CAMPUS

FOR



ST. JOHNS RIVER  
STATE COLLEGE  
PALATKA, FLORIDA

MARK	DATE	DESCRIPTION

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PROJECT NO: 1809

CAD DWG FILE:

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BID DOCUMENTS PHASE

SHEET TITLE

CONTROL  
DIAGRAMS

SHEET NUMBER

M501



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CAD DWG FILE:

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BID DOCUMENTS PHASE

SHEET TITLE

CONTROL  
DIAGRAMS

SHEET NUMBER

M502

