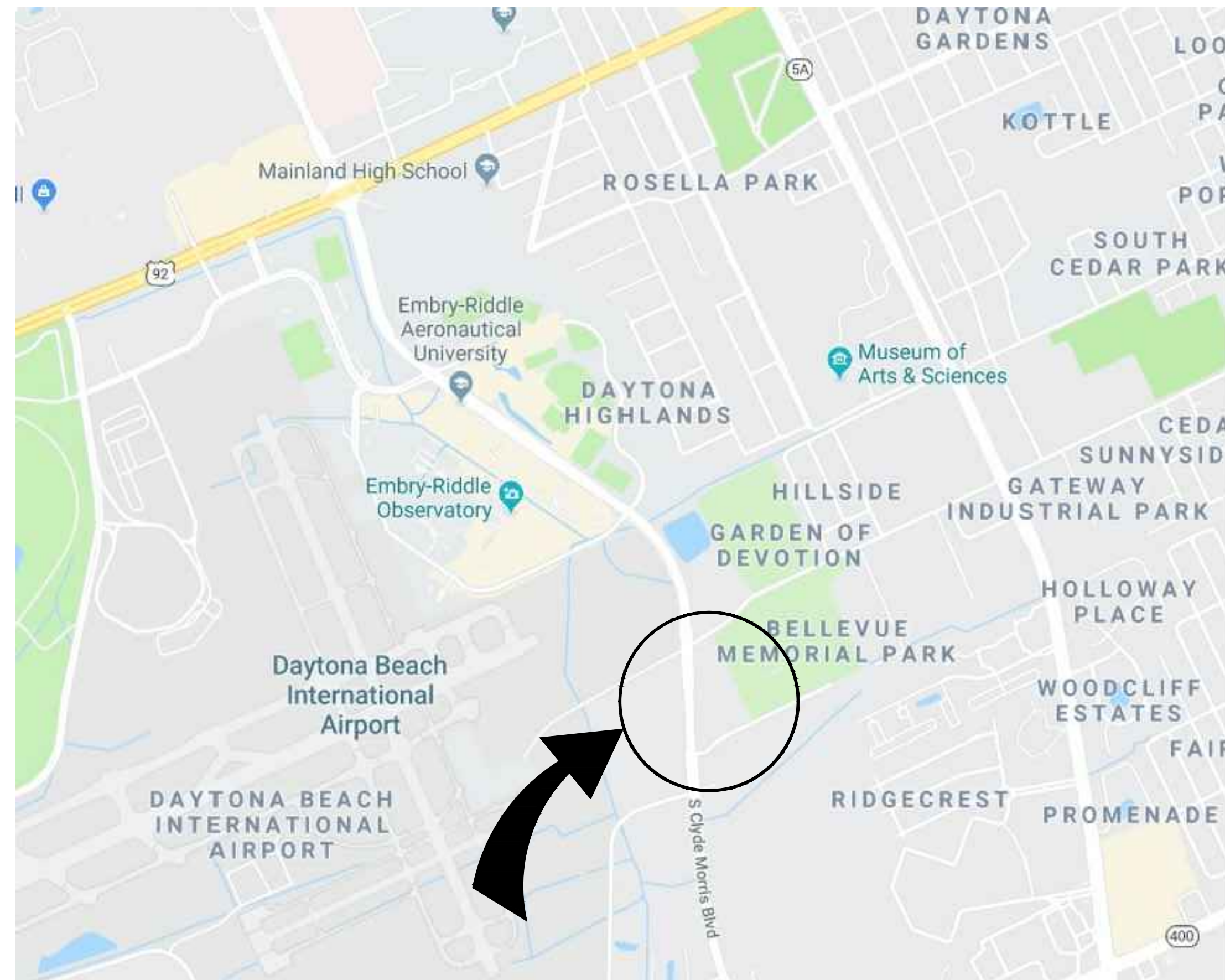
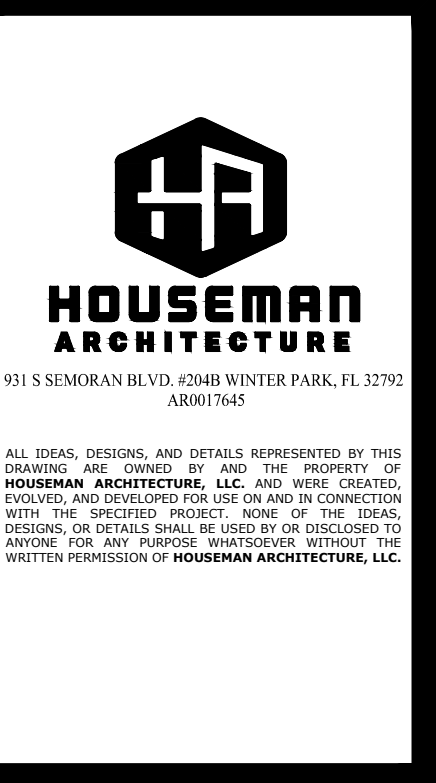


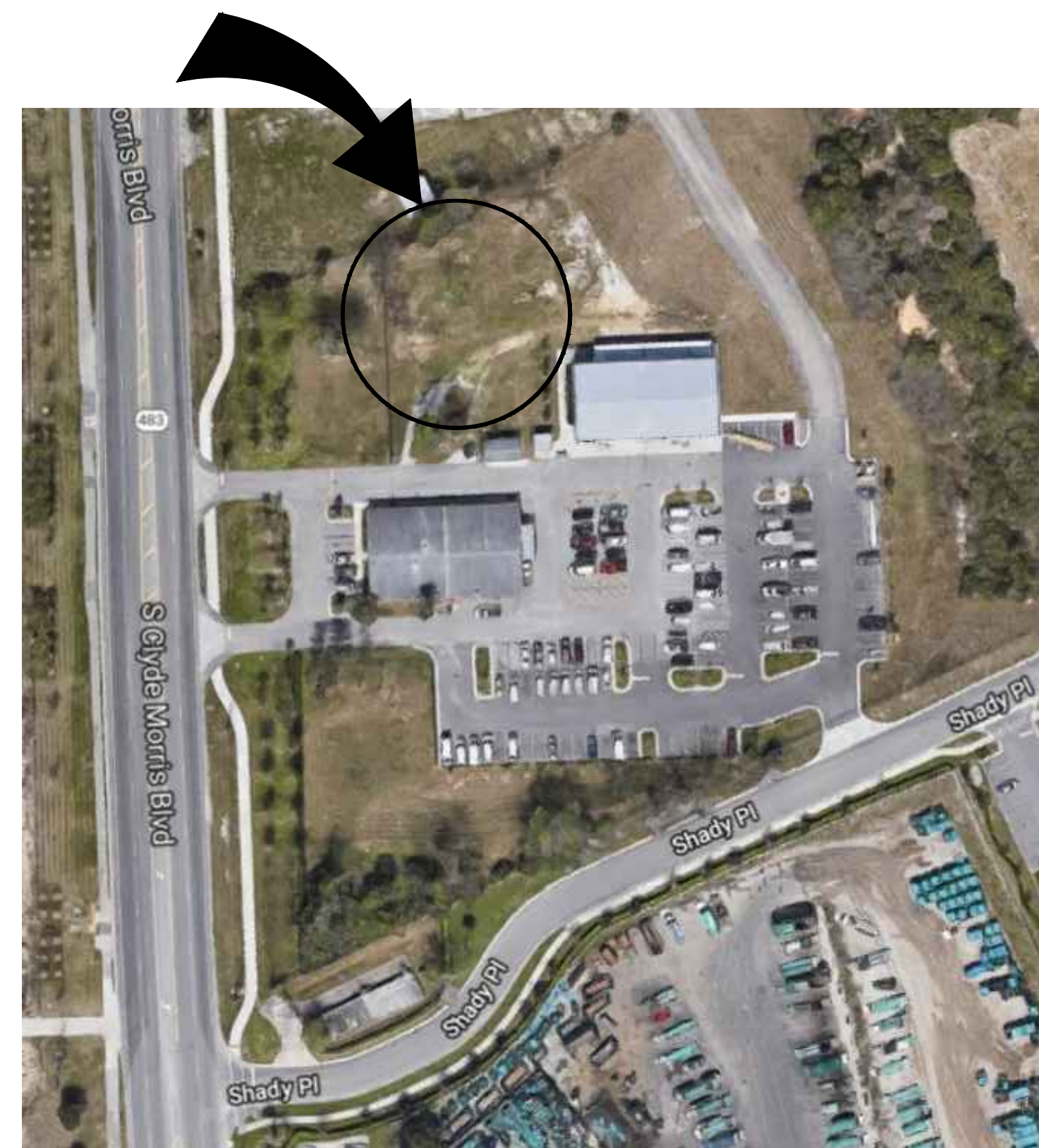


# EMBRY-RIDDLE AERONAUTICAL UNIVERSITY NEW PRINT SHOP BUILDING

DAYTONA BEACH, FL CAMPUS



**GENERAL PROJECT LOCATION**  
DAYTONA BEACH, FL 32114-3900



**GENERAL PROJECT LOCATION**  
DAYTONA BEACH, FL 32114-3900



ISSUE HISTORY		
REVISION	ISSUE DATE	DESCRIPTION
	07/12/2019	ISSUE FOR PERMIT
	08/07/2019	ISSUE FOR BID
△	08/21/2019	ADDENDUM 1
△	09/09/2019	ADDENDUM 3
△	01/15/2020	REVISION 1
△	01/31/2020	CHANGE ORDER REQUEST 5
△	02/06/2020	REVISION 2

DRAWING LIST		
SHEET	TITLE	ISSUE HISTORY
CVR	COVER SHEET	△ △ △ △ △
<b>CIVIL</b>		
CIVIL PLANS - PACKAGE OF 19 SHEETS		
<b>GENERAL</b>		
G0.001	GENERAL INFORMATION & CODE SUMMARY	△
G1.101	LIFE SAFETY PLAN	△
G2.101	DOOR SCHEDULE, TYPES & DETAILS	△
G2.102	DOOR & WINDOW DETAILS	△
<b>ARCHITECTURAL</b>		
A0.100	SITE PLAN	
A1.101	FLOOR PLAN	△
A1.110	ENLARGED PLANS & DETAILS	△
A1.201	ROOF & CLERESTORY PLANS	△
A2.101	EXTERIOR ELEVATIONS	△
A2.110	WINDOW ELEVATIONS	△
A3.101	BUILDING SECTIONS	△
A4.101	WALL SECTIONS	△
A4.102	WALL SECTIONS	△
A4.103	WALL SECTIONS	△
A7.101	FINISH SCHEDULE & PLAN	△
A8.101	REFLECTED CEILING PLAN	△
A9.101	INTERIOR ELEVATIONS & DETAILS	△
<b>STRUCTURAL</b>		
S-100	GENERAL STRUCTURAL NOTES & DETAILS	
S-101	FOUNDATION DETAILS	
S-200	FOUNDATION PLAN	
<b>PLUMBING</b>		
P0.1	LEGEND AND GENERAL NOTES - PLUMBING	
P1.1	SITE PLAN - PLUMBING	△
P1.2	FLOOR PLAN - PLUMBING	△
P1.3	ENLARGED FLOOR PLAN & RISERS - PLUMBING	△
<b>MECHANICAL</b>		
M0.1	LEGEND AND GENERAL NOTES - MECHANICAL	
M0.2	EQUIPMENT SCHEDULES - MECHANICAL	
M1.1	FLOOR PLAN - MECHANICAL	△ △
M5.1	DETAILS - MECHANICAL	△
M6.1	CONTROLS - MECHANICAL	△
<b>ELECTRICAL</b>		
E0.1	LEGEND AND GENERAL NOTES - ELECTRICAL	△ △
E1.1	SITE PLAN - ELECTRICAL	△ △ △
E1.2	FLOOR PLAN - POWER & SYSTEMS	△ △ △
E1.3	REFLECTED CEILING PLAN - ELECTRICAL	△ △ △
E1.4	SITE PLAN - PHOTOMETRICS	△ △ △
E5.1	DETAILS - ELECTRICAL	△ △ △
E5.2	DETAILS - SITE LIGHTING	△ △ △
E5.3	DETAILS - SITE LIGHTING	△ △ △
E6.1	RISER DIAGRAM AND FEEDER SCHEDULES	△ △
E6.2	FIRE ALARM RISER DIAGRAM AND I/O MATRIX	△ △
E6.3	LIGHTING CONTROL DIAGRAMS	△ △
E7.1	SCHEDULES - ELECTRICAL	△ △ △

CODES AND STANDARDS	
THESE DOCUMENTS HAVE BEEN PREPARED AND ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING CODES AND STANDARDS:	
•	2017 FLORIDA BUILDING CODE BUILDING
•	2017 FLORIDA BUILDING CODE RESIDENTIAL
•	2017 FLORIDA BUILDING CODE EXISTING BUILDING
•	2017 FLORIDA BUILDING CODE ENERGY CONSERVATION
•	2017 FLORIDA BUILDING CODE FUEL GAS
•	2017 FLORIDA BUILDING CODE PLUMBING
•	2017 FLORIDA BUILDING CODE MECHANICAL
•	2017 FLORIDA BUILDING CODE TEST PROTOCOLS
•	2017 FLORIDA ACCESSIBILITY CODE
•	2014 NATIONAL ELECTRIC CODE (NECA 70)
•	2017 FLORIDA FIRE PREVENTION CODE

PERMIT REVISION - 02/06/2020

DATE	02/06/2020		
REVISION	REVISION 2		
			CHECKED
			DRAWN
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY NEW PRINT SHOP BUILDING			
COVER SHEET		CVR	



### SYMBOLS LEGEND



### ABBREVIATIONS

"A" AC or A/C A/E ARCHITECT/ENGINEER AFF ABOVE FINISH FLOOR AHU AIR HANDLING UNIT ALT ALTERNATE ALUM ALUMINUM APPROX APPROXIMATE ARCH ARCHITECT, ARCHITECTURE, ARCHITECTURAL	AIR CONDITIONING ARCHITECT/ENGINEER ABOVE FINISH FLOOR AIR HANDLING UNIT ALTERNATE ALUMINUM APPROXIMATE ARCHITECT, ARCHITECTURE, ARCHITECTURAL ACOUS PNL ACOUSTICAL PANEL	"G" GA GALV GALVANIZED GL GLASS GR GRADE GYP GYPSUM GYP BD GYPSUM BOARD GYP PLAS GYPSUM PLASTER	"H" HC HGT HEIGHT HM HOLLOW METAL HMD HOLLOW METAL DOOR HMF HOLLOW METAL FRAME HVAC HEATING, VENTILATION, AIR CONDITIONING	"Q" QT QUARRY TILE	"R" R RD RISER / RADIUS REF REFERENCE REFL REFLECTED REINF REINFORCED, REINFORCING, REINFORCEMENT REQD REQUIRED RM ROOM RO ROUGH OPENING	"S" S SC SOUTH CORE SCHED SCHEDULE SECT SECTION SHT SHEET SIM SIMILAR SPEC SPECIFICATION SQ SQUARE SQ FT SQUARE FOOT SST STAINLESS STEEL SOUND SOUND TRANSMISSION CLASS STD STANDARD STL STEEL STRUCT STRUCTURAL SUSP SUSPENDED SYM SYMBOL SYMM SYMMETRICAL	"T" T T&G TONGUE AND GROOVE TEL TELEPHONE TF TOP OF FOOTING TFF TOP OF FINISH FLOOR THK THICKNESS TJ TOP OF JOINT TS TUBE STEEL TSL TOP OF SLAB TST TOP OF STEEL TW TOP OF WALL TYP TYPICAL	"U" UNFIN UNFINISHED UNLESS OTHERWISE NOTED UPS UNINTERRUPTIBLE POWER SUPPLY "V" V VCT VINYL COMPOSITION TILE, OR VITRIFIED CLAY TILE VERT VERTICAL VWC VINYL WALL COVERING	"W" W W/ WITH W/O WITHOUT WC WATER CLOSET WD WOOD, WIDTH WDF WINDOW WF WIDE FLANGE WI WROUGHT IRON WP WORKING POINT WWF WELDED WIRE FABRIC	"N" N NA NOT APPLICABLE NIC NOT IN CONTRACT NO NUMBER NR NOISE REDUCTION COEFFICIENT NTS NOT TO SCALE	"O" OA OC ON CENTER OD OUTSIDE DIAMETER/ OUTSIDE DIMENSION OFF OFFICE OPNG OPENING OPH OPPOSITE HAND OPP OPPOSITE ORIG ORIGINAL OVHD OVERHEAD	"P" PL PLAM PLASTIC LAMINATE PLAS PLASTER PLYWD PLYWOOD PNL PANEL PR PAIR PREFAB PREFABRICATED PREFIN PREFINISHED PRELIM PRELIMINARY PREP PREPARATION PT PRESERVATIVE TREATED PTD PAINTED PVMT PAVEMENT	"D" DET DIA DIAMETER DIAG DIAGONAL DIM DIMENSION DN DOWN DR DOOR DS DOWNSPOUT DWG DRAWING	MEZZ MEZZANINE MFG MANUFACTURING MFR MANUFACTURER MIN MINIMUM MISC MISCELLANEOUS MO MASONRY OPENING MULL MULLION	"E" E EA EACH ELEC ELECTRICAL EL ELEVATION ELEV ELEVATOR EQ EQUAL EQUIP EQUIPMENT EWC ELECTRICAL WATER COOLER	EAST EACH ELECTRICAL ELEVATION ELEVATOR EQUAL EQUIPMENT ELECTRICAL WATER COOLER	"F" FD FDC FIRE DEPARTMENT CONNECTION FDV FIRE DEPARTMENT VALVE FEC FIRE EXTINGUISHER CABINET FHC FIRE HOSE CABINET FIN FINISH FIN FL FINISH FLOOR FIN GR FINISH GRADE FLR FLOOR FLUOR FLUORESCENT FOC FACE OF CONCRETE FOM FACE OF MASONRY FOS FACE OF STUD FPRF FIREPROOFING FT FOOT, FEET FTG FOOTING FWC FABRIC WALL COVERING	FLOOR DRAIN FIRE DEPARTMENT CONNECTION FIRE DEPARTMENT VALVE FIRE EXTINGUISHER CABINET FIRE HOSE CABINET FINISH FINISH FLOOR FINISH GRADE FLOOR FLUORESCENT FACE OF CONCRETE FACE OF MASONRY FACE OF STUD FIREPROOFING FOOT, FEET FOOTING FABRIC WALL COVERING	"I" ID INSUL INSULATION INTR INTERIOR	"J" JAN JST JANITOR JT JOINT	"L" LAV LAVATORY LT WT LIGHT WEIGHT	"M" MAINT MAS MASONRY MAX MAXIMUM MECH MECHANICAL	MAINTENANCE MASONRY MAXIMUM MECHANICAL	"I" INSUL INSULATION INTR INTERIOR	"J" JAN JST JANITOR JT JOINT	"L" LAV LAVATORY LT WT LIGHT WEIGHT	"M" MAINT MAS MASONRY MAX MAXIMUM MECH MECHANICAL	TREAD TONGUE AND GROOVE TELEPHONE TOP OF FOOTING TOP OF FINISH FLOOR THICKNESS TOP OF JOINT TUBE STEEL TOP OF SLAB TOP OF STEEL TOP OF WALL TYPICAL	UNFINISHED UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY VINYL COMPOSITION TILE, OR VITRIFIED CLAY TILE VERTICAL VINYL WALL COVERING	WEST WITH WITHOUT WATER CLOSET WOOD, WIDTH WINDOW WIDE FLANGE WROUGHT IRON WORKING POINT WELDED WIRE FABRIC	NORTH NOT APPLICABLE NOT IN CONTRACT NUMBER NOISE REDUCTION COEFFICIENT NOT TO SCALE	OVERALL ON CENTER OUTSIDE DIAMETER/ OUTSIDE DIMENSION OFFICE OPENING OPPOSITE HAND OPPOSITE ORIGINAL OVERHEAD	PLATE PLASTIC LAMINATE PLASTER PLYWOOD PANEL PAIR PREFABRICATED PREFINISHED PRELIMINARY PREPARATION PRESERVATIVE TREATED PAINTED PAVEMENT	QUARRY TILE	RISER / RADIUS ROOF DRAIN REFERENCE REFLECTED REINFORCED, REINFORCING, REINFORCEMENT REQUIRED ROOM ROUGH OPENING	SOUTH CORE SCHEDULE SECTION SHEET SIMILAR SPECIFICATION SQUARE SQUARE FOOT STAINLESS STEEL SOUND TRANSMISSION CLASS STANDARD STEEL STRUCTURAL SUSPENDED SYMBOL SYMMETRICAL	TONGUE AND GROOVE TELEPHONE TOP OF FOOTING TOP OF FINISH FLOOR THICKNESS TOP OF JOINT TUBE STEEL TOP OF SLAB TOP OF STEEL TOP OF WALL TYPICAL	UNFINISHED UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY VINYL COMPOSITION TILE, OR VITRIFIED CLAY TILE VERTICAL VINYL WALL COVERING	WEST WITH WITHOUT WATER CLOSET WOOD, WIDTH WINDOW WIDE FLANGE WROUGHT IRON WORKING POINT WELDED WIRE FABRIC	NORTH NOT APPLICABLE NOT IN CONTRACT NUMBER NOISE REDUCTION COEFFICIENT NOT TO SCALE	OVERALL ON CENTER OUTSIDE DIAMETER/ OUTSIDE DIMENSION OFFICE OPENING OPPOSITE HAND OPPOSITE ORIGINAL OVERHEAD	PLATE PLASTIC LAMINATE PLASTER PLYWOOD PANEL PAIR PREFABRICATED PREFINISHED PRELIMINARY PREPARATION PRESERVATIVE TREATED PAINTED PAVEMENT	QUARRY TILE	RISER / RADIUS ROOF DRAIN REFERENCE REFLECTED REINFORCED, REINFORCING, REINFORCEMENT REQUIRED ROOM ROUGH OPENING	SOUTH CORE SCHEDULE SECTION SHEET SIMILAR SPECIFICATION SQUARE SQUARE FOOT STAINLESS STEEL SOUND TRANSMISSION CLASS STANDARD STEEL STRUCTURAL SUSPENDED SYMBOL SYMMETRICAL	TONGUE AND GROOVE TELEPHONE TOP OF FOOTING TOP OF FINISH FLOOR THICKNESS TOP OF JOINT TUBE STEEL TOP OF SLAB TOP OF STEEL TOP OF WALL TYPICAL	UNFINISHED UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY VINYL COMPOSITION TILE, OR VITRIFIED CLAY TILE VERTICAL VINYL WALL COVERING	WEST WITH WITHOUT WATER CLOSET WOOD, WIDTH WINDOW WIDE FLANGE WROUGHT IRON WORKING POINT WELDED WIRE FABRIC
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### GENERAL NOTES

- THESE DRAWINGS HAVE BEEN PREPARED TO THE BEST OF OUR ABILITY TO BE IN COMPLIANCE AND CONFORMANCE WITH THE FEDERAL ACCESSIBILITY LAW CONTAINED WITHIN THE AMERICANS WITH DISABILITIES ACT GUIDELINES FOR DESIGN.
- THE DESIGN AND DRAWINGS OF THIS PROJECT HAVE BEEN SPECIFICALLY PREPARED FOR THE USE AND CONSTRUCTION AT THE LOCATION SHOWN. REPRODUCTION FOR USE IN ANY OTHER SITE OR MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DOCUMENTS AND IS PROHIBITED.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICE CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES. CONTRACTOR SHALL COORDINATE THE REMOVAL, ABANDONMENT OR RELOCATION OF EXISTING UTILITIES SHOWN ON THESE DOCUMENTS WITH RESPECTIVE UTILITY COMPANIES. ANY INTERRUPTIONS IN EXISTING UTILITY SERVICES NEEDS TO BE COORDINATED AND APPROVED BY THE UTILITY COMPANY PRIOR TO START OF WORK.
- CONTRACTOR SHALL PERFORM ALL WORK WITHIN PUBLIC RIGHTS OF WAY ACCORDING TO THESE DOCUMENTS AND REQUIREMENTS BY THE GOVERNING AGENCY AND SHALL OBTAIN NECESSARY APPROVALS AS REQUIRED.
- ARCHITECT SHALL BE NOTIFIED BY CONTRACTOR OF ANY DISCREPANCIES ON THESE DOCUMENTS PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL NEW AND EXISTING CONDITIONS AND DIMENSIONS FOR COMPARISON TO THE DOCUMENTS PRIOR TO BIDDING AND THE COMMENCEMENT OF CONSTRUCTION. NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS BEFORE THE COMMENCEMENT OF WORK.
- ALL CONSULTANT DRAWINGS SHALL BE CONSIDERED COMPLIMENTARY TO THE ARCHITECT'S DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE CONSULTANT DRAWINGS AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS BEFORE THE COMMENCEMENT OF WORK.
- DO NOT SCALE THESE DRAWINGS. CONTRACTOR SHALL RELY ON THE DIMENSIONS SHOWN AND SHALL FIELD VERIFY ALL DIMENSIONS AND COORDINATE THE WORK WITH ALL TRADES. NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS BEFORE THE COMMENCEMENT OF WORK.

### CODE SUMMARY

APPLICABLE CODES	
FLORIDA BUILDING CODE	EDITION: 2017
FLORIDA BUILDING CODE - EXISTING BUILDING	EDITION: 2017
FLORIDA BUILDING CODE - PLUMBING	EDITION: 2017
FLORIDA BUILDING CODE - ELECTRICAL	EDITION: 2017
FLORIDA BUILDING CODE - ENERGY CONSERVATION	EDITION: 2017
FLORIDA BUILDING CODE - MECHANICAL	EDITION: 2017
NATIONAL ELECTRICAL CODE - NFPA 70	EDITION: 2014
FLORIDA FIRE PREVENTION CODE	EDITION: 6TH EDITION
*NFPA-1 & NFPA-101	EDITION: 2015

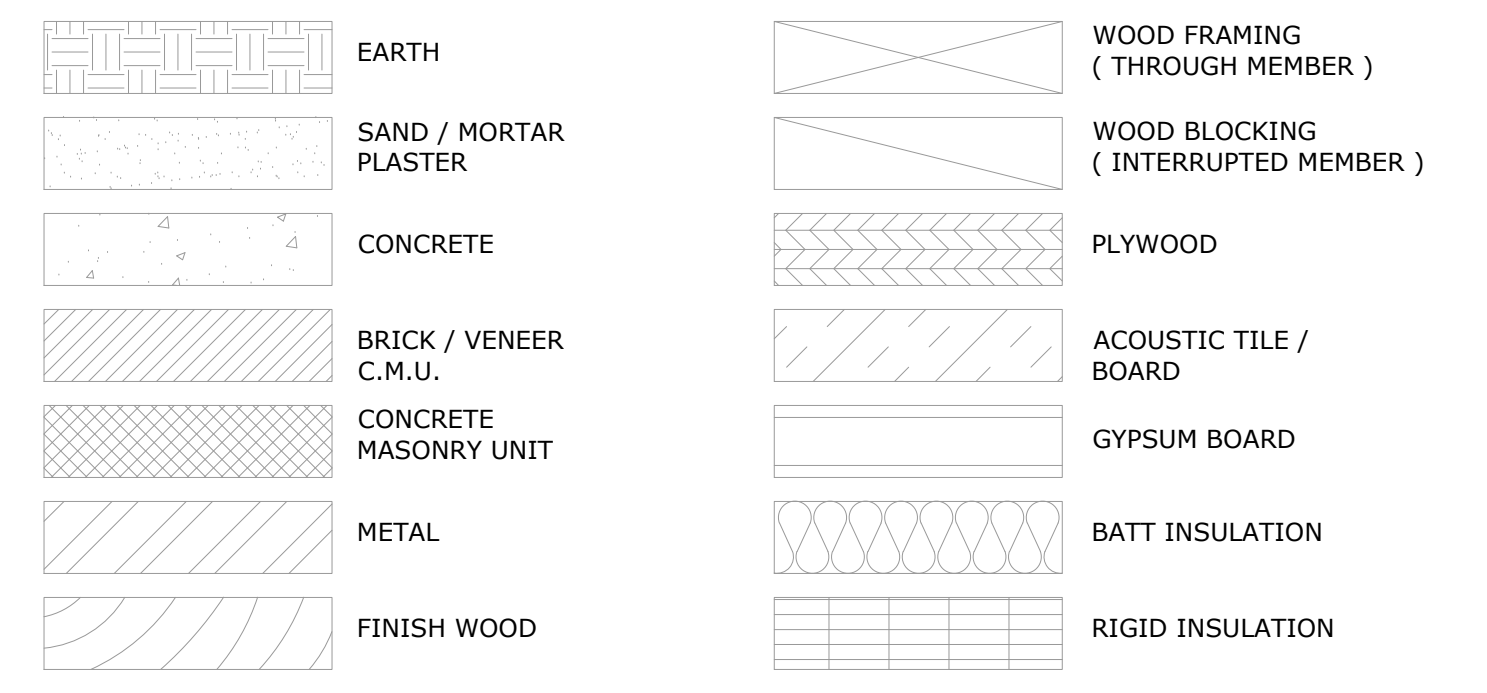
PROJECT INFORMATION			
<b>SCOPE OF PROJECT:</b> NEW PRINT SHOP BUILDING			
SQUARE FOOTAGE OF BUILDING:	7,557 SF		
OCCUPANCY CLASSIFICATION: BUSINESS (B)			
OCCUPANCY USE:	SQUARE FOOTAGE:	OCCUPANTS / SF:	TOTAL OCCUPANTS:
BUSINESS (B)	7,557 SF	1 / 100 GROSS	76 OCCUPANTS

CONSTRUCTION			
CONSTRUCTION TYPE:	FBC: VB	NFPA: V (000)	
FIRE RATINGS:		BUILDING HEIGHT:	ALLOWABLE 40' PROPOSED 25'-8"
STRUCTURAL FRAME:	0 HR	NUMBER OF STORIES (S):	2 1
BEARING WALLS (INT/EXT):	0 HR		
NONBEARING WALLS:	0 HR		
FLOOR CONSTRUCTION:	0 HR		
ROOF CONSTRUCTION:	0 HR		
SPRINKLERED:	NO		
PROTECTED:	UNPROTECTED		
INTERIOR FINISHES:	EXITS - CLASS A EXIT ACCESS - CLASS B OTHER SPACES - CLASS C		

EXITS			
	ALLOWABLE	ACTUAL	
MINIMUM NUMBER OF EXITS:	2	4	
MAX. DEAD END CORRIDOR:	20 FT.	5'-0"	
	ALLOWABLE	ACTUAL	
MINIMUM TRAVEL DISTANCE:	200 FT.	74 FT.	
MINIMUM CORRIDOR WIDTH:	44 IN.	72 IN.	
MAXIMUM COMMON PATH OF TRAVEL:	75 FT.	31 FT.	

PLUMBING CALCULATIONS			
OCCUPANTS:	76 OCCUPANTS		
PLUMBING FACTORS:	UTILIZING BUSINESS OCCUPANCY	WC: 1/50	1/50 THEN 1/50 LAV: 1/40 / 80
REQUIRED :	MEN 2 WC & 1 LAV	WOMEN 2 WC & 1 LAV	1 DRINKING FOUNTAIN 1 SERVICE SINK
PROVIDED:	MEN 2 WC & 2 LAV	WOMEN 2 WC & 2 LAV	2 DRINKING FOUNTAINS 1 SERVICE SINK

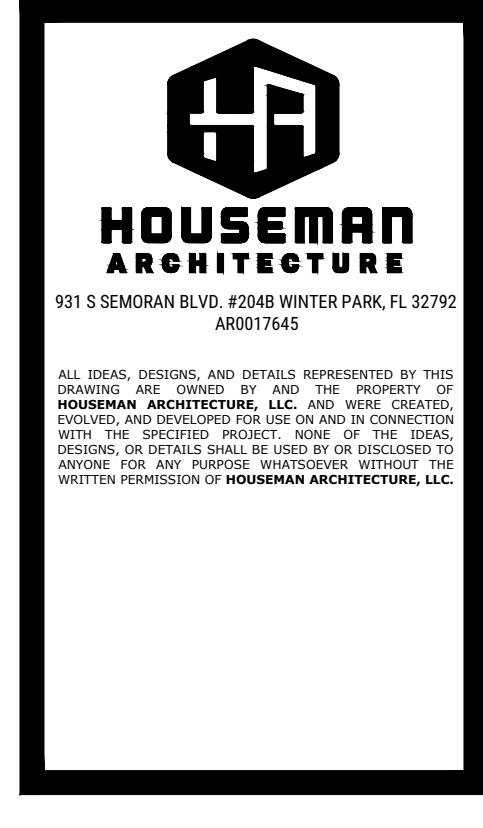
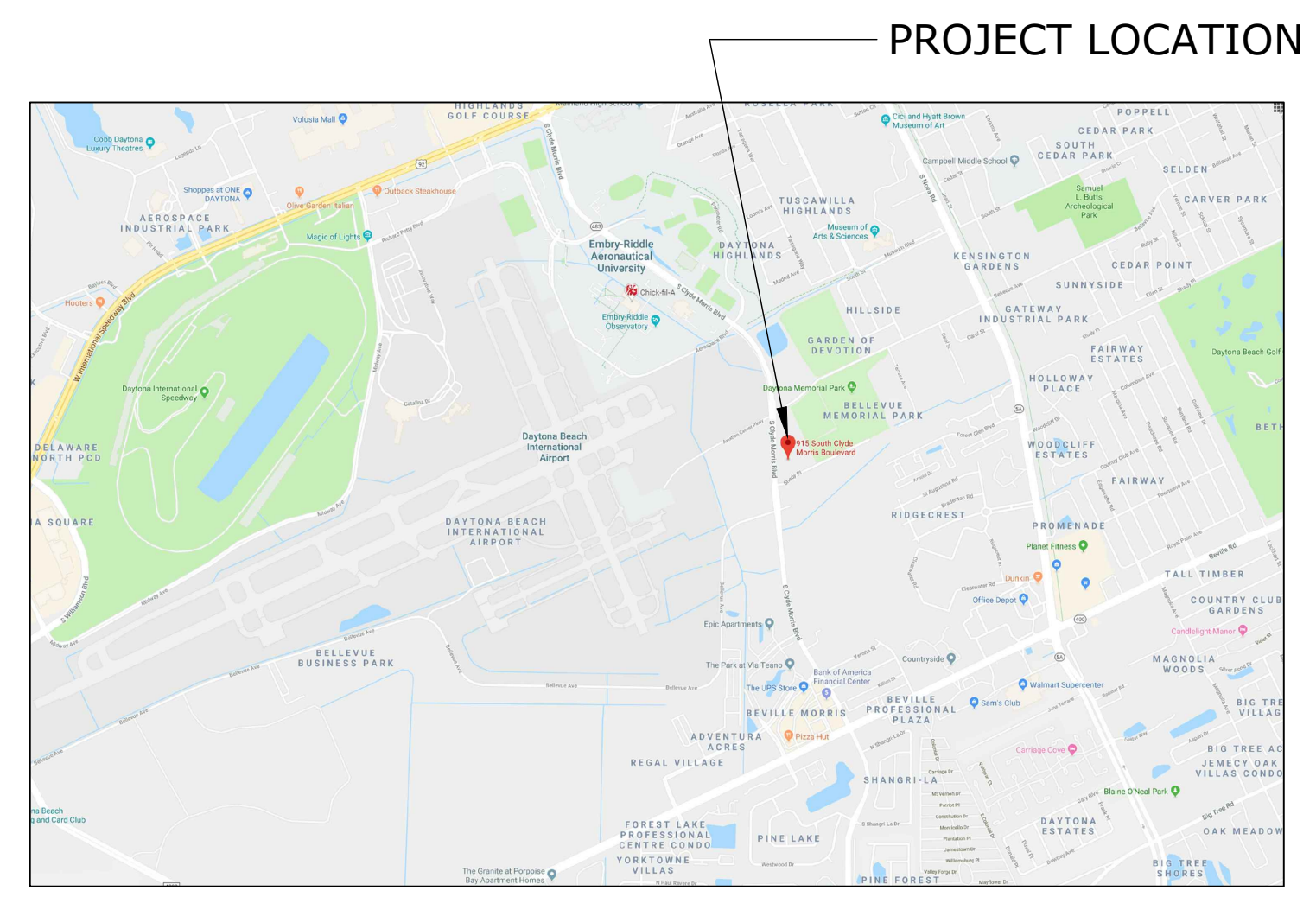
### MATERIALS LEGEND



### DIMENSIONING CONVENTIONS

- DIMENSIONS ARE INDICATED ON DRAWINGS; DO NOT SCALE DRAWINGS.
- DIMENSIONS SHOWN ARE TO FACE OF STUDS, MASONRY OR CONCRETE AND ARE INDICATED WITH A DIAGONAL MARK.
- CLEAR DIMENSIONS AND DIMENSIONS TO FACE OF FINISH ARE NOTED WITH A LEADER HEAD.
- CENTERLINE DIMENSIONS ARE INDICATED WITH A 'CL'.
- WALLS, PARTITIONS OR MULLIONS THAT ARE DIMENSIONED TO THE CENTERLINE ARE SHOWN WITH A DASHED LINE.
- ELEMENTS THAT ARE CENTERED BETWEEN TWO WALLS ARE SHOWN WITH 'EQ.' SYMBOLS.
- UNLESS NOTED OTHERWISE, DOORS ARE LOCATED 6" FROM THE CORNER IN METAL FRAMED WALLS AND 8" FROM A CORNER IN CMU WALLS.
- DIMENSIONS TO ROUGH OPENINGS (RO) OR MASONRY OPENINGS (MO) ARE NOTED ACCORDINGLY.

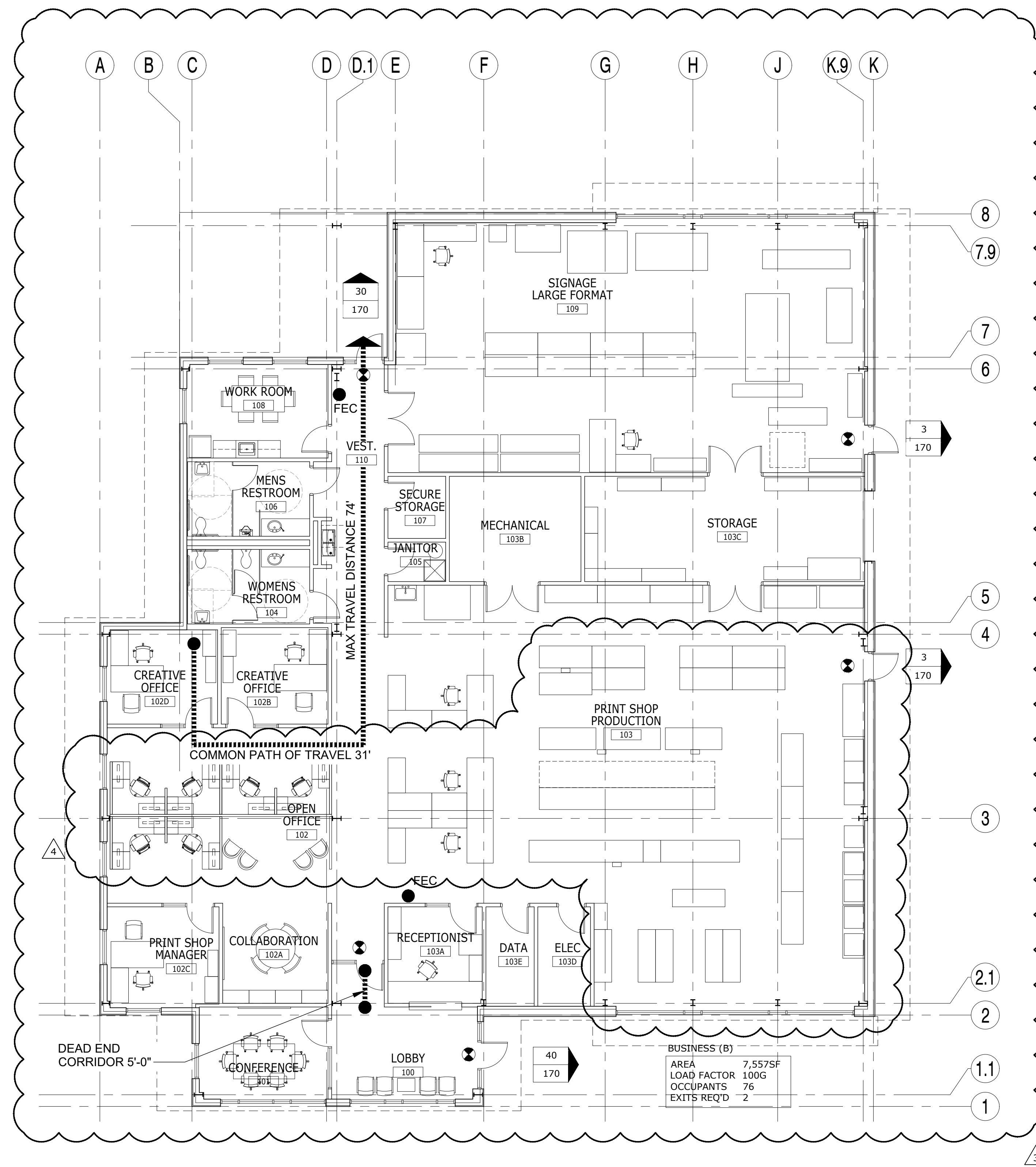
### VICINITY MAP



DATE	02/06/2020
REVISION	REVISION 2
DRAWN	CHECKED

**PERMIT REVISION - 02/06/2020**  
**GENERAL INFORMATION & CODE SUMMARY**  
**EMBRY-RIDDLE AERONAUTICAL UNIVERSITY**  
**NEW PRINT SHOP BUILDING**  
**G0.001**





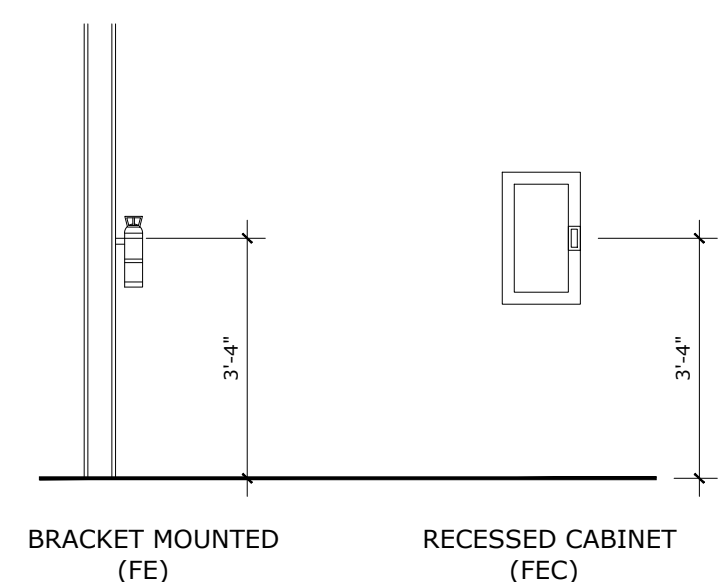
**1 LIFE SAFETY PLAN**  
1/8" = 1'-0"

**LIFE SAFETY PLAN SUMMARY**

TOTAL SQUARE FEET: 7,557 SF		TOTAL OCCUPANTS: 76	
EXITING REQUIREMENT	REQUIRED	ACTUAL	REMARKS
BUILDING EXITS	2	4	
EXIT CORRIDOR WIDTH	44"	72"	SEE NOTE #1
EXIT DOOR WIDTH	68"	136"	SEE NOTE #2
TRAVEL DISTANCE	200' MAX	74'	
COMMON PATH OF TRAVEL	75' MAX	31'	
DEAD END CORRIDOR	20' MAX	5'-0"	

NOTES:  
 1. 7,557 TOTAL SQUARE FEET  
 76 OCCUPANTS (SEE SHEET G0.001)  
 76 OCCUPANTS x 0.2"/OCC = 15.2" MIN. EGRESS CAPACITY REQUIRED  
 44" REQUIRED BY CODE  
 2. 2 EXITS REQUIRED (> 50 OCCUPANTS) @ 34" X 2 = 68"  
 FOUR 36" EXIT DOORS @ 34" CLEAR = 136" DOOR WIDTH

**FIRE EXTINGUISHER DETAILS**



NOTE:  
 PROVIDE UL RATED FIRE EXTINGUISHERS  
 MULTI-PURPOSE USE 4-A:80B-C, 10 POUND

**LIFE SAFETY PLAN NOTES**

- TO THE BEST OF THE ARCHITECT'S KNOWLEDGE, THE DOCUMENTS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE MINIMUM FIRE SAFETY CODES AS DETERMINED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- THESE DOCUMENTS HAVE BEEN PREPARED TO THE BEST OF OUR ABILITY TO BE IN COMPLIANCE AND CONFORMANCE WITH THE FEDERAL ACCESSIBILITY LAW CONTAINED WITHIN THE AMERICANS WITH DISABILITIES ACT GUIDELINES FOR DESIGN.
- CONTRACTOR TO COORDINATE ALL EXIT SIGNS SHOWN ON THE LIFE SAFETY PLANS WITH ELECTRICAL DRAWINGS. REFER TO ELECTRICAL DRAWINGS FOR SIGN DIRECTION, MOUNTING, CIRCUITING AND FIXTURE TYPES.
- FURNITURE IS SHOWN ON THE PLANS FOR GENERAL REFERENCE ONLY. OWNER WILL VERIFY 44" MIN CLEARANCE AROUND ALL MOVABLE FURNITURE ELEMENTS.
- CONTRACTOR TO COORDINATE WITH THE AHJ ON THE PREFERRED LOCATION/MOUNTING FOR THE KNOX BOX. SEE SPECIFICATIONS FOR KNOX BOX.

**LIFE SAFETY PLAN LEGEND**

- WALL RATING DESIGNATION  
 NO RATED WALLS REQUIRED
- TRAVEL DISTANCE  
 # TRAVEL DISTANCE (FT.)  
 # COMMON PATH OF TRAVEL (FT.)
- EXITING / OCCUPANT LOAD TAG  
 X = OCCUPANTS USING EXIT  
 Y = EXIT CAPACITY
- LIFE SAFETY SYMBOLS  
 EXIT SIGN  
 FE FIRE EXTINGUISHER  
 FEC FIRE EXTINGUISHER CABINET  
 FIRE ALARM ANNUNCIATION PANEL  
 FAAP

PERMIT REVISION - 02/06/2020

LIFE SAFETY PLAN

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING

G1.101

DATE	02/06/2020
REVISION	REVISION 2
DRAWN	CHECKED

**HOUSEMAN ARCHITECTURE**  
 931 S SEMORAN BLVD. #204B WINTER PARK, FL 32792  
 AR0017645

ALL IDEAS, DESIGNS, AND DETAILS REPRESENTED BY THIS DRAWING ARE OWNED BY AND THE PROPERTY OF HOUSEMAN ARCHITECTURE, LLC AND WERE CREATED, PROVIDED, AND DESIGNED FOR USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF THE IDEAS, DESIGNS, OR DETAILS SHALL BE USED BY AN INDIVIDUAL OR ANYONE FOR ANY PURPOSE WHATSOEVER, WITHOUT THE WRITTEN PERMISSION OF HOUSEMAN ARCHITECTURE, LLC.

**SALAS O'BRIEN**  
 | expect a difference |  
 3501 Quadrangle Boulevard, Suite 100  
 Orlando, Florida 32817  
 (407) 300-0400

CERT. OF AUTH. NO. 6106

■ GARY A. WILKERSON, P.E. 43167  
 ■ KYLE J. CARTER, P.E. 53889  
 ■ JEFF A. KIRKMAN, P.E. 65629  
 ■ ADAM S. LEVINE, P.E. 77010

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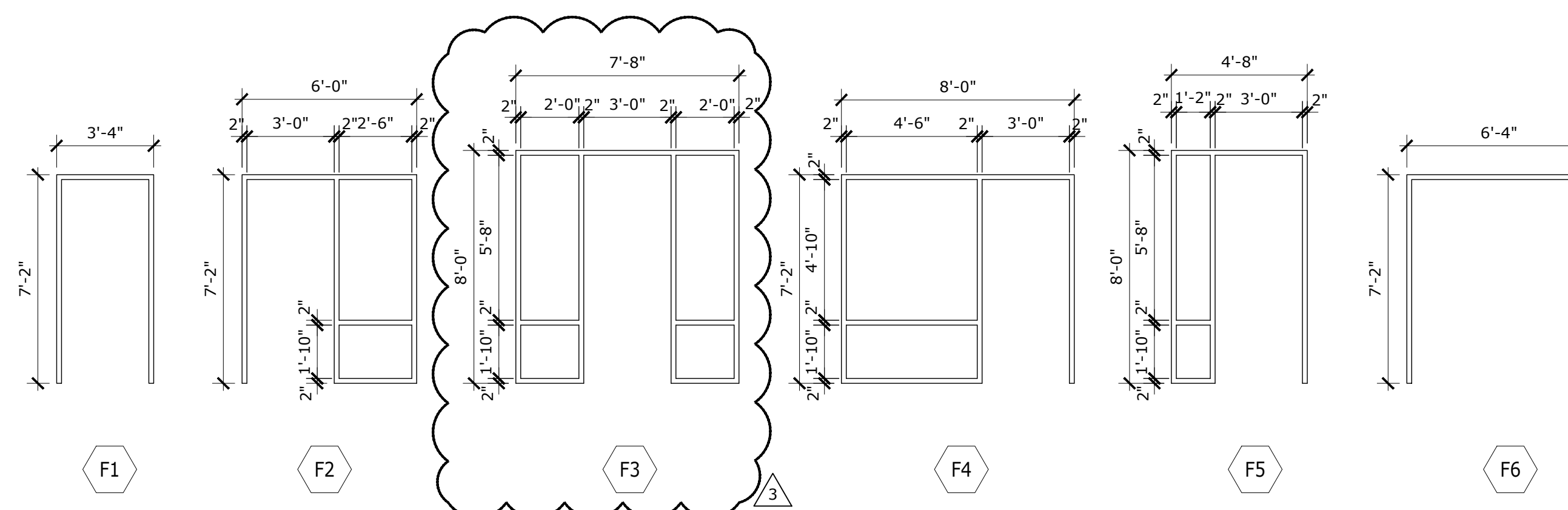
**GENERAL NOTES**

1. ALL HARDWARE TO MEET APPLICABLE LOCAL, STATE AND FEDERAL CODES.
2. CONTRACTOR TO PREP DOORS AS NECESSARY TO RECEIVE SPECIFIED HARDWARE.
3. ALL HOLLOW METAL FRAMES TO BE PAINTED TO MATCH ADJACENT WALL COLOR (UON).
4. ALL HOLLOW METAL FRAMES SHALL BE WELDED CONSTRUCTION; 'KNOCK-DOWN' FRAMES ARE NOT ACCEPTABLE.
5. ALL EXTERIOR GLASS TO BE INSULATED, TINTED & TEMPERED. ALL INTERIOR GLASS TO BE 1/2" CLEAR TEMPERED.
6. EXTERIOR GLAZING PERFORMANCE TO BE:  
U-VALUE .5 MAX  
SHGC .25 MAX

**SCHEDULE KEYNOTES**

1. WEATHER STRIPPING AROUND DOOR
2. PROVIDE SOUND SEALS
3. TEMPERED GLASS - CLEAR
4. TEMPERED GLASS - TINTED
5. CARD KEY ACCESS HARDWARE - COORD W/ ELEC DWGS
6. TAMPERPROOF HARDWARE
7. 12" STAINLESS STEEL KICKPLATE
8. SELF-CLOSING HARDWARE
9. UNDER-CUT DOOR 3/4"
10. 180 DEGREE DOOR SWING
11. DOOR STOP
12. DOOR VIEWER

**DOOR FRAME TYPES**

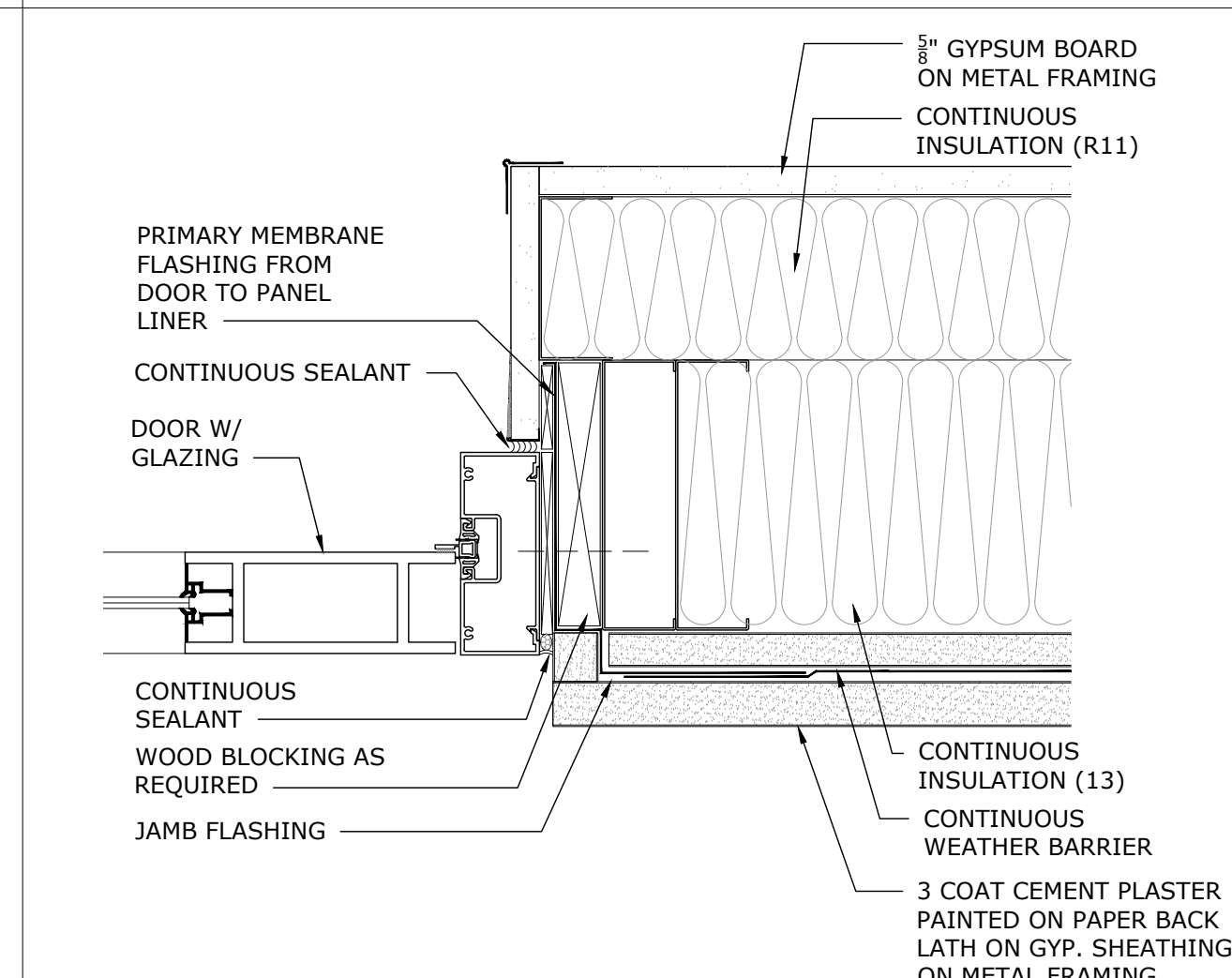
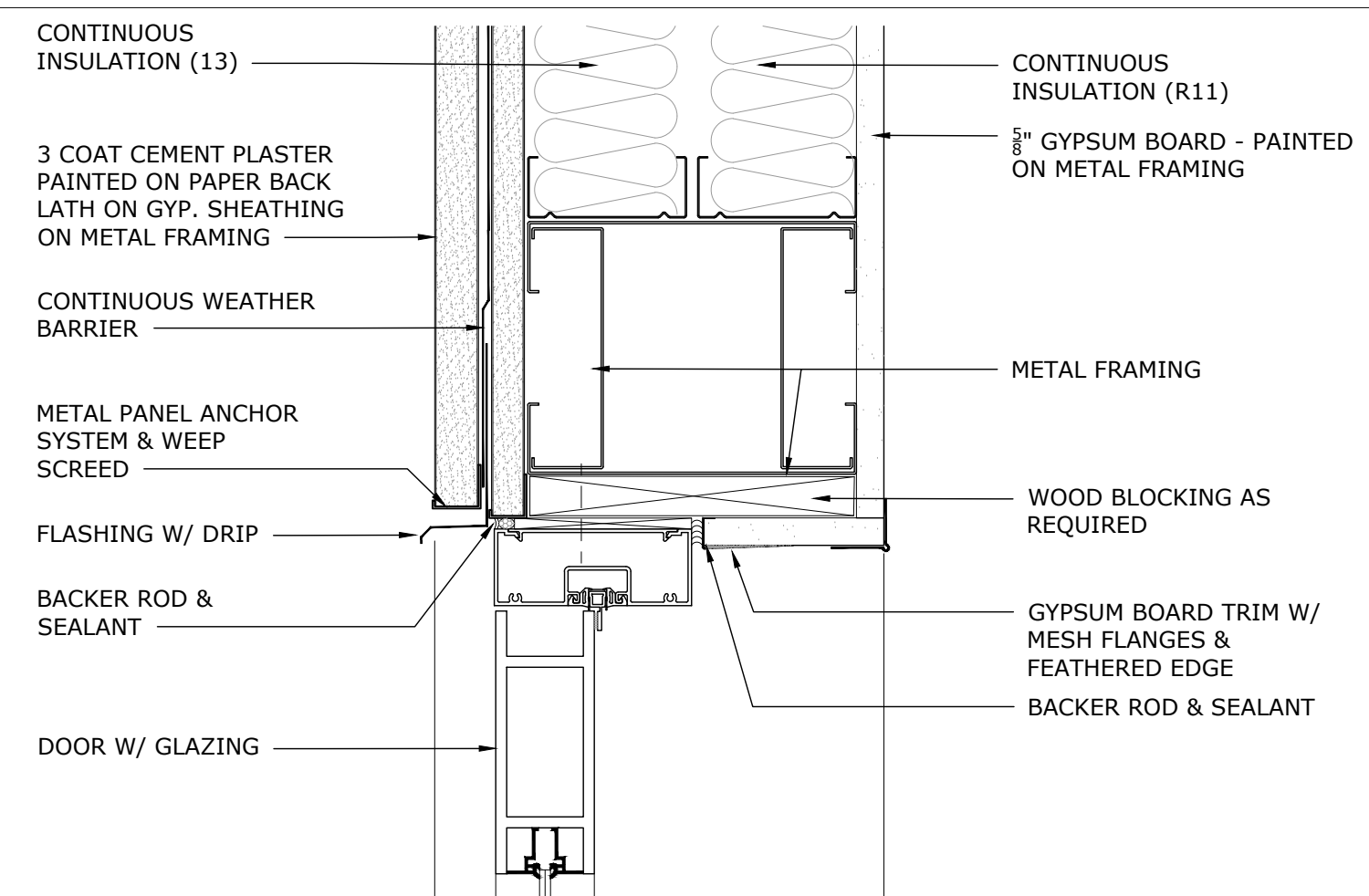
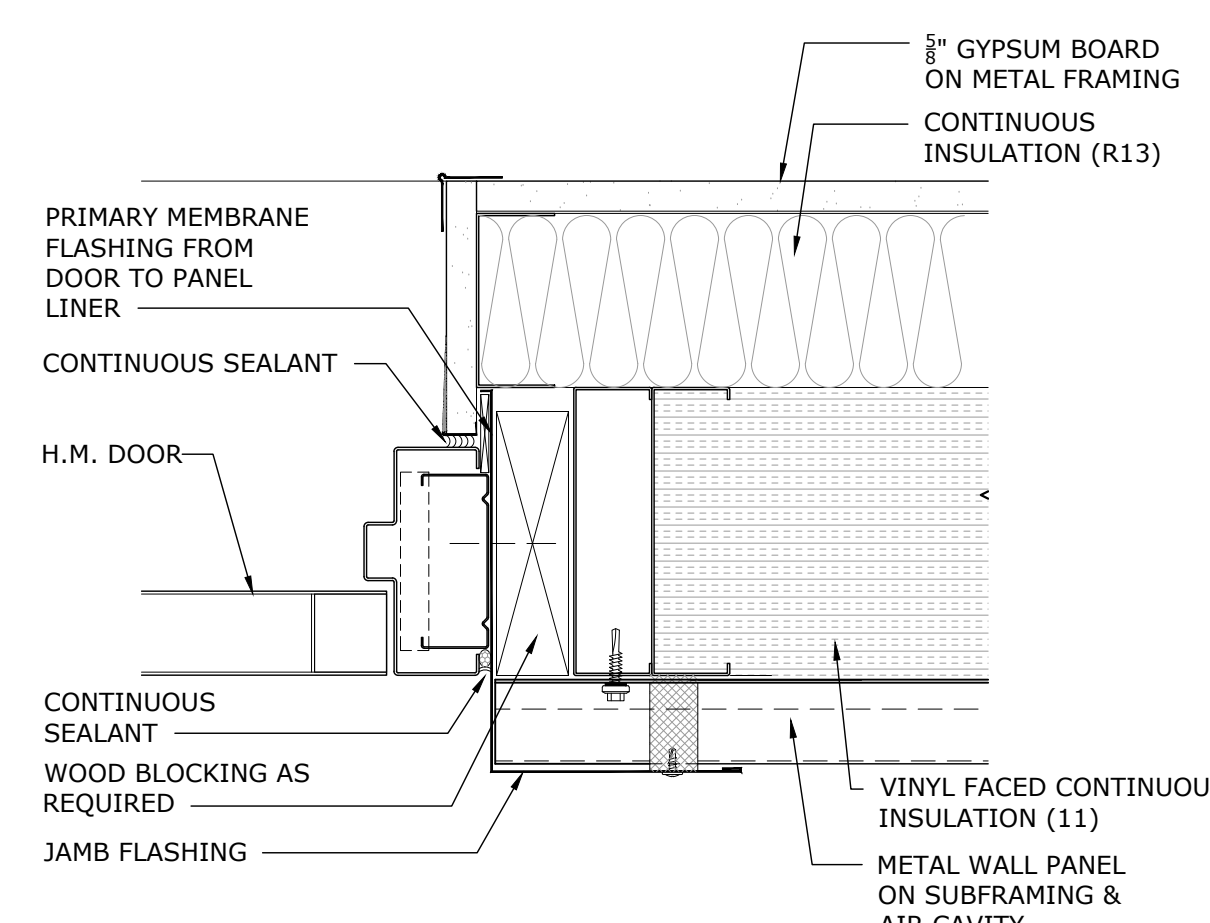
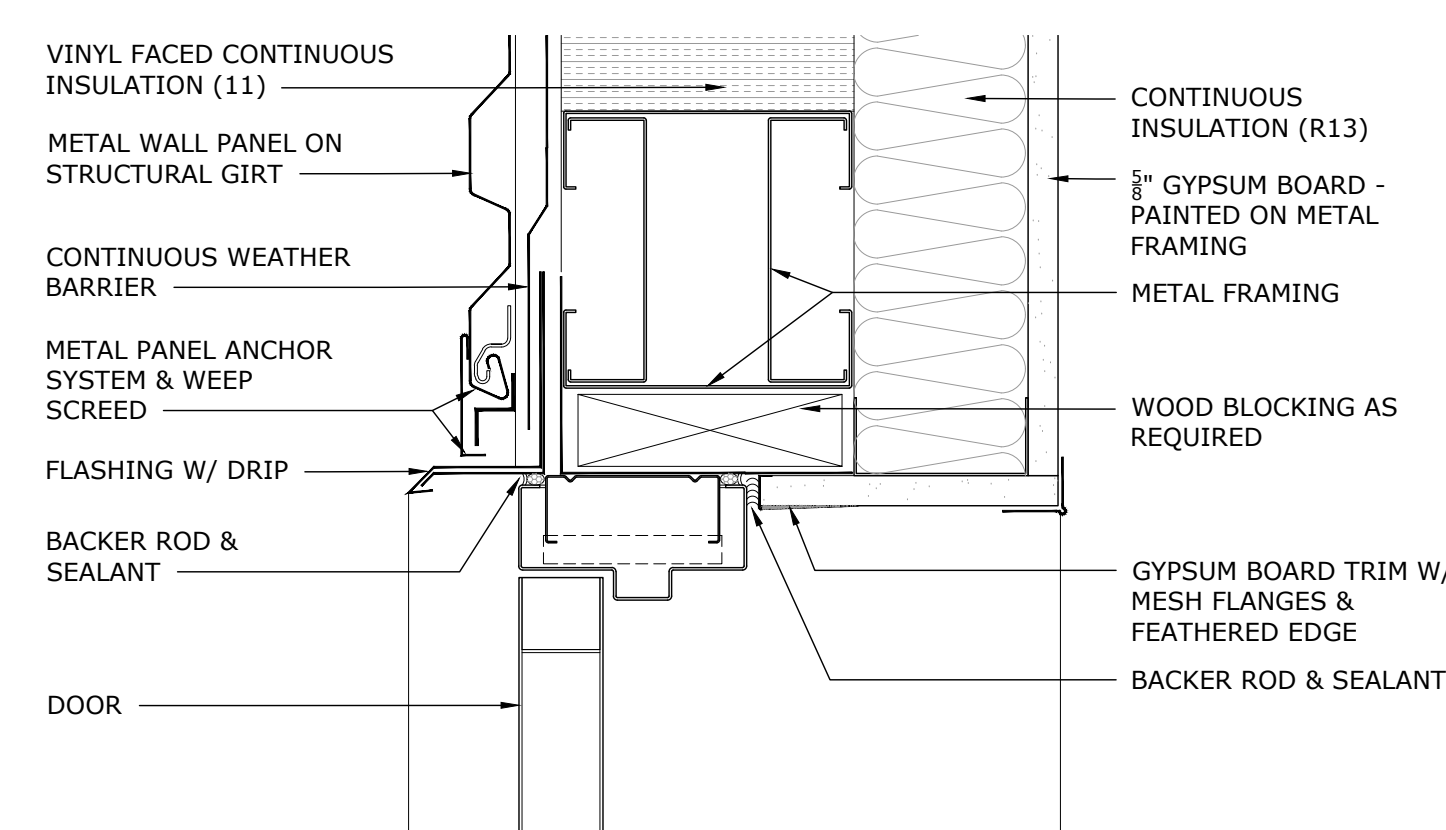
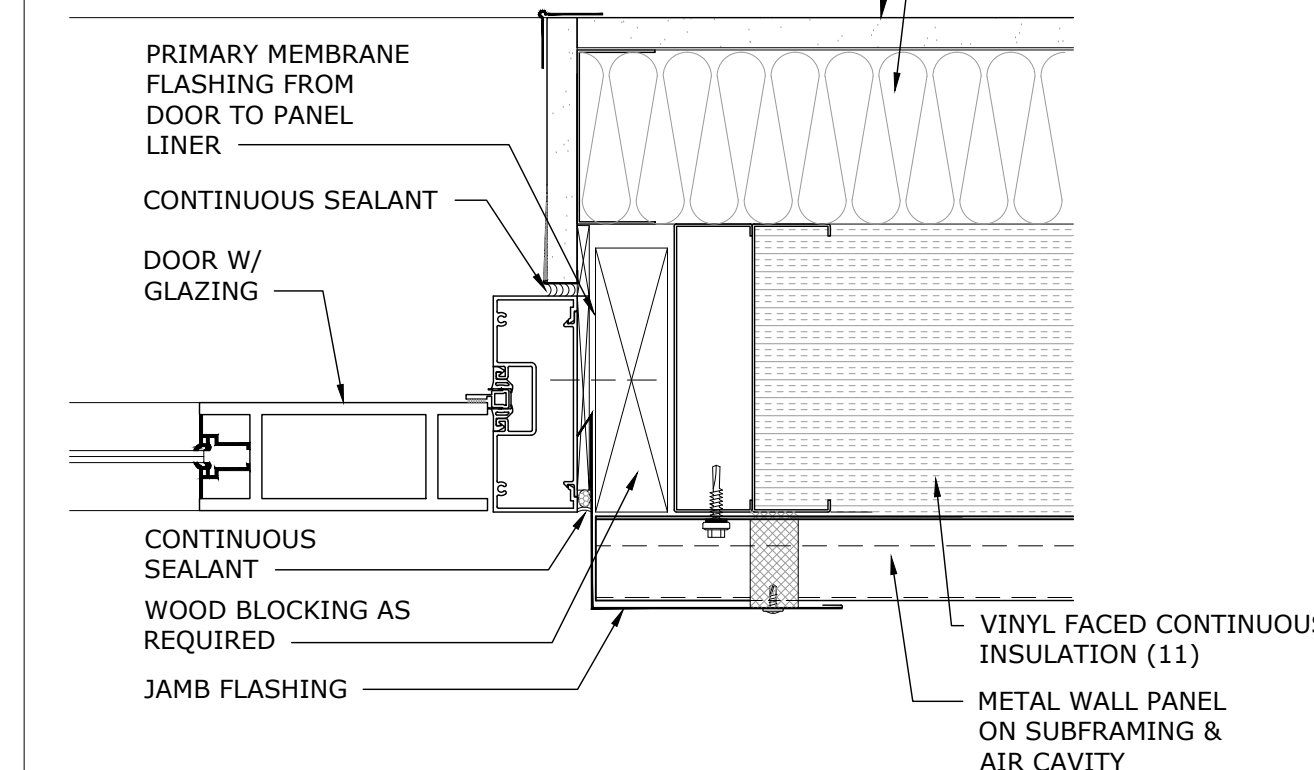
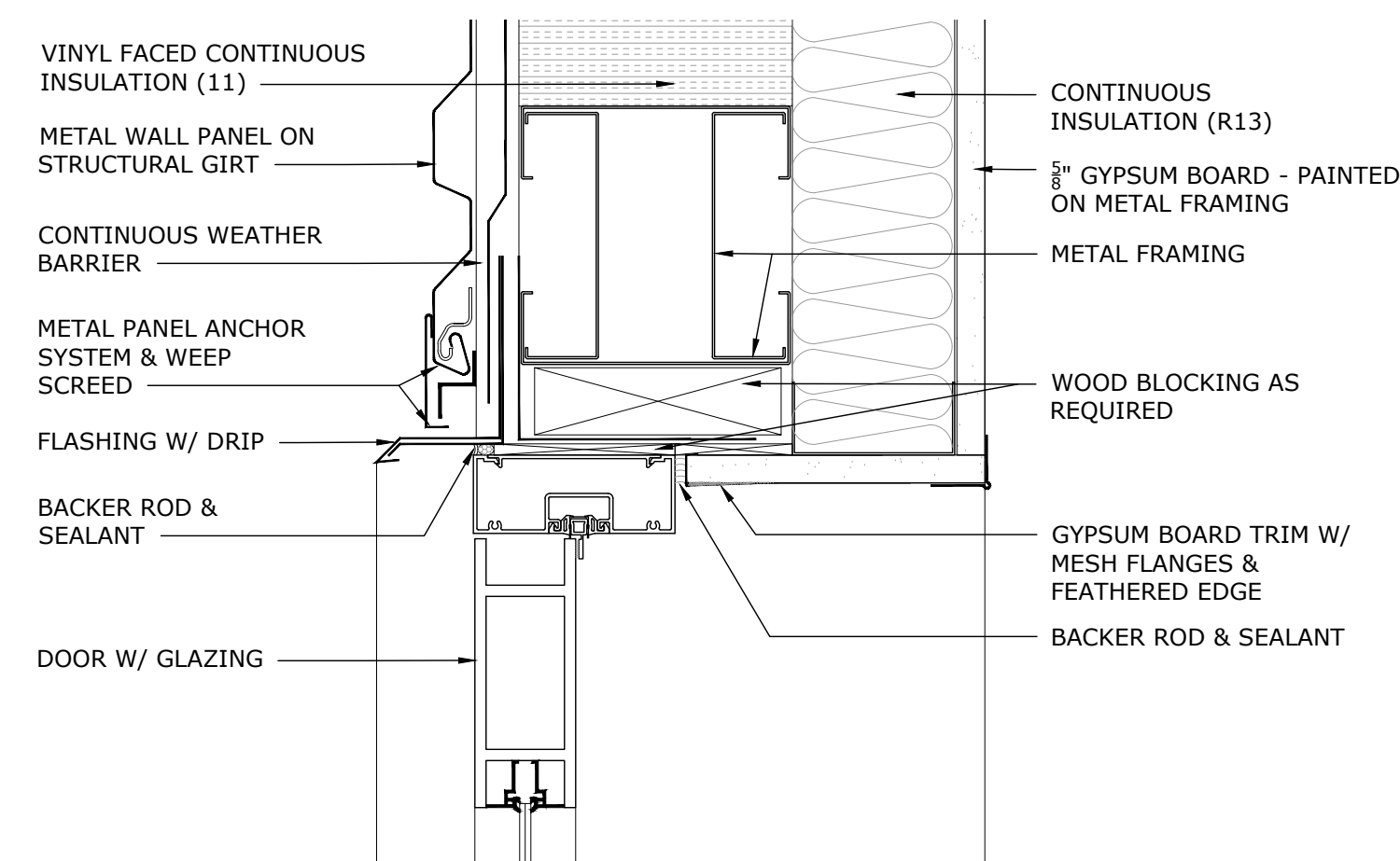
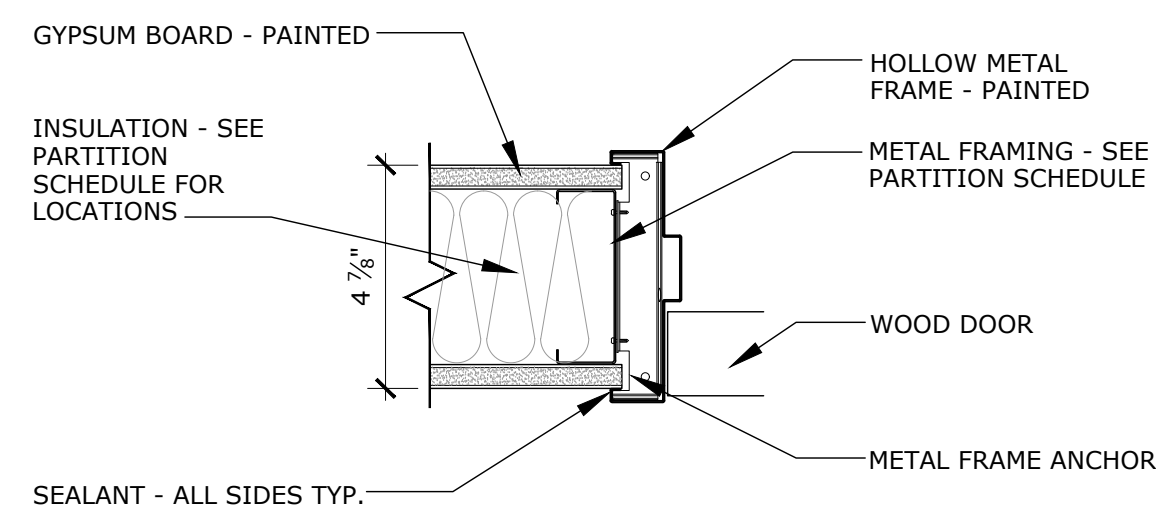
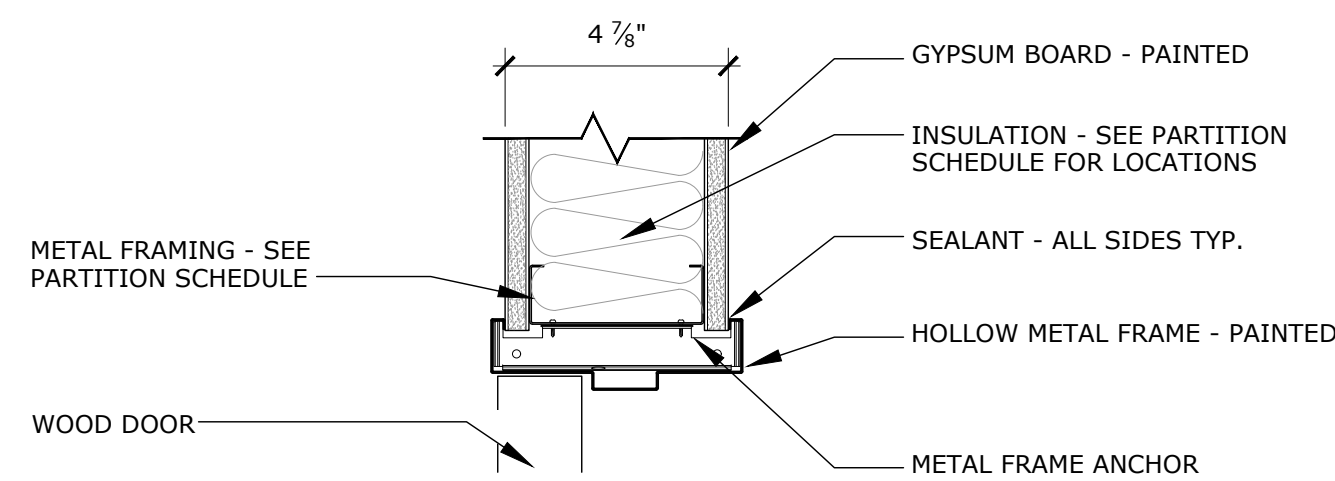
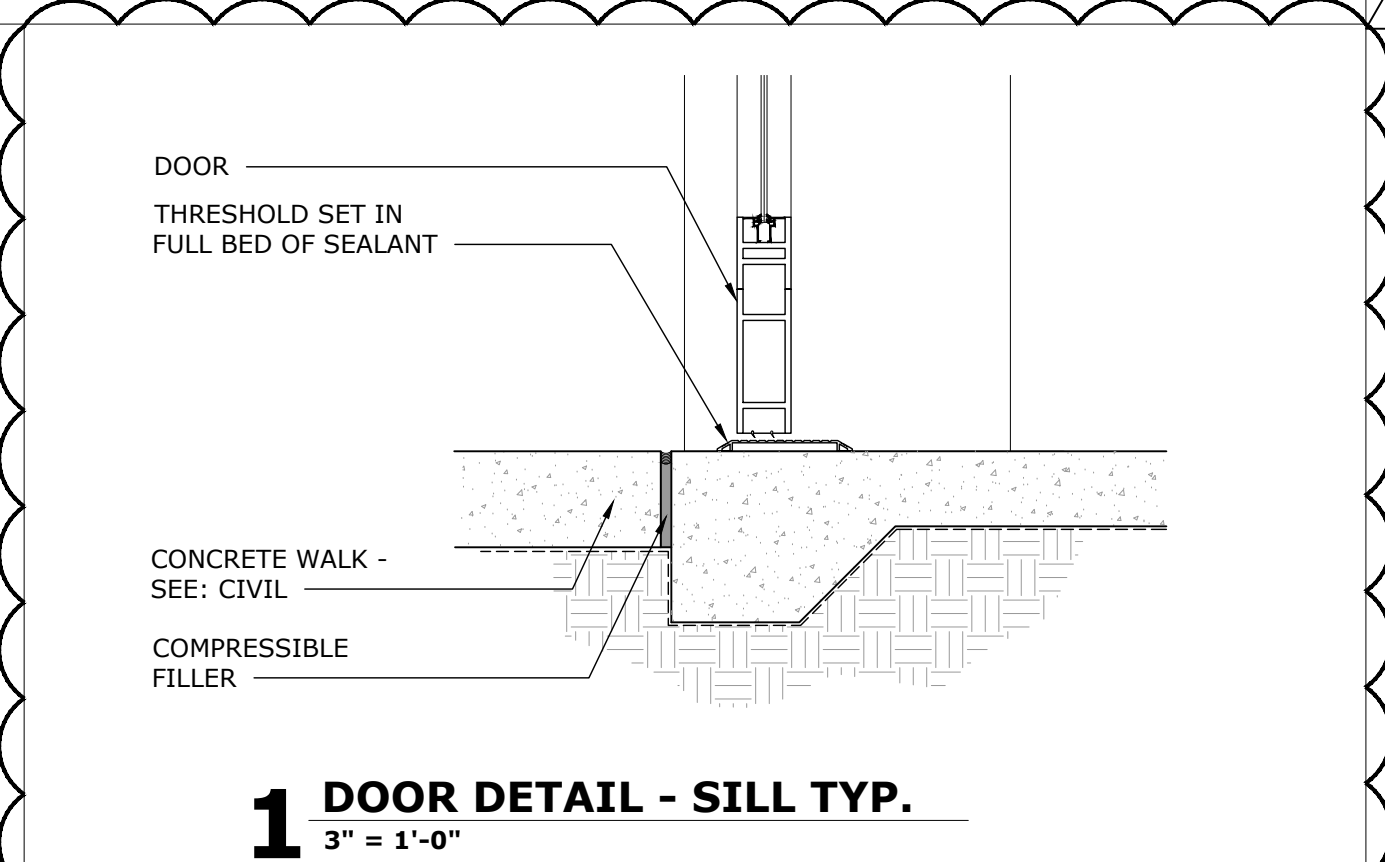
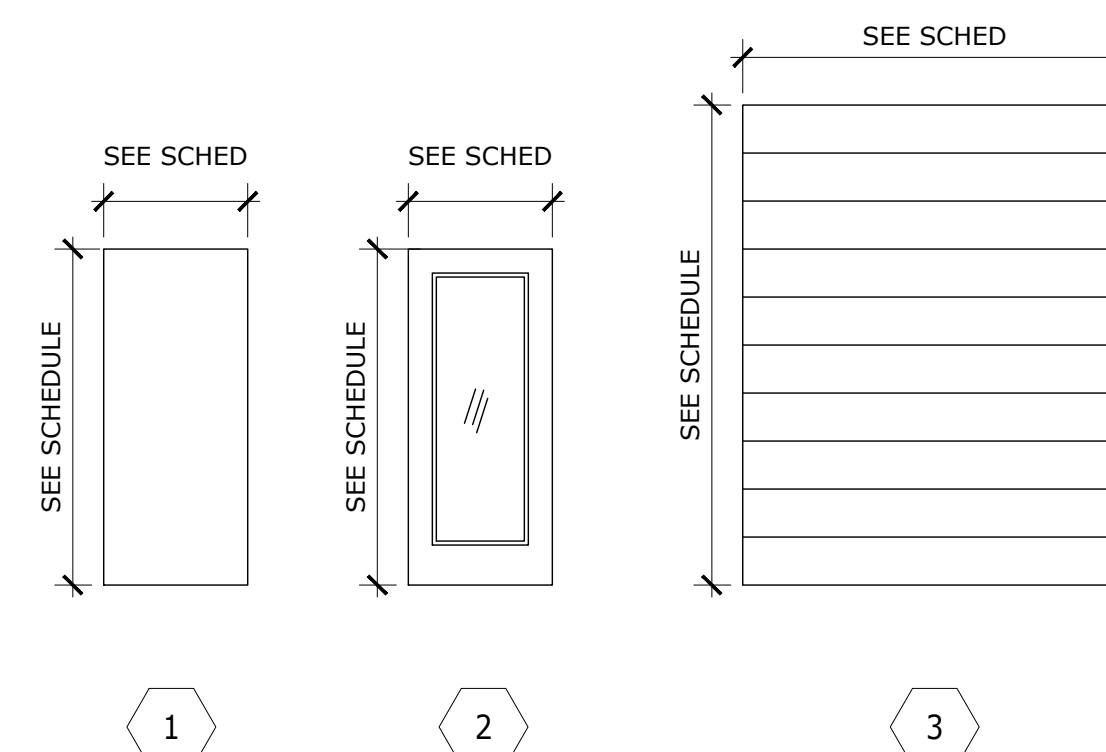


**DOOR SCHEDULE**

NO.	DOOR				FRAME				HWD NO.	DETAILS			KEY NOTES
	WIDTH	HEIGHT	THICKNESS	TYPE	MAT'L	TYPE	MAT'L	RATING		HEAD	SILL	JAMB	
100A	3'-0"	7'-10"	1-3/4"	2	ALUM	F3	ALUM	---	1	8/G2.101	1/G2.101	9/G2.101	1, 4, 5, 6, 8
100B	3'-0"	7'-0"	1-3/4"	2	WD	F2	HM	---	12	2/G2.101	---	3/G2.101	3, 5, 7, 8, 11
101	3'-0"	7'-0"	1-3/4"	2	WD	F4	HM	---	8	2/G2.101	---	3/G2.101	2, 11
102B	3'-0"	7'-0"	1-3/4"	1	WD	F2	HM	---	10	2/G2.101	---	3/G2.101	11
102C	3'-0"	7'-0"	1-3/4"	1	WD	F2	HM	---	10	2/G2.101	---	3/G2.101	11
102D	3'-0"	7'-0"	1-3/4"	1	WD	F2	HM	---	10	2/G2.101	---	3/G2.101	11
103A	3'-0"	7'-0"	1-3/4"	1	WD	F2	HM	---	11	2/G2.101	---	3/G2.101	1, 11
103B	PR3'-0"	7'-0"	1-3/4"	1	WD	F6	HM	---	6	2/G2.101	---	3/G2.101	2, 7, 10, 11
103C	PR3'-0"	7'-0"	1-3/4"	1	WD	F6	HM	---	5	2/G2.101	---	3/G2.101	7, 10, 11
103D	3'-0"	7'-0"	1-3/4"	1	WD	F1	HM	---	13	2/G2.101	---	3/G2.101	2, 11
103E	3'-0"	7'-0"	1-3/4"	1	WD	F1	HM	---	13	2/G2.101	---	3/G2.101	2, 11
103F	3'-0"	7'-0"	1-3/4"	1	HM	F1	HM	---	2	6/G2.101	1/G2.101	7/G2.101	1, 5, 6, 8, 12
103G	8'-0"	10'-0"	---	3	STL	STL	---	---	4	8/G2.102	---	---	---
104	3'-0"	7'-0"	1-3/4"	1	WD	F1	HM	---	14	2/G2.101	---	3/G2.101	7, 8, 9, 11
105	3'-0"	7'-0"	1-3/4"	1	WD	F1	HM	---	12	2/G2.101	---	3/G2.101	7, 9, 11
106	3'-0"	7'-0"	1-3/4"	1	WD	F1	HM	---	14	2/G2.101	---	3/G2.101	7, 8, 9, 11
107	3'-0"	7'-0"	1-3/4"	1	WD	F1	HM	---	12	2/G2.101	---	3/G2.101	7, 9, 11
108	3'-0"	7'-0"	1-3/4"	2	WD	F1	HM	---	9	2/G2.101	---	3/G2.101	7, 11
109A	PR3'-0"	7'-0"	1-3/4"	1	WD	F6	HM	---	7	2/G2.101	---	3/G2.101	2, 7, 11
109B	PR3'-0"	7'-0"	1-3/4"	1	WD	F6	HM	---	5	2/G2.101	---	3/G2.101	7, 10, 11
109C	3'-0"	7'-0"	1-3/4"	1	HM	F1	HM	---	2	6/G2.101	1/G2.101	7/G2.101	1, 5, 6, 8, 12
110	3'-0"	7'-10"	1-3/4"	2	ALUM	F5	ALUM	---	3	4/G2.101	1/G2.101	5/G2.101	1, 4, 5, 6, 8

DOOR SCHEDULE NOTES:  
1. REFERENCE PROJECT MANUAL FOR DOOR HARDWARE SETS AND SPECIFICATIONS.

**DOOR TYPES**



**2 HM DOOR DETAIL - HEAD TYP.**  
3" = 1'-0"

**3 HM DOOR DETAIL - JAMB TYP.**  
3" = 1'-0"

**4 DOOR DETAIL - HEAD TYP.**  
3" = 1'-0"

**5 DOOR DETAIL - JAMB TYP.**  
3" = 1'-0"

**6 HM DOOR DETAIL - HEAD TYP.**  
3" = 1'-0"

**7 HM DOOR DETAIL - JAMB TYP.**  
3" = 1'-0"

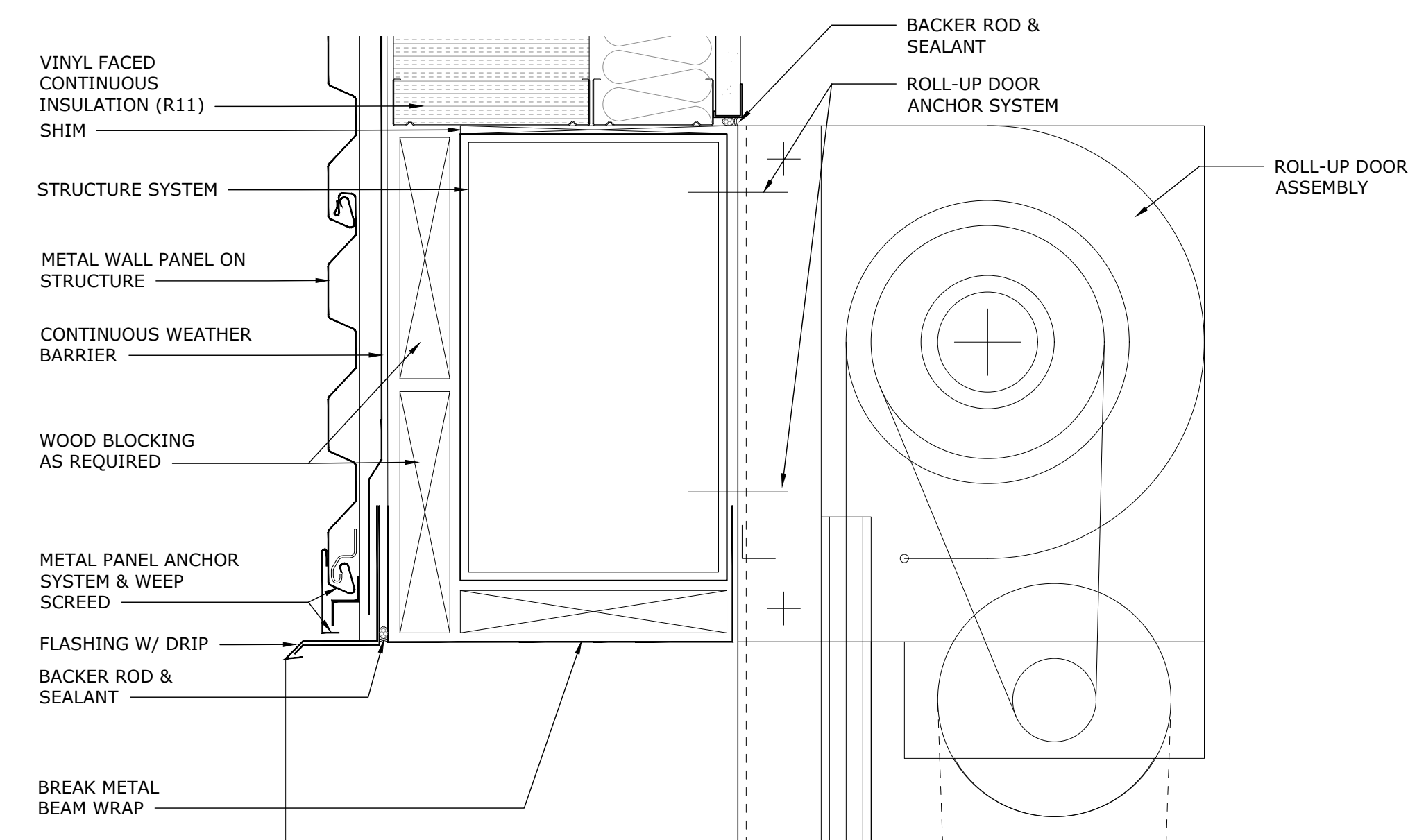
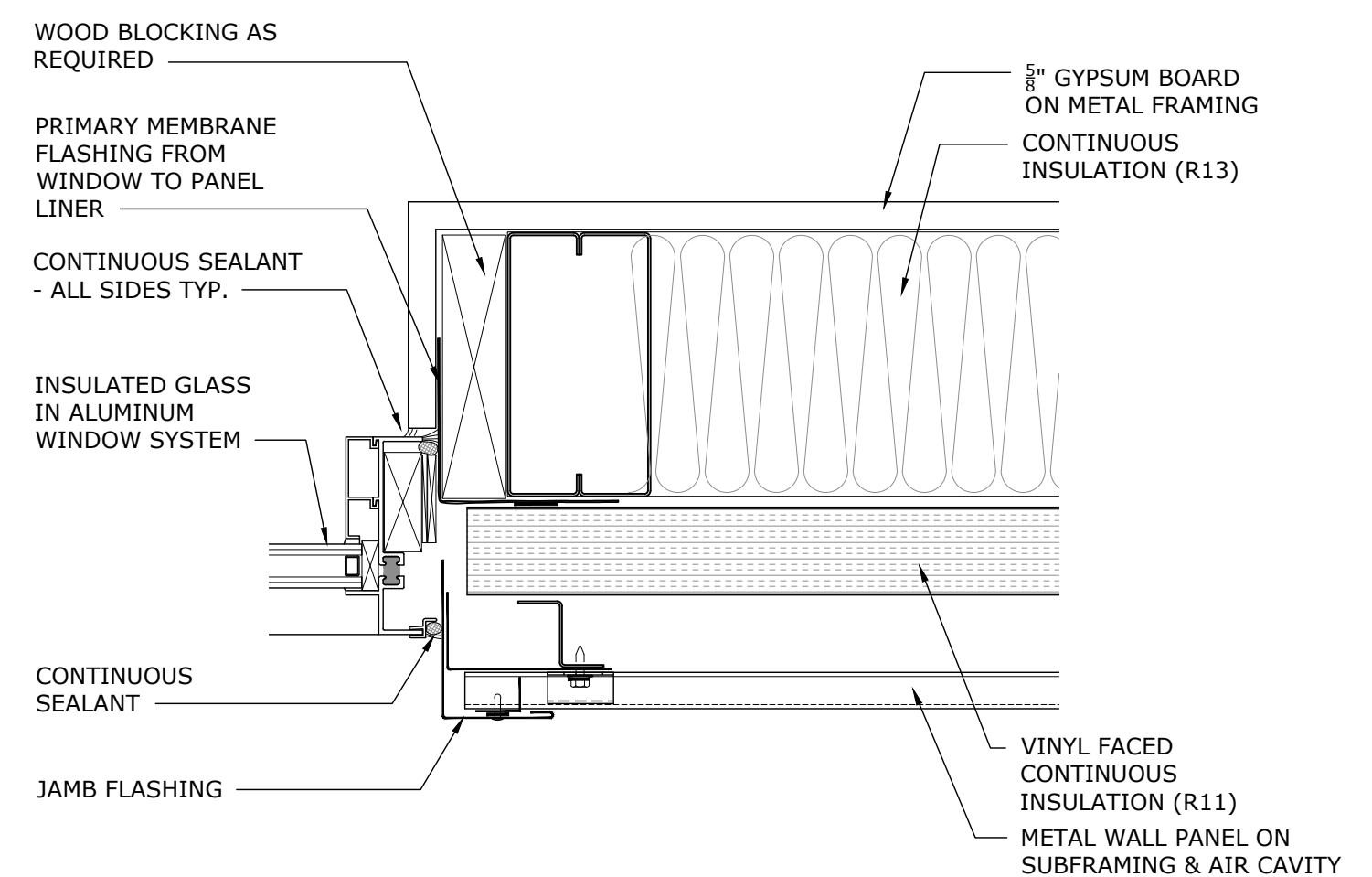
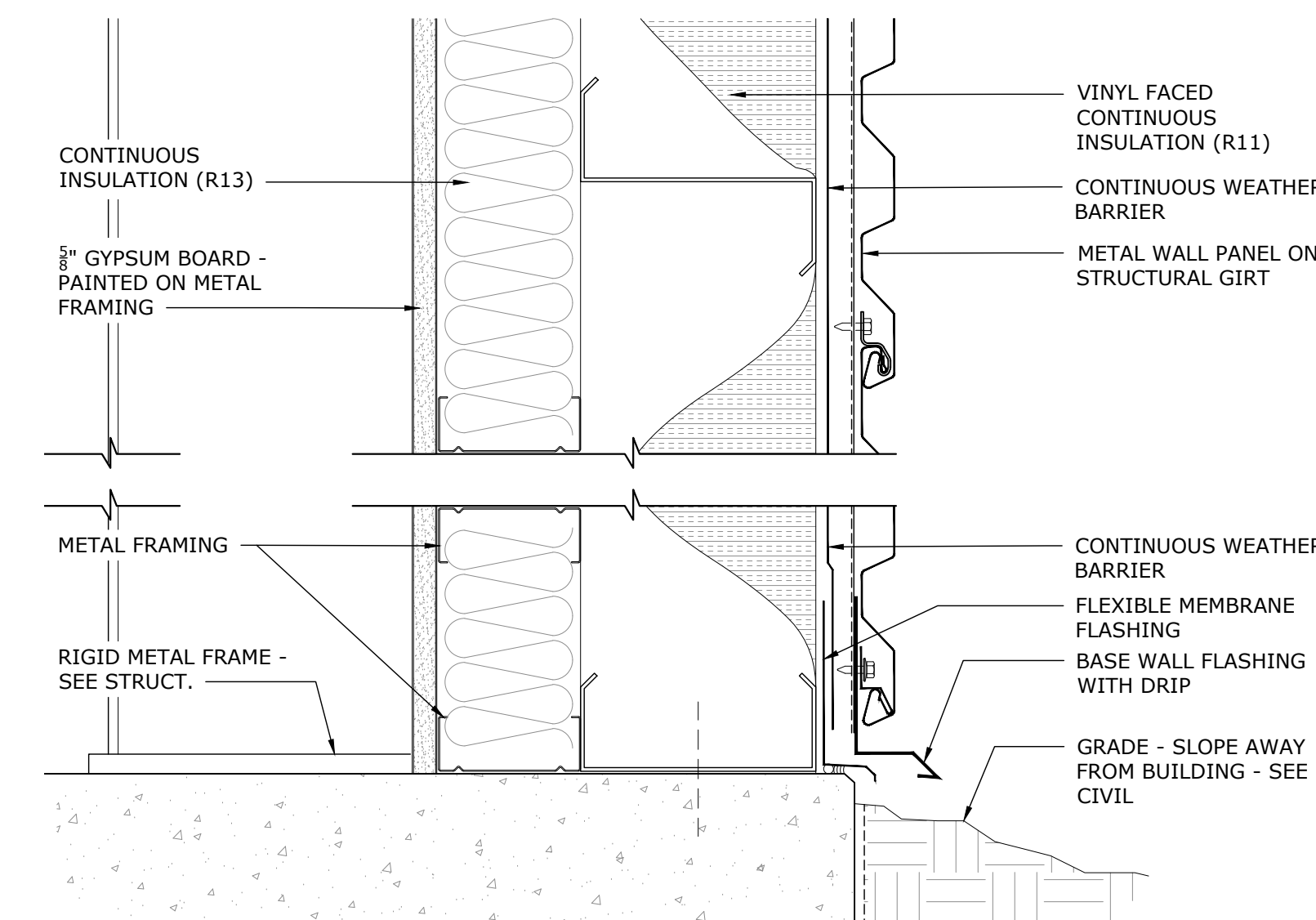
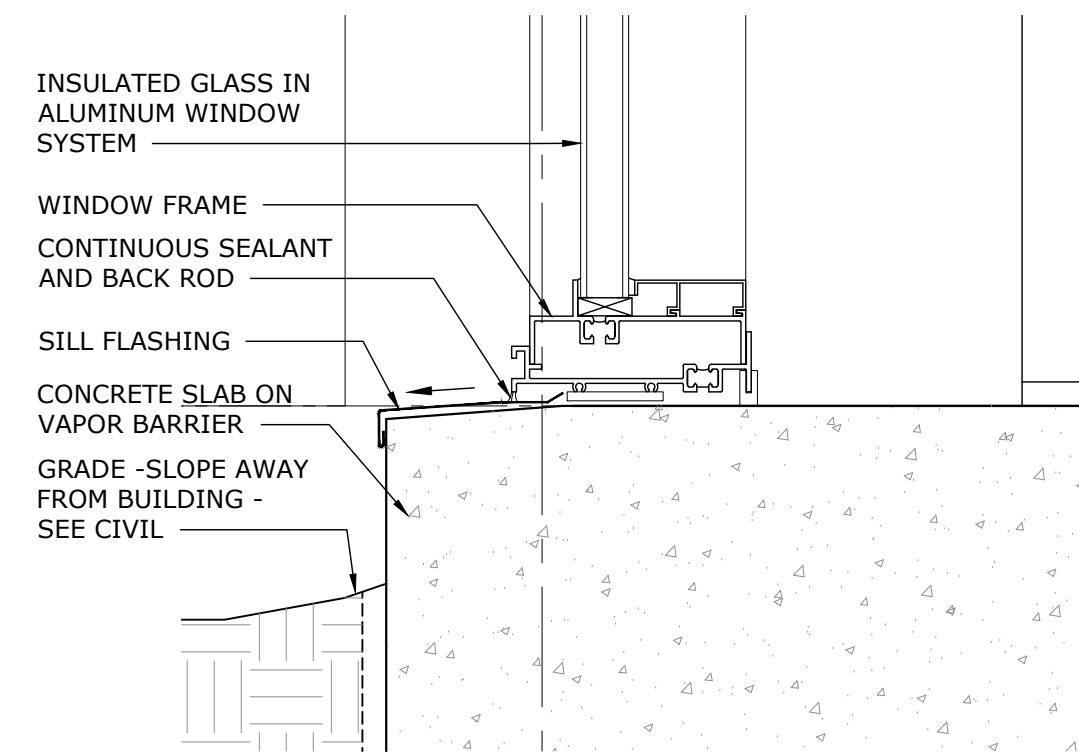
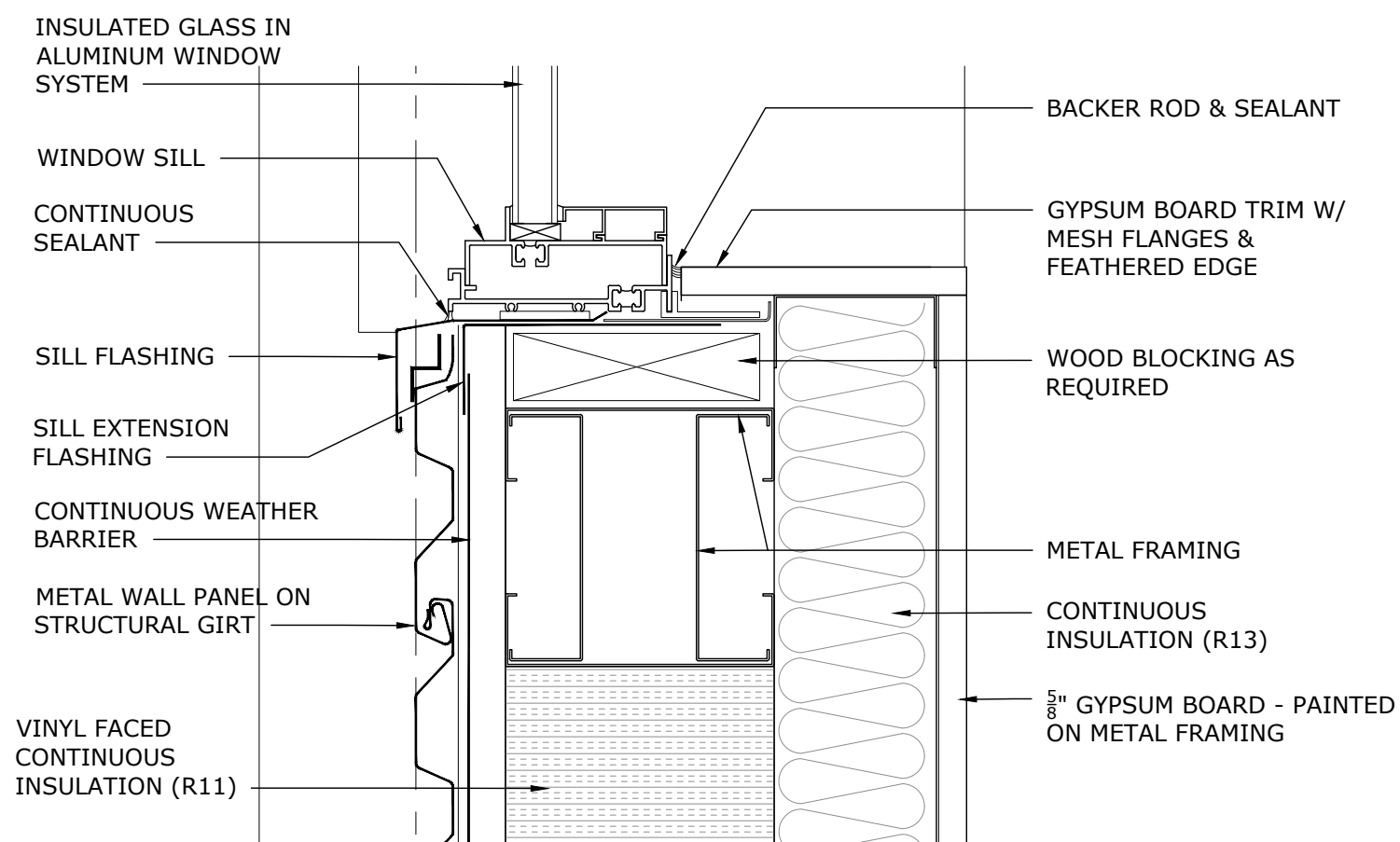
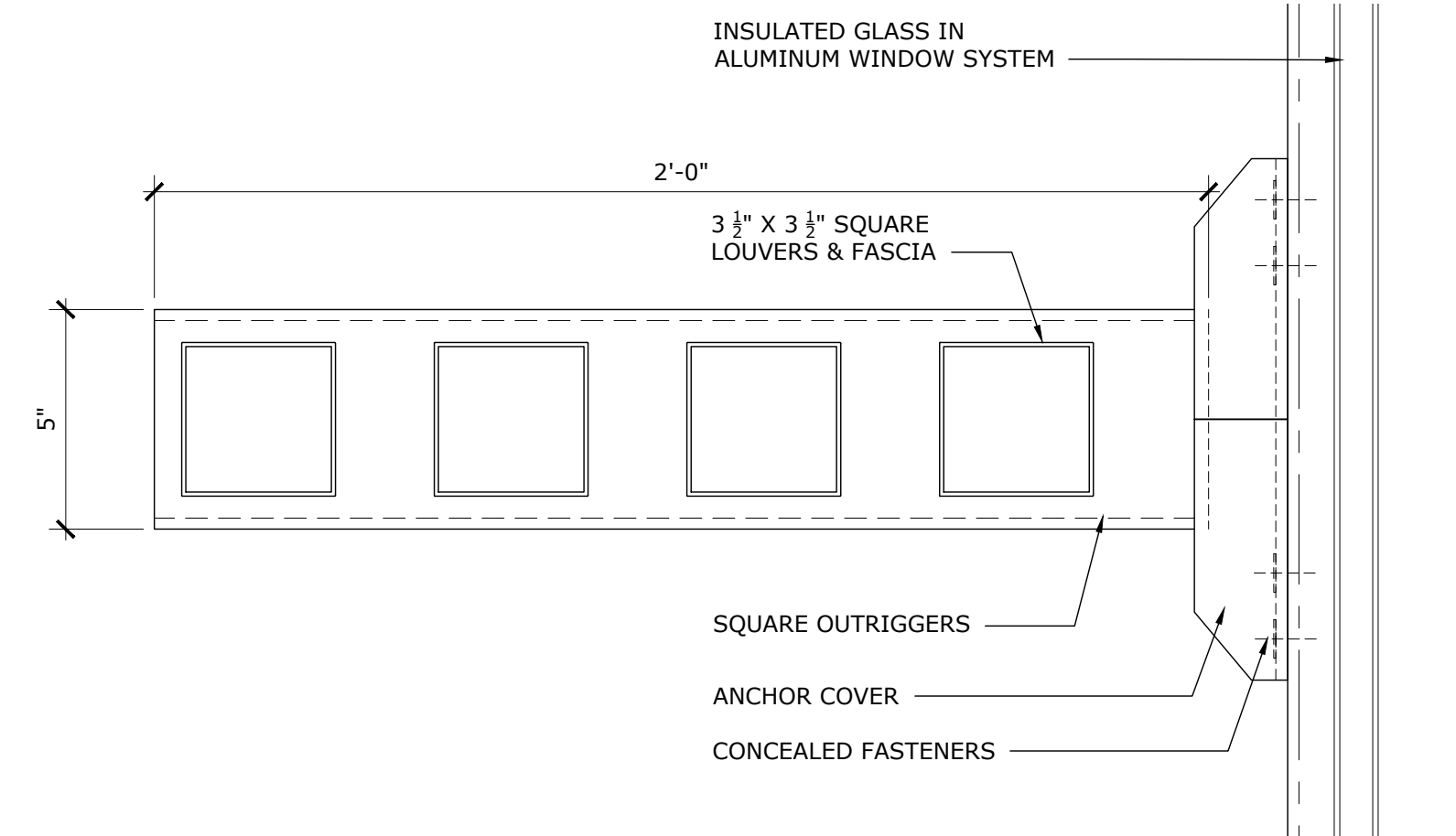
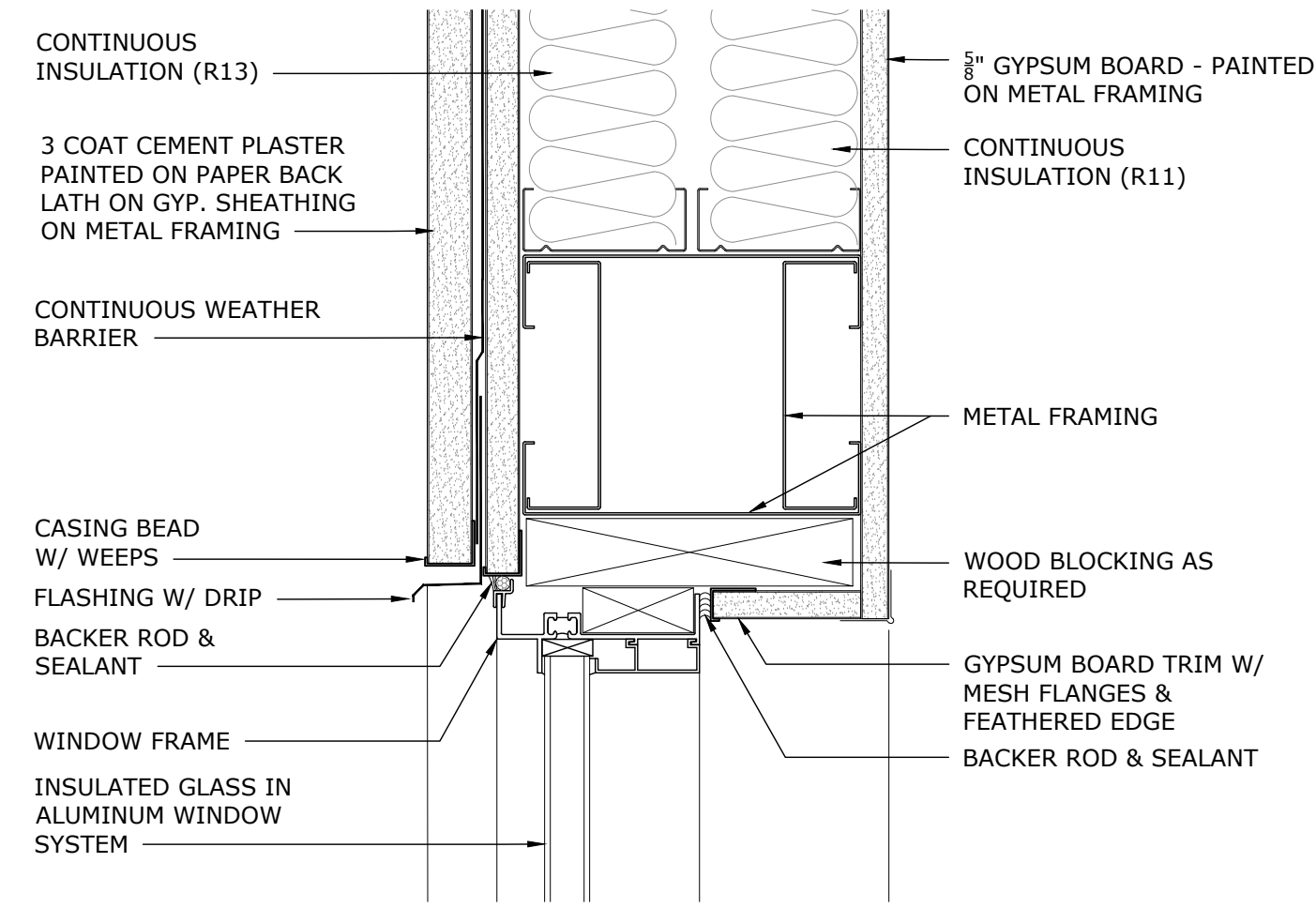
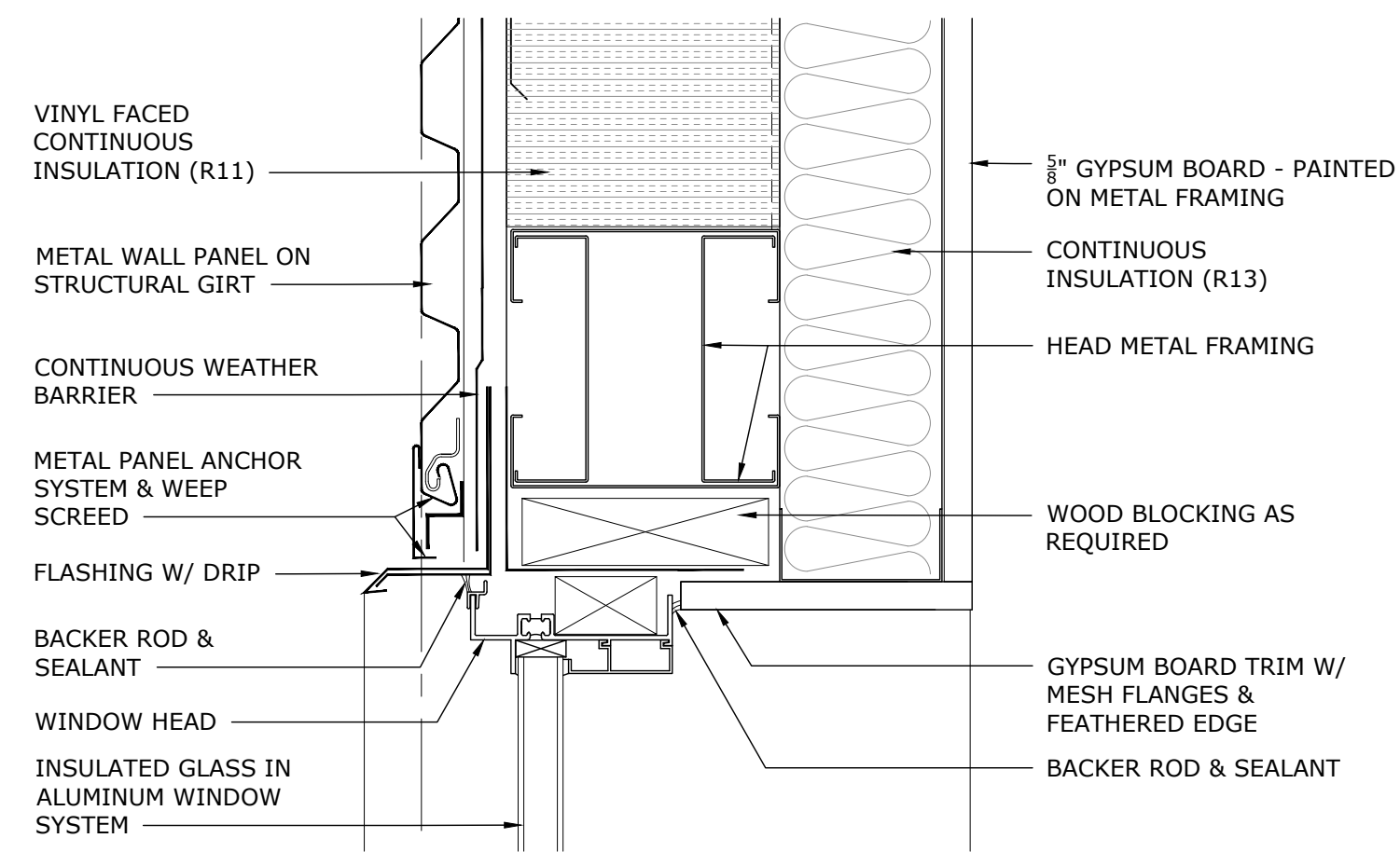
**8 DOOR DETAIL - HEAD TYP.**  
3" = 1'-0"

**9 DOOR DETAIL - JAMB TYP.**  
3" = 1'-0"

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		DRAWN

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**DOOR SCHEDULE, TYPES & DETAILS**  
 EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING  
 Date: 02/06/2020  
 Job No.: 19-0-02  
 Sheet No.: **G2.101**





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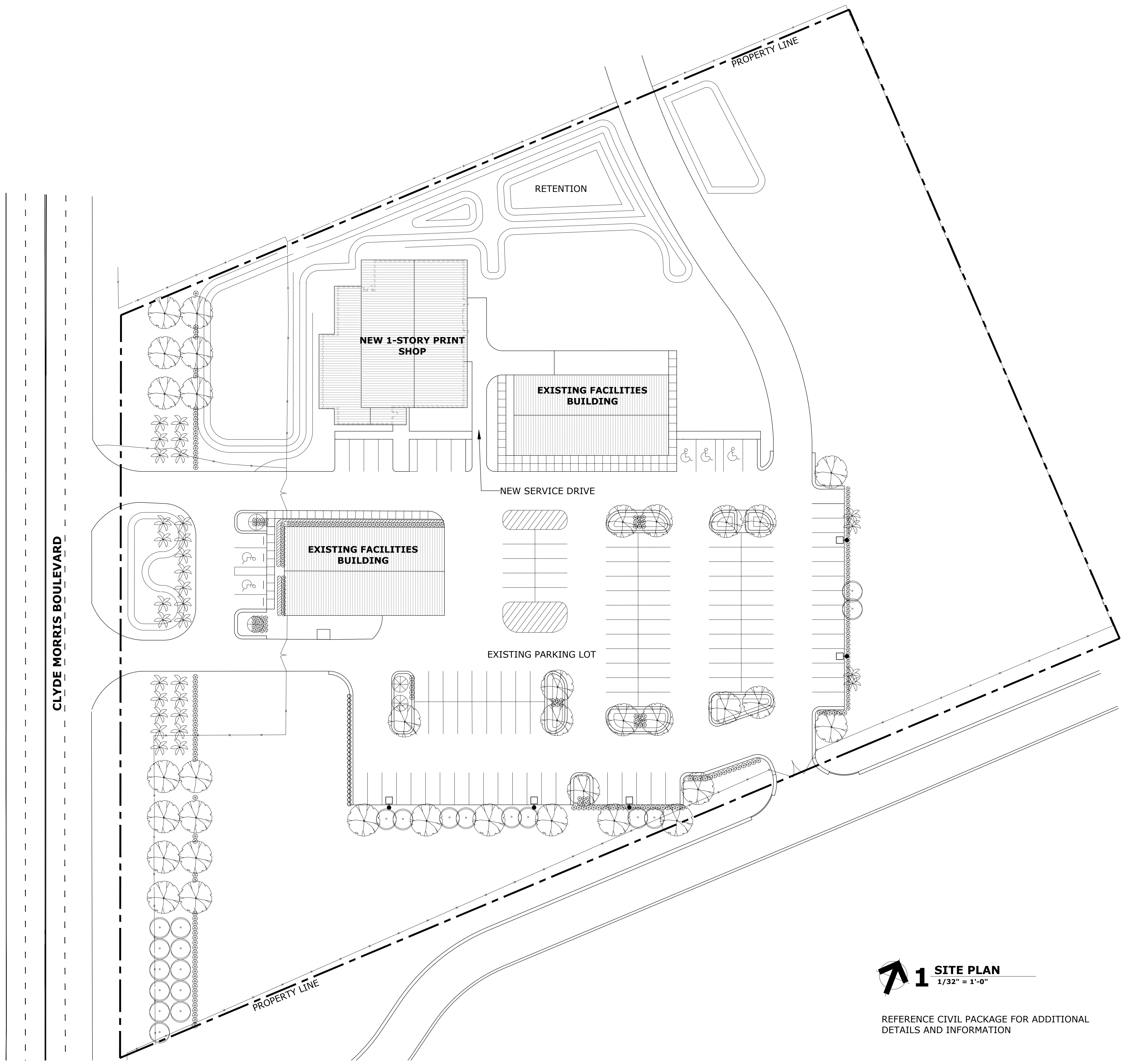
WINDOW DETAILS

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NEW PRINT SHOP BUILDING

G2.102

Date: 02/06/2020  
Job no. 18-042  
Sheet no.





**1 SITE PLAN**  
1/32" = 1'-0"

REFERENCE CIVIL PACKAGE FOR ADDITIONAL  
DETAILS AND INFORMATION

**SALAS O'BRIEN**  
[ expect a difference ]  
3501 Quadrangle Boulevard, Suite 100  
Orlando, Florida 32817  
407.388.0400  
CERT. OF AUTH. NO. 6106  
■ GARY A. WILKERSON, P.E. 43167  
■ KYLE J. CARTER, P.E. 32009  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010  
19005

**HOUSEMAN ARCHITECTURE**  
931 S SEMORAN BLVD. #204B WINTER PARK, FL 32792  
A8017645  
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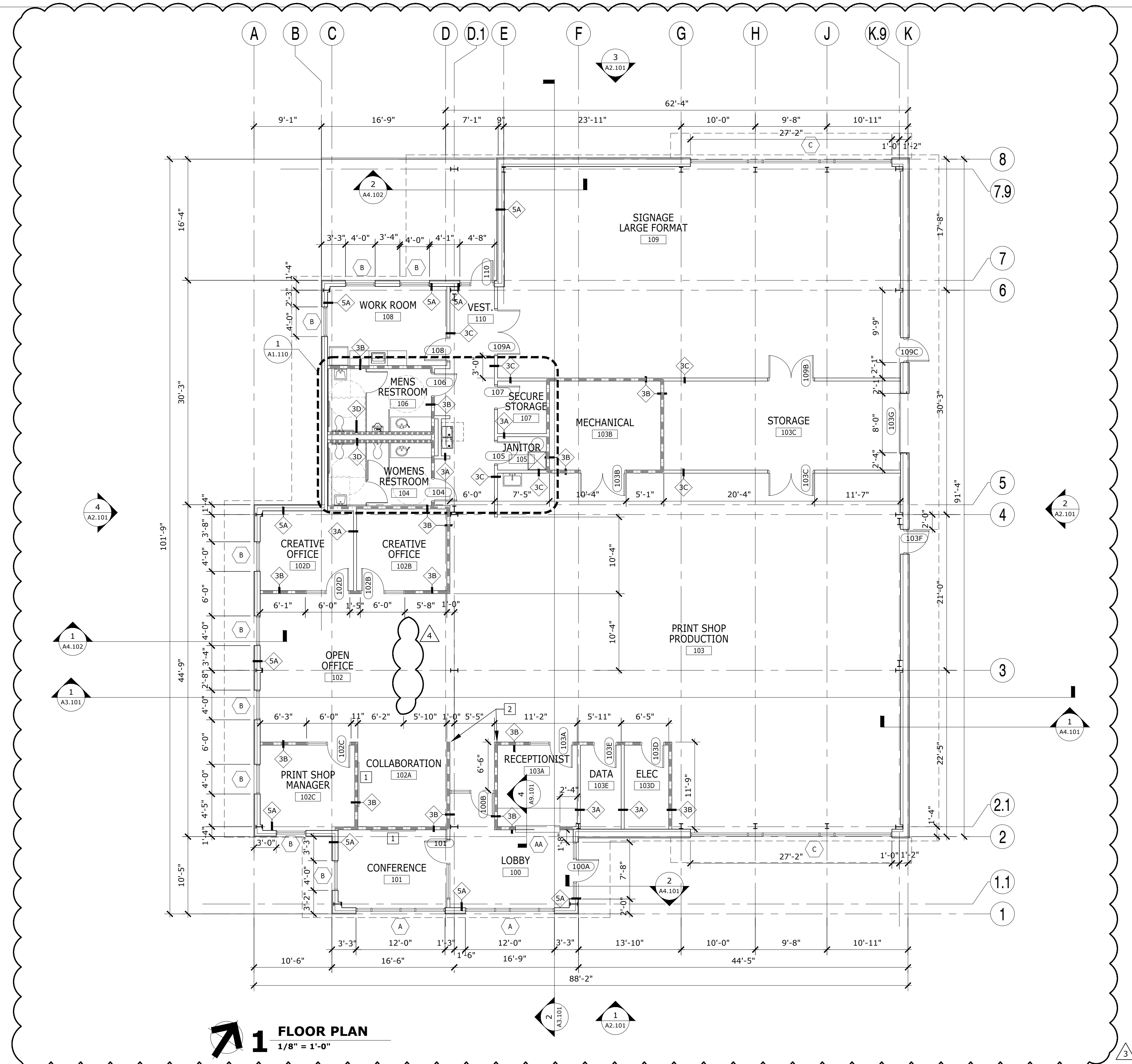
**SITE PLAN**

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

**A0.100**

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Sheet No.:





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

**FLOOR PLAN NOTES**

1. DO NOT SCALE THESE DRAWINGS.
2. THE INTENT OF THESE DRAWINGS IS TO INDICATE THE SCOPE OF WORK REQUIRED IN ORDER TO CONSTRUCT A COMPLETE AND FINISHED SPACE READY FOR OCCUPANCY. THE CONTRACTOR AND SUB-CONTRACTORS ARE EXPECTED TO VISIT THE PROJECT SITE PRIOR TO CONSTRUCTION AND NOTIFY THE ARCHITECT - PRIOR TO CONSTRUCTION - OF ANY DISCREPANCIES WITHIN THE DRAWINGS OR POSSIBLE CONFLICTS WHICH AFFECT THE PROGRESS OF THIS PROJECT. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS NOTIFYING THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
3. ALL DIMENSIONS ON FLOOR PLANS ARE FROM FACE OF STUD TO STUD OF WALL, UNLESS NOTED OTHERWISE. DIMENSIONS TO EXTERIOR WALLS ARE TO INSIDE FACE OF STRUCTURE.
4. PROVIDE TILE BACKER BOARD AT ALL TILE LOCATIONS. PROVIDE WATER RESISTANT GYPSUM BOARD BEHIND ALL SINK LOCATIONS.
5. PROVIDE BLOCKING AS REQUIRED FOR ALL GRAB BARS, TV'S AND OTHER WALL MOUNTED FIXTURES AS REQUIRED.
6. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE BUILDING AND FIRE SAFETY CODES.
7. BUILDING DEPARTMENT APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL BE USED ONLY BY THE SUPERINTENDENT. ALL CONSTRUCTION DOCUMENT SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF CONSTRUCTION DOCUMENTS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS, ON THE PREMISES AT ALL TIMES. THESE SHALL BE UNDER THE CARE OF THE JOB SUPERINTENDENT.
8. INTERIOR STEEL FRAMED GYPSUM BOARD PARTITION DESIGN CRITERIA SHALL BE BASED ON ASTM C 754 STANDARD SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREW ATTACHED GYPSUM PANEL PRODUCTS, LATEST VERSION. ALLOWABLE DEFLECTION WITH A 5 PSF UNIFORM LOAD PERPENDICULAR TO THE PARTITION IS L/240. PARTITIONS WITH TILE FINISH SHALL HAVE AN ALLOWABLE DEFLECTION OF L/360.
9. ALL PARTITIONS TO RECEIVE LEVEL 4 FINISH U.N.O.
10. DOORS ARE LOCATED 6" FROM THE CORNER U.N.O.

**PARTITION SCHEDULE**

TYPE	SYMBOL	HEIGHT	DESCRIPTION
3A	=====	6" ABOVE CEILING	ONE LAYER 3/8" GYPSUM WALL BOARD EACH SIDE OF 3-5/8" METAL FRAMING - BRACE WALL AS REQUIRED.
3B	-----	TO DECK	ONE LAYER 3/8" GYPSUM WALL BOARD EACH SIDE OF 3-5/8" METAL FRAMING WITH BATT INSULATION (FULL DEPTH OF STUDS)- BRACE WALL AS REQUIRED.
3C	-----	TO DECK	ONE LAYER 3/8" GYPSUM WALL BOARD EACH SIDE OF 3-5/8" METAL FRAMING - BRACE WALL AS REQUIRED.
3D	=====	6" ABOVE CEILING	ONE LAYER 3/8" WATER RESISTANT GYPSUM WALL BOARD ONE SIDE OF 3-5/8" METAL FRAMING WITH BATT INSULATION (FULL DEPTH OF STUDS)- BRACE WALL AS REQUIRED. PROVIDE TILE BACKER BOARD AT TILE LOCATIONS
5A	=====	6" ABOVE CEILING OR EAVE HT.	ONE LAYER 3/8" GYPSUM WALL BOARD ONE SIDE OF METAL FRAMING ATTACHED TO RIGID FRAME STRUCTURE

**KEYNOTES**

- 1 PROVIDE BLOCKING IN WALLS FOR TV MONITORS AND RESTROOM GRAB BARS, COUNTERS & TOILET ACCESSORIES
- 2 ALIGN FACE



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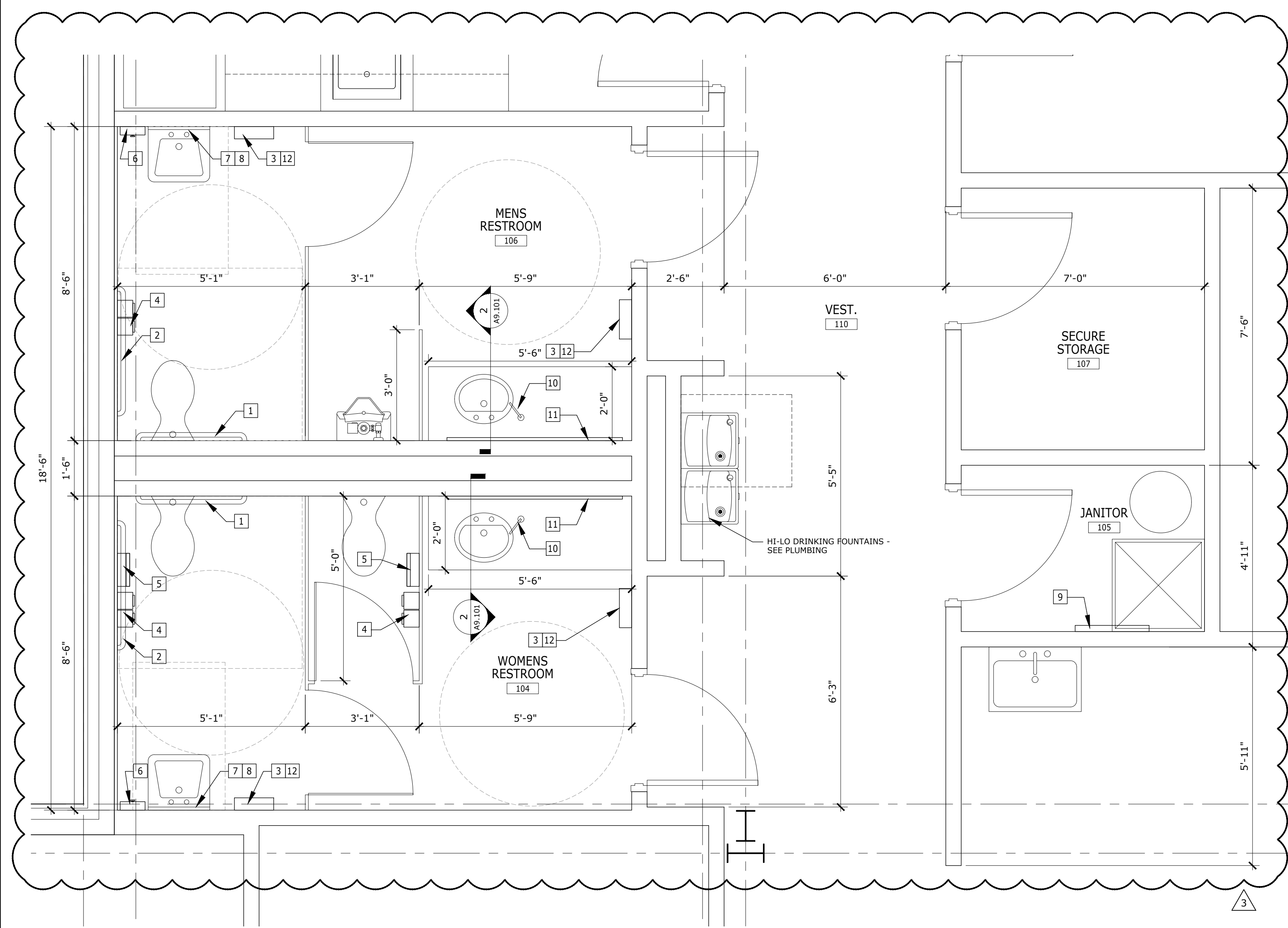
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FLOOR PLAN

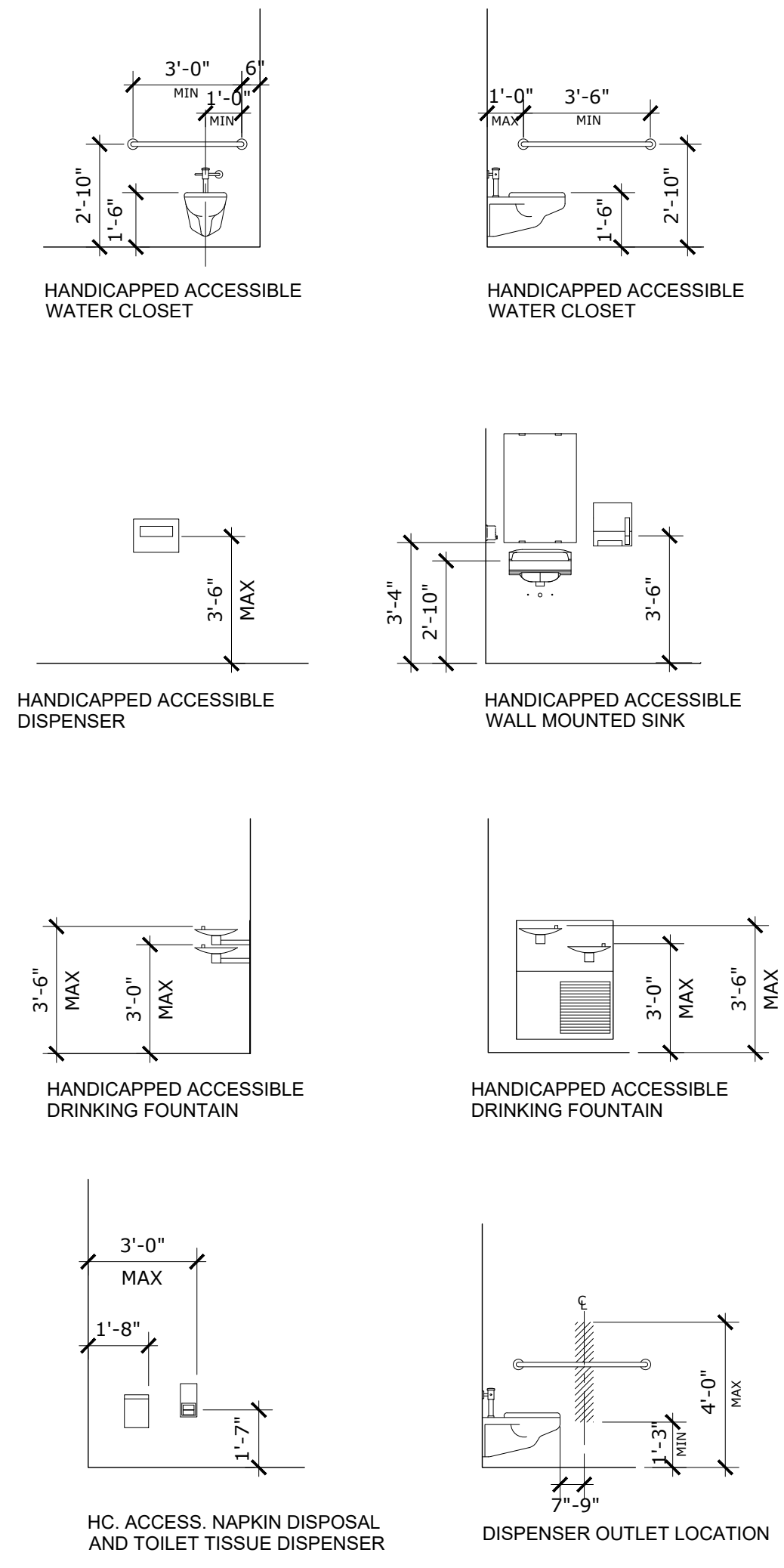
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A1.101





**1 ENLARGED TOILET PLAN**  
1/2" = 1'-0"



**2 ACCESSORY MOUNTING HEIGHTS**  
NOT TO SCALE

**TOILET ACCESSORY SCHEDULE**

NOTE	TAG	DESCRIPTION	MODEL #
A	1	GRAB BAR, 1 1/2" X 36"	B-6806 X36
A	2	GRAB BAR, 1 1/2" X 42"	B-6806 X42
B	3	PAPER TOWEL DISPENSER - UNISOURCE	#U24081
B	4	TOILET TISSUE DISPENSER - GA PACIFIC	#56784
A	5	SANITARY NAPKIN DISPOSAL	B-270
B	6	SOAP DISPENSER - GA PACIFIC	#53053
A	7	ADA TILTED MIRROR	B-293-2436
A	8	STAINLESS STEEL SHELF	B-295 X24
A	9	MOP/BROOM HOLDER	B-223 X36
A	10	COUNTERTOP SOAP DISPENSER	B-823
A	11	BACKLIT MIRROR - 42" T. X 4'-6" W. - SEE ELECTRICAL	
A	12	WASTE RECEPTACLE	B-277

SCHEDULE NOTE:  
A = CONTRACTOR FURNISHED, CONTRACTOR INSTALLED  
B = OWNER FURNISHED, OWNER INSTALLED

GENERAL NOTES:  
1. CONTRACTOR TO PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED ACCESSORIES.  
2. MODEL NUMBERS ARE BASED UPON BOBRICK PRODUCT NUMBERS UNO.  
3. REFER TO MOUNTING HEIGHTS ON THIS PAGE FOR ADA APPROVED INSTALLATION.



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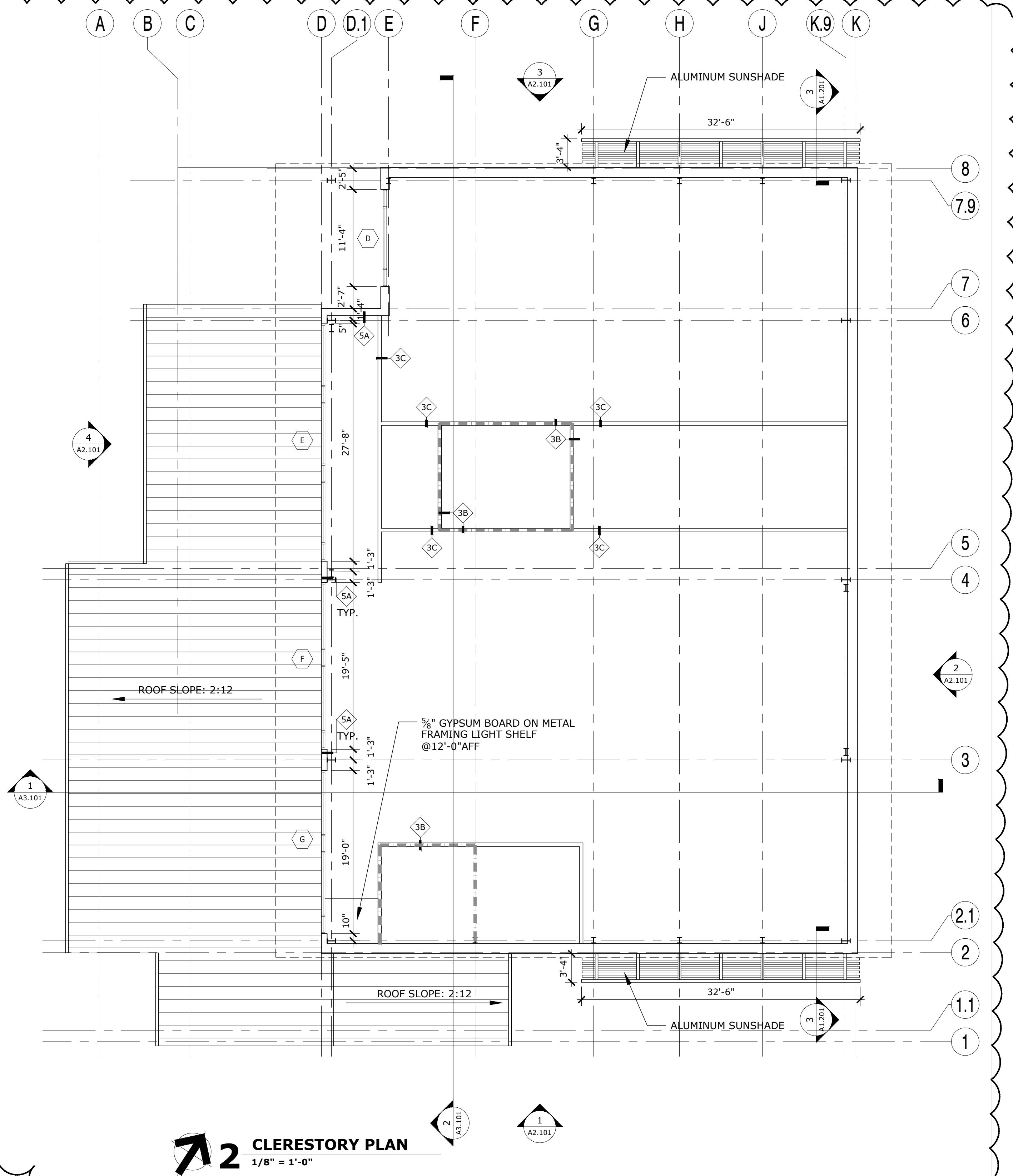
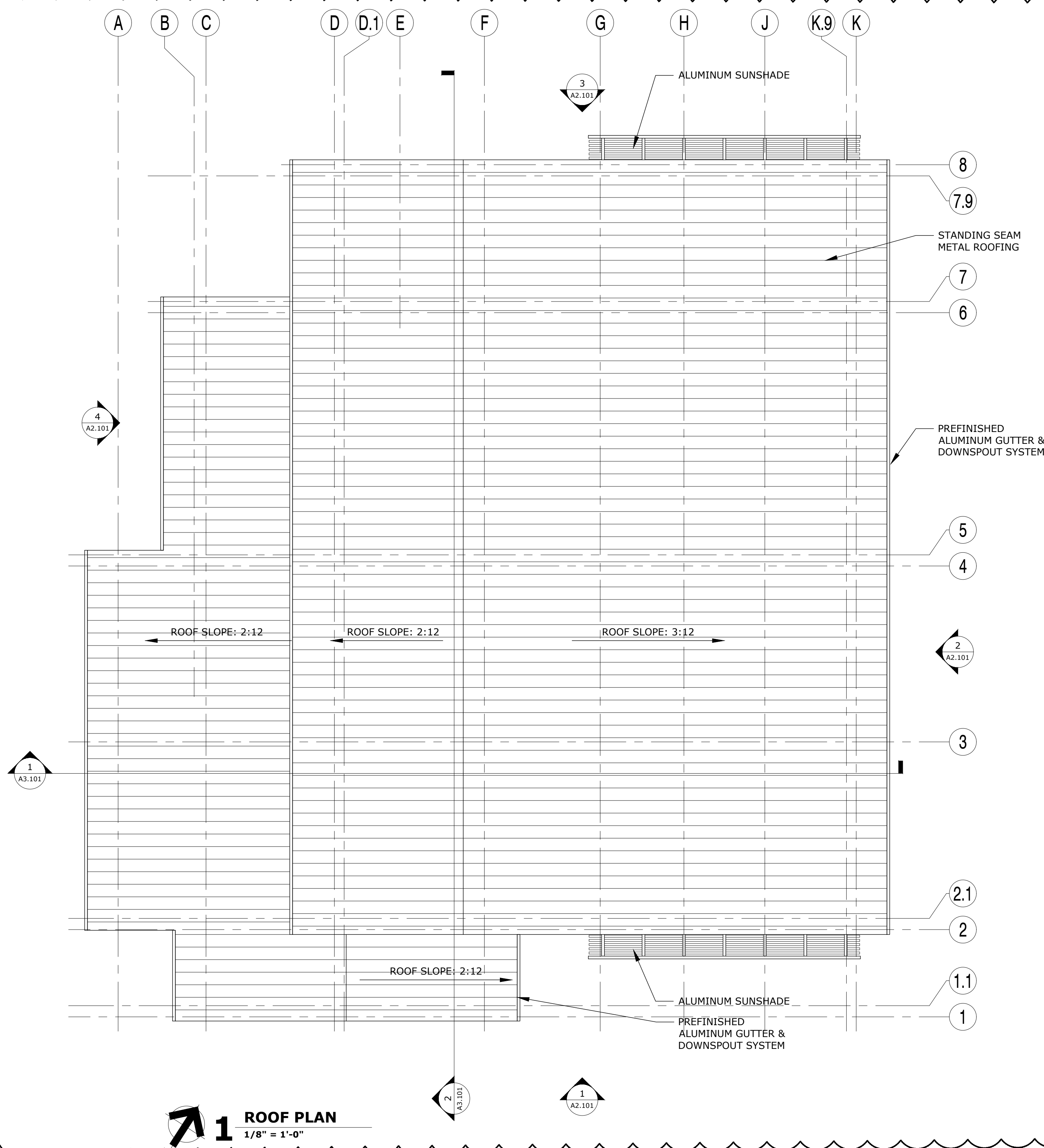
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**ENLARGED PLANS & DETAILS**

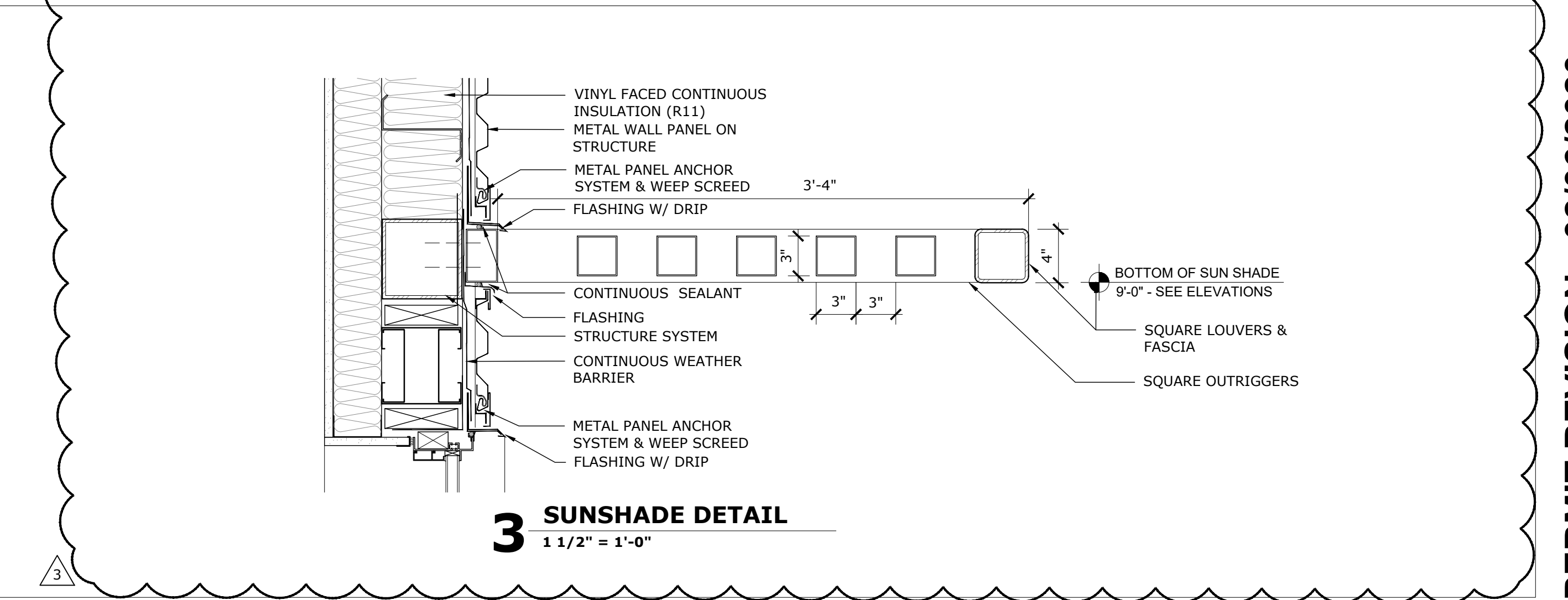
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Job no.: 18-042  
Sheet no.: **A1.110**





- ROOF PLAN NOTES**
1. ROOFING INSULATION R-VALUE TO BE R-30 MIN.
  2. SEE STRUCTURAL DRAWINGS FOR DESIGN WIND PRESSURES AND SPEEDS.
  3. COORDINATE WITH CIVIL DRAWINGS FOR DOWNSPOUT CONNECTION LOCATIONS.



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**SALAS O'BRIEN**  
| expect a difference |  
3501 Quadrangle Boulevard, Suite 100  
Orlando, Florida 32817  
(407) 389-9400  
CERT. OF AUTH. NO. 6106  
■ GARY A. WILKERSON, P.E. 43167  
■ KYLE J. CARTER, P.E. 53209  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010  
19005

**HOUSEMAN ARCHITECTURE**  
931 S SEMORAN BLVD. #204B WINTER PARK, FL 32792  
ARD017645  
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**SALAS O'BRIEN**  
Expect a difference

3501 Quadrangle Boulevard, Suite 100  
Orlando, Florida 32817  
(407) 380-9400

CERT. OF AUTH. NO. 6106

GARY A. WILKERSON, P.E. 43167  
KYLE J. CARTER, P.E. 53269  
JEFF A. KIRKMAN, P.E. 65625  
ADAM S. LEVINE, P.E. 77010

19005



**HOUSEMAN  
ARCHITECTURE**

931 S SEMORAN BLVD. #204B WINTER PARK, FL 32782  
AR0017645

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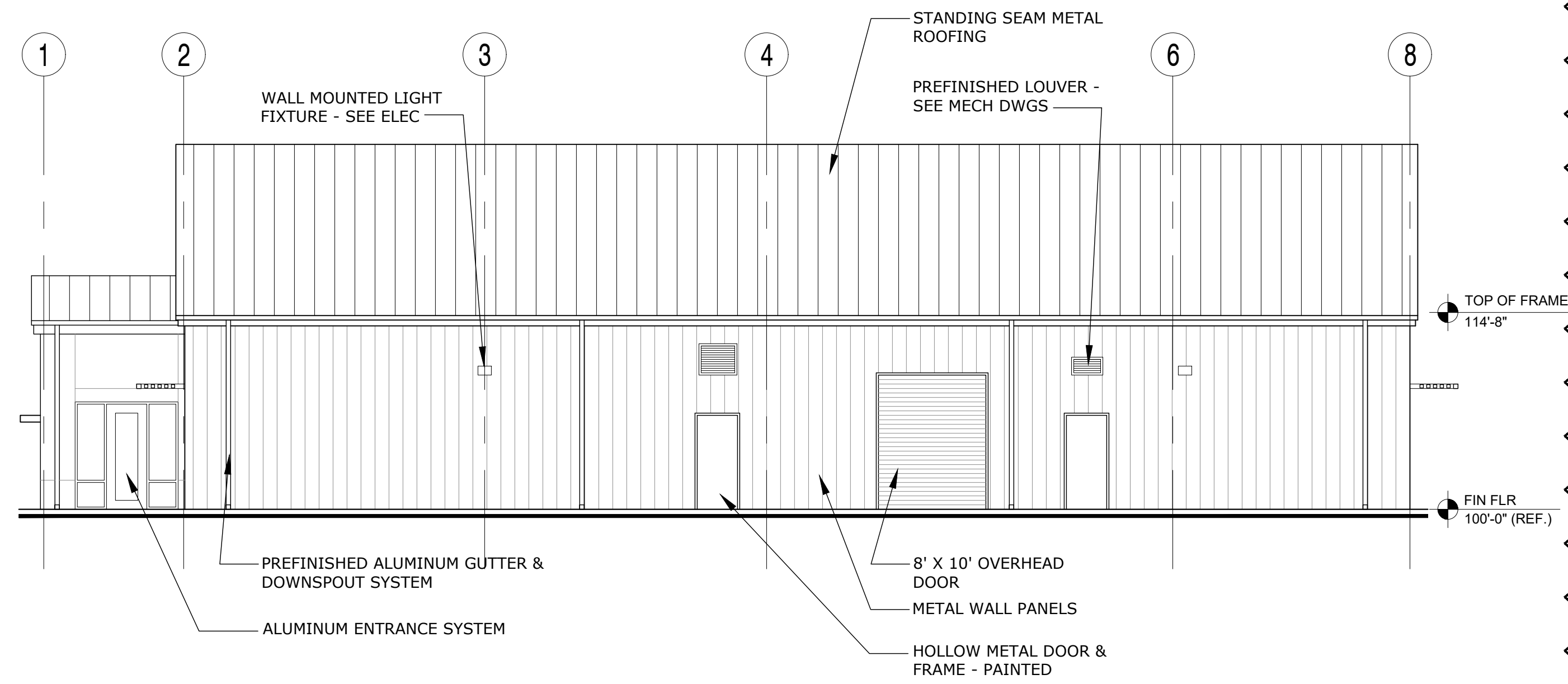
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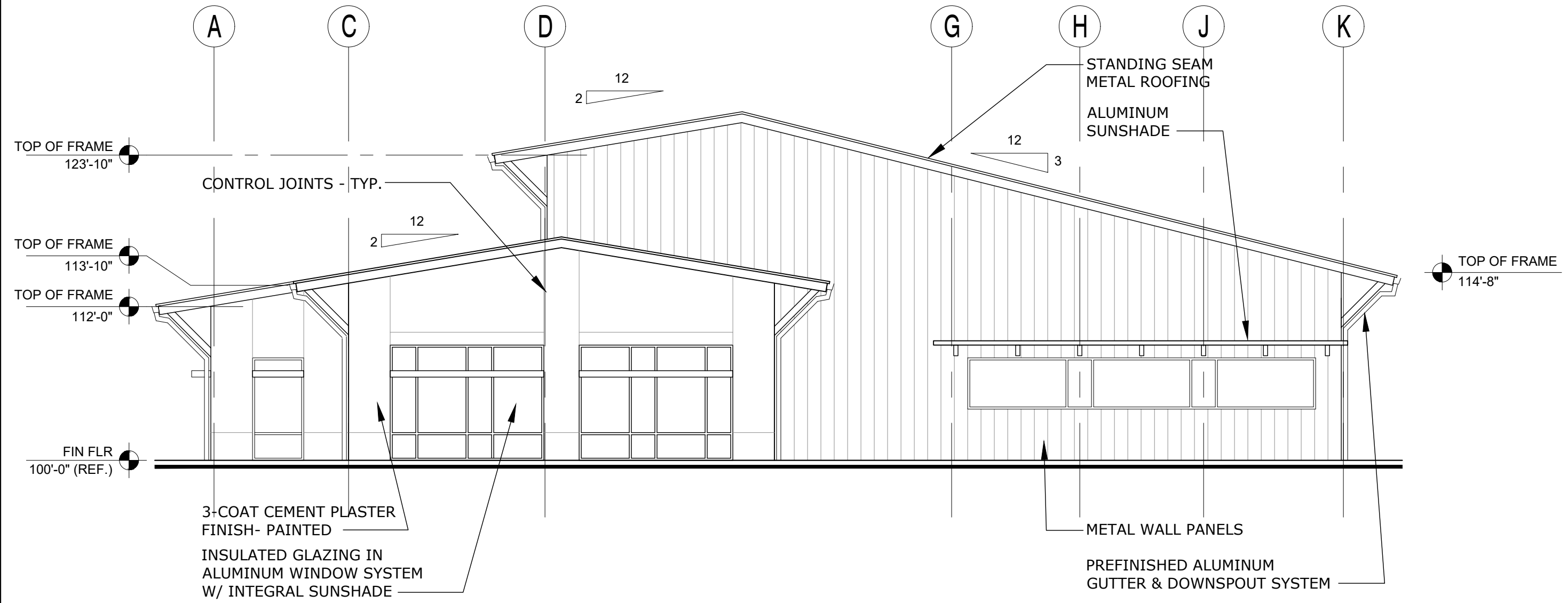
EXTERIOR ELEVATIONS

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Job No.: 18-042  
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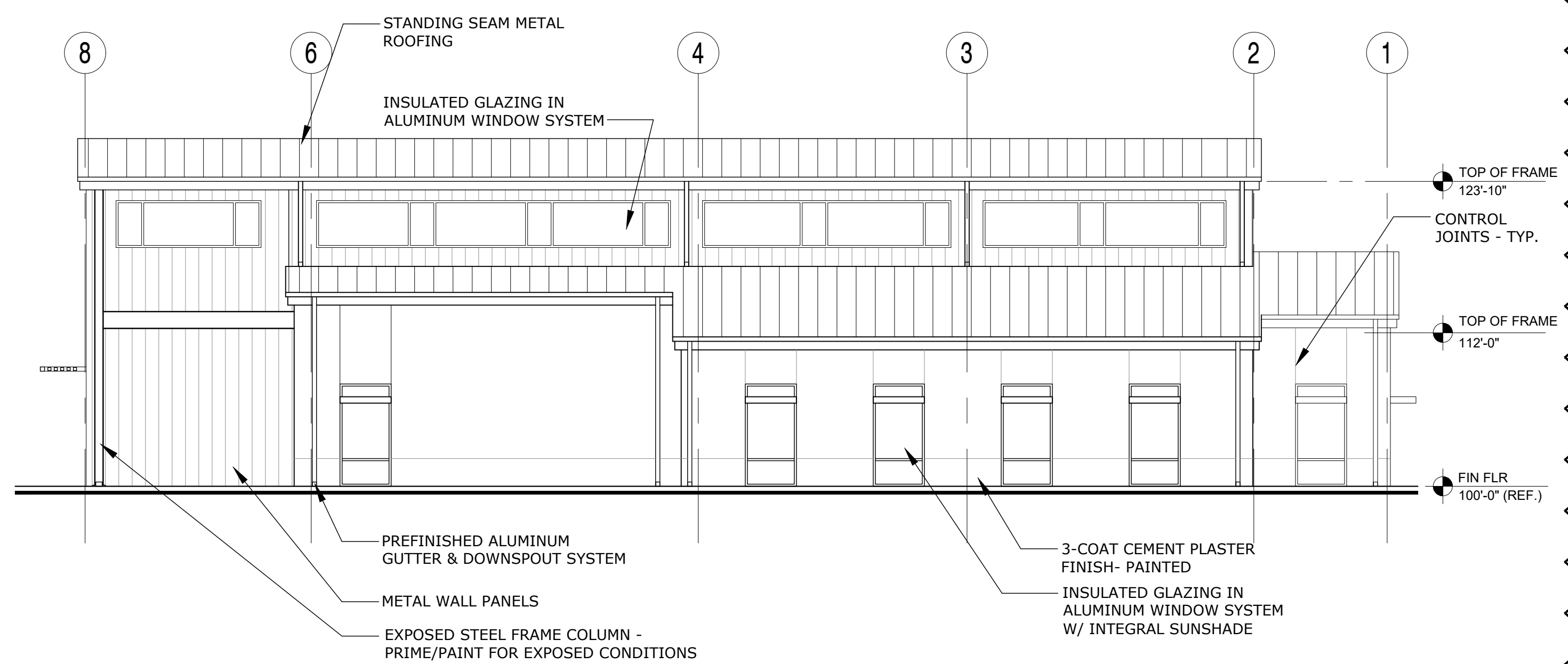
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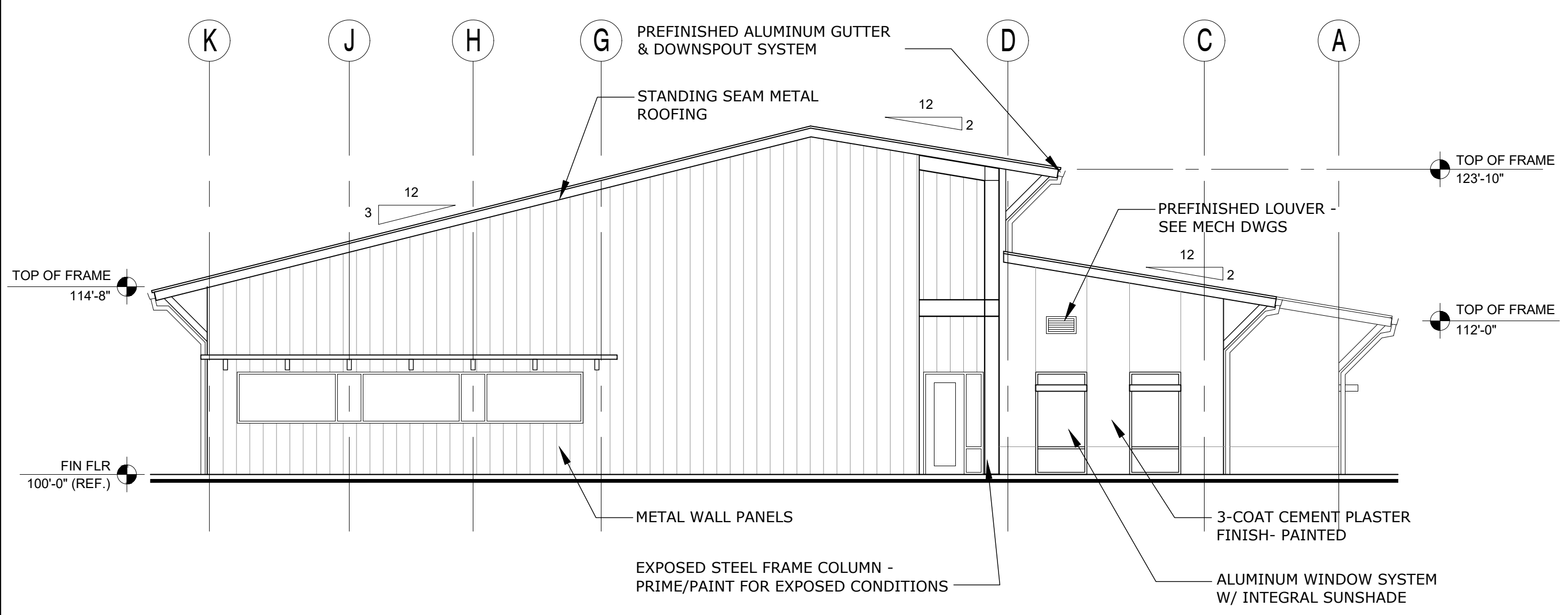
**2 EAST ELEVATION**  
1/8" = 1'-0"



**1 SOUTH ELEVATION**  
1/8" = 1'-0"



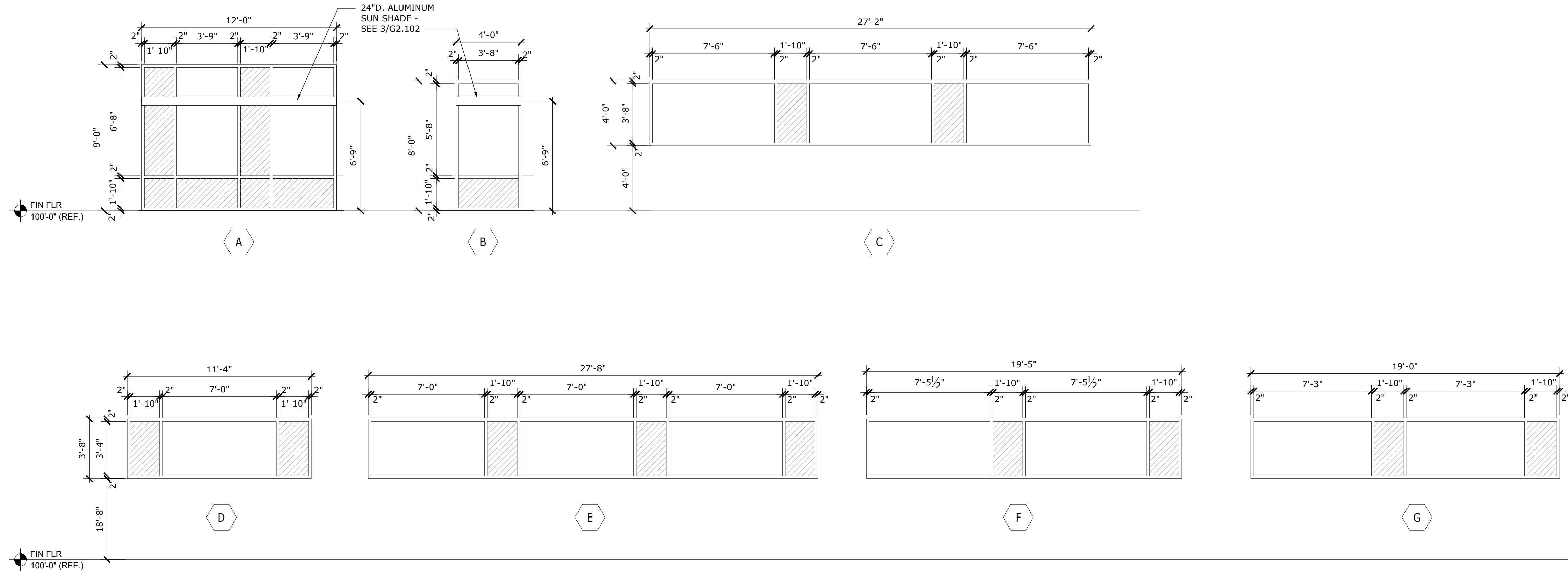
**4 WEST ELEVATION**  
1/8" = 1'-0"



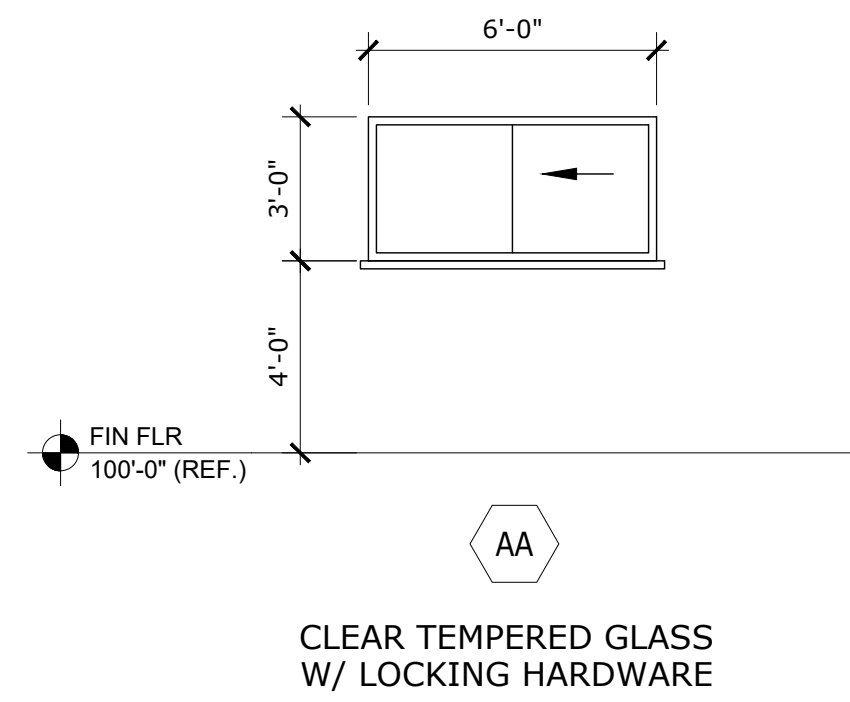
**3 NORTH ELEVATION**  
1/8" = 1'-0"



**WINDOW TYPES**



**OPERABLE WINDOW**



**GENERAL NOTES**

1. ALL EXTERIOR GLASS TO BE INSULATED, TINTED & TEMPERED. ALL INTERIOR GLASS TO BE 1/4" CLEAR TEMPERED.
2. EXTERIOR GLAZING PERFORMANCE TO BE: U-VALUE .5 MAX SHGC .25 MAX
3. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION.
4. MULLIONS TO ALIGN HORIZONTALLY AND VERTICALLY ACROSS THE BUILDING ELEVATIONS.

**GLAZING LEGEND**

	INSULATED TINTED GLASS (TINT A)
	INSULATED TINTED GLASS (TINT B)



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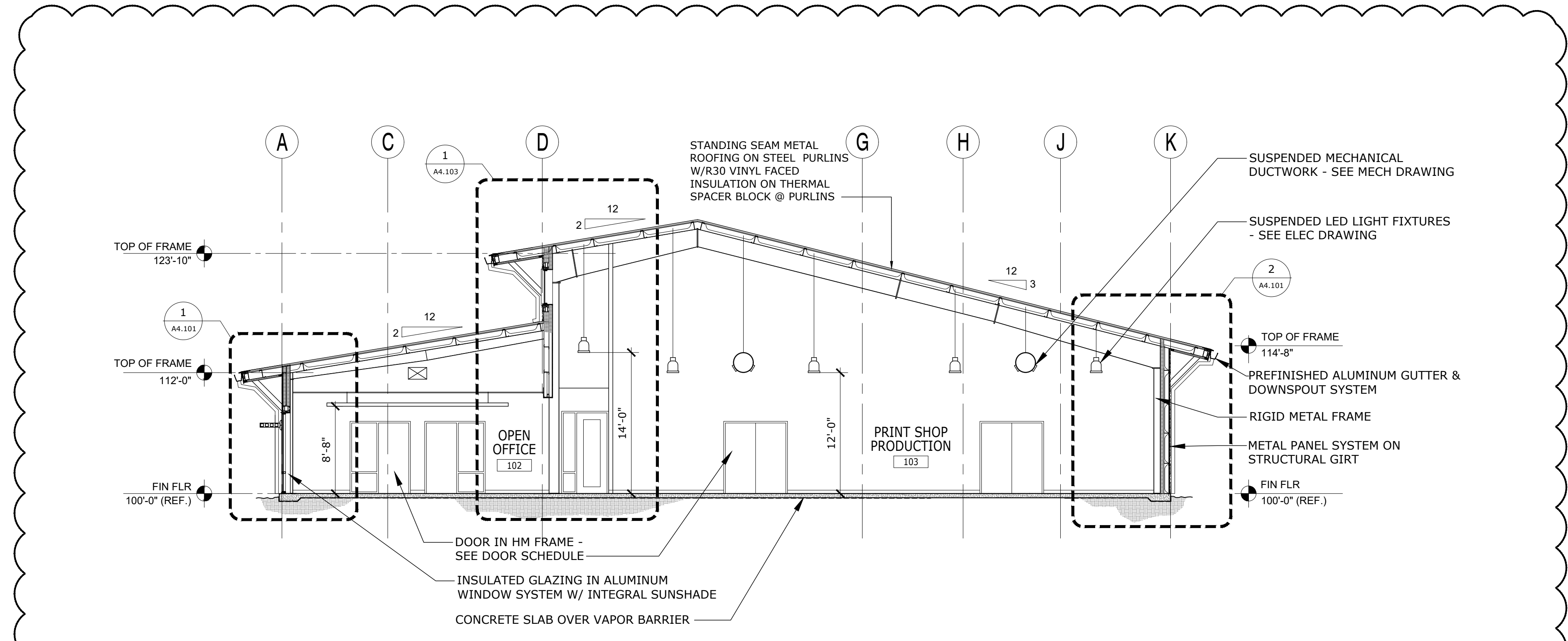
WINDOW ELEVATIONS

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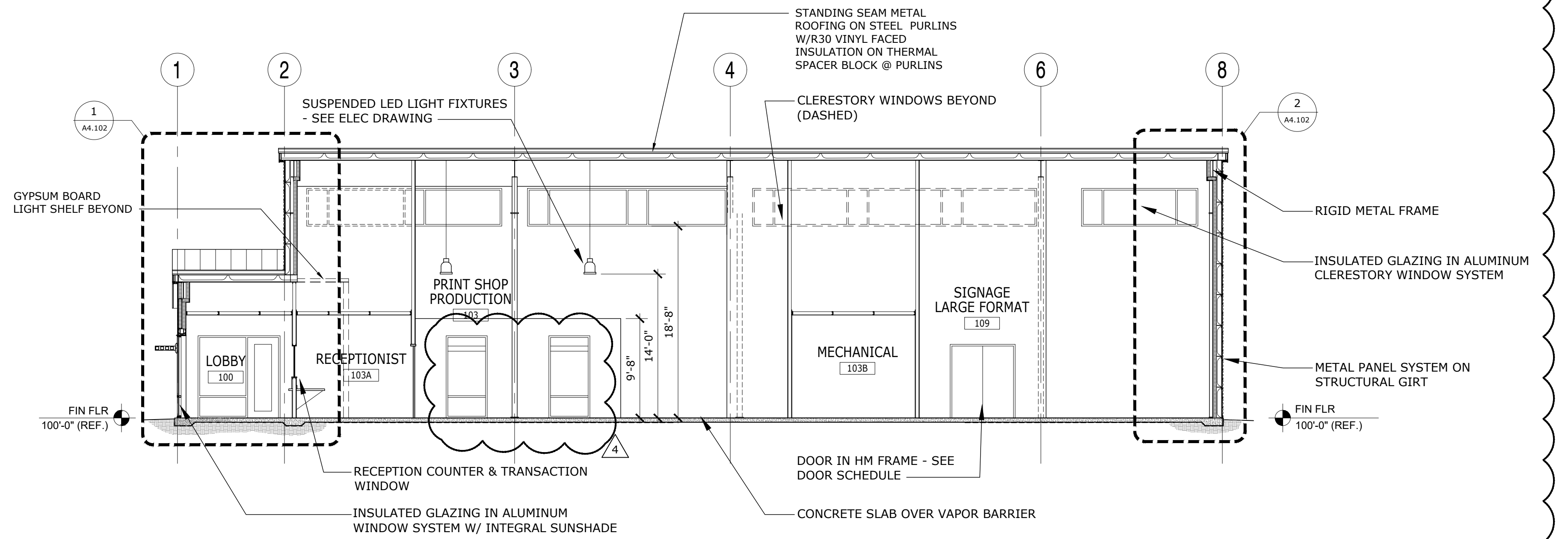
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Job no.: 18-042  
Sheet no.: 3

A2.110  
NEW SHEET





**1 BUILDING SECTION**  
1/8" = 1'-0"



**2 BUILDING SECTION**  
1/8" = 1'-0"



**SALAS O'BRIEN**  
| expect a difference |  
3501 Quadrangle Boulevard, Suite 100  
Orlando, Florida 32817  
407.380.6400  
CERT. OF AUTH. NO. 6106  
■ GARY A. WILKERSON, P.E. 43167  
■ KYLE J. CARTIER, P.E. 53269  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010  
19005



**HOUSEMAN ARCHITECTURE**  
931 S SEMORAN BLVD. #2048 WINTER PARK, FL 32792  
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REVISION	DATE	DRAWN	CHECKED
REVISION 2	02/06/2020		

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<b>BUILDING SECTIONS</b>	
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY NEW PRINT SHOP BUILDING	
Date: 02/06/2020	Sheet no. A3.101
Job no. 18-442	





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3501 Quadrangle Boulevard, Suite 100  
Orlando, Florida 32817  
(407) 308-8400

CERT. OF AUTH. NO. 6106

■ GARY A. WILKERSON, P.E. 43167  
■ KYLE J. CARTER, P.E. 53269  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010

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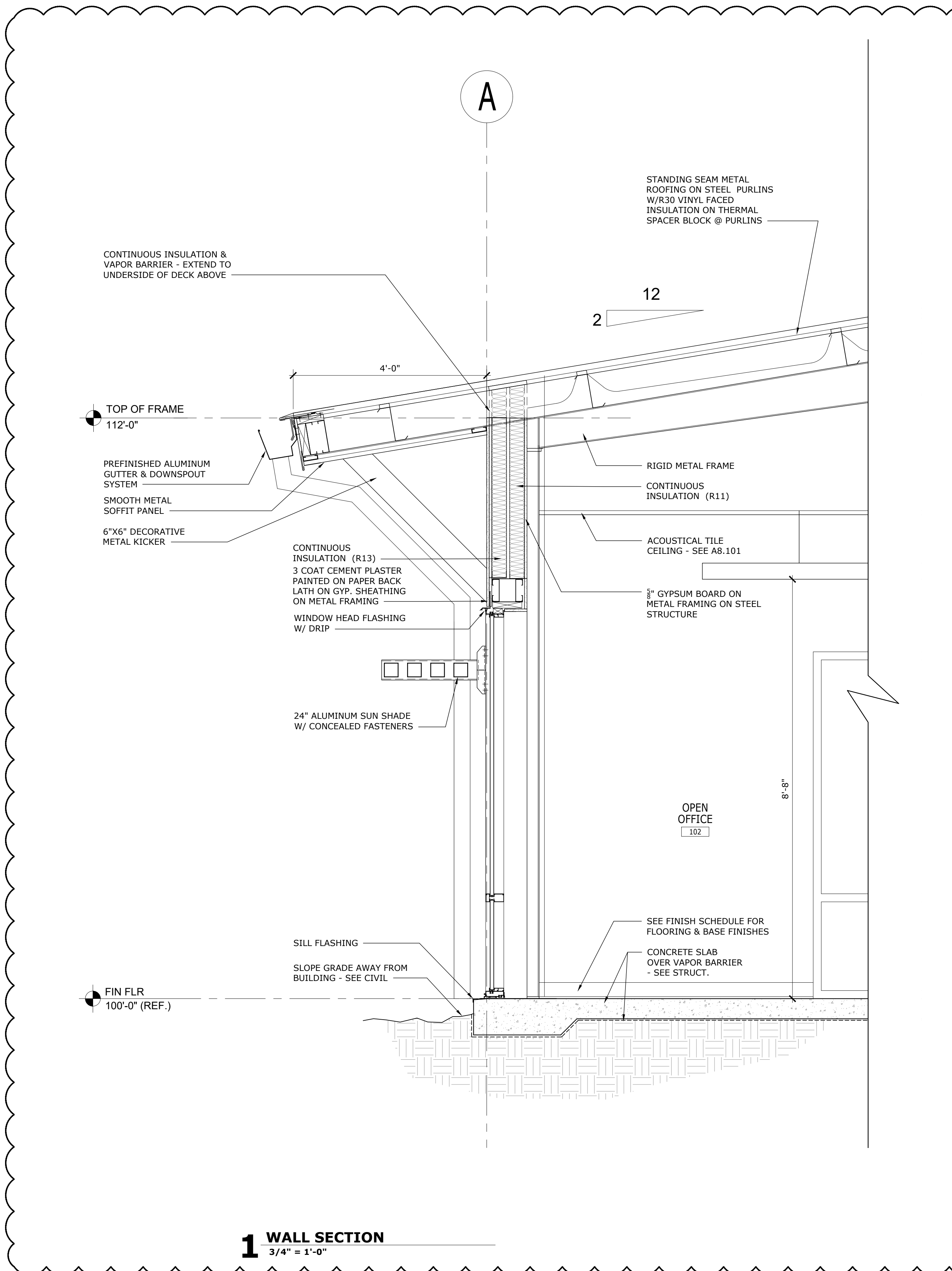
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EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

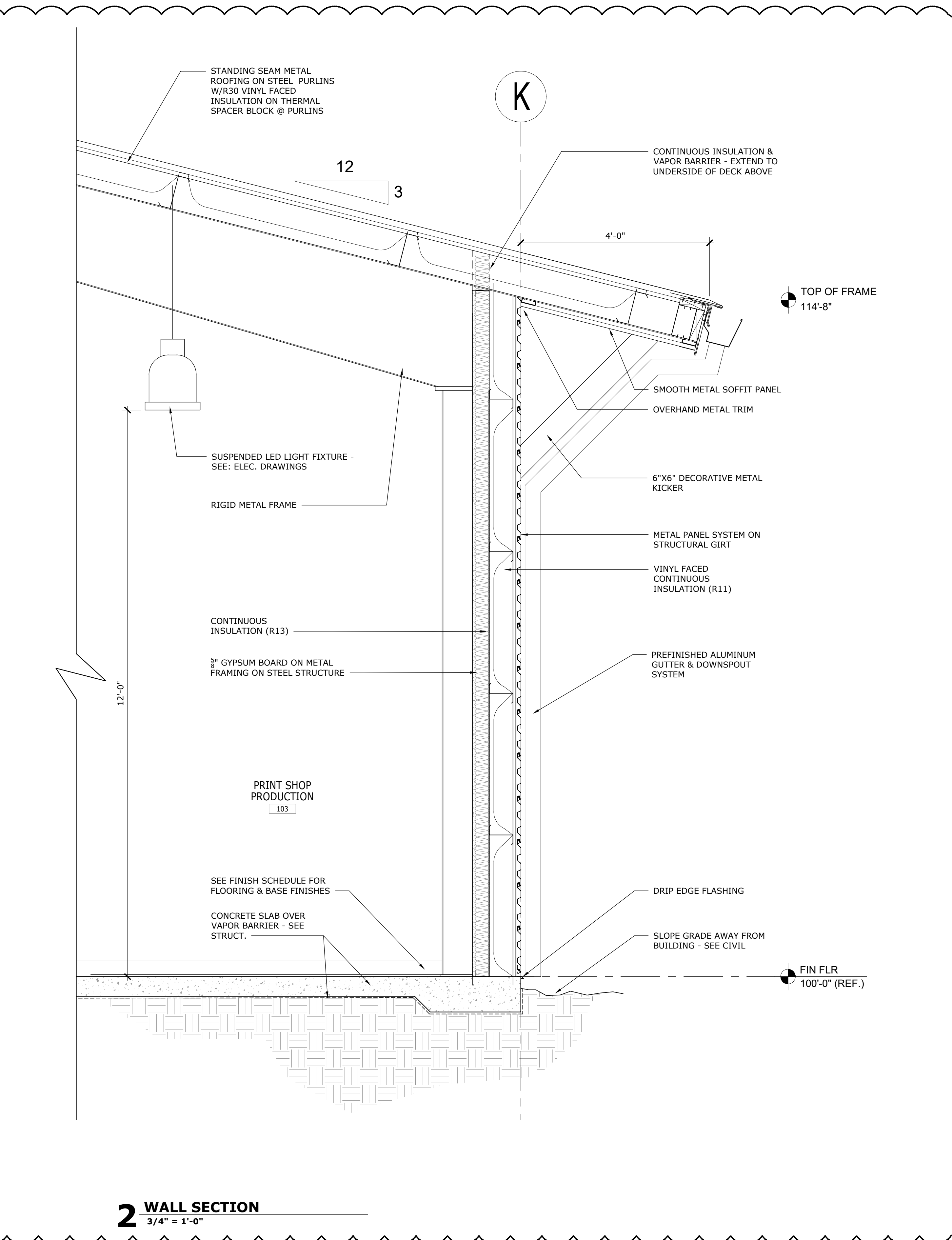
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Job no. 15-042  
Sheet no. A4.101

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WALL SECTIONS



**1** WALL SECTION  
3/4" = 1'-0"



**2** WALL SECTION  
3/4" = 1'-0"

3





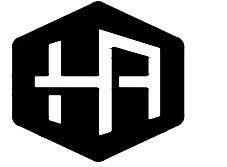
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3501 Quadrangle Boulevard, Suite 100  
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(407) 308-9400

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■ GARY A. WILKERSON, P.E. 43167  
■ KYLIE J. CARTER, P.E. 53069  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010

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NEW PRINT SHOP BUILDING

Date 02/06/20  
Job no. 15-042  
Sheet no. A4.102

PERMIT REVISION - 02/06/2020

WALL SECTIONS

1

2

8

STANDING SEAM METAL ROOFING ON STEEL PURLINS W/R30 VINYL FACED INSULATION ON THERMAL SPACER BLOCK @ PURLINS

METAL FASCIA ON METAL FRAMING

SMOOTH METAL SOFFIT PANEL  
OVERHAND METAL TRIM

5/8" GYPSUM BOARD ON METAL FRAMING ON STEEL STRUCTURE

METAL PANEL SYSTEM ON STRUCTURAL GIRT  
VINYL FACED INSULATION (R11)

BASE FLASHING

GYPSUM BOARD LIGHT SHELF BEYOND

STANDING SEAM METAL ROOFING ON STEEL PURLINS W/R30 VINYL FACED INSULATION ON THERMAL SPACER BLOCK @ PURLINS

SMOOTH METAL SOFFIT PANEL

CONTINUOUS INSULATION (R11)

CONTINUOUS INSULATION (R13)

3 COAT CEMENT PLASTER ON PAPER BACK LATH ON GYP. SHEATHING ON METAL FRAMING

WINDOW HEAD FLASHING W/ DRIP

24" ALUMINUM SUN SHADE W/ CONCEALED FASTENERS

1" INSULATED GLAZING IN ALUMINUM WINDOW SYSTEM

SILL FLASHING

SLOPE GRADE AWAY FROM BUILDING - SEE CIVIL

5/8" GYPSUM BOARD ON METAL FRAMING ON STEEL STRUCTURE

ACOUSTICAL TILE CEILING - SEE A8.101

LOBBY  
100

OPERABLE WINDOW

RECEPTIONIST  
103A

RECEPTION COUNTER

SEE FINISH SCHEDULE FOR FLOORING & BASE FINISHES  
CONCRETE SLAB OVER VAPOR BARRIER - SEE STRUCT.

FIN FLR  
100'-0" (REF.)

STANDING SEAM METAL ROOFING ON STEEL PURLINS W/R30 VINYL FACED INSULATION ON THERMAL SPACER BLOCK @ PURLINS

METAL FASCIA ON METAL FRAMING

SMOOTH METAL SOFFIT PANEL  
OVERHAND METAL TRIM

5/8" GYPSUM BOARD ON METAL FRAMING ON STEEL STRUCTURE

INSULATED GLAZING IN ALUMINUM CLERESTORY WINDOW SYSTEM

METAL PANEL SYSTEM ON STRUCTURAL GIRT

VINYL FACED CONTINUOUS INSULATION (R11)

CONTINUOUS INSULATION (R13)

5/8" GYPSUM BOARD ON METAL FRAMING ON STEEL STRUCTURE

SIGNAGE  
LARGE FORMAT  
109

SEE FINISH SCHEDULE FOR FLOORING & BASE FINISHES

CONCRETE SLAB OVER VAPOR BARRIER - SEE STRUCT.

DRIP EDGE FLASHING

SLOPE GRADE AWAY FROM BUILDING - SEE CIVIL

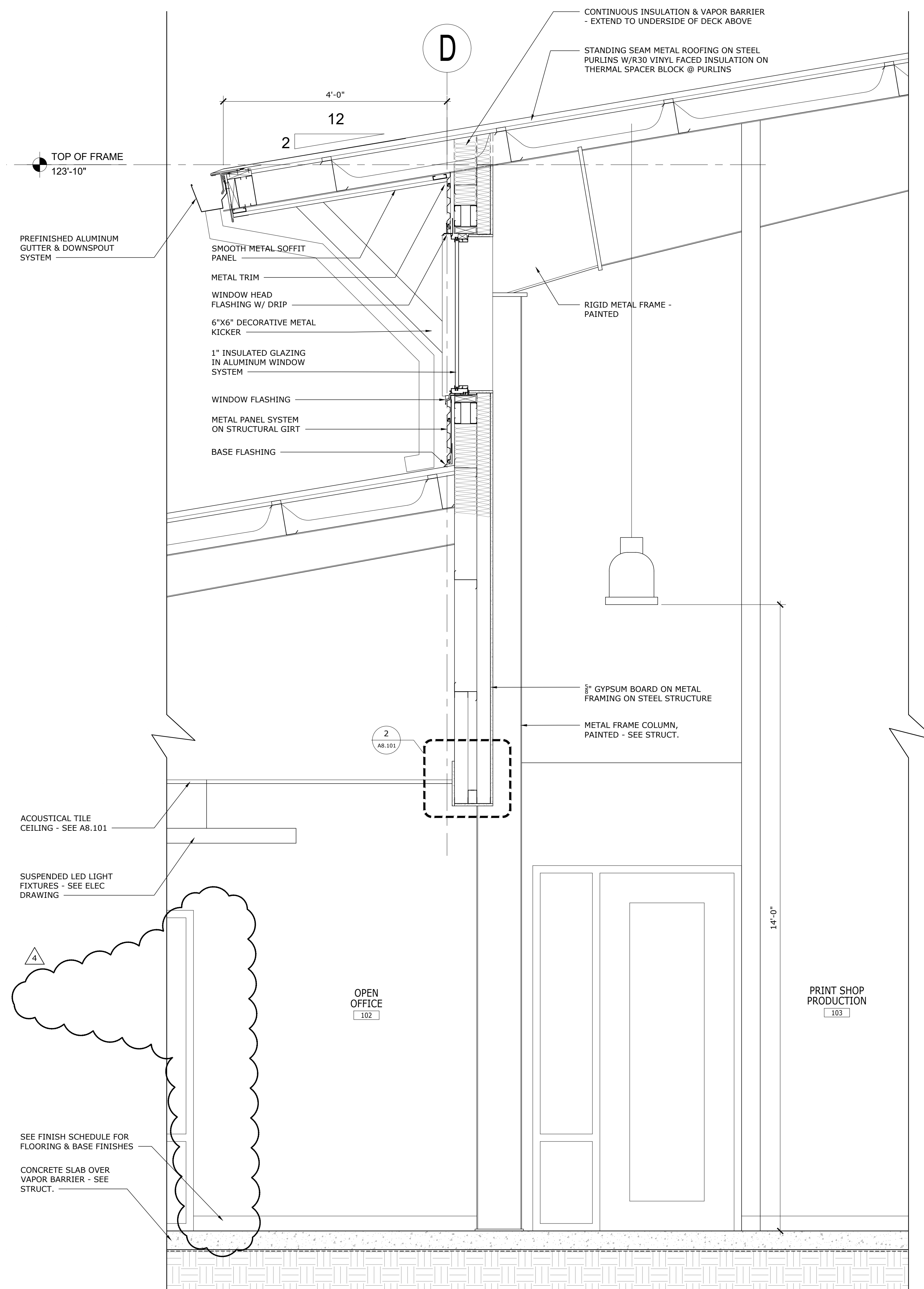
FIN FLR  
100'-0" (REF.)

1 WALL SECTION  
3/4" = 1'-0"

2 WALL SECTION  
3/4" = 1'-0"

3





**1** WALL SECTION  
3/4" = 1'-0"

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| expect a difference |  
3501 Quadrangle Boulevard, Suite 100  
Orlando, Florida 32817  
(407) 308-8400  
CERT. OF AUTH. NO. 6106  
■ GARY A. WILKERSON, P.E. 43167  
■ KYLE J. CARTER, P.E. 52099  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010  
19005

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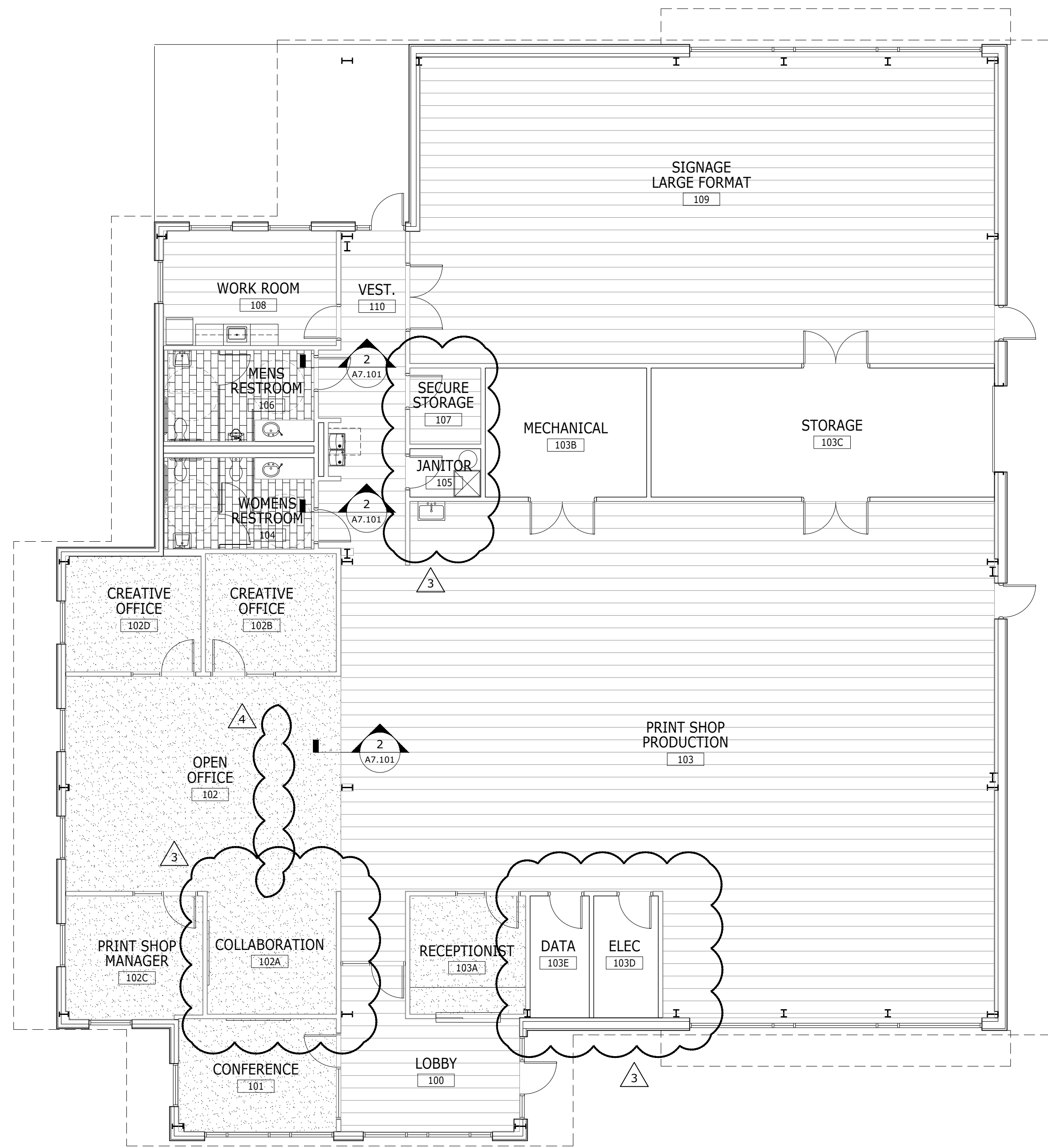
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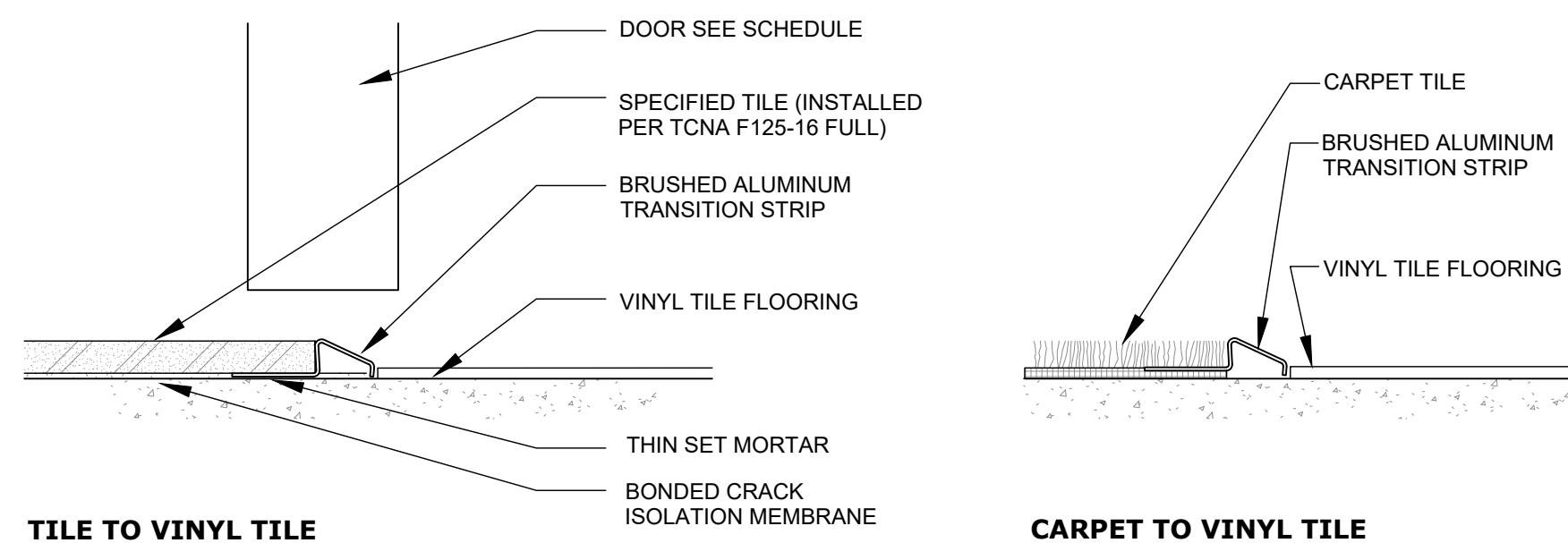
**WALL SECTIONS**  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

Date	02/06/20
Job no.	15-042
Sheet no.	<b>A4.103</b>
	NEW SHEET





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



**2 TRANSITION DETAILS**  
6" = 1'-0"

**FINISH PLAN LEGEND**

SC-1	SEALED CONCRETE
CPT-1	CARPET TILE
LVT-1	VINYL TILE
T-1	PORCELAIN TILE FLOORING

**FINISH NOTES**

- INTERSECTIONS OF FLOORING MATERIALS SHALL OCCUR UNDER CENTER OF DOOR UNO.
- ALL INTERIOR FINISHES SHALL COMPLY WITH SECTION 803.1, 803.1.1, AND TABLE 803.9 OF THE FLORIDA BUILDING CODE, 2017 MINIMUM INTERIOR FINISH FLAME SPREAD, AND NFPA 101 10.2. CLASSIFICATION FOR MATERIALS OTHER THAN FLOORINGS FOR BUSINESS OCCUPANCY SHALL COMPLY WITH THE FOLLOWING. FINISHES TO MATCH THE FLAME SPREAD RATINGS BELOW:

<b>NONSPRINKLED:</b>		
EXITS	EXIT ACCESS	OTHER SPACES
CLASS A	CLASS B	CLASS C

**MATERIALS LEGEND**

FLOORING	DESCRIPTION	REMARKS
SC-1	SEALED CONCRETE	MATTE FINISH, CLEAR SEALER
T-1	PORCELAIN TILE	DALTILE, ANCHORAGE PORCELAIN TILE 12" X 24" BLACK AC10 UNPOLISHED BRICK PATTERN 1/8" JOINTS, GROUT: CUSTOM 370 DOVE GRAY
CPT-1	CARPET TILE	PATCRAFT MID CENTURY POP 24" X 24", COLOR: 0320 CENTURY POP, INSTALLATION: MONOLITHIC PATTERN
LVT-1	VINYL TILE FLOORING	TARKETT CLASSIC PLANK, 6" X 36", ECK, LIMED OAK 3309, INSTALLATION: ASHLAR PATTERN
WALL BASE	DESCRIPTION	REMARKS
B-1	VINYL BASE	TARKETT TRADITIONAL WALL BASE COLOR: 20 CHARCOAL
B-2	PORCELAIN TILE BASE	DALTILE, ANCHORAGE PORCELAIN COVE BASE 6"X12" BLACK AC10 UNPOLISHED 1/8" JOINTS, GROUT: CUSTOM 370 DOVE GRAY
PAINT	DESCRIPTION	REMARKS
PT-1	WALL PAINT	BENJAMIN MOORE SUPER WHITE (OC-152), EGGSHELL FINISH
PT-2	EPOXY WALL PAINT	BENJAMIN MOORE SUPER WHITE (OC-152), EGGSHELL FINISH
PT-3	CEILING PAINT	BENJAMIN MOORE SUPER WHITE (OC-152), FLAT FINISH
PT-4	EXPOSED STRUCTURE	BENJAMIN MOORE STEEL WOOL (2121-20), FLAT FINISH
PT-5	ACCENT WALL PAINT	BENJAMIN MOORE HIBISCUS (2027-50), EGGSHELL FINISH
WALL TILE	DESCRIPTION	REMARKS
WT-1	PORCELAIN TILE	DALTILE, ANCHORAGE PORCELAIN TILE 12"X24" WHITE AC04 POLISHED 1/8" JOINTS, STACK BOND PATTERN GROUT: CUSTOM 381 BRIGHT WHITE
CABINETS	DESCRIPTION	REMARKS
PL-1	PLASTIC LAMINATE	FORMICA WHITE TWILL 9285C-59 COLORCORE, MATTE FINISH
PL-2	PLASTIC LAMINATE	FORMICA TERRIL 2297-PX, PLEX FINISH
SS-1	SOLID SURFACE	CAMBRIA: 3CM QUARTZ, WHITE CLIFF (RESTROOMS, BREAK ROOM)
SS-2	SOLID SURFACE	CAMBRIA: 3CM QUARTZ, FIELDSTONE (LOBBY, RECEPTION COUNTER)
SPECIALTIES	DESCRIPTION	REMARKS
ACT-1	ACOUSTICAL CEILING TILE	ARMSTRONG: 2' X 2' TILE: ULTIMA HIGH NRC GRID: PRELUDE, EXPOSED TEE, 15/16" WHITE
TP-1	TOILET PARTITIONS	SCRANTON PRODUCTS, HINY HIDERS, COLOR: STAINLESS, FINISH: GRIP EX

**FINISH SCHEDULE**

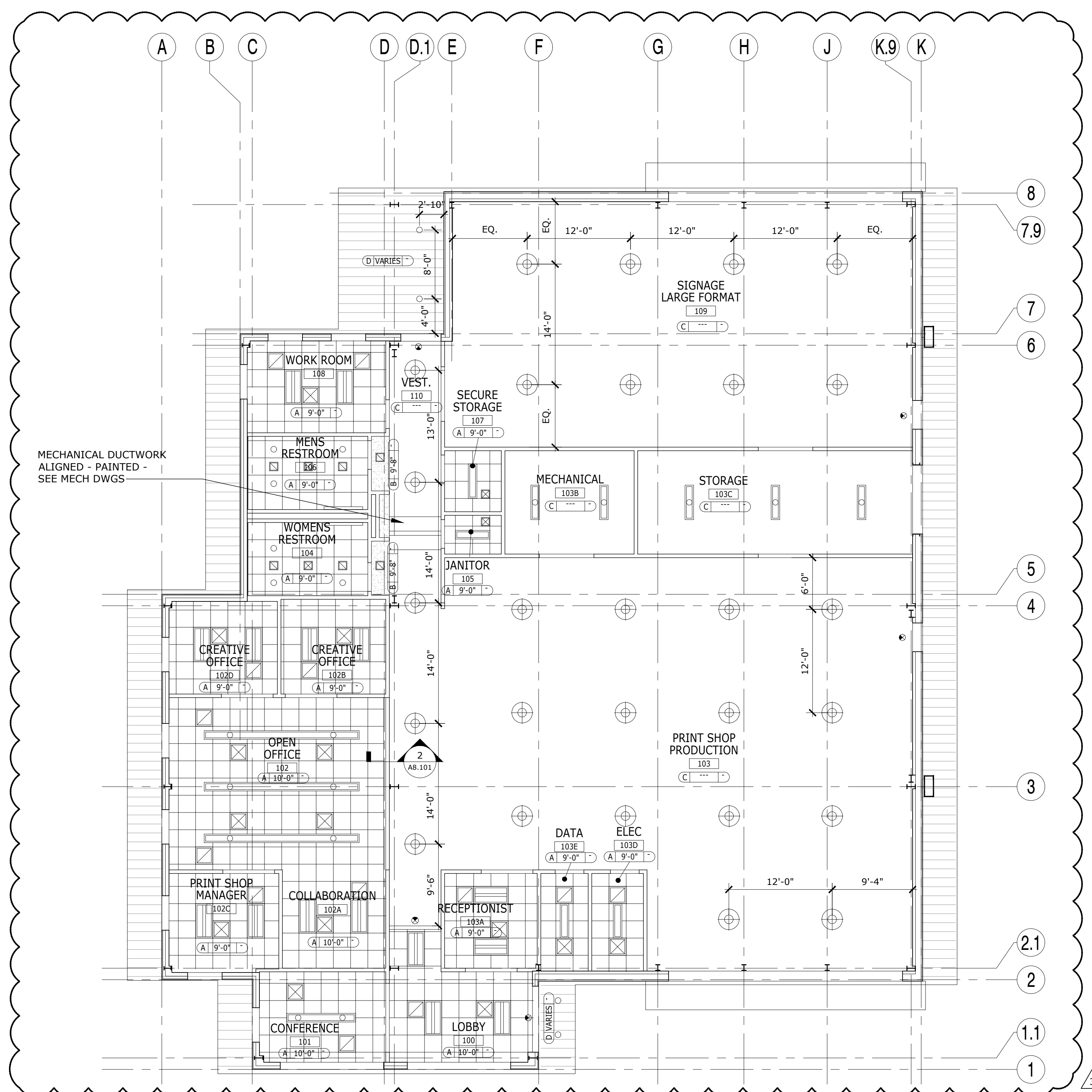
ROOM	FLOOR	BASE	WALLS				REMARKS
			N	S	W	E	
100	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	
101	CPT-1	B-1	PT-5	PT-1	PT-1	PT-1	
102	CPT-1	B-1	PT-1	PT-1	PT-1	---	PT-5 @FREESTANDING WALL - ALL SIDES
102A	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	
102B	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	
102C	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	
102D	CPT-1	B-1	PT-1	PT-1	PT-1	PT-1	
103	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	PT-4 @ALL EXPOSED STEEL STRUCTURE
103A	CPT-1	B-1	PT-1	PT-1	PT-1	PT-5	
103B	SC-1	B-1	PT-1	PT-1	PT-1	PT-1	
103C	SC-1	B-1	PT-1	PT-1	PT-1	PT-1	
103D	SC-1	B-1	PT-1	PT-1	PT-1	PT-1	
103E	SC-1	B-1	PT-1	PT-1	PT-1	PT-1	
104	T-1	B-2	WT-1	PT-2	PT-2	PT-2	TILE FULL HEIGHT @ WET WALL ONLY
105	SC-1	B-1	PT-2	PT-2	PT-2	PT-2	PROVIDE WHITE FRP PANEL 48"X48" @BOTH SIDES OF MOP SINK
106	T-1	B-2	PT-2	WT-1	PT-2	PT-2	TILE FULL HEIGHT @ WET WALL ONLY
107	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	
108	LVT-1	B-1	PT-1	PT-5	PT-1	PT-1	
109	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	PT-4 @ALL EXPOSED STEEL STRUCTURE
110	LVT-1	B-1	PT-1	PT-1	PT-1	PT-1	PT-4 @ALL EXPOSED STEEL STRUCTURE



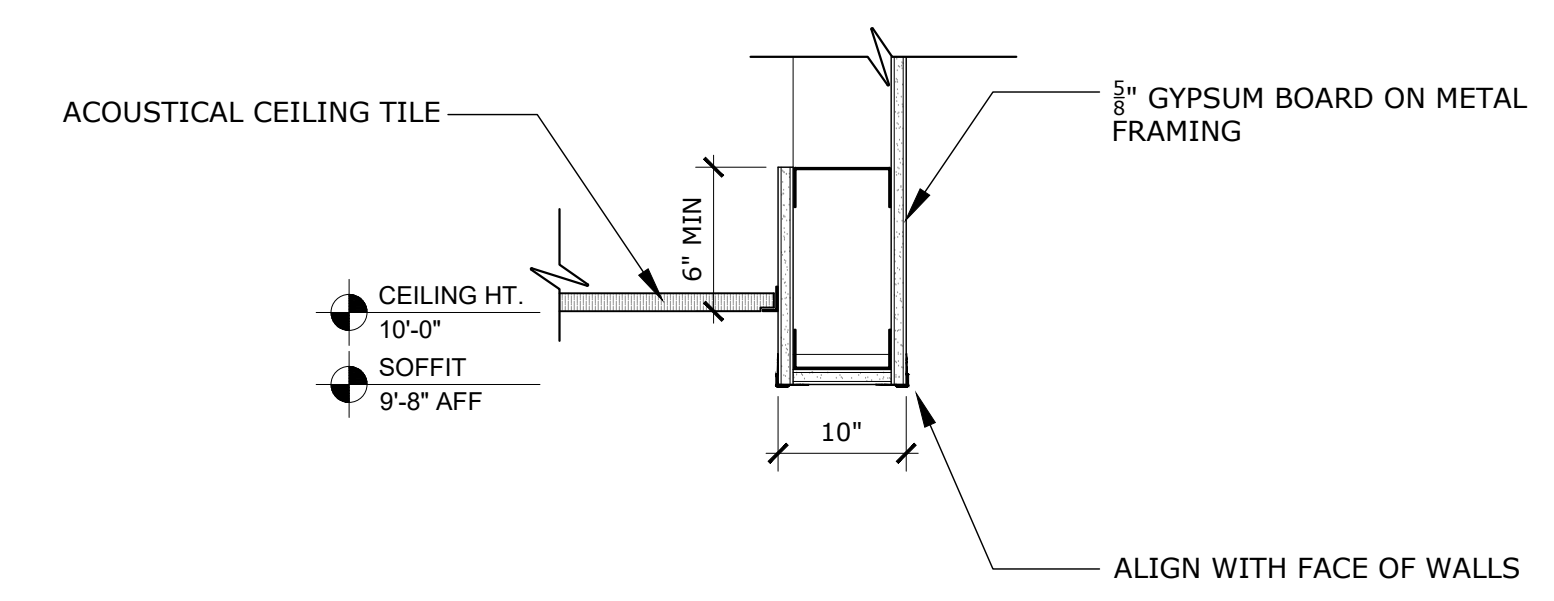
DATE	02/06/2020
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**FINISH SCHEDULE & PLAN**  
 EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING  
 02/06/20  
 18-042  
**A7.101**





**1 REFLECTED CEILING PLAN**  
1/8" = 1'-0"



**2 CEILING TRANSITION DETAIL**  
1 1/2" = 1'-0"

**CEILING LEGEND**

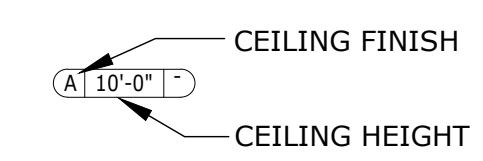
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
[Symbol]	2' X 4' RECESSED INDIRECT LED FIXTURE	[Symbol]	EXIT LIGHT
[Symbol]	SURFACE MOUNTED LED FIXTURE	[Symbol]	HVAC DEVICES - SEE MECH DWGS.
[Symbol]	SUSPENDED DIRECT-INDIRECT LED FIXTURE		
[Symbol]	SUSPENDED LED HIGH BAY FIXTURE		
[Symbol]	LED DOWNLIGHT		
[Symbol]	EXTERIOR LED WALL LIGHT FIXTURE - SEE ELEVATIONS FOR MOUNTING HEIGHTS		

**FINISH LEGEND**

TAG	SYMBOL	DESCRIPTION
A	[Symbol]	2' X 2' ACOUSTICAL CEILING TILE - SEE A7.101 ACT-1
B	[Symbol]	5/8" GYPSUM BOARD CEILING - PAINTED SEE A7.101 PT-3
C	[Symbol]	EXPOSED STRUCTURE - PAINTED SEE A7.101 PT-4
D	[Symbol]	PREFINISHED METAL SOFFIT PANEL SYSTEM - BRACED FOR WIND UPLIFT

**CEILING NOTES**

- REFER TO ELECTRICAL DRAWINGS FOR FIXTURE TYPES, LIFE SAFETY DEVICES, CONTROLS & SPECIFICATIONS
- DEVICES SHOULD BE INSTALLED CENTERED WITHIN THE CEILING TILE.
- INSTALL SUSPENDED CEILING GRID AS SHOWN. NOTIFY ARCHITECT OF ANY DISCREPANCIES.



REVISION	DATE	DRAWN	CHECKED
REVISION 2	02/06/2020		

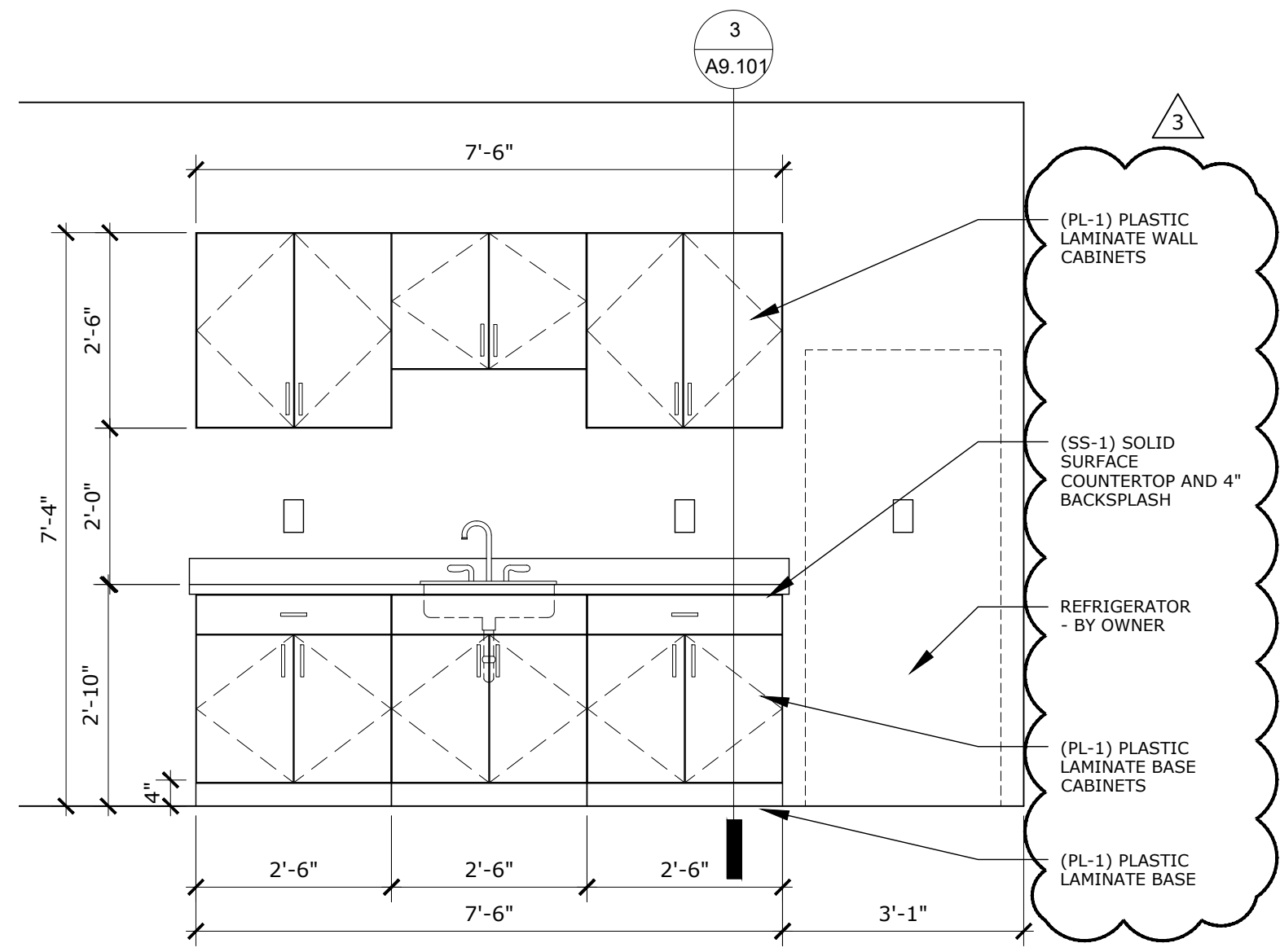
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REFLECTED CEILING PLAN

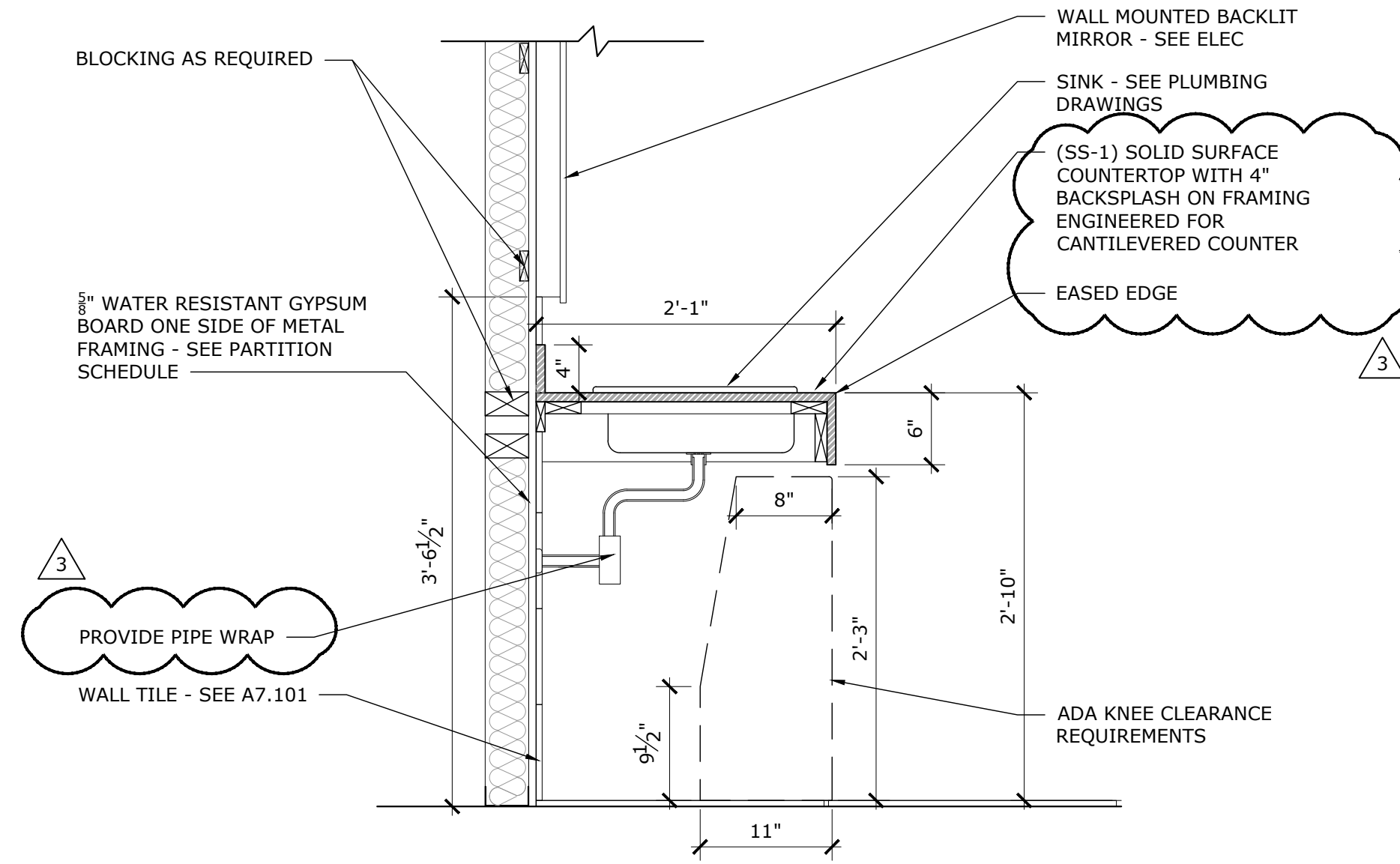
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

A8.101

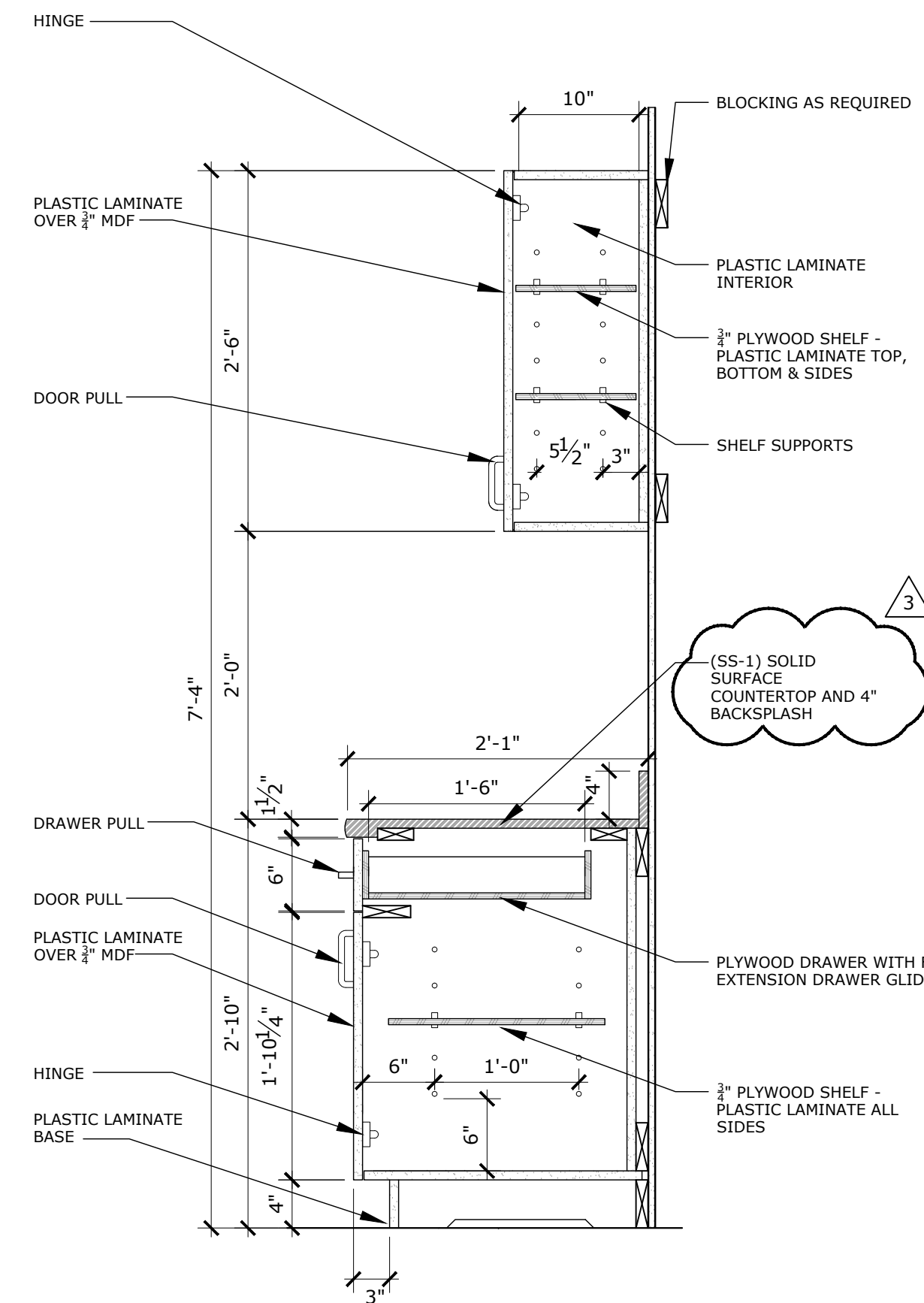




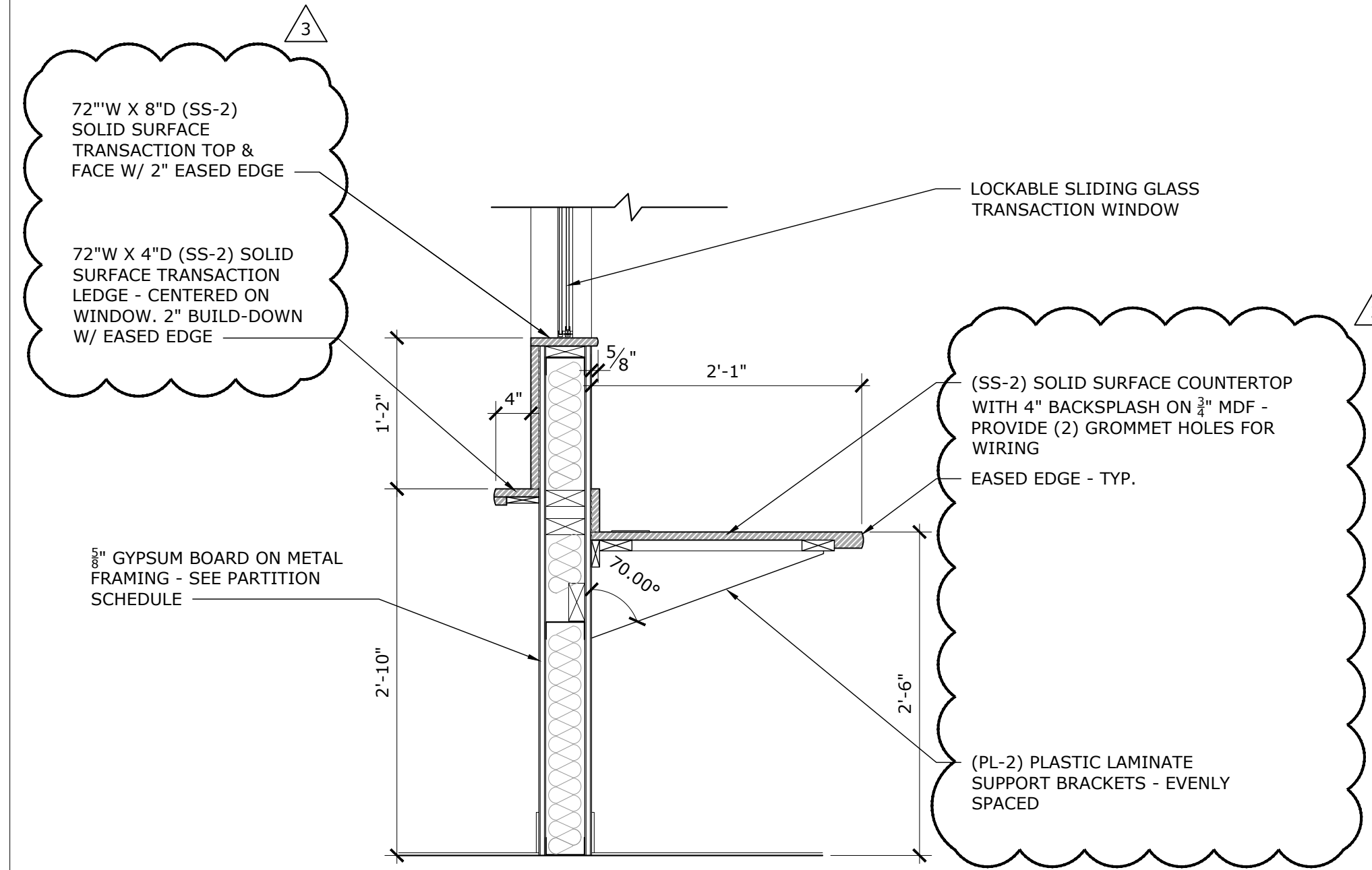
**1 WORK ROOM 108 - INTERIOR ELEVATION**  
 1/2" = 1'-0"



**2 RESTROOM VANITY DETAIL**  
 1/2" = 1'-0"



**3 CABINERY SECTION**  
 1" = 1'-0"



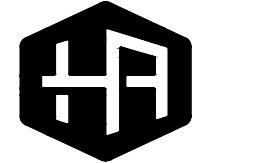
**4 RECEPTION 103A COUNTER DETAIL**  
 1" = 1'-0"

**NOTES**

1. ALL CASEWORK SHALL FULLY COMPLY WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE.
2. ALL EXPOSED INTERIOR SURFACES TO BE PLASTIC LAMINATE.
3. HARDWARE SPECS:
  - 3.1.1. DRAWER GLIDES: BLUMOTION, BLUM INC. SOFT CLOSE
  - 3.1.2. PULLS: DPSSA, DOUG MOCKETT & CO.
  - 3.1.3. HINGES: SERIES 200-100, SALICE
  - 3.1.4. SHELF SUPPORT: HAFELE 282.47.402



**SALAS O'BRIEN**  
*Expect a difference*  
 3501 Quadrangle Boulevard, Suite 100  
 Orlando, Florida 32817  
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 ■ GARY A. WILKERSON, P.E. 43167  
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 19005



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 19005

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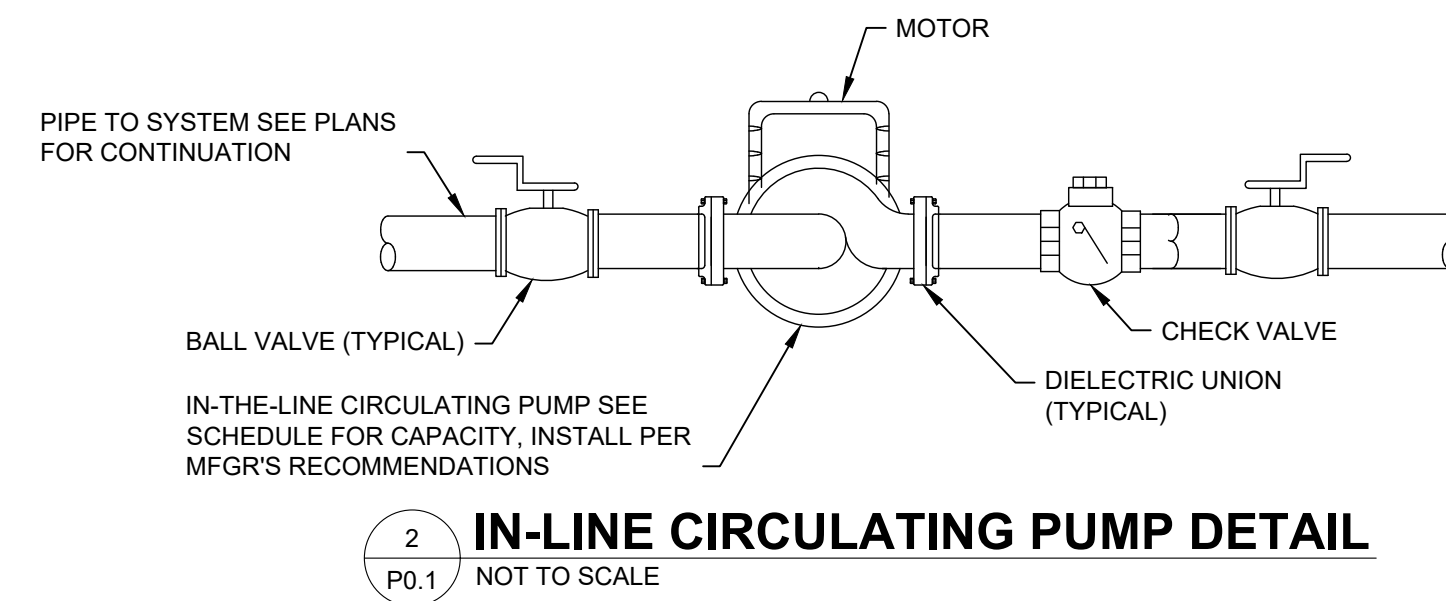
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INTERIOR ELEVATIONS & DETAILS  
 EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING

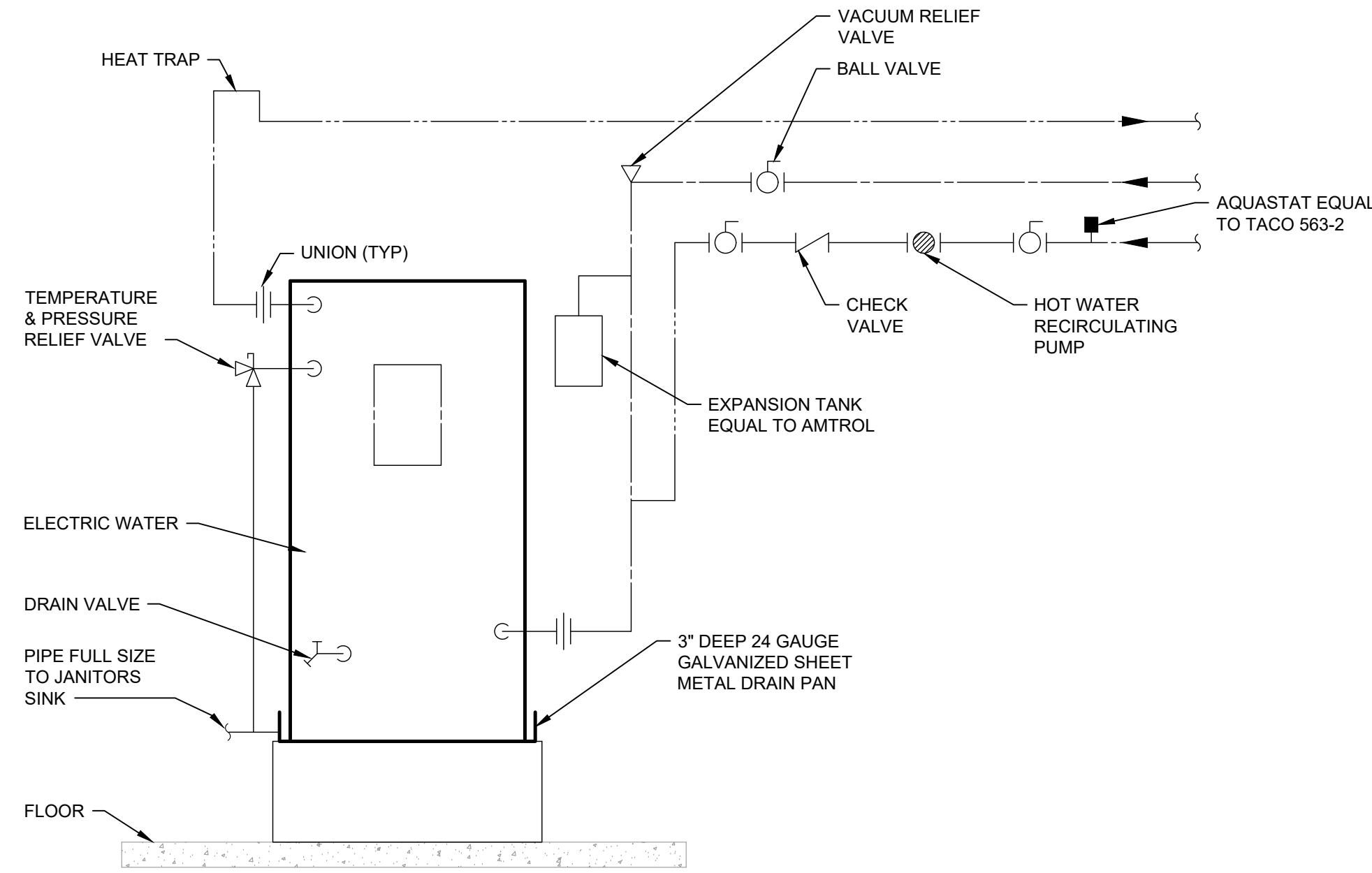
Date 02/06/20  
 Job No. 18-042  
 Sheet No.

A9.101





**2 IN-LINE CIRCULATING PUMP DETAIL**  
P0.1 NOT TO SCALE



**1 ELECTRIC WATER HEATER DIAGRAM**  
P0.1 NOT TO SCALE WITH RECIRC. PUMP

PLUMBING FIXTURE CONNECTION SCHEDULE							
ITEM	DESCRIPTION	WASTE	TRAP	VENT	CW	HW	REMARKS
WC-1	WATER CLOSET	4"	INTEG	2"	1"	-	WL HG FL VLV 1.6 GAL
WC-2	WATER CLOSET	4"	INTEG	2"	1"	-	WL HG FL VLV ADA 1.6 GAL
UR-1	URINAL	2"	INTEG	1-1/2"	3/4"	-	WL HG 0.125 GAL ADA
L-1	LAVATORY	2"	1-1/4"	1-1/2"	1/2"	1/2"	CTR
L-2	LAVATORY	2"	1-1/4"	1-1/2"	1/2"	1/2"	WL HG ADA
S-1	SINK - SINGLE	2"	1-1/2"	1-1/2"	1/2"	1/2"	SS
US-1	UTILITY SINK	2"	1-1/2"	1-1/2"	1/2"	1/2"	-
JS-1	JANITOR SINK	3"	3"	1-1/2"	3/4"	3/4"	FLR MTD
EWC-1	ELEC. WATER COOLER	2"	1-1/4"	1-1/2"	1/2"	-	WALL HUNG DOUBLE ADA

ABBREVIATIONS			
CTR	COUNTERTOP	MTD	MOUNTED
FLR	FLOOR	GAL	GALLONS
HG	HUNG	SS	STAINLESS STEEL
FL	FLUSH	ADA	AMERICAN DISABILITIES ACT COMPLIANT
VLV	VALVE		
WL	WALL		
TK	TANK		

NOTES

- PROVIDE BY OTHERS INSTALLED BY PLUMBING CONTRACTOR

ELECTRIC WATER HEATER SCHEDULE	
MARK	EW-H-1
MANUFACTURER	A.O. SMITH
MODEL	PXHS 40
STORAGE CAPACITY (GAL)	40
RECOVERY (GPH)	20 @ 80°R
UNIT SIZE	47"H x 23" DIA.
ENERGY-EFFICIENCY	95%
OPERATIONAL WEIGHT (LBS)	458
KW INPUT	4.5
VOLTAGE/PHASE	208V/1

NOTES

- PROVIDE WITH TIME SWITCH. CONNECT THE WATER HEATER, RECIRC. PUMP AND AQUASTAT TO THE TIME SWITCH. REFER TO ELECTRICAL DRAWINGS FOR TIME SWITCH LOCATION AND SPECIFICATIONS.

HOT WATER RECIRC. PUMP SCHEDULE	
MARK	HWRP-1
MANUFACTURER	ARMSTRONG
MODEL	H-32
VOLTAGE/H.P.	120/ 1/6
PHASE	1
RPM	1750
CAPACITY (GPM)	10
TOTAL HEAD (FEET)	10

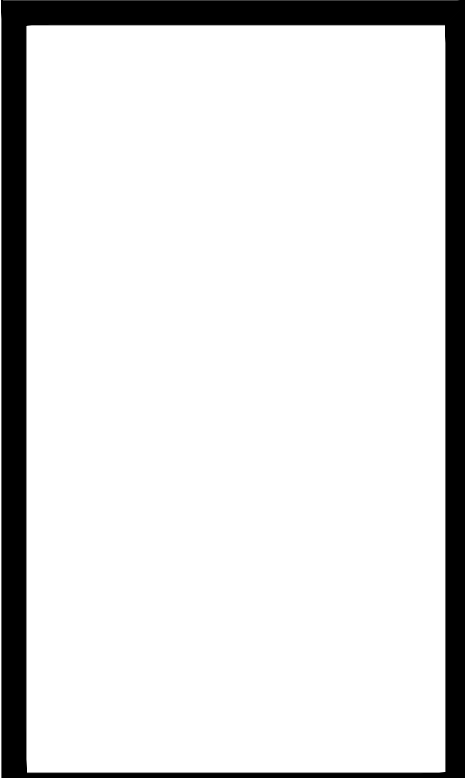
SHOCK ARRESTOR SCHEDULE	
P.D.I. SIZE	FIXTURE UNITS
'SA-A'	1-11
'SA-B'	12-32
'SA-C'	33-60
'SA-D'	61-113
'SA-E'	114-154
'SA-F'	155-330

PLUMBING SYMBOL LEGEND	
SYMBOL/ABBREV.	DESCRIPTION
— GR —	SANITARY PIPING
— GR —	GREASE WASTE PIPING
---	VENT PIPING
---	RAINWATER PIPING
---	DOMESTIC COLD WATER PIPING
---	DOMESTIC HOT WATER PIPING
---	DOMESTIC HOT WATER RECIRCULATING PIPING
— G —	NATURAL GAS PIPING
— A —	COMPRESSED AIR PIPING
⊗	FLOOR DRAIN
⊙	HUB DRAIN
⊕	FLOOR SINK
⊖	PIPING TEE UP
⊕	PIPING TEE DOWN
⊖	PIPING ELL UP
⊕	PIPING ELL DOWN
⊗	GATE VALVE
⊙	BALL VALVE
⊕	FLOOR CLEANOUT
⊗	EXTERIOR CLEANOUT
⊙	WALL CLEANOUT
⊕	VALVE IN VERTICAL PIPE
⊗	POINT OF CONNECTION

ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
CONT	CONTINUATION
CW	COLD WATER (POTABLE)
DW	DISHWASHER
EWC	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
FCO	FLOOR CLEAN OUT
GW	GAS WATER HEATER
HB	HOSE BIBB
HWRP	HOT WATER RECIRC. PUMP
JS	JANITOR SINK
L	LAVATORY
O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
SA	SHOCK ARRESTOR
UNO	UNLESS NOTED OTHERWISE
WC	WATER CLOSET
WH	WALL HYDRANT
WB	WASHER BOX

**GENERAL NOTES**

- FIELD VERIFY ALL MEASUREMENTS PRIOR TO LAYING AND CONNECTING ANY PIPING. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- PROVIDE SHOCK ARRESTORS FOR PREVENTING WATER HAMMER AT EACH BATTERY OF FIXTURES ON THE COLD AND HOT WATER SUPPLIES. PROVIDE SHOCK ARRESTORS AT ISOLATED PLUMBING FIXTURES. SHOCK ARRESTORS SHALL BE FACTORY FABRICATED AND LOCATED FULLY ACCESSIBLE. SHOCK ARRESTORS SHALL BE SIZED PER PLUMBING AND DRAINAGE INSTITUTE STANDARD WH-201. AIR CHAMBERS ARE NOT ACCEPTABLE.
- MAINTAIN FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL PIPING PENETRATIONS.
- ROUTE ALL PIPING ABOVE CEILINGS, WITHIN WALLS, OR IN CHASES EXCEPT AS SPECIFICALLY NOTED.
- PROVIDE ACCESS PANELS TO ALL VALVES WITHIN CHASES OR ABOVE NON-ACCESSIBLE CEILINGS. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF PLUMBING FIXTURE MOUNTING HEIGHTS AND DIMENSIONS. DO NOT SCALE DRAWINGS. DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW GENERAL ROUTING.
- VERIFY ELEVATIONS OF SEWER PIPING TO WHICH NEW SEWERS ARE TO BE CONNECTED PRIOR TO INSTALLATION OF ANY PIPING.
- PROVIDE DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
- PROVIDE 3/8" CW SUPPLY WITH RECESSED VALVE BOX, STOP VALVE, AND FLEXIBLE COPPER SUPPLY TUBE TO REFRIGERATORS. COORDINATE HEIGHT OF WATER CONNECTION WITH REFRIGERATOR SUPPLIER.



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LEGEND AND GENERAL NOTES - PLUMBING

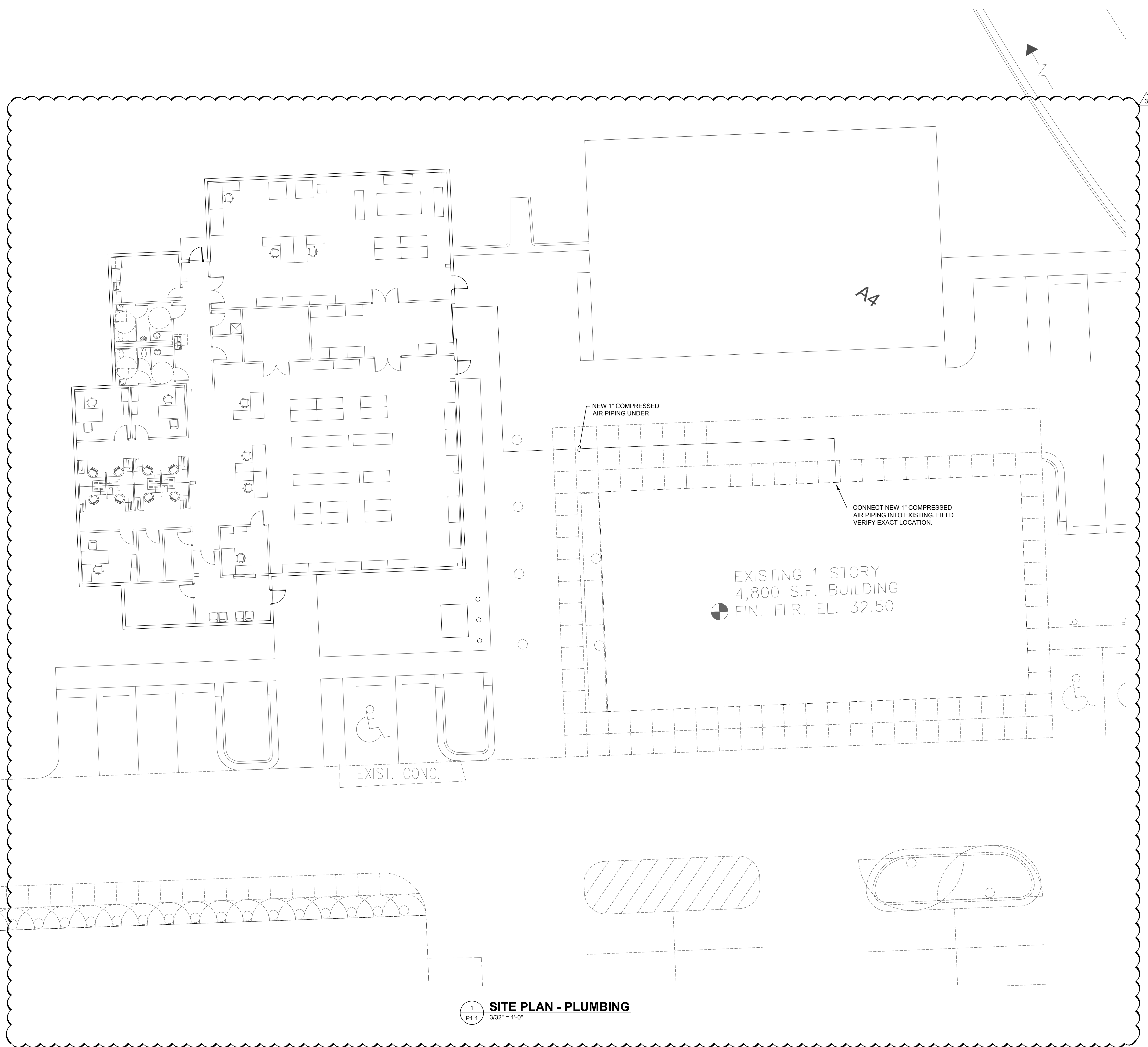
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING





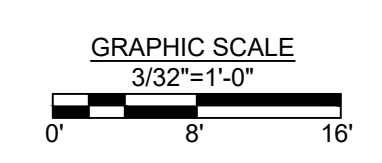
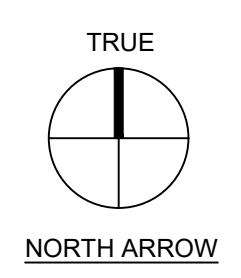
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**SITE PLAN - PLUMBING**  
 EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING  
 P1.1



**1 SITE PLAN - PLUMBING**  
P1.1 3/32" = 1'-0"

**GENERAL NOTES**  
1. COMPRESS AIR PIPING UNDERGROUND PIPING SHALL BE PVC ASTM D1785, SCHEDULE 40 WITH ASTM D2644, SCHEDULE 40, SOCKET TYPE FITTING.



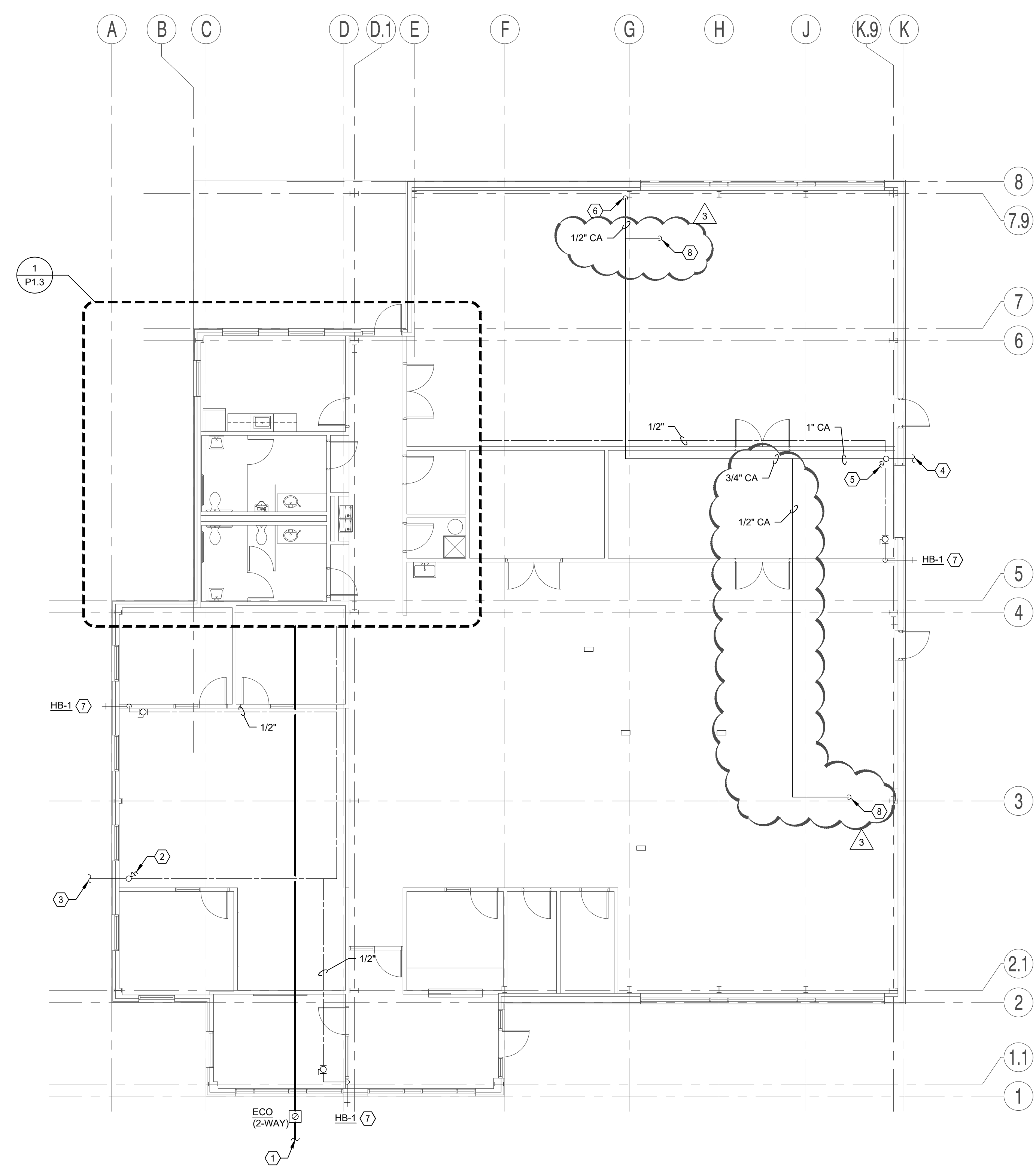
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**REFERENCE NOTES**

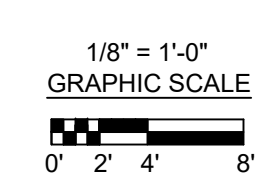
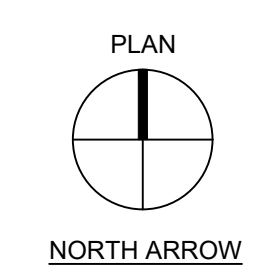
- ① 4" SANITARY LINE. FOR CONTINUATION REFER TO CIVIL DRAWINGS. LEAVING INVERT AT -2'-6" BFF.
- ② 2" COLD WATER UP FROM BELOW GRADE. PROVIDE BALL VALVE IN RISER AT 4'-0" AFF.
- ③ 2" COLD WATER LINE FOR CONTINUATION REFER TO CIVIL DRAWINGS.
- ④ 1" COMPRESSED AIR LINE UNDERGROUND. REFER TO PLUMBING SITE PLAN FOR CONTINUATION.
- ⑤ 1/2" COMPRESSED AIR LINE UP FROM BELOW GRADE. PROVIDE BALL VALVE IN RISER AT 4'-0" AFF.
- ⑥ 1/2" COMPRESSED AIR DOWN WALL AND CAP AT 3'-0" AFF. COORDINATE EXACT LOCATION WITH OWNER.
- ⑦ 1/2" COLD WATER DOWN TO HOSE BIBB. PROVIDE BALL VALVE IN RISER AT 4'-0" AFF.
- ⑧ CEILING MOUNTED HOSE REEL. EQUAL TO #GRACO 100 SERIES



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

**GENERAL NOTES**

- 1. COMPRESS AIR PIPING INSIDE THE BUILDING SHALL BE TYPE L COPPER TUBE, WROUGHT-COPPER FITTINGS, AND SOLDERED JOINTS. UNDERGROUND PIPING SHALL BE PVC ASTM D1785, SCHEDULE 40 WITH ASTM D2644, SCHEDULE 40, SOCKET TYPE FITTING.



REVISION	DATE
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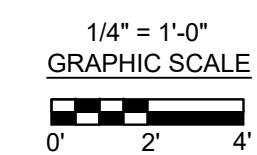
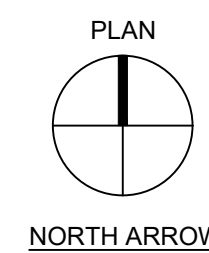
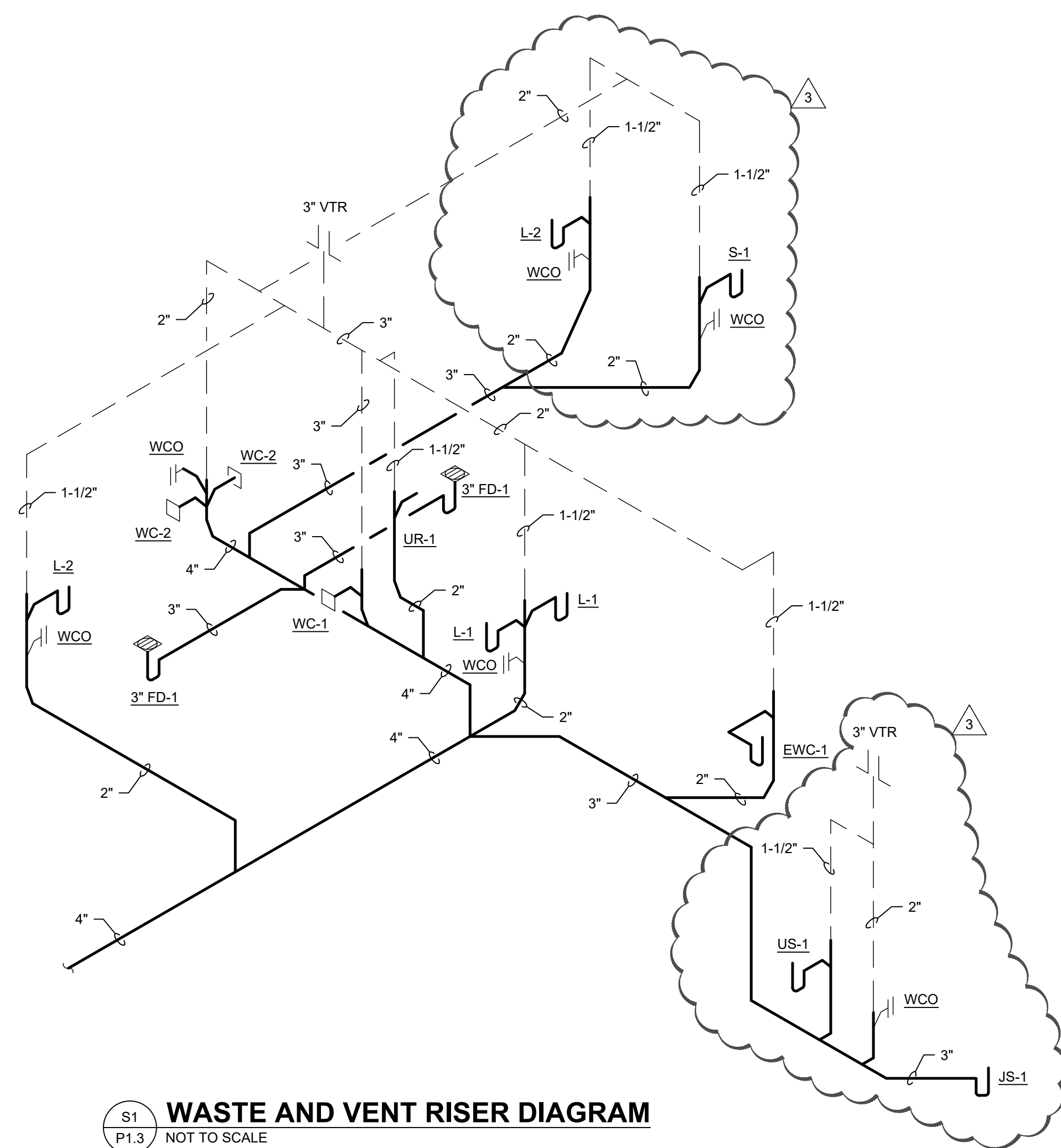
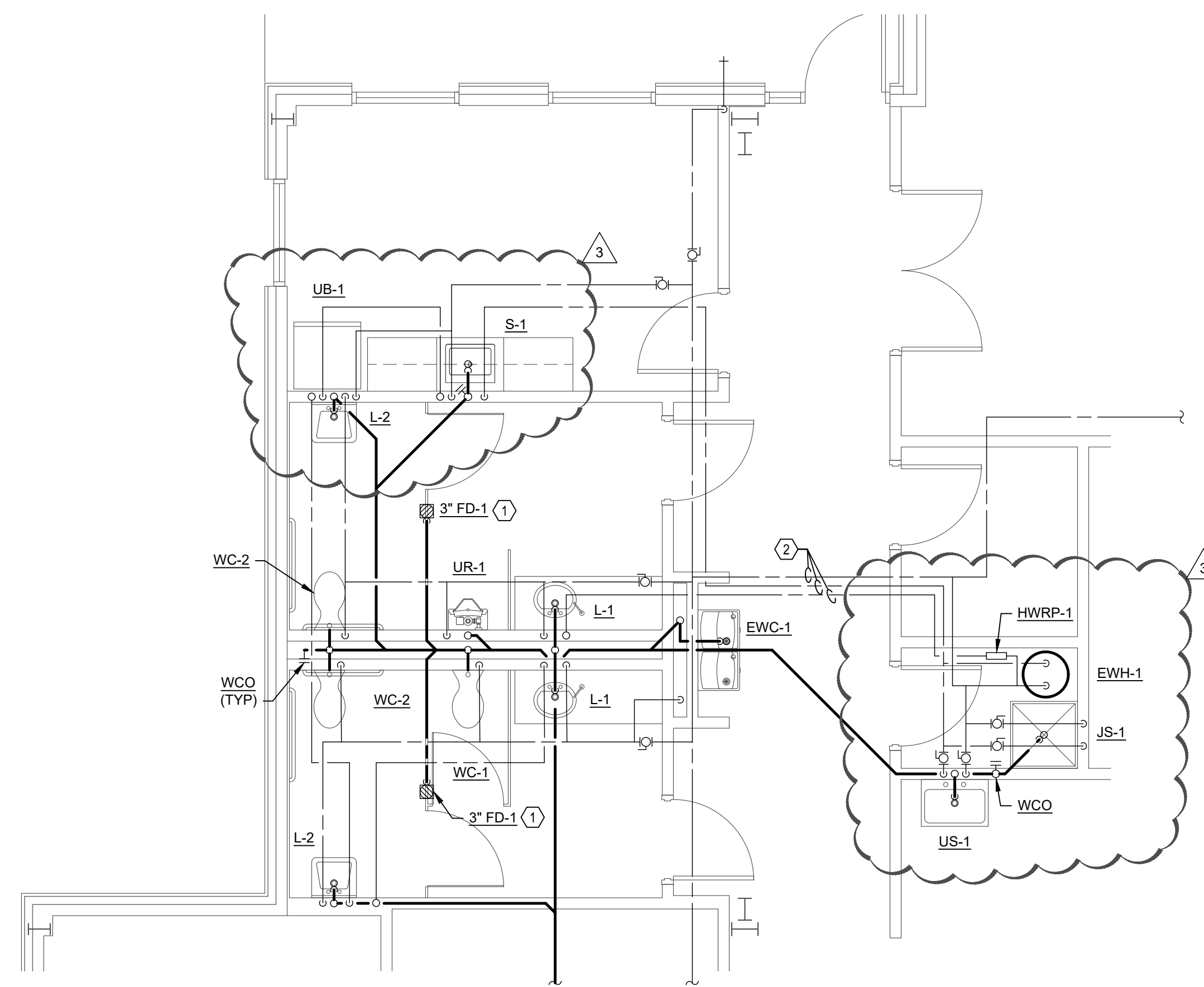
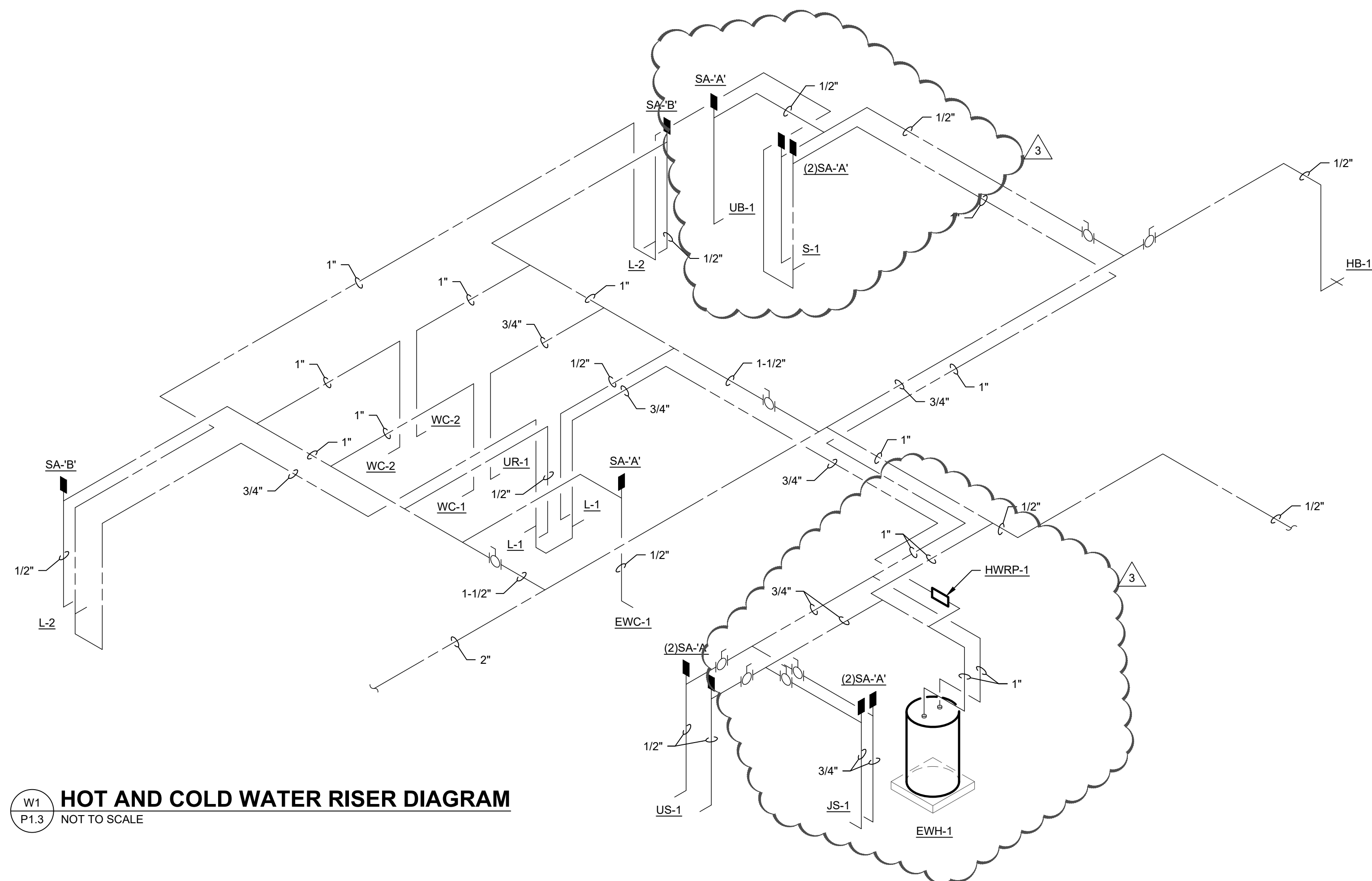
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**FLOOR PLAN - PLUMBING**  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

Date: 07/12/2019  
Job no.: SOBIE 19005  
Sheet no.: **P1.2**

**REFERENCE NOTES**

- ① PROVIDE FLOOR DRAIN WITH WATERLESS IN-LINE TRAP SEAL CONFORMING TO ASSE 1072.
- ② INSTALL WATER PIPING INSIDE METAL DUCT WORK. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.



PERMIT REVISION - 02/06/2020

DATE	02/06/2020
REVISION	REVISION 2
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<b>ENLARGED FLR PLAN &amp; RISERS - PLUMBING</b>	
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY NEW PRINT SHOP BUILDING	
Date: 07/12/2019	Job no.: SOBE 19005
Sheet no.:	<b>P1.3</b>



### REFRIGERANT PIPING NOTES

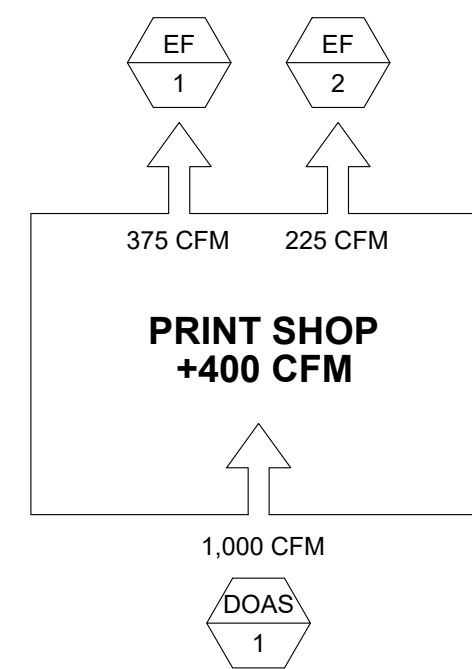
REFRIGERANT PIPE SIZING AND ROUTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE INTO ACCOUNT LENGTH OF RUN, ELEVATION CHANGES, AND FIELD CONDITIONS. ALL ACCESSORIES FOR LONG LINE APPLICATIONS (HARD-START KIT, THERMOSTATIC EXPANSION VALVE (TXV), LIQUID LINE SOLENOID AT THE OUTDOOR UNIT, AN INVERTED REFRIGERANT TRAP AT THE INDOOR UNIT, ETC.) SHALL BE PROVIDED AND INSTALLED WHEN THE DEVELOPED LENGTH FALLS IN THE CATEGORY OF A LONG LINE APPLICATION. THE CONTRACTOR SHALL SUBMIT CALCULATIONS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. ALL REFRIGERANT ROUTING SHALL BE INSTALLED CONCEALED.

### GENERAL NOTES

- THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS BEFORE SUBMITTING A BID.
- THE CONTRACTOR SHALL COORDINATE THE LOCATION OF SITE MOBILIZATION WITH THE UNIVERSITY PRIOR TO COMMENCING THE WORK.
- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) SYSTEMS.
- REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION REGARDING THE INSTALLATION OF DUCTWORK, PIPING, AND EQUIPMENT.
- THE CONTRACTOR IS EXPECTED TO ORDER MATERIALS IN SUFFICIENT TIME TO AVOID DELAYING THE COMPLETION OF THE PROJECT. DELAY IN DELIVERIES WILL NOT BE CONSIDERED A JUSTIFIABLE REASON FOR SUBSTITUTION OF MATERIALS.
- THE CONTRACTOR SHALL COMPLY WITH THE 2017 FLORIDA BUILDING CODE AND THE CURRENT EDITIONS OF ALL OTHER APPLICABLE CODES AND STANDARDS.
- ALL REQUESTS FOR INFORMATION (RFI'S) SUBMITTED BY THE CONTRACTOR SHALL INCLUDE A PROPOSED SOLUTION.
- INSTALLATION OF EQUIPMENT SHALL COMPLY WITH EQUIPMENT MANUFACTURER'S INSTALLATION AND CLEARANCE REQUIREMENTS. THE CONTRACTOR SHALL VERIFY INSTALLATION CLEARANCES WILL BE MAINTAINED AND DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO THE ACQUISITION OF EQUIPMENT.
- THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF THE DIFFERENT TRADES SO THAT INTERFERENCE BETWEEN HVAC, PIPING, EQUIPMENT, STRUCTURAL, AND ELECTRICAL WORK WILL BE AVOIDED. ALL NECESSARY OFFSETS IN DUCTWORK, PIPING, AND FITTINGS REQUIRED TO INSTALL THE WORK PROPERLY SHALL BE PROVIDED COMPLETE IN PLACE AT NO ADDITIONAL COST.
- THE CONTRACTOR IS RESPONSIBLE TO REPAIR, AT HIS COST, ANY DAMAGED ITEMS DUE TO WORK PERFORMED. DAMAGED ITEMS SHALL BE BROUGHT BACK TO LIKE-NEW CONDITION OR REPLACED WITH NEW.
- DUCTWORK, PIPING, AND EQUIPMENT LOCATIONS SHOWN ARE SCHEMATIC. PRIOR TO LAYOUT AND CONSTRUCTION OF THE MECHANICAL SYSTEMS, THE CONTRACTOR SHALL SUBMIT LAYOUT AND FABRICATION SHOP DRAWINGS FOR APPROVAL. CONTRACTOR SHALL NOT COMMENCE WORK WITHOUT APPROVED SHOP DRAWINGS ON THE CONSTRUCTION SITE.
- INSULATE ALL SURFACES SUBJECT TO CONDENSATION.
- ALL DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE THE INTERNAL CLEAR DIMENSIONS.
- THE BUILDING WILL HAVE A FIRE ALARM SYSTEM. THE MECHANICAL CONTRACTOR SHALL INSTALL DUCT-MOUNTED SMOKE DETECTORS AS INDICATED ON THE DRAWINGS AND SCHEDULES. ALL UNITS SHALL SHUT DOWN ON AN ALARM FROM THE FIRE ALARM SYSTEM AND SHALL AUTOMATICALLY RESTART ONCE THE ALARM HAS BEEN CLEARED. THE DUCT-MOUNTED SMOKE DETECTORS SHALL BE PROVIDED, WIRED, AND INTERFACED WITH THE FIRE ALARM SYSTEM BY THE ELECTRICAL AND/OR FIRE ALARM CONTRACTOR.
- THE MECHANICAL CONTRACTOR SHALL FURNISH AND MOUNT ALL MOTOR STARTERS, RELAYS, AND LOW-VOLTAGE WIRING AND CONDUIT TO ALLOW THE MECHANICAL EQUIPMENT TO PERFORM AS REQUIRED BY THE SEQUENCE OF OPERATIONS.
- ALL HVAC SENSORS/CONTROLS SHALL LOCATED FOR UNOBSTRUCTED ACCESS AND BE MOUNTED 48" AFF.
- THE CONTRACTOR SHALL HIRE A THRID-PARTY TEST AND BALANCE COMPANY TO PERFORM A COMPLETE CERTIFIED TEST AND BALANCE OF EACH MECHANICAL SYSTEM IN ACCORDANCE WITH A NATIONAL STANDARD. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.

### ELECTRICAL COORDINATION NOTES

- ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70). THE EQUIPMENT INDICATED ON THE DRAWINGS HAS BEEN COORDINATED WITH THE ELECTRICAL SYSTEMS. IF THIS CONTRACTOR SELECTS TO USE ALTERNATE EQUIPMENT, HE SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH THE ELECTRICAL ENGINEER AND SHALL BEAR ANY ADDED EXPENSE TO THE ELECTRICAL CONTRACTOR AND CONSULTANTS RESULTING FROM SUCH ALTERNATE SELECTION.



1 PRINT SHOP PRESSURIZATION  
M0.1 NOT TO SCALE

### VENTILATION CALCULATIONS

MECHANICAL VENTILATION: THE VENTILATION RATE FOR EACH UNIT WAS CALCULATED PER THE 2017 FBC MECHANICAL, SECTION 403.3 OUTDOOR AIR AND LOCAL EXHAUST AIRFLOW RATES.

Vbz = BREATHING ZONE VENTILATION  
Az = ZONE FLOOR AREA (SF)  
Pz = ZONE POPULATION (PEOPLE)  
Rp = PEOPLE OUTDOOR AIR RATE (CFM/PERSON)  
Ra = AREA OUTDOOR AIR RATE (CFM/SF)  
Ez = ZONE AIR DISTRIBUTION EFFECTIVENESS  
Voz = ZONE OUTDOOR AIRFLOW RATE

$$Vbz = RpPz + RaAz \quad (\text{EQUATION 4-1})$$

$$Voz = Vbz/Ez \quad (\text{EQUATION 4-2})$$

UNIT	Az	Pz	Ra	Rp	Vbz	Ez	Voz
AH/HP-1	3,058	16	0.06	5	263	0.8	329
AH/HP-2	1,971	6	0.06	5	148	0.8	185
AH/HP-3	2,088	8	0.06	5	165	0.8	207

#### NOTES

- THE MINIMUM VENTILATION RATE REQUIRED FOR THE PRINT SHOP IS 721 CFM.
- THE VENTILATION WILL PROVIDED BY A 100% DEDICATED OUTDOOR AIR SYSTEM (DOAS)

### HVAC ABBREVIATIONS

ABBREV.	DESCRIPTION
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFMS	AIRFLOW MEASURING STATION
AH	AIR HANDLER
AHU	AIR HANDLING UNIT
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AV	AUDIBLE/VISUAL
AWG	AMERICAN WIRE GAUGE
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNITS
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
CxA	COMMISSIONING AGENT
D	DEPTH
dB	DECIBEL
DB	DRY BULB
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DEG F	DEGREE FAHRENHEIT
DIA	DIAMETER
DOAS	DEDICATED OUTDOOR AIR SYSTEM
EA	EXHAUST AIR, EACH
EAT	ENTERING AIR TEMPERATURE
ECM	ELECTRICALLY COMMUTATED MOTOR EFFICIENCY
EEER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
ESP	EXTERNAL, STATIC PRESSURE
ETC	ET CETERA
FBC	FLORIDA BUILDING CODE
FBC-M	FLORIDA BUILDING CODE - MECHANICAL
FD	FIRE DAMPER, FLOOR DRAIN
FLA	FULL LOAD AMPS
PPM	FEET PER MINUTE
PPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET
FT-H2O	FEET OF WATER
GA	GAGE
GAL	GALLON
GPM	GALLONS PER MINUTE
H	HEIGHT
HB	HOSE BIBB
HUB	HUB DRAIN
H-O-A	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HR	HOUR
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HZ	HERTZ
IN	INCH
IN.W.G.	INCHES OF WATER - GAUGE
IPS	IRON PIPE SIZE
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LF	LINEAR FEET
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CURRENT AMPACITY
MIN	MINIMUM
MOCPP	MAXIMUM OVERCURRENT PROTECTION
MSS	MANUFACTURERS STANDARDIZATION SOCIETY
MVD	MANUAL VOLUME DAMPER
N	NORTH
N/A	NOT APPLICABLE/NONE ASSOCIATED/NONE AVAILABLE
NC	NOISE CRITERIA
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OA	OUTDOOR AIR
PH	PHASE
PRV	PRESSURE RELIEF OR REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RA	RETURN AIR
RH	RELATIVE HUMIDITY
RLA	RUNNING LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SQUARE FEET
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SP	STATIC PRESSURE
STD	STANDARD
T	THERMOSTAT
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES UNLESS NOTED OTHERWISE
UNO	UNO
V	VOLTAGE
VA	VOLT AMPERE
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIDTH
WB	WET BULB
WWF	WELDED WIRE FABRIC
YR	YEAR

### HVAC LEGEND

SYMBOL	DESCRIPTION
<b>DUCTWORK</b>	
	SUPPLY DUCT RISER
	RETURN DUCT RISER
	EXHAUST DUCT RISER
	SUPPLY DUCT DOWN
	RETURN DUCT DOWN
	EXHAUST DUCT DOWN
	DUCT CONTINUES
	MANUAL VOLUME DAMPER
	MOTORIZED DAMPER
	FIRE/SMOKE DAMPER
	FIRE DAMPER
	RADIATION DAMPER
	DUCT SMOKE DETECTOR
	DUCT ACCESS PANEL
	DUCT RISE (R) OR DROP (D) IN DIRECTION OF FLOW
	ROUND/FLEXIBLE DUCT CONNECTION
	ROUND/FLEXIBLE DUCT CONNECTION WITH DAMPER
	SQUARE TO ROUND DUCT TRANSITION
	ROUND DUCT
	SIDEWALL DIFFUSER/GRILLE
	SUPPLY DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE
	SLOT DIFFUSER
	FLEXIBLE DUCT (DOUBLE LINE)
<b>PIPING</b>	
	PIPING CONTINUES
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	UNION
	BALL VALVE
	CAPPED END
	FLOW DIRECTION
	BUTTERFLY VALVE
	BALL VALVE
<b>SYMBOLS</b>	
	POINT OF DISCONNECTION
	POINT OF CONNECTION
	REFERENCE NOTE
	THERMOSTAT
	SENSOR
	AIR DEVICE TAG TYPE/SIZE (INxIN) AIRFLOW (CFM)
	UNDER CUT DOOR AIR FLOW AMOUNT (CFM)
	DETAIL NUMBER SHEET DETAIL APPEARS
	TYPE OF EQUIPMENT EQUIPMENT NUMBER
	SECTION NUMBER SHEET SECTION APPEARS

### HVAC DESIGN DATA

LOCATION	DAYTONA BEACH, FLORIDA			
	SUMMER		WINTER	
OUTDOOR AIR DESIGN CONDITIONS	DB (DEG F)	WB (DEG F)	DB (DEG F)	WB (DEG F)
	95	78	36	65
INDOOR AIR DESIGN CONDITIONS	DB (DEG F)	RELATIVE HUMIDITY (%)	DB (DEG F)	RELATIVE HUMIDITY (%)
	75	50	72	40
ALL UNITS				
NOTES				
ci = CONTINUOUS INSULATION				
LS = LINEAR SYSTEM				



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**LEGEND AND GENERAL NOTES - MECHANICAL**  
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AIR DEVICE SCHEDULE											
MARK	MANUFACTURER	MODEL	TYPE	BORDER	AIR PATTERN	FACE/NECK	FINISH	MATERIAL	MAX NC LEVEL	MAX PRESS DROP (IN.W.G.)	ACCESS. NOTES
<b>SUPPLY AIR DEVICES</b>											
CS-A	TITUS	TMS-AA	CEILING SUPPLY	LAY-IN	4-WAY	24x24/SEE TABLE 1	WHITE	ALUMINUM	25	0.08	1 1.2
CS-B	TITUS	TMS-AA	CEILING SUPPLY	LAY-IN PANEL	4-WAY	12x12/SEE TABLE 1	WHITE	ALUMINUM	25	0.08	1-3 1.2
CS/XX	TITUS	250-AA	CEILING SUPPLY	SURFACE	1-WAY	REFER TO DRAWINGS	WHITE	ALUMINUM	25	0.08	1 1.2
SS/XX	TITUS	272FS	CEILING SUPPLY	SURFACE	2-WAY	REFER TO DRAWINGS	WHITE	ALUMINUM	25	0.08	1 1.2
DL/XX	TITUS	DL	CEILING SUPPLY	SURFACE	1-WAY	REFER TO DRAWINGS	WHITE	ALUMINUM	25	0.08	1 1.2
SSS-A	TITUS	US-DL-SV	CEILING SUPPLY	SURFACE	2-WAY	18x6 AIR DEVICE	WHITE	ALUMINUM	25	0.08	1.4 1.2
<b>RETURN AIR DEVICES</b>											
CR-A	TITUS	355FL	CEILING RETURN	LAY-IN	1-WAY	24x24/SEE TABLE 1	WHITE	ALUMINUM	25	0.08	1 1.2
CR-B	TITUS	355FL	CEILING RETURN	LAY-IN PANEL	1-WAY	12x12/SEE TABLE 1	WHITE	ALUMINUM	25	0.08	1.3 1.2
CR/XX	TITUS	355FL	CEILING RETURN	SURFACE	1-WAY	REFER TO DRAWINGS	WHITE	ALUMINUM	25	0.08	1 1.2
SR/XX	TITUS	350FL	CEILING RETURN	SURFACE	1-WAY	REFER TO DRAWINGS	WHITE	ALUMINUM	25	0.08	1 1.2
<b>EXHAUST AIR DEVICES</b>											
CE-A	TITUS	355FL	CEILING EXHAUST	LAY-IN	1-WAY	24x24/SEE TABLE 1	WHITE	ALUMINUM	25	0.08	- 1.2
CE-B	TITUS	355FL	CEILING EXHAUST	LAY-IN PANEL	1-WAY	12x12/SEE TABLE 1	WHITE	ALUMINUM	25	0.08	2 1.2
CE/XX	TITUS	355FL	CEILING EXHAUST	SURFACE	1-WAY	REFER TO DRAWINGS	WHITE	ALUMINUM	25	0.08	- 1.2
SE/XX	TITUS	350FL	CEILING EXHAUST	SURFACE	1-WAY	REFER TO DRAWINGS	WHITE	ALUMINUM	25	0.08	- 1.2
<b>ACCESSORIES (PROVIDE THE FOLLOWING)</b>											
1. INSULATED DUCT BOOT FOR CONNECTION TO ROUND DUCTWORK											
2. OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF AIR DEVICE											
3. 12x12 GRILLE IN A 24x24 LAY-IN PANEL											
4. SPIRAL DUCT AIR DEVICE WITH OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF AIR DEVICE											
<b>NOTES</b>											
1. USE NECK SIZES LISTED IN TABLE 1 BELOW IF THE SIZE IS NOT INDICATED ON THE PLANS.											
2. PAINT DUCTWORK THAT IS VISIBLE THROUGH FRONT OF AIR DEVICE MATTE BLACK.											
<b>TABLE 1</b>											
<b>AIR DEVICE NECK SIZING TABLE</b>						<b>LEGEND</b>					
CFM RANGE	0-110	111-220	221-420	421-550	551-750	AIR DEVICE TAG		EXAMPLES			
NECK SIZE	6" DIA	8" DIA	10" DIA	12" DIA	14" DIA	MARK - TYPE OR (INxIN)	CS-A	OR	SS/12x6		
						AIRFLOW (CFM)	100 CFM	OR	100 CFM		

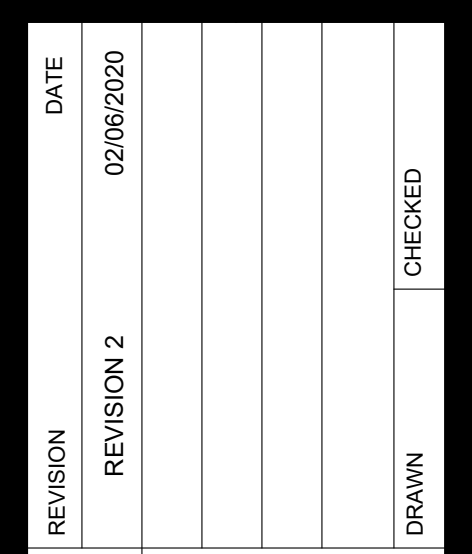
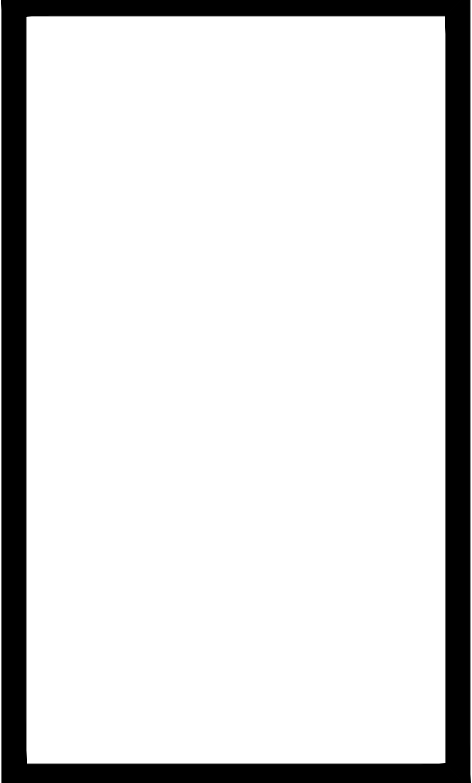
LOUVER SCHEDULE											
MARK	MATERIAL	LOUVER SIZE W(IN)xH(IN)xD(IN)	DESIGN CFM	FREE AREA (SF)	VELOCITY (FPM)	SERVICE	MAX PRESS DROP (IN.W.G.)	ACCESS.	NOTES	MANUFACTURER & MODEL NUMBER	
LV-1	ALUMINUM	24x12x5	375	0.52	721	EXHAUST	0.1	1.2	1-4	GREENHECK EHV-550	
LV-2	ALUMINUM	24x12x5	225	0.52	433	EXHAUST	0.1	1.2	1-4	GREENHECK EHV-550	
LV-3	ALUMINUM	30x24x5	1,000	2.04	490	INTAKE	0.1	1.2	1-4	GREENHECK EHV-550	
<b>ACCESSORIES (PROVIDE THE FOLLOWING)</b>											
1. BIRD SCREEN IN REMOVABLE ALUMINUM FRAME											
2. LOUVER SHALL BE FACTORY FINISHED WITH 70% KYNAR 500/HYLAR 5000 FINISH; COLOR: TO BE SELECTED BY ARCHITECT											
<b>NOTES</b>											
1. LOUVER IS A FLORIDA PRODUCT APPROVED WIND-DRIVEN RAIN LOUVER.											
2. LOUVER IS A MIAMI-DADE QUALIFIED LOUVER WITH A PUBLISHED NOTICE OF ACCEPTANCE.											
3. COORDINATE LOUVER ELEVATIONS AND OPENINGS WITH ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.											
4. PROVIDE COLOR SAMPLES TO THE ARCHITECT FOR COLOR SELECTION BEFORE PROCURING LOUVER.											

FAN SCHEDULE			
MARK	EF-1	EF-2	
MANUFACTURER	GREENHECK	GREENHECK	
MODEL	CSP-A780	CSP-A410	
APPLICATION	EXHAUST	EXHAUST	
<b>FAN</b>			
LOCATION	INLINE	INLINE	
AIR FLOW (CFM)	375	225	
STATIC PRESSURE (IN.W.G.)	0.25	0.15	
DRIVE/TYPE	DIRECT	DIRECT	
WATTS	95 W	37 W	
VOLTAGE/PHASE/HZ	115/1/60	115/1/60	
<b>UNIT REQUIREMENTS</b>			
MAXIMUM SONES	0.5	0.5	
OPERATING WEIGHT (LBS)	40	40	
ACCESSORIES	1	1	
NOTES	1	1	
<b>ACCESSORIES (PROVIDE THE FOLLOWING)</b>			
1. FAN SPEED CONTROLLER			
<b>NOTES</b>			
1. FAN OPERATION SHALL BE CONTROLLED/MONITORED BY THE BMS.			

DEDICATED OUTSIDE AIR SPLIT SYSTEM SCHEDULE	
INDOOR UNIT	
MARK	DOAS-1
LOCATION	MECH RM
MANUFACTURER	DESERT AIRE
MODEL	QV05
<b>FAN</b>	
TOTAL AIR FLOW (CFM)	1,000
OUTSIDE AIR FLOW (CFM)	1,000
ESP/TSP (IN.W.G.)	1.0 / 1.7
HP	1.0
<b>EVAPORATOR</b>	
NOMINAL TONS	5.0
TOTAL COOLING CAPACITY (MBH)	80.0
SENSIBLE COOLING CAPACITY (MBH)	43.9
ENTERING AIR TEMP (DB/WB)	95.0 / 78.0
LEAVING AIR TEMP (DB/WB)	54.7 / 54.0
PROTECTIVE COIL COATING	ELECTROFIN
<b>ELECTRIC HEATER</b>	
CAPACITY (KW)	10.0
ENTERING/LEAVING AIR TEMPERATURE (DEG F)	37.0 / 69.0
CONTROL	SCR
<b>COMPRESSORS</b>	
QUANTITY	1
TYPE	SCROLL
<b>FILTERS</b>	
EFFICIENCY	MERV 11
TYPE	DISPOSABLE
<b>GENERAL</b>	
WEIGHT	700
<b>ELECTRICAL</b>	
VOLTAGE/PHASE/HZ	208/3/60
COMPRESSOR 1 RLA (AMPS)	22.4
MOTOR RLA (AMPS)	4.2
HEATER DRAW (AMPS)	27.8
UNIT MCA (AMPS)	42
UNIT MOCP (AMPS)	50
<b>OUTDOOR UNIT</b>	
MARK	DC-1
LOCATION	GRADE
MANUFACTURER	DESERT AIRE
MODEL	RCS5024C3K40900
REFRIGERANT	R-410A
OUTDOOR DESIGN TEMPERATURE (DEG F)	95
NUMBER OF FANS	1
TOTAL HEAT REJECTION (MBH)	98.0
PROTECTIVE COIL COATING	ELECTROFIN
UNIT WEIGHT (LBS)	250
<b>ELECTRICAL</b>	
VOLTAGE/PHASE/HZ	208/3/60
MINIMUM CIRCUIT AMPACITY	5
MAXIMUM FUSE SIZE	9
<b>SYSTEM PERFORMANCE</b>	
AHRI 920 RATING	7.7
<b>ACCESSORIES (PROVIDE THE FOLLOWING)</b>	
1. MODULATING HOT GAS REHEAT	
2. HOT GAS BYPASS	
3. 20-GAUGE STAINLESS STEEL DRAIN PAN	
4. LOUVERED CONDENSER COIL GUARD	
5. PROTECTIVE EVAPORATOR AND CONDENSER COIL COATINGS	
6. CONTROLS	
• MODEL CM3500 CONTROLLER OR EQUAL	
• OUTSIDE AIR SENSOR (FIELD INSTALLED)	
• SUPPLY AIR TEMPERATURE CONTROL	
• SUPPLY AIR DUCT TEMPERATURE SENSOR (FIELD INSTALLED)	
• REMOTE DISPLAY TERMINAL	
• INPUTS FROM BMS TO START AND STOP UNIT	
• OUTPUTS TO BMS FOR ALARMS	
<b>NOTES</b>	
1. THE REFRIGERANT PIPING DESIGN AND SIZING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THE CONTRACTOR SHALL CONSIDER LENGTH OF RUN AND FIELD CONDITIONS WHEN SIZING PIPING.	

SPLIT SYSTEM AIR HANDLER SCHEDULE			
MARK	AH-1	AH-2	AH-3
LOCATION	MECH RM	MECH RM	MECH RM
MANUFACTURER	TRANE	TRANE	TRANE
MODEL	TWE09043BAA	GAM5B0C48M41	GAM5B0C48M41
<b>FAN</b>			
TOTAL AIR FLOW (CFM)	3,000	1,600	1,600
VENTILATION AIR FLOW (CFM)	400	300	300
EXTERNAL STATIC PRESSURE (IN.W.G.)	0.75	0.6	0.6
DRIVE/SPEED	DIRECT / 1,058	DIRECT / 1,050	DIRECT / 1,050
MOTOR HP	3.0	0.75	0.75
<b>EVAPORATOR COIL</b>			
SENSIBLE CAPACITY (MBH)	71.9	34.2	34.2
TOTAL CAPACITY (MBH)	88.6	44.8	44.8
ENTERING AIR TEMP (DB/WB)	74.3 / 62.2	74.1 / 62.5	74.1 / 62.5
LEAVING AIR TEMP (DB/WB)	53.2 / 52.1	54.2 / 52.5	54.2 / 52.5
<b>HEAT PUMP HEATING CAPACITY</b>			
HEATING CAPACITY (MBH)	48.6	41.5	41.5
<b>AUXILIARY ELECTRIC HEATING COIL</b>			
INPUT (KW @ 208V)	11.25	5.77	5.77
<b>ELECTRICAL (CIRCUIT 1)</b>			
VOLTAGE/PHASE/HZ	208/3/60	208/3/60	208/3/60
MINIMUM CIRCUIT AMPACITY	51.0	8.0	8.0
MAXIMUM FUSE SIZE	60	15	15
<b>ELECTRICAL (CIRCUIT 2)</b>			
VOLTAGE/PHASE/HZ	N/A	208/3/60	208/3/60
MINIMUM CIRCUIT AMPACITY	N/A	42.0	42.0
MAXIMUM FUSE SIZE	N/A	45	45
<b>FILTERS</b>			
TYPE	DISPOSABLE	DISPOSABLE	DISPOSABLE
EFFICIENCY	MERV 8	MERV 8	MERV 8
<b>UNIT REQUIREMENTS</b>			
OPERATING WEIGHT (LBS)	350	175	175
ACCESSORIES	1-3	2,3	2,3
NOTES	-	-	-
<b>ACCESSORIES (PROVIDE THE FOLLOWING)</b>			
1. SINGLE POINT POWER CONNECTION WITH FACTORY-INSTALLED PULL-TYPE DISCONNECT			
2. PROTECTIVE EVAPORATOR COIL COATING			
3. CONDENSATE OVERFLOW SAFETY SWITCH WHICH WILL SHUT DOWN THE AIR HANDLER IF THE PRIMARY CONDENSATE DRAIN LINE CLOGS. DESIGN BASIS: LITTLE GIANT PUMP COMPANY ACS-5			
<b>NOTES</b>			
1. -			

AIR-COOLED HEAT PUMP SCHEDULE			
MARK	HP-1	HP-2	HP-3
LOCATION	GRADE	GRADE	GRADE
MANUFACTURER	TRANE	TRANE	TRANE
MODEL NUMBER	TWA09043DAB	4TWA04048A3	4TWA04048A3
NOMINAL TONS	7.5	4.0	4.0
REFRIGERANT	R-410A	R-410A	R-410A
<b>COMPRESSOR</b>			
OUTDOOR DESIGN TEMPERATURE (DEG F)	95	95	95
NUMBER OF STAGES	2	1	1
NUMBER OF COMPRESSORS	2	1	1
<b>CONDENSER FAN</b>			
NUMBER OF FANS	1	1	1
MOTOR HP	0.5	0.20	0.20
<b>ELECTRICAL</b>			
VOLTAGE/PHASE/HZ	208/3/60	208/3/60	208/3/60
COMPRESSOR RLA EACH	13.1 / 13.1	13.7	13.7
CONDENSER FAN MOTOR FLA EACH	3.1	1.1	1.1
MINIMUM CIRCUIT AMPACITY	33.0	18.0	18.0
MAXIMUM FUSE SIZE	45	30	30
<b>UNIT REQUIREMENTS</b>			
EER/SEER	12.8 EER	14.5 SEER	14.5 SEER
COP/HSPF	3.75 COP	8.20 HSPF	8.20 HSPF
UNIT WEIGHT (LBS)	450	300	300
ACCESSORIES	1-7	1-7	1-7
NOTES	1	1	1
<b>ACCESSORIES (PROVIDE THE FOLLOWING)</b>			
1. LOUVERED COIL GUARD			
2. MANUFACTURER'S ANCHOR BRACKET KIT			
3. ANTI-SHORT CYCLE KIT			
4. FREEZE PROTECTION KIT			
5. HIGH AND LOW PRESSURE SWITCHES			
6. REFRIGERANT CHARGING VALVES			
7. CONDENSER PROTECTIVE COIL COATING			
<b>NOTES</b>			
1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE EQUIPMENT MANUFACTURER FOR THE PROPER REFRIGERANT PIPE SIZING FOR THE APPLICATION.			



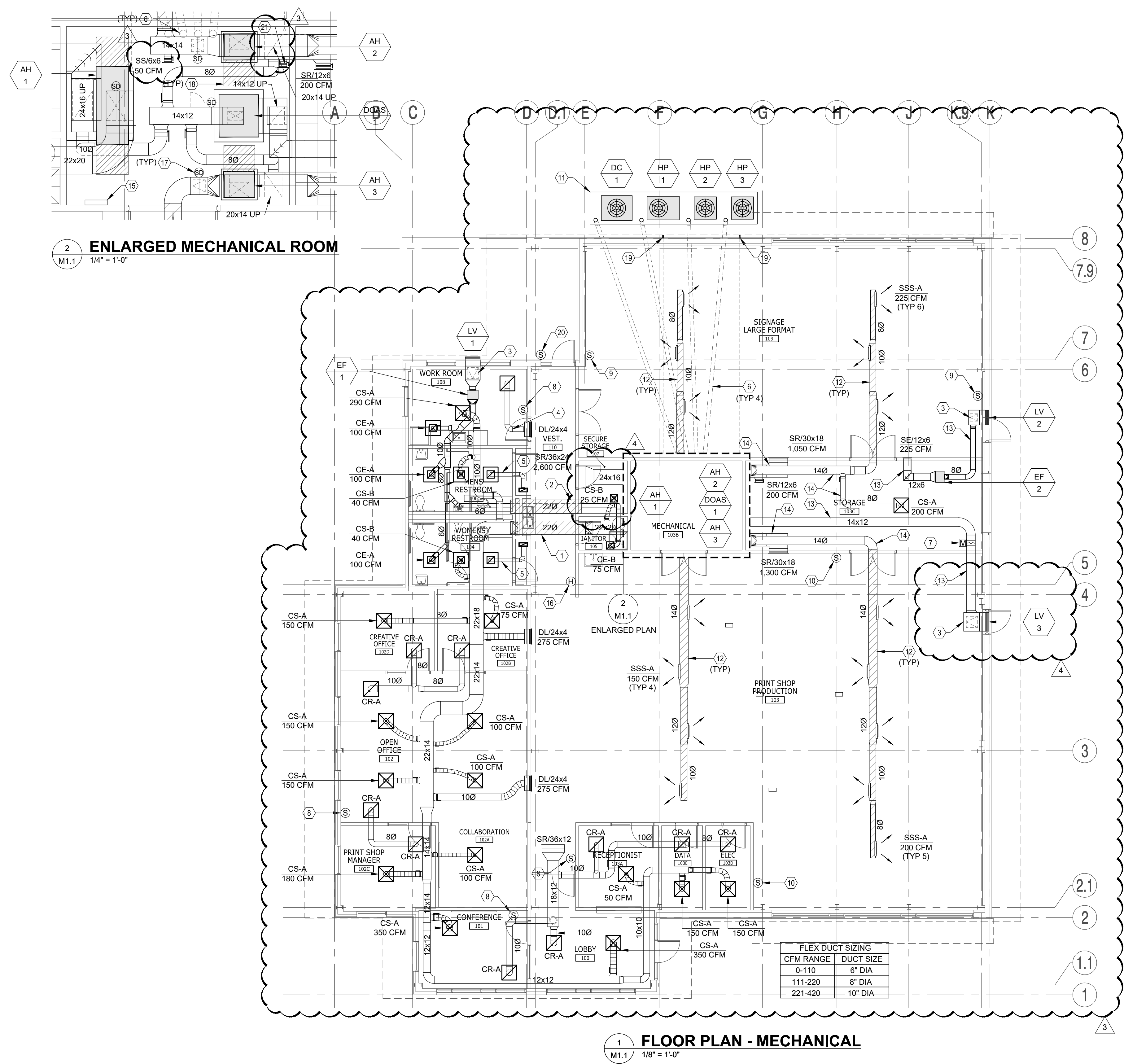


**GENERAL NOTES**

- ALL AIR DEVICES AND ACCESSORIES USED WITH PAINTED DUCTWORK SHALL BE PRIMED AND PAINTED TO MATCH DUCT COLOR.
- SEAL AND FINISH AROUND ALL WALL PENETRATIONS FOR A CLEAN TRANSITION BETWEEN THE PENETRATING ITEM AND THE WALL.
- DUAL WALL DUCT SHALL BE SUSPENDED FROM THE STRUCTURE ABOVE WITH CLEVIS HANGERS AND THREADED ROD PRIMED AND PAINTED TO MATCH DUCT COLOR. ANTI-SWAY SUPPORT SHALL BE PROVIDED BY CLEAR VINYL WRAPPED 1/4" DIAMETER STAINLESS STEEL AIRCRAFT CORD.
- ALL OUTDOOR AIR DUCT AND ACCESSORIES SHALL BE OF ALUMINUM CONSTRUCTION.

**REFERENCE NOTES**

- PAINTED DUAL WALL EXPOSED SPIRAL DUCTWORK.
- PAINTED DUAL WALL EXPOSED SPIRAL DUCT USED AS A CONDUIT FOR THE EXHAUST DUCT, PLUMBING PIPING, AND ELECTRICAL SYSTEMS.
- DUCT ACCESS DOOR INSTALLED IN THE BOTTOM OF THE PLENUM.
- 8" DIA TRANSFER AIR DUCT WITH CR-A AND DL/24x4 AIR DEVICES.
- 6" DIA TRANSFER AIR DUCT WITH CR-B AND CR/12x4 AIR DEVICES.
- 6" DIA PVC PIPE CONDUITS FOR ROUTING REFRIGERANT PIPES FROM MECHANICAL ROOM TO EXTERIOR UNITS.
- MOTORIZED DAMPER INTERLOCKED WITH DOAS-1 OPERATION.
- AVERAGING TEMPERATURE SENSOR FOR AH/HP-1 HARDWIRED BACK TO BMS PANEL (4 TOTAL).
- AVERAGING TEMPERATURE SENSOR FOR AH/HP-2 HARDWIRED BACK TO BMS PANEL (2 TOTAL).
- AVERAGING TEMPERATURE SENSOR FOR AH/HP-3 HARDWIRED BACK TO BMS PANEL (2 TOTAL).
- CONCRETE EQUIPMENT PAD.
- DUAL WALL SPIRAL DUCT WITH PRIMED AND PAINTED OUTER SHELL.
- PRIME AND PAINT UNINSULATED SHEET METAL.
- PRIME AND PAINT INSULATION JACKET.
- BMS CONTROL PANEL.
- RELATIVE HUMIDITY SENSOR HARDWIRED BACK TO BMS PANEL.
- SUPPLY AIR DUCT-MOUNTED SMOKE DETECTOR WITH MIN 12x12 ACCESS DOOR FOR INSPECTION.
- EQUIPMENT ACCESS - KEEP THIS AREA CLEAR.
- 2" DIAMETER SCHEDULE 40 PVC CONDENSATE DRAIN LINE TERMINATED OUTSIDE OF BUILDING WITH A GOOSENECK.
- OUTDOOR AIR TEMPERATURE/HUMIDITY SENSOR.
- MECHANICAL ROOM RETURN AIR GRILLE (SR/6x6) BALANCED TO 50 CFM.



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02/06/2020 <td>REVISION 2</td>	REVISION 2

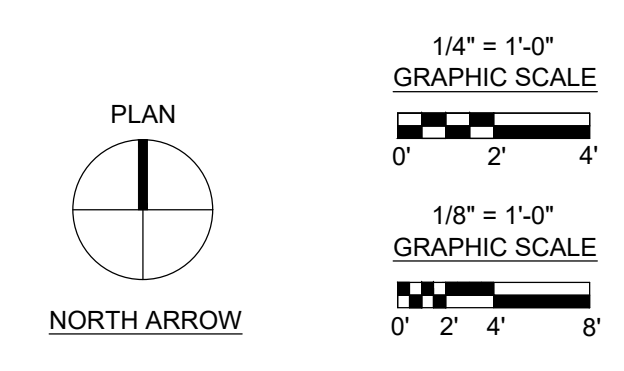
**PERMIT REVISION - 02/06/2020**

**FLOOR PLAN - MECHANICAL**

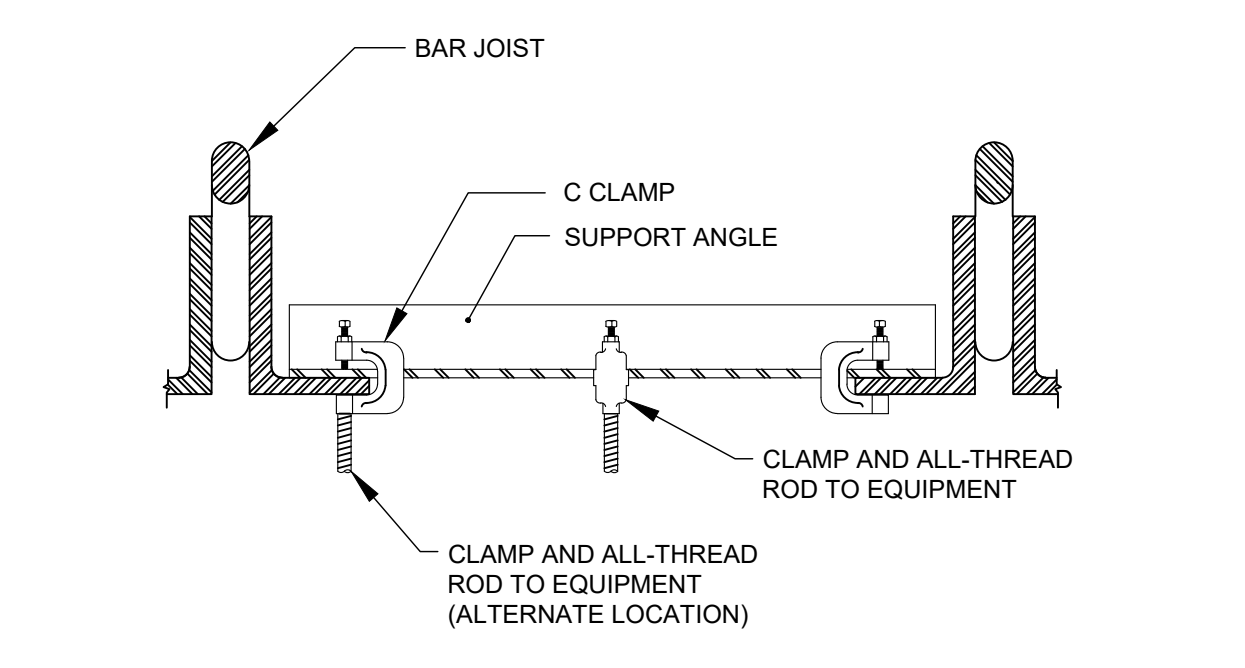
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING

M1.1

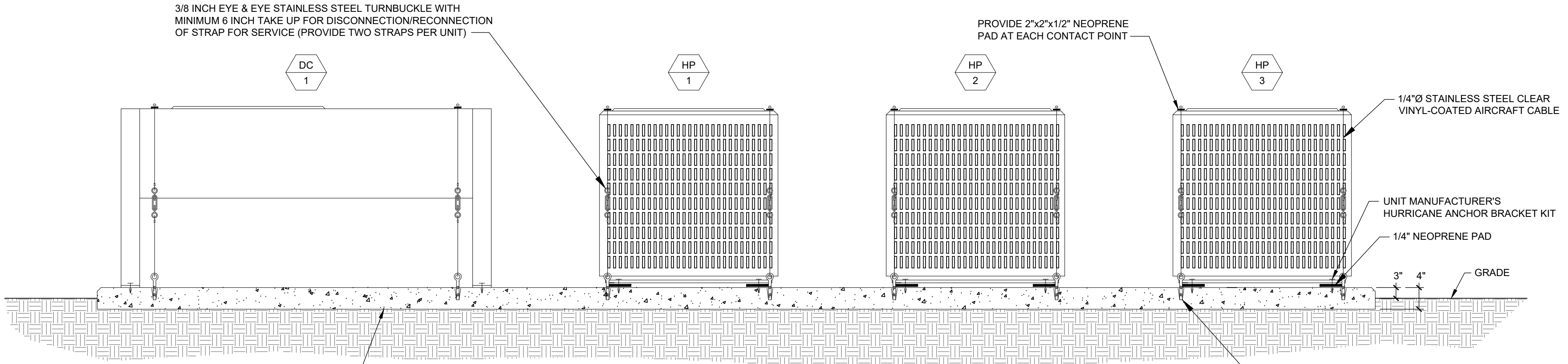
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 JOB NO.: SOBE 19005  
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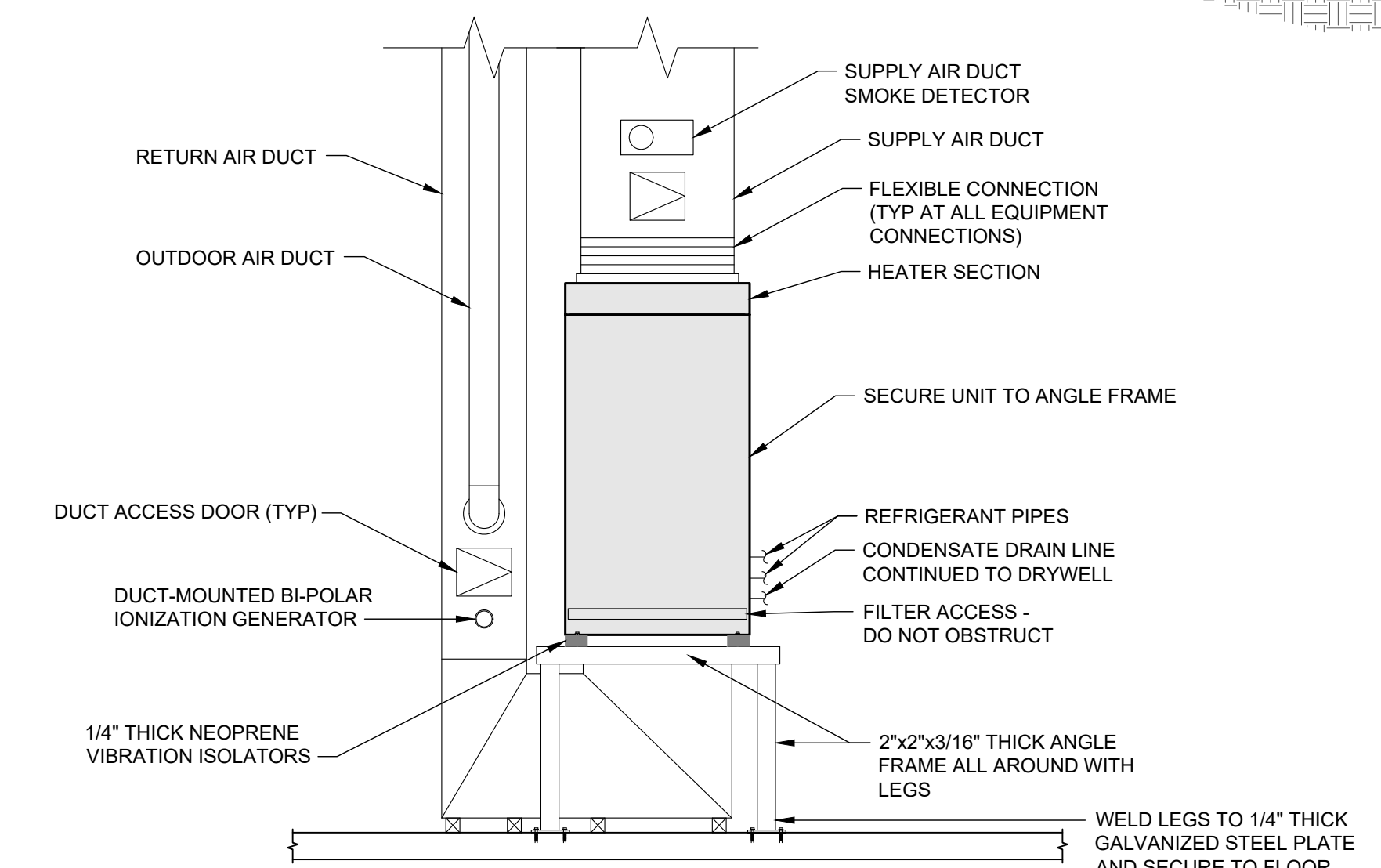




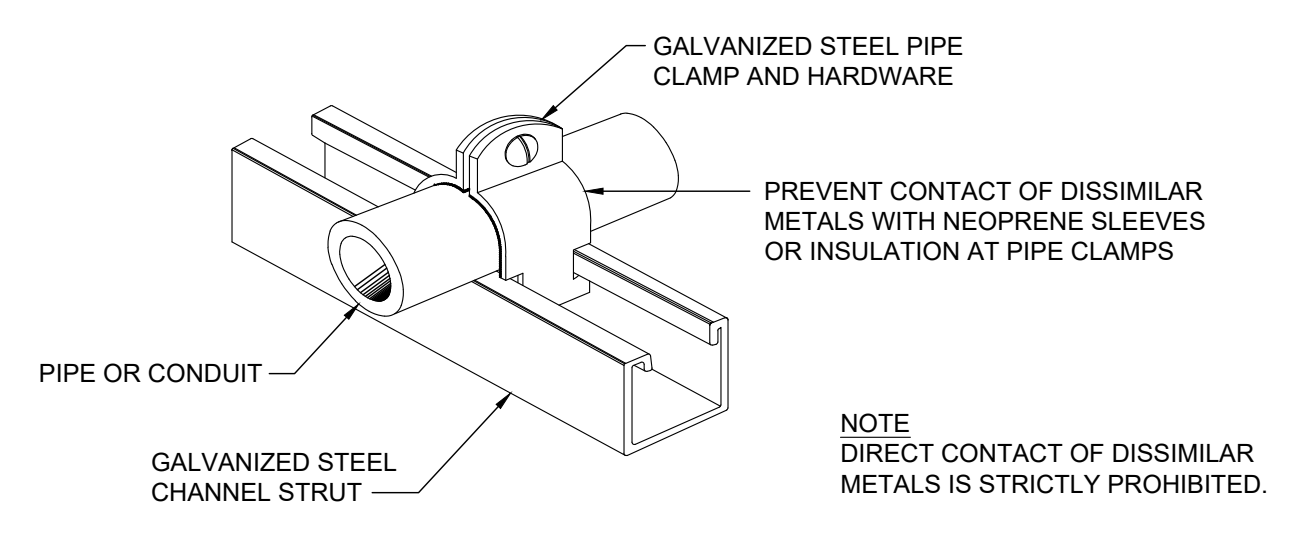
**10 EQUIPMENT SUPPORT - JOIST ATTACHMENT**  
 M5.1 NOT TO SCALE



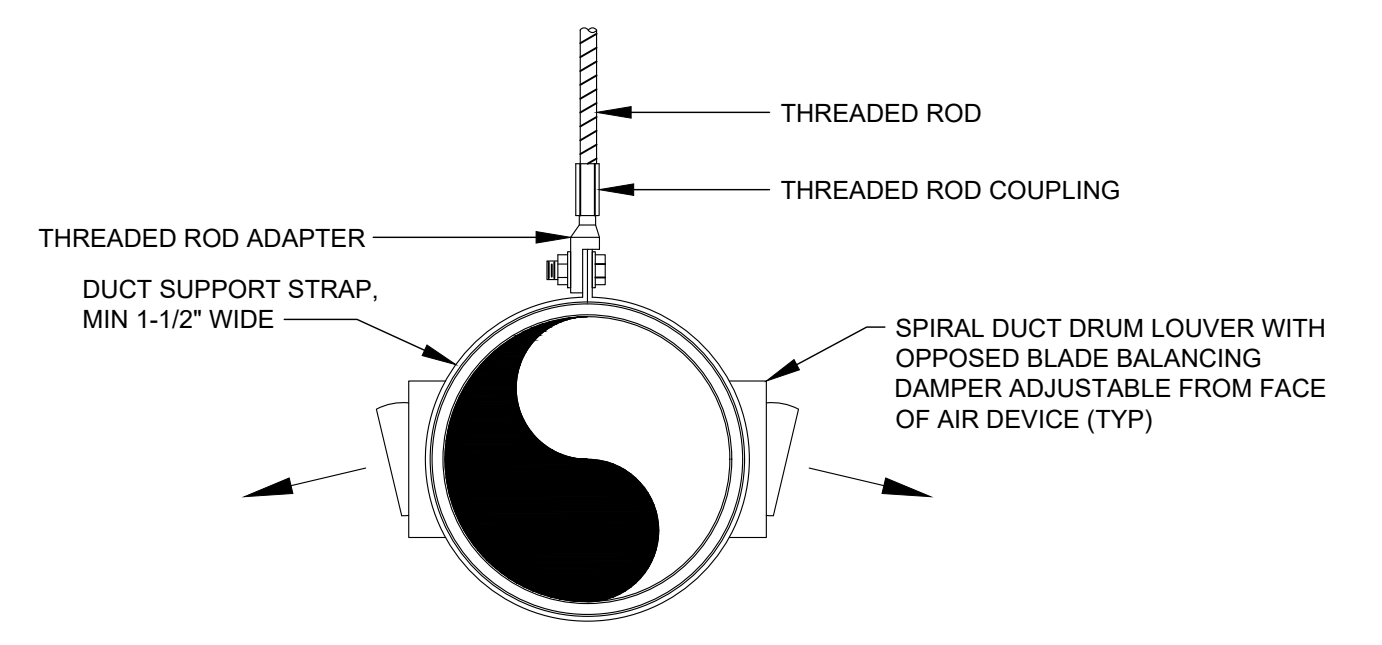
**7 TYPICAL OUTDOOR EQUIPMENT INSTALLATION DETAIL**  
 M5.1 NOT TO SCALE



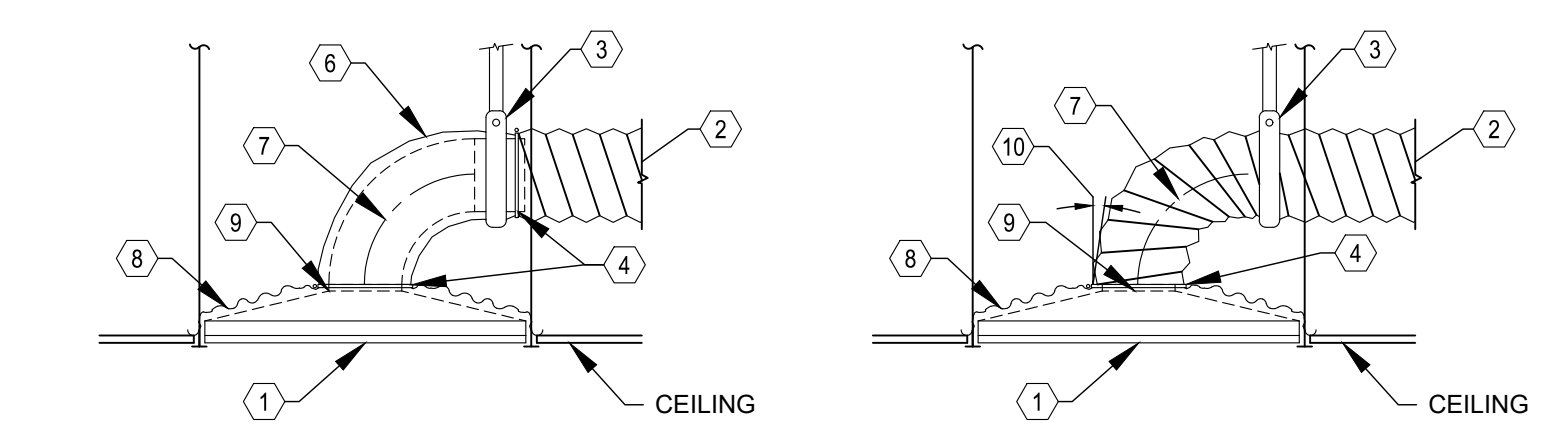
**9 AH (< 6 TONS) SUPPORT DETAIL**  
 M5.1 NOT TO SCALE



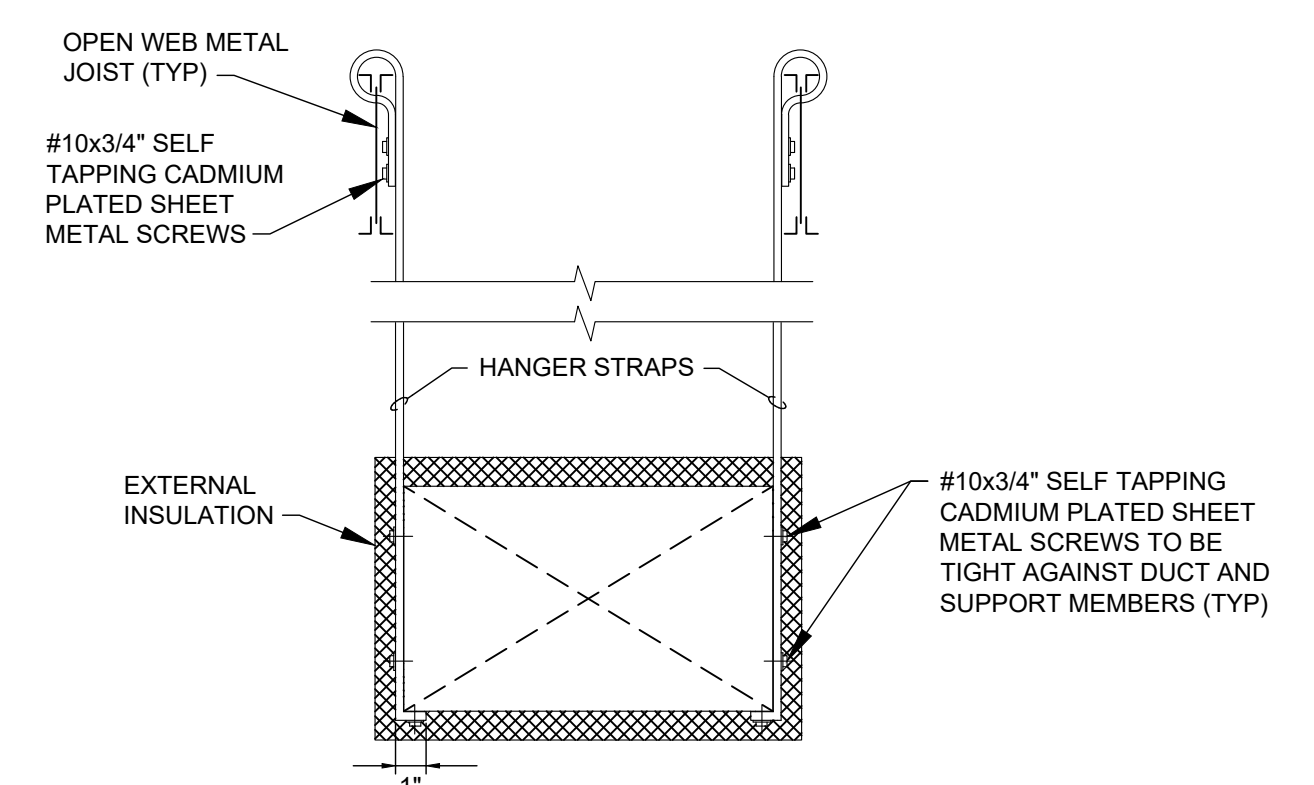
**6 TYPICAL PIPE SUPPORT**  
 M5.1 NOT TO SCALE



**3 TYPICAL SPIRAL DUCT SUPPORT**  
 M5.1 NOT TO SCALE



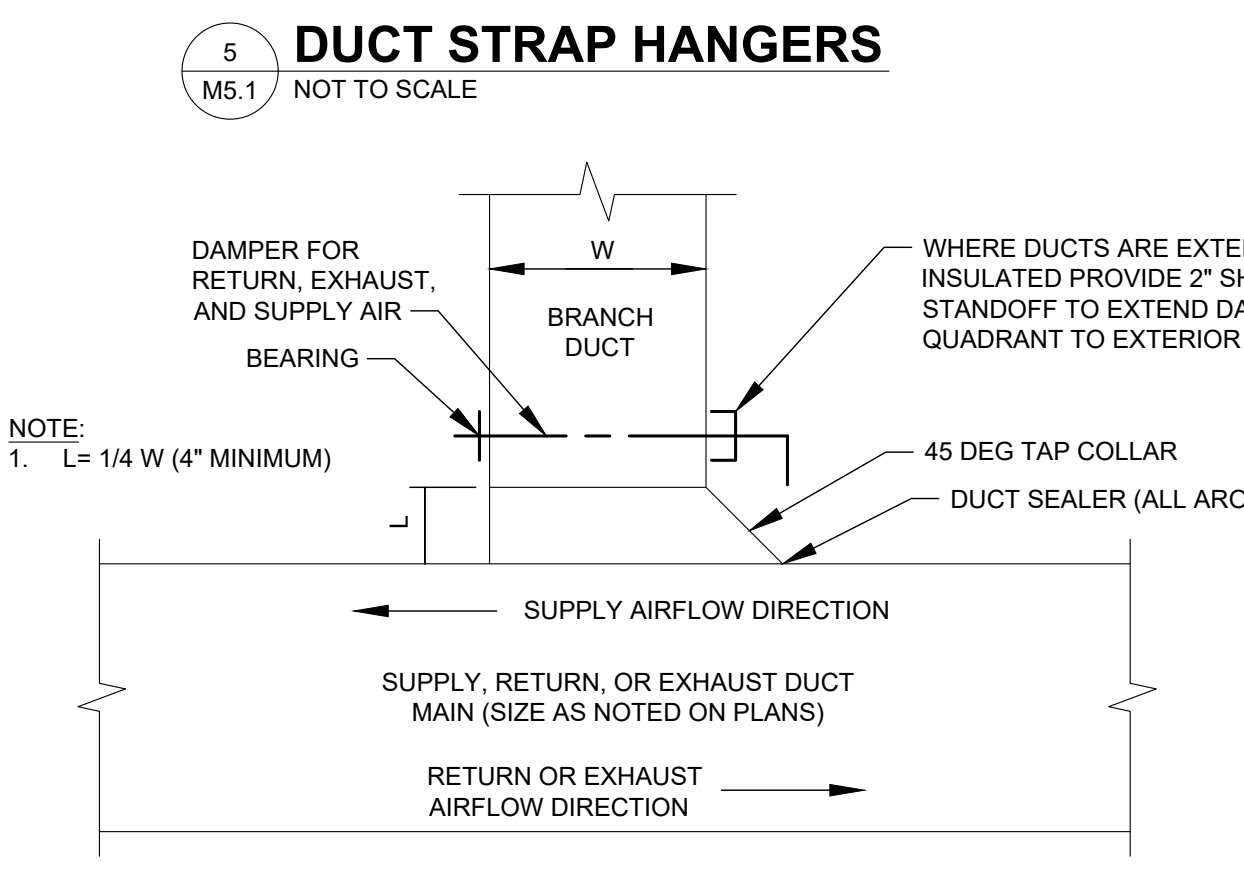
**8 TYPICAL AIR DEVICE FLEXIBLE CONNECTIONS**  
 M5.1 NOT TO SCALE



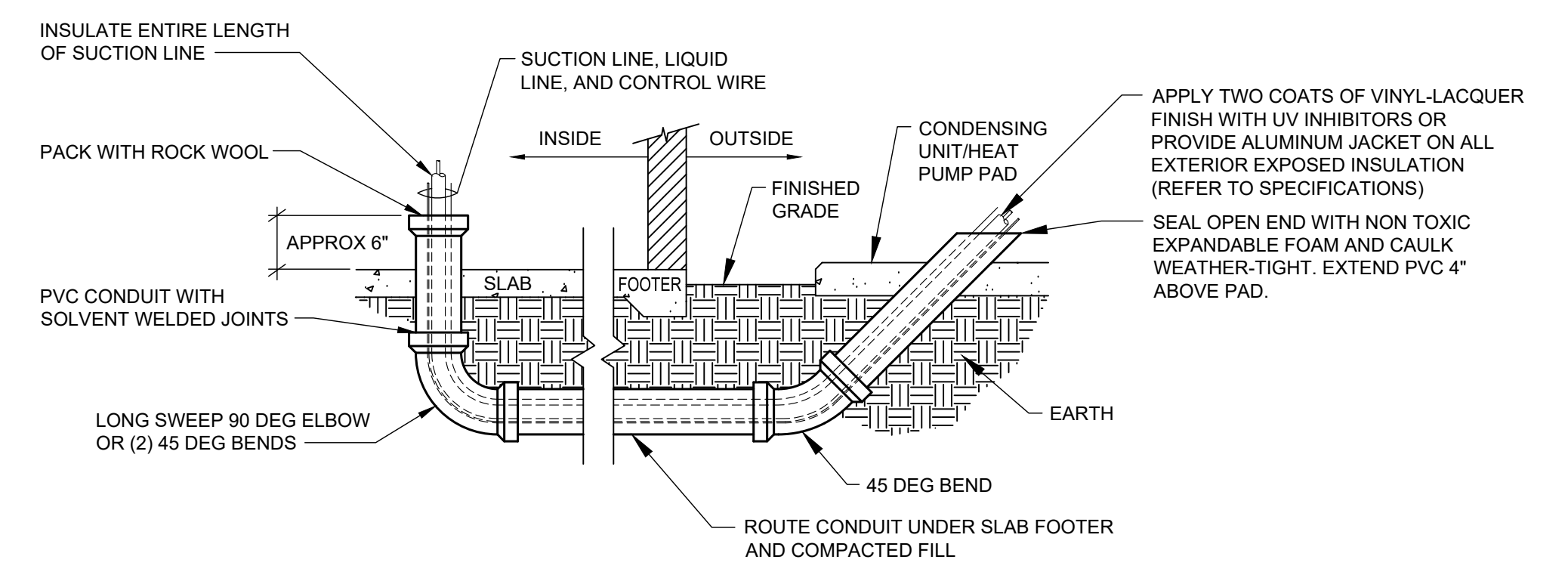
**5 DUCT STRAP HANGERS**  
 M5.1 NOT TO SCALE

RECTANGULAR DUCT HANGER SIZES			
MAXIMUM SIDE	HANGER	HORIZONTAL SUPPORT MEMBER	MAXIMUM SPACING
30"	1" x 18 GAGE STRAP	NONE REQUIRED	10'-0"
36"	1/4" ALL-THREAD ROD	1-1/2" x 1-1/2" x 1/8"	8'-0"
48"	1/4" ALL-THREAD ROD	2" x 2" x 1/8"	8'-0"

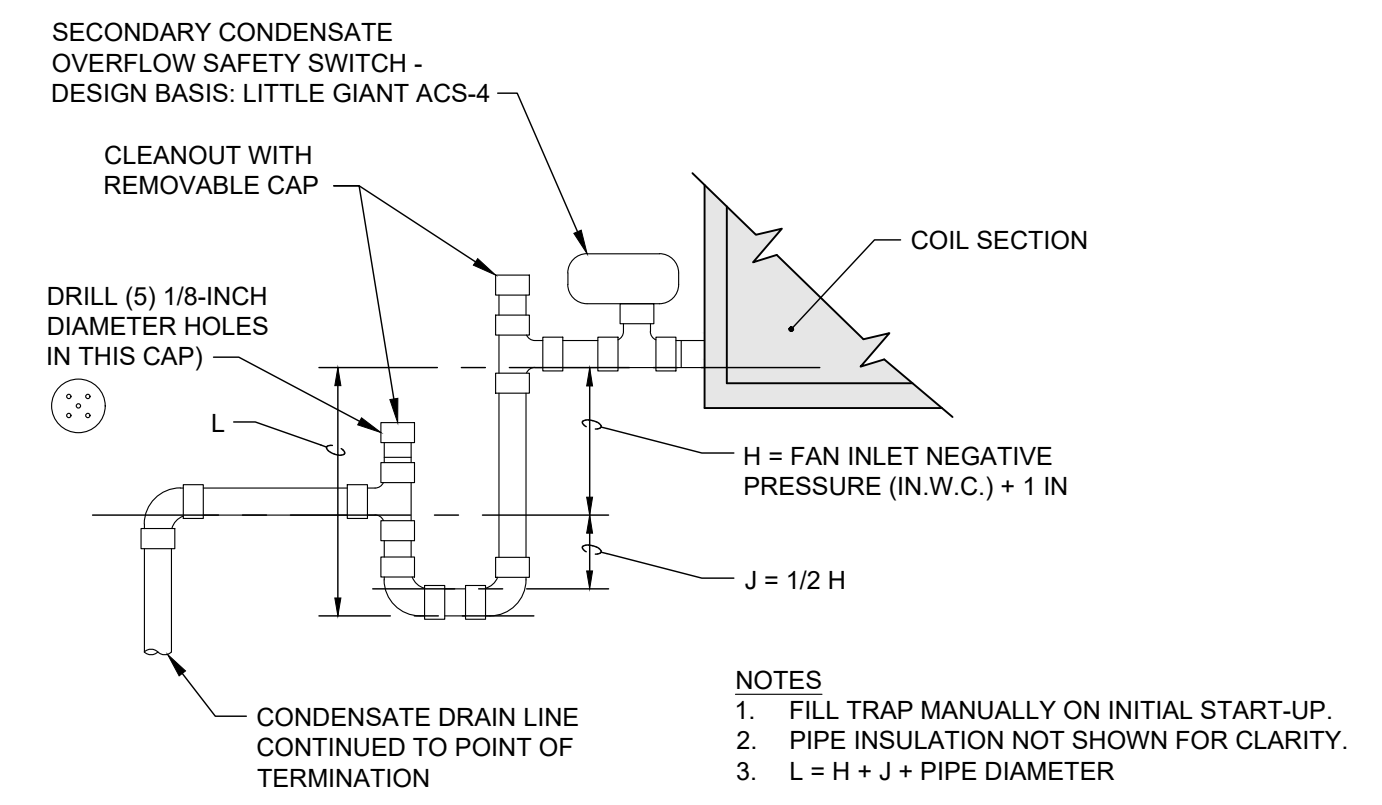
NOTES:  
 1. NO POP RIVETS ALLOWED.  
 2. DUCTS SHALL BE INSULATED AS REQUIRED BY THE SPECIFICATIONS.



**4 TYPICAL DUCT BRANCH CONNECTION**  
 M5.1 NOT TO SCALE



**2 BURIED CONDUIT FOR REFRIGERANT LINES AND CONTROLS**  
 M5.1 NOT TO SCALE



**1 TYPICAL CONDENSATE DRAIN**  
 M5.1 NOT TO SCALE

- DETAIL NOTES**
- USE INSULATED FLEXIBLE DUCTWORK ONLY AS INDICATED ON THE CONTRACT DRAWINGS.
  - MAXIMUM FLEXIBLE DUCT SAG BETWEEN SUPPORTS POINTS SHALL BE 1/2" PER FOOT.
  - FLEXIBLE DUCTS SHALL BE ONE-PIECE AND SHALL NOT BE SPLICED TOGETHER.
  - EXTEND FLEXIBLE DUCT INSULATION TO DUCT/AIR DEVICE INSULATION AND SEAL WITH MASTIC.
- DETAIL REFERENCE NOTES**
- AIR DEVICE.
  - INSULATED FLEXIBLE DUCT CONTINUED TO RIGID DUCTWORK.
  - PROVIDE FULL PERIMETER SUPPORT ON OUTSIDE OF INSULATION OF ALL ROUND DUCTWORK. MINIMUM WIDTH OF STRAP SHALL BE 1-1/2 INCHES.
  - DRAW-TIGHT OR SCREW-TIGHT BANDS OF NONCORROSIVE MATERIALS TO ATTACH INNER LINER OF FLEXIBLE DUCT TO RIGID DUCTWORK. INNER LINER OF FLEX DUCT SHALL BE SEALED WITH MASTIC AND MECHANICALLY ATTACHED TO RIGID DUCTWORK. SEAL OUTER SKIN OF DUCT.
  - INSULATED, GALVANIZED STEEL AIR DEVICE BOOT AND TRANSITION TO ROUND DUCT.
  - INSULATED, RIGID METAL ELBOW.
  - MINIMUM 1.5 TIMES THE DUCT DIAMETER.
  - 2 INCH BATT INSULATION OVERLAPPING EDGES OF CEILING DIFFUSERS BY 2 INCHES.
  - AIR DEVICE NECK SIZE TO MATCH FLEXIBLE DUCT SIZE.
  - MAXIMUM OFFSET IS 7 DEG FROM VERTICAL.

PERMIT REVISION - 02/06/2020

DATE	REVISION	CHECKED
02/06/2020 <td>REVISION 2 <td>DRAWN</td> </td>	REVISION 2 <td>DRAWN</td>	DRAWN

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 NEW PRINT SHOP BUILDING

DETAILS - MECHANICAL





### CONTROL SYSTEM GENERAL NOTES

- A BUILDING MANAGEMENT SYSTEM (BMS) SHALL BE PROVIDED AS PART OF THIS PROJECT.
- THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
  - MICROPROCESSOR BASED CONTROLLERS
  - SENSORS
  - ROUTERS AND COMMUNICATION
  - PANELS
  - SWITCHES
  - WIRING AND CONDUIT
  - SOFTWARE OPERATING SYSTEMS, PROGRAMMING, AND FULL OPERATOR WORKSTATION SYSTEM GRAPHICS
  - COMMISSIONING, CALIBRATION, ACTIVATION, AND DE-BUGGING
  - DEMONSTRATIONS AND TRAINING
- THE CONTRACTOR IS RESPONSIBLE FOR ALL STARTERS, RELAYS, AND WIRING REQUIRED TO ACCOMPLISH THE SEQUENCES OF OPERATION DEFINED ON THIS SHEET.
- ENSURE THAT THE MEASURED SIGNALS ARE COMMUNICATED QUICKLY TO THE CONTROL LOOPS (AND NOT DELAYED DUE TO NETWORK TIMING).
- ALL SET POINTS SHALL BE USER-ADJUSTABLE.
- SEQUENCES ARE PERFORMANCE-BASED AND GENERALLY DO NOT REFER TO SPECIFIC DEAD-BANDS, RESET RATIOS, DELAYS, AND RANGES REQUIRED FOR STABLE OPERATION. THESE PARAMETERS SHALL BE FULLY ADJUSTABLE AT THE OPERATOR WORKSTATION.
- COORDINATE THE RANGE, SET POINT, DEAD-BAND, CHARACTERISTICS AND MOUNTING LOCATIONS OF SENSORS WITH THE ACTUAL EQUIPMENT FURNISHED. INSTALL SENSORS, TUBING, AND WIRING TO BE ACCESSIBLE AND AS NOT TO IMPEDE OR ENCROACH UPON EQUIPMENT SERVICE AND ACCESS AREAS.
- WHERE PROPOSED SEQUENCES COULD DEFEAT THE EQUIPMENT MANUFACTURER'S EQUIPMENT SAFETIES OR BE DETRIMENTAL TO THE EQUIPMENT CONTROLLED, ALERT THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
- PROVIDE MODIFICATION TO THE SET POINTS, DEAD-BANDS, DELAYS AND RANGES BASED UPON THE ACTUAL PERFORMANCE OF THE CONTROLLED EQUIPMENT IN ORDER TO PROVIDE STABLE OPERATION WITHOUT EXCESSIVE CYCLING OR HYSTERESIS. DO NOT MODIFY THE SEQUENCE WITHOUT SUBMITTING AN ALTERNATE SEQUENCE TO THE ENGINEER FOR REVIEW AND APPROVAL.
- IN ADDITION TO SPECIFIC EQUIPMENT ALARMS NOTED IN THE CONTRACT DOCUMENTS, PROVIDE STANDARD ALARMS FOR ITEMS SUCH AS SENSOR FAILURE, OUT-OF-RANGE (HIGH/LOW LIMITS) AND SIMILAR ITEMS.
- COORDINATE SEQUENCES AND DATA ACQUISITION REQUIREMENTS AND PROVIDE FOR TREND LOGGING, REPORT GENERATION, CALCULATED RUN-HOURS, AND SIMILAR PREVENTATIVE MAINTENANCE FUNCTIONS.
- POWER WIRING SHALL NOT BE RUN IN THE SAME CONDUIT AS LOW VOLTAGE WIRING, SIGNAL, OR COMMUNICATIONS WIRING. FINAL CONNECTION TO SENSORS AND ACTUATORS MAY BE MADE WITH FLEXIBLE CONDUIT NOT TO EXCEED 30 INCHES IN LENGTH. COMMUNICATION CABLING CONCEALED ABOVE CEILINGS SHALL BE PLENUM-RATED AND MAY BE RUN WITHOUT CONDUIT, BUT SHALL BE SUPPORTED IN CABLE TRAY (WHERE AVAILABLE), OR SUPPORTED WITH BRIDAL RINGS. EXPOSED COMMUNICATION CABLING SHALL BE RUN IN CONDUIT, EXCEPT WHERE CABLE TRAY IS AVAILABLE TO BE USED.
- WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT VERSION OF THE NATIONAL ELECTRICAL CODE (NEC). CONDUCTORS SHALL BE COPPER, ONE-PIECE, INSTALLED WITHOUT SPLICES. WIRING SHALL BE COLOR-CODED.
- POWER (120V AND ABOVE) AND CONDUIT TO UNIT CONTROLLERS AND PANELS SHALL BE PROVIDED AND TERMINATED BY THE ELECTRICAL CONTRACTOR. TRANSFORMERS, DC POWER RECTIFIERS, AND EXTENSION OF LOW-VOLTAGE POWER TO ACTUATORS, TRANSMITTERS, AND SIMILAR CONTROL DEVICES AND SENSORS SHALL BE PROVIDED BY THE CONTROLS CONTRACTOR.
- "POWER BY DIV 26" REFERS TO POWER PROVIDED BY THE ELECTRICAL CONTRACTOR REGARDLESS OF THE PROJECT SPECIFICATION NUMBERING.
- ALL AIR-MOVING EQUIPMENT SHALL SHUTDOWN DURING A FIRE ALARM AND SHALL AUTOMATICALLY RETURN TO NORMAL OPERATION AFTER THE FIRE ALARM HAS BEEN CLEARED.

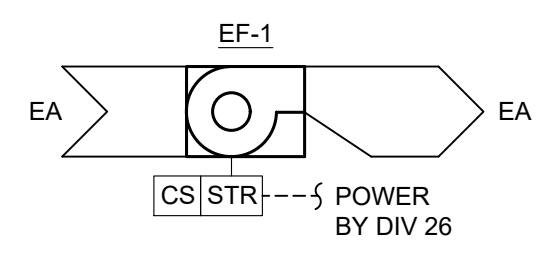
### TYPICAL CONTROL POINT LIST

CONTROL POINT	AI	AO	BI	BO
OUTDOOR AIR TEMPERATURE (DEG F)	●	○	○	○
OUTDOOR AIR HUMIDITY (% RH)	●	○	○	○
BUILDING HUMIDITY	●	○	○	○
BUILDING FIRE ALARM	○	○	○	●
EF-1 ON/OFF	○	○	○	●
EF-1 STATUS (CURRENT SWITCH)	○	○	○	●
EF-2 ON/OFF	○	○	○	●
EF-2 STATUS (CURRENT SWITCH)	○	○	○	●
SPLIT SYSTEM CONTROLLER (SEE NOTE 2)	AI	AO	BI	BO
ZONE TEMPERATURE SENSOR 1 (DEG F)	○	○	○	○
ZONE TEMPERATURE SENSOR 2 (DEG F)	○	○	○	○
ZONE TEMPERATURE SET POINT (DEG F)	○	○	○	○
SYSTEM ENABLE/DISABLE	○	○	○	○
FAN	○	○	○	○
COOLING MODE	○	○	○	○
HEATING MODE - HEAT PUMP	○	○	○	○
HEATING MODE - AUX ELECTRIC HEAT	○	○	○	○
DUCT-MOUNTED SA TEMP SENSOR (DEG F)	○	○	○	○
RA NEEDLEPOINT BIPOLAR IONIZATION (ON/OFF)	○	○	○	○
100% OA SPLIT SYSTEM CONTROLLER (SEE NOTE 3)	AI	AO	BI	BO
SYSTEM ENABLE/DISABLE	○	○	○	○
MODE (COOLING/HEATING)	○	○	○	○
OA DAMPER POSITION WITH END SWITCH	○	○	○	○
OA NEEDLEPOINT BIPOLAR IONIZATION (ON/OFF)	○	○	○	○
SA DUCT-MOUNTED TEMP SENSOR (DEG F)	○	○	○	○
ALARM	○	○	○	○

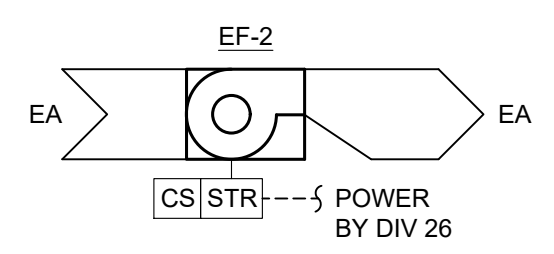
- NOTES**
- THIS SCHEDULE SHOWS THE MINIMUM POINTS REQUIRED. PROVIDE ALL POINTS AS REQUIRED FOR THE MECHANICAL EQUIPMENT TO PERFORM THE SEQUENCE OF OPERATIONS.
  - SPLIT SYSTEM CONTROLLERS SHALL HOUSE ALL OPERATING SEQUENCES FOR STAND-ALONE OPERATION IF COMMUNICATION TO BMS IS TEMPORARILY LOST.
  - 100% OA UNIT SHALL BE CONTROLLED BY THE MANUFACTURER'S CONTROLLER AND SHALL COMMUNICATE TO THE BMS VIA BACNET. THE POINTS LISTED ARE THE MINIMUM POINTS TO BE MONITORED/ADJUSTED THROUGH THE BMS.

### CONTROL LEGEND

SYMBOL	DESCRIPTION
CS	CURRENT SWITCH
DM	DAMPER MOTOR - ELECTRIC
DPS	DIFFERENTIAL PRESSURE SWITCH
ES	ENTHALPY SENSOR
HS	HUMIDITY SENSOR
ION	BIPOLAR IONIZATION BAR
RLY	RELAY
SD	SMOKE DETECTOR
STR	MOTOR STARTER WITH RELAYS
THS	TEMPERATURE AND HUMIDITY SENSOR
TS	TEMPERATURE SENSOR
DIV 16	ELECTRICAL CONTRACTOR
F/A	FIRE ALARM SYSTEM
T	THERMOSTAT
[Symbol]	MANUAL DAMPER
[Symbol]	CONTROL DAMPER
[Symbol]	FAN
[Symbol]	COOLING COIL
[Symbol]	HEATING COIL
[Symbol]	AIR FILTERS



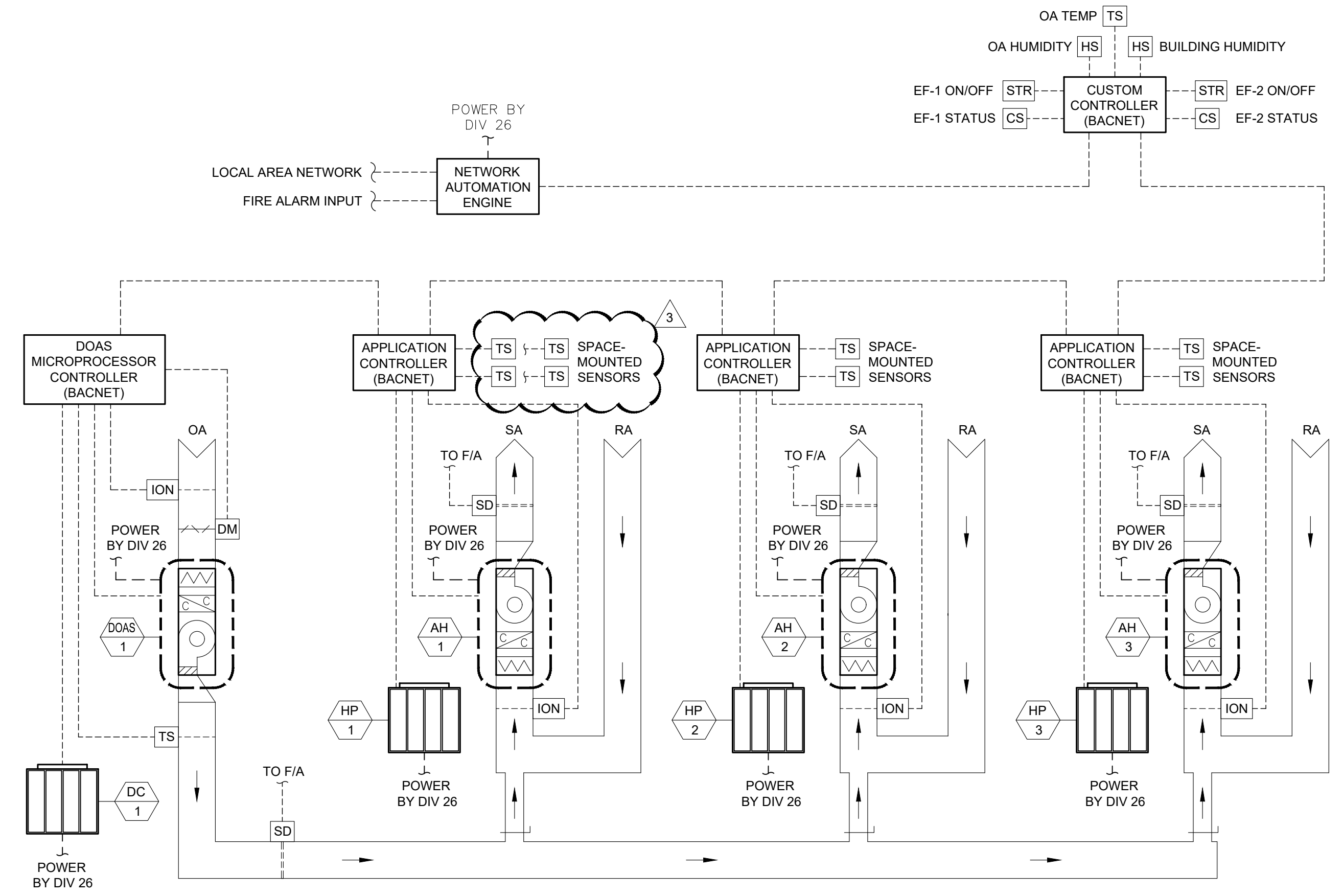
THE INLINE FAN SERVING THE RESTROOMS, WORKROOM, SECURED STORAGE, AND JANITOR CLOSET SHALL BE CONTROLLED BY THE BMS TO OPERATE ON A TIME-OF-DAY SCHEDULE. THE TIME-OF-DAY SCHEDULE SHALL BE COORDINATED TO MATCH THE 100% OUTDOOR AIR SPLIT SYSTEM SCHEDULE. THE EXHAUST FAN STATUS WILL BE MONITORED BY THE BMS.



THE INLINE FAN SERVING THE SIGNAGE LARGE FORMAT ROOM SHALL BE CONTROLLED BY THE BMS TO OPERATE ON A TIME-OF-DAY SCHEDULE. THE TIME-OF-DAY SCHEDULE SHALL BE COORDINATED TO MATCH THE 100% OUTDOOR AIR SPLIT SYSTEM SCHEDULE. THE EXHAUST FAN STATUS WILL BE MONITORED BY THE BMS.

### 2 EXHAUST FAN SEQUENCES AND SCHEMATICS

M6.1 NOT TO SCALE



- SEQUENCE OF OPERATION - BUILDING HVAC SYSTEM**
- SUPPLY FANS**
- THE SUPPLY FAN SHALL BE STARTED AND STOPPED BY THE BMS BASED ON AN OCCUPANCY SCHEDULE. THE FAN START SHALL BE SUBJECT TO SAFETIES SUCH AS FIRE ALARM, SMOKE DETECTORS, OVERLOADS, ETC.
- OCCUPIED MODE**
- OUTSIDE AIR DAMPER SHALL OPEN
  - DOAS-1 SHALL BE ENABLED TO OPERATE CONTINUOUSLY
  - AH-1, AH-2, AND AH-3 TEMPERATURE SET POINTS SHALL BE SWITCHED TO THE OCCUPIED MODE SET POINTS
  - AH-1, AH-2, AND AH-3 SHALL ENTER FAN-ON MODE AND CYCLE THE COOLING AND HEATING AS NEEDED TO MAINTAIN ZONE TEMPERATURE
- UNOCCUPIED MODE**
- AH-1, AH-2, AND AH-3 TEMPERATURE SET POINTS SHALL BE SWITCHED TO THE UNOCCUPIED MODE SET POINTS
  - AH-1, AH-2, AND AH-3 SHALL SWITCH TO FAN-AUTO MODE AND THE UNITS SHALL CYCLE AS NEEDED TO MAINTAIN THE ZONE TEMPERATURE
  - DOAS-1 SHALL BE DISABLED AND SHALL NOT OPERATE IN THE UNOCCUPIED MODE
  - OUTSIDE AIR DAMPER SHALL CLOSE
- UNOCCUPIED MODE - HUMIDITY CONTROL**
- IF THE BUILDING HUMIDITY RISES ABOVE THE UNOCCUPIED MAXIMUM SPACE RELATIVE HUMIDITY SET POINT THE FOLLOWING SHALL OCCUR:
- DOAS-1 SHALL REMAIN DISABLED AND THE OUTDOOR AIR DAMPER SHALL REMAIN SHUT
  - AH-1, AH-2, AND AH-3 SHALL BE SWITCHED TO FAN-ON MODE AND THE TEMPERATURE SET POINTS WILL BE RESET TO THE DEHUMIDIFICATION SET POINTS
  - AH-1, AH-2, AND AH-3 SHALL REVERT TO THE UNOCCUPIED MODE WHEN THE BUILDING RELATIVE HUMIDITY IS LOWERED 5%RH BELOW THE UNOCCUPIED SET POINT
- SET POINTS (USER ADJUSTABLE)**
- |   |          |
|---|----------|
| OCCUPIED SPACE COOLING TEMPERATURE SET POINT: | 75 DEG F |
| OCCUPIED SPACE HEATING TEMPERATURE SET POINT: | 72 DEG F |
| UNOCCUPIED SPACE COOLING SET POINT:           | 80 DEG F |
| UNOCCUPIED SPACE HEATING SET POINT:           | 60 DEG F |
| UNOCCUPIED MAXIMUM SPACE RELATIVE HUMIDITY:   | 60%      |

### 1 CONTROL SCHEMATIC BUILDING HVAC CONTROLS

M6.1 NOT TO SCALE

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Sheet no. M6.1

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EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING



**GENERAL NOTES:**

- ALL 120V, 20A CIRCUIT HOMERUNS OVER 50FT. SHALL BE #10 CU. MINIMUM, UNLESS NOTED OTHERWISE.
- ALL 120V, 20A CIRCUIT HOMERUNS OVER 150FT. SHALL BE #8 CU. MINIMUM, UNLESS NOTED OTHERWISE.
- ALL BRANCH CIRCUIT CONDUCTORS WILL BE SIZED PER NEC MINIMUM. THE MINIMUM ALLOWABLE BRANCH CIRCUIT CONDUCTOR SIZE IS #12 AWG COPPER. INCREASE CONDUCTOR SIZE FOR APPLICATION PER NEC AND AS NOTED ON THE PLANS.
- CONDUCTOR SIZES INDICATED ON CIRCUIT HOMERUNS OR IN SCHEDULES SHALL BE INSTALLED OVER THE ENTIRE LENGTH OF THE CIRCUIT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- UP TO THREE PHASE CONDUCTORS, CORRESPONDING SWITCHLEGS AND NEUTRALS ARE ALLOWED IN THE SAME RACEWAY UNLESS INDICATED OTHERWISE ON THE DRAWINGS. DO NOT COMBINE HOMERUNS.
- PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDERS AND BRANCH CIRCUITS.
- COMPLY WITH ARTICLE 210 OF THE NEC. PROVIDE A DEDICATED NEUTRAL FOR ALL 120V AND 277V CIRCUITS OR PROVIDE C.B. HANDLE TIES TO CONNECT POLES SERVING MULTIWIRE CIRCUITS.
- COORDINATE EXACT LOCATION OF LIGHTING FIXTURES IN MECH. ROOMS/SPACES WITH DUCTWORK INSTALLER PRIOR TO ROUGH-IN. LOCATE BELOW DUCTWORK (8"-0" AFF MINIMUM) CENTERED IN ROOM AS MUCH AS POSSIBLE.
- COORDINATE EXACT INSTALLATION REQUIREMENTS OF OUTLETS IN MILLWORK WITH ARCHITECTURAL DRAWINGS, APPROVED SHOP DRAWINGS AND MILLWORK INSTALLER PRIOR TO ROUGH-IN.
- VERIFY EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL INSTALLER PRIOR TO ROUGH-IN.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHT FIXTURES.
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS IN THEM.
- ALL COMPUTER RECEPTACLE CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL FOR EACH PHASE CONDUCTOR.
- COORDINATE THE REQUIRED SIZE OF ALL CIRCUIT BREAKERS FEEDING EQUIPMENT, (I.E. MOTORS, HVAC EQUIPMENT, SPECIAL PURPOSE OUTLETS, OWNER FURNISHED EQUIPMENT ETC.) WITH APPROVED EQUIPMENT SHOP DRAWINGS AND OWNER REPRESENTATIVES PRIOR TO ORDERING PANELBOARDS. BREAKERS SHALL BE SIZED PER THE NEC, THE EQUIPMENT NAME PLATE AND MANUFACTURERS RECOMMENDATIONS.
- THE POWER COMPANY SHALL BE CONTACTED WITHIN 10 DAYS OF THE AWARD OF THE CONTRACT BY THE CONTRACTOR TO VERIFY THE ACTUAL AVAILABLE SHORT CIRCUIT FAULT CURRENT (SCC) AT THE TRANSFORMER SECONDARY BUSHINGS. THE CONTRACTOR SHALL PROVIDE ELECTRICAL DISTRIBUTION AND UTILIZATION EQUIPMENT AND PANELBOARDS WHICH HAVE AIC/WITHSTAND RATINGS GREATER THAN THE AVAILABLE SSC AT EACH POINT IN THE ELECTRICAL SYSTEM.
- CONTRACTOR SHALL INCLUDE IN HIS BID THE TRANSPORT AND DISPOSAL OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL RULES, REGULATIONS AND GUIDELINES APPLICABLE.
  - CONTRACTOR SHALL COMPLY FULLY WITH FLORIDA STATUTE 403.7186 REGARDING MERCURY CONTAINING DEVICES AND LAMPS.
  - LAMPS, BALLASTS AND OTHER MATERIALS SHALL BE TRANSPORTED AND DISPOSED OF IN ACCORDANCE WITH ALL DEP AND EPA GUIDELINES.
  - THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION THAT ALL MATERIALS WHERE RECYCLED OR DISPOSED OF PROPERLY PER THE GUIDE LINE NOTED ABOVE.
- EXISTING CONDITIONS AND UTILITIES INDICATED ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, VARIOUS SURVEYS AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND/OR BURIAL DEPTHS AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ARCHITECT/ENGINEER MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED A PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.
- LOCATE ALL EXISTING UTILITIES AND PROTECT THEM FROM DAMAGE.
- ALL CONDUIT TO BE CONCEALED UNLESS IMPOSSIBLE DUE TO EXISTING CONDITIONS (I.E. EXPOSED STRUCTURAL CEILINGS, BUILDING EXTERIOR WALLS). CONCEAL ALL CONDUITS ABOVE CEILINGS OR WITHIN WALLS AND COUNTERS.
  - ALL NEW DEVICES TO BE FLUSH MOUNTED UNLESS SPECIFICALLY NOTED OTHERWISE.
  - INSTALL FLEXIBLE CONDUIT DOWN EXISTING WALLS TO NEW FLUSH OUTLETS, (IF EXISTING WALLS DO NOT CONTAIN HOLLOW VERTICAL CAVITIES AND IT IS NOT FEASIBLE TO CONCEAL THE CONDUIT THEN EXPOSED WIREMOLD PAINTED TO MATCH THE WALL SHALL BE USED).
- EXISTING ELECTRICAL SERVICE: MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR SERVICE. DISABLE SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION.
- PANELBOARDS: CLEAN EXPOSED SURFACES AND CHECK TIGHTNESS OF ELECTRICAL CONNECTIONS. REPLACE DAMAGED CIRCUIT BREAKERS AND PROVIDE CLOSURE PLATES FOR VACANT POSITIONS. PROVIDE TYPED CIRCUIT DIRECTORY SHOWING REVISED CIRCUITING ARRANGEMENT.
- A RADIO COVERAGE SURVEY SHALL BE CONDUCTED PRIOR TO, DURING, AND POST CONSTRUCTION TO ENSURE THE TWO-WAY RADIO COVERAGE MEET THE REQUIREMENTS OF NFPA 72 SECTION 24.5.2.2.
- THE BUILDING THAT CANNOT SUPPORT THE REQUIRED LEVEL OF RADIO COVERAGE SHALL BE EQUIPPED WITH A DISTRIBUTED ANTENNA SYSTEM (DAS) WITH FCC-CERTIFIED SIGNAL BOOSTERS IN ORDER TO ACHIEVE THE REQUIRED ADEQUATE RADIO COVERAGE.

FIRE ALARM		
F	MANUAL FIRE ALARM PULL STATION.	b
HA	FIRE ALARM HORN/STROBE COMBINATION DEVICE. (15/75 CANDELA, U.O.N.)	l, m
HS	FIRE ALARM STROBE. (15/75 CANDELA, U.O.N.)	l, m
SD	DUCT MOUNTED SMOKE DETECTOR. (S = SUPPLY; R = RETURN)	
AHR	CONTROL RELAY "AIR HANDLING CONTROL"	
FACP	FIRE ALARM CONTROL PANEL	b
FAA	FIRE ALARM ANNUCIATOR	b
SECURITY AND ACCESS CONTROL		
CR	CARD ACCESS READER, FLUSH MOUNTED. (PR = PROXIMITY)	b
DL	ELECTRIC DOOR STRIKE	
RTE	"REQUEST-TO-EXIT" DOOR RELEASE SWITCH	b
DC	SECURITY DOOR CONTACT	
ML	MAGNETIC DOOR STRIKE	
SCOP	SECURITY CONTROL PANEL	n
COMMUNICATION AND DATA		
TD	COMBINATION TELEPHONE/DATA WALL OUTLET BOX, FLUSH MOUNTED WITH BLANK PLATE, PROVIDE (2) MINIMUM 1" TO CEILING SPACE, U.O.N.	a
TV	COMBINATION HDMI AND VGA WALL OUTLET, FLUSH MOUNT, PROVIDE 1-1/2" EMPTY CONDUIT TO ADJACENT TELEVISION OUTLET BOX	a
TVT	TELEVISION OUTLET, FLUSH MOUNT, STUB INTO CEILING SPACE WITH 3/4" C. OR TO NEAREST TVTC.	n
TTB	TELEPHONE TERMINATION BOARD (OR SYSTEMS TERMINAL BOARD AS NOTED); FIRE RETARDANT TREATED PLYWOOD, 3/4" THICK x 8'-0" HEIGHT x WIDTH AS SHOWN ON PLANS. PAINT TO MATCH WALL WITH (2) COATS OF FIRE RETARDANT PAINT.	
CF	COMMUNICATION FURNITURE BASE FEED WITH 2-GANG JUNCTION BOX, PROVIDE (2) 1-1/4" EMPTY CONDUIT TO ABOVE ACCESSIBLE CEILING SPACE. FLEX CONNECT TO FURNITURE SYSTEM WIREWAY. FIELD VERIFY EXACT CONNECTION POINT WITH FURNITURE VENDOR.	a
GROUNDING		
G	GROUND WIRE, CONCEALED (IN CONDUIT FOR ABOVE GROUND APPLICATIONS)	
GR	GROUND OR GROUND ROD AS NOTED	
GT	GROUND BUS BAR	

POWER		
Φ	NEMA 6-20R RECEPTACLE, 20 AMP, WITH FLUSH WALL OUTLET BOX.	a, f
Φ	DUPLEX RECEPTACLE, 20 AMP, WITH FLUSH WALL OUTLET BOX.	a, f
ΦC	DUPLEX RECEPTACLE CONNECTED TO ACUTY CONTROLS SWITCHING PACK nPP16, 20 AMP, WITH FLUSH WALL OUTLET BOX.	a, f
Φ	DUPLEX RECEPTACLE MOUNTED 2" ABOVE COUNTER BACKSPLASH, 20 AMP, WITH FLUSH WALL OUTLET BOX.	f
ΦG	GFI DUPLEX RECEPTACLE MOUNTED 6" ABOVE COUNTER BACKSPLASH, 20 AMP, WITH FLUSH WALL OUTLET BOX.	f
ΦEWC	GFI DUPLEX RECEPTACLE, 20 AMP, WITH WALL OUTLET BOX FOR ELECTRIC WATER COOLER. COORDINATE CONCEALMENT WITH EWC INSTALLER FOR MOUNTING REQUIREMENTS.	f
ΦWPG	DUPLEX RECEPTACLE, WEATHERPROOF GFI AND SURFACE MTD. OUTLET BOX WITH IN-USE COVER	a, f
Φ30	FLUSH WALL OUTLET BOX AND 20A, 125/250V, 1P, 3W NEMA L5-20R RECEPTACLE.	a, f
Φ30	FLUSH WALL OUTLET BOX AND 30A, 125/250V, 3P, 4W, NEMA 14-30R RECEPTACLE.	a, f
ΦV	CAST IRON FULLY ADJUSTABLE TWO-GANG FLOOR OUTLET BOX WITH (2) 20 AMP DUPLEX RECEPTACLES AND (1) TELECOMMUNICATIONS BLANK OUTLET WITH (1) 1" C. TO TB/TT/C (UNLESS OTHERWISE NOTED). PROVIDE CARPET OR TILE FLANGE. (PROVIDE SPECIAL RECEPTACLES, I.E. ISOLATED GROUND TYPE WHERE NOTED)	d, f
Φ	POWER FURNITURE BASE FEED WITH JUNCTION BOX, FLEX CONNECT TO FURNITURE SYSTEM WIREWAY. FIELD VERIFY EXACT CONNECTION POINT WITH FURNITURE VENDOR.	a, f
Φ	DISCONNECT SWITCH, REFER TO EQUIPMENT FEEDER SCHEDULE FOR REQUIREMENTS (I.E. SIZE, FUSED, NON-FUSED, ETC.)	h, j
Φ	COMBINATION DISCONNECT/MOTOR STARTER	h, j
ΦM	OUTLET BOX WITH 20 AMP, 1 POLE, MANUAL MOTOR CONTROLLER WITHOUT OVERLOADS (MSS), RATED 1 HP @ 120V; REFER TO EQUIPMENT FEEDER SCHEDULE.	f
ΦS	SURFACE MOUNTED SHUNT-TRIP BUTTON, LOCATE AND LABEL IN ACCORDANCE WITH A.H.J., MOUNTED 54" TO TOP, UNLESS OTHERWISE NOTED.	f
Φ	120/208V PANELBOARD, SURFACE MOUNTED	h, j
ΦP	TWO COMPARTMENT POWER POLE, LEGRAND TELE-POWER POLE, NP800C-XX-B - OR APPROVED EQUAL, WHITE UNLESS OTHERWISE SPECIFIED BY ARCHITECT.	
LIGHTING		
Φ	EXIT SIGN LIGHT FIXTURE WITH CEILING OUTLET BOX AND EMERGENCY BATTERY. SHADING INDICATES NUMBER OF FACES AND ORIENTATION, ARROWS, CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHES (OR TO LOCAL EMERGENCY LIGHTING CIRCUIT WHEN AVAILABLE)	f
ΦVS	SINGLE POLE VACANCY SENSOR SWITCH WITH WALL OUTLET BOX, ON/OFF/DIMMING, DUAL TECHNOLOGY WITH PASSIVE INFRARED/MICROPHONIC SENSING, MANUFACTURED BY ACUTY SENSOR SWITCH MODEL #WSX PDT D SA - OR APPROVED EQUAL, LOAD RATING 800W @ 120V	b, f
Φa	LOW VOLTAGE WALLPAD, WITH WALL OUTLET BOX, BY ACUTY CONTROLS, NLIGHT-PODM SERIES, ON/OFF/DIMMING WITH NUMBER OF CHANNELS AS NOTED ON PLANS. CONNECTS TO NLIGHT LIGHTING CONTROL SYSTEM VIA CAT 5 CABLE. ("a" INDICATES SWITCH-LEG)	b, f
ΦS	LOW VOLTAGE OCCUPANCY SENSOR SWITCH, CEILING MOUNTED, DUAL TECHNOLOGY WITH PASSIVE INFRARED/MICROPHONIC SENSING, BY ACUTY CONTROLS nLIGHT #NCM PDT 10 U.O.N. CONNECTS WITH NLIGHT LIGHTING CONTROL SYSTEM VIA CAT 5 CABLE.	
ΦS	LOW VOLTAGE COMBINATION DAYLIGHT/OCCUPANCY SENSOR SWITCH, CEILING MOUNTED, DUAL TECHNOLOGY WITH PASSIVE INFRARED/MICROPHONIC AND DAYLIGHT, BY ACUTY CONTROLS nLIGHT #NCM PDT 10 ADCX, U.O.N. CONNECTS WITH NLIGHT LIGHTING CONTROL SYSTEM VIA CAT 5 CABLE.	
ΦC	PHOTO CELL	

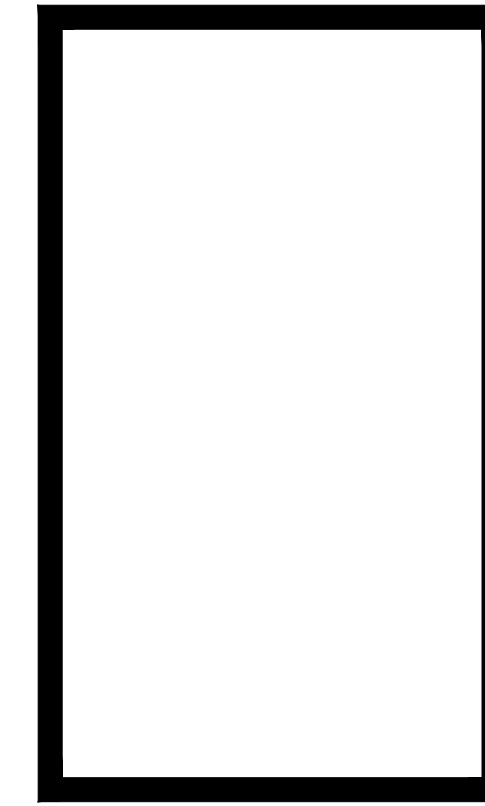
**SYMBOL LEGEND NOTES:**

- THE COLOR OF ALL DEVICES SHALL BE SELECTED BY THE ARCHITECT. COVER PLATES SHALL BE #302 SMOOTH STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- SCREENED ELECTRICAL ITEM DENOTES EXISTING.
- "R" BY DEVICE DENOTES EXISTING TO BE REMOVED COMPLETELY.
- "H" BY DEVICE DENOTES DEVICE TO BE MOUNTED HORIZONTALLY.
- ALL DIMENSIONS INDICATED ARE TO THE BOTTOM OF FIXTURE, OUTLET, OR EQUIPMENT AND SHALL BE THE DIMENSIONS USED UNLESS INDICATED OTHERWISE ON THE DRAWINGS. DIMENSIONS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS ARE TO THE BOTTOM OF THE FIXTURE, OUTLET, OR EQUIPMENT UNLESS INDICATED OTHERWISE. ALL MOUNTING HEIGHTS SHALL COMPLY WITH ADA REQUIREMENTS. VERIFY AND COORDINATE THE EXACT HEIGHT AND LOCATION OF ALL FIXTURES, OUTLETS, AND EQUIPMENT WITH ALL DOCUMENTS AND DISCIPLINES (I.E., ARCHITECTURAL, STRUCTURAL, HVAC, PLUMBING, FIRE PROTECTION, KITCHEN EQUIPMENT, MILLWORK, ETC.) PRIOR TO ROUGH-IN; ADJUST TO MEET ALL REQUIREMENTS.
- ALL SYMBOLS INDICATED IN THIS LEGEND MAY NOT BE USED ON THE PLANS.
- ALL WIRING DEVICES SHALL BE PROVIDED WITH A GROUNDING TERMINAL SCREW.
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- U.O.N. = UNLESS OTHERWISE NOTED.
- A.H.J. = AUTHORITY HAVING JURISDICTION.
- A.F.F. = ABOVE FINISHED FLOOR
- ELECTRICAL CONTRACTOR TO PROVIDE PULL STRINGS IN ALL CONDUIT(S).

**REMARKS:**

- MOUNTED 16" ABOVE FINISHED FLOOR TO THE BOTTOM.
- MOUNTED 44" ABOVE FINISHED FLOOR TO THE BOTTOM.
- MOUNTED 50" ABOVE FINISHED FLOOR TO THE BOTTOM.
- OUTLET BOX SHALL BE SIZED PER SYSTEM INSTALLERS REQUIREMENTS.
- SUPPORT OUTLET BOX FROM STRUCTURE WITH (1) 3/8" ALL THREADS MINIMUM. BOXES LARGER THAN 25" SQUARE INCHES SHALL BE SUPPORTED WITH (2) 3/8" ALL THREADS MINIMUM.
- JUNCTION/OUTLET BOX SHALL BE SIZED AS REQUIRED FOR CONDUCTOR/DEVICES FILL PER N.E.C.
- THREADED CONDUIT HUBS SHALL BE SIZED AND CONFIGURED AS REQUIRED FOR APPLICATION.
- PROVIDE KINDORF MOUNTING RACK FOR FREE STANDING APPLICATIONS. KINDORF SHALL BE PAINTED FOR EXTERIOR APPLICATIONS.
- WHEN SURFACE JUNCTION BOX SYMBOL IS COMBINED WITH DEVICE SYMBOL, PROVIDE APPROPRIATE SURFACE PLATE FOR OUTLET APPLICATION.
- MAINTAIN WORKING CLEARANCES IN STRICT ACCORDANCE WITH N.E.C.
- COORDINATE EXACT LOCATION OF EQUIPMENT WITH ALL DISCIPLINES (I.E. ARCHITECTURAL, STRUCTURAL, HVAC, PLUMBING, FIRE PROTECTION, KITCHEN EQUIPMENT, MILLWORK, ETC.) PRIOR TO ROUGH-IN TO MAINTAIN CLEARANCES.
- "NL" INDICATES FIXTURE CONNECTED AHEAD OF ALL SWITCHES FOR 24 HOUR NIGHTLIGHT OPERATION.
- MOUNTED 80" ABOVE FINISHED FLOOR TO BOTTOM.
- ALL STROBES SHALL BE ADJUSTABLE INTENSITY TYPE SET AT 75cd UNLESS OTHERWISE NOTED.
- MOUNTED 72" ABOVE FINISHED FLOOR TO THE TOP.

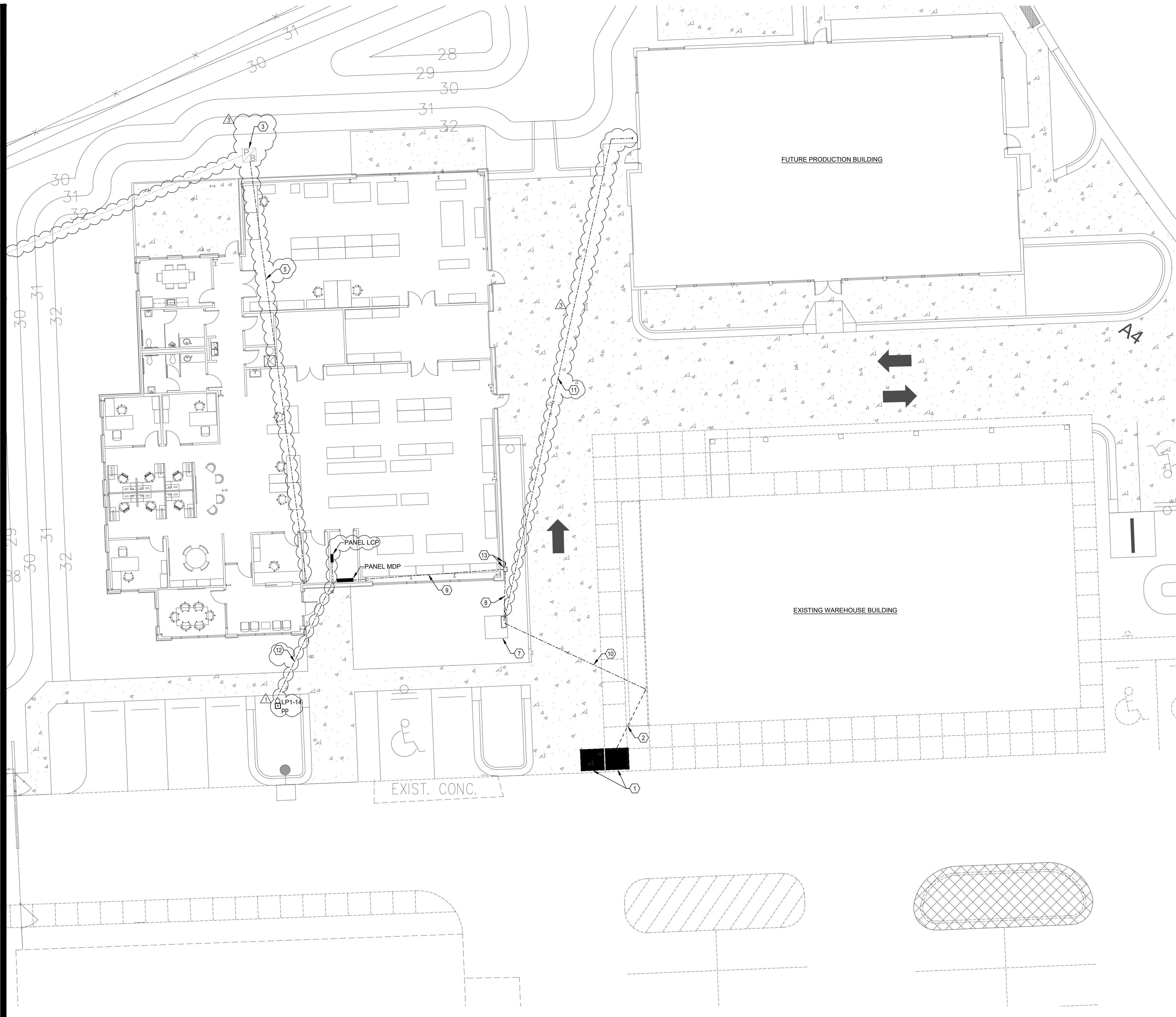
LIGHTING FIXTURE SCHEDULE								
TYPE	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	WATTS	SOURCE	DIMMING	COMMENTS
LS	LINEAR DIRECT-INDIRECT SUSPENDED FIXTURE	FINELITE	HP-4-ID-4It-S-S-835	SUSPENDED	29.1	LED, 3500K	0-10V	SUSPEND USING AIRCRAFT CABLE, DUAL CIRCUIT WIRING
PH	SUSPENDED LED HIGH BAY FIXTURE	PEACH TREE	HBB-16P-120-DX-35K-80	SUSPENDED	97.3	LED, 3500K	0-10V	SUSPEND USING AIRCRAFT CABLE
R1	4" RECESSED DOWNLIGHT	LIGHTOLIER	Z4RDL20835WOCZ10U	RECESSED	20	LED, 3500K	0-10V	
R2	2X4 RECESSED PERFORMANCE FULL LENSE	DAY-BRITE	2-CA-G-40B-835-4-DS-UNV-DIM-DSC	RECESSED	32.1	LED, 3500K	0-10V	
S	4" SURFACE LENSED STRIP LIGHT	DAY-BRITE	FSS-4-55L-835-UNV-DIM	SURFACE	44.5	LED, 45W, 3500K		
S2	LARGE AREA LUMINAIRE	GARDCO	ECF-L-80-1A-NW-SF-3-UNV-BL-OMRP-BK	POLE	200	LED, 4000K	MOTION	CONTROLLED BY LCP
SG	4" LENSED STRIP LIGHT WITH WIRE GUARD	DAY-BRITE	FSS-4-55L-835-UNV-DIM-FSSWG4	SUSPENDED	44.5	LED, 45W, 3500K		SUSPEND USING AIRCRAFT CABLE
RW	ADJUSTABLE WET LOCATION RECESSED DOWNLIGHT	LUMINIS	OC750-L1L15-R55	RECESSED	13.3	LED, 4000K		
EW	EXTERIOR LED WALL LIGHT FIXTURE	TGS	WPF-70W-40K	SURFACE	70.39	LED, 4000K	N/A	CONTROLLED BY LCP
XE	UNIVERSAL EXIT SIGN WITH BATTERY	BEGHELLI	VA-4-SA	SURFACE	3	LED	N/A	
W	54" x 42" LED BACKLIT MIRROR	ELAN		SURFACE	46.5	LED, 3000K	N/A	



DATE	02/06/2020
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**PERMIT REVISION - 02/06/2020**  
**LEGEND AND GENERAL NOTES - ELECTRICAL**  
 EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING  
 Sheet no. **E0.1**





**GENERAL NOTES**

1. COORDINATE WITH FP&L FOR INSTALLATION OF THE NEW TRANSFORMER AND THE PRIMARY CONDUITS.
2. COORDINATE WITH ERAU PRIOR TO DEMOLITION OF THE EXISTING TRANSFORMERS AND SECONDARY CONDUITS TO EXISTING BUILDING METER.
3. PROVIDE AND INSTALL NEW LAMICOID NAMEPLATES FOR EXISTING WAREHOUSE BUILDING PANELS INDICATING 208VAC OPERATING VOLTAGE.

**REFERENCE NOTES**

1. COORDINATE WITH FP&L FOR REMOVAL OF EXISTING 240/120 VAC SINGLE PHASE TRANSFORMERS.
2. REMOVE EXISTING SECONDARY FEEDER FROM EXISTING TRANSFORMERS TO WAREHOUSE BUILDING METER.
3. COMMUNICATIONS PULL BOX INSTALLED BY PRODUCTION BUILDING CONTRACTOR.
4. NOT USED.
5. INSTALL ONE 4 INCH SCH 40 PVC CONDUITS FROM COMMUNICATIONS PULLBOX TO THE PRINT SHOP COMMUNICATIONS ROOM. STUB UP CONDUITS ADJACENT TO TT BOARD.
6. NOT USED.
7. INSTALL NEW TRANSFORMER PAD AND COORDINATE INSTALLATION OF NEW TRANSFORMER WITH FP&L.
8. INSTALL NEW SERVICE CONDUCTORS IN SCH 40 PVC CONDUITS FROM TRANSFORMER SECONDARY TO CT CABINET. SEE PANEL FEEDER SCHEDULE ON SHEET E6.1 FOR CONDUIT AND CONDUCTOR SIZING.
9. INSTALL NEW SERVICE CONDUCTORS IN SCH 40 PVC CONDUITS FROM CT CABINET TO PANEL MDP. SEE PANEL FEEDER SCHEDULE ON SHEET E6.1 FOR CONDUIT AND CONDUCTOR SIZING.
10. INSTALL NEW SERVICE CONDUCTORS IN SCH 40 PVC CONDUITS FROM TRANSFORMER SECONDARY TO WAREHOUSE BUILDING METER BASE. SEE PANEL FEEDER SCHEDULE ON SHEET E6.1 FOR CONDUIT AND CONDUCTOR SIZING.
11. INSTALL THREE 4 INCH CONDUITS FROM TRANSFORMER SECONDARY CABINET TO FUTURE BUILDING LOCATION. INSTALL TRACER WIRE AND CAP CONDUITS BELOW GRADE. MAINTAIN 12" MIN SPACING BETWEEN POWER AND DATA CONDUITS.
12. INSTALL ONE 2 INCH SCH 40 PVC CONDUIT FROM LCP TO LIGHT POLE. SEE EQUIPMENT FEEDER SCHEDULE ON SHEET E6.1 FOR CONDUCTOR DETAILS. SEE DETAIL 1 ON SHEET E5.2 FOR POLE DETAILS.
13. INSTALL CT CABINET AND METER BASE IN ACCORDANCE WITH FPL ELECTRICAL SERVICE STANDARDS. SEE DETAIL 4 ON SHEET E5.1 FOR DETAILS.



REVISION	DATE
ADDENDUM 1	08/21/2019
REVISION 1	01/15/2020

**PERMIT REVISION - 02/06/2020**

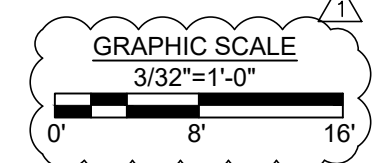
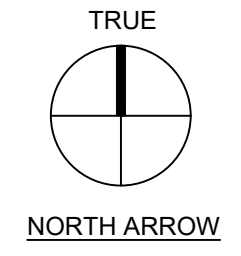
**SITE PLAN - ELECTRICAL**

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

**E1.1**

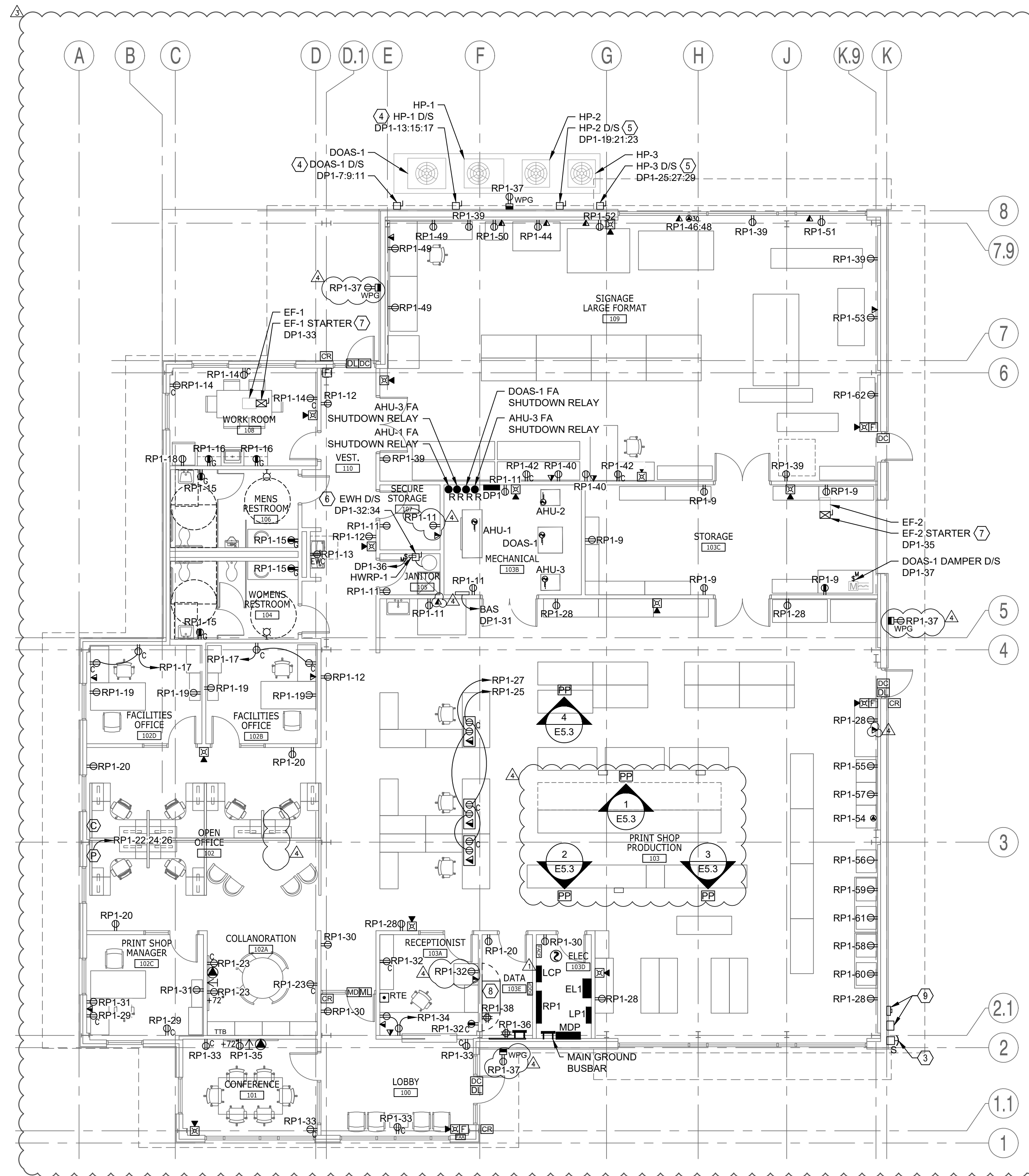
Date: 07/12/2019  
Job no.: SOBE 19005  
Sheet no.:

1 SITE PLAN - ELECTRICAL  
E1.1 3/32" = 1'-0"





**NOTE:**  
 PROVIDE AND INSTALL A UL MASTER LABEL LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH UL 98 AND NFPA 780. SEE SPECIFICATIONS SECTION 284113 FOR DETAILS.



1 FLOOR PLAN - POWER AND SYSTEMS  
 E1.2 1/8" = 1'-0"

**GENERAL NOTES**

- FURNITURE SYSTEM RECEPTACLES ARE APPROXIMATE. FINAL CONFIGURATION TO BE COORDINATED WITH CHOSEN FURNITURE MANUFACTURER.
- PROVIDE ONE SPARE FOR EACH TYPE OF MODULE FOR STARLINE PLUG-IN RACEWAY.
- PROVIDE ONE SPARE FOR EACH TYPE OF PLUG-IN UNIT FOR STARLINE TRACK BUSWAY.
- NOT USED

**REFERENCE NOTES**

- NOT USED
- NOT USED
- INSTALL PANEL MDP SHUNT TRIP. PROVIDE A PERMANENT PLAQUE IN ACCORDANCE WITH AHJ AND 225.37, NEC 2014 IDENTIFYING THE BUTTON AS 'MAIN POWER SHUNT TRIP'.
- PROVIDE AND INSTALL 240VAC, 60A, 3P DISCONNECT SWITCH IN A NEMA 3R ENCLOSURE.
- PROVIDE AND INSTALL 240VAC, 30A, 3P DISCONNECT SWITCH IN A NEMA 3R ENCLOSURE.
- PROVIDE AND INSTALL 240VAC, 30A, 2P DISCONNECT SWITCH IN A NEMA 1 ENCLOSURE TO SERVICE EWH.
- NEMA 00 COMBINATION MOTOR STARTER.
- IT RACK SHOWN FOR SPACE ALLOCATION ONLY. RACK TO BE INSTALLED BY OTHERS.
- INSTALL CT CABINET AND METER BASE. SEE DETAIL 4 ON SHEET E5.1 FOR DETAILS.
- NOT USED.
- NOT USED.
- NOT USED.
- NOT USED.

3501 Quadrangle Boulevard, Suite 100  
 Orlando, Florida 32817  
 (407) 380-0400  
 CERT. OF AUTH. NO. 6106  
 GARY A. WILKERSON, P.E. 43167  
 NYLE J. GARTNER, P.E. 53009  
 JEFF A. KIRKMAN, P.E. 65629  
 ADAM S. LEVINE, P.E. 77010  
 19005

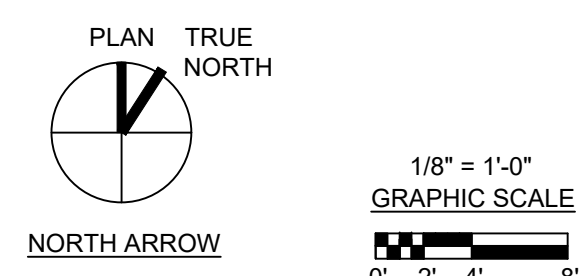
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DATE	02/06/2020
REVISION	REVISION 2
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FLOOR PLAN - POWER AND SYSTEMS  
 EMBURY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING

Date: 07/12/2019  
 Job no.: SOBE 19005  
 Sheet no.: E1.2





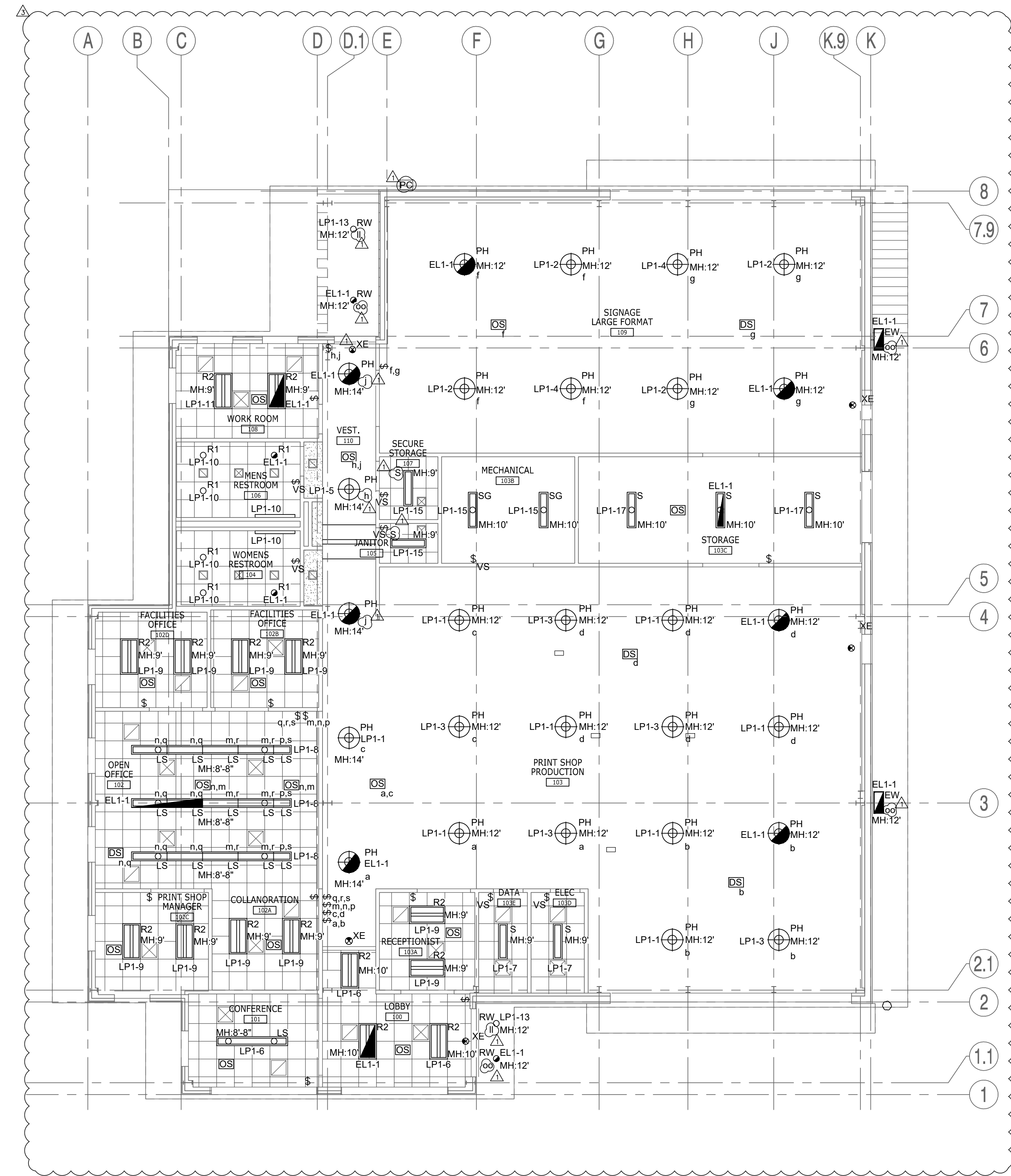
**GENERAL NOTES**

1. ALL 120VAC NORMAL POWER LIGHTING CIRCUITS ARE FED FROM PANEL 'LP1'.
2. ALL 120VAC EMERGENCY/LIFE SAFETY LIGHTING CIRCUITS ARE FED FROM EM LIGHTING INVERTER PANEL EL1.
3. CONTRACTOR TO PROVIDE AND INSTALL ALL COMPONENTS AND CABLING NECESSARY FOR A COMPLETE AND FUNCTIONAL LIGHTING CONTROL SYSTEM. SEE LIGHTING CONTROL DIAGRAMS ON SHEET E6.3 FOR DETAILS.

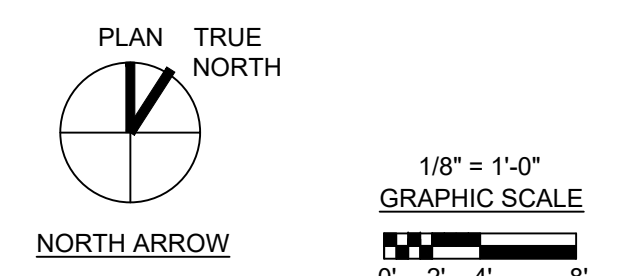
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Orlando, Florida 32817  
(407) 380-0400  
CERT. OF AUTH. NO. 6106

GARY A. WILKERSON, P.E. 43167  
 NYLE J. GARTNER, P.E. 53069  
 JEFF A. KIRKMAN, P.E. 65629  
 ADAM S. LEVINE, P.E. 77010

19005



1 REFLECTED CEILING PLAN - ELECTRICAL  
E1.3 1/8" = 1'-0"



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**REFLECTED CEILING PLAN - ELECTRICAL**

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

**E1.3**



LUMINAIRE SCHEDULE						
SYMBOL	QTY	LABEL	ARRANGEMENT	TOTAL LAMP LUMENS	LLF	DESCRIPTION
○	4	RW	SINGLE	N.A.	0.900	OC750-L1L15-R55
□	7	EW	SINGLE	7335.5	0.900	WPF-70W-40K
□	4	S2	SINGLE	N.A.	1.000	ECF-L-80L-1A-NW-G2-3

CALCULATION SUMMARY					
LABEL	CALC TYPE	UNITS	AVG	MAX	MIN
BETWEEN NEW AND EXISTING BLDG	ILLUMINANCE	Fc	3.33	18.5	0.2
PRINT SHOP PARKING	ILLUMINANCE	Fc	5.72	22.0	0.9
PRINT SHOP NORTH	ILLUMINANCE	Fc	2.71	17.8	0.0
PRODUCTION BUILDING PARKING	ILLUMINANCE	Fc	4.21	18.3	0.5
PROPERTY LINE	ILLUMINANCE	Fc	0.03	1.1	0.0
SERVICE ACCESS DRIVEWAY	ILLUMINANCE	Fc	3.66	18.1	0.3

DAYTONA BEACH DESIGN CRITERIA	
MAXIMUM ILLUMINATION LEVELS	
TYPE OF USE ABUTTING A LOT LINE	MAXIMUM ILLUMINATION LEVEL AT LOT LINE (FOOT-CANDLES)
COMMERCIAL USE	2
PARKING LOT	2.5

### GENERAL NOTES

- SITE LIGHTING SHALL BE IN COMPLIANCE WITH CITY OF DAYTONA BEACH LAND DEVELOPMENT CODE SECTION 6.9.
- COORDINATE POLE LOCATIONS WITH CIVIL DRAWINGS TO AVOID CONFLICT WITH OTHER UTILITIES.
- EXISTING PARKING SPOTS NOT INCLUDED IN SCOPE OF THIS PROJECT.
- SEE SHEET ES.2 FOR LUMINAIRE AND POLE DETAILS

### REFERENCE NOTES

- FUTURE LIGHT TO BE PROVIDED INSTALLED WITH PRODUCTION BUILDING.



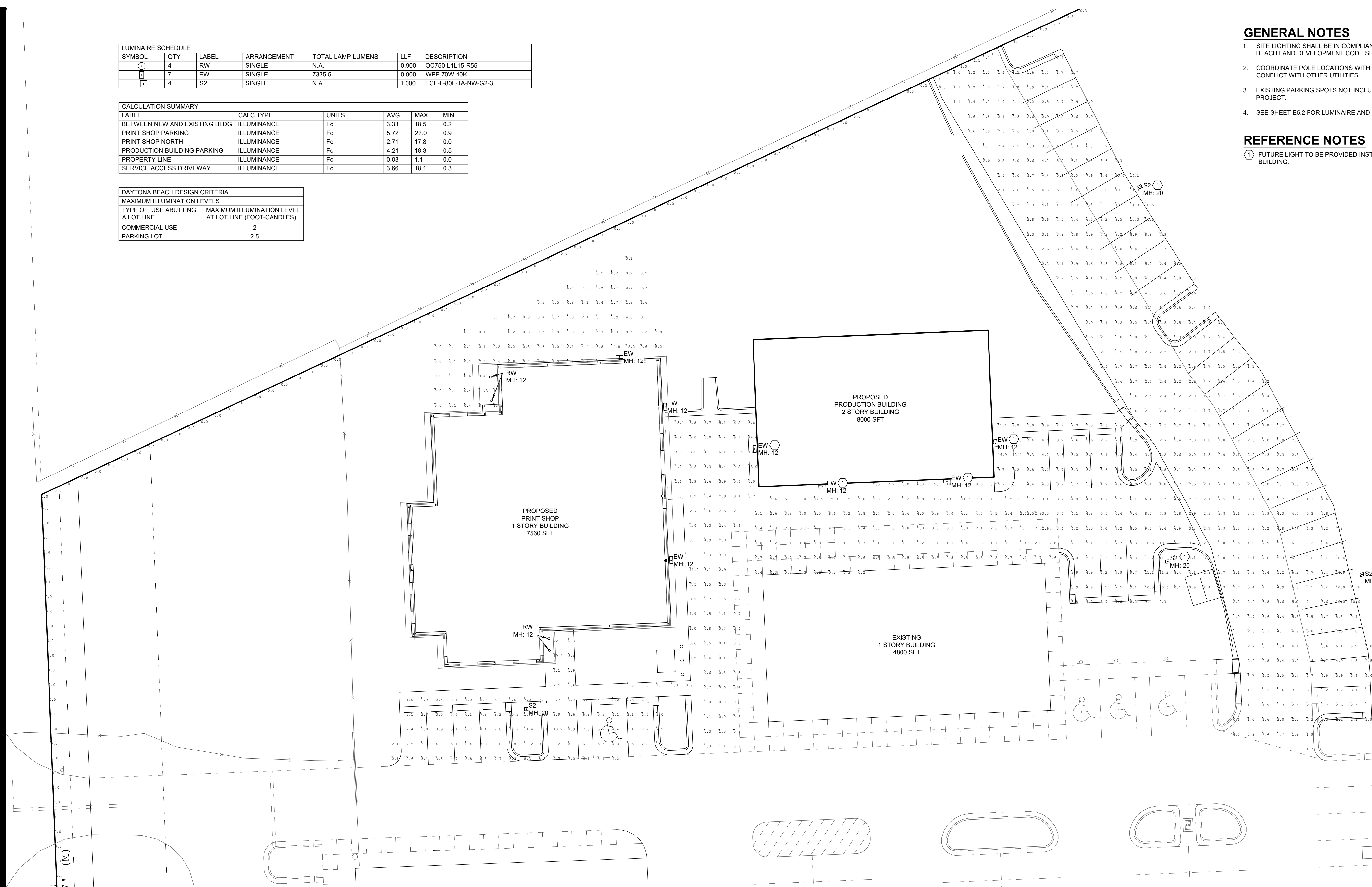
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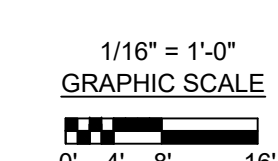
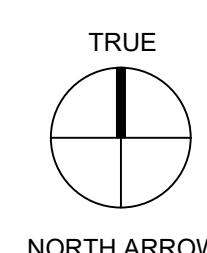
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□ GARY A. WILKERSON, P.E. 43167  
□ RYLEE J. CARTER, P.E. 53059  
□ JEFF A. KIRKMAN, P.E. 65529  
□ ADAM S. LEVINE, P.E. 77010

19055



**1 SITE PLAN - PHOTOMETRICS**  
E1.4 1/16" = 1'-0"



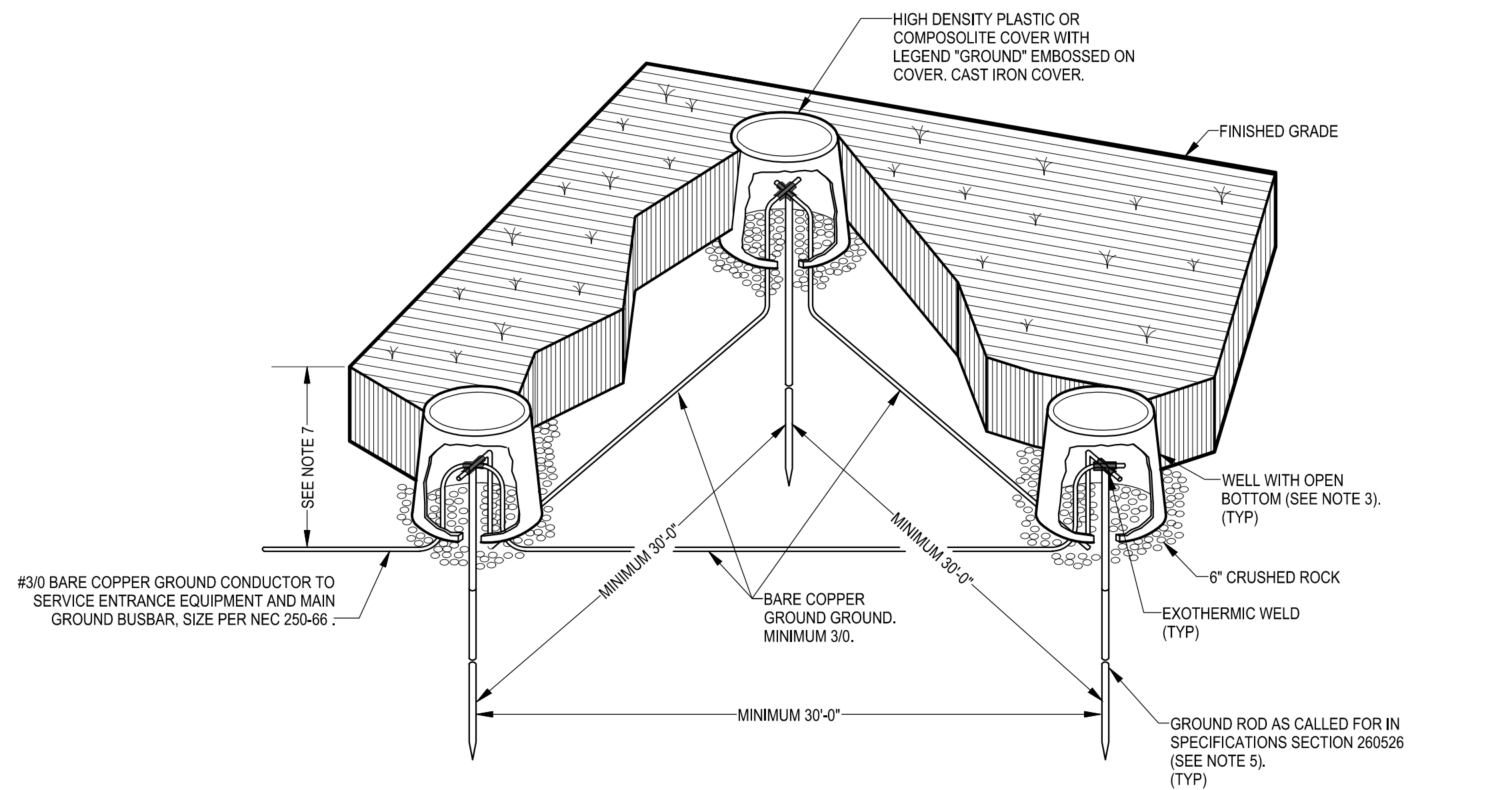
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**SITE PLAN - PHOTOMETRICS**  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

Date: 07/12/2019  
Job no.: SOB 19005  
Sheet no.: **E1.4**  
NEW SHEET





- NOTES:**
- 1) SEE SPECIFICATION SECTION 260526.
  - 2) NOT FOR USE IN PAVED, ETC. LOCATIONS.
  - 3) INCREASE DEPTH, DIAMETER, SIZE, ETC. IF REQUIRED DUE TO INSTALLATION AND ACCESS REQUIREMENTS.
  - 4) CONCRETE COVERS ARE NOT ACCEPTABLE.
  - 5) IF THREE RODS IN A DELTA CONFIGURATION DOES NOT PROVIDE SPECIFIED RESISTANCE, CHANGE ROD LENGTHS FOR MINIMUM SPECIFIED AS REQUIRED TO PROVIDE SPECIFIED RESISTANCE.
  - 6) MEASUREMENT OF RESISTANCE VALUES TO PROVIDE COMPLIANCE WITH SPECIFIED RESISTANCE SHALL BE WITH GROUND RODS CONNECTED IN DELTA CONFIGURATION BUT DISCONNECTED FROM EQUIPMENT OR BUSBAR BEING GROUNDED.
  - 7) DEPTH PER CODES, 1'-0" MINIMUM.

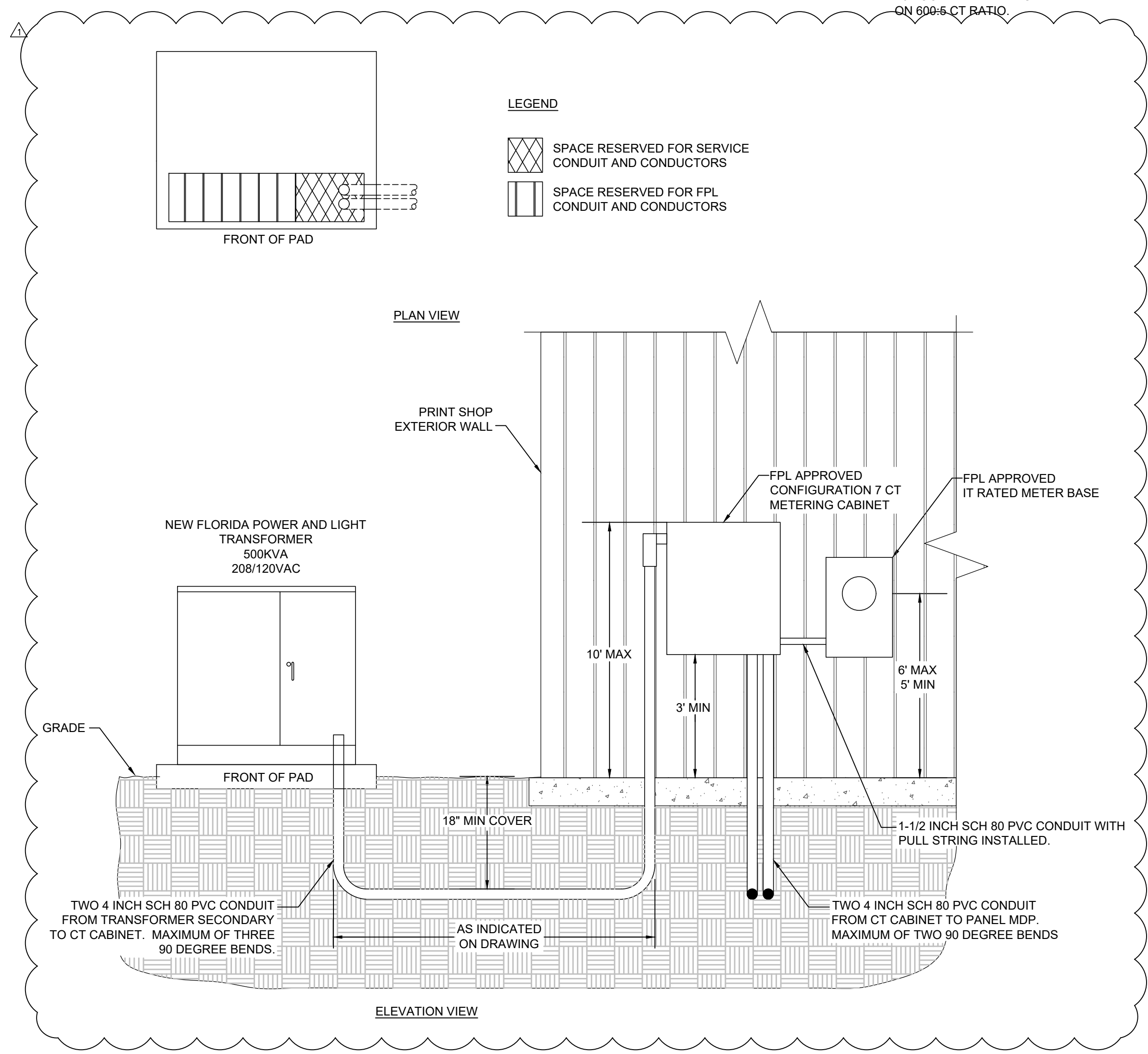
**WELL:**

INSIDE DIMENSIONS: 12" MINIMUM  
 HEIGHT: 18" MINIMUM  
 MATERIAL: STRUCTURAL PLASTIC, CONCRETE, OR COMPOSITE  
 MANUFACTURER: QUAZITE OR BROOKS PRODUCTS

**1 MAIN SERVICE GROUND**  
 E5.1 NOT TO SCALE

**GENERAL NOTES**

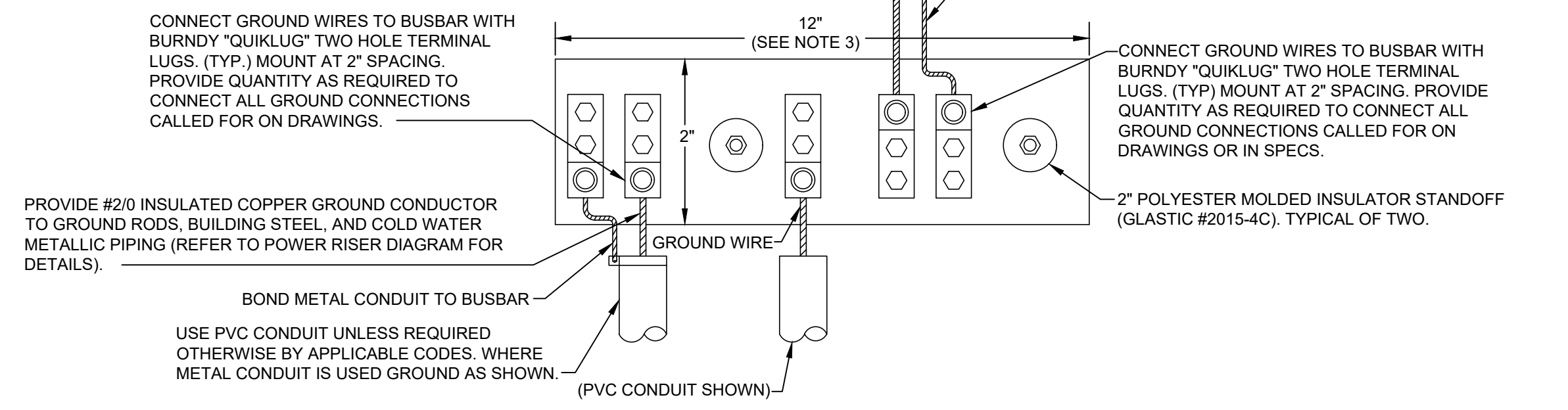
1. COORDINATE METER REQUIREMENTS WITH BEVERLY HUTTO OF FLORIDA POWER AND LIGHT, 386-322-3439.
2. 40 FOOT MAX DISTANCE BETWEEN METER AND TRANSFORMER BASED ON 600:6 CT RATIO.



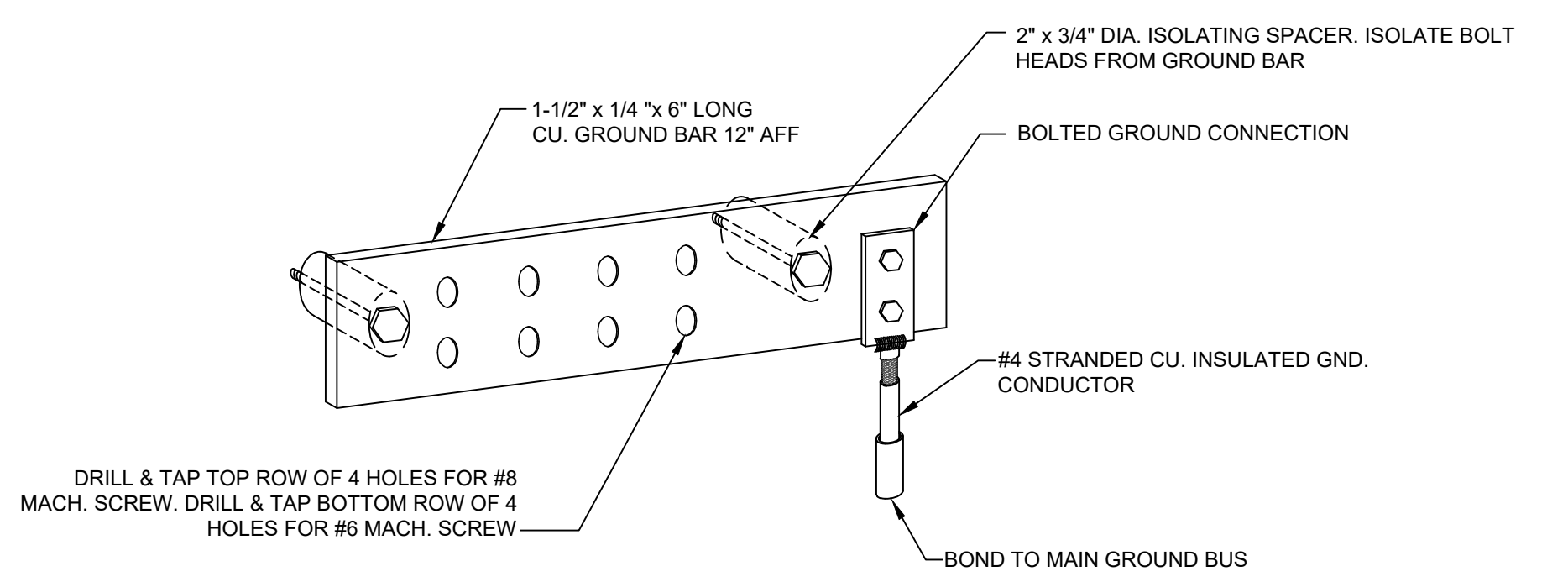
**4 METER DETAIL**  
 E5.1 NOT TO SCALE

**GENERAL NOTES**

1. ALL HARDWARE BOLTS, NUTS, WASHER, ETC. SHALL BE SOLID COPPER OR BRONZE. COPPER PLATING IS NOT ACCEPTABLE.
2. BUSBAR SHALL BE 1/4" THICK x 2" WIDE FLAT COPPER BAR
3. INCREASE LENGTH AS REQUIRED FOR NUMBER OF CONNECTIONS AND STILL PROVIDE 2" SPACING BETWEEN LUGS.



**2 MAIN GROUND BUSBAR**  
 E5.1 NOT TO SCALE



**3 TB GROUND BUSBAR**  
 E5.1 NOT TO SCALE

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DATE	02/06/2020
REVISION	REVISION 2
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**DETAILS - ELECTRICAL**

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
 NEW PRINT SHOP BUILDING

E5.1

Date	07/12/2019
Job no.	SOBE 19005
Sheet no.	



**GARDCO** by @ignify

**Site & Area**  
EcoForm  
ECF-L Large Area Luminaire

LED

Project: \_\_\_\_\_  
Location: \_\_\_\_\_  
City: \_\_\_\_\_  
Type: \_\_\_\_\_  
Lamp: \_\_\_\_\_  
Notes: \_\_\_\_\_

Gardco EcoForm Gen-2 combines economy with performance in an LED area luminaire. Capable of delivering up to 42,000 lumens or more in a compact, low profile LED luminaire. EcoForm offers a new level of customer value. EcoForms features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings. Includes Service Tag, our innovative way to provide assistance throughout the life of the product.

Ordering guide example: ECF-L-96L-1A-CW-AR-AR-90-120-DD-PCB-F1-SP1-T8-RPA-MS-BK

Part	Code	Desc	Options
ECF-L	96L	96" LED Luminaire	1A CW AR AR 90 120 DD PCB F1 SP1 T8 RPA MS BK

1. BL-MBS27 equipped with out-board sensor housing when voltage is HVU (247-480V).  
2. Mounts to 4" round pole with adapter included for square poles.  
3. Limited to a maximum of 45 degree aiming above horizontal.  
4. Not available with other dimming control options.  
5. Not available with motion sensors.  
6. Not available with photocell control.

7. Available only in 120 or 277V.  
8. Not available in 347 or 480V.  
9. Must specify input voltage.  
10. Dimming not to be connected to LEDA receptacle if ordering with other control options.  
11. Not available in 480V.  
12. Not available with 0-10V.  
13. Not available with 0V and MS. RPA provided with black finish standard.

14. HFS not available with Type 5 and 9B options.  
15. Available only with SW, LLC, and BL control options.  
16. Available only with SW and BL control options.

ECF-L\_EcoForm\_area\_large\_04/19 page 1 of 7

**FIXTURE S2**

**tgs** TRULY GREEN SOLUTIONS

SKU#: \_\_\_\_\_ PROJECT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

**WPF™ Full-Cutoff Wall Pack**

**DESCRIPTION**  
The WPF™ full-cut off wall pack provides high performance outdoor illumination in a familiar form factor. An advanced polycarbonate lens provides uniform illumination and reduces glare when compared to traditional lighting sources. The WPF™ wall pack luminaire is suitable for wet locations and is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways, and loading docks.

**APPLICATIONS**  
Commercial, Retail, Institution, Warehouse, and Industrial

**FEATURES**  
Rugged, die-cast housing suitable for indoor or outdoor application. Available in Dark Bronze finish.

**Optical System**  
Polycarbonate optical lens providing a Type III distribution.

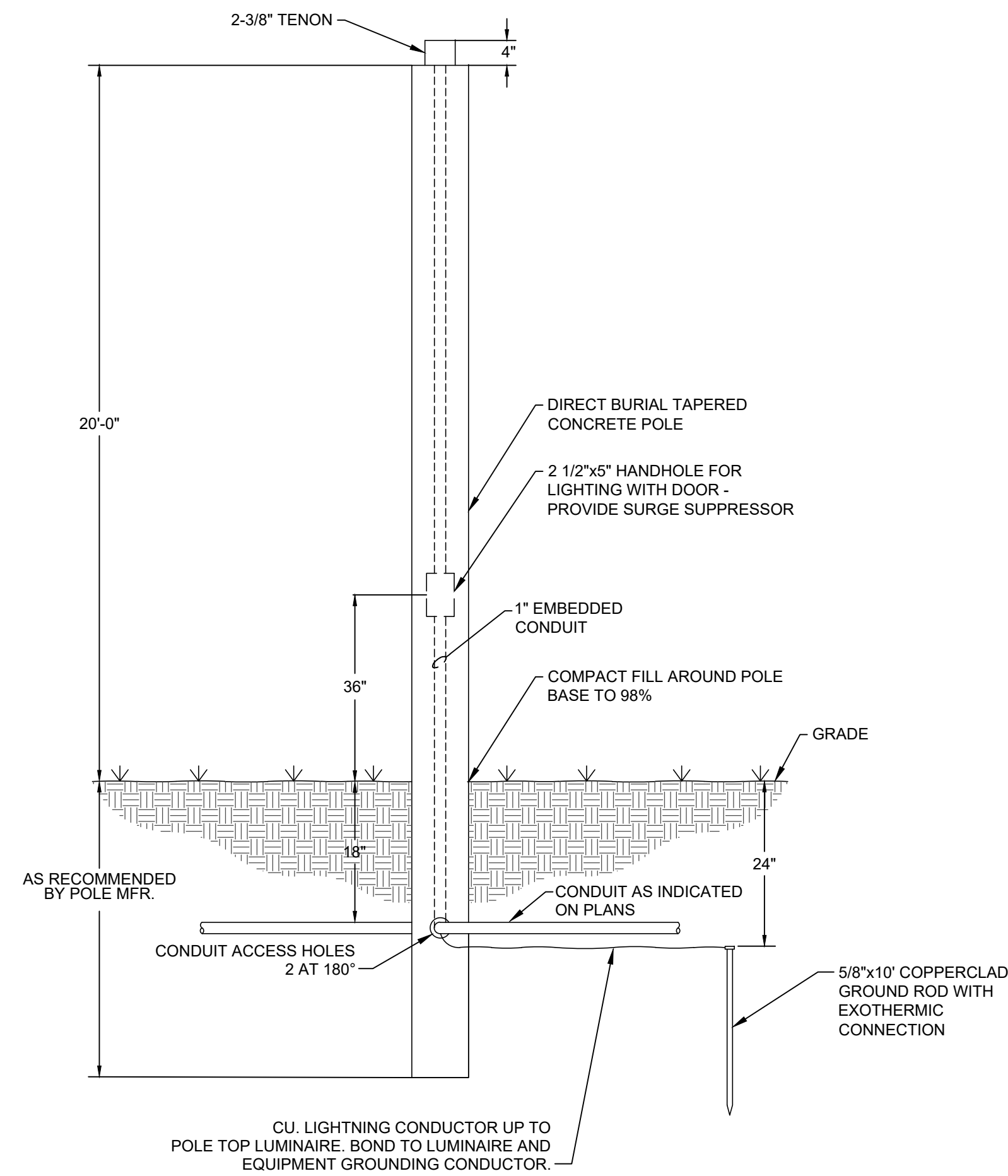
**Warranty**  
5 Year Warranty. See warranty documentation for more information.

**Ordering Information**

LED Wall Pack	Wattage	CCT	Input Voltage	Finishing
WPF	45W 70W 90W 135W	50K-5000K *40K-4000K	U - 120-277VAC	D - Dark Bronze

Specifications and Dimensions subject to change without notice.  
\*MCO and longer lead times may apply, please contact customer service for more information.  
1 822019 9601 Varkel Ave | Chatsworth, CA 91311 | Ph: (818) 206-4404 | trulygreensolutions.com © 2019 Truly Green Solutions. All rights reserved.

**FIXTURE EW**



**1** POLE DETAIL - FIXTURE TYPE 'S2'  
E5.2 NOT TO SCALE

**GENERAL NOTES**

1. SITE LIGHTING SHALL BE IN COMPLIANCE WITH CITY OF DAYTONA BEACH LAND DEVELOPMENT CODE SECTION 6.9.
2. COORDINATE POLE LOCATIONS WITH CIVIL DRAWINGS TO AVOID CONFLICT WITH OTHER UTILITIES.



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Orlando, Florida 32817  
(407) 380-0400

CERT. OF AUTH. NO. 6106

■ GARY A. WILKERSON, P.E. 43167  
■ RYLEE J. CARTER, P.E. 53069  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010

19005



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**DETAILS - SITE LIGHTING**

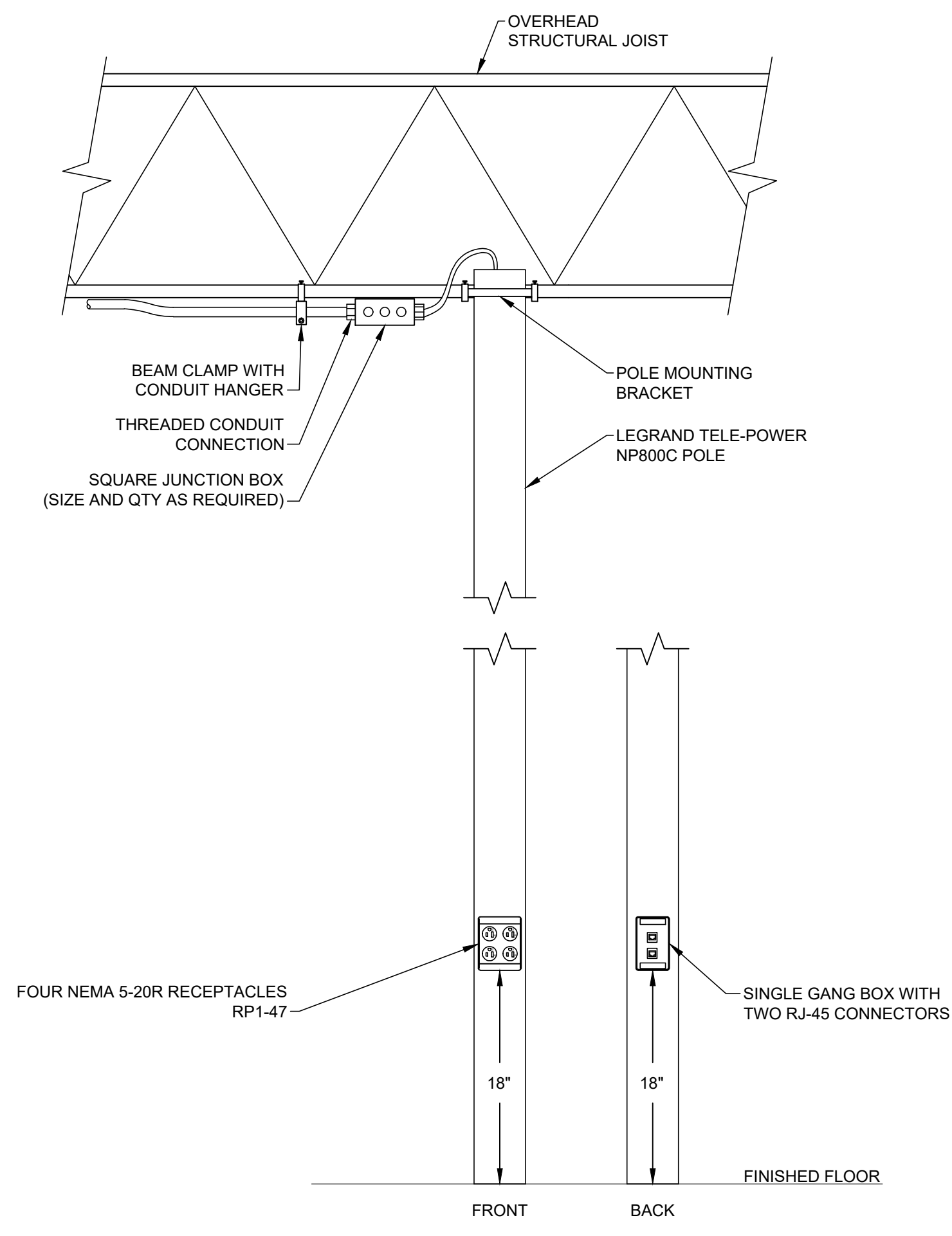
Date: 07/12/2019  
Job no.: SOBIE 19005  
Sheet no.: E5.2 NEW SHEET



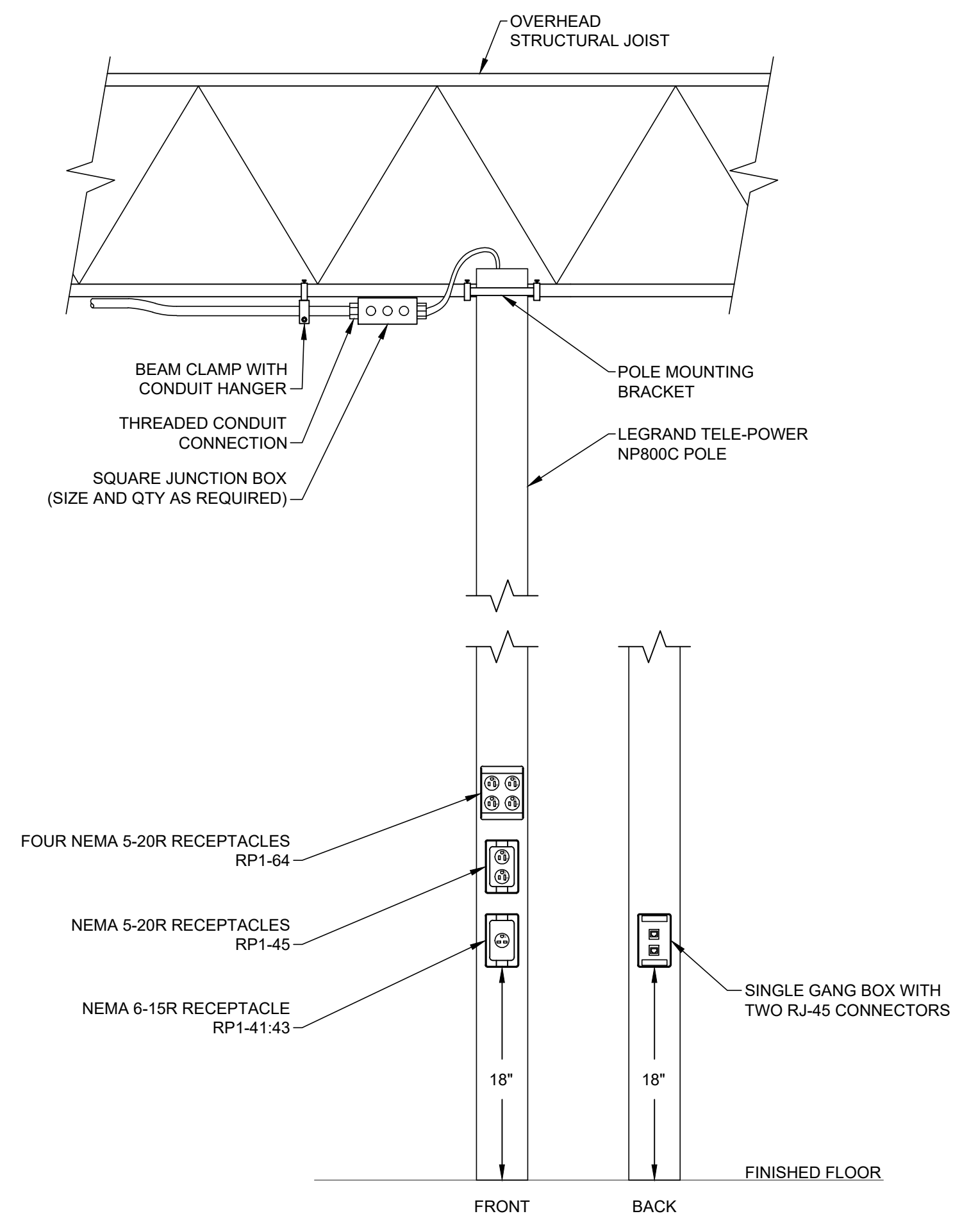


**GENERAL NOTES**

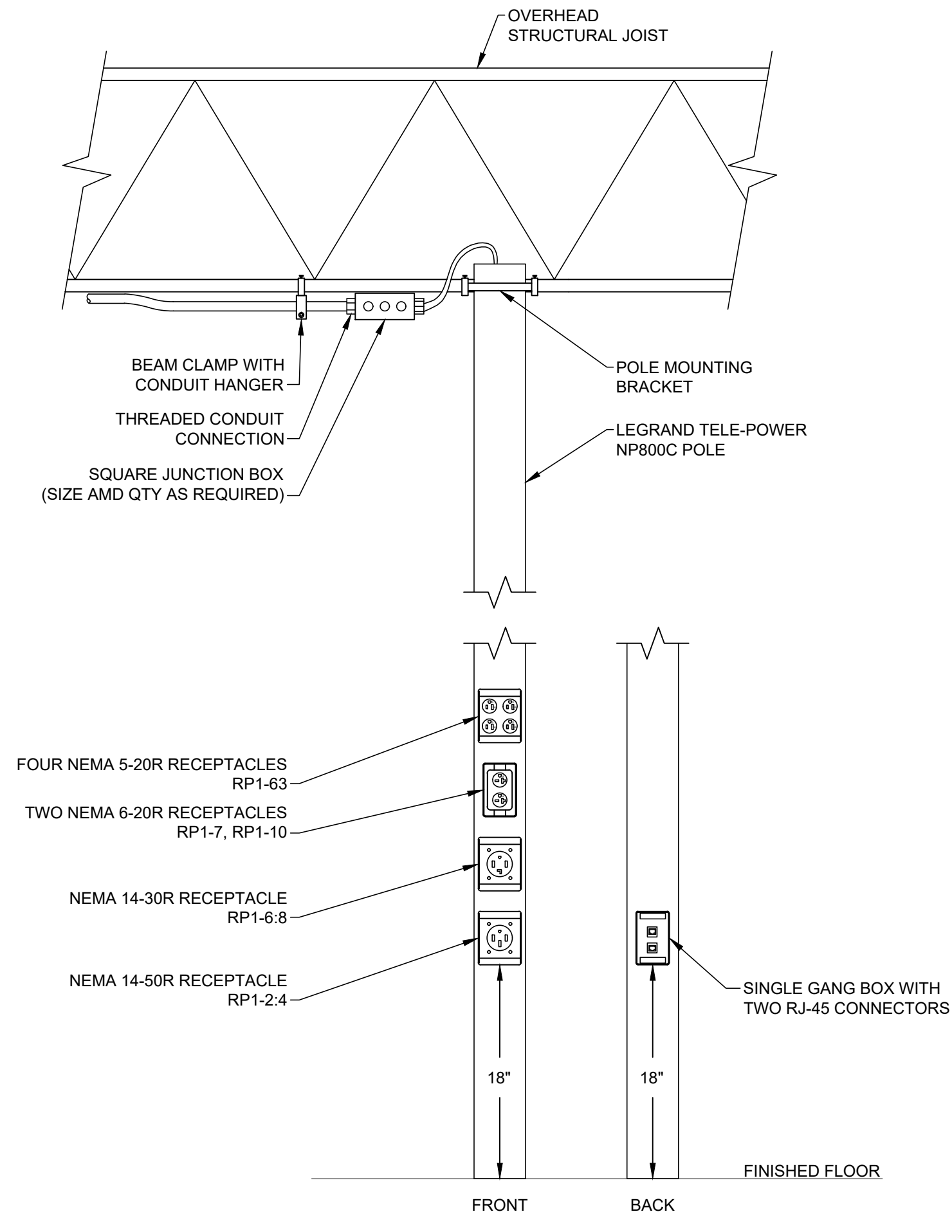
1. SEE EQUIPMENT FEEDER SCHEDULE FOR CONDUCTOR SIZE.
2. PROVIDE CHANNEL STRUT AS NEEDED TO MOUNT JUNCTION BOX AND CONDUIT HANGERS TO CEILING STRUCTURE.



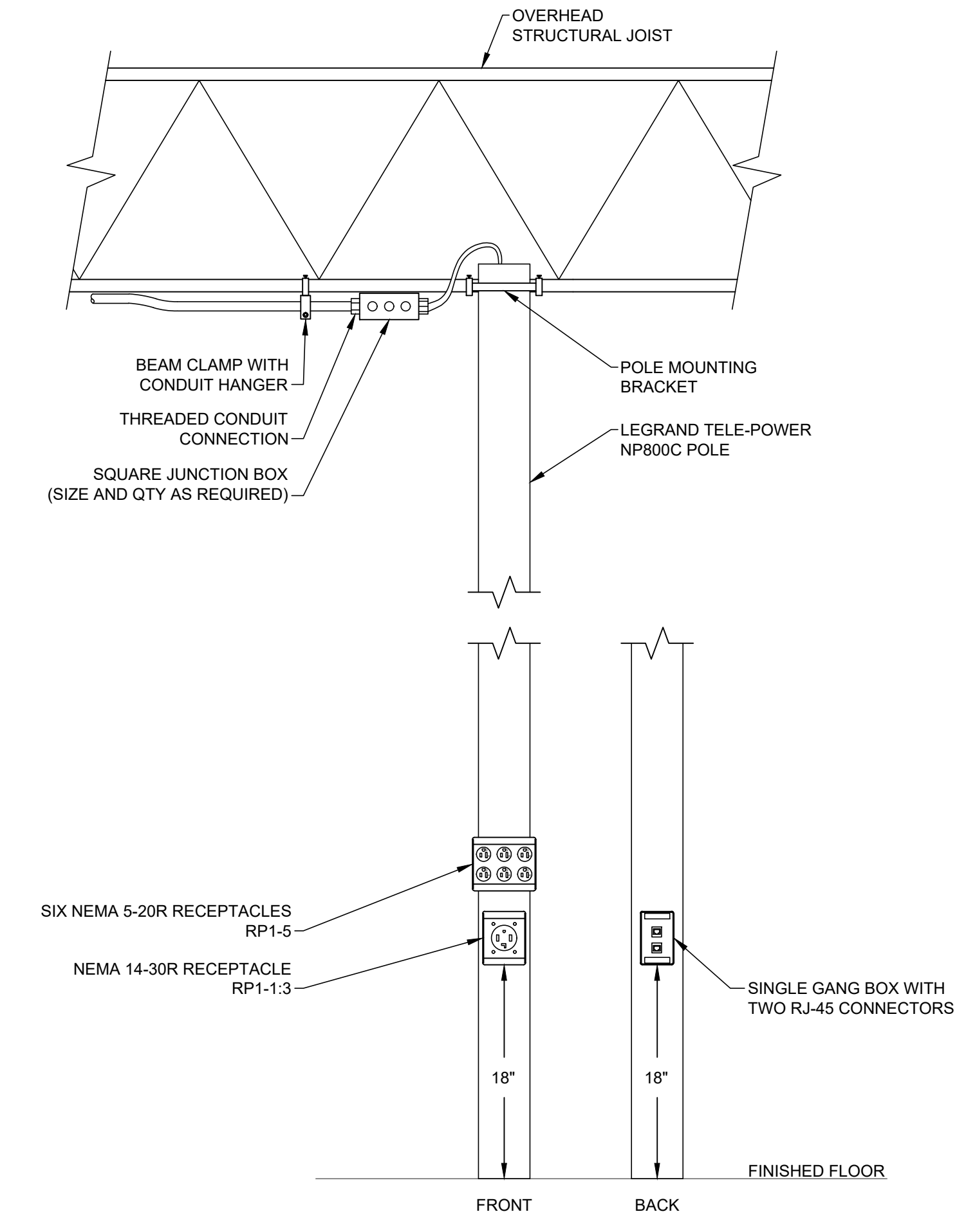
**4**  
E5.3  
**COPIER POWER AND COMM PEDESTAL**  
NOT TO SCALE



**3**  
E5.3  
**COPIER POWER AND COMM PEDESTAL**  
NOT TO SCALE



**2**  
E5.3  
**COPIER POWER AND COMM PEDESTAL**  
NOT TO SCALE



**1**  
E5.3  
**COPIER POWER AND COMM POWER POLE**  
NOT TO SCALE

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**DETAILS - COPIER POWER POLES**  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
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Date: 07/12/2019  
Job no.: SOBIE 19005  
Sheet no.: **E5.3**  
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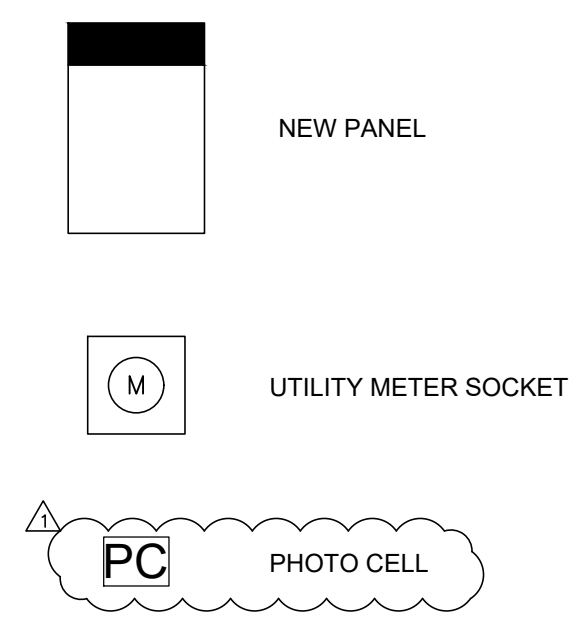
**GENERAL NOTES**

- SEE SPECIFICATIONS SECTIONS 260519 AND 260533 FOR CONDUCTOR AND CONDUIT INFORMATION.
- COORDINATE TRANSFORMER REQUIREMENTS WITH BEVERLY HUTTO OF FLORIDA POWER AND LIGHT, 386-322-3439.

**REFERENCE NOTES**

- CONTRACTOR TO PROVIDE METER BASE, SUPPORT, AND CONDUIT FROM CT CABINET TO METER BASE. SEE METER DETAILS ON SHEET E5.1.
- BOND NEUTRAL AND GROUND IN PANEL MDP USING #3/0 AWG BARE COPPER CONDUCTOR.
- BOND PANEL MDP EQUIPMENT GROUND TO MGB USING #1/0 AWG BARE COPPER CONDUCTOR.
- BOND MDP NEUTRAL BUS TO MAIN SERVICE GROUND USING #3/0 AWG BARE COPPER CONDUCTOR.
- BOND MGB TO MAIN SERVICE GROUND USING #3/0 AWG BARE COPPER CONDUCTOR.
- SEE DETAIL ON SHEET E5.1 FOR MGB DETAILS.
- PROVIDE AND INSTALL CT CABINET PER FPL ELECTRICAL SERVICE STANDARD AS INDICATED ON SHEET E1.1.
- PROVIDE PHOTOCELL ON BUILDING EXTERIOR AS INDICATED ON SHEET E1.3. AIM SENSOR NORTH.

**RISER LEGEND:**



**PANEL FEEDER SCHEDULE**

JOB NUMBER: 19005 DATE: 01/09/20

FEEDER FEEDING	CIRCUIT BREAKER			FEEDER CAPACITY	FEEDER LENGTH	FEEDER VOLT DROP %	PARALLEL RUNS	PHASE WIRE	NEUTRAL WIRE	GROUND WIRE	ISOLATED GROUND	COPPER/ALUMINUM	CONDUIT SIZE
	AMP SIZE	VOLTS	PHASE										
CT CABINET	800	208	3	840	23	0.15	2	#600	#600	N/A	N/A	COPPER	4"
MDP	800	208	3	840	77	0.51	2	#600	#600	N/A	N/A	COPPER	4"
DP1	400	208	3	420	15	0.50	1	#600	#600	#3	N/A	COPPER	4"
RP1	400	208	3	420	13	0.09	1	#600	#600	#3	N/A	COPPER	4"
LP1	100	208	3	100	13	0.22	1	#3	#3	#8	N/A	COPPER	1-1/4"
EL1	20	120	1	20	8	0.43	1	#12	#12	#12	N/A	COPPER	1/2"
WAREHOUSE METER BASE	200	208	3	200	40	0.42	1	#3/0	#3/0	#6	N/A	COPPER	2"

**EQUIPMENT FEEDER SCHEDULE**

JOB NUMBER: 18041 DATE: 1/7/20

EQUIPMENT DESCRIPTION	VOLTS	PH	NEUT Y OR N	MOTOR (LARGEST)		ADDITIONAL MOTORS		HEATER OR LIGHTING LOAD		MISC AMPS	TOTAL AMPS	P.N.L. C.B. SIZE AMPS	DISCONNECT SIZE AMPS	FUSE SIZE AMPS	STARTER SIZE NEMA	TYPE	VOLTAGE DROP	WIRE PER PHASE	NEUT WIRE	GND WIRE	# OF RUNS	CONDUIT SIZE	NOTES
				H.P.	FLA	H.P.	FLA	KW	AMPS														
DOAS-1	208	3	N		42.00					42	50	60	NF				0.47%	#6		#10	1	1"	
DOAS-1 OUTSIDE UNIT	208	3	N		5.00					5	15	20	NF				0.33%	#12		#12	1	1/2"	
HP-1	208	3	N		33.00					33	45	60	NF				0.62%	#6		#10	1	1"	
HP-2	208	3	N		18.00					18	30	30	NF				0.99%	#10		#10	1	1/2"	
HP-3	208	3	N		18.00					18	30	30	NF				1.06%	#10		#10	1	1/2"	
AHU-1	208	3	N		51.00					51	60						0.57%	#6		#10	1	1"	
AHU-2	208	3	N		8.00					8	15						0.34%	#12		#12	1	1/2"	
AHU-3	208	3	N		8.00					8	15						0.34%	#12		#12	1	1/2"	
AHU-2 HEATER	208	3	Y					42.0		42	45						0.47%	#6	#6	#10	1	1"	
AHU-3 HEATER	208	3	Y					42.0		42	45						0.47%	#6	#6	#10	1	3/4"	
EF-1	120	1	Y						1.0	1	20			00			0.11%	#12	#12	#12	1	1/2"	d
EF-2	120	1	Y						1.0	1	20			00			0.12%	#12	#12	#12	1	1/2"	d
DOAS-1 DAMPER	120	1	Y						3.0	3	20		20	NF			0.47%	#12	#12	#12	1	1/2"	
EVH-1	208	1	Y						22.0	22	30		30	NF			0.81%	#10	#10	#10	1	1/2"	
HWRP-1	120	1	Y						4.0	4	15		20	NF			0.40%	#12	#12	#12	1	1/2"	
BAS CONTROLLER	120	1	Y						2.0	2	20						0.17%	#12	#12	#12	1	1/2"	
XEROX 3100	208	1	Y						24.0	24	30						1.02%	#10	#10	#10	1	1/2"	f
XEROX 3100 ACCESSORIES	120	1	Y						9.0	9	20						1.02%	#12	#12	#12	1	1/2"	
XEROX NUVERA	208	1	Y						40.0	40	50						0.78%	#6	#6	#10	1	1"	
XEROX NUVERA	208	1	Y						24.0	24	30						0.73%	#8	#8	#8	1	3/4"	f
XEROX NUVERA ACCESSORIES	120	1	Y						8.0	8	20						1.02%	#12	#12	#12	1	1/2"	
XEROX NUVERA ACCESSORIES	120	1	Y						8.0	8	20						1.02%	#12	#12	#12	1	1/2"	
XEROX 4555	208	1	Y						12.0	12	15						0.98%	#12	#12	#12	1	1/2"	f
XEROX 4555 ACCESSORIES	120	1	Y						2.0	2	20						0.28%	#12	#12	#12	1	1/2"	
LCP	120	1	Y						3.0	3	20						0.09%	#12	#12	#12	1	2"	
PARKING LIGHT	120	1	Y						1.0	1	20						0.14%	#12	#12	#12	1	1/2"	

**GENERAL NOTES:**

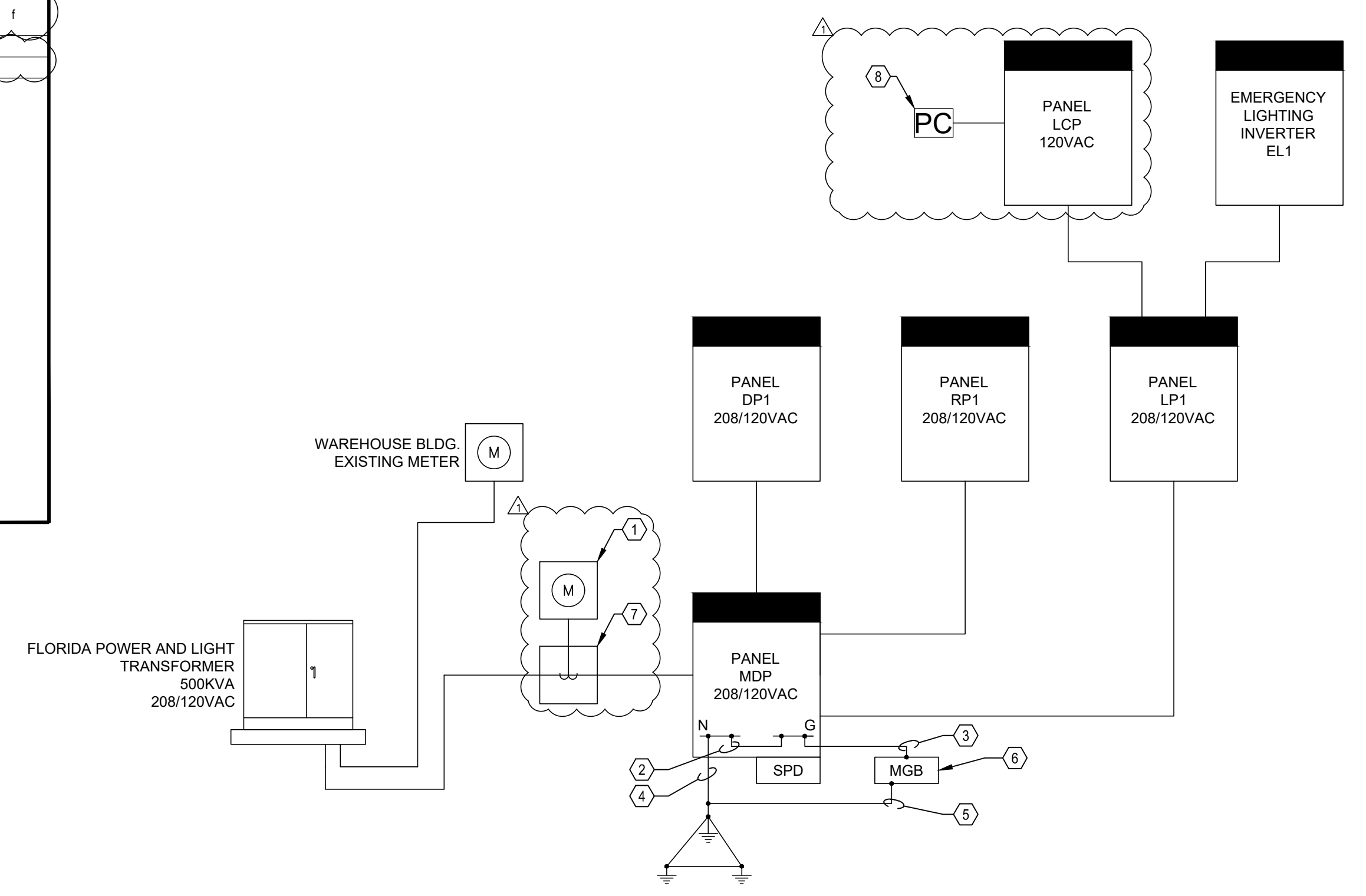
- PROVIDE DISC. SW. AT ALL PIECES OF EQUIPMENT, UNLESS OTHERWISE NOTED ON THIS SCHEDULE.
- C.B., STARTER, DISC. & FUSE SIZES SHOWN FOR REFERENCE ONLY, SIZE AS RECOMMENDED BY EQUIPMENT MANUFACTURER. VERIFY REQUIREMENTS WITH APPROVED EQUIPMENT SHOP DRAWINGS.
- PROVIDE NEMA OUTDOOR RATED ENCLOSURES FOR ALL DISC. SVS MOUNTED OUTDOORS.
- COORDINATE STARTER TYPE WITH EQUIPMENT PROVIDER.
- E.C. TO VERIFY THAT C.B.'S FOR MOTORS ARE SUFFICIENT TO ALLOW STARTING OF MOTOR, IF REQUIRED FOR STARTING C.B. TO BE INCREASED TO A MAX OF 225% OF LARGEST MOTOR F.L.A.
- INCREASE CONDUCTOR SIZES AS REQUIRED TO MAINTAIN A MAXIMUM OF 3% VOLTAGE DROP BASED ON ACTUAL CIRCUIT LENGTHS AS INSTALLED.
- TOTAL AMPS SHOWN DO NOT INCLUDE NON-COINCIDENTAL LOADS.
- VOLTAGE DROP BASED ON POWER FACTOR OF 0.85.

**ABBREVIATIONS:**

MCP = MOTOR CIRCUIT PROTECTOR C.B. N.F. = NON-FUSED  
MMS = MAN. MTR. STARTER 20A SW. WITH O.L. AND PILOT O.L. = THERMAL OVER LOAD ELEMENT  
MSS = MOTOR STARTING 20A SW. WITHOUT O.L. I = NEMA I ENCLOSURE  
VFD = VARIABLE FREQ. DRIVE UNIT. 3R = NEMA 3R ENCLOSURE  
CBMC = COMB. DISC(MCP) AND MAG. MOTOR STARTER(MMC) 4SS = NEMA 4 W.P. STAINLESS STEEL ENCL.  
MMC = MAGNETIC MOTOR CONTROLLER W.O.L.

**NOTES:**

- CONNECT VIA LINE VOLTAGE T'STAT. FURNISHED BY MECH. CONTRACTOR.
- CONNECT VIA CONTROL DEVICES FURNISHED BY MECH. CONTRACTOR.
- CONNECT TO LOCAL LIGHTING SWITCHLEG FROM OCCUPANCY SENSOR.
- CONNECT VIA STARTER FURNISHED BY MECH. CONTRACTOR.
- CONNECT VIA UNIT MTD DISC. SW. FURNISHED WITH EQUIPMENT.
- COMBINE CIRCUITS PER DETAIL ON SHEET E5.3.



**1 RISER DIAGRAM - ELECTRICAL**  
E6.1 NOT TO SCALE

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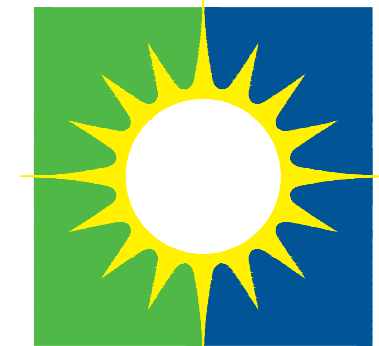
**RISER DIAGRAM AND FEEDER SCHEDULES**

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY  
NEW PRINT SHOP BUILDING

Date: 07/12/2019 Job no.: SOBE 19005 Sheet no.: E6.1

REVISION	DATE	REVISION	DATE
2	02/06/2020		

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CERT. OF AUTH. NO. 6196

■ GARY A. WILKERSON, P.E. 43167  
■ NOEL J. CARTER, P.E. 53269  
■ JEFF A. KIRKMAN, P.E. 65629  
■ ADAM S. LEVINE, P.E. 77010

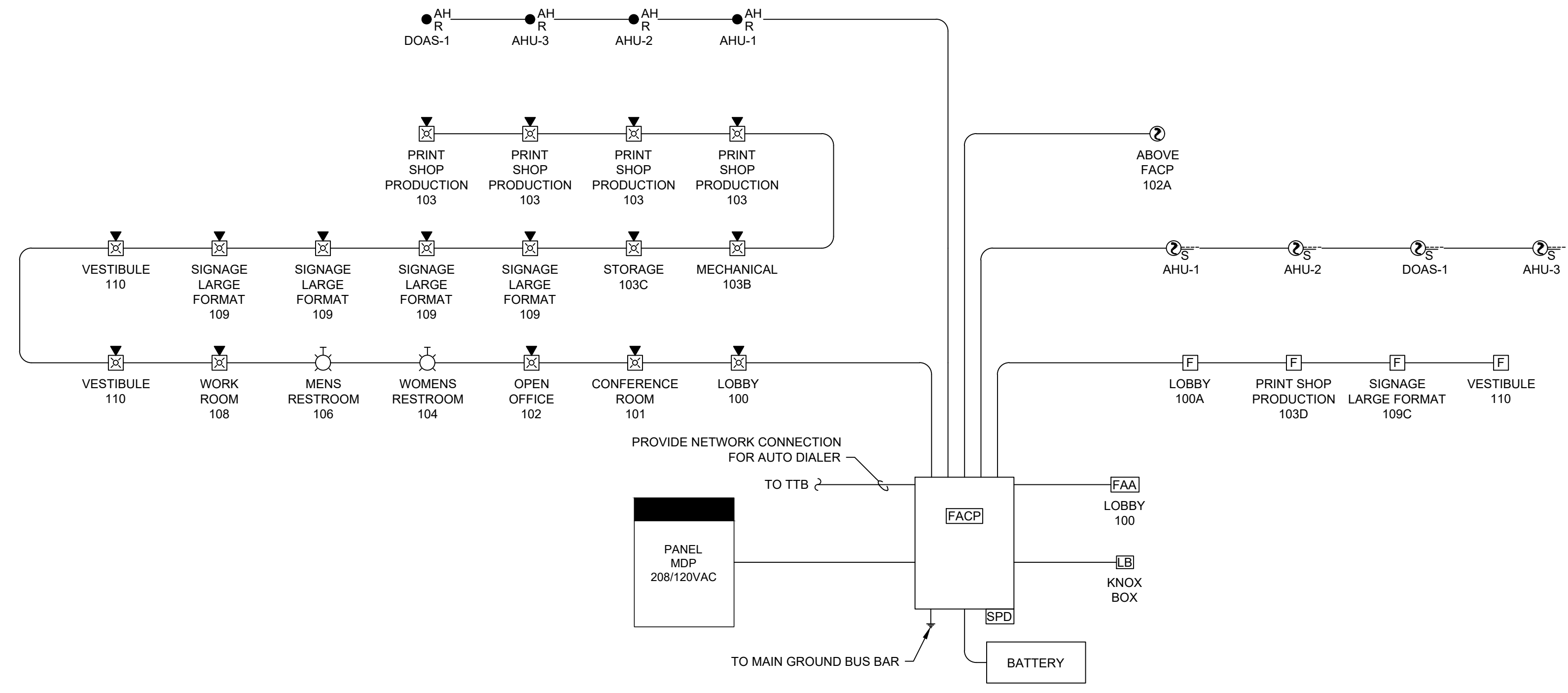
19005

**GENERAL NOTES**

1. PROVIDE SURGE SUPPRESSION TO 120V AND ALL LOW VOLTAGE CIRCUITS LEAVING AND/OR ENTERING THE BUILDING(S).
2. ALL CABLES BELOW GRADE LEVEL SHALL BE RATED FOR WET LOCATION USE.
3. SECONDARY POWER SUPPLY CAPACITY SHALL BE 24 HOURS, STAND-BY WITH 15 MINUTES OF ALARM. BATTERY BACK-UP SHALL NOT BE LOADED MORE THAN 80%.
4. NOTIFICATION APPLIANCE CIRCUITS SHALL NOT BE LOADED MORE THAN 80% OF ITS LISTED OUTPUT.
5. VOLTAGE DROP ON ALL CIRCUITS SHALL BE NO GREATER THAN 5%.
6. VERIFY FINAL LOCATIONS OF DUCT SMOKE DETECTORS WITH MECHANICAL CONTRACTOR.
7. PROVIDE #6 GROUND CONDUCTOR FROM MAIN GROUND BUS BAR TO EACH EQUIPMENT PANEL AND TERMINAL.
8. REFER TO FLOOR PLANS AND SITE PLANS FOR ACTUAL FIRE ALARM DEVICE LOCATION AND QUANTITY.
9. FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT.
10. ALL WORK SHALL CONFORM TO THE FLORIDA ADMINISTRATIVE CODE (FAC) 61G15-32.008.

	FACP ANNUNCIATION								NOTIFICATION		FACP CONTROL	
	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3												
4												
5												
6												
7												
8												

**2 FIRE ALARM INPUT/OUTPUT MATRIX**  
E6.2 NTS



**1 FIRE ALARM RISER DIAGRAM**  
E6.2 NTS

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**FIRE ALARM RISER DIAGRAM AND I/O MATRIX**

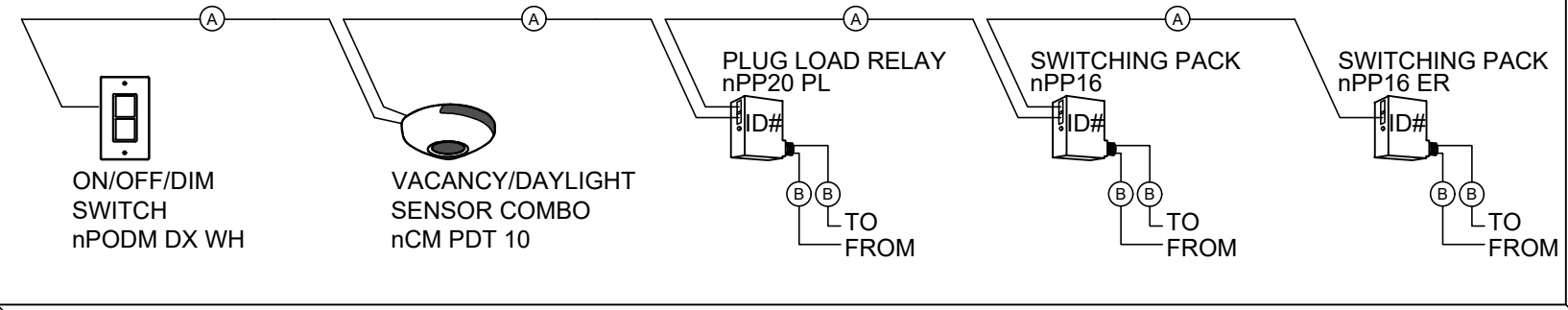
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NEW PRINT SHOP BUILDING

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Job no.: SOB19005  
Sheet no.: E6.2

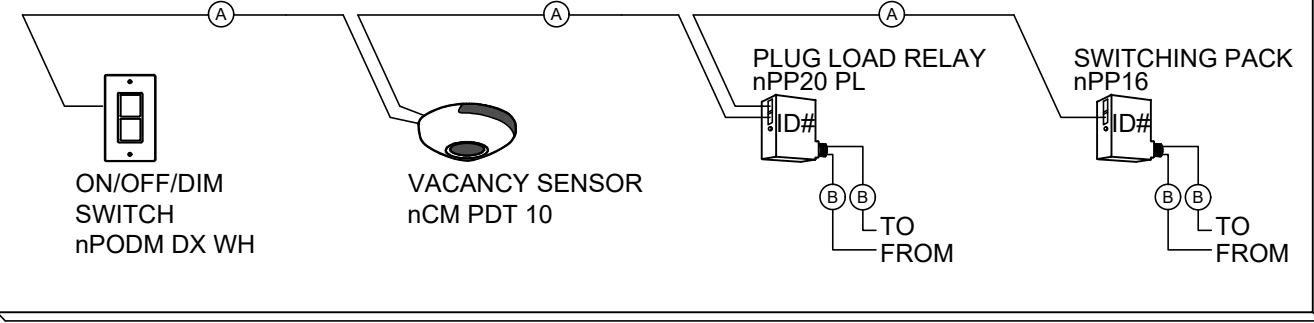
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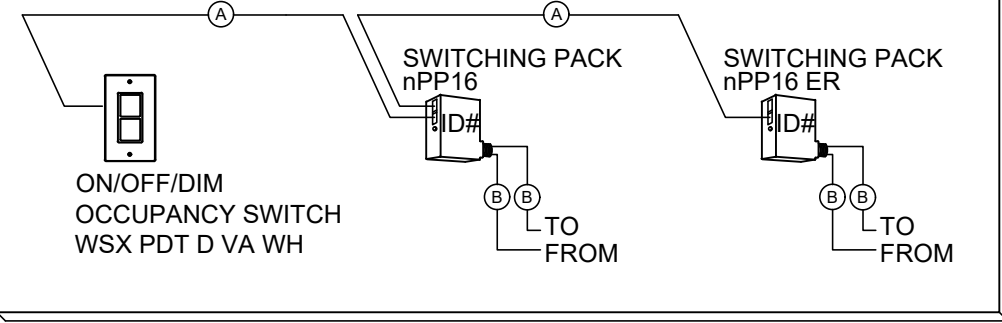
**ROOMS 100 AND 108**



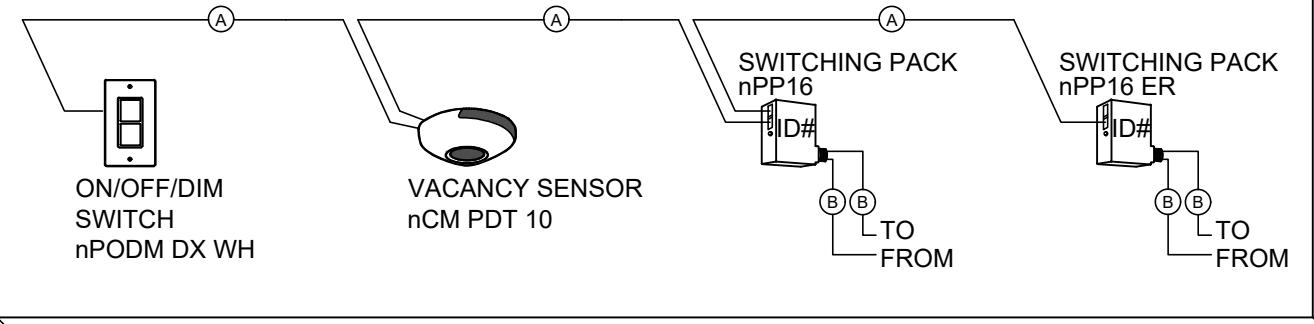
**ROOMS 101, 102A, 102B, 102C, 102D, AND 103A**



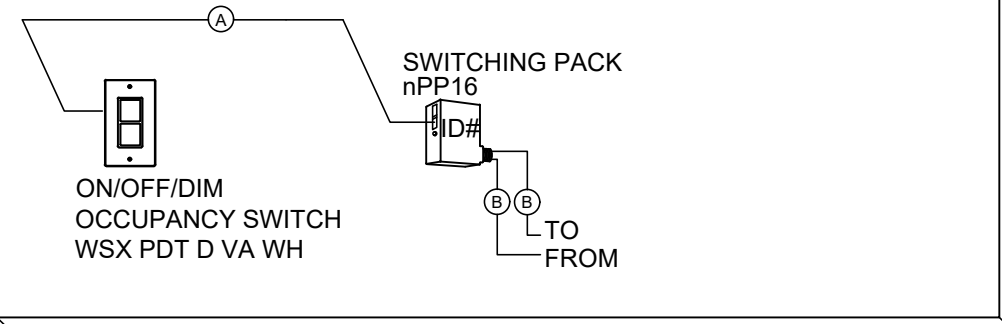
**ROOMS 106 AND 104**



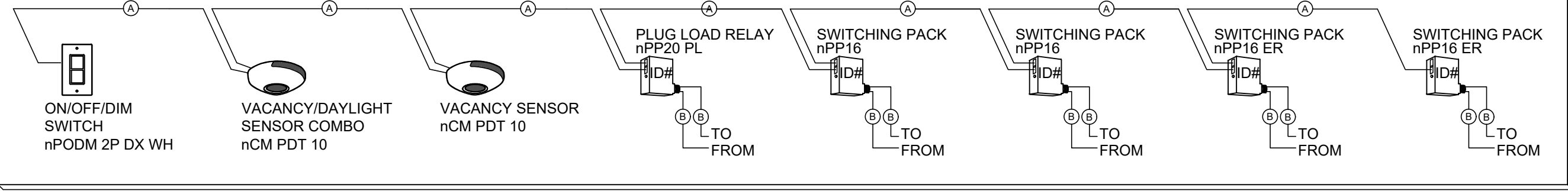
**ROOMS 103C AND 110**



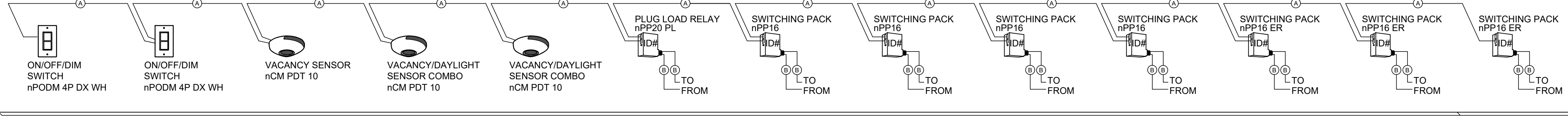
**ROOMS 103B, 103D, 103E, 105, AND 107**



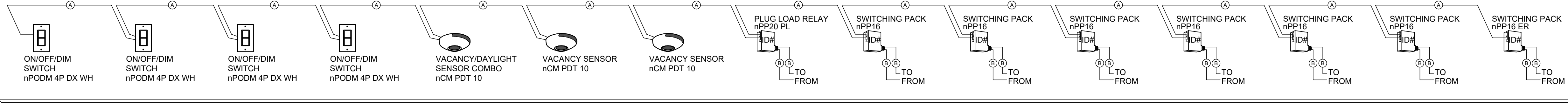
**ROOM 109**



**ROOM 103**



**ROOM 102**



**GENERAL NOTES**

1. THE LIGHTING CONTROL DIAGRAMS ON THIS SHEET REPRESENT A GENERIC LAYOUT OF THE COMPONENTS THAT ARE REQUIRED USING THE ACUITY CONTROLS SYSTEM.
2. PROVIDE PROPER QUANTITY AND TYPE OF OCCUPANCY SENSORS, SWITCHES, SWITCH PACKS, DAYLIGHT SENSORS, ETC. PER CODE REQUIREMENT FOR EACH SPACE.
3. FOLLOW MANUFACTURER INSTRUCTIONS FOR PROPER PRODUCT PLACEMENT, INSTALLATION, WIRING, AND OPERATION.

**SEQUENCE OF OPERATIONS**

1. GENERAL LIGHTING AUTO ON TO 50% AND CONTROLLED RECEPTACLES AUTO ON WHEN OCCUPANCY DETECTED.
2. MANUAL ON/OFF/DIM GENERAL LIGHTING WITH DIMMER SWITCHES.
3. LIGHTING IN DAYLIGHT ZONE WILL CONTINUOUSLY DIM BASED ON DAYLIGHT CONTRIBUTION TO MAINTAIN AT LEAST 35fc AT TASK LEVEL.
4. AUTO OFF ALL LIGHTING AND CONTROLLED RECEPTACLES WITHIN 20 MINUTES OF OCCUPANTS LEAVING.
5. EMERGENCY LIGHTING TRANSFERS TO EMERGENCY POWER SOURCE AND FULL ON WITH LOSS OF NORMAL POWER.

**WIRE LEGEND**

- (A)— CAT 5e (LOW VOLTAGE)
- (B)— CLASS 1 (LINE VOLTAGE)

NOTE: PROVIDE EMERGENCY LIGHTING OVERRIDE POWER/RELAY PACK AS REQUIRED IN ALL AREAS WITH EMERGENCY FIXTURES.

ALL LIGHTING CONTROL PRODUCTS ARE MANUFACTURED BY "ACUITY CONTROLS". SUBSTITUTIONS ARE ALLOWED (SUBJECT TO APPROVAL).

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CHECKED	BKWH

**PERMIT REVISION - 02/06/2020**  
**LIGHTING CONTROL DIAGRAMS**  
**EMBRY-RIDDLE AERONAUTICAL UNIVERSITY**  
**NEW PRINT SHOP BUILDING**  
**E6.3**

