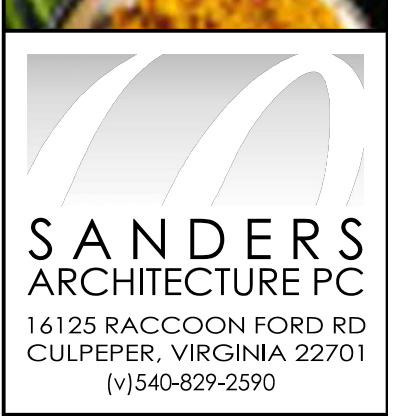


# GEORGE WASHINGTON CARVER FOOD ENTERPRISE CENTER - PHASE 1

## CULPEPER COUNTY, VIRGINIA



**SANDERS ARCHITECTURE PC**  
16125 RACCOON FORD RD  
CULPEPER, VIRGINIA 22701  
(540)829-2590

**GEORGE WASHINGTON CARVER  
FOOD ENTERPRISE CENTER**  
9432 JAMES MADISON HIGHWAY  
RAPIDAN, VA 22733

**NOTICE TO CONTRACTOR & ALL TRADES**

ALL TRADES SHALL BE RESPONSIBLE FOR THE CONTENTS CONTAINED HEREIN, AND FOR THE INFORMATION REPRESENTED ON ALL SHEETS. THESE CONSTRUCTION DOCUMENTS HAVE BEEN PRODUCED WITH THE INTENTION OF BEING USED AS A SINGULAR TOOL FOR THE CONSTRUCTION OF THIS PROJECT. NO SINGLE DRAWING WILL STAND ALONE, AND AT NO TIME WILL THE ARCHITECT OR OWNER BE RESPONSIBLE FOR ACTIONS TAKEN BY A CONTRACTOR OR SUBCONTRACTOR WHO HAS NOT REVIEWED, AND IS NOT IN POSSESSION OF A FULL WORKING SET OF DOCUMENTS. BE ADVISED, THERE MAY BE NOTES ON A DRAWING FOR ONE SPECIFIC TRADE THAT WILL PERTAIN TO THE WORK OF OTHER TRADES. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE CLEAR COMMUNICATION BETWEEN ALL TRADES, AND THAT ALL WORKERS HAVE ADEQUATELY REVIEWED ALL DRAWINGS AND LOCATED ALL WORK THAT WOULD FALL UNDER THEIR RESPONSIBILITY.

AN APPROVED SET OF DRAWINGS BY EACH TRADE SHALL BE OBTAINED FROM THE AHJ BEFORE WORK CAN COMMENCE FOR THAT TRADE.

**GENERAL NOTES**

BUILDING PERMIT BY GENERAL CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING, BRACING & WEATHER PROTECTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROTECTION AND BARRICADING OF PUBLIC AREAS AND NEIGHBORING PROPERTIES.

CONTRACTOR SHALL COMPLY WITH ALL PERTINENT RULES, REGULATIONS, ORDINANCES, AND LAWS MANDATED BY LOCAL, STATE, AND FEDERAL AGENCIES.

PRIOR TO CONSTRUCTION, EXAMINE ALL PROJECT SPECIFICATIONS, DRAWINGS, AND VISIT THE SITE TO DEVELOP A COMPLETE UNDERSTANDING OF THE PROJECT SCOPE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM ALL WORK REQUIRED FOR A COMPLETE INSTALLATION. UPON REVIEW OF THESE DOCUMENTS, ADVISE THE ARCHITECT IN A TIMELY MANNER OF ANY DISCREPANCIES WHICH WILL EFFECT THE WORK REQUIRED SO THAT THE ARCHITECT MAY PROVIDE DIRECTION PRIOR TO BEGINNING AFFECTED WORK.

EACH INDIVIDUAL TRADE IS RESPONSIBLE FOR THE DAILY CLEAN UP OF THEIR WORK AREA AND GENERAL CLEAN UP OF THE JOBSITE.

GENERAL CONTRACTOR SHALL SUBMIT LEGIBLE COPIES OF EACH INDIVIDUAL TRADE PERMIT TO OWNER AND HAVE APPROVED DRAWINGS FOR EACH SUB-CONTRACTOR PRIOR TO THE SUB-CONTRACTOR STARTING WORK ON THE SITE.

**CODE INFORMATION 2018 VEBC**

HEIGHT & AREA LIMITATION (ALLOWABLE/ACTUAL): NO CHANGE IS PROPOSED TO BUILDING HEIGHT OR AREA

TOTAL BUILDING AREA (FOOTPRINT): 33,584 SF  
APPROX. REMODELED AREA: 7,487 SF

**CHAPTER 1**  
103.2 NEW CERTIFICATE OF OCCUPANCY REQUIRED FOR CHANGE OF OCCUPANCY

**CHAPTER 3**  
302.1 DETERMINE OCCUPANCY AND USE BY VCC

E ORIGINAL USE  
A-1 EXISTING ASSEMBLY - LEASE CHURCH USE  
B EXISTING OFFICE USE  
S-1 EXISTING STORAGE  
F-1 NEW COMMERCIAL KITCHEN USE (WORK AREA 1)

WORK AREA OCCUPANCY: 49 TOTAL (SEE FLOOR PLANS FOR INDIVIDUAL SPACE OCCUPANCY)

NON-SEPARATED USES IN BUILDING OUTSIDE WORK AREA  
NEW WORK AREA SEPARATED W/ (1) HOUR RATING

CONSTRUCTION TYPE: IIB NON-COMBUSTIBLE

**CHAPTER 4**  
402.2 ACCESSIBILITY: COMPLY WITH VCC CHAPTER 11 EXCEPT AS MODIFIED  
404.3 PROVIDE ACCESSIBLE ROUTE TO PRIMARY FUNCTIONAL AREAS.

**CHAPTER 5**  
REPAIRS COMPLY W/ CHAPTER 5

**CHAPTER 6**  
THIS WORK INCLUDES LEVEL 1 & 2 ALTERATIONS.

601.4 CONFORM TO THE IECC W/ EXCEPTIONS  
602.3.1 NEW INTERIOR FINISHES SHALL COMPLY WITH CHAPTER 8 OF THE VCC  
603.3 NEW CONSTRUCTION WITHIN THE WORK AREA SHALL COMPLY WITH THE VCC.  
603.6 STORY OCCUPANCY LOAD NOT INCREASE BY MORE THAN 20%. EXISTING BUILDING TOILETS TO BE USED IN PHASE 1

**CODE INFORMATION (CONTINUED)**

**CHAPTER 7**  
703.1 INTERIOR FINISH: COMPLY W/ VCC  
704.2 FIRE SPRINKLER SYSTEM [NR] F-1 FIRE AREA < 12,000 SF  
704.3 FIRE ALARM [NR]  
705.2 HAZARD CATEGORY 4 (NO CHANGE OR REDUCED) MEANS OF EGRESS - MEET VCC CHAPTER 10 EGRESS CAPACITY  
705.4 HEIGHT & AREA HAZARD CATEGORY 3 (NO CHANGE)  
706.4 EXISTING HEIGHT & AREA ACCEPTABLE  
707.1 EXTERIOR WALL HAZARD CATEGORY 2 (NO CHANGE)  
708.4 LIGHTING: COMPLY W/ VCC IN WORK AREA  
709.1 MECHANICAL: COMPLY W/ VCC IN WORK AREA  
710.1 PLUMBING: COMPLY W/ VCC IN WORK AREA  
711 STRUCTURAL: NO INCREASE IN HAZARD / CHANGE IN EXISTING LOADS REQUIRED

SEE PLANS FOR NEW STRUCTURAL ALTERATIONS

**SUMMARY OF WORK**

THIS WORK WILL BE PERFORMED IN ONE PHASE IN ONE WORK AREA. NO CHANGES ARE PROPOSED TO THE REMAINDER OF THE BUILDING USE OR OCCUPANCY.

WORK INCLUDES DEMOLITION OF PORTIONS OF THE EXISTING INTERIOR WALLS, MODIFICATIONS TO EXISTING EXTERIOR OPENINGS & PARTIAL BUILD-OUT FOR NEW COMMERCIAL KITCHEN SPACE WITH ASSOCIATED STORAGE. A NEW ACCESSIBLE ENTRANCE WILL BE ADDED AND AN EXISTING EXIT WILL BE MODIFIED. ACCESSIBLE TOILET FACILITIES WILL BE PROVIDED IN A FUTURE PHASE.

**DESIGN LOADS**  
SEE PLANS FOR PROPOSED STRUCTURAL MODIFICATIONS.

**MEP COORDINATION NOTE**

PLUMBING, ELECTRICAL, FIRE ALARM & HVAC SYSTEMS ARE TO BE CONSTRUCTED AS COMPLETE, COORDINATED SYSTEMS. AS A MINIMUM THEY SHALL MEET APPLICABLE BUILDING AND LIFE SAFETY CODES UNDER VA USBC 2018 & ANS J117.1-2009. EACH SYSTEM INSTALLER MUST COORDINATE WITH THE GENERAL CONTRACTOR, KITCHEN EQUIPMENT BY OTHERS AND OTHER PROJECT SUB-CONTRACTORS.

**FIRE ALARM NOTE:**  
FIRE ALARM IS NOT REQUIRED OR PROVIDED IN PHASE 1

**BID ALTERNATES**

**ADD ALTERNATE #1:** NEW EXTERIOR WINDOWS & FINISH WORK IN SPACES 102, 102A & 102B. SEE PLANS

**ADD ALTERNATE #2:** NOT USED

**ADD ALTERNATE #3:** ELECTRICAL FEEDER EXTENSION - RISER DIAGRAM NOTE SHEET E1.1

**WORK BY OTHERS (BASE BID)**

- DATA CABLING, TELEPHONE, SECURITY, CARD READERS & IT RACKS (SEE PLANS FOR CONDUIT W/ PULL STRING & EMPTY BOXES)
- FURNITURE NOT INDICATED IN CONTRACT DOCUMENTS
- ITEMS SPECIFICALLY IDENTIFIED AS "BY OTHERS" OR N.I.C.
- EXTERIOR AND INTERIOR SIGNAGE EXCEPT AS INDICATED.
- LOCKSET CORES (SARGENT 11 LINE XC KEYING SYSTEM)
- APPLIANCES & KITCHEN EQUIPMENT NOT SPECIFICALLY IDENTIFIED
- FIRE ALARM - FUTURE

**PROJECT CONTACTS**

**OWNER**  
COUNTY OF CULPEPER, VIRGINIA  
PAUL HOWARD  
540.727.3409

**TENANT / PROJECT MANAGER**  
GEORGE WASHINGTON CARVER  
AGRICULTURE RESEARCH CENTER  
REBECCA SHEFFIELD GARTNER  
540.727.3435 EXT. 344

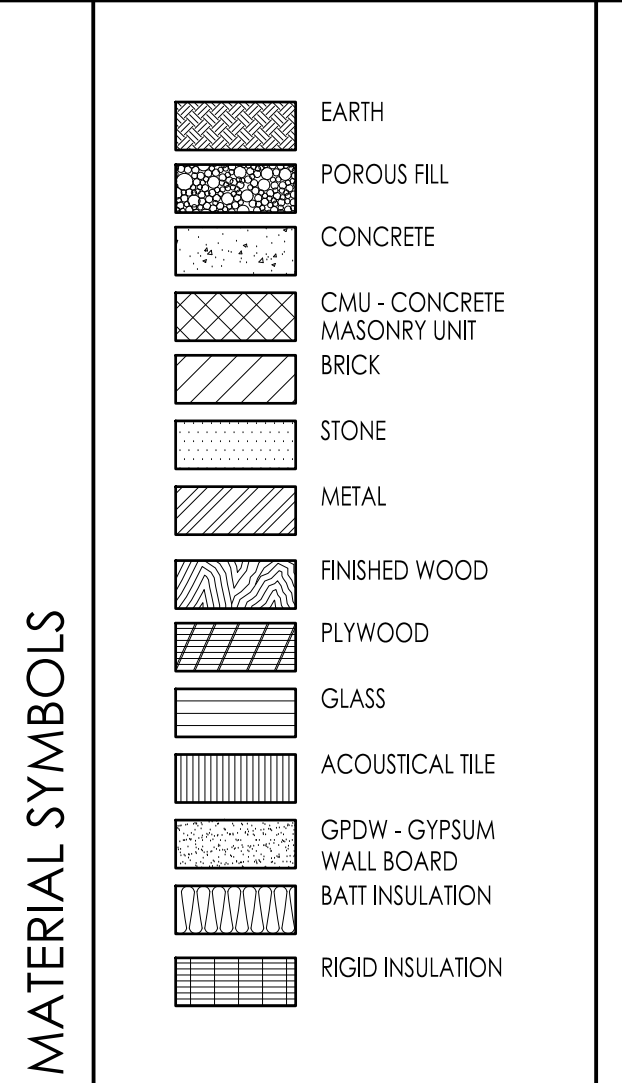
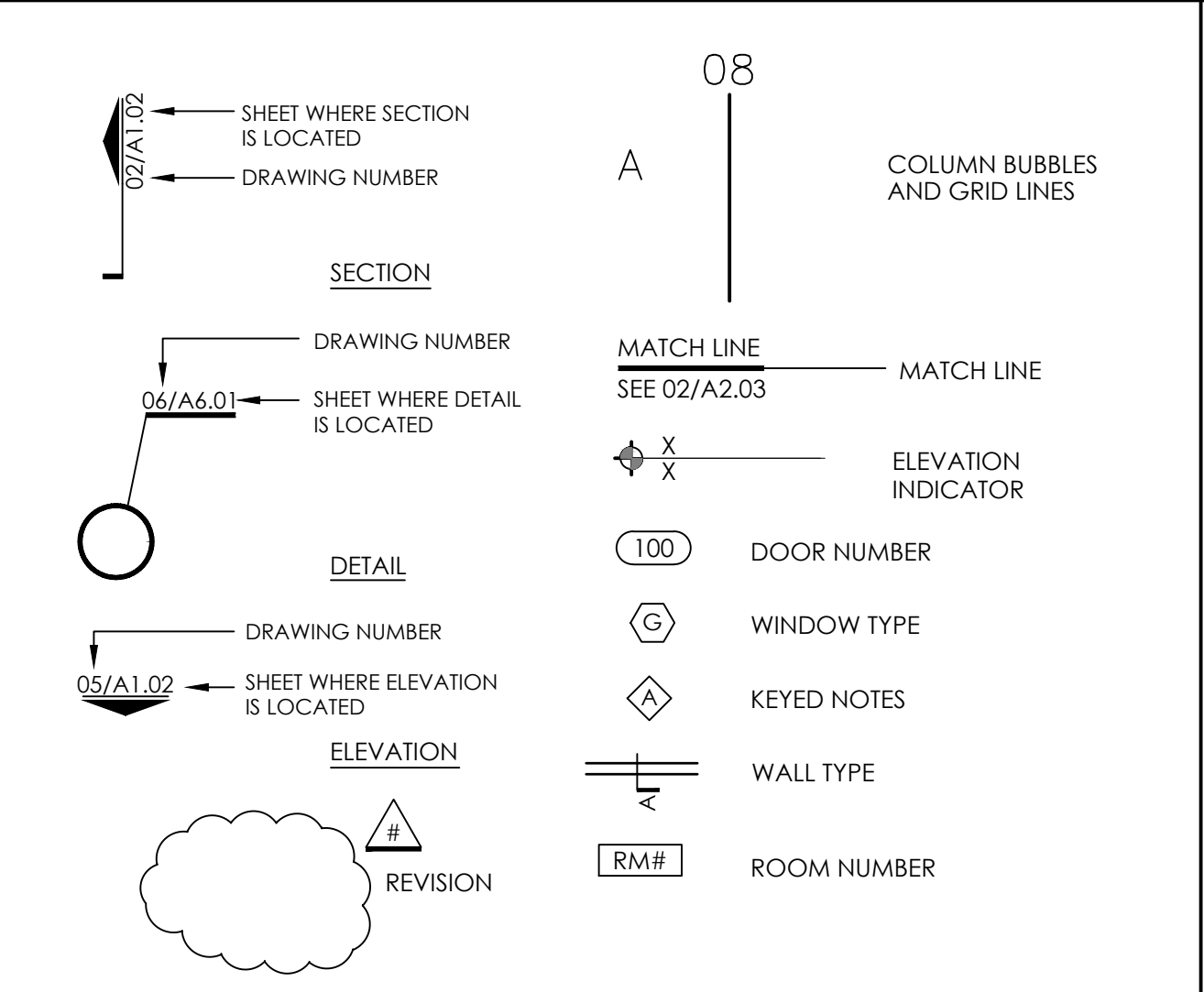
**ARCHITECT**  
SANDERS ARCHITECTURE, PC  
DEX SANDERS  
540.829.2590

**MEP ENGINEER**  
MEI ENGINEERING, INC.  
WESLEY SEIVER  
540.432.6272 EXT. 107



**PHASE 1**

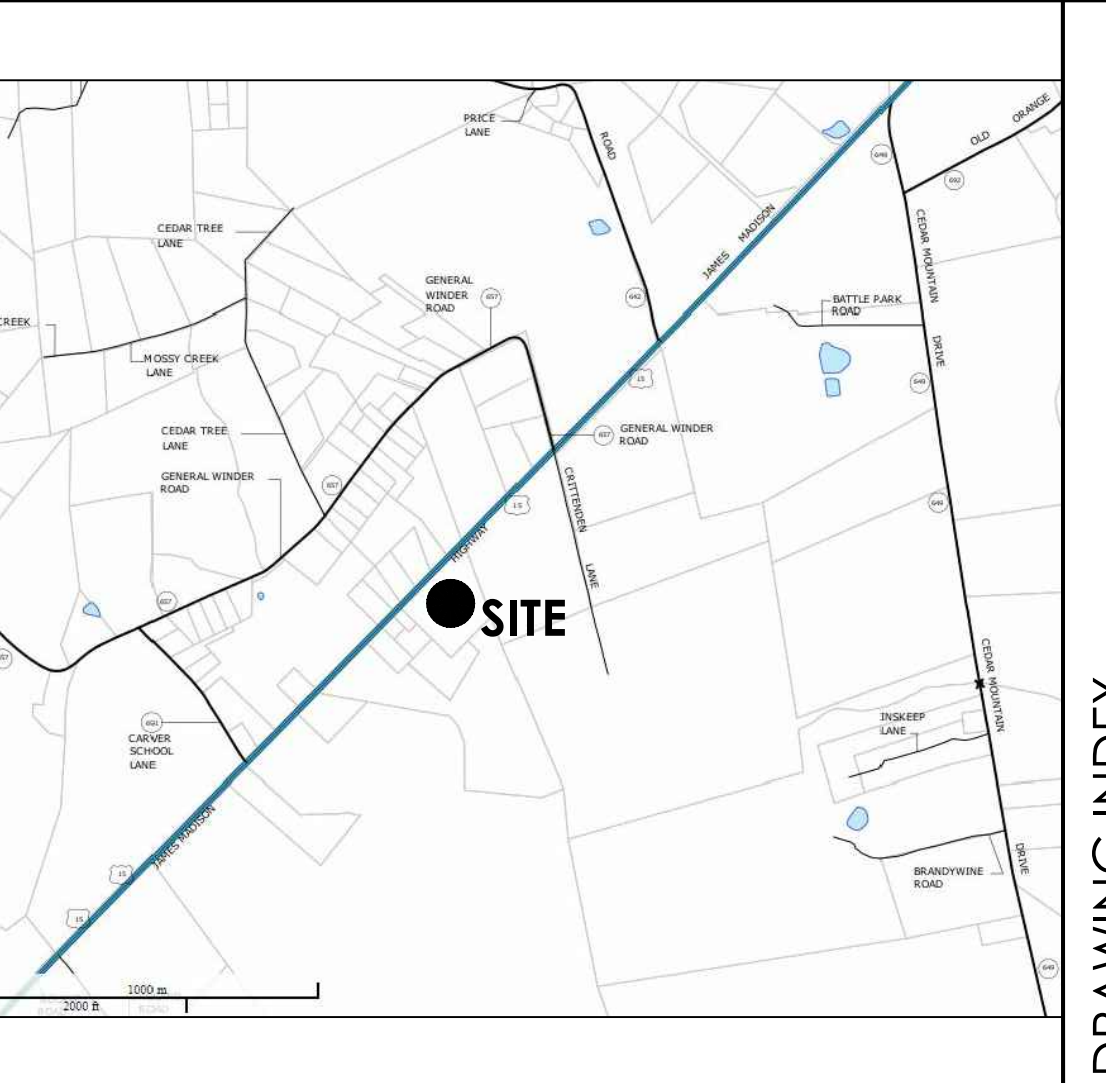
GENERAL SYMBOLS



**ABBREVIATIONS**

@	ABV.	AT	F.F.	FINISHED FLOOR FINISH	P.C.	PLUMBING CONTRACTOR PER SQUARE FOOT
A.C.T.	A.C.T.	ACOUSTICAL CEILING TILE	BRD.	FLOOR	PSF	PER SQUARE INCH
A.F.F.	A.F.F.	ABOVE FINISHED FLOOR	FLR.	FOUNDATION	P.T.I.	PRESSURE TREATED
ADJ.	ADJ.	ADJUSTABLE	FND.	FRAMING	PERIM.	PERIMETER
ALT.	ALT.	ALTERNATE	FT.	FOOT/FEET	PLUMB.	PLUMBING
ALUM.	ALUM.	ALUMINUM	FIG.	FOOTING	R.O.	ROUGH OPENING
ARCH.	ARCH.	ARCHITECTURAL	G.C.	GENERAL CONTRACTOR	R.W.C.	RAIN WATER CONDUCTOR
B.F.F.	B.F.F.	BELOW FINISHED FLOOR	GPDW	GYPSUM WALLBOARD	REINF.	REINFORCED
BSMT	BSMT	BASEMENT	GA.	GAUGE	REQ.	REQUIRED
BLK'G	BLK'G	BLOCKING	GALV.	GALVANIZED	RESP.	RESPONSIBLE
B.O.	B.O.	BOTTOM OF	HVAC	HVAC	RET.	RETURN
BOT.	BOT.	BOTTOM	HW	HARDWARE	RM	ROOM
BD	BD	BOARD	HDR.	HEADER	S.F.	SQUARE FEET
BLDG.	BLDG.	BUILDING	HGT.	HEIGHT	S.S.R	STANDING SEAM ROOF
C.T.	C.T.	CERAMIC TILE	HORIZ.	HORIZONTAL	SCHED.	SCHEDULE
CLG.	CLG.	CEILING	INSUL.	INSULATION	STD.	STANDARD
CLO.	CLO.	CLOSET	INT.	INTERIOR	STL	STEEL
CMU	CMU	CONCRETE MASONRY UNIT	JAN.	JANITOR	STOR.	STORAGE
CONC.	CONC.	CONCRETE	JOINT	JOINT	T&G	TONGUE & GROOVE
CONST	CONST	CONSTRUCTION	L.F.	LINEAR FOOT	TEMP.	TEMPORARY
DBL	DBL	DOUBLE	M.C.	MECHANICAL CONTRACTOR	T.O.	TOP OF
DWG	DWG	DRAWING	MRB	MOISTURE RESISTANT BOARD	TYP.	TYPICAL
DTL	DTL	DETAIL	MANUF.	MANUFACTURED	U.G.	UNDERGROUND
EX.	EX.	EXISTING	MAX.	MAXIMUM	U.N.O.	UNLESS NOTED OTHERWISE
E.C.	E.C.	ELECTRICAL CONTRACTOR	MECH.	MECHANICAL	VVC	VINYL WALLCOVERING
ELEC.	ELEC.	ELECTRICAL	MIN.	MINIMUM	VERT.	VERTICAL
ELEV.	ELEV.	ELEVATION	MTL	METAL	V.C.T.	VINYL COMPOSITE TILE
EQ.	EQ.	EQUIVALENT	O.C.	ON CENTER	W/	WITH
EXP.	EXP.	EXPANSION	PL	PLATE	W/O	WITHOUT
EXT.	EXT.	EXTERIOR			W.W.F.	WELDED WIRE FABRIC
F.G.	F.G.	FIBERGLASS			WD.	WOOD

VICINITY MAP



DRAWING INDEX

SHEET	DRAWING TITLE
CS.1	COVER SHEET
CS.2	PROJECT SPECIFICATIONS
A1.1	OVERALL FLOOR PLAN
A2.1	ENLARGED FLOOR PLAN EAST
A2.2	ENLARGED FLOOR PLAN WEST
A3.1	ROOF PLAN / WINDOW DETAILS
A4.1	EXTERIOR VIEWS
A5.1	SECTIONS, DETAILS
A8.1	DOOR SCHEDULE
A10.1	LOWER LEVEL REFLECTED CEILING PLAN
M0.1	HVAC SPECIFICATIONS
M1.1	HVAC PLAN & SCHEDULES
E0.1	ELECTRICAL SPECIFICATIONS
E0.2	ELECTRICAL SCHEDULES AND RISERS
E0.3	ELECTRICAL PANEL SCHEDULES
E1.1	POWER PLAN
E2.1	LIGHTING PLAN
P0.1	PLUMBING SPECS & SCHEDULES
P0.2	PLUMBING DETAILS
P1.1	SANITARY PLAN & RISERS
P2.1	WATER / GAS PLAN & RISERS

COMMONWEALTH OF VIRGINIA  
DEX A. SANDERS  
Lic. No. 8814  
08-11-22  
ARCHITECT

REVISIONS:  
08-22-22

DRAWN: DAS  
CHECKED:  
SCALE: NOTED  
DATE: 08-11-22  
PROJECT #: 1624A

COVER SHEET

**CS-1**

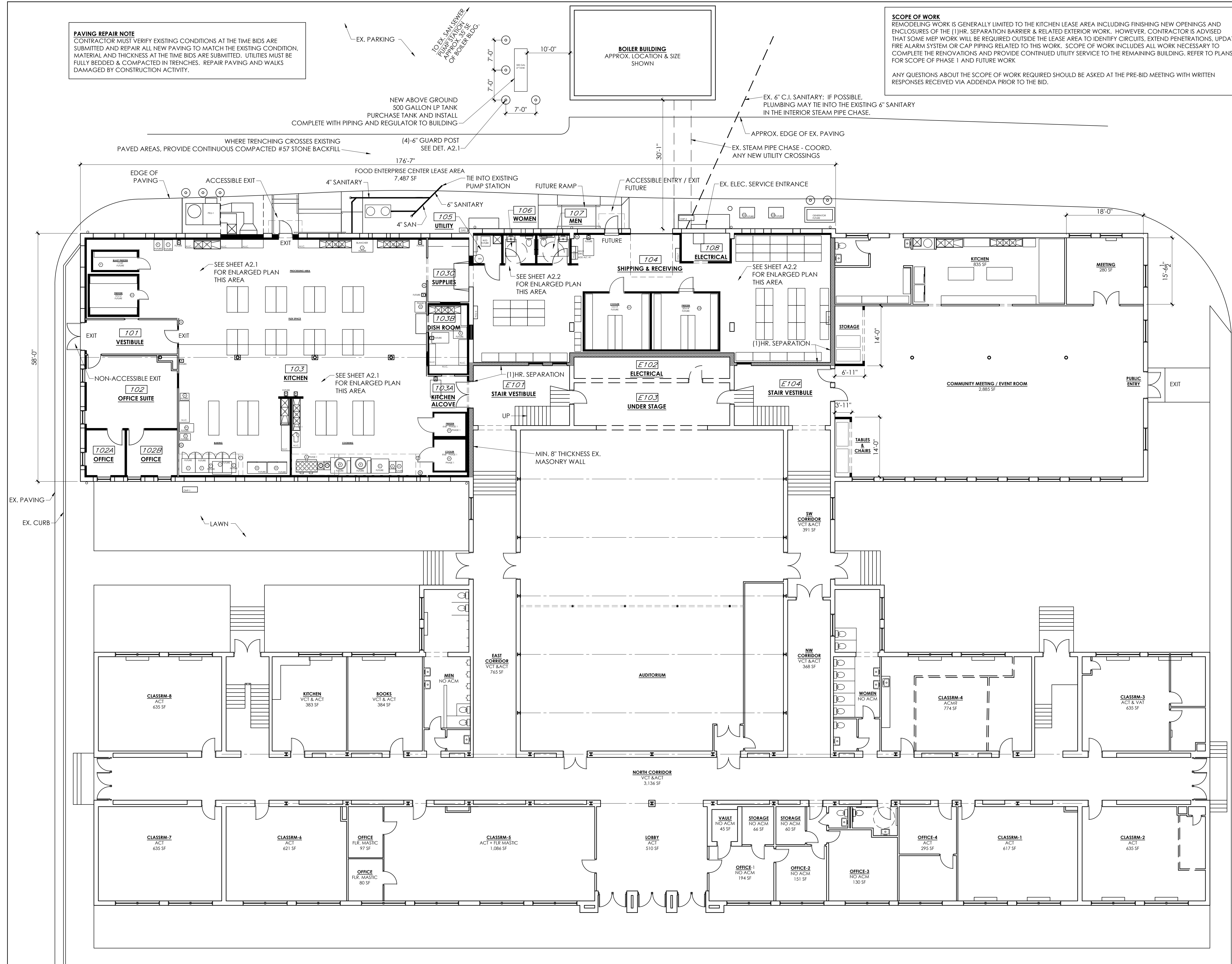




**PAVING REPAIR NOTE**  
CONTRACTOR MUST VERIFY EXISTING CONDITIONS AT THE TIME BIDS ARE SUBMITTED AND REPAIR ALL NEW PAVING TO MATCH THE EXISTING CONDITION. MATERIAL AND THICKNESS AT THE TIME BIDS ARE SUBMITTED. UTILITIES MUST BE FULLY BEDDED & COMPACTED IN TRENCHES. REPAIR PAVING AND WALKS DAMAGED BY CONSTRUCTION ACTIVITY.

**SCOPE OF WORK**  
REMODELING WORK IS GENERALLY LIMITED TO THE KITCHEN LEASE AREA INCLUDING FINISHING NEW OPENINGS AND ENCLOSURES OF THE (1)HR. SEPARATION BARRIER & RELATED EXTERIOR WORK. HOWEVER, CONTRACTOR IS ADVISED THAT SOME MEP WORK WILL BE REQUIRED OUTSIDE THE LEASE AREA TO IDENTIFY CIRCUITS, EXTEND PENETRATIONS, UPDATE FIRE ALARM SYSTEM OR CAP PIPING RELATED TO THIS WORK. SCOPE OF WORK INCLUDES ALL WORK NECESSARY TO COMPLETE THE RENOVATIONS AND PROVIDE CONTINUED UTILITY SERVICE TO THE REMAINING BUILDING. REFER TO PLANS FOR SCOPE OF PHASE 1 AND FUTURE WORK.  
  
ANY QUESTIONS ABOUT THE SCOPE OF WORK REQUIRED SHOULD BE ASKED AT THE PRE-BID MEETING WITH WRITTEN RESPONSES RECEIVED VIA ADDENDA PRIOR TO THE BID.

- GENERAL DEMOLITION NOTES**
- SEE PROJECT MANUAL SECTION 01732 SELECTIVE DEMOLITION FOR ADDITIONAL INFORMATION & REQUIREMENTS.
- THE INTENT OF DEMOLITION ACTIVITIES GENERALLY IS TO PREPARE FOR NEW FINISHED WORK AND TO RETURN EXISTING DISTURBED AREAS TO A CONDITION TO MATCH EXISTING ADJACENT FINISHES. IT IS IMPERATIVE THAT THE CONTRACTOR AND ANY SUB-CONTRACTORS INVOLVED IN THE WORK EXAMINE THE SITE PRIOR TO SUBMITTING A BID TO IDENTIFY MISC. AREAS OF REPAIR NECESSARY TO COMPLETE THE WORK. REQUESTS FOR CHANGES WILL NOT BE GRANTED TO PERFORM DEMOLITION WORK REQUIRED TO COMPLETE THE PROJECT THAT IS VISIBLE AT THE TIME BIDS ARE SUBMITTED.
- WHERE FLOOR, WALLS OR CEILING ARE REMOVED, REPAIR EXISTING ADJACENT FLOOR, BASE, WALLS & CEILING TO MATCH ADJACENT FINISHES UNLESS OTHERWISE SCHEDULED. PROVIDE NEW COVER PLATES WHERE PLATES ARE MISSING OR DAMAGED. UNLESS OTHERWISE NOTED, TOUCH UP REPAIRING SHALL COVER ENTIRE WALL SURFACE AFFECTED BY DEMOLITION. RE-PAINT BOTH SIDES OF DOORS & FRAMES IN AREAS SCHEDULED FOR NEW FINISHES.
  - ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN FULL COOPERATION AND COORDINATION W/ OWNER. COORDINATE ALL LOSS OR REDUCTION OF EGRESS ELEMENTS OR ELECTRICAL OR COMMUNICATIONS SYSTEMS WITH OWNER. FOR INTERIOR REMODELING, ERECT DUST BARRIERS & NEGATIVE PRESSURE ENCLOSURES AROUND ENTIRE NEW CONSTRUCTION AREA TO PROTECT ADJACENT SPACES FROM DUST AND DEBRIS. **CONTRACTOR SHALL MAINTAIN DUST BARRIER INTEGRITY TO OWNER'S SATISFACTION AT ALL TIMES UNTIL SUBSTANTIAL COMPLETION.** VERIFY AT PRE-CONSTRUCTION MEETING ACCESS TO WORK AREA AND EXTENT OF WORK TO BE PERFORMED AFTER HOURS.
  - WHERE EXIST. ITEMS ARE RELOCATED, REPAIR DAMAGES TO ORIGINAL LOCATION AND PROVIDE HANGERS, SUPPORTS, WIRING, CONDUIT, ETC. NECESSARY FOR THE RELOCATION.
  - PROTECT EXISTING STRUCTURE FROM DAMAGE DURING CONSTRUCTION ACTIVITIES. EXTREME CARE MUST BE TAKEN NOT TO DAMAGE OR DISTURB EXISTING EQUIPMENT WHILE PERFORMING WORK. **DO NOT TURN OFF BREAKERS OR VALVES WITHOUT OWNER'S PERMISSION.**
  - DURING REGULAR BUSINESS HOURS, MAINTAIN REQUIRED EXITS FROM BUILDING TO THE SATISFACTION OF THE BUILDING OFFICIAL.
  - U.N.O. EXISTING VALVES, ELECTRICAL RECEPTACLES, SWITCHES & EQUIPMENT SERVICING EXISTING FACILITY TO REMAIN. CONTRACTOR SHALL COORDINATE ALL POWER OR FIRE ALARM SYSTEM INTERRUPTIONS WITH OWNER'S REPRESENTATIVE.
  - WHERE NEW PENETRATIONS ARE MADE THRU EXISTING EXTERIOR WALLS OR ITEMS ARE REMOVED CREATING HOLES - SEAL FOR INSULATED & WEATHER-TIGHT ENCLOSURE.
  - IT IS THE INTENTION OF THESE BID DOCUMENTS TO IDENTIFY THE GENERAL DESIGN INTENT OF THE DEMOLITION AND REMODELING WORK NECESSARY FOR THE PERFORMANCE OF THIS REMODELING PROJECT. CONTRACTOR & SUB-CONTRACTORS MUST FIELD VERIFY EXISTING MISC. CONDUIT, PIPING, EQUIPMENT AND OTHER ITEMS ABOVE AND BELOW THE LAY-IN CEILING THAT WILL NEED TO BE REMOVED AND/OR RELOCATED. THIS WILL REQUIRE VISITING THE SITE PRIOR TO SUBMITTING BIDS TO UNDERSTAND EXISTING CONDITIONS FOR ITEMS TO BE REMOVED AND/OR RELOCATED. THE OWNER'S CONSTRUCTION REPRESENTATIVE(S) SHOULD BE CONTACTED PRIOR TO BIDS SO ANY QUESTIONS MAY BE ANSWERED BEFORE BIDS ARE SUBMITTED.
  - FINISHED FLOOR SPACE IS EXTREMELY VALUABLE TO THE OWNER. CONTRACTOR TO BOX TIGHTLY AROUND ALL EXPOSED PIPING & CONDUIT WITH SCHEDULED FINISH. CONTRACTOR SHALL BOX IN AROUND SPRINKLER RISERS, CONDUITS, MISC. DUCTS & OTHER EXPOSED PIPING WITH GPDW ON METAL FRAMING.
  - REPORT ANY DAMAGE TO EXISTING EQUIPMENT OR STRUCTURE TO OWNER AT THE TIME OF DAMAGE - EVEN IF THE DAMAGE IS PROMPTLY REPAIRED.
  - SEE MEP SHEETS FOR ADDITIONAL EQUIPMENT DEMOLITION AND HOLES REQUIRED.
  - WHERE EXISTING WALLS ARE REMOVED REPAIR FLOOR AND CEILING TO MATCH ADJACENT EXISTING SURFACES OR FOR NEW FINISH AS INDICATED.



OVERALL FIRST FLOOR PLAN  
SCALE: 3/32" = 1'-0"



FINISH SCHEDULE

- GENERAL FINISH NOTES:**
- SEE CEILING PLAN FOR EXTENT OF PAINTED SOFFITS & SUSPENDED CEILING.
  - COLORS TO BE SELECTED BY TENANT OR ARCHITECT.
  - UP TO (2) DIFFERENT WALL PAINT COLORS MAY BE SELECTED BY OWNER PER SPACE.
  - WHERE FLOOR FINISH IS REMOVED OR EXISTING WD BASE IS RE-FURBISH OR ADDED, PROVIDE NEW BASE SHOE ALL AROUND IN THE SPACE.
  - IN KITCHEN AREAS PROVIDE WASHABLE PAINT FINISH FOR EXISTING CMU TO REMAIN AND FRP AT ALL STUD PARTITIONS.

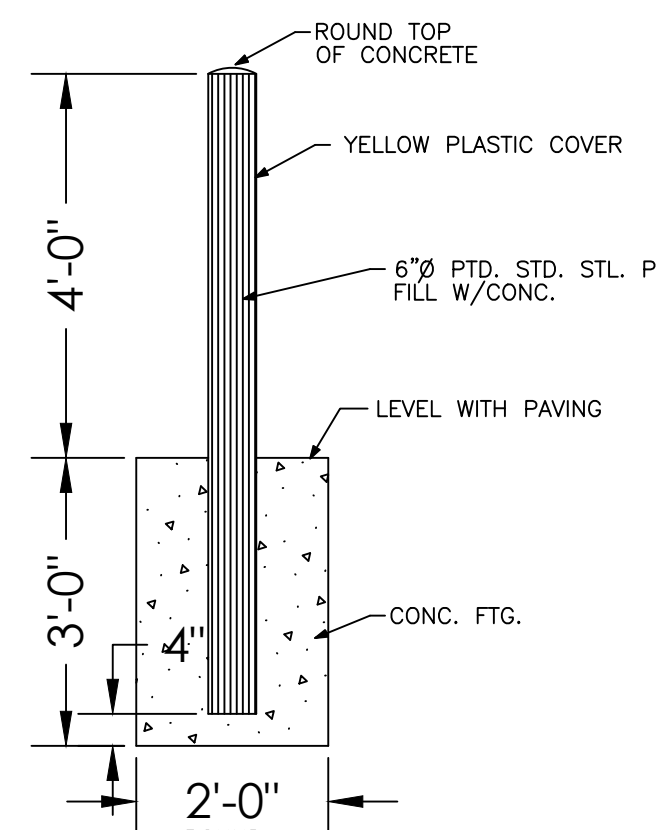
**F-1** FLOOR - EX. PTD. CONCRETE (PATCH & SEAL CUT CONCRETE)  
BASE - EX. PTD. WD / NEW 4" RUBBER WALLS - PTD EGG-SHELL ENAMEL TRIM - PTD SEMI-GLOSS ENAMEL CEILING - PTD EGG-SHELL ENAMEL

**F-2** FLOOR - EPOXY QUARTZ NON-SLIP FINISH BASE - 4" EPOXY FINISH TURN UP WALL WALLS - FRP / PTD SEMI-GLOSS ENAMEL TRIM - PTD SEMI-GLOSS ENAMEL CEILING - A.C.T.

**F-3** [FUTURE] FLOOR - EPOXY QUARTZ NON-SLIP FINISH BASE - 4" EPOXY FINISH TURN UP WALL WALLS - FRP / PTD SEMI-GLOSS ENAMEL TRIM - PTD SEMI-GLOSS ENAMEL CEILING - A.C.T.

PLAN NOTES (PHASE 1 SCOPE OF WORK)

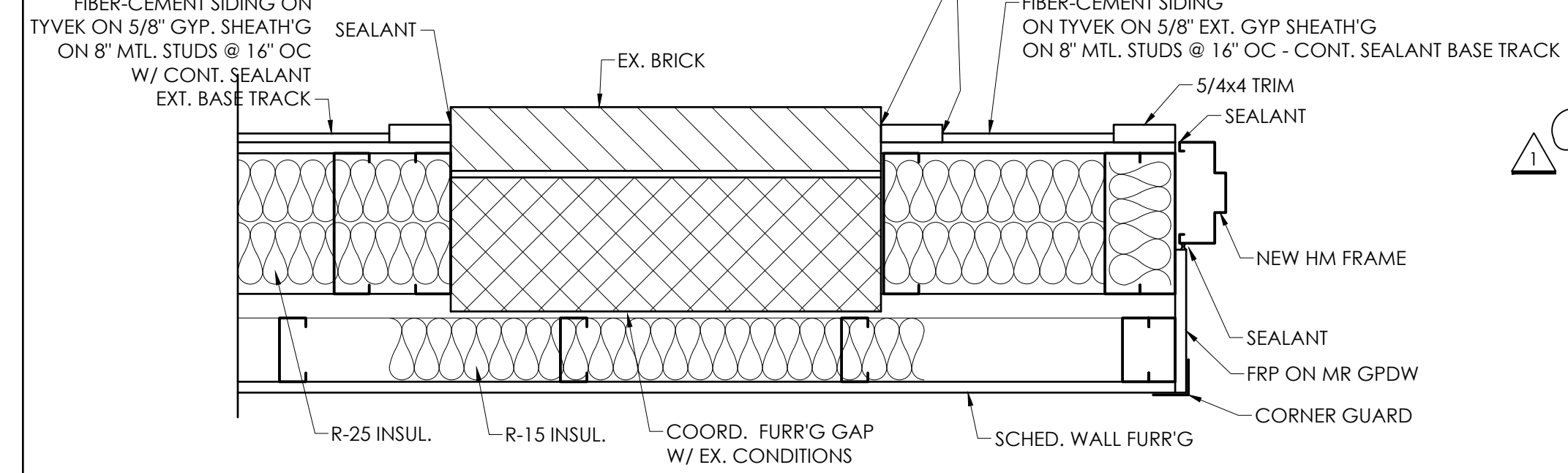
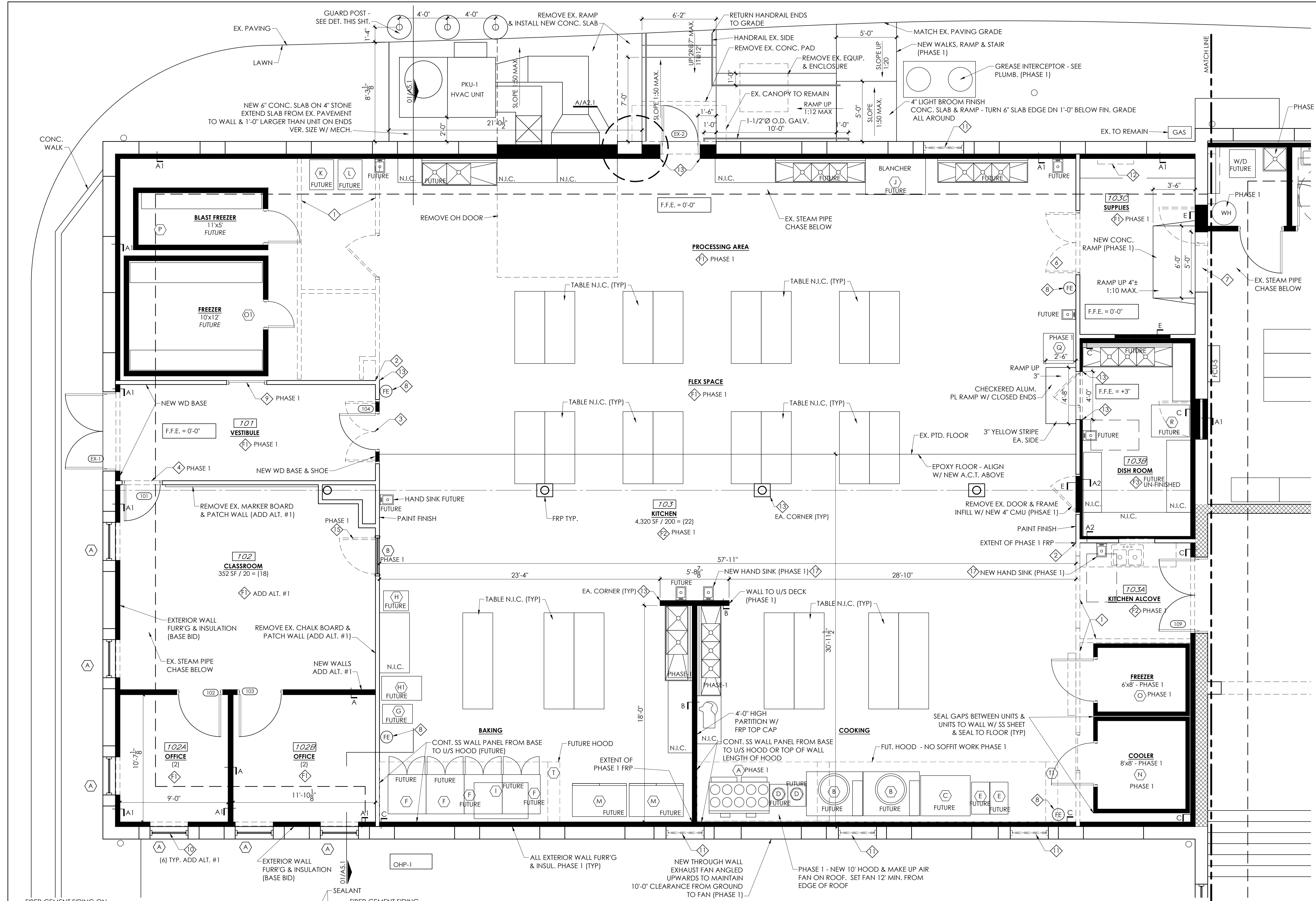
- REMOVE EX. WALL & PATCH & MATCH FLOOR & WALLS.
- GRIND CORNER SMOOTH & PATCH W/ MORTAR.
- REMOVE EX. 5'-0" WIDE DOOR & REPLACE W/ NEW 3'-0" WIDE EXIT DOOR - RE-USE EXISTING FRAME. FILL & WELD EX. UNUSED CUT-OUTS IN EX. FRAME.
- REMOVE PORTION OF EX. WALL FOR NEW HM FRAME & DOOR. VERIFY WALL CONSTRUCTION & PROVIDE NEW LINTEL IF CMU WALL.
- REMOVE EX. VCT FLOOR & BASE SHOE.
- REMOVE EX. DOOR - EX. FRAME TO REMAIN
- NEW 5'-0" x 7'-0" HIGH OPENING W/ STRIP CURTAIN WRAPPED COLUMN EDGES & CASED OPENINGS THAT DO NOT HAVE WOOD TRIM (TYP). PROVIDE (2) AT END WALLS. PROVIDE 8" TALL SS CORNER GUARDS AT FRP WALLS AS PART OF THE FRP INSTALLATION.
- REMOVE EX. WINDOW & REPLACE WITH NEW WINDOW. (ADD ALTERNATE #1)
- REMOVE EX. WINDOW & INFILL W/ NEW CMU & BRICK TO MATCH EX. WALL CONSTRUCTION.
- REMOVE EX. RADIATOR COVER AND CAP PIPING AS DIRECTED BY MECHANICAL / PLUMBING. TYPICAL FOR ALL RADIATORS IN PROJECT AREA.
- PROVIDE WALLGUARD.COM 2"x2" x 4'-0" LONG (ABOVE BASE) S.S. HEAVY DUTY ADHESIVE APPLIED CORNER GUARDS AT ALL 90 DEGREE INTERIOR OUTSIDE STUD WALL CORNERS - INCLUDING WRAPPED COLUMN EDGES & CASED OPENINGS THAT DO NOT HAVE WOOD TRIM (TYP). PROVIDE (2) AT END WALLS. PROVIDE 8" TALL SS CORNER GUARDS AT FRP WALLS AS PART OF THE FRP INSTALLATION.
- REMOVE EX. DOOR & FRAME. WIDEN EX. CMU OPENING AND PROVIDE NEW 4" CMU LINTEL W/ 8" BEARING EA. END AND BULLNOSE CORNERS AT OPENING
- REMOVE EX. DOOR. INFILL WALL W/ CMU TO MATCH EX. & PROVIDE NEW INTERIOR VIEW WINDOW BELOW EX. LINTEL. VERIFY EX. M.O. WIDTH.
- NEW TYPE 2A WALL HUNG FIRE EXTINGUISHER.
- INSTALL BLOCKING AND WALL MOUNTED SOAP DISPENSERS (PROVIDED BY OWNER) ABOVE EACH HAND SINK AT 40" A.F.F.



GUARD POST DETAIL  
SCALE: 1/2" = 1'-0"

ENLARGED FLOOR PLAN - EAST  
SCALE: 1/4" = 1'-0"

- BASE BID ROUGH-IN WORK**
- FOR PLUMBING FIXTURES & EQUIPMENT LABELED "FUTURE": PROVIDE ROUGH-IN PLUMBING & ELECTRICAL TO INCLUDE ELECTRICAL CONDUITS W/ PULL STRINGS FROM PANELS TERMINATED TO LOCAL J.B. OR DISCONNECT SWITCHES & CIRCUIT BREAKERS IN PANELS AS INDICATED ON ELECTRICAL.
  - FOR PLUMBING FIXTURES & EQUIPMENT SHOWN AS "NEW" OR "PHASE 1" OR NOT OTHERWISE LABELED: PROVIDE COMPLETE FIXTURES AND FINISHED CONNECTION SO EQUIPMENT AND FIXTURES ARE FULLY OPERATIONAL.
  - ITEMS LABELED "N.I.C." ARE NOT IN THE CONTRACT - NO WORK REQUIRED.
  - U.N.O., ALL EXTERIOR WORK IS A PART OF THIS CONTRACT.



PLAN DETAIL  
SCALE: 1-1/2" = 1'-0"



INTERIOR WALL TYPES

- NOTES:
1. PROVIDE 3" SOUND BATTS INSULATION IN ALL OCCUPIED INTERIOR PARTITIONS U.N.O.
  2. SEAL AROUND ALL EDGES AT SOUND PARTITIONS.
  3. PROVIDE MR GPDW AT WET WALLS (WHERE NOT FIRE RATED)
  4. U.N.O. EXTEND PARTITIONS TO UNDERSIDE OF ROOF DECK.

- TYPE 'A' 5/8" GPDW EACH SIDE ON 3-5/8" MTL. STUDS @ 16" OC MAX (SOUND BATTS)  
TYPICAL INTERIOR WALL TYPE - USE WHERE NOT OTHERWISE INDICATED.
- TYPE 'A1' 5/8" GPDW TO U/S CLG. OR DECK ON 3-5/8" FURRING @ 16" OC MAX. PROVIDE R-15 MIN. INSUL. AT ALL EXT. WALLS
- TYPE 'A2' 8'-0" TALL FRP PANELS ON 5/8" MR GPDW TO U/S CLG. OR DECK ON 1-1/2" FURRING @ 16" OC MAX.
- TYPE 'B' 8'-0" TALL FRP PANELS ON 5/8" GPDW EACH SIDE ON 3-5/8" STUDS @ 16" OC MAX.
- TYPE 'C' 8'-0" TALL FRP PANELS ON 5/8" GPDW TO 10'-4" A.F.F. ON 3-5/8" FURRING @ 16" OC MAX. PROVIDE R-15 MIN. INSUL. AT ALL EXT. WALLS
- TYPE 'D' 5/8" TYPE 'X' GPDW EA. SIDE ON 3-5/8" STUDS @ 16" OC W/ 3" SOUND BATTS INSUL. (1) HOUR RATED - (U.L. U465)
- TYPE 'E' CMU TOOTHED INTO THE EXISTING WALL - MATCH EX. WALL WIDTH

WASHROOM ACCESSORIES

1. TOILET TISSUE HOLDER: OWNER PROVIDED, CONTRACTOR INSTALLED. (1) AT EACH TOILET.
2. TOWEL DISPENSER: OWNER PROVIDED, CONTRACTOR INSTALLED. CONTRACTOR TO PROVIDE BLOCKING FOR TOWEL DISPENSERS: MOUNT 48" TO TOP OF OPERABLE PARTS.
3. MIRROR: 24" WIDE x 3'-6" HIGH 1/2" FLOAT GLASS BEVEL EDGE FRAMELESS - SECURELY GLUED & CLIPPED TO WALL. MIRROR SHALL BE GUARANTEED AGAINST SILVER SPOILAGE FOR 15 YEARS.
4. TOILET GRAB BARS: EQ. TO ASI 3800 SERIES W/ INTEGRAL NON-SLIP SURFACE. PROVIDE (1)-42" LONG & (1)-36" & (1) 18" LONG GRAB BAR AS INDICATED IN EACH ACCESSIBLE TOILET ROOM.

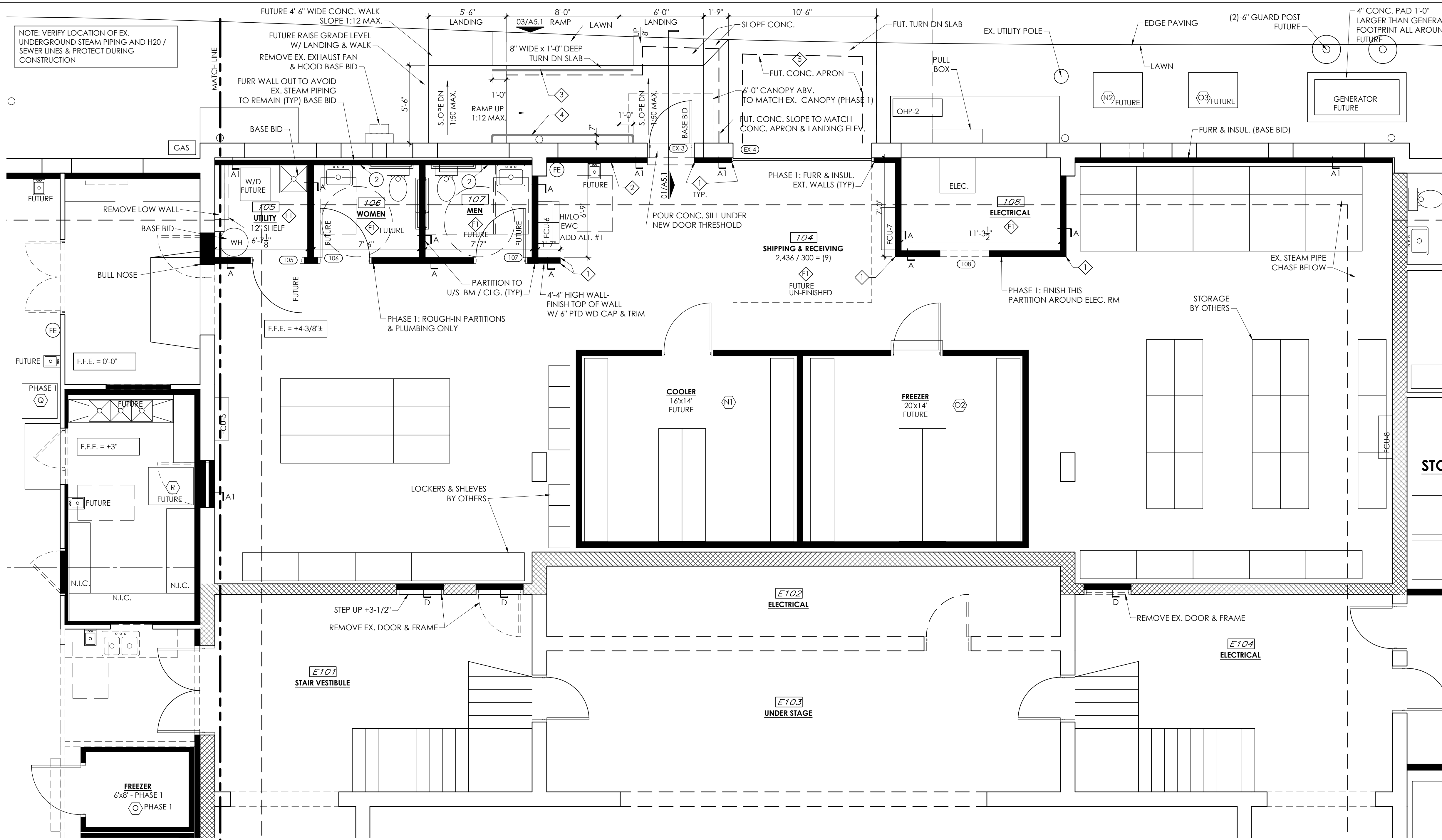
NOTE: CONTRACTOR TO VERIFY BLOCKING LOCATIONS.

BUILT-IN SHELF NOTES

1. WHERE UTILITY TYPE SHELVES ARE INDICATED IN CLOSETS, AND JANITOR CLOSET BY A DASHED LINE, PROVIDE 3/4" THICKNESS A/B PTD. PLYWD SHELVES MIN 12" WIDE. INSTALL SHELVES ON HEAVY-DUTY ADJUSTABLE SHELF STANDARDS AND SNAP-IN PLACE BRACKETS OF THE PROPER WIDTH. U.N.O. PROVIDE (1) SHELF AND 24" LONG SHELF STANDARD BRACKETS @ 24" OC. PROVIDE BRACKETS @ 24" OC MAX.

PLAN NOTES

1. PROVIDE WALLGUARD.COM 2"x2" x 4'-0" LONG (ABOVE BASE) S.S. HEAVY DUTY ADHESIVE APPLIED CORNER GUARDS AT ALL 90 DEGREE INTERIOR OUTSIDE STUD WALL CORNERS - INCLUDING WRAPPED COLUMN EDGES & CASED OPENINGS THAT DO NOT HAVE WOOD TRIM (TYP). PROVIDE (2) AT END WALLS.
2. RELOCATE SEWER PANEL & ALARM - SEE MEP
3. 1-1/2" O.D. GALV. PIPE HANDRAIL W/ (4) EQUALLY SPACED POSTS SET IN GROUTED SS PIPE SLEEVES. PROVIDE SMOOTH BENDS AND ALL WELDS GROUND SMOOTH. SEE DET. 03/AS.1. (FUTURE)
4. 1-1/2" O.D. GALV. PIPE HANDRAIL. PROVIDE SMOOTH BENDS AND ALL WELDS GROUND SMOOTH. TURN UPPER ENDS OF RAIL TO WALL AND MOUNT RAIL TO BRICK WITH CUSTOM GALV. WALL BRACKETS. (FUTURE)
5. REMOVE EX. CONC. APRON AND POUR NEW 6" THICK CONC. APRON WITH 1'-0" DEEP x 1'-0" WIDE TURN DN SLAB EDGE W/ (2)-#4 BOT. PROVIDE 6x6-2x9x2.9 WWF IN MID-SLAB



ENLARGED FLOOR PLAN - WEST

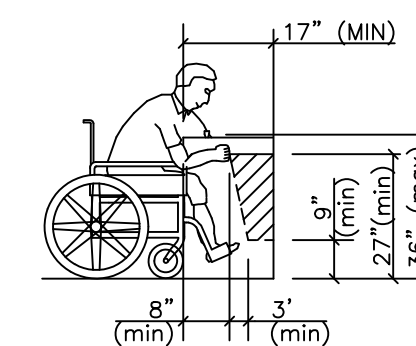
SCALE: 1/4" = 1'-0"

KITCHEN EQUIPMENT SCHEDULE

DESCRIPTION	MANUFACTURER	MODEL NO.	BTUs	NOTES
A 10 Burner Stove	Garland or EQ	G60-10RR	406,000	CONVERT TO LP, Owner may provide used range
B 40 gallon Kettle	Blodgett	KLT - 40 - G40	100,000	
C Gas Braising Pan w/ Tilt	Blodgett	BLT-30G	80,000	
D Pot Burner	Black Diamond	BDCT SP-1/NG	80,000	
E Deep Fat Fryer	Empura	EGF-40/50	114,000	
F Gas Convection Oven	Southbend	GS25	180,000	
G Dough Proofer	Omcan	31834		
H Mixer - 20 quart	Empura	EM-20H		
H1 Mixer - 60 quart	Eurodib	M60A 220 ETL-60 QT		
I Pasteurizer	TBD			
J Blancher	TBD			
K Dehydrator - 24 Rack	Weston	28-0501-W		
L Vacuum Sealer	ProMarks	SC-520		
M Refrigerator	Kool-It	KB54R		
N Cooler 8'x8' Walk-in	Kold Locker Walk-in	KL-7788 / CPB075DC-A		
N1 Cooler 14'x16' Walk-in Combination	Nor-Lake	FINELINE 32'X14'X8'-7" high		
N2 14'x16'x8' Cooler Split System	Nor-Lake	LASJ300RL3-#BYHM		
O Freezer 6'x8' Walk-in	Kold Locker Walk-in	KL-7768 / CPF100DC-A		
O1 Freezer 10'x12' Walk-in	Kold Locker Walk-in	KL771012 / CPF151DC-A		
O2 Freezer 14'x16' Walk-in Combination	Nor-Lake	FINELINE 32'X14'X8'-7" high		
O3 14'x16'x8' Freezer Split System	Nor-Lake	NASJ200RL3-#BYHM		
P Blast Freezer	Thermo-Kool	TK1408 CF-2		
P1 Blast Freezer Condensing Unit	Thermo-Kool	TBD		
Q Ice Machine	Manitowoc	Indigo Series 300		
R Dish Machine	Hobart	PW10eR		
T 16" Exhaust Hood (FUTURE)	TBD			
T1 12" Exhaust Hood	FURNISHED BY OWNER			GC INSTALL COMPLETE HOOD & ANSUL SYSTEM

KITCHEN EQUIPMENT NOTES:

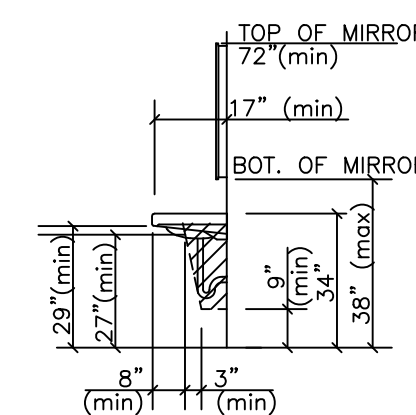
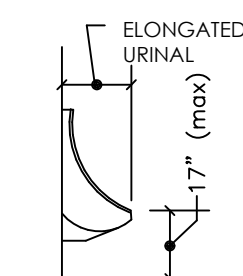
1. SCHEDULE SHOWS PHASE 1 AND FUTURE EQUIPMENT. SEE FLOOR PLANS FOR PHASE 1 EQUIPMENT. ALL PHASE 1 EQUIPMENT WILL BE PURCHASED BY THE OWNER (TENANT) & INSTALLED BY THE GC. ROUGH IN FOR OTHER EQUIPMENT.
2. PRIOR TO STARTING WORK, OWNER SHALL FURNISH THE CONTRACTOR WITH A COMPLETE PDF DOCUMENT OF ALL KITCHEN EQUIPMENT TO BE FURNISHED BY THE OWNER AND INSTALLED BY THE CONTRACTOR. NOTE THAT SOME EQUIPMENT IS EXISTING AND CONTRACTOR WILL NEED TO FIELD EXAMINE EXISTING EQUIPMENT ON SITE TO CONFIRM ROUGH-IN REQUIREMENTS. CONTRACTOR SHALL CONFIRM ROUGH-IN REQUIREMENTS OF EQUIPMENT AND MAKE ADJUSTMENTS BEFORE ORDERING OR INSTALLING SYSTEMS.
3. SEE MEP PLANS FOR ELECTRICAL AND OTHER CONNECTION INFORMATION.



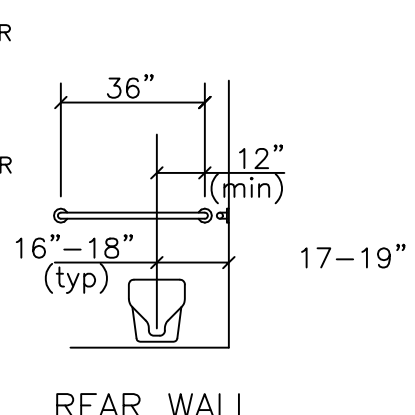
WATER COOLER URINAL

MOUNTING HEIGHTS

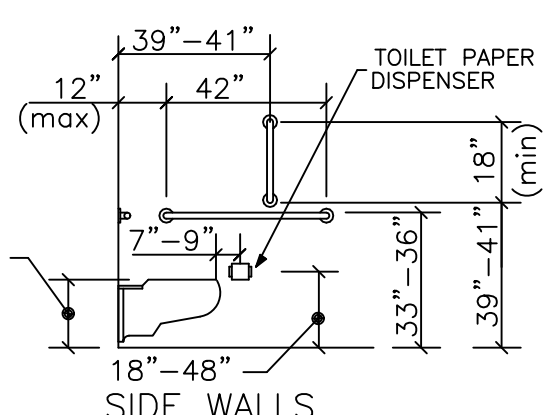
SCALE: NONE



LAVATORY



WATER CLOSETS

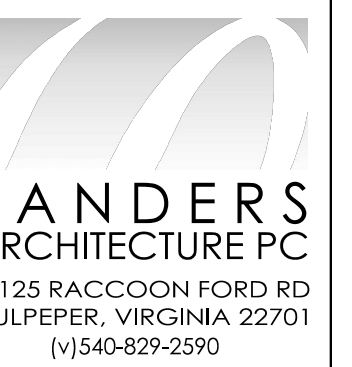


TOWEL DISPENSER/WASTE RECEPTACLE

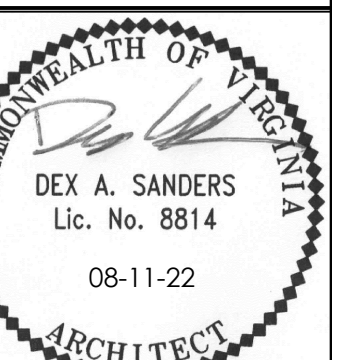
EQUIPMENT PERMITTED IN HATCHED AREAS TO BE CONFIGURED TO PROTECT AGAINST CONTACT. STANDARDS SHOW TYPICAL ACCESSIBLE MOUNTING HEIGHTS & CLEARANCES. SPECIFIED PRODUCTS MAY VARY FROM DETAIL IMAGE. SPECIAL MOUNTING HEIGHTS MAY BE INDICATED ON OTHER SHEETS. ORDER TOILETS WITH FLUSH VALVES ON THE OPEN SIDE OF THE TOILET. REACH HEIGHTS SHOWN ARE TO OPERABLE PARTS (TYPICAL)

REACH HEIGHTS SHOWN ARE TYPICAL TO OPERABLE PARTS FOR ALL DEVICES INCLUDING RECEPTACLES / FULL STATIONS





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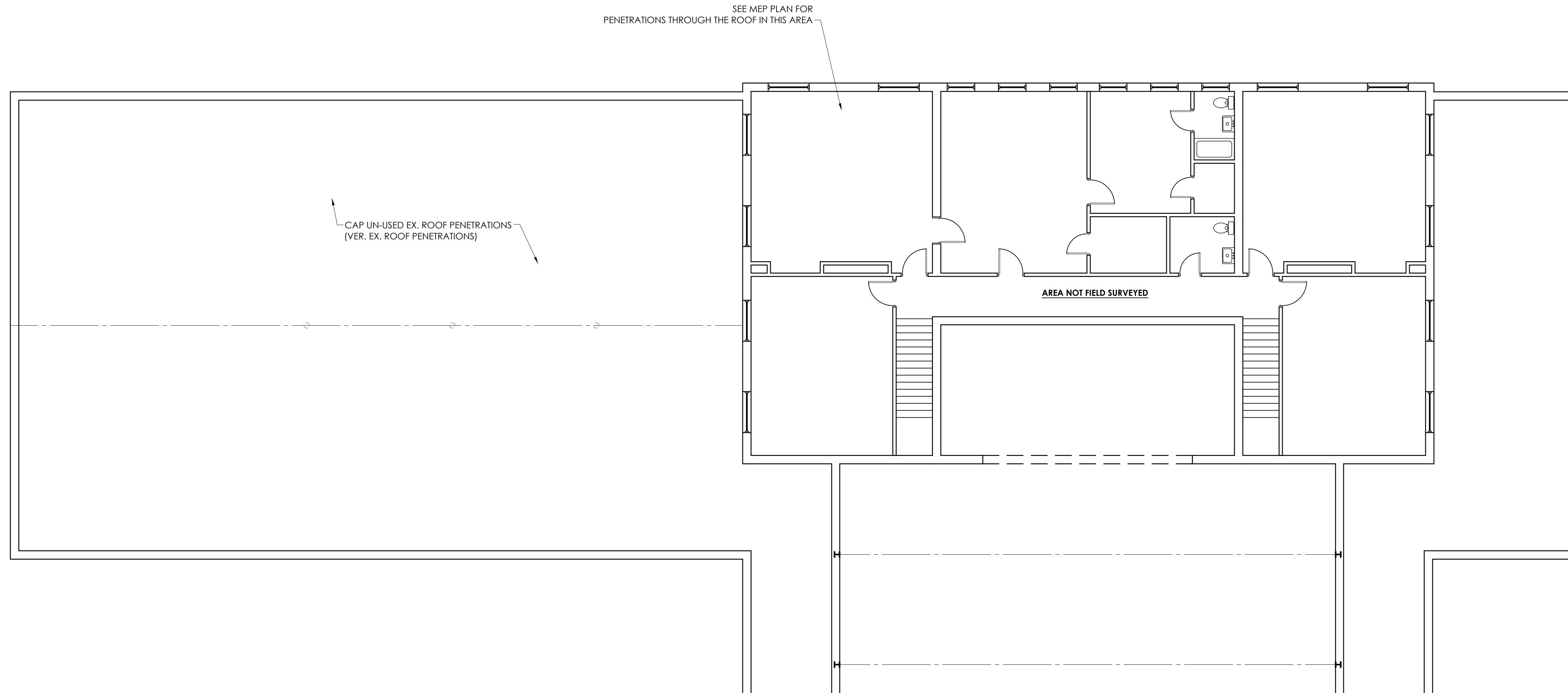


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DATE: 08-11-22  
PROJECT #: 1624A

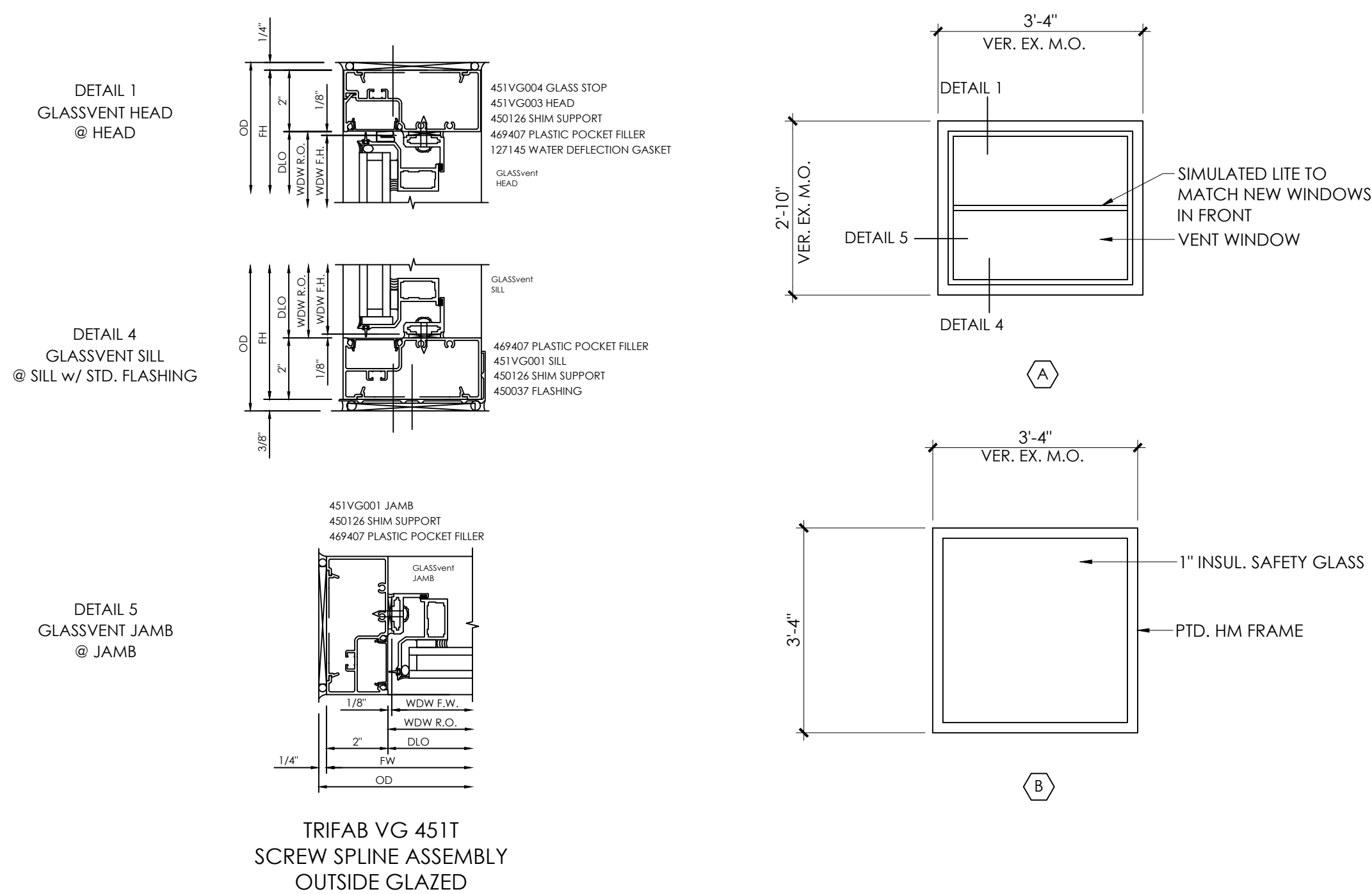
ROOF PLAN  
WINDOW DETAILS



PARTIAL 2ND FLOOR / ROOF PLAN  
SCALE: 1/8" = 1'-0"



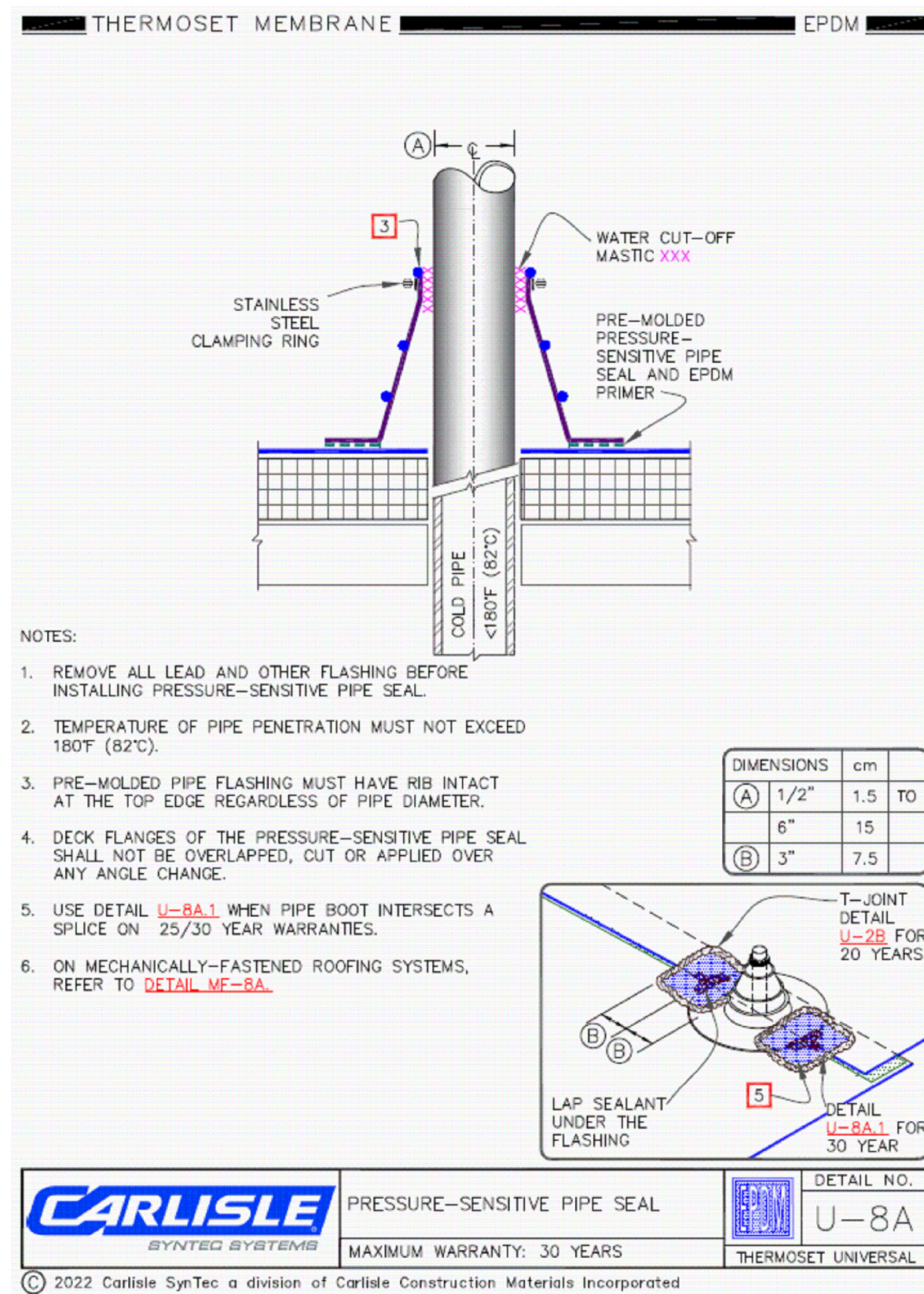
SITE IMAGE  
SCALE: NOTED



WINDOW DETAILS  
SCALE: 3" = 1'-0"

WINDOW TYPES  
SCALE: 1/2" = 1'-0"

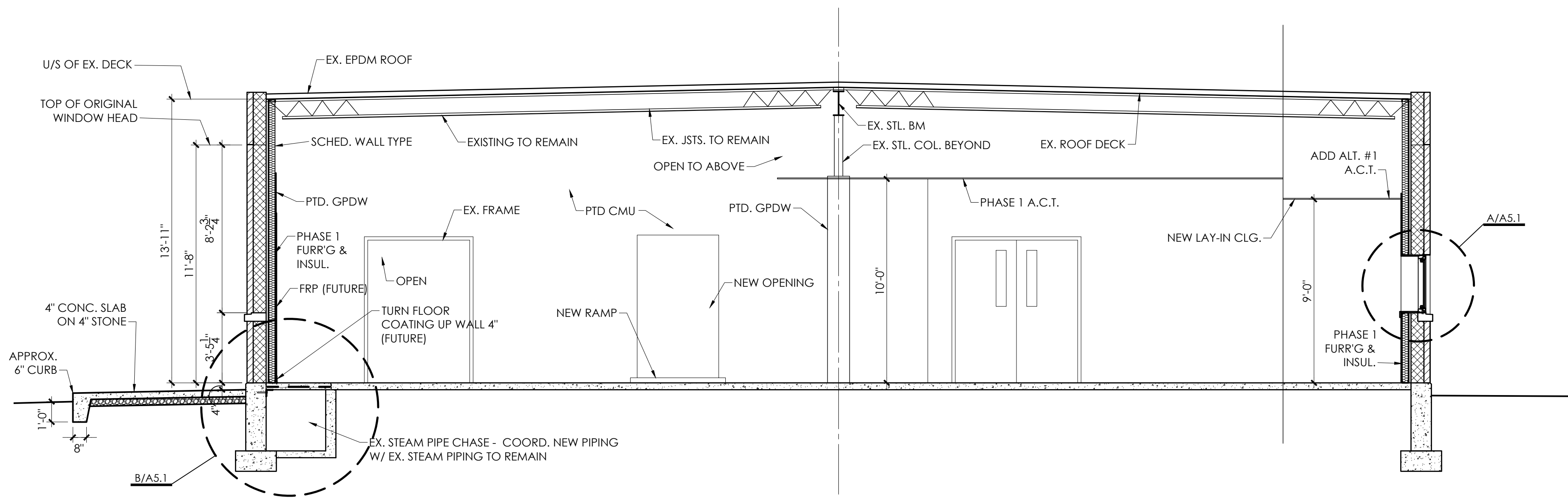
- ALUMINUM STOREFRONT**
1. KAWNEER TRIFAB VG 451T SYSTEM OR EQUAL AS INDICATED. ALL FRAMING MEMBERS TO BE THERMALLY BROKEN.
  2. FRAME COLOR TO BE WHITE TO MATCH EXISTING REPLACEMENT WINDOWS.
  3. GLASS: 1" INSULATED, LOW E ARGON FILLED, GREY TINT, TEMPERED WHERE REQUIRED BY CODE (SUBMIT GLASS TINT SAMPLE FOR REVIEW). MAX. U VALUE = 0.28, MAX SHGC = 0.30.
  4. DOORS: NOT USED



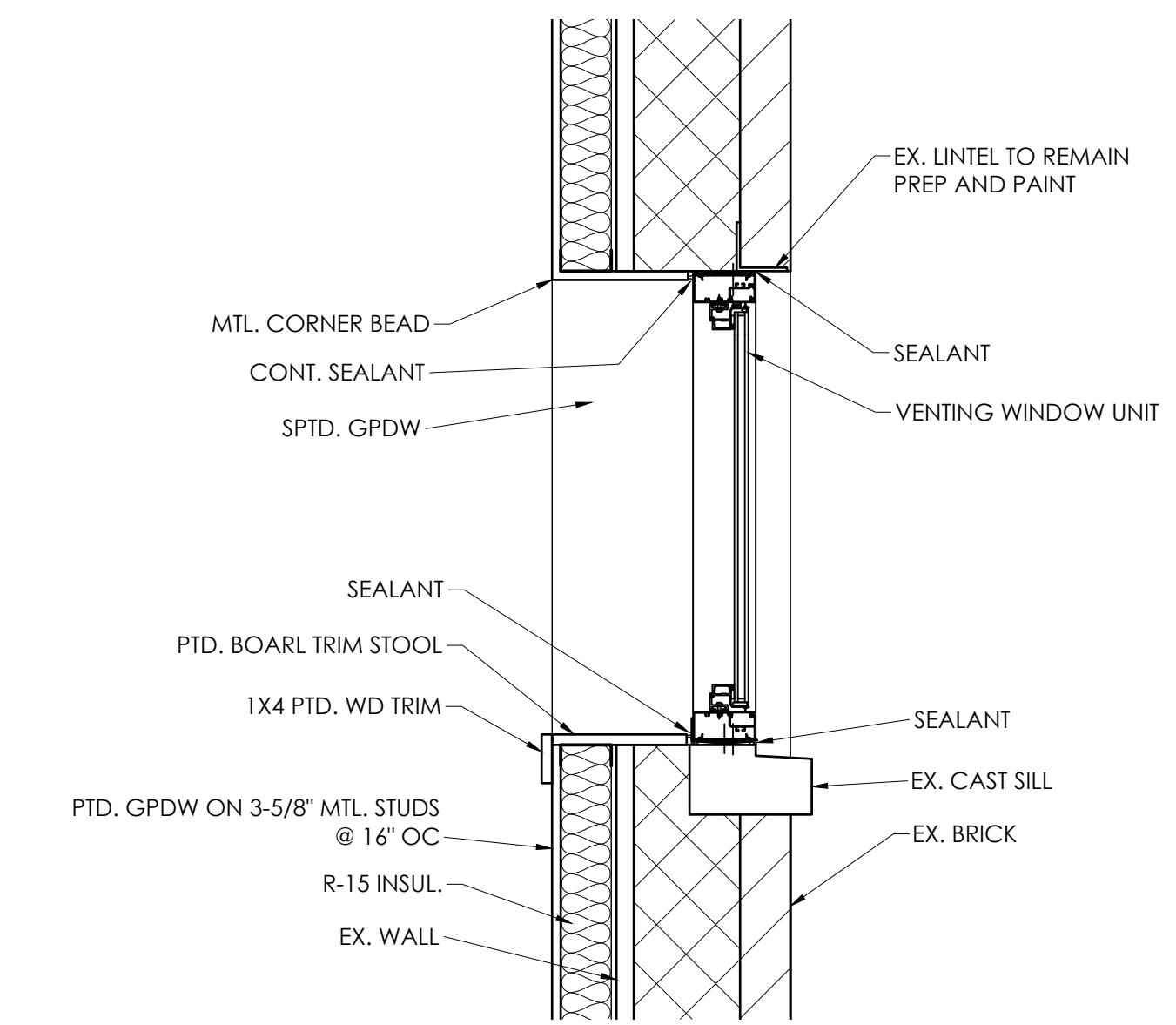




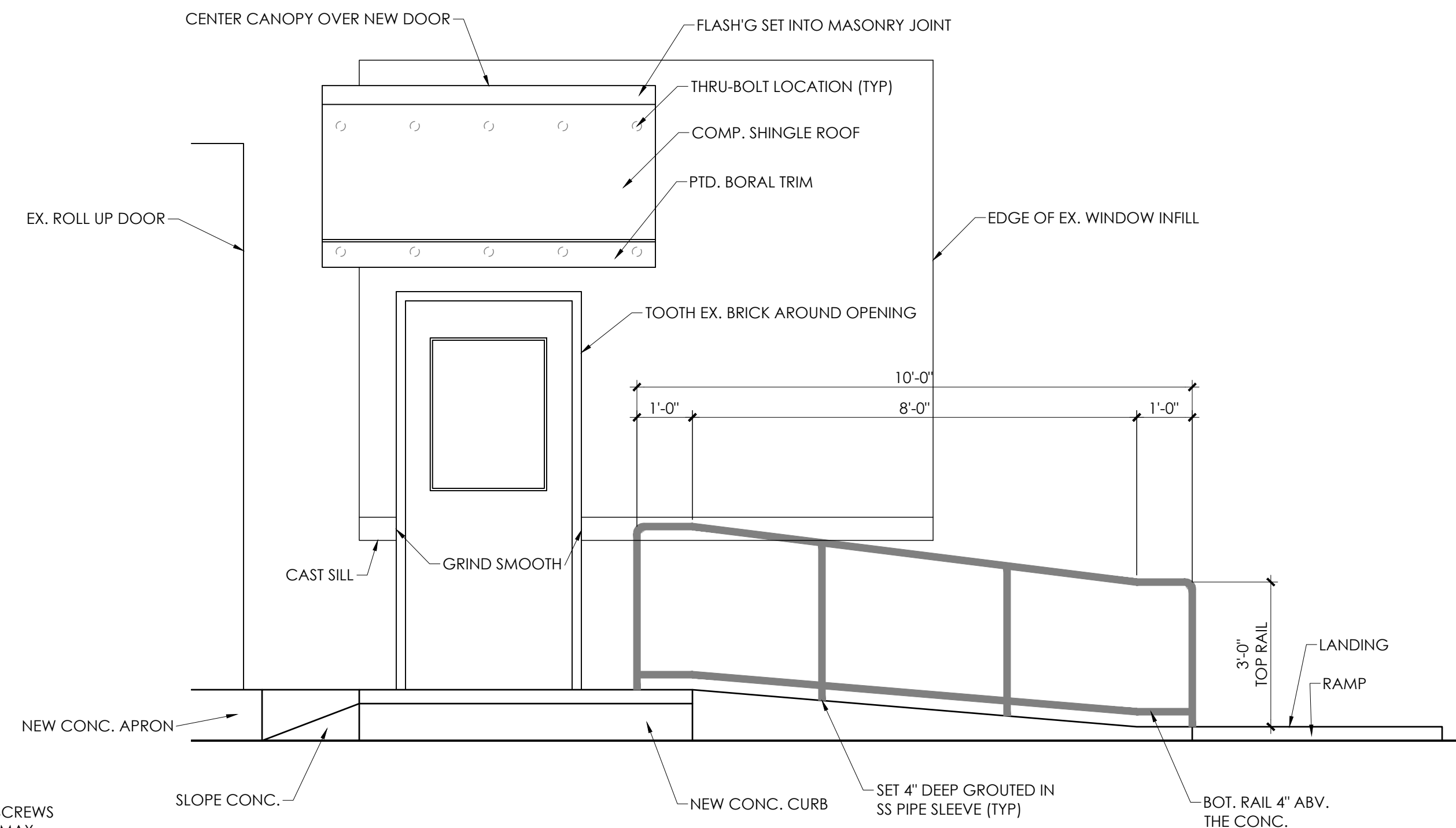




**01 SECTION**  
SCALE: 1/4" = 1'-0"

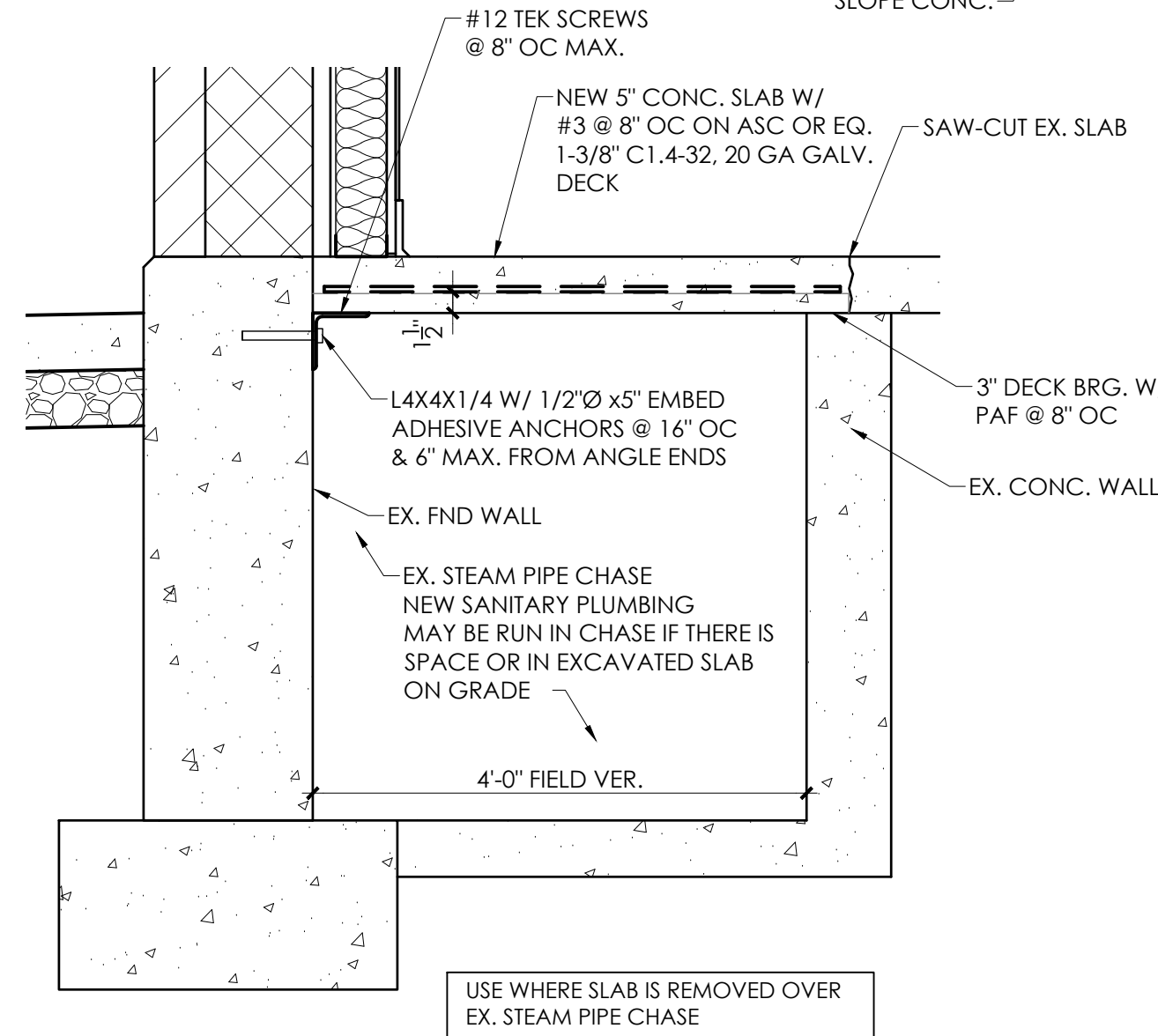


**A SECTION @ WINDOW REPLACEMENT**  
SCALE: 1" = 1'-0"

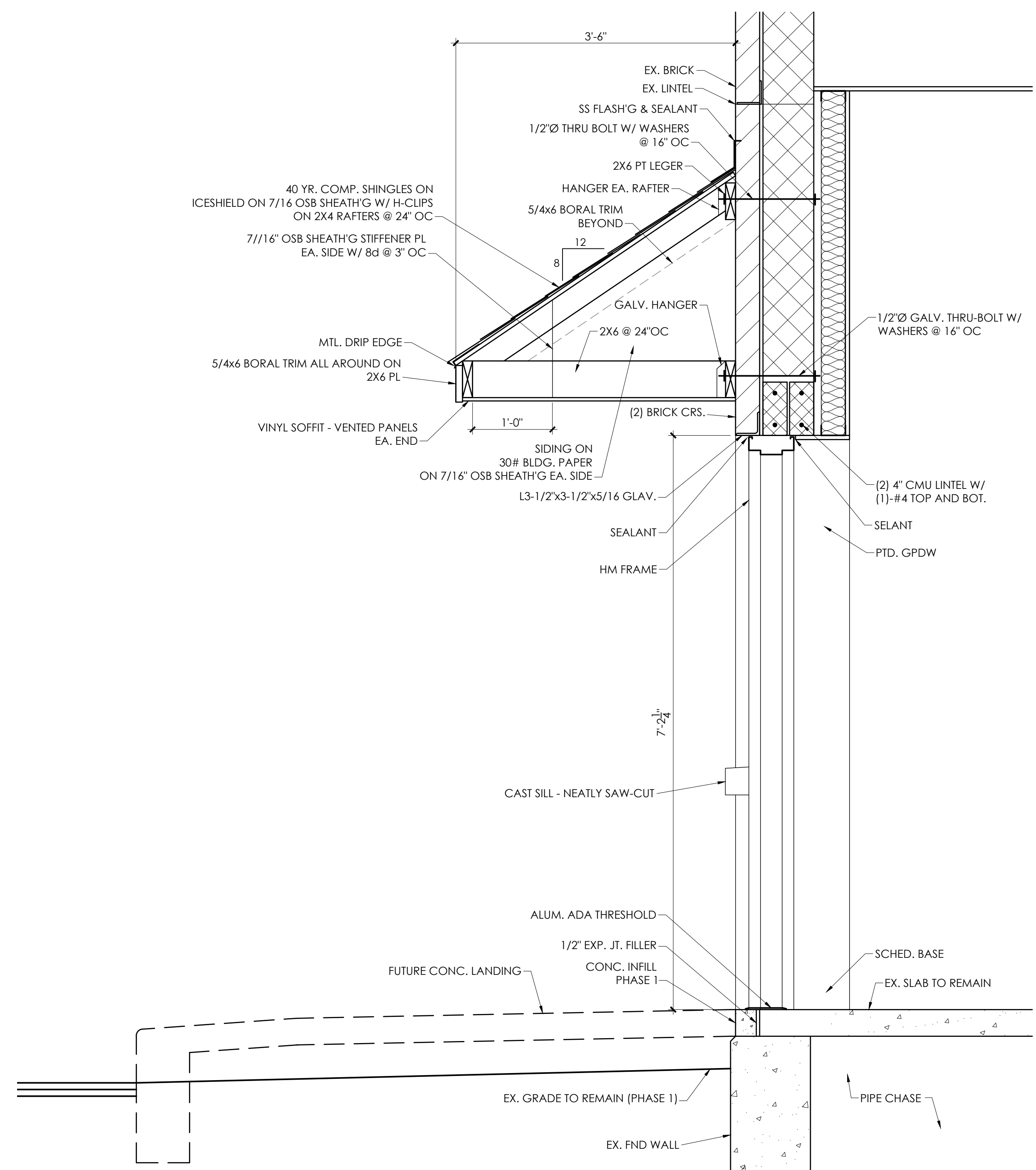


**03 ELEVATION @ DOOR EX-3 - FUTURE**  
SCALE: 1/2" = 1'-0"

NOTE: RAIL AT DOOR EX-2 SIMILAR



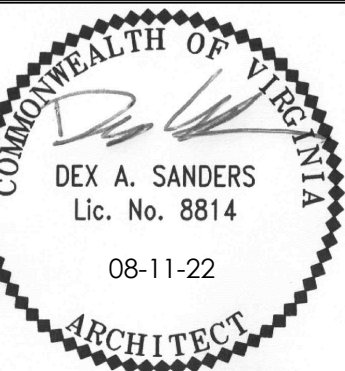
**B CHASE SLAB REPAIR DETAIL**  
SCALE: 1" = 1'-0"



**02 SECTION @ DOOR EX-3**  
SCALE: 1" = 1'-0"



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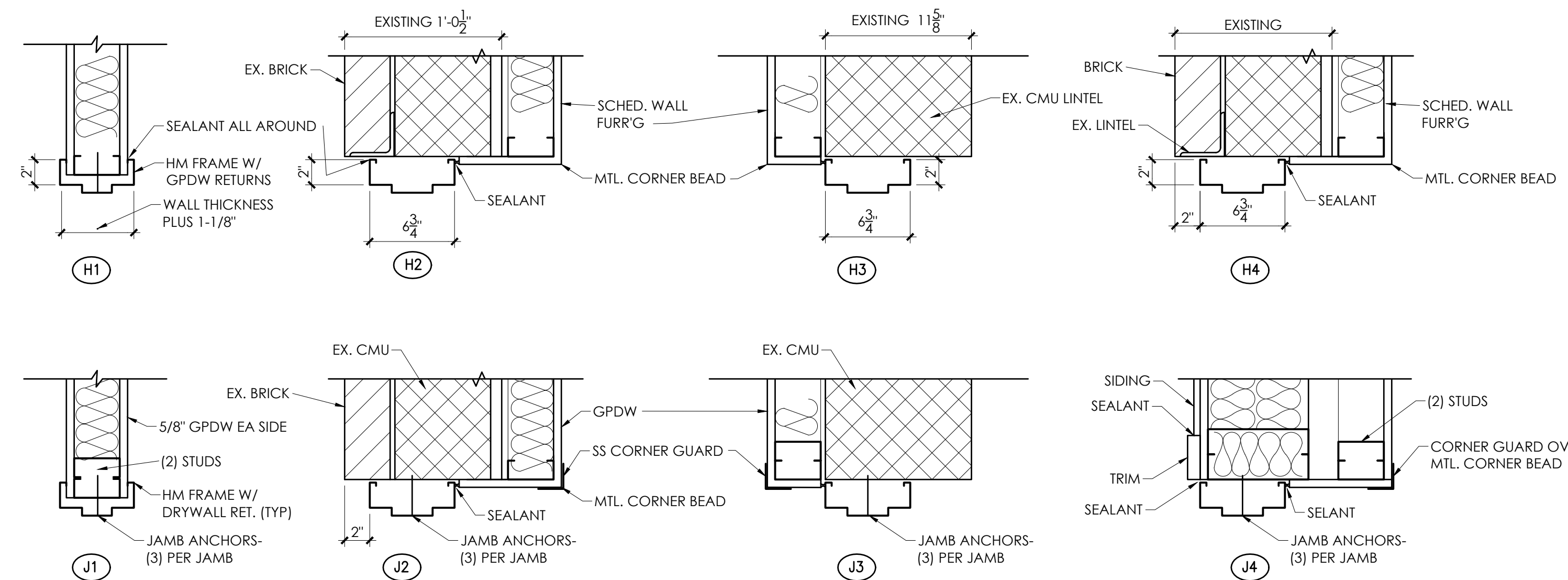
SECTIONS & DETAILS



DOOR NO.	DOOR				FRAME				REMARKS			
	SIZE W X H X T	MATL	FIN	TYPE	LOUVER	MATL	FIN	DETAIL		U. L. LABEL	HDW SET	SEE PROJECT MANUAL FOR HARDWARE SPECS.
								HEAD / JAMB	THRES			
	EXTERIOR											
EX-1	PR. 3'-1 1/2" x 7'-0" x 1-3/4"	STL.	PTD.	A	-	HM	PTD.	H2/J2	6" ALUM.	-	-	EXTERIOR PULL, KEYED PANIC EXIT, 12" KICKPL., FUT. CARD KEY
EX-2	3'-0" x 7'-0" x 1-3/4"	STL.	PTD.	C	-	HM	PTD.	H4/J4	6" ALUM.	-	-	LEVER EXT. KEYED PANIC EXIT, CLOSER, 12" KICKPL.
EX-3	3'-0" x 7'-0" x 1-3/4"	STL.	PTD.	D	-	HM	PTD.	H2/J2 SIM.	6" ALUM.	-	-	LEVER HANDLE, PANIC EXIT W/ ELEC. STRIKE, 34" KICKPL.
EX-4	EXISTING	-	-	-	-	-	PTD.	-	-	-	-	EXISTING ROLL UP DOOR TO REMAIN - PAINT EXT. JAMB
	INTERIOR											
101	3'-0" x 7'-0" x 1-3/4"	WD	STN	D	-	HM	PTD.	H1/J1	-	-	-	CLASSROOM LOCKSET, NO CLOSER, 34" KICKPL
102**	3'-0" x 7'-0" x 1-3/4"	WD	STN	D	-	HM	PTD.	H1/J1	-	-	-	OFFICE LOCKSET, NO CLOSER (ADD ALT. #1)
103**	3'-0" x 7'-0" x 1-3/4"	WD	STN	D	-	HM	PTD.	H1/J1	-	-	-	OFFICE LOCKSET, NO CLOSER (ADD ALT. #1)
104	3'-0" x 7'-0" x 1-3/4"	STL.	PTD.	D	-	HM	PTD.	H1/J1	-	-	-	PASSAGE LATCHSET, PANIC EXIT, CLOSER, 34" KICKPL.
105*	3'-0" x 7'-0" x 1-3/4"	STL.	PTD.	C	-	HM	PTD.	H1/J1	-	-	-	PASSAGE LATCHSET, NO CLOSER, 12" KICKPL EA. SIDE
106*	3'-0" x 7'-0" x 1-3/4"	STL.	PTD.	C	-	HM	PTD.	H1/J1	-	-	-	PRIVACY LOCKSET, CLOSER, 12" KICKPL EA. SIDE
107*	3'-0" x 7'-0" x 1-3/4"	STL.	PTD.	C	-	HM	PTD.	H1/J1	-	-	-	PRIVACY LOCKSET, CLOSER, 12" KICKPL EA. SIDE
108	3'-6" x 7'-0" CASED OPEN	-	-	-	-	-	PTD.	-	-	-	-	STOREROOM LOCKSET, FLUSH BOLTS INACTIVE. FUT. CARD READER
109	3'-0" x 7'-0" x 1-3/4" ver. ht.	STL.	PTD.	B	-	HM	PTD.	H3/J3	-	60 MIN.	-	

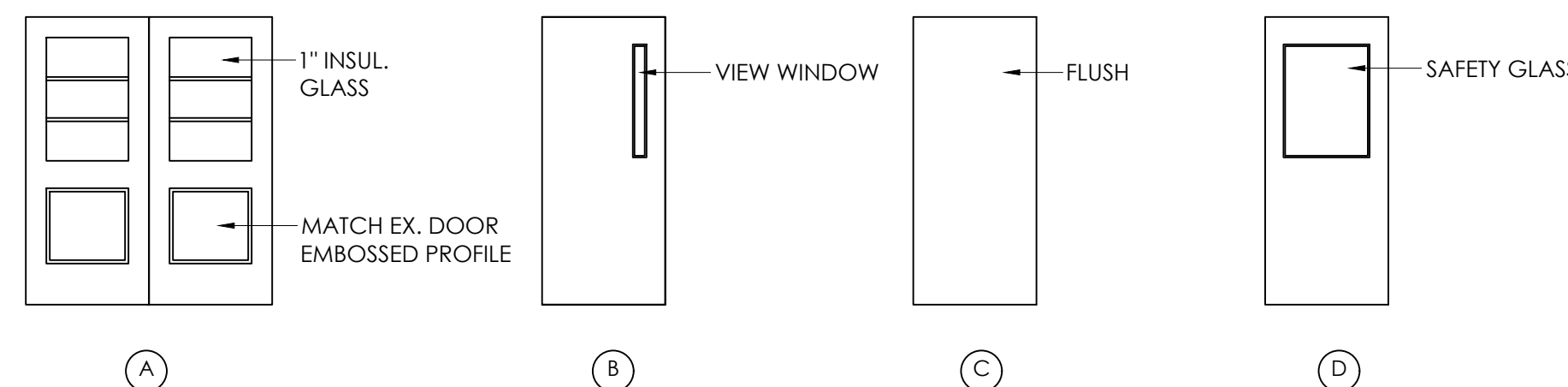
\* DOOR TO BE INSTALLED IN FUTURE PHASE

\*\* DOOR TO BE INSTALLED IN PHASE 1 ADD ALTERNATE #1 WORK



FRAME DETAILS

SCALE: 1-1/2" = 1'-0"



DOOR TYPES

SCALE: 1/4" = 1'-0"

HARDWARE NOTES / TYPES

GENERAL NOTES:

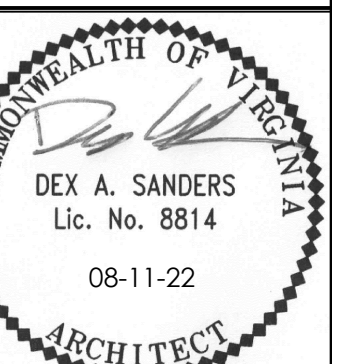
- U.N.O. ALL HINGED DOORS TO HAVE SURFACE MOUNTED CLOSERS. PROVIDE CLOSERS WITH HOLD OPEN FEATURES AT NON-RATED STORAGE DOORS.
- ALL INTERIOR HARDWARE SATIN STAINLESS FINISH.
- ALL LATCH SETS AND HANDLES TO BE MATCHING LEVER STYLE W/ FULL RETURN.
- ALL INTERIOR DOORS TO HAVE MINIMUM GRADE 2 COMMERCIAL HARDWARE UNLESS OTHERWISE NOTED.
- PROVIDE 12" KICKPLATES AT TOILET & ALL DOORS OPENING TO THE CORRIDOR.
- EXTERIOR DOORS TO HAVE WEATHERSTRIPPING ALL AROUND W/ SILL SWEEPS. PROVIDE SILL SWEEPS WITH DRIPS AT OUTSWINGING STEEL DOORS WITHOUT OVERHANGS.
- INSTALL ALL LOCKSETS AS SCHEDULED. KEY ALL EXTERIOR DOORS THE SAME. KEY ALL INTERIOR UTILITY DOORS ALIKE. KEY ALL DOORS TO A MASTER & GRANDMASTER KEY SYSTEM. COORDINATE W/ OWNER.
- PROVIDE COMMERCIAL BRUSHED STAINLESS STEEL DOOR STOPS AT ALL DOORS - FLOOR MOUNTED WHERE POSSIBLE OR WALL MOUNTED W/ FULL BLOCKING.
- REFERENCE THE PROJECT MANUAL FOR HARDWARE SPECIFICATIONS. HARDWARE SUPPLIER SHALL PREPARE DETAILED HARDWARE SCHEDULE FOR REVIEW UPON NOTICE TO PROCEED. FURNISH ALL HARDWARE NECESSARY FOR A COMPLETE CODE COMPLIANT INSTALLATION AS INDICATED BY THE CONSTRUCTION DOCUMENTS.
- COORDINATE HARDWARE WITH OWNER'S SECURITY / ACCESS CONTROL REQUIREMENTS.

DOOR NOTES

- ALL DOORS UP TO 7'-0" TALL TO HAVE 1-1/2" PAIR HINGES. DOORS OVER 7'-0" TALL TO HAVE 2 PAIR HINGES.
- UNDERCUT DOORS AS REQUIRED FOR EASE OF OPERATION. ALL DOORS SHALL HANG 1/8" ABOVE FINISHED FLOOR/THRESHOLD EXCEPT DOORS SCHEDULED TO BE UNDERCUT OR SPECIAL ACOUSTIC DOORS.
- ALL DOORS TO BE REINFORCED FOR CLOSERS. PROVIDE MATCHING TRIM AT LITES. INTERIOR GLASS TO BE 1/2" SAFETY WHERE REQUIRED U.N.O.
- PROVIDE (3) SILENCERS TYP. AT EACH INTERIOR DOOR ON THE LATCHING SIDE.
- EXTERIOR GLASS IN DOORS TO BE 1" INSULATED UNITS.



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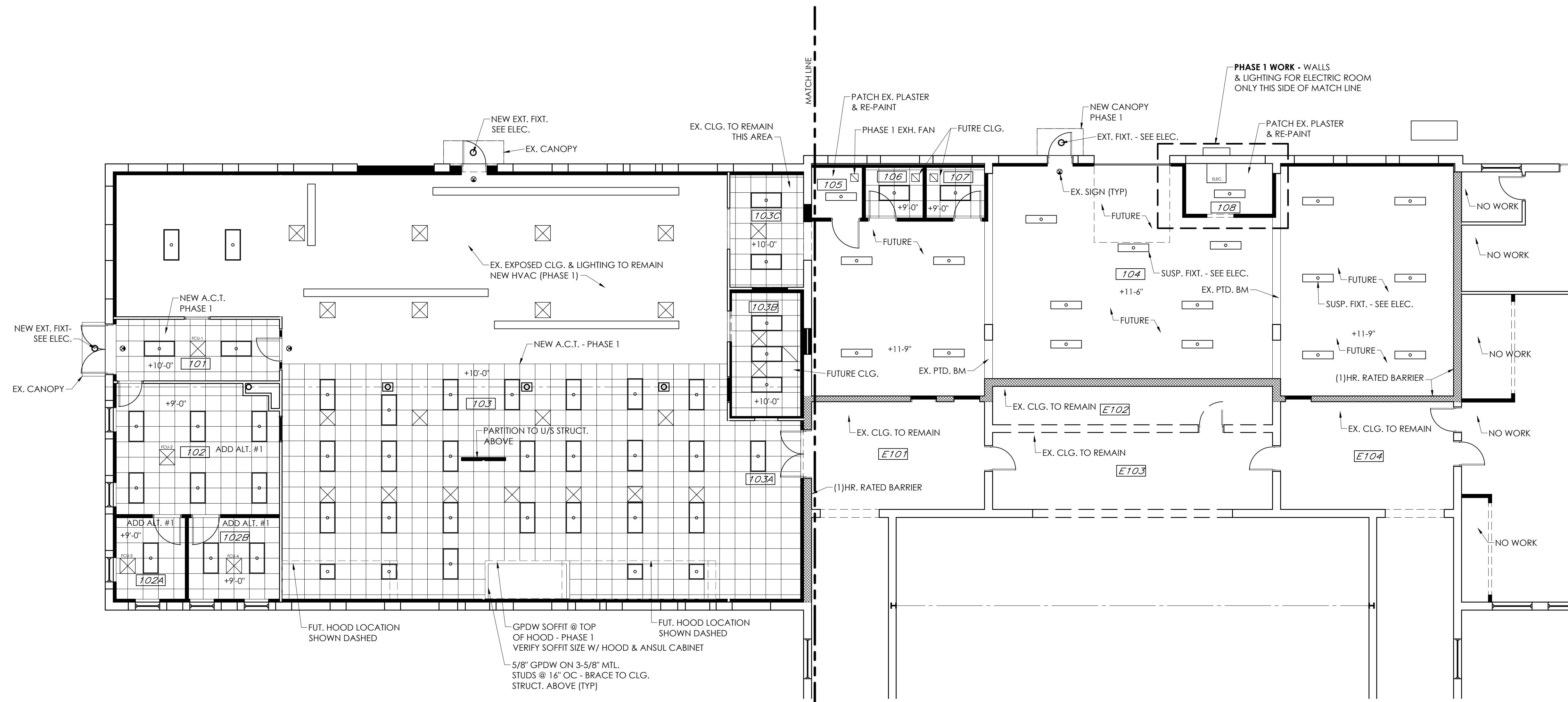


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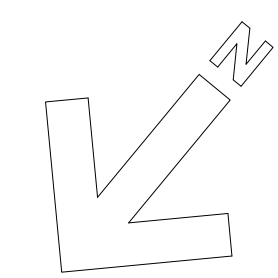
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DOOR SCHEDULE

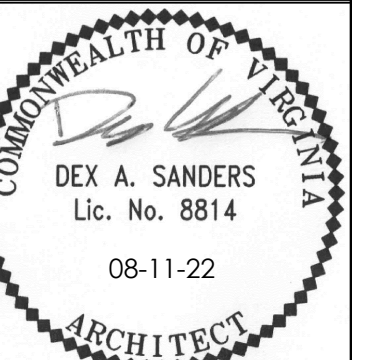




REFLECTED CEILING PLAN  
 SCALE: 1/8" = 1'-0"



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CEILING PLAN

A10-1



## HVAC SPECIFICATIONS

### 1. GENERAL

#### 1.1 DESCRIPTION OF WORK:

- A. ALL FIXTURES, EQUIPMENT, ACCESSORIES, MATERIALS, AND LABOR REQUIRED TO PROVIDE COMPLETE, COORDINATED, AND FULLY FUNCTIONAL HVAC SYSTEMS GENERALLY AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
1. HEATING SYSTEM
  2. COOLING SYSTEM
  3. VENTILATION SYSTEM
  4. EXHAUST SYSTEMS

#### 1.2 RELATED DOCUMENTS:

- A. THE REQUIREMENTS OF THE CIVIL, ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL APPLY TO AND BE CONSIDERED A PART OF THE HVAC WORK IN-SO-FAR AS THEY APPLY TO THE HVAC WORK AND ARE REQUIRED FOR COORDINATION.

#### 1.3 JOB CONDITIONS:

- A. DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED TO PROVIDE A COMPLETE INSTALLATION OF THE WORK DESCRIBED AND INDICATED.
- B. PROVIDE FITTINGS, OFFSETS, TRANSITIONS, CONTROL TRANSFORMERS AND ACCESSORIES REQUIRED TO MEET CONDITIONS OF THE PROJECT.
- C. PROVIDE SERVICE ACCESS FOR EQUIPMENT, CONTROL COMPONENTS, VALVES, FILTERS AND SPECIALTIES.
- D. PROVIDE ACCESS PANELS FOR VALVES, ACCESS DOORS, ETC. CONCEALED BEHIND FINISHED SURFACES.
- E. MODIFY DUCT DIMENSIONS AS REQUIRED BY BUILDING STRUCTURE OR OTHER WORK AT NO ADDITIONAL COSTS TO THE OWNER. MAINTAIN EQUIVALENT FREE AREA SIZES.

#### 1.4 CONFORMANCE TO REGULATIONS:

- A. WORK SHALL CONFORM WITH VIRGINIA UNIFORM STATEWIDE BUILDING CODE, NFPA, AND LOCAL ORDINANCES.
- B. COMPLY WITH LANDLORD'S TENANT REQUIREMENTS FOR INSTALLATION OF WORK.

#### 1.5 QUALITY ASSURANCE:

- A. COMPLY WITH MANUFACTURER'S REQUIREMENTS AND NOTES AND DETAILS SHOWN HEREIN FOR INSTALLATION OF EQUIPMENT.
- B. COMPLY WITH RECOMMENDATIONS OF SMACNA AND ASHRAE.

#### 1.6 MATERIALS AND EQUIPMENT:

- A. EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE EQUIVALENT TO PRODUCTS SPECIFIED.
- B. CONTRACTOR SHALL GUARANTEE EQUIVALENCE AND IS RESPONSIBLE FOR MODIFICATIONS REQUIRED AND COORDINATION WITH OTHER TRADES TO FIT SUBSTITUTED PRODUCT INTO THE PROJECT.
- C. MATERIALS AND EQUIPMENT OF THE SAME TYPE AND USE SHALL BE FROM A SINGLE MANUFACTURER.
- D. PROTECT STORED MATERIALS AND EQUIPMENT FROM WEATHER.
- E. IF HVAC EQUIPMENT IS OPERATED DURING CONSTRUCTION, PROVIDE TEMPORARY FILTERS TO PROTECT AIR HANDLING EQUIPMENT.

#### 1.7 SUBMITTALS:

- A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT SPECIFIED HEREIN AND ON THE DRAWINGS. SHOP DRAWINGS AND PRODUCT DATA SHALL BE IDENTIFIED PER INDICATIONS ON DRAWINGS, SHALL BE MARKED TO INDICATED SPECIFIC ITEM BE PROPOSED, AND SHALL BE ORGANIZED IN AN ORDERLY MANNER. SUBMIT IN .PDF FORMAT VIA EMAIL.
- B. SUBMIT OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT INSTALLED IN THIS PROJECT. INCLUDE COPIES OF SPECIFIC EQUIPMENT WARRANTIES IN MANUAL.
- C. UPON COMPLETION OF THE INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE OWNER, CONTRACTOR SHALL FURNISH TWO COPIES OF AS-BUILT DOCUMENTATION. ALL CHANGES TO THE BIDDING DOCUMENTS SHALL BE NEATLY AND CLEARLY IDENTIFIED ON THE AS-BUILT DOCUMENTATION.
- #### 1.8 PROJECT CLOSEOUT:
- A. REPLACE OR REPAIR DAMAGED EQUIPMENT AND CLEAN ALL EXPOSED SURFACES.
- B. TOUCH-UP SHOP APPLIED FINISHES TO RESTORE DAMAGED OR SOILED AREAS.
- C. INSTRUCT OWNER'S REPRESENTATIVE IN OPERATION AND MAINTENANCE OF EQUIPMENT UTILIZING OPERATION AND MAINTENANCE MANUAL. MINIMUM INSTRUCTION PERIOD SHALL BE TWO HOURS.
- D. REPLACE FILTERS IN AIR HANDLING EQUIPMENT AT TIME OF PROJECT TURNOVER TO OWNER.
- E. VACUUM INTERIORS OF DUCTWORK AND EQUIPMENT WHICH BECOMES DIRTY, PRIOR TO PROJECT TURNOVER TO OWNER. CLEAN ANY DIRTY EQUIPMENT COILS.

### 2. PRODUCTS

#### 2.1 PIPING SYSTEMS:

- A. CONDENSATE DRAIN - SCH. 40 PVC WITH SOLVENT WELD FITTINGS
- B. REFRIGERANT - TYPE C&C OR ARC COPPER, SILVER SOLDER FITTINGS.

#### 2.2 HVAC EQUIPMENT:

- A. REFER TO SCHEDULE SHEETS AND EQUIPMENT LIST FOR MANUFACTURERS AND MODEL NUMBERS.
- B. ALTERNATE MANUFACTURER'S ARE: LENNOX, YORK, DAIKIN, TITUS, CARRIER, PANASONIC, MITSUBISHI, TRANE, COOK, CARNES, TWIN CITY, ACME, METALAIR
- C. PROVIDE MINIMUM MERV 8 RETURN AIR FILTERS FOR AIR HANDLING EQUIPMENT.

### 2.3 AIR DISTRIBUTION:

- A. METAL DUCTWORK: SHOP FABRICATED AS FOLLOWS.
1. MATERIALS: GALVANIZED STEEL SHEET, ASTM A 527-85.
  2. CONSTRUCTION: PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS FOR LOW PRESSURE SYSTEM UP TO 2" W.C. CONSTRUCTION.
  3. JOINT SEALANT: UL LISTED FOSTER MASTIC, HARDCAST FTA-20, KINGCO 18-136.
  4. SUPPLY AIR BRANCH DUCTS RUN IN CONCEALED AREAS MAY BE PRE-INSULATED, UL CLASS 1, FLEXIBLE DUCT - LIMIT LENGTH TO TEN FEET - USE RIGID DUCT FOR REMAINDER OF RUNOUT.
  5. KITCHEN HOOD EXHAUST DUCT SHALL BE 16 GAUGE BLACK STEEL WITH SEAMS AND JOINTS WELDED LIQUIDTIGHT AND SMOOTH INTERIOR OF DUCT. PROVIDE UL LISTED ZERO CLEARANCE INSULATION ON DUCT TO MAINTAIN PROPER CLEARANCE TO COMBUSTIBLES-1 1/2" THICK WITH 3" THICK OVERLAPS. PROVIDE CLEANOUTS IN DUCT PER CODE REQUIREMENTS. COVER EXTERIOR DUCT WITH ALUMINUM JACKET-SEAL JOINTS AND SEAMS WEATHER TIGHT.
  6. BRICK VENT SHALL BE EXTRUDED ALUMINUM, CHANNEL FRAME WITH BIRDSCREEN, SIZE PER DRAWINGS - ACME SERIES BEX OR EQUAL.
  7. DRYER VENT SHALL BE RIGID GALVANIZED STEEL WITH LONG RADIUS ELBOWS AND NO SCREWS PROTRUDING INTO VENT. USE RIVETS AT JOINT AND FITTING CONNECTIONS. USE FLEXIBLE METAL VENT AT CONNECTION TO DRYER. MINIMUM THICKNESS OF VENT TO BE 26 GAUGE. FIRESTOP VENT PENETRATIONS THRU FIRE RATED CONSTRUCTION PER ULC-AJ7063.
- B. DAMPERS - AS MANUF. BY RUSKIN, CESCO, ARROW, CREATIVE METALS, PREFCO
1. VOLUME DAMPERS SHALL BE GALVANIZED STEEL, 16 GAUGE, BLADE HEIGHT SHALL NOT EXCEED 12". DAMPER LINKAGE AND LOCKING QUADRANT SHALL BE OUTSIDE OF AIRSTREAM.
- C. ACCESS DOORS -
1. FACTORY BUILT WITH SASH LOCKS, BUTT HINGE, GASKET, 24 GA. DOOR AND 22 GA. FRAME.
  2. ACCESS DOOR IN INSULATED DUCT SHALL BE DOUBLE CONSTRUCTION, WITH INSULATION ENCASED.
  3. MINIMUM SIZE TO BE 75% SIZE OF DUCT IN WHICH INSTALLED, OR 10" X 10".
  4. CESCO MODEL HAD-10, LOUVERS AND DAMPERS, KEES, INC. OR AIR BALANCE.

#### 2.4 CONTROLS:

- A. PROVIDE ALL RELAYS, TRANSFORMERS, CONTROL WIRING, TERMINAL BLOCKS, ETC. FOR A COMPLETE SYSTEM.
1. COMPONENT MANUFACTURER'S AND MODEL NUMBERS AS SPECIFIED ON DRAWINGS.
- B. THE WARRANTY PERIOD SHALL COMMENCE AFTER 60 DAYS OF BENEFICIAL USE, MEASURED FROM THE DATE OF ACCEPTANCE FROM THE OWNER.

### 3. EXECUTION

#### 3.1 PIPING SYSTEMS:

- A. VERIFY INVERT ELEVATIONS PRIOR TO EXCAVATION.
- B. BACKFILL BURIED PIPE IN TRENCHES WITH DIRT FREE OF ROCK, STONE OR DEBRIS.
- C. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO ROUGH-IN.
- D. COORDINATE ROUTING OF WORK WITH OTHER TRADES AND INSTALL TO ALLOW MAXIMUM HEADROOM CLEARANCES, SERVICE ACCESS AND MAINTAIN PROPER PITCH OF SLOPING LINES.
- E. INSULATE PIPING SYSTEMS AS FOLLOWS:
1. REFRIGERANT - CLOSED CELLULAR RUBBER TO CODE REQUIRED THICKNESS.
  2. HORIZONTAL CONDENSATE DRAIN - 1/2" THICK FIBERGLASS WITH ASJ.
  3. SEAL VAPOR BARRIERS. SECURE WITH ADHESIVE AND SEAL JOINTS WITH SEALANT.
  4. PROVIDE GALVANIZED STEEL SADDLE AT HANGERS SURROUNDING INSULATED PIPE.
  5. DO NOT COMPRESS INSULATION EXCEPT IN AREAS OF STRUCTURAL INTERFERENCE.
  6. INSTALL PRE-FITTED PLASTIC ELBOWS OR APPLY CANVAS JACKET IN THREE LAYERS AT ELBOWS.
  7. INSULATE FITTINGS, VALVES AND EQUIPMENT BODIES.
  8. PROVIDE 2 COATS OF GREY WEATHERPROOF FINISH ON EXTERIOR REFRIGERANT PIPING.
- F. PROVIDE SLEEVES FOR PIPING PENETRATING WALLS. INSULATION SHALL BE CONTINUOUS THROUGH SLEEVES.
- G. FIRESTOP PIPING PASSING THROUGH FIRE RATED WALLS OR CEILINGS.
- H. PATCH FINISHED AREAS DISTURBED BY WORK TO MATCH SURROUNDING AREAS.
- I. WELDING SHALL BE DONE BY CERTIFIED WELDERS FOR THE APPROPRIATE SYSTEM BEING WELDED.
- J. MAKE CONNECTIONS OF DISSIMILAR METALLIC PIPING WITH DIELECTRIC UNIONS.
- K. DO NOT USE PLASTIC PIPING IN RETURN AIR PLENUM SPACES.
- L. PROVIDE SHUT OFF VALVES AT EQUIPMENT CONNECTIONS.
- M. HANGERS SUPPORTING COPPER PIPING SHALL BE COPPER PLATED OR PLASTIC COVERED. HANGERS SUPPORTING INSULATED PIPING SHALL BE SIZED TO SURROUND INSULATION AND STEEL SADDLE.
- N. CLEAN AND FLUSH PIPING THEN TEST PIPING SYSTEMS AS FOLLOWS:
1. REFRIGERANT PIPING - TO 100 PSIG W/ COMPRESSED AIR FOR FOUR HOURS AND TEST FITTINGS WITH FREON AND HALIDE LEAK DETECTOR.
  2. CONDENSATE DRAIN PIPING - W/ 10 FT. WATER COLUMN OR 5 PSI COMPRESSED AIR FOR 12 HOURS.
  3. TESTS SHALL SHOW NO SUBSTANTIAL LOSS IN PRESSURE.
  4. PIPING RUN IN CONCEALED AREAS SHALL BE LEAK TESTED PRIOR TO BEING CONCEALED.
  5. SUBMIT WRITTEN REPORT OF TEST RESULTS.

### 3.2 HVAC EQUIPMENT:

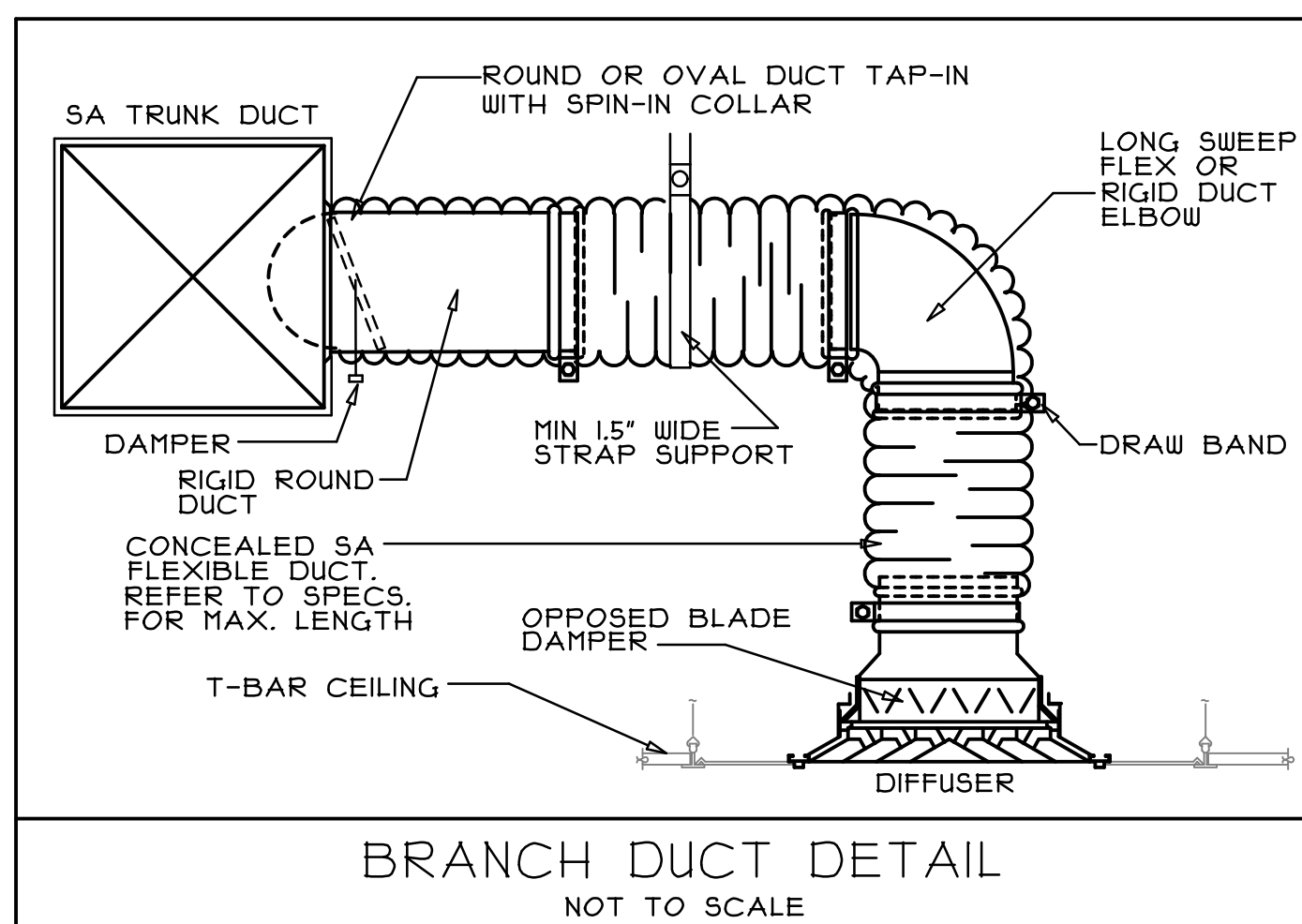
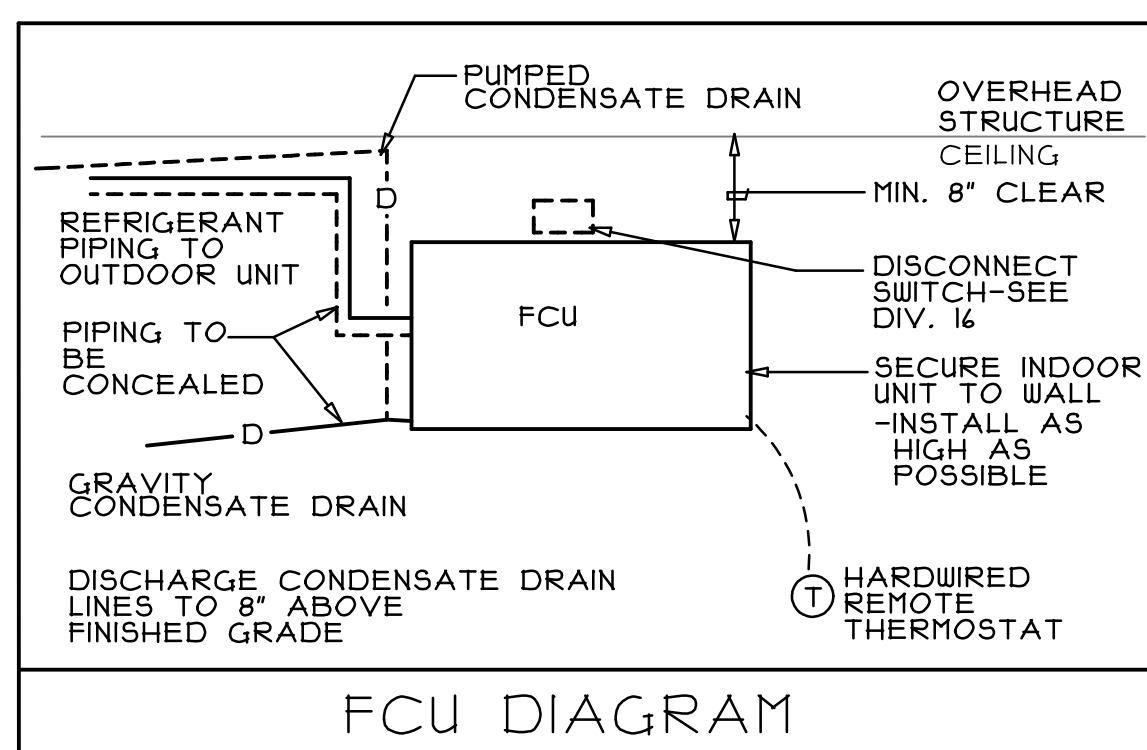
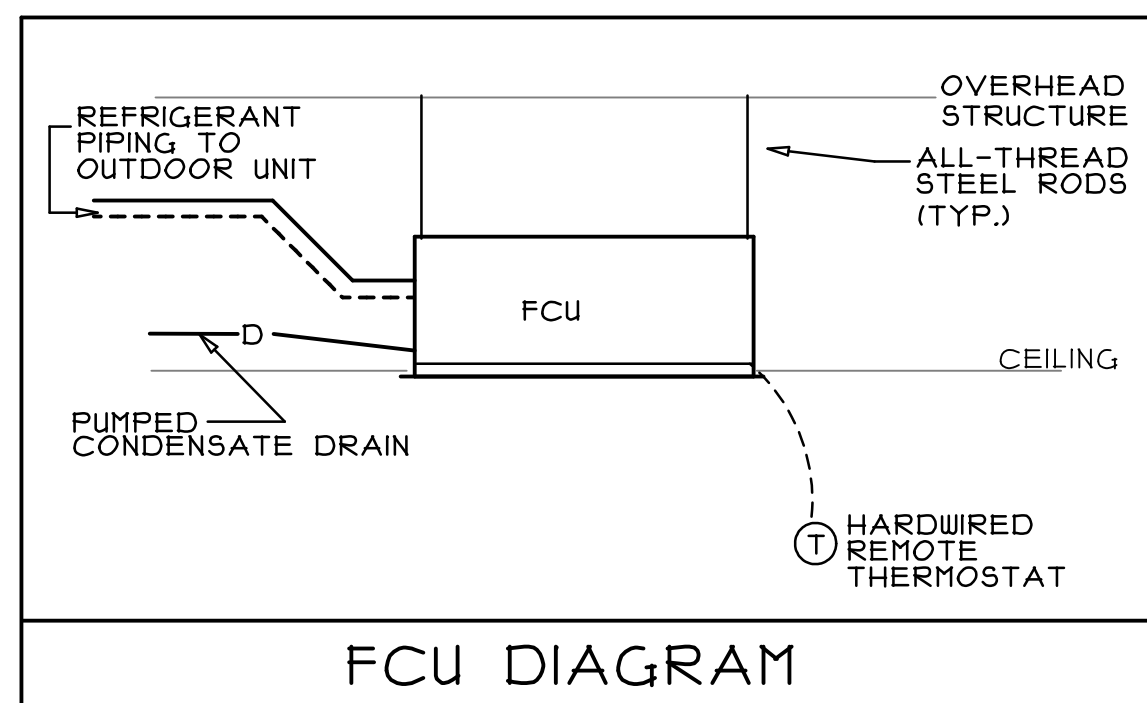
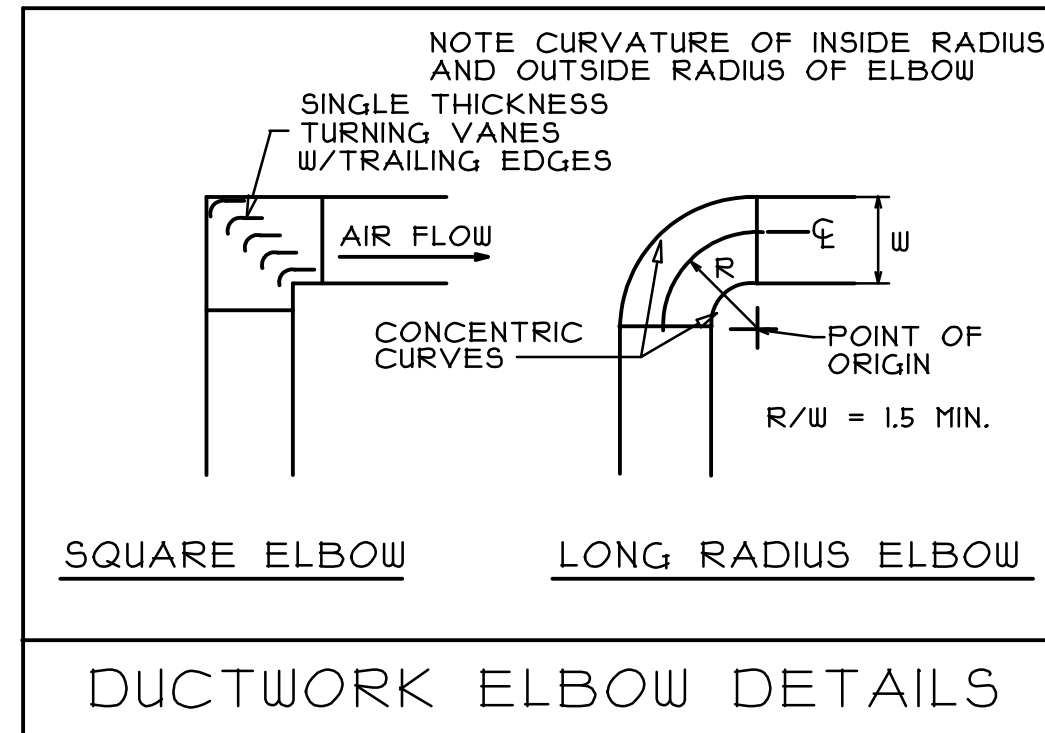
- A. PROVIDE PERMANENT TAG ON EQUIPMENT INDICATING EXPIRATION DATE OF WARRANTIES. LOCATE TAG IN A READILY VISIBLE LOCATION.
- B. PROVIDE FACTORY AUTHORIZED START-UP OF EQUIPMENT AND SUBMIT TEST REPORTS. (INCLUDE IN O&M MANUAL). COMPLY WITH MANUFACTURER REQUIREMENTS AND NOTES STATED ON THE CONSTRUCTION DOCUMENTS FOR INSTALLATION OF EQUIPMENT. BALANCE THE OUTSIDE AIR CFM TO QUANTITIES LISTED. CONNECT CONTROL WIRING.
- C. PACKAGED UNITS:
1. CONNECT DUCTWORK TO UNITS WITH FLEXIBLE DUCT CONNECTORS.
  2. PROVIDE 1" CONDENSATE DRAINS FROM COOLING COIL AND DISCHARGE TO GRADE.
  3. INSTALL OUTSIDE AIR HOODS, ECONOMIZERS, DAMPERS, ETC., WHERE SPECIFIED.
  4. COMB BENT FINS AND REPAIR DEFECTS IN EQUIPMENT FINISH AND PANELS.
- D. SPLIT SYSTEM UNITS:
1. SUPPORT INDOOR UNIT FROM STRUCTURE WITH ALL THREAD STEEL RODS AND SPRING TYPE VIBRATION ISOLATORS - INSTALL LEVEL. CONNECT DUCTWORK WITH FLEXIBLE DUCT CONNECTIONS. INSTALL TO ALLOW PROPER SERVICE ACCESS.
  2. PROVIDE DRAIN PAN BENEATH UNITS. SUPPORT PAN FROM FLOOR STRUCTURE.
  3. PROVIDE CONDENSATE DRAIN PIPING AND EXTEND TO HUB DRAIN OR TO EXTERIOR - VERIFY TERMINATION POINT WITH LOCAL CODE OFFICIAL AND ARCHITECT.
  4. CONNECT REFRIGERANT PIPING AND CONTROL WIRING.

#### 3.3 AIR DISTRIBUTION:

- A. DUCTWORK:
1. SEAL JOINTS IN DUCTWORK WITH COATING OF HARDCAST SEALANT OR UL LISTED FSK DUCT TAPE.
  2. INSTALL INTERNAL ENDS OF SLIP JOINTS IN DIRECTION OF AIRFLOWS.
  3. MAXIMUM ANGLE OF OFFSETS AND TRANSITIONS SHALL NOT EXCEED 30 DEGREES.
  4. ADEQUATELY SUPPORT DUCT AS PER CODE REQUIREMENTS - ELIMINATE SAGGING AND COMPRESSION OF DUCT.
  5. TRANSITION DUCTS TO FIT EQUIPMENT. PROVIDE FLEXIBLE FLAME RETARDANT DUCT CONNECTIONS TO FURNACES AND GAS FIRED PACKAGED UNITS. PROVIDE 1/2" THICK ACOUSTICAL SOUNDLINING IN RETURN AIR TRUNK DUCTS WITHIN TWENTY FEET OF RTU'S AND AHU'S. SECURE LINER TO DUCTS WITH ADHESIVE AT 70% COVERAGE AND WITH MECHANICAL FASTENERS AT 18" CENTERS, AND WITHIN 6" OF BUTT JOINTS AND EDGES OF DUCT. COAT ALL EXPOSED 'ROUGH' LINER WITH MASTIC. ENLARGE DUCT TO ACCOMMODATE THE LINER - SIZES ON THE PLANS ARE INSIDE FREE AREA DIMENSIONS.
  7. USE LONG RADIUS RIGID DUCT FITTINGS AT ELBOWS IN FLEXIBLE DUCT EXCEEDING 60 DEGREE ANGLE. ELBOWS IN FLEXIBLE DUCT LESS THAN 60 DEGREE ANGLE SHALL BE LONG SWEEP TYPE.
- B. INSULATE DUCT SYSTEMS PER CODE OR AS FOLLOWS, WHICHEVER IS MORE STRINGENT:
1. WITHIN BUILDING STRUCTURE AND INSIDE OF BUILDING INSULATION ENVELOPE (OUTSIDE AIR, SUPPLY AND RETURN AIR DUCTS): ONE LB./CU.FT. DENSITY, 2" THICK FIBERGLASS, WITH FSK JACKET; OR WITH 3/8" THICK FOIL FACED AIR CELL INSULATION, REFLECTIX OR EQUAL.
  2. INSULATE SUPPLY AIR AND RETURN AIR DUCTS OUTSIDE OF BUILDING INSULATION WITH 3" THICK FIBERGLASS WITH FSK JACKET - MINIMUM R = 8.0 INSTALLED.
  3. EXHAUST AIR DUCTS: DO NOT INSULATE.
  4. SECURE INSULATION TO DUCTS W/ ADHESIVE AT 60% COVERAGE AND SECURE WITH MECHANICAL FASTENERS AND WASHERS AT 18" CENTERS - SEAL VAPOR BARRIER.
  5. INSULATE EXTERIOR SA AND RA DUCTS WITH TWO-1" THICK LAYERS OF CLOSED CELL RUBBER-SEAL JOINTS WEATHERTIGHT. PROVIDE BLOCKING TO PITCH TOP AT 4% SLOPE. TOP LAYER SHALL OVERLAP SIDES. PROVIDE EPDM RUBBER JACKET OVER INSULATION WITH SEAMS AND JOINTS SEALED WEATHERTIGHT.
- C. DAMPERS: ACTUATORS AND PUSH-RODS SHALL BE ACCESSIBLE.
1. ACTUATORS AND PUSH-RODS SHALL BE ACCESSIBLE.
  2. PROVIDE COMBINATION DAMPER/EXTRACTOR/SPIN-IN FOR ROUND DUCT CONNECTIONS TO TRUNK DUCTS. PROVIDE 45 DEGREE BEVEL INLET WITH BALANCE DAMPER FOR RECTANGULAR DUCT CONNECTIONS TO TRUNK DUCT. DAMPER ADJUSTMENT TO BE LOCATED ON BOTTOM SIDE OF DUCT.
- D. ACCESS DOORS - PROVIDE IN DUCT FOR ACCESS TO COILS, FILTERS, FIRE & MOTORIZED DAMPERS, AND ALL OTHER EQUIPMENT NOT OTHERWISE ACCESSIBLE. INSTALL TO ALLOW SERVICE ACCESS. PROVIDE LABEL ON ACCESS DOOR INDICATING DEVICE SERVED.
- E. BALANCE AIR DISTRIBUTION TO WITHIN 10% OF DESIGN AND SUBMIT REPORT.
1. REPORT SHALL IDENTIFY ZONES, DESIGN AIRFLOWS AND FINAL AIRFLOWS (SUPPLY AIR, RETURN AIR AND OUTSIDE AIR), SUPPLY AND RETURN STATIC PRESSURES, ENTERING AND LEAVING AIR TEMPERATURES.
  2. INCLUDE EXHAUST FAN SYSTEMS, AND HVAC EQUIPMENT.
  3. COMPLY WITH NEBB AND AABC REQUIREMENTS.

#### 3.4 CONTROLS:

- A. SEAL PROBE PENETRATIONS FOR DUCT MOUNTED SENSORS.
- B. PROVIDE JUNCTION BOX HOUSING FOR CONTROL WIRING INTERLOCK TO COMPONENTS.
- C. ROUTE CONDUCTORS NEATLY AND PARALLEL OR PERPENDICULAR TO BUILDING CONSTRUCTION. WIRING AND CONDUCTORS IN FINISHED SPACES TO BE RUN CONCEALED.
- D. SEQUENCE OF CONTROL
1. ON A CALL FOR COOLING - BLOWER AND COOL COMPRESSOR SHALL BE ENABLED. FOR UNITS WITH OA ECONOMIZERS, IF OA CONDITIONS ARE SUITABLE, OA DAMPER TO MODULATE OPEN FOR FIRST STAGE COOL. OTHERWISE DAMPER TO POSITION AS DESCRIBED HEREIN. MIXED AIR LOW LIMIT SET AT 55F (ADJUSTABLE) TO LIMIT OA MOTORIZED DAMPER POSITION. MOTORIZED DAMPER OPERATION.
  2. ON A CALL FOR HEAT - BLOWER AND GAS HEAT SHALL BE ENABLED. FOR HEAT PUMP, BLOWER AND HEAT COMPRESSOR SHALL BE ENABLED. SMOKE DETECTOR TO DISABLE APPLICABLE UNITS AND ACTIVATE ALARMS IN CASE OF ABNORMAL SMOKE CONDITION.
  3. BLOWER TO RUN CONTINUOUSLY IN OCCUPIED MODES AND CYCLE WITH THE THERMOSTAT IN UNOCCUPIED MODES.
  4. ON A CALL FOR DE-HUMIDIFICATION BLOWER AND COOL COMPRESSOR TO BE ENABLED. HOT GAS REHEAT TO BE ENABLED TO MAINTAIN ROOM CONDITIONS. PROGRAM THERMOSTATS PER OWNER'S SCHEDULING.
  5. FLOAT SWITCH IN DRAIN PAN TO DISABLE HVAC UNIT IN CASE OF WATER IN PAN. OUTSIDE AIR TO BE INTRODUCED WHEN BLOWER RUNS. FOR UNITS WITH AIR QUALITY SENSOR, THERMOSTAT TO ENABLE SENSOR TO OPEN MOTORIZED OA DAMPER TO SETPOINT IN CASE OF POOR RA QUALITY (1000 PPM IN OCCUPIED MODES ONLY). OTHERWISE OA DAMPER TO CLOSE TO THE 10% POSITION.



FOR CONSTRUCTION

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Lic. No. 0402 043863  
8/22/22  
PROFESSIONAL ENGINEER

REVISIONS:  
1 - 8-22-22 - KITCHEN HOOD

DRAWN: DRB  
CHECKED: MDI  
SCALE: NOTED  
DATE: 08-11-22  
PROJECT #: 22017

HVAC  
SPECIFICATIONS

MO.1

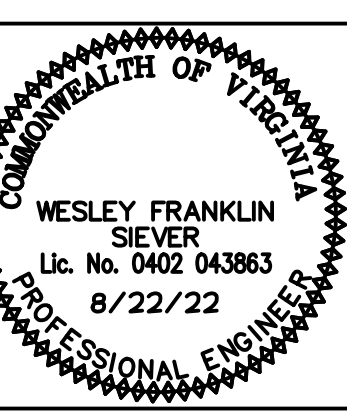


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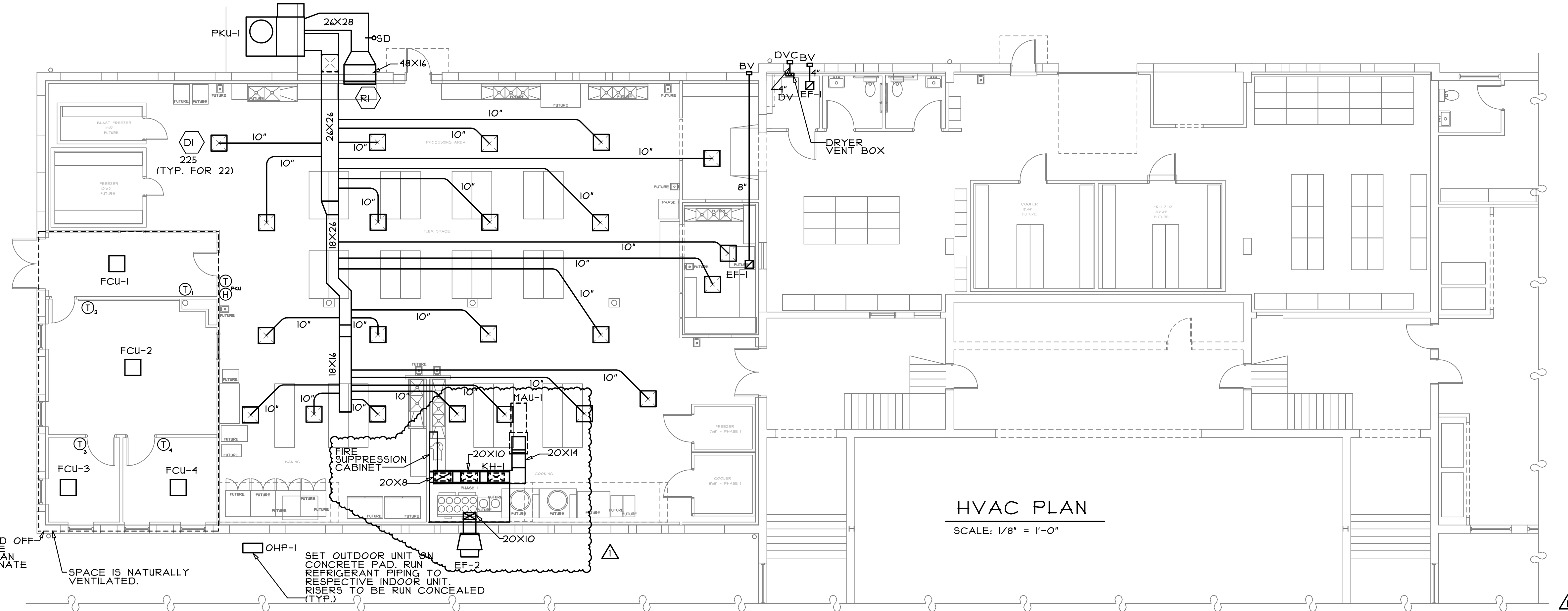
HVAC PLAN  
AND SCHEDULES

### SYMBOLS

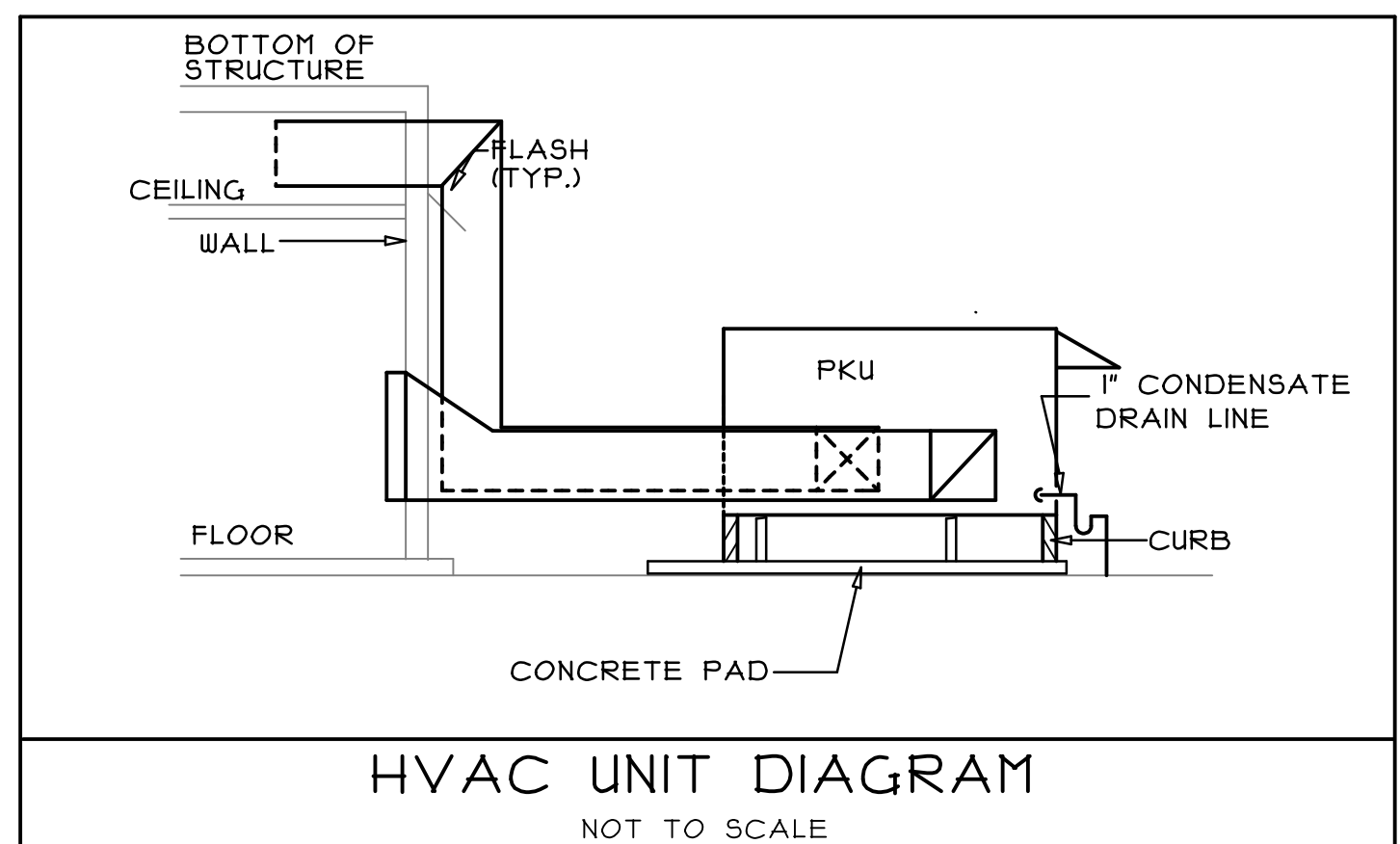
- ☒ SUPPLY DUCT
- ☑ RETURN OR EXHAUST DUCT
- Ⓜ THERMOSTAT-MTD. 48" AFF
- Ⓐ INDICATES AIR OUTLET OR INLET  
TOP LETTER INDICATES GRID TYPE  
(SEE SCHEDULE); BOTTOM  
NUMERAL INDICATES CFM FOR  
BALANCING
- └ VOLUME DAMPER (VD)
- ├ DUCT TRANSITION
- SD SMOKE DETECTOR

### ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR
- BV BRICK VENT - 8X4 NECK UNLESS  
OTHERWISE NOTED, MATCH  
BUILDING FINISH
- CD CEILING DIFFUSER
- DN DOWN
- EA EXHAUST AIR
- EF EXHAUST FAN
- MTD. MOUNTED
- OA OUTSIDE AIR
- RA RETURN AIR
- RG RETURN GRILLE
- SA SUPPLY AIR
- TYP TYPICAL
- WC WALL CAP



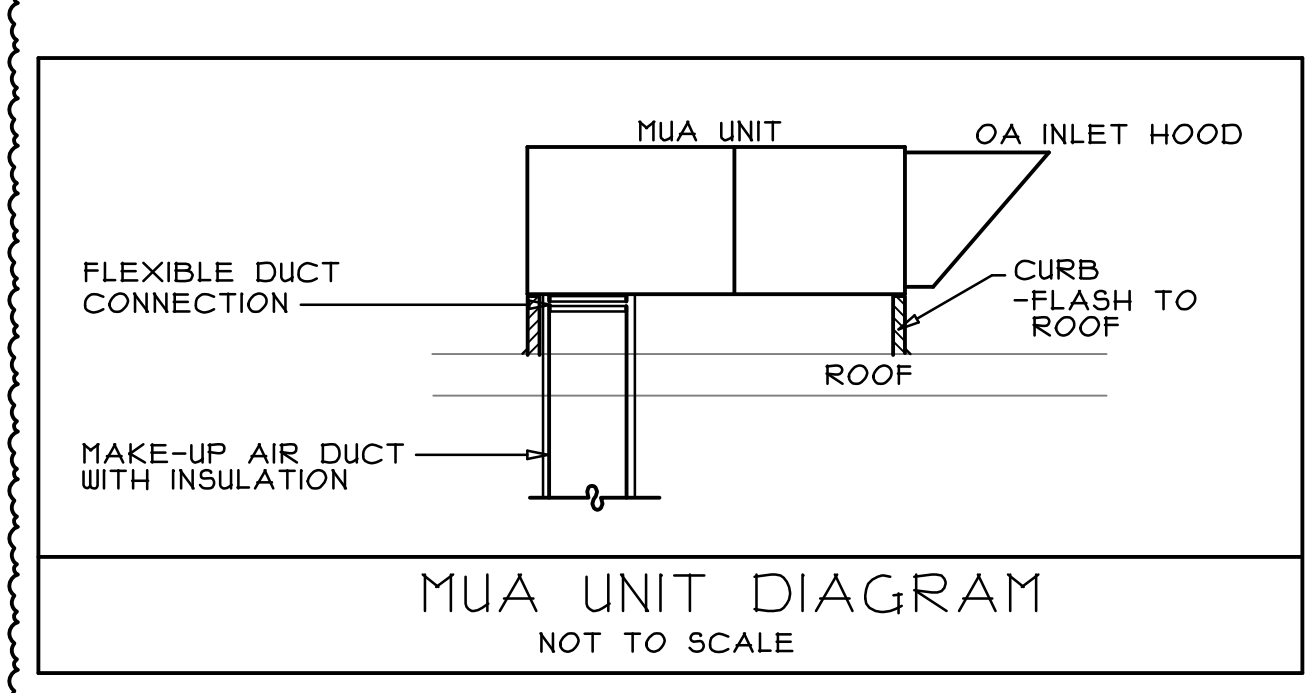
**HVAC PLAN**  
SCALE: 1/8" = 1'-0"



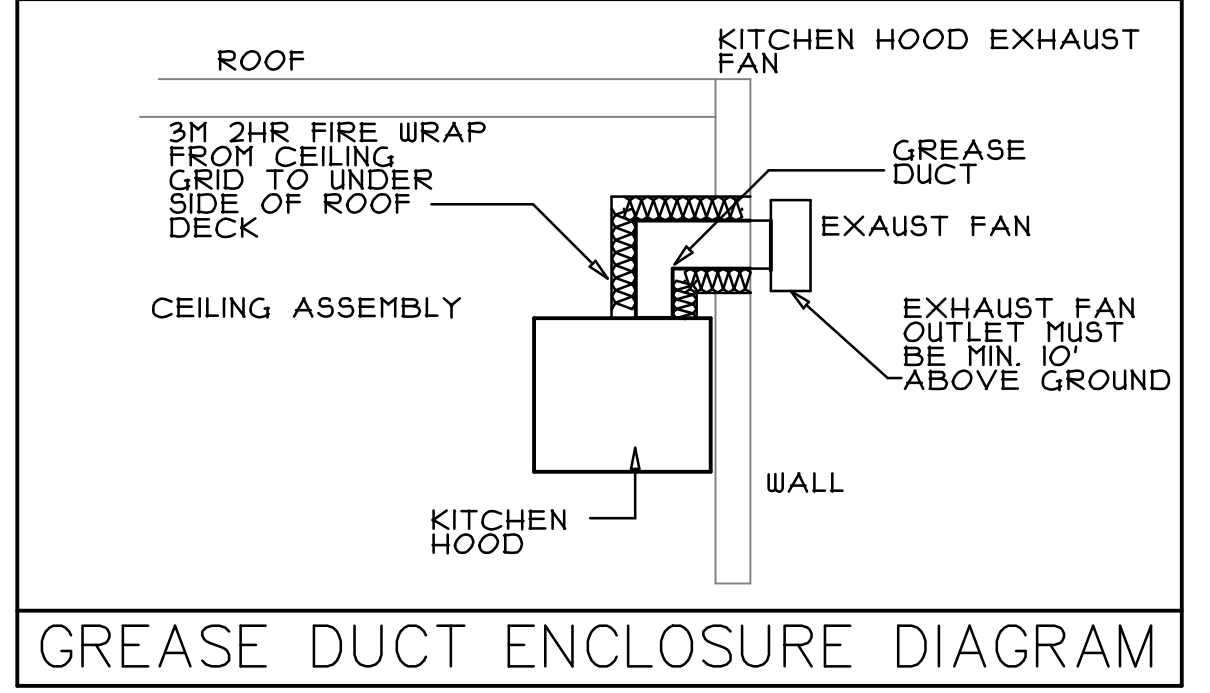
**HVAC UNIT DIAGRAM**  
NOT TO SCALE

**GRILLES, REGISTERS, DIFFUSERS AND LOUVERS**

TYPE	DESCRIPTION	NECK	FRAME	FINISH	MFR. MDL.	REMARKS
DI	4-WAY CEILING DIFFUSER	12X12	T-BAR LAY-IN	WHITE	NAILOR IND. 6500-L-4A-AW-4215	24" SQUARE PANEL
RI	RETURN AIR GRILLE	48X48	FLANGE	WHITE	NAILOR IND. 445H-S-AW	
LI	EXHAUST AIR LOUVER	12X10	CHANNEL	SEL. BY ARCHIT.	NCA MDL. XAD-4-45	W/ BIRDSCREEN



**MUA UNIT DIAGRAM**  
NOT TO SCALE



**GREASE DUCT ENCLOSURE DIAGRAM**

**PACKAGED HVAC EQUIPMENT SCHEDULE**

ZONE	MODEL	NOMINAL TONS	SENSIBLE COOLING	SEER	VOLTS	MCA	HEATING		CFM <sup>②</sup>	ESP.	MIN. OA CFM	BLOWER SPEED	FLA	MOCP	WEIGHT	REMARKS
							BTUH INPUT	EFF.								
PKU-1	CARRIER MDL. 48TCEE14	12.5	109,500 BTU	10.8 EER	208/3	73	224,000	82%	4950	1.0"	200	BELT DRIVE	78	80	2500	①③④⑤⑥①

**NOTES:**

- ① WITH REFRIGERANT HIGH AND LOW PRESSURE SWITCHES, REFRIGERANT LINE FILTER DRIER, COMPRESSOR TIME DELAY RELAY, COMPRESSOR CRANKCASE HEATER, R-410A REFRIGERANT, TXV.
- ② APPROXIMATE CFM AIRFLOW - REFER TO PLAN FOR EXACT NUMBERS FOR AIR BALANCE
- ③ W/ RA CO<sub>2</sub> SENSOR
- ④ PROVIDE OA INTAKE HOOD W/ INLET FILTER, 14" ROOF CURB, 35% EFF. RA FILTERS
- ⑤ W/ HOTGAS REHEAT COIL AND DEHUMIDIFICATION CONTROLS
- ⑥ W/ 0-100% OA ECONOMIZER, POWER EXHAUST, ENTHALPY CONTROLLED
- ⑦ W/ VOLTAGE PHASE LOSS MONITOR

**VRF EQUIPMENT SCHEDULE**

ZONE	OUTDOOR HEAT PUMP	NOMINAL TONS	RATED COOLING	RATED HEATING	SEER	O.U. VOLTS	O.U. MCA/ MOP	INDOOR UNIT									
								I.U. NAME	I.U. MODEL NO.	CFM	MIN. OA	ESP.	RATED COOLING TOTAL	RATED HEATING	BLOWER SPEED	VOLTS	FLA
OHP-1	CARRIER 38NQR34D-3	3	45020 BTUH	50350 BTUH	21.5	208/1	35/50	FCU-1	CARRIER 40MBCQ09-3	380	0	N/A	9000 BTUH	9,500 BTUH	HIGH	208/1	0.2
								FCU-2	CARRIER 40MBCQ18-3	420	0	N/A	17,000 BTUH	17,500 BTUH	HIGH	208/1	0.2
								FCU-3	CARRIER 40MBCQ09-3	320	0	N/A	9000 BTUH	9,500 BTUH	HIGH	208/1	0.2
								FCU-4	CARRIER 40MBCQ09-3	320	0	N/A	9000 BTUH	9,500 BTUH	HIGH	208/1	0.2

PROVIDE ALL PIPING, CONTROL KIT, W/ WIRED WALL MOUNTED ROOM THERMOSTAT, WYE FITTINGS, ETC. AS REQUIRED FOR A COMPLETE OPERATING SYSTEM, W/ INTERNAL CONDENSATE PUMPS.  
(NOTE) VOLTAGE SUPPLIED FROM THE OUTDOOR UNIT TO THE INDOOR FCU CASSETTES

**EQUIPMENT LIST**

EQUIPMENT: EQUIVALENT MANUFACTURERS MAY BE SUBSTITUTED. EQUIPMENT TO BE UL OR ETL LISTED.

Ⓜ - THERMOSTAT - SHALL BE 24 VAC, HEATING-COOLING AUTO-CHANGEOVER TYPE, 1 DAY PROGRAMMABLE, (SUITABLE FOR HEAT PUMP USE ), OVERRIDE TIMER W/ AUX. CONTACT TO CONTROL OA MOD, MULTI-STAGE HEAT/COOL, HONEYWELL OR EQUAL.

EF-1 - CENTRIFUGAL CEILING EXHAUSTER, 120 VAC, BACKDRAFT DAMPER, SAFETY SWITCH, 300 CFM @ 0.3" SP, 905 RPM, 212 WATTS, ACME VQ300.

EF-2 - UPBLAST KITCHEN EXHAUSTER, 208/3 VAC, 66 FLA, 1101 RPM, 2000CFM @ 1.25" SP, GREASEMASTER GMDJ180H, MOUNTED HORIZONTALLY WITH WALL MOUNT SLEEVE AND MOUNTING HARDWARE.

→SD - DUCT MTD. SMOKE DETECTOR, UL LISTED, IONIZATION TYPE WITH DUCT SENSING PROBE, DPDT, 120 VAC, INSTALL DETECTOR AND INTERLOCK WITH BLOWER TO DISABLE ON ABNORMAL SMOKE CONDITION. PROVIDE AUDIBLE AND VISUAL ALARM DEVICES AND TROUBLE SIGNALS PER LOCAL CODE REQUIREMENTS, INTERLOCK ALL DEVICES. FENWALL, GAMEWELL, SIMPLEX OR EQUAL.

DVB - DRYER VENT BOX, DOWN/UP VENT CONNECTION, HIGH IMPACT POLYSTYRENE, TO FIT IN A 2X4 WALL. CONSTRUCTION SOLUTIONS DBX1000. ALL DRYER VENT CONNECTIONS SHALL HAVE A DRYER VENT BOX

KITCHEN HOOD - COMMERCIAL HOOD, UL GREASE FILTERS, UL LISTED LIGHTS, W/ TOP ENCLOSURE, ELECTRIC GAS SOLENOID VALVE, PREWIRE CONTROL PACKAGE, PREWIRE PACKAGE SYSTEM TO CONTROL HOOD LIGHTS AND FANS, COMPLETE WITH SWITCHES, MICROSWITCHES, REMOTE MOUNTED FIRE CABINET, BACKSPASH, HEAT SENSOR, MAINTAIN REAR CLEARANCE TO COMBUSTIBLES.

KH-1 - 10' L X 40" 2000 EA AT 0.828" SP 1800 FROM MAU-1, 450 SS WHERE EXPOSED, FRONT PLENUM MAKE-UP AIR, 544 LBS.

MAU-1 - MAKEUP AIR UNIT, DOWNFLOW CONNECTION THROUGH 20" TALL CURB, 208/3 VOLT, 31 FLA, 3.4 MCA, 15A MOCP, 1HP, 1800 CFM 0.5 SP, 1131 RPM. INTAKE AIR HOOD WITH FILTERS, GREASEMASTER MOD GMI-1SD. MAKE UP AIR IS NOT HEATED.



# ELECTRICAL SPECIFICATIONS

## I. GENERAL

### I.1 RELATED DOCUMENTS:

- A. REQUIREMENTS OF THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, AND SPECIAL CONDITIONS APPLY TO THIS SECTION.
- B. ARCHITECTURAL, STRUCTURAL, MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS.
- C. KITCHEN, HVAC, AND PLUMBING EQUIPMENT MANUFACTURER GUIDELINES & INSTALLATION INSTRUCTIONS.

### I.2 WORK INCLUDED:

- A. ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- B. PERMITS AND INSPECTIONS REQUIRED FOR WORK.
- C. TEMPORARY ELECTRIC FOR SITE DURING CONSTRUCTION AS REQUIRED.
- D. COORDINATION OF FINAL SELECTIONS, LOCATIONS, CONNECTIONS, ELECTRICAL CHARACTERISTICS, ETC. OF EQUIPMENT SUPPLIED BY OTHERS ON PROJECT.

### I.3 JOB CONDITIONS:

- A. COORDINATE WITH BUILDING CONSTRUCTION AND WITH OTHER TRADES.
- B. IN CASE OF CONFLICT BETWEEN SPECIFICATIONS AND DRAWINGS, CONSULT ARCHITECT IMMEDIATELY FOR DETERMINATION OF PROCEDURE METHOD.

### I.4 CONFORMANCE TO REGULATIONS:

- A. WORK SHALL CONFORM WITH 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, NFPA, LOCAL ORDINANCES AND THE RULES AND REGULATIONS OF THE UTILITIES.
- B. WORK SHALL BE IN ACCORDANCE WITH THE OWNER'S CRITERIA AND REQUIREMENTS.

### I.5 QUALITY ASSURANCE:

- A. MEET OR EXCEED RECOMMENDATIONS OF: IEEE, IES, NEMA AND UL.
- B. NOTIFY ARCHITECT IMMEDIATELY OF CONFLICTS AND DEFICIENCIES. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN RESOLVED.

### I.6 MATERIALS AND EQUIPMENT:

- A. PROVIDE NEW MATERIALS AND EQUIPMENT UNLESS OTHERWISE NOTED.
- B. FURNISH (INCLUDING FREIGHT AND UNLOADING) AND INSTALL UNLESS OTHERWISE NOTED.
- C. EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE NEW UNLESS NOTED OTHERWISE.

### I.7 SUBMITTALS:

- A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT IN ACCORDANCE WITH THE ARCHITECT'S REQUIREMENTS.
- B. UPON COMPLETION OF THE INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE OWNER, CONTRACTOR SHALL FURNISH AS-BUILT DOCUMENTATION AND O'M MANUALS IN ACCORDANCE WITH THE ARCHITECT'S REQUIREMENTS.
- C. ON-DRAWING WIRING DIAGRAMS SPECIFIC TO THIS PROJECT FOR ALL ROOMS WITH LOW VOLTAGE DEVICES SHOWING INTERCONNECTIONS BETWEEN POWER PAK, SWITCHES, AND OCCUPANCY SENSORS.

### I.8 PROJECT CLOSEOUT:

- A. REPAIR DAMAGED AND DEFECTIVE EQUIPMENT AND MATERIALS. REPLACE ITEMS THAT CANNOT BE PROPERLY REPAIRED.
- B. CLEAN EXPOSED AND SEMI-EXPOSED SURFACES OF EQUIPMENT AND MATERIALS.
- C. TOUCH-UP SHOP-APPLIED FINISHES TO RESTORE DAMAGED AND SOILED AREAS.
- D. INSTRUCT OWNER'S REPRESENTATIVE IN OPERATION AND MAINTENANCE OF ELECTRICAL SYSTEMS UTILIZING THE OPERATION AND MAINTENANCE MANUAL.
- E. INSTRUCTION PERIOD SHALL OCCUR AFTER SUBSTANTIAL COMPLETION OF ELECTRICAL SYSTEMS AND PRIOR TO COMPLETION OF THE PROJECT. COORDINATE WITH THE ARCHITECT AND OWNER.

## 2. PRODUCTS

### 2.1 RACEWAYS AND FITTINGS:

- A. CONDUIT SIZES SHALL BE AS REQUIRED BY THE CODE (UNLESS INDICATED OR SPECIFIED OTHERWISE) FOR THE NUMBER AND SIZE OF WIRE INDICATED. MINIMUM SIZE CONDUIT SHALL BE 1/2" ELECTRICAL TRADE SIZE FLEXIBLE METAL CONDUIT USED FOR LIGHTING FIXTURE WIRES MAY BE 3/8" WHERE ALLOWED BY THE CODE.
- B. USE ELECTRICAL METALLIC TUBING EXCEPT AS FOLLOWS. USE RIGID NONMETALLIC CONDUIT IN OR UNDER ON GRADE CONCRETE SLABS. USE FLEXIBLE METAL CONDUIT FOR MOTOR AND EQUIPMENT CONNECTIONS IN DRY LOCATIONS. USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT IN WET OR DAMP LOCATIONS.

### 2.2 WIRE AND CABLE:

- A. CONDUCTORS SHALL BE COPPER MINIMUM SIZE NO. 12 AWG. OTHER WIRE SIZES SHALL BE AS NOTED OR AS REQUIRED FOR THE CIRCUIT SIZE. CONDUCTOR INSULATION SHALL BE THIN/THIN.
- B. BRANCH CIRCUIT WIRING WHERE CONCEALED IN WALLS AND ABOVE CEILINGS MAY BE TYPE MC (METAL CLAD) CABLE WHERE ALLOWED BY THE CODE.

### 2.3 BOXES:

- A. GALVANIZED SHEET STEEL TYPE. SINGLE DEVICE BOX SHALL BE "NON-GANGABLE" TYPE AND FOR MULTIPLE DEVICES "GANGABLE" TYPE SHALL BE USED. BOXES FOR EXPOSED WORK SHALL BE 4" SQUARE TYPE. BOXES FOR EXPOSED WORK IN WET LOCATIONS SHALL BE DIE CAST TYPE WITH THREADED HUBS. SECTIONAL BOXES SHALL NOT BE USED IN MASONRY OR CONCRETE. SIZED FOR NUMBER OF CONDUCTORS. FITTINGS AND DEVICES AS REQUIRED BY THE CODE.

### 2.4 WIRING DEVICES:

- A. 20 AMPERE SPECIFICATION GRADE.
- B. COVERPLATES SHALL BE AS FOLLOWS: INTERIOR RECESSED - SMOOTH UNBREAKABLE NYLON; SURFACE - 4" SQUARE RAISED COVER, GALVANIZED, WEATHERPROOF - DIE CAST ALUMINUM, GFCI TYPE, WATERTIGHT WHILE IN USE TYPE. USE EXTERNAL OPERATING TYPE FOR WEATHERPROOF SWITCHES.
- C. DEVICE AND PLATE COLOR SHALL BE AS SELECTED BY ARCHITECT.
- D. GFCI OUTLETS TO BE SELF-TESTING TYPE.

### 2.5 DISCONNECT SWITCHES:

- A. SAME MANUFACTURER AS THE PANELBOARDS, NEMA 3R FOR OUTDOOR USE.
- B. DISCONNECT SWITCHES SHALL BE FUSED OR NON-FUSED AS INDICATED AND BE VISIBLE BLADE TYPE WITH EXTERNAL OPERATING HANDLE AND COVER INTERLOCK AND PAD LOCKING.
- C. ALL LABELING ON EXTERIOR DISCONNECT SWITCHES SHALL BE UV RESISTANT.

### 2.6 PANELBOARDS:

- A. NEW PANELBOARDS SHALL BE AS SCHEDULED OR BY: SQUARE-D, CUTLER HAMMER, GENERAL ELECTRIC OR SIEMENS. PANELS TO HAVE MINIMUM 20" WIDE CABINETS AND COPPER BUS BARS.
- B. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC, FOLDED CASE, BOLT-ON TYPE. MULTI-POLE SHALL BE COMMON TRIP TYPE. BREAKERS FOR HVAC EQUIPMENT SHALL BE "HACR" RATED WHERE REQUIRED.
- C. NEW PANELBOARDS SHALL HAVE LOCKABLE DOORS, LOCKS SHALL BE KEYPED ALIKE.
- D. NEW PANELBOARDS SHALL BE FULLY RATED OR HAVE A UL LISTED SERIES CONNECTED RATING MATCHING EXISTING EQUIPMENT.
- E. NEW BREAKERS FOR EXISTING PANELBOARDS SHALL BE OF THE SAME MANUFACTURER AND AIC RATINGS AS THE EXISTING. UPDATE PANEL DIRECTORIES TO INDICATE CHANGES IN BRANCH CIRCUIT WORK. LEAVE SPARE BREAKERS IN "OFF" POSITION.
- F. PROVIDE & INSTALL ALL BREAKER FRAMES, COVERS, LUGS, ETC. AS REQUIRED FOR ADDING NEW BREAKERS TO EXISTING PANELS.

### 2.7 ELECTRIC SERVICE:

- A. EXISTING SERVICE IS 120/208 VOLT, 3 PHASE, 4 WIRE.

### 2.8 DRIVERS AND ACCESSORIES:

- A. LED DRIVERS SHALL BE ELECTRONIC TYPE WITH EQUAL TO OR LESS THAN 10% THD AND A 3 YEAR WARRANTY. VOLTAGE TO MATCH SYSTEM VOLTAGE.
- B. ACCESSORIES SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING FOR A COMPLETE LIGHTING FIXTURE INSTALLATION: PLASTER FRAMES, TEE BAR HANGERS, FIXTURE STUDS AND HOLD DOWN CLIPS FOR SUSPENDED CEILINGS.

### 2.9 LIGHTING FIXTURES:

- A. LIGHTING FIXTURES SHALL BE AS SPECIFIED ON THE DRAWINGS.
- B. PHOTOCELLS; SWIVEL MOUNT, 1800 WATT, TORK SERIES 2020 OR EQUAL.

### 2.10 EMPTY CONDUIT SYSTEMS:

- A. PROVIDE FOR USE BY THE OWNER'S CABLING CONTRACTOR. CONDUIT SYSTEM SHALL BE AS DESCRIBED ON THE DRAWINGS FOR DATA, TELEPHONE, TELEVISION, SOUND, SECURITY, ETC.

## 3. EXECUTION

### 3.1 RACEWAYS AND FITTINGS:

- A. INSTALL CONDUITS CONCEALED IN WALLS, CEILINGS OR FLOORS UNLESS INDICATED OR SPECIFIED OTHERWISE. CONDUITS MAY BE INSTALLED EXPOSED IN UNFINISHED AREAS (IE: EQUIPMENT ROOMS). INSTALL EXPOSED CONDUITS IN RUNS PARALLEL OR PERPENDICULAR TO WALLS STRUCTURAL MEMBERS, OR INTERSECTIONS OF VERTICAL PLANES OR CEILINGS. EXPOSED AND CONCEALED CONDUITS SHALL PASS THROUGH WALLS, FLOORS OR CEILINGS AT RIGHT ANGLES. UNDERGROUND CONDUITS SHALL HAVE BURY DEPTH AS REQUIRED BY THE CODE.
- B. INSURE THAT CONDUITS ARE IN ALIGNMENT BETWEEN BENDS, ELBOWS AND TERMINATIONS; THAT BENDS ARE FREE OF CRIMPS, THAT JOINTS AND TERMINATIONS ARE TIGHT AND SECURE; THAT INTERIORS ARE SMOOTH AND FREE OF BURRS AND FOREIGN OBJECTS; AND THAT INTERIORS ARE FULL SIZE ENTIRE LENGTH. DURING CONSTRUCTION, CLOSE ENDS OF CONDUITS WITH METAL OR PLASTIC CAPS INTENDED FOR THE PURPOSE.
- C. FIELD BENDING OF CONDUITS AND TUBING SHALL BE MADE WITH HAND OR POWERED EQUIPMENT APPROVED FOR THE PURPOSE. USE OF TORCHES TO BEND NONMETALLIC CONDUIT IS NOT APPROVED. RADIUS OF BENDS SHALL BE AS PER THE CODE FOR TYPE OF CONDUIT AND TUBING USED. CONDUITS PASSING THROUGH A FIRE RATED WALL OR FLOOR SHALL NOT LESSEN THE RATING OF THE STRUCTURE THROUGH WHICH THEY PASS. FINAL INSTALLATION OF CONDUITS PENETRATING WATERPROOF CONSTRUCTION SHALL BE COMPLETELY WATERTIGHT.
- D. SLEEVE CONDUITS PASSING THROUGH CONCRETE FLOOR SLABS AND CONCRETE, MASONRY, TILE AND GYPSUM WALLS.
- E. CONDUIT SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE AT INTERVALS REQUIRED BY THE CODE. USE STANDARD CONDUIT HANGERS, ONE HOLE SNAP STRAPS, THIN WALL CONDUIT CLAMPS, MALLEABLE IRON PIPE STRAPS, STRUT CHANNEL, BEAM CLAMPS, U-BOLTS AND ALL-THREAD RODS. DO NOT USE WIRE TIES, STAPLE ON CLIPS OR PERFORATED STRAP IRON.
- F. PAINT ANY EXPOSED CONDUITS NOT WITHIN UTILITY ROOMS TO MATCH SURROUNDINGS.

### 3.2 WIRE AND CABLE:

- A. SPLICE CONDUCTORS NO. 10 AND SMALLER WITH STEEL SPRING WIRE CONNECTOR WITH THERMOPLASTIC SHELL. SPLICE CONDUCTORS NO.8 AND LARGER WITH MECHANICAL TYPE, TAP CONNECTORS WITH INSULATED COVERS OR SPILT BOLTS TAPED TO CONDUCTOR INSULATION VALUE.
- B. INSTALL CONDUCTORS IN RACEWAYS. CONDUCTORS SHALL BE CONTINUOUS FROM POINT OF ORIGIN TO PANEL OR EQUIPMENT TERMINATION WITHOUT RUNNING SPLICES IN INTERMEDIATE BOXES. CONDUCTORS OF DIFFERENT VOLTAGES SHALL NOT BE PULLED INTO SAME RACEWAY.
- C. CABLE SHALL BE SUPPORTED DIRECTLY FROM THE BUILDING STRUCTURE WITH STAPLES OR ONE-HOLE STRAPS AT INTERVALS REQUIRED BY THE CODE. BORED HOLES SHALL NOT EXCEED IT DIAMETER AND SHALL BE A MINIMUM OF 2'-0" FROM STRUCTURAL BEARING POINTS, NOTCHING OF STRUCTURAL MEMBERS IS PROHIBITED. PROVIDE GUARD STRIPS AT LEAST AS HIGH AS CABLE WHERE RUN ACROSS TOP OF STRUCTURE IN ACCESSIBLE ATTIC SPACES.
- D. DO NOT RUN ANY WIRE OR CABLE IN PLUMBING WALLS UNTIL PIPING SYSTEMS HAVE BEEN COMPLETED. PLUMBING SHALL PRESIDE IN THESE WALLS.
- E. DO NOT SHARE NEUTRAL CONDUCTORS FOR 120 VOLT CIRCUITS.
- F. COLOR CODE CONDUCTORS TO INDUSTRY STANDARDS.
- G. INCREASE WIRE SIZES AS REQUIRED TO COMPENSATE FOR VOLTAGE DROP BASED ON FEEDER/BRANCH CIRCUIT LENGTH.

### 3.3 BOXES:

- A. SECURE BOXES TO STRUCTURE BY MEANS OF SCREWS, BOLTS, ROD HANGERS OR OTHER APPROVED MEANS. RACEWAYS ENTERING OR LEAVING BOX SHALL NOT BE USED AS SUPPORT. BOXES SHALL BE LEVEL AND PLUMB. BOXES FOR FLUSH EQUIPMENT SHALL BE PLACED TO WITHIN 1/4" OF THE FINISHED SURFACE. PROVIDE EXTENSIONS OR PLASTER RINGS AS REQUIRED. JUNCTION AND PULL BOXES SHALL BE INSTALLED READILY ACCESSIBLE, UNOBSTRUCTED BY PIPING, DUCTS OR OTHER EQUIPMENT.
- B. BOXES SHALL BE MOUNTED AT HEIGHT INDICATED ON THE DRAWINGS OR DIRECTLY ADJACENT TO PIECE OF EQUIPMENT SERVED. SEAL SPARE OR UNUSED OPENINGS IN BOXES WITH APPROVED FITTINGS. FOR BOXES INSTALLED IN WET LOCATIONS PROVIDE CLEAR SILICONE CAULK BETWEEN BOX AND SURROUNDING SURFACE TO PREVENT WATER ENTRY.
- C. BOXES IN RATED CONSTRUCTION SHALL BE SUITABLE FOR THE USE AND INSTALLED IN ACCORDANCE WITH THE CODE.

### 3.4 WIRING DEVICES:

- A. INSTALL DEVICES APPROXIMATELY AT THE LOCATIONS INDICATED ON THE DRAWINGS. DETERMINE EXACT LOCATION BY CONDITIONS OF CONSTRUCTION. COORDINATE LOCATIONS TO AVOID CONFLICT WITH OTHER EQUIPMENT BEING INSTALLED. INSTALL DEVICES STRAIGHT AND SOLID TO BOX. MOUNTING HEIGHTS OF WALL OUTLETS SHALL BE AS INDICATED ON THE DRAWINGS AND SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTER OF THE OUTLET. WHERE DEVICES ARE SHOWN GROUPED TOGETHER, PROVIDE A SINGLE, MULTIPLE GANG PLATE.
- B. COORDINATE PLACEMENT IN AND AROUND KNEE SPACES, LAVATORIES AND OTHER EQUIPMENT TO AVOID CONFLICTS WITH MIRRORS AND OTHER APPURTENANCES. REFER TO ARCHITECTURAL DRAWINGS. SWITCHES SHALL BE LOCATED TO STRIKE SIDE OF THE DOOR. VERIFY FINAL DOOR SWINGS.
- C. WHERE GFCI OUTLETS ARE USED TO PROVIDE FEED-THRU PROTECTION FOR DOWNSTREAM OUTLETS ON SAME CIRCUIT, DO NOT FEED-THRU WIRE ACROSS PARTITIONS, USE A SEPARATE DEVICE.
- D. VERIFY THE NEMA CONFIGURATIONS OF ALL OUTLETS WITH OWNER.
- E. LABEL COVERPLATES WITH PANEL AND CIRCUIT NUMBER FOR DEVICES EXCEPT WALL SWITCHES.

### 3.5 DISCONNECT SWITCHES:

- A. MOUNT SWITCHES ON WALL OR AT ASSOCIATED PIECE OF EQUIPMENT. WALL MOUNTED SWITCHES SHALL BE 48 INCHES ABOVE FINISHED FLOOR. PROVIDE ENGRAVED PLASTIC LAMINATE NAMEPLATE FOR EACH DISCONNECT SWITCH LOCATED ON FRONT OUTSIDE COVER. NAMEPLATE SHALL INDICATE ITEM SERVED.
- B. SWITCHES SCHEDULED ARE FOR DESIGN BASED EQUIPMENT. REVIEW OTHER TRADES' SUBMITTALS TO DETERMINE IF SUBSTITUTIONS HAVE BEEN MADE, PROVIDE SWITCH TO MATCH EQUIPMENT SUPPLIED.

### 3.6 GROUNDING:

- A. CONDUIT SYSTEM SHALL NOT BE USED FOR GROUNDING.

### 3.1 PANELBOARDS:

- A. NEATLY PRINT CIRCUIT DESIGNATIONS ON DIRECTORY CARD. NOTATIONS SHALL INDICATE THE NATURE AND LOADS SERVED. DO NOT USE A PERMANENT MARKER TO LABEL CIRCUIT DESIGNATIONS ON PANEL HOUSING.
- B. PROVIDE ENGRAVED LAMINATE NAMEPLATE FOR EACH NEW PANELBOARD LOCATED ON OUTSIDE OF DOOR. NAMEPLATE SHALL INCLUDE PANELBOARD DESIGNATION ON THE DRAWINGS, SERVICE VOLTAGE, PHASE AND AMPERAGE.
- C. BREAKERS SCHEDULED ARE FOR DESIGN BASED EQUIPMENT. REVIEW OTHER TRADES' SUBMITTALS TO DETERMINE IF SUBSTITUTIONS HAVE BEEN MADE. PROVIDE BREAKERS TO MATCH EQUIPMENT SUPPLIED.

### 3.8 LAMPS:

- A. PERMANENT LAMPS SHALL NOT BE USED AS TEMPORARY LIGHTING DURING CONSTRUCTION, IF FIXTURES ARE TO BE USED, TEMPORARY LAMPS SHALL BE PROVIDED AND PERMANENT LAMPS SHALL NOT BE INSTALLED UNTIL TIME OF OWNER'S ACCEPTANCE OF BUILDING.

### 3.9 LIGHTING FIXTURES:

- A. INSTALLATION OF FIXTURES SHALL BE IN A NEAT, WORKMANLIKE MANNER. PROVIDE STRAPS, SUPPORTS, HANGERS AND OTHER MATERIALS REQUIRED FOR PROPER INSTALLATION.
- B. SURFACE MOUNTED FIXTURES SHALL NOT HAVE GAPS BETWEEN THE FIXTURE AND ATTACHING SURFACE UNLESS MOUNTING IS DESIGNED TO HOLD FIXTURE OFF CEILING, OR EXCEPT WHERE REQUIRED BY THE CODE REGULATION. CONTINUOUS ROWS OF FIXTURES SHALL BE INSTALLED SO AS TO PROVIDE PERFECT ALIGNMENT.
- C. SUPPORT SURFACE MOUNTED FIXTURES DIRECTLY FROM THE BUILDING STRUCTURE AND NOT FROM THE CEILING GRID SYSTEM. USE ALL-THREAD RODS, BEAM CLAMPS, PIPE CLAMPS AND PIPE OR PERFORATED STEEL CHANNEL FOR SUPPORT. WIRE TIES AND STAB-ON CLIPS WILL NOT BE ACCEPTED. THE SUPPORT ASSEMBLY SHALL BE CAPABLE OF SUPPORTING 150 POUNDS IN ADDITION TO THE FIXTURE WEIGHT INDEFINITELY.
- D. RECESSED FIXTURES SHALL NOT HAVE GAPS BETWEEN THE FIXTURE TRIM AND ADJACENT SURFACE. WHERE LIGHT LEAKS OCCUR, SUITABLE GASKETS SHALL BE INSTALLED.
- E. RECESSED LIGHTING FIXTURES INSTALLED IN MODULAR OR INTEGRATED CEILINGS SHALL BE OF THE PROPER TYPE FOR THE TYPE OF CEILING BEING INSTALLED. VERIFY TYPE OF CONSTRUCTION PRIOR TO ORDERING OF FIXTURES. ADDITIONAL CEILING TIES SHALL BE INSTALLED AT EACH CORNER OF THE LIGHTING FIXTURE TO REINFORCE THE CEILING SYSTEM.
- F. CONNECT EXIT AND EMERGENCY LIGHTING FIXTURES TO BRANCH CIRCUIT SERVING NORMAL LIGHTING IN AREA AHEAD OF LOCAL SWITCHING.
- G. PHOTOCELLS SHALL BE LOCATED IN AN ACCESSIBLE LOCATION EITHER BELOW SOFFIT OR ABOVE ROOF LINE FACING NORTH. DO NOT ATTACH PHOTOCELLS ON FACE OF BUILDING.

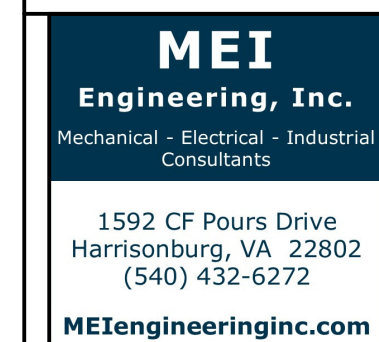
### 3.10 EMPTY CONDUIT SYSTEMS:

- A. LEAVE CONDUITS WITH PULL CORDS. AT COMPLETION OF THE PROJECT, PROVIDE BLANK COVERPLATES FOR ANY OUTLET BOXES NOT UTILIZED AND LEFT SPARE BY THE OWNER'S CABLING CONTRACTOR.
- B. PAINT ALL SIDES AND EDGES OF EQUIPMENT SPACE WITH 2 COATS OF GRAY ENAMEL PAINT PRIOR TO INSTALLATION.
- C. COORDINATE WITH THE UTILITIES SELECTED BY THE OWNER AND PROVIDE ALL MEANS REQUIRED FOR SERVICES TO THE BUILDING.

### 3.11 DEMOLITION:

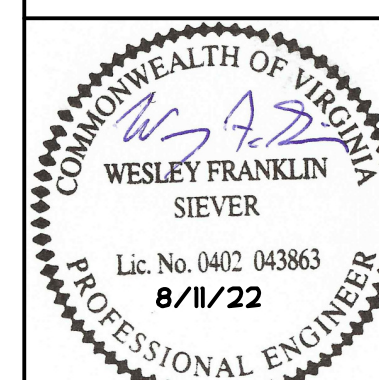
- A. REFER TO ARCHITECTURAL DRAWINGS AND OWNER FOR EXACT EXTENT OF DEMOLITION.
- B. REMOVE ITEMS AS REQUIRED TO CLEAR AREAS OF NEW CONSTRUCTION. COORDINATE WITH OTHER TRADES FOR EQUIPMENT THAT MAY REQUIRE ELECTRIC CONNECTIONS TO BE DEMOLISHED.
- C. CONDUCTORS SHALL BE REMOVED FULLY FROM OUTLET BOX BACK TO NEAREST JUNCTION POINT. CONDUITS AND BOXES SHALL BE REMOVED WHERE EXPOSED AND CAN BE ABANDONED WHERE CONCEALED. LEAVE BOXES WITH BLANK COVERPLATES.
- D. CONDUITS, OUTLET, JUNCTION AND PULL BOXES MAY BE REUSED WHERE PRACTICAL.
- E. ELECTRICAL WORK BEING REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED OR REMOVED FROM THE SITE AS DIRECTED.
- F. ITEMS DISTURBED BY WORK UNDER THIS CONTRACT SHALL BE RESTORED TO THE ORIGINAL OPERATING CONDITION.
- G. WHERE ITEMS ARE TO BE RELOCATED, USE CARE IN REMOVAL AND PROTECT UNTIL REINSTALLED. CLEAN SURFACES OF EQUIPMENT PRIOR TO REINSTALLATION.
- H. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION AND SHALL FIELD VERIFY REQUIREMENTS PRIOR TO BID.
- I. MAINTAIN CONTINUITY TO REMAINING DEVICES AND FIXTURES ON ALTERED CIRCUITS AS REQUIRED.

FOR CONSTRUCTION



16125 RACCOON FORD RD  
CULPEPER, VIRGINIA 22701  
540-629-2590

GEORGE WASHINGTON CARVER  
FOOD ENTERPRISE CENTER  
9432 JAMES MADISON HIGHWAY  
RAPIDAN, VIRGINIA



REVISIONS:  
  
  
  
  
  
  
  
  
  
DRAWN: RBP  
CHECKED: WFS  
SCALE: NONE  
DATE: 8-11-22  
PROJECT #: 22017

ELECTRICAL  
SPECIFICATIONS

E0.1



COMcheck Software Version 4.1.5.2  
Interior Lighting Compliance Certificate

**Project Information**  
Energy Code: 2018 IECC  
Project Title: George Washington Carver Food Enterprise Center  
Project Type: New Construction

Construction Site: 9432 James Madison Highway, Rapidan, VA  
Owner/Agent: [Signature]  
Designer/Contractor: R.B. Propst, MEI Engineering, Inc., 1592 CF Pours Drive, Harrisonburg, VA 22802, 540-432-6272

Credits: 1.0 Required, 1.0 Proposed, Reduced Lighting Power, 1.0 credit  
**Allowed Interior Lighting Power**

A Area Category	B Floor Area (ft <sup>2</sup> )	C Allowed Watts / ft <sup>2</sup>	D Allowed Watts (B X C)
1-Manufacturing Facility	6002	0.81	4862
Total Allowed Watts =			4862

**Proposed Interior Lighting Power**

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Manufacturing Facility				
LED 1: Type 1 Lensed 2 x 4 LED Other Fixture Unit 40W	1	28	38	1075
LED 2: Type 2 x 4 LED Other Fixture Unit 36W	1	13	36	471
LED 3: Type 3 Walk-in 1 x 4 LED Other Fixture Unit 45W	1	4	45	164
LED 4: Type 4 5500L Strip LED Other Fixture Unit 45W	1	14	45	630
LED 5: Type 5 3000L Strip LED Other Fixture Unit 28W	1	1	28	28
Total Proposed Watts =				2388

**Interior Lighting PASSES: Design 51% better than code**  
**Interior Lighting Compliance Statement**  
Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.  
R.B. PROPST  
Name - Title: [Signature] Date: 8-11-22

Project Title: George Washington Carver Food Enterprise Center  
Report date: 07/28/22  
Data filename: M:\Current\2022\2017\22017 Ltg.cck Page 1 of 8

COMcheck Software Version 4.1.5.2  
Exterior Lighting Compliance Certificate

**Project Information**  
Energy Code: 2018 IECC  
Project Title: George Washington Carver Food Enterprise Center  
Project Type: New Construction  
Exterior Lighting Zone: 2 (Neighborhood business district (L22))

Construction Site: 9432 James Madison Highway, Rapidan, VA  
Owner/Agent: [Signature]  
Designer/Contractor: R.B. Propst, MEI Engineering, Inc., 1592 CF Pours Drive, Harrisonburg, VA 22802, 540-432-6272

**Allowed Exterior Lighting Power**

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradeable Wattage	E Allowed Watts (B X C)
Entry canopy	21 ft <sup>2</sup>	0.25	Yes	5
Entry canopy	23 ft <sup>2</sup>	0.25	Yes	6
Entry canopy	21 ft <sup>2</sup>	0.25	Yes	5
Total Tradeable Watts (a) =				16
Total Allowed Watts =				16
Total Supplemental Watts (b) =				400

(a) Wattage tradeoffs are only allowed between tradeable areas/surfaces.  
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradeable and tradeable areas/surfaces.

**Proposed Exterior Lighting Power**

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Entry canopy (21 ft <sup>2</sup> ): Tradeable Wattage				
LED 1: Type 6 Surface Drum LED Other Fixture Unit 13W	1	1	12	12
Entry canopy (23 ft <sup>2</sup> ): Tradeable Wattage				
LED 2: Type 6 Surface Drum LED Other Fixture Unit 13W	1	1	12	12
Entry canopy (21 ft <sup>2</sup> ): Tradeable Wattage				
LED 3: Type 6 Surface Drum LED Other Fixture Unit 13W	1	1	12	12
Total Tradeable Proposed Watts =				36

**Exterior Lighting PASSES: Design 91% better than code**  
**Exterior Lighting Compliance Statement**  
Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.  
R.B. PROPST  
NAME: [Signature] DATE: 8-11-22

Project Title: George Washington Carver Food Enterprise Center  
Report date: 07/28/22  
Data filename: M:\Current\2022\2017\22017 Ltg.cck Page 2 of 8

KITCHEN EQUIPMENT CONNECTION SCHEDULE

ITEM	DESCRIPTION	VOLTS	PH	FLA	WIRE	GND.	MOCP	DISCONNECT	PNL. & CKT.	REMARKS
(A)	GAS STOVE	120	1	5.0	2 #12	#12	20A	DUPLEX RECEPTACLE	KA-1	NOTE 1
(NA)	WALK-IN COOLER CAPSULE FAK	208	1	1.1	2 #12	#12	20A	MATCHING OUTLET	KE-5	
(NB)	WALK-IN COOLER DOOR/LIGHT	120	1	1.0	2 #12	#12	20A	DIRECT CONNECTION	KE-13	
(OA)	WALK-IN FREEZER CAPSULE FAK	208	1	1.5	2 #12	#12	20A	MATCHING OUTLET	KE-9	
(OB)	WALK-IN FREEZER DOOR/LIGHT	120	1	2.0	2 #12	#12	20A	DIRECT CONNECTION	KE-15	
(O)	ICE MACHINE	120	1	8.6	2 #12	#12	15A	DIRECT CONNECTION	KA-14	
(KH)	KITCHEN HOOD EXHAUST FAN	208	3	6.6	3 #12	#12	15A	FURNISHED WITH FAN	KA-62	NOTE 2
(KH2)	KITCHEN HOOD MAKE-UP AIR UNIT	208	3	3.1	3 #12	#12	15A	FURNISHED WITH UNIT	KA-68	NOTE 2
(KH3)	KITCHEN HOOD CONTROL PANEL	120	1	8.0	2 #12	#12	15A	DIRECT CONNECTION	KA-45	NOTE 3

SCHEDULE NOTES

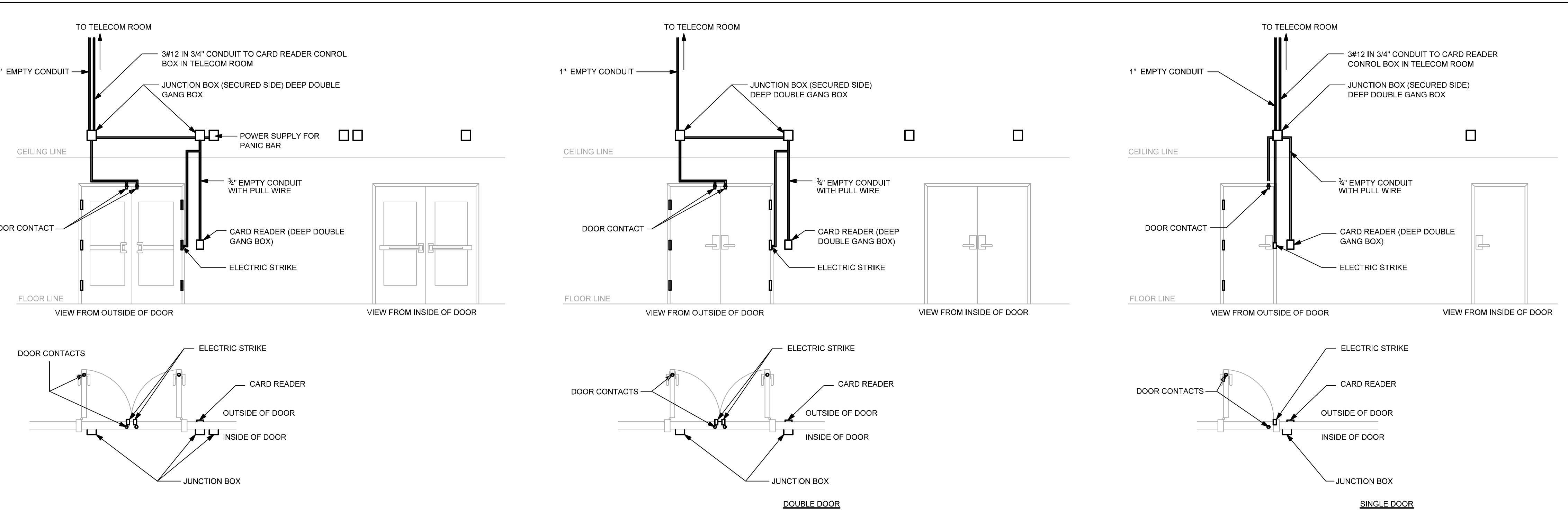
- COORDINATE WITH FINAL EQUIPMENT SELECTIONS. CONTRACTOR IS RESPONSIBLE FOR CORRECTNESS OF ALL BREAKERS, WIRE SIZES, ETC. VERIFY EXACT LOCATIONS OF EQUIPMENT PRIOR TO ANY ROUGH-IN AND MAKE FINAL CONNECTIONS AFTER EQUIPMENT IS SET IN PLACE. RUN NEUTRAL FOR MULTI-POLE CIRCUIT IF REQUIRED IN MANUFACTURER'S GUIDELINES.
- 1. RUN CIRCUIT TO SHUNT TRIP BREAKER. INTERLOCK BREAKER WITH HOOD FIRE SUPPRESSION TO DISCONNECT POWER TO EQUIPMENT UNDER THE HOOD IN EVENT OF FIRE.
- 2. WIRE CIRCUIT FOR KITCHEN HOOD EXHAUST FAN AND MAKE-UP AIR UNIT THRU KITCHEN HOOD CONTROL PANEL. SEE MANUFACTURER'S WIRING DIAGRAM.
- 3. CONTRACTOR SHALL CLOSELY COORDINATE ALL SERVICES THE KITCHEN HOOD MANUFACTURER REQUIRES FOR A COMPLETE INSTALLATION OF CONTROL PANEL.

KITCHEN HOOD OPERATION

- KH1.** VERIFY HOOD AND ANSUL SYSTEM REQUIREMENTS.
- KH2.** WIRE EXHAUST FAN AND MAKE-UP AIR UNIT TO CONTROL POINTS AS DESIGNATED BY THE HOOD SUPPLIER.
- KH3.** WIRE CIRCUITS SERVING EQUIPMENT UNDER THE HOOD TO A CONTACTOR CONTROLLED BY THE FAN SWITCH. THERE SHALL BE NO POWER TO THE EQUIPMENT UNDER THE HOOD UNLESS THE EXHAUST FAN IS RUNNING.
- KH4.** WIRE ANSUL SYSTEM TO SHUNT TRIP BREAKERS AND CONTACTOR.
- KH5.** ON CALL FROM FIRE SUPPRESSION UNDER THE HOOD, THE FOLLOWING CONDITIONS MUST BE MET:  
A) POWER TO THE EQUIPMENT UNDER THE HOOD AND SUPPLY FAN (MAKE-UP AIR UNIT) SHALL BE DISCONNECTED.  
B) THE EXHAUST FAN SHALL REMAIN RUNNING.
- KH6.** ELECTRICIAN SHALL WIRE HOOD COMPONENTS AS DETAILED ON HOOD SUPPLIER DRAWINGS. VERIFY ALL REQUIREMENTS WITH FINAL HOOD SELECTION.
- KH7.** INTERLOCK HOOD SUPPLY FAN (MAKE-UP AIR UNIT) WITH HOOD EXHAUST FAN TO OPERATE SIMULTANEOUSLY. WIRE SUPPLY FAN THRU NEW CONTACTOR CONTROLLED BY ANSUL SYSTEM FOR OPERATION DETAILED IN NOTE KH5 ABOVE.
- KH8.** COORDINATE ROUGH-IN FOR HOOD EMERGENCY PULL STATION AS SHOWN ON FIRE ALARM DRAWINGS.

SYMBOLS LIST

- A-1 [Symbol] OUTLET FOR CEILING OR WALL MOUNTED FLUORESCENT OR LED LIGHTING FIXTURE WITH CIRCUIT NUMBER
- [Symbol] EXISTING CEILING OR WALL MOUNTED FLUORESCENT OR LED LIGHTING FIXTURE
- A-1 [Symbol] OUTLET FOR CEILING OR WALL MOUNTED EMERGENCY EGRESS LIGHTING FIXTURE WITH BATTERY BACKUP WITH CIRCUIT NUMBER
- [Symbol] EXISTING CEILING OR WALL MOUNTED EMERGENCY EGRESS LIGHTING FIXTURE
- A-1 [Symbol] OUTLET FOR CEILING OR WALL MOUNTED EMERGENCY EGRESS LIGHTING FIXTURE WITH BATTERY BACKUP WITH CIRCUIT NUMBER
- [Symbol] EXISTING CEILING OR WALL MOUNTED EMERGENCY EGRESS LIGHTING FIXTURE
- A-1 [Symbol] OUTLET FOR CEILING OR WALL MOUNTED COMBINATION EXIT/EMERGENCY EGRESS LIGHTING FIXTURE WITH BATTERY BACKUP WITH CIRCUIT NUMBER
- [Symbol] EXISTING CEILING OR WALL MOUNTED COMBINATION EXIT/EMERGENCY EGRESS LIGHTING FIXTURE
- [Symbol] LIGHTING FIXTURE TYPE SEE SCHEDULE
- S SINGLE POLE WALL SWITCH AT 48" AFF TO TOP OF BOX
- Ss THREE-WAY WALL SWITCH AT 48" AFF TO TOP OF BOX
- A-1 [Symbol] GENERAL PURPOSE DUPLEX RECEPTACLE AT 18" AFF TO BOTTOM OF BOX WITH CIRCUIT NUMBER
- A-1 [Symbol] GENERAL PURPOSE DUPLEX RECEPTACLE AT 48" AFF TO TOP OF BOX WITH CIRCUIT NUMBER
- GFCI [Symbol] GROUND FAULT CIRCUIT INTERRUPTER AT 18" AFF TO BOTTOM OF BOX WITH CIRCUIT NUMBER
- GFCI [Symbol] GROUND FAULT CIRCUIT INTERRUPTER AT 48" AFF TO TOP OF BOX WITH CIRCUIT NUMBER
- A-1 [Symbol] EXISTING GENERAL PURPOSE DUPLEX RECEPTACLE AT 18" AFF WITH CIRCUIT NUMBER
- A-1 [Symbol] EXISTING GENERAL PURPOSE DUPLEX RECEPTACLE AT 48" AFF WITH CIRCUIT NUMBER
- EWC [Symbol] OUTLET FOR ELECTRIC WATER COOLER COORDINATE LOCATION WITH PLUMBING ROUGH-IN DRAWINGS, WITH CIRCUIT NUMBER
- SWD [Symbol] 250 VOLT DEVICE FOR STACKED WASHER/ DRYER. HEIGHT TO SUIT APPLIANCE SERVED WITH CIRCUIT NUMBER
- A-1 [Symbol] DUPLEX RECEPTACLE CORD REEL WITH CIRCUIT NUMBER. PROVIDE ALL ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION ON AN ACT LAY-IN CEILING. VERIFY REQUIREMENTS, APC GROUP KITCHEN LEASH SERIES OR EQUAL
- [Symbol] JUNCTION BOX AT 18" AFF TO BOTTOM OF BOX OR AT ASSOCIATED PIECE OF EQUIPMENT
- [Symbol] OUTLET FOR LOW VOLTAGE CABLE (DATA, TELEPHONE OR TELEVISION) AT 18" AFF TO BOTTOM OF BOX WITH A 3/4" EC STUBBED INTO ACCESSIBLE CEILING SPACE
- [Symbol] CARD READER AT 48" AFF. COORDINATE ALL REQUIREMENTS WITH OWNER AND SECURITY SYSTEM PROVIDER PRIOR TO ANY ROUGH-IN. SEE CARD READER DETAIL.
- A-1 [Symbol] 120V-1PH. CONNECTION FOR DOOR CONTROLS. COORDINATE ALL REQUIREMENTS WITH SECURITY SYSTEM PROVIDER PRIOR TO ANY ROUGH-IN WITH CIRCUIT NUMBER. SEE CARD READER DETAIL.
- [Symbol] DUCT MOUNTED SMOKE DETECTOR
- [Symbol] MOTOR OUTLET
- [Symbol] EXHAUST FAN (120V-1PH) FURNISHED AND INSTALLED BY HVAC WIRED BY ELECTRICAL
- [Symbol] EXISTING EXHAUST FAN
- A-1 [Symbol] PHOTOCELL, LOCATE IN ACCESSIBLE LOCATION AND SHIELD FROM SURROUNDING LIGHT SOURCES, WITH CIRCUIT NUMBER
- [Symbol] PANELBOARD
- [Symbol] EQUIPMENT CONNECTION DESIGNATION SEE SCHEDULE
- [Symbol] KITCHEN EQUIPMENT DESIGNATION SEE SCHEDULE
- [Symbol] SWITCH LEG WIRING, 2 #12 - CROSS MARKS INDICATE NUMBER OF CONDUCTORS IF MORE THAN TWO
- [Symbol] SWITCH LEG WIRING, 2 #12 - WITH ADDITIONAL DIMMING CONTROL WIRING AS REQUIRED FOR FIXTURE SUPPLIED
- [Symbol] DROP TO SWITCH SWITCH DESIGNATION AS INDICATED
- AFF ABOVE FINISHED FLOOR
- C/E CONDUIT/EMPTY CONDUIT
- ENC EXISTING, NO CHANGE
- F55/NF55 FUSIBLE/NON-FUSIBLE SAFETY SWITCH
- PKU PACKAGED A/C UNIT
- WH WATER HEATER
- WP WEATHERPROOF



CARD READER ELECTRIC STRIKE DETAIL  
NO SCALE

NOTE: DIAGRAMS ARE GENERAL IN NATURE. COORDINATE WITH FINAL EQUIPMENT SUPPLIER'S INSTALLATION GUIDELINES PRIOR TO ROUGH-IN.

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8/22/22  
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REVISIONS:  
1 - 8-22-22 - KITCHEN HOOD

DRAWN: RBP  
CHECKED: WFS  
SCALE: NONE  
DATE: 08-11-22  
PROJECT #: 22017

ELEC. SCHEDS. AND RISERS

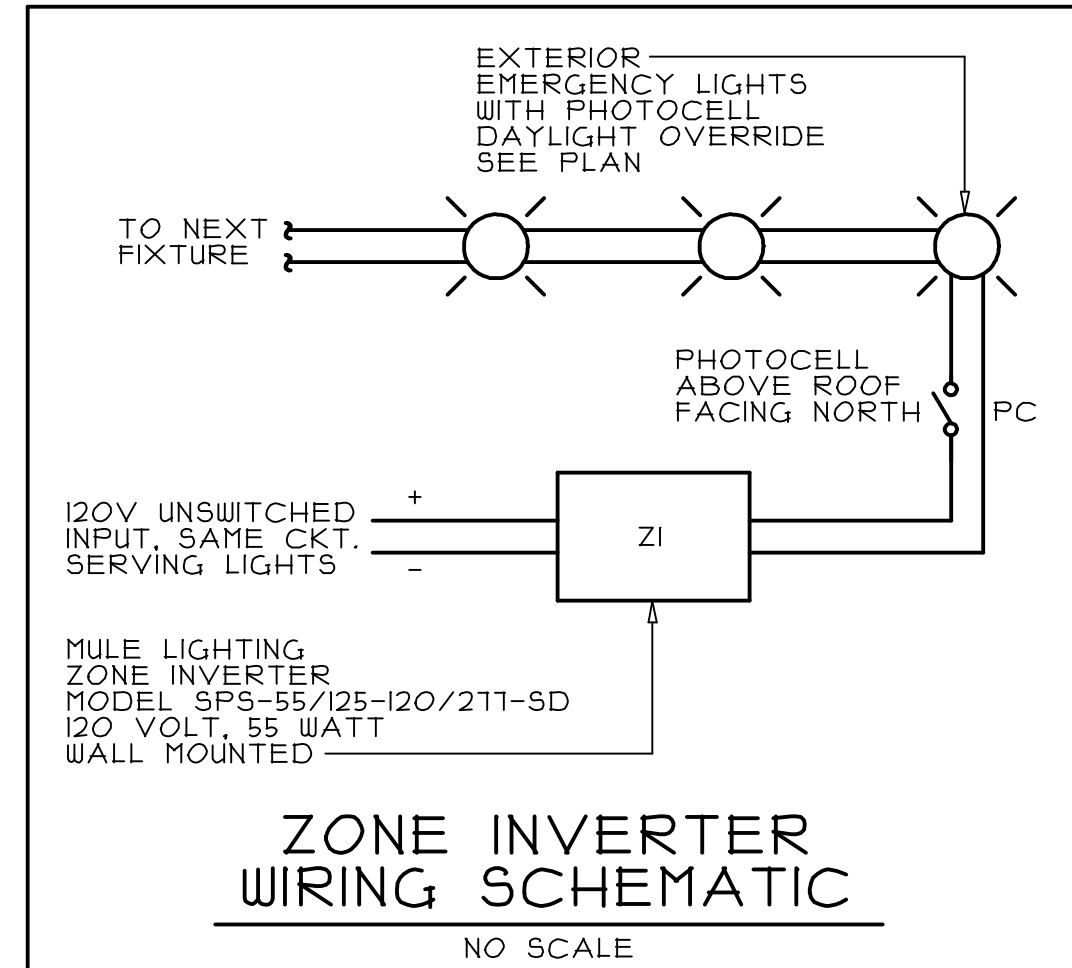
E0.2



NEW PANEL KA														
VOLTS: 120/208		PHASE: 3				WIRES: 4				MOUNTING: SURFACE				
AMPS: 400		MAIN: LUGS ONLY												
BRKR	P	A	CIRCUIT			PHASE LOAD			CIRCUIT			DESCRIPTION	BRKR	
			AMPS	DEMAND	NO.	A	B	C	NO.	DEMAND	AMPS			
1	20		5.0	65%	1	13.3			2	100%	10.0	WTR. FILTRATION SYS	20	2
--	--		0.0	100%	3		10.0		4	100%	10.0	--	--	--
1	20		10.0	65%	5		35.5		6	100%	29.0	OHP-1	40	2
--	--		9.6	100%	7	38.6			8	100%	29.0	--	--	--
1	20		5.0	65%	9				10	100%	1.7	FCU-1, FCU-2, FCU-3, FCU-4	15	2
--	--		0.0	100%	11			1.7	12	100%	1.7	--	--	--
1	20		3.0	100%	13	11.6			14	100%	8.6	ICE MACHINE	20	1
1	20		3.0	100%	15		12.1		16	85%	14.0	FUT. 20 QT. MIXER (2)	20	1
1	20		3.0	100%	17		8.9		18	65%	9.0	REFRIGERATOR (2)	20	1
1	20		3.0	100%	19	8.9			20	65%	9.0	REFRIGERATOR (2)	20	1
1	20		3.0	100%	21		13.4		22	65%	16.0	FUT. VACUUM SEALER (2)	20	1
1	20		3.0	100%	23		3.0		24	65%	0.0	SPARE	20	1
1	20		3.0	65%	25	2.0			26	65%	0.0	SPARE	20	1
1	20		3.0	100%	27		12.4		28	65%	14.5	FUT. DEHYDRATOR (2)	20	1
1	20		3.0	100%	29		12.1		30	65%	14.0	FUT. DOUGH PROOFER (2)	20	1
1	20		3.0	100%	31	6.0			32	100%	3.0	KITCHEN COUNTER (2)	20	1
1	20		3.0	100%	33		4.5		34	100%	1.5	KITCHEN COUNTER (2)	20	1
1	20		3.0	100%	35			6.0	36	100%	3.0	KITCHEN COUNTER (2)	20	1
1	20		12.5	100%	37	15.5			38	100%	3.0	KITCHEN COUNTER (2)	20	1
1	20		12.5	100%	39		14.5		40	100%	2.0	PKU SMOKE DET.	20	1
1	20		10.0	100%	41		15.0		42	100%	5.0	TELEVISION	20	1
1	20		3.0	100%	43	13.5			44	100%	10.5	RECEPTACLES	20	1
1	20		8.0	100%	45	18.5			46	100%	10.5	RECEPTACLES	20	1
1	20		0.0	100%	47		7.5		48	100%	7.5	RECEPTACLES (2)	20	1
1	20		0.0	100%	49	6.0			50	100%	6.0	RECEPTACLES (2)	20	1
1	20		0.0	100%	51		8.0		52	100%	8.0	CHARGING STATION	20	1
1	20		0.0	100%	53		8.0		54	100%	8.0	CHARGING STATION	20	1
1	20		0.0	100%	55	8.0			56	100%	8.0	CHARGING STATION	20	1
1	20		0.0	100%	57		13.4		58	125%	10.7	LIGHTS	20	1
1	20		0.0	100%	59		13.4		60	125%	10.7	LIGHTS	20	1
1	--		0.0	100%	61	8.3			62	125%	6.6	KIT. HOOD EX FAN	15	3
1	--		0.0	100%	63	8.3			64	125%	6.6	--	--	--
1	--		0.0	100%	65		8.3		66	125%	6.6	--	--	--
3	20		1.0	100%	67	4.9			68	125%	3.1	KIT. HOOD MUA UNIT	15	3
--	--		1.0	100%	69	4.9			70	125%	3.1	--	--	--
--	--		1.0	100%	71		4.9		72	125%	3.1	--	--	--
						136.4	124.9	124.2						

NOTE: PANEL SIZE INCLUDES ALLOWANCE FOR FUTURE KITCHEN EQUIPMENT INCLUDING PASTERIZER, BLANCHER AND HOODS. PANEL SHALL HAVE FEED-THRU LUGS SQUARE D NQ OR EQUAL SEE SPEC. NOTES

- (1) - SHUNT TRIP CIRCUIT BREAKER
- (2) - GFI CIRCUIT BREAKER
- (3) - PROVIDE E-MON SUB METER AND INSTALL AS DIRECTED BY THE MANUFACTURER. LOCATE AS DIRECTED BY THE OWNER



### LIGHTING FIXTURE CONTROLS SYMBOLS LIST

- PASSIVE INFRARED DUAL TECHNOLOGY MICROPHONIC LINE VOLTAGE CEILING MOUNT SENSOR, EXTENDED RANGE TYPE
- PASSIVE INFRARED DUAL TECHNOLOGY MICROPHONIC LINE VOLTAGE WALL MOUNT SENSOR, AT 48" AFF TO TOP OF BOX, MANUAL "ON" AUTOMATIC "OFF"
- PASSIVE INFRARED DUAL TECHNOLOGY MICROPHONIC LINE VOLTAGE WALL MOUNT SENSOR WITH 0-10VDC DIMMING CONTROL, AT 48" AFF TO TOP OF BOX, MANUAL "ON" AUTOMATIC "OFF"
- ◆ OCCUPANCY SENSOR SUPPLIED AND MOUNTED ON LIGHT FIXTURE
- AFF ABOVE FINISHED FLOOR

### LIST NOTES

- ACCEPTABLE MANUFACTURERS SHALL BE LEVITON AND SENSOR SWITCH.
- ALL COMPONENTS AND WIRING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
- ADJUST SENSITIVITY, OVERRIDE SWITCHES (WHERE APPLICABLE) AND TIME DELAYS TO THE SATISFACTION OF THE OWNER.

### MECHANICAL EQUIPMENT CONNECTION SCHEDULE

ITEM	DESCRIPTION	VOLTS	PH	FLA	WIRE	GND.	MOCP	DISCONNECT	PNL. & CKT.	REMARKS
①	PKU-1	208	3	18.0	3 #4	#8	80A	3P-100A-NFSS	KM-1	NEMA 3R
②	OHP-1	208	1	29.0	2 #8	#10	40A	2P-60A-NFSS	KA-6	NEMA 3R
③	GAS WATER HEATER	120	1	5.0	2 #12	#12	20A	TOGGLE SWITCH	KA-65	
④	FCU-1	208	1	0.4	2 #12	#12	15A	2P-30A-NFSS	KA-10	
⑤	FCU-2	208	1	0.5	2 #12	#12	15A	2P-30A-NFSS	KA-10	
⑥	FCU-3	208	1	0.4	2 #12	#12	15A	2P-30A-NFSS	KA-10	
⑦	FCU-4	208	1	0.4	2 #12	#12	15A	2P-30A-NFSS	KA-10	
⑧	RECIRC. PUMP	120	1	5.0	2 #12	#12	20A	TOGGLE SWITCH	KA-65	NOTE 1

### SCHEDULE NOTES

- VERIFY FINAL LOCATIONS, CONNECTIONS, ELECTRICAL CHARACTERISTICS, ETC. WITH FINAL EQUIPMENT SELECTIONS. CONTRACTOR IS RESPONSIBLE FOR CORRECTNESS OF ALL BREAKERS, WIRES, ETC.
- PKU = PACKAGED A/C UNIT, OHP = OUTDOOR HEAT PUMP, FCU = FAN COIL UNIT.
- 1. WIRE THRU AQUASTAT AND TIMER, COORDINATE WITH PLUMBING.

NEW PANEL KA2														
VOLTS: 120/208		PHASE: 3				WIRES: 4				MOUNTING: SURFACE				
AMPS: 400		MAIN: LUGS ONLY												
BRKR	P	A	CIRCUIT			PHASE LOAD			CIRCUIT			DESCRIPTION	BRKR	
			AMPS	DEMAND	NO.	A	B	C	NO.	DEMAND	AMPS			
2	20		9.6	65%	1	53.8			2	100%	47.6	FUT. DISHWASHER	60	3
--	--		0.0	100%	3		53.8		4	100%	47.6	--	--	--
--	--		0.0	100%	5		47.6		6	100%	47.6	--	--	--
2	20		9.6	65%	7	12.7			8	65%	10.0	FUT. 60 QT. MIXER	20	3
--	--		9.6	65%	9		12.7		10	65%	10.0	--	--	--
--	--		0.0	100%	11			6.5	12	65%	10.0	--	--	--
2	20		9.6	65%	13	7.7			14	100%	1.5	UTILITY RECEPTACLE	20	1
--	--		9.6	65%	15		6.2		16	100%	0.0	SPARE	20	1
--	--		0.0	100%	17		20.0		18	100%	20.0	FUT. BLAST FREEZER	30	2
2	20		9.6	65%	19	26.2			20	100%	20.0	--	--	--
--	--		9.6	65%	21		30.2		22	100%	24.0	WASHER/DRYER	30	2
--	--		0.0	100%	23			24.0	24	100%	24.0	--	--	--
1	20		0.0	100%	25	0.0			26	100%	0.0	SPARE	20	1
1	20		0.0	100%	27		0.0		28	100%	0.0	SPARE	20	1
1	20		0.0	100%	29		0.0		30	100%	0.0	SPARE	20	1
1	20		0.0	100%	31	0.0			32	100%	0.0	SPARE	20	1
1	20		0.0	100%	33		0.0		34	100%	0.0	SPARE	20	1
1	20		0.0	100%	35		0.0		36	100%	0.0	SPARE	20	1
1	--		0.0	100%	37	0.0			38	100%	0.0	PROVISION	--	1
1	--		0.0	100%	39		0.0		40	100%	0.0	PROVISION	--	1
1	--		0.0	100%	41		0.0		42	100%	0.0	PROVISION	--	1
						100.6	103.1	98.1						

NOTE: PANEL SIZE INCLUDES ALLOWANCE FOR FUTURE KITCHEN EQUIPMENT INCLUDING PASTERIZER, BLANCHER AND HOODS. PANEL IS FED FROM PANEL KA VIA FEED-THRU LUGS SQUARE D NQ OR EQUAL SEE SPEC. NOTES

- (1) - SHUNT TRIP CIRCUIT BREAKER

WITH INTEGRAL 160KA TVSS

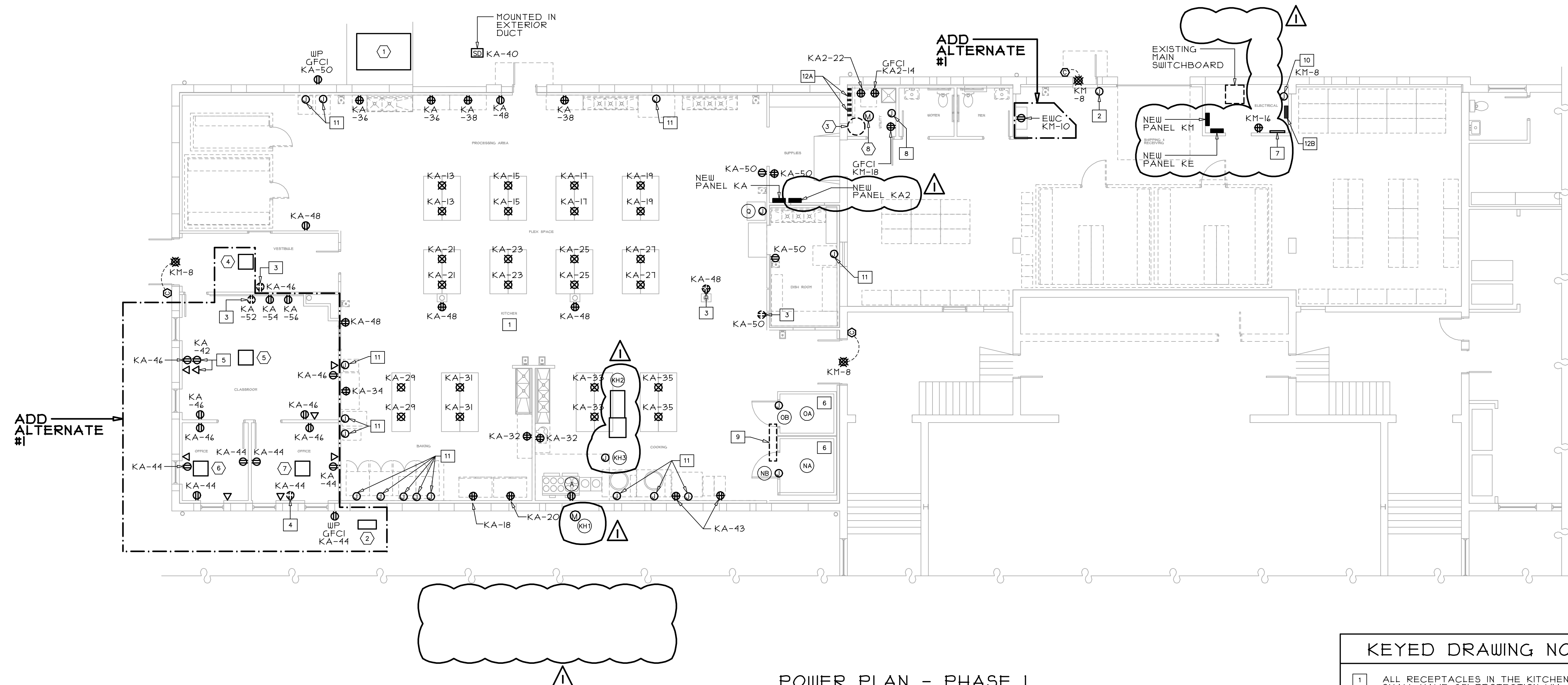
NEW PANEL KE														
VOLTS: 120/208		PHASE: 3				WIRES: 4				MOUNTING: SURFACE				
AMPS: 100		MAIN: LUGS ONLY												
BRKR	P	A	CIRCUIT			PHASE LOAD			CIRCUIT			DESCRIPTION	BRKR	
			AMPS	DEMAND	NO.	A	B	C	NO.	DEMAND	AMPS			
2	20		10.7	100%	1	27.9			2	100%	17.2	FUT. W-I FREEZER COND.	35	3
--	--		10.7	100%	3			27.9	4	100%	17.2	--	--	--
2	20		7.7	100%	5			24.9	6	100%	17.2	--	--	--
--	--		7.7	100%	7	18.8			8	100%	11.1	FUT. W-I COOLER COND.	20	3
2	20		7.5	100%	9		18.6		10	100%	11.1	--	--	--
--	--		7.5	100%	11		18.6		12	100%	11.1	--	--	--
1	20		1.0	100%	13	2.3			14	100%	1.3	FUT. W-I COOLER EVAP.	20	1
1	20		2.0	100%	15		3.6		16	100%	1.6	FUT. W-I FREEZER EVAP.	20	1
1	20		2.0	100%	17		7.0		18	100%	5.0	FUT. W-I CLR. CONTROLS	20	1
1	20		0.0	100%	19	5.0			20	100%	5.0	FUT. W-I FZR. CONTROLS	20	1
1	20		5.0	100%	21		6.9		22	125%	1.5	FUT. WALK-IN LIGHTS	20	1
1	20		5.0	100%	23		5.0		24	100%	0.0	SPARE	20	1
1	20		0.0	100%	25	0.0			26	100%	0.0	SPARE	20	1
1	20		0.0	100%	27		10.0		28	100%	10.0	GEN. BATT. HEATER	20	1
1	20		0.0	100%	29			10.0	30	100%	10.0	GEN. BATT. CHARGER	20	1
						54.0	67.0	65.5						

SQUARE D NQ OR EQUAL SEE SPEC. NOTES

- (1) - WITH RED HANDLE LOCK

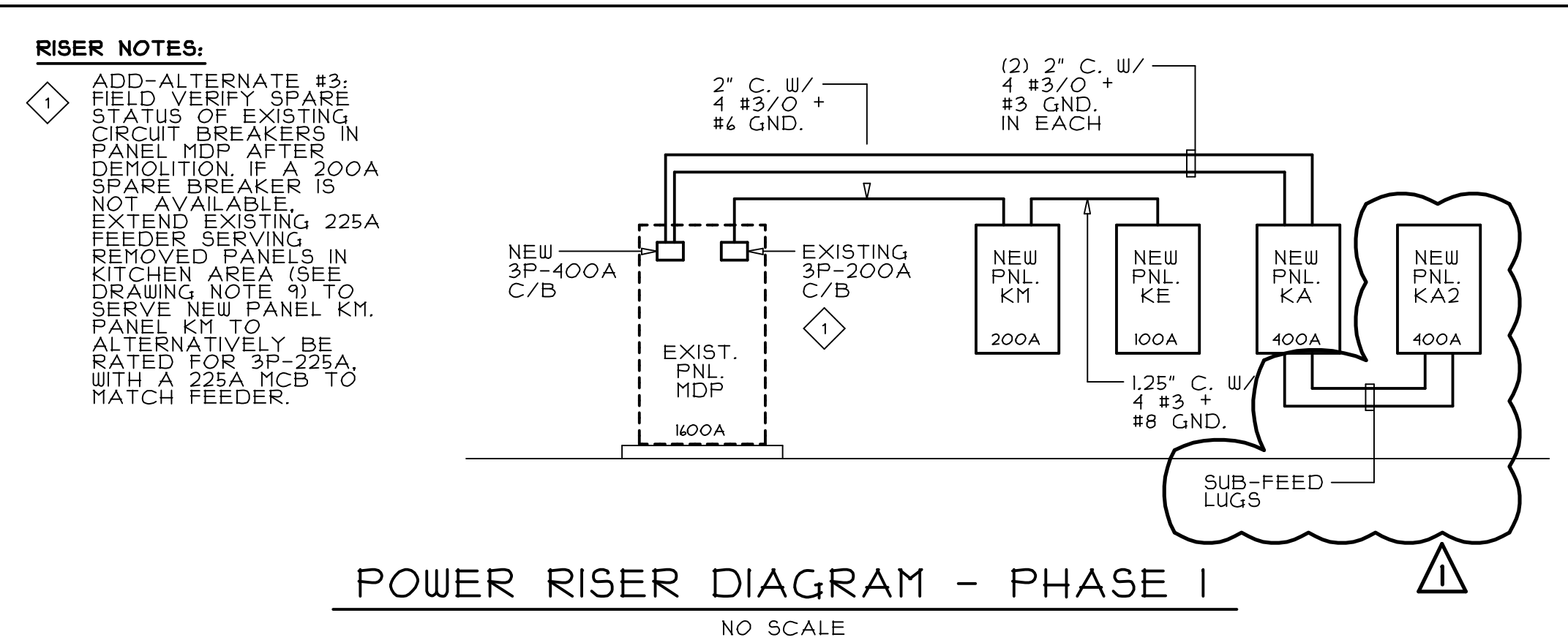
NEW PANEL KM														
VOLTS: 120/208		PHASE: 3				WIRES: 4				MOUNTING: SURFACE				
AMPS: 225		MAIN: LUGS ONLY												
BRKR	P	A	CIRCUIT			PHASE LOAD			CIRCUIT			DESCRIPTION	BRKR	
			AMPS	DEMAND	NO.	A	B	C	NO.	DEMAND	AMPS			
3	80		78.0	100%	1	132.0			2	100%	54.0	PANEL KE	100	3
--	--		78.0	100%	3		145.0		4	100%	67.0	--	--	--
--	--		78.0	100%	5		143.5		6	100%	65.5	--	--	--
2	40		29.0	100%	7	33.0			8	100%	4.0	SECURITY SYS.	20	1
--	--		29.0	100%	9		29.0		10	100%	0.0	SPARE	20	1
2	15		0.8	100%	11			8.8	12	100%	8.0	EWC (1)	20	1
--	--		0.8	100%	13	0.8			14	100%	0.0	SPARE	20	1
1	20		0.0	100%	15		7.5		16	100%	7.5	RECEPTACLES	20	1
1	20		1.0	125%	17		8.8		18	100%	7.5	RECEPTACLES	20	1
1	20		7.											





**POWER PLAN - PHASE I**  
SCALE: 1/8" = 1'-0"

1600A SERVICE LOAD SUMMARY	
EXISTING PEAK DEMAND PER POWER COMPANY AT 125%	LOAD (KW) 186.80
ADDED LOAD FROM PLANNED RENOVATIONS UNDER SEPARATE PERMIT	48.00
NEW PANEL KA	46.40
NEW PANEL KM (INCLUDES PANEL KE)	63.86
TOTAL	345.06
TOTAL AT 208V 3PHASE =	958.51 AMPS



**KEYED DRAWING NOTES**

- 1 ALL RECEPTACLES IN THE KITCHEN SHALL HAVE GFI PROTECTION VIA CIRCUIT BREAKER PER NEC 210.8.
- 2 120V-1PH. CONNECTION FOR AIR CURTAIN. VERIFY REQUIREMENTS WITH CURTAIN SUPPLIER. RUN TO CIRCUIT KM-24.
- 3 RE-WIRE EXISTING DUPLEX RECEPTACLE TO NEW CIRCUIT NOTED. VERIFY REQUIREMENTS. REPLACE DEVICE AND COVER PLATE WITH NEW.
- 4 EXTEND EXISTING DUPLEX RECEPTACLE TO FACE OF NEW WALL FURRING AND RE-WIRE TO NEW CIRCUIT NOTED. REPLACE DEVICE AND COVERPLATE TO MATCH NEW STANDARD. VERIFY ALL REQUIREMENTS.
- 5 DUPLEX RECEPTACLE AND COMMUNICATIONS OUTLET FOR MONITOR. VERIFY LOCATION AND MOUNTING HEIGHT WITH THE OWNER PRIOR TO ROUGH-IN. COORDINATE WITH MOUNTING HARDWARE.
- 6 PROVIDE SEALS ON ALL CONDUITS ENTERING WALK-IN COOLERS AND FREEZERS.
- 7 2'-0" X 4'-0" X 3/4" FRT PLYWOOD EQUIPMENT SPACE WITH (2) 1" EC'S RUN TO BUILDING DEMARC LOCATION.
- 8 208V-1PH. CONNECTION FOR WATER FILTRATION SYSTEM. VERIFY FINAL LOCATION AND REQUIREMENTS WITH THE OWNER PRIOR TO ROUGH-IN. RUN TO CIRCUIT KA-2.
- 9 REMOVE (3) 225A ELECTRICAL PANELS AND ASSOCIATED FEEDERS IN THIS AREA TO CLEAR SPACE FOR NEW WORK. FIELD VERIFY REQUIREMENTS.
- 10 JUNCTION BOX FOR SECURITY SYSTEM CONTROL PANEL. VERIFY FINAL LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
- 11 JUNCTION BOX IN WALL AT 18" AFF WITH 3/4" EC ROUTED UP AND OUT INTO OPEN CEILING SPACE ABOVE "FLEX SPACE". CONDUIT SHALL EXTEND BEYOND LAY-IN CEILING OF KITCHEN. LABEL BLANK COVER PLATE AND END OF CONDUIT TO FACILITATE FUTURE TRACING. LEAVE WITH PULL STRING.
- 12A BASE BID. TRACE ALL CIRCUITS IN PANELS TO VERIFY NONE ARE TO REMAIN AFTER DEMOLITION. REMOVE PANEL BOARDS IN THIS LOCATION AND ASSOCIATED FEEDERS/CIRCUITS. ADD-ALTERNATE #2 IF ANY CIRCUITRY IN THESE PANELS IS TO REMAIN. RELOCATE ONE PANEL TO ELECTRICAL ROOM (SEE NOTE 12B) AND CONSOLIDATE CIRCUITRY TO THIS PANEL. EXTEND FEEDER AND BRANCH CIRCUITS AS REQUIRED.
- 12B LOCATION OF RELOCATED PANEL FOR ADD-ALTERNATE #2.

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8/22/22  
PROFESSIONAL ENGINEER

REVISIONS:

1-8-22-22 - KITCHEN HOOD	

DRAWN: RBP  
CHECKED: WFS  
SCALE: NOTED  
DATE: 8-11-22  
PROJECT #: 22017

**POWER PLAN PHASE I**  
**E1.1**







PLUMBING SPECIFICATIONS

1. GENERAL

1.1 DESCRIPTION OF WORK:

- A. ALL FIXTURES, EQUIPMENT, ACCESSORIES, MATERIALS, AND LABOR REQUIRED TO PROVIDE COMPLETE, COORDINATED, AND FULLY FUNCTIONAL PLUMBING SYSTEMS GENERALLY AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
  - SANITARY SEWER
  - DOMESTIC WATER
  - LP GAS - 2 PSI

1.2 RELATED DOCUMENTS:

- A. THE REQUIREMENTS OF THE CIVIL ARCHITECTURAL, STRUCTURAL, HVAC, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL APPLY TO AND BE CONSIDERED A PART OF THE PLUMBING WORK IN-SO-FAR AS THEY APPLY TO THE PLUMBING WORK AND ARE REQUIRED FOR COORDINATION.

1.3 JOB CONDITIONS:

- A. DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED TO PROVIDE A COMPLETE INSTALLATION OF THE WORK DESCRIBED AND INDICATED.
- B. PROVIDE FITTINGS, OFFSETS, TRANSITIONS, AND ACCESSORIES REQUIRED TO MEET CONDITIONS OF THE PROJECT.
- C. PROVIDE SERVICE ACCESS FOR EQUIPMENT, CONTROL COMPONENTS, VALVES, AND SPECIALTIES.
- D. PROVIDE ACCESS PANELS FOR VALVES, ACCESS DOORS, ETC. CONCEALED BEHIND FINISHED SURFACES.

1.4 CONFORMANCE TO REGULATIONS:

- A. WORK SHALL CONFORM WITH VIRGINIA UNIFORM STATEWIDE BUILDING CODE, NFPA, AND LOCAL ORDINANCES.

1.5 QUALITY ASSURANCE:

- A. COMPLY WITH MANUFACTURER'S REQUIREMENTS AND NOTES AND DETAILS SHOWN HEREIN FOR INSTALLATION OF EQUIPMENT.

1.6 MATERIALS AND EQUIPMENT:

- A. EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE EQUIVALENT TO PRODUCTS SPECIFIED.
- B. CONTRACTOR SHALL GUARANTEE EQUIVALENCE AND IS RESPONSIBLE FOR MODIFICATIONS REQUIRED AND COORDINATION WITH OTHER TRADES TO FIT SUBSTITUTED PRODUCT INTO THE PROJECT.
- C. MATERIALS AND EQUIPMENT OF THE SAME TYPE AND USE SHALL BE FROM A SINGLE MANUFACTURER.
- D. PROTECT STORED MATERIALS AND EQUIPMENT FROM WEATHER.

1.7 UTILITIES AND CONNECTIONS:

- A. OWNER WILL PAY FOR ALL WATER, GAS AND SEWER UTILITY CONNECTION FEES.
- B. COORDINATE CONNECTIONS WITH SITE UTILITY DRAWINGS. WORK TO LOCATIONS AND INVERTS INDICATED ON SITE DRAWINGS. PROVIDE TRANSITIONS IN SIZE AND MATERIAL AT POINT OF CONNECTION.

1.8 SUBMITTALS:

- A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR FIXTURES AND EQUIPMENT SPECIFIED HEREIN AND ON THE DRAWINGS. SHOP DRAWINGS AND PRODUCT DATA SHALL BE IDENTIFIED PER INDICATORS ON DRAWINGS; SHALL BE MARKED TO INDICATED SPECIFIC ITEM BE PROPOSED, AND SHALL BE ORGANIZED IN AN ORDERLY MANNER. SUBMIT SHOP DRAWINGS ELECTRONICALLY IN PDF FORMAT.
- B. SUBMIT OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT INSTALLED IN THIS PROJECT. INCLUDE COPIES OF SPECIFIC EQUIPMENT WARRANTIES IN MANUAL.
- C. UPON COMPLETION OF THE INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE OWNER, CONTRACTOR SHALL FURNISH TWO COPIES OF AS-BUILT DOCUMENTATION. ALL CHANGES TO THE BIDDING DOCUMENTS SHALL BE NEATLY AND CLEARLY IDENTIFIED ON THE AS-BUILT DOCUMENTATION.

1.9 PROJECT CLOSEOUT:

- A. REPLACE OR REPAIR DAMAGED EQUIPMENT AND CLEAN ALL EXPOSED SURFACES.
- B. TOUCH-UP SHOP APPLIED FINISHES TO RESTORE DAMAGED OR SOILED AREAS.
- C. INSTRUCT OWNER'S REPRESENTATIVE IN OPERATION AND MAINTENANCE OF EQUIPMENT UTILIZING OPERATION AND MAINTENANCE MANUAL.

2. PRODUCTS

2.1 PIPING SYSTEMS:

- A. DOMESTIC WATER PIPING - DOMESTIC TYPE L COPPER W/ NO LEAD SOLDER JOINTS, PEX OR CPVC. UNDERSLAB WATER - TYPE K SOFT COPPER OR PEX W/ NO JOINTS.
- B. WATER SERVICE - DUCTILE IRON.
- C. SANITARY DRAINAGE - SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS, OR NO-HUB CAST IRON PIPING. HIGH TEMP DRAINAGE - NO-HUB CAST IRON PIPING.
- D. VENT PIPING - SCHEDULE 40 PVC W/ SOLVENT WELD FITTINGS, OR COPPER DWV WITH 50/50 SOLDER FITTINGS.
- E. 1ST STAGE GAS PIPING -
- E. 2ND STAGE GAS PIPING - SCHEDULE 40 BLACK STEEL.

2.2 PLUMBING FIXTURES AND EQUIPMENT:

- A. REFER TO FIXTURE SCHEDULE AND EQUIPMENT LIST ON DRAWINGS FOR MANUFACTURER'S AND MODEL NUMBERS.

3. EXECUTION

3.1 PIPING SYSTEMS

- A. VERIFY INVERT ELEVATIONS PRIOR TO EXCAVATION.
- B. BACKFILL BURIED PIPE IN TRENCHES WITH DIRT FREE OF ROCK, STONE OR DEBRIS.
- C. VERIFY EXACT LOCATION OF EQUIPMENT AND FIXTURES PRIOR TO ROUGH-IN.
- D. COORDINATE ROUTING OF WORK WITH OTHER TRADES AND INSTALL TO ALLOW MAXIMUM HEADROOM CLEARANCES, SERVICE ACCESS AND MAINTAIN PROPER PITCH OF SLOPING LINES.
- E. INSULATE PIPING SYSTEMS AS FOLLOWS:
  - DOMESTIC WATER - 1/2" FIBERGLASS W/ ASJ UP TO 1.5"; 1" FIBERGLASS W/ ASJ OVER 1.5" PIPE SIZE. UNDERSLAB WATER - 3/4" CLOSED CELL RUBBER. HOT WATER - 1" FIBERGLASS W/ ASJ.
  - SEAL VAPOR BARRIERS. SECURE WITH ADHESIVE AND SEAL JOINTS WITH SEALANT.
  - PROVIDE GALVANIZED STEEL SADDLE AT HANGERS SURROUNDING INSULATED PIPE.
  - DO NOT COMPRESS INSULATION EXCEPT IN AREAS OF STRUCTURAL INTERFERENCE.
  - INSTALL PRE-FITTED PLASTIC ELBOWS OR APPLY CANVAS JACKET IN THREE LAYERS AT ELBOWS.
  - INSULATE FITTINGS, VALVES AND EQUIPMENT BODIES.
- F. PROVIDE SLEEVES FOR PIPING PENETRATING WALLS. INSULATION SHALL BE CONTINUOUS THROUGH SLEEVES.
- G. FIRESTOP PIPING PASSING THROUGH FIRE RATED WALLS OR CEILINGS.
- H. PATCH FINISHED AREAS DISTURBED BY WORK TO MATCH SURROUNDING AREAS.
- I. WELDING SHALL BE DONE BY CERTIFIED WELDERS FOR THE APPROPRIATE SYSTEM BEING WELDED.
- J. MAKE CONNECTIONS OF DISSIMILAR METALLIC PIPING WITH DIELECTRIC UNIONS.
- K. PROVIDE CHROME PLATED ESCUTCHEON FOR EXPOSED PIPING PENETRATING A FINISHED SURFACE.
- L. PROVIDE SHUT OFF VALVES AT EQUIPMENT CONNECTIONS. PROVIDE STOPS FOR ALL PLUMBING EQUIPMENT AND FIXTURES.
- M. HANGERS SUPPORTING COPPER PIPING SHALL BE COPPER PLATED OR PLASTIC COVERED. HANGERS SUPPORTING INSULATED PIPING SHALL BE SIZED TO SURROUND INSULATION AND STEEL SADDLE.
- N. PROVIDE VACUUM BREAKERS AT WALL HYDRANTS.
- O. NO PLASTIC PIPING IN STEAM VENT CHASE. PLASTIC PIPING TO BE RUN CONCEALED IN CONDITIONED SPACE ONLY.
- P. WATER MAIN TO BE SUB-METERED.
- Q. TEST PIPING SYSTEMS AS FOLLOWS:
  - WATER PIPING - TEST AT PRESSURE NOT LESS THAN WORKING PRESSURE OF THE SYSTEM. MAINTAIN SUCH PRESSURE FOR MINIMUM OF 1 HOUR.
  - SANITARY AND VENT PIPING - W/ 10 FT. HEAD OF WATER, MAINTAINING SUCH PRESSURE FOR MINIMUM OF 1 HOUR.
  - TEST GAS PIPING IN ACCORDANCE WITH IFGC-2015.
  - TESTS SHALL SHOW NO SUBSTANTIAL LOSS IN PRESSURE.
  - PIPING RUN IN CONCEALED AREAS SHALL BE LEAK TESTED PRIOR TO BEING CONCEALED.

3.2 PLUMBING FIXTURES

- A. PROVIDE CHROME PLATED STOPS FOR FIXTURES.
- B. PROVIDE TAILPIECE AND TRAP WITH CLEANOUT FOR LAVATORIES AND SINKS.
- C. PROVIDE REMOVABLE CHROME PLATED BASKET STRAINER FOR SINKS.
- D. CAULK BETWEEN FIXTURE AND FINISHED SURFACES WITH WHITE SILICONE CAULKING.
- E. PROVIDE BOLT CAPS FOR WATER CLOSETS AND URINALS.
- F. MOUNT WALL CLEANOUTS AND PLUGGED OUTLETS AT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS.

KITCHEN EQUIPMENT SCHEDULE

NO.	DESCRIPTION	W	V	CW	HW	GAS	REMARKS
A	10 BURNER GAS STOVE W/ OVENS	--	--	--	--	1	404 MBH INPUT
B	40 GALLON GAS KETTLE	--	--	--	--	3/4	100 MBH INPUT
C	GAS BRAISING PAN W/ TILT	--	--	--	--	3/4	80 MBH INPUT
D	GAS POT BURNER	--	--	--	--	3/4	80 MBH INPUT
E	GAS FRYER	--	--	--	--	3/4	114 MBH INPUT
F	GAS CONVECTION OVEN	--	--	--	--	(2) 3/4	180 MBH INPUT
J	BLANCHER	2	--	1/2	--	--	INDIRECT WASTE TO FD
Q	ICE MACHINE	(2) 1	--	1/2	--	--	INDIRECT WASTE TO FS
R	DISHWASHER	2	--	--	3/4	--	INDIRECT WASTE TO FD

NOTES:

- I. VERIFY EXACT LOCATION, SIZE, AND TYPE OF CONNECTIONS FOR KITCHEN EQUIPMENT PRIOR TO ROUGH-IN.

PLUMBING FIXTURE SCHEDULE

NO.	DESCRIPTION	W	V	CW	HW	MFR. MODEL			NTS
						FIXTURE	FITTINGS	ACCESS.	
W	ACCESSIBLE TANK TYPE WATER CLOSET	3	1.5	1/2	--	AMER. STD. 2441.016	PROVIDE CORRECT HANDLE ORIENTATION	SEAT: CHURCH 2455SC	1
LI	ACCESSIBLE WALL HUNG LAVATORY	1.5	1.5	1/2	1/2	AMER. STD. 0355.012	MOEN 8915	CARRIER: WADE 520 SERIES	1,2,3,4
HS	ACCESSIBLE WALL HUNG S/S HAND SINK	1.5	1.5	1/2	1/2	SELECTED BY OWNER INSTALLED BY CONTRACTOR - ALLOWANCE OF \$500			1,2,3,4
PSI	S/S PRE-RINSE SINK W/ DRAIN BOARD RIGHT	1.5	1.5	1/2	1/2	SELECTED BY OWNER INSTALLED BY CONTRACTOR - ALLOWANCE OF \$1500			2
3BS	THREE BOWL S/S SINK	1.5	1.5	1/2	1/2	SELECTED BY OWNER INSTALLED BY CONTRACTOR - ALLOWANCE OF \$4000			2
EWC	ACCESSIBLE ELEC. WATER COOLER	1.5	1.5	1/2	--	ELKAY LZ5TL8WSLK			1,2
MB	MOP BASIN	3	1.5	1/2	1/2	FIAT MSB-2424 W/ 2-E-11-AA	FIAT 830-AA, 832-AA, 889C		2
WH	WASHING MACHINE	2	1.5	1/2	1/2		SIoux CHIEF 696-2313WR		2
GW	GAS WATER HEATER	--	--	3/4	3/4	A.O. SMITH BTH-191(A)	100 GAL. 199,900 BTU	EXPAN. TANK	
HB	HOSE BIBB WITH VACUUM BREAKER	--	--	3/4	--	NIBCO MDL. 662	WATTS 8A		2
WH	WALL HYDRANT	--	--	3/4	--	WOODFORD B65			2
WCO	WALL CLEANOUT	X	--	--	--	WADE 8480R			6
FCO	FLOOR CLEANOUT	X	--	--	--	WADE SERIES 6000			6
COTG	CLEANOUT TO GRADE	4	--	--	--	WADE 6000-Z-5			5
FD	FLOOR DRAIN	X	X	--	--	WADE I103STD6-21		W/ TRAP PRIMER	6
FS	FLOOR SINK	X	X	--	--	WADE 9143-6-15-21			6
TD	TRENCH DRAIN	4	--	--	--	ZURN Z895-E4			
TV	TEMPERING VALVE	--	--	1/2	1/2	POWERS LFe480			4
PF	POT FILLER	--	--	1/2	--	T15 BRASS B-0594			2

NOTES:

- 1. INSTALL FIXTURES IN ACCORDANCE WITH APPLICABLE STANDARDS.
- 2. PROVIDE PROPER ACCESSORIES FOR WALL THICKNESS & CONSTRUCTION.
- 3. PROVIDE PIPE INSULATION KIT, TRUEBRO MODEL 105W OR EQUAL.
- 4. PROVIDE TEMPERING VALVE AT FIXTURES AS INDICATED ON PLAN OR RISERS.
- 5. MOUNT IN 1/2" ROUND CONCRETE RING FLUSH W/ PAVEMENT OR GRADE.
- 6. SIZE TO MATCH SEWER SERVED.

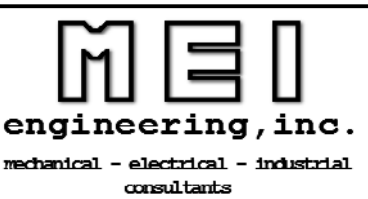
LEGEND

- SOIL OR WASTE PIPING
- GREASE SOIL OR WASTE PIPING
- HIGH TEMP SOIL OR WASTE PIPING
- WATER SERVICE PIPING
- VENT PIPING
- COLD WATER PIPING
- HOT WATER PIPING
- HOT WATER RECIRC. PIPING
- GAS PIPING
- BALL OR GATE VALVE
- CHECK VALVE
- GAS COCK
- GAS REGULATOR
- DROP IN PIPING
- RISER MARK - SEE DIAGRAM
- EQUIPMENT MARK - SEE SCHEDULE

ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- WCO WALL CLEANOUT
- FCO FLOOR CLEANOUT
- COTG CLEANOUT TO GRADE
- VTR VENT THRU ROOF
- WH WALL HYDRANT
- HB HOSE BIBB W/ VACUUM BREAKER
- GW GAS WATER HEATER
- CW COLD WATER
- HW HOT WATER
- TW TEMPERED WATER
- HWR HOT WATER RECIRC.
- DN DOWN
- WC WATER CLOSET
- LAV LAVATORY
- FD FLOOR DRAIN
- FS FLOOR SINK
- DFU DRAINAGE FIXTURE UNIT
- SFU SUPPLY FIXTURE UNIT
- RIO ROUGH-IN ONLY

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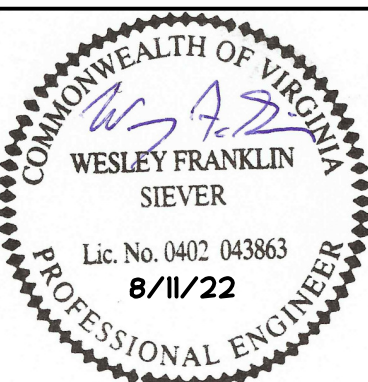
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REVISIONS:

DRAWN: WLA  
CHECKED: WFS  
SCALE: NONE  
DATE: 08-11-22  
PROJECT #: 22017

PLUMBING SPECS AND SCHEDULES











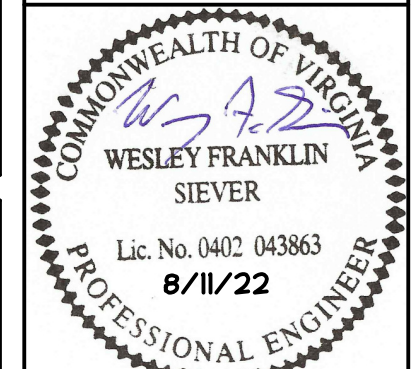
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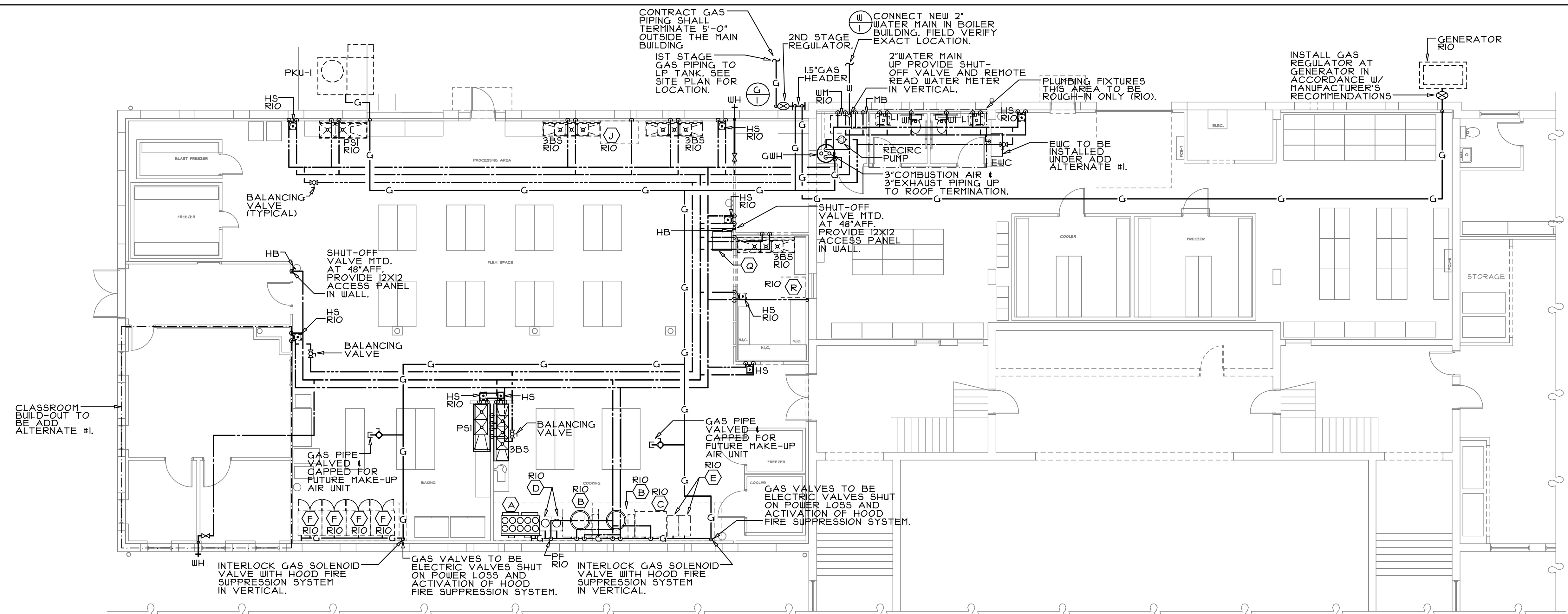
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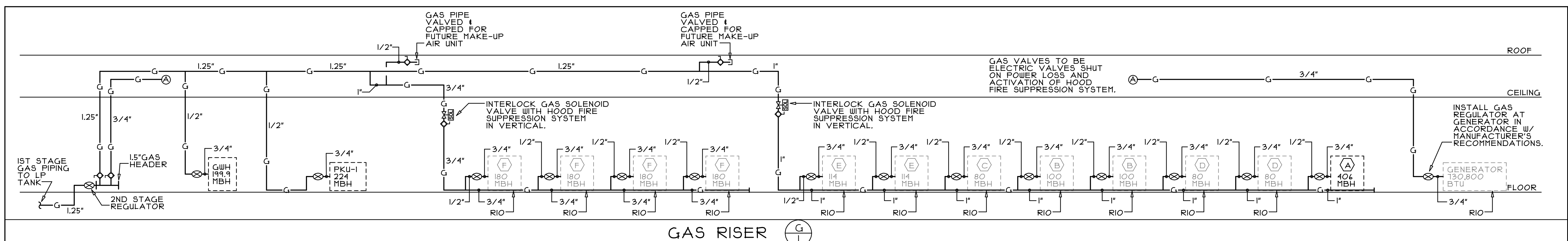

DRAWN: WLA  
 CHECKED: WFS  
 SCALE: 1/8" = 1'-0"  
 DATE: 08-11-22  
 PROJECT #: 22017

WATER/GAS PLAN AND RISERS



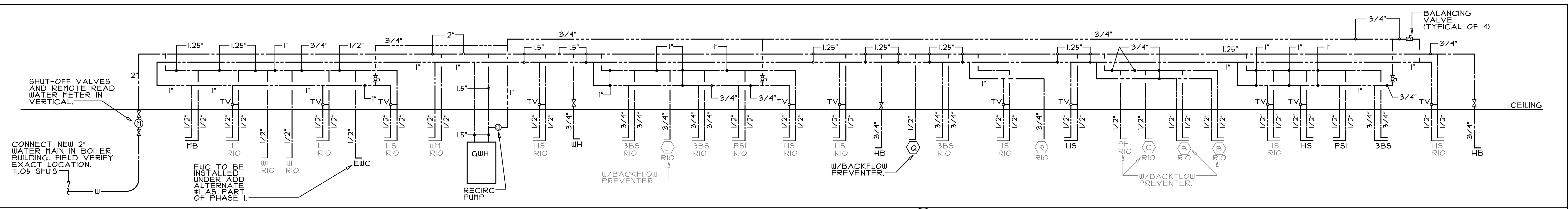
WATER/GAS PLAN  
 SCALE: 1/8" = 1'-0"

NO PLASTIC PIPING IN STEAM VENT CHASE. PLASTIC PIPING TO BE RUN CONCEALED IN CONDITIONED SPACE ONLY.



GAS RISER (G)

- NOTES:
1. THE MAXIMUM TOTAL DEVELOPED LENGTH OF 1ST STAGE PIPE IS LESS THAN 200 FEET. THE MAXIMUM TOTAL DEVELOPED LENGTH OF 2ND STAGE PIPE IS LESS THAN 200 FEET.
  2. THE TOTAL CONNECTED GAS LOAD FOR THE BUILDING IS 3,248,100 BTU.
  3. 1ST STAGE GAS PIPE SIZES ARE BASED ON IFGC-2015 TABLE 402.4(3A). 2ND STAGE GAS PIPE SIZES ARE BASED ON IFGC-2015 TABLE 402.4(2).
  4. SERVICE PRESSURE AT 2ND STAGE REGULATOR IS 2 PSI.



WATER RISER (W)