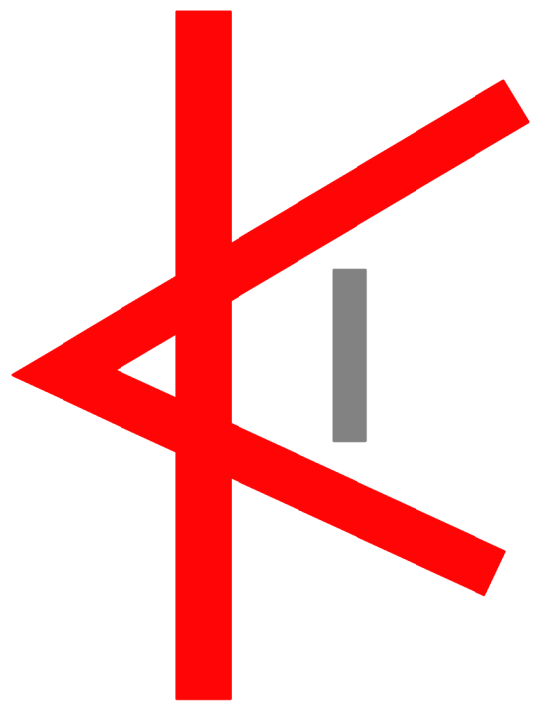


# OHIO VALLEY EDUCATIONAL CO-OP

## Building Addition and Interior Renovation Project

100 Alpine Road  
Shelbyville, KY 40065

ska# 2019-51



studio

### PROJECT TEAM:

#### ARCHITECT:

studio kremer architects  
1231 S. Shelby Street  
Louisville, KY 40203  
502.499.1100  
CONTACT: Jeremy Adams



#### OWNER:

Ohio Valley Educational Co-Op  
100 Alpine Rd  
Shelbyville, KY 40065  
502.647.3533  
CONTACT:

#### MEP ENGINEER:

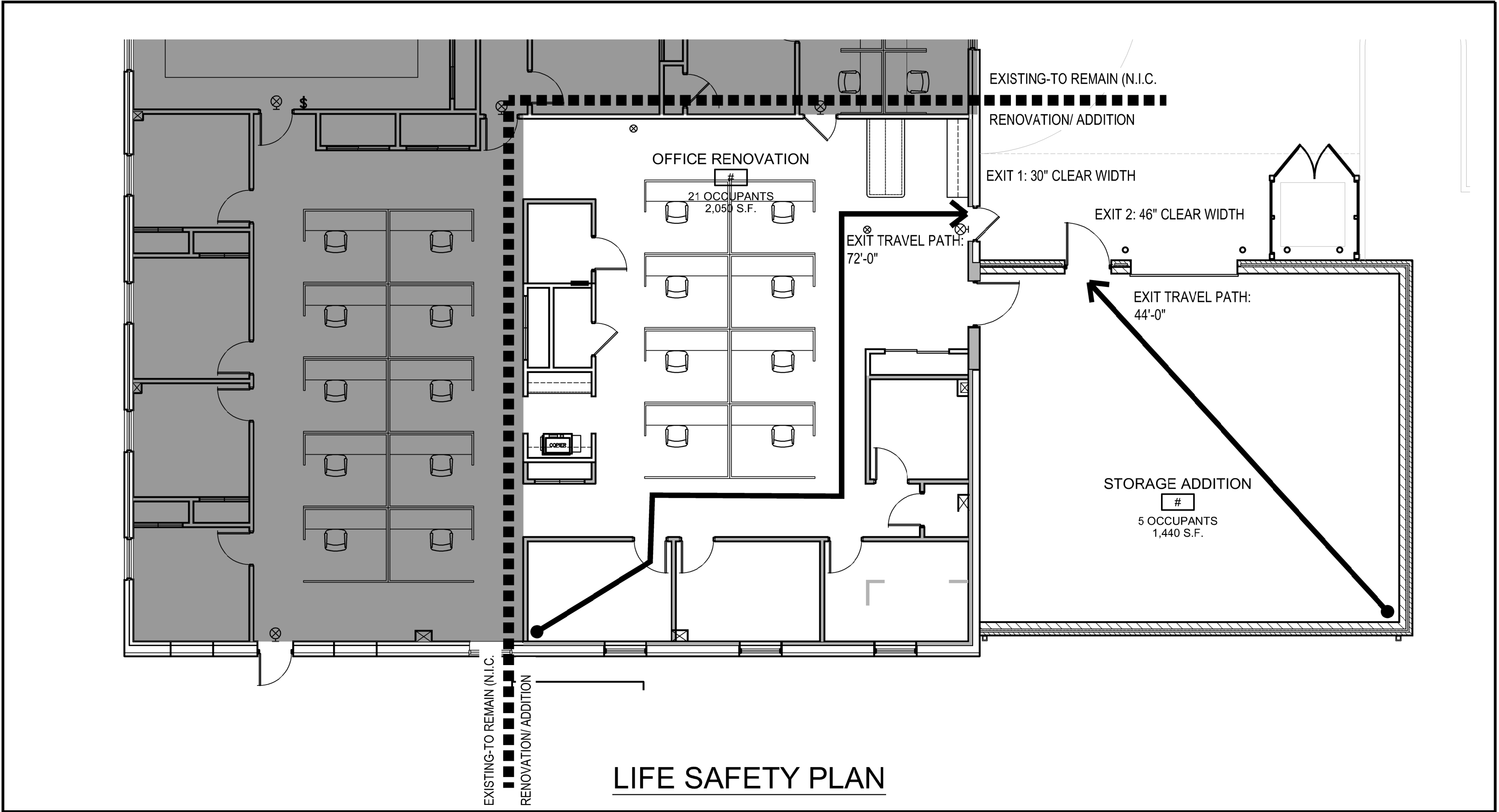
Pharis Engineering  
7110 Austinwood Road  
Louisville, KY 40214  
502.471.7963  
CONTACT: Keith Pharis

#### CIVIL ENGINEER:

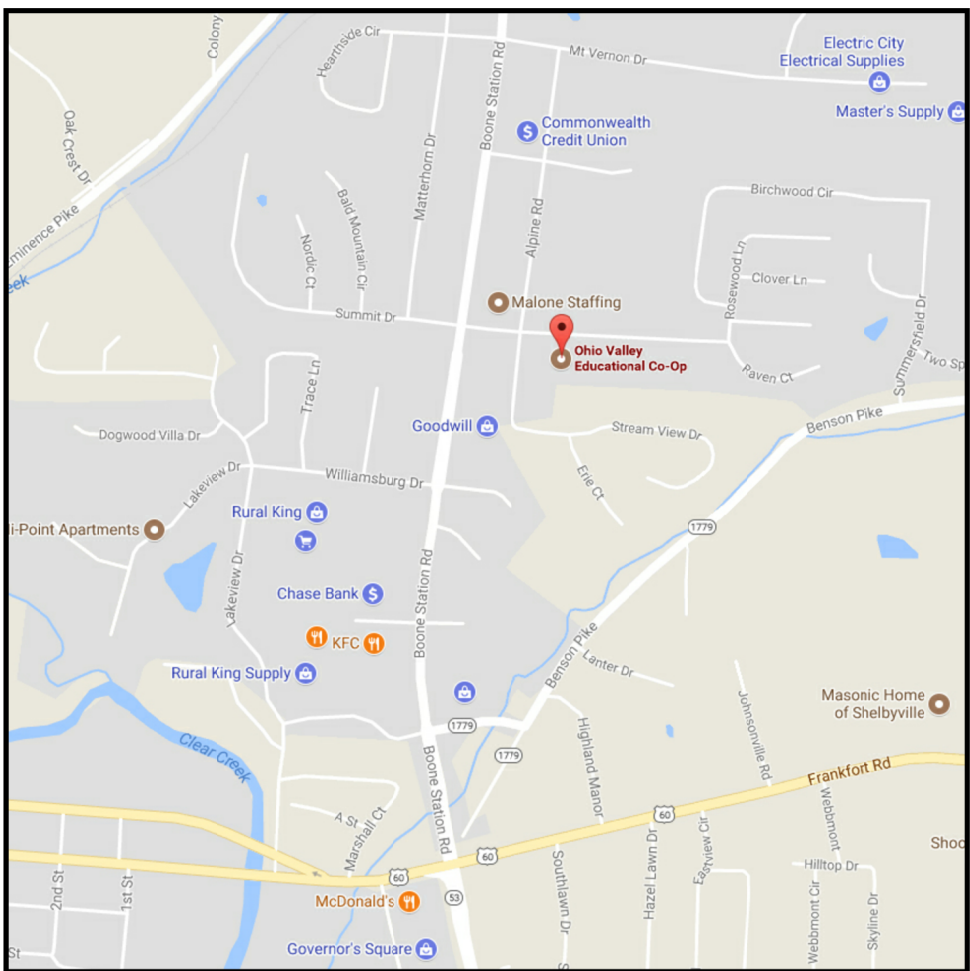
Kerry P. Magan Consulting Engineers, PLC  
506 Main Street  
Shelbyville, KY 40065  
502.633.4365  
CONTACT: Will Hagan

#### STRUCTURAL ENGINEER:

Structural Services, Inc.  
5948 Timber Ridge Dr, Suite 201  
Prospect, KY 40059  
502.292.2100  
CONTACT: Nick Carter



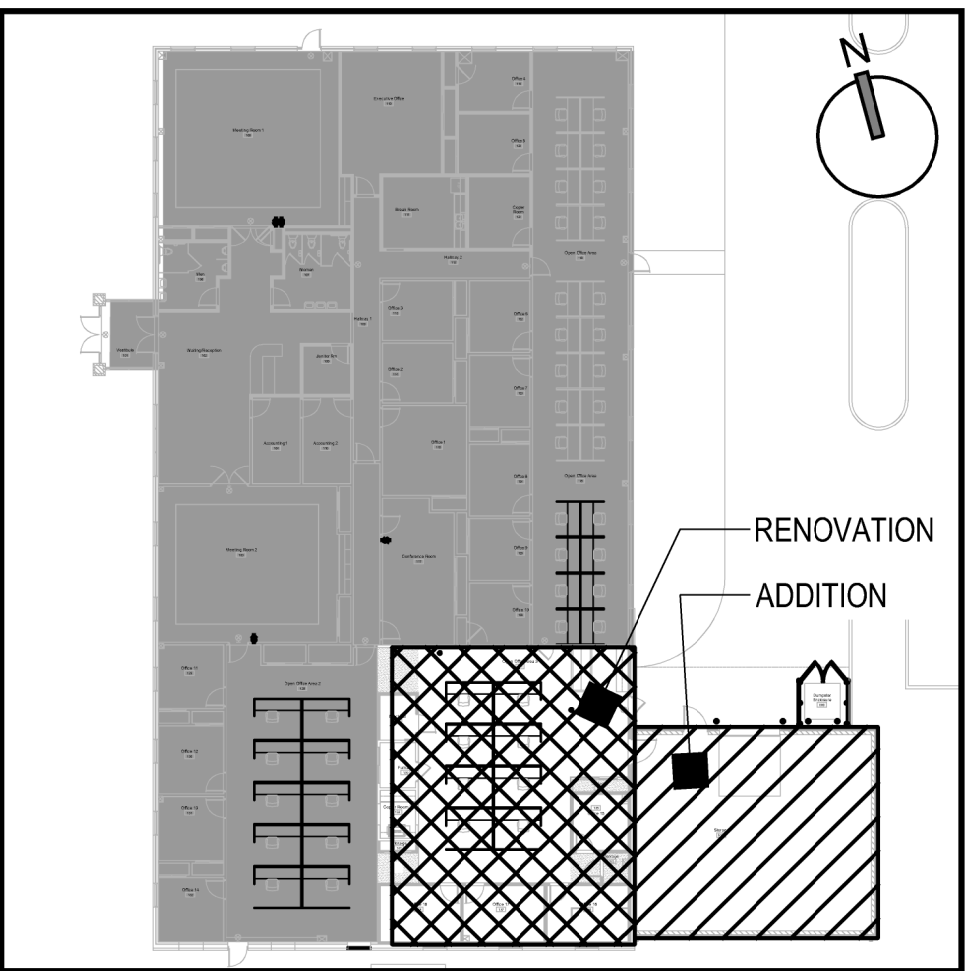
VICINITY MAP



CODE INFORMATION

- ALL APPLICABLE CODES:  
2018 KENTUCKY BUILDING CODE  
KENTUCKY PLUMBING CODE - CURRENT EDITION  
NATIONAL ELECTRIC CODE - CURRENT EDITION  
ANSI 117.1 2013 EDITION
- CONSTRUCTION TYPE: SB
- OCCUPANCY GROUP:  
-B (BUSINESS)
- TOTAL OCCUPANT LOAD: 126  
-BUSINESS AREAS: (12,130/100)= 121  
STORAGE AREA (5-1): (1,440/100)= 15  
PER TABLE 508.4 NO FIRE SEPARATION REQUIRED BETWEEN OCCUPANCIES
- BUILDING ADDITION FOOTPRINT: 1,440 SQFT  
EXISTING BUILDING FOOTPRINT: 12,100 SQUARE FEET (+)  
TOTAL FOOTPRINT: 13,540 SQFT(+)  
RENOVATION OF EXISTING BUILDING INTERIOR: 2,050 SQFT(+)  
PER 506.2  
IF = 1/100 = 0.25 1/100  
IF = (1/440/562) = 0.25 1/100  
IF = 0.78-0.25 = 0.53  
9,000 sqft + (9000 x 0.53) = 9000 + 4,770 = 13,770 MAX. ALLOWABLE SQ. FT.
- EXISTING BUILDING AND ADDITION IS NOT SPRINKLERED
- MAXIMUM COMMON PATH TRAVEL DISTANCE: 75'-0"
- NUMBER OF EXITS PROVIDED: 6

KEY PLAN



### LIST OF DRAWINGS:

#### COVER SHEET

##### CIVIL:

- C-1 SITE LOCATION & KEY MAP
- C-2 DEMOLITION PLAN
- C-3 PAVING PLAN
- C-4 GRADING PLAN & UTILITY PLAN
- C-5 SWPP PLAN
- C-6 DETAILS

##### STRUCTURAL:

- S0.0 GENERAL NOTES
- S0.1 TYPICAL DETAILS
- S1.0 FOUNDATION AND ROOF FRAMING PLAN
- S2.0 SECTIONS AND DETAILS

##### ARCHITECTURAL:

- D1.0 DEMO PLAN
- A0.1 WALL TYPES LEGEND
- A1.0 OVERALL PLAN
- A1.01 ENLARGED FLOOR PLAN
- A1.02 PARTIAL ROOF PLAN
- A1.03 REFLECTED CEILING PLAN
- A2.0 BUILDING ELEVATIONS
- A3.0 BUILDING SECTIONS
- A3.1 BUILDING SECTIONS
- A4.0 CASEWORK DETAILS & ELEVATIONS
- A4.01 ROOM FINISH SCHEDULE
- A4.02 HARDWARE SCHEDULE/ SPECS
- A5.0 WINDOW & DOOR DETAILS

##### ELECTRICAL:

- E.0 ELECTRICAL LEGEND, SCHEDULES AND NOTES
- E.1 PARTIAL FLOOR PLAN- ELECTRICAL DEMOLITION
- E.2 PARTIAL FLOOR PLAN- LIGHTING
- E.3 PARTIAL FLOOR PLAN- POWERSYSTEMS
- E.4 ELECTRICAL DETAILS, DIAGRAMS & PANEL SCHEDULE
- E.5 ELECTRICAL SHEET SPECIFICATIONS

##### MECHANICAL:

- M-1 HVAC PLAN

##### PLUMBING:

- P-1 PLUMBING PLAN




























The site plan illustrates the proposed addition to the existing building. Key features include:

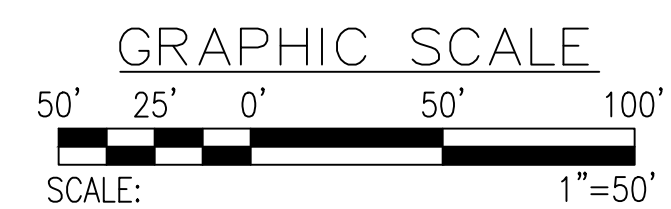
- EXISTING BUILDING**: A large rectangular structure with a smaller section on the right.
- PROPOSED ADDITION**: A new rectangular structure attached to the right side of the existing building.
- EXISTING DETENTION AREA**: A rectangular area located to the right of the proposed addition.
- Parking Lots**: Several parking spaces are shown, including a large lot to the left of the existing building and a smaller lot to the right of the proposed addition.
- Alpine Drive**: A road running vertically along the left side of the site.
- Summit Drive**: A road running horizontally along the top of the site.
- EXIST. R/W**: Existing right-of-way lines are indicated by dashed lines along the top and left boundaries.
- 20' EASEMENT AREA**: A specific area is marked with a dashed line and labeled "20' EASEMENT AREA".
- Site Numbers**: Various numbers (e.g., 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100) are scattered throughout the site, likely representing lot or section numbers.



SHEET INDEX	
C-1	Site Location & Key Map
C-2	Demolition Plan
C-3	Paving Plan
C-4	Grading & Utility Plan
C-5	SWPP Plan
C-6	Details

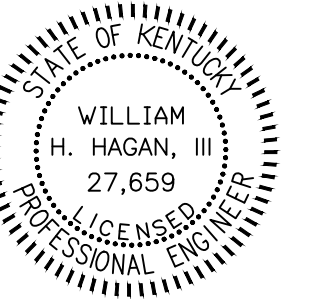
# LEGEND

	FOUND MONUMENT AS NOTED
	SET 1/2" REBAR W/CAP #2123 18" IN LENGTH
<b>B/L</b>	<b>BUILDING SETBACK LINE</b>
	EXISTING CONTOUR
<b>X 780</b>	PROPOSED SPOT ELEVATION
	PROPOSED CONTOUR
	BENCHMARK
	PROPOSED SEWER
	PROPOSED STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING CATCH BASIN
	EXISTING STORM MANHOLE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS MAIN
	EXISTING WATER MAIN
	EXISTING UTILITY POLE
	EXISTING GUY ANCHOR
	EXISTING LIGHT POLE
	EXISTING WATER VALVE
	EXISTING GAS VALVE
	WATER METER
	GAS METER
	EXISTING FIRE HYDRANT
	EXISTING BOLLARD
	ELECTRIC PAD
	TELEPHONE PEDESTAL



## Site Location & Key Map

**OVEC**  
Building Addition  
Lot 3 Hi Point Commercial Center  
100 Alpine Drive  
SHELBYVILLE, KENTUCKY 40065



KERRY P. MACAN  
CONSULTING ENGINEERS, PLC  
506 MAIN STREET  
SHELBYVILLE, KY 40065  
(502) 633-4365

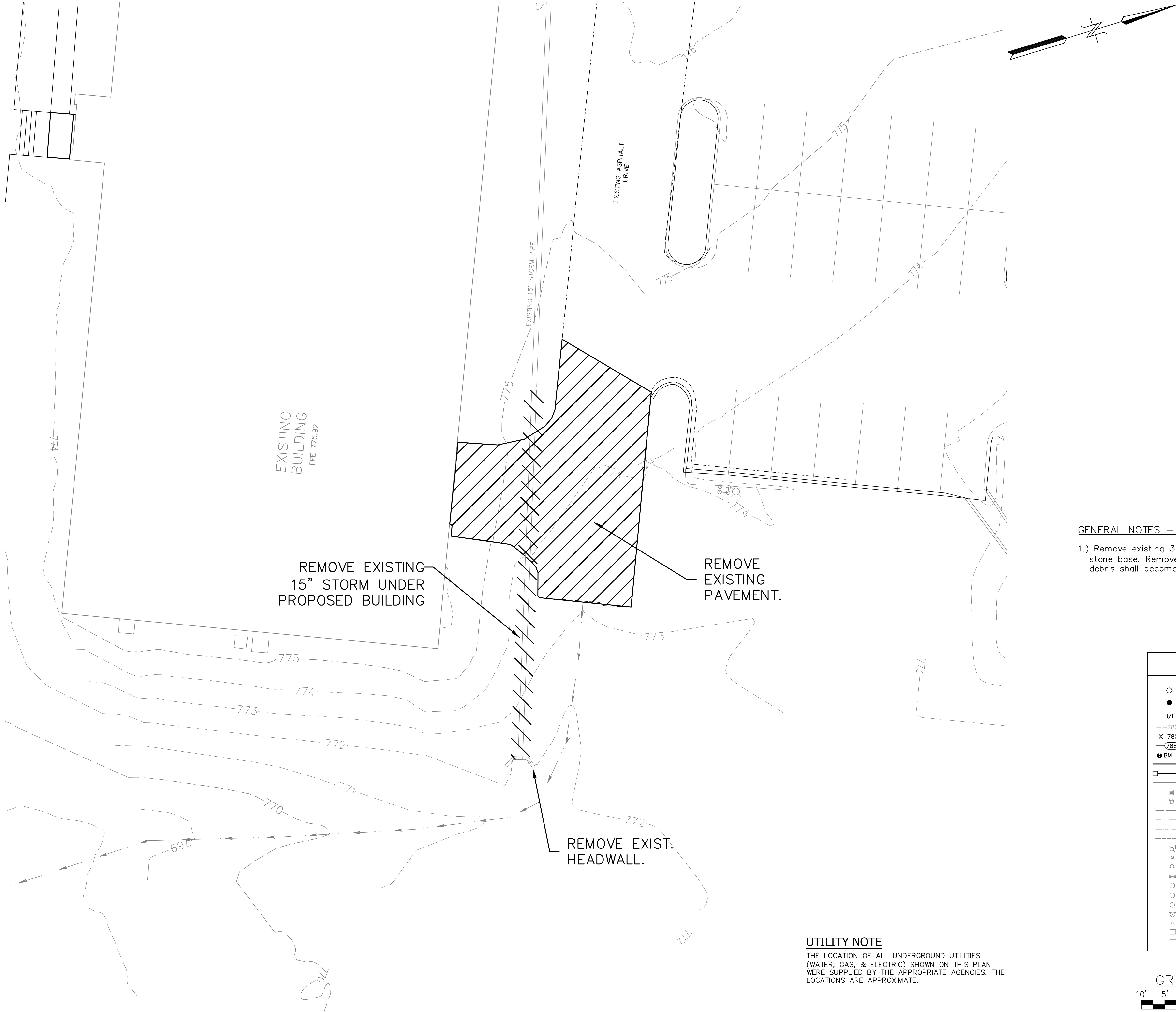
# C-1

Republic Bank and Trust  
601 West Market Street  
Louisville, KY 40202

DEVELOPER:  
Ohio Valley Education Cooperative  
Alpine Drive  
Shelbyville, KY 40065

SOURCE OF TITLE:  
D.B. 449 P. 172





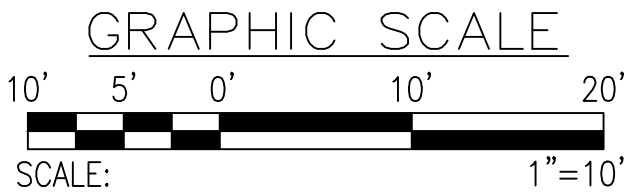
GENERAL NOTES – SITE DEMOLITION

- 1.) Remove existing 3"± asphalt pavement to stone base. Removed asphalt/concrete debris shall become property of Contractor.

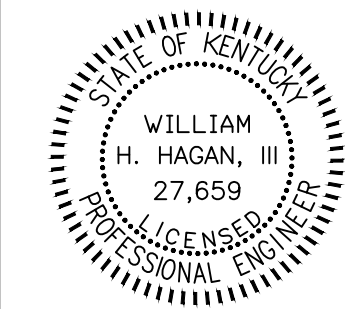
UTILITY NOTE

THE LOCATION OF ALL UNDERGROUND UTILITIES (WATER, GAS, & ELECTRIC) SHOWN ON THIS PLAN WERE SUPPLIED BY THE APPROPRIATE AGENCIES. THE LOCATIONS ARE APPROXIMATE.

LEGEND	
	FOUND MONUMENT AS NOTED
	SET 1/2" REBAR W/CAP #2123 18" IN LENGTH
	BUILDING SETBACK LINE
	EXISTING CONTOUR
	PROPOSED SPOT ELEVATION
	PROPOSED CONTOUR
	BENCHMARK
	PROPOSED SEWER
	PROPOSED STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING CATCH BASIN
	EXISTING STORM MANHOLE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS MAIN
	EXISTING WATER MAIN
	EXISTING UTILITY POLE
	EXISTING GUY ANCHOR
	EXISTING LIGHT POLE
	EXISTING WATER VALVE
	EXISTING GAS VALVE
	WATER METER
	GAS METER
	EXISTING FIRE HYDRANT
	EXISTING BOLLARD
	ELECTRIC PAD
	TELEPHONE PEDESTAL



**OVEC**  
Building Addition  
Lot 3 Hi Point Commercial Center  
100 Alpine Drive  
SHELBYVILLE, KENTUCKY 40065



**KERRY P. MAGAN**  
CONSULTING ENGINEERS, PLC  
506 MAIN STREET  
SHELBYVILLE, KY 40065  
(502) 633-4365

**C-2**

DATE: 4/14/2020  
REV.: 7/23/2020  
REV.:

Demolition Plan

OWNER:  
Berk and Trust  
601 West Market Street  
Louisville, KY 40202  
DEVELOPER:  
Ohio Valley Education Cooperative  
Alpine Drive  
Shelbyville, KY 40065  
SOURCE OF TITLE:  
D.B. 449 P. 172

REVISION	DATE	DESCRIPTION
#1	7/23/2020	DO NOT REUSE EXIST. HWL



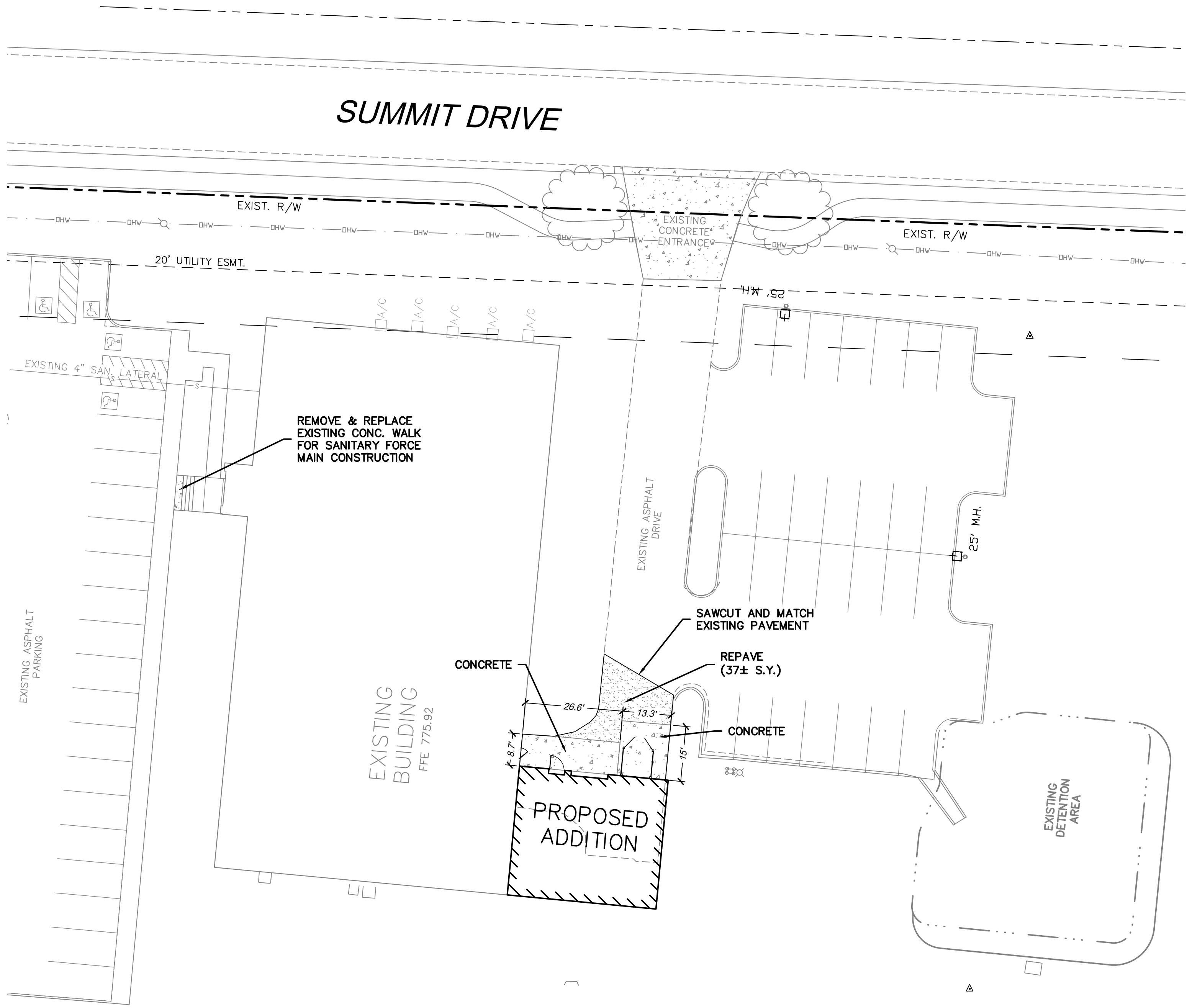
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### UTILITY NOTE

All utilities shown on these plans are approximate. Individual service lines are not shown. The contractor or subcontractor shall notify the utility protection center KENTUCKY 811 (Toll Free Phone No. 1-800-752-6007 or Local No. 502-266-5123) 48 hours in advance of any construction on this project. This number was established to provide accurate locations of existing below ground utilities (i.e. cables, electric wires, gas, and water lines). When contacting the KENTUCKY 811 call center, please state that the work to done is for a proposed sewer, water, or drainage facility. The contractor shall be responsible for becoming familiar with all utility requirements set forth on the plans and in the technical specifications and special provisions.

### SAFETY NOTE

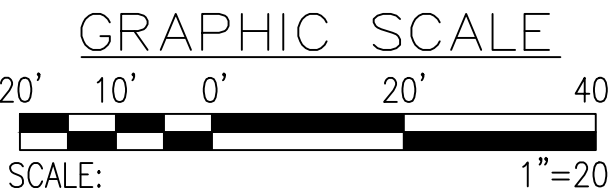
The contractor shall comply with the U.S. Department of Labor Safety and Health regulations for construction promulgated under the Occupations Safety and Health Act of 1970 (PL91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL91-54) during all phases of this project (including excavations and trenching) the Contractor shall be responsible for safety at all times.



### GENERAL NOTES – SITE LAYOUT

1.) Refer to sheet C-6 for pavement section information.

LEGEND	
	FOUND MONUMENT AS NOTED
	SET 1/2" REBAR W/CAP #2123 18" IN LENGTH
	B/L BUILDING SETBACK LINE
	EXISTING CONTOUR
	PROPOSED SPOT ELEVATION
	PROPOSED CONTOUR
	BENCHMARK
	PROPOSED SEWER
	PROPOSED STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING CATCH BASIN
	EXISTING STORM MANHOLE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS MAIN
	EXISTING WATER MAIN
	EXISTING UTILITY POLE
	EXISTING GUY ANCHOR
	EXISTING LIGHT POLE
	EXISTING WATER VALVE
	EXISTING GAS VALVE
	WATER METER
	GAS METER
	EXISTING FIRE HYDRANT
	EXISTING BOLLARD



**OVEC**  
**BUILDING ADDITION**  
**Lot 3 Hi Point Commercial Center**  
**100 Alpine Drive**  
**SHELBYVILLE, KENTUCKY 40065**

**KERRY P. MAGAN**  
**CONSULTING ENGINEERS, PLC**  
**506 MAIN STREET**  
**SHELBYVILLE, KY 40065**  
**(502) 633-4365**

**C-3**

DATE: 4/14/2020  
REV.: 9/08/2020  
REV.:

### Paving Plan

REVISION	DATE	DESCRIPTION
#2	9/08/2020	REMOVE/REPLACE CONCRETE WALK IN FRONT
#1	4/24/2020	ADD CONCRETE IN FRONT OF BLDG.

OWNER: Republic Bank and Trust  
601 West Market Street  
Louisville, KY 40202  
DEVELOPER: Ohio Valley Education Cooperative  
Alpine Drive  
Shelbyville, KY 40065  
SOURCE OF TITLE: D.B. 449 P. 172



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#### UTILITY NOTE

All utilities shown on these plans are approximate. Individual service lines are not shown. The contractor or subcontractor shall notify the utility protection center KENTUCKY 811 (Toll Free Phone No. 1-800-752-6007 or Local No. 502-266-5123) 48 hours in advance of any construction on this project. This number was established to provide accurate locations of existing below ground utilities (i.e. cables, electric wires, gas, and water lines). When contacting the KENTUCKY 811 call center, please state that the work to be done is for a proposed sewer, water, or drainage facility. The contractor shall be responsible for becoming familiar with all utility requirements set forth on the plans and in the technical specifications and special provisions.

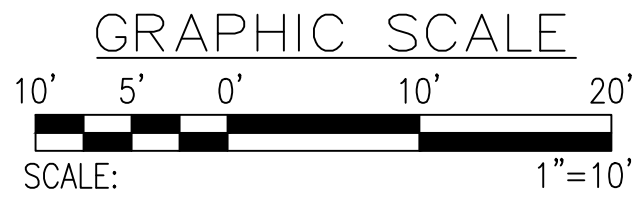
#### SAFETY NOTE

The contractor shall comply with the U.S. Department of Labor Safety and Health regulations for construction promulgated under the Occupations Safety and Health Act of 1970 (PL91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL91-54) during all phases of this project (including excavations and trenching) the Contractor shall be responsible for safety at all times.

LEGEND	
○	FOUND MONUMENT AS NOTED
●	SET 1/2" REBAR W/CAP #2123 18" IN LENGTH
B/L	BUILDING SETBACK LINE
---	EXISTING CONTOUR
X 780	PROPOSED SPOT ELEVATION
(780)	PROPOSED CONTOUR
BM #1	BENCHMARK
—	PROPOSED SEWER
—	PROPOSED STORM SEWER
—	EXISTING SANITARY SEWER
—	EXISTING CATCH BASIN
—	EXISTING STORM MANHOLE
—	EXISTING UNDERGROUND ELECTRIC
—	EXISTING OVERHEAD ELECTRIC
—	EXISTING GAS MAIN
—	EXISTING WATER MAIN
PP	EXISTING UTILITY POLE
—	EXISTING GUY ANCHOR
LP	EXISTING LIGHT POLE
—	EXISTING WATER VALVE
GV	EXISTING GAS VALVE
WM	WATER METER
GM	GAS METER
—	EXISTING FIRE HYDRANT
—	EXISTING BOLLARD
EP	ELECTRIC PAD
TP	TELEPHONE PEDESTAL

#### GENERAL NOTES – SITE GRADING & UTILITIES

- 1.) Refer to Plumbing Plans for additional information on sanitary sewer lift station, force main and lateral.



<b>Grading &amp; Utility Plan</b>		OWNER: Republic Bank and Trust 601 West Market Street Louisville, KY 40202
		DEVELOPER: Ohio Valley Education Cooperative Alpine Drive Shelbyville, KY 40065
		SOURCE OF TITLE: D.B. 449 P. 172
	#1	9/08/2020
	#2	7/23/2020
		ADDED SANITARY SEWER SERVICE DETAILS
		DO NOT REUSE EXISTING HEADWALL
		REVISION DATE DESCRIPTION
<b>OVEC</b> Building Commercial <b>Lot 3 Hi Point Commercial Center</b> 100 Alpine Drive SHELBYVILLE, KENTUCKY 40065		
<b>KERRY P. MAGAN</b> CONSULTING ENGINEERS, PLC 506 MAIN STREET SHELBYVILLE, KY 40065 (502) 633-4365		
<b>C-4</b>		DATE: 4/14/2020 REV.: 9/08/2020 REV.:



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### SAFETY NOTE

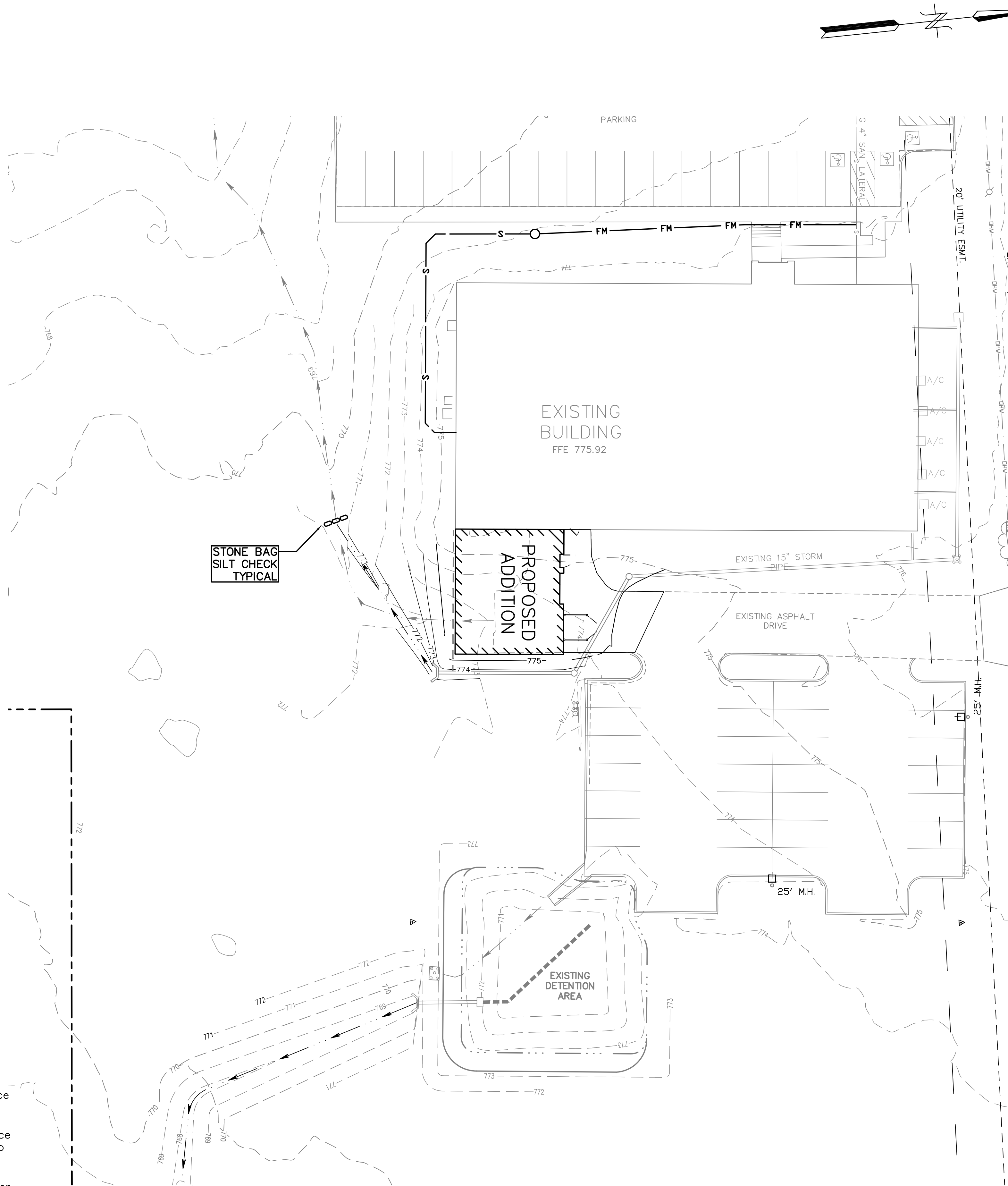
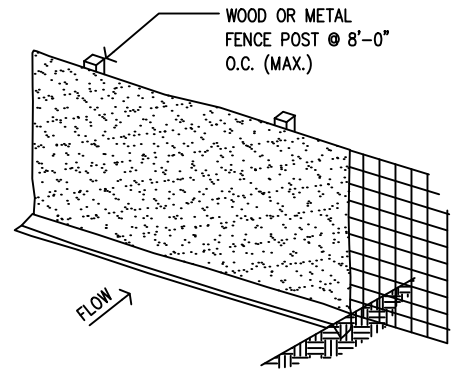
The contractor shall comply with the U.S. Department of Labor Safety and Health regulations for construction promulgated under the Occupations Safety and Health Act of 1970 (PL91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL91-54) during all phases of this project (including excavations and trenching) the Contractor shall be responsible for safety at all times.

### UTILITY NOTE

All utilities shown on these plans are approximate. Individual service lines are not shown. The contractor or subcontractor shall notify the utility protection center KENTUCKY 811 (Toll Free Phone No. 1-800-752-6007 or Local No. 502-266-5123) 48 hours in advance of any construction on this project. This number was established to provide accurate locations of existing below ground utilities (i.e. cables, electric wires, gas, and water lines). When contacting the KENTUCKY 811 call center, please state that the work to be done is for a proposed sewer, water, or drainage facility. The contractor shall be responsible for becoming familiar with all utility requirements set forth on the plans and in the technical specifications and special provisions.

NOTES:  
1. FENCE POST SHALL BE AT LEAST 5 FEET LONG, AND METAL FENCE FABRIC SHALL BE AT LEAST 14 GAUGE, 36 INCHES HIGH, AND WITH OPENINGS NO LARGER THAN 6 INCHES BY 6 INCHES. GEOTEXTILE FABRIC SHALL BE A MATERIAL RECOMMENDED FOR THIS USE BY THE MANUFACTURER.  
2. THE BOTTOM 12 INCHES OF THE FABRIC SHALL BE BURIED IN A 6 INCH TRENCH CUT INTO THE GROUND TO PREVENT SEDIMENT ESCAPING UNDER THE FENCE. ALL EARTHWORK SHALL BE DONE ON THE UPSTREAM SIDE OF THE FENCE.  
3. THE SILT FENCE SHALL BE ERECTED BEFORE GRADING IS BEGUN. THE GEOTEXTILE FABRIC SHALL BE ATTACHED TO THE FENCE, ON THE UPSTREAM SIDE, USING STAPLES, HOOK RINGS OR OTHER APPROVED METHOD.  
4. SILT FENCE SHALL BE INSPECTED AND MAINTAINED AS DESCRIBED ON PLANS. REMOVE SILT FENCE UPON ESTABLISHMENT OF PERMANENT GROUND COVER.

TEMPORARY SILT FENCE DETAIL  
N12



### PERMITTING

IF DISTURBED AREA OF SITE IS GREATER THAN 1 ACRE THEN THE FOLLOWING APPLIES. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS, AND NOTIFYING THE KENTUCKY DIVISION OF WATER IN WRITING OF INTENT TO DISTURB. ALL DOCUMENTATION FOR PERMITTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. EROSION CONTROL SHALL BE PROVIDED AS REQUIRED BY GOVERNING AUTHORITIES, AT NO ADDITIONAL COST TO THE OWNER, WHETHER THEY APPEAR ON THIS PLAN OR NOT.

### KPDES FORM NOI-SWCA DETAILS

ACRES TO BE DISTURBED: 0.1 ACRES ±  
RECEIVING WATER BODY: Tributary of Clear Creek

SITE LATITUDE: 38.218107°  
SITE LONGITUDE: -85.201386°

DISCHARGE POINT #1  
LATITUDE: 38.218027°  
LONGITUDE: -85.201488°

### EROSION PREVENTION AND SEDIMENT CONTROL NOTES

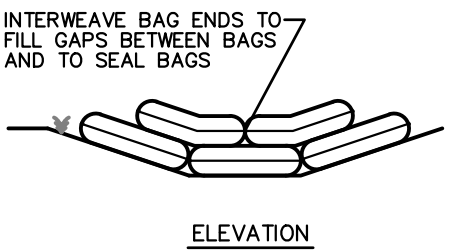
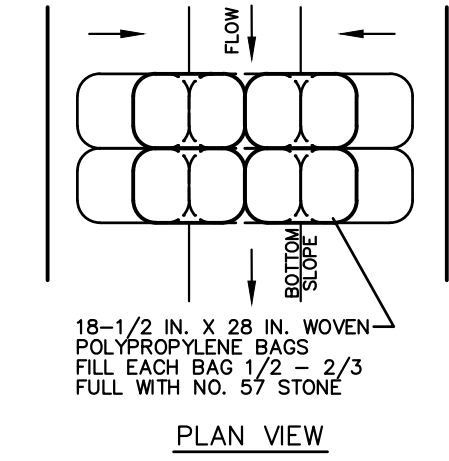
- 1.) DETENTION BASINS, IF APPLICABLE, SHALL BE CONSTRUCTED FIRST.
- 2.) ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM THE CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.
- 3.)SOIL STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWALES AND CATCH BASINS. STOCKPILES SHALL BE SEEDED, MULCHED, AND ADEQUATELY CONTAINED THROUGH THE USE OF SILT FENCE.
- 4.)WHERE CONSTRUCTION OR LAND DISTURBANCE ACTIVITY WILL OR HAS BEEN TEMPORARILY CEASED ON ANY PORTION OF THE SITE, TEMPORARY SITE STABILIZATION MEASURES SHALL BE REQUIRED, AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 DAYS AFTER THE ACTIVITY HAS CEASED.

### SILT CONTROL NOTES

- 1.) SILT CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS TO SILT CONTROLS SHOWN ON PLANS AS A RESULT OF ACTUAL FIELD CONDITIONS OR CONSTRUCTION PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES PER EPA'S 1992 "STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES" MANUAL. ANY SUCH MODIFICATION SHALL BE THE RESPONSIBILITY OF THE OWNER AND SHALL BE INSTALLED AS DIRECTED BY THE STATE DIVISION OF WATER.
- 2.)THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION BY QUALIFIED PERSONNEL, CLEANING, MAINTAINING, AND/OR REPLACING ALL SILT CONTROLS EVERY 14 DAYS AND WITHIN 24 HOURS FOLLOWING A RAINFALL OF 0.5 INCH OR MORE.
- 3.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING BMP INSPECTION REPORTS TO THE CITY OF SHELBYVILLE.

### SWPPP LEGEND

STONE BAG SILT CHECK



STONE BAG SILT/VELOCITY CHECK  
N12

### LEGEND

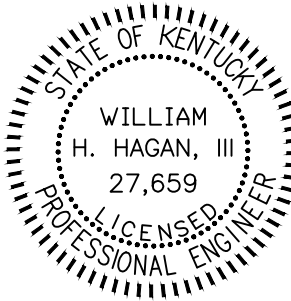
- FOUND MONUMENT AS NOTED
- SET 1/2" REBAR W/CAP #2123 18" IN LENGTH
- B/L BUILDING SETBACK LINE
- - -780- - - EXISTING CONTOUR
- X 780 PROPOSED SPOT ELEVATION
- 788 PROPOSED CONTOUR
- BM #1 BENCHMARK
- PROPOSED SEWER
- PROPOSED STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING CATCH BASIN
- EXISTING STORM MANHOLE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING GAS MAIN
- EXISTING WATER MAIN
- EXISTING UTILITY POLE
- EXISTING GUY ANCHOR
- EXISTING LIGHT POLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- WM WATER METER
- GM GAS METER
- EXISTING FIRE HYDRANT
- EXISTING BOLLARD
- EP ELECTRIC PAD
- TP TELEPHONE PEDESTAL

### GRAPHIC SCALE



Stormwater  
Pollution Prevention  
Plan

OVEC  
Building Addition  
Lot 3 Hi Point Commercial Center  
100 Alpine Drive  
SHELBYVILLE, KENTUCKY 40065



KERRY P. MAGAN  
CONSULTING ENGINEERS, PLC  
506 MAIN STREET  
SHELBYVILLE, KY 40065  
(502) 633-4365

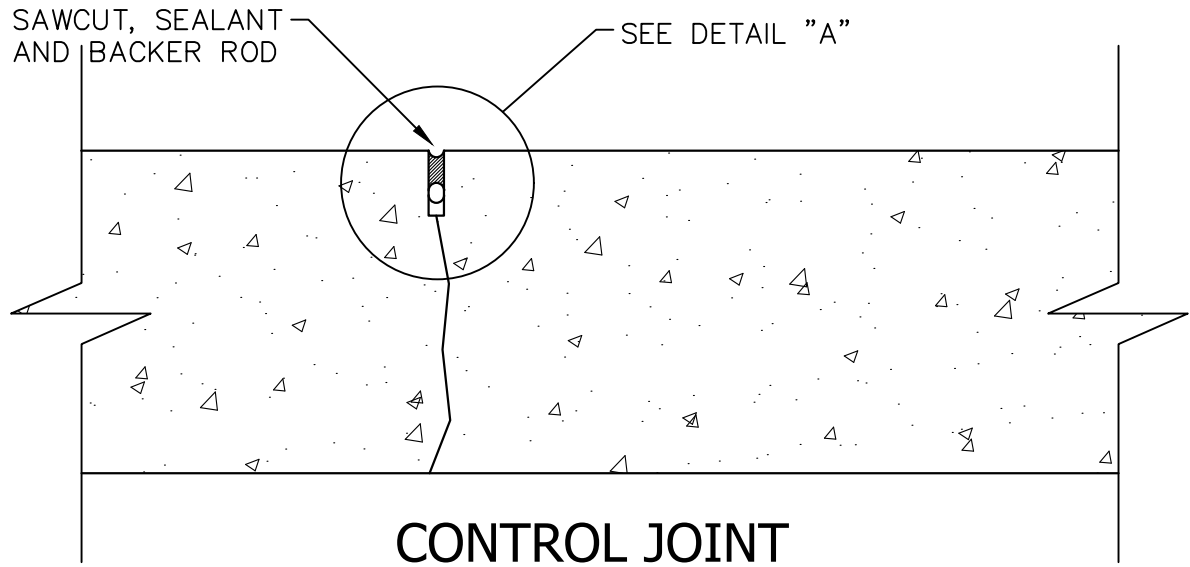
C-5

DATE: 4/14/2020  
REV.:  
REV.:

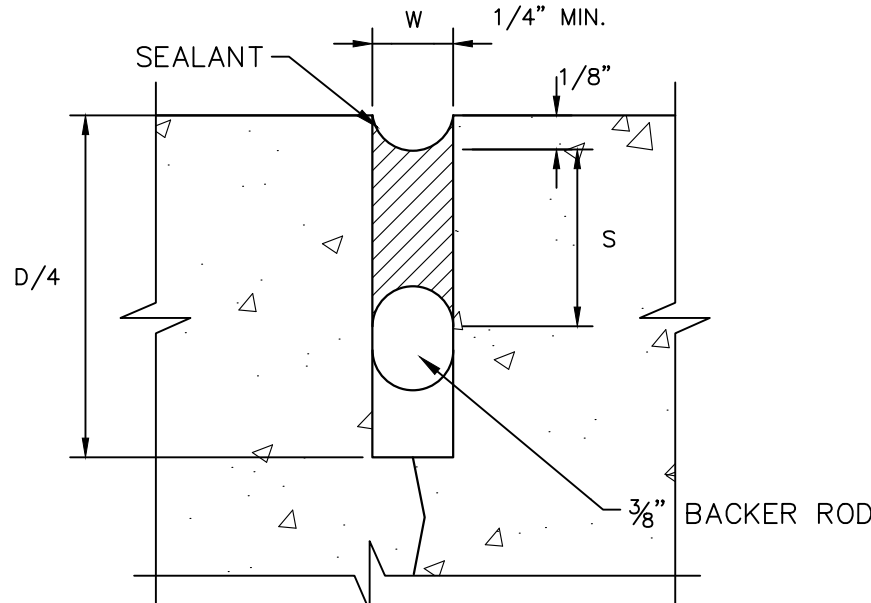
OWNER:  
Rebublic Bank and Trust  
601 West Market Street  
Louisville, KY 40202  
DEVELOPER:  
Ohio Valley Education Cooperative  
Alpine Drive  
Shelbyville, KY 40065  
SOURCE OF TITLE:  
D.B. 449 P. 172



8/9/2020 3:03 PM  
C:\Users\kerrm\Documents\Hortman\Projects\Kerr-Magan-ConsEngrs\OVEC2020\OVEC-Addition.dwg



CONTROL JOINT

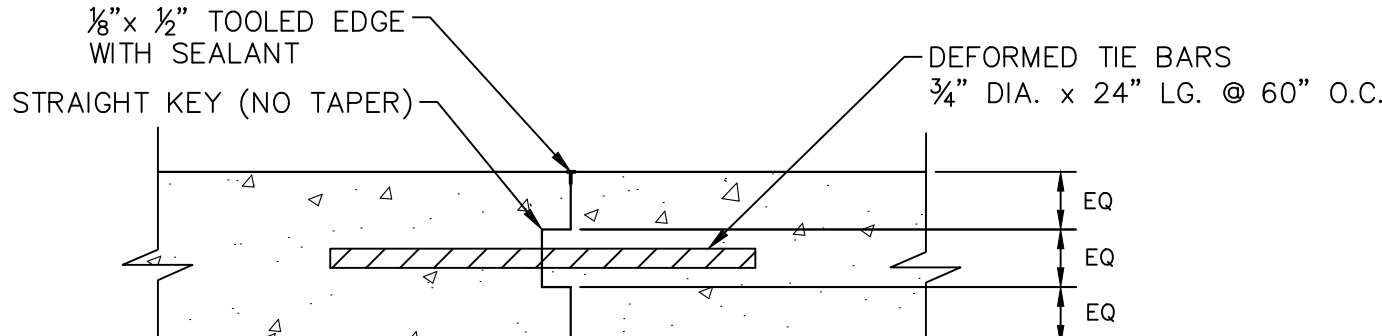


DETAIL "A"

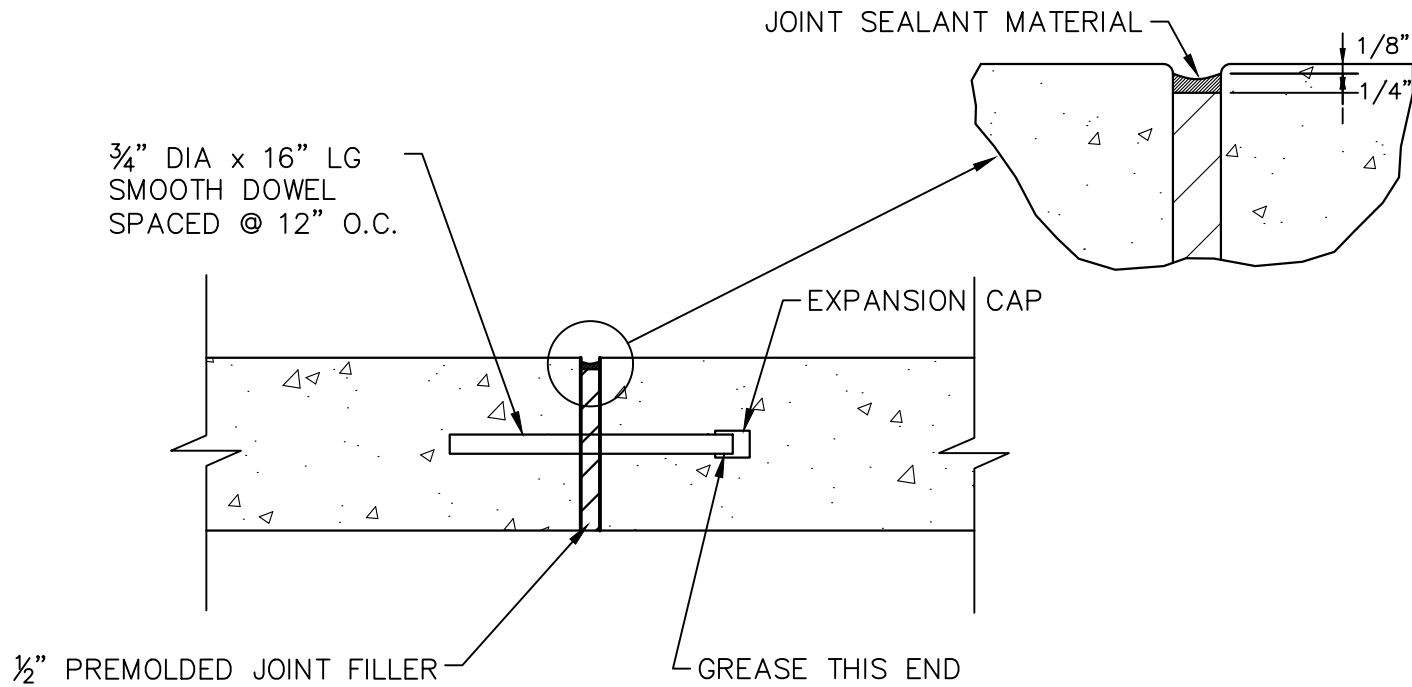
NOTE:

1. DEPTH OF SEALANT "S" SHALL PROVIDE A 0.5 WIDTH TO DEPTH RATIO.
2. DETAIL SHOWS JOINT DESIGN UTILIZING THE INITIAL SAW CUT FOR PLACING BACKER ROD AND SEALANT. WALLS OF SAW CUT MUST BE FREE OF ANY DIRT, DUST OR CHEMICALS THAT CAN ADVERSELY EFFECT THE ABILITY OF THE SEALANT TO BOND TO THE WALLS.
3. DIMENSIONS SHOWN WILL VARY. ACTUAL JOINT WIDTH MUST BE DETERMINED BY THE ANTICIPATED JOINT MOVEMENT. THE ACTUAL JOINT DEPTH IS DETERMINED BY THE RECOMMENDATIONS OF THE SEALANT MANUFACTURER.
4. CONTROL JOINTS TO BE PLACED AT 5' O.C.

6  
C-6  
NTS  
CONCRETE PAVEMENT CONTROL JOINTS

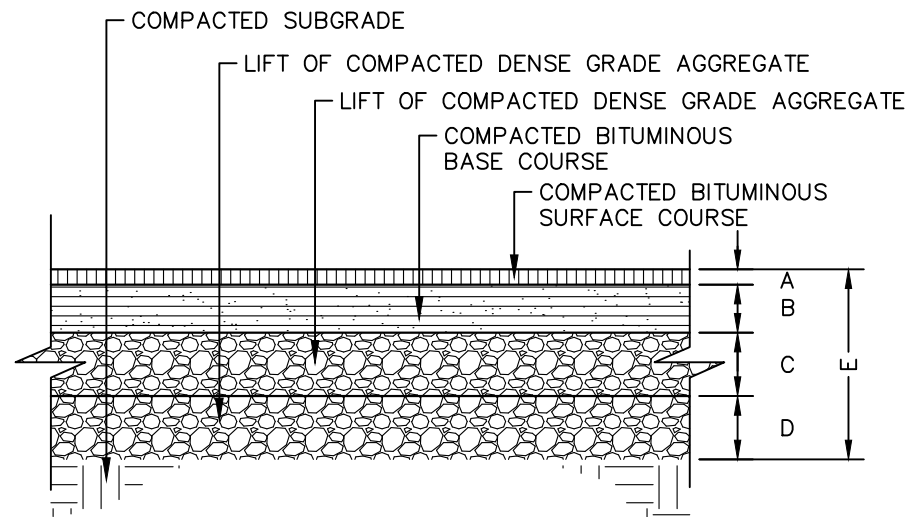


CONSTRUCTION JOINT



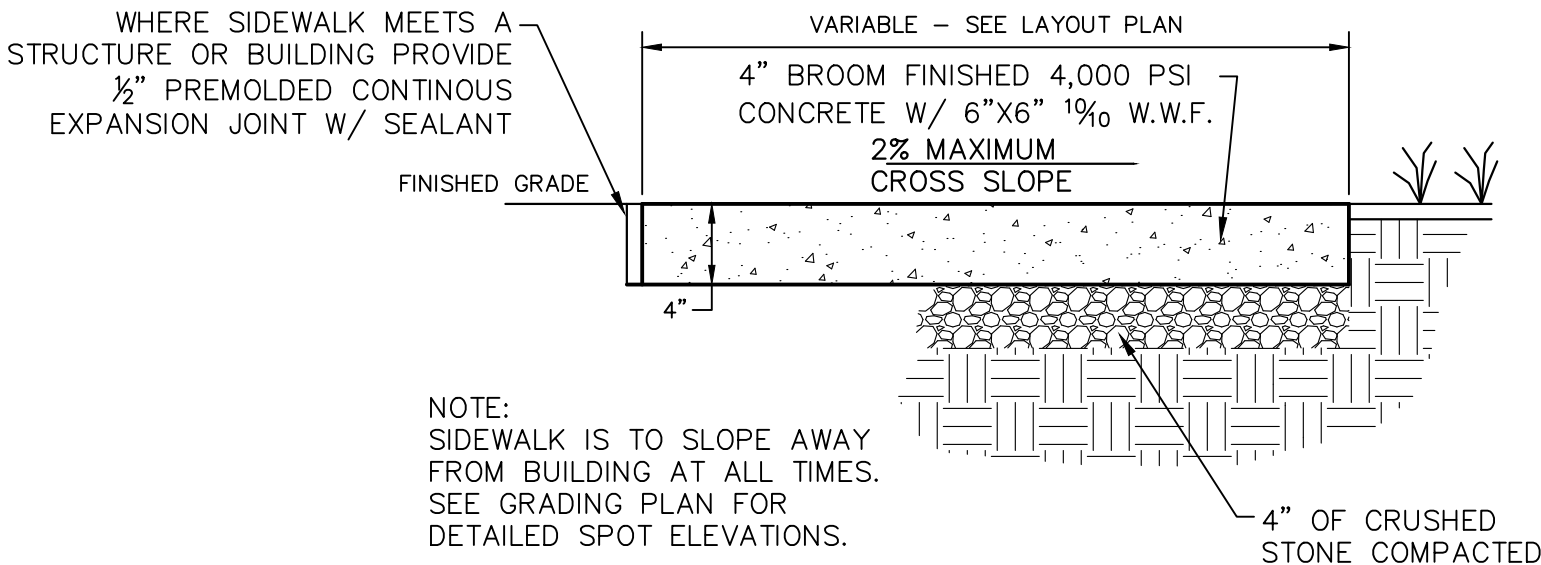
EXPANSION JOINT

5  
C-6  
NTS  
CONCRETE PAVEMENT CONSTRUCTION AND EXPANSION JOINTS

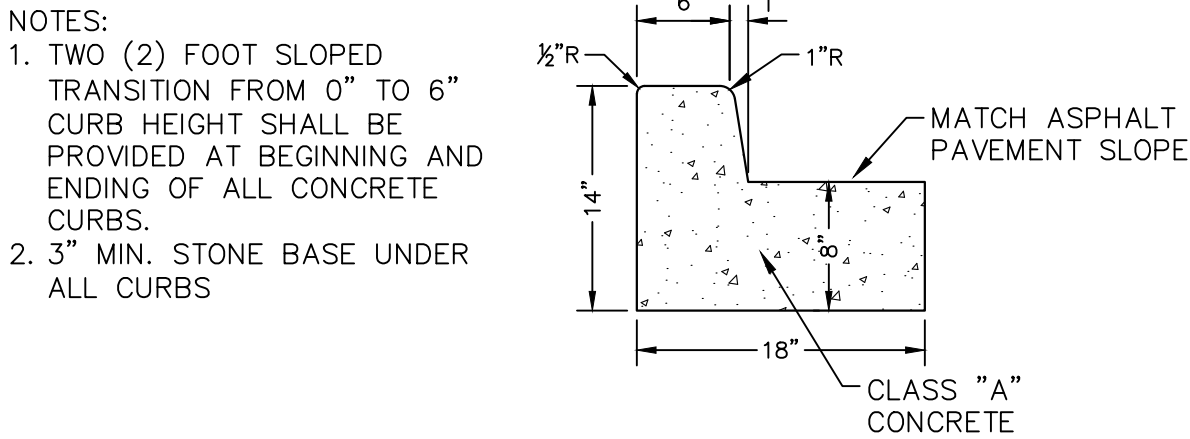


SCHEDULE					
LOCATION	A	B	C	D	E
ASPHALT SECTION	1½"	3"	4"	4"	12½"

1  
C-6  
NTS  
ASPHALT PAVEMENT

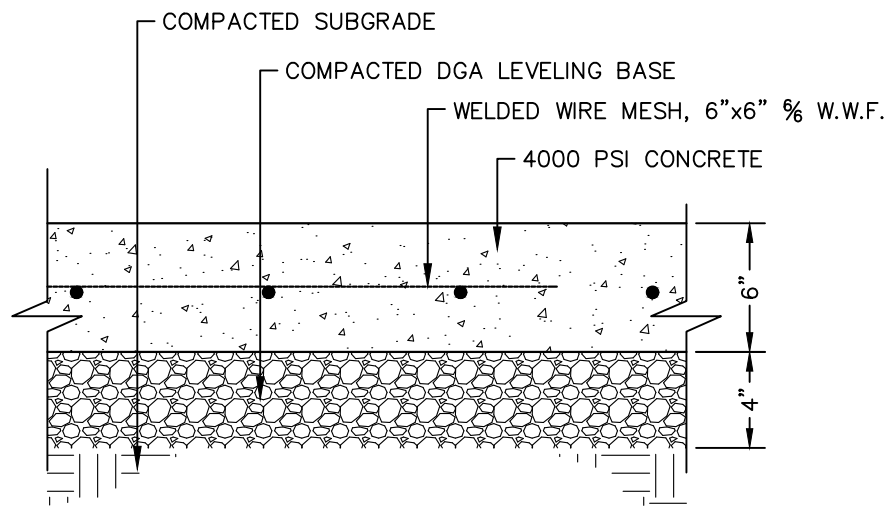


2  
C-6  
NTS  
CONCRETE SIDEWALK



- NOTES:
1. TWO (2) FOOT SLOPED TRANSITION FROM 0" TO 6" CURB HEIGHT SHALL BE PROVIDED AT BEGINNING AND ENDING OF ALL CONCRETE CURBS.
  2. 3" MIN. STONE BASE UNDER ALL CURBS

3  
C-6  
NTS  
MEDIAN CURB



4  
C-6  
NTS  
CONCRETE PAVEMENT

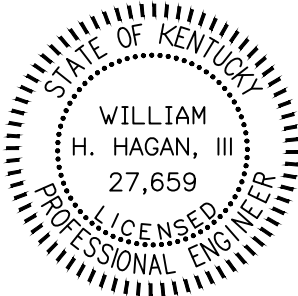
OWNER:  
Republic Bank and Trust  
601 West Market Street  
Louisville, KY 40202

DEVELOPER:  
Ohio Valley Education Cooperative  
506 Main Street  
Shelbyville, KY 40065

SOURCE OF TITLE:  
D.B. 449 P. 172

Details

OVEC  
Building Addition  
Lot 3 Hi Point Commercial Center  
100 Alpine Drive  
SHELBYVILLE, KENTUCKY 40065



KERRY P. MAGAN  
CONSULTING ENGINEERS, PLC  
506 MAIN STREET  
SHELBYVILLE, KY 40065  
(502) 633-4365

C-6

DATE: 4/14/2020

REV.:



GENERAL NOTES:

1. BUILDING CODE: 2018 KENTUCKY BUILDING CODE (2015 IBC)

2. BUILDING RISK CATEGORY II

3. MINIMUM DESIGN LIVE LOADS:

SLAB ON GRADE

MINIMUM ROOF

\*UNLESS EXCEEDED BY SNOW DRIFTS

125 PSF

20 PSF\*

4. SNOW LOADS

GROUND SNOW LOAD

EXPOSURE FACTOR

THERMAL FACTOR

IMPORTANCE FACTOR

15 PSF

1.0

1.1

1.0

5. WIND LOADS

WIND SPEED:

WIND DIRECTIONALITY FACTOR:

EXPOSURE:

INTERNAL PRESSURE COEFFICIENTS

TOPOGRAPHIC FACTOR INCLUDED:

GUST EFFECT FACTOR:

115 MPH

D

0.85

B

-0.18, +0.18

N

0.85

6. SEISMIC:

IMPORTANCE FACTOR, IE

SITE CLASS:

DESIGN SPECTRAL RESPONSE, Sds:

Sd1:

Ss:

MAPPED SPECTRAL RESPONSE S1:

ANALYSIS PROCEDURE:

SEISMIC DESIGN CATEGORY:

1.00

D

0.191

0.154

0.179

0.096

ELFP

C

BASIC SEISMIC FORCE RESISTING SYSTEM:

ORDINARY REINFORCED MASONRY SHEAR WALL

RESPONSE MODIFICATION COEFFICIENT, R:

SEISMIC RESPONSE COEFFICIENT, Cs:

SEISMIC BASE SHEAR

2

0.1

7K

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DETAILS AND DIMENSIONS. ANY DISCREPANCY BETWEEN SUCH DETAILS AND DIMENSIONS AS MAY OCCUR SHALL BE REPOTED TO THE ARCHITECT FOR CLARIFICATION BEFORE THE WORK.

FOUNDATION DESIGN

1. SHALLOW FOUNDATIONS

ALLOWABLE SOIL BEARING CAPACITY:

COEFFICIENT OF SUBGRADE REACTION:

2000 PSF

100 PSI/INCH

THE ABOVE SOIL VALUES FOR THE DESIGN OF SHALLOW FOUNDATIONS ON THIS SITE HAVE BEEN ASSUMED AND SHALL BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING REINFORCEMENT AT FOUNDATION BEARING SURFACES. FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL PLACED UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL ENGINEER.

CONCRETE GENERAL

1. CONCRETE FOR GENERAL USE SHALL BE NORMAL WEIGHT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI. CONCRETE FOR EXTERIOR SLABS SHALL BE NORMAL WEIGHT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI

2. ALL LAP LENGTHS AND DEVELOPMENT LENGTHS NOT SHOWN SHALL BE FOR FULL TENSION SPLICE (CLASS B). WHERE BARS ARE OF DIFFERENT SIZE, THE LAP LENGTH SHALL BE BASED ON THE LARGER BAR, UNLESS OTHERWISE SHOWN.

3. DEVELOPMENT LENGTHS OF REINFORCEMENT SHALL CONFORM TO ACI 318.

4. MATERIAL PROPERTIES – REINFORCING AND CONNECTION STEEL:

Fy (psi)

ASTM

WELDED BARS

ALL BARS, U.N.

WELDED WIRE REINFORCEMENT (SMOOTH)

WELDING FOR STEEL REINF BARS

DEFORMED BAR ANCHORS

HEADED ANCHOR STUDS

HEADED/TERMINATOR BARS

60,000

60,000

65,000

70,000

60,000

60,000

A706 OR A615\*

A615

A185

AWS D1.4

A496

A108

A970

\* PREHEAT PER AWS D1.4.

5. PROVIDE BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH ACI DETAILING MANUAL. ALL BAR SUPPORTS IN AREAS WHERE CONCRETE WILL BE EXPOSED SHALL HAVE PLASTIC FEET.

6. DETAILING, FABRICATION AND PLACING OF REINFORCING SHALL CONFORM TO APPLICABLE PROVISIONS OF ACI 315 AND ACI 318.

7. MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL COMPLY WITH THE REQUIREMENTS OF ACI 318, SECTION 7.7.1 OF ACI CODE.

8. SLABS, FOOTINGS SHALL HAVE NO HORIZONTAL JOINTS. ANY STOP IN CONCRETE WORK MUST BE MADE NEAR CENTER OF SPAN, OR AS INDICATED ON THE DRAWINGS, WITH VERTICAL KEYED BULKHEADS. ALL REINFORCEMENT SHALL CONTINUE THRU JOINTS.

9. BEFORE PLACING CONCRETE, THE CONTRACTOR SHALL NOTIFY ALL SUBCONTRACTORS TO BE SURE ALL SLEEVES, CONDUIT, CHASES, EMBEDS, EQUIPMENT ANCHOR BOLTS, ETC., ARE PROPERLY INSTALLED.

10. ATTENTION IS CALLED TO THE FACT THAT ANY CONCRETE THAT WILL BE EXPOSED MUST HAVE SPECIAL CARE TAKEN TO PREVENT EXPOSURE OF TIE WIRE OR OTHER MATERIAL THAT MAY CAUSE STAINING. PROPER CONCRETE COVER ON ALL REINFORCING STEEL MUST BE MAINTAINED.

11. ALL EXPOSED EDGES AND CORNERS OF CONCRETE SHALL HAVE A ¼" CHAMFER AT 45 DEGREES UNLESS OTHERWISE NOTED.

12. ANCHOR BOLTS FOR ALL COLUMNS AND EQUIPMENT SHALL BE SET BY TEMPLATE AND SHALL BE WIRE TIED IN PLACE. COORDINATE ANCHOR BOLT LAYOUT AND SIZE WITH CERTIFIED METAL BUILDING LAYOUTS.

13. PIPE SLEEVES WHICH PASS THROUGH WALLS SHALL BE PLACED ABOVE FOOTINGS OR ABOVE PRIMARY REINFORCEMENT AND SHALL BE PLACED SO AS NOT TO AFFECT THE STRUCTURAL INTEGRITY OF THE CONCRETE.
- CONCRETE MIX DESIGNS
1. MAXIMUM W/C RATIO – 0.45

2. MINIMUM CEMENTITIOUS MATERIALS CONTENT, LB/CY BASED ON MAXIMUM AGGREGATE SIZE:

1.5 INCHES

1.0

0.75

0.375

470 LB/CY

520

540

610

3. AIR ENTRAINMENT 5% +/- 1% FOR EXTERIOR CONCRETE EXPOSED TO FREEZING.

4. SLUMP AT POINT OF DISCHARGE: 4" ±1

5. PRIOR TO DELIVERY TO THE JOBSITE, ENGINEER SHALL BE FURNISHED WITH CONCRETE MIX DESIGN AND ASSOCIATED DATA TO SUBSTANTIATE 28 DAY COMPRESSIVE STRENGTH AND PLASTIC PROPERTIES.

6. DO NOT ADD WATER TO CONCRETE DURING DELIVERY. WATER MAY ADDED ON SITE ONLY IF A TICKET WITH THE WATER UNDERRUN NOTED IS PROVIDED. WATER ADDED MUST NOT EXCEED THE AMOUNT OF WATER NOTED ON THE TICKET. CONCRETE MUST STILL MEET SPECIFICATIONS AFTER THE WATER IS ADDED. CONCRETE ADMIXTURES OF ANY KIND SHALL NOT BE ADDED ON SITE OR DURING DELIVERY.
- CONCRETE PLACEMENT
1. BEFORE PLACING CONCRETE, INSPECT AND COMPLETE FORMWORK INSTALLATION. VERIFY REINFORCING STEEL PLACEMENT, SIZES, SPLICES AND EMBEDS TO BE CAST--IN.

2. COMPLY WITH ACI 304R "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE".

3. DEPOSIT AND CONSOLIDATE CONCRETE IN FORMS IN HORIZONTAL LAYERS NOT DEEPER THAN 18" AND IN A MANNER TO PREVENT INCLINED CONSTRUCTION JOINTS.

4. DEPOSIT AND CONSOLIDATE SLABS IN A CONTINUOUS OPERATION WITHIN LIMITS OF CONSTRUCTION JOINTS UNTIL PLACEMENT OF PANEL OR SECTION IS COMPLETED.

5. PROTECT CONCRETE FROM PHYSICAL DAMAGE OR REDUCED STRENGTH WHICH COULD BE CAUSED BY FROST, FREEZING ACTIONS OR LOW TEMPERATURES IN COMPLIANCE WITH ACI 306R.

6. WHEN HOT WEATHER CONDITIONS EXIST THAT WOULD IMPAIR QUALITY AND STRENGTH OF CONCRETE, PLACE CONCRETE IN COMPLIANCE WITH ACI 305R. CONCRETE AT TIME OF PLACEMENT SHALL BE LESS THAN 90 DEF F AND SHALL BE MAINTAINED SO THAT TEMPERATURE DOES NOT EXCEED 90 DEF F.

7. CONSOLIDATE CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND--SPADING RODDING OR TAMPING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE INSIDE FORMS. DO NOT INSERT VIBRATORS INTO LOWER LAYERS OF CONCRETE THAT HAVE BEGUN TO SET.
- FINISH OF HORIZONTAL CONCRETE SURFACES
1. EXTERIOR SLABS SHALL RECEIVE A FINE BROOM FINISH: APPLY A PARTIAL TROWEL FINISH, STOPPING AFTER SECOND TROWELING. IMMEDIATELY AFTER SECOND TROWELING, AND WHEN CONCRETE IS STILL PLASTIC, SLIGHTLY SCARIFY SURFACE WITH A FINE BROOM.

2. INTERIOR SLABS SHALL RECEIVE A TROWEL FINISH. APPLY HARD TROWEL FINISH TO SLAB ON GRADE AND SECOND FLOOR SLAB ON DECK.

3. WATER SHALL NOT BE APPLIED TO HORIZONTAL SURFACES TO RETEMPER PRIOR TO FINISHING.

4. DRY CEMENT SHALL NOT BE ADDED TO HORIZONTAL SURFACES TO STIFFEN SURFACE PRIOR TO FINISHING.

5. FLOOR SHALL BE FINISHED TO THE FOLLOWING FINISHED PER ACI 117

COMPOSITE OVER FLATNESS (Fp):

COMPOSITE OVER FLATNESS (Fp):

25

20
- CONCRETE CURING AND PROTECTION
1. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES.

2. START INITIAL CURING IMMEDIATELY AFTER FINAL FINISHING IS COMPLETE. KEEP CONTINUOUSLY MOIST FOR NOT LESS THAN 7 DAYS.

3. 3. PERFORM CURING OF CONCRETE BY CURING COMPOUND, MOIST CURING, MOISTURE--RETAINING COVER CURING AND BY COMBINATIONS THEREOF.
- QUALITY CONTROL TESTING OF CONCRETE DURING CONSTRUCTION
1. THE OWNER SHALL RETAIN A TESTING LABORATORY TO PERFORM TESTS AND TO SUBMIT TEST REPORTS. THE CONTRACTOR SHALL ALLOW TESTING AGENCY ACCESS TO ALL MATERIALS AND SHALL ASSIST IN OBTAINING SAMPLES.

2. TESTING AGENCY HAS THE AUTHORITY TO REJECT A LOAD OF CONCRETE THAT DOES NOT MEET SPECIFICATIONS. REJECTED CONCRETE SHALL BE REPLACED AT NO COST TO THE OWNER.
- | MILD STEEL LAP SPLICES |       |                        |       |              |       |                        |       |              |       |
|------------------------|-------|------------------------|-------|--------------|-------|------------------------|-------|--------------|-------|
| SIZE                   | CLASS | CONCRETE COVER = 1.50" |       |              |       | CONCRETE COVER = 2.00" |       |              |       |
|                        |       | UNCOATED               |       | EPOXY COATED |       | UNCOATED               |       | EPOXY COATED |       |
|                        |       | TOP                    | OTHER | TOP          | OTHER | TOP                    | OTHER | TOP          | OTHER |
| #3                     | A     | 12                     | 12    | 14           | 12    | 12                     | 12    | 14           | 12    |
|                        | B     | 16                     | 16    | 18           | 16    | 16                     | 16    | 18           | 16    |
| #4                     | A     | 15                     | 12    | 18           | 14    | 15                     | 12    | 18           | 14    |
|                        | B     | 20                     | 16    | 23           | 18    | 20                     | 16    | 23           | 18    |
| #5                     | A     | 19                     | 15    | 24           | 22    | 19                     | 15    | 22           | 17    |
|                        | B     | 24                     | 19    | 32           | 28    | 24                     | 19    | 29           | 22    |
| #6                     | A     | 22                     | 17    | 29           | 26    | 22                     | 17    | 29           | 26    |
|                        | B     | 29                     | 22    | 38           | 34    | 29                     | 22    | 38           | 34    |
| #7                     | A     | 37                     | 28    | —            | —     | 33                     | 25    | —            | —     |
|                        | B     | 48                     | 37    | —            | —     | 42                     | 33    | —            | —     |
| #8                     | A     | 47                     | 36    | —            | —     | 37                     | 29    | —            | —     |
|                        | B     | 60                     | 47    | —            | —     | 48                     | 37    | —            | —     |
| #9                     | A     | 57                     | 44    | —            | —     | 46                     | 36    | —            | —     |
|                        | B     | 74                     | 57    | —            | —     | 60                     | 46    | —            | —     |
| #10                    | A     | 70                     | 54    | —            | —     | 57                     | 44    | —            | —     |
|                        | B     | 91                     | 70    | —            | —     | 74                     | 57    | —            | —     |
| #11                    | A     | 84                     | 64    | —            | —     | 68                     | 53    | —            | —     |
|                        | B     | 109                    | 84    | —            | —     | 89                     | 68    | —            | —     |
- STRUCTURAL STEEL
1. STRUCTURAL STEEL HAS BEEN DESIGNED AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS 14TH EDITION.

2. ALL MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS; THE 2012 INTERNATIONAL BUILDING CODE SHALL APPLY:

STRUCTURAL WIDE FLANGE SHAPES INCLUDING COLUMNS, BEAMS, ETC

STRUCTURAL ANGLES, CHANNELS, PLATE & MISCELLANEOUS ITEMS

ANCHOR BOLTS

STRUCTURAL TUBING

STRUCTURAL PIPE

STRUCTURAL BOLTS

ASTM A992

ASTM A572 Grade 50

A36 OR A307

ASTM A500, GRADE C

ASTM A53, GRADE B

ASTM A325 or A490; –N or –X AS INDICATED

3. ALL WELDING SHALL BE IN ACCORDANCE WITH "THE STRUCTURAL WELDING CODE" AWS D1.1.

4. ALL BEAM CONNECTIONS SHALL BE DESIGNED FOR ⅓ OF THE MAXIMUM UNIFORM LOAD FOR THE SIZE, SPAN, AND GRADE OF STEEL LISTED IN MAXIMUM TOTAL UNIFORM LOAD TABLES FROM CHAPTER 3 OF THE AISC MANUAL (14TH EDITION) UNLESS OTHERWISE NOTED ON THE DRAWINGS.

5. ALL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION AND ERECTION OF STEEL SHALL BE VERIFIED. ANY AMBIGUITY FOUND SHALL IMMEDIATELY BE BROUGHT TO THE NOTICE OF THE ARCHITECT.

6. STRUCTURAL STEEL ERECTOR SHALL FIELD APPLY TOUCH UP PRIMER PAINT TO ALL WELDED OR UNCOATED STEEL IMMEDIATELY AFTER ANY FIELD CONNECTIONS ARE MADE TO LIMIT POSSIBLE STAINING OR DISCOLORATION OF MASONRY OR CONCRETE ELEMENTS.

7. GROUT SHALL BE PRE–MIXED, NON–METALLIC, NON–CORROSIVE, NON–STAINING PRODUCT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER REDUCING AGENTS, COMPLYING WITH CE–CRD–C621.

8. BEFORE SHIPPING FROM THE SHOP ALL STEEL SHALL BE CLEANED. REMOVE HEAVY RUST AND MILL SCALE, SPATTER, SLAG OR FLUX DEPOSITS. COMPLY WITH STEEL STRUCTURES PAINTING COUNCIL SP–2 "HAND TOOL CLEANING" OR SP–3 "POWER TOOL CLEANING". REMOVE OIL, GREASE AND SIMILAR CONTAMINATES; COMPLY WITH SSPC SP–1 "SOLVENT CLEANING".

9. APPLY 2 COATS OF PAINT TO SURFACES WHICH ARE INACCESSIBLE AFTER ASSEMBLY OR ERECTION. CHANGE COLOR OF SECOND COAT TO DISTINGUISH IT FROM THE FIRST. DO NOT PAINT CONNECTION SURFACES AND SURFACES WHICH ARE TO RECEIVE SPRAYED ON FIRE–RESISTIVE MATERIALS.

10. IMMEDIATELY AFTER CLEANING APPLY MANUFACTURER'S OR FABRICATOR'S STANDARD, FAST CURING, LEAD–FREE, UNIVERSAL MODIFIED ALKYD PRIMER SELECTED FOR GOOD RESISTANCE TO NORMAL ATMOSPHERIC CORROSION, FOR COMPATIBILITY WITH ALKYD FINISH PAINT SYSTEMS, AND FOR THE CAPABILITY OF PROVIDING A SOUND FOUNDATION FOR FIELD--APPLIED TOPCOATS DESPITE PROLONGED EXPOSURE. APPLICATION SHALL BE NOT LESS THAN 1.5 MILS DRY FILM THICKNESS.

11. ALL FERROUS METALS IN UNCONDITIONED AREAS SHALL BE HOT–DIP GALVANIZED AFTER FABRICATION. APPLY ZINC--COATING BY THE HOT–DIP PROCESS IN COMPLIANCE WITH THE FOLLOWING REQUIREMENT:

A. ASTM A153 FOR GALVANIZING IRON AND STEEL HARDWARE.

B. ASTM A123 FOR GALVANIZING BOTH FABRICATED AND UNFABRICATED IRON AND STEEL PRODUCTS MADE OF UNCOATED ROLLED, PRESSED, AND FORGED SHAPES, PLATES, BARS, AND STRIP 0.0299 INCH THICK AND HEAVIER.

CONCRETE MASONRY CONSTRUCTION

1. CONCRETE MASONRY UNITS SHALL BE GRADE N HOLLOW--LOAD BEARING TYPE (LIGHT WEIGHT), AND SHALL MEET WITH THE REQUIREMENTS OF ASTM C90. ALL CONCRETE MASONRY UNITS SHALL BE PLACED IN ACCORDANCE WITH ACI 530.

2. HORIZONTAL JOINT REINFORCING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A951 AND CONSIST OF W1.7 SIDE RODS AND CROSS RODS. CROSS ROD SPACING SHALL NOT EXCEED 16 INCHES. LENGTHS SHALL NOT BE LESS THAN 10FT WITH PREFABRICATED INTERSECTIONS. VERTICAL SPACING OF JOINT REINFORCEMENT SHALL NOT EXCEED 16 INCHES AND SHALL BE LOCATED 8 INCHES FROM TOP AND BOTTOM OF MASONRY FOUNDATION WALL. MINIMUM COVER SHALL BE 5/8 INCH FOR BELOW GRADE WALLS.

3. CONSOLIDATE GROUT BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND--SPADING RODDING OR TAMPING.

4. UNLESS OTHERWISE NOTED, LAP SPLICES OR EMBEDMENT LENGTHS OF REINFORCING SHALL BE AS FOLLOWS:

#4 = 24"

#5 = 30"

#6 = 36"

#7 = 42"

EMBEDMENT LENGTHS SHALL BE A MINIMUM OF 48 BAR DIA. FOR ALL LAP SPLICES AND EMBEDMENT REINFORCEMENT SHALL BE WIRE TIED IN PLACE PRIOR TO GROUTING. HOLD VERTICAL BARS IN PLACE USING METAL SUPPORTS, CENTERING CLIPS, SPACERS, TIES, OR CAGING DEVICES NEAR THE END OF EACH BAR AND AT INTERMEDIATE INTERVALS OF NOT MORE THAN 192 DIAMETERS OF THE BAR.

5. NOTE: BARS SHALL NOT BE INSTALLED OR "STUCK" IN PLASTIC GROUT. ANY SUCH CONDITIONS SHALL BE GROUNDS FOR REMOVAL AND REPLACEMENT OF BLOCK/ REINFORCING.

6. UNLESS OTHERWISE NOTED, PROVIDE BOND BEAMS WITH 1--#5 CONTINUOUS HORIZONTAL REINFORCEMENT AT TOP OF CMU WALLS, AT FLOOR AND ROOF LINES AND AT A VERTICAL SPACING NOT TO EXCEED 8'-0".

7. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY LATERAL SUPPORT FOR ALL MASONRY WALLS DURING CONSTRUCTION.

8. ALL MASONRY WALLS SHALL BE SHORED AGAINST WIND FORCES AND CONSTRUCTION LOADINGS, THESE SHORES SHALL REMAIN UNTIL ELEVATED FLOOR, ROOF AND SLAB ON GRADE ARE IN PLACE.

9. MASONRY WALLS ARE NOT DESIGNED AS CANTILEVER WALLS OR AS OTHERWISE UNSUPPORTED. MASONRY WALLS ARE DESIGNED TO RESIST FINAL LOAD CONDITIONS. AS SUCH, ALL TEMPORARY BRACING OF THE WALLS DUE TO WIND LOAD, IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL MASONRY CONSTRUCTION HAS ACHIEVED 100% OF THE 28 DAY COMPRESSIVE STRENGTH AND LATERAL SUPPORT PROVIDED BY ROOF SYSTEM AND ROOF DECK IS IN PLACE.

10. MASONRY UNITS SHALL BE STORED AND PROTECTED SO THAT THEY ARE MAINTAINED IN A DRY CONDITION. WET MASONRY UNITS SHALL NOT BE LAID. INSTALLED MASONRY SHALL BE COVERED AND PROTECTED UNTIL IT HAS BEEN GROUTED AND HAS ACHIEVED 2/3 OF ITS 28 DAY COMPRESSIVE STRENGTH.

11. COLD WEATHER AND HOT WEATHER CONSTRUCTION REQUIREMENTS SHALL BE FOLLOWED AS REQUIRED PENDING CONSTRUCTION WEATHER CONDITIONS AND SHALL BE IN ACCORDANCE WITH ACI 530.1

Roof Wind Uplift Zones

No Scale

ROOF TRUSS UPLIFT VALUES  
(unless otherwise noted)

ZONE 1 = +16, –29 PSF

ZONE 2 = +16, –49 PSF

ZONE 3 = +16, –73 PSF

UPLIFT VALUES FOR ROOF TRUSS COMPONENTS & CLADDING DETERMINED IN ACCORDANCE WITH ASCE 7–10, ASSUMING AN EFFECTIVE AREA OF 10 SF. UPLIFT VALUES ARE FACTORED LOADS.

ZONE 4 = +27, –29 psf  
ZONE 5 = +27, –36 psf

Wall Wind Uplift Zones

No Scale

CONSTRUCTION DOCUMENTS

studio

kremer architects

1231 S Shelby St, Louisville, KY 40203

TEL 502.499.1100 FAX 502.499.1101

STATE OF KENTUCKY

NICHOLAS D. CARTER

25710

14036563

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Prospect, KY 40369

(602) 282-2000

OHIO VALLEY EDUCATIONAL COOPERATIVE

OHIO VALLEY EDUCATIONAL COOPERATIVE

100 Alpine Rd.

Shelbyville, KY 40065

GENERAL NOTES

DATE: 9.9.20

DRAWN BY: NDC

CHECKED BY: NDC

REVISIONS:

#2019-51

S0.0



SPECIAL INSPECTIONS

1. GENERAL

A. SPECIAL INSPECTOR MEETING REQUIREMENTS OF CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE ARE REQUIRED FOR THIS PROJECT. THE OWNER SHALL RETAIN THE SERVICES OF A LICENSED PROFESSIONAL QUALIFIED TO PERFORM SPECIAL INSPECTION SERVICES. AS A PART OF THE WORK BID, THE CONTRACTOR AND SUB-CONTRACTORS SHALL FULLY COOPERATE AT ALL TIMES WITH THE OWNER'S SPECIAL INSPECTOR OF RECORD (SIR) AND HIS/HER AGENTS. THE CONTRACTOR AND SUB-CONTRACTORS SHALL PROVIDE ACCESS TO THE SITE AND TO SPECIFIC AREAS OF WORK AS REQUIRED BY THE (SIR) OR HIS/HER AGENTS. THE CONTRACTOR SHALL ASSIST THE (SIR) IN COORDINATING THE TIMING OF INSPECTIONS AND SITE VISITS. THE CONTRACTOR SHALL NOTIFY THE (SIR) OR HIS/HER AGENTS IMMEDIATELY WHEN ITEMS SPECIFIED FOR INSPECTION ARE EITHER NOT COMPLETE OR ARE NOT ACCESSIBLE FOR INSPECTION DUE TO OTHER CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TIME AND COSTS INCURRED WHEN INSPECTION ITEMS ARE NOT COORDINATED PROPERLY.

2. REPORTING AND COMPLIANCE PROCEDURES

A. ON THE FIRST DAY OF EACH MONTH, THE SPECIAL INSPECTOR OF RECORD SHALL FURNISH COPIES OF THE COMBINED PROGRESS REPORTS OF THE SPECIAL INSPECTOR'S OBSERVATIONS. THESE PROGRESS REPORTS SHALL LIST ALL SPECIAL INSPECTIONS OF CONSTRUCTION OR REVIEWS OF TESTING PERFORMED DURING THAT MONTH, NOTE ALL UNCORRECTED DEFICIENCIES, AND DESCRIBE THE CORRECTIONS MADE BOTH TO THESE DEFICIENCIES AND TO PREVIOUSLY REPORTED DEFICIENCIES.

B. ANY DISCREPANCIES, IRREGULARITIES, NON-COMPLIANCE WITH THE CONTRACT DOCUMENTS OBSERVED DURING THE INSPECTION WORK SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT, ENGINEER, CONSTRUCTION MANAGER, AND OWNER IN WRITING BY MEANS OF A "DEFICIENCY LOG". ISSUES INVOLVING ON-GOING CONSTRUCTION AT THE SITE SHOULD BE BROUGHT TO ALL PARTIES ATTENTION IMMEDIATELY BY TELEPHONE, FAX, MAIL AND/OR E-MAIL TO AVOID POSSIBLE MATERIAL AND LABOR WASTE.

C. CONSTRUCTION NOT COMPLYING WITH THE CONTRACT DOCUMENTS AND FOUND NOT IN COMPLIANCE WITH THE SPECIAL INSPECTION PROGRAM SHALL BE REPLACED AT NO COST TO THE OWNER.

D. TESTING AND EMPLOYMENT OF ANY OTHER TESTING AGENCY OR LABORATORY BY THE CONTRACTOR SHALL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO PERFORM WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

E. THE SPECIAL INSPECTOR OF RECORD (SIR) SHALL SUBMIT A COMBINED FINAL REPORT CONTAINING THE SIGNED FINAL REPORTS OF ALL THE SPECIAL INSPECTORS. THE (SIR) SHALL SIGN THE COMBINED FINAL REPORT ATTESTING THAT ALL FINAL REPORTS OF SPECIAL INSPECTORS THAT PERFORMED WORK TO COMPLY WITH THESE CONSTRUCTION DOCUMENTS ARE CONTAINED THEREIN, AND THAT THE (SIR) HAS REVIEWED AND APPROVED ALL OF THE INDIVIDUAL INSPECTOR'S FINAL REPORTS.

F. AT COMPLETION OF THE PROJECT, THE SPECIAL INSPECTOR OF RECORD SHALL COMPLETE THE FINAL REPORT AND AFFIX THE PROFESSIONAL REGISTRATION SEAL AND SIGNATURE. THE FINAL REPORT SHALL BE SUBMITTED TO THE DEPT. OF HOUSING, BUILDINGS AND CONSTRUCTION AND TO THE PARTIES LISTED ABOVE.

G. SAMPLE REPORTING FORMS ARE AVAILABLE AT WWW.SEOK.ORG.

3. QUALIFICATIONS OF INSPECTION AGENTS

A. WHEN THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE DEEMS IT APPROPRIATE THAT THE INDIVIDUAL PERFORMING A STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION OR LICENSE AS INDICATED BELOW, SUCH DESIGNATION SHALL APPEAR BELOW THE AGENCY NUMBER ON THE SCHEDULE. THE RDP MUST DETERMINE WHAT QUALIFICATIONS ARE APPROPRIATE FOR THE PARTICULAR PROJECT AND CONFIRM THAT THE SELECTED AGENCY EMPLOYS INDIVIDUALS WITH THE SPECIFIED QUALIFICATIONS.

PE STRUCTURAL ENGINEER – A LICENSED PE SPECIALIZING IN THE DESIGN OF BUILDING STRUCTURES WITH A MINIMUM OF FIVE YEARS OF LICENSED EXPERIENCE.  
PE/GE GEOTECHNICAL ENGINEER – A LICENSED PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS WITH A MINIMUM OF FIVE YEARS OF LICENSED EXPERIENCE.  
EIT ENGINEER-IN-TRAINING – A GRADUATE ENGINEER WHO HAS PASSED THE FUNDAMENTALS OF ENGINEERING EXAMINATION.

AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION  
ACI-CFTT CONCRETE FIELD TESTING TECHNICIAN – GRADE 1  
ACI-CCI CONCRETE CONSTRUCTION INSPECTOR  
ACI-LTT LABORATORY TESTING TECHNICIAN – GRADE 1&2  
ACI-STT STRENGTH TESTING TECHNICIAN

AMERICAN WELDING SOCIETY (AWS) CERTIFICATION  
AWS-CWI CERTIFIED WELDING INSPECTOR  
AWS/AISC-SSI CERTIFIED STRUCTURAL STEEL INSPECTOR

AMERICAN SOCIETY OF NON-DESTRUCTIVE TESTING (ASNT) CERTIFICATION  
ASNT NON-DESTRUCTIVE TESTING TECHNICIAN – LEVEL II OR III.

INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION  
ICC-SMSI STRUCTURAL MASONRY SPECIAL INSPECTOR  
ICC-SWSI STRUCTURAL STEEL AND WELDING SPECIAL INSPECTOR  
ICC-SFSI SPRAY-APPLIED FIREPROOFING SPECIAL INSPECTOR  
ICC-PCSI PRESTRESSED CONCRETE SPECIAL INSPECTOR  
ICC-RCSI REINFORCED CONCRETE SPECIAL INSPECTOR

NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET)  
NICET-CT CONCRETE TECHNICIAN – LEVELS I, II, III & IV  
NICET-ST SOILS TECHNICIAN – LEVELS I, II, III & IV  
NICET-GET GEOTECHNICAL ENGINEERING TECHNICIAN – LEVELS I, II, III & IV

4. STATEMENT OF SPECIAL INSPECTIONS

A. THE FOLLOWING TABLES SHALL SERVE AS THE SUMMARY OF THE "STATEMENT OF SPECIAL INSPECTIONS THAT WILL BE COMPLETED BY THE OWNER'S SPECIAL INSPECTOR OF RECORD (SIR). THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE. THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL ASSIST THE (SIR) AND HIS/HER AGENT AND SHALL PROVIDE ALL REQUESTED INFORMATION AND DATA TO THE (SIR) AS NECESSARY. THE CONTRACTOR AND SUB-CONTRACTORS SHALL PREPARE, COMPLETE, SIGN, AND SUBMIT ALL CONTRACTOR'S STATEMENT OF RESPONSIBILITY" LETTERS TO THE (SIR) AND THE ARCHITECT OF RECORD.

B. SPECIAL INSPECTIONS INCLUDE THE FOLLOWING DISCIPLINES: STRUCTURAL

Soils and Foundations

Item	Agency # (Qualif.)	Scope
1. Shallow Foundations	PE/GE	1. Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report. 2. Inspect removal of unsuitable material and preparation of subgrade prior to placement of controlled fill.
2. Controlled Structural Fill	PE/GE	1. Perform sieve tests (ASTM D422 & D1140) and modified Proctor tests (ASTM D1557) of each source of fill material. Inspect placement, lift thickness and compaction of controlled fill. 2. Test density of each lift of fill by nuclear methods (ASTM D2922) 3. Verify extent and slope of fill placement.

Cast-in-Place Concrete

Item	Agency # (Qualif.)	Scope
1. Mix Design	ACI-CCI ICC-RCSI	1. Review concrete batch tickets and verify compliance with approved mix design. 2. Verify that water added at the site does not exceed that allowed by the mix design.
2. Reinforcement Installation	ACI-CCI ICC-RCSI	1. Inspect size, spacing, cover, positioning and grade of reinforcing steel. 2. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. 3. Verify that bars are adequately tied and supported on chairs or belsters
3. Welding of Reinforcing	AWS-CWI	1. Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.
4. Anchor Rods	ACI-CCI ICC-RCSI	1. Inspect size, positioning and embedment of anchor rods. 2. Inspect concrete placement and consolidation around anchors.
5. Concrete Placement	ACI-CCI ICC-RCSI	1. Inspect placement of concrete. 2. Verify that concrete conveyance and depositing avoids segregation or contamination. 3. Verify that concrete is properly consolidated.
6. Sampling and Testing of Concrete	ACI-CFTT ACI-STT	1. Test concrete compressive strength (ASTM C31 & C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064).
7. Curing and Protection	ACI-CCI ICC-RCSI	1. Inspect curing, cold weather protection and hot weather protection procedures.

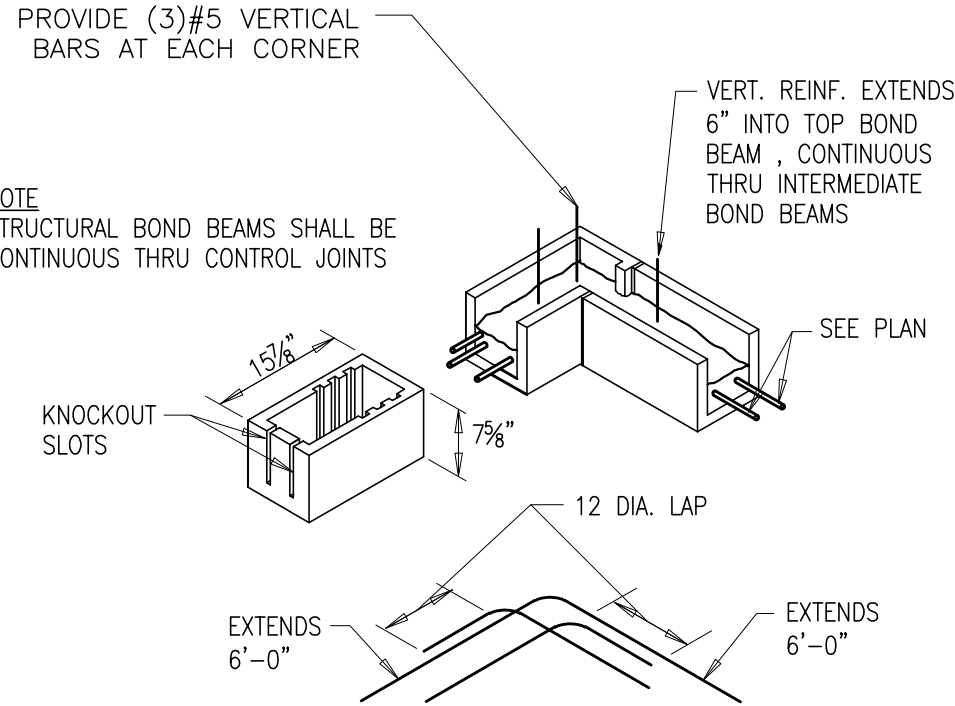
Structural Steel

Item	Agency # (Qualif.)	Scope
1. Fabricator Certification/Quality Control Procedures	AWS/AISC-SSI ICC-SWSI	1. Review shop fabrication and quality control procedures.
2. Material Certification	AWS/AISC-SSI ICC-SWSI	1. Review certified mill test reports and identification markings on structural steel shapes, high-strength bolts, nuts, and welding electrodes
4. Bolting	AWS/AISC-SSI ICC-SWSI	1. Inspect installation and tightening of high-strength bolts. 2. Verify that splices have separated from tension control bolts 3. Verify proper tightening sequence. Continuous inspection of bolts in slip-critical connections.
5. Welding	AWS-CWI ASNT	1. Visually inspect joist field welds. 2. Visually inspect all welds. Inspect pre-heat, post-heat and surface preparation between passes. 3. Verify size and length of fillet welds. 4. Ultrasonic testing of all full-penetration welds.
6. Metal Deck	AWS-CWI ASNT	1. Review certified mill test reports and identification markings on steel roof deck, floor deck, and deck fasteners. 2. Visually inspect all deck fastening.

Masonry

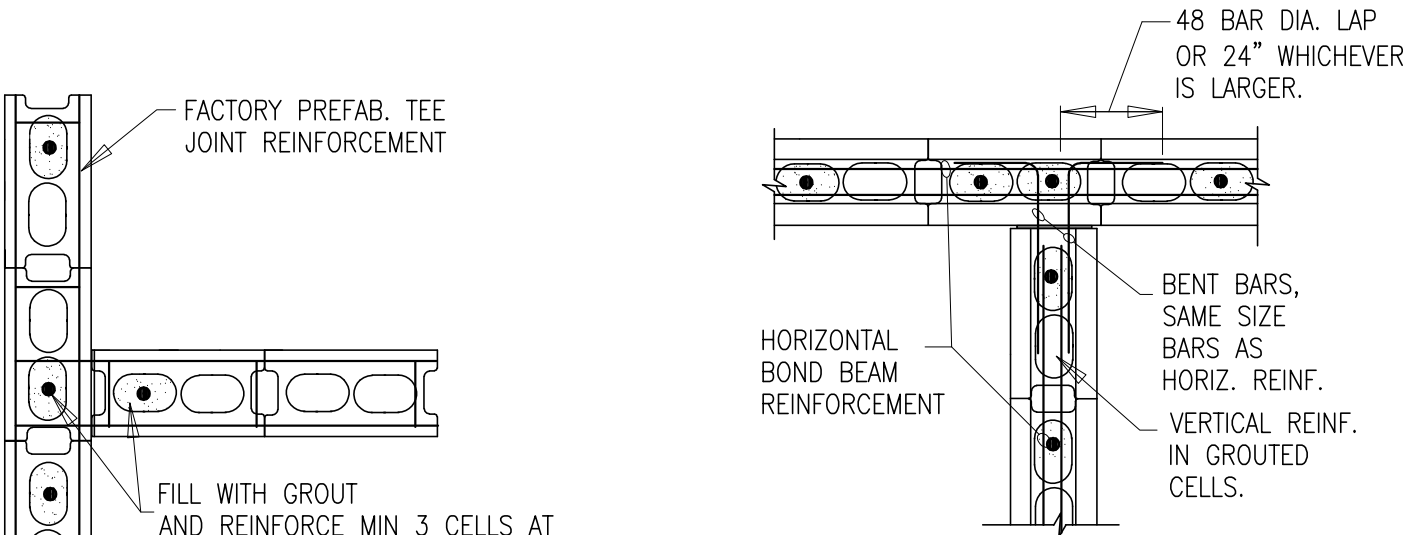
Required Inspection Level: ☒ Level 1 ☐ Level 2

Item	Agency # (Qualif.)	Scope
1. Mixing of Mortar and Grout	ICC-SMSI	1. Inspect proportioning, mixing and retempering of mortar and grout.
2. Installation of Masonry	ICC-SMSI	1. Inspect size, layout, bonding and placement of masonry units.
3. Mortar Joints	ICC-SMSI	1. Inspect construction of mortar joints including tooling and filling of head joints
4. Reinforcement Installation	ICC-SMSI AWS-CWI	1. Inspect placement, positioning and lapping of reinforcing steel. 2. Inspect welding of reinforcing steel.
5. Grouting Operations	ICC-SMSI	1. Inspect placement and consolidation of grout. Inspect masonry clean-outs for high-lift grouting.
6. Weather Protection	ICC-SMSI	1. Inspect cold weather protection and hot weather protection procedures. 2. Verify that wall cavities are protected against precipitation.
7. Evaluation of Masonry Strength	ICC-SMSI	1. Test compressive strength of mortar and grout cube samples (ASTM C780). 2. Test compressive strength of masonry prisms (ASTM C1314).
8. Anchors and Ties	ICC-SMSI	1. Inspect size, location, spacing and embedment of dowels, anchors and ties.



TYPICAL CMU CORNER DETAIL AND BOND BEAM UNIT AT CORNER

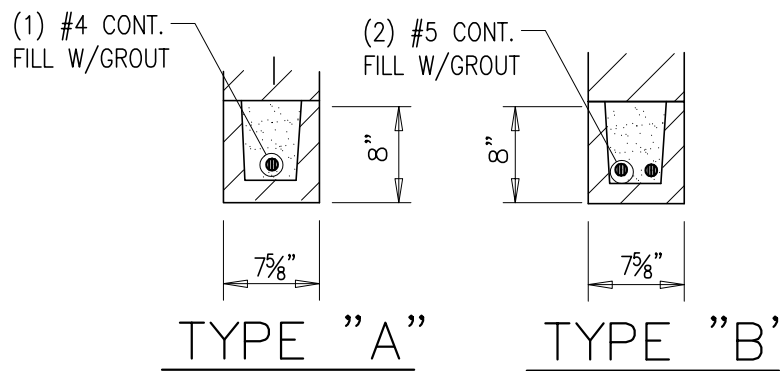
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INTERSECTION OF STRUCTURAL BOND BEAMS

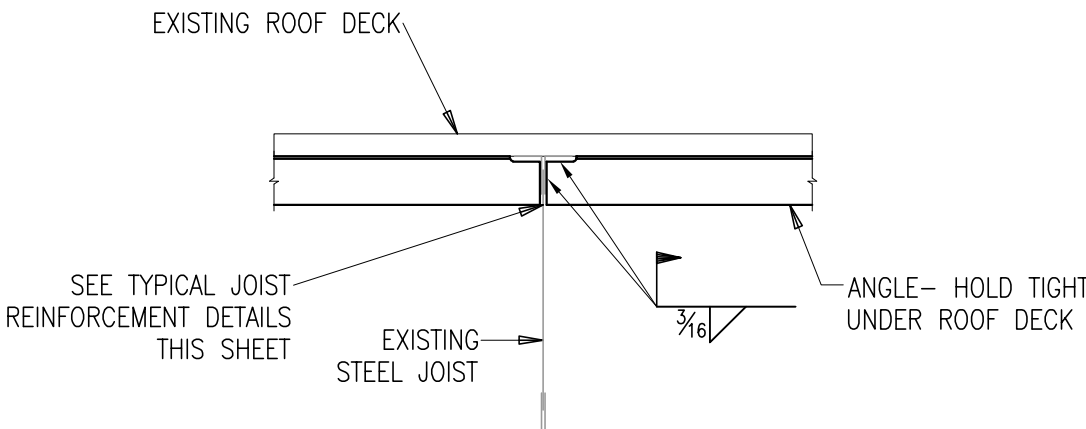
TYPICAL MASONRY REINFORCEMENT DETAILS

SCALE : NTS



MISC. MASONRY LINTEL SCHEDULE				
-TYP. UNLESS DETAILED ELSEWHERE				
OPENING WIDTH	C.M.U. THICKNESS	BOND BEAM	REINF.	TYPE
LESS THAN 4'-8"	8"	(1) 8" DEEP	1#5	"A"
5'-0" TO 10'-0"	8"	(1) 8" DEEP	2#5	"B"

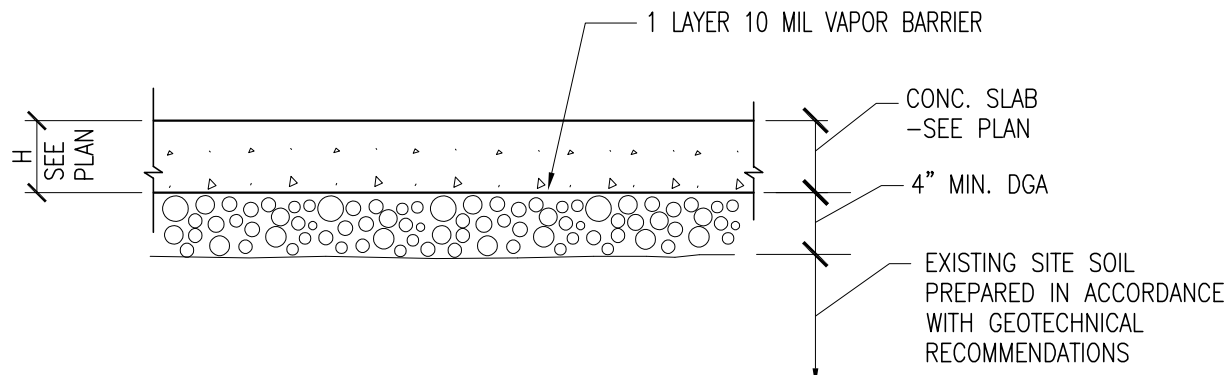
\*PROVIDE A MINIMUM OF 8" BEARING ON EACH END OF LINTEL. PROVIDE #5 VERTICAL BAR IN ALL OPENING JAMBS TO T.O. WALL.



TYPICAL ANGLE CONNECTION TO EXISTING JOIST

BRICK LINTEL SCHEDULE	
-TYP. UNLESS DETAILED ELSEWHERE	
OPENING WIDTH	ANGLE SIZE
LESS THAN 6'-0"	L7x4x3/8 (LLH)
6'-0" TO 14'-0"	B.P.3/8"x7"x7"

ALL LINTELS SHALL BE HOT DIPPED GALVANIZED. PROVIDE 3/8"x4" SIMPSON TITEN HD HDG ANCHORS @24" O.C.INTO CMU LINTEL. LOCATE ANCHOR 1" DOWN FROM THE TOP OF VERTICAL LEG.

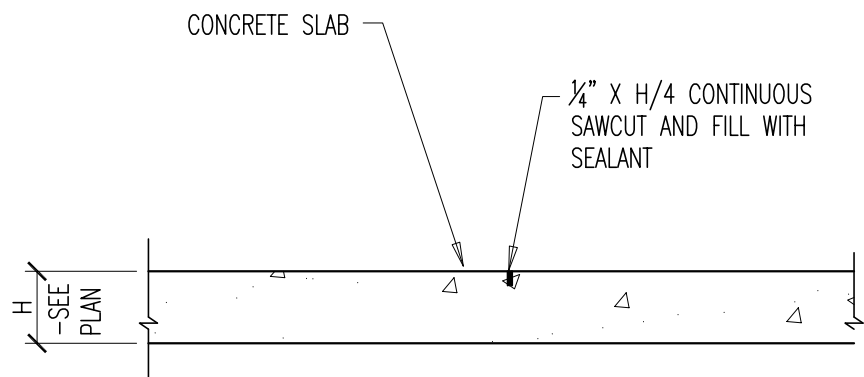


Typical Slab on Grade Detail

SCALE : NTS

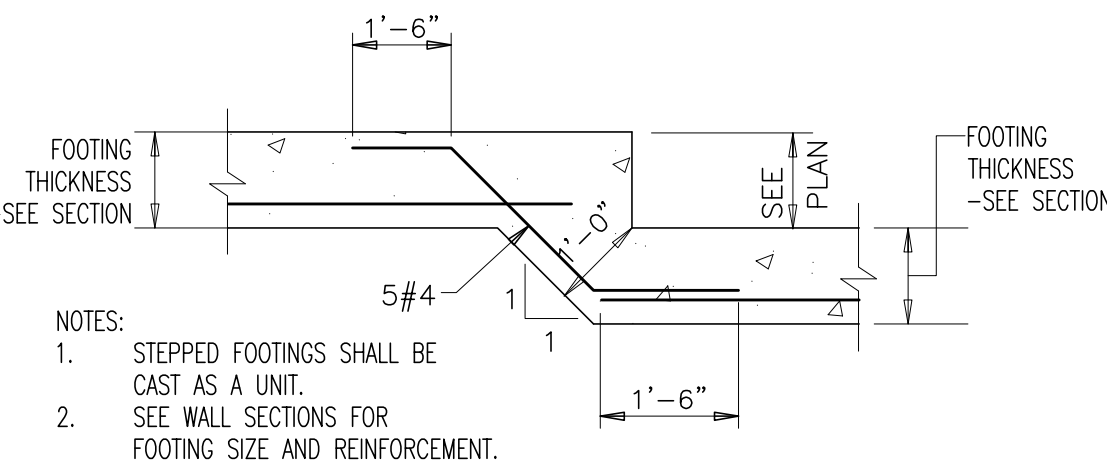
TYPICAL SOIL PROFILES:

- INTERPRETATION OF SITE CONDITIONS SHALL BE AS PER THE DIRECTION OF THE GEOTECHNICAL TESTING AGENCY OVERSEEING SITE PREPARATION WORK.
- TEST ALL EXISTING SOILS PER RECOMMENDATION OF GEOTECHNICAL TESTING AGENCY TO IDENTIFY LOCATIONS OF UNSTABLE SOILS WHICH MAY REQUIRE REMEDIATION.



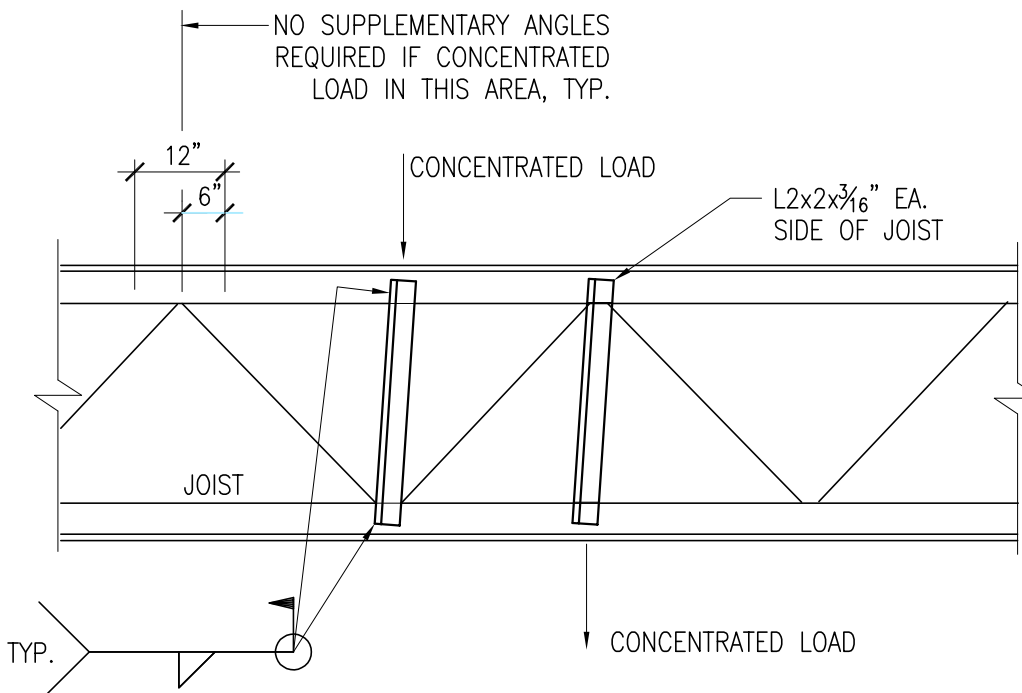
Interior Slab on Grade Control Joint Detail

SCALE: N.T.S.



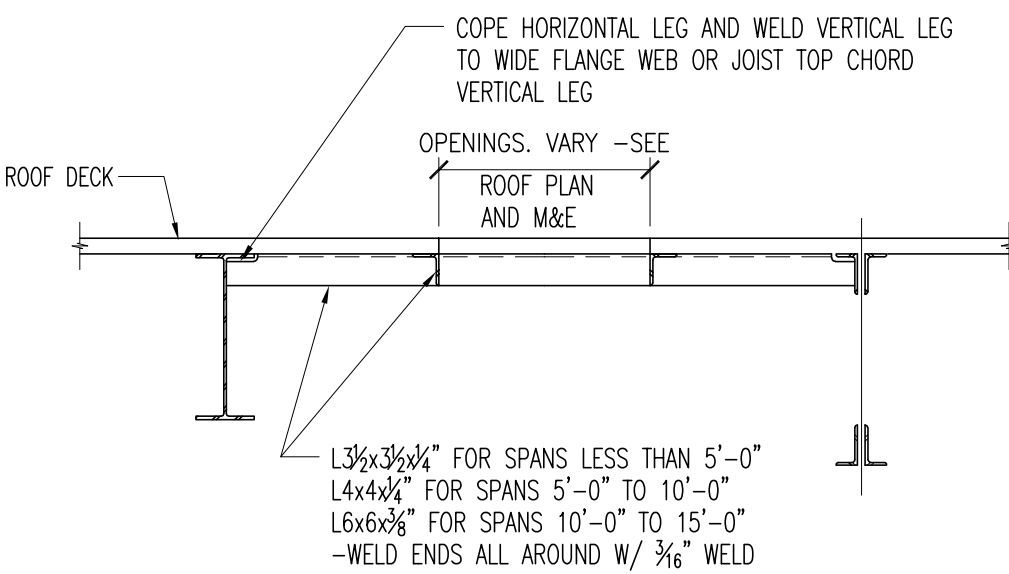
Typical Footing Step

SCALE: None



EXISTING STEEL JOIST REINFORCEMENT

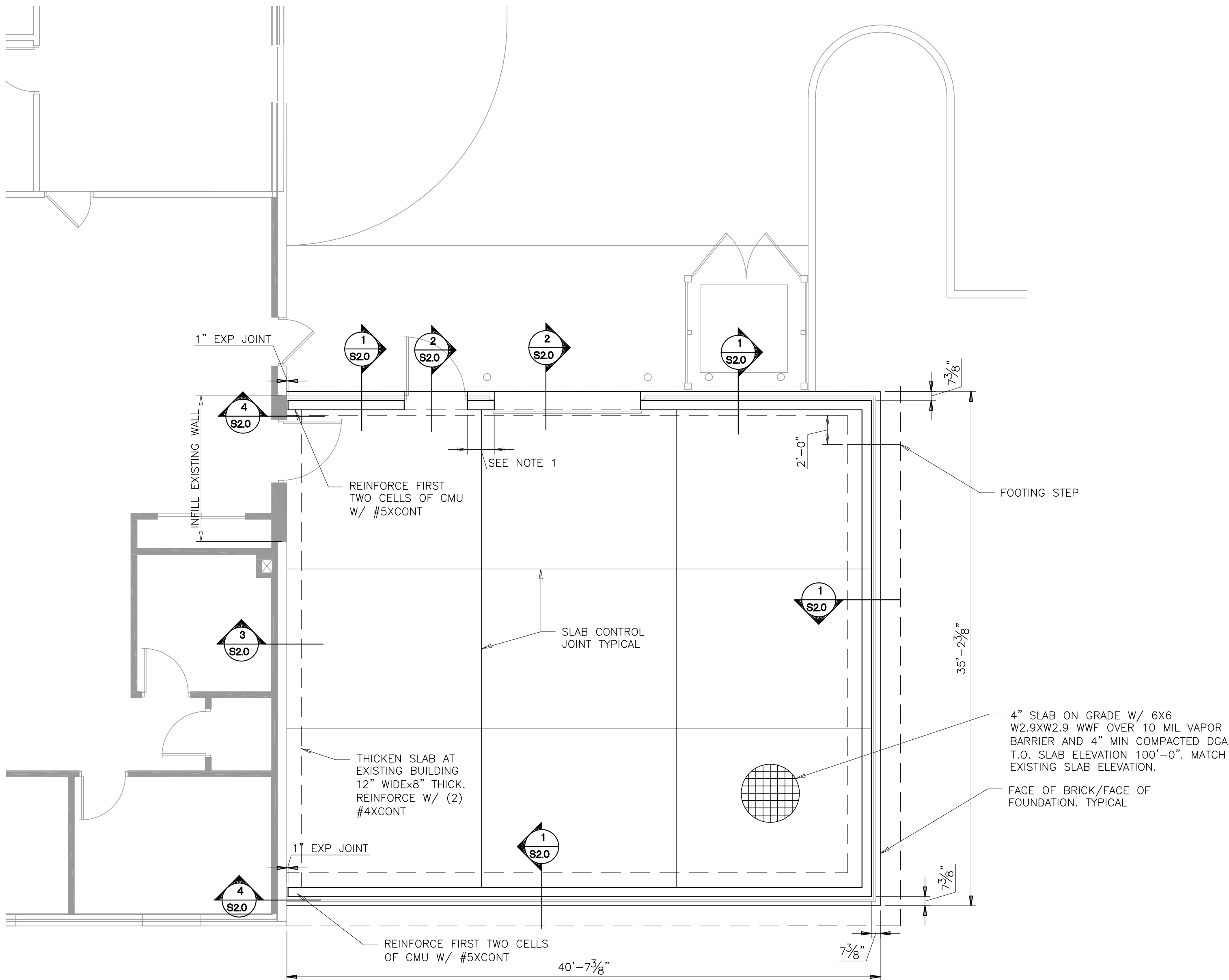
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ANGLE FRAMES • ROOF OPENINGS

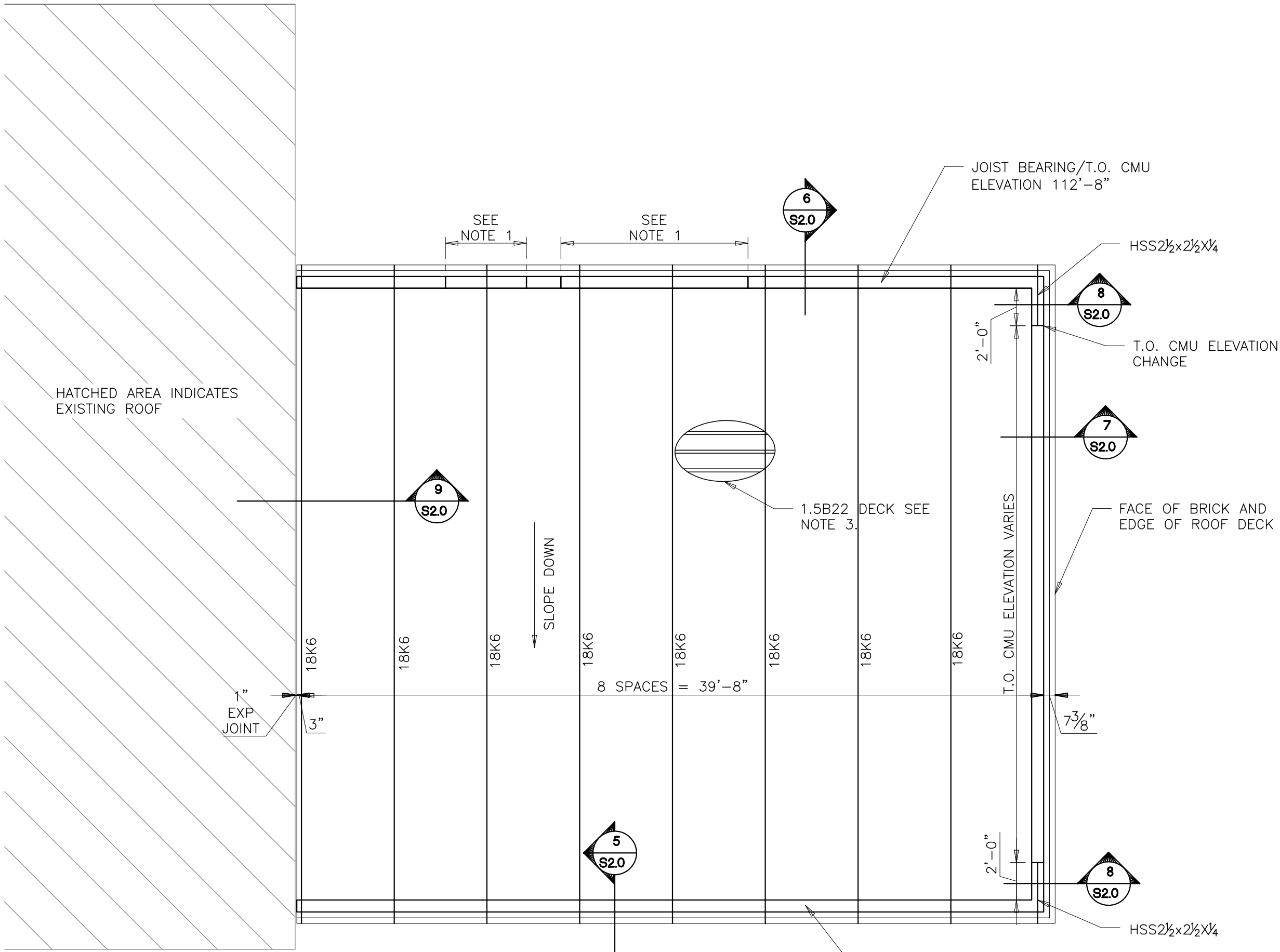
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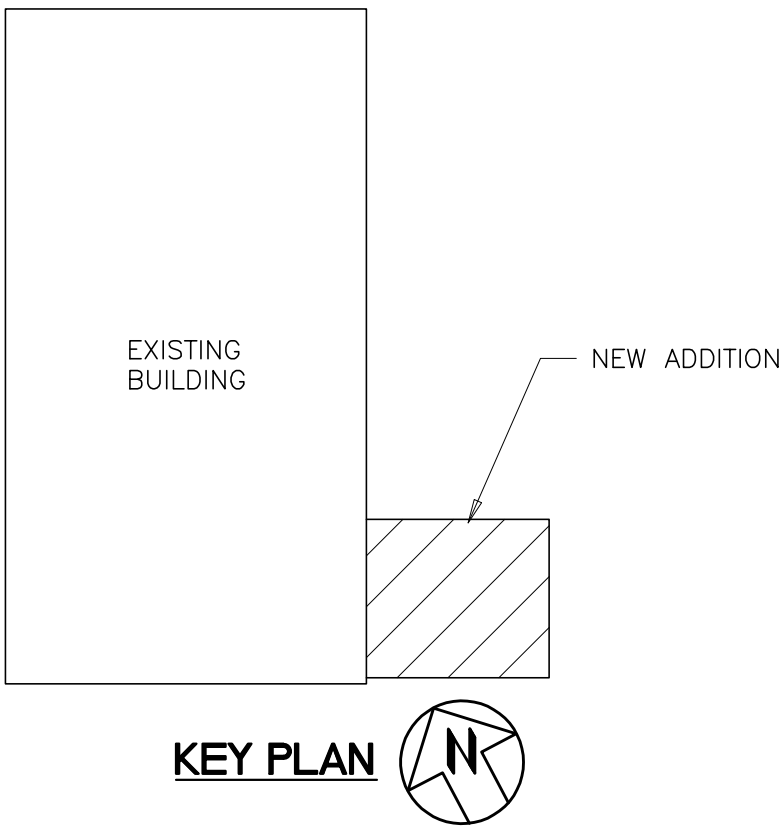
ADDITION FOUNDATION PLAN  
SCALE 3/16"=1'-0"

- DRAWING NOTES:
1. REINFORCE EACH CELL OF THIS PORTION OF WALL WITH #5 W/ STD HOOK INTO FOOTING. GROUT ALL CELLS AND VOIDS SOLID.



ADDITION ROOF FRAMING PLAN  
SCALE 3/16"=1'-0"

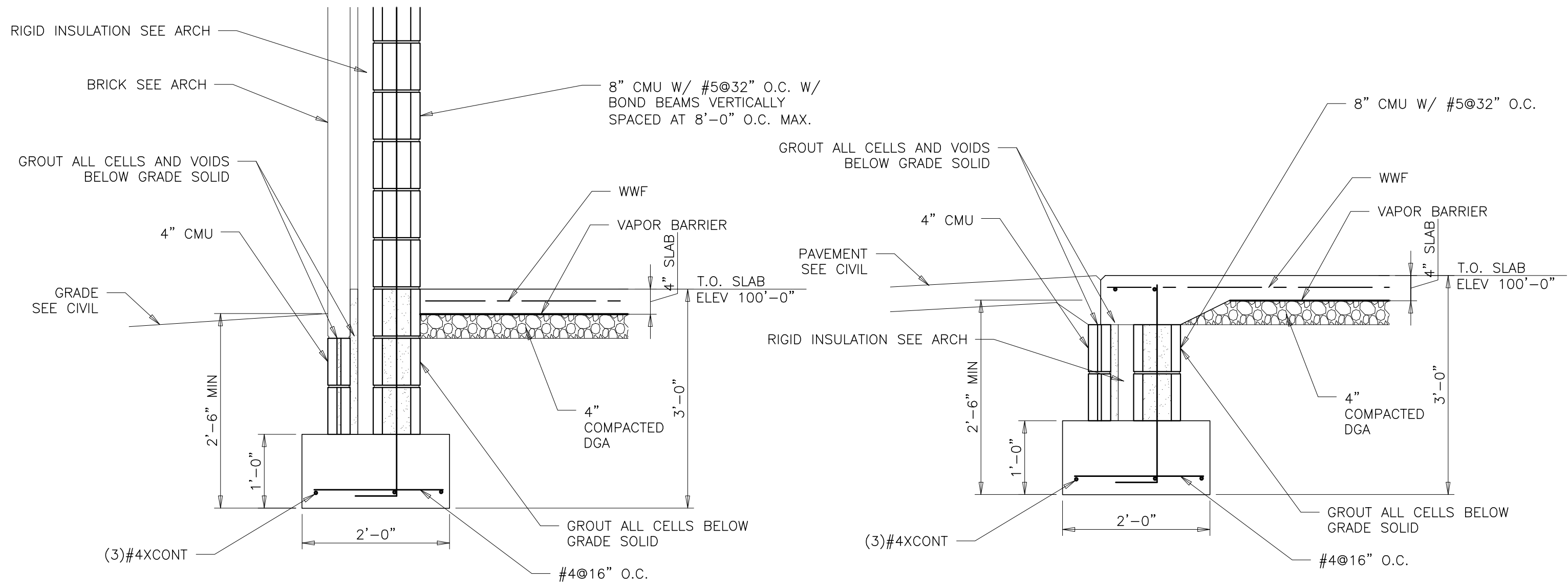
- DRAWING NOTES:
1. SEE TYPICAL DETAILS FOR NEW CMU AND BRICK LINTELS.
  2. JOIST VENDOR TO PROVIDE BRIDGING PER SJI REQUIREMENTS.
  3. PROVIDE 3/8" FASTENING PATTERN WITH W/ #12 SCREWS INTO SUPPORTS AND #12 SCREW @12" O.C. AT PERIMETER. PROVIDE (2) #10 SIDE LAP FASTENERS.



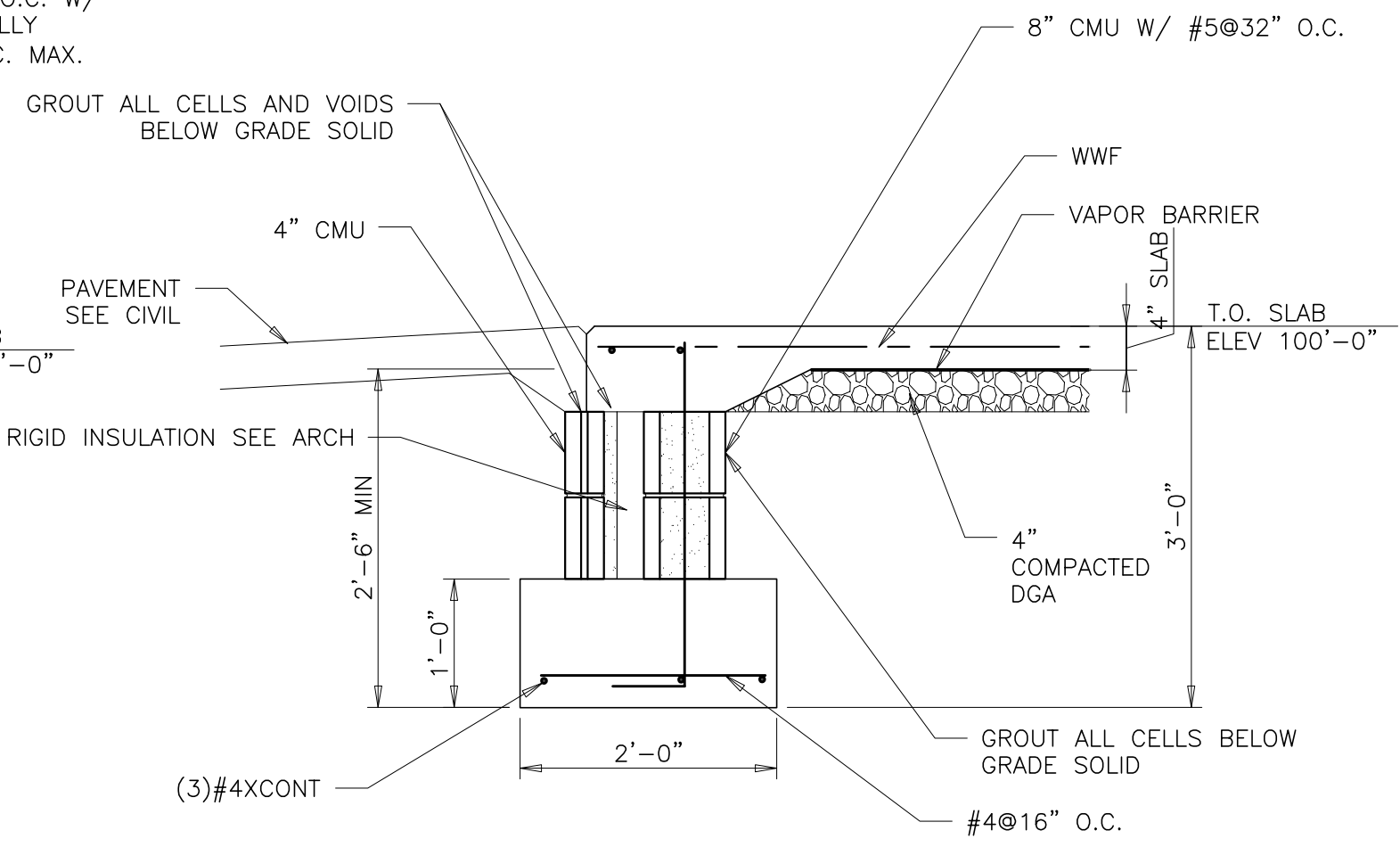
CONSTRUCTION DOCUMENTS

studio <b>kremer</b> architects 1231 S Shelby St, Louisville, KY 40203 TEL 502.499.1100 FAX 502.499.1101	
<b>S2</b> STRUCTURAL SERVICES, INC. 5948 Timber Ridge Dr., Suite 201 Prospect, KY 40059 (602) 282-2000	
FOUNDATION AND ROOF FRAMING PLAN	<b>OHIO VALLEY EDUCATIONAL COOPERATIVE</b> 100 Alpine Rd. Shelbyville, KY 40065
DATE: 9.9.20 DRAWN BY: NDC CHECKED BY: NDC REVISIONS:	
#2019-51	
<b>S1.0</b>	

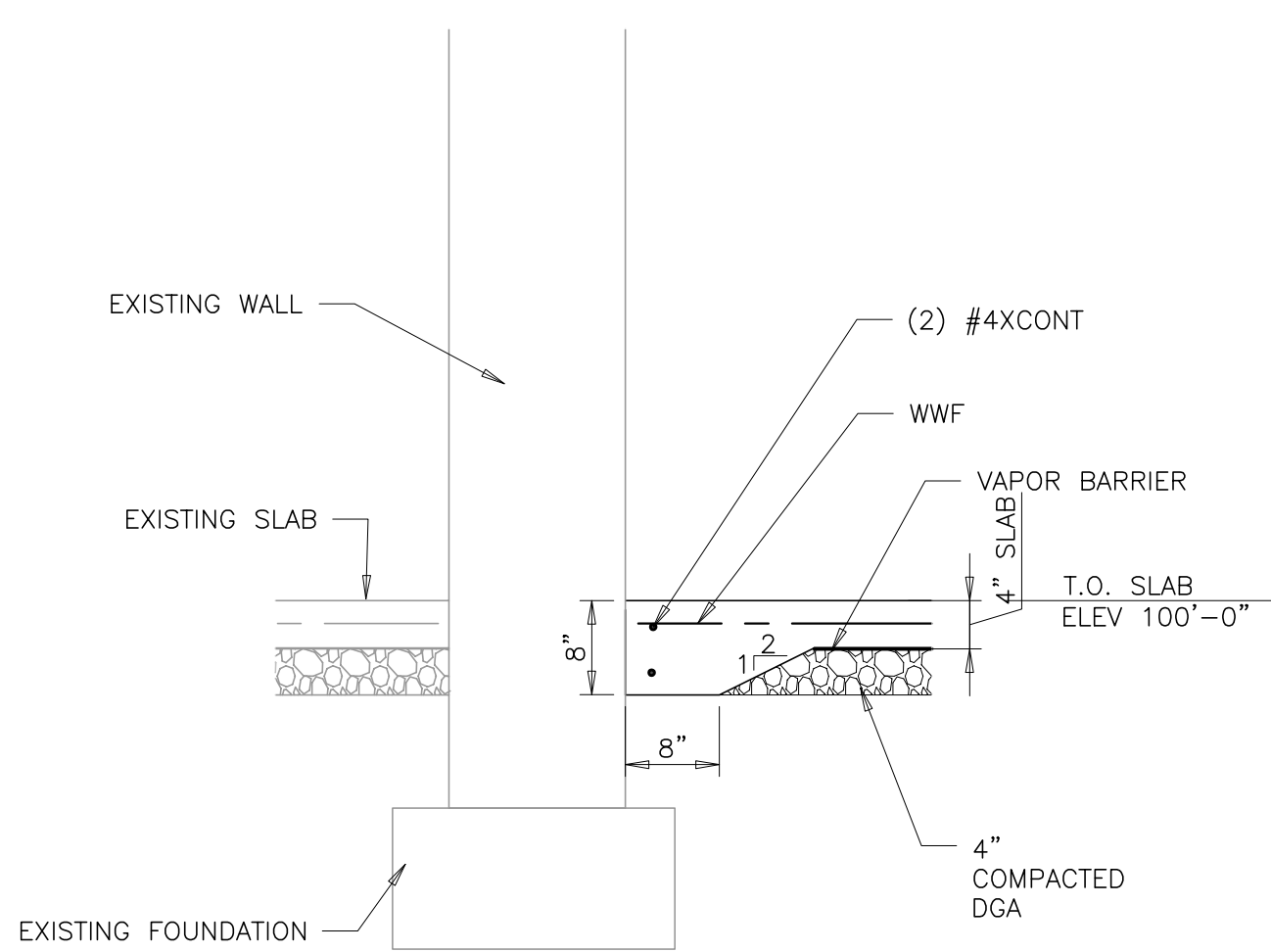




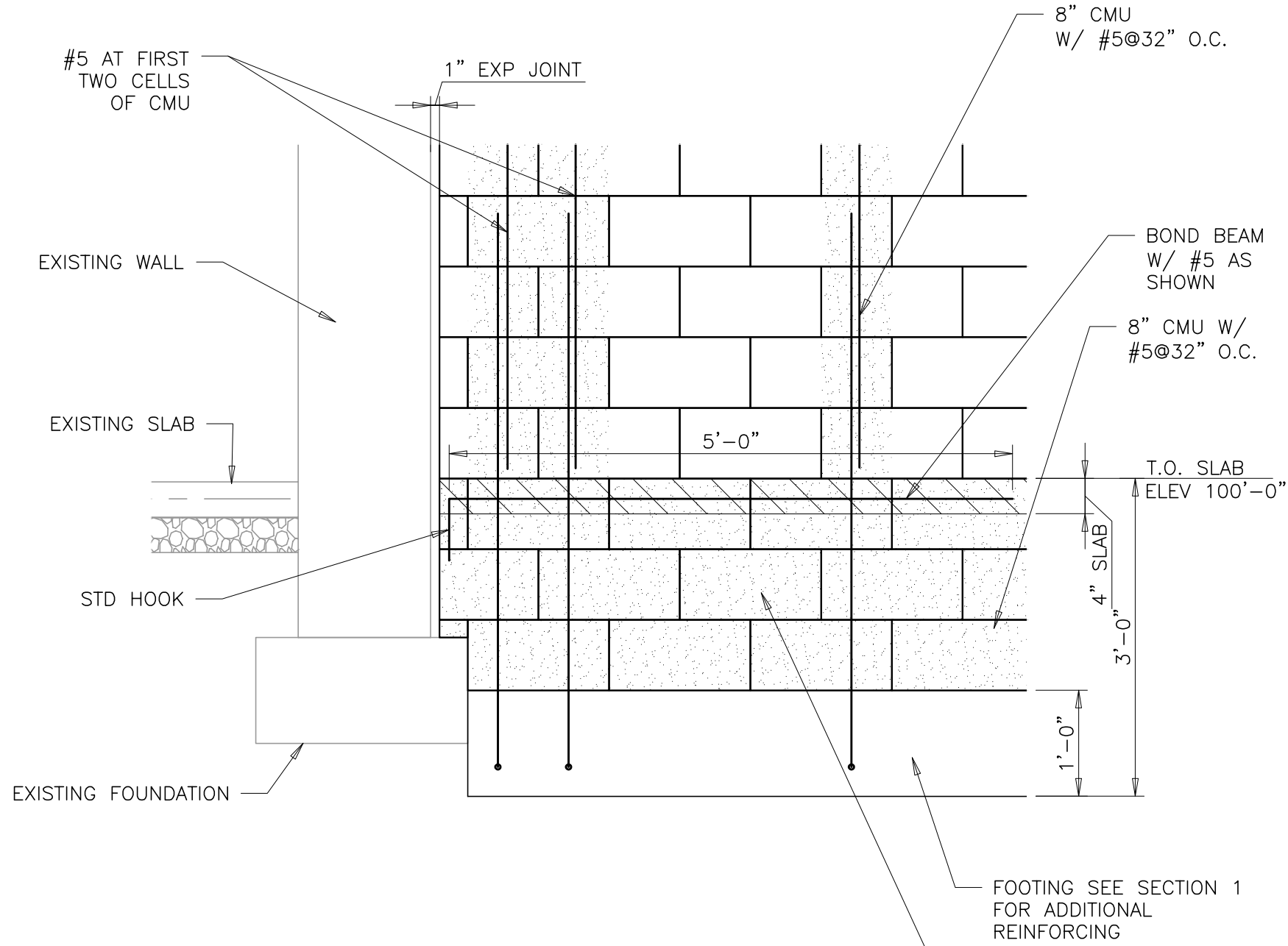
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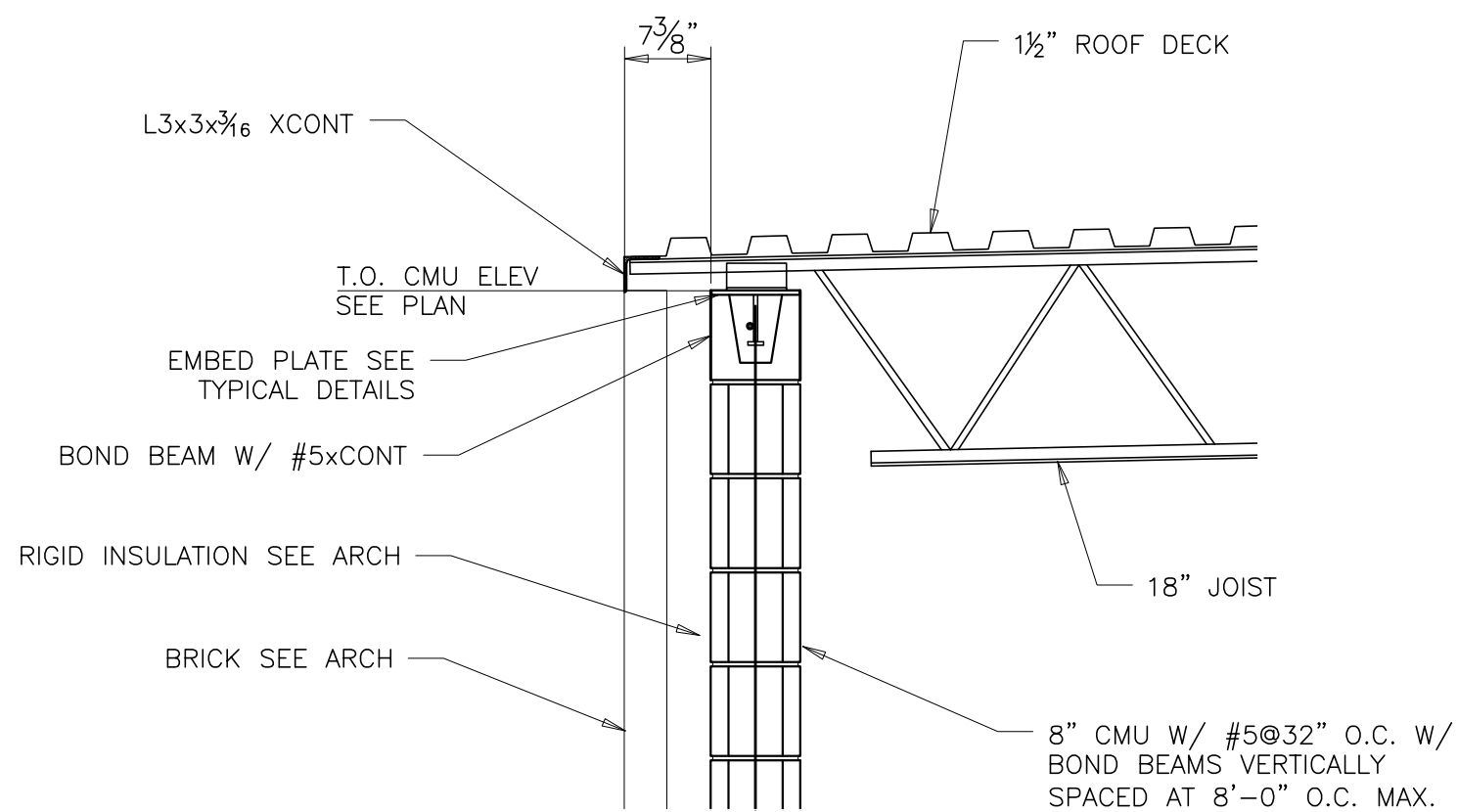
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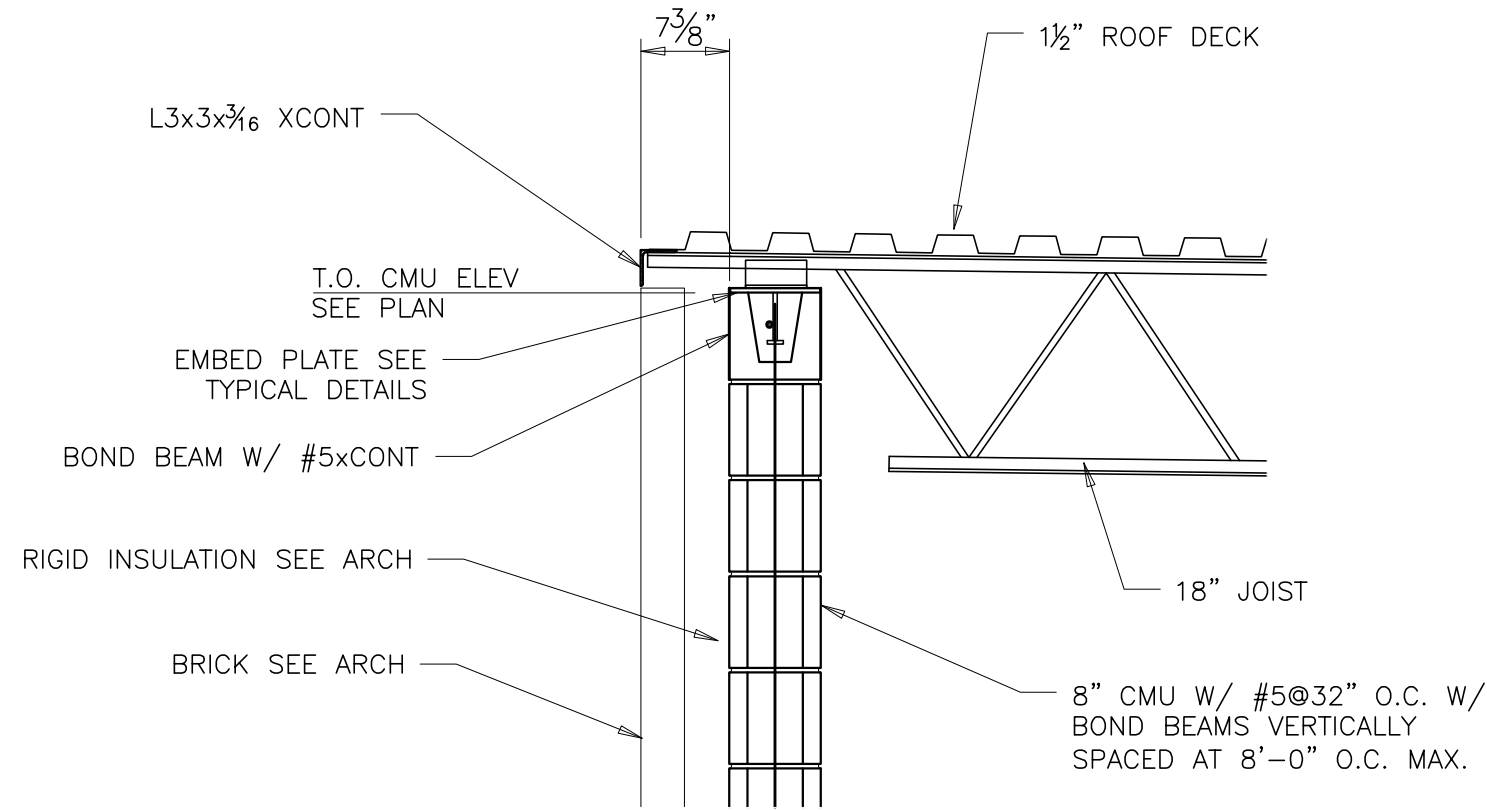
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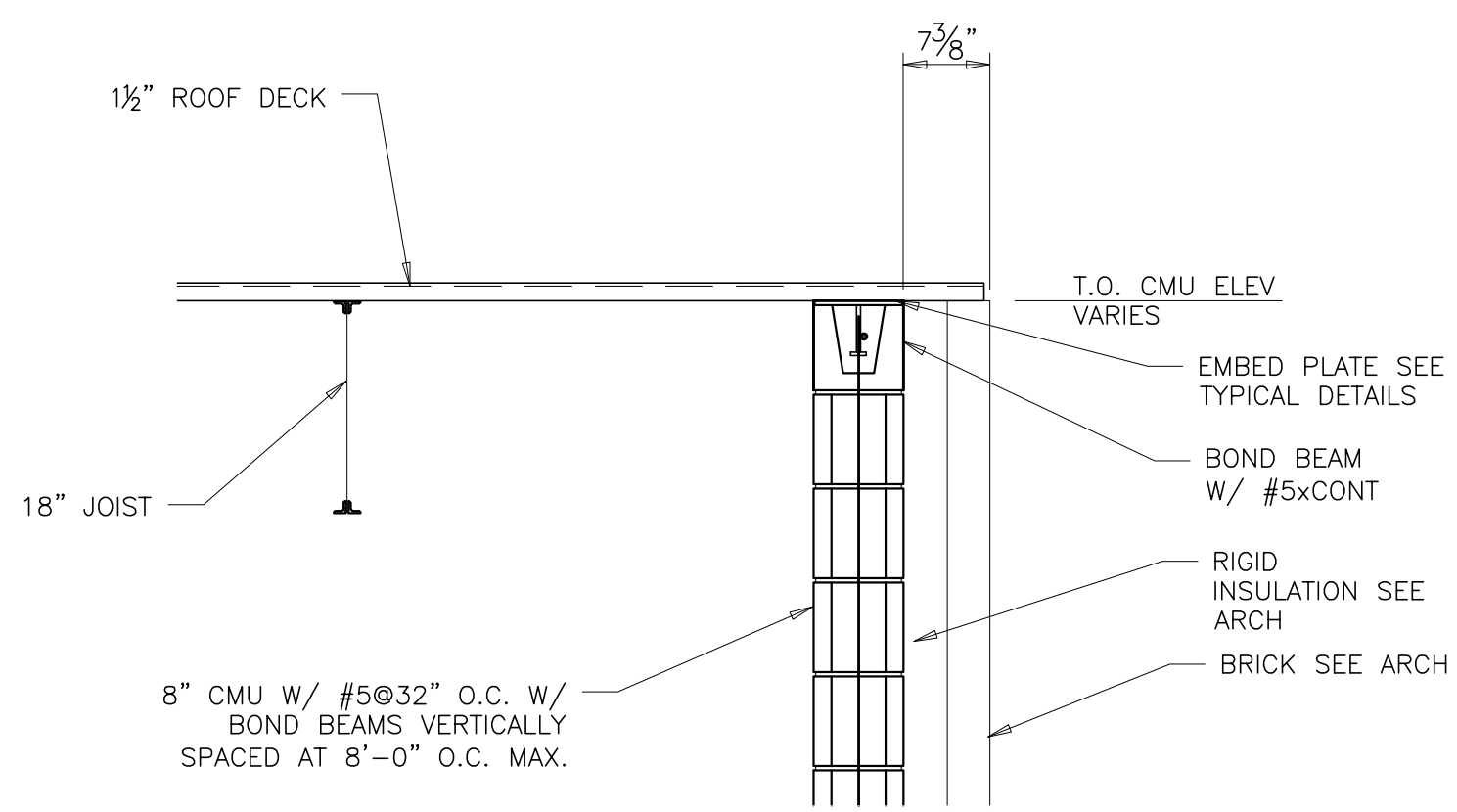
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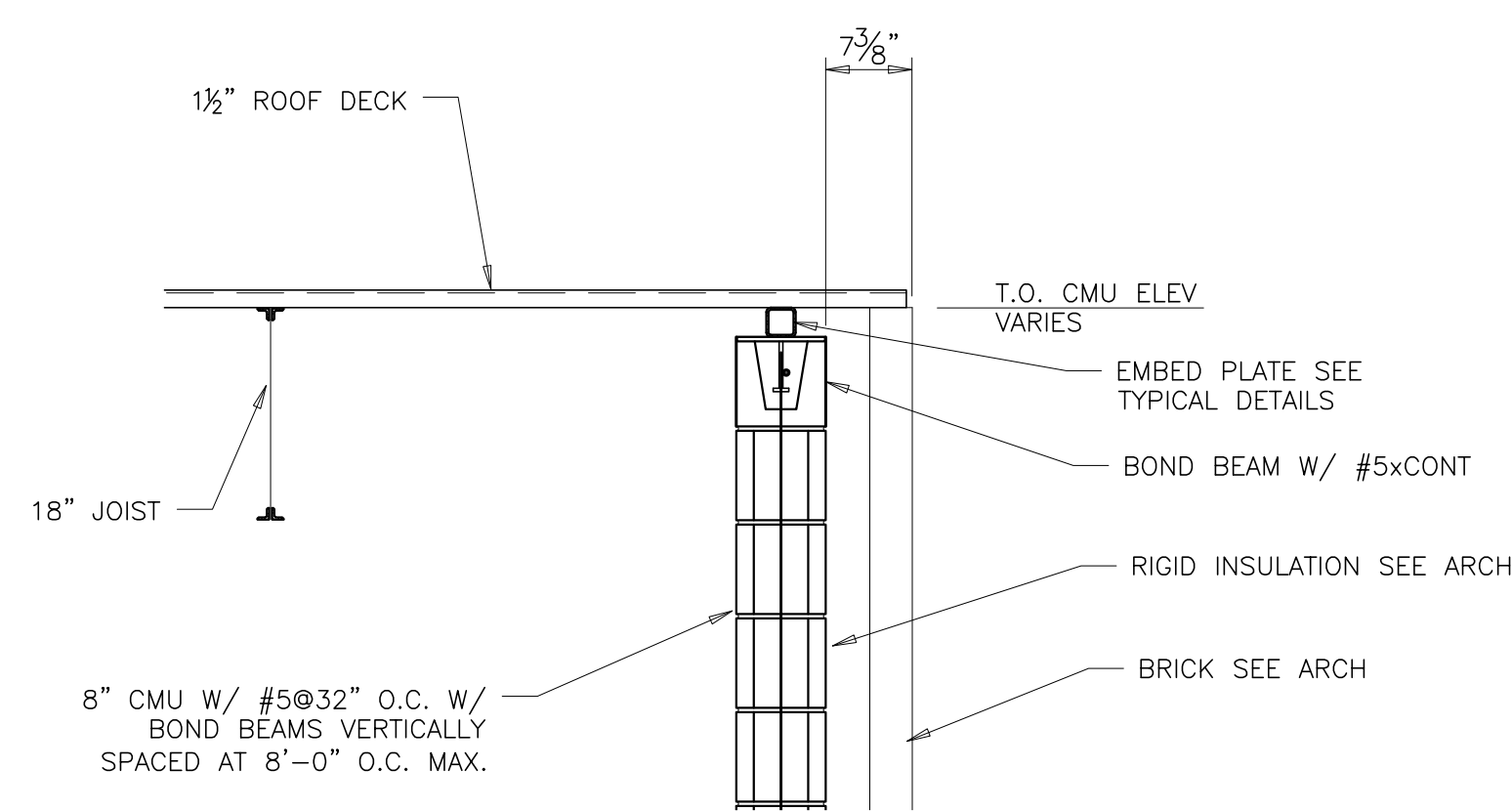
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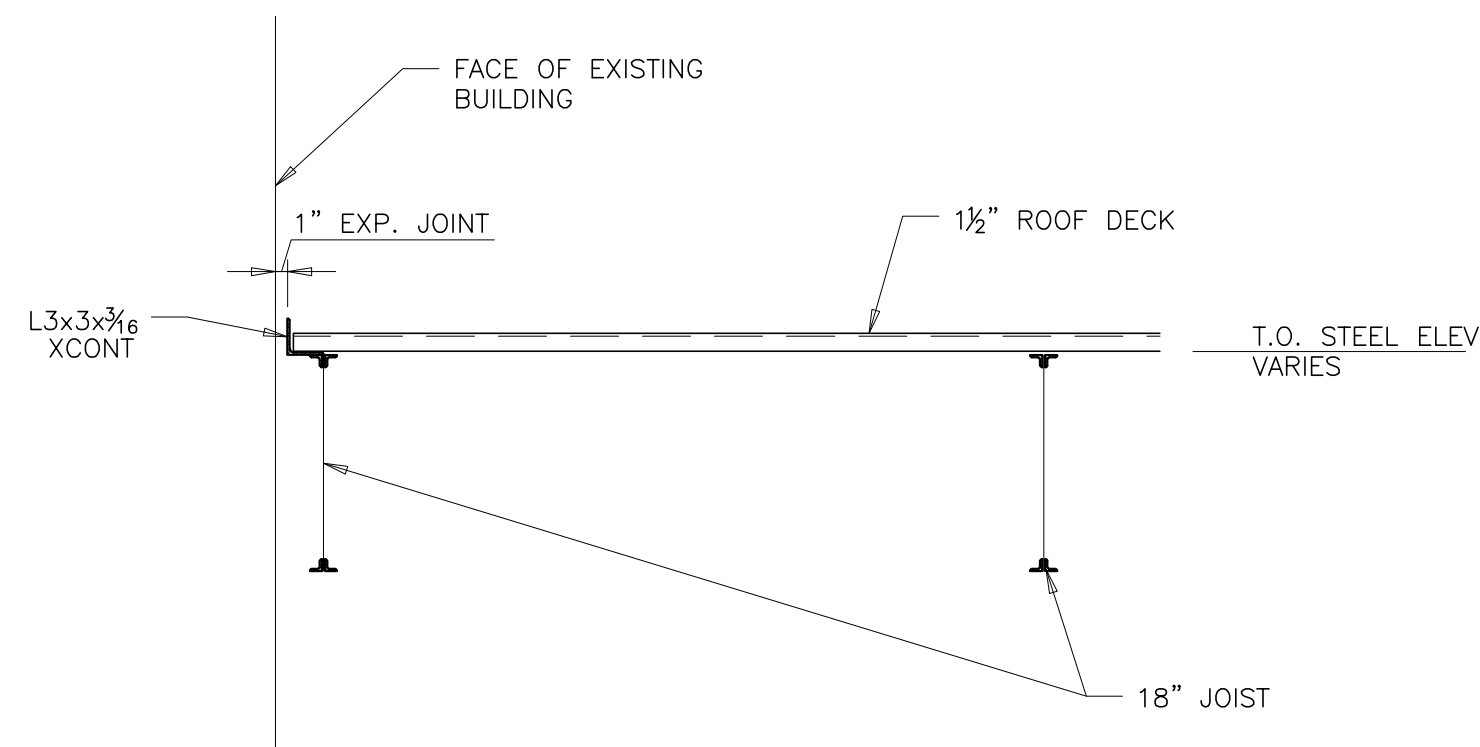
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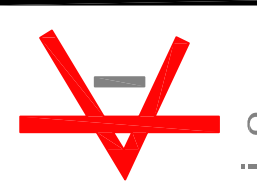
SECTION 7  
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SECTION 8  
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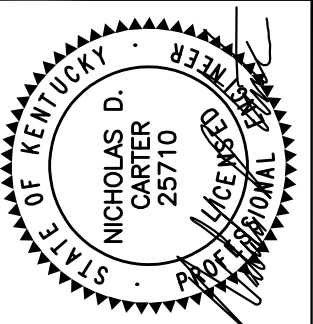


SECTION 9  
SCALE: 3/4"=1'-0"




studio

studio **kramer** architects  
1231 S Shelby St, Louisville, KY 40203  
TEL 502.499.1100 FAX 502.499.1101



NICHOLAS D. CARTER  
25710  
12/31/2024

**S2** STRUCTURAL SERVICES, INC.  
5948 Timber Ridge Dr., Suite 201  
Prospect, KY 40059  
(602) 282-2000



OVC  
OHIO VALLEY EDUCATIONAL COOPERATIVE

SECTIONS AND DETAILS

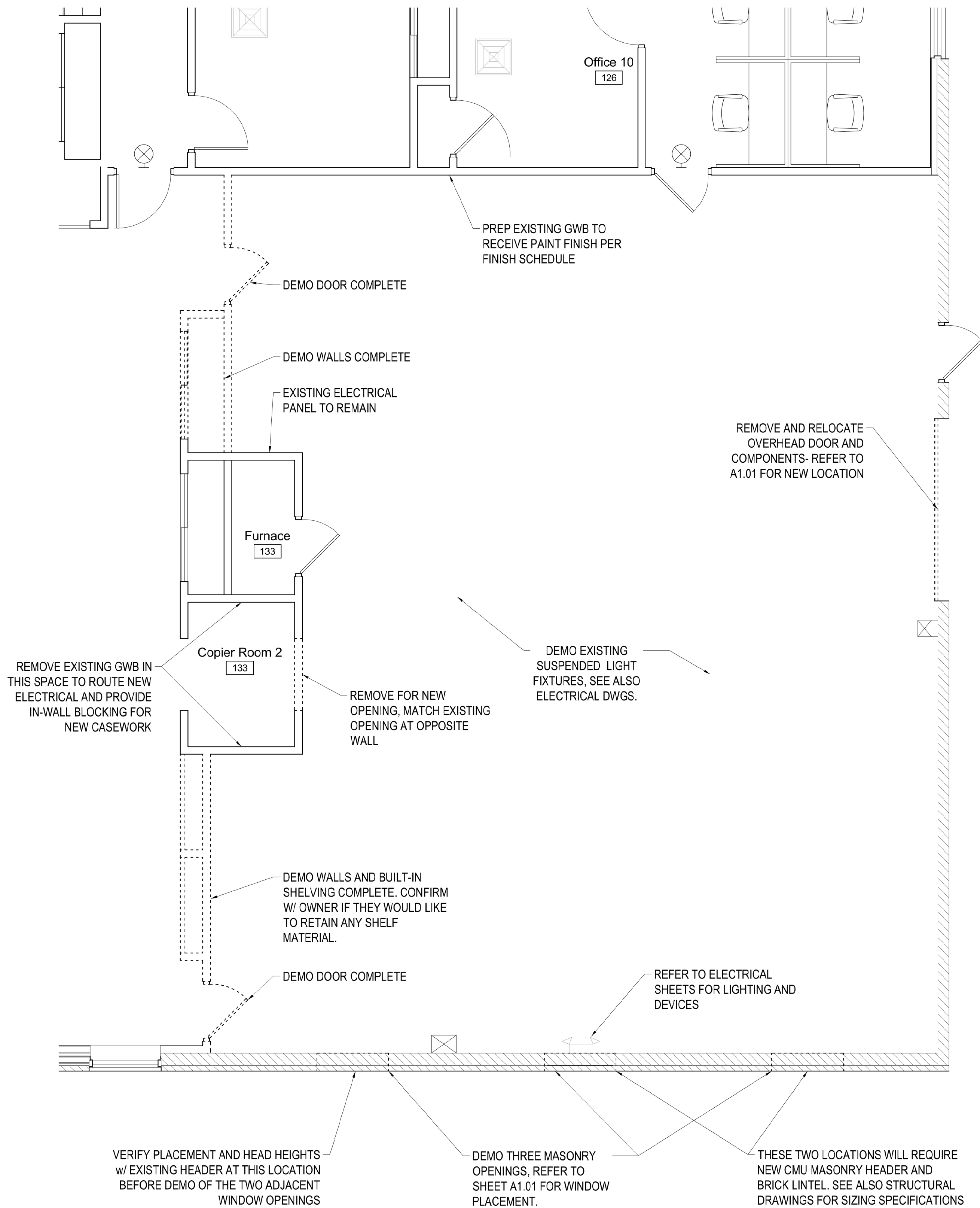
**OHIO VALLEY EDUCATIONAL COOPERATIVE**  
100 Alpine Rd.  
Shelbyville, KY 40065

DATE: 9.9.20  
DRAWN BY: NDC  
CHECKED BY: NDC  
REVISIONS:

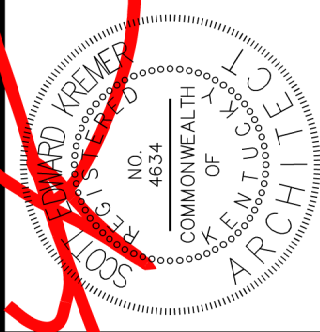
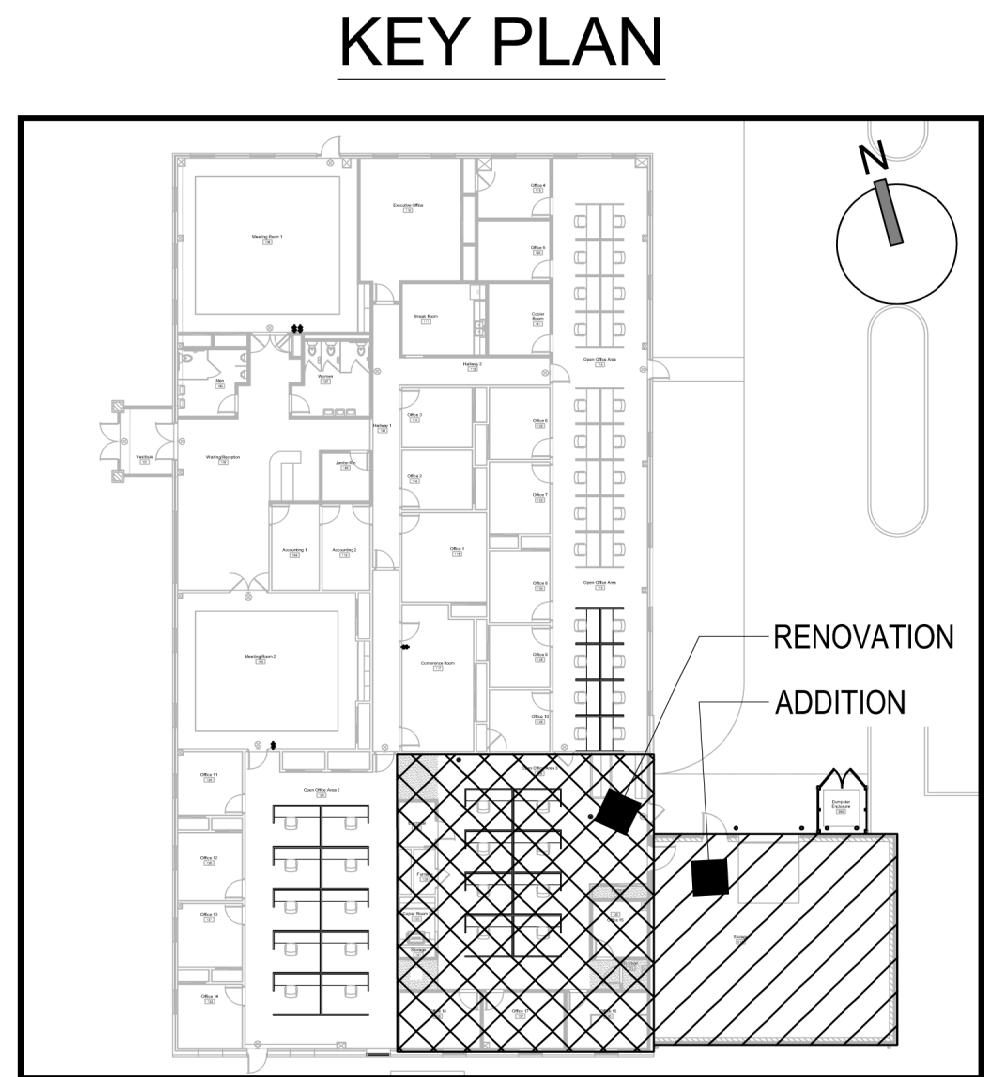
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**S2.0**

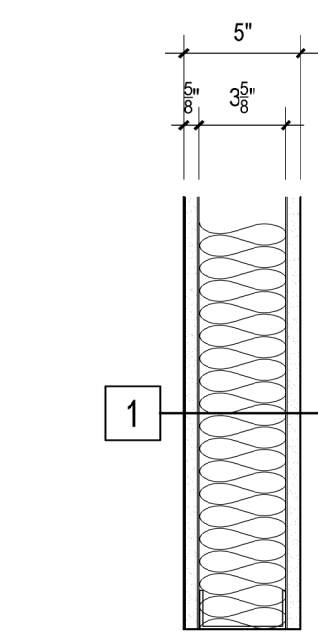




- GENERAL DEMO NOTES:
1. CONTRACTOR SHALL PROTECT ALL EXISTING ITEMS AND CONSTRUCTION TO REMAIN. REPAIR EXISTING AS REQUIRED FOR STRUCTURAL INTEGRITY AND TO MEET APPLICABLE CODES.
  2. DEMO PLAN IS FOR GENERAL SCOPE REFERENCE ONLY AND DOES NOT EXPLICITLY INDICATE OR ACCURATELY DEFINE ALL BUILDING COMPONENTS AND ADJACENCIES. CONTRACTOR RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS PRIOR TO BID SUBMISSION.
  3. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE OWNERS STANDARDS. COORDINATE CONSTRUCTION SCHEDULE AND UTILITY INTERRUPTION, IF ANY, WITH THE OWNERS PRIOR TO INTERRUPTION.
  4. CONTRACTOR SHALL COORDINATE ALL NOISY PERIODS OF CONSTRUCTION AND UTILITY SHUT DOWNS WITH THE BUILDING OWNERS REPRESENTATIVE(S).
  5. CONTRACTOR RESPONSIBLE FOR DAILY CLEAN UP DURING THE JOB AND REMOVAL OF ALL DEMOLITION MATERIALS IN A LAWFUL MANNER.
  6. MECHANICAL/ ELECTRICAL/ STRUCTURAL SHOWN IN ARCHITECTURAL IS FOR REFERENCE ONLY. REFER TO ENGINEERS DRAWINGS / SPECIFICATIONS FOR FULL EXTENT OF WORK PRIOR TO STARTING.
  7. CONTRACTOR SHALL INSPECT EXISTING ELECTRICAL SYSTEMS AND VERIFY IF EXISTING ELECTRICAL SERVICES ARE ACTIVE AND ADEQUATE FOR NEW WORK. IF EXISTING ELECTRICAL SERVICE IS NOT ADEQUATE OR AS DESCRIBED WITHIN THE ELECTRICAL DRAWINGS, CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY.
  8. CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF ALL ABANDONED OR UNUSED WATER SUPPLY AND WASTE LINE MATERIAL IN A LAWFUL MANNER. ALL ABANDONED OR UNUSED WATER SUPPLY LINES SHALL BE REMOVED BACK TO THE MAIN SUPPLY. ALL ABANDONED OR UNUSED WATER WASTE LINE MATERIAL SHALL BE REMOVED TO A PREDETERMINED LOCATION AND LAWFULLY CAPPED. COORDINATE WITH THE OWNER.
  9. REFER TO M.E.P. AND CIVIL DRAWINGS FOR ADDITIONAL DEMO PLANS AND INSTRUCTIONS.
  10. IT IS NOT EXPECTED THAT HAZARDOUS MATERIALS WILL BE ENCOUNTERED IN THE WORK. IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NO DISTURB; IMMEDIATELY NOTIFY ARCHITECT AND OWNER.

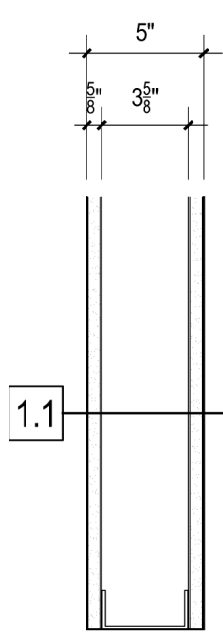






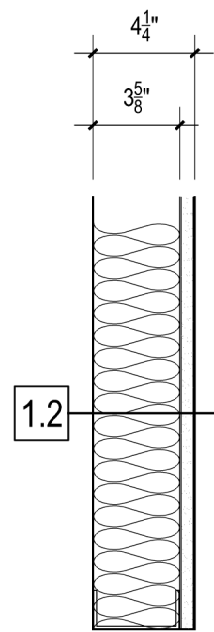
WALL TYPE 1:

- METAL STUD WALL (5" NOMINAL DIMENSION)
  - 5/8" TYPE "X" GWB
  - 3-5/8" METAL STUD FRAMING (22ga.) @ 16"o.c. w/ SOUND BATT INSULATION.
  - 5/8" TYPE "X" GWB
  - METAL FRAMING TO BE BRACED TO ROOF STRUCTURE ABOVE, TYP.



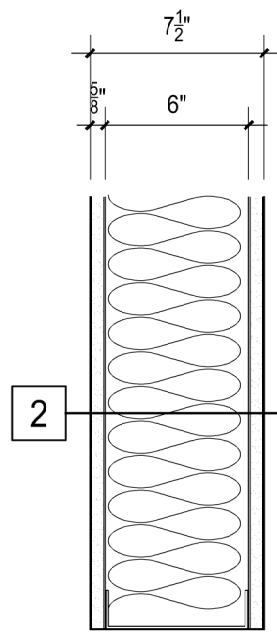
WALL TYPE 1.1:

- METAL STUD WALL (5" NOMINAL DIMENSION)
  - 5/8" TYPE "X" GWB
  - 3-5/8" METAL STUD FRAMING (22ga.) @ 16"o.c.
  - 5/8" TYPE "X" GWB
  - METAL FRAMING TO BE BRACED TO ROOF STRUCTURE ABOVE, TYP.



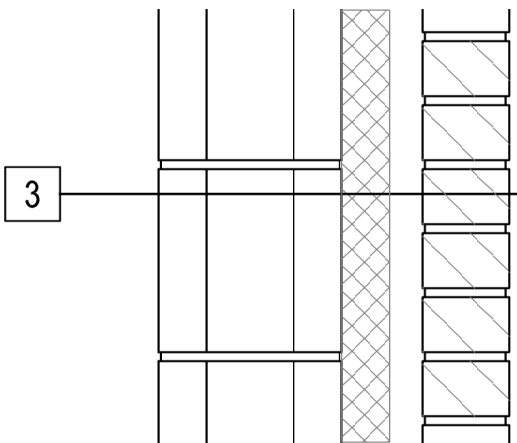
WALL TYPE 1.2:

- METAL STUD WALL
  - 5/8" TYPE "X" GWB
  - 3-5/8" METAL STUD FRAMING (22ga.) @ 16"o.c. w/ SOUND BATT INSULATION.
  - METAL FRAMING TO BE BRACED TO ROOF STRUCTURE ABOVE, TYP.



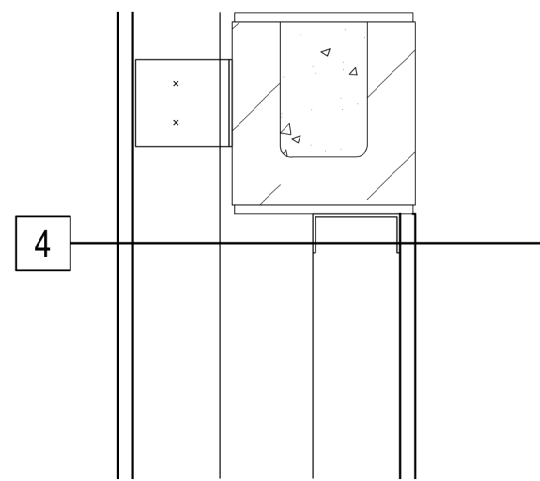
WALL TYPE 2:

- METAL STUD WALL (7" NOMINAL DIMENSION)
  - 5/8" TYPE "X" GWB
  - 6" METAL STUD FRAMING (22ga.) @ 16"o.c. w/ SOUND BATT INSULATION.
  - 5/8" TYPE "X" GWB
  - METAL FRAMING TO BE BRACED TO ROOF STRUCTURE ABOVE, TYP.



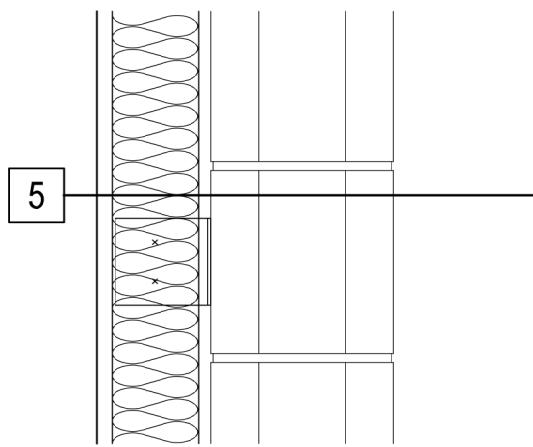
WALL TYPE 3:

- NEW BRICK VENEER W/ ADJ. MASONRY WALL ANCHORS @16" O.C. BOTH WAYS, MATCH EXISTING BRICK.
- AIR SPACE: 1-1/4"
- CONT. RIGID INSULATION, R9.5 (2" THICKNESS) w/ CONT. VAPOR BARRIER
- NEW 8" (NOM.) CMU. SEE STRUCTURAL FOR REINFORCING



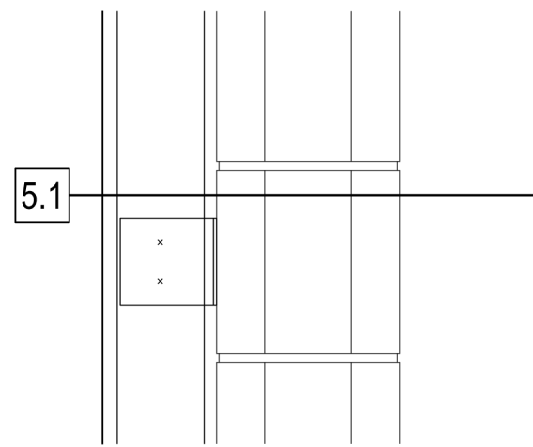
WALL TYPE 4:

- NEW DOUBLE 3-5/8" METAL STUD FRAMING WALL(22ga.) @ 16" o.c.
  - METAL CLIPS TO ATTACH TO CMU @ 48" VERTICALLY AND 32" HORIZONTALLY TO HOLD FRAMING 1/2" +/- OFF OF EXISTING CMU
  - 5/8" TYPE "X" GWB
- PROVIDE R-19 BATT INSULATION AT UPPER WALL AREAS ABOVE THE ROOF LINE OF STORAGE ADDITION.
- ALIGN NEW FACE OF GWB WITH EXISTING CMU FINISH FACE



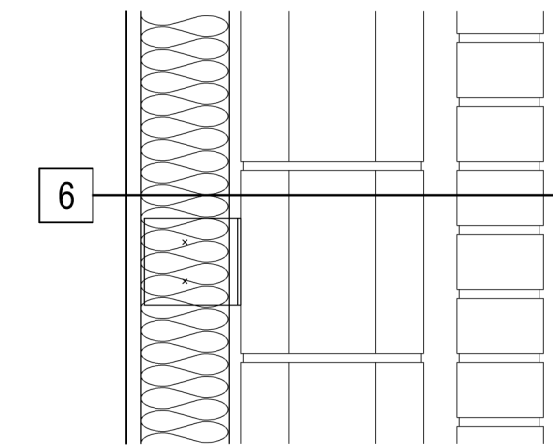
WALL TYPE 5:

- EXISTING 8" (NOM.) CMU
- NEW 3-5/8" METAL STUD FRAMING (22ga.) @ 16" o.c.
  - R-19 BATT INSULATION
  - METAL CLIPS TO ATTACH TO CMU @ 48" VERTICALLY AND 32" HORIZONTALLY TO HOLD FRAMING 1/2" +/- OFF OF EXISTING CMU
  - 5/8" TYPE "X" GWB



WALL TYPE 5.1:

- EXISTING 8" (NOM.) CMU
- NEW 3-5/8" METAL STUD FRAMING (22ga.) @ 16" o.c.
  - METAL CLIPS TO ATTACH TO CMU @ 48" VERTICALLY AND 32" HORIZONTALLY TO HOLD FRAMING 1/2" +/- OFF OF EXISTING CMU
  - 5/8" TYPE "X" GWB
- PROVIDE R-19 BATT INSULATION AT UPPER WALL AREAS ABOVE THE ROOF LINE OF STORAGE ADDITION.
- PROVIDE IN-WALL BLOCKING AS NEEDED AT LINE OF STORAGE ROOM ROOF TO HOLD INSULATION.

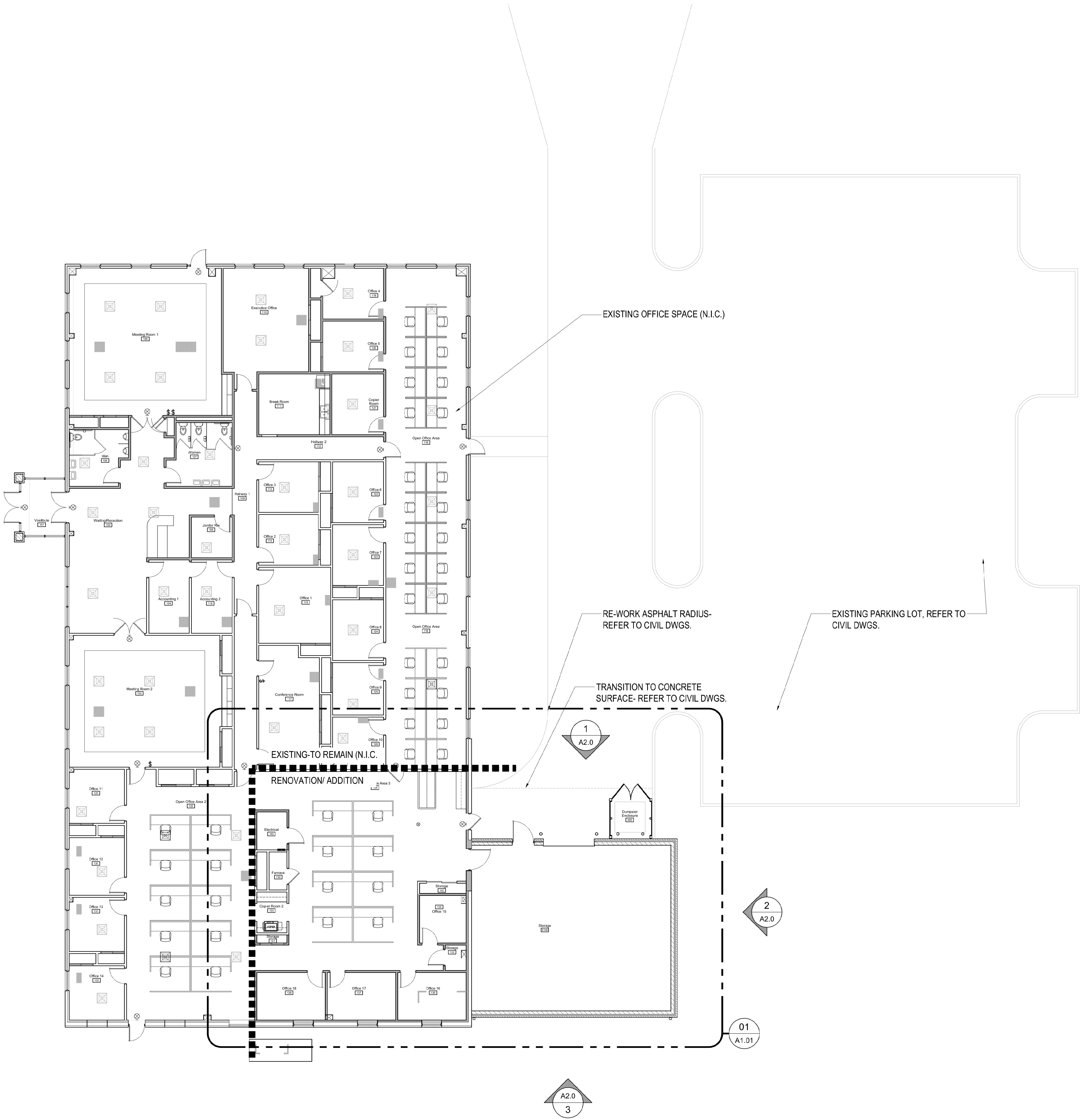


WALL TYPE 6:

- EXISTING BRICK VENEER
- AIR SPACE
- EXISTING 8" (NOM.) CMU
- NEW 3-5/8" METAL STUD FRAMING (22ga.) @ 16" o.c.
  - R-19 BATT INSULATION
  - METAL CLIPS TO ATTACH TO CMU @ 48" VERTICALLY AND 32" HORIZONTALLY TO HOLD FRAMING 1/2" +/- OFF OF EXISTING CMU
  - 5/8" TYPE "X" GWB

NOTE: NEW FRAMING TO BE ALIGNED WITH EDGE OF EXISTING STEEL GIRT. PROVIDE SPACE FROM EXISTING CMU AND NEW FRAMING AS REQUIRED.





SYMBOLS LEGEND:

- NEW DOOR, FRAME & HARDWARE
- EXISTING DOOR
- TOILET ACCESSORY SYMBOL
- ROOM
- ROOM NUMBER
- DOOR NUMBER
- DETAIL / SECTION NUMBER
- SHEET NUMBER LOCATION
- FIRE EXTINGUISHER & CABINET- FINAL LOCATIONS TBD BY OWNER
- WALL TYPE

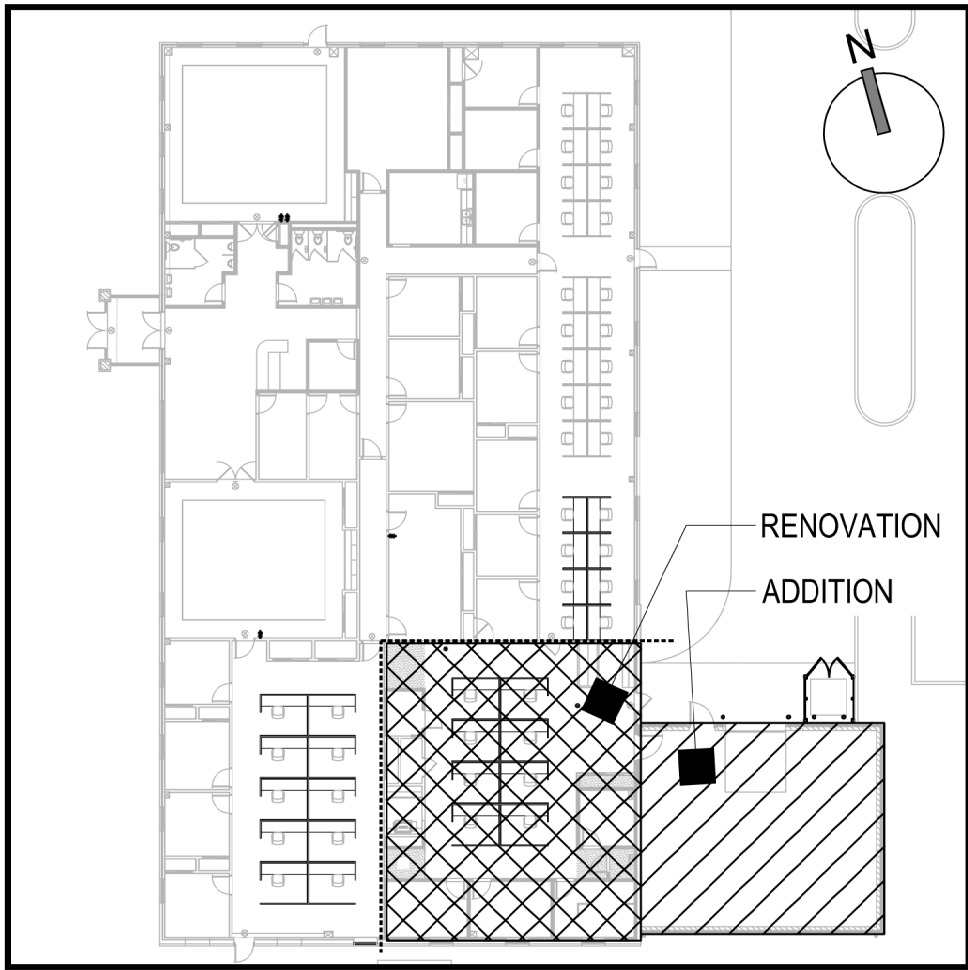
GENERAL NOTES:

- A. CONTRACTOR TO NOTIFY THE ARCHITECT IMMEDIATELY IN THE EVENT THAT ANY EXISTING CONDITIONS IN THE FIELD DIFFER FROM THOSE DEPICTED IN THESE DOCUMENTS.
- B. CONTRACTOR SHALL CHECK EXISTING CMU WALLS FOR PLUMB PRIOR TO INSTALLATION OF INTERIOR METAL STUD FURRING @ EXTERIOR WALLS. FACE OF METAL STUDS SHALL BE INSTALLED WITH 1/2"-1" AIR SPACE BETWEEN STUD AND CMU TO ACCOUNT FOR ANY WALL OUT OF PLUMB. METAL STUD FURRING TO BE INSTALLED PLUMB, TYP.
- C. NEW METAL STUD FURRING @ EXTERIOR WALLS SHALL EXTEND TO THE UNDERSIDE OF ROOF DECK AND SEALED, TYP. R-19 BATT INSULATION SHALL BE INSTALLED IN NEW METAL STUD FURRING.
- D. ALL NEW INTERIOR METAL STUD PARTITION WALLS SHALL EXTEND A MINIMUM OF 6" ABOVE ELEVATION OF NEW ACT CEILING. NEW WALLS SHALL EITHER EXTEND TO UNDERSIDE OF EXISTING ROOF DECK OR BE BRACED TO EXISTING ROOF STRUCTURE ABOVE.
- E. INTERIOR DIMENSIONS (FOR BLOCK / METAL STUD WALLS) SHALL BE FROM FACE OF STUD/CMU TO FACE OF STUD/CMU - SLIGHT FIELD ADJUSTMENT MAY BE REQUIRED.
- F. IN LOCATIONS WHERE CASEWORK, FIXTURES AND TOILET ACCESSORIES ARE INSTALLED ON DRYWALL PARTITION, PROVIDE WOOD BLOCKING FOR SOLID MOUNT ATTACHMENT PER MANUFACTURER'S RECOMMENDATIONS.
- G. IN ADDITION TO CORNER BEADS, PROVIDE VINYL CORNER GUARDS AT ALL OUTSIDE CORNERS IN CORRIDORS FOR ALL DRYWALL PARTITIONS. SEE FINISHES PLANS FOR LOCATIONS.
- H. ALL CHANGES OF FLOOR FINISH SHALL OCCUR CENTERED UNDER THE DOOR.
- I. OUTSIDE EDGE OF DOOR JAMBS ARE TO BE LOCATED 6" FROM CORNER UNLESS OTHERWISE NOTED.
- J. PATCH AND PAINT ALL HOLES / VOIDS / BLEMISHES IN INTERIOR PARTITIONS FOR A SMOOTH FINISH INSTALLATION.
- K. PATCH ALL AREAS OF SLAB REMOVAL FOR NEW UNDER-SLAB PLUMBING TO MAKE FLUSH FINISH AND PREP SURFACE FOR NEW FLOORING INSTALLATION.
- L. ANY AREAS OF EXTERIOR WALL REMOVED FOR PME DEMOLITION SHALL BE PATCHED BACK WITH LIKE MATERIALS AND FINISHED CONSISTENT WITH ADJACENT SURFACES.

ABBREVIATIONS:

ACT	ACOUSTICAL TILE CEILING
ADJ	ADJACENT
ALUM	ALUMINUM
B.O.	BOTTOM OF
CSWK	CASEWORK
CPT	CARPET
CT	CERAMIC TILE
DED	DEDICATED
D.S.	DOWNSPOUT
DWGS	DRAWINGS (OR SHEETS)
EX	EXISTING
F.O.F.	FACE OF FINISH
GALV	GALVANIZED
GR	GRANITE
GR	GRANITE
GWB	GYPSUM WALL BOARD
IRGWB	IMPACT RESISTANT GYPSUM WALL BOARD
M.O.	MASONRY OPENING
PLY	PLYWOOD
PR	PAIR
PT	PAINT
PTD	PAINTED
QT	QUARRY TILE
RB	RUBBER BASE
ST	STAIN
VB	VINYL BASE
VT	VINYL COMPOSITION TILE
VF	VINYL FACE
WVC	VINYL WALL COVERING
WB	WALL BASE
WD	WOOD
WS	WINDOW SHADES
SC	SEALED CONCRETE
T.O.	TOP OF
U.N.O.	UNLESS NOTED OTHER WISE

KEY PLAN





- A. CONTRACTOR TO NOTIFY THE ARCHITECT IMMEDIATELY IN THE EVENT THAT ANY EXISTING CONDITIONS IN THE FIELD DIFFER FROM THOSE DEPICTED IN THESE DOCUMENTS.
- B. CONTRACTOR SHALL CHECK EXISTING CMU WALLS FOR PLUMB PRIOR TO INSTALLATION OF INTERIOR METAL STUD FURRING @ EXTERIOR WALLS. FACE OF EXISTING WALLS SHALL BE INSTALLED WITH 1/2"-1" AIR SPACE BETWEEN STUD AND CMU TO ACCOUNT FOR ANY WALL OUT OF PLUMB. METAL STUD FURRING TO BE INSTALLED PLUMB, TYP.
- C. NEW METAL STUD FURRING @ EXTERIOR WALLS SHALL EXTEND TO THE UNDERSIDE OF ROOF DECK AND SEALED, TYP. 19 BATT INSUL SHALL BE INSTALLED TO UNDERSIDE OF EXISTING ROOF DECK OR BE BRACED TO EXISTING ROOF STRUCTURE ABOVE.
- D. ALL NEW INTERIOR METAL STUD PARTITION WALLS SHALL EXTEND A MINIMUM OF 6" ABOVE ELEVATION OF NEW AC TYP. NEW 19 BATT INSUL SHALL EITHER EXTEND TO UNDERSIDE OF EXISTING ROOF DECK OR BE BRACED TO EXISTING ROOF STRUCTURE ABOVE.
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- F. IN LOCATIONS WHERE CASEWORK, FIXTURES AND TOILET ACCESSORIES ARE INSTALLED ON DRYWALL PARTITION, PROVIDE WOOD BLOCKING FOR SOLID MOUNT ATTACHMENT PER MANUFACTURER'S RECOMMENDATIONS.
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- L. ANY AREAS OF EXTERIOR WALL REMOVED FOR PME DEMOLITION SHALL BE PATCHED BACK WITH LIKE MATERIALS AND FINISHED CONSISTENT WITH ADJACENT SURFACES.

NEW DOOR, FRAME & HARDWARE

EXISTING DOOR

T1 - TOILET ACCESSORY SYMBOL

ROOM  
101 - ROOM NUMBER

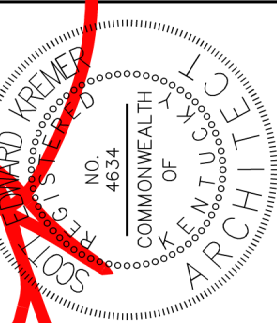
101 - DOOR NUMBER

1 - DETAIL / SECTION NUMBER  
A1.1 - SHEET NUMBER LOCATION

F.E.C. - FIRE EXTINGUISHER & CABINET- FINAL LOCATIONS  
TED BY OWNER

5A - WALL TYPE

studio **kremer** architects  
1231 S Shelby St, Louisville, KY 40203  
TEL 502.499.1100 FAX 502.499.1101



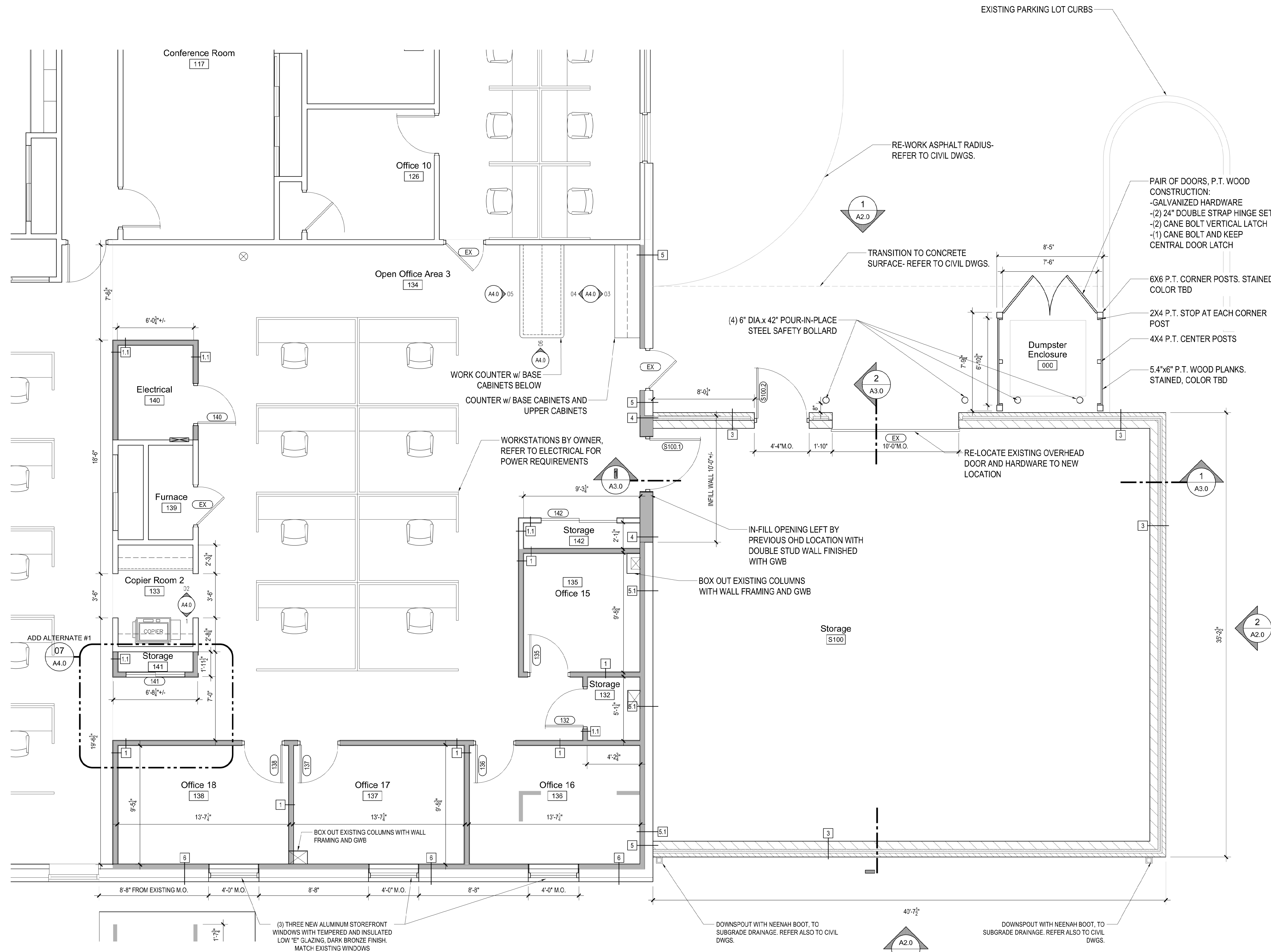
**OHIO VALLEY EDUCATIONAL  
COOPERATIVE**  
100 Alpine Rd,  
Shelbyville, KY 40065

DATE: 09.09.20  
DRAWN BY: BM  
CHECKED BY:  
REVISIONS:

#2019-51

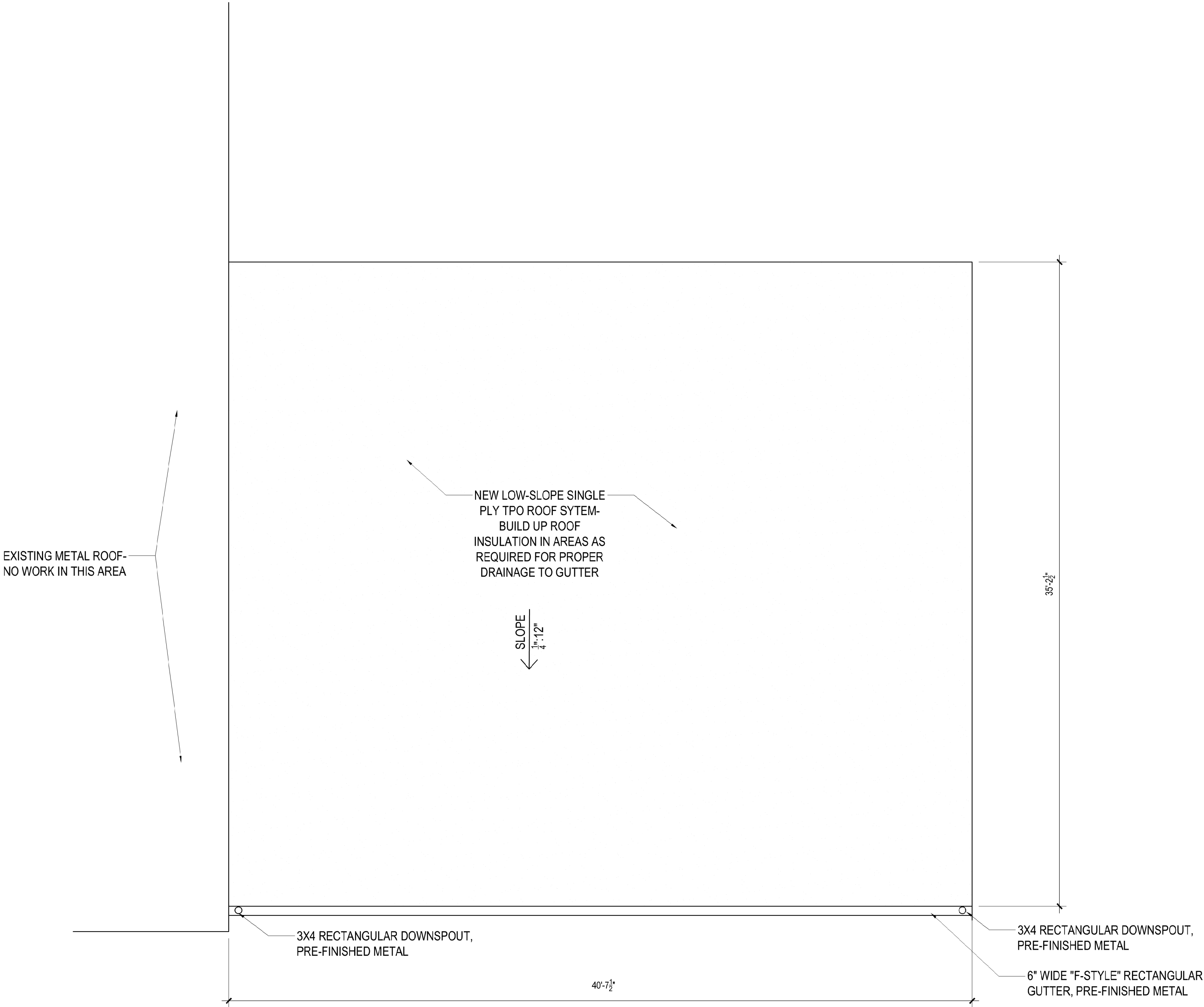
## A1.01

CONSTRUCTION DOCUMENTS

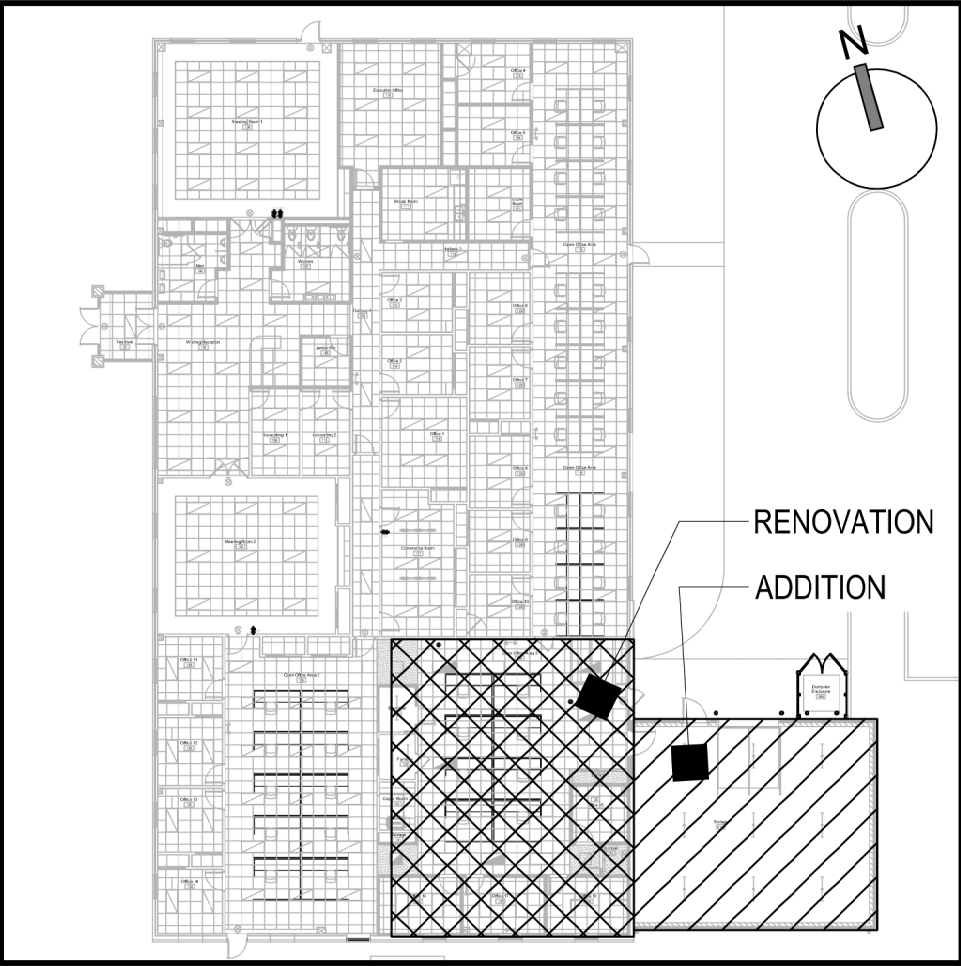
RENOVATION / ADDITION  
FLOOR PLAN

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

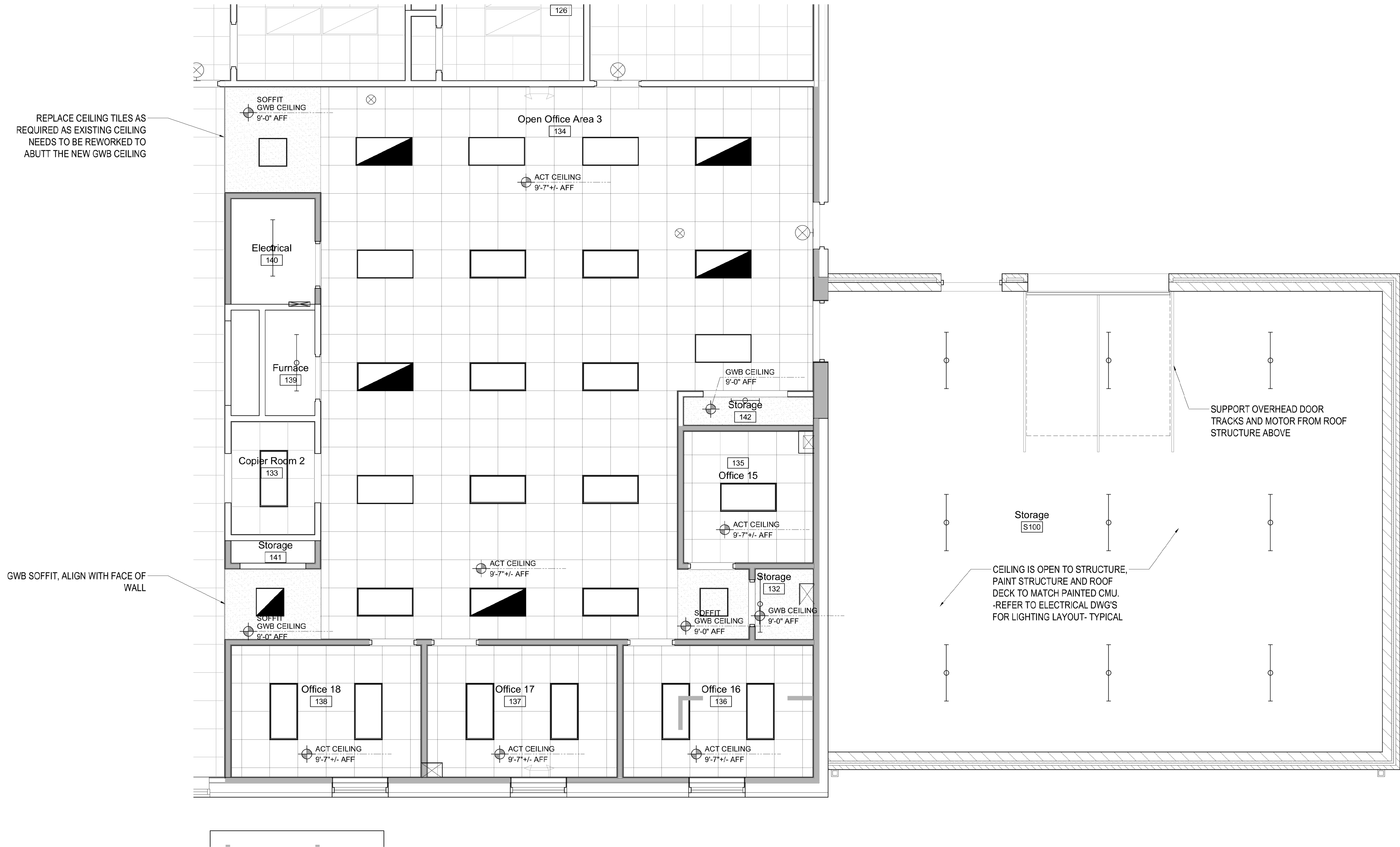




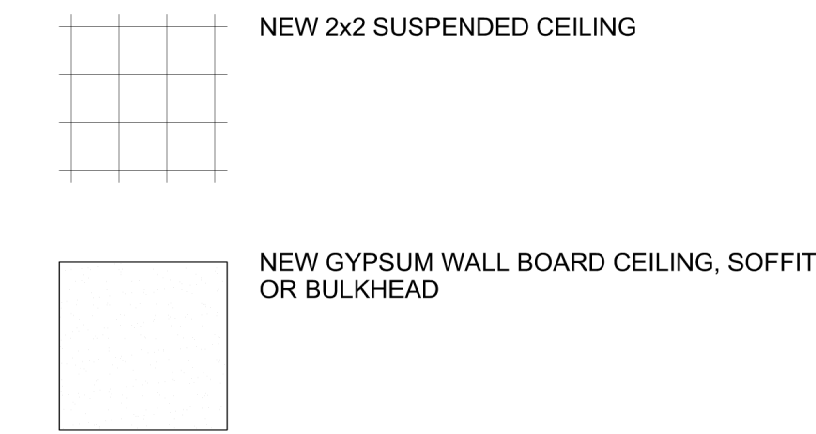
KEY PLAN



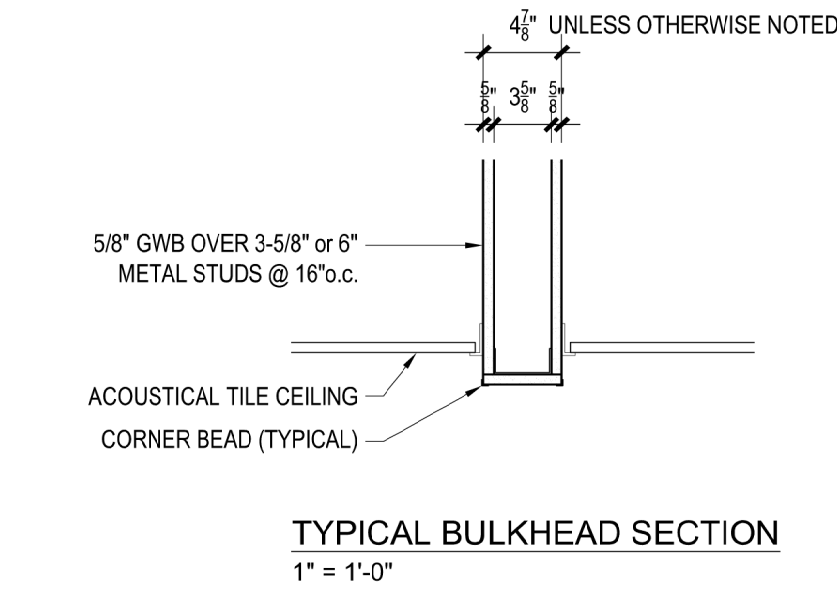




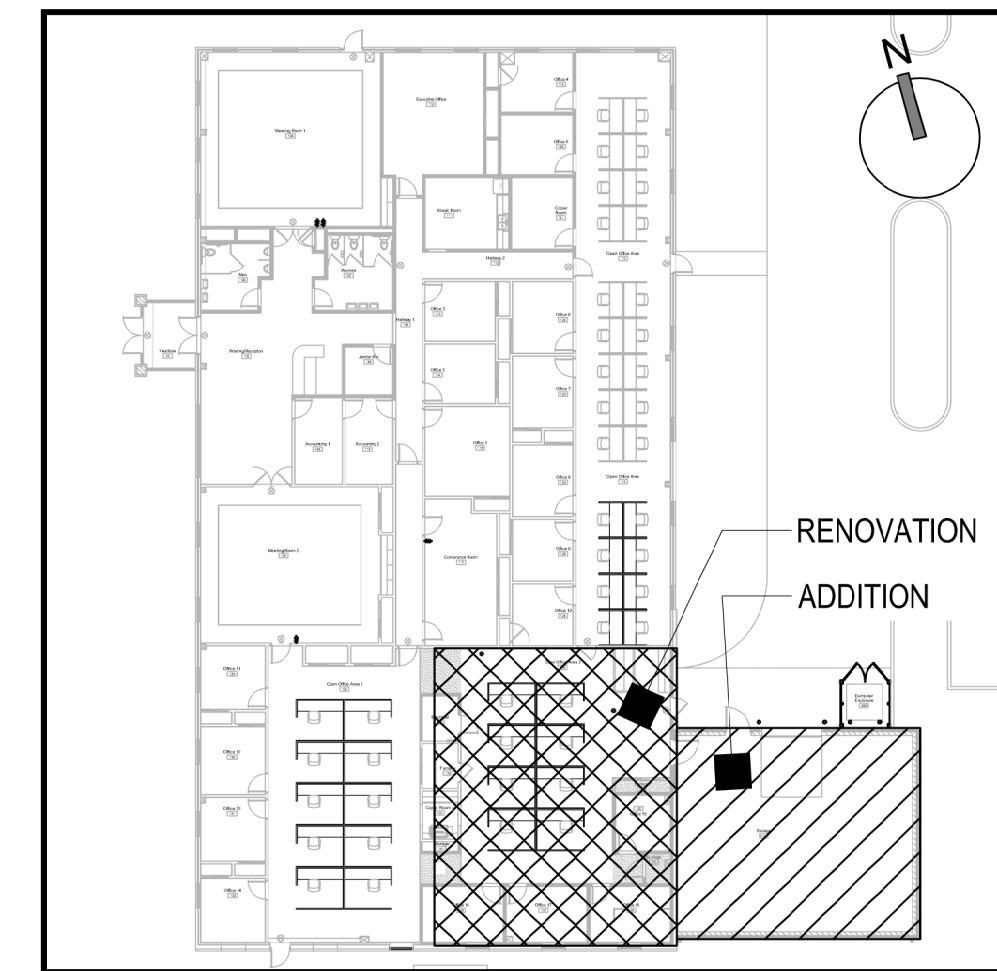
REFLECTED CEILING LEGEND / NOTES:



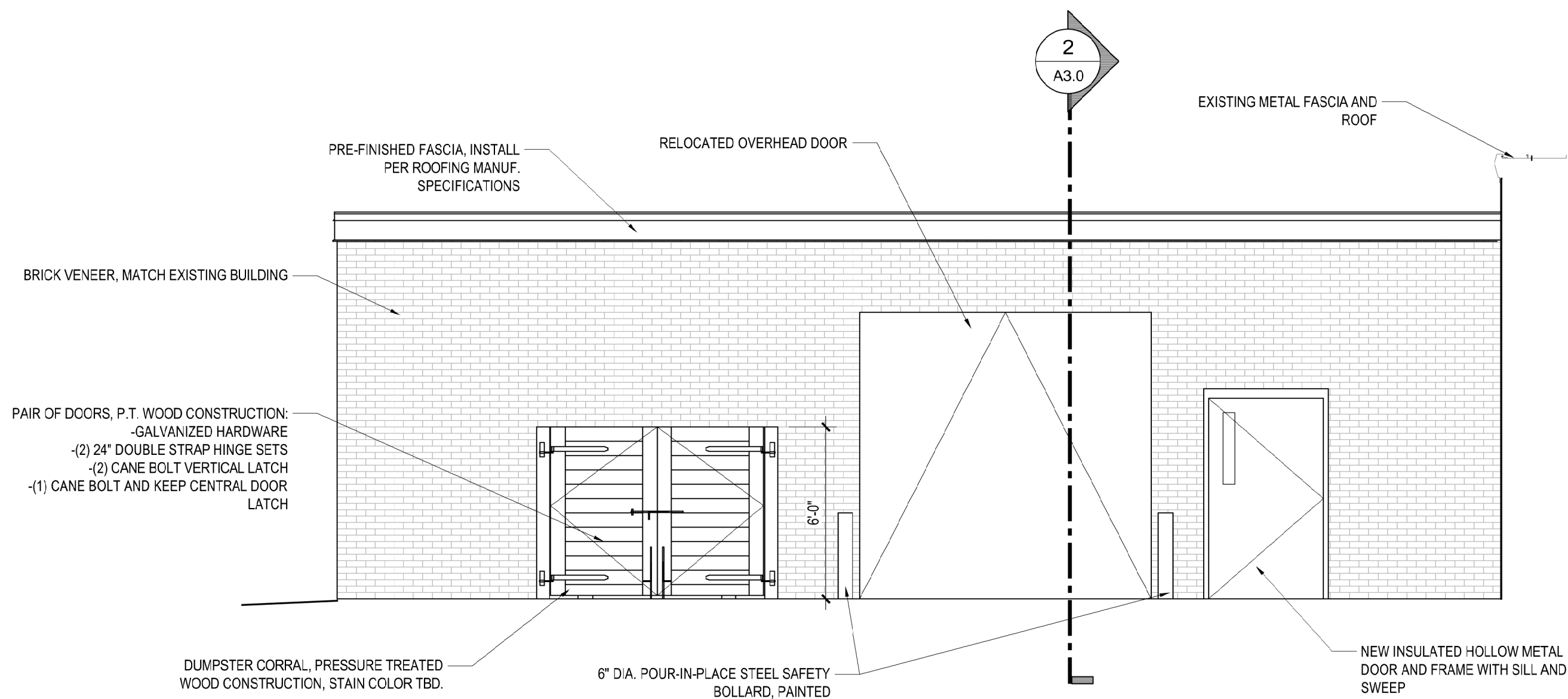
- COORDINATE EXACT GRID LAYOUT WITH FIELD CONDITIONS AND MECHANICAL / ELECTRICAL LIGHTING LAYOUT.
- CEILING TILE SHALL BE WHITE 2'-0"x2'-0" ARMSTRONG ULTIMA SQUARE LAY-IN TILE w/ 15/16" WHITE GRID. REFER TO MANUFACTURER'S DETAILS FOR INSTALLATION REQUIREMENTS. NEW TILES SHOULD MATCH EXISTING, VERIFY IN FIELD PRIOR TO ORDERING AND INSTALL.
- LIGHTING SHOWN FOR REFERENCE ONLY. COORDINATE w/ ELECTRICAL DRAWINGS FOR EXACT LIGHT FIXTURE TYPE AND PLACEMENT.
- REFER TO MECHANICAL DRAWINGS FOR CEILING MOUNTED EQUIPMENT AND SPRINKLER LOCATIONS.
- CENTER ALL CEILING MOUNTED DEVICES AND EQUIPMENT IN CEILING PANELS.
- ALL GWB CEILINGS, SOFFITS AND BULKHEADS ARE TO BE PREPPED, PRIMED AND PAINTED COMPLETE.
- SOUND ATTENUATION BATTS TO BE INSTALLED ABOVE CEILING, 2'-0" WIDE ON BOTH SIDES OF WALLS ENCLOSING, OFFICES
- BULKHEAD AND SOFFIT FRAMING SHALL BE OF 3 5/8" OR 6" (22ga.) METAL STUD FRAMING AND BRACED BACK TO ROOF STRUCTURE ABOVE.



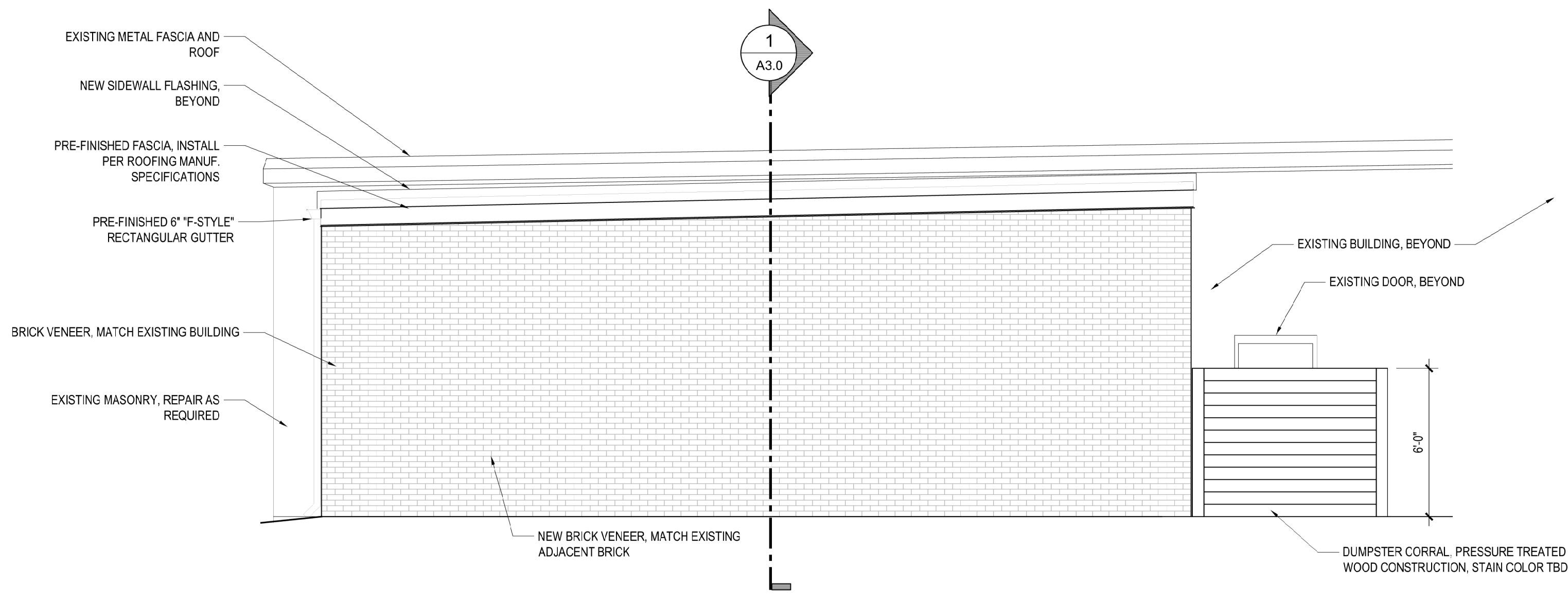
KEY PLAN



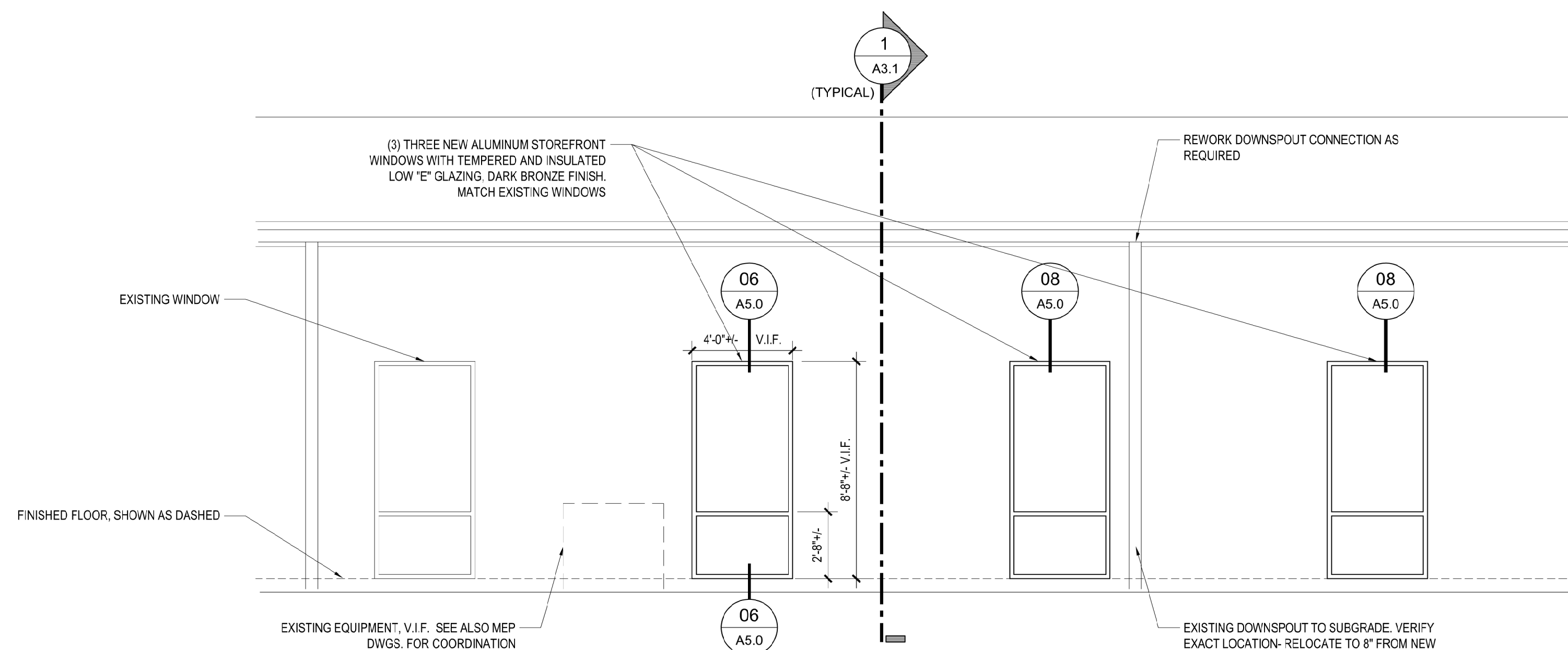




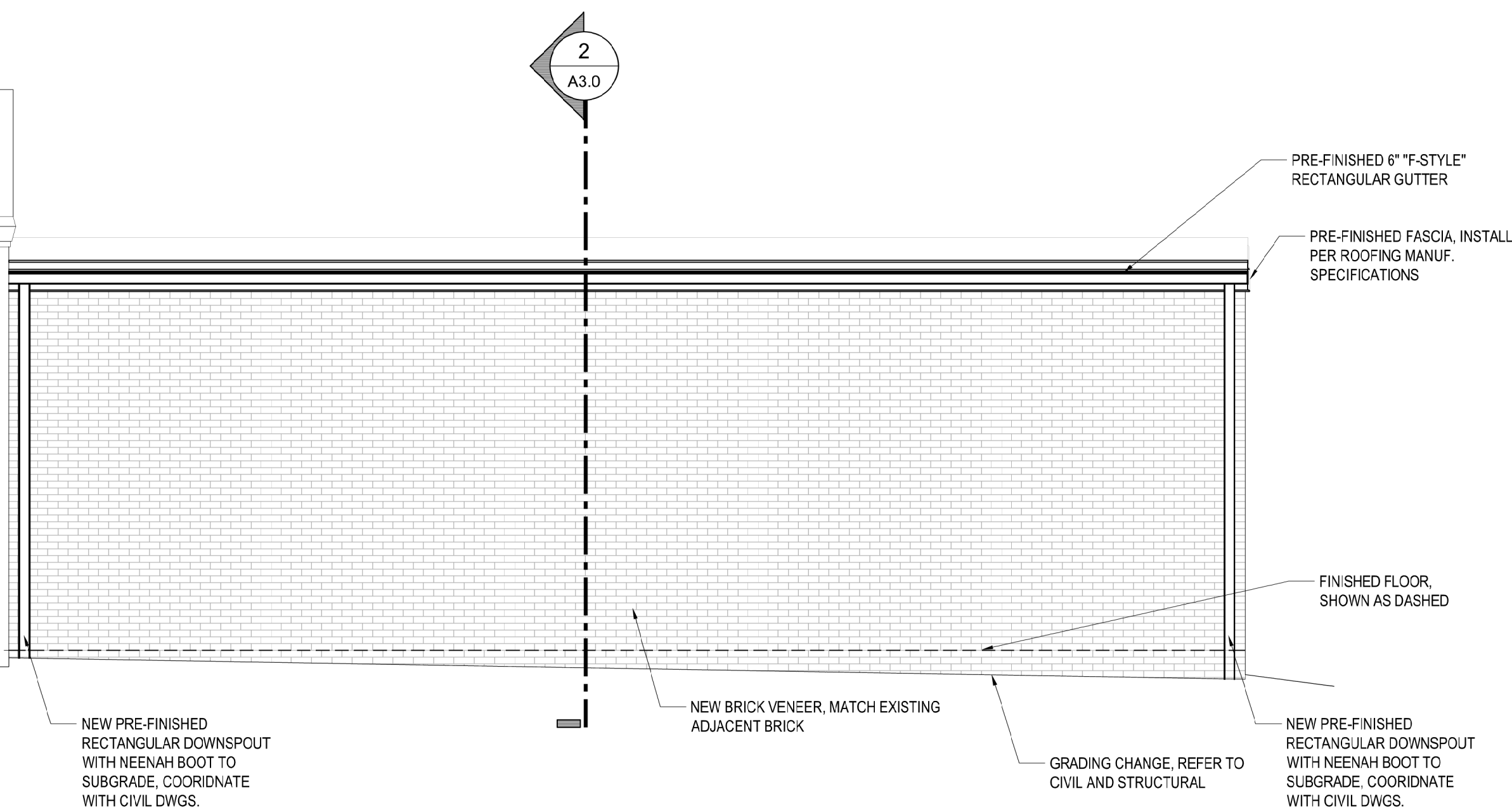
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RENOVATION / ADDITION  
BUILDING ELEVATION  
Scale: 1/4"=1'-0"



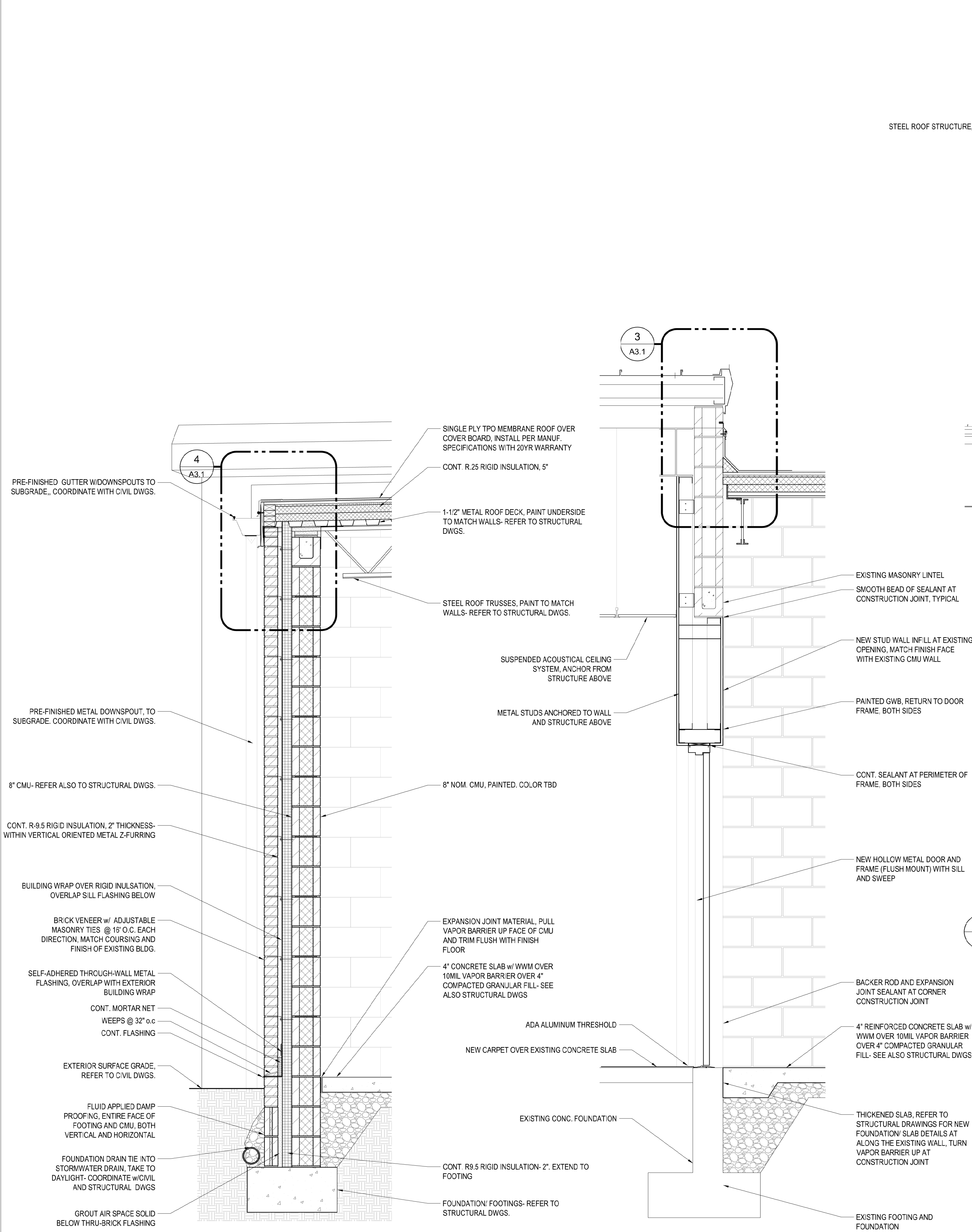
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RENOVATION / ADDITION  
BUILDING ELEVATION  
Scale: 1/4"=1'-0"



3  
RENOVATION / ADDITION  
BUILDING ELEVATION  
Scale: 1/4"=1'-0"





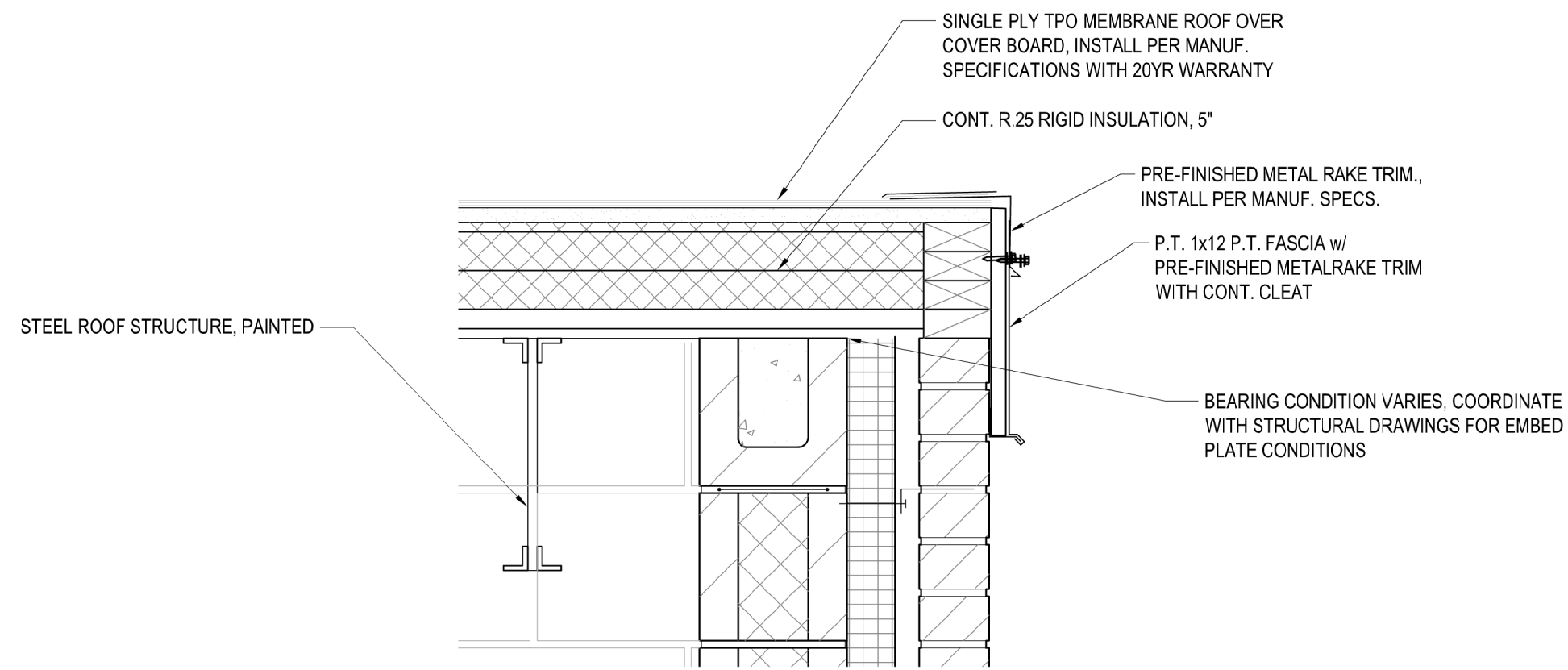


RENOVATION / ADDITION  
WALL SECTION

Scale: 3/4"=1'-0"

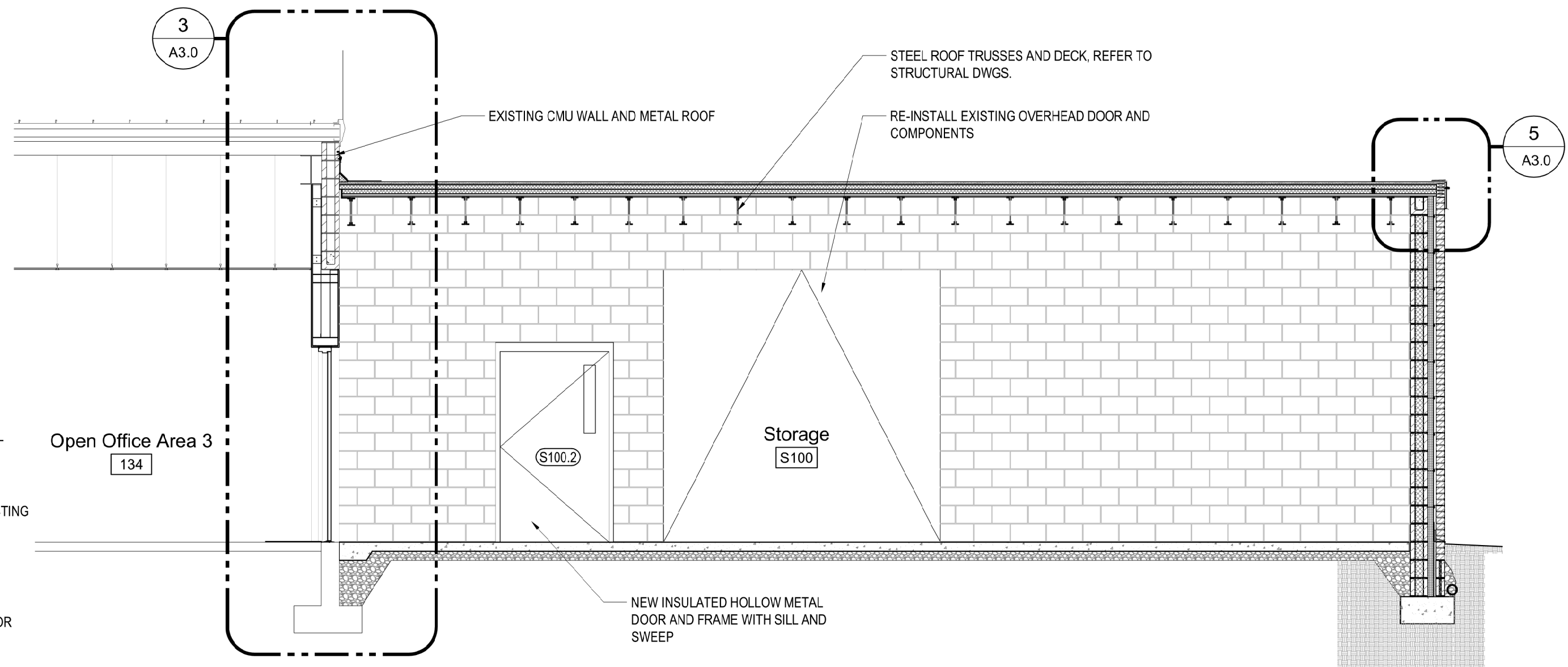
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WALL SECTION

Scale: 3/4"=1'-0"



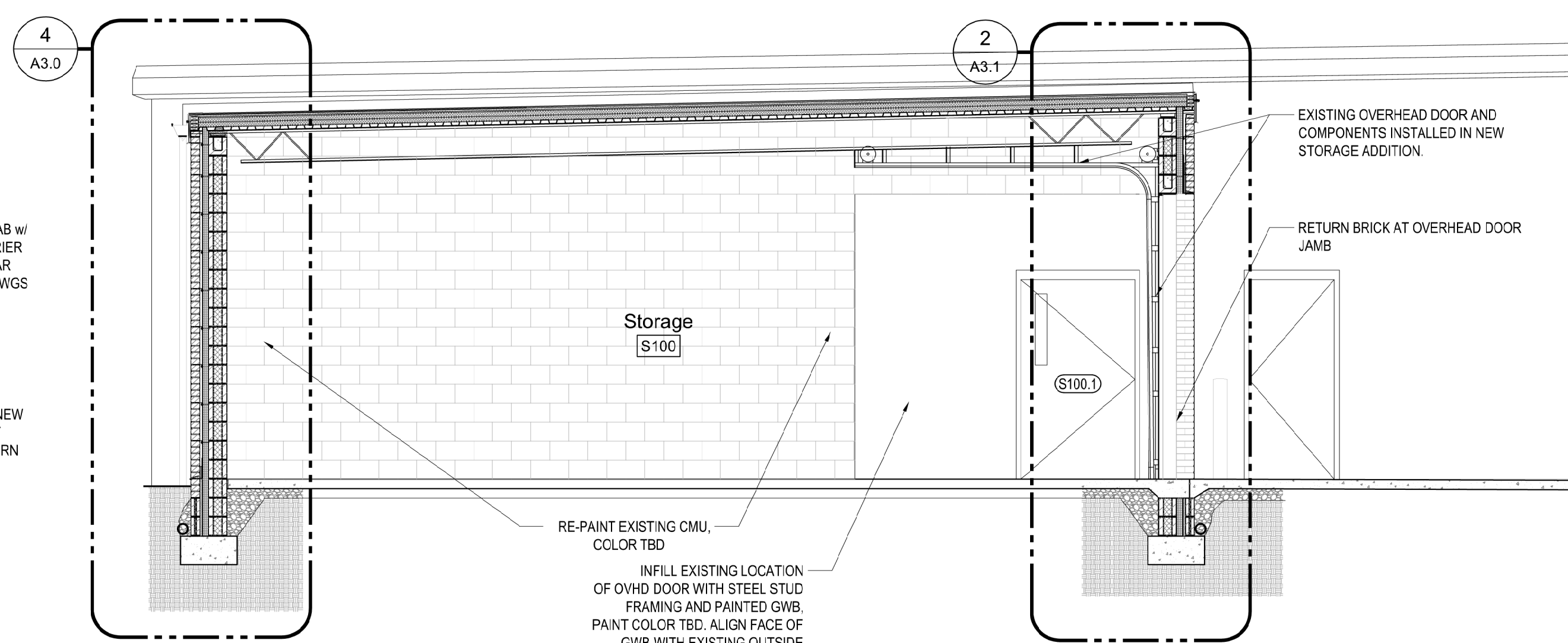
DETAIL

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



RENOVATION / ADDITION  
BUILDING SECTION

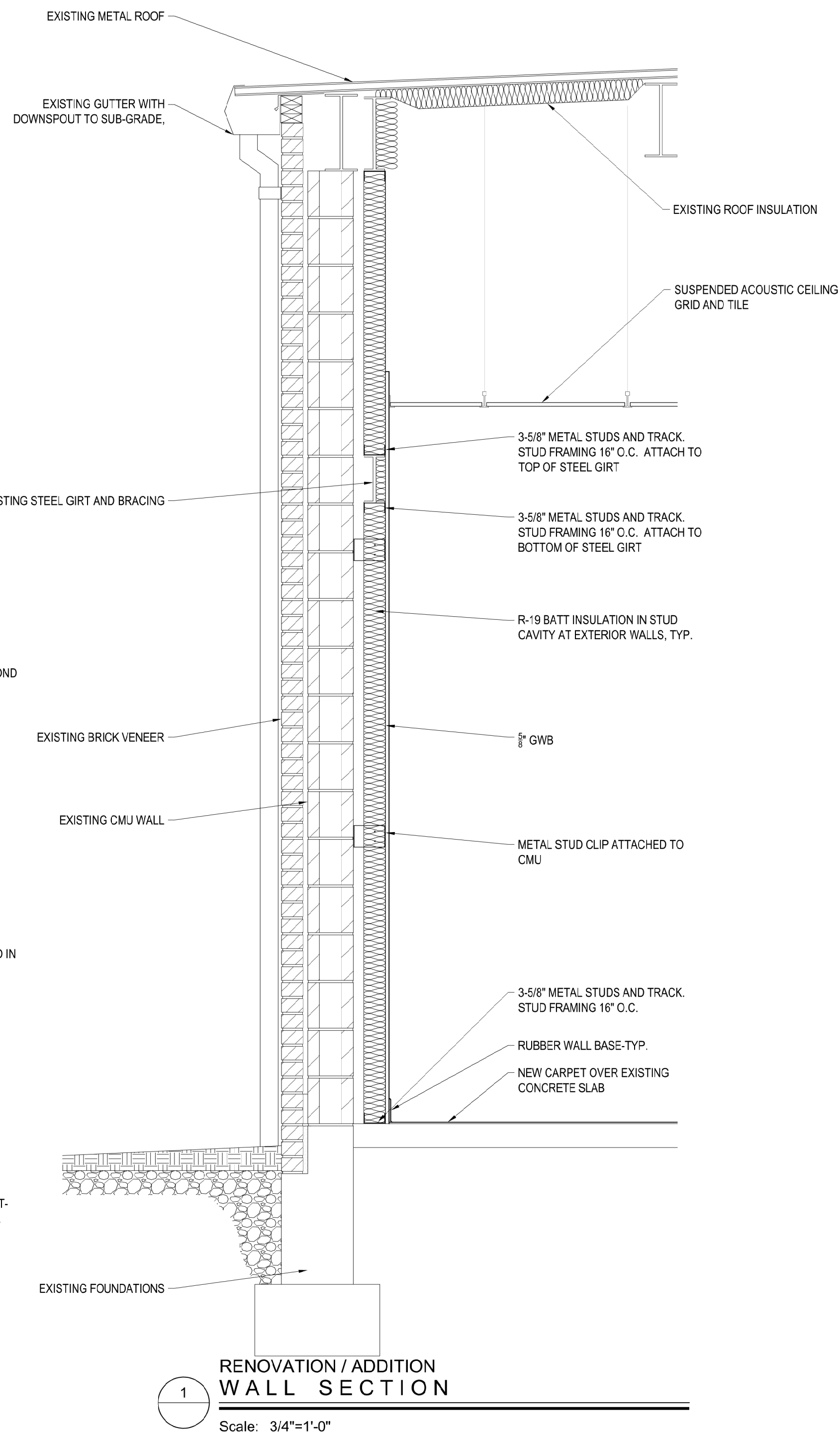
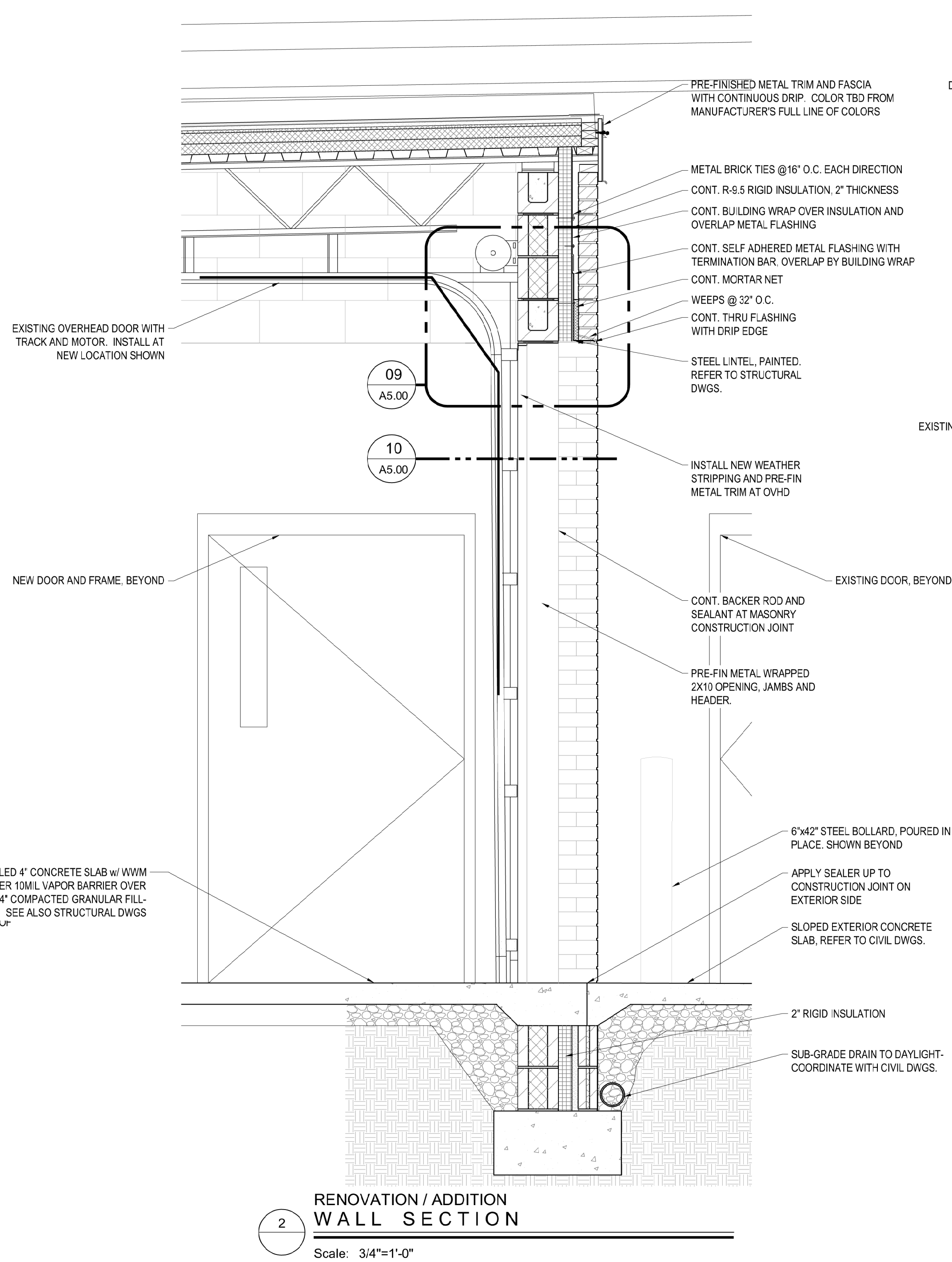
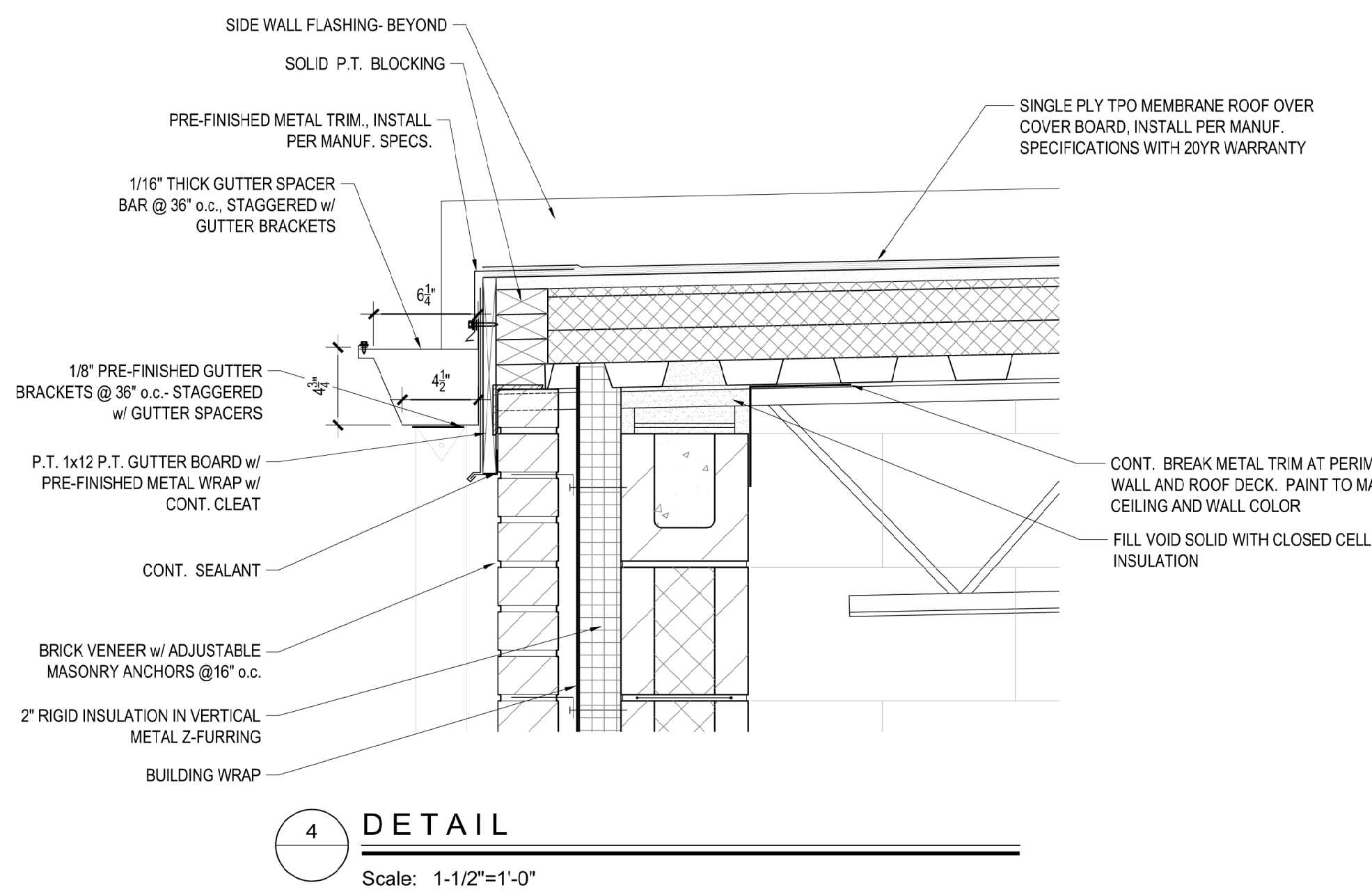
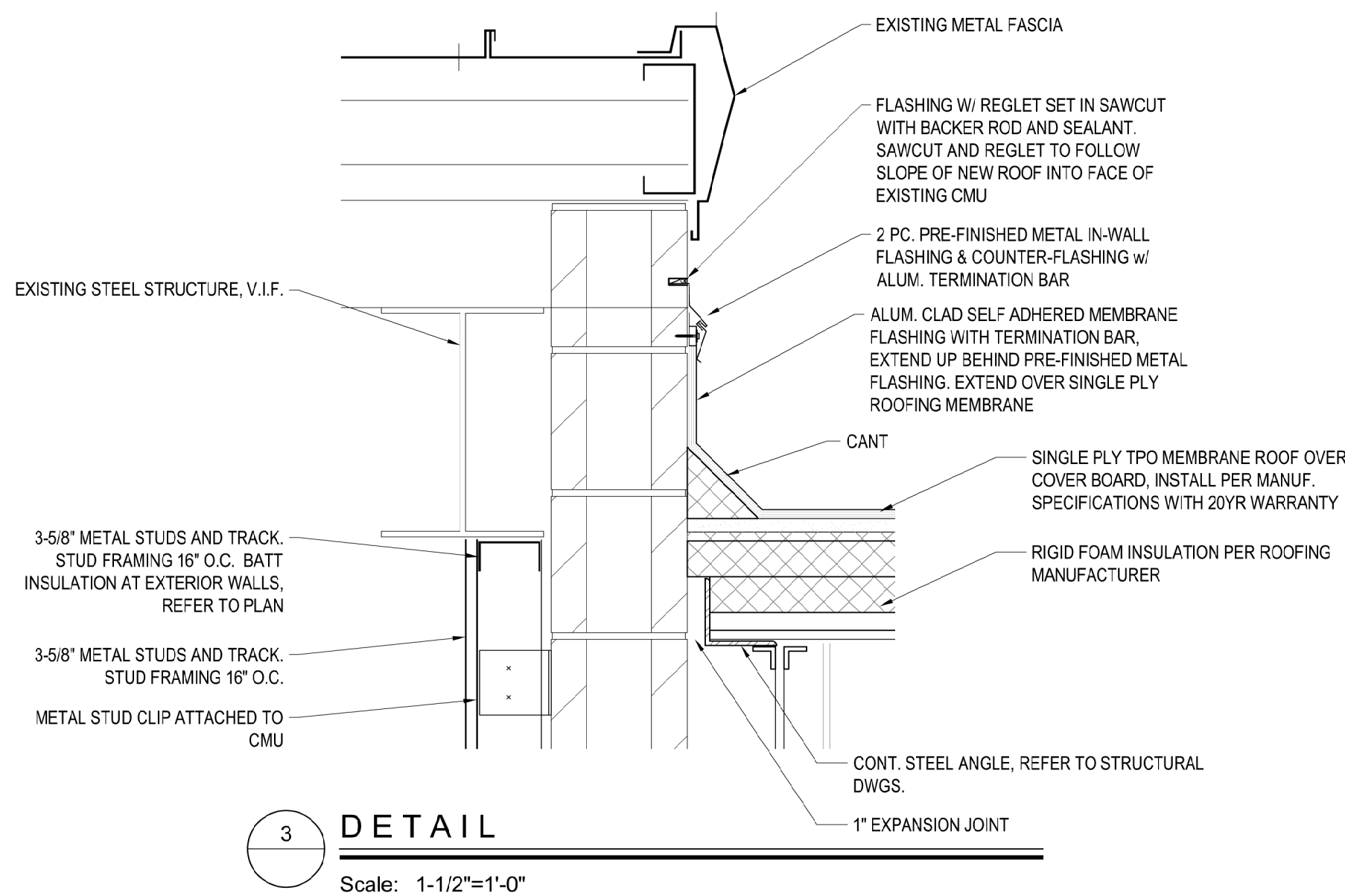
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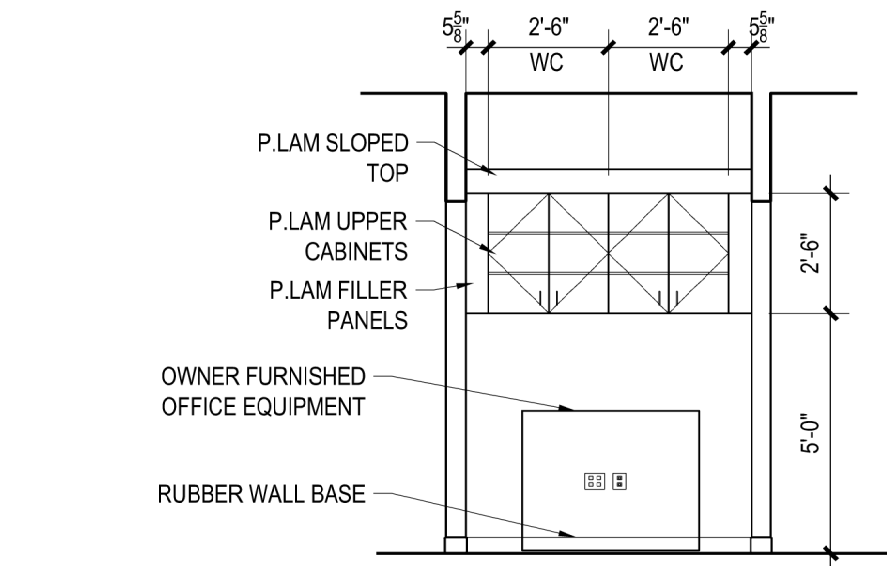
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BUILDING SECTION

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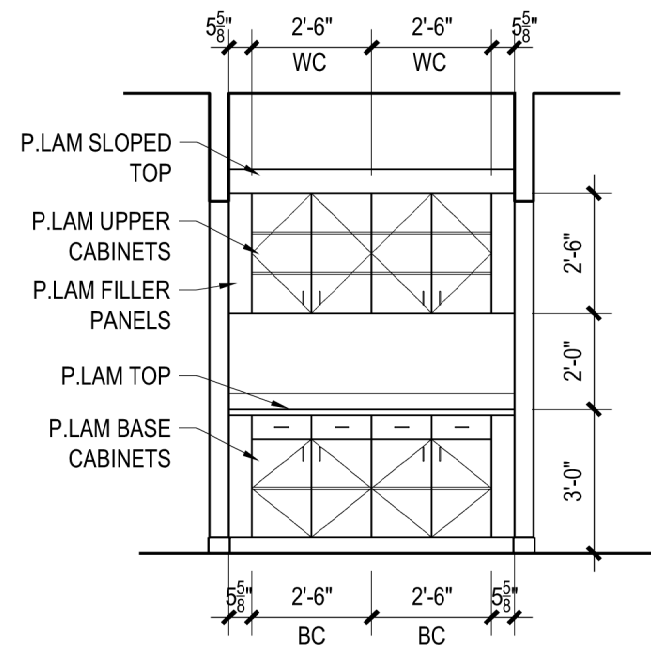




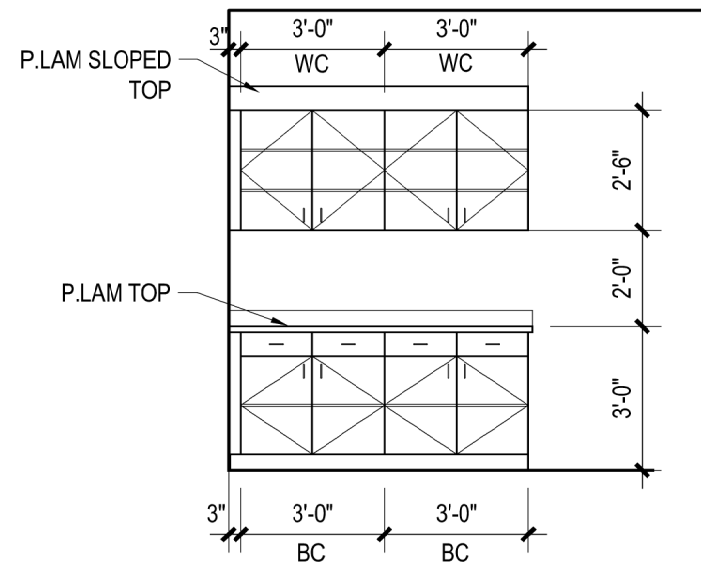




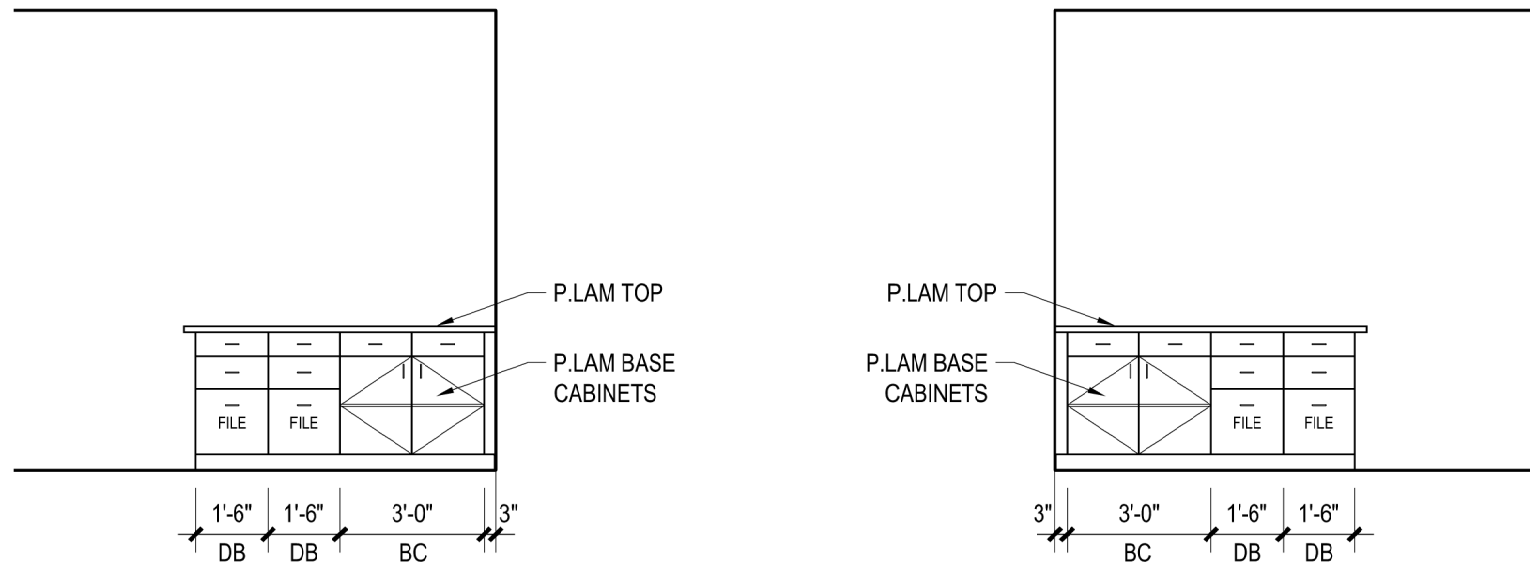
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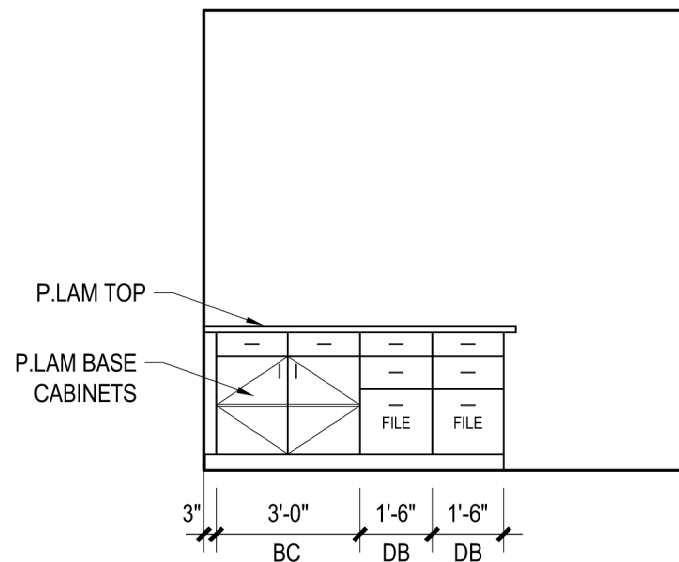
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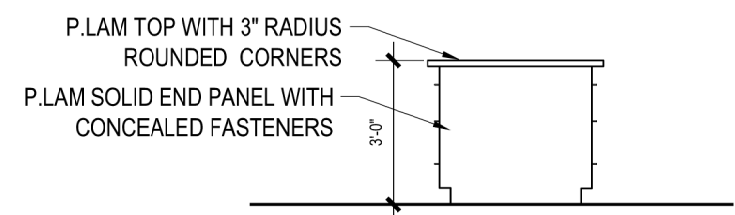
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4 CASEWORK ELEV  
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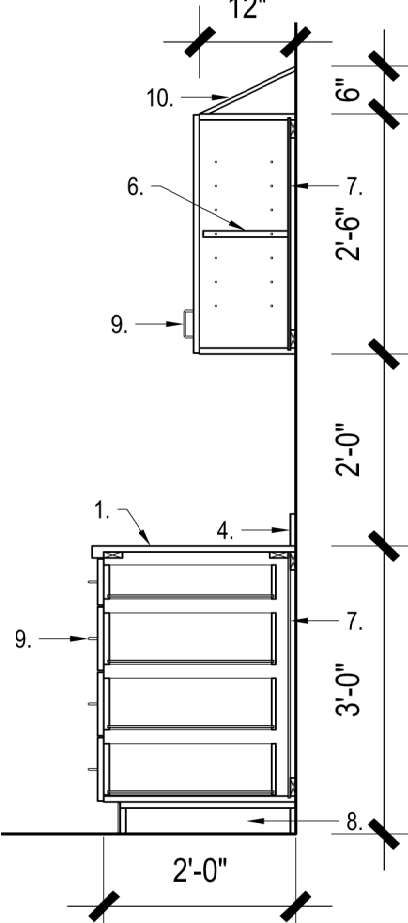


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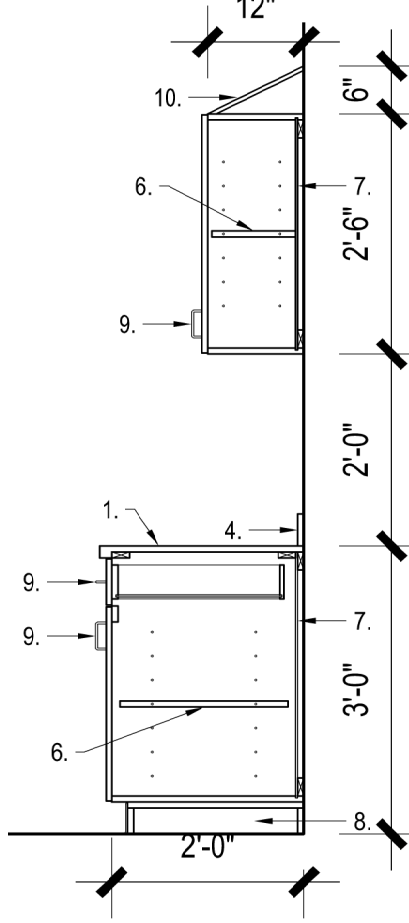
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TYPICAL CASEWORK SECTION:  
• 36" (tall) DRAWER BASE  
• 30" (tall) WALL CABINET  
• PLASTIC LAMINATE COUNTERTOP



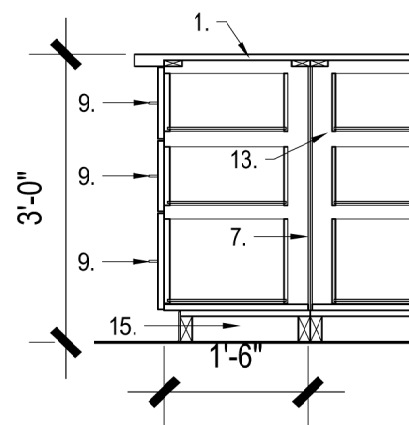
AA SECTION  
Scale: 1/2" = 1'-0"

TYPICAL CASEWORK SECTION:  
• 36" (tall) BASE CABINET  
• 30" (tall) WALL CABINET  
• PLASTIC LAMINATE COUNTERTOP



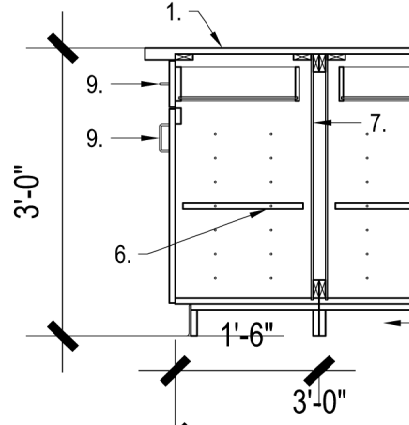
BB SECTION  
Scale: 1/2" = 1'-0"

TYPICAL CASEWORK SECTION:  
• 36" (tall) DRAWER BASE  
• PLASTIC LAMINATE COUNTERTOP WITH 3" OVERHANG ON ALL SIDES. OUTSIDE CORNERS SHALL HAVE A 3" RADIUS.



CC SECTION  
Scale: 1/2" = 1'-0"

TYPICAL CASEWORK SECTION:  
• 36" (tall) BASE CABINET  
• PLASTIC LAMINATE COUNTERTOP WITH 3" OVERHANG ON ALL SIDES. OUTSIDE CORNERS SHALL HAVE A 3" RADIUS.



DD SECTION  
Scale: 1/2" = 1'-0"

#### CASEWORK NOTES:

1. PLASTIC LAMINATE COUNTERTOP
2. EPOXY COUNTERTOP w/ MARINE EDGE (NOT USED)
3. INTEGRAL SINK (NOT USED)
4. 4" BACKSPLASH
5. 6" BACKSPLASH (NOT USED)
6. ADJUSTABLE SHELF (1" PARTICLE BD.)
7. 1/4" HARDBOARD BACK
8. BASE (3/4" PLYWOOD)
9. WIRE PULL
10. SLOPED TOP (3/4" PARTICLE BD.)
11. ADA DROP-IN SINK
12. SOLID 2x WOOD BLOCKING ON TOP OF METAL STUD TRACK
13. HOLES THROUGH FRAMING FOR ELECTRICAL WIRING
14. 2x BLOCKING
15. 2x BASE
16. PLASTIC LAMINATE FRONT PANEL w/ 3/8" deep REVEAL (DIFFERENT COLOR THAN FACE)
17. 3 5/8" METAL STUD VERTICAL SUPPORTS @ 16" o.c.
18. 5/8" GWB SURFACE - COORDINATE CUT-OUTS w/ ELECTRICAL CONTRACTOR
19. 3/4" SOLID SURFACE @ TRANSACTION COUNTERS- PLASTIC LAMINATE AT ALL OTHER COUNTER SURFACES, TYP.

#### GENERAL NOTES:

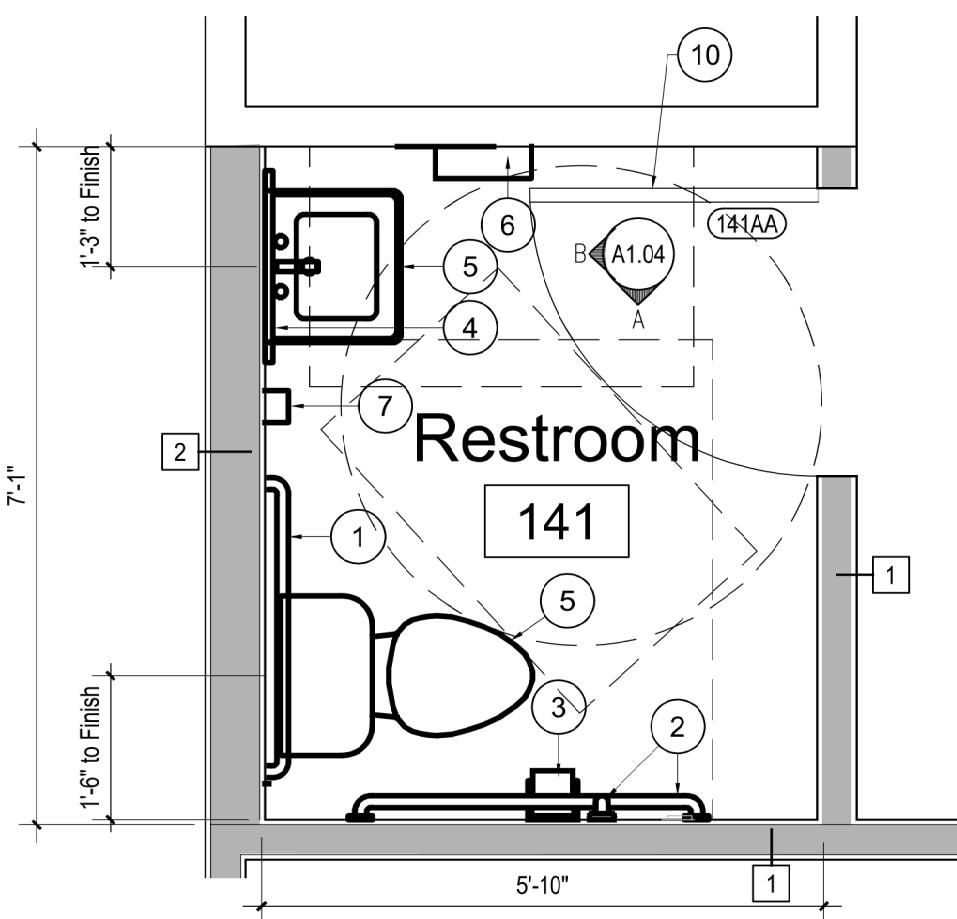
- A. GROMMETS SHALL BE PROVIDED AT ALL PLASTIC LAMINATE COUNTERTOP LOCATIONS WHERE ELECTRICAL DATA IS PROVIDED BELOW THE COUNTER TOP HEIGHT, TYP.-OWNER SHALL IDENTIFY FINAL LOCATIONS, CONTRACTOR INSTALL.
- B. ALL EXPOSED EDGES OF COUNTERTOPS SHALL HAVE A RADIUS EDGE, TYP.
- C. HIGH PRESSURE LAMINATE TO BE SELECTED FROM MANUFACTURER'S FULL RANGE OF COLORS FROM WILSONART, FORMICA, NEVAMAR, OR PIONITE
- D. PRODUCTS TO BE MANUFACTURED BY ONE OF THE FOLLOWING:
  1. CAMPBELL RHEA
  2. TMI SYSTEMS DESIGN CORPORATION
  3. SHELDON
  4. PRECISION MILLWORK AND PLASTICS
- E. TYPICAL FILLER PANELS @ ADJACENT WALLS SHOWN AS 3" WIDE. MANUFACTURER TO MINIMIZE FILLER PANELS WHERE POSSIBLE AND PROVIDE WIDTH AS NECESSARY FOR FLUSH FIT AGAINST WALL.
- F. ALL JOINTS IN CASEWORK @ WALL INTERSECTIONS SHALL BE CAULKED, COLOR TO MATCH ADJACENT FINISH.
- G. ALL DRAWER BASES LABELED "FILE" SHALL INCLUDE FILE FOLDER RACK SYSTEM INSTALLED
- H. SEE INTERIOR ELEVATIONS FOR CABINETS AND DRAWERS LABELED w/ AN "L" TO INDICATE LOCKED CABINETS AND DRAWERS.

#### TOILET ACCESSORIES SCHEDULE:

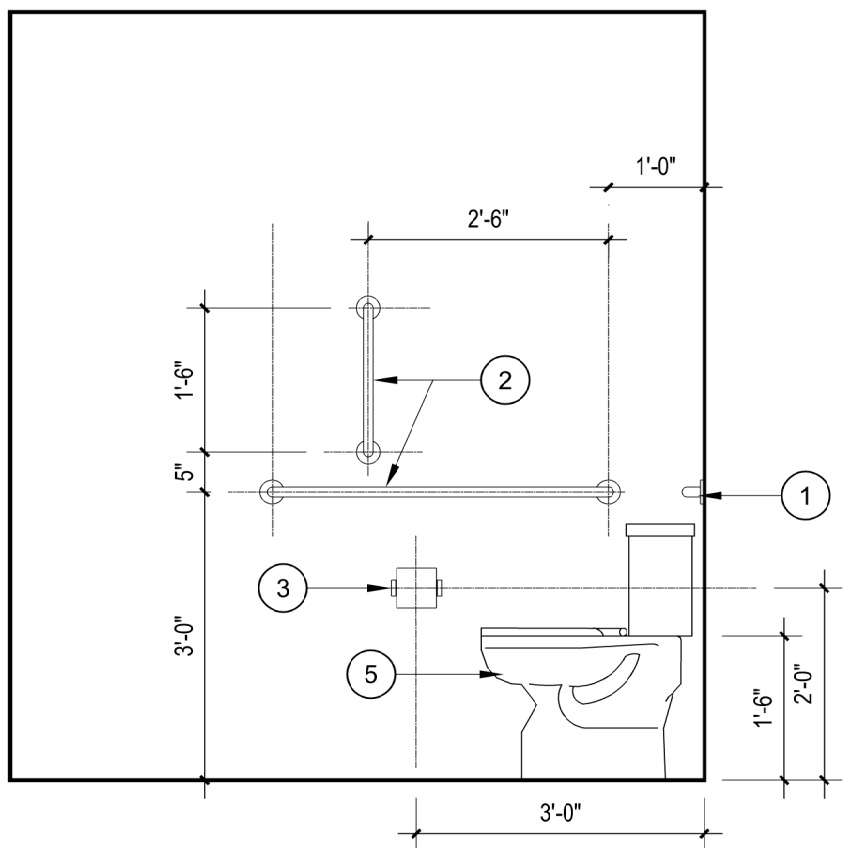
1. 1 1/2" dia. GRAB BAR - 36", STAINLESS STEEL
2. 1 1/2" dia. GRAB BAR - 42" w/ 18" VERTICAL LEG, STAINLESS STEEL
3. 2- ROLL TOILET PAPER DISPENSER, STAINLESS STEEL
4. MIRROR - 24" x 36", STAINLESS STEEL FRAME
5. NEW PLUMBING FIXTURE - REFER TO PLUMBING DRAWINGS FOR REQUIREMENTS
6. PAPER TOWEL DISPENSER
7. SOAP DISPENSER
8. -NOT USED-
9. -NOT USED-
10. COAT HOOK @ 5'-0" AFF
11. -NOT USED-
12. WRAP ALL EXPOSED PLUMBING SUPPLY LINES AND WASTE LINES WITH INSULATION AND PVC WRAP.

NOTE:  
PROVIDE IN-WALL SOLID BLOCKING FOR INSTALLATION OF ALL ACCESSORIES PER MANUFACTURER INSTRUCTIONS FOR ADA COMPLIANCE

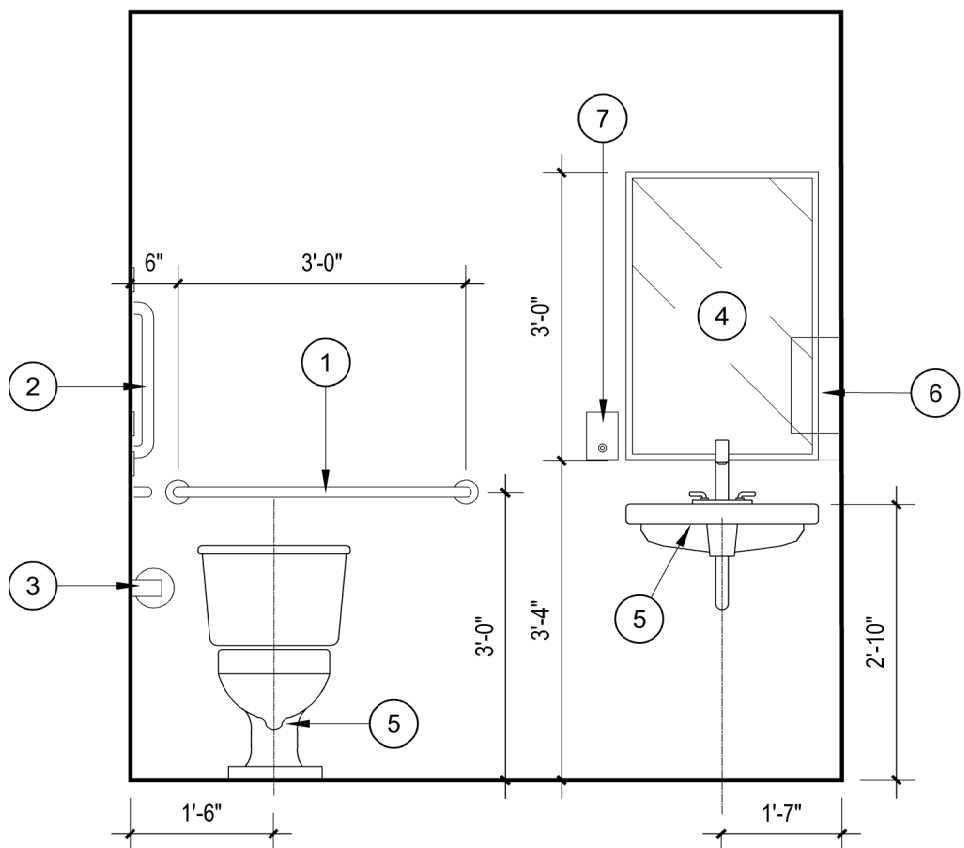
\*ACCESSORIES AND RESTROOM SCOPE TO BE BID AS ADD ALTERNATE #1. REFER ALSO TO PLUMBING AND CIVIL DWGS.



7 ADD ALTERNATE #1  
RESTROOM  
FLOOR PLAN  
Scale: 1/2" = 1'-0"



A ADD ALTERNATE #1  
Restroom  
Interior Elevation  
Scale: 1/2" = 1'-0"



B ADD ALTERNATE #1  
Restroom  
Interior Elevation  
Scale: 1/2" = 1'-0"

ADD  
ALT. 1



ROOM FINISH SCHEDULE

Room No.	Room Name	Floor Finish	Base	Wall Finish				Ceiling Type	Ceiling Height	Remarks
				N	E	S	W			
132	Storage	CA-2	RB-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-7"	
133	Copier Room	EX.	EX.	PT-2	PT-2	PT-2	PT-2	EX	EX	
134	Open Office Area 3	CA-2	RB-1	PT-2	PT-2	PT-2	PT-2	ACT	9'-7"	
135	Office 15	CA-3	RB-1	PT-2	PT-2	PT-1	PT-2	ACT	9'-7"	
136	Office 16	CA-3	RB-1	PT-2	PT-2	PT-1	PT-2	ACT	9'-7"	
137	Office 17	CA-3	RB-1	PT-2	PT-2	PT-1	PT-2	ACT	9'-7"	
138	Office 18	CA-3	RB-1	PT-2	PT-2	PT-1	PT-2	ACT	9'-7"	
139	Furnace	EX.	EX.	PT-2	PT-2	PT-2	PT-2	EX	9'-7"	
140	Electrical	CA-3	RB-1	PT-2	PT-2	PT-2	PT-2	ACT	9'-7"	
141	Restroom	LVT-1	RB-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	
142	Storage	CA-2	RB-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-7"	
S100	Storage	SC	RB-1	PT	PT	PT	PT			
Note 1: All vertical walls of soffits to be painted primary wall color (PT-2); Horizontal (ceiling) surfaces of soffit to be painted w/ PT-4										
Note 2: Closet flooring should match that of adjoining room unless otherwise noted.										
Note 3: All new and existing exterior metal (steel) doors shall be painted.										

MATERIALS & FINISH LEGEND

ITEM	DESCRIPTION	MANUFACTURER	COLOR	PRODUCT#	NOTES
LVT-1	Luxury Vinyl Plank	Armstrong	Natural Creations Classics/Buckhead Oak Savannah	TP101	6x48"
PT-1	Paint	Sherwin Williams	Camelback	SW6122	eggshell
PT-2	Paint	Sherwin Williams	Antique White	SW6119	eggshell
***PT-3	Paint	Sherwin Williams	Snowbound	SW7004	semi-gloss
PT-4	Paint	Sherwin Williams	Snowbound	SW7004	eggshell
*CA-1	Carpet	Shaw	Base Hexagon; Scale	5T159; 59501	28.8" (dia.)
**CA-2	Carpet	Shaw	Surround Tile; Limestone	5T125; 17530	24x24"
CA-3	Carpet	Shaw	Poured Tile; Mortar	5T206; 06530	24x24"
RB-1	Rubber Base	Johnsonite	Grey WG	48	
ACT-1	Acoustical Ceiling Tile	Armstrong	White	Ultima Lay-in	2'x2' Square
PL-1	Plastic Laminate (Casework)	Wilsonart	Park Elm	7967K-12	Casework
PL-2	Plastic Laminate (Countertops)	Wilsonart	Crisp Linen	4942-38	Countertops
SC	Sealed Concrete	Euclid Chemical	N/A	--	--
Finish Notes:					
**CA-2 to be installed at quarter turn					
***PT-3 to be applied to all metal door frames (typical); Existing finish to remain on storefront.					

GENERAL NOTES:

- A. CONTRACTOR TO NOTIFY THE ARCHITECT IMMEDIATELY IN THE EVENT THAT ANY EXISTING CONDITIONS IN THE FIELD DIFFER FROM THOSE DEPICTED IN THESE DOCUMENTS.
- B. ALL WALLS ARE TO REMAIN UNLESS OTHERWISE NOTED.
- C. INTERIOR DIMENSIONS (ALL DIMENSIONS ARE TAKEN FROM FINISH FACE OF WALL UNLESS OTHERWISE NOTED). ALL DIMENSIONS ARE EXISTING AND SHALL BE CONSIDERED (+/-).
- D. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL EXISTING FINISHES AND PREPARATION OF EXISTING SUBSTRATES TO RECEIVE NEW FINISHES PER THE ROOM FINISH SCHEDULE.
- E. IN LOCATIONS WHERE CASEWORK, FIXTURES AND TOILET ACCESSORIES ARE INSTALLED ON DRYWALL PARTITION, RE-USE OR PROVIDE WOOD BLOCKING FOR SOLID MOUNT ATTACHMENT PER MANUFACTURER'S RECOMMENDATIONS.
- F. ALL CHANGES OF FLOOR FINISH SHALL OCCUR CENTERED UNDER THE DOOR.
- G. ANY EXISTING HOLES / VOIDS / BLEMISHES IN DRYWALL SURFACES SHALL BE FILLED AND PREPPED TO RECEIVE NEW FINISH PER THE INTERIOR FINISH SCHEDULE.
- H. ALL HVAC SUPPLY AND RETURN GRATES/DIFFUSERS ARE TO BE REMOVED, CLEANED, AND REINSTALLED IN THEIR ORIGINAL LOCATION. REPLACE ANY ITEMS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS.
- I. ALL AV DEVICES SUCH AS SPEAKERS, WIRELESS ACCESS DEVICES, PROJECTORS, ETC. ARE TO BE REMOVED BY AN OWNER'S REPRESENTATIVE (NOT IN THIS CONTRACT). COORDINATE TIMING WITH THE OWNER TO PROVIDE AMPLE TIME TO SCHEDULE REMOVAL OF THESE ITEMS TO FIT WITHIN CONSTRUCTION SCHEDULE.
- J. ALL SIGNAGE, WHITE BOARDS, TACK BOARDS, ETC. ARE TO BE REMOVED PRIOR TO BEGINNING OF WORK, CLEANED, AND REINSTALLED IN THEIR ORIGINAL LOCATION UNLESS DIRECTED OTHERWISE BY OWNER OR ARCHITECT.
- K. ALL EXISTING TOILET FIXTURES SHALL BE REPLACED WITH NEW MANSFIELD FLOOR-MOUNTED, TANK-TYPE TOILETS OF SIMILAR FLOW RATE AS EXISTING FIXTURES.
- L. ALL EXISTING RESTROOM WALL-HUNG LAVATORIES SHALL BE REPLACED WITH NEW MANSFIELD WALL-HUNG LAVATORIES OF SIMILAR SIZE TO EXISTING FIXTURES.
- M. ALL EXISTING URINALS SHALL BE REPLACED WITH NEW MANSFIELD WALL-HUNG URINALS OF SIMILAR SIZE TO EXISTING FIXTURES.
- N. ALL EXISTING RESTROOM ACCESSORIES SHALL BE REMOVED AND NEW ACCESSORIES SHALL BE INSTALLED IN THEIR LOCATIONS.
- O. ALL EXISTING TOILET PARTITION WALLS SHALL BE REMOVED AND NEW HDPE PARTITION SYSTEMS OF SAME TYPE AND SIZE SHALL BE INSTALLED. TYP. COLOR SHALL BE CHOSE BY THE OWNER PER MANUFACTURER'S STANDARD COLOR OPTIONS.
- P. All EXISTING BUILT-IN SHELVING SYSTEMS SHALL BE REMOVED, WIPED CLEAN AND SAVED FOR REINSTALLATION. PATCH ALL DRYWALL TO RECEIVE NEW PAINT FINISH PER FINISH SCHEDULE. COORDINATE WITH OWNER IF EXISTING SYSTEMS ARE TO BE SALVAGED PRIOR TO REINSTALLATION.



SECTION 08710 - DOOR HARDWARE

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes furnishing items known commercially as finish hardware or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.

- Butt Hinges
- Cylinders
- Locks and Latches
- Exit Devices
- Closers
- Protection Plates
- Door Stops
- Thresholds, Weatherstripping, Gasketing
- Silencers

- B. Related Sections: The following Sections contain requirements that relate to this Section:

- |                   |   |
|-------------------|---|
| 1. Division 1     | ORGANIZATIONS & SERVICES  |
| a. Section 01300  | Administrative Requirements                                       |
| b. Section 01400: | Quality Requirements  |
| c. Section 01500  | Temporary Facilities and Controls                                 |
| 2. Division 4     | MASONRY   |
| a. Section 04400  | Concrete Masonry Units, installation of door frames.              |
| 3. Division 6     | WOOD & PLASTICS   |
| a. Section 06100  | Rough Carpentry, blocking for finish hardware.                    |
| b. Section 06400  | Architectural Woodwork, installation of doors and finish hardware |
| 4. Division 7     | PAINTS, COATINGS, AND FINISHES                                    |
| a. Section 07900  | Paints and Sealants   |
| 5. Division 8     | DOORS AND WINDOWS   |
| a. Section 08110  | Standard Hollow Metal Doors and Frames                            |
| b. Section 08210  | Flush Wood Doors.   |
| 6. Division 9     | FINISHES  |
| a. Section 09900  | Paintings and Coatings  |

1.03 REFERENCES

- A. Applicable publications: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. American National Standards Institute (ANSI)

- ANSI A117.1-1998, Providing Accessibility and Usability for Physically Handicapped People
- ANSI/BHMA A156.1, 1997, Butts and Hinges
- ANSI/BHMA A156.3-1994, Exit Devices
- ANSI/BHMA A156.4-1992, Door Controls-Closers
- ANSI/BHMA A156.6-2007, Architectural Door Trim
- ANSI/BHMA A156.7, 1997, Template Hinge Dimensions
- ANSI/BHMA A156.13, 1994, Locks & Latches, Mortise
- ANSI/BHMA A156.16, 1997, Auxiliary Hardware
- ANSI/BHMA A156.18, 1993, Materials and Finishes

- C. American Society for Testing and Materials (ASTM)

- |                    |   |
|--------------------|---|
| 1. ASTM-E2074-2001 | Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies |
|--------------------|---|

- D. Code of Federal Regulations (CFR)
- E. Americans with Disabilities Act (ADA)

1. 28\_CFR Part 36, Appendix A Accessibility Guidelines for Buildings and Facilities

- F. Door and Hardware Institute (DHI)

- Keying Systems and Nomenclature, 1989 edition.
- Hardware for Labeled Fire Doors, January 1996 edition.
- Sequence and Format for the Hardware Schedule, January 1996 edition.
- Abbreviations and Symbols, September 1983 edition.

- G. National Fire Protection Association (NFPA)

- NFPA 80 Standard for Fire Doors and Windows, 1999 edition.
- NFPA 101 Life Safety Code, 1997 edition.
- NFPA 105 Recommended Practice for the Installation of Smoke-Control Door Assemblies, 1999 edition.
- NFPA 252 Standard Methods of Fire Tests of Door Assemblies, 1995 edition.

- H. Steel Door Institute (SDI)

1. SDI 100 Recommended Specifications for Standard Steel Doors and Frames, 1998 edition.
- I. Underwriter's Laboratories, Inc. (UL) - UL Standards for Safety:

- UL 10C, 97 Positive Pressure Fire Tests of Door Assemblies
- UL 228 Door Closer-Holders, With or Without Integral Smoke Detectors
- UL 305 Panic Hardware

1.04 SUBMITTALS

- A. General: Each requirement listed under headings below shall be submitted in relation to all items specified in this section. The submittal for each heading shall be compiled by the Contractor and submitted complete and in its entirety.

- B. Shop Drawings: Submit a binder with label on the front cover and spine indicating job name, date, Contractor's name and the title "DOOR HARDWARE". Binder shall contain six copies of all the door hardware shop drawings with largest sheets 11" x 17" (279 x 432 mm). Punch and fold largest sheets to fit in binder. Separate items in binder with tabbed reinforced index sheets indicating contents in each section. Use door references same as contract documents. Highlight items on shop drawings in question with yellow marker for Architect's review and response. Submit complete hardware schedule, catalog cut sheets, templates, and specifications for all hardware set items.

1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule in vertical format "hardware sets" indicating complete designations of every item required for each door or opening. Hardware schedule to be in the DHI vertical format as per DHI publication Sequence and Format for the Hardware Schedule. Use specification Heading numbers with any variations suffixed a, b, etc. Supplier to submit 6 copies including the following:

- Type, style, function, size, hand, and finish of each hardware item.
- Name and manufacturer of each item.
- Fastenings and other pertinent information.
- Location of each hardware set cross-referenced to indications on Drawings both on floor plans and in door and frame schedule.

- Index and explanation of all abbreviations, symbols, and codes contained in schedule.
- Mounting locations for hardware.
- Door and frame sizes and materials.
- Keying information.
- Furnish factory drawn wiring diagrams for electronic openings.
- Cross-reference numbers used within schedule deviating from those specified.
- Column 1: State specified item and manufacturer.
- Column 2: State prior approved substituted item and its manufacturer.

- Production and Delivery Schedule: Submit a production and delivery schedule as well as all templates to be forwarded to other trades involved in hardware preparation work.
- Templates: Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- Operations and Maintenance Data: The manufacturer shall furnish the owner a OPERATIONS AND MAINTENANCE MANUAL, information shall be bound in a 3-ring loose-leaf binder with project name and address on the front cover and spine. Submit in accordance with Section 01770 Closeout Procedures. In this manual are to be one copy of each of the following:
  - Name, address, phone and fax for the Finish Hardware supplier.
  - Name, address, phone and fax number for the local manufacturers representative for each manufacturers who's products have been used on this project.
  - Specification Section 08710 Finish Hardware.
  - "AS BUILT" Door and Frame Schedule.
  - "AS BUILT" Keying Schedule.
  - Hardware manufacturers maintenance instructions, if any.
  - Fully executed Warranty(s) for finish hardware.
  - Specifications for related sections.
- Abbreviations: Use abbreviations per DHI publication Abbreviations and Symbols.
- Keying Schedule: Keying schedule is to be formatted as per DHI publication Keying Systems and Nomenclature.

1.05 QUALITY ASSURANCE

- A. Manufacturers Requirements: Repair or replace damaged or defective materials prior to shipment. If product is repaired it is to meet all QA requirements for said product.
- B. Supplier Qualifications: A recognized architectural door hardware supplier, with an office and warehousing facilities in the Project's vicinity, that has on the shelf inventory of the hardware that will be furnished. Supplier to schedule and provide hardware in compliance with manufacturers recommendations. Supplier to be a regular authorized distributor of the product furnished. Supplier is responsible for furnishing hardware required for fully functional openings and complying with building codes rather specified herein or not.
- C. Regulatory Requirements: Comply with requirements of NFPA 80, NFPA101 and NFPA 252 in providing hardware for fire rated openings.
- D. End User Training: Material supplier to conduct a comprehensive training class for the owners maintenance personnel prior to date of acceptance on any special application mechanical hardware provided under this Section.
- E. Product Standards:
  - Hinges, Mortise Locks and Latches, Closers, Thresholds, Trim, Finishes and other miscellaneous hardware: Complying with requirements of ANSI A156 standards for quality, construction, performance and operation applicable for specified hardware.
- F. Substitutions: Submit requests for substitution no less than ten days prior to bid date and accordance with the requirements set forth in Division 1.
- G. Pre-Installation Conference: Require attendance for the GC project manager & superintendent, material supplier and installer.
- H. Keying Meeting: The Contractor shall be responsible for scheduling, coordinating and documenting a Keying Meeting with owner, Architect and suppliers to establish requirements for the project. Notify participants of time and place of meeting at least seven days in advance. Incorporate and coordinate all hardware in the Project to provide for a complete unified system of keying. A complete keying schedule shall be submitted to the Architect and Owner for review after meeting.

1.06 DELIVERY AND STORAGE

- A. Tag each item or package according to the approved finish hardware schedule, and include manufacturers instructions with each item or package.
- B. Deliver hardware in manufacturers original packaging.
- C. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.
- D. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).
- E. Provide secure lock up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

1.07 WARRANTY

- A. Warranty to comply with requirements set fourth in Division 1. Warranty to commence at date of acceptance. Furnish manufacturers' limited warranty covering defects in materials and workmanship for periods indicated as follows:
  - Door Closers: Minimum Ten years
  - Locksets: Minimum Ten years
  - Exit Devices: Minimum Ten years
  - All other hardware: Minimum One year

1.08 MAINTENANCE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware. These tools are limited to tools that are manufactured by the hardware manufacturers for the products used on this project, ie spanner wrenches, closer adjustment tools.

B. EXTRA MATERIALS

- Provide the following materials, or those submitted, as building inventory at the owners request.
  - 1 each screw pack for locksets
  - 1 each screw pack for closers
  - 1 each screw pack for exit devices
  - 1 each screw pack for hinges

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers listed have products specified in this section. Only the manufacturers' products specifically listed are acceptable, subject to meeting or exceeding the requirements specified.
- B. Unless otherwise specified, acceptable manufacturers listed as follows are referred to in this section hereinafter by their first or common trade names:

- Bommer Industries
- Dorma
- Hager
- McKinney
- NGP
- Norton
- PBB, INC.
- Pemko
- Precision
- Reese
- Rockwood Mfg. Co.
- 2.Sargent Mfg. Corp.
- 13.Schlage
- 14.Trimco
- 15.Von Duprin

2.02 HINGES

- A. Full Mortise Butt Hinges:

- Provide templated hinges. Install machine screws for metal doors and frames. Finish screw heads to match surface of hinges or pivots. Wood doors provide steel threaded to the head wood screws. Provide out-swing exterior doors with a non-corrosive brass base metal, and non-removable pins, and interior doors with non-rising pins. Size hinges in accordance with manufacturer's published recommendations. Furnish one pair of hinges for all doors up to 5'0" high. Furnish one hinge for each additional 2-1/2 feet or fraction thereof. Furnish 4-1/2 high hinges for all 1-3/4" thick doors.
  - Acceptable manufacturers and products:

MFG	STD.WT.	HVY.WT.
PBB	BB61	4B81
HAGER	BB1279	BB1168
BOMMER	BB5000	BB5004

2.03 KEY CYLINDERS AND KEYING

- A. Key Cylinders: Provide a seven-pin interchangeable core key cylinder meeting ANSI Grade 1 Security. Supply manufacturer's standard size cylinder as required to accommodate specified hardware. Include security cylinder rings, extensions and collars as required to accommodate installation. Provide factory original keys of nickel silver.

- B. Acceptable manufacturers and products:

Corbin/Russwin Pyramid, Schiage Primus, Dorma.

C. Keying:

- Key Systems: Furnish a new master key system for the project. System shall be keyed in sets per the owner's instructions.
- Key Quantities: Provide number of keys indicated. Quantities indicated shall be used as the basis for adjustments, if required, after keying is established with Owner. Coordinate number of keys furnished with key cabinets (and key safes). Lock openings shall include door openings, pass openings and other similar openings scheduled with locks.
  - Provide 3 each change keys per lock.
  - Provide 5 each Master Keys per key group.
- Key Control: All keys shall be accounted for at all times and delivered to the designated personnel as directed by Owner. Index tag and deliver keys in sealed containers; shipped direct to Owner by prepaid registered mail or other secure method acceptable to Owner. All keys assigned to Contractor shall be surrendered to Owner upon completion of the project. The Owner will provide a receipt for all keys received. If at any time a key cannot be accounted for, the lock cylinder shall be re-keyed, or the entire lock replaced if re-keying is not possible, at an additional cost to the Owner.
- Key Identification: Each key shall be stamped or engraved with the key set per the approved key schedule in addition to the manufacturer's standard markings.
- Key Cabinet: Provide a key cabinet to hold all keys distributed on this project. Cabinet shall be wall mounted cabinet and hold a capacity for 150% future expansion. Include index cards, key tags, and all visual key control needed to record the distribution of keys in this building.

2.04 BORED LOCKS AND LATCHSETS:

- A. Furnish a standard-duty key in lever bored lockset designed to exceed the requirements of ANSI 156.2, Series 4000, Grade 2. Provide a 4-7/8" curved lid strike plate for all hollow metal frames. Furnish brass latchbolts with a 1/2" minimum throw and 2-3/4" backset. Furnish locksets with straight levers that do not return to the door.

- B. Acceptable manufacturers:

- Dorma C700 Series LF design
- Schiage AL Series
- Corbin/Russwin CL3900

2.05 EXIT DEVICES

Provide exit devices with "UL" listing for life safety and with "UL" labels for "Fire Exit Hardware" unless noted otherwise. At any non-rated applications indicated, provide cylinder dogging. All exit devices mounted on labeled wood doors shall be mounted on the door per the door manufacturer's requirements. All trim shall be thru-bolled to the lock stile case. Provide glass bead conversion kits to shim exit devices on doors with raised glass beads or raised panels or moldings. All exit devices shall be one manufacturer. No deviation will be considered. Lever trim shall be solid case material with a vandal resistant feature to limit damage to the unit from vandalism and match the lock lever design. Hardware to comply with ANSI A156.1, Grade 1 requirements.

- B. Acceptable manufacturers and products:

- Von Duprin 98 series
- Precision 2000 series
- Dorma 9000 series

2.06 EXIT DEVICE TRIM

- A. Thru-bolt all trim to chassis. Use vandal resistant lever trim where lever trim is specified. Furnish pull trim with a cylinder for exterior doors. Furnish lever trim with a classroom function for the interior doors.

- A. Acceptable manufacturers and products:

- Von Duprin 996L x 07, Precision 4900B, Dorma YG

2.07 DOOR CLOSERS

- A. Door closers shall have fully hydraulic, full rack and pinion action. All closers shall utilize a stable all weather fluid without seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with standards UBC 7-2 (1997) and UL 10C, as required. Closers will be have adjustable sizes 1 thru 6. Provide full closer cover. Doors swinging into exit corridors shall provide for corridor clear width as required by code. Where possible, mount closers inside rooms. Furnish Grade 1 closers conforming to ADA and ANSI-A117.1. Furnish overhead stops where wall stops cannot be used.

- B. Acceptable manufacturers and products:

- |              |                  |            |
|--------------|------------------|------------|
| Manufacturer | Extra Heavy Duty | O.H.Stops  |
| Dorma        | 8600 Series      | 900 Series |
| Norton       | 8500 Series      | 6 Series   |
| LCN          | 1431             | 90 Series  |

2.08 PUSH PLATES, PULLS AND PULL PLATES

- A. Pulls: Material to be 1" solid stainless steel. Pulls to be 12" Center to Center. Provide fasteners at common ends and button pin spanner thru-bolts at free ends.

- B. Furnish pull plates where specified in the hardware sets. Where the door stile will not allow the width specified, provide a plate 1" less than the stile width.

- C. All plates to be furnished with .050 thick stainless steel. Furnish back to back mounting wherever possible, and metal screws for metal doors and wood screws for wood doors.

- D. Acceptable manufacturers and products:

- |              |             |         |          |
|--------------|-------------|---------|----------|
| Manufacturer | Push Plates | Pulls   | Bar Sets |
| Rockwood 70C | BF157       | BF15747 |          |
| Trimco       | 1001-3      | 1191-3  | 1737-1   |

2.09 PROTECTIVE PLATES

- A. Protective plates to be .050" thick (U.S. 18 gage) stainless steel. Counter sink for mechanical fasteners. Furnish clear plastic plates where specified. Fasten with pan head oval stainless steel sheet metal screws provided by protective plate manufacturer.

- B. Kick Plates: Kick plates are to be mounted on push side of door and shall be 8" in height and 2" LDW. Bevel all four sides. Furnish smaller kickplates when the bottom rail will not permit 8" in height.

- C. Map Plates: Map plates are to be mounted on pull side of door and shall be 4" in height and 1" LDW. Bevel all four sides.

- D. Acceptable manufacturers and products:

- |          |       |
|----------|-------|
| Rockwood | K1050 |
| Trimco   | KO050 |

2.10 WALL BUMPERS AND DOOR VIEWERS

- A. Wall Stops: Provide concave wall stops with concealed combo pack fasteners. Use toggle fasteners in drywall and wood screw x plastic anchor in masonry and concrete walls. Furnish stops with an anti-vandal metal washer to deter rubber portion from vandalism or abuse.

- B. Acceptable manufacturers and products:

- |              |          |              |         |
|--------------|----------|--------------|---------|
| Manufacturer | Wall     | Roller Stops | Viewers |
| Trimco       | 1278WVCP | 1244         | 978U    |

2.11 DOOR SEALS/GASKETING/THRESHOLDS/DOOR BOTTOMS

- A. Aluminum extrusions to be T-6063 or T-6463 with a minimum hardness of T-5. Provide mechanical fasteners. Use only manufacturer supplied fasteners.

- B. Door Seals and Gasketing: Fasteners shall be stainless steel sheet metal screws. Furnish UL listed gasketing for smoke and fire-rated doors.

1. Perimeter Seals:

Provide bulb seal at head and jambs of all exterior openings. Seal to be silicone or Polyurethane. Fasten with manufacturer's recommended and supplied fasteners. Furnish smoke gasketing for all 20 minute fire-doors. Furnish intumescent seals for fire doors, with a ratings over 20 minute.

2. Thresholds

Provide only manufacturer supplied fasteners. Secure thresholds and safety treads with stainless steel wood screws and plastic anchors, or lead expansion anchors and machine screws. Furnish anti-slip surfaces compatible with Pemko PemKola.

- Thresholds: Provide 1/2" thick material for 1/4" rise saddle thresholds and .200" material for 1/2" rise saddle thresholds.

- b. Acceptable manufacturers and products:

- |              |       |                 |                  |        |              |
|--------------|-------|-----------------|------------------|--------|--------------|
| Manufacturer | W/S   | 1/4" Rise Panic | 1/2" Rise Saddle | Gasket | Intume.      |
| NGP          | 162SB | 897S            | S483SIA          | 5050   | 9500         |
| Pemko        | 303BS | 2005ASK         | S2005AK          | S880   | HS2000 X S44 |
| Reese        | 769B  | S493A           | S483A            | 797    | Bzaseal      |

2.12 SILENCERS

- A. Provide punch in silencers for mounting to door frames. Silencers to meet the requirements of ANSI A156.16. Provide silencers for all frames rather specified in the hardware sets or not.

- B. Acceptable manufacturers and products:

- |              |           |             |
|--------------|-----------|-------------|
| Manufacturer | HM Frames | Wood Frames |
| Rockwood     | 608       | 609         |
| Trimco       | 1229A     | 1229B       |

- C. Provide three for each single doors, two pairs for doors. All frames in this project receive silencers, rather specified or not.

2.13 MATERIALS AND FABRICATION

- A. Base Metals: Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units by applicable ANSI/BHMA A156 series standards for each type of hardware item and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.

- B. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.

- Do not provide hardware that has been prepared for self-tapping steel metal screws, except as specifically indicated.
- Furnish screws for installation with each hardware item. Provide Phillips flat head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
- Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners.
- Do not use thru\_bolts or sex bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of adequately fastening the hardware, or otherwise found in Headings. Coordinate with wood doors and metal doors and frames where thru\_bolts are used as a means of reinforcing the work, provide sleeves for each thru\_bolt or use sex screw fasteners.

2.14 HARDWARE FINISHES

- A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if no latch or lock sets).
- B. Provide finishes that match those established by ANSI or, if none established, match the Architect's sample.
- C. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- D. The designations used to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturers for their products.

- |                           |                           |
|---------------------------|---------------------------|
| 1. Hinges (Interior)      | US15                      |
| 2. Cont.Hinges (Exterior) | Match finish of alum.door |
| 3. Locks                  | US15                      |
| 4. Exit Devices           | US15                      |
| 5. Door Closers           | 695                       |
| 6. Protective Plates      | US15                      |
| 7. Door Stops             | US15                      |
| 8. Thresholds             | Mill Alum.                |
| 9. Weatherstripping       | Dark Anodized             |

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide an installer with not less than 10 years of experience in the installation of these type of products. Installer will use the screws and fasteners provided from the manufacturer of each product. Self-tapping self-drilling screws are not acceptable, unless they were furnished with the product. Caulk all thresholds and exterior openings.
- B. USE ONLY MANUFACTURER SUPPLIED FASTENERS. USE OF ANY OTHER FASTENERS WILL VOID LABEL AND WARRANTY.
- C. Install hardware per manufacturers instructions and in compliance with:

- NFPA-80
- NFPA-101
- NFPA-105
- NFPA-252
- ANSI A117.1
- Local building code requirements
- Approved Shop Drawings
- Approved Finish Hardware Schedule

- D. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work.

- E. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

- F. Drill and countersink units that are not factory prepared for: anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

- G. Thresholds, Weatherstrip and Seals: Comply with manufacturer's instructions and recommendations to the extent installation requirements are not otherwise indicated.

3.02 FIELD QUALITY CONTROL

- A. Certified Architectural Hardware Consultant(AHC) by Door & Hardware Institute to inspect hardware after installation and before final acceptance in order to ensure that hardware has been properly installed. If there are any discrepancies, consultant to provide the architect a written report detailing the discrepancies. All discrepancies are to be corrected prior to final acceptance unless otherwise directed by the Owner.

3.03 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjusting: Hardware installer to adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.

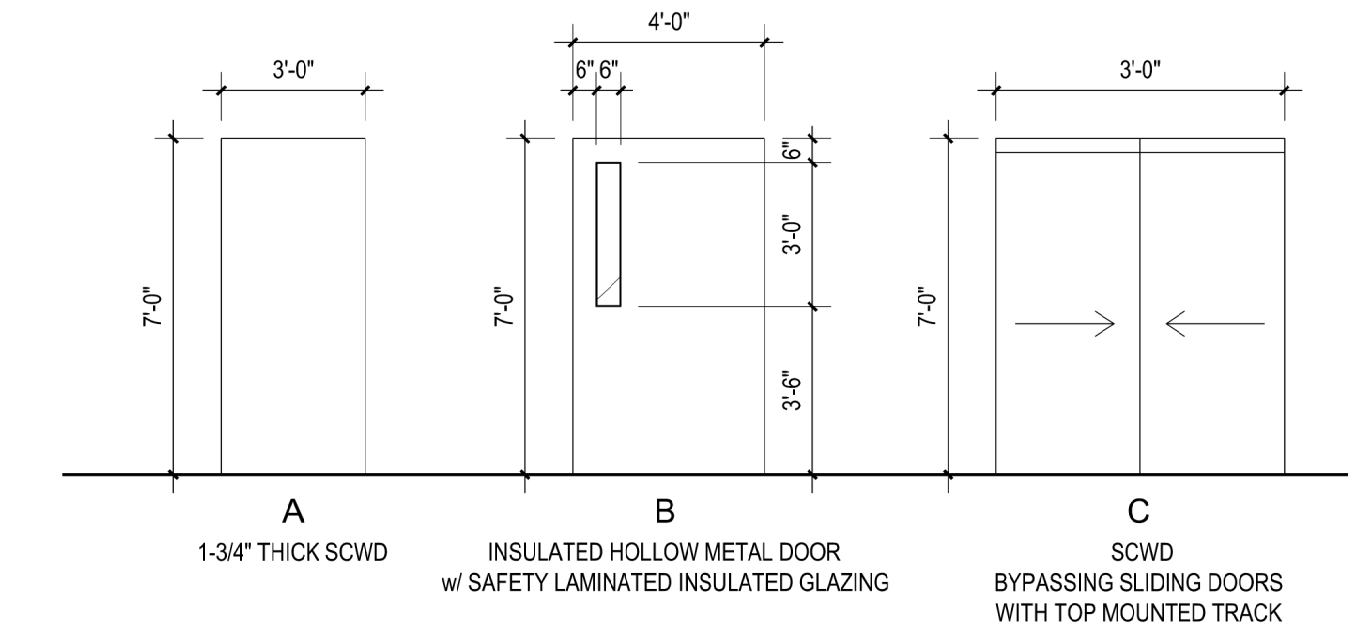
- Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to function properly with final operation of heating and ventilating equipment.

- B. Cleaning: General Contractor to:

- Clean adjacent surfaces soiled by hardware installation.
- Clean finish hardware per manufacturers instructions after installer makes final adjustments and prior to final acceptance. Remove all mortar, dry wall mud, paint over spray and foreign materials from hardware. Replace at no cost to owner items that can not be cleaned to manufacturers level of finish quality.

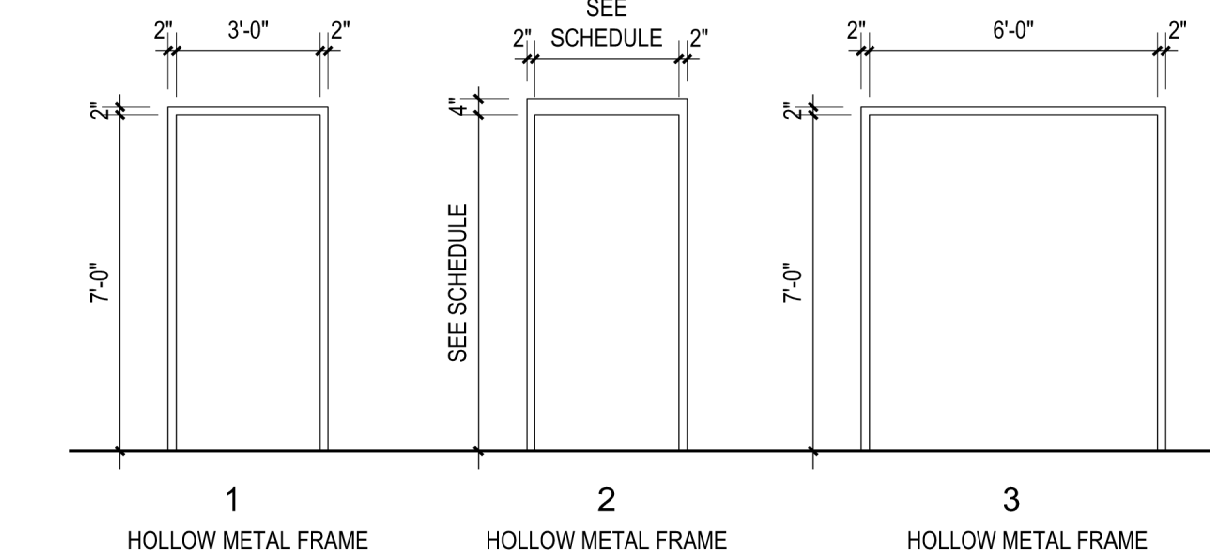
- C. Demonstrating: Prior to final acceptance Door Hardware Supplier and Hardware Installer to:

- Conduct a training class for the building maintenance personnel in the adjustment, operation and maintenance of mechanical and electrified finish hardware. This class should be scheduled at least seven days before the punch list starts. Training class will be a minimum 2 hours or until the owner is comfortable with all products.



01 DOOR TYPES

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



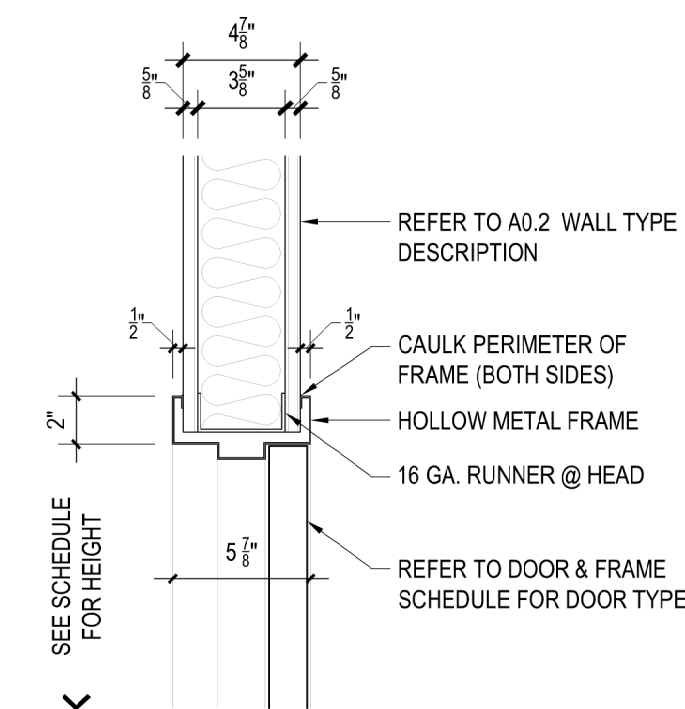
02 DOOR FRAME TYPES

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

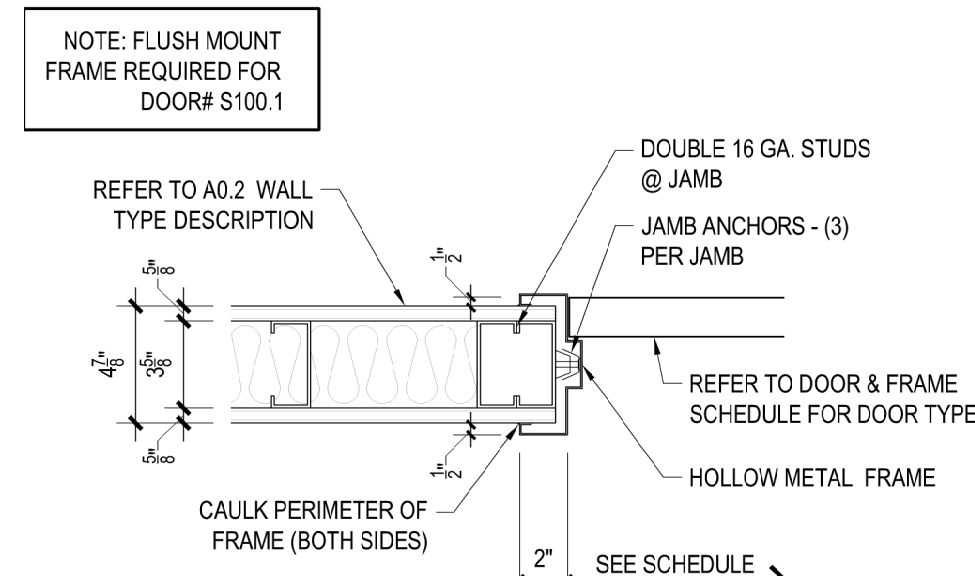
DOOR SCHEDULE

Door No.	Room Name	Hdwe No.	Door Type	Frame Type	Details A5.0
132	Storage	01	A	01	01/02
135	Office 15	04	A	01	01/02
136	Office 16	04	A	01	01/02
137	Office 17	04	A	01	01/02
138	Office 18	04	A	01	01/02
140	Electrical	04	A	01	01/02
141	Storage	02	C	03	--
141AA	Restroom (ADD ALTERNATE #1)	09	C	01	01/02
142	Storage	02	C	03	--
S100.1	Storage	08	B	02	03/A3.0
S100.2	Storage	08	B	02	03, 04, 05

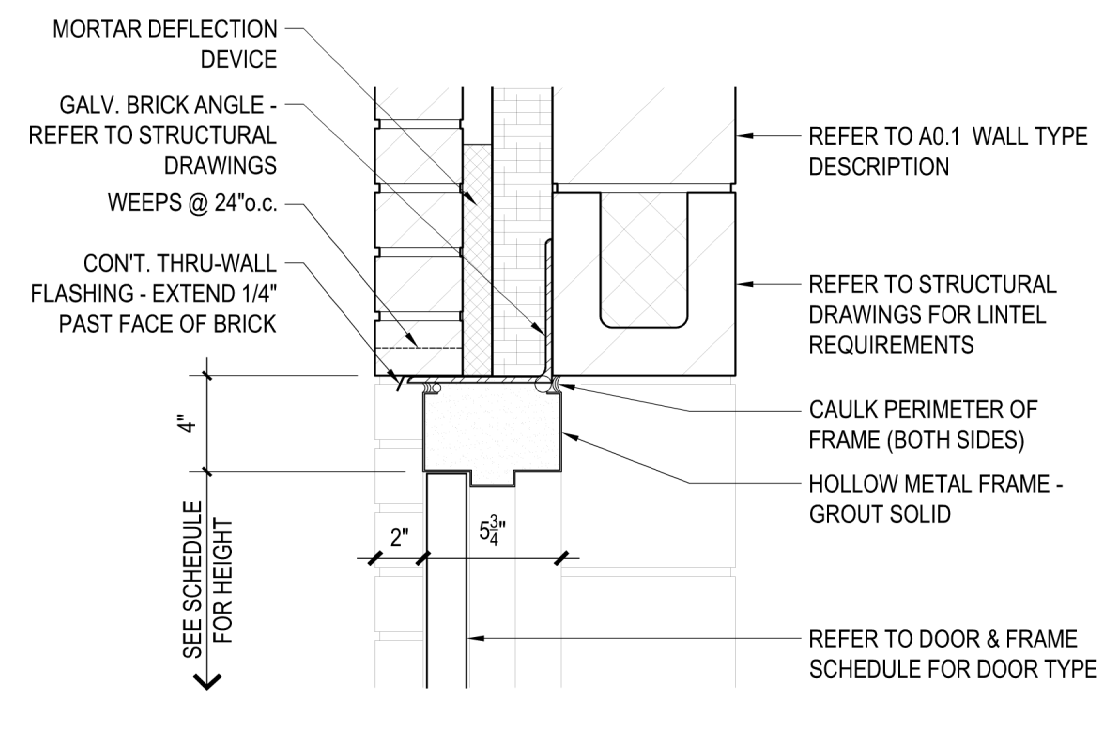




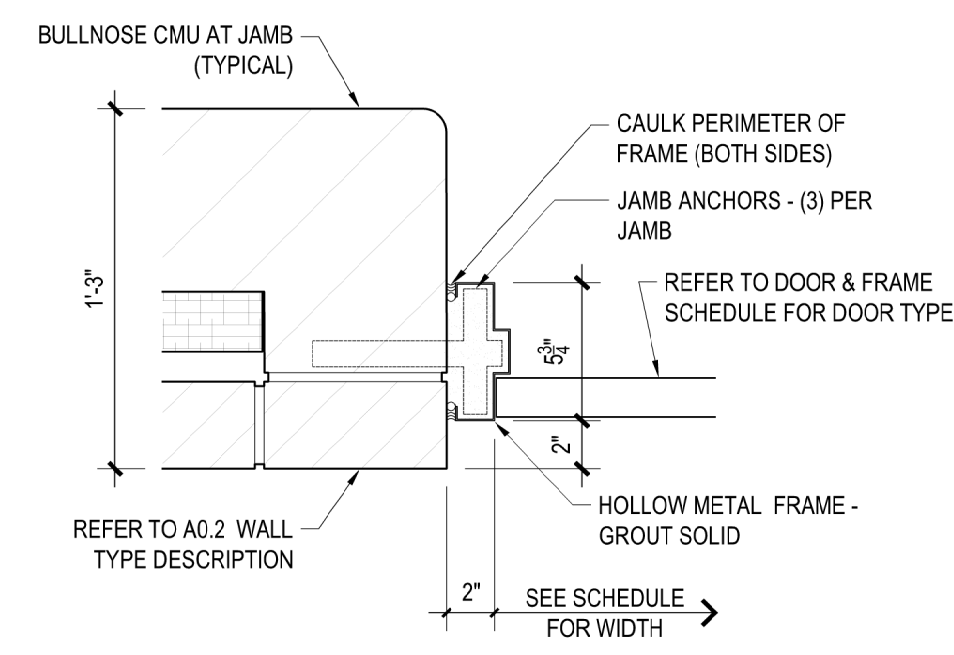
1 HEAD DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



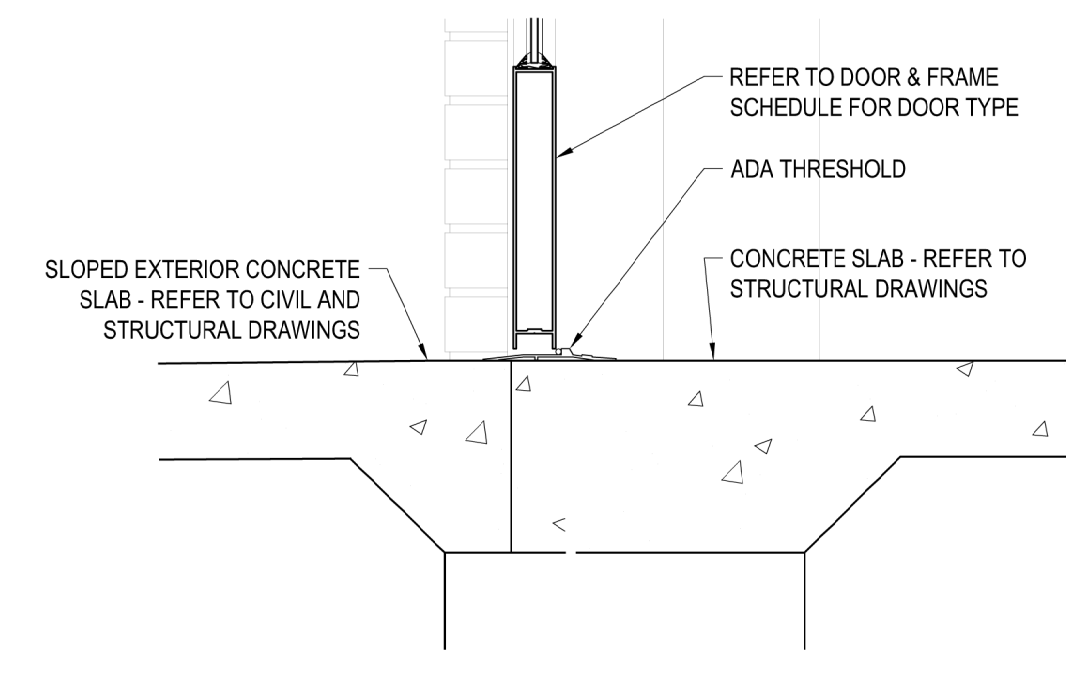
2 JAMB DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



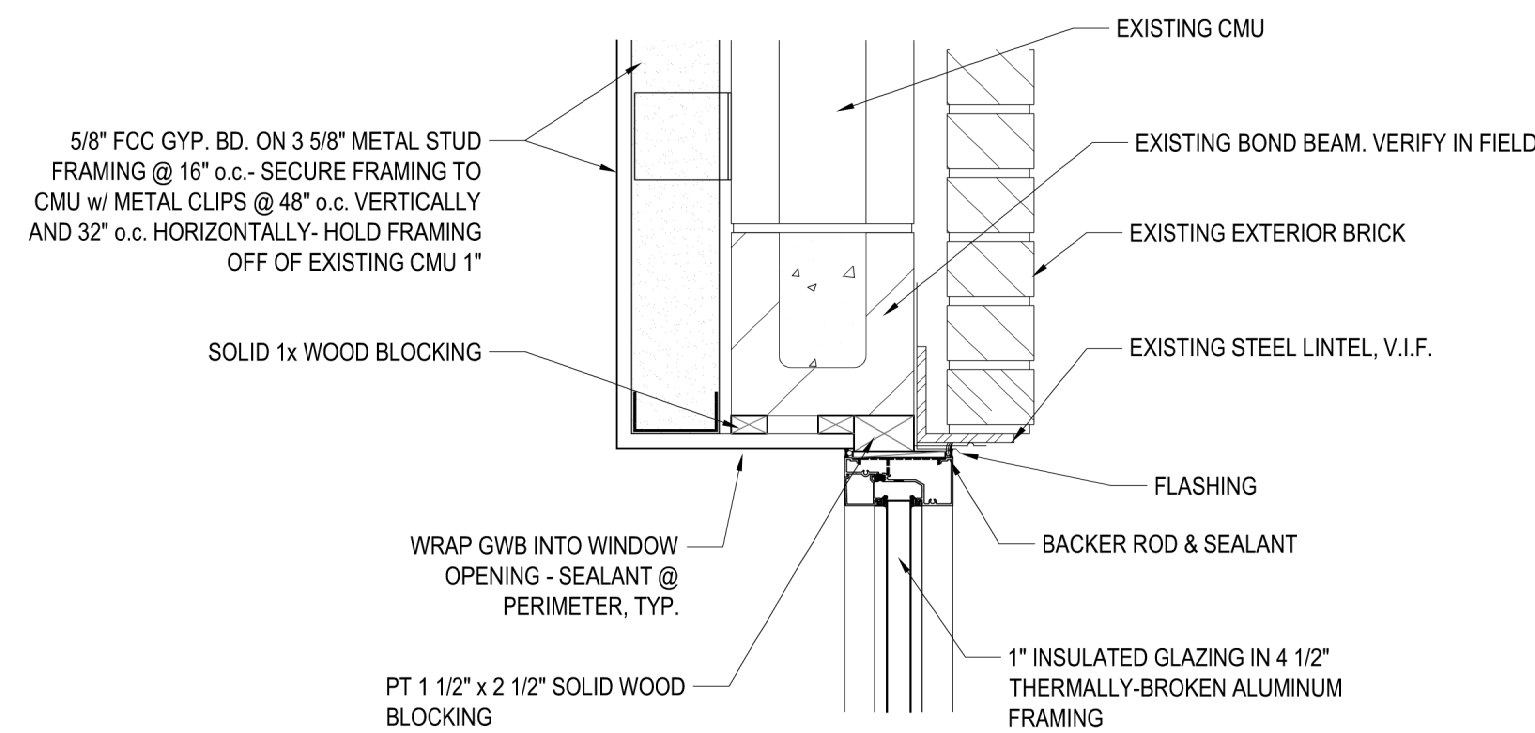
3 HEAD DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



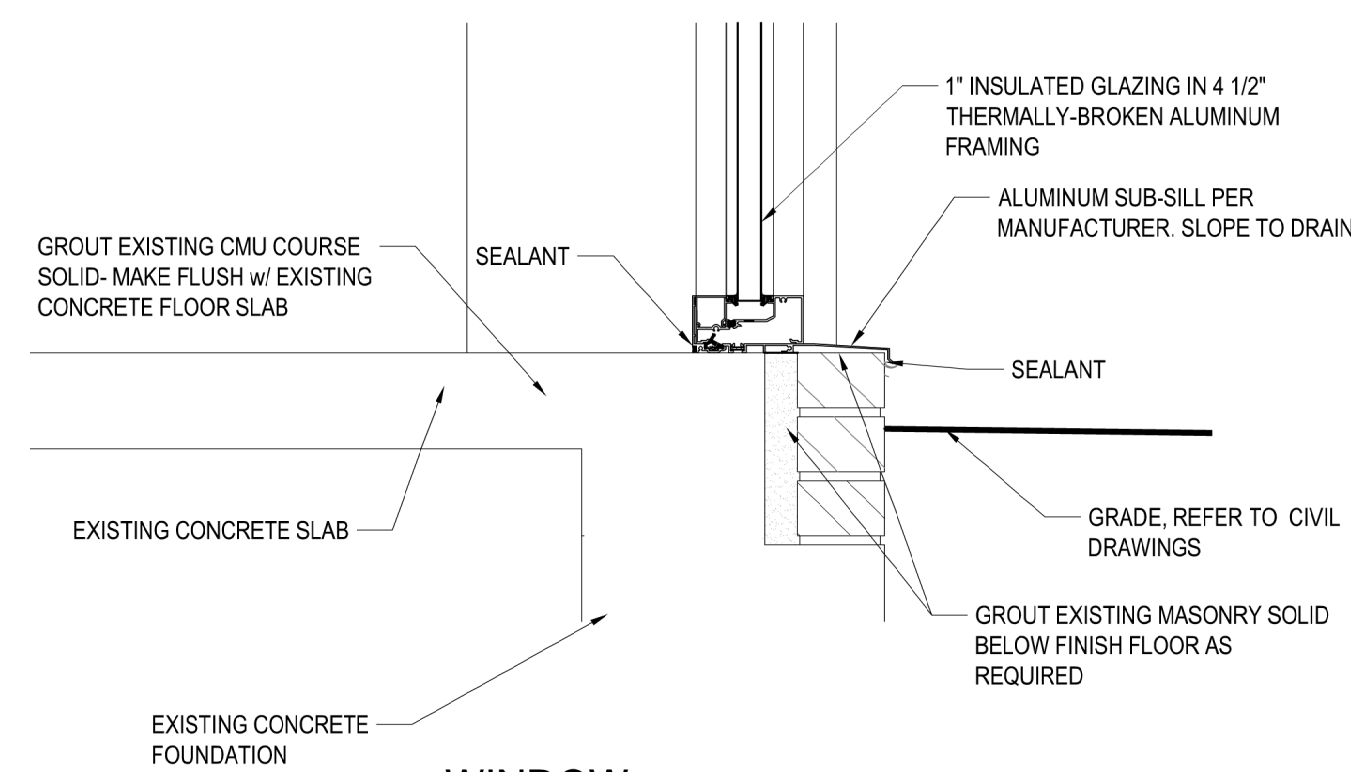
4 JAMB DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



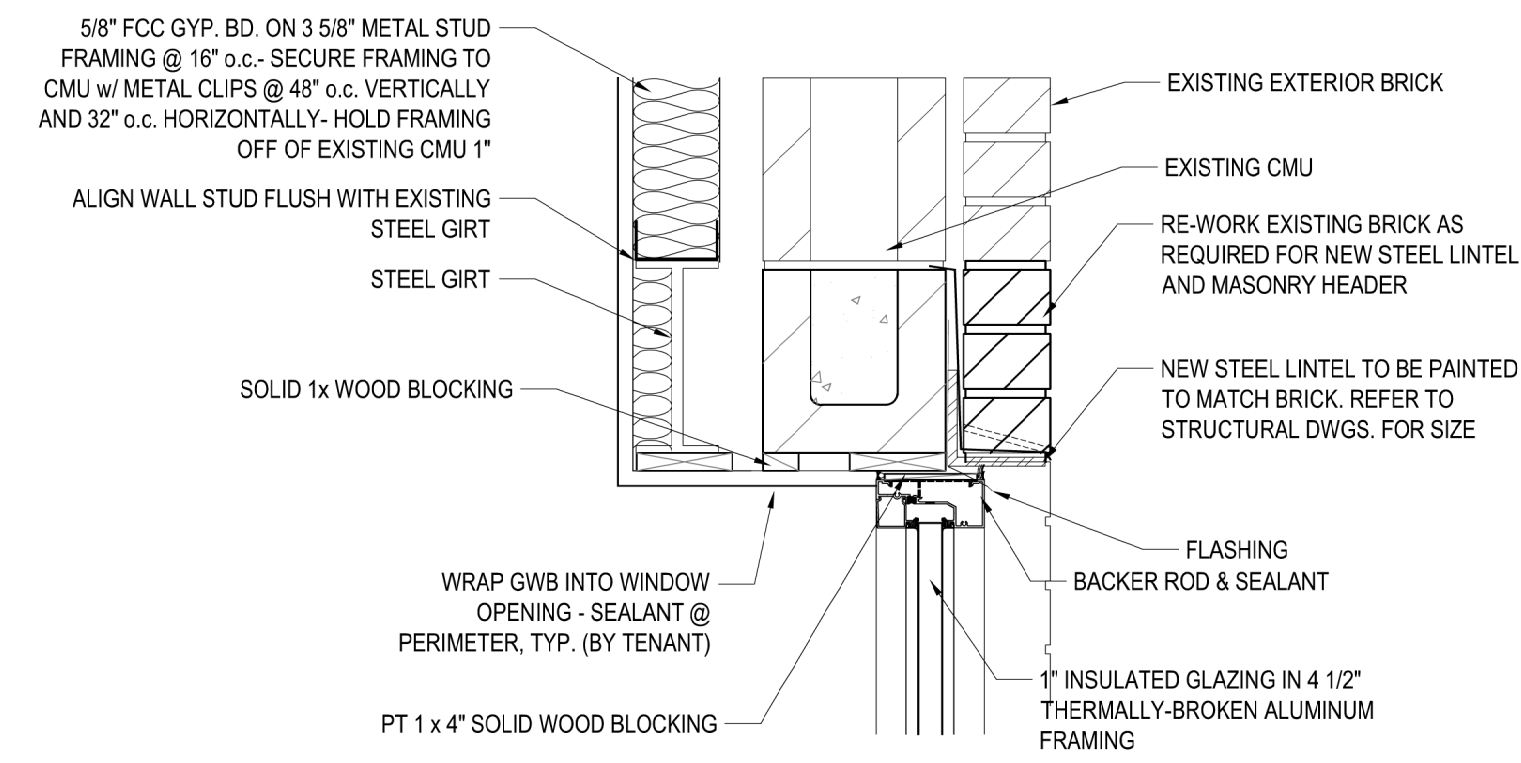
5 SILL DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



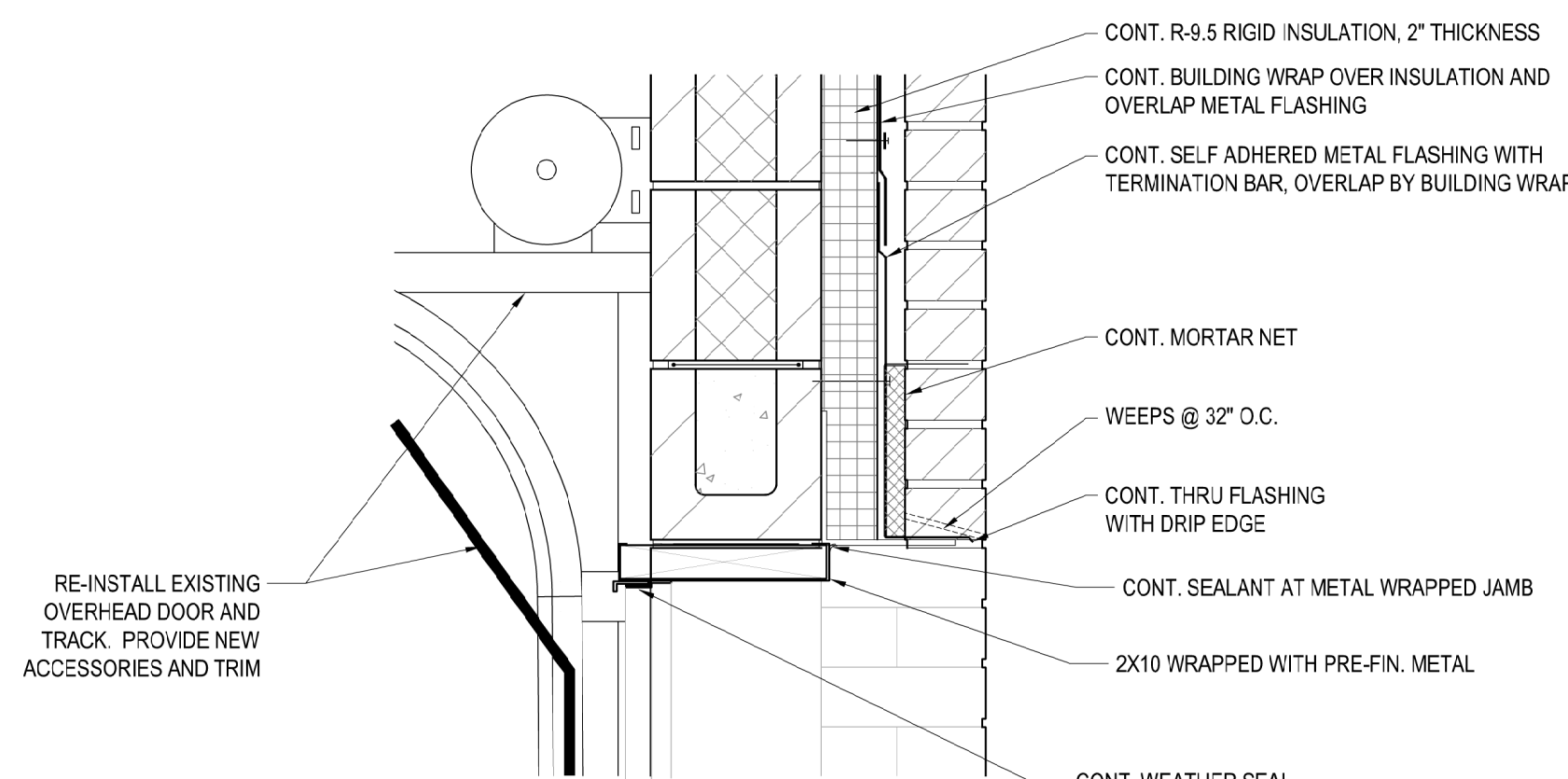
6 WINDOW HEAD DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



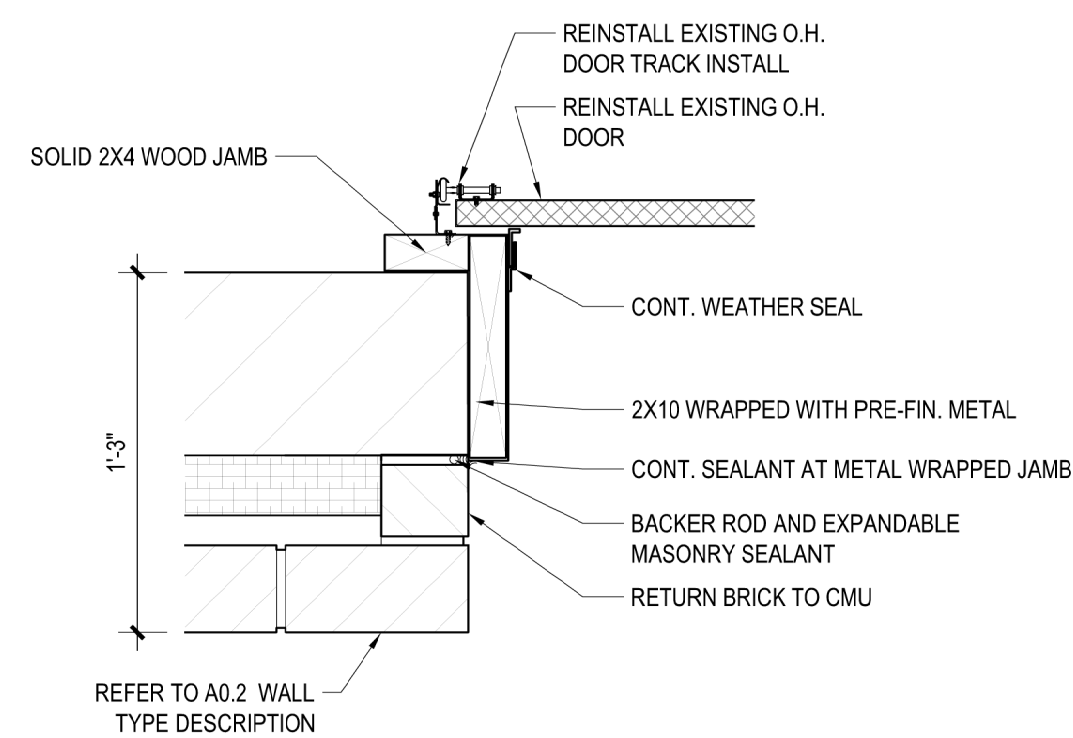
7 WINDOW SILL DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



8 WINDOW HEAD DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



9 OVERHEAD DOOR HEAD DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



10 OVERHEAD DOOR HEAD DETAIL  
A5.00  
Scale: 1 1/2" = 1'-0"



GENERAL NOTES- ELECTRICAL:

- A. CONTRACTOR SHALL FOLLOW SEISMIC RESTRAINT AND DESIGN REQUIREMENTS CONTAINED IN LATEST ADOPTED STATE AND INTERNATIONAL BUILDING CODES, WITH ALL AMENDMENTS AS ADOPTED BY THE CURRENT LEGISLATION.
- B. THE TERM "PROVIDE" SHALL MEAN CONTRACTOR SHALL FURNISH AND INSTALL ITEMS AND CONNECT AS REQUIRED TO OBTAIN A COMPLETE WORKING SYSTEM.
- C. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ALL LOCAL, STATE, AND NATIONAL CODES. INCLUDING BUT NOT LIMITED TO NFPA 70 (NATIONAL ELECTRIC CODE), NFPA 72, INTERNATIONAL BUILDING CODE, ETC.
- D. ALL WORK SHALL BE COORDINATE WITH EXISTING CONDITIONS, NEW CONSTRUCTION, OWNER'S VENDORS, ALL TRADES, AND THEIR DOCUMENTS. THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING HIS BID. CONTRACTOR SHALL CONTACT OWNER FOR AN APPOINTMENT TO VISIT THE SITE. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS NOT KNOWN BY THE CONTRACTOR.
- E. NO MORE THAN THREE CIRCUITS (4-SINGLE CONDUCTOR CABLES PLUS GROUND) SHALL BE PULLED IN SINGLE CONDUIT, (EXCEPTION: SEPARATE NEUTRALS FOR GROUND FAULT CIRCUITS). WIRE (EXCEPT GROUND) MUST BE OF SAME SIZE AND MUST BE ON OPPOSITE PHASES IF USING COMMON NEUTRAL. ALL PANELBOARDS AND WIRING SHALL MEET NEC 210.4 MULTIWIRE BRANCH CIRCUITS. IT IS AT THE CONTRACTOR'S DISCRETION TO EITHER PROVIDE DEDICATED NEUTRALS OR MULTI-POLE BREAKERS.
- F. WHEN RUNNING MORE THAN 3 CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT, DERATE AMPACITIES IN ACCORDANCE WITH NFPA 70.
- G. A CODE SIZE INSULATED GROUND CONDUCTOR SHALL BE PROVIDED IN ALL FEEDER AND BRANCH CIRCUIT CONDUITS. THIS INCLUDES EXISTING DEVICES LOCATED WITHIN THE RENOVATED AREA THAT ARE TO REMAIN, REPLACE DEVICES AS REQUIRED.
- H. ALL THHN/THWN/THW/THHW/XHHW CONDUCTORS ARE SIZED BASED ON 75°C TEMPERATURE RATING. ALL TERMINATIONS FOR ALL EQUIPMENT AND DEVICES SHALL BE LISTED AND IDENTIFIED FOR USE WITH 75°C CONDUCTORS. IF CONTRACTOR PROVIDES TERMINATIONS OF LESS THAN 75°C, THE ASSOCIATED CONDUCTOR SIZES SHALL BE INCREASED DUE TO THE DERATING AMPACITY PER NEC TABLE 310-15(B)(16). CONTRACTOR SHALL MAKE ALL CHANGES (I.E. CONDUIT SIZES, ETC.) AS NECESSARY AND SHALL MAKE ALL REVISIONS ON "AS-BUILT" DRAWINGS.
- I. MINIMUM CONDUIT SIZE IS 3/4 INCH, MINIMUM WIRE SIZE IS #12 AWG (COPPER CONDUCTOR THHN/THWN), UNLESS OTHERWISE NOTED ON PLANS OR IN CIRCUIT REVIEWS.
- J. ALL CONDUIT SHALL BE RUN CONCEALED WHEREVER POSSIBLE ABOVE CEILINGS, INSIDE WALLS, OR UNDER FLOOR SLAB (ONLY WHERE SHOWN DASHED ON PLAN), UNLESS OTHERWISE NOTED ON PLAN. IN HIGH-BAY (NO CEILING) AREAS, RUN EXPOSED CONDUIT HIGH AS POSSIBLE. ALL CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO NEARBY SURFACE OR STRUCTURAL MEMBERS AND FOLLOW THE SURFACE CONTOURS AS MUCH AS PRACTICAL. NO CONDUIT SHALL BE INSTALLED IN FLOOR SLAB UNLESS SPECIFICALLY NOTED OTHERWISE.
- K. CONTRACTOR SHALL PROVIDE RIGID METAL SLEEVES TO FACILITATE PATHWAY (I.E. THRU BLOCK WALLS) FOR ELECTRICAL AND TELECOMMUNICATION DEVICES.
- L. PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR CONDUITS. DO NOT LEAVE PIPING/ CONDUITS OPEN ENDED. PROVIDE END BUSHINGS FOR ALL STUB-OUTS AND SLEEVES DESIGNATED TO BE UTILIZED FOR THIS PROJECT. COORDINATE WITH OWNER'S REPRESENTATIVE FOR SYSTEMS NOT PROVIDED UNDER THIS CONTRACT.
- M. PROVIDE FIRE STOP TO ALL CONDUITS AND DEVICES PENETRATING FIRE RATED WALLS, SMOKE WALLS AND FLOORS.
- N. MOUNTING HEIGHTS ABOVE FINISHED FLOOR (AFF) ARE TO CENTER OF DEVICE UNLESS NOTED OTHERWISE.
- O. DEVICES/OUTLETS SHALL BE COORDINATED WITH ASSOCIATED ARCHITECTURAL DRAWINGS (I.E. FLOOR PLANS, CASEWORK DETAILS/ELEVATIONS, ETC.) FOR EXACT LOCATIONS AND MOUNTING, PRIOR TO ROUGH-IN. IF EXACT LOCATIONS AND MOUNTING ARE NOT INDICATED ON ARCHITECTURAL DRAWINGS, FIELD VERIFY EXACT LOCATIONS AND MOUNTING WITH OWNER AND ALL TRADES.
- P. DEVICES SHALL NOT BE INSTALLED BACK TO BACK ON A COMMON WALL WHERE CONDITION EXISTS FOR ADJACENT OFFICE ROOMS OR ROOMS WHERE SOUND TRANSMISSION IS NOT PERMITTED. OR PROVIDE SOUND INSULATION.
- Q. RECEPTACLES SHALL BE CIRCUITED WITH A SEPARATE GROUND WIRE. RECEPTACLES PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER CIRCUIT BREAKER SHALL HAVE A DEDICATED NEUTRAL WIRE PULLED FOR THAT CIRCUIT. RECEPTACLES PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE SHALL BE WIRED PER MANUFACTURERS RECOMMENDATIONS.
- R. RECEPTACLES ARE TO BE INSTALLED WITH THE GROUND PIN IN THE TOP POSITION.
- S. FOR EACH RECEPTACLE SUPPLIED FROM A GROUND FAULT CIRCUIT INTERRUPTER BREAKER IN PANELBOARD, PROVIDE A COVER PLATE WITH THE FOLLOWING PERMANENTLY ETCHED OR ENGRAVED MARKING: "G.F.C.I. PROTECTED".
- T. ELECTRICAL DRAWINGS SHALL BE COORDINATED WITH EXISTING CONDITIONS, ASSOCIATED MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR FOR MOTORS, DEVICES, FIXTURES, ETC. FOR EXACT LOCATIONS BEFORE ROUGH-IN OF CONDUIT SYSTEM
- U. LIGHTING FIXTURES SHALL BE WIRED TO SWITCHES GENERALLY SHOWN IN EACH ROOM AND CONNECTED TO LIGHTING PANELS WITH THE REQUIRED QUANTITY OF WIRES FOR PROPER OPERATION. A CONTINUOUS GROUND MUST BE PROVIDED THROUGH CONDUIT SYSTEM. EXIT LIGHTS, INVERTORS, AND NIGHT LIGHTS SHALL BE CONNECTED AHEAD OF LOCAL SWITCHING ON SAME CIRCUIT.
- V. SEE/VERIFY ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED DEVICES, I.E. LIGHT FIXTURES, SPEAKERS, FIRE ALARM DEVICES, ETC.
- W. FROM EACH TELEPHONE/DATA, CRT, TV, PAGING, ETC. COMMUNICATION TYPE OUTLET, PROVIDE A (MIN.) 1 INCH CONDUIT (WITH PULL WIRE) STUBBED TO ACCESSIBLE CEILING WITH INSULATED BUSHING, UNLESS OTHERWISE NOTED.
- X. WHEN ROUTED THROUGH AN AIR RETURN PLENUMS, ALL TELEPHONE/DATA, CRT, TV, PAGING, ETC. COMMUNICATION CABLING SHALL BE ROUTED IN A COMPLETE CONDUIT RACEWAY SYSTEM OR SHALL BE PLENUM RATED. (NO PVC CONDUIT SHALL BE INSTALLED). COORDINATE ALL CONDUIT RUNS WITH ALL TRADES AND THEIR VENDORS. SEE MECHANICAL FOR LOCATION OF ANY AIR RETURN PLENUMS.
- Y. TURN OVER TO THE OWNER ALL MANUFACTURERS WARRANTIES FOR EQUIPMENT AND MATERIALS PROVIDED.
- Z. PROVIDE NEW UPDATED TYPED PANEL LEDGER/CIRCUIT DIRECTORY FOR EACH NEW AND ALTERED PANELBOARD.
- AA. ALL NEW ELECTRICAL JUNCTION BOXES ABOVE CEILING IN AREAS RELATED TO CONSTRUCTION ARE TO BE IDENTIFIED AND LABELED WITH A PERMANENT MARKER. FIRE ALARM JUNCTION BOXES ARE TO BE PAINTED RED.
- AB. NO MC CABLE SHALL BE PERMITTED ON PROJECT UNLESS SPECIFICALLY NOTED. WHEN MC CABLE IS ALLOWED, IT SHALL ONLY BE USED FOR POWER CONNECTIONS FOR INTERIOR BRANCH CIRCUITS DOWN INTO WALLS FOR RECEPTACLES AND TO LIGHT FIXTURES. NOTE HARD CONDUIT SHALL STILL BE PROVIDED FROM PANELBOARDS TO CORRIDOR/ACCESSIBLE CEILING LOCATIONS - MC CABLE SHALL BE ROUTED ONLY TO DEVICES/FIXTURES AND IN INTERNAL WALLS/CEILINGS FROM THIS POINT. PROVIDE DEDUCT ALTERNATE FOR INCLUSION OF MC CABLE (HOSPITAL GRADE IN ALL AREAS PER NEC 517).
- AC. CONTRACTOR SHALL REMOVE EXISTING ELECTRICAL DEVICES, FIXTURES, ETC. IN AREA OF CONSTRUCTION TO ACCOMMODATE NEW DESIGN, AND COORDINATE WITH GENERAL CONTRACTOR.

SYSTEMS COORDINATION								
SYSTEM TYPE	BACK BOX AND CONDUIT	DEVICES AND CABLING	EQUIPMENT	INSTALLATION	POWER	VENDOR	DESIGN	SPECIFICATIONS
FIRE ALARM	IN CONTRACT	IN CONTRACT	IN CONTRACT	IN CONTRACT	IN CONTRACT	PER CD	SEE PLANS	SEE PLANS
SECURITY/ACCESS	IN CONTRACT	BY OWNER	OWNER'S VENDOR	OWNER'S VENDOR	IN CONTRACT	OWNER'S VENDOR	OWNER'S VENDOR	OWNER'S VENDOR
VOICE/DATA/INTERNET	IN CONTRACT	BY OWNER	OWNER'S VENDOR	OWNER'S VENDOR	IN CONTRACT	OWNER'S VENDOR	OWNER'S VENDOR	OWNER'S VENDOR
CABLE TV	IN CONTRACT	IN CONTRACT	IN CONTRACT	IN CONTRACT	IN CONTRACT	OWNER'S VENDOR	SEE PLANS	SEE PLANS
REMARKS: COORDINATE ALL SYSTEMS WORK WITH OWNER'S VENDORS FOR ALL, INCLUDING BUT NOT LIMITED TO: DEVICE LOCATIONS, DEVICE REQUIREMENTS, EQUIPMENT LOCATIONS, EQUIPMENT REQUIREMENTS, POWER LOCATIONS, POWER REQUIREMENTS, AND QUANTITIES REQUIRED. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM.								

LUMINAIRE SCHEDULE											
TYPE	DESCRIPTION	MOUNTING	LAMPS	BALLAST	VOLTAGE	INPUT WATTS	EMERGENCY	MANUFACTURER	CATALOG NUMBER	ALTERNATE MANUFACTURERS	NOTES
OL1	WALL MOUNTED LED EXTERIOR WALL BRACKET WITH INTEGRAL EMERGENCY PACK	SURFACE	LED 1500 LUMEN	CONSTANT CURRENT	120	12	INTEGRAL BATTERY	LITHONIA	WST LED P1 30K VF MVOLT E20WC XX	PER REVIEW BY ENGINEER	1
T2	RECESSED LED INDIRECT 2X2 TROFFER WITH PERFORATED METAL BASKET WITH ACRYLIC OVERLAY	RECESSED	LED 2000 LUMENT	CONSTANT CURRENT	120	22	N/A	LITHONIA	2AVL2 AV LED 20LSE MDR EZ1 LP840	PER REVIEW BY ENGINEER	1
T2E	SAME AS T2 EXCEPT WITH EMERGENCY INVERTER	RECESSED	LED 2000 LUMENT	CONSTANT CURRENT	120	22	N/A	LITHONIA	2AVL2 AV LED 20LSE MDR EZ1 LP840 EL14	PER REVIEW BY ENGINEER	1
T3	RECESSED LED INDIRECT 2X4 TROFFER WITH PERFORATED METAL BASKET WITH ACRYLIC OVERLAY	RECESSED	LED 4800 LUMEN	CONSTANT CURRENT	120	45	N/A	LITHONIA	2AVL4 AV LED 48LSE MDR EZ1 LP840	PER REVIEW BY ENGINEER	1
T3E	SAME AS T3 EXCEPT WITH EMERGENCY INVERTER	RECESSED	LED 4800 LUMENS	CONSTANT CURRENT	120	47	INTEGRAL BATTERY	LITHONIA	2AVL4 AV LED 48LSE MDR EZ1 LP840 EL14	PER REVIEW BY ENGINEER	1
T4	RECESSED LED INDIRECT 2X4 TROFFER WITH PERFORATED METAL BASKET WITH ACRYLIC	RECESSED	LED 3300 LUMENS	CONSTANT CURRENT	120	36	N/A	LITHONIA	2AVL4 AV LED 33LSE MDR EZ1 LP840	PER REVIEW BY ENGINEER	1
X	SELF-CONTAINED UNIVERSAL MOUNTED EMERGENCY EXIT SIGN	UNIVERSAL	LED	N/A	120	N/A	N/A	LITHONIA	LQM S3R 120/277 ELN	PER REVIEW BY ENGINEER	1
Z1	24" LED STRIP RIXTURE	SURFACE	LED 2500 LUMEN	CONSTANT CURRENT	120	19	N/A	LITHONIA	Z1LN L24 2500LM FST MVOLT 30IK 80CRI	PER REVIEW BY ENGINEER	1
Z2	48" LED STRIP FIXTURE	SURFACE	LED 3000 LUMEN	CONSTANT CURRENT	120	35	N/A	LITHONIA	Z1LN L48 3000LM FST MVOLT 30K 80CRI	PER REVIEW BY ENGINEER	1
LUMINAIRE SCHEDULE NOTES:  1. FIXTURE SUBSTITUTIONS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL 10 DAYS PRIOR TO BID DATE, NO EXCEPTIONS.  2. COORDINATE FINISH AND EXACT FIXTURE WITH OWNER'RE REPRESENTATIVE PRIOR TO ORDER											

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	CEILING OUTLET AND INCANDESCENT, FLUORESCENT, LED OR HID FIXTURE
	WALL OUTLET AND INCANDESCENT, FLUORESCENT, LED OR HID FIXTURE
	CEILING OUTLET AND FLUORESCENT FIXTURE OR LED FIXTURE (SEE FIXTURE SCHEDULE)
	FIXTURE ON EMERGENCY POWER OR POWERED BY EMERGENCY INVERTER, SEE PLANS AND KEYNOTES AND FIXTURE SCHEDULE FOR EXACT INFORMATION
	FIXTURE HALF ON NORMAL/HALF ON BATTERY BALLAST CIRCUIT, DUAL CIRCUITS OR WITH DUAL SWITCHING (REQUIRES TWO BALLASTS). CIRCUITING/SWITCHING AS INDICATED.
	WALL MOUNTED FLUORESCENT FIXTURE
	FLUORESCENT STRIP/INDUSTRIAL FIXTURE
	TRACK LIGHTS
	FLOODLIGHT
	EMERGENCY BATTERY PACK (8'-6" A.F.F. TO CENTER UNLESS OTHERWISE NOTED)
	EMERGENCY LIGHTING REMOTE HEAD
	EXIT SIGN. CEILING MOUNTED
	EXIT SIGN. MOUNT 4" ABOVE DOOR FRAME
a, b, c	LOWER CASE LETTERS AT OUTLETS INDICATE SWITCHING ARRANGEMENT
	LIGHT FIXTURE TYPE CALLOUT. REFER TO FIXTURE SCHEDULE FOR COMPLETE FIXTURE DESCRIPTION. QUANTITY OF THIS TYPE NOTED IN PARENTHESIS.
\$	SINGLE POLE SWITCH - 20 AMP, 277V (46" A.F.F.TO BOTTOM, TYP. ALL SWS.)
\$D	DIMMER SWITCH, TO MATCH TYPE OF LIGHTING CONTROLLED - COORDINATE WITH FIXTURE MANUFACTURER AND ENGINEER.
\$2	2=2-POLE SWITCH,3=THREE-WAY,4=FOUR-WAY, LV##=LOW VOLTAGE FOR OCC SENSOR (SEE DETAIL FOR MODEL NUMBERS), OC=OCCUPANCY SENSOR TYPE SENSOR SWITCH #WSXPD1, VS= VACANCY SENSOR TYPE SENSOR SWITCH #WSXPOTSA (SEMI-AUTOMATIC TO MEET IECC)
	PHOTO-CELL (TORK MODEL B2101 OR EQUAL)
	EXTERIOR POLE MOUNTED LIGHT FIXTURE (# OF HEADS AS INDICATED)
	DUPLEX RECEPTACLE - 20 AMP,125V,2P,3W,TYP.MTG. AT 18" A.F.F. TO BOTTOM UON WITH HEIGHT NOTED AFF
	DEDICATED 20AMP DUPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE - (2) DUPLEX RECEPTACLES IN 3 GANG BOX WITH 2 GANG PLASTER RING
	FLUSH FLOOR MOUNTED RECEPTACLE(S) PER SYMBOL, BRUSHED ALUMINUM COVER PLATE, UON - VERIFY COVERPLATE WITH FLOOR TYPE BY ARCHITECT PRIOR TO ORDERING. WHEN SHOWN WITH ADJACENT COMMUNICATION DEVICE, PROVIDE COMBINATION DEVICE PER SYMBOL, SHOWN. SEE COMMUNICATION DEVICE/GENERAL NOTES FOR ADDITIONAL INFORMATION, ROUTE CONDUITS UNDER FLOOR OVER TO NEAREST WALL AND STUB UP OR DOWN TO ABOVE CEILING AS NECESSARY.
	DUPLEX RECEPTACLE - 20 AMP, 125V, 2P, 3W, TYP MTG. ABOVE DROP CEILING
	JUNCTION BOX
	PLUGSTRIP WITH RECEPTACLES AT 12" O.C., UNO. MOUNT BOTTOM 2" ABOVE COUNTER TOP BACKSPLASH, UNO.
	SPECIAL OUTLET, NEMA CONFIGURATION AS NOTED OR AS REQUIRED BY EQUIPMENT
	SPECIALTY RECEPTACLE - TL = TWIST LOCK, AMPERAGE INDICATED NEMA CONFIGURATION INDICATE. COORDINATE ALL RECEPTACLES WITH EQUIPMENT MANUFACTURES RECOMMENDATIONS AND REQUIREMENTS.
	PUSH-BUTTON REMOTE RELEASE OR DOOR OPERATOR - COORDINATE WITH ARCHITECT, VENDOR/MANUFACTURER/SUPPLIER
	EMERGENCY POWER OFF PUSH-BUTTON, RED MUSHROOM HEAD, AT 54" AFF, UNO.
	START/STOP PUSH-BUTTON STATION, AT 54" AFF, UNO.
	NEMA 1 ENCL., 600 VOLT, 3P, 30AMP, FUSED DISCONNECT SWITCH AT 4'-6" AFF, UNO.
	NEMA 1 ENCL., 600 VOLT, 3P, 30AMP, NON-FUSED DISCONNECT SWITCH AT 4'-6" A.F.F, UNO.
	MAGNETIC STARTER SIZE 1, NEMA 1 ENCLOSURE WITH HAND-OFF-AUTO SELECTOR SWITCH AT 4'-6" AFF, UNO.
	COMBINATION MAGNETIC STARTER AND FUSED SWITCH SIZE 1, NEMA 1 ENCLOSURE WITH HAND-OFF-AUTO SELECTOR SWITCH AT 4'-6" AFF, UNO.
	MOTOR LOCATION
	EXHAUST FAN WITH INTEGRAL DISCONNECT FURNISHED BY MECHANICAL
	MANUAL MOTOR RATED SWITCH/CONTROLLER, SIZE AS REQUIRED BY LOAD, MOUNT 46" A.F.F. UNLESS OTHERWISE NOTED
	CONDUIT CONCEALED WHERE POSSIBLE (NOTE NOT ALL CONDUIT IS INDICATED ON PLANS)
	CONDUIT CONCEALED IN FLOOR OR BELOW GRADE (NOTE NOT ALL CONDUIT IS INDICATED ON PLANS)
	RECESSED MOUNTED PANELBOARDSEE PLANS/SINGLE-LINE FOR NAME, VOLTAGE AND SIZE
	SURFACE MOUNTED PANELBOARD, SEE PLANS/SINGLE-LINE FOR NAME, VOLTAGE AND SIZE
	SURFACE MOUNTED PANELBOARD, SEE PLANS/SINGLE-LINE FOR NAME, VOLTAGE AND SIZE
	BOX AND COVER PLATE FOR COMMUNICATION OUTLET. MOUNT 18" A.F.F. (W = 48" A.F.F., P = PAY PHONE, D = DICTATION). PROVIDE 1" CONDUIT W/BUSHING & PULLSTRING STUBBED ABOVE ACCESSIBLE CEILING U.O.N.
	BOX AND COVER PLATE FOR COMMUNICATION OUTLET. FLOOR MOUNTED. PROVIDE 1" CONDUIT W/BUSHING & PULLSTRING STUBBED ABOVE ACCESSIBLE CEILING U.O.N.
	VISUAL ADA COMPLIANT FIRE ALARM APPLIANCE:(WALL MOUNT AT 80" A.F.F.), 30 CANDELLA(cd), OR AS OTHERWISE REQUIRED BY SPACE TO MEET CODE, (C = CEILING MOUNT). VERIFY CANDELLA OF STROBE WITH CODE AND FIRE ALARM VENDOR.
	70db CALCULATED SOUND VALUE IN DECIBELS(db)ASSUME 100db AT 10FT FROM HORN WITH 35db LOSS THRU DOOR OR PARTITION TO OBTAIN 70db DESIGN AVERAGE
	SMOKE DETECTOR IN DUCT SYSTEM WITH REMOTE TEST SWITCH IN CORRIDOR WALL UNLESS OTHERWISE NOTED. CONNECT PER CODE AND MANUFACTURER REQUIREMENTS, COORDINATE WITH HVAC AND FIRE ALARM MANUFACTURER. PROVIDE FOR FAN SHUTDOWN.
	FIRE ALARM FLOW SWITCH
	FIRE ALARM PRESSURE SWITCH
	FIRE ALARM TAMPER SWITCH
	FIRE ALARM BREAK STATION MOUNTED 46" A.F.F. TO BOTTOM
	AUDIO/VISUAL ADA COMPLIANT FIRE ALARM DEVICE (WALL MOUNT @80" A.F.F.), HORN (OR SPEAKER IN HIGH RISE) WITH STROBE APPLIANCE, UNLESS NOTED OTHERWISE ON PLAN OR SPECS. VERIFY CANDELLA OF STROBE WITH CODE & FIRE ALARM VENDOR.
	SPEAKER/SOUNDER CODE COMPLIANT FIRE ALARM DEVICE(WALL MOUNT AT 80" A.F.F.),
	SYSTEM SMOKE DETECTOR, CEILING MOUNTED UNLESS OTHERWISE NOTED. A= LOW FREQ. AUDIBLE BASE TO MEET APPLICABLE RESIDENTIAL CODE REQUIREMENTS, COORDINATE EXACT LOCATION WITH VENDOR, OTHER EQUIPMENT AND CODE.
	135 DEGREE F.FIXED TEMPERATURE & RATE OF RISE DETECTOR,UNLESS OTHERWISE NOTED ON PLAN
	FIRE FIGHTERS PHONE JACK. COORDINATE EXACT REQUIREMENTS WITH FIRE ALARM.
	MAIN/FIRE ALARM CONTROL PANEL"
	REMOTE/FIRE ALARM ANNUNCIATOR"
	BEAM TYPE WALL MOUNTED SMOKE DETECTOR TRANSMITTER, FIELD ALIGN BEAM WITH RECEIVER, SEE PLANS FOR LOCATION.
	BEAM TYPE WALL MOUNTED SMOKE DETECTOR RECEIVER, FIELD ALIGN BEAM FROM TRANSMITTER, SEE PLANS FOR LOCATION.
	CEILING SPEAKER
	WALL MOUNTED SPEAKER, 12" BELOW CEILING, UNO.
	SPEAKER VOLUME CONTROL., CONNECT TO SPEAKERS IN ROOM LOCATED
	BOX AND COVER PLATE FOR TV OUTLET, COORDINATE HEIGHT WITH ARCHITECTURAL ELEVATIONS, PROVIDE 120V DUPLEX RECEPTACLE ADJACENT IN SEPARATE BOX/COMPARTMENT W/COMMON COVERPLATE. SEE GENERAL NOTES, PROVIDE RG-6U COAX TO CTV IN DATA/TELECOM ROOM
	INCOMING COAX PATCH PANEL/SPLITTERS BY LOCAL UTILITY. COIL RG-6U COAX AT LOCATION FOR TERMINATION BY LOCAL PROVIDER.
	KP = KEYPAD, CR = CARD READER, EL = ELECTRIC LATCH. CONTRACTOR SHALL PROVIDE BACKBOX AND 1"TC STUBBED AND TURNED ABOVE ACCESSIBLE CEILING WITH PULL STRING FOR SECURITY/ACCESS CONTROL DEVICE. PROVIDE 120V CONNECTION TO DOOR LATCHES AS REQUIRED, COORDINATE WITH SECURITY VENDOR FOR EXACT REQUIREMENTS
	SURGE PROTECTION DEVICE, ALSO LABELED AS "TVSS" TRANSIENT VOLTAGE SURGE SUPPRESSION
AC	ABOVE COUNTER - BOTTOM OF COVER PLATE FOR OUTLET 2" ABOVE COUNTER TOP BACKSPLASH.
AFF	ABOVE FINISHED FLOOR - (TO CENTER, UNO.)
HD	H/D TELEVISION OUTLET DUPLEX RECEPTACLE AT 57"AFF IN A RECESSED FLAT SCREEN COMBINATION BACK BOX, UNO.
C	CONDUIT
IG	ISOLATED GROUND(TYPE RECEPTACLE)
EM	EMERGENCY
NL	NIGHT LIGHT CIRCUIT (NON-SWITCHED)
WP	WEATHERPROOF (NEMA 3R). PROVIDE IN USE TYPE COVER WHERE NEC REQUIRED
GND	GROUND
GF I GF	GROUND FAULT INTERRUPTER(RECEPTACLE)
UON	UNLESS OTHERWISE NOTED
THIS IS A STANDARD LEGEND. ALL ITEMS MAY NOT APPEAR ON THIS JOB.	

CONSTRUCTION DOCUMENTS

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OVEC  
OHIO VALLEY EDUCATIONAL COOPERATIVE

ELECTRICAL LEGEND,  
SCHEDULES AND NOTES

OHIO VALLEY EDUCATIONAL  
COOPERATIVE

100 Alpine Rd.,  
Shelbyville, KY 40065

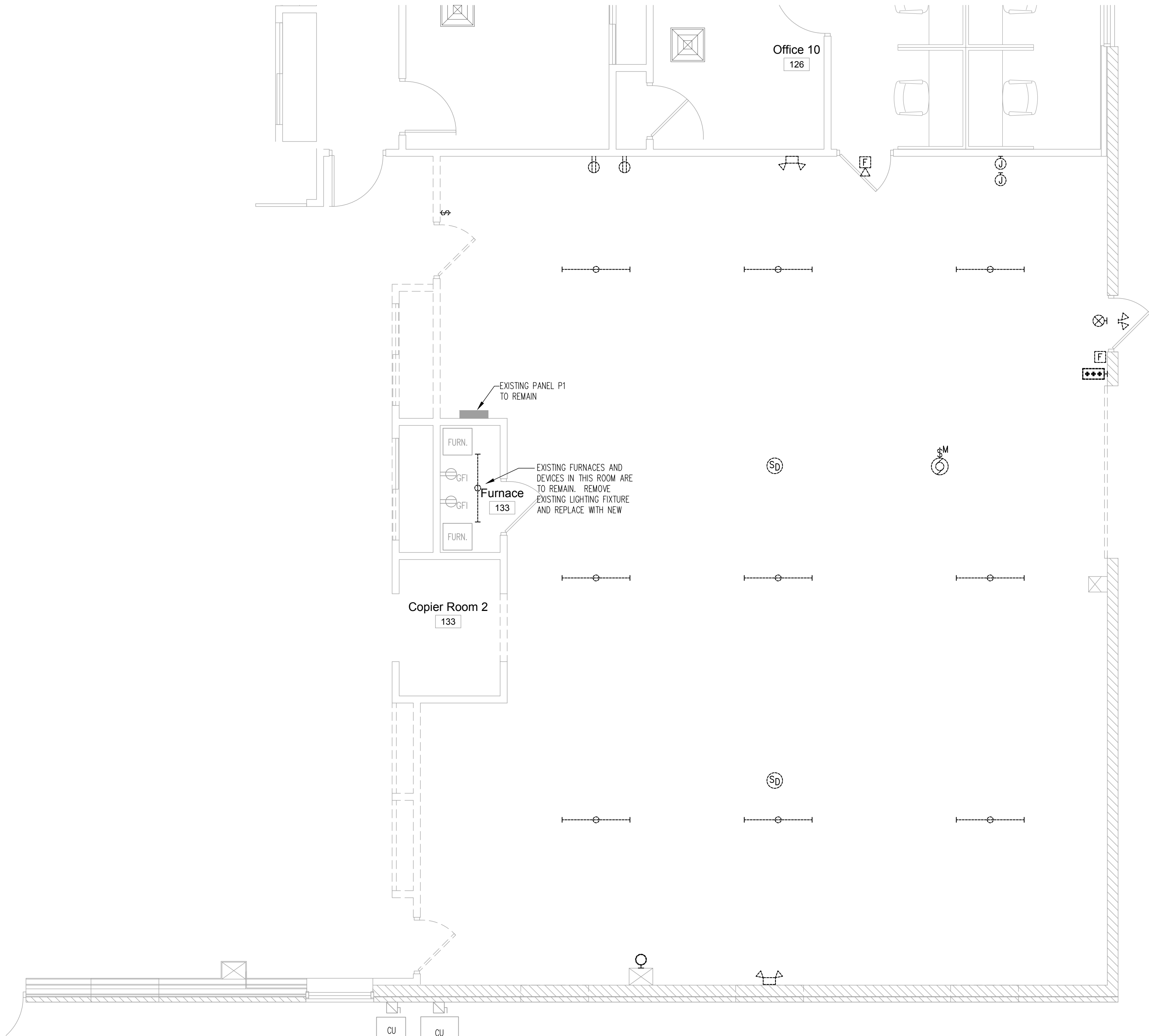
MEP PROJECT #: 20020

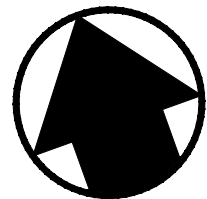
DATE: 09.08.2020  
DRAWN BY: RAB  
CHECKED BY: KAP  
REVISIONS:

#2019-51

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**DEMOLITION**  
**FIRST FLOOR PLAN**

GRAPHIC SCALE SUPERSEDES NUMERIC SCALE

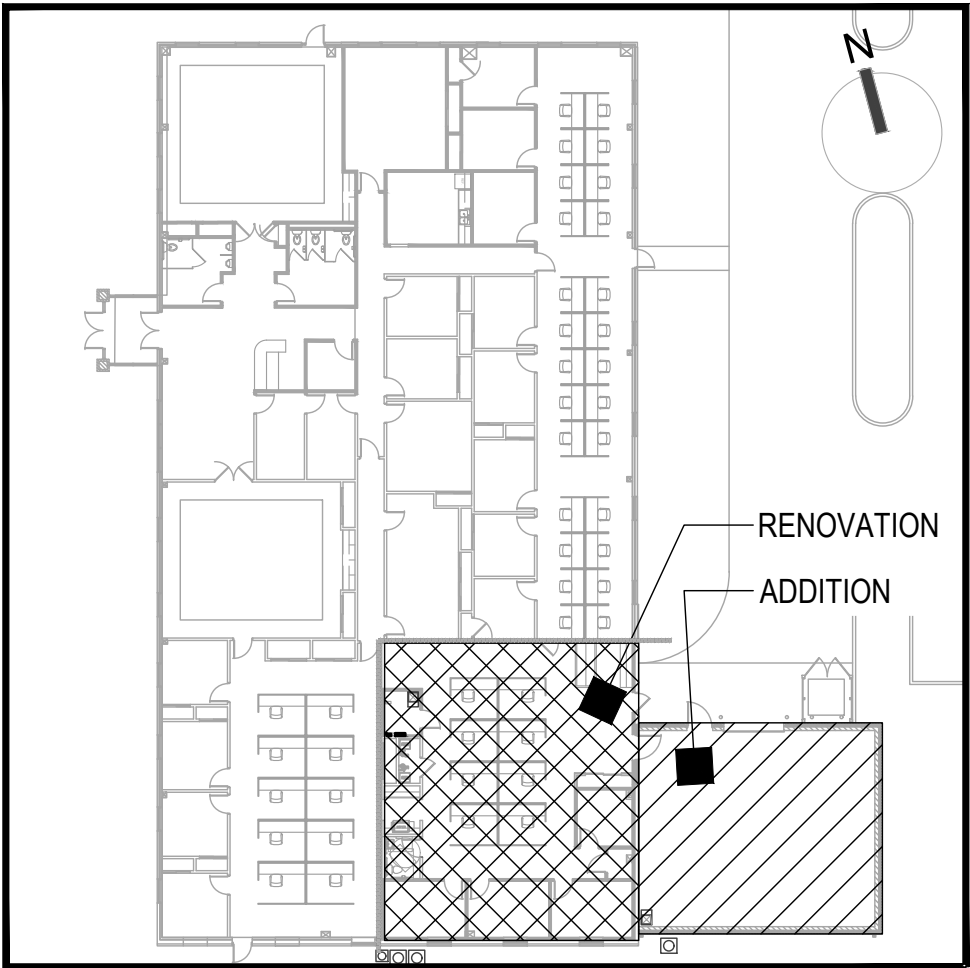
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GENERAL NOTES- DEMOLITION

- (ALL NOTES MAY NOT APPLY TO THIS SHEET)
- B. ALL EXISTING DEVICES ARE NOT INDICATED ON DRAWINGS, DEVICES INDICATED ON DRAWINGS ARE FOR ADDITIONAL CLARIFICATION.
  - C. COORDINATE WITH ALL TRADES AND THEIR DOCUMENTS FOR THE DEMOLITION AND RELOCATION OF THEIR EQUIPMENT. PROVIDE ALL LABOR AND MATERIAL WHERE REQUIRED.
  - D. THE LOCATION OF ALL ELECTRICAL DISTRIBUTION EQUIPMENT, DEVICES, SYSTEMS EQUIPMENT, CIRCUITS, FEEDERS, TERMINATIONS, ETC., AS INDICATED ON THIS DRAWING WERE TAKEN FROM VARIOUS SOURCES. THE INFORMATION IS DIAGRAMATIC ONLY AND IS SUBJECT TO VARIATION FROM EXISTING CONDITIONS. IN FACT, CERTAIN EXISTING CONDITIONS MAY NOT BE INDICATED AT ALL. CONTRACTORS PROPOSING TO DO ANY PART OF THE WORK INDICATED HEREIN OR AS DEFINED IN THE SCOPE OF WORK SHALL REVIEW THE COMPLETE SET OF CONTRACT DOCUMENTS, VISIT THE SITE AND DETERMINE TO HIS/HER SATISFACTION THAT HE/SHE WILL BE ABLE TO COMPLETE ALL WORK REQUIRED FOR THE BID AMOUNT PROPOSED.
  - E. COORDINATE THE LOCATION OF EXISTING CONDUITS AND JUNCTION BOXES WITH NEW MECHANICAL SYSTEM AND OTHER APPLICABLE SYSTEMS. DEVICES, CONDUITS, CABLING, SUPPORTS, AND JUNCTION BOXES THAT ARE IN CONFLICT SHALL BE RELOCATED TO BOTTOM OF STRUCTURE ABOVE AS NECESSARY TO ACCOMMODATE ALL NEW CONSTRUCTION, INCLUDING BUT NOT LIMITED TO NEW CEILINGS, MECHANICAL, PLUMBING, NEW CONDUIT ROUTING, AND ELECTRICAL EQUIPMENT AND SYSTEMS.
  - F. THE CONTRACTOR SHALL MAINTAIN THE CONTINUITY OF EXISTING CIRCUITS THAT CONTAIN DEVICES OR EQUIPMENT THAT ARE TO REMAIN. WHERE DEMOLITION/RELOCATION OF DEVICES AND EQUIPMENT IS INDICATED, THE CONTRACTOR SHALL ENSURE THAT OTHER DEVICES OR EQUIPMENT THAT ARE CONNECTED TO THE SAME CIRCUIT, WHETHER "UPSTREAM" OR "DOWNSTREAM", SHALL REMAIN OPERATIONAL. UNUSED CIRCUIT BREAKERS SHALL REMAIN AND BE LABELED AS SPARES IN ALL AFFECTED PANELBOARDS. IN ADDITION, PROVIDE NEW TYPEWRITTEN DIRECTORIES IN ALL AFFECTED PANELBOARDS.
  - G. COORDINATE WITH ALL TRADES NOT TO DAMAGE EXISTING CABLES AND WIRING (DESIGNATED TO BE RELOCATED IN NEW CONSTRUCTION) BEING TEMPORARILY COILING UP AND STORED ABOVE CEILING. TEST ALL CABLES AND WIRING PRIOR TO DEMOLITION. NOTIFY CONSTRUCTION MANAGER OF ALL CABLES THAT DO NOT OPERATE PER SYSTEMS SPECIFICATIONS. CABLES NOT BEING REUSED SHALL BE REMOVED COMPLETELY. MAINTAIN "UPSTREAM" AND/OR "DOWNSTREAM" CONNECTIONS.
  - H. COORDINATE WITH CONSTRUCTION MANAGER TO REWORK AND RELOCATE ANY DISTURBED EXISTING SYSTEM DEVICES PER OWNER'S VENDOR.
  - I. COORDINATE WITH EXISTING FIRE ALARM SYSTEM, VENDOR AND CONSTRUCTION MANAGER, ETC. TO REWORK, MODIFY AND/OR RELOCATE EXISTING FIRE ALARM SYSTEM DEVICES PER DRAWINGS AND IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES.
  - J. COORDINATE AND RETAIN EXISTING SWITCHING CONFIGURATIONS, U.N.O.
  - K. DASHED LINES INDICATE ITEMS TO BE REMOVED. RETAIN EXISTING LIGHTING CIRCUITRY FOR REUSE IN RENOVATION, REFER TO LIGHTING PLANS. POWER OR SIGNAL DEVICE CIRCUITS ARE TO BE REMOVED BACK TO NEAREST REMAINING DEVICE OR PANEL WHICHEVER IS APPLICABLE, CIRCUITS SHALL BE EXTENDED TO NEW DEVICES AS NOTED.
  - L. IN ROOMS WHERE NO WORK IS INDICATED ALL EXISTING ELECTRICAL DEVICES AND CIRCUITRY SHALL REMAIN AS IS.

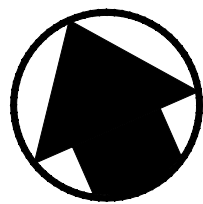
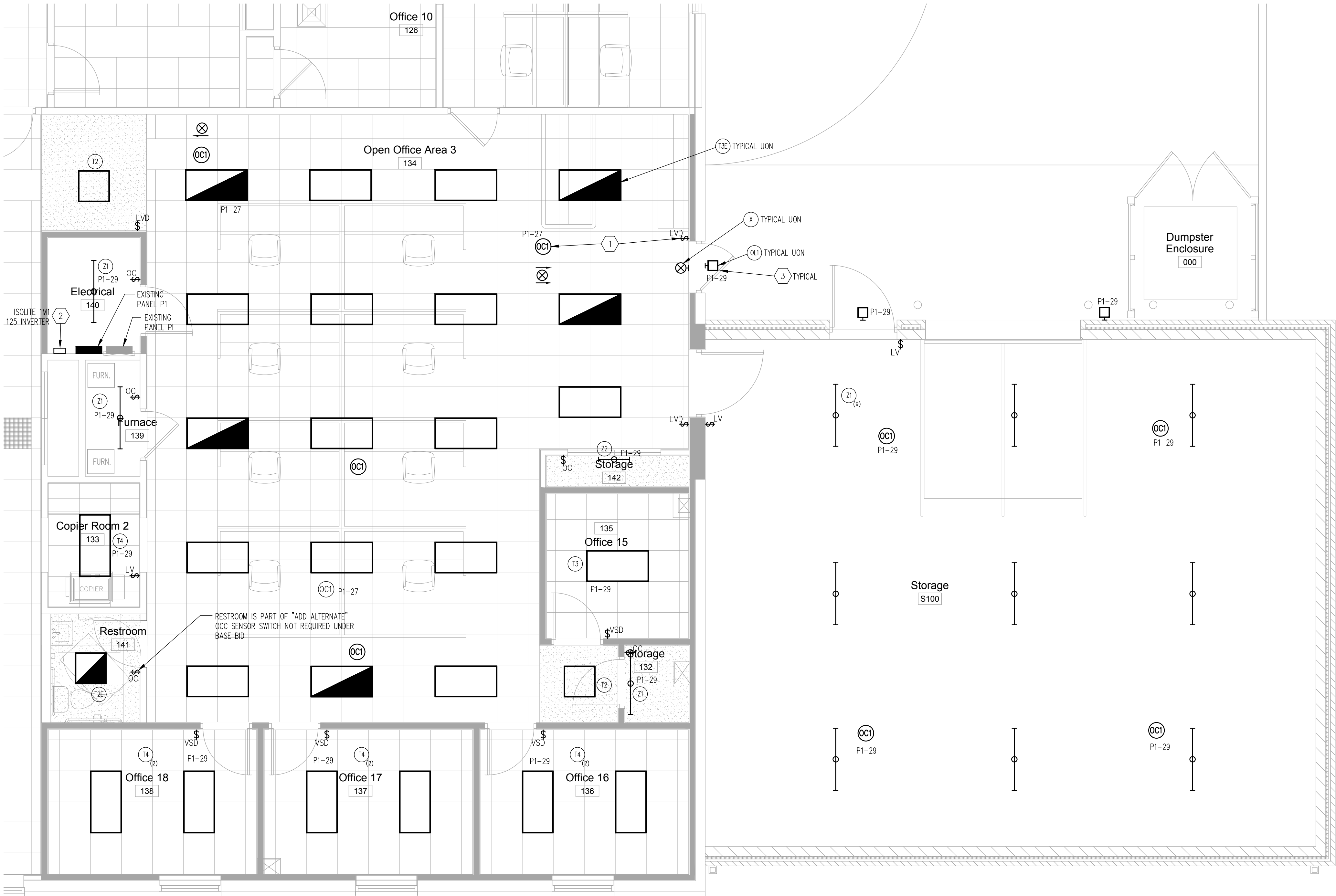
KEY PLAN



CONSTRUCTION DOCUMENTS

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PARTIAL FLOOR PLAN - ELECTRICAL DEMOLITION <b>OHIO VALLEY EDUCATIONAL COOPERATIVE</b> 100 Alpine Rd., Shelbyville, KY 40065	
MEP PROJECT #: 20020 DATE: 09.08.2020 DRAWN BY: RAB CHECKED BY: KAP REVISIONS:	
#2019-51	
<b>E-D</b>	





**LIGHTING  
FIRST FLOOR PLAN**

GRAPHIC SCALE SUPERSEDES NUMERIC SCALE  
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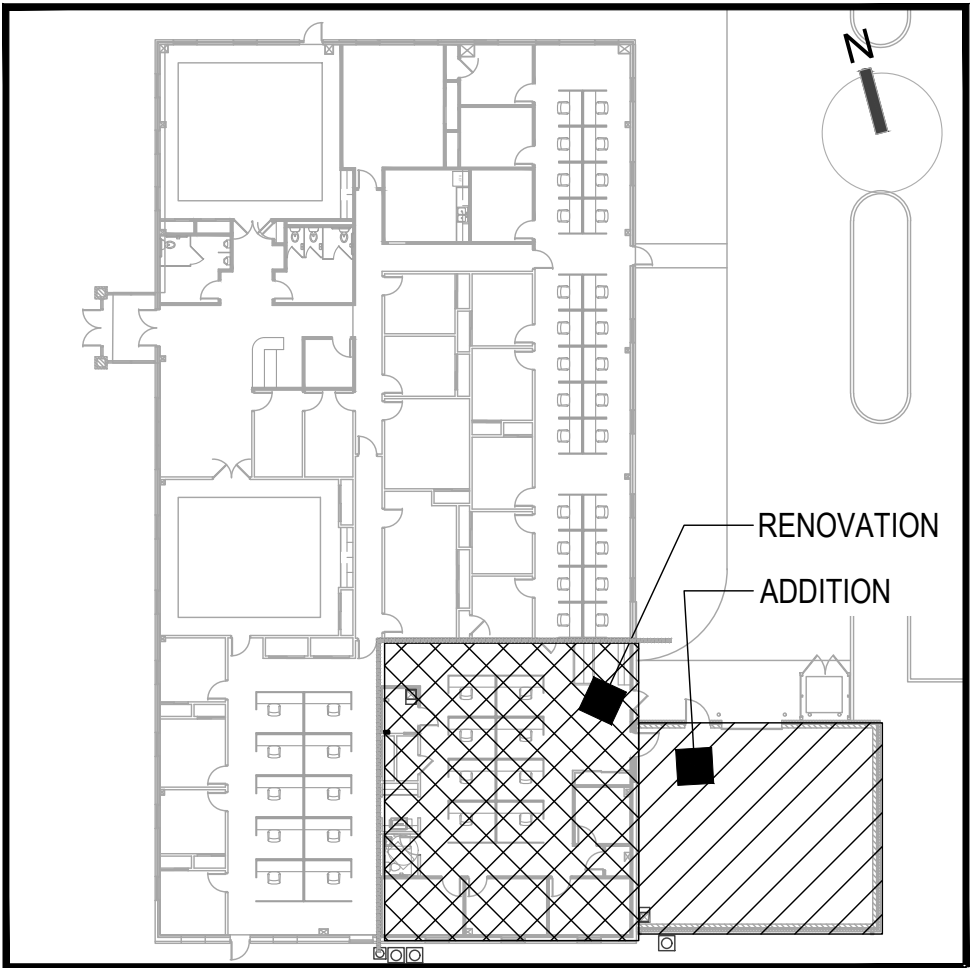
**GENERAL NOTES - LIGHTING:**

- (ALL NOTES MAY NOT APPLY TO THIS SHEET)
- A. SEE DRAWING E.0 FOR ADDITIONAL NOTES AND FIXTURE SCHEDULE.
  - B. COORDINATE EXACT MOUNTING HEIGHTS AND LOCATIONS WITH ARCHITECTURAL ELEVATIONS, NEW WORK, AND ALL TRADES (MECHANICAL, PLUMBING EQUIPMENT, DUCTWORK, ETC.).
  - C. ALL LIGHTING FIXTURES ARE TO BE SUPPORTED PER CURRENT NEC.
  - D. LIGHTING FIXTURES SHALL BE WIRED TO SWITCHES GENERALLY SHOWN IN EACH ROOM AND CONNECTED TO LIGHTING PANELS WITH THE REQUIRED QUANTITY OF WIRES FOR PROPER OPERATION. A CONTINUOUS GROUND MUST BE PROVIDED THROUGH CONDUIT SYSTEM. EXIT LIGHTS, INVERTERS, AND NIGHT LIGHTS SHALL BE CONNECTED AHEAD OF LOCAL SWITCHING ON SAME CIRCUIT.
  - E. FOR CEILING MOUNTED OCCUPANCY SENSORS, PROVIDE CEILING MOUNTED LIGHTING CONTROL CONSISTING OF A SENSOR SWITCH, CIRCUIT AHEAD OF ANY WALL BOX CONTROLS OR SWITCHES, (SEE PLAN). COLOR PER ARCHITECT. SEE TYPICAL DIAGRAM DRAWING E.3.
  - F. FOR WALL SWITCH/OCCUPANCY SENSORS. PROVIDE WALL BOX LIGHTING CONTROL CONSISTING OF A SENSOR SWITCH PER LEGEND OR TYPICAL DIAGRAM DRAWING E.3 AS APPROPRIATE, ALL DEVICES COLOR SELECTION BY ARCHITECT.
  - G. FOR STANDARD AREA WALL SWITCHES PROVIDE WALL BOX LIGHTING CONTROLS CONSISTING OF THE FOLLOWING (ALL DEVICES IVORY IN COLOR):  
LUTRON CA-1PSH-277V SINGLE POLE SWITCH.  
LUTRON CA-3PSH-277V THREE POLE SWITCH.  
LUTRON CA-4PSH-277V FOUR POLE SWITCH.  
FOR ALL WALL SWITCH COVER PLATES PROVIDE OUTLET BOX COVER PLATE CONSISTING WITH LUTRON CW-X OUTLET BOX COVER PLATE. (X-INDICATED NUMBER OF DEVICES PER LOCATION. ALL DEVICES AND COVERPLATES COLOR SELECTION BY ARCHITECT.
  - H. PROVIDE ALL LABOR AND MATERIALS TO REWORK AND/OR RELOCATE SWITCHING WHERE DOOR AND DOOR FRAMES ARE BEING REPLACED (ENLARGED) AND REQUIRED MOVING SWITCH, COORDINATE WITH ALL CONTRACT DOCUMENTS. PROVIDE NEW DEVICE TO MATCH EXISTING ROOM DEVICE COLOR AND COVER PLATE TO MATCH EXISTING ROOM DEVICE COLOR AND MATERIAL IF APPLICABLE.

**KEYNOTES - LIGHTING:**

- (ALL NOTES MAY NOT APPLY TO THIS SHEET)
- 1. SEE VACANCY/OCCUPANCY CONTROL TYPICAL WIRING DIAGRAMS ON DRAWING E.3, TYPICAL. COORDINATE WITH ENGINEER. COORDINATE EXACT LOCATION OF CEILING MOUNTED SENSORS WITH MANUFACTURER, OTHER TRADES AND ENGINEER/CONTRACTOR/ARCHITECT PRIOR TO ROUGH-IN TO CONFIRM COVERAGE.
  - 2. CIRCUIT EXTERIOR FIXTURES VIA REMOTE EMERGENCY INVERTER ISOLITE IMI 125 IN THE ELECTRIC ROOM 108. COORDINATE THIS CONNECTION REQUIREMENT WITH MANUFACTURER FOR CORRECT NUMBER OF CONDUCTORS, ETC. FOR PROPER OPERATION OF NORMAL SWITCHING AND EMERGENCY OPERATION.
  - 3. CIRCUIT EXTERIOR FIXTURES INDICATED THRU PHOTOCELL/TIMECLOCK SYSTEM.

**KEY PLAN**



CONSTRUCTION DOCUMENTS

PARTIAL FLOOR PLAN - LIGHTING  
**OHIO VALLEY EDUCATIONAL COOPERATIVE**  
100 Alpine Rd.,  
Shelbyville, KY 40065

MEP PROJECT #: 20020  
DATE: 09.08.2020  
DRAWN BY: RAB  
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REVISIONS:

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PARTIAL FLOOR PLAN - LIGHTING  
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Shelbyville, KY 40065

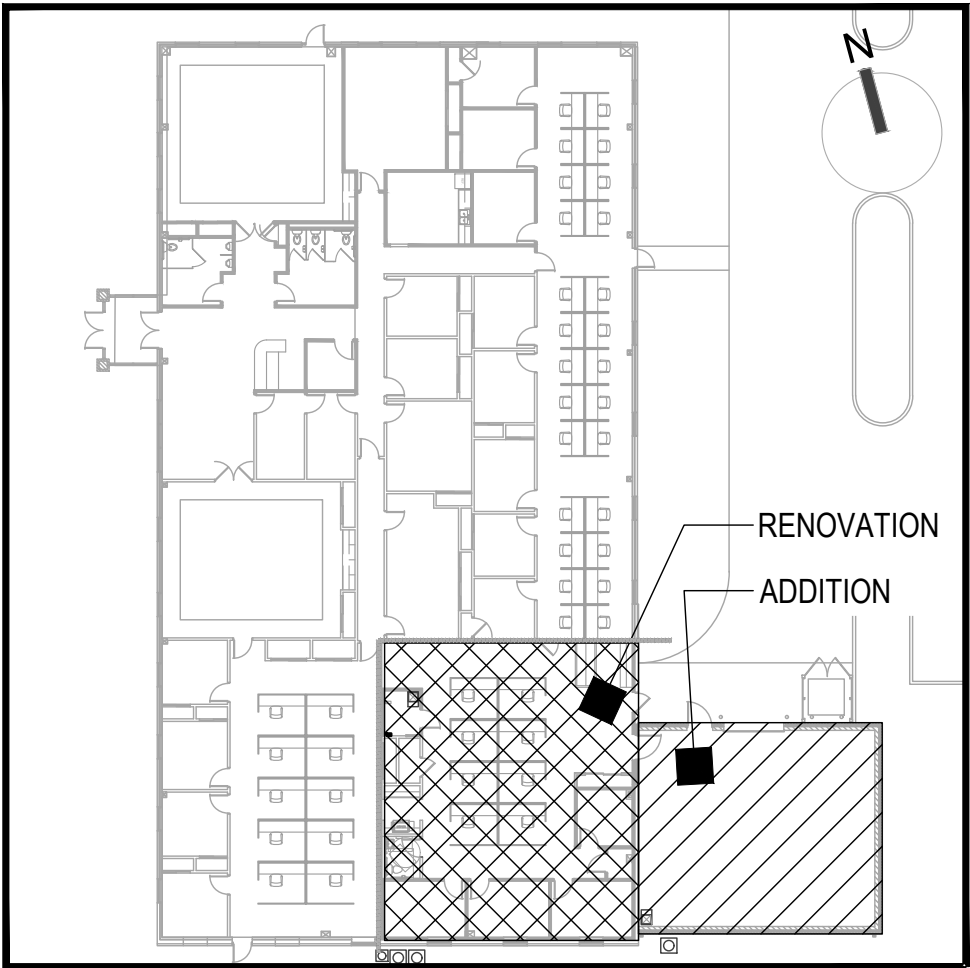
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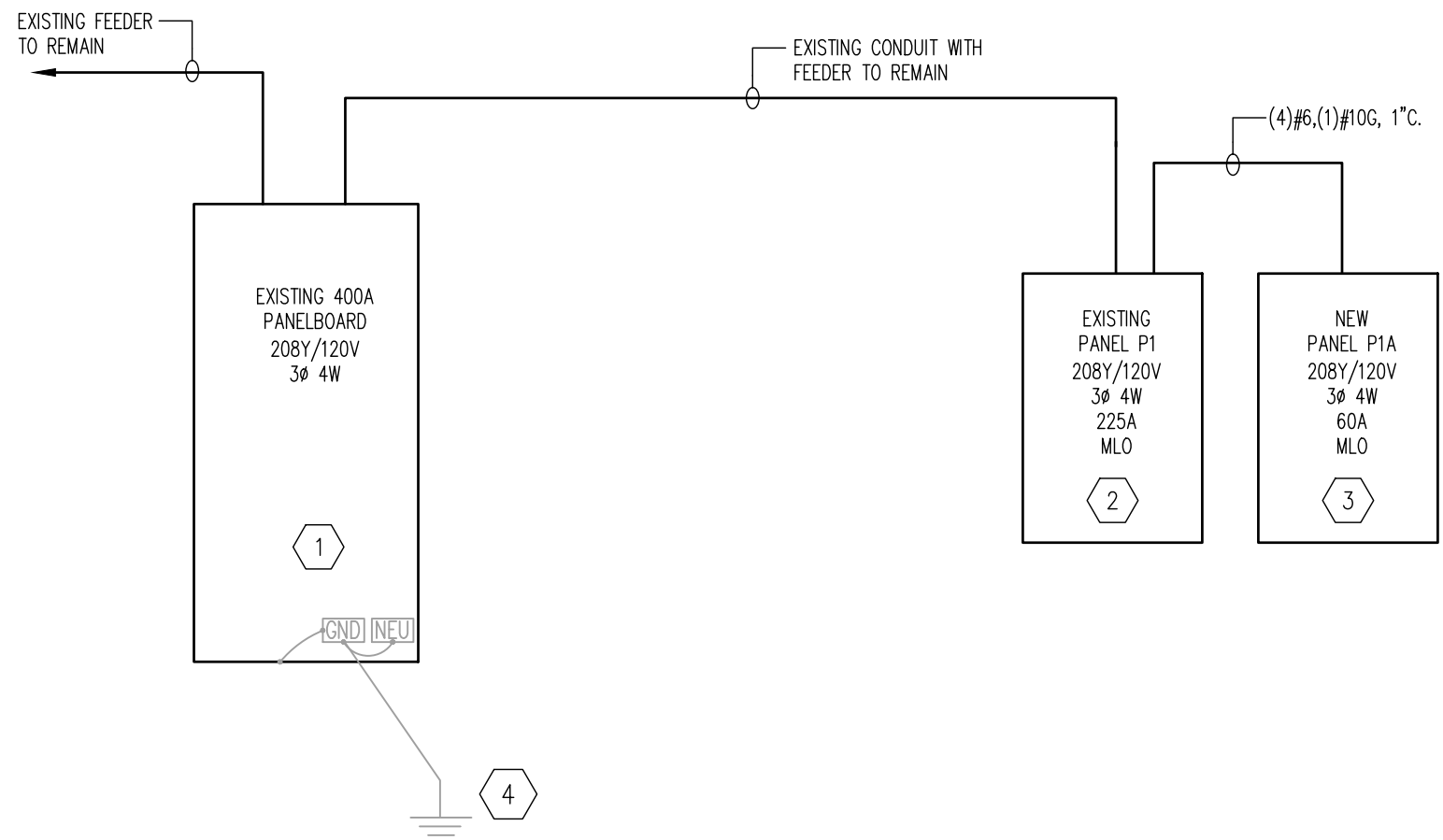
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#32 Lexington, KY 40509  
(859)-263-6983





1. PROVIDE FIRE ALARM DEVICES INDICATED TO MATCH EXISTING SYSTEM. CONTRACTOR SHALL CONFIRM EXISTING SYSTEM AND EXPANSION CAPACITY WITH VENDOR AND PROVIDE ALL IN ORDER TO PROVIDE COMPLETE SYSTEM. RECTIFYIFY SYSTEM UPON COMPLETION.
2. POWER CONNECTION FOR MECHANICAL/PLUMBING EQUIPMENT. COORDINATE EXACT LOCATION, CONTROLS, POWER AND REQUIREMENTS WITH EQUIPMENT MANUFACTURER AND ALL TRADES TO INSTALL COMPLETE. PROVIDE DISCONNECT RATED (NEMA 1 INTERIOR, NEMA 3R EXTERIOR) AND SIZED/FUSED PER MANUFACTURER RECOMMENDATIONS IF NOT FACTORY PROVIDED OR PART OF EQUIPMENT (SEE MECHANICAL FOR BASIS OF DESIGN MCA AND MOPC). PROVIDE CIRCUIT TO PANEL INDICATED. EXACT CIRCUIT BREAKER AND BRANCH CIRCUIT SIZE SHALL BE BASED ON ACTUAL EQUIPMENT PROVIDED TO MEET MANUFACTURER'S REMAINING REQUIREMENTS. FINAL CONNECTION WITH SEAL-TITE.
3. EXISTING PANEL TO REMAIN. PROVIDE CONNECTIONS TO EXISTING SPARE BREAKERS AND PROVIDE A NEW BREAKER FOR NEW PANEL P1A AS INDICATED ON PANEL SCHEDULES ON DRAWING E.3.
4. PROVIDE NEW DUAL SERVICE (POWER AND DATA) POWER POLE. PROVIDE POWER CIRCUITS AS INDICATED AND CONNECTION TO SYSTEMS FURNITURE PER FURNITURE VENDOR RECOMMENDATIONS/DIRECTIONS. CONNECT DATA COMPARTMENT TO DATA RACEWAY IN FURNITURE PER SYSTEMS FURNITURE VENDOR RECOMMENDATIONS/DIRECTIONS. COORDINATE WITH VENDOR FOR EXACT REQUIREMENTS.
5. NEW SUB PANEL P1A TO BE FED FROM EXISTING PANEL P1. SEE PANEL SCHEDULES ON DRAWING E.3 AND SINGLE LINE DIAGRAM.





## ELECTRICAL SINGLE-LINE DIAGRAM

SCALE: NONE

01

### KEYNOTES - SINGLE-LINE DIAGRAM:

- EXISTING 400AMP PANELBOARD WITH EXISTING 100AMP 3P CIRCUIT BREAKER FEEDING EXISTING PANELBOARD P1 IS TO REMAIN.
- EXISTING PANELBOARD P1 TO BE USED TO PROVIDE POWER FOR THE NEW ADDITION. PROVIDE A 60AMP 3P CIRCUIT BREAKER IN PANEL P1 TO FEED NEW SUB PANELBOARD P1A. SEE PANELBOARD SCHEDULES THIS DRAWING.
- PROVIDE NEW BRANCH PANELBOARD AS INDICATED. SEE PLANS FOR LOCATION - FIELD COORDINATE EXACT LOCATIONS WITH EXISTING CONDITIONS, OTHER TRADES AND ARCHITECTURAL LAYOUT TO PROVIDE NECESSARY NEC CLEARANCES, ETC. SEE PANELBOARD SCHEDULES THIS DRAWING.
- EXISTING MAIN GROUNDING TO REMAIN.

### GENERAL NOTES - PANELBOARD AND SINGLE-LINE DIAGRAM:

- PROVIDE PANELBOARDS WITH TYPE WRITTEN SCHEDULES AND AS-BUILT DRAWINGS PER ACTUAL INSTALLATION.
- FOR ALL PANELBOARD FEEDER SIZES REFER TO SAME PANELBOARD SCHEDULES, THIS DRAWING.
- ALL EQUIPMENT FEEDER SIZES INDICATED ON PANEL SCHEDULE, UON OR PROVIDE PER NEC TO MATCH NAMEPLATE AND CORRESPONDING OVERCURRENT PROTECTION DEVICE.
- REFER TO POWER PLAN FOR DISTRIBUTION EQUIPMENT 'BASIS OF DESIGN' PHYSICAL SIZES AND LAYOUTS. CONTRACTOR SHALL PROVIDE AND INSTALL DISTRIBUTION EQUIPMENT TO MEET REQUIREMENTS OF ALL LOCAL, STATE, NATIONAL CODES AND AUTHORITY HAVING JURISDICTION. COORDINATE WITH EXISTING CONDITIONS, ALL NEW WORK, ACTUAL ROOM SIZE, ALL TRADES AND DISTRIBUTION EQUIPMENT SUPPLIER.
- VERIFY EXACT A.I.C. RATING FOR ALL DISTRIBUTION EQUIPMENT WITH ACTUAL SITE AND EQUIPMENT CHARACTERISTICS OF AVAILABLE FAULT CURRENT PER LOCAL UTILITY AND PROPER SHORT CIRCUIT CALCULATIONS PER MANUFACTURER CALCULATION. SIZES INDICATED ARE A MINIMAL DESIGN SIZE BASED ON INFORMATION PROVIDED AT TIME OF DESIGN. CONTRACTOR TO VERIFY.

#### 208Y/120V 3-Phase 4-Wire LIGHTING PANEL

Mains: 225A MLO  
Trim: Surface Door: Yes  
Neutral: S/N  
Ground bar: Yes

Name: P1

Min Sym IC: 10000  
Fed from: MDP  
Feeder: Note 1

CIR DESCRIPTION	CONDUIT	PHASE	NEUT	GND	TRIP	POLES	PHASE LOADS			POLES	TRIP	CONDUIT	PHASE	NEUT	GND	DESCRIPTION	CIR
							A	B	C								
1 Lighting EX	3/4" C	#12	#12	#12	20	1	750									Receptacles ex	2
3 Lighting EX	3/4" C	#12	#12	#12	20	1	750									Receptacles ex	4
5 Lighting EX	3/4" C	#12	#12	#12	20	1	750									Receptacles ex	6
7 Receptacles ex	3/4" C	#12	#12	#12	20	1	900									Receptacles ex	8
9 Receptacles ex	3/4" C	#12	#12	#12	20	1	900									Receptacles ex	10
11 Rec. copier ex	3/4" C	#12	#12	#12	20	1	1000									Receptacles ex	12
13 Recept. GFI ex	3/4" C	#12	#12	#12	20	1	180									Receptacles ex	14
15 Recept. GFI ex	3/4" C	#12	#12	#12	20	1	180									Receptacles ex	16
17 Receptacles ex	3/4" C	#12	#12	#12	20	1	900									Receptacles ex	18
19 ACCU-1 EX	3/4"	#12	-	#12	30	2	1404									Recept. OPEN OFF	20
21 -		#12					1404									Recept. OPEN OFF	22
23 ACCU-2 EX	3/4"	#8	-	#10	40	2	2600									Rec.ELECT,STOR.	24
25 -		#8					1620									OH DOOR	26
27 LTG OPEN OFFICE	3/4" C	#12	#12	#12	20	1	855									Recept. COPIER	28
29 LTG OFFICE	3/4" C	#12	#12	#12	20	1	1000									Recept. OFFICE	30
31 Recept. OFFICE	3/4" C	#12	#12	#12	20	1	1440									Rec. SYSTEM FURN	32
33 Recept. OFFICE	3/4" C	#12	#12	#12	20	1	1260									Rec. SYSTEM FURN	34
35 Rec. SYSTEM FURN	3/4" C	#12	#12	#12	20	1	900									Rec. SYSTEM FURN	36
37 Rec. SYSTEM FURN	3/4" C	#12	#12	#12	20	1	900									P1A	38
39 Rec. SYSTEM FURN	3/4" C	#12	#12	#12	20	1	6800									#6	40
41 Spare	-				20	1	8307									#6	42
Phase load totals							A 21130	B 20416	C 21797								

Demand load = 48.2 KVA

Demand amps = 134

Notes for P1:

1 Feeder is (1) 1-1/2" - 4#1/0 + #6 GND THWN Copper

#### 208Y/120V 3-Phase 4-Wire LIGHTING PANEL

Mains: 60A Main molded case breaker  
Trim: Surface Door: Yes  
Neutral: S/N  
Ground bar: Yes

Name: P1A

Min Sym IC: 10000  
Fed from: P1  
Feeder: Note 1

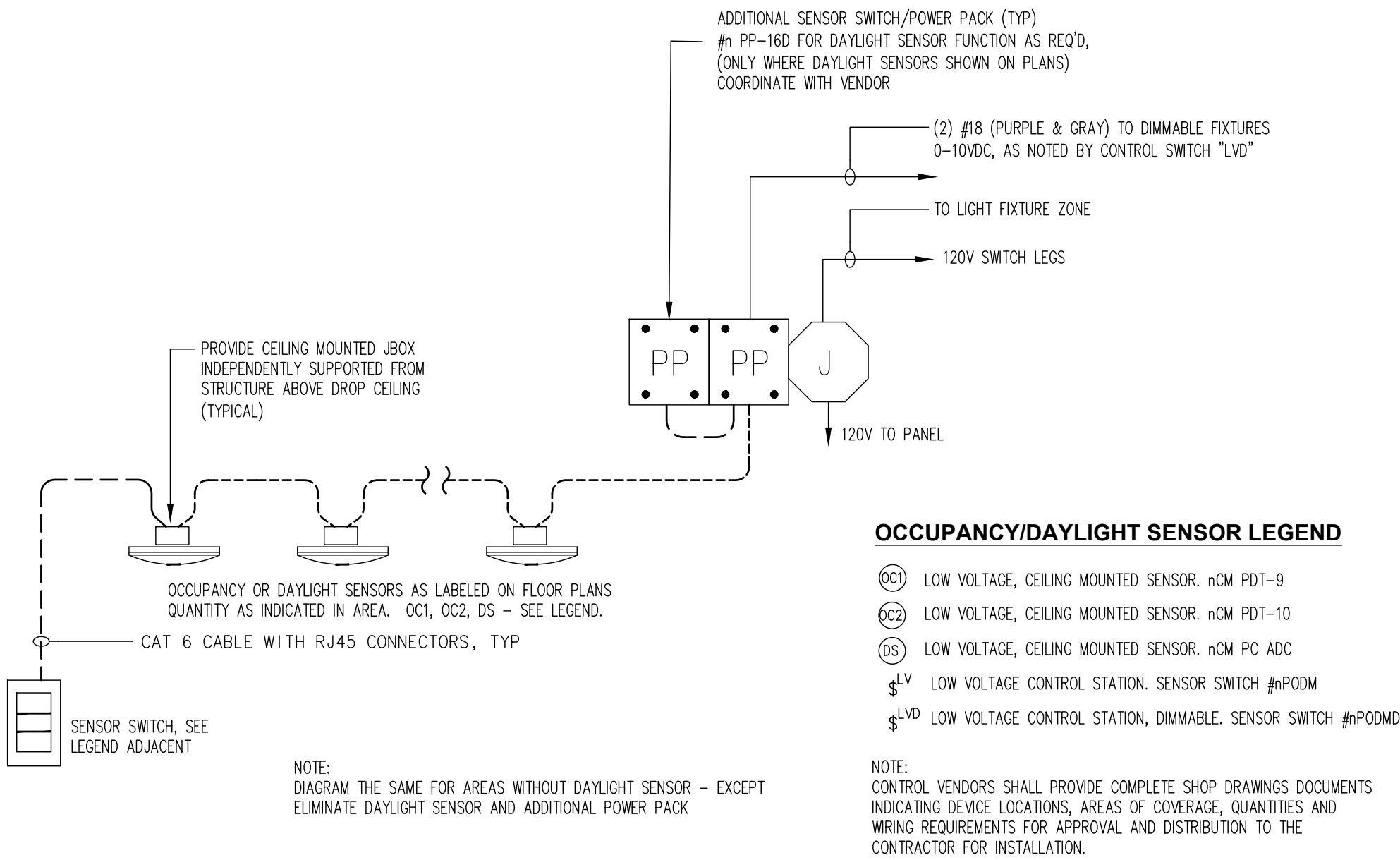
CIR DESCRIPTION	CONDUIT	PHASE	NEUT	GND	TRIP	POLES	PHASE LOADS			POLES	TRIP	CONDUIT	PHASE	NEUT	GND	DESCRIPTION	CIR
							A	B	C								
1 existing recepts	3/4" C	#12	#12	#12	20	1	900									Furnace F1	2
3 existing recepts	3/4" C	#12	#12	#12	20	1	1920									CU-1	4
5 existing recepts	3/4" C	#12	#12	#12	20	1	900									-	6
7 Furnace F2	3/4" C	#12	#12	#12	20	1	2839									#8	
9 CU-2	3/4"	#10	-	#10	30	2	1620									#12	
11 -		#10					500									#12	
13 Receptacles ext.	3/4" C	#12	#12	#12	20	1	2028									#12	
15 Grinder Pump	3/4"	#12	-	#12	15	2	500									#12	
17 -		#12					1040									#12	
19 Spare	-				20	1	500									#12	
21 Spare	-				20	1	500									#12	
23 Spare	-				20	1	500									#12	
25 Spare	-				20	1	500									#12	
27 Space only	-				-	1										#12	
29 Space only	-				-	1										#12	
31 Space only	-				-	1										#12	
33 Space only	-				-	1										#12	
35 Space only	-				-	1										#12	
37 Space only	-				-	1										#12	
39 Space only	-				-	1										#12	
41 Space only	-				-	1										#12	
Phase load totals							A 6800	B 8307	C 8307								

Demand load = 21.3 KVA

Demand amps = 59

Notes for P1A:

1 Feeder is (1) 1" - 4#6 + #10 GND THWN Copper



NOTE:

\$ VS \$ VSD \$ OC ARE STANDALONE ONLY WITH NO NETWORK CONNECTION REQUIRED

## OCCUPANCY/VACANCY/DAYLIGHT SENSOR SYSTEM STANDARD TYPICAL WIRING DIAGRAM

SCALE: NONE

01

TECHNICAL HORIZONS  
Industrial • Commercial • Institutional

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ELECTRICAL DETAILS, DIAGRAMS  
& PANEL SCHEDULE

OHIO VALLEY EDUCATIONAL  
COOPERATIVE

MEP PROJECT #: 20020

DATE: 09.08.2020  
DRAWN BY: RAB  
CHECKED BY: KAP  
REVISIONS:

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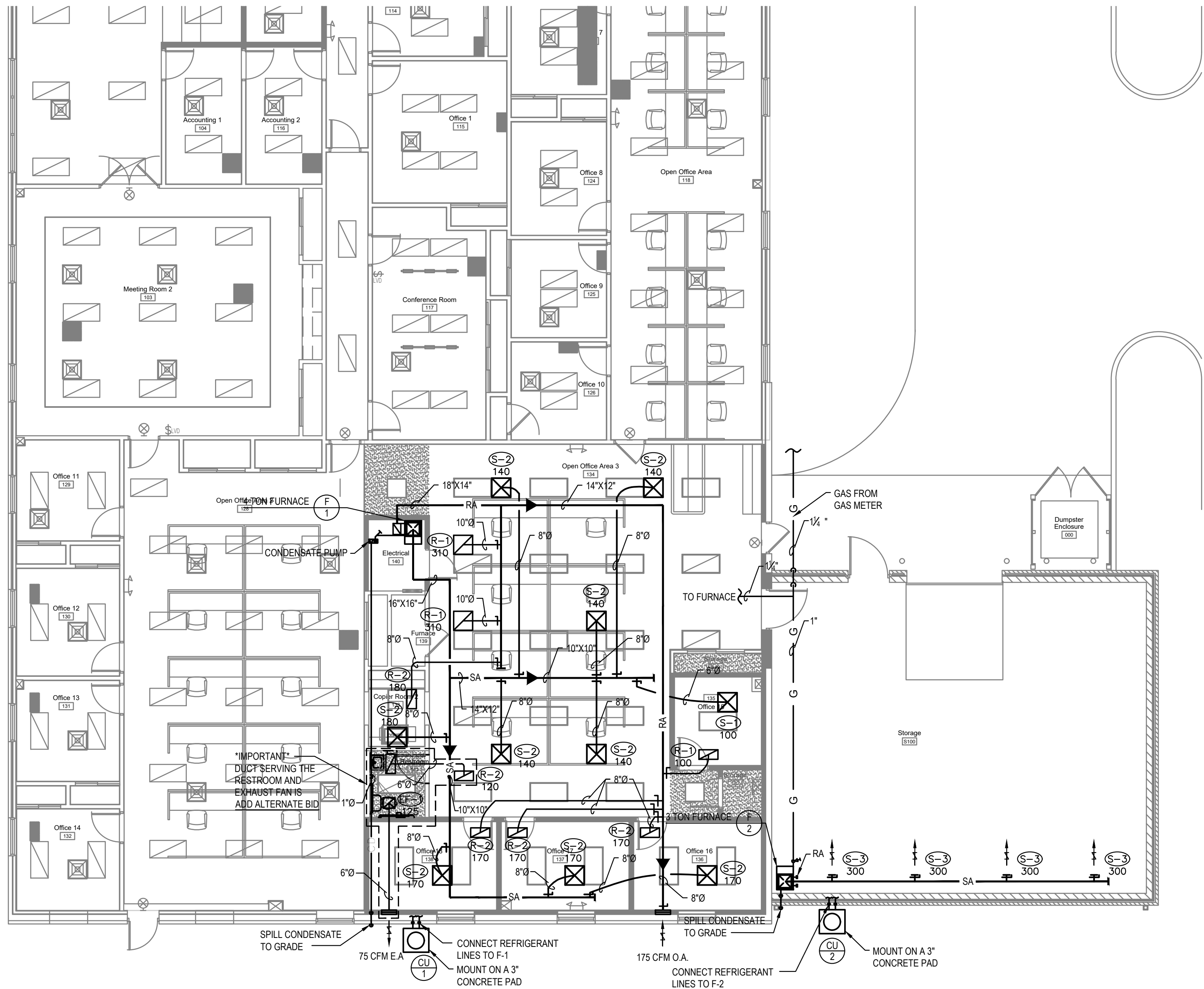


## ELECTRICAL SHEET SPECIFICATIONS

- A. PROVIDE A COMPLETE AND FUNCTIONAL POWER DISTRIBUTION SYSTEM, INCLUDING CONDUITS AND WIRING FOR RECEPTACLES AND OWNER FURNISHED EQUIPMENT. COORDINATE SERVICE TO TENANT SPACE WITH EXISTING FACILITY AND LANDLORD. COORDINATE SERVICE WITH LOCAL UTILITY.
- B. PROVIDE A COMPLETE AND FUNCTIONAL LIGHTING DISTRIBUTION SYSTEM INCLUDING LUMINAIRES, LAMPS, HANGERS, AND ACCESSORIES.
- C. PROVIDE BACK BOXES AND CONDUIT STUB-OUTS FOR LOW VOLTAGE SYSTEMS INCLUDING TELEPHONE, DATA, FIRE ALARM, NURSE CALL, TELEMETRY, SECURITY, ETC. COORDINATE BACK BOX SIZES WITH SYSTEM(S) VENDOR.
- D. COORDINATE BACK BOX LOCATIONS WITH CONSTRUCTION DOCUMENTS AND VENDOR DRAWINGS.
2. FIELD INVESTIGATION:
- A. INVESTIGATE EXISTING CONDITIONS AND ELECTRICAL PLANS. BRING TO ENGINEERS ATTENTION ANY AND ALL DISCREPANCIES.
3. CODES:
- A. WORK SHALL BE EXECUTED AND ALL MATERIALS SHALL CONFORM TO AND BE INSPECTED IN ACCORDANCE WITH LOCAL, STATE AND NATIONAL CODES CURRENTLY IN EFFECT AND AS DIRECTED BY THE AUTHORITY HAVING JURISDICTION.
- B. ALL WORK SHALL BE FABRICATED, TESTED AND INSTALLED IN ACCORDANCE WITH APPLICABLE PORTIONS OF THE FOLLOWING:
- i. NATIONAL ELECTRICAL CODE (NEC)
  - ii. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
  - iii. UNDERWRITERS LABORATORIES (UL)
  - iv. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
  - v. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
  - vi. AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)
  - vii. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
  - viii. FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
  - ix. ILLUMINATING ENGINEERING SOCIETY (IES)
  - x. CERTIFIED BALLAST MANUFACTURERS ASSOCIATION (CBM)
4. COORDINATION OF WORK:
- A. COORDINATE THE LOCATIONS AND MOUNTING CHARACTERISTICS OF ALL LUMINAIRES, PANELBOARDS, MOTOR STARTERS, RECEPTACLES, SWITCHES, AUXILIARY SYSTEM OUTLETS AND SIMILAR ELECTRICAL SPECIALTY EQUIPMENT WITH THE WORK OF ALL TRADES. THE COORDINATION IS FOR THE PURPOSE OF AVOIDING ANY INTERFERENCE BETWEEN TRADES.
- C. SET THE ELECTRICAL ITEMS IN A MANNER TO CLEAR CASEWORK, DUCTWORK, PIPING, AND OTHER STRUCTURAL OR ARCHITECTURAL COMPONENTS. MAINTAIN SYMMETRY FOR ALL UNITS AS CLOSELY AS POSSIBLE WITHIN THE ARCHITECTURAL SECTION CONTAINED. FOR EXAMPLE, CENTER A FIXTURE OVER A DOORWAY IF IT IS SHOWN IN THAT APPROXIMATE POSITION. THE COORDINATION DESCRIBED IN THE PRECEDING PARAGRAPHS IS A PART OF THIS CONTRACT AND ANY EXPENSES FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
6. ARCHITECT'S SUPERVISION:
- A. THE PERIODIC INSPECTIONS OF WORK, BY THE ENGINEER OR ARCHITECT ARE ONLY FOR THE EXPRESS PURPOSE OF VERIFYING COMPLIANCE BY THE CONTRACTOR WITH THE CONTRACT DOCUMENTS.
- B. SUCH INSPECTIONS BY THE ARCHITECT OR ENGINEER SHALL NOT BE CONSTRUED AS SUPERVISION OF THE ACTUAL CONSTRUCTION.
- C. SUCH INSPECTIONS ARE NOT INTENDED TO MAKE THE ARCHITECT RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF THE WORK BY CONTRACTORS OR CONTRACTOR'S EMPLOYEES OR THOSE OF SUPPLIERS OR SUBCONTRACTORS.
7. APPROVAL AND SUBMISSION OF SHOP DRAWINGS:
- A. SHOP DRAWING APPROVAL RELATES TO MANUFACTURER AND TYPE OF EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE EQUIPMENT THAT MEETS THE INTENT AND WILL RESULT IN A COMPLETE AND CONSTRUCTIBLE PROJECT MEETING ALL DESIGN CONSTRAINTS NOTED IN THE PLAN DOCUMENTS. AN APPROVED SHOP DRAWING DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY.
8. EQUIPMENT DESIGN AND INSTALLATION:
- A. UNIFORMITY: UNLESS OTHERWISE SPECIFIED, EQUIPMENT AND MATERIAL OF SAME TYPE OR CLASSIFICATION AND USED FOR SAME PURPOSE, SHALL BE PROVIDED BY THE SAME MANUFACTURER.
- B. DESIGN: EQUIPMENT AND ACCESSORIES NOT SPECIFICALLY DESCRIBED OR IDENTIFIED BY MANUFACTURER'S CATALOG NUMBERS SHALL BE DESIGNED IN ACCORDANCE WITH APPLICABLE TEST STANDARDS, SUITABLE FOR MAXIMUM WORKING PRESSURE AND SHALL HAVE A NEAT AND FINISHED APPEARANCE.
- C. INSTALLATION INSTRUCTIONS: OBTAIN MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS TO AD IN PROPER EXECUTION OF WORK. SUBMIT THREE (3) COPIES OF INSTRUCTIONS TO THE ENGINEER PRIOR TO INSTALLATION.
- D. INSTALLATION: ERECT EQUIPMENT IN A NEAT AND WORKMANLIKE MANNER. ALIGN, LEVEL, AND ADJUST FOR SATISFACTORY OPERATION. INSTALL SO THAT CONNECTIONS AND DISCONNECTING OF PIPING AND ACCESSORIES ARE ACCESSIBLE FOR INSPECTION, OPERATION, MAINTENANCE, AND REPAIR. MINOR DEVIATION FROM ARRANGEMENTS SHOWN ON DRAWING MAY BE MADE, AS APPROVED BY THE ENGINEER.
9. CONDUCTORS:
- A. GENERAL:
- i. WIRE AND CABLE SHALL BE NEW WIRE OF RECENT MANUFACTURE AND IN ACCORDANCE WITH THE LATEST STANDARDS OF THE INSULATED POWER CABLES ASSOCIATION, THE ASSOCIATION OF ELECTRICAL ILLUMINATING COMPANIES AND THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION.
  - ii. ALL CONDUCTORS SHALL BE COPPER, 98 PERCENT CONDUCTIVITY.
  - iii. CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG UNLESS OTHERWISE INDICATED OR SPECIFIED.
- B. 600 VOLT POWER WIRE AND CABLE
- i. CONDUCTORS SHALL BE 600 VOLT INSULATED, SINGLE CONDUCTOR, SIZED COPPER UP TO #10 AWG, INCLUSIVE AND STRANDED FOR LARGER SIZE.
  - ii. CONDUCTORS SHALL HAVE DUAL RATED TYPE THW/THHN INSULATION, UNLESS OTHERWISE NOTED. 250 KCMIL CABLE AND LARGER SHALL BE 37 STRANDED COPPER.
  - iii. COLOR CODING OF CONDUCTOR INSULATION FOR 208/120V SYSTEM SHALL BE "A" PHASE BLACK, "B" PHASE RED, "C" PHASE BLUE, "NEUTRAL" WHITE, AND "GROUND" GREEN. AND CONDUCTOR INSULATION FOR 480/277V SYSTEM SHALL BE "A" PHASE BROWN, "B" PHASE ORANGE, "C" PHASE YELLOW, "NEUTRAL" GRAY, AND "GROUND" GREEN/WHITE.
10. CONDUIT SYSTEMS AND ACCESSORIES:
- A. GENERAL:
- i. UNLESS INDICATED OTHERWISE ON THE DRAWINGS FOR POWER SUPPLY AND RELATED CONTROL CIRCUITS ONLY, INSTALL EACH TYPE OF WIRING IN A SEPARATE SYSTEM OF CONDUITS CONTROL, POWER, LIGHTING, COMMUNICATION, AND RESPECTIVE SPECIAL SYSTEMS.
  - ii. CONDUIT SHALL BE INSTALLED CONCEALED OR EXPOSED AS INDICATED. CONCEALED CONDUIT SHALL BE INSTALLED IN FURRED SPACES, BUILDING WALLS, FLOORS, OR CEILINGS.
  - iii. INSTALL CONDUITS WITH A MINIMUM OF 12" OF FREE AIR SPACE BETWEEN CONDUITS AND STEAM/HOT WATER PIPES AND A MINIMUM OF 3" OF FREE AIR SPACE FROM ALL OTHER MECHANICAL PIPING.
  - iv. CONDUITS SHALL NOT BE SUPPORTED FROM PIPES, HANGERS, OR EXTENSIONS OF OTHER BUILDING TRADES.
  - v. INSERT A PULL WIRE IN ALL CONDUITS DESIGNATED FOR FUTURE USE OR AS SPARES.
  - vi. CLEAN CONDUITS THOROUGHLY AND DRY INNER SURFACES BEFORE CONDUCTORS ARE INSTALLED. CONDUITS FOUND TO BE PLUGGED OR SO EXCEPTIONALLY DIRTY THAT THEY CANNOT BE CLEANED SHALL BE REMOVED AND REPLACED.
- vii. SEAL CONDUITS INSTALLED FOR FUTURE USE OR USE BY OTHERS WITH AN APPROVED TYPE CONDUIT CAP OR PLUG.
- viii. INSTALL CONDUIT IN SUCH A MANNER AS TO PREVENT FORMATION OF WATER TRAPS. ix. CONDUITS SHALL MAINTAIN CONTINUITY OF ELECTRICAL GROUND CONNECTIONS.
- B. CONDUIT:
- i. ALL CONDUITS SHALL BE 3/4" EMT MINIMUM WITH COMPRESSION FITTINGS UNLESS NOTED OTHERWISE.
  - ii. CONDUIT ENCASED IN CONCRETE SHALL BE SCHEDULE 80 PVC. CONDUIT EXPOSED TO PHYSICAL DAMAGE SHALL BE RIGID, HEAVY WALL, GALVANIZED STEEL TUBING WITH EXTERIOR HAVING A SMOOTH BAKED LACQUER, VARNISH OR ENAMEL SURFACE. CONDUIT CONCEALED IN WALLS, ABOVE SUSPENDED CEILINGS OR ATTACHED TO UNDERSIDE OF CONCRETE DECK SHALL BE GALVANIZED THIN WALL ELECTRICAL METALLIC TUBING (EMT) TYPE WITH SIMILAR INTERIOR. ALL CONDUIT 3" AND LARGER SHALL BE STANDARD RIGID.
  - iii. CONDUIT SHALL BEAR THE UNDERWRITERS' LABORATORIES, INC., LABEL AND SHALL SHOW THE MANUFACTURER'S NAME AND TRADEMARK. THE UNDERWRITERS' LABORATORIES, INC., "STANDARD FOR RIGID STEEL CONDUIT," LATEST EDITION, SHALL BE REFERRED TO FOR ADDITIONAL DETAILS OR REQUIREMENTS FOR STEEL CONDUIT.
  - iv. CONDUIT ENTERING OUTLET BOXES, JUNCTION BOXES, CABINETS, OR ANY PIECE OF ELECTRICAL EQUIPMENT NOT HAVING THREADED HUBS SHALL BE FITTED WITH GALVANIZED LOCKNUTS INSIDE AND OUT. SUFFICIENT CONDUIT THREAD SHALL EXTEND INTO THE ENCLOSURE OR FITTING SO THAT THE END OF THE CONDUIT SHALL BUTT UP TIGHT INTO END OF BUSHINGS. BUSHINGS SHALL NOT BE USED AS JAWB NUTS OR IN LIEU OF LOCKNUTS.
  - v. ENDS OF ALL CONDUITS SHALL BE FURNISHED WITH AN INSULATED BUSHING. OZ/GENEY OR APPROVED EQUIV. EXCEPT AT COUPLINGS OR THREADED TYPE OUTLETS.
- C. FLEXIBLE METALLIC CONDUIT:
- i. LIQUID TIGHT FLEXIBLE METALLIC CONDUITS SHALL BE USED TO COMPLETE THE CONNECTION TO NORMALLY STATIONARY MOTORS, LIMIT SWITCHES, AND OTHER EXTERNALLY MOUNTED DEVICES. CONNECTIONS BETWEEN RIGID CONDUIT AND UNITS HAVING SMALLER INFREQUENT MOVEMENT, CONNECTIONS TO DRY TYPE TRANSFORMERS, AND SPECIFIC INSTALLATIONS AS APPROVED BY THE ENGINEER.
  - ii. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE SIMILAR TO "SEALITE" AND SHALL BE INSTALLED WITH THE USE OF GALVANIZED OR CADMIUM PLATED "SQUEEZE TYPE" APPROVED FITTINGS SIMILAR TO APPLETON "SI" SERIES OR MIDEAST.
  - iii. FLEXIBLE METALLIC TUBING SHALL BE SO INSTALLED SO THAT LIQUIDS WILL RUN OFF THE SURFACE INSTEAD OF DRAINING TOWARD THE FITTINGS AND SHALL NOT BE INSTALLED IN LENGTHS GREATER THAN SIX FEET.
  - iv. RECESSED LUMINAIRES MAY BE WIRED WITH STANDARD FLEXIBLE STEEL CONDUIT.
  - v. ALL LIQUID TIGHT FLEXIBLE CONDUIT SHALL BE OF THE CONTINUOUS GROUNDING TYPE WITH A GROUNDING CONDUCTOR IN THE CORE.
- D. CONDUIT FITTINGS:
- i. CONDUIT FITTINGS FOR HEAVY WALL CONDUIT SHALL BE CADMIUM PLATED OR GALVANIZED MALLEABLE OR CAST IRON WITH THREADED HUBS AND FULL BODY DESIGN. COVERS SHALL BE OF STAMPED METALS, WHERE VAPOR-PROOF OR WEATHERPROOF CONSTRUCTION IS REQUIRED, BLANK COVERS SHALL BE HEAVY CAST METAL WITH COMPOSITION GASKETS.
  - ii. CONDUIT FITTINGS FOR EMT SHALL BE MADE OF ZINC-PLATED STEEL AND BE TAP-ON, MULTI-POLE POINT, STAINLESS STEEL LOCKING RING TYPE EQUAL TO TOMO, THOMAS & BETTS, MIDEAST COMPRESSION TYPES, INDUSTRY TYPES ARE ALSO ACCEPTABLE.
  - iii. EXPANSION FITTINGS WITH FLEXIBLE GROUND STRAP SHALL BE USED WHERE REQUIRED.
- E. FASTENING, SUPPORTS AND HANGERS:
- i. OUTLET BOXES IN CONCRETE SHALL BE ACCURATELY LOCATED AND SECURELY ANCHORED TO REINFORCING STEEL AND TO FORMS. OUTLET BOXES IN FURRED CEILINGS SHALL BE RIGIDLY FASTENED TO THE SUPPORTING STRUCTURE BY APPROVED TYPE SUPPORTS.
  - ii. OUTLET BOXES ON HOLLOW TILE OR SIMILAR SURFACES SHALL BE SECURED WITH TOGGLE BOLTS.
  - iii. OUTLET BOXES ON CONCRETE, BRICK, OR OTHER MASONRY SURFACES SHALL BE RIGIDLY SECURED BY MACHINE SCREWS, BOLTS AND EXPANSION TYPE SHIELDS.
- F. EXPOSED CONDUIT INSTALLATION:
- i. CONDUIT SHALL BE INSTALLED IN NEAT SYMMETRICAL LINES PARALLEL TO THE CENTER LINES OF THE BUILDING CONSTRUCTION AND CLOSELY FOLLOWING THE BUILDING OUTLINE. DIAGONAL RUNS ARE NOT ACCEPTABLE. VERTICAL AND HORIZONTAL RUNS OF CONDUITS SHALL BE GROUPED WHENEVER POSSIBLE ON COMMON SUPPORTS.
- G. CONDUIT MARKING:
- i. CONDUIT SHALL BE MARKED TO MATCH EXISTING SYSTEMS.
11. LUMINAIRES:
- A. PROVIDE LUMINAIRES IN ACCORDANCE WITH THE TYPES, MAKES, AND QUANTITIES AS SHOWN ON THE PLANS AND LUMINAIRE SCHEDULE.
- B. ALL LUMINAIRES SHALL BE COMPLETE IN EVERY RESPECT, INCLUDING WIRING NECESSARY FOR A COMPLETE AND SATISFACTORY INSTALLATION. FIXTURE INSTALLATION SHALL COMPLY IN ALL RESPECTS WITH THE RULES OF THE NATIONAL BOARD OF FIRE UNDERWRITERS AND SHALL BEAR AN UNDERWRITERS' LABORATORY LABEL.
12. OUTLET BOXES:
- A. BOXES SHALL HAVE KNOCKOUTS AS REQUIRED. CONCENTRIC KNOCKOUTS ARE NOT ACCEPTABLE.
- B. OUTLET BOXES AND FITTINGS FOR EXPOSED INSTALLATIONS SHALL BE OF CAST MALLEABLE IRON OR A SPECIAL ALLOY HAVING SIMILAR CHARACTERISTICS. GASKETED COVERS SHALL BE USED IN AREAS REQUIRING PROTECTION FROM MOISTURE OR VAPOR.
- C. SUPPORT OF DEVICES IN BOXES SHALL BE SEPARATED INDEPENDENT OF ANY MEANS FOR SUPPORTING BOXES.
13. WIRING DEVICES:
- A. PROVIDE EQUIPMENT CONSISTING OF BUT NOT LIMITED TO THE FOLLOWING:
- i. TUMBLER SWITCHES 20 AMP, 120/277 VOLT A.C. QUIET ACTION, IVORY, HUBBELL 1221-1, 1223-1 (SAME SERIES FOR KEYLOCK).
  - ii. OCCUPANCY CONTROLS, SWITCHES, SENSORS, ETC. SHALL BE PER NOTES ON FLOOR PLANS AND DIAGRAMS - ALL DEVICES SHALL BE IVORY.
  - iii. DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 3 WIRE, 3 POLE GROUNDING TYPE, IVORY, SIDE WIRE, HUBBELL 5362-1 (INSTALLED GROUND UP).
  - iv. GROUND FAULT INTERRUPTER RECEPTACLE, HUBBELL OF53621 (INSTALLED GROUND UP).
  - v. ISOLATED GROUND RECEPTACLE, HUBBELL 105362 (INSTALLED GROUND UP).
  - vi. TAMPERPROOF RECEPTACLE, HUBBELL #R20R1P (INSTALLED GROUND UP).
  - vii. PROVIDE PLATES OF SMOOTH PLASTIC FOR ALL DEVICES, HUBBELL P (SMOOTH NYLON) SERIES.
  - viii. OTHER APPROVED MANUFACTURERS - LEVITON, DANIEL WOODHEAD AND BRYANT

- vii. MODEL NUMBERS LISTED ARE FOR BASIS OF INTENT. CONTRACTOR SHALL PROVIDE DEVICES AS REQUIRED FOR INSTALLATION IF REQUIRED TO BE A COMBINATION DEVICE (I.E. TAMPER RESISTANT GPO, OR OTHER).  
 vii. PROVIDE PLATES OF SMOOTH PLASTIC FOR ALL DEVICES, HUBBELL P (SMOOTH NYLON) SERIES, COLOR SAME AS DEVICE.  
 viii. OTHER APPROVED MANUFACTURERS – LEVITON, DANIEL WOODHEAD AND BRYANT.
- B. IDENTIFICATION:  
 i. IDENTIFY ALL ELECTRICAL PANEL BOARDS, DISCONNECTS, CABINETS, ENCLOSURES, ETC. WITH BLACK LAMACAO LABELS WITH WHITE LETTERS TO MATCH NOMENCLATURE OF ELECTRICAL PLANS AND DIAGRAMS.
16. PANELBOARD:  
 A. PANELBOARD: – SQUARE “D” TYPE N400 OR EQUIVALENT BY EATON, OR GE, BOLT-ON, MINIMUM 10,000 AC – 120/208 VOLTS, 14,000 AC – 277/480 VOLT, SIZE PER PLANS.  
 C. CIRCUIT BREAKERS: – SQUARE “D” TYPE OR EQUIVALENT BY EATON, OR GE, BOLT-ON, MINIMUM 10,000 AC – 120/208 VOLT, 14,000 AC – 277/480 VOLT, SIZE PER PLANS.  
 i. CIRCUIT BREAKERS SHALL BE QUICK-BREAK, QUICK-BREAK, THERMAL-MAGNETIC, TRIP INDICATING, AND HAVE COMMON TRIP ON ALL MULTI-POLE BREAKERS. BRANCH CIRCUIT BREAKERS FEEDING CONVENIENCE OUTLETS SHALL HAVE SENSITIVE INSTANTANEOUS TRIP SETTINGS OF NOT MORE THAN TEN TIMES THE TRIP RATING OF THE BREAKER.  
 ii. UL CLASS A (5 MILLIAMPERE SENSITIVITY) GROUND FAULT CIRCUIT PROTECTION SHALL BE PROVIDED ON 120 VOLT AC BRANCH CIRCUITS AS SPECIFIED ON THE PLANS OR PANELBOARD SCHEDULES.
17. MOTOR STARTERS:  
 A. CHARACTERISTICS: CONFORM TO NEMA STANDARDS FOR INDUSTRIAL CONTROL, NO. 1C-1, LATCHING WITH BE-METAL OVERLOAD RELAYS.  
 B. PHASE: STARTERS FOR MOTORS, SEE DRAWINGS.  
 C. SIZE STARTERS IN ACCORDANCE WITH NEMA STANDARDS, MINIMUM SIZE NO. “0”, UNLESS OTHERWISE NOTED.  
 D. PROVIDE NEMA TYPE 1 ENCLOSURE.  
 E. MAGNETIC STARTERS:  
 iii. APPROVED MANUFACTURERS: SQUARE “D”, GENERAL ELECTRIC, WESTINGHOUSE, ITC.  
 F. COMBINATION MAGNETIC STARTERS WITH FUSED SWITCH SIZE FOR HORSEPOWER AS SHOWN ON DRAWINGS.  
 i. APPROVED MANUFACTURED: GENERAL ELECTRIC, SQUARE “D”, WESTINGHOUSE, ITC.
- G. MOTOR STARTERS, MANUAL:  
 i. APPROVED MANUFACTURERS: GENERAL ELECTRIC, SQUARE “D”, WESTINGHOUSE, ITC.
- H. HEATER ELEMENTS: PROVIDE CORRECT SIZE HEATER ELEMENTS THAT WILL PROTECT MOTOR AND ALLOW IT TO OPERATE BASED ON MOTOR LOAD AMBIENT TEMPERATURE AS EXPERIENCED ON EACH INDIVIDUAL MOTOR. CORRECT SIZE TO BE DETERMINED IN FIELD PER NAMEPLATE MOTOR RATING. PROVIDE ONE (1) IN EACH PHASE LEG.
- I. ACCESSORIES: PROVIDE DUTY PUSH BUTTON, PILOT LIGHTS AND HANDS-OFF AUTO SWITCHES WHERE REQUIRED.
18. ELECTRICAL WORK FOR PLUMBING EQUIPMENT:  
 A. THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL HOT WATER CIRCULATING PUMPS, WATER COOLERS AND WATER HEATERS, IN CONNECTION WITH PLUMBING SYSTEMS, AND FURNISH TO THE ELECTRICAL CONTRACTOR, ANY SWITCHES AND CONTROLS REQUIRED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MOTOR STARTERS AND DISCONNECTS THAT ARE NOT FURNISHED BY PLUMBING CONTRACTOR AND INSTALL ALL THAT ARE FURNISHED BY THE PLUMBING CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND WIRING REQUIRED FOR A COMPLETELY FUNCTIONAL POWER AND CONTROL SYSTEM FOR PROPER OPERATION OF PLUMBING EQUIPMENT.
19. ELECTRICAL WORK FOR HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT:  
 A. THE TEMPERATURE CONTROL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE ALL TEMPERATURE CONTROLS AND P-E SWITCHES NECESSARY TO COMPLETE THE TEMPERATURE CONTROL OF THE HEATING AND VENTILATING EQUIPMENT.  
 i. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING AND CONDUITS, AND PROVIDE A 120 VOLT, SINGLE PHASE, POWER SOURCE AT THE TEMPERATURE CONTROL EQUIPMENT LOCATION FOR THE TEMPERATURE CONTROL.  
 B. THE HEATING CONTRACTOR SHALL FURNISH AND INSTALL ALL AIR CONDITIONING EQUIPMENT, AIR HANDLING UNITS, EXHAUST FANS, FAN COIL UNITS, REHEAT, AND PREHEAT COILS, AND FURNISH TO THE ELECTRICAL CONTRACTOR, ANY SWITCHES, CONTROLS, TRANSFORMERS AND RELAYS ASSOCIATED WITH THE HEATING AND VENTILATING EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MOTOR STARTERS, DISCONNECTS, AND CONTACTORS THAT ARE NOT PART OF A “PACKAGE” UNIT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING, CONDUITS, LABOR, AND FINAL ELECTRICAL CONNECTIONS AS REQUIRED FOR PROPER OPERATION.
20. FIRE ALARM SYSTEM:  
 A. THIS SPECIFICATION DESCRIBES AN ADDRESSABLE FIRE DETECTION AND ALARM SIGNALING SYSTEM. THE CONTROL PANEL SHALL BE INTELLIGENT DEVICE ADDRESSABLE, ANALOG DETECTION LOW VOLTAGE AND MODULAR, WITH DIGITAL COMMUNICATION TECHNIQUES, IN FULL COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS. THE FEATURES AND CAPACITIES DESCRIBED IN THIS SPECIFICATION ARE REQUIRED AS A MINIMUM FOR THIS PROJECT AND SHALL BE FURNISHED BY THE SUCCESSFUL CONTRACTOR.  
 B. THE SYSTEM SHALL BE IN FULL COMPLIANCE WITH NATIONAL AND LOCAL CODES.  
 C. THE SYSTEM SHALL INCLUDE ALL REQUIRED HARDWARE, RACKWAYS, INTERCONNECTING WIRING AND SOFTWARE TO ACCOMPLISH THE REQUIREMENTS OF THIS SPECIFICATION AND THE CONTRACT DRAWINGS, WHETHER OR NOT SPECIFICALLY ITEMIZED HEREIN.  
 D. ALL EQUIPMENT FURNISHED SHALL BE NEW AND THE LATEST STATE-OF-THE-ART PRODUCTS OF A SINGLE MANUFACTURER, ENGAGED IN THE MANUFACTURING AND SALE OF ANALOG FIRE DETECTION DEVICES FOR OVER TEN YEARS.  
 E. THE SYSTEM AS SPECIFIED SHALL BE SUPPLIED, INSTALLED, TESTED AND APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION, AND TURNED OVER TO THE OWNER IN AN OPERATIONAL CONDITION.  
 F. IN THE INTEREST OF JOB COORDINATION AND RESPONSIBILITIES, THE INSTALLING CONTRACTOR SHALL CONTRACT WITH A SINGLE SUPPLIER FOR FIRE ALARM EQUIPMENT, ENGINEERING, PROGRAMMING, INSPECTION AND TESTS, AND SHALL BE CAPABLE OF PROVIDING A “UL LISTING CERTIFICATE” FOR THE COMPLETE SYSTEM.  
 G. THE SYSTEM SPECIFIED SHALL BE THAT OF SIEMENS DESIGO FIRE SAFETY WHICH MEETS THE PROJECT REQUIREMENTS OR, OTHER SYSTEMS SHALL BE SUBMITTED 10 DAYS PRIOR TO BID DATE FOR APPROVAL BY THE ENGINEER. ALL SYSTEM APPROVED SHALL MEET ALL THE REQUIREMENTS SPELLED OUT IN THIS SPECIFICATION. SYSTEM APPROVAL SHALL BE IN WRITING BY THE ENGINEER AND A COPY SHALL BE SUBMITTED WITH THE SYSTEM SUBMITTALS.  
 H. UTILIZE THE MANUFACTURER'S STANDARD DEVICES SHOWN ON THE DRAWINGS THAT ARE COMPATIBLE WITH THE LISTED SYSTEM.  
 I. PROVIDE ALL NECESSARY DEVICES, RELAYS, WIRING, CONTROL, INTEGRATION WITH HVAC, FIRE SUPPRESSION, ETC. FOR COMPLETE SYSTEM.  
 J. PROVIDE DIGITAL DIALER AND ALL ASSOCIATED COMPONENTS FOR COMPLETE SYSTEM.  
 K. PROVIDE CAD GENERATED AS-BUILT DRAWINGS.





1 OVERALL FLOOR PLAN - HVAC  
1/8" = 1'-0"

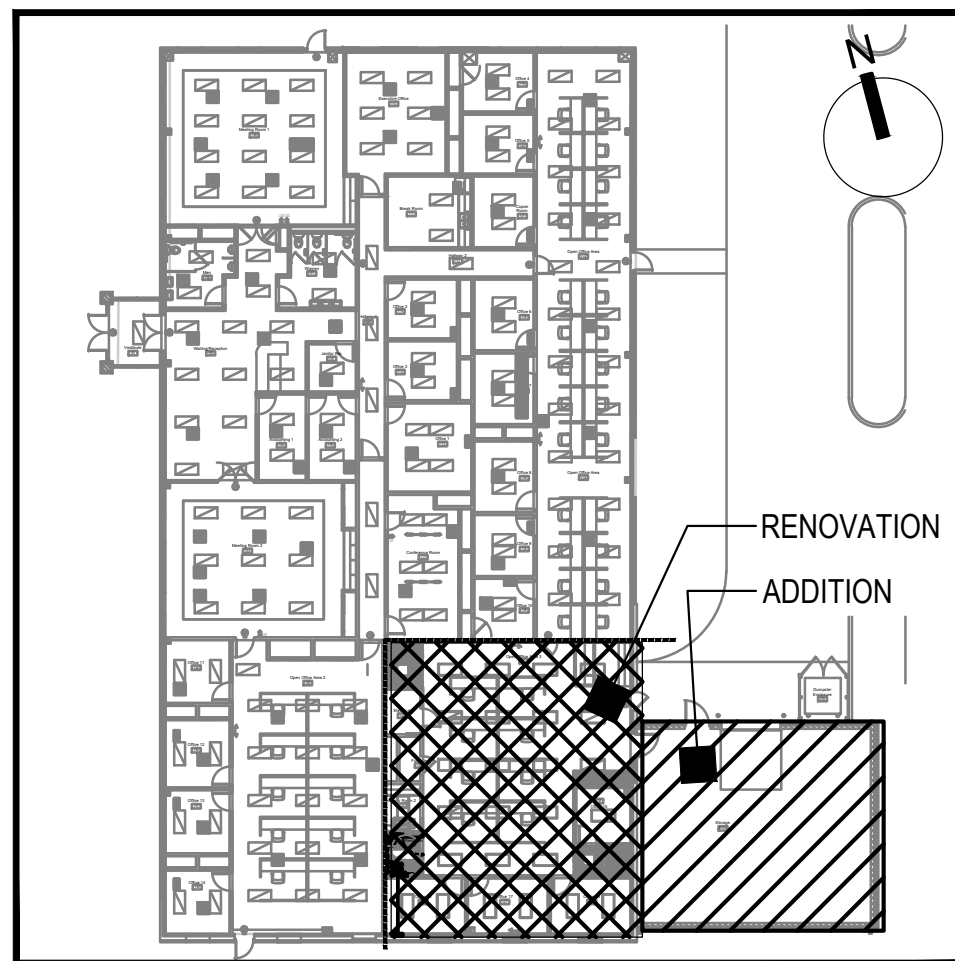
### MECHANICAL SYMBOLS

AFG	ABOVE FINISHED GRADE	→	TRANSITION - RECT. TO ROUND
FFE	FINISHED FLOOR ELEVATION	→	TRANSITION - RECT. TO RECT. OR ROUND TO ROUND.
AFF	ABOVE FINISHED FLOOR	→	TRANSITION - FROM OR TO EQUIPMENT TO DUCT SIZE INDICATED.
TYP	TYPICAL	→	VOLUME DAMPER (MANUAL)
NTS	NOT TO SCALE	→	BOWDEN VOLUME DAMPER
FC	FLEXIBLE CONNECTION	→	U.L. LISTED PENETRATION
EF-#	EXHAUST FAN	→	SUPPLY, RETURN, EXHAUST GRILLE
FD	FIRE DAMPER	→	THERMOSTAT OR REMOTE SENSOR
SD	SUCTION DIFFUSER	→	UNION
○	TAGGED NOTE	→	LIMIT OF DEMOLITION
FD/SD	FIRE/SMOKE DAMPER	→	CONNECT TO EXISTING
CO <sub>2</sub>	CARBON DIOXIDE SENSOR	→	DUCT MOUNTED SMOKE DETECTOR
— CD —	CONDENSATE DRAIN LINE	→	MECHANICAL EQUIPMENT DESIGNATOR
	INDICATES AIR DISTRIBUTION DEVICE SPECIFICATION	→	SET OF REFRIGERANT LINES
L	LOUVER	→	
T	TRANSFER GRILLE	→	
S	SUPPLY DIFFUSER OR REGISTER	→	
R	RETURN GRILLE OR REGISTER	→	
E	EXHAUST GRILLE OR REGISTER	→	
CFM IF INDICATED ON DWG.		→	
SA	SUPPLY AIR DUCT/DUCT DIM. 20" HORIZ. X 12" VERT. (ONE LINE)	→	
RA	RETURN AIR DUCT (ONE LINE)	→	
EA	EXHAUST AIR DUCT (ONE LINE)	→	

### MECHANICAL GENERAL NOTES

- EACH CONTRACTOR, PROPOSER, SUPPLIER AND/OR MANUFACTURER SHALL REFER TO ALL DOCUMENTS PERTAINING TO THIS PROJECT AND COORDINATE ACCORDINGLY SO AS TO ENSURE ADEQUACY OF FIT, COMPLIANCE WITH SPECIFICATIONS, PROPER VOLTAGE AND CURRENT CHARACTERISTICS TO AVOID CONFLICT WITH ANY OTHER BUILDINGS SYSTEMS.
- ALL OFFSETS, TURNS, FITTINGS, TRIM-, DETAIL, ETC., MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME IN EACH PROPOSERS BID.
- INSTALL NO PIPING, CONDUITS, ETC., IN A LOCATION OR IN A MANNER WHICH WILL ALLOW FREEZING AND THE COLLECTION OF CONDENSATION THEREON.
- OBSERVE ALL APPLICABLE CODES, RULES, AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNCIL, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, OSHA, COMMONWEALTH OF KENTUCKY, ETC.)
- UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL EQUIPMENT AND/OR MATERIALS WITHIN OCCUPIED SPACES OR EXPOSED TO VIEW ON THE BUILDING EXTERIOR SHALL BE PRIMED AND FINISHED WITH COLOR AS CHOSEN BY ARCHITECT.
- UNLESS OTHERWISE SPECIFIED OR INDICATED, INSTALL DIFFUSERS, REGISTERS, GRILLES, SMOKE DETECTORS AND OTHER CEILING MOUNTED APPURTENANCES IN A SYMMETRICAL PATTERN. UNLESS SPECIFICALLY INDICATED OTHERWISE, REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN AS APPLICABLE.
- ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTORS' EXPENSE.
- DEVIATIONS IN SIZES, CAPACITIES, FIT, FINISH, ETC., FOR EQUIPMENT FROM THAT PRIME SPECIFIED SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
- DO NOT SCALE FROM DRAWINGS. AS PRINTING DISTORTS SCALE. WORK SHALL BE LAID OUT FROM DIMENSIONED DRAWINGS, OR DIMENSIONS SUPP-LIED TO THE CONTRACTOR.
- ALL ELECTRICAL COMPONENTS OR EQUIPMENT SHALL BE LABELED BY UNDERWRITERS LABORATORIES, OR OTHER APPROVED LISTING AGENCY.
- ALL SUPPORT FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE, FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRADES OR EQUIPMENT. HOLD ALL ABOVE CEILING EQUIPMENT TIGHT TO STRUCTURAL SUPPORTING ROOF DECK.
- WHERE INTERRUPTING AN EXISTING UTILITY OR SERVICE DELIBERATELY OR ACCIDENTALLY, THE RESPONSIBLE CONTRACTOR SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED.
- WHERE PENETRATING ROOFING MEMBRANE OR OTHER MATERIALS USED FOR WEATHERPROOFING THE BUILDING, MAKE SUCH PENETRATIONS IN A WAY THAT WILL NOT VOID OR DIMINISH THE ROOFING WARRANTY OR INTEGRITY IN ANYWAY. COORDINATE ALL SUCH PENETRATIONS WITH THE ROOFING MANUFACTURER.
- CONTRACTOR TO PROVIDE TURNING VANES IN ALL MAIN DUCT 45/90 DEGREE TURNS. THIS APPLIES TO ALL S.A. & R.A. DUCTS.

### KEY PLAN



### REGISTERS, GRILLES AND DIFFUSERS

MARK	E.H. PRICE MODEL	TYPE	NOMINAL SIZE	MOUNTING	CFM MAX.	PD MAX.	THROW Ø 100 FPM	OBD	FINISH	NC MAX.	REMARKS
S-1	ASPD SERIES ALUMINUM	SQUARE PLAQUE CEILING DIFFUSER	24"x24" 6" Ø NECK	LAY-IN	100	0.016"	2	YES	CHOSEN BY ARCHITECT	22	1,2
S-2	ASPD SERIES ALUMINUM	SQUARE PLAQUE CEILING DIFFUSER	24"x24" 8" Ø NECK	LAY-IN	210	0.03"	4	YES	CHOSEN BY ARCHITECT	22	1,2
S-3	ASPD SERIES ALUMINUM	—	—	DUCT	300	—	—	YES	CHOSEN BY ARCHITECT	—	1,2
R-1	MODEL 70 ALUMINUM	LOUVER FACED RETURN GRILLE	24"x24"	LAY-IN	840	0.023"	—	—	CHOSEN BY ARCHITECT	22	2,4,5
R-2	MODEL 70 ALUMINUM	LOUVER FACED RETURN GRILLE	24"x12"	LAY-IN	360	0.014"	—	YES	CHOSEN BY ARCHITECT	—	2,3,4,5

- REMARKS:
- PROVIDE DUCT TRANSITION TO GRILLE/DIFFUSER AS REQUIRED.
  - IF ARCHITECT DOES NOT CHOOSE A COLOR, THEN COLOR SHALL BE OFF-WHITE OR AS INDICATED ON PLANS.
  - PROVIDE MARGINS TO FINISH AS A 24"x12" LAY-IN.
  - PROVIDE PLENUM BOX, FULL SIZE OF AIR DEVICE, 12" DEEP, DUCT TO TAP INTO SIDE. WHERE THE INSIDE OF PLENUM BOXES ARE VISIBLE FROM THE FLOOR, THEY SHALL BE PAINTED FLAT BLACK.
  - PROVIDE WITH SOUND ATTENUATING RETURN BOOT, REFER TO DETAILS.

### EXHAUST FANS (ADD ALTERNATE)

MARK	GREENHECK MODEL NO.	MOUNTING	CLEAN FILTERS CFM	E.S.P.	DRIVE	SONES	ELECTRIC DATA HP	VOLTS/Ø	REMARKS
EF-1	SP-B150	CEILING	125	0.19	DIRECT	2.5	0.17	115/1	1,2,3,4

- REMARKS:
- PROVIDE BIRDSCREEN ON THE SIDEWALL LOUVER.
  - PROVIDE BACKDRAFT DAMPER.
  - PROVIDE NON-FUSED DISCONNECT SWITCH.
  - MARK SPEED CONTROLLER.

### GAS FIRED FURNACES

MARK	GREENHECK MODEL NO.	MOUNTING	NOM. TONS	GAS HEATER CAPACITY INPUT MBH	OUTPUT MBH	AIRFLOW CFM	OUTSIDE AIR CFM	MOTOR HP	VOLTAGE	MCA	MOCP	EXTERNAL STATIC PRES. (IN.)	REMARKS
F-1	G9MVT1002120A	VERT. UPFLOW	4	100	97	1490	335	1	115/1/60	17.7	20	0.5"	1,2,3,4,5
F-2	G9MXT0801716A	VERT. UPFLOW	3	80	78	1200	210	3/4	115/1/60	13.5	15	0.5"	1,2,3,4,5

- REMARKS:
- PROVIDE 'A'-FRAME COOLING COIL WITH COIL ENCLOSURE.
  - PROVIDE INTERIOR CONDENSATE TRAP
  - PROVIDE SIDE FILTER RACK.
  - PROVIDE HIGH LIMIT CONTROL.
  - UNIT SHALL BE DIRECT VENT TYPE WITH COMBUSTION AIR INTAKE AND FLUE DISCHARGE CAPABLE OF UTILIZING PVC VENT MATERIALS.

### SPLIT SYSTEM DX CONDENSING UNITS

MARK	MODEL	NOMINAL TONNAGE	COOLING CAPACITY (MBH)	SEER	VOLTAGE	PHASE	MCA	MOCP	APPROX. SATURATED SUCTION TEMP.	REMARKS
CU-1	CVA948GKA	4	45	19	208	1	27.3	40	STANDARD	2,3,5,6,7,8
CU-2	N4H436GKG	3	32.4	14	208	1	19.5	30	STANDARD	2,3,5,6,7,8

- REMARKS:
- NOT USED
  - PROVIDE UNIT WITH SUCTION AND DISCHARGE SERVICE VALVES.
  - PROVIDE AUTOCHANGE-OVER WALL THERMOSTAT.
  - PROVIDE LOW AMBIENT HEAD PRESSURE CONTROL CAPABLE OF 0 DEG. F. OPERATION
  - PROVIDE WITH 3" PRE-CAST CONCRETE MOUNTING PAD.
  - PROVIDE VIBRATION ISOLATED COMPRESSOR.
  - PROVIDE CRANKCASE HEATER, FILTER-DRIER, AND LOW PRESSURE SWITCH.
  - FIVE (5) YEAR COMPRESSOR WARRANTY.



PLUMBING GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS AND CONDITIONS OF ALL EXISTING SYSTEMS BEFORE CONSTRUCTION BEGINS. MAKE ALL PLUMBING CONNECTIONS TO SUCH SYSTEMS INCLUDING BUT NOT LIMITED TO, GAS, DOMESTIC WATER, SEWER, VENT, ETC..
- CONTRACTOR SHALL MAKE ALL NECESSARY PLUMBING CONNECTIONS TO EXISTING SYSTEMS PER NEUTRIK PLUMBING CODE, NFPA AND LOCAL GAS, SEWER AND WATER STANDARDS TO ASSURE ALL NEW INSTALLATIONS ARE COMPLETE AND IN WORKING ORDER.
- THERE IS A EQUIPMENT VENDER FOR THIS PROJECT THAT WILL BE SUPPLYING EQUIPMENT THAT REQUIRES PLUMBING CONNECTIONS. CONTRACTOR SHALL COORDINATE WITH VENDOR PRIOR TO STARTING PROJECT AND INSTALL ALL NECESSARY PLUMBING FOR SUCH EQUIPMENT.
- THE FIXTURE ROUGH-INS AND THEIR LOCATIONS FOR ALL CONNECTIONS ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. IN SOME INSTANCES THE OWNER OR SUPPLIER MAY MAKE SUBSTITUTIONS OR THE FIXTURE MAY VARY FROM WHAT IS SHOWN. THEREFORE, THESE ITEMS SHALL BE VERIFIED WITH THE SUPPLIER. THE ARCHITECT/ENGINEER SHALL BE IMMEDIATELY NOTIFIED, PRIOR TO CONSTRUCTION, OF ANY DISCREPANCIES FROM WHAT IS SHOWN OR IMPLIED ON THESE DRAWINGS. FAILURE OF THE APPROPRIATE CONTRACTOR TO VERIFY ROUGH-INS OR THEIR LOCATIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION AND/OR ADDITIONAL ROUGH-INS DIRECTLY UPON THE CONTRACTOR.
- CONTRACTOR SHALL SUPPLY TO THE ARCHITECT EIGHT COPIES OF SHOP DRAWINGS FOR APPROVAL SO THE QUALITY OF INTENDED MATERIALS OR EQUIPMENT CAN BE REVIEWED BEFORE INSTALLATION.
- DO NOT SCALE THESE DRAWINGS. REFER TO ARCHITECTURAL FLOOR PLAN FOR BUILDING DIMENSIONS.
- THE SUBMISSION OF A PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE.
- PLUMBING CONTRACTOR SHALL INSTALL ALL SOIL AND WASTE PIPING WITH A MINIMUM SLOPE OF 1/8" PER FOOT UNLESS OTHERWISE REQUIRED BY THE STATE OR LOCAL ADMINISTRATIVE AUTHORITY.
- FURNISH & INSTALL 1/2" (MIN.) FIBERGLASS INSULATION WITH ALL SERVICE JACKET ON ALL HOT & COLD WATER LINES ABOVE SLAB.
- MATERIALS, EQUIPMENT, ASSEMBLIES AND SYSTEMS SHALL MEET ALL PERTINENT REQUIREMENTS OF NATIONALLY RECOGNIZED TESTING ORGANIZATION SUCH AS THE UL, ASTM, ASSE, AWWA AND NFPA.
- ALL VENT PIPE TO BE COMPATIBLE WITH STRUCTURE, MECHANICAL EQUIPMENT AND DUCTWORK, ELECTRICAL EQUIPMENT AND LIGHTING.
- THE CONTRACTOR SHALL COOPERATE FULLY AMONG THE TRADES.
- ALL EQUIPMENT, FIXTURES AND MATERIALS SHALL BE OF NEW AND UNUSED CONDITION. EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S RECOMMENDATIONS (U.O.N.), PROVIDE COMPLETE WITH ALL TRIM, STOPS, HANGERS, CARRIERS, SUPPORTS, ETC. INCLUDING PROVISION FOR THE HANDICAPPED, IF REQUIRED. WHERE FIXTURES ARE ACCESSIBLE TO THE HANDICAPPED, FIXTURES MUST COMPLY WITH ALL FEDERAL A.D.A. REGULATIONS.
- THE POTABLE WATER SUPPLY SHALL BE PROTECTED AGAINST BACKFLOW AND SIPHONAGE BOTH NATURAL AND INDUCED. ALL EQUIPMENT CONNECTED TO THE POTABLE WATER SYSTEM BEING CAPABLE OF POLLUTING OR CONTAMINATING THE POTABLE WATER DISTRIBUTION SYSTEM OR ANY PART THEREOF BY MEANS OF A REVERSAL OF FLOW, PRESSURE DROP, PRESSURE LOSS, INDUCED VACUUM OR BY INJECTION BECAUSE OF ANY PRIMARY OR AUXILIARY PUMPING SYSTEM CONNECTED THERETO MUST BE ISOLATED AND CONTAINED BY MEANS OF APPROVED BACKFLOW DEVICES, CHECK VALVES, AIR GAPS OR VACUUM BREAKERS. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL THESE DEVICES PER LOCAL CODE REQUIREMENTS.
- ALL ROOF PENETRATIONS SHALL BE MADE IN ACCORDANCE WITH ROOF SYSTEM MANUFACTURER'S GUIDELINES. COORDINATE WITH ARCHITECTURAL DETAILS FOR ROOF SYSTEM USED.
- FURNISH AND INSTALL SHUTOFF OR BALL VALVE AND DIELECTRIC UNION ON ALL HOT AND COLD WATER LINES. PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO PLUMBING FIXTURES. ALL SHUT-OFFS TO BE IN ACCESSIBLE LOCATIONS.
- PROVIDE CHROME PLATED ESCUTCHEONS AT ALL VISIBLE WALL, CEILINGS AND FLOOR PENETRATIONS.
- ALL V.T.R.'S SHALL BE EXTENDED TO A MINIMUM OF 1' ABOVE ROOF AND MAINTAINED 10'-0" MINIMUM FROM ALL OUTSIDE AIR INTAKES.
- VERIFY MOUNTING HEIGHTS OF ALL HANDICAP FIXTURES WITH ARCHITECTURAL PLANS.
- HANDICAPPED LAVATORY P-TRAP AND ANGLE STOP ASSEMBLIES SHALL BE INSULATED WITH TRAP WRAP PROTECTIVE KIT 500R BY BROCAR (1-800-827-1207) OR EQUAL. ABRASION RESISTANT EXTERIOR COVER SHALL BE SMOOTH AND HAVE 1/8" MIN. WALL OVER CUSHIONED FOAM INSERT. FASTENERS SHALL REMAIN SUBSTANTIALLY OUT OF SIGHT.
- BIDDERS SHALL BE LICENSED CONTRACTORS IN ACCORDANCE WITH LOCAL AND STATE LAWS.
- ALL INSTALLED SYSTEMS, DEVICES AND RELATED ITEMS SHALL BE TESTED IN PLACE ON SITE. REPLACE ANY AND ALL CONTRACTOR SUPPLIED DEFECTIVE DEVICES, ITEMS OR SYSTEMS AT CONTRACTOR'S OWN EXPENSE BEFORE COMPLETION OF PROJECT.
- ALL PERMITS AND FEES REQUIRED FOR THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR AND INCLUDED IN THE BID PRICE.
- THE WATER PIPING SYSTEM SHALL BE FLUSHED AND STERILIZED IN ACCORDANCE WITH LOCAL REGULATIONS.

GRINDER PUMP SPECIFICS

CONTRACTOR SHALL PROVIDE ONE SIMPLEX GRINDER PUMP PACKAGE CONSISTING OF THE FOLLOWING COMPONENTS:

1 - #MODEL PIR S10/4W ABS PRANHA GRINDER PUMP TO DELIVER 10 GPM @ 25 FEET TDH. THE MOTOR SHALL BE 1.5 HP, 1750 RPM AND BE RATED FOR 7.2 AMPS AT FULL LOAD CONDITIONS MAX WHEN OPERATING AT 208 VOLT, SINGLE PHASE. PUMP TO BE IRON BODY CONSTRUCTION WITH A HARDENED 440C CUTTER ASSEMBLY. MOTOR SHALL BE AIR FILLED/ HIGH EFFICIENCY TYPE AND HAVE A DOUBLE MECHANICAL SEAL ARRANGEMENT WITH LOWER SEAL OF SILICON CARBIDE. SEAL FAILURE AND HIGH TEMPERATURE ALARM CIRCUIT TO BE PROVIDED.

1 -NEMA 4X SIMPLEX PUMP CONTROL PANEL WITH DISCONNECT, MOTOR STARTER WITH OVERLOAD PROTECTION, START AND RUN CAPACITORS (IF REQUIRED), HIGH LEVEL ALARM LIGHT, SEAL FAIL ALARM LIGHT, HIGH TEMPERATURE ALARM LIGHT, AND AUDIBLE ALARM HORN AND SILENCE.

1 -30" X 60" DEEP FIBERGLASS BASIN WITH ANTI-FLOTTATION RING, 4" INLET GROMMET, 2" NPT BELOW COVER OUTLET, AND A 30" DIAMETER SOLID STEEL COVER. BASIN TO INCLUDE A STAINLESS STEEL FLOAT BRACKET AND AN ELECTRICAL JUNCTION BOX WITH CORD GRIPS. INCLUDE 3 -N/O ON- MERCURY FLOAT SWITCHES WITH 15' CORDS. INCLUDE A 1-1/4" BALL TYPE CHECK VALVE, AND A 1-1/4" TRU-UNION BALL VALVE.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	HW	CW	WASTE	DESCRIPTION
P-1	WATER CLOSET FLOOR MOUNT FLUSH LEVER	--	1-1/2"	4"	AMERICAN STANDARD CADET ADA HEIGHT ELONGATED PRESSURE-ASSISTED TOILET 1.6 GPF MODEL #2467.016.020, ELONGATED WATER CLOSET, FLOOR MOUNTED LEFT HAND FLUSH TRIP. PROVIDE CHURCH #9500C OPEN FRONT SEAT, NO COVER, PROVIDE CHROME SUPPLY AND ESCUTCHEON.
P-2	LAVATORY (WALL-HUNG VIT. CHINA, BARRIER FREE)	1/2"	1/2"	1-1/4"	AMERICAN STANDARD LUCERNE #0355.012 WALL HUNG, WHITE, VITREOUS CHINA. PROVIDE DELTA 501 FAUCET AND CHROME TRIM INCLUDING GRID DRAIN. PROVIDE CHROME PLATED SUPPLIES, STOPS AND ESCUTCHEONS. PROVIDE "TRU-BRO" ADA TRAP WRAP ON TRAP AND FITTINGS. MOUNT TOP AT 34" A.F.F. PER ADA.
CO	CLEANOUT	--	--	2"	ZURN 1400 SERIES DUCCO CAST IRON BODY WITH ROUND HEAVY DUTY SCORIATED POLISHED BRONZE TOP. ADJUSTABLE TO FLOOR LEVEL AFTER CONCRETE HAS SET.
ECO	EXTERIOR CLEANOUT	--	--	4"	ZURN 1400 SERIES DUCCO CAST IRON BODY WITH ROUND HEAVY DUTY ENAMEL COATED DUCTILE IRON TOP. ADJUST LEVEL TO CONCRETE APRON. SEE DETAIL THIS SHEET.

PLUMBING FIXTURE SCHEDULE NOTES:

- CONTRACTOR SHALL FURNISH AND INSTALL CARRIER FOR EACH FIXTURE WHICH IS WALL HUNG, UNLESS OTHERWISE NOTED. PROVIDE APPROPRIATE CARRIER PER FIXTURE TYPE AND REQUIREMENTS.
- ACCEPTABLE ALTERNATE MANUFACTURERS FOR ITEMS INCLUDING BUT NOT LIMITED TO 2A. WATER CLOSETS: KOHLER, ELJER, CRANE, MANSFIELD LAVATORIES: SAME AS WATER CLOSETS.
- ENCLOSE ALL EXPOSED SUPPLIES AND P-TRAPS OF BARRIER FREE LAVATORIES WITH A PROTECTIVE INSULATING MATERIAL AND A SMOOTH JACKET (TRAP WRAP OR EQUAL).
- SHOCK ARRESTORS FOR BRANCH PIPING TO FIXTURES WITH QUICK CLOSING VALVES SHALL BE BY P.P.P. INC., ZURN (OR EQUAL), SIZED PER PDI REQUIREMENTS.

22.5 DEGREE BEND FITTINGS

REPLACE SIDEWALK CONCRETE IN THIS AREA AFTER PUMPED SANITARY LINE IS INSTALLED AND PRESSURE TESTED.

1 1/2" PUMPED SAN.

EXISTING TREE

1 OVERALL FLOOR PLAN - PLUMBING  
3/32" = 1'-0"

WORK INCLUDED UNDER THE BASE BID

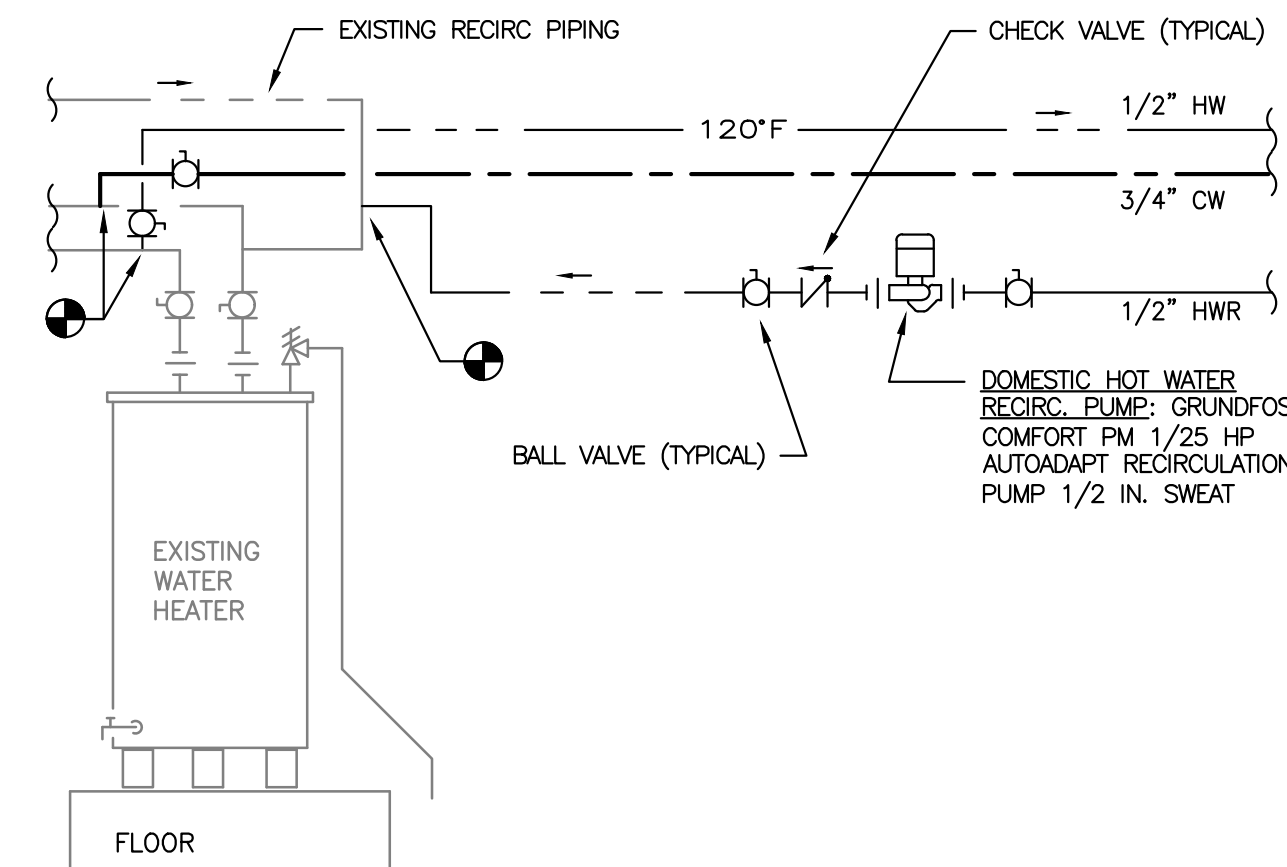
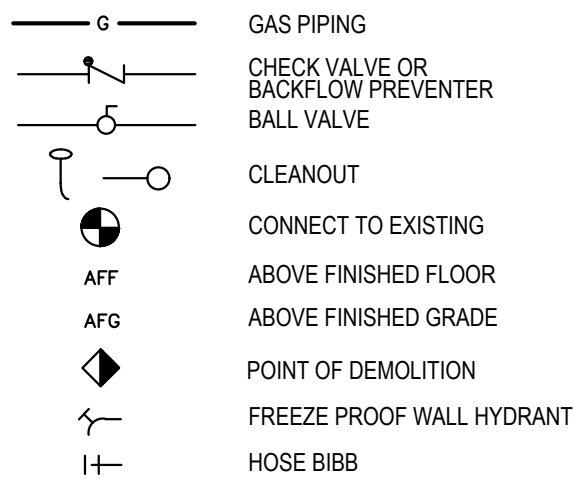
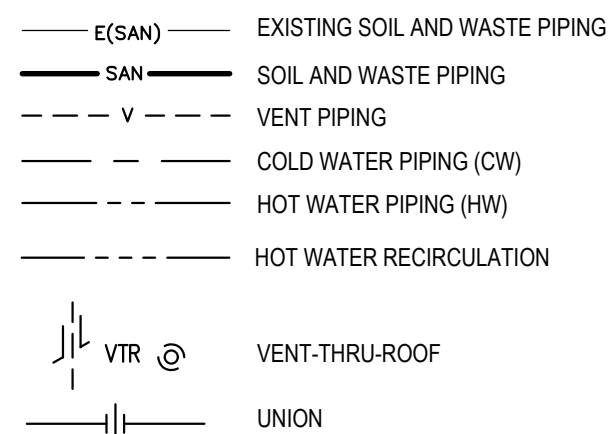
- NEW GAS PIPING IDENTIFIED ON THIS DRAWING.

WORK INCLUDED UNDER THE ADD ALTERNATE

- NEW SOIL WASTE AND VENT PIPING IDENTIFIED ON THIS DRAWING.
- NEW HOT, COLD AND RECIRCULATING HOT WATER RETURN PUMP VALVES AND PIPING IDENTIFIED ON THIS DRAWING.
- NEW PLUMBING FIXTURES AND APPURTENANCES IDENTIFIED ON THIS DRAWING.
- NEW EFFLUENT LIFT STATION IDENTIFIED ON THIS DRAWING.

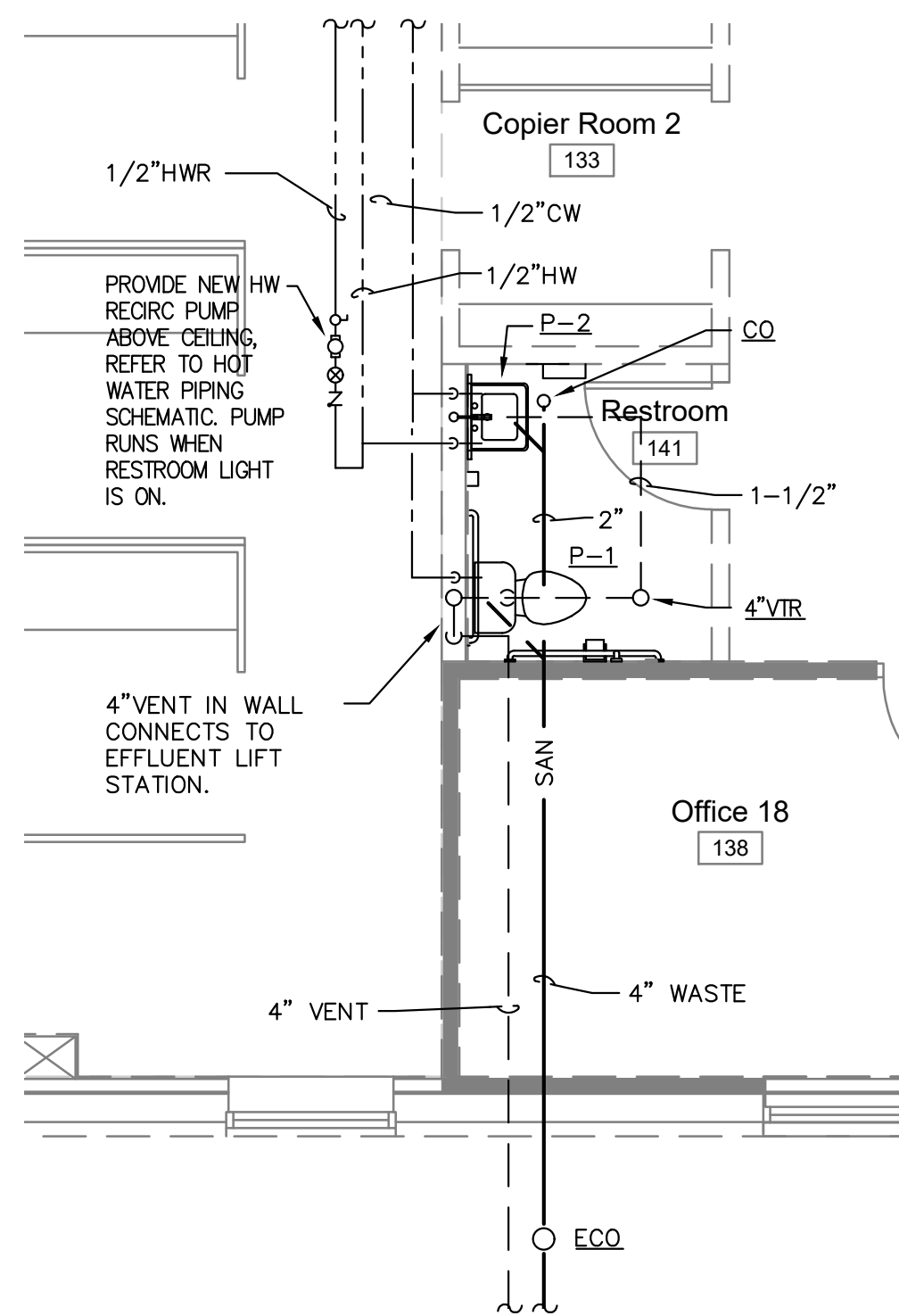
PLUMBING SYMBOLS AND ABBREVIATIONS

NOTE:  
SOME SYMBOLS SHOWN IN THIS LEGEND MAY NOT NECESSARILY BE USED FOR THIS PROJECT.

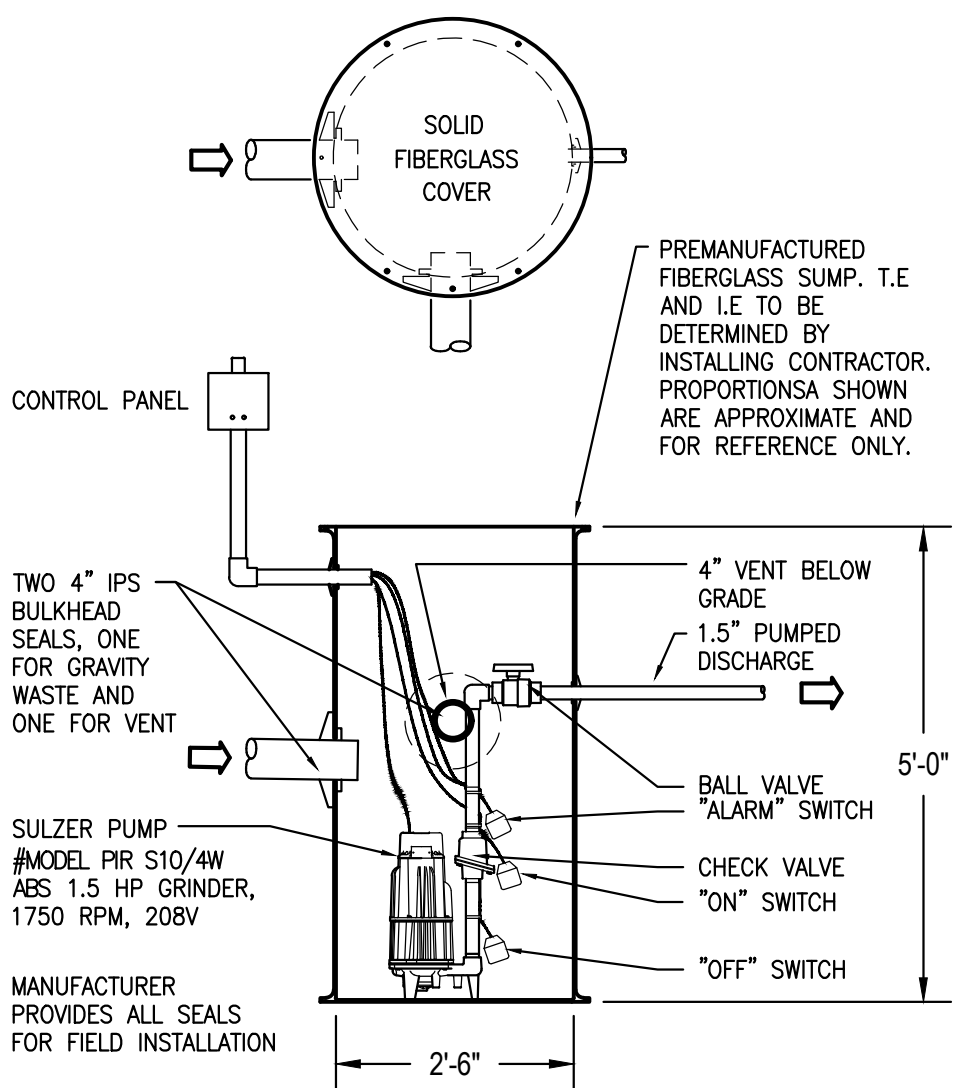


- NOTES:
- SET WATER HEATER THERMOSTAT(S) TO DELIVER 120°F HOT WATER TEMPERATURE.

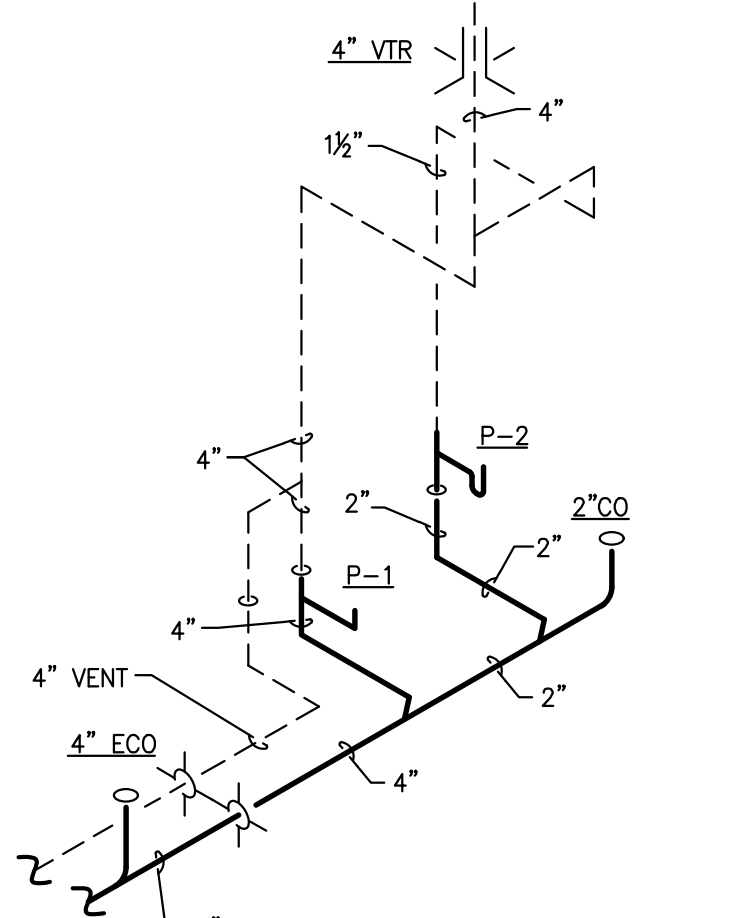
4 WATER HEATER PIPING SCHEMATIC  
NOT TO SCALE



2 ENLARGED RESTROOM PLUMBING  
1/4" = 1'-0"



3 EFFLUENT LIFT STATION DETAIL  
NOT TO SCALE



5 SOIL WASTE AND VENT RISER  
NOT TO SCALE

FOR CONSTRUCTION

PLUMBING PLAN

OHIO VALLEY EDUCATIONAL CO-OPERATIVE  
100 Alpine Rd.  
Shelbyville, KY 40065

MEP PROJECT #: 20020

DATE: 09.08.2020  
DRAWN BY: RVS  
CHECKED BY: CME  
REVISIONS:

#2019-51

P-1

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