

# Marion County Middle School Addition & Renovation

## Lebanon, Kentucky

for the

Marion County Board of Education

755 East Main Street    Lebanon, Kentucky    40033

p    270-692-3721

BG # 19-363

RTA # 1928



101 old lafayette avenue  
lexington, kentucky 40502  
p 859.254.4018  
www.rosstarrant.com

enhancing education through great design

STRUCTURAL ENGINEER:

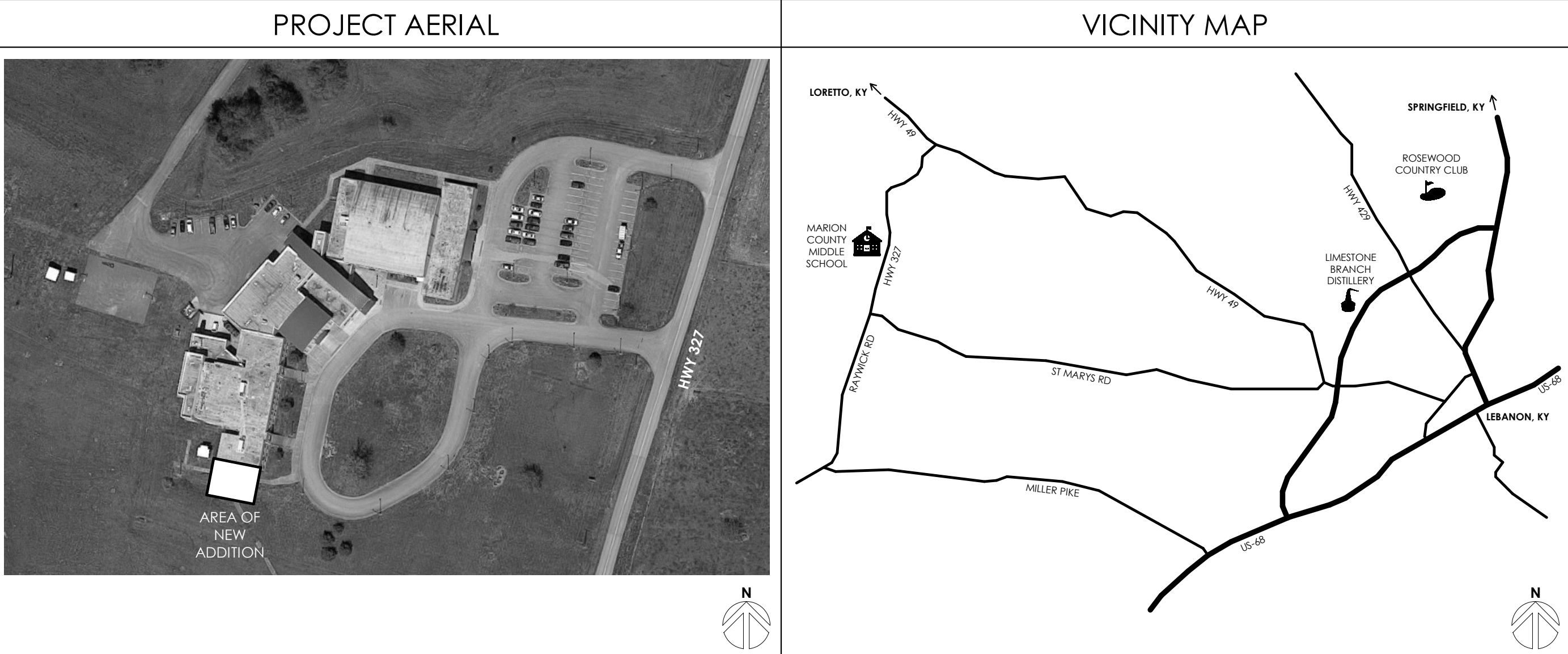
STRUCTURAL DESIGN GROUP, INC.  
220 Great Circle Road, Suite 106                      Nashville, Tennessee    37228  
p 615.255.5537

M.E.P. ENGINEER:

CMTA, INC.  
2429 Members Way    Lexington, Kentucky    40504  
p 859.253.0892

HARDWARE CONSULTANT:

CALVERT INDEPENDENT HARDWARE SPECIFICATIONS, LLC  
307 Oakwood Circle    Vine Grove, Kentucky 40175  
p 502.930.2039



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COVER SHEET

FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

M.E.&P. Engineer:  
CMTA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.253.0892

Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG# 19-363

Project No: 1928  
Drawn By: RB  
Rev'd By: RM

SHEET RELEASE

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CONSTRUCTION DOCUMENTS

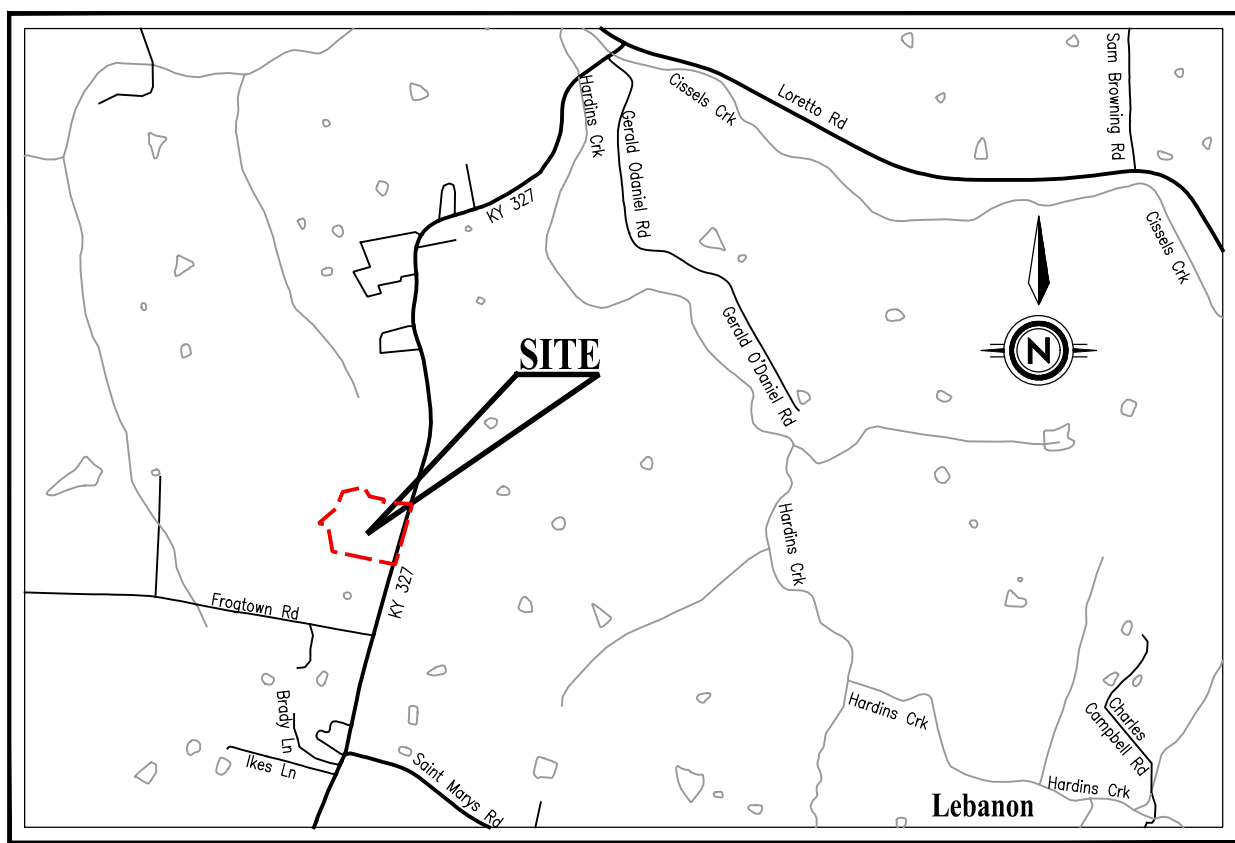
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COVER SHEET

DATE ISSUED:  
OCTOBER 3, 2019







VICINITY MAP  
1" = 2000'

#### UTILITY OWNERS

ELECTRIC  
KENTUCKY UTILITIES  
800-981-0600

WASTE WATER  
MARION COUNTY WATER DISTRICT  
1835 CAMPBELLVILLE ROAD  
LEBANON, KY  
(270) 692-2004

WATER  
MARION COUNTY WATER DISTRICT  
1835 CAMPBELLVILLE ROAD  
LEBANON, KY  
(270) 692-2004

TELEPHONE  
WINSTON  
1715 EAST BROADWAY  
CAMPBELLVILLE, KY  
(270) 465-3141

STATE ROADS  
TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS  
DISTRICT OFFICE NO. 4  
634 EAST DIXIE HIGHWAY  
ELIZABETH STREET, KENTUCKY  
(270) 766-5069



#### LEGEND

- FOUND MONUMENT
- AS NOTED ON SURVEY
- 24" LONG, 5/8" DIAMETER REBAR WITH SURVEYOR'S CAP (SET, PLS 3350)
- MAG NAIL WITH ID TAG (SET, PLS 3350)
- WITNESS MONUMENT
- MAG NAIL WITH ID TAG (SET, PLS 3350)
- PROPERTY LINE
- STREET LIGHT (LP)
- POWER POLE (PP)
- TELEPHONE POLE (TP)
- FIRE HYDRANT (FH)
- WATER VALVE (WV)
- WATER METER (WM)
- IRRIGATION CONTROL VALVE (ICV)
- GAS METER (GM)
- GAS VALVE (GV)
- ELECTRIC METER (EM)
- LIGHT POLE (LP)
- POST INDICATOR VALVE (PIV)
- STORM MANHOLE
- SANITARY MANHOLE
- SIGNS
- PARKING METER
- DOWN SPOUT
- RCP REINFORCED CONCRETE PIPE
- CMP CORRUGATED METAL PIPE
- PVC PLASTIC PIPE
- ADS PLASTIC PIPE
- OPP CORRUGATED PLASTIC PIPE
- VCP VITRIFIED CLAY PIPE
- D.I. DUCTILE IRON PIPE
- MH MANHOLE
- INV. INVERT ELEVATION
- F.L. FLOW LINE ELEVATION
- S.G. SURFACE ELEVATION (TOP-OF-GRATE)
- T.B. SURFACE ELEVATION (TOP-OF-RIM)
- LSA LANDSCAPING AREA
- FFE FINISHED FLOOR ELEVATION
- CHAIN LINK FENCE
- IRON FENCE
- WATER LINE
- WATER LINE PER PLAN - NOT VERIFIED
- GAS LINE
- GAS LINE PER PLAN/NOT VERIFIED
- SANITARY SEWER PER PLAN - NOT VERIFIED
- STORM SEWER PER PLAN - NOT VERIFIED
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE/CABLE
- UNDERGROUND ELECTRIC
- UNDERGROUND ELECTRIC PER PLAN - NOT VERIFIED
- UNDERGROUND TELEPHONE/CABLE
- DECIDUOUS TREE (LEAFY TREE)
- INDICATES GROUND OR OUTLET OF UTILITY OR PIPE IS UNKNOWN

Per Plan  
REFERS TO THE SITE UTILITY PLAN FOR  
ST. CHARLES MIDDLE SCHOOL RENOVATION & ADDITION  
FOR THE MARION COUNTY BOARD OF EDUCATION BY  
CMTA ENGINEERING CONSULTANT AND  
ROSS-TARRANT ARCHITECTS, INC., DATED 5/11/2005

#### ORIGIN OF BEARINGS & COORDINATES

THE BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON KENTUCKY STATE PLANE GRID NORTH, PARTICULARLY, THE ELEVATIONS ARE BASED ON A GNSS SURVEY UTILIZING A TRIMBLE R6 GNSS RECEIVER AND THE KYTC VRS (2011) SYSTEM.

#### ORIGIN OF ELEVATIONS

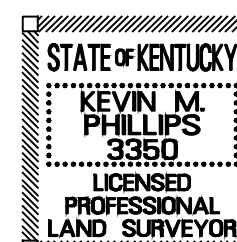
THE ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. PARTICULARLY, THE ELEVATIONS ARE BASED ON A GNSS SURVEY UTILIZING A TRIMBLE R6 GNSS RECEIVER AND THE KYTC VRS SYSTEM.

#### F.E.M.A. FLOOD HAZARD AREA

BASED ON AN INSPECTION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S MAP NUMBER 215500172C WITH A DATE OF IDENTIFICATION OF JANUARY 6, 2010 FOR COMMUNITY NUMBER 210160 IN MARION COUNTY, STATE OF KENTUCKY, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) FOR THE COMMUNITY IN WHICH THE SUBJECT PROPERTY LIES, THE PROPERTY LIES IN ZONE "X" (UNSHADED), DESIGNATED AS AREAS OF 0.02% CHANCE OF ANNUAL FLOOD.

#### METHOD OF SURVEY

THIS SURVEY WAS PERFORMED ON THE GROUND WITH A TRIMBLE S6 ROBOTIC TOTAL STATION BY RANDOM TRAVERSE WITH BOUNDRIES TO CORNER. THE STATE PLANE COORDINATES SHOWN WERE DERIVED FROM A REAL-TIME (VIA CELLULAR COMMUNICATION) OBSERVATION UTILIZING A TRIMBLE R6 GNSS RECEIVER AND THE KYTC VRS SYSTEM (2011).



KEVIN M. PHILLIPS, PLS. # 3350  
E-MAIL: KPHILLIPS@EENDRIS.COM

08-22-2019

#### LAND SURVEYOR'S CERTIFICATION

I HEREBY DO CERTIFY THAT THIS SURVEY WAS PREPARED BY ME OR UNDER MY DIRECTION; AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE LOCATIONS AND ELEVATIONS SHOWN ARE TRUE AND ACCURATE. THE GROUND SURVEY UPON WHICH THIS MAP IS BASED WAS CONCLUDED ON AUGUST 21, 2019. THIS IS NOT A BOUNDARY SURVEY.

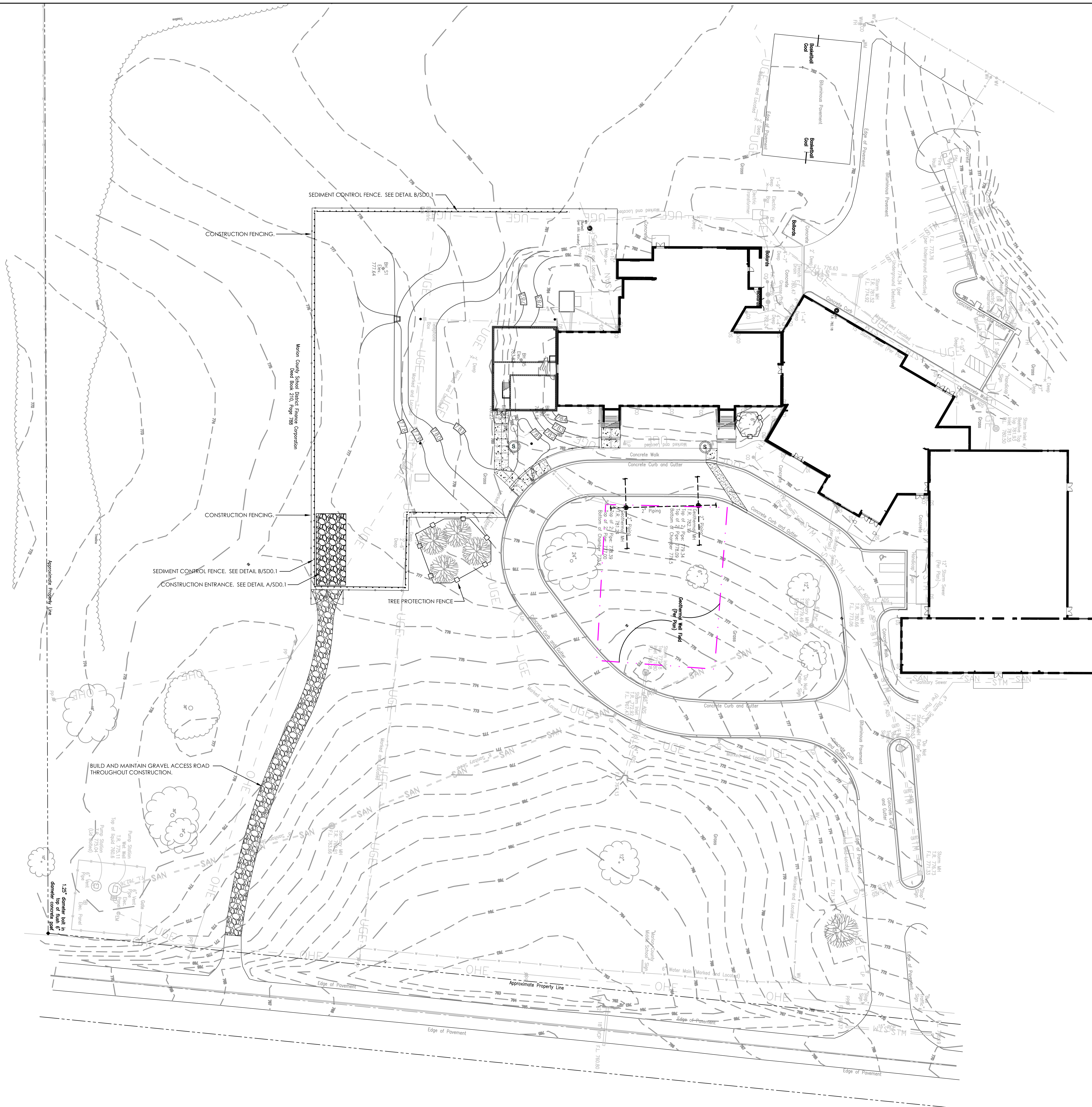
TOPOGRAPHIC SURVEY OF  
**Marion County Middle School**  
1155 Kentucky State Highway 327  
Lebanon, Marion County, Kentucky



Prepared For:  
This does not represent a boundary survey.  
**SURVEY COMPLETED**  
August 21, 2019

**JOB NUMBER** 4210  
**DRAWING DATE** August 22, 2019  
**DRAWING FILE** 1155 Marion Co Middle School  
**SCALE:** 1" = 30'  
0 30'



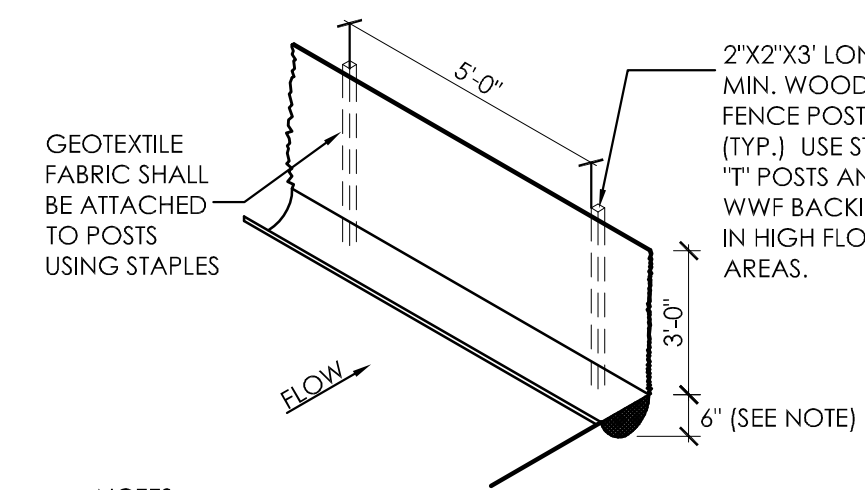


GENERAL SITE NOTES

1. THE SITE PLANS WERE PREPARED BASED UPON TOPOGRAPHIC SURVEYS BY ENDRIS ENGINEERING, P.S.C., 771 ENTERPRISE DRIVE, LEXINGTON, KY 40510. REFER TO SITE SURVEY SHEETS.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE FEATURES AND CONDITIONS. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.
3. THE ARCHITECT AND ARCHITECTS CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
4. THE CONTRACTOR SHALL USE EXTREME CARE IN WORKING AROUND EXISTING OVERHEAD AND UNDERGROUND UTILITIES. MEASURES SHOULD BE TAKEN TO PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.

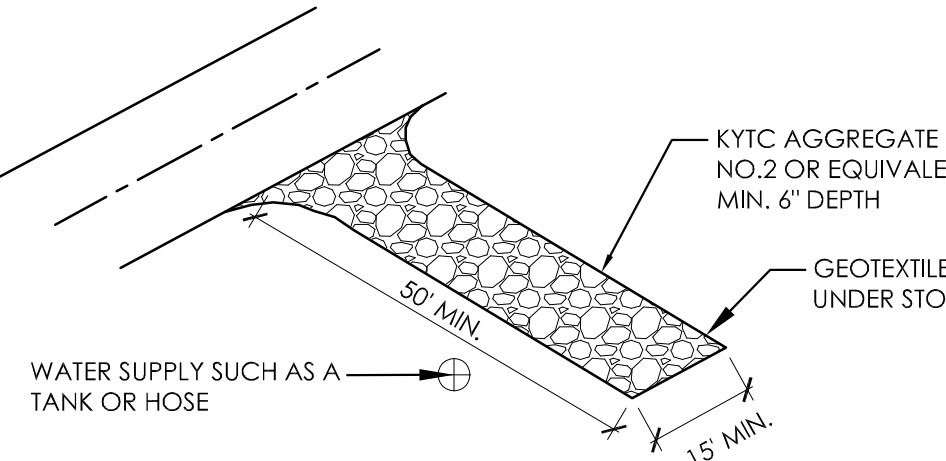
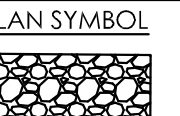
SITE BMP NOTES

1. CONTRACTOR IS TO PROVIDE ALL KPDES PERMITS, NOTICES OF INTENT (NOIS) AND NOTICES OF TERMINATION INCLUDING EROSION AND SEDIMENT CONTROL PLANS FOR ALL PHASES OF CONSTRUCTION. ALL KPDES AND RELATED DIVISION OF WATER REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE PROJECT IS CLOSED OUT AND THE NOTICE OF TERMINATION APPROVED.
2. SEDIMENT CONTROL FENCING SHOWN AND REFERENCES TO SEDIMENT CONTROLS AT STORM WATER STRUCTURES AND ELSEWHERE ON THE DOCUMENTS ARE NOT TO BE USED FOR DIVISION OF WATER REQUIREMENTS. THESE REFERENCES ARE ONLY REQUIRED BY THE DESIGNER FOR PROPER MAINTENANCE OF THE STORM WATER SYSTEM AND TO MINIMIZE CLEANING OF THE SYSTEM AND PAVEMENTS.
3. EXISTING VEGETATION IS TO BE LEFT INTACT UNTIL CONSTRUCTION IN THAT PARTICULAR LOCATION IS REQUIRED. SOIL STABILIZATION PRACTICES (SEEDING, MULCHING, ETC.) ARE TO BEGIN WITHIN 14 DAYS OF PERMANENT COMPLETION OR TEMPORARY HALT (21 DAYS OR MORE) OF WORK IN ANY PARTICULAR AREA.
4. PERIMETER SEDIMENT AND EROSION CONTROLS ARE TO BE INSTALLED PRIOR TO THE START OF SITE CLEARING AND GRUBBING. EROSION CONTROLS SHALL BE IN ACCORDANCE WITH KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARDS. CONTROL SHALL BE ACCOMPLISHED BY USE OF INTERCEPTOR DITCHES, DITCH SILT CHECKS, TEMPORARY SEEDING AND OTHER MEASURES AS MAY BE EFFECTIVE IN ACHIEVING THE DESIRED EFFECT. SILT FENCE SHALL BE INSTALLED TO PREVENT EROSION AND WASH-OFF ONTO WALKS, PAVEMENTS AND ALL ADJOINING PROPERTIES.
5. INSTALL SEDIMENT CONTROL FENCE OR SEDIMENT TRAPS AROUND ALL STORM WATER INLETS AND MAINTAIN UNTIL VEGETATION IS ESTABLISHED OR AREA PAVED AS APPROVED BY THE ARCHITECT. STORM WATER INLET PROTECTION IS TO BE INSTALLED IMMEDIATELY AFTER INSTALLATION OF THE STRUCTURES. REMOVE PROTECTIONS AT THE COMPLETION OF THE PROJECT WHEN CONDITIONS NO LONGER WARRANT THEIR USE. SEE SD4 SHEETS FOR DETAILS.
6. TYPICAL SILT FENCE AND SEDIMENT TRAP INSTALLATION DETAILS ARE SHOWN BELOW. SEE KYTC STANDARDS FOR INFORMATION CONCERNING THE STONE SILT CHECKS.
7. SEDIMENT CONTROLS ARE TO BE INSPECTED, CLEANED AND REPAIRED AFTER EACH RAIN EVENT OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE PER WEEK. A LOG OF INSPECTIONS AND CLEANING IS TO BE KEPT ON SITE.
8. THE LOCATIONS OF SEDIMENT CONTROLS SHOWN ARE FOR GENERAL PROTECTION PRACTICES AND NOT AS PART OF A BMP PLAN. IF CONSTRUCTION ACTIVITIES PRODUCE CONDITIONS THAT REQUIRE ADDITIONAL CONTROLS, IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE, INSTALL AND MAINTAIN THE CONTROLS UNTIL CONDITIONS NO LONGER WARRANT THEIR USE.
9. ALL STORM DRAINAGE CATCH BASINS, CURB INLETS, AND JUNCTIONS BOXES ARE TO RECEIVE PROTECTION FROM SEDIMENTATION. AT A MINIMUM A PERIMETER SILT FENCE SHOULD BE INSTALLED AROUND THE DRAINAGE STRUCTURE AND INSTALLED UNDER THE GRATE.



NOTES:  
1.) THE BOTTOM 12 INCHES OF THE FABRIC SHALL BE BURIED IN A 6" TRENCH CUT INTO THE GROUND COVERED BY 6" OF FILL MATERIAL TO PREVENT SEDIMENT FROM ESCAPING UNDER THE FENCE. ALL EARTHWORK SHALL BE ON THE UPSTREAM SIDE OF THE FENCE.

SILT FENCE DETAIL  
SCALE: N.T.S.



CONSTRUCTION ENTRANCE DETAIL  
SCALE: N.T.S.

LEGEND

- SEDIMENT CONTROL FENCE. ADDITIONAL FENCE MAY BE REQUIRED AT OTHER AREAS DURING CONSTRUCTION. SEE DETAIL B/SD0.1
- INLET PROTECTION. SEE B/SD0.1
- TREE PROTECTION FENCING.
- TREE PROTECTION FENCE. INSTALLED PER SPECIFICATIONS



EROSION PROTECTION AND SEDIMENT CONTROL PLAN  
MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

M.E.&P Engineer:  
CMTA, INC.  
2429 Members Way  
Lexington, KY 40504  
p.859.253.0892  
Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p.615.255.5537

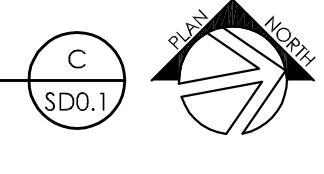
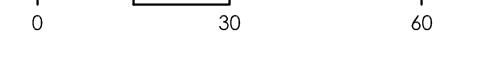
BG#  
Project No: 1928  
Drawn By: JMB  
Rev'd By: DSW/MAM

| SHEET RELEASE |  |
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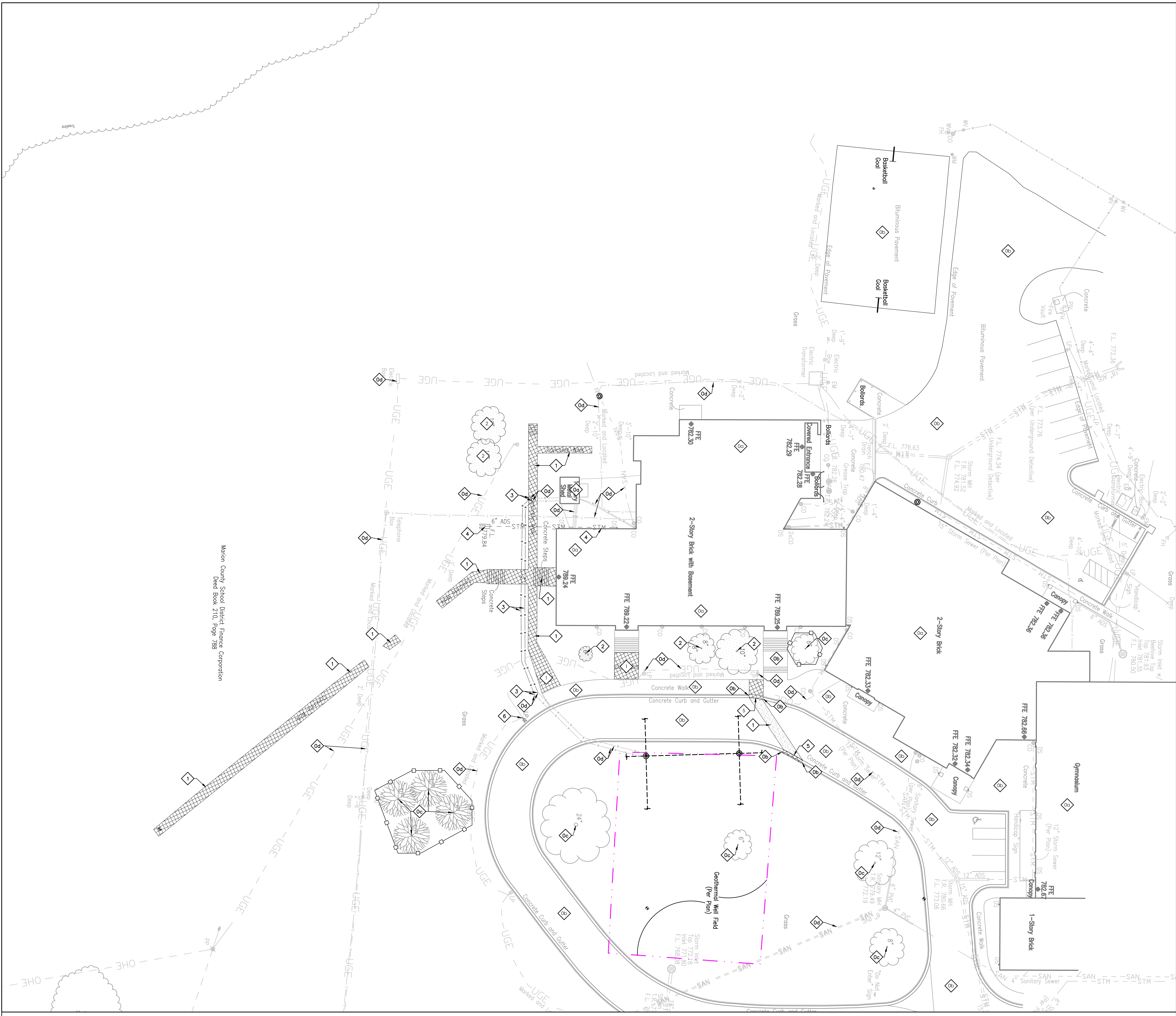
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CONSTRUCTION DOCUMENTS

SD0.1  
EROSION PROTECTION & SEDIMENT CONTROL PLAN  
DATE ISSUED:  
OCTOBER 09, 2019

EROSION PROTECTION & SEDIMENT CONTROL PLAN  
SCALE: 1"=30'-0"







## GENERAL SITE NOTES

1. THE SITE PLANS WERE PREPARED BASED UPON TOPOGRAPHIC SURVEYS BY ENDRIS ENGINEERING, P.S.C., 771 ENTERPRISE DRIVE, LEXINGTON, KY 40510. REFER TO SITE SURVEY SHEETS.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE FEATURES AND CONDITIONS. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.
3. THE ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
4. THE CONTRACTOR SHALL USE EXTREME CARE IN WORKING AROUND EXISTING OVERHEAD AND UNDERGROUND UTILITIES. MEASURES SHOULD BE TAKEN TO PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
5. SEE EROSION POLLUTION AND SEDIMENT CONTROL PLAN FOR RECOMMENDED BEST MANAGEMENT PRACTICES INFORMATION AND SEDIMENT CONTROLS.

## SITE DEMOLITION TAGS

- 0 EXISTING TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.
- [a] BUILDING TO REMAIN. NO UTILITIES TO THESE FACILITIES ARE TO BE REMOVED UNLESS NEW PERMANENT UTILITY IS PROVIDED PRIOR TO DEMOLITION.
- [b] PAVEMENT TO REMAIN - PATCH/REPAIR WHERE DAMAGED BY CONSTRUCTION. SAW-CUT TO PROVIDE CLEAN EDGE. CONCRETE PAVING TO BE SAW-CUT BACK TO NEAREST UNDAMAGED CONTROL OR ISOLATION JOINT. MATCH NEW ADJACENT PAVEMENT TO EXISTING PAVEMENT ELEVATIONS.
- [c] TREE/VEGETATION TO REMAIN.
- [d] UTILITY TO REMAIN.
- [e] DENOTES STORM LINE/STRUCTURE TO REMAIN.
- 1 DEMOLISH AND REMOVE CONCRETE PAVEMENT, CONCRETE STAIRS, AND ASPHALT PAVEMENT.
- 2 DEMOLISH AND REMOVE TREE/VEGETATION.
- 3 DEMOLISH AND REMOVE EXISTING UTILITY. SEE MEP PLANS FOR ADDITIONAL INFORMATION.
- 4 DEMOLISH AND REMOVE EXISTING STORM STRUCTURE/LINE.
- 5 DEMOLISH AND REMOVE EXISTING CURB AND GUTTER.
- 6 SALVAGE LIGHT POLE AND PROTECT THROUGHOUT CONSTRUCTION. DEMOLISH AND REMOVE CONCRETE BASE. SEE MEP DRAWINGS FOR ADDITIONAL INFORMATION.



## SITE DEMOLITION PLAN

### MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

FOR:

### MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

M.E.&P. Engineer:  
CMTA, Inc.  
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Structural Design Group, Inc.  
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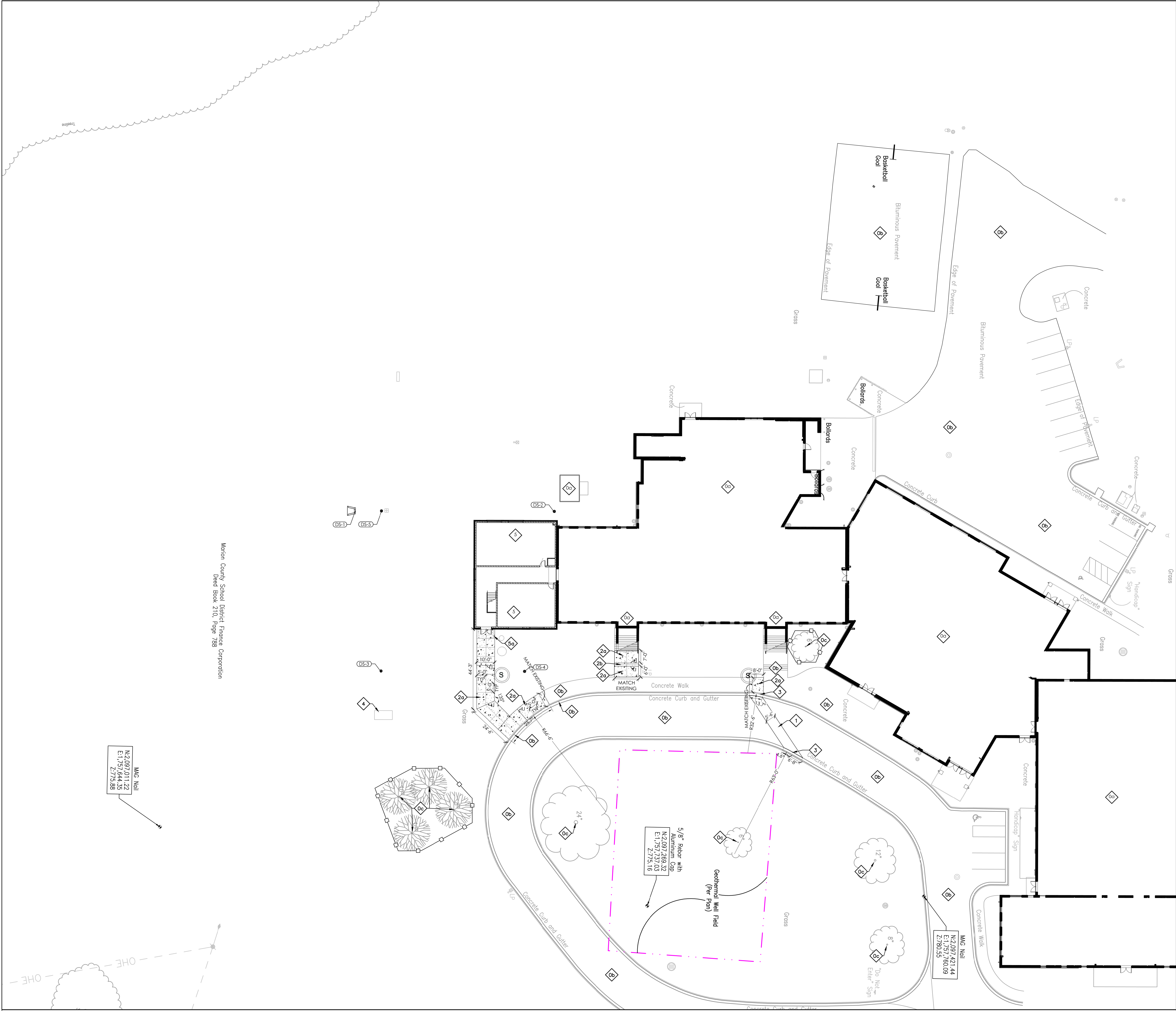
Project No: 1928  
Drawn By: JMB  
Rev'd By: DSW/MRM

## LEGEND

- CONCRETE PAVING TO BE DEMOLISHED AND REMOVED.
- ASPHALT PAVING TO BE DEMOLISHED AND REMOVED.
- TREE/VEGETATION TO BE DEMOLISHED AND REMOVED.
- SEDIMENT CONTROL FENCE. ADDITIONAL FENCE MAY BE REQUIRED AT OTHER AREAS DURING CONSTRUCTION. SEE DETAIL B/SDO.1
- LIMITS OF DEMOLITION
- TREE PROTECTION FENCE. INSTALLED PER SPECIFICATIONS

| SHEET RELEASE                    |  |
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| CONSTRUCTION DOCUMENTS           |  |
| SD0.2                            |  |
| SITE DEMOLITION PLAN             |  |
| DATE ISSUED:<br>OCTOBER 09, 2019 |  |





GENERAL SITE NOTES

1. THE SITE PLANS WERE PREPARED BASED UPON TOPOGRAPHIC SURVEYS BY ENDRIS ENGINEERING, P.S.C., 771 ENTERPRISE DRIVE, LEXINGTON, KY 40510. REFER TO SITE SURVEY SHEETS.
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4. THE CONTRACTOR SHALL USE EXTREME CARE IN WORKING AROUND EXISTING OVERHEAD AND UNDERGROUND UTILITIES. MEASURES SHOULD BE TAKEN TO PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
5. SEE EROSION POLLUTION AND SEDIMENT CONTROL PLAN FOR RECOMMENDED BEST MANAGEMENT PRACTICES INFORMATION AND SEDIMENT CONTROLS.

SITE DEVELOPMENT TAGS

- 0 EXISTING TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.
- [a] BUILDING TO REMAIN. NO UTILITIES TO THESE FACILITIES ARE TO BE REMOVED UNLESS NEW PERMANENT UTILITY IS PROVIDED PRIOR TO DEVOLUTION.
- [b] PAVEMENT/CURB TO REMAIN - PATCH/REPAIR WHERE DAMAGED BY CONSTRUCTION. SAW-CUT TO PROVIDE CLEAN EDGE. CONCRETE PAVING TO BE SAW-CUT BACK TO NEAREST UNDAMAGED CONTROL OR ISOLATION JOINT. MATCH NEW ADJACENT PAVEMENT TO EXISTING PAVEMENT ELEVATIONS
- [c] TREE/VEGETATION TO REMAIN.
- 1 LIGHT DUTY ASPHALT PAVING. (321216) SEE DETAIL A/SD4.2.
- 2 CONCRETE PAVEMENT. (321313, 321373)
  - [a] 4" DEPTH CONCRETE SIDEWALK. SEE DETAIL B/SD3.1.
  - [b] 2 RISER CONCRETE STAIR. SEE DETAIL E/SD3.1
- 3 CONCRETE CURB AND GUTTER. (321313, 321613, 321726) SEE DETAIL D/SD3.1
- 4 UTILITY STRUCTURE. SEE MEP DRAWINGS FOR ADDITIONAL INFORMATION.
- 5 STRUCTURE. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - [a] BUILDING CANOPY.



SITE DEVELOPMENT PLAN  
MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

M.E.&P Engineer:  
CMTA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.253.0892  
Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

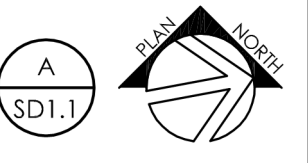
BG#  
Project No: 1928  
Drawn By: JWA  
Rev'd By: DBM/AMM

LEGEND

- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- ISOLATION JOINTS
- SEDIMENT CONTROL FENCE. ADDITIONAL FENCE MAY BE REQUIRED AT OTHER AREAS DURING CONSTRUCTION. SEE DETAIL B/SD0.1
- LIMITS OF CONSTRUCTION
- TREE PROTECTION FENCE. INSTALLED PER SPECIFICATIONS

SITE DEVELOPMENT PLAN

SCALE: 1"=20'-0"



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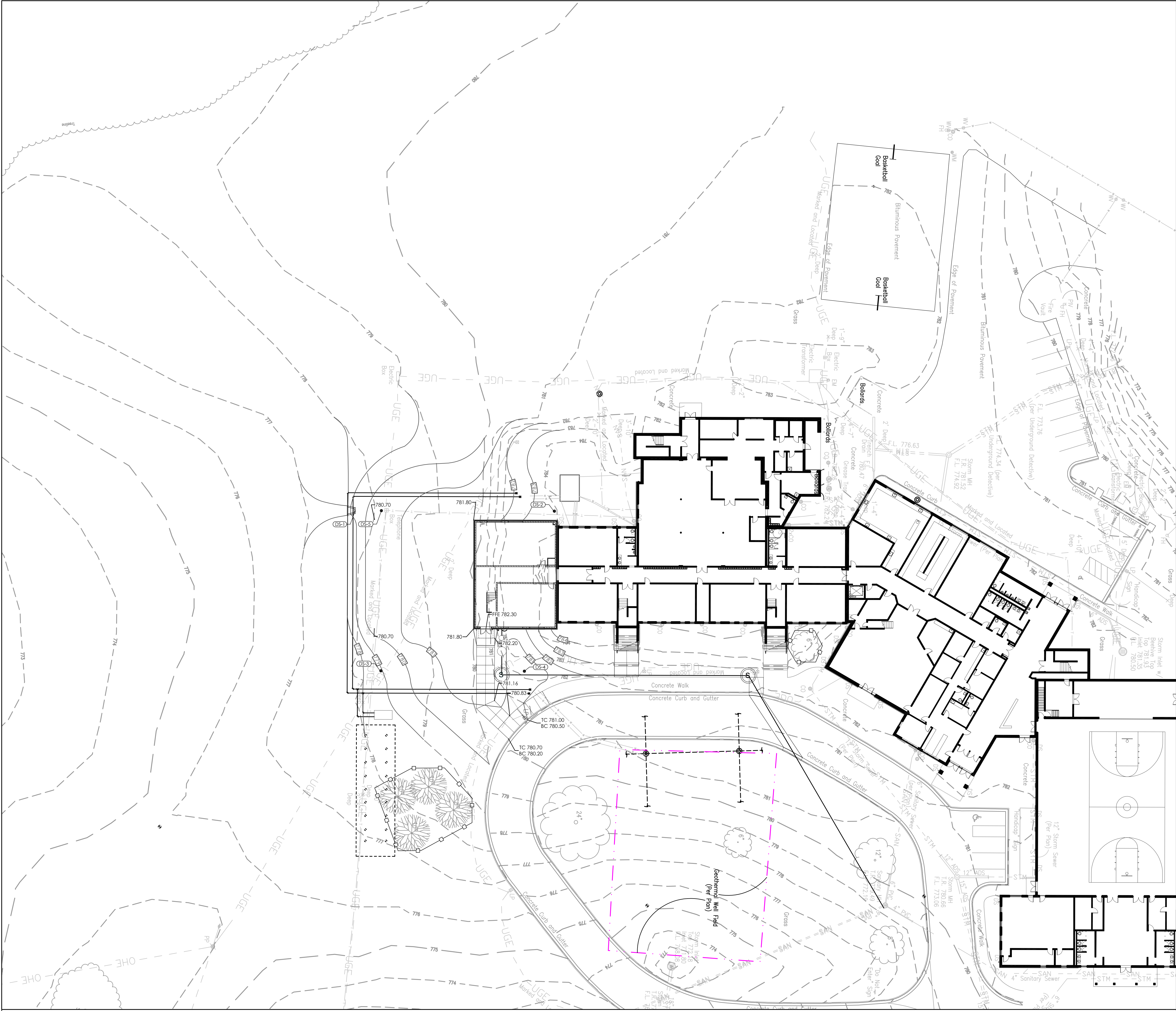
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CONSTRUCTION DOCUMENTS

SD1.1

SITE LAYOUT PLAN  
DATE ISSUED:  
OCTOBER 09, 2019





- GENERAL SITE NOTES
1. THE SITE PLANS WERE PREPARED BASED UPON TOPOGRAPHIC SURVEYS BY ENDRIS ENGINEERING, P.S.C., 771 ENTERPRISE DRIVE, LEXINGTON, KY 40510. REFER TO SITE SURVEY SHEETS.

2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE FEATURES AND CONDITIONS. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.

3. THE ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.

4. THE CONTRACTOR SHALL USE EXTREME CARE IN WORKING AROUND EXISTING OVERHEAD AND UNDERGROUND UTILITIES. MEASURES SHOULD BE TAKEN TO PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.

5. SEE EROSION POLLUTION AND SEDIMENT CONTROL PLAN FOR RECOMMENDED BEST MANAGEMENT PRACTICES INFORMATION AND SEDIMENT CONTROLS.

- SITE GRADING NOTES
1. THE CONTRACTOR SHALL VERIFY LOCATIONS AND ACTUAL DEPTHS OF ALL EXISTING STORM DRAINS, GAS MAINS, WATER MAINS, AND PIPES TO ALL NEW CONNECTIONS AND CROSSINGS. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO AREAS WHERE CONSTRUCTION OR GRADING MAY INTERFERE WITH SUCH LINES.

2. ANY DISCREPANCIES BETWEEN THIS GRADING PLAN AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO EXCAVATION, GRADING, TRENCHING, OR OTHER CONSTRUCTION OF ANY SORT. FAILURE TO NOTIFY THE ARCHITECT IN WRITING PRIOR TO COMMENCEMENT OF EXCAVATION, GRADING, TRENCHING, OR OTHER CONSTRUCTION SHALL IMPLY THE CONTRACTOR'S VERIFICATION OF AND ACCEPTANCE OF EXISTING SITE CONDITIONS. SAID FAILURE TO NOTIFY THE ARCHITECT IN WRITING SHALL IDENTIFY AND HOLD HARMLESS THE OWNER FROM ANY ADDITIONAL COSTS INCURRED BY THE CONTRACTOR DUE TO DISCREPANCIES NOT REPORTED WHICH COULD HAVE BEEN DETECTED BY PRUDENT AND REASONABLE OBSERVATION AND VERIFICATION BY THE CONTRACTOR.

3. ALL IMPERVIOUS SURFACES SHALL BE GRADED AND INSTALLED WITH A MINIMUM SLOPE OF ONE PERCENT (1%) AND A MAXIMUM SLOPE OF SEVEN PERCENT (7%).

4. ALL PERVIOUS SURFACES SHALL BE GRADED AND INSTALLED WITH A MINIMUM SLOPE OF TWO PERCENT (2%) AND A MAXIMUM SLOPE OF THIRTY-THREE PERCENT (33%) EXCEPT WHERE SHOWN.

5. SLOPE PERVIOUS SURFACES MIN. 5% AND IMPERVIOUS SURFACES MIN. 1% AWAY FROM BUILDING FOUNDATIONS.

6. MAINTAIN GRADING TO PROMOTE POSITIVE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO POND IN CONSTRUCTION AREAS.

7. RELOCATE ALL BURIED UTILITIES THAT ARE IMPACTED BY ANY EARTHWORK. RELOCATED UTILITY LOCATIONS ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO STARTING WORK.

8. PROTECT AREAS TO BE SEED AS FOLLOWS:

A) DITCHES AND DRAINAGE SWALES ARE TO RECEIVE HIGH-VELOCITY EROSION-CONTROL BLANKETS.

B) SLOPES 4:1 (H:V) OR GREATER ARE TO RECEIVE LONG-TERM EROSION-CONTROL BLANKETS.

C) SLOPES BETWEEN 4:1 AND 6:1 (H:V) ARE TO RECEIVE SHORT-TERM EROSION CONTROL BLANKETS.

D) SLOPES BELOW 6:1 (H:V) ARE TO RECEIVE STRAW MULCH PER THE SPECIFICATIONS. DO NOT USE HAY.

9. ANY AREAS DISTURBED DURING CONSTRUCTION ARE TO BE RECONDITIONED, SEEDDED AND MULCHED PER THE SPECIFICATIONS.

10. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF THEIR STANDARD PROCTOR MAXIMUM DRY DENSITY AT PLUS OR MINUS TWO (2) PERCENT OF OPTIMUM MOISTURE CONTENT:

A) UNDER FLOOR SLABS AND FOUNDATIONS ON STRUCTURAL FILL - 97%

B) FILLS ON EXISTING SOILS, ROCK CUTS OR SHOT-ROCK FILL - 97%

C) PAVED AREAS AND WALKS - 95%

D) LANDSCAPE AREAS OUTSIDE MASS FILL AREAS - 85%

11. ALL TREES THAT ARE IDENTIFIED BY THE ARCHITECT TO REMAIN, EITHER ON THE DRAWING OR IN THE FIELD, ARE TO BE PROTECTED IN ACCORDANCE WITH THE SPECIFICATIONS. ALL TREES LOCATED OUTSIDE OF AREAS IDENTIFIED TO BE RE-GRADED ARE TO BE PROTECTED IN ACCORDANCE WITH THE SPECIFICATIONS.

12. THE CONTRACTOR SHALL ENSURE THAT CONSTRUCTION DEBRIS AND SEDIMENT ARE REMOVED DAILY FROM SITE DRIVEWAYS, PARKING AREAS, WALKWAYS AND SURROUNDING ROADWAYS AND WALKWAYS.

13. EXCESS SATISFACTORY SOILS ARE TO BE DISPOSED OF ON-SITE IN A LOCATION IDENTIFIED BY THE OWNER. THESE SOILS ARE TO BE SPREAD AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS.

14. THE NEW PARKING, ROADS AND ROAD BASE ARE NOT DESIGNED TO ACCOMMODATE CONSTRUCTION TRAFFIC AND SHOULD NOT BE USED FOR SUCH UNLESS STABILIZED USING #2 CRUSHED STONE AND/OR GEO-GRID IN ADDITION TO THE PAVEMENT DESIGN SECTION SHOWN. IF THE CONTRACTOR WISHES TO USE THE NEW ROAD ALIGNMENTS DURING CONSTRUCTION, IT IS THE CONTRACTORS RESPONSIBILITY TO STABILIZE THE ROAD ALIGNMENT SUBGRADES AND PREVENT THEM FROM BEING DAMAGED DURING CONSTRUCTION.

15. THE CONTRACTOR SHALL INSTALL AND MAINTAIN A CRUSHED STONE ENTRY AND DRIVE TO REDUCE SOIL TRACKING.

rosstant architect

101 old boyette avenue lexington, kentucky 40502 p 859.254.4018

STATE OF KENTUCKY  
MICHAEL MAYS  
31048  
PROFESSIONAL ENGINEER

9-9-2019

SITE GRADING PLAN

MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

FOR:  
MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

M.E.&P Engineer:  
CMTA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.255.0892

Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG#

Project No: 1928  
Drawn By: JWB  
Rev'd By: DSW/MAM

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CONSTRUCTION DOCUMENTS

SD2.1

SITE GRADING PLAN

DATE ISSUED:  
OCTOBER 09, 2019

SITE GRADING PLAN

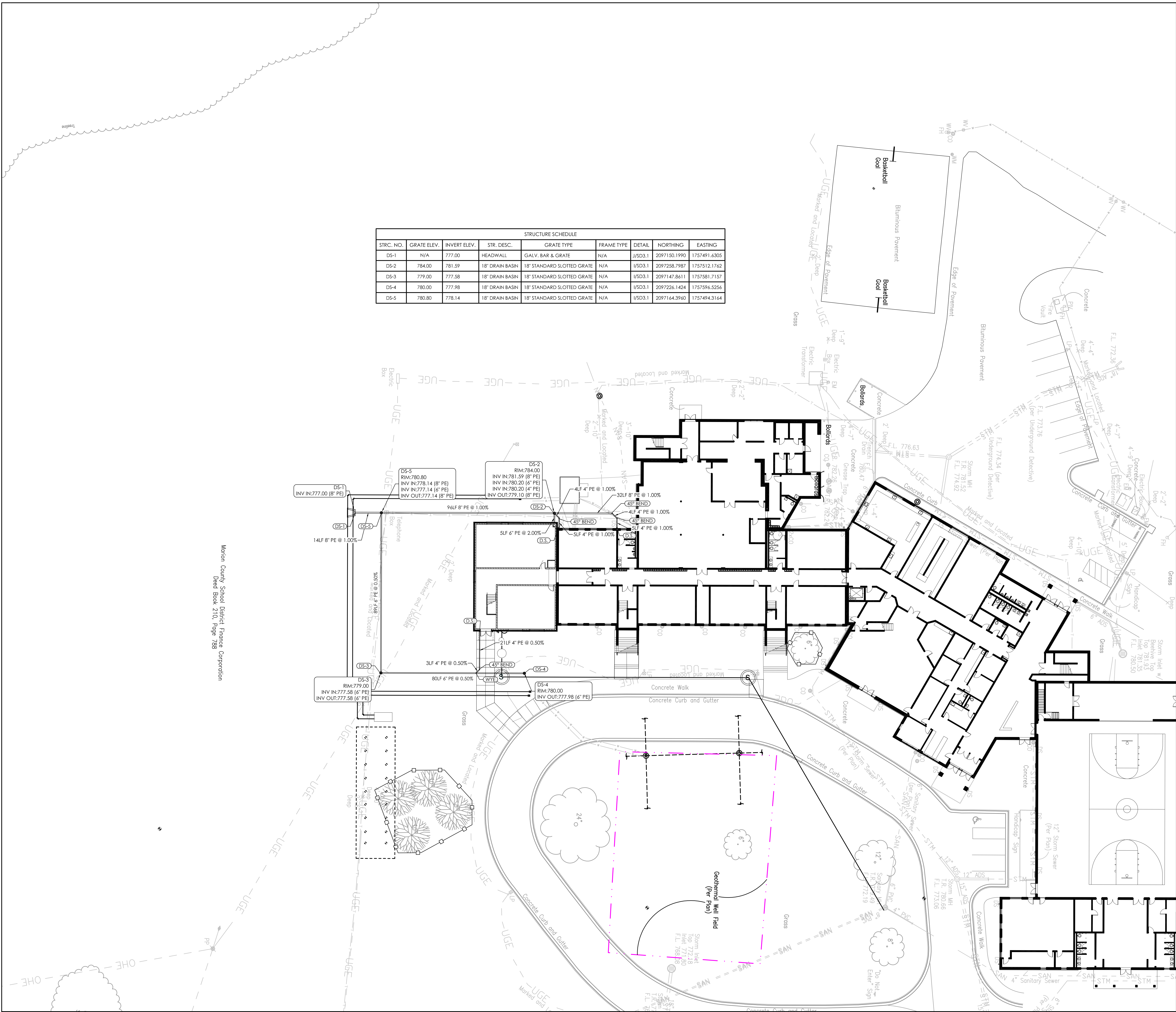
SCALE: 1"=20'-0"

0 20 40 Feet

A

SD2.1





| STRUCTURE SCHEDULE |             |              |                 |                            |            |         |              |              |
|--------------------|-------------|--------------|-----------------|----------------------------|------------|---------|--------------|--------------|
| STR. NO.           | GRATE ELEV. | INVERT ELEV. | STR. DESC.      | GRATE TYPE                 | FRAME TYPE | DETAIL  | NORTHING     | EASTING      |
| DS-1               | N/A         | 777.00       | HEADWALL        | GALV. BAR & GRATE          | N/A        | J/SD3.1 | 2097150.1990 | 1757491.6305 |
| DS-2               | 784.00      | 781.59       | 18" DRAIN BASIN | 18" STANDARD SLOTTED GRATE | N/A        | V/SD3.1 | 2097258.7987 | 1757512.1762 |
| DS-3               | 779.00      | 777.58       | 18" DRAIN BASIN | 18" STANDARD SLOTTED GRATE | N/A        | V/SD3.1 | 2097147.8611 | 1757581.7157 |
| DS-4               | 780.00      | 777.98       | 18" DRAIN BASIN | 18" STANDARD SLOTTED GRATE | N/A        | V/SD3.1 | 2097226.1424 | 1757596.5256 |
| DS-5               | 780.80      | 778.14       | 18" DRAIN BASIN | 18" STANDARD SLOTTED GRATE | N/A        | V/SD3.1 | 2097164.3960 | 1757494.3164 |

- GENERAL SITE NOTES
1. THE SITE PLANS WERE PREPARED BASED UPON TOPOGRAPHIC SURVEYS BY ENDRIS ENGINEERING, P.S.C., 771 ENTERPRISE DRIVE, LEXINGTON, KY 40510. REFER TO SITE SURVEY SHEETS.

2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE FEATURES AND CONDITIONS. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.

3. THE ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.

4. THE CONTRACTOR SHALL USE EXTREME CARE IN WORKING AROUND EXISTING OVERHEAD AND UNDERGROUND UTILITIES. MEASURES SHOULD BE TAKEN TO PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.

5. SEE EROSION POLLUTION AND SEDIMENT CONTROL PLAN FOR RECOMMENDED BEST MANAGEMENT PRACTICES INFORMATION AND SEDIMENT CONTROLS.
- SITE STORM DRAINAGE NOTES
1. DRAINAGE PIPE THAT CROSSES UNDER ROADS OR PARKING AREAS SHALL BE REINFORCED CONCRETE. ALL PE PIPE SHALL BE DUAL WALL POLYETHYLENE PIPE WITH SMOOTH INTERIOR WALL, OR EQUIVALENT AS APPROVED IN THE SPECIFICATIONS. ALL STORM PIPING SHALL BE INSTALLED AT A CONSTANT, POSITIVE SLOPE FROM INLET CONNECTION TO DISCHARGED CONNECTION. PIPE SLOPE IS TO BE 0.5% MINIMUM.

2. SEDIMENT PROTECTION DEVICES, SUCH AS SILT FENCING SHALL BE INSTALLED IN AND/OR AROUND ALL STORM STRUCTURES.

3. EROSION CONTROL BLANKETS ARE TO BE INSTALLED AS INDICATED IN THE SPECIFICATIONS.

4. ALL STORM STRUCTURES ARE TO BE DESIGNED FOR H-20 LOADING.

5. ALL GRATES AND MANHOLE COVERS ARE TO BE HEAVY DUTY CAST IRON DESIGNED FOR H-20 LOADING.

6. MAINTAIN GRADING TO PROMOTE POSITIVE DRAINAGE AT ALL TIMES.

7. ALL ROOF DRAINS AND DOWNSPOUTS, INCLUDING CANOPY DOWNSPOUTS, ARE TO BE PIPED UNDERGROUND AND CONNECTED TO STORM WATER STRUCTURES. DOWNSPOUT BOOT AND DOWNSPOUT SIZES ARE TO BE COORDINATED WITH THE MANUFACTURERS AND INSTALLERS OF EACH ITEM. CLEANOUTS ARE TO BE LOCATED AT EACH CHANGE IN DIRECTION OF THE PIPING. ENSURE CLEANOUTS ARE DESIGNED FOR AUTOMOBILE TRAFFIC, AND ARE FLUSH WITH THE SURROUNDING SURFACES.

8. THE LOCATIONS SHOWN FOR THE NEW STORM SEWER PIPING AND STRUCTURES ARE APPROXIMATE. ACTUAL LOCATIONS CAN BE ADJUSTED WITH ARCHITECTS WRITTEN APPROVAL IN ORDER TO AVOID UNFORESEEN CONDITIONS OR OTHER CONSTRUCTION CONFLICTS. CONTRACTOR IS TO COORDINATE STORM SEWER INSTALLATION WITH ALL OTHER TRADES AND WORK.

rosstant architects

101 old boyette avenue lexington, kentucky 40502 p 859.254.4018

STATE OF KENTUCKY  
MICHAEL MAYS  
31048  
PROFESSIONAL ENGINEER

9-9-2019

SITE DRAINAGE PLAN

MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

FOR:  
MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

M.E.&P Engineer:  
CMTA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.253.0892

Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG#

Project No: 1928  
Drawn By: JBA  
Rev'd By: DSW/MAM

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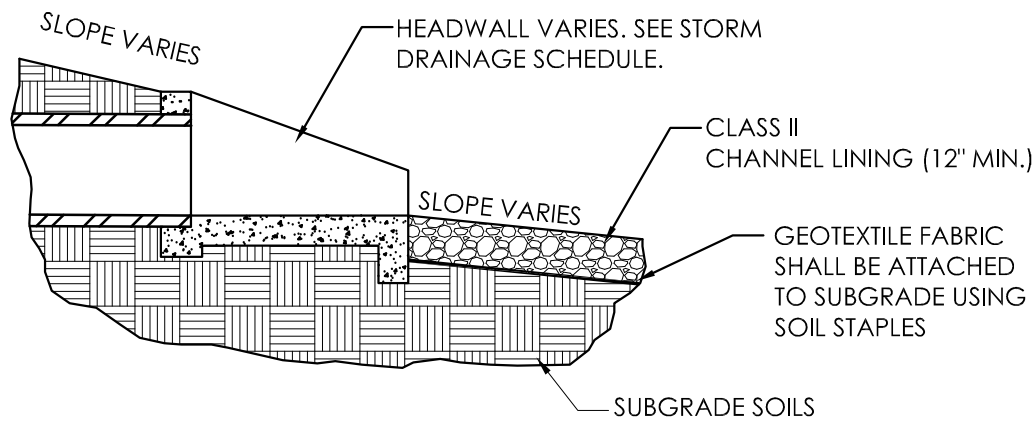
CONSTRUCTION DOCUMENTS

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SITE DRAINAGE PLAN

DATE ISSUED:  
OCTOBER 09, 2019



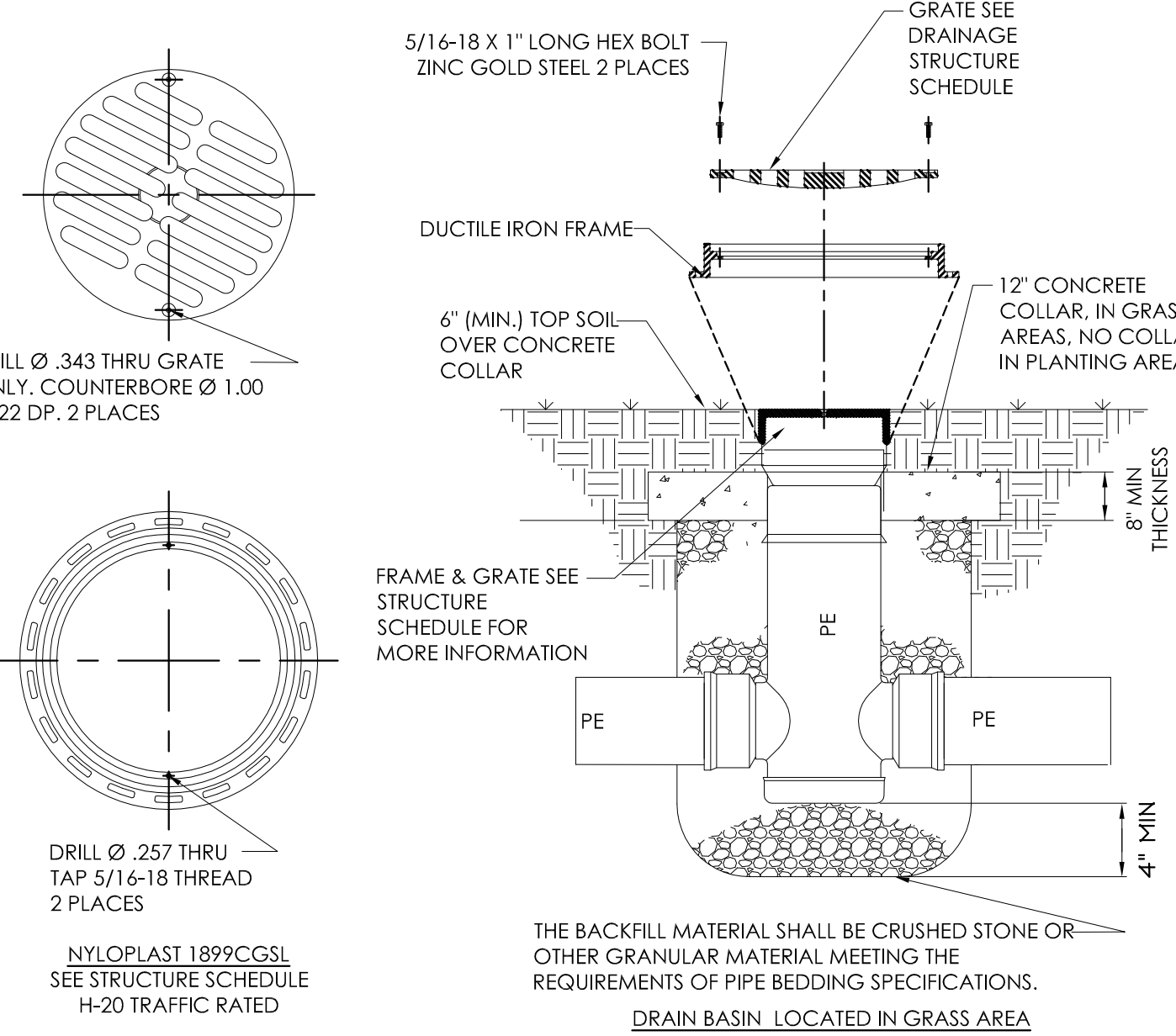


- NOTES:
- 1.) CHANNEL LINING SHALL BE PLACED IN A MANNER THAT WILL NOT TEAR OR DAMAGE THE FILTER FABRIC.
  - 2.) GEOTEXTILE FABRIC SHALL BE NON-WOVEN DRAINAGE FABRIC SUCH AS AMOCO 4545.
  - 3.) GRADING AROUND THE HEADWALL SHOULD BE SUFFICIENT TO PREVENT THE HEADWALL FROM MOVING AND TO PREVENT EROSION AROUND THE HEADWALL. SLOPED HEADWALLS ARE TO BE GRADED FLUSH SO THAT THEY CAN BE MOWED OVER.
  - 4.) RIP-RAP EROSION PROTECTION IS TO EXTEND A MINIMUM OF 25-FEET DOWNSTREAM OF THE HEADWALL, AND IS TO EXTEND TO THE TOP OF THE DITCH OR A MINIMUM OF 15-FEET WIDE.

HEADWALL DETAIL

SCALE : N.T.S.

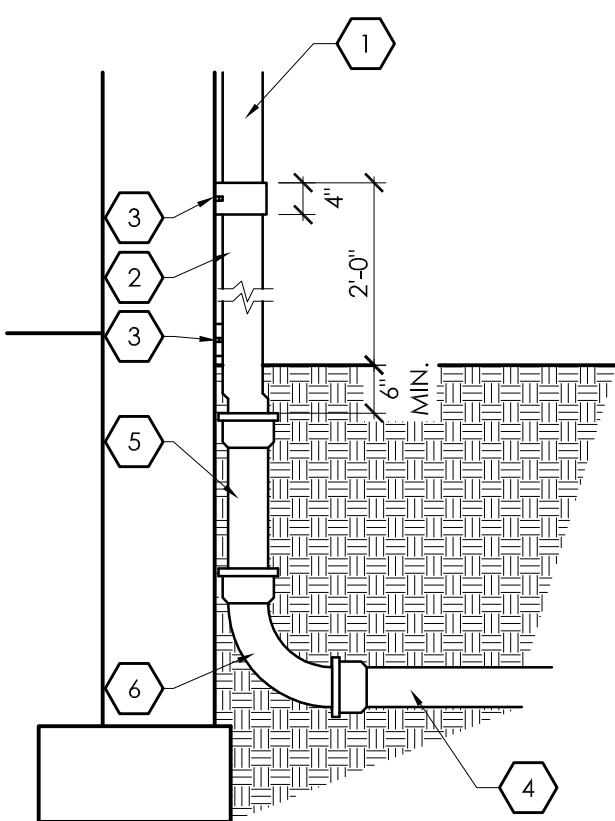
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DRAIN BASIN PLAZA DRAIN DETAIL

SCALE : N.T.S.

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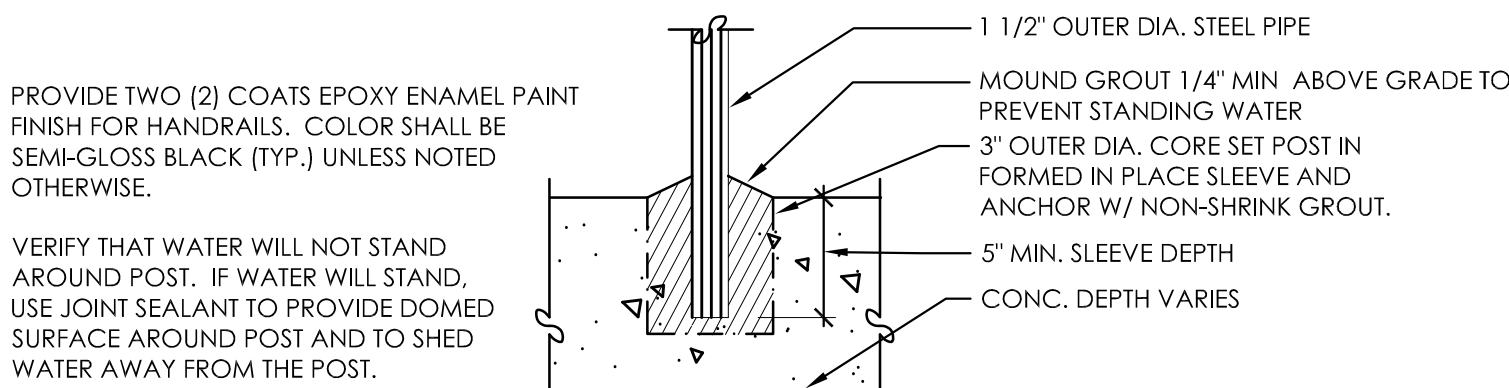


- NOTES:
1. DOWNSPOUT-SEE ARCHITECTURAL DRAWINGS FOR SIZES. COORDINATE WITH DOWNSPOUT BOOT SIZES.
  2. DOWNSPOUT BOOT PER SPECIFICATION SECTION 334993. COORDINATE BOOT SIZES WITH DOWNSPOUTS AND STORM DRAINAGE PIPING. COORDINATE EXACT LOCATIONS WITH DOWNSPOUT CONTRACTOR. INSTALL A MINIMUM OF 24" OF BOOT ABOVE GRADE AND PIPE CONNECTION 6" MINIMUM BELOW GRADE.
  3. SECURE TO WALL. PAINT BACK OF BOOT PRIOR TO INSTALLING.
  4. STORM DRAINAGE PIPING BELOW GRADE.
  5. PVC PIPE AS NEEDED TO EXTEND TO REQUIRED PIPE DEPTH.
  6. LONG SWEEP ELBOW

DOWNSPOUT BOOT DETAIL

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

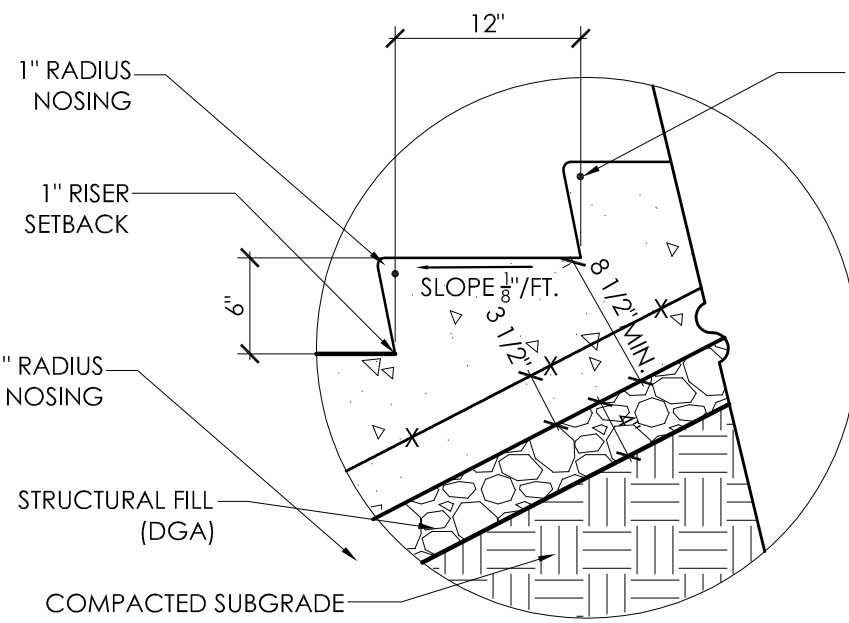
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POST EMBEDMENT DETAIL

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

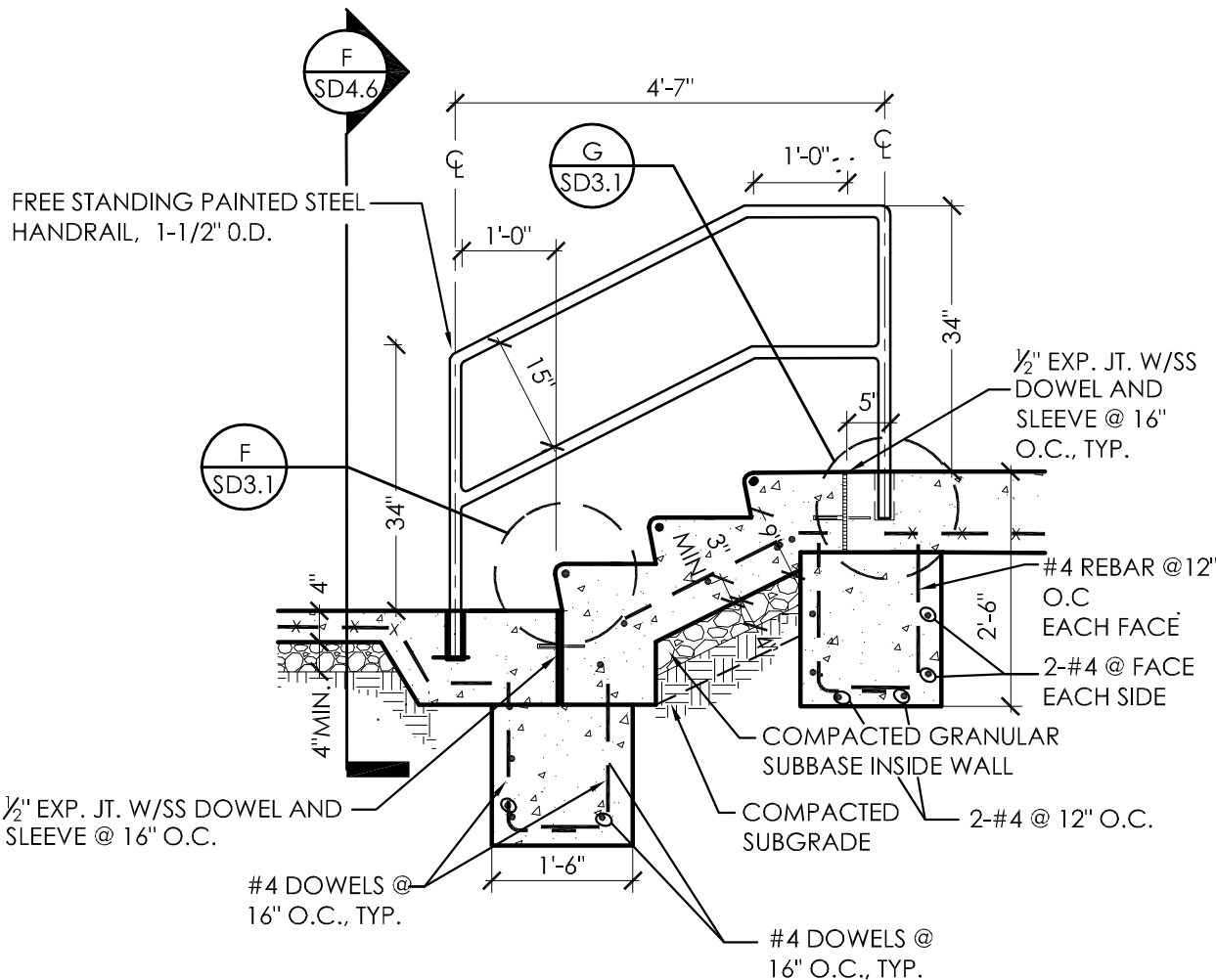
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TYPICAL STAIR TREAD AND NOSING DETAIL

SCALE : 1" = 1'-0"

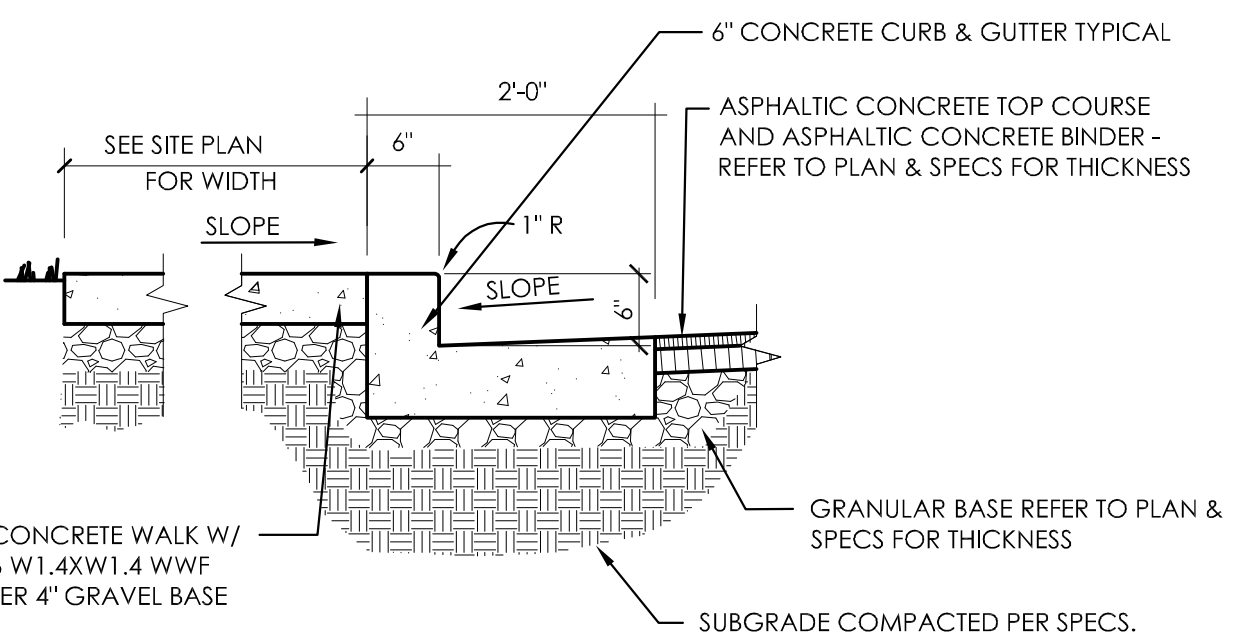
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CONCRETE STAIR

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

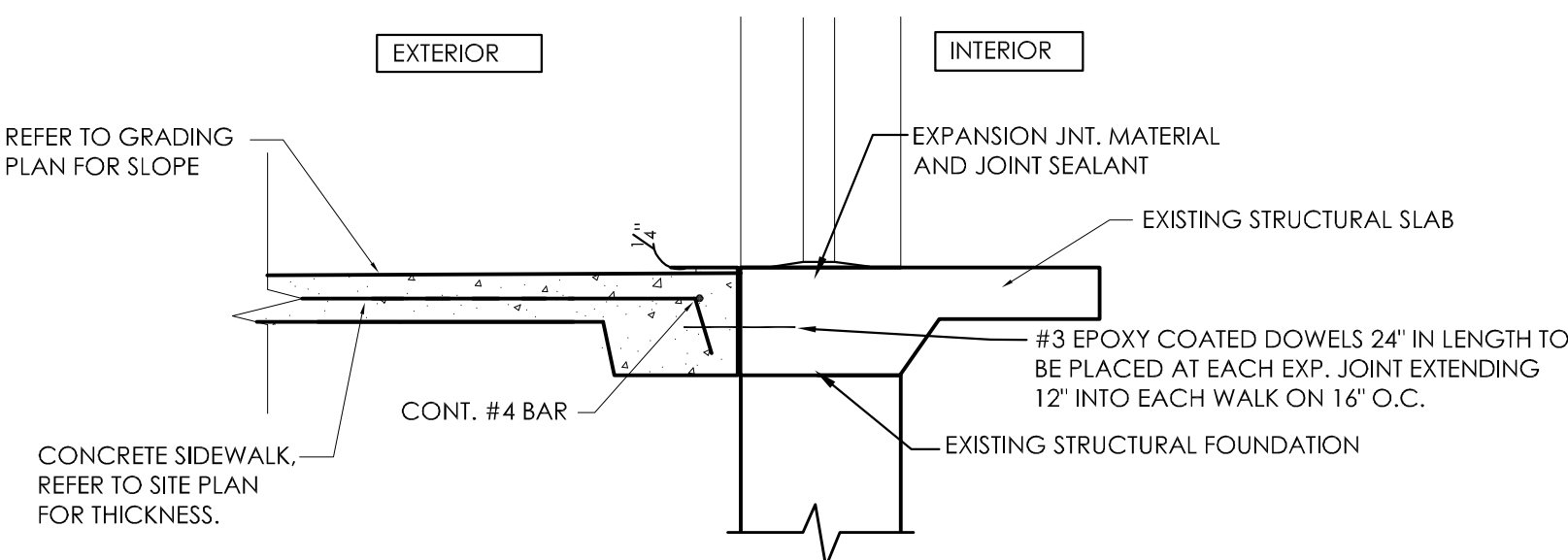
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CONCRETE CURB AND GUTTER (321613)

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

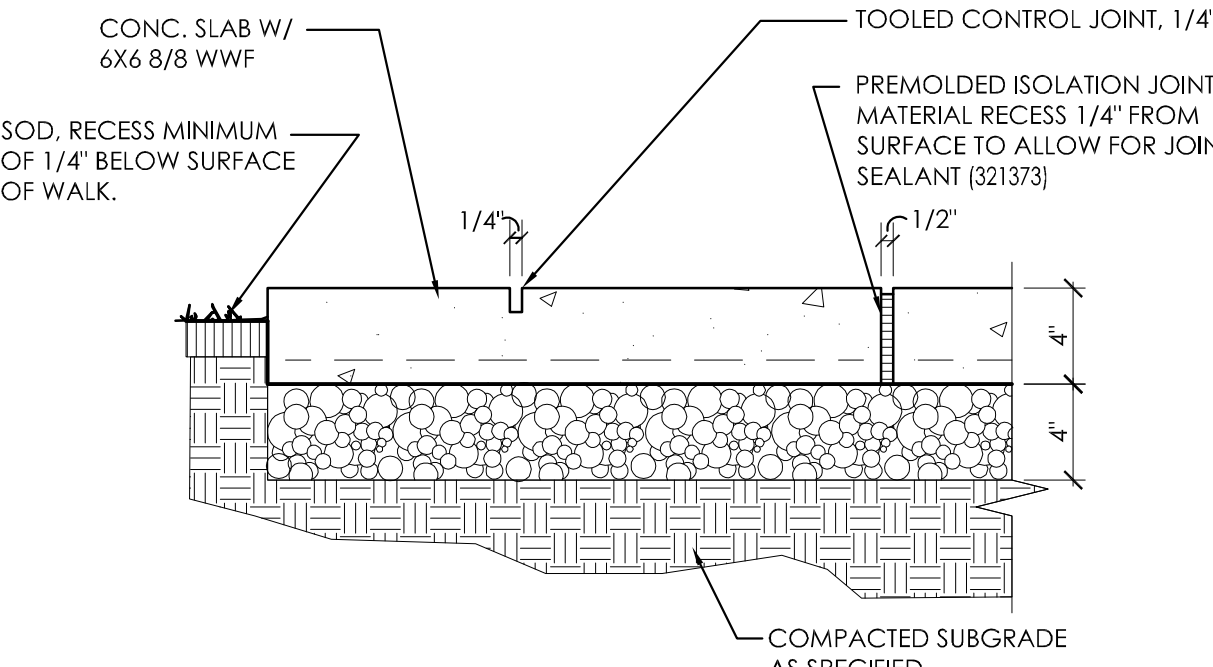
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CONCRETE THRESHOLD DETAIL (321313)

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

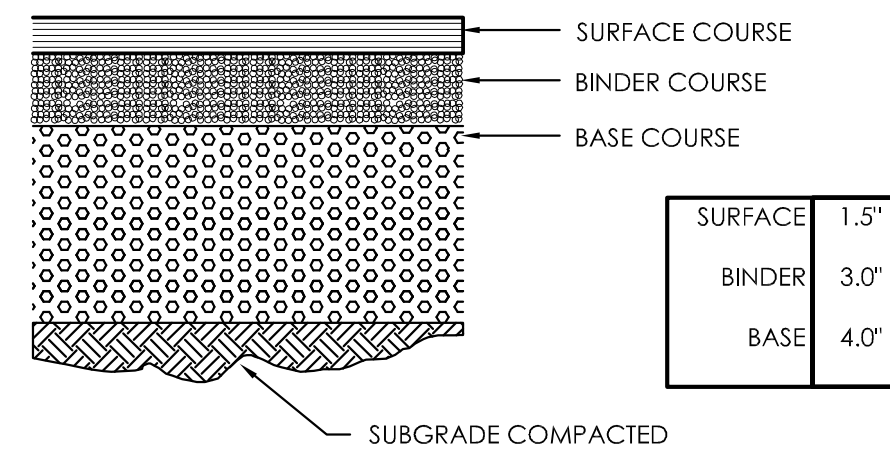
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CONCRETE SIDEWALK (321313)

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

B  
SD3.1



ASPHALT PAVEMENT (321216)

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

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SD3.1

SITE DETAILS

MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

M.E.&P Engineer:  
CMFA, INC.  
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220 Great Circle Rd. Suite 106  
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p 615.255.5537

BG#

Project No: 1928  
Drawn By: **WBA**  
Rev'd By: **DSM/WRM**

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SITE DETAILS  
DATE ISSUED:  
OCTOBER 09, 2019





# STRUCTURAL NOTES

THE STRUCTURAL NOTES DEFINE GENERAL DESIGN AND MATERIAL REQUIREMENTS AND ARE INTENDED TO SUPPLEMENT, BUT NOT REPLACE, THE PROJECT SPECIFICATIONS

## DESIGN CRITERIA

- Building Code: 2018 Kentucky Building Code and ASCE 7-10 (except Chapter 14 and Appendix 11A)
  - Building Risk Category: III
- Design Loads
  - Uniform Floor Live Loads (reduced per Building Code, UNO)

|                            |   |
|----------------------------|---|
| Partitions                 | 20 psf (except when live load > 80 psf) |
| General Ground Floor Areas | 100 psf                                 |
| Corridors:                 |   |
| Corridors Above 1st Floor  | 80 psf                                  |
| Classrooms                 | 50 psf                                  |
| Stairs                     | 100 psf                                 |
| Mechanical Rooms           | 125 psf                                 |
  - Concentrated Floor Live Loads (distributed over 2.5 ft x 2.5 ft, UNO)

|         |           |
|---------|-----------|
| Schools | 1,000 lbs |
|---------|-----------|
  - Roof Loads
    - Uniform Roof Live Load 20 psf (reduced per Bldg. Code)
    - Snow Loads: Ground Snow = 15 psf (with drift loads per Code)  
Terrain Category = C  
Snow Exposure Factor, Ce = 1.0  
Snow Load Importance Factor, I = 1.1  
Thermal Factor: Heated Spaces, Ct = 1.0  
Unheated Spaces, Ct = 1.2  
Flat-roof Snow Load: Heated Spaces, PF = 16.6 psf  
Unheated Spaces, PF = 18.9 psf  
Rain-on-Snow Surcharge: 5 psf (where applicable)
  - Wind Loads  
Basic Wind Speed V(ult)=120 mph; V(asd)= 93 mph  
Wind Exposure C  
Internal Pressure Coefficient = +/-0.18 (Enclosed Building)  
Directionality Factor, Kd = 0.85
  - Earthquake Loads  
Seismic Importance Factor, I = 1.25  
Mapped Spectral Response Accelerations, Ss and S1 = 0.19 and 0.103  
Site Class: C  
Spectral Response Coefficients, Sds and Sd1 = 0.152 and 0.117  
Seismic Design Category: B
- Structural Engineer is not responsible for the design of steel stairs, handrails, curtain wall/window wall systems, cold-formed steel framing, or other systems not shown in the Structural Documents. Such systems shall be designed, furnished, and installed as required by other portions of the Construction Documents.
- No explicit provisions have been made for future building expansion.

## GENERAL

- Reference to standards or specifications of technical societies, organizations, or associations means the standard or specification referenced by the governing Building Code shown on the Drawings, unless specifically noted otherwise.
- Material, workmanship, and design shall conform to the referenced Building Code.
- For dimensions not shown in the Structural Drawings, see the Architectural Drawings.
- Contractor responsibilities include, but are not limited to, the following:
  - Structural Documents are being released prior to Documents by other disciplines (Architectural, Mechanical, etc.) Coordinate Structural Documents with other portions of the Construction Documents as they are released. Architect/Structural Engineer shall be notified of any discrepancy or omission.
  - Coordinate Structural Documents with Architectural and MPE Documents for location and quantity of miscellaneous framing for items such as roof drains, suspended or supported mechanical units, window washing davits, etc. Refer to Architectural and MPE Documents for additional miscellaneous structural elements that may not appear in the Structural Documents.
  - Equipment/Framing Verification
    - Mechanical Equipment: Submit actual weights of equipment to be used for review at least 3 weeks prior to fabrication and construction. Coordinate opening sizes and locations with Mechanical Contractor.
    - Miscellaneous Framing: Verify framing shown on the Structural Drawings for mechanical equipment, Owner-furnished items, partitions, etc. is consistent with the requirements of such items.
  - The structure is stable only in its completed form. Temporary supports required for stability during all intermediate stages of construction shall be designed, furnished, and installed by the Contractor.
  - Contractor has sole responsibility for jobsite safety and complying with all health and safety precautions as required by any regulatory agency. In performing construction observation visits to the jobsite, the Structural Engineer will have no control over, nor responsibility for, the Contractor's means, methods, sequences, techniques, or Procedures in performing the work.
  - Contractor is responsible for locating concrete reinforcement prior to installation of post-installed anchors, through bolts, or other post-installed items in concrete. Existing reinforcement including post-tensioning tendons shall not be cut or otherwise damaged while installing post-installed anchors.

## GENERAL (cont.)

- Existing and Unforeseen Conditions
  - Contractor shall field verify all existing conditions, elevations, and site conditions prior to construction and fabrication. Contractor shall immediately notify Structural Engineer of any existing conditions that are in conflict with the Structural Documents.
  - Shop drawing submittals shall be based on field verified dimensions and conditions only. Contractor shall clearly show actual field dimensions on shop drawings.
  - Existing dimensions, elevations, and other information shown in the Structural Drawings are based on the following documents:

## SUBMITTALS

- Shop Drawings and Submittals
  - Reproduction of Structural Drawings for shop drawings is not permitted.
  - Electronic drawing files will not be provided to the Contractor.
  - Review of shop drawings will be for conformance with the Construction Documents regarding arrangement and sizes of members and the Contractor's interpretation of the design loads, if applicable, and Construction document details. Such review shall not relieve the Contractor of the full responsibility to comply with the Construction Documents.
- Submittals
  - The Structural Quality Assurance Plan and Specifications identify the required submittals. Prior to (or with) the first submittal, Contractor shall submit a list of all required submittals for Engineer's review.
- Deferred Submittals
  - Deferred Submittals include those portions of the project that are furnished by the Contractor and designed by someone other than the Engineer of Record and are submitted at the time of the application. Deferred Submittals shall be submitted to the Building Official prior to fabrication and installation.
    - Submittal documents for Deferred Submittals:
      - 3.2.1 Shall be included in the Contractor's scope of services and shall be sealed by an Engineer licensed in the project state. Design of Deferred Submittals shall be in accordance with the governing Building Code indicated above.
      - 3.2.2 Shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the building official with a notation indicating the deferred submittal documents have been reviewed and that they have been found in general conformance with the design of the building. Deferred submittal items shall not be installed until the design and submittal documents have been approved by the Building Official.
  - The following shall be considered Deferred Submittals:  
Steel Connections - See "Structural Steel" Section  
Steel Joists  
Cold-formed Exterior Steel Stud Framing  
Rooftop Unit Anchorage  
Steel Stairs and Handrails  
Slotted Channel Strut Framing (e.g. Unistrut)

## FOUNDATION

- Geotechnical Report: Solid Ground Engineering Report #19-0231, Dated August 15, 2019.
  - It is the responsibility of the contractor to obtain a copy of the geotechnical report and comply with the recommendations found therein.
- Building Pad Preparation
  - Strip vegetation and topsoil.
  - Proofroll building areas with a minimum of two complete coverages of a loaded dump-truck or scraper in each of two perpendicular directions. Replace soft areas with compacted structural fill.
- Soil Bearing Capacity: Isolated Footings 2,000 psf  
Continuous Footings 2,000 psf
- Foundation walls
  - Lateral Pressures:  
walls supported at top (at-rest): 65 pcf Equivalent Fluid Density  
walls free to displace at top (active): 40 pcf Equivalent Fluid Density
  - walls shall be backfilled with granular materials (See Specification)

## REINFORCEMENT

- Reinforcing Bars: ASTM A615, Grade 60
  - Reinforcing bars are not to be welded.
- Welded Wire Reinforcement (WWR): ASTM A1064, 8" minimum side and end laps
- Reinforcement Placement (UNO)
  - Concrete Reinforcement Cover  
Below Grade: Unformed 3" clear  
Formed 2" clear
  - Masonry reinforcing steel: Place in the center of CMU cells.
- Reinforcement Splices
  - Reinforcement marked "Continuous" can be spliced at locations determined by contractor. All other reinforcement shall be spliced only at locations shown or noted, unless approved in writing by Structural Engineer.
  - Splice Lengths (UNO)  
Concrete Reinforcement: See Concrete Lap Splice Tables in Drawings  
Masonry Reinforcement: See CMU Lap Splice Tables in Drawings
- Deformed Bar Anchors (DBA): ASTM A496
  - Deformed Bar Anchors shall conform to AWS D1.1, Type C studs with a minimum yield strength of 70 ksi and minimum tensile strength of 80 ksi.
  - Deformed Bar Anchors shall be stud welded

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STRUCTURAL NOTES  
MARION COUNTY MIDDLE SCHOOL ADDITION & REYNOLSON  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

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p 859.253.0892  
Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

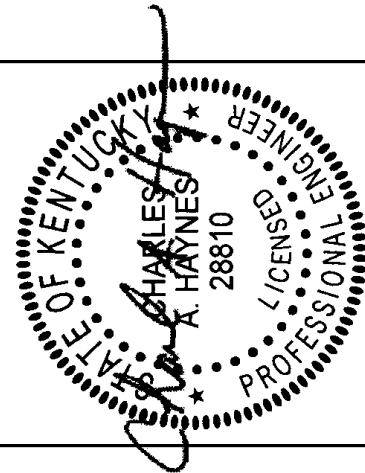
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Project No: 1928  
Drawn By: CCA  
Rev'd By: CH

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S0.1  
STRUCTURAL NOTES  
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STRUCTURAL NOTES CONTINUED

CAST-IN-PLACE CONCRETE

1. Concrete Properties
- 1.1 Normal Weight Structural Concrete
- |                                | 28-Day, F'c<br>(min) | w/cm Ratio<br>(max.) | Entrained Air |
|--------------------------------|----------------------|----------------------|---------------|
| Footings (Isolated/Continuous) | 4,500 psi            | 0.45                 | None Required |
| Foundation walls, Pedestals    | 4,500 psi            | 0.45                 | None Required |
| Slabs on Grade                 | 3,500 psi            | 0.48                 | None Required |
| Slabs on Steel Forms           | 3,000 psi            | 0.48                 | None Required |
| Mechanical Equipment Pads:     |                      |                      |               |
| Interior                       | 3,000 psi            | ----                 | None Required |
| Exterior                       | 3,000 psi            | ----                 | 5.0 +/- 1.5%  |
| All Other Concrete             | 5,000 psi            | 0.40                 | 5.0 +/- 1.5%  |
- Note: All concrete shall be assigned the exposure classes FO, SO, WO, and CO; except concrete in Aggressive Environment shall be assigned the exposure classes F3, S2, W1, and C2 (see ACI 318).
2. Construction Joint Locations: No horizontal construction joints are permitted except as shown on the Structural Drawings. Obtain written consent for additional joints.
3. Pipes or ducts shall not exceed one-third the slab or wall thickness unless specifically detailed. See mechanical and electrical drawings for location of sleeves, accessories, etc.
- 3.1 Conduit shall not be placed within the slab on grade. Conduit shall be installed below the slab on grade within the granular subbase.
- 3.2 Conduit shall not be installed within elevated slabs.
4. Special Finishes: Refer to Architectural Drawings for molds, grooves, ornaments, clips or grounds required to be encased in concrete and for location of floor finishes and slab depressions.
5. Defect Repair: Honey-combing, spalls, cracks, etc. shall be repaired. Extent of defective area to be determined by the Structural Engineer.
6. Curing
- 6.1 Begin curing procedures immediately following commencement of the finishing operation.
- 6.2 Concrete shall be moist cured in accordance with ACI 308. See Specification for additional information.
- 6.3 All concrete slabs that are to have exposed stained or polished concrete finish shall be wet cured a minimum of 7 days in strict accordance with ACI 301. The acceptable methods of wet curing are ponding, continuous fogging, continuous sprinkling; or application of mats or fabric kept continuously wet.

NON-SHRINK GROUTING

1. Non-shrink grout under steel base plates shall be non-metallic with minimum compressive strength of 5000 psi at 28 days.
2. Non-shrink grout used for patching, repair, and other specific applications shall be submitted for review and approval by engineer.

CONCRETE MASONRY

1. Specified Compressive Strength, f'm = 2,000 psi  
Minimum Net Area Compressive Strength of Masonry Unit: 2,000 psi  
(ASTM C90 w/ Type M or S Mortar)
2. Mortar: walls below grade Type M  
Bearing walls Type M or S  
Partition walls Type N
3. Coarse Grout: 2,500 psi min. compressive strength conforming to ASTM C476.
- 3.1 Grout solid bond beams, reinforced CMU cores, and CMU cores and wall cavities below grade.
- 3.2 Masonry webs on each side of grouted cells shall be fully mortared. Exterior Single wythe CMU walls shall have head joints fully mortared.
4. Horizontal Joint Reinforcement: Two (2) No. 9 gage longitudinal wires at 16" vertically, UNO. Lap wire 6 inches minimum. Provide accessories for corners, intersections, etc. Use ladder type for walls with vertical reinforcing.
5. Provide open bottom beam block units with 3" deep minimum web openings at horizontal reinforcement locations not located over an opening. A minimum clear space of one bar diameter shall be provided between the reinforcing bars and the face of masonry units.
6. CMU has been designed assuming "running bond" placement. Do not use "stack bond" unless approved by Structural Engineer.
7. Contraction Joints: Unless noted otherwise on the Plans, maximum spacing of 1 1/2 times of wall height or 24 feet (whichever is less) in all concrete masonry walls (including partitions) above grade.
8. Submit written construction procedures prior to the start of masonry construction.

STRUCTURAL STEEL

1. Steel Shapes
- 1.1 W-Shapes: ASTM A992 (Grade 50)
- 1.2 Angles, Channels, Plates, UNO: ASTM A36
- 1.3 Square/Rectangular/Round Hollow Structural Sections (HSS): ASTM A500, Grade B
- 1.4 Pipe Structural Sections: ASTM A53, Grade B
- 1.5 Structural steel exposed to weather shall be galvanized.
2. Anchor Rods, Bolts, and Studs
- 2.1 Anchor Rods: ASTM F1554, Grade 36. Headed Rods or threaded rods with plate washer and heavy hex nut.
- 2.2 Bolts: 3/4" Diameter A325 minimum. All connections may be bearing type, UNO. Design bearing type connections for load values with threads included in the shear plane. Submit proposed bolt tightening procedure for review.
- 2.3 Headed Studs: ASTM A108. See Details for Diameter, Length and Spacing. Length given is in-place length after burn-off.
3. Structural steel shall be fabricated and erected according to the "Specification for Structural Steel Buildings" dated June 22, 2010 and the AISC "Code of Standard Practice for Steel Buildings and Bridges" dated April 14, 2010.
4. Connections shall be detailed based on the design information provided in the Structural Documents.
- 4.1 Standard Shear Connections: Detail as bolted or welded double-angle, single-plate, single-angle, or tee connections in accordance with the connection tables in the "Manual of Steel Construction", Fourteenth Edition.
- 4.1.1 Shear connections not defined in the AISC Manual shall be designed by an Engineer licensed in the project state. This design service shall be included in the Contractor's scope of services. Shop drawings of such connections shall be sealed by the Engineer.
- 4.2 Welded Connections: Prequalified welded joints in accordance with AISC and the Structural Welding Code of the American Welding Society; "Non-prequalified joints" shall be qualified prior to fabrication.
- 4.3 Factored Design Forces/Reactions: As shown on the Structural Drawings or, if not shown, the factored design reaction shall be half of the "Maximum Total Uniform Load (LRFD)" tabulated in the "Manual of Steel Construction", Fourteenth Edition.
- 4.4 Steel connections not specifically detailed in the Structural Drawings shall be designed by the Contractor. This design service shall be included in the Contractor's scope of services. Shop drawings of such connections shall be sealed by an Engineer licensed in the project state.
5. Shop Drawings: Submittal shall adequately depict structural members and connections.
6. Welders shall be qualified for the work performed in accordance with AWS D1.1. Welder qualifications shall be certified by the local building authority and verified by the Contractor and the Special Inspector.
7. Galvanizing
- 9.1 Galvanize environmentally exposed steel, for example mechanical equipment supports and screenwalls.
- 9.2 Galvanize shelf angles that support the exterior building veneer, for example brick shelf angles.
- 9.3 Touch-up welds and abrasions in galvanized members in accordance with ASTM A780.

STEEL JOISTS

1. Steel Joists, Bridging, and Connections: Designed, fabricated, and erected according to Specifications of the Steel Joist Institute (SJI).
- 1.1 Net Uniform Uplift Design Load for Roof Joists = 8 psf (service load)
- 1.2 Top chord extensions or extended ends are to be designed for the same tabulated uniform loads used in the design of the associated joists plus a concentrated load of 300 pounds at the end of the of the extension or extended end, unless noted otherwise on the Drawings.
2. Design of steel joists, bridging, and their connections shall be the sole responsibility of the Contractor. Submit shop drawings sealed by an Engineer licensed in the project state.
3. Contractor shall coordinate the construction and erection of walls, beam framing, steel decking, etc. to ensure compatibility of roof and wall systems considering pitch and camber of steel joists.

STEEL DECK

1. Non-Composite Steel Form Floor Deck: For gage see plan, galvanized
2. Steel Roof Deck: For gage see plan, galvanized
3. Submit shop drawings with the manufacturer's catalog demonstrating compliance with the Contract Documents and the Steel Deck Institute.

STRUCTURAL NOTES CONTINUED

MARION COUNTY MIDDLE SCHOOL ADDITION & REYNOATION

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

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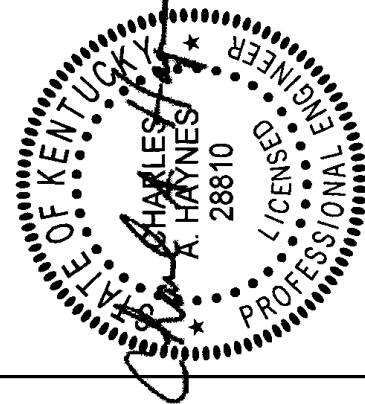
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STRUCTURAL NOTES  
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# STRUCTURAL QUALITY ASSURANCE PLAN

## GENERAL

This Structural Quality Assurance Plan includes:

- The Statement of Special Inspections which defines the scope of testing and inspection that is required for this project.
- The responsibilities of the Contractor.

Refer to other portions of the Construction Documents for Special Inspections required of architectural, mechanical, electrical, or other building components.

Special Inspector will be hired by the Owner.

Special Inspector shall maintain records of inspections in accordance with Chapter 17 of the Building Code and shall distribute these records to the Building Official, Architect, and Structural Engineer on a weekly basis, unless noted otherwise below. Reports shall indicate that work inspected/tested was done in conformance to the Construction Documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If the discrepancies are not corrected, they shall be brought to the attention of the Building Official, Architect, and Structural Engineer prior to completion of that phase of the work.

At the conclusion of the project, the Special Inspector shall submit a final report documenting required special inspections and correction of any discrepancies noted in the inspections.

## STATEMENT OF SPECIAL INSPECTIONS

Special Inspector shall perform the following tests and inspections of all structural elements included within this Statement of Special Inspections.

- The following tables contain material, components and work that require special inspection or testing:
  - Inspection Frequency, C - Continuous special inspection. Special inspection by the special inspector who is present when and where the work to be inspected is being performed.
  - Inspection Frequency, P - Periodic special inspection. Special inspection by the special inspector who is intermittently present where the work to be inspected has been or is being performed. For structural steel observe the items on a random basis.
  - See Steel section for additional information for inspection tasks.

| SOILS   | Inspection Frequency | Remarks |
|---|----------------------|---------|
| 1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.  | ---                  | P ---   |
| 2. Verify excavations are extended to proper depth and have reached proper material.  | ---                  | P       |
| 3. Perform classification and testing of controlled fill materials.   | ---                  | P       |
| 4. Verify use of proper materials, densities, and lift thickness during placement and compaction of controlled fill.<br>a. As a minimum, perform one test per lift for every 2500 square feet of fill placed. | C                    | ---     |
| 5. Prior to placement of controlled fill, observe subgrade and verify that the site has been prepared properly (e.g. proofrolling, etc.).   | ---                  | P ---   |
| 6. Determine quantities of material removed and quantities of material placed where Unit Prices are involved.   | ---                  | P ---   |

| NON-SHRINK GROUTING   | Inspection Frequency | Remarks |
|---|----------------------|---------|
| 1. Compressive strength tests per ASTM C1107.<br>a. Number of Tests: One test for each ten bags of grout used or minimum of one test for each day of grouting.<br>b. Cube Size: 2-inch x 2-inch<br>c. Test Schedule: (1) cube at 3-days, (2) cubes at 7-days, (3) cubes at 28-days. | C                    | ---     |
| 2. Perform one performance evaluation test prior placing grout under base plates. Test shall be performed as outlined in ACI 308.1R-99  | ---                  | P       |

| CONCRETE CONSTRUCTION  | Inspection Frequency | Remarks |
|--|----------------------|---------|
| 1. Inspection of reinforcing steel placement and installation. Grade, size, quantity, quality, location, spacing, clearances.  | ---                  | P       |
| 2. Inspection of anchors cast in concrete. Verify compliance of the following: diameter, grade, type, length, number, placement, and embedment depth.  | C                    | ---     |
| 3. Inspection of post-installed mechanical anchors installed in hardened concrete members: verify anchor type, anchor dimensions, hole diameter and cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment, and tightening torque.  | C                    | ---     |
| 4. Inspection of post-installed adhesive anchors and reinforcing steel installed in hardened concrete members. Verify adhesive type, anchor rod dimensions, hole diameter and cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque.   | C                    | ---     |
| 5. Verify use of required design mix.  | ---                  | P       |
| 6. Sampling fresh concrete from concrete discharge. Mold one set of specimens for compressive strength testing for each 150 cubic yards or each 5,000 square feet of slab or wall surface area for each mix design placed in any one day. No fewer than five tests for a given class of concrete for the entire project.<br>a. Mold (5) 4x8-inch compressive strength cylinders, break and report (1) at 7-days, (3) at 28-days, or mold (4) 6x12-inch compressive strength cylinders, break and report (1) at 7-days, (2) at 28-days.<br>b. Remaining specimen(s) shall be broken as directed by the Structural Engineer if compressive strengths do not appear adequate.<br>c. For each set molded, record:<br>i. Slump<br>ii. Air Content<br>iii. Unit Weight<br>iv. Temperature, ambient and concrete<br>v. Batch and discharge times<br>vi. Location and placement<br>vii. Any pertinent information, such as addition of water, addition of admixtures, etc.<br>d. Verify compliance with construction documents | C                    | ---     |
| 7. Inspection of concrete conveying and placement for proper application techniques.   | C                    | ---     |
| 8. Inspection for maintenance of specified curing temperature and techniques.  | ---                  | P       |
| 9. Inspection of formwork for shape, location, and dimensions of the concrete member being formed.   | ---                  | P       |
| 10. Perform testing of floor Flatness and Levelness of concrete slab placements in accordance with ASTM E1155. See specification   | ---                  | P       |

| CONCRETE MASONRY LEVEL B - (FOR RISK CATEGORY I, II, OR III STRUCTURES using Engineered methods, NON-Empirical)  | Inspection Frequency | Remarks |
|--|----------------------|---------|
| 1. Verification of 1" in accordance with Specification TMS 602 Article 1.4 B prior to construction   | ---                  | ---     |
| 2. Verification of Slump flow and Visual Stability Index (VSI) as delivered to the project site for self-consolidating grout.                                    | ---                  | ---     |
| 3. Verify compliance with the following approved submittals  | ---                  | ---     |
| a. Mortar mix designs indicating type and proportions of ingredients in compliance with the proportion specification of ASTM C270                                | ---                  | P       |
| b. Mortar mix designs and mortar tests performed in accordance with the property specification of ASTM C270  | ---                  | P       |
| c. Grout mix designs indicating type and proportions of the ingredients according to the proportion requirements of ASTM C476                                    | ---                  | P       |
| d. Grout mix designs and grout strength test performed in accordance with ASTM C476  | ---                  | P       |
| e. Grout compressive strength tests performed in accordance with ASTM C1019, and slump flow and Visual Stability Index (VSI) as determined by ASTM C1611/C1611M. | ---                  | P       |
| f. Construction procedures cold weather (temperature below 40°F) or hot weather (temperature above 90°F)   | ---                  | P       |
| 4. As masonry construction begins, verify that the following are in compliance   | ---                  | ---     |
| a. Proportions of site-prepared mortar   | ---                  | P       |
| b. Construction of mortar joints   | ---                  | P       |
| c. Location of reinforcement and connectors  | ---                  | P       |
| 5. Prior to grouting, verify that the following are in compliance:   | ---                  | ---     |
| a. Grout space.  | ---                  | P       |
| b. Grade, type, and size of reinforcement and anchor bolts   | ---                  | P       |
| c. Placement of reinforcement and connectors (including horizontal joint reinforcement)  | ---                  | P       |
| d. Proportions of site-prepared grout  | ---                  | P       |
| e. Construction of mortar joints   | ---                  | P       |
| 6. Verify during construction:   | ---                  | ---     |
| a. Size and location of structural elements  | ---                  | P       |
| b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction                     | ---                  | P       |
| c. Preparation, construction, and protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F)                     | ---                  | P       |
| d. Placement of grout is in compliance   | C                    | ---     |
| 7. Observe preparation of grout specimens, mortar specimens, and/or prisms   | ---                  | P       |

| STRUCTURAL STEEL   | Inspection Frequency | Remarks  |
|--|----------------------|----------|
| Where the following tasks have been performed by the fabricator's or erector's quality control program in accordance to Chapter N of AISC 360-10. It is permitted that this task be coordinated with the Special Inspector so that the inspection functions are performed by only one party. The Special Inspector shall review records of tasks performed by the erector's and fabricator's quality control program to verify completeness. | Obs. ---             | Obs. --- |
| 1. Inspection of steel framing to verify compliance with details shown on the approved construction documents including member locations, bracing, stiffening application of joint details at each connection, proper fasteners, etc.  | ---                  | Obs. --- |
| 2. Review the material test reports and certifications as listed below for compliance with the construction documents.<br>a. Main structural steel material test reports<br>b. Anchor rods and threaded rods<br>c. Headed stud anchors - manufacturer's certifications   | Perf. ---            | ---      |
| 3. Visual Inspection Tasks Prior to Welding  | ---                  | ---      |
| a. Welding procedure specifications (WPSs) available   | Perf. ---            | ---      |
| b. Manufacturer certifications for welding consumables available.  | Perf. ---            | ---      |
| c. Material identification (type/grade)  | ---                  | Obs. --- |
| d. Welder identification system The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or has welded a part to be identified. Stamps, if used, shall be the low-stress type.   | ---                  | Obs. --- |
| e. Fit-up of groove welds (including joint geometry)<br>i. Joint preparation<br>ii. Dimensions (alignment, root opening, root face, bevel)<br>iii. Cleanliness (condition of steel surfaces)<br>iv. Tacking (tack weld quality and location)<br>v. Backing type and fit (if applicable)  | ---                  | Obs. --- |
| f. Configuration and finish of access holes  | ---                  | Obs. --- |
| g. Fit-up of fillet welds<br>i. Dimensions (alignment, gaps at root)<br>ii. Cleanliness (condition of steel surfaces)<br>iii. Tacking (tack weld quality and location)   | ---                  | Obs. --- |
| h. Check welding equipment   | ---                  | Obs. --- |
| 4. Visual Inspection Tasks During Welding  | ---                  | ---      |
| a. Use of qualified welders  | ---                  | Obs. --- |
| b. Control and handling of welding consumables<br>i. Packaging<br>ii. Exposure control   | ---                  | Obs. --- |
| c. No welding over cracked tack welds  | ---                  | Obs. --- |
| d. Environmental conditions<br>i. Wind speed within limits<br>ii. Precipitation and temperature  | ---                  | Obs. --- |
| e. WPS followed<br>i. Settings on welding equipment<br>ii. Travel speed<br>iii. Selected welding materials<br>iv. Shielding gas type/flow rate<br>v. Preheat applied<br>vi. Interpass temperature maintained (min/max.)<br>vii. Proper position (F, V, H, OH)  | ---                  | Obs. --- |
| f. Welding techniques<br>i. Interpass and final cleaning<br>ii. Each pass within profile limitations<br>iii. Each pass meets quality requirements  | ---                  | Obs. --- |
| 5. Visual Inspection Tasks After Welding   | ---                  | ---      |
| a. Welds cleaned   | ---                  | Obs. --- |
| b. Size, length and location of welds  | Perf. ---            | ---      |
| c. Welds meet visual acceptance criteria<br>i. Crack prohibition<br>ii. Weldbase-metal fusion<br>iii. Crater cross section<br>iv. Weld profiles<br>v. Weld size<br>vi. Undercut<br>vii. Porosity   | Perf. ---            | ---      |
| d. Arc strikes   | Perf. ---            | ---      |
| e. k-area. When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. (75mm) of the weld.   | Perf. ---            | ---      |
| f. Repair activities   | Perf. ---            | ---      |
| g. Document acceptance or rejection of welded joint or member  | Perf. ---            | ---      |
| 6. Nondestructive Testing (NDT) of Welded Joints   | ---                  | ---      |
| a. UT all complete penetration groove welds subject to transversely applied tension loading in a butt, T- and corner joints in material 5/16" thick or greater.  | Perf. ---            | ---      |
| b. Document all NDT performed, identifying tested weld by location in the structure, piece mark and location. Consistent to submitting NDT reports to EOR or owner submit to contractor.   | Perf. ---            | ---      |
| c. Review NDT test reports performed by fabricator   | ---                  | ---      |

| STRUCTURAL STEEL CONT.   | Inspection Frequency | Remarks  |
|--|----------------------|----------|
| 7. Inspection Tasks Prior to Bolting   | ---                  | ---      |
| a. Manufacturer's certifications available for fastener materials  | Perf. ---            | ---      |
| b. Fasteners marked in accordance with ASTM requirements   | Perf. ---            | ---      |
| c. Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)  | ---                  | Obs. --- |
| d. Proper bolting procedure selected for joint detail  | ---                  | Obs. --- |
| e. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements                            | ---                  | Obs. --- |
| f. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used, not required for Snug tight bolts | ---                  | Obs. --- |
| g. Proper storage provided for bolts, nuts, washers and other fastener components  | ---                  | Obs. --- |
| 8. Inspection Tasks During Bolting   | ---                  | ---      |
| a. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required  | ---                  | Obs. --- |
| b. Joint brought to the snug-tight condition prior to the pretensioning operation  | ---                  | Obs. --- |
| c. Fastener component not turned by the wrench prevented from rotating   | ---                  | Obs. --- |
| d. Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges                    | ---                  | Obs. --- |
| 9. Inspection Tasks After Bolting  | ---                  | ---      |
| a. Document acceptance or rejection of bolted connections  | Perf. ---            | ---      |

| STEEL JOISTS   | Inspection Frequency | Remarks |
|--|----------------------|---------|
| 1. Visual inspection of bolted and welded connections.     | ---                  | P ---   |
| 2. Verify installation of bridging or braces.              | ---                  | P ---   |
| 3. Verify connections for top and bottom chords.           | ---                  | P ---   |
| 4. Verify reinforcement of members for concentrated loads. | ---                  | P ---   |
| 5. Verify proper bearing.                                  | ---                  | P ---   |

| STEEL DECK   | Inspection Frequency | Remarks |
|--|----------------------|---------|
| 1. Material verification of steel deck.<br>a. Identification markings to conform to ASTM standards specified in the approved construction documents<br>b. Manufacturer's certified test reports.   | ---                  | P ---   |
| 2. Verify general alignment and deck lap.  | ---                  | P ---   |
| 3. Verify welds for size and pattern.  | ---                  | P ---   |
| 4. Inspection of welding at floor and roof deck  | ---                  | P ---   |
| 5. Verify spacing and type of sidelap attachments.   | ---                  | P ---   |
| 6. Verify installation of deck closures.   | ---                  | P ---   |
| 7. Inspect welding operations, screw attachment, bolting, anchoring, and other fastening of components within the lateral force resisting system along including shear walls, braces, diaphragms, collectors (drag struts) and hold downs. | ---                  | P ---   |

## CONTRACTOR RESPONSIBILITIES

- Contractor shall pay for any additional structural testing/inspection required for work or materials not complying with the Construction Documents due to negligence or nonconformance and shall pay for any additional structural testing/inspection required for his convenience.
- Contractor is responsible to ensure that the Special Inspector is on site as required to perform all tasks required by Statement of Special inspection. Any work that requires special inspection and is performed without the Special Inspector being present is subject to being demolished and reconstructed.
- Contractor has the following responsibilities to the Special Inspector:
  - Provide copy of Construction Documents to Special Inspector and latest addenda (include change orders and field orders prior to inspection of work contained therein).
  - Notify Special Inspector sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.
  - Cooperate with Special Inspector and provide access to work.
  - Provide samples of materials to be tested in required quantities.
  - Provide storage space for Special Inspector's exclusive use, such as for storing and curing concrete testing samples.
  - Provide labor to assist Special Inspector in performing tests/inspections.
- Contractor shall perform the following:
  - SOILS
    - Identify soils to be used as structural fill.
  - CAS-T-IN-PLACE CONCRETE
    - Establish concrete mix design proportions in accordance with the specifications and ACI 318.
    - Submit manufacturer's certification that concrete materials meet the requirements of the Construction Documents.
  - NON-SHRINK GROUTING
    - Submit product data sheets for non-shrink grout that shows compliance with the Construction Documents and with ASTM C1107 for fluid or flowable grouts, prior to placement of grout.
  - CONCRETE MASONRY
    - Submit a certification from each manufacturer or supplier stating that the following materials comply with the Construction Documents:
      - Concrete masonry units.
      - Mortar materials: Portland cement, hydrated lime, and aggregates.
      - Grout materials: Portland cement and aggregates.
      - Joint reinforcement steel.
      - Reinforcing steel.
  - STRUCTURAL STEEL
    - If fabricator or erector is NOT AISC certified, the fabricator and/or erector shall establish and maintain *quality control* procedures and perform inspections to ensure that their work is performed in accordance with the Section N of the Specification for Structural Steel Building, AISC 360-10 and the *construction documents*. Payment of these Quality control tests and inspections, except for all NDT of welds completed in the field by the Special Inspector, shall be by the fabricator and Erector.
      - Make available the documents listed in AISC 360-10 N3.2 in electronic or printed form for review by the EOR of the EOR's Designee prior to fabrication or erection unless otherwise required by the contract documents to be submitted:
      - Provide non-destructive test (NDT) reports performed in shop by fabricator. Fabricator is responsible for cost of NDT performed in shop. Reports shall identify the tested weld by piece mark and location in the piece.
  - POST-INSTALLED ANCHORS
    - Contractor shall contact manufacturer's representative for product installation training. Submit a letter indicating that training has taken place.
  - STEEL JOISTS
    - Submit manufacturer's certificate of compliance that the steel joists comply with the Construction Documents.
  - STEEL DECK
    - Submit manufacturer's certificate of compliance that the supplied steel deck complies with the Construction Documents.

STRUCTURAL QUALITY ASSURANCE PLAN

MARION COUNTY MIDDLE SCHOOL ADDITION & REYNOLSON

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

M.E.P. Engineer:  
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Lexington, KY 40304  
p 859.253.0892

Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG#

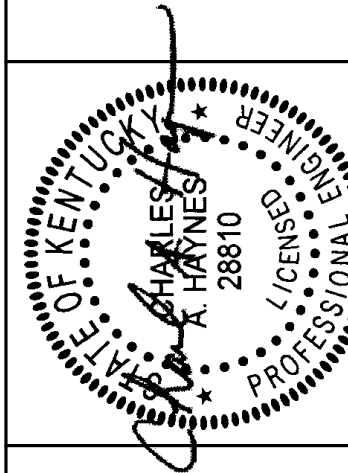
Project No.: 1928  
Drawn By: CCA  
Rev'd By: CH

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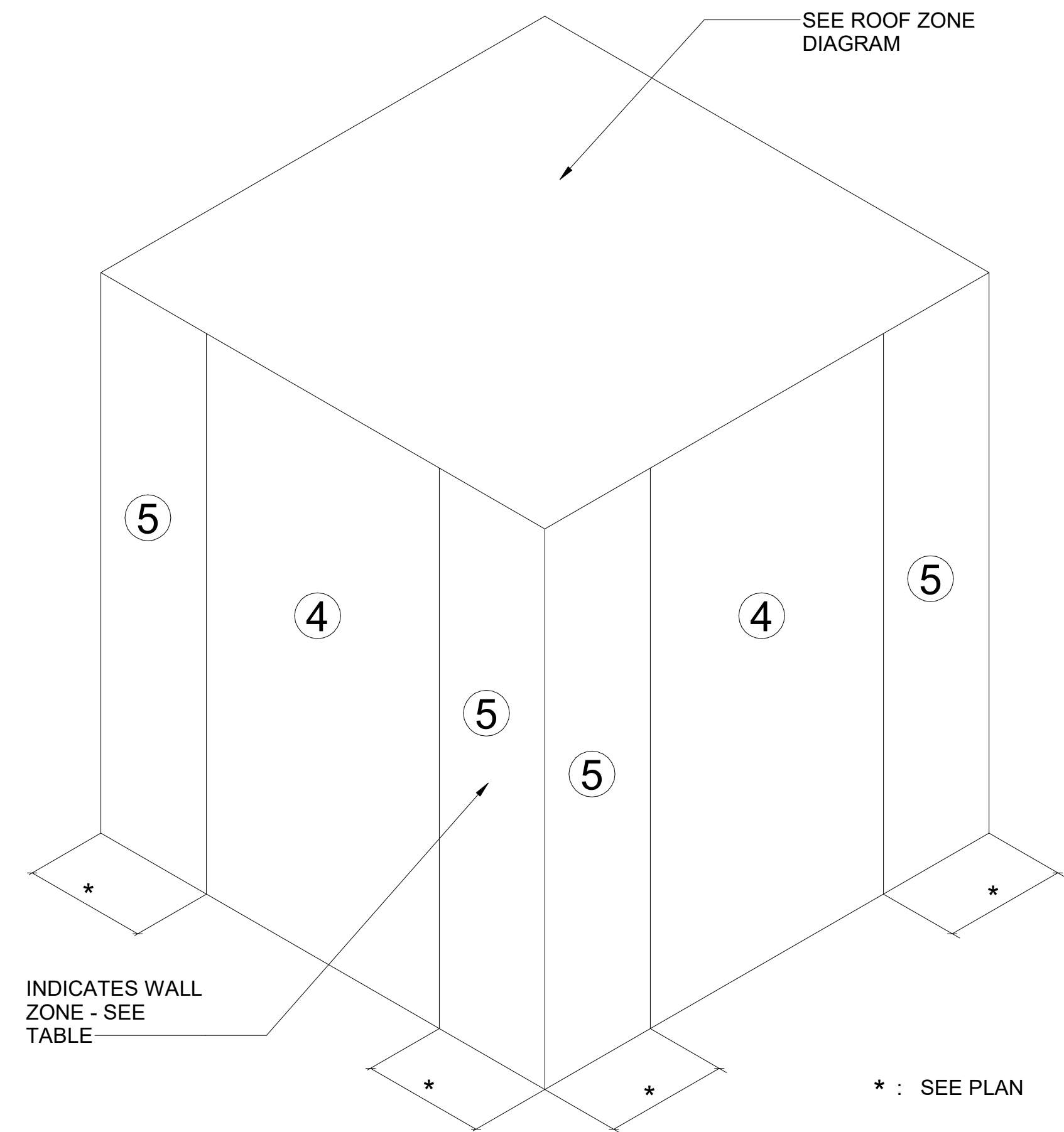
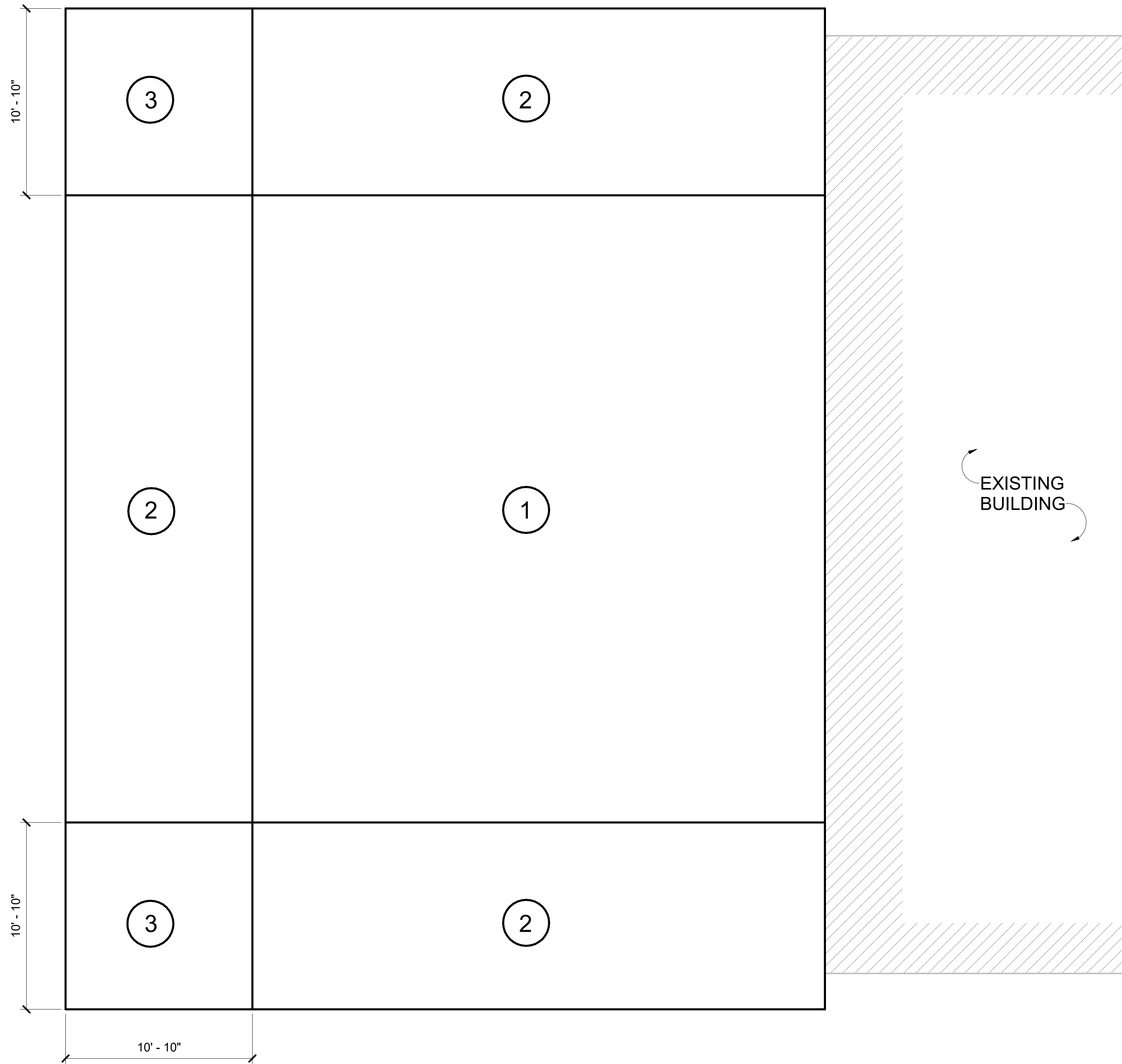


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101 old layette avenue lebanon, kentucky 40502 p 859.254.018



# WIND PRESSURE DIAGRAM



WALL ZONE DIAGRAM

## WIND PRESSURE DIAGRAM NOTES:

- DESIGN WIND PRESSURES WERE CALCULATED IN ACCORDANCE WITH ASCE 7-10 BASED ON AN EFFECTIVE WIND AREA. MULTIPLY BY 0.6 FOR ASD.
- ROOF UPLIFT WIND PRESSURES IN ZONES 1, 2, AND 3 ARE GROSS UPLIFT VALUES. NET UPLIFT PRESSURES SHALL BE CONSIDERED EQUAL TO GROSS PRESSURES.
- TABULATED WIND PRESSURES SHALL BE USED IN THE DESIGN OF EXTERIOR COMPONENT AND CLADDING MATERIALS. INTERPRETATION AND APPLICATION OF THESE PRESSURES TO SPECIFIC PORTIONS OF THE BUILDING AREAS SHALL BE THE RESPONSIBILITY OF THE EXTERIOR COMPONENT AND CLADDING MATERIAL SUPPLIER.
- WHERE PARAPET HEIGHT EXCEEDS 3' - 0", CORNER ZONES (ZONE 3), MAY BE TREATED AS PERIMETER ZONES (ZONE 2).

| EXTERIOR WALL PRESSURES |               |               |
|-------------------------|---------------|---------------|
| AREA (SQ. FT.)          | ZONE 4 (PSF)  | ZONE 5 (PSF)  |
| ≤ 10                    | +32.5 / -35.2 | +32.5 / -43.3 |
| 50                      | +29.2 / -31.9 | +29.2 / -36.7 |
| 100                     | +27.7 / -30.4 | +27.7 / -33.8 |
| 200                     | +26.3 / -29   | +26.3 / -30.9 |
| ≥ 500                   | +24.4 / -27.1 | +24.4 / -27.1 |

| ROOF UPLIFT PRESSURES |               |               |               |
|-----------------------|---------------|---------------|---------------|
| AREA (SQ. FT.)        | ZONE 1 (PSF)  | ZONE 2 (PSF)  | ZONE 3 (PSF)  |
| ≤ 10                  | +14.4 / -35.5 | +14.4 / -59.6 | +14.4 / -89.7 |
| 20                    | +13.5 / -34.6 | +13.5 / -53.3 | +13.5 / -74.3 |
| 50                    | +12.3 / -33.4 | +12.3 / -44.9 | +12.3 / -53.9 |
| 100                   | +11.4 / -32.5 | +11.4 / -38.5 | +11.4 / -38.5 |
| 200                   | +11.4 / -32.5 | +11.4 / -38.5 | +11.4 / -38.5 |
| ≥ 500                 | +11.4 / -32.5 | +11.4 / -38.5 | +11.4 / -38.5 |

WIND PRESSURE DIAGRAM PLAN  
MARION COUNTY MIDDLE SCHOOL ADDITION & REYNOATON  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

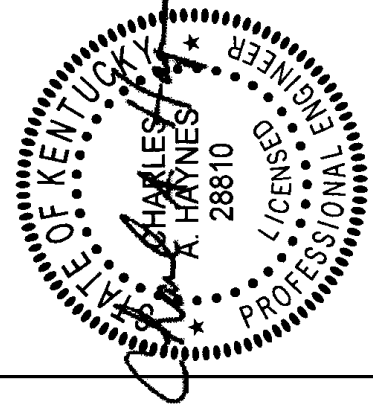
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BG#  
Project No: 1928  
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WIND PRESSURE DIAGRAM  
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# NOTES & SCHEDULES

| Concrete Minimum 28 Day<br>Compressive Strength,<br>f <sub>c</sub> = 3000 psi |             |               |             |               |
|---|-------------|---------------|-------------|---------------|
| Bar<br>Size   | Case 1      |               | Case 2      |               |
|   | Top<br>Bars | Other<br>Bars | Top<br>Bars | Other<br>Bars |
| #3  | 2'-6"       | 2'-0"         | 3'-9"       | 3'-0"         |
| #4  | 3'-3"       | 2'-9"         | 5'-0"       | 3'-9"         |
| #5  | 4'-3"       | 3'-3"         | 6'-0"       | 4'-9"         |
| #6  | 5'-0"       | 3'-9"         | 7'-3"       | 5'-6"         |
| #7  | 7'-0"       | 5'-6"         | 10'-6"      | 8'-0"         |
| #8  | 8'-0"       | 6'-3"         | 11'-9"      | 9'-3"         |
| #9  | 9'-0"       | 7'-0"         | 13'-3"      | 10'-3"        |
| #10   | 10'-0"      | 7'-9"         | 15'-0"      | 11'-6"        |
| #11   | 11'-3"      | 8'-9"         | 16'-6"      | 12'-9"        |

| Concrete Minimum 28 Day<br>Compressive Strength,<br>f <sub>c</sub> = 4000 psi |             |               |             |               |
|---|-------------|---------------|-------------|---------------|
| Bar<br>Size   | Case 1      |               | Case 2      |               |
|   | Top<br>Bars | Other<br>Bars | Top<br>Bars | Other<br>Bars |
| #3  | 2'-3"       | 1'-9"         | 3'-3"       | 2'-6"         |
| #4  | 3'-0"       | 2'-3"         | 4'-3"       | 3'-3"         |
| #5  | 3'-6"       | 2'-9"         | 5'-3"       | 4'-3"         |
| #6  | 5'-3"       | 4'-0"         | 7'-9"       | 6'-0"         |
| #7  | 7'-6"       | 5'-9"         | 11'-3"      | 8'-9"         |
| #8  | 8'-6"       | 6'-6"         | 12'-9"      | 9'-9"         |
| #9  | 9'-6"       | 7'-6"         | 14'-3"      | 11'-0"        |
| #10   | 10'-9"      | 8'-3"         | 16'-0"      | 12'-6"        |
| #11   | 12'-0"      | 9'-3"         | 17'-9"      | 13'-9"        |

## SPLICE LENGTH NOTES:

Case #1: For beams and columns, concrete cover greater than or equal to bar diameter, bar spacing greater than or equal to 2 times bar diameter, and ties as specified on the drawings. For other members, concrete cover greater than or equal to bar diameter and bar spacing greater than or equal to 3 times bar diameter.

Case #2: For beams and columns, concrete cover less than bar diameter and bar spacing less than 2 bar diameters. For other members, concrete cover less than bar diameter and bar spacing less than 3 times bar diameter.

| Concrete Minimum 28 Day<br>Compressive Strength,<br>f <sub>c</sub> = 5000 psi |             |               |             |               |
|---|-------------|---------------|-------------|---------------|
| Bar<br>Size   | Case 1      |               | Case 2      |               |
|   | Top<br>Bars | Other<br>Bars | Top<br>Bars | Other<br>Bars |
| #3  | 2'-0"       | 1'-9"         | 3'-0"       | 2'-3"         |
| #4  | 2'-9"       | 2'-3"         | 3'-9"       | 3'-0"         |
| #5  | 3'-3"       | 2'-6"         | 4'-9"       | 3'-9"         |
| #6  | 4'-9"       | 3'-9"         | 7'-0"       | 5'-6"         |
| #7  | 6'-9"       | 5'-3"         | 10'-0"      | 7'-9"         |
| #8  | 7'-9"       | 6'-0"         | 11'-6"      | 8'-9"         |
| #9  | 8'-9"       | 6'-9"         | 12'-9"      | 10'-0"        |
| #10   | 9'-9"       | 7'-6"         | 14'-6"      | 11'-3"        |
| #11   | 10'-9"      | 8'-3"         | 16'-0"      | 12'-3"        |

| Concrete Minimum 28 Day<br>Compressive Strength,<br>f <sub>c</sub> = 6000 psi |             |               |             |               |
|---|-------------|---------------|-------------|---------------|
| Bar<br>Size   | Case 1      |               | Case 2      |               |
|   | Top<br>Bars | Other<br>Bars | Top<br>Bars | Other<br>Bars |
| #3  | 2'-0"       | 1'-6"         | 2'-9"       | 2'-3"         |
| #4  | 2'-6"       | 2'-0"         | 3'-6"       | 2'-9"         |
| #5  | 3'-0"       | 2'-3"         | 4'-3"       | 3'-6"         |
| #6  | 3'-6"       | 2'-9"         | 5'-3"       | 4'-0"         |
| #7  | 5'-0"       | 4'-0"         | 8'-6"       | 6'-6"         |
| #8  | 5'-9"       | 4'-6"         | 8'-6"       | 6'-6"         |
| #9  | 6'-6"       | 5'-0"         | 9'-6"       | 7'-3"         |
| #10   | 7'-3"       | 5'-6"         | 10'-9"      | 8'-3"         |
| #11   | 8'-0"       | 6'-3"         | 11'-9"      | 9'-3"         |

Top bars are horizontal reinforcement with more than 12" of fresh concrete placed below the splice.

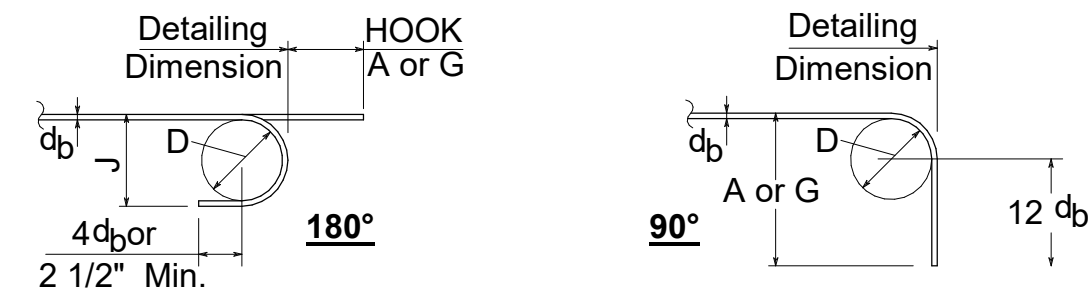
Where indicated on the drawings, class "A" lap splice lengths may be calculated by dividing tabulated values by 1.3.

As contractor's alternate, class "B" splice lengths may be calculated by the steel reinforcement detailer in accordance with ACI 318 and submitted for review.

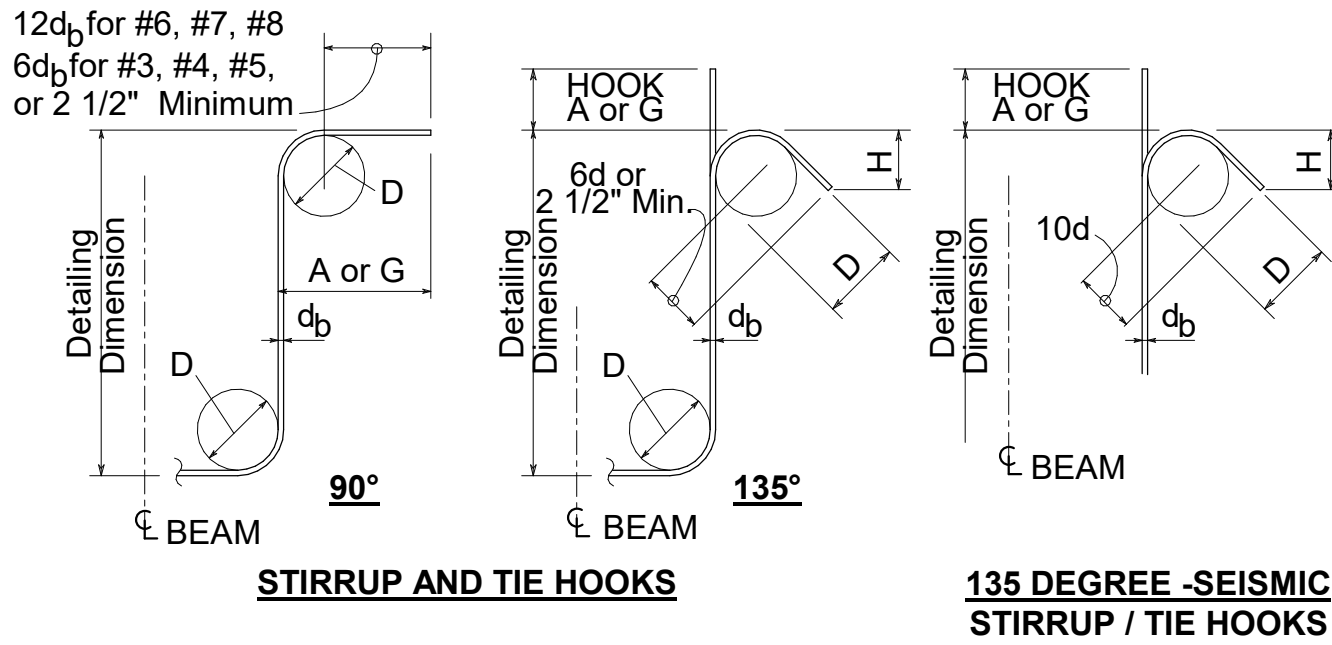
Tension couplers may be used and installed in accordance with manufacturer's recommendations and shall be capable of developing 125% of the reinforcing steel ASTM specified minimum yield strength.

For lightweight structural concrete, multiply lap splice lengths by 1.3

## CONCRETE REINFORCEMENT CLASS "B" SPLICE LENGTHS (UNO)



| RECOMMENDED END HOOKS , ALL GRADES |  |                |           |                             |
|------------------------------------|--|----------------|-----------|-----------------------------|
| BAR<br>SIZE                        | FINISHED<br>BEND<br>DIAMETER<br>D, in. | 180 DEG. HOOKS |           | 90 DEG HOOKS<br>A or G, in. |
|                                    |  | A or G, in.    | J, in.    |                             |
| #3                                 | 2 1/4"                                 | 5"             | 3"        | 6"                          |
| #4                                 | 3"                                     | 6"             | 4"        | 8"                          |
| #5                                 | 3 3/4"                                 | 7"             | 5"        | 10"                         |
| #6                                 | 4 1/2"                                 | 8"             | 6"        | 1'-0"                       |
| #7                                 | 5 1/4"                                 | 10"            | 7"        | 1'-2"                       |
| #8                                 | 6"                                     | 11"            | 8"        | 1'-4"                       |
| #9                                 | 9 1/2"                                 | 1'-3"          | 11 3/4"   | 1'-7"                       |
| #10                                | 10 3/4"                                | 1'-5"          | 1'-1 1/4" | 1'-10"                      |
| #11                                | 12"                                    | 1'-7"          | 1'-2 3/4" | 2'-0"                       |
| #14                                | 18 1/4"                                | 2'-3"          | 1'-9 3/4" | 2'-7"                       |
| #18                                | 24"                                    | 3'-0"          | 2'-4 1/2" | 3'-5"                       |



| BAR<br>SIZE | D, in* | STIRRUP & TIE<br>HOOK DIMENSIONS, in.* |         |              | 135° STIRRUP - TIE<br>HOOK DIMENSIONS, in.* |              |
|-------------|--------|--|---------|--------------|---|--------------|
|             |        | 135° HOOKS                             |         |              | 135° HOOKS                                  |              |
|             |        | A or G                                 | A or G  | H<br>APPROX. | A or G                                      | H<br>APPROX. |
| #3          | 1 1/2" | 4"                                     | 4"      | 2 1/2"       | 4 1/4"                                      | 3"           |
| #4          | 2"     | 4 1/2"                                 | 4 1/2"  | 3"           | 4 1/2"                                      | 3"           |
| #5          | 2 1/2" | 6"                                     | 5 1/2"  | 3 3/4"       | 5 1/2"                                      | 3 3/4"       |
| #6          | 4 1/2" | 1'-0"                                  | 8"      | 4 1/2"       | 8"  | 4 1/2"       |
| #7          | 5 1/4" | 1'-2"                                  | 9"      | 5 1/4"       | 9"  | 5 1/4"       |
| #8          | 6"     | 1'-4"                                  | 10 1/2" | 6"           | 10 1/2"                                     | 6"           |

\* GRADES 40, 50 and 60

## TYPICAL BAR HOOK DETAILS

| WALL FOOTING SCHEDULE |               |             |            |         |
|-----------------------|---------------|-------------|------------|---------|
| MARK                  | SIZE          | REINFORCING |            | REMARKS |
|                       | WIDTH & DEPTH | CONTINUOUS  | TRANSVERSE |         |
| WF2.0                 | 2'-0"x1'-0"   | 3 - #5      | #4 @ 24"   | -----   |
| WF3.0                 | 3'-0"x        |             |            |         |
| WF3.5                 | 3'-6"x        |             |            |         |
| WF4.5                 | 4'-6"x        |             |            |         |
|                       |               |             |            |         |
|                       |               |             |            |         |

## STRUCTURAL ABBREVIATIONS

|            |                                     |
|------------|-------------------------------------|
| AFF        | ABOVE FINISHED FLOOR                |
| ALT.       | ALTERNATE                           |
| ARCH.      | ARCHITECT/ARCHITECTURE              |
| BLDG.      | BUILDING                            |
| BRG        | BEARING                             |
| B or BOT.  | BOTTOM                              |
| B/xxx      | BOTTOM OF SOMETHING                 |
| CJ         | CONTRACTION/CONSTRUCTION JOINT      |
| CL         | CENTERLINE                          |
| CLR        | CLEAR                               |
| CMU        | CONCRETE MASONRY UNIT               |
| COL        | COLUMN                              |
| CONC.      | CONCRETE                            |
| CONN.      | CONNECTION                          |
| CONT.      | CONTINUOUS/CONTINUED                |
| COORD.     | COORDINATE                          |
| DBL        | DOUBLE                              |
| DIA.       | DIAMETER                            |
| DL         | DEAD LOAD                           |
| DP         | DRILLED PIER                        |
| DWG, DWGS  | DRAWING(S)                          |
| EA.        | EACH                                |
| EE         | EACH END                            |
| EF         | EACH FACE                           |
| EW         | EACH WAY                            |
| EJ         | EXPANSION JOINT                     |
| EL         | ELEVATION                           |
| EQ.        | EQUAL                               |
| ELEV       | ELEVATOR                            |
| EMBED.     | EMBEDMENT/EMBEDDED                  |
| EOS        | EDGE OF SLAB                        |
| EQUIP.     | EQUIPMENT                           |
| EXIST.     | EXISTING                            |
| EXP.       | EXPANSION                           |
| EXT.       | EXTERIOR                            |
| F/xxx      | FACE OF SOMETHING                   |
| FD         | FIELD DETERMINED                    |
| FDN        | FOUNDATION                          |
| FIN.       | FINISHED                            |
| FLG        | FLANGE                              |
| FLR or FL. | FLOOR                               |
| FS         | FAR SIDE                            |
| FT         | FEET                                |
| FTG        | FOOTING                             |
| FV         | FIELD VERIFY                        |
| GAGE       | GAGE                                |
| GALV.      | GALVANIZED                          |
| HDD        | HEADED                              |
| HORIZ.     | HORIZONTAL                          |
| ICF        | INSULATED CONCRETE FORM             |
| INFO.      | INFORMATION                         |
| INT.       | INTERIOR                            |
| JOINT      | JOINT                               |
| JST        | JOIST                               |
| K          | KIPS                                |
| KSI        | KIPS PER SQUARE INCH                |
| KSF        | KIPS PER SQUARE FOOT                |
| LBS or #   | POUNDS                              |
| LL         | LIVE LOAD                           |
| LLH        | LONG LEG HORIZONTAL                 |
| LLO        | LONG LEG OUTSTANDING                |
| LLV        | LONG LEG VERTICAL                   |
| MPE        | MECHANICAL, PLUMBING AND ELECTRICAL |
| MFR        | MANUFACTURER                        |
| MATL       | MATERIAL                            |
| MAX.       | MAXIMUM                             |
| MECH.      | MECHANICAL                          |
| MIN.       | MINIMUM                             |
| MISC.      | MISCELLANEOUS                       |
| No. or #   | NUMBER                              |
| NS         | NEAR SIDE                           |
| N/A        | NOT APPLICABLE                      |
| NTS        | NOT TO SCALE                        |
| OH         | OPPOSITE HAND                       |
| OPP.       | OPPOSITE                            |
| PART.      | PARTIAL, OR PARTITION               |
| PL         | PLATE                               |
| PH         | PENTHOUSE                           |
| PSF        | POUNDS PER SQUARE FOOT              |
| PSI        | POUNDS PER SQUARE INCH              |
| R          | REACTION                            |
| RAD.       | RADIUS                              |
| RD         | ROOF DRAIN                          |
| REINF.     | REINFORCING/REINFORCEMENT           |
| REQD       | REQUIRED                            |
| REV.       | REVISION/REVISED                    |
| RTU        | ROOF TOP UNIT                       |
| SDS        | SELF-DRILLING SCREWS                |
| SECT.      | SECTION                             |
| SIM        | SIMILAR                             |
| SPECS      | SPECIFICATIONS                      |
| SQ.        | SQUARE                              |
| STD        | STANDARD                            |
| STIFF.     | STIFFENER                           |
| STL        | STEEL                               |
| SYM.       | SYMMETRICAL                         |
| T          | TOP                                 |
| t          | THICKNESS                           |
| T/xxx      | TOP OF SOMETHING                    |
| THK        | THICK                               |
| TYP.       | TYPICAL                             |
| UNO        | UNLESS NOTED OTHERWISE              |
| VERT.      | VERTICAL                            |
| w/         | WITH                                |
| w/o        | WITHOUT                             |
| WP         | WORK POINT                          |
| WT         | WEIGHT                              |
| WWR        | WELDED WIRE REINFORCEMENT           |

NOTES & SCHEDULES  
MARION COUNTY MIDDLE SCHOOL ADDITION & REYNOLDS  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

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Drawn By: CCA  
Rev'd By: CH

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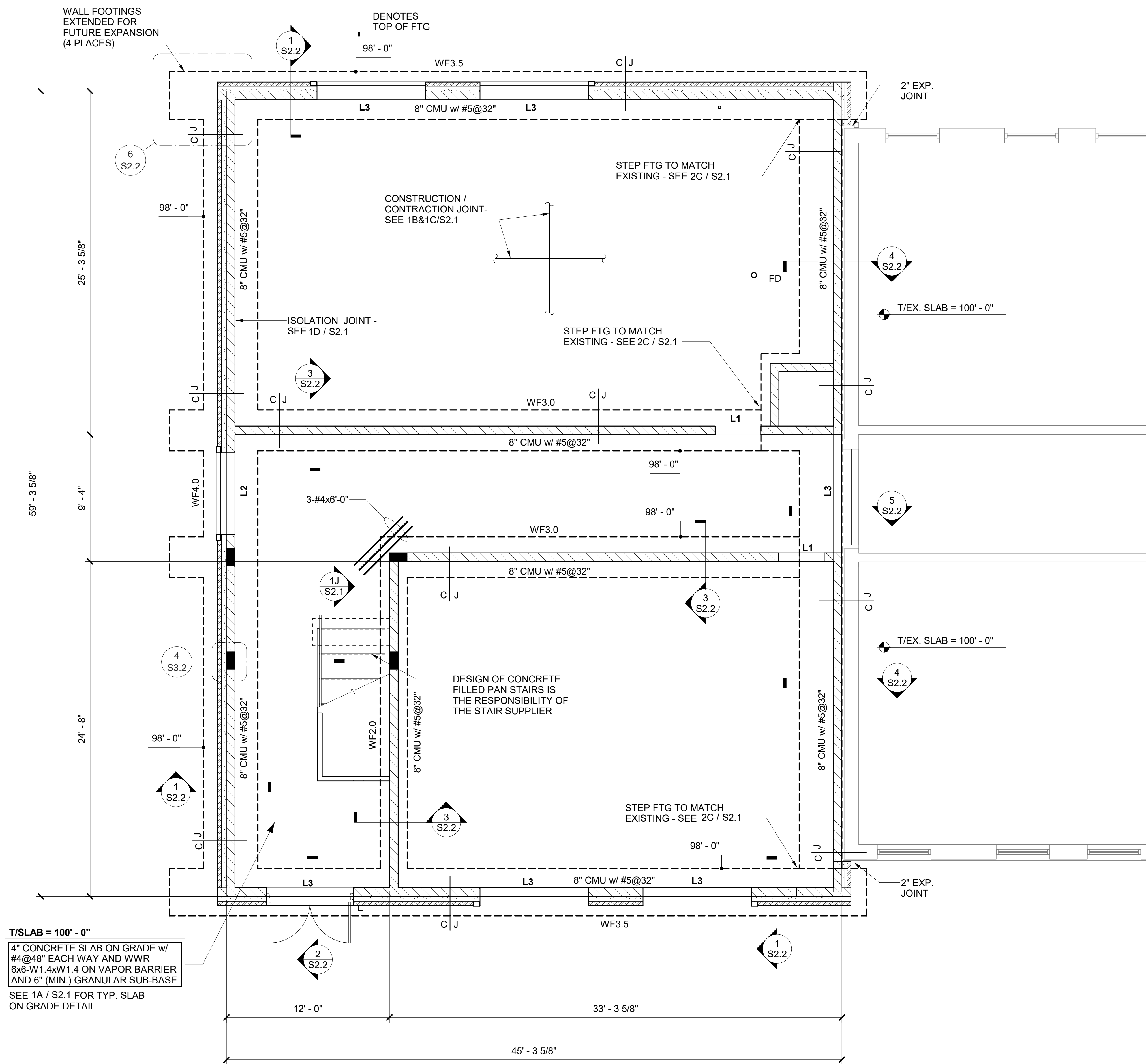
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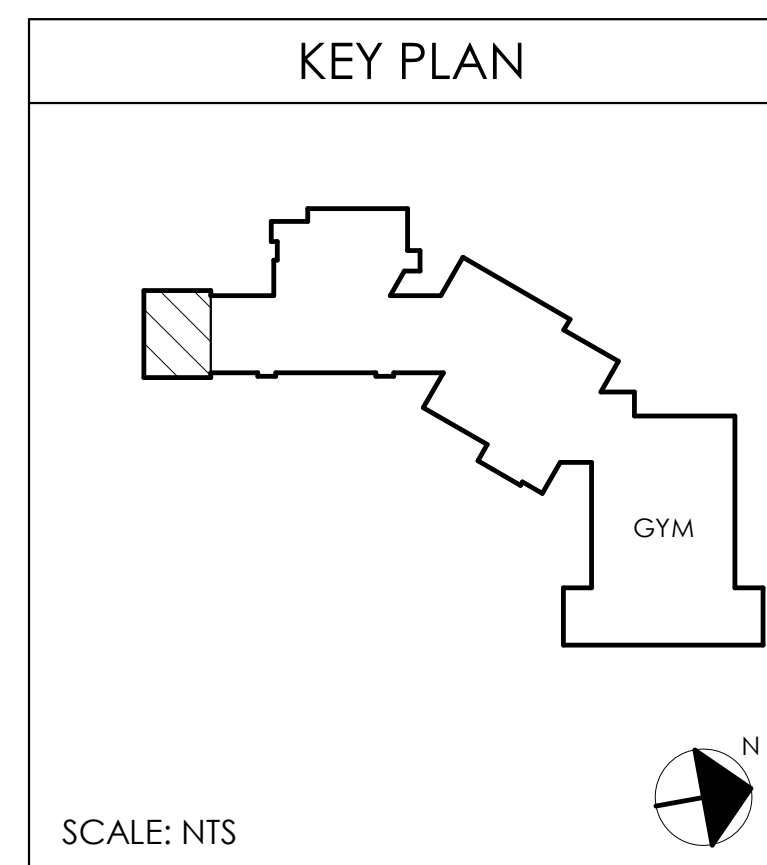
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FOUNDATION PLAN

1/4" = 1'-0"



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FOUNDATION PLAN

MARION COUNTY MIDDLE SCHOOL ADDITION & REYNOATON

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

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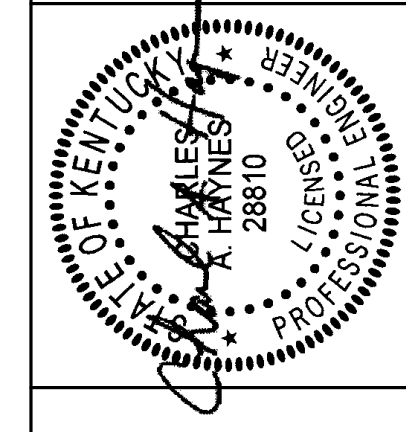
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220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG#

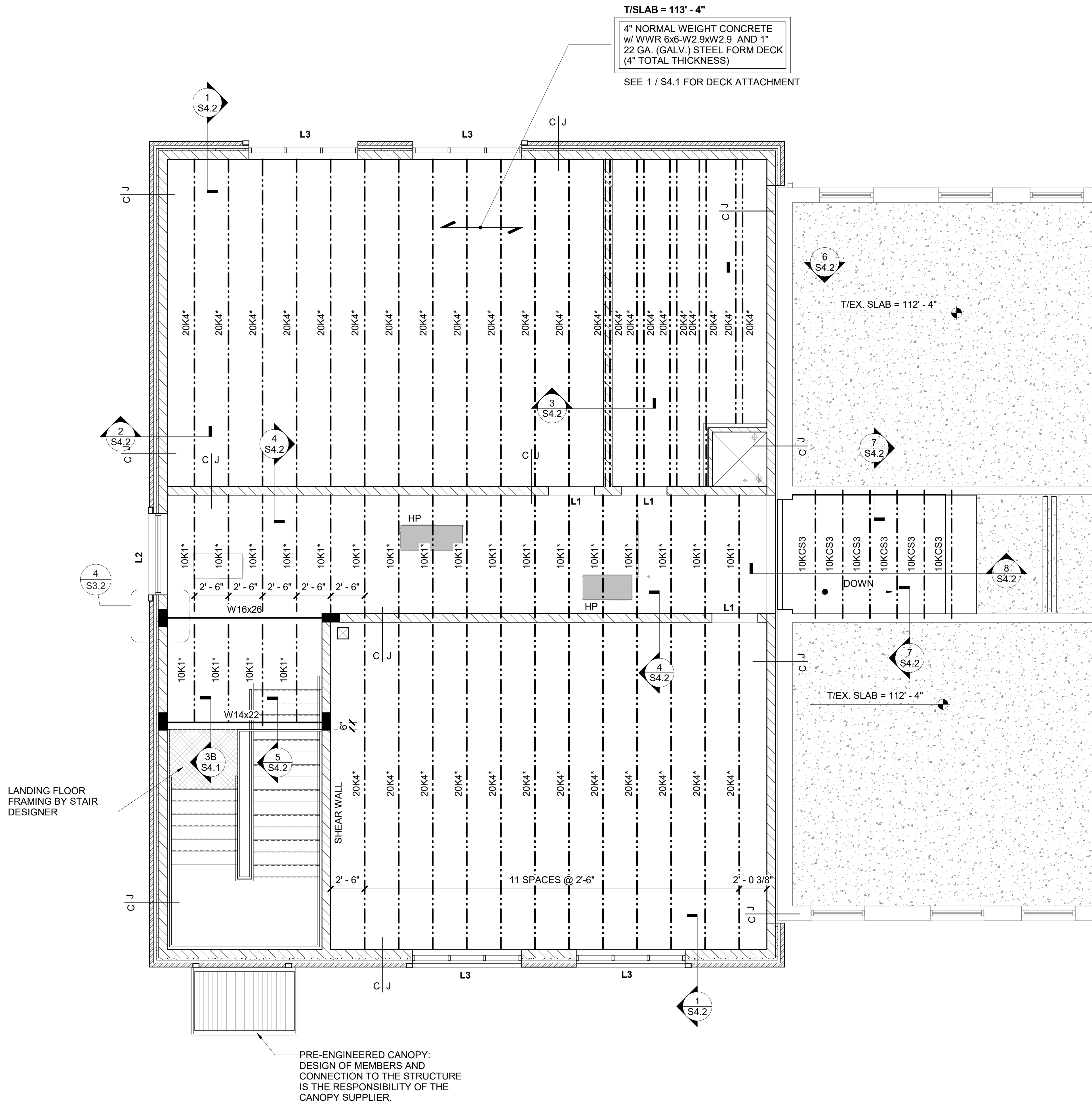
Project No: 1928

Drawn By: CCA

Rev'd By: CH

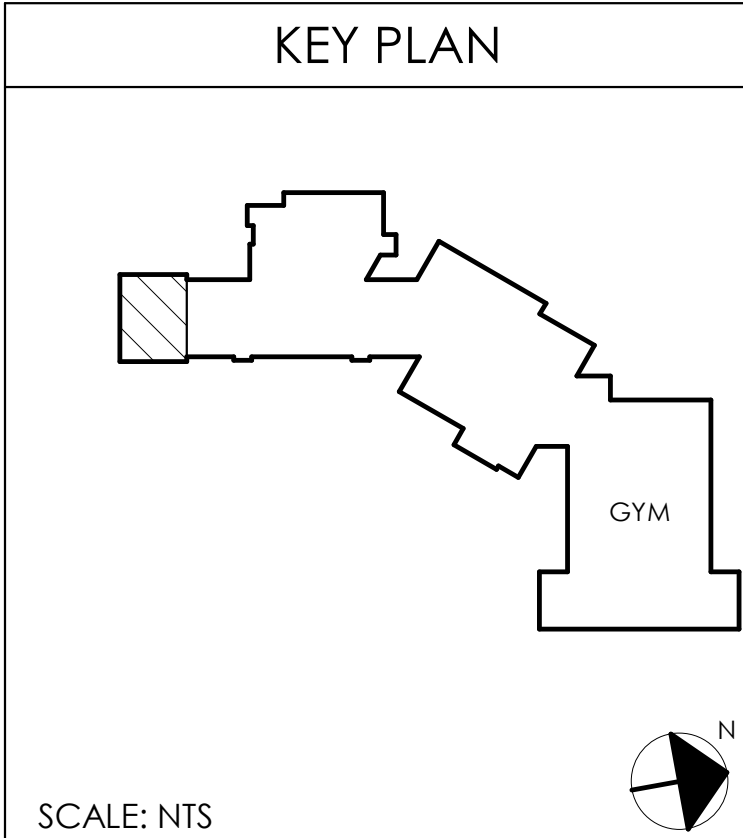






## SECOND FLOOR FRAMING PLAN

1/4" = 1'-0"



## SECOND FLOOR FRAMING PLAN MARION COUNTY MIDDLE SCHOOL ADDITION & REVENOATION FOR: MARION COUNTY BOARD OF EDUCATION LEBANON, KENTUCKY

M.E.&P. Engineer:  
CMLA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.253.0892

Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG#

Project No: 1928

Drawn By: CCA

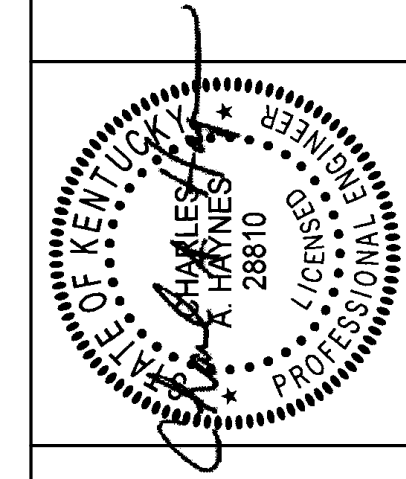
Rev'd By: CH

| SHEET RELEASE |  |
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**S1.2**

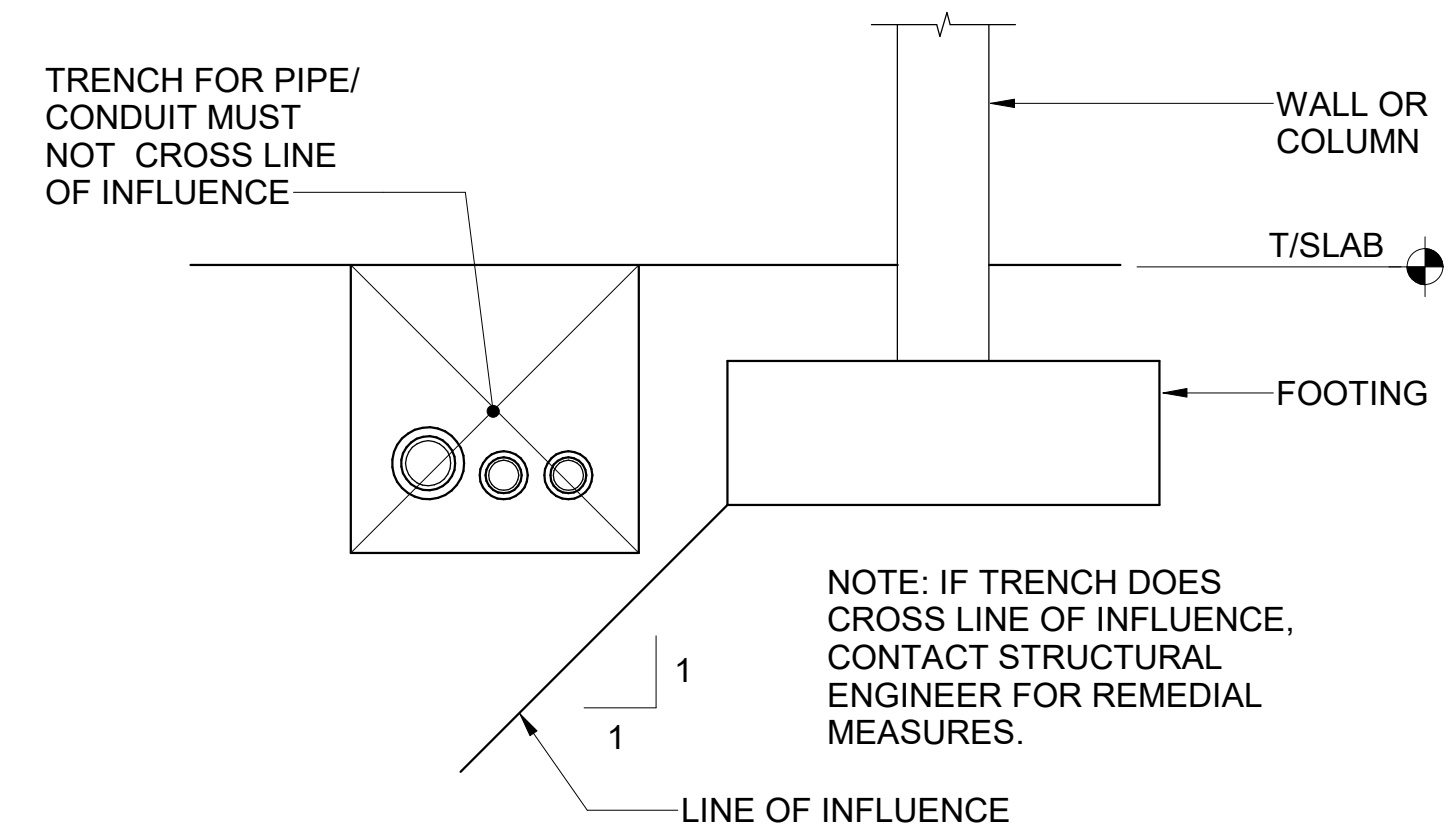
SECOND FLOOR FRAMING  
PLAN  
DATE ISSUED:  
OCTOBER 2019



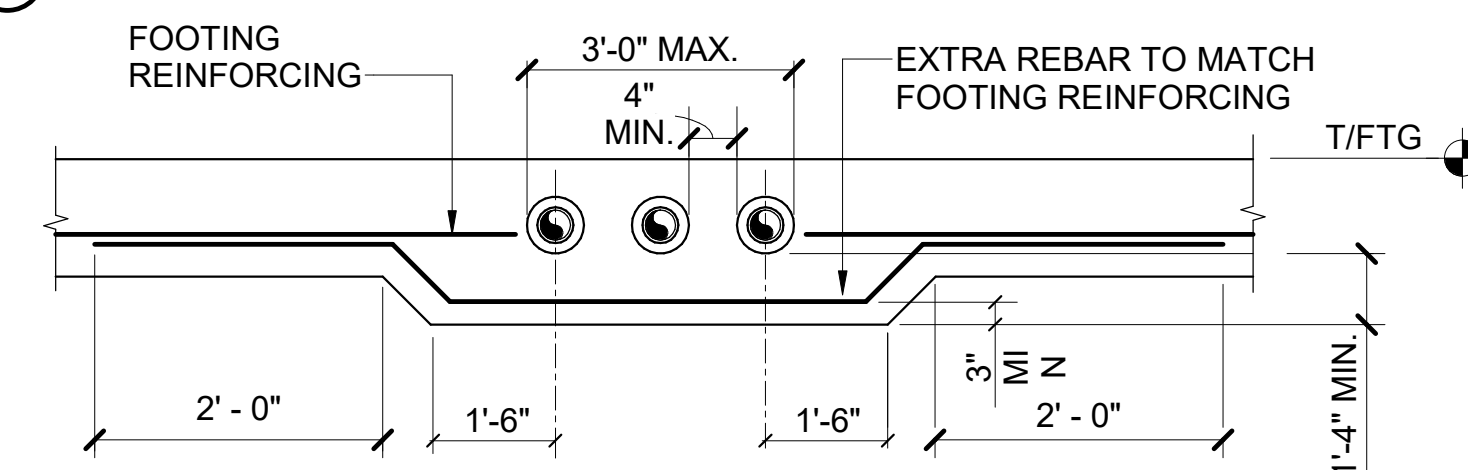




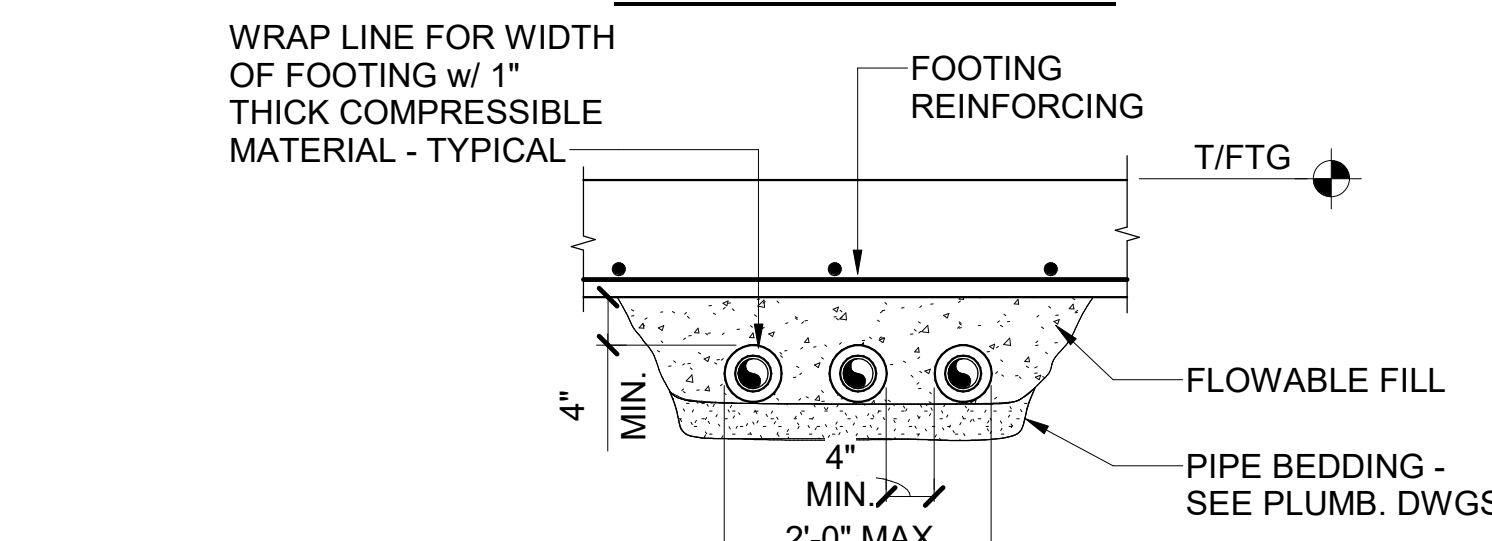




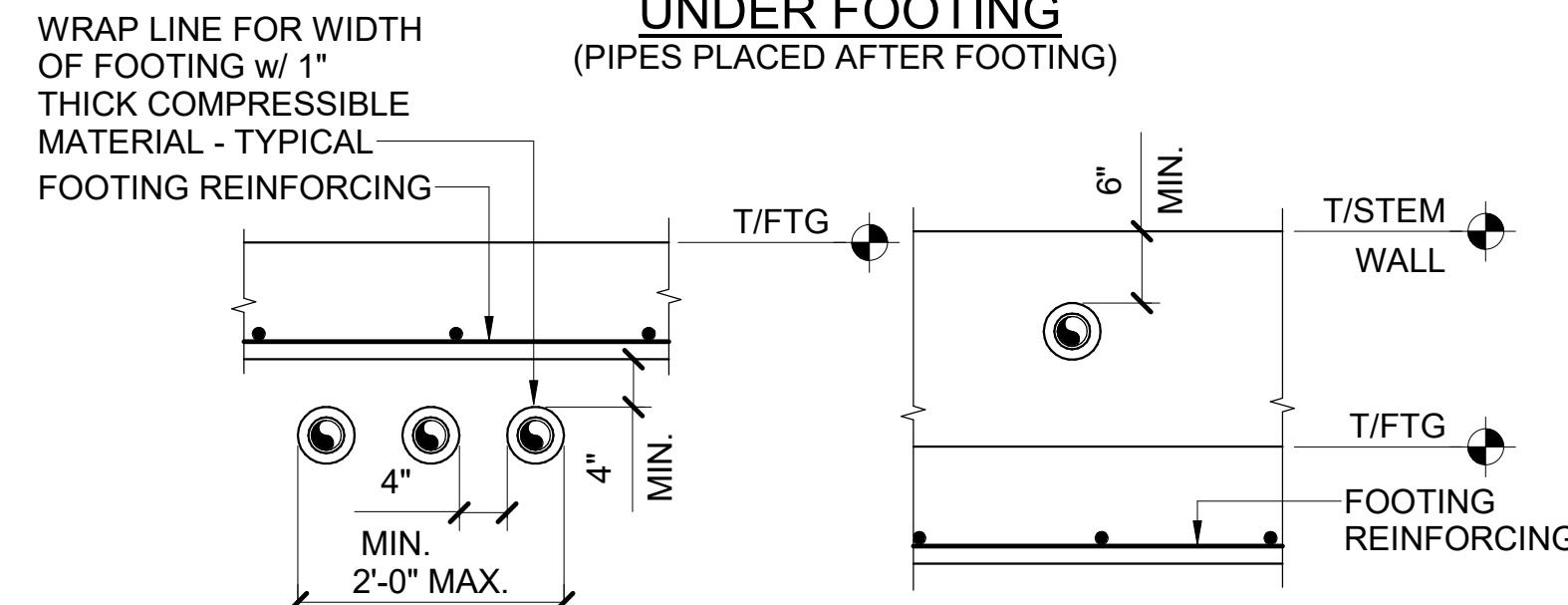
## 2F PIPE/CONDUIT TRENCH PARALLEL TO FOOTING



THROUGH FOOTING



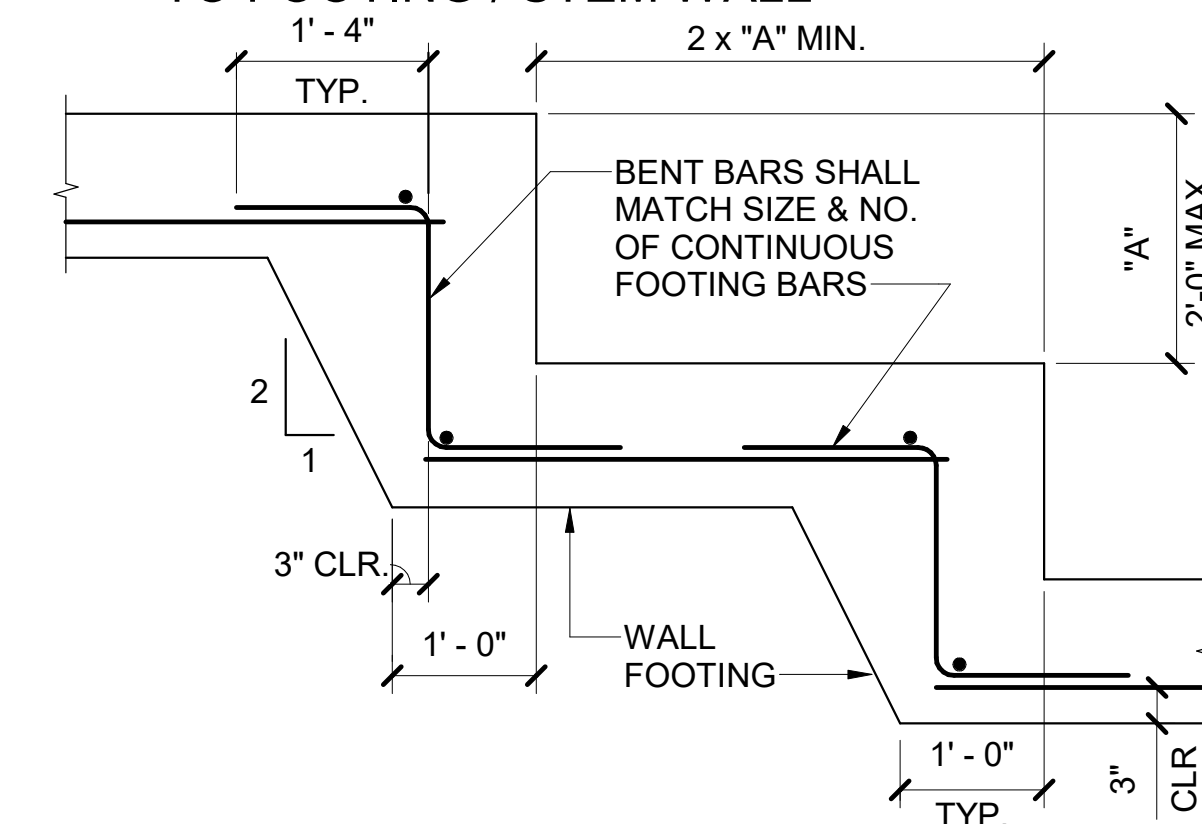
UNDER FOOTING



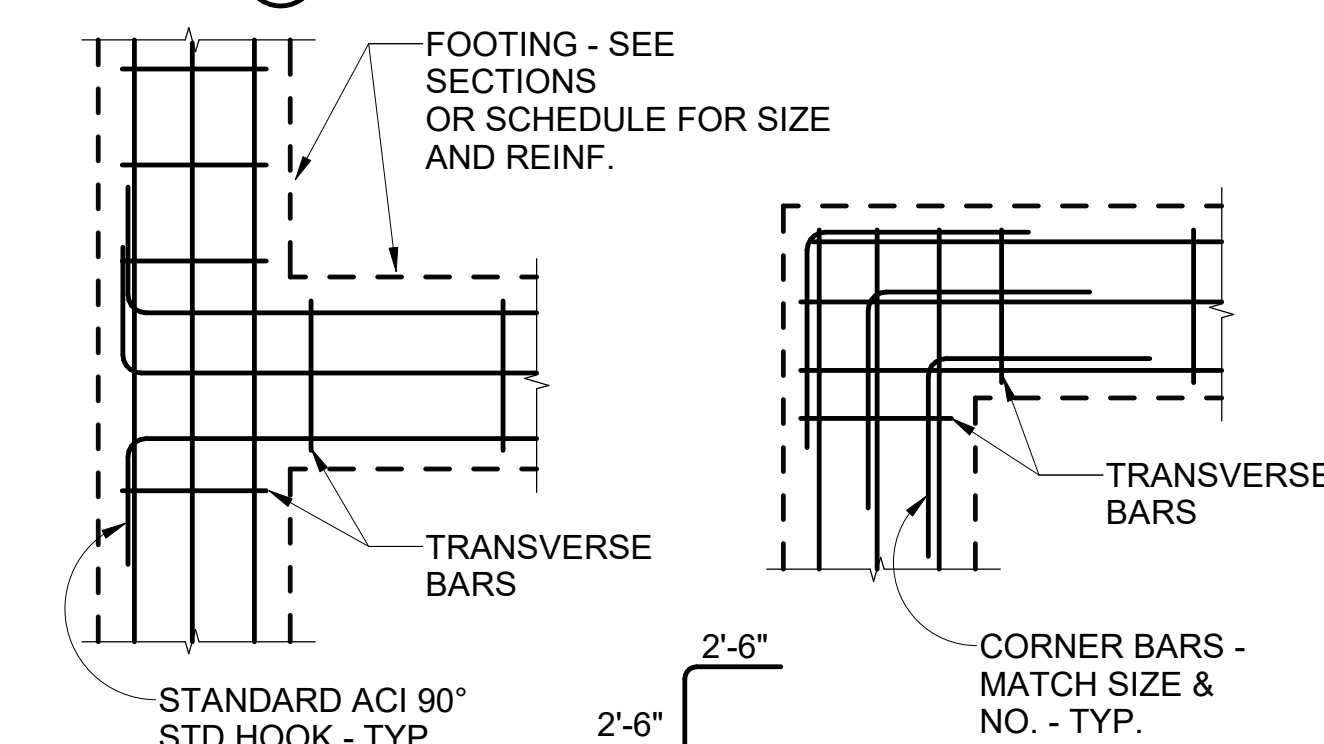
UNDER FOOTING  
(PIPES PLACE PRIOR TO FOOTING)

THRU STEM WALL

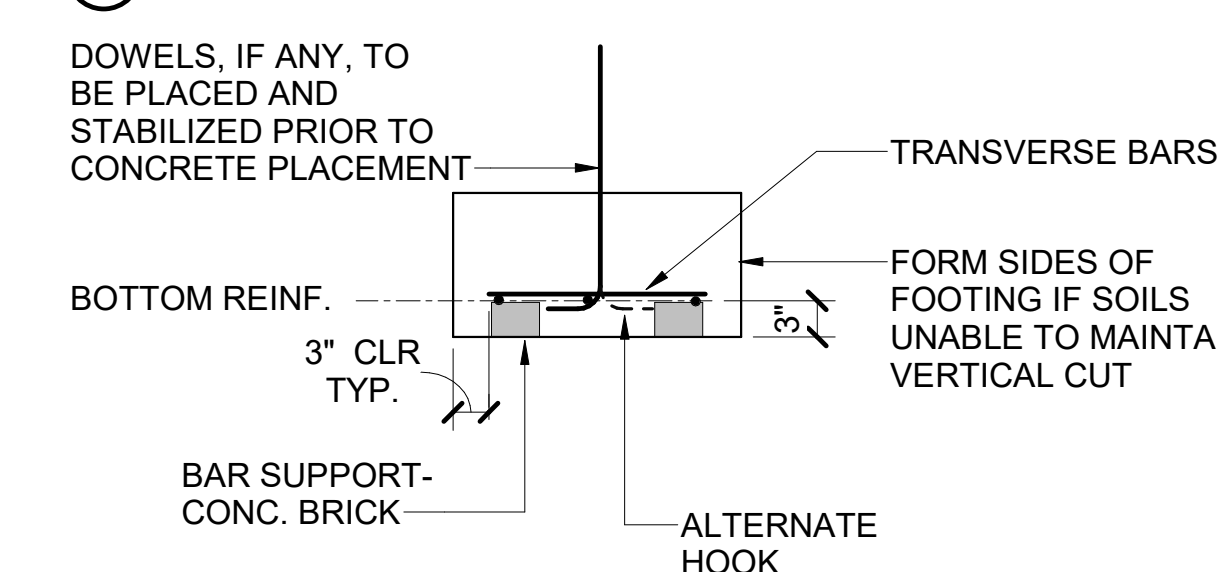
②D PIPE/CONDUIT LINES PERPENDICULAR  
TO FOOTING / STEM WALL



2C STEP FOOTING DETAIL

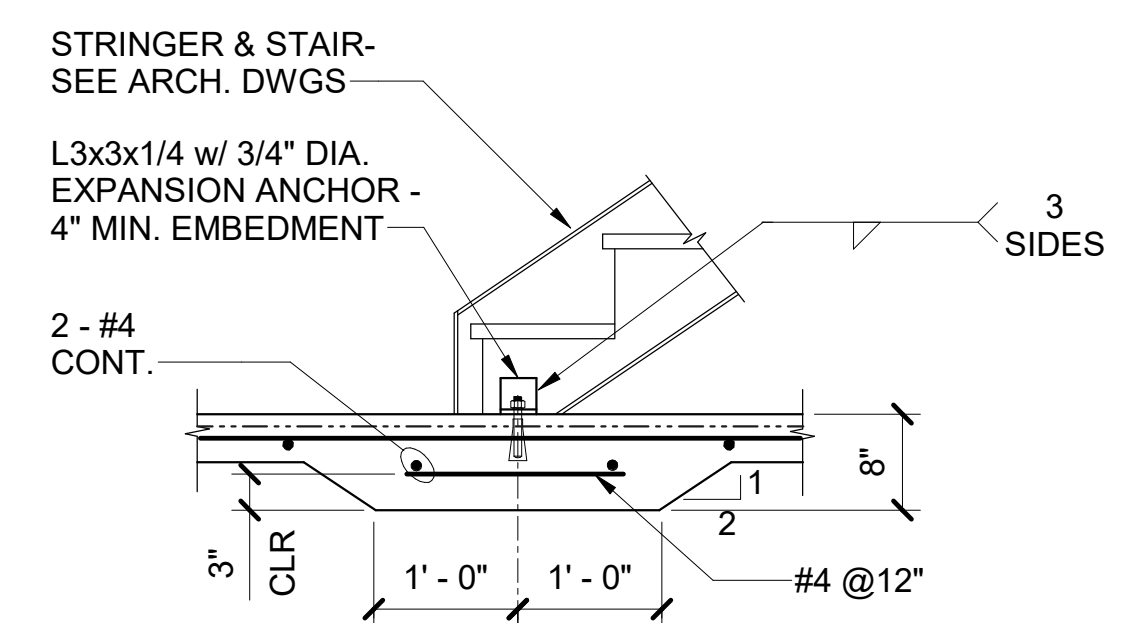


2B FOOTING CORNER REINFORCEMENT

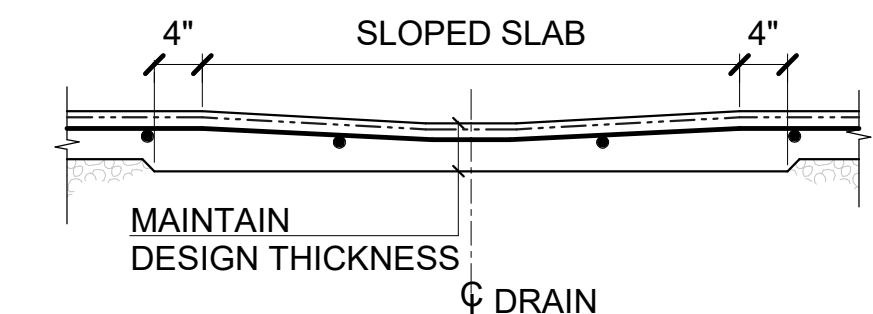


2A TYPICAL CONTINUOUS FOOTING DETAIL

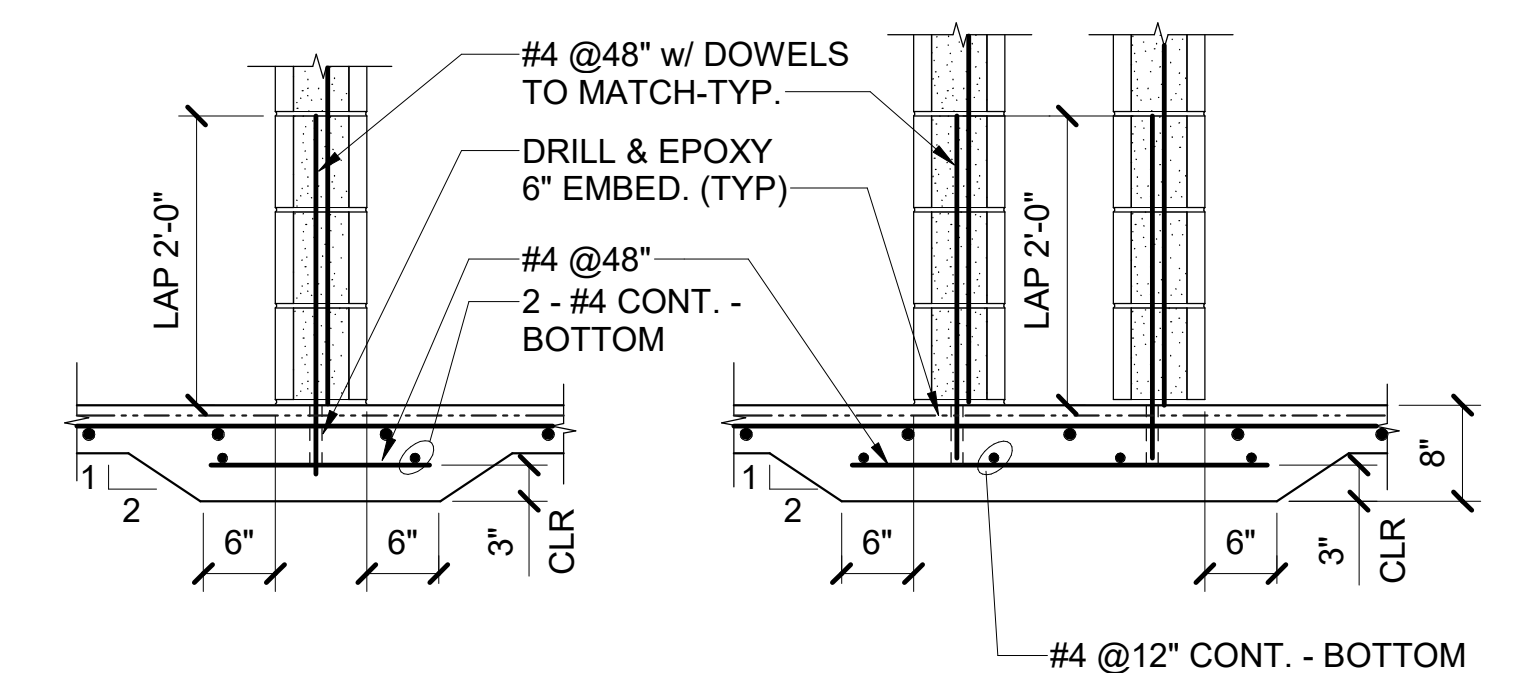
## TYPICAL FOOTING DETAILS



①J THICKENED SLAB-ON-GRADE AT  
AT STEEL STAIR STRINGERS

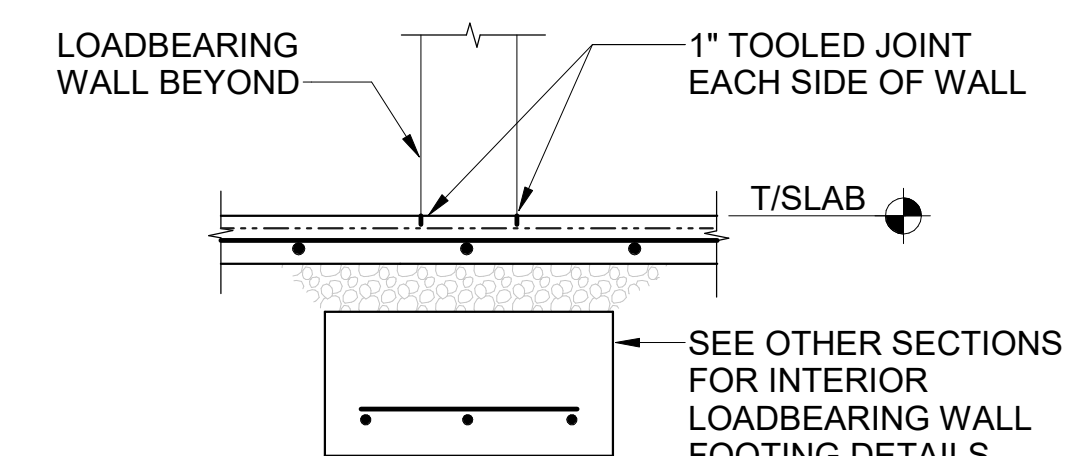


**(1H) SLOPED SLAB AT FLOOR DRAIN**

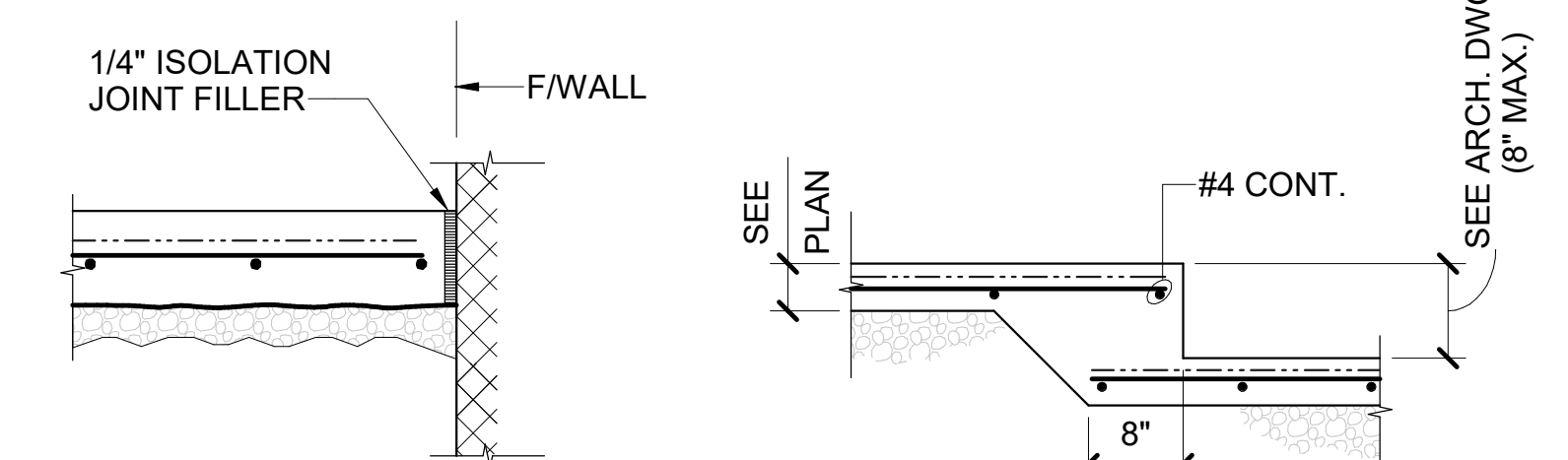
AT CONTINUOUS SLAB

AT DOUBLE WALL

**1G THICKENED SLAB AT NON-LOADBEARING CMU WALLS**

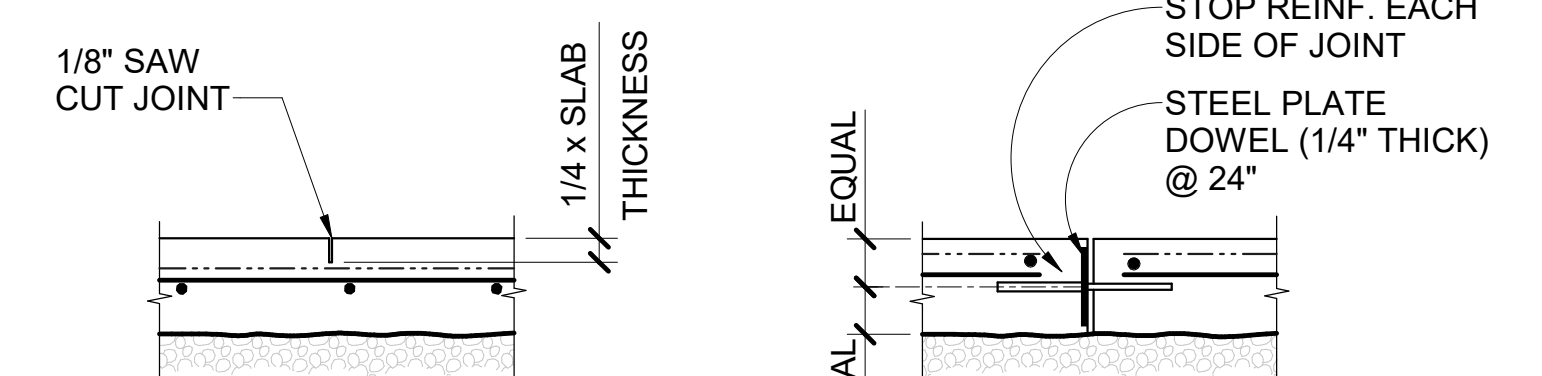


1F CONTRACTION JOINT AT DOORS



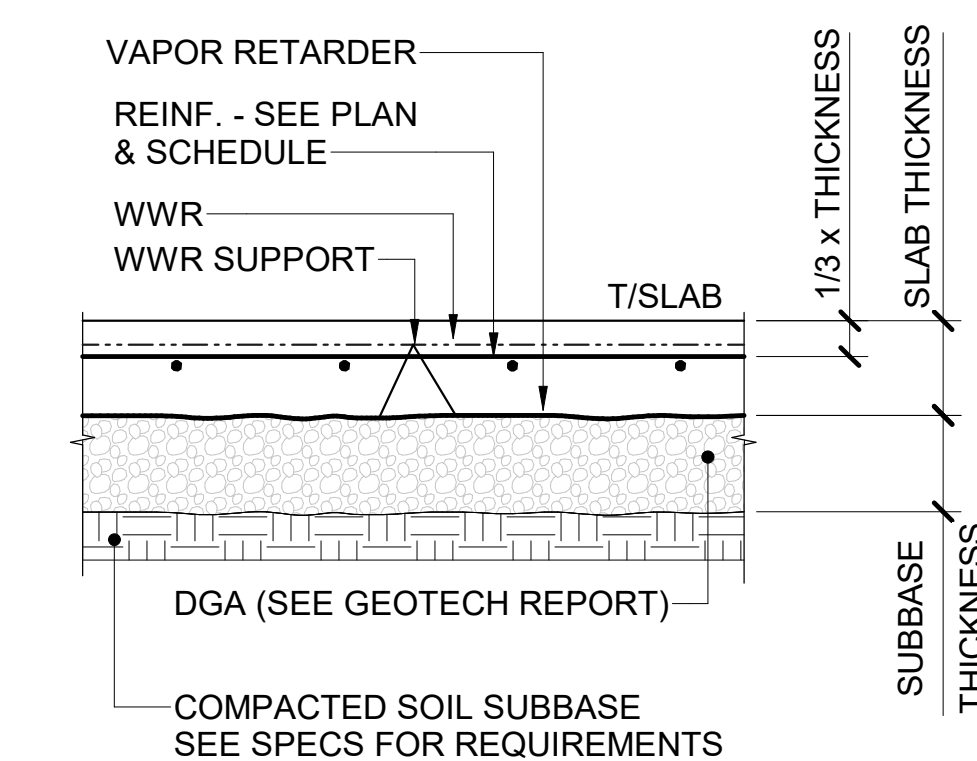
①D ISOLATION JOINT

①F SLAB RECESS



1B) CONTRACTION JOINT  
(AT 16'-0" MAX.)

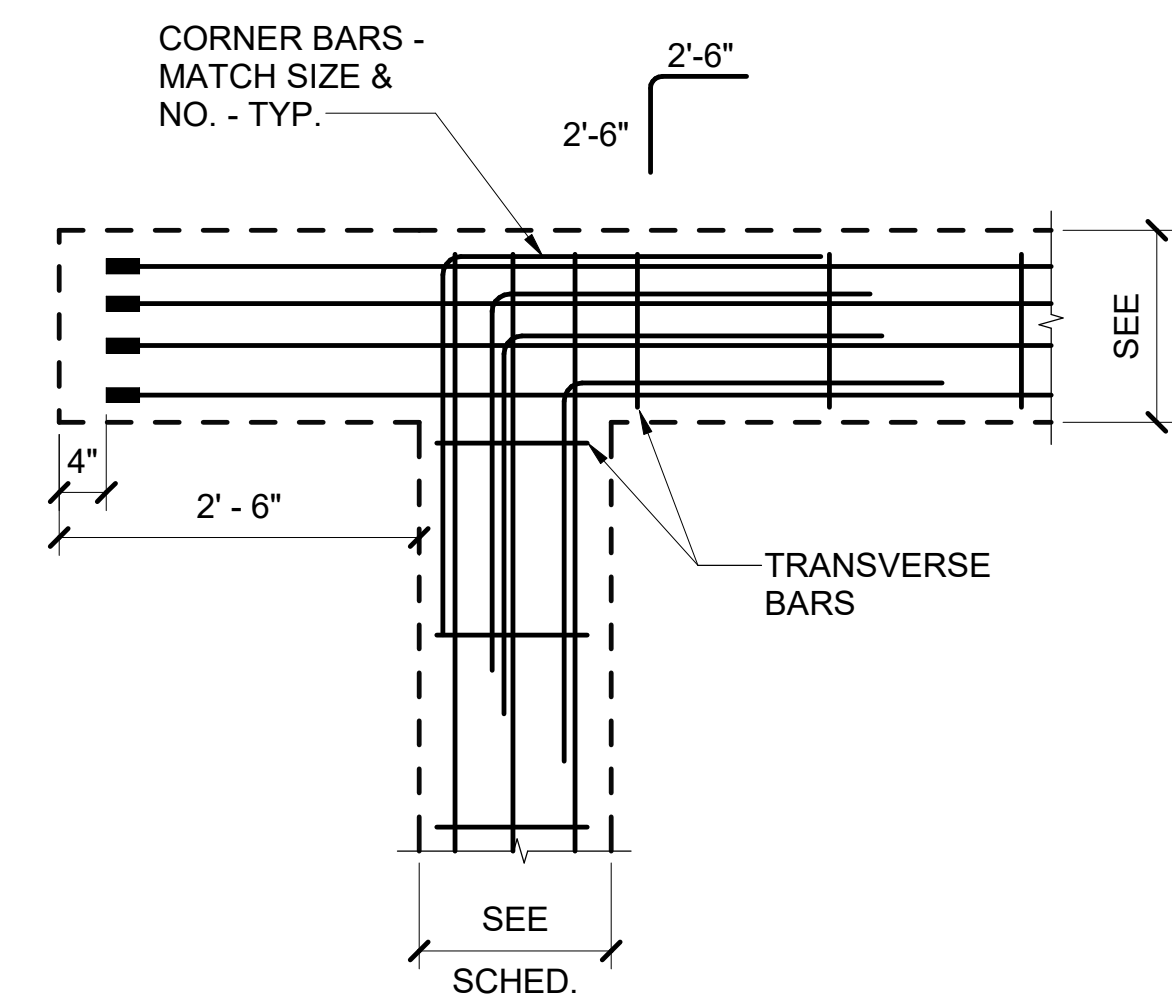
1C CONSTRUCTION JOINT



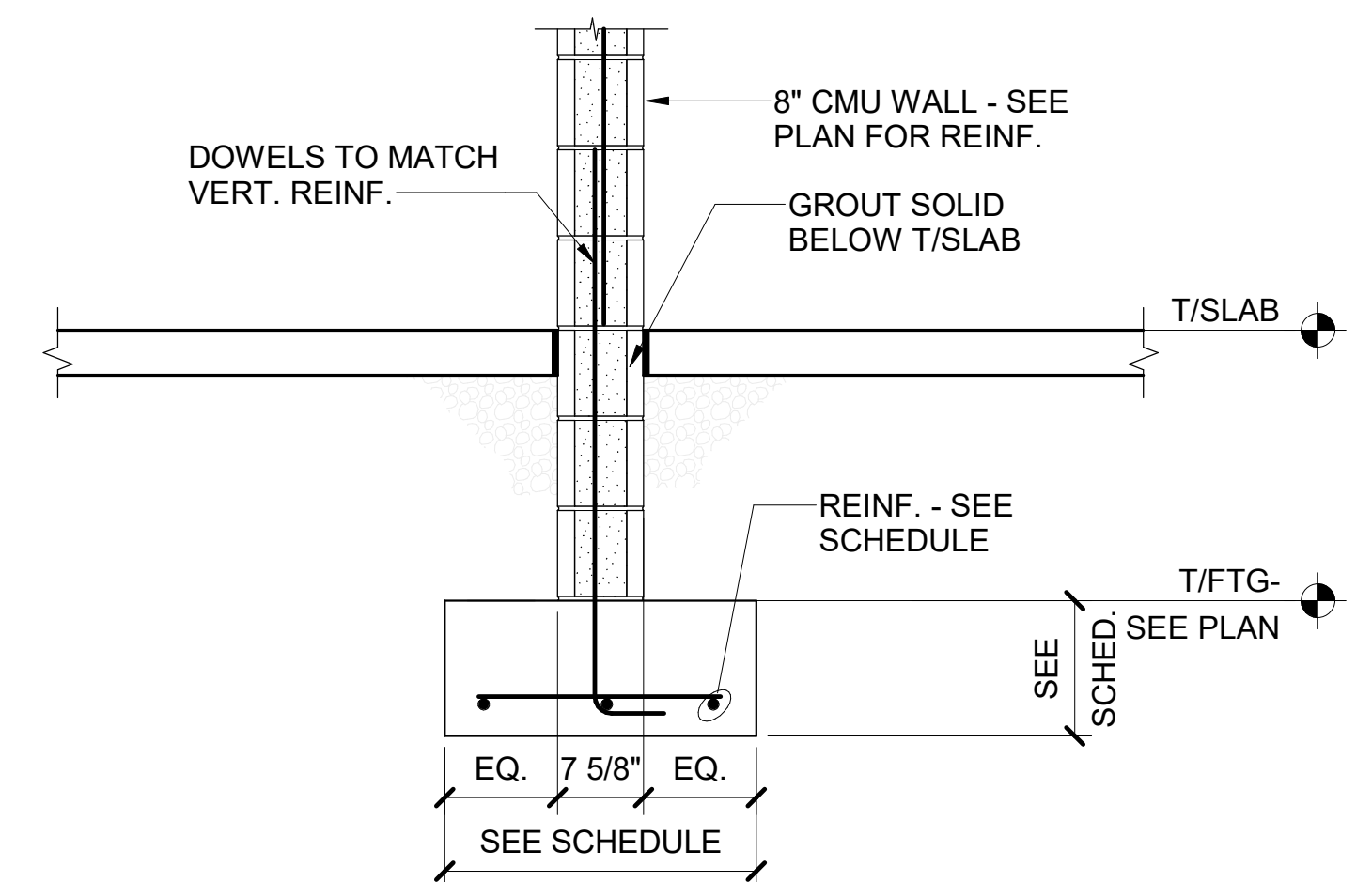
1A TYPICAL SLAB SECTION

## TYPICAL SLAB-ON-GRADE DETAILS

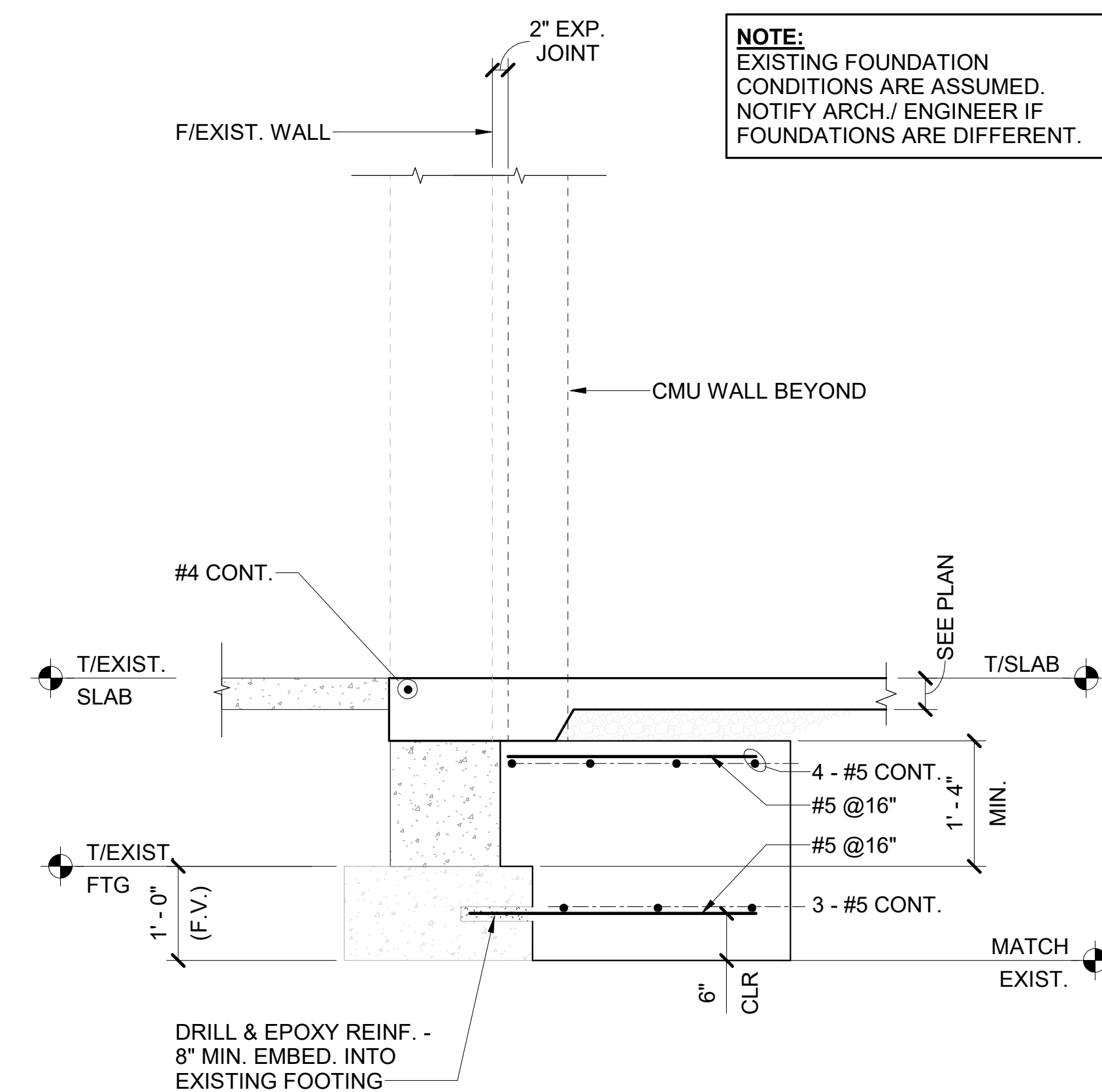




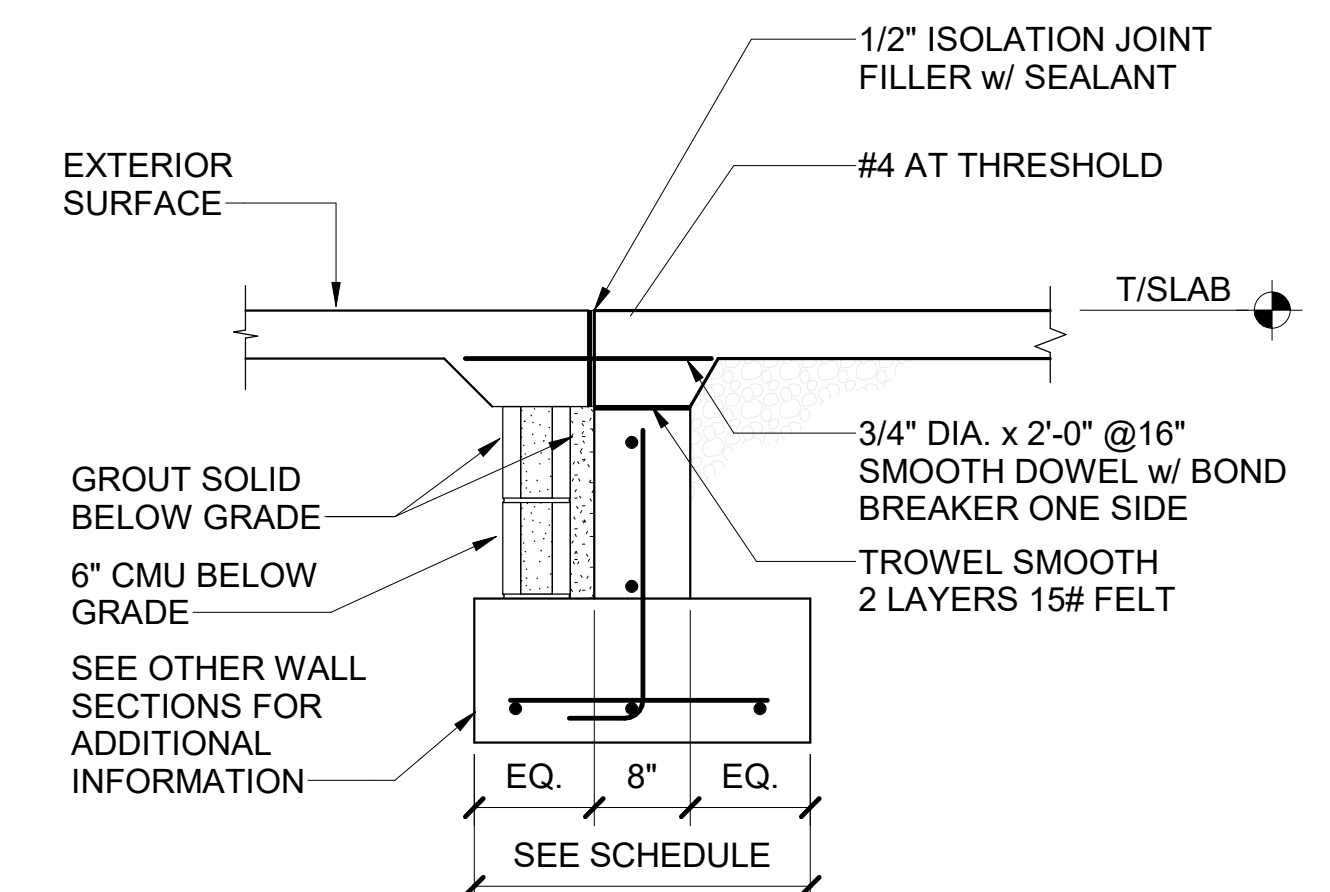
6 SECTION



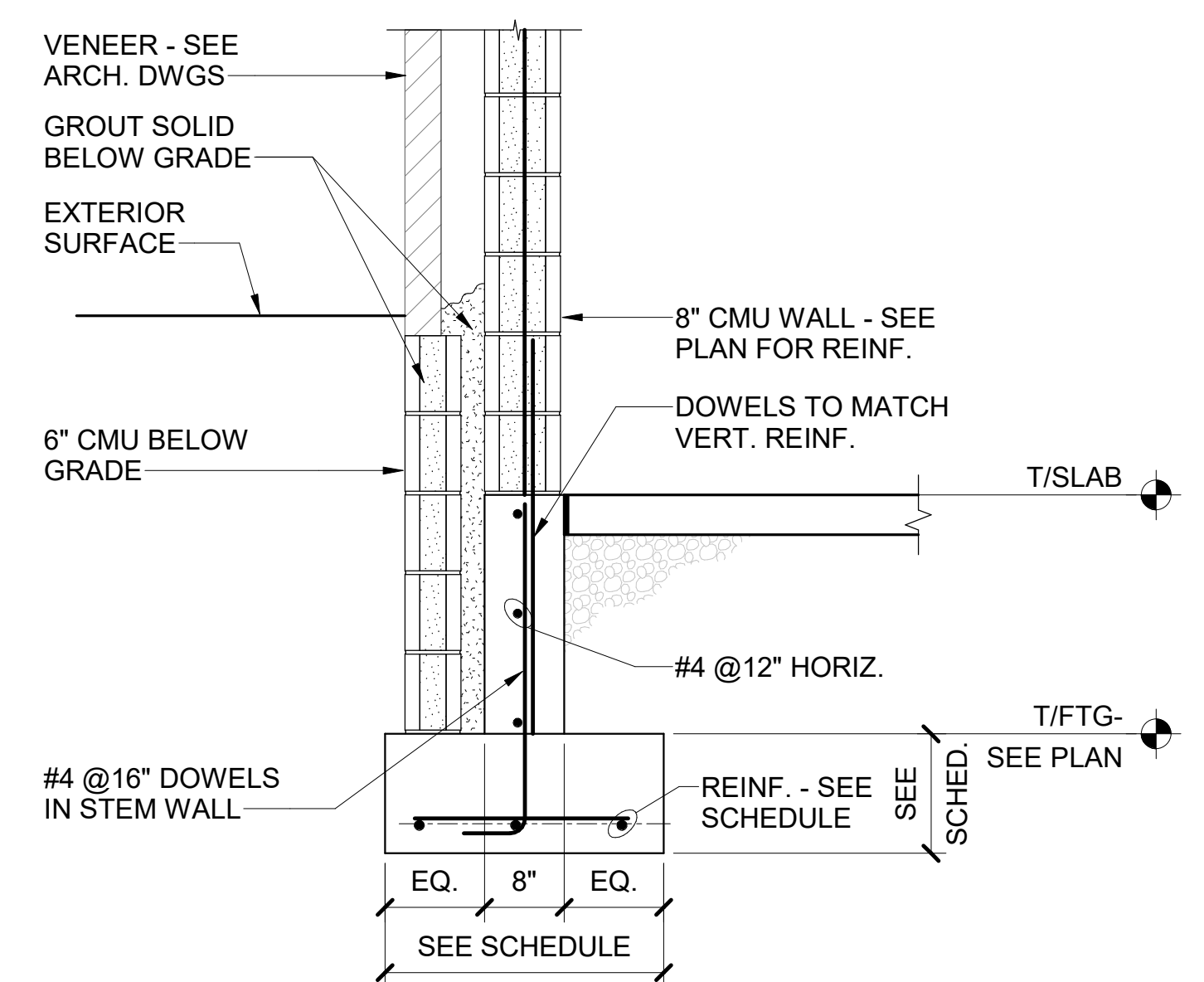
③ SECTION AT INTERIOR LOADBEARING WALL



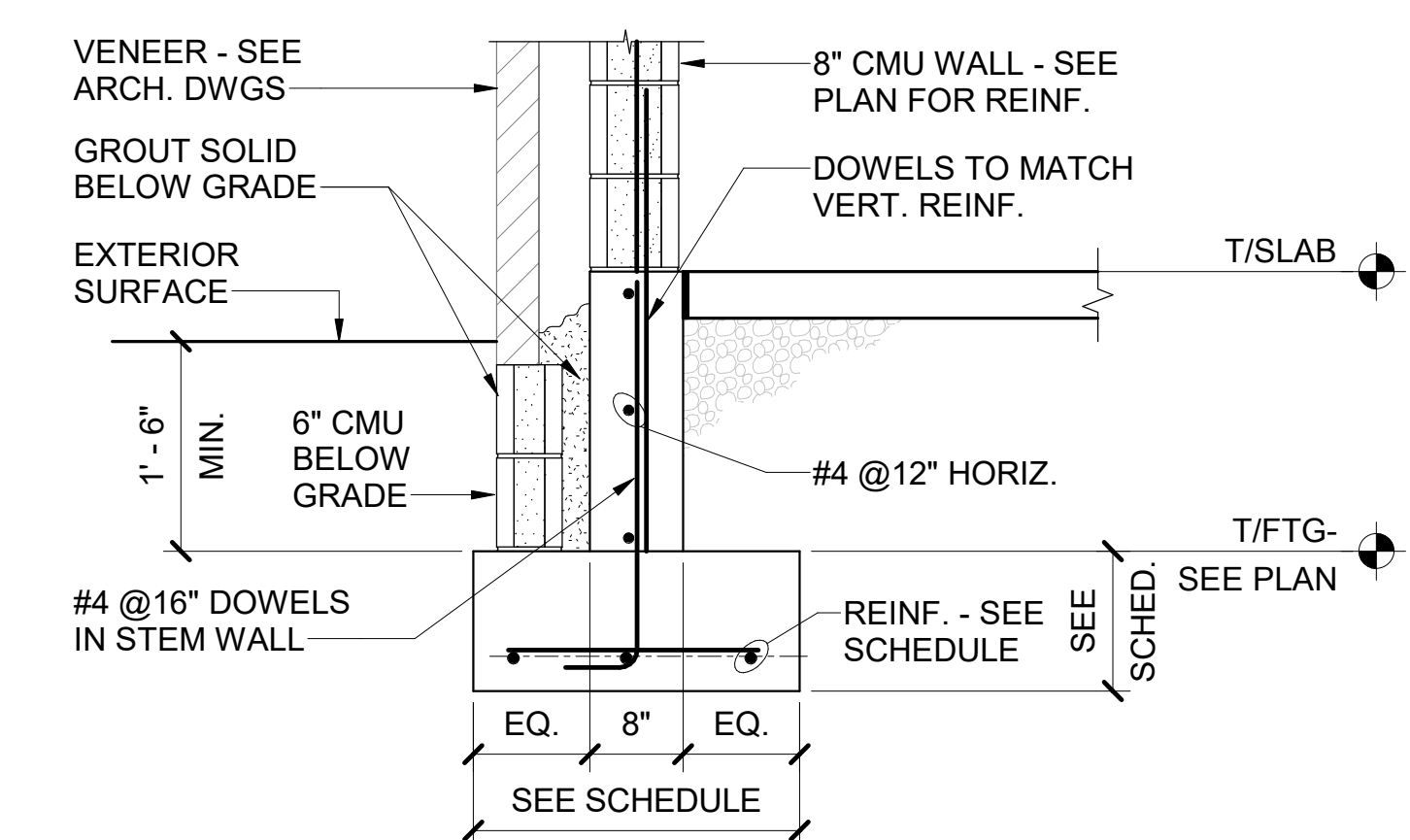
5 SECTION AT EXISTING BUILDING AT DOOR



② SECTION AT DOOR AT 8" CMU WALL

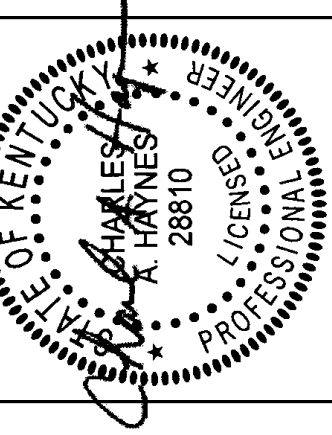


SECTION AT HIGH GRADE



①A AT LOW GRADE

1 SECTION AT EXTERIOR AT  
LOADBEARING WALL



FOR:  
MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

**M, E & P Engineer:**  
CMTA, Inc.  
1429 Members Way  
Lexington, KY 40504  
859.253.0892

**Structural Engineer:**  
Structural Design Group, Inc.  
120 Great Circle Rd. Suite 106  
Nashville, TN 37228  
615.255.5537

BG#

|             |      |
|-------------|------|
| Project No: | 1928 |
| Drawn By:   | CCA  |
| Rev'd By:   | CH   |

SHEET RELEASE

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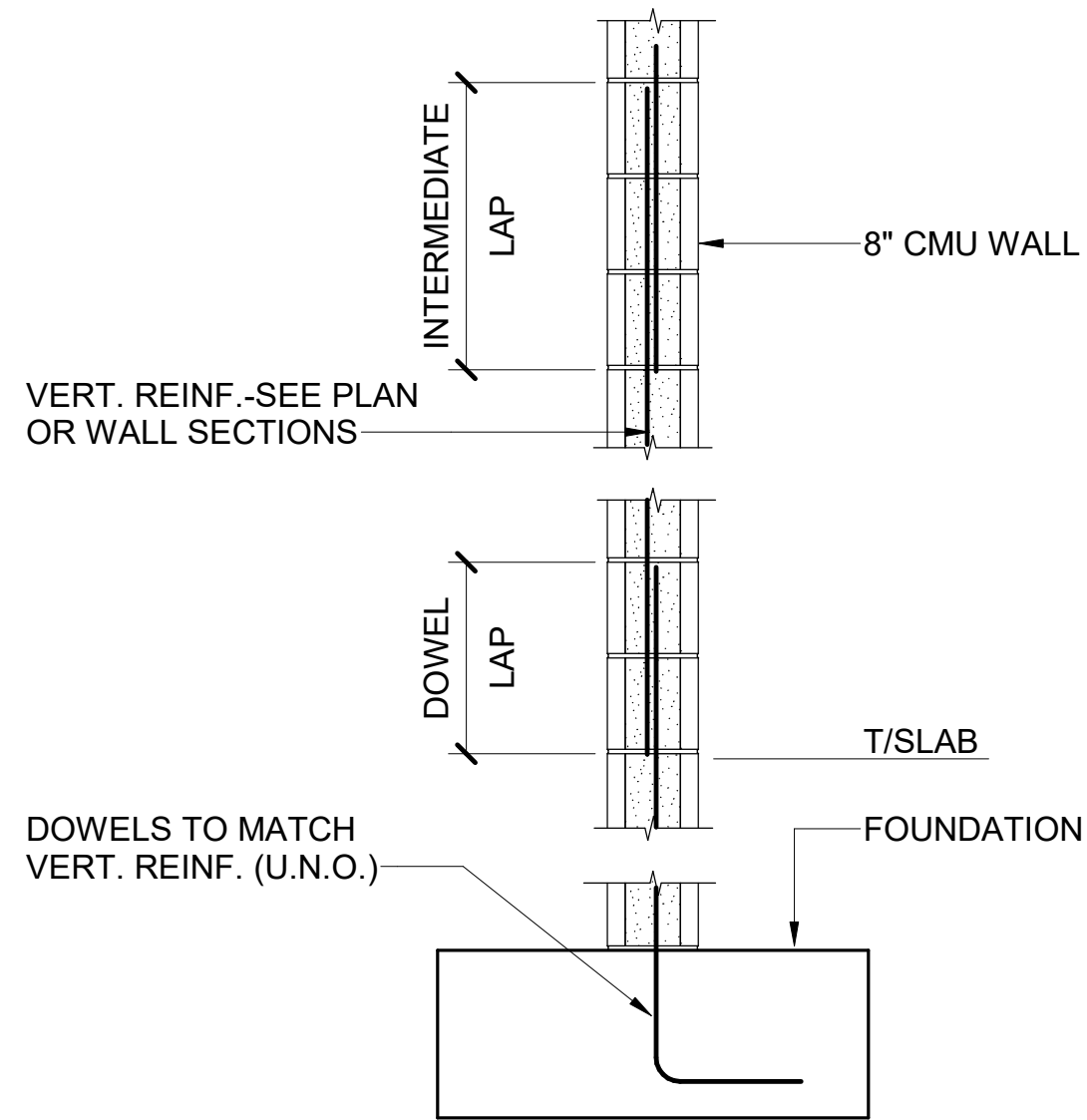
## §2.2

FOUNDATION SECTIONS AND  
DETAILS  
DATE ISSUED:  
OCTOBER 2019



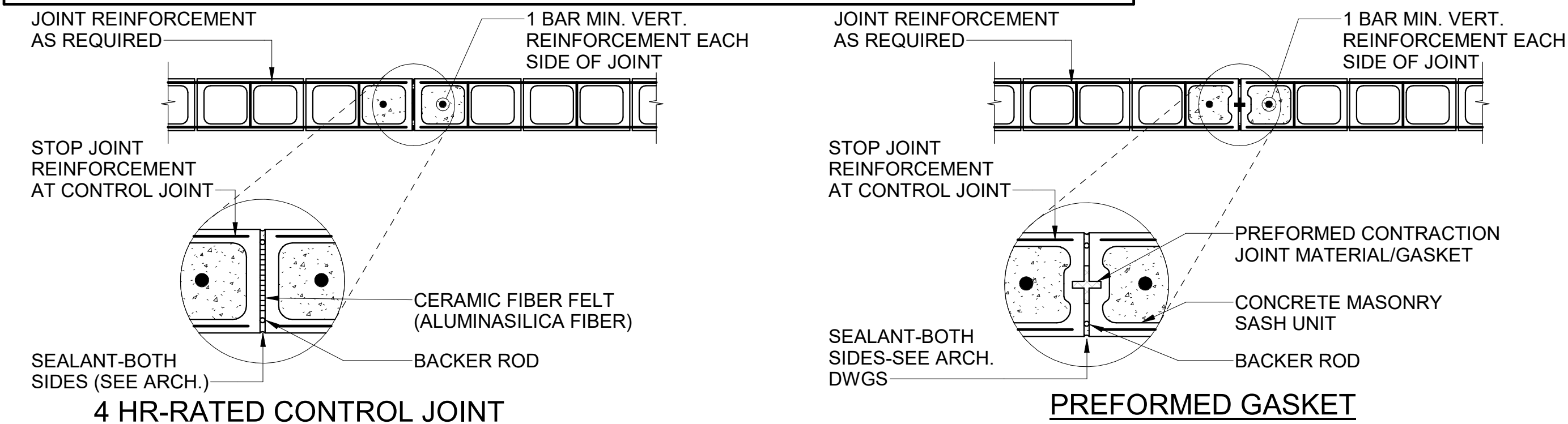
| CMU LAP SPLICE SCHEDULE   |            |              |
|---------------------------|------------|--------------|
| BAR SIZE                  | LAP LENGTH |              |
|                           | DOWEL      | INTERMEDIATE |
| #4                        | 24"        | 16"          |
| #5                        | 24"        | 24"          |
| #6                        | 24"        | 40"          |
| #7                        | 24"        | 54"          |
| #8                        | 32"        | 80"          |
| #9                        | 32"        | 104"         |
| F'm = 2,000 psi (MINIMUM) |            |              |

**ENGINEER NOTE:** CHECK DOWEL AND LAP REQUIREMENTS IF WALL IS SHEARWALL

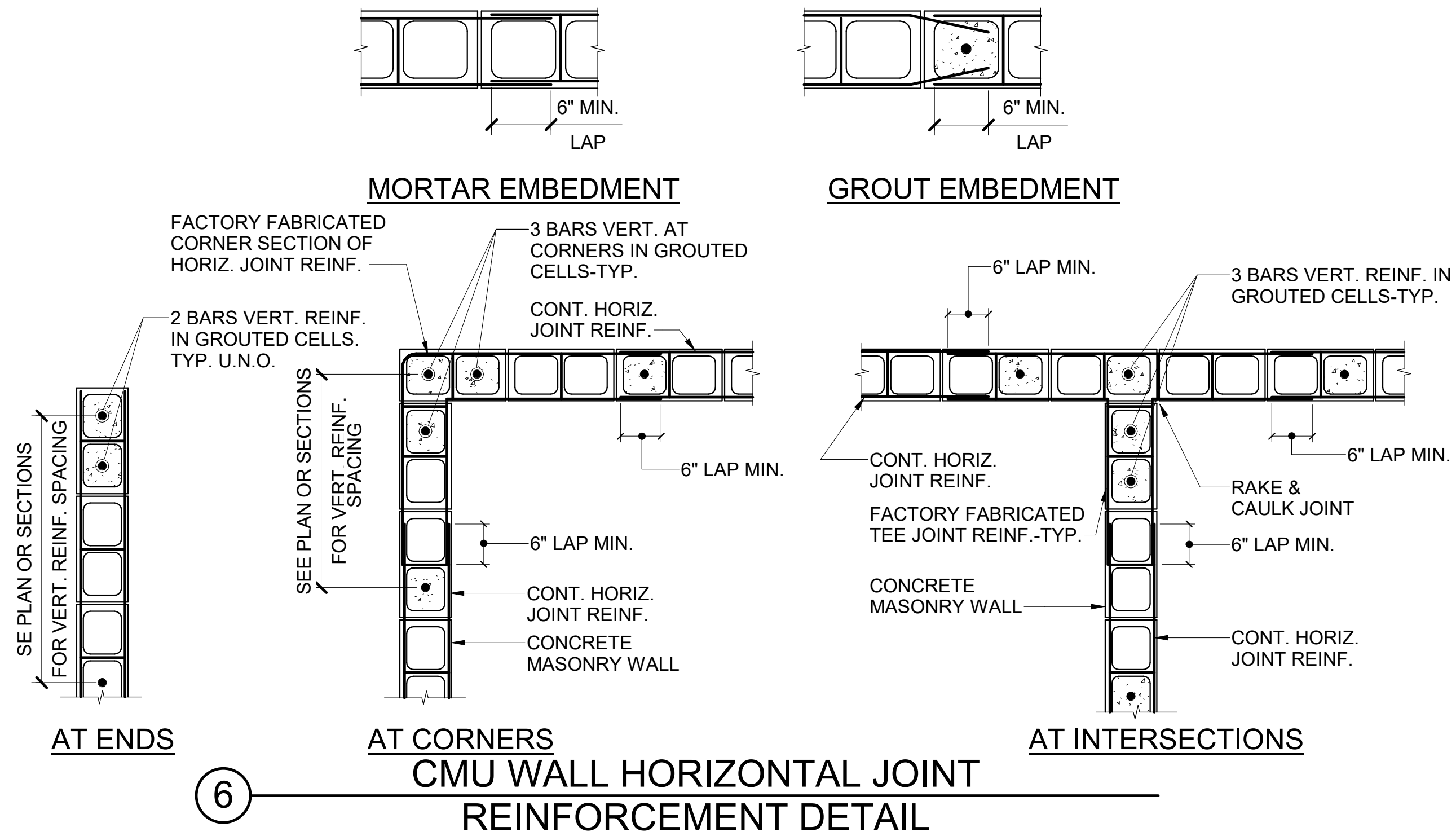


**8 CMU REINFORCEMENT LAP SPLICE SCHEDULE**

- NOTE:**
- SEE PLANS FOR LOCATION OF CONTRACTION JOINTS AND STRUCTURAL NOTES FOR MAX. SPACING.
  - LOCATE CONTRACTION JOINTS 2'-0" MINIMUM FROM SIDES OF OPENINGS.
  - CJ (CMU CONTRACTION JOINT) SHOWN ON PLANS INDICATES APPROXIMATE LOCATIONS OF CONTRACTION JOINTS. LOCATIONS ARE INTENDED TO COINCIDE WITH CMU COURSING. COORDINATE LOCATION OF JOINTS WITH ARCH. DWGS. SEE ARCH. DWGS FOR LOCATIONS OF BRICK JOINTS.
  - COORDINATE LOCATIONS w/ARCH. DWGS.
  - DO NOT CONSTRUCT CONTRACTION JOINT THROUGH BOND BEAM.

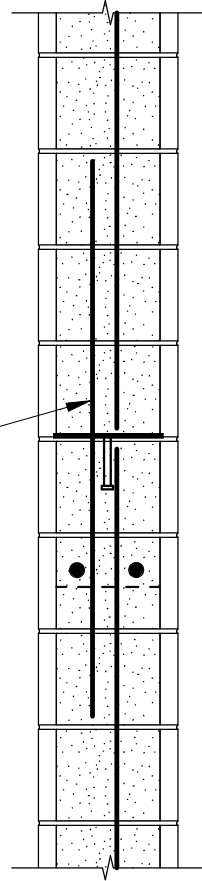


**7 CMU WALL CONTRACTION/CONTROL JOINT DETAIL**

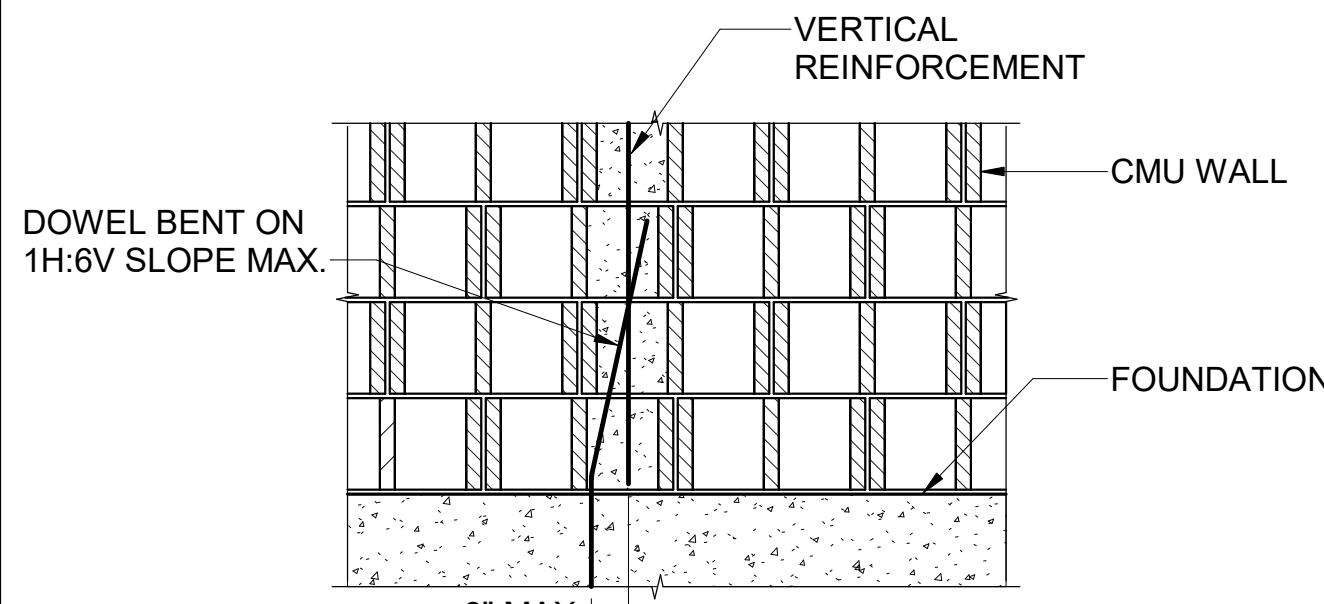


**6 CMU WALL HORIZONTAL JOINT REINFORCEMENT DETAIL**

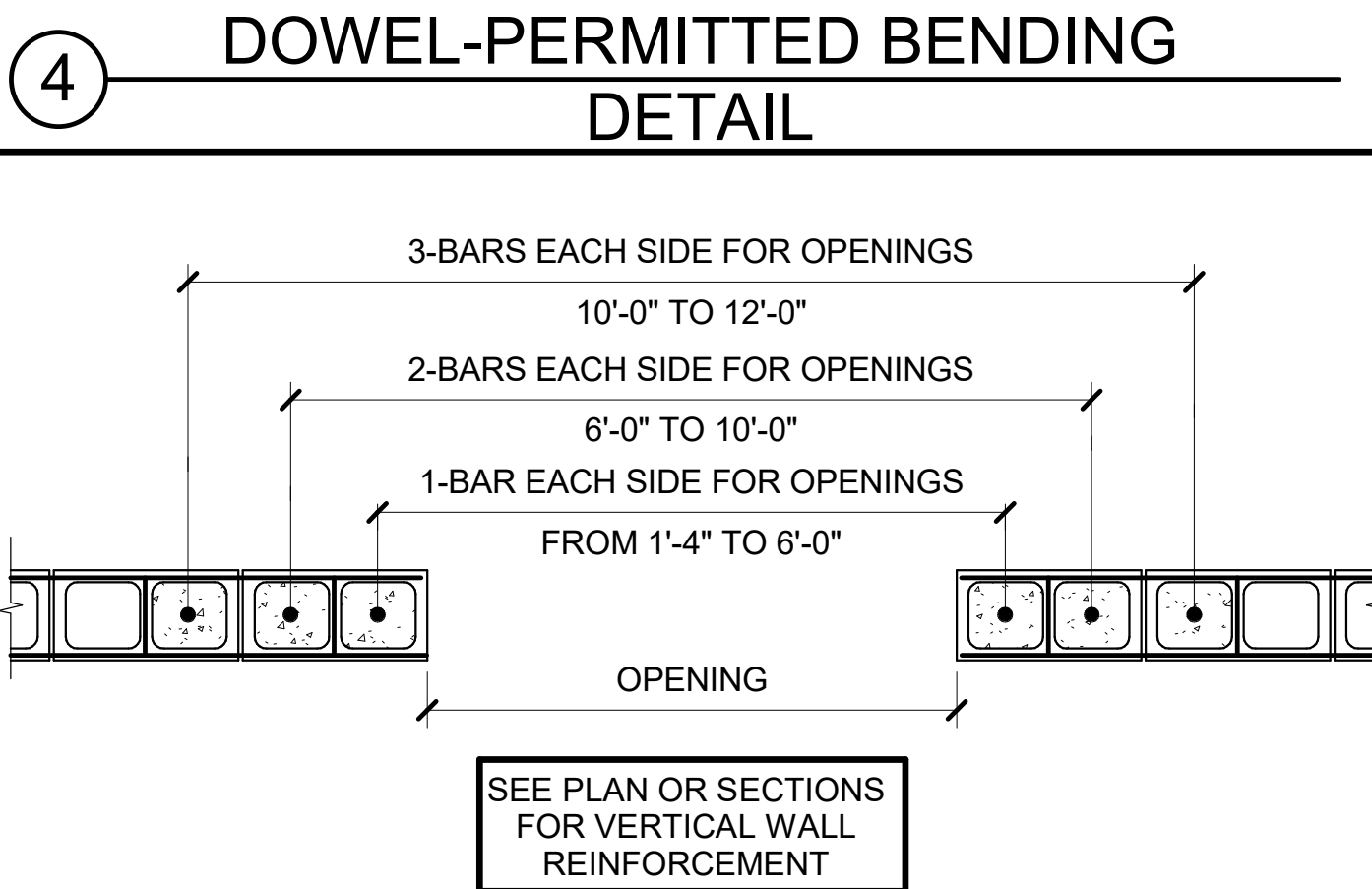
WHERE VERTICAL BAR HITS BEARING PLATE, OR OTHER OBSTRUCTION, PROVIDE DOWEL TO MATCH VERTICAL REINF. w/ 8" MAX. OFFSET IN GROUTED CELL.



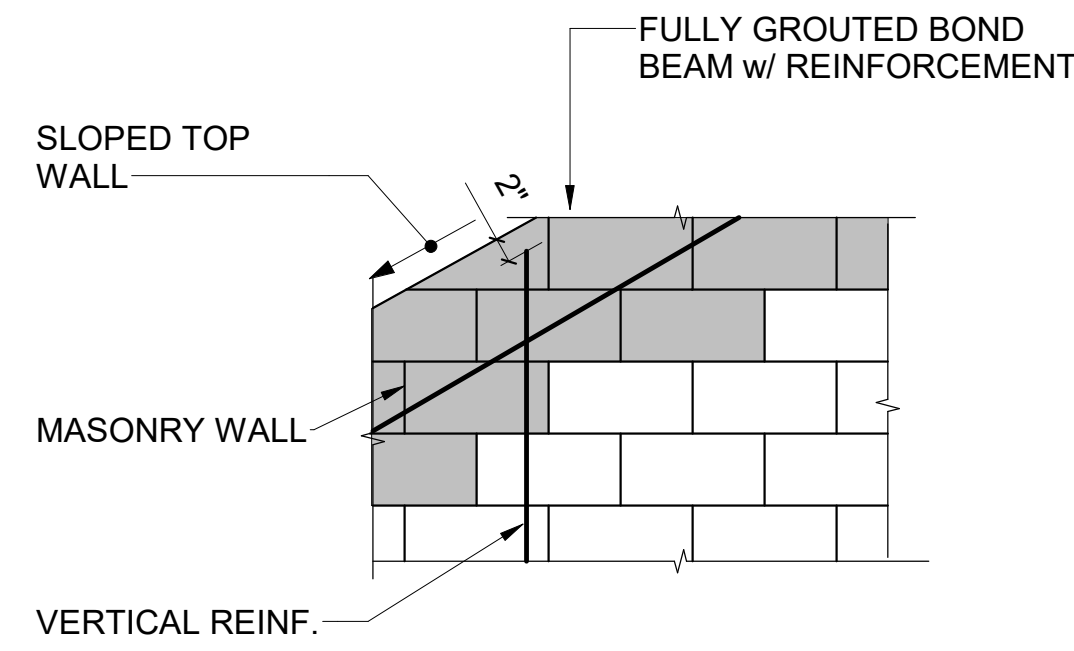
**5 NON-CONTACT LAP SPLICE DETAIL**



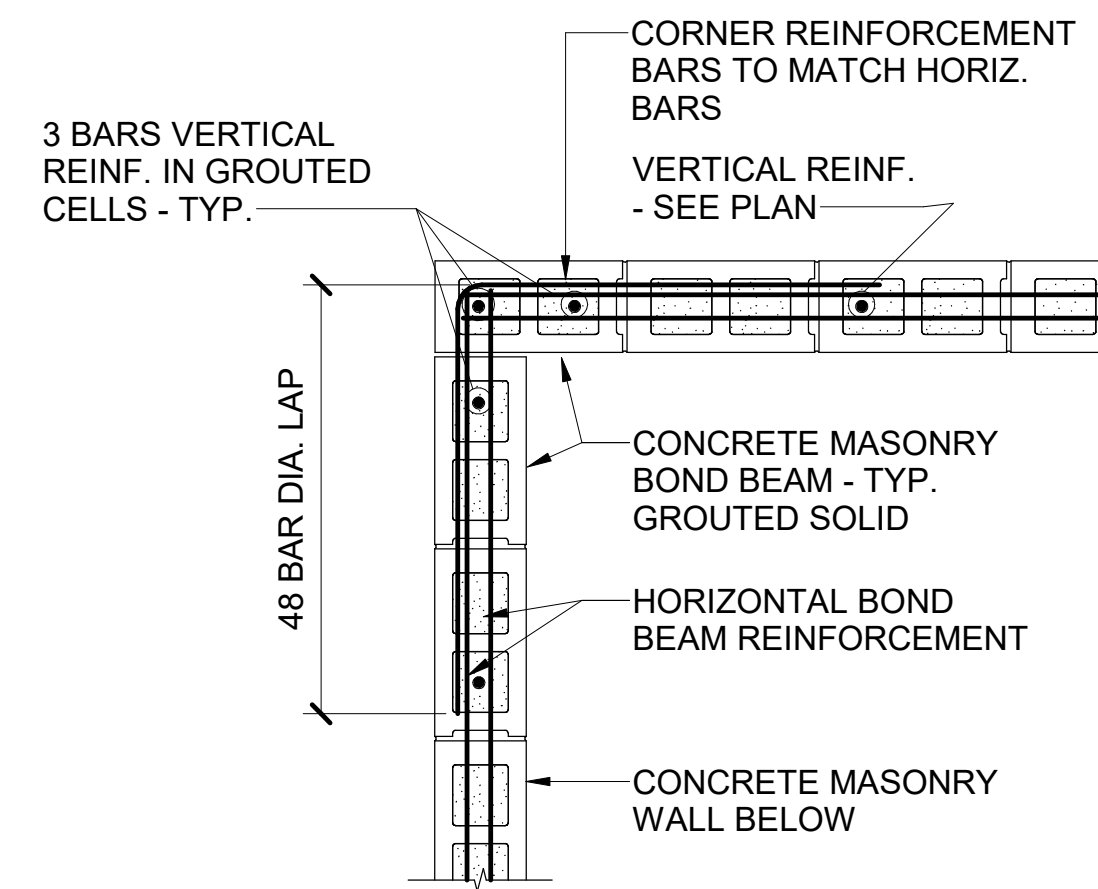
**ELEVATION VIEW TOLERANCE**



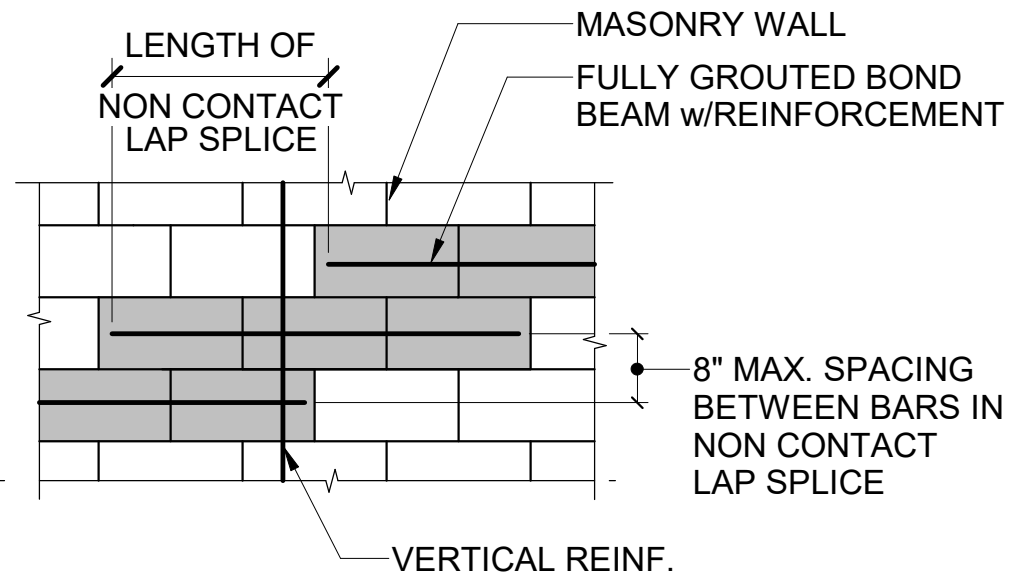
**3 CMU WALL OPENING DETAIL**



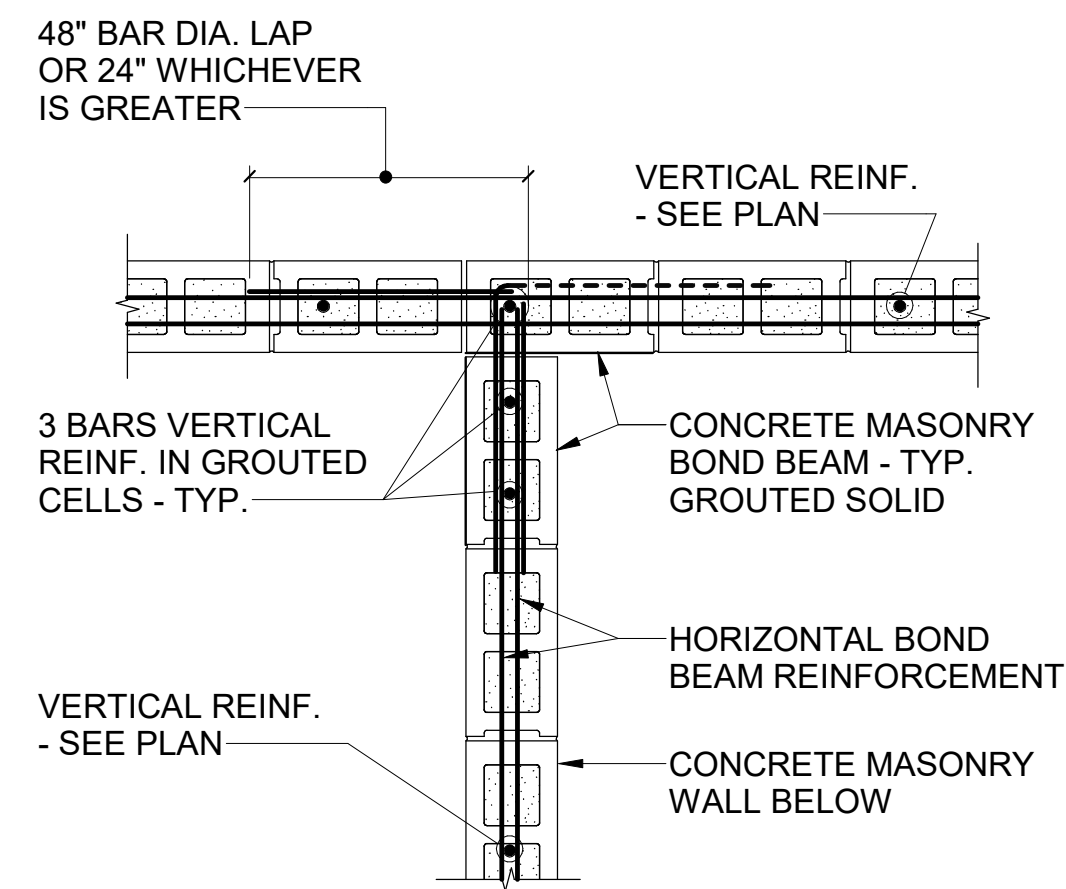
**SLOPED BOND BEAM**



**AT CORNERS**

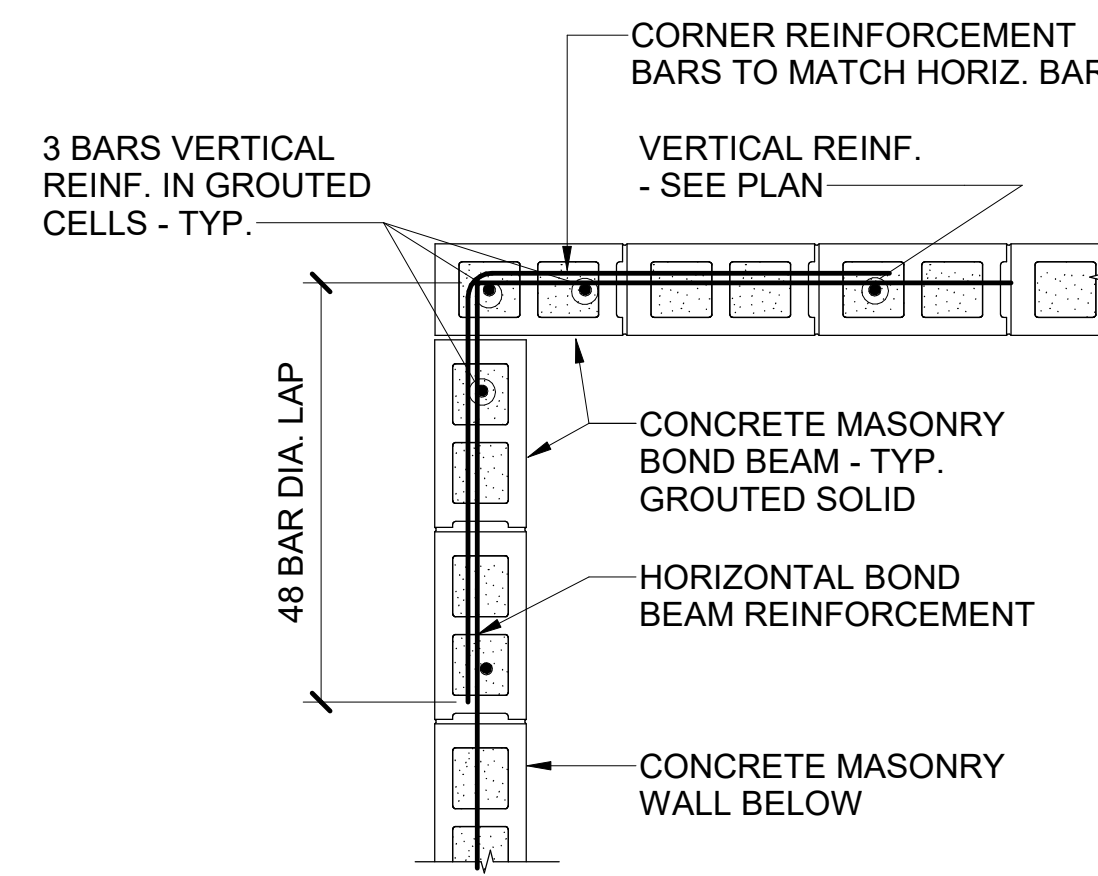


**STEPPED BOND BEAM**

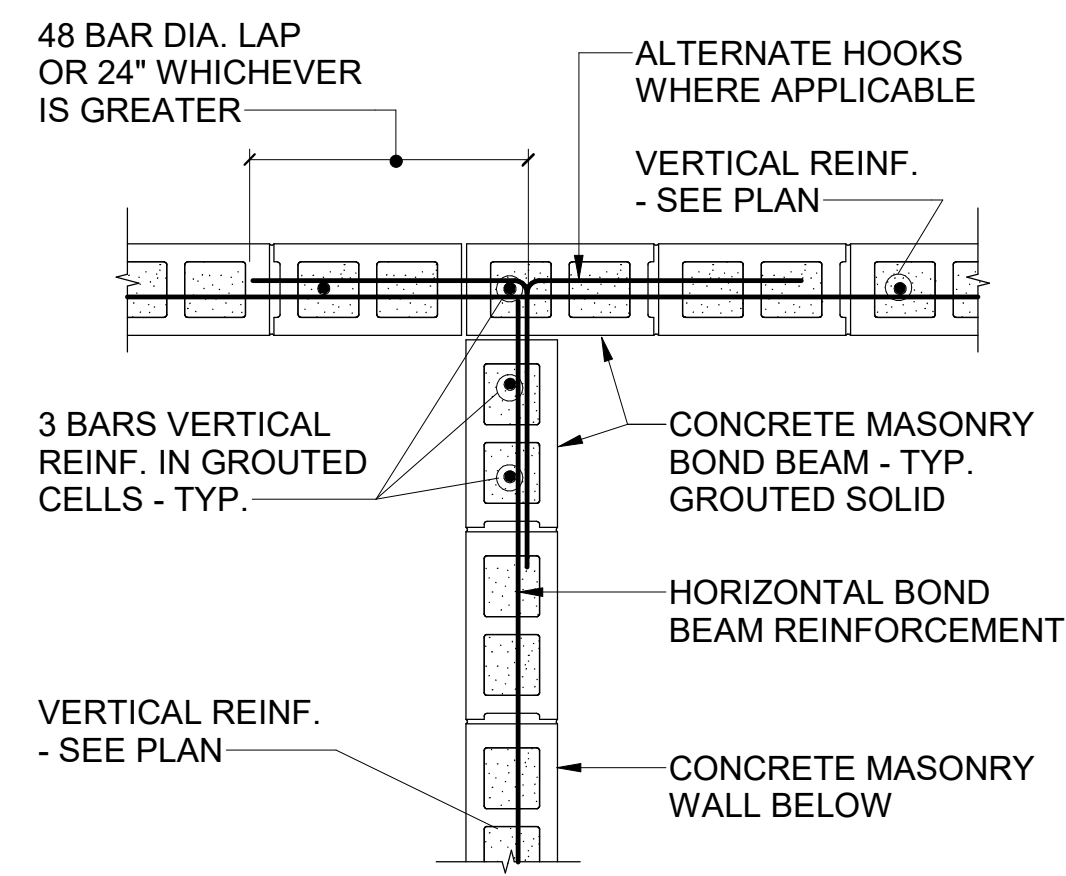


**AT INTERSECTIONS**

**DOUBLE ROW REINFORCEMENT**



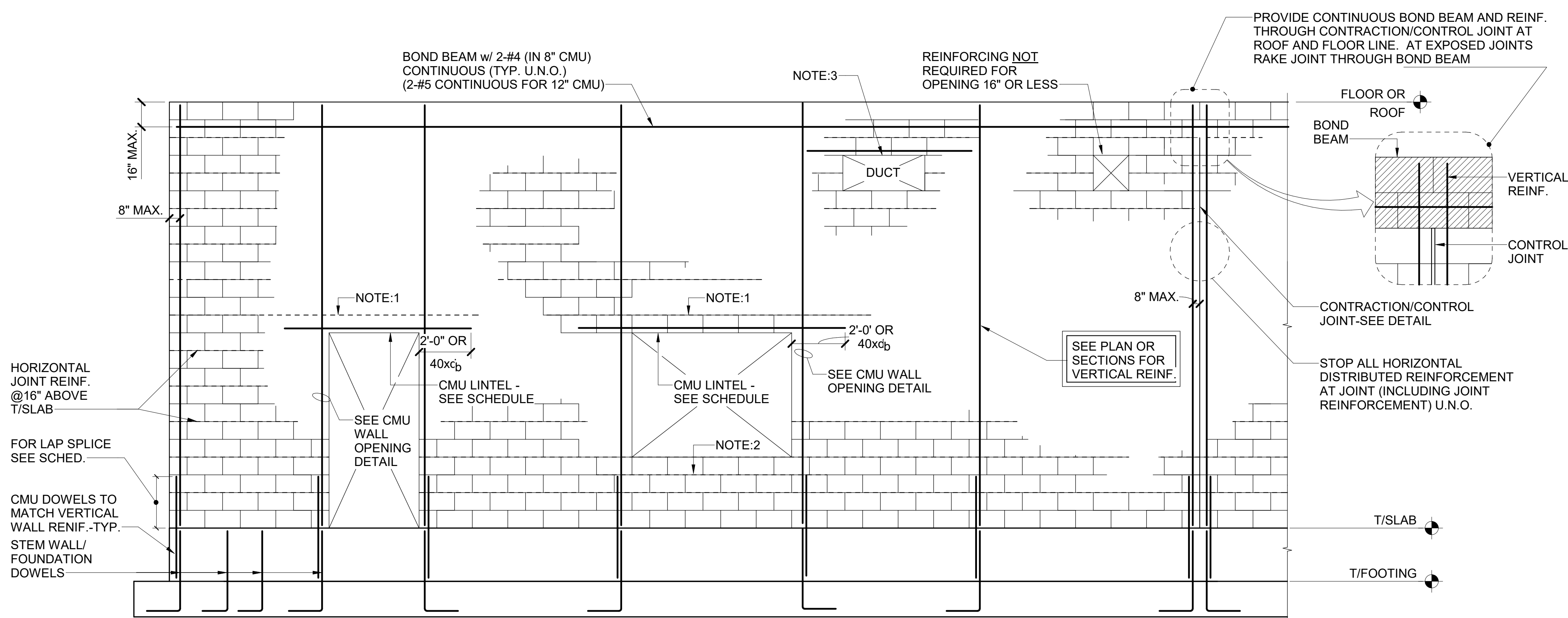
**AT CORNERS**



**AT INTERSECTIONS**

**SINGLE ROW REINFORCEMENT**

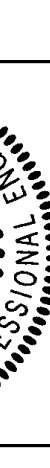
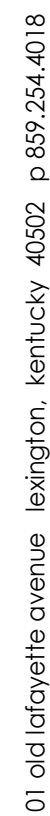
**CMU BOND BEAM DETAILS**



- NOTE:**
- ADD HORIZONTAL JOINT REINFORCEMENT ABOVE LINTEL. EXTEND 4'-0" EACH SIDE OF OPENING.
  - ADD HORIZONTAL JOINT REINFORCEMENT BELOW CMU SILL. EXTEND 4'-0" EACH SIDE OF OPENING.
  - FOR MECHANICAL/PLUMBING PENETRATIONS, PROVIDE LINTEL OVER CMU OPENING PER UNMARKED CMU LINTEL SCHEDULE.

**1 TYPICAL CMU WALL REINFORCING ELEVATION**





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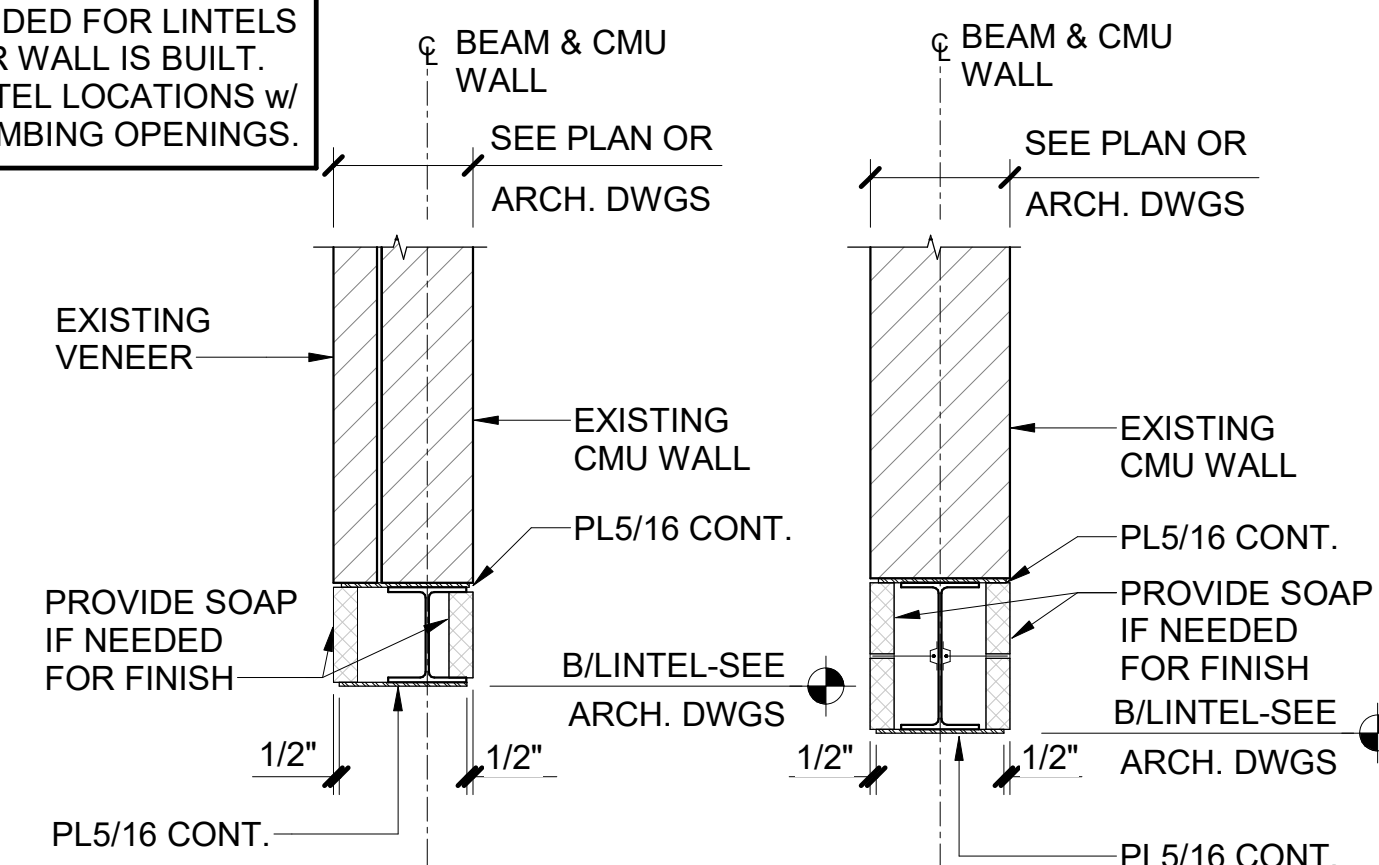
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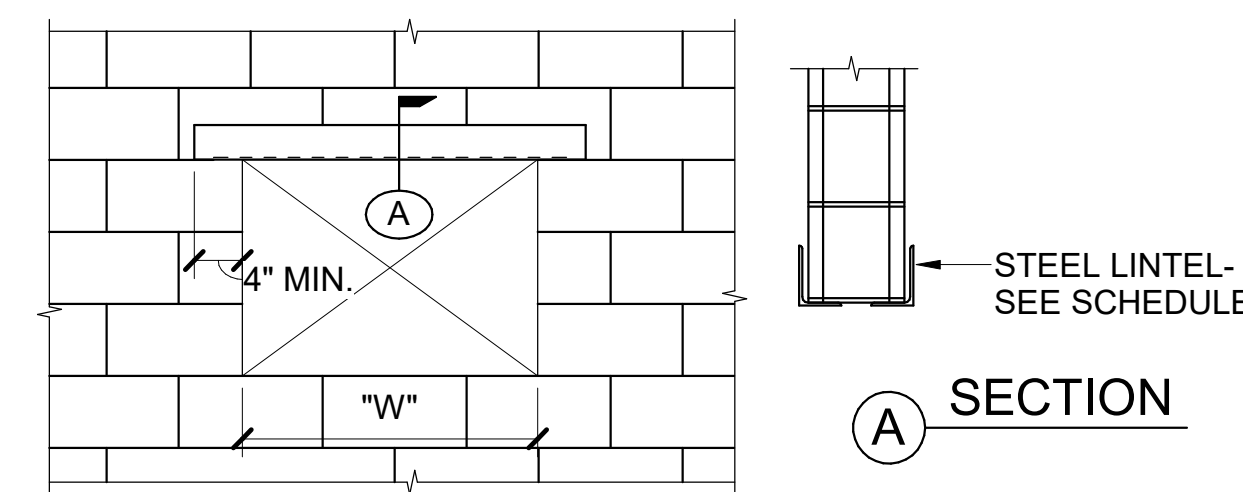
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**NOTE:**  
DETAILS IS PROVIDED FOR LINTELS  
INSTALLED AFTER WALL IS BUILT.  
COORDINATE LINTEL LOCATIONS w/  
MECH./ELEC./PLUMBING OPENINGS.



| WIDTH OF OPENING<br>"W" | STEEL LINTEL               |
|-------------------------|----------------------------|
| TO 1'-0"                | NONE                       |
| 1'-1" TO 3'-4"          | L5x3x5/16 (LLV) BOTH SIDES |
| OVER 3'-4" TO 6'-0"     | USE BEAM - W8x24           |

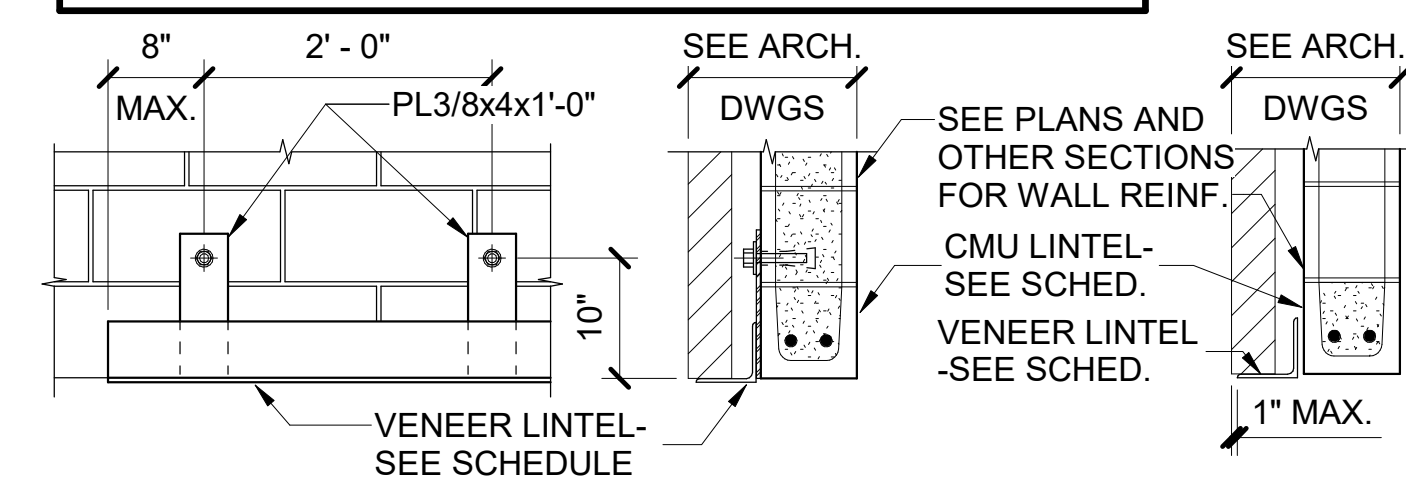
NOTE:  
IF LINTEL IS EXPOSED TO VIEW, USE BEAM IN LIEU OF ANGLE



③ TYPICAL LINTEL DETAIL FOR  
OPENING IN EXISTING CMU WALL

| VENEER LINTEL SCHEDULE WITH CMU |                      |  |
|---------------------------------|----------------------|--|
| OPENING WIDTH                   | ANGLE SIZE           | REMARKS  |
| 0'-0" TO 4'-0"                  | L5x3 1/2x 5/16 (LLH) | LOOSE  |
| 4'-1" TO 8'-0"                  | L8x4x 7/16           | LOOSE  |
| OVER 8'-0"                      | L8x4x 7/16           | BOLTED w/ 5/8" DIA. SCREW ANCHORS @ 2'-0" (5" EMBED) |

NOTE: 8" MIN. BEARING EACH END-TYP.  
STEEL EXPOSED TO ELEMENTS SHALL BE GALVANIZED.



| <u>ELEVATION</u> | <u>SECTION</u> | <u>SECTION</u> |
|------------------|----------------|----------------|
| BOLTED LINTEL    |                | LOOSE LINTEL   |

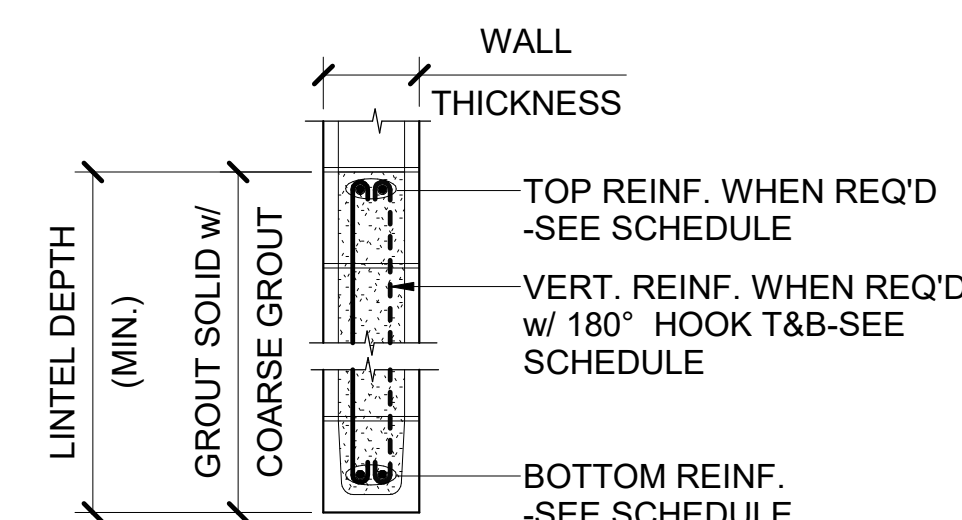
### ② VENEER LINTEL SCHEDULE WITH CMU

| MARKED "LX" CMU LINTEL SCHEDULE |              |              |               |     |          |                    |
|---------------------------------|--------------|--------------|---------------|-----|----------|--------------------|
| MARK                            | WALL THICK'S | LINTEL DEPTH | REINFORCEMENT |     |          |                    |
|                                 |              |              | BOTTOM        | TOP | VERTICAL | BEARING AND LENGTH |
| L1                              | 8            | 8            | 2-#5          | -   | -        | 8"                 |
| L2                              | 8            | 16           | 2-#5          | -   | -        | 8"                 |
| L3                              | 8            | 24           | 2-#5          | -   | -        | 16"                |
|                                 |              |              |               |     |          |                    |

**NOTE:**  
1. FILL CMU CORES AT LINTEL BEARING w/ 2500 psi COARSE GROUT. REINFORCE JAMBS w/ FULL HEIGHT REINFORCING PER CMU WALL OPENING DETAIL.

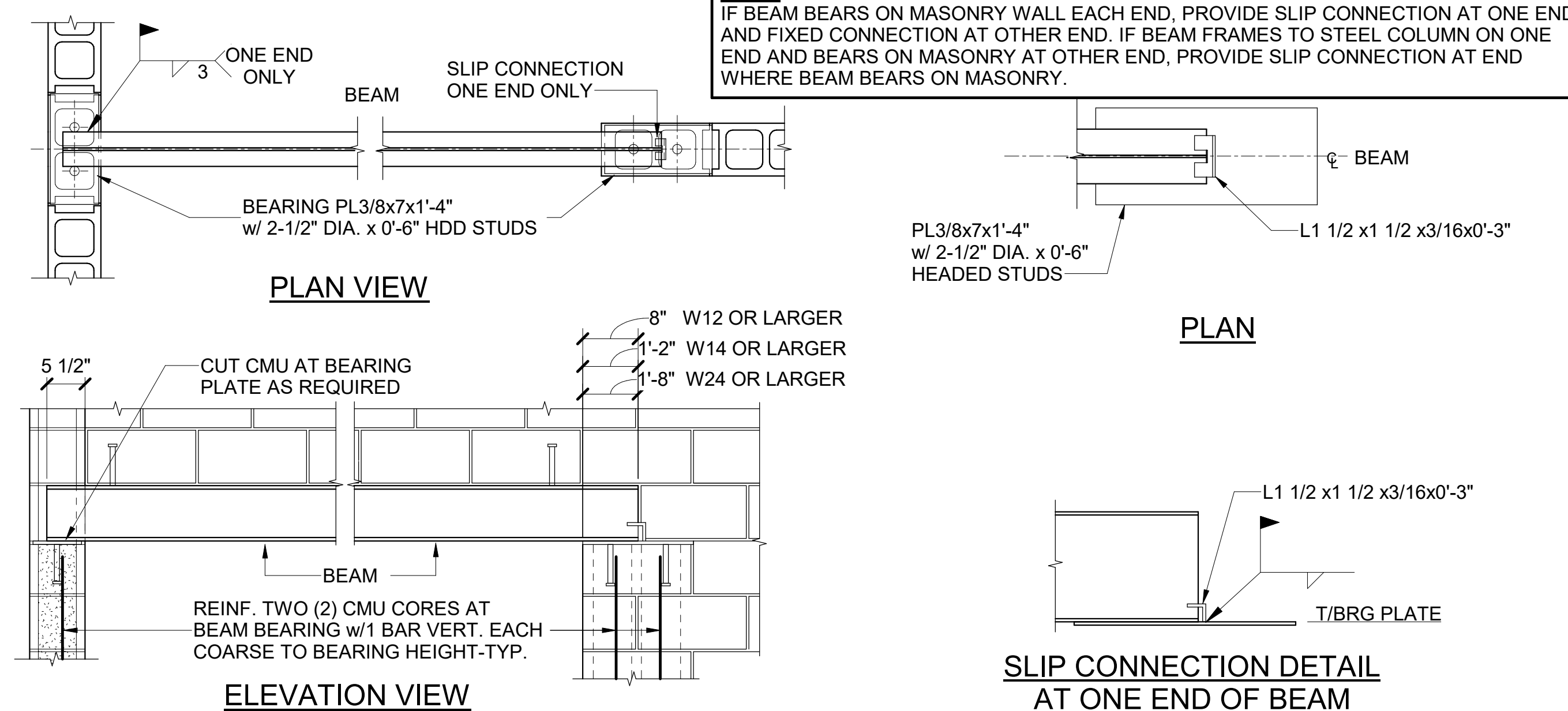
| UNMARKED CMU LINTEL SCHEDULE |              |             |                    |
|------------------------------|--------------|-------------|--------------------|
| WALL OPENING                 | LINTEL DEPTH | REINFORCING | BEARING AND LENGTH |
| UP TO 4'-0"                  | 8"           | 2-#4 BOTTOM | 8"                 |
| 4'-1" TO 6'-0"               | 8"           | 2-#5 BOTTOM | 8"                 |
| 6'-1" TO 8'-0"               | 16"          | 2-#5 BOTTOM | 16"                |
| 8'-1" TO 10'-0"              | 16"          | 2-#6 BOTTOM | 16"                |

NOTE: 8" MIN. BEARING EACH END-TYP



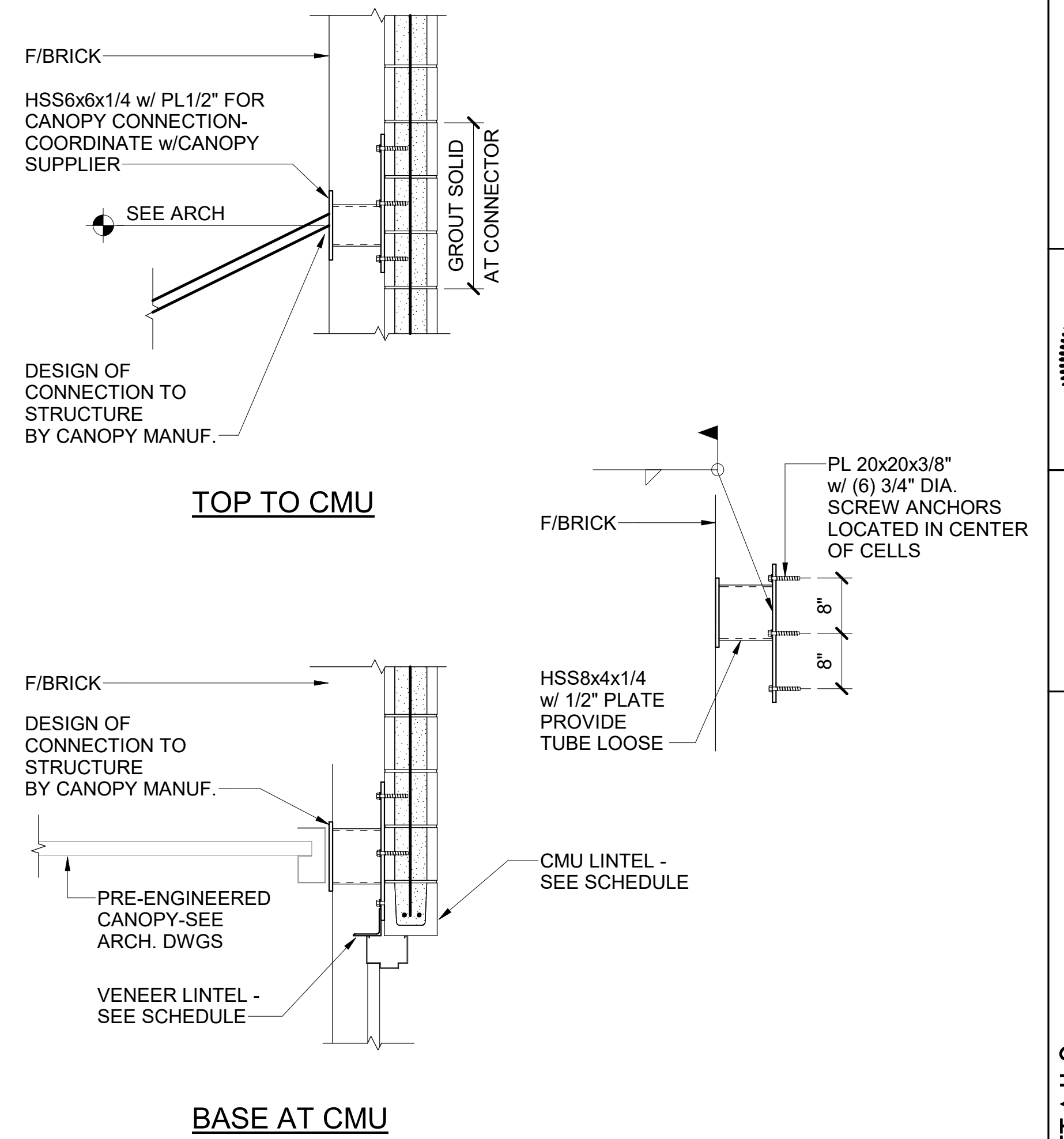
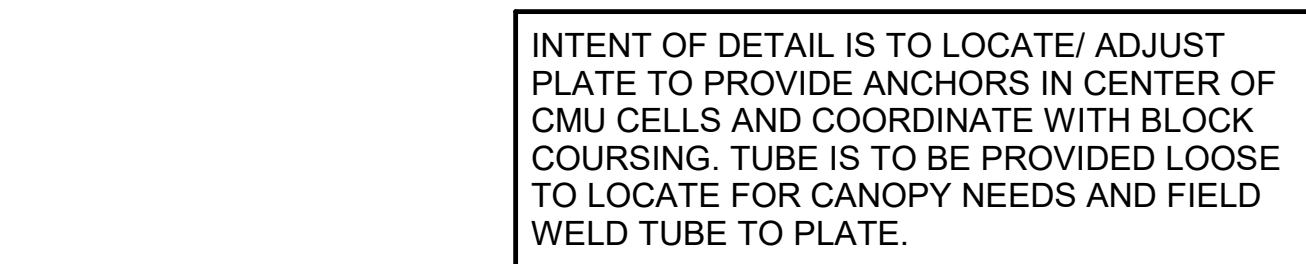
SECTION

## ① CMU LINTEL SCHEDULES AND DETAILS

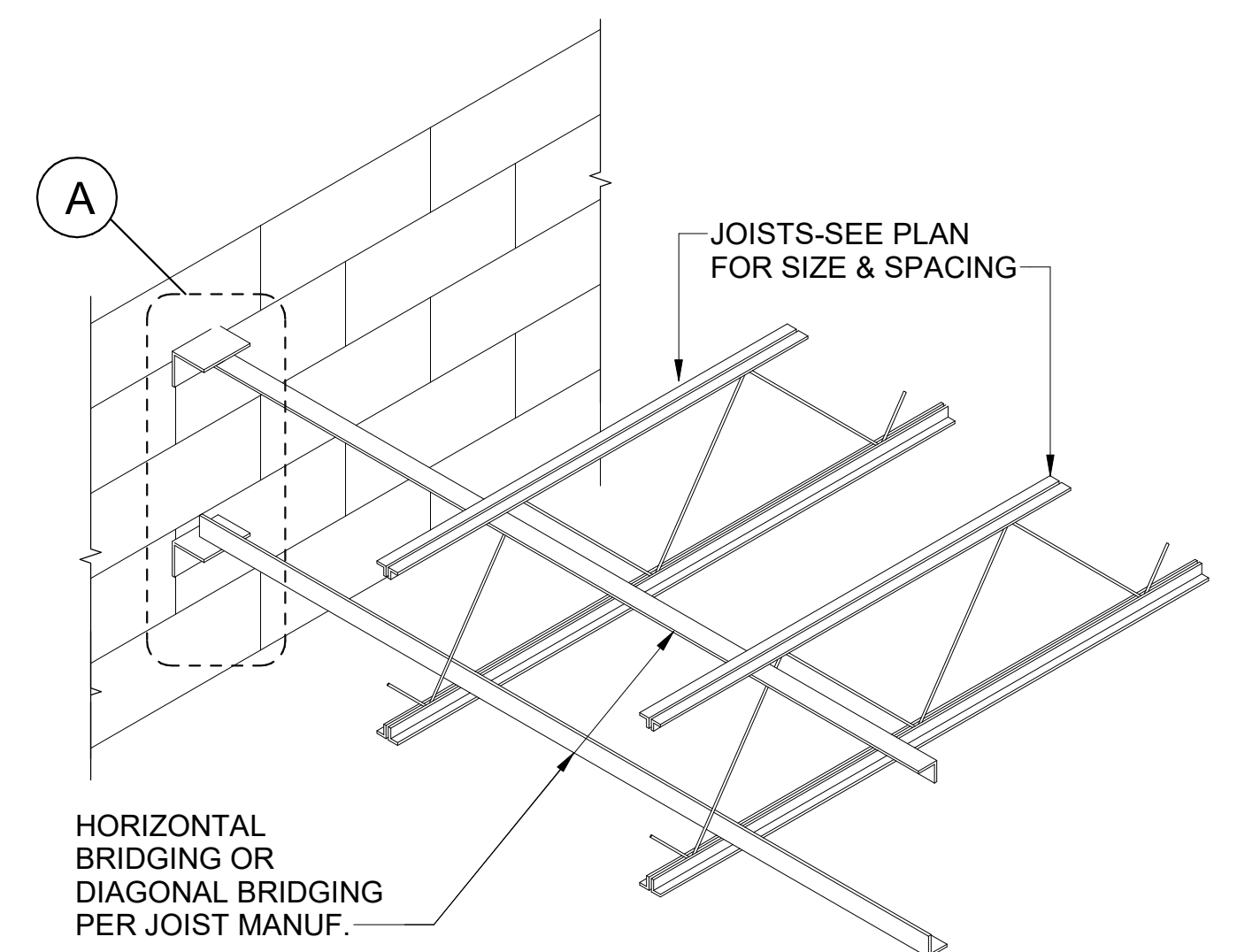
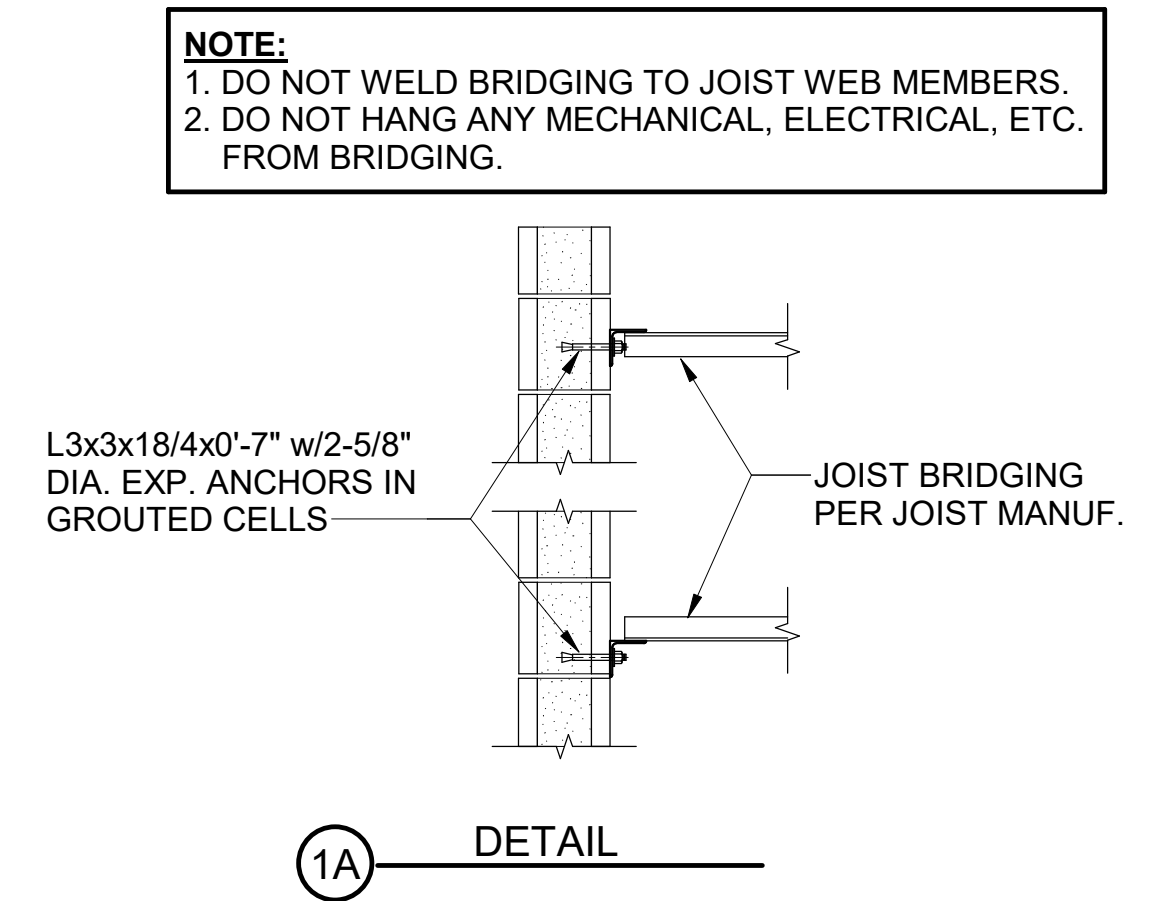


### ④ TYPICAL STEEL BEAM BEARING ON CMU WALL

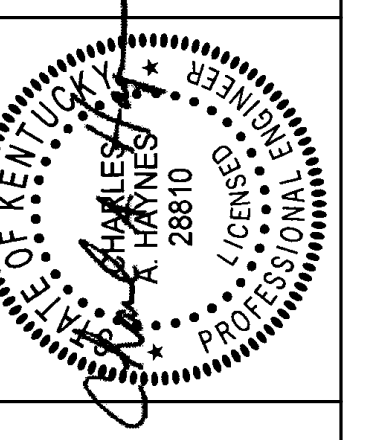




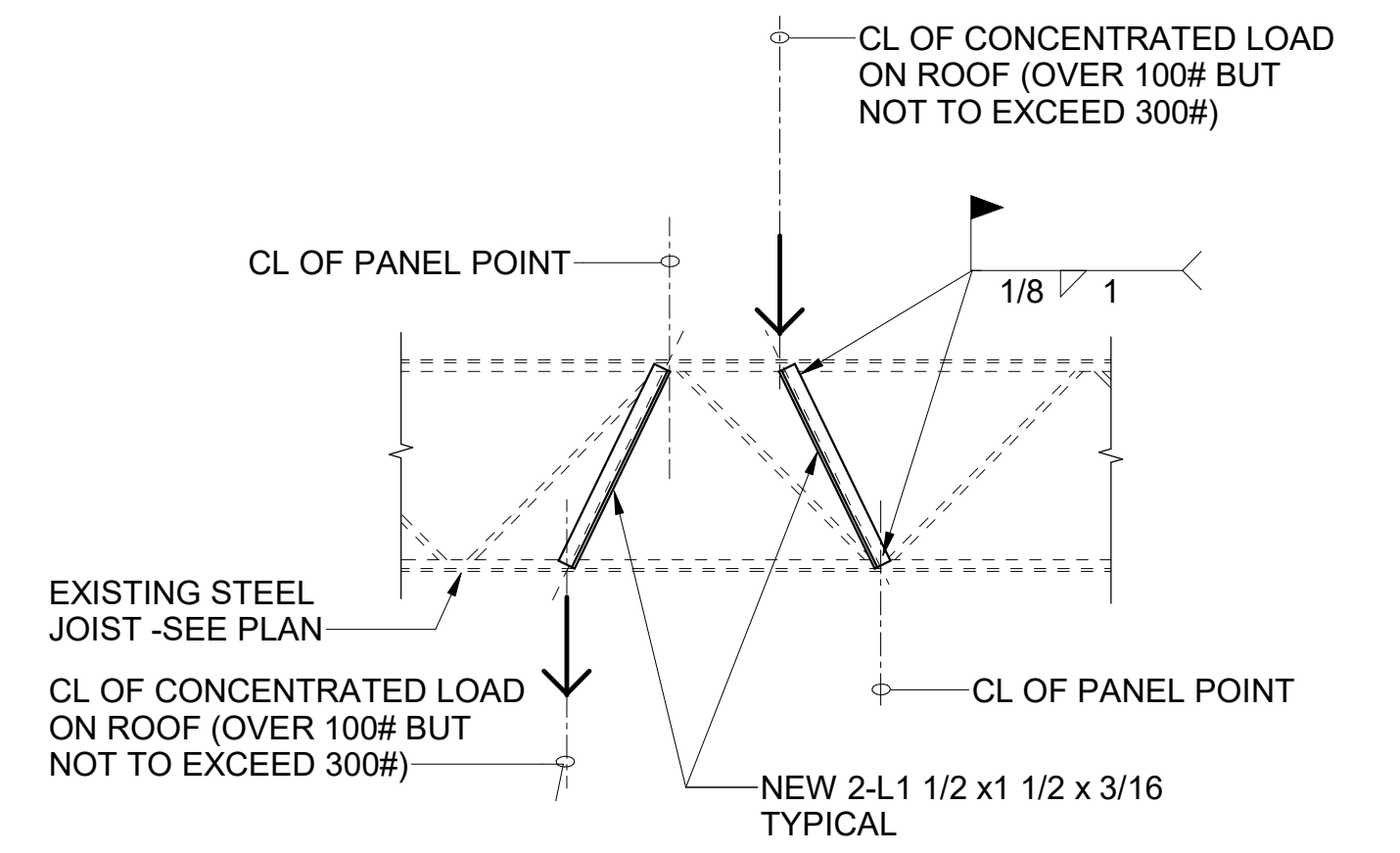
## 2 CANOPY CONNECTION DETAILS



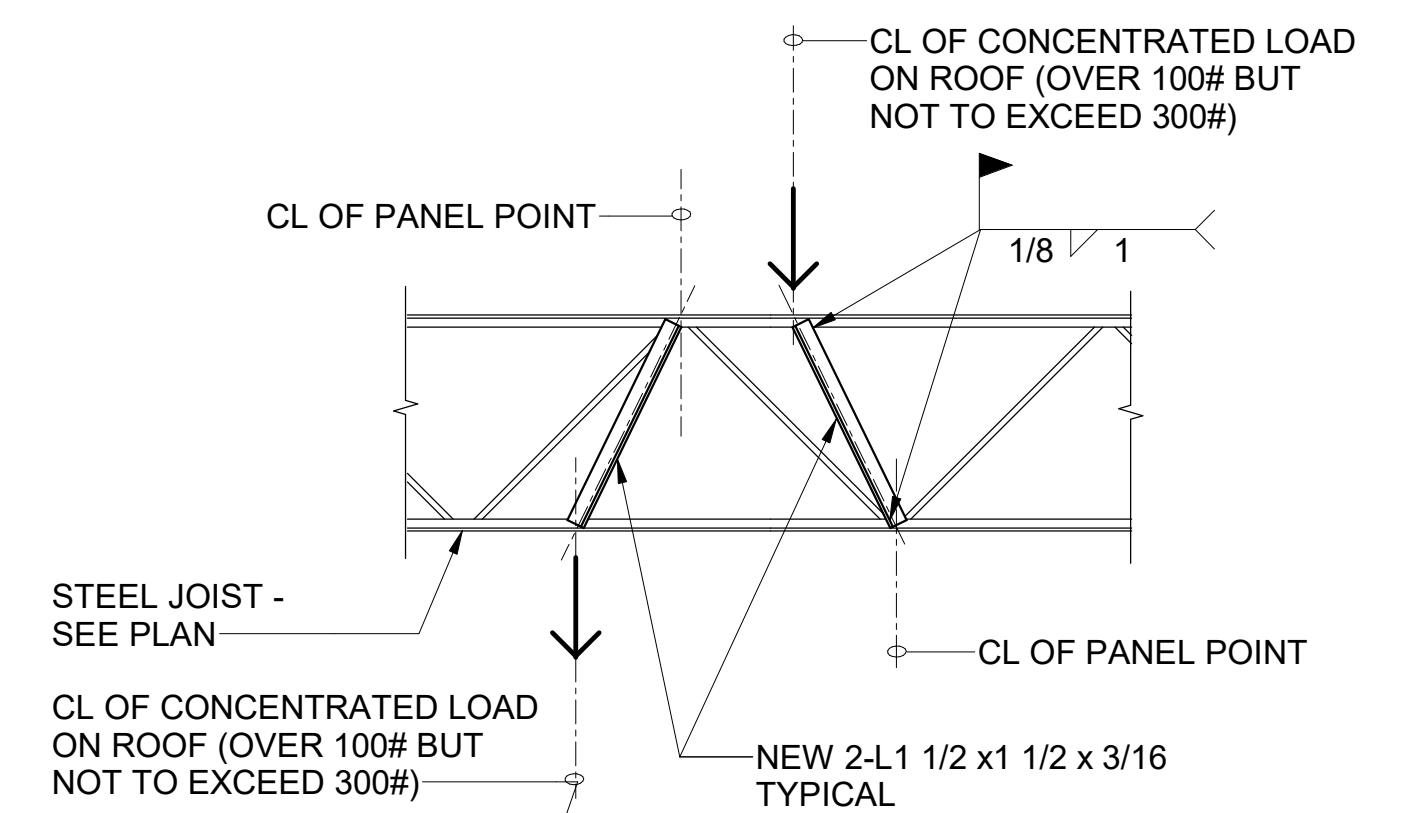
1 JOIST BRIDGING DETAIL





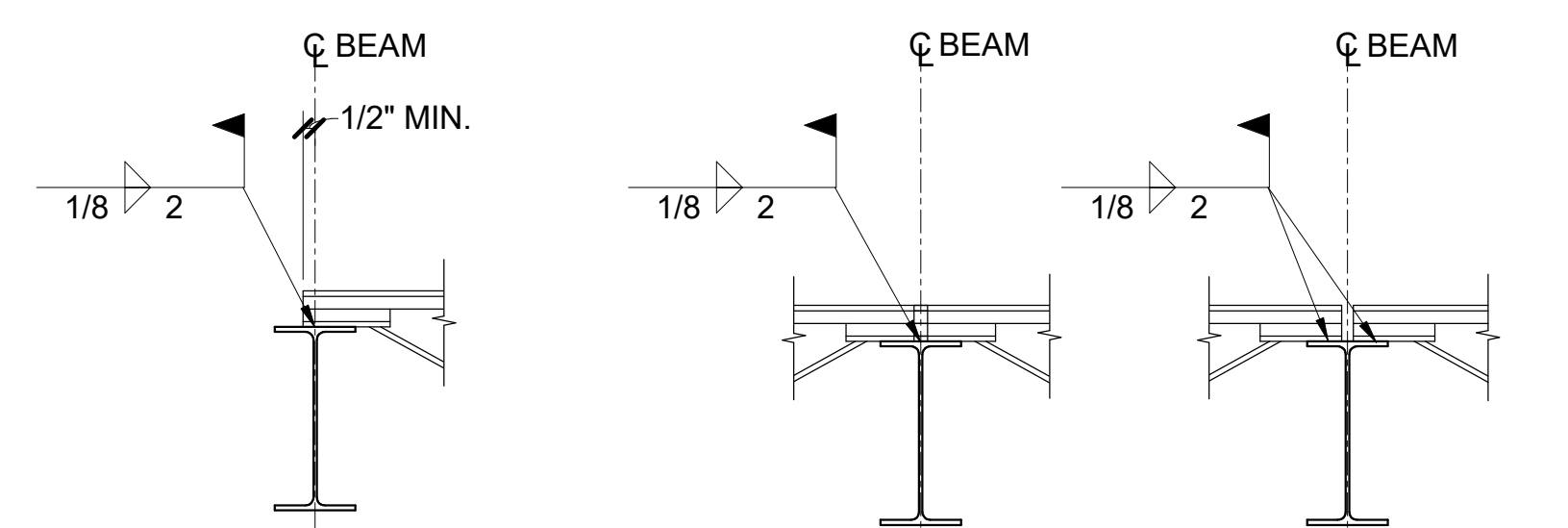


**(B) AT EXISTING JOIST**



AT NEW JOIST

## ② TYPICAL JOIST REINFORCEMENT (FOR CONCENTRATED LOADS)

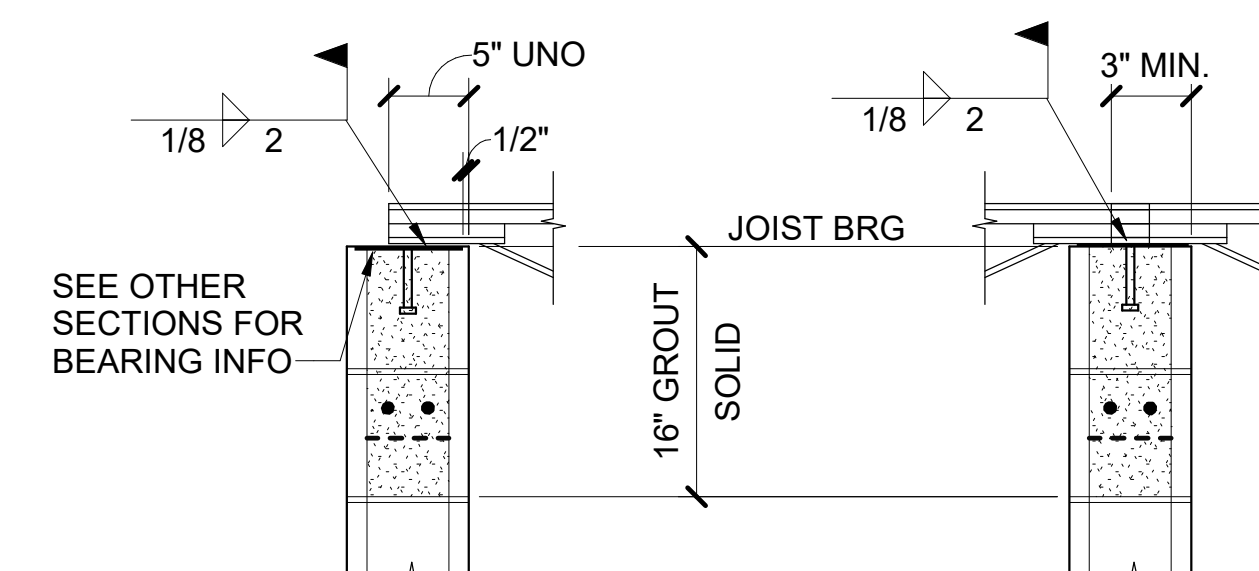


FLANGE WIDTH LESS THAN 5"      FLANGE WIDTH GREATER THAN 5"

BEAM ONE SIDE ONLY

BEAM BOTH SIDES

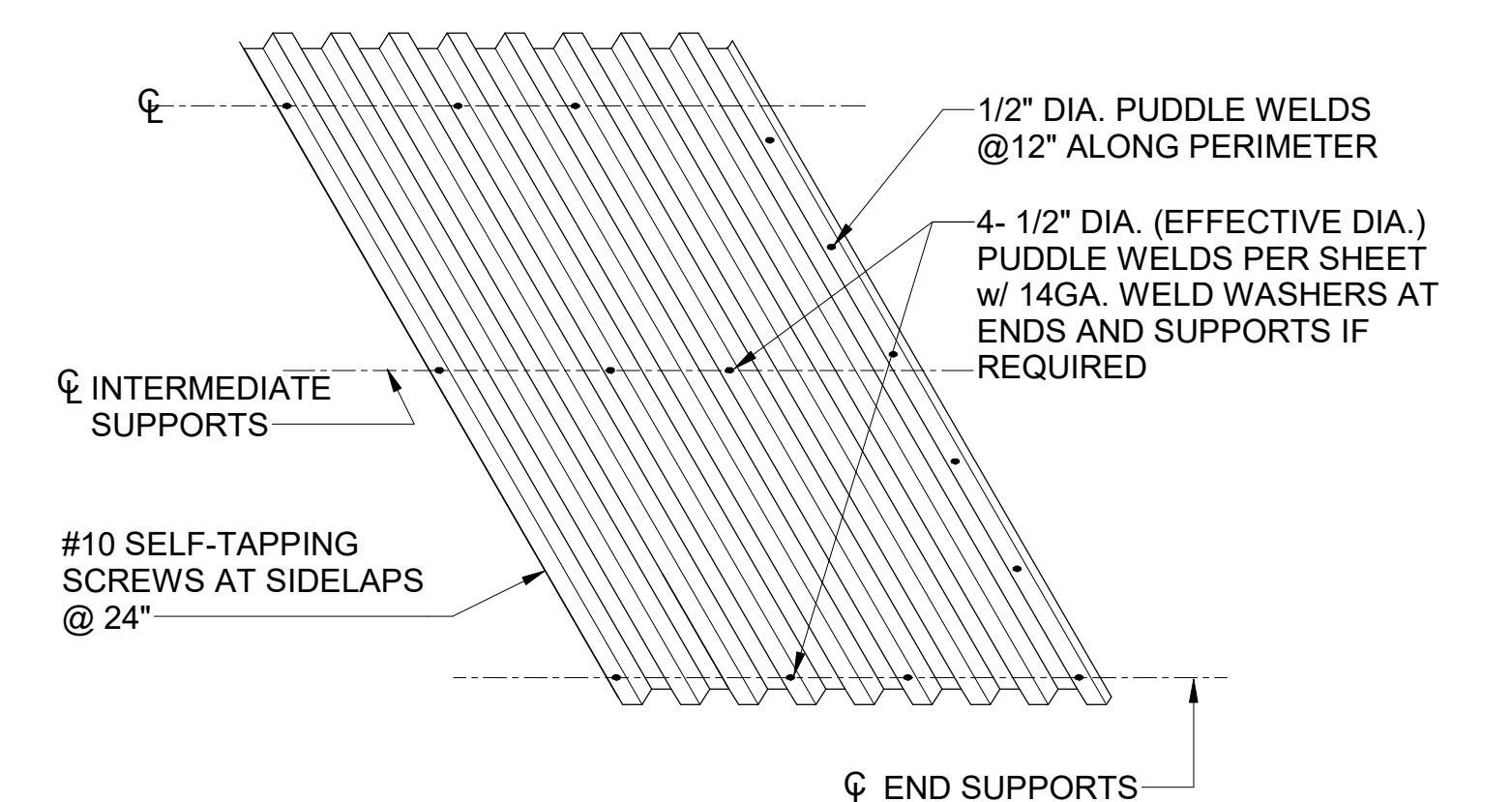
③B AT STEEL

JOIST ONE SIDE ONLYJOIST BOTH SIDES

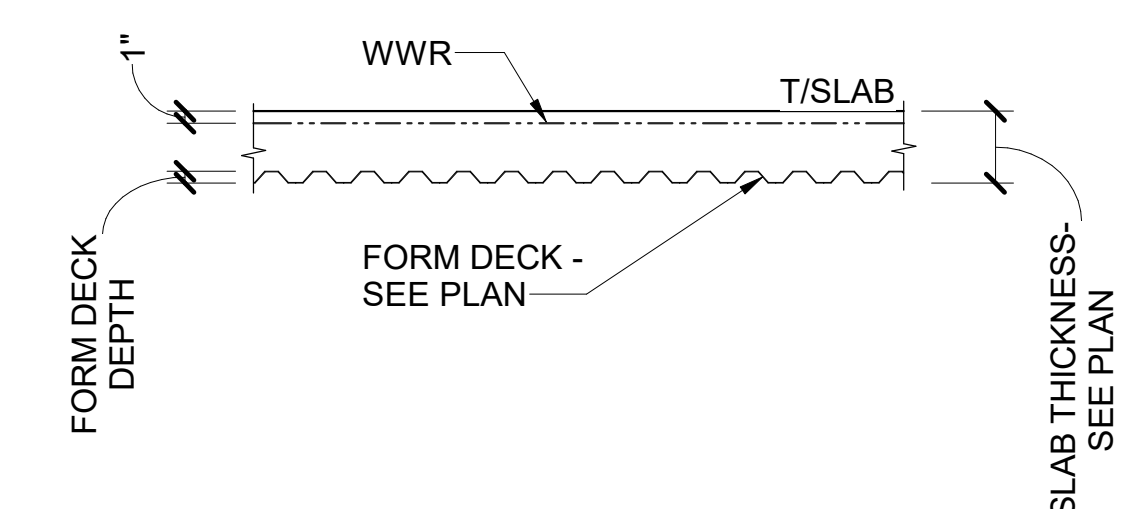
③A AT CMU

### ③ TYPICAL JOIST BEARING DETAILS

**NOTE:**  
#12 - 24 SELF-TAPPING SCREW MAY BE  
SUBSTITUTED FOR 1/2" DIA. PUDDLE  
WELD. USE SAME SPACING.



1" FORM DECK ATTACHMENT DETAIL  
(GALVANIZED)



① NON-COMPOSITE STEEL FORM DECK

## FRAMING SECTIONS AND DETAILS

FOR: MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

E.&P Engineer:  
ATA, Inc.  
89 Members Way  
Birmingham, KY 40504  
59.253.0892

**Structural Engineer:**  
Structural Design Group, Inc.  
10 Great Circle Rd. Suite 106  
Nashville, TN 37228  
615.255.5537

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|             |      |
|-------------|------|
| Project No: | 1928 |
| Drawn By:   | CCA  |
| Check By:   | CH   |

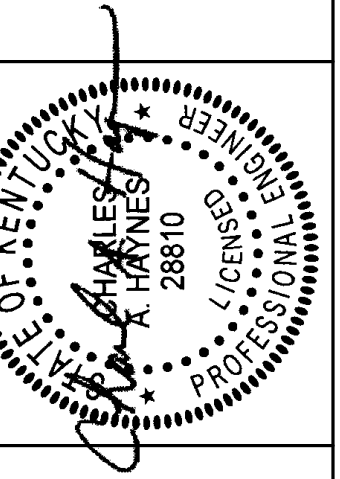
SHEET RELEASE

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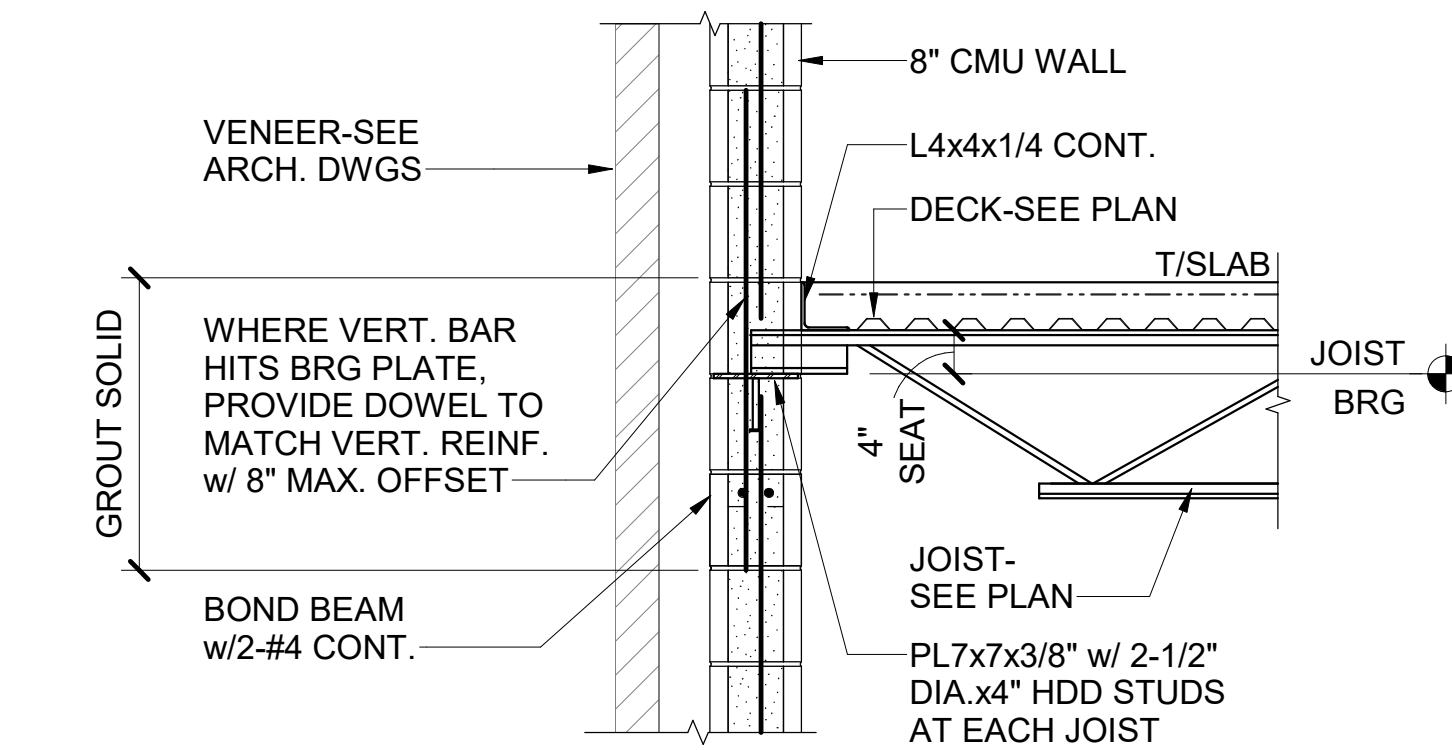
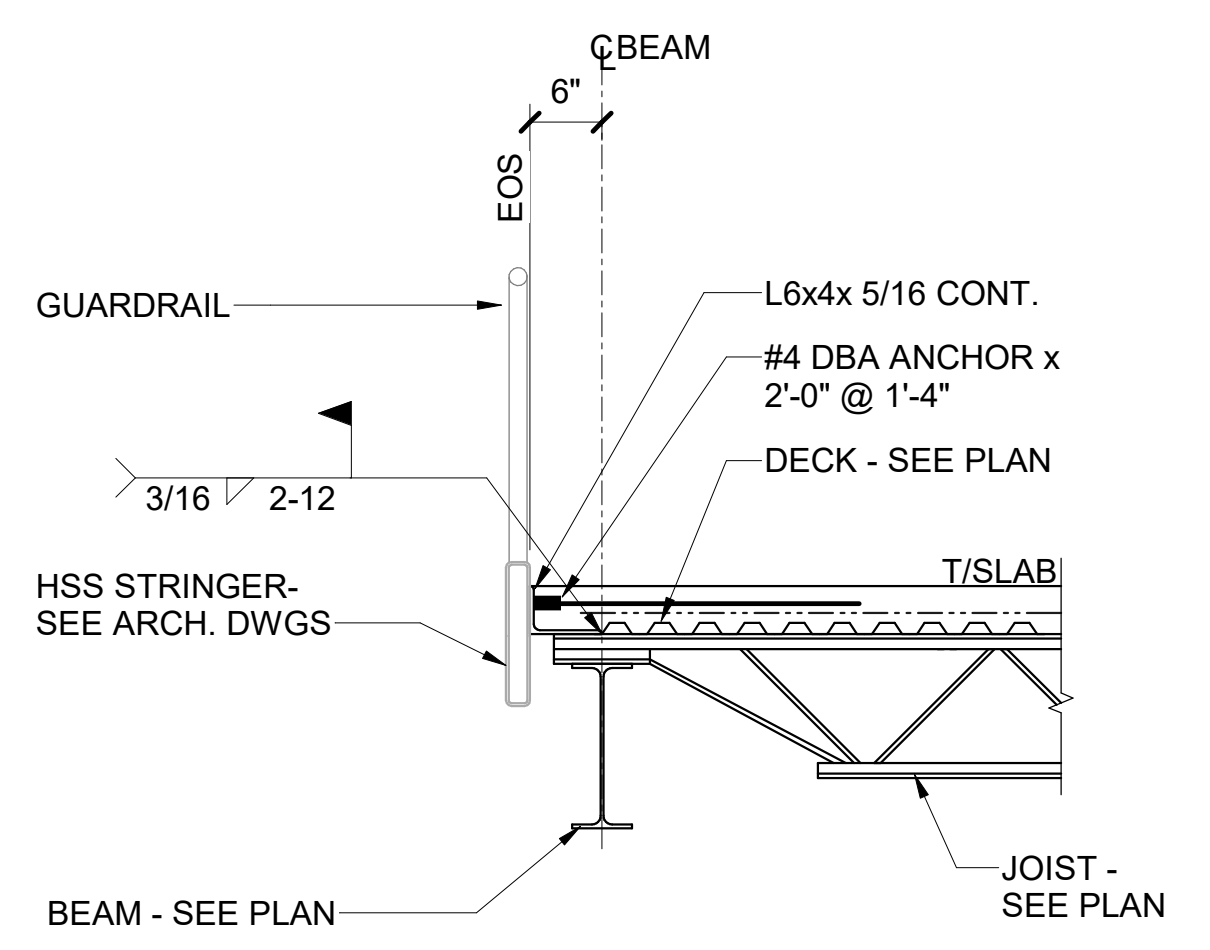
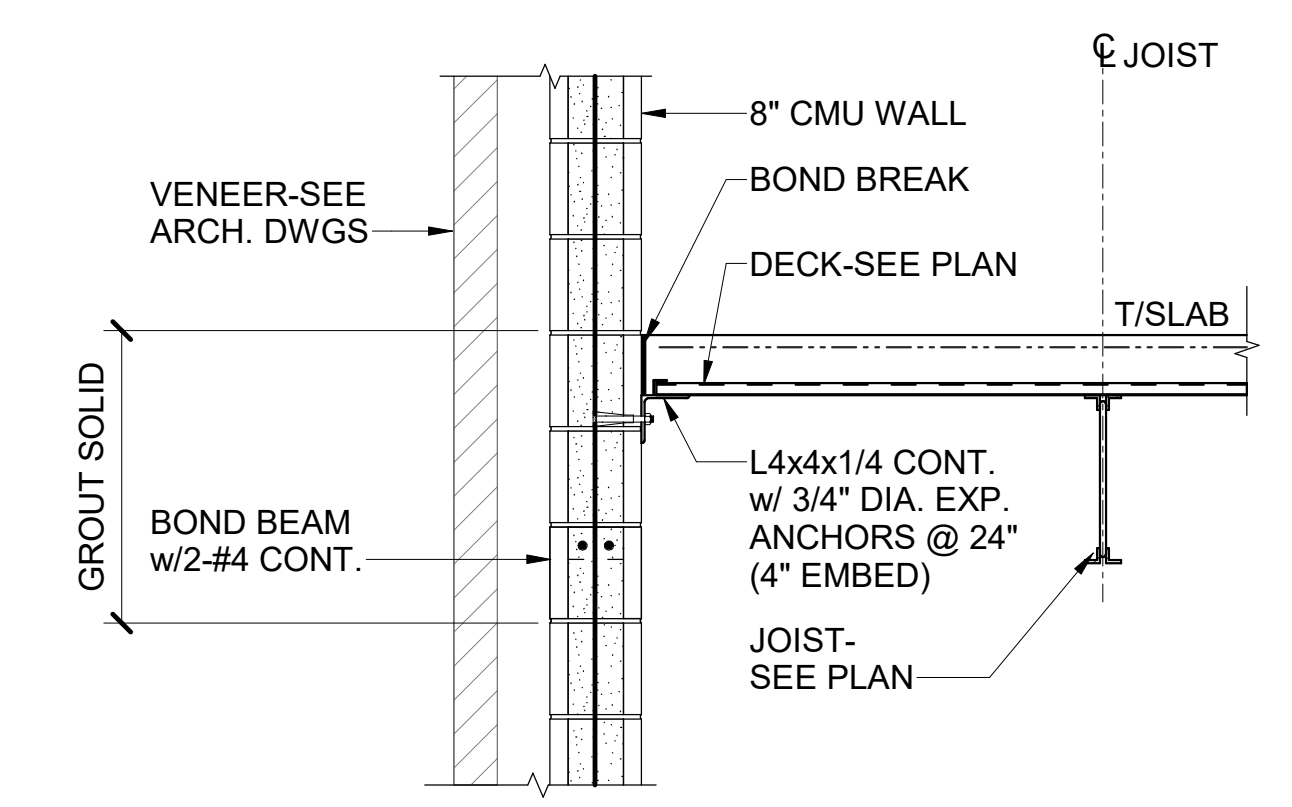
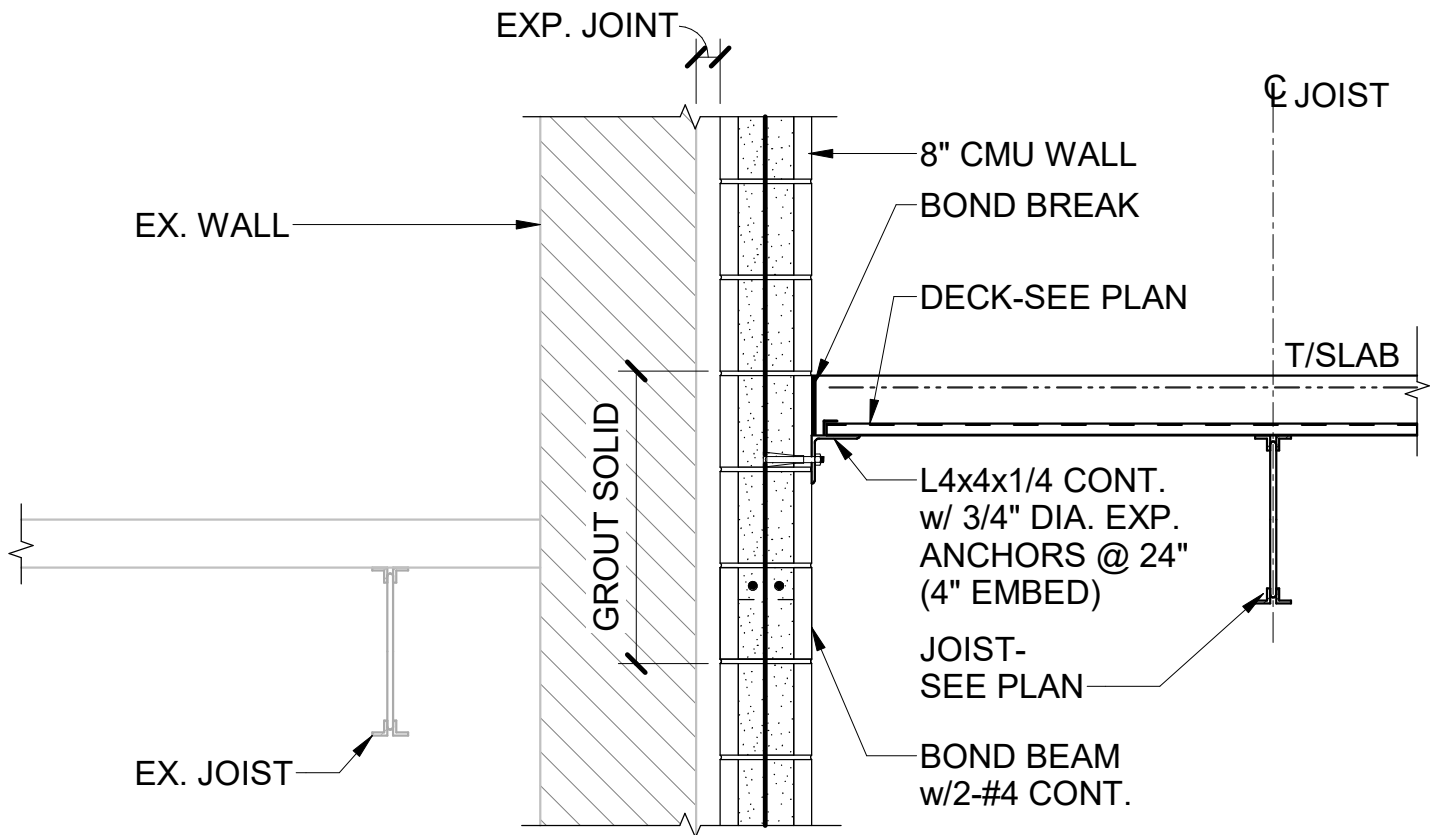
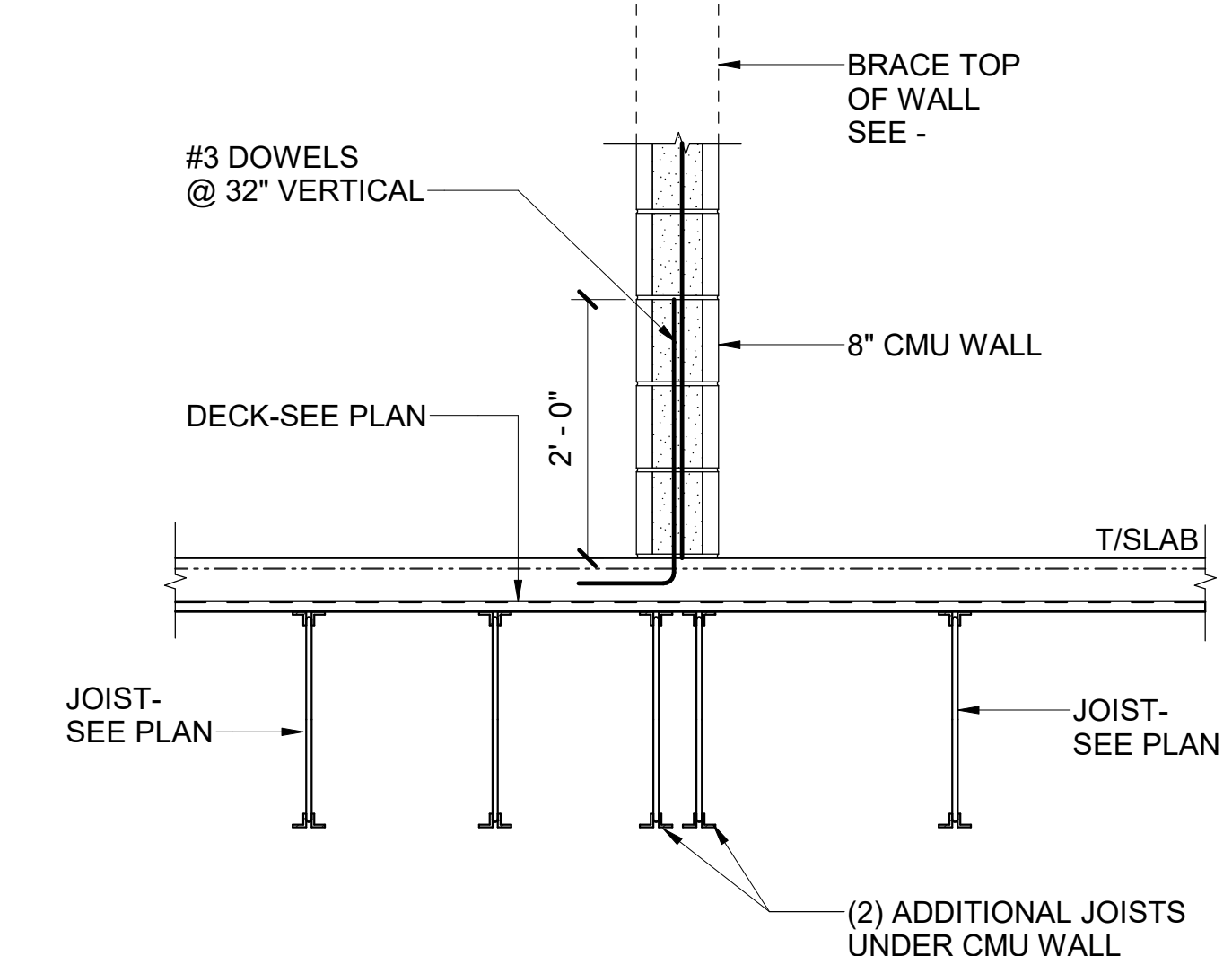
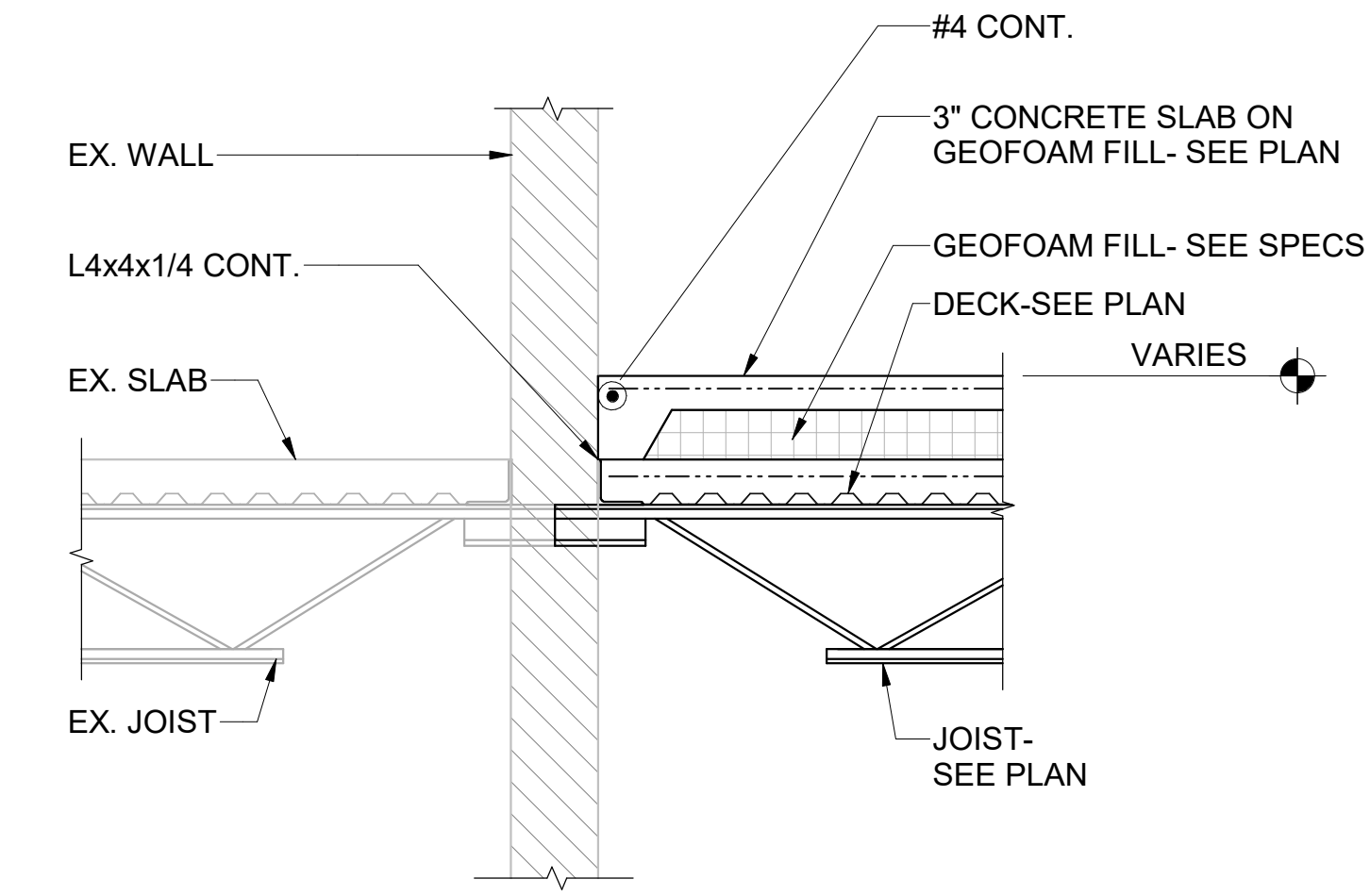
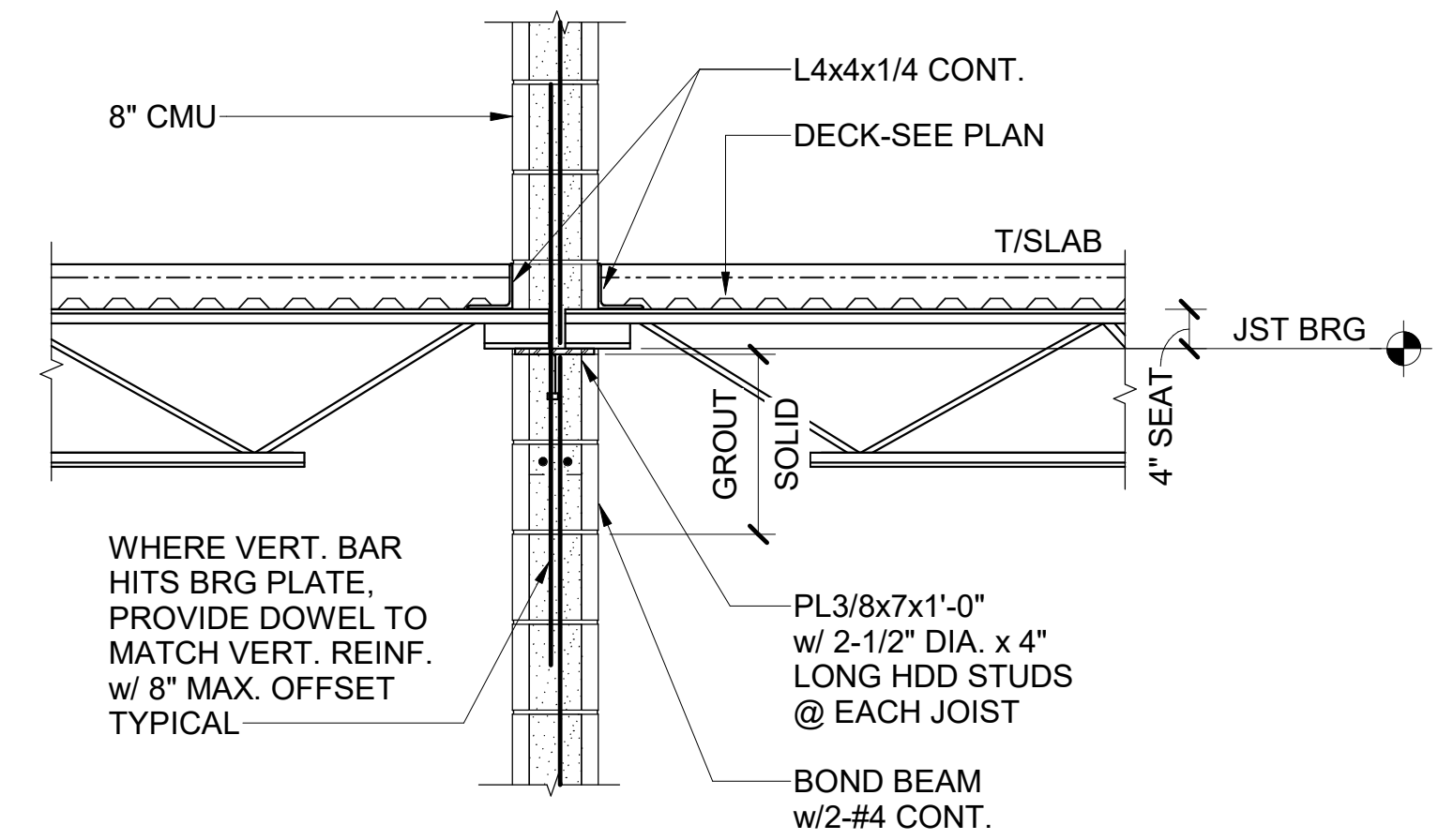
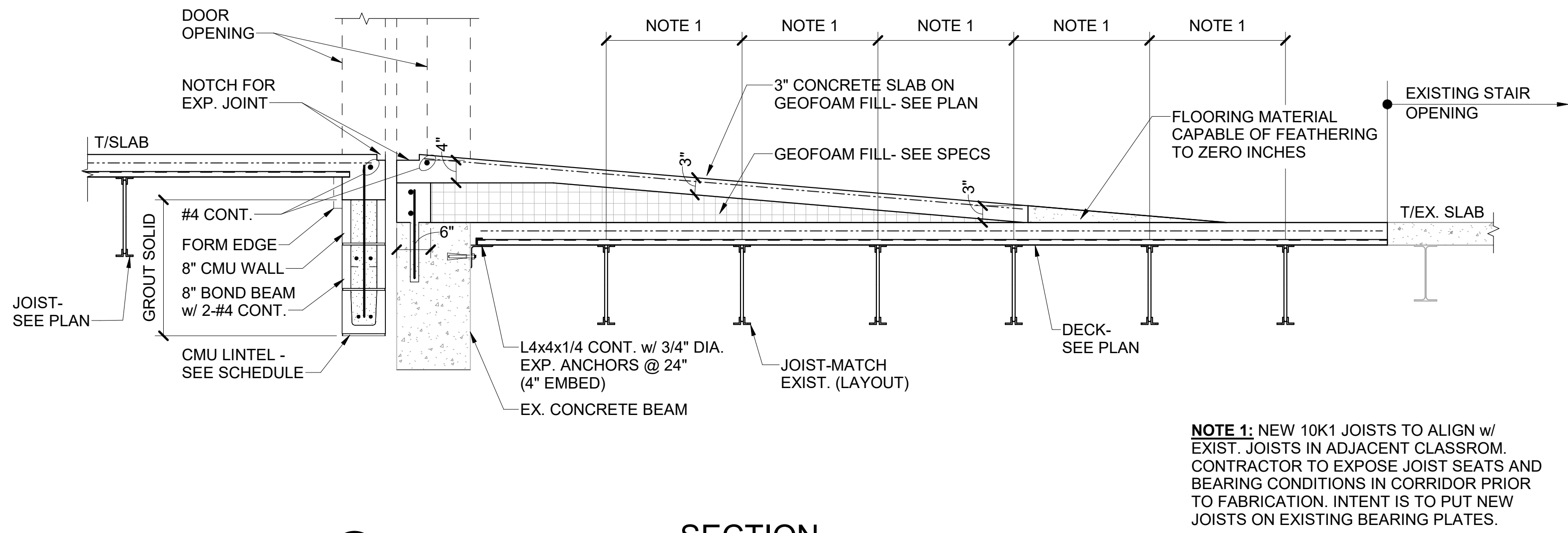
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## 54.1

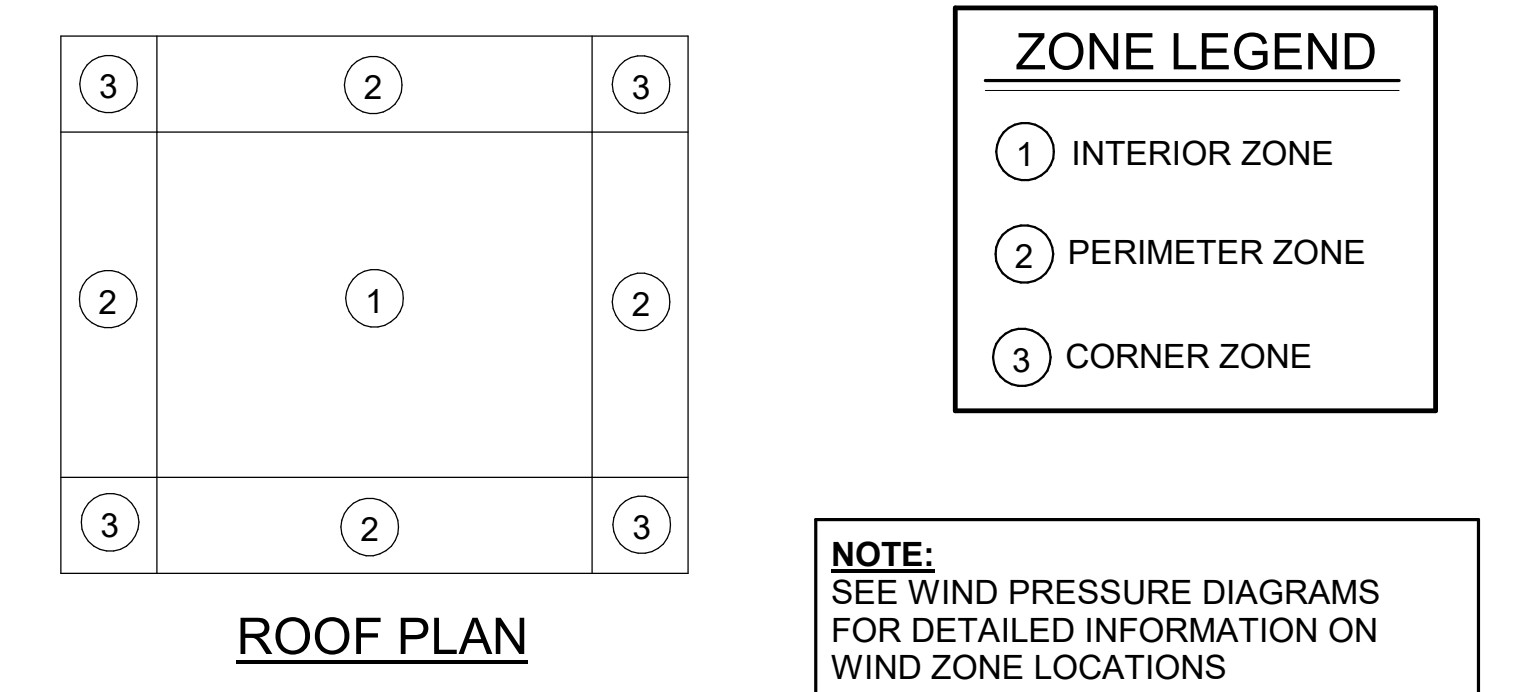
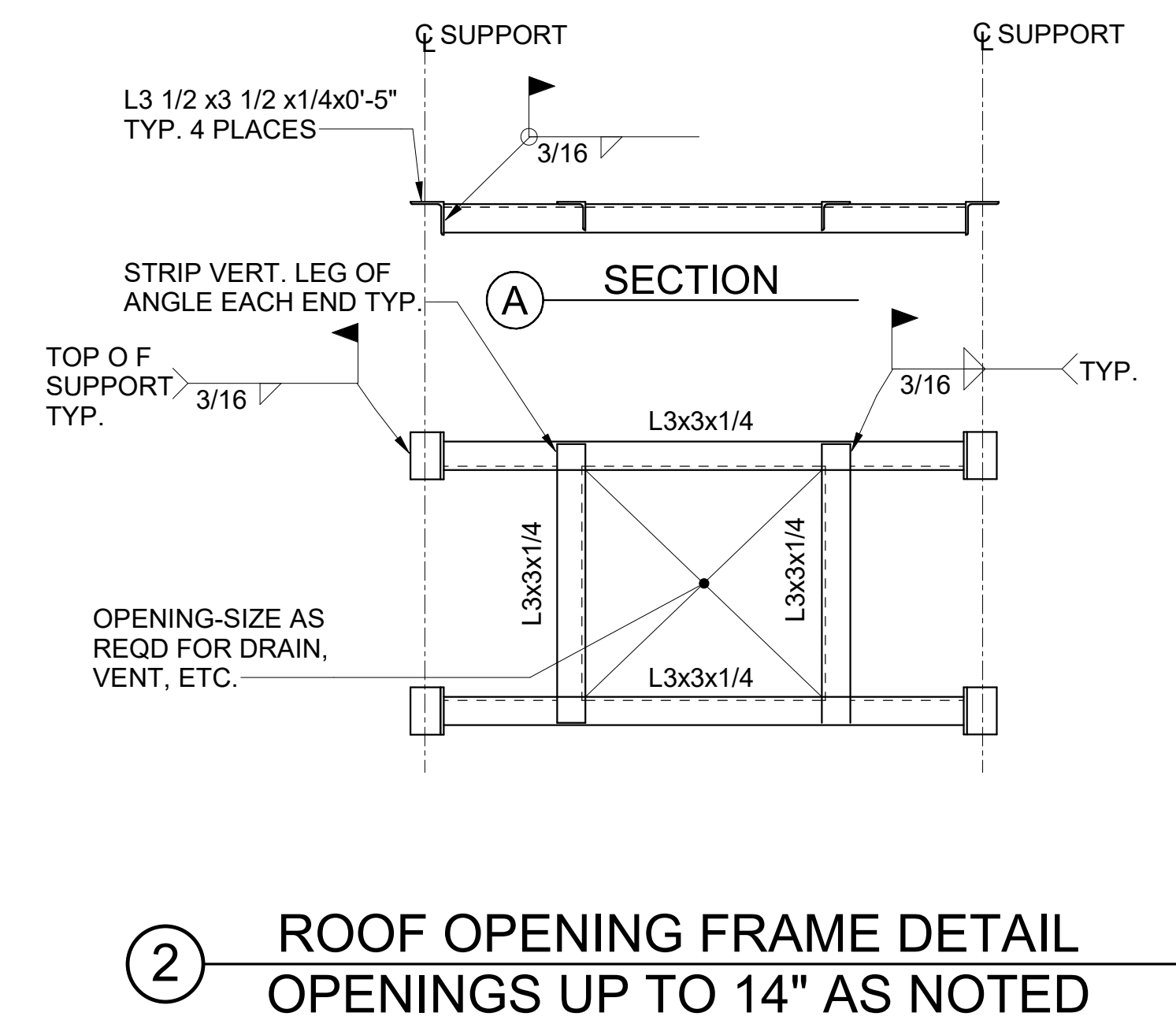
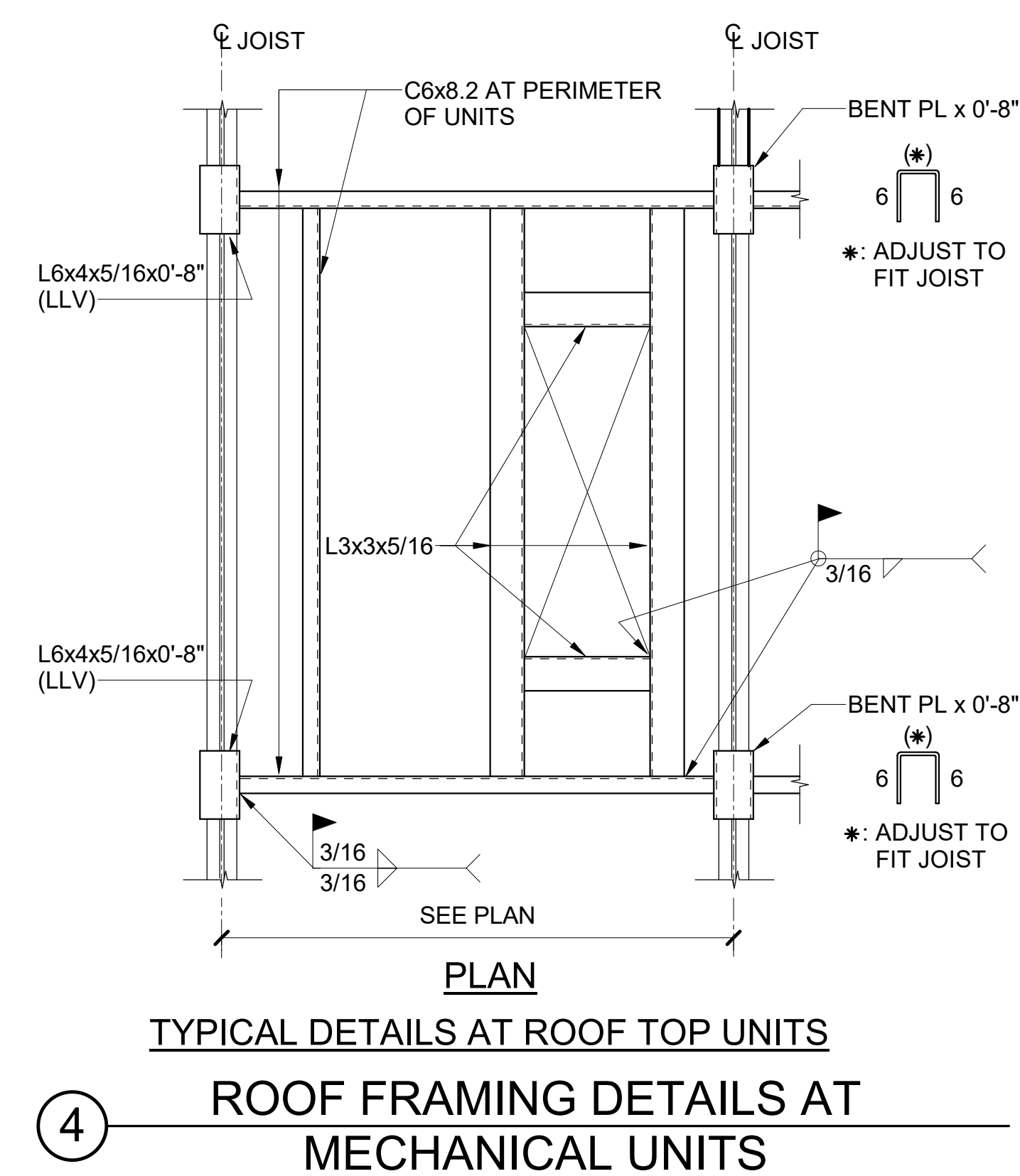
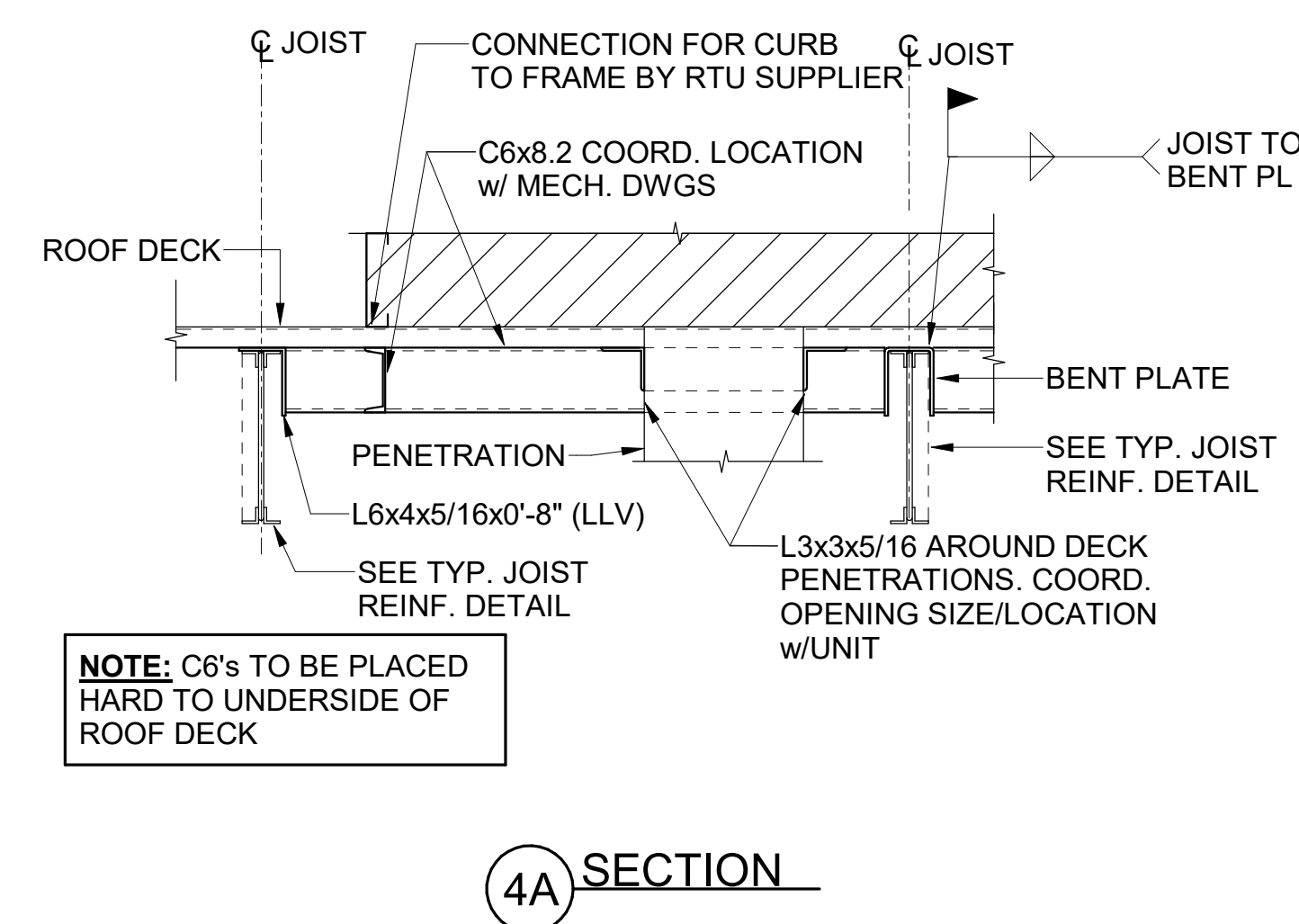
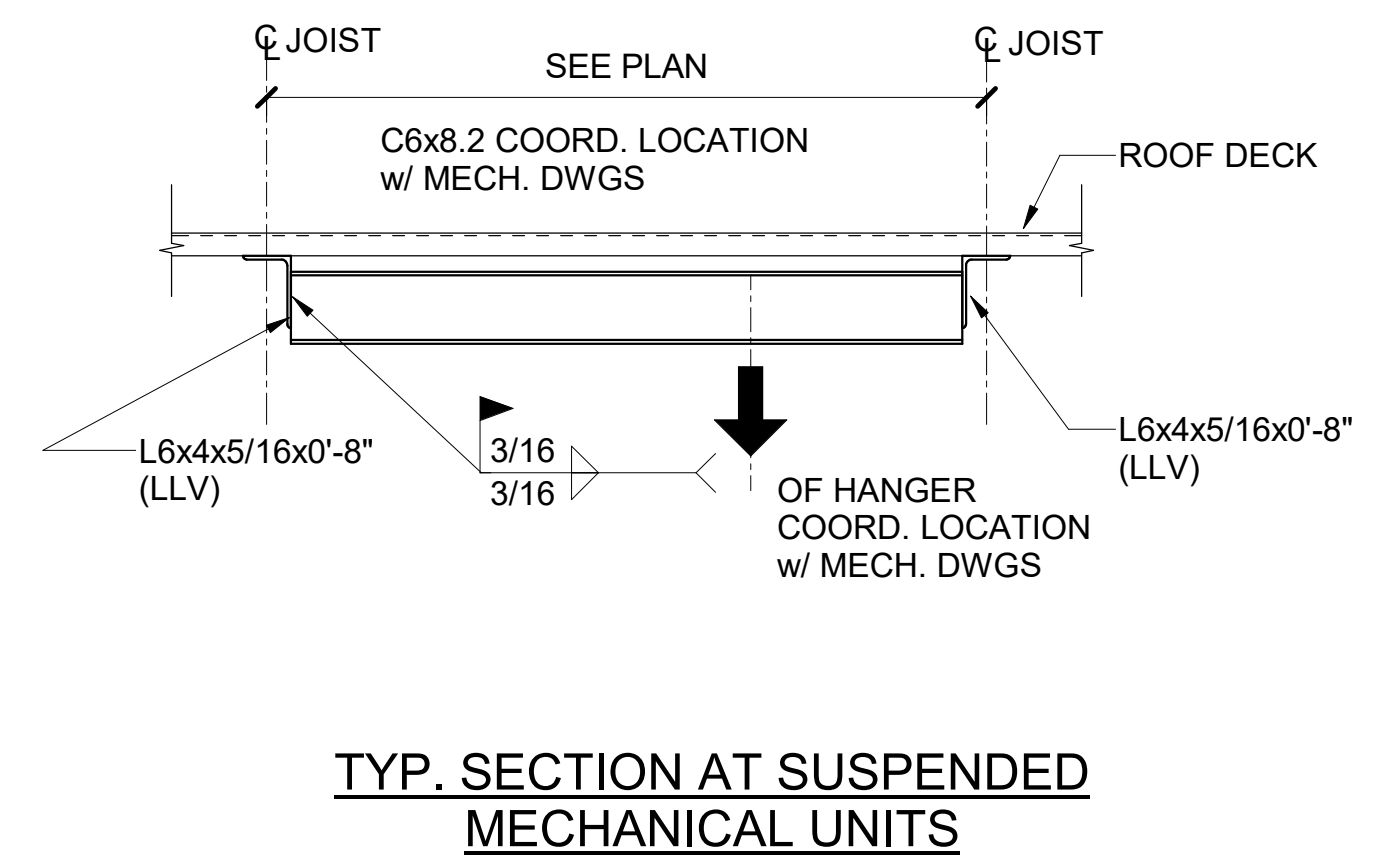
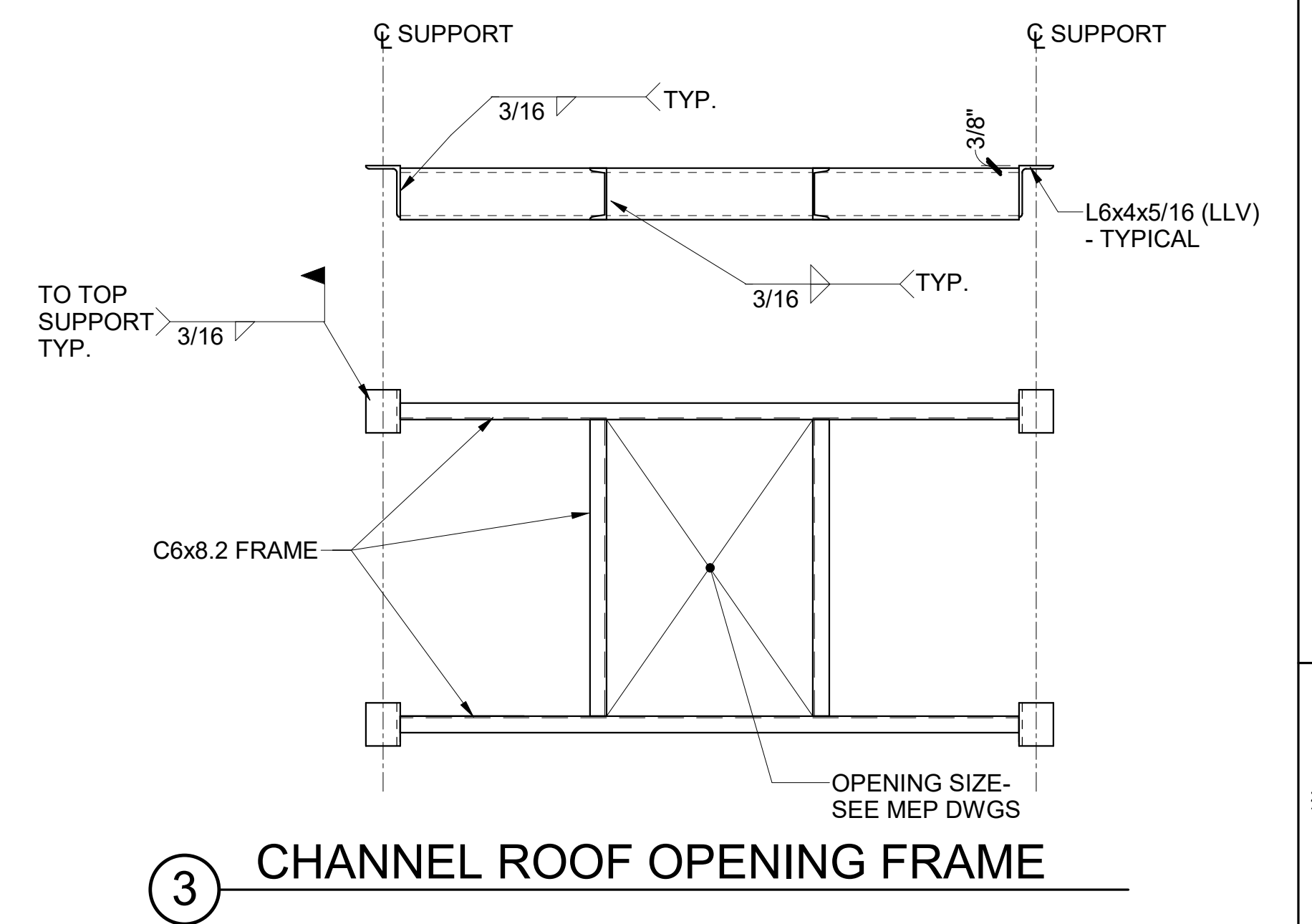
RAMING SECTIONS AND  
DETAILS  
DATE ISSUED:  
OCTOBER 2019



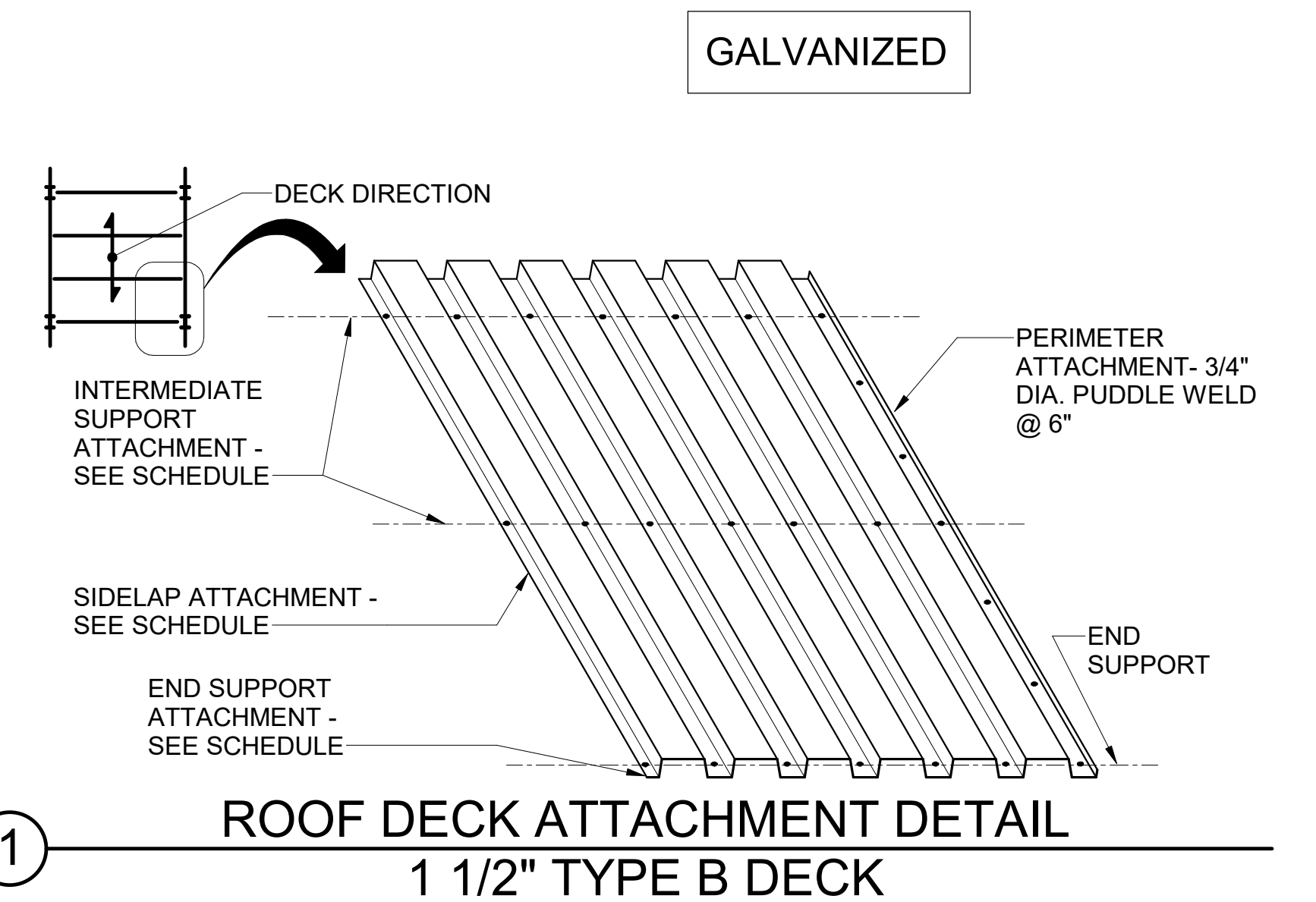




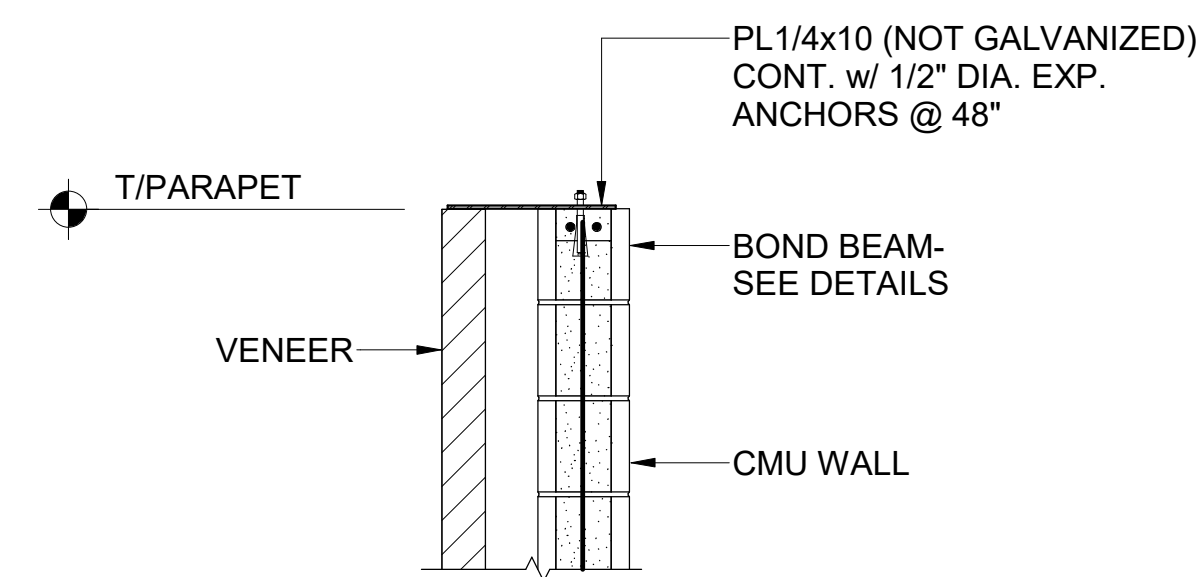




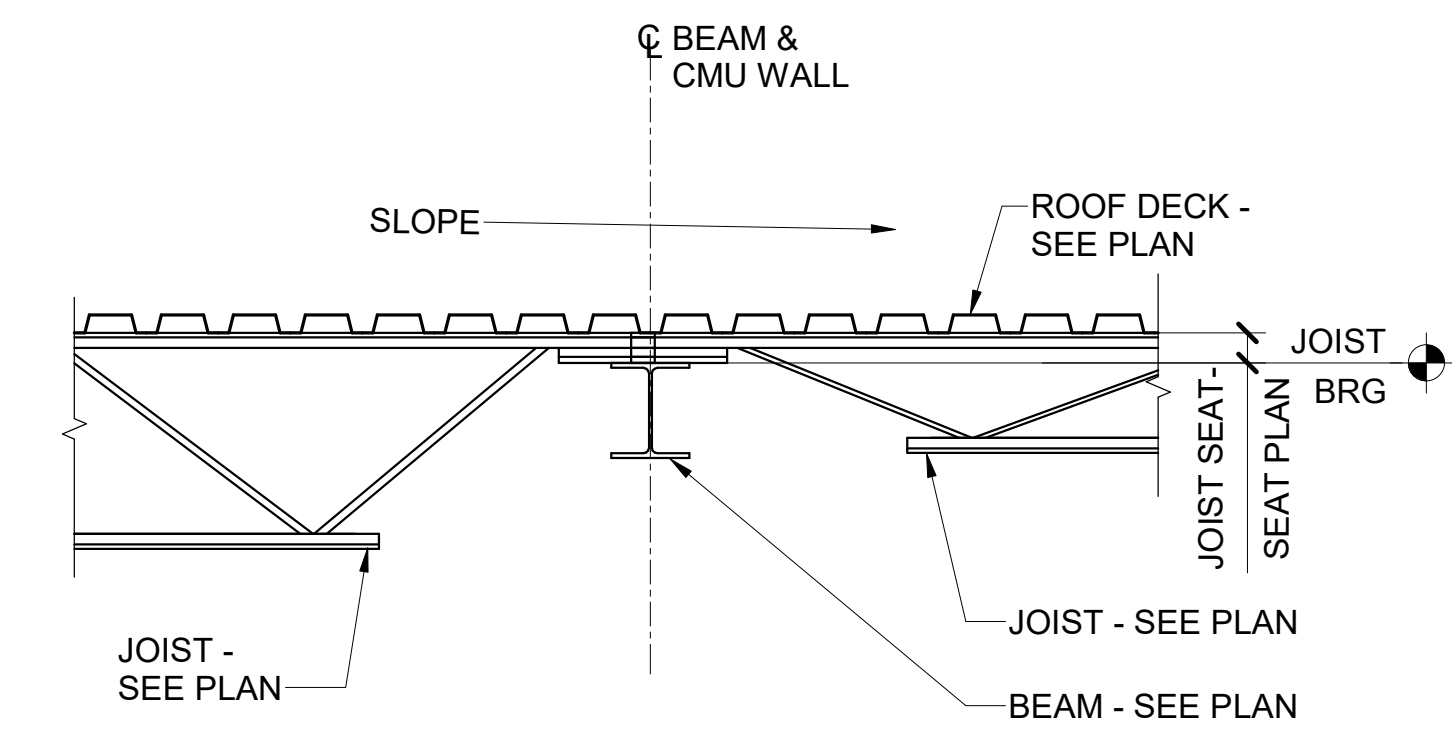
| ROOF DECK ATTACHMENT SCHEDULE |                                  |   |   |
|-------------------------------|----------------------------------|---|---|
| ZONE                          | SIDLAP                           | INTERMEDIATE<br>SUPPORT                   | END SUPPORT                               |
| ①                             | #10 SELF-TAPPING<br>SCREWS @ 12" | 36/4 PATTERN w/ 3/4"<br>DIA. PUDDLE WELDS | _____                                     |
| ②                             | #10 SELF-TAPPING<br>SCREWS @ 12" | 36/4 PATTERN w/ 3/4"<br>DIA. PUDDLE WELDS | 36/7 PATTERN w/ 3/4"<br>DIA. PUDDLE WELDS |
| ③                             | #10 SELF-TAPPING<br>SCREWS @ 12" | 36/7 PATTERN w/ 3/4"<br>DIA. PUDDLE WELDS | 36/7 PATTERN w/ 3/4"<br>DIA. PUDDLE WELDS |



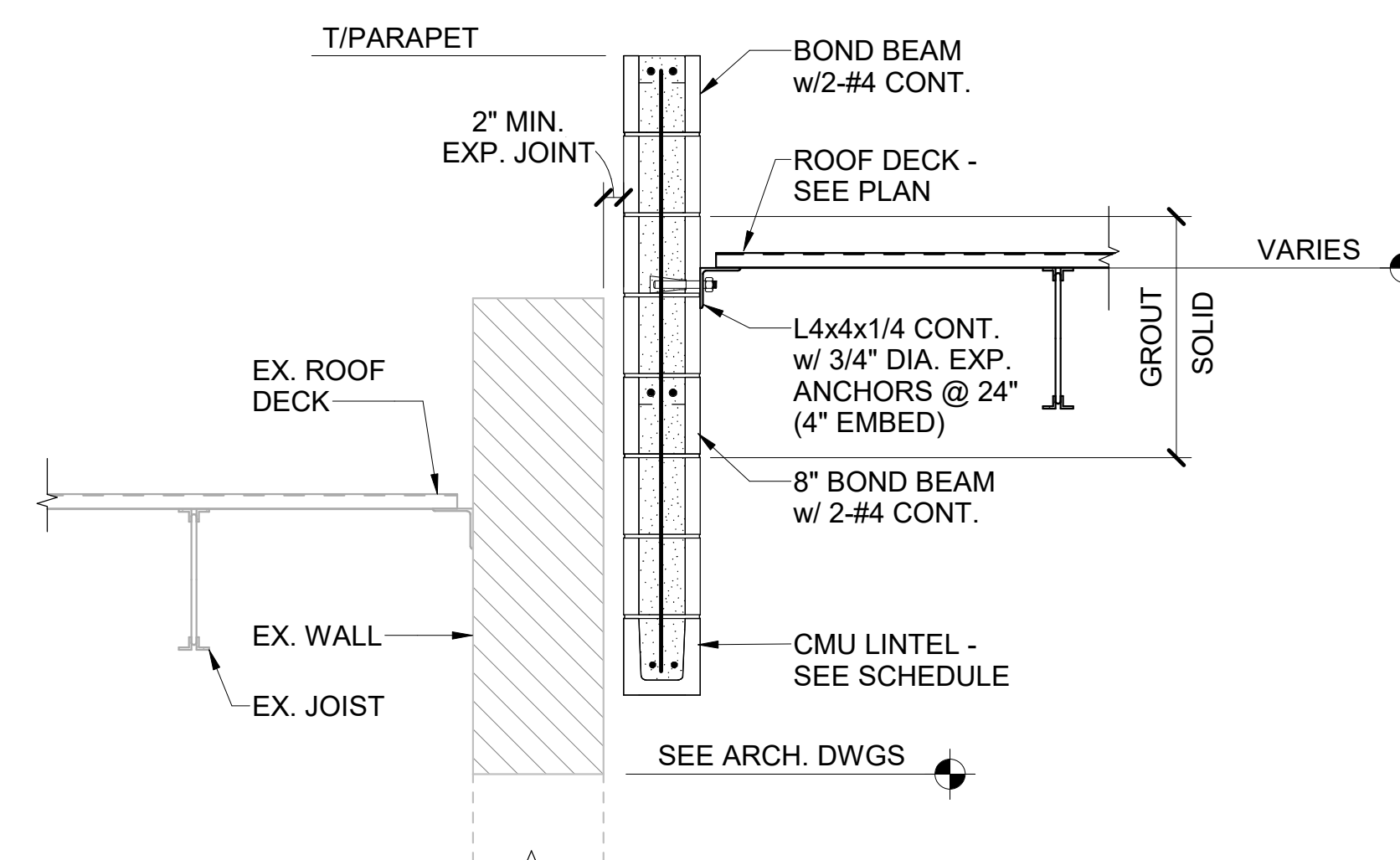




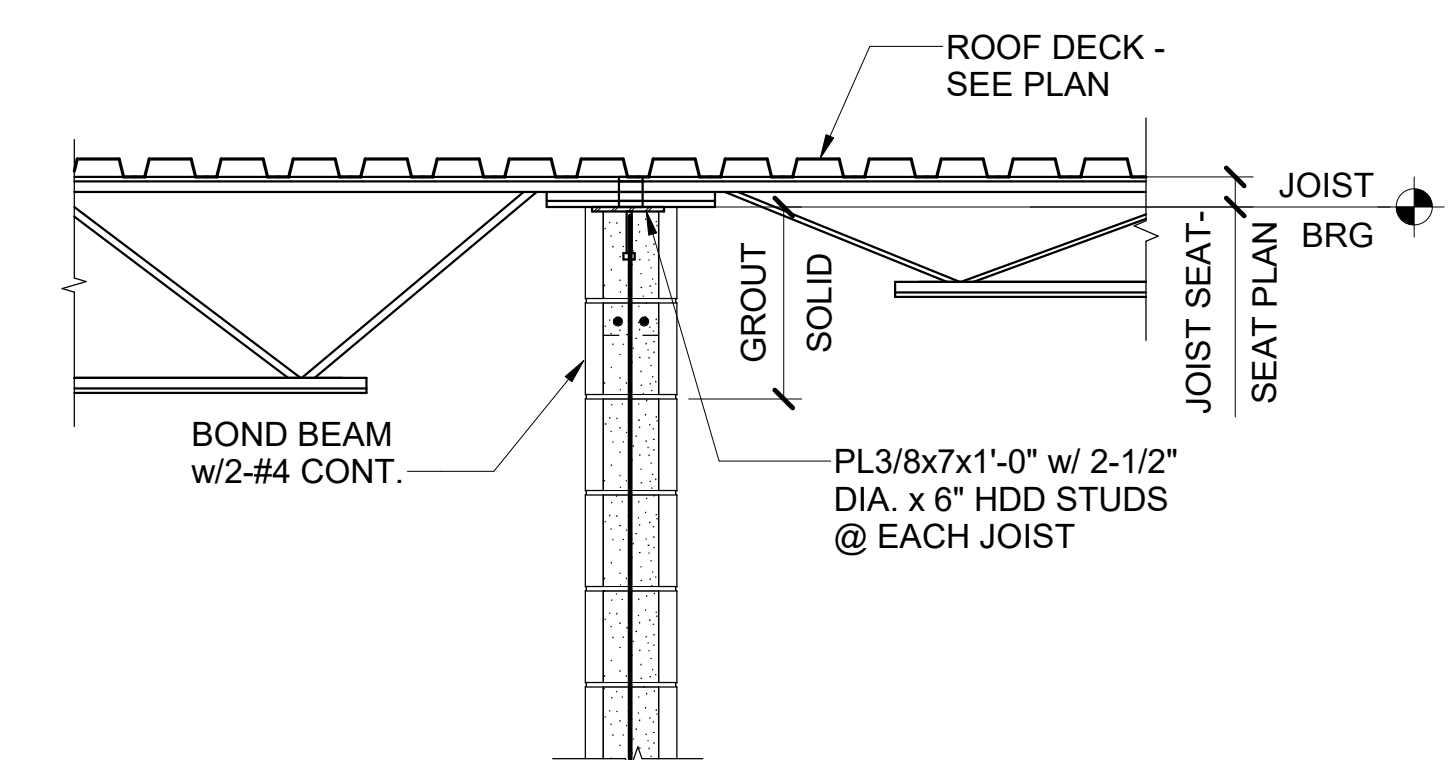
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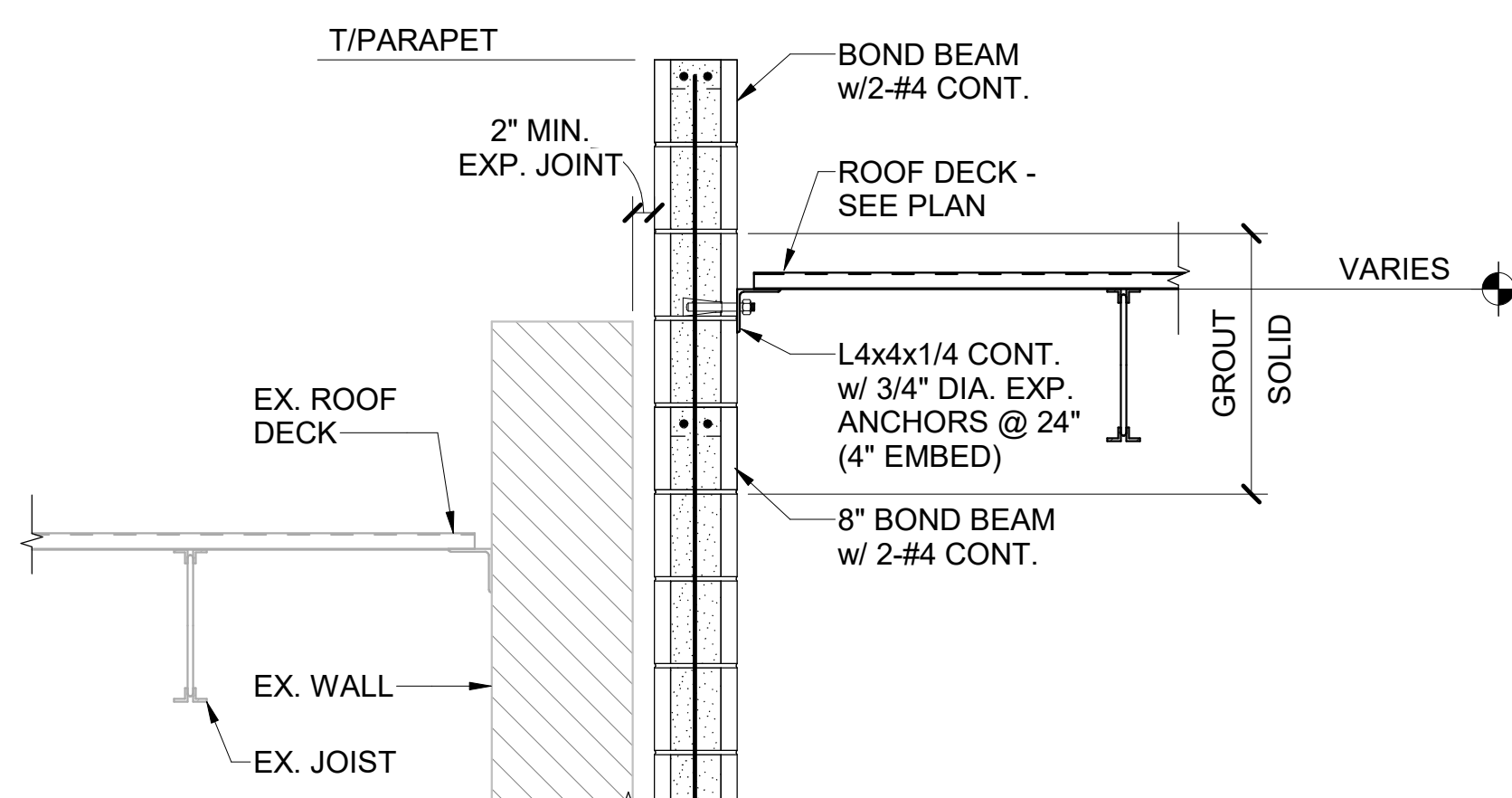
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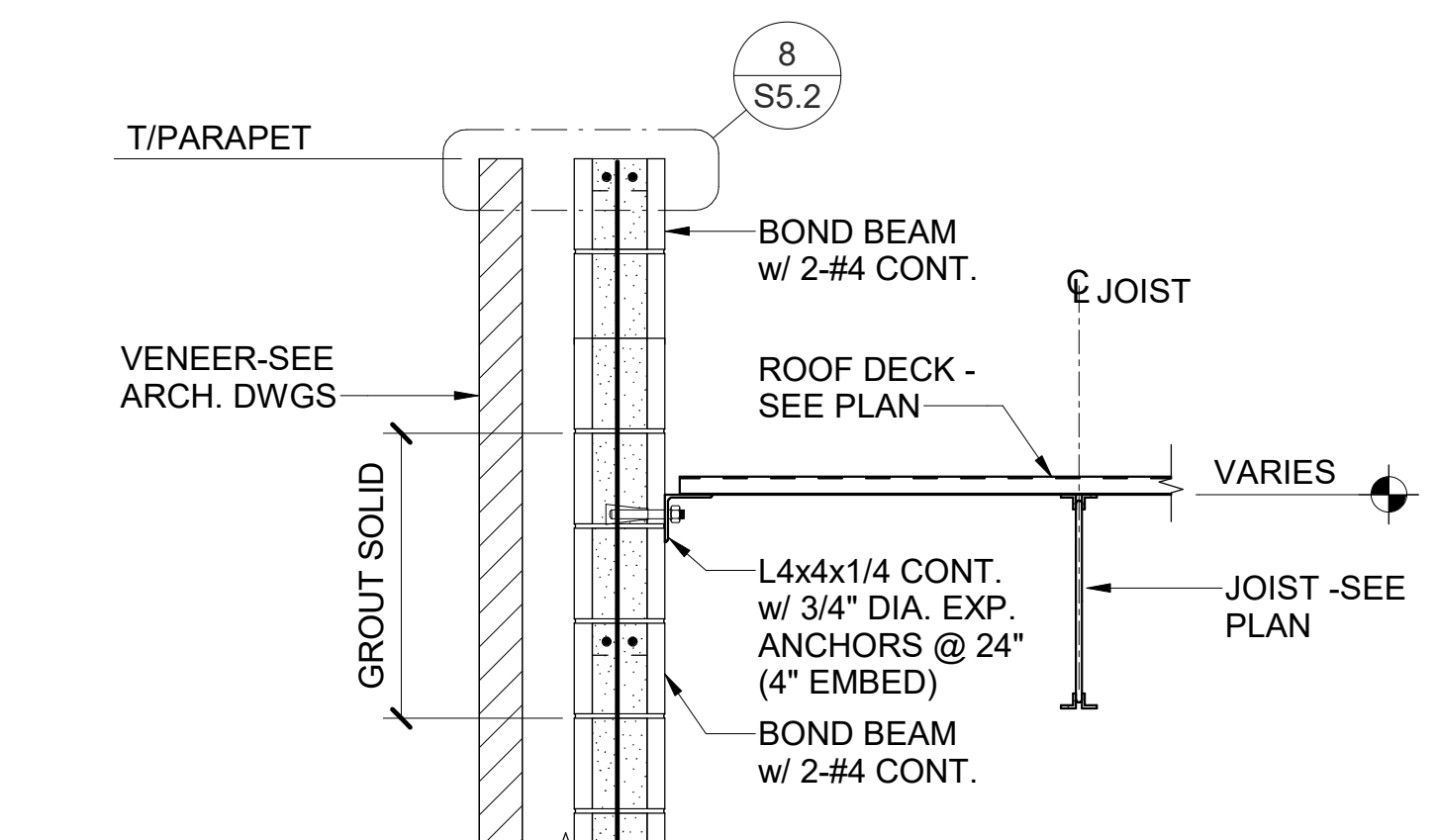
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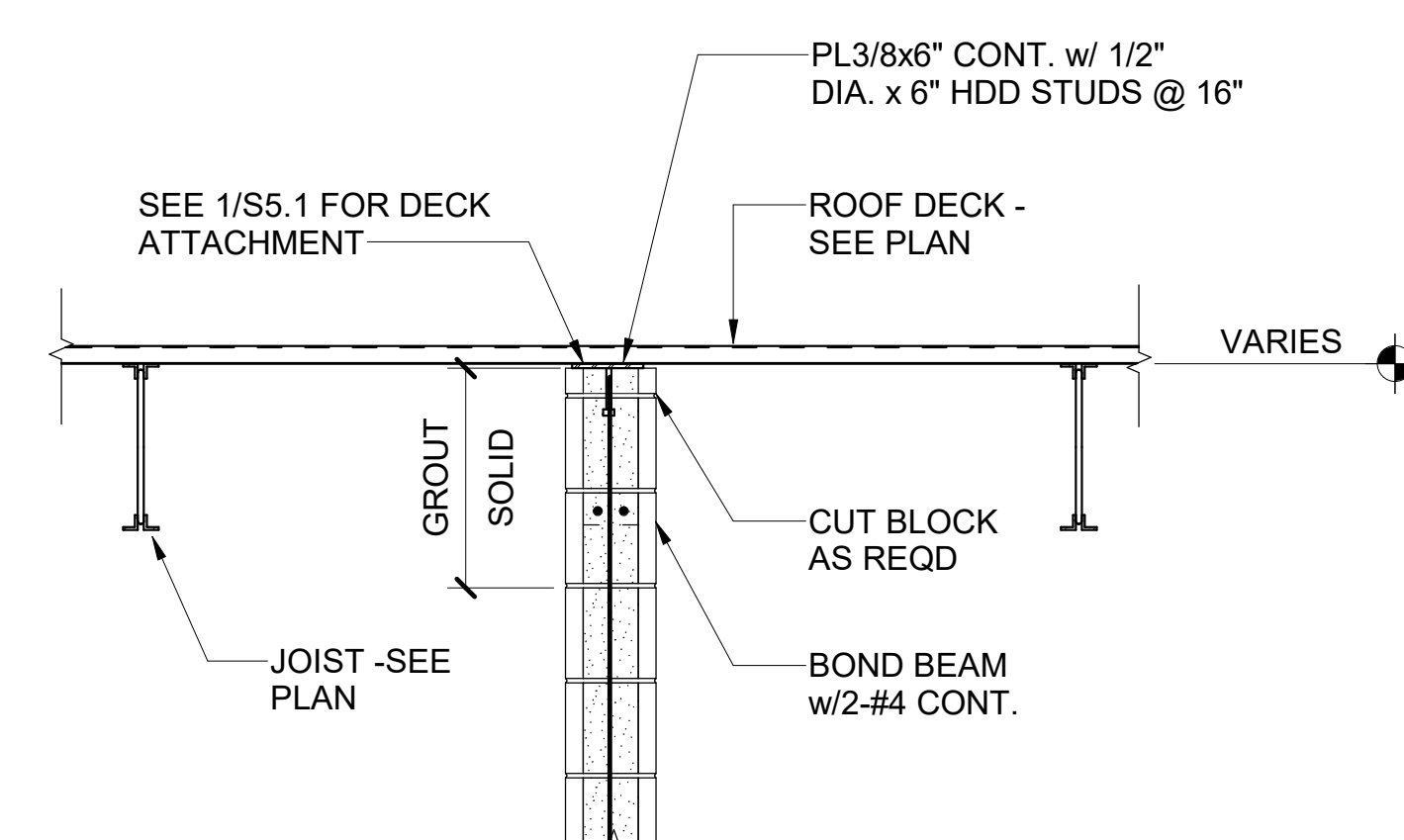
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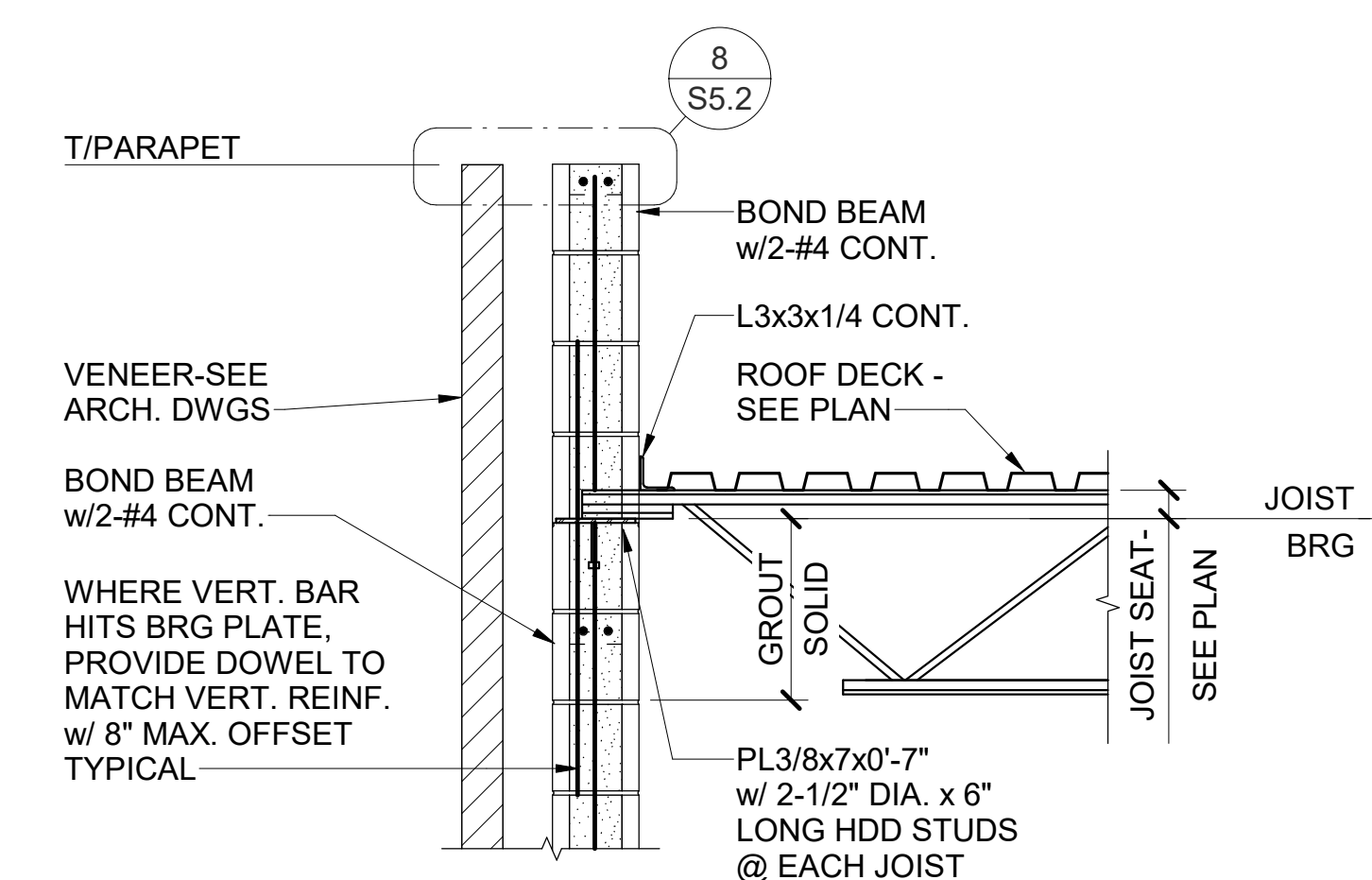
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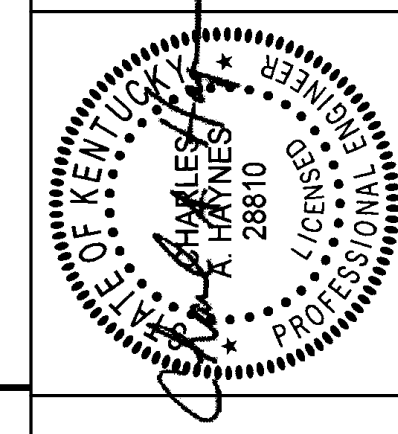
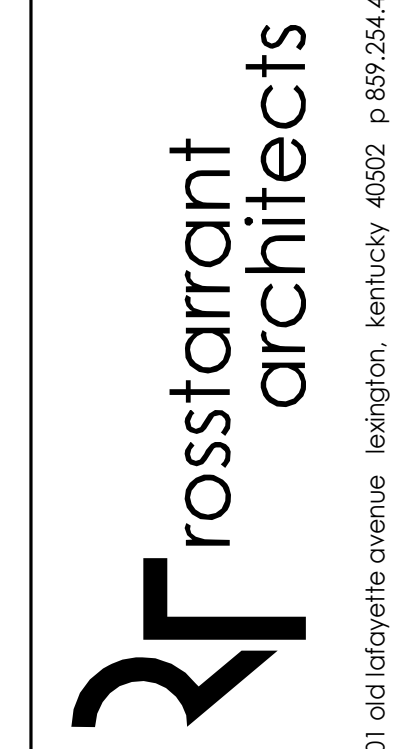
② \_\_\_\_\_ SECTION



5 \_\_\_\_\_ SECTION \_\_\_\_\_



① \_\_\_\_\_ SECTION \_\_\_\_\_



ROOF FRAMING SECTIONS AND DETAILS

MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

M.E.&P Engineer:  
CMTA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.253.0892

Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd. Suite 106  
Nashville, TN 37228  
p 615.255.5537

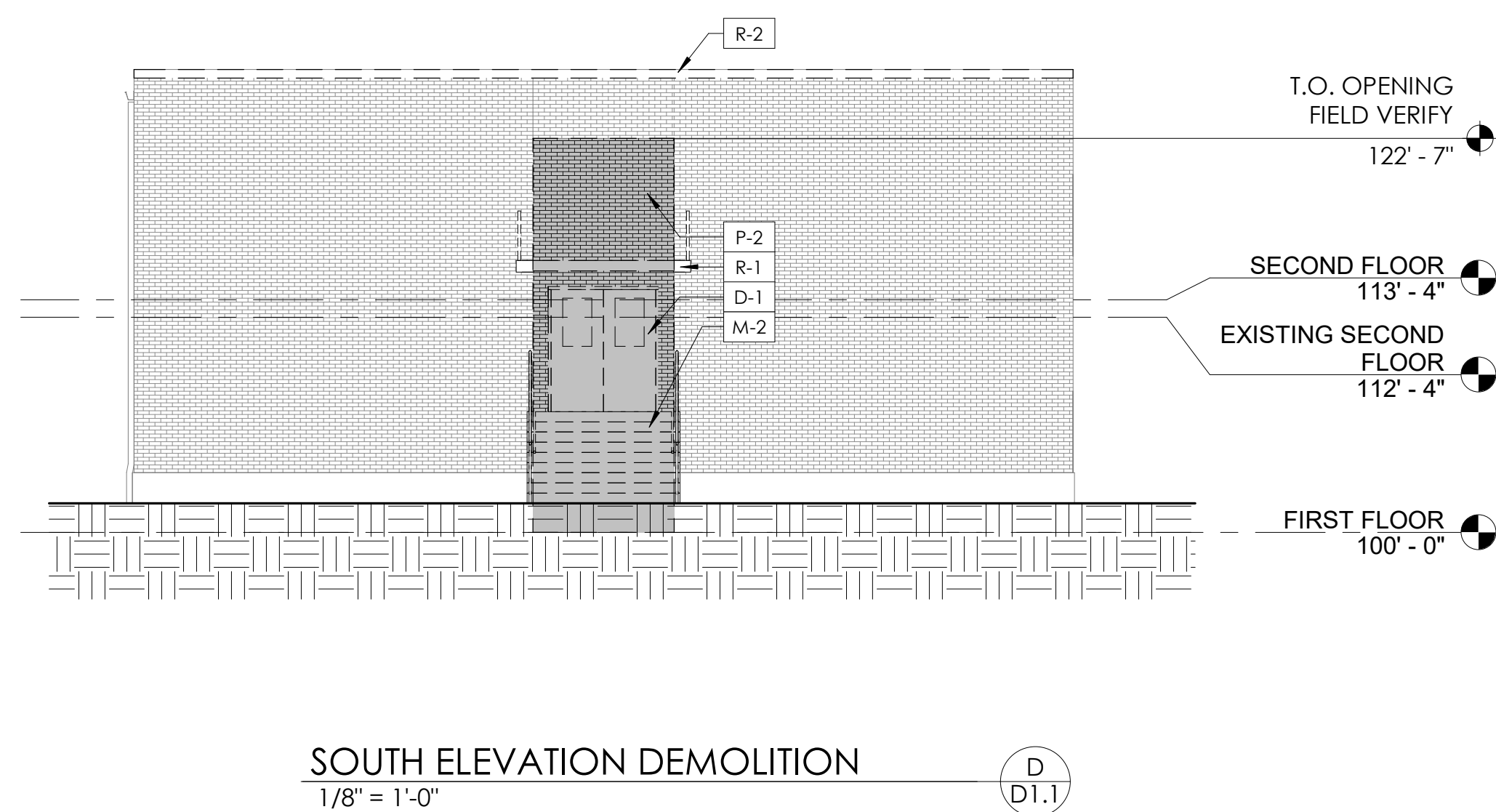
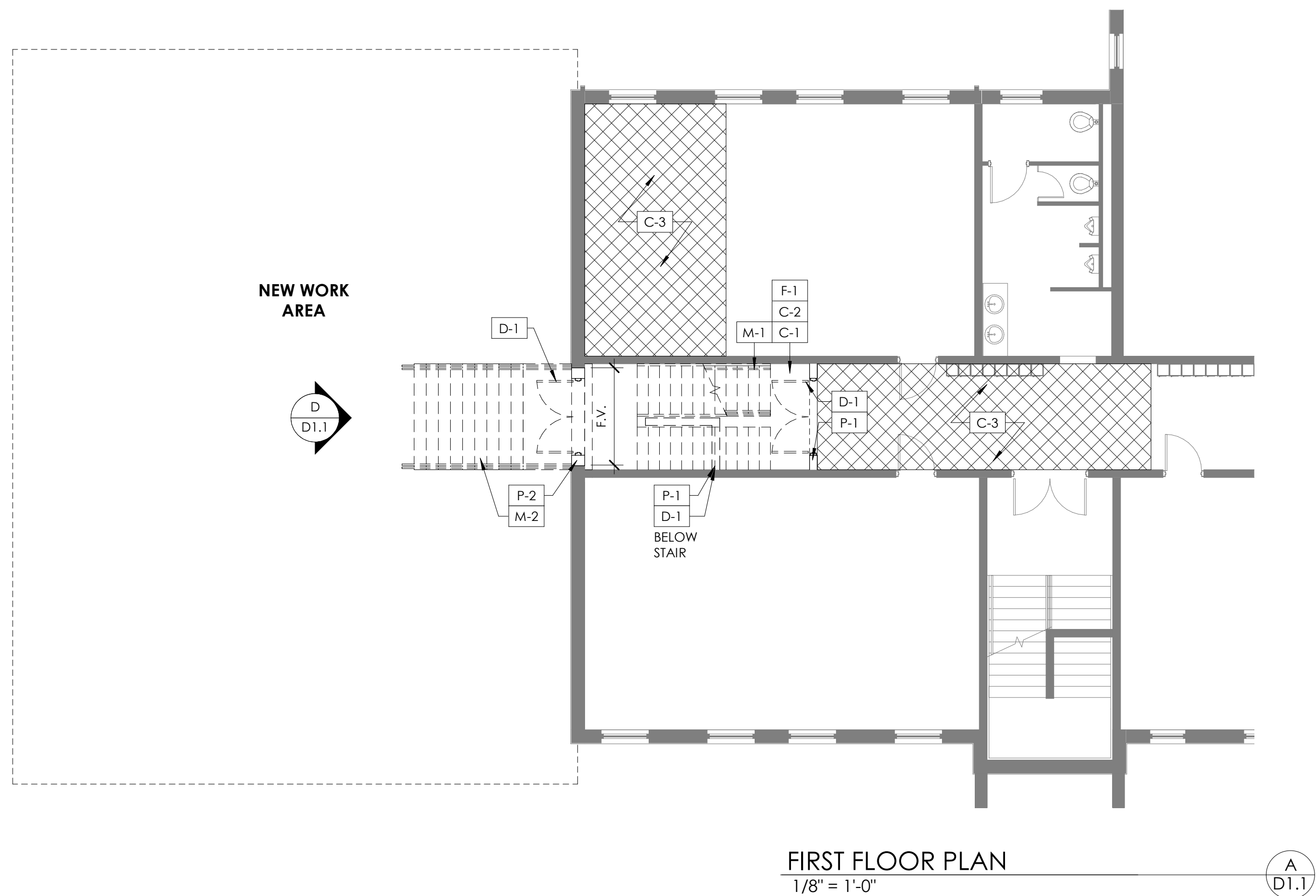
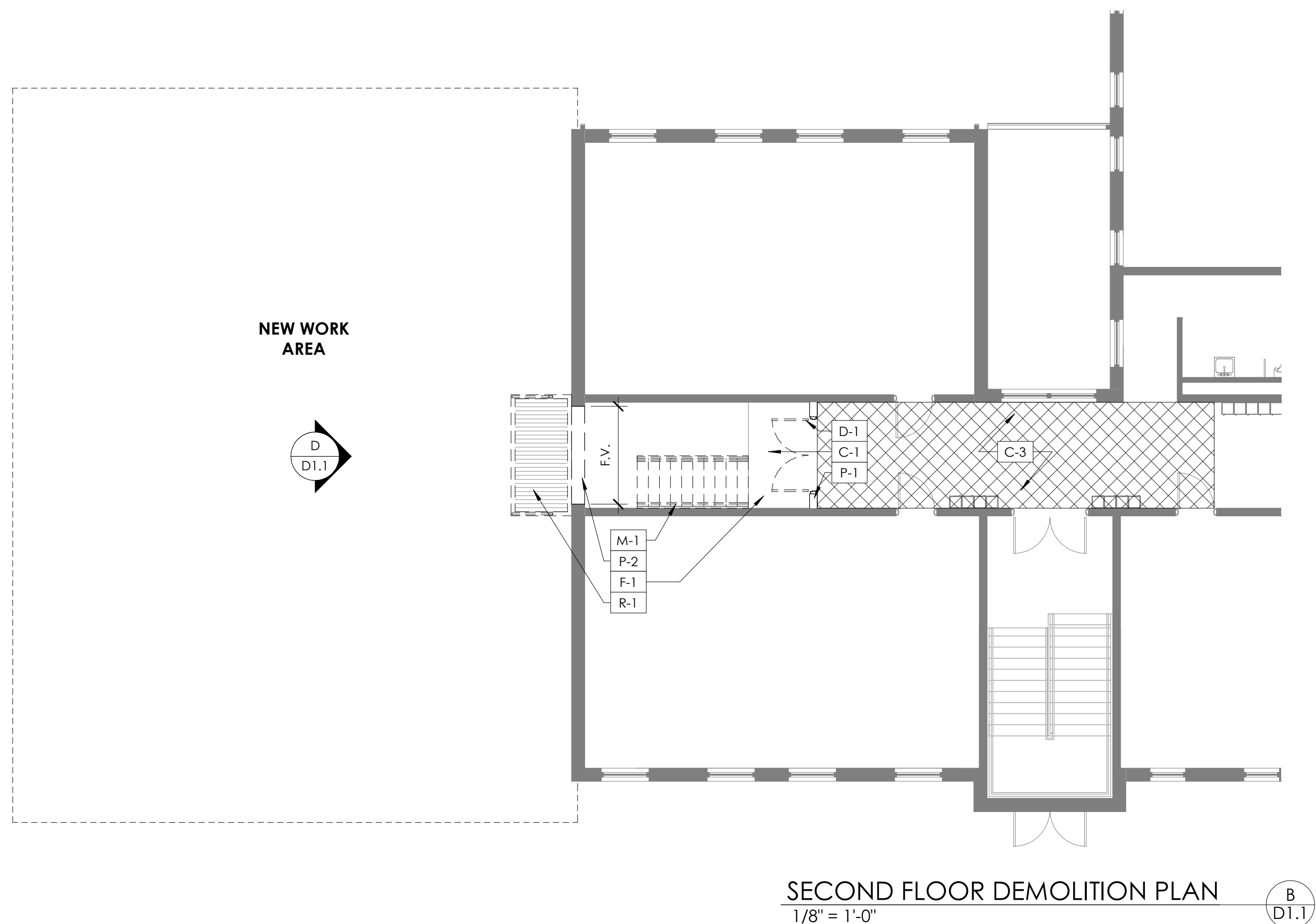
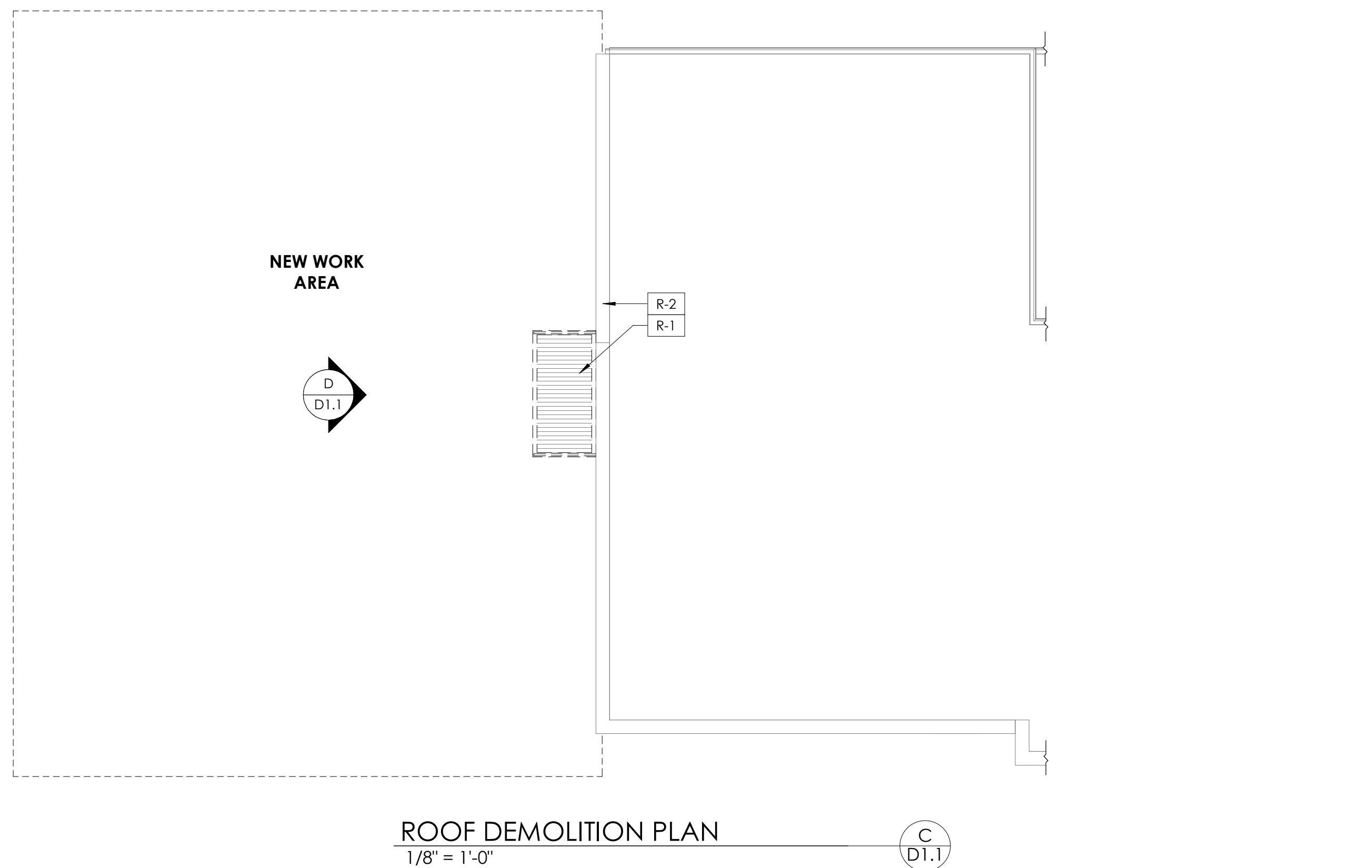
|             |      |
|-------------|------|
| BG#         |      |
| Project No: | 1928 |
| Drawn By:   | CCA  |
| Rev'd By:   | CH   |

| SHEET RELEASE |  |
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**S5.2**  
ROOF FRAMING SECTIONS  
AND DETAILS  
DATE ISSUED:  
OCTOBER 2019



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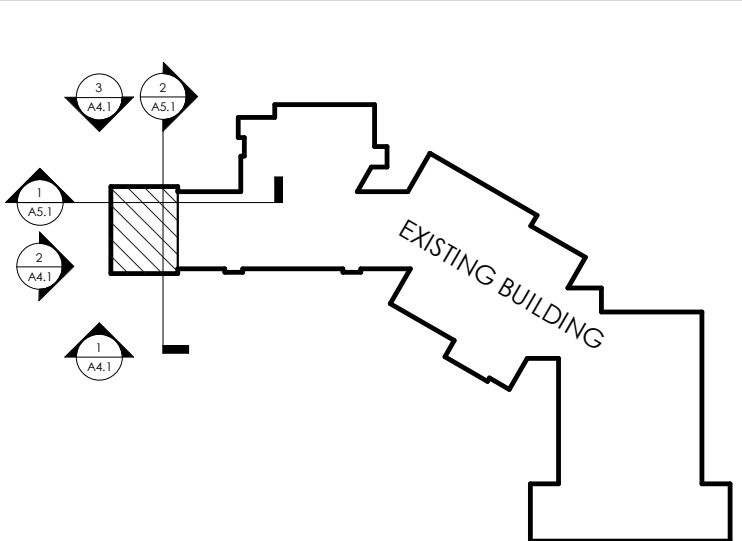
- GENERAL DEMOLITION NOTES

1. THESE DEMOLITION PLANS ARE MEANT TO BE A CONVENIENCE TO THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION NECESSARY FOR REMOVAL OF NEW WORK. WHETHER SHOWN HERE OR NOT.
2. REFER TO SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION ON WORK REQUIRED IN SPECIFIC AREAS OF WORK.
3. REFER TO THE PHASING DRAWING FOR SEQUENCE OF DEMOLITION AND NEW WORK.
4. REMOVE OR SHAVE OFF ALL MATERIAL BEARING CONDITIONS OF WALLS PRIOR TO THEIR DEMOLITION. ANY WALL FOUND TO BE LOAD BEARING OR WHICH IS OTHERWISE IDENTIFIED AS SUCH, BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ITS DEMOLITION.
5. WHERE WALLS OR OTHER ITEMS ARE REMOVED, PATCH AND REPAIR JOINTS TO FLUSH CONDITION SUITABLE TO RECEIVE FLOOR FINISH. WHERE MASONRY WALLS EXTEND THROUGH SLAB AND REST IN AN JOING, REPAIR JOINTS TO BE "FLUSH 4" BELOW FINISH FLOOR. FILL FLUSH WITH CONCRETE. PROVIDE MIN 4" CONCRETE FILL AT ABANDONED JOINTS OR OTHER OTHER DISCONTINUITIES IN WALLS WHICH ARE EXPOSED OR CREATED BY OTHER DEMOLITION. GRIND TO FLUSH AS REQUIRED.
6. ALL CONCRETE BLOCK, AND/OR BRICK VENEER TO BE PATCHED TO MATCH ADJACENT WALLS SHALL BE TOOTHED INTO ADJACENT SOUND MASONRY IN FULL UNITS UNLESS OTHERWISE INDICATED. PARTIAL UNITS AND UNITS AT CORNERS AND OTHER AREAS SHALL BE REMOVED AS REQUIRED TO ALLOW TOOTHING. WHERE NEW MASONRY CONSTRUCTION JOINS EXISTING MASONRY UNITS, REMOVE ALL EXISTING UNITS AT CONNECTIONS AS NECESSARY TO PERMIT TOOTHING OF NEW CONSTRUCTION WHETHER OR NOT SUCH DEMOLITION IS SPECIFICALLY SHOWN. REMOVE ALL MASONRY UNITS TO EXPOSE NEW MASONRY UNITS TO PROVIDE FINISHED OPENING. PROVIDE NEW MASONRY TIES AND HORIZONTAL REINFORCING AS REQUIRED TO MATCH WITH NEW MASONRY CONSTRUCTION SHALL PRECISELY MATCH ADJACENT EXISTING MASONRY IN COLOR, TEXTURE, PATTERN AND FINISH, UNLESS NOTED OTHER WISE.
7. ALL HVAC GRILLES, LOUVERS AND OTHER MECHANICAL/ELECTRICAL AND PLUMBING EQUIPMENT WHICH ARE NOT TO BE REMOVED OR CALLED OUT TO BE REMOVED SHALL BE COMPLETELY REMOVED AND OPENINGS SHALL BE FILL WITH NEW CONCRETE. IF EQUIPMENT DOES EXIST, AND D/M/E CONSTRUCTION REFER TO NOTE 1 ABOVE, AND J/C DRAWINGS OF RELATED ITEMS.
8. EXISTING DOORS AND FRAMES SHOWN IN WALL TO BE DEMOLISHED SHALL BE REMOVED. PATCH AS NOTED. REMOVE ALL OTHER MATERIALS REMAINING WITHIN WALLS. PATCH AND REPAIR AS USED. REMOVE ALL WALL MOUNTED ITEMS WHICH ARE NOT SPECIFICALLY INDICATED TO BE REMOVED BUT WHICH INTERFERE WITH, OR ARE NOT PART OF NEW CONSTRUCTION. REMOVE ALL HUNG ITEMS WHICH ARE NOT INDICATED TO BE REUSED IN THE RENOVATION OR RETURNED TO THE OWNER MAY BE REMOVED BY THE CONTRACTOR AND REMOVED FROM THE SITE.
9. WHERE EXISTING EQUIPMENT OR CASEWORK IS REMOVED, PATCH AND REPAIR TO MATCH EXISTING DEVICES, ANCHORS ETC. PATCH AND REPAIR EXISTING FINISHES.
10. SEE NEW WORK PLANS FOR NEW WORK TO BE INSTALLED.
11. REFER TO SPEC SECTION 0241.19 SELECTIVE DEMOLITION FOR STRUCTURAL EXPLORATION FOR UNUSUAL CONDITIONS, CONDITIONS, COORDINATE WITH STRUCTURAL DRAWINGS.

## DEMOLITION NOTES

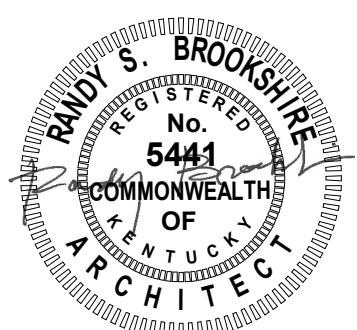
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|------------------------------------|--|
| <b>CEILING DEMOLITION NOTES:</b>   |  |
| C-1                                | REMOVE EXISTING CEILING TILE & GRID IN ITS ENTIRETY. COORDINATE WITH MEP DRAWINGS AND REMOVE LIGHTS AND OTHER MEP FIXTURES TO BE TURNED OVER TO THE OWNER.   |
| C-2                                | REMOVE EXISTING GYPSUM/PLASTER/PLYWOOD CEILING/SOFT IN ITS ENTIRETY.   |
| C-3                                | CAREFULLY REMOVE CEILING TILES AND LIGHTS AS REQUIRED TO EXPOSE ALL STRUCTURAL CONNECTIONS AND PROTECT FOR REINSTALLATION AFTER ABOVE CEILING ITEMS ARE INSTALLED. COORDINATE STORAGE WITH THE OWNER.  |
| <b>DOOR DEMOLITION NOTES:</b>      |  |
| D-1                                | REMOVE EXISTING DOOR FRAME, DOOR(S), AND GLAZING IN ENTIRETY. CAREFULLY REMOVE ALL DOOR HARDWARE AND TURN DOORS AND HARDWARE OVER TO THE OWNER.  |
| <b>FINISH DEMOLITION NOTES:</b>    |  |
| F-1                                | REMOVE EXISTING RESILIENT TILE FLOORING & BASE IN THEIR ENTIRETY. PREPARE CEMENT SLAB FOR NEW WORK. SEE NEW WORK FOR ADDITIONAL INFORMATION.   |
| <b>MISCELLANEOUS DEMOLITION:</b>   |  |
| M-1                                | REMOVE EXISTING MEAL STAIRS AND LANDING ALONG WITH ASSOCIATED RAILINGS IN THEIR ENTIRETY. PATCH AND REPAIR WALL SURFACES.  |
| M-2                                | REFER TO THE SITE DRAWINGS FOR DEMOLITION OF EXTERIOR CORNER STAIR AND RAILING.  |
| <b>PARTITION DEMOLITION NOTES:</b> |  |
| P-1                                | REMOVE EXISTING WALL IN ITS ENTIRETY. SHORE AND BRACE AS NECESSARY PRIOR TO DEMOLITION.  |
| P-2                                | REMOVE PORTION OF EXISTING BRICK AND/OR CMU WALL FOR INSTALLATION OF NEW WORK. SHORE AND BRACE AS NECESSARY PRIOR TO DEMOLITION AND INSTALLATION OF NEW WORK. REFER TO THE ARCHITECTURAL DRAWINGS. COORDINATE WITH THE ARCHITECTURAL DRAWINGS. |
| <b>ROOF DEMOLITION:</b>            |  |
| R-1                                | REMOVE EXISTING WALL HUNG MEAL CANOPY IN ITS ENTIRETY. PATCH AND REPAIR WALL SURFACE.  |
| R-2                                | REMOVE EXISTING PORTION OF COPING. REFER TO THE ARCHITECTURAL DRAWINGS FOR NEW WORK.   |
| R-3                                | REMOVE PORTION TO PROTECT EXISTING ROOF SURFACE AND MAINTAIN CONDITIONS OF ROOF WATERPROOFING.   |

## KEY PLAN



SCALE: NTS

**2F** rosARRANT architects  
101 old lafayette avenue lexington, kentucky 40502 p 859.254.4018 f 859.231.5046



DEMOLITION PLANS

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MARION COUNTY MIDDLE SCHOOL ADDITION & REYNOATION

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

**M,E & P Engineer:**  
CMTA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.253.0892

**Structural Engineer:**  
Structural Design Group, Inc.  
220 Great Circle Rd. Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG# 19-363

|             |      |
|-------------|------|
| Project No: | 1928 |
| Drawn By:   | RB   |
| Rev'd By:   | RM   |

|               |  |  |
|---------------|--|--|
| SHEET RELEASE |  |  |
| 1             |  |  |

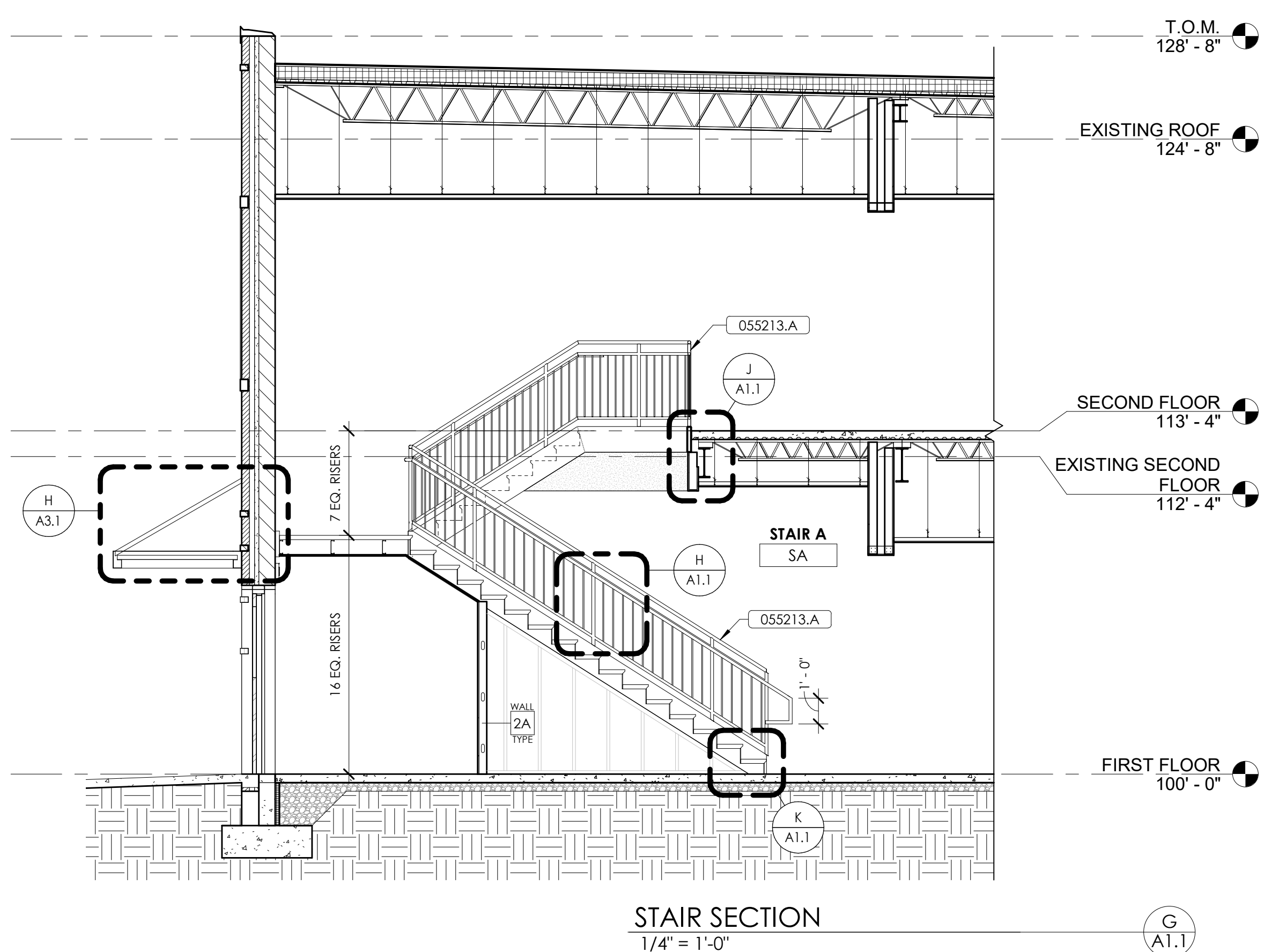
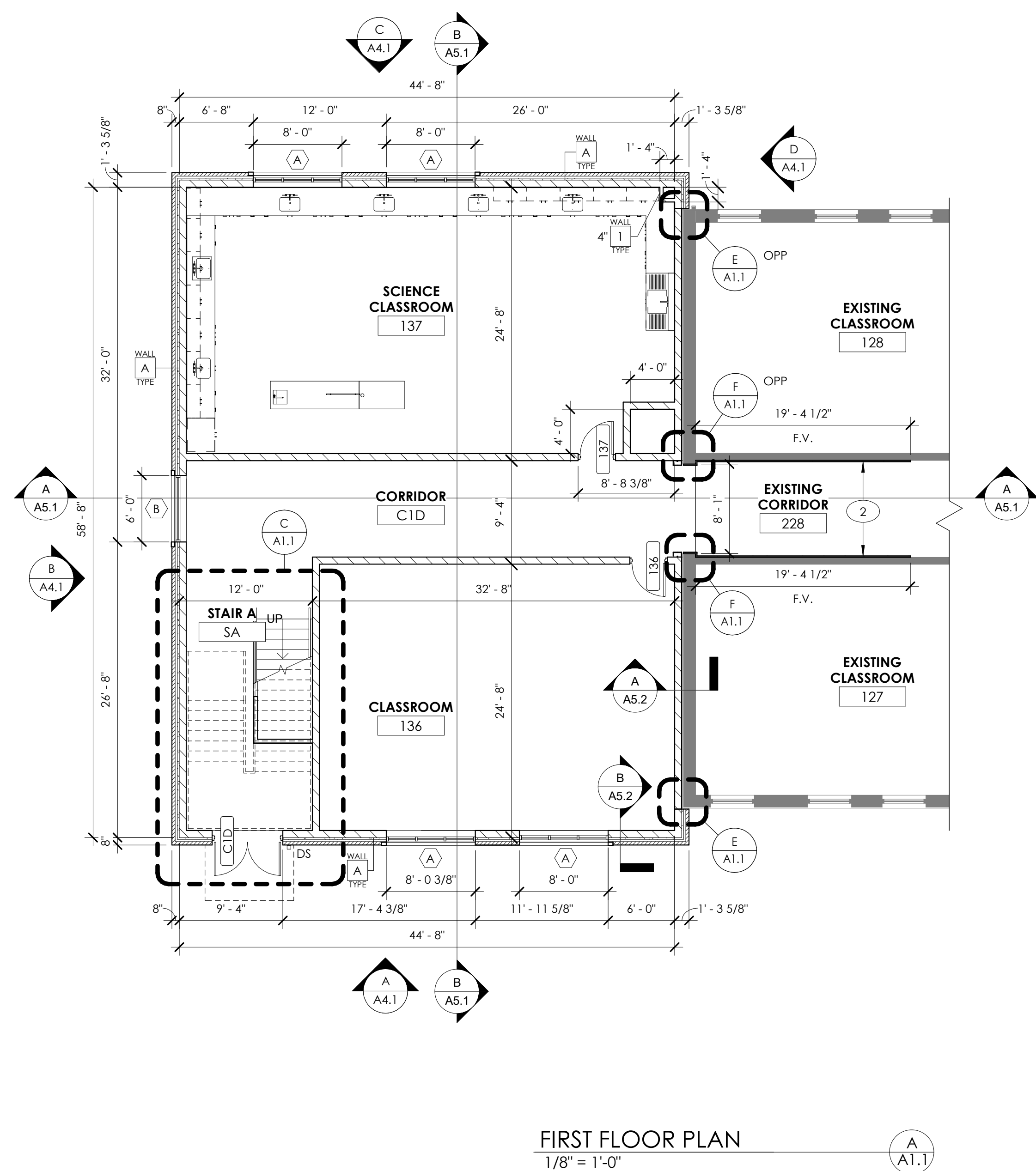
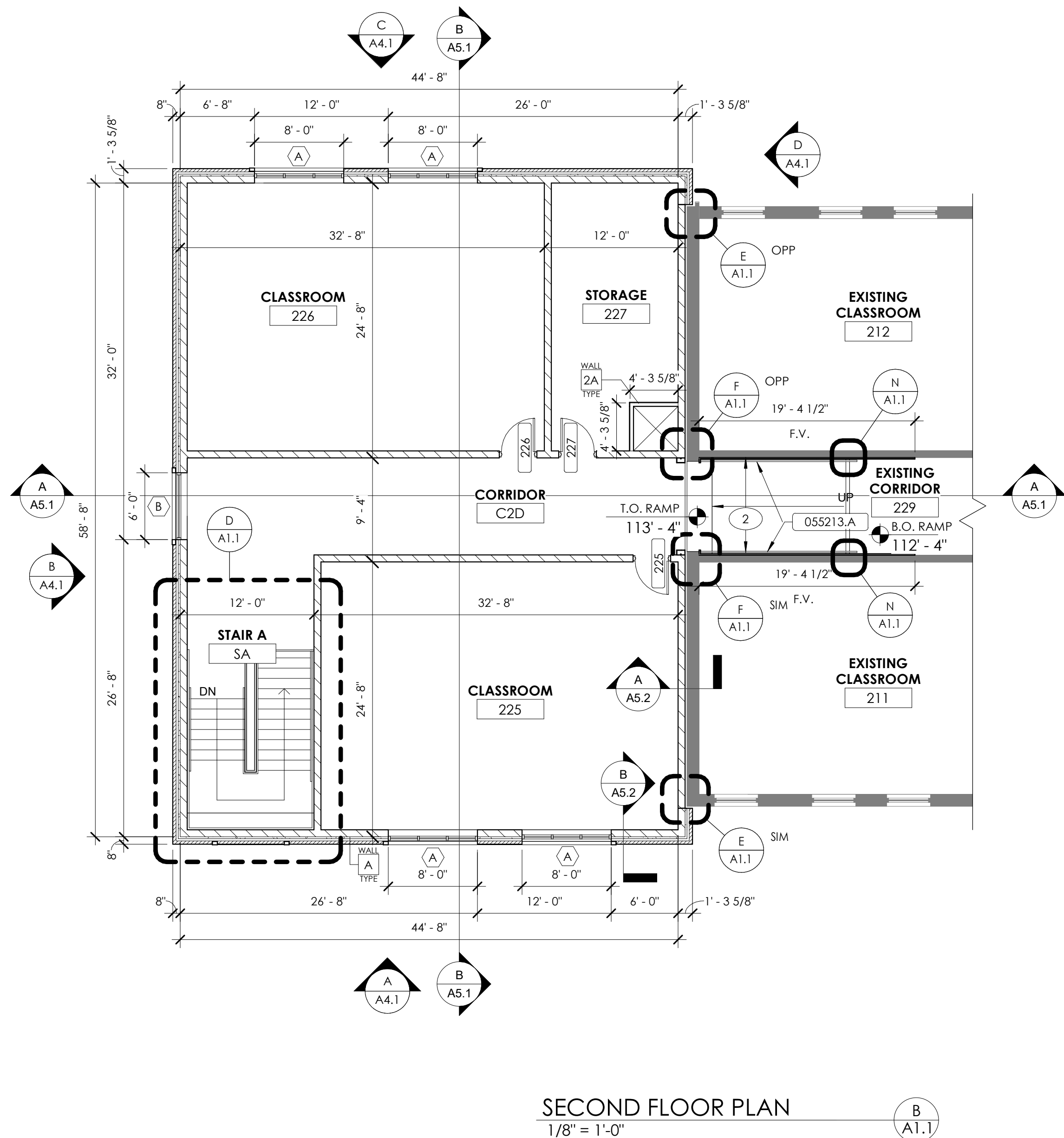
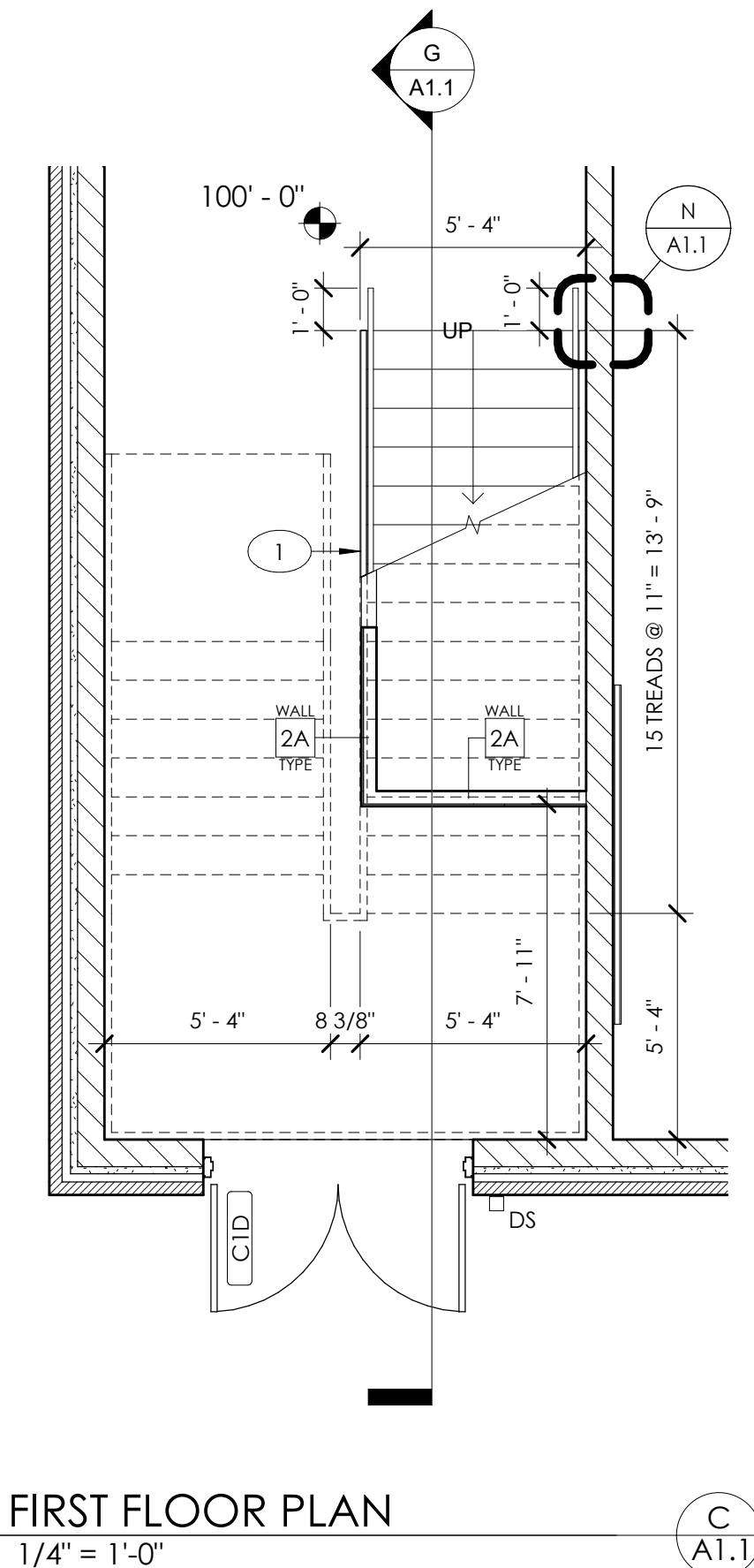
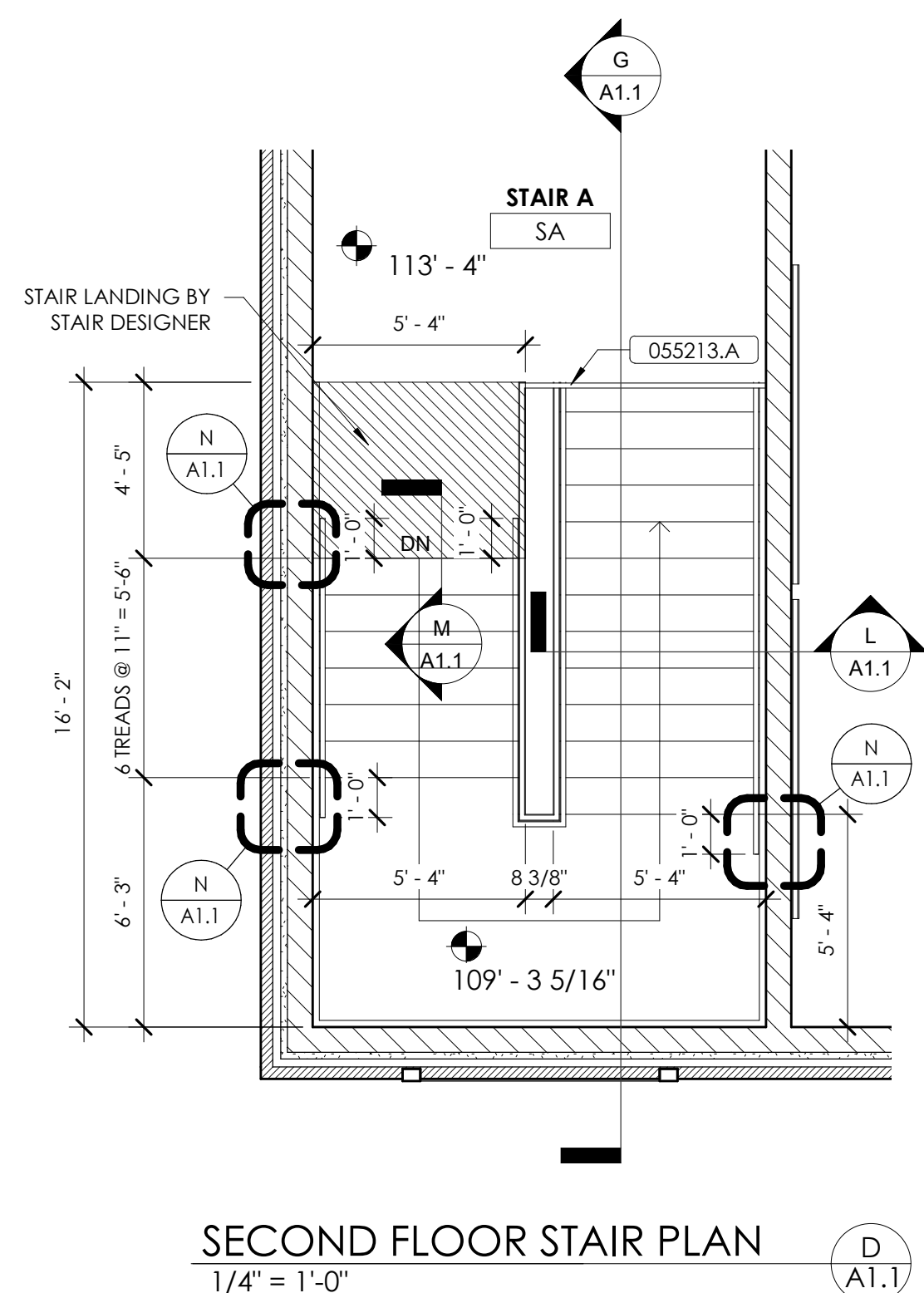
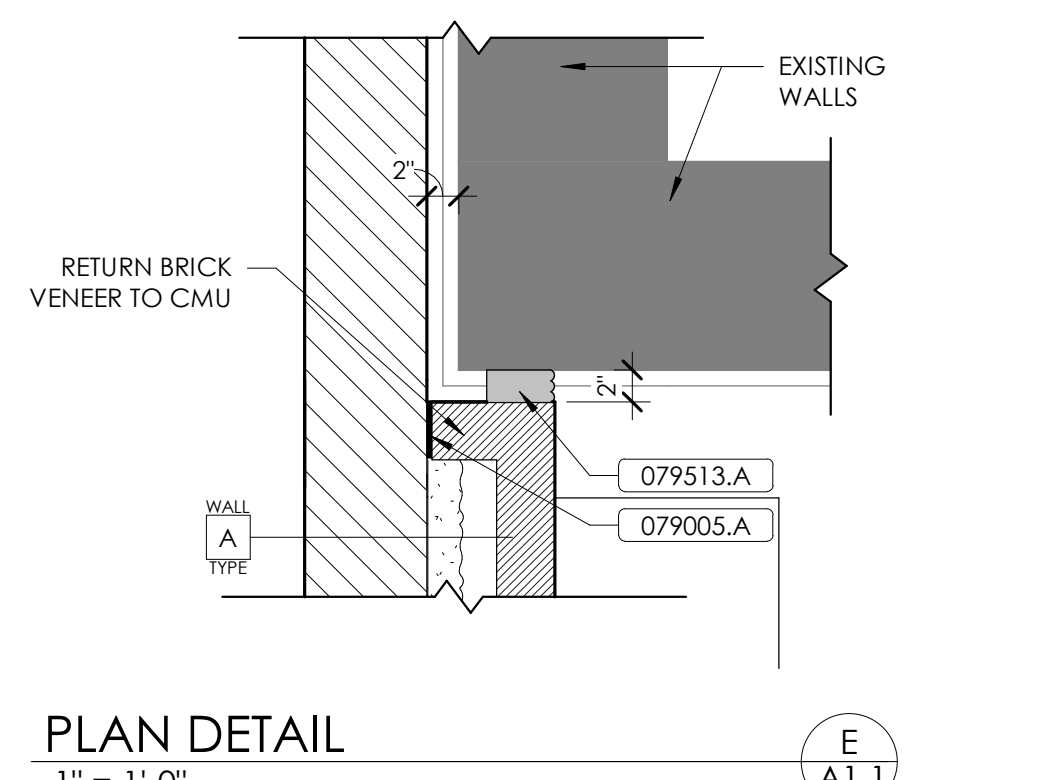
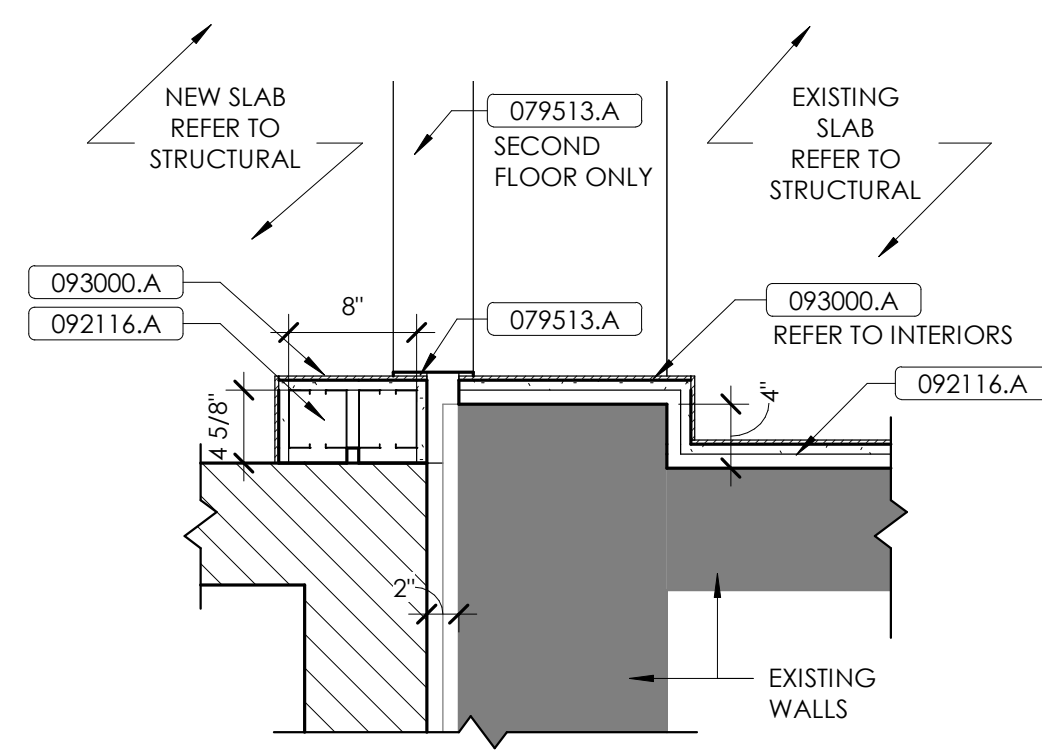
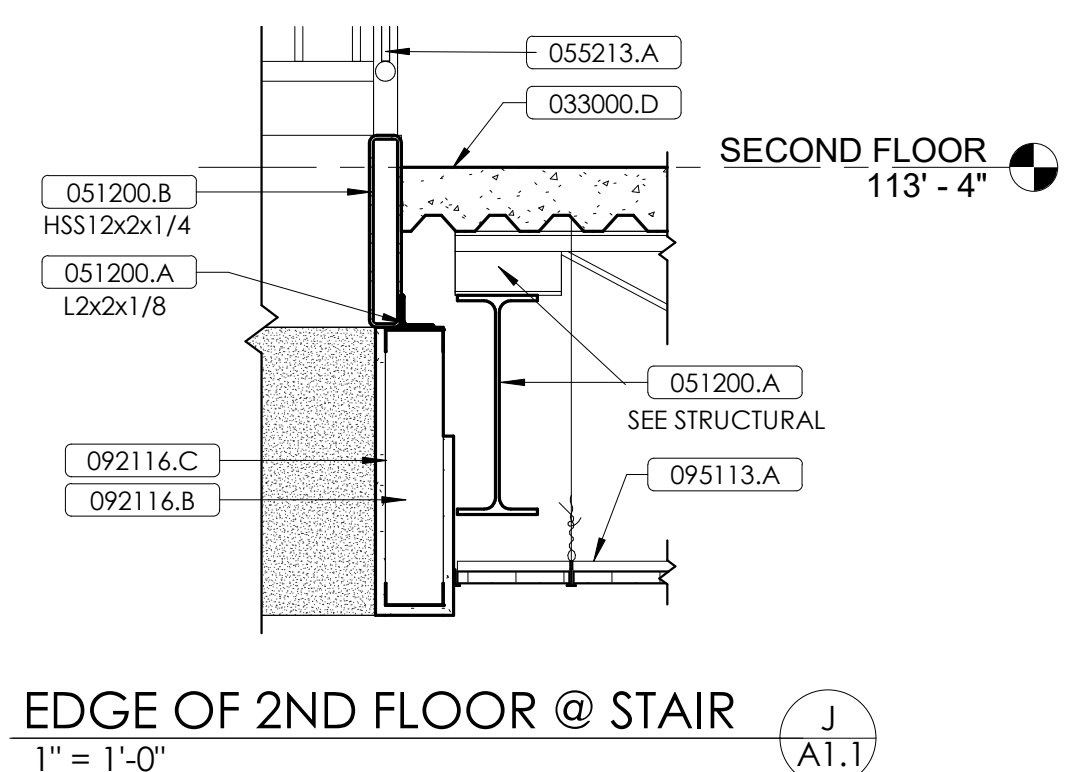
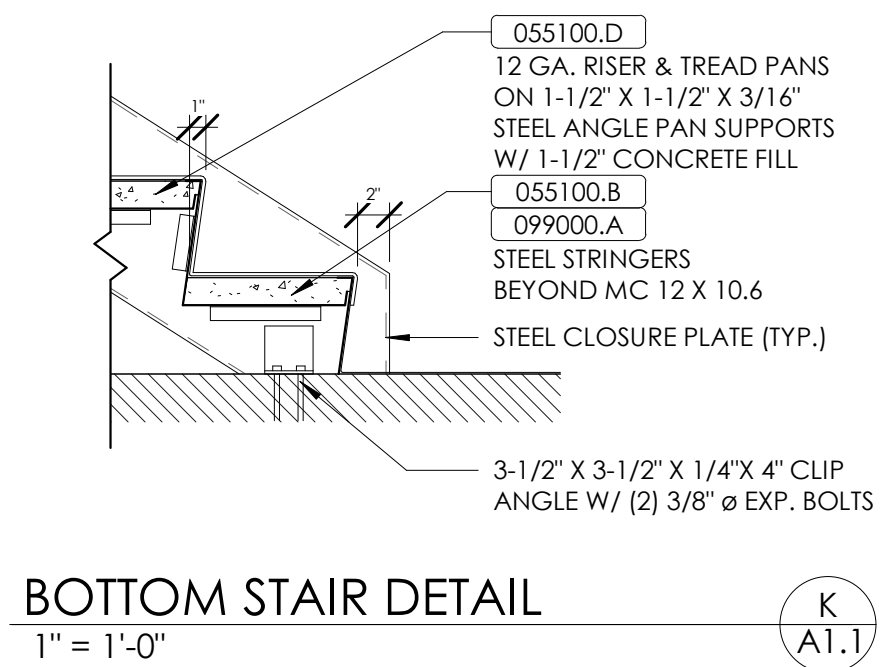
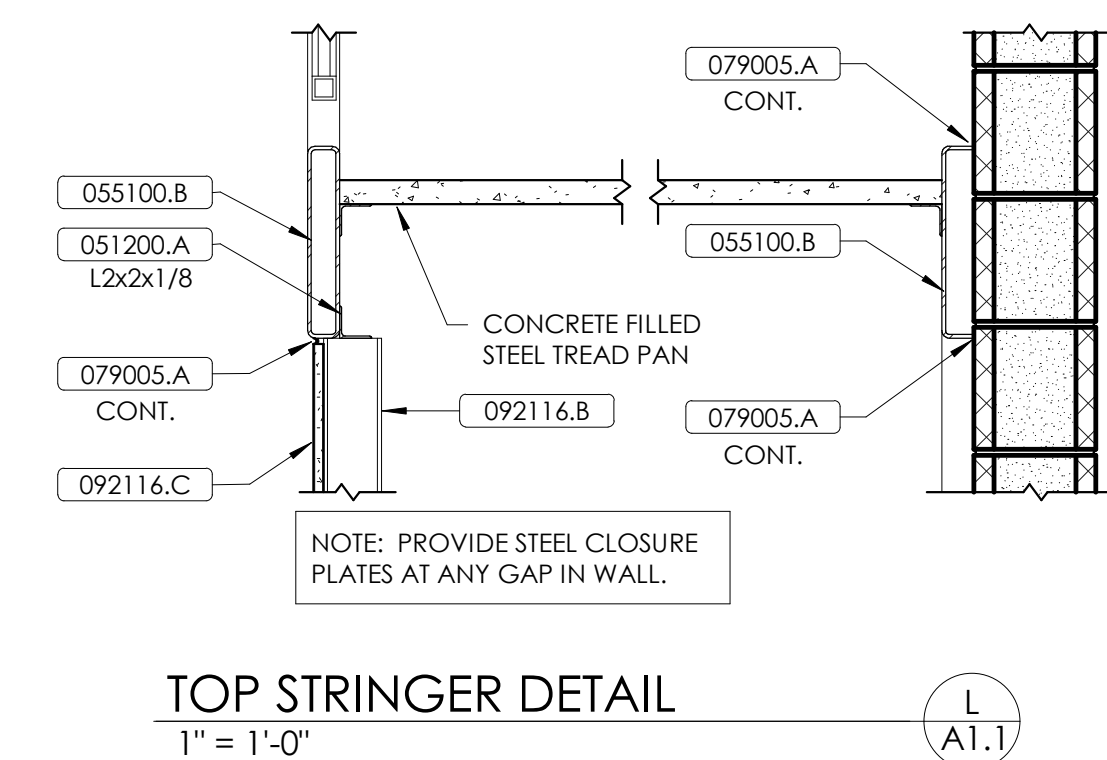
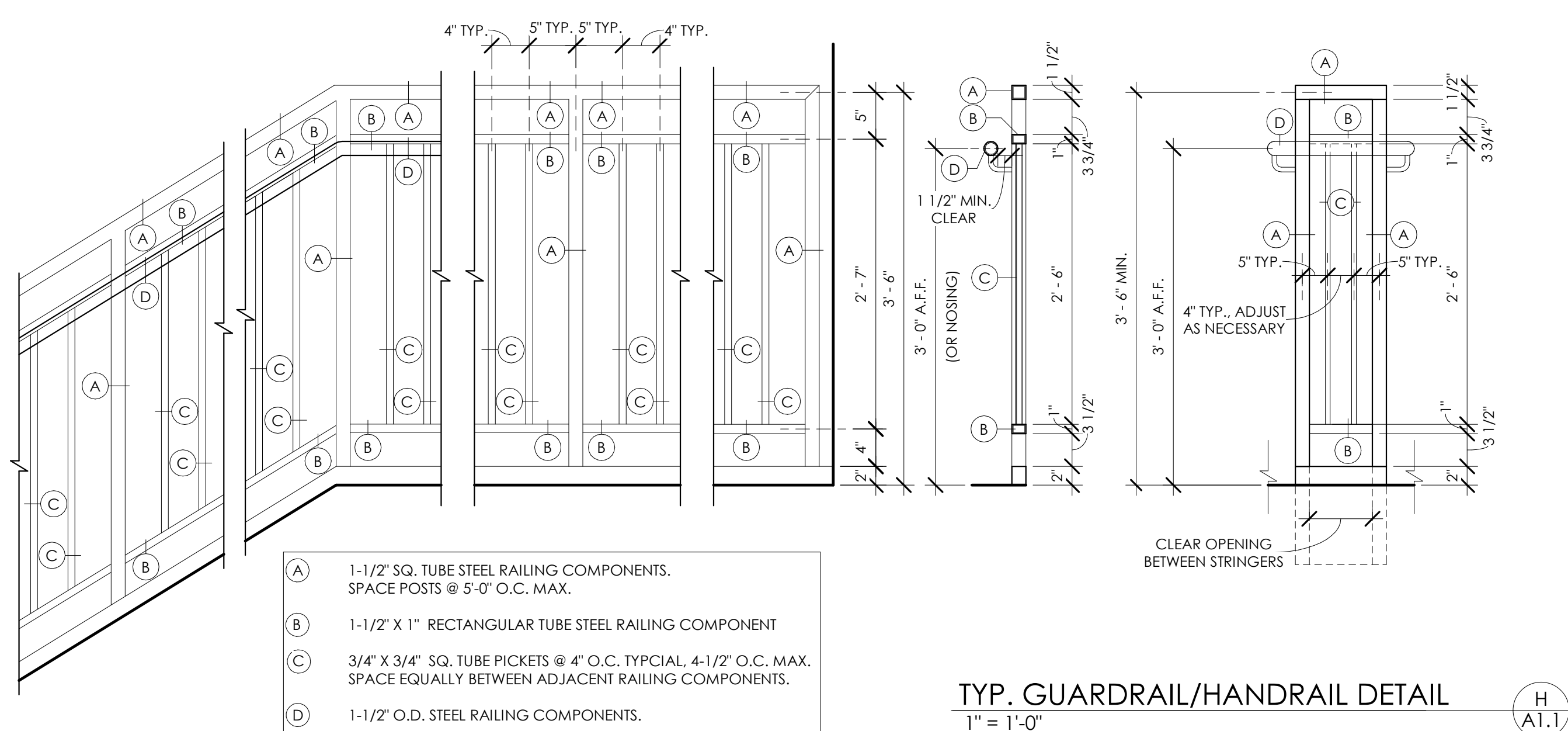
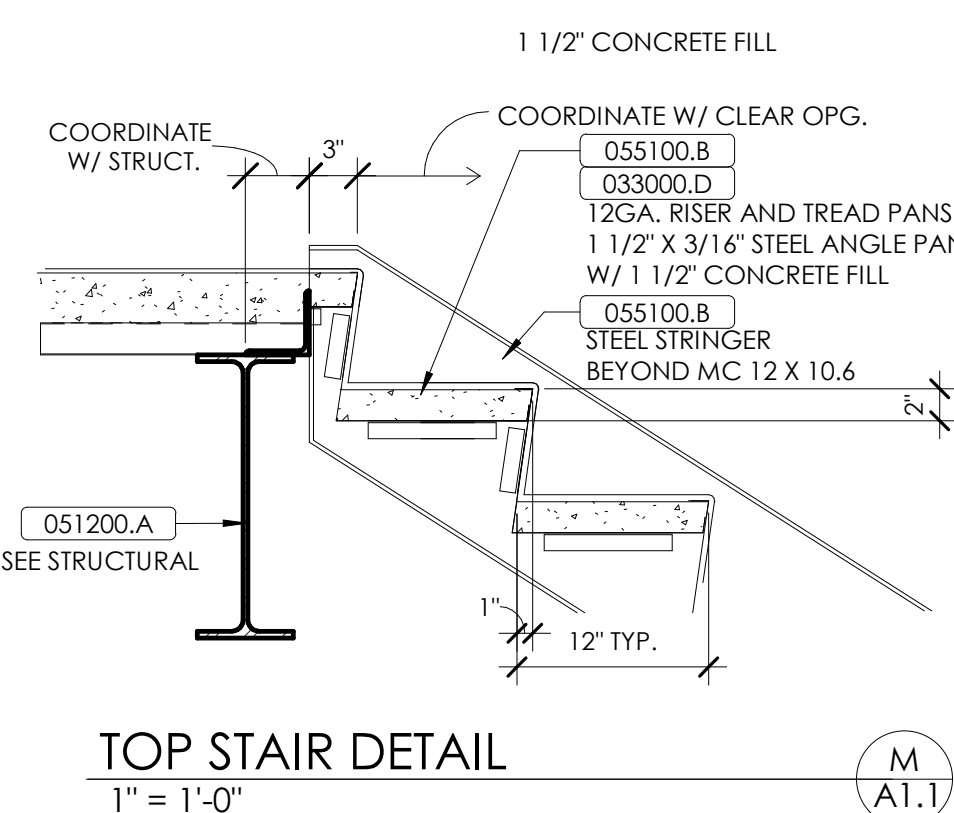
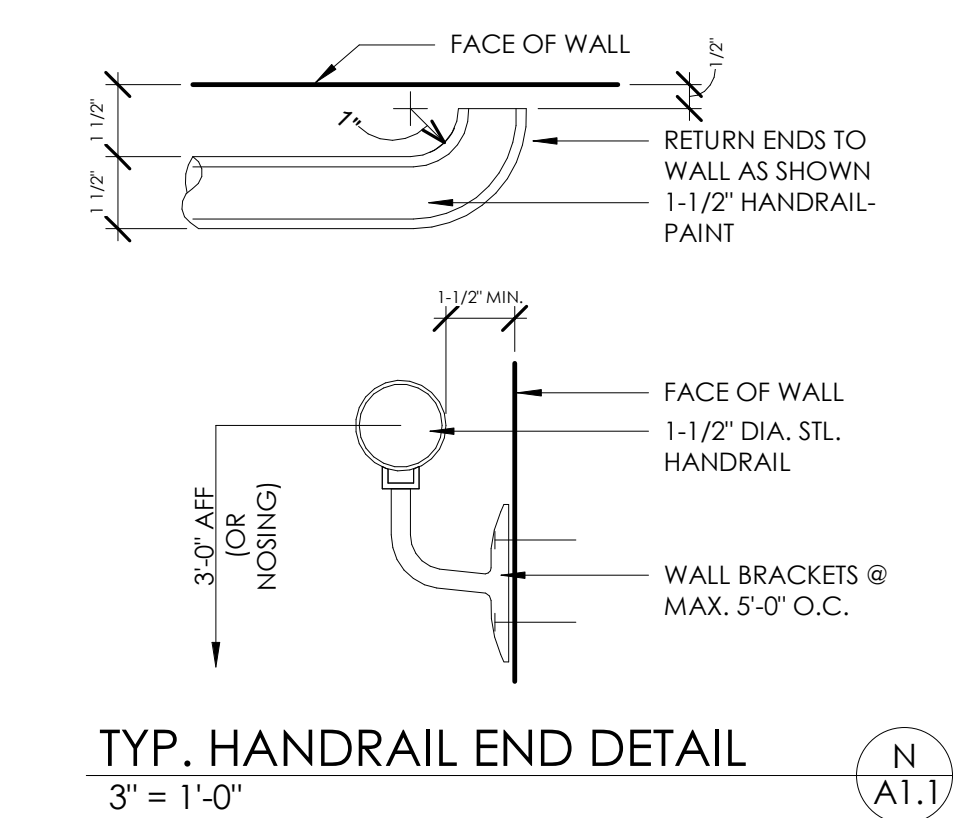
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## D1.1

DATE ISSUED:  
OCTOBER 3, 2019



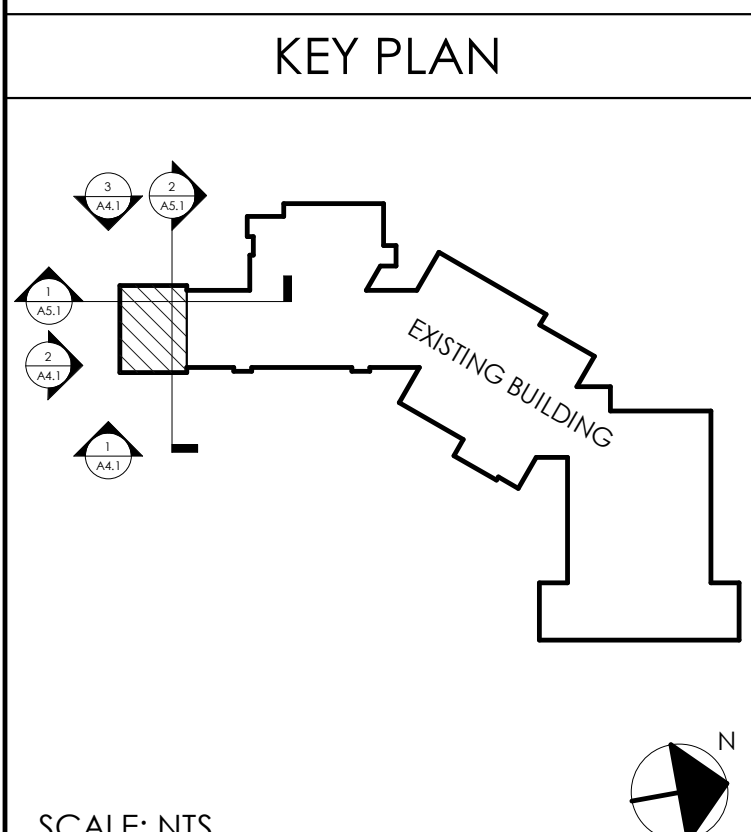


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## MATERIAL REFERENCE

|          |                                       |
|----------|---------------------------------------|
| 033000.D | Slab-on-Deck                          |
| 051200.A | Structural Steel Member               |
| 051200.B | Structurally Exposed Structural Steel |
| 053100.A | Metal Sheet                           |
| 055100.D | Miscellaneous Metal Stair Components  |
| 055213.A | Steel Component Railing               |
| 079005.A | Joint Sealant                         |
| 079513.A | Joint Covers                          |
| 092116.A | Gypsum Board Assemblies               |
| 092116.B | Metal Studs and Runners               |
| 092116.C | Gypsum Board-Regular Type "X"         |
| 093800.A | Ceramic Tiles                         |
| 095113.A | Acoustical Panel Ceiling System       |
| 099000.A | Paint                                 |




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|--|--|
| 1  | PROVIDE WALL TYPE 2A CONTINUOUSLY WITH SLOPE OF STRINGER. FINISH GYP. BOARD TO UNDERSIDE OF STRINGER                                       |
| 2  | WALLS TO RECEIVE CERAMIC TILE (093000.A), 5/8" CEMENT BOARD (092116.L), OVER 7/8" HAT CHANNELS (092116.E). REFER TO THE INTERIOR DRAWINGS. |





| ROOM FINISH SCHEDULE |                   |                                     |                           |                   |           |                   |           |                       |                 |                                     |
|----------------------|-------------------|-------------------------------------|---------------------------|-------------------|-----------|-------------------|-----------|-----------------------|-----------------|-------------------------------------|
| ROOM NO.             | ROOM NAME         | FLOOR FINISH                        | BASE FINISH               | NORTH WALL        | EAST WALL | SOUTH WALL        | WEST WALL | CEILING FINISH        | Sign Type       | COMMENTS                            |
| 136                  | CLASSROOM         | VCT1                                | RB1                       | P1                | P1        | P2                | P1        | APC1                  | Type 1          |                                     |
| 137                  | SCIENCE CLASSROOM | VCT1                                | RB1                       | P2                | P1        | P1                | P1        | APC1                  | Type 1          |                                     |
| 225                  | CLASSROOM         | VCT1                                | RB1                       | P1                | P1        | P2                | P1        | APC1                  | Type 1          |                                     |
| 226                  | CLASSROOM         | VCT1                                | RB1                       | P2                | P1        | P1                | P1        | APC1                  | Type 1          |                                     |
| 227                  | STORAGE           | Epoxy Painted Concrete              | Color matching couk       | P1                | P1        | P1                | P1        | APC1                  | Type 1          |                                     |
| 228                  | EXISTING CORRIDOR | VCT1-VCT4                           | Color matching couk & RB1 | P1 & CT1 Wainscot | P1        | P1 & CT1 Wainscot | P1        | APC1                  | N/A             | Refer to plan notes for VCT pattern |
| 229                  | EXISTING CORRIDOR | VCT1-VCT4                           | RB1                       | P1                | P1        | P1                | P1        | APC1                  | N/A             | Refer to plan notes for VCT pattern |
| C1D                  | CORRIDOR          | VCT1-VCT4                           | RB1                       | P1                | P1        | P1                | P1        | APC1 & P3 Painted Gyp | N/A             | Refer to plan notes for VCT pattern |
| C2D                  | CORRIDOR          | VCT1-VCT4                           | RB1                       | P1                | P1        | P1                | P1        | APC1                  | N/A             | Refer to plan notes for VCT pattern |
| SA                   | STAIR A           | RT1 at stairs; RT1 at stair landing | RB1                       | P1                | P1        | P1                | P1        | APC1 & P3             | Type 2 & type 3 |                                     |

| OPTIMUM MOUNTING HEIGHTS                            |                       |
|---|-----------------------|
| ITEM<br>(DIMENSION TO)                              |                       |
| VISUAL DISPLAY BOARDS -<br>MARKER, TACK, CHALK      | TOP 78"<br>BOTTOM 30" |
| COUNTERTOP: STANDING<br>POSITION (TOP)              | 34"                   |
| DESKTOP/TABLETOP:<br>SEATED POSITION (TOP)          | 24"                   |
| PANIC DEVICE DOOR<br>HARDWARE (CENTERLINE)          | 36"                   |
| FIRE EXTINGUISHER<br>CABINET (BOTTOM)               | 32"                   |
| FIRE EXTINGUISHER CABINET<br>(CENTER OF VALVE LINE) | 64"                   |
| COAT HOOK<br>(CENTERLINE)                           | 48"                   |

| EQUIPMENT LEGEND  |                                |                        |
|---|--------------------------------|------------------------|
|    | 4'-0" W X 4'-0" H MARKERBOARD  | REFER TO SPECIFICATION |
|    | 6'-0" W X 4'-0" H MARKERBOARD  | REFER TO SPECIFICATION |
|    | 12'-0" W X 4'-0" H MARKERBOARD | REFER TO SPECIFICATION |
|  | 6'-0" W X 4'-0" H TACKBOARD    | REFER TO SPECIFICATION |
|  | 8'-0" W X 4'-0" H TACKBOARD    | REFER TO SPECIFICATION |

| MATERIAL REFERENCE |   |
|--------------------|---|
| 093000.A           | Ceramic Tile  |
| 123450.A           | Wood Laboratory Casework                                  |
| 123450.A1          | Wood Base Cabinet   |
| 123450.A2          | Wood Accessible Sink Base Cabinet & Slant Enclosure Panel |
| 123450.A4          | Wood Wall Cabinet   |
| 123450.A7          | Wood Full-Height Wardrobe Cabinet w/ Lock                 |
| 123450.A81         | Wood Demo Desk  |
| 123450.B1          | Epoxy Countertop w/ Backsplash                            |
| 123450.B4          | Epoxy Under-mount Sink                                    |
| 123450.C11         | Eyewash   |
| 123450.D1          | Finished End  |
| 123450.E2          | Peg Board with Drip Trough & Hose - Resin                 |

# ROOM FINISH NOTES

1. ALL WALLS, GYPSUM BOARD CEILINGS, METAL CEILING, STRUCTURAL ELEMENTS, CONDOL, ALL UNFINISHED SURFACES EXPOSED AFTER CONSTRUCTION IS COMPLETE SHALL RECEIVE PAINT UNLESS OTHERWISE NOTED.
2. ALL UNFINISHED EXTERIOR SURFACES INCLUDING CONCRETE BLOCK, STEEL UNITS, ETC., WILL RECEIVE A PAINT SYSTEM. REFER TO THE SPECIFICATION FOR ADDITIONAL INFORMATION.
3. REFER TO FLOOR PLANS FOR WALL ASSEMBLY TYPES.
4. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION ON CEILINGS AND SCOTCH LOCATIONS.
5. PROVIDE COLOR MATCHING CAULK AT THE INTERSECTION OF HOLLOW METAL FRAMES AND HARD SURFACE FLOORING. TYPE WHERE CRACKS OR TILE BORDER CRACKS OCCUR. THE CENTER "FIELD" TILES SHALL BE FULL SIZE TILES AND THE BORDER TILES ALONG THE WALL SHALL BE CUT TO CENTER THE FIELD TILES.
7. ALL FURNITURE/EQUIPMENT SHOWN DASHED IS FOR REFERENCE ONLY AND IS NOT IN THIS CONTRACT.
8. ALL CASEWORK/TOE KICK AREAS AND/OR OTHER CASEWORK SURFACES WHICH ABUT FLOOR FINISHES WILL RECEIVE RESILIENT BASE.
9. WHERE MARKERBOARDS AND TACKBOARDS ARE TO BE USED FOR THE PROJECT, IF INDICATED, THE SUPPLIER SHALL NOTIFY THE DESIGNER AND MODIFY THE WIDTH ACCORDINGLY.
10. PAINTING: CONTRACT SHALL INCLUDE STAIR ASSEMBLY COMPONENTS INCLUDING STRINGER, HANDRAILS, ETC.,
11. COUNTERTOP & SHELVING BRACKETS (WHERE APPLICABLE) WILL BE EQUAL TO A&H HARDWARE STEEL BRACKETS. SIZES SHALL ACCOMMODATE THE REQUIRED DEPTHS INDICATED IN THE DRAWINGS.
12. ALL LOUVERS, GRILLS, REGISTERS & DIFFUSERS SHALL BE PAINTED TO MATCH THE SURFACE ON WHICH THEY ARE MOUNTED.

| SIGNAGE TYPES  |  |
|--|--|
| SEE SPECIFICATION 101.424 FOR SIGN MANUFACTURING AND INSTALLATION DETAILS  |  |
| SIGN TYPE 1 [TYPICAL]: TYPICAL 8'X 8'W PANEL SIGN - REFER TO SPECIFICATION FOR DETAILS ON MATERIALS AND MECHANICAL MOUNTING DETAILS  |  |
| SIGN TYPE 2 [EXIT SIGN]: TYPICAL 8'X 8'W PANEL SIGN WITH SYMBOL; EXIT STAIR SIGN WITH BRAILLE AND CONFORMING TO CODE STANDARDS WITH TEXT "EXIT STAIR DOWN" - REFER TO SPECIFICATION FOR DETAILS ON MATERIALS AND MECHANICAL MOUNTING DETAILS |  |
| SIGN TYPE 3 [EXIT]: 3'X 5'W PANEL SIGN AS SHOWN BELOW THAT CONFORMS TO CODE STANDARDS, TWO SCREWS FOR MECHANICAL MOUNT.  |  |

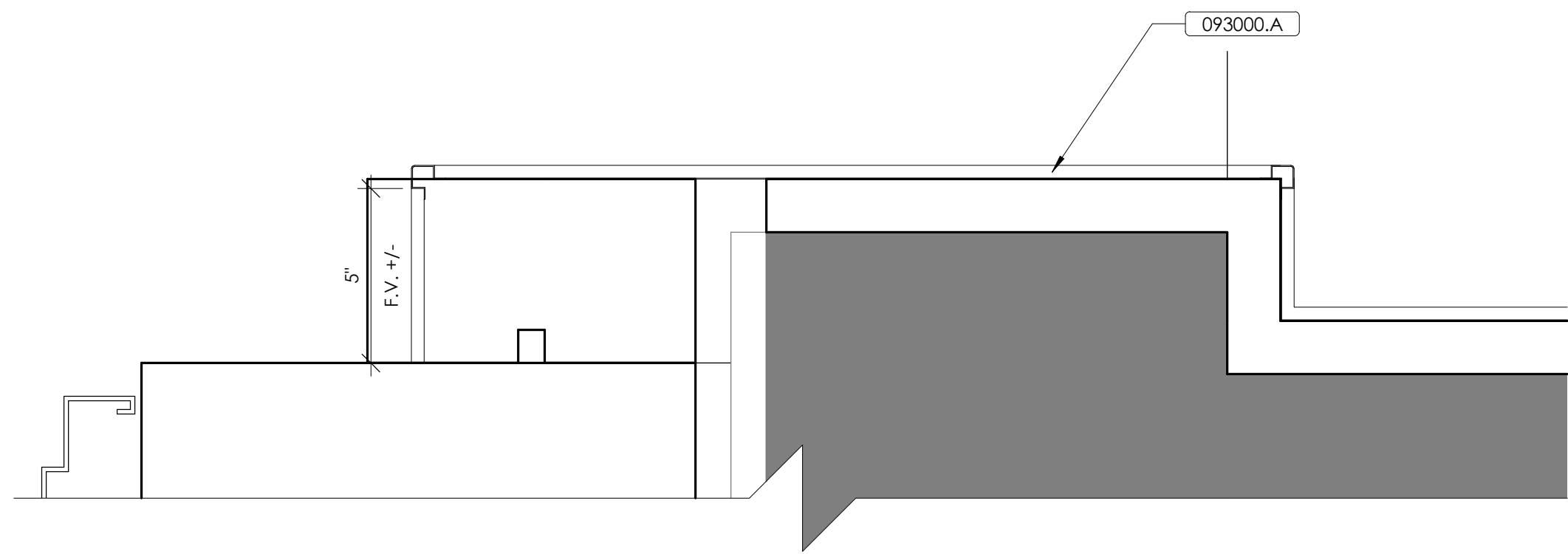
| EPOXY SINK LEGEND |   |
|-------------------|---|
| EP-1              | EPOXY SINK INTEGRAL TO SPECIFIED CASEWORK:<br>25" W x 15" L x 10" D   |
| EP-2              | ADA EPOXY SINK INTEGRAL TO SPECIFIED<br>CASEWORK: 25" W x 15" L   |
| EP-3              | EPOXY SINK W/ DRAINBOARD INTEGRAL TO<br>SPECIFIED DRAINBOARD SINK CABINET:<br>24" W x 16" L x 15" D<br>DRAINBOARDS (Qty. 2) 18 1/2" x 19 3/4" |
| EP-4              | EPOXY SINK INTEGRAL TO SPECIFIED DEMO DESK:<br>15" W x 18" L x 11" D  |

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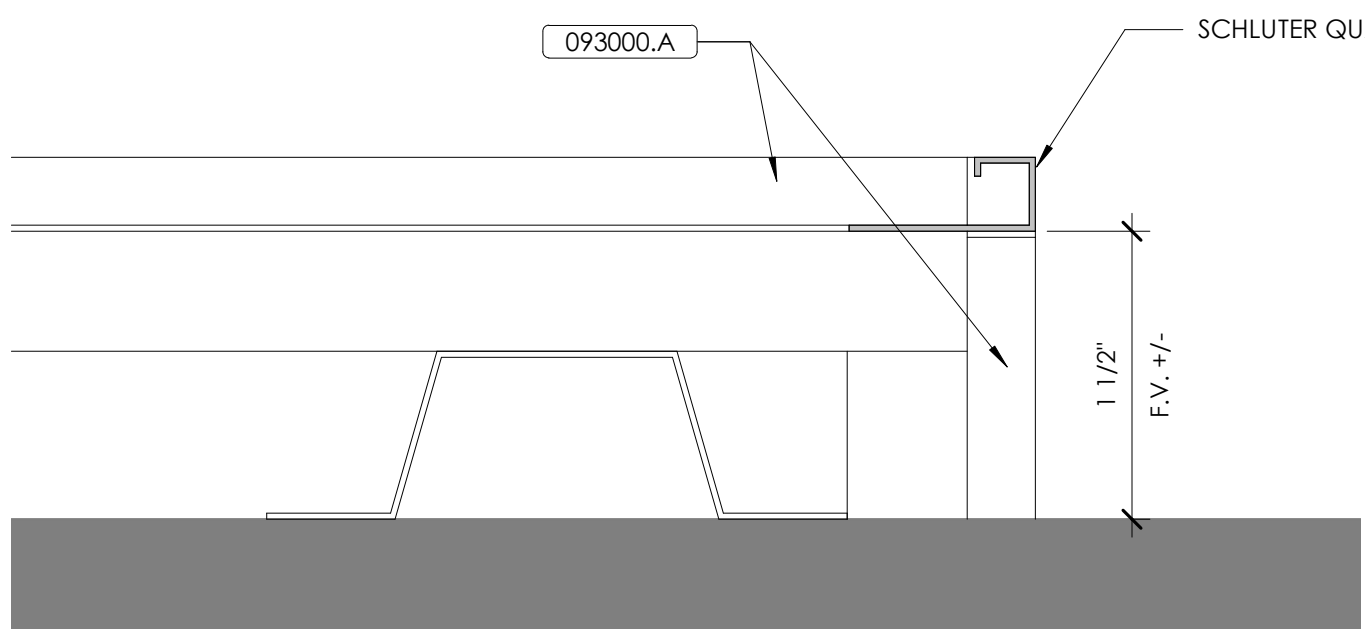
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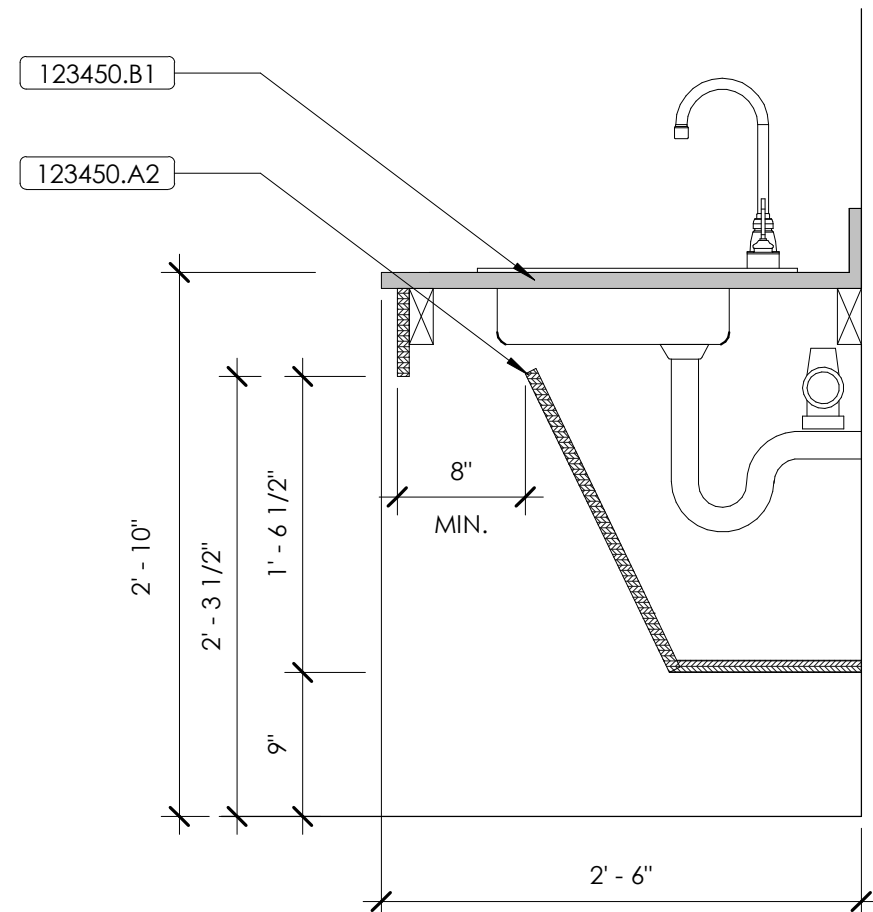
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|---|--|---|--|--|--|
| <br>rostarrant<br>architects<br>old clayette avenue lebanon, kentucky 40502 p 859.254.4018 f 859.223.1504 |  |    |  |  |  |
| FLOOR PLANS FF&E  |  | MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION   |  | FOR: MARION COUNTY BOARD OF EDUCATION<br>LEBANON, KENTUCKY |  |
| M, E & P Engineer:<br>CMIA, Inc.<br>2429 Members Way<br>Lexington, KY 40504<br>p 859.253.0892   |  | Structural Engineer:<br>Structural Design Group, Inc.<br>220 Great Circle Rd., Suite 106<br>Nashville, TN 37228<br>p 615.255.5537 |  |  |  |
| BG#   |  | 19-363  |  |  |  |
| Project No:   |  | 1928  |  |  |  |
| Drawn By:   |  | AC  |  |  |  |
| Revd By:  |  | DC  |  |  |  |
| SHEET RELEASE   |  |   |  |  |  |
| 1   |  |   |  |  |  |
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| 8   |  |   |  |  |  |
| COPYRIGHT © 2019  |  | CONSTRUCTION DOCUMENTS  |  |  |  |
| A2.0  |  | FLOOR PLANS FF&E  |  |  |  |
| DATE ISSUED:  |  | OCTOBER 3, 2019   |  |  |  |



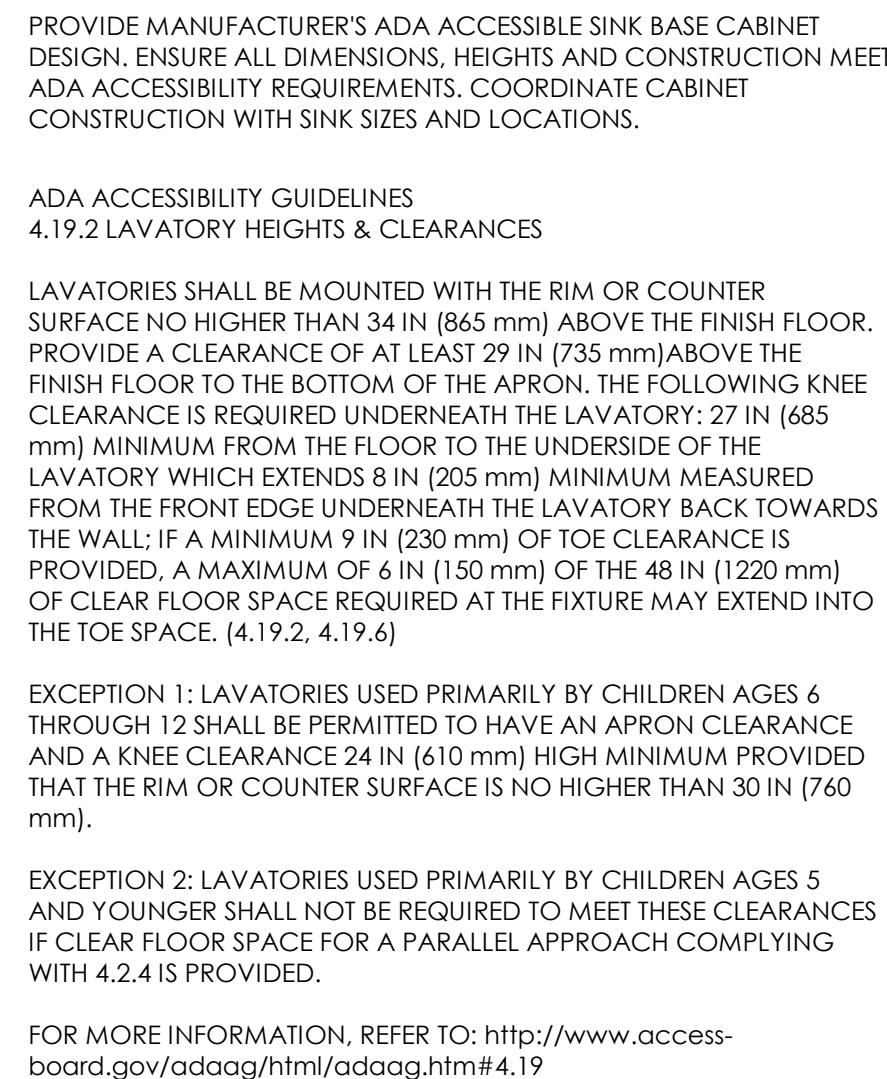
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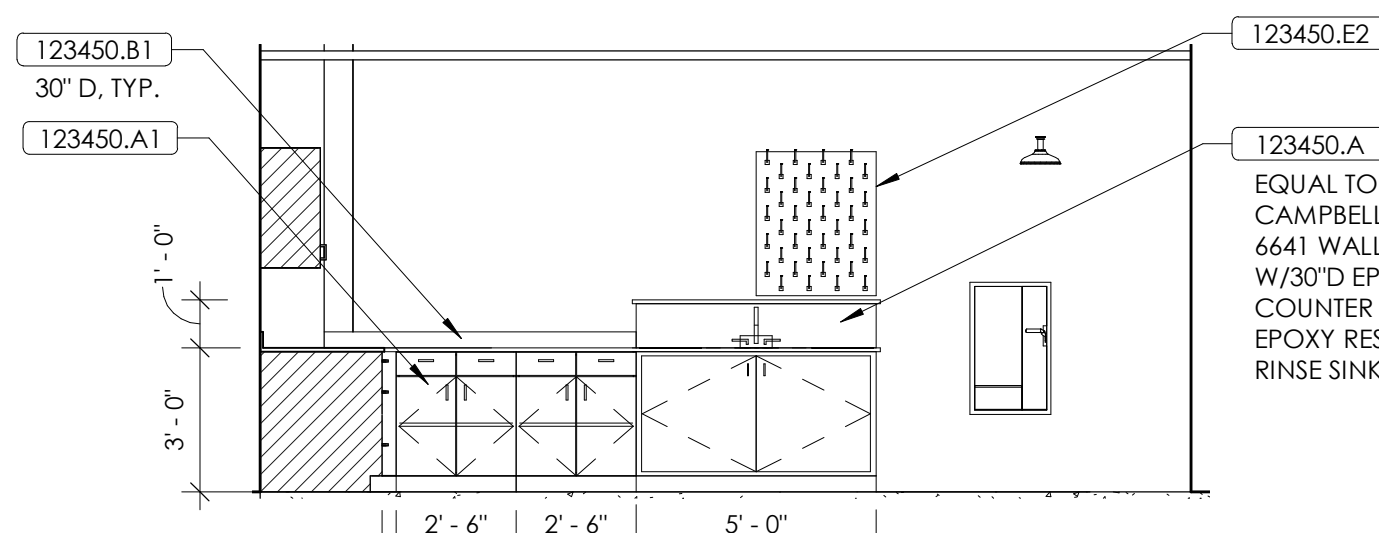
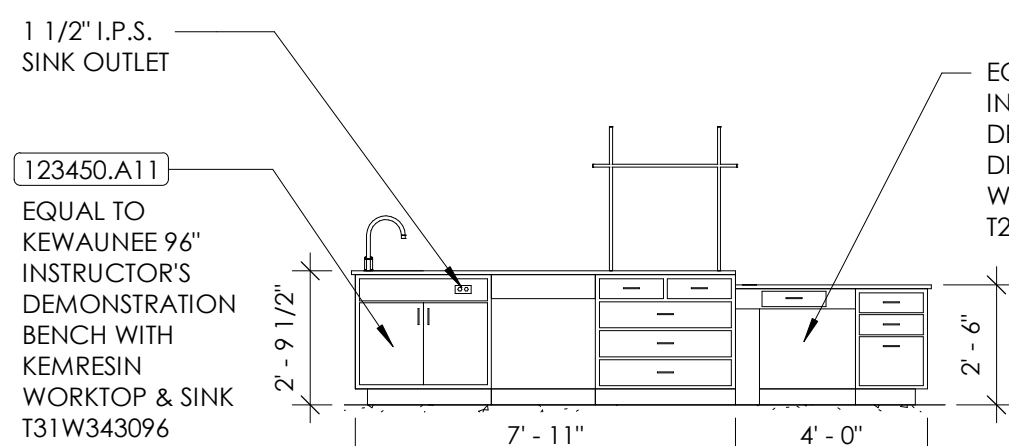
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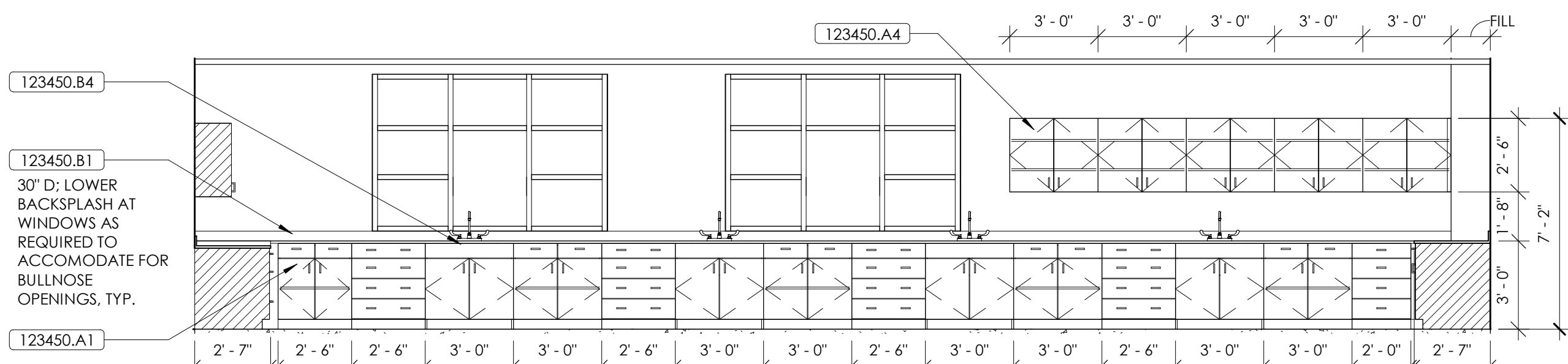
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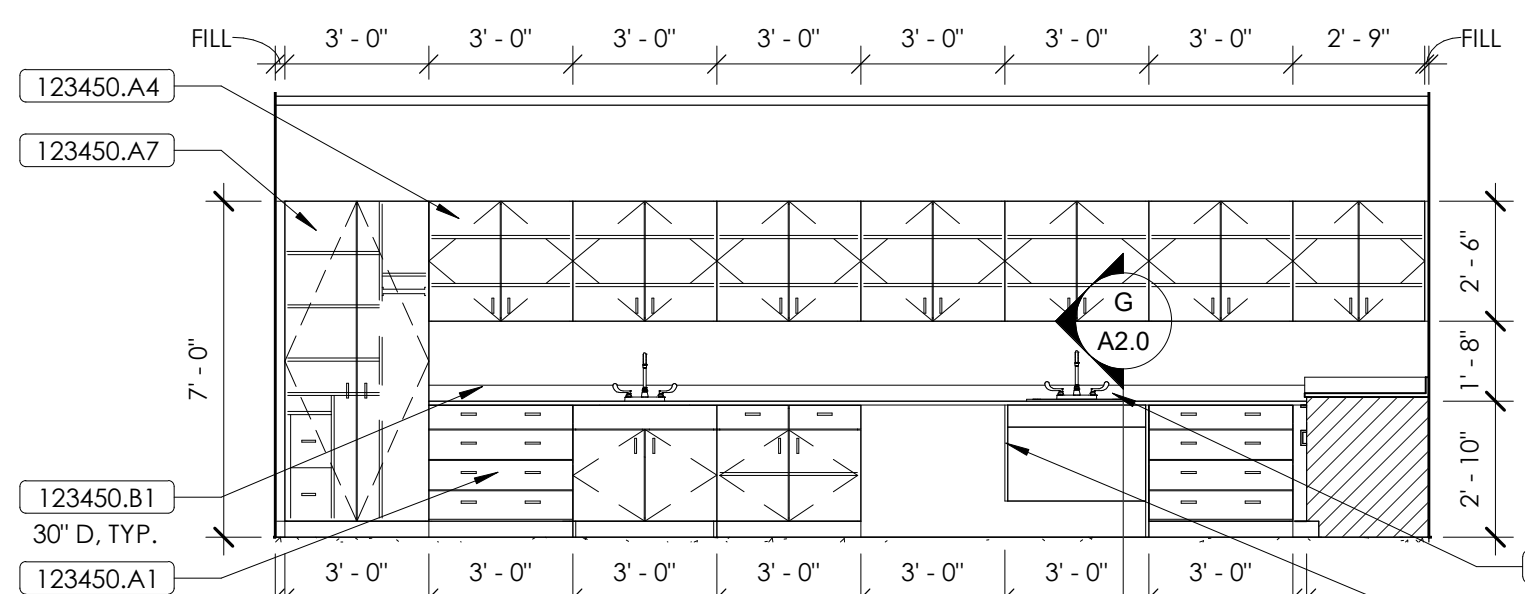
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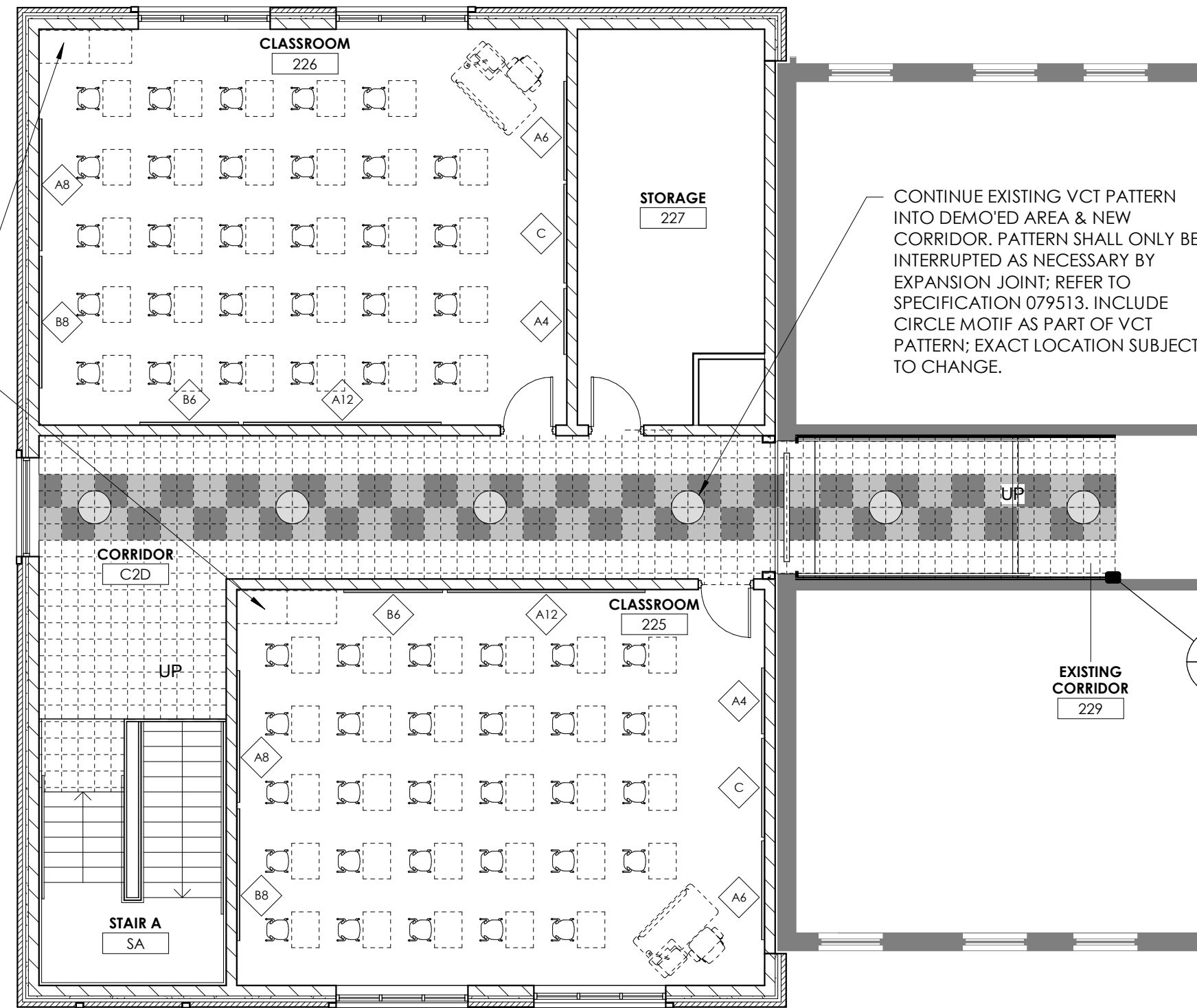
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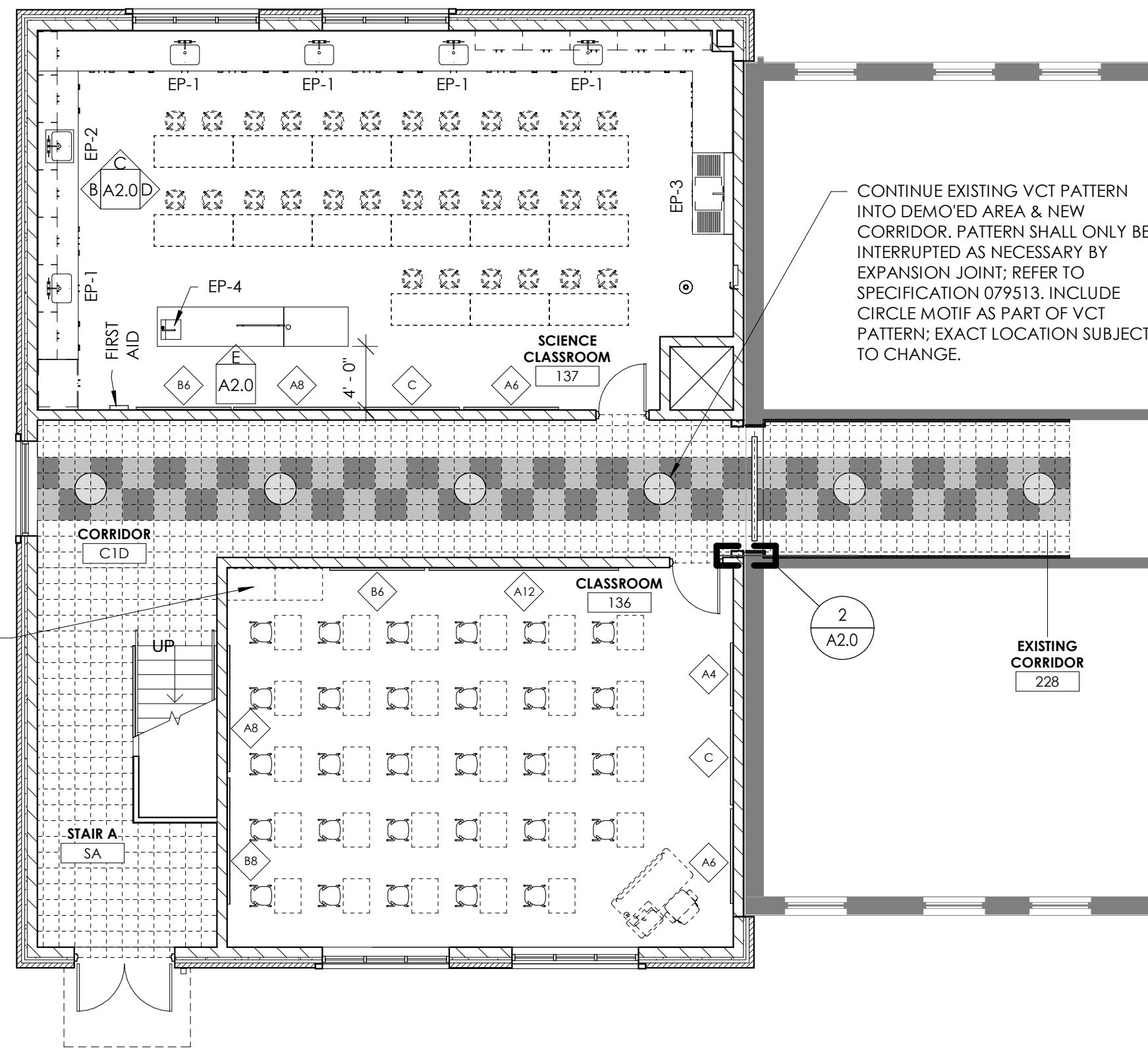
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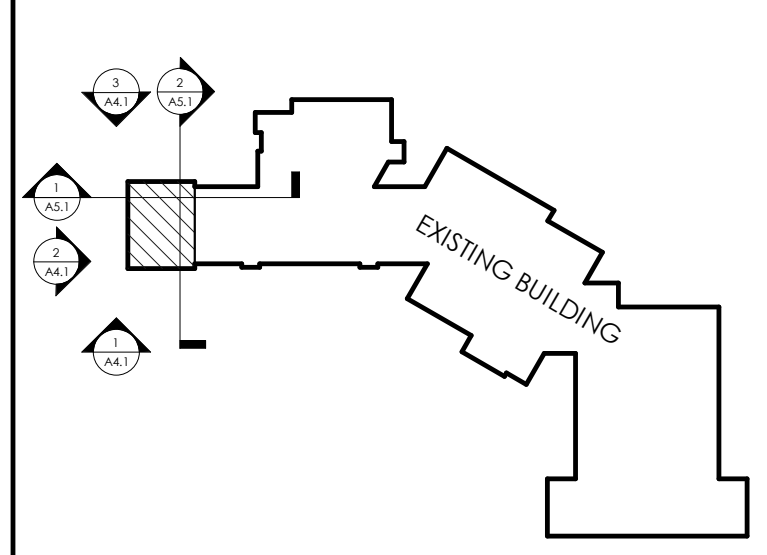
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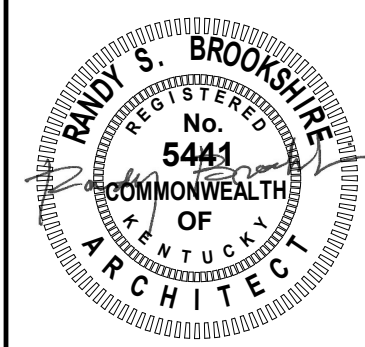
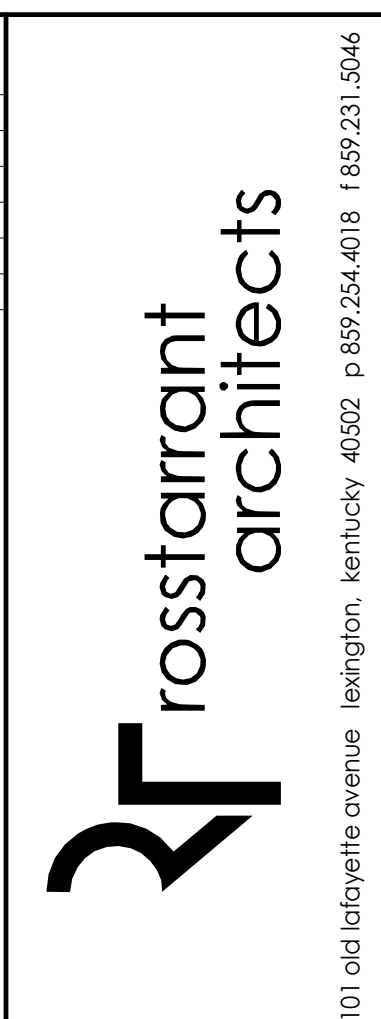






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| MATERIAL REFERENCE |                          |
|--------------------|--------------------------|
| 042000.B           | Face Brick               |
| 047200.A           | Cast Stone Masonry Units |
| 077100.A           | Fascia                   |
| 079513.A           | Joint Covers             |
| 081113.A           | Steel Doors & Frames     |
| 107300.B           | Wall Hung Metal Canopy   |



BUILDING ELEVATIONS

MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

**M,E&P Engineer:**  
CMTA, Inc.  
2429 Members Way  
Lexington, KY 40504  
p 859.253.0892

**Structural Engineer:**  
Structural Design Group, Inc.  
220 Great Circle Rd. Suite 106  
Nashville, TN 37228  
p 615.255.5537

|     |        |
|-----|--------|
| BG# | 19-363 |
|-----|--------|

|             |      |
|-------------|------|
| Project No: | 1928 |
| Drawn By:   | RB   |
| Rev'd By:   | RM   |

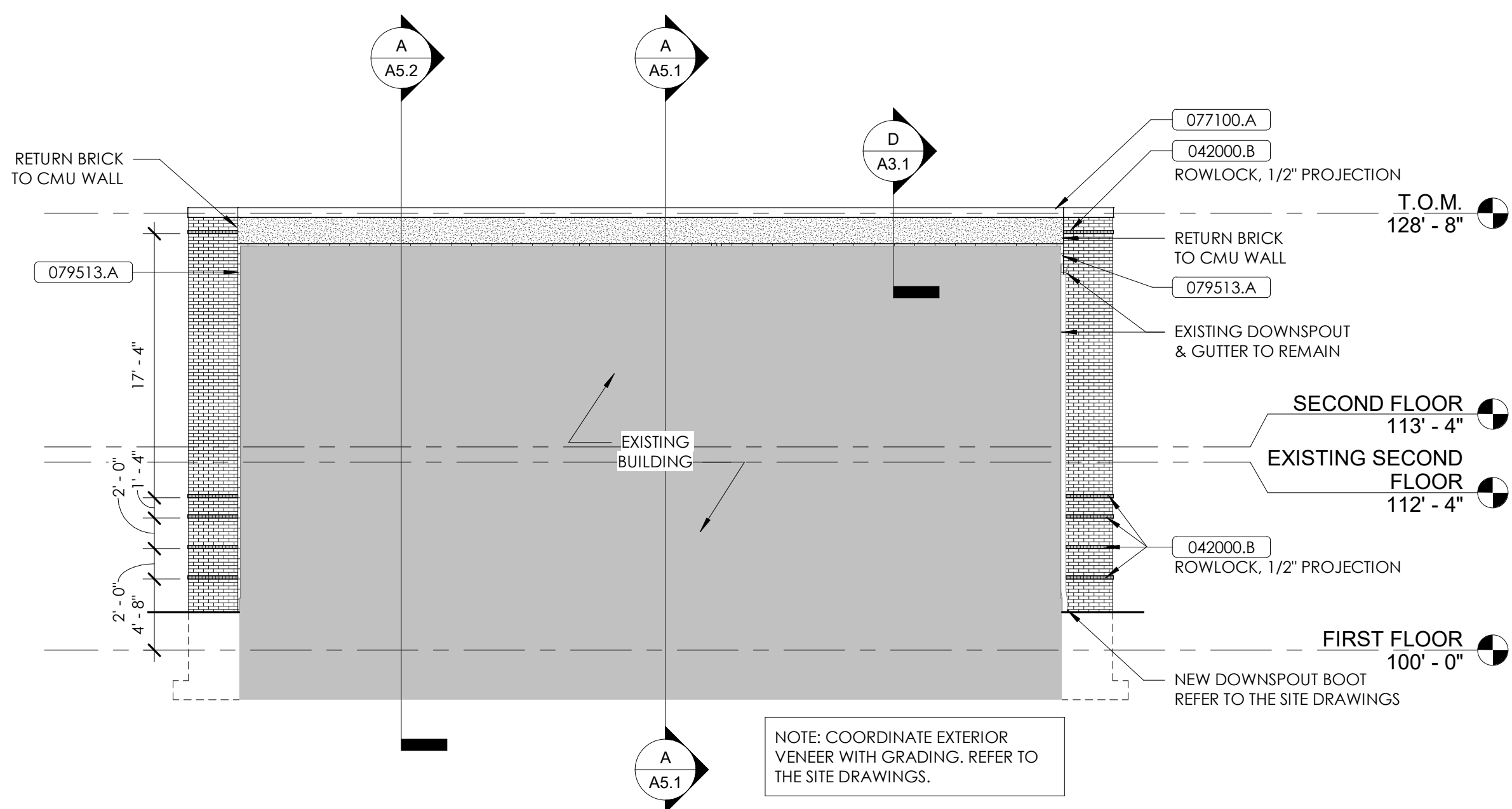
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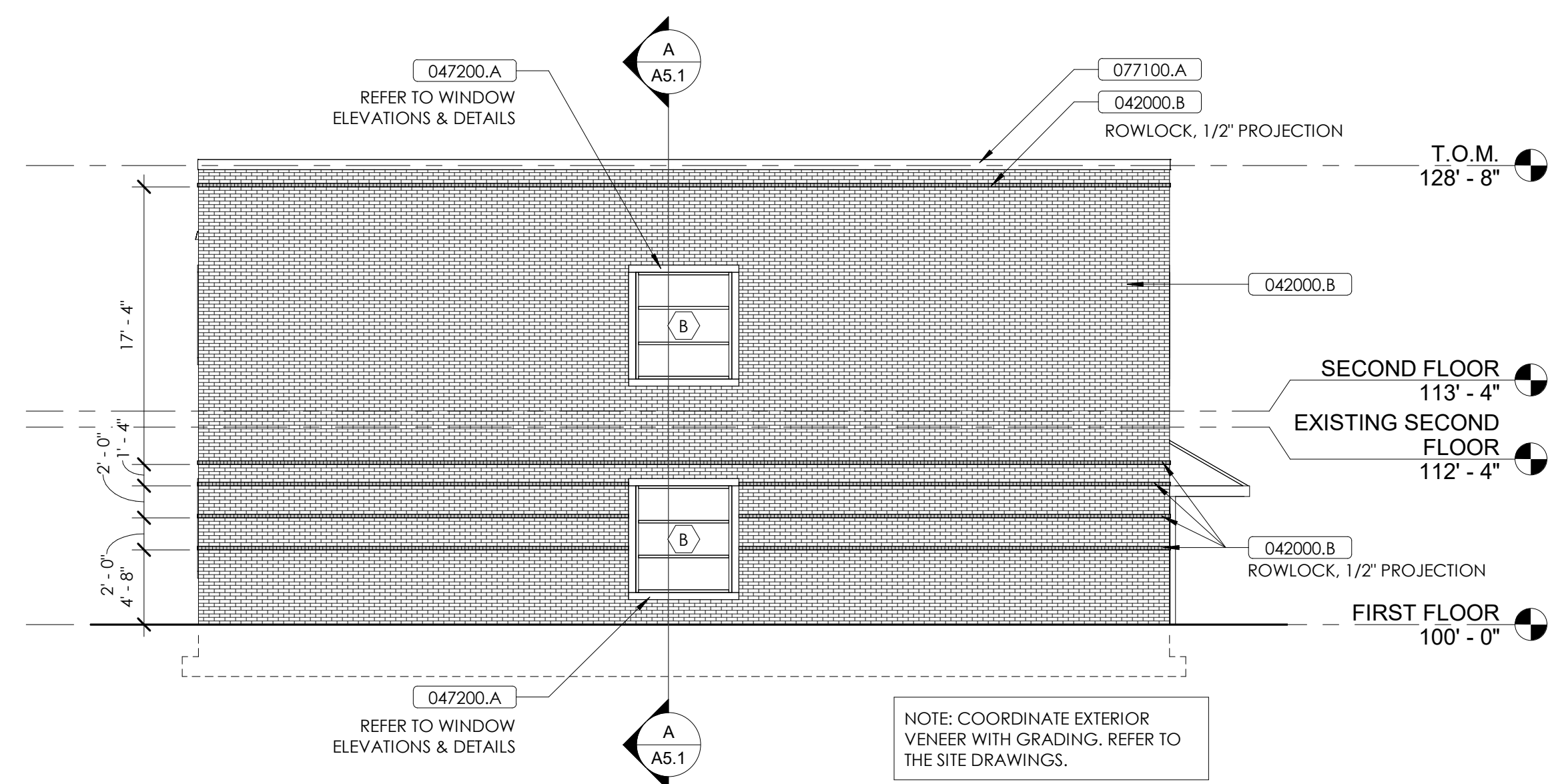
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## A4.1

DATE ISSUED:  
OCTOBER 3, 2018



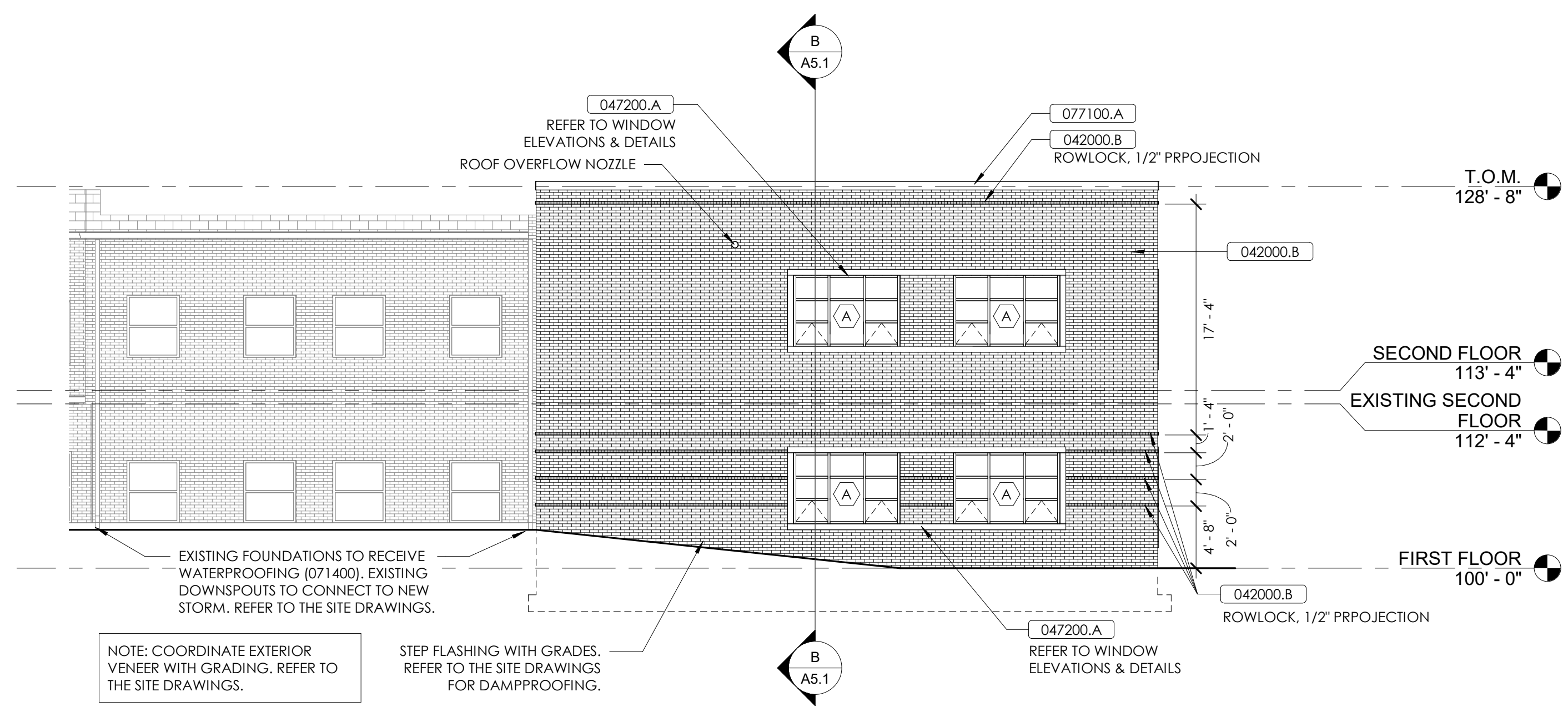
NORTH ELEVATION (BACK) D  
A4.1



**SOUTH ELEVATION**

1/8" = 1'-0"

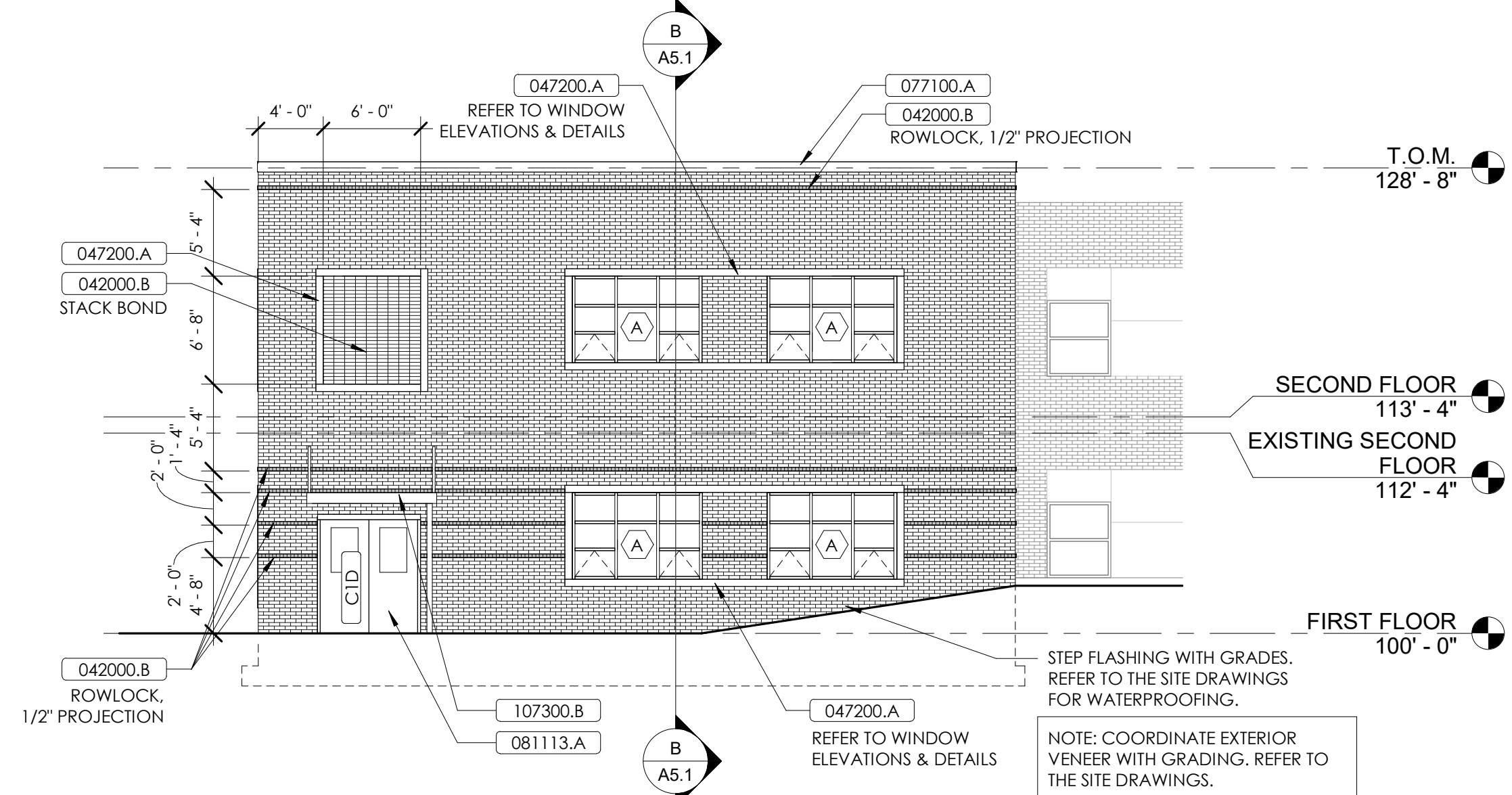
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WEST ELEVATION

1/8" = 1'-0"

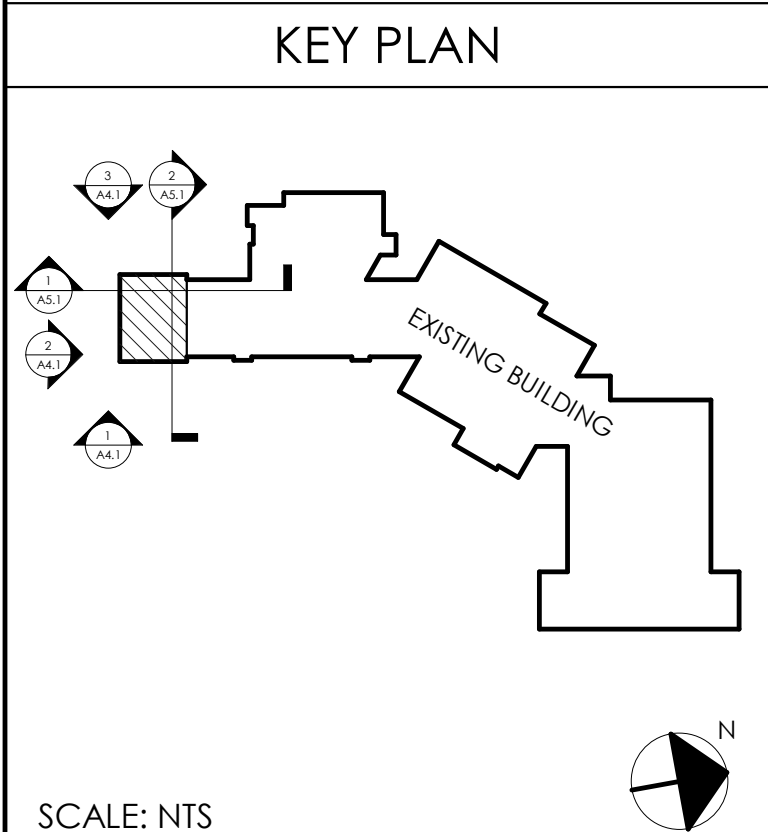
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EAST ELEVATION

$1/8" = 1'-0"$

A  
A4.1



SCALE: NTS





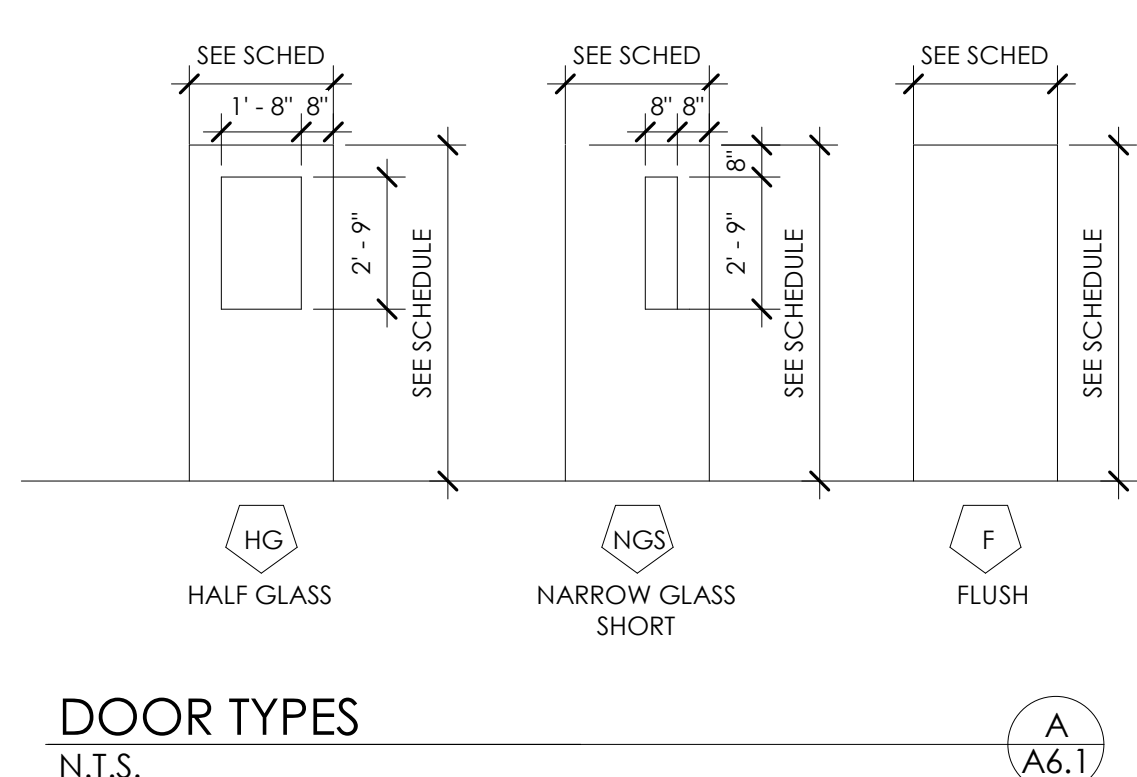
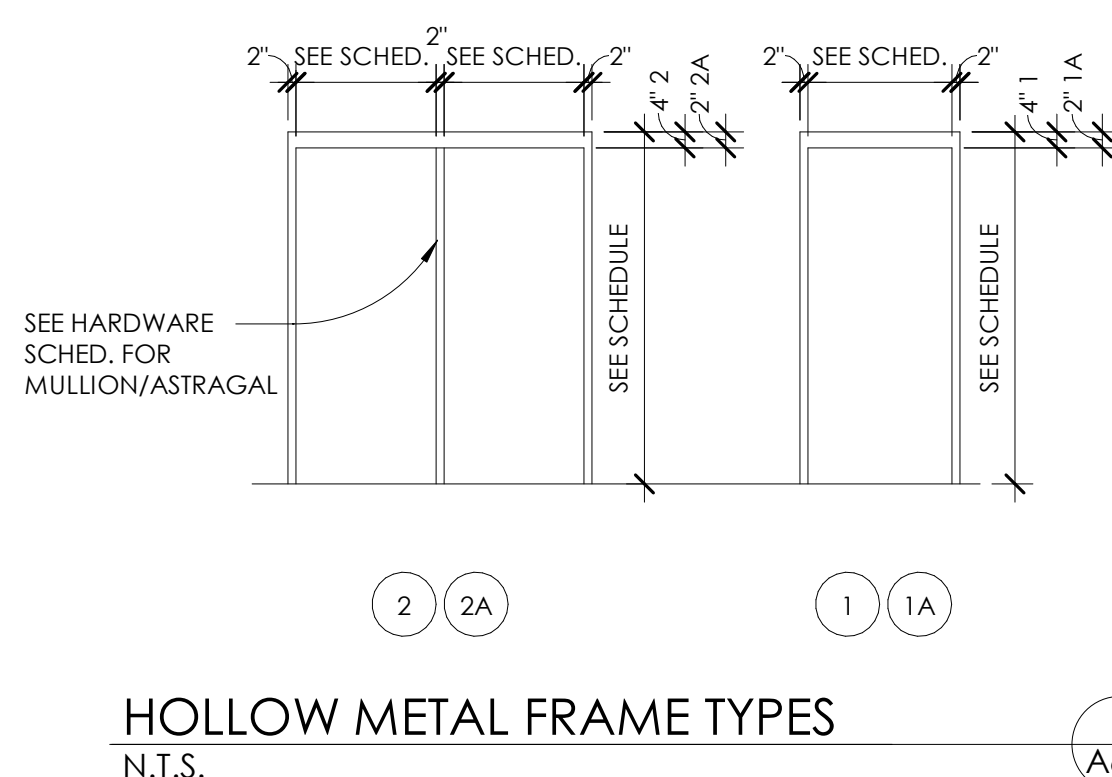
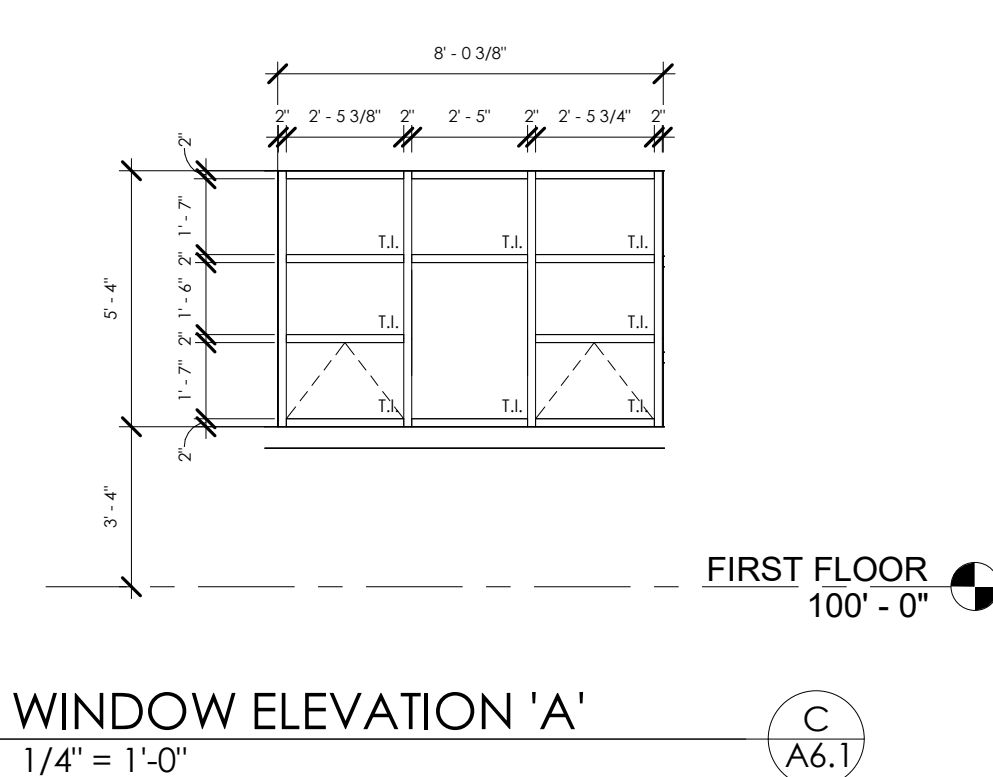
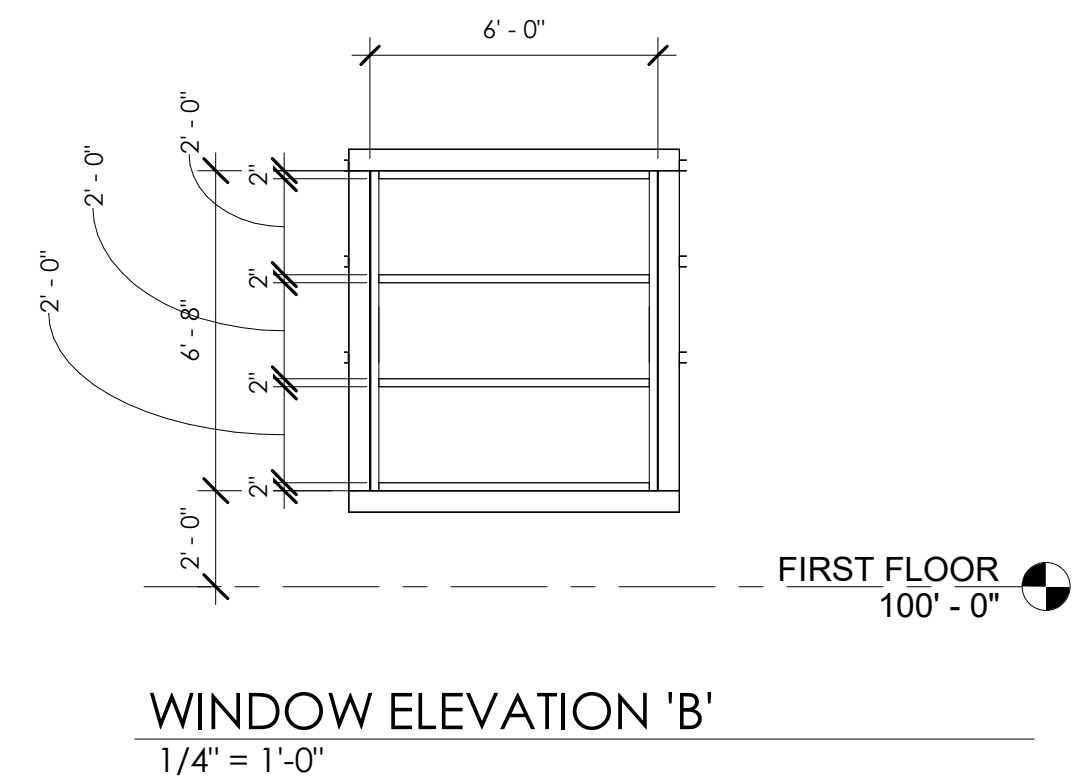
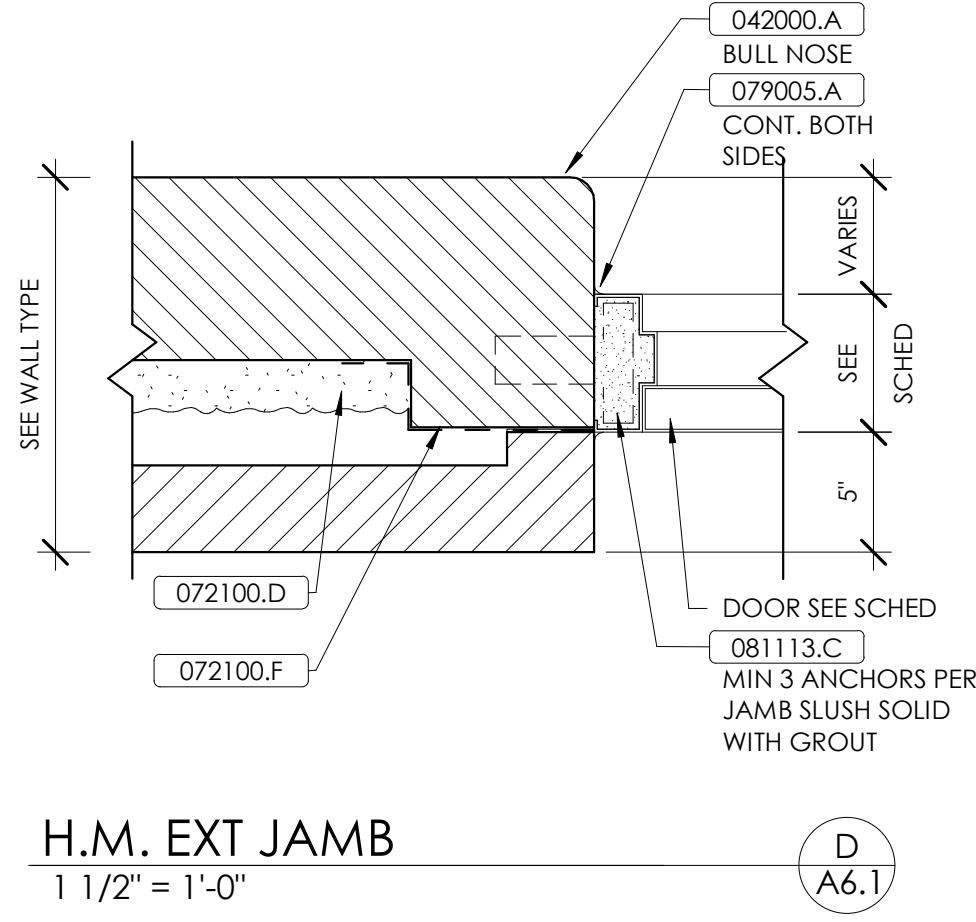
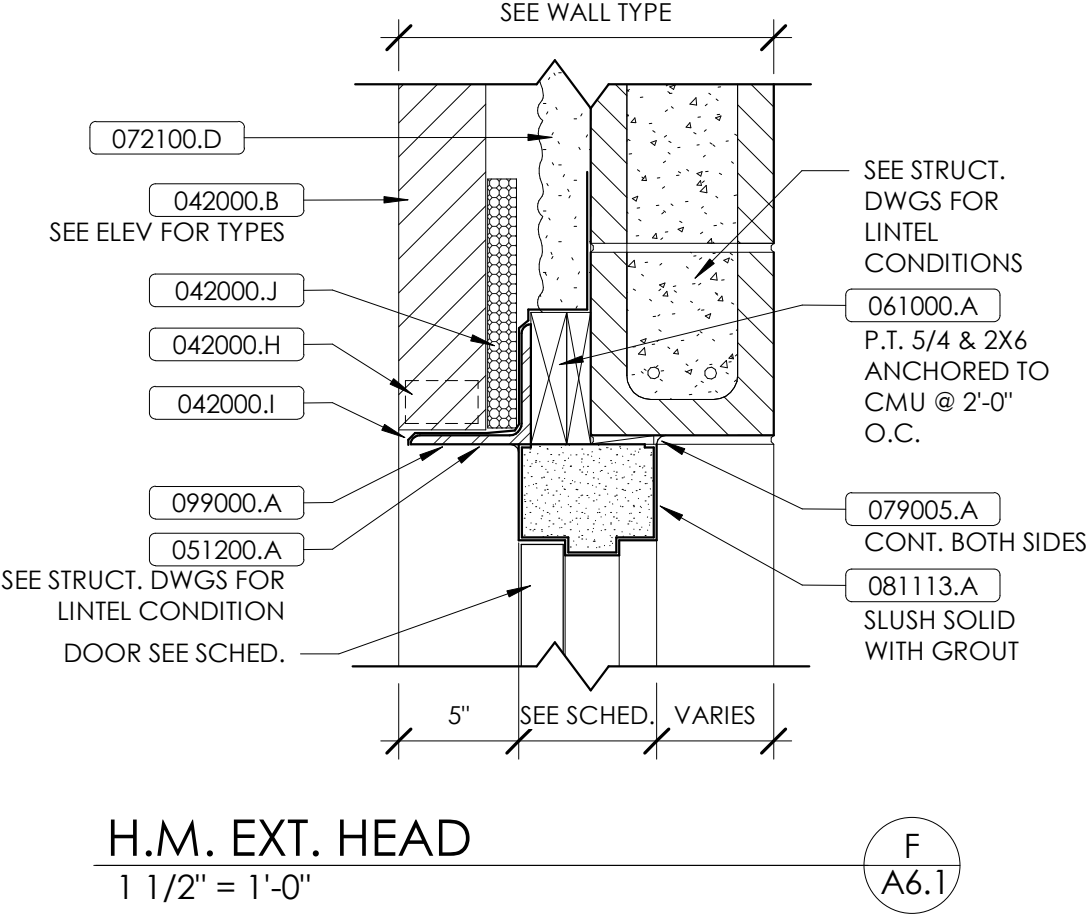
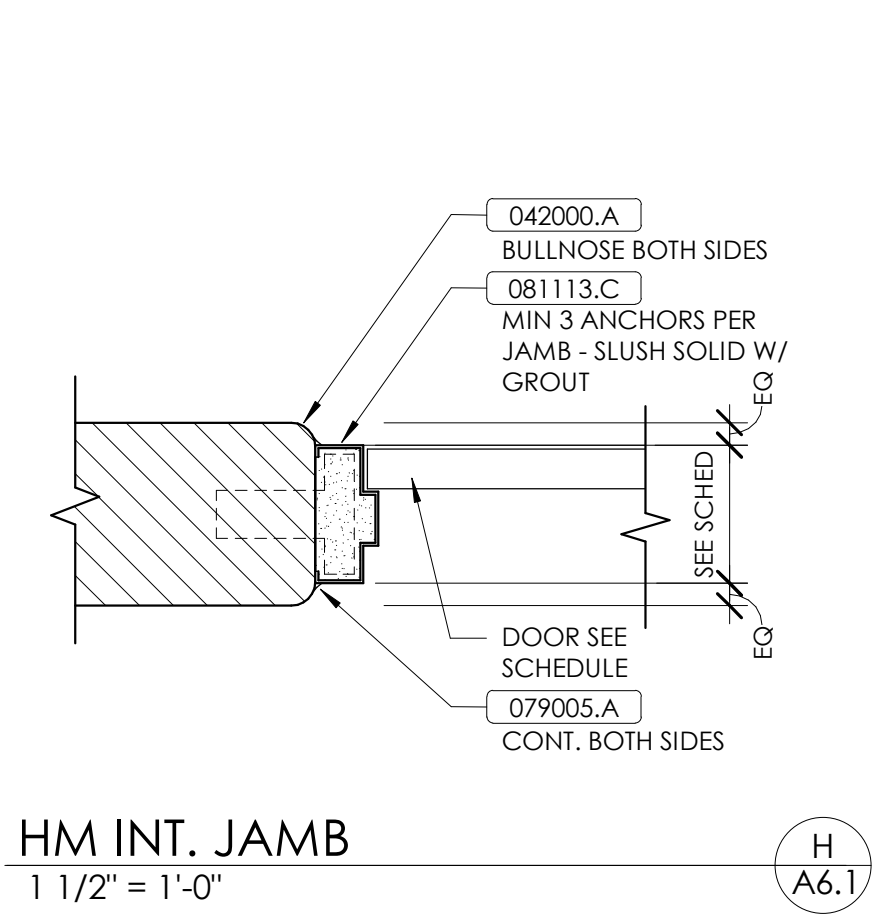
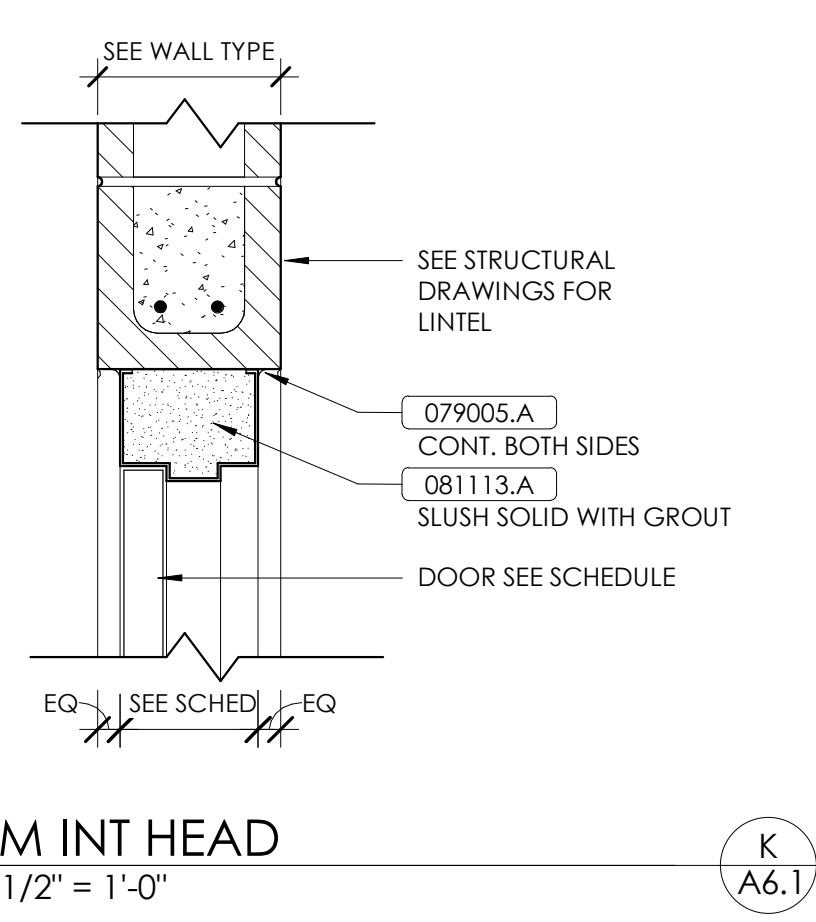
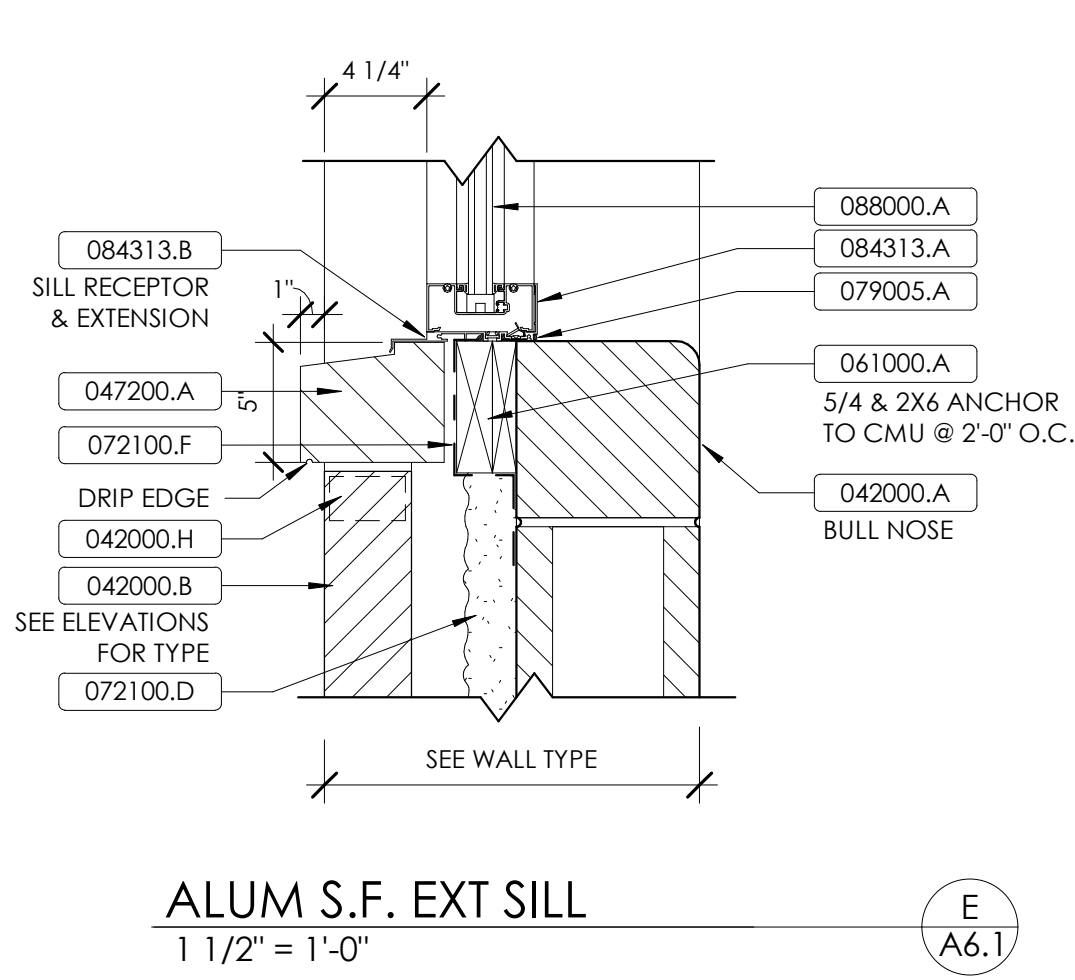
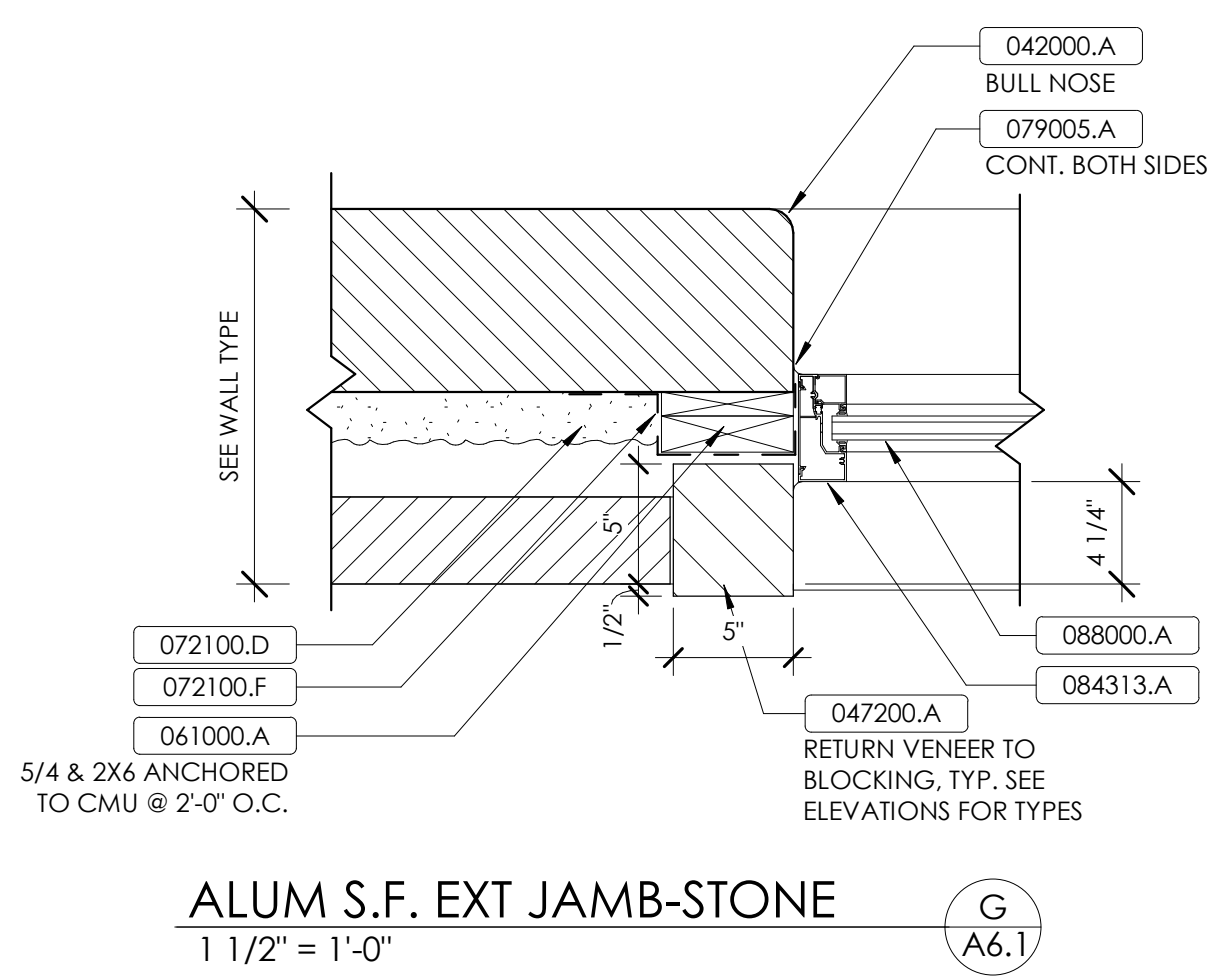
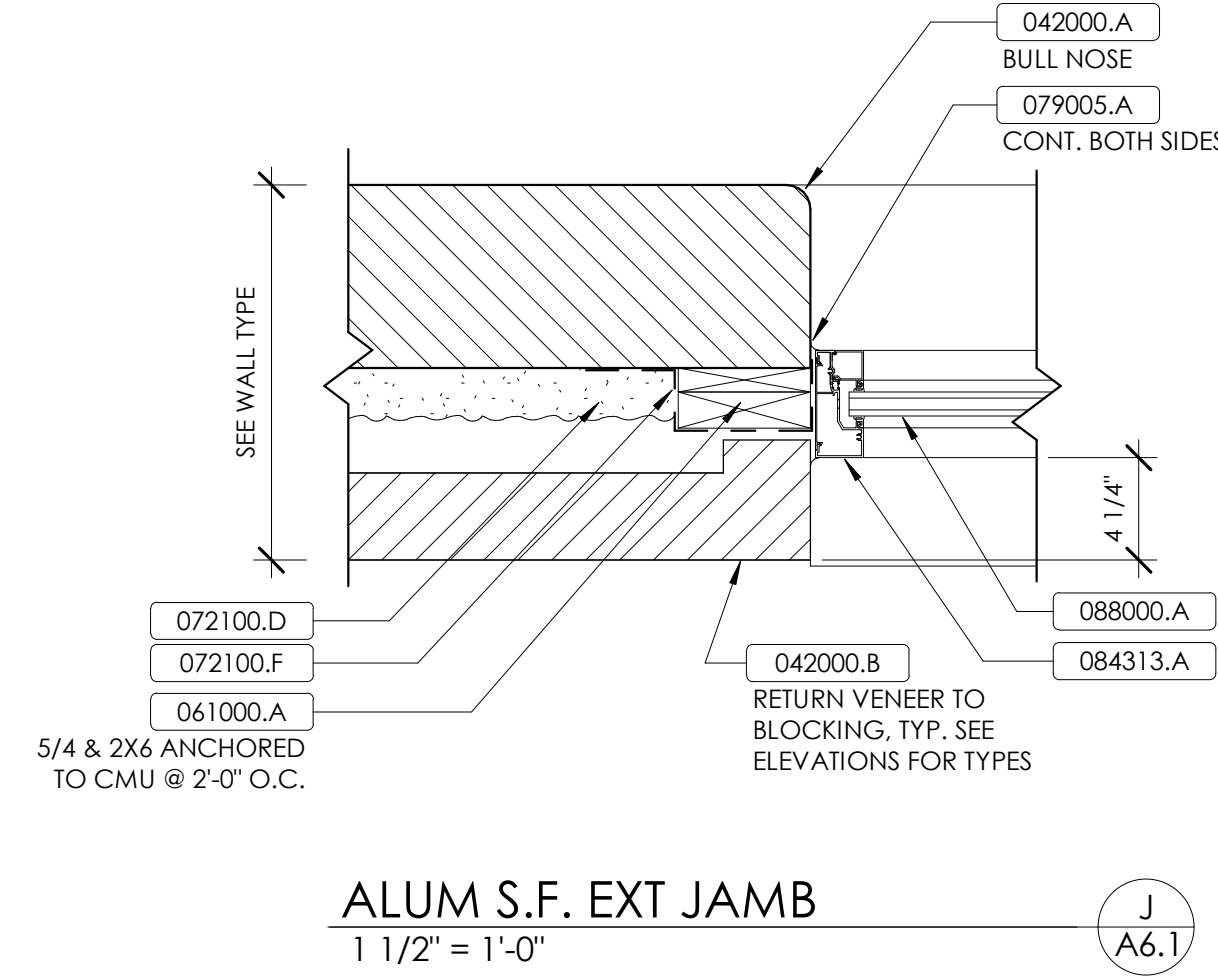
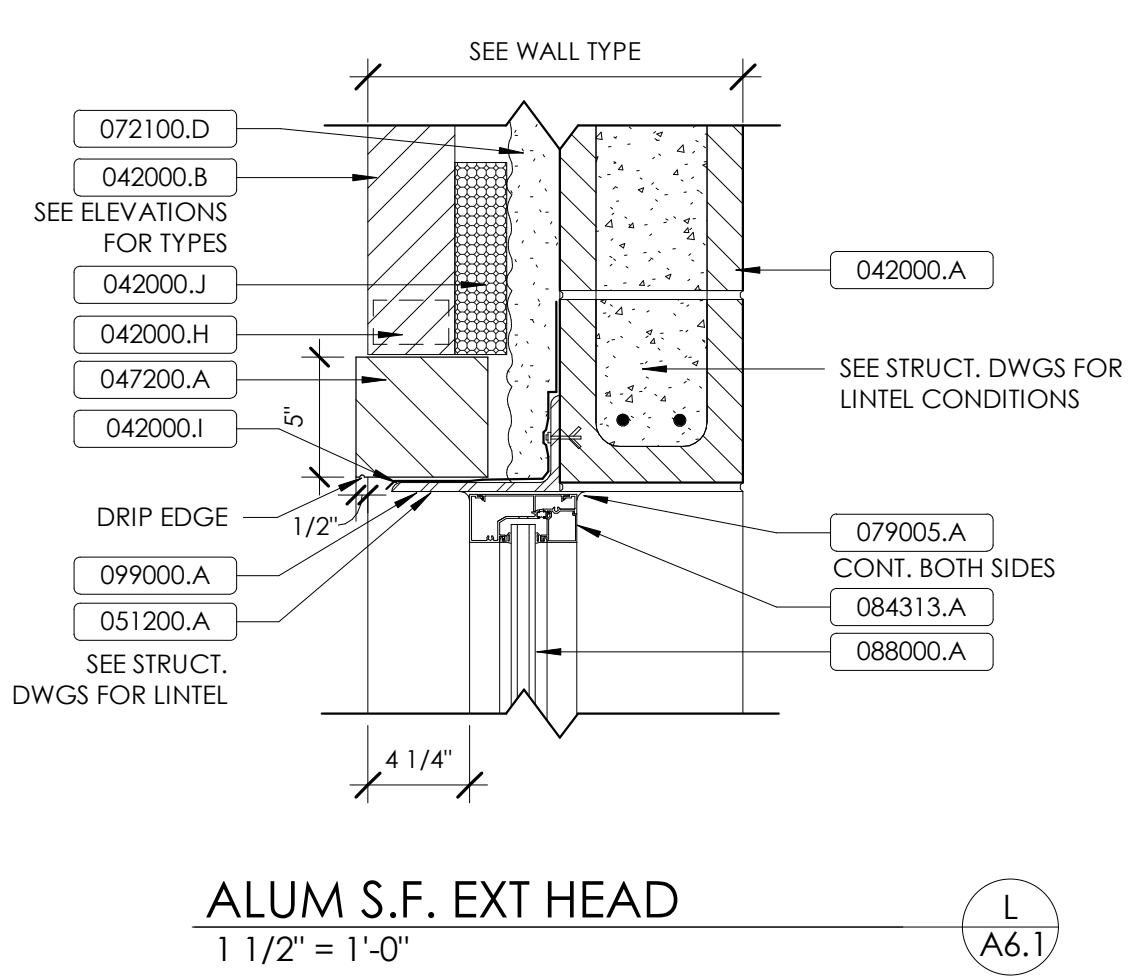


[illegible]

| SCHEDULE OF DOORS AND FRAMES |                   |      |       |       |        |     |      |       |       |      |             |        |             |         |          |  |
|------------------------------|-------------------|------|-------|-------|--------|-----|------|-------|-------|------|-------------|--------|-------------|---------|----------|--|
| DOOR NUMBER                  | ROOM              | PAIR | DOOR  |       |        |     |      |       | FRAME |      |             |        | FIRE RATING | SET NO. | COMMENTS |  |
|                              |                   |      | W     | H     | THICK  | MAT | TYPE | GLASS | MAT   | TYPE | FRAME THICK | DETAIL |             |         |          |  |
|                              |                   |      | 3'-0" | 7'-0" | 1'-6"  | NGS | NGS  | T     | HM    | 1    | 5/3/4"      | HEAD   | JAMB        |         |          |  |
| 136                          | CLASSROOM         |      | 3'-0" | 7'-0" | 1'-6"  | WD  | NGS  | T     | HM    | 1    | 5/3/4"      | K/A6.1 | H/A6.1      | -       |          |  |
| 137                          | SCIENCE CLASSROOM |      | 3'-0" | 7'-0" | 1-3/4" | WD  | NGS  | T     | HM    | 1    | 5/3/4"      | K/A6.1 | H/A6.1      | -       |          |  |
| 225                          | CLASSROOM         |      | 3'-0" | 7'-0" | 1-3/4" | WD  | NGS  | T     | HM    | 1    | 5/3/4"      | K/A6.1 | H/A6.1      | -       |          |  |
| 227                          | CLASSROOM         |      | 3'-0" | 7'-0" | 1-3/4" | WD  | NGS  | T     | HM    | 1    | 5/3/4"      | K/A6.1 | H/A6.1      | -       |          |  |
| 227                          | STORAGE           |      | 3'-0" | 7'-0" | 1-3/4" | WD  | F    | F     | HM    | 1    | 5/3/4"      | K/A6.1 | H/A6.1      | -       |          |  |
| C1D                          | STAIR A           | X    | 6'-0" | 7'-0" | 1-3/4" | HM  | HG   | T     | HM    | 2    | 5/3/4"      | F/A6.1 | D/A6.1      | -       |          |  |

## MATERIAL REFERENCE

|          |                                     |
|----------|-------------------------------------|
| 042000.A | Concrete Masonry Unit               |
| 042000.B | Face Brick                          |
| 042000.H | Vents and Weeps                     |
| 042000.I | Through Wall Flashing               |
| 042000.J | Mortar Deflection Material          |
| 042000.A | Cast Stone Masonry Units            |
| 051200.A | Structural Steel Member             |
| 061000.A | Wood Backing                        |
| 072100.D | Sprayed-In-Place Thermal Insulation |
| 072100.F | Transition Membrane                 |
| 079005.A | Joint Sealant                       |
| 081113.A | Steel Doors & Frames                |
| 081113.C | Steel Frame                         |
| 084313.B | Aluminum Storefront Window          |
| 084313.B | Aluminum Storefront Framing         |
| 088000.A | Glazing                             |
| 099000.A | Paint                               |



DOOR SCHEDULE ABBREVIATION LEGEND:

|      |   |                           |
|------|---|---------------------------|
| AL   | = | ALUMINUM                  |
| AW   | = | ALUMINUM WINDOW           |
| ARG  | = | ARSAULT RESISTANT GLAZING |
| BN   | = | BULLWOG                   |
| BL   | = | BULLET RESISTANT GLAZING  |
| CW   | = | CURTAINWALL               |
| F    | = | FIRE RATED GLAZING        |
| HM   | = | HOLLOW METAL              |
| I    | = | INSULATED                 |
| IFA  | = | INTEGRATED FRAME ASSEMBLY |
| IP   | = | INFILL PANEL              |
| L    | = | LAMINATED                 |
| O    | = | OBSCURE GLAZING           |
| S    | = | SMOKE                     |
| SF   | = | STOREFRONT                |
| SPG. | = | SPANDREL GLAZING          |
| T    | = | TEMPERED                  |
| TI   | = | TEMPERED INSULATED        |
| W    | = | WIRE GLASS                |
| WD   | = | WOOD                      |

\*SEE DRAWING A0.1 FOR MORE ABBREVIATIONS.





[illegible]

**SITE UTILITY PLAN**  
1" = 30'-0"

S SITE UTILITY GENERAL NOTES - MECHANICAL

A DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS.

B CONTRACTOR SHALL CUT ALL PAVEMENT, CURBING, ETC. AS REQUIRED FOR PATCH AND REPAIR. CONTRACTOR SHALL REFER TO CM SCOPING DOCUMENTS FOR PATCH AND REPAIR OF CONCRETE/ASPHALT/GRADE. ANY SUCH WORK NOT EXPLICITLY MENTIONED UNDER A SEPARATE CONTRACT IS TO BE INCLUDED IN THE CONTRACTOR'S OBLIGATION.

C FEDERAL, STATE, LOCAL, MUNICIPALITY AND UTILITY COMPANY CODES, RULES, REGULATIONS AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. IF AN OCCURRENCE ACCIDENTALLY, THE CONTRACTOR(S) SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME TO PREVIOUS PREMIUM TIME AS NEEDED AT AN ADDITIONAL COST TO THE CONTRACTOR.

D PLANNED INTERRUPTION OF ANY SERVICE SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPALITY OR UTILITY COMPANY. THE ARCHITECT AND THE CONTRACTOR SHALL COORDINATE WITH THE ADVANCEANCE OF THE ANTICIPATED INTERRUPTION A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MEMORANDUM TO AVOID UNNECESSARY DISRUPTION TO THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY ANTICIPATED SERVICES REQUIRED FROM THEM AT LEAST TWO WEEKS IN ADVANCE TO ALLOW THEM TO SCHEDULE THEIR DELAY WORK.

E LOCATIONS, DEPTHS, MATERIAL TYPES, ELEVATIONS, ETC. OF ALL APPURTENANCES, LINES, BUILDINGS, ETC. INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES. ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO CHANGE. CONTRACTOR SHALL VERIFY ALL LOCATIONS AND DEPTHS PRIOR TO ANY LOCATIONS MAY VARY (CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE TO VERIFY ALL LOCATIONS PRIOR TO ANY WORK SO THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND OTHER FLAMMABLE OR EXPLOSIVE GASES. CONTRACTOR SHALL VERIFY ALL FEDERAL, STATE, AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS. UTILITIES SHALL ALSO BE INSTALLED IN ACCORD WITH THE APPROPRIATE MUNICIPALITY OR UTILITY COMPANY. CONTRACTOR SHALL BE THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF ANY VARIATION OCCURS, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. THE REPRESENTATIVE CONTRACTOR SHALL VISIT SITE AND FIELD VERIFY THE ROUTING OF ALL UTILITIES NEW AND EXISTING PRIOR TO SUBMISSION OF BIDS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.

G CONTRACTOR SHALL REFER TO CM SCOPING DOCUMENT FOR PATCH AND REPAIR AND TO FIELD VERIFY UNDERGROUND UTILITIES. THE CONTRACTOR IS NOT TO PATCH ANY SUCH PATCH AND REPAIR NOT EXPLICITLY COVERED UNDER A SEPARATE CONTRACT SHALL BE INCLUDED IN THE CONTRACTOR'S OBLIGATION.

H THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY.

I THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO FIELD VERIFY UNDERGROUND UTILITIES. THE CONTRACTOR IS NOT TO PATCH ANY SUCH PATCH AND REPAIR NOT EXPLICITLY COVERED UNDER A SEPARATE CONTRACT SHALL BE INCLUDED IN THE CONTRACTOR'S OBLIGATION.

J THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD OTHER EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.

K CONTRACTOR SHALL PAY ALL TAP FEES, UTILITY COST, UTILITY CONNECTION COSTS, METER FEES, EXTENSION AND DEVELOPMENT CHARGES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

L CONTRACTOR SHALL VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES, GAS LINES, SANITARY LINES, SEWER LINES, VAULTS, ETC., WITH ELECTRICAL PULB BOXES, CONDUITS, POLE BASES ETC. SPECIFICALLY COORDINATE WITH THE REPRESENTATIVE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.
















M ALL PIPING TO BE ABANDONED SHALL BE CAPPED WATERWIGHT. NO PIPING SHALL BE LEFT EXPOSED.

N REFER TO SITE DEMOLITION PLAN FOR TREES TO BE REMOVED. IF TREES ARE TO REMAIN, CONTRACTOR SHALL TAKE CARE TO INSTALL PIPING AND LIMIT EXCAVATING ACTIVITIES TO OUTSIDE THE DRIPLINE OF EXISTING TREES TO REMAIN.

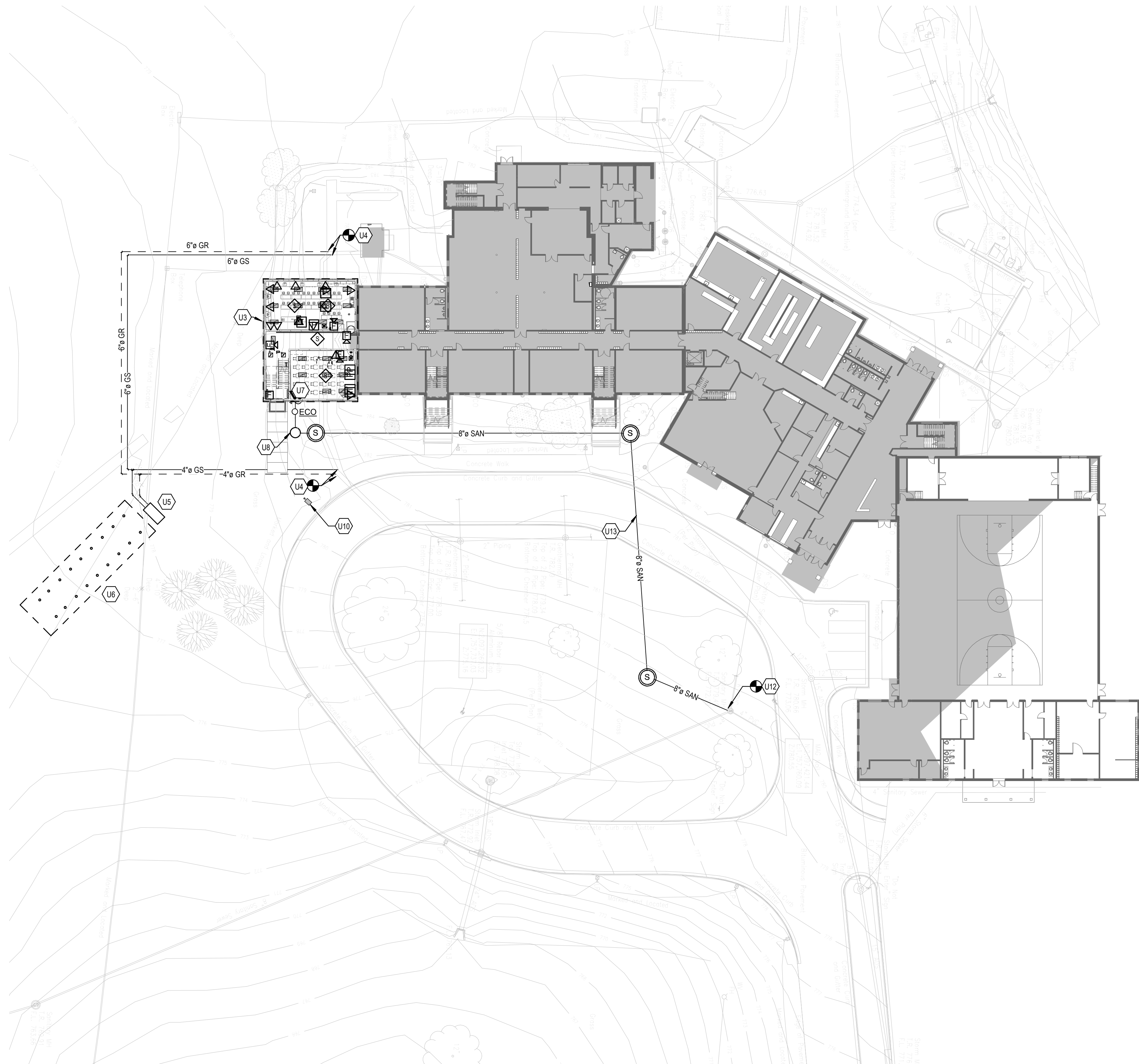
| TAGGED NOTES |  | # |
|--------------|--|---|
| U2           | AREA OF PROPOSED ADDITION. REFER TO SITE UTILITY DRAWING FOR NEW WORK.   |   |
| U9           | REMOVE AREA LIGHT TO BE RELOCATED. REMOVE AND STORE. REMOVE EXISTING POLE BASE TO 24" BELOW FINISHED GRADE.  |   |
| U11          | PHASE DEMOLITION OF GEOTHERMAL SUPPLY/RETURN PIPING SUCH THAT NEW GEOTHERMAL MAINS ARE INSTALLED, TESTED, AND COMPLETE PRIOR TO TIE-IN. COORDINATE REQUIRED SHUT DOWN WITH OWNER A MINIMUM 2 WEEKS IN ADVANCE. |   |

**BEFORE YOU DIG**

THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONTACT "BUD (BEFORE YOU DIG)" AT 1-800-752-6007 TO OBTAIN UNDERGROUND UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY CONTRACTOR OR SUBCONTRACTOR PERFORMING ANY TYPE OF EXCAVATION ON THIS PROJECT SHALL CALL "BUD" TO OBTAIN AN AUTHORIZATION NUMBER.

| SITE UTILITIES LEGEND          |  |   |  |
|--------------------------------|--|---|--|
|                                | EXISTING   | DEMOLITION  | NEW  |
| OVERHEAD PRIMARY               | —EOP—  | ----DOP----   | —OP—   |
| OVERHEAD SECONDARY             | —EOS—  | ----DOS----   | —OS—   |
| OVERHEAD STREET LIGHTING       | —EOSL—   | ----DOSL----  | —OSL—  |
| OVERHEAD TRAFFIC SIGNAL        | —EOTS—   | ----DOTS----  | —OTS—  |
| OVERHEAD TELECOMMUNICATIONS    | —EOT—  | ----DOT----   | —OT—   |
| OVERHEAD FIBER OPTIC           | —EOF—  | ----DOF----   | —OF—   |
| OVERHEAD CATV                  | —EOTV—   | ----DOTV----  | —OTV—  |
| UNDERGROUND PRIMARY            | —EUP—  | ----DUP----   | —UP—   |
| UNDERGROUND SECONDARY          | —EUS—  | ----DUS----   | —US—   |
| UNDERGROUND STREET LIGHTING    | —EUSL—   | ----DUSL----  | —USL—  |
| UNDERGROUND TRAFFIC SIGNAL     | —EUTS—   | ----DUTS----  | —UTS—  |
| UNDERGROUND TELECOMMUNICATIONS | —EUT—  | ----DUT----   | —UT—   |
| UNDERGROUND FIBER OPTIC        | —EUF—  | ----DUF----   | —UF—   |
| UNDERGROUND CATV               | —EUTV—   | ----DUTV----  | —UTV—  |
| CHILLED WATER                  | —CW—   | ----CW----  | —CW—   |
| DOMESTIC WATER                 | —W—  | ----W----   | —W—  |
| GAS                            | —GAS—  | ----GAS----   | —GAS—  |
| HIGH PRESSURE SUPPLY           | —HPS—  | ----HPS----   | —HPS—  |
| HIGH PRESSURE RETURN           | —HPR—  | ----HPR----   | —HPR—  |
| PUMP DISCHARGE RETURN          | —PDR—  | ----PDR----   | —PDR—  |
| SANITARY SEWER                 | —SS—   | ----SS----  | —SS—   |
| STORM                          | —STORM—  | ----STORM----   | —STORM—  |
| FIRE HYDRANT                   | F.H.  | D(F.H.)  | F.H.  |
| WATER VALVE                    | WV    | D(WV)    | WV    |
| EXTERIOR CLEANOUT              | ECCO  | D(ECCO)  | ECCO  |
| SANITARY MANHOLE               |       |          |       |
| THRUST BLOCK                   | T.B.  | D(T.B.)  | T.B.  |



[illegible]

SITE UTILITY PLAN  
1" = 30'-0"

1 SITE UTILITY GENERAL NOTES - MECHANICAL

A DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS.

B CONTRACTOR SHALL CUT ALL PAVEMENT, CURBING, ETC. AS REQUIRED FOR EXISTING UTILITIES. CONTRACTOR SHALL REFER TO CM SCOPING DOCUMENT FOR FATH AND REPAIR OF CONCRETE/ASPHALT/GRADE. ANY SUCH WORK NOT EXPLICITLY MENTIONED UNDER A SEPARATE CONTRACT IS TO BE INCLUDED IN THE CONTRACTOR'S BID.

C FEDERAL, STATE, LOCAL, MUNICIPALITY AND UTILITY COMPANY CODES, RULES, REGULATIONS AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN. WHEN INTERRUPTION OF AN EXISTING UTILITY OR SERVICES IS PLANNED OR ANTICIPATED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDED PREMIUM TIME AS REQUIRED AT NO ADDITIONAL CHARGE IN CONTRACT PRICE.

D PLANNED INTERRUPTION OF ANY SERVICE SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPALITY OR UTILITY COMPANY. THE ARCHITECT AND THE CONTRACTOR SHALL COORDINATE WITH THE OPERATOR OF THE FACILITY TO BE INTERRUPTED. A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MENTIONED TO AVOID UNNECESSARY INTERRUPTIONS TO THE FACILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ANTICIPATED SERVICES REQUIRED FROM THEM AT LEAST TWO WEEKS IN ADVANCE IN WRITING AND INSURE THAT THEY DO NOT DELAY WORK.

E LOCATIONS OF THIS DRAWING, INCLUDING BUT NOT LIMITED TO, UTILITIES, APPEARANCES, LINES, BUILDINGS, ETC., INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES, ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO CHANGE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL LOCATIONS MAY VARY (CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS, INSURE THAT THEY DO NOT INTERRUPT ANY UTILITIES OR SERVICES. THE CONTRACTOR SHALL GIVE PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND WATER. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL LOCATIONS OF FEDERAL, STATE, AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS. UTILITIES SHALL ALSO BE INSTALLED IN ACCORD WITH THE REQUIREMENTS OF THE MUNICIPALITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MOST STRINGENT REQUIREMENT SHALL APPLY IF ANY VARIATION OCCURS. CONSULT THE BUILDING ENGINEER AND THE MECHANICAL ENGINEER FOR ANY CONFLICTS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE RESULTING OF ALL UTILITIES NEW AND EXISTING PRIOR TO SUBMISSION OF BIDS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHARGES.

F CONTRACTOR SHALL REFER TO CM SCOPING DOCUMENT FOR PATCH AND REPAIR OF CONCRETE/ASPHALT/GRADE. ANY SUCH WORK NOT EXPLICITLY COVERED UNDER A SEPARATE CONTRACT SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

G THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY.

H THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO EXPOSE UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALSO REQUIRED TO NOTIFY ANY OTHER AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY REPORT TO THE CITY OF CHICAGO.

J THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD OTHER EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES NEW AND AROUND THE OTHER UTILITIES. THE UTILITY WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.

K CONTRACTOR SHALL BE RESPONSIBLE FOR TAP FEES, UTILITY COST, UTILITY CONNECTION COSTS, METER FEES, EXTENSION AND DEVELOPMENT CHARGES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

L CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND WATER LINES, GAS LINES, SANITARY LINES, SEWER LINES, VAULTS, ETC., WITH ELECTRICAL, PULP BOXES, CONDUITS, POLE BASIS ETC. SPECIFICALLY COORDINATE THE MOVEMENT OF ALL UTILITIES WITH THE CITY OF CHICAGO. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES AND NOTIFY AYE IF CONFLICTS ARISE.
















M ALL PIPING TO BE ABANDONED SHALL BE CAPPED WATERWATER. NO PIPING SHALL BE REMOVED.

N REFER TO SITE DEMOLITION PLAN FOR TREES TO BE REMOVED. IF TREES ARE TO REMAIN, CONTRACTOR SHALL TAKE CARE TO INSTALL PIPING AND LIMIT EXCAVATING ACTIVITIES TO AVOID THE DRIP-LINE OF EXISTING TREES REMAIN.

**TAGGED NOTES**

- U3 AREA OF NEW ADDITION.
- U4 CONNECT NEW GEOTHERMAL PIPING MAINS TO EXISTING MAINS AT POINTS INDICATED. NEW MAINS MUST BE INSTALLED AND READY FOR TIE-IN PRIOR TO DEMOLITION OF EXISTING GEOTHERMAL PIPING.
- U5 INTERCEPT EXISTING CONDUITS AND EXTEND TO NEW LOCATION. PROVIDE NEW CONDUITS TO FIT FUTURE. COORDINATE EXACT LOCATION ON SITE TO CLEAR NEW SIDEWALK.
- U6 NEW GEOTHERMAL WELDFIELD SERVING FOUR CLASSROOM ADDITION. 18 WELLS, 200FT DEEP. 20 TON P ON CENTER.
- U7 REFER TO PLUMBING PLANS FOR CONTINUATION.
- U8 ACID DILUTION. REFER TO DETAIL.
- U10 NEW LOCATION OF EXISTING AREA LIGHT. PROVIDE NEW POLE BASE PER DETAIL. INTERCEPT EXISTING CONDUITS AND EXTEND TO NEW LOCATION. PROVIDE NEW CONDUITS TO FIT FUTURE. COORDINATE EXACT LOCATION ON SITE TO CLEAR NEW SIDEWALK.
- U11 CONNECT TO EXISTING SANITARY MANHOLE.
- U13 ALL NEW SANITARY PIPING MUST BE INSTALLED DURING SUMMER BREAK AND COORDINATED WELL IN ADVANCE WITH OWNER TO MINIMIZE IMPACT TO BUS LOOP.

THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONTACT "BUD (BEFORE YOU DIG)" AT 1-800-752-6007 TO OBTAIN UNDERGROUND UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY CONTRACTOR OR SUBCONTRACTOR PERFORMING ANY TYPE OF EXCAVATION ON THIS PROJECT SHALL CALL "BUD" TO OBTAIN AN AUTHORIZATION NUMBER.

| SITE UTILITIES LEGEND          |  |   |  |
|--------------------------------|--|---|--|
|                                | EXISTING   | DEMOLITION  | NEW  |
| OVERHEAD PRIMARY               | —EOP—  | ----DOP----   | —OP—   |
| OVERHEAD SECONDARY             | —EOS—  | ----DOS----   | —OS—   |
| OVERHEAD STREET LIGHTING       | —EOSL—   | ----DOSL----  | —OSL—  |
| OVERHEAD TRAFFIC SIGNAL        | —EOTS—   | ----DOTS----  | —OTS—  |
| OVERHEAD TELECOMMUNICATIONS    | —EOT—  | ----DOT—  | —OT—   |
| OVERHEAD FIBER OPTIC           | —EOF—  | ----DOF—  | —OF—   |
| OVERHEAD CATV                  | —EOTV—   | ----DOTV----  | —OTV—  |
| UNDERGROUND PRIMARY            | —EUP—  | ----DUP—  | —UP—   |
| UNDERGROUND SECONDARY          | —EUS—  | ----DUS—  | —US—   |
| UNDERGROUND STREET LIGHTING    | —EUSL—   | ----DUSL----  | —USL—  |
| UNDERGROUND TRAFFIC SIGNAL     | —EUTS—   | ----DUTS----  | —UTS—  |
| UNDERGROUND TELECOMMUNICATIONS | —EUT—  | ----DUT—  | —UT—   |
| UNDERGROUND FIBER OPTIC        | —EUF—  | ----DUF—  | —UF—   |
| UNDERGROUND CATV               | —EUTV—   | ----DUTV----  | —UTV—  |
| CHILLED WATER                  | —CW—   | ----CW—   | —CW—   |
| DOMESTIC WATER                 | —W—  | ----W—  | —W—  |
| GAS                            | —GAS—  | ----GAS—  | —GAS—  |
| HIGH PRESSURE SUPPLY           | —HPS—  | ----HPS—  | —HPS—  |
| HIGH PRESSURE RETURN           | —HPR—  | ----HPR—  | —HPR—  |
| PUMP DISCHARGE RETURN          | —PDR—  | ----PDR—  | —PDR—  |
| SANITARY SEWER                 | —SS—   | ----SS—   | —SS—   |
| STORM                          | —STORM—  | ----STORM—  | —STORM—  |
| FIRE HYDRANT                   | F.H.  | D(F.H.)  | F.H.  |
| WATER VALVE                    | WV    | D(WV)    | WV    |
| EXTERIOR CLEANOUT              | ECO   | D(ECO)   | ECO   |
| SANITARY MANHOLE               |       |          |       |
| THRUST BLOCK                   | T.B.  | D(T.B.)  | T.B.  |











[illegible]

| PLUMBING FIXTURE SCHEDULE |  |        |        |      |       |          |
|---------------------------|--|--------|--------|------|-------|----------|
| TAG                       | DESCRIPTION  | CW     | HW     | VENT | WASTE | VOLTAEGE |
| FD-1                      | FLOOR DRAIN, 6" DIA. : DRAIN 2N-415 OR EQUAL FLOOR DRAIN WITH 6" DIAMETER TYP. TYPE "B" NICKEL BRONZE STRAINER, 4" : ZURN AUTO-UNLOCK AND TRAP PRIMER CONNECTION.  | -      | -      | 2"   | 4"    | Yes      |
| P-1                       | EMERGENCY SHOWEREY WASHBOWL - GUARDIAN EQUIPMENT GBP2170 OR EQUAL RECESSED SHOWER HEAD, 10" DIAMETER EMERGENCY SHOWER STATION, WITH 10" DIAMETER ORANGE PLASTIC SHOWER HEAD, 1" STAY OPEN BALL VALVE WITH STAINLESS STEEL ACTUATING ARM AND PULL ROD, 11-1/2" STAINLESS STEEL EYE WASH BOWL, WITH SPRAY HEADS FLIP TOP DUAL COVERS. PROVIDE WITH LEONARD T&H 5100-S105-1121-REC OR EQUAL EMERGENCY MIXING VALVE WITH RECESSED STAINLESS STEEL CABINET.           | 1-1/4" | 1-1/4" | -    | -     | Yes      |
| P-2                       | SINGLE COMPARTMENT SINK - SINGLE COMPARTMENT STAINLESS STEEL SINK, 19X21" O.D., 14X18" I.D., 6/12" DEEP, 18 GAUGE, WITH 8" CENTERS, PROVIDE WITH 8" RIDGID SPOUT GOOSENECK FAUCET WITH 4" WRIST BLADE CONTROL HANDLES, REAR CENTERED CRUMPS CUP STRAINER DRAIN, 3/8" ANGLE SUPPLIES WITH STOPS, KENTUCKY CODE P-TAP, TAILPIECE AND ESCUTCHEONS. COORDINATE WITH CASEWORK MANUFACTURER PRIOR TO ORDERING SINKS.   | 1/2"   | 1/2"   | 2"   | 2"    | Yes      |
| P-2A                      | SINGLE COMPARTMENT SINK - ADA STATION - SINGLE COMPARTMENT STAINLESS STEEL SINK, 19X21" O.D., 14X18" I.D., 6/12" DEEP, 18 GAUGE, WITH 8" CENTERS, PROVIDE WITH 8" RIDGID SPOUT GOOSENECK FAUCET WITH 4" WRIST BLADE CONTROL HANDLES, REAR CENTERED CRUMPS CUP STRAINER DRAIN, 3/8" ANGLE SUPPLIES WITH STOPS, KENTUCKY CODE P-TAP, TAILPIECE AND ESCUTCHEONS.COORDINATE WITH CASEWORK MANUFACTURER PRIOR TO ORDERING SINKS.                                      | 1/2"   | 1/2"   | 2"   | 2"    | Yes      |
| P-3                       | SINGLE COMPARTMENT SINK - DOUBLE WASHBOARD - SINGLE COMPARTMENT STAINLESS STEEL SINK, 19X21" O.D., 14X18" I.D., 6/12" DEEP, 18 GAUGE, WITH 8" CENTERS, PROVIDE WITH 8" RIDGID SPOUT GOOSENECK FAUCET WITH 4" WRIST BLADE CONTROL HANDLES, REAR CENTERED CRUMPS CUP STRAINER DRAIN, 3/8" ANGLE SUPPLIES WITH STOPS, KENTUCKY CODE P-TAP, TAILPIECE AND ESCUTCHEONS. PROVIDE WITH DOUBLE WASHBOARD, COORDINATE WITH CASEWORK MANUFACTURER PRIOR TO ORDERING SINKS. | 1/2"   | 1/2"   | 2"   | 2"    | Yes      |
| P-4                       | SINGLE COMPARTMENT SINK - INSTRUCTOR'S STATION - SINGLE COMPARTMENT STAINLESS STEEL SINK, 19X21" O.D., 14X18" I.D., 6/12" DEEP, 18 GAUGE, WITH 8" CENTERS, PROVIDE WITH 8" RIDGID SPOUT GOOSENECK FAUCET WITH 4" WRIST BLADE CONTROL HANDLES, REAR CENTERED CRUMPS CUP STRAINER DRAIN, 3/8" ANGLE SUPPLIES WITH STOPS, KENTUCKY CODE P-TAP, TAILPIECE AND ESCUTCHEONS. COORDINATE WITH CASEWORK MANUFACTURER PRIOR TO ORDERING SINKS.                            | 1/2"   | 1/2"   | 2"   | 2"    | Yes      |
| RD-1                      | ROOF DRAIN - COMBINATION DRAIN : WATTS RD-700 OR EQUAL, EPOXY COATED, CAST IRON DUAL OUTLET ROOF DRAIN/OVERFLOW COMBINATION WITH FLASHING PLUMB, INTEGRAL GRAVEL STOP, 4" HIGH INTERNAL OVERFLOW STANDPIPE, SECURED DUCTILE IRON DOME, AND NO HUB OUTLETS.   | -      | -      | 4"   | -     | Yes      |
| TP-1                      | TRAP PRIMER TYPE-1, PRECISION PLUMBING PRODUCTS PRIME-TIME OR EQUAL, 1/2" NPT, 1/2" TRAP PRIMER MANIFOLD, WITH ATMOSPHERIC VACUUM BREAKER, PER-SET 24 HOUR CLOCK, MANUAL OVERRIDE SWITCH, 120 VOLT SOLENOID VALVE WITH 120V/3WIRE CONNECTION, PROVIDE IN 12" X 12" X 5/8" UNF MOUNTED METAL CABINET. PROVIDE WITH 10" OPENING MANIFOLD, UN-USED MANIFOLD OPENING SHALL BE CAPPED. INSTALLED UNLESS AS REQUIRED BY MANUFACTURER.                                  | -      | -      | -    | -     | Yes      |

**HAZARDOUS MATERIAL NOTE:**

A. THE CONTRACTOR IT IS HEREBY ADVISED THAT IT IS POSSIBLE THAT ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS ARE OR WERE PRESENT IN THIS BUILDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING ANY MATERIALS OF THIS TYPE, INCLUDING, BUT NOT LIMITED TO, ASBESTOS, ETC., WHOSE CONTACT ANY MATERIAL OF WHOSE CONTACT THEY ARE NOT CERTAIN SHALL PROMPTLY REPORT THE EXISTENCE AND LOCATION OF THAT MATERIAL TO THE OWNER. THE CONTRACTOR SHALL INSURE THAT NO ONE COMES NEAR TO OR IN CONTACT WITH ANY HAZARDOUS MATERIAL UNTIL SUCH TIME ITS CONTENT CAN BE ASCERTAINED TO BE NON-HAZARDOUS.

B. CMIA, INC. HAS NO EXPERTISE IN THE DETERMINATION OF THE EXISTENCE OF ANY HAZARDOUS MATERIALS. IF AN ATTEMPT HAS BEEN MADE BY CMIA TO IDENTIFY THE EXISTENCE OR LOCATION OF ANY SUCH HAZARDOUS MATERIAL, FURTHERMORE, CMIA NOR ANY SUBCONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING OR PROVIDING ANY RECOMMENDATIONS RELATIVE TO THE REMOVAL, HANDLING OR DISPOSAL OF SUCH MATERIAL.

C. THE CONTRACTOR SHALL BE PERFORMED INTERFACES, CONNECTIONS OR RELATES IN ANY PHYSICAL WAY WITH OR TO EXISTING COMPONENTS WHICH MAY CONTAIN OR BECOME CONTAMINATED BY ASBESTOS BEING ONE, THEN IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO CONTACT THE OWNER AND SO ADVISE IMMEDIATELY.

D. THE CONTRACTOR BY EXECUTION OF THE CONTRACT FOR ANY WORK AND/OR BY THE ACCOMPLISHMENT OF ANY WORK THEREBY AGREE TO WAIVE ALL CLAIMS RELATIVE TO THE WORK HEREUNDER, INCLUDING NEGLIGENCE, BREACH OF CONTRACT, INDEMNITY, OR ANY OTHER SUCH INTEREST AGAINST CMTA, ITS PRINCIPALS, EMPLOYEES, AGENTS OR SUBCONTRACTORS, ALSO, THE CONTRACTOR SHALL WAIVE THE RIGHT TO DEFEND, INDEMNIFY AND HOLD CMTA, ITS PRINCIPALS, EMPLOYEES, AGENTS AND SUBCONTRACTORS HARMLESS FROM AND AGAINST ALL SUCH CLAIMS WHICH MAY BE BROUGHT BY ANY SUBCONTRACTORS, SUPPLIERS OR ANY OTHER THIRD PARTIES.

E. THE CONTRACTOR IS DIRECTED TO THE SPECIFICATIONS FOR FURTHER INFORMATION.

A. COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS ETC., WITH ALL CASEWORK EQUIPMENT.

B. MECHANICAL WORK SHALL BE COMPLETED BEFORE COMMENCING INSTALLATION, WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.

B. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK TO AVOID ANY DAMAGE TO EXISTING WORK. DO NOT INTERRUPT ANY EXISTING SERVICE, FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NEW WORK, INCLUDING, BUT NOT LIMITED TO, THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL CODES, ORDINANCES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPAL AND STATE CODES AND STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL PREVAIL.

C. WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REFINISHING ANY DAMAGE TO REPLACEMENT (IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL BE MATCHED TO EXISTING TILE AND GRID. PATCHING WORK SHALL MATCH ADJACENT SURFACES. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM EXISTING WORK OR OTHER FINISHES.

D. COORDINATE ALL WORK WITH PROJECT PHASING

E. PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S) STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMOVED OR DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE

**PHASING NOTE:**

THIS PROJECT INTERFACES EXTENSIVELY WITH EXISTING BUILDING SERVICES, INCLUDING BUT NOT LIMITED TO: RESPONSIBILITY TO COORDINATE AND PHASE ALL TI/LINE AND INTERRUPTIONS OF EXISTING SERVICES TO MINIMIZE OR ELIMINATE DOWNTIME, AT THE REQUEST OF THE OWNER. STEAM SERVICE, ELECTRICAL SERVICE, HVAC SERVICES, STEAM GENERATION, ETC., WILL BE SHUT DOWN AND REMOVED DURING THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING AND VERIFYING ALL SERVICES ARE TESTED AND FULLY AND RELIABLY FUNCTIONAL PRIOR TO INTERRUPTING, RELOCATING OR REMOVING ANY EXISTING SERVICES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BARE ANY AND ALL COSTS ASSOCIATED WITH THIS PHASING, INCLUDING BUT NOT LIMITED TO: PHASING, SCHEDULING, PREMIUM TIME WORK, ETC. CONTRACTOR SHALL COORDINATE ALL SCHEDULING WITH THE OWNER AND APPLICABLE UTILITIES PER THE CONTRACT DOCUMENTS.

H. COMPANY, COMMONWEALTH OF KENTUCKY, ETC. SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN THE CONTRACTOR SHALL BE REQUIRED TO PLAN AN ALTERNATE ROUTE TO RERUN THE ROUTING. THE CONTRACT ENGINEERS TO REVIEW THE ROUTING. IF THE CONTRACTOR HAS TO CUT THROUGH AN IN-DOOR SLAB, CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHOD TO SURVEY THE SLAB. CONTRACTOR SHALL NOT CUT BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS. WHERE FLOOR PENETRATIONS EXIST, CONTRACTOR SHALL EXISTING CONDUNTS, WATER, HYDRO-PNEUM, STEAM, CHILLED WATER, FIRE PROTECTION LINES, GED GAS, ETC. SHALL BE PROTECTED TO BE REMOVED WITH THE EXISTING STRUCTURE WITH NO INTERFERENCE.

K. ALL PENETRATIONS THROUGH FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED ALL POWER AND CABLES SHALL BE PROTECTED TO REMAIN IN PLACE.

**PLUMBING DEMOLITION NOTES:**


- A. IN THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR AREAS IN WHICH THE CEILING IS REMAINING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE EXISTING CEILING AS REQUIRED AND REINSTALLATION. TEMPORARILY SUPPORT LIGHTS, DIFFUSERS, CEILING ETC. REPLACE BROKEN CEILING TILES WITH NEW AT NO ADDITIONAL COST TO OWNER. FIELD VERIFY EXACT REQUIREMENTS.
- B. ALL OUTGAGES SHALL BE SCHEDULED THROUGH THE PROJECT REPRESENTATIVE FOR PROPER COORDINATION. A REQUEST FOR AN OUTGAGE SHALL BE SUBMITTED IN WRITING A MINIMUM OF TWO WEEKS IN ADVANCE.
- C. DURING SPRINKLER SYSTEM OUTAGES THE CONTRACTORS SHALL PROVIDE FIRE WATCH OF AREAS WITH OUTGAGES.
- D. ALL WALLS AND FLOOR SLABS SHALL BE REPAIRED TO MATCH EXISTING AND TO A LIKE NEW CONDITION. ALL RATED WALLS AND FLOOR SLABS SHALL BE PATCHED AND REPAIRED TO MAINTAIN RATING.
- E. ALL EXISTING BUILDING FINISHES SHALL BE PROTECTED DURING THE DEMOLITION PHASE.
- F. HEAVY DASHED LINES INDICATE ITEMS FOR REMOVAL (U.O.N) AND LIGHT SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.
- G. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH THE OWNER.
- H. ALL PIPING IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
- I. IN ACCORDANCE WITH K.R.S. ALL PLUMBING WORK SHALL BE CONSTRUCTED IN COMPLIANCE WITH PLANS APPROVED BY AND BEARING THE APPROVAL STAMP OF THE KENTUCKY DEPARTMENT OF PLUMBING AND/OR THE KENTUCKY WATERWORKS BOARD. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL HE HAS RECEIVED SUCH APPROVED PLANS.
- J. LOCATIONS OF PLUMBING EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
- K. OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
- L. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES OR OTHER COSTS THAT ANY UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (GAS, SEWER, WATER, ETC.)
- M. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL, INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
- N. DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS. TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS.
- O. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR VIBRATION 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 CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION OR EQUIPMENT SHALL BE THAT OF THE ENGINEER.
- P. DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
- Q. VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILING. IN GENERAL, ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
- R. ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
- S. WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMENTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHENEVER POSSIBLE, LOCATE PIPING OUTSIDE THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF THE FOUNDATION OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.
- T. WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.
- U. THE DOCUMENTS COMPLY WITH 2015 IMC, 2018 KBC, AND 2012 IECC.
- V. THE DOCUMENTS COMPLY WITH 2015 IMC, 2018 KBC, AND ASHRAE 90.1-2010.

### PLUMBING GENERAL NOTES:


| COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS, ETC., WITH ALL CASEWORK INCLUDING MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR. |  | SYMBOLS & ABBREVIATIONS |  |
|---|--|-------------------------|--|
| B.  | THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE, FOR ANY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY. | A                       | AIR  |
| C.  | WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO REMOVE OR REPLACE NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.   | AFB                     | ABOVE FINISHED FLOOR                           |
| D.  | ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.   | AFR                     | ABOVE FINISHED ROOF                            |
| E.  | COORDINATE ALL WORK WITH PROJECT FASHING REQUIREMENTS.   | C.I.                    | CAST IRON                                      |
| F.  | REPAIR, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.   | CO2                     | CARBON DIOXIDE                                 |
| G.  | OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.).  | CW                      | DOMESTIC COLD WATER                            |
| H.  | CONTRACTOR SHALL BE AWARE OF UNSEEN PENDING WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THEM. DO NOT CONTACT THE ENGINEERS TO REVIEW THE ROUTING.   | DN                      | DOWN   |
| I.  | IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB, CONTRACTOR SHALL USE ULTRA SLOW OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.  | EV                      | EVACUATION (WASTE ANESTHETIC GAS DISPOSAL)     |
| J.  | WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.   | FHV                     | FIRE HOSE VALVE WITH CABINET                   |
| K.  | ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.  | FWH                     | FREEZE PROOF WALL HYDRANT                      |
| L.  | ALL WORK REQUIRING DOWNTIME OF ANY AREA OF THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.   | HB                      | HOT BIBB                                       |
| M.  | ALL PIPING IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.  | HW                      | DOMESTIC HOT WATER                             |
| N.  | IN ACCORDANCE WITH K.R.S. ALL PLUMBING WORK SHALL BE CONSTRUCTED IN COMPLIANCE WITH PLANS APPROVED BY AND BEARING THE APPROVAL STAMP OF THE KENTUCKY DIVISION OF PLUMBING AND/OR THE DIVISION OF WATER. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL HE HAS RECEIVED SUCH APPROVED PLANS.   | IAW                     | IN ACCORDANCE WITH                             |
| O.  | LOCATIONS OF PIPINGS AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.   | ID                      | INSIDE DIMENSION                               |
| P.  | ALL OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.   | IE                      | INVERT ELEVATION                               |
| Q.  | THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES OR OTHER COSTS THAT ANY UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK (GAS, SEWER, WATER, ETC.).   | LP                      | LINE PRESSURE ALARM (MEDICAL GAS AREA ALARM)   |
| R.  | WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.  | MA                      | MAN-HOLE                                       |
| S.  | DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK EXCEPTS TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS.   | MSA                     | MULTI-SINGLE ALARM (MEDICAL GAS MASTER ALARM)  |
| T.  | ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM ALL SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATIONS ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.   | NTS                     | NOT TO SCALE                                   |
| U.  | DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF SUCH EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.  | NIC                     | NOT IN CONTRACT                                |
| V.  | VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING, IF THIS IS POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS.  | NO                      | NORMALLY OPEN                                  |
|   |  | NC                      | NORMALLY CLOSED                                |
|   |  | O.                      | OXYGEN   |
|   |  | OD                      | OUTSIDE DIMENSION                              |
|   |  | OFCI                    | OWNER FURNISHED, CONTRACTOR INSTALLED          |
|   |  | OFOW                    | OWNER FURNISHED, OWNER INSTALLED               |
|   |  | CFCI                    | CONTRACTOR FURNISHED, CONTRACTOR INSTALLED     |
|   |  | ORL                     | OPEN RECEPTACLE                                |
|   |  | ORLF                    | OVERFLOW ROOF LEADER                           |
|   |  | PRV                     | PRESSURE REDUCING VALVE (STEAM, WATER, OR GAS) |
|   |  | PSI                     | POUNDS PER SQUARE INCH                         |
|   |  | RHW                     | DOMESTIC RECIRCULATING HOT WATER               |
|   |  | RL                      | ROOF LEADER                                    |
|   |  | SCW                     | SOFT DOMESTIC COLD WATER                       |
|   |  | SRI                     | SANITARY RISER                                 |
|   |  | TB                      | THRUST BLOCK                                   |
|   |  | TE                      | TOP ELEVATION                                  |
|   |  | TP                      | TRAP PRIMER                                    |
|   |  | TYP                     | TYPICAL  |
|   |  | UON                     | UNLESS OTHERWISE NOTED                         |
|   |  | V. VAC                  | VACUUM   |
|   |  | VTR                     | VENT THRU ROOF                                 |

## SYMBOLS & ABBREVIATIONS

| Abbreviation | Description                                    | Symbol | Meaning   |
|--------------|--|--------|---|
| AIR          | MEDICAL AIR                                    |        | POINT OF CONNECTION                               |
| AFF          | ABOVE FINISHED FLOOR                           |        | LIMIT OF DEMOLITION                               |
| AFR          | ABOVE FINISHED ROOF                            |        | PIPE ELBOW TURNING UP/TURNING DOWN                |
| C.I.         | CAST IRON                                      |        | PIPE TEE TURNING UP/TURNING DOWN                  |
| CO2          | CARBON DIOXIDE                                 |        | MEDICAL AIR                                       |
| CW           | DOMESTIC COLD WATER                            |        | COMPRESSED AIR                                    |
| DN           | DOWN   |        | FORCED MAIN                                       |
| EV           | EVACUATION (WASTE ANESTHETIC GAS DISPOSAL)     |        | FIRE PROTECTION LINE                              |
| FHV          | FIRE HOSE VALVE WITH CABINET                   |        | GAS LINE  |
| FPWH         | FREEZE PROOF WALL HYDRANT                      |        | SANITARY WASTE PIPING TO GREASE TRAP              |
| HB           | HOSE BIBB                                      |        | OXYGEN PIPING                                     |
| HW           | DOMESTIC HOT WATER                             |        | OVERFLOW ROOF LEADER PIPING                       |
| IAW          | IN ACCORDANCE WITH                             |        | ROOF LEADER PIPING                                |
| ID           | INSIDE DIMENSION                               |        | SANITARY WASTE PIPING                             |
| IE           | INVERT ELEVATION                               |        | STORM SEWER PIPING                                |
| LPA          | LINE PRESSURE ALARM (MEDICAL GAS AREA ALARM)   |        | VACUUM PIPING                                     |
| MH           | MANHOLE  |        | VENT PIPING                                       |
| MSA          | MULTI-SINGLE ALARM (MEDICAL GAS MASTER ALARM)  |        | EXISTING PIPING (THIN LINE)                       |
| NTS          | NOT TO SCALE                                   |        | ABANDONED EXISTING PIPING (THIN LINE)             |
| NIC          | NOT IN CONTRACT                                |        | DOMESTIC COLD WATER PIPING                        |
| NO           | NORMALLY OPEN                                  |        | DOMESTIC HOT WATER SUPPLY                         |
| NC           | NORMALLY CLOSED                                |        | DOMESTIC RECIRCULATING HOT WATER                  |
| O, OX        | OXYGEN   |        | CLEANOUT IN CEILING SPACE                         |
| OD           | OUTSIDE DIMENSION                              |        | FLOOR CLEANOUT                                    |
| OFci         | OWNER FURNISHED, CONTRACTOR INSTALLED          |        | EXTERIOR CLEANOUT                                 |
| OFoi         | OWNER FURNISHED, OWNER INSTALLED               |        | BALANCING VALVE                                   |
| CFCi         | CONTRACTOR FURNISHED, CONTRACTOR INSTALLED     |        | BALL VALVE  |
| OR           | OPEN RECEPTACLE                                |        | SAFETY RELIEF VALVE                               |
| ORL          | OVERFLOW ROOF LEADER                           |        | SAFETY RELIEF VALVE                               |
| PRV          | PRESSURE REDUCING VALVE (STEAM, WATER, OR GAS) |        | OS&Y (GATE) VALVE                                 |
| PSI          | POUNDS PER SQUARE INCH                         |        | PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.) |
| RHW          | DOMESTIC RECIRCULATING HOT WATER               |        | STRAINER  |
| RL           | ROOF LEADER                                    |        | CHECK VALVE                                       |
| SCW          | SOFT DOMESTIC COLD WATER                       |        | DOUBLE CHECK VALVE ASSEMBLY                       |
| SR           | SANITARY RISER                                 |        | PIPING UNION                                      |
| TB           | THRUST BLOCK                                   |        | FLOW SWITCH                                       |
| TE           | TOP ELEVATION                                  |        | PRESSURE SWITCH                                   |
| TP           | TRAP PRIMER                                    |        | TAMPER SWITCH                                     |
| TYP          | TYPICAL  |        | THERMOMETER                                       |
| UON          | UNLESS OTHERWISE NOTED                         |        | VACUUM BREAKER                                    |
| V, VAC       | VACUUM   |        | LIMITED AREA SPRINKLER HEAD                       |
| VTR          | VENT THRU ROOF                                 |        | PETE'S PLUG                                       |
|              |  |        | FLOOR DRAIN DESIGNATOR                            |
|              |  |        | ROOF DRAIN DESIGNATOR                             |
|              |  |        | PLUMBING FIXTURE DESIGNATOR                       |
|              |  |        | EQUIPMENT TAG DESIGNATOR                          |
|              |  |        | TAGGED NOTE DESIGNATOR                            |
|              |  |        | REVISION DESIGNATOR                               |
|              |  |        | TEMPERATURE SENSOR                                |
|              |  |        | HOSE BIBB   |
|              |  |        | TRENCH VENT                                       |



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**PLUMBING LEGEND**

**FOR:**

**MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION**

**MARION COUNTY BOARD OF EDUCATION**

**LEBANON, KENTUCKY**



**CMTA**  
COMMUNITY MODEL TEAM APPROACH

**Structural Engineer**  
Structural Design Group, Inc.  
220 Great Circle Rd., Suite 106  
Nashville, TN 37228  
p 615.355.5337

**BG#**

Project No: 1928/MCMC19  
 Drawn By: JEA  
 Rev'd By: MCW

SHEET RELEASE

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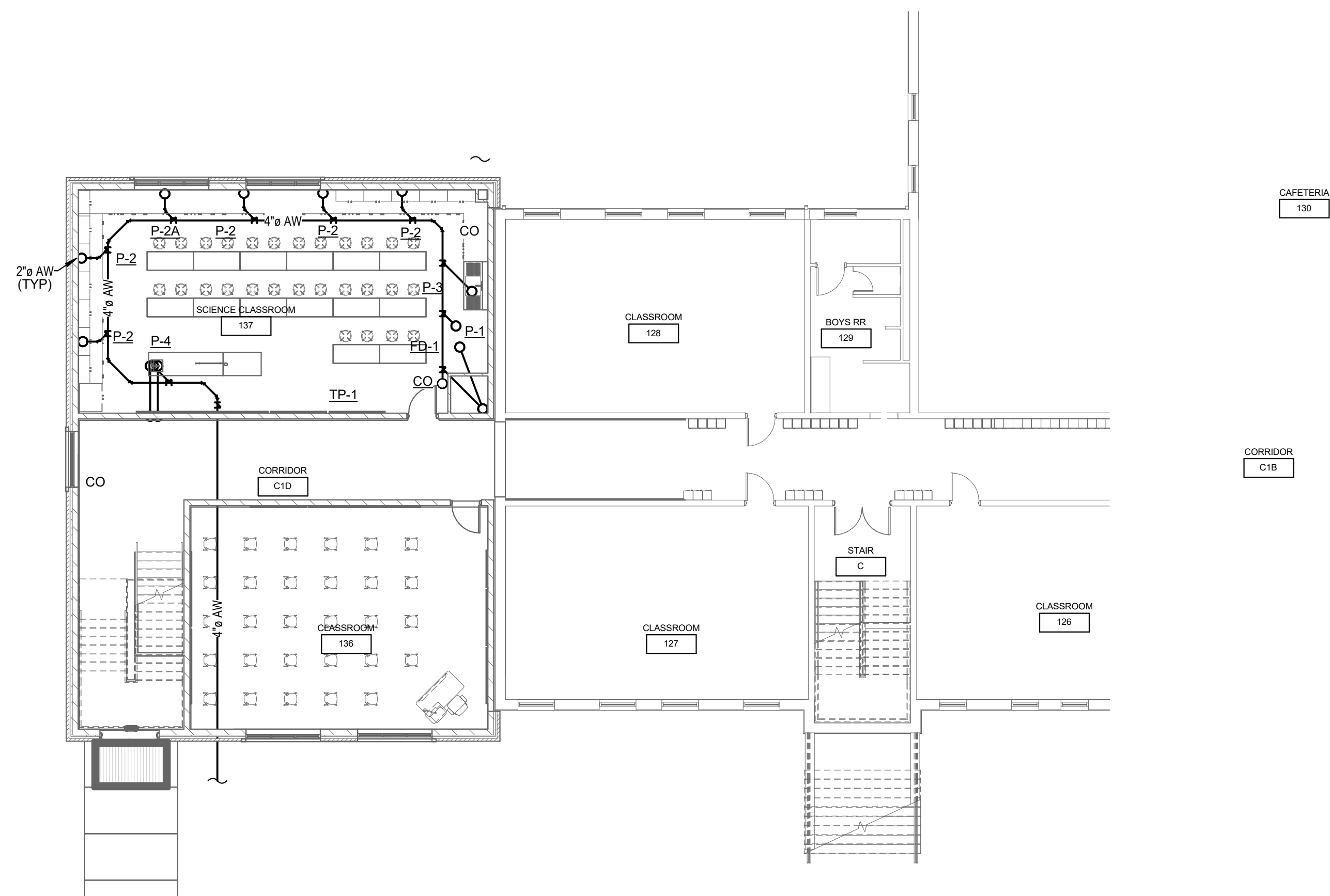
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DESIGN DEVELOPMENT

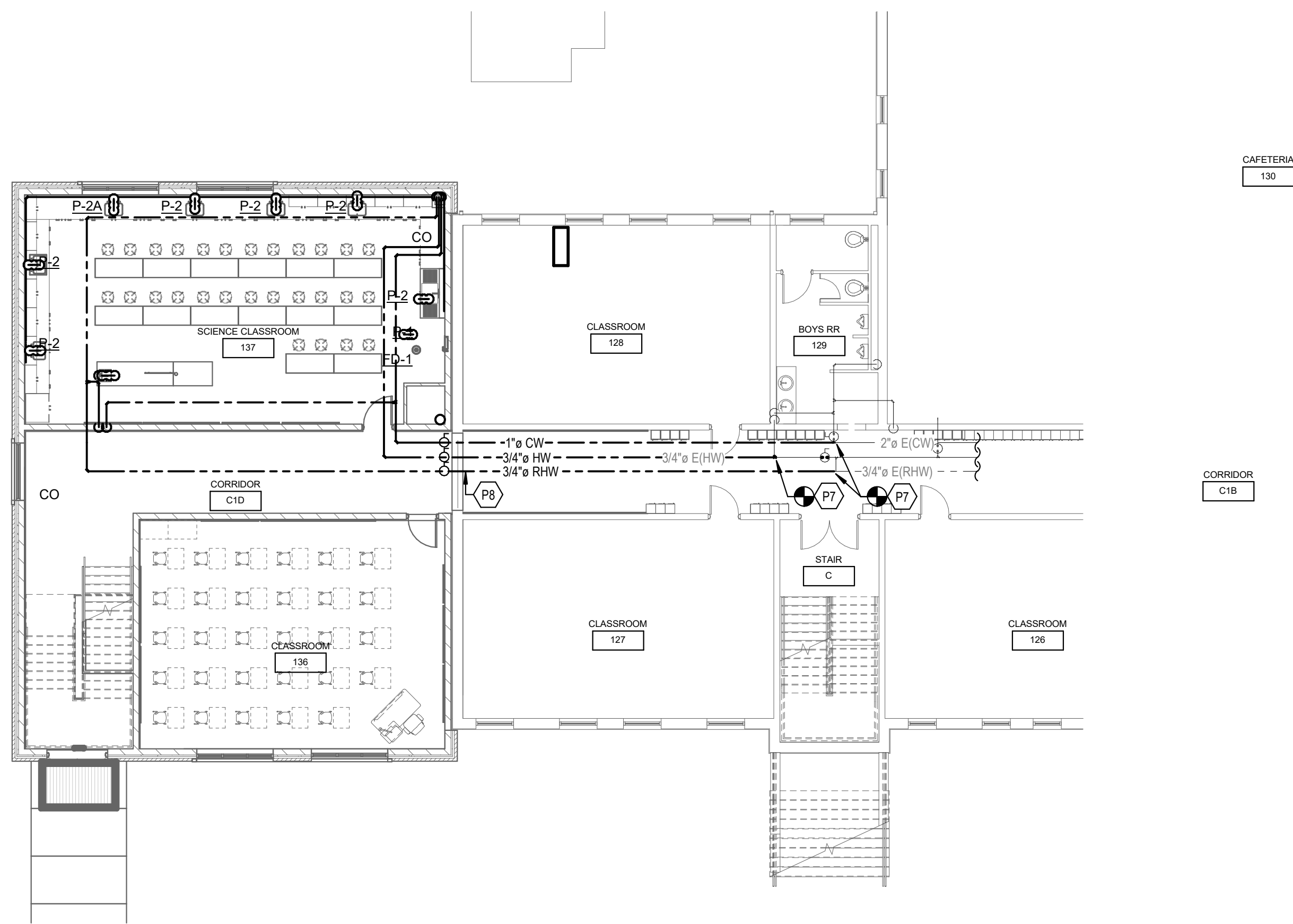
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PLUMBING LEGEND

DATE ISSUED:  
OCTOBER 3, 2019

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UNDERSLAB PLUMBING PLAN  
3/32" = 1'-0"



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

| GENERAL NOTES - PLUMBING |  |
|--------------------------|--|
| 1                        | REFER TO STRUCTURAL DRAWINGS SHEET S2.1 FOR REQUIREMENTS OF UNDERSLAB PIPING ROUTED NEAR THE EXTERIOR ZONE OF THE BUILDING. PIPING SHALL BE INSTALLED IN A MANNER WHICH DOES NOT UNDERMINE FOOTINGS.                                       |
| 2                        | PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING INSTALLATION OF UNDESIRABLE: SANITARY ROOF LEADER, FORCED MAIN, AND ACID WASTE PIPING WITH THE BUILDING FOOTINGS. REFER TO STRUCTURAL DRAWINGS FOR FOOTINGS AND FOUNDATION PLAN. |
| 3                        | REFER TO P4 SERIES SHEETS FOR FIXTURE TYPES.   |
| <b>TAGGED NOTES</b>      |  |
| P7                       | CONNECT TO EXISTING PIPING AT POINT INDICATED AND EXTEND TO BUILDING ADJACENT.   |
| P8                       | ROUTE ALL PIPING THROUGH EXISTING OPENING IN CONCRETE. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AND COORDINATE WITH OTHER TRADES.  |

**2r** rosstarrant  
architects

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FIRST FLOOR PLUMBING PLAN

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MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY



Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd. Suite 106  
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p 615.255.5537

BG#

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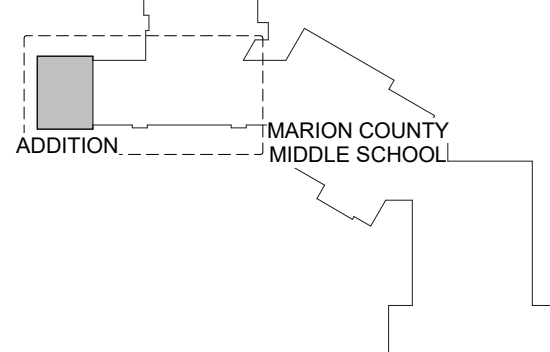
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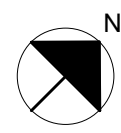
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FIRST FLOOR PLUMBING PLAN

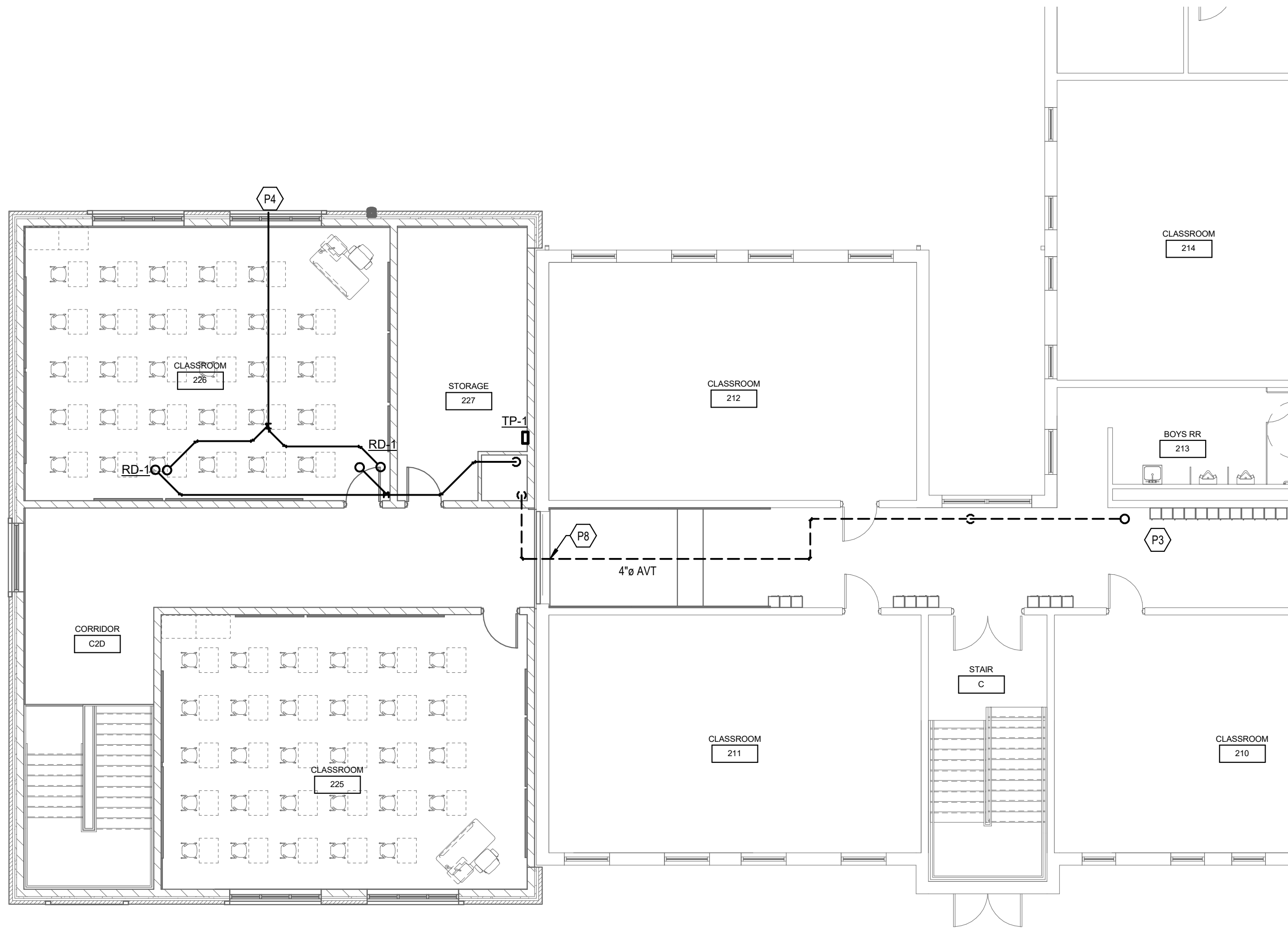
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SECOND FLOOR PLUMBING PLAN  
1/8" = 1'-0"

**GENERAL NOTES - PLUMBING**

- 1 REFER TO STRUCTURAL DRAWINGS SHEET S2.1 FOR REQUIREMENTS OF UNDERSLAB PIPING ROUTED NEAR FLOOR JOINTS TO AVOID PLUMBING THROUGH REINFORCED CONCRETE JOINTS. PIPING SHALL BE INSTALLED IN A MANNER WHICH DOES NOT UNDERMINE FOOTINGS.
- 2 PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING INSTALLATION OF UNDERSLAB SANITARY, ROOF LEADER, FORCED MAIN, AND ACID WASTE PIPING WITH THE BUILDING FOOTINGS. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND FOUNDATION PLAN.
- 3 REFER TO P4 SERIES SHEETS FOR FIXTURE TYPES.

**TAGGED NOTES**

#1 2" 40V WENT PIPING THROUGH ROOF

P4 PROVIDE ZURN MODEL Z199 DOWNSPOUT NOZZLE MATCHING PIPE CONNECTION SIZE. PROVIDE WITH STRESS RINGS. TELL MECHANICAL LOCATION SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATION PLANS.

P8 ROUTE ALL PIPING THROUGH EXISTING OPENING IN WALL. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS AND COORDINATE WITH OTHER TRADES.

**2F** **rosARRANT**  
**architects**



SECOND FLOOR PLUMBING PLAN

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MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

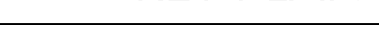
FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

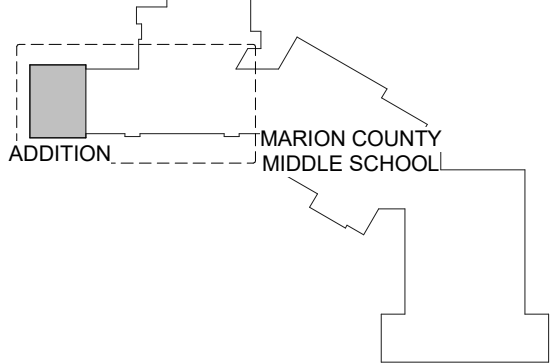


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| Project No: | 1928/XMCM19 |
| Drawn By:   | JEA         |
| Rev'd By:   | MCW         |

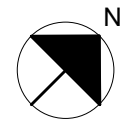
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| <h1 style="text-align: center;">KEY PLAN</h1>  <p style="text-align: center;">MARION COUNTY<br/>MIDDLE SCHOOL</p> | Drawn By: <u>JE A</u><br>Rev'd By: <u>MCW</u>  |   |  |   |  |   |  |   |  |   |  |   |  |   |  |   |
|  | SHEET RELEASE<br><table border="1"> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td>7</td><td></td></tr> <tr><td>8</td><td></td></tr> </table> | 1 |  | 2 |  | 3 |  | 4 |  | 5 |  | 6 |  | 7 |  | 8 |
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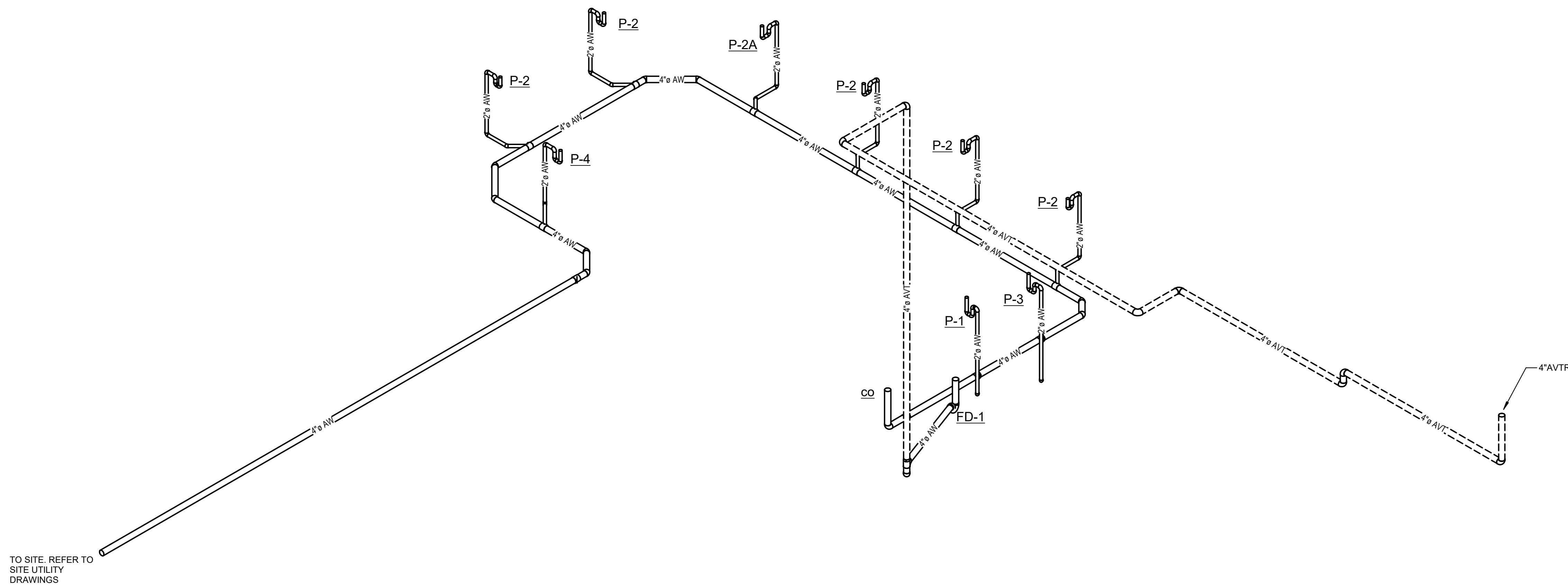
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P-2.1  
SECOND FLOOR PLUMBING  
PLAN  
DATE ISSUED:  
OCTOBER 3, 2019



SCALE: NTS



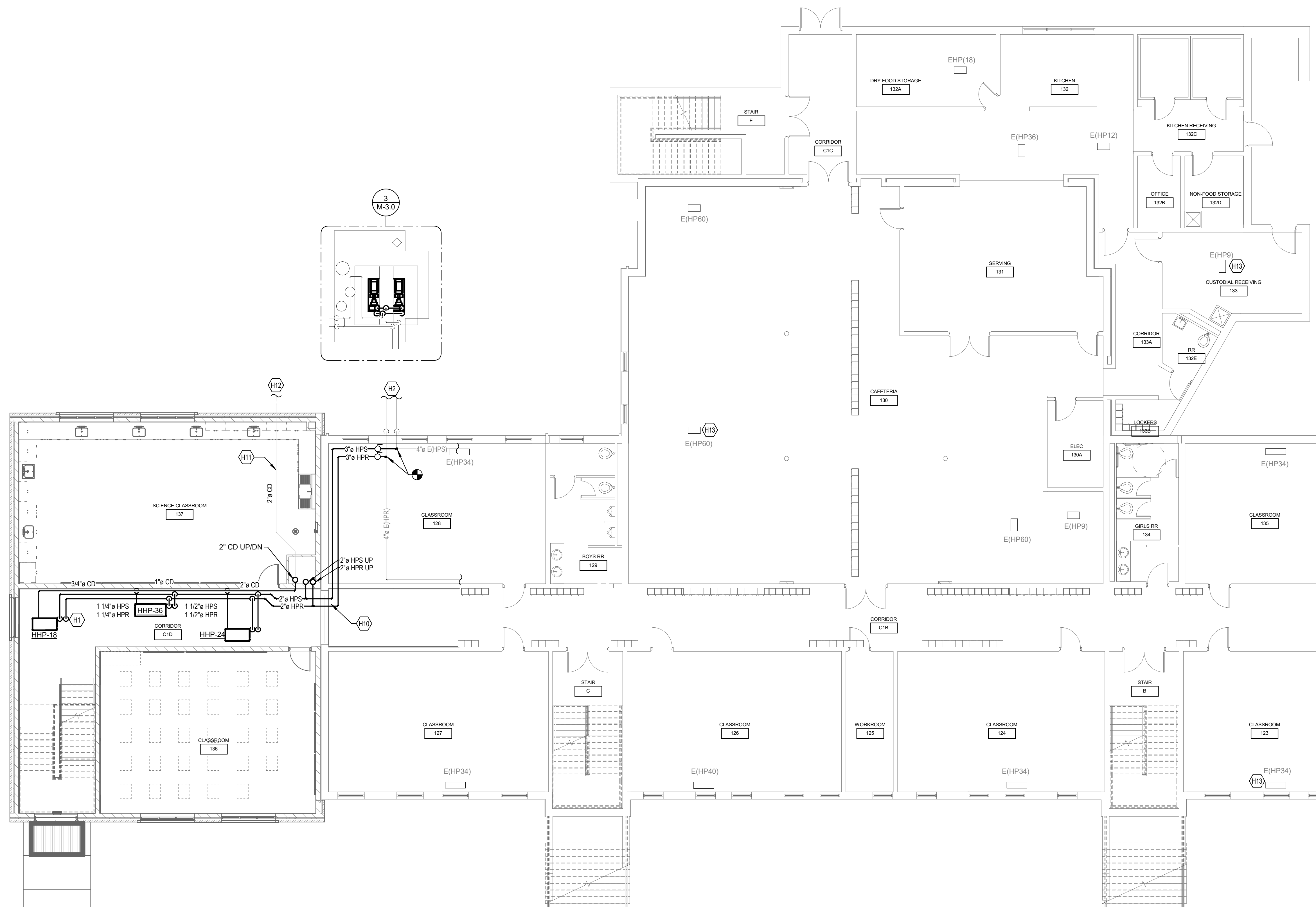
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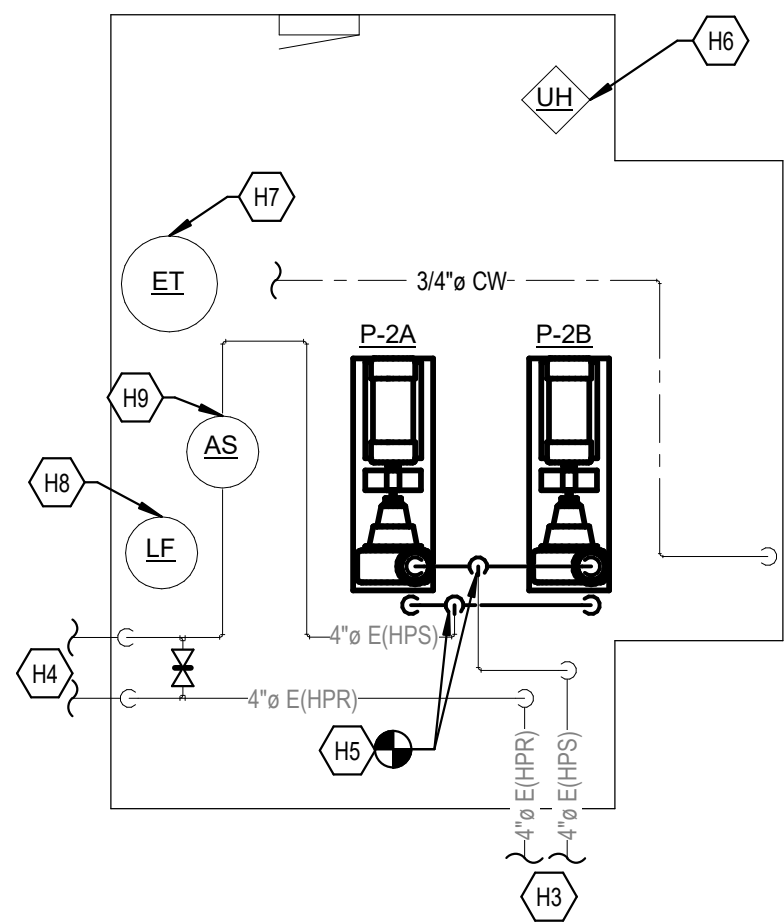




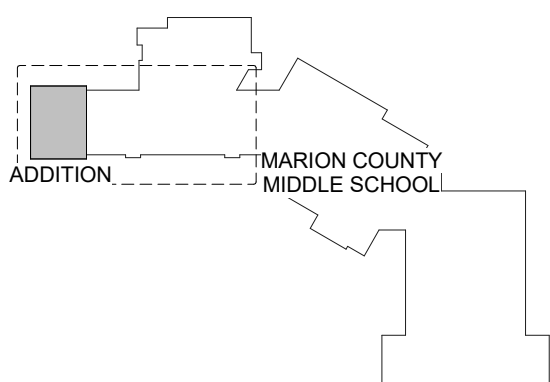


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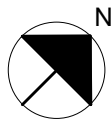
FIRST FLOOR HYDRONICS PIPING PLAN  
1/8" = 1'-0"



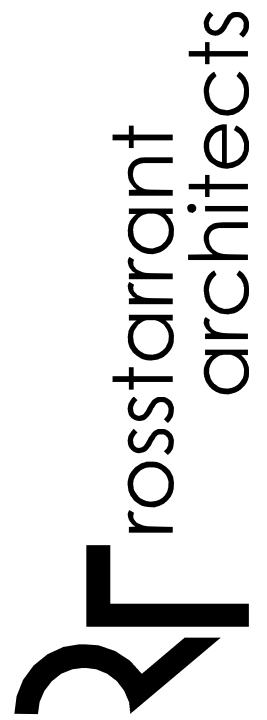
ENLARGED PUMP ROOM HYDRONICS PIPING PLAN  
1/4" = 1'-0"



SCALE: NTS



| GENERAL NOTES - HYDROGENS PIPING |  |
|----------------------------------|--|
| 1                                | ELECTRICAL PANELS SHOWN FOR REFERENCE ONLY. REFER TO ELECTRICAL DRAWINGS. NO DUCT OR PIPING SHALL BE ROUTED OVER ELECTRICAL PANELS.  |
| <b>TAGGED NOTES</b>              |  |
| H1                               | PIPING TO HEAT PUMP UNIT. REFER TO PIPING SCHEMATIC FOR CONNECTION REQUIREMENTS.   |
| H2                               | EXISTING PIPING TO PUMP BUILDING. REFER TO ENLARGED PUMP BUILDING PLAN FOR CONTINUATION.   |
| H3                               | PIPING TO MIDDLE SCHOOL. REFER TO FIRST FLOOR PLAN FOR PIPING PLAN FOR CONTINUATION.   |
| H4                               | PIPING TO GEOTHERMAL WELLFIELD. REFER TO SITE UTILITY PLAN FOR CONTINUATION.   |
| H5                               | CONNECT NEW PIPING FROM NEW PUMPS TO EXISTING MAINS IN MECHANICAL ROOM. REFER TO GEOTHERMAL PUMP PIPING SCHEMATIC.   |
| H6                               | EXISTING UNIT HEATER TO REMAIN.  |
| H7                               | EXISTING EXPANSION TANK TO REMAIN.   |
| H8                               | EXISTING LOOP FILTER TO REMAIN.  |
| H9                               | EXISTING AIR SEPARATOR TO REMAIN.  |
| H10                              | ROUTE NEW PIPING THROUGH EXISTING OPENING IN EXTERIOR WALL. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DETAILS. COORDINATE WITH OTHER TRADES.  |
| H11                              | 2" CONDENSATE PIPING ROUTED UNDER SLAB.  |
| H12                              | 2" CONDENSATE PIPING TO ADJACENT STORM STRUCTURE. REFER TO SITE CIVIL DRAWINGS FOR CONTINUATION.   |
| H13                              | EXISTING HEAT PUMPS ON HPS/PIR PIPING SYSTEM SHOWN FOR REFERENCE ONLY. AFTER NEW PUMPS ARE SUCCESSFULLY INSTALLED, PROVIDE TOTAL BALANCE OF ALL EXISTING HEAT PUMPS TO ENSURE THE PROPER FLOW AND TO ASSIST THE SYSTEM IN MAINTAINING THE DESIGN TEMPERATURE. PROVIDE PRESSURE SETPOINT FOR THE NEW PUMPS. |



HYDRONICS PLAN - FIRST FLOOR  
MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY



**Structural Engineer:**  
Structural Design Group, Inc.  
220 Great Circle Rd. Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG#

|             |             |
|-------------|-------------|
| Project No: | 1928/XMCM19 |
| Drawn By:   | JEA         |
| Revised By: | MCM         |

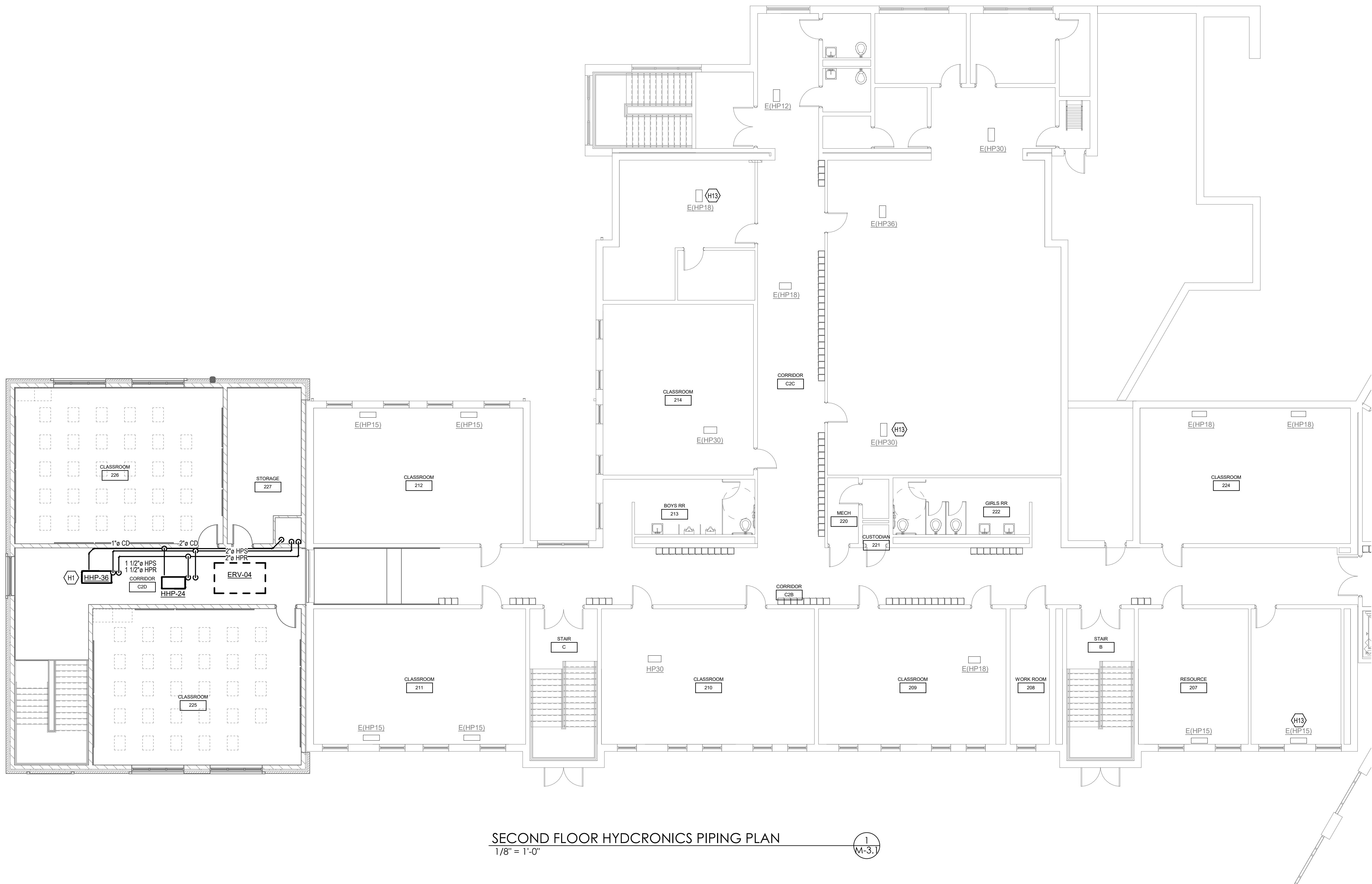
SHEET RELEASE

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HYDRONICS PLAN - FIRST  
FLOOR  
DATE ISSUED:  
OCTOBER 3, 2019

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| GENERAL NOTES - HYDRONICS PIPING |   |
|----------------------------------|---|
| 1                                | ELECTRICAL PANELS SHOWN FOR REFERENCE ONLY. REFER TO ELECTRICAL DRAWINGS. NO DUCT OR PIPING SHALL BE ROUTED OVER ELECTRICAL PANELS.   |
| <b>TAGGED NOTES</b>              |   |
| H1                               | PIPING TO HEAT PUMP UNIT. REFER TO PIPING SCHEDULE FOR CONNECTION REQUIREMENTS.   |
| H13                              | EXISTING HEAT PUMPS ON HP/SPR PIPING SYSTEM SHOWN FOR REFERENCE ONLY. AFTER NEW PUMPS HAVE BEEN SUCCESSFULLY INSTALLED, PROVIDE TOTAL BALANCE OF ALL EXISTING HEAT PUMPS TO ENSURE THE PROPER FLOW AND TO ASSIST THE CONTROLS CONTRACTOR IN DETERMINING THE PROPER PRESSURE SETPOINT FOR THE NEW PUMPS. |

**2r** rosARRANT  
architects

101 old claypetite avenue lexington, kentucky 40302 p 859.254.4018 f 859.231.3046



HYDRONICS PLAN - SECOND FLOOR  
MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY

 **CMTA**  
2020 Members Only: Lexington, KY 40504  
850.253.0802 [www.cmta.org](http://www.cmta.org)

Structural Engineer:  
Structural Design Group, Inc.  
220 Great Circle Rd. Suite 106  
Nashville, TN 37228  
p 615.255.5537

|             |             |
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| BG#         |             |
| Project No: | 1928/XMCM19 |
| Drawn By:   | Author      |
| Rev'd By:   | Checker     |

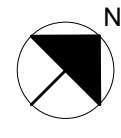
## KEY PLAN

| SHEET RELEASE |  |  |
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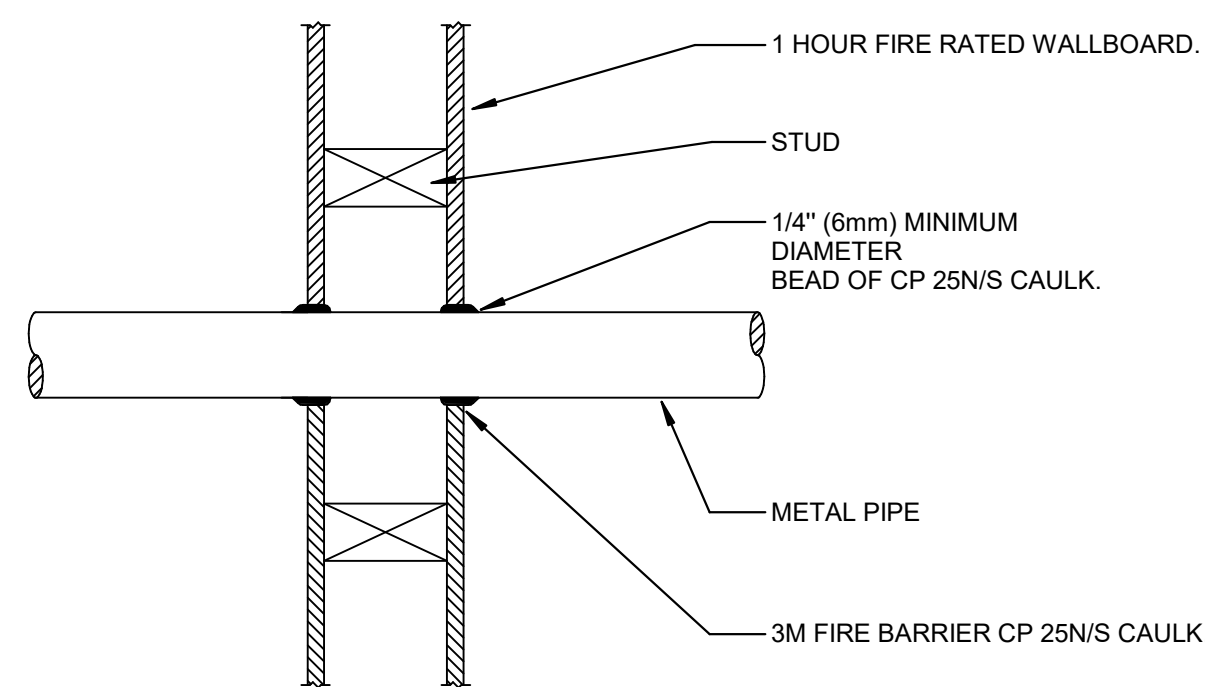
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**M-3.1**  
HYDRONICS PLAN - SECOND  
FLOOR  
DATE ISSUED:  
OCTOBER 3, 2019

SCALE: NTS





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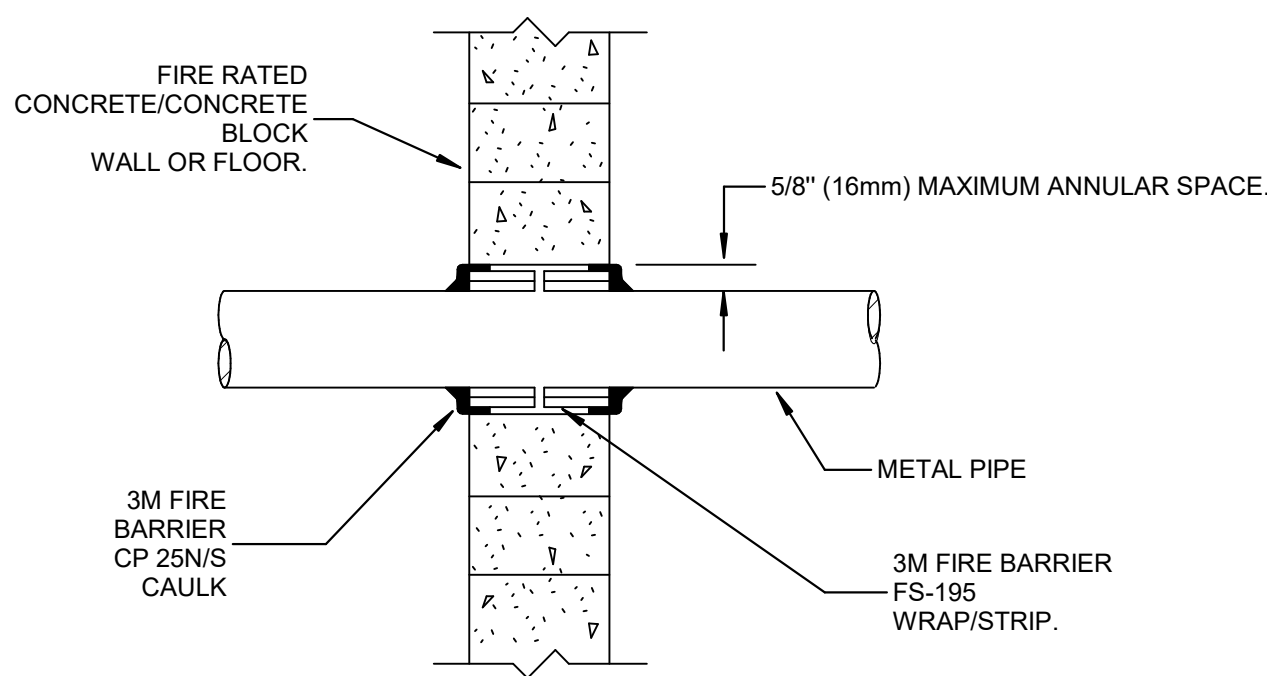
NOTE:S

1. FORCE THE 3M MODEL# CP 25N/50 CAULK INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE, FLUSH WITH THE EXTERIOR OF THE PENETRATION SURFACE.
2. FINISH CAULKING WITH A 1/4" (6mm) MINIMUM BEAD OF CP 25N/50 CAULK APPLIED TO THE PERIMETER OF THE CONDUIT/PIPE AT ITS EGRESS FROM THE WALL.
3. THE MAXIMUM ANNULAR SPACE IS NOT TO EXCEED 3/16" (5mm). (IF IT DOES PATCH WALL AND PENETRATE WALL AT ANOTHER LOCATION).
4. INSTALL THE 3M FIRESTOP ON BOTH SIDES OF THE WALL.

FIRE STOPPING NOTES:

1. FIRE STOPPING IS CRITICAL AND MUST BE ACCOMPLISHED. ALL PIPES MUST BE FIRESTOPPED WHERE THEY PENETRATE FIRE RESISTIVE, FIRE RATED, AND SMOKE RESISTIVE WALLS OR FLOORS. ALL FLOORS CORRIDOR WALLS, STAIR WALLS, MECHANICAL ROOM WALLS, STORAGE ROOM WALLS AND OTHER HAZARDOUS ROOM WALLS ARE ONE HOUR RATED.
2. A FOUR-HOUR TRAINING SESSION SHALL BE CONDUCTED BY MANUFACTURER OF THE FIRESTOPPING MATERIAL. THIS SHALL BE DONE PRIOR TO THE INSTALLATION OF THE MATERIAL. CONTACT HOSPITAL ENGINEER AND CMTA TO ADVISE OF DATE AND TIME OF THIS MEETING.
3. ALL PENETRATIONS WILL BE REVIEWED BY THE HOSPITAL ENGINEER OR CMTA. PRIOR TO INSPECTION, ALL CEILING TILES BENEATH THE PENETRATIONS SHALL BE REMOVED BY THE CONTRACTOR.

PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH  
ONE HOUR WALL  
NOT TO SCALE



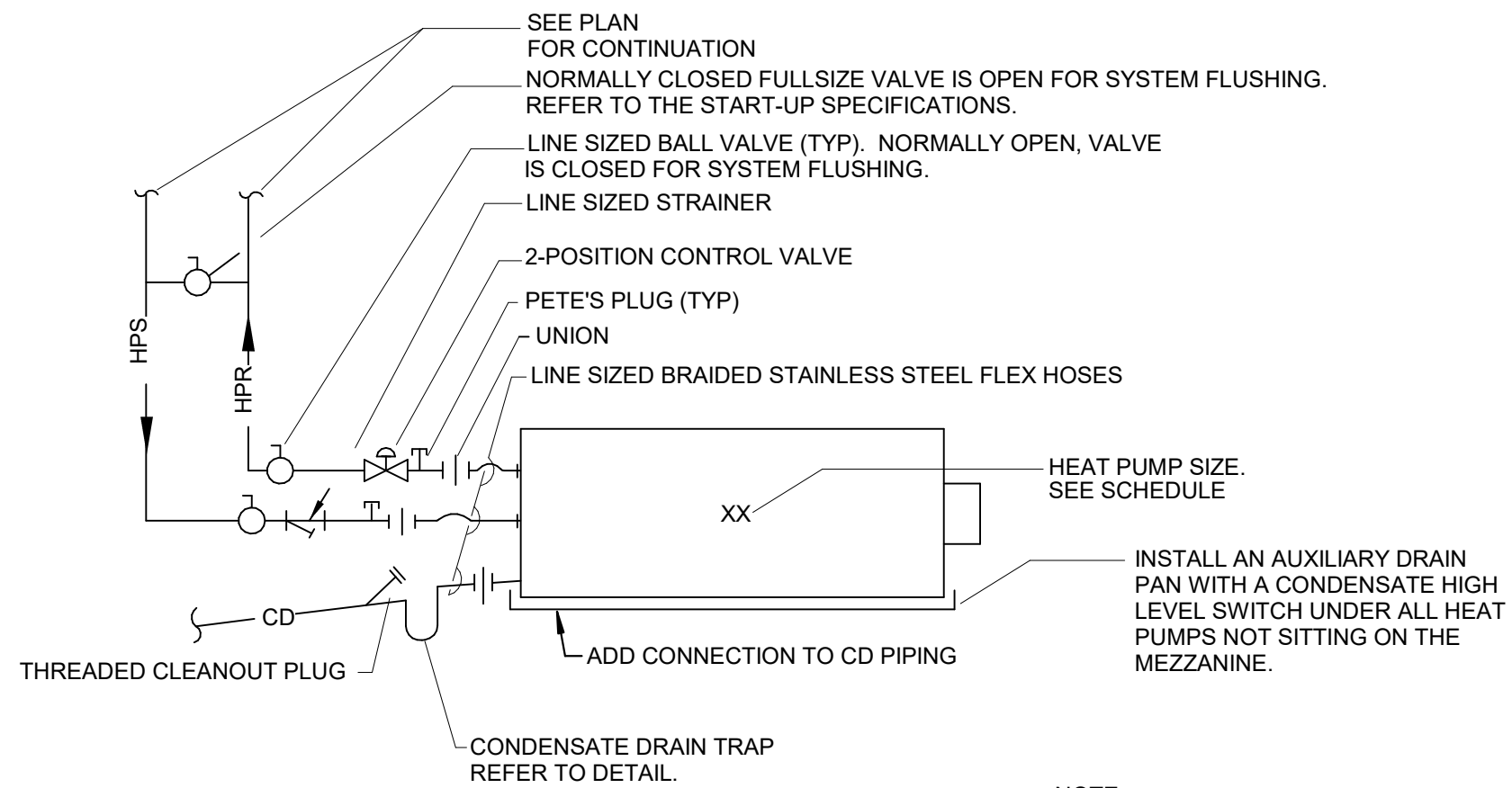
NOTES:

1. THE MAXIMUM ANNUAL SPACE AROUND THE METAL PIPE OR CONDUIT IS 5/8" (16mm). (IF THE ANNUAL SPACE EXCEEDS 5/8" PATCH THE WALL AND PENETRATE WALL AT ANOTHER LOCATION).
2. WRAP THE 3M MODEL# FS-195 WRAP/STRIP AROUND THE PIPE/CONDUIT, FOIL SIDE, OUT TO FILL THE SPACE BETWEEN THE PIPE/CONDUIT AND THE WALL. THE 3M MODEL# FS-195 WRAP/STRIP SHOULD BE TIGHTLY SECURED WITH ALUMINUM FOIL TAPE OR STEEL TIE WIRE AND PUSHED INTO THE OPENING UNTIL THE TOP EDGE OF THE WRAP IS FLUSH WITH THE WALL SURFACE. THE IDENTICAL INSTALLATION SHOULD BE INSTALLED ON THE OTHER SIDE OF THE WALL.
3. USE 3M MODEL# CP 25(SN/SG) CAULK TO FILL THE AREA BETWEEN THE FS-195 WRAP/STRIP AND THE EDGES OF THE OPENING AND ANY VOID IN THE 3M MODEL# FS-195 WRAP/STRIP. A FILL OF CP 25 CAULK SHOULD COAT ALL EXPOSED EDGES OF THE FS-195 WRAP/STRIP AND COMPLETELY SEAL THE AREA BETWEEN THE FS-195 WRAP/STRIP, THE PIPE/CONDUIT AND THE WALL SURFACE.

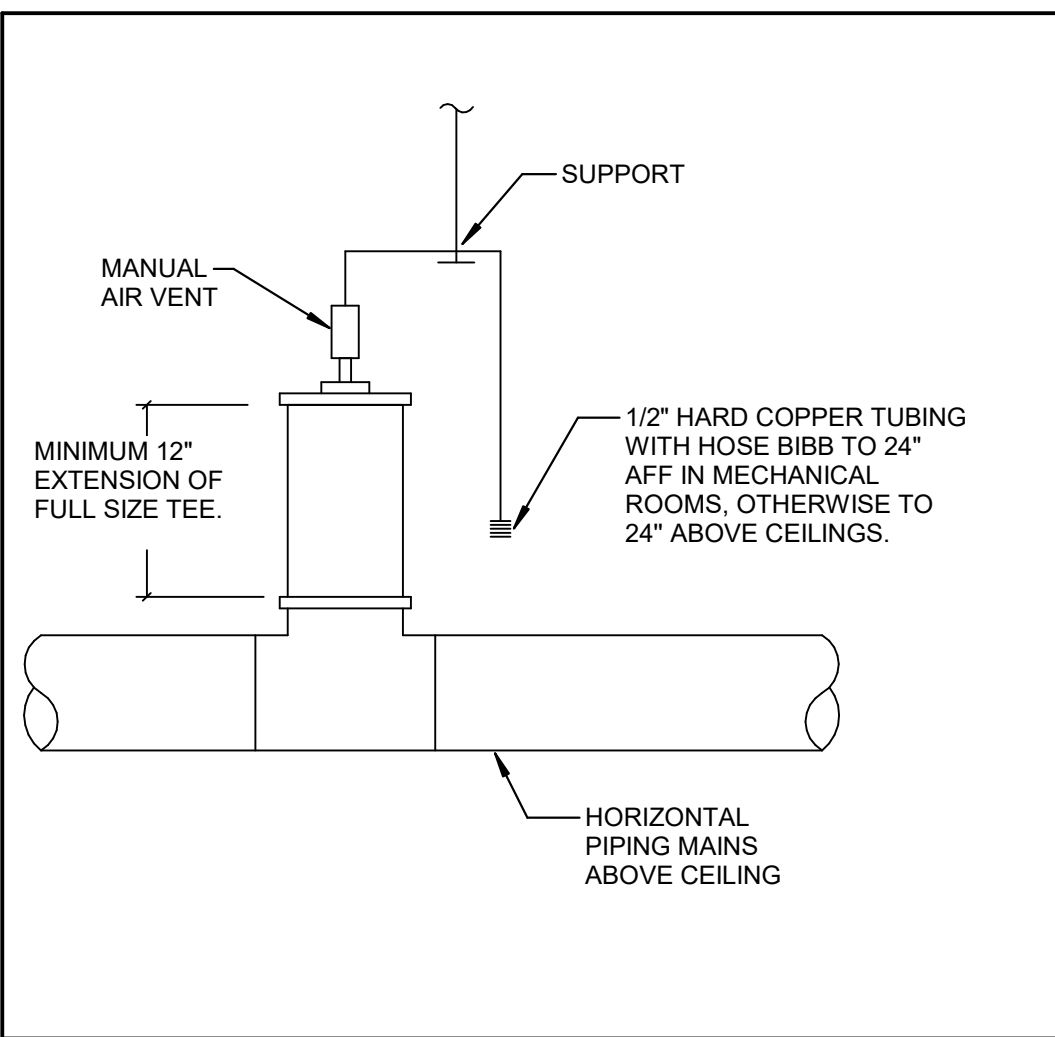
FIRE STOPPING NOTES:

1. FIRE STOPPING IS CRITICAL AND MUST BE ACCOMPLISHED. ALL PIPES MUST BE FIRE STOPPED WHERE THEY PENETRATE FIRE RESISTIVE, FIRE RATED, AND SMOKE RESISTIVE WALLS OR FLOORS. ALL FLOORS CORRIDOR WALLS, STAIR WALLS, MECHANICAL ROOM WALLS, STORAGE ROOM WALLS AND OTHER HAZARDOUS ROOM WALLS ARE ONE HOUR RATED
2. A FOUR-HOUR TRAINING SESSION SHALL BE CONDUCTED BY MANUFACTURER OF THE FIRESTOPPING MATERIAL. THIS SHALL BE DONE PRIOR TO THE INSTALLATION OF THE MATERIAL. CONTACT HOSPITAL ENGINEER AND CMTA TO ADVISE OF DATE AND TIME OF THIS MEETING.
3. ALL PENETRATIONS WILL BE REVIEWED BY THE HOSPITAL ENGINEER OR CMTA. PRIOR TO INSPECTION, ALL CEILING TILES BENEATH THE PENETRATIONS SHALL BE REMOVED BY THE CONTRACTOR.

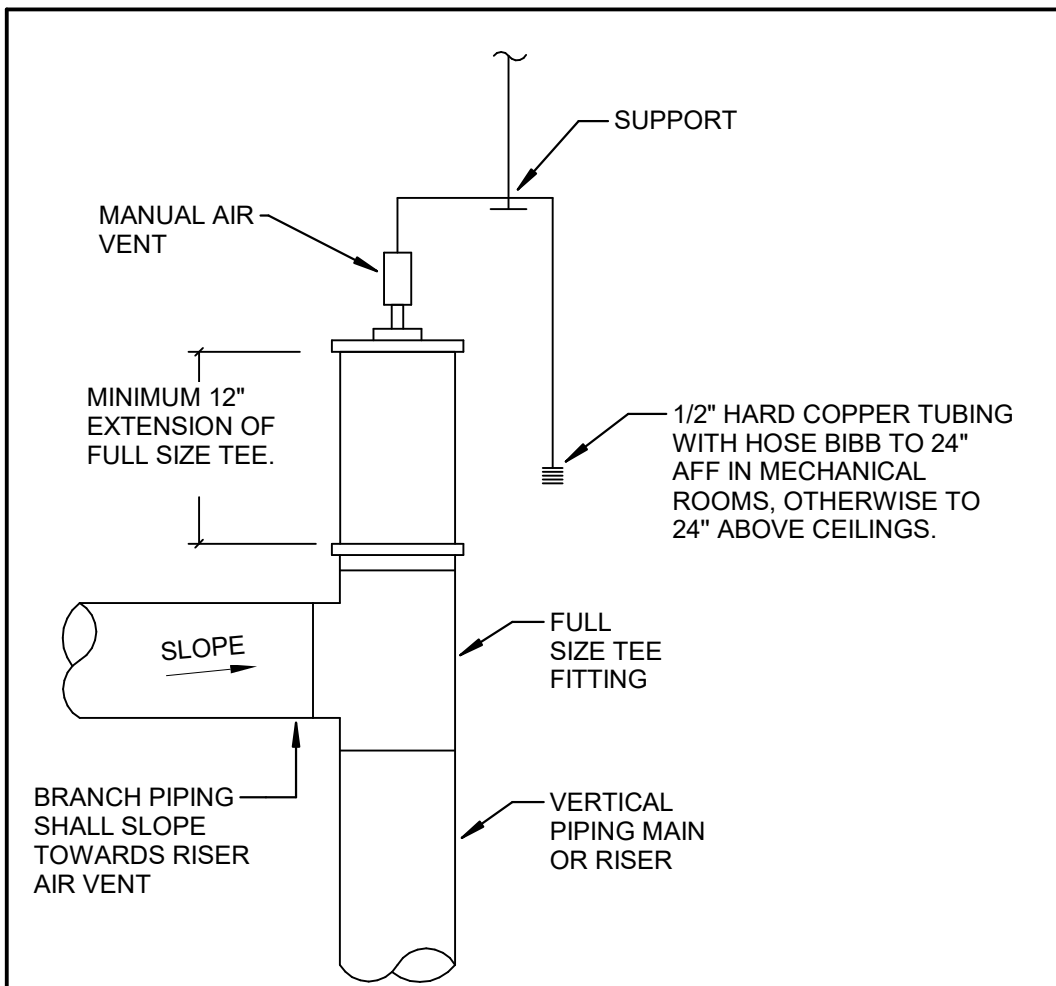
PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH A  
CONCRETE WALL  
NOT TO SCALE



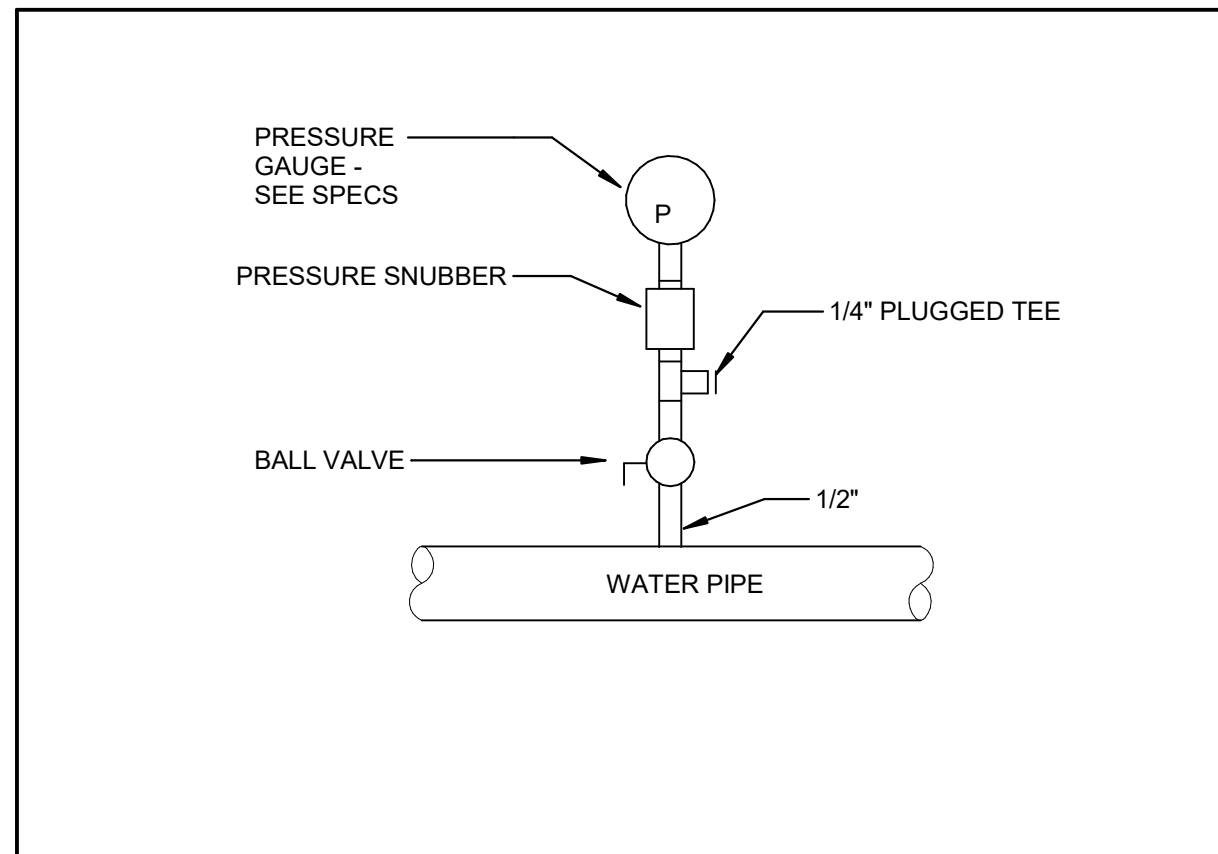
HORIZONTAL HEAT PUMP PIPING SCHEMATIC  
NOT TO SCALE



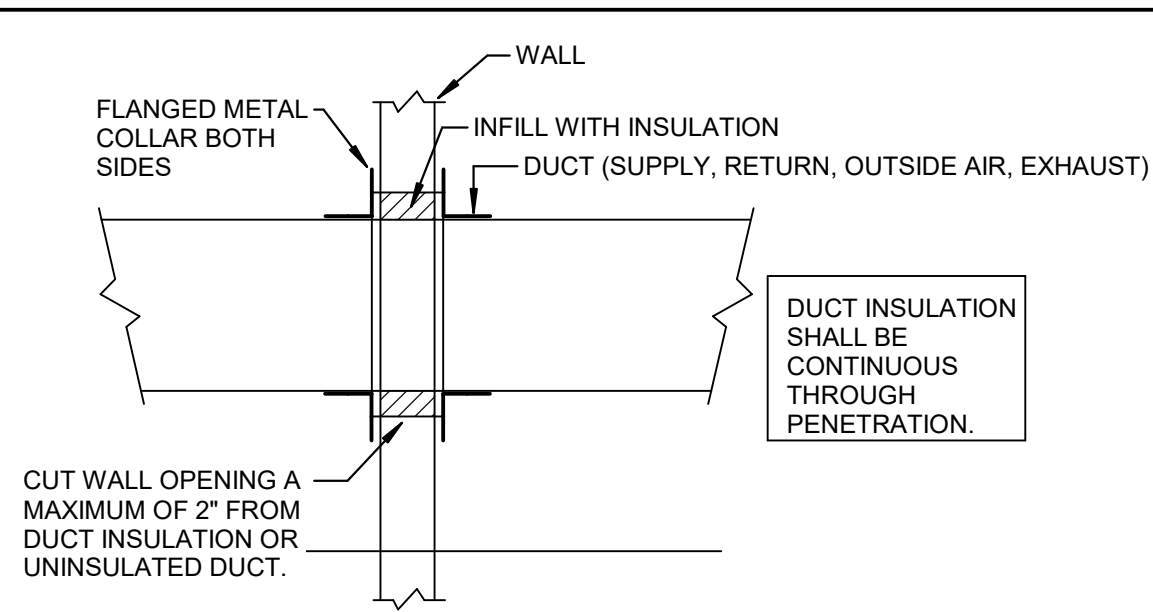
HORIZONTAL MANUAL AIR VENT DETAIL  
NOT TO SCALE



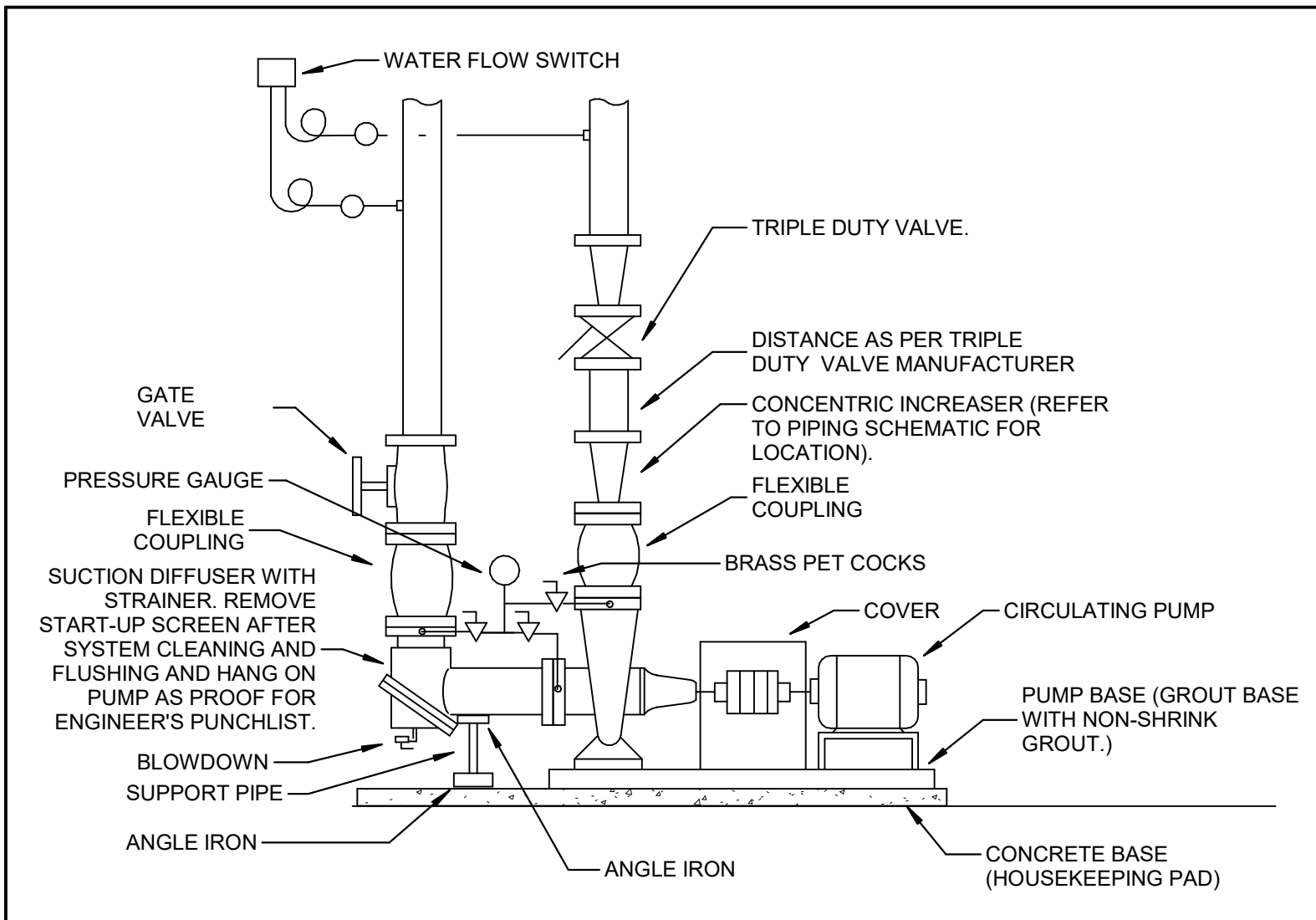
VERTICAL MANUAL AIR VENT DETAIL  
NOT TO SCALE



## WATER PRESSURE GAUGE INSTALLATION

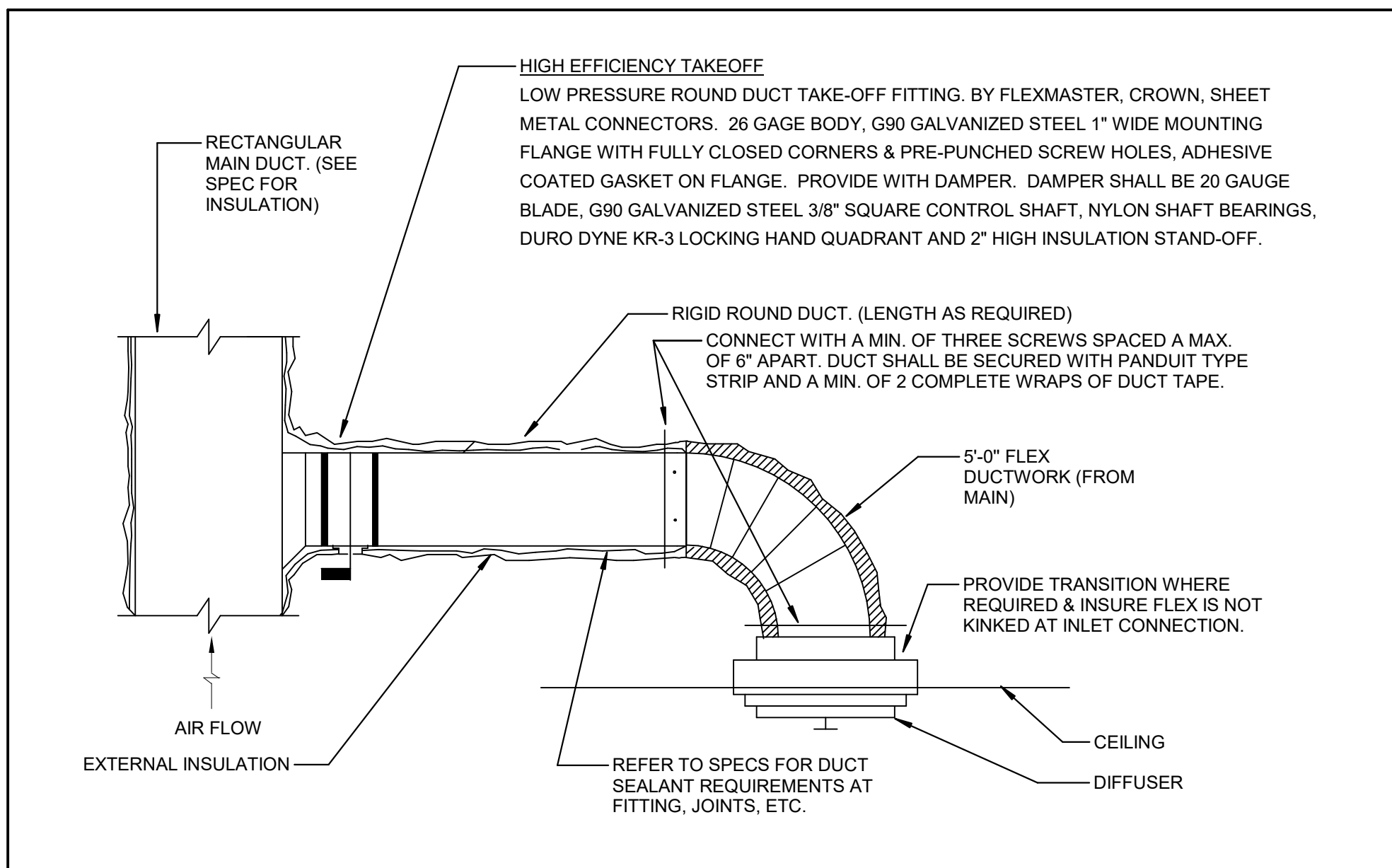


DUCT PENETRATION THROUGH NON-RATED WALL DETAIL  
NOT TO SCALE



### BASE MOUNTED PUMP PIPING DETAIL

NOT TO SCALE



TYPICAL ROUND SUPPLY, RETURN, & EXHAUST BRANCH DUCT DETAIL  
NOT TO SCALE





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| SCHEDULE - WATER SOURCE HEAT PUMP   |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
|---|--------------|---------|------------|----------|--------------|-----|--------------------|--------|-------------|-----------------|-------|--------|------------|----|-------|------|---------|---------------------------|---------------|----------|-----------------------------|--------------------------|----------------------------|-------------------------|---------|----------|----------|----------|-------------------|--------------------------|----------------------|-----------------|-----|
| MARK  | MANUFACTURER | MODEL # | TYPE       | NOM. CFM | ESP (IN WG.) | GPM | WATER PD (FT. H2O) | STAGES | WEIGHT (LB) | DIMENSIONS (IN) |       |        | ELECTRICAL |    |       |      | HEATING |                           |               |          | COOLING                     |                          |                            |                         | REMARKS |          |          |          |                   |                          |                      |                 |     |
|   |              |         |            |          |              |     |                    |        |             | LENGTH          | WIDTH | HEIGHT | VOLTAGE    | HZ | PHASE | MCA  | MOCP    | HEATING CAPACITY (BTU/Hr) | EAT (DB) (°F) | EWI (°F) | HEAT OF ABSORPTION (BTU/Hr) | COP @ ARI (FULL/PARTIAL) | SENSIBLE CAPACITY (BTU/Hr) | TOTAL CAPACITY (BTU/Hr) |         | EAT (DB) | EAT (WB) | EWI (°F) | HEAT OF REJECTION | EER @ ARI (FULL/PARTIAL) | CONDENSATE PIPE SIZE | GS/GR PIPE SIZE |     |
| HHP-18  | TRANE        | WGSH    | HORIZONTAL | 600      | 0.30         | 5   | 8.12               | 1      | 200         | 38              | 23    | 26     | 208 V      | 60 | 3     | 10 A | 15      | 19863.0                   | 75            | 45       |                             | 15749.0                  | 4.1                        | 11790.0                 | 16535.0 | 75       | 63       | 85       | 20217.0           | 18.7                     | 0.75"                | 1.5"            | ALL |
| HHP-24  | TRANE        | WGSH    | HORIZONTAL | 800      | 0.30         | 6   | 5.16               | 2      | 230         | 48              | 23    | 26     | 208 V      | 60 | 3     | 11 A | 15      | 25171.0                   | 75            | 45       |                             | 19791.0                  | 4.1                        | 24660.0                 | 27991.0 | 75       | 63       | 85       | 29915.0           | 20.7                     | 0.75"                | 1.5"            | ALL |
| HHP-36  | TRANE        | WGSH    | HORIZONTAL | 1200     | 0.30         | 9   | 9.11               | 2      | 310         | 51              | 25    | 33     | 208 V      | 60 | 3     | 12 A | 20      | 39221.0                   | 75            | 45       |                             | 31066.0                  | 4.2                        | 26012.0                 | 36611.0 | 75       | 63       | 85       | 44363.0           | 20.1                     | 1"                   | 1.5"            | ALL |
| REMARKS:  |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 1. CLIMATEMASTER, DAIKIN, MAMMOTH, and FLORIDA HEAT PUMP ARE ACCEPTABLE.  |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 2. PROVIDE W/IT INTEGRAL DISCONNECT.  |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 3. ALL HEAT PUMPS TO BE EXTENDED RANGE GROUND SOURCE.   |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 4. COORDINATE "HAND" OF UNIT WITH FLOOR PLANS. REFER TO DRAWINGS.   |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 5. PROVIDE HEAT PUMP WITH STAINLESS STEEL DRAIN PAN AND CONDENSATE OVERFLOW SWITCH.   |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 6. PROVIDE FACTORY STAINPUF UTILIZING MANUFACTURER'S STANDARD FORMS.  |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 7. HEAT PUMP MANUFACTURER TO PROVIDE 2-WAY CONTROL VALVE SHIPPED LOOSE FOR INSTALLATION BY MECHANICAL CONTRACTOR AND WIRING BY CONTROLS CONTRACTOR PER MANUFACTURER'S REQUIREMENTS. |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 8. AFTER FINAL FILTER CHANGE REQUIRED AT SUBSTANTIAL COMPLETION, PROVIDE NEW COMPLETE SET OF REPLACEMENT FILTERS FOR ALL HEAT PUMPS TO OWNER FOR ATTIC STOCK.                       |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 9. PROVIDE PHASE AND BROWNOUT PROTECTION FOR ALL HEAT PUMPS WITH 3 PHASE POWER.   |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |
| 10. PROVIDE WITH INTEGRAL FACTORY MOUNTED CONTROLLER WITH BACNET/MS/TC INTERFACE. COORDINATE WITH SUCCESSFUL CONTROLS CONTRACTOR.   |              |         |            |          |              |     |                    |        |             |                 |       |        |            |    |       |      |         |                           |               |          |                             |                          |                            |                         |         |          |          |          |                   |                          |                      |                 |     |

| SCHEDULE - REGISTERS, GRILLES, AND DIFFUSERS   |              |         |   |             |            |                 |                  |         |      |                |               |         |
|--|--------------|---------|---|-------------|------------|-----------------|------------------|---------|------|----------------|---------------|---------|
| MARK   | MANUFACTURER | MODEL # | TYPE  | GRILLE SIZE | PANEL SIZE | DUCT INLET SIZE | DUCT BRANCH SIZE | MAX CFM | P.D. | NOISE CRITERIA | THROW PATTERN | REMARKS |
| R-3  | TITUS        | 45F     | ALUMINUM, SIGHT PROOF EGGRATE EXHAUST GRILLE            | 24"x24"     | 24"x24"    | 6"Ø             | 6"Ø              | 375     | 0.02 | 10             | -             | ALL     |
| S-2  | TITUS        | 50FF    | ALUMINUM, FILTER EGGRATE RETURN GRILLE                  | 24"x24"     | 24"x24"    | 6"Ø             | 6"Ø              | 350     | 0.02 | 10             | -             | ALL     |
| REMARKS:   | TITUS        | TMSA-AA | ALUMINUM, SQUARE CEILING DIFFUSER WITH ADJUSTABLE VANES | 24"x24"     | 24"x24"    | 6"Ø             | 6"Ø              | 400     | 0.02 | 10             | 4-WAY         | ALL     |
| 1. COLOR BY ARCHITECT<br>2. GRILLE TO BE FIELD VERIFIED BY CONTRACTOR TO FIT. REFER TO DRAWINGS.<br>3. PRICE AND METALAIRS ARE ACCEPTABLE. |              |         |   |             |            |                 |                  |         |      |                |               |         |

| SCHEDULE - HYDRONIC PUMP |                |        |                           |                      |     |                      |     |                        |      |                 |    |          |         |       |         |
|--------------------------|----------------|--------|---------------------------|----------------------|-----|----------------------|-----|------------------------|------|-----------------|----|----------|---------|-------|---------|
| MARK                     | MANUFACTURER   | MODEL  | TYPE                      | SERVICE              | GPM | PRESSURE (FEET HEAD) | VFD | MINIMUM EFFICIENCY (%) | RPM  | ELECTRICAL DATA |    |          |         |       | REMARKS |
|                          |                |        |                           |                      |     |                      |     |                        |      | HZ              | HP | BRAKE HP | VOLTAGE | PHASE |         |
| P-2A                     | BELL & GOSSETT | e-1510 | BASE-MOUNTED, END-SUCTION | GEOHERMAL LOOP PUMPS | 275 | 75.00                | Yes | 79                     | 1750 | 60              | 10 | 7        | 208 V   | 3     | ALL     |
| P-2B                     | BELL & GOSSETT | e-1510 | BASE-MOUNTED, END-SUCTION | GEOHERMAL LOOP PUMPS | 275 | 75.00                | Yes | 79                     | 1750 | 60              | 10 | 7        | 208 V   | 3     | ALL     |

REMARKS:

1. FLOW PERFORMANCE BASED ON 100% WATER AS WORKING FLUID.
2. PUMPS SHALL BE NON-OVERLOADING.
3. PROVIDE PREMIUM EFFICIENCY INVERTER DUTY MOTOR WITH SHAFT GROUND KIT.
4. REFER TO VFD SCHEDULE.
5. ARMSTRONG AND WILO ARE ACCEPTABLE.

| MARK<br>ERV-04  |  | MANUFACTURER<br>MICROMETL |  | MODEL #<br>EVE |  | PHYSICAL DATA      |                    |                    |                       | SUPPLY FAN           |                       |                           | EXHAUST FAN              |                      |                      | SCHEDULE - ENERGY RECOVERY VENTILATOR |                          |                  |                  |                   |                     |                     |                      |                   |                   | SUMMER OPERATION  |                             |                             |                     | APD OA (IN W/G)<br>0.5 |  | APD EA (IN W/G)<br>0.50 |  | ELECTRICAL DATA   |                   |  |                               |                              |  |  |
|---|--|---------------------------|--|----------------|--|--------------------|--------------------|--------------------|-----------------------|----------------------|-----------------------|---------------------------|--------------------------|----------------------|----------------------|---------------------------------------|--------------------------|------------------|------------------|-------------------|---------------------|---------------------|----------------------|-------------------|-------------------|-------------------|-----------------------------|-----------------------------|---------------------|------------------------|--|-------------------------|--|-------------------|-------------------|--|-------------------------------|------------------------------|--|--|
|   |  |                           |  |                |  | WIDTH (IN.)<br>56" | LENGTH (IN.)<br>94 | HEIGHT (IN.)<br>76 | WEIGHT (LBS.)<br>1375 | TOTAL SA CFM<br>1800 | E.S.P. (" WC)<br>0.75 | RATED H.P. (PER FAN)<br>1 | B.H.P. (PER FAN)<br>1.04 | TOTAL EA CFM<br>1600 | E.S.P. (" WC)<br>0.8 | RATED H.P. (PER FAN)<br>1.0           | B.H.P. (PER FAN)<br>1.04 | OUTSIDE AIR      |                  |                   | WINTER OPERATION    |                     |                      | EXHAUST AIR       |                   |                   | TOTAL CAPACITY (MBH)<br>110 | TOTAL EFFECTIVENESS<br>81.0 | OUTSIDE AIR         |                        |  |                         |  | EXHAUST AIR       |                   |  | TOTAL CAPACITY (MBH)<br>50.10 | TOTAL EFFECTIVENESS<br>79.00 |  |  |
|   |  |                           |  |                |  |                    |                    |                    |                       |                      |                       |                           |                          |                      |                      |                                       |                          | EAT DB (°F)<br>4 | EAT WB (°F)<br>3 | LAT DB (°F)<br>66 | LAT WB (°F)<br>43.0 | EAT DB (°F)<br>72.0 | EAT WB (°F)<br>54.00 | EAT DB (°F)<br>91 | EAT WB (°F)<br>74 | LAT DB (°F)<br>79 |                             |                             | LAT WB (°F)<br>53.0 |                        |  |                         |  | EAT DB (°F)<br>75 | EAT WB (°F)<br>63 |  |                               |                              |  |  |
|   |  |                           |  |                |  |                    |                    |                    |                       |                      |                       |                           |                          |                      |                      |                                       |                          |                  |                  |                   |                     |                     |                      |                   |                   |                   |                             |                             |                     |                        |  |                         |  |                   |                   |  |                               |                              |  |  |
| REMARKS:<br>1. SEMCO, TRANE, AAO, INNOVENT ARE ACCEPTABLE.<br>2. PROVIDE WITH SINGLE POINT POWER CONNECTION.<br>3. AFTER FINAL FILTER CHANGE WHICH IS REQUIRED AT SUBSTANTIAL COMPLETION, IN ADDITION TO FILTERS CHANGED, PROVIDE NEW COMPLETE SET OF FILTERS TO OWNER FOR ATTIC STOCK. ALSO TURN OVER TO OWNER A REPLACEMENT SET OF FAN BELTS. |  |                           |  |                |  |                    |                    |                    |                       |                      |                       |                           |                          |                      |                      |                                       |                          |                  |                  |                   |                     |                     |                      |                   |                   |                   |                             |                             |                     |                        |  |                         |  |                   |                   |  |                               |                              |  |  |

MECHANICAL SCHEDULES

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MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION

FOR:

MARION COUNTY BOARD OF EDUCATION

LEBANON, KENTUCKY

 **CMTA**  
2424 Standish Way, Lexington, KY 40504  
606.253.6900 [www.cmta.org](http://www.cmta.org)

**Structural Engineer:**  
Structural Design Group, Inc.  
220 Great Circle Rd, Suite 106  
Nashville, TN 37228  
p 615.255.5537

|             |             |
|-------------|-------------|
| BG#         |             |
| Project No: | 1928/XMCM19 |
| Drawn By:   | Author      |
| Rev'd By:   | Checker     |

| SHEET RELEASE |  |  |
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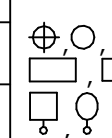
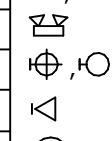

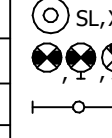
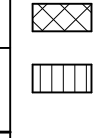
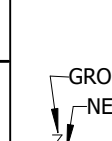

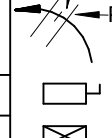

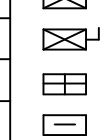


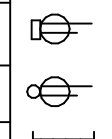


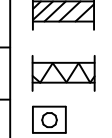





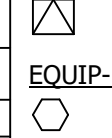




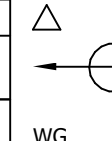


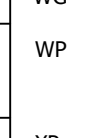


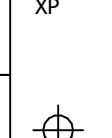


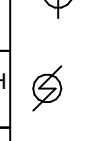


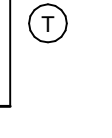












































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DESIGN DEVELOPMENT

M-6.0

MECHANICAL SCHEDULES

DATE ISSUED:  
OCTOBER 3, 2019

[illegible]

| DESCRIPTION  | MOUNTING CENTER OF BOX | DRAWING SYMBOL  | DESCRIPTION   | MOUNTING CENTER OF BOX | DRAWING SYMBOL  | DESCRIPTION  | MOUNTING CENTER OF BOX | DRAWING SYMBOL  |
|--|------------------------|---|---|------------------------|---|--|------------------------|---|
| LIGHTING CONTROL SWITCHES  |                        |   | LIGHTING  |                        |   | ABBREVIATIONS  |                        |   |
| LIGHT SWITCH: LOW VOLTAGE  | 46"                    | \$  | REFER TO LUMINAIRE SCHEDULE FOR EXACT FIXTURE SPECIFICATIONS, MOUNTING HEIGHTS, ETC.  |                        |    | UNLESS OTHERWISE NOTED   |                        | UION  |
| OCCUPANCY OR VACUANCY SENSOR SWITCH  |                        | \$S   | SURFACE OR SUSPENDED CEILING FIXTURE (SLASH INDICATES RECESSED)   |                        |    | OWNER FURNISHED CONTRACTOR INSTALLED   |                        | OFCI  |
| OCCUPANCY OR VACUANCY SENSOR, CEILING MOUNT  | CLG                    |    | POLE MOUNTED AREA LIGHT   |                        |    | CONTRACTOR FURNISHED CONTRACTOR INSTALLED  |                        | CFCI  |
| PHOTO-CELL AS NOTED  | AS NOTED               | PC  | EMERGENCY BATTERY WALL-PACK   |                        |    | CONTRACTOR FURNISHED CONTRACTOR INSTALLED  |                        | CFCI  |
| POWER OUTLETS  |                        |   | WALL MOUNT FIXTURE  |                        |    | INDICATES EMERGENCY POWER  |                        | E, EM   |
| SIMPLEX RECEPTACLE   | 1'-6"                  |    | FLOODLIGHT  |                        |    | OVERHEAD PAGING  |                        |   |
| DUPLEX RECEPTACLE-SAFETY TYPE, TAMPER-RESISTANT  | 1'-0"                  |    | SURGICAL/EXAM LIGHT   |                        |    | PAGING SPEAKER: CEILING  | CLG                    |    |
| DUPLEX RECEPTACLE  | 1'-6"                  |    | EXIT LIGHT (CEILING, END, WALL MOUNT)   |                        |    | PAGING SPEAKER W/ VOLUME CONTROL   | CLG                    |    |
| SLASH THROUGH ANY DEVICE INDICATES MOUNTING ABOVE COUNTERTOP 4" ABOVE BACKSPASH                              |                        |    | STRIP FIXTURE   |                        |   | PAGING SPEAKER: WALL   | 8'-0"                  |    |
| FILLED CENTER BAR INDICATES INTEGRAL GROUND FAULT PROTECTION (GFCI)  | 1'-6"                  |    | CROSS-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-CRITICAL BRANCH  |                        |  | RECESSED WALL MOUNTED PAGING SPEAKER DUKANE GAGOS SPEAKER, ATLAS 417-8WD   | 8'-0"                  |    |
| READ FRONT GFCI DEVICE, LABEL AND INSTALL IN READILY ACCESSIBLE LOCATION                                     |                        |    | PARALLEL-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-LIFE SAFETY BRANCH  |                        |  | WALL MOUNTED PAGING HORN   | 9'-0"                  |    |
| FILLED OUTER BARS INDICATES INTEGRAL INTEGRAL BUS OUTLETS IN ADDITION TO POWER RECEPTACLES                   | 1'-6"                  |    | MISCELLANEOUS   |                        |   | VANDAL PROOF / WEATHERPROOF WALL MOUNTED PAGING SPEAKER, QUAM VP1  |                        |    |
| GANG RECEPTACLE IN COMBINATION WITH SWITCH   | 46"                    |    | CONDUIT CONCEALED IN WALLS OR IN CEILING SPACE: ARROW(S) INDICATE(S) HOME RUN & # OF CIRCUITS: HASHMARKS INDICATE # OF CONDUCTORS, DASHED LINE INDICATES CONDUIT BELOW FLOOR. |                        |  | EXTERIOR VANDAL PROOF / WEATHERPROOF WALL MOUNTED PAGING SPEAKER, SHALL BE PAINTED COLOR SELECTED BY ARCHITECT/OWNER, QUAM VP6 |                        |    |
| DUPLEX RECEPTACLE IF LIGHTING CIRCUIT IS 220V  | CLG                    |    | DISCONNECT SWITCH   | 5'-0"                  |  | CALL INITIATION STATION  | 46"                    |    |
| QUADRUPLX RECEPTACLE   | 1'-6"                  |    | MAGNETIC STARTER  | 5'-0"                  |  | WALL VOLUME CONTROL  | 46"                    |    |
| JUNCTION BOX, CEILING OR WALL  |                        |    | MAGNETIC COMBINATION STARTER  | 5'-0"                  |  | LCD WALL DISPLAY   |                        |    |
| VOLTAGE/1PH RECEPTACLE, AS NOTED   | AS NOTED               |    | VARIABLE FREQUENCY DRIVE  | 5'-0"                  |  | PAGING MICROPHONE  | 1'-6"                  |    |
| VOLTAGE/3PH RECEPTACLE, AS NOTED   | 1'-6"                  |    | ENCLOSED FLUSH MTD. CIRCUIT BREAKER   | 5'-0"                  |  | PAGING SYSTEM AMPLIFIER/TUNER CABINET  | 46"                    |    |
| "DOG-HOUSE" TYPE TWIN DUPLEX RECEPTACLE WITH ONE DUPLEX RECEPTACLE ON BOTH SIDES                             | ON CNTR.               |    | BOX ON ANY DEVICE INDICATES SURFACE MOUNTED BACKBOX/WIREMOLD  |                        |  | CLOCKS   |                        |   |
| SS INDICATES SURGE SUPPRESSION TYPE OUTLET(S)  |                        |   | CIRCLE ON ANY DEVICE INDICATES DEVICE FED FROM STUB UP CONDUIT  |                        |  | ANALOG CLOCK   | 84"                    |    |
| FIRE ALARM   |                        |   | WIREWAY WITH REMOVABLE COVER (SIZE AS NOTED)  | AS SHOWN               |  | DATA / VOICE   |                        |   |
| MAIN CONTROL PANEL CENTRAL PROCESSING UNIT (CPU)   | 6'-6" TO TOP           |  | TRENCH DUCT (SIZE AS NOTED)   | AS SHOWN               |  | DATA OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF DATA JACKS  | 1'-6"                  | #D #V #V #V #V  |
| PULL STATION : DOUBLE ACTION   | 46" TO LEVER           |  | PUSHBUTTON STATION  | 46"                    |  | VOICE OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF VOICE JACKS  | 1'-6"                  | #D #V #V #V #V  |
| KEYED, LOCKED PULL STATION : DOUBLE ACTION. STATION SHALL ONLY BE OPERABLE VIA KEY IN POSSESSION LIKE STATE. | 46" TO LEVER           |  | FLEXIBLE CONDUIT  | 6'-6" TO TOP           |  | COMBINATION OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF DATA/VOICE JACKS   | 1'-6"                  | #D #V #V #V #V  |
| AUDIO/SUAL NOTIFICATION APPLIANCE  | WALL, CLG              |  | PANELBOARD, SURFACE OR FLUSH MOUNTED, HATCHING INDICATES EMERGENCY  |                        |  | CLASSROOM A/V EQUIPMENT  |                        |   |
| AUDIO-ONLY NOTIFICATION APPLIANCE  | WALL, CLG              |  | TRANSFORMER   | AS NOTED               |  | CEILING MOUNTED PROJECTOR  |                        |    |
| VISUAL-ONLY NOTIFICATION APPLIANCE   | WALL, CLG              |  | EQUIPMENT TAG, REFER TO EQUIPMENT SCHEDULE  |                        |  | AV SYSTEM CABLEING TERMINATIONS / WALLPLATE  |                        |   |
| BELL / LIGHT   | 80"                    |  | TAGGED NOTE   |                        |  | CLASSROOM PROJECTOR SPEAKER  |                        |  |
| BELL ONLY  | 80"                    |  | REVISION TAG  |                        |  | TEACHER STATION: REFER TO INSTRUCTIONAL WALL OUTLET INSTALLATION DETAIL  |                        |   |
| PHOTO-ELECTRIC SMOKE DETECTOR  | CLG                    |  | MECHANICAL EQUIPMENT DESIGNATOR (SEE MECH. SCHEDULES)   |                        |  | TWOCHSCREEN LOCATION: REFER TO INSTRUCTIONAL WALL OUTLET INSTALLATION DETAIL   |                        |   |
| PHOTO-ELECTRIC SMOKE DETECTOR FOR PATIENT ROOM MONITORING (SEE RISER)  | CLG                    |  | WIREGUARD - PROVIDE MANUFACTURER'S SPECIFIC GUARD FOR DEVICE NOTED  |                        |  |  |                        |   |
| PROJECTED BEAM SMOKE DETECTOR; EMITTER (BE) AND RECEIVER (RD)  | CLG                    |  | WEATHERPROOF - NEMA 3R, WET LOCATION LISTED. PROVIDE COVERS, RATINGS, ETC. AS SUITABLE FOR OUTDOORS.  |                        |  |  |                        |   |
| HEAT DETECTOR  | CLG                    |  | EXPLOSION PROOF - PROVIDE WIRING METHODS, ENCLOSURES, RATINGS, ETC. AS SUITABLE FOR HAZARDOUS LOCATION.   |                        |  |  |                        |   |
| CARBON MONOXIDE DETECT DETECTOR  | ABV CLG                |  | PLUMBING FIXTURE SOLENOID VALVE/ELECTRIC EYE SENSOR CONNECTION, COORDINATE EXACT CONNECTION REQUIREMENTS WITH MANUFACTURER.   |                        |  |  |                        |   |
| CARBON MONOXIDE ALARM: SINGLE STATION W/SOUNDER BASE   | CLG                    |  | PROVIDE CONNECTION TO HAND DRYER (SEE ARCHITECTURAL SPECIFICATIONS)   | VERIFY WITH ARCHITECT  |  |  |                        |   |
| CARBON MONOXIDE AUDIO/VISUAL NOTIFICATION APPLIANCE  | WALL                   |  | THERMOSTAT PROVIDED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL PROVIDE BACK-BOX CONDUIT STUB-UP, REFER TO MECHANICAL DRAWINGS FOR LOCATIONS                        |                        |  |  |                        |   |
| DOOR HOLDER : WALL TYPE  | WALL                   |  |   |                        |  |  |                        |   |
| DOOR HOLDER : CLOSURE TYPE   | ABV DOOR               |  |   |                        |  |  |                        |   |
| DET SMOKE DETECTOR   | ABV CLG                |  |   |                        |  |  |                        |   |
| CONNECTION TO SPRINKLER FLOW SWITCH WITH ADDRESSABLE MODULE  |                        |  |   |                        |  |  |                        |   |
| CONNECTION TO SPRINKLER TAMPER SWITCH WITH ADDRESSABLE MODULE  |                        |  |   |                        |  |  |                        |   |
| PRESSURE SWITCH  |                        |  |   |                        |  |  |                        |   |
| REMOTE L.C.D. FIRE ALARM ANNUNCIATOR   | 54"                    |  |   |                        |  |  |                        |   |
| REMOTE FIRE ALARM ANNUNCIATOR W/ MICROPHONE  | 54"                    |  |   |                        |  |  |                        |   |
| POST INDICATOR VALVE   |                        |  |   |                        |  |  |                        |   |
| POWER SUPPLY/CONTROL FOR AUDIO/VISUAL DEVICES  | 46"                    |  |   |                        |  |  |                        |   |
| TRANSFORMER CABINET  | 46"                    |  |   |                        |  |  |                        |   |
| GRAPHICS DISPLAY TERMINAL  |                        |  |   |                        |  |  |                        |   |
| FIRE ALARM CONTROL, EXTENDER   |                        |  |   |                        |  |  |                        |   |
| ISOLATION MODULE   | WALL                   |  |   |                        |  |  |                        |   |
| ZONE ADDRESSABLE MODULE  |                        |  |   |                        |  |  |                        |   |
| H.V.A.C. SMOKE DAMPER CONNECTION   |                        |  |   |                        |  |  |                        |   |
| FLUSH MOUNTED REMOTE ALARM INDICATING STATION/TEST SWITCH  | 7'-6"                  |  |   |                        |  |  |                        |   |
| FIREMAN'S PHONE JACK   | 4'-6"                  |  |   |                        |  |  |                        |   |
| FIREMAN'S KNOX BOX CONNECTION  |                        |  |   |                        |  |  |                        |   |
| ADDRESSABLE RELAY MODULE   |                        |  |   |                        |  |  |                        |   |

PANEL BOARD AND WIRING SCHEDULE

PANEL: A

VOLTAGE: 208Y/120V, 3P, 4W

AMPERES: 225 A

MAIN TYPE: SPDT:

SUPPLY: SURFACE

AVAILABLE FAULT CURRENT: 100 KA

PANEL INTERRUPTING RATINGS:

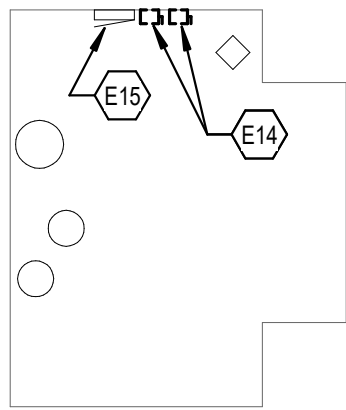
LOCATION: STORAGE 227

SUPPLY FROM:

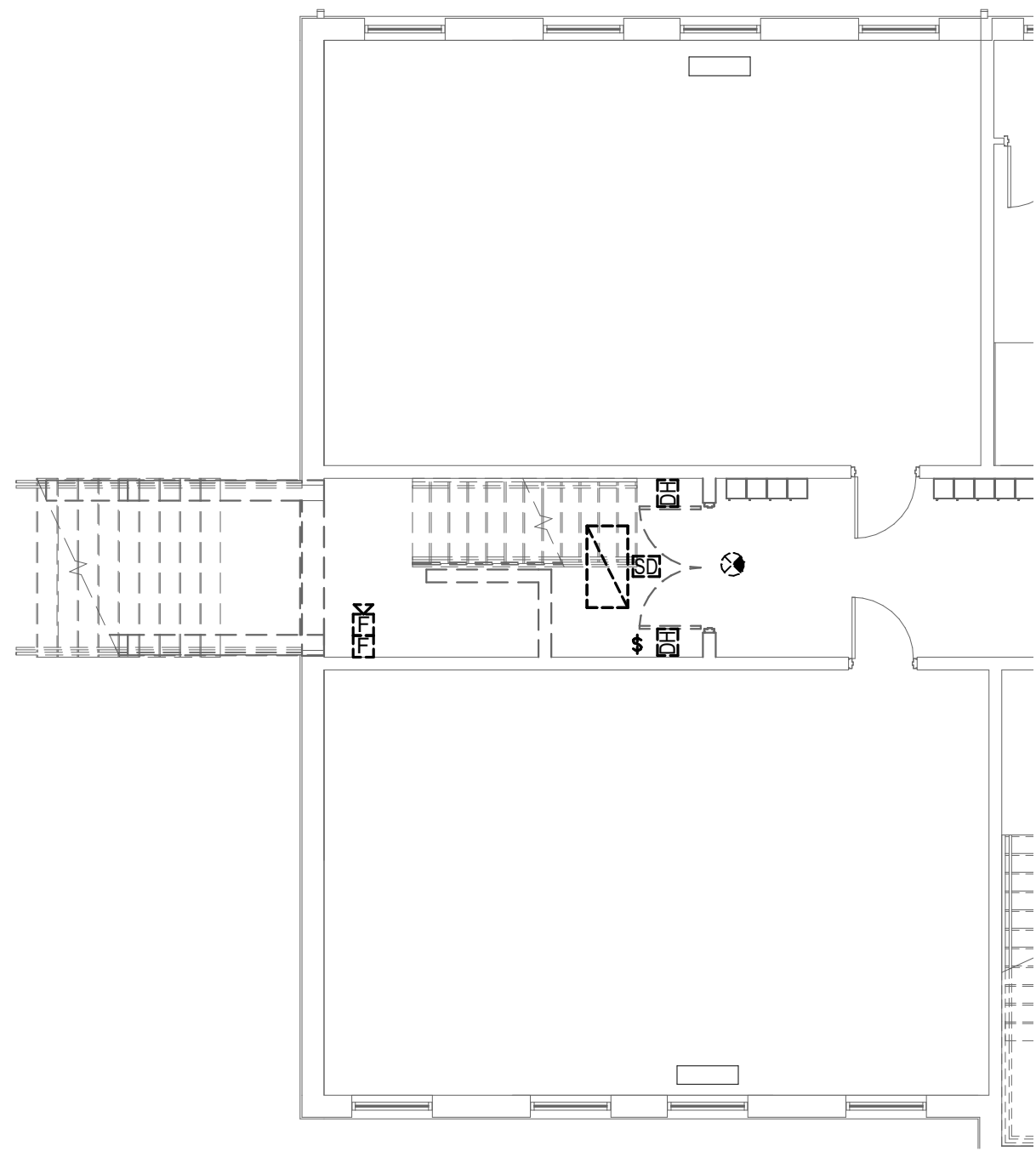
| CIRCUIT DESCRIPTION | WIRE | GND      | C  | OC      | P | CKT      | A        | B        | C     | CKT | P   | OC  | C        | GND                                   | WIRE | CIRCUIT DESCRIPTION    |
|---------------------|------|----------|----|---------|---|----------|----------|----------|-------|-----|-----|-----|----------|---------------------------------------|------|------------------------|
| REC - Classroom 225 |      |          |    | 20      | 1 | 1        | 0.7      | 0.4      |       |     | 2   | 1   | 20       |                                       |      | REC - Classroom 225    |
| REC - Classroom 225 |      |          |    | 20      | 1 | 3        |          |          | 1.0   | 0.7 |     | 4   | 1        | 20                                    |      | REC - Classroom 225    |
| REC - Classroom 225 |      |          |    | 20      | 1 | 5        |          |          |       |     | 6   | 1   | 20       |                                       |      | REC - Storage 227      |
| REC - Classroom 226 |      |          |    | 20      | 1 | 7        | 1.0      | 0.7      |       |     | 0.5 | 0.7 | 8        | 1                                     | 20   | REC - Classroom 226    |
| REC - Classroom 226 |      |          |    | 20      | 1 | 9        |          |          | 0.4   | 0.7 |     | 10  | 1        | 20                                    |      | REC - Classroom 226    |
| REC - Classroom 226 |      |          |    | 20      | 1 | 11       |          |          |       |     | 0.5 | 0.7 | 12       | 1                                     | 20   | REC - Classroom 136    |
| REC - Classroom 136 |      |          |    | 20      | 1 | 13       | 0.4      | 0.7      |       |     |     |     | 14       | 1                                     | 20   | REC - Classroom 136    |
| REC - Classroom 136 |      |          |    | 20      | 1 | 15       |          |          | 0.9   | 0.5 |     |     | 16       | 1                                     | 20   | REC - Classroom 136    |
| REC - Corridor C1D  |      |          |    | 20      | 1 | 17       |          |          |       |     | 0.5 | 1.0 | 18       | 1                                     | 20   | REC - Science 137      |
| REC - Science 137   |      |          |    | 20      | 1 | 19       | 0.7      | 0.9      |       |     |     |     | 20       | 1                                     | 20   | REC - Science 137      |
| REC - Science 137   |      |          |    | 20      | 1 | 21       |          |          | 0.7   | 0.7 |     |     | 22       | 1                                     | 20   | REC - Science 137      |
| REC - Science 137   |      |          |    | 20      | 1 | 23       |          |          |       |     | 0.5 | 1.5 | 24       | 2                                     | 20   |                        |
|                     |      |          |    | 25      | 2 | 5        | 2.5      | 1.5      |       |     |     |     | 26       |                                       |      | HHP-18                 |
| HHP-36              |      |          |    | 20      | 3 | 27       |          |          | 2.5   | 1.4 |     |     | 28       |                                       |      |                        |
|                     |      |          |    | 29      |   |          |          |          |       |     | 2.5 | 1.4 | 30       | 3                                     | 20   | HHP-24                 |
|                     |      |          |    | 31      | 2 | 5        | 2.5      | 1.4      |       |     |     |     | 32       |                                       |      |                        |
| HHP-36              |      |          |    | 20      | 3 | 33       |          |          | 2.5   | 1.4 |     |     | 34       |                                       |      |                        |
|                     |      |          |    | 35      |   |          |          |          |       |     | 2.5 | 1.4 | 36       | 3                                     | 20   | HHP-24                 |
|                     |      |          |    | 37      | 1 | 3        | 1.4      |          |       |     |     |     | 38       |                                       |      |                        |
| OA1                 |      |          |    | 20      | 3 | 39       |          |          | 1.3   | 1.2 |     |     | 40       | 1                                     | 20   | LTNG - FIRST FLOOR     |
|                     |      |          |    | 41      |   |          |          |          |       |     | 1.3 | 1.3 | 42       | 1                                     | 20   | LTNG - SECOND FLOOR    |
| EPO - SCIENCE 137   |      |          |    | 20      | 1 | 43       | 0.5      | 0.5      |       |     |     |     | 44       | 1                                     | 20   | SOLENOID - SCIENCE 137 |
| TP-1                |      |          |    | 20      | 1 | 45       |          |          | 0.5   |     |     |     | 46       |                                       |      |                        |
|                     |      |          |    | 47      |   |          |          |          |       |     |     |     | 48       |                                       |      |                        |
| SPARE               | --   | --       | -- | 20      | 1 | 49       | 0.0      | 0.0      |       |     |     |     | 50       | 1                                     | 20   | -- -- -- SPARE         |
| SPARE               | --   | --       | -- | 20      | 1 | 51       |          |          | 0.0   | 0.0 |     |     | 52       | 1                                     | 20   | -- -- -- SPARE         |
| SPARE               | --   | --       | -- | 20      | 1 | 53       |          |          |       |     | 0.0 | 0.0 | 54       | 1                                     | 20   | -- -- -- SPARE         |
| TOTAL LOAD (VA):    |      |          |    |         |   |          | 17.2 KVA | 16.6 KVA |       |     |     |     | 16.6 KVA |                                       |      |                        |
| TOTAL CURRENT (A):  |      |          |    |         |   |          | 143 A    | 138 A    | 138 A |     |     |     |          |                                       |      |                        |
| LOAD CLASSIFICATION |      |          |    |         |   |          |          |          |       |     |     |     |          |                                       |      |                        |
| EQUIP               |      | 32009 VA |    | 80.00%  |   | 25607 VA |          |          |       |     |     |     |          | TOTAL CONNECTED LOAD: 50375 VA        |      |                        |
| LTNG                |      | 2556 VA  |    | 100.00% |   | 2556 VA  |          |          |       |     |     |     |          | TOTAL ESTIMATED DEMAND: 42343 VA      |      |                        |
| Other               |      | 2200 VA  |    | 100.00% |   | 2200 VA  |          |          |       |     |     |     |          | TOTAL CONNECTED CURRENT: 140 A        |      |                        |
| REC                 |      | 13860 VA |    | 86.06%  |   | 11930 VA |          |          |       |     |     |     |          | TOTAL ESTIMATED DEMAND CURRENT: 117 A |      |                        |

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

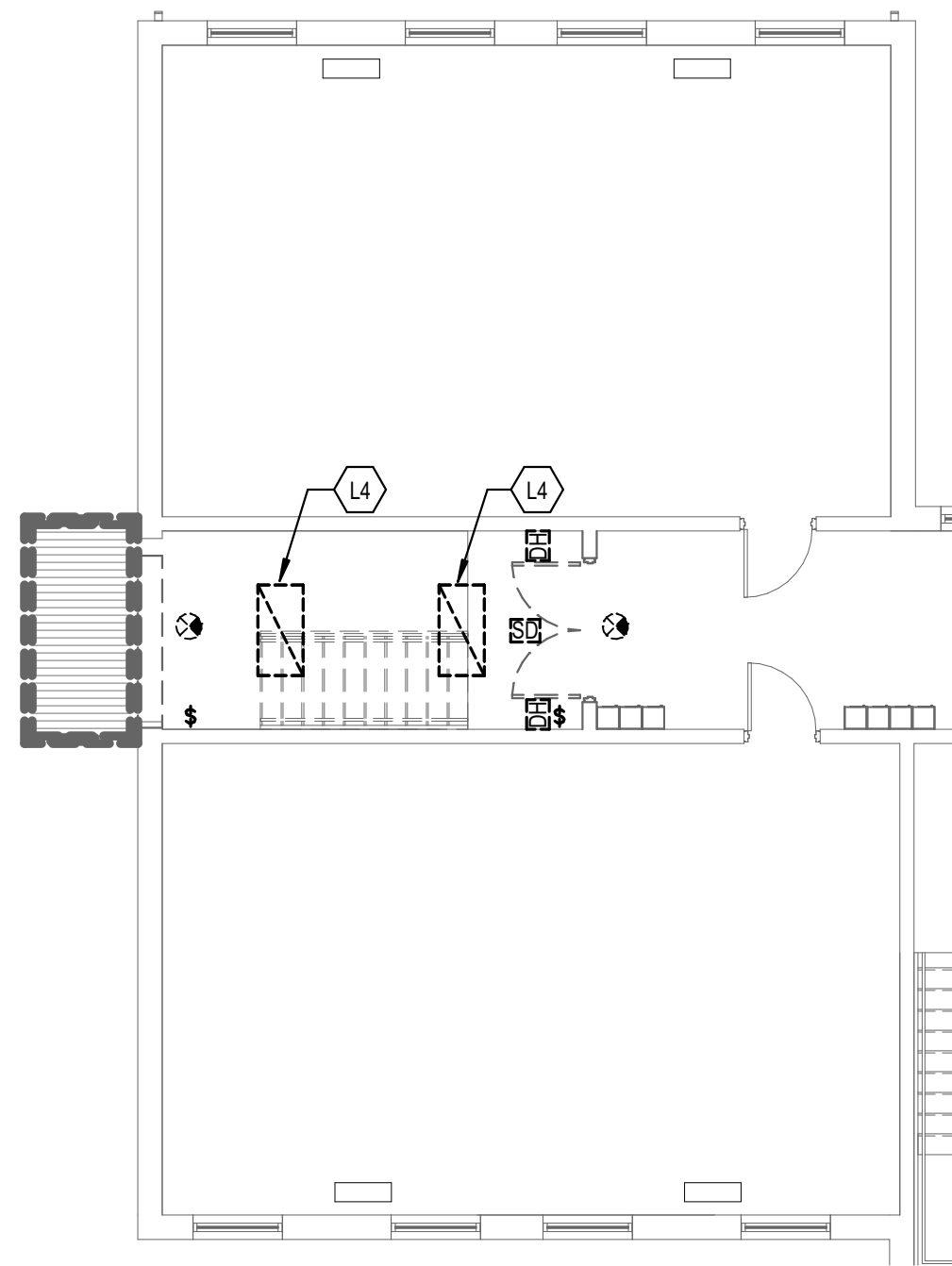


[illegible]

3 PUMP HOUSE ELECTRICAL DEMOLITION  
1/8" = 1'-0"



# FIRST FLOOR ELECTRICAL DEMOLITION PLAN



2 SECOND FLOOR ELECTRICAL  
DEMOLITION PLAN  
1/8" = 1'-0"

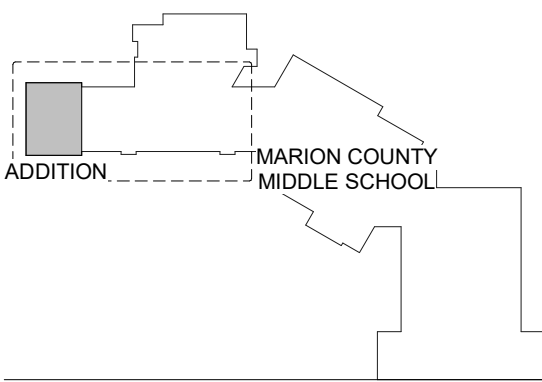
## ELECTRICAL DEMOLITION...

- EXISTING LINES INDICATE ITEMS FOR REMOVAL  
AND NEW LINES INDICATE LINES TO BE  
INSTALLED TO REMAIN.
- EXISTING CIRCUITS THAT CONTAIN DEVICES OR  
EQUIPMENT TO BE REMOVED SHALL BE  
DEMOLITION OF AN ELECTRICAL DEVICE (OR  
CIRCUIT) IS INDICATED ON THE DRAWINGS: THE  
CIRCUIT SHALL BE IDENTIFIED BY THE  
DEVICES OR EQUIPMENT "UPSTREAM"  
OR "DOWNSTREAM" ON THE CIRCUITS SHALL REMAIN  
IN PLACE. THE CIRCUIT BREAKER OR  
"LEFT-OVER" CIRCUIT BREAKERS SHALL BE  
SWITCHED TO OFF POSITION, AND BE LABELED  
"REMOVED". THE WORK SHALL BE IDENTIFIED  
BY TYPED/WRITTEN DIRECTORIES FOR ALL PANELS  
AFFECTED.
- LOCATIONS OF DEVICES, CONDUITS, ETC.,  
INDICATED ON THIS DRAWING WERE TAKEN FROM  
VARIOUS SOURCES. THEY ARE DIAGRAMMATIC  
ONLY AND ARE SUBJECT TO VARIATION FROM  
EXISTING CONDITIONS. THE LOCATION OF THE  
ELEMENTS MAY NOT BE INDICATED AT ALL. THE  
OWNER SHALL BE RESPONSIBLE FOR THE  
WORK INDICATED HEREON SHALL VISIT THIS  
SITE AND DETERMINE TO HIS SATISFACTION THAT  
THEY MAY BE THE SAME AS REQUIRED FOR THE  
BID WHICH HE PROPOSES.
- REMOVE ALL ASSOCIATED BACKBOXES, CONDUIT  
AND CONDUCTORS FOR DEVICES / FIXTURES /  
EQUIPMENT TO BE REMOVED. THE WORK SHALL  
WHETHER INDICATED OR NOT (UON).
  - CONTRACTOR SHALL PATCH AND REPAIR ANY  
EXISTING WALLS, FLOORS, CEILING, ROOF, WHERE  
DEVICES ARE SHOWN TO BE REMOVED (PATCH  
AND REPAIR TO RECEIVE NEW FINISHES - SEE  
ARCHITECT'S PLANS).
  - COORDINATE DISPOSAL OF ALL FIXTURES,  
DEVICES, ETC. (INDICATED FOR DEMOLITION WITH  
THEY WILL BE REMOVED ITEMS REMOVED TO OWNER  
AT THEIR OPTION.
- COORDINATE WITH OTHER TRADES FOR THE  
REMOVAL AND/OR RELOCATION OF ELECTRICAL  
EQUIPMENT AND CONNECTIONS ASSOCIATED WITH  
THEIR EQUIPMENT.
- PROVIDE TEMPORARY EMERGENCY EXIT LIGHTS  
AS REQUIRED BY THE CODES.
- CONTRACTOR SHALL PATCH AND REPAIR ALL  
EXISTING WALLS / CEILINGS AS REQUIRED WHERE  
THEY ARE SHOWN TO BE REMOVED. THE WORK  
SHALL BE IN ACCORDANCE WITH ALL  
UNUSED/ABANDONED CONDUCTORS DISCOVERED  
ABOVE ACCESSIBLE CEILINGS SHALL BE  
REMOVED IN ACCORDANCE WITH NEC  
REQUIREMENTS.
- EXISTING ELECTRICAL SYSTEMS IN CONFLICT  
WITH CONSTRUCTION SHALL BE RELOCATED TO  
MAINTAIN OPERATION OF THE EQUIPMENT  
AND EQUIPMENT SHOWN ON PLANS.
- CONTRACTOR SHALL SEAL ALL EXISTING AND  
NEW PENETRATIONS OF THE ROOF, CEILING,  
(EXTERIOR WALLS, ROOF, ETC.) WATER-TIGHT  
AND AS APPROVED BY ARCHITECT AND  
ENGINEER. THE WORK SHALL BE TESTED BY A  
LICENSED ROOFING CONTRACTOR BASED ON  
WRITTEN INSTRUCTIONS AND DETAILS FROM  
ARCHITECT AND ENGINEER. THE CONTRACTOR  
TO MAINTAIN ROOF WARRANTY, REFER TO  
ARCHITECTURAL AND ENGINEERING PLANS AND  
SPECIFICATIONS FOR ALL REQUIREMENTS.
- DEVICES INDICATED WITH AN "R" SHALL BE  
RELOCATED, REMOVE, PROTECT, AND REINSTALL  
OR RELOCATED TO MAINTAIN OPERATION OF THE  
SYSTEMS. INTERCEPT AND EXTEND ALL EXISTING  
CABLING TO NEW LOCATION. CLEAN AND RE-LAMP  
ALL EXISTING MINOR.
- ALL EXISTING PANELS AFFECTED BY THIS  
CONTRACTOR'S WORK SHALL BE PROVIDED WITH  
A NEW TYPE-WRITTEN PANEL DIRECTORIES AND  
CIRCUIT BREAKER PANELS. THE WORK SHALL  
USE ROOM NUMBERS OR NUMBERS FROM THESE  
DRAWINGS. THE WORK SHALL BE IDENTIFIED  
AND COORDINATED WITH OWNER. THE  
NUMBERS, FINAL ROOM NUMBERS, IT RACK  
EQUIPMENT, AND THE WORK SHALL BE IDENTIFIED  
CIRCUIT BREAKERS SHALL BE IN OFF POSITION.
- CONTRACTOR TO VERIFY THAT THERE ARE NO  
ELECTRICAL CIRCUITS IN CHASES BEING  
DEMOLISHED OR REMOVED. THE WORK SHALL  
IN SERVICE AND CANNOT BE REMOVED. SHOULD  
SUCH CIRCUITS BE ENCOUNTERED, THE  
CONTRACTOR SHALL STOP WORK, RECONNECT  
AS REQUIRED TO MAINTAIN SERVICE.

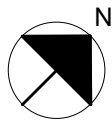
## TAGGED NOTES

|     |  |
|-----|--|
| E14 | REMOVE EXISTING STARTER DISCONNECT SERVING EXISTING PUMP AND ASSOCIATED CONNECTION TO EXISTING PUMP. REMOVE EXISTING BREAKERS FROM EXISTING PUMP HOUSE PANEL AND TURN OVER TO OWNER. |
| E15 | EXISTING PUMP HOUSE PANEL - SQUARE D NQOD TYPE 400A 120/208/3PH/4W   |
| L4  | REMOVE EXISTING LIGHT FIXTURE AND TURN OVER LED TUBES TO OWNER.  |

## KEY PLAN



SCALE: NTS



ELECTRICAL DEMOLITION PLANS

FOR:

LEBANON, KENTUCKY

The logo for rostartant architects, featuring a stylized '2' and 'r' followed by the text 'rostartant architects' in a sans-serif font.

101 old lafayette avenue lexington, kentucky 40502 p 859.254.4018 f 859.231.5046



**Structural Engineer:**  
Structural Design Group, Inc.  
220 Great Circle Rd. Suite 106  
Nashville, TN 37228  
p 615.255.5537

BG#

Project No: 1928/XMCM19  
 Drawn By: JNJ  
 Rev'd By: JNJ

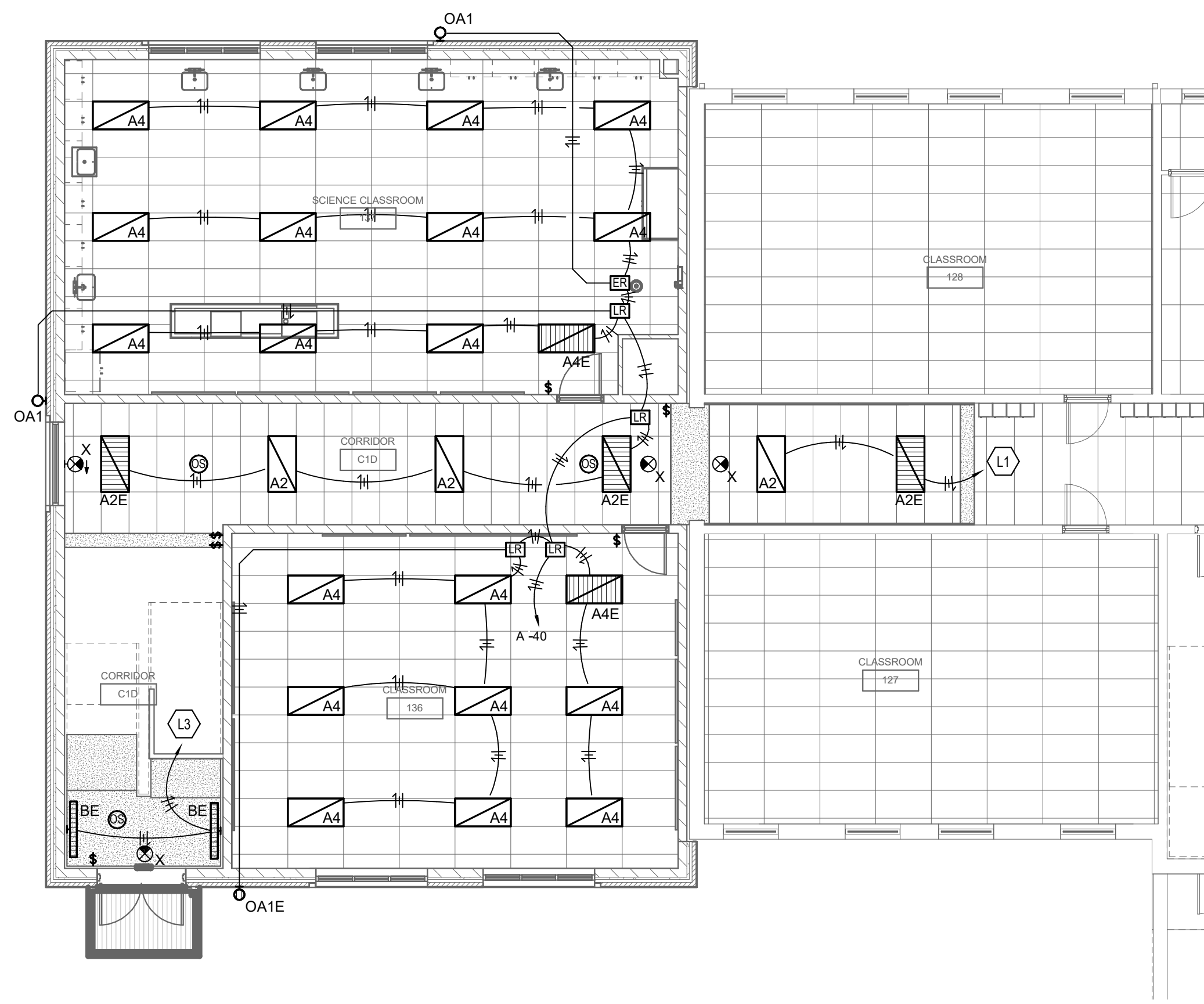
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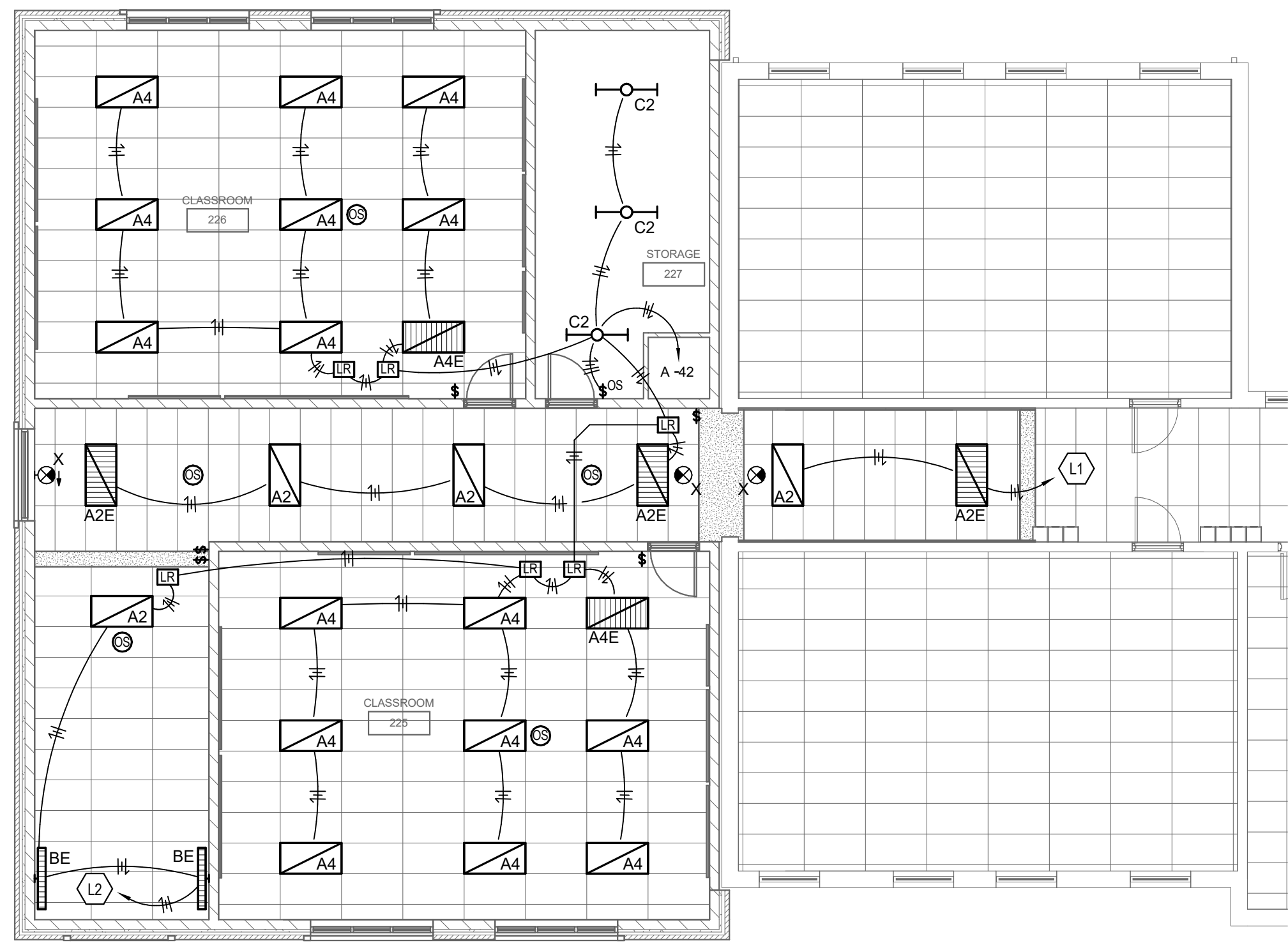
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DESIGN DEVELOPMENT

# E-2.0

ELECTRICAL DEMOLITION  
PLANS  
DATE ISSUED:  
OCTOBER 3, 2019

[illegible]

FIRST FLOOR LIGHTING PLAN  
1/8" = 1'-0"



SECOND FLOOR LIGHTING PLAN  
1/8" = 1'-0"

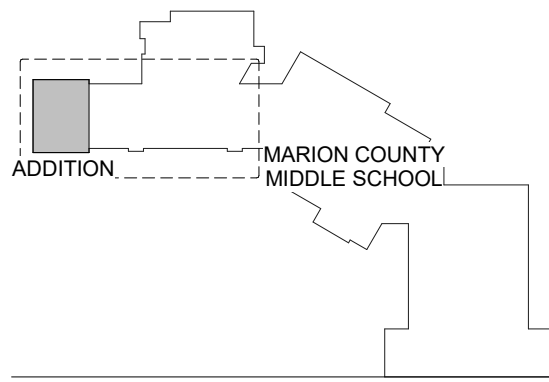
## ELECTRICAL LIGHTING...

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR THE LOCATION OF ALL RECESSED CEILING MOUNTED ELECTRICAL DEVICES.
- CONTRACTOR SHALL FOLLOW BRANCH CIRCUIT SCHEDULE OUTLINE THE LOCATION OF THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE IDENTIFIED BY A NUMBERED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENTLY UNOCCUPIED. ADDITIONAL BRANCH CIRCUITS SHALL RUN IN THE SAME CONDUIT WITH THOSE.
- CONTRACTOR SHALL DERATE ALL CURRENTLY OCCUPIED BRANCH CIRCUITS TO N.E.C. #110.15(b)(3), AND UPSIZE CONDUIT AS REQUIRED TO ACCOMMODATE THE ADDITIONAL BRANCH CIRCUITS AS DEFINED IN N.E.C #100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR SHALL BE DERATED).
- IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELING TO EACH PANEL AND IN ALL CARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. ALSO, MARK INSIDE OF EACH DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
- LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN ALL AREAS OF CONSTRUCTION. PROVIDE PIPING, TO MAXIMIZE AVAILABLE LIGHT. SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ACCESS TO ALL EQUIPMENT. IN ALL ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
- IDENTIFY ALL EXISTING ELECTRICAL AREAS TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ELECTRICAL EQUIPMENT, FEEDERS, AND FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
- WHERE EXIST SIGNS OR EMERGENCY BATTERY PACKS ARE PROVIDED, THEY SHALL BE MAINTAINED IN PLACE.
- LUMINAIRE INDICATED WITH MULTI-LEVEL SWITCHING SHALL HAVE SIMILAR LUMINAIRE CONTROL LOGIC TO EXISTING LUMINAIRE AND OUTBOARD LAMPS OR RIGHT AND LEFT HAND LAMPS.
- ALL LIGHTING FIXTURE LENSES, PARABOLIC LOUVERS, DOWNLIGHTING ALZAK CONES AND "PARABUCE" LOUVERS SHALL BE HANDLED WITH CARE TO PREVENT DAMAGE TO THE LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. IT IS PREFERRED THAT FIXTURES BE REMOVED TO A CLEAN STORAGE AREA TO PREPARE TO PROTECT LOUVERS AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AND TESTING OF THE LUMINAIRE. IF REMOVED, A LOUVER OR CONE SHOWING DIRT OR FINGERPRINTS SHALL BE REJECTED AND REPLACED AS RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
- RECESSED LUMINAIRE SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS OR CONES INTO LOUVERS OR CONES DOES NOT SHIFT HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF THE CONTROL.
- CONTRACTOR SHALL PROVIDE UNOCCUPIED CONDUIT TO ALL EXIST SIGNS, EMERGENCY INDICATOR LIGHTING PACKS, AIRIGHT LIGHTS AS REQUIRED.

## TAGGED NOTES

- |    |  |
|----|--|
| L1 | CONNECT TO EXISTING SWITCHED CORRIDOR LIGHTING CIRCUIT WITH #12, #12 GROUND IN 3/4" CONDUIT. CONTRACTOR SHALL VERIFY CIRCUIT VOLTAGE PRIOR TO ORDERING LIGHT FIXTURES. |
| L2 | CONTINUE SWITCHED CIRCUIT TO FIXTURES BELOW.   |
| L3 | CONTINUE SWITCHED CIRCUIT FROM FIXTURES ABOVE.   |

## KEY PLAN



SCALE: NTS



**27** **rosARRANT**  
**architects**



LIGHTING PLANS

---

MARION COUNTY MIDDLE SCHOOL ADDITION & RENOVATION  
FOR:  
MARION COUNTY BOARD OF EDUCATION  
LEBANON, KENTUCKY



**Structural Engineer:**  
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Project No: 1928/XMCM19  
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## LIGHTING PLANS

DATE ISSUED:  
OCTOBER 3, 2019





