

## GENERAL NOTES

1. Staging and storage of materials on site is to be coordinated with the Owner.
2. The Contractor is responsible for the protection of the Owner's facilities.
3. All existing conditions shall be field verified. Any variation shall be brought to the attention of the Architect. No deviation from the construction documents shall be made without the written approval of the Owner and Architect.
4. The contractor is responsible for the coordination of all trades.
5. Debris shall be cleaned up and removed at the end of each day.
6. Normal operation of the Owner facilities shall be maintained during construction. All work inside building is to be coordinated with the Owner.
7. Any and all damage to existing conditions, including but not limited to landscaping, paving, and building finishes, shall be repaired or replaced as directed by the Owner.
8. All work shall be installed in accordance with all applicable codes.

## PROJECT DESCRIPTION

CONCRETE SLAB FOR INTERIOR REHABILITATION PROJECT.

## CODE INFORMATION

### APPLICABLE CODES:

2018 INTERNATIONAL BUILDING CODE  
2018 INTERNATIONAL FIRE CODE  
2018 INTERNATIONAL MECHANICAL CODE  
2021 COLORADO PLUMBING CODE  
2021 COLORADO FUEL GAS CODE  
2018 INTERNATIONAL ENERGY CONSERVATION CODE  
2023 NATIONAL ELECTRICAL CODE  
ICC/ANSI A117.1 - 2009 (ACCESSIBILITY DESIGN CODE)

OCCUPANCY: A-3

CONSTRUCTION TYPE: TYPE III-B  
SPRINKLERED: YES

FLOOR AREA - NO CHANGE TO FLOOR AREA AS A PART OF THIS PROJECT

OCCUPANTS NO CHANGE TO OCCUPANT LOAD

## SHEET INDEX

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## NOTES

1. NEW SLAB TO ALIGN WITH THRESHOLD AT DOOR ON GRID LINE A = 100'-0", RE: DETAIL 3/S3.2



1

MAIN FLOOR PLAN

1/8" = 1'-0"

JOB NUMBER: 23-001

FILE:

DESIGNED: BJ

DRAWN: SH

CHECKED:

DATE: 11/14/25

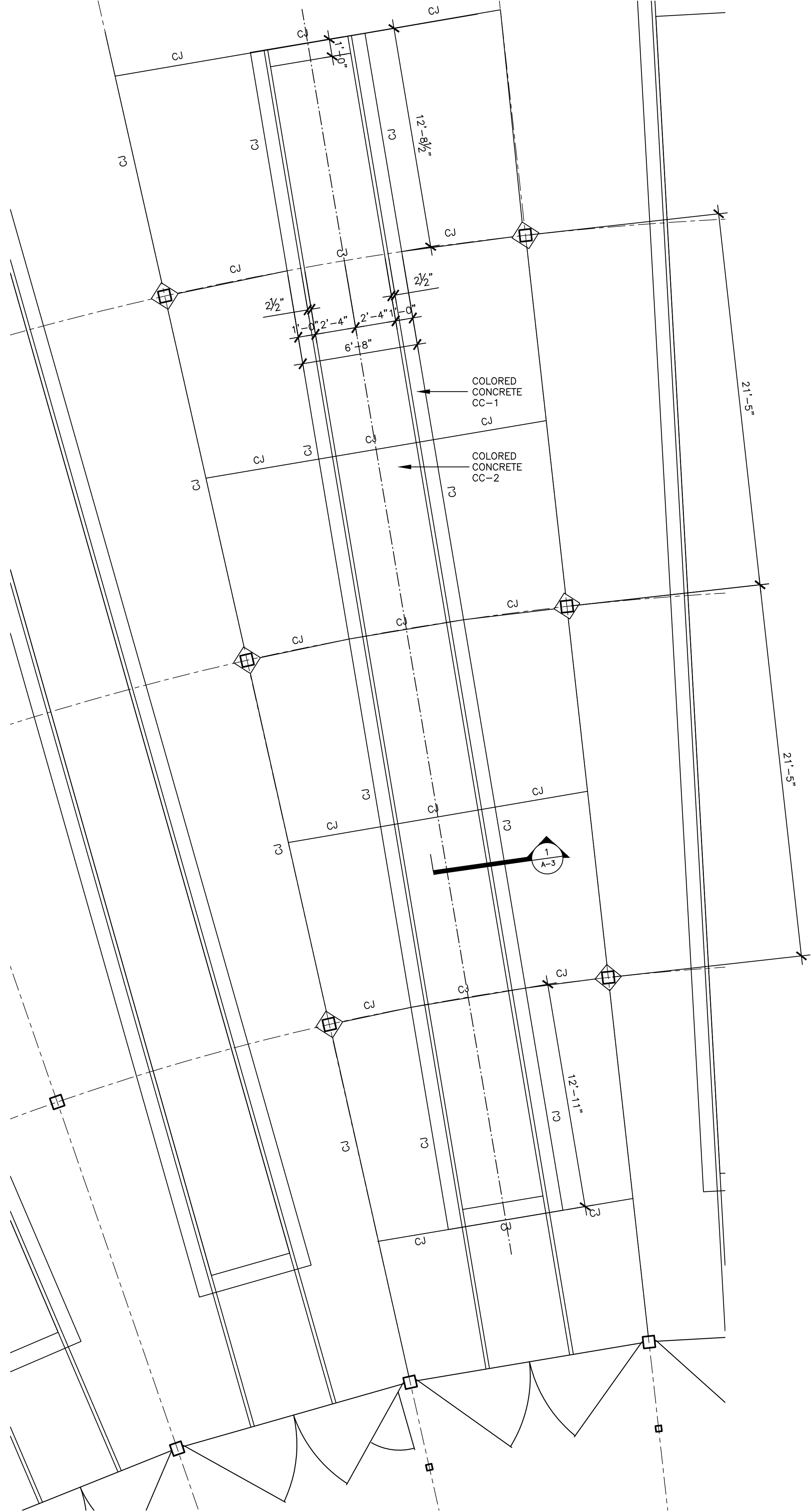
REVISIONS:

SHEET TITLE:

PLANS

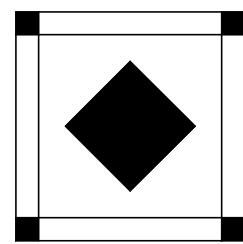
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A-1



2 ENLARGED PIT PLAN/CONTROL JOINT PLAN – BAYS 1–4  
1/4" = 1'–0"

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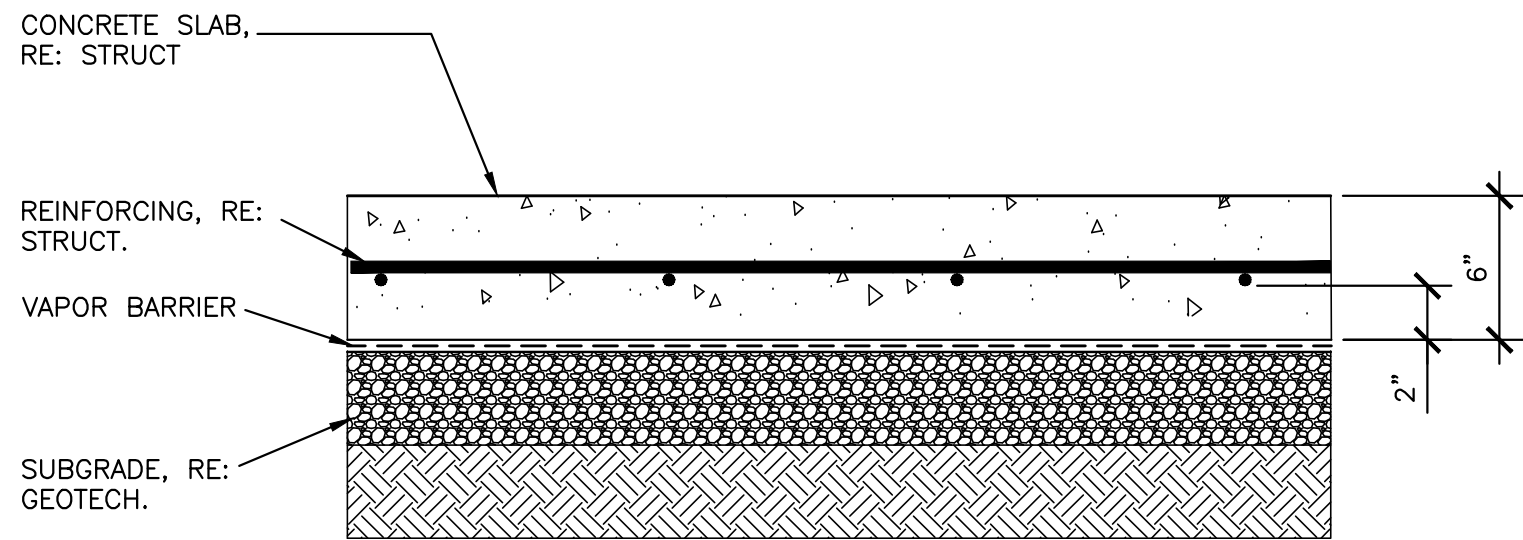


HUGO ROUNDHOUSE  
ROUNDHOUSE PRESERVATION, INC  
HUGO, COLORADO 80821

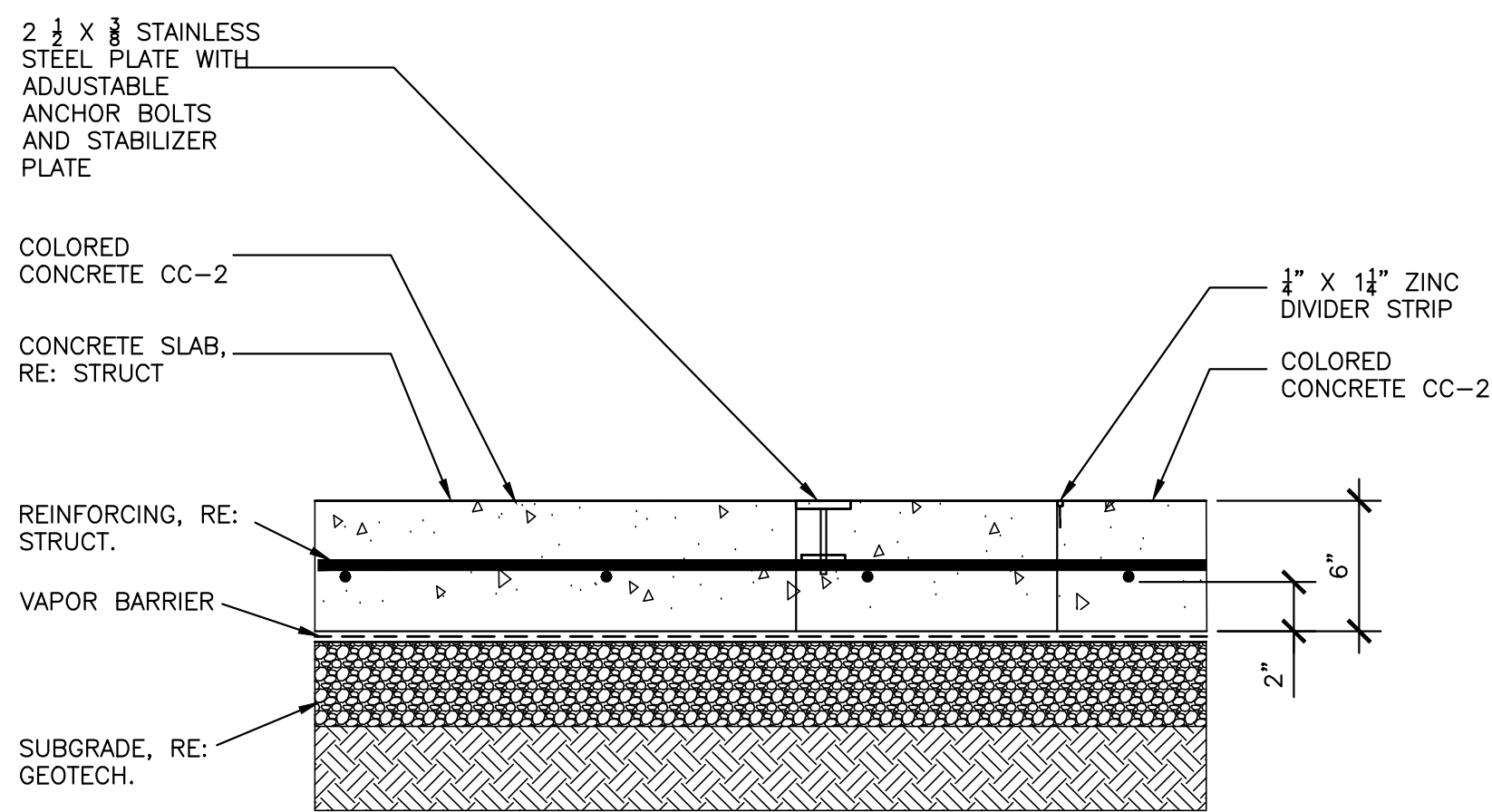
JOB NUMBER: 20-015  
FILE:  
DESIGNED:  
DRAWN: SH  
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DATE: 11/14/25  
REVISIONS:

SHEET TITLE:  
ENLARGED  
PLANS  
SHEET NUMBER:

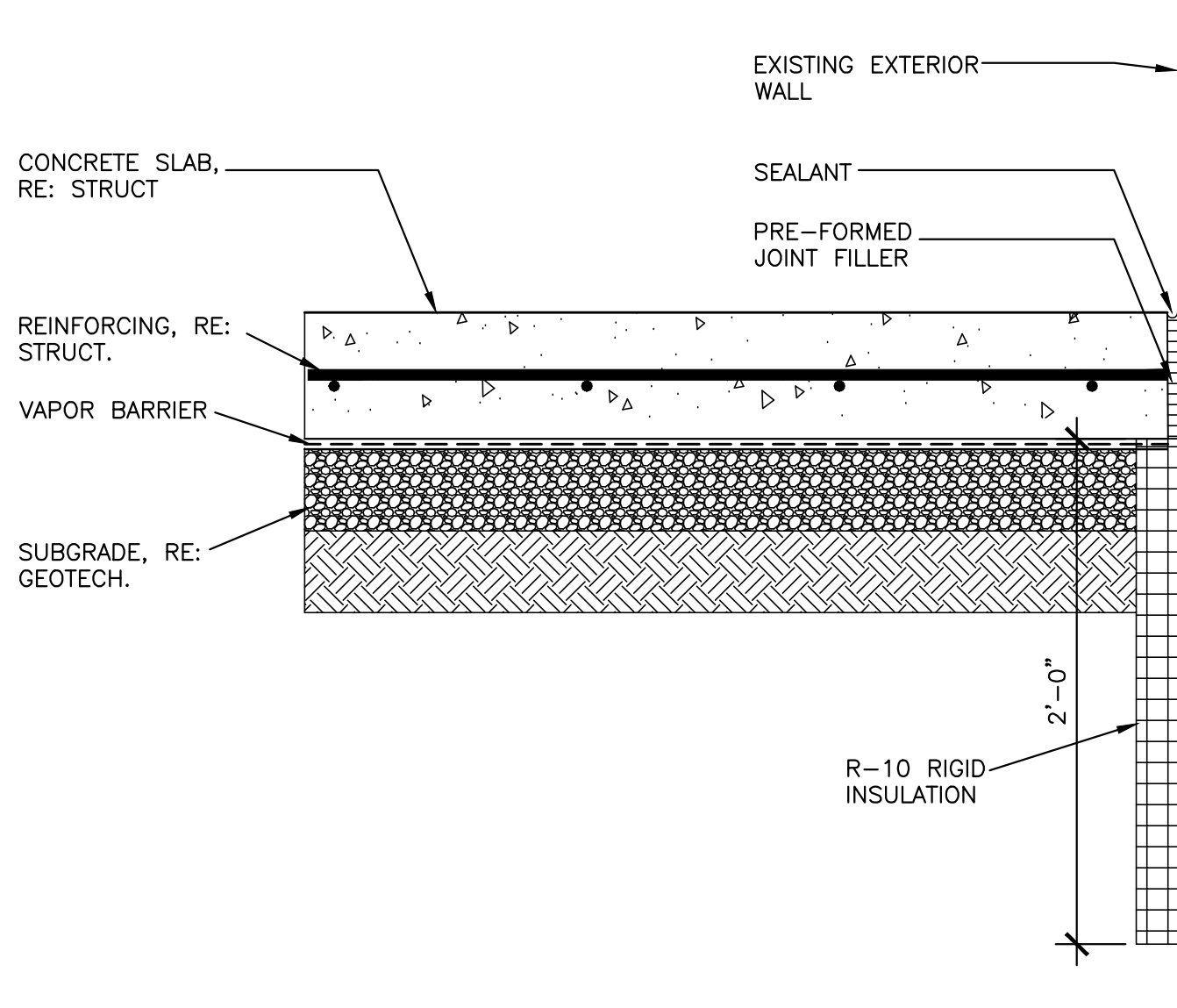
A-2



1 TYPICAL SLAB DETAIL  
1 1/2" = 1'-0"

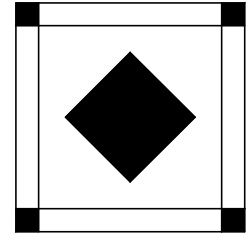


2 SLAB DETAIL  
1 1/2" = 1'-0"



3 SLAB DETAIL  
1 1/2" = 1'-0"

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JOB NUMBER: 20-015  
FILE:  
DESIGNED:  
DRAWN: SH  
CHECKED:  
DATE: 10/24/2023  
REVISIONS:

SHEET TITLE:

DETAILS

SHEET NUMBER:

A-3



ML JOB #: 23-0213.S.01  
PRINCIPAL ENGINEER  
FOR DAVID WITTMAN  
PROJECT MANAGER: DAVID WITTMAN  
DESIGNER: ORSA KROEGER  
LEAD REVIT TECH: JOEL JONES  
DATE PRINTED: 7/26/2024 8:21:14 AM  
FILE PATH: AutoDesk Docs\MM Structural Projects\2023\23-0213.S.01-Hugo Roundhouse Interiors-S23.rvt

DESIGN CRITERIA
<p><b>1) CODES AND STANDARDS:</b> 1A) GENERAL DESIGN</p> <ul style="list-style-type: none"><li>INTERNATIONAL BUILDING CODE 2018</li></ul> <p><b>2) LATERAL LOADS</b> 2A) SEISMIC LOADS</p> <ul style="list-style-type: none"><li>SEISMIC DESIGN CATEGORY = B</li><li>RISK CATEGORY = II</li><li>EARTHQUAKE IMPORTANCE FACTOR, <math>I_e = 1.00</math></li><li>MAPPED SPECTRAL RESPONSE ACCELERATION, <math>S_s = 11.60\%</math></li><li>MAPPED SPECTRAL RESPONSE ACCELERATION, <math>S_1 = 4.60\%</math></li><li>DESIGN SPECTRAL RESPONSE COEFFICIENT, <math>SD_s = 0.124</math></li><li>DESIGN SPECTRAL RESPONSE COEFFICIENT, <math>SD_1 = 0.074</math></li><li>SOIL SITE CLASS = D</li></ul> <p>2B) NEW MEZZANINE CONSTRUCTION SHALL BE Laterally Independent. THEREFORE NO CHANGES TO LOADING OR CONFIGURATION OF THE EXISTING LATERAL FORCE RESISTING SYSTEM ARE PRESENT.</p> <p><b>3) GRAVITY LOADS</b> 3A) MEZZANINE DEAD LOAD = 16PSF</p> <p>3B) ASSEMBLY LIVE LOAD = 100PSF</p>
PHASED CONSTRUCTION NOTES
<p><b>1) GENERAL:</b> 1A) THE DRAWINGS IN THIS PACKAGE ARE INCOMPLETE AND REPRESENT A PORTION OF THE TOTAL PROJECT. COORDINATE THE WORK OF THIS PACKAGE WITH FUTURE DRAWINGS ISSUED AND UPDATED DRAWINGS TO ALL TRADES AS REQUIRED.</p> <p>1B) THESE STRUCTURAL DRAWINGS ARE RELEASED FOR SHEETS ISSUED FOR 100% CD IN STRUCTURAL DRAWINGS LIST.</p> <p>1C) DRAWINGS STAMPED OR NOTED AS "NOT FOR CONSTRUCTION" ARE PRELIMINARY AND SUBJECT TO CHANGE.</p> <p>1D) USE THE MOST CURRENT DRAWINGS IN PREPARATION OF SUBMITTALS. ALL SUBMITTALS SHALL LIST DATE OF DRAWINGS USED TO PREPARE THE SUBMITTAL.</p> <p>1E) BECAUSE THIS IS A PHASED CONSTRUCTION PROJECT, THE CONTRACTOR MUST ANTICIPATE ADDITIONAL DRAWING REVISIONS AFTER EARLY BID PACKAGES HAVE BEEN ISSUED. THESE REVISIONS WILL INCREASE THE CONSTRUCTION COST. THE CONTRACTOR SHALL INCLUDE THESE ANTICIPATED COSTS IN ANY BIDS OR PRICE GUARANTEES PROVIDED TO THE OWNER.</p>
GENERAL NOTES
<p><b>1) GENERAL:</b> 1A) ENGINEER: REFERENCES ON THE STRUCTURAL DRAWINGS TO 'ENGINEER' MEAN THE STRUCTURAL ENGINEER OF RECORD. OTHER ENTITIES ARE SPECIFICALLY NOTED AS "CONTRACTOR'S ENGINEER", "MECHANICAL ENGINEER", ETC.</p> <p>1B) UNDERGROUND UTILITIES: LOCATE EXISTING UTILITIES AND NOTIFY ARCHITECT OF EXISTING UTILITIES OR SUBGRADE CONDITIONS WHICH INTERFERE WITH WORK.</p> <p>1C) STRUCTURAL ELEMENTS ARE CENTERED ON GRID LINES AND GRID LINE INTERSECTIONS UNLESS DIMENSIONED OTHERWISE.</p> <p><b>2) USE OF DRAWINGS:</b> 2A) DO NOT SCALE DRAWINGS.</p> <p>2B) DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.</p> <p>2C) DETAILS NOTED TYPICAL APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT.</p> <p>2D) WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, AND GENERAL NOTES:</p> <ul style="list-style-type: none"><li>CONTACT THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION</li><li>THE MORE STRINGENT REQUIREMENTS SHALL GOVERN FOR BIDDING / PRICING</li></ul> <p><b>3) EXISTING STRUCTURES:</b> 3A) CONTRACT DOCUMENTS HAVE BEEN PREPARED USING AVAILABLE DRAWINGS AND SITE OBSERVATION AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.</p> <p>3B) DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL CONDITIONS NOT PER THE CONTRACT DOCUMENTS. EXAMPLES INCLUDE:</p> <ul style="list-style-type: none"><li>SIZES OR DIMENSIONS OTHER THAN THOSE SHOWN</li><li>DAMAGE OR DETERIORATION TO MATERIALS AND COMPONENTS</li><li>CONDITIONS OF INSTABILITY OR LACK OF SUPPORT</li><li>ITEMS NOTED AS EXISTING ON THE DRAWINGS BUT NOT FOUND IN THE FIELD</li></ul> <p>3C) PREPARE DIMENSIONAL DRAWINGS OF ALL DISCOVERED ITEMS.</p> <p>3D) CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS.</p> <p>3E) CONTRACTOR SHALL MAKE ALLOWANCE FOR THE RESOLUTION OF SUCH DISCOVERIES IN THE CONSTRUCTION SCHEDULE.</p> <p>3F) SUBMIT A DIMENSIONED DRAWING OF ALL NEW OPENINGS THROUGH EXISTING STRUCTURE AND SECURE APPROVAL PRIOR TO CUTTING. NEW OPENING MAY BE EITHER SHOWN ON THE CONTRACT DOCUMENTS OR PROPOSED BY THE CONTRACTOR. DRAWING SHALL SHOW:</p> <ul style="list-style-type: none"><li>VERTICAL &amp; HORIZONTAL LOCATION AND SIZE OF NEW OPENING(S)</li><li>ALL EXISTING OPENINGS IN THE VICINITY OF THE NEW OPENING(S)</li><li>ALL EXISTING STRUCTURE (BEAMS, COLUMNS, SLABS, WALLS, ETC) IN THE VICINITY OF THE NEW OPENING(S)</li><li>ALL REINFORCING BAR SIZES AND POSITIONS (LAYOUT LOCATION AND DEPTH) CONFLICTING WITH OR IN THE VICINITY OF THE NEW OPENING(S).</li></ul>

GENERAL NOTES
<p><b>4) COORDINATION:</b> 4A) STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO SHOP DRAWINGS AND WORK.</p> <p>4B) COORDINATE DIMENSIONS OF ALL OPENINGS, BLOCKOUTS, DEPRESSIONS, ETC., WITH ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL.</p> <p>4C) SEE ARCHITECTURAL PLANS FOR INTERIOR PARTITIONS. PARTITION FRAMING SHALL BE CONNECTED TO THE PRIMARY STRUCTURE IN SUCH A WAY SO AS TO ALLOW FOR VERTICAL LIVE LOAD DEFLECTIONS OF SPAN/360 AT FLOOR FRAMING OR SPAN/240 AT ROOF FRAMING. DO NOT MAKE RIGID VERTICAL AND HORIZONTAL CONNECTIONS TO THE PRIMARY STRUCTURE IN THE PLANE OF THE PARTITION.</p> <p><b>5) SUBMITTALS AND SUBSTITUTIONS:</b> 5A) SUBMITTALS:</p> <ul style="list-style-type: none"><li>IF THE CONTRACTOR REQUESTS A CHANGE FROM THE STRUCTURAL DRAWINGS, IT SHALL BE APPROVED BY THE ARCHITECT AND DESIGNED BY MARTIN/MARTIN, INC. PRIOR TO SUBMITTING SHOP DRAWINGS. VARIATION SHALL BE INDICATED ON THE SHOP DRAWINGS. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR MAKING THE CHANGE.</li><li>CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE IN SUBMITTALS</li><li>ALL SHOP DRAWINGS SHALL REFERENCE THE STRUCTURAL DRAWING NUMBER AND DETAIL USED TO PREPARE THE SUBMITTAL</li><li>SUBMIT A STATEMENT OF RESPONSIBILITY FOR CONSTRUCTION OF THE LATERAL LOAD RESISTING SYSTEM IDENTIFIED IN THE DESIGN CRITERIA IN ACCORDANCE WITH IBC 2006 SECTION 1706.</li></ul> <p>5B) SUBSTITUTIONS: ARCHITECT'S APPROVAL SHALL BE SECURED FOR ALL SUBSTITUTIONS</p> <p>5C) NONCONFORMANCE: NOTIFY ARCHITECT OF CONDITIONS NOT CONSTRUCTED PER THE CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH CORRECTIVE WORK. SUBMIT PROPOSED REPAIR TO THE ARCHITECT FOR ACCEPTANCE. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR DESIGNING THE REPAIR.</p> <p>5D) ALL SHOP DRAWINGS SHALL BE SUBMITTED IN ELECTRONIC FORMAT ONLY.</p> <p><b>6) TEMPORARY CONDITIONS, CONSTRUCTION ENGINEERING, AND OSHA STANDARDS:</b> 6A) THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION AND ONLY FOR LOADS ANTICIPATED DURING THE STRUCTURE'S SERVICE LIFE.</p> <p>6B) THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. REFER TO "LATERAL LOAD RESISTING SYSTEM DESCRIPTION" IN DESIGN CRITERIA FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL PROVIDE ALL REQUIRED ENGINEERING AND OTHER MEASURES TO ACHIEVE THE MEANS, METHODS, AND SEQUENCES OF WORK WHICH MAY INCLUDE, BUT IS NOT LIMITED TO:</p> <ul style="list-style-type: none"><li>LAYOUT</li><li>DESIGN FOR FORMWORK, SHORING, AND RESHORING</li><li>DESIGN OF CONCRETE MIXES</li><li>ERECTION PROCEDURES WHICH ADDRESS STABILITY OF THE FRAME DURING CONSTRUCTION</li><li>WELD PROCEDURES</li><li>DESIGN OF TEMPORARY BRACING OF WALLS FOR WIND, SEISMIC, OR SOIL LOADS</li><li>SURVEYING TO VERIFY CONSTRUCTION TOLERANCES</li><li>EVALUATION OF TEMPORARY CONSTRUCTION LOADS ON STRUCTURE DUE TO EQUIPMENT AND MATERIALS</li><li>STRUCTURAL ENGINEERING TO RESIST ANY OTHER LOADS NOT IDENTIFIED ON DESIGN DRAWINGS</li></ul> <p>6C) NOTHING SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSTRUED AS ELIMINATING THE NEED FOR THE CONTRACTOR TO COMPLY WITH ALL OSHA REQUIREMENTS. WHERE THE STRUCTURAL DRAWINGS APPEAR TO CONFLICT WITH OSHA REQUIREMENTS, THE STRUCTURAL DRAWINGS REPRESENT FINAL CONDITIONS ONLY.</p> <ul style="list-style-type: none"><li>THE CONTRACTOR SHALL ADD ALL ERECTION FRAMING NECESSARY TO COMPLY WITH OSHA.</li><li>THE CONTRACTOR SHALL ADD ALL NECESSARY BOLTS, ANCHOR BOLTS, PLATES, STIFFENER PLATES, STABILIZER PLATES, BRIDGING, BRACING, BEARING SEATS, COLUMN SPLICES, ETC., AS WELL AS CLOSURES FOR OPENINGS. IN ADDITION, FIELD WELD ANYTHING THAT MAY BE CONSIDERED A TRIP HAZARD, SUCH AS SHEAR STUDS, AFTER PROTECTIVE DECKING IS INSTALLED.</li><li>WASHERS OR RINGS MAY BE WELDED TO COLUMNS TO PROVIDE FOR SAFETY CABLES. HOLES IN COLUMNS FOR SAFETY CABLES SHALL BE SHOP INSTALLED AND SHALL BE INDICATED ON SHOP DRAWINGS. ADJUST COLUMN SPLICE LOCATIONS OR ADD COLUMN SPLICES AS NECESSARY TO COMPLY WITH OSHA REQUIREMENTS. SUBMIT PROPOSED LOCATIONS.</li><li>HOLES IN CONCRETE COLUMNS FOR SAFETY CABLES SHALL BE INDICATED ON THE SHOP DRAWINGS, SHALL BE LIMITED TO 1"Ø MAXIMUM, LOCATED WITHIN THE MIDDLE THIRD OF THE COLUMN AND SHALL BE CREATED USING SLEEVES. DO NOT DRILL OR CORE COLUMNS TO INSTALL SAFETY CABLES.</li><li>ALL METAL JOISTS REQUIRED BY OSHA TO BE BOLTED SHALL HAVE ERECTION BOLTS INSTALLED REGARDLESS OF FINAL CONNECTION SHOWN ON THE STRUCTURAL DRAWINGS.</li></ul>

CONCRETE NOTES
<p><b>1) GENERAL:</b> 1A) ALL WORK SHALL CONFORM WITH ACI 301-10, UNLESS NOTED OTHERWISE IN DRAWINGS.</p> <p>1B) DETAIL BARS IN ACCORDANCE WITH THE DRAWINGS AND ACI PUBLICATION SP-66 (2004); "ACI DETAILING MANUAL."</p> <p><b>2) REINFORCING MATERIALS:</b> 2A) SEE 'REINFORCING MATERIAL TABLE'</p> <p><b>3) REINFORCING FABRICATION:</b> 3A) SPLICES:</p> <ul style="list-style-type: none"><li>NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED ON DRAWINGS. MAKE BARS CONTINUOUS AROUND CORNERS WHERE DETAIL NOT PROVIDED. WHERE PERMITTED, SPLICES MAY BE MADE BY CONTACT LAPS.</li><li>SEE 'LAP SPLICE SCHEDULE' FOR LAP LENGTHS.</li><li>SPLICE CONTINUOUS TOP AND BOTTOM BARS IN WALLS, BEAMS, AND GRADE BEAMS 'LTS' UNLESS NOTED OTHERWISE.</li><li>SPLICE TOP BARS AT MIDSPAN AND BOTTOM BARS OVER SUPPORT UNLESS NOTED OTHERWISE.</li></ul> <p>3B) MISCELLANEOUS REINFORCING REQUIREMENTS:</p> <ul style="list-style-type: none"><li>PROVIDE ADDITIONAL BARS OR STIRRUPS REQUIRED TO SECURE REINFORCING IN PLACE DURING CONCRETE PLACEMENT.</li><li>MAKE ALL REINFORCING BAR BENDS IN THE FABRICATOR'S SHOP UNLESS NOTED.</li><li>NO WELDING OF REINFORCING PERMITTED UNLESS NOTED ON DRAWINGS. WHERE PERMITTED, PERFORM WELDING IN ACCORDANCE WITH AWS D1.4-2011.</li><li>PROVIDE ADDED REINFORCING TO TRIM ALL OPENINGS, NOTCHES, AND REENTRANT CORNERS AS NOTED IN TYPICAL DETAILS.</li></ul> <p><b>4) STRUCTURAL CONCRETE MIX REQUIREMENTS:</b> 4A) SEE 'CONCRETE MIX TABLE'</p> <p><b>5) SLAB-ON-GRADE:</b> 5A) VERIFY ALKALINITY OF CONCRETE SURFACE, SLAB VAPOR TRANSMISSION, AND SLAB FLATNESS/LEVELNESS ARE COMPATIBLE WITH FLOORING SYSTEM AND ADHESIVES PRIOR TO INSTALLING FLOORING.</p> <p>5B) TAKE PRECAUTIONS TO MINIMIZE SLAB CURLING. GRIND SLAB OR USE LEVELING COMPOUND IF FLOOR FLATNESS AND LEVELNESS VALUES ARE NOT ACCEPTABLE TO THE ARCHITECT.</p> <p><b>6) NON-SHRINK GROUT:</b> 6A) CONFORM TO ASTM C1107</p> <p>6B) ACHIEVE 6000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.</p> <p><b>7) PLACING REINFORCEMENT:</b> 7A) REINFORCEMENT PROTECTION:</p> <ul style="list-style-type: none"><li>SEE 'REBAR COVER TABLE'</li><li>SEE ACI 117-10 FOR REINFORCEMENT PLACING TOLERANCES</li></ul> <p>7B) PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE REINFORCEMENT AT POSITIONS SHOWN ON PLANS. ALL REINFORCING, DOWELS, BOLTS, AND EMBEDDED PLATES SHALL BE SET AND TIED IN PLACE BEFORE THE CONCRETE IS POURED. "STABBING" INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.</p> <p><b>8) CONSTRUCTION/CONTROL JOINTS:</b> 8A) CONSTRUCTION JOINT LOCATION AND CASTING SEQUENCE SHOWN ON THE ARCHITECTURAL DRAWINGS IS SUGGESTED AND HAS BEEN ARRANGED TO MINIMIZE THE EFFECTS OF ELASTIC AND LONG-TERM SHORTENING. SUBMIT DRAWINGS SHOWING PROPOSED CONSTRUCTION JOINT LOCATION AND CASTING SEQUENCE.</p> <p>8B) CONSTRUCTION JOINTS IN SLABS-ON-GRADE SHALL BE LOCATED TO ACCOMMODATE THE MAXIMUM LENGTH AND AREA THE CONTRACTOR CAN REASONABLY POUR, FINISH, AND JOINT IN THE SAME DAY, BUT SHALL NOT EXCEED 150 FEET WITH A MAXIMUM AREA OF 15,000 SQUARE FEET UNLESS APPROVED BY THE ENGINEER.</p> <p>8C) CONCRETE CONSTRUCTION JOINT SURFACE SHALL BE CLEANED AND ALL LAITANCE AND LOOSE MATERIAL REMOVED PRIOR TO SECOND CONCRETE PLACEMENT.</p> <p><b>9) MODIFICATIONS TO HARDENED OR EXISTING CONCRETE</b> 9A) UNLESS NOTED ON THE STRUCTURAL DOCUMENTS MODIFICATIONS AS LISTED BELOW SHALL NOT BE MADE TO HARDENED OR EXISTING CONCRETE WITHOUT APPROVAL OF THE ARCHITECT:</p> <ul style="list-style-type: none"><li>SAW CUTTING</li><li>CORING</li><li>CHIPPING</li></ul> <p>9B) DO NOT CUT OR DAMAGE ANY REINFORCING WITHOUT APPROVAL OF THE ENGINEER.</p> <p><b>10) SLEEVES, OPENINGS, AND EMBEDDED PIPE/CONDUITS:</b> 10A) GENERAL</p> <ul style="list-style-type: none"><li>REFER TO TYPICAL DETAILS FOR REQUIREMENTS FOR CONDUIT AND PIPE EMBEDDED IN WALLS AND SLABS</li><li>REFER TO TYPICAL DETAILS FOR SPACING AND LAYOUT LIMITATIONS FOR SLEEVES AND OPENINGS</li><li>FORM OPENINGS AND PROVIDE SLEEVES BEFORE PLACING CONCRETE, CORING OF CONCRETE IS NOT PERMITTED</li><li>AT COMPOSITE SLABS DO NOT CUT DECK FOR AT LEAST 7 DAYS AFTER CONCRETE PLACEMENT</li></ul> <p>10B) REINFORCING</p> <ul style="list-style-type: none"><li>REFER TO TYPICAL DETAILS FOR REINFORCEMENT REQUIREMENTS AT SLEEVES, OPENINGS OR CONDUIT</li><li>DO NOT CUT REINFORCING WHICH MAY CONFLICT</li></ul>

REINFORCING MATERIAL TABLE							
REINF ELEMENT	ASTM	Fy (KSI)	Fu (KSI)	COMMENTS			
TYP REINFORCING	A615	60	90	-			
WELDED & FIELD BENT REINF	A706	60	80	-			
EPOXY COATING OF REINFORCING	A775 OR A934	-	-	-			

CONCRETE MIX TABLE							
CONC MIX TYPE	INTENDED USE	28 DAY STRENGTH f'c (KSI)	CONC WEIGHT	MAX W/C RATIO, INCLUDING FLY ASH	MAX AGGREGATE SIZE, IN	TOTAL AIR CONTENT (%) NOTE a	OTHER REQTS, NOTE b
1	INTERIOR CONCRETE SLABS ON GRADE AND FOUNDATION ELEMENTS	4	NWC	-	1	NP	MSS
2	ALL CONC OTHERWISE NOT SPECIFIED	4	NWC	-	1	NP	-

**CONCRETE MIX TABLE NOTES:**  
PROPORTIONS OF MATERIALS IN CONCRETE MIX SHALL BE ESTABLISHED TO:

- PROVIDE THE MINIMUM COMPRESSIVE STRENGTH AS INDICATED IN THE MIX TABLE. DO NOT EXCEED THE MAXIMUM WATER-CEMENT RATIO NOTED.
- PROVIDE WORKABILITY AND CONSISTENCY TO PERMIT CONCRETE TO BE WORKED READILY INTO FORMS AND AROUND REINFORCEMENT UNDER CONDITIONS OF PLACEMENT TO BE EMPLOYED, WITHOUT SEGREGATION OR EXCESSIVE BLEEDING. CONTRACTOR SHALL SELECT APPROPRIATE SLUM...

USE TYPE I / II PORTLAND CEMENT UNLESS NOTED OTHERWISE. FOR CONCRETE MIXES USED ON FLOORS MINIMUM CEMENTITIOUS CONTENT SHALL BE 540 POUNDS PER CUBIC YARD


FOR CONCRETE PLACED BY PUMPING PROVIDE CONCRETE MIX FLOWABILITY TO FACILITATE PUMPING...

a. WHERE AIR CONTENT IS INDICATED IN THE MIX TABLE, PROVIDE AIR ENTRAINING ADMIXTURE. TOTAL AIR CONTENT LIMITS INCLUDE BOTH ENTRAINED AND ENTRAPPED AIR +/- 1 1/2%. "NP" IN COLUMN INDICATES ADDITION OF ENTRAINED AIR IS NOT PERMITTED EXCEPT WHERE CONTRACTOR CAN...

b. ABBREVIATIONS FOR OTHER REQUIREMENTS AS FOLLOWS:  
MSS = MAXIMUM SHRINKAGE STRAIN LIMITED

FOUNDATION NOTES	
<p><b>1) DESIGN CRITERIA:</b> 1A) NO PROJECT GEOTECHNICAL REPORT WAS AVAILABLE FOR THIS PROJECT. DESIGN BASED ON ASSUMED VALUES PER IBC 1806.2.</p> <p>1B) THE FOLLOWING IBC MINIMUM VALUES PER TABLE 1806.2 HAVE BEEN USED FOR THIS PROJECT:</p> <ul style="list-style-type: none"><li>ALLOWABLE VERTICAL BEARING PRESSURE = 1,500 PSF</li><li>ALLOWABLE LATERAL BEARING PRESSURE = 150 PCF</li></ul> <p>1C) GEOTECHNICAL REPRESENTATIVE TO INSPECT ONSITE MATERIALS PRIOR TO POURING FOUNDATIONS. REVIEW ADEQUACY OF ONSITE MATERIALS AND PROVIDE RECOMMENDATIONS TO ACHIEVE THE ALLOWABLE VALUES STATED ABOVE.</p>	

STRUCTURAL DRAWING LIST			
SHEET NUMBER	SHEET NAME	ISSUED FOR	ISSUE DATE
S-0.1	GENERAL NOTES	100% CD	12/08/23
S-0.2	GENERAL NOTES	100% CD	12/08/23
S-1.0	FOUNDATION PLAN	100% CD	12/08/23
DDS-1.1	WALL FRAMING PLAN - MAIN FLOOR	50% DD	12/08/23
DDS-1.2	MEZZANINE FLOOR FRAMING PLAN	50% DD	12/08/23
S-3.1	CONCRETE DETAILS	100% CD	12/08/23
S-3.2	CONCRETE DETAILS	100% CD	12/08/23



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REVISIONS

NO.	ISSUE	DATE

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

S-0.1

PROJECT NO:

23.0213.S.01

DATE:

12/08/23

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MM JOB # 23.0213.S.01  
PRINCIPAL DESIGNER  
FOR DAVID WITTMAN  
PROJECT MANAGER DAVID WITTMAN

DESIGNER: DICK KRIEGER  
LEAD REVIT TECH: JOEL DINKES  
DATE PRINTED: 7/26/2024 8:21:14 AM  
FILE PATH: Autodesk Docs\\MM Structural Projects 2023\\23.0213.S.01-Hugo Roundhouse Interiors-S23.rvt

POST-INSTALLED ANCHOR NOTES

**1) PERSONNEL REQUIREMENTS:**  
1A) THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. SUBMIT DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS HAVE PASSED THE TRAINING COURSE PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

1B) PERSONNEL WHO WILL INSTALL HORIZONTAL OR UPWARDLY INCLINED ADHESIVE ANCHORS IN CONCRETE THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM. THESE ANCHORS ARE DESIGNATED WITH A (CERT) AFTER THE ANCHOR CALL OUT. SUBMIT DOCUMENTED CONFIRMATION THAT PERSONNEL HAVE PASSED THE TRAINING COURSE PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

**2) INSTALLATION REQUIREMENTS:**  
2A) ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND PER MANUFACTURER'S ON-SITE TRAINING.

2B) ALL ADHESIVE ANCHORS AND ADHESIVE ANCHORED REINFORCEMENT DESIGNS ARE FOR INSTALLATION IN THE FOLLOWING CONDITIONS, UNLESS NOTED OTHERWISE. WRITTEN APPROVAL MUST BE RECEIVED FROM ENGINEER PRIOR TO INSTALLATION IN ALTERNATE CONDITIONS.

- DRY CONCRETE, UNLESS NOTED OTHERWISE.
- CONCRETE TEMPERATURE AT TIME OF INSTALLATION THROUGH CURE TIME MUST BE WITHIN THE TEMPERATURE RANGE SPECIFIED IN MANUFACTURER'S PRINTED INSTALLATION INSTRUCTION FOR ADHESIVE GEL AND CURE TIMES.
- ANCHOR HOLES TO BE HAMMER DRILLED AND CLEANED.
- CONCRETE MUST BE AT LEAST 21 DAYS OLD BEFORE INSTALLATION OF ANCHORS.
- HOLES TO BE CLEANED AND PREPARED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND EVALUATION REPORT PRIOR TO ADHESIVE INJECTION.

2C) THE POSITION OF EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE SHALL BE LOCATED PRIOR TO INSTALLING POST INSTALLED ANCHORS OR REINFORCEMENT. EXISTING REINFORCEMENT SHALL BE LOCATED USING A SCANNER, GPR, X-RAY, CHIPPING OR OTHER MEANS. DO NOT DAMAGE OR CUT EXISTING REINFORCEMENT.

**3) SUBSTITUTION REQUESTS:**  
3A) SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS AND PRODUCT DATA DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS IN COMPLIANCE WITH THE RELEVANT BUILDING CODES, LOAD RESISTANCE, INSTALLATION CATEGORY, CREEP APPROVAL, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE OF THE SPECIFIED PRODUCT.

POST-INSTALLED ANCHOR TABLE - SIMPSON				
ANCHOR TYPE	PRODUCT	Fy (KSI)	Fu (KSI)	COMMENT
ADHESIVE (IN CONCRETE)	SET-3G	-	-	SUBMIT CALCULATIONS FOR SUBSTITUTIONS
ADHESIVE ANCHOR RODS	-	36 MIN	58 MIN	THREADED ROD, UNGREASED
EXPANSION ANCHORS (IN CONCRETE)	SIMPSON STRONG BOLT	-	-	SUBMIT CALCULATIONS FOR SUBSTITUTIONS
SCREW ANCHORS	SIMPSON TITEN HD	-	-	SUBMIT CALCULATIONS FOR SUBSTITUTIONS

WOOD NOTES

**1) LAMINATED MEMBER SIZES:**  
1A) LVL SIZES SHOWN ARE NET. OTHER MEMBER SIZES ARE NOMINAL.

**2) FRAMING LUMBER:**  
2A) DRY (19% MAXIMUM MOISTURE CONTENT AT THE TIME OF INSTALLATION), HEM-FIR WITH MINIMUM DESIGN VALUES BASED ON THE 2005 NDS. SEE 'FRAMING LUMBER TABLE' FOR MINIMUM GRADES.

2B) BEAMS AND STRINGERS USED WITH CANTILEVERS OR CONTINUOUS SPANS SHALL BE GRADED TO PROVIDE THE SPECIFIED ALLOWABLE STRESSES OVER THE ENTIRE MEMBER LENGTH.

**3) FABRICATED LUMBER:**  
3A) FABRICATED LUMBER DESIGNATIONS ARE THOSE MANUFACTURED BY ILEVEL, BOISE, IDAHO.

3B) FABRICATED LUMBER IS DESIGNATED ON THE DRAWINGS AS ONE OF THE FOLLOWING: MICROLAM (LVL).

3C) FABRICATED LUMBER SHALL BE DRY.

3D) FABRICATED LUMBER DESIGNATIONS ARE THOSE MANUFACTURED BY WEYERHAUSER.

3E) MINIMUM PROPERTIES FOR LVL SHALL BE:  
- E = 2,000,000psi  
- Fb = 2,600psi  
- Fv = 285psi

3E) FABRICATED RIMBOARD SHALL BE LAMINATED STRAND LUMBER.

**4) SHEATHING:**  
4A) WOOD STRUCTURAL PANELS (WSP)  
- WOOD STRUCTURAL PANELS SHALL BE APA RATED SHEATHING CONFORMING TO U.S. DEPARTMENT OF COMMERCE STANDARD PS 2-10.  
- ALL WOOD PANELS SHALL BE EXPOSURE 1.

**5) BLOCKING AND BRIDGING:**  
5A) PROVIDE 1" X 4" SIMPSON NC/NCA CROSS-BRIDGING AT 8' OC MAXIMUM SPACING FOR ALL SOLID SAWN WOOD JOISTS AND RAFTERS. PROVIDE FULL HEIGHT SOLID BLOCKING (MINIMUM WIDTH TO MATCH WIDTH OF FRAMING) BETWEEN ALL FRAMING MEMBERS (SOLID SAWN JOISTS AND RAFTERS, FABRICATED JOISTS AND RAFTERS AND TRUSSES) AT SUPPORTS.

**6) NAILING:**  
- UNLESS NOTED OTHERWISE ON THE DRAWINGS, PROVIDE BOX NAILS COMMON NAILS SINKERS WITH SIZES SHOWN IN THE TABLE BELOW. MINIMUM NAILING SHALL BE IN ACCORDANCE WITH THE TYPICAL WOOD CONNECTION SCHEDULE AND IBC 2006 TABLE 2304.9.1

6B) WHERE COMMON NAILS ARE SPECIFIED, BOX NAILS OF EQUAL LENGTH MAY BE SUBSTITUTED PROVIDED ONE BOX NAIL IS ADDED FOR EVERY THREE COMMON NAILS SPECIFIED.

**7) METAL CONNECTORS:**  
7A) FRAMING CONNECTORS SHALL CONFORM TO IBC 2006 SECTION 1715.1 FRAMING CONNECTOR DESIGNATIONS ARE THOSE MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, SAN LEANDRO, CALIFORNIA. OTHER MANUFACTURER'S PRODUCTS MAY BE USED IF APPROVED BY THE ENGINEER. FURNISH NAILS AND/OR BOLTS OF DIAMETER, LENGTH, AND NUMBER SPECIFIED BY THE MANUFACTURER FOR EACH CONNECTOR.

7B) ALL CONNECTOR HOLES SHALL BE FILLED WITH PROPER NAILS/BOLTS INCLUDING OPTIONAL NAIL LOCATIONS FOR UPLIFT. ALL BOLT HOLES SHALL BE DRILLED INTO FRAMING MEMBERS. MAXIMUM HOLE DIAMETER IS 1/16" LARGER THAN THE BOLT DIAMETER.

**8) OPENINGS:**  
8A) OPENING, POCKETS, ETC., SHALL NOT BE PLACED IN BEAMS, JOISTS, RAFTERS, STUDS, POSTS, COLUMNS, TIMBER AND OTHER STRUCTURAL MEMBERS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS.

FRAMING LUMBER TABLE - HEM-FIR (HF)				
TYPE OF USE	GRADE	Fb (PSI)	Fv (PSI)	E (PSI)
LOAD BEARING STUDS (AND COLUMNS ASSEMBLED FROM STUDS)	NO. 2	850	150	1,300,000
NON-LOAD BEARING STUDS	STUD	675	150	1,200,000
FLOOR-JOIST	NO. 2	850	150	1,300,000
BEAMS & STRINGERS	NO. 1	1,050	140	1,300,000
POSTS & TIMBER	NO. 1	975	140	1,300,000
ALL OTHER	NO. 1	975	150	1,500,000

FASTENER TABLE			
FASTENER	DIAMETER	HEAD DIAMETER	LENGTH
8d COMMON NAIL	0.131"	0.281"	2.5"
10d COMMON NAIL	0.148"	0.312"	3"
12d COMMON NAIL	0.148"	0.312"	3.25"
16d COMMON NAIL	0.162"	.344"	3.5"

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HUGO ROUNDHOUSE INTERIORS

3RD AVENUE  
HUGO, COLORADO 80821

REVISIONS

NO.	ISSUE	DATE

PROJECT NO: 23.0213.S.01  
DATE: 12/08/23  
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SHEET TITLE:  
GENERAL NOTES

SHEET NUMBER:  
S-0.2

MM JOB # 23.0213.S.01  
PRINCIPAL DESIGNER  
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PROJECT MANAGER DAVID WITTMAN

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REVISIONS

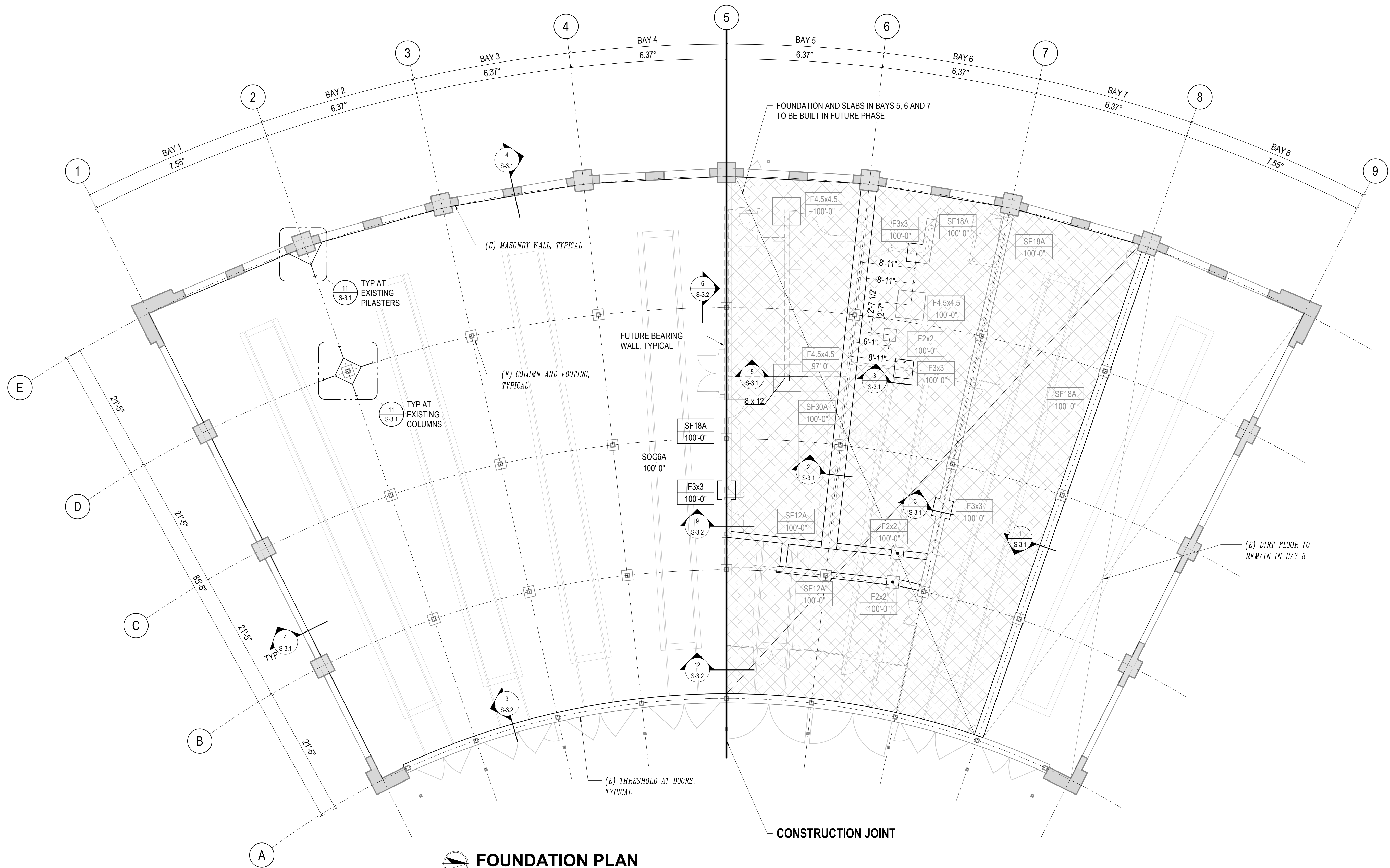
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GENERAL NOTES

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S-0.2



MM JOB # 23.0213.S.01  
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DATE PRINTED: 11/13/2025 11:39:49 PM  
FILE PATH: Autodesk Docs\\MM Structural Projects 2023\\23.0213.S.01-Hugo Roundhouse Interiors-S23.rvt



## FOUNDATION PLAN

1/8" = 1'-0"

### FOUNDATION NOTES:

#### 1) SLAB-ON-GRADE

1A) SEE S0 SERIES SHEETS FOR GENERAL NOTES.

1B) SEE S3 SERIES SHEETS FOR TYPICAL CONCRETE DETAILS.

1C) SEE 6/S-3.1 FOR TYPICAL SLAB-ON-GRADE.

1D) SEE 12/S-3.1 FOR TYPICAL SLAB-ON-GRADE LAYOUT/INFORMATION.

1E) SEE ARCHITECTURAL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, FILL, PADS, CURBS, AND PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

1F) SLAB-ON-GRADE TYPE AND ELEVATION ARE NOTED THUS:

SOGXX  
XXX'-XX"

1G) FOOTING TYPE AND ELEVATION ARE NOTED THUS:

XXXX  
XXX'-XX"

# HUGO ROUNDHOUSE INTERIORS

3RD AVENUE  
HUGO, COLORADO 80821

### REVISIONS

NO.	ISSUE	DATE
1	Revision 1	11/14/2025

PROJECT NO: 23.0213.S.01

DATE: 12/08/23

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SHEET TITLE:  
FOUNDATION PLAN

SHEET NUMBER:  
S-1.0

# HUGO ROUNDHOUSE INTERIORS

3RD AVENUE  
HUGO, COLORADO 80821

REVISIONS		
NO.	ISSUE	DATE
1	Revision 1	11/14/2025

PROJECT NO: 23.0213.S.01  
DATE: 12/08/23  
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SHEET TITLE:  
CONCRETE  
DETAILS

SHEET NUMBER:

S-3.2

LAP SPLICE & DEVELOPMENT LENGTHS (INCHES)						
F <sub>c</sub> =3,000 PSI, F <sub>y</sub> =60,000 PSI						
CLEAR COVER			1" 1.5" 2"+	1" 1.5" 2"+	1" 1.5" 2"+	
BAR SIZE	LDH	LCE	LCS	LTE	LTS TOP & LTS	LTS TOP
#3	8	9	12	12	13	17
#4	12	11	15	14	18	23
#5	16	14	19	20	22	34
#6	21	17	23	27	26	46
#7	27	20	27	44	33	57
#8	32	22	30	55	42	72
#9	39	25	34	67	51	87
#10	45	28	38	79	61	103
#11	52	31	42	93	72	120

- GENERAL NOTES:**
- LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF LAP LENGTHS SCHEDULED
  - ABBREVIATIONS:
    - A. 'LCE' = COMPRESSION EMBEDMENT LENGTH
    - B. 'LCS' = COMPRESSION LAP SPLICE LENGTH
    - C. 'LDH' = HOOK DEVELOPMENT LENGTH
    - D. 'LTE' = TENSION EMBEDMENT LENGTH
    - E. 'LTS' = TENSION LAP SPLICE LENGTH
  - 'TOP' BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 IN OF FRESH CONCRETE IS CAST BELOW THE BAR
  - CLEAR COVER IS DEFINED FROM THE NEAREST FACE OF CONCRETE TO THE BAR BEING DEVELOPED OR SPLICED
  - UNLESS NOTED OTHERWISE, ALL HOOK BARS SHALL EXTEND TO THE FAR FACE LESS 2" COVER
  - IF A NOTE OR DETAIL CALLS FOR A BAR TO BE EMBEDDED L<sub>d</sub> (DEVELOPMENT LENGTH) INTO CONCRETE, THIS SHALL CORRESPOND TO A 'LTE' LENGTH
  - IF A NOTE OR DETAIL REQUIRES A BAR TO HAVE A DEVELOPMENT OR LAP LENGTH BUT INSUFFICIENT DIMENSION IS AVAILABLE FOR THE LENGTH SCHEDULED, EXTEND BAR TO FAR FACE OF CONCRETE LESS 2" COVER AND HOOK

- ADJUSTMENTS TO GIVEN LENGTHS:**
- IF REINFORCING IS SPECIFIED AS EPOXY COATED, INCREASE SCHEDULED LENGTHS BY 50%
  - IF LIGHTWEIGHT AGGREGATE IS SPECIFIED, INCREASE SCHEDULED LAP BY LENGTHS 30%
  - SCHEDULED LENGTHS ASSUME:
    - A. CLEAR COVER IS AS INDICATED IN SCHEDULE
    - B. CLEAR SPACING BETWEEN BARS IS GREATER THAN 2xCLEAR COVER
    - C. IF EITHER CONDITION A OR B IS NOT MET FOR A GIVEN BAR, INCREASE LENGTHS BY 50%
  - LENGTHS NOTED BASED ON F<sub>y</sub> = 60,000 PSI.
    - A. FOR OTHER YIELD STRENGTHS, MULTIPLY LENGTHS NOTED BY F<sub>y</sub>/60,000

- LAP SPLICE NOTES:**
- ALL SPLICES SHALL BE WIRED IN CONTACT
  - ALL SPLICES ARE 'LTS' UNLESS NOTED OTHERWISE
  - SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPLICING DIFFERENT SIZED BARS
    - A. COMPRESSION LAP LENGTH SHALL NOT BE LESS THAN 'LCE' OF THE LARGER BAR
    - B. TENSION LAP LENGTH SHALL NOT BE LESS THAN 'LTE' OF THE LARGER BAR
  - BUNDLED BAR SPLICES:
    - A. INDIVIDUAL BAR SPLICES WITHIN THE BUNDLE SHALL BE STAGGERED
    - B. INCREASE LAP LENGTH 20% FOR A 3 BAR BUNDLE
    - C. INCREASE LAP LENGTH 33% FOR A 4 BAR BUNDLE
  - TOP AND BOTTOM BEAM SPLICES SHALL BE STACKED VERTICALLY

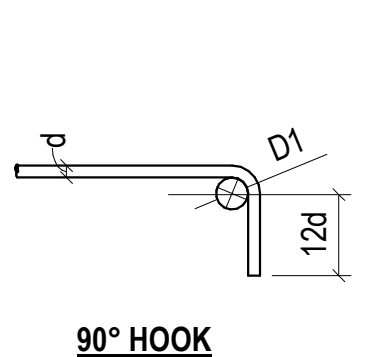
- HOOK EMBEDMENT NOTES:**
- SCHEDULED HOOK EMBEDMENT LENGTHS ASSUME:
    - A. SIDE COVER IS 2 1/2 INCHES OR GREATER
    - B. COVER BEYOND IS 2 INCHES OR GREATER
  - IF REINFORCING IS SPECIFIED AS EPOXY COATED, INCREASE SCHEDULED LENGTHS BY 20%
  - IF LIGHTWEIGHT AGGREGATE IS SPECIFIED, INCREASE SCHEDULED LENGTHS BY 30%
  - IF SIDE COVER IS LESS THAN 2 1/2 INCHES, INCREASE LENGTHS BY 40%

## REBAR COVER TABLE

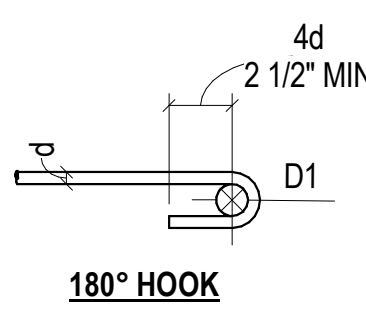
CASE	COVER (IN)
CONCRETE PLACED AGAINST EARTH	3
CONCRETE PLACED IN FORMS, EXPOSED TO WEATHER OR EARTH	2
SLABS OR WALLS NOT EXPOSED TO EARTH OR WEATHER	1

### STANDARD BENDS

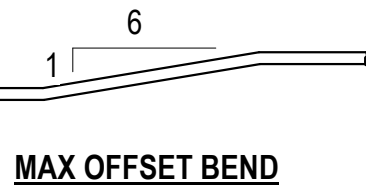
D1
#3 - #8 6d
#9 - #11 8d



90° HOOK



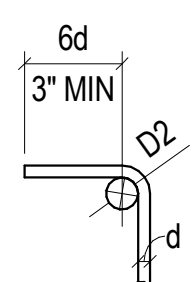
180° HOOK



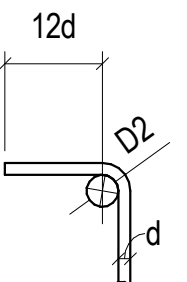
MAX OFFSET BEND

### STIRRUP/TIE BENDS

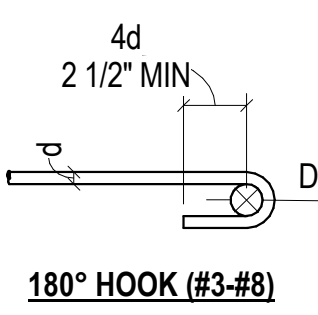
D2
#3 - #5 4d
#6 - #8 6d



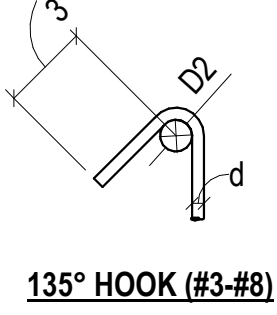
90° HOOK (#3-#5)



90° HOOK (#6-#8)



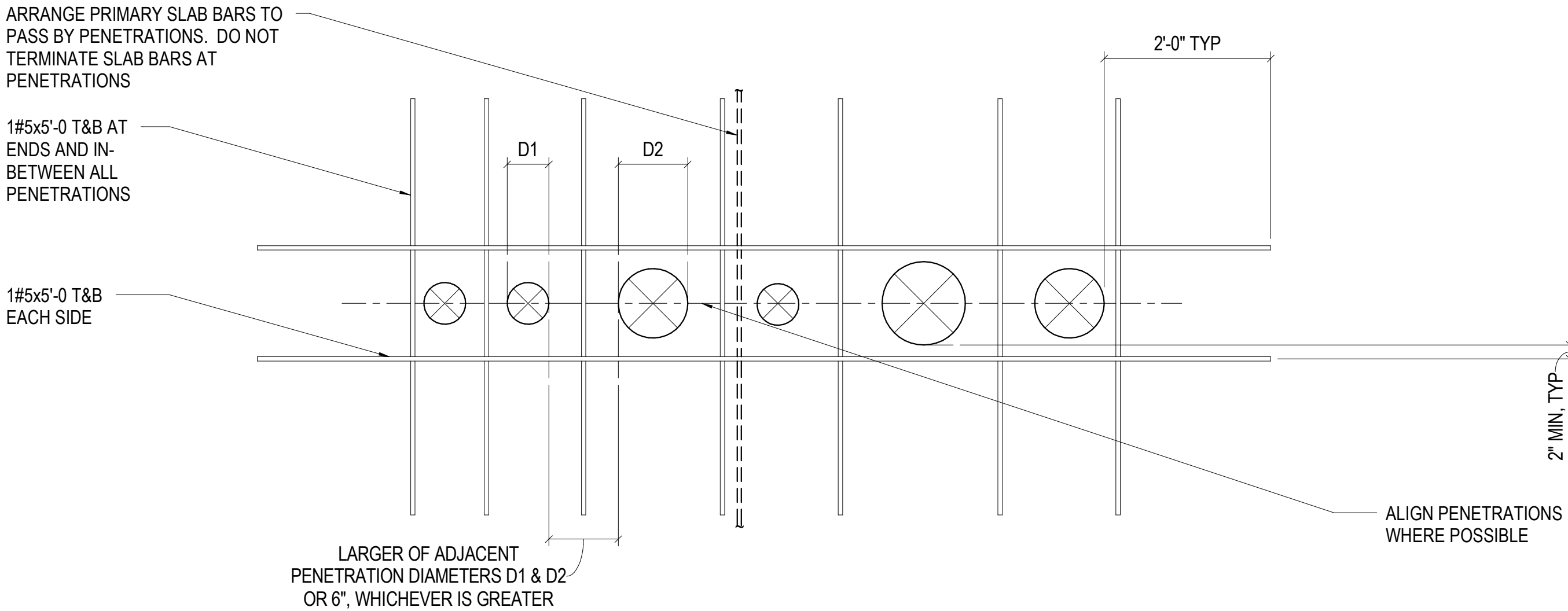
180° HOOK (#3-#8)



135° HOOK (#3-#8)

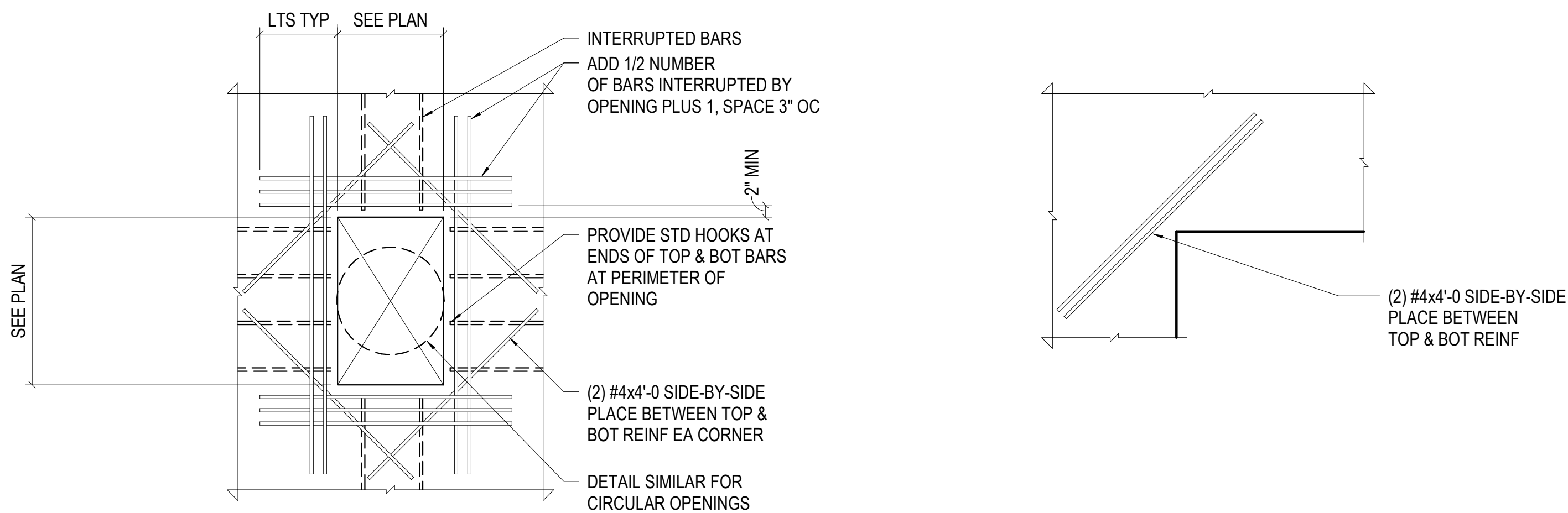
- NOTES:**
- ALL BENDS SHALL BE MADE COLD
  - #14 & #18 BARS SHALL BE BEND TESTED & LAB APPROVED PRIOR TO BENDING

## TYPICAL REINFORCING BENDS



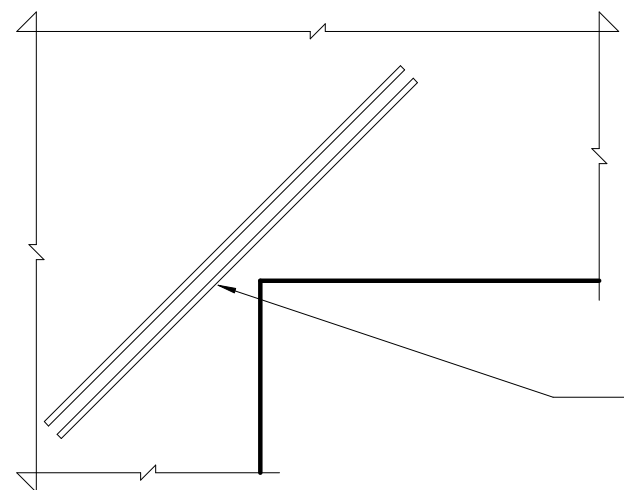
- NOTES:**
- DETAIL DOES NOT APPLY FOR PENETRATIONS LARGER THAN 12" IN DIAMETER. SEE TYP SLAB OPENING DETAIL FOR SUCH PENETRATIONS

### AT OPENINGS 12" OR LESS



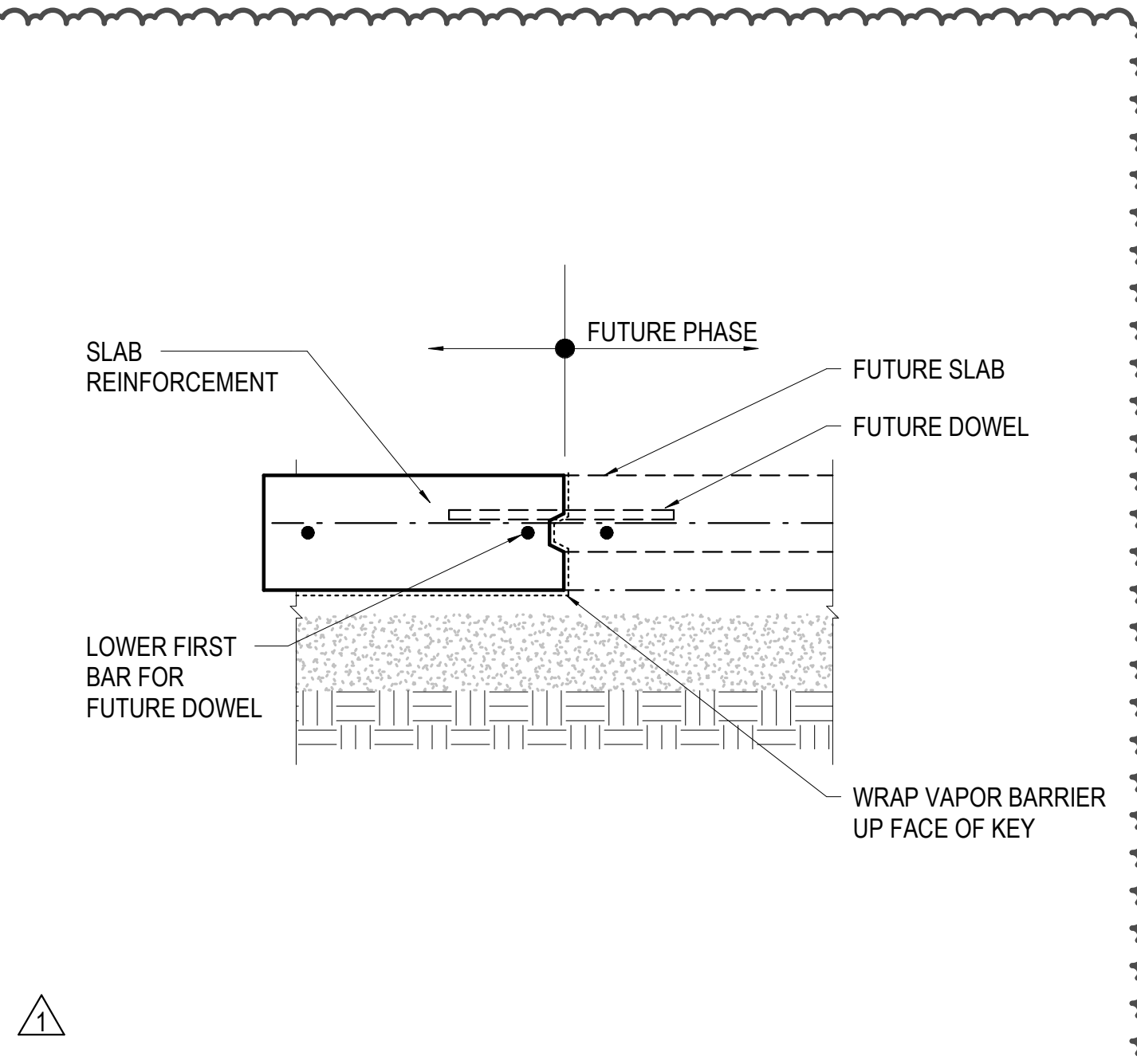
TYPICAL OPENINGS

### AT REENTRANT CORNERS



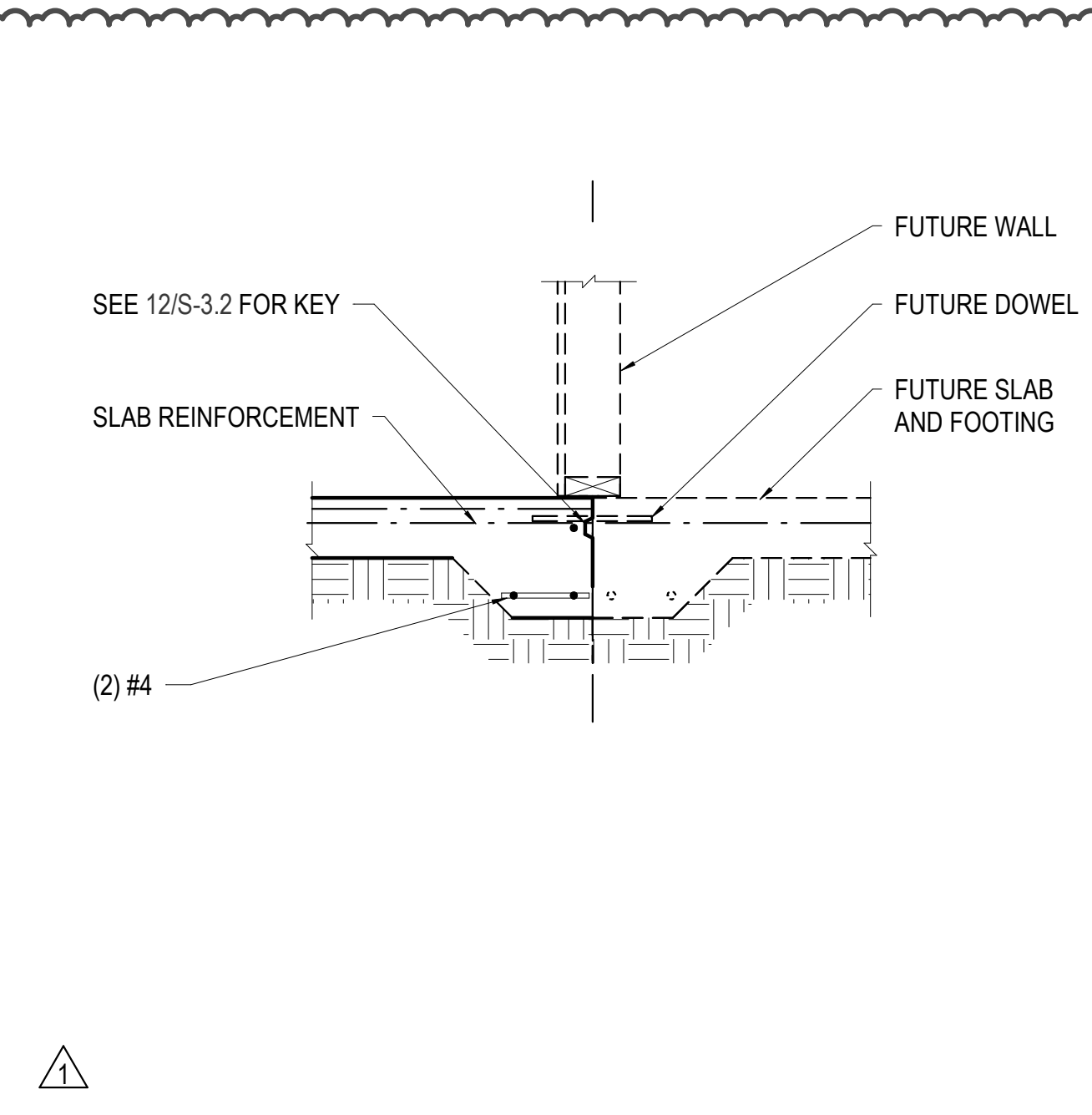
(2) #4x4'-0 SIDE-BY-SIDE PLACE BETWEEN TOP & BOT REINF

11 3/4" = 1'-0" TYP CIP SLAB OPENING/CORNER REINF

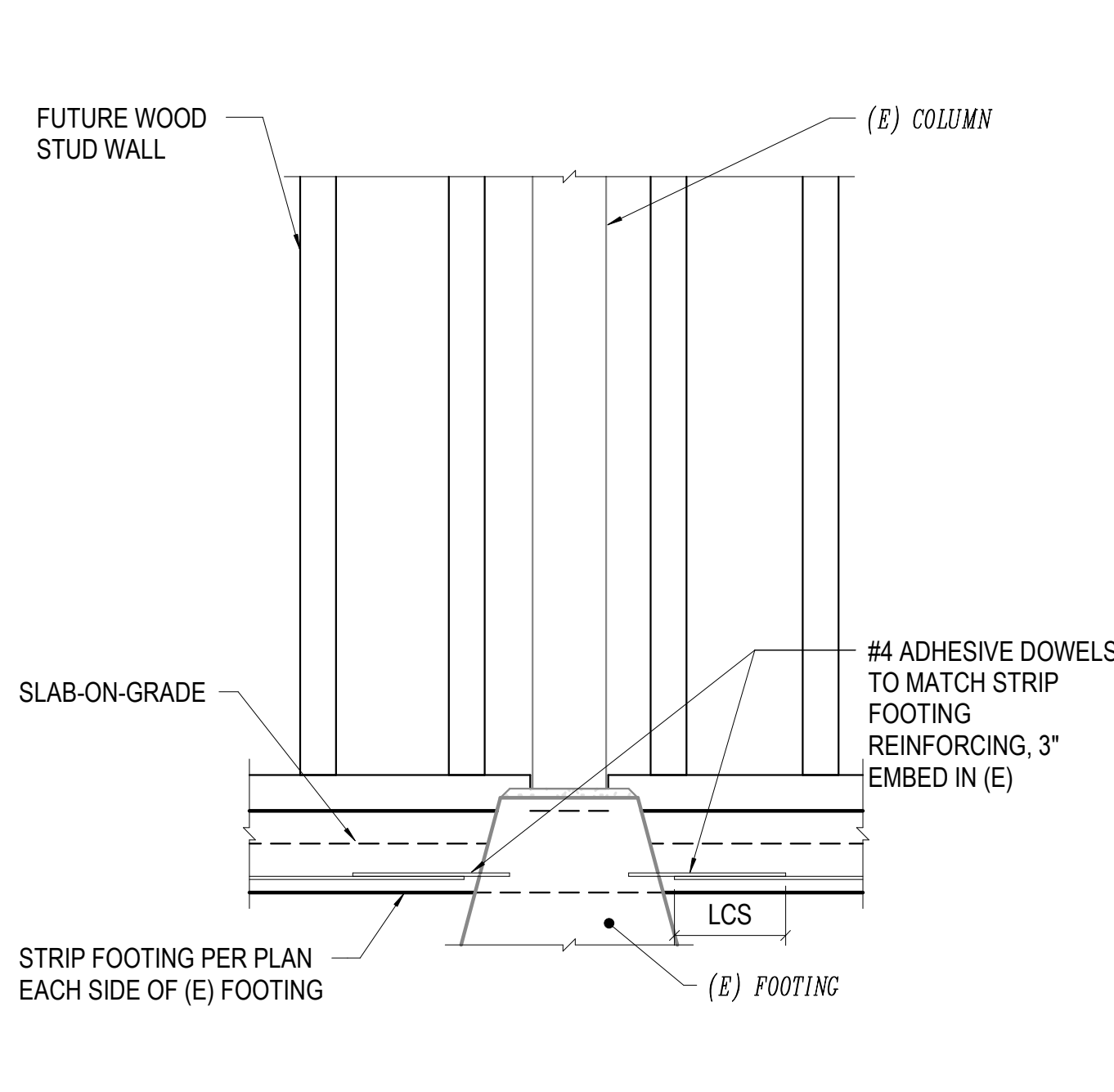


12 1 1/2" = 1'-0" SLAB AT CONSTRUCTION JOINTS

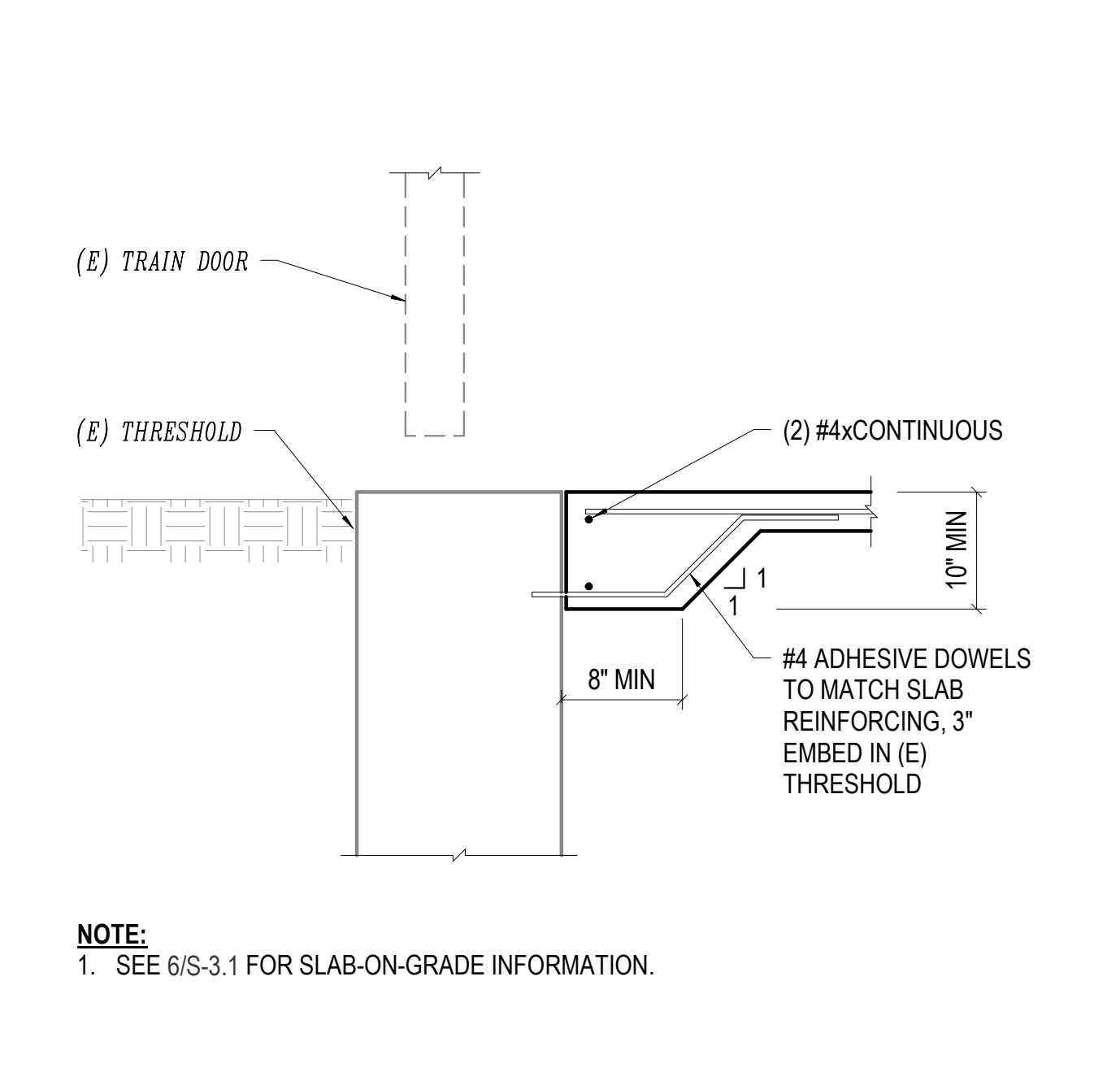
9 3/4" = 1'-0" FOOTING AT CONSTRUCTION JOINT



5 NO SCALE REINFORCING DEVELOPMENT, PLACEMENT, AND BEND INFO



6 1/2" = 1'-0" INTERFACE BETWEEN (E) COLUMN FOOTING & NEW STRIP FOOTING



- NOTE:**
- SEE 6/S-3.1 FOR SLAB-ON-GRADE INFORMATION.

3 3/4" = 1'-0" SOG AT THRESHOLD



ELECTRICAL LEGEND

LIGHTING		ONE LINE DIAGRAM	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	RECESSED FLUORESCENT LUMINAIRE, LAY-IN GRID CEILING, LOWERCASE SCRIPT INDICATES PERFORMANCE INDICATES LUMINAIRE TYPE.		DISCONNECT SWITCH
	RECESSED FLUORESCENT LUMINAIRE, FLANGED		DISCONNECT SWITCH, FUSED
	SURFACE MOUNTED LUMINAIRE		CIRCUIT BREAKER: L=LONG TIME PICKUP, S=SHORTTIME PICKUP; I- INSTANEOUS TRIP, G=GROUND FAULT
	SURFACE OR PENDANT MOUNTED STRIP		FUSE
	SURFACE MOUNTED WALL LUMINAIRE		GROUND
	PENDANT MOUNTED LINEAR LUMINAIRE		STEP DOWN TRANSFORMER, ## INDICATES KVA
	RECESSED DIRECT/INDIRECT LUMINAIRE		CURRENT TRANSFORMER
	UNDERCABINET LIGHTING		POTENTIAL TRANSFORMER
	SURFACE MOUNTED CEILING LUMINAIRE		SERVICE ENTRANCE TRANSFORMER
	PENDANT MOUNTED LUMINAIRE		METER
	SURFACE MOUNTED WALL LUMINAIRE		EQUIPMENT ENCLOSURE
	RECESS MOUNTED WALL LUMINAIRE		KIRK KEY INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP
	RECESS MOUNTED CEILING LUMINAIRE		ELECTRICAL INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP
	POLE MOUNTED LUMINAIRE		MECHANICAL INTERLOCK
	SPOT / FLOOD LIGHT		PANELBOARD "A"
	BOLLARD		EM=ENERGY METER, PM=POWER METER, CM=CIRCUIT MONITOR
	TRACK LIGHTING		VOLTMETER
	EMERGENCY LIGHTING UNIT		AMMETER
	EXIT LIGHT, ARROWS AS INDICATED, FACES INDICATED BY SHADING		ENGINE GENERATOR
	SINGLE POLE SWITCH (SUBSCRIPT DENOTES SWITCHING)		CONTRACTOR/RELAY/CAPACITOR (AS NOTED)
	SWITCH: 2 = 2-POLE; 3 = 3-WAY; 4 = 4-WAY		TRANSFER SWITCH - A=AUTOMATIC, MTS=MANUAL
	K = KEY OPERATED SWITCH; M = HORSEPOWER		GROUND FAULT INTERRUPTER
	HP = HORSEPOWER		TRANSIENT VOLTAGE SURGE SUPPRESSER
	DIMMER SWITCH		SHUNT TRIP
	LV = LOW VOLTAGE SWITCH; MC = MOMENTARY CONTACT		DRAW-OUT DEVICE
	THERMAL OVERLOAD SWITCH		PLUG-IN DEVICE
	PHOTOCELL		ELECTRICALLY OPERATED
	TIME CLOCK		SERVICE WEATHERHEAD
	OCCUPANCY SENSOR WALL MOUNTED DUAL TECHNOLOGY; VS = VACANCY SENSOR		
	OCCUPANCY SENSOR CEILING MOUNT DUAL TECHNOLOGY; VS = VACANCY SENSOR		
	SHADING INDICATES CONNECTION TO EMERGENCY SYSTEM; LS INDICATE LIFE SAFETY CIRCUIT.		
POWER		ABBREVIATIONS	
SYMBOL	DESCRIPTION	A	AMPERES
	SINGLE RECEPTACLE	AFB	ABOVE FINISHED FLOOR
	DUPLEX RECEPTACLE	AFG	ABOVE FINISHED GRADE
	DUPLEX RECEPTACLE ABOVE COUNTER	ATS	AUTOMATIC TRANSFER SWITCH
	DOUBLE DUPLEX RECEPTACLE	BFG	BELOW FINISHED GRADE
	DOUBLE DUPLEX RECEPTACLE ABOVE COUNTER	C	CONDUIT
	DUPLEX RECEPTACLE, HALF SWITCHED	CATV	CABLE TELEVISION
	DUPLEX RECEPTACLE, CEILING MOUNTED	CB	CIRCUIT BREAKER
	DUPLEX RECEPTACLE, FLOOR MOUNTED	CCTV	CLOSED CIRCUIT TELEVISION
	DOUBLE DUPLEX RECEPTACLE, FLOOR MOUNTED	EM	EMERGENCY
	SPECIAL RECEPTACLE	EP	EXPLOSION PROOF
	SPECIAL RECEPTACLE, FLOOR MOUNTED	EPO	EMERGENCY POWER OFF
	JUNCTION BOX, WALL OR CEILING MOUNTED	EWC	ELECTRIC WATER COOLER
	ELECTRICAL PANELBOARD OR OTHER CABINET AS NOTED	FA	FIRE ALARM
	DISCONNECT SWITCH (NON-FUSED)	G	GROUND
	DISCONNECT SWITCH (FUSED)	GFI	GROUND FAULT INTERRUPTING
	COMBINATION STARTER/DISCONNECT	HOA	HAND OFF AUTOMATIC
	MOTOR STARTER	IG	ISOLATED GROUND
	PLUG MOLD (MULTI-OUTLET ASSEMBLY)	MCB	MAIN CIRCUIT BREAKER
	WIREMOLD (SURFACE RACEWAY)	MCC	MOTOR CONTROL CENTER
	CONNECTION TO PRE-WIRED EQUIPMENT	MDC	MAIN DISTRIBUTION CENTER
	CONDUIT CONCEALED	MH	MOUNTING HEIGHT
	CONDUIT EXPOSED	MLO	MAIN LUGS ONLY
	CONDUIT, UNDERGROUND OR CONCEALED IN FLOOR	MTS	MANUAL TRANSFER SWITCH
	CONDUIT TURNING DOWN	NC	NORMALLY CLOSED
	CONDUIT TURNING UP	NI	NOT IN CONTRACT
	CONDUIT CAPPED	NL	NIGHT LIGHT
	GROUND BAR	NO	NORMALLY OPEN
	MAIN SWITCHBOARD/DISTRIBUTION CENTER	NTS	NOT TO SCALE
	TRANSFORMER	OC	ON CENTER
	CURRENT TRANSFORMER	OFCL	OWNER FURNISHED, CONTRACTOR INSTALLED
	GENERATOR ANNUNCIATOR PANEL	OFOL	OWNER FURNISHED, OWNER INSTALLED
	MOTOR	PB	PULL BOX
	SHADING INDICATES EMERGENCY SYSTEM	TP	TAMPER PROOF
	TEXT INDICATES PANEL AND CIRCUIT DESIGNATION	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
		TYP	TYPICAL
		UF	UNDER FLOOR
		UG	UNDER GROUND
		UON	UNLESS OTHERWISE NOTED
		UPS	UNINTERRUPTABLE POWER SUPPLY
		V	VOLTS
		VFD	VARIABLE FREQUENCY DRIVE
		WP	WEATHER PROOF
		XFMR	TRANSFORMER

DIVISION 16 - ELECTRICAL  
SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS  
A. DESCRIPTION: PROVIDE ALL LABOR, EQUIPMENT, SUPPLIES, MATERIALS, DELIVERY, STORAGE, INSURANCE, PERMITS AND TAKES UNLESS OTHERWISE SPECIFIED, NECESSARY FOR THE INSTALLATION OF COMPLETE ELECTRICAL SYSTEMS AS REQUIRED BY THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS, SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT  
A. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH LOCAL AND STATE CODES, AND LATEST EDITIONS OF THE B.C. IFC, NEC, NFPA AND ADA.  
B. CONTRACTOR SHALL PAY FOR ALL FEES.  
C. CONTRACTOR SHALL PREPARE COMPLETE AS-BUILT DRAWINGS INDICATING ALL ADDENDUMS, CHANGE ORDERS, MAJOR CONDUIT ROUTING, FIELD CHANGES, ETC.

SECTION 16110 - RACEWAYS  
A. GENERAL  
1. RIGID, INTERMEDIATE METAL, AND FLEXIBLE METAL CONDUIT SHALL BE GALVANIZED STEEL.  
2. ELECTRICAL METALLIC TUBING SHALL BE ELECTRO-GALVANIZED STEEL.  
3. LIQUIDTIGHT FLEXIBLE METALLIC TUBING SHALL BE GALVANIZED STEEL WITH POLYVINYL JACKET BONDED ONTO EXTERIOR.  
4. HOME RUN CIRCUITS SHALL BE RUN IN SOLID CONDUIT.  
5. WIREWAYS SHALL BE OF THE HINGED TYPE WITH ALL PARTS FACTORY FABRICATED.  
6. CONDUITS SHALL BE SIZED ACCORDING TO THE NEC BASED ON USE OF COPPER CONDUCTORS.  
7. CONDUITS SHALL BE CONCEALED IN BUILDING CONSTRUCTION EXCEPT WHERE EXPOSED RUNS ARE INDICATED.  
8. ELECTRICAL METALLIC TUBING (EMT) FITTINGS: DIE-CAST SET-SCREW FOR ALL OTHER CONNECTIONS. BUSHINGS SHALL BE THREADED AND HAVE NYLON INSULATED THROAT OR NYLON BUSHING.  
9. LIQUID-TIGHT AND METAL FLEXIBLE CONDUIT FITTINGS: DIE-CAST WITH NYLON INSULATED THROAT ON NYLON BUSHING.  
10. FLEXIBLE CONDUIT IS NOT ALLOWED IN THE HOME-RUN PORTION OF CIRCUITS.  
11. MINIMUM SIZE SHALL BE 1/2-INCH EXCEPT BRANCH CIRCUIT HOME RUNS TO PANELBOARD WHICH SHALL NOT BE LESS THAN 3/4".  
12. MOTOR AND EQUIPMENT CONNECTIONS SHALL USE PVC JACKETED LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT WITH LIQUID TIGHT CONNECTORS.  
13. ALL EMERGENCY CIRCUITS SHALL BE RUN TOTALLY IN METAL CONDUIT AND SHALL BE IN A COMPLETELY SEPARATE MULTIPLE BY A SAFETY FACTOR OF AT LEAST FOUR.  
14. CONDUIT SHALL NOT BE MOUNTED ON OR SUPPORTED FROM DUCTWORK OR OTHER MECHANICAL EQUIPMENT EXCEPT WHERE NECESSARY TO MAKE CONNECTIONS TO ELECTRICAL DEVICES THAT ARE PART OF OR MOUNTED ON SUCH EQUIPMENT. WHERE CONDUIT MUST BE INSTALLED ON EQUIPMENT, DO NOT COVER ACCESS DOORS, CONTROLS, REMOVABLE PANELS, OR OTHERWISE HINDER NORMAL MAINTENANCE AND REPAIR OF THE EQUIPMENT. WHERE IT IS NECESSARY TO MAKE CONDUIT CONNECTIONS TO EQUIPMENT MOUNTED ON VIBRATION MOTORS, FLEXIBLE CONNECTION SHALL BE USED.  
15. EXTERIOR EXPOSED CONDUIT AND CONDUIT WITHIN CLASS 1 DIV 2 AREAS SHALL BE GRC.  
16. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC.

SECTION 16120 - WIRES AND CABLE  
A. CONDUCTORS SHALL BE NEW AND UNUSED COPPER, SINGLE CONDUCTOR TYPE. MINIMUM CIRCUIT SIZE SHALL BE 12 AWG COPPER.  
B. NUMBER 10 AWG WIRE AND SMALLER SHALL BE SOLID.  
C. NUMBER 8 AWG WIRE AND LARGER SHALL BE STRANDED.  
D. GROUNDING CONDUCTORS SHALL BE COPPER IN ALL CASES.  
E. BRANCH CIRCUIT AND FEEDER WIRING SHALL BE COLOR CODED IN ACCORDANCE WITH THE NEC.  
F. A GROUNDING CONDUCTOR SHALL BE PROVIDED FOR ALL CIRCUITS.  
G. USE 10 AWG CONDUIT FOR BRANCH CIRCUITS; 12 AWG CONDUIT LONGER THAN 50 FEET TO THE FIRST FIXTURE OR DEVICE. USE 10 AWG CONDUCTORS FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET TO THE FIRST FIXTURE OR DEVICE.

SECTION 16135 - CABINETS, BOXES, & FITTINGS  
A. CONTRACTOR SHALL PROVIDE CODE GAUGE SHEET METAL PULL & JUNCTION BOXES COMPLETE WITH ACCESSORIES SIZED PER THE NEC.  
B. PULL & JUNCTION BOXES SHALL BE FACTORY PAINTED.  
C. PULL & JUNCTION BOXES AND CABINETS FOR EMERGENCY SYSTEMS SHALL BE PAINTED RED.  
D. OUTLET BOXES SHALL BE ZINC OR CADMIUM-PLATED CODE GAUGE PRESSED STEEL AND OF THE KNOCK-OUT TYPE.  
E. ROUND BOXES WILL NOT BE PERMITTED EXCEPT WHERE SPECIFIED.  
F. OUTLET BOXES SHALL BE INSTALLED SECURELY AND PLUMB WITH BUILDING LINES IN ACCORDANCE WITH THE NEC.  
G. OUTLET BOXES SHALL BE SUPPORTED INDEPENDENTLY OF THE CONDUIT SYSTEM.  
H. BACK TO BACK OUTLETS SHALL NOT BE PERMITTED.  
I. TELEPHONE OUTLETS SHALL BE MOUNTED AT SAME HEIGHT AS ADJACENT RECEPTACLE OUTLETS.  
J. SUPPORT BOXES INDEPENDENTLY OF CONDUIT.  
K. INACCESSIBLE CEILING AREAS: PROVIDE ACCESS PANEL AS REQUIRED. INSTALL OUTLET AND JUNCTION BOXES NO MORE THAN 6 INCHES FROM CEILING ACCESS PANEL OR FROM A REMOVABLE RECESSED LUMINAIRE.

SECTION 16142 - ELECTRICAL CONNECTIONS FOR EQUIPMENT  
A. MANUFACTURER: PROVIDE CIRCUIT AND MOTOR DISCONNECTS BY ONE OF THE FOLLOWING: SQUARE D COMPANY, CUTLER-HAMMER INC., GENERAL ELECTRIC CO., SIEMENS ENERGY & AUTOMATION, INC., WESTINGHOUSE ELECTRIC CORP.  
B. FURNISH, SET IN PLACE, AND WIRE (EXCEPT AS MAY BE OTHERWISE INDICATED) ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING AND FIRE PROTECTION, ELEVATOR, ETC., MOTORS AND CONTROLS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CAREFULLY COORDINATE WITH WORK PERFORMED UNDER THE MECHANICAL DIVISION AND WITH OWNER PROVIDED EQUIPMENT.  
C. PROVIDE CIRCUIT AND MOTOR DISCONNECT SWITCHES IN TYPES, SIZES, DUTIES, FEATURES, RATINGS, AND ENCLOSURES AS INDICATED. ALL EQUIPMENT WITH MAXIMUM FUSE SIZE LISTED IN NAMEPLATE SHALL HAVE FUSIBLE DISCONNECT SWITCH PROVIDED.  
D. PROVIDE EQUIPMENT ENCLOSURES THAT ARE RATED FOR THE ENVIRONMENT IN WHICH THEY ARE INSTALLED PER NEC 110.  
E. FUSIBLE SWITCHES: HEAVY DUTY SWITCHES, WITH FUSES OF CLASSES AND CURRENT RATINGS INDICATED. WHERE CURRENT LIMITING FUSES ARE INDICATED, PROVIDE SWITCHES WITH NON-INTERCHANGEABLE FEATURE SUITABLE ONLY FOR CURRENT LIMITING TYPE FUSES. ALL DISCONNECT SWITCHES SHALL BE FUSIBLE UNLESS OTHERWISE NOTED. PROVIDE UL TYPE "HD" 100 PERCENT DUTY RATED SWITCHES.  
F. DISCONNECT SWITCH HANDLES SHALL BE LOCKABLE IN OPEN AND CLOSED POSITION WITHOUT MODIFICATION.  
G. PROVIDE CIRCUIT AND MOTOR DISCONNECT SWITCHES AS INDICATED AND WHERE REQUIRED BY CODE. PROVIDE EACH MOTOR WITH A HORSEPOWER RATED DISCONNECT SWITCH AND EXTERNAL THERMAL OVERLOAD PROTECTION. INSTALL WITHIN SIGHT OF MOTORS OR EQUIPMENT SERVED.

SECTION 16460 - TRANSFORMERS  
A. MANUFACTURERS SHALL BE SIEMENSITE, SQUARED OR GE  
B. ENCLOSURE SHALL BE INDOOR, VENTILATED.  
C. INSULATION CLASS: 220 DEG C  
D. INSULATION TEMPERATURE RISE: 80 DEG C MAX RISE ABOVE 40 DEG C  
E. INSTALL ON VIBRATION MOUNTS  
F. GROUND TRANSFORMER AND TIGHTEN CONNECTION TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STANDARD 489A  
G. PROVIDE 4" CONCRETE PAD FOR TRANSFORMER. EXTEND 4" BEYOND EQUIPMENT AND CHAMFER EDGES.  
H. SHALL MEET EFFICIENCY REQUIREMENTS OF 2018 IECC TABLE C405.6.

SECTION 16470 - PANELBOARDS

SECTION 16413 - WIRING DEVICES  
A. WIRING DEVICES FOR OWNER FURNISHED EQUIPMENT: MATCH DEVICES TO PLUG CONNECTORS FOR OWNER-FURNISHED EQUIPMENT.  
B. CORD AND PLUG SETS: CONTRACTORS SHALL PROVIDE A LENGTH OF 50 CORD COMPLETE WITH A STRAIGHT BLADE OR TWIST-LOCK RECEPTACLE FOR CONNECTION OF INDICATED EQUIPMENT. CORD AND PLUG RATING SHALL BE SUITABLE FOR THE CONNECTED EQUIPMENT LOAD AND RATING OF THE BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE. PLUG SHALL MATCH RECEPTACLE CONFIGURATION INCLUDED ON THE PLANS AND CORD LENGTH SHALL BE AS REQUIRED.  
C. CONTRACTOR SHALL CONNECT CORD TO EQUIPMENT.  
C MATERIALS:  
A. MANUFACTURERS: WALL SWITCHES AND RECEPTABLES: PASS & SEYMOUR.  
B. WALL SWITCHES: NEMA WD-1, SPECIFICATION GRADE COMMERCIAL SERIES, UL 20 AND FS W-9-896E LISTED. NEMA WD-1 AND WD-6 COMPLAINT, 20 AMP RATED. HANDLE: WHITE.  
C. RECEPTABLES:  
1. MINIMUM SPECIFICATION GRADE, COMMERCIAL SERIES UL 498 AND FS W-C-596 LISTED, NEMA WD-1 AND WD-6 COMPLAINT.  
2. DUPLEX RECEPTACLE: TYPE NEMA 5-20R DUPLEX UNLESS NOTED OTHERWISE.  
3. DEVICE COVER PLATES: SMOOTH NYLON FOR FINISHED AREAS. VERIFY COLOR WITH ARCHITECT.  
4. PROVIDE EXTENSION RINGS TO BRING OUTLET BOXES FLUSH WITH FINISHED SURFACE.  
5. INSTALL SWITCHES WITH OFF POSITION DOWN.  
6. INSTALL RECEPTABLES WITH EITHER GROUND OR NEUTRAL UP.  
7. PROVIDE GFCI RECEPTABLES THROUGHOUT IN KITCHENS AND AT VENDING MACHINES AND WITHIN 6' OF ANY SINKS.  
8. PROVIDE GFCI TYPE OUTLETS FOR EACH ABOVE COUNTER DUPLEX RECEPTACLE SHOWN WITHIN 6 FEET-0 INCHES OF SINKS/LAVATORIES. FOR ABOVE COUNTER MULTI-OUTLET ASSEMBLIES WHICH DO NOT CONTAIN DUPLEX RECEPTABLES THAT CAN BE REPLACED WITH GFCI DEVICES, PROVIDE GFI CIRCUIT BREAKERS ON THE BRANCH CIRCUITS FEEDING THE ASSEMBLY.  
9. EACH BRANCH CIRCUIT SHALL BE FURNISHED WITH A DEDICATED NEUTRAL CONDUCTOR.

SECTION 16180 - SUPPORTING DEVICES  
A. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC REQUIREMENTS.  
B. STRENGTH OF EACH SUPPORT SHALL BE ADEQUATE TO CARRY PRESENT AND FUTURE PROPOSED LOAD MULTIPLIED BY A SAFETY FACTOR OF AT LEAST FOUR.  
C. INSTALL INDIVIDUAL AND MULTIPLE (TRAPEZE) RACEWAY HANGERS AND RISER CLAMPS AS NECESSARY TO SUPPORT RACEWAYS. PROVIDE U-BOLTS, CLAMPS, ATTACHMENTS AND OTHER HARDWARE NECESSARY FOR HANGER ASSEMBLY AND FOR SECURING HANGER RODS AND CONDUITS.  
D. SUPPORT PARALLEL RUNS OF HORIZONTAL RACEWAYS TOGETHER ON TRAPEZE-TYPE HANGERS. USE 3/8" DIAMETER OR LARGER THREADED STEEL RODS FOR SUPPORT.  
E. SUPPORT INDIVIDUAL HORIZONTAL RACEWAYS BY SEPARATE PIPE HANGERS. SPRING STEEL FASTENERS MAY BE USED IN LIEU OF HANGERS ONLY FOR 1-1/2 INCH AND SMALLER RACEWAYS SERVING LIGHTING AND RECEPTACLE BRANCH CIRCUITS ABOVE SUSPENDED CEILING ONLY. FOR HANGER RODS WITH SPRING STEEL FASTENERS, USE 1/2" DIAMETER OR LARGER THREADED STEEL. USE SPRING STEEL FASTENERS THAT ARE SPECIFICALLY DESIGNED FOR SUPPORTING SINGLE CONDUITS OR TUBING. FOR HANGER RODS SUPPORTING 1-1/2 INCH OR LARGER CONDUITS PROVIDE 3/8 INCH MINIMUM THREADED STEEL RODS WITH PIPE HANGERS.  
F. SPACE SUPPORTS FOR RACEWAYS IN ACCORDANCE WITH NEC. WHEN THERE ARE 4 OR MORE Z' CONDUITS IN A TRAPEZE, SUPPORTS SHALL BE SPACED 5 FEET O.C.  
G. FASTEN HANGER RODS, CONDUIT CLAMPS AND OUTLET AND JUNCTION BOXES TO BUILDING STRUCTURE USING PRECAST INSERT SYSTEM, EXPANSION ANCHORS, BEAM CLAMPS, OR SPRING STEEL CLIPS.  
H. USE TOGGLE BOLTS OR HOLLOW WALL FASTENERS IN HOLLOW MASONRY, PLASTER OR GYPSUM BOARD PARTITIONS AND WALLS; SELF-DRILLING ANCHORS OR EXPANSION ANCHORS OR PRESET INSERTS IN SOLID MASONRY WALLS; SELF-DRILLING ANCHORS OR EXPANSION ANCHOR ON CONCRETE SURFACES; SHEET METAL SCREWS IN SHEET METAL STUDS; AND WOOD SCREWS IN WOOD CONSTRUCTION.  
I. DO NOT FASTEN SUPPORTS TO PIPING, DUCTWORK, MECHANICAL EQUIPMENT OR CONDUIT.  
J. USE NO CEILING WIRE TO SUPPORT INDIVIDUAL CONDUITS UP TO 1/2" WITH SPRING STEEL FASTENERS.  
K. CONDUITS SHALL NOT BE SUPPORTED FROM THE SUPPORT WIRES OF SUSPENDED CEILING SYSTEMS.  
L. ELECTRICAL DEVICES OR EQUIPMENT SHALL NOT BE HUNG FROM THE ROOF DECK.  
M. INSTALL SURFACE-MOUNTED CABINETS AND PANELBOARDS WITH MINIMUM OF FOUR ANCHORS. PROVIDE STEEL CHANNEL SUPPORTS TO STAND CABINET ONE INCH OFF WALL.  
N. CUT OFF UNUSED LENGTHS THREADED ROD SUPPORTS.

SECTION 16185 - ELECTRICAL IDENTIFICATION  
A. PRE-PRINTED, FLEXIBLE, SELF-ADHESIVE LABELS WITH LEGEND INDICATING VOLTAGE AND SERVICE (EMERGENCY, LIGHTING, POWER, LIGHT, POWER D.C., AIR CONDITIONING, COMMUNICATIONS, CONTROL, FIRE) SHALL BE PROVIDED FOR ALL RACEWAYS AND METAL CLAD CABLE.  
B. VINYL OR VINYL-CLOTH, SELF-ADHESIVE, WRAPAROUND, CABLE/CONDUCTOR MARKERS SHALL BE PROVIDED FOR WIRE/CABLE DESIGNATION.  
C. ENGRAVING STOCK MELAMINE PLASTIC LAMINATE, WITH ENGRAVED LEGEND IN WHITE LETTERS ON BLACK FACE AND PUNCHED FOR MECHANICAL FASTENERS SHALL BE PROVIDED FOR PANELBOARDS, SWITCHBOARDS, DISCONNECTS, ETC.  
D. PROVIDE NEW TYPED DIRECTORY IN WHERE PANELBOARD SCHEDULES ARE REVISED.

SECTION 16462 - GROUNDING  
A. GROUNDING CONDUCTORS SHALL BE COPPER IN ALL CASES.  
B. GROUND THE SECONDARY ELECTRICAL SYSTEM AND COMMUNICATION SYSTEM IN ACCORDANCE WITH THE NEC.

SECTION 16475 - OVERCURRENT PROTECTIVE DEVICES  
A. CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURER AS PANELBOARD; THERMAL MAGNETIC, QUICK-MAKE, QUICK-BREAK, TRIP FREE, TRIP INDICATING, BOLT-IN TYPE AND RATED FOR THE AVAILABLE FAULT CURRENT.  
B. WHERE NOT A PART OF A PRE-FABRICATED PANELBOARD, CIRCUIT BREAKERS SHALL BE INSTALLED IN A NEMA 1 OR NEMA 3R ENCLOSURE AS REQUIRED.  
C. DISCONNECTING SWITCHES SHALL BE NEMA STANDARD TYPE "HD" 100 PERCENT DUTY RATED IN NEMA 1 ENCLOSURES WITH QUICK-MAKE, QUICK-BREAK OPERATING MECHANISMS. PROVIDE FACILITIES FOR PADLOCKING IN "OFF" POSITION.  
D. SWITCHES SHALL BE OF THE SAME OR LARGER AMPERE RATING AS THE CIRCUIT PROTECTIVE DEVICE.

SECTION 16721 - FIRE ALARM  
A. EXTEND OF THE FIRE ALARM SYSTEMS WORK IS INDICATED ON THE POWER AND SYSTEMS PLANS.  
B. PROVIDE ALL SYSTEM COMPONENT DEVICES NECESSARY FOR A COMPLETE SYSTEM.  
C. INSTALLATION SHALL CONFORM TO APPLICABLE SECTIONS OF NFPA-72, INTERNATIONAL CODES, LOCAL CODE REQUIREMENTS AND THE NATIONAL ELECTRICAL CODE.  
D. PROVIDE SUBMITTALS AS REQUIRED BY 2015 IFC AND LOCAL AHJ.  
E. PROVIDE ALL DEVICES, WIRING, COMPONENTS, ACCESSORIES, ETC AS REQUIRED FOR A COMPLETE SYSTEM.  
F. WIRE INSTALLATION SHALL COMPLY WITH NEC ARTICLE 760.

END OF DIVISION 16

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. ALL ELECTRICAL WORK PERFORMED UNDER THIS CONTRACT SHALL CONFORM WITH LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING CODE, LOCAL BUILDING AND FIRE DEPARTMENT REQUIREMENTS.
3. ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE WITH OWNER REPRESENTATIVES. PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS OF OWNER REPRESENTATIVES. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY CHANGES REQUIRED BY THE BUILDING MANAGEMENT AND TENANT REPRESENTATIVES.
4. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL WORK. LOCATIONS ARE APPROXIMATE AND SHALL BE SUBJECT TO MINOR MODIFICATIONS AS DIRECTED BY THE GENERAL CONTRACTOR AND OWNER REPRESENTATIVES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXACT FITTING OF ALL MATERIALS, EQUIPMENT, ETC., IN THE BUILDING AND TENANT SPACE. ALL DIMENSIONS SHALL BE VERIFIED ON THE JOB. ELECTRICAL CONTRACTOR SHALL CUT, CHANNEL, CHASE, AND/OR DRILL FLOORS, WALLS, PARTITIONS, CEILINGS, OR OTHER SURFACES AS REQUIRED FOR INSTALLATION, UPPORT, ANCHORAGE, ETC., OF WORK. PROVIDE X-RAY OF FLOOR PRIOR TO CORE DRILLS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUBSEQUENT PATCHING WORK.
5. A DETAILED WRITTEN METHOD OF PROCEDURE IS REQUIRED WHEN A CONSTRUCTION ACTIVITY OR AN OUTAGE AFFECTS THE SAFETY OF OCCUPANTS, TELEPHONE/FIRE ALARM EQUIPMENT OR COMPONENTS OF ANY SYSTEM WHICH SUPPORTS THIS EQUIPMENT OR ESSENTIALLY AFFECTS THE BUILDING MANAGEMENT, OPERATIONS OR SECURITY. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. PRIOR TO SUBMITTING BIDS, THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING ELECTRICAL EQUIPMENT CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. FIELD VERIFY QUANTITIES OF EXISTING LIGHT FIXTURES, ELECTRICAL DEVICES, COMMUNICATION DEVICES, FIRE ALARM DEVICES, AND ELECTRICAL EQUIPMENT. NOTIFY THE ARCHITECT AND ENGINEER OF ANY EXISTING CONDITIONS WHICH MODIFY THE SCOPE OF WORK AS SHOWN ON THE CONSTRUCTION DOCUMENTS. SUBMISSION OF A BID PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR MOBILIZATION, LABOR, EQUIPMENT, AND/OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
7. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR TO ORIGINAL CONDITION. DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
8. EXISTING INFORMATION SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM OWNER FURNISHED DRAWINGS AND/OR LIMITED FIELD OBSERVATIONS. CMO CONSULTING ENGINEERS, LLC IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION OR THE ADEQUACY, SAFETY AND CONFORMANCE TO CURRENT PREVAILING CODES OF ANY WORK SHOWN AS EXISTING ON THESE DRAWINGS.
9. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
10. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED.
11. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
12. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. VERIFY RATED WALL LOCATIONS ON ARCHITECTURAL DRAWINGS.
13. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.
14. REFER TO ARCHITECTURAL AND MECHANICAL EQUIPMENT DRAWINGS FOR EXACT LOCATIONS OF ELECTRICAL DEVICES AND LIGHT FIXTURES. DO NOT SCALE FROM THE ELECTRICAL PLANS. ADDITIONAL ELECTRICAL REQUIREMENTS ON ARCHITECTURAL PLANS, KITCHEN EQUIPMENT PLANS, AND MECHANICAL PLANS SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTORS BID.
15. DEMOLITION OF ANY ELECTRICAL AND COMMUNICATIONS CONDUIT, WIRING, CABLING, OR DEVICE MEANS TO REMOVE IN ITS ENTIRETY. REMOVE UNUSED CONDUITS FROM CEILING SPACES IN AREAS OF WORK. RETURN UNUSED ELECTRICAL EQUIPMENT AND LIGHT FIXTURES TO BUILDING MANAGEMENT FOR STORAGE AND/OR REMOVAL FROM SITE AS DIRECTED BY OWNERS.
16. WHERE REMODELING INTERFERES WITH EXISTING CIRCUITS AND EQUIPMENT WHICH ARE NOT TO BE REMOVED OR ARE OUTSIDE OF THE PROJECT AREA, SUCH CIRCUITS AND EQUIPMENT SHALL BE REWORKED AND RELOCATED AS REQUIRED TO COMPLETE THE PROJECT.
17. MINIMUM WORKING CLEARANCES PER THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE SHALL BE PROVIDED AROUND AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
18. ELECTRICAL CONTRACTOR SHALL MAINTAIN ON THE JOB AN UP TO DATE SET OF WORKING DRAWINGS, MARKED UP TO SHOW ELECTRICAL SYSTEMS AS INSTALLED. PROVIDE TENANT REPRESENTATIVES WITH ONE SET OF REPRODUCIBLES WITH "AS BUILT" PROJECT RECORD INFORMATION CLEARLY INDICATED. ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LOCAL FEES, PERMITS, AND SERVICES OF INSPECTION AUTHORITIES REQUIRED BY ELECTRICAL WORK FOR THIS ELECTRICAL CONSTRUCTION.
19. PROVIDE TYPED, UPDATED, COMPLETE AND ACCURATE PANELBOARD CIRCUIT DIRECTORIES AT THE COMPLETION OF WORK. CLEAN EXPOSED PANELBOARD SURFACES AND CHECK TIGHTNESS OF ELECTRICAL CONNECTIONS. REPLACE DAMAGED CIRCUIT BREAKERS AS REQUIRED AND PROVIDE FILLER PLATES FOR VACANT SPACES.
20. PROVIDE UPDATED LABELING OF ALL NEW AND RELOCATED ELECTRICAL EQUIPMENT IN SCOPE OF WORK INCLUDING, BUT NOT LIMITED TO, ENGINE GENERATOR SYSTEMS, TRANSFER SWITCHES, TRANSFORMERS, SWITCHGEAR, SWITCHBOARDS, PANELBOARDS, MOTOR CONTROL CENTERS, AND DISCONNECTS TO INDICATE THE AMPERE RATING, VOLTAGE RATING, PHASE, CONDUCTOR COLOR CODING WITHIN THE EQUIPMENT AND APPLICABLE AIC RATING.
21. ALL NEW AND MODIFIED ELECTRICAL EQUIPMENT, SUCH AS SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS, THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT PER NEC ARTICLE 110.16.

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DRAWN: CAD

CHECKED: CAB

DATE: 11/14/25

REVISIONS:

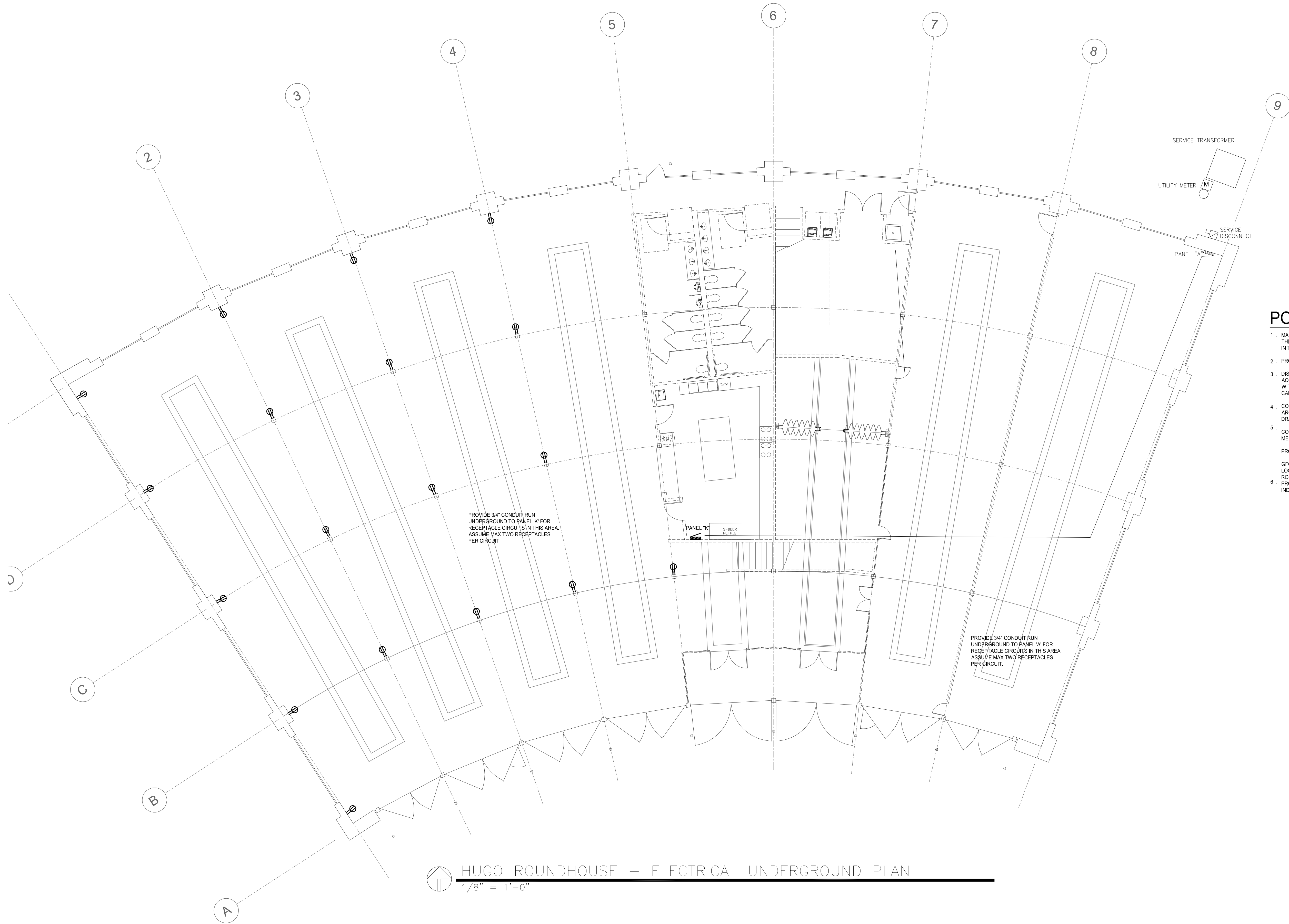
SHEET TITLE:  
ELECTRICAL  
LEGEND

SHEET NUMBER:  
E1.0

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**POWER PLAN NOTES:**

1. MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ALL MECHANICAL AND OTHER EQUIPMENT INCLUDED IN THIS PROJECT.
2. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. DISCONNECT SWITCH LOCATIONS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO SUIT EQUIPMENT AND SPACE. DISCONNECT SWITCHES SHALL BE WITHIN SIGHT OF THE EQUIPMENT THEY SERVE AND MOUNTED AT 6'-3", MAXIMUM, TO TOP OF CABINET. MAINTAIN NEC WORK SPACE REQUIREMENTS.
4. COORDINATE AND VERIFY EXACT MOUNTING LOCATIONS OF WALL AND FLOOR DEVICES WITH ARCHITECTURAL ELEVATIONS, AND ANY FURNITURE OR SPECIALTY EQUIPMENT SUPPLIER DRAWINGS PRIOR TO ROUGH-IN.
5. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.  
PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V AND 277V CIRCUIT.  
GFCI RECEPTACLES ARE NOT GENERALLY SHOWN ON DRAWINGS. ALL RECEPTACLE OUTLETS LOCATED IN TOILET ROOMS, SHOWER ROOMS, ROOFTOPS, OUTDOOR LOCATIONS, MECHANICAL ROOMS, WITHIN 6 FEET OF A SINK, OR OTHER WET LOCATIONS SHALL BE PROVIDED WITH GFCI PROTECTION PER NEC ARTICLE 210. ADDITIONAL GFCI PROTECTION TO BE PROVIDED AS INDICATED.
- 6.

 HUGO ROUNDHOUSE – ELECTRICAL UNDERGROUND PLAN  
1/8" = 1'-0"

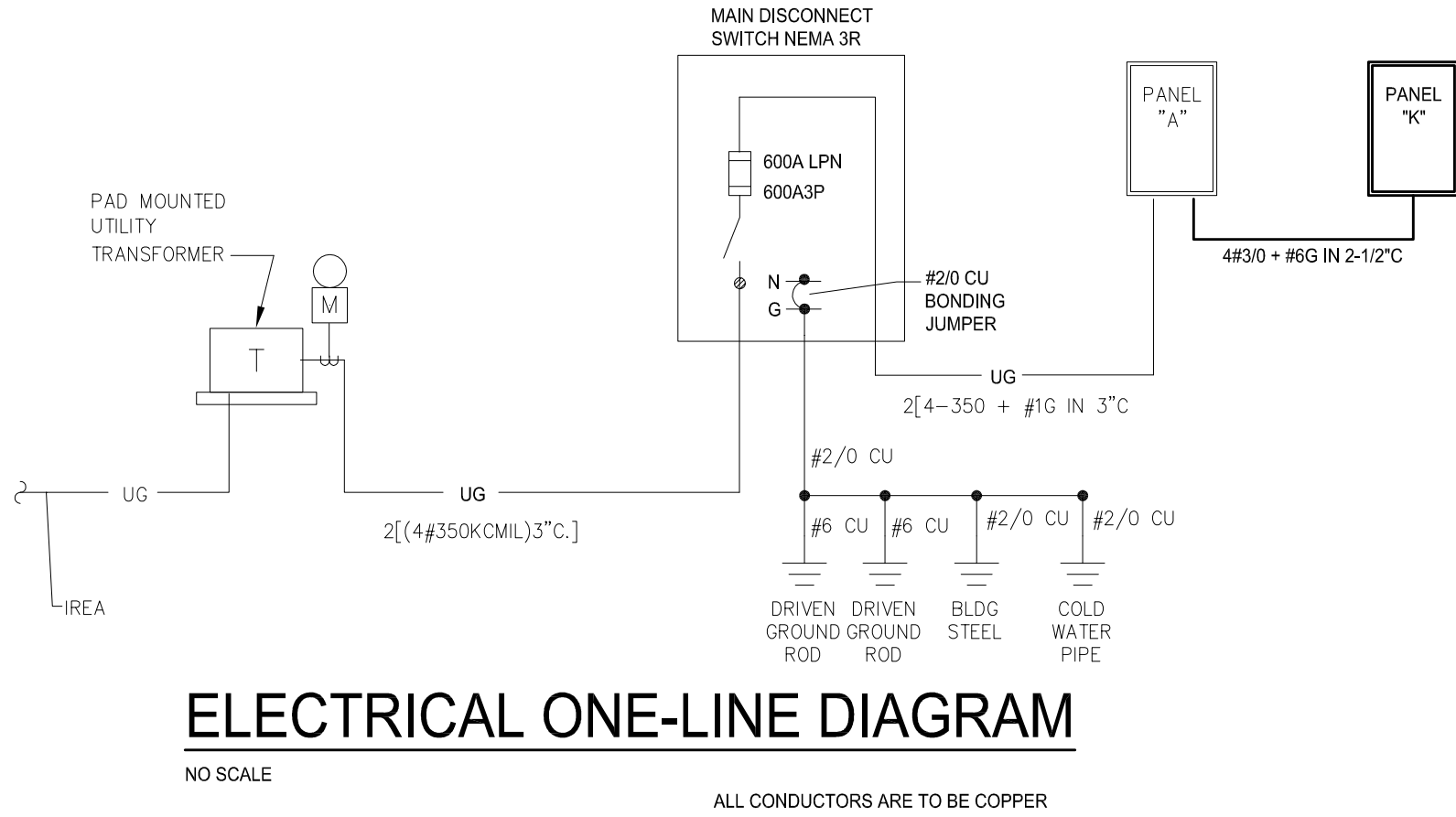
**BRET JOHNSON  
ARCHITECTURE**  
2304 YOSEMITE STREET  
DENVER, COLORADO 80238  
720.341.0392

**HUGO ROADHOUSE  
ROUNDHOUSE PRESERVATION, INC**  
HUGO, COLORADO 80821

JOB NUMBER: 20005  
FILE:  
DESIGNED:  
DRAWN: CAD  
CHECKED: CAB  
DATE: 11/14/25  
REVISIONS:

SHEET TITLE:  
**UNDERGROUND  
FLOOR PLAN**  
SHEET NUMBER:  
**E2.0**

 Consulting Engineers, LLC  
11646 Sun Bear Trail  
Golden, Colorado 80403  
303.875.4037



SHORT-CIRCUIT CURRENT CALCULATIONS											
PROJECT NAME: HUGO						SERVICE VOLTAGE: 120Y/208					
ELECTRIC UTILITY:						AVAILABLE FAULT CURRENT (A): 26500					
EQUIPMENT DESCRIPTION	FEEDER LENGTH	VOLTAGE	SIZE	CU / AL	SINGLE CONDUCTOR OR CABLE	CONDUIT (STEEL OR NM)	# PARALLEL RUNS	L SUPPLY	C	m	f
MDC	15	208	350	CU	S	NM	2	26500	22737	0.07279	0.9322
PANEL X	120	208	30	CU	S	S	1	24702	12844	1.92175	0.3423
NOTES: 1. FEEDER LENGTHS INDICATED THIS SCHEDULE ARE ESTIMATED FOR PURPOSES OF SHORT-CIRCUIT ANALYSIS ONLY, NOT FOR CONTRACTOR TAKE-OFFS.											

EXISTING										PANEL A										NOTES:									
600A MLO										VOLTAGE 120 / 208 V										ONE SECTION PANEL									
3 PHASE WIRE										4 W										1. PROVIDE NEW BREAKER IN SPACE TO MATCH EXISTING.									
MFR: SURFACE																													
MTG.: SURFACE																													
AIC: 35K FULLY RATED																													
NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	CONTIN	NON CONTIN	TOTAL	BREAKER				BREAKER				TOTAL	NON CONTIN	CONTIN	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE						
								AMP	/	P		OCT	PH	OCT										AMP	/	P			
	CC-1			16.812			16.812	175	/	1	A	2	175	/	1	16.812			16.812			CC-2							
	--			16.812			16.812	/	3	B	4	/	3		16.812			16.812			--								
	--			16.812			16.812	/	3	C	6	/	3		16.812			16.812			--								
	AHU-1			6.004			6.004	90	/	7	A	8	90	/	7	6.004			6.004			AHU-2							
	--			6.004			6.004	/	9	B	10	/	9		6.004			6.004			--								
	--			6.004			6.004	/	3	C	12	/	3		6.004			6.004			--								
				0			0	20	/	1	13	A	14	20	/	1	0				PANEL "K"	1							
				0			0	20	/	1	15	B	16	/	1	0					--								
				0			0	20	/	1	17	C	18	/	3	0					--								
				0			0	20	/	1	19	A	20	20	/	1	0												
				0			0	20	/	1	21	B	22	20	/	1	0												
				0			0	20	/	1	23	C	24	20	/	1	0												
				0			0	20	/	1	25	A	26	20	/	1	0												
				0			0	20	/	2	27	B	28	20	/	1	0												
				0			0	20	/	1	29	C	30	20	/	1	0												
				0			0	20	/	1	31	A	32	20	/	1	0												
				0			0	20	/	1	33	B	34	20	/	1	0												
				0			0	20	/	1	35	C	36	20	/	1	0												
				0			0	20	/	1	37	A	38	20	/	1	0												
				0			0	20	/	1	39	B	40	20	/	1	0												
				0			0	20	/	1	41	C	42	20	/	1	0												
PHASE LOADING SUMMARY										PANEL LOADING SUMMARY																			
LOAD TYPE (VA)				PH A	PH B	PH C	LOAD TYPE	CONNECTED		NEC CALCULATED DEMAND																			
LIGHTING				0.0	0.0	0.0		LOAD KVA		DEMAND LOAD																			
RECEPTACLES				0.0	0.0	0.0																							
MOTORS				45.633.8	45.633.8	45.633.8	LIGHTING	0.0	KVA	x 125% =	0.0	KVA																	
CONTINUOUS				0.0	0.0	0.0	RECEPTACLES	0.0	KVA	x 100% =	0.0	KVA																	
NON CONTINUOUS				0.0	0.0	0.0	FIRST 10 KVA	0.0	KVA	x 100% =	0.0	KVA																	
TOTAL (VA)				45.633.8	45.633.8	45.633.8	REMAINDER	0.0	KVA	x 50% =	0.0	KVA	CONNECTED AMPACITY = 380.0																
							MOTORS	LARGEST	KVA	x 125% =	0.0	KVA																	
							REMAINDER	136.9	KVA	x 100% =	136.9	KVA	NEC DEMAND AMPACITY = 380.0																
							CONTINUOUS	0.0	KVA	x 125% =	0.0	KVA																	
							NON CONTINUOUS	0.0	KVA	x 100% =	0.0	KVA																	
							TOTAL	136.9	KVA		136.9	KVA																	

NEW										PANEL K									
200A MLO					VOLTAGE 120 / 208 V					NOTES:									
3 PHASE WIRE					3 PH W														
MFR: SURFACE																			
MTG.: SURFACE																			
AIC: 10K																			
NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	CONTIN	NON CONTIN	TOTAL	BREAKER				TOTAL	NON CONTIN	CONTIN	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE
								AMP	/	P	OCT								
							0	20	/	1	1	A	2	20	/	1	0		
							0	20	/	1	3	B	4	20	/	1	0		
							0	20	/	1	5	C	6	20	/	1	0		
							0	20	/	1	7	A	8	20	/	1	0		
							0	20	/	1	9	B	10	20	/	1	0		
							0	20	/	1	11	C	12	20	/	1	0		
							0	20	/	1	13	A	14	20	/	1	0		
							0	20	/	1	15	B	16	20	/	1	0		
							0	20	/	1	17	C	18	20	/	1	0		
							0	20	/	1	19	A	20	20	/	1	0		
							0	20	/	1	21	B	22	20	/	1	0		
							0	20	/	1	23	C	24	20	/	1	0		
							0	20	/	1	25	A	26	20	/	1	0		
							0	20	/	1	27	B	28	20	/	1	0		
							0	20	/	1	29	C	30	20	/	1	0		
							0	20	/	1	31	A	32	20	/	1	0		
							0	20	/	1	33	B	34	20	/	1	0		
							0	20	/	1	35	C	36	20	/	1	0		
							0	20	/	1	37	A	38	20	/	1	0		
							0	20	/	1	39	B	40	20	/	1	0		
							0	20	/	1	41	C	42	20	/	1	0		
PHASE LOADING SUMMARY								PANEL LOADING SUMMARY											
LOAD TYPE (VA)			PH A	PH B	PH C	LOAD TYPE		CONNECTED		NEC CALCULATED DEMAND									
LIGHTING			0.0	0.0	0.0			LOAD KVA		DEMAND LOAD									
RECEPTACLES			0.0	0.0	0.0			0.0 KVA		x 125% = 0.0 KVA									
MOTORS			0.0	0.0	0.0			0.0 KVA		x 100% = 0.0 KVA									
CONTINUOUS			0.0	0.0	0.0			0.0 KVA		x 50% = 0.0 KVA									
NON CONTINUOUS			0.0	0.0	0.0			0.0 KVA											
TOTAL (VA)			0.0	0.0	0.0			0.0 KVA											
PHASE LOAD (A):			0.0	0.0	0.0			0.0 KVA											
								0.0 KVA											
								0.0 KVA											
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