GENERAL STRUCTURAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY FULLY WITH THE APPLICABLE PROVISIONS OF MIOSHA, THE LATEST ADOPTED EDITIONS OF THE MICHIGAN BUILDING CODE, AND THE LOCAL GOVERNING CODE, AND ALL REQUIREMENTS SPECIFIED IN THE CODES SHALL BE ADHERED TO AS IF THEY WERE CALLED FOR OR SHOWN ON THE DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT ANY REQUIREMENTS SET FORTH ON THE DRAWING MAY BE MODIFIED BECAUSE THEY ARE MORE STRINGENT THAN THE CODE REQUIREMENTS OR BECAUSE THEY ARE NOT SPECIFICALLY REQUIRED BY CODE.

DESIGN LOADS:
LIVE LOADS
ROOF LIVE LOAD 20 PSF

SNOW LOADS
GROUND SNOW, Pg 25 PSF
FLAT ROOF SNOW, Pf_{MIN} 20 PSF
EXPOSURE FACTOR, C_e 1.0
IMPORTANCE FACTOR, I_s 1.0
THERMAL FACTOR, C_t 1.0

WIND DESIGN DATA
BASIC WIND SPEED (3-SECOND GUST) 108 MPH
RISK CATEGORY II
WIND EXPOSURE B
INTERNAL PRESSURE COEFFICIENT +/- 0.18
DESIGN C&C WIND PRESSURES (10SF EFFECTIVE AREA)
WALL PRESSURE (ZONE 4) +16/-16.3 PSF
WALL PRESSURE (ZONE 5) +16/-17.3 PSF
END ZONE WIDTH 9.1 FT

EARTHQUAKE DESIGN DATA
RISK CATEGORY II
IMPORTANCE FACTOR, I_e 1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS
SHORT PERIOD (S_S) --- 0.109g
1-SECOND PERIOD (S_1) --- 0.050g
SITE CLASS D
DESIGN SPECTRAL RESPONSE ACCELERATIONS
SHORT PERIOD (S_{DS}) --- 0.117g
1-SECOND PERIOD (S_{D1}) --- 0.073g
SEISMIC DESIGN CATEGORY B
BASIC SEISMIC FORCE RESISTING SYSTEM
N-S DIRECTION MASONRY BEARING WALL
E-W DIRECTION MASONRY BEARING WALL
RESPONSE MODIFICATION COEFFICIENT, R
N-S DIRECTION 2
E-W DIRECTION 2
ANALYSIS PROCEDURE USED EQUIVALENT LATERAL FORCE

2. PRIOR TO SUBMITTING PROPOSAL, VERIFY ALL CONDITIONS GOVERNING OR AFFECTING THE STRUCTURAL WORK. OBTAIN AND VERIFY ALL DIMENSIONS TO ENSURE THE PROPER FIT AND LOCATION OF THE STRUCTURAL WORK, TAKE ADDITIONAL DIMENSIONS AS REQUIRED, REPORT TO THE ENGINEER ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK, FAMILIARIZE YOURSELF WITH THE ACTUAL CONDITIONS OF THE STRUCTURAL WORK, ACCESS TO THE SITE, AVAILABLE STORAGE SPACE, FACILITIES AND OBSTRUCTIONS THAT MAY BE ENCOUNTERED DURING THE PROGRESS OF WORK.

3. CONTRACTOR TO FURNISH ALL NECESSARY LABOR, MATERIAL, EQUIPMENT AND FACILITIES TO FURNISH, FABRICATE AND PERFORM THE REQUIRED STRUCTURAL WORK.

4. ALL WORK SHOWN ON THESE DRAWINGS MAY BE CHECKED BY AN INDEPENDENT TESTING AGENCY RETAINED BY OWNER TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ACCESS AS REQUIRED FOR TESTING PURPOSES.

5. CONTRACTOR SHALL MAKE ALL NECESSARY FIELD VISITS FOR INSPECTION, MEASUREMENTS AND VERIFICATION OF EXISTING CONDITION OF BUILDING.

6. THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS, SPECIFICATION, AND/OR THE GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION AS DETERMINED BY THE ENGINEER SHALL GOVERN.

7. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF TEMPORARY BRACING, GUYS AND/OR TIE-DOWNS AS NECESSARY. SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER COMPLETION OF THE PROJECT.

8. WORK THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, SITE AND ELECTRICAL DRAWINGS.

9. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS STRICTLY PROHIBITED.

SITE PREPARATION

1. AT THE START OF EARTHWORK OPERATIONS, ALL SURFACE VEGETATION SHALL BE CLEARED AND THE EXISTING TOPSOIL AND ANY OTHER ORGANIC SOILS SHALL BE REMOVED IN THEIR ENTIRETY FROM BELOW THE PROPOSED BUILDING AND PAVEMENT AREAS. EXISTING RANDOM CONCRETE AND OTHER DEBRIS SHALL BE REMOVED FROM WITHIN THE BUILDING AREA.

2. THE SUB-GRADE SHOULD BE THOROUGHLY PROOF-ROLLED WITH A HEAVY RUBBER-TIRED VEHICLE SUCH AS A LOADED SCRAPER OR LOADED DUMP TRUCK. ANY AREAS THAT EXHIBIT EXCESSIVE PUMPING AND YIELDING DURING PROOF-ROLLING SHOULD BE STABILIZED BY AERATION, DRYING AND COMPACTION IF WEATHER CONDITIONS ARE FAVORABLE, OR REMOVAL AND REPLACEMENT WITH ENGINEERED FILL.

3. ALL EXCAVATIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE, WHO SHALL BE CONSULTED WHEN POOR SOIL, WATER, OBSTRUCTIONS, PIPING, EXISTING FOOTINGS, EXCAVATIONS, ETC., ARE ENCOUNTERED.

FOOTINGS & FOUNDATIONS

1. CONTRACTOR SHALL VERIFY ALL CONDITIONS, INCLUDING UNDERGROUND UTILITIES, AND FIELD MEASUREMENTS AT JOB SITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

2. PROVIDE ALL NECESSARY SHEETING, SHORING, BRACING, ETC. AS REQUIRED FOR EXCAVATIONS TO PROTECT SIDES OF EXCAVATIONS AND ADJACENT STRUCTURES.

3. CONTRACTOR SHALL COMPLY FULLY WITH THE REQUIREMENTS OF MIOSHA, OTHER REGULATORY AGENCIES AND THE OWNER'S SITE-SPECIFIC SAFETY PLAN AND REGULATIONS FOR SAFETY PROVISIONS.

4. BOTTOM OF FOOTING ELEVATIONS NOTED ON PLAN ARE MINIMUM ELEVATIONS. IN ALL CASES, FOOTINGS ARE TO BEAR ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL HAVING A MINIMUM GROSS ALLOWABLE BEARING CAPACITY OF 2500 PSF.

5. FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND WALLS UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE DRAWINGS.

6. NO FOOTINGS OR SLABS SHALL BE PLACED ON OR AGAINST SUB-GRADE CONTAINING FREE WATER, FROST OR ICE. SHOULD WATER OR FROST, HOWEVER SLIGHT, ENTER A FOOTING EXCAVATION AFTER SUB-GRADE APPROVAL, THE SUB-GRADE SHALL BE RE-INSPECTED BY THE TESTING LABORATORY AFTER REMOVAL OF WATER OR FROST.

7. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUB-GRADE BEFORE AND AFTER PLACING OF CONCRETE UNTIL THE CONCRETE HAS REACHED ITS' DESIGN STRENGTH.

8. ALL FOUNDATION BEARING SOILS SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER. THE TESTING SHALL INCLUDE, BUT NOT BE LIMITED TO, IDENTIFICATION OF SOILS AT AND BELOW THE FOUNDATION BEARING LEVEL, AND THE ALLOWABLE BEARING CAPACITY.

9. CONTRACTOR SHALL FURNISH ALL REQUIRED DEWATERING EQUIPMENT TO MAINTAIN A DRY EXCAVATION UNTIL BACKFILL IS COMPLETE.

10.THE FOUNDATION DESIGN IS BASED ON THE SOILS INVESTIGATION REPORT PREPARED BY SOILS & STRUCTURES, DATED APRIL 04, 2025

BACKFILLING

1. MATERIAL FOR BACKFILL OR ENGINEERED FILL REQUIRED TO ACHIEVE DESIGN GRADES SHOULD CONSIST OF NON-ORGANIC SOILS. THE ON-SITE SOILS THAT ARE FREE OF ORGANIC MATTER AND DEBRIS MAY BE USED FOR ENGINEERED FILL WITH ENGINEER'S APPROVAL.

2. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF ITS' MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHODS (ASTM D1557), IN LIFTS NOT EXCEEDING 12-INCHES IN LOOSE THICKNESS.

3. FROZEN MATERIAL SHALL NOT BE USED AS FILL, NOR SHALL FILL BE PLACED ON FROZEN SUB-GRADE.

4. DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNTIL BASEMENT FLOOR LEVEL AND FIRST FLOOR LEVEL SLABS ARE IN PLACE AND HAVE REACHED 75% OF THEIR SPECIFIED DESIGN STRENGTH, SHORE AND BRACE WALLS AS REQUIRED IF BACKFILLING OPERATIONS ARE TO BE CARRIED OUT PRIOR TO PLACEMENT OF FLOOR SLABS.

5. PLACE BACKFILL AGAINST BOTH SIDES OF GRADE BEAMS AND FOUNDATIONS AT EQUAL ELEVATIONS OF FILL, EXCEPT AS SHOWN ON THE DRAWINGS.

6. CRUSHED SLAG USED AS BACKFILL SHALL BE AGED, ENVIRONMENTALLY-SAFE PROCESSED BLAST FURNACE SLAG.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301- LATEST ADOPTED EDITION, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING", EXCEPT AS MODIFIED BY STRUCTURAL REQUIREMENTS NOTED ON THE DRAWINGS.

2. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH (f 'c) OF 4500 psi.

3. ALL EXTERIOR CONCRETE INCLUDING WALLS SHALL BE AIR-ENTRAINED 5% +/- 1%.

4. ALL EXTERIOR CONCRETE EXPOSED TO WEATHER SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF (W/C) 0.45.

5. UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER SHALL BE:
CONCRETE CAST AGAINST EARTH 3-INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER 2-INCHES
CONCRETE NOT EXPOSED TO EARTH OR WEATHER 3/4-INCHES

6. ALL REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 (fy = 60,000 psi)

7. WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS AND SHALL CONFORM TO ASTM A185 (FY = 75 KSI) AND HAVE A MINIMUM SIDE AND END LAP OF 8 INCHES.

8. THE CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGN(S) TO THE ENGINEER FOR REVIEW. PROPORTION MIX DESIGNS AS DEFINED IN ACI 301 SECTION 4. THE SUBMITTAL SHALL INCLUDE AS A MINIMUM CEMENT TYPE AND SOURCE, CEMENT CUBE STRENGTH, AGGREGATE GRADATIONS, WATER TESTS, AD-MIXTURE CATALOG INFORMATION AND CYLINDER STRENGTH TEST RESULTS FOR THE CONCRETE. THE MIX DESIGN HISTORICAL RESULTS SHALL ALSO BE SUBMITTED IF APPROPRIATE.

9. ALL REINFORCEMENT TO BE DETAILED, FABRICATED AND ERECTED ACCORDING TO THE ACI STANDARDS: ACI 315R-18 - "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES", ACI 315R - LATEST ADOPTED EDITION.

10.THE CONTRACTOR SHALL PREPARE AND SUBMIT REINFORCEMENT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL CLEARLY SHOW ALL REINFORCEMENT LENGTHS AND BENDS, LOCATIONS OF ALL BARS, VIBRATION AND CONSTRUCTION JOINTS. THE DRAWINGS SHALL ALSO INDICATE ALL OPENINGS, SLEEVES, CURBS AND CONCRETE DIMENSIONS IN ACCORDANCE WITH ACI 315.

11.LAPS, ANCHORAGES AND SPLICES SHALL COMPLY WITH THE REQUIREMENTS OF ACI 318-LATEST EDITION, CHAPTER 25. LOCATIONS AND SPLICES SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION JOINT LOCATIONS, DETAILS AND AS SHOWN ON THE REINFORCING STEEL SHOP DRAWINGS.

12.PROVIDE DOWELS OF SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS.

13.UNLESS OTHERWISE SHOWN OR NOTED, AS A MINIMUM, PROVIDE TWO #5 BARS (ONE EACH FACE) AROUND UNFRAMED OPENINGS IN SLABS AND WALLS. PLACE BARS PARALLEL TO SIDES OF OPENINGS AND EXTEND THEM 24 INCHES BEYOND CORNERS.

14.HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS WITH LAPS COMPLYING WITH THE REQUIREMENTS OF ACI 318-LATEST EDITION CHAPTER 25. UNLESS DETAILED OTHERWISE. CORNER BARS SHALL BE PROVIDED AT ALL CHANGE IN WALL DIRECTIONS AND SHALL BE OF THE SAME SIZE AND SPACING AS THE HORIZONTAL STEEL. EACH CORNER BAR LEG TO PROVIDE A LAP COMPLYING WITH THE REQUIREMENTS OF ACI 318-LATEST EDITION CHAPTER 25. SPLICE UNLESS DETAILED OTHERWISE. EXTEND ALL HORIZONTAL WALLS REINFORCING THROUGH PIERS.

15.ALL CONSTRUCTION JOINTS SHALL BE FURNISHED WITH KEYWAY CENTERED ON MEMBERS. WHERE THE SIZE OF KEY IS NOT SHOWN ON THE DRAWINGS, THE KEY DEPTH SHALL BE 10% OF THE CROSS SECTION DIMENSION OF THE MEMBER - MINIMUM 3/4".

16.ANCHOR BOLTS (FURNISHED BY STRUCTURAL STEEL CONTRACTOR) SHALL BE SET USING A TEMPLATE TO WITHIN 1/8" TOLERANCE IN ANY PLAN DIRECTION IN PIERS, FOOTINGS AND FOUNDATION WALLS, WITH THE MINIMUM PROJECTION AND EMBEDMENT LENGTHS AS INDICATED ON THE DRAWINGS.

17.PROVIDE 3/4" CHAMFER STRIP AT ALL EXPOSED CORNERS OF CONCRETE WALLS AND PIERS.

18.LOCATE ALL SLEEVES, OPENINGS, EMBEDDED ITEMS, ETC., AS INDICATED ON THE DRAWINGS. THE CONCRETE CONTRACTOR SHALL CHECK WITH ALL OTHER TRADES TO MAKE SURE THE SLEEVES, OPENINGS AND EMBEDDED ITEMS THAT ARE TO BE PROVIDED AND SET BY THEM ARE IN PLACE PRIOR TO PLACING OF CONCRETE IN THE AREA INVOLVED.

19.ALL INTERIOR SLABS ON GRADE SHALL BE PLACED ON A VAPOR BARRIER WITH A MINIMUM OF 4-INCHES CLEAN SAND. MINIMUM REINFORCEMENT SHALL BE IN ACCORDANCE WITH ENGINEERING DATA REPORT CRSI NUMBER 37, "REINFORCING STEEL IN SLAB ON GRADE" OR AS DETAILED. ALL EXTERIOR SLABS ON GRADE SHALL BE PLACED ON A MINIMUM OF 4-INCHES CLEAN SAND. MINIMUM REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 318 SECTION 24.4 - SHRINKAGE AND TEMPERATURE REINFORCEMENT, OR AS DETAILED.

20.CONTRACTORS SHALL OBTAIN APPROVAL FROM THE ENGINEER, PRIOR TO PLACING OPENINGS OR SLEEVES, NOT SHOWN ON THE DRAWINGS, THROUGH ANY STRUCTURAL MEMBERS, ROOF, WALLS OR FOUNDATIONS. REVIEW ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR BASES, OPENINGS, SLEEVES, ANCHORS, INSERTS, CONDUITS, RECESSES AND OTHER DEVICES IN CONCRETE WORK BEFORE CASTING CONCRETE.

21.PROVIDE POCKETS OR RECESSES IN CONCRETE WORK FOR STEEL COLUMNS AND BEAMS AS REQUIRED AND / OR AS CALLED FOR IN THE SPECIFICATIONS EVEN IF NOT SHOWN ON THE DRAWINGS. PROVIDE CONCRETE FILL AFTER STEEL ERECTION TO SEAL OPENINGS.

22.REFER TO ARCHITECTURAL DRAWINGS FOR SLAB RECESSES AND/OR FLOOR FINISH MATERIALS.

23.WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS SPECIFICALLY DETAILED. WELDING SHALL CONFORM TO AWS D1.4 SPECIFICATION, LATEST ADOPTED EDITION.

24.CONCRETE CONTRACTOR SHALL INCLUDE IN HIS ESTIMATE ADDITIONAL CONCRETE QUANTITY AS REQUIRED TO COMPENSATE FOR DEFLECTIONS OF METAL DECK AND TO PROVIDE A LEVEL CONCRETE SURFACE. REFER TO STRUCTURAL STEEL AND METAL DECK NOTES FOR ADDITIONAL CONSIDERATIONS.

25.THE CONCRETE SHALL BE THOROUGHLY COMPACTED BY VIBRATION SUPPLEMENTED BY SPADING, PUDDLING OR AGITATION, TO PREVENT HONEYCOMBING AND TO ENSURE THE ELIMINATION OF VOIDS. VIBRATION MUST BE DIRECT ACTION IN THE CONCRETE AND NOT AGAINST FORMS OR REINFORCEMENT. HONEYCOMBING, VOIDS AND LARGE AIR POCKETS WILL NOT BE ACCEPTABLE.

26.LOCATIONS OF CONTRACTION JOINTS ARE SHOWN ON THE PLAN DRAWING. THE JOINTS SHOWN MAY SERVE AS CONSTRUCTION JOINTS IF CONVENIENT FOR THE CONSTRUCTION SEQUENCE. THE LOCATION OF ANY ADDITIONAL CONSTRUCTION JOINTS PROPOSED BY THE CONTRACTOR SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. ALL CONCRETE SLABS AND WALLS WITH CONSTRUCTION JOINTS SHALL BE PLACED PER ACI 302.1R-15.

27. THE USE OF WATER-SOLUBLE CHLORIDE ION SHALL NOT BE USED UNLESS APPROVED BY THE ENGINEER, AS AN ALTERNATIVE TO THE ABOVE, THE CONTRACTOR MAY SUBMIT A CONCRETE MIX DESIGN FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE ALTERNATE MIX DESIGN SHALL BE REVIEWED FOR CONFORMANCE TO '02 UBC.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATION:
* WIDE FLANGE AND WT SHAPES - A992
* HSS RECT. - A500 GRADE C (fy = 50 KSI)
* HSS ROUND - A500 GRADE C (fy = 46 KSI)
* PIPE - A53 GRADE B (fy = 35 KSI)
* HP SHAPES - A572 GR. 50
* ALL OTHER SHAPES AND PLATES - A36

2. THE FABRICATOR/ERECTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL.

3. BEAM CONNECTIONS SHALL BE STANDARD TWO ANGLE WEB CONNECTIONS CAPABLE OF SUPPORTING 50% OF THE ALLOWABLE UNIFORM LOAD FROM THE ALLOWABLE LOADS ON BEAM TABLES IN THE AISC CODE, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

4. ALL CONNECTIONS NOT SPECIFICALLY DETAILED, SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR. DETAILING SHALL BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE GENERAL DETAILS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES, UNLESS SPECIFICALLY NOTED.

5. ALL CONNECTIONS SHALL BE SHOP WELDED IN ACCORDANCE WITH LATEST AWS SPECIFICATION USING E70XX ELECTRODES AND FIELD BOLTED WITH ASTM A325 OR A490 BOLTS. ALL A325 AND A490 BOLTS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS."

6. EXCEPT AS NOTED ON THE DRAWINGS, STRUCTURAL STEEL BOLTS SHALL BE ASTM A325, 3/4" DIAMETER. ALL VERTICAL BOLTS ARE TO BE INSTALLED "HEAD UP" UNLESS SPECIFICALLY NOTED. IF A BOLT CANNOT BE INSTALLED "HEAD UP", THE THREAD IS TO BE "SPOILED" AFTER THE BOLT HAS BEEN PROPERLY TIGHTENED AND THEN INSPECTED BY THE TESTING AGENCY.

7. HIGH STRENGTH BOLT INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF AISC AND THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS." PROVIDE FULLY PRETENSIONED JOINTS AT CONNECTIONS OF BRACING, WHERE BOLTS ARE IN TENSION, ARE SUBJECT TO LOAD REVERSALS OR FATIGUE, AND AT MOMENT CONNECTIONS. PROVIDE SLIP-CRITICAL JOINTS AT CONNECTIONS SUBJECT TO FATIGUE AND LOAD REVERSALS, OVERSIZED HOLES, SLOTTED HOLES AND WHERE SLIP AT THE FAYING SURFACES WOULD BE DETRIMENTAL TO THE PERFORMANCE OF THE STRUCTURE. ALL OTHER CONNECTIONS MAY HAVE SNUG-TIGHTENED CONNECTIONS UNLESS OTHERWISE NOTED.

8. ALL SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER THE REQUIREMENTS OF THE AISC 360 SECTION J1.2.

9. ALL ANCHOR RODS SHALL CONFORM TO ASTM F1554 GR. 36. UNLESS OTHERWISE NOTED.

10.CONTRACTOR SHALL REFERENCE ARCHITECTURAL DRAWINGS FOR MISC. SHAPES AND PLATES WHICH SHALL BE SHOP-WELDED TO THE STRUCTURAL FRAMING SECTIONS TO MINIMIZE FIELD WELDING.

11.ALL FLOOR AND ROOF OPENINGS, UNLESS OTHERWISE NOTED, ARE TO BE FRAMED WITH L5X3X1/4 (LLV). VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH THE TRADE INVOLVED.

12.PROVIDE L4X4X1/4 SEATS AT COLUMN WEBS, WHERE REQUIRED FOR SUPPORT OF ROOF AND FLOOR DECKS.

13.ALL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP. PROVIDE CAMBERS AS INDICATED ON THE DRAWINGS.

14.ALL STIFFENER PLATES AND BEARING STIFFENERS ARE TO BE PROVIDED IN PAIRS.

15.SHEAR CONNECTORS SHALL BE MANUFACTURED BY NELSON STUD WELDING, DIV. OR ENGINEER APPROVED SUBSTITUTE, AND WELDED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

16.ALL STEEL TO RECEIVE ONE SHOP COAT OF PAINT. OMIT PAINT AT HOLES FOR SLIP CRITICAL-TYPE CONNECTIONS, AT STRUCTURAL STEEL TO BE FIREPROOFED, ENCASED OR IN CONTACT WITH CONCRETE, AND ON TOP FLANGE OF BEAMS RECEIVING SHEAR CONNECTORS.

17.THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS, ESPECIALLY WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO CONCRETE WALLS, BEAMS OR COLUMNS.

18.PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY OF THE STRUCTURE UNDER FULL DESIGN LOADS UNTIL THE PERMANENT BRACING IS IN PLACE. CONTRACTOR SHALL PROVIDE NECESSARY SHORING WHERE REQUIRED DURING CONSTRUCTION.

19.SHOP AND FIELD TESTING OF WELDS AND OR BOLTS SHALL BE AS FOLLOWS:
A. ALL WELDS SHALL BE VISUALLY INSPECTED. 5% AT RANDOM SHALL BE MEASURED.
B. FILLET WELDS FOR BEAM AND GIRDER SHEAR CONNECTION PLATES (10% AT RANDOM) SHALL BE CHECKED BY MAGNETIC PARTICLE IN ACCORDANCE WITH ASTM E709 FOR FINAL PASS ONLY.
C. ULTRASONICALLY TEST 100% OF ALL FULL-PENETRATION WELDS IN ACCORDANCE WITH AWS D1.1 - SECTION, PART 'F', "ULTRASONIC TESTING (UT) OF GROOVE WELDS".
D. CHECK BY CALIBRATED TORQUE WRENCH, 25% OF BOLTS IN EACH FULLY PRETENSIONED CONNECTION JOINT OR SLIP-CRITICAL CONNECTION JOINT, BUT NOT LESS THAN TWO (2) BOLTS PER CONNECTION.
E. ULTRASONICALLY TEST 100 % OF ALL PARTIAL-PENETRATION COLUMN SPLICE WELDS IN ACCORDANCE WITH AWS D1.1 - SECTION, PART 'F', "ULTRASONIC TESTING (UT) OF GROOVE WELDS".
F. CHECK 100% OF CONTINUITY PLATE FILLET WELDS BY MAGNETIC PARTICLE ON LAST LAYERS IN ACCORDANCE WITH ASTM E709.
G. THE OWNER'S TESTING AGENCY SHALL PERFORM ALL SHOP AND FIELD INSPECTION AND TESTING AS OUTLINED ABOVE.
H. THE STRUCTURAL STEEL FABRICATOR AND ERECTOR SHALL SCHEDULE ALL WORK TO ALLOW THE ABOVE TESTING REQUIREMENTS TO BE COMPLETED.

20.STRUCTURAL STEEL SHALL NOT BE ALTERED IN THE FIELD FROM THAT SHOWN ON THE DESIGN DRAWINGS. MISMATCHED HOLES SHALL BE REAMED TO LARGER DIAMETER AND PROPERLY SIZED BOLTS AND WASHERS USED FOR FINAL HOLE SIZE. CUTTING, BURNING OR WELDING NOT SHOWN ON DESIGN DRAWINGS SHALL NOT BE PERFORMED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.

21.ALL STRUCTURAL STEEL SHALL BE DETAILED, SHOP PRIME PAINTED OR HOT-DIPPED GALVANIZED, PIECE MARKED, FURNISHED, FABRICATED AND ERECTED ACCORDING TO THE AISC "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS", LATEST ADOPTED EDITION AND TO THE AISC "CODE OF STANDARD PRACTICE". HOT DIP GALVANIZED FINISH FOR ALL STEEL MEMBERS EXPOSED TO THE WEATHER.

22.NON-SHRINK GROUT SHALL CONFORM TO "CORPS OF ENGINEERS SPECIFICATION FOR NON-SHRINK GROUT", CRD-C 621-LATEST ADOPTED EDITION. GROUT SHALL BE PREMIXED, NON-SHRINK, NON-CATALYZED NATURAL AGGREGATE GROUT FOR: (1) COLUMN LEVELING PLATES, WHICH ARE NOT BOLTED DOWN BEFORE COLUMN ERECTION, (2) ITEMS SET INTO CONCRETE BLOCKOUTS, DEPRESSIONS, OR TOPPINGS, AND (3) OTHER STRUCTURAL LOAD BEARING APPLICATIONS. THE SEVEN-DAY COMPRESSIVE FOR THE SPECIFIED CONSISTENCY SHALL BE AT LEAST, 7,000 PSI PLASTIC, 6,000 PSI FLOWABLE, AND 5,000 PSI FLUID CONSISTENCY.

FABRICATION AND ERECTION

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC 303-16 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES ".

2. ALL HOLES SHALL BE DRILLED OR PUNCHED. NO BURNING OF HOLES WILL BE PERMITTED. SLOTTED HOLES MUST HAVE STRAIGHT AND SMOOTH SIDES.

3. HOLES SHALL BE SIZED SUCH THAT THEY ARE 1/16"LARGER IN DIAMETER THAN THE SPECIFIED FASTENER.

4. ALL STRUCTURAL MATERIAL INCLUDING BEAMS, ANGLES AND PLATES TO BE FIELD MEASURED AND FIELD FABRICATED.

5. IN PLANNING THE METHOD OF ERECTION AND DISTRIBUTION OF MATERIAL BEFORE AND DURING ERECTION, THE CONTRACTOR SHALL MAKE FULL ALLOWANCE FOR ANY OBSTRUCTIONS ENCOUNTERED WHICH MAY RESULT FROM WORK PERFORMED BY OTHER TRADES, AS WELL AS THE OPERATIONS OF THE OWNER.

6. IT SHALL BE UNDERSTOOD THAT THERE WILL BE NO EXTRA CHARGE BY THE CONTRACTOR ON ACCOUNT OF ANY OBSTRUCTIONS NOW ON THE SITE OF THE BUILDING.

7. FURNISH AND INSTALL ANY AND ALL NECESSARY TEMPORARY BRACING TO SQUARE AND PLUMB UP ALL WORK, AS REQUIRED, BEFORE BOLTING OR WELDING.

8. IN CASES WHERE MEMBERS DO NOT FIT OR HOLES DO NOT MATCH, THE HOLES SHALL BE REAMED OUT AND THE NEXT LARGER SIZE BOLT INSERTED. IF THE CONNECTION REQUIRES NEW HOLES, THEN NEW HOLES SHALL BE DRILLED. NO SUCH CORRECTIONS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER'S RESIDENT ENGINEER. BURNING OF HOLES IS STRICTLY PROHIBITED.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED BY THE ERECTION OF STRUCTURAL STEEL AS HEREIN SPECIFIED. THE CONTRACTOR SHALL REIMBURSE THE OWNER ACTUAL COST OF REPAIR AND OR REPLACEMENT.

10.THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE/DEMOLISH AND PROPERLY DISPOSE OF EXISTING STEEL, AS REQUIRED FOR THE INSTALLATION OF NEW STEEL.

FABRICATION AND ERECTION (CONT.)

11.CONTRACTOR IS RESPONSIBLE TO DESIGN, PROVIDE AND INSTALL NECESSARY SHORING DURING DEMOLITION AND REPLACEMENT OF STRUCTURAL STEEL. THE SHORING PLAN SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.

12.TEMPORARILY SUPPORT ALL EXISTING UTILITIES IN WORK AREA AS REQUIRED TO COMPLETE SCOPE-OF-WORK ITEMS.

13.PRIOR TO THE COMPLETION OF THE SCOPE OF WORK, INSTALL PERMANENT SUPPORTS TO ALL EXISTING UTILITIES AFFECTED BY WORK AREA AS REQUIRED TO THE SATISFACTION OF THE OWNER.

HANDLING OF STEEL

1. WHEN THE STRUCTURAL STEEL IS DELIVERED, IT SHALL BE STACKED OFF THE GROUND. CARE SHALL BE TAKEN IN HANDLING AND STACKING THE MEMBERS TO PREVENT BUCKLING, KINKING OR DISTORTION. RAIL AND CARRIER SHIPMENTS SHALL HAVE SUFFICIENT AND SATISFACTORY DUNNAGE TO PREVENT DAMAGE IN TRANSIT.

2. MEMBERS WHICH ARE BENT IN FABRICATION OR IN HANDLING SHALL BE STRAIGHTENED OR REPLACED BEFORE ERECTION.

3. ALL DIRT, MUD AND DEBRIS SHALL BE CLEANED FROM STEEL BEFORE ERECTION.

HIGH STRENGTH BOLTS

1. HIGH STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO GROUPS A, B, AND C OF THE STEEL CONSTRUCTION MANUAL AND SHALL BE USED IN ACCORDANCE WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" LATEST REVISION, BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.

2. ALL BOLTED CONNECTIONS SHALL USE ONLY STANDARD HOLES; EXCEPT SHORT SLOTS, OVERSIZED HOLES AND LONG SLOTS SHALL BE USED WHERE SPECIFICALLY SHOWN OR CALLED OUT ON THE DESIGN DRAWINGS OR MENTIONED HEREIN. OVERSIZED HOLES, AND SHORT AND LONG SLOTS MUST BE TREATED AS SLIP-CRITICAL TYPE CONNECTIONS. HARDENED WASHERS SHALL BE INSTALLED OVER ALL OVERSIZED HOLES AND SHORT SLOTS IN AN OUTER PLY. A PLATE WASHER OR A CONTINUOUS BAR IS REQUIRED FOR ALL LONG SLOTTED HOLES USED IN AN OUTER

METAL DECK

1. ALL METAL DECK SHALL BE AS NOTED ON DRAWINGS, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE "STEEL DECK INSTITUTE" (SDI) SPECIFICATIONS.

2. THE CONTRACTOR SHALL FURNISH ALL ACCESSORIES INCLUDING CLOSURES, "Z" CLOSURES, COLUMN CLOSURES, SCREED ANGLES AND GIRDER FILLERS AS REQUIRED.

3. ROOF DECK SHALL HAVE A GALVANIZED COATING CONFORMING TO ASTM A653 - COATING DESIGNATION G-60.

4. DESIGN OF FLOOR DECK AS A FORM SHALL CONFORM TO THE REQUIREMENTS OF SDI SPECIFICATIONS AND COMMENTARIES FOR COMPOSITE STEEL FLOOR DECK, EXCEPT THAT CALCULATED THEORETICAL DEFLECTIONS AS DEFINED UNDER PARAGRAPH 3.3 SHALL NOT EXCEED L/240 OR 1 INCH, WHICHEVER IS SMALLER.

5. THE METAL DECK SHALL BE DESIGNED TO BE CONTINUOUS OVER THREE (3) SPANS MINIMUM IN THE DIRECTION INDICATED. SINGLE AND DOUBLE SPANS, IF REQUIRED, SHALL SATISFY LOAD AND DEFLECTION REQUIREMENTS.

6. COMPOSITE FLOOR DECK SHALL HAVE A GALVANIZED COATING CONFORMING TO ASTM A653 - COATING DESIGNATION G-60.

7. THE FABRICATOR/ERECTOR SHALL PROVIDE ENGINEERING CALCULATIONS, PUBLISHED MANUFACTURER'S DATA AND INDEPENDENTLY CERTIFIED TEST DATA, VERIFYING THE SPECIFIED DECK REQUIREMENTS TO THE ENGINEER FOR REVIEW. PROVIDE ENGINEERING AND CHECKED SHOP DRAWINGS, INDICATING LOCATION, GAGE AND SIZE OF EACH PIECE OF DECKING. THE DRAWING SHALL CLEARLY SHOW WELDING DETAILS TO STRUCTURAL FRAMING AND SIDE LAP CONNECTION DETAILS.

8. ALL NON-CELLULAR METAL DECK SHALL BE WIDE-RIB, SUITABLE FOR SHEAR STUD PLACEMENT WHERE STUDS ARE REQUIRED. THE CONFIGURATION OF THE METAL DECK SHALL BE SUCH AS TO DEVELOP THE FULL SHEAR VALUE OF THE STUD FOR THE PARTICULAR WEIGHTS OF THE CONCRETE AS LISTED IN THE AISC SPECIFICATIONS, LATEST EDITION. THE METAL DECK CONTRACTOR SHALL PROVIDE VERIFICATION OF THE STUD VALUES AND PROVIDE ADDITIONAL STUDS AS REQUIRED.

9. ALL DECKING SHALL BE WELDED TO THE STRUCTURAL STEEL BY QUALIFIED WELDERS USING PRE-QUALIFIED PROCEDURES IN ACCORDANCE WITH AWS D1.1 SECTION 7, LATEST ADOPTED EDITION. THE ERECTOR SHALL ESTABLISH A WELDING PROCEDURE FOR THE STEEL DECKING TO THE STRUCTURAL STEEL FOR THE PARTICULAR GAGE USED. PRIOR TO THE START OF ERECTION OF THE STEEL DECK, EACH WELDER SHALL BE QUALIFIED USING THIS PROCEDURE AS WITNESSED BY THE OWNER'S TESTING AGENCY.

10. ALL METAL DECK SHALL BE WELDED AT 12-INCHES ON CENTER MAXIMUM SPACING TO THE SUPPORTING STEEL WITH A MINIMUM 5/8 INCH DIAMETER PUDDLE WELD. SIDE LAPS SHALL BE FASTENED AT 36-INCHES ON CENTER MAXIMUM SPACING.

11. NO LOADS SHALL BE PERMITTED TO BE HUNG FROM ANY ROOF DECK. ALL HANGERS FOR CEILINGS, DUCTWORK, ELECTRICAL CONDUIT, PIPING, ETC. SHALL BE HUNG DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS.

12. ALTERNATE PAF OR SCREW FASTENERS ARE ACCEPTABLE ALTERNATES.

MASONRY

1. MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE MORE STRINGENT PROVISIONS OF CHAPTER 21 OF THE 2021 MICHIGAN BUILDING CODE AND THE REQUIREMENTS OF THE "SPECIFICATION FOR MASONRY STRUCTURES (TMS 602-16)", EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.

2. CONTRACTOR SHALL PROVIDE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO LAY MASONRY AS SHOWN OR SPECIFIED IN THESE CONSTRUCTION DOCUMENTS.

3. ALL WORK SHALL BE LAID TRUE TO A LINE, PLUMB AND LEVEL IN KEEPING WITH THE TOLERANCES GIVEN IN "SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602-16).

4. EMPLOY HOT OR COLD WEATHER CONSTRUCTION PRACTICES AS DEFINED IN TMS 602 WHEN AMBIENT AIR TEMPERATURE EXCEEDS 100°F OR IS BELOW 40°F. NO WORK SHALL BE DONE SUBJECT TO FREEZING TEMPERATURES OR ON FROZEN SUBSTRATE.

5. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90.
   A. THE MASONRY ASSEMBLY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'M) OF 2000 PSI.
   B. MASONRY ASSEMBLY COMPRESSIVE STRENGTH SHALL BE DEEMED TO COMPLY THROUGH THE USE OF MASONRY UNITS WITH A NET AREA COMPRESSIVE STRENGTH OF 2800 PSI FOR TYPE M OR S MORTAR OR THROUGH MASONRY PRISM TESTING WITH PRIOR APPROVAL.

6. MORTAR SHALL BE OF MATERIALS AND PROPORTIONED IN COMPLIANCE WITH THE PROPORTION SPECIFICATIONS OF ASTM C270 AND SHALL BE OF THE FOLLOWING TYPE BASED ON APPLICATION:
   A. TYPE M OR S FOR MASONRY BELOW GRADE OR IN CONTACT WITH EARTH
   B. TYPE S FOR UNREINFORCED MASONRY ABOVE GRADE
   C. TYPE [N] [S] FOR REINFORCED MASONRY ABOVE GRADE
   D. TYPE N FOR VENEER MASONRY

7. TOOL MORTAR JOINTS TO A CONCAVE PROFILE, USING A JOINTER LARGER THAN JOINT THICKNESS, ON EXPOSED INTERIOR FACE OF WALL AND EXTERIOR EXPOSED FACE WHEN MORTAR IS THUMBPRINT HARD. STRIKE MORTAR JOINTS FLUSH ON EXTERIOR (CAVITY) FACE OF BACKUP WYTHE.

8. SAND FOR MORTAR SHALL CONFORM TO ASTM C144 AND SHALL BE MEASURED IN LOOSE, DAMP CONDITION.

9. GROUT SHALL CONFORM TO THE PROPORTION REQUIREMENTS OF ASTM C476. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'C) OF 2500 PSI AND MEET OR EXCEED THE MASONRY ASSEMBLY COMPRESSIVE STRENGTH (F'M).

10. PROVIDE MATERIAL SUBMITTALS AND/OR TEST REPORTS SHOWING COMPLIANCE WITH REFERENCED STANDARDS.

11. ALL MASONRY WORK SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE.

12. ALL MASONRY WORK BELOW GRADE SHALL BE SOLID OR HAVE SOLID GROUTED CORES.

13. GROUT PLACEMENT AND CONSOLIDATION SHALL CONFORM TO SECTION 3.5 IN TMS 602.

14. ALL GROUT SHALL BE PLACED OR SUPERVISED BY MASONRY CERTIFIED IN GROUT PLACEMENT BY THE INTERNATIONAL MASONRY INSTITUTE, THE MASONRY INSTITUTE OF MICHIGAN, OR AN APPROVED ALTERNATE.

15. ALL WALLS SHALL BE ADEQUATELY BRACED IN ACCORDANCE WITH MIOSHA CONSTRUCTION SAFETY STANDARD PART 2 AND THE "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION " (DECEMBER 2012) PUBLISHED BY THE MASON CONTRACTORS ASSOCIATION OF AMERICA.

16. ALL WALLS SHALL RECEIVE THE MINIMUM SPECIFIED VERTICAL REINFORCEMENT AT EACH SIDE OF OPENINGS, CONTROL JOINTS, AND ALL CORNERS UNLESS NOTED OTHERWISE.

17. CONTACT THE ENGINEER FOR LINTELS OVER OPENINGS NOT SHOWN IN THE PLANS.

18. CONTROL JOINTS SHALL BE INSTALLED AS SHOWN IN THE PLANS AND/OR PER THE FOLLOWING REQUIREMENTS:
   A. MAXIMUM JOINT SPACING SHALL BE 25'-0" UNLESS NOTED OTHERWISE. 1:2.5 MAXIMUM LENGTH TO HEIGHT RATIO.
   B. JOINTS SHALL BE CONSTRUCTED USING GROUTED FLANGED UNITS (MICHIGAN CONTROL JOINT) OR WITH PREFORMED HARD RUBBER GASKETS IN SASH UNITS.
   C. DO NOT PLACE CONTROL JOINTS AT LINTEL ENDS UNLESS SPECIFICALLY NOTED.
   D. AT PERPENDICULAR WALLS; ONE-HALF CONTROL JOINT SPACING FROM THE CORNERS.
   E. AT CHANGE IN WALL HEIGHT.
   F. AT CHANGE IN WALL THICKNESS.

MASONRY (CONT.)

19. GROUT 24" WIDE BY 24" DEEP AT ALL BEAM BEARING LOCATIONS AND AT OTHER POINT LOAD LOCATIONS EXCEPT GROUTED BEARING ZONE MAY TERMINATE AT A SOLID GROUTED BOND BEAM COURSE THAT IS LESS THAN 24 " BELOW THE BEARING POINT.

20. MASONRY JOINTS SHALL BE FULLY FILLED FOR SOLID UNITS AND FACE SHELL BEDDED WITH HEAD JOINT DEPTH EQUAL TO THE FACE SHELL OR GREATER FOR HOLLOW UNITS UNLESS NOTED OTHERWISE.

21. PROVIDE LADDER TYPE JOINT REINFORCEMENT WITH (1) 9 GA DEFORMED SIDE ROD IN EACH FACE UNLESS NOTED OTHERWISE. INSTALL JOINT REINFORCEMENT AT 16" ON CENTER VERTICALLY FOR UNITS WITH A NOMINAL HEIGHT OF 8" AND AT 12" ON CENTER VERTICALLY FOR UNITS WITH A NOMINAL HEIGHT OF 4", UNLESS NOTED OTHERWISE.

22. MASONRY CONSTRUCTION CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS SHALL BE VERIFIED IN ACCORDANCE WITH 'TABLE 4 - LEVEL B QUALITY ASSURANCE' IN "SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602-16) AND BE CONDUCTED BY AN ICC CERTIFIED STRUCTURAL MASONRY SPECIAL INSPECTOR.

23. THE CONTRACTOR SHALL ALLOW A 3 DAY CURING PERIOD OF MASONRY CONSTRUCTION PRIOR TO THE APPLICATION OF SURCHARGE LOADS.

24. POURABLE CONSISTENCY CROUT SHALL BE USED TO FILL CAVITIES AT BEAM, JOIST AND METAL DECK BEARING, AT VERTICAL FILL OF HOLLOW CORES, AND IN BOND BEAMS AND REINFORCED MASONRY BEAMS, PIERS OR COLUMNS. GROUT SHALL CONFORM TO ASTM C476 WITH MINIMUM 28 DAY COMPRESSION STRENGTH OF 2500 PSI.

25. VERTICAL CELLS CONTAING REINFORCING AND GROUT SHALL FORM A CONTINUOUS CAVITY, FREE OF MORTAR DROPPINGS.

26. ALL STEEL REINFORCEMENT SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE.

27. TIE WIRE SHALL CONFORM TO ASTM A82.

28. HORIZONTAL JOINT REINFORCEMENT SHALL CONFORM WITH ASTM A82 AND BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153.

29. DETAILING, BENDING AND PLACING OF STEEL REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602-16).

30. SUBMIT SHOP DRAWINGS INDICATING SIZE, LOCATION, AND DIMENSIONS OF REINFORCING STEEL FOR ALL REINFORCED MASONRY WALLS.

31. ALL STEEL REINFORCEMENT SHALL BE PLACED AND SUPPORTED AS NECESSARY TO MAINTAIN PROPER POSITION IN ACCORDANCE WITH "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602-16).

32. ALL STEEL REINFORCEMENT MARKED OR SHOWN AS CONTINUOUS MAY BE SPLICED WITH A LAP SPLICE AS INDICATED IN THESE CONSTRUCTION DRAWINGS OR CONFORMING TO "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602-16).

33. JOINT REINFORCEMENT SHALL BE LAPPED A MINIMUM OF 8".

34. USE PREFABRICATED JOINT REINFORCEMENT SECTIONS FOR INTERSECTING WALLS AND CORNERS, OR FOLLOW AN ESTABLISHED PROCEDURE FOR FIELD FABRICATING CORNERS AS SHOWN BY THE MASONRY INSTITUTE OF MICHIGAN.

35. ALL HORIZONTAL STEEL REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS TO PROVIDE LAP LENGTHS IN ACCORDANCE WITH "SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602-16) OR AS INDICATED IN THESE CONSTRUCTION DRAWINGS, UNLESS NOTED OTHERWISE.

36. CONTINUE ALL VERTICAL STEEL REINFORCEMENT FROM FOOTING TO BOND BEAM UNLESS NOTED OTHERWISE. WHERE TERMINATION OCCURS IN BOND BEAMS ENGAGE BOND BEAM STEEL WITH A STANDARD 90- OR 180-DEGREE HOOK.

37. SUPPORT REINFORCEMENT TO PREVENT DISPLACEMENT CAUSED BY CONSTRUCTION LOADS OR BY PLACEMENT OF GROUT OR MORTAR, BEYOND THE ALLOWABLE TOLERANCES IN ACCORDANCE WITH "SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602-16).

38. DISCONTINUE ALL HORIZONTAL REINFORCEMENT AT CONTROL JOINTS EXCEPT AT DIAPHRAGM LEVELS UNLESS NOTED OTHERWISE.

39. MASONRY REINFORCEMENT COVER:
   A. MASONRY FACE EXPOSED TO EARTH OR WEATHER, #6 BAR OR LARGER . . . . . 2"
   B. MASONRY FACE EXPOSED TO EARTH OR WEATHER, #5 BAR OR SMALLER . . . . . 1 1/2"
   C. MASONRY NOT EXPOSED TO EARTH OR WEATHER . . . . . 1 1/2"
   D. MASONRY JOINT REINFORCEMENT EXPOSED TO EARTH OR WEATHER . . . . . 5/8"
   E. MASONRY JOINT REINFORCEMENT NOT EXPOSED TO EARTH OR WEATHER . . . . . 1/2"

SPECIAL INSPECTIONS & TESTS

SPECIAL INSPECTION SHALL MEET THE REQUIREMENTS OF IBC SECTION 1704. SPECIAL INSPECTOR(S) SHALL BE HIRED BY THE OWNER TO PERFORM THE REQUIRED SPECIAL INSPECTIONS. THE NAMES OF PERSONS OR FIRMS WHO ARE TO PERFORM THE SPECIAL INSPECTIONS SHALL BE FORWARDED TO THE BUILDING OFFICIAL FOR APPROVAL. THE SPECIAL INSPECTOR(S) SHALL COMPLETE AND SUBMIT ALL FORMS REQUIRED BUILDING OFFICIAL.

1. THE SPECIAL INSPECTOR(S) SHALL:
   A. OBSERVE THE WORK ASSIGNED FOR CONFORMANCE TO THE APPROVED DRAWING AND SPECIFICATIONS.
   B. FURNISH INSPECTION REPORTS TO THE ENGINEER OF RECORD AND BUILDING DEPARTMENT. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF NOT CORRECTED, TO THE ENGINEER AND THE BUILDING DEPARTMENT.
   C. SUBMIT TO THE ENGINEER OF RECORD AND THE BUILDING DEPARTMENT A SIGNED FINAL REPORT STATING THAT THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.

2. SPECIAL INSPECTION NOTES:
   A. CONTINUOUS SPECIAL INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS SPECIFICALLY NOTED BELOW.
   B. WHERE FABRICATION OF THE STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING THE PERFORMANCE OF THE WORK EXCEPT AS ALLOWED IN IBC SECTION 1704.2.5 AND UNLESS SPECIFICALLY NOTED BELOW.
   C. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE SPECIAL INSPECTOR(S) WITH ADVANCE NOTICE, NO LESS THAN ONE WORKING DAY, OF THE INITIATION OF ANY WORK REQUIRED TO HAVE SPECIAL INSPECTIONS. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION WILL BE SUBJECT TO REMOVAL.

3. TYPES OF WORK REQUIRING SPECIAL INSPECTIONS ARE:
   A. STRUCTURAL STEEL ELEMENTS OF BUILDINGS AND STRUCTURES AS REQUIRED BY IBC SECTION 1705.2.1 AND AISC 360 SECTION 'N'.
   B. COLD-FORMED STEEL DECK AS REQUIRED BY IBC SECTION 1705.2.2 AND SDI QA/QC.
   C. OPEN-WEB STEEL JOISTS AND JOIST GIRDERS AS REQUIRED BY IBC SECTION 1705.2.3 AND TABLE 1705.2.3, AS FOLLOWS: PERIODIC SPECIAL INSPECTION IN COMPLIANCE WITH SJI SPECIFICATIONS, SECTION 2207.1 FOR INSTALLATION OF OPEN WEB STEEL JOISTS AND JOIST GIRDERS REQUIRED FOR:
      a. END CONNECTIONS - WELDING OR BOLTED.
      b. BRIDGING - HORIZONTAL OR DIAGONAL. APPLIES TO BOTH STANDARD BRIDGING AND BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1
   D. CONCRETE CONSTRUCTION AS REQUIRED BY IBC SECTION 1705.3 AND TABLE 1705.3, AS FOLLOWS:
      a. WELDING OF REINFORCING BARS AS REQUIRED BY IBC SECTION 1705.3.1 AND IN COMPLIANCE WITH AWS D1.4 FOR SPECIAL INSPECTION AND AWS D1.4 FOR SPECIAL INSPECTOR QUALIFICATION.
      b. MATERIAL TESTS AS REQUIRED BY IBC SECTION 1705.3.2 AND ACI 318, CHAPTERS 19 AND 20.

IBC TABLE 1705.3 - REQ'D. SPECIAL INSPECTION OF CONC. CONSTRUCTION

INSPECTION TYPE	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X
2. REINFORCING BAR WELDING:		
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	X
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND	-	X
c. INSPECT ALL OTHER WELDS	X	-
3. INSPECT ANCHORS CAST IN CONCRETE	-	X
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.		
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	-
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	-	X
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TEST, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X
9. INSPECT PRESTRESSED CONCRETE FOR:		
a. APPLICATION OF PRESTRESSING FORCES; AND	X	-
b. GROUTING OF BONDED PRESTRESSING TENDONS.	X	-
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	X
11. FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN THE FIELD FOR:		
a. INSTALLATION OF THE EMBEDDED PARTS	X	-
b. COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS.	X	-
c. COMPLETION OF CONNECTIONS IN THE FIELD.	X	-
12. INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5.	-	X
13. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X
14. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X

E. MASONRY CONSTRUCTION AS REQUIRED BY IBC SECTION 1705.4 AND LEVEL B SPECIAL INSPECTIONS OF TMS 402/602-16 AS FOLLOWS:

TMS 4 - MINIMUM SPECIAL INSPECTION REQUIREMENT

INSPECTION TYPE	MINIMUM SPECIAL INSPECTION FREQUENCY	
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
a. PROPORTIONS OF SITE-PREPARED MORTAR	-	X
b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	-	X
c. GRADE, TYPE AND SIZE OR REINFORCEMENTS, CONNECTIONS, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES.	-	X
d. PRESTRESSING TECHNIQUE	-	X
e. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X	X
f. SAMPLE PANEL CONSTRUCTION	-	X
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
a. GROUT SPACE	-	X
b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	-	X
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES	-	X
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	-	X
3. VERIFY DURING CONSTRUCTION:		
a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS.	-	X
b. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION.	-	X
c. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	-	X
d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	-	X
e. WELDING OF REINFORCEMENT	X	-
f. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32°))	-	X
g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X	-
h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	
i. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X	X
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	-	X

F. SOILS AS REQUIRED BY IBC 1705.6 AND TABLE 1705.6 AS FOLLOWS:
   1. PERIODIC SPECIAL INSPECTION REQUIRED TO:
      a. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.
      b. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.
      c. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.
      d. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED.
   2. CONTINUOUS SPECIAL INSPECTION REQUIRED TO:
      a. VERIFY USE OF PROPER MATERIALS AND PROCEDURES, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.
      b. COMPACTED SOIL BACKFILL IN COMPLIANCE WITH SECTION 1803 SHALL REQUIRE SPECIAL INSPECTIONS IN ACCORDANCE WITH ASTM D1557.

G. FABRICATED ITEMS AS REQUIRED BY IBC SECTION 1705.11 AND SECTION 1704.2.5.

Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

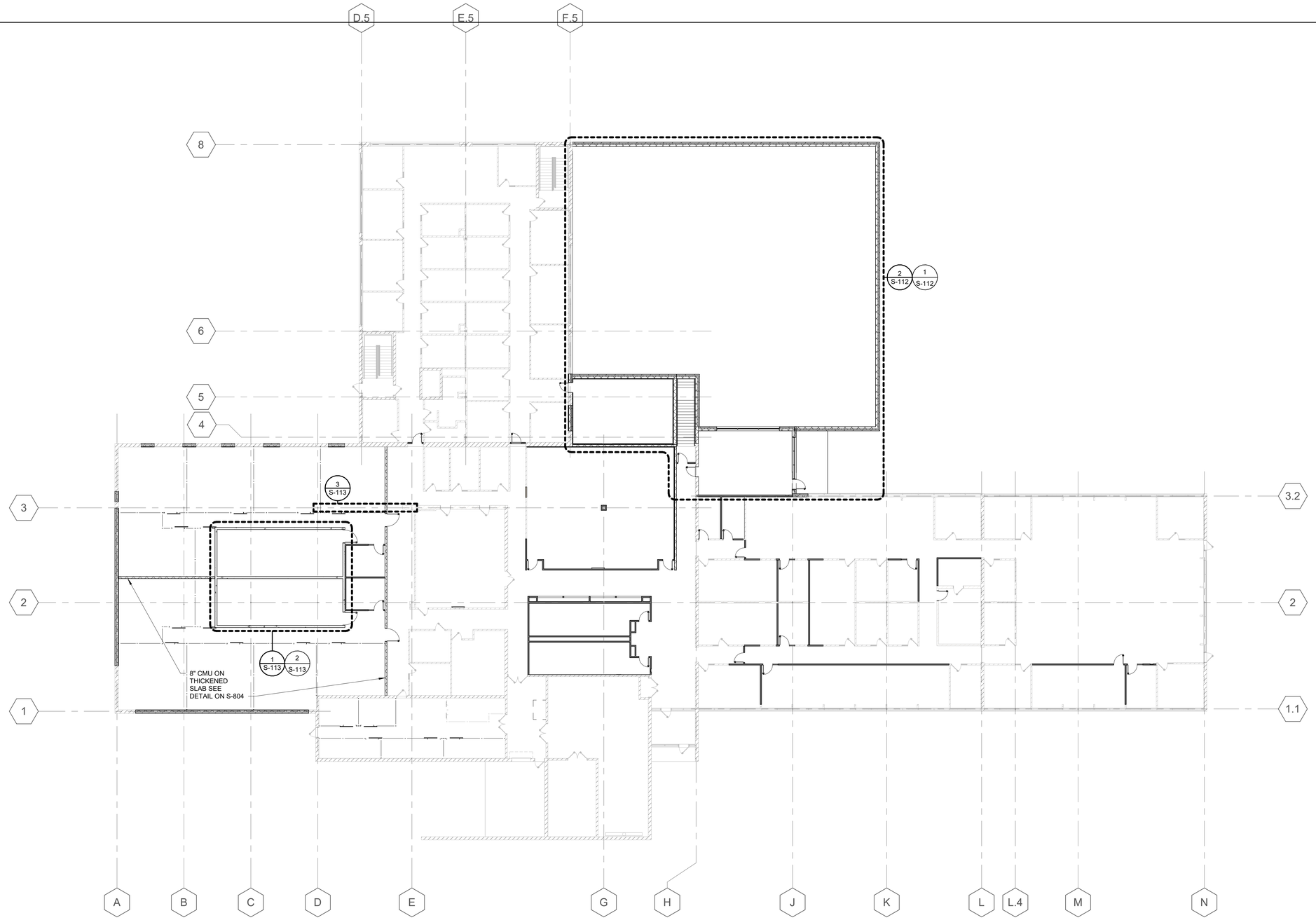
MISS DIG 811
FOR SITE OWNED UTILITIES
72 HOURS (3 WORKING DAYS) BEFORE YOU DIG
CALL: MR. ZIMMERMAN
PH: (248) 606-8821
FACILITIES MANAGEMENT

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

RENOVATE ARMORY, JACKSON (WEST) ARMORY

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2700 W ARGYLE ST., JACKSON, MI

SHEET TITLE: STRUCTURAL NOTES AND INSPECTION SCHEDULE
SHEET: S-002
IDENTIFICATION NO:
ISSUED FOR: PRELIMINARY ☐ CONSTRUCTION ☒ FINAL RECORD ☐
DATE: 1/15/26
PROJECT NO: 25510.A
DMVA: 262252507
FILE NO./INDEX CODE: 51125039.CAK
DESIGNED SE
DRAWN NC
CHECKED EA
APPROVED MR



N
1
S-111

OVERALL FLOOR PLAN

1/16" = 1'-0"

Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

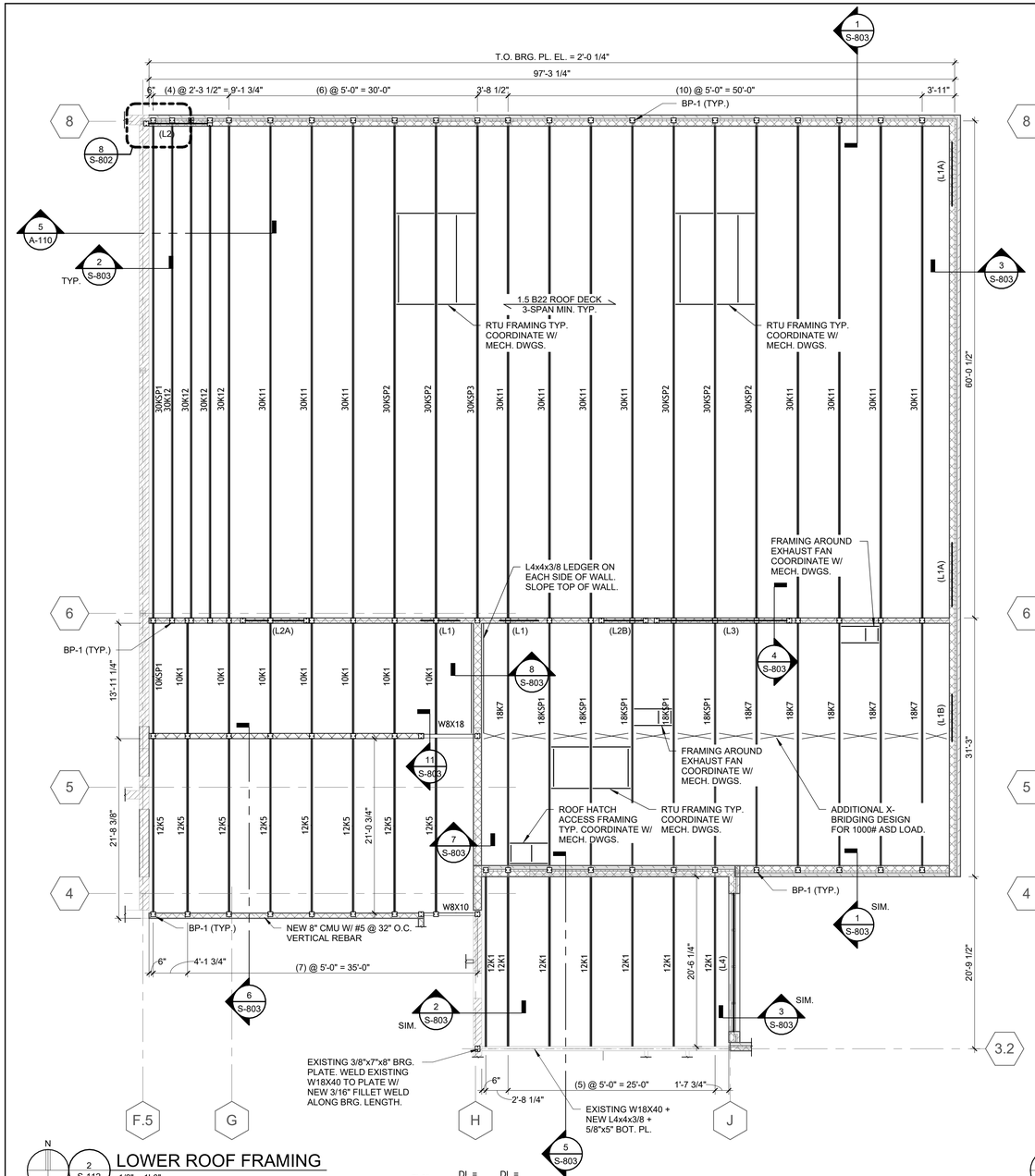
MISS DIG 811
FOR SITE OWNED UTILITIES
72 HOURS
(3 WORKING DAYS)
BEFORE YOU DIG
CALL: MR. ZIMMERMAN
PH: (248) 606-8821
FACILITIES MANAGEMENT

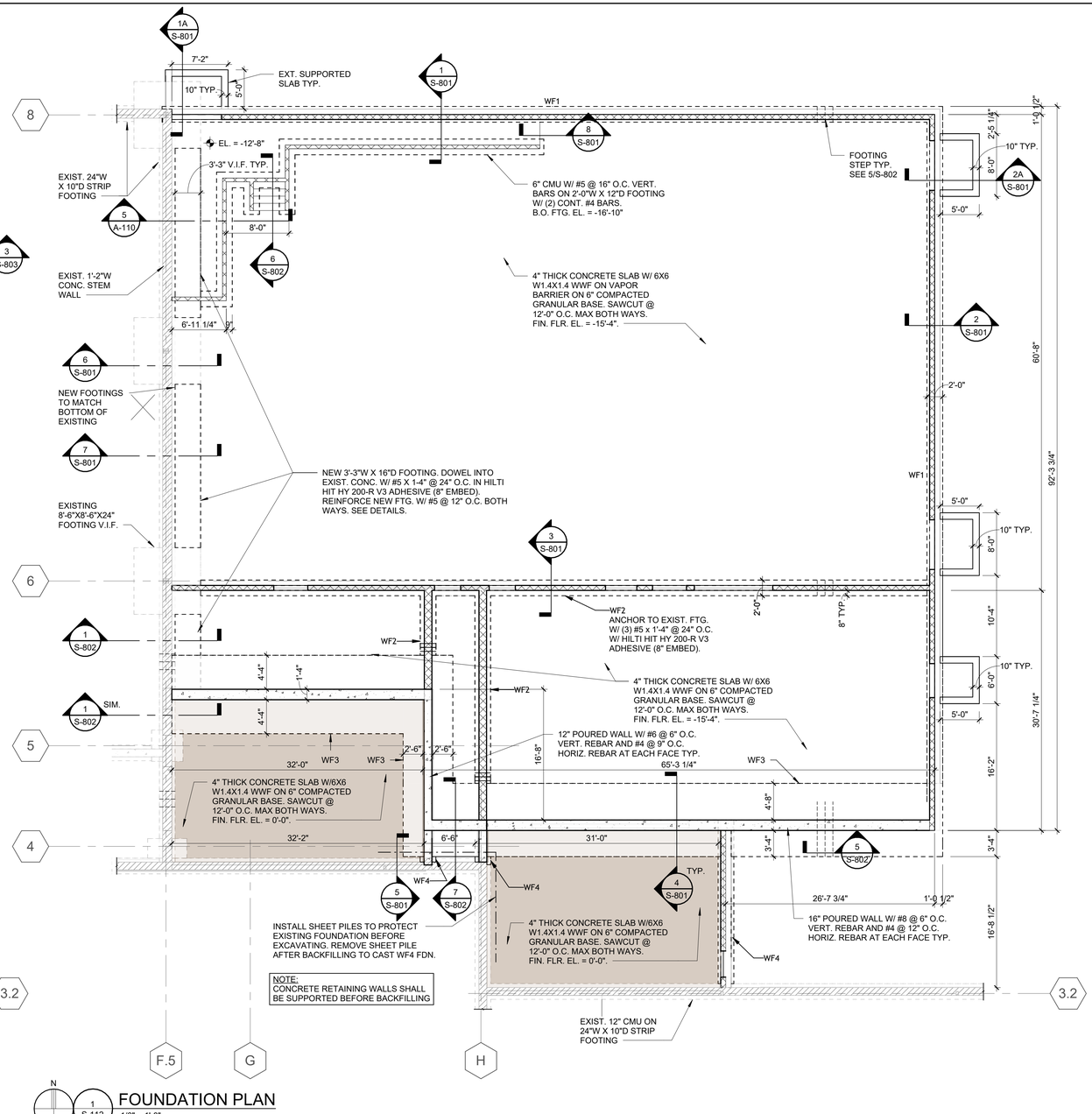
STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

RENOVATE ARMORY, JACKSON (WEST) ARMORY

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2700 W ARGYLE ST., JACKSON, MI

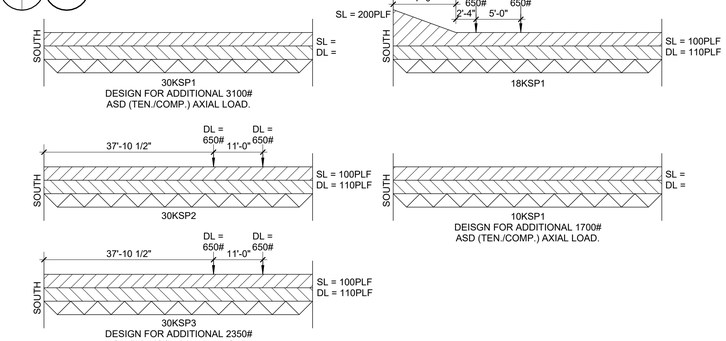
SHEET TITLE:	OVERALL FLOOR PLAN
SHEET IDENTIFICATION NO:	S-111
PROJECT NO.: 26510.A	
DMVA 262262507	
FILE NO./INDEX CODE: 51125039.CAK	
ISSUED FOR:	DATE
☐ PRELIMINARY	
☒ CONSTRUCTION	1/15/26
☐ FINAL RECORD	
DESIGNED	SE
DRAWN	NC
CHECKED	EA
APPROVED	MR





LOWER ROOF FRAMING

N 2 S-112 — 1/8" = 1'-0"



SPECIAL JOISTS

FOUNDATION PLAN

N 1 S-112 — 1/8" = 1'-0"

BEARING PLATE SCHEDULE

MARK	SIZE	ANCHORAGE
BP-1	7" x 7" x 3/8"	(2) 1/2" ∅ x 5" STUDS
BP-2	7" x 7" x 5/8"	(2) 1/2" ∅ x 5" STUDS

LINTEL SCHEDULE

MARK	LINTEL	OPENING SIZE	REMARK
L1	8" W x 16" H w/ (2) #5 BARS	3'-4"	
L1A	8" W x 16" H w/ (2) #5 BARS	6'-4"	
L1B	8" W x 16" H w/ (2) #5 BARS	4'-2"	
L2	W8X13 w/ 3/8"x15" PL. TOP & BOT.	6'-5"	BP1
L2A	W8X13 w/ 3/8"x7" PL. TOP & BOT.	4'-5"	BP1
L2B	W8X13 w/ 3/8"x7" PL. TOP & BOT.	4'-0"	BP1
L3	W10X30 w/ 3/8"x7" PL. TOP & BOT.	15'-4"	BP2
L4	W8X21 w/ 3/8"x15" PL. TOP & BOT.	16'-8"	BP1

NOTE: THE WEST END OF L2 TO BEAR ON EXISTING CMU - GROUT SOLID BEARING UNIT.

GENERAL FRAMING NOTES

1. JOIST MANUFACTURER SHALL DESIGN JOISTS FOR ADDITIONAL LOADS AT LOCATIONS SHOWN AND BRIDGING. CONTRACTOR OPTION TO ALTERNATE JOISTS AT COMMON BRG. POINT.
2. JOIST DESIGNATION; SP - SPECIAL JOIST.
3. METAL ROOF DECK: 3 SPAN MIN., 36/4 FASTENER PATTERN W/ MIN. 3 SIDE LAP FASTENERS UNO.
4. ROOF DECK SUPPORT FASTENERS: 5/8" PUDDLE WELDS OR #12 TEK SCREWS UNO.
5. ROOF DECK SIDE LAP FASTENERS: #10 TEK SCREWS AND WELDS RESPECTIVELY.
6. 10 PSF NET UPLIFT @ ROOF JOISTS.
7. GC SHALL CONFIRM CURB SIZES FOR ROOF ACCESS AND HVAC EQUIPMENT PRIOR TO STEEL SHOP DRAWING APPROVAL.
8. ALL ROOF SUMP OPENINGS TO BE 2'-0" X 2'-0" CLEAR W/ L4 X 4 X 1/4 FRAMING. CONTRACTOR OPTION TO USE SUMP PANS.
9. ALL RTU FRAMING TO BE L5X3 1/2X5/16 L.L.V., TYP.

FOOTING SCHEDULE

MARK	SIZE	REBAR
WF-1	2'-0"W X 1'-0"D STRIP FTG.	#5 @ 12" O.C. TRANS. BAR (3) #4 CONT. LONG. BAR
WF-2	2'-0" X 1'-0" STRIP FTG.	#5 @ 12" O.C. TRANS. BAR (3) #4 CONT. LONG. BAR
WF-3	SEE PLAN	#6 @ 10" O.C. T/B TRANS #5 @ 10" O.C. T/B LONG.
WF-4	2'-0" X 3'-6" CONC. TRENCH FTG.	(3) #5 CONT. BARS TOP & BOT.

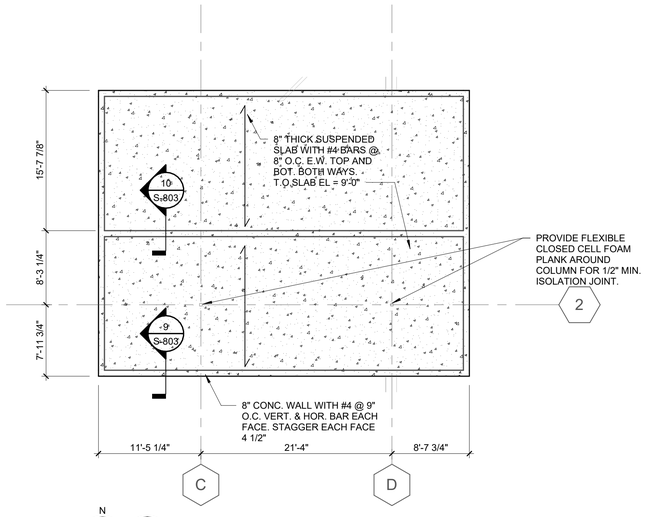
Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

MISS DIG 811
FOR SITE OWNED UTILITIES
72 HOURS (3 WORKING DAYS) BEFORE YOU DIG
CALL: MR. ZIMMERMAN
PH: (248) 606-8821
FACILITIES MANAGEMENT

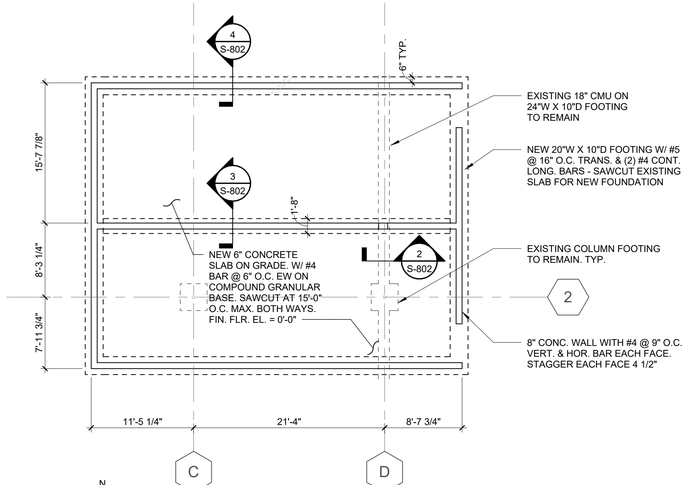
STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

RENOVATE ARMORY, JACKSON (WEST) ARMORY
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2700 W ARGYLE ST., JACKSON, MI

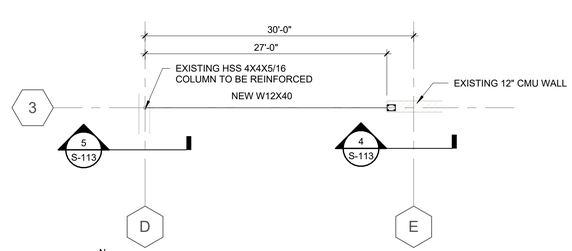
SHEET TITLE: NEW ADDITION FRAMING & FOUNDATION PLANS - LOWER LEVEL
SHEET: S-112
IDENTIFICATION NO.: PROJECT NO: 25510.A; DMVA: 262252507; FILE NO./INDEX CODE: 511/25039.CAK
ISSUED FOR: DATE — PRELIMINARY ☐; CONSTRUCTION ☒ 1/15/26; FINAL RECORD ☐
DESIGNED SE; DRAWN NC; CHECKED EA; APPROVED MR



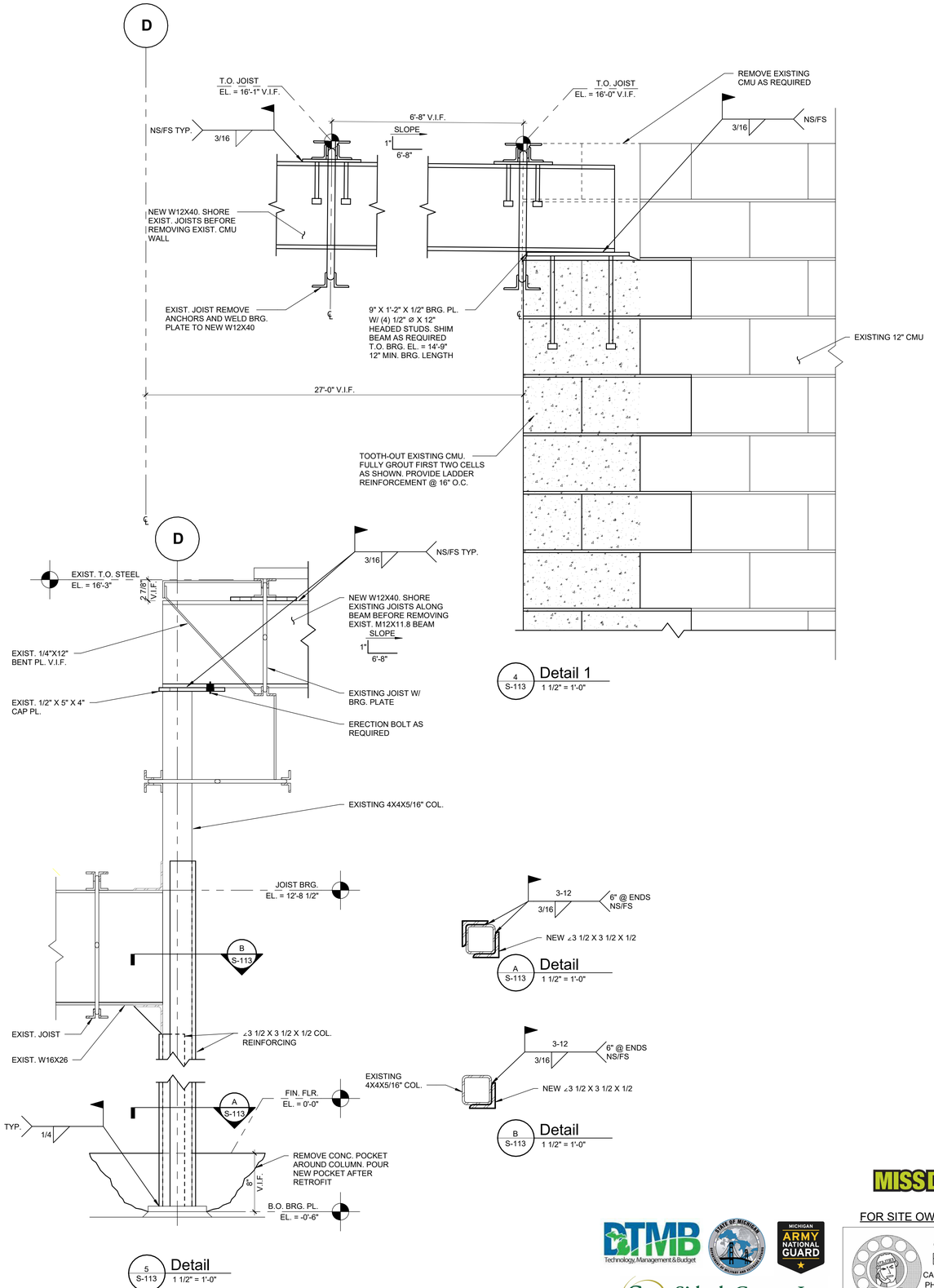
N 1 S-113 **NEW VAULT ELEVATED SLAB**
1/8" = 1'-0"



N 2 S-113 **NEW VAULT FOUNDATION PLAN**
1/8" = 1'-0"



N 3 S-113 **ENLARGED STRUCTURAL FRAMING PLAN**
1/8" = 1'-0"



5 S-113 **Detail**
1 1/2" = 1'-0"

Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

MISS DIG 811
FOR SITE OWNED UTILITIES
72 HOURS (3 WORKING DAYS) BEFORE YOU DIG
CALL: MR. ZIMMERMAN
PH: (248) 606-8821
FACILITIES MANAGEMENT

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

RENOVATE ARMORY, JACKSON (WEST) ARMORY
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2700 W ARGYLE ST., JACKSON, MI

SHEET TITLE: ENLARGED FRAMING & FOUNDATION PLANS

IDENTIFICATION NO:	ISSUED FOR:	DATE
PROJECT NO: 25510.A	☐ PRELIMINARY	1/15/26
DMA: 262282507	☐ CONSTRUCTION	☒
FILE NO./INDEX CODE: 511/25039.CAK	☐ FINAL RECORD	☐

DESIGNED	SE
DRAWN	NC
CHECKED	EA
APPROVED	MR

SHEET S-113

N

1 S-114

MAIN LEVEL FRAMING PLAN - PART A

1/8" = 1'-0"

MISS DIG 811

FOR SITE OWNED UTILITIES

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG

CALL: MR. ZIMMERMAN PH: (248) 606-8821

FACILITIES MANAGEMENT

Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

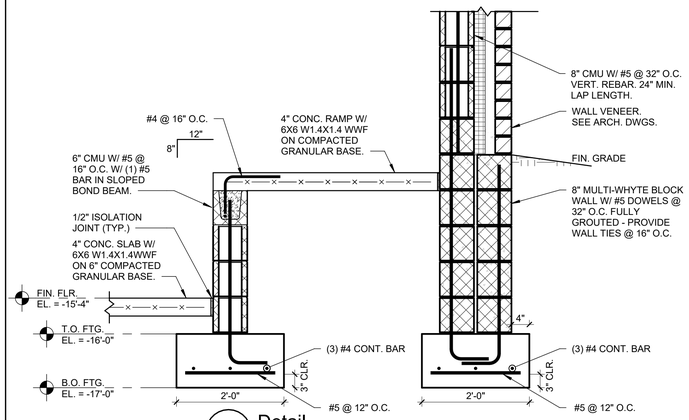
RENOVATE ARMORY, JACKSON (WEST) ARMORY

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

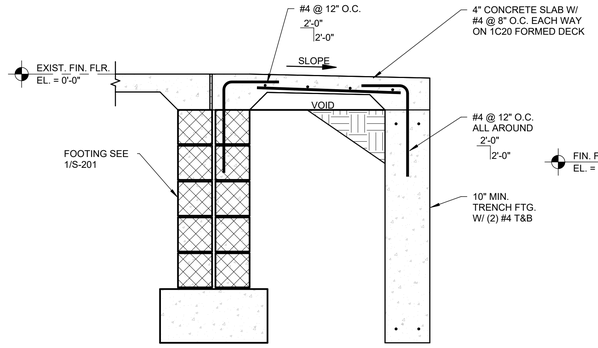
2700 W ARGYLE ST., JACKSON, MI

SHEET TITLE:	ENLARGED FRAMING PLAN - PART A
ISSUED FOR:	DATE
☐ PRELIMINARY	1/15/26
☒ CONSTRUCTION	
☐ FINAL RECORD	
IDENTIFICATION NO:	
PROJECT NO: 25510.A	
DMVA: 262262507	
FILE NO./INDEX CODE: 511/25039.CAK	
SHEET	S-114

DESIGNED	SE
DRAWN	NC
CHECKED	EA
APPROVED	MR

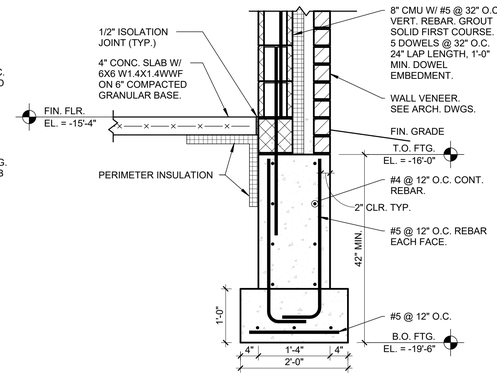


1 S-112 **Detail**
3/4" = 1'-0"

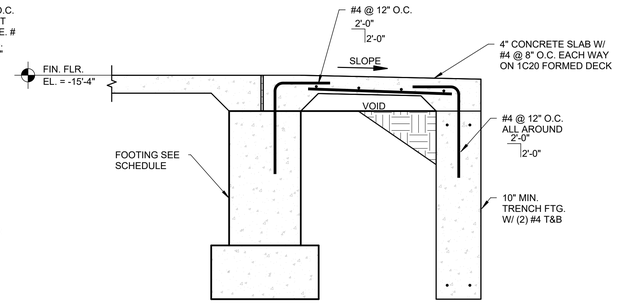


NOTE:
AT CONTRACTOR'S OPTION A MASS CONCRETE POUR MAY BE SUBSTITUTED FOR ENTRY SLABS

1A S-112 **Detail**
3/4" = 1'-0"

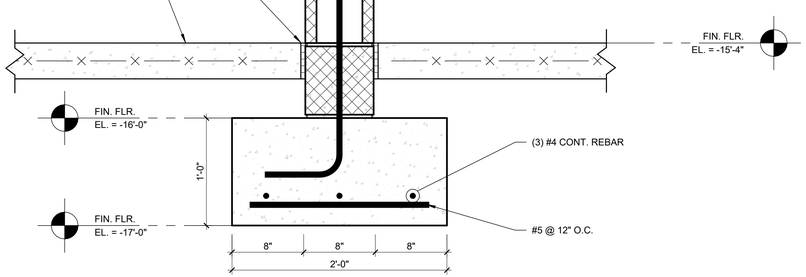


2 S-112 **Detail**
3/4" = 1'-0"

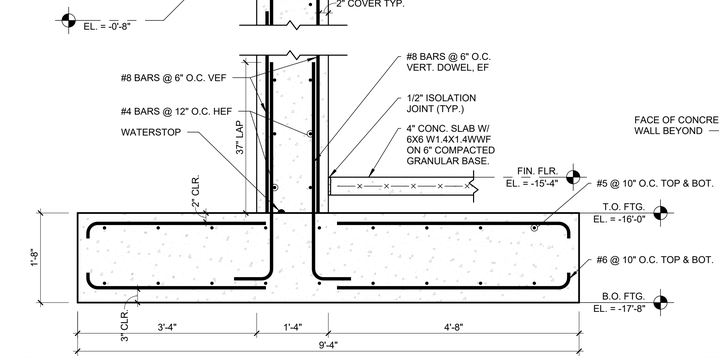


NOTE:
AT CONTRACTOR'S OPTION A MASS CONCRETE POUR MAY BE SUBSTITUTED FOR ENTRY SLABS

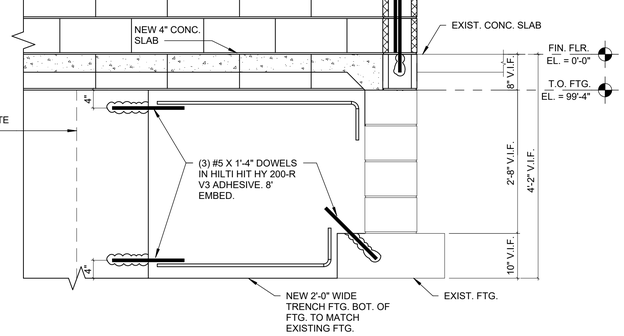
2A S-112 **Detail**
3/4" = 1'-0"



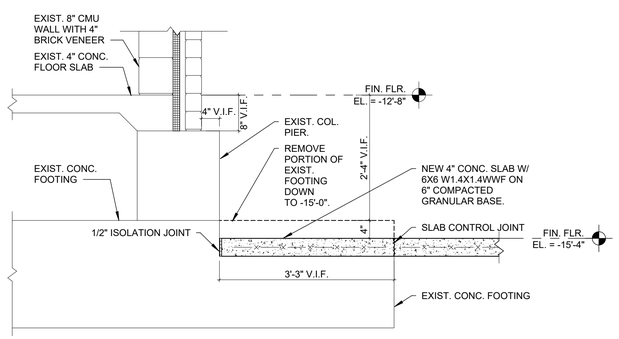
3 S-112 **Detail**
1 1/2" = 1'-0"



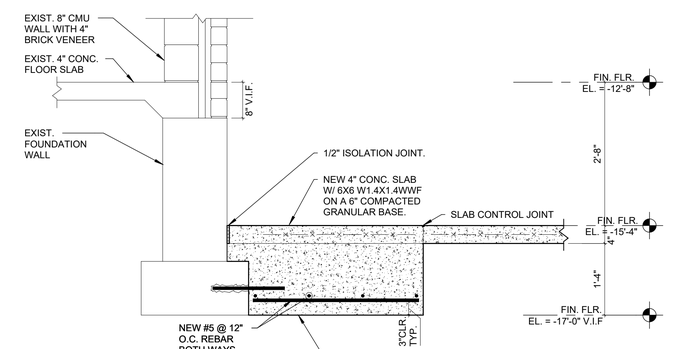
4 S-112 **Detail**
3/4" = 1'-0"



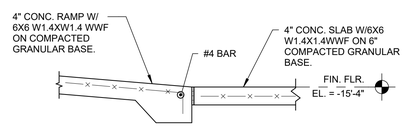
5 S-112 **Detail**
3/4" = 1'-0"



6 S-112 **Detail**
3/4" = 1'-0"



7 S-112 **Detail**
3/4" = 1'-0"



8 S-112 **Detail**
3/4" = 1'-0"

MISS DIG 811
FOR SITE OWNED UTILITIES
72 HOURS (3 WORKING DAYS) BEFORE YOU DIG
CALL: MR. ZIMMERMAN
PH: (248) 606-8821
FACILITIES MANAGEMENT

DTMB Technology, Management & Budget
STATE OF MICHIGAN
MICHIGAN ARMY NATIONAL GUARD

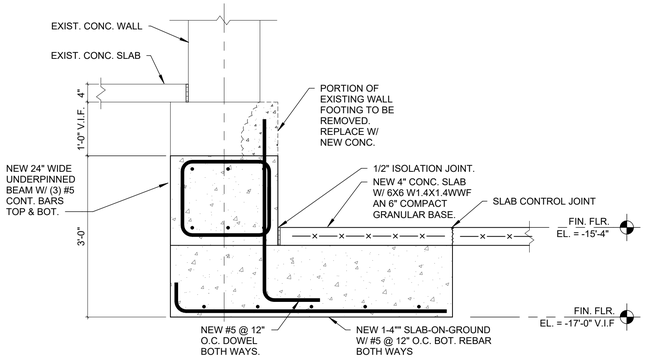
Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

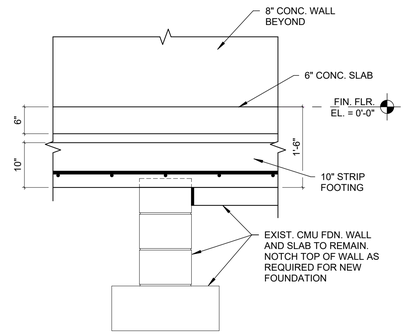
RENOVATE ARMORY, JACKSON (WEST) ARMORY
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2700 W ARGYLE ST., JACKSON, MI

DESIGNED	SE		
DRAWN	NC	ISSUED FOR:	DATE
CHECKED	EA	☐ PRELIMINARY	☐
APPROVED	MR	☐ CONSTRUCTION	☒ 1/15/26
		☐ FINAL RECORD	☐

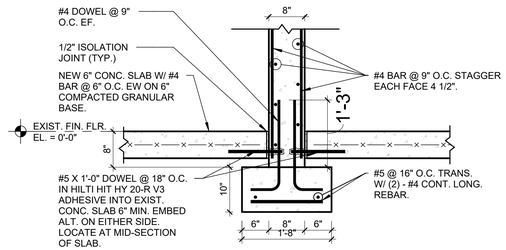
SHEET TITLE: STRUCTURAL DETAILS
IDENTIFICATION NO.:
PROJECT NO: 25510.A
DMVA 262282507
FILE NO./INDEX CODE: 51125039.CAK
SHEET S-801



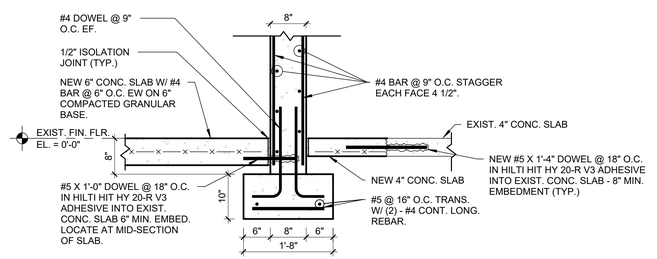
1 S-112 Detail 3/4" = 1'-0"



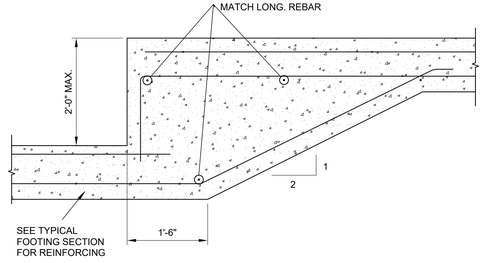
2 S-113 Detail 3/4" = 1'-0"



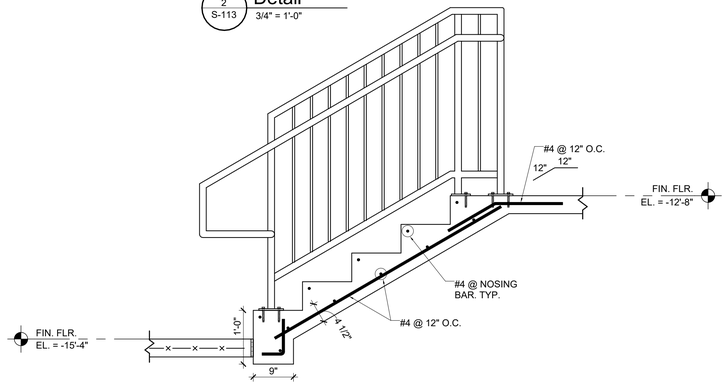
3 S-113 Detail 3/4" = 1'-0"



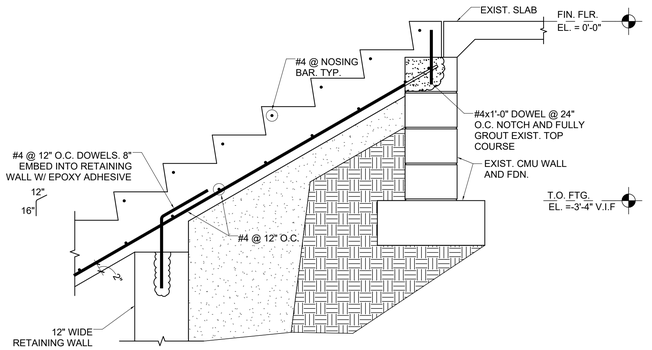
4 S-113 Detail 3/4" = 1'-0"



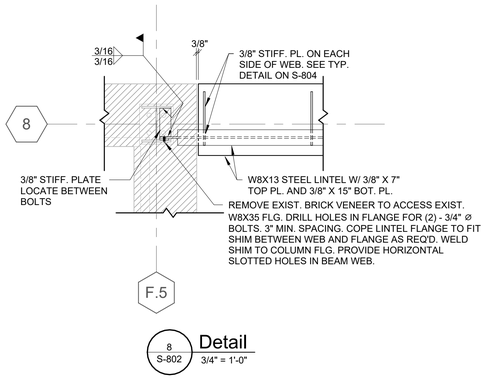
5 S-112 Detail 3/4" = 1'-0"



6 S-112 Detail 3/4" = 1'-0"



7 S-112 Detail 3/4" = 1'-0"



8 S-802 Detail 3/4" = 1'-0"

MISS DIG 811

FOR SITE OWNED UTILITIES

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG

CALL: MR. ZIMMERMAN

PH: (248) 606-8821

FACILITIES MANAGEMENT

DTMB Technology, Management & Budget

MICHIGAN ARMY NATIONAL GUARD

Sidock Group, Inc.

ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

RENOVATE ARMORY, JACKSON (WEST) ARMORY

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

2700 W ARGYLE ST., JACKSON, MI

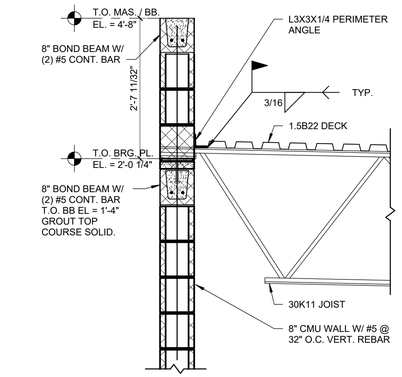
SHEET TITLE: STRUCTURAL DETAILS

SHEET: S-802

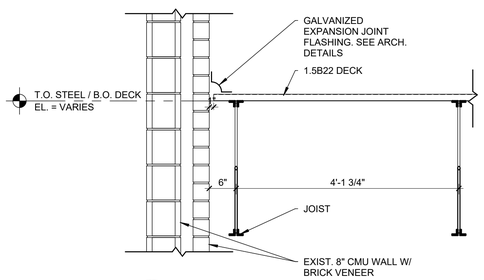
IDENTIFICATION NO:
PROJECT NO: 245104.A
DMVA: 262262007
FILE NO./INDEX CODE: 511/25039.CAK

ISSUED FOR: DATE
PRELIMINARY ☐
CONSTRUCTION 1/15/26 ☒
FINAL RECORD ☐

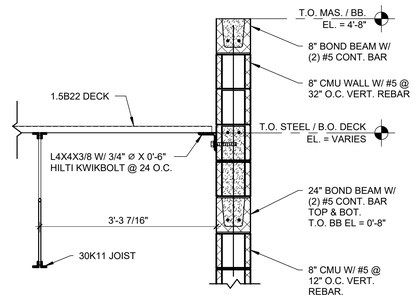
DESIGNED SE
DRAWN NC
CHECKED EA
APPROVED MR



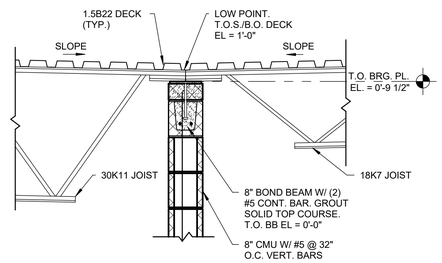
1 S-112 **Detail** 3/4" = 1'-0"



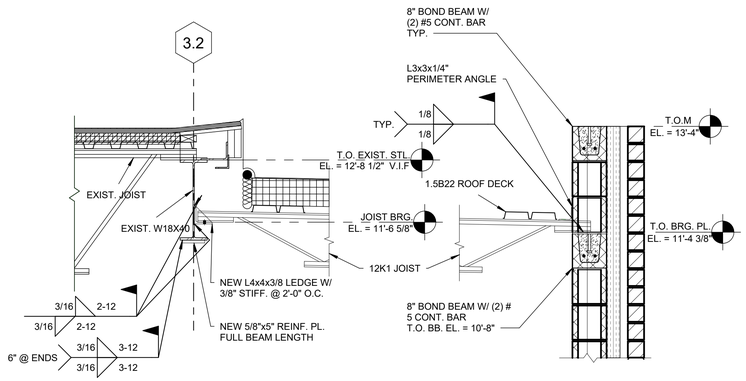
2 S-112 **Detail** 3/4" = 1'-0"

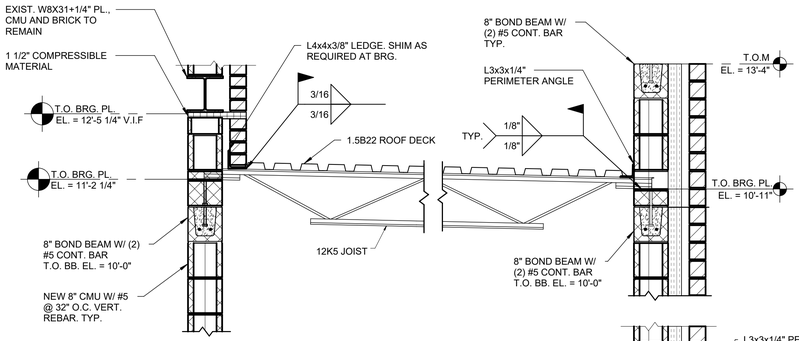


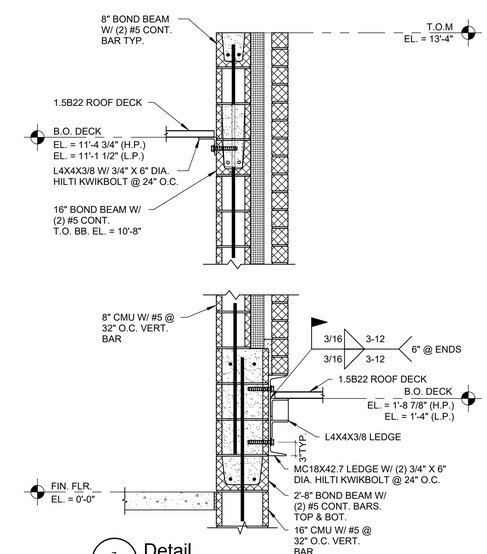
3 S-112 **Detail** 3/4" = 1'-0"



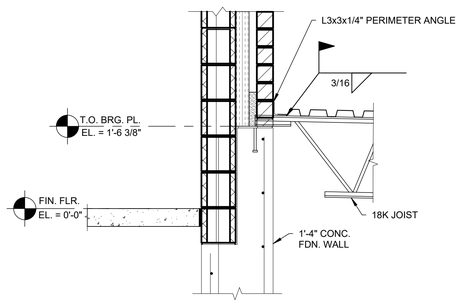
4 S-112 **Detail** 3/4" = 1'-0"



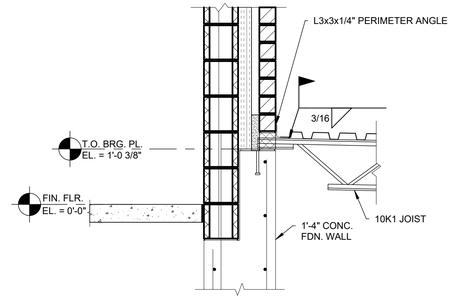




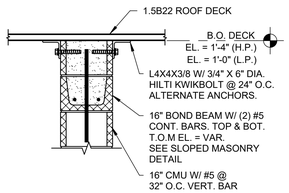
5 S-112 **Detail** 3/4" = 1'-0"



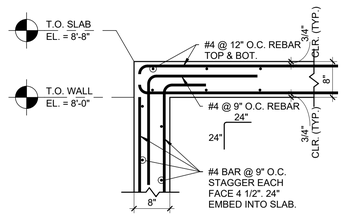
6 S-112 **Detail** 3/4" = 1'-0"



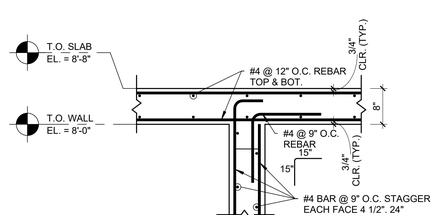
7 S-112 **Detail** 3/4" = 1'-0"



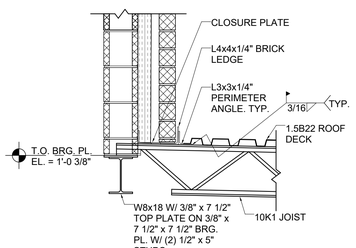
8 S-112 **Detail** 3/4" = 1'-0"



9 S-113 **Detail** 3/4" = 1'-0"



10 S-113 **Detail** 3/4" = 1'-0"



11 S-112 **Detail** 3/4" = 1'-0"

Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

MISS DIG 811
FOR SITE OWNED UTILITIES
72 HOURS
(3 WORKING DAYS)
BEFORE YOU DIG
CALL: MR. ZIMMERMAN
PH: (248) 606-8821
FACILITIES MANAGEMENT

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

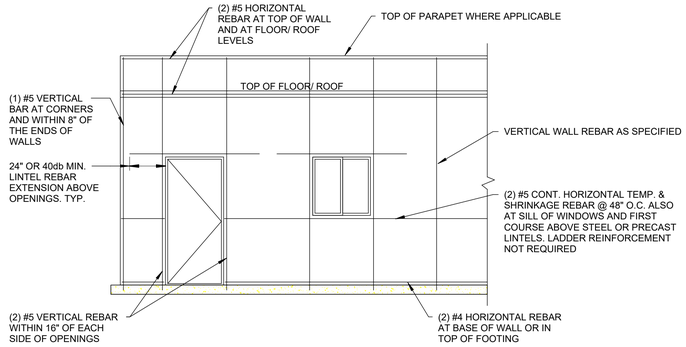
RENOVATE ARMORY, JACKSON (WEST) ARMORY

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2700 W ARGYLE ST., JACKSON, MI

DESIGNED	SE
DRAWN	NC
CHECKED	EA
APPROVED	MR

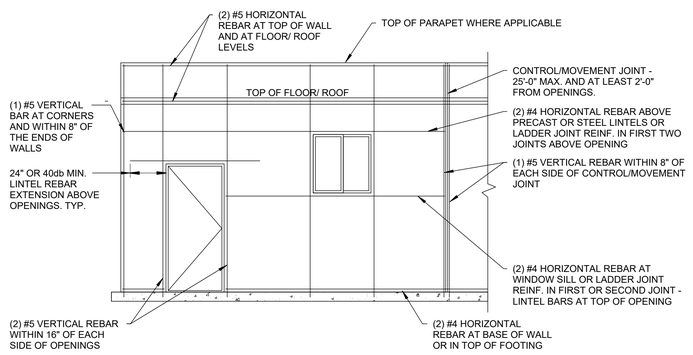
ISSUED FOR: DATE
☐ PRELIMINARY
☐ 1/15/26 [X] CONSTRUCTION
☐ FINAL RECORD

SHEET TITLE: STRUCTURAL DETAILS
IDENTIFICATION NO:
PROJECT NO: 25510.A
DMA: 262282507
FILE NO./INDEX CODE: 511/25038 CAK
SHEET S-803



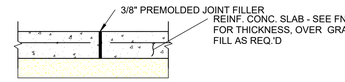
TYP. WALL PANEL DETAIL (W/O CONTROL POINTS)

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

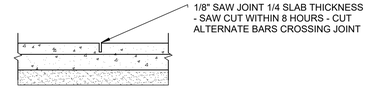


TYP. WALL PANEL DETAIL (WITH CONTROL POINTS)

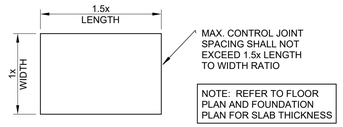
SCALE: 1/4" = 1'-0"



TYP. ISOLATION JOINT

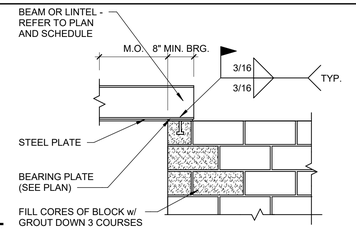


TYP. CONTROL / CONSTRUCTION JOINT



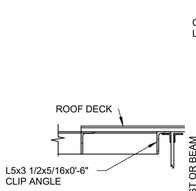
TYP. JOINT DETAILS

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

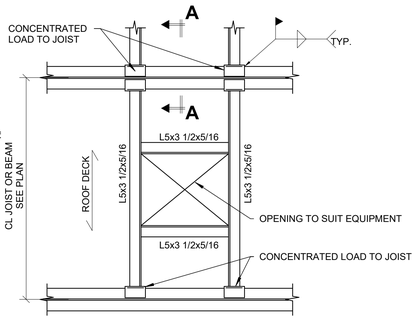


TYP. STEEL LINTEL BEARING

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

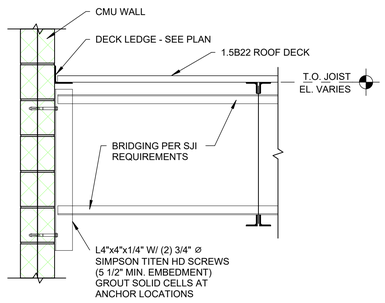


SECTION A-A



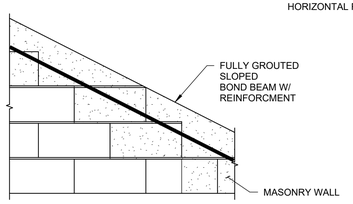
TYP. ROOF OPENING FRAME DETAIL

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



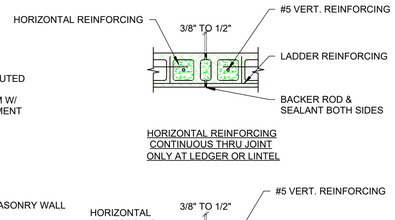
TYP. HORIZONTAL BRIDGING TO CMU WALL DETAIL

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



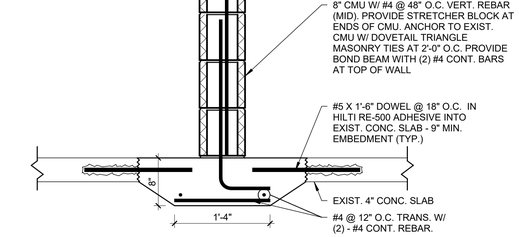
SLOPED BOND BEAM DETAIL

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



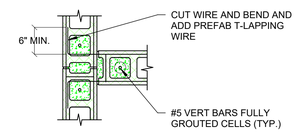
TYP. CMU WALL CONTROL JOINTS

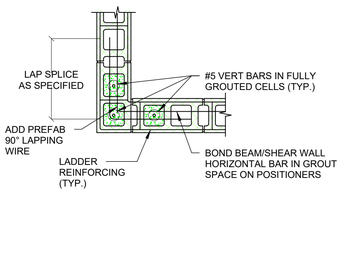
SCALE: 3/4" = 1'-0"



THICKENED SLAB AT NEW CMU WALL

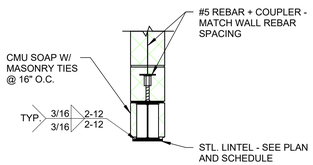
SCALE: 1" = 1'-0"





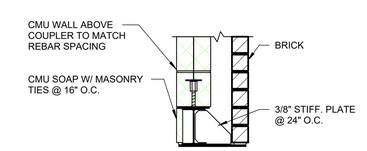
TYP. CMU WALL INTERSECTIONS

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



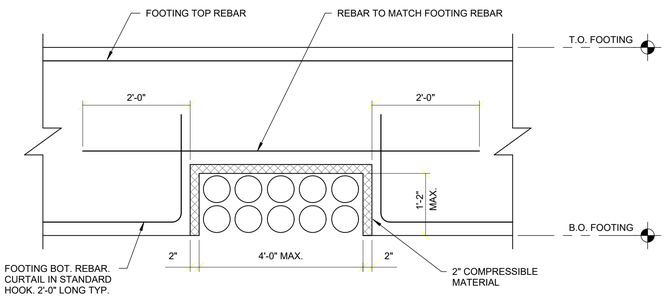
TYP. CMU STEEL LINTEL

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



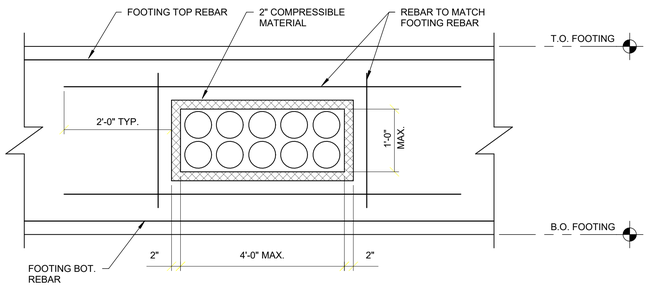
TYP. CMU STEEL LINTEL

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



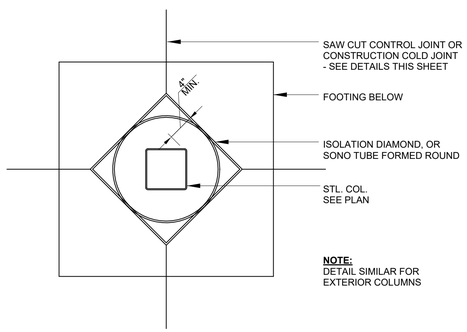
TYP. DETAIL OF PIPE AT CONC. FOOTING

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



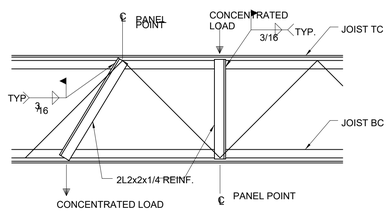
TYP. DETAIL OF PIPE AT CONC. FOOTING

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



TYP. ISOLATION JOINT @ COLUMN

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



ROOF JOIST REINFORCING

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

MISS DIG 811
FOR SITE OWNED UTILITIES
72 HOURS (3 WORKING DAYS) BEFORE YOU DIG
CALL: MR. ZIMMERMAN
PH: (248) 606-8821
FACILITIES MANAGEMENT

DTMB Technology, Management & Budget
STATE OF MICHIGAN
MICHIGAN ARMY NATIONAL GUARD

Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM P. LARCH, R.A., DIRECTOR

RENOVATE ARMORY, JACKSON (WEST) ARMORY

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2700 W ARGYLE ST., JACKSON, MI

DESIGNED	SE
DRAWN	NC
CHECKED	EA
APPROVED	MR

ISSUED FOR: DATE
☐ PRELIMINARY 1/15/26
☒ CONSTRUCTION
☐ FINAL RECORD

PROJECT NO: 25510.A
DMA: 262282507
FILE NO./INDEX CODE: 511/25039.CAK

SHEET TITLE: STRUCTURAL DETAILS
SHEET IDENTIFICATION NO: S-804