DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH:
   MBC 2015
   MI RHC 2015
   ASCE 7-10
   ASCE 41-13
   ACI 318-14
   ACI 530-13
   AISC 360-10
   AISC 341-10
   AISI S100
   AWS D1.1, D1.3 AND D1.8
   NDS-15 AND SDPWS-15
2. RISK CATEGORY II
3. DEAD LOADS ARE LISTED ON PLANS.
4. LIVE LOADS: SEE S004 FOR LOADING PLANS
5. SNOW: SEE S004 FOR LOADING PLANS
6. SEISMIC: SEE S004 FOR LOADING PLANS
7. WIND LOADS: SEE S004 FOR LOADING PLANS
8. ICC 500 SHELTER WIND DESIGN LOADS: SEE S004 FOR LOADING PLANS
9. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY MASONRY WALLS IN EACH ORTHOGONAL DIRECTION. SEE PLANS FOR LOCATIONS. THE DECKING SERVE AS HORIZONTAL DIAPHRAGMS DISTRIBUTING THE LATERAL FORCES TO THE VERTICAL LATERAL ELEMENTS WHICH IN TURN CARRY THE LOAD TO THE BUILDING FOUNDATIONS.

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO CONSTRUCTION, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL SO CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE.
11. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF/FLOOR OPENINGS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
12. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
13. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
14. PENETRATIONS SHALL BE CAST-IN-PLACE AND SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN THE STRUCTURAL DRAWINGS.
15. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH PARTY SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH CONDITIONS IN FIELD, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.

SUBMITTALS

1. SUBMITTALS ARE:
   a. CONCRETE MIX DESIGNS
   b. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
   c. CONCRETE AND MASONRY REINFORCING
   d. ENGINEERED LUMBER
   e. PANELIZED WALLS FOR WOOD BUILDINGS
   f. STEEL FABRICATION AND MISCELLANEOUS METALS
   g. STEEL DECK
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE ARCHITECT/STRUCTURAL ENGINEER.
3. SUBMITTALS SHALL BE REVIEWED BY THE ARCHITECT/STRUCTURAL ENGINEER FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE ARCHITECT/STRUCTURAL ENGINEER ON THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

1. DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
2. DELEGATED DESIGNS ARE:
   a. EXCAVATION, SHORING, AND UNDERPINNING
   b. PREMANUFACTURED WOOD JOISTS AND TRUSSES
   c. STRUCTURAL STEEL CONNECTIONS
   d. CURTAIN WALL AND STOREFRONT SYSTEMS
   e. COLD FORMED STEEL FRAMING
   f. ROOFTOP EQUIPMENT ANCHORAGE AND CURBS
   g. STAIRS, ACCESS LADDERS, HANDRAILS, GUARDRAILS, AND GRATING
3. ALL DELEGATED DESIGNS SHALL BEAR THE STAMP AND SIGNATURE OF THE QUALIFIED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED, RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EXISTING CONDITIONS / DEMOLITION

1. EXISTING CONDITIONS:
   a. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS:
      i. DATED 6-15-1962 BY DOLGNER, ROLLASON & ROKICKI ARCHITECTS & ENGINEERS.
      ii. DATED 12-1-1949 BY JENSEN & KEOUCH ARCHITECTS & ENGINEERS.
      iii. DATED 5-14-1927 BY VAN LEYEN, SCHILLING & KEOUCH ARCHITECTS & ENGINEERS.
   b. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
   c. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT OR STRUCTURAL ENGINEER SO PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
2. EXISTING BUILDING MATERIAL PROPERTIES:
   a. REFER TO DRAWINGS
3. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY SO AS TO NOT DAMAGE EXISTING ELEMENTS WHICH ARE TO REMAIN.
4. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. EXISTING ELEMENTS ARE TO BE PROTECTED TO THE FULLEST EXTENT POSSIBLE TO REDUCE SUCH DAMAGE TO A MINIMUM.

EARTHWORK

1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT DATED SEPTEMBER 26, 2023 BY McDOWEL & ASSOCIATES. REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES PER THE GEOTECHNICAL REPORT:

ALLOWABLE NET SOIL BEARING PRESSURE:	
FOOTINGS	3000 PSF
FROST DEPTH	3.5 FT (UNHEATED)

3. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING/BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM IS IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OR SHORING AND/OR SHEETING.
4. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER OR SEEPAGE. FREE GROUND WATER WAS NOT ENCOUNTERED IN THE BORINGS. DETAILS OF GROUND WATER INFORMATION CAN BE OBTAINED FROM THE ABOVE-MENTIONED GEOTECHNICAL REPORT. IF GROUND WATER SHOULD OCCUR DURING EXCAVATION, SPECIAL PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED. SEE THE GEOTECHNICAL REPORT FOR INFORMATION REGARDING THE DESIGN AND INSTALLATION OF THE SHORING. SHORING THAT IS NOT PART OF THE PERMANENT BUILDING SUPPORT IS THE CONTRACTOR'S RESPONSIBILITY AND OUTSIDE THIS PERMIT.
6. CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
7. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY. ALL ABANDONED FOUNDATIONS, UTILITIES AND OTHER STRUCTURES THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
8. ALL FOOTINGS AND SLABS ON GRADE SHALL BE PLACED ONTO FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL, REMOVING ANY EXISTING FILL, ORGANIC MATERIAL, OR UNSUITABLE SOILS, AS RECOMMENDED BY THE GEOTECHNICAL REPORT. EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED BELOW SLABS ON GRADE.
9. THE PREPARATION OF THE SUBGRADE FOR THE SLAB ON GRADE SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT REFERENCED ABOVE. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
10. FOUNDATION ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH WHERE AN ADEQUATE SOIL BEARING PRESSURE IS EXPECTED. FOOTINGS, PIERS AND/OR WALLS SHALL BE LOWERED OR EXTENDED AS REQUIRED TO REACH SOIL MEETING THE DESIGN BEARING PRESSURE.
11. ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN 6" LAYERS TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND TO THE APPROVAL OF THE INSPECTION AGENCY.
12. THE MOISTURE CONTENT OF ONSITE CLAYEY SOILS AT THE TIME OF COMPACTION SHALL BE BETWEEN 2-3% ABOVE OPTIMUM MOISTURE CONTENT.
13. ANY REQUIRED IMPORT FILL SOIL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL" (SP-066) EXCEPT AS OTHERWISE SHOWN, NOTED OR SPECIFIED.
2. CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:

DEFORMED BARS	ASTM A615, GR 60	Fy = 60 KSI
DEFORMED BARS IN SFRS	ASTM A706, GR 60	Fy = 60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy = 65 KSI
DEFORMED EPOXY-COATED BARS	ASTM A775	Fy = 60 KSI
DEFORMED GALVANIZED-COATED BARS	ASTM A767	Fy = 60 KSI
STEEL WIRE	ASTM A1064	Fy = 60 KSI
DEFORMED BAR ANCHORS	ASTM A1064	Fy = 70 KSI
WELDABLE BARS, DEFORMED	ASTM A706, GR 60	Fy = 60 KSI

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	3"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
#6 BARS OR LARGER	2"
#5 BARS OR SMALLER	1 1/2"

4. ALL REINFORCING IN CONCRETE USED FOR THE CONTAINMENT OF WATER SHALL BE HOT-DIP GALVANIZED OR EPOXY-COATED.
5. DEFORMED BAR ANCHORS (DBA) SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE WELDING EQUIPMENT IN THE SHOP OR IN THE FIELD. WELDING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER.
6. SUPPORTS FOR REINFORCEMENT SHALL HAVE CLASS 2 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
7. SUPPORTS FOR COATED REINFORCEMENT SHALL HAVE CLASS 1 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
8. ALL WELDED WIRE REINFORCING (WWR) SHALL BE LAPPED 2 PANELS AT EDGES AND ENDS.
9. CONTINUOUS HORIZONTAL REINFORCING SHALL BE LAPPED AT MIDSPAN FOR TOP BARS AND DIRECTLY OVER SUPPORTS FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
10. FOR MAT FOUNDATIONS, REINFORCING FOR TOP BARS SHALL BE LAPPED UNDER STRUCTURAL COLUMNS AND WALLS ABOVE AND AT MIDSPAN FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
11. WHERE REINFORCEMENT LENGTH IS SPECIFIED, NO SPLICES ARE PERMITTED WITHIN THE SPECIFIED LENGTH WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.
12. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS OTHERWISE NOTED. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND SPACING OF WALL OR COLUMN REINFORCEMENT. EXTEND DOWELS A LAP SPLICE LENGTH INTO WALL OR COLUMN AND TERMINATE WITH STANDARD HOOK AT BOTTOM OF FOOTING, UNLESS OTHERWISE NOTED.
13. REINFORCING IN WALL FOOTINGS AND GRADE BEAMS BETWEEN COLUMNS SHALL BE DEVELOPED (Ld) INTO COLUMN FOOTINGS.
14. CUTTING OF REINFORCING WHICH CONFLICTS WITH EMBEDDED OBJECTS OR SLEEVES IS NOT ACCEPTABLE.
15. REINFORCING BARS SHALL BE BENT COLD, AND NO METHOD OF FABRICATION SHALL BE USED WHICH WOULD BE INJURIOUS TO THE MATERIAL. HEATING OF BARS FOR BENDING IS NOT PERMITTED.
16. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
17. USE TEMPLATES TO SET ALL EMBEDDED ANCHOR BOLTS, LEVELING PLATES, AND DOWEL BARS AS REQUIRED OR INDICATED ON THE DRAWINGS.
18. SUBMIT SHOP DRAWINGS FOR FABRICATION AND PLACEMENT OF REINFORCING STEEL. INCLUDE SCHEDULES AND DIAGRAMS OF BENT BARS AND SHOW ARRANGEMENT OF REINFORCEMENT, INCLUDING CONCRETE COVER. STRUCTURAL ENGINEER'S REVIEW WILL BE FOR COMPLIANCE WITH DESIGN REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND QUANTITIES.
19. ALL CONCRETE NOT OTHERWISE SPECIFIED SHALL BE REINFORCED TO THE MINIMUM REQUIREMENT OF ACI 318.
20. REINFORCE ALL ARCHITECTURAL CONCRETE TOPPING SLABS WITH 6x6-W1.4xW1.4 WWR UNLESS OTHERWISE NOTED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE CORRESPONDING EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 117, ACI 301, ACI 305.1, ACI 306.1, ACI 308.1, ACI 318 AND SP-066, UNLESS OTHERWISE NOTED.
2. CONCRETE MATERIALS SHALL CONFORM TO:

CEMENT	ASTM C150, TYPE I OR II
FLY ASH	ASTM C618, TYPE C OR F
FINE AND COARSE AGGREGATE	ASTM C33
LIGHTWEIGHT AGGREGATE	ASTM C330
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

3. CONCRETE STRENGTHS SHALL CONFORM TO:

INTENDED USE	STRENGTH (PSI)	EXPOSURE CLASS
FOUNDATIONS	4000	N/A
SLAB ON GRADE	4000	N/A
UNLESS OTHERWISE NOTED	4000	N/A

NORMAL-WEIGHT 28-DAY STRENGTH UNLESS OTHERWISE NOTED.

4. THE MODULUS OF ELASTICITY OF ALL CONCRETE SHALL EXCEED 57,000 SQRT(f'c) FOR NORMAL-WEIGHT CONCRETE OR wc1.5 33 SQRT(f'c).
5. DRYPACK OR GROUT SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 7000 PSI.
6. SLAB-ON-GRADE CONSTRUCTION: LOCATE SAW-CUT CONTROL JOINTS ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED PER THE TABLE BELOW, UNLESS OTHERWISE NOTED. SLAB PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5:1. PROVIDE ADDITIONAL CONTROL JOINTS AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR SPECIAL CASES.

THICKNESS (IN)	MAXIMUM JOINT SPACING EACH WAY (FT)
4	12
5	13
6	15
8	18
10	20
12	22

7. CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ENSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, NOTCHES, AND EDGES OF WALLS/FOUNDATIONS PRIOR TO PLACING CONCRETE.
8. UNLESS OTHERWISE NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS, PIERS OR COLUMNS.
9. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED TO 1/4" AMPLITUDE BY SAND BLASTING OR MECHANICAL MEANS. CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATION PLAN OF ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
10. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE ALL REINFORCING AND EMBEDMENTS, INCLUDING COLUMN ANCHOR BOLTS, ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.
11. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL PENETRATIONS THROUGH CONCRETE BEFORE PLACING. SECURE SLEEVES TO PREVENT MOVEMENT DURING PLACING OPERATIONS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS.
12. CONFIRM WITH ARCHITECT THAT MATERIALS TO BE EMBEDDED ARE SUITABLE FOR EMBEDMENT IN CONCRETE.
13. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO REQUIREMENTS OF ACI 318, SECTIONS 20.7 AND 26.8.
14. DO NOT PLACE VERTICAL CONDUIT IN CONCRETE COLUMNS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
15. NO ALUMINUM SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.
16. WATERSTOPS SHALL BE A FLEXIBLE BENTONITE PRODUCT. ACCEPTABLE PRODUCTS INCLUDE: CETCO WATERSTOP-RX AND GREENSTREAK SWELLSTOP WESTIC BARRIER TECHNOLOGIES TPE-R WATERSTOP AND GREENSTREAK PVC WATERSTOP.
17. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 INCH CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
18. SLOPE SLABS TO DRAINS OR FOR POSITIVE DRAINAGE IF NO DRAINS ARE PRESENT AND PROVIDE DEPRESSIONS WHERE SHOWN ON THE STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS WITHOUT REDUCING THE THICKNESS OF SLAB INDICATED. FOR SLAB-ON-GRADE DEPRESSIONS GREATER THAN 1 INCH, SEE DETAILS FOR ADDITIONAL REINFORCING.
19. INTERNALLY VIBRATE ALL CAST-IN-PLACE CONCRETE EXCEPT SLABS-ON-GRADE WHICH NEED ONLY BE VIBRATED AROUND UNDER FLOOR DUCTS AND OTHER EMBEDDED ITEMS. VIBRATE TOPS OF COLUMNS.
20. PROVIDE VERTICAL CONTROL JOINTS IN EXPOSED CONCRETE WALLS AT A MINIMUM UNIFORM SPACING NOT TO EXCEED 25 FEET PER ACI 224.3. COORDINATE JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.
21. CONCRETE SHALL NOT BE PERMITTED TO DROP MORE THAN 5 FEET.
22. IF CONCRETE IS PLACED BY PUMPING, SUPPORT SHALL BE PROVIDED FOR THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING AND OTHER EMBEDDED ITEMS.
23. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR MAY BE STRIPPED AFTER 3 DAYS AND COATED WITH AN APPROVED CURING COMPOUND.
24. NO LOADS SHALL BE PLACED ON STRUCTURAL CONCRETE SLABS WITHIN 7 DAYS AFTER CONCRETE IS PLACED. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS, UNLESS THE WORK IS SHORED.
25. NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
26. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
27. THE DESIGN AND ENGINEERING OF FORMWORK, SHORING AND RESHORING, AS WELL AS THEIR CONSTRUCTION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMS SHALL BE DESIGNED TO HAVE SUFFICIENT STRENGTH TO SAFELY WITHSTAND THE LOADS RESULTING FROM PLACEMENT AND VIBRATION OF THE CONCRETE AND SHALL ALSO BE DESIGNED FOR SUFFICIENT RIGIDITY TO MAINTAIN SPECIFIED TOLERANCES. CONTRACTOR SHALL SUBMIT DETAILED FORMWORK SHOP DRAWINGS TO THE ARCHITECT TO BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT ONLY.
28. SHORING OF ELEVATED CONCRETE TO REMAIN UNTIL CONCRETE TESTS, CURED UNDER JOB-SITE CONDITIONS HAVE BEEN TESTED AND INDICATE 80% OF THE DESIGN MODULUS OF ELASTICITY. GENERAL CONTRACTOR TO PROVIDE THE STRUCTURAL ENGINEER WITH MODULUS OF ELASTICITY TEST RESULTS. SHORING OF THE STRUCTURAL BAY CONTAINING CONSTRUCTION JOINTS AND/OR POUR STRIPS TO REMAIN IN PLACE UNTIL SLAB CONSTRUCTION IS COMPLETE.
29. CONCRETE FILL THICKNESS SHOWN ON FRAMING PLANS AND DETAIL SHEETS IS MINIMUM THICKNESS. NO ALLOWANCES HAVE BEEN SHOWN FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR BEAM OR DECK DEFLECTIONS AND TO MAINTAIN SURFACE TOLERANCES SPECIFIED.
30. PROVIDE LIGHTWEIGHT SELF-LEVELING MATERIAL AT ELEVATED CONCRETE SLABS AND SLABS ON STEEL DECK AS REQUIRED TO MEET FLOOR FLATNESS AND LEVELNESS REQUIREMENTS. SUBMIT PROPOSED LOCATIONS AND LEVELING MATERIAL DATA FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
31. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
32. NO CONCRETE SHALL BE PLACED ONTO OR AGAINST SUBGRADES CONTAINING FREE WATER, FROST, ICE OR SNOW.
33. DURING WINTER CONSTRUCTION, ALL FOOTINGS SHALL BE PROTECTED FROM FROST PENETRATION UNTIL THE BUILDING IS ENCLOSED AND TEMPORARY HEAT IS PROVIDED.
34. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
35. PROVIDE SLAB COORDINATION DRAWING SUBMITTAL INDICATING COORDINATED LOCATIONS OF: MEP PENETRATIONS, SLEEVES, OPENINGS, IN-SLAB CONDUIT/DUCT (IF ALLOWED), EMBEDS, CAST-IN ANCHORS, AND OTHER ITEMS EMBEDDED OR PENETRATING STRUCTURAL ELEVATED SLABS.

MASONRY

1. CMU CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530/530.1 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES".
2. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	1500 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	1900 PSI
GROUT	2000 PSI

3. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	2000 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	2800 PSI
GROUT	2000 PSI

4. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	2500 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	3250 PSI
GROUT	2500 PSI

5. CMU MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS	ASTM C90, NORMAL WEIGHT
MORTAR	ASTM C270, TYPE N
GROUT	ASTM C476
JOINT REINFORCING	ASTM A82

6. WIRE REINFORCING PER ASTM A82 FOR SINGLE-WYTHE CMU WALLS, CMU CAVITY WALLS, AND MULTI-WYTHE COMPOSITE CMU WALLS SHALL BE HOT-DIP GALVANIZED PER ASTM A153, CORROSION RESISTANT HORIZONTAL JOINT REINFORCING WITH THE FOLLOWING GAUGE AND VERTICAL SPACING:

RUNNING BOND	9 GA @ 16" OC (ALL WIDTHS)
BELOW GRADE WALLS	9 GA @ 8" OC
OTHER THAN RUNNING BOND	9 GA @ 16" OC (6"-8" WIDTH) 9 GA @ 8" OC (10"-16" WIDTH)

7. ALL LOAD BEARING CMU WALLS TO HAVE FULL MORTAR BED, HEAD, AND COLLAR JOINTS.
8. GROUT SOLID ALL JAMBS FULL HEIGHT IN LOAD BEARING CMU WALLS TO UNDERSIDE OF LINTEL PLUS ONE CELL BEYOND BEARING LENGTH.
9. PROVIDE MINIMUM 1 INCH GROUT BETWEEN MAIN REINFORCING AND/OR BOLTS AND CMU UNIT FACE. VERTICAL REINFORCEMENT SHALL BE CENTERED IN WALL, UNLESS OTHERWISE NOTED. VERTICAL REINFORCING BARS SHALL SECURELY BE HELD IN POSITION BY WIRE TIES OR OTHER APPROVED MEANS TO ENSURE DESIGN LOCATION AND LAP. PLACE BARS AND LAP PRIOR TO GROUTING.
10. HORIZONTAL BOND BEAM AND VERTICAL REINFORCING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED.
11. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH VERTICAL REINFORCING STEEL.
12. ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.
13. GROUT CELLS SOLID IN ALL WALLS, UNLESS OTHERWISE NOTED. GROUT IN 4'-0" MAXIMUM LIFTS.
14. LIFTS OF GROUT SHALL BE KEYED 1 1/2 INCHES INTO THE PREVIOUS COURSE BELOW.
15. HORIZONTAL BAR REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR.
16. EXCEPT FOR WALL PILASTERS, VERTICAL REINFORCEMENT SHALL BE FIELD CUT FOR 4'-0" LIFTS AND LAP SPLICED PER LAP LENGTH SCHEDULE.
17. COORDINATE ANY UNIDENTIFIED PIPE OR DUCT PASSING THROUGH STRUCTURAL CMU WALLS WITH TYPICAL DETAILS, UNLESS OTHERWISE NOTED.
18. SEE ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN, AND JOINT TYPE. ALL BLOCK SHALL BE LAID IN RUNNING BOND, UNLESS OTHERWISE NOTED.
19. ALL MULTIPLE WYTHE CMU WALLS SHALL BE GROUTED SOLID BETWEEN EACH WYTHE.
20. PROVIDE HORIZONTAL TIES WHERE CMU ABUTS CONCRETE.

LINTELS

1. PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION. LINTELS ARE NOT REQUIRED OVER OPENINGS 12" WIDE OR LESS THAT IS AT LEAST 1 COURSE BELOW THE BOND BEAM AT THE TOP OF WALL.
2. PENETRATIONS NOT IDENTIFIED ON THE DOCUMENTS ARE TO BE TREATED IN A MANNER SIMILAR TO THE IDENTIFIED LOCATIONS.
3. LINTELS IN NON-BEARING WALLS SHALL BE SIZED PER THE FOLLOWING:

SPAN, L	STEEL OPTION (FOR EA 4" OF MASONRY) *
0' < L ≤ 4'-0"	L3 1/2x3 1/2x1/4
4'-0" < L ≤ 6'-0"	L4x3 1/2x5/16 (LLV)
6'-0" < L ≤ 8'-0"	L5x3 1/2x5/16 (LLV)
8'-0" < L ≤ 10'-0"	L6x3 1/2x3/8 (LLV)

SPAN, L	CMU OPTIONS			
	6" BLOCK	8" BLOCK	10" BLOCK	12" BLOCK
0' < L ≤ 4'-0"	8" DEEP W/ (1) #4 BOTT	8" DEEP W/ (1) #4 BOTT	8" DEEP W/ (1) #5 BOTT	8" DEEP W/ (1) #5 BOTT
4'-0" < L ≤ 6'-0"	8" DEEP W/ (1) #4 BOTT	8" DEEP W/ (1) #4 BOTT	8" DEEP W/ (1) #5 BOTT	8" DEEP W/ (1) #5 BOTT
6'-0" < L ≤ 8'-0"	16" DEEP W/ (1) #4 BOTT	16" DEEP W/ (1) #4 BOTT	16" DEEP W/ (1) #5 BOTT	16" DEEP W/ (1) #5 BOTT
8'-0" < L ≤ 10'-0"	16" DEEP W/ (1) #5 BOTT	16" DEEP W/ (2) #5 BOTT	16" DEEP W/ (2) #5 BOTT	16" DEEP W/ (2) #5 BOTT

*ALL ANGLES THAT ARE BACK-TO-BACK SHALL BE WELDED TOP AND BOTTOM 3" @ 12" OC MINIMUM.

4. ALL LINTELS SHALL HAVE A MINIMUM OF 8" END BEARING AND DO NOT REQUIRE BEARING PLATES, UNLESS OTHERWISE NOTED.
5. TEMPORARY SHORING OF MASONRY LINTELS MUST BE PROVIDED UNTIL MASONRY HAS REACHED 75% OF DESIGN STRENGTH.
6. ALL STEEL LINTELS IN EXTERIOR WALL CONSTRUCTION SHALL BE HOT-DIP GALVANIZED, UNLESS OTHERWISE NOTED.

SPAN, L	PRECAST CONCRETE LINTEL (f'c = 3000 PSI MIN)
0' < L ≤ 4'-0"	8" DEEP W/ (1) #4 T&B
4'-0" < L ≤ 6'-0"	8" DEEP W/ (1) #4 T&B
6'-0" < L ≤ 8'-0"	8" DEEP W/ (1) #4 T&B
8'-0" L ≤ 10'-0"	8" DEEP W/ (1) #5 T&B

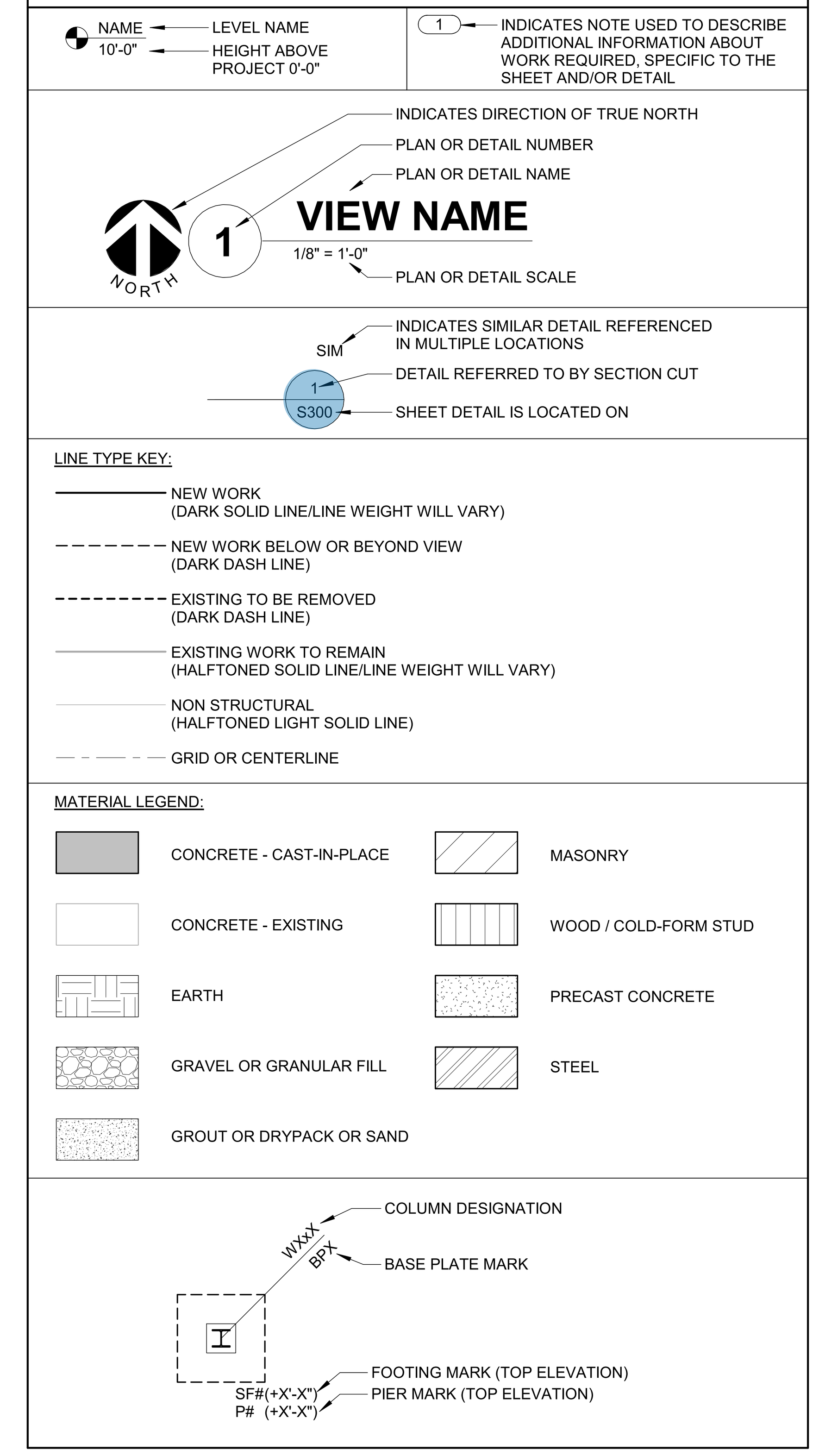
STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE SHAPES	ASTM A992	Fy = 50 KSI
OTHER ROLLED SHAPES	ASTM A36	Fy = 36 KSI
PIPE SECTIONS	ASTM A53, GR B	Fy = 35 KSI
HSS SECTIONS, ROUND	ASTM A500, GR C	Fy = 46 KSI
HSS SECTION, SQ/RECT	ASTM A500, GR C	Fy = 50 KSI
BASE AND CONNECTION PLATES	ASTM A36	Fy = 36 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy = 36 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fv = 120 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
HEADED STUD ANCHORS	ASTM A108, TYPE B	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	

3. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.
4. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS, UNLESS OTHERWISE NOTED. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM "SNUG TIGHT" CONDITION, UNLESS OTHERWISE NOTED.
5. EXCEPT WHERE DETAILED OTHERWISE, FABRICATOR SHALL SELECT LRFD BOLTED (OR WELDED EQUIVALENT) SIMPLE SHEAR CONNECTIONS PER AISC 360 PART 10 TO SUPPORT LOADS INDICATED ON THE STRUCTURAL DRAWINGS. WHEN LOADS ARE NOT SHOWN, CONNECTION SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR EACH GIVEN BEAM SIZE AND SPAN AS LISTED IN AISC 360 TABLE 3-6.
6. BEAM REACTIONS GIVEN ON THE CONTRACT DOCUMENTS SHALL SUPERSEDE THE PREVIOUS NOTE. IN NO CASE SHALL THE CONNECTIONS BE DESIGNED FOR AN UNFACTORED END REACTION LESS THAN 12 KIPS.
7. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
8. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING CALLED FOR. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
9. HEADED STUD ANCHORS (HSA): SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8"ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"ø.
10. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
11. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE AND CONNECTION TO BE MADE.
12. ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G60. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
13. ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
14. CUTS, HOLES, OPENINGS, ETC., REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OF HOLES AND CUTS IN THE FIELD SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
15. FURNISH AND INSTALL MISCELLANEOUS STEEL (CURBS, HANGERS, EXPANSION JOINT ANGLES, STRUTS, ETC.) AS CALLED FOR OR AS NECESSARY PER ARCHITECTURAL AND MECHANICAL/ELECTRICAL DRAWINGS.
16. GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 7000 10,000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
17. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR ARCHITECT/STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

VIEW KEY



STRUCTURAL ABBREVIATION KEY

ABBR:	DESCRIPTION:	ABBR:	DESCRIPTION:
#	NUMBER OR POUNDS	KSF	KIPS PER SQUARE FOOT
@	AT	KSI	KIPS PER SQUARE INCH
°	DEGREE	L	LENGTH
ø	DIAMETER	LBS	POUNDS
(E)	EXISTING	LL	LIVE LOAD
A.B.	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
ARCH	ARCHITECT, -URE, -URAL	LLV	LONG LEG VERTICAL
B.O.	BOTTOM OF	LONG.	LONGITUDINAL
bf	BEAM FLANGE WIDTH	LSH	LONG SIDE HORIZONTAL
BF	BRACE FRAME	LSV	LONG SIDE VERTICAL
BM	BEAM	LT WT	LIGHTWEIGHT
B.N.	BOUNDARY NAILING	MAX	MAXIMUM
BOTT	BOTTOM	MECH	MECHANICAL
BTWN	BETWEEN	MANUF	MANUFACTURER
CFSF	COLD FORM STEEL FRAMING	MIN	MINIMUM
CGS	CENTER OF GRAVITY OF THE TENDON	NIC	NOT IN CONTRACT
CJP	COMPLETE JOINT PENETRATION WELD	NTS	NOT TO SCALE
CLR	CLEAR	OC	ON CENTER
CL	CENTERLINE	OH	OPPOSITE HAND
CMU	CONCRETE MASONRY UNIT	OPNG	OPENING
COL	COLUMN	OSB	ORIENTED STRAND BOARD
CONC	CONCRETE	PCF	POUNDS PER CUBIC FOOT
CONN	CONNECTION	P.H.	PENTHOUSE
CONST	CONSTRUCTION	PJP	PARTIAL JOINT PENETRATION WELD
CONT	CONTINUOUS	PL	PLATE
COORD	COORDINATION	PLF	POUNDS PER LINEAR FOOT
DIA	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DL	DEAD LOAD	PSI	POUNDS PER SQUARE INCH
DET	DETAIL	PT	POST-TENSION, -ED, -ING
DWG	DRAWING	R	RADIUS
DWL	DOWEL	REINF	REINFORCING, -MENT, -ED
EA	EACH	REQD	REQUIRED
EF	EACH FACE	RTU	ROOF TOP UNIT
EFF	EFFECTIVE	SC	SLIP CRITICAL
EL	ELEVATION	SCHED	SCHEDULE
ELEC	ELECTRICAL	SFRS	SEISMIC FORCE-RESISTING SYSTEM
EMBED	EMBEDMENT	SIM	SIMILAR
E.N.	EDGE NAILING	SL	SNOW LOAD
EOD	EDGE OF DECK	S.M.S.	SHEET METAL SCREW
EOS	EDGE OF SLAB	SP	SPACE(S)
EQ	EQUAL	SPECS	SPECIFICATION(S)
EQUIP	EQUIPMENT	SQ	SQUARE
ETC	ETCETERA	STIFF	STIFFENER
EW	EACH WAY	STL	STEEL
EXP	EXPANSION	SYM	SYMMETRICAL
EXT	EXTERIOR	T&B	TOP AND BOTTOM
f 'c	CONCRETE COMPRESSIVE STRENGTH	T.O.	TOP OF
FDN	FOUNDATION	TC	PRE-TENSIONED BOLT
F.N.	FIELD NAILING	TEMP	TEMPERATURE
FT	FOOT	tf	BEAM FLANGE THICKNESS
FTG	FOOTING	THK	THICK
Fy	YIELD STRESS	TRANS	TRANSVERSE
GA	GAGE OR GAUGE	TYP	TYPICAL
GALV	GALVANIZED	UON	UNLESS OTHERWISE NOTED
GLB	GLULAM BEAM	VERT	VERTICAL
GT	GIRDER TRUSS	VIF	VERIFY IN FIELD
HORIZ	HORIZONTAL	w/	WITH
HSA	HEADED STUD ANCHOR	WP	WORK POINT
HSB	HIGH STRENGTH BOLT	WT	WEIGHT
JT	JOINT	WWR	WELDED WIRE REINFORCING
K, KIP	KILOPOUND (1,000 POUNDS)		

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME	CURRENT ISSUE DATE	CURRENT ISSUE DESCRIPTION
S000	COVER & GENERAL NOTES	01/14/2026	Bulletin No. 7
S001	GENERAL NOTES	12/20/2024	Permit
S002	SPECIAL INSPECTIONS	12/20/2024	Permit
S003	LOADING DIAGRAMS	12/20/2024	Permit
S004	SCHEDULES	01/14/2026	Bulletin No. 7
S100-E	EXISTING FOUNDATION / FLOOR PLAN	10/13/2025	Bulletin No. 5
S101-E	EXISTING 2ND FLOOR FRAMING PLAN	12/20/2024	Permit
S102-E	EXISTING ROOF FRAMING PLAN	12/20/2024	Permit
S100-A	ADDITION FOUNDATION / FLOOR PLAN	01/14/2026	Bulletin No. 7
S101-A	ADDITION 2ND FLOOR FRAMING PLAN	01/14/2026	Bulletin No. 7
S102-A	ADDITION ROOF FRAMING PLAN	01/14/2026	Bulletin No. 7
S300	TYPICAL CONCRETE DETAILS	02/19/2025	Bulletin No. 1
S400	TYPICAL MASONRY DETAILS	02/19/2025	Bulletin No. 1
S430	MASONRY SECTIONS	12/20/2024	Permit
S500	TYPICAL STEEL DETAILS & SECTIONS	12/20/2024	Permit
S600	TYPICAL WOOD SECTIONS & DETAILS	12/20/2024	Permit
S602	TYPICAL WOOD SECTIONS & DETAILS	02/19/2025	Bulletin No. 1
GRAND TOTAL: 17			

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CONSULTANT

KEY PLAN

AGENCY APPROVAL

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<<<State Registration Number>>>

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REF. SCALE IN INCHES
PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1
9	10/13/2025	Bulletin No. 5
10	01/14/2026	Bulletin No. 7

SHEET INFORMATION

Issue	Issued for Permit
Date	10/30/2024
Project #	23008275.00
Drawn	GHW
Checked	GFM
Approved	-

SHEET TITLE
COVER & GENERAL NOTES

SCALE
Scale: As indicated

SHEET NUMBER
S000

23008275.00 1/20/2026 2:53:49 PM JOHN GRACE ARMS

STEEL DECK

1. MATERIAL, DETAILING, DESIGN, MANUFACTURE, AND ERECTION OF STEEL DECKS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) SPECIFICATION.
2. DECK SIZE AND GAUGE INDICATED ON THE DRAWINGS ARE BASED ON THE FOLLOWING:
   A. CURRENT VERSION OF VULCRAFT CATALOG FOR GRAVITY DESIGN LOADS AND UNSHORED CONSTRUCTION SPANS
   B. STEEL DECK INSTITUTE (SDI) DIAPHRAGM DESIGN MANUAL 4TH EDITION FOR DIAPHRAGM LOADS
3. STEEL DECK GALVANIZING SHALL CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60.
4. PAINTED STEEL ROOF DECK SHALL CONFORM TO ASTM A1008, GRADE C.
5. ALL FLOOR AND ROOF DECK SHALL BE VENTED.
6. PROVIDE MINIMUM DECK BEARING AND LAP LENGTHS PER MANUFACTURER'S RECOMMENDATIONS.
7. USE SUMP PANS AT ALL ROOF DRAINS. MINIMUM THICKNESS FOR SUMP PANS SHALL BE 14 GAUGE.
8. DECK MANUFACTURER SHALL FURNISH ALL RIDGE AND VALLEY PLATES, SUMP PANS, DRAIN PLATES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. DECK MANUFACTURER SHALL PROVIDE ALL CLOSURE PLATES AND POUR STOPS NOT PROVIDED BY THE STEEL FABRICATOR.
9. CUTTING AND FRAMING OF OPENINGS FOR OTHER TRADES SHALL BE THE RESPONSIBILITY OF THE TRADES INVOLVED. HOLES THAT ARE LOCATED AND DIMENSIONED ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE DECK ERECTOR.
10. CONDUITS SHOULD NOT BE PLACED IN CONCRETE SLAB ON STEEL DECK WITHOUT COORDINATION WITH THE STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
11. COORDINATE ALL PENETRATIONS, EMBEDS, AND RECESSES IN COMPOSITE FLOOR SYSTEMS WITH THE STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
12. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO STEEL ROOF DECK. THIS 25 LBS LOAD AND 2'-0" SPACING INCLUDES ADJACENT MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS HANGING FROM THE DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING SUPPORTED OFF STEEL FRAMING WILL NEED TO BE ADDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATION AND WEIGHT OF ALL THE ELEMENTS BEING HUNG WITH STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
13. CORRUGATED FORM DECK GAUGES SHOWN ON THE DRAWINGS ARE INTENDED TO SUPPORT THE WEIGHT OF THE WET CONCRETE PLUS A CONSTRUCTION LIVE LOAD OF 20 PSF WITHOUT INTERMEDIATE SHORING BASED ON A THREE-SPAN CONTINUOUS CONDITION. DECK MANUFACTURER SHALL EVALUATE OTHER SPAN CONDITIONS FOR DEFLECTION WHICH SHALL NOT EXCEED SPAN OVER 180 NOR 1/8 INCH UNDER UNIFORMLY DISTRIBUTED CONCRETE DEAD LOAD. PROVIDE SHORING OR ALTERNATE MEANS OF CONTROLLING DEFLECTION AND MEETING ALLOWABLE STRESSES.
14. SUBMIT SHOP DRAWINGS SHOWING ERECTION PROCEDURES, WELDING PROCEDURES, VERTICAL LOAD AND DIAPHRAGM SHEAR CAPACITY FURNISHED, DECK SHORING REQUIREMENTS, UNDERWRITER'S LABORATORIES (UL) FIRE RATING NUMBER AND COMPOSITE BEAM AND GIRDER STUD PROFILES TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW. FABRICATION SHALL NOT BEGIN WITHOUT APPROVED SHOP DRAWINGS.

WOOD

1. STRUCTURAL SHEATHING
   A. ALL PANELS TO BE PLYWOOD OF MINIMUM 5 PLY CONSTRUCTION. EACH PANEL SHALL BEAR THE QUALITY TRADEMARK STAMP OF THE AMERICAN PLYWOOD ASSOCIATION (APA).
   B. ROOFS:
      i. GRADE:
         a. 1/2", "C-D", GROUP 1, SPAN INDEX 32/16, EXPOSURE 1
         b. 5/8", "C-D", GROUP 1, SPAN INDEX 40/20, EXPOSURE 1
         c. 3/4", "C-D", GROUP 1, SPAN INDEX 48/24, EXPOSURE 1
         d. 1 1/8", STURD-I-FLOOR, SPAN RATING 48" OC
      ii. PANEL EDGE SUPPORT SHALL BE EITHER TONGUE-AND-GROOVE EDGE, PANEL EDGE CLIP MIDWAY BETWEEN SUPPORTS, OR LUMBER BLOCKING (MIN 2x4 SIZE).
   C. FLOORS:
      i. GRADE:
         a. 5/8", "C-D", GROUP 1, SPAN INDEX 40/20, EXPOSURE 1
         b. 3/4", "C-D", GROUP 1, SPAN INDEX 48/24, EXPOSURE 1
         c. 7/8", "C-D", GROUP 1, SPAN INDEX 60/32, EXPOSURE 1
         d. 5/8", STURD-I-FLOOR, SPAN RATING 20" OC, EXPOSURE 1
         e. 3/4", STURD-I-FLOOR, SPAN RATING 24" OC, EXPOSURE 1
         f. 7/8", STURD-I-FLOOR, SPAN RATING 32" OC, EXPOSURE 1
         g. 1 1/8", STURD-I-FLOOR, SPAN RATING 48" OC, EXPOSURE 1
      ii. FLOORS SHALL BE NAILED AND GLUED PER APA GLUED FLOOR SYSTEM REQUIREMENTS. THE GLUE SHALL CONFORM TO PERFORMANCE SPECIFICATION ASTM D3498. FOLLOW MANUFACTURER'S SPECIFIC APPLICATION RECOMMENDATIONS.
   D. WALLS:
      i. SEE ARCHITECTURAL DRAWINGS FOR TYPICAL WALL SHEATHING, UNLESS OTHERWISE NOTED. SEE PLANS FOR SHEAR WALL SHEATHING.
   E. MINIMUM NAILING REQUIREMENTS UNLESS OTHERWISE NOTED:
      i. ROOF:
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
            3) GLULAM BEAMS AND SHEAR COLLECTORS @ 6" OC
      ii. FLOOR:
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
            3) GLULAM BEAMS AND SHEAR COLLECTORS @ 6" OC
      iii. WALL (AT SHEAR WALL, PROVIDE NAILING PER SCHEDULE OR MINIMUM LISTED BELOW):
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
      iv. PROVIDE MINIMUM 2x SOLID BLOCKING AT PANEL EDGES OF WALL SHEATHING WHERE REQUIRED BY SHEAR WALL SCHEDULE OR AT PANEL EDGES OF ROOF/FLOOR SHEATHING WHERE REQUIRED ON PLAN.
      v. SHEATHING FASTENERS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE FACE PLY.
      vi. HOT-DIP GALVANIZED NAILS SHALL BE USED WHEN NAILING TO PRESSURE TREATED MEMBERS.
   F. PANEL LAYOUT:
      i. LONG DIMENSION OF PANEL TO BE PERPENDICULAR TO FRAMING MEMBERS, EXCEPT PANELS AT WALLS MAY BE INSTALLED WITH LONG DIMENSION PARALLEL TO STUDS UNLESS OTHERWISE NOTED.
      ii. END JOINTS IN ADJACENT RUNS SHALL BE STAGGERED 4 FEET.
      iii. MINIMUM PANEL WIDTH SHALL BE 12".
      iv. EDGES OF ALL PANELS LESS THAN 24" WIDE SHALL BE BACKED BY BLOCKING (MIN 2x4 SIZE).
      v. PROVIDE 1/8" GAP AT ALL SHEATHING JOINTS FOR FLOORS AND WALLS UNLESS OTHERWISE NOTED ON PLAN OR DETAILS.
   G. IF SHEATHING PANELS EXHIBIT SWELLING, NAIL HEAD PULL-THROUGH, SOFT SPOTS OR OTHER CONDITIONS WHEREBY REDUCING THE STRUCTURAL CAPACITY, REMOVE AND REPLACE.
2. LUMBER:
   A. COMPLY WITH ANSI/AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
   B. ALL FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:

      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 900 PSI, E = 1,600,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 FB = 900 PSI, E = 1,600,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 1350 PSI, E = 1,600,000 PSI
   C. ALL FRAMING LUMBER SHALL BE HEM FIR, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:

      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 850 PSI, E = 1,300,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 850 PSI, E = 1,300,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 1050 PSI, E = 1,300,000 PSI
   D. ALL FRAMING LUMBER SHALL BE SPRUCE PINE FIR, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:

      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 875 PSI, E = 1,400,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 875 PSI, E = 1,400,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 900 PSI, E = 1,300,000 PSI
   E. ALL FRAMING LUMBER SHALL BE SOUTHERN PINE, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:

      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 1100 PSI, E = 1,400,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 1100 PSI, E = 1,400,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 1350 PSI, E = 1,500,000 PSI
   F. ALL FRAMING LUMBER SHALL BE WESTERN CEDAR, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:

      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 700 PSI, E = 1,000,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 700 PSI, E = 1,000,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 975 PSI, E = 1,000,000 PSI
   G. ALL LUMBER STRESSES SHOWN ABOVE ARE FOR VISUALLY STRESS-RATED LUMBER USED AT 19% MAXIMUM MOISTURE CONTENT WHEN BUILDING IS ENCLOSED, SINGLE MEMBER USE. ALL LUMBER SHALL BE GRADE MARKED.
   H. PROVIDE A MINIMUM OF 1 1/2" JOIST BEARING UNLESS OTHERWISE NOTED.
   I. NOTCHING OR DRILLING HOLES IN LUMBER FRAMING MEMBERS MUST BE AS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
3. MANUFACTURED WOOD PRODUCTS:
   A. WOOD I-JOISTS
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST, BOISE CASCADE, LOUISIANA PACIFIC, ROSEBURG FOREST PRODUCTS, REDBUILT. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. JOISTS BY OTHER MANUFACTURERS MAY BE USED PROVIDED THEY HAVE THE SAME DEPTH AND EQUIVALENT ICC APPROVED LOAD CAPACITIES AND STIFFNESS. SUBMIT SUBSTITUTION REQUEST FOR STRUCTURAL ENGINEER APPROVAL.
      iii. FLANGES OF I-JOIST SHALL BE MANUFACTURED FROM LVL.
   B. LAMINATED VENEER LUMBER (LVL)
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST, BOISE CASCADE, LOUISIANA PACIFIC, ROSEBURG FOREST PRODUCTS, REDBUILT. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. MATERIAL STRENGTHS:

         MODULUS OF ELASTICITY, E 2000 KSI
         BENDING STRENGTH, Fb 2900 PSI
         SHEAR STRENGTH, Fv 285 PSI
   C. LAMINATED STRAND LUMBER (LSL)
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST, LOUISIANA PACIFIC. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. MATERIAL STRENGTHS:

         MODULUS OF ELASTICITY, E 1500 KSI
         BENDING STRENGTH, Fb 2250 PSI
         SHEAR STRENGTH, Fv 410 PSI
         AXIAL STRENGTH, Fc 1950 PSI
   D. PARALLEL STRAND LUMBER (PSL)
      i. SIZES SHOWN ARE AS MANUFACTURED BY WEYERHAEUSER. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. MATERIAL STRENGTHS:

         MODULUS OF ELASTICITY, E 2000 KSI
         BENDING STRENGTH, Fb 2900 PSI
         SHEAR STRENGTH, Fv 290 PSI
         AXIAL STRENGTH, Fc 2900 PSI
   E. NOTCHING OR DRILLING HOLES IN MANUFACTURED WOOD PRODUCTS THAT ARE DIFFERENT FROM THE MANUFACTURER'S GUIDELINES MUST BE AS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
   F. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION PER DETAILED INSTALLATION RECOMMENDATIONS AND GUIDELINES OF THE MANUFACTURER.
   G. NAILING INTO THE SIDE FACE OF AN I-JOIST TOP/BOTTOM CHORD IS NOT PERMITTED.
   H. PROVIDE SLOPED SEAT HANGERS FOR SLOPING I-JOIST INSTALLATIONS.
   I. ALL HANGERS SELECTED SHALL MATCH THE SIZE OF SUPPORTED MEMBER AND SHALL HAVE FULL NAILING AS SHOWN IN THE ICC REPORT.
   J. SUBSTITUTIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER AND HAVE ICC APPROVED LOAD CAPACITIES EQUAL TO OR GREATER THAN THE SIMPSON STRONG-TIE CONNECTORS.
   K. SIMPSON HANGERS AT PRESSURE TREATED MEMBERS SHALL HAVE ZMAX COATING.
   L. SEE ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR MATERIAL TYPES AND FINISHES.
   M. PROVIDE STANDARD CAMBERS FOR ALL ROOF BEAMS AND PURLINS UNLESS OTHERWISE NOTED.
   N. SEE MANUFACTURER REQUIREMENTS FOR MINIMUM BEARING LENGTHS.
4. FASTENING:
   A. ALL NAILS SHALL BE COMMON WIRE NAILS. AT ALL EXPOSED NAILING TO WEATHER OR INSTALLED IN PRESSURE TREATED WOOD (E.G.-DECKING & SIDING), USE HOT-DIP GALVANIZED NAILS. USE OF PLASTIC COATED OR CASING NAILS IS NOT ALLOWED. NAIL DESIGNATIONS SHALL MEET THE FOLLOWING LENGTHS AND DIAMETERS:
      i. 6d - 2" x 0.113"
      ii. 8d - 2 1/2" x 0.131"
      iii. 10d - 3" x 0.148"
      iv. 12d - 3 1/4" x 0.148"
      v. 16d - 3 1/2" x 0.162"
      vi. 20d - 4" x 0.192"
   B. THE NAILING SCHEDULE AND STRUCTURAL DETAILS ARE BASED ON THE USAGE OF "COMMON" WIRE NAILS EXCEPT THAT 16d "SINKER" NAILS (3 1/4" x 0.148") MAY BE USED WHERE 16d IS SPECIFIED. IF GUN NAILS ARE USED, THE CONTRACTOR SHALL SUBMIT NAIL DATA FOR REVIEW PRIOR TO BEGINNING CONSTRUCTION.
   C. THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THE FOLLOWING SCHEDULE:

CONNECTION	FASTENING
JOIST TO SILL, TOP PLATE OR GIRDER	(3) 8d TOENAILS
BRIDGING OR BLOCKING BETWEEN JOISTS OR TRUSSES NOT AT WALL TOP PLATE	(2) 8d TOENAILS, EACH END OR (2) 16d END NAILS
SILL PLATE TO JOIST, RIM JOIST OR BLOCKING	16d @ 16" OC, FACE NAIL
TOP PLATE TO STUD AND STUD TO SILL PLATE	(2) 16d END NAILS FOR 2x (3) 16d END NAILS FOR 3x
2x STUD TO TOP OR SILL PLATE	(4) 8d TOENAILS OR (2) 16d END NAILS
3x STUD TO SOLE PLATE	(6) 8d TOENAILS OR (3) 16d END NAILS
STUD TO STUD	16d @ 24" OC, FACE NAIL
DOUBLE TOP PLATES	16d @ 16" OC, FACE NAIL
DOUBLE TOP PLATES, LAP SPLICE	(12) 16d EACH SIDE OF SPLICE
BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE	(3) 8d TOENAILS
RIM JOIST TO TOP PLATE OR FRAMING BELOW	8d @ 6" OC, TOENAIL
JOIST TO RIM JOIST	(3) 16d END NAILS
TOP PLATE LAPS AT CORNERS AND INTERSECTIONS	(2) 16d, FACE NAIL
BUILT-UP HEADER	16d @ 16" OC ALONG EACH EDGE
CEILING JOIST TO TOP PLATE	(3) 8d TOENAILS
CONTINUOUS HEADER TO STUD	(4) 8d, TOENAIL
CEILING JOIST, LAPS OVER PARTITIONS	(3) 16d FACE NAILS
CEILING JOISTS TO PARALLEL RAFTERS	SEE TABLE 2308.7.3.1
RAFTER OR ROOF TRUSS TO PLATE	(3) 10d TOENAILS
BUILT-UP CORNER STUDS	16d @ 24" OC
BUILT-UP GIRDER AND BEAMS, 2x LUMBER LAYERS	20d FACE NAILS @ 32" OC ALONG T&B, STAGGERED OPPOSITE SIDES, AND (2) 20d AT ENDS AND AT EACH SPLICE
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d @ 16" OC, FACE NAIL
MULTI-PLY LAMINATED VENEER LUMBER (LVL)	SEE PLAN

   D. PILOT HOLES SHALL BE PROVIDED FOR ALL NAILS 20d AND LARGER. PILOT HOLES SHALL HAVE A DIAMETER OF APPROXIMATELY 75% OF THE NAIL SHANK DIAMETER.
   E. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION AND THE APPROVAL OF THE ARCHITECT/STRUCTURAL ENGINEER.
   F. CONTRACTOR TO AVOID SPLITTING WOOD MEMBERS DURING FASTENER INSTALLATION. NAIL HEADS SHOULD BE DRIVEN NO GREATER THAN 1/16 OF AN INCH BELOW WOOD SURFACE.
   G. ALL BOLTED WOOD CONNECTIONS SHALL BE MADE WITH A307 BOLTS CONFORMING TO THE REQUIREMENTS OF THE CURRENT VERSION OF ANSI/ASME UNLESS OTHERWISE NOTED. BOLT HOLES SHALL BE 1/32" TO 1/16" LARGER THAN THE BOLT. FORCIBLE DRIVING OF BOLTS IS NOT ALLOWED. RETIGHTEN ALL BOLTS BEFORE CONCEALING CONNECTION.
   H. USE STANDARD CUT WASHERS BETWEEN THE BOLTS HEADS, BOLT NUTS AND LAG SCREW HEADS AND WOOD FRAMING, UNLESS OTHERWISE NOTED.
   I. ALL WOOD CONNECTIONS MADE WITH LAG SCREWS SHALL BE MADE WITH SCREWS CONFORMING TO THE REQUIREMENTS OF THE CURRENT VERSION OF ANSI/ASME. LEAD HOLES FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK AND THE SAME DEPTH AS THE LENGTH OF UNTHREADED SHANK. THE LEAD HOLE SHALL HAVE A DIAMETER EQUAL TO 60-75% OF THE SHANK DIAMETER.
   J. WHERE THERE ARE CONNECTOR NAILING ALTERNATIVES LISTED IN THE MANUFACTURER'S CATALOG, THE NAILING PROVIDING THE HIGHEST LOAD CAPACITY SHALL BE USED, UNLESS OTHERWISE NOTED.
5. GENERAL CONSTRUCTION REQUIREMENTS:
   A. METAL FRAMING CONNECTORS NOTED ON THE DRAWINGS USE SIMPSON STRONG-TIE AS BASIS OF DESIGN, UNLESS OTHERWISE NOTED. SUBSTITUTIONS OF ALTERNATE MANUFACTURERS WILL BE ACCEPTABLE AS LONG AS LOAD CAPACITIES ARE MET OR EXCEEDED AND ARE SUBSTANTIATED BY AN ICC REPORT.
   B. FRAMING PLANS INDICATE GENERAL LAYOUT AND DIMENSIONAL CONTROL ONLY. SEE SHOP DRAWINGS FOR ENGINEERING AND ERECTION.
   C. SOLID-SAWN LUMBER BEAMS, RAFTERS AND JOISTS SHALL HAVE LATERAL SUPPORT PREVENTING ROTATION OR DISPLACEMENT BASED UPON SPAN-TO-DEPTH RATIOS AS FOLLOWS:
      i. 2:1, NO LATERAL SUPPORT IS REQUIRED.
      ii. 3:1 OR 4:1, THE ENDS SHALL BE HELD IN POSITION BY FULL-DEPTH BLOCKING, BRIDGING, NAILING, OR BOLTING TO OTHER FRAMING MEMBERS.
      iii. 5:1, ONE EDGE SHALL BE HELD IN LINE FOR ITS ENTIRE LENGTH.
      iv. 6:1, FULL-DEPTH BLOCKING, BRIDGING, OR CROSS-BRACING SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 8 FEET UNLESS BOTH EDGES ARE HELD IN LINE.
      v. 7:1, BOTH EDGES SHALL BE HELD IN LINE FOR THE ENTIRE LENGTH.
   D. ALL LUMBER, UNLESS NOTED, SHALL BE MILL SIZED AND SURFACED ON FOUR SIDES AND SHALL BE STRAIGHT STOCK, FREE FROM WARP OR CUP, AND SINGLE LENGTH PIECES.
   E. ALL ROUGH CARPENTRY SHALL PRODUCE JOINTS TRUE, TIGHT, AND WELL NAILED WITH MEMBERS ASSEMBLED IN ACCORDANCE WITH THE DRAWINGS AND ALL PERTINENT BUILDING CODES. THE SHIMMING OF SILLS, JOISTS, SHORT STUDS, TRIMMERS, HEADERS, OR OTHER FRAMING MEMBERS SHALL NOT BE PERMITTED. ALL WALLS AND PARTITIONS SHALL BE STRAIGHT, PLUMB, AND ACCURATELY LOCATED. CAREFULLY SELECT ALL STRUCTURAL MEMBERS SO KNOTS AND OBVIOUS MINOR DEFECTS WILL NOT INTERFERE WITH MAKING SOUND CONNECTIONS.
   F. INSTALL ALL BLOCKING AS REQUIRED TO SUPPORT ALL REQUIRED FINISHES AND EQUIPMENT. PROVIDE 2x FIRE BLOCKING TO CUT OFF ALL CONCEALED DRAFT OPENINGS, BOTH VERTICAL AND HORIZONTAL, BETWEEN CEILING AND FLOOR AREAS. VERIFY ALL REQUIRED BLOCKING WITH ARCHITECTURAL DRAWINGS AND LOCAL BUILDING OFFICIAL.
   G. ALL LUMBER AND PRODUCTS SHALL BE HANDLED AND STORED TO PREVENT MARRING AND MOISTURE ABSORPTION. NO DIRECT CONTACT WITH THE GROUND IS PERMITTED.
   H. PROTECTION AGAINST DECAY AND TERMITES:
      i. ALL LUMBER: WHEN IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED WOOD. BOTTOM OF SILLS AT EXTERIOR WALLS SHALL NOT BE LESS THAN 8" ABOVE OUTSIDE GRADE EXCEPT WHERE GRADE IS PAVED OVER FOR 18" MINIMUM WIDTH AND DRAINING AWAY FROM THE BUILDING. FOR THAT CONDITION, SILL MAY BE 2" ABOVE.
      ii. EXTERIOR COLUMNS AND POSTS: IN AREAS EXPOSED TO WATER SPLASH AND EXTERIOR CONDITIONS, COLUMN/POST SHALL BE SUPPORTED BY A METAL CONNECTOR AND BE TREATED IN ACCORDANCE WITH AWPA UC3.
      iii. STRUCTURAL SUPPORTS OF BALCONIES, PORCHES, OR SIMILAR APPURTENANCES: WHEN MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE ROOF PROTECTION PREVENTING WATER ACCUMULATION, THEY SHALL BE TREATED WOOD IN ACCORDANCE WITH AWPA UC3.
      iv. MOISTURE CONTENT: WHEN WOOD IS PRESSURE TREATED WITH A WATERBORNE PRESERVATIVE AND LOCATED IN ENCLOSED SPACES WHERE DRYING IN SERVICE CANNOT READILY OCCUR, SUCH WOOD SHALL BE AT A MOISTURE CONTENT OF 19% OR LESS BEFORE BEING COVERED.
      v. USE AWPA UC4 AT ALL WOOD IN CONTACT WITH SOIL.
   I. NOTCHES AND BORED HOLE PENETRATIONS IN WOOD STUD WALLS SHALL CONFORM TO SECTION 2308 OF THE IBC CBC AND TYPICAL DETAIL, WHICHEVER IS MORE RESTRICTIVE.
   J. ALL APPLICABLE FRAMING STANDARDS OR GRADING RULES SPECIFIED SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION BY AN APPROVED AGENCY. ALL LUMBER AND PLYWOOD REQUIRED TO BE TREATED WOOD SHALL BE IDENTIFIED BY THE QUALITY MARK OF AN APPROVED INSPECTION AGENCY WHICH MAINTAINS CONTINUED SUPERVISION, TESTING, AND INSPECTION OVER THE QUALITY OF THE PRODUCT.
   K. ALL APPLICABLE FRAMING STANDARDS OR GRADING RULES SPECIFIED SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION BY AN APPROVED AGENCY. ALL LUMBER AND PLYWOOD REQUIRED TO BE TREATED WOOD SHALL BE IDENTIFIED BY THE QUALITY MARK OF AN APPROVED INSPECTION AGENCY WHICH MAINTAINS CONTINUED SUPERVISION, TESTING, AND INSPECTION OVER THE QUALITY OF THE PRODUCT.
   L. WALL STUD CONSTRUCTION IS DESIGNED TO BE BRACED BY THE WALL SHEATHING (WOOD STRUCTURAL PANEL OR GYPSUM BOARD). CONTRACTOR TO PROVIDE TEMPORARY BRACING, AS REQUIRED, UNTIL SHEATHING IS INSTALLED.
   M. ALL DRYWALL, WINDOWS, EXTERIOR CLADDING, MEP, ETC. SHALL BE ARCHITECTURALLY DETAILED AND CONSTRUCTED BY THE CONTRACTOR TO ACCOMMODATE ESTIMATED VERTICAL MOVEMENT DUE TO CRUSHING, SHRINKAGE, AND CONSTRUCTION GAPS. STRUCTURAL ENGINEER SHALL NOT BE HELD LIABLE FOR ANY POST-CONSTRUCTION REMEDIATION REQUIRED AS A RESULT OF DIFFERENTIAL MOVEMENT.

FIRE-RETARDANT TREATED (FRT) LUMBER

1. SEE ARCHITECTURAL FOR ALL LOCATIONS REQUIRING FRT DIMENSIONAL LUMBER.
2. NO FIRE TREATED LUMBER TO BE INCISED. NO REDUCTION DUE TO INCISING HAS BEEN CONSIDERED.
3. THE REDUCTION FACTORS USED FOR DESIGN ASSUME FRT LUMBER SUPPLIED BY PYROGUARD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING PRIOR TO SUBMITTING A BID THAT THE ASSUMED FRT LUMBER STRENGTH REDUCTION FACTORS BELOW MEET THE REQUIREMENTS OF THE SUBMITTED FIRE-RETARDANT TREATMENT TO BE USED. ANY REVISIONS TO FRAMING MEMBERS AFTER BIDDING DUE TO FAILURE TO VERIFY THESE VALUES SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

FIRE-RETARDANT TREATED LUMBER STRENGTH FACTORS		
DESIGN PROPERTY	REDUCTION IN VALUE (WALL/FLOOR)	REDUCTION IN VALUE (ROOF)
Fb	0.97	0.93
Ft	0.95	0.87
Fv	0.96	0.95
Fc perp	0.95	0.95
Fc parallel	1.00	0.98
E	0.96	0.96
FASTENERS	0.90	0.90

NOTE: THE REDUCTION VALUES ABOVE ARE FOR DOUGLAS FIR IN CLIMATE ZONE 1B.

4. FIRE-RETARDANT TREATMENT PER AWPA U1 STANDARD, USE CATEGORY UCFA FOR INTERIOR LUMBER PROTECTED FROM MOISTURE. FRT SILL PLATES PER UC2, SUBJECT TO MOISTURE. FRT SILL PLATES SHALL ALSO BE IDENTIFIED AS EXTERIOR PER [ENGR NOTE: FOR CALIFORNIA PROJECTS, UPDATE "IBC" TO "CBC"] IBC CBC 2303.2.6 .
5. FRT LUMBER TO BE LABELED WITH THE MARK OF THE APPROVAL AGENCY, TREATING MANUFACTURER, SPECIES OF WOOD, FLAME SPREAD AND SMOKE-DEVELOPED INDEX, AND METHOD OF DRYING PER THE APPLICABLE BUILDING CODE.
6. CUTTING FRT LUMBER TO LENGTH AND TYPICAL UTILITY HOLE DRILLING IS ALLOWED. NO FIELD TREATMENT OR PAINTING OF FRT LUMBER TO BE REQUIRED. DO NOT MILL, RESURFACE, OR RIP (CUT ALONG LENGTH) FRT LUMBER.
7. ALL FASTENERS INSTALLED IN FRT WOOD SHALL BE HOT-DIP GALVANIZED OR STAINLESS STEEL.

METAL PLATE CONNECTED WOOD TRUSSES

1. DESIGN, FABRICATE, TRANSPORT, AND ERECT METAL PLATE CONNECTED WOOD TRUSSES IN ACCORDANCE WITH LATEST STRUCTURAL BUILDING COMPONENTS ASSOCIATION (SBCA) STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
2. DESIGN FOR LOADS, IN ADDITION TO MEMBER WEIGHTS, AS NOTED ON THE DRAWINGS AND PER APPLICABLE CODE REQUIREMENTS.
3. PREFABRICATED PRE-ENGINEERED TRUSSES ARE PERFORMANCE SPECIFIED. WOOD GRADE, SECTION, BRACING, CONNECTIONS, AND SIMILAR DETAILS ARE THE RESPONSIBILITY OF THE MANUFACTURER BASED ON REQUIRED LOADING.
4. ALL TRUSS-T0-TRUSS CONNECTIONS ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER.
5. ALL PERMANENT AND TEMPORARY BRACING SHALL BE DESIGNED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
6. COMPONENT DESIGN SHALL BE SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL STRUCTURAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS FOR REVIEW BY THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT. FABRICATION SHALL NOT BEGIN WITHOUT APPROVED SHOP DRAWINGS.
7. SHOP DRAWINGS SHALL SHOW THE TRUSS DESIGN LOADS, SIZE AND GRADE OF THE CHORDS AND WEBS, TRUSS DEFLECTION, LOCATIONS OF THE JOINTS AND CONNECTIONS, SIZE AND TYPE AND LOCATION OF THE METAL PLATES, AND ALL BRACING AND BLOCKING REQUIREMENTS.
8. ROOF TRUSS LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/480. TOTAL LOAD DEFLECTION SHALL NOT EXCEED SPAN/360.
9. FLOOR TRUSS LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/480. TOTAL LOAD DEFLECTION SHALL NOT EXCEED SPAN/360.
10. TRUSSES SUPPORTING MASONRY TO BE DESIGNED FOR A MAXIMUM TOTAL LOAD DEFLECTION OF SPAN/600 OR 3/8", WHICHEVER IS SMALLER.
11. MAXIMUM DIFFERENTIAL DEFLECTION SHALL BE 1/2" MAXIMUM BETWEEN ADJACENT TRUSSES (LIVE LOAD ONLY OR TOTAL LOAD).
12. TRUSS MANUFACTURER SHALL NOT EXCEED THE ALLOWABLE BEARING STRESS PERPENDICULAR TO GRAIN OF THE SUPPORTING MEMBER.
13. TRUSS MANUFACTURER TO CONFIRM CEILING SLOPES AND CONFIGURATION WITH ARCHITECTURAL DRAWINGS PRIOR TO FABRICATION.
14. TRUSS MANUFACTURER IS RESPONSIBLE FOR MAINTAINING WEB OPENING ALIGNMENT BETWEEN ADJACENT TRUSSES AT TYPICAL AND ATYPICAL SPANS. GENERAL CONTRACTOR SHALL COORDINATE WEB OPENING MIS-ALIGNMENT WITH MECHANICAL, ELECTRICAL AND PLUMBING ROUTING.

WOOD DECKING

1. ALL WOOD DECKING SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS FOR TONGUE-AND-GROOVE HEAVY TIMBER ROOF DECKING, AITC 112.
2. ALL ROOF DECKING SHALL BE A 2x6 NOMINAL WOOD DECKING WITH A MINIMUM 1 7/16" THICKNESS AND A MINIMUM MODULUS OF ELASTICITY (E) OF 1,600,000 PSI. PROVIDE DOUGLAS FIR-LARCH (DF) SELECT DEX WOOD DECKING WITH Fb = 1750 PSI MINIMUM. DECKING SHALL BE KILN DRIED WITH 15% MAXIMUM MOISTURE CONTENT.
3. ALL WOOD DECK IS TO BE INSTALLED IN ACCORDANCE WITH AITC 112 FOR CONTROLLED RANDOM LAYUP. NO FLOATERS ARE ALLOWED.
4. ALL WOOD DECKING SHALL BE NAILED IN ACCORDANCE WITH THE REQUIREMENTS OF AITC 112.
5. OVERLAY THE NOMINAL 2" WOOD DECKING WITH A 3/8" PLYWOOD DIAPHRAGM. SEE PLAN FOR FASTENING.
6. VERIFY SIZE, NUMBER, AND LOCATION OF ALL OPENINGS IN ROOF DECKING WITH ALL DISCIPLINES.

POST-INSTALLED ANCHORS

1. ANCHORS SERVING AS THE BASIS OF DESIGN ARE SHOWN ON THE DRAWINGS. ACCEPTABLE ALTERNATIVE ANCHORS MAY BE SUPPLIED PROVIDED THE QUANTITY AND CONFIGURATION MATCH THE CAPACITY OF THE DESIGN ANCHOR QUANTITY AND CONFIGURATION. ANY ALTERNATES ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. BELOW SUMMARIZES EACH ANCHOR TYPE USED ON THE PROJECT.
2. MECHANICAL ANCHORS:
   a. EXPANSION ANCHORS

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
GROUTED MASONRY	HILTI KB3 (ESR-1385)	DEWALT POWER STUD+ SD1 (ESR-2966) SIMPSON WEDGE-ALL (ESR-1396)
UNCRACKED CONCRETE	HILTI KB3 (ESR-2302)	DEWALT POWER STUD+ SD2 (ESR-2502) RED HEAD TRUBOLT+ (ESR-2427) SIMPSON STRONG BOLT 2 (ESR-3037)
CRACKED CONCRETE	HILTI KBTZ (ESR-1917)	DEWALT POWER STUD+ SD2 (ESR-2502) RED HEAD TRUBOLT+ (ESR-2427) SIMPSON STRONG BOLT 2 (ESR-3037)

   b. THREADED SCREW ANCHORS

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
GROUTED MASONRY	HILTI KWIK HUS-EZ (ESR-3056)	DEWALT WEDGE-BOLT+ (ESR-1678) SIMPSON TITEN HD (ESR-1056)
UNCRACKED CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)	DEWALT POWER SCREW-BOLT+ (ESR-3889) SIMPSON TITEN HD (ESR-2713)
CRACKED CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)	DEWALT POWER SCREW-BOLT+ (ESR-3889) SIMPSON TITEN HD (ESR-2713)

3. ADHESIVE ANCHORS: SHALL CONSIST OF DEFORMED REINFORCING BARS OR ASTM A193 GRADE B7 RODS, HEAVY DUTY NUTS AND WASHERS AND A TWO COMPONENT STRUCTURAL ADHESIVE. WHERE ANCHORING INTO HOLLOW MASONRY, A SCREEN TUBE SHALL BE PROVIDED.

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
HOLLOW MASONRY	HILTI HIT-HY 270 (ESR-4143)	DEWALT AC 100+ GOLD (ESR-3200) SIMPSON SET-XP (ESR-0265)
GROUTED MASONRY	HILTI HIT-HY 270 (ESR-4143)	DEWALT AC 100+ GOLD (ESR-3200) RED HEAD A7 ACRYLIC (ESR-3951) SIMPSON SET-XP (ESR-0265)
CONCRETE	HILTI HIT-HY 200 (ESR-3187)	DEWALT AC 200+ (ESR-4027) SIMPSON SET-3G (ESR-4057)

4. CRACKED CONCRETE REPRESENTS ALL CONCRETE FOR PROJECTS LOCATED IN SEISMIC DESIGN CATEGORY C OR HIGHER, TENSILE ZONES SUCH AS BOTTOMS OF BEAMS AND SLABS, OR WHERE NOTED ON THE DRAWINGS.

EPOXY ANCHORS

1. INTENDED FOR USE WITH REINFORCING BARS AND THREADED RODS.
2. ALL EPOXY ON THE JOB, UNLESS OTHERWISE NOTED, SHALL BE 'SET-3G' AS MANUFACTURED BY SIMPSON STRONG-TIE (ICC ESR-4057) OR APPROVED EQUIVALENT.
3. WORKERS SHALL BE CERTIFIED FOR ANCHOR INSTALLATION EQUIPMENT AND PROCEDURES USING THEIR EPOXY.
4. CONTINUOUS INSPECTION IS REQUIRED FOR INSTALLATION OF REBAR OR THREADED RODS.
5. FOR REQUIRED HOLES, THE DIAMETERS SHALL BE PER MANUFACTURER'S REQUIREMENTS. MINIMUM HOLE LENGTH SHALL BE PER STRUCTURAL DRAWINGS, OR PER THE ICC MINIMUM (FOR MAXIMUM TENSION) IF NOT SHOWN.
6. FOR HORIZONTAL HOLES COMPLETELY THROUGH WALLS OR BEAMS AND FOR TIES AROUND COLUMNS, PROVIDE A DAM AT ONE END, FLOOD WITH EPOXY AND DAM THE OTHER SIDE. VIBRATE TIES TO ENSURE FULL COVERAGE. REMOVE DAMS ONCE FLUID EPOXY HAS SET. FILL ANY VOIDS WITH ADDITIONAL EPOXY.
7. ALL EPOXY ANCHORS WILL BE TESTED AS FOLLOWS:
   a. 25% OF FIRST 40 ANCHORS INSTALLED AND 10% OF ALL ANCHORS THEREAFTER.
   b. IF ANY FAILURES OCCUR, THE PREVIOUS 10 ANCHORS INSTALLED SHALL BE TESTED AS WELL AS THE NEXT 5 ANCHORS INSTALLED. NEW INSTALLED ANCHORS WILL CONTINUE TO BE TESTED UNTIL 5 SUCCESSIVE ANCHORS PASS, AT WHICH TIME NORMAL TESTING OF THE REMAINING ANCHORS SHALL RESUME.
   c. TEST VALUES:

ANCHOR TYPE	TEST TYPE	TEST LOAD (LBS)	BASE MATERIAL
5/8"ø THREADED ROD*	TENSION	6,000	CONCRETE
3/4"ø THREADED ROD*	TENSION	8,500	CONCRETE
7/8"ø THREADED ROD*	TENSION	11,500	CONCRETE
1"ø THREADED ROD*	TENSION	15,000	CONCRETE
#4 REBAR**	TENSION	4,800	CONCRETE
#5 REBAR**	TENSION	7,500	CONCRETE
#6 REBAR**	TENSION	10,500	CONCRETE

   * A307 ** GRADE 60
   d. ANCHORS SHALL BE ALLOWED TO CURE 48 HOURS PRIOR TO TESTING.
   e. TENSION TEST SHALL BE IN ACCORDANCE WITH ASTM E488.
   f. A MINIMUM OF TWO DOWELS PER WALL PER FLOOR SHALL BE TESTED.
   g. IF ANCHOR EDGE DISTANCE IS LESS THAN 6 ANCHOR DIAMETERS, USE 1/2 THE TEST VALUE SHOWN, UNLESS OTHERWISE NOTED.
8. WHEN INSTALLING DRILLED-IN EPOXY BARS OR ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.

POWDER ACTUATED FASTENERS

1. POWDER ACTUATED FASTENING SYSTEMS SHALL BE INSTALLED IN NORMAL WEIGHT AND LIGHTWEIGHT CONCRETE, MASONRY, AND STEEL PER THE REQUIREMENTS OF THE ICC ESR FOR THE SPECIFIC FASTENER AND AS REQUIRED BY THE MANUFACTURER.
2. WHEN INSTALLING POWDER ACTUATED FASTENERS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID HITTING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF 1" BETWEEN THE REINFORCEMENT AND THE FASTENER.
3. POWDER ACTUATED FASTENERS ARE NOT PERMITTED BY ASCE 7, SECTION 13.4.5 FOR SEISMIC TENSION LOAD APPLICATIONS. POWDER ACTUATED FASTENERS SHALL NOT BE USED TO CARRY SEISMIC TENSION LOADS, EXCEPT FOR VERTICAL SEISMIC LOAD PRODUCED BY SELF-WEIGHT OF THE COMPONENTS SUPPORTED, OR IN CRACKED CONCRETE UNLESS PREAPPROVED FOR SUCH LOADING BY THE ENFORCEMENT AGENCY.
4. POWDER ACTUATED FASTENERS MAY BE USED FOR SEISMIC SHEAR, WHEN THEY ARE SPECIFICALLY LISTED FOR SERVICE IN RESISTING LATERAL LOADS IN AREAS SUBJECT TO EARTHQUAKE.
5. MINIMUM EDGE DISTANCE FOR POWDER ACTUATED FASTENERS SHALL BE THE LARGER OF THE VALUES GIVEN IN ASTM E1190 OR THE APPLICABLE ICC ESR.
6. FASTENERS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE INSPECTION AGENCY.
7. TESTING OF POWDER ACTUATED FASTENERS USED TO ATTACH TRACKS OF INTERIOR NON-SHEAR WALL PARTITIONS FOR SHEAR ONLY, WHERE THERE ARE AT LEAST THREE FASTENERS, IS NOT REQUIRED.
8. IF ANY FASTENERS FAIL TESTING, TEST ALL FASTENERS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE FASTENERS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
9. THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE FASTENER, SUCH AS DIRECT PULL WITH A HYDRAULIC JACK, CALIBRATED SPRING-LOADED DEVICE, ETC. POWDER ACTUATED FASTENERS SHALL BE TENSION TESTED TO TWICE THE ALLOWABLE TENSION LOAD AS LISTED IN THE ICC ESR.
10. HILTI X-ENP-19 L15 SHOT PIN (ICC ESR-2776) CAN BE USED IN LIEU OF HILTI XU-0.157 AND XU-0.145 SHOT PINS FOR CONNECTION TO STEEL APPLICATION, AT CONTRACTOR'S OPTION.

ELEVATORS

1. THE ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS ARE A DEFERRED APPROVAL ITEM.
2. INSTALLATION OF ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS SHALL NOT BE STARTED UNTIL DETAILED PLANS AND ENGINEERING CALCULATIONS HAVE BEEN APPROVED BY THE ARCHITECT/STRUCTURAL ENGINEER.
3. ALLOWANCE FOR ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS HAS BEEN INCLUDED IN THE DESIGN OF THE STRUCTURE.

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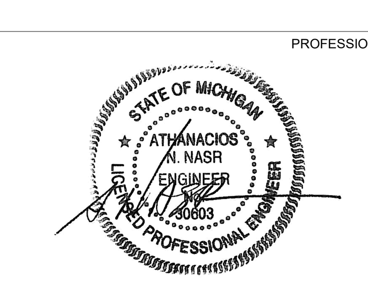
PROFESSIONAL SEAL



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KEY PLAN

AGENCY APPROVAL

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REVISIONS

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Date	10/30/2024
Project #	23008275.00
Drawn	GHW
Checked	GFM
Approved	-

SHEET TITLE
GENERAL NOTES

SCALE

Scale:

SHEET NUMBER

S001

TESTING, INSPECTIONS, AND OBSERVATIONS

1. THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
3. DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
   a. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
   b. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
   c. FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
   d. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
4. SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
   a. POST-INSTALLED ANCHORS - INSPECTION
5. THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
CONCRETE CONSTRUCTION				
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT		X	ACI 318: CH 20, 25.2, 25.3, 26.2.1-26.6.3	1908.4
2. MATERIAL IDENTIFICATION OF REINFORCING (TYPE/GRADE)		X	AISC 341: TABLE J9.1	
3. REINFORCING STEEL HAS NOT BEEN REBENT IN THE FIELD		X	AISC 341: TABLE J9.1	
4. REINFORCING STEEL HAS BEEN TIED AND SUPPORTED AS REQUIRED		X	AISC 341: TABLE J9.1	
5. REINFORCING STEEL CLEARANCES HAVE BEEN PROVIDED		X	AISC 341: TABLE J9.1	
6. INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
7. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a		X	ACI 318: 17.8.2	
8. VERIFY USE OF REQUIRED DESIGN MIX		X	ACI 318: CH 19, 26.4.2, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
9. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	1907.10
10. INSPECT CONCRETE FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	1908.6, 1908.7, 1908.8
11. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318: 26.5.3-26.5.5	1908.9
12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.2(b)	

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	TMS 402	TMS 602
MASONRY CONSTRUCTION - LEVEL 1				
1. PRIOR TO CONSTRUCTION:				
a. VERIFICATION OF COMPLIANCE OF SUBMITTALS		X		ART. 1.5

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE
STRUCTURAL STEEL - FABRICATION			
1. FABRICATION FACILITY			X
2. CONNECTION ERECTION AND ASSEMBLY	X	X	
3. SINGLE PASS FILLET WELDS 5/16" OR LESS	X	X	X

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE
STRUCTURAL STEEL - ERECTION			
1. STRUCTURAL STEEL ERECTION	X	X	
2. CONNECTION ERECTION AND ASSEMBLY	X	X	
3. SINGLE PASS FILLET WELDS 5/16" OR LESS	X	X	X

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL PRIOR TO BOLTING - MINIMUM INSPECTION				
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	TABLE C-N5.6-1	2.1, 9.1
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	TABLE C-N5.6-1	6.5.1
3. CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)	O	O	TABLE C-N5.6-1	2.3.2, 2.7.2, 9.1
4. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	TABLE C-N5.6-1	4, 8
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	TABLE C-N5.6-1	TABLE 6.1(2)
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P[1]	O[1]	TABLE C-N5.6-1	3, 9.1, 9.3
7. PROTECTION STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	TABLE C-N5.6-1	2.2, 8, 9.1

1 DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE REPORTS NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT-UPS, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLES. FOR SHOP FABRICATION, THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED. FOR FIELD WORK, THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INSPECTED. WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION.

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL AFTER BOLTING - MINIMUM INSPECTION				
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	TABLE C-N5.6-3	N/A

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL PRIOR TO WELDING - MINIMUM INSPECTION				
1. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	P	TABLE C-N5.4-1	6.3
2. MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE	P	P	TABLE C-N5.4-1	6.2
3. MATERIAL IDENTIFICATION	O	O	TABLE C-N5.4-1	6.2
4. WELDER IDENTIFICATION	O	O	TABLE C-N5.4-1	6.4 (WELDER QUALIFICATION)
5. FIT-UP OF FILLET WELDS	P/O[1]	O	TABLE C-N5.4-1	
a. DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	P/O[1]	O	TABLE C-N5.4-1	5.21.1
b. CLEANLINESS (CONDITION OF STEEL SURFACES)	P/O[1]	O	TABLE C-N5.4-1	5.14
c. TACKING (TACK WELD QUALITY AND LOCATION)	P/O[1]	O	TABLE C-N5.4-1	5.17
6. CHECK WELDING EQUIPMENT	O	O	TABLE C-N5.4-1	6.2, 5.10

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL AFTER WELDING - MINIMUM INSPECTION				
1. WELDS CLEANED	O	O	TABLE C-N5.4-3	5.29.1
2. SIZE, LENGTH AND LOCATION OF WELDS	P	P	TABLE C-N5.4-3	6.5.1
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA	P[2]	P[2]	TABLE C-N5.4-3	6.5.3
a. CRACK PROHIBITION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(1)
b. WELD/BASE-METAL FUSION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(2)
c. CRATER CROSS-SECTION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(3)
d. WELD PROFILES	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(4), 5.24
e. WELD SIZE	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(6)
f. UNDERCUT	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(7)
g. POROSITY	P[2]	P[2]		TABLE 6.1(8)
4. ARC STRIKES	P	P	TABLE C-N5.4-3	5.28
5. K-AREA[3]	P[2]	P[2]	TABLE C-N5.4-3	N/A
6. WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES	P	P	TABLE C-N5.4-3	5.16, 6.5.2 (& SEE AISC 360 SECT. J1.6)
7. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P[2]	P[2]	TABLE C-N5.4-3	5.9, 5.30
8. REPAIR ACTIVITIES	P	P[2]	TABLE C-N5.4-3	6.5.3, 5.25
9. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	TABLE C-N5.4-3	6.5.4, 6.5.5
10. PLACEMENT OF REINFORCING OR CONTOURING FILLET WELDS (IF REQUIRED)	P[2]	P[2]	TABLE C-N5.4-3	6.5.4, 6.5.5

1 FOLLOWING PERFORMANCE OF THIS INSPECTION TASK FOR TEN WELDS TO BE MADE BY A GIVEN WELDER, WITH THE WELDER DEMONSTRATING UNDERSTANDING OF REQUIREMENTS AND POSSESSION OF THE SKILLS TO VERIFY THESE ITEMS, THE PERFORM DESIGNATION OF THIS TASK SHALL BE REDUCED TO OBSERVE, AND THE WELDER SHALL PERFORM THIS TASK. SHOULD THE INSPECTOR DETERMINE THE WELDER HAS DISCONTINUED PERFORMANCE OF THIS TASK, THE TASK SHALL BE RETURNED TO PERFORM UNTIL SUCH TIME AS THE INSPECTOR HAS RE-ESTABLISHED ADEQUATE ASSURANCE THE WELDER WILL PERFORM THE INSPECTION TASKS LISTED.

2 DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE REPORT NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT-UPS, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLES. FOR SHOP FABRICATION, THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED. FOR FIELD WORK, THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INSPECTED. WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION.

3 WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3" OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING.

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
STRUCTURAL DECKING				
1. DECK PLACEMENT AND ATTACHMENT	X	X		

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
COLD-FORMED STEEL FRAMING				
1. EXTERIOR WALLS AND CONNECTIONS	X	X		
2. COLD-FORMED STEEL TRUSS SPANNING 60 FEET OR GREATER:				
a. TEMPORARY AND PERMANENT INSTALLATION RESTRAINT/BRACING		X		1705.2.4

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
WOOD FRAMING				
1. PREFABRICATED WOOD STRUCTURAL ELEMENTS		X		1704.2.5
a. METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FEET OR GREATER:				
i. TEMPORARY AND PERMANENT INSTALLATION RESTRAINT/BRACING		X		1705.5.3
2. HIGH-LOAD DIAPHRAGMS:				
a. SHEATHING GRADE AND THICKNESS		X		1705.5.1
b. MEMBER SIZES AT ADJOINING PANEL EDGES		X		1705.5.1
c. DIAPHRAGM NAILING		X		1705.5.1
3. LATERAL FORCE RESISTING SYSTEM (SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLDOWNS, WHERE FASTENER SPACING AT PANEL EDGES IS 4" OR LESS):				
a. GLUING OF ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM	X			1705.12.1, 1705.13.2
b. NAILING, BOLTING, ANCHORING AND OTHER FASTENING TO OTHER ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM		X		1705.12.1, 1705.13.2

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
SOILS				
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		
3. PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL		X		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X			
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		

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PROFESSIONAL SEAL

STATE OF MICHIGAN
ATHANASIOS NASR
ENGINEER
LICENSED PROFESSIONAL ENGINEER

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KEY PLAN

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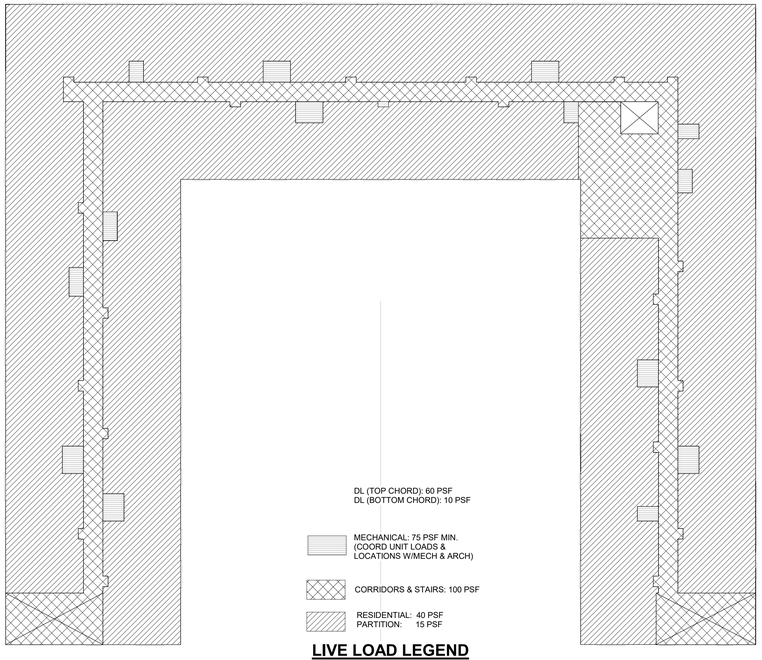
Approved	**-**

SHEET TITLE
SPECIAL INSPECTIONS

SCALE
Scale:

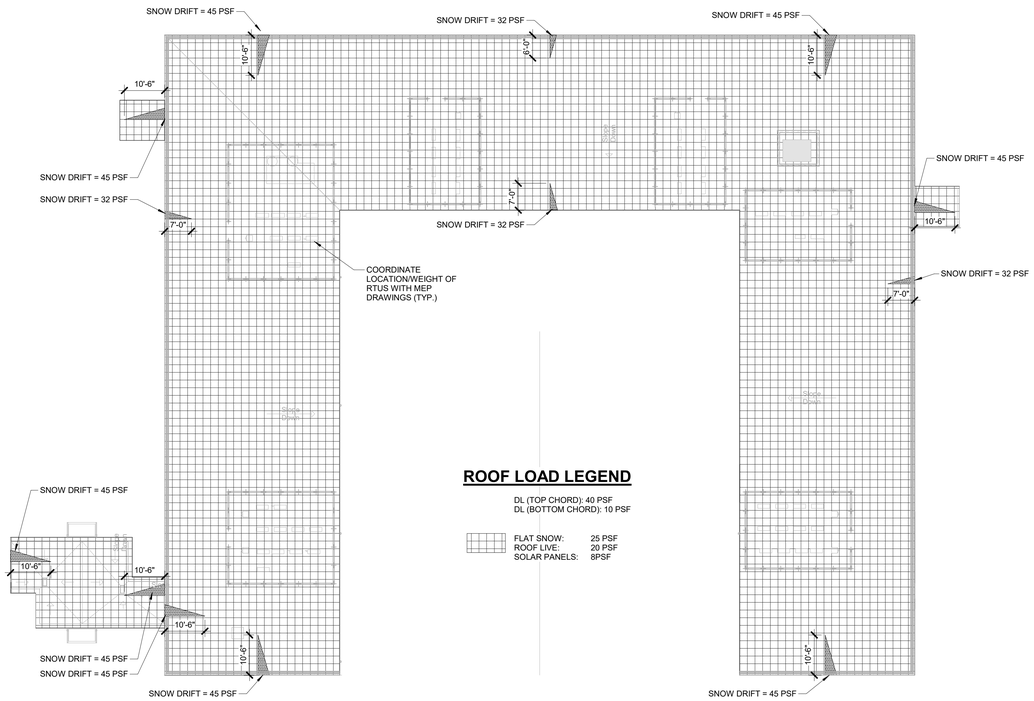
SHEET NUMBER
S002



LIVE LOAD LEGEND

1 SECOND FLOOR ADDITION LOADING MAP

1/16" = 1'-0"



ROOF LOAD LEGEND

DL (TOP CHORD): 40 PSF
DL (BOTTOM CHORD): 10 PSF

FLAT SNOW: 25 PSF
ROOF LIVE: 20 PSF
SOLAR PANELS: 8PSF

2 ROOF ADDITION LOADING MAP

1/16" = 1'-0"

DESIGN CRITERIA		
The structure is designed for the following live loads, in addition to the lateral loads, super-imposed dead loads, and self weight of the structure. Where applicable, the live loads are reduced in accordance with the provisions of the governing Building Code.		
		CODE REFERENCE
Risk Category	II	IBC Table 1604.5 ASCE Table 1.5-1
FLOOR LIVE LOADS		
		CODE REFERENCE
Live	40 PSF	ASCE Table 4-1
Roof Live	20 PSF	ASCE Table 4-1
Partition	15 PSF	ASCE Table 4-1
SNOW LOADS		
		CODE REFERENCE
Ground Snow Load	Pg = 20 PSF	ASCE Figure 7-1
Flat Roof Snow Load	Pf = 25 PSF (minimum)	ASCE Section 7.3
Exposure Factor	Ce = 1.0	ASCE Table 7-2
Importance Factor	I = 1.0	ASCE Table 1.5-2
Thermal Factor	Ct = 1.0	ASCE Table 7-3
Snow loads adjacent to vertical projections, on lower roofs adjacent to high roofs, or sloped roofs are increased for the effects of drifting.		
WIND LOADS		
		CODE REFERENCE
Ultimate Design Wind Speed (3 sec. gust)	Vult = 115 MPH	ASCE Figure 26.5-1A
Nominal Design Wind Speed	Vasd = 89 MPH	IBC Section 1609.3.1
Exposure Category	B	ASCE Section 26.7.3
Internal Pressure Coefficient	± 0.18 (Enclosed)	ASCE Section 26.11-1
Components and Cladding	Per Code Requirements Based on Above	ASCE Chapter 30

ROOF COMPONENTS				
	Zone 1	Zone 2	Zone 3	CODE REFERENCE
Support Beams (A > 100 SF)	+/-24 PSF	+/-28 PSF	+/-28 PSF	ASCE Table 30.7-2
Roof Sheathing (A = 50 SF)	+/-26 PSF	+/-35 PSF	+/-41 PSF	ASCE Table 30.7-2
Deck Fasteners (A < 10 SF)	+/-26 PSF	+/-43 PSF	+/-65 PSF	ASCE Table 30.7-2

WALL COMPONENTS				
	Zone 4	Zone 5		CODE REFERENCE
A = 100 SF	+/-24 PSF	+/-25 PSF		ASCE Table 30.7-2
A = 50 SF	+/-24 PSF	+/-27 PSF		ASCE Table 30.7-2
A = 10 SF	+/-26 PSF	+/-26 PSF		ASCE Table 30.7-2

Refer to ASCE 7-10 for zone definitions. Calculate wind load for tributary area of design component. Wind loads shown are for use with ASCE 7-10 load combinations (i.e. 0.6 factor for ASD and 1.0 factor for LRFD), and include directionality factor Kd = 0.85, per ASCE Table 26.6-1.

SEISMIC LOADS		
		CODE REFERENCE
Seismic Importance Factor	Ie = 1.0	ASCE Table 1.5-2
Short Period Mapped Spectral Response Acceleration Parameter (5% of Critical Damping)	SS = 0.095 g	ASCE Section 11.4.1
1.0 sec. Mapped Spectral Response Acceleration Parameter (5% of Critical Damping)	S1 = 0.047 g	ASCE Section 11.4.1
Soil Site Class	E	ASCE Section 11.4.2
Design Spectral Response Acceleration Parameter (for short period)	SDS = 0.159 g	ASCE Section 11.4.4
Design Spectral Response Acceleration Parameter (1 sec. period)	SD1 = 0.109 g	ASCE Section 11.4.4
Seismic Design Category	B	ASCE Section 11.6
Seismic Force Resisting System	Wood shear walls sheathed with wood structural panels	ASCE Table 12.2-1
Seismic Response Coefficient	Cs = 0.024	ASCE Section 12.8.1.1
Response Modification Factor	R = 2.0	ASCE Table 12.2-1
Analysis Procedure	Equivalent Lateral Force	ASCE Section 12.8
EARTH PRESSURE LOADS		
LATERAL EARTH EQUIVALENT FLUID PRESSURE		
Walls Unbraced at Top	40 PCF	
Walls Braced at Top	55 PCF	
Allowable Soil Bearing Capacity	3,000 PSF	
1. Refer to Geotechnical Report for additional Information 2. Lateral earth pressure is based upon drained soil. Refer to drawings for foundation drainage.		
MECHANICAL / ELECTRICAL LOADS		
Typical Floors and Roof	125 PSF	

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STATE OF MICHIGAN
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AGENCY APPROVAL

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REVISIONS

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SHEET INFORMATION

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Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

LOADING DIAGRAMS

SCALE

Scale: **1/16" = 1'-0"**

SHEET NUMBER

S003

23008275.00 12/19/2024 9:12:46 PM JOHN GRACE ARMS

WOOD BEARING WALL SCHEDULE

LOCATION	ROOF - 2ND	2ND - 1ST	REMARKS
TYPICAL - DEMISING WALL BETWEEN UNITS	(1) 2x4 @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL	(1) 2x4 @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL	-
CORRIDOR	(1) 2x6 @ 16" OC	(1) 2x6 @ 16" OC	-
EXTERIOR / PERIMETER	(1) 2x6 @ 16" OC	(1) 2x6 @ 16" OC	

NOTES:

1. WALLS LISTED ON SCHEDULE ARE FOR ALL WALLS SHOWN ON STRUCTURAL PLANS, UON.
2. STUDS TO ALIGN WITH FLOOR OR ROOF FRAMING MEMBERS, UON.

CMU WALL SCHEDULE

WALL ID	WALL THICKNESS	MAXIMUM HEIGHT	BAR SIZE AND SPACING EACH MAT		GROUTED	REMARKS
			VERTICAL	HORIZONTAL (SEE NOTE 4)		
MW1	8"	25'-0"	#5 @ 16" OC	STD LADDER @ 16" OC	PARTIAL	SINGLE MAT
MW2	8"	25'-0"	#5 @ 48" OC	STD LADDER @ 16" OC	PARTIAL	SINGLE MAT

NOTES:

1. THE ABOVE SCHED SHALL BE MIN REINF FOR ALL BUILDING CMU WALLS.
2. SINGLE MAT REINF SHALL BE IN THE CENTER OF WALL, UON.
3. PLACE HORIZ BAR IN BOND BEAM UNIT, TYP.
4. LOCATE FIRST LAYER OF HORIZ BARS AT 8" MAX FROM BASE OF WALLS AND FROM TOP AND BOTTOM OF WALL OPENINGS.

WOOD SHEAR WALL SCHEDULE

MARK	APA RATED SHEATHING			PANEL NAIL SIZE AND SPACING			FRAMING SIZE AT ADJOINING PANEL EDGES, MIN	JOIST/BLOCKING TO TOP PLATE CONN WITH SIMPSON A35 OR LTP4, UON	SILL PLATE CONN AT FLOOR WITH SIMPSON SCREWS	SILL PLATE ANCHORS AT CONCRETE		REMARKS
	THICKNESS	GRADE	SPAN RATING	SIZE	E.N.	F.N.				SIZE AND SPACING	EMBEDMENT (IN)	
SW1	1/2" ZIP SYSTEM	STRUCT 1	32/16	10d @	3" OC,	12" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 32" OC	12"	2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE
SW2	5/8" GYPSUM SHEATHING BOARD ON EACH SIDE	STRUCT 1	-	6d x 1 7/8"@	4" OC,	7" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 32" OC	12"	2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE
SW3	15/32" ONE SIDE	STRUCT 1	32/16	10d @	4" OC,	12" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 16" OC	12"	2X4 DFL STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE
SW4	15/32" ONE SIDE	STRUCT 1	32/16	10d @	6" OC,	12" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 24" OC	12"	2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE

Tighter nailing pattern per RFI

NOTES:

1. SHEATHING SHALL BE APA RATED, STRUCTURAL 1, 15/32" MIN, 5-PLY, EXPOSURE 1 OR APPROVED EXTERIOR GRADE OSB.SEE GENERAL NOTES FOR PLYWOOD INFORMATION.
2. PROVIDE BLOCKING IN SHEAR WALL PER TYP SHEAR WALL ELEVATION DETAIL. ALL PANEL EDGES ARE TO BE BLOCKED.
3. SILL PLATE ANCHORS ARE BASED UPON HILTI KWIK BOLT TZ2 OR HILTI HY-200 + HIT-Z.CONCRETE SHALL HAVE 75% OF SPECIFIED COMPRESSIVE STRENGTH AT TIME OF INSTALLATION.
4. SEE PLAN AND SCHEDULE FOR HOLDOWN ANCHOR AND POST SIZE.
5. ALL NAILS SHALL BE COMMON WIRE NAILS WITH 1 1/2" PENETRATION. SINKER OR BOX NAILS ARE NOT PERMITTED.
6. FOR TRANSFER NAILING, PREDRILL HOLES FOR NAILS WHERE NAILS TEND TO SPLIT WOOD.
7. OVERDRIVEN NAILS INTO SHEATHING ARE NOT ACCEPTABLE. ANY SHEATHING AND STUDS DAMAGED DUE TO OVERDRIVEN NAILS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
8. WHERE PANELS ARE APPLIED TO BOTH SIDES AND NAIL SPACING IS LESS THAN 6", PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING, EACH SIDE OF WALL. CONTRACTOR OPTION TO PROVIDE NOMINAL 3" WIDE, OR GREATER, FRAMING MEMBERS WITH STAGGERED NAILS.
9. SEE S600 AND S601 FOR TYPICAL SHEAR WALL CONSTRUCTION DETAILS.
10. WHERE ROOF JOISTS ARE PERPENDICULAR TO SHEAR WALL, PROVIDE SIMPSON H8 CLIP FROM ROOF JOIST TO DOUBLE PLATE IN ADDITION TO CLIP SHOWN ON SHEAR WALL SCHED.
11. NUMBER OF ANCHOR BOLTS REQD EQUAL TO WALL LENGTH DIVIDED BY BOLT SPACING.
12. PLATE WASHERS AT SILL ANCHOR BOLTS IN SHEAR WALLS SHALL EXTEND TO WITHIN 1/2" OF THE PLATE EDGE ON THE SIDE(S) WITH SHEATHING. USE SIMPSON BPS3/4-6 OR EQUIVALENT AT 6 INCH NOMINAL WALLS. SEE S600 AND S601 FOR ADDITIONAL SILL BOLTING REQUIREMENTS.
13. 1/2" EDGE DISTANCE FROM THE PANEL EDGES AND 3/8" FROM THE EDGE OF CONNECTING MEMBERS. SEE S600 AND S601.
14. ALL WOOD STRUCTURAL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED AT ALL PANEL EDGES.
15. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. UON ON THE PLANS NAILING SHALL BE PER MARK SW4.
16. ZIP SYSTEM SHALL MEET THE REQUIREMENTS OF ICC-ES EVALUATION REPORT ESR-3373.
17. TOP AND SILL PLATES SHALL BE DOUGLAS-FIR-LARCH NO.1 UNLESS NOTED OTHERWISE.
18. PROVIDE MST48 STEEL STRAP @ 24" O.C. MAX. BETWEEN 1ST FLOOR AND 2ND FLOOR SHEAR WALL (ACCROSS THE LENGTH OF SW)
19. PROVIDE 2x STUDS OR 2x BLOCKING AT ADJOINING PANEL EDGES,
20. STAGGER VERTICAL JOINTS IN GYPSUM SHEETS WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES.
21. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS. HOLDOWNS SHALL BE FINGER TIGHT AND WRENCH TURNED JUST PRIOR TO COVERING THE WALL FRAMING. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE A MIN OF 0.299"x3" x 0'-3".
22. USE APA STRUC I WHERE FIRE TREATED PLYWOOD IS REQD. (REFER TO ARCH. DRAWINGS FOR FIRE RATING REQUIREMENTS)

HOLDOWN SCHEDULE

MARK	LEVEL	MODEL	THREADED ROD ANCHOR	WOOD FASTENER	END POST IN 2x4 WALL	END POST IN 2x6 WALL
SW-1	GROUND	HTT5KT	5/8"ø	(26) #10x 2 1/2 SD	-	(3) 2x6 SPF
	2ND	DTT2Z	1/2"ø	(8) 1/4 x 1 1/2 SDS	-	(3) 2x6 SPF
SW-2	GROUND	DTT2Z	1/2"ø	(8) 1/4 x 1 1/2 SDS	-	(4) 2x6 SPF
	2ND	DTT1Z	3/8"ø	(8) 0.148 x 1 1/2	-	(4) 2x6 SPF
SW-3	GROUND	HD12	1"ø	(4) 1" STUD BOLTS	(6) 2X4 DFL SS	-
	2ND	HDU5-SDS2.5	5/8"ø	(14) 1/4 x 2 1/2 SDS	(6) 2X4 DFL SS	-
SW-4	GROUND	HTT5	5/8"ø	(26) 0.162x 2 1/2	-	(3) 2x6 SPF
	2ND	DTT2Z	1/2"ø	(8) 1/4 x 1 1/2 SDS	-	(3) 2x6 SPF

NOTES:

1. TYPICAL POST SIZE SHOWN IN SCHEDULE, UON ON PLAN.
2. EMBEDMENT FOR HOLDOWN AT GROUND LEVEL SHALL BE 16" MINIMUM.
3. INSTALL HOLDOWNS PER SIMPSON STRONG-TIE SPECIFICATIONS.
4. NOTCHES ARE NOT ALLOWED IN SHEAR WALL END POSTS.
5. SEE TYPICAL DETAIL 'SIMPSON HOLDOWNS (NON-ATS) FOR THREADED ROD HOLDOWN ANCHOR INFORMATION.
5. HOLD-DOWNS SHALL BE INSTALLED AT THE END OF EACH WALL SEGMENT AND SHALL BE ALIGNED FLOOR-TO-FLOOR; REFER TO PLAN
6. END POST SHALL BE DFL SELECT STRUCTURAL (1900 E; 625 FC PERP) & SPF NO.1/NO.2 MIN. (SEE SCHEDULE)

WOOD BEARING WALL SCHEDULE

LOCATION	ROOF - 2ND	2ND - 1ST	REMARKS
TYPICAL - DEMISING WALL BETWEEN UNITS	(1) 2x4 SPF @ 16" OC, ~~STAGGERED ABOUT EACH SIDE OF WALL~~	(1) 2x4 SPF @ 16" OC, ~~STAGGERED ABOUT EACH SIDE OF WALL~~	-
CORRIDOR	(1) 2x6 SPF @ 16" OC	(1) 2x6 SPF @ 16" OC	-
EXTERIOR / PERIMETER	(1) 2x6 SPF @ 16" OC	(1) 2x6 SPF @ 16" OC	

NOTES:

1. WALLS LISTED ON SCHEDULE ARE FOR ALL WALLS SHOWN ON STRUCTURAL PLANS, UON.
2. STUDS TO ALIGN WITH FLOOR OR ROOF FRAMING MEMBERS, UON.
3. REFER TO SHEAR WALL/ HOLDOWN SCHEDULE FOR THE END POSTS.

See RFI 64 (No staggered walls)

RFI #64

WOOD HEADER SCHEDULE

MARK	SIZE	REMARKS
H1	(3) 2x12 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H2	(2) 2x12 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H3	(2) 2x10 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H4	(2) 2x8 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H5	(3) 1 3/4x14 LVL	(2) 2X KING STUDS, (3) 2x TRIMMER

NOTE:

1. PROVIDE FULL BEARING ON TRIMMER END OF HEADER.
2. LINTELS NOT SPECIFICALLY SIZED BY DRAWINGS AND DETAIL SECTIONS AT 4" NON-BEARING WALLS SHALL BE COMPLY WITH THE FOLLOWING:
   - UP TO 4'-0" WIDE OPENING: (2) 2X6 SPF
   - OVER 4'-0" UP TO 7'-0" WIDE OPENING: H-3

LINTEL SCHEDULE

MARK	MEMBER SIZE	REFERENCE DETAIL	REMARKS
L1	L6x3-1/2x3/8" LLV	-	-
L2	L4x3-1/2x3/8" LLV	-	-
L3	16" DEEP BOND BEAM w/ (2) #5	6/S400	-
L4	L6x3-1/2x3/8" LLV ANCH. TO H5 W/ (2)1/2"Ø LAG SCREW @ 24" OC	-	-

NOTE:

1. BEARING LENGTH EACH END = 8" MIN. UON.
2. WOOD HEADER U.N.O. REFER TO PLANS AND SCHEDULE.

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PROFESSIONAL SEAL

STATE OF MICHIGAN ATHANASIOS A. NASR ENGINEER No. 6201 LICENSED PROFESSIONAL ENGINEER

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KEY PLAN

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REVISIONS

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5	10/30/2024	Issued for Permit
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7	12/20/2024	Permit
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9	10/13/2025	Bulletin No. 5
10	01/14/2026	Bulletin No. 7

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Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

SCHEDULES

SCALE

Scale: **As indicated**

SHEET NUMBER

S004

FOUNDATION NOTES:

1. REFERENCE FINISHED FLOOR ELEVATION = 0'-0"
2. TOP OF FOOTING ELEVATION = -0'-8" FROM REFERENCE FINISHED FLOOR ELEVATION UNLESS NOTED OTHERWISE.
3. FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
4. REFER TO GEOTECHNICAL REPORT NO. 23-385 PREPARED BY THE McDOWELL & ASSOCIATES, (DATED 09-26-2023). THE CONTRACTOR MUST NOTIFY THE GEOTECHNICAL ENGINEER (MCDOWELL & ASSOCIATES) OF ANY VARIATION OF SOIL CONDITIONS FROM THE CONDITIONS INDICATED IN THE SOILS REPORT.
4. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
5. REFER TO CIVILSITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
6. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
8. DESIGNATIONS:

SOG1: 4" CONC SLAB ON GRADE w/6x6-W2.9xW2.9 WWF PLACED @ 2" FROM TOP OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP UNO)

W1: 2x6 SPF @ 16" OC WITH 4" BRICK

W2: 2x6 SPF @16" OC

W3: 2x4 SPF @16" OC

CFx: CONTINUIOUS FOOTING - REFER TO SCHEDULE

MWx MASONRY WALL - REFER TO SCHEDULE

SWx: SHEAR WALL - REFER TO SCHEDULE

P1: (2) 2X6 SPF WOOD POST

P2: (3) 2X6 SPF WOOD POST

P3: (4) 2X6 SPF WOOD POST

P4: (3) 2X4 SPF WOOD POST

C1: HSS4x4x1/4 w/ 12"x12"x3/4 BASE PL + (4)-3/4"ø ANCHOR BOLTS w/ 12" EMBED.

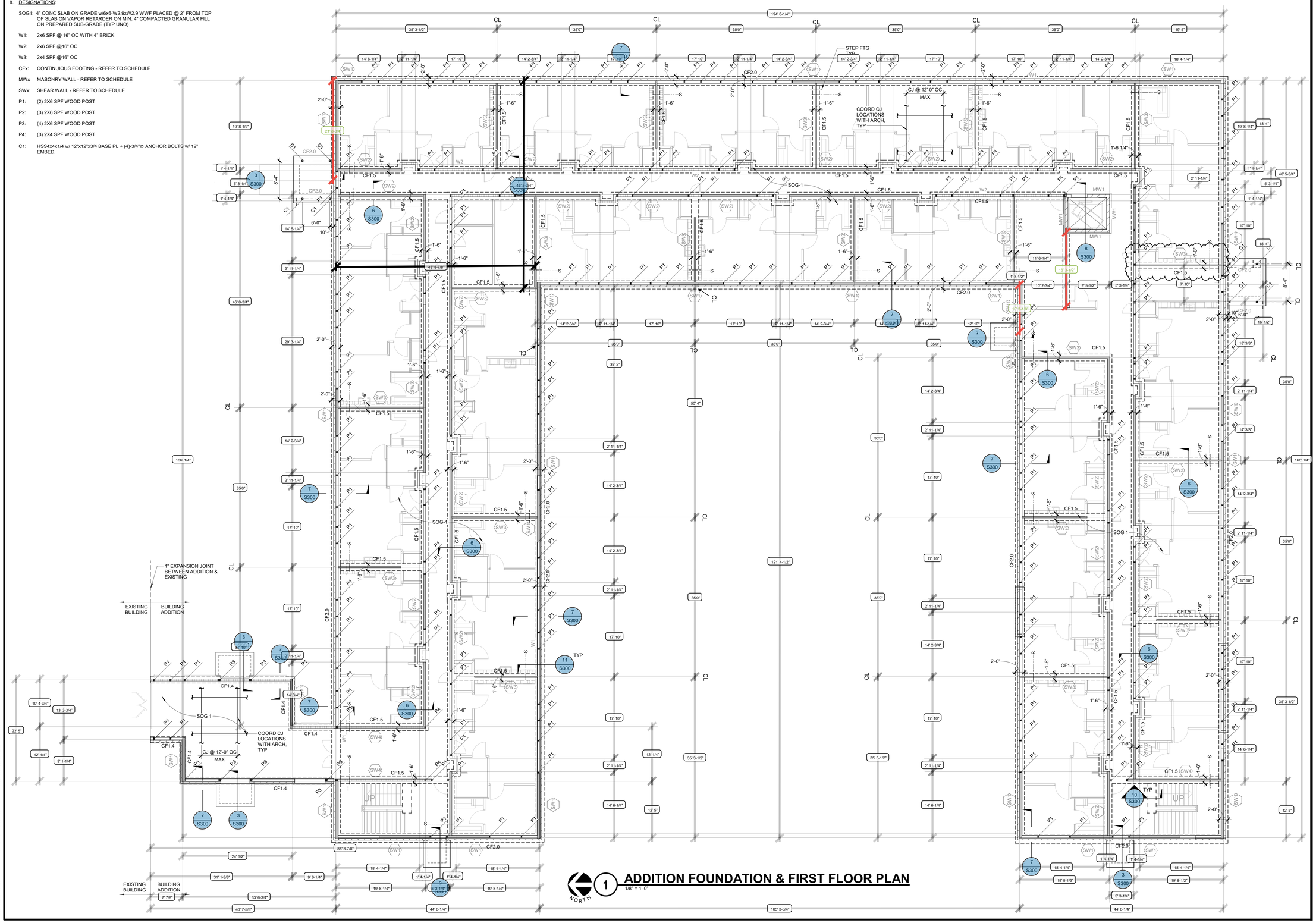
CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	MIN. THICKNESS	REINFORCING	
			LONG DIRECTION	SHORT DIRECTION
CF1.4	1'-4"	3'-4"	(2)#5 T&B	#3 TIES @ 24" OC
CF1.5	1'-6"	1'-6"	(2)#5 T&B	
CF2.0	2'-0"	3'-4"	(3)#5 T&B	#3 TIES @ 24" OC

CF SCHEDULE NOTES:

a. DEEPEN THE EXTERIOR FOOTINGS AS NECESSARY TO MAINTAIN THE BOTTOM OF FOOTINGS AT LEAST 3'-6" BELOW FINISHED GRADE (TYP.)

b. SCHEDULE APPLIES TO THE PROPOSED FOOTINGS IN THE EXISTING BUILDING FOUNDATION PLAN ON SHEET S100-E.



1 ADDITION FOUNDATION & FIRST FLOOR PLAN
1/8" = 1'-0"

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SHEET TITLE

ADDITION FOUNDATION / FLOOR PLAN

SCALE

Scale: As indicated

SHEET NUMBER

S100-A

23008275.00 1/20/2026 2:53:58 PM JOHN GRACE ARMS

FOUNDATION NOTES:

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2. TOP OF FOOTING ELEVATION = -0'-8" FROM REFERENCE FINISHED FLOOR ELEVATION UNLESS NOTED OTHERWISE.
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W2: 2x6 SPF @16" OC

W3: 2x4 SPF @16" OC

CFx: CONTINUIOUS FOOTING - REFER TO SCHEDULE

MWx: MASONRY WALL - REFER TO SCHEDULE

SWx: SHEAR WALL - REFER TO SCHEDULE

P1: (2) 2X6 SPF WOOD POST

P2: (3) 2X6 SPF WOOD POST

P3: (4) 2X6 SPF WOOD POST

P4: (3) 2X4 SPF WOOD POST

C1: HSS4x4x1/4 w/ 12"x12"x3/4 BASE PL + (4)-3/4"ø ANCHOR BOLTS w/ 12" EMBED.

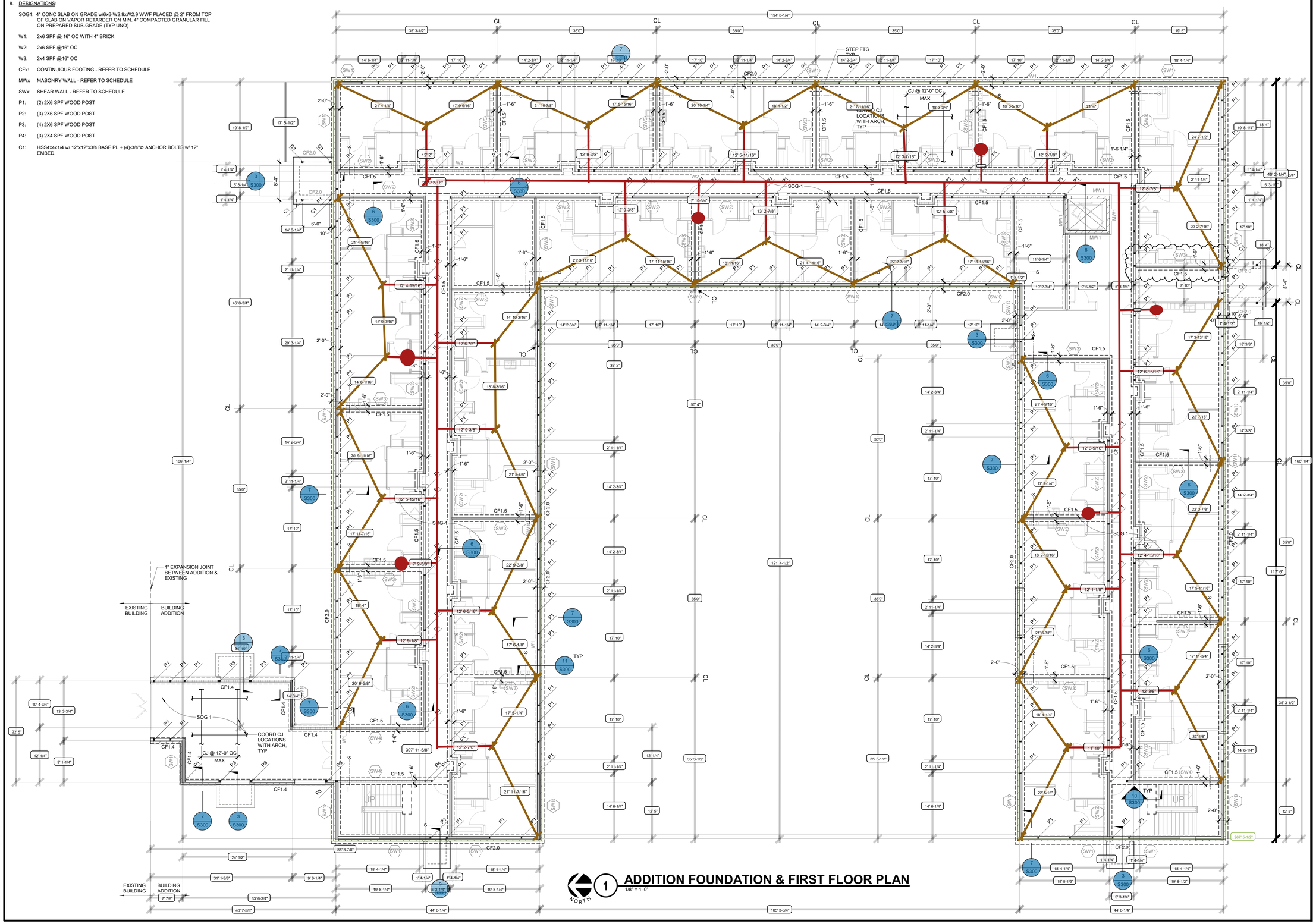
CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	MIN. THICKNESS	REINFORCING	
			LONG DIRECTION	SHORT DIRECTION
CF1.4	1'-4"	3'-4"	(2)#5 T&B	#3 TIES @ 24" OC
CF1.5	1'-6"	1'-6"	(2)#5 T&B	
CF2.0	2'-0"	3'-4"	(3)#5 T&B	#3 TIES @ 24" OC

CF SCHEDULE NOTES:

a. DEEPEN THE EXTERIOR FOOTINGS AS NECESSARY TO MAINTAIN THE BOTTOM OF FOOTINGS AT LEAST 3'-6" BELOW FINISHED GRADE (TYP.)

b. SCHEDULE APPLIES TO THE PROPOSED FOOTINGS IN THE EXISTING BUILDING FOUNDATION PLAN ON SHEET S100-E.



1 ADDITION FOUNDATION & FIRST FLOOR PLAN
1/8" = 1'-0"

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PROFESSIONAL SEAL

STATE OF MICHIGAN ATHANACIOS A NASR ENGINEER 47002 LICENSED PROFESSIONAL ENGINEER

CONSULTANT

KEY PLAN

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REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
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7	12/20/2024	Permit
9	10/13/2025	Bulletin No. 5
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SHEET INFORMATION

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Approved	**-**

SHEET TITLE

ADDITION FOUNDATION / FLOOR PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

S100-A

23008275.00 1/20/2026 2:53:58 PM JOHN GRACE ARMS

FOUNDATION NOTES:

1. REFERENCE FINISHED FLOOR ELEVATION = 0'-0"
2. TOP OF FOOTING ELEVATION = -0'-8" FROM REFERENCE FINISHED FLOOR ELEVATION UNLESS NOTED OTHERWISE.
3. FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
4. REFER TO GEOTECHNICAL REPORT NO. 23-385 PREPARED BY THE McDOWELL & ASSOCIATES, (DATED 09-26-2023). THE CONTRACTOR MUST NOTIFY THE GEOTECHNICAL ENGINEER (MCDOWELL & ASSOCIATES) OF ANY VARIATION OF SOIL CONDITIONS FROM THE CONDITIONS INDICATED IN THE SOILS REPORT.
4. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
5. REFER TO CIVILSITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
6. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
8. DESIGNATIONS:

SOG1: 4" CONC SLAB ON GRADE w/6x6-W2.9xW2.9 WWF PLACED @ 2" FROM TOP OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP UNO)

W1: 2x6 SPF @ 16" OC WITH 4" BRICK

W2: 2x6 SPF @16" OC

W3: 2x4 SPF @16" OC

CFx: CONTINUIOUS FOOTING - REFER TO SCHEDULE

MWx MASONRY WALL - REFER TO SCHEDULE

SWx: SHEAR WALL - REFER TO SCHEDULE

P1: (2) 2X6 SPF WOOD POST

P2: (3) 2X6 SPF WOOD POST

P3: (4) 2X6 SPF WOOD POST

P4: (3) 2X4 SPF WOOD POST

C1: HSS4x4x1/4 w/ 12"x12"x3/4 BASE PL + (4)-3/4"ø ANCHOR BOLTS w/ 12" EMBED.

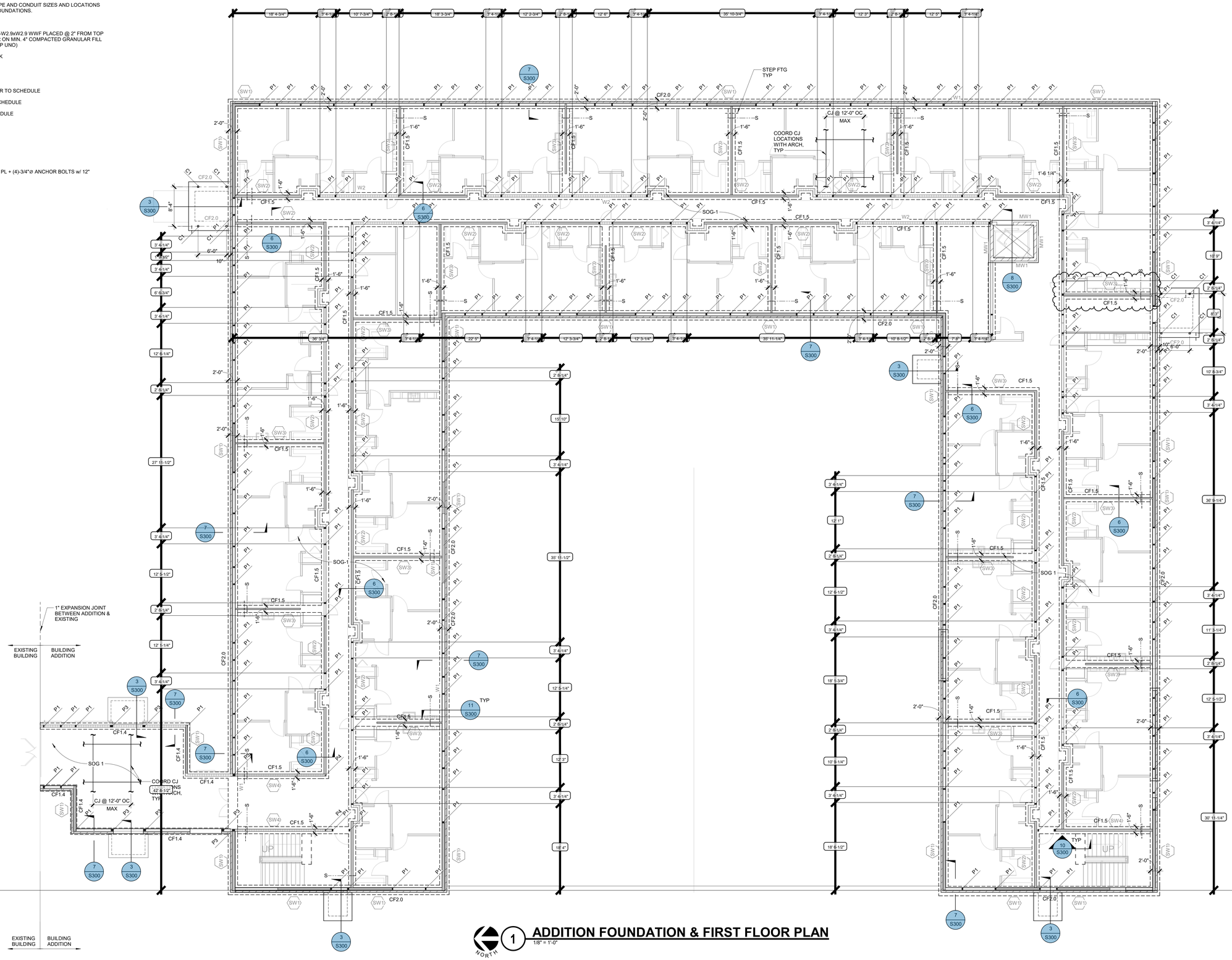
CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	MIN. THICKNESS	REINFORCING	
			LONG DIRECTION	SHORT DIRECTION
CF1.4	1'-4"	3'-4"	(2)#5 T&B	#3 TIES @ 24" OC
CF1.5	1'-6"	1'-6"	(2)#5 T&B	
CF2.0	2'-0"	3'-4"	(3)#5 T&B	#3 TIES @ 24" OC

CF SCHEDULE NOTES:

a. DEEPEN THE EXTERIOR FOOTINGS AS NECESSARY TO MAINTAIN THE BOTTOM OF FOOTINGS AT LEAST 3'-6" BELOW FINISHED GRADE (TYP.)

b. SCHEDULE APPLIES TO THE PROPOSED FOOTINGS IN THE EXISTING BUILDING FOUNDATION PLAN ON SHEET S100-E.



1 ADDITION FOUNDATION & FIRST FLOOR PLAN
1/8" = 1'-0"

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PROFESSIONAL SEAL

STATE OF MICHIGAN ATHANACIOS NASR ENGINEER 47002 LICENSED PROFESSIONAL ENGINEER

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SHEET INFORMATION

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Approved	**-**

SHEET TITLE

ADDITION FOUNDATION / FLOOR PLAN

SCALE

Scale: **As indicated**

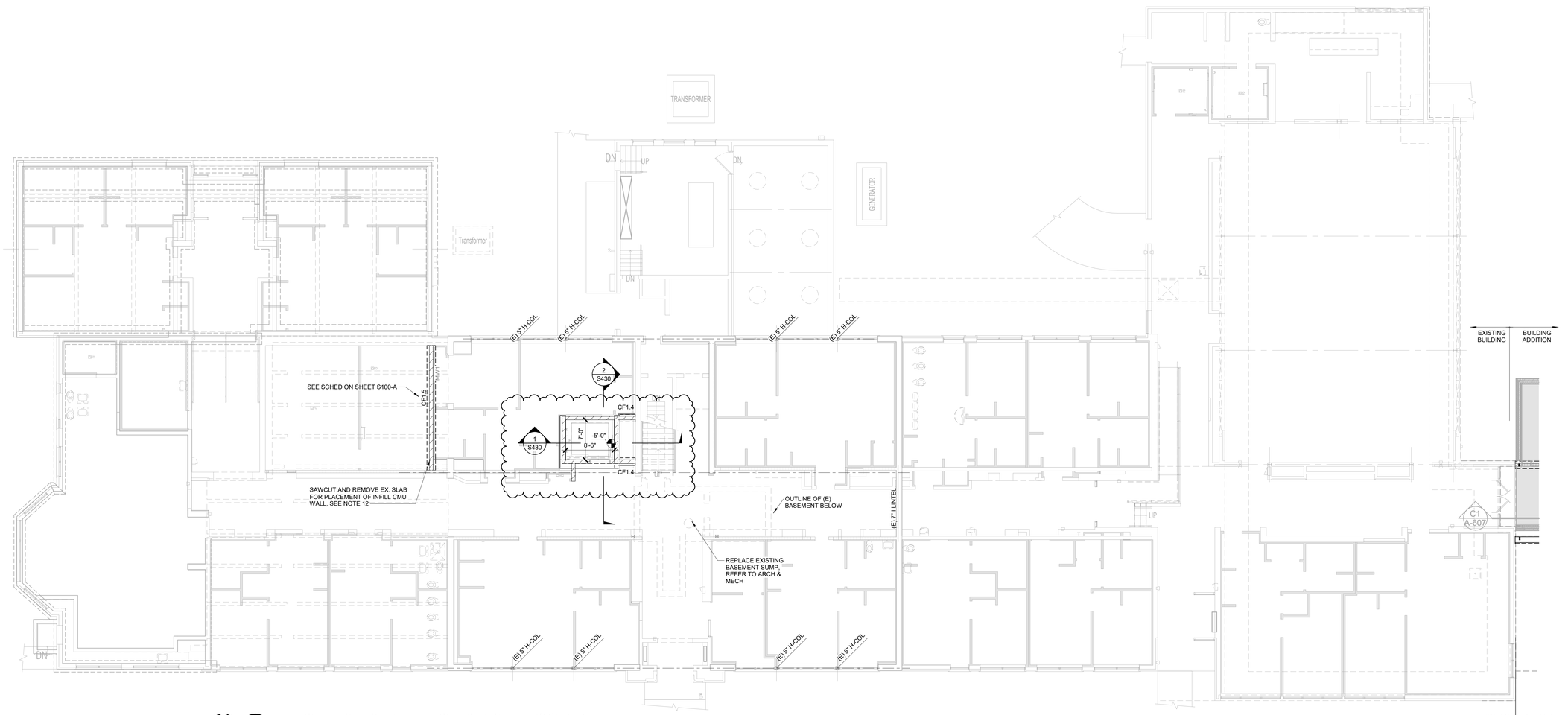
SHEET NUMBER

S100-A

23008275.00 1/20/2026 2:53:58 PM JOHN GRACE ARMS

EXISTING FOUNDATION & 1ST FLOOR NOTES:

1. FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
2. REFER TO GEOTECHNICAL REPORT NO. 23-385 PREPARED BY THE McDOWELL & ASSOCIATES, (DATED 09-26-2023).
3. GENERAL CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS LISTED IN SOILS REPORT. THE CONTRACTOR MUST NOTIFY THE GEOTECHNICAL ENGINEER (MCDOWELL & ASSOCIATES) OF ANY VARIATION OF SOIL CONDITIONS FROM THE CONDITIONS INDICATED IN THE SOILS REPORT.
4. MATCH ELEVATION OF ANY NEW AND/OR REPLACEMENT SLAB ON GRADE TO EXISTING ELEVATION.
5. SEE GENERAL NOTES SECTIONS FOR ADDITIONAL INFORMATION.
6. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH ARCH DRAWINGS.
7. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS, FRAMING SIZES, AND CONDITIONS IN FIELD.
8. CONTRACTOR TO VERIFY ALL EXISTING FOUNDATION SIZES AND CONDITIONS IN FIELD.
9. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
10. REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
11. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
12. CONTRACTOR TO VERIFY EXISTANCE AND CONDITION OF FOOTING AND/OR THICKENED SLAB. IF NO THICKENED SLAB IS FOUND, REPLACE EXISTING SLAB WITH THICKENED SLAB.



1 **EXISTING FOUNDATION & 1ST FLOOR PLAN**
1/8" = 1'-0"

NORTH

23008275.00 7/29/2026 6:13:54 AM JOHN GRACE ARMS

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PROFESSIONAL SEAL

STATE OF MICHIGAN
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ENGINEER
No. 4101058453
LICENSED PROFESSIONAL ENGINEER

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7	12/20/2024	Permit
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SHEET TITLE

EXISTING FOUNDATION / FLOOR PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

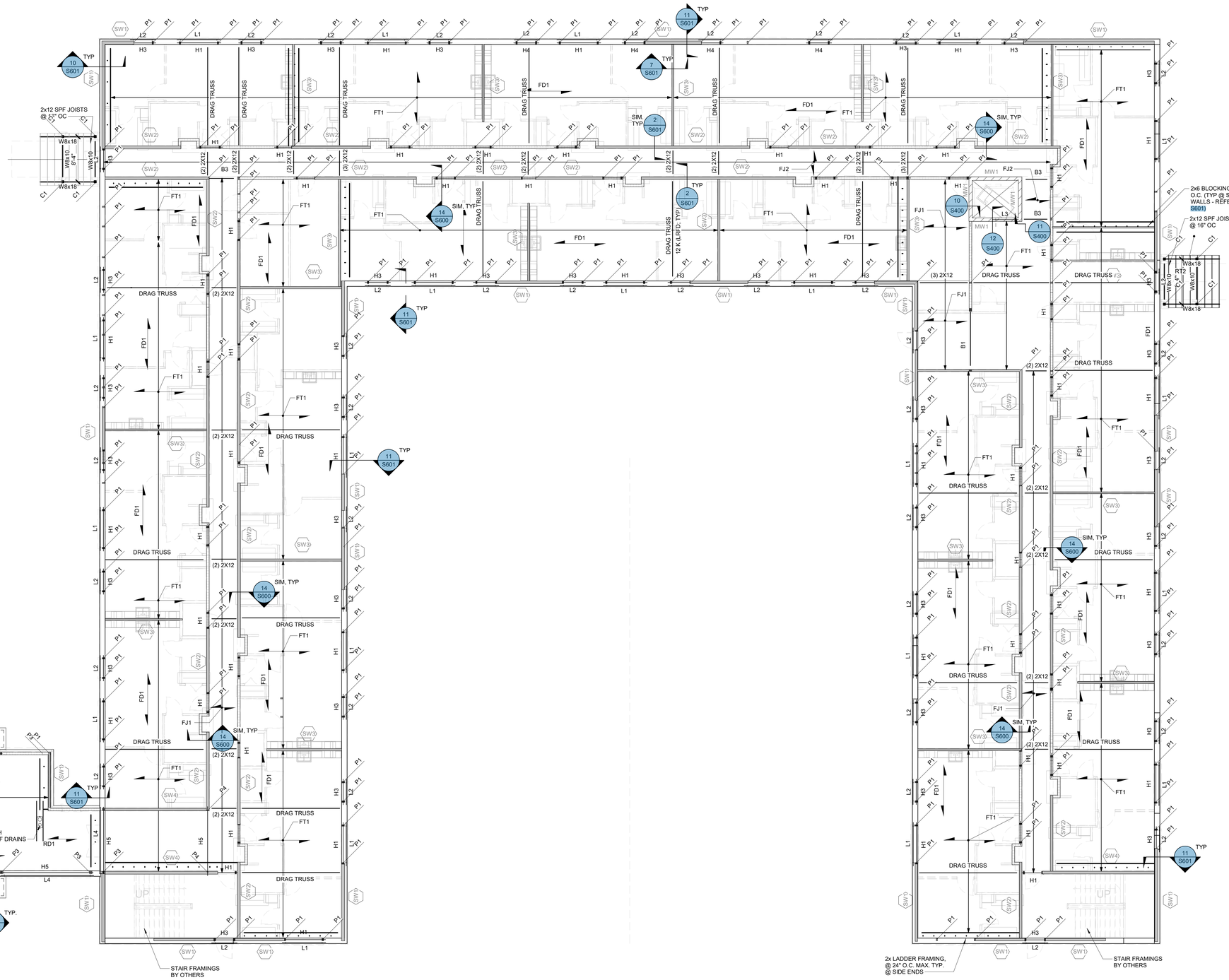
S100-E

SECOND FLOOR FRAMING NOTES:

1. FINISHED FLOOR REFERENCE ELEVATION = 11'-3 1/8"
2. DESIGNATIONS:

FD1:	2" GYPCRETE TOPPING (w/ SOUND ABSORBING MAT) OVER 3/4" THICK (MIN.) PLYWOOD UNLESS NOTED OTHERWISE. PLYWOOD SHALL BE GLUED AND NAILED TO FLOOR TRUSSES AND JOISTS, TYPICAL (U.N.O.). USE EXTERIOR GRADE PLYWOOD FOR BALCONIES AND TOILET ROOMS. REFER TO ARCH. DWGS FOR EXTENT OF TOILET ROOM AREA.
RD1:	3/4" PLYWOOD (ADD 1/2" PLWYOOD LAYER OVER INSULATION UNDER SOLAR PANEL LOCATIONS)
FT1:	24" DEEP PRE-ENGINEERED WOOD FLOOR TRUSSES AT 24" OC. REFER TO S-004 FOR DESIGN LOADS.
FJ1:	2x12 FLOOR JOIST @ 16" O.C.
RT1:	24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. U.N.O.
B1:	3-PLY 2x12 PRE-ENGINEERED LVL BEAM
B2:	2-PLY 2x12 PRE-ENGINEERED LVL BEAM
B3:	2-PLY 2x12 PRE-ENGINEERED LVL BEAM
W1:	2x6 SPF @ 16" O.C. WITH 4" BRICK
W2:	2x6 SPF @16" O.C.
W3:	2x4 SPF @16" O.C.
P1:	(2) 2X6 SPF WOOD POST
P2:	(3) 2X6 SPF WOOD POST
P4:	(3) 2X4 SPF WOOD POST
SWx:	SHEAR WALL - REFER TO SCHEDULE
MWX:	CMU WALL, REFER TO SCHEDULE
BPX:	BEARING PLATE, REFER TO SCHEDULE
EPX:	EMBED PLATE, REFER TO SCHEDULE
LX:	LINTEL, REFER TO SCHEDULE
HX:	HEADER, REFER TO SCHEDULE

3. VERIFY SIZE AND LOCATION OF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS.



1 ADDITION 2ND FLOOR FRAMING PLAN

1/8" = 1'-0"

NORTH

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PROFESSIONAL SEAL

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SHEET TITLE

ADDITION 2ND FLOOR FRAMING PLAN

SCALE

Scale: **As indicated**

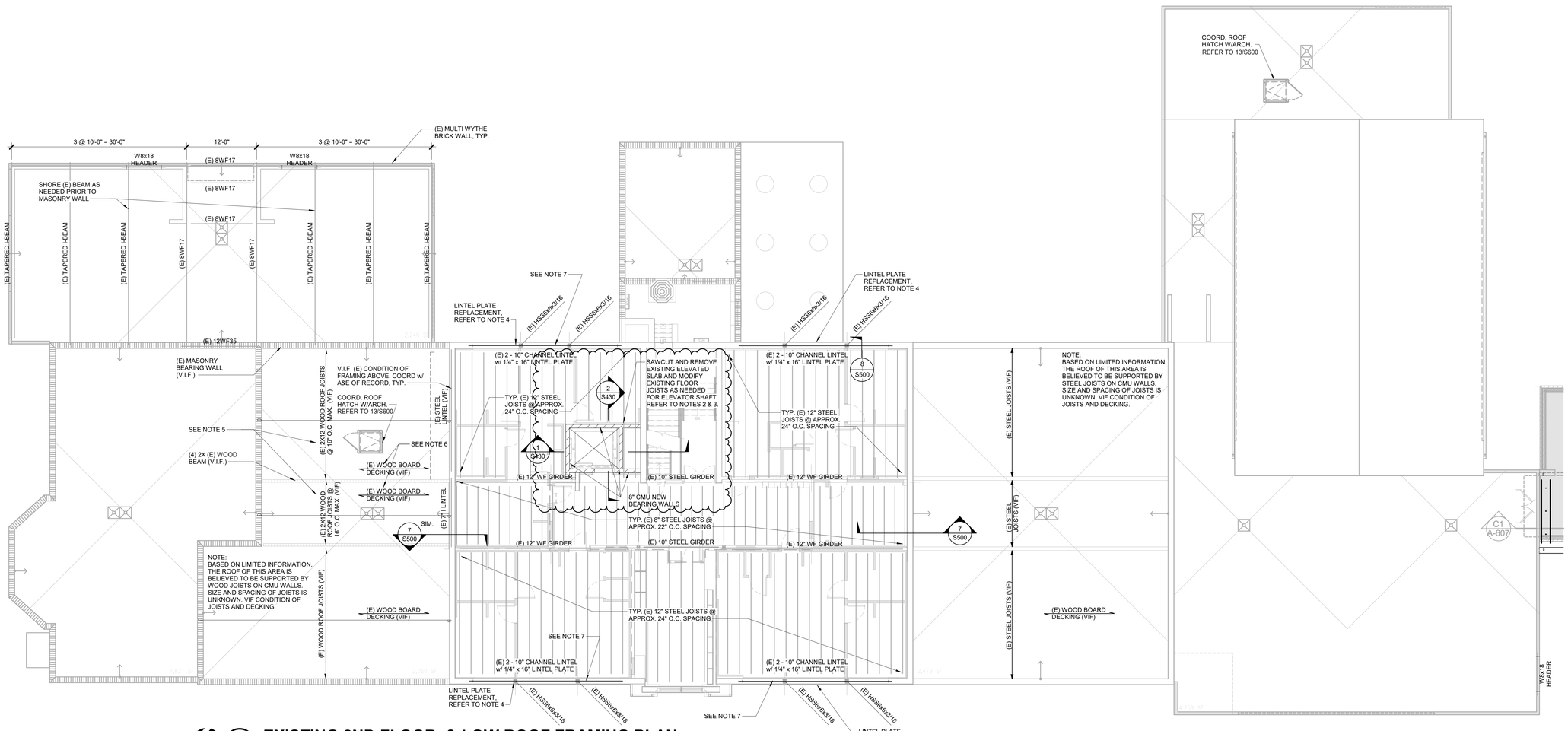
SHEET NUMBER

S101-A

23008275.00 1/20/2026 2:54:07 PM JOHN GRACE ARMS

EXISTING SECOND FLOOR FRAMING PLAN NOTES:

1. VERIFY SIZE AND LOCATION OF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS.
2. CONTRACTOR IS RESPONSIBLE FOR BRACING AND PROTECTING THE EXISTING STRUCTURAL ELEMENTS FROM DAMAGE, CORROSIION, OVERLOADING, ETC. DUE TO CONSTRUCTION OPERATIONS AND/OR WEATHER ELEMENTS.
3. TEMPORARY SHORING MUST BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.
4. REMOVE DETERIORATED LINTEL COVER PLATE. VERIFY IN FIELD SIZE AND CONDITION OF EXISTING LINTEL AND INFORM ARCHITECT/ENGINEER IF LINTEL IS IN POOR CONDITION.
   INSTALL NEW STEEL LINTEL COVER PLATE. COORDINATE WITH ARCH FOR COATING COLOR.
5. SISTER EXIST. DETERIORATED/DAMAGED JOIST WITH 1 3/4"x11 7/8" LVL JOIST (FULL LENGTH) W/ 3 ROWS 1/4"dx3 1/2" SIMPSON SDS SCREWS @ 16" W/ M/IT SIMPSON HANGER. NAIL THE DECKING TO NEW JOIST W/ 10d COMMON NAIL @ 6" O.C. MAX. REFER TO S600 THRU S602.
6. REMOVE AND REPLACE DETERIORATED/DAMAGED DECK W/ 3/4" EXTERIOR GRADE DECK. NAIL THE DECKING TO JOISTS W/ 10d COMMON NAIL @ 6" O.C. MAX.
7. PROVIDE SUPPORT/REPAIRS WHERE EXISTING JOIST SEATS ARE NOT SUPPORTED AND ARE RQUIRED. REFER TO 9/S500.



1 EXISTING 2ND FLOOR & LOW ROOF FRAMING PLAN

1/8" = 1'-0"

NORTH

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PROFESSIONAL SEAL

STATE OF MICHIGAN
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ENGINEER
No. 6201 2003
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11	06/25/2026	Bulletin No. 9 - Lintel Repairs
12	07/27/2026	Bulletin No. 11

SHEET INFORMATION

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SHEET TITLE

EXISTING 2ND FLOOR FRAMING PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

S101-E

23008275.00 7/29/2026 8:13:56 AM JOHN GRACE ARMS

ROOF FRAMING NOTES:

1. TOP OF STRUCTURE ELEVATION (DECK BEARING ELEVATION) = REFER TO ARCH.(UNLESS NOTED OTHERWISE).

2. DESIGNATIONS:

   RD1: 3/4" PLYWOOD (ADD 1/2" PLYWOOD LAYER OVER INSULATION UNDER SOLAR PANEL LOCATIONS)

   Dens Deck has been removed

   RFI #76

   RT1: 24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. U.N.O.

   RT2: 24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. INWARD ON EACH SIDE TO PROVIDE VALLEY AT CANTER.U.N.O.

   RT3: 24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES (WITH TAPERED CANTILEVER BOTH SIDES) AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. INWARD ON EACH SIDE TO PROVIDE VALLEY AT CANTER.U.N.O.

   RJ2: 2x12 SPF ROOF JOIST AT 16" O.C. U.N.O.

   RJ3: 2x6 PT SPF JOISTS @ 16" O.C.

   B1: 3-PLY 2x12 PRE-ENGINEERED LVL BEAM

   B2: 2-PLY 2x12 PRE-ENGINEERED LVL BEAM

   B3: 1-PLY 2x12 PRE-ENGINEERED LVL BEAM

   SWx: SHEAR WALL - REFER TO SCHEDULE

   W1: 2x6 SPF @ 16" OC w/ 4" BRICK

   W2: 2x6 SPF @16" OC

   W3: 2x4 SPF @16" OC

3. PRE-ENGINEERED WOOD ROOF TRUSS FRAMING SHALL BE DESIGNED BY THE TRUSS MANUFACTURER AND SHALL INCLUDE ALL INFORMATION INDICATED IN THE TRUSS NOTES SECTIONS OF THE GENERAL STRUCTURAL NOTE ON SHEET ON S004. SUBMIT CALCULATION AND SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.

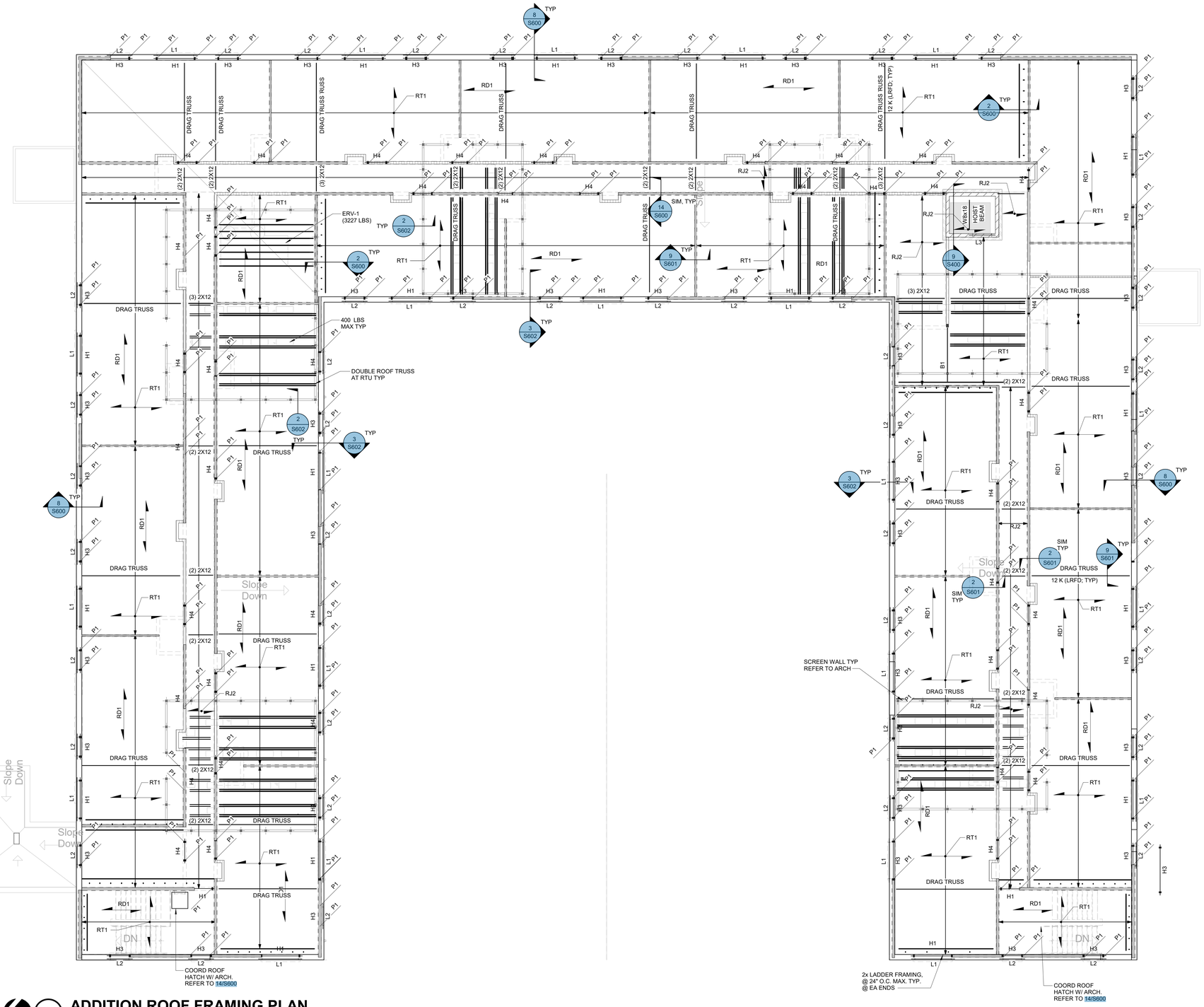
4. ALL ROOF TRUSSES SHALL BE DESIGNED FOR A NET UPLIFT OF 20 PSF (ASD), IN ADDITION TO OTHER LOAD CASES AND ANY OTHER NON-UNIFORM LOADS INDICATED ON THE DRAWINGS. ALL BRIDGING AND UPLIFT BRIDGING SHALL BE PER SJI REQUIREMENTS.

5. COORDINATE SIZES AND LOCATION OF ALL ROOF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS. VERIFY SIZES, WEIGHTS, AND LOCATIONS OF ROOF TOP MECHANICAL EQUIPMENT WITH ARCHITECTURAL AND MEP DRAWINGS. REPORT ANY DISCREPANCIES WITH RESPECT TO SIZE AND WEIGHTS SHOWN ON THESE DRAWINGS TO THE ARCHITECT AND ENGINEER.

6. FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE 2x8 TYPICAL, ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE.

7. REFER TO ARCH. DRAWINGS FOR ELEVATIONS AND DIM. TYPICAL

8. DOUBLE ROOF TRUSS UNDER ROOF TOP UNITS.



1 ADDITION ROOF FRAMING PLAN

1/8" = 1'-0"

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SHEET TITLE

ADDITION ROOF FRAMING PLAN

SCALE

Scale: **As indicated**

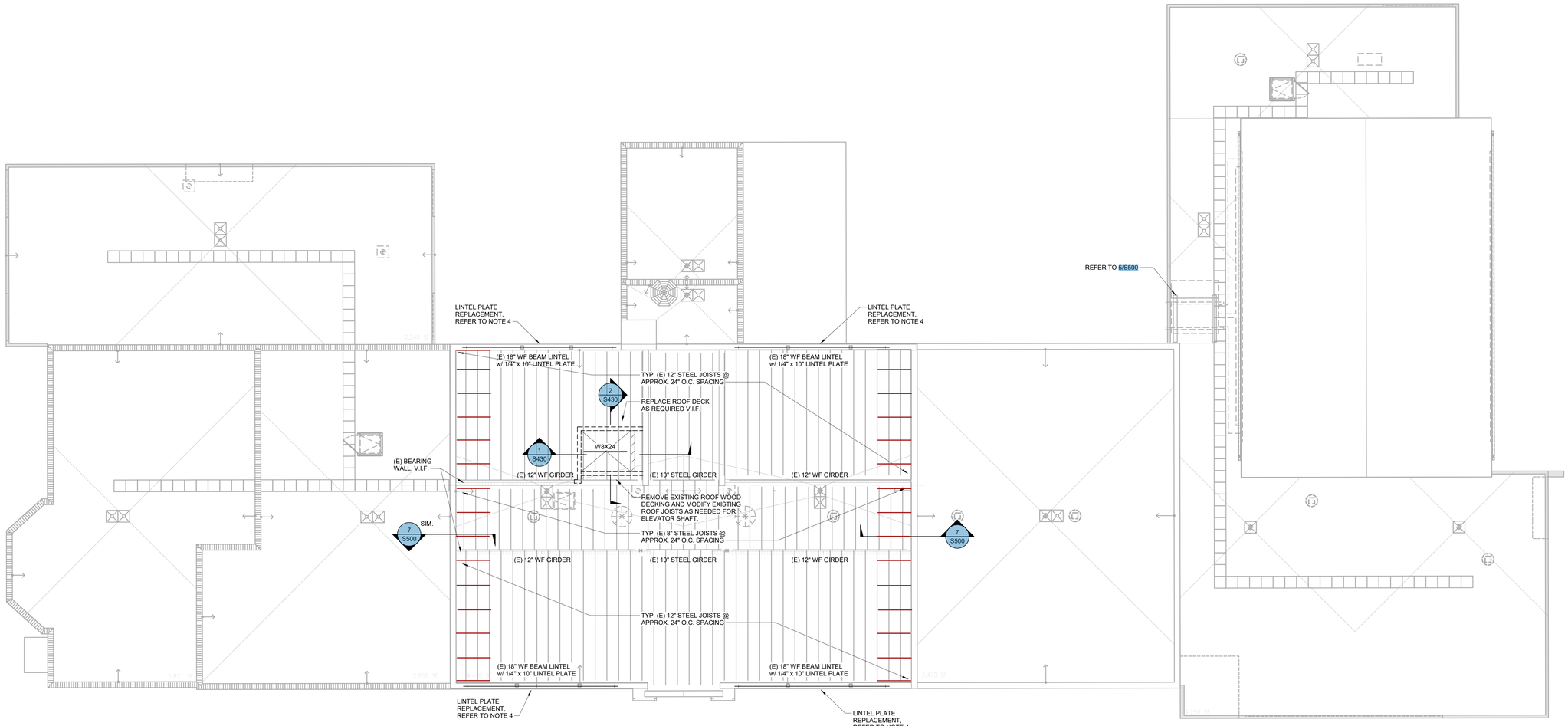
SHEET NUMBER

S102-A

23008275.00 1/20/2026 2:54:25 PM JOHN GRACE ARMS

EXISTING ROOF FRAMING PLAN NOTES:

1. SECONDARY STEEL FRAMING PENDING MEP EQUIPMENT LOCATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR BRACING AND PROTECTING THE EXISTING STRUCTURAL ELEMENTS FROM DAMAGE, CORROSIION, OVERLOADING, ETC. DUE TO CONSTRUCTION OPERATIONS AND/OR WEATHER ELEMENTS.
3. TEMPORARY SHORING MUST BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.
4. REMOVE DETERIORATED LINTEL COVER PLATE. VERIFY IN FIELD SIZE AND CONDITION OF EXISTING LINTEL AND INFORM ARCHITECT/ENGINEER IF LINTEL IS IN POOR CONDITION.INSTALL NEW STEEL LINTEL COVER PLATE. COORDINATE WITH ARCH FOR COATING COLOR.
5. CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF ALL ROOF DECK OPENINGS SHOWN AND NOT SHOWN ON PLANS WITH ARCH. AND MEP DRAWINGS. SEE TYPICAL ROOF OPENING FRAME DETAIL ON S500.
6. VERIFY SIZES, WEIGHTS, AND LOCATIONS OF ROOF TOP MECH. EQUIPMENT WITH ARCH. AND MEP DRAWINGS, REPORT ANY DISCREPANCIES WITH RESPECT TO SIZE AND WEIGHTS SHOWN ON THESE DRAWINGS TO THE ARCHITECT AND ENGINEER.
7. FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE 2x8 TYPICAL, ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE.
8. REFER TO ARCH. DRAWINGS FOR ELEVATIONS AND DIM. TYPICAL



1 **EXISTING ROOF FRAMING PLAN**
1/8" = 1'-0"

23008275.00 12/19/2024 9:13:25 PM JOHN GRACE ARMS

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PROFESSIONAL SEAL

STATE OF MICHIGAN
ATHANACIOS ALNASR
ENGINEER
No. 70053
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

KEY PLAN

AGENCY APPROVAL

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0 1 2 3
REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit

SHEET INFORMATION

Issue	**Issued for Permit**
Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

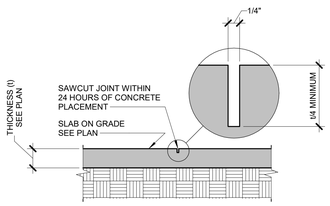
EXISTING ROOF FRAMING PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

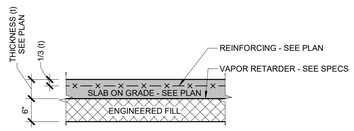
S102-E



NOTES:

1. SEE CAST-IN-PLACE CONCRETE GENERAL NOTES CONCERNING LOCATION OF JOINTS.

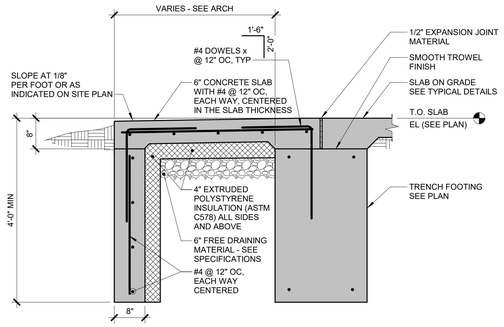
1 TYPICAL CONTROL JOINT
3/4" = 1'-0"



NOTES:

1. COMPACT ALL FILL MATERIAL TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D1557.
2. VAPOR RETARDER TO MEET ASTM E1745, CLASS A AND BE NOT LESS THAN 15 MILS THICK.

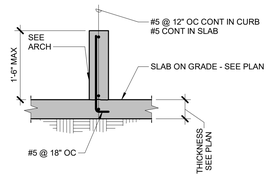
2 TYPICAL SLAB SECTION
3/4" = 1'-0"



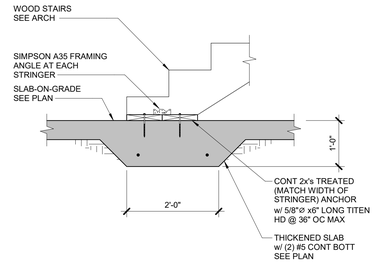
NOTE:

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT STOOP LAYOUT AND LOCATIONS.

3 TYPICAL STOOP DETAIL
3/4" = 1'-0"

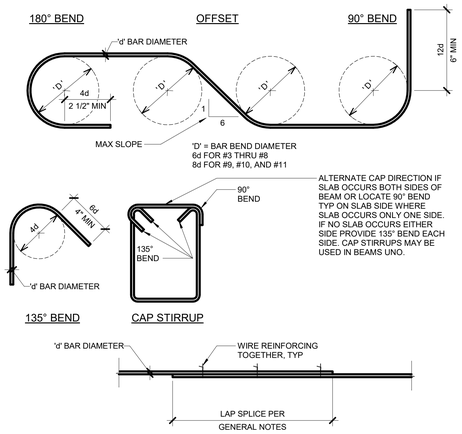


4 TYPICAL CURB DETAIL
3/4" = 1'-0"



NOTE: REFER TO ARCH. DRAWINGS FOR FIRE RATING REQUIREMENTS

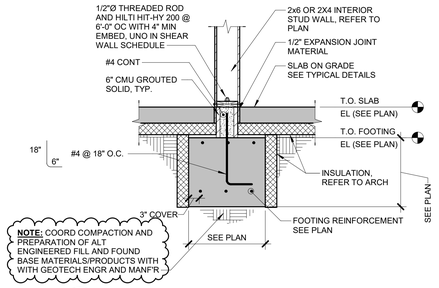
10 STAIR STRINGER CONNECTION TO SLAB-ON-GRADE
3/4" = 1'-0"
6611-09



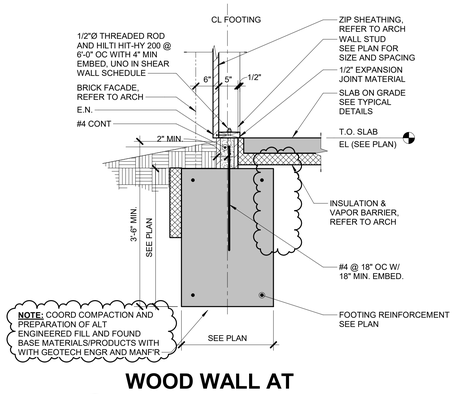
NOTE:

1. ALL HOOKS, BENDS AND LAPS SHALL BE AS INDICATED UNLESS SPECIFICALLY NOTED ON DETAIL. FOR LIGHTWEIGHT CONCRETE, MULTIPLY VALUE FROM THE GENERAL NOTES TABLE BY 1.18.

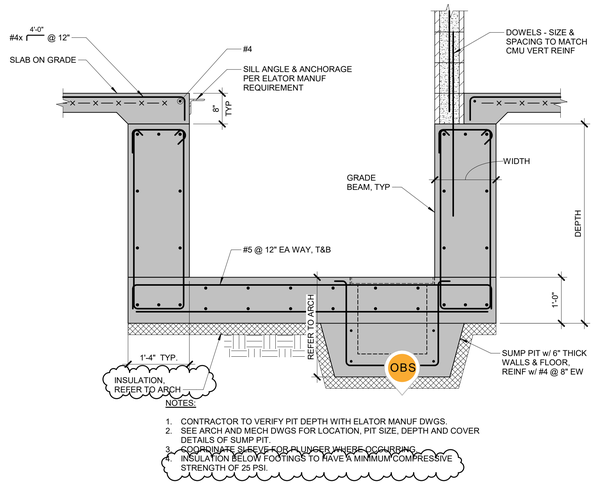
5 TYPICAL REINFORCING DETAILS
3/4" = 1'-0"



6 INTERIOR STUD WALL FOUNDATION
3/4" = 1'-0"



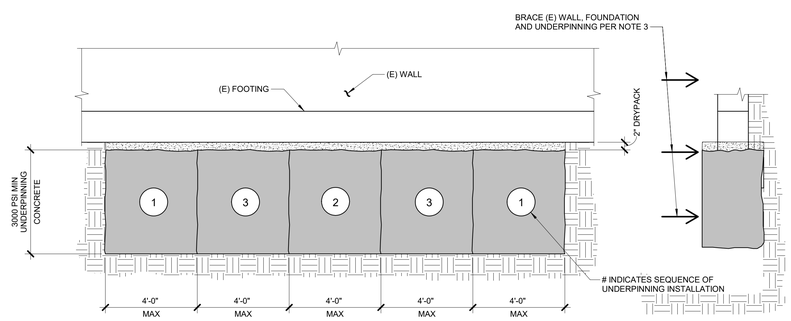
7 WOOD WALL AT CONT. FOOTING DETAIL
3/4" = 1'-0"



NOTES:

1. CONTRACTOR TO VERIFY PIT DEPTH WITH ELATOR MANUF DWGS.
2. SEE ARCH AND MECH DWGS FOR LOCATION, PIT SIZE, DEPTH AND COVER DETAILS OF SUMP PIT.
3. COORDINATE SLEEVE FOR PLUNGER WHERE OCCURRING.
4. INSULATION BELOW FOOTINGS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 PSI.

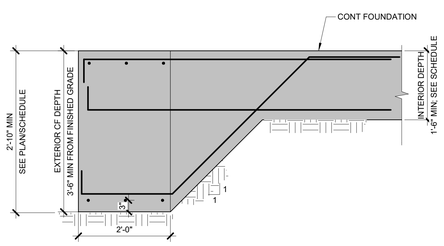
8 ELEVATOR PIT
3/4" = 1'-0"
2900-04



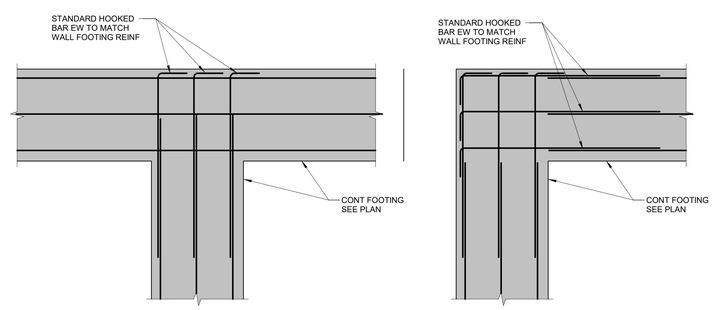
NOTES:

1. UNDERPINNING BELOW (E) FOUNDATIONS SHALL BE CONT AND SHALL BEAR ON UNDISTURBED SOIL.
2. BEARING STRATUM SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF UNDERPINNING CONCRETE. THE GEOTECHNICAL ENGINEER SHALL BE A LICENSED PROFESSIONAL ENGINEER IN THE PROJECT'S JURISDICTION.
3. THE (E) WALL AND FOUNDATION AND THE NEW UNDERPINNING SHALL BE BRACED TO RESIST LATERAL EARTH PRESSURE.
4. DESIGN OF THE UNDERPINNING AND DESIGN OF LATERAL BRACING REQD TO BRACE THE UNDERPINNING AND (E) FOUNDATION IS THE RESPONSIBILITY OF A PROFESSIONAL ENGINEER LICENSED IN THE PROJECT'S JURISDICTION WORKING FOR THE CONTRACTOR. DRAWINGS DOCUMENTING DESIGN OF THE UNDERPINNING AND BRACING AND DESIGN CALCULATIONS FOR THAT UNDERPINNING AND BRACING SHALL BE SUBMITTED PRIOR TO CONSTRUCTION. THOSE DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THAT ENGINEER.
5. ALLOW UNDERPINNING CONCRETE TO CURE FOR 24 HOURS BEFORE DRYPACKING TO UNDERSIDE OF FOUNDATION.
6. DO NOT EXCAVATE BELOW (E) FOUNDATION UNTIL DRYPACK HAS BEEN INSTALLED ABOVE PREVIOUSLY INSTALLED SEGMENTS OF UNDERPINNING.
7. EXCAVATION FOR INDIVIDUAL SEGMENTS OF UNDERPINNING AND APPROACH EXCAVATION TO EACH SEGMENT SHALL BE DUG ONE SECTION AT A TIME.

9 UNDERPINNING BELOW EXISTING WALL FOUNDATION
3/4" = 1'-0"
2940-01



11 CONT FOUNDATION THICKNESS TRANSITION
3/4" = 1'-0"



12 FOOTING CORNER / INTERSECTION
3/4" = 1'-0"

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PROJECT #23008275.00

PROFESSIONAL SEAL

STATE OF MICHIGAN ATHANASIOS NASR ENGINEER 47053 LICENSED PROFESSIONAL ENGINEER

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KEY PLAN

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REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

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3	04/08/2024	CD Set
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6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1

SHEET INFORMATION

Issue	Issued for Permit
Date	10/30/2024
Project #	23008275.00
Drawn	GHW
Checked	GFM
Approved	-

SHEET TITLE

TYPICAL CONCRETE DETAILS

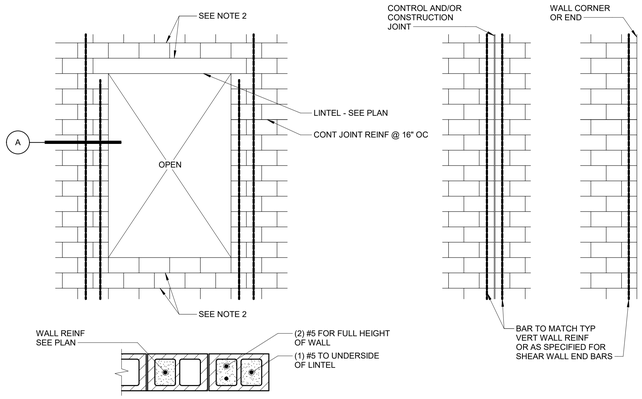
SCALE

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

SHEET NUMBER

S300

23008275.00 2/18/2025 4:57:00 PM JOHN GRACE ARMS

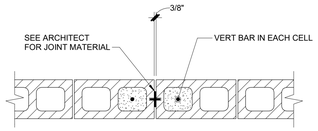


NOTES:

1. SEE ARCH ELEVATIONS FOR CONTROL JOINT LOCATIONS.
2. TWO COURSES OF JOINT REINF ARE REQUIRED ABOVE THE LINTEL AND BELOW THE SILL AND SHALL EXTEND A MIN OF 24 INCHES PAST THE OPENING.

1 TYPICAL CMU WALL OPENING DETAIL

3/4" = 1'-0"
S_M-003

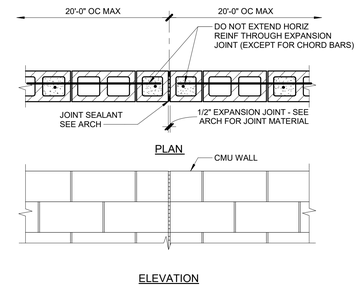


NOTES:

1. HORIZONTAL REINFORCING AND BOND BEAMS SHALL BE DISCONTINUOUS AT WALL JOINT. EXCEPT FOR CHORD REINFORCING.
2. DO NOT LOCATE JOINT OVER OPENING OR WITHIN JAMB.
3. REFERENCE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
4. COORDINATE LOCATION OF JOINTS WITH ARCHITECTURAL DRAWINGS.

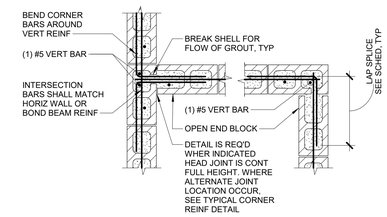
2 WALL CONSTRUCTION JOINT

1" = 1'-0"
S_M-008



3 CMU EXPANSION JOINT DETAIL

3/4" = 1'-0"
S_M-007

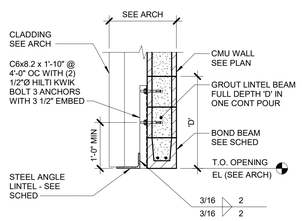


NOTES:

1. TYPICAL VERTICAL REINFORCING AND GROUT NOT SHOWN FOR CLARITY.
2. DETAIL ASSUMES CORNER IS CONSTRUCTED IN RUNNING BOND WITH UNITS INTERLOCKED.

4 CMU WALL INTERSECTION DETAIL

3/4" = 1'-0"
S_M-005

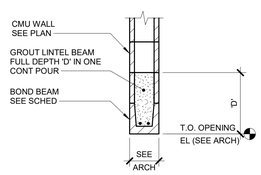


NOTES:

1. SEE ARCH DRAWINGS FOR INSULATION, THROUGH-WALL FLASHING, AND WEEP HOLES.
2. SHORE UNTIL GROUT FOR LINTEL HAS REACHED ITS SPECIFIED STRENGTH.

5 BOND BEAM LINTEL DETAIL

3/4" = 1'-0"
S_M-404

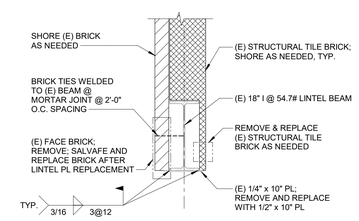


NOTE:

1. SHORE UNTIL GROUT FOR LINTEL HAS REACHED ITS SPECIFIED STRENGTH.

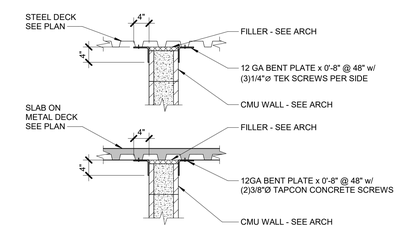
6 BOND BEAM LINTEL DETAIL

3/4" = 1'-0"
S_M-412



7 EXISTING BUILDING LINTEL PLATE REPAIR

3/4" = 1'-0"

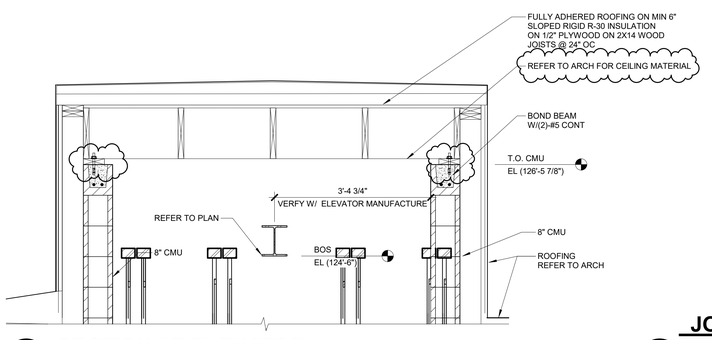


NOTES:

1. WALL BRACING (2)L3x3x3/16x0'-6" @ 4'-0".
2. PROVIDE THE BRACING ON ALL INTERIOR NON- STRUCTURAL CMU PARTITION WALLS. SEE ARCH DWGS FOR LOCATION OF ALL WALLS.

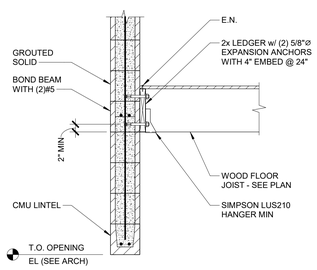
8 NON-STRUCTURAL CMU WALL BRACING TO DECK/SLAB

3/4" = 1'-0"
4220-01



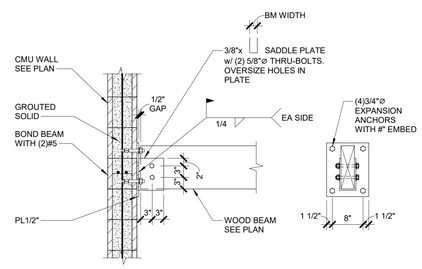
9 SECTION AT ELEVATOR

3/4" = 1'-0"



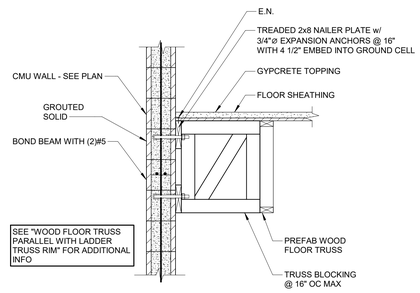
10 JOIST BEARING AT CMU CORE WALL

3/4" = 1'-0"
4330-07



11 EMBED PLATE IN CMU WALL AT WOOD BEAMS

3/4" = 1'-0"
4330-10



12 FLOOR TRUSS PARALLEL TO ELEVATOR WALL

3/4" = 1'-0"
4330-06

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PROFESSIONAL SEAL

STATE OF MICHIGAN ATHANACIOS A NASR ENGINEER 4202 LICENSED PROFESSIONAL ENGINEER

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REVISIONS

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3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
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7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1

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Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

TYPICAL MASONRY DETAILS

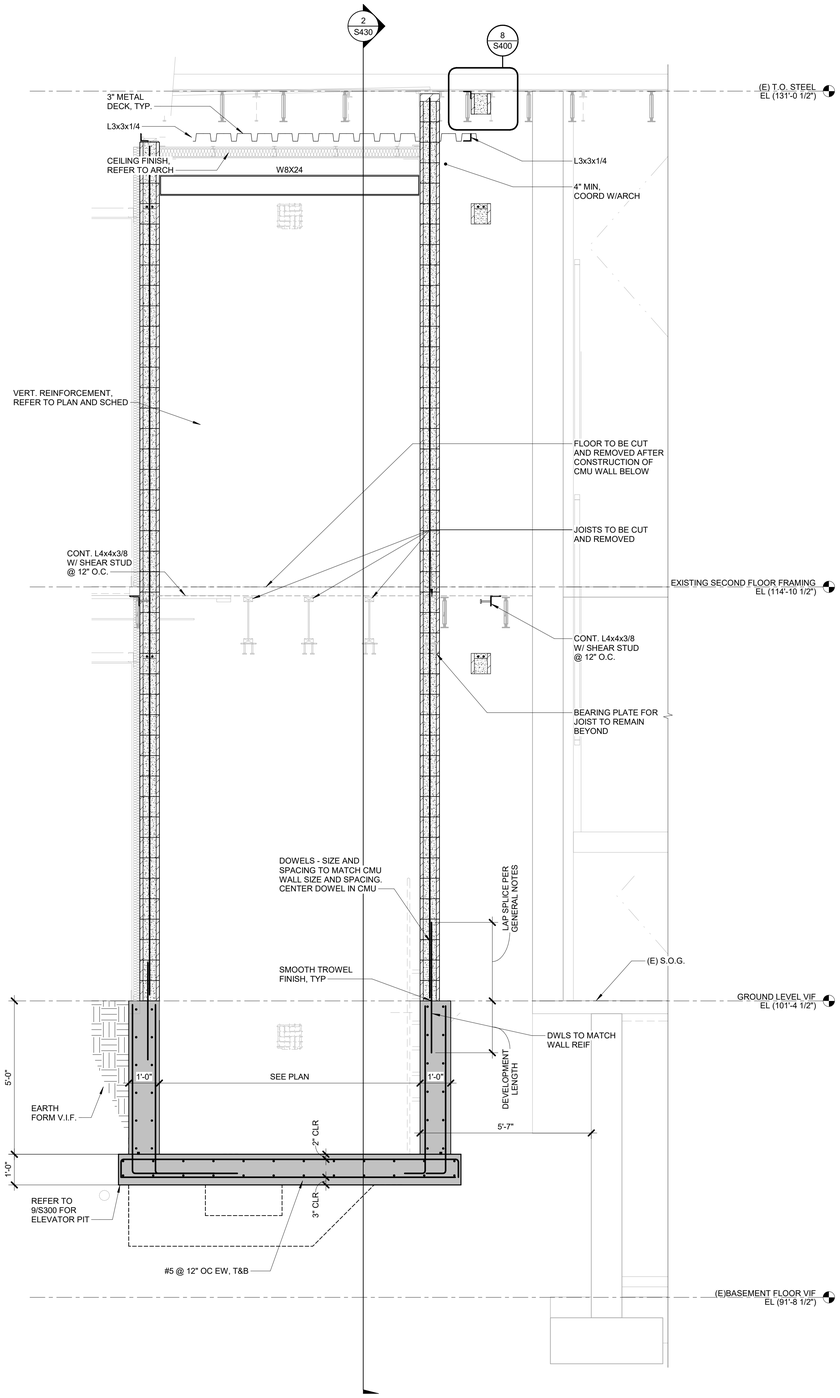
SCALE

Scale: **As indicated**

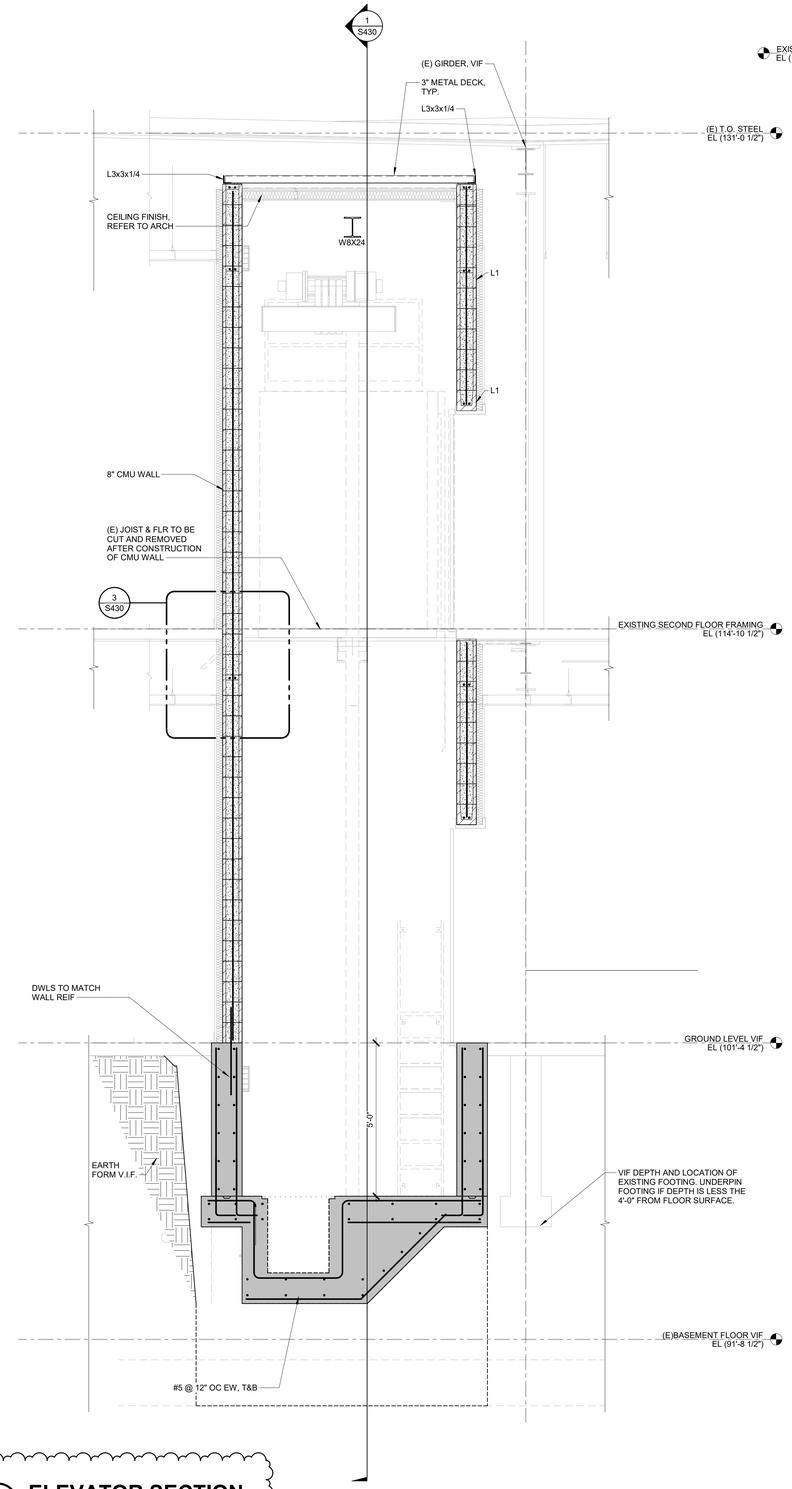
SHEET NUMBER

S400

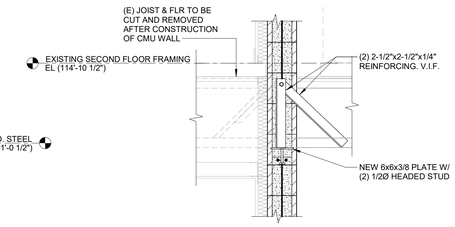
23008275.00 2/18/2025 4:57:01 PM JOHN GRACE ARMS



1 ELEVATOR SECTION
1/2" = 1'-0"



2 ELEVATOR SECTION
1/2" = 1'-0"



3 (E) JOIST REINF. TYP DETAIL
3/4" = 1'-0"

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7	12/20/2024	Permit
12	07/27/2026	Bulletin No. 11

SHEET INFORMATION

Issue	**Issued for Permit**
Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

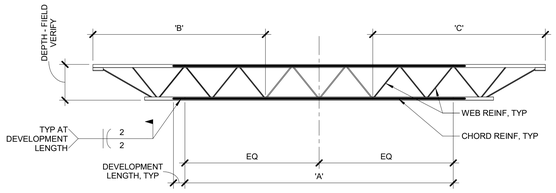
MASONRY SECTIONS

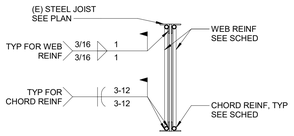
SCALE

Scale: **As indicated**

SHEET NUMBER

S430





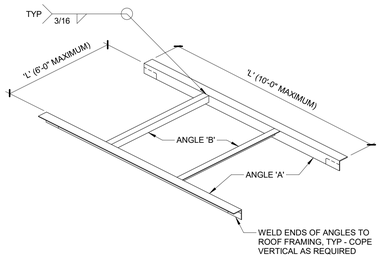
STEEL JOIST REINFORCING SCHEDULE								
MARK	RTU #	CHORD REINFORCING			WEB REINFORCING			REMARKS
		SIZE	'A'	DEVELOPMENT LENGTH	SIZE	'B'	'C'	
A		(2) X"Ø GR50 RODS	X'-X"		(2) X"Ø GR50 RODS	X'-X"		
B								
C								

NOTES:

1. REMOVE AND REINSTALL JOIST BRIDGING AS NECESSARY TO INSTALL REINF MEMBERS.
2. JOIST REINF IS DUE TO NEW ROOF EQUIPMENT OR SNOW DRIFT. PRIOR TO PLACING EQUIPMENT OR BUILDING TALLER STRUCTURE, JOIST REINF MUST BE INSTALLED.
3. JOIST SHALL BE SHORED.
4. SPLICE CHORD REINF SEGMENTS TOGETHER TO DEVELOP FULL CAPACITY OF MEMBER. SPLICE DETAIL BY STEEL FABRICATOR.

1 JOIST REINFORCING DETAIL

3/4" = 1'-0"
S_S-313



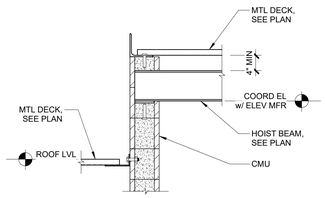
'L'	ANGLE 'A'	ANGLE 'B'
UP TO 1'-0"	NONE	NONE
1'-1" TO 4'-6"	L4x4x1/4	L4x4x1/4
4'-7" TO 6'-0"	L4x4x5/16	L4x4x1/4
6'-1" TO 8'-0"	L4x4x3/8	-
8'-1" TO 10'-0"	L6x4x3/8 (LLV)	-

NOTES:

1. SEE ARCHI AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.
2. ROOF OPENING FRAMING NOT REQUIRED AT SIDE DISCHARGE ROOF DRAINS. COORDINATE WITH MECHANICAL CONTRACTOR.

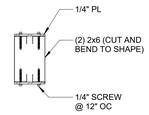
2 ROOF OPENING DETAIL

3/4" = 1'-0"
S_S-214



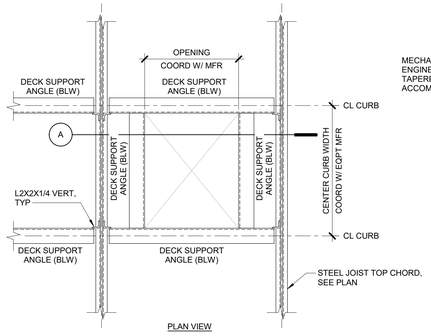
3 HOIST BEAM DETAIL

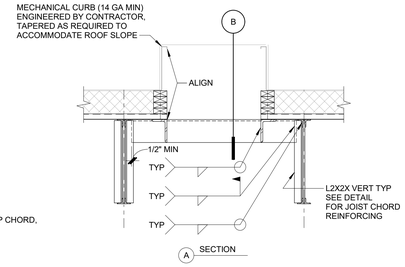
3/4" = 1'-0"



6 CFS BOX BEAM DETAIL

1 1/2" = 1'-0"

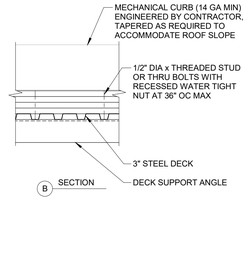


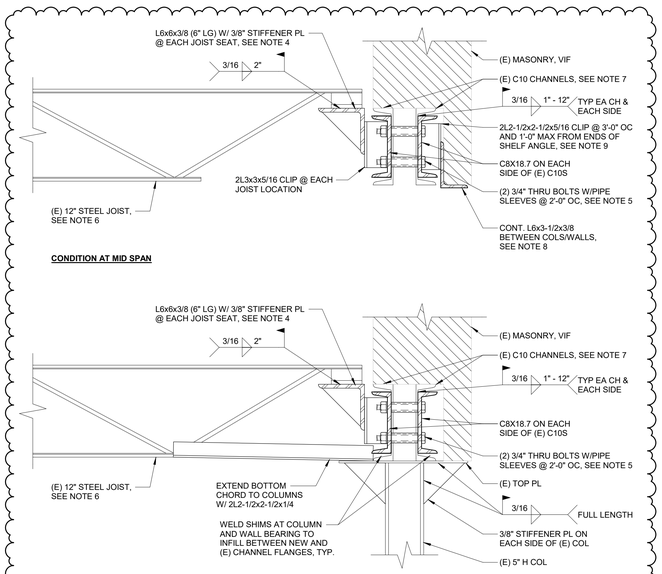


NOTE:
VERIFY ALL DIMENSIONS WITH MECHANICAL UNIT SUPPLIER AND MECH DRAWINGS PRIOR TO FABRICATION

5 RTU CURB SUPPORT @ EX. BUILDING

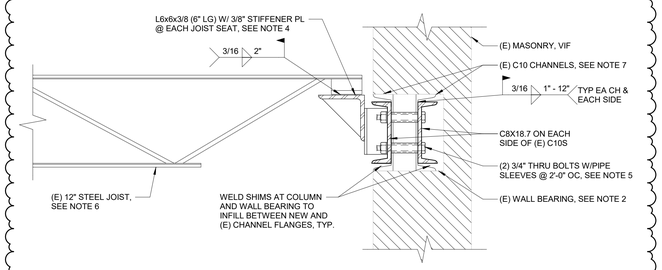
3/4" = 1'-0"
5335-02





CONDITION AT MID SPAN

CONDITION AT STEEL COLUMNS



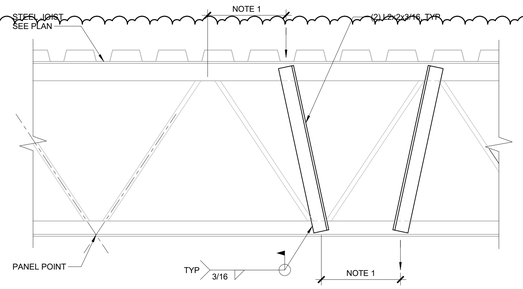
CONDITION AT WALL BEARING

NOTES:

1. CONTRACTOR TO VIF ALL MEASUREMENTS AND CONDITIONS.
2. EX. BEARING MASONRY AND STEEL SHALL BE EXPOSED AND INSPECTED FOR ADEQUATE BEARING CONDITIONS. INFORM A/E IF THERE ARE DISCREPENCIES AND/OR DEFICIENCIES IN THE BEARING CONDITIONS.
3. COORDINATE LINTEL FLASHING AND WATERPROOFING WITH ARCH DRAWINGS.
4. ADJUST ANGLE ELEVATION OR PROVIDE SHIM AS REQUIRED FOR JOIST SEAT TO BEARING.
5. TACK WELD BOLT HEAD AND TO CHANNEL AFTER TIGHTENING.
6. PROVIDE TEMPORARY SHORE EXISTING JOISTS, FLOOR, AND WALL AS REQUIRED. WHERE JOISTS BEAR ON SHORING, MODIFY JOISTS PER
7. CLEAN ALL CORROSION AND PACK RUST FROM EXISTING STEEL AND COAT WITH RUST INHIBITING PRIMER.
8. TOP OF SHELF ELEVATION TO BE FLUSH WITH ELEVATION OF EXISTING COL TOP PLATE AND EXISTING WALL BEARING.
9. ADJUST CLIP ANGLE SIZE AS NEEDED BASED ON SPACE BETWEEN CHANNEL AND MASONRY.

8 EX. 2C LINTEL REPAIR

1 1/2" = 1'-0"
S_S-313

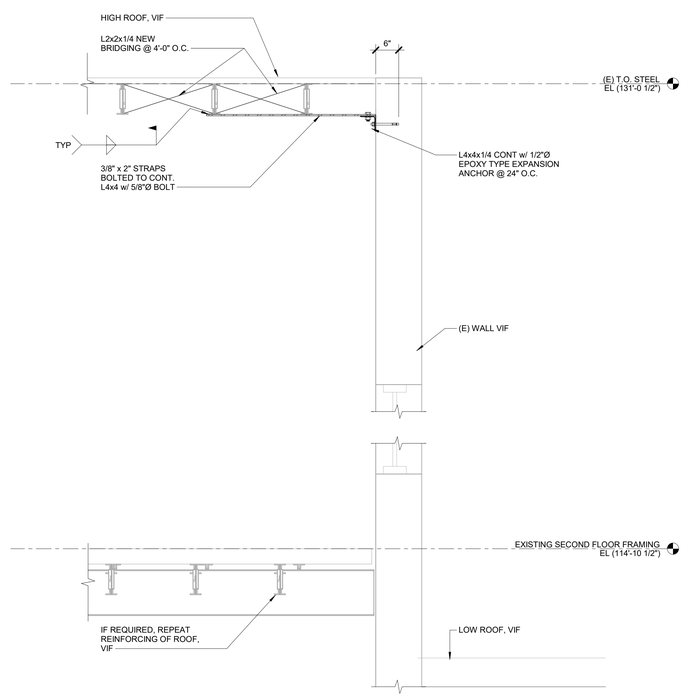


NOTE:

1. PROVIDE ANGLES TO CREATE PANEL POINT WHERE POINT LOADS DO NOT CONFORM TO SJI STANDARDS.

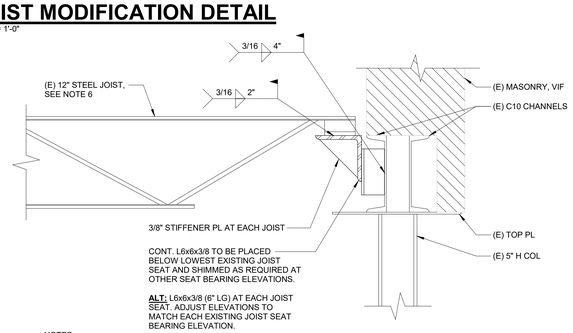
4 JOIST MODIFICATION DETAIL

1 1/2" = 1'-0"



7 EXISTING BUILDING SECTION

3/4" = 1'-0"



NOTES:

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2. EX. BEARING MASONRY AND STEEL SHALL BE EXPOSED AND INSPECTED FOR ADEQUATE BEARING CONDITIONS. INFORM A/E IF THERE ARE DISCREPENCIES AND/OR DEFICIENCIES IN THE BEARING CONDITIONS.
3. COORDINATE LINTEL FLASHING AND WATERPROOFING WITH ARCH DRAWINGS.
4. ADJUST ANGLE ELEVATION OR PROVIDE SHIM AS REQUIRED FOR JOIST SEAT BEARING.
5. PROVIDE TEMPORARY SHORE EXISTING JOISTS, FLOOR, AND WALL AS REQUIRED. WHERE JOISTS BEAR ON SHORING, MODIFY JOISTS PER 4/S500.

9 UNSUPPORTED JOIST SEAT REPAIRS

1 1/2" = 1'-0"
S_S-313

23008275.00 6/25/2026 11:41:26 AM JOHN GRACE ARMS

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PROFESSIONAL SEAL

CONSULTANT

KEY PLAN

AGENCY APPROVAL

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<<<State Registration Number>>>

0 1 2 3
REF. SCALE IN INCHES

PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
11	06/25/2026	Bulletin No. 9 - Lintel Repairs

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Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

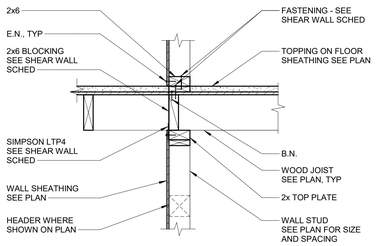
TYPICAL STEEL DETAILS & SECTIONS

SCALE

Scale: **As indicated**

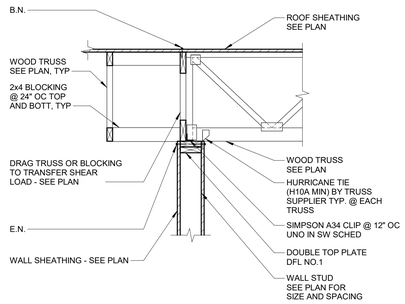
SHEET NUMBER

S500



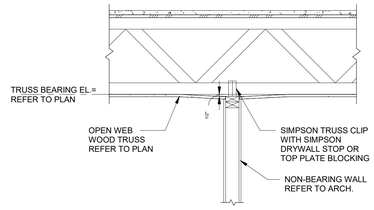
1 WOOD JOIST BEARING CHANGE IN DIRECTION

3/4" = 1'-0"
S_W-007



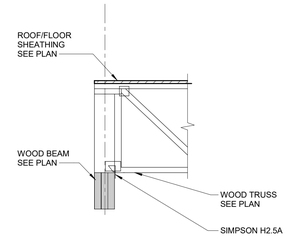
2 TRUSS BEARING AT INTERIOR WALL DETAIL

3/4" = 1'-0"
S_W-207



3 SECTION AT NON- BEARING WALL

3/4" = 1'-0"

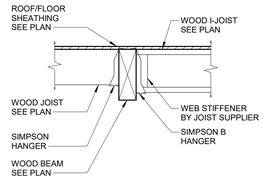


NOTE:

1. FOR MULTIPLE LAMINATIONS, SEE THE WOOD GENERAL NOTES FOR BEAM FASTENERS.

4 BEARING AT WOOD BEAM

3/4" = 1'-0"
S_W-212

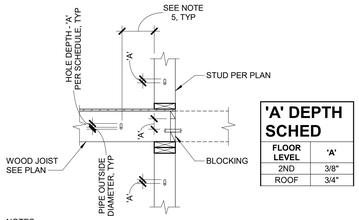


NOTE:

1. FOR MULTIPLE LAMINATIONS, SEE THE WOOD GENERAL NOTES FOR BEAM FASTENERS.

5 BEARING AT WOOD BEAM

3/4" = 1'-0"



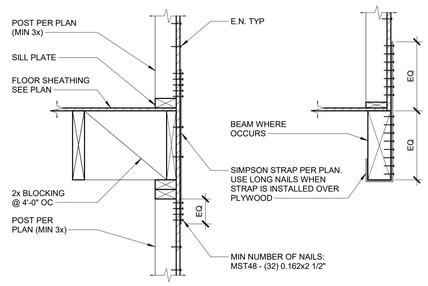
'A' DEPTH SCHED	
FLOOR LEVEL	'A'
2ND	3/8"
ROOF	3/4"

NOTES:

1. 'A' DENOTES REQUIRED CLEAR DISTANCE FROM TOP OF PIPE TO TOP OF OPENING.
2. DEPTH 'A' IS BASED UPON A MAXIMUM LUMBER MOISTURE CONTENT OF 19% AT TIME OF INSTALLATION OF PLUMBING.
3. HOLE DEPTH 'A' SHALL NOT EXCEED ALLOWABLE HOLE SIZES IN STRUCTURAL MEMBERS AS SHOWN IN TYPICAL DETAILS.
4. PLACE PIPE AT BOTTOM OF VERT SLOTTED HOLE.
5. LOCATION OF HOLES IN STRUCTURAL MEMBERS (STUDS, JOIST, BLOCKING, ETC.) SHALL BE PER STRUCTURAL DRAWINGS AND BUILDING CODE.

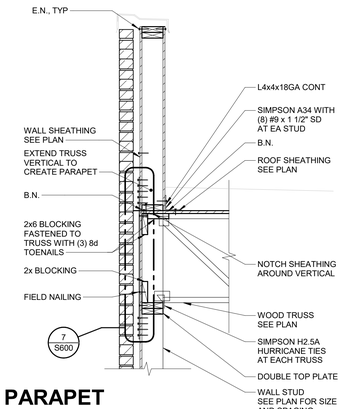
6 SHRINKAGE SLOTTED HOLES DETAIL

3/4" = 1'-0"
S_W-610



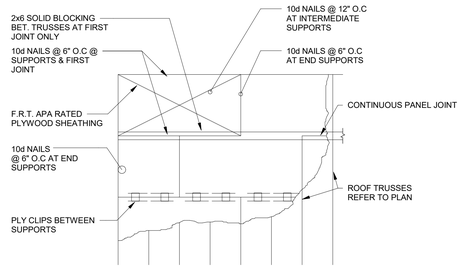
7 HOLDOWN DETAIL ACROSS FRAMING

3/4" = 1'-0"



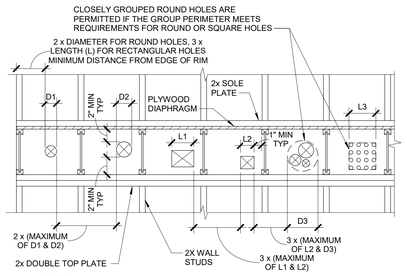
8 PARAPET AT TRUSS BEARING

3/4" = 1'-0"
S_W-204



9 TYPICAL ROOF SHEATHING DETAIL

1/4" = 1'-0"

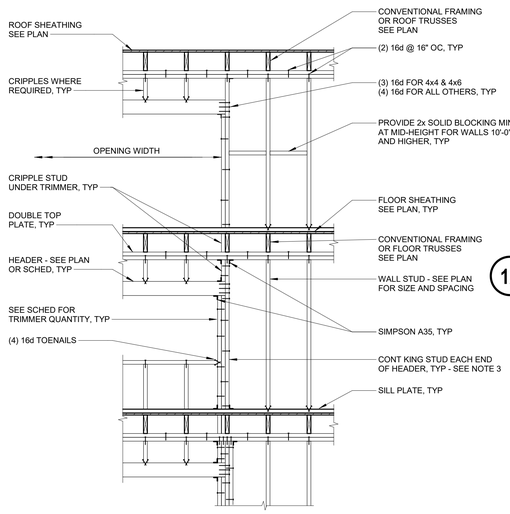


NOTES:

1. MAXIMUM HEIGHT OF ROUND OR RECTANGULAR HOLE SHALL NOT EXCEED RIM HEIGHT - 4".
2. MAXIMUM WIDTH OF RECTANGULAR HOLE SHALL NOT EXCEED 2/3 x JOIST SPACING.
3. DO NOT OVERCUT RECTANGULAR HOLES.
4. NOTIFY ENGINEER FOR REVIEW OF ANY PROPOSED PENETRATION THAT DOES NOT MEET THE REQUIREMENTS NOTED ABOVE.

10 ALLOWABLE HOLES IN SCL RIMBOARD

3/4" = 1'-0"

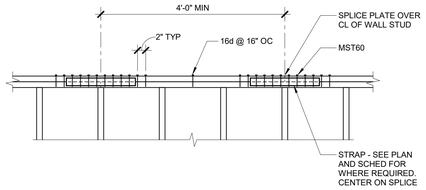


NOTES:

1. SEE PLANS FOR SPECIAL FRAMING REQUIREMENTS.
2. HEADER SIZES SHOWN IN SCHEDULES ABOVE ARE MINIMUM HEADER SIZES. SEE PLANS FOR WHERE LARGER HEADER SIZES ARE REQUIRED.
3. AT EXTERIOR WALLS WHERE OPENING WIDTH IS GREATER THAN 3'-6", PROVIDE DOUBLE STUD EACH END OF HEADER.
4. TRIMMERS TO BE SAME SIZE AS STUDS AT GIVEN FLOOR LEVEL UON. SEE PLANS FOR POSTS WHERE REQUIRED INSTEAD OF TRIMMERS.
5. NAIL TRIMMERS AND KING STUDS TOGETHER WITH 16d NAILS @ 12" OC, STAGGERED EACH FACE.
6. SEE PLANS FOR SHEAR WALL FRAMING REQUIREMENTS.
7. FRAMING IS SYMMETRICAL ABOUT OPENING.
8. WHERE TRIMMERS/KING STUDS ARE ADJACENT TO SILL PLATE BOLTING, PROVIDE 2" MIN CLEAR.

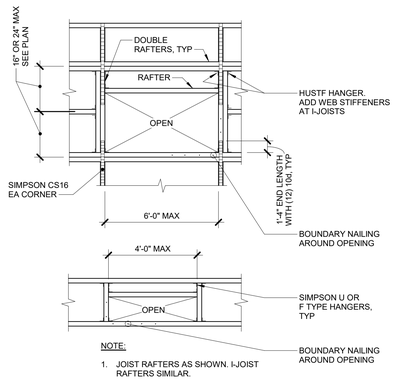
11 TYPICAL STUD WALL FRAMING DETAIL

1/2" = 1'-0"



12 TYPICAL TOP PLATE SPLICE DETAIL

3/4" = 1'-0"
S_W-415

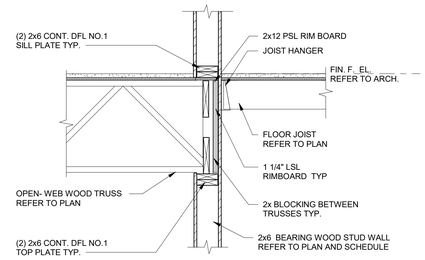


NOTE:

1. JOIST RAFTERS AS SHOWN. I-JOIST RAFTERS SIMILAR.

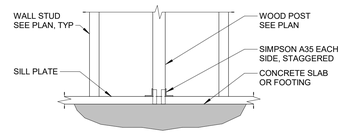
13 OPENING DETAIL

3/4" = 1'-0"
S_W-607

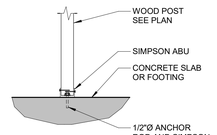


14 INTERIOR BEARING WALL DETAIL

3/4" = 1'-0"



B - POST AS PART OF WALL



A - ISOLATED POST

15 POST BASE CONNECTION DETAILS

3/4" = 1'-0"

JOHN GRACE ARMS

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SDG Architects

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PROJECT #23008275.00

PROFESSIONAL SEAL

STATE OF MICHIGAN
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CONSULTANT

KEY PLAN

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0 1 2 3
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Approved	-

SHEET TITLE

TYPICAL WOOD SECTIONS & DETAILS

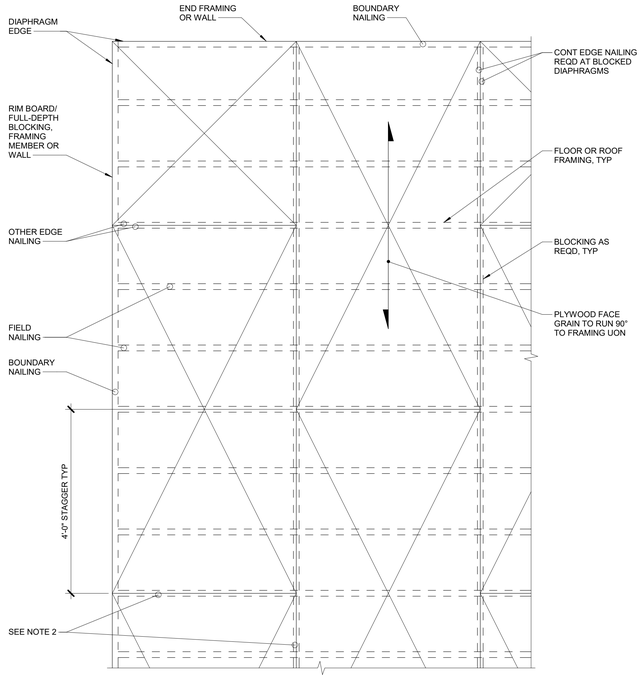
SCALE

Scale: As indicated

SHEET NUMBER

S600

23008275.00 12/19/2024 9:13:32 PM JOHN GRACE ARMS



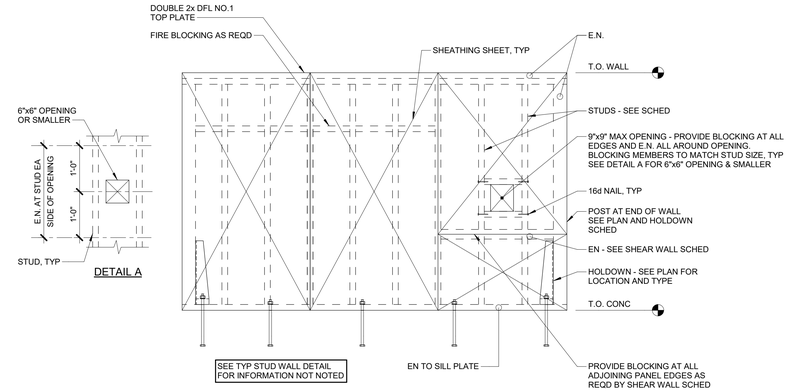
1 TYPICAL FLOOR AND ROOF DIAPHRAGM
3/4" = 1'-0"

PLYWOOD NAIL SPACING SCHEDULE

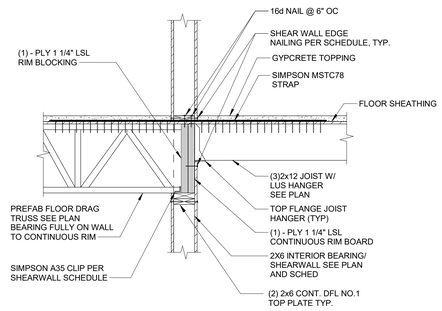
LOCATION	BOUNDARY NAILING	CONT EDGE NAILING	OTHER EDGE NAILING	FIELD NAILING	SOLID BLOCKING	REMARKS
ROOF	6"	6"	6"	12"	YES	-
FLOOR	6"	6"	6"	12"	YES	-

NOTES:

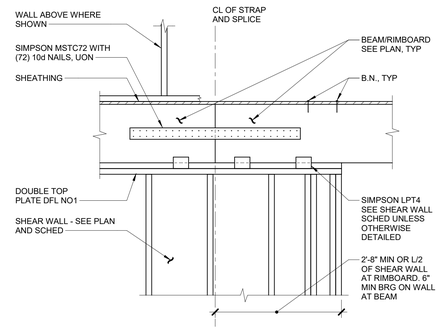
1. SHEATHING NAILS SHALL BE 10d NAILS, PENETRATING 1 1/2" INTO THE FRAMING MEMBER OR BLOCKING. ALL NAILS SHALL BE COMMON NAILS.
2. ALL INTERIOR PANEL EDGES SHOWN ON NAILING PLAN SHALL HAVE TWO ROWS OF BOUNDARY EDGE NAILING. ONE ROW EACH EDGE WHERE SHEATHING PANELS ABUT.
3. PLYWOOD THICKNESS AND GRADE PER PLAN AND GENERAL NOTES.
4. ALL SHEATHING PANELS TO BE 4'-0' x 8'-0" EXCEPT WHERE JOB CONDITIONS PROHIBIT. JOINTS FROM SUCCESSIVE ROWS SHALL BE STAGGERED 4'-0" AS SHOWN. MINIMUM PANEL SIZE TO BE 2'-0" x 2'-0".
5. THE OWNER SHALL APPROVE THE USE OF OSB SHEATHING IN LIEU OF PLYWOOD SPECIFIED ON THE APPROVED CONTRACT DOCUMENTS.



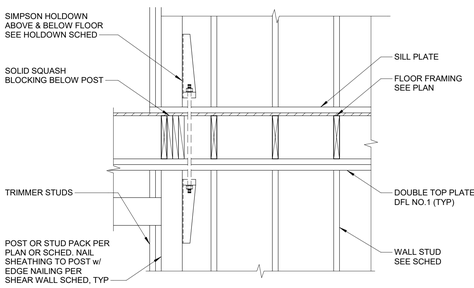
3 WOOD SHEAR WALL ELEVATION WITH HOLDOWNS
3/4" = 1'-0"



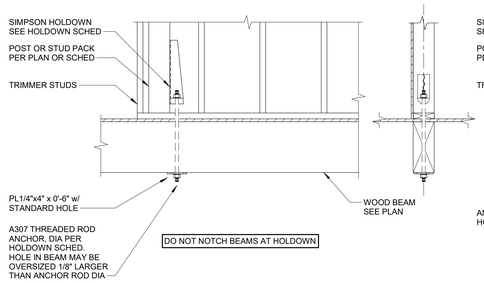
2 DRAG TRUSS CONNECTION DETAIL
3/4" = 1'-0"



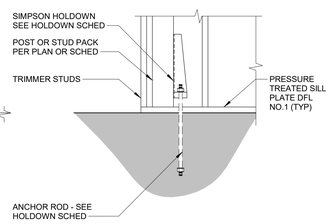
4 TYP BEAM/RIMBOARD SPLICE DETAIL
3/4" = 1'-0"



HOLDOWN ACROSS FLOOR FRAMING

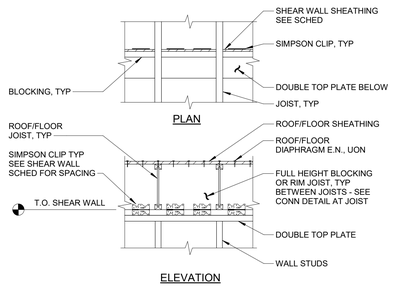


HOLDOWN AT BEAM BELOW SHEAR WALL

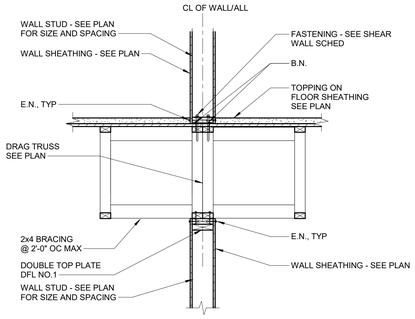


HOLDOWN AT CONCRETE SLAB/WALL

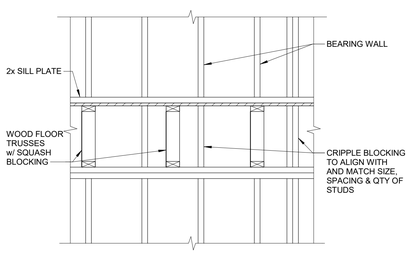
5 TYPICAL SIMPSON HOLDOWNS
3/4" = 1'-0"



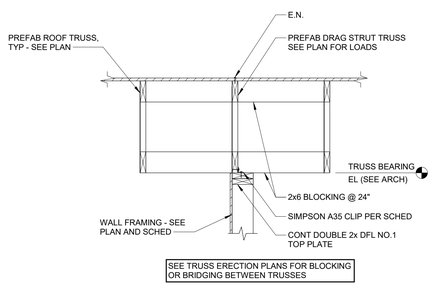
6 SHEAR WALL BLOCKING
3/4" = 1'-0"



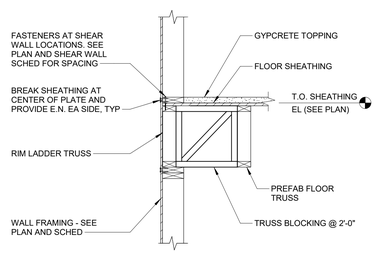
7 FLOOR TRUSSES PARALLEL TO SHEAR WALL
3/4" = 1'-0"



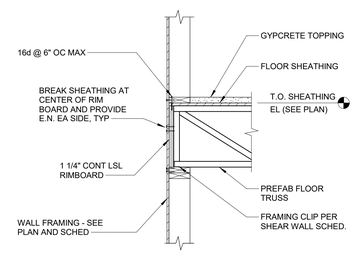
8 TYPICAL WALL CRIPPLE BLOCKING AT BEARING WALL
3/4" = 1'-0"



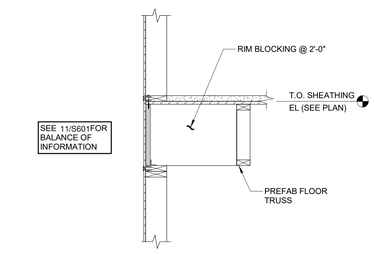
9 ROOF TRUSSES PARALLEL TO SHEAR WALL
3/4" = 1'-0"



10 WOOD FLOOR TRUSS PARALLEL WITH LADDER TRUSS RIM
3/4" = 1'-0"



11 WOOD FLOOR TRUSS BEARING WITH RIMBOARD
3/4" = 1'-0"



12 WOOD FLOOR TRUSS PARALLEL WITH RIMBOARD
3/4" = 1'-0"

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PROFESSIONAL SEAL

STATE OF MICHIGAN ATHANACIOS A NASR ENGINEER 47052 LICENSED PROFESSIONAL ENGINEER

CONSULTANT

KEY PLAN

AGENCY APPROVAL

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0 1 2 3
REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
6	12/13/2024	HUD Submission
7	12/20/2024	Permit

SHEET INFORMATION

Issue	Issued for Permit
Date	10/30/2024
Project #	23008275.00
Drawn	Author
Checked	Checker
Approved	Approver

SHEET TITLE

TYPICAL WOOD SECTIONS & DETAILS

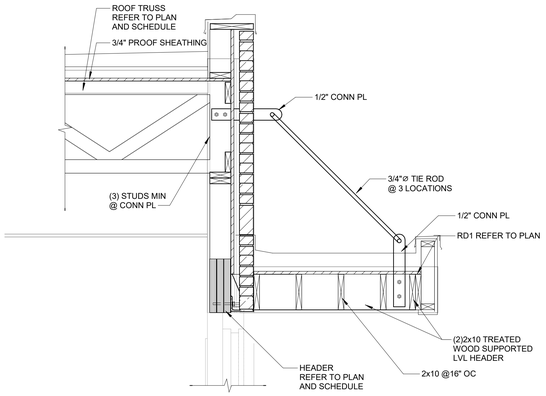
SCALE

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

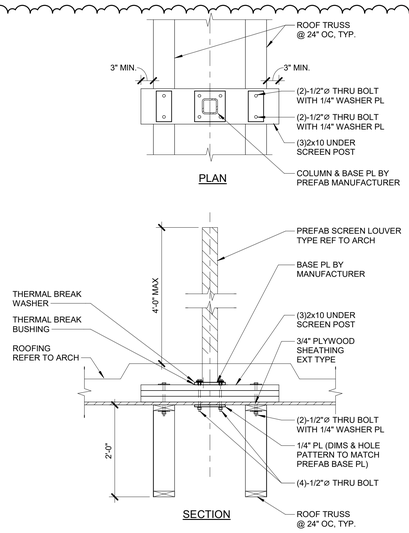
SHEET NUMBER

S601

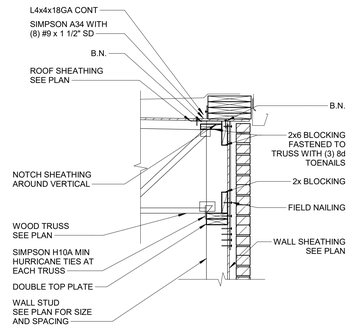
23008275.00 12/19/2024 9:13:33 PM JOHN GRACE ARMS



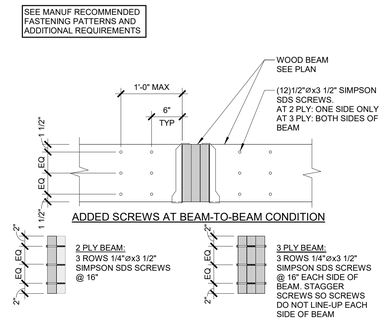
1 SECTION
3/4" = 1'-0"



2 TYP SCREEN WALL ATTACHMENT TO ROOF FRAMING
3/4" = 1'-0"



3 PARAPET AT TRUSS BEARING
3/4" = 1'-0"
S_W-204



4 BUILT-UP LVL BEAM / HEADER FASTENING
1" = 1'-0"

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KEY PLAN

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0 1 2 3
REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1

SHEET INFORMATION

Issue	**Issued for Permit**
Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE
TYPICAL WOOD SECTIONS & DETAILS

SCALE
Scale: **As indicated**

SHEET NUMBER
S602

23008275.00 2/18/2025 4:57:01 PM JOHN GRACE ARMS