DESIGN CRITERIA

1. THE BUILDING(S) HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS.

   A. UFC 1-200-01, DOD BUILDING CODE (01 SEPT 2022, CHANGE 2, 12 JUNE 2023)
   B. UFC 3-301-01, STRUCTURAL ENGINEERING (11 APR 2023, CHANGE 1, 2 OCT 2023)
   C. IBC 2021, INTERNATIONAL BUILDING CODE
   D. ASCE 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND STRUCTURES
   D. UFC 4-010-01, DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS (12 DECEMBER 2018 WITH CHANGE 2, 30 JUL 2022)

2. LOADING CRITERIA:

MINIMUM SUPERIMPOSED DEAD LOADS :

SEE SHEET S0010

MINIMUM LIVE LOADS:

SEE SHEET S0010

SNOW LOADS:

GROUND SNOW LOAD,	P_g = 25 PSF - UFC 3-301-01
FLAT-ROOF SNOW LOAD,	P_f = 19.25 PSF
MINIMUM SNOW LOAD,	P_m = 22.0 PSF
SNOW EXPOSURE FACTOR,	C_e = 1.0, PARTIALLY EXPOSED
SNOW LOAD IMPORTANCE FACTOR,	I_s = 1.10, FOR RISK CATEGORY "III"
THERMAL FACTOR,	C_t = 1.00
SLOPE FACTOR,	C_s = 1.00
SLOPED ROOF SNOW LOAD	19.25 PSF
RAIN-ON-SNOW SURCHARGE LOAD	NOT APPLICABLE
FROST PENETRATION DEPTH	26 IN
UNBALANCED SNOW	P_d = SEE SHEET S0010

RAIN LOADS:

100-YEAR HOURLY RAINFALL RATE = 3.47 INCHES

WIND LOADS:

ALL BUILDINGS:	PER UFC 3-301-01, IBC 2021 & ASCE 7-16
BASIC 3-SECOND GUST DESIGN WIND SPEED	= 120 M.P.H. (ULTIMATE)
RISK CATEGORY	= "III"
WIND EXPOSURE CATEGORY FOR MWFRS	= 'C'
TOPOGRAPHIC FACTOR, K_{zt}	= 1.15
INTERNAL PRESSURE COEFFICIENT, GC_{pi}	= (+/-)0.18 ENCLOSED AREAS
COMPONENT AND CLADDING	= PER IBC 2021/ ASCE 7-16
WIND $_x$	= 84k
WIND $_y$	= 97k

SEISMIC LOADS:

ALL BUILDINGS:	PER UFC 3-301-01, IBC 2021 & ASCE 7-16
RISK CATEGORY	= "III"
SEISMIC IMPORTANCE FACTOR, I_e	= 1.25

SPECTRAL RESPONSE ACCELERATIONS (UFC 3-301-01 & IBC 2021 SECTION 1613.2.1)

AT SHORT PERIODS, S_s ; F_a	= 0.130; 1.60
AT ONE SECOND PERIOD, S_1 ; F_v	= 0.043; 2.40
SITE CLASS	= "D"

DESIGN SPECTRAL RESPONSE ACCELERATIONS

AT SHORT PERIODS, S_{Ds}	= 0.139
AT ONE SECOND PERIOD, S_{D1}	= 0.068
SEISMIC DESIGN CATEGORY	= "B" (IBC 2021 TABLE 1613.2.3)

BASIC SEISMIC FORCE-RESISTING SYSTEM (UFC 3-301-01 TABLE 3-3)

BEARING WALL SYSTEMS: INTERMEDIATE REINFORECED MASONRY SHEAR WALLS

RESPONSE MODIFICATION FACTOR, R	= 3 1/2
DEFLECTION AMPLIFICATION FACTOR, C_d	= 2 1/4
OVERSTRENGTH FACTOR	= 2 1/2
SEISMIC RESPONSE COEFFICIENT, C_s	= 0.05
DESIGN BASE SHEAR	= 93 K

ANALYSIS PROCEDURE USED EQUIVALENT LATERAL FORCE.

ANTI-TERRORISM FORCE PROTECTION CRITERIA:

BUILDING CATEGORY: INHABITED BUILDING
DESIGN CRITERIA: MINIMUM AT/FP REQUIREMENTS PER UFC 4-010-01

STANDARD 1: STANDOFF DISTANCE
- BUILDING MORE THAN 50 FT FROM INSTALLATION PERIMETER.

STANDARD 2: UNOBSTRUCTED SPACE
- 33FT UNOBSTRUCTED SPACE. SEE CIVIL DRAWINGS.

STANDARD 6: PROGRESSIVE COLLAPSE RESISTANCE
- DOES NOT APPLY.

STANDARD 7: STRUCTURAL ISOLATION
- DOES NOT APPLY.

STANDARD 8: BUILDING OVERHANGS AND BREEZEWAYS
- DOES NOT APPLY.

STANDARD 9: EXTERIOR MASONRY WALLS
- DOES NOT APPLY.

STANDARD 15: OVERHEAD MOUNTED ARCHITECTURAL FEATURES
- ENSURE OVERHEAD MOUNTED FEATURES WEIGHING 31 POUNDS OR MORE (EXCLUDING DISTRIBUTION SYSTEMS SUCH AS SUSPENDED CEILING THAT COLLECTIVELY EXCEED THAT WEIGHT) ARE MOUNTED TO MINIMIZE THE LIKELIHOOD THAT THEY WILL FALL AND INJURE BUILDING OCCUPANTS. MOUNT ALL SUCH SYSTEMS SO THAT THEY RESIST FORCES OF 0.5 TIMES THE COMPONENT WEIGHT IN ANY DIRECTION AND 1.5 TIMES THE COMPONENT WEIGHT IN THE DOWNWARD DIRECTION.

STANDARD 19: EQUIPMENT BRACING
- MOUNT ALL OVERHEAD UTILITIES WEIGHING 30 POUNDS OR MORE (EXCLUDING DISTRIBUTION SYSTEMS SUCH AS PIPING NETWORKS THAT COLLECTIVELY EXCEED THAT WEIGHT) TO MINIMIZE THE LIKELIHOOD THAT THEY WILL FALL AND INJURE BUILDING OCCUPANTS. MOUNT ALL SUCH SYSTEMS AS REQUIRED TO RESIST FORCES OF 0.5 TIMES THE COMPONENT WEIGHT IN ANY DIRECTION AND 1.5 TIMES THE COMPONENT WEIGHT IN THE DOWNWARD DIRECTION.

MECHANICAL EQUIPMENT WEIGHTS

MECHANICAL EQUIPMENT WEIGHTS ARE COORDINATED WITH THE MECHANICAL ENGINEER'S BASIS OF DESIGN. SEE DRAWINGS FOR EQUIPMENT WEIGHTS AND LOCATIONS. FOR CASES WHERE PURCHASED EQUIPMENT EXCEEDS THE LISTED ESTIMATED EQUIPMENT WEIGHT BY 5%, BEFORE PROCEEDING WITH WORK CONTACT THE E.O.R AND SUBMIT LOAD DATA FOR REVIEW TO DETERMINE IF STRUCTURAL FRAMING ENHANCEMENTS ARE REQUIRED. STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATING EQUIPMENT. MOUNT VIBRATING EQUIPMENT ON VIBRATION ISOLATOR.

CONSTRUCTION LOADS

IMPOSED CONSTRUCTION LOADS, INCLUDING CONSTRUCTION CRANES, SCISSOR LIFTS, RIDING LEVELERS ETC., IN EXCESS OF STATED DESIGN LOADS MUST BE REVIEWED BY E.O.R PRIOR TO APPLICATION OF SUCH LOADS. SUBMIT CALCULATIONS BY OTHERS TO CHECK THE ADEQUACY OF THE BASE STRUCTURE WITH THESE CONSTRUCTION LOADS IMPOSED FOR REVIEW.

SERVICEABILITY CRITERIA - NEW CONSTRUCTION

LIVE LOAD FLOOR VERTICAL DEFLECTION	= L/480 OR LESS
LIVE LOAD ROOF VERTICAL DEFLECTION	= L/240 OR LESS
LONG-TERM TOTAL LOAD VERTICAL DEFLECTION	= L/240 OR LESS
INTER-STORY LATERAL DRIFT DUE TO WIND LOAD	= H/480 OR LESS

DELEGATED DESIGN

EMPLOY OR RETAIN A REGISTERED PROFESSIONAL/ STRUCTURAL ENGINEER, LICENSED IN ANY STATE IN THE UNITED STATES, TO DESIGN AND DETAIL ITEMS LISTED BELOW THAT ARE PART OF THE BASE BUILDING STRUCTURE.

- STRUCTURAL STEEL CONNECTIONS, NOT DETAILED ON THESE DRAWINGS
- MULLIONS, WINDOWS, DOOR AND THEIR CONNECTIONS TO BASE STRUCTURE
- COLD-FORMED STEEL (CFS) FRAMING SYSTEM, NOT DESIGNED AND DETAILED ON THESE DRAWINGS
- PRECAST SYSTEM OR MASONRY, NOT DESIGNED AND DETAILED ON THESE DRAWINGS
- ARCHITECTURAL FEATURES INCLUDING FACADE SYSTEM, NOT DETAILED ON THESE DRAWINGS
- SEISMIC BRACING OF NON-STRUCTURAL ELEMENTS, IF REQUIRED, INCLUDING BUT NOT LIMITED TO MEP EQUIPMENT SUPPORT BRACING, ARCHITECTURAL COMPONENT BRACINGS ETC.

SUBMIT SEALED AND SIGNED CALCULATIONS AND SHOP DRAWINGS CERTIFYING THE DESIGN MEETS THE REQUIREMENTS OF DESIGN CRITERIA LISTED ABOVE.

GENERAL

1. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORT, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HAS NOT BEEN CONSIDERED BY THE ARCHITECT / ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE APPLICATION OF SHEAR WALLS, ROOF AND FLOOR DIAPHRAGMS AND FINISH MATERIALS. PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE APPLICATION OF THE AFOREMENTIONED MATERIALS. STRUCTURAL CALCULATIONS AND DETAILS FOR ANY TEMPORARY SHORING AND BRACING MUST BE SEALED BY A REGISTERED PROFESSIONAL/ STRUCTURAL ENGINEER, LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED AND MUST BE SUBMITTED TO ARCHITECT / ENGINEER FOR RECORD.
2. SHOP DRAWINGS MUST BE CHECKED BY THE CONTRACTOR BEFORE SUBMITTAL TO ARCHITECT / ENGINEER. SHOP DRAWINGS FOR STRUCTURAL STEEL, CONCRETE REINFORCING AND MASONRY REINFORCING MUST BE SUBMITTED FOR CONFORMANCE WITH THE DESIGN CONCEPT PRIOR TO FABRICATION. PROVIDE SHOP DRAWINGS FOR PRE-FABRICATED STRUCTURAL SYSTEMS FOR REVIEW BY EOR.
3. CONTRACTOR MUST WORK THIS SET OF DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, ELECTRICAL, MECHANICAL DRAWINGS FOR SIZE, SHAPE AND LOCATION OF WALL OPENINGS. ANY CONFLICT MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT / ENGINEER PRIOR TO FABRICATIONS OR CONSTRUCTION.
4. DO NOT USE SCALE TO OBTAIN DIMENSIONS NOT SHOWN ON THESE DRAWINGS. DO NOT SCALE/OBTAIN ANY UNCLEAR INFORMATION FROM THE E-FILE INCLUDING REVIT MODEL OF CAD DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS RESULTING FROM SUCH SCALED DATA.
5. USE OF E-FILE OF CAD S-DRAWINGS AS THE BASE SHEET FOR THE SHOP DRAWINGS PREPARATION REQUIRES REVIEW BY ARCHITECT, FEES FOR A/E COSTS OF REPRODUCTION, SHIPPING, AND HANDLING WILL BE APPLIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ERRORS RESULTING FROM SUCH USE.
6. VERIFY DIMENSIONS AND CONDITIONS WITH THE LATEST ARCHITECTURAL, MECHANICAL, AND SHOP DRAWINGS IN THE FIELD OF EXISTING CONDITIONS BEFORE PROCEEDING WITH FABRICATION OR CONSTRUCTION.
7. SERVICES FOR SOIL, MASONRY, CONCRETE, STEEL, BOLT & WELD TESTING AS OUTLINED IN THE SPECIFICATIONS AND GENERAL NOTES MUST BE PERFORMED BY AN INDEPENDENT TESTING AGENCY PROVIDED BY THE DESIGN BUILD CONTRACTOR. REPORTS MUST BE SUBMITTED TO THE ARCHITECT/ENGINEER. TESTING MUST CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

GENERAL EXCAVATION

1. COORDINATE ELEMENTS OF THE FILL OPERATIONS AND IF REQUIRED, SOIL RETENTION SYSTEM, WITH ELEMENTS OF THE PERMANENT BUILDING.
2. THE EXCAVATIONS FOR FOOTINGS, MATS, PITS, ETC. MUST BE EXCAVATED ON AN INDIVIDUAL, LOCALIZED BASIS. THE LAST 6 INCHES OF EACH EXCAVATION MUST BE EXCAVATED TO A TRIM, LEVEL SURFACE.
3. PROVIDE POSITIVE PROTECTION (MAT/SHEET COVERINGS) FOR EXCAVATION SLOPES TO PROTECT SLOPES FROM INSTABILITY AND DETERIORATION DUE TO RAIN, WIND OR SNOW/ICE.
4. PROVIDE SURFACE DRAINAGE CHANNELS, SUMPS AND SUMP PUMPS TO PROTECT EXCAVATIONS FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF THE SUBGRADE WILL BE CAUSE FOR COMPLETE REMOVAL OF CONCRETE MUD SLABS AND COMPLETE REPREPARATION AND APPROVAL OF THE SUBGRADE.
5. THE SITE MUST BE DEWATERED BEFORE OR AS THE EXCAVATION PROCEEDS. AT ALL TIMES THE DEWATERING SYSTEM MUST MAINTAIN THE WATER LEVEL, A MINIMUM OF 3 FEET BELOW THE DEEPEST FOUNDATION SUBGRADE. THE DEWATERING SYSTEM MUST BE MAINTAINED UNTIL GROUND FLOOR SLABS, PERIMETER WALLS, AND WATERPROOFING ARE INSTALLED AND THE PERMANENT BUILDING DRAINAGE SYSTEM IS FULLY OPERATIONAL.
6. THE SOIL TESTING LABORATORY MUST REVIEW AND MONITOR THE EXCAVATION, DEWATERING AND SOIL RETENTION SYSTEMS.
7. **REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION REPORT** # JD225235 DATED JANUARY 24, 2024, DEVELOPED BY TERRACON, ASHBURN, VA.

SUB-GRADE PREPARATION

1. SEE GEOTECHNICAL REPORT BY TERRACON (GENERAL EXCAVATION NOTE #7) FOR SUB-GRADE PREPARATION REQUIREMENTS AND FOR REQUIREMENTS RELATED TO VAPOR BARRIER SYSTEM REQUIREMENTS. SEE CIVIL, ARCHITECTURAL AND MEP DRAWING FOR FURTHER DETAILS..

SITE FILL WITH LIGHTWEIGHT CELLULAR CONCRETE AND SETTLEMENT MONITORING

1. PER GEOTECHNICAL REPORT BY TERRACON (GENERAL EXCAVATION NOTE #7) , PORTION BUILDING OF SITE IS TO BE FILLED WITH LIGHTWEIGHT CELLULAR CONCRETE (LCC). THIS LCC FILL IS REQUIRED TO BRING THE SITE TO PROPOSED BUILDING GROUND ELEVATION. SEE GEOTECHNICAL REPORT FOR DETAILS REGARDING THE FILL AND SETTLEMENT MONITORING REQUIREMENTS BEFORE THE BUILDING CONSTRUCTION STARTS.

SHEET INDEX

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GENERAL FOUNDATION

1. THE SOIL SUBGRADE FOR FOOTINGS AND SLABS MUST BE INSPECTED AND APPROVED BY THE TESTING LABORATORY IMMEDIATELY PRIOR TO PLACING FOUNDATION CONCRETE. NET DESIGN SOIL PRESSURE FOR NEW SHALLOW FOOTINGS = 3,000 PSF ON COMPETENT BEARING SOIL OR LIGHTWEIGHT CELLULAR CONCRETE (LCC) FILL.
2. ALL SLAB SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D-1557 DRY DENSITY. ALL BACKFILL BELOW, AROUND AND ABOVE THE FOUNDATION ELEMENTS, FOOTINGS, WALLS AND PITS SHALL BE COMPACTED TO 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
3. PREPARE THE EXPOSED SUB-GRADE AS DESCRIBED IN THE GEOTECHNICAL REPORT. ALL ORGANIC AND/OR OTHER UNSUITABLE MATERIALS SHALL BE REMOVED FROM SUBGRADE AND BACKFILL AREAS AND BACKFILLED WITH ACCEPTABLE GRANULAR FILL, OR CRUSHED CONCRETE FILL MATERIAL MAXIMUM 8" OR LESS LIFTS IN LOOSE THICKNESS COMPACTED TO MINIMUM OF 95% FOR SLABS AND 98% FOR FOOTINGS OF MAXIMUM DENSITY OBTAINED IN ACCORDANCE WITH ASTM STANDARD D-1557, MODIFIED PROCTOR DENSITY.
4. FOOTINGS OR SLABS SHALL NOT BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE. SHOULD WATER OR FROST ENTER A FOOTING EXCAVATION AFTER SUBGRADE APPROVAL, THE SUBGRADE SHALL BE REINSPECTED BY THE TESTING LABORATORY AFTER REMOVAL OF WATER OR FROST.
5. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.
6. ALL SLABS-ON-GRADE SHALL BE PLACED OVER A VAPOR RETARDER OVER A MINIMUM OF 6" FREE DRAINING COMPACTED GRANULAR MATERIAL MEETING THE GRADUATION REQUIREMENTS OF GEOTECHNICAL ENGINEER APPROVED SOIL SUBGRADE.
7. SEE **SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION REPORT** # JD225235 DATED JANUARY 25, 2024, DEVELOPED BY TERRACON, ASHBURN, VA.

STRUCTURAL CONCRETE

1. CAST-IN-PLACE CONCRETE MUST BE OF THE TYPES AND HAVING MINIMUM 28-DAY COMPRESSIVE STRENGTHS INDICATED BELOW.
   A. CONCRETE MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF f'c =4,000 PSI WITH A MAXIMUM W/C RATIO OF 0.45, U.N.O.
   B. CONCRETE EXPOSED TO WEATHER f'c = 4,500 PSI w/c = 0.40
2. CONCRETE MUST CONTAIN AN APPROVED WATER REDUCING (AS NEEDED), PLASTICIZING ADMIXTURE (AS NEEDED) (FLY ASH, IF USED, MUST BE AS PER ACI 318 GUIDELINES). CONCRETE PERMANENTLY EXPOSED TO THE WEATHER MUST CONTAIN AN APPROVED AIR-ENTRAINING ADMIXTURE (6%). MAX. W/C RATIO = 0.40.
3. REINFORCING BARS MUST BE NEW BILLET STEEL CONFORMING TO THE STANDARDS OF ASTM A615, GRADE 60. BARS USED IN WELDED CONSTRUCTION MUST CONFORM TO ASTM A706.
4. WELDED WIRE FABRIC MUST CONFORM TO THE STANDARDS OF ASTM A185. WELDED WIRE FABRIC FOR SLABS MUST BE SHEETS ONLY AND NOT ROLLS.
5. CONCRETE REINFORCEMENT MUST BE DETAILED, FABRICATED, LABELED SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315.
6. CHECKED SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, MUST BE SUBMITTED TO THE ARCHITECT/ ENGINEER FOR REVIEW PRIOR TO FABRICATION.
7. SUBMIT DETAILED DRAWINGS SHOWING THE LOCATIONS OF CONSTRUCTION JOINTS, CURBS, SLABS DEPRESSIONS, SLEEVES, OPENINGS, ETC.
8. REINFORCING SPLICES MUST CONFORM TO THE REQUIREMENTS OF ACI 318, BUT IN NO CASE MUST BE LESS THAN 30 BAR DIAMETERS FOR COMPRESSION AND/OR 40 BAR DIAMETERS FOR TENSION, U.N.O.
9. WELDED WIRE FABRIC MUST BE LAPPED TWO (2) FULL MESH PANELS AND TIED SECURELY.
10. WHERE REQUIRED, DOWELS MUST MATCH SIZE AND NO. OF MAIN REINFORCING.
11. SEE SECTIONS FOR WALL REINFORCING REQUIREMENTS.
12. CONSTRUCTION JOINTS IN WALLS MUST NOT BE FURTHER APART THAN 60 FEET. SUBMIT CONSTRUCTION JOINT LOCATION PLAN FOR WALLS AND SLABS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. CONSTRUCTION JOINTS MUST BE WIRE BRUSHED, CLEANED AND MOISTENED IMMEDIATELY PRIOR TO PLACING NEW CONCRETE.
13. SEE ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF FLOOR FINISHES, FLOOR DEPRESSIONS, CURBS AND WATERPROOFING / DAMP-PROOFING DETAILS (WHERE APPLICABLE).
14. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES MUST BE PLASTIC TIPPED.
15. DO NOT FIELD BEND OR WELD TO GRADE 60 REINFORCING STEEL.
16. REBARS MUST BE SECURELY PLACED BEFORE POURING CONCRETE.

STRUCTURAL CONCRETE

17. EMBEDDED ITEMS:
   A. CONDUIT, PIPES ETC. PASSING THROUGH SLABS, WALLS, OR BEAMS MUST NOT SIGNIFICANTLY IMPAIR THE STRENGTH OF THE MEMBER. DO NOT EMBED ALUMINUM ITEMS.
   B. CONDUIT AND PIPES EMBEDDED IN SLABS OR WALLS, MUST BE LIMITED TO A MAXIMUM DIAMETER OF THE SMALLER OF 1/3 OF THE SLAB OR WALL THICKNESS OR 2".
   C. EMBEDDED ITEMS MUST NOT BE SPACED CLOSER THAN THREE DIAMETER ON CENTER.
   D. ADDITIONAL REINFORCEMENT EQUAL TO 0.002*THE AREA OF CONCRETE MUST BE PROVIDED NORMAL TO THE EMBEDDED PIPING/CONDUITS.
   E. SUBMIT EMBEDDED PIPES/CONDUITS LAYOUT DRAWINGS FOR REVIEW.
18. CONCRETE PROTECTION TO REINFORCING BARS MUST BE AT LEAST EQUAL TO THE DIAMETER OF THE BARS. COVER MUST BE AS FOLLOWS, UNLESS SHOWN OTHERWISE ON PLANS AND DETAILS:

A. POURED AGAINST EARTH	3"
B. POURED AGAINST FORM BELOW GRADE	2"
C. SLABS-ON-GRADE (FROM TOP OF SLAB)	1 1/2"
D. FORMED SLAB	3/4"
E. BEAMS TO STIRRUPS	1 1/2"
F. COLUMNS TO TIES	2"
G. WALLS EXPOSED TO WEATHER	
a. NO.6 THROUGH NO.18 BARS	2"
b. NO.5 BAR AND SMALLER	1 1/2"
H. WALLS NOT EXPOSED TO WEATHER	
a. NO.11 BAR AND SMALLER	3/4"

MASONRY

1. MATERIAL AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE MASONRY SOCIETY (TMS 402/ TMS 602).
2. PROVIDE PRISM AND GROUT TESTS AS OUTLINED IN THE SPECIFICATIONS.
3. MINIMUM COMPRESSIVE STRENGTHS OF MASONRY MATERIALS MUST BE:

CONCRETE BLOCK (ASTM C-90 GRADE N, TYPE 1)	2500 PSI
MORTAR - TYPE S (ASTM C-270)	1800 PSI (CMU)
GROUT (ASTM C-476)	3000 PSI
f'm, COMPRESSIVE STRENGTH OF MASONRY	2200 PSI
REINFORCING BARS (ASTM A615)	GRADE 60

4. VERTICAL CELLS TO BE FILLED WITH GROUT MUST BE ALIGNED TO PROVIDE A CONTINUOUS, UNOBSTRUCTED CELL OPENING OF THE DIMENSIONS SHOWN ON THE PLANS. CELLS WHICH WILL CONTAIN VERTICAL REINFORCEMENT MUST HAVE A MINIMUM OF TWO (2) INCH CLEAR OPENING.
5. GROUT FOR FILLING REINFORCED OR NON-REINFORCED CELLS MUST BE FLUID AND PLACED BY ACCEPTABLE PRESSURE GROUTING PROCEDURES.
6. GROUT FOR FILLING REINFORCED OR NON-REINFORCED CELLS MUST BE PLACED IN MAXIMUM FIVE (5) FOOT LIFTS AND CONSOLIDATED IN PLACE BY VIBRATION OR OTHER METHODS WHICH INSURE COMPLETE FILLING OF THE CELLS. HIGHER LIFTS MUST COMPLY TMS602/ACI 530.1/ASCE6 FOR CLEANOUTS AND GROUT PLACEMENT. CELLS CONTAINING REINFORCING BARS AND/OR ANCHOR BOLTS MUST BE FULLY GROUTED.
7. HOLLOW UNITS MUST BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS EXCEPT THAT WEBS MUST ALSO BE BEDDED WHERE THEY ARE ADJACENT TO CELLS TO BE REINFORCED AND/OR FILLED WITH GROUT, IN THE STARTING COURSE ON FOOTINGS AND SOLID FOUNDATION WALLS AND IN NON-REINFORCED OR GROUTED PIERS, PILASTERS AND COLUMNS.
8. CUTTING AND FITTING OF MASONRY INCLUDING THAT REQUIRED TO ACCOMMODATE THE WORK OF OTHER TRADES, MUST BE DONE WITH MASONRY SAWS.
9. MASONRY WALLS AND PIERS MUST HAVE 'LADUR TYPE' HORIZONTAL JOINT REINFORCING CONSISTING OF HORIZONTAL RODS WITH 9 GAGE CROSS TIES, HOT DIPPED GALVANIZED WITH 0.8 OZ. ZINC COATING, ASTM A116, CLASS 3 WITH MAXIMUM VERTICAL SPACING OF 16" O.C., UNLESS NOTED OTHERWISE ON THE MASONRY WALL SCHEDULES.
10. THE MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS EXCEPT IN COLUMNS MUST BE EQUAL TO THE NOMINAL DIAMETER OF THE BAR.
11. VERTICAL REINFORCEMENT MUST BE LAP SPLICED A MINIMUM OF 48 BAR DIAMETERS (2'-0" MINIMUM) WHERE REQUIRED.
12. BARS MUST BE COMPLETELY EMBEDDED IN GROUTING FILLED CORES. BARS MUST HAVE A COVERAGE OF MASONRY NOT LESS THAN:
   A. BARS LARGER THAN #5 2"
   B. #5 BARS OR SMALLER 1-1/2"
13. PROVIDE ADEQUATE TEMPORARY BRACING AS REQUIRED DURING CONSTRUCTION TO WITHSTAND LATERAL LOADS AND THE PRESSURES OF FLUID GROUT.
14. ANCHORS, WALL PLUGS, ACCESSORIES AND OTHER ITEMS TO BE BUILT IN MUST BE INSTALLED AS THE MASONRY WORK PROGRESSES, SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS.
15. SEE SPECIFICATION DIVISION 4, "MASONRY", FOR FURTHER REQUIREMENTS.
16. PROVIDE PROTECTION OF NEW MASONRY AS REQUIRED BY CODE.
17. FOR NON-LOAD BEARING INTERIOR CMU WALL OPENINGS LINTEL MUST BE A 8" CMU BOND BEAM WITH 2-#5 CONTINUOUS BARS AND 8" MINIMUM BEARING ON EACH SIDE.

1 2 3 4 5

STRUCTURAL METAL DECK

1. METAL DECK MUST BE DESIGNED FOR THE SPANS AND OTHER CONDITIONS SHOWN ON THE DRAWINGS.
2. METAL DECK SECTION PROPERTIES MUST BE COMPUTED IN ACCORDANCE WITH AISI "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".
3. METAL DECKING MUST BE FABRICATED FROM STEEL TYPE ASTM A653, GRADE A, HAVING A MINIMUM YIELD STRENGTH OF 50,000 PSI. ROOF METAL DECK MUST BE FORMED WITH TELESCOPED ENDS TO LAP ENDS OF SHEETS A MINIMUM OF 2 INCHES.
4. THE FABRICATOR/ERECTOR MUST PROVIDE ENGINEERING CALCULATIONS, PUBLISHED MANUFACTURER'S DATA AND INDEPENDENTLY CERTIFIED LOAD TEST DATA VERIFYING THE SPECIFIED DECK REQUIREMENTS FOR REVIEW, INCLUDING DIAGRAM DATA (BASED ON IBC 2018 REQUIREMENTS), PROVIDE ENGINEERED AND CHECKED SHOP DRAWINGS INDICATING LOCATION, GAGE AND SIZE OF EACH PIECE OF DECKING. THE DRAWINGS MUST CLEARLY SHOW WELDING OR FASTENER DETAILS TO STRUCTURAL FRAMING AND SIDE LAP CONNECTION DETAILS.
5. THE MINIMUM THICKNESS OF THE METAL DECK MUST BE AS NOTED ON DRAWINGS. THE FABRICATOR/ ERECTOR MUST VERIFY MINIMUM THICKNESS REQUIRED TO CONFORM TO DESIGN CRITERIA AS STATED IN NOTE #13 BELOW.
6. THE METAL DECK MUST BE DESIGNED TO BE CONTINUOUS OVER THREE (3) SPANS IN THE DIRECTION INDICATED. SINGLE AND DOUBLE SPANS, IF REQUIRED, MUST SATISFY LOAD AND DEFLECTION REQUIREMENTS.
7. THE DECK MUST BE DESIGNED FOR AN ASSUMED SUITABLE CONSTRUCTION LIVE LOAD TAKING INTO CONSIDERATION THE PARTICULAR METHOD OF CONCRETE PLACEMENT TO BE USED ON THIS PROJECT, SPAN AND LOAD CONDITIONS INDICATED BY THE SUPPORTING FRAMEWORK, OPENINGS AND ACTUAL PIECE SIZES UTILIZED. THE ASSUMED CONSTRUCTION LIVE LOAD MUST NOT BE LESS THAN 20 PSF. THE CONCRETE CONTRACTOR MUST NOT EXCEED THE ASSUMED CONSTRUCTION DESIGN LIVE LOAD WITHOUT FIRST TAKING PROPER SAFETY PRECAUTIONS SUCH AS SHORING, ETC. ADDITIONALLY, FOLLOW APPLICABLE CITY, LOCAL AND AISI REQUIREMENTS IF MORE STRINGENT.
8. DESIGN CRITERIA:

   A. METAL DECK: (CONSTRUCTION LOADS ONLY)

      1. MAXIMUM DECK DEFLECTION FOR CONCRETE WET WEIGHT MUST BE LESS THAN OR EQUAL TO 0.5 INCHES COMPUTED EITHER ON A SINGLE SPAN BASIS, OR ON LOADING ONLY ONE (1) SPAN FOR MULTIPLE SPAN CONDITIONS.
      2. MAXIMUM STRESS IN DECK FOR CONCRETE WET WEIGHT AND CONSTRUCTION LOADS MUST BE LESS THAN OR EQUAL TO 0.6FY (FY=YIELD STRESS) COMPUTED EITHER ON A SINGLE SPAN BASIS, OR ON LOADING ONLY ONE (1) SPAN FOR MULTIPLE SPAN DECKS.

   B. NON-COMPOSITE ROOF DECKS:

      1. MAXIMUM DECK DEFLECTION UNDER TOTAL SUPERIMPOSED LOAD MUST BE LESS THAN OR EQUAL TO L/240, OR ONE INCH MAXIMUM, COMPUTED EITHER ON A SINGLE SPAN BASIS, OR ON LOADING ON ONLY ONE (1) SPAN FOR MULTIPLE SPAN CONDITIONS.
      2. MAXIMUM STRESS IN DECK FOR TOTAL SUPERIMPOSED LOAD MUST BE LESS THAN OR EQUAL TO 0.6FY.

9. PROVIDE CONTINUOUS SHEET METAL CLOSURES AT SLAB OPENINGS AND SLAB EDGES AND CONTINUOUS DECK CLOSURE AT DECK ENDS AS REQUIRED BY SDI (UNLESS DETAILED OTHERWISE).
10. PROVIDE 18ga RIDGE, HIP AND VALLEY BENT PLATE W/ 2 - #12 SCREWS AT 6" O.C.
11. DO NOT ATTACH MEP RELATED CONDUITS, UNITS AND OTHER ITEMS WEIGHTING MORE THAN 50 LBS DIRECTLY TO NON-COMPOSITE ROOF DECKS. MEP RELATED ITEMS MUST BE ATTACHED/ HUNG TO/FROM THE FRAMING MEMBERS.

DECK PROPERTIES

DECK TYPE	GAUGE	DESIGN THICKNESS	Ip (in4/ft)	Sp (in3/ft)
3" COMPOSITE	18			
2" COMPOSITE	18	0.0474"	0.559	0.495
1 1/2" ROOF-B	20	0.0358"	0.201	0.234
1 1/2" ROOF-B	22	0.0295"	0.155	0.186

LIGHT-GAUGE STEEL FRAMING

1. STRUCTURAL PROPERTIES AND CAPACITIES OF STEEL FRAMING COMPONENTS MUST BE IN ACCORDANCE WITH THE A.I.S.I. COLD-FORMED DESIGN SPECIFICATION.
2. TEMPORARY BRACING MUST BE PROVIDED AND REMAIN IN PLACE UNTIL WORK IS COMPLETELY STABILIZED.
3. FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD -FORMED MEMBERS IS UNACCEPTABLE. WHEN REQUIRED FOR BRIDGING PURPOSES, FRAMING FABRICATOR IS TO ENSURE PUNCHOUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH.
4. NO SPLICES IN STUDS, JOIST, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR SUCH SPLICE(S).
5. WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUD SPACINGS, A PIECE OF STUD MUST BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALL OR THE TRACKS MUST BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.
6. IF REQUIRED, WELDED CONNECTIONS ARE TO BE PERFORMED IN ACCORDANCE WITH THE LATEST VERSION OF AWS D1.3 SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES. CONSULT AWS D19.0 WELDING ZINC COATED STEEL AND ANSI STANDARD Z49.1 FOR INFORMATION REGARDING SAFE WELDING PROCEDURES. WELDS ARE TO BE TOUCHED-UP WITH A RUST INHIBITIVE GALVANIZED PAINT.
7. SUGGESTED WELD METAL AND PROCESS FOR SHOP WELDING ARE: 60 KSI WELD METAL STRENGTH (MINIMUM) - MIG. SUGGESTED METHODS FOR FIELD WELDING: 1/8" (UNLESS NOTED OTHERWISE) E60XX (MINIMUM) ELECTRODE - SMAW; OR "GASLESS" MIG.
8. UNLESS NOTED OTHERWISE, REFER TO LITERATURE PUBLISHED BY HILTI FASTENING SYSTEMS, INC. FOR ANCHOR BOLT, AND POWER DRIVEN FASTENER INFORMATION. USE 1 INCH MINIMUM EMBEDMENT FOR EACH POWDER DRIVEN FASTENER UNLESS NOTED OTHERWISE. REFER TO BUILDEX, INC. TECHNICAL INFORMATION FOR TEKS SCREW DATA. ALTERNATE MANUFACTURE'S FASTENERS OF COMPARABLE SPECIFICATIONS AND LOAD CAPACITIES ARE ACCEPTABLE.
9. STUD, JOIST, AND TRUSS MEMBERS 54 mils (16 GAUGE) AND HEAVIER MUST BE FORMED STEEL CORRESPONDING TO A TYPE LISTED IN THE A.I.S.I SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, WITH A MINIMUM YIELD STRENGTH OF 50 KSI.
10. 43 mils (18 GAGE) AND LIGHTER MEMBERS, AN TRACK BRIDGING AND ACCESSORY ITEMS MUST BE FORMED STEEL MEETING THE CRITERIA AS LISTED ABOVE, WITH A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.
11. FRAMING COMPONENTS MUST BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS MUST BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
12. FRAMING PRODUCTS MUST BE FORMED FROM STEEL POSSESSING A G-60 (INTERIOR) G-90 (EXTERIOR) ZINC COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM A525.
13. STRUCTURAL PROPERTIES USED IN DESIGN ARE THOSE PUBLISHED BY "STEEL STUD MANUFACTURER'S ASSOC." (SSMA). MANUFACTURERS MUST PROVIDE MEMBERS TO THESE PROPERTIES AND SPECIFICATIONS. DESIGN PROPERTIES MUST BE A MINIMUM OF 95% OF THE BASIS OF DESIGN.
14. LIGHT GAUGE STEEL CONTRACTOR MAY PROPOSE SUBSTITUTES FOR FRAMING SYSTEMS. PROVIDE DRAWINGS & CALCULATIONS FOR SUBSTITUTIONS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL/ STRUCTURAL ENGINEER, LICENSED IN ANY STATE IN THE UNITED STATES, FOR REVIEW.
15. LIGHT GAUGE STEEL CONTRACTOR MUST DESIGN AND SUBMIT CONNECTIONS. CONNECTIONS ASSUMED TO BE SCREWED.
16. SEE ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING WALL LOCATIONS.
17. LIGHT GAUGE STEEL NOMENCLATURE
    S 362 162-54

    362 - MEMBER DEPTH = 3-5/8"
    S - MEMBER STYLE
    S = STUD OR JOIST
    T = TRACK
    162 - FLANGE WIDTH = 1-5/8"
    54 - MATERIAL THICKNESS IN mils

MATERIAL THICKNESS / GAUGE

MILLS	GAUGE	DESIGN THICKNESS	MINIMUM THICKNESS
33	20	0.0346"	0.0329"
43	18	0.0451"	0.0428"
54	16	0.0566"	0.0538"
68	14	0.0713"	0.0677"
97	12	0.1017"	0.0969"

STRUCTURAL STEEL

1. STRUCTURAL STEEL MUST BE ASTM A992 GR 50 UNLESS NOTED OTHERWISE. STRUCTURAL CONNECTION PLATES AND ANGLES MUST BE ASTM A36 GRADE STEEL. STRUCTURAL HSS SECTIONS MUST BE ASTM A500 GRADE C.

2. BOLTS, NUTS AND WASHERS MUST CONFORM TO THE REQUIREMENTS OF ASTM A325/A490. BOLTS MUST BE 3/4"∅ MINIMUM, UNLESS NOTED OTHERWISE.

3. ANCHOR RODS MUST BE ASTM F1554 Gr. 36 ROD (UNLESS NOTED OTHERWISE) AND PLACED WITHIN A 1/8"(±) TOLERANCE FROM DIMENSIONS AS SHOWN ON DRAWINGS. IN-PLACE ANCHOR ROD LOCATIONS MUST BE VERIFIED IN THE FIELD BEFORE FABRICATION OF BASE PLATES.

4. DETAILING, FABRICATION AND ERECTION MUST CONFORM TO AISC SPECIFICATIONS, LATEST EDITIONS.

5. WELDING MUST BE DONE BY QUALIFIED WELDERS AND MUST CONFORM TO THE AWS "CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION", LATEST EDITION. WELDING ELECTRODES MUST BE E70XX.

6. CONNECTIONS OTHER THAN FOR THE LATERAL-LOAD CARRYING SYSTEMS (DOR DESIGNED) MUST BE DESIGNED AND DETAILED BY THE FABRICATOR. DETAILING MUST BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE GENERAL DETAILS SHOWN ON THE DRAWINGS ARE CONCEPTUAL ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES, UNLESS SPECIFICALLY NOTED. SUBMIT CONNECTION DESIGN CALCULATIONS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL/ STRUCTURAL ENGINEER, LICENSED IN ANY STATE IN THE UNITED STATES, WITH THE STRUCTURAL STEEL SHOP DRAWINGS, FOR REVIEW.

7. OTHER CONNECTIONS MUST BE SIMPLE SHEAR CONNECTIONS UTILIZING HIGH-STRENGTH BOLTS IN BEARING TYPE CONNECTIONS. THE CAPACITIES MUST BE AS SHOWN BELOW, UNLESS NOTED OTHERWISE.

8. MINIMUM SHEAR (FACTORED, LRFD) CAPACITIES: (FOR STANDARD ROLLED SHAPES, COMPOSITE AND NON-COMPOSITE)

BEAM SIZE	FACTORED REACTION	BEAM SIZE	FACTORED REACTION
W8x10 TO x21	16 KIPS	W10x12 TO x26	16 KIPS
W12x14 TO x19	28 KIPS	W12x22 TO x40	36 KIPS
W14x22 TO x26	30 KIPS	W14x30 TO x53	36 KIPS
W16x26 TO x31	42 KIPS	W16x36 TO x57	60 KIPS
W18x35 TO x46	55 KIPS	W18x50 TO x71	90 KIPS
W21x44 TO x57	80 KIPS	W21x62 TO x93	120 KIPS
W24x55 TO x62	90 KIPS	W24x68 TO x94	130 KIPS
W27x84 TO x114	150 KIPS		
BAL BM SIZES	SEE PLANS		

STRUCTURAL STEEL

9. THE MINIMUM NUMBER OF BOLTS PER CONNECTION MUST BE TWO (2).

10. SIMPLE SHEAR CONNECTIONS MUST BE CAPABLE OF END ROTATION AS PER THE REQUIREMENTS OF THE AISC CODE.

11. MINIMUM FILLET WELDS MUST COMPLY WITH THE AISC, BUT MUST NOT BE LESS THAN 1/4 INCH, UNLESS NOTED OTHERWISE.

12. SHOP AND FIELD TESTING OF WELDS AND BOLTS MUST BE AS FOLLOWS:

    A. WELDS MUST BE VISUALLY INSPECTED.

    B. FILLET WELDS FOR BEAM AND GIRDER SHEAR CONNECTION PLATES (SEE SPECIFICATION) MUST BE CHECKED BY MAGNETIC PARTICLE FOR FINAL PASS ONLY.

    C. ULTRASONICALLY TEST (SEE SPECIFICATION) OF FULL PENETRATION WELDS.

    D. CHECK BY CALIBRATED TORQUE WRENCH 25 PERCENT OF BOLTS IN EACH SHEAR CONNECTION, BUT NOT LESS THAN TWO (2) BOLTS PER CONNECTION.

    E. CHECK 100 PERCENT OF CONTINUITY PLATE AND DIRECT TENSION FILLET WELDS BY MAGNETIC PARTICLE FOR THE FINAL PASS.

    F. THE TESTING AGENCY MUST PERFORM SHOP AND FIELD INSPECTION AND TESTING AS OUTLINED ABOVE.

    G. THE STRUCTURAL STEEL FABRICATOR AND ERECTOR MUST SCHEDULE WORK TO ALLOW THE ABOVE TESTING REQUIREMENTS TO BE COMPLETED.

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

14. AFTER FABRICATION, STEEL MUST BE CLEANED OF RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS.

15. PROVIDE CONTROL OF ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS, ESPECIALLY WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO EXISTING AND NEW CONCRETE WALLS, BEAMS OR COLUMNS.

16. THERE MUST BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE CONTRACTING OFFICER.

17. ADDITIONAL STEEL REQUIRED FOR ERECTION PURPOSES AND SITE ACCESS OF STOCK-PILED MATERIALS MUST BE PROVIDED AT NO COST. ADDITIONAL STEEL USED FOR THIS PURPOSE MUST BE REMOVED.

18. EXPANSION ANCHORS MUST BE HILTI - KWIK-BOLT, SIMPSON WEDGE ADHESIVE ANCHORS MUST BE HILTI - HIT HY200, SIMPSON SET, SCREW ANCHORS MUST BE HILTI-HUS-H, SIMPSON TITEN-HD OR EQUIVALENT.

19. EXAMPLE ANCHOR EQUIVALENTS:

    5/8"∅ HILTI HY-200 ANCHORS AT 2'-0" O.C. (5" EMBED) OR,
    5/8"∅ SIMPSON SET ANCHORS AT 2'-0" O.C. (5" EMBED)
    1/2"∅ HILTI HY-200 ANCHORS AT 2'-8" O.C. (41/2" EMBED) OR,
    1/2"∅ SIMPSON SET ANCHORS AT 2'-8" O.C. (41/2" EMBED)
    1/2"∅ KWIK BOLT-3 (41/2" EMBED) OR,
    1/2"∅ SIMPSON WEDGE (41/2" EMBED)

20. STEEL EXPOSED TO WEATHER - COLUMNS, BEAMS, BOLTS, PLATES, ANCHOR BOLTS, ETC. MUST BE HOT-DIPPED GALVANIZED AFTER FABRICATION. AREA REQUIRING FIELD WELDS MUST HAVE THE GALVANIZING REMOVED BEFORE WELDING. FIELD WELDS MUST BE PAINTED WITH AN APPROVED ZINC-RICH PAINT. GALVANIZING MUST CONFORM TO ASTM A123.

LIGHT-GAUGE ROOF TRUSS FRAMING

1. ROOF TRUSS MANUFACTURER MUST PROVIDE CALCULATIONS FOR ROOF & EAVE TRUSSES INCLUDING CONNECTION CALCULATIONS. SUBMIT SIGNED & SEALED CALCULATIONS/ DRAWINGS BY A PROFESSIONAL/ STRUCTURAL ENGINEER LICENSED IN ANY STATE IN THE UNITED STATES, FOR REVIEW.

2. ROOF TRUSS MANUFACTURER MUST DESIGN AND DETAIL EAVE TRUSS CONNECTIONS TO THE CONCRETE/ PRECAST/ MASONRY OR LIGHT-GAUGE STUDS AND TRUSSES ENDS. COORDINATE W/ EOR AND SPECIALITY CONTRACTOR.

3. MINIMUM GAUGE FOR ROOF TRUSS MEMBER MUST BE 20GA (33 MIL) AND 18GA (43 MIL) FOR TOP CHORD MEMBER.

4. SEE SHEETS S012 FOR TRUSS DESIGN LOADS.

5. ALL HANGING LOADS SHALL BE SUPPORTED ONLY AT THE TRUSS PANEL POINTS. NO HOLES SHALL BE DRILLED OR BURNED IN THE TOP OR BOTTOM CHORD OF TRUSS.

6. DESIGN ALL TRUSSES FOR A **2-250 LBS. POINT LOAD** APPLIED AT ANY LOCATION AT THE TOP CHORD OR AT A BOTTOM CHORD PANEL POINT, U.N.O.

7. TRUSS MANUFACTURER SHALL DESIGN ALL TRUSSES FOR UPLIFT FORCES AS REQUIRED PER INTERNATIONAL BUILDING CODE, IBC 20121, AND, FOR WIND UPLIFT PRESSURES AS LISTED ON COMPONENT & CLADDING LOADING DIAGRAM. MINIMUM NET UPLIFT = 20 PSF (WORKING LOAD).

8. COORDINATE ROOF TRUSS DESIGN WITH FALL ARREST SYSTEM (WHERE REQUIRED) IMPOSED LOADS ON THE TRUSSES.

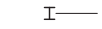
ABBREVIATIONS & SYMBOLS

A.B.	ANCHOR BOLT
ADJ.	ADJACENT
ADDL.	ADDITIONAL
ARCH.	ARCHITECTURAL
BAL.	BALANCE
B.O.F.	BOTTOM OF FOOTING
BM	BEAM
BOT.	BOTTOM
B.S.	BOTH SIDES
BSMT.	BASEMENT
C.	CAMBER
CANT.	CANTILEVER
C/C OR C.C.	CENTER TO CENTER
CL.	CENTER LINE
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
DET.	DETAIL
DIA.	DIAMETER
DN.	DOWN
DWG.	DRAWING
DWL.	DOWEL
EA.	EACH
E.F.	EACH FACE
EL.	ELEVATION
EQUIP.	EQUIPMENT
E.W.	EACH WAY
E.W.E.F.	EACH WAY EACH FACE
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
FAS.	FASTEN, FASTENER
FIN.	FINISH(ED)
FL.	FLOOR
FT.	FOOT OR FEET
FTG.	FOOTING
GEN.	GENERAL
H.	HIGH
H.H.N.	HEXAGONAL HEAD NUT
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
H.S.	HIGH STRENGTH
I.D.	INSIDE DIAMETER
IN.	INCH OR INCHES
INFO.	INFORMATION
INV.	INVERT
JT.	JOINT
K.	KIP (ONE THOUSAND POUNDS)
KSI.	KIP PER SQUARE INCH
L.	SPAN, FEET OR INCHES
LOCA.	LOCATION
L.P.	LOW POINT
LT. WT.	LIGHT WEIGHT
MAX.	MAXIMUM
MECH.	MECHANIC(AL)
MFR.	MANUFACTURER
MIN.	MINIMUM
N.T.S.	NOT TO SCALE
O.C.	ON CENTER(S)
OPNG.	OPENING
OPP.H.	OPPOSITE HAND
PM.J.	PREMOLDED JOINT
PSI	POUNDS PER SQUARE INCH PSF POUNDS PER SQUARE FOOT
P.V.C.	POLYVINYL CHLORIDE
R.D.	ROOF DRAIN
REINF.	REINFORCING
REQ.	REQUIRED
SCHED.	SCHEDULE
SIM.	SIMILAR
SPECS.	SPECIFICATIONS
STD.	STANDARD
STRUCT.	STRUCTURE
SQ.	SQUARE

THK.	THICK
THD.	THREAD
T.D.	TRENCH DRAIN
T.W.	TACK WELD
TYP.	TYPICAL
T&B.	TOP AND BOTTOM
T/FLOOR	TOP OF FLOOR
T/FTG.	TOP OF FOOTING
T/STL.	TOP OF STEEL
T/SLAB	TOP OF SLAB
T/W	TOP OF WALL
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
W.	WIDE, WIDTH
W.W.F.	WELDED WIRE FABRIC
W/	WITH
W.P.	WORKING POINT
W.S.	WATER STOP
WT.	WEIGHT
<	ANGLE
@	AT
&	AND
℄	CENTERLINE
∅	DIAMETER
%	PERCENT
#	POUND
℗	PLATE
O	ROUND

ELEVATION TARGET


SECTION NUMBER
SHEET NUMBER


SIMPLE SHEAR CONNECTION


FULL MOMENT CONNECTION

STRUCTURAL QUALITY ASSURANCE PLAN

GENERAL

THE STRUCTURE IS DESIGNED PER THE INTERNATIONAL BUILDING CODE (IBC), 2021 EDITION WITH FRISCO AMENDMENTS, EFFECTIVE 01-01-2023. THIS STRUCTURAL QUALITY ASSURANCE PLAN IDENTIFIES THE RESPONSIBILITIES OF THE CONTRACTOR AND THE SPECIAL INSPECTOR, AS DEFINED IN IBC 2021 CHAPTER 17 AND AMENDMENTS, IN PERFORMING THE TESTING AND INSPECTION OF THE WORK REQUIRED BY CHAPTER 17 OF THE IBC THAT IS WITHIN THE SCOPE OF THE STRUCTURAL ENGINEERING SERVICES FOR THIS PROJECT. THE FOLLOWING MUST NOT BE CONSIDERED AS THE EXHAUSTIVE LIST OF INSPECTIONS REQUIRED. REFER TO IBC 2021 CHAPTER 17 AND OTHER PORTIONS OF CONSTRUCTION DOCUMENTS AND SPECIFICATIONS FOR TESTING AND INSPECTION REQUIRED OF STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, OR OTHER BUILDING COMPONENTS.

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR MUST SUBMIT TO THE AUTHORITY HAVING JURISDICTION AND THE A / E, A WRITTEN STATEMENT OF RESPONSIBILITY THAT CONTAINS THE FOLLOWING:

1. ACKNOWLEDGEMENT OF AWARENESS OF THE INSPECTION REQUIREMENTS CONTAINED WITHIN THIS STRUCTURAL QUALITY ASSURANCE PLAN.
2. ACKNOWLEDGEMENT THAT CONTROL MUST BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
3. PROCEDURES FOR EXERCISING CONTROL WITHIN CONTRACTOR'S ORGANIZATION,THE METHOD AND FREQUENCY OF REPORTING, AND THE DISTRIBUTION OF REPORTS.
4. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE SPECIAL INSPECTOR IS PRESENT FOR ALL WORK REQUIRING INSPECTION. ANY WORK THAT REQUIRES SPECIAL INSPECTION AND IS PERFORMED WITHOUT THE INSPECTOR BEING PRESENT IS SUBJECT TO BEING DEMOLISHED AND RECONSTRUCTED.

CONTRACTOR HAS THE FOLLOWING RESPONSIBILITIES TO THE SPECIAL INSPECTOR:

1. PROVIDE COPY OF CONSTRUCTION DOCUMENTS TO THE INSPECTOR.
2. NOTIFY THE INSPECTOR SUFFICIENTLY IN ADVANCE OF OPERATIONS TO ALLOW ASSIGNMENT OF PERSONNEL AND SCHEDULING OF TESTS.
3. COOPERATE WITH THE INSPECTOR AND PROVIDE ACCESS TO WORK.
4. PROVIDE SAMPLES OF MATERIALS TO BE TESTED IN REQUIRED QUANTITIES.
6. PROVIDE LABOR TO ASSIST THE INSPECTOR IN PERFORMING TESTS / INSPECTIONS.

SPECIAL INSPECTOR'S RESPONSIBILITIES

THE SPECIAL INSPECTOR MUST MEET THE REQUIREMENTS OF IBC CHAPTER 17 WITH FRISCO AMENDMENTS.

THE INSPECTOR MUST MAINTAIN RECORDS OF INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC CODE AND MUST DISTRIBUTE THESE RECORDS TO AUTHORITY HAVING JURISDICTION, ARCHITECT AND STRUCTURAL ENGINEER ON A WEEKLY BASIS.

AT THE CONCLUSION OF THE PROJECT, THE INSPECTOR MUST SUBMIT A WRITTEN STATEMENT THAT THE QUALITY CONTROL INSPECTIONS DURING CONSTRUCTION HAVE COMPILED WITH THIS STRUCTURAL ASSURANCE PLAN AND THAT ANY DISCREPANCIES NOTED DURING CONSTRUCTION HAVE BEEN CORRECTED.

TABLE 1

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS (ADAPTION OF 2021 IBC - TABLE 1705.6)

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
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 CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4. DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESS 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

TABLE 2

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION (ADAPTION OF 2021 IBC - TABLE 1705.3)

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD *a	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	-
2. REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706; B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND C. INSPECT ALL OTHER WELDS.	- - X	X X -	AWS D1.4 ACI 318: 26.6.4	-
3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS *b. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATION RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	X -	- X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	-
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C31 ACI 318: 26.5, 26.12	-
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	-
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	-
9. INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES. B. GROUTING OF BONDED PRESTRESSING TENDONS.	X X	- -	ACI 318: 26.10	-
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	ACI 318: Ch.26.9	-
11. FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY IN STRUCTURES ASSIGNED TO SEISMIC dESIGN cATEGORY C, D, E, OR F, INSPECT SUCH CONNECTIONS AND REINF. IN FIELD FOR: A. INSTALLATION OF THE EMBEDDED PARTS. B. COMPLETION OF THE CONTINUITY OF REINF. ACROSS JOINTS. C. COMPLETION OF CONNECTIONS IN FIELD.	 X X X	 - - -	ACI 318: 26.13.1.3 ACI 550.5	-
12. INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5.	-	X	ACI 318: 26.13.1.3	-
13. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	-
14. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2 (b)	-

*a. WHERE APPLICABLE, SEE ALSO 2021 IBC SECTION 1705.13. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

*b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION MUST BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS MUST BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND MUST BE APPROVED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO THE COMMENCEMENT OF WORK.

TABLE 3

INSPECTION TASKS PRIOR TO WELDING (ADAPTION OF AISC 360-16 TABLE C-N5.4-1)

INSPECTION TASKS PRIOR TO WELDING	QA
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O
WELDER IDENTIFICATION SYSTEM *1	O
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL, • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O
FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	O
CHECK WELDING EQUIPMENT	-

*1 THE FABRICATOR OR ERECTOR, AS APPLICABLE, MUST MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, MUST BE LOW-STRESS TYPE.

NOTES:

1. "CONTINUOUS SPECIAL INSPECTION" INDICATES SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED.
2. "PERIODIC SPECIAL INSPECTION" INDICATES SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.
3. "P" INDICATES TO PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER, FOR EACH BOLTED CONNECTION, AND EACH STEEL ELEMENT.
4. "O" INDICATES TO OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
5. "QA" INDICATES QUALITY ASSURANCE AS SPECIFIED IN CHAPTER N OF AISC 360-16.

TABLE 4

INSPECTION TASKS DURING WELDING (ADAPTION OF AISC 360-16 TABLE C-N5.4-2)	
INSPECTION TASKS DURING WELDING	QA
USE OF QUALIFIED WELDERS	O
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL NO WELDING OVER CRACKED TACK WELDS	O O
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	O
WPS FOLLOWED • SETTING ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) • PROPER POSITION (F, V, H, OH)	O
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	O

TABLE 5

INSPECTION TASKS AFTER WELDING (ADAPTION OF AISC 360-16 TABLE C-N5.4-3)	
INSPECTION TASKS AFTER WELDING	QA
WELDS CLEANED	O
SIZE, LENGTH AND LOCATION OF WELDS	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	P
ARC STRIKES	P
k-AREA *1	P
BACKING REMOVED AND WELDS TABS REMOVED (IF REQUIRED)	P
REPAIR ACTIVITIES	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P

*1 WHEN WELDING OF DOUBLE 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.

TABLE 6

INSPECTION TASKS PRIOR TO BOLTING OF STRUCTURAL STEEL (ADAPTION OF AISC 360-16 TABLE C-N5.6-1)	
INSPECTION TASKS PRIOR TO BOLTING	QA
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	O
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O

TABLE 7

INSPECTION TASKS DURING BOLTING OF STRUCTURAL STEEL (ADAPTION OF AISC 360-16 TABLE C-N5.6-2)	
INSPECTION TASKS DURING BOLTING	QA
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O

TABLE 8

INSPECTION TASKS AFTER BOLTING OF STRUCTURAL STEEL (ADAPTION OF AISC 360-16 TABLE C-N5.6-3)	
INSPECTION TASKS AFTER BOLTING	QA
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P

TABLE 9

INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT	
INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT	QA
PLACEMENT AND INSTALLATION OF STEEL DECK	P
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	P

NOTES:

1. "CONTINUOUS SPECIAL INSPECTION" INDICATES SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED.
2. "PERIODIC SPECIAL INSPECTION" INDICATES SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.
3. "P" INDICATES TO PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER, FOR EACH BOLTED CONNECTION, AND EACH STEEL ELEMENT.
4. "O" INDICATES TO OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
5. "QA" INDICATES QUALITY ASSURANCE AS SPECIFIED IN CHAPTER N OF AISC 360-16.

TABLE 10

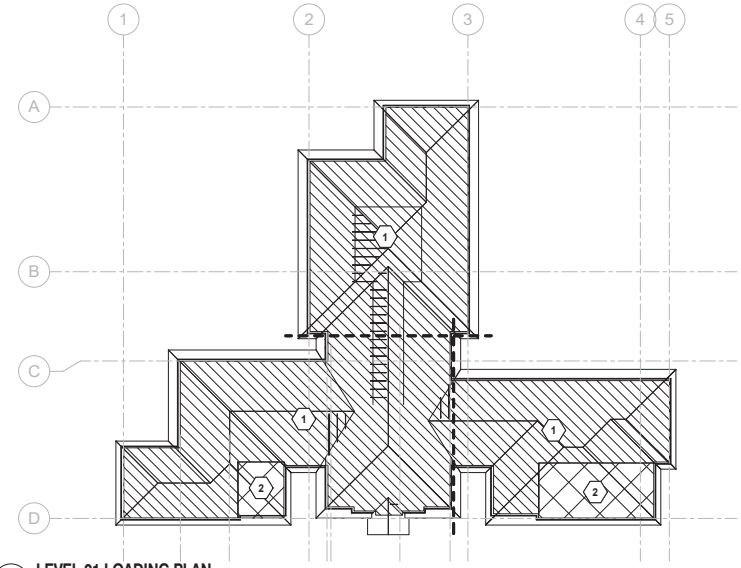
LIGHT GAUGE STEEL CONSTRUCTION AND CONNECTIONS (ADAPTION OF 2021 IBC - 1705.2.2, 1705.2.4, 1705.12.2)	
INSPECTION TASKS DURING BOLTING	QA
TRUSSES SPANNING 60 FT OR GREATER WHERE/IF APPLIES - VERIFY THAT TEMPORARY AND PERMANENT TRUSS RESTRAINT/BRACING IS INSTALLED IN ACCORDANCE WITH APPROVED TRUSS SUBMITTAL PACKAGE.	P
WELDED CONNECTIONS (SEISMIC AND/OR WIND RESISTING SYSTEM) - VISUALLY INSPECT ALL WELDS COMPOSING PART OF THE MAIN WIND/ SEISMIC FORCE RESISTING SYSTEM, INCLUDING SHEAR WALLS, BRACES, COLLECTORS (DRAG STRUTS), AND HOLD-DOWNS.	P
CONNECTIONS (SEISMIC AND/OR WIND RESISTING SYSTEM) -VISUALLY INSPECT ALL SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM, INCLUDING ROOF DECK, ROOF FRAMING, EXTERIOR WALL COVERING, WALL TO ROOF/FLOOR CONNECTIONS, BRACE, COLLECTOR (DRAG STRUTS) AND HOLD-DOWNS.	P

TABLE 11

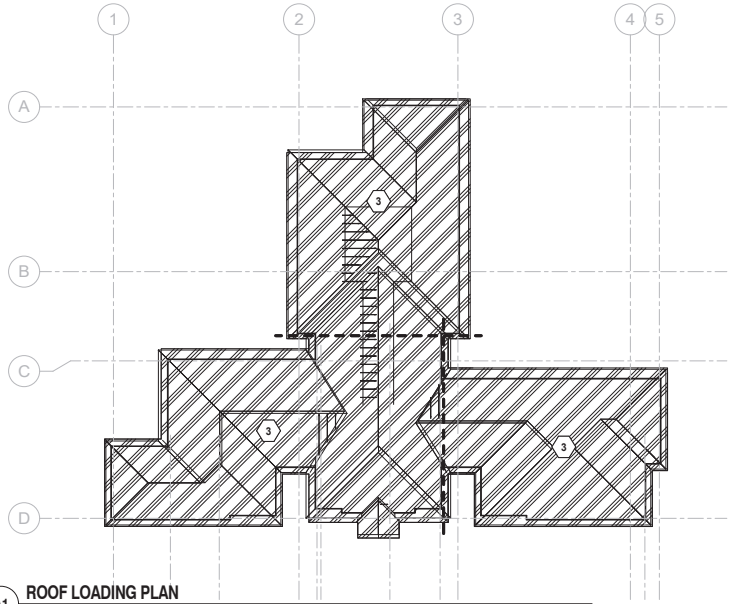
REQUIRED MINIMUM SPECIAL INSPECTION OF MASONRY (ADAPTION OF 2021 IBC AND TMS 402/602-16)			
INSPECTION TASK	FREQUENCY (a)		
	LEVEL 1	LEVEL 2	LEVEL 3
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:			
a. PROPORTIONS OF SITE-PREPARED MORTAR	NR	P	P
b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P
c. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS	NR	P	P
d. PRESTRESSING TECHNIQUE	NR	P	P
e. SAMPLE PANEL CONSTRUCTION	NR	P	C
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:			
a. GROUT SPACE	NR	P	C
b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	NR	P	C
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT OF BONDED TENDONS	NR	P	P
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:			
a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	NR	P	P
b. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	P	P
c. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	P	P
d. TYPE, SIZE, AND LOCATION OF ANCHORS INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	NR	P	C
e. WELDING OF REINFORCEMENT	NR	C	C
f. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMP BELOW 40F) OR HOT WEATHER (TEMP ABOVE 90F)	NR	P	P
g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	NR	C	C
h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IN COMPLIANCE	NR	C	C
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS.	NR	P	C

a. FREQUENCY REFERS TO THE FREQUENCY OF INSPECTION. NR = NOT REQUIRED, P = PERIODIC, C = CONTINUOUS

PROJECT IS LEVEL 2.



C1 **LEVEL 01 LOADING PLAN**
1" = 30'-0"



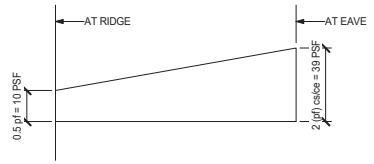
A1 **ROOF LOADING PLAN**
1" = 30'-0"

NOTES:

1. R - REDUCIBLE LIVE LOAD; NR - NON-REDUCIBLE LIVE LOAD; S - STORAGE LOAD
2. SEE COMPONENT & CLADDING LOADS ON SHEET S011 FOR ROOF WIND UPLIFT DESIGN PRESSURES.
3. ADDITIONAL ROOF LIGHT-GAUGE TRUSS POINT LOADS - 2x 250 LBS APPLIED AT TWO SINGLE POINTS OF TOP OR BOTTOM CHORD OF TRUSS.
4. USE TOTAL DEAD LOAD OF 15 PSF TO CALCULATE THE NET WIND UPLIFT FOR THE DESIGN OF ROOF LIGHT- GAUGE TRUSS AND COMPONENT USING THE WIND PRESSURES AS SHOWN ON SHEET S0XX.
   USE TOTAL DEAD LOAD OF 15 PSF TO CALCULATE THE NET WIND UPLIFT FOR THE DESIGN OF ROOF LIGHT- GAUGE TRUSS AND COMPONENT USING THE WIND PRESSURES AS SHOWN ON SHEET S0XX.
5. PER UFC 3-301-01 SECTION 1607.0.4 FALL ARREST ANCHORAGES MUST BE CAPABLE OF SUPPORTING AT LEAST 5,000 POUNDS PER PERSON ATTACHED OR BE DESIGNED, INSTALLED AND USED AS PART OF A COMPLETE FALLARREST SYSTEM WHICH MAINTAINS A SAFETY FACTOR OF AT LEAST 2.0 UNDER THE SUPERVISION OF A QUALIFIED PERSON. SEE ANSI/ASSE Z359.6 FOR ADDITIONAL REQUIREMENTS AND DESIGN GUIDANCE (NOTE: THE 1.6 LOAD FACTOR USED IN Z359.6 FOR ACTIVE FORCES MUST BE REPLACED BY 2.0)

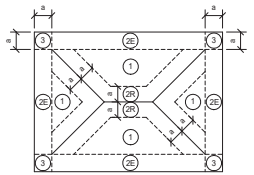
DESIGN GRAVITY LOADS

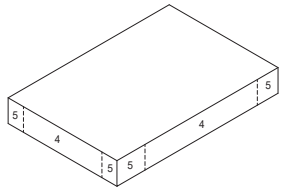
MARK	LIVE LOAD (LL)		SUPERIMPOSED DEAD LOAD (SDL)	
	DESCRIPTION	LOAD (psf)	DESCRIPTION	LOAD (psf)
1	PUBLIC USE AREAS	100	N/A	-
2	MECHANICAL	125	N/A	-
3	ROOF MIN SNOW UNBALANCED SNOW (PS = 19.3 psi)	25	TOP CHORD	15
		22	BOTTOM CHORD	10

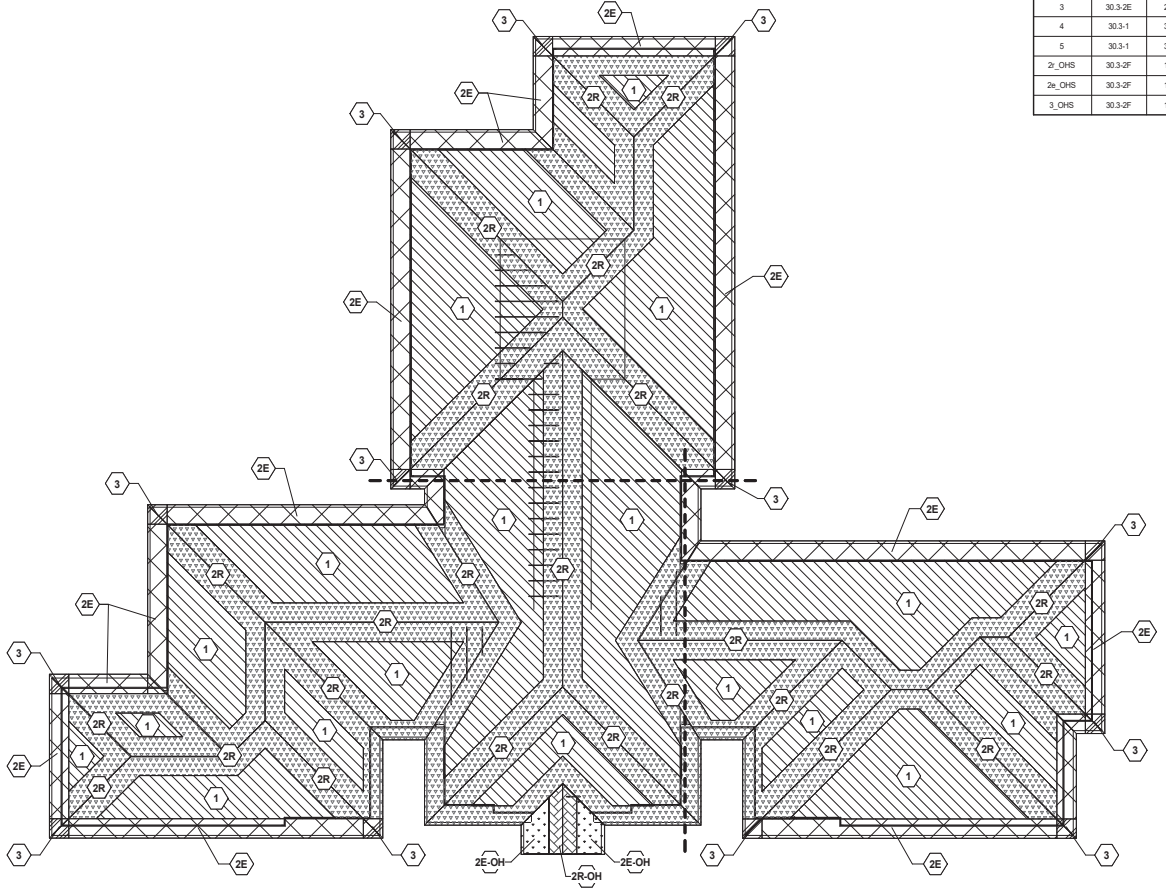


UNBALANCED SNOW
SLOPE = 4/12 (18 DEG)

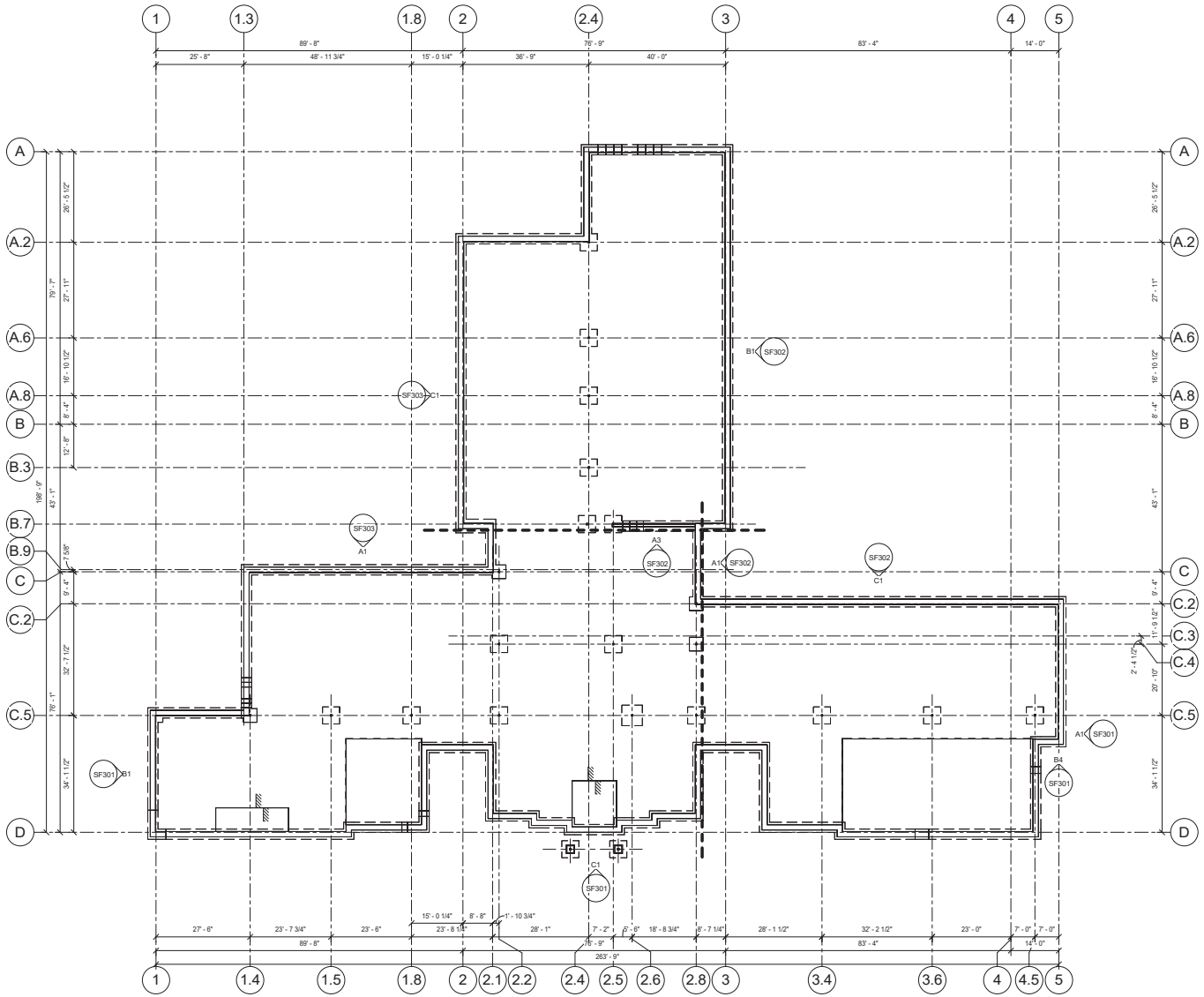
ZONE	FIGURE	POS A < 10 ft² PSF	NEG A < 10 ft² PSF	POS A = 20 ft² PSF	NEG A = 20 ft² PSF	POS A = 50 ft² PSF	NEG A = 50 ft² PSF	POS A = 100 ft² PSF	NEG A = 100 ft² PSF	POS A = 200 ft² PSF	NEG A = 200 ft² PSF	POS A = 500 ft² PSF	NEG A = 500 ft² PSF
1	30.3-2E	24.89	-41.86	21.48	-41.86	16.98	-37.03	16.00	-33.11	16.00	-33.11	16.00	-33.11
2e	30.3-2E	24.89	-56.00	21.48	-51.42	16.98	-45.37	16.00	-40.46	16.00	-35.92	16.00	-35.92
2r	30.3-2E	24.89	-72.97	21.48	-65.78	16.98	-56.23	16.00	-48.67	16.00	-41.53	16.00	-41.53
3	30.3-2E	24.89	-56.00	21.48	-51.42	16.98	-45.37	16.00	-40.46	16.00	-35.92	16.00	-35.92
4	30.3-1	33.38	-36.20	31.87	-34.70	29.89	-32.71	28.16	-30.96	26.66	-29.47	24.69	-27.50
5	30.3-1	33.38	-44.69	31.87	-41.68	29.89	-37.71	28.16	-34.42	26.66	-31.44	24.69	-27.50
2r_OHS	30.3-2F	16.00	-87.12	16.00	-83.19	16.00	-78.00	16.00	-73.48	16.00	-69.59	16.00	-69.59
2e_OHS	30.3-2F	16.00	-70.15	16.00	-68.84	16.00	-67.11	16.00	-65.27	16.00	-63.97	16.00	-63.97
3_OHS	30.3-2F	16.00	-87.12	16.00	-78.61	16.00	-67.36	16.00	-58.39	16.00	-49.95	16.00	-49.95







1. GROSS WIND PRESSURES SHOWN ABOVE ARE PREDICATED ON ULTIMATE WIND SPEED.
2. EDGE ZONES: 'a' = 8'-0"
3. WIND PRESSURES SHOWN SHALL BE USED IN CONJUCTION WITH LOAD COMBINATIONS SPECIFIED IN SECTIONS 2.3 AND 2.4 OF ASCE 7-16.
4. POSITIVE WIND PRESSURES REPRESENT WIND PRESSURES ACTING TOWARDS THE COMPONENT AND CLADDING SURFACES.
5. NEGATIVE WIND PRESSURES REPRESENT WIND PRESSURES ACTING AWAY FROM THE COMPONENT AND CLADDING SURFACES.



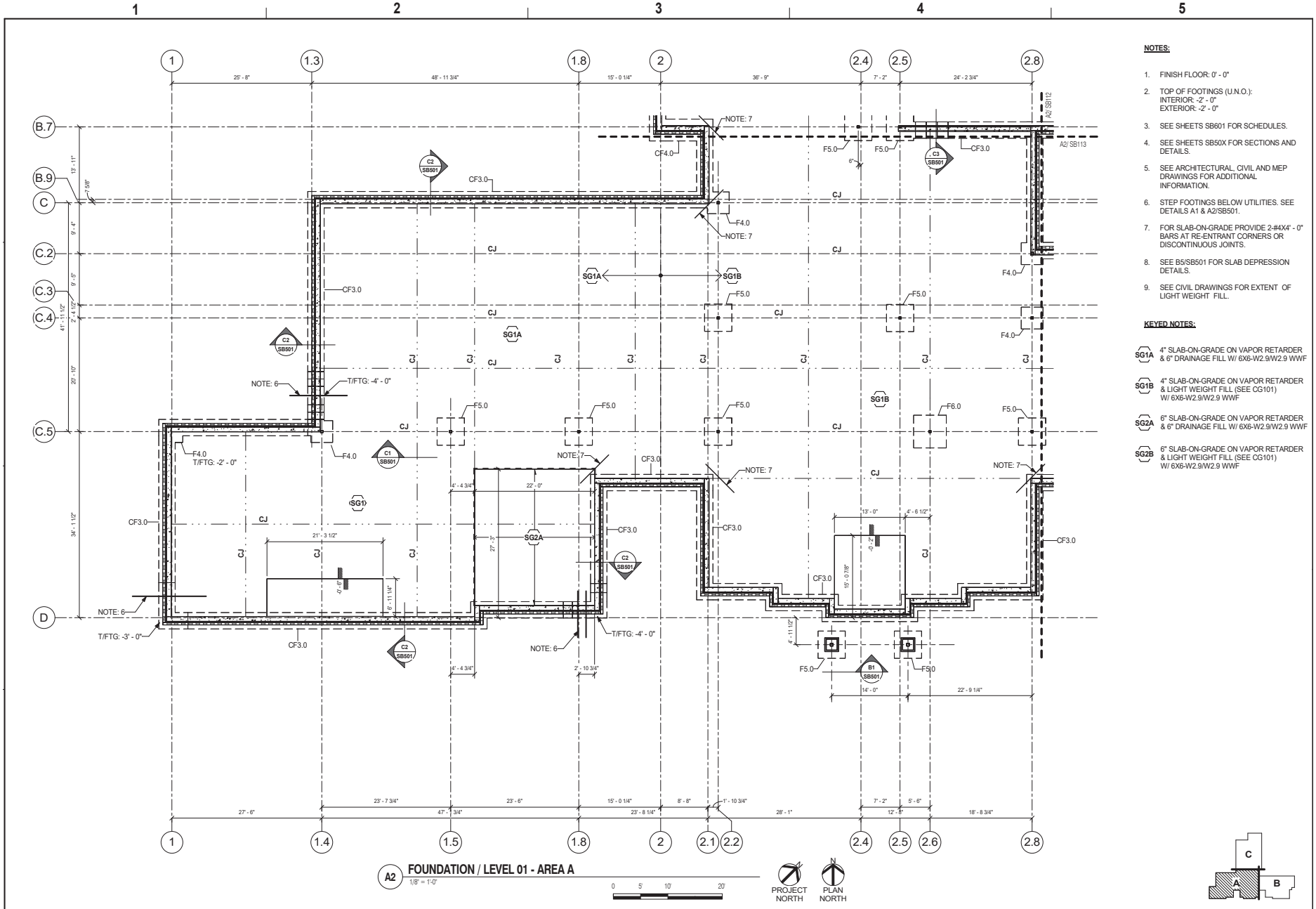
A2 FOUNDATION / LEVEL 01 - OVERALL PLAN

1/16" = 1'-0"

0 5' 10' 20' 30'

PROJECT NORTH

PLAN NORTH



NOTES:

1. FINISH FLOOR: 0' - 0"
2. TOP OF FOOTINGS (U.N.O.):
   INTERIOR: -2' - 0"
   EXTERIOR: -2' - 0"
3. SEE SHEETS SB601 FOR SCHEDULES.
4. SEE SHEETS SB50X FOR SECTIONS AND DETAILS.
5. SEE ARCHITECTURAL, CIVIL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.
6. STEP FOOTINGS BELOW UTILITIES. SEE DETAILS A1 & A2/SB501.
7. FOR SLAB-ON-GRADE PROVIDE 2-#4X4' - 0" BARS AT RE-ENTRANT CORNERS OR DISCONTINUOUS JOINTS.
8. SEE B5/SB501 FOR SLAB DEPRESSION DETAILS.
9. SEE CIVIL DRAWINGS FOR EXTENT OF LIGHT WEIGHT FILL.

KEYED NOTES:

SG1A — 4" SLAB-ON-GRADE ON VAPOR RETARDER & 6" DRAINAGE FILL W/ 6X6-W2.9/W2.9 WWF

SG1B — 4" SLAB-ON-GRADE ON VAPOR RETARDER & LIGHT WEIGHT FILL (SEE CG101) W/ 6X6-W2.9/W2.9 WWF

SG2A — 6" SLAB-ON-GRADE ON VAPOR RETARDER & 6" DRAINAGE FILL W/ 6X6-W2.9/W2.9 WWF

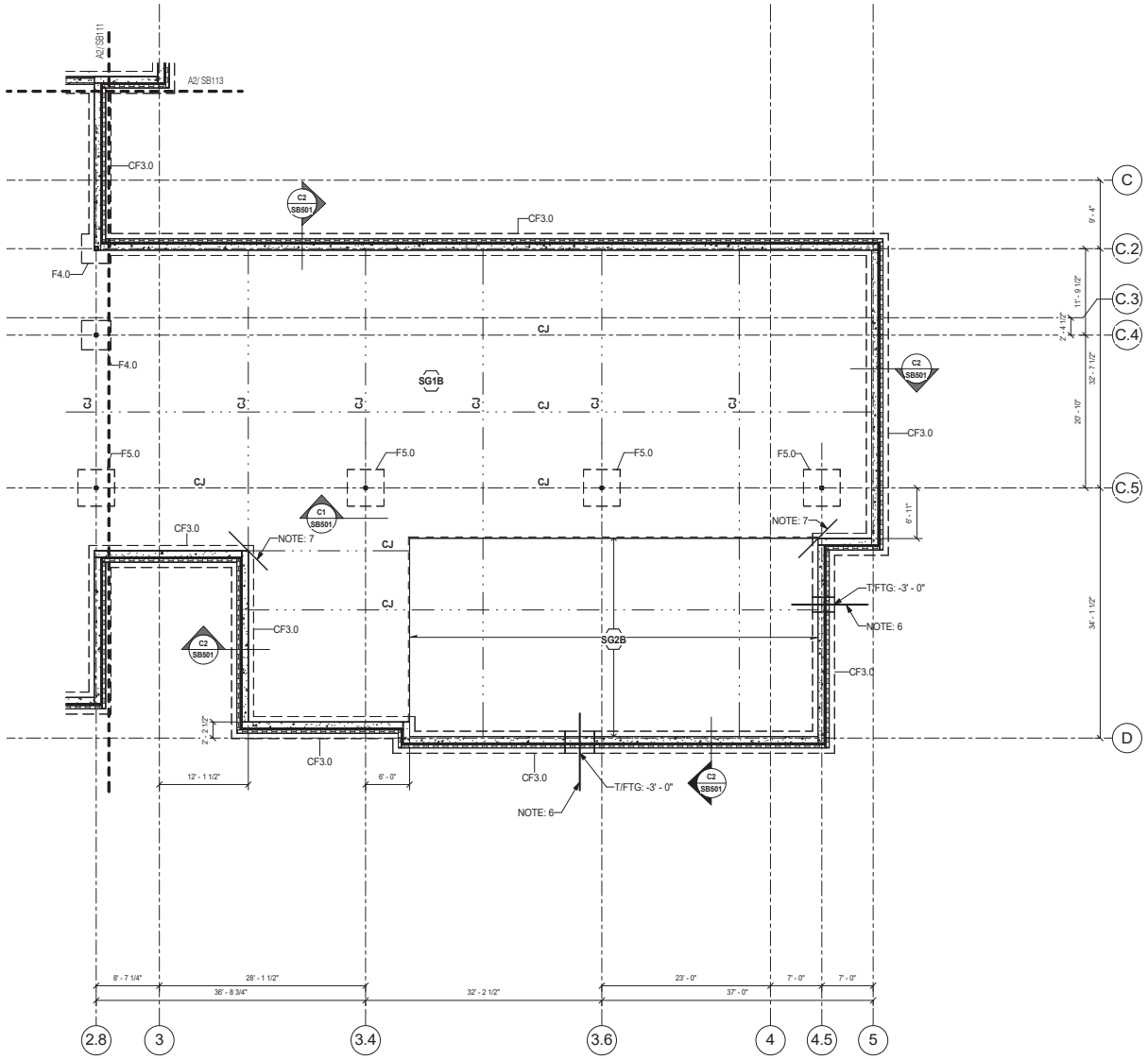
SG2B — 6" SLAB-ON-GRADE ON VAPOR RETARDER & LIGHT WEIGHT FILL (SEE CG101) W/ 6X6-W2.9/W2.9 WWF

A2 **FOUNDATION / LEVEL 01 - AREA A**
1/8" = 1'-0"

0 5' 10' 20'

PROJECT NORTH

N
PLAN NORTH



A2 **FOUNDATION / LEVEL 01 - AREA B**
1/8" = 1'-0"

0 5' 10' 20'

PROJECT NORTH

N
PLAN NORTH

NOTES:

1. FINISH FLOOR: 0' - 0"
2. TOP OF FOOTINGS (U.N.O.):
   INTERIOR: -2' - 0"
   EXTERIOR: -2' - 0"
3. SEE SHEETS SB601 FOR SCHEDULES.
4. SEE SHEETS SB50X FOR SECTIONS AND DETAILS.
5. SEE ARCHITECTURAL, CIVIL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.
6. STEP FOOTINGS BELOW UTILITIES. SEE DETAILS A1 & A2/SB501.
7. FOR SLAB-ON-GRADE PROVIDE 2-#4X4' - 0" BARS AT RE-ENTRANT CORNERS OR DISCONTINUOUS JOINTS.
8. SEE B5/SB501 FOR SLAB DEPRESSION DETAILS.
9. SEE CIVIL DRAWINGS FOR EXTENT OF LIGHT WEIGHT FILL.

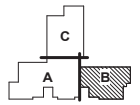
KEYED NOTES:

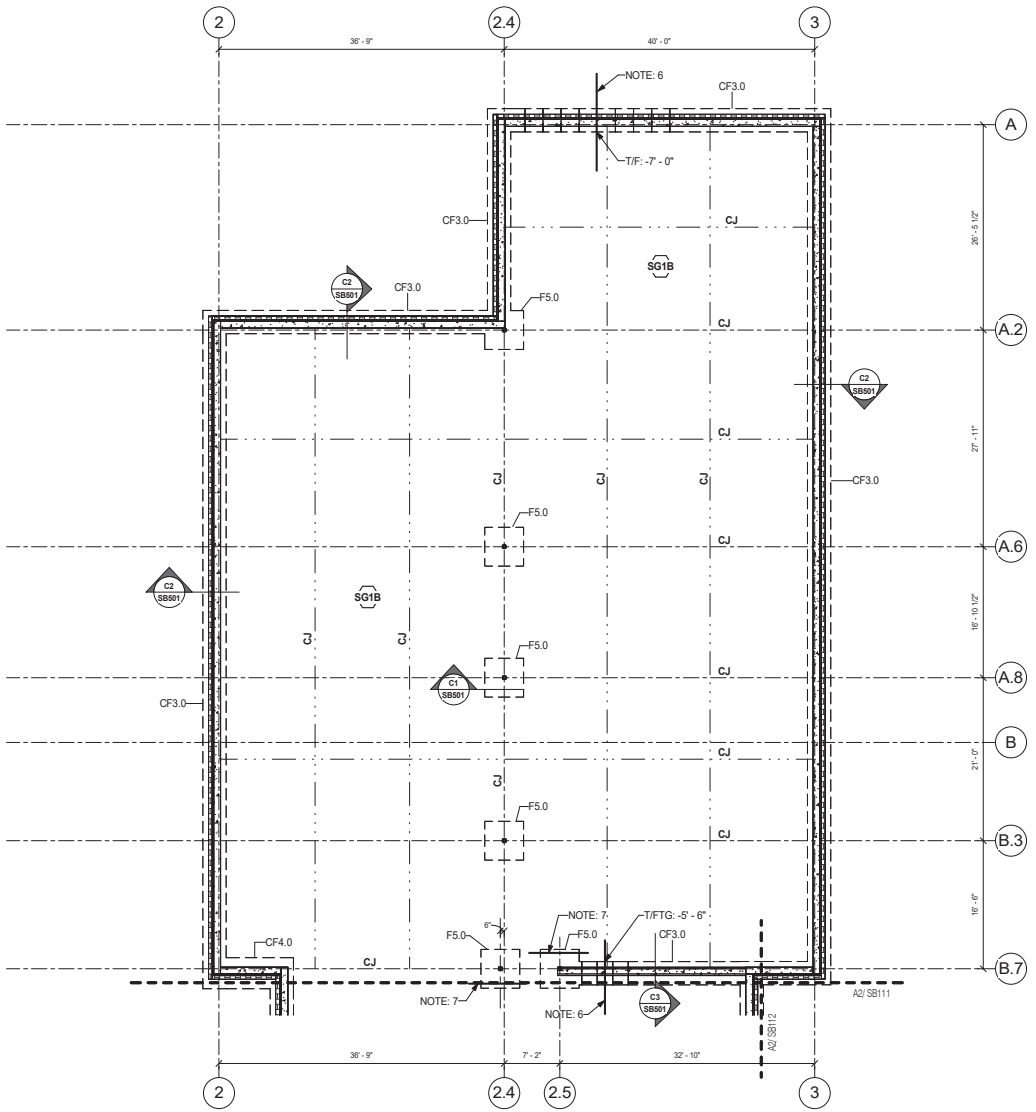
SG1A 4" SLAB-ON-GRADE ON VAPOR RETARDER & 6" DRAINAGE FILL W/ 6X6-W2.9/W2.9 WWF

SG1B 4" SLAB-ON-GRADE ON VAPOR RETARDER & LIGHT WEIGHT FILL (SEE CG101) W/ 6X6-W2.9/W2.9 WWF

SG2A 6" SLAB-ON-GRADE ON VAPOR RETARDER & 6" DRAINAGE FILL W/ 6X6-W2.9/W2.9 WWF

SG2B 6" SLAB-ON-GRADE ON VAPOR RETARDER & LIGHT WEIGHT FILL (SEE CG101) W/ 6X6-W2.9/W2.9 WWF





A2 **FOUNDATION / LEVEL 01 - AREA C**

1/8" = 1'-0"

0 5' 10' 20'

PROJECT NORTH

PLAN NORTH

NOTES:

1. FINISH FLOOR: 0' - 0"
2. TOP OF FOOTINGS (U.N.O.):
   INTERIOR: -2' - 0"
   EXTERIOR: -2' - 0"
3. SEE SHEETS SB601 FOR SCHEDULES.
4. SEE SHEETS SB50X FOR SECTIONS AND DETAILS.
5. SEE ARCHITECTURAL, CIVIL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.
6. STEP FOOTINGS BELOW UTILITIES. SEE DETAILS A1 & A2/SB501.
7. FOR SLAB-ON-GRADE PROVIDE 2-#4X4' - 0" BARS AT RE-ENTRANT CORNERS OR DISCONTINUOUS JOINTS.
8. SEE B5/SB501 FOR SLAB DEPRESSION DETAILS.
9. SEE CIVIL DRAWINGS FOR EXTENT OF LIGHT WEIGHT FILL.

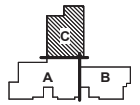
KEYED NOTES:

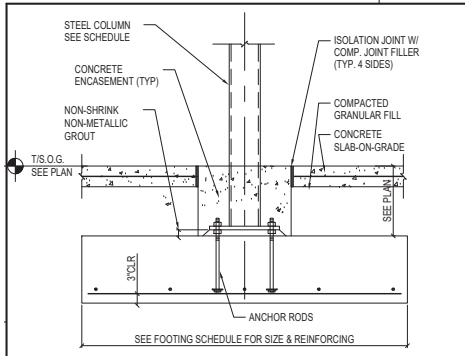
SG1A 4" SLAB-ON-GRADE ON VAPOR RETARDER & 6" DRAINAGE FILL W/ 6X6-W2.9/W2.9 WWF

SG1B 4" SLAB-ON-GRADE ON VAPOR RETARDER & LIGHT WEIGHT FILL (SEE CG101) W/ 6X6-W2.9/W2.9 WWF

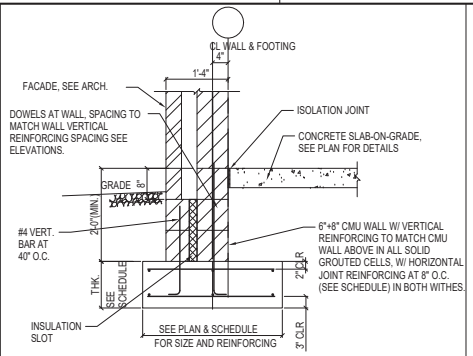
SG2A 6" SLAB-ON-GRADE ON VAPOR RETARDER & 6" DRAINAGE FILL W/ 6X6-W2.9/W2.9 WWF

SG2B 6" SLAB-ON-GRADE ON VAPOR RETARDER & LIGHT WEIGHT FILL (SEE CG101) W/ 6X6-W2.9/W2.9 WWF

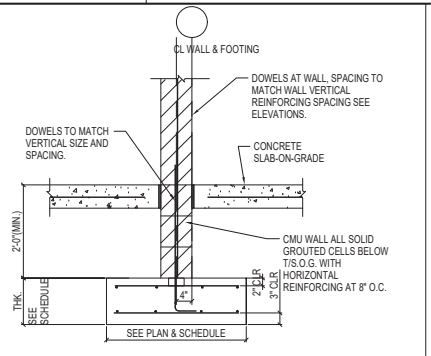




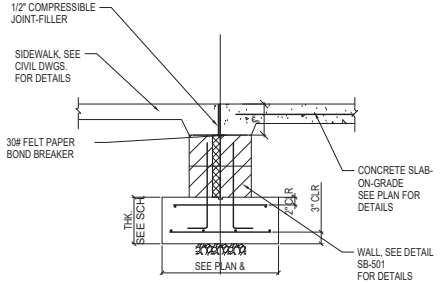
C1 TYPICAL INTERIOR FOOTING
3/4" = 1'-0"



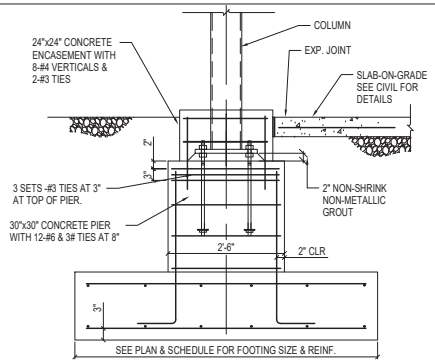
C2 SECTION AT EXTERIOR 8" CMU WALL
3/4" = 1'-0"



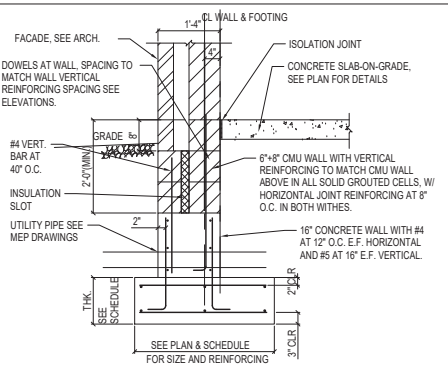
C3 SECTION AT INTERIOR WALL
3/4" = 1'-0"



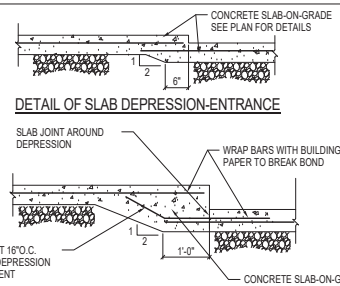
C5 SECTION - EXTERIOR WALL AT DOOR
3/4" = 1'-0"



B1 TYPICAL EXTERIOR FOOTING & PIER
3/4" = 1'-0"

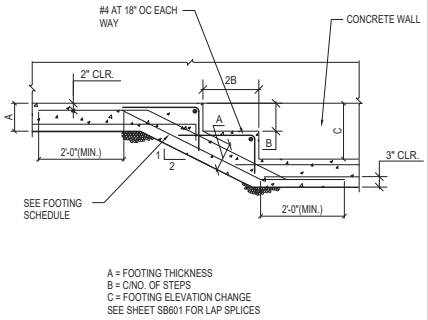


B2 SECTION - EXTERIOR WALL & UTILITY
3/4" = 1'-0"



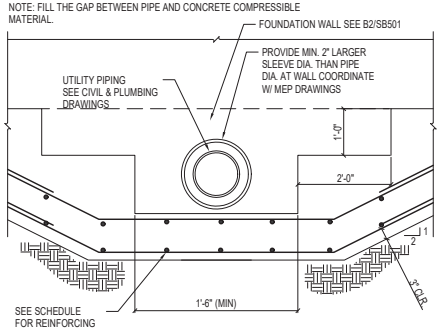
NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS.

B5 SLAB DEPRESSION DETAILS
NO SCALE

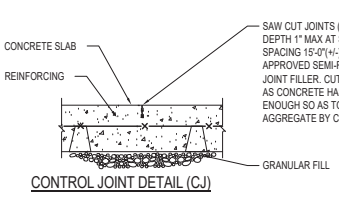


A = FOOTING THICKNESS
B = C/NO. OF STEPS
C = FOOTING ELEVATION CHANGE
SEE SHEET SB601 FOR LAP SPLICES

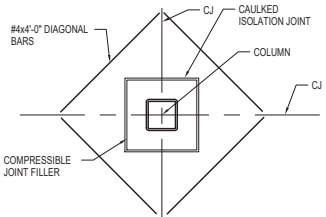
A1 STEP FOOTING DETAIL
NOT TO SCALE



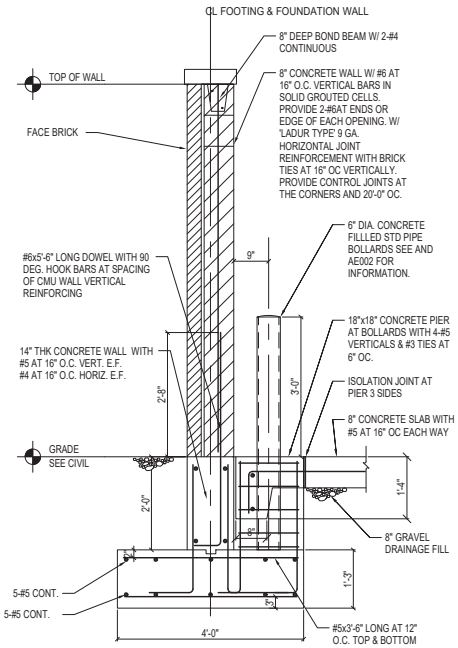
A2 SECTION AT UTILITY & FDTN WALL
NOT TO SCALE



NOTE:
1. PROVIDE CHAIRS FOR SUPPORT OF WELDED WIRE FABRIC AND REINFORCING BARS IN SLAB ON GRADE. SPACE 2 TO 3 FEET MAXIMUM.

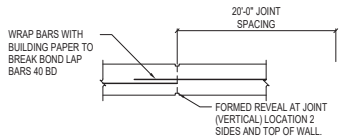


A3 TYPICAL SLAB DETAILS
NO SCALE

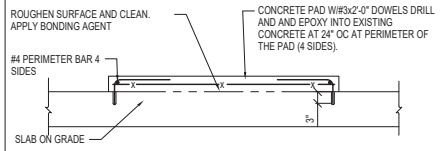


NOTES:
1. SEE ARCHITECTURAL DRAWING AE00X FOR ADDITIONAL INFORMATION, SEE CIVIL DRAWINGS FOR LOCATIONS.

B1 DUMBSTER/MECH EQ. SCREEN WALL
3/4" = 1'-0" (AE002)



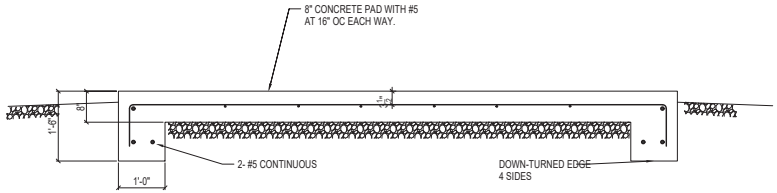
C2 CONTRACTION JOINT IN WALL
NO SCALE



THICKNESS	REINFORCEMENT	COMMENTS
<=4"	6x6-W2.9/W2.9 WWF	
5"	#4 AT 18" EACH WAY 2" FROM TOP OF SLAB	
6"	#4 AT 18" EACH WAY 2" FROM TOP OF SLAB	

NOTES:
1. COORDINATE FINAL SIZE & LOCATION OF ALL PADS WITH THE EQUIPMENT MANUFACTURER AND/OR THE CONTRACTOR PROVIDING THE EQUIPMENT.

C3 EQUIPMENT HOUSEKEEPING PAD
NO SCALE



NOTE:
1. CONFIRM FINAL SIZE WITH CIVIL DRAWINGS.
2. SEE CIVIL DRAWINGS FOR LOCATIONS AND ADDITIONAL INFORMATION.
3. SEE TRANSFORMER SHOP DRAWINGS FOR PAD SIZE REQUIREMENTS AND ADDITIONAL INFORMATION.

B2 EQUIPMENT PAD
NO SCALE

SPREAD FOOTING SCHEDULE

ALLOWABLE BEARING CAPACITY = 3,000 PSF

MARK	SIZE	BOTTOM REINFORCING	TOP REINFORCING:	REMARKS
F4.0	4'-0"x4'-0"x1'-6" THK	8-#4 EA WAY		
F5.0	5'-0"x5'-0"x1'-6" THK	8-#5 EA WAY	3-#5 EA WAY	
F6.0	6'-0"x6'-0"x1'-6" THK	8-#6 EA WAY	3-#5 EA WAY	

CONTINUOUS FOOTING SCHEDULE

ALLOWABLE BEARING CAPACITY = 3,000 PSF

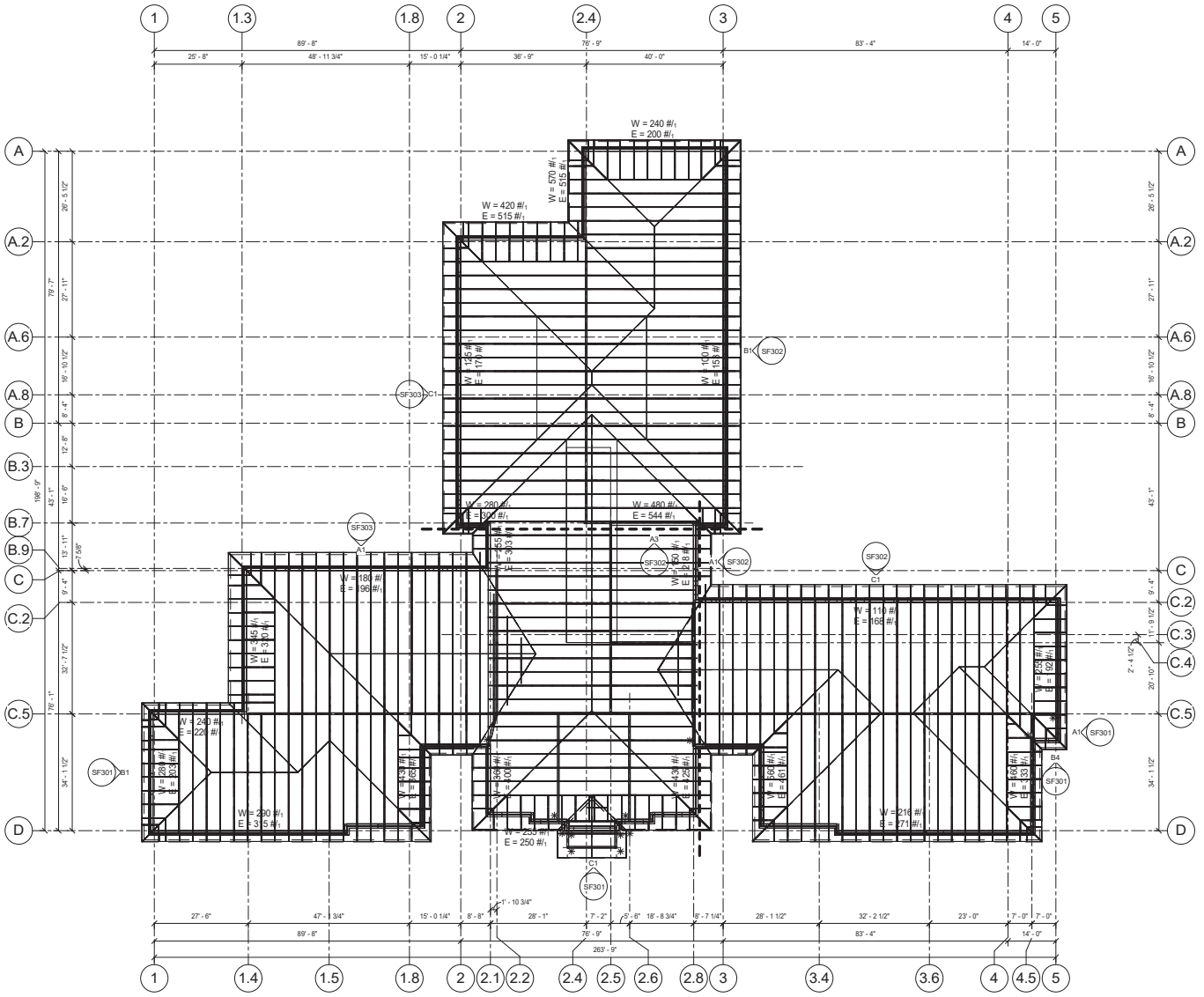
MARK	SIZE	BOTTOM REINFORCING	TOP REINFORCING	REMARKS
CF2.0	2'-0" WIDE CONTINUOUS x 1'-0" THK	2-#5 CONTINUOUS	2-#5 CONTINUOUS	
CF2.5	2'-6" WIDE CONTINUOUS x 1'-0" THK	3-#5 CONTINUOUS	3-#5 CONTINUOUS	
CF3.0	3'-0" WIDE CONTINUOUS x 1'-0" THK	3-#5 CONTINUOUS #4x2'-6" AT 12"	3-#5 CONTINUOUS #4x2'-6" AT 24"	
CF4.0	4'-0" WIDE CONTINUOUS x 1'-3" THK	4-#5 CONTINUOUS #4x3'-6" AT 9"	4-#5 CONTINUOUS #4x3'-6" AT 9"	

CONCRETE REINFORCING BAR DEVELOPMENT AND SPLICE LENGTH SCHEDULE (f'c = 4,000 PSI)

BAR SIZE	OTHER BARS		TOP/HORIZ BARS		HOOKED BARS
	Ld	SPLICE	Ld	SPLICE	Ldh
#3	15	19	19	25	6
#4	19	25	25	33	7
#5	24	31	31	41	9
#6	29	37	37	49	10
#7	42	54	54	71	12
#8	47	62	62	81	14
#9	54	70	70	91	15

NOTES:

1. LENGTHS SHOWN IN THIS SCHEDULE SHALL BE USED UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS.
2. LENGTHS SHOWN IN THIS SCHEDULE ARE BASED ON CLASS B TENSION LAP SPLICES FOR NORMAL WEIGHT CONCRETE STRENGTH AND GRADE 60 (Fy = 60,000 PSI) REINFORCING STEEL WITH CONCRETE COVER AND SPACING AS DEFINED IN CONRETE SECTION OF GENERAL NOTES ON SHEE S-001 AND ACI 318.14 SECTION 12.
3. Ld = TENSION DEVELOPMENT / EMBEDMENT LENGTH FOR STRAIGHT BARS.
4. Ldh = TENSION DEVELOPMENT / EMBEDMENT LENGTH FOR HOOKED BARS.
5. LAP SPLICES SHALL BE WIRED IN CONTACT.
6. TOP BARS ARE HORIZONTAL BARS IN BEAMS, FOOTINGS, SLABS AND WALLS WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.
7. ALL TABULATED VALUES ARE INCHES.



DIAPHRAGM TRANSFER LOADING:

1. LOADS ARE FACTORED (LRFD).

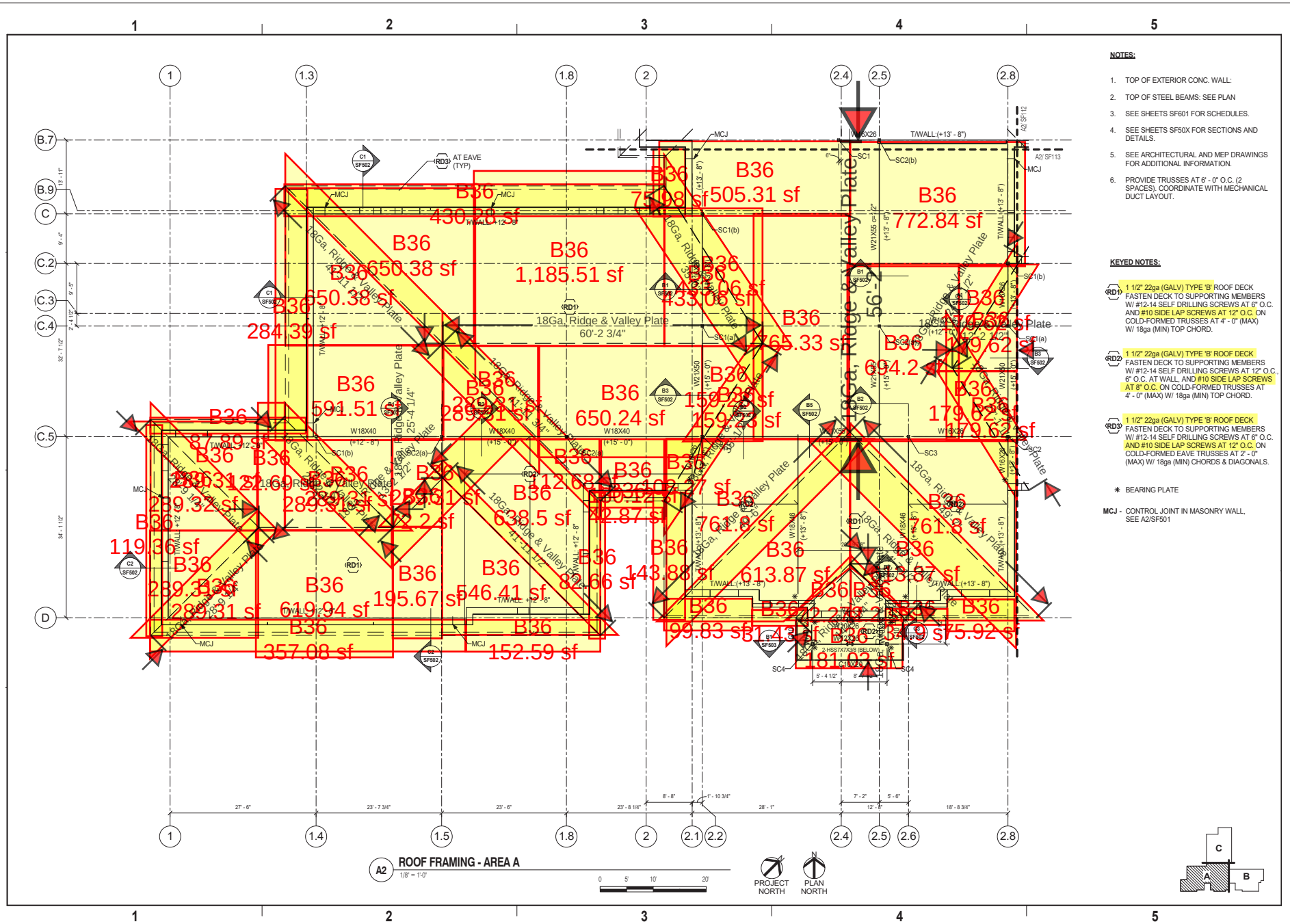
A2 ROOF FRAMING - OVERALL PLAN

1/16" = 1'-0"

0 5' 10' 20' 30'

PROJECT NORTH

PLAN NORTH



NOTES:

1. TOP OF EXTERIOR CONC. WALL:
2. TOP OF STEEL BEAMS: SEE PLAN
3. SEE SHEETS SF601 FOR SCHEDULES.
4. SEE SHEETS SF50X FOR SECTIONS AND DETAILS.
5. SEE ARCHITECTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.
6. PROVIDE TRUSSES AT 6' - 0" O.C. (2 SPACES). COORDINATE WITH MECHANICAL DUCT LAYOUT.

KEYED NOTES:

(RD1) 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 6" O.C. AND #10 SIDE LAP SCREWS AT 12" O.C. ON COLD-FORMED TRUSSES AT 4' - 0" (MAX) W/ 18ga (MIN) TOP CHORD.

(RD2) 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 12" O.C., 6" O.C. AT WALL, AND #10 SIDE LAP SCREWS AT 8" O.C. ON COLD-FORMED TRUSSES AT 4' - 0" (MAX) W/ 18ga (MIN) TOP CHORD.

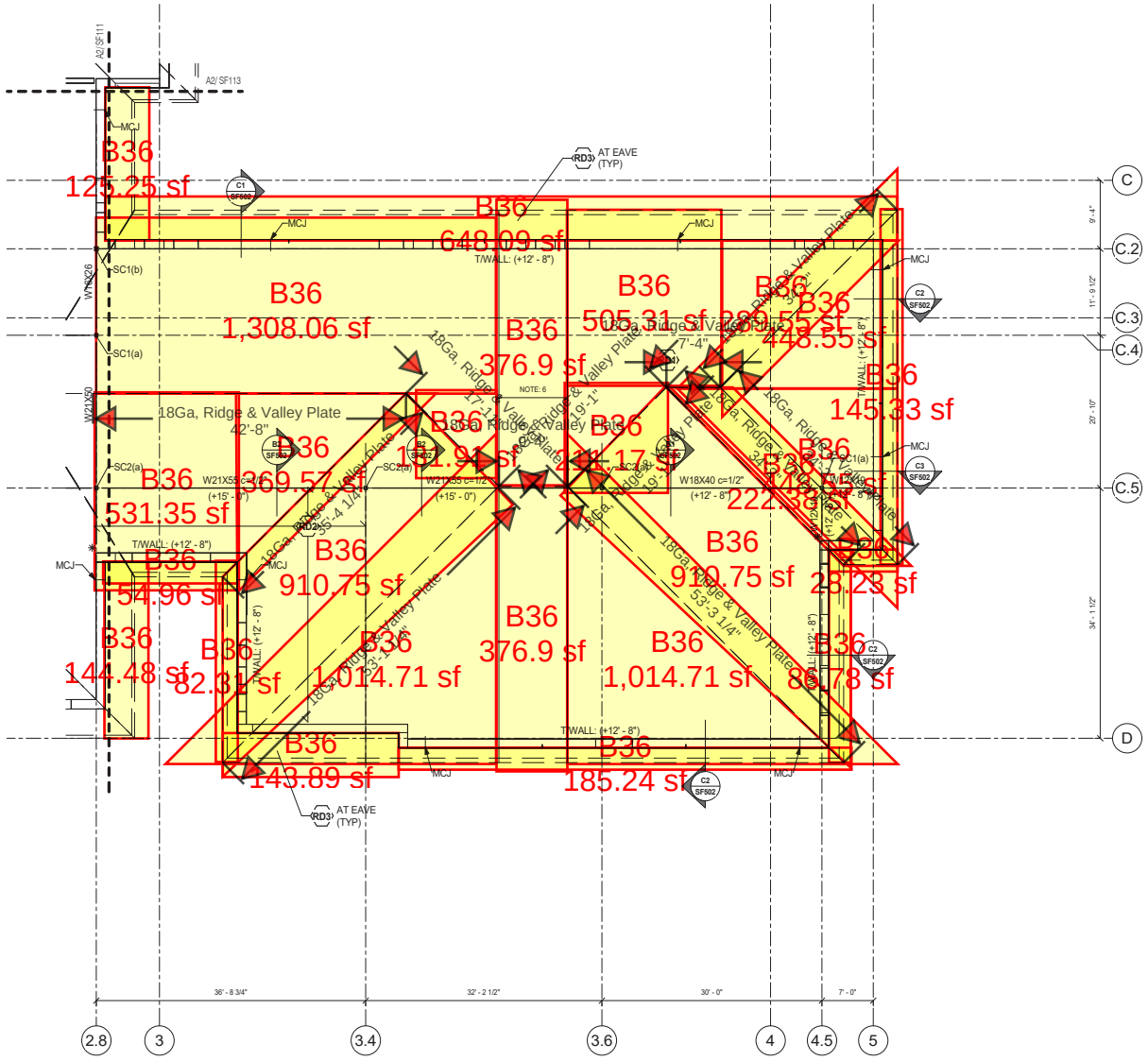
(RD3) 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 6" O.C. AND #10 SIDE LAP SCREWS AT 12" O.C. ON COLD-FORMED EAVE TRUSSES AT 2' - 0" (MAX) W/ 18ga (MIN) CHORDS & DIAGONALS.

✳ BEARING PLATE

MCJ - CONTROL JOINT IN MASONRY WALL, SEE A2/SF501

A2 **ROOF FRAMING - AREA A**
1/8" = 1'-0"

PROJECT NORTH
PLAN NORTH



A2 **ROOF FRAMING - AREA B**
1/8" = 1'-0"

PROJECT NORTH

PLAN NORTH

NOTES:

1. TOP OF EXTERIOR CONC. WALL:
2. TOP OF STEEL BEAMS: SEE PLAN
3. SEE SHEETS SF601 FOR SCHEDULES.
4. SEE SHEETS SF50X FOR SECTIONS AND DETAILS.
5. SEE ARCHITECTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.
6. PROVIDE TRUSSES AT 6' - 0" O.C. (2 SPACES). COORDINATE WITH MECHANICAL DUCT LAYOUT.

KEYED NOTES:

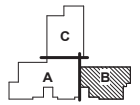
⟨RD1⟩ 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 6" O.C. AND #10 SIDE LAP SCREWS AT 12" O.C. ON COLD-FORMED TRUSSES AT 4' - 0" (MAX) W/ 18ga (MIN) TOP CHORD.

⟨RD2⟩ 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 12" O.C., 6" O.C. AT WALL, AND #10 SIDE LAP SCREWS AT 8" O.C. ON COLD-FORMED TRUSSES AT 4' - 0" (MAX) W/ 18ga (MIN) TOP CHORD.

⟨RD3⟩ 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 6" O.C. AND #10 SIDE LAP SCREWS AT 12" O.C. ON COLD-FORMED EAVE TRUSSES AT 2' - 0" (MAX) W/ 18ga (MIN) CHORDS & DIAGONALS.

✳ BEARING PLATE

MCJ - CONTROL JOINT IN MASONRY WALL, SEE A2/SF501



Deck V3 (ALL Page)										
	Description	Deck Type	Deck Gauge	Deck Finish	Lap or Waste	Deck SQ	No of Floors	Screw Pattern	Screw Total	Comments-Add'l Loads
	Roof	B36	22	G60	2%	109.30	1 Floor	8" O/C	5,466	
	Roof	B36	22	G60	2%	138.00	1 Floor	12" O/C	4,598	
	Roof	B36	22	G60	2%	190.35	1 Floor	12" O/C	6,346	

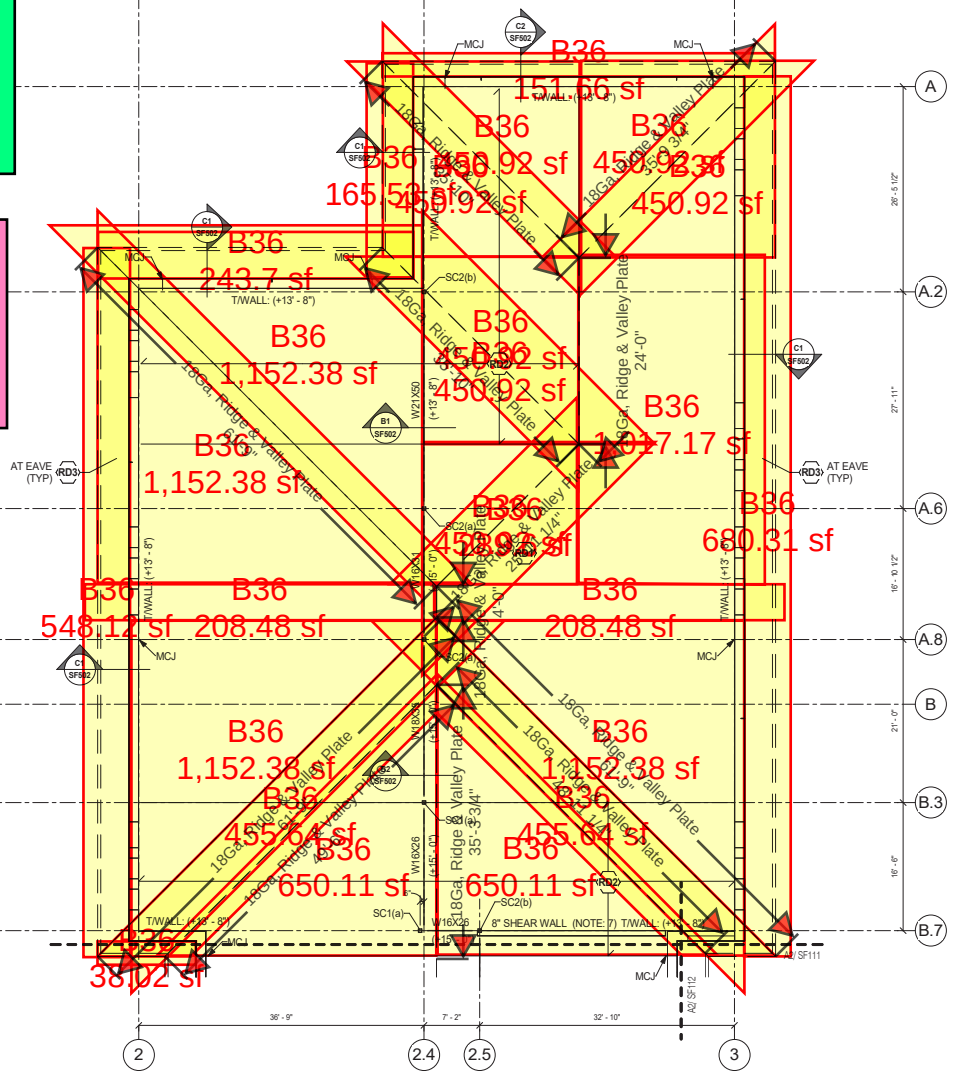
Deck Accessories (ALL Page)					
	Label	Description	Total Length	Total Qtys	Comments-Add'l Loads
	18Ga, Ridge & Valley Plate	Other Accessories	1,457.29	1,660.00	Linear Feet, REF. B1/SF503
	18Ga, Ridge & Valley Plate	Other Accessories	56.16	60.00	Linear Feet

alifications:

f deck quoted with galvanized G60.
D Deck section properties used.
nsider 4:12 slope for entire Roof.

lusions:

earch & evaluation reports.
Ga Truss.
& 3" Comp. deck.
Ga roof deck



A2 ROOF FRAMIN - AREA C
1/8" = 1'-0"

PROJECT NORTH
PLAN NORTH

NOTES:

1. TOP OF EXTERIOR CONC. WALL:
2. TOP OF STEEL BEAMS: SEE PLAN
3. SEE SHEETS SF601 FOR SCHEDULES.
4. SEE SHEETS SF50X FOR SECTIONS AND DETAILS.
5. SEE ARCHITECTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.
6. PROVIDE TRUSSES AT 6' - 0" O.C. (2 SPACES). COORDINATE WITH MECHANICAL DUCT LAYOUT.
7. PROVIDE LATERAL LOAD TRANSFER TRUSS FROM ROOF DECK DIAPHRAGM TO TOP OF CONCRETE SHEAR WALL.

KEYED NOTES:

RD1 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 6" O.C. AND #10 SIDE LAP SCREWS AT 12" O.C. ON COLD-FORMED TRUSSES AT 4' - 0" (MAX) W/ 18ga (MIN) TOP CHORD.

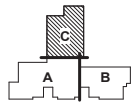
RD2 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 12" O.C., 6" O.C. AT WALL, AND #10 SIDE LAP SCREWS AT 8" O.C. ON COLD-FORMED TRUSSES AT 4' - 0" (MAX) W/ 18ga (MIN) TOP CHORD.

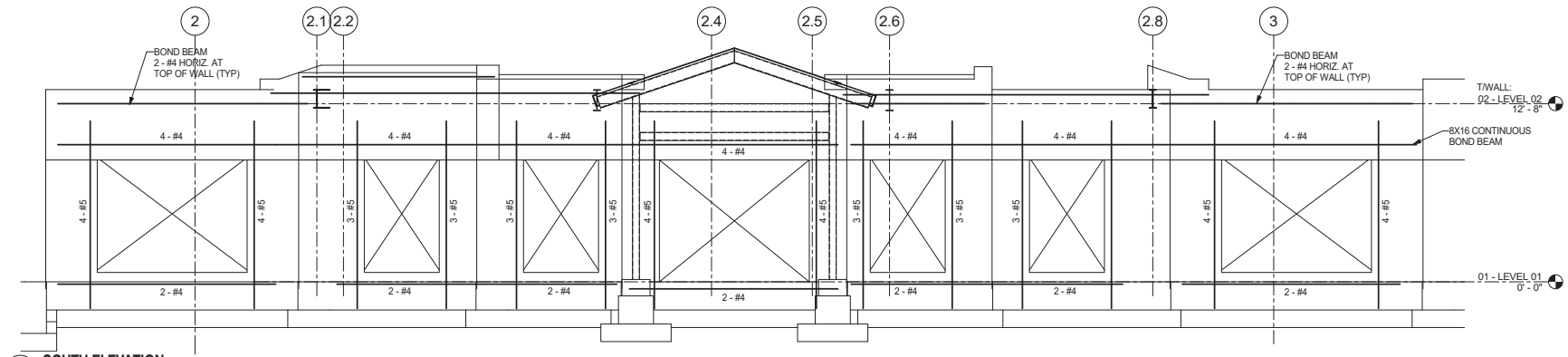
RD3 1 1/2" 22ga (GALV) TYPE 'B' ROOF DECK FASTEN DECK TO SUPPORTING MEMBERS W/ #12-14 SELF DRILLING SCREWS AT 6" O.C. AND #10 SIDE LAP SCREWS AT 12" O.C. ON COLD-FORMED EAVE TRUSSES AT 2' - 0" (MAX) W/ 18ga (MIN) CHORDS & DIAGONALS.

✳ BEARING PLATE

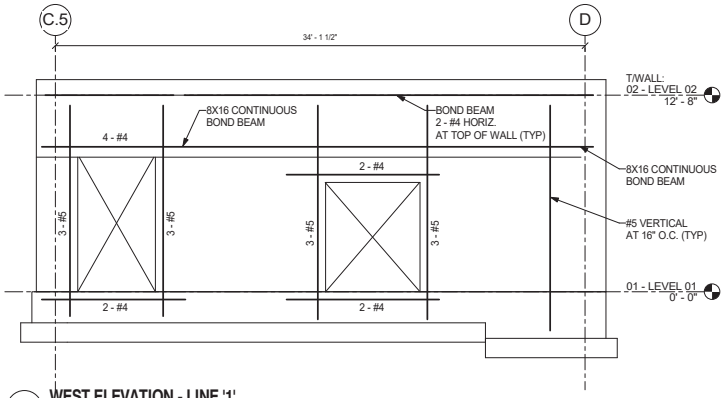
MCJ - CONTROL JOINT IN MASONRY WALL, SEE A2/SF501

S0001 TO S0011, SB101, SB111 TO SB113, SB501 TO SB502,SB601, SF101, SF111 TO SF113, SF301 TO SF303, SF501 TO SF503, SF601 (DATED-10/10/2024)

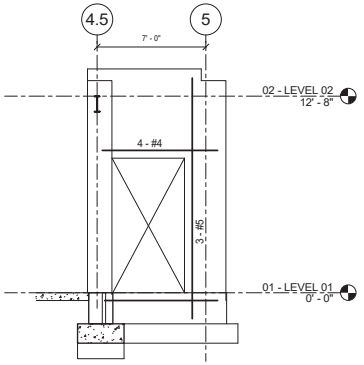




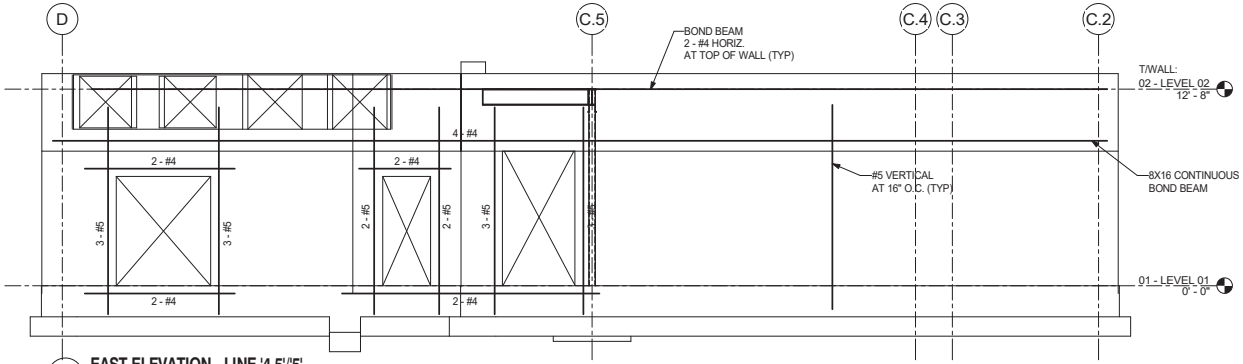
C1 **SOUTH ELEVATION**
1/4" = 1'-0"



B1 **WEST ELEVATION - LINE '1'**
1/4" = 1'-0"



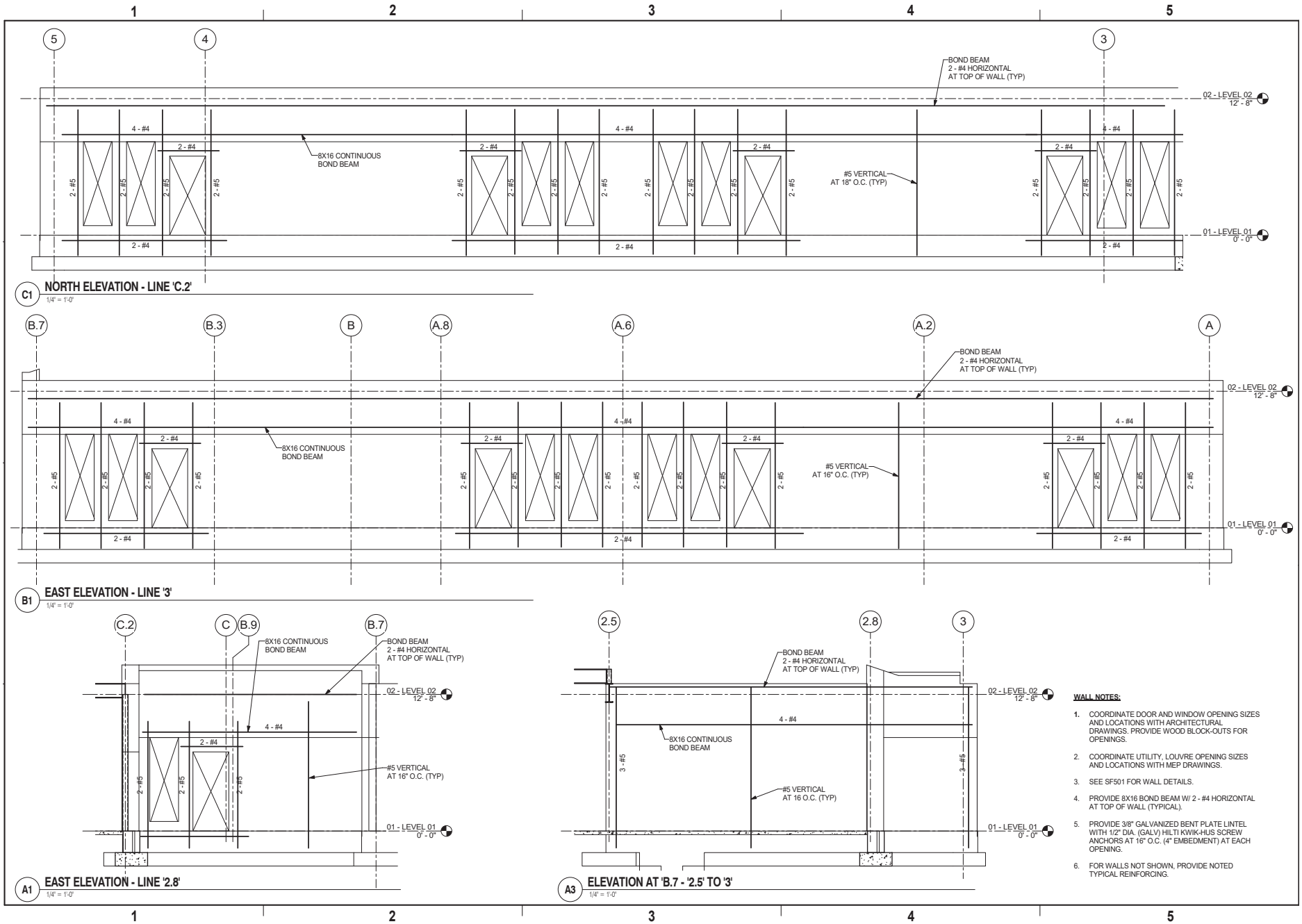
B4 **SOUTH ELEVATION - LINE 'D'/'C.6**
1/4" = 1'-0"



A1 **EAST ELEVATION - LINE '4.5'/'5'**
1/4" = 1'-0"

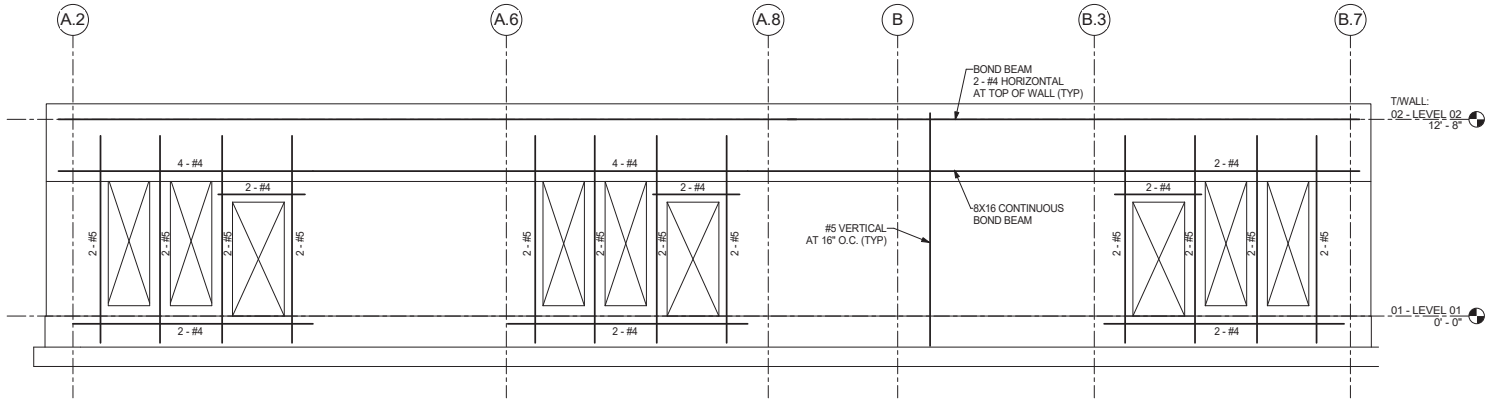
WALL NOTES:

1. COORDINATE DOOR AND WINDOW OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL DRAWINGS. PROVIDE WOOD BLOCK-OUTS FOR OPENINGS.
2. COORDINATE UTILITY, LOUVRE OPENING SIZES AND LOCATIONS WITH MEP DRAWINGS.
3. SEE SF501 FOR WALL DETAILS.
4. PROVIDE 8X16 BOND BEAM W/ 2 - #4 HORIZONTAL AT TOP OF WALL (TYPICAL).
5. PROVIDE 3/8" GALVANIZED BENT PLATE LINTEL WITH 1/2" DIA. (GALV) HILTI KWIK-HUS SCREW ANCHORS AT 16" O.C. (4" EMBEDMENT) AT EACH OPENING.
6. FOR WALLS NOT SHOWN, PROVIDE NOTED TYPICAL REINFORCING.

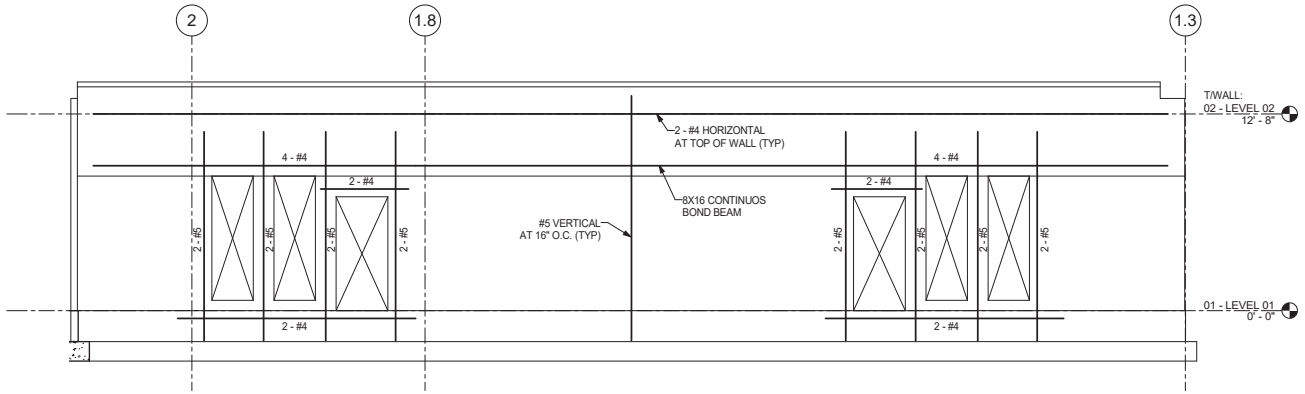


WALL NOTES:

1. COORDINATE DOOR AND WINDOW OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL DRAWINGS. PROVIDE WOOD BLOCK-OUTS FOR OPENINGS.
2. COORDINATE UTILITY, LOUVRE OPENING SIZES AND LOCATIONS WITH MEP DRAWINGS.
3. SEE SF501 FOR WALL DETAILS.
4. PROVIDE 8X16 BOND BEAM W/ 2 - #4 HORIZONTAL AT TOP OF WALL (TYPICAL).
5. PROVIDE 3/8" GALVANIZED BENT PLATE LINTEL WITH 1/2" DIA. (GALV) HILTI KWIK-HUS SCREW ANCHORS AT 16" O.C. (4" EMBEDMENT) AT EACH OPENING.
6. FOR WALLS NOT SHOWN, PROVIDE NOTED TYPICAL REINFORCING.



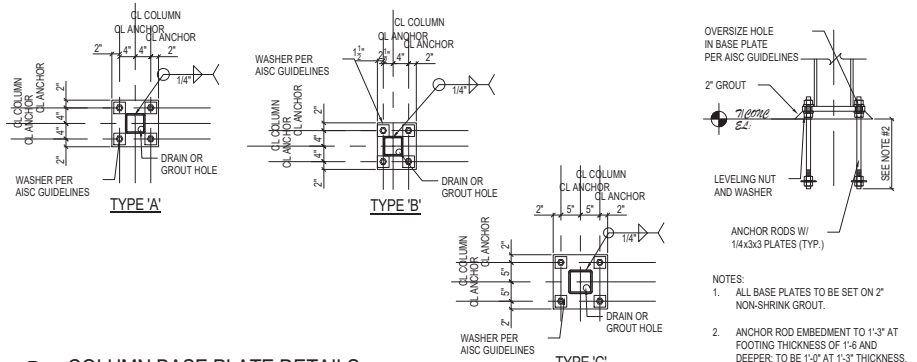
C1 **WEST ELEVATION - LINE '2'**
1/4" = 1'-0"



A1 **NORTH ELEVATION - LINE 'C'**
1/4" = 1'-0"

WALL NOTES:

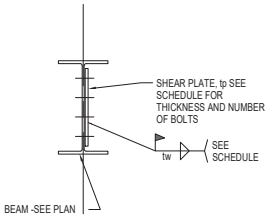
1. COORDINATE DOOR AND WINDOW OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL DRAWINGS. PROVIDE WOOD BLOCK-OUTS FOR OPENINGS.
2. COORDINATE UTILITY, LOUVRE OPENING SIZES AND LOCATIONS WITH MEP DRAWINGS.
3. SEE SF501 FOR WALL DETAILS.
4. PROVIDE 8X16 BOND BEAM W/ 2 - #4 HORIZONTAL AT TOP OF WALL (TYPICAL).
5. PROVIDE 3/8" GALVANIZED BENT PLATE LINTEL WITH 1/2" DIA. (GALV) HILTI KWIK-HUS SCREW ANCHORS AT 16" O.C. (4" EMBEDMENT) AT EACH OPENING.
6. FOR WALLS NOT SHOWN, PROVIDE NOTED TYPICAL REINFORCING.



NOTES:
1. ALL BASE PLATES TO BE SET ON 2" NON-SHRINK GROUT.
2. ANCHOR ROD EMBEDMENT TO 1'-3" AT FOOTING THICKNESS OF 1'-6 AND DEEPER; TO BE 1'-0" AT 1'-3" THICKNESS, 9" FOR 12" THICKNESS. SEE SCHEDULE FOR SPECIAL REQUIREMENTS.

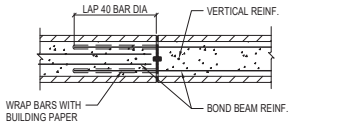
C1 COLUMN BASE PLATE DETAILS
NO SCALE

SHEAR PLATE SCHEDULE						
SECTION	SHEAR PLATE tp(thick)xL(length)	WELD PLATE THICKNESS(MIN)	WELD SIZE tw	NO. OF BOLTS		
W8x,C8,W10,C10	1/4" x 6"	1/2"	3/16"	2 -3/4" DIA. A325-N		
W12x,C12,W14	1/4" x 9"	1/2"	3/16"	3 - 3/4" DIA. A325-N		
W16x, C15	5/16" x 12"	5/8"	1/4"	4 - 3/4" DIA. A325-N		
W18x	3/8" x 15"	5/8"	5/16"	5 - 3/4" DIA. A325-N		
W21x	3/8" x 18"	3/4"	5/16"	6 - 3/4" DIA. A325-N		

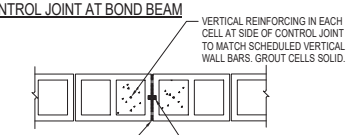


SHEAR TAB

C3 SHEAR PLATE SCHEDULE
NO SCALE



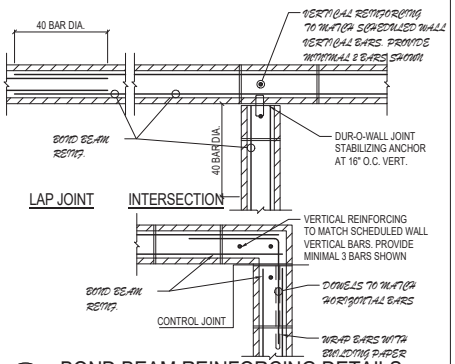
CONTROL JOINT AT BOND BEAM



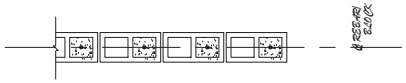
NOTE:
SEE PLANS FOR LOCATION OF CONTROL JOINTS.

CONTROL JOINT

B1 CMU CONTROL JOINT DETAIL (MCJ)
NO SCALE

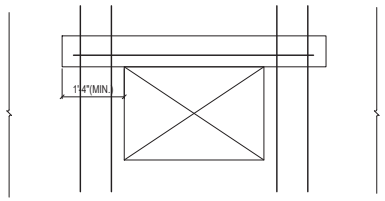


B2 BOND BEAM REINFORCING DETAILS
NO SCALE



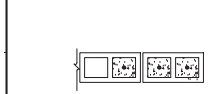
AT 1-BARS PER CELL LOCATION

B3 CMU WALL REINFORCING LOCATION
NO SCALE

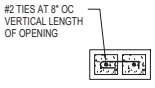


NOTES:
1. SEE SHEETS S1.01, S2.01, S3.01 FOR VERTICAL AND HORIZONTAL REINFORCING IN LOAD- BEARING CMU WALLS.
2. PROVIDE VENEER SUPPORT SHELF ANGLE SEE DETAIL C1 & C2/S3.01.

B5 TYP. CMU WALL REINF. AT OPENING
NO SCALE

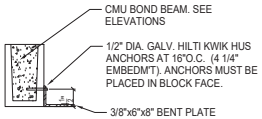


TYPICAL EDGE OF OPENING DETAIL

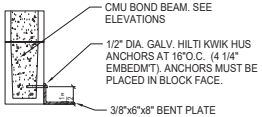


TYPICAL BETWEEN OPENINGS DETAIL

A1 CMU WALL REINFORCING DETAILS
NO SCALE

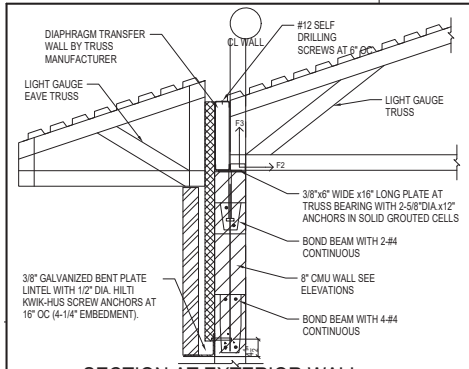


TYPICAL OPENINGS DETAIL < 8'-0"

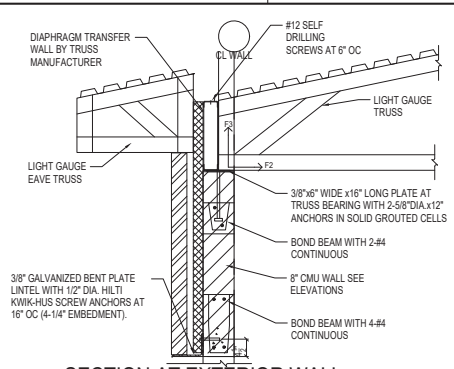


TYPICAL OPENINGS DETAIL > 8'-0"

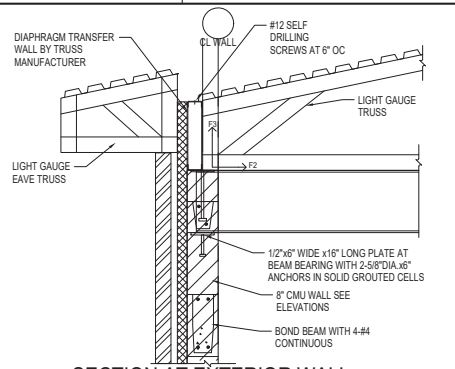
A2 LINTEL DETAILS
NO SCALE



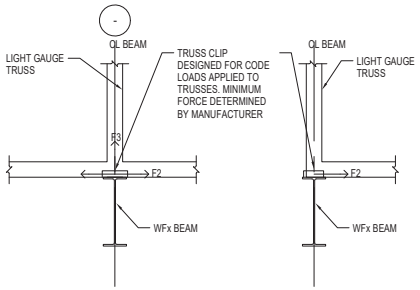
C1 SECTION AT EXTERIOR WALL
3/4" = 1'-0"



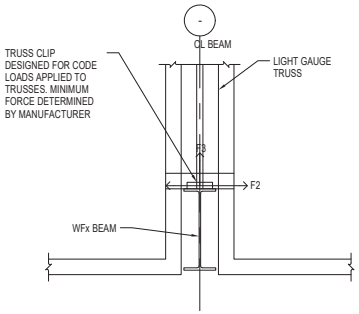
C2 SECTION AT EXTERIOR WALL
3/4" = 1'-0"



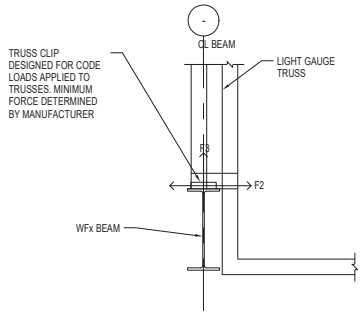
C3 SECTION AT EXTERIOR WALL
3/4" = 1'-0"



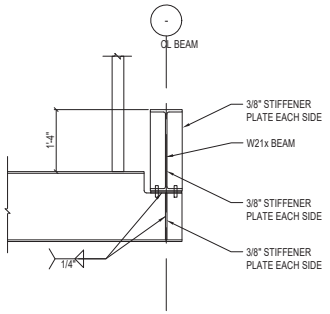
B1 SECTION - TRUSS AT INTERIOR BEAM
3/4" = 1'-0"



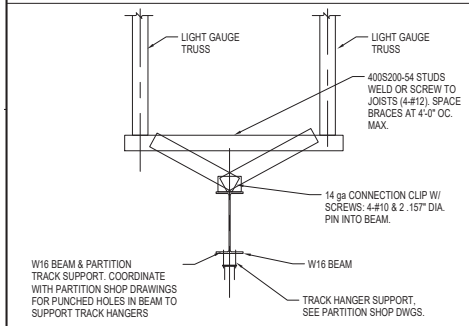
B2 SECTION - TRUSS AT INTERIOR BEAM
3/4" = 1'-0"



B3 SECTION - TRUSS AT INTERIOR BEAM
3/4" = 1'-0"

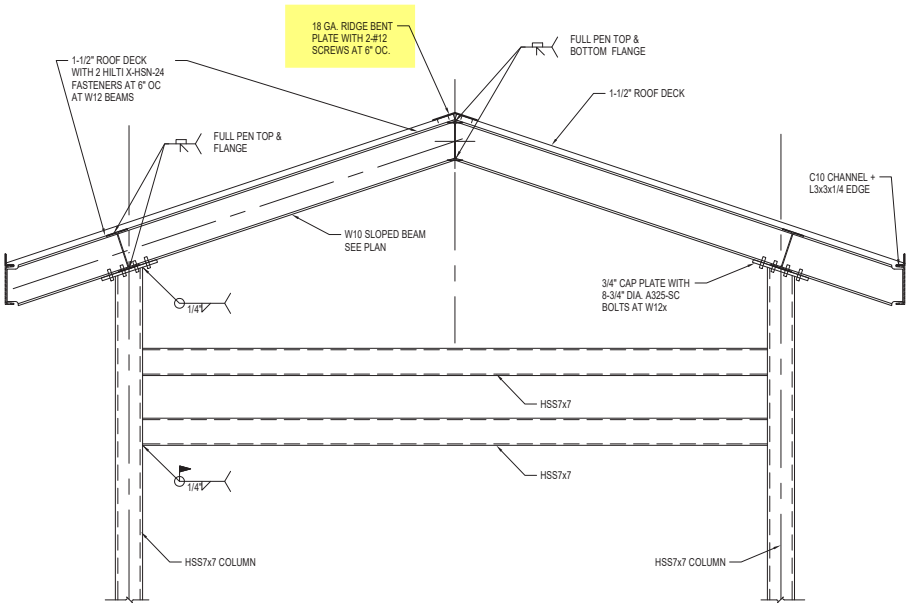


B5 SECTION AT ROOF BEAMS
3/4" = 1'-0"



NOTE:
SEE ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.

A1 HANGING PARTITION SUPPORT
3/4" = 1'-0"



B1 SECTION-ENTRANCE ROOF FRAMING AT RIDGE

3/4" = 1'-0"

STEEL COLUMN SCHEDULE

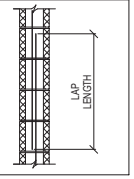
MARK / LOCATION	SC-1a, SC-1b	SC-2a, SC-2b	SC-3	SC-4	
MAIN ROOF					
EL: SEE PLAN LEVEL 01 EL: 0'-0"	HSS5x5x1/4	HSS5x5x3/8	HSS5x5x1/2	HSS7x7x1/4 (GALVANIZED)	
BASE PLATE/	TYPE 'A' 12"x12"x3/4" TYPE 'B' 10"x12"x3/4"	TYPE 'A' 12"x12"x1" TYPE 'B' 10"x12"x1"	TYPE 'A' 12"x12"x1"	TYPE 'C' 14"x14"x1" (GALVANIZED)	
ANCHOR RODS	4 - 1" DIA.	4 - 1" DIA.	4 - 1" DIA.	4 - 1" DIA. (GALVANIZED)	

NOTES:

1. SEE C1/SF501 FOR BASE PLATE TYPES.

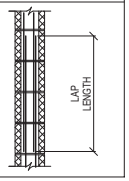
LAP SPLICE LENGTHS FOR CMU WALL SINGLE REINFORCEMENT (GRADE 60 UNCOATED BARS IN FULLY GROUTED CELLS)

BAR SIZE	LAP LENGTH
#3	1' - 6"
#4	2' - 0"
#5	2' - 6"
#6	3' - 6"
#7	4' - 4"
#8	6 - 0"
#9	-



LAP SPLICE LENGTHS FOR CMU WALL DOUBLE REINFORCEMENT (GRADE 60 UNCOATED BARS IN FULLY GROUTED CELLS)

BAR SIZE	LAP LENGTH
#3	1' - 6"
#4	2' - 0"
#5	3' - 0"
#6	4' - 6"
#7	5' - 4"
#8	-
#9	-



MASONRY WALL NOTES:

1. PROVIDE CONTINUOUS REINFORCING BARS IN MASONRY WALL AND LAP BARS AS REQUIRED.
2. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
3. EXTEND VERTICAL BARS THROUGH BOND BEAMS/ LINTELS.
4. BOND BEAMS HAVE A MINIMUM BEARING LENGTH OF 16".
5. SEE SHEET SF502 FOR DETAILS.
6. ALL JAMBS TO EXTEND FULL HEIGHT TO THE UNDERSIDE OF ROOF.
7. PIER AT WALL END OCCURS AT MASONRY CONTROL JOINTS.
8. **HORIZONTAL REINFORCEMENT:** PROVIDE HORIZONTAL REINFORCEMENT IN THE MASONRY WALLS SCHEDULED ABOVE PER MASONRY GENERAL NOTE #9 ON SHEET S0002 WITH A MAXIMUM SPACING OF 8" O.C .