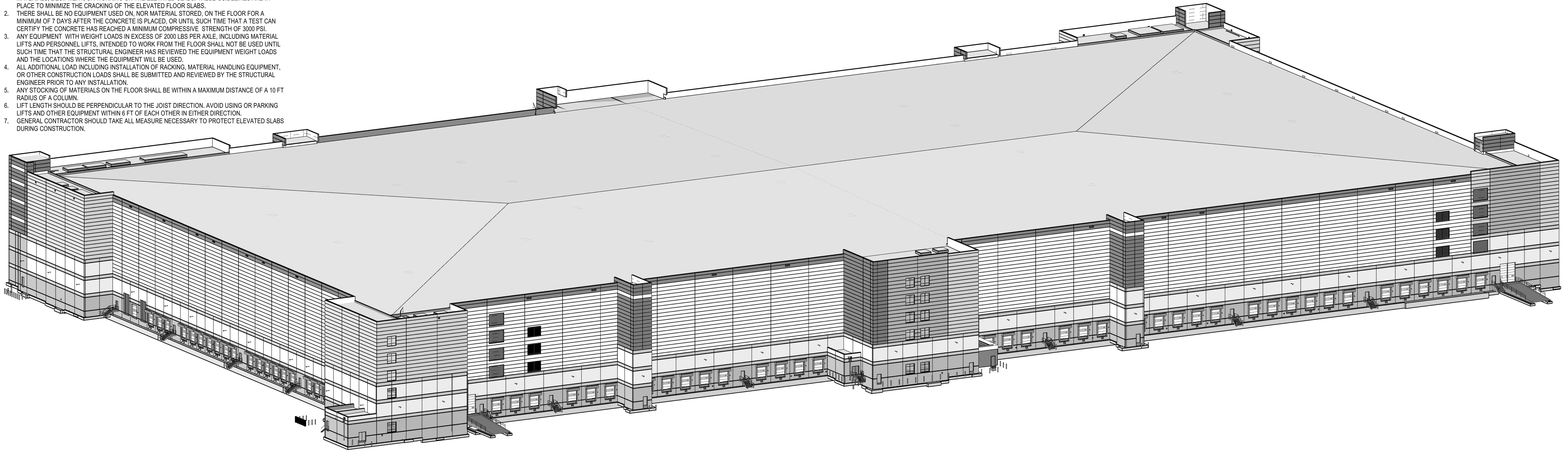
SLAB ON METAL DECK CONSTRUCTION LOADING NOTES:

1. THE FOLLOWING ITEMS SHALL BE CONSIDERED BY ALL PERSONNEL PRIOR TO LOADING MATERIALS, EQUIPMENT, OR WORKING ON THE ELEVATED SLABS. THESE GUIDELINES ARE IN PLACE TO MINIMIZE THE CRACKING OF THE ELEVATED FLOOR SLABS.
2. THERE SHALL BE NO EQUIPMENT USED ON, NOR MATERIAL STORED, ON THE FLOOR FOR A MINIMUM OF 7 DAYS AFTER THE CONCRETE IS PLACED, OR UNTIL SUCH TIME THAT A TEST CAN CERTIFY THE CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
3. ANY EQUIPMENT WITH WEIGHT LOADS IN EXCESS OF 2000 LBS PER AXLE, INCLUDING MATERIAL LIFTS AND PERSONNEL LIFTS, INTENDED TO WORK FROM THE FLOOR SHALL NOT BE USED UNTIL SUCH TIME THAT THE STRUCTURAL ENGINEER HAS REVIEWED THE EQUIPMENT WEIGHT LOADS AND THE LOCATIONS WHERE THE EQUIPMENT WILL BE USED.
4. ALL ADDITIONAL LOAD INCLUDING INSTALLATION OF RACKING, MATERIAL HANDLING EQUIPMENT, OR OTHER CONSTRUCTION LOADS SHALL BE SUBMITTED AND REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO ANY INSTALLATION.
5. ANY STOCKING OF MATERIALS ON THE FLOOR SHALL BE WITHIN A MAXIMUM DISTANCE OF A 10 FT RADIUS OF A COLUMN.
6. LIFT LENGTH SHOULD BE PERPENDICULAR TO THE JOIST DIRECTION. AVOID USING OR PARKING LIFTS AND OTHER EQUIPMENT WITHIN 6 FT OF EACH OTHER IN EITHER DIRECTION.
7. GENERAL CONTRACTOR SHOULD TAKE ALL MEASURE NECESSARY TO PROTECT ELEVATED SLABS DURING CONSTRUCTION.



STRUCTURAL NOTES

COPIES OF PUBLICATIONS REFERENCED IN THESE GENERAL STRUCTURAL NOTES ARE AVAILABLE FOR REVIEW AT SCHAEFER. CONTRACTORS UNFAMILIAR WITH THESE PUBLICATIONS MUST REVIEW THEM PRIOR TO CONSTRUCTION.

GOVERNING CODE

2018 NORTH CAROLINA STATE BUILDING CODE (BASED ON 2015 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS; STRUCTURAL LOADS DETERMINED IN ACCORDANCE WITH ASCE 7-16) PER ACCEPTANCE BY AUTHORITY HAVING JURISDICTION.

DESIGN LOADS

1. 5-STORY WAREHOUSE AREA ROOF LOADS:

A.	ROOF MEMBRANE & INSULATION	2	PSF
B.	METAL DECK	2	PSF
C.	STEEL JOIST FRAMING SELF-WEIGHT	3	PSF
D.	SPRINKLERS / FIRE PROTECTION SYSTEM	3	PSF
E.	DUCTS, LIGHTS, & MISCELLANEOUS MECHANICAL	10	PSF
F.	ALLOWANCE FOR FUTURE SOLAR PV PANELS	5	PSF**
	TOTAL DEAD LOAD SUPPORTED BY STEEL JOIST FRAMING	25	PSF MIN**
G.	STEEL JOIST GIRDER FRAMING SELF-WEIGHT	3	PSF
	TOTAL DEAD LOAD SUPPORTED BY STEEL JOIST GIRDER FRAMING	28	PSF MIN**
H.	ROOF LIVE, SNOW, MHE LIVE, AND RAIN LOADS	SEE S011	

** ASSUMED FLAT & LOW-PROFILE SOLAR PANELS THAT WILL NOT INDUCE SNOW DRIFT OR ADDITIONAL LATERAL WIND FORCES ON BUILDING. FUTURE 5 PSF SOLAR PV PANEL ALLOWANCE IS ONLY INCLUDED OVER THE 5-STORY WAREHOUSE AREA BOUNDED BY GRID LINES 1 TO 21 AND A TO U.

SEE JOIST LOADING SCHEDULE & DIAGRAMS ON SHEET S402 FOR ADDITIONAL INFORMATION.

SECONDARY ROOF DRAINAGE VIA SCUPPERS OR OVERFLOW DRAINS SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE AND ASCE 7. SECONDARY ROOF DRAINAGE SHALL BE DESIGNED BY OTHERS TO LIMIT THE TOTAL DEPTH OF WATER (STATIC HEAD + HYDRAULIC HEAD OVER SECONDARY ROOF DRAINS) TO 4" MAXIMUM ABOVE THE ROOF MEMBRANE AT THE PRIMARY ROOF DRAIN. REFER TO JOIST SCHEDULE ON SHEET S402 FOR RAIN AND SNOW LOADING ON APPLICABLE ROOF STRUCTURE.

COORDINATE ROOF FRAMING WITH FINAL SELECTION OF ROOF SUPPORTED MECHANICAL EQUIPMENT AND ASSOCIATED OPENINGS. ITEMS TO BE COORDINATED INCLUDE SIZES, LOCATIONS, TOTAL WEIGHTS, WEIGHT DISTRIBUTIONS, AND SUPPORT FRAME REQUIREMENTS.

2. 1-STORY OFFICE AREA ROOF LOADS:

A.	ROOF MEMBRANE & INSULATION	2	PSF
B.	METAL DECK	2	PSF
C.	STEEL JOIST FRAMING SELF-WEIGHT	3	PSF
D.	SPRINKLERS / FIRE PROTECTION SYSTEM	3	PSF
E.	SUSPENDED CEILINGS	3	PSF
F.	DUCTS, LIGHTS, & MISCELLANEOUS MECHANICAL	10	PSF
	TOTAL DEAD LOAD SUPPORTED BY STEEL JOIST FRAMING	23	PSF MIN
G.	STEEL JOIST GIRDER FRAMING SELF-WEIGHT	3	PSF
	TOTAL DEAD LOAD SUPPORTED BY STEEL JOIST GIRDER FRAMING	26	PSF MIN
H.	ROOF LIVE, SNOW, MHE LIVE, AND RAIN LOADS	SEE S011	

SEE JOIST LOADING SCHEDULE & DIAGRAMS ON SHEET S402 FOR ADDITIONAL INFORMATION.

SECONDARY ROOF DRAINAGE VIA SCUPPERS OR OVERFLOW DRAINS SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE AND ASCE 7. SECONDARY ROOF DRAINAGE SHALL BE DESIGNED BY OTHERS TO LIMIT THE TOTAL DEPTH OF WATER (STATIC HEAD + HYDRAULIC HEAD OVER SECONDARY ROOF DRAINS) TO 4" MAXIMUM ABOVE THE ROOF MEMBRANE AT THE PRIMARY ROOF DRAIN. REFER TO JOIST SCHEDULE ON SHEET S402 FOR RAIN AND SNOW LOADING ON APPLICABLE ROOF STRUCTURE.

COORDINATE ROOF FRAMING WITH FINAL SELECTION OF ROOF SUPPORTED MECHANICAL EQUIPMENT AND ASSOCIATED OPENINGS. ITEMS TO BE COORDINATED INCLUDE SIZES, LOCATIONS, TOTAL WEIGHTS, WEIGHT DISTRIBUTIONS, AND SUPPORT FRAME REQUIREMENTS.

3. RSP (LEVELS 2 - 5) FLOOR LOADS:

A.	SLAB AND DECK SELF-WEIGHT (INCLUDES ALLOWANCE FOR 1/2" PONDED CONCRETE WEIGHT)	75	PSF
B.	SPRINKLERS, DUCTS, LIGHTS, & MISCELLANEOUS MECHANICAL	10	PSF
	TOTAL DEAD LOAD SUPPORTED BY STEEL BEAM FRAMING (DOES NOT INCLUDE STEEL BEAM FRAMING SELF-WEIGHT)	85	PSF MIN
C.	FLOOR LIVE LOAD	SEE S010 & S011	

4. SLAM PLATFORM FLOOR LOADS:

A.	SLAB AND DECK SELF-WEIGHT (INCLUDES ALLOWANCE FOR 1/2" PONDED CONCRETE WEIGHT)	63	PSF
B.	SPRINKLERS, DUCTS, LIGHTS, & MISCELLANEOUS MECHANICAL	10	PSF
	TOTAL DEAD LOAD SUPPORTED BY STEEL BEAM FRAMING (DOES NOT INCLUDE STEEL BEAM FRAMING SELF-WEIGHT)	73	PSF MIN
C.	FLOOR LIVE LOAD	SEE S010 & S011	

5. OTHER MHE (NON-SLAM) PLATFORM FLOOR LOADS:

A.	METAL DECK PLUS RESIN DECK	6	PSF
B.	SPRINKLERS, DUCTS, LIGHTS, & MISCELLANEOUS MECHANICAL	10	PSF
	TOTAL DEAD LOAD SUPPORTED BY STEEL BEAM FRAMING (DOES NOT INCLUDE STEEL BEAM FRAMING SELF-WEIGHT)	16	PSF MIN
C.	FLOOR LIVE LOAD	SEE S010 & S011	

6. SNOW LOADS:
   - A. FLAT ROOF SNOW LOAD, P_F = 7 PSF
   - B. GROUND SNOW, P_g = 10 PSF
   - C. SNOW LOAD IMPORTANCE FACTOR, I_S = 1.0
   - D. SNOW EXPOSURE FACTOR, C_e = 1.0
   - E. SNOW LOAD THERMAL FACTOR, C_t = 1.0 (TYP); 1.2 (FOR EXTERIOR STRUCTURES)
   - F. MINIMUM SNOW LOAD, P_m = 12 PSF

DESIGN LOADS - CONTINUED

7. WIND LOADS:
   - A. BASIC DESIGN WIND SPEED, V = 143 MPH
   - B. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD} = 116 MPH
   - C. RISK CATEGORY = II
   - D. WIND EXPOSURE = C (ALL WIND DIRECTIONS)
   - E. INTERNAL PRESSURE COEFFICIENT, GCpi = +0.18, -0.18
   - F. DESIGN PRESSURES FOR EXTERIOR COMPONENT AND CLADDING ITEMS NOT SPECIFICALLY DESIGNED BY THE ENGINEER OF RECORD: SEE TYPICAL COMPONENT AND CLADDING WIND PRESSURE TABLE. FOR PRESSURES NOT SHOWN, SPECIALTY ENGINEER SHALL DETERMINE WIND LOADS UNDER GOVERNING BUILDING CODE, AND BASED ON WIND LOAD PARAMETERS DEFINED ABOVE AS APPLICABLE.

8. SEISMIC LOADS:

A.	SEISMIC RISK CATEGORY	= II
B.	SEISMIC IMPORTANCE FACTOR, I_e	= 1.0
C.	MAPPED SPECTRAL RESPONSE ACCELERATION FACTOR AT SHORT PERIOD, S_S	= 0.157
D.	MAPPED SPECTRAL RESPONSE ACCELERATION FACTOR AT 1 SECOND PERIOD, S_1	= 0.069
E.	SITE CLASS	= D
F.	DESIGN SPECTRAL RESPONSE ACCELERATION FACTOR AT SHORT PERIODS, S_{DS}	= 0.167
G.	DESIGN SPECTRAL RESPONSE ACCELERATION FACTOR AT 1 SECOND PERIOD, S_{D1}	= 0.110
H.	SEISMIC DESIGN CATEGORY	= B
I.	BASIC SEISMIC FORCE RESISTING SYSTEM	= STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE, EXCLUDING CANTILEVER COLUMN SYSTEMS + ORDINARY PRECAST CONCRETE SHEAR WALLS (AT SINGLE STORY OFFICE AREA & STAND-ALONE BUILDINGS)
J.	RESPONSE MODIFICATION COEFFICIENT, R	= 3.0
K.	SEISMIC RESPONSE COEFFICIENT, C_S	= 0.021 (5-STORY WAREHOUSE) 0.056 (OFFICE + STAND-ALONE)
L.	DESIGN BASE SHEAR	= 3,740 KIPS (MAX PER E/W SIDE) 165 KIPS (OFFICE)
M.	ANALYSIS PROCEDURE USED	= ELFP

9. SPECIAL LOADS:
   - A. INTERIOR WALLS & PARTITIONS (> 6 FEET IN HEIGHT): 5 PSF HORIZONTAL LIVE LOAD
   - B. HANDRAILS AND GUARDRAILS:
     - i. TOP RAIL: 200-POUND CONCENTRATED LOAD AT ANY POINT IN ANY DIRECTION OR 50 PLF UNIFORM LOAD APPLIED IN ANY DIRECTION.
     - ii. INTERMEDIATE RAILS, BALUSTERS, AND PANEL FILLERS: HORIZONTALLY APPLIED NORMAL LOAD OF 50 POUNDS ON AN AREA NOT TO EXCEED 1 SQUARE FOOT, INCLUDING OPENINGS AND SPACE BETWEEN RAILS.
   - C. IMPACT:
     - i. ELEVATORS: SECTION 1607.9.1
     - ii. MACHINERY: SECTION 1607.9.2
     - iii. FAÇADE ACCESS EQUIPMENT: SECTION 1607.9.3
     - iv. LIFELINE ANCHORAGE FOR FAÇADE ACCESS: SECTION 1607.9.4

CONSTRUCTION AND SAFETY

1. THESE STRUCTURAL DESIGN DOCUMENTS REPRESENT THE COMPLETED PROJECT IN ITS FINAL STATE AND DESIGNED FOR THE LOADS AND MATERIALS INDICATED. THE STRUCTURAL ENGINEER HAS ONLY REVIEWED THE STRENGTH AND STABILITY OF THE STRUCTURE IN ITS COMPLETED FORM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR BRACING THE STRUCTURE AS REQUIRED TO MAINTAIN STABILITY DURING CONSTRUCTION AND UNTIL COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT, INCLUDING PARTIALLY CONSTRUCTED AND INCOMPLETE STRUCTURES.
   - A. THE CONTRACTOR SHALL RETAIN A QUALIFIED ERECTION/BRACING ENGINEER WITH A MINIMUM OF 5 YEARS OF EXPERIENCE DESIGNING ERECTION/BRACING SYSTEMS FOR SIMILAR CONSTRUCTION.
   - B. THE CONTRACTOR SHALL SUBMIT ERECTION/BRACING DRAWINGS SEALED BY THE QUALIFIED ERECTION/BRACING ENGINEER REGISTERED IN THE STATE OF THE PROJECT AND RESPONSIBLE FOR THEIR PREPARATION. ERECTION/BRACING DRAWINGS SHALL INCLUDE CONSTRUCTION LOADS, BRACING, SHORING, SEQUENCING, ETC. AND SHALL BE PREPARED IN ACCORDANCE WITH THE LATEST EDITION OF ASCE 37 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION" AND TEMPORARY CABLE BRACING DESIGNED PER THE LATEST EDITION OF ASCE/SEI 19 "STRUCTURAL APPLICATIONS OF STEEL CABLES FOR BUILDINGS".
2. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
3. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS RESPONSIBLE FOR HIS/HER OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.
4. PRIOR TO COMMENCEMENT OF STEEL ERECTION, CONTRACTOR MUST PROVIDE THE STEEL ERECTOR WRITTEN NOTIFICATION THAT THE CONCRETE IN THE FOOTINGS, PIERS, AND WALLS OR THE MORTAR IN THE MASONRY PIERS AND WALLS HAS ATTAINED EITHER 75 PERCENT OF THE INTENDED MINIMUM COMPRESSIVE DESIGN STRENGTH OR SUFFICIENT STRENGTH TO SUPPORT THE LOADS IMPOSED DURING STEEL ERECTION.
5. ANCHOR RODS AND FOUNDATION DOWELS SHALL NOT BE REPAIRED, REPLACED, OR FIELD-MODIFIED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

LATERAL LOAD RESISTING SYSTEM

1. THE LATERAL LOAD RESISTING SYSTEM CONSISTS OF THE FOLLOWING ELEMENTS:
   - A. METAL ROOF DECK & CONCRETE OVER METAL DECK FLOOR DIAPHRAGMS THROUGHOUT
   - B. 5-STORY WAREHOUSE AREA: STEEL MOMENT FRAMES AS SHOWN AND NOTED ON PLANS
   - C. OFFICE AREA: CONCENTRICALLY BRACED FRAMES + CONCRETE PANELS (SHEAR WALLS)
   - D. STAND-ALONE BUILDINGS: CONCRETE PANELS (SHEAR WALLS)

INTERSTORY DRIFTS AS FOLLOWS (C_d = 3.0)

1. BASE TO INTERMEDIATE PLATFORMS = 1"
2. INTERMEDIATE PLATFORMS TO 2^{ND} FLOOR = 1 1/2"
3. 2^{ND} FLOOR TO ROOF = 1" (PER FLOOR, TYP)

DESIGN CONSIDERATIONS FOR FUTURE REMOVAL OF FLOORS

1. BUILDING HAS NOT BEEN DESIGNED TO ACCOMMODATE THE FUTURE REMOVAL OF ONE OR MORE FLOORS OR ANY PORTION THERE-OF. ANY FUTURE MODIFICATIONS TO THE BUILDING STRUCTURE MUST BE REVIEWED AND APPROVED BY A STRUCTURAL ENGINEER PRIOR TO MODIFICATION.

FOUNDATIONS

1. FOUNDATION DESIGN IS BASED UPON RECOMMENDATIONS DESCRIBED IN THE GEOTECHNICAL ENGINEER'S REPORT (REV. 1) BY S&ME, PROJECT NO. 218721, DATED 01/24/2022. THE GEOTECHNICAL ENGINEER'S REPORT IS AVAILABLE UPON REQUEST.
   - A. ALL FOOTINGS SUPPORTING STRUCTURAL ELEMENTS ASSOCIATED WITH THE MAIN BUILDING ELEMENTS AND STRUCTURES WITHIN THE FOOTPRINT OF THE MAIN BUILDING SHALL BEAR ON GROUND IMPROVED ELEMENTS COMPRISED OF COMPACTED AGGREGATE PIERS OR VIBRO-REPLACEMENT STONE COLUMNS. GROUND IMPROVEMENT SHALL EXTEND BELOW COLUMN FOOTINGS THAT SUPPORT THE ROOF OF THE OFFICE AREA. EXTENT AND FREQUENCY OF GROUND IMPROVEMENT ELEMENTS SHALL BE DETERMINED BY SPECIALTY CONTRACTOR RESPONSIBLE FOR THE DESIGN.
   - B. ALL FOOTINGS SUPPORTING LIGHTLY LOADED ANCILLARY STRUCTURES AROUND THE BUILDING SHALL BEAR ON LEVEL (WITHIN 1 IN 12) STRUCTURAL FILL AND/OR LEAN CONCRETE (f'_c = 250 PSI MIN) EXTENDED A MINIMUM OF ONE TO TWO FEET BELOW THE DESIGN BEARING GRADE AS DESCRIBED IN THE GEOTECHNICAL ENGINEER'S REPORT. FOUNDATIONS FOR THESE STRUCTURES HAVE BEEN DESIGNED FOR A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 3,000 PSF.
   - C. SLABS-ON-GRADE SHALL BE SUPPORTED ON 6" (MIN) OF COMPACTED SELECT GRANULAR MATERIAL, COMPACTED TO AT LEAST 98% OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY.
   - D. THE SPECIALTY CONTRACTOR SHALL SUBMIT A GROUND IMPROVEMENT DESIGN THAT IS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. DESIGNS SHALL MEET REQUIREMENTS OUTLINED IN THE PROJECTS SPECIFICATIONS AND SHALL PROVIDE THE FOLLOWING MINIMUM DESIGN CRITERIA:
     - i. ALLOWABLE NET BEARING CAPACITY OF 6,000 PSF OR GREATER
     - ii. TOTAL SETTLEMENT OF 1" OR LESS
     - iii. A DIFFERENTIAL SETTLEMENT OF L/500 BUT NO MORE THAN 1/2", WHERE L IS THE HORIZONTAL DISTANCE BETWEEN POINTS IN CONSIDERATION.
   - E. THE SPECIALTY CONTRACTOR SHALL COORDINATE WITH ALL BELOW GRADE UTILITIES THAT MAY IMPACT THE DISTRIBUTION INFLUENCE ENVELOPE BELOW FOOTINGS AND FOUNDATIONS. THE GROUND IMPROVEMENT CONTRACTOR'S SPECIALTY ENGINEER SHALL MAKE THE NECESSARY DESIGN AND CONSTRUCTION ADJUSTMENTS REQUIRED TO ACCOMMODATE THE INTERFERING UTILITY LINES, INCLUDING THE EFFECTS OF THE CONSTRUCTION SEQUENCE OF GROUND IMPROVEMENT AND UTILITY INSTALLATION.
2. ALL AREAS WITHIN THE FOOTPRINT OF THE BUILDING, INCLUDING UTILITY TRENCHES, MUST BE FREE OF ANY WET AND/OR SOFT AREAS PRIOR TO PLACEMENT OF FILL MATERIAL OR SLAB.
3. CONTRACTOR SHALL CONTACT UTILITY COMPANIES FOR LOCATING UNDERGROUND SERVICES AND IS RESPONSIBLE FOR THEIR PROTECTION AND SUPPORT.
4. FILL MATERIALS: ALL FILL MATERIALS SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER, INCLUDING THE SUITABILITY OF ALL EXCAVATED ON-SITE SOILS FOR RE-USE. MATERIAL SHALL NOT BE PLACED ON FROZEN GROUND.
   - A. CONTROLLED LOW STRENGTH MATERIAL (CLSM): SELF-LEVELING AND SELF-COMPACTING CEMENTITIOUS MATERIAL WITH AN UNCONFINED COMPRESSIVE STRENGTH BETWEEN 50 PSI AND 150 PSI.
   - B. WELL GRADED GRANULAR MATERIAL: WELL GRADED MIXTURE OF CRUSHED GRAVEL, CRUSHED STONE, AND SAND PER ASTM D294 WITH AT LEAST 95 PERCENT PASSING A 1-1/2" SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 SIEVE.
   - C. FREE DRAINING GRANULAR FILL: NARROWLY GRADED MIXTURE OF CRUSHED STONE PER ASTM D448 WITH COARSE AGGREGATE GRADING SIZE 67 WITH 100 PERCENT PASSING A 1" SIEVE AND NO MORE THAN 5 PERCENT PASSING A NO. 4 SIEVE OR AASHTO NO 57 - CRUSHED AGGREGATE.
   - D. IMPERVIOUS FILL: LEAN CLAYEY GRAVEL AND SAND MIXTURE CAPABLE OF COMPACTING TO A DENSE STATE.
5. FOUNDATION ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES AND MAY VARY TO SUIT SUB-SURFACE SOIL CONDITIONS. ELEVATIONS AND BEARING STRATA SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE. PROVIDE ENGINEERED FILL OR CLSM UNDER FOUNDATIONS AT SOFT SPORTS AND FOR EXTENDING EXCAVATION TO ADEQUATE BEARING MATERIAL. INSTALL FOUNDATIONS AT DESIGNED ELEVATIONS UNLESS OTHERWISE APPROVED BY STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER.
6. FROST DEPTH IS 12 INCHES BELOW GRADE. BOTTOM OF FOOTINGS, MAT FOUNDATIONS, AND GRADE BEAMS THAT ARE NOT PART OF AN INSULATED FROST PROTECTED FOUNDATION SYSTEM AND ARE NOT WITHIN CONDITIONED SPACE MUST BE BELOW SPECIFIED MINIMUM FROST DEPTH AS MEASURED FROM EXTERIOR GRADE. MAINTAIN SPECIFIED TOP OF FOUNDATION ELEVATIONS AND THICKEN FOOTING OR PLACE ON CLSM AS REQUIRED.
7. FOUNDATIONS MAY BE PLACED WITHOUT SIDE FORMS IF EXCAVATED WALLS STAND APPROXIMATELY VERTICAL.
8. LATERAL SOIL PRESSURES: LATERAL EARTH PRESSURES INDICATED BELOW DO NOT INCLUDE HYDROSTATIC OR COMPACTION PRESSURES DURING BACKFILL OPERATIONS. WALLS SHALL HAVE ADEQUATE DRAINAGE TO PREVENT HYDROSTATIC PRESSURES. COMPACT USING HAND-OPERATED TAMPERS ONLY.
   - A. DOCK WALLS (AT-REST PRESSURE): 60 PCF EQUIVALENT FLUID PRESSURE, TRIANGULAR DISTRIBUTION + 0.5 x FLOOR LIVE LOAD SURCHARGE, RECTANGULAR DISTRIBUTION. FINAL LATERAL SOIL PRESSURES TO BE CONFIRMED WITH GEOTECHNICAL ENGINEER.
9. BACKFILL AGAINST WALLS:
   - A. ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER OR CONSULTANT.
   - B. ALL BACKFILL MATERIALS AGAINST WALLS, FILL BENEATH SLABS-ON-GRADE, AND/OR ALONG UTILITY TRENCHES AND EXCAVATIONS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNCIAL ENGINEER. MINIMUM COMPACTION SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
10. SEAL UTILITY TRENCH AT THE EXTERIOR FOUNDATION WALL BY USING A COMPACTED IMPERVIOUS FILL OR CLSM TO CREATE A DAM TO PREVENT ENTRY OF WATER.
11. FINISHED GRADE SHALL SLOPE AWAY FROM THE PERIMETER FOUNDATIONS.
12. EXCAVATIONS:
    - A. ALL EXCAVATIONS IN THE VICINITY OF EXISTING FOUNDATIONS SHALL BE COORDINATED AND APPROVED BY THE STRUCTURAL ENGINEER, GEOTECHNCIAL ENGINEER, AND SPECIALTY CONTRACTOR PRIOR TO EXCAVATION.

GROUND IMPROVEMENT

1. DESIGN AND INSTALL GROUND IMPROVEMENT IN A TURN-KEY FASHION TO MEET THE FOLLOWING DESIGN CRITERIA:
   - A. PROVIDE UNIFORM ALLOWABLE BEARING CAPACITIES MEETING OR EXCEEDING SPECIFIED DESIGN BEARING PRESSURES AS INDICATED IN "FOUNDATIONS" GENERAL NOTES.
   - B. LIMIT LONG-TERM MAXIMUM OVERALL SETTLEMENTS TO 1", AND LONG-TERM MAXIMUM DIFFERENTIAL SETTLEMENTS (AS MEASURED BETWEEN TYPICAL COLUMN BAYS, NO LESS THAN 30'-0") TO L/500 AND 1/2" (MAXIMUM).
   - C. MINIMUM COEFFICIENT OF FRICTION AS INDICATED IN THE GEOTECHNICAL ENGINEER'S REPORT, BUT NO LESS THAN 0.4.
2. SUBMITTALS:
   - A. SUBMIT GROUND IMPROVEMENT CONSTRUCTION DOCUMENTS, INCLUDING DESIGN CALCULATIONS SIGNED AND SEALED BY A REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE OF THE PROJECT. SUBMITTAL SHALL INCLUDE:
     - i. ALL DESIGN REQUIREMENTS INCLUDING TEMPORARY AND PERMANENT SOIL STABILITY REQUIREMENTS.
     - ii. DESIGN PARAMETERS FOR SETTLEMENT CALCULATIONS CONSIDERING STRESS OVERLAP.
     - iii. NUMBER, DEPTH, DIAMETER, AND LOCATION OF AGGREGATE PIERS OR GROUND IMPROVEMENT ELEMENTS.
     - iv. QUALITY ASSURANCE AND QUALITY CONTROL REQUIREMENTS.
   - B. INSTALLER SHALL SUBMIT INSTALLATION RECORD, FIELD MODULUS LOAD TEST DATA, AND ANALYSIS OF THE TEST DATA FOR VERIFICATION OF THE DESIGN PARAMETER VALUES. THE REPORT SHALL BE PREPARED UNDER THE DIRECTION OF REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE OF THE PROJECT.
3. QUALITY CONTROL:
   - A. GROUND IMPROVEMENT INSTALLER SHALL HAVE A MINIMUM OF 5 YEARS EXPERIENCE AND HAVE COMPLETED AT LEAST 15 PROJECTS OF SIMILAR SIZE.
   - B. PERFORM FIELD MODULUS LOAD TEST (ASTM D1143) TO VALIDATE COMPLIANCE WITH REQUIRED BEARING CAPACITIES AND SETTLEMENT CRITERIA. MODULUS TEST SHALL BE PERFORMED TO A MINIMUM OF 150% OF THE DESIGN OR LIMIT STATE TOP OF PIER STRESS OF AN INDIVIDUAL PIER LOCATED WHERE SOIL CONDITIONS ARE THE POOREST AS DOCUMENTED BY THE BORING LOADS CONTAINED IN THE GEOTECHNICAL REPORT. TEST PIERS SHALL NOT BECOME PART OF THE PERMANENT FOUNDATION SYSTEM.
   - C. CONTINUOUS INSPECTIONS ARE REQUIRED TO BE PERFORMED BY THE GEOTECHNICAL ENGINEER OF RECORD, OR THE OWNER'S CONTRACTED SPECIAL INSPECTOR TO MONITOR ADHERENCE TO ALL TESTING AND INSTALLATION PROCEDURES. THE INSTALLER SHALL IMMEDIATELY REPORT ANY UNUSUAL CONDITIONS ENCOUNTERED DURING THE FIELD MODULUS TEST OR PIER INSTALLATION TO THE GROUND IMPROVEMENT REGISTERED DESIGN PROFESSIONAL FOR THE PROJECT, THE OWNER, AND THE ENGINEER.

CAST-IN-PLACE CONCRETE (03-30-00)

1. CONCRETE MIXTURES: REFER TO CONCRETE MIXTURE REQUIREMENTS TABLE FOR CONCRETE MIX INFORMATION.
2. CONCRETE MATERIALS:
   - A. CEMENTITIOUS MATERIALS:
     - i. PORTLAND CEMENT: ASTM C150, TYPE I OR TYPE II
     - ii. BLENDED HYDRAULIC CEMENT: NOT PERMITTED (ASTM C595, TYPE IL, PORTLAND LIMESTONE CEMENT)
     - iii. FLY ASH: ASTM C618, CLASS F OR C. FLY ASH SHALL NOT EXCEED 25% OF TOTAL CEMENTITIOUS CONTENT BY MASS. FLY ASH SHALL BE USED IN FOUNDATION CONCRETE MIXES ONLY, UNLESS NOTED OTHERWISE IN SPECIFICATIONS.
     - iv. GROUND GRANULATED BLAST FURNACE SLAG: ASTM C989, GRADE 100 OR 120. COMBINATION SLAG AND FLY ASH SHALL NOT EXCEED 50% OF TOTAL CEMENTITIOUS CONTENT BY MASS. GROUND GRANULATED BLAST FURNACE SLAG SHALL BE USED IN FOUNDATION CONCRETE MIXES ONLY, UNLESS NOTED OTHERWISE IN SPECIFICATIONS.
     - v. FLY ASH, NATURAL POZZOLANS, OR GROUND GRANULATED BLAST FURNACE SLAG: WHEN EXPOSED TO DEICING CHEMICALS, LIMIT THE MAXIMUM WEIGHT TO THE PERCENTAGES OF THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS GIVEN IN TABLE 4.2.1.1.b OF ACI 301-16.
     - vi. CHLORIDE CONTENT OF CONCRETE: LIMIT TOTAL CHLORIDE ION CONTENT TO AMOUNT INDICATED IN TABLE 4.2.2.7.d OF ACI 301-16 (EXPOSURE CLASS C0 UNLESS NOTED OTHERWISE). ADMIXTURES CONTAINING CHLORIDE ARE NOT PERMITTED IN REINFORCED CONCRETE OR CONCRETE CONTAINING METALS.
   - B. AGGREGATES:
     - i. NORMAL WEIGHT AGGREGATES: ASTM C33, COARSE GRADED.
     - ii. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
   - C. ADMIXTURES: ADMIXTURES CONTAINING CHLORIDE ARE NOT PERMITTED IN REINFORCED CONCRETE OR CONCRETE CONTAINING METALS.
     - i. WATER REDUCING ADMIXTURE: ASTM C494
     - ii. PLASTICIZING ADMIXTURE: ASTM C1017
     - iii. AIR ENTRAINING ADMIXTURE: ASTM C260
   - D. WATER: ASTM C94 AND POTABLE
3. DETAILING REQUIREMENTS:
   - A. FINISH OF CONCRETE HANDICAP RAMPS TO CONFORM WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA).
   - B. CONTRACTION JOINTS IN SLABS-ON-GROUND SHALL NOT EXCEED A LENGTH TO WIDTH RATIO OF 1.5-TO-1. SEE DRAWINGS FOR TYPICAL JOINT DETAILS.
   - C. CONSTRUCTION JOINTS IN SLABS-ON-GROUND MAY BE LOCATED AT ANY CONTRACTION JOINT LOCATION. SEE DRAWINGS FOR TYPICAL JOINT DETAILS.
   - D. PROVIDE 3/4" CHAMFER AT CORNERS OF EXPOSED CONCRETE.
   - E. WHERE BRITTLE FLOOR FINISHES ARE TO BE APPLIED TO FLOOR SLABS, COORDINATE CONTRACTION JOINT LOCATIONS WITH FLOOR FINISH JOINT LOCATIONS AND ARCHITECT.

Schaefer Project Number: 24-0265

ABBREVIATIONS

ARCH =	ARCHITECT
B/ =	BOTTOM OF
BLDG =	BUILDING
BOT =	BOTTOM
BRG =	BEARING
CFS =	COLD-FORMED STEEL
CJ =	CONTRACTION JOINT
CJP =	COMPLETE JOINT PENETRATION
CL =	CENTER LINE
CLR =	CLEAR
CLSM =	CONTROLLED LOW STRENGTH MATERIAL
CMU =	CONCRETE MASONRY UNIT
COL =	COLUMN
CONC =	CONCRETE
CONN =	CONNECTION
CONT =	CONTINUOUS
DEG or ° =	DEGREE
DIA or ø =	DIAMETER
EA =	EACH
EF =	EACH FACE
EL =	ELEVATION
EMB =	EMBEDMENT
EQ =	EQUAL
EXIST =	EXISTING
EXP =	EXPANSION
FDN =	FOUNDATION
FS =	FAR SIDE
FTG =	FOOTING
GA =	GAGE
GALV =	GALVANIZED
GT =	GIRDER TRUSS
HORIZ =	HORIZONTAL
JST BRG =	JOIST BEARING
Ld =	TENSION DEVELOPMENT LENGTH OF REINFORCING BAR IN CONCRETE
Ld-CMU =	TENSION DEVELOPMENT LENGTH OF REINFORCING BAR IN GROUTED CMU
Ldc =	COMPRESSION DEVELOPMENT LENGTH OF REINFORCING BAR IN CONCRETE
LDH =	LONG DIMENSION HORIZONTAL
Ldh =	HOOKED BAR TENSION DEVELOPMENT LENGTH OF REINFORCING BAR IN CONCRETE
LDV =	LONG DIMENSION VERTICAL
LLH =	LONG LEG HORIZONTAL
LLV =	LONG LEG VERTICAL
Ls =	LAP SPLICE LENGTH OF REINFORCING BAR IN CONCRETE
Ls-CMU =	LAP SPLICE LENGTH OF REINFORCING BAR IN GROUTED CMU
Lsc =	COMPRESSION LAP SPLICE LENGTH OF REINFORCING BAR IN CONCRETE
LSL =	LAMINATED STRAND LUMBER
LVL =	LAMINATED VENEER LUMBER
MCJ =	MASONRY CONTROL JOINT
MFR =	MANUFACTURER
NS =	NEAR SIDE
oc =	ON CENTER
OPNG =	OPENING
P/T =	POST-TENSION
PAF =	POWER-ACTUATED FASTENER
PE =	PRE-ENGINEERED
PEMB =	PRE-ENGINEERED METAL BUILDING
PJP =	PARTIAL JOINT PENETRATION
PL =	PLATE
PSL =	PARALLEL STRAND LUMBER
PT =	POINT
RD =	ROOF DRAIN
REINF =	REINFORCING
RTU =	ROOF TOP UNIT
SDS =	SELF DRILLING SCREWS
SIM =	SIMILAR
SL =	STEP LEDGE
SPA =	SPACE or SPACES
SRD =	SECONDARY ROOF DRAIN
STIFF =	STIFFENER
STL =	STEEL
STW =	STEP TOP OF WALL
T/ =	TOP OF
UNO =	UNLESS NOTED OTHERWISE
VB =	VERTICAL BRACING
VERT =	VERTICAL
VIF =	VERIFY IN FIELD
w/ =	WITH
WP =	WORK POINT

LEGEND

SYMBOL	DESCRIPTION	REFERENCE
n	COLUMN LINE DESIGNATION	
n	FACE OF BUILDING	
Fxx / T/FTG = x'-xx"	INDICATES FOOTING TYPE PER SCHEDULE; INDICATES TOP OF FOOTING ELEVATION	
W14x257 - BPX / W14x99 (ABOVE)	COLUMN SIZE AT GROUND LEVEL; BASE PLATE TYPE, SEE SCHEDULE; WHERE INDICATED, COLUMN SIZE ABOVE LEVEL 3. SPLICE COLUMN AT 4'-0" ABOVE LEVEL 3 TYPICAL UNO.	
Kn	KEYNOTE MARK	
Pn	PEDESTAL MARK	
	STEP T/FTG	
	ELEVATION INDICATION	
Dn	DECK MARK	
n	SHEAR EMBED MARK	

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

GENERAL NOTES, ABBREVIATIONS & LEGEND

SHEET NUMBER

S001

NOT FOR CONSTRUCTION

6/7/2024 8:38:05 AM

CAST-IN-PLACE CONCRETE (03-30-00) - CONTINUED

F. PROVIDE CONTRACTION/CONSTRUCTION JOINTS IN CONCRETE WALLS AT A MAXIMUM SPACING OF TWICE THE HEIGHT OF THE WALL ABOVE THE TOP OF FOOTING. MAXIMUM JOINT SPACING SHALL NOT EXCEED 24 FEET ON CENTER. CONTRACTION JOINTS SHALL HAVE A 1-1/2" DEEP BY 3/4" WIDE TAPERED REVEAL EACH SIDE OF THE WALL UNLESS NOTED OTHERWISE. AT CONTRACTION JOINTS, EVERY OTHER HORIZONTAL BAR SHALL BE CUT BACK 1-1/2" FROM THE CONTRACTION JOINT UNLESS NOTED OTHERWISE. CONSTRUCTION JOINTS SHALL BE FORMED SIMILAR TO CONTRACTION JOINTS. AT CONSTRUCTION JOINTS, ALL HORIZONTAL STEEL SHALL BE DISCONTINUOUS AND A DOWEL BAR OF SIZE AND SPACING TO MATCH THE HORIZONTAL REINFORCING SHALL BE EMBEDDED A MINIMUM OF 40 x BAR DIAMETER EACH SIDE OF THE CONSTRUCTION JOINT UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR ARCHITECTURAL JOINT TREATMENT.

G. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNLESS EFFECTIVELY COATED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.

H. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR VAPOR BARRIER REQUIREMENTS. VAPOR BARRIER, WHERE REQUIRED, SHALL BE PLACED OVER GRANULAR BASE.

4. CONCRETE PLACEMENT:

A. DO NOT BACKFILL AGAINST WALLS UNTIL CONCRETE STRENGTH HAS REACHED A MINIMUM OF 0.75 x f'_c AND A MINIMUM OF 7 DAYS.

B. ROUGHENED SURFACES, WHERE INDICATED, SHALL EITHER BE:
i. ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY ¼" AND BE CLEAN AND FREE OF LAITANCE.
ii. FORMED BY EXPANDED METAL LEAVE-IN-PLACE MESH. SUBMIT PRODUCT INFORMATION FOR APPROVAL.

C. THE ELEVATED CONCRETE SLAB-ON-METAL-DECK SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL FLOOR ELEVATION. THE STEEL FLOOR FRAMING HAS BEEN DESIGNED FOR ADDITIONAL WEIGHT OF THE CONCRETE SLAB TO ACCOUNT FOR JOIST AND GIRDER DEFLECTION. THE CONTRACTOR SHALL INCORPORATE THE COST OF ADDITIONAL CONCRETE TO PROVIDE LEVEL FLOORS. ADDITIONAL CONCRETE PLACED TO LEVEL THE FLOOR SHALL BE 0" AT COLUMN AND SHALL NOT EXCEED 1/2" AT ANY LOCATION.

5. PERFORMANCE:

A. CONCRETE WORK IN COLD WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 306.1-90 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING" AND ACI 306R-16 "GUIDE TO COLD WEATHER CONCRETING".

B. CONCRETE WORK IN HOT WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 305.1-14 "SPECIFICATION FOR HOT WEATHER CONCRETING" AND ACI 305R-10 "GUIDE TO HOT WEATHER CONCRETING". THE AIR TEMPERATURE, RELATIVE HUMIDITY, CONCRETE TEMPERATURE, AND WIND SPEED SHALL BE ENTERED INTO NOMOGRAPH FIGURE 4.2 IN ACI 305R-10 TO DETERMINE IF PRECAUTIONS AGAINST PLASTIC SHRINKAGE ARE REQUIRED.

C. MASS CONCRETE: THE FOLLOWING REQUIREMENTS AND ACI 301-16 PROVISIONS FOR MASS CONCRETE SHALL APPLY TO ANY CONCRETE WHERE ALL THREE VOLUMETRIC DIMENSIONS EXCEED 4 FEET (OR THE TOTAL VOLUME EXCEEDS 64 CUBIC FEET / 2.37 CUBIC YARDS).
i. CONTRACTOR SHALL SCHEDULE A MEETING WITH THE STRUCTURAL ENGINEER, TESTING AGENCY, CONCRETE SUBCONTRACTOR, AND CONCRETE SUPPLIER TO DISCUSS MASS CONCRETE REQUIREMENTS, MIX DESIGNS, AND TESTING PROCEDURES.
ii. MAXIMUM TEMPERATURE IN CONCRETE AFTER PLACEMENT SHALL NOT EXCEED 160° F.
iii. MAXIMUM TEMPERATURE DIFFERENCE BETWEEN CENTER AND SURFACE PLACEMENT SHALL NOT EXCEED 35° F UNLESS CALCULATIONS ON THE THERMAL CRACKING PROPERTIES OF THE MIX ARE PROVIDED AND SHOW A HIGHER TEMPERATURE DIFFERENCE WILL NOT ADVERSELY AFFECT THE CONCRETE.
iv. 56-DAY COMPRESSIVE STRENGTH IS REQUIRED FOR THE MASS CONCRETE MIX. OBTAIN APPROVAL FROM THE ENGINEER OF RECORD.

D. TOLERANCES: CONFORM TO ACI 117-10.

E. FLOOR SLABS-ON-GRADE AND SLABS-ON-METAL-DECK SHALL CONFORM TO THE SURFACE PROFILE TOLERANCES PER ASTM E-1155 AND ACI 117-10 AS INDICATED WITHIN THE PROJECT SPECIFICATIONS.

F. IF CONCRETE ARRIVES AT THE POINT OF DELIVERY WITH A SLUMP BELOW THAT WHICH WILL RESULT IN THE SPECIFIED SLUMP AT THE POINT OF PLACEMENT AND IS UNSUITABLE FOR PLACING AT THAT SLUMP, THE SLUMP MAY BE ADJUSTED ONCE ONLY TO THE REQUIRED VALUE BY ADDING WATER UP TO THE AMOUNT ALLOWED IN THE ACCEPTED MIXTURE PROPORTIONS. ADDITION OF WATER SHALL BE IN ACCORDANCE WITH ASTM C94. DO NOT EXCEED THE SPECIFIED WATER-CEMENTITIOUS MATERIAL RATIO OR SLUMP IN THE APPROVED MIX DESIGN. DO NOT ADD WATER TO CONCRETE DELIVERED IN EQUIPMENT NOT ACCEPTABLE FOR MIXING. AFTER PLASTICIZING OR WATER REDUCING ADMIXTURES ARE ADDED TO THE CONCRETE AT THE SITE TO ACHIEVE FLOWABLE CONCRETE, DO NOT ADD WATER TO THE CONCRETE. MEASURE SLUMP (AND AIR CONTENT OF AIR ENTRAINED CONCRETE), AFTER SLUMP ADJUSTMENT, TO VERIFY COMPLIANCE WITH SPECIFIED REQUIREMENTS.

G. SLUMP SHALL BE MEASURED PRIOR TO THE ADDITION OF ADMIXTURES AND AFTER THE ADDITION OF ADMIXTURES.

H. FOR FINISHING AND CURING, REFER TO SPECIFICATIONS AND SSI'S C309 CURING COMPOUND SPECIFICATIONS.

I. FOR REQUIREMENTS ON SURFACE PREPARATION, FINISHES, FLATNESS AND LEVELNESS, AND JOINT FILLING, REFER TO SPECIFICATIONS.

6. SUBMITTALS:

A. CONSTRUCTION JOINT LAYOUT

B. CONCRETE MIX DESIGNS: CONCRETE MIX DESIGNS INCLUDING PRODUCT DATA FOR ALL CONSTITUENTS AND ADMIXTURES SHALL BE SUBMITTED FOR EACH TYPE OF CONCRETE TO THE STRUCTURAL ENGINEER FOR APPROVAL IN ACCORDANCE WITH ACI 301-16 FIELD TEST DATA OR TRIAL MIXTURES. SUBMITTAL DATA MUST INCLUDE FIELD TEST DATA FROM AT LEAST 10 TESTS OR A THREE POINT CURVE GENERATED USING TRIAL MIXTURES.

C. FOUNDATION SUBMITTAL CONTAINING SIZES, LAYOUTS, AND LOCATIONS OF ALL FOOTINGS, STEPPED FOUNDATIONS, STEM WALLS, PEDESTALS, ETC.

D. FOUNDATION REINFORCING SUBMITTAL CONTAINING SIZES, LAYOUTS, AND LOCATIONS OF ALL REINFORCING, PROPOSED LAP SPLICE LOCATIONS, ETC.

E. PRODUCT DATA FOR CURING MATERIALS

F. PRODUCT DATA FOR FIBER REINFORCEMENT

G. FLOOR FLATNESS AND LEVELNESS MEASUREMENT REPORTS INDICATING COMPLIANCE WITH SPECIFIED TOLERANCES. PROVIDE LEVELNESS MEASUREMENT REPORTS FOR ELEVATED SLABS FOR RECORD EVEN WHERE SPECIFIC LEVELNESS CRITERIA IS NOT REQUIRED.

7. QUALITY ASSURANCE:

A. CONCRETE WORK AND TESTING, AS PERFORMED BY "QUALIFIED FIELD TESTING TECHNICIANS" AND "QUALIFIED LABORATORY TECHNICIANS", SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301-16, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS ABOVE. REPORTS FROM TESTS REQUIRED BY SECTION 1.6 OF ACI 301-16 SHALL BE SUBMITTED TO STRUCTURAL ENGINEER, ARCHITECT, OWNER, CONTRACTOR, CONCRETE SUPPLIER, AND BUILDING OFFICIAL.

CONCRETE REINFORCING (03-20-00)

1. MATERIALS:

A. DEFORMED BARS: ASTM A615 OR ASTM A706, GRADE 60
i. ASTM A706 DEFORMED BARS ARE REQUIRED FOR ALL WELDED REINFORCING BARS.

B. WELDED WIRE REINFORCEMENT: ASTM A1064, FLAT SHEETS ONLY.

2. REINFORCING DEVELOPMENT AND LAP SPLICES (UNLESS OTHERWISE NOTED):

A. WELDED WIRE REINFORCEMENT: LAP WELDED WIRE REINFORCEMENT MINIMUM 1 FULL SPACE PLUS 2".

B. SEE REINFORCING BAR DEVELOPMENT TABLES FOR REQUIRED DEVELOPMENT AND LAP SPLICE LENGTHS.

3. DETAILING REQUIREMENTS:

A. AT SLAB AND WALL OPENING CORNERS AND RE-ENTRANT CORNERS, PROVIDE CORNER/TRIM BARS PER DETAILS ON DRAWINGS. IF NO ADDITIONAL REINFORCING SHOWN, PROVIDE MIN OF (1) #5 BAR IN EACH FACE PARALLEL TO EACH EDGE EXTENDING A MINIMUM OF 2'-0" PAST EDGE OF OPENING. THIS STEEL MAY BE OMITTED IF TYPICAL WALL OR SLAB REINFORCING STEEL EXCEEDS THIS MINIMUM REQUIREMENT.

B. UNLESS OTHERWISE NOTED, AT CORNERS AND INTERSECTIONS OF FOOTINGS, WALLS, AND GRADE BEAMS, PROVIDE BENT BARS OF EQUAL SIZE AND AT SAME SPACING AS TYPICAL REINFORCING AROUND CORNER AND/OR INTO ABUTTING FOOTING, WALL, OR GRADE BEAM. REINFORCING BARS SHALL HAVE AN EMBEDMENT OF 38 x BAR DIAMETERS (18" MIN).

C. SEE PLANS AND DETAILS FOR INTERIOR SLABS-ON-GROUND REINFORCEMENT. LOCATE REINFORCEMENT AS SPECIFIED PER PLANS AND DETAILS.

D. SEE PLAN AND METAL DECK SCHEDULE FOR REINFORCEMENT IN SLABS SUPPORTED ON METAL DECK.

CONCRETE REINFORCING (03-20-00) - CONTINUED

4. PERFORMANCE:

A. COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR PLACING AND SUPPORTING REINFORCEMENT.

B. REINFORCING BARS SHALL HAVE CLEAR COVER AS INDICATED ON THE DRAWINGS. WHERE NOT INDICATED, PROVIDE MINIMUM CLEAR COVER PER ACI-318.

C. REINFORCING BARS SHALL BE FREE OF DIRT AND FORM RELEASE AGENTS.

5. SUBMITTALS:

A. SHOP DRAWINGS FOR REINFORCING STEEL (COMPLY WITH ACI SP-066).

TILT-UP CONCRETE WALL PANELS

1. THE DESIGN, FABRICATION, AND ERECTION OF ALL TILT-UP CONCRETE CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE A SPECIALTY WALL PANEL ENGINEER AND THE CONTRACTOR.

2. DESIGN OF TILT-UP CONCRETE CONSTRUCTION INCLUDING WALL PANELS AND CONNECTIONS SHALL BE IN COMPLIANCE WITH THE INDICATED BUILDING CODE, ACI 318-14, AND THE FOLLOWING CRITERIA:

A. LOADS AND LIMITATIONS SHOWN ON THE CONTRACT DOCUMENTS.
i. SPECIFIED LOADS ARE UNFACTORED UNLESS NOTED OTHERWISE AND SHALL BE FACTORED ACCORDING TO THE LOAD COMBINATIONS LISTED IN SECTION 1605 OF THE REFERENCED BUILDING CODE.

B. SELF WEIGHT OF THE TILT-UP WALL PANELS AND WEIGHT OF MEMBERS SUPPORTED BY THE TILT-UP WALL PANELS.

C. OUT-OF-PLANE FORCES ON TILT-UP WALL PANELS AND ADJACENT OPENINGS SUPPORTED BY THE TILT-UP WALL PANELS.

D. HANDLING, TRANSPORTATION, ERECTION, AND CONSTRUCTION STRESSES.
i. TILT-UP WALL PANELS AND TEMPORARY BRACES SHALL BE DESIGNED TO WITHSTAND CONSTRUCTION PERIOD DESIGN WIND FORCES IN ACCORDANCE WITH ASCE 37 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."

E. STRESSES INDUCED BY CYCLIC THERMAL CHANGES.
i. DESIGN AND DETAILING OF TILT-UP CONCRETE WALL PANELS SHALL ALLOW FOR THERMAL MOVEMENT OF COMPONENTS WITHOUT DAMAGE OR OVERSTRESSING, CONNECTION FAILURE, FAILURE OF JOINT SEALS, UNDUE STRAIN ON FASTENERS AND ANCHORS, OR OTHER DETRIMENTAL EFFECTS WHEN SUBJECT TO CYCLIC THERMAL CHANGES AND A MAXIMUM AMBIENT TEMPERATURE CHANGE OF 120° F.

F. ALLOWANCE FOR CONSTRUCTION TOLERANCES, DISPLACEMENT OF PRIMARY BUILDING STRUCTURE, AND CLEARANCES AT OPENINGS.

G. FIRE RESISTANCE AS SPECIFIED BY THE ARCHITECT.

H. R-VALUE AS SPECIFIED BY THE ARCHITECT.

3. TILT-UP WALL PANELS ARE PART OF THE LATERAL LOAD RESISTING SYSTEM AND SHALL BE DESIGNED AS SHEAR WALLS UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR IN-PLANE SHEAR LOADS.

4. DEVIATIONS FROM THE CONTRACT DOCUMENTS WILL BE PERMITTED ONLY AFTER THE ARCHITECT AND ENGINEER PROVIDE WRITTEN APPROVAL OF THE SPECIALTY WALL PANEL ENGINEER'S PROPOSED DESIGN, WHICH IS SUPPORTED BY COMPLETE DESIGN CALCULATIONS AND DRAWINGS. DEVIATIONS SHALL PROVIDE AN INSTALLATION EQUIVALENT TO THE INTENT SHOWN IN THE CONTRACT DOCUMENTS WITHOUT INCURRING ADDITIONAL COST TO THE OWNER.

5. MATERIALS:

A. SEE STRUCTURAL STEEL FOR STEEL PLATES, ANGLES, BOLTS, ANCHORS, HEADED STUDS, WELDS, AND CONNECTIONS UNLESS NOTED OTHERWISE BY SPECIALTY WALL PANEL ENGINEER.
i. PROVIDE HIGH STRENGTH BOLTS, NUTS, AND WASHERS FOR CONNECTION TO STRUCTURAL STEEL FRAMING MEMBERS UNLESS NOTED OTHERWISE.

B. GROUT: ASTM C1107, NON-SHRINK, NON-METALLIC, FLUID TYPE, MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS. LIMIT GYPSUM CONTENT TO 1.5% MAXIMUM AT EXTERIOR APPLICATIONS.

C. BOND BREAKER SHALL BE COMPATIBLE WITH CURING COMPOUND AND OTHER FINISHES, INCLUDING PAINT AND FLOOR FINISH. BOND BREAKER SHALL BE INSTALLED CONTINUOUSLY BELOW PANELS. BOND BREAKER SHALL NOT BE SPRAYED ON PANEL REBAR.

6. FABRICATION & INSTALLATION/ERECTION:

A. CONCRETE WORK IN COLD WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 306.1-90 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING" AND ACI 306R-16 "GUIDE TO COLD WEATHER CONCRETING."

B. CONCRETE WORK IN HOT WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 305.1-14 "SPECIFICATION FOR HOT WEATHER CONCRETING" AND ACI 305R-10 "GUIDE TO HOT WEATHER CONCRETING". THE AIR TEMPERATURE, RELATIVE HUMIDITY, CONCRETE TEMPERATURE, AND WIND SPEED SHALL BE ENTERED INTO NOMOGRAPH FIGURE 4.2 IN ACI 305R-10 TO DETERMINE IF PRECAUTIONS AGAINST PLASTIC SHRINKAGE ARE REQUIRED.

C. SPECIALTY WALL PANEL CONTRACTOR SHALL SUPPLY STRUCTURAL STEEL ELEMENTS, INSERTS, AND OTHER HARDWARE TO BE CAST INTO WALL PANELS FOR SECURING WALL PANELS TO SUPPORTING AND ADJACENT CONSTRUCTION.
i. ANCHORAGE HARDWARE SHALL BE FABRICATED WITH SUFFICIENT ANCHORAGE AND EMBEDMENT TO COMPLY WITH DESIGN REQUIREMENTS.

D. EMBEDDED ITEMS SHALL BE SECURELY TIED PRIOR TO CONCRETE PLACEMENT. EMBEDDED ITEMS SHALL NOT BE "FLOATED" OR "WET SET" INTO CONCRETE. VIBRATE CONCRETE AROUND EMBEDDED ITEMS TO ENSURE CONSOLIDATION.

E. PANELS SHALL BE ERECTED IN A MANNER THAT IS SAFE FOR PERSONNEL AND PROPERTY. FIELD PERSONNEL SHALL BE UNDER THE DIRECT SUPERVISION OF AN ACI CERTIFIED SITE CAST TILT-UP SUPERVISOR AT ALL TIMES.

F. CASTING SURFACES SHALL PROVIDE THE ESTABLISHED LEVEL OF FINISH. COORDINATE SLAB FINISH, INCLUDING LOCATION AND TREATMENT OF ALL SLAB JOINTS, WITH PANEL FORMING TO MINIMIZE THE IMPACT TO THE ARCHITECTURAL FINISH OF THE PANELS.

G. ROOF LEDGER ELEVATIONS SHALL BE COORDINATED WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS PRIOR TO PANEL FABRICATION. STRUCTURAL ENGINEER, SPECIALTY WALL PANEL ENGINEER, AND ARCHITECT SHALL BE PROVIDED DISCREPANCIES FOR REVIEW.

H. LOAD BEARING SHIMS SHALL BE INSTALLED BETWEEN WALL PANELS AND FOUNDATIONS. SHIMS SHALL PROVIDE ADEQUATE CAPACITY TO SUPPORT CONSTRUCTION LOADS BEFORE GROUT IS INSTALLED. SHIMS SHALL BE SPACED AT A MAXIMUM OF 8 FEET ON CENTER AND AS NOTED BY THE SPECIALTY WALL PANEL ENGINEER. PROVIDE A MINIMUM OF (2) SHIMS PER PANEL. LOCATE FIRST SHIM WITHIN 1/4 x PANEL WIDTH FROM PANEL EDGE UNLESS NOTED OTHERWISE. LOCATE SHIMS WITHIN PANEL JAMBS WHERE APPLICABLE. GROUT BELOW PANELS AS EARLY AS POSSIBLE AFTER PANEL PLACEMENT TO OBTAIN FULL BEARING ON FOUNDATION SUPPORT.

I. VERTICAL AND HORIZONTAL PANEL REINFORCEMENT SHALL NOT BE LAPPED OR SPLICED WITHOUT APPROVAL BY THE SPECIALTY WALL PANEL ENGINEER UNLESS NOTED ON THE PANEL DRAWINGS.

J. UNLESS OTHERWISE NOTED BY SPECIALTY WALL PANEL ENGINEER, PANEL REINFORCEMENT SHALL HAVE 3/4 INCHES MINIMUM CLEAR COVER OR AS REQUIRED PER ACI 318-14 AND THE PROJECT ENVIRONMENT. PANEL REINFORCEMENT AND BAR SUPPORTS SHALL BE ARRANGED, SPACED, AND SECURELY TIED PRIOR TO CONCRETE PLACEMENT.
i. REINFORCING BARS SHALL BE FREE OF DIRT AND FORM RELEASE AGENTS.

K. EMBEDDED ITEMS SHALL BE SECURELY TIED AT LOCATIONS SHOWN ON THE PANEL DRAWINGS PRIOR TO CONCRETE PLACEMENT. EMBEDDED ITEMS SHALL NOT BE "FLOATED" OR "WET SET" INTO CONCRETE. VIBRATE CONCRETE AROUND EMBEDDED ITEMS TO ENSURE CONSOLIDATION.

L. UNLESS NOTED OTHERWISE, TIE REINFORCING BARS A MINIMUM OF 50% OF INTERSECTIONS. UNIFORMLY DISTRIBUTE TIES ACROSS THE REINFORCEMENT MAT.

M. PROVIDE 3/4" CHAMFER AT CORNERS OF EXPOSED CONCRETE.

N. UNLESS OTHERWISE NOTED, PROVIDE #5 BARS AT PANEL OPENING CORNERS SUCH AS WINDOWS AND DOORS. BARS SHALL BE ANCHORED TO FULLY DEVELOP TENSION AT THE PANEL CORNERS. THIS STEEL MAY BE OMITTED IF TYPICAL WALL STEEL EXCEEDS THIS MINIMUM REQUIREMENT.

O. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNLESS EFFECTIVELY COATED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.

P. FINISH: STEEL FORM SMOOTH EXTERIOR FINISH.
i. PRESSURE WASH PANELS AS REQUIRED TO ENSURE THAT RELEASE AGENTS, DIRT, ETC. ARE REMOVED FROM PANEL FACE PRIOR TO PAINTING.

TILT-UP CONCRETE WALL PANELS - CONTINUED

Q. FLOOR SLABS HAVE BEEN DESIGNED FOR THE PERMANENT CONSTRUCTED CONDITION USING DESIGN CRITERIA SHOWN ON THE CONSTRUCTION DOCUMENTS. FLOOR SLABS HAVE NOT BEEN DESIGNED FOR CONSTRUCTION CONDITIONS, INCLUDING BUT NOT LIMITED TO CRANES OR TEMPORARY BRACING OF WALL PANELS.

i. PANELS SHALL BE BRACED AND PROTECTED AGAINST WIND AND OTHER FORCES THAT MAY OCCUR DURING CONSTRUCTION AND UNTIL THE LATERAL-LOAD-RESISTING SYSTEM OF THE STRUCTURE IS COMPLETE AND FINAL PANEL ATTACHMENTS ARE MADE. TEMPORARY BRACING SHALL NOT BE REMOVED WITHOUT APPROVAL BY THE ENGINEER.

ii. CRANES SHALL NOT BE DRIVEN ON CONCRETE SLABS OR WALL PANELS WITHOUT APPROVAL BY THE ENGINEER.

R. ERECT PRECAST STRUCTURAL CONCRETE TO BE LEVEL, PLUMB, AND SQUARE WITHIN SPECIFIED ALLOWABLE TOLERANCES. PROVIDE TEMPORARY STRUCTURAL FRAMING, SHORING, AND BRACING AS REQUIRED TO MAINTAIN POSITION, STABILITY, AND ALIGNMENT OF UNITS UNTIL THE SUPPORTING STRUCTURE IS COMPLETE INCLUDING PERMANENT CONNECTIONS TO PANELS.

S. DO NOT INSTALL/ERECT TILT-UP WALL PANELS UNTIL CONCRETE FOUNDATIONS HAVE REACHED A MINIMUM OF 0.75 x f'_c AND A MINIMUM OF 7 DAYS.

T. PANEL JOINTS ALONG EXTERIOR WALLS SHALL BE SEALED WITH BACK-UP ROD AND SEALANT AT INTERIOR AND EXTERIOR FACES UNLESS NOTED OTHERWISE.

U. PATCH VOIDS FROM LIFTING DEVICES FLUSH WITH SURFACE OF ADJACENT WALL PANEL SURFACES.

V. FIELD CUTTING OF TILT-UP WALL PANES IS NOT PERMITTED WITHOUT THE WRITTEN APPROVAL OF ENGINEER, ARCHITECT, AND SPECIALTY WALL PANEL ENGINEER.

7. SUBMITTALS:

A. PRODUCT DATA FOR EACH TILT-UP PANEL COMPONENT:

i. REINFORCEMENT GRADE INDICATED SHALL NOT BE SUBSTITUTED WITHOUT APPROVAL BY THE SPECIALTY WALL PANEL ENGINEER.

B. TILT-UP PANEL SUBMITTAL BY THE SPECIALTY WALL PANEL ENGINEER AND CONTRACTOR INDICATING:
i. PLANS AND ELEVATIONS LOCATING, DIMENSIONING, AND DEFINING EACH WALL PANEL, INCLUDING DIMENSIONS TO ALL OPENINGS 10 INCHES OR LARGER AND EMBEDDED ITEMS IN RELATIONSHIP TO ADJACENT MATERIALS.
ii. SECTIONS AND DETAILS SHOWING CONNECTIONS, EDGE CONDITIONS, AND PERMANENT SUPPORT CONDITIONS OF EACH WALL PANEL.
iii. SECTIONS AND DETAILS TO INDICATE QUANTITIES, LOCATION, AND TYPE OF REINFORCING STEEL.
iv. LOCATIONS, TYPES, MAGNITUDES, AND DIRECTION OF LOADS IMPOSED ON THE TILT-UP WALL PANELS FROM THE STRUCTURE AND ASSUMED FOR PANEL DESIGN.
v. LOCATIONS, TYPES, MAGNITUDES, AND DIRECTION OF LOADS IMPOSED ON THE SUPPORTING STRUCTURE FROM THE TILT-UP WALL PANEL.

C. CALCULATIONS FOR THE DESIGN OF TILT-UP WALLS (INCLUDING PANELS AND CONNECTIONS) SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER WHO IS REGISTERED IN THE STATE THE PROJECT IS LOCATED IN, RESPONSIBLE FOR THEIR PREPARATION, AND EXPERIENCED IN STRUCTURAL TILT-UP WALL DESIGN.

D. TEST REPORTS OF SOURCE QUALITY-CONTROL, CONCRETE MIXES, PRODUCT DATA, AND OTHER TILT-UP CONSTRUCTION MATERIALS UPON REQUEST.
i. ADDITIONAL FIELD TEST SPECIMENS: A MINIMUM OF (4) 6x6x24 BEAMS IN ACCORDANCE WITH ASTM C31 FOR EACH CLASS OF CONCRETE FOR EACH 100 CUBIC YARDS AND FOR EACH DAY CONCRETE IS CAST. TEST BEAMS ACCORDING TO ASTM C78.

E. THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND PROJECT REQUIREMENTS AND DOES NOT IMPLY APPROVAL OF ANY VARIANCE FROM THE CONTRACT DOCUMENTS. THE ENGINEER WILL NOT CHECK DIMENSIONS AND QUANTITIES.
i. WALL PANEL DIMENSIONS, OPENING LOCATIONS, STRUCTURAL FRAMING MEMBER LOCATIONS, AND EMBED PLATE LOCATIONS SHALL BE COORDINATED WITH CONTRACT DOCUMENTS PRIOR TO PANEL FABRICATION. ENGINEER, ARCHITECT, AND SPECIALTY WALL PANEL DESIGNER SHALL BE PROVIDED DISCREPANCIES FOR REVIEW.
ii. SEE ARCHITECTURAL DRAWINGS FOR OPENINGS, JOINTS, REVEALS, AND FORMLINERS.

8. TOLERANCES: CONFORM TO ACI 117-10 EXCEPT AS MODIFIED BELOW:

A. STEEL REINFORCEMENT SUPPORTS: LIMIT STEEL REINFORCEMENT DEFLECTION TO 1/8" MAX FROM THE LOCATION SHOWN ON THE PANEL DRAWINGS UNLESS NOTED OTHERWISE BY SPECIALTY WALL PANEL ENGINEER.

B. BEARING PLATE PLACEMENT: WITHIN 1/8" OF VERTICAL LOCATION SHOWN ON THE PANEL DRAWINGS.

MASONRY

1. MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602-2013), EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.

2. COMPRESSIVE STRENGTH SHALL BE DETERMINED FOR EACH TYPE OF MASONRY BY THE UNIT STRENGTH METHOD.

A. CONCRETE MASONRY: f'_m = 2,000 PSI AT 28 DAYS.

3. SUBMITTALS SHALL BE MADE FOR THE FOLLOWING:

A. COLD WEATHER CONSTRUCTION PROCEDURE.

B. HOT WEATHER CONSTRUCTION PROCEDURE.

C. MANUFACTURERS LITERATURE FOR:
i. HORIZONTAL JOINT REINFORCING
ii. REINFORCING STEEL POSITIONERS
iii. MOVEMENT JOINT MATERIALS
iv. TIES & ANCHORS

D. SHOP DRAWINGS SHOWING:
i. DETAILS OF STEEL REINFORCING.
ii. LINTELS.

E. MANUFACTURERS CERTIFICATE OF COMPLIANCE FOR SPECIFIED:
i. MASONRY UNIT
ii. REINFORCING STEEL

F. PROPORTIONS OF MATERIAL IN ACCORDANCE WITH REFERENCED SPECIFICATIONS OF:
i. MORTAR
ii. GROUT

4. MATERIALS:

A. CONCRETE MASONRY UNITS: ASTM C90 TYPE I
i. NORMAL WEIGHT AGGREGATE PER ASTM C33

B. MORTAR: ASTM C270
i. ALL MASONRY UNLESS NOTED OTHERWISE: TYPE S
ii. NON-LOAD BEARING INTERIOR PARTITION WALLS: TYPE N

C. PORTLAND CEMENT-LIME MORTAR:
i. PORTLAND CEMENT: TYPE I
ii. HYDRATED LIME: TYPE S

D. MASONRY CEMENT MORTAR IS PERMITTED.

E. GROUT: ASTM C476. SLUMP 8" TO 11". MINIMUM COMPRESSIVE STRENGTH = 2,000 PSI AT 28 DAYS.

F. REINFORCING STEEL: ASTM A615 OR ASTM A706, 60 KSI YIELD.

G. HORIZONTAL JOINT REINFORCING FOR SINGLE WYTHE CONCRETE MASONRY: ASTM A951, 9 GAGE LADDER TYPE. HOT DIPPED GALVANIZED PER ASTM A153 CLASS B. PLACE HORIZONTAL JOINT REINFORCING AT 16" CENTERS VERTICALLY FOR CONCRETE MASONRY. LAP HORIZONTAL JOINT REINFORCING 6" MINIMUM. HORIZONTAL JOINT REINFORCING SHALL BE DISCONTINUOUS ACROSS MOVEMENT JOINTS.

5. MORTAR PROPORTIONS MUST BE ACCURATELY MEASURED PRIOR TO MIXING. ADD CEMENT TO MIX IN FULL BAG QUANTITIES. MEASURE SAND IN BOX WITH VOLUME OF ONE CUBIC FOOT AS OFTEN AS NECESSARY TO MAINTAIN CONSISTENT PROPORTIONS AND AT LEAST ONCE DAILY AND EVERY 4 HOURS OF MIXING.

6. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND SPECIFICATIONS OF FIRE RATED MASONRY.

7. PROVIDE PREFABRICATED "L" AND "T" SHAPED HORIZONTAL JOINT REINFORCING AT WALL INTERSECTIONS.

8. RUNNING BOND PATTERN SHALL BE USED FOR ALL MASONRY WORK UNLESS OTHERWISE NOTED.

MASONRY - CONTINUED

9. PROVIDE MOVEMENT (CONTROL AND EXPANSION) JOINTS IN WALLS WHERE INDICATED ON ARCHITECTURAL DRAWINGS. BOND BEAMS SHALL BE DISCONTINUOUS ACROSS MOVEMENT JOINTS UNLESS NOTED OTHERWISE:

A. MOVEMENT JOINTS IN CONCRETE BLOCK: SASH BLOCK UNIT WITH PREFORMED SHEAR KEY. CAULK BOTH FACES. ALTERNATE DETAILS FOR CONTROL JOINTS MAY BE ACCEPTABLE, SUBMIT DETAILS FOR APPROVAL.

B. PROVIDE BUILDING PAPER BOND BREAK BELOW LINTEL BEARING ADJACENT TO CONTROL JOINTS.

10. UNLESS NOTED OTHERWISE ON PLANS, UNDER LINTELS, BEARING PLATES, BEAMS, ETC.; FILL CELLS WITH GROUT, 3 COURSES MINIMUM BELOW BEARING.

11. UNLESS NOTED OTHERWISE ON PLANS, LINTELS SHALL HAVE 8" MINIMUM END BEARING.

12. ALL REINFORCING STEEL SHALL BE SUPPORTED AND FASTENED TO APPROVED POSITIONERS LOCATED AT 192 x BAR DIAMETERS MAXIMUM SPACING AND WITH A MINIMUM OF TWO POSITIONERS PER GROUT POUR (ONE NEAR THE BOTTOM AND ONE NEAR THE TOP) TO PREVENT DISPLACEMENT DURING THE PLACEMENT OF GROUT.

13. GROUT ALL CELLS BELOW GRADE SOLID.

14. PROVIDE REINFORCING BAR SPLICES AS SPECIFIED IN THE FOLLOWING TABLE. BAR SPLICE COUPLERS MAY BE CONSIDERED AS A SUBSTITUTE, SUBMIT MANUFACTURER'S DATA PRIOR TO INSTALLATION.

BAR SIZE	LAP SPLICE
#4	36"
#5	45"
#6	54"
#7	63"

STRUCTURAL STEEL

1. MATERIALS (UNLESS NOTED OTHERWISE):

A. WIDE-FLANGE (W AND WT) SHAPES: ASTM A992, Fy = 50 KSI. ASTM A913, Fy = 65 KSI WHERE SPECIFICALLY NOTED.

B. CHANNEL (C AND MC) SHAPES: ASTM A36, Fy = 36 KSI (DEPTH < 8 INCHES); ASTM A992, Fy = 50 KSI (DEPTH ≥ 8 INCHES)

C. ANGLE (L) SHAPES: ASTM A36, Fy = 36 KSI

D. PLATES AND BARS: ASTM A36, Fy = 36 KSI (THICKNESS ≤ 4 INCHES); ASTM A572, GRADE 50, Fy = 50 KSI (COLUMN BASE PLATES, THICKNESS > 4 INCHES, AND WHERE SPECIFICALLY NOTED)

E. ROUND SHAPES:
i. PIPE (STD UNLESS NOTED OTHERWISE): ASTM A53, TYPES E OR S, GRADE B, Fy = 35 KSI
ii. HSS ROUND: ASTM A500, GRADE C, Fy = 46 KSI

F. HSS TUBULAR (SQUARE AND RECTANGULAR) SHAPES: ASTM A500, GRADE C, Fy = 50 KSI

G. BOLTS: ASTM F3125, GRADE A325-N, 3/4" DIAMETER (UNLESS NOTED OTHERWISE)

H. ANCHOR RODS (TYPICAL): ASTM F1554, GRADE 36

I. THREADED RODS: ASTM A193, GRADE B7

J. HEADED STUD SHEAR CONNECTORS (COMPOSITE BEAMS AND EMBED PLATES): ASTM A108 AND AWS D1.1, CHAPTER 7, TYPE B.

K. WELDS: AWS E70XX, LOW HYDROGEN ELECTRODES. FILLER METALS WITH SPECIFIED MIN CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT 40 DEGREES FAHRENHEIT SHALL BE USED IN THE FOLLOWING JOINTS OR WHERE OTHERWISE INDICATED:
i. CJP WELDS OF ROLLED SHAPES WITH FLANGE THICKNESS EXCEEDING 2 INCHES
ii. CJP WELDS OF PLATES WITH THICKNESS EXCEEDING 2 INCHES
iii. CJP WELDS IN "T" AND CORNER JOINTS WITH STEEL BACKING LEFT IN PLACE

L. NON-SHRINK NON-METALLIC GROUT: CRD-C-621 AND ASTM C1107 FOR INTERIOR AND EXTERIOR APPLICATIONS, FLUID TYPE.

i. LIMIT GYPSUM CONTENT TO 1.5% MAXIMUM AT EXTERIOR APPLICATIONS.

2. ALL DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO AISC SPECIFICATIONS FOR "DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITION.

3. FABRICATOR QUALIFICATIONS: STRUCTURAL STEEL FABRICATOR SHALL PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM, AND SHALL BE DESIGNATED AS AN AISC-CERTIFIED PLANT, CATEGORY STD.

4. THE FABRICATOR/ERECTOR SHALL CONSIDER SPECIAL DIMENSIONAL TOLERANCES THAT EXCEED STANDARD AISC LIMITATIONS AT ELEVATED SLAB EDGES TO SATISFY INTERIOR EQUIPMENT DEMANDS. COORDINATE WITH OWNER, ARCHITECT, AND SPECIFICATION REQUIREMENTS.

5. SUBMITTALS:

A. STRUCTURAL STEEL SHOP DRAWINGS

B. DELEGATED CONNECTION DESIGN SUBMITTAL(S): FOR STRUCTURAL-STEEL CONNECTIONS INDICATED TO COMPLY WITH DESIGN LOADS, INCLUDE THE FOLLOWING DOCUMENTS SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN AND RESPONSIBLE FOR THEIR PREPARATION:
i. SUBSTANTIATING CONNECTION INFORMATION INCLUDING COMPREHENSIVE ANALYSIS DATA.
ii. LETTER STATING CONNECTIONS DETAILED IN SHOP DRAWINGS ARE IN CONFORMANCE WITH DELEGATED CONNECTION ENGINEER'S DESIGN.

C. MISC. METAL SHOP DRAWINGS (STAIRS, RAILINGS AND LADDERS INCLUDING ATTACHMENT TO THE PRIMARY STRUCTURE), INCLUDING ANALYSIS DATA, SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

D. FABRICATOR SHALL NOT BEGIN ON FABRICATION PRIOR TO APPROVAL OF THE SHOP DRAWINGS AND ASSOCIATED DELEGATED DESIGN CALCULATIONS BY THE ENGINEER-OF-RECORD.

6. CONNECTIONS:

A. WHERE DESIGN LOADS OR REACTIONS ARE INDICATED, DESIGN STRUCTURAL STEEL CONNECTIONS FOR INDICATED DESIGN LOADS AND REACTIONS PER AISC 303-16, OPTION 3 (LRFD).
i. ADDITIONAL MEMBER REINFORCEMENT SHALL BE INCLUDED IN CONNECTION DESIGN WHERE REQUIRED BY ANALYSIS PER AISC 303-16, OPTION 3B.

B. BOLTED CONNECTIONS ARE TO BE INSTALLED SNUG TIGHT UNLESS OTHERWISE NOTED.
i. PRETENSIONED BOLTS SHALL USE DIRECT-TENSION INDICATING WASHERS (ASTM F959) OR TENSION-CONTROL, HIGH-STRENGTH BOLT-NUT-WASHER ASSEMBLIES (ASTM F 1852).

C. DESIGN COLUMN-TO-BASE PLATE CONNECTION FOR THE LARGER OF THE SPECIFIED REACTIONS (IF INDICATED), AND MINIMUM ERECTION FORCES REQUIRED BY OSHA.

D. FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDED CONNECTIONS ARE INDICATED ON THE STRUCTURAL DRAWINGS.

E. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS D1.1:2010).
i. HEADED STUD SHEAR CONNECTORS SHALL BE WELDED WITH AUTOMATICALLY TIMED STUD WELDING EQUIPMENT. FILLET WELDS ARE NOT PERMITTED.

7. PAINT AND PROTECTION:

A. STEEL SURFACES UNLESS NOTED OTHERWISE: TO BE PAINTED (COORDINATE LOCATIONS WITH ARCHITECT): PREPARE SURFACES PER SSPC-SP3 "POWER TOOL CLEANING" AND PAINT WITH FABRICATOR'S STANDARD PRIME COAT.
i. DO NOT PAINT PORTIONS OF MEMBERS TO BE ENCASED IN CONCRETE, TO RECEIVE FIREPROOFING, OR TO RECEIVE COMPOSITE SHEAR CONNECTORS.
ii. IMMEDIATELY AFTER ERECTION, CLEAN EXPOSED AREAS WHERE PRIMER IS DAMAGED OR MISSING, PREPARE SURFACES BY SSPC-SP2 OR SSPC-SP3, AND PAINT WITH MATCHING SHOP PRIME COAT.

B. MEMBERS EXPOSED TO WEATHER IN FINISHED STRUCTURE, LOOSE LINTELS, AND RELIEVING ANGLES:
i. HOT DIP GALVANIZE PER ASTM A123 AFTER FABRICATION. COATING WEIGHT PER PARAGRAPH 5.1 OF ASTM A123 AND A153. FABRICATE ASSEMBLIES PER ASTM A143, A384, AND A385. AFTER ERECTION, REPAIR DAMAGED AREAS AND WELDS MADE AFTER GALVANIZING IN ACCORDANCE WITH ASTM A780 WITH ORGANIC ZINC RICH PAINT COMPLYING WITH DOD-P-21035 OR MIL-P-26915, MULTIPLE COATS TO DRY FILM THICKNESS OF 4 MILS. FILL EXPOSED VENT AND DRAIN HOLES, NOT INDICATED AS WEEP HOLES, BY PLUGGING WITH ZINC SOLDER AND FILING OFF SMOOTH.

C. MEMBERS ENCASED IN CONCRETE: PROVIDE 3" MINIMUM CONCRETE COVER FOR ALL STEEL BELOW GRADE.

8. INSTALLATION OF HEADED COMPOSITE STUDS SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1, SECTIONS 7.4 AND 7.5. HEADED COMPOSITE STUDS SHALL BE TESTED IN ACCORDANCE WITH AWS D1.1, SECTIONS 7.6, 7.7, AND 7.8 BY A QUALIFIED TESTING AGENCY. COPIES OF THE TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER.

Schaefer Project Number: 24-0265

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

S002

NOT FOR CONSTRUCTION

6/7/2024 8:38:09 AM

STRUCTURAL STEEL - CONTINUED

9. A VERTICAL STABILIZER PLATE MUST BE PROVIDED ON EACH COLUMN FOR STEEL JOISTS AND JOIST GIRDERS. THE STABILIZER PLATE SHALL BE A MINIMUM OF 6-INCHES X 6-INCHES, SHALL EXTEND A MINIMUM OF 3-INCHES BELOW THE BOTTOM OF THE BOTTOM CHORD, AND SHALL EXTEND A MINIMUM OF 1-INCH ABOVE THE TOP OF THE BOTTOM CHORD. THE PLATE IS REQUIRED TO HAVE A 13/16-INCH DIAMETER HOLE TO PROVIDE AN ATTACHING POINT FOR GUYING CABLES.

10. AT COLUMNS, BEAMS FRAMING INTO THE OPPOSITE SIDES OF THE SAME GIRDER OR COLUMN WEB SHALL HAVE EITHER ERECTION SEAT ANGLES OR SHALL HAVE SHEAR CONNECTIONS THAT ALLOW ERECTION OF EACH BEAM INDEPENDENTLY WITH AT LEAST ONE NON-COMMON BOLT.

11. PERIMETER COLUMN SPLICES SHALL BE LOCATED A MINIMUM OF 48 INCHES ABOVE FINISHED FLOOR.

12. WHERE JOISTS AND JOIST GIRDERS BEAR ON STEEL BEARING PLATES AND COLUMN CAP PLATES, FABRICATOR SHALL VERIFY THAT SUPPORTING ELEMENTS ARE WIDER THAN THE JOIST OR JOIST GIRDER SEAT SUCH THAT SPECIFIED FILLET WELDS CAN BE INSTALLED. WHERE FABRICATOR FINDS SUPPORTING ELEMENTS ARE NOT WIDER THAN JOIST OR JOIST GIRDER SEAT, FABRICATOR SHALL CONTACT ENGINEER FOR DIRECTION.

STEEL JOISTS

1. THE DESIGN, FABRICATION, AND ERECTION OF STEEL JOISTS AND JOIST GIRDERS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATIONS ADOPTED BY THE STEEL JOIST INSTITUTE.

2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER. FABRICATION SHALL NOT BEGIN PRIOR TO SHOP DRAWING APPROVAL BY ENGINEER.

3. JOIST MANUFACTURER SHALL DESIGN THE JOISTS AND JOIST GIRDER FOR NET UPLIFTS AS INDICATED ON THE DRAWINGS. JOIST MANUFACTURER SHALL PROVIDE ADDITIONAL BRIDGING AS REQUIRED TO BRACE JOISTS AND GIRDERS SUBJECT TO NET UPLIFT.

4. CONNECTIONS:

   A. K-SERIES JOISTS: WELD EACH SIDE OF JOIST SEAT TO SUPPORTING STEEL WITH 2 1/2 INCHES OF 1/8 INCH FILLET WELD.

   B. LH SERIES JOISTS (LH02-06): WELD EACH SIDE JOIST SEAT TO SUPPORTING STEEL WITH 2 1/2 INCHES OF 3/16 INCH WELD.

   C. LH SERIES JOISTS (LH07-17), DLH SERIES JOISTS (DLH10-17), AND JOIST GIRDERS WITH A SELF WEIGHT LESS THAN OR EQUAL TO 50 PLF: WELD EACH SIDE JOIST SEAT TO SUPPORTING STEEL WITH 2 1/2 INCHES OF 1/4 INCH WELD.

   D. DLH SERIES JOISTS (DLH18-25), AND JOIST GIRDERS WITH A SELF WEIGHT GREATER THAN 50 PLF: WELD EACH SIDE JOIST SEAT TO SUPPORTING STEEL WITH 4 INCHES OF 1/4 INCH WELD.

   E. K-JOISTS AT COLUMNS AND K-JOISTS IN BAYS OF 40 FEET AND LONGER TO HAVE (2) 1/2" DIAMETER A307 ERECTION BOLTS. LH & DLH-JOISTS AT COLUMNS AND LH & DLH-JOISTS IN BAYS OF 40 FEET AND LONGER TO HAVE (2) 3/4" DIAMETER A325 ERECTION BOLTS. EXCEPT AT COLUMNS, ERECTION BOLTS ARE NOT REQUIRED WHERE JOISTS AND BRIDGING HAVE BEEN PRE-ASSEMBLED INTO PANELS.

5. JOISTS SHALL HAVE MINIMUM BRIDGING AS REQUIRED BY THE SJI AND AS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS. ALL BRIDGING RUNS AND DETAILS SHALL BE SHOWN ON JOIST SHOP DRAWINGS. FOR JOIST SPANS EXCEEDING OSHA TABLES A AND B FROM SUBPART R-STEEL ERECTION 1926.757, INSTALL A LINE OF BOLTED X-BRIDGING NEAR MID-SPAN PRIOR TO SLACKING HOIST LINES. FOR JOISTS BETWEEN 60 FEET AND 100 FEET, TWO LINES OF BOLTED X-BRIDGING SHALL BE INSTALLED NEAR THE THIRD POINTS OF THE JOIST PRIOR TO SLACKING HOIST LINES.

6. PLACE ADDITIONAL X-BRIDGING AT THE END OF EACH HORIZONTAL BRIDGING RUN IN LAST SPACE BETWEEN JOISTS, EXCEPT WHERE HORIZONTAL BRIDGING RUNS TERMINATE AT MASONRY OR CONCRETE WALLS. WHERE BRIDGING RUNS TERMINATE AT MASONRY OR CONCRETE WALLS, HORIZONTAL BRIDGING SHALL BE ANCHORED TO WALL.

7. NO MODIFICATION THAT AFFECTS THE STRENGTH OF A JOIST OR JOIST GIRDER SHALL BE MADE WITHOUT THE APPROVAL OF THE PROJECT STRUCTURAL ENGINEER OF RECORD.

8. WHERE JOISTS DO NOT CONNECT DIRECTLY TO THE COLUMN CAP PLATE, AT THE JOIST CLOSEST TO EACH COLUMN, PROVIDE DIAGONAL L2x2x1/6 BRACE. ANGLE SHALL BE WELDED TO TOP OF COLUMN OR TO BOTTOM FLANGE OF BEAM AND TO THE FIRST TOP CHORD PANEL POINT OF JOIST WITH 2 INCH OF 1/8 INCH FILLET EACH END. ANGLE SHALL BE SUPPLIED BY THE STRUCTURAL STEEL FABRICATOR.

9. EXTEND BOTTOM CHORD OF ALL JOIST GIRDERS AND ALL JOISTS AT OR NEAREST COLUMN LOCATIONS TO LAP WITH STABILIZER PLATE.

10. WHERE STEEL JOISTS AT OR NEAR COLUMNS SPAN MORE THAN 60 FEET, THE JOISTS SHALL BE SET IN TANDEM WITH ALL BRIDGING INSTALLED.

11. UNLESS NOTED OTHERWISE, K-SERIES JOISTS SHALL HAVE 2 1/2" DEEP SEATS, AND LH- AND DLH-SERIES JOISTS SHALL HAVE 5" DEEP SEATS. PROVIDE MATCHING HEIGHT SEATS ON SHORT SPAN JOISTS WHICH HAVE COMMON BEARING WITH LONG SPAN AND DEEP LONG SPAN JOISTS.

12. PROVIDE SLOPING JOIST AND JOIST GIRDER SEATS WHERE THE SLOPE EXCEEDS 1/4" PER FOOT.

13. JOIST GIRDERS SHALL HAVE 7 1/2" DEEP SEATS.

14. JOIST MANUFACTURER SHALL DESIGN JOIST SEATS FOR A MINIMUM LATERAL ROLLOVER FORCE OF 1,650 LBS (ASD) DUE TO WIND OR SEISMIC, UNLESS NOTED OTHERWISE. TYPICAL FOR ALL JOISTS ALONG BRACED FRAME, MOMENT FRAME, AND WALL LINES.

15. UNLESS NOTED OTHERWISE, ROOF JOISTS CONNECTED TO WALLS AT PERIMETERS SHALL BE DESIGNED FOR A MINIMUM TOP CHORD AXIAL LOAD DUE TO WIND NOT LESS THAN:

   A. 7,250 LBS (LRFD) OR 4,620 LBS (ASD) AT CFS WALLS & SINGLE-STORY CONCRETE WALL PANELS

STEEL DECKING (05-31-00)

1. THE DESIGN, FABRICATION, AND ERECTION OF ALL STEEL DECK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATIONS OF THE STEEL DECK INSTITUTE.

2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER. FABRICATION SHALL NOT BEGIN PRIOR TO SHOP DRAWING APPROVAL BY ENGINEER.

3. MATERIALS:

   A. ROOF DECK: SEE PLAN AND METAL DECK SCHEDULE FOR SIZE, GAGE, MIN F_Y, AND REQUIRED SUPPORT FASTENERS AND SIDELAP FASTENERS. PAINTED WITH STANDARD SHOP COAT.

   B. DECK FOR CONCRETE FORM: SEE PLAN AND METAL DECK SCHEDULE FOR SIZE, GAGE, MIN F_Y, AND REQUIRED SUPPORT FASTENERS AND SIDELAP FASTENERS. GALVANIZED COATING CONFORMING TO ASTM A653 G60.

   C. DECK FOR COMPOSITE SLAB: SEE PLAN AND METAL DECK SCHEDULE FOR SIZE, GAGE, MIN F_Y, AND REQUIRED SUPPORT FASTENERS AND SIDELAP FASTENERS. GALVANIZED COATING CONFORMING TO ASTM A653 G60.

   D. SELF DRILLING SCREWS (SDS): HEX WASHER HEAD SELF-DRILLING TAPPING SCREWS (ASTM C1513) MANUFACTURED FROM CARBON STEEL (ASTM A510, MIN GRADE 1018). ZINC PLATING SHALL MEET MINIMUM CORROSION RESISTANCE REQUIREMENTS OF ASTM F1941.

4. METAL DECK SHALL BE PROVIDED TO RUN CONTINUOUS OVER AT LEAST 3 SPANS EXCEPT AS NOTED OTHERWISE.

5. CONNECT METAL DECK TO STRUCTURAL MEMBERS, INCLUDING PERIMETER ANGLES.

6. MINIMUM METAL DECK END BEARING ON SUPPORTS = 1 1/2".

7. LAP ENDS OF ROOF DECK AND CONCRETE FORM DECK 4" MINIMUM. BUTT ENDS OF COMPOSITE FLOOR DECK.

8. WELDING OF METAL DECK SHALL BE IN ACCORDANCE WITH AWS D1.3-08.

COLD-FORMED METAL FRAMING

1. MATERIALS:

   A. STRUCTURAL FRAMING MEMBERS 54 MILS (16 GAGE) & HEAVIER: ASTM A1003 & C955, Fy MINIMUM = 50 KSI, G60 GALVANIZED COATING (TYPICAL UNO).

   B. STRUCTURAL FRAMING MEMBERS 43 MILS (18 GAGE) & LIGHTER: ASTM A1003 & C955, Fy MINIMUM = 33 KSI, G60 GALVANIZED COATING (TYPICAL UNO).

   C. ALL TRACK & BRIDGING: Fy = 33 KSI MINIMUM AND AS REQUIRED FOR STRUCTURAL PERFORMANCE, ASTM A1003 & C955, G60 GALVANIZED COATING.

   D. STRAP BRACING: Fy MINIMUM = 50 KSI & AS REQUIRED FOR STRUCTURAL PERFORMANCE. SIZE & GAGE AS INDICATED, ASTM A1003 & C955, G60 GALVANIZED COATING.

   E. SELF DRILLING SCREWS (SDS):

      i. HEX OR PHILLIPS WASHER HEAD SELF-DRILLING TAPPING SCREWS (ASTM C1513) MANUFACTURED FROM CARBON STEEL (ASTM A 510, MIN GRADE 1018). ZINC PLATING SHALL MEET MINIMUM CORROSION RESISTANCE REQUIREMENTS OF ASTM F1941. SIZE AND SPACING TO BE DETERMINED BY SPECIALTY ENGINEER.

   F. WELDING ELECTRODES: E60XX

COLD-FORMED METAL FRAMING - CONTINUED

2. DESIGN SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

   A. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) S100-12 "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"

   B. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) S200-12 "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS"

   C. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) S213-07 / S1-09 "STANDARD FOR COLD-FORMED STEEL FRAMING - LATERAL DESIGN"

   D. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) AISI S212-07 "STANDARD FOR COLD-FORMED STEEL FRAMING - HEADER DESIGN", LATEST EDITION

   E. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) S211-07 / S1-12 "STANDARD FOR COLD-FORMED STEEL FRAMING - WALL STUD DESIGN", LATEST EDITION

   F. AMERICAN WELDING SOCIETY (A.W.S.) D.1.3, 2011 "STRUCTURAL WELDING CODE-SHEET STEEL"

3. WORK SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS:

   A. AMERICAN IRON AND STEEL INSTITUTE (A.I.S.I.) "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS", LATEST EDITION

   B. AMERICAN WELDING SOCIETY (A.W.S.) D.1.3, 2011 "STRUCTURAL WELDING CODE-SHEET STEEL."

4. DEFLECTION LIMITS. DESIGN FRAMING SYSTEMS TO WITHSTAND SPECIFIED DESIGN LOADS WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING:

   A. EXTERIOR LOAD-BEARING WALL FRAMING: HORIZONTAL DEFLECTION OF H/240 OF THE WALL HEIGHT, TYP UNO.

   B. EXTERIOR LOAD-BEARING WALL FRAMING WITH MASONRY VENEER: HORIZONTAL DEFLECTION OF H/600 OF THE WALL HEIGHT.

   C. INTERIOR LOAD-BEARING WALL FRAMING: HORIZONTAL DEFLECTION OF H/240 OF THE WALL HEIGHT UNDER A HORIZONTAL PARTITION LIVE LOAD OF 5 PSF.

   D. EXTERIOR NON-LOAD-BEARING FRAMING: HORIZONTAL DEFLECTION OF H/240 OF THE WALL HEIGHT.

   E. INTERIOR NON-LOAD-BEARING FRAMING: HORIZONTAL DEFLECTION OF H/240 OF THE WALL HEIGHT UNDER A HORIZONTAL PARTITION LIVE LOAD OF 5 PSF.

   F. FLOOR AND CEILING JOIST FRAMING: VERTICAL DEFLECTION OF L/480 FOR LIVE LOADS AND L/240 FOR TOTAL LOADS OF THE SPAN.

   G. ROOF RAFTER FRAMING: VERTICAL DEFLECTION OF L/240 FOR ROOF LIVE, SNOW, OR WIND LOADS AND L/180 FOR TOTAL LOADS OF THE SPAN.

5. DESIGN FRAMING SYSTEMS TO PROVIDE FOR MOVEMENT OF FRAMING MEMBERS LOCATED OUTSIDE THE INSULATED BUILDING ENVELOPE WITHOUT DAMAGE OR OVERSTRESSING, SHEATHING FAILURE, CONNECTION FAILURE, UNDUE STRAIN ON FASTENERS AND ANCHORS, OR OTHER DETRIMENTAL EFFECTS WHEN SUBJECT TO A MAXIMUM AMBIENT TEMPERATURE CHANGE OF 120 DEG F.

6. DESIGN FRAMING SYSTEM TO MAINTAIN CLEARANCES AT OPENINGS, TO ALLOW FOR CONSTRUCTION TOLERANCES, AND TO ACCOMMODATE DISPLACEMENT OF PRIMARY BUILDING STRUCTURE AS FOLLOWS:

   A. UPWARD AND DOWNWARD MOVEMENT AS INDICATED.

7. DESIGN EXTERIOR NON-LOAD-BEARING WALL FRAMING TO ACCOMMODATE HORIZONTAL DEFLECTION WITHOUT REGARD FOR CONTRIBUTION OF SHEATHING MATERIALS.

8. SUBMITTALS:

   A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT

   B. DELEGATED DESIGN SUBMITTAL SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN AND RESPONSIBLE FOR THEIR PREPARATION INCLUDING COMPREHENSIVE ANALYSIS DATA AND SHOP DRAWINGS INCLUDING THE FOLLOWING:
      i. CROSS-SECTIONS, PLANS, AND/OR ELEVATIONS DEPICTING COMPONENT LAYOUTS, SIZES, AND LOCATIONS.
      ii. CONNECTION DETAILS SHOWING FASTENER TYPES AND LOCATIONS, WELD SIZES, LENGTHS, AND LOCATIONS INCLUDING ATTACHMENTS TO ADJOINING WORK.
      iii. SIZES AND LOCATIONS OF ALL BRIDGING AND BRACING.

9. CUT ALL FRAMING COMPONENTS SO THEY FIT SQUARELY TOGETHER. STUDS MUST BEAR TIGHT AGAINST TRACK WEB. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED. BRACE WALL COMPONENTS AS REQUIRED DURING ERECTION TO PREVENT RACKING AND DISTORTION.

10. PRIOR TO THE START OF INSTALLATION OF COLD-FORMED STEEL FRAMING SYSTEMS, MEET AT THE PROJECT SITE WITH THE INSTALLERS OF OTHER WORK INCLUDING DOOR AND WINDOW FRAMES, MECHANICAL, STRUCTURAL AND ELECTRICAL WORK. REVIEW AREAS OF POTENTIAL INTERFERENCE AND CONFLICTS AND COORDINATE LAYOUT AND SUPPORT PROVISIONS FOR INTERACTING WORK.

11. FASTEN EACH STUD AT EACH FLOOR LEVEL, HORIZONTAL GIRT, AND ROOF LEVEL, UNLESS NOTED OTHERWISE ON DRAWINGS.

12. ALL WELDED CONNECTIONS SHALL BE MADE BY WELDERS CERTIFIED FOR WELDING MEMBERS OF GAGE BEING USED PER AWS D.1.3-11.

13. ERECTION TOLERANCES. FABRICATE AN ERECT ASSEMBLIES LEVEL, PLUMB, AND TRUE TO LINE TO A MAXIMUM ALLOWABLE VARIATION OF 1/8 INCH IN 10 FEET AND AS FOLLOWS:

   A. SPACING: SPACE INDIVIDUAL FRAMING MEMBERS NO MORE THAN PLUS OR MINUS 1/8 INCH FROM PLAN LOCATION. CUMULATIVE ERROR SHALL NOT EXCEED MINIMUM FASTENING REQUIREMENTS OF SHEATHING OR OTHER FINISHING MATERIALS.

   B. SQUARENESS: FABRICATE EACH COLD-FORMED STEEL FRAMING ASSEMBLY TO A MAXIMUM OUT-OF-SQUARE TOLERANCE OF 1/8 INCH.

14. INSTALL LOAD-BEARING SHIMS OR GROUT BETWEEN THE UNDERSIDE OF LOAD-BEARING WALL BOTTOM TRACK AND THE TOP OF FOUNDATION WALL OR SLAB AT LOCATIONS WITH A GAP LARGER THAN 1/4 INCH TO ENSURE A UNIFORM BEARING SURFACE ON SUPPORTING CONCRETE OR MASONRY CONSTRUCTION.

INSULATED METAL PANEL (IMP) SUB-FRAMING

1. SUPPORT FRAMING FOR INSULATED METAL PANELS SHALL BE VERTICAL HSS TUBES. TYPICAL HSS TUB SIZES AND SPACINGS HAVE BEEN PROVIDED ON STRUCTURAL SHEET S403.

   A. HSS FRAMING SIZES PROVIDED ON STRUCTURAL DRAWINGS ARE FOR THE TYPICAL SPACING OF THE HSS TUBES. THE SPACING OF THESE MEMBERS HAS NOT BEEN COORDINATED WITH THE INSULATED METAL PANEL JOINT LAYOUT.

   B. THE HSS FRAMING SIZES HAVE BEEN DESIGNED WITH THE FOLLOWING ASSUMPTIONS:
      i. 3" THICK KINGSPAN MICRO-RIB INSULATED WALL PANEL SYSTEMS AS THE BASIS OF DESIGN FOR THE INSULATED METAL PANELS.
      ii. MAXIMUM SPAN OF INSULATED METAL PANELS WAS SELECTED BASED ON THE KSMR PANEL AND THE PROJECT WIND SPEED.
      iii. HSS TUBE WALLS ARE LESS THAN 1/2" THICK TO ACCOMMODATE DIRECT FASTENING OF INSULATED METAL PANELS TO HSS SUBFRAMING.
      iv. HSS FRAMING HAS BEEN DESIGNED TO ACCOMMODATE A MAXIMUM OUT-OF-PLACE DEFLECTION OF L/180.
      v. A GRAVITY CONNECTION FROM THE HSS FRAMING TO THE MAIN STRUCTURE OCCURS ONLY AT LEVEL 4. A VERTICAL SLOTTED CONNECTION SHALL BE PROVIDED AT ALL OTHER FLOORS.

   C. IF ANY OF THE ABOVE ASSUMPTIONS ARE INVALIDATED, THE HSS FRAMING SIZES PROVIDED IN THE STRUCTURAL DRAWINGS ARE SUBJECT TO CHANGE.

2. THE HSS TUBE FRAMING HAS NOT BEEN COORDINATED WITH INSULATED METAL PANEL JOINTS, OR A PROJECT SPECIFIC INSULATED METAL PANEL MANUFACTURER. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE FOLLOWING ITEMS ASSOCIATED WITH THE INSULATED METAL PANEL SUBFRAMING DESIGNS:

   A. DELEGATED DESIGN: CONNECTIONS FROM IMP SUPPORT FRAMING TO MAIN STRUCTURAL FRAMING SHALL BE DESIGNED AND DETAILED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
      i. CONNECTION DESIGNS SHALL COMPLY WITH ALL LOADS SHOWN ON STRUCTURAL DRAWINGS.
      ii. CONNECTION DETAILS MUST ACCOMMODATE MAIN STRUCTURAL FRAMING MOVEMENT AS NOTED ON STRUCTURAL DRAWINGS.
      iii. SIGNED AND SEALED CONNECTION CALCULATIONS AND DRAWINGS MUST BE SUBMITTED FOR REVIEW AND APPROVAL.

   B. SHOP DRAWINGS FOR ALL HSS TUBE FRAMING SHALL BE PROVIDED FOR APPROVAL.
      i. SHOP DRAWINGS SHALL BE COORDINATED WITH SITE SPECIFIC INSULATED METAL PANEL JOINTS AND SITE SPECIFIC INSULATED METAL PANEL MANUFACTURER.
      ii. SHOP DRAWINGS SHALL BE COORDINATE WITH DELEGATED CONNECTION DESIGNS.

POST INSTALLED ANCHORS

1. INSTALLATION: INSTALL ANCHORS PER EVALUATION REPORT AND MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).

2. CONNECTIONS TO EXISTING REINFORCED CONCRETE OR MASONRY: PRIOR TO DRILLING, VERIFY LOCATIONS OF EXISTING REINFORCING BARS USING A REBAR DETECTOR. NOTIFY ENGINEER PRIOR TO INSTALLATION IF ANCHOR LOCATIONS CONFLICT WITH EXISTING REINFORCING BARS. DO NOT DRILL THROUGH REINFORCING BARS.

3. TESTING AND INSPECTION: REFER TO EVALUATION REPORTS FOR ADDITIONAL TESTING AND INSPECTION REQUIREMENTS.

4. SUBSTITUTIONS: SUBSTITUTIONS COMPLYING WITH SPECIFIED ACCEPTANCE CRITERIA MAY BE CONSIDERED. SUBMIT EVALUATION REPORT DEMONSTRATING COMPLIANCE WITH GOVERNING CODE AND SPECIFIED ACCEPTANCE CRITERIA PRIOR TO INSTALLATION.

5. ADHESIVE ANCHORS:

   A. ANCHOR RODS: HILTI "HAS-V-36" UNLESS NOTED OTHERWISE. SIZE AND EMBEDMENT AS INDICATED ON DRAWINGS.

   B. ADHESIVE IN CONCRETE: HILTI "HIT-RE 500 V3" EPOXY (EVALUATION REPORT: ICC-ES ESR-3814). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC308 AND ACI 355.4 FOR USE IN CRACKED CONCRETE MAY BE CONSIDERED.

   C. ADHESIVE IN GROUT FILLED CONCRETE MASONRY: HILTI "HIT-HY 270" ADHESIVE ANCHOR SYSTEM (EVALUATION REPORT: ICC-ES ESR-4143). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC58 FOR USE IN GROUT FILLED CONCRETE MASONRY WALLS MAY BE CONSIDERED.

   D. ADHESIVE IN HOLLOW CONCRETE MASONRY: HILTI "HIT-HY 270" ADHESIVE ANCHOR SYSTEM (EVALUATION REPORT: ICC-ES ESR-4143). INSTALL WITH SCREEN TUBE(S) AS REQUIRED IN EVALUATION REPORT. SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC58 FOR USE IN HOLLOW CONCRETE MASONRY WALLS MAY BE CONSIDERED.

   E. VERIFY THAT THE SHELF LIFE OF THE ADHESIVE HAS NOT BEEN EXCEEDED ON THE DATE OF INSTALLATION.

6. EXPANSION ANCHORS:

   A. ANCHORAGE TO CONCRETE: HILTI "KWIK BOLT TZ2 CARBON STEEL" (EVALUATION REPORT: ICC-ES ESR-4266). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC193 AND ACI 355.2 FOR USE IN CRACKED CONCRETE MAY BE CONSIDERED.

   B. ANCHORAGE TO GROUT FILLED CONCRETE MASONRY: HILTI "KWIK BOLT TZ2 CARBON STEEL" (EVALUATION REPORT: ICC-ES ESR-4561). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC01 (INCLUDING SEISMIC TESTS) FOR EXPANSION ANCHORS IN MASONRY ELEMENTS MAY BE CONSIDERED.

   C. ANCHORAGE TO HOLLOW CONCRETE MASONRY: HILTI "HLC" SLEEVE ANCHOR SYSTEM. SUBSTITUTES MAY BE CONSIDERED. ANCHORAGE TO HOLLOW CONCRETE MASONRY IS PERMITTED ONLY WHERE SPECIFICALLY INDICATED ON DRAWINGS. UNLESS OTHERWISE NOTED, GROUT CELLS SOLID AND ANCHOR PER "ANCHORAGE TO GROUT FILLED CONCRETE MASONRY".

7. SCREW ANCHORS:

   A. ANCHORAGE TO CONCRETE: HILTI "KH-EZ" (EVALUATION REPORT: ICC-ES ESR-3027). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC193 AND ACI 355.2 FOR USE IN CRACKED CONCRETE MAY BE CONSIDERED.

   B. ANCHORAGE TO GROUT FILLED CONCRETE MASONRY: HILTI "KH-EZ" (EVALUATION REPORT: ICC-ES ESR-3056). SUBSTITUTES COMPLYING WITH ACCEPTANCE CRITERIA ICC-ES AC106 (INCLUDING SEISMIC TESTS) FOR SCREW ANCHORS IN MASONRY ELEMENTS MAY BE CONSIDERED.

POWER-ACTUATED FASTENERS (PAF)

1. INSTALLATION: INSTALL FASTENERS PER EVALUATION REPORT AND MANUFACTURER'S PRINTED INSTRUCTIONS (MPII).

2. SUBSTITUTIONS: SUBSTITUTIONS COMPLYING WITH ICC-ES ACCEPTANCE CRITERIA AC 70 MAY BE CONSIDERED. SUBMIT EVALUATION REPORT DEMONSTRATING GREATER OR EQUAL CAPACITY, AND COMPLIANCE WITH GOVERNING CODE AND SPECIFIED ACCEPTANCE CRITERIA PRIOR TO INSTALLATION.

3. FASTENING WOOD FRAMING AND COLD FORMED METAL FRAMING TRACKS AND CHANNELS:

   A. FASTENING TO STRUCTURAL STEEL:
      i. 0.157" DIAMETER NAIL (TYP UNO): HILTI "X-U" NAIL (ICC-ESR-2269). DETERMINE FASTENER LENGTH IN ACCORDANCE WITH ICC REPORT TO PROVIDE MINIMUM REQUIRED PENETRATION THROUGH STEEL.
      ii. 0.177" DIAMETER NAIL: HILTI "X-EDS" NAIL (ICC-ESR-1663). DETERMINE FASTENER LENGTH IN ACCORDANCE WITH ICC REPORT TO PROVIDE MINIMUM REQUIRED PENETRATION THROUGH STEEL.

   B. FASTENING TO CONCRETE (CONCRETE MUST ACHIEVE SPECIFIED DESIGN STRENGTH PRIOR TO FASTENER INSTALLATION):
      i. 0.157" DIAMETER NAIL: HILTI "X-U" NAIL (ICC-ESR-2269). DETERMINE FASTENER LENGTH IN ACCORDANCE WITH ICC REPORT TO PROVIDE A MINIMUM 1 1/4" EMBEDMENT.
      ii. 0.177" DIAMETER NAIL: HILTI "X-EDS" NAIL (ICC-ESR-1663). DETERMINE FASTENER LENGTH IN ACCORDANCE WITH ICC REPORT TO PROVIDE A MINIMUM 1 1/4" EMBEDMENT.

   C. FASTENING TO CMU:
      i. 0.157" DIAMETER NAIL: HILTI "X-U" NAIL (ICC-ESR-2269). DETERMINE FASTENER LENGTH IN ACCORDANCE WITH ICC REPORT TO PROVIDE A MINIMUM 1" EMBEDMENT INTO FACE SHELL OF GROUTED CMU OR TOP OF GROUTED CELL. DO NOT FASTEN INTO MORTAR JOINT.
      ii. 0.177" DIAMETER NAIL: HILTI "X-EDS" NAIL (ICC-ESR-1663). DETERMINE FASTENER LENGTH IN ACCORDANCE WITH ICC REPORT TO PROVIDE A MINIMUM 1" EMBEDMENT INTO FACE SHELL OF GROUTED CMU OR TOP OF GROUTED CELL. DO NOT FASTEN INTO MORTAR JOINT.

4. FASTENING METAL DECK TO STRUCTURAL STEEL: SEE "METAL DECK" GENERAL STRUCTURAL NOTES.

DEFERRED SUBMITTALS

1. THE FOLLOWING ITEMS SHALL BE ISSUED AS A DEFERRED SUBMITTAL PER SECTION 106.3.4.2 OF THE REFERENCED BUILDING CODE:

   A. PREFABRICATED STEEL JOISTS / JOIST GIRDERS
   B. PRE-ENGINEERED / PREFABRICATED STEEL STAIRS
   C. STEEL HSS FRAMING AND CONNECTIONS SUPPORTING EXTERIOR INSULATED METAL PANELS.
   D. HANDRAILS, GUARDRAILS, AND ACCESS LADDERS
   E. PRE-ENGINEERED GROUND IMPROVEMENT
   F. CONCRETE TILT-UP WALL PANELS
   G. PRE-ENGINEERED CANOPIES, FENCES, GATES, AND AWNINGS
   H. NON-STRUCTURAL ELEMENTS NOT ASSOCIATED WITH THE BUILDING ELEMENTS
   I. PRE-ENGINEERED STEEL PLATFORMS AS NOTED ON PLANS
   J. ANCHORAGE / CONNECTIONS OF ROOFTOP MOUNTED MEP AND TELECOMMUNICATIONS ITEMS

2. ALL ITEMS NOTED ABOVE SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT AND ISSUED A MINIMUM OF 30 DAYS PRIOR TO INSTALLATION. IN NO CASE SHALL ANY OF THE ABOVE LISTED ITEMS BE INSTALLED UNTIL THEY HAVE BEEN REVIEWED BY THE ENGINEER-OF-RECORD FOR CONFORMANCE WITH THE DESIGN INTENT OF THE BUILDING AND APPROVED BY THE BUILDING OFFICIAL.

Schaefer Project Number: 24-0265

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

S003

NOT FOR CONSTRUCTION

6/7/2024 8:38:12 AM

Schaefer Project Number: 24-0265

SCHEDULE OF TENSION DEVELOPMENT AND LAP SPLICE LENGTHS

FOOTINGS, MATS, AND GRADE BEAMS (f'c = 4,000 PSI)

BAR SIZE	Ld		Ls		Ldh
	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	
	(in)	(in)	(in)	(in)	(in)
#3	15	19	19	25	8
#4	19	25	25	33	10
#5	24	31	31	41	12
#6	29	37	37	49	15
#7	42	54	54	71	17
#8	48	62	62	81	19
#9	54	70	70	91	22
#10	61	79	79	102	25
#11	67	87	87	114	27
#14	81	105	105	136	33

LAP AND DEVELOPMENT TABLE CRITERIA:
A. GRADE 60 UNCOATED REINFORCING STEEL
  i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2
B. NORMAL WEIGHT CONCRETE
  i. FOR LIGHTWEIGHT CONCRETE: MULTIPLY Ld, Ls, Ldh BY 1.33
C. CLEAR COVER GREATER THAN db
D. MIN 2"db CLEAR SPACING BETWEEN BARS

FOR BARS THAT DO NOT MEET THE CLEAR COVER OR CLEAR SPACING INDICATED:
#6 AND SMALLER: Ld = 57 BAR DIAMETERS; Ls = 74 BAR DIAMETERS
#7 AND LARGER: Ld = 72 BAR DIAMETERS; Ls = 93 BAR DIAMETERS
FOR TOP BARS MULTIPLY BY 1.3
MINIMUM Ld AND Ls = 12"

FOUNDATION WALLS & RETAINING WALLS WITH EXTERIOR EXPOSURE (f'c = 4,500 PSI)

BAR SIZE	Ld		Ls		Ldh
	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	
	(in)	(in)	(in)	(in)	(in)
#3	12	12	16	16	7
#4	12	14	16	19	9
#5	14	18	18	23	12
#6	17	21	21	28	14
#7	24	31	31	40	16
#8	27	35	35	46	18
#9	34	44	44	57	21
#10	42	54	54	70	23
#11	50	65	65	84	26
#14	68	88	88	115	31

LAP AND DEVELOPMENT TABLE CRITERIA:
A. GRADE 60 UNCOATED REINFORCING STEEL
  i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2
B. NORMAL WEIGHT CONCRETE
  i. FOR LIGHTWEIGHT CONCRETE: MULTIPLY Ld, Ls, Ldh BY 1.33
C. 2" MIN CLEAR COVER
D. 4" MIN CLEAR SPACING BETWEEN BARS

FOR BARS THAT DO NOT MEET THE CLEAR COVER OR CLEAR SPACING INDICATED:
#6 AND SMALLER: Ld = 54 BAR DIAMETERS; Ls = 70 BAR DIAMETERS
#7 AND LARGER: Ld = 68 BAR DIAMETERS; Ls = 88 BAR DIAMETERS
FOR TOP BARS MULTIPLY BY 1.3
MINIMUM Ld AND Ls = 12"

SLABS ON METAL DECK w/ FIBER REINFORCEMENT (f'c = 3,500 PSI)

BAR SIZE	Ld		Ls		Ldh
	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	
	(in)	(in)	(in)	(in)	(in)
#3	16	20	20	26	8
#4	21	27	27	35	11
#5	26	33	33	43	13
#6	31	40	40	52	16
#7	45	58	58	75	18
#8	51	66	66	86	21
#9	58	75	75	97	23
#10	65	84	84	109	26
#11	72	93	93	121	29
#14	86	112	112	146	35

LAP AND DEVELOPMENT TABLE CRITERIA:
A. GRADE 60 UNCOATED REINFORCING STEEL
  i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2
B. NORMAL WEIGHT CONCRETE
  i. FOR LIGHTWEIGHT CONCRETE: MULTIPLY Ld, Ls, Ldh BY 1.33
C. CLEAR COVER GREATER THAN db
D. MIN 2"db CLEAR SPACING BETWEEN BARS

FOR BARS THAT DO NOT MEET THE CLEAR COVER OR CLEAR SPACING INDICATED:
#6 AND SMALLER: Ld = 61 BAR DIAMETERS; Ls = 80 BAR DIAMETERS
#7 AND LARGER: Ld = 77 BAR DIAMETERS; Ls = 99 BAR DIAMETERS
FOR TOP BARS MULTIPLY BY 1.3
MINIMUM Ld AND Ls = 12"

INTERIOR METAL PAN STAIRS AND LANDINGS (f'c = 4,000 PSI)

BAR SIZE	Ld		Ls		Ldh
	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	
	(in)	(in)	(in)	(in)	(in)
#3	15	19	19	25	8
#4	19	25	25	33	10
#5	24	31	31	41	12
#6	29	37	37	49	15
#7	42	54	54	71	17
#8	48	62	62	81	19
#9	54	70	70	91	22
#10	61	79	79	102	25
#11	67	87	87	114	27
#14	81	105	105	136	33

LAP AND DEVELOPMENT TABLE CRITERIA:
A. GRADE 60 UNCOATED REINFORCING STEEL
  i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2
B. NORMAL WEIGHT CONCRETE
  i. FOR LIGHTWEIGHT CONCRETE: MULTIPLY Ld, Ls, Ldh BY 1.33
C. CLEAR COVER GREATER THAN db
D. MIN 2"db CLEAR SPACING BETWEEN BARS

FOR BARS THAT DO NOT MEET THE CLEAR COVER OR CLEAR SPACING INDICATED:
#6 AND SMALLER: Ld = 57 BAR DIAMETERS; Ls = 74 BAR DIAMETERS
#7 AND LARGER: Ld = 72 BAR DIAMETERS; Ls = 93 BAR DIAMETERS
FOR TOP BARS MULTIPLY BY 1.3
MINIMUM Ld AND Ls = 12"

TILT-UP WALL PANELS (f'c = 4,000 PSI)

BAR SIZE	Ld		Ls		Ldh
	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	
	(in)	(in)	(in)	(in)	(in)
#3	15	19	19	25	8
#4	19	25	25	33	10
#5	24	31	31	41	12
#6	29	37	37	49	15
#7	42	54	54	71	17
#8	48	62	62	81	19
#9	54	70	70	91	22
#10	61	79	79	102	25
#11	67	87	87	114	27
#14	81	105	105	136	33

LAP AND DEVELOPMENT TABLE CRITERIA:
A. GRADE 60 UNCOATED REINFORCING STEEL
  i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2
B. NORMAL WEIGHT CONCRETE
  i. FOR LIGHTWEIGHT CONCRETE: MULTIPLY Ld, Ls, Ldh BY 1.33
C. CLEAR COVER GREATER THAN db
D. MIN 2"db CLEAR SPACING BETWEEN BARS

FOR BARS THAT DO NOT MEET THE CLEAR COVER OR CLEAR SPACING INDICATED:
#6 AND SMALLER: Ld = 57 BAR DIAMETERS; Ls = 74 BAR DIAMETERS
#7 AND LARGER: Ld = 72 BAR DIAMETERS; Ls = 93 BAR DIAMETERS
FOR TOP BARS MULTIPLY BY 1.3
MINIMUM Ld AND Ls = 12"

LAP AND DEVELOPMENT TABLE NOTES & DEFINITIONS:
A. TOP BARS = HORIZ BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS
B. db = BAR DIAMETER
C. s = CENTER-TO-CENTER BAR SPACING
D. Ath = TOTAL AREA OF TIES OR STIRRUPS CONFINING HOOKED BARS
E. Ahs = TOTAL AREA OF HOOKED BARS BEING DEVELOPED
F. WHERE BARS OF DIFFERENT SIZES ARE SPLICED, Ls FOR THE LARGER BAR SHALL BE USED
G. ALL TENSION SPLICES SHALL BE CLASS B, UNLESS NOTED OTHERWISE
H. Ldh VALUES FOR #11 BARS AND SMALLER MAY BE REDUCED AS FOLLOWS (PER ACI 318-14)
  i. MULTIPLY BY 0.70 FOR (1) OR (2)
    (1) SIDE COVER ≥ 2 1/2"
    (2) 90° HOOKS WITH COVER ON BAR EXTENSION BEYOND HOOK ≥ 2"
  ii. MULTIPLY BY 0.80 FOR (3), (4), or (5)
    (3) 90° HOOKS ENCLOSED ALONG Ldh WITHIN TIES OR STIRRUPS AT s ≤ 3db
    (4) 90° HOOKS ENCLOSED ALONG THE BAR EXTENSION WITHIN TIES OR STIRRUPS AT s ≤ 3db
    (5) 180° HOOKS ENCLOSED ALONG Ldh WITHIN TIES OR STIRRUPS AT s ≤ 3db
  iii. Ldh SHALL NOT BE LESS THAN THE LARGER OF 8db OR 6" WITH REDUCTIONS APPLIED

CONCRETE MIXTURE REQUIREMENTS

CONCRETE CLASS	DESCRIPTION	EXPOSURE CLASS F	S	W	C	MINIMUM f'c AT 28 DAYS (PSI)	MAXIMUM w/c RATIO	AIR CONTENT	MINIMUM CEMENTITIOUS MATERIAL (LB/CY)	REMARKS
A	FOOTINGS, MATS, AND GRADE BEAMS	F0	S0	W0	C0	4,000	--	--	--	--
B	FOUNDATION WALLS & RETAINING WALLS WITH EXTERIOR EXPOSURE	F2	S0	W0	C1	4,500	0.45	6% ±1.5%	--	--
C	INTERIOR SLABS-ON-GROUND	F0	S0	W0	C0	4,000	0.55	3% MAX	520	--
D	SLABS ON METAL DECK w/ FIBER REINFORCEMENT	F0	S0	W0	C0	3,500	0.55	--	--	SEE REMARK 1
E	INTERIOR METAL PAN STAIRS AND LANDINGS	F0	S0	W0	C0	4,000	--	--	--	SEE REMARK 2
F	TILT-UP WALL PANELS	F0	S0	W0	C0	4,000	0.52	3% MAX	--	SEE REMARK 3
G	TILT-UP WALL PANEL GROUT	--	--	--	--	5,000	--	--	--	SEE REMARK 4

CONCRETE MIXTURE NOTES:
A. PROVIDE MIX DESIGNS IN ACCORDANCE WITH ACI 301-16 FOR SPECIFIED EXPOSURE CLASS AND AGGREGATE.
B. NOMINAL MAX AGGREGATE SIZE = 1 1/2" UNLESS OTHERWISE NOTED.
C. ALL CONCRETE SHALL BE NORMAL WEIGHT UNLESS OTHERWISE NOTED.
D. MIX DESIGNS SHOWN ABOVE ARE FOR NEGLIGIBLE SULFATE EXPOSURE (S0). THE GEOTECHNICAL ENGINEER AND CIVIL ENGINEER SHALL VERIFY SULFATE EXPOSURE REQUIREMENTS FOR THE SITE SUBGRADE AND INTERACTIONS WITH CONCRETE. REFER TO ACI 318, TABLE 19.3.2.1 FOR CONCRETE REQUIREMENTS FOR SUFATE EXPOSURE.

CONCRETE MIXTURE REMARKS:
1. FIBER REINFORCEMENT(ASTM C1116): MACROSYNTHETIC FIBERS (ASTM D7508). DOSAGE PER MANUFACTURER'S RECOMMENDATION, NOT LESS THAN 7.5 LB/CY IN LOCATIONS NOTED IN DRAWINGS.
2. NOMINAL MAX AGGREGATE SIZE: 3/8"
3. FLY ASH, GROUND GRANULATED BLAST FURNACE SLAG, AND SILICA FUME NOT PERMITTED
4. NON-SHRINK, NON-METALLIC GROUT (ASTM C1107)

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION
BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
S004

NOT FOR CONSTRUCTION

Schaefer Project Number: 24-0265

SCHEDULE OF SPECIAL INSPECTION SERVICES - 1705.6 SOILS

Item	Sub Item / Scope	Extent Cont.	Extent Periodic	Extent N/A	Agency Qualifications	Comments
1. Bearing Materials	Verify materials below shallow foundations are adequate to achieve the design bearing capacity.		X		**Testing Agency** Under supervision of Licensed Geotechnical Engineer	
2. Excavations	Verify excavations are extended to proper depth and have reached proper material		X		**Testing Agency** Under supervision of Licensed Geotechnical Engineer	
3. Fill Classification	Perform classification and testing of compacted fill materials		X		**Testing Agency** Under supervision of Licensed Geotechnical Engineer	
4. Placement and Fill Compaction	Verify use of proper materials, densities, and lift thicknesses during placement and compaction of compacted fill	X			**Testing Agency** Under supervision of Licensed Geotechnical Engineer	
5. Subgrade	Prior to placement of compacted fill, inspect subgrade and verify that the site has been prepared properly		X		**Testing Agency** Under supervision of Licensed Geotechnical Engineer	

SCHEDULE OF SPECIAL INSPECTION SERVICES - 1705.3 CONCRETE CONSTRUCTION

Item	Sub Item / Scope	Extent Cont.	Extent Periodic	Extent N/A	Agency Qualifications	Comments
In-Plant Special Inspections (Precast Concrete)	**Fabrication and implementation procedures:** In addition to special inspections provided on site, provide special inspections indicated below on the premises of fabricator's shop. Verify that the fabricator maintains detailed fabrication and quality control procedures.			X	**As Noted Below**	Special inspections on the premises of the fabricator's shop are not required provided the fabricator is an ***Approved Fabricator*** in accordance with section 1704.2.5.1. Fabricator is required to submit documentation/certification that they are an ***Approved Fabricator***.
1. Reinforcing steel	**a. Mild Reinforcing Steel:** Inspect size, spacing, cover, positioning and grade of reinforcing steel: Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters. Verify welded wire fabric is supported per construction documents. Reference ACI 318: 20, 25.2, 25.3, 26.6-1-26.6-3, and IBC 1908.4.		X		**Testing Agency**	
	b. Prestress Steel: Inspect size, spacing, cover, and position of prestressing tendons.			X	**Testing Agency**	
2. Welding of Reinforcing Steel	a. Verify weldability of reinforcing bars other than ASTM A706. Reference ACI 318: 26.6.4 and AWS D1.4		X		**Testing Agency**	
	b. Inspect single pass fillet welds, maximum 5/16"		X		**Testing Agency** AWS - Certified Welding Inspector	
	c. Inspect all other welds	X			**Testing Agency** AWS - Certified Welding Inspector	
3. Cast in Place Anchor Rods	Inspect size, position and embedment of cast in place bolts and anchor rods. Inspect concrete placement and consolidation around anchors. Reference ACI 318: 17.8.2		X		**Testing Agency**	
4. Post Installed Anchors (Anchors installed in Hardened Concrete)	a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. Inspect type and size of anchor, concrete type and compressive strength, hole cleaning procedures, anchor embedment, anchor spacing and edge distances, and tightening torque (where applicable). Reference ACI 318: 17.8.2.4	X			**Testing Agency**	Reference evaluation report (identified in project general notes) for additional inspection scope required by manufacturer.
	b. Mechanical anchors and adhesive anchors not defined in 4.a. Inspect type and size of anchor, concrete type and compressive strength, hole cleaning procedures, anchor embedment, anchor spacing and edge distances, and tightening torque (where applicable). Reference ACI 318: 17.8.2.4		X		**Testing Agency**	
5. Mix Design	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at site, if permitted by construction documents, does not exceed that allowed by mix design.		X		**Testing Agency**	
6. Sampling and Testing of Concrete	At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests as required by construction documents, and determine the temperature of concrete. Reference ASTM C 172, ASTM C31, ACI 318 19, 26.4.3, 26.4.4, and IBC 1904.1, 1904.2, 1908.2, 1908.3	X			**Testing Agency**	
7. Concrete and Shotcrete Placement	Inspect concrete and shotcrete placement for proper application techniques. Reference ACI 318: 26.5 and IBC 1908.6, 1908.7, and 1908.8. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.	X			**Testing Agency**	
8. Curing and Protection	Inspect for maintenance of specified curing temperature and techniques. Inspect cold weather and hot weather protection procedures as applicable. Reference ACI 318: 26.5.3-26.5.5 and ISC 1908.9		X		**Testing Agency**	
9. Prestressed (Post-tensioned) Concrete	**a. Application of Prestressing Forces:** Inspect placement, stressing, grouting and protection of post-tensioning tendons. Verify that tendons are correctly positioned, supported, tied and wrapped. Record tendon elongations. Reference ACI 318: 26.10.2			X	**Testing Agency**	
	b. Grouting of Bonded Prestressing Tendons in the Seismic-Force Resisting System: Reference ACI 318: 26.10.1			X	**Testing Agency**	
10. Precast Concrete Erection	Inspect erection of precast concrete including member configuration, connections, welding and grouting. Reference ACI 318: Ch 26.9		X		**Testing Agency**	
11. Verification of In-Situ Concrete Strength	Verify concrete strength prior to the removal of shores and forms from beams and structural slabs and prior to the stressing of tendons in post-tensioned concrete. Reference ACI 318: 26.10.2 & 26.11.11.2		X		**Testing Agency**	
12. Formwork Geometry	Inspect formwork for shape, location and dimensions of the concrete member being formed. Reference ACI 318: 26.11		X		**Testing Agency**	

SCHEDULE OF SPECIAL INSPECTION SERVICES - 1705.2.1 STRUCTURAL STEEL

Item	Sub Item / Scope	Extent Observe	Extent Perform	Extent N/A	Agency Qualifications	Comments
In-Plant Special Inspections	**Fabrication and implementation procedures:** In addition to special inspections provided on site, provide special inspections indicated below on the premises of fabricator's shop. Verify that the fabricator maintains detailed fabrication and quality control procedures.			X	**As Noted Below**	Special inspections on the premises of the fabricators shop are not required provided the fabricator is an ***Approved Fabricator*** in accordance with section 1704.2. Fabricator is required to submit documentation/certification that they are an ***Approved Fabricator***.
1. Fabricator and erector documents	Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents		X		**Schaefer Submittal Review**	
2. Material verification of structural steel	Verify material in shop and field inspection		X		**Testing Agency**	
3. Embedments	Verify diameter, grade, type, length, embedment. See Table 1705.3 for anchors		X		**Testing Agency**	
4. Verify compliance with construction documents	Verify member locations, braces, stiffoners, and application of joint details at each connection comply with construction documents		X		**Testing Agency**	
5.4-1. Visual Welding Inspection - Inspection Tasks Before Welding:	1. Welding procedure specifications (WPS) available		X		**Testing Agency** AWS - Certified Welding Inspector	
	2. Manufacturer certifications for welding consumables available.		X			
	3. Material Identification:	X				
	4. Fit up of Groove Welds (Including Joint Geometry): Inspection shall include Joint preparation, Dimensions (alignment, root opening, roof face, and bevel), Cleanliness (condition of steel surfaces), Tacking (tack weld quality and location), Backing type and fit (if applicable)	X				
	4. Configuration and Finish of Access Holes:	X				
	5. Fit-up of Fillet Welds	X				
5.4-2. Visual Welding Inspection - Inspection Tasks During Welding:	1. Use of Qualified Welders:	X			**Testing Agency** AWS - Certified Welding Inspector	
	2. Control and Handling of Welding Consumables: Packaging and Exposure control.	X				
	3. No welding over cracked tack welds.	X				
	4. Environmental Conditions: Wind speed within limits, and Precipitation and temperature.	X				
	WPS Followed: Observe Settings on welding equipment, Travel speed, Selected welding materials, Shielding gas type/flow rate, Preheat applied, Interpass temperature maintained (min and max), and Proper position (F,V,F,OH)	X				
	Welding Techniques: Interpass and final cleaning, Each pass within profile limitations, Each pass meets quality requirements.	X				
5.4-3. Visual Welding Inspection - Inspection Tasks After Welding	1. Welds Cleaned:	X			**Testing Agency** AWS - Certified Welding Inspector	
	2. Size, Length, and Location of Welds:		X			
	3. Welds meet visual acceptance criteria: Crack prohibition, Weld/base-metal fusion, Crater cross section, Weld profiles, Weld size, Undercut, Porosity.		X			
	4. Arc strikes:		X			
	5. k-area		X			
	6. Backing Bar Removal and weld tabs removal (if required):		X			
	7. Repair Activities:		X			
	9. Document acceptance or rejection of welded joint or membor		X			
5.5 Non-destructive Testing of Welds	**1. CJP Groove Welds:** Ultrasonic testing shall be performed on 100 percent of CJP groove welds subject to transversely applied tension loading in butt, T- and corner joints, in materials 5/16 in thick or greater. Ultrasonic testing in materials less than 5/16 in thick is not required. Reduction of Rate of Ultrasonic Testing is permitted if the conditions of AISC 360-10 Appendix N.5.e are met.		X		**Testing Agency** AWS - Certified Welding Inspector	Perform NDT for both in field and shop welds.
	2. Access Holes: Thermally cut surfaces of access holes shall be tested using Magnetic Particle Testing or Penetration Testing, when the flange thickness exceeds 2 inches for rolled shapes or when the web thickness exceeds 2 inches for built up shapes.		X			Perform NDT for both in field and shop welds.
	3. Weld Joints Subjected to Fatigue: Welded joints requiring weld soundness to be established by Radiographic or Ultrasonic Inspections. Reduction rate is prohibited.		X			Perform NDT for both in field and shop welds.
5.6-1, Inspection of Bolting: Inspection Tasks Prior to Bolting	1. Manufacturer's certifications available for fastener materials.		X		**Testing Agency**	
	2. Fasteners marked in accordance with ASTM requirements	X			**Testing Agency**	
	3. Proper fasteners selected for the joint detail (grade, type, and bolt length if threads are excluded from shear plane)	X			**Testing Agency**	
	4. Proper bolting procedure selected for joint detail.	X			**Testing Agency**	
	5. Connecting elements: Verify elements are fabricated properly, including the appropriate faying surface condition and hole preparation, if specified, meets the applicable requirements	X			**Testing Agency**	
	6. Pre-installation verification testing conducted for fastener assemblies and methods used	X			**Testing Agency**	
	7. Proper storage provided for bolts, nuts, washers, and other fastener components	X			**Testing Agency**	
5.6-2, Inspection of Bolting: Inspection Tasks During Bolting	1. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are properly positioned	X			**Testing Agency**	
	2. Joint brought to the snug tight condition prior to the pretensioning operation	X			**Testing Agency**	
	3. Fastener component not turned by the wrench prevented from rotating	X			**Testing Agency**	
	4. Bolts are pretensioned in accordance with the RCSC specification, progressing systematically from most rigid point toward free edges	X			**Testing Agency**	
5.6-3, Inspection of Bolting: Inspection Tasks After Bolting	1. Document accepted and rejected connections:		X		**Testing Agency**	
6.1 Inspection of Steel Elements of Composite Construction Prior to Concrete Placement	1. Placement and installation of steel deck.		X		**Testing Agency**	
	2. Placement and installation of steel headed stud anchors.		X		**Testing Agency**	
	3. Document acceptance or rejection of steel elements.		X		**Testing Agency**	
7. Inspection of Steel Frame	1. Inspect fabricated steel or erected steel frame to verify compliance with details shown on construction documents including bracing, stiffeners, member locations, and proper application of joint details at each connection	X			**Testing Agency**	

SCHEDULE OF SPECIAL INSPECTION SERVICES - 1705.2.3 OPEN WEB STEEL JOISTS AND JOIST GIRDERS

Item	Sub Item / Scope	Extent Cont.	Extent Periodic	Extent N/A	Agency Qualifications	Comments
1. Installation of open-web steel joists and joist girders:	a. End Connections - Welding or Bolting. Reference SJI Specifications listed in IBC 2207.1		X		**Testing Agency** AWS Certified Welding Inspector	
	b. Bridging - horizontal or diagonal		X		**Testing Agency**	
	b.1. Standard bridging, Reference SJI Specifications listed in IBC 2207.1		X			
	b.2. Bridging that differs from the SJI specifications listed in Section 2207.1		X			

SCHEDULE OF SPECIAL INSPECTION SERVICES - 1705.2.2 COLD FORMED STEEL DECK

Item	Sub Item / Scope	Extent Observe	Extent Perform	Extent N/A	Agency Qualifications	Comments
1. Inspection Tasks Prior to Deck Placement	a. Verify compliance of materials (deck and all deck accessories) with construction documents, including profiles, material, perperties, and base metal thickness		X		**Testing Agency**	
	b. Document acceptance or rejection of deck and deck accessories		X			
2. Inspection Tasks After Deck Placement	a. Verify compliance of deck and all deck accessories installation with construction documents		X		**Testing Agency**	
	b. Verify deck materials are represented by the mill certifications that comply with the construction documents		X			
	c. Document acceptance or rejection of installation of deck and deck accessories		X			
3. Inspection Prior to Welding	a. Welding procedure specifications (WPS) available	X			**Testing Agency** AWS Certified Welding Inspector	
	b. Manufacturer certifications for welding consumables available	X				
	c. Material Identification (type/grade)	X				
	d. Check Welding Equipment	X				
4. Inspection Tasks During Welding	a. Use of qualified welders.	X			**Testing Agency** AWS Certified Welding Inspector	
	b. Control and handling of welding consumables.	X				
	c. Environmental conditions	X				
	d. WPS followed	X				
5. Inspection Tasks After Welding	a. Verify size and location of welds, including support, sidelap, and perimeter welds.		X		**Testing Agency** AWS Certified Welding Inspector	
	b. Weld meets visual inspection criteria.		X			
	c. Verify repair activities.		X			
	d. Document acceptance or rejection of welds		X			
6. Inspection Tasks Prior to Mechanical Fastening	a. Manufacturer installation instructions are available for mechanical fasteners.	X			**Testing Agency**	
	b. Proper tools are available for fastener installation	X				
	c. Proper storage for mechanical fasteners	X				
7. Inspection Tasks During Mechanical Fastening	a. Fasteners are positioned as required	X			**Testing Agency**	
	b. Fasteners are installed in accordance with manufacturer's instructions	X				
8. Inspection Tasks After Mechanical Fastening	a. Check spacing, type, and installation of support fasteners		X		**Testing Agency**	
	b. Check spacing, type, and installation of sidelap fasteners		X			
	c. Check spacing, type, and installation of perimeter fasteners		X			
	d. Verify repair activities		X			
	e. Document acceptance or rejection of mechanical fasteners		X			

SCHEDULE OF SPECIAL INSPECTION SERVICES - COLD FORMED CONSTRUCTION

Item	Sub Item / Scope	Extent Cont.	Extent Periodic	Extent N/A	Agency Qualifications	Comments
Lateral Load Resisting System Elements	**Strap Bracing:** Inspect straps and all connections at walls with CFS strap bracing			X	**Testing Agency**	
	Shearwalls: Inspect wood structural panel grade and thickness, fastener size and spacing, panel edge blocking, shearwall end studs, and holdowns			X	**Testing Agency**	
	Chords/Collectors: Inspect collector/chord straps and ties.			X	**Testing Agency**	
Framing	**Members:** Inspect member size, spacing, and configuration		X		**Testing Agency**	
	Connections: Inspect connection details for conformance to construction documents.		X		**Testing Agency**	
Mechanical Fastening	Inspect fastener type, size, and installation procedures. Verify that fasteners are installed tight.		X		**Testing Agency**	
Material Properties and Thickness	Review conformance with construction documents		X		**Testing Agency**	
Material Verification of weld filler materials	Review identification markings conform to AWS specification indicated in construction documents.		X		**Testing Agency** AWS - Certified Welding Inspector	
	Review manufacturer's certificate of compliance for all specified weld filler materials.		X		**Testing Agency** AWS - Certified Welding Inspector	
Welding	Inspection of welds. Reference AWS D1.3, Chapter 6		X		**Testing Agency** AWS - Certified Welding Inspector	

SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS ARE REQUIRED BY SECTION 1704 OF THE REFERENCED BUILDING CODE. THE INTENT OF SPECIAL INSPECTIONS IS TO VERIFY THE COMPLIANCE OF MATERIALS, INSTALLATION, FABRICATION, ERECTION, AND/OR PLACEMENT OF COMPONENTS WITH THE COMPLETED SET OF CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. IT IS THE RESPONSIBILITY OF ALL PARTIES INVOLVED TO BECOME FAMILIAR WITH THE SPECIAL INSPECTION REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE REFERENCED BUILDING CODE. SPECIAL INSPECTIONS SHALL BE PROVIDED BY THE OWNER OR THE OWNER'S AGENT AND SHALL NOT BE CONSIDERED IN THE SCOPE OF WORK OF THE CONTRACTOR.

   A. THE FOLLOWING SCHEDULE OF SPECIAL INSPECTIONS FOR STRUCTURAL WORK HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 106.1 AND 1704 OF THE REFERENCED BUILDING CODE. SEE OTHERS FOR SPECIAL INSPECTION REQUIREMENTS FOR NON-STRUCTURAL WORK. THE SPECIAL INSPECTOR(S) SHALL COORDINATE WITH THE OWNER, CONTRACTORS, AND DESIGN PROFESSIONALS AND SCHEDULE ALL INSPECTIONS ACCORDINGLY.

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

SPECIAL INSPECTIONS

SHEET NUMBER

S005

NOT FOR CONSTRUCTION

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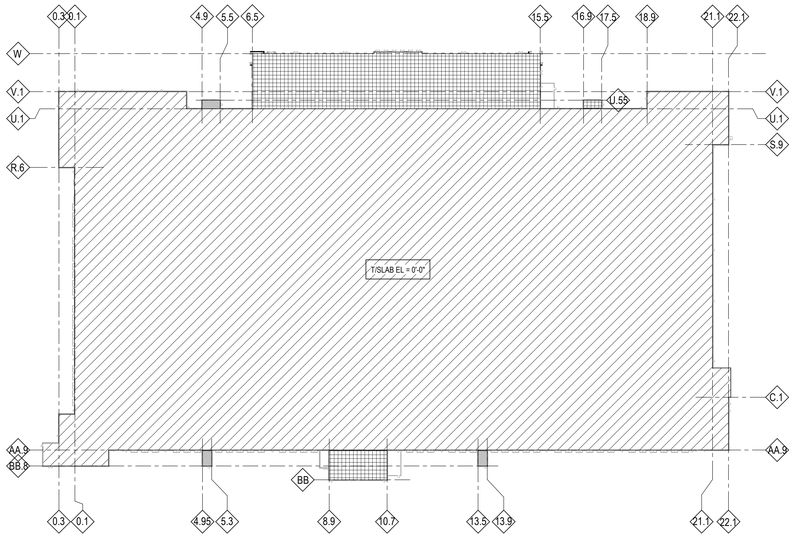
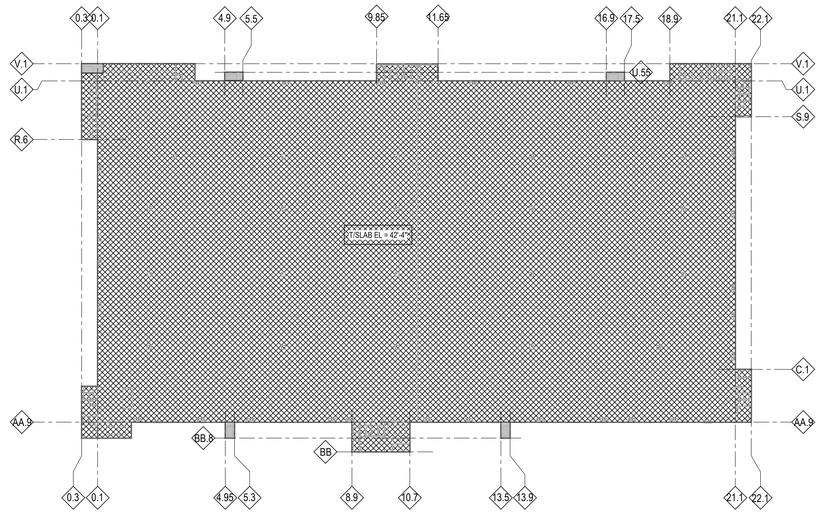


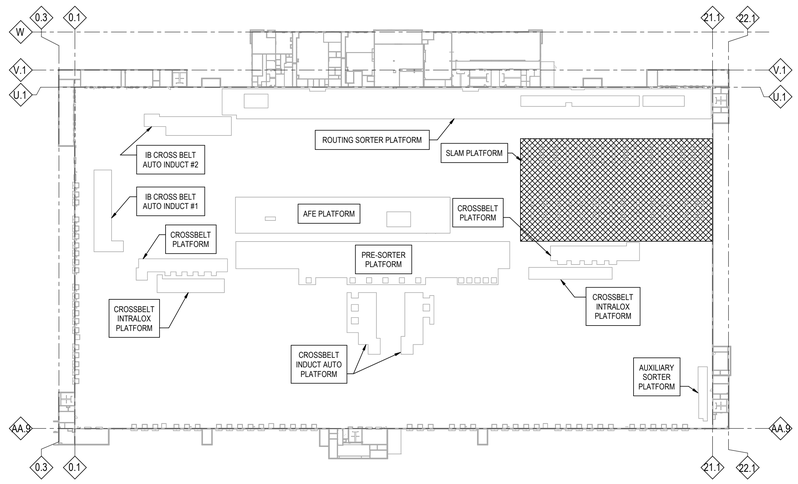
SLAB ON GRADE / LEVEL 1 LOADING PLAN

1" = 100'-0"



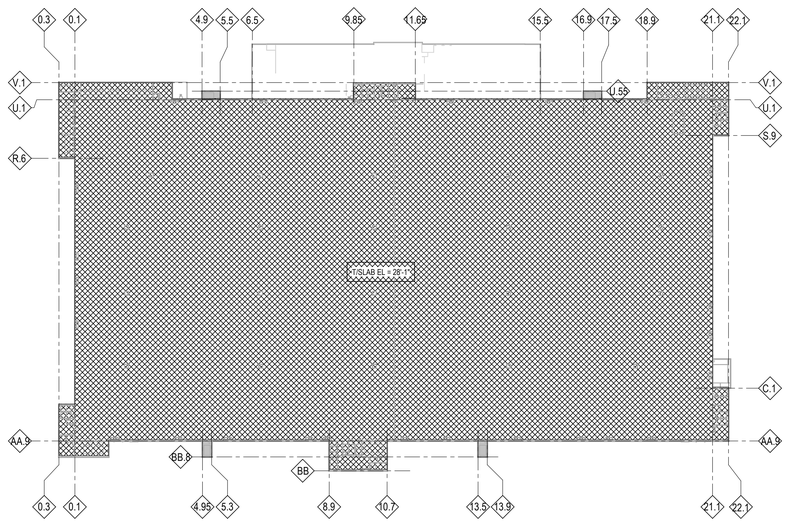
LEVEL 3 RSP FLOOR LOADING PLAN

1" = 100'-0"



MEZZANINE / PLATFORM LEVEL LOADING PLAN

1" = 100'-0"



LEVEL 2 RSP FLOOR LOADING PLAN

1" = 100'-0"

WIND PRESSURE ON GLAZING & WALL COMPONENTS (ULTIMATE - 143 MPH)

LOCATION ON BUILDING	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE
	< 20 SQ FT	≥ 20 SQ FT	≥ 50 SQ FT	≥ 100 SQ FT	≥ 200 SQ FT	≥ 500 SQ FT
FIELD AREA (ZONE 4)	-59.8	-59.8	-56.6	-54.2	-51.8	-48.7
CORNER AREA (ZONE 5)	-109.6	-109.6	-97.0	-87.4	-77.9	-65.3
ZONES 4 & 5	59.8	59.8	55.0	51.5	47.9	43.2

ROOF PRESSURES (ULTIMATE - 143 MPH)

LOCATION ON BUILDING	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE
	< 10 SQ FT	≥ 10 SQ FT	≥ 20 SQ FT	≥ 50 SQ FT	≥ 100 SQ FT	≥ 200 SQ FT	≥ 500 SQ FT
ZONE 1	-87.4	-87.4	-82.5	-76.0	-71.1	-66.2	-59.8
ZONE 2	-137.2	-137.2	-130.4	-121.3	-114.4	-107.6	-98.5
ZONE 3	-137.2	-137.2	-130.4	-121.3	-114.4	-107.6	-98.5
ZONES 1 THRU 3	16.0	16.0	16.0	16.0	16.0	16.0	16.0

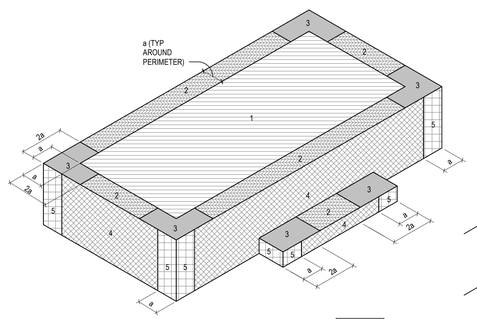
WIND PRESSURE ON GLAZING & WALL COMPONENTS (SERVICE - 111 MPH)

LOCATION ON BUILDING	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE
	< 20 SQ FT	≥ 20 SQ FT	≥ 50 SQ FT	≥ 100 SQ FT	≥ 200 SQ FT	≥ 500 SQ FT
FIELD AREA (ZONE 4)	-36.0	-36.0	-34.1	-32.7	-31.2	-29.3
CORNER AREA (ZONE 5)	-66.0	-66.0	-58.4	-52.7	-46.9	-39.3
ZONE 4 & 5	36.0	36.0	33.2	31.0	28.9	26.0

ROOF PRESSURES (SERVICE - 111 MPH)

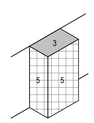
LOCATION ON BUILDING	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE	PRESSURE
	< 10 SQ FT	≥ 10 SQ FT	≥ 20 SQ FT	≥ 50 SQ FT	≥ 100 SQ FT	≥ 200 SQ FT	≥ 500 SQ FT
ZONE 1	-52.7	-52.7	-49.7	-45.8	-42.9	-39.9	-36.0
ZONE 2	-87.2	-87.2	-78.6	-73.1	-69.0	-64.8	-59.3
ZONE 3	-87.2	-87.2	-78.6	-73.1	-69.0	-64.8	-59.3
ZONES 1 THRU 3	10.0	10.0	10.0	10.0	10.0	10.0	10.0

NOTE:
1. ALL PRESSURES ARE IN PSF.
2. POSITIVE & NEGATIVE VALUES SIGNIFY PRESSURES ACTING TOWARD & AWAY FROM THE SURFACES, RESPECTIVELY.
3. IF A PARAPET ≥ 3 FT IS PROVIDED AROUND THE ROOF PERIMETER, ZONE 3 SHALL BE PERMITTED TO BE TREATED AS ZONE 2.
4. TABULATED PRESSURES ARE FROM ASCE 7-16 SECTION 30.5.2 (EXCEPTION LISTED IN 30.5.2 NOT USED).



WIND ZONE ISOMETRIC

NTS



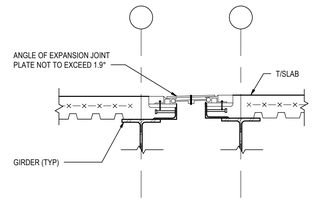
TYPICAL STAIR TOWER WIND ZONE ISOMETRIC

NTS

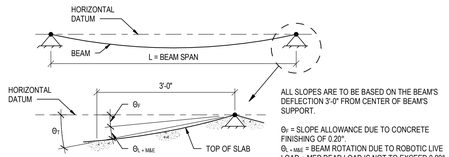
LIVE LOADING LEGEND

PATTERN	LIVE LOAD	MHE LIVE LOAD
	500 PSF (SEE NOTE 3)	
	100 PSF (SEE NOTE 3)	-
	75 PSF	(1) 10,000 LB PT LOAD APPLIED AT ANY LOCATION ALONG EACH BEAM AND GIRDER SPAN. TWO OR MORE 10,000 LB PT LOADS NEED NOT BE APPLIED SIMULTANEOUSLY FOR ANY MEMBER, INCLUDING BEAMS, GIRDERS AND SUPPORTING COLUMNS.
	125 PSF (SEE NOTE 7 & 8)	• SLAM PLATFORM : (1) 3000 LB PT LOAD APPLIES AT ANY LOCATION ALONG EACH BEAM AND GIRDER SPAN. TWO OR MORE 3000 LB PT LOAD NEED NOT BE APPLIED SIMULTANEOUSLY FOR ANY MEMBER, INCLUDING BEAMS, GIRDERS, AND SUPPORTING COLUMNS. • LEVELS 3-4: (1) 2000 LB PT LOAD AT ANY COMPOSITE JOIST BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME). • LEVEL 2: (1) 5000 LB PT LOAD AT ANY COMPOSITE JOIST BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME). PT LOADS NEED NOT BE APPLIED TO GIRDERS, COLUMNS, & FOOTINGS.
	133 PSF (SEE NOTES 7 & 8)	• LEVEL 5: (1) 2000 LB PT LOAD AT ANY COMPOSITE JOIST BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME).
	100 PSF STAIR LIVE LOAD	-
	20 PSF ROOF LIVE (SEE NOTES 1, 2, & 4)	-
	20 PSF ROOF LIVE (SEE NOTES 1, 2, & 4)	(1) 2000 LB PT LOAD AT ANY JOIST AND JOIST GIRDER BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME)
	20 PSF ROOF LIVE (SEE NOTES 1, 2, & 4)	(1) 2000 LB PT LOAD AT ANY JOIST AND JOIST GIRDER BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME) AND ADDITIONAL 20 PSF LIVE LOAD SUSPENDED FROM ROOF AT BUILDING CORNERS NOTED

NOTES
1. REFER TO "SPECIAL JOIST LOADING DIAGRAM" ON SHEET S402 FOR ADDITIONAL ROOF BAR JOIST LOADS DUE TO PONDED WATER & MHE POINT LOADS.
2. REFER TO ROOF FRAMING PLANS FOR ADDITIONAL LOADING DUE TO ROOF TOP MECHANICAL EQUIPMENT (RTU's). COORDINATE FINAL RTU SIZE, WEIGHT & LOCATION WITH MEP DWGS.
3. SLAB ON GRADE LOADING REPRESENTS UNIFORM LOAD. POINT LOADS DUE TO RACK POSTS, PLATFORM POSTS, AND FORKTRUCKS SHALL BE REVIEWED ON A CASE BY CASE BASIS.
4. MHE LIVE LOAD AT THE ROOF FRAMING SHALL BE USED IN COMBINATION WITH ROOF LIVE LOAD WITHOUT THE REDUCTION OF EITHER.
5. SEE ROOF FRAMING PLANS FOR ADDITIONAL JOIST GIRDER LOADS.
6. NOT USED.
7. IN ADDITION TO STRENGTH AND DEFLECTION DESIGN FOR THE INDICATED DESIGN LIVE LOAD, COMPOSITE JOISTS AT RSP LEVELS 2-5 SHALL BE SIZED TO LIMIT ROTATION TO 0.80 DEGREES OVER THE FIRST 3 FEET OF THE JOIST'S SPAN, ASSUMING A SIMPLE SPAN, DUE TO ROBOTIC 88 PSF LIVE LOAD + 10 PSF MEP DEAD LOAD (+ 15 PSF MHE LIVE LOAD AT LEVEL 2 ONLY), SEE DETAIL B/S010.
8. IN ADDITION TO STRENGTH AND DEFLECTION DESIGN FOR THE INDICATED DESIGN LIVE LOAD, BEAMS AND GIRDERS ON 11 AND 11.1 LINES (ADJACENT & PARALLEL TO THE EXPANSION JOINT) AT RSP LEVELS 2-5 ARE SIZED TO LIMIT ROTATION OF THE EXPANSION JOINT PLATE TO 1.9 DEGREES ASSUMING DIFFERENTIAL LOADING OF 0 PSF LIVE LOAD + MEP DEAD LOAD + MHE LIVE LOAD ON ONE SIDE OF THE EXPANSION JOINT, 88 PSF & ROBOTIC LIVE LOAD + 5 PSF MEP DEAD LOAD (+ 7.5 PSF MHE LIVE LOAD AT LEVEL 2 ONLY) ON THE OPPOSITE SIDE OF THE EXPANSION JOINT. SEE DETAIL A/S010.
9. REFER TO ARCH & MEP DWGS FOR LOCATION & SIZE OF RAIN LEADERS SUPPORTED BY ROOF STRUCTURE. REFER TO "SPECIAL JOIST LOADING DIAGRAM" ON SHEET S402 FOR LOADING CRITERIA. RAIN LEADER LOADINGS ARE ADDITIVE TO SNOW AND LIVE LOADS.
10. REFER TO "MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN" SHEETS FOR FURTHER DEFERRED PLATFORM DESIGN CRITERIA AND REQUIREMENTS.
11. MHE CATWALKS TO BE SUSPENDED FROM THE COMPOSITE JOISTS AT LEVEL 2. CONTRACTOR AND COMPOSITE JOIST DESIGNER/SUPPLIER SHALL REVIEW FINAL QUANTITIES, MAGNITUDES, AND LOCATIONS OF POINT LOADS FROM SUSPENDED MHE CATWALKS IN COMBINATION WITH ALL OTHER MHE HANGING LOADS SUPPORTED BY FLOOR.



DETAIL A 3/4" = 1'-0" S010



DETAIL B 3/4" = 1'-0" S010

Schaefer Project Number: 24-0265

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

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DATE	PROJECT NO
--	2024-013

SHEET TITLE

LOADING PLANS

SHEET NUMBER

S010

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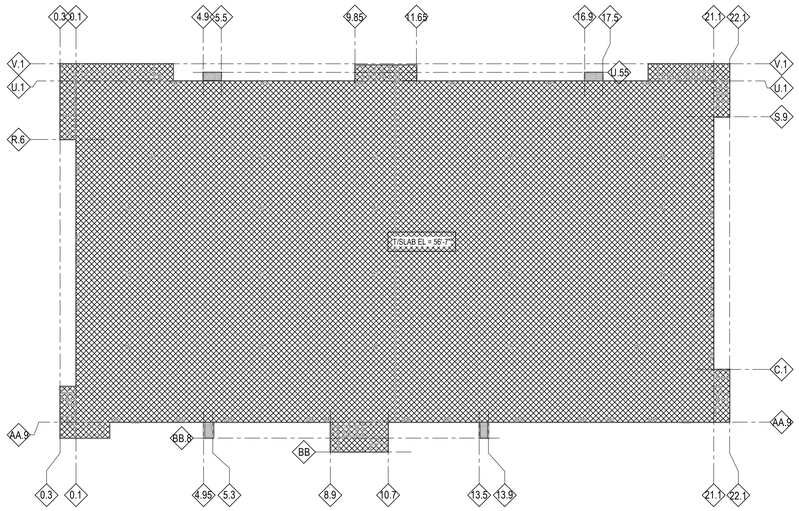
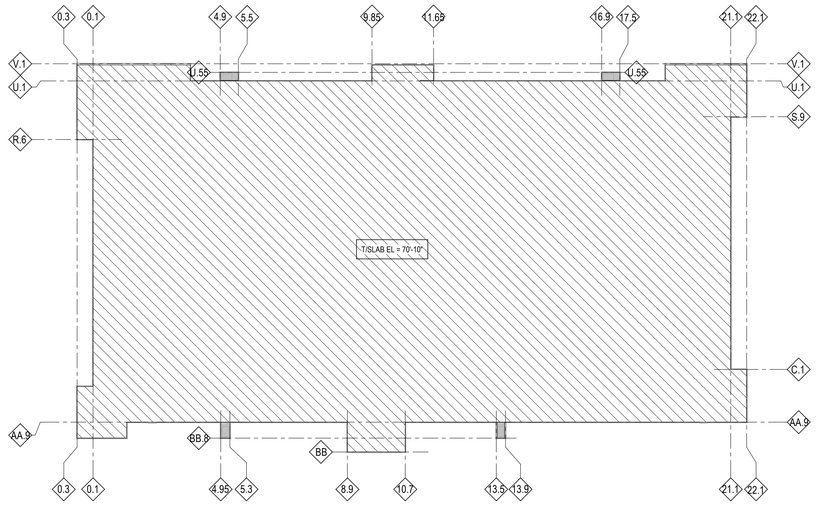
6/7/2024 8:38:38 AM

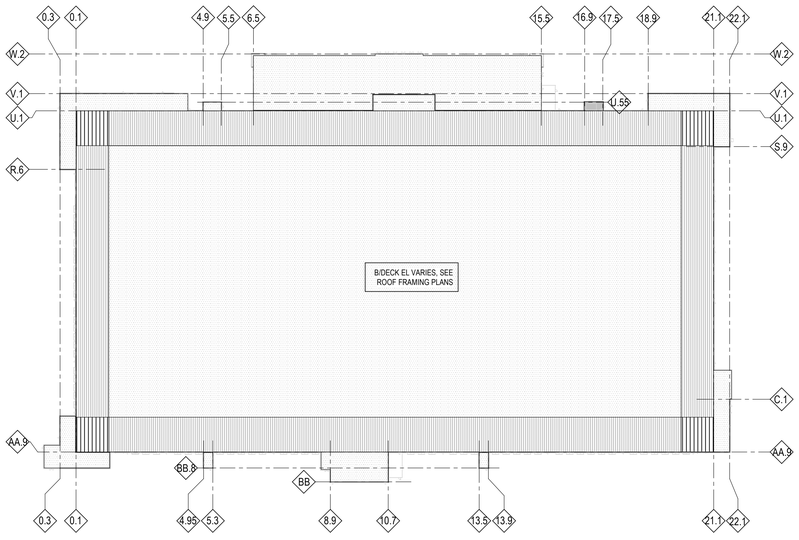
Schaefer Project Number: 24-0265



LEVEL 4 RSP FLOOR LOADING PLAN
1" = 100'-0"



LEVEL 5 RSP FLOOR LOADING PLAN
1" = 100'-0"



ROOF LOADING PLAN
1" = 100'-0"

LIVE LOADING LEGEND

PATTERN	LIVE LOAD	MHE LIVE LOAD
	500 PSF (SEE NOTE 3)	
	100 PSF (SEE NOTE 3)	-
	75 PSF	(1) 10,000 LB PT LOAD APPLIED AT ANY LOCATION ALONG EACH BEAM AND GIRDER SPAN. TWO OR MORE 10,000 LB PT LOADS NEED NOT BE APPLIED SIMULTANEOUSLY FOR ANY MEMBER, INCLUDING BEAMS, GIRDERS AND SUPPORTING COLUMNS.
	125 PSF (SEE NOTE 7 & 8)	• SLAM PLATFORM : (1) 3000 LB PT LOAD APPLIES AT ANY LOCATION ALONG EACH BEAM AND GIRDER SPAN. TWO OR MORE 3000 LB PT LOAD NEED NOT BE APPLIED SIMULTANEOUSLY FOR ANY MEMBER, INCLUDING BEAMS, GIRDERS, AND SUPPORTING COLUMNS. • LEVELS 3-4: (1) 2000 LB PT LOAD AT ANY COMPOSITE JOIST BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME). • LEVEL 2: (1) 5000 LB PT LOAD AT ANY COMPOSITE JOIST BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME). PT LOADS NEED NOT BE APPLIED TO GIRDERS, COLUMNS, & FOOTINGS.
	133 PSF (SEE NOTES 7 & 8)	• LEVEL 5: (1) 2000 LB PT LOAD AT ANY COMPOSITE JOIST BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME).
	100 PSF STAIR LIVE LOAD	-
	20 PSF ROOF LIVE (SEE NOTES 1, 2, & 4)	-
	20 PSF ROOF LIVE (SEE NOTES 1, 2, & 4)	(1) 2000 LB PT LOAD AT ANY JOIST AND JOIST GIRDER BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME)
	20 PSF ROOF LIVE (SEE NOTES 1, 2, & 4)	(1) 2000 LB PT LOAD AT ANY JOIST AND JOIST GIRDER BOTTOM CHORD PANEL POINT (MAX OF (1) MHE PT LOAD APPLIED ALONG THE SPAN @ ANY GIVEN TIME) AND ADDITIONAL 20 PSF LIVE LOAD SUSPENDED FROM ROOF AT BUILDING CORNERS NOTED

NOTES
1. REFER TO "SPECIAL JOIST LOADING DIAGRAM" ON SHEET S402 FOR ADDITIONAL ROOF BAR JOIST LOADS DUE TO PONDED WATER & MHE POINT LOADS.
2. REFER TO ROOF FRAMING PLANS FOR ADDITIONAL LOADING DUE TO ROOF TOP MECHANICAL EQUIPMENT (RTU's). COORDINATE FINAL RTU SIZE, WEIGHT & LOCATION WITH MEP DWGS.
3. SLAB ON GRADE LOADING REPRESENTS UNIFORM LOAD. POINT LOADS DUE TO RACK POSTS, PLATFORM POSTS, AND FORKTRUCKS SHALL BE REVIEWED ON A CASE BY CASE BASIS.
4. MHE LIVE LOAD AT THE ROOF FRAMING SHALL BE USED IN COMBINATION WITH ROOF LIVE LOAD WITHOUT THE REDUCTION OF EITHER.
5. SEE ROOF FRAMING PLANS FOR ADDITIONAL JOIST GIRDER LOADS.
6. NOT USED.
7. IN ADDITION TO STRENGTH AND DEFLECTION DESIGN FOR THE INDICATED DESIGN LIVE LOAD, COMPOSITE JOISTS AT RSP LEVELS 2-5 SHALL BE SIZED TO LIMIT ROTATION TO 0.80 DEGREES OVER THE FIRST 3 FEET OF THE JOIST'S SPAN, ASSUMING A SIMPLE SPAN, DUE TO ROBOTIC 88 PSF LIVE LOAD + 10 PSF MEP DEAD LOAD (+ 15 PSF MHE LIVE LOAD AT LEVEL 2 ONLY). SEE DETAIL B/S010.
8. IN ADDITION TO STRENGTH AND DEFLECTION DESIGN FOR THE INDICATED DESIGN LIVE LOAD, BEAMS AND GIRDERS ON 11 AND 11.1 LINES (ADJACENT & PARALLEL TO THE EXPANSION JOINT) AT RSP LEVELS 2-5 ARE SIZED TO LIMIT ROTATION OF THE EXPANSION JOINT PLATE TO 1.9 DEGREES ASSUMING DIFFERENTIAL LOADING OF 0 PSF LIVE LOAD + MEP DEAD LOAD + MHE LIVE LOAD ON ONE SIDE OF THE EXPANSION JOINT, 88 PSF & ROBOTIC LIVE LOAD + 5 PSF MEP DEAD LOAD (+ 7.5 PSF MHE LIVE LOAD AT LEVEL 2 ONLY) ON THE OPPOSITE SIDE OF THE EXPANSION JOINT. SEE DETAIL A/S010.
9. REFER TO ARCH & MEP DWGS FOR LOCATION & SIZE OF RAIN LEADERS SUPPORTED BY ROOF STRUCTURE. REFER TO "SPECIAL JOIST LOADING DIAGRAM" ON SHEET S402 FOR LOADING CRITERIA. RAIN LEADER LOADINGS ARE ADDITIVE TO SNOW AND LIVE LOADS.
10. REFER TO "MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN" SHEETS FOR FURTHER DEFERRED PLATFORM DESIGN CRITERIA AND REQUIREMENTS.
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DATE	PROJECT NO
--	2024-013

SHEET TITLE

LOADING PLANS

SHEET NUMBER

S011

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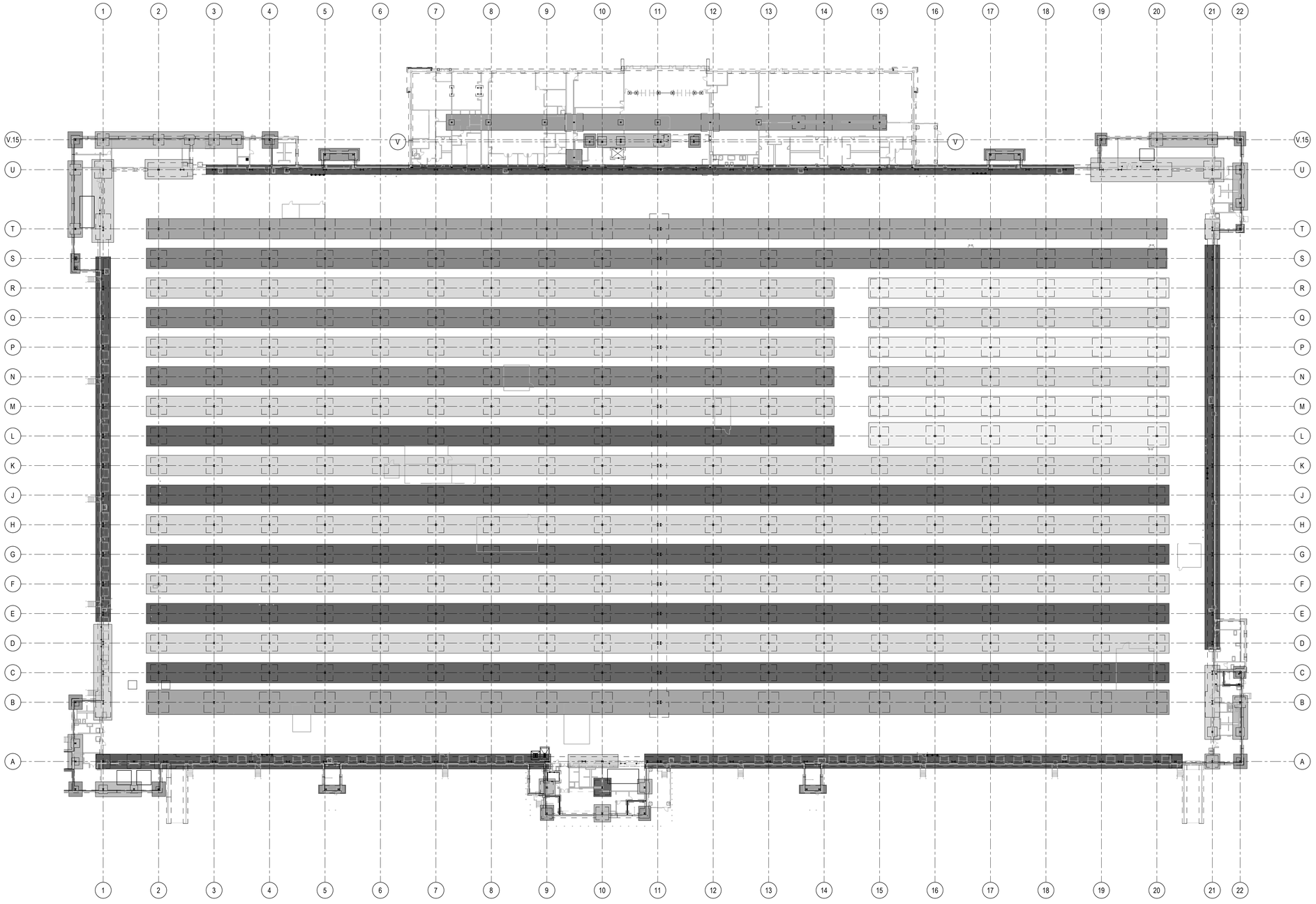
6/7/2024 8:38:58 AM

Schaefer Project Number: 24-0265



FOUNDATION GRAVITY LOADING PLAN

1" = 40'-0"

FOUNDATION LOADING SCHEDULE			
MARK	DL	LL* (REDUCED 20% MAX PER ASCE 7)	
	845 KIPS	950 KIPS	
	525 KIPS	625 KIPS	
	375 KIPS	425 KIPS	+ 8.5 KIPS/FT LINE LOAD FROM TILT-UP WALL PANEL WHERE APPLICABLE
	225 KIPS	250 KIPS	+ 8.5 KIPS/FT LINE LOAD FROM TILT-UP WALL PANEL WHERE APPLICABLE
	75 KIPS	85 KIPS	+ 8.5 KIPS/FT LINE LOAD FROM TILT-UP WALL PANEL WHERE APPLICABLE
	300 KIPS	330 KIPS	+ 8.5 KIPS/FT LINE LOAD FROM TILT-UP WALL PANEL WHERE APPLICABLE
	660 KIPS	770 KIPS	
	750 KIPS	820 KIPS	
	940 KIPS	1050 KIPS	

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SHEET TITLE

FOUNDATION GRAVITY LOADING

SHEET NUMBER

S012

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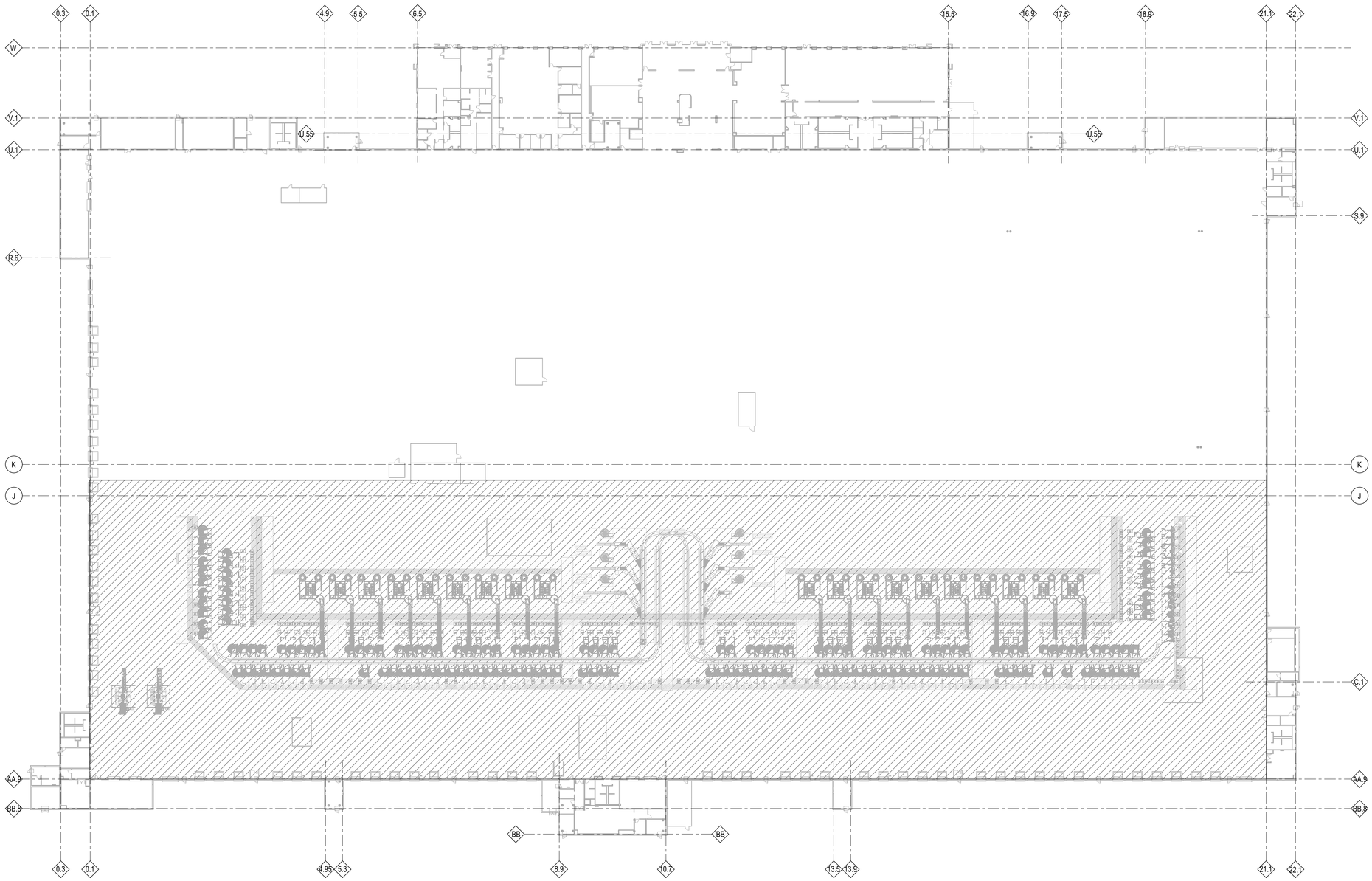
6/7/2024 8:39:05 AM

Schaefer Project Number: 24-0265



ROBOTICS FLOOR PLAN LEGEND	
PATTERN	**NOTES**
▨	FLOOR AREA WITH ROBOTIC TRAFFIC

NOTES:
1. THE EXTENTS OF THE SHADED AREA ON THE SLAB-ON-GROUND SHALL BE COORDINATED WITH THE FINAL APPROVED COMPOSITE.
2. LOCATE THE TERMINATION OF THE SHADED AREA ON THE SLAB-ON-GROUND AT THE NEAREST CONTROL JOINT PLAN NORTH OF THE ROBOTICS AREA, AS SHOWN IN THE FINAL APPROVED COMPOSITE. SEE SHEET S050 FOR CONTROL JOINT SPACING.
3. PER SPECIFICATION 033000 - CAST IN PLACE CONCRETE", NORMAL PORTLAND CEMENT (ASTM C150) IS REQUIRED FOR ALL SHADED AREAS DEPICTED ON PLAN. SEE SPECIFICATION 033000 FOR ADDITIONAL DETAILS.

SLAB-ON-GRADE / LEVEL 1 ROBOTICS RANDOM TRAFFFIC AREA PLAN
1" = 40'-0"

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SHEET TITLE

LEVEL 1 AR ROBOTICS RANDOM TRAFFIC AREA PLAN

SHEET NUMBER

S015

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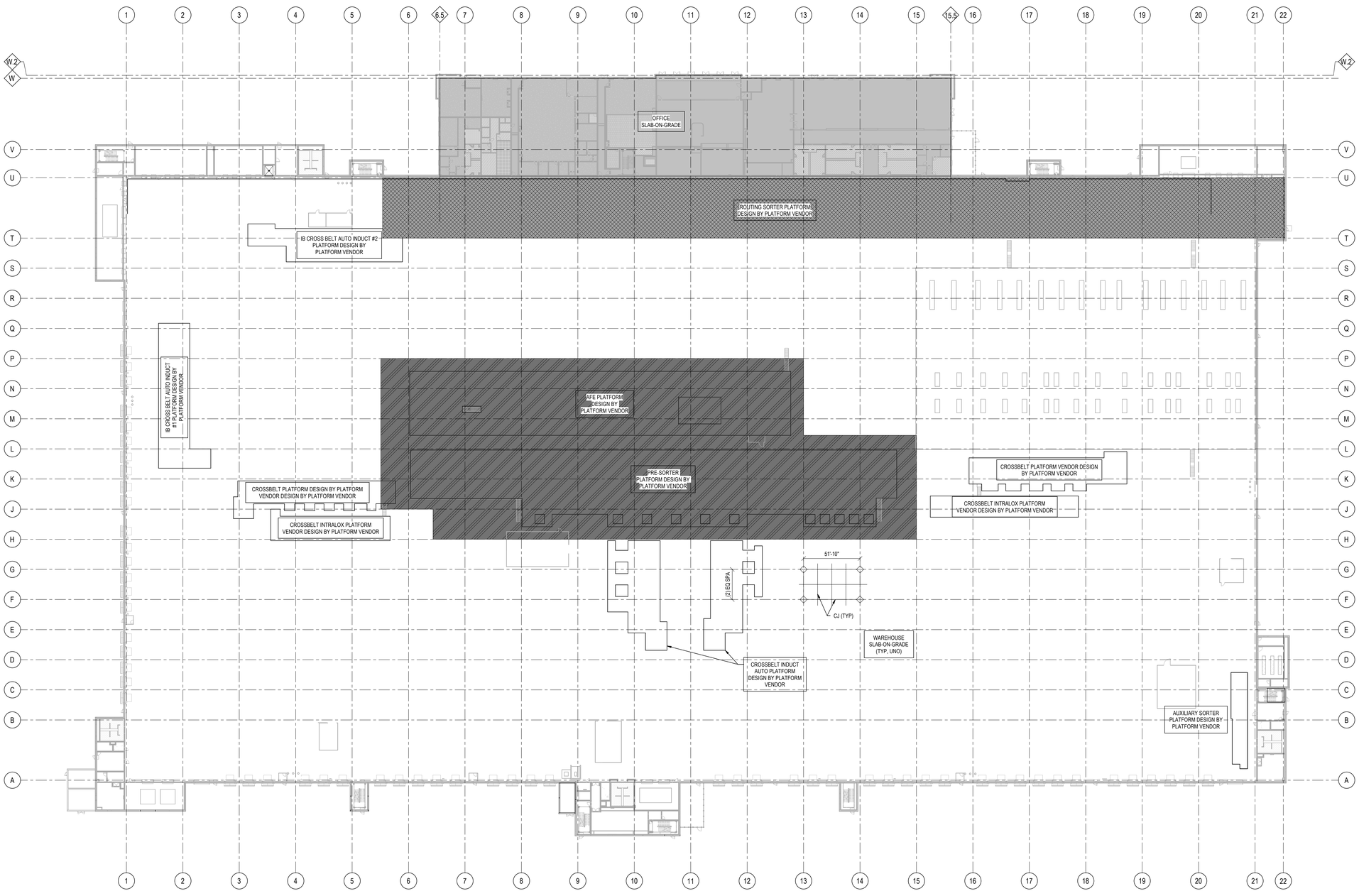
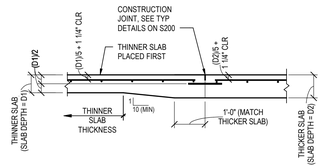
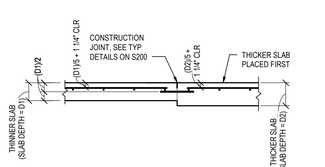
6/7/2024 8:39:22 AM

Schaefer Project Number: 24-0265

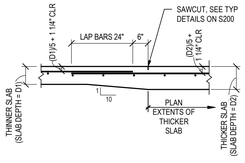




WAREHOUSE SLAB THICKNESS
CHANGE AT CONSTRUCTION JOINT
TYPICAL DETAIL - THINNER SLAB PLACED FIRST
1/2" = 1'-0"



WAREHOUSE SLAB THICKNESS
CHANGE AT CONSTRUCTION JOINT
TYPICAL DETAIL - THICKER SLAB PLACED FIRST
1/2" = 1'-0"



WAREHOUSE SLAB THICKNESS CHANGE AT
CONTRACTION JOINT TYPICAL DETAIL
1/2" = 1'-0"

WAREHOUSE TYPICAL SLAB ON GRADE ALTERNATE:

1. SLAB THICKNESS: 7" UNREINFORCED (TYP). #3 @ 16"oc EA WAY REINFORCING REQUIRED AT PERIMETER BAYS WHERE TFTG ELEVATION = -3'-0" OR LOWER (PERIMETER BAYS = COLUMN LINE 20 TO EAST EXTERIOR WALL, COLUMN LINE 2 TO WEST EXTERIOR WALL, COLUMN LINE B TO SOUTH EXTERIOR WALL, & COLUMN LINE T TO NORTH EXTERIOR WALL). JOINT SPACING: NOT TO EXCEED 15'-0".
   CONTRACTION JOINT AT UNREINFORCED SLAB: PD3 DOWEL PLATE BY PNA, SEE TYPICAL DETAIL ON S200.
   CONSTRUCTION JOINT AT UNREINFORCED SLAB: DIAMOND DOWEL BY PNA, SEE TYPICAL DETAIL ON S200.
   SEE S200 FOR TYPICAL CONTRACTION AND CONSTRUCTION JOINT DETAILS AT REINFORCED SLAB WHERE OCCURS AT PERIMETER BAYS.

OVERALL THICKENED SLAB-ON-GROUND PLAN AT DEFERRED PLATFORMS

1" = 40'-0"

NOTES:

1. REFERENCE PLAN ELEVATION 0'-0" = LEVEL 1 ELEVATION, SEE CIVIL DRAWINGS FOR CORRESPONDING MEAN SEA LEVEL ELEVATION. T/SLAB EL = 0'-0" (TYP UNO).
2. TYPICAL WAREHOUSE SLAB ON GRADE BASE BID TO BE 7" CONCRETE SLAB REINFORCED WITH #3 BARS AT 16" oc EA WAY. SEE TYPICAL WAREHOUSE SLAB ON GRADE ALTERNATE 1 THIS SHEET. SEE PLAN FOR THICKENED SLAB AREAS BELOW DEFERRED PLATFORMS.
3. OFFICE SLAB ON GRADE TO BE 5" CONCRETE SLAB REINFORCED WITH #3 BARS AT 22"oc EA WAY. REFER TO PLAN FOR EXTENTS. MAX CONTRACTION JOINT (CJ) SPACING SHALL BE 12'-6".
4. PLACE ALL SLABS ON 15 MIL (MIN) VAPOR RETARDER OVER 6" COMPACTED GRANULAR BASE. REFER TO GEOTECH REPORT FOR COMPACTION REQUIREMENTS.
5. MAX CONTRACTION JOINT (CJ) SPACING IN WAREHOUSE SHALL BE 15'-0". SEE PLAN FOR TYPICAL CONTRACTION JOINT SPACING IN WAREHOUSE. CONSTRUCTION JOINTS MAY BE LOCATED AT ANY CONTRACTION JOINT LOCATION. SEE S200 FOR TYPICAL CONTRACTION JOINT AND CONSTRUCTION JOINT DETAILS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
7. SEE SHEET S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
8. SLOPE SLAB TO FLOOR DRAINS, COORDINATE WITH ARCH DWGS AND PLUMBING DWGS.
9. IF SLAB CUTTING IS REQUIRED, NO OVER CUTTING IS PERMITTED - DRILLED CORNERS ARE REQUIRED (SEE S203 FOR TYPICAL DRILLED CORNER EXAMPLE DETAILS).
10. SEE S200 SHEETS FOR TYPICAL FOUNDATION AND SLAB DETAILS.

WAREHOUSE SLAB ON GRADE CRITERIA & ASSUMPTIONS:

1. SUBGRADE MODULUS, LONG-TERM LOADS = 110 pci.
2. SUBGRADE MODULUS, SHORT TERM LOADS = 200 pci.
3. CONCRETE MODULUS OF RUPTURE (MOR) = 550 psi MIN (TO BE VERIFIED BY TESTING).
4. WAREHOUSE SLAB ON GROUND HAS BEED DESIGNED TO SUPPORT THE FOLLOWING SERVICE LEVEL (ASD) DEFERRED PLATFORM COLUMN POINT LOADS (APPROXIMATE 12' x 12' COLUMN SPACING):
   A. SORT INDUCT PLATFORM & AUX SORTER PLATFORM:
      P = 15 KIPS MAX & 10" x 10" BASE PLATE.

THICKENED SLAB-ON-GRADE LEGEND (AREAS SUPPORTING DEFERRED PLATFORMS):

- 10" SLAB w/ WWR 16x16 - D14xD14 OR (#3 @ 14"oc EA WAY) (WWR PREFERRED FOR CONSTRUCTABILITY/FOOT SPACE BETWEEN BARS)
- 12" SLAB w/ WWR 16x16 - D16xD16 OR (#4 @ 21"oc EA WAY)

THICKENED SLAB ON GRADE DESIGN CRITERIA & ASSUMPTIONS:

1. SUBGRADE MODULUS, LONG-TERM LOADS = 110 pci.
2. SUBGRADE MODULUS, SHORT-TERM LOADS = 200 pci.
3. CONCRETE MODULUS OF RUPTURE (MOR) = 550 psi MIN (TO BE VERIFIED BY TESTING).
4. THICKENED SLABS ARE DESIGNED FOR THE FOLLOWING SERVICE LEVEL (ASD) DEFERRED PLATFORM COLUMN POINT LOADS (APPROXIMATE 16' x 16' COLUMN SPACING):
   A. ROUTING SORTER PLATFORM: P = 30 KIPS MAX & 15"x15" BASE PLATE
   B. AFE PLATFORM & PRE-SORTER PLATFORM: P = 45 KIPS MAX & 18"x18" BASE PLATE.
5. THICKENED SLAB EXTENTS SHOWN ARE BASED ON POTENTIAL PLATFORM EXPANSION AREAS INDICATED ON ARCH DRAWINGS. THICKENED SLABS SHALL EXTEND AT A MIN TO THE FIRST SLAB JOINT LOCATED AT LEAST 15' BEYOND THE DEFERRED PLATFORM FOOTPRINT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT SLAB ON GRADE PLACEMENT/SEQUENCE PLAN TO THE SEOR FOR REVIEW OF THICKENED SLAB EXTENTS.
6. THICKENED SLABS HAVE BEEN DESIGNED FOR A MIN FACTOR OF SAFETY AGAINST CRACKING OF 1.4.

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PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

SLAB-ON-GROUND PLAN

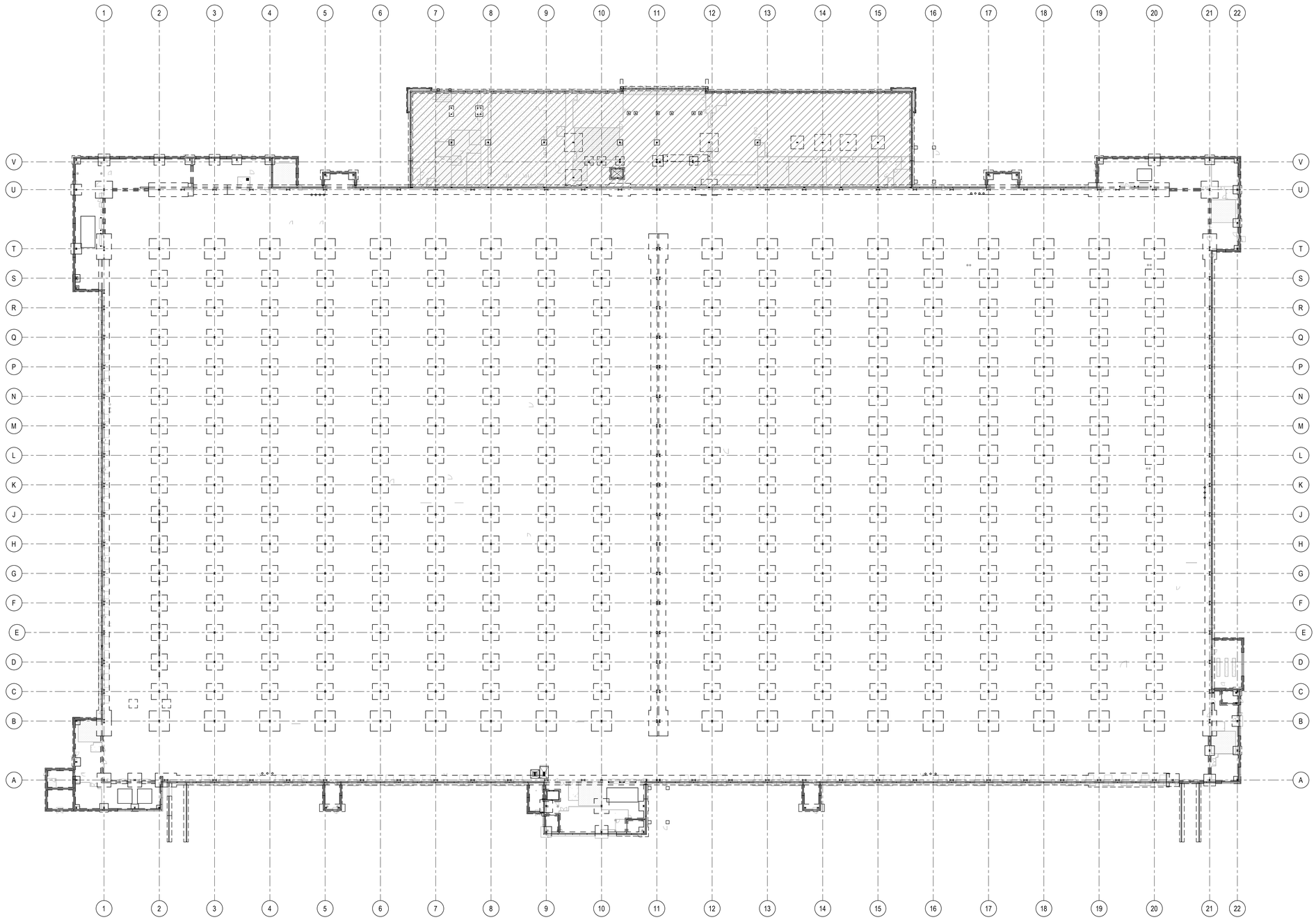
SHEET NUMBER

S050

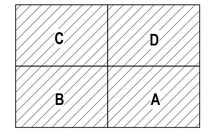
NOT FOR CONSTRUCTION

6/7/2024 8:39:28 AM

Schaefer Project Number: 24-0265



FOUNDATION OVERALL PLAN
1" = 40'-0"



KEY PLAN
NTS

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DATE	PROJECT NO
--	2024-013

SHEET TITLE

FOUNDATION OVERALL PLAN

SHEET NUMBER

S100

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6/7/2024 8:39:37 AM

Schaefer Project Number: 24-0265

FOUNDATION KEYNOTES

K1 VRC PIT OR POD LIFT PIT (HATCHED AREA), SEE TYPICAL SECTION ON S200 AND SEE S180 FOR ENLARGED PARTIAL PLANS. COORDINATE SIZE AND LOCATION w/ ARCH DRAWINGS.

K2 CANOPY FOUNDATIONS DESIGNED BY CANOPY MANUFACTURER. COORDINATE FINAL LOCATION AND SIZE OF CANOPY FOUNDATIONS TO AVOID UNDERMINING BUILDING FOUNDATIONS.

K3 SCRUBBER DUMP TRENCH, SEE TYPICAL DETAILS ON SHEET S200. COORDINATE FINAL LOCATION w/ ARCH DRAWINGS.

K4 FOUNDATION FOR ROBOT PALLETIZER. COORDINATE FINAL LOCATION w/ MHE INTEGRATOR AND TENANT PRIOR TO INSTALLATION. SEE DETAIL ON SHEET S200.

K5 CONTAINMENT BASIN FOR EMERGENCY EYE WASH. SEE ARCH AND PLUMBING DRAWINGS.

K6 8" HIGH x 12" WIDE CURB AT WINDOW OPENING. SEE SECTION 6A/S210. COORDINATE LOCATION AND LENGTH w/ ARCH DRAWINGS.

K7 NOTCH IN CONT FTG AT ELECTRICAL SERVICE CONDUIT, ROOF WATER LEADER, DOWNSPOUT, OR FIRE LINE RISER. SEE TYPICAL DETAIL ON SHEET S200.

K8 DELEGATED STAIR DESIGNER TO PROVIDE LANDING POST LOADS/REACTIONS TO CONTRACTOR AND SEOR FOR REVIEW PRIOR TO SLAB INSTALLATION.

FOUNDATION PARTIAL PLAN A

1" = 20'-0"

NOTES:
1. REFERENCE PLAN ELEVATION 0'-0" = LEVEL 1 ELEVATION. SEE CIVIL DRAWINGS.
2. SEE SHEET S050 FOR SLAB-ON-GROUND PLAN AND NOTES
3. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
4. SEE SHEET S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
5. DIMENSIONS TO WALL FOOTING STEP LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE FOOTING STEPS WITH LOCATIONS INDICATED ON FOUNDATION PLANS, WALL PANEL JOINT LOCATIONS, AND TYPICAL FOOTING STEP DETAIL.
6. SEE S200 SHEETS FOR TYPICAL FOUNDATION AND SLAB DETAILS.
7. SLOPE SLAB TO FLOOR DRAINS, COORDINATE WITH ARCH AND PLUMBING DWGS.
8. COLUMN SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

COLUMN PLAN LEGEND

WXXxXX — HIGH STRENGTH COLUMN 65 KSI
WXXxXX - (ABOVE)
WXXxXX - BPn
WXXxXX - (ABOVE)
H — STANDARD COLUMN

KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

DATE	PROJECT NO
--	2024-013

SHEET TITLE

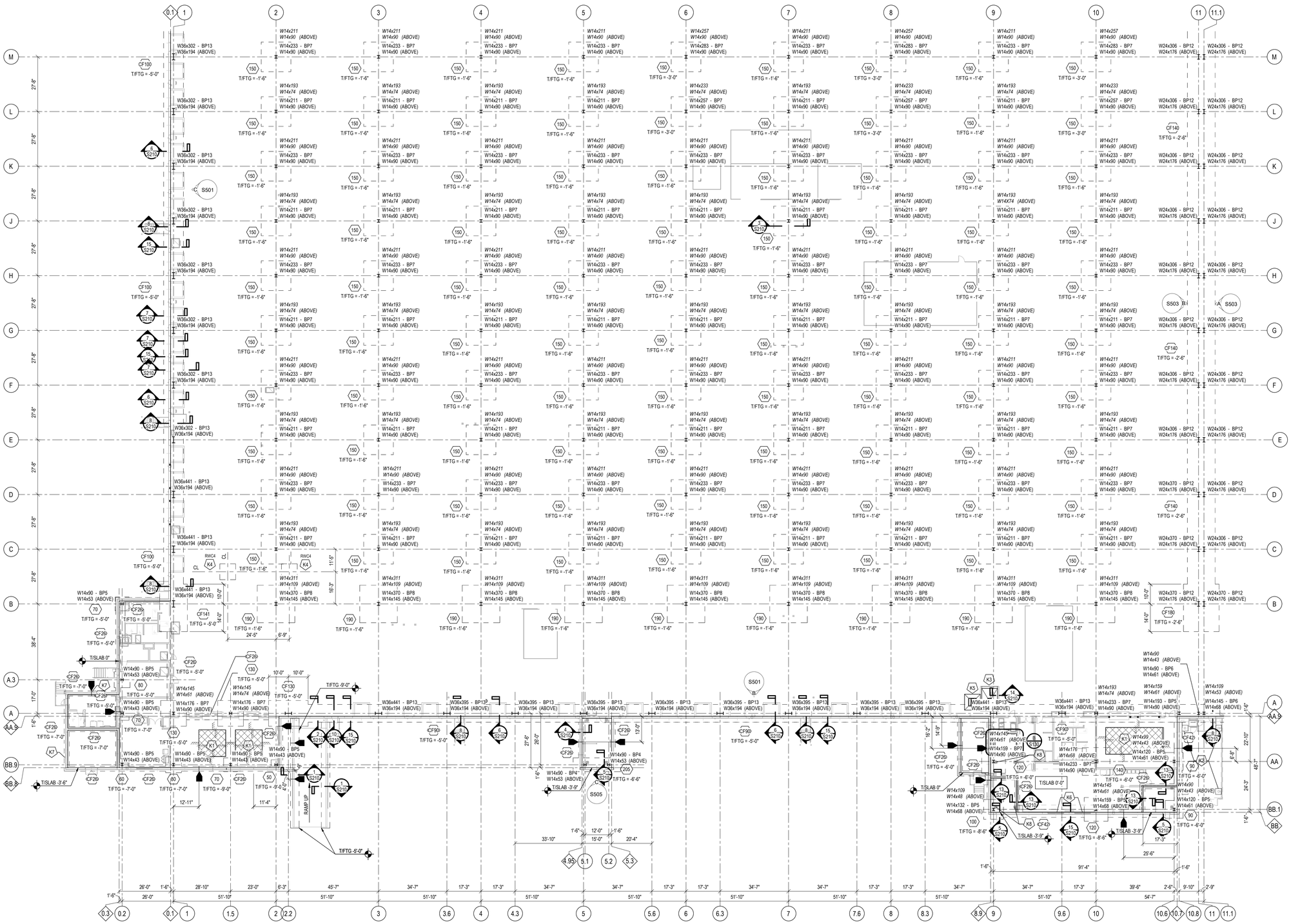
FOUNDATION PARTIAL PLAN A

SHEET NUMBER

S100A

NOT FOR CONSTRUCTION

6/7/2024 8:39:45 AM



FOUNDATION KEYNOTES

K1 VRC PIT OR POD LIFT PIT (HATCHED AREA), SEE TYPICAL SECTION ON S200 AND SEE S180 FOR ENLARGED PARTIAL PLANS. COORDINATE SIZE AND LOCATION w/ ARCH DRAWINGS.

K2 CANOPY FOUNDATIONS DESIGNED BY CANOPY MANUFACTURER. COORDINATE FINAL LOCATION AND SIZE OF CANOPY FOUNDATIONS TO AVOID UNDERMINING BUILDING FOUNDATIONS.

K3 SCRUBBER DUMP TRENCH, SEE TYPICAL DETAILS ON SHEET S200. COORDINATE FINAL LOCATION w/ ARCH DRAWINGS.

K4 FOUNDATION FOR ROBOT PALLETIZER. COORDINATE FINAL LOCATION w/ MHE INTEGRATOR AND TENANT PRIOR TO INSTALLATION. SEE DETAIL ON SHEET S200.

K5 CONTAINMENT BASIN FOR EMERGENCY EYE WASH. SEE ARCH AND PLUMBING DRAWINGS.

K6 8" HIGH x 12" WIDE CURB AT WINDOW OPENING. SEE SECTION 6A/S210. COORDINATE LOCATION AND LENGTH w/ ARCH DRAWINGS.

K7 NOTCH IN CONT FTG AT ELECTRICAL SERVICE CONDUIT, ROOF WATER LEADER, DOWNSPOUT, OR FIRE LINE RISER. SEE TYPICAL DETAIL ON SHEET S200.

K8 DELEGATED STAIR DESIGNER TO PROVIDE LANDING POST LOADS/REACTIONS TO CONTRACTOR AND SEOR FOR REVIEW PRIOR TO SLAB INSTALLATION.

Schaefer Project Number: 24-0265

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PRINT RECORD

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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

DATE	PROJECT NO
--	2024-013

SHEET TITLE

FOUNDATION PARTIAL PLAN B

KEY PLAN
NTS

C D
B A

SHEET NUMBER

S100B

NOT FOR CONSTRUCTION

6/7/2024 8:39:54 AM

Schaefer Project Number: 24-0265

FOUNDATION KEYNOTES

K1 VRC PIT OR POD LIFT PIT (HATCHED AREA). SEE TYPICAL SECTION ON S200 AND SEE S180 FOR ENLARGED PARTIAL PLANS. COORDINATE SIZE AND LOCATION w/ ARCH DRAWINGS.

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K3 SCRUBBER DUMP TRENCH. SEE TYPICAL DETAILS ON SHEET S200. COORDINATE FINAL LOCATION w/ ARCH DRAWINGS.

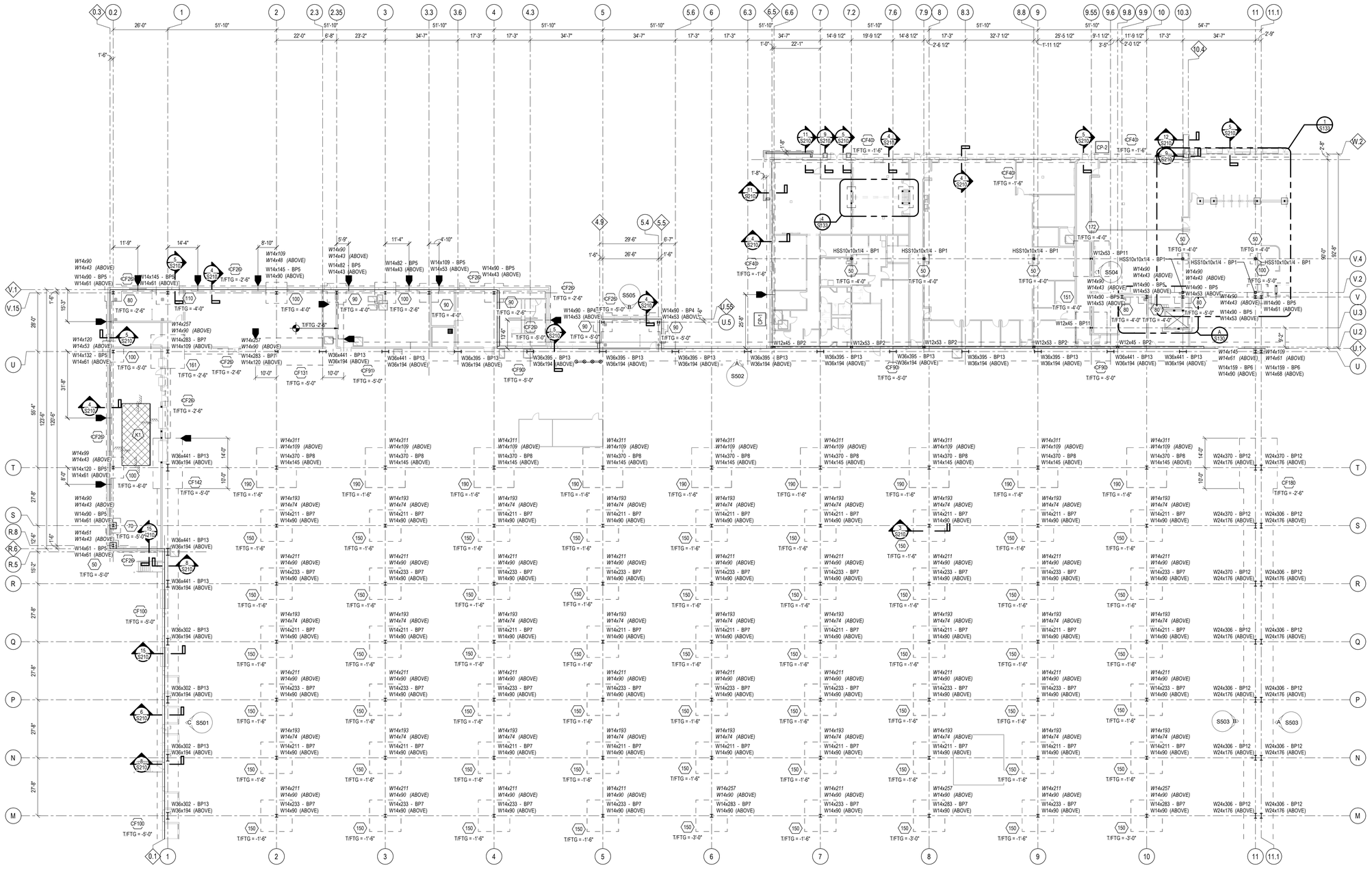
K4 FOUNDATION FOR ROBOT PALLETIZER. COORDINATE FINAL LOCATION w/ MHE INTEGRATOR AND TENANT PRIOR TO INSTALLATION. SEE DETAIL ON SHEET S200.

K5 CONTAINMENT BASIN FOR EMERGENCY EYE WASH. SEE ARCH AND PLUMBING DRAWINGS.

K6 8" HIGH x 12" WIDE CURB AT WINDOW OPENING. SEE SECTION 6A/S210. COORDINATE LOCATION AND LENGTH w/ ARCH DRAWINGS.

K7 NOTCH IN CONT FTG AT ELECTRICAL SERVICE CONDUIT, ROOF WATER LEADER, DOWNSPOUT, OR FIRE LINE RISER. SEE TYPICAL DETAIL ON SHEET S200.

K8 DELEGATED STAIR DESIGNER TO PROVIDE LANDING POST LOADS/REACTIONS TO CONTRACTOR AND SEOR FOR REVIEW PRIOR TO SLAB INSTALLATION.

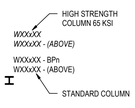


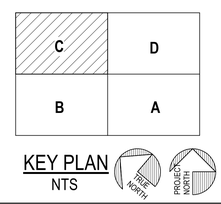
FOUNDATION PARTIAL PLAN C

1" = 20'-0"

NOTES:
1. REFERENCE PLAN ELEVATION 0'-0" = LEVEL 1 ELEVATION, SEE CIVIL DRAWINGS.
2. SEE SHEET S050 FOR SLAB-ON-GROUND PLAN AND NOTES.
3. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
4. SEE SHEET S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
5. DIMENSIONS TO WALL FOOTING STEP LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE FOOTING STEPS WITH LOCATIONS INDICATED ON FOUNDATION PLANS, WALL PANEL JOINT LOCATIONS, AND TYPICAL FOOTING STEP DETAIL.
6. SEE S200 SHEETS FOR TYPICAL FOUNDATION AND SLAB DETAILS.
7. SLOPE SLAB TO FLOOR DRAINS, COORDINATE WITH ARCH AND PLUMBING DWGS.
8. COLUMN SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

COLUMN PLAN LEGEND





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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

FOUNDATION PARTIAL PLAN C

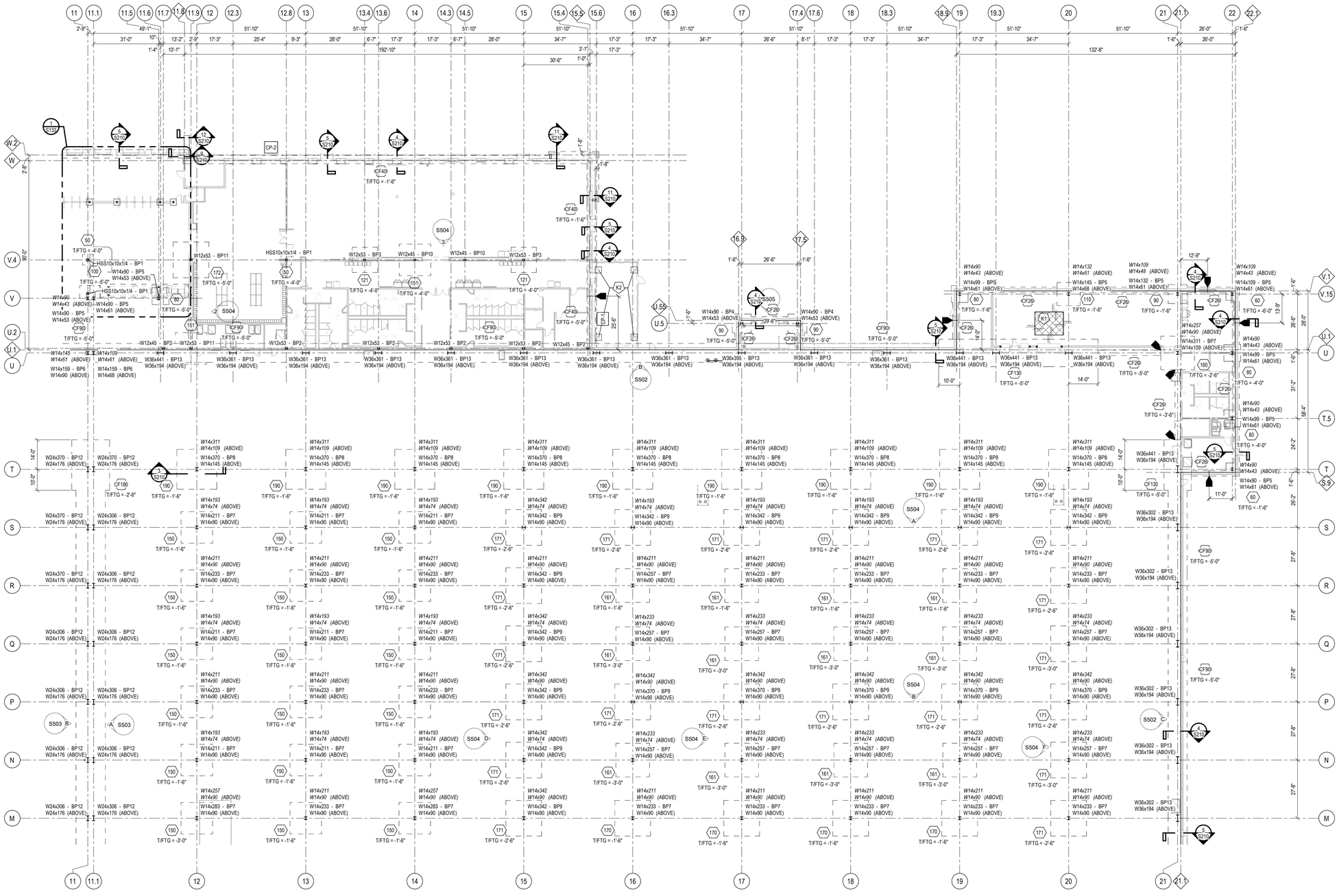
SHEET NUMBER

S100C

NOT FOR CONSTRUCTION

6/7/2024 8:40:04 AM

Schaefer Project Number: 24-0265



FOUNDATION KEYNOTES

K1 VRC PIT OR POD LIFT PIT (HATCHED AREA). SEE TYPICAL SECTION ON S200 AND SEE S180 FOR ENLARGED PARTIAL PLANS. COORDINATE SIZE AND LOCATION w/ ARCH DRAWINGS.

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K3 SCRUBBER DUMP TRENCH. SEE TYPICAL DETAILS ON SHEET S200. COORDINATE FINAL LOCATION w/ ARCH DRAWINGS.

K4 FOUNDATION FOR ROBOT PALLETIZER. COORDINATE FINAL LOCATION w/ MHE INTEGRATOR AND TENANT PRIOR TO INSTALLATION. SEE DETAIL ON SHEET S200.

K5 CONTAINMENT BASIN FOR EMERGENCY EYE WASH. SEE ARCH AND PLUMBING DRAWINGS.

K6 8" HIGH x 12" WIDE CURB AT WINDOW OPENING. SEE SECTION 6/A9210. COORDINATE LOCATION AND LENGTH w/ ARCH DRAWINGS.

K7 NOTCH IN CONT FTG AT ELECTRICAL SERVICE CONDUIT, ROOF WATER LEADER, DOWNSPOUT, OR FIRE LINE RISER. SEE TYPICAL DETAIL ON SHEET S200.

K8 DELEGATED STAIR DESIGNER TO PROVIDE LANDING POST LOADS/REACTIONS TO CONTRACTOR AND SEOR FOR REVIEW PRIOR TO SLAB INSTALLATION.

FOUNDATION PARTIAL PLAN D

1" = 20'-0"

NOTES:
1. REFERENCE PLAN ELEVATION 0'-0" = LEVEL 1 ELEVATION, SEE CIVIL DRAWINGS.
2. SEE SHEET S050 FOR SLAB-ON-GROUND PLAN AND NOTES
3. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
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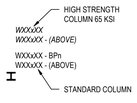
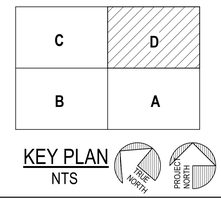
COLUMN PLAN LEGEND





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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

FOUNDATION PARTIAL PLAN D

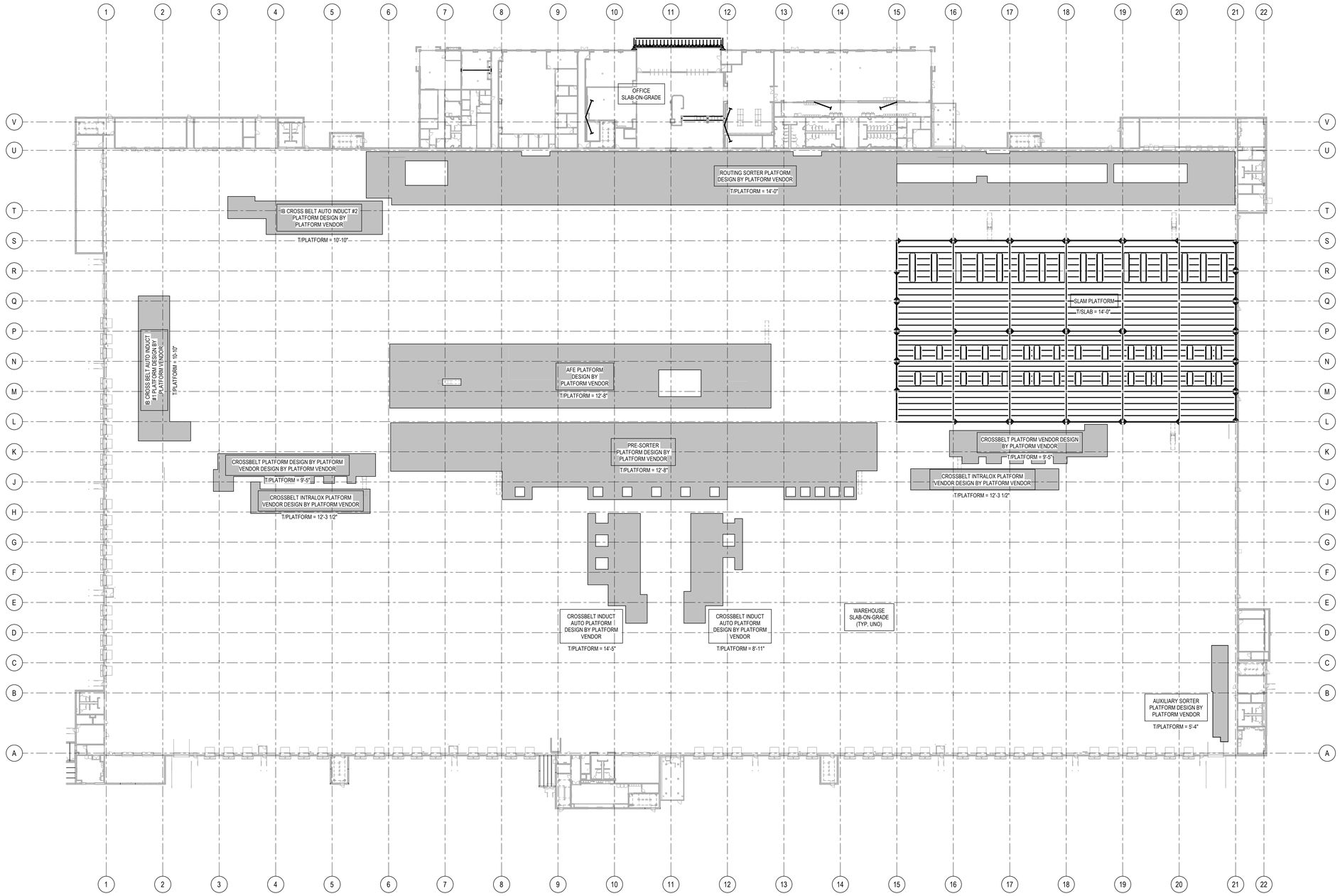
SHEET NUMBER

S100D

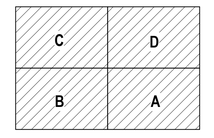
NOT FOR CONSTRUCTION

6/7/2024 8:40:13 AM

Schaefer Project Number: 24-0265



MEZZANINE & PLATFORM LEVEL OVERALL FRAMING PLAN
1" = 40'-0"



KEY PLAN
NTS

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

MEZZANINE & PLATFORM LEVEL OVERALL FRAMING PLAN

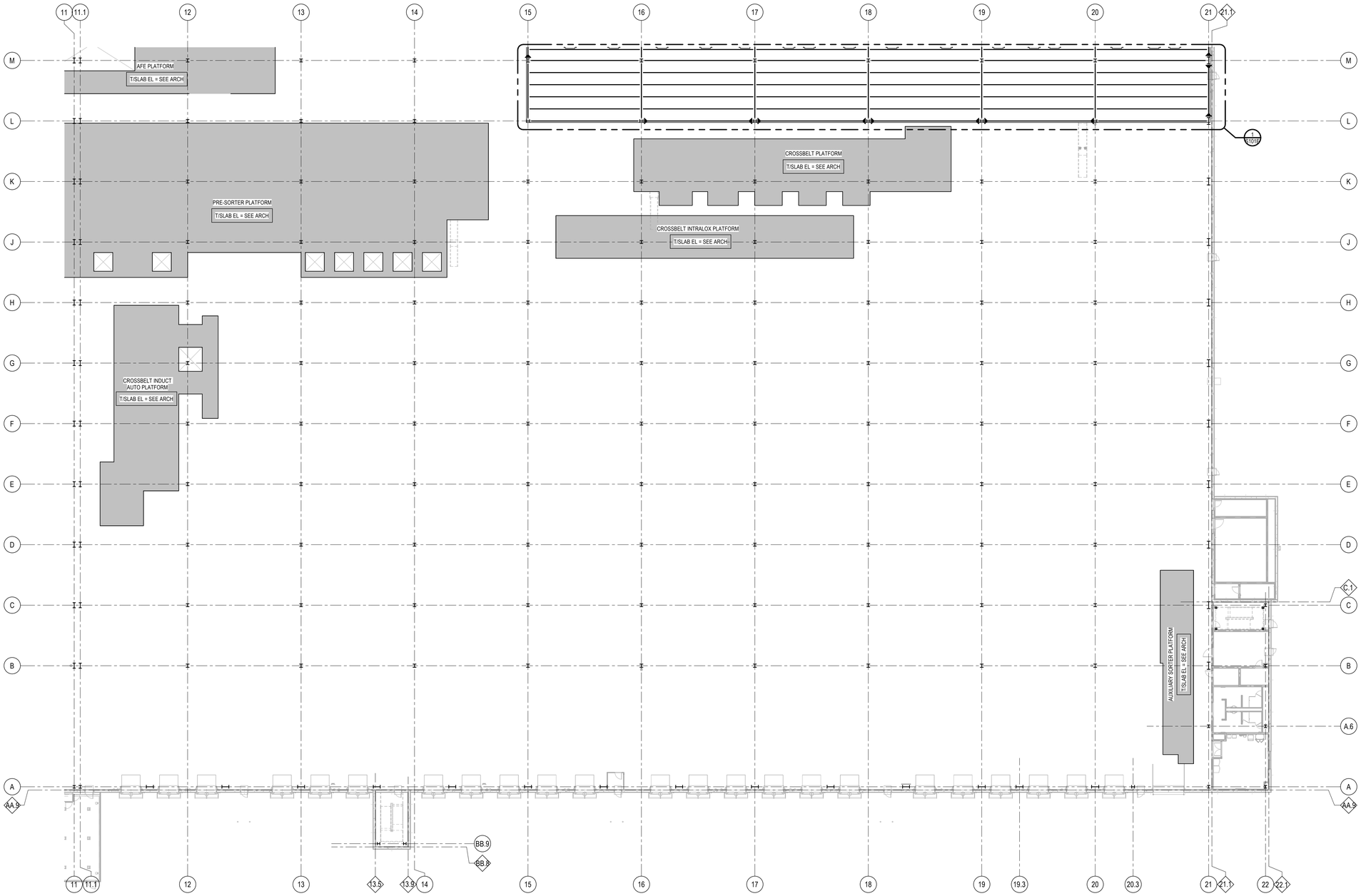
SHEET NUMBER

S101

NOT FOR CONSTRUCTION

6/7/2024 8:40:24 AM

Schaefer Project Number: 24-0265



MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN A

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

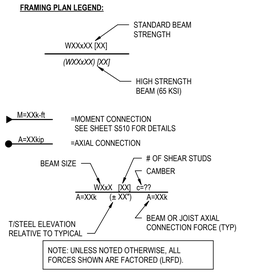
ROUTING SORTER, AFE & PRE-SORTER PLATFROM STRUCTURAL DESIGN REQUIREMENTS:

1. PLATFORMS ARE INCLUDED IN THE GENERAL CONTRACTOR'S SCOPE AND SHALL BE A DEFERRED DESIGN SUBMITTAL.
2. PLATFORM CONSTRUCTION:
    A. COLD FORMED STEEL &/OR STRUCTURAL STEEL FRAMING MEMBERS
    B. RESIN DECK OVER METAL DECK
    C. STRUCTURAL STEEL COLUMNS BEARING ON SLAB ON GROUND
    D. COORDINATE PLATFORM COLUMN LOCATIONS w/ TENANT AND MHE INTEGRATOR. PLATFORM COLUMN GRID SPACING SHALL BE PROVIDED SUCH THAT MAX ALLOWABLE COLUMN REACTIONS INDICATED ON SHEET S050 BELOW ARE NOT EXCEEDED.
    E. SEE ARCHITECTURAL DRAWINGS FOR ALLOWABLE CLEAR HEIGHT TO UNDERSIDE OF STRUCTURE.
3. SEE S010 FOR DESIGN LIVE LOAD. LIVE LOAD DEFLECTION SHALL NOT EXCEED L/360.
4. LATERAL BRACING SHALL CONSIST OF MOMENT FRAMES OR KNEE BRACES (KNEE BRACES SHALL NOT EXTEND BELOW THE ALLOWABLE CLEAR HEIGHT TO STRUCTURE).
6. PLATFORM STRUCTURES SHALL BE STRUCTURALLY INDEPENDENT FROM MAIN BUILDING STRUCTURE. PROVIDE GRAVITY AND LATERAL ISOLATION FROM MAIN BUILDING COLUMNS.
7. DEFERRED DESIGN SUBMITTAL SHALL INCLUDE SHOP DRAWINGS SHOWING PLANS, SECTIONS, ELEVATIONS, LAYOUTS, PROFILES, AND ACCESSORIES AND FINISHES.
8. DEFERRED DESIGN SUBMITTAL SHALL INCLUDE STRUCTURAL CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. STRUCTURAL CALCULATIONS SHALL INCLUDE A DESCRIPTION OF DESIGN CRITERIA, ENGINEERING ANALYSIS DEPICTING STRESS AND DEFLECTION REQUIREMENTS FOR EACH MEMBER, AND SELECTION OF FRAMING MEMBERS AND CONNECTION REQUIREMENTS.
9. PLATFORM COLUMNS AND THEIR BASE PLATES / ANCHOR BOLTS SHALL BE LOCATED TO AVOID SLAB-ON-GROUND JOINTS.

MEZZANINE / PLATFORM FRAMING KEYNOTES

K12 CL LOCATION OF ROBIN ARM PEDESTAL ANCHORS PARALLEL TO SLAB EDGE. SEE SECTION 1/S322 FOR PEDESTAL ANCHOR CAGE IN BOTH DIRECTIONS AND VERIFY ALL ANCHOR LOCATIONS WITH TENANT PRIOR TO DRILLING THROUGH SLAB

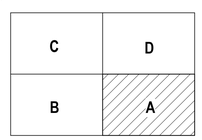
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN A

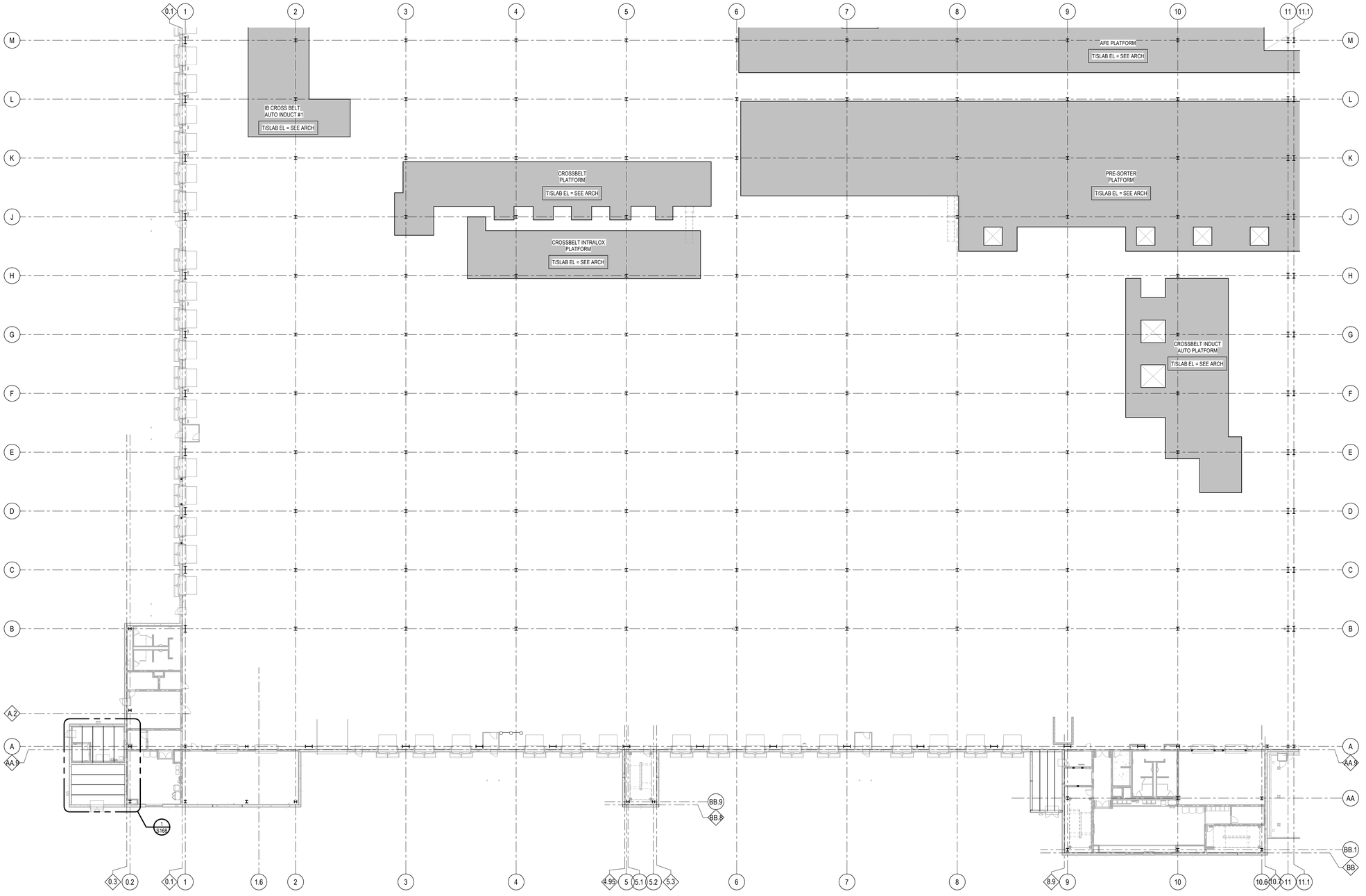
SHEET NUMBER

S101A

NOT FOR CONSTRUCTION

6/7/2024 8:40:28 AM

Schaefer Project Number: 24-0265



MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN B

1" = 20'-0"

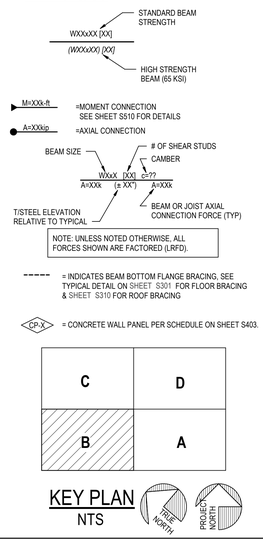
FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTILIZING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

ROUTING SORTER, AFE & PRE-SORTER PLATFROM STRUCTURAL DESIGN REQUIREMENTS:

1. PLATFORMS ARE INCLUDED IN THE GENERAL CONTRACTOR'S SCOPE AND SHALL BE A DEFERRED DESIGN SUBMITTAL.
2. PLATFORM CONSTRUCTION:
    A. COLD FORMED STEEL &/OR STRUCTURAL STEEL FRAMING MEMBERS
    B. RESIN DECK OVER METAL DECK
    C. STRUCTURAL STEEL COLUMNS BEARING ON SLAB ON GROUND
    D. COORDINATE PLATFORM COLUMN LOCATIONS w/ TENANT AND MHE INTEGRATOR. PLATFORM COLUMN GRID SPACING SHALL BE PROVIDED SUCH THAT MAX ALLOWABLE COLUMN REACTIONS INDICATED ON SHEET S050 BELOW ARE NOT EXCEEDED.
    E. SEE ARCHITECTURAL DRAWINGS FOR ALLOWABLE CLEAR HEIGHT TO UNDERSIDE OF STRUCTURE.
3. SEE S010 FOR DESIGN LIVE LOAD. LIVE LOAD DEFLECTION SHALL NOT EXCEED L/360.
4. LATERAL BRACING SHALL CONSIST OF MOMENT FRAMES OR KNEE BRACES (KNEE BRACES SHALL NOT EXTEND BELOW THE ALLOWABLE CLEAR HEIGHT TO STRUCTURE).
6. PLATFORM STRUCTURES SHALL BE STRUCTURALLY INDEPENDENT FROM MAIN BUILDING STRUCTURE. PROVIDE GRAVITY AND LATERAL ISOLATION FROM MAIN BUILDING COLUMNS.
7. DEFERRED DESIGN SUBMITTAL SHALL INCLUDE SHOP DRAWINGS SHOWING PLANS, SECTIONS, ELEVATIONS, LAYOUTS, PROFILES, AND ACCESSORIES AND FINISHES.
8. DEFERRED DESIGN SUBMITTAL SHALL INCLUDE STRUCTURAL CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. STRUCTURAL CALCULATIONS SHALL INCLUDE A DESCRIPTION OF DESIGN CRITERIA, ENGINEERING ANALYSIS DEPICTING STRESS AND DEFLECTION REQUIREMENTS FOR EACH MEMBER, AND SELECTION OF FRAMING MEMBERS AND CONNECTION REQUIREMENTS.
9. PLATFORM COLUMNS AND THEIR BASE PLATES / ANCHOR BOLTS SHALL BE LOCATED TO AVOID SLAB-ON-GROUND JOINTS.

FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.

KEY PLAN
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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN B

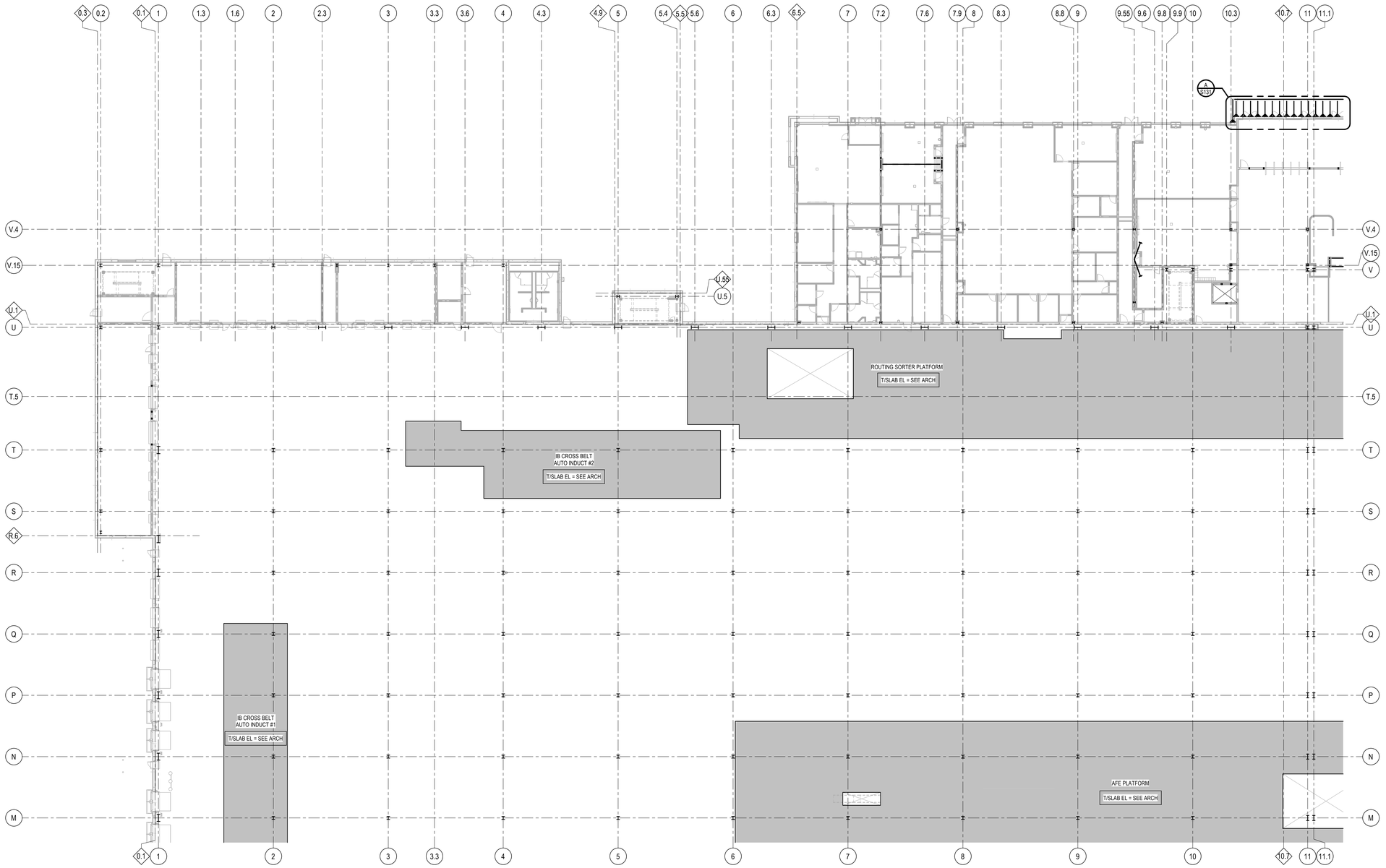
SHEET NUMBER

S101B

NOT FOR CONSTRUCTION

6/7/2024 8:40:32 AM

Schaefer Project Number: 24-0265



MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN C

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
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13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S106E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

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    C. STRUCTURAL STEEL COLUMNS BEARING ON SLAB ON GROUND
    D. COORDINATE PLATFORM COLUMN LOCATIONS w/ TENANT AND MHE INTEGRATOR. PLATFORM COLUMN GRID SPACING SHALL BE PROVIDED SUCH THAT MAX ALLOWABLE COLUMN REACTIONS INDICATED ON SHEET S050 BELOW ARE NOT EXCEEDED.
    E. SEE ARCHITECTURAL DRAWINGS FOR ALLOWABLE CLEAR HEIGHT TO UNDERSIDE OF STRUCTURE.
3. SEE S010 FOR DESIGN LIVE LOAD. LIVE LOAD DEFLECTION SHALL NOT EXCEED L/360.
4. LATERAL BRACING SHALL CONSIST OF MOMENT FRAMES OR KNEE BRACES (KNEE BRACES SHALL NOT EXTEND BELOW THE ALLOWABLE CLEAR HEIGHT TO STRUCTURE).
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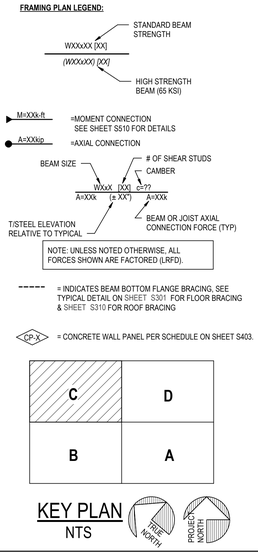
9. PLATFORM COLUMNS AND THEIR BASE PLATES / ANCHOR BOLTS SHALL BE LOCATED TO AVOID SLAB-ON-GROUND JOINTS.

FRAMING PLAN LEGEND:



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN C

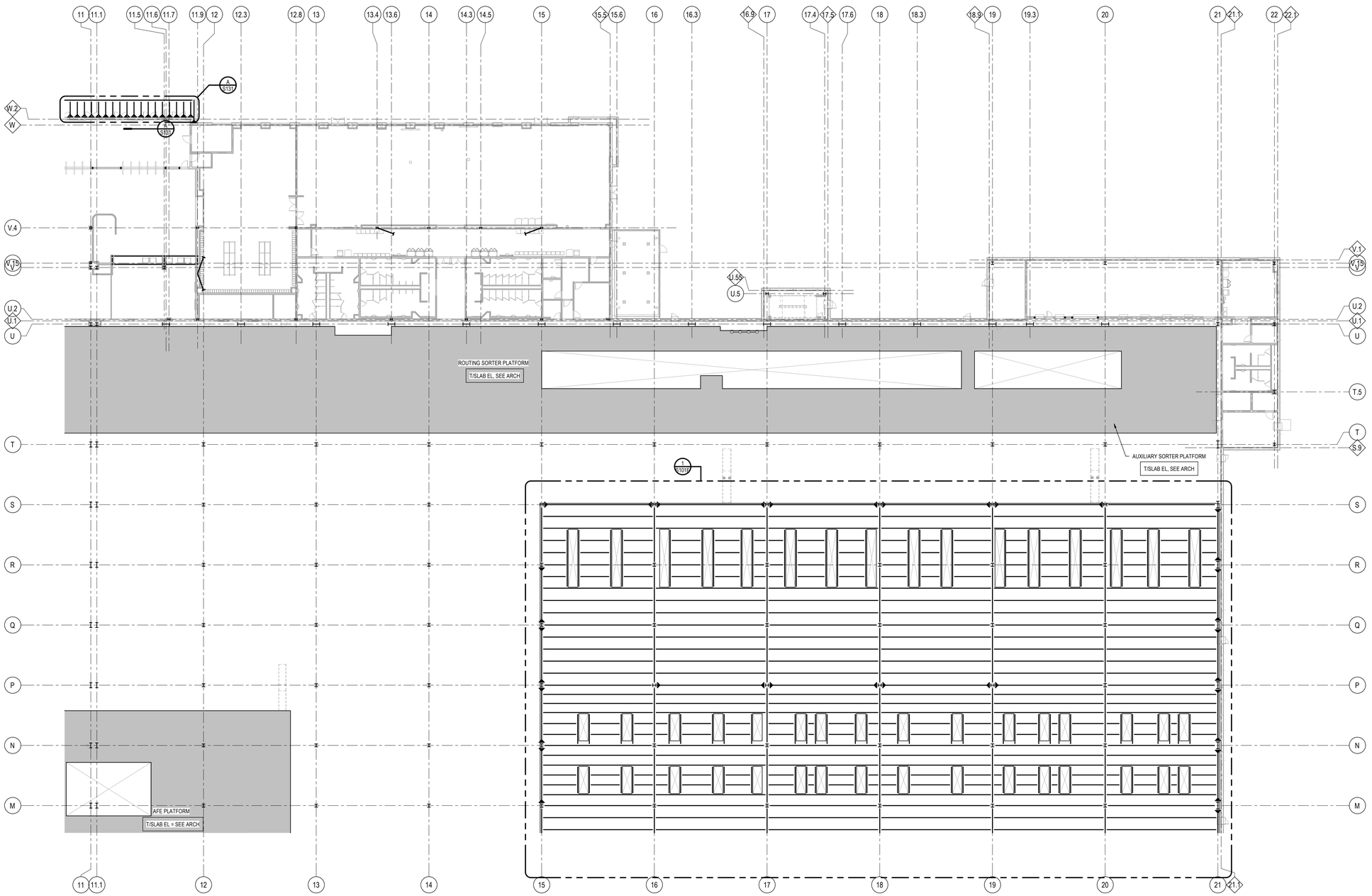
SHEET NUMBER

S101C

NOT FOR CONSTRUCTION

6/7/2024 8:40:38 AM

Schaefer Project Number: 24-0265



MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN D

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE, STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
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14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
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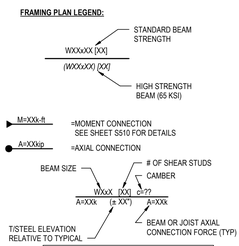
9. PLATFORM COLUMNS AND THEIR BASE PLATES / ANCHOR BOLTS SHALL BE LOCATED TO AVOID SLAB-ON-GROUND JOINTS.

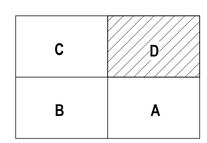
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

TRUE NORTH

PROJECT NORTH

6/7/2024 8:40:44 AM

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

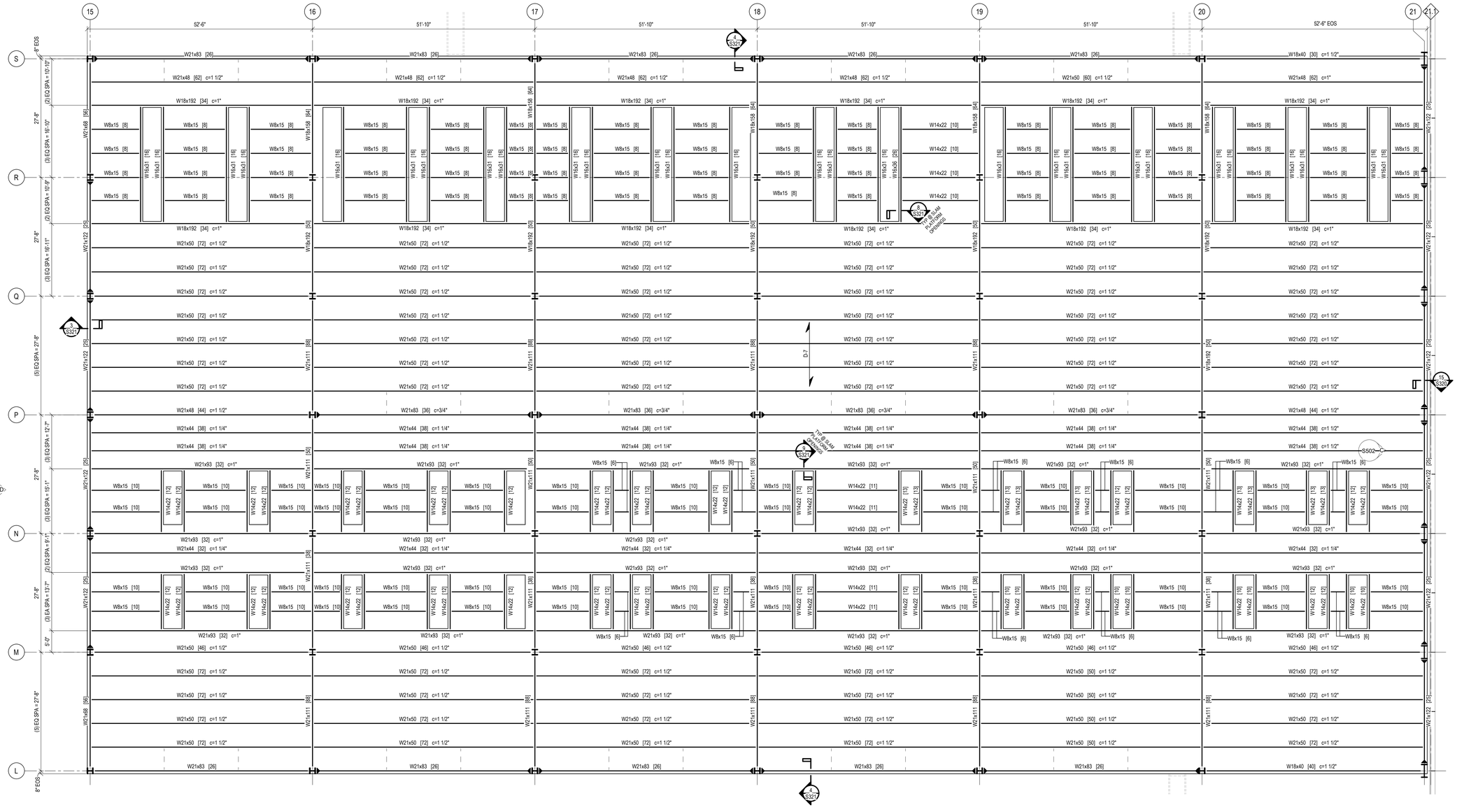
MEZZANINE & PLATFORM LEVEL PARTIAL FRAMING PLAN D

SHEET NUMBER

S101D

NOT FOR CONSTRUCTION

Schaefer Project Number: 24-0265



FRAMING PLAN LEGEND:

WXXxXX [XX] / (WXXxXX) [XX]
- STANDARD BEAM STRENGTH
- HIGH STRENGTH BEAM (65 KSI)

M=XXk-ft =MOMENT CONNECTION SEE SHEET S510 FOR DETAILS

A=XXkip =AXIAL CONNECTION

BEAM SIZE — WXxX [XX] c=?? — # OF SHEAR STUDS, CAMBER

A=XXk (± XX") A=XXk

T/STEEL ELEVATION RELATIVE TO TYPICAL

BEAM OR JOIST AXIAL CONNECTION FORCE (TYP)

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ENLARGED SLAM PLATFORM OPENINGS PLAN

1" = 10'-0"

1 / S101E

PLAN NOTES:
1. REFER TO SHEET S101A - S101B FOR FLOOR FRAMING PLAN NOTES.
2. T/SLAB EL = 14'-0"

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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED MEZZANINE PLANS

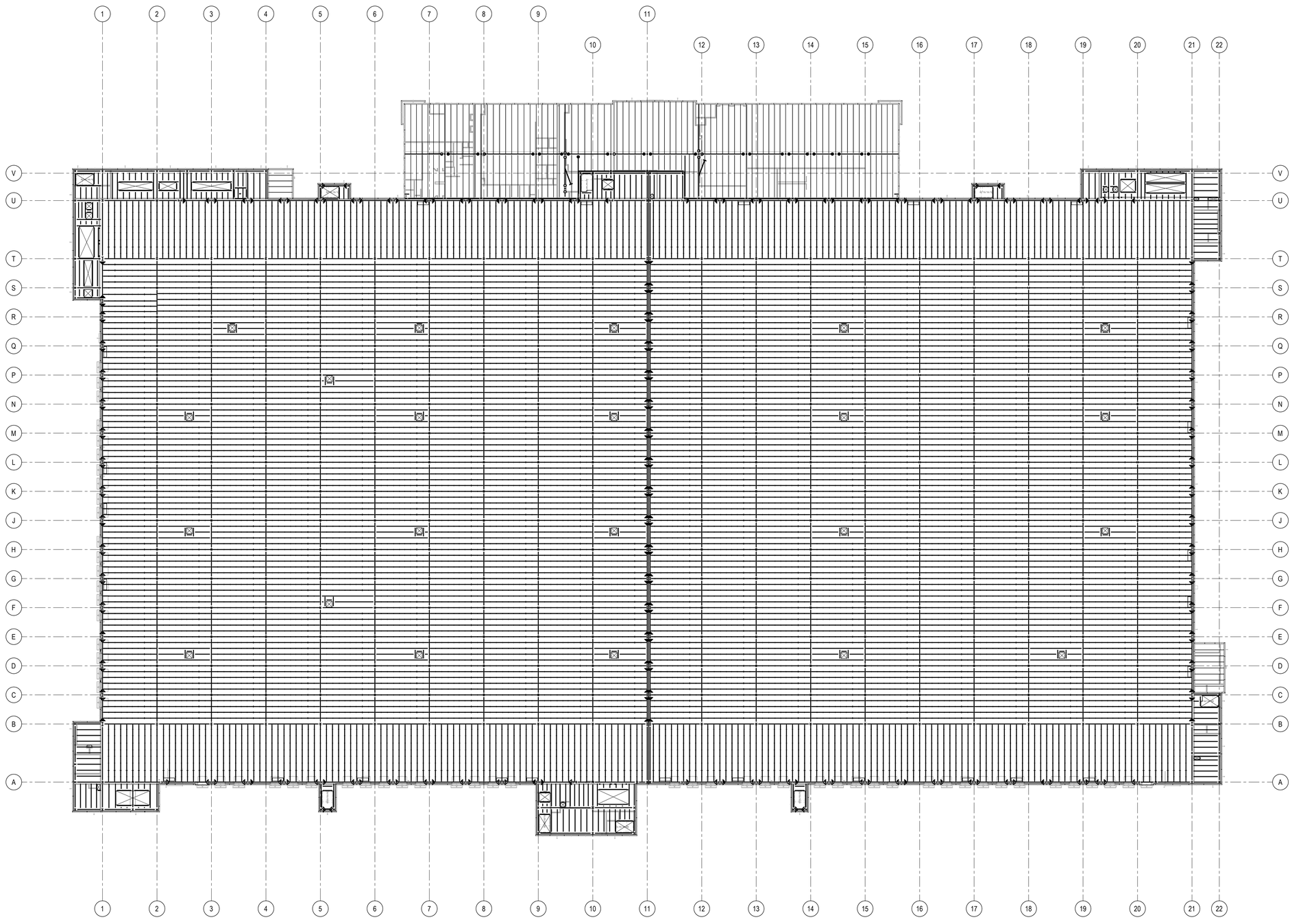
SHEET NUMBER

S101E

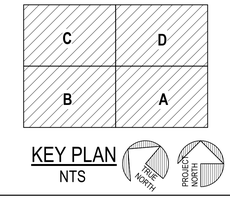
NOT FOR CONSTRUCTION

6/7/2024 8:40:50 AM

Schaefer Project Number: 24-0265



LEVEL 2 & LOW ROOF OVERALL PLAN
1" = 40'-0"



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PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 2 & LOW ROOF OVERALL FRAMING PLAN

SHEET NUMBER

S102

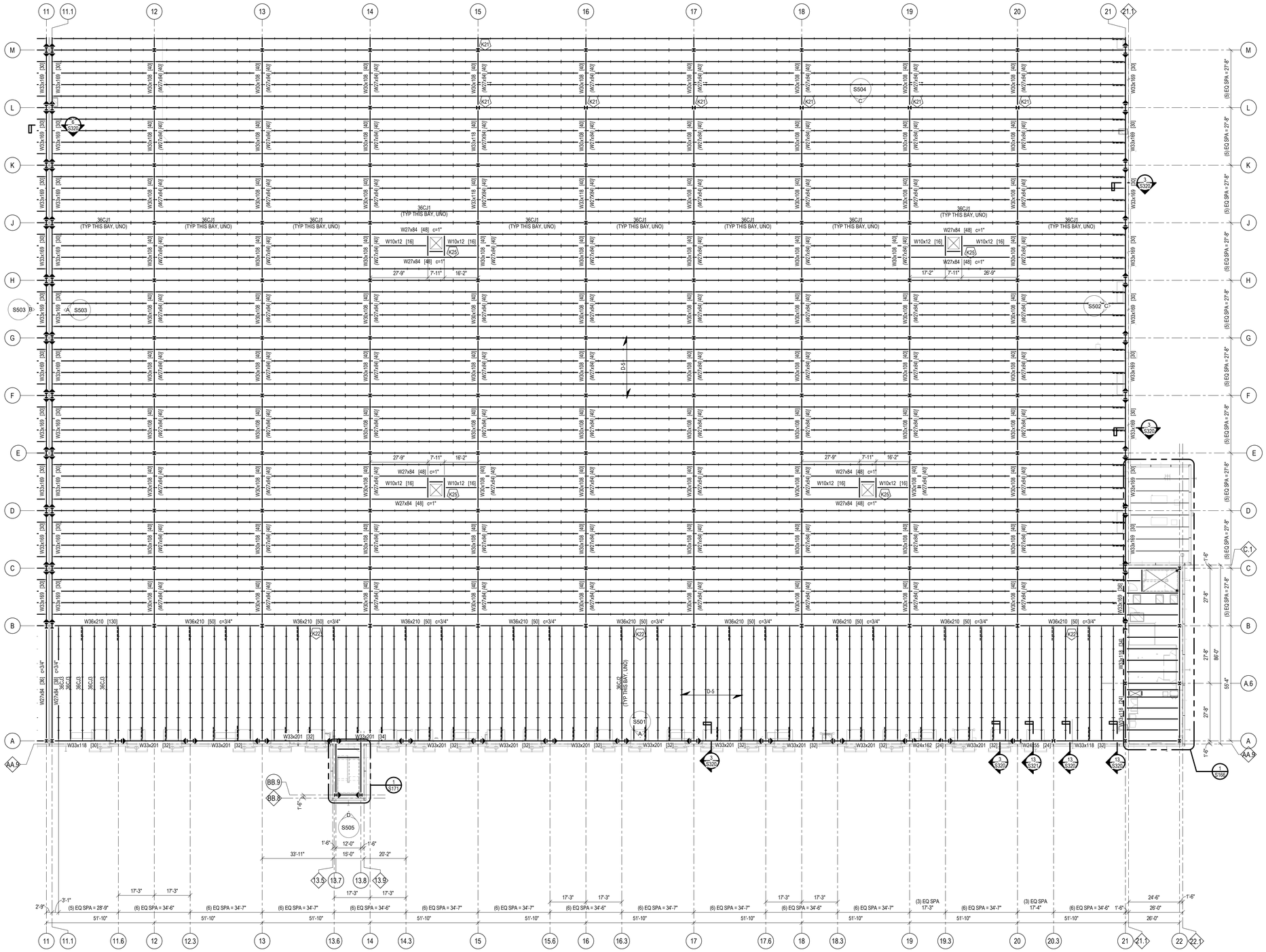
NOT FOR CONSTRUCTION

6/7/2024 8:41:36 AM

Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

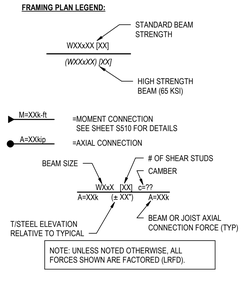
K21	SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.
K22	BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.
K25	SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



LEVEL 2 PARTIAL FRAMING PLAN A

1" = 20'-0"

FRAMING PLAN LEGEND:



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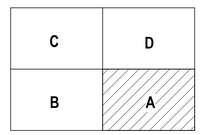

KEY PLAN
NTS

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAB PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 2 & LOW ROOF PARTIAL FRAMING PLAN A

SHEET NUMBER

S102A

NOT FOR CONSTRUCTION

6/7/2024 8:41:48 AM

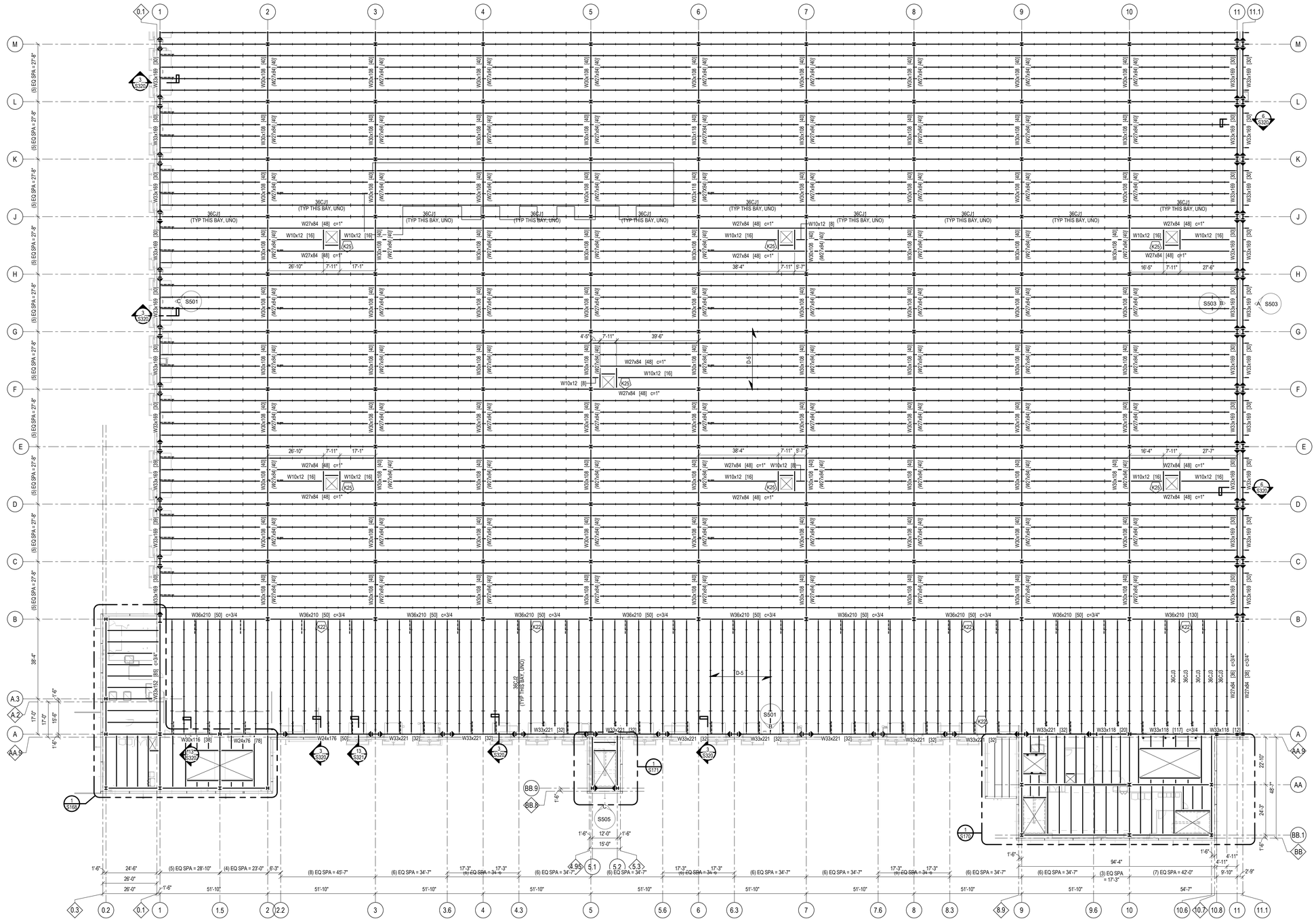
Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



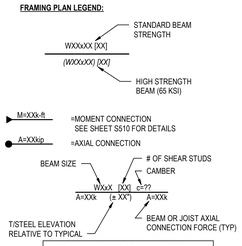
LEVEL 2 PARTIAL FRAMING PLAN B

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE SS10 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

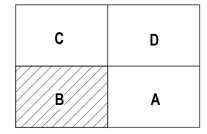
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 2 & LOW ROOF PARTIAL FRAMING PLAN B

SHEET NUMBER

S102B

NOT FOR CONSTRUCTION

6/7/2024 8:42:01 AM

Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

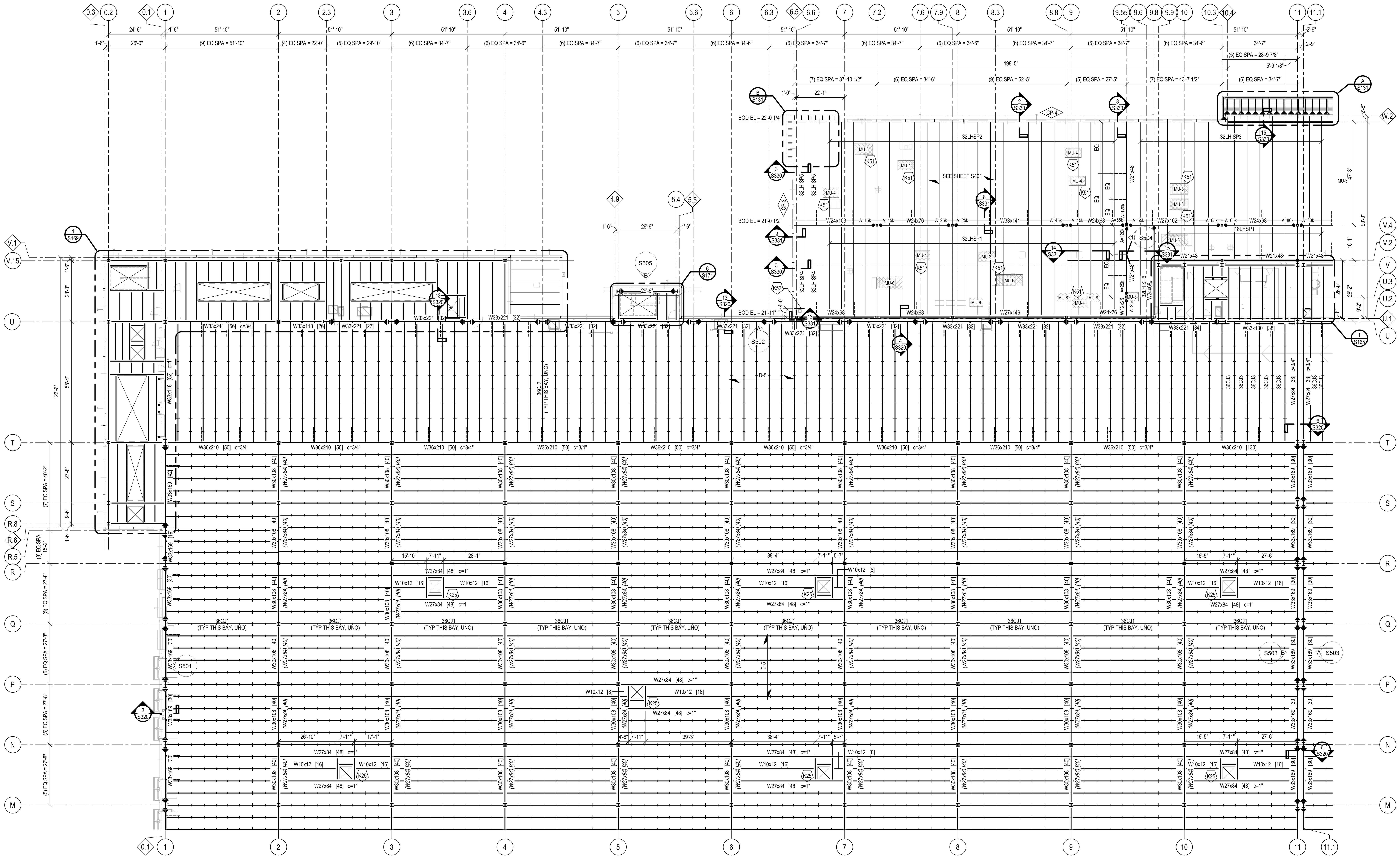
K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301

LOW ROOF FRAMING KEYNOTES

K51 PROVIDE SUPPLEMENTAL FRAMING TO SUPPORT RTU PER TYPICAL DETAILS ON SHEET S310. JOIST MFR TO DESIGN JOIST AND JOIST GIRDERS FOR RTU LOADS SHOWN IN RTU LOADING SCHEDULE ON SHEET S401. COORDINATE FINAL EQUIPMENT SIZE, LOCATION AND WEIGHT WITH MEP DRAWINGS. NOTIFY ENGINEER OF RECORD IF SIZE OR LOCATION OF THE RTU VARIES FROM WHAT IS SHOWN.

K52 L4x4x1/4 ANGLE BRACE.



LEVEL 2 & LOW ROOF PARTIAL FRAMING PLAN C

1" = 20'-0"

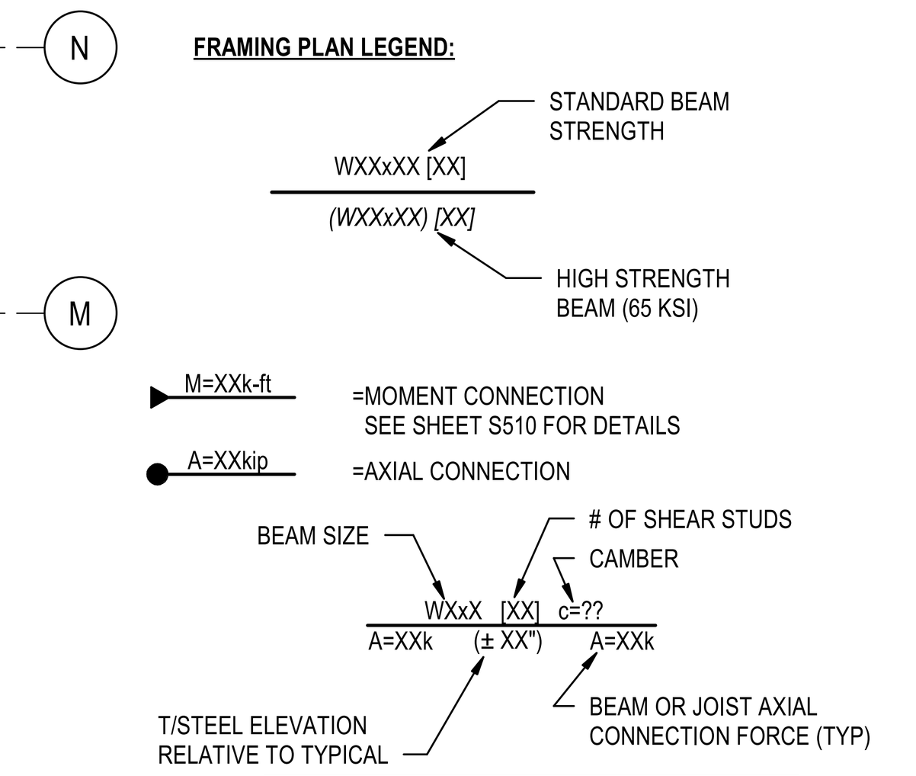
ROOF FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
2. SEE FOUNDATION PLAN FOR COLUMN SIZING. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE .
4. SEE S310 FOR "TYPICAL ROOF OPENING EDGE" DETAILS, "TYPICAL ROOF MECHANICAL UNIT SUPPORT" DETAIL, AND "TYPICAL SUPPORT OF CONCENTRATED LOADS NOT AT JOIST PANEL POINTS" DETAIL.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. FINAL SIZE, WEIGHT, & LOCATION OF ROOF TOP SUPPORTED MECHANICAL UNITS SHALL BE COORDINATED w/ STRUCTURAL ENGINEER PRIOR TO SHOP DRAWING CREATION.
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. AT LOCATIONS WHERE ROOF DECK CHANGES DIRECTION OVER JOIST GIRDER, PROVIDE HSS BETWEEN JOIST SEATS TO SUPPORT DECK PER "TYPICAL ROOF DECK TRANSITION AT JOIST GIRDER" DETAIL ON S310.
11. SEE SHEET S402 FOR JOIST LOADING SCHEDULE AND DIAGRAM.
12. DESIGN STEEL JOISTS SUPPORTING RTU's AND SPRINKLER MAINS FOR LOADS INDICATED BY JOIST DESIGNATION AND/OR SPECIAL JOIST LOADING DIAGRAM + RTU & SPRINKLER LOADS. COORDINATE RTU & SPRINKLER SIZE, WEIGHT & LOCATION w/ MEP & SPRINKLER DWGS. JOIST MANUFACTURER SHALL ALSO DISTRIBUTE ALL RTU & SPRINKLER LOADS TO JOIST GIRDER PANEL POINTS (JOIST GIRDER DESIGNATION SHOWN ON PLAN DOES NOT INCLUDE POINT LOADS DUE TO RTU'S OR SPRINKLER MAINS ACTING ON SUPPORTED BAR JOISTS).
13. FABRICATE ALL JOISTS AND JOIST GIRDERS w/ SJI RECOMMENDED CAMBER.
14. COORDINATE LOCATIONS OF JOIST BRIDGING, SPRINKLER BRANCH LINES, AND SPRINKLER MAINS TO PROVIDE MINIMUM REQUIRED CLEARANCES.
15. DESIGN STEEL JOISTS AT OFFICE TO NOT EXCEED L/360 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION. OFFICE LOCATION OCCURS BETWEEN GRIDLINES U.1 & W.2. ALL OTHER JOISTS AND JOIST GIRDERS MAY BE DESIGNED TO NOT EXCEED L/240 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION (UNLESS NOTED OTHERWISE). INCLUDE 5 PSF FUTURE SOLAR PANEL ALLOWANCE IN ALL ROOF LIVE LOAD AND SNOW LOAD DEFLECTION CALCULATIONS.
16. "TICK MARKS" ON STEEL JOIST INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE SHEET S106E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. MINIMUM DOWNWARD COMPONENTS AND CLADDING WIND PRESSURES HAVE BEEN ACCOUNTED FOR IN ROOF JOIST DESIGNATIONS.
18. TOP OF STEEL ELEVATION SHALL BE BOTTOM OF DECK ELEVATION FOR BEAMS THAT DO NOT HAVE ANY JOISTS THAT BEAR ON TOP.
19. MEP AND TELECOMMUNICATION CONTRACTORS TO COORDINATE WITH STRUCTURAL STEEL FABRICATOR REGARDING ATTACHMENT OF ROOFTOP MOUNTED EQUIPMENT TO ROOF STRUCTURE FRAMING. PROVIDE DELEGATED DESIGN SUBMITTALS OF ANCHORAGE AND CONNECTIONS OF ROOFTOP MOUNTED MEP AND TELECOMMUNICATIONS ITEMS FOR REVIEW PRIOR TO INSTALLATION.

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL, UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

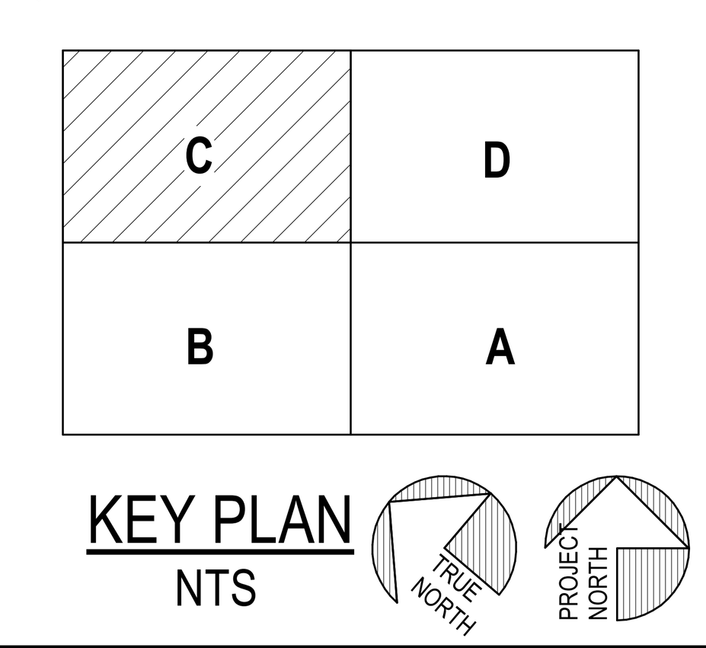
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
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PRINT RECORD

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 2 & LOW ROOF PARTIAL FRAMING PLAN C

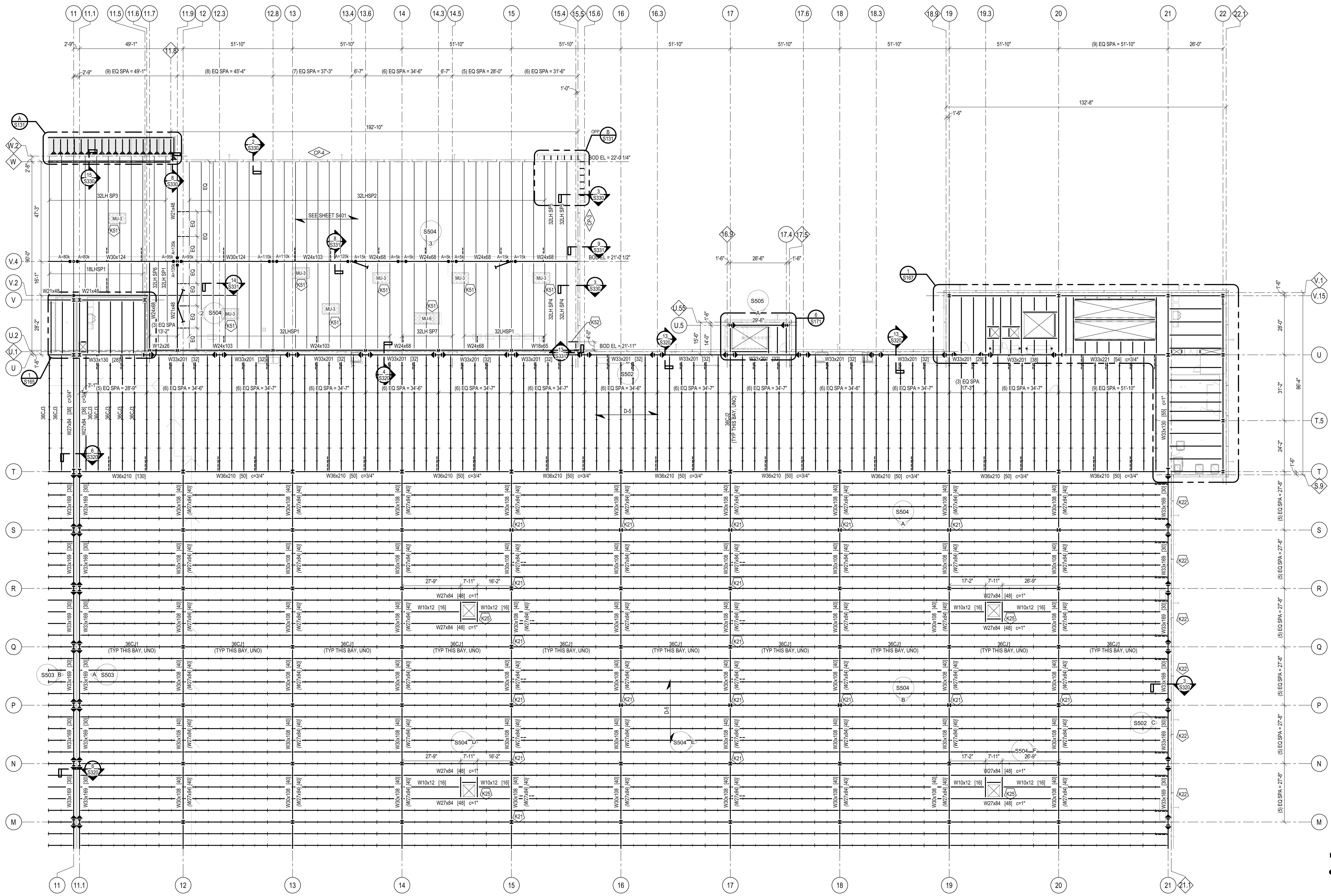
SHEET NUMBER

S102C

NOT FOR CONSTRUCTION

6/7/2024 8:42:16 AM

Schaefer Project Number: 24-0265



LEVEL 2 & LOW ROOF PARTIAL FRAMING PLAN D

1" = 20'-0"

FLOOR FRAMING KEYNOTES

- K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.
- K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.
- K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301

LOW ROOF FRAMING KEYNOTES

- K51 PROVIDE SUPPLEMENTAL FRAMING TO SUPPORT RTU PER TYPICAL DETAILS ON SHEET S310. JOIST MFR TO DESIGN JOIST AND JOIST GIRDERS FOR RTU LOADS SHOWN IN RTU LOADING SCHEDULE ON SHEET S401. COORDINATE FINAL EQUIPMENT SIZE, LOCATION AND WEIGHT WITH MEP DRAWINGS. NOTIFY ENGINEER OF RECORD IF SIZE OR LOCATION OF THE RTU VARIES FROM WHAT IS SHOWN.
- K52 L4x4x1/4 ANGLE BRACE.

ROOF FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
2. SEE FOUNDATION PLAN FOR COLUMN SIZING. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE .
4. SEE S310 FOR "TYPICAL ROOF OPENING EDGE" DETAILS, "TYPICAL ROOF MECHANICAL UNIT SUPPORT" DETAIL, AND "TYPICAL SUPPORT OF CONCENTRATED LOADS NOT AT JOIST PANEL POINTS" DETAIL.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. FINAL SIZE, WEIGHT, & LOCATION OF ROOF TOP SUPPORTED MECHANICAL UNITS SHALL BE COORDINATED w/ STRUCTURAL ENGINEER PRIOR TO SHOP DRAWING CREATION.
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. AT LOCATIONS WHERE ROOF DECK CHANGES DIRECTION OVER JOIST GIRDER, PROVIDE HSS BETWEEN JOIST SEATS TO SUPPORT DECK PER "TYPICAL ROOF DECK TRANSITION AT JOIST GIRDER" DETAIL ON S310.
11. SEE SHEET S402 FOR JOIST LOADING SCHEDULE AND DIAGRAM.
12. DESIGN STEEL JOISTS SUPPORTING RTU's AND SPRINKLER MAINS FOR LOADS INDICATED BY JOIST DESIGNATION AND/OR SPECIAL JOIST LOADING DIAGRAM + RTU & SPRINKLER LOADS. COORDINATE RTU & SPRINKLER SIZE, WEIGHT & LOCATION w/ MEP & SPRINKLER DWGS. JOIST MANUFACTURER SHALL ALSO DISTRIBUTE ALL RTU & SPRINKLER LOADS TO JOIST GIRDER PANEL POINTS (JOIST GIRDER DESIGNATION SHOWN ON PLAN DOES NOT INCLUDE POINT LOADS DUE TO RTU'S OR SPRINKLER MAINS ACTING ON SUPPORTED BAR JOISTS).
13. FABRICATE ALL JOISTS AND JOIST GIRDERS w/ SJI RECOMMENDED CAMBER.
14. COORDINATE LOCATIONS OF JOIST BRIDGING, SPRINKLER BRANCH LINES, AND SPRINKLER MAINS TO PROVIDE MINIMUM REQUIRED CLEARANCES.
15. DESIGN STEEL JOISTS AT OFFICE TO NOT EXCEED L/360 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION. OFFICE LOCATION OCCURS BETWEEN GRIDLINES U.1 & W.2. ALL OTHER JOISTS AND JOIST GIRDERS MAY BE DESIGNED TO NOT EXCEED L/240 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION (UNLESS NOTED OTHERWISE). INCLUDE 5 PSF FUTURE SOLAR PANEL ALLOWANCE IN ALL ROOF LIVE LOAD AND SNOW LOAD DEFLECTION CALCULATIONS.
16. "TICK MARKS" ON STEEL JOIST INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE SHEET S106E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. MINIMUM DOWNWARD COMPONENTS AND CLADDING WIND PRESSURES HAVE BEEN ACCOUNTED FOR IN ROOF JOIST DESIGNATIONS.
18. TOP OF STEEL ELEVATION SHALL BE BOTTOM OF DECK ELEVATION FOR BEAMS THAT DO NOT HAVE ANY JOISTS THAT BEAR ON TOP.
19. MEP AND TELECOMMUNICATION CONTRACTORS TO COORDINATE WITH STRUCTURAL STEEL FABRICATOR REGARDING ATTACHMENT OF ROOFTOP MOUNTED EQUIPMENT TO ROOF STRUCTURE FRAMING. PROVIDE DELEGATED DESIGN SUBMITTALS OF ANCHORAGE AND CONNECTIONS OF ROOFTOP MOUNTED MEP AND TELECOMMUNICATIONS ITEMS FOR REVIEW PRIOR TO INSTALLATION.

FLOOR FRAMING PLAN NOTES:

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5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
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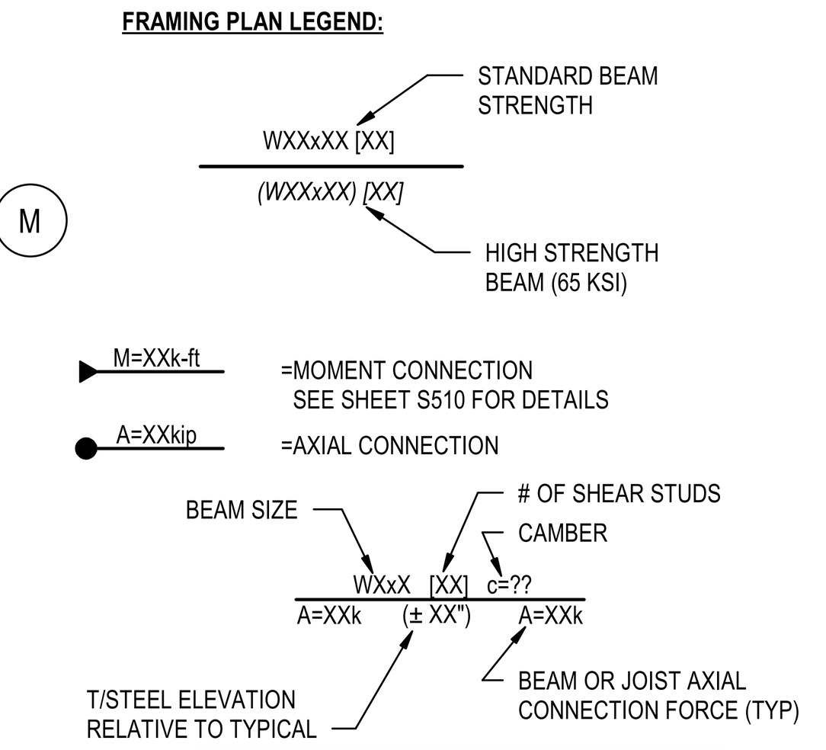
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL, UNLESS NOTED OTHERWISE ON PLAN:
    - A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    - B. LEVEL 2 = 28'-1"
    - C. LEVEL 3 = 42'-4"
    - D. LEVEL 4 = 56'-7"
    - E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

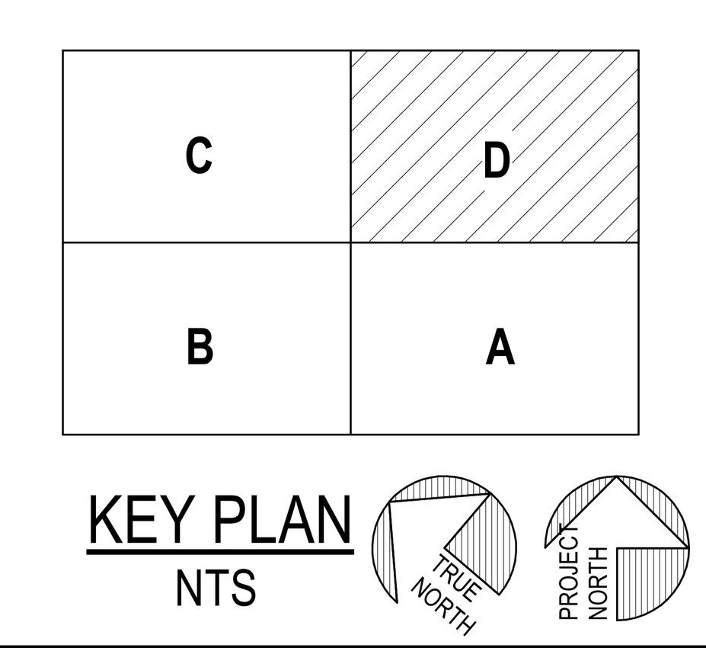
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

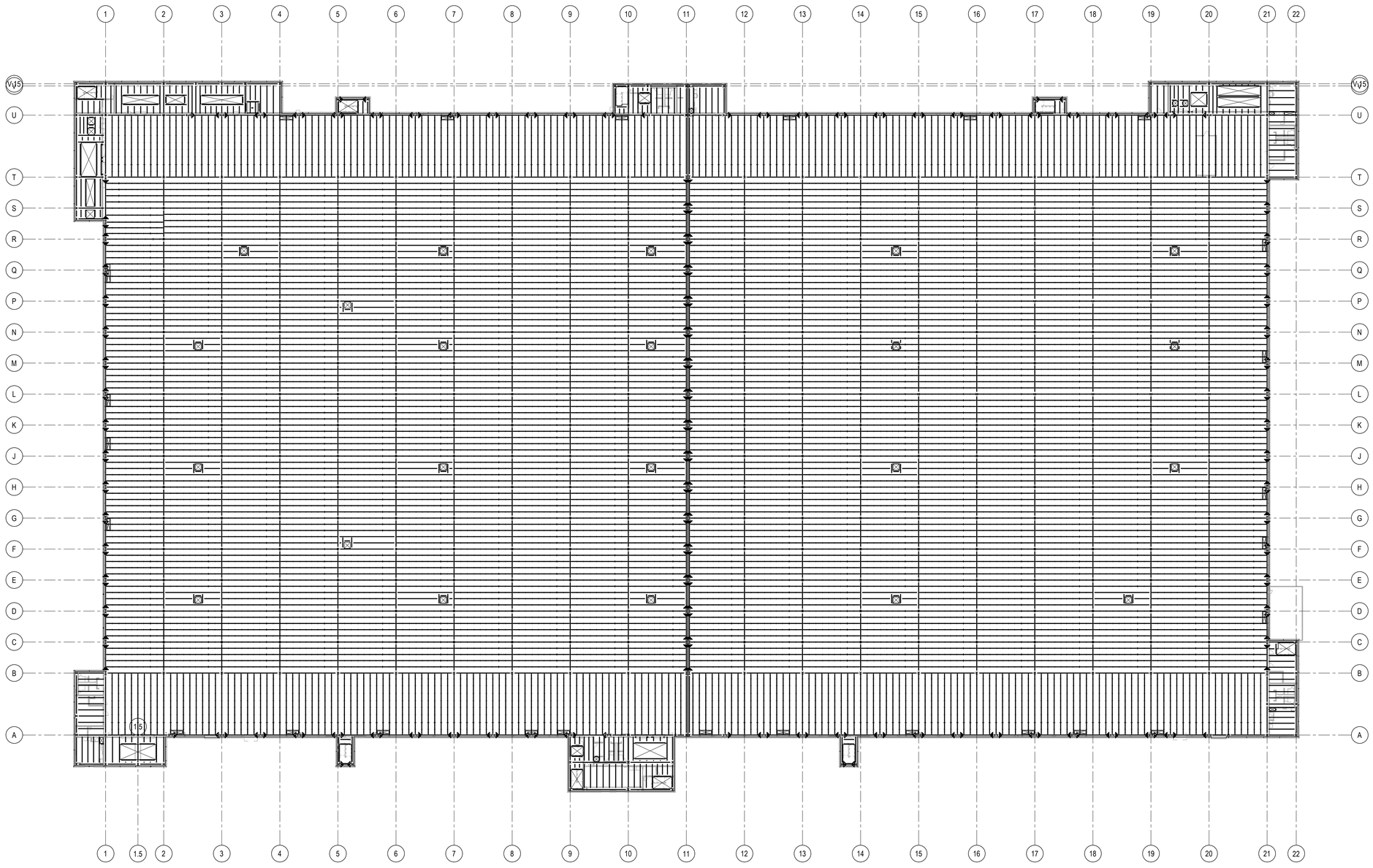
LEVEL 2 & LOW ROOF PARTIAL FRAMING PLAN D

SHEET NUMBER

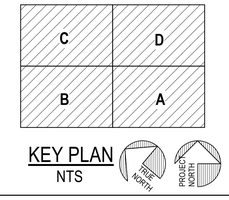
S102D

NOT FOR CONSTRUCTION

Schaefer Project Number: 24-0265



LEVEL 3 OVERALL FRAMING PLAN
1" = 40'-0"



KEY PLAN
NTS

TRUE NORTH
PROJECT NORTH

MACGREGOR ASSOCIATES ARCHITECTS

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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 3 OVERALL FRAMING PLAN

SHEET NUMBER

S103

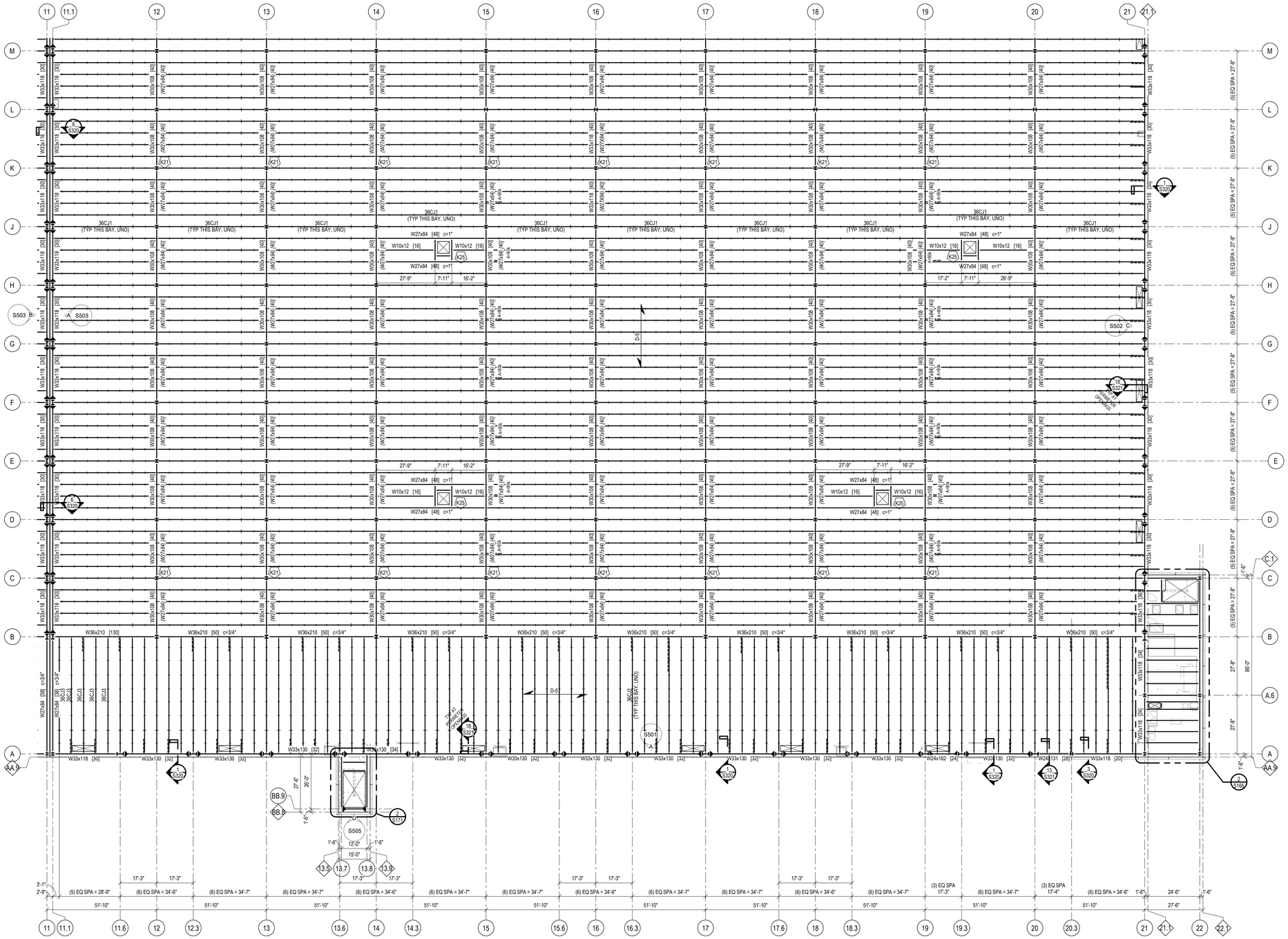
NOT FOR CONSTRUCTION

6/7/2024 8:43:06 AM

Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21	SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.
K22	BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.
K25	SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



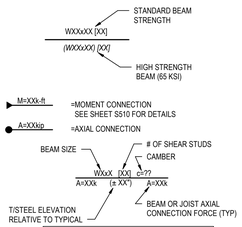
LEVEL 3 PARTIAL FRAMING PLAN A

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING (UTILTING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

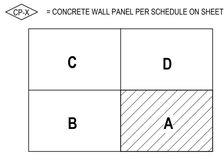
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

------ = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 3 PARTIAL FRAMING PLAN A

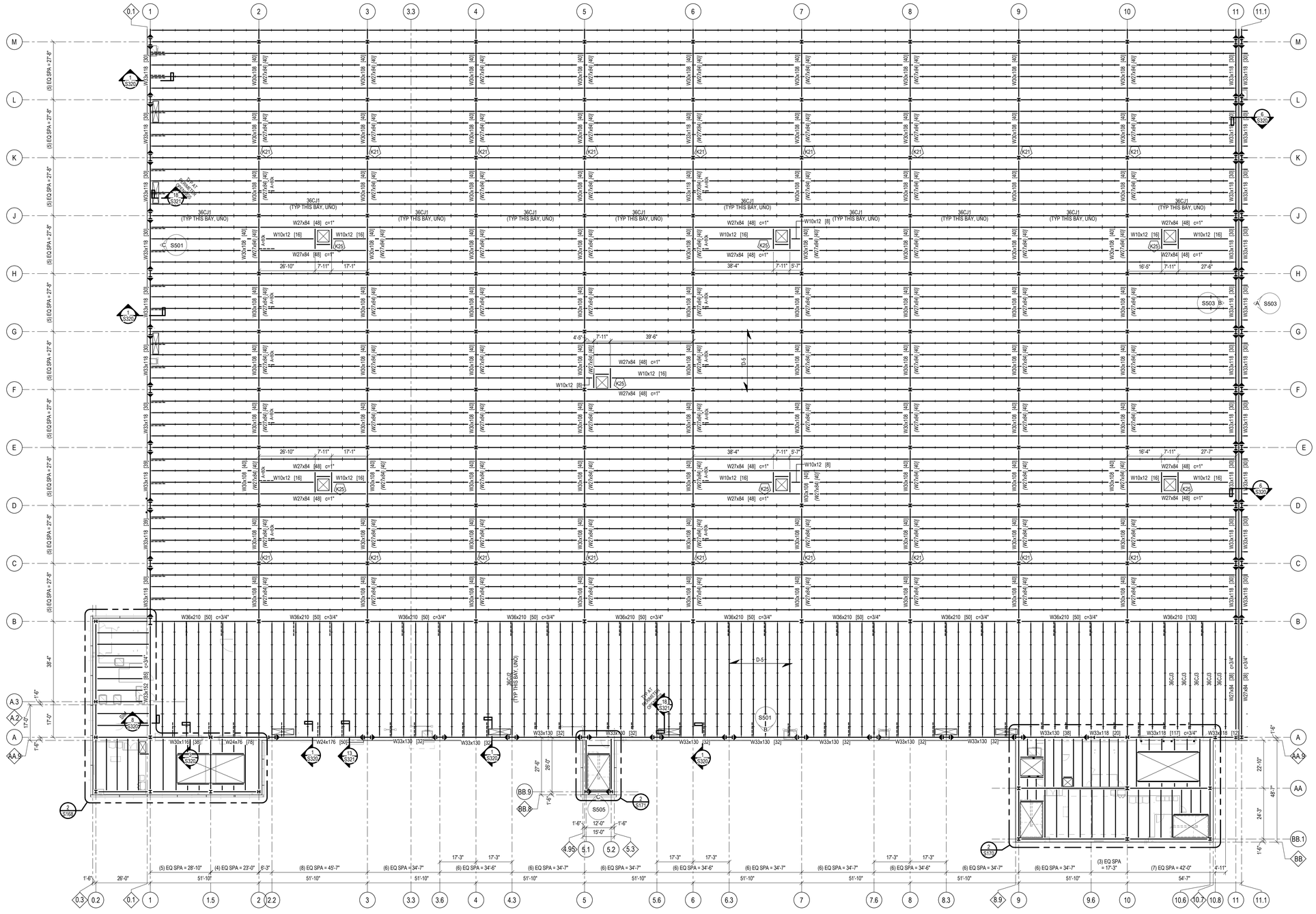
SHEET NUMBER

S103A

NOT FOR CONSTRUCTION

6/7/2024 8:43:17 AM

Schaefer Project Number: 24-0265



LEVEL 3 PARTIAL FRAMING PLAN B

1" = 20'-0"

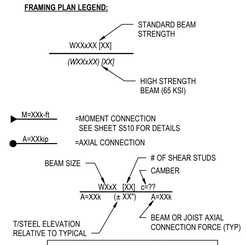
FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAB PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

FLOOR FRAMING KEYNOTES

- K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.
- K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.
- K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301

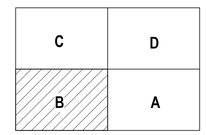
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 3 PARTIAL FRAMING PLAN B

SHEET NUMBER

S103B

NOT FOR CONSTRUCTION

6/7/2024 8:43:29 AM

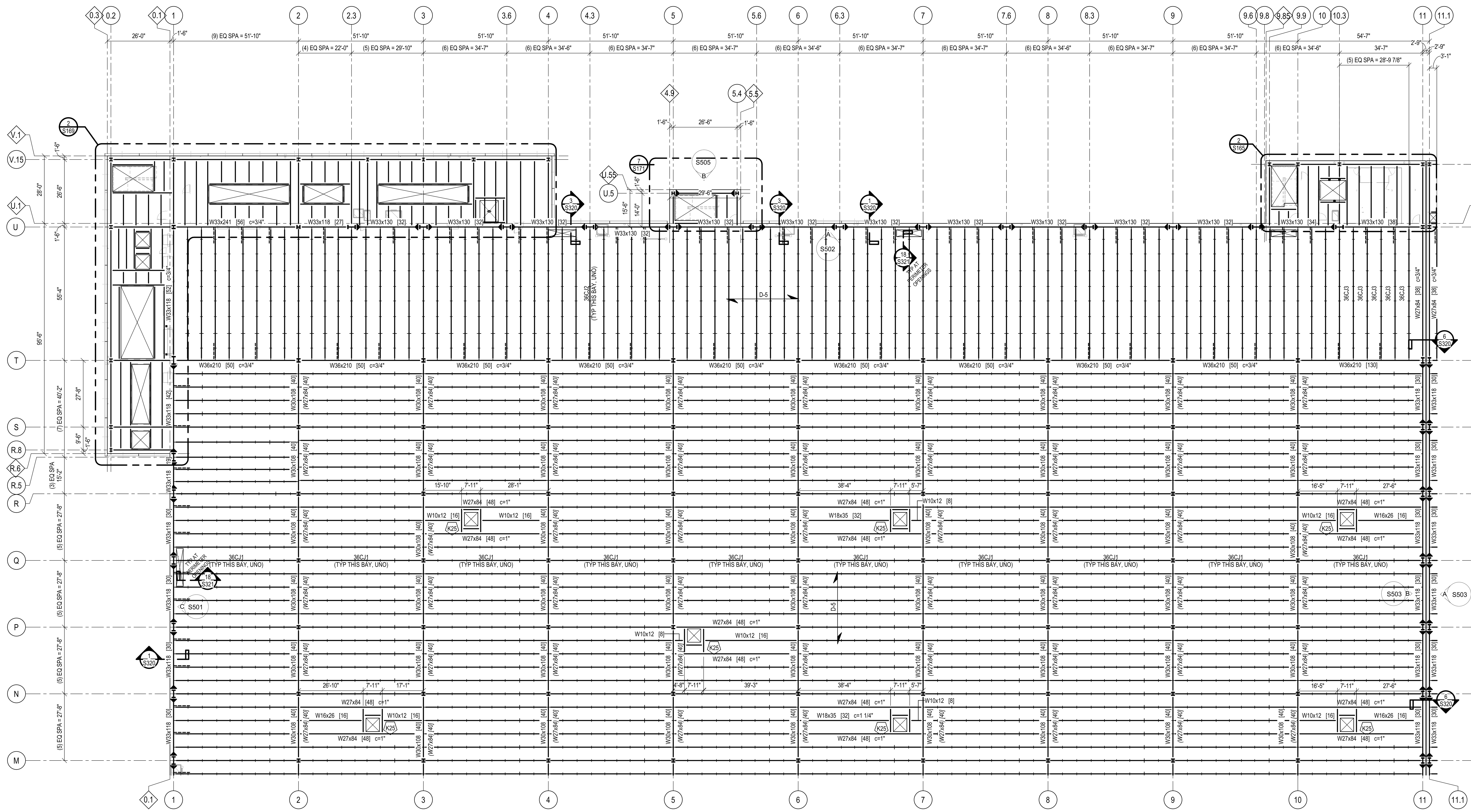
Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



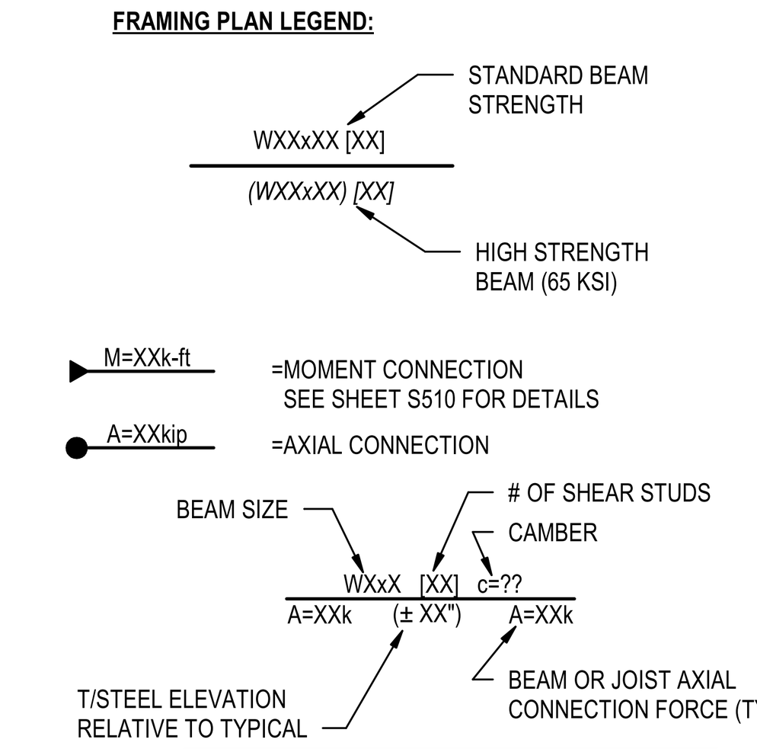
LEVEL 3 PARTIAL FRAMING PLAN C

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL, UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

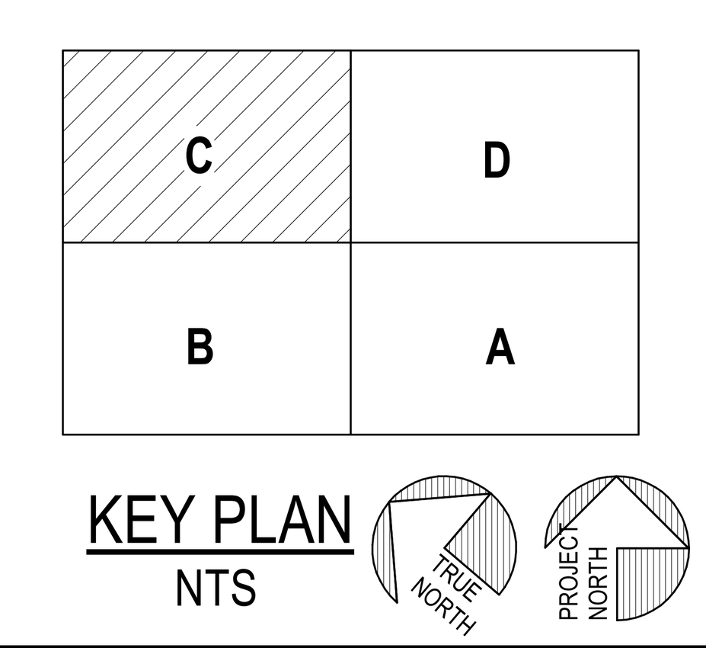
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 3 PARTIAL FRAMING PLAN C

SHEET NUMBER

S103C

NOT FOR CONSTRUCTION

6/7/2024 8:43:39 AM

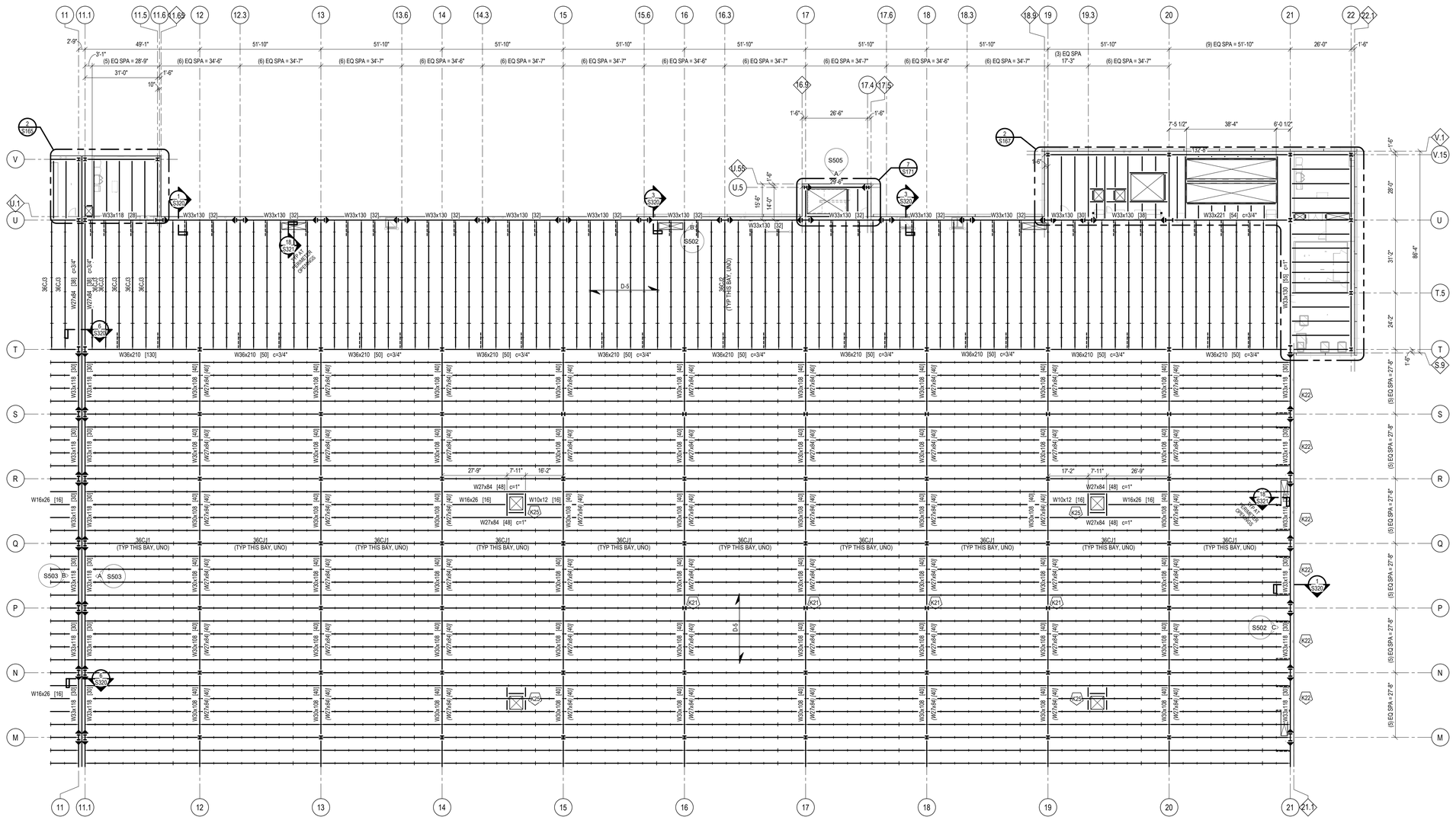
Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



LEVEL 3 PARTIAL FRAMING PLAN D

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
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6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
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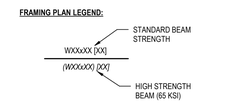
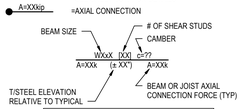
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

FRAMING PLAN LEGEND:



M=XXk-ft =MOMENT CONNECTION SEE SHEET S510 FOR DETAILS

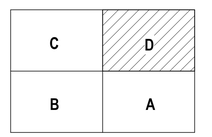
A=XXXkip =AXIAL CONNECTION



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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STRUCTURAL ENGINEERS
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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 3 PARTIAL FRAMING PLAN D

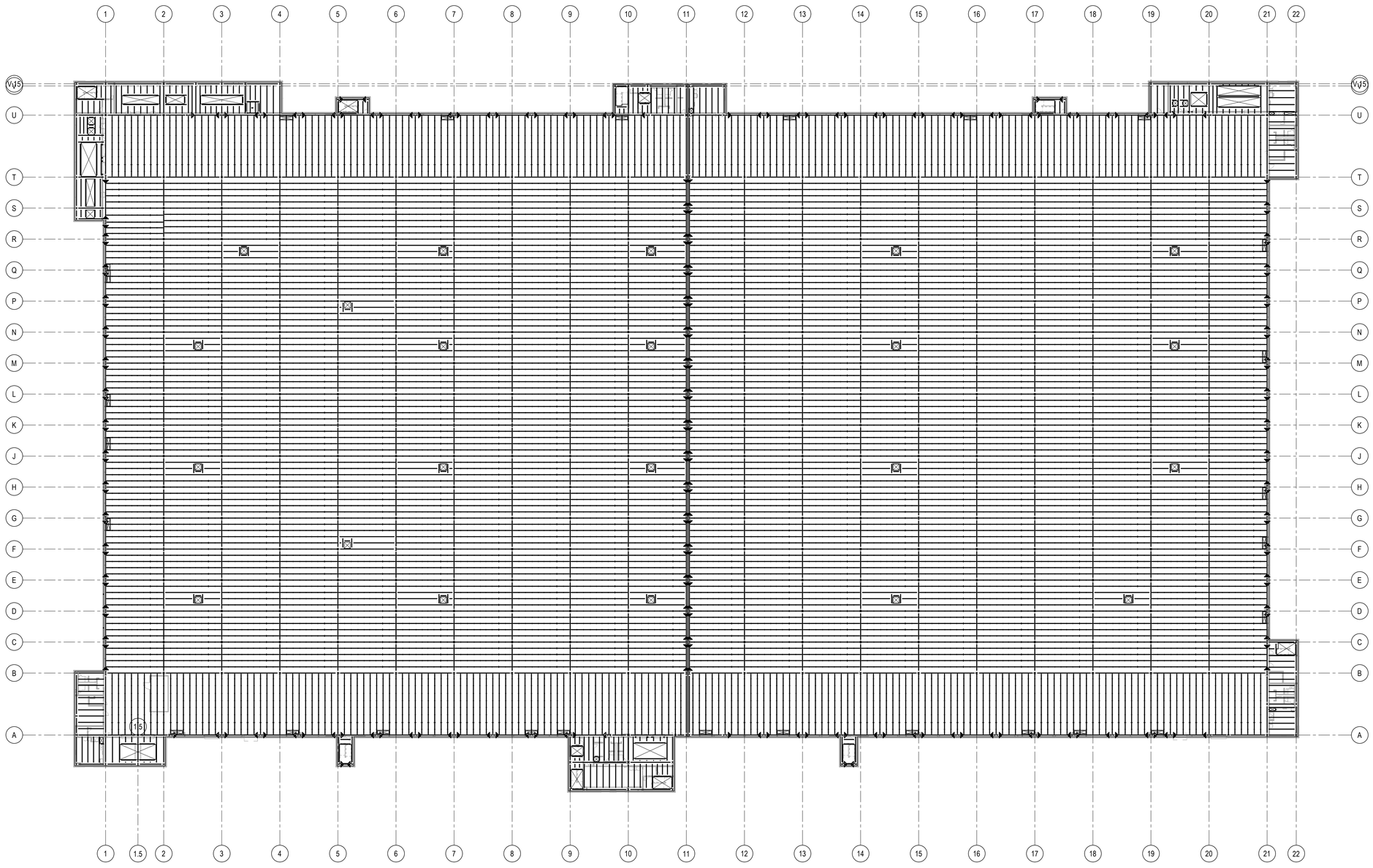
SHEET NUMBER

S103D

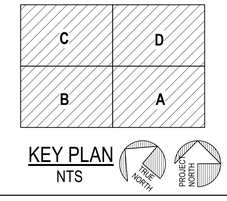
NOT FOR CONSTRUCTION

6/7/2024 8:43:47 AM

Schaefer Project Number: 24-0265



LEVEL 4 OVERALL FRAMING PLAN
1" = 40'-0"



KEY PLAN
NTS

TRUE NORTH
PROJECT NORTH

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 4 OVERALL FRAMING PLAN

SHEET NUMBER

S104

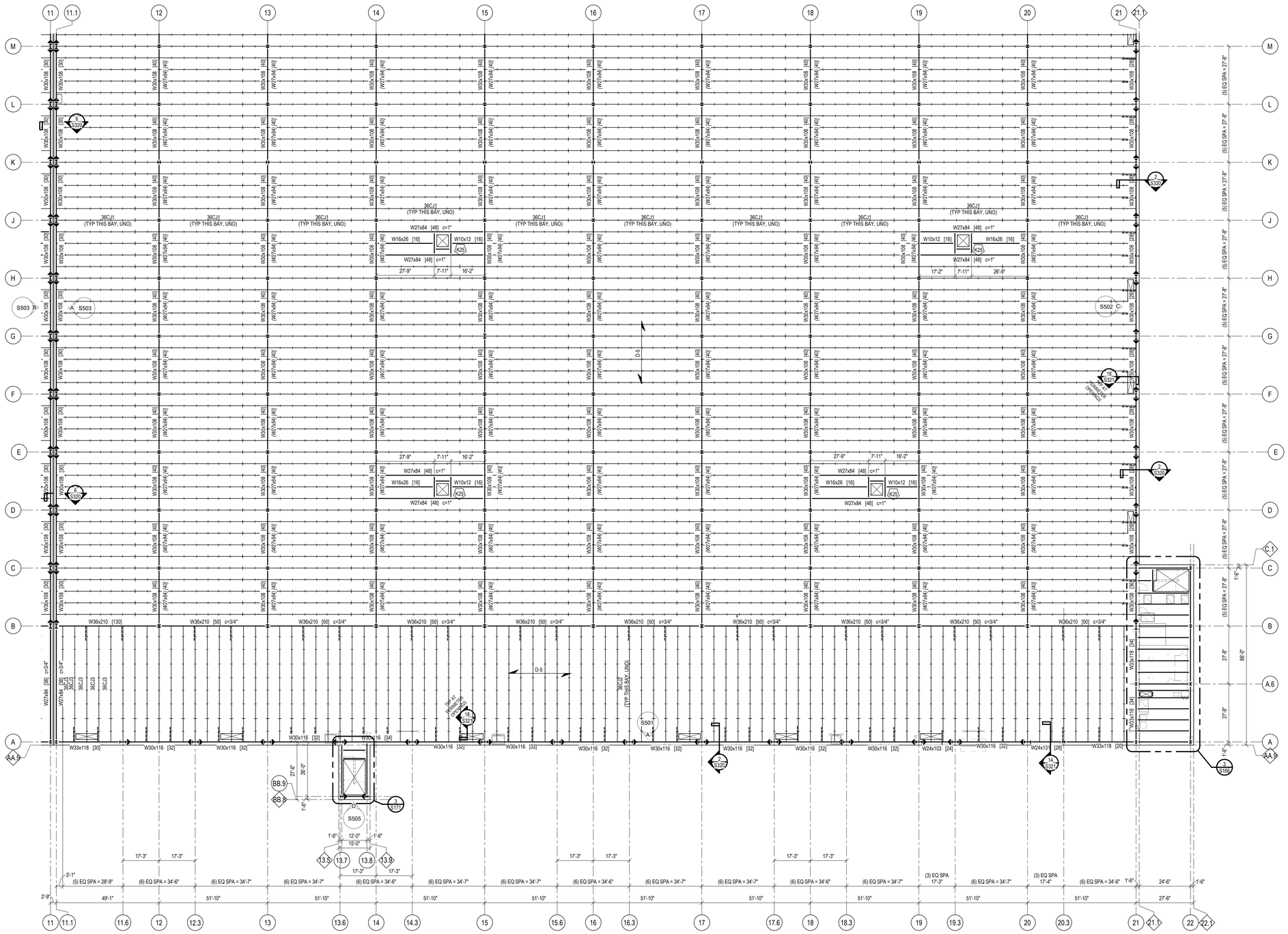
NOT FOR CONSTRUCTION

6/7/2024 8:44:24 AM

Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.
K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.
K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



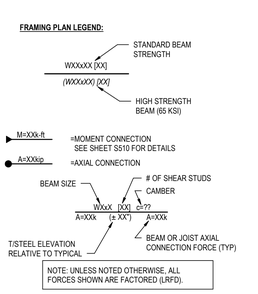
LEVEL 4 PARTIAL FRAMING PLAN A

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE SS10 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

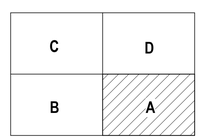
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

DP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

TRUE NORTH
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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 4 PARTIAL FRAMING PLAN A

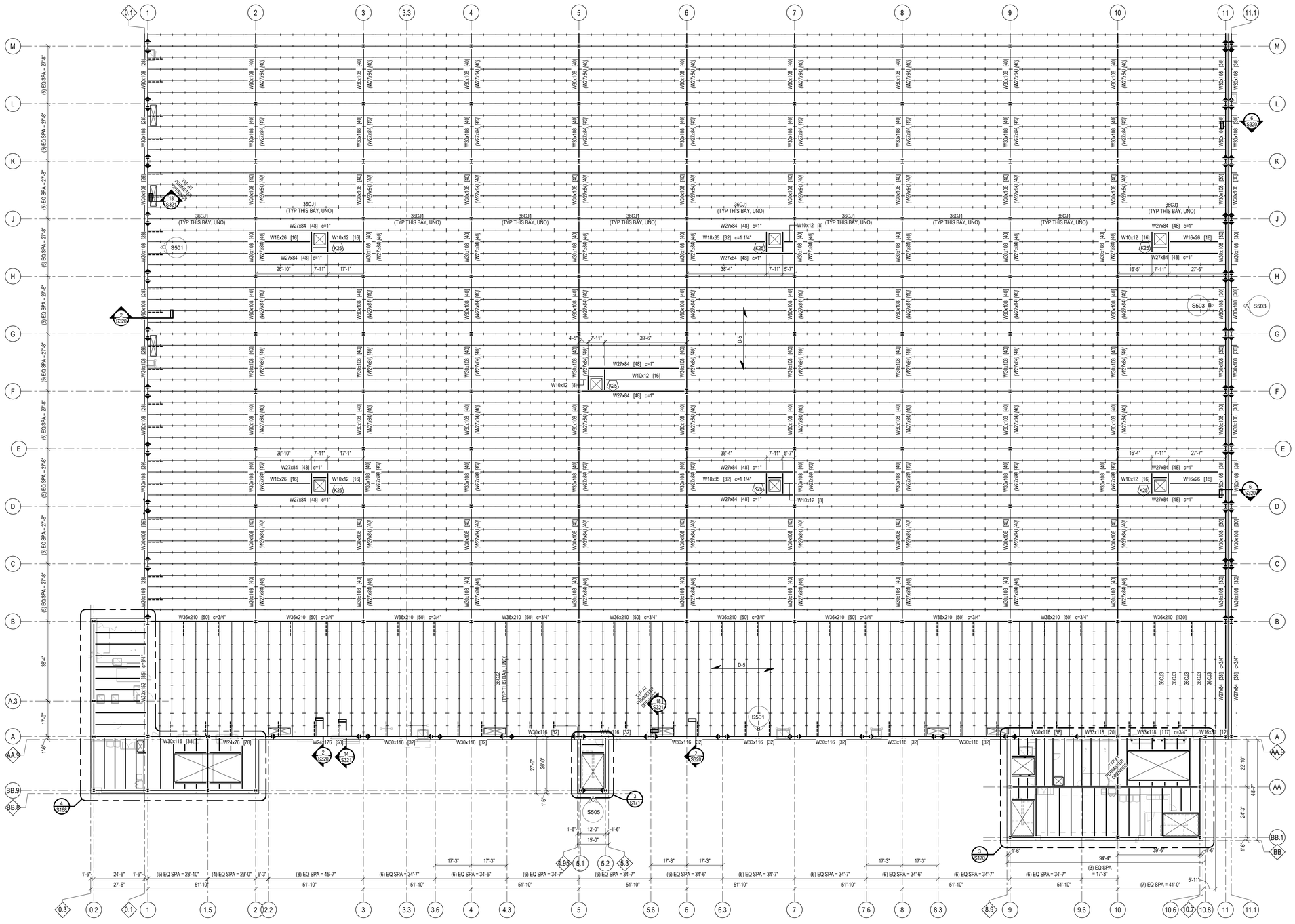
SHEET NUMBER

S104A

NOT FOR CONSTRUCTION

6/7/2024 8:44:35 AM

Schaefer Project Number: 24-0265



LEVEL 4 PARTIAL FRAMING PLAN B

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAB PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

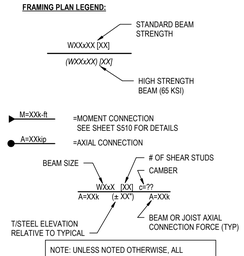
FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301

FRAMING PLAN LEGEND:



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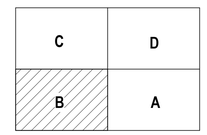
----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

<P-X> = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

TRUE NORTH

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 4 PARTIAL FRAMING PLAN B

SHEET NUMBER

S104B

NOT FOR CONSTRUCTION

6/7/2024 8:44:46 AM

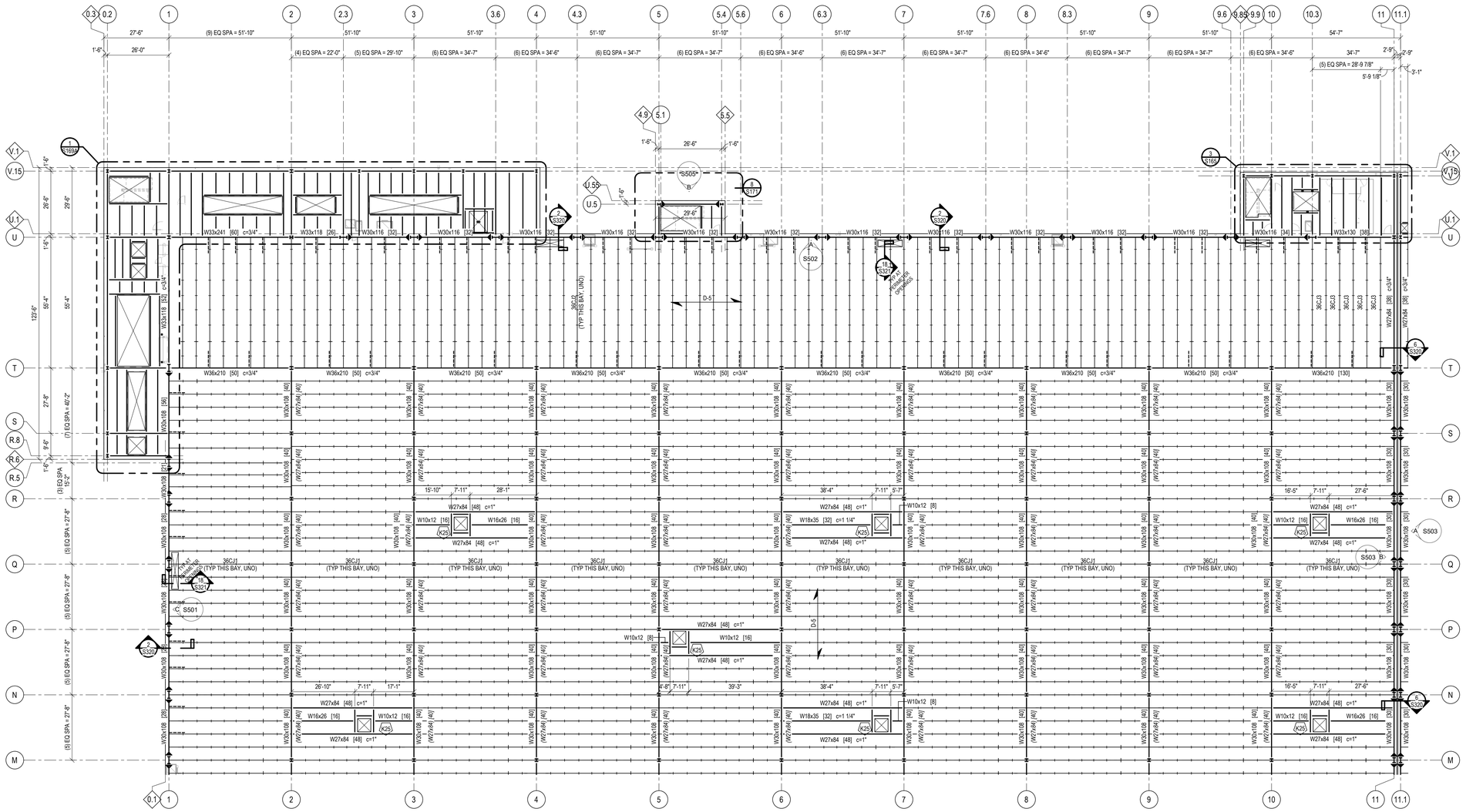
Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



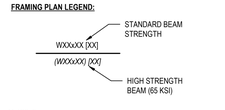
LEVEL 4 PARTIAL FRAMING PLAN C

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

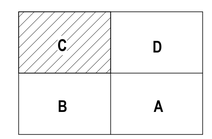
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 4 PARTIAL FRAMING PLAN C

SHEET NUMBER

S104C

NOT FOR CONSTRUCTION

6/7/2024 8:44:55 AM

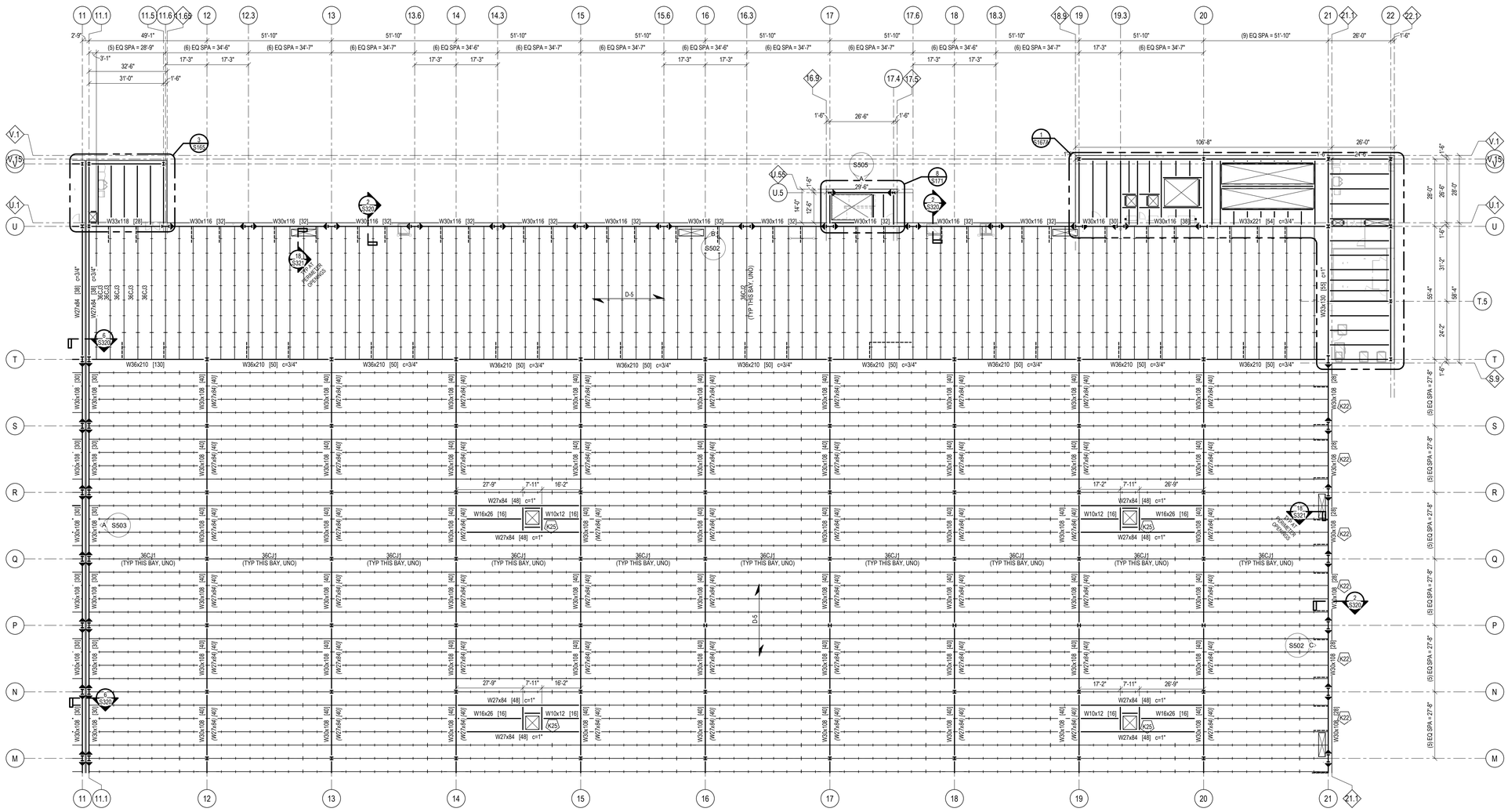
Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



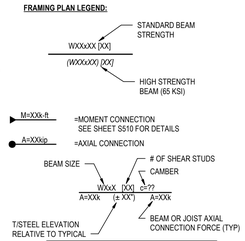
LEVEL 4 PARTIAL FRAMING PLAN D

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

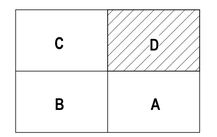
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

DP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

TRUE NORTH

PROJECT NORTH

MACGREGOR ASSOCIATES ARCHITECTS

2727 Paces Ferry Road SE
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CONSULTANT

STRUCTURAL ENGINEERS
800.542.3302
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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 4 PARTIAL FRAMING PLAN D

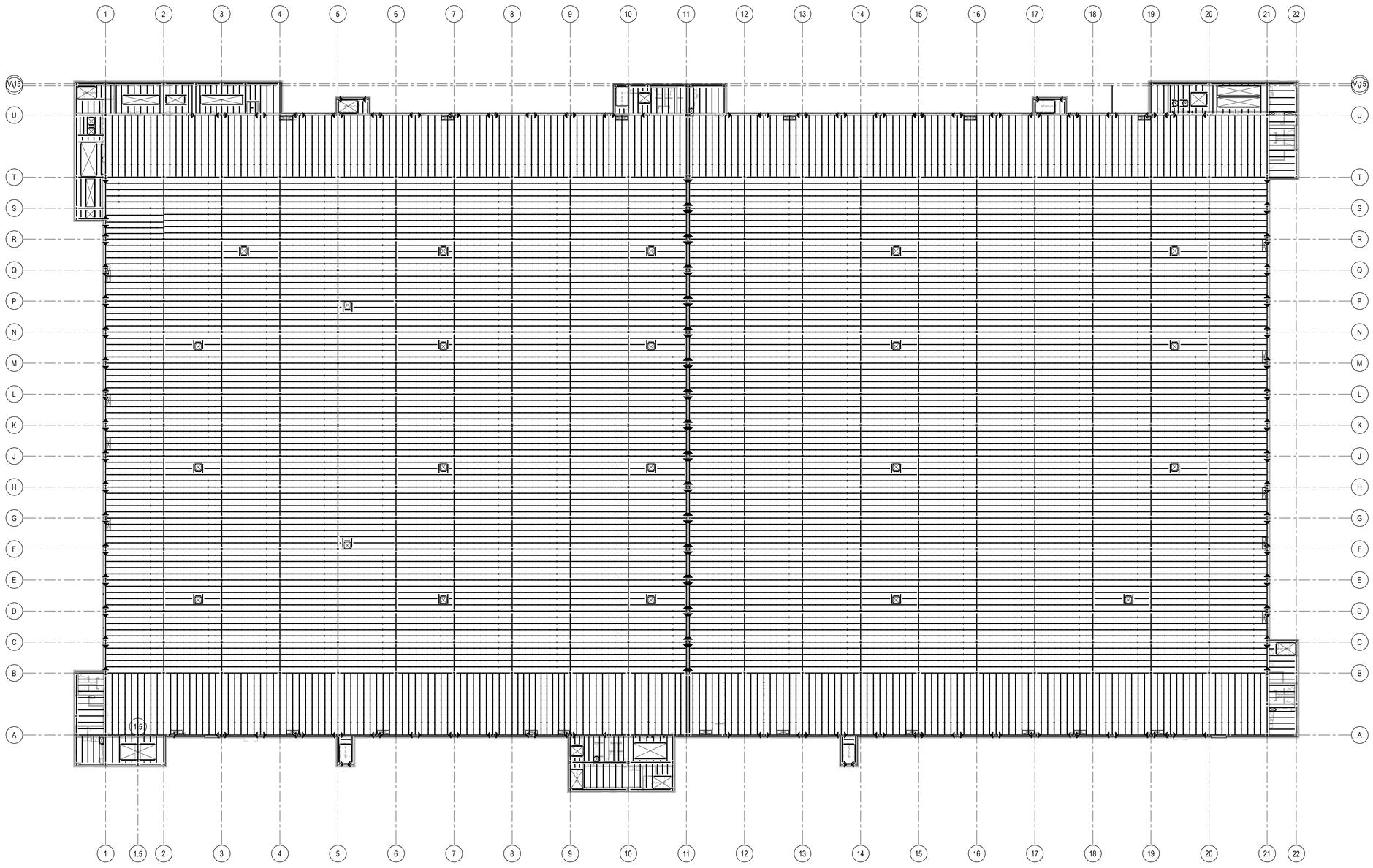
SHEET NUMBER

S104D

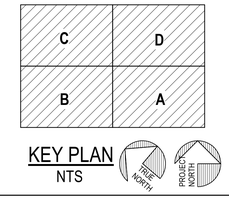
NOT FOR CONSTRUCTION

6/7/2024 8:45:04 AM

Schaefer Project Number: 24-0265



LEVEL 5 OVERALL FRAMING PLAN
1" = 40'-0"



KEY PLAN
NTS

TRUE NORTH
PROJECT NORTH

6/7/2024 8:45:41 AM

MACGREGOR ASSOCIATES ARCHITECTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 5 OVERALL FRAMING PLAN

SHEET NUMBER

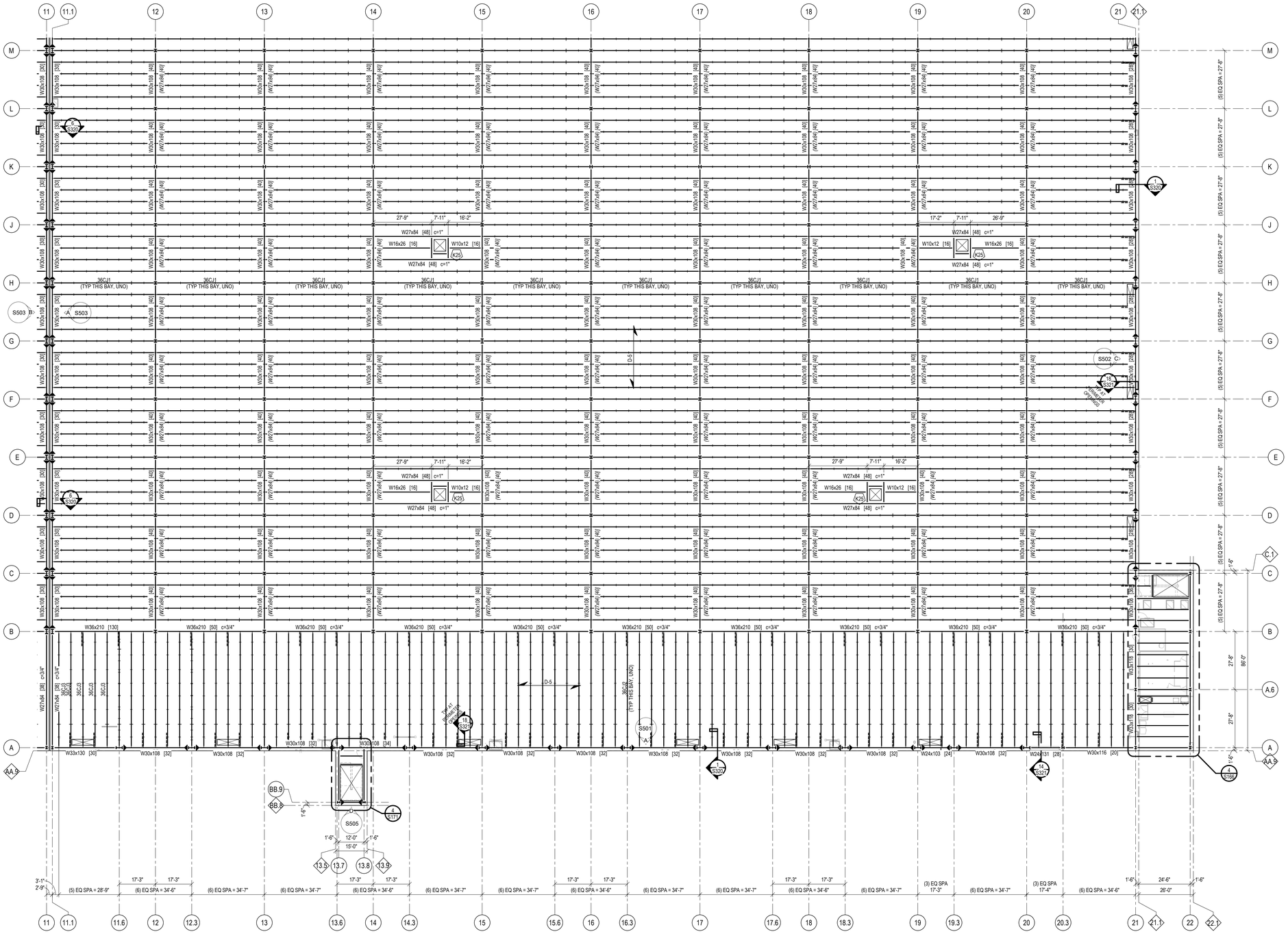
S105

NOT FOR CONSTRUCTION

Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.
K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.
K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



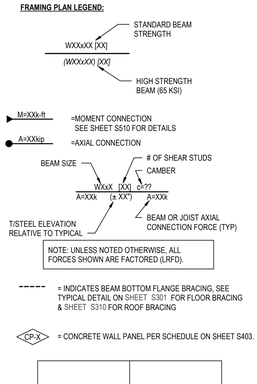
LEVEL 5 PARTIAL FRAMING PLAN A

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE SS10 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTILTING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

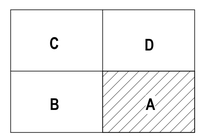
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

MACGREGOR ASSOCIATES ARCHITECTS
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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 5 PARTIAL FRAMING PLAN A

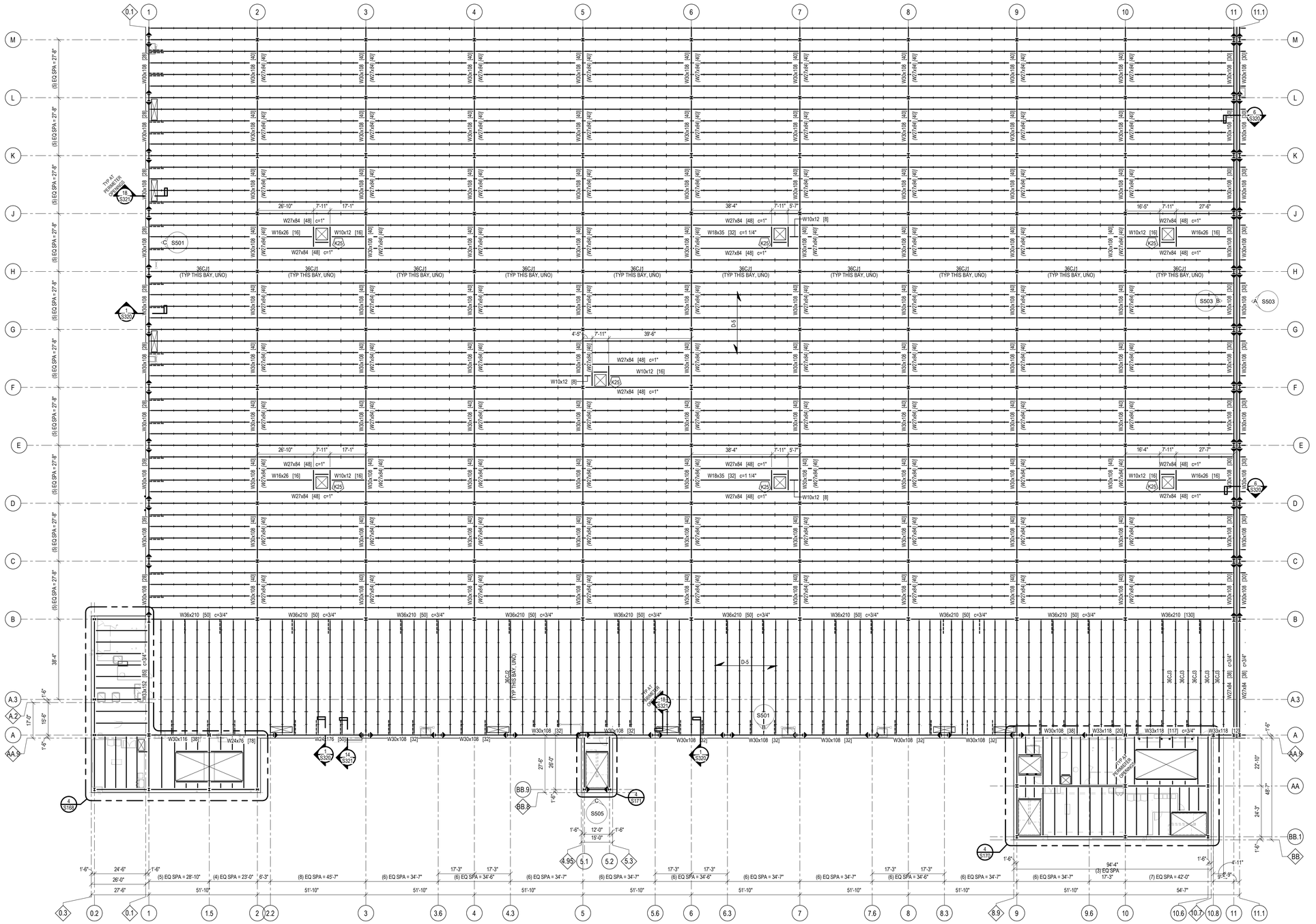
SHEET NUMBER

S105A

NOT FOR CONSTRUCTION

6/7/2024 8:45:51 AM

Schaefer Project Number: 24-0265



LEVEL 5 PARTIAL FRAMING PLAN B

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. T/SLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

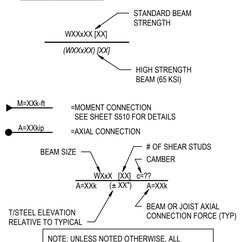
FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES - SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301

FRAMING PLAN LEGEND:



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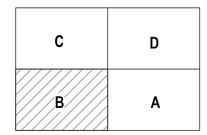
----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

MACGREGOR ASSOCIATES ARCHITECTS
2727 Paces Ferry Road SE
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CONSULTANT

STRUCTURAL ENGINEERS
800.542.3302
schaefer-inc.com
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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 5 PARTIAL FRAMING PLAN B

SHEET NUMBER

S105B

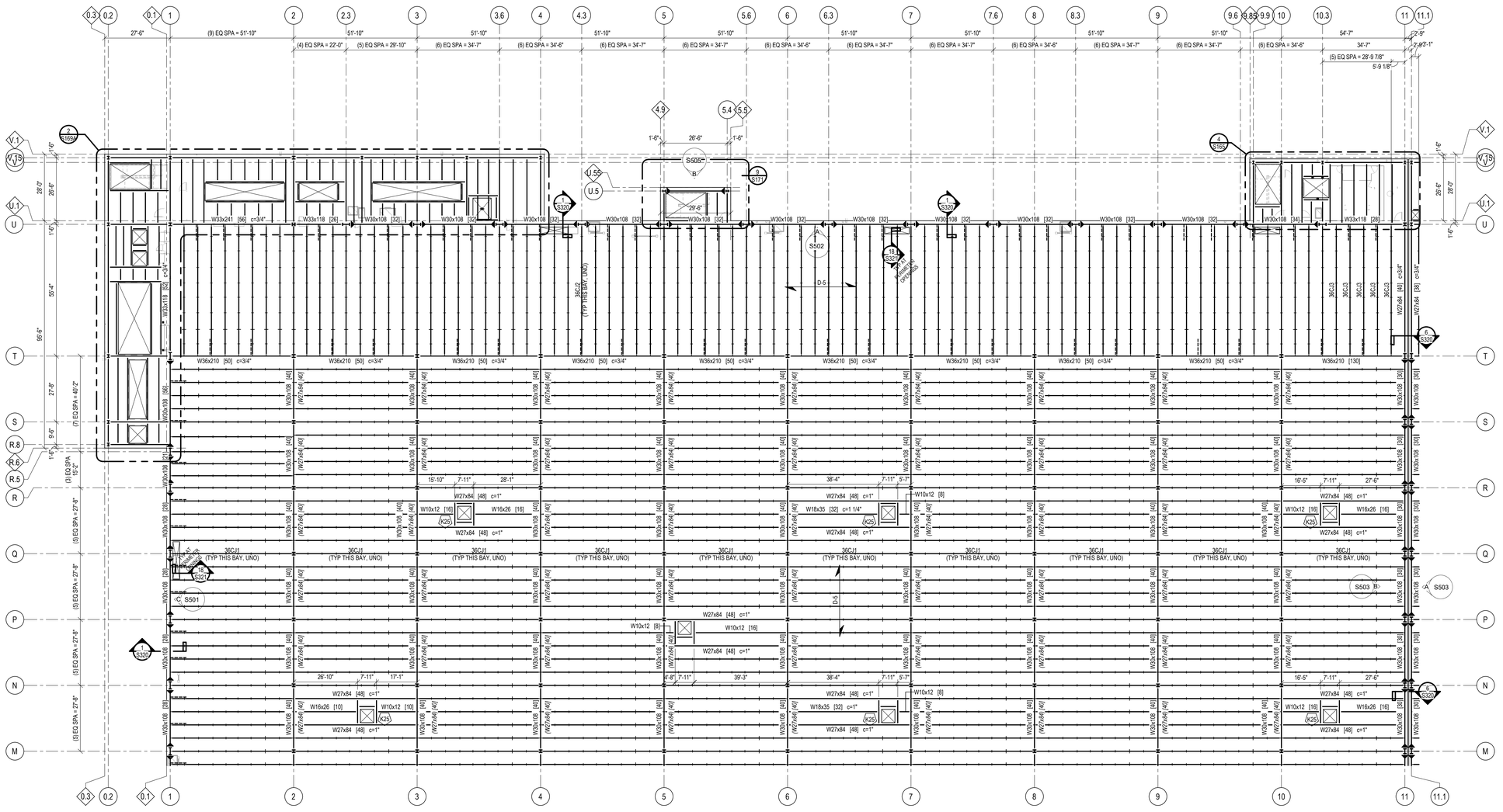
NOT FOR CONSTRUCTION

6/7/2024 8:46:03 AM

Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.
K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.
K25 SEE "TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



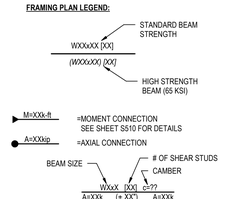
LEVEL 5 PARTIAL FRAMING PLAN C

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE SS10 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS, SEE S300 FOR TYPICAL EOS DIMENSION
11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. TSLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
16. "TICK MARKS" ON STEEL JOISTS INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE S105E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

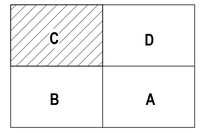
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

LEVEL 5 PARTIAL FRAMING PLAN C

SHEET NUMBER

S105C

NOT FOR CONSTRUCTION

6/7/2024 8:46:12 AM

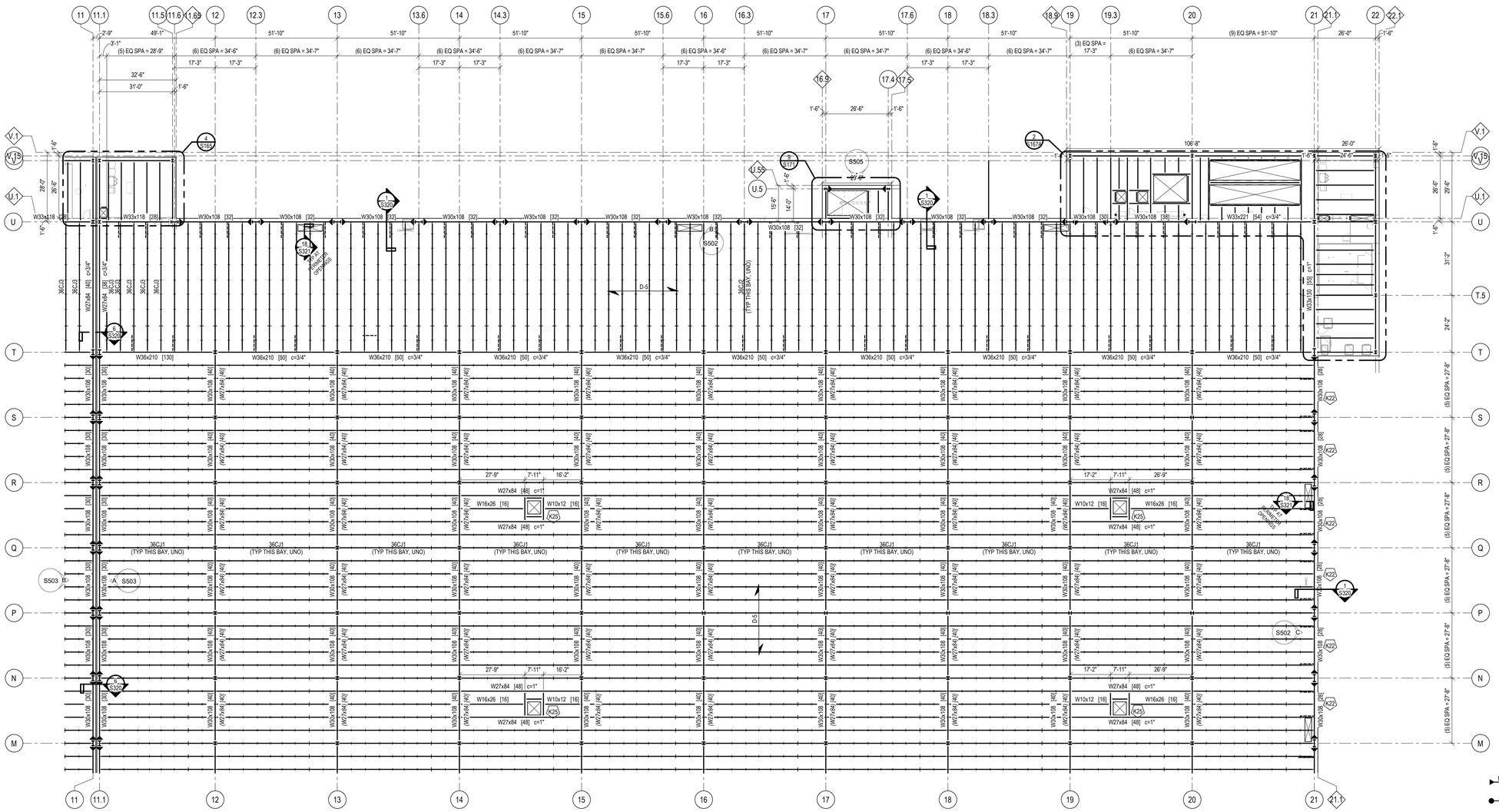
Schaefer Project Number: 24-0265

FLOOR FRAMING KEYNOTES

K21 SEE TYPICAL "FLOOR JOIST TOP CHORD TO COLUMN CONNECTION" DETAIL ON SHEET S301.

K22 BEAM BRACES -SEE "TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL" SHEET S301.

K25 SEE TYPICAL MECHANICAL FLOOR OPENING PLAN DETAIL" ON SHEET S301



LEVEL 5 PARTIAL FRAMING PLAN D

1" = 20'-0"

FLOOR FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
2. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE (INCLUDES COMPOSITE DECK SIZE & TYPE; STUD SIZE; & ELEVATED CONCRETE SLAB TYPE, THICKNESS AND REINFORCING).
4. SEE S300 FOR TYPICAL COMPOSITE BEAM & SLAB ON COMPOSITE METAL DECK DETAILS.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. SEE "TYPICAL RE-ENTRANT REINFORCEMENT DETAIL" ON S300 FOR REINFORCING AT ALL RE-ENTRANT CORNERS (INCLUDING SLAB OPENINGS).
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
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11. THE ELEVATED CONCRETE SLAB ON METAL DECK AT LEVELS 2-5 SHALL BE PLACED IN A MANNER TO ACHIEVE A LEVEL SLAB SURFACE. THE SUSPENDED FLOOR FRAMING HAS BEEN DESIGNED FOR AN ADDITIONAL UNIFORM 1/2 INCH PONDED CONCRETE ALLOWANCE..
12. THE ELEVATED CONCRETE SLAB ON METAL DECK AT STEEL BEAM-FRAMED PLATFORMS AND MEZZANINES SHALL BE PLACED IN A MANNER TO ACHIEVE A UNIFORM SLAB THICKNESS (OR, AT CONTRACTOR'S OPTION A "LEVEL" SLAB SURFACE MAY BE PLACED IN LIEU OF A UNIFORM SLAB THICKNESS).
13. SEE S301 FOR TYPICAL COMPOSITE FLOOR SLAB OPENING DETAILS.
14. TSLAB EL. UNLESS NOTED OTHERWISE ON PLAN:
    A. SLAM PLATFORM & DEFERRED PLATFORMS VARIES, SEE PLAN
    B. LEVEL 2 = 28'-1"
    C. LEVEL 3 = 42'-4"
    D. LEVEL 4 = 56'-7"
    E. LEVEL 5 = 70'-10"
15. AT PVC PIPE PENETRATIONS THRU THE FLOOR, PROVIDE CAST-IN-PLACE COLLAR IN FLOOR AT LOCATIONS NOTED ON ARCH DWGS. COLLAR SPECIFICATIONS ARE NOTED ON ARCH DWGS.
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17. BEAM AND GIRDER SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

FRAMING PLAN LEGEND:

STANDARD BEAM STRENGTH
WXXxXX [XX]
(WXXxXX) [XX]
HIGH STRENGTH BEAM (65 KSI)

M=XXk-ft =MOMENT CONNECTION SEE SHEET S510 FOR DETAILS

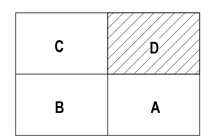
A=XXkip =AXIAL CONNECTION

BEAM SIZE — # OF SHEAR STUDS — CAMBER
WXxX [XX] c=??
A=XXk (+ XX') A=XXk
T/STEEL ELEVATION RELATIVE TO TYPICAL
BEAM OR JOIST AXIAL CONNECTION FORCE (TYP)

NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

TRUE NORTH

PROJECT NORTH

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

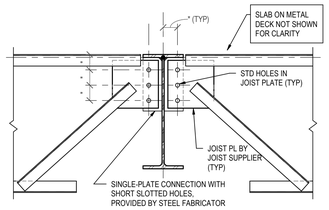
LEVEL 5 PARTIAL FRAMING PLAN D

SHEET NUMBER

S105D

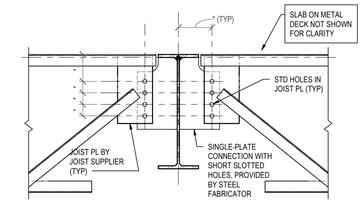
NOT FOR CONSTRUCTION

6/7/2024 8:48:21 AM



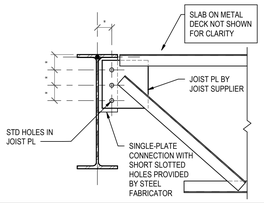
NOTES:
1. APPLICABLE TO INTERIOR GIRDER w/ 51'-10" NOMINAL JOIST SPAN ON BOTH SIDES OF GIRDER.
2. ASTERISK (*) INDICATES DIMENSION TO BE DETERMINED BY DELEGATED CONNECTION ENGINEER/STEEL FABRICATOR. COORDINATE DIMENSIONS WITH JOIST SUPPLIER.
3. JOIST SUPPLIER AND CONNECTION DESIGNER SHALL BASE DESIGN ASSUMPTIONS UPON CONVENTIONAL CONFIGURATION SINGLE-PLATE CONNECTIONS PER AISC SCM CHAPTER 9

COMPOSITE JOIST-TO-GIRDER INTERIOR RECESSED SHEAR TAB CONNECTION
3/4" = 1'-0"



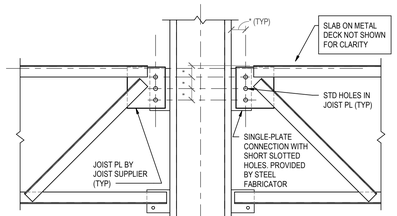
NOTES:
1. APPLICABLE TO INTERIOR GIRDER w/ 51'-10" NOMINAL JOIST SPAN ON BOTH SIDES OF GIRDER.
2. ASTERISK (*) INDICATES DIMENSION TO BE DETERMINED BY DELEGATED CONNECTION ENGINEER/STEEL FABRICATOR. COORDINATE DIMENSIONS WITH JOIST SUPPLIER.
3. JOIST SUPPLIER AND CONNECTION DESIGNER SHALL BASE DESIGN ASSUMPTIONS UPON EXTENDED CONFIGURATION SINGLE-PLATE CONNECTIONS PER AISC SCM CHAPTER 9, INCLUDING THE FOLLOWING ADDITIONAL REQUIREMENTS AT EXTENDED SHEAR TAB CONNECTIONS:
   A. BOLT LINE RESISTS MOMENT DUE TO ECCENTRICITY BETWEEN WELD AND BOLTS. DESIGN BOLT GROUP, JOIST PLATE, AND JOIST CHORD AND WEB MEMBERS TO RESIST ECCENTRICITY.
   B. PLATE THICKNESS SHALL BE LIMITED SUCH THAT PLATE MOMENT STRENGTH DOES NOT EXCEED MOMENT STRENGTH OF BOLT GROUP.

COMPOSITE JOIST-TO-GIRDER INTERIOR EXTENDED SHEAR TAB CONNECTION
3/4" = 1'-0"



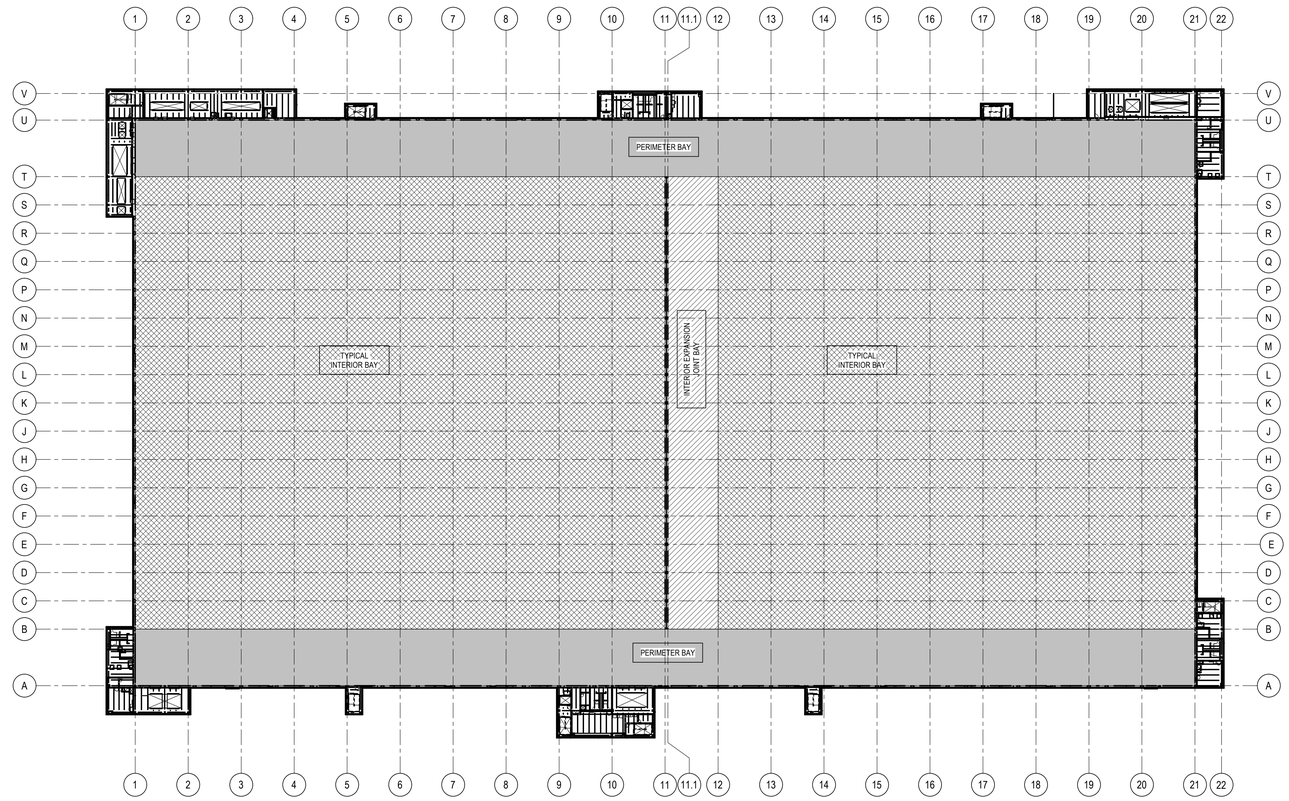
NOTES:
1. APPLICABLE TO PERIMETER GIRDERS & GIRDERS SUPPORTING JOISTS ON ONLY 1 SIDE.
2. ASTERISK (*) INDICATES DIMENSION TO BE DETERMINED BY DELEGATED CONNECTION ENGINEER/STEEL FABRICATOR. COORDINATE DIMENSIONS WITH JOIST SUPPLIER.
3. JOIST SUPPLIER AND CONNECTION DESIGNER SHALL BASE DESIGN ASSUMPTIONS UPON CONVENTIONAL CONFIGURATION SINGLE-PLATE CONNECTIONS PER AISC SCM CHAPTER 9, INCLUDING THE FOLLOWING. ADDITIONAL REQUIREMENTS AT UNBALANCED PERIMETER GIRDER SHEAR TAB CONNECTIONS (ALSO INCLUDING CONNECTIONS TO GIRDERS ALONG GRID LINES B & T):
   A. BOLT LINE RESISTS MOMENT DUE TO ECCENTRICITY BETWEEN WELD AND BOLTS. DESIGN BOLT GROUP, JOIST PLATE, AND JOIST CHORD AND WEB MEMBERS TO RESIST ECCENTRICITY.
   B. WHERE REQUIRED, PLATE THICKNESS SHALL BE LIMITED SUCH THAT PLATE MOMENT STRENGTH DOES NOT EXCEED MOMENT STRENGTH OF BOLT GROUP.

COMPOSITE JOIST-TO-GIRDER PERIMETER RECESSED SHEAR TAB CONNECTION
3/4" = 1'-0"

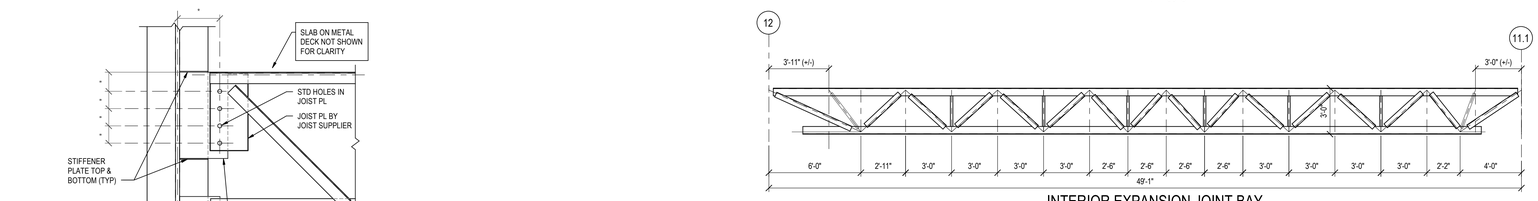


NOTES:
1. APPLICABLE TO INTERIOR & PERIMETER COLUMNS.
2. ASTERISK (*) INDICATES DIMENSION TO BE DETERMINED DELEGATED CONNECTION ENGINEER/STEEL FABRICATOR. COORDINATE DIMENSIONS WITH JOIST SUPPLIER.
3. JOIST SUPPLIER AND CONNECTION DESIGNER SHALL BASE DESIGN ASSUMPTIONS UPON EXTENDED CONFIGURATION SINGLE-PLATE CONNECTIONS PER AISC SCM CHAPTER 9

COMPOSITE JOIST-TO-COLUMN FLANGE SHEAR TAB CONNECTION
3/4" = 1'-0"

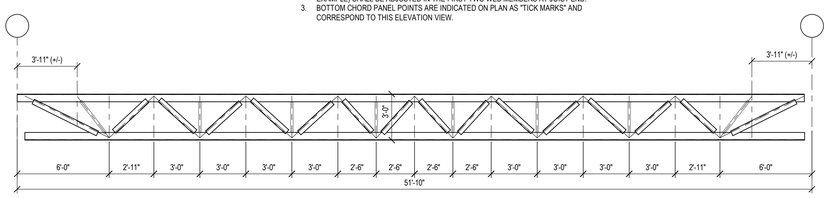


FLOOR JOIST KEYPLAN
1" = 60'-0"



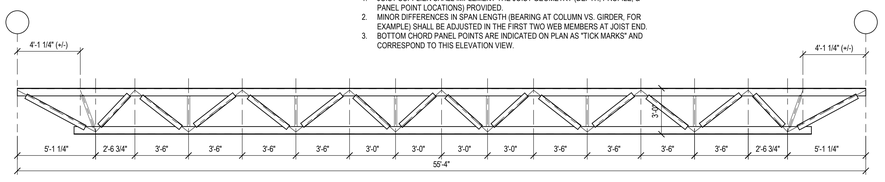
INTERIOR EXPANSION JOINT BAY
1/4" = 1'-0"

NOTES:
1. JOIST SUPPLIER SHALL IMPLEMENT THE JOIST GEOMETRY (DEPTH, PROFILE, & PANEL POINT LOCATIONS) PROVIDED.
2. MINOR DIFFERENCES IN SPAN LENGTH (BEARING AT COLUMN VS. GIRDER, FOR EXAMPLE) SHALL BE ADJUSTED IN THE FIRST TWO WEB MEMBERS AT JOIST END.
3. BOTTOM CHORD PANEL POINTS ARE INDICATED ON PLAN AS "TICK MARKS" AND CORRESPOND TO THIS ELEVATION VIEW.



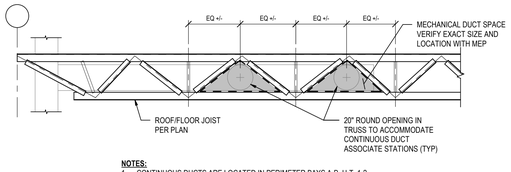
TYPICAL INTERIOR BAY
1/4" = 1'-0"

NOTES:
1. JOIST SUPPLIER SHALL IMPLEMENT THE JOIST GEOMETRY (DEPTH, PROFILE, & PANEL POINT LOCATIONS) PROVIDED.
2. MINOR DIFFERENCES IN SPAN LENGTH (BEARING AT COLUMN VS. GIRDER, FOR EXAMPLE) SHALL BE ADJUSTED IN THE FIRST TWO WEB MEMBERS AT JOIST END.
3. BOTTOM CHORD PANEL POINTS ARE INDICATED ON PLAN AS "TICK MARKS" AND CORRESPOND TO THIS ELEVATION VIEW.



PERIMETER BAY
1/4" = 1'-0"

NOTES:
1. JOIST SUPPLIER SHALL IMPLEMENT THE JOIST GEOMETRY (DEPTH, PROFILE, & PANEL POINT LOCATIONS) PROVIDED.
2. MINOR DIFFERENCES IN SPAN LENGTH (BEARING AT COLUMN VS. GIRDER, FOR EXAMPLE) SHALL BE ADJUSTED IN THE FIRST TWO WEB MEMBERS AT JOIST END.
3. BOTTOM CHORD PANEL POINTS ARE INDICATED ON PLAN AS "TICK MARKS" AND CORRESPOND TO THIS ELEVATION VIEW.



NOTES:
1. APPLICABLE TO INTERIOR & PERIMETER COLUMNS.
2. ASTERISK (*) INDICATES DIMENSION TO BE DETERMINED BY DELEGATED CONNECTION ENGINEER/STEEL FABRICATOR. COORDINATE DIMENSIONS WITH JOIST SUPPLIER.
3. JOIST SUPPLIER AND CONNECTION DESIGNER SHALL BASE DESIGN ASSUMPTIONS UPON EXTENDED CONFIGURATION SINGLE-PLATE CONNECTIONS PER AISC SCM CHAPTER 9, INCLUDING THE FOLLOWING ADDITIONAL REQUIREMENTS AT UNBALANCED PERIMETER COLUMN SHEAR TAB CONNECTIONS (ALSO INCLUDING CONNECTIONS TO COLUMNS ALONG GRID LINES B & T):
   A. BOLT LINE RESISTS MOMENT DUE TO ECCENTRICITY BETWEEN WELD AND BOLTS. DESIGN BOLT GROUP, JOIST PLATE, AND JOIST CHORD AND WEB MEMBERS TO RESIST ECCENTRICITY.
   B. PLATE THICKNESS SHALL BE LIMITED SUCH THAT PLATE MOMENT STRENGTH DOES NOT EXCEED MOMENT STRENGTH OF BOLT GROUP.

COMPOSITE JOIST-TO-COLUMN WEB RECESSED SHEAR TAB CONNECTION
3/4" = 1'-0"

NOTES:
1. APPLICABLE TO INTERIOR & PERIMETER COLUMNS.
2. ASTERISK (*) INDICATES DIMENSION TO BE DETERMINED BY DELEGATED CONNECTION ENGINEER/STEEL FABRICATOR. COORDINATE DIMENSIONS WITH JOIST SUPPLIER.
3. JOIST SUPPLIER AND CONNECTION DESIGNER SHALL BASE DESIGN ASSUMPTIONS UPON EXTENDED CONFIGURATION SINGLE-PLATE CONNECTIONS PER AISC SCM CHAPTER 9, INCLUDING THE FOLLOWING ADDITIONAL REQUIREMENTS AT UNBALANCED PERIMETER COLUMN SHEAR TAB CONNECTIONS (ALSO INCLUDING CONNECTIONS TO COLUMNS ALONG GRID LINES B & T):
   A. BOLT LINE RESISTS MOMENT DUE TO ECCENTRICITY BETWEEN WELD AND BOLTS. DESIGN BOLT GROUP, JOIST PLATE, AND JOIST CHORD AND WEB MEMBERS TO RESIST ECCENTRICITY.
   B. PLATE THICKNESS SHALL BE LIMITED SUCH THAT PLATE MOMENT STRENGTH DOES NOT EXCEED MOMENT STRENGTH OF BOLT GROUP.

COMPOSITE JOIST-TO-COLUMN WEB EXTENDED SHEAR TAB CONNECTION
3/4" = 1'-0"

NOTES:
1. CONTINUOUS DUCTS ARE LOCATED IN PERIMETER BAYS A-B, U-T, 1-2, AND 20-21. EXACT EXTENTS AND LOCATIONS OF CONTINUOUS DUCTS WITHIN THOSE BATS VARY, REFER TO MEP DRAWINGS

TYPICAL JOIST AT PERIMETER FLOOR
1/4" = 1'-0"

Schaefer Project Number: 24-0265

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

FLOOR JOIST ELEVATIONS AND KEYPLAN

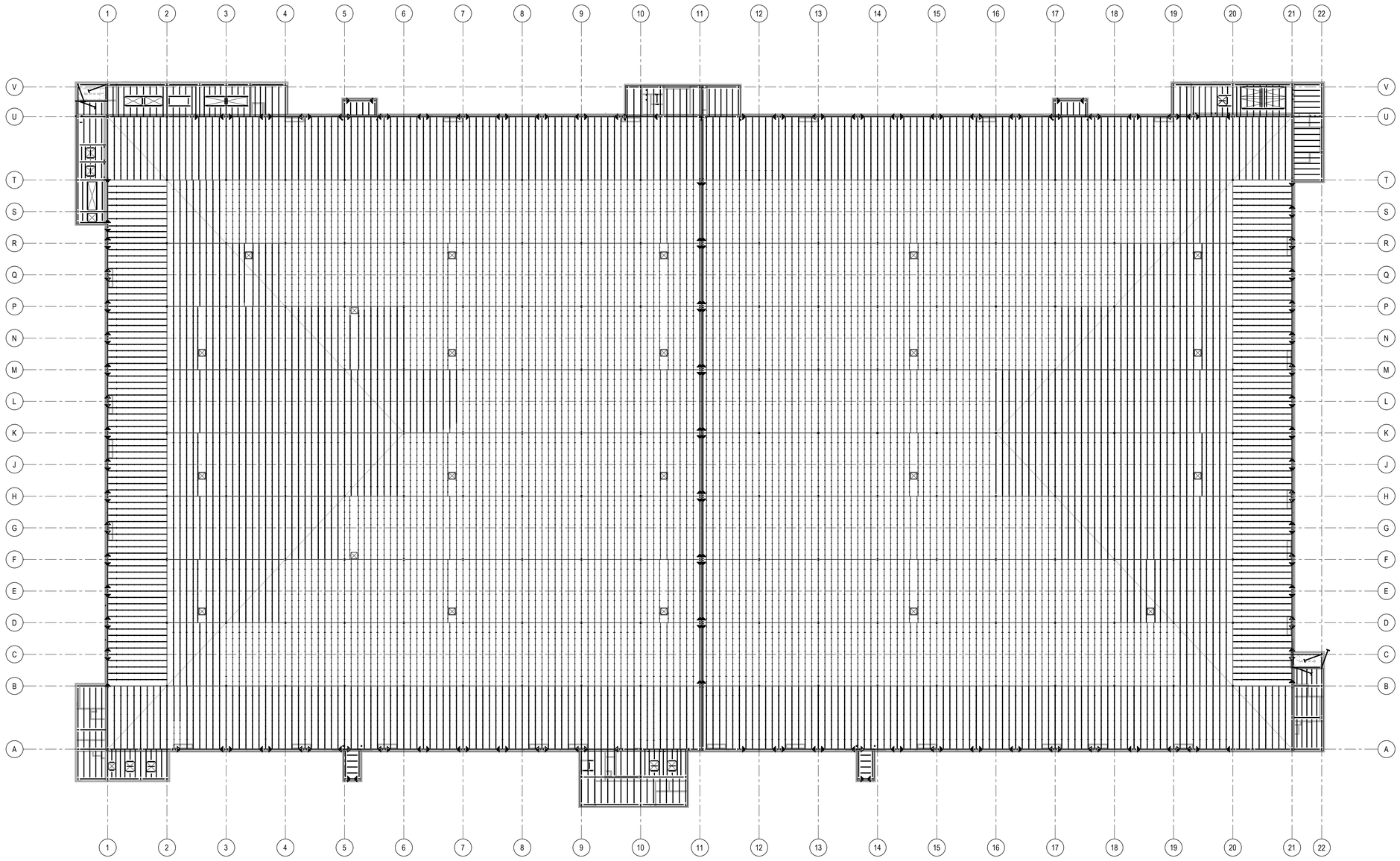
SHEET NUMBER

S105E

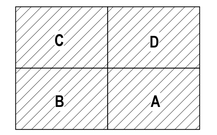
NOT FOR CONSTRUCTION

6/7/2024 8:46:56 AM

Schaefer Project Number: 24-0265



OVERALL ROOF FRAMING PLAN
1" = 40'-0"



KEY PLAN
NTS

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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE SITE BEFORE PROCEEDING WITH EACH PHASE OF HIS WORK.

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ROOF OVERALL FRAMING PLAN

SHEET NUMBER

S106

NOT FOR CONSTRUCTION

6/7/2024 8:47:27 AM

Schaefer Project Number: 24-0265

ROOF FRAMING KEYNOTES

K41 PLACE D-1 AS DEFINED ON SHEET S401 TYPICAL IN HATCHED AREA, (3) SPAN MINIMUM. VERIFY JOIST SPACING w/ ARCH & MEP
K42 PROVIDE SUPPLEMENTAL FRAMING TO SUPPORT RTU PER TYPICAL DETAILS ON SHEET S310. JOIST MFR TO DESIGN JOIST AND JOIST GIRDERS FOR RTU LOADS SHOWN IN RTU LOADING SCHEDULE ON SHEET S401. COORDINATE FINAL EQUIPMENT SIZE, LOCATION AND WEIGHT WITH MEP DRAWINGS. NOTIFY ENGINEER OF RECORD IF SIZE OR LOCATION OF THE RTU VARIES FROM WHAT IS SHOWN.
K43 SEE LEGEND ON SHEET S011 FOR REQUIRED ADD LOAD
K44 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 5300 IN^4.
K45 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6000 IN^4.
K46 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6900 IN^4.
K47 DRIFT ON RTU OVERLAPS WITH DRIFT ON PARAPET. TAKE HIGHER OF THE TWO Pd VALUES AND APPLY AS A UNIFORM LOAD FROM RTU TO PARAPET.
K48 DESIGN JOIST FOR ADDITIONAL 9K (ASD) AXIAL LOAD AND ADDITIONAL 9K (ASD) REVERSIBLE VERTICAL POINT LOAD AT KICKER. REF SECTION 17/S330.

ROOF PARTIAL FRAMING PLAN A

1" = 20'-0"

ROOF FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
2. SEE FOUNDATION PLAN FOR COLUMN SIZING. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE .
4. SEE S310 FOR "TYPICAL ROOF OPENING EDGE" DETAILS, "TYPICAL ROOF MECHANICAL UNIT SUPPORT" DETAIL, AND "TYPICAL SUPPORT OF CONCENTRATED LOADS NOT AT JOIST PANEL POINTS" DETAIL.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. FINAL SIZE, WEIGHT, & LOCATION OF ROOF TOP SUPPORTED MECHANICAL UNITS SHALL BE COORDINATED w/ STRUCTURAL ENGINEER PRIOR TO SHOP DRAWING CREATION.
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. AT LOCATIONS WHERE ROOF DECK CHANGES DIRECTION OVER JOIST GIRDER, PROVIDE HSS BETWEEN JOIST SEATS TO SUPPORT DECK PER "TYPICAL ROOF DECK TRANSITION AT JOIST GIRDER" DETAIL ON S310.
11. SEE SHEET S402 FOR JOIST LOADING SCHEDULE AND DIAGRAM.
12. DESIGN STEEL JOISTS SUPPORTING RTU's AND SPRINKLER MAINS FOR LOADS INDICATED BY JOIST DESIGNATION AND/OR SPECIAL JOIST LOADING DIAGRAM + RTU & SPRINKLER LOADS. COORDINATE RTU & SPRINKLER SIZE, WEIGHT & LOCATION w/ MEP & SPRINKLER DWGS. JOIST MANUFACTURER SHALL ALSO DISTRIBUTE ALL RTU & SPRINKLER LOADS TO JOIST GIRDER PANEL POINTS (JOIST GIRDER DESIGNATION SHOWN ON PLAN DOES NOT INCLUDE POINT LOADS DUE TO RTU'S OR SPRINKLER MAINS ACTING ON SUPPORTED BAR JOISTS).
13. FABRICATE ALL JOISTS AND JOIST GIRDERS w/ SJI RECOMMENDED CAMBER.
14. COORDINATE LOCATIONS OF JOIST BRIDGING, SPRINKLER BRANCH LINES, AND SPRINKLER MAINS TO PROVIDE MINIMUM REQUIRED CLEARANCES.
15. DESIGN STEEL JOISTS AT OFFICE TO NOT EXCEED L/360 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION. OFFICE LOCATION OCCURS BETWEEN GRIDLINES U.1 & W.2. ALL OTHER JOISTS AND JOIST GIRDERS MAY BE DESIGNED TO NOT EXCEED L/240 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION (UNLESS NOTED OTHERWISE). INCLUDE 5 PSF FUTURE SOLAR PANEL ALLOWANCE IN ALL ROOF LIVE LOAD AND SNOW LOAD DEFLECTION CALCULATIONS.
16. "TICK MARKS" ON STEEL JOIST INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE SHEET S106E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. MINIMUM DOWNWARD COMPONENTS AND CLADDING WIND PRESSURES HAVE BEEN ACCOUNTED FOR IN ROOF JOIST DESIGNATIONS.
18. TOP OF STEEL ELEVATION SHALL BE BOTTOM OF DECK ELEVATION FOR BEAMS THAT DO NOT HAVE ANY JOISTS THAT BEAR ON TOP.
19. MEP AND TELECOMMUNICATION CONTRACTORS TO COORDINATE WITH STRUCTURAL STEEL FABRICATOR REGARDING ATTACHMENT OF ROOFTOP MOUNTED EQUIPMENT TO ROOF STRUCTURE FRAMING. PROVIDE DELEGATED DESIGN SUBMITTALS OF ANCHORAGE AND CONNECTIONS OF ROOFTOP MOUNTED MEP AND TELECOMMUNICATIONS ITEMS FOR REVIEW PRIOR TO INSTALLATION.

FRAMING PLAN LEGEND:

STANDARD BEAM STRENGTH
W(XXxXX) [XX]
(WXXxXX) [XX]
HIGH STRENGTH BEAM (65 KSI)

M=XXk-ft =MOMENT CONNECTION SEE SHEET S310 FOR DETAILS
A=XXXkip =AXIAL CONNECTION

BEAM SIZE
OF SHEAR STUDS
CAMBER
W(XXX [XX] (± XX") A=XXX
c="?
A=XXX
T/STEEL ELEVATION RELATIVE TO TYPICAL
BEAM OR JOIST AXIAL CONNECTION FORCE (TYP)

NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

----- = INDICATES BEAM BOTTOM FLANGE BRACING. SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.

KEY PLAN
NTS

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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ROOF PARTIAL FRAMING PLAN A

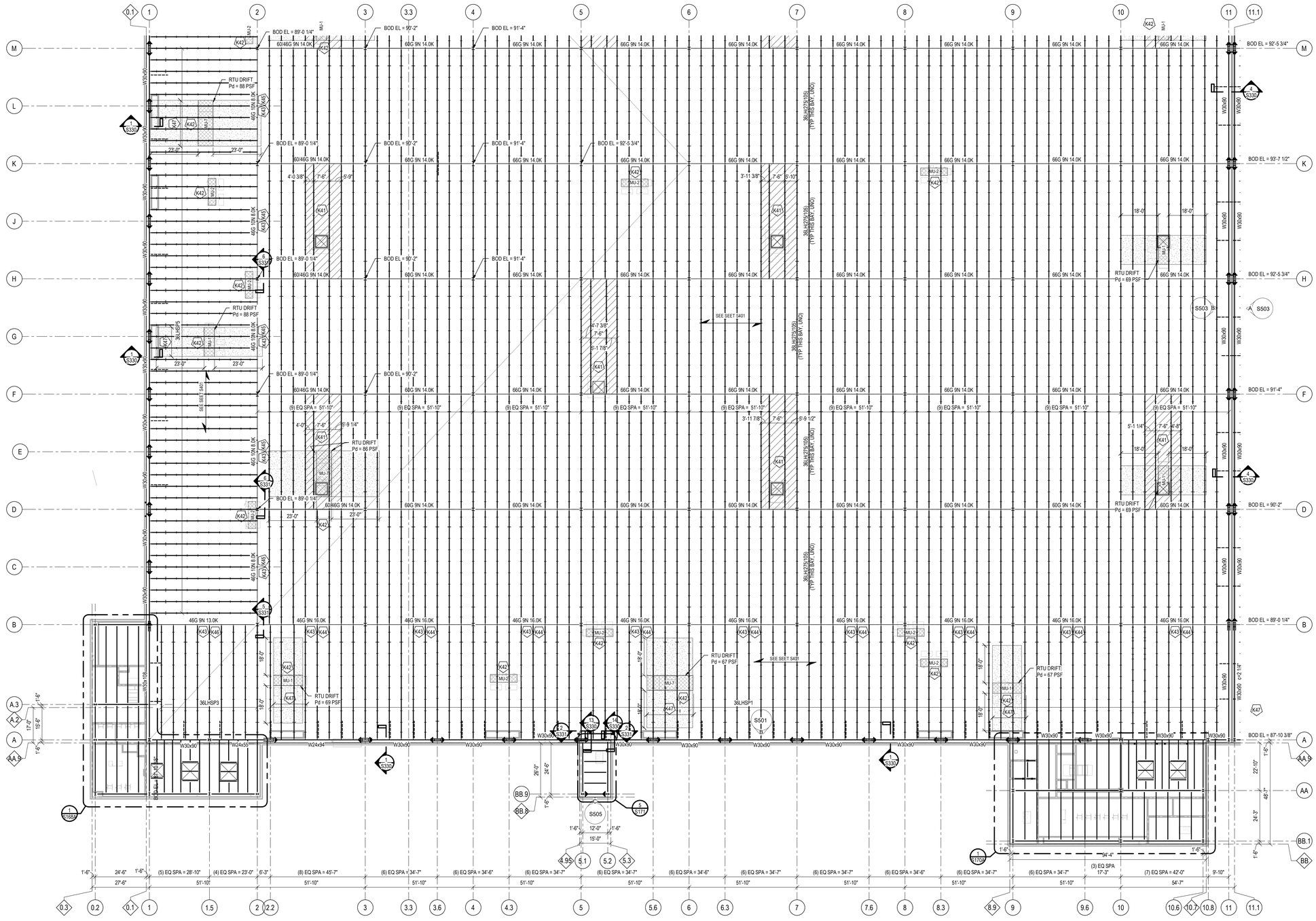
SHEET NUMBER

S106A

NOT FOR CONSTRUCTION

6/7/2024 8:47:37 AM

Schaefer Project Number: 24-0265



ROOF PARTIAL FRAMING PLAN B

1" = 20'-0"

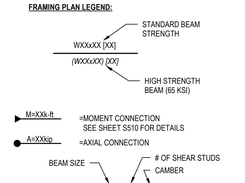
ROOF FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
2. SEE FOUNDATION PLAN FOR COLUMN SIZING. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE.
4. SEE S310 FOR "TYPICAL ROOF OPENING EDGE" DETAILS, "TYPICAL ROOF MECHANICAL UNIT SUPPORT" DETAIL, AND "TYPICAL SUPPORT OF CONCENTRATED LOADS NOT AT JOIST PANEL POINTS" DETAIL.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. FINAL SIZE, WEIGHT, & LOCATION OF ROOF TOP SUPPORTED MECHANICAL UNITS SHALL BE COORDINATED w/ STRUCTURAL ENGINEER PRIOR TO SHOP DRAWING CREATION.
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. AT LOCATIONS WHERE ROOF DECK CHANGES DIRECTION OVER JOIST GIRDER, PROVIDE HSS BETWEEN JOIST SEATS TO SUPPORT DECK PER "TYPICAL ROOF DECK TRANSITION AT JOIST GIRDER" DETAIL ON S310.
11. SEE SHEET S402 FOR JOIST LOADING SCHEDULE AND DIAGRAM.
12. DESIGN STEEL JOISTS SUPPORTING RTU's AND SPRINKLER MAINS FOR LOADS INDICATED BY JOIST DESIGNATION AND/OR SPECIAL JOIST LOADING DIAGRAM + RTU & SPRINKLER LOADS. COORDINATE RTU & SPRINKLER SIZE, WEIGHT & LOCATION w/ MEP & SPRINKLER DWGS. JOIST MANUFACTURER SHALL ALSO DISTRIBUTE ALL RTU & SPRINKLER LOADS TO JOIST GIRDER PANEL POINTS (JOIST GIRDER DESIGNATION SHOWN ON PLAN DOES NOT INCLUDE POINT LOADS DUE TO RTU'S OR SPRINKLER MAINS ACTING ON SUPPORTED BAR JOISTS).
13. FABRICATE ALL JOISTS AND JOIST GIRDERS w/ SJI RECOMMENDED CAMBER.
14. COORDINATE LOCATIONS OF JOIST BRIDGING, SPRINKLER BRANCH LINES, AND SPRINKLER MAINS TO PROVIDE MINIMUM REQUIRED CLEARANCES.
15. DESIGN STEEL JOISTS AT OFFICE TO NOT EXCEED L/360 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION. OFFICE LOCATION OCCURS BETWEEN GRIDLINES U.1 & W.2. ALL OTHER JOISTS AND JOIST GIRDERS MAY BE DESIGNED TO NOT EXCEED L/240 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION (UNLESS NOTED OTHERWISE). INCLUDE 5 PSF FUTURE SOLAR PANEL ALLOWANCE IN ALL ROOF LIVE LOAD AND SNOW LOAD DEFLECTION CALCULATIONS.
16. "TICK MARKS" ON STEEL JOIST INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE SHEET S106E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. MINIMUM DOWNWARD COMPONENTS AND CLADDING WIND PRESSURES HAVE BEEN ACCOUNTED FOR IN ROOF JOIST DESIGNATIONS.
18. TOP OF STEEL ELEVATION SHALL BE BOTTOM OF DECK ELEVATION FOR BEAMS THAT DO NOT HAVE ANY JOISTS THAT BEAR ON TOP
19. MEP AND TELECOMMUNICATION CONTRACTORS TO COORDINATE WITH STRUCTURAL STEEL FABRICATOR REGARDING ATTACHMENT OF ROOFTOP MOUNTED EQUIPMENT TO ROOF STRUCTURE FRAMING. PROVIDE DELEGATED DESIGN SUBMITTALS OF ANCHORAGE AND CONNECTIONS OF ROOFTOP MOUNTED MEP AND TELECOMMUNICATIONS ITEMS FOR REVIEW PRIOR TO INSTALLATION.

ROOF FRAMING KEYNOTES

K41 PLACE D-1 AS DEFINED ON SHEET S401 TYPICAL IN HATCHED AREA, (3) SPAN MINIMUM. VERIFY JOIST SPACING w/ ARCH & MEP
K42 PROVIDE SUPPLEMENTAL FRAMING TO SUPPORT RTU PER TYPICAL DETAILS ON SHEET S310. JOIST MFR TO DESIGN JOIST AND JOIST GIRDERS FOR RTU LOADS SHOWN IN RTU LOADING SCHEDULE ON SHEET S401. COORDINATE FINAL EQUIPMENT SIZE, LOCATION AND WEIGHT WITH MEP DRAWINGS. NOTIFY ENGINEER OF RECORD IF SIZE OR LOCATION OF THE RTU VARIES FROM WHAT IS SHOWN.
K43 SEE LEGEND ON SHEET S011 FOR REQUIRED ADD LOAD
K44 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 9300 IN^4.
K45 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6000 IN^4.
K46 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6900 IN^4.
K47 DRIFT ON RTU OVERLAPS WITH DRIFT ON PARAPET. TAKE HIGHER OF THE TWO Pd VALUES AND APPLY AS A UNIFORM LOAD FROM RTU TO PARAPET.
K48 DESIGN JOIST FOR ADDITIONAL 9K (ASD) AXIAL LOAD AND ADDITIONAL 9K (ASD) REVERSIBLE VERTICAL POINT LOAD AT KICKER. REF SECTION 17/S330.

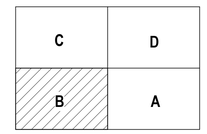
FRAMING PLAN LEGEND:



NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ROOF PARTIAL FRAMING PLAN B

SHEET NUMBER

S106B

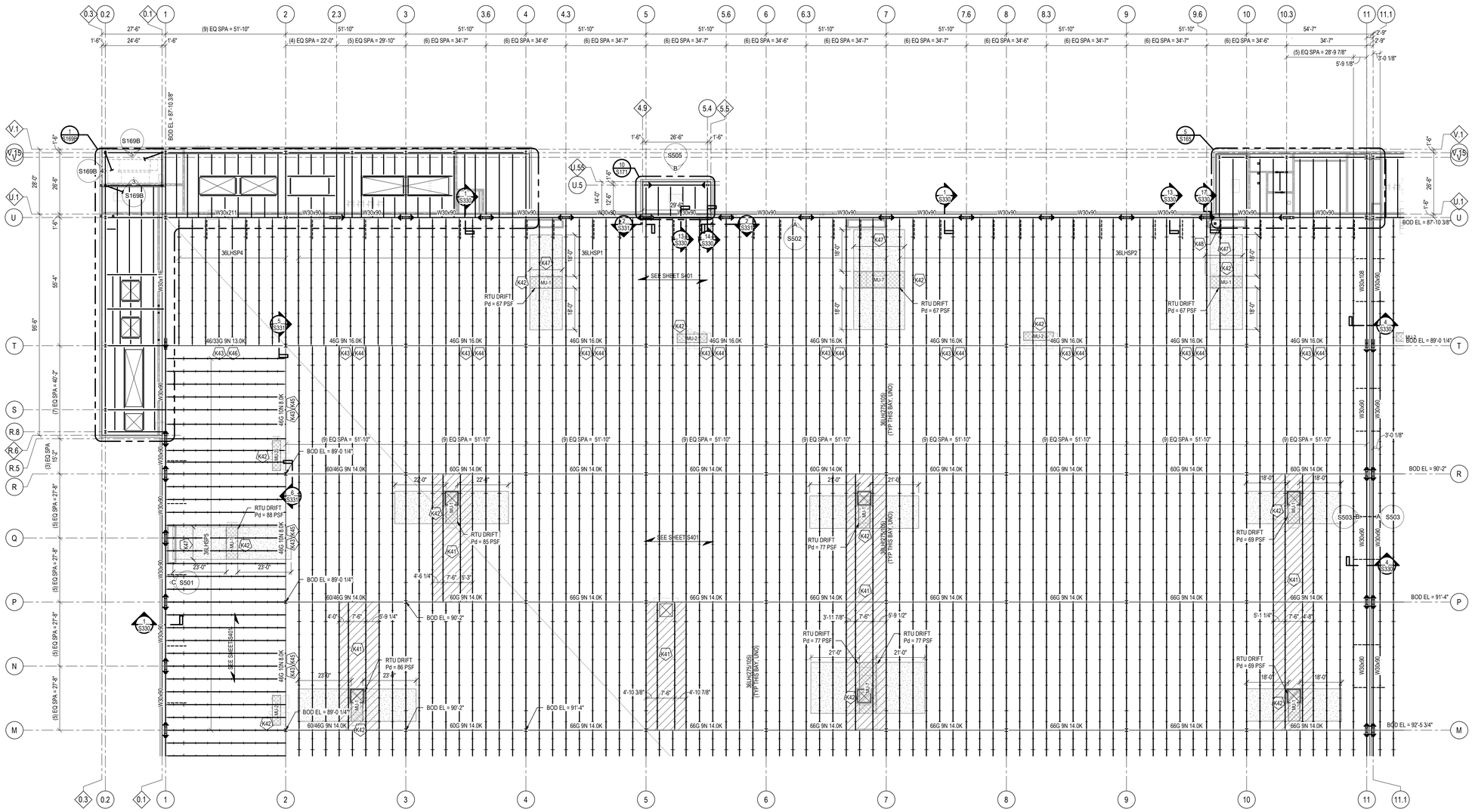
NOT FOR CONSTRUCTION

6/7/2024 8:47:47 AM

Schaefer Project Number: 24-0265

ROOF FRAMING KEYNOTES

K41 PLACE D-1 AS DEFINED ON SHEET S401 TYPICAL IN HATCHED AREA, (3) SPAN MINIMUM. VERIFY JOIST SPACING w/ ARCH & MEP
K42 PROVIDE SUPPLEMENTAL FRAMING TO SUPPORT RTU PER TYPICAL DETAILS ON SHEET S310. JOIST MFR TO DESIGN JOIST AND JOIST GIRDERS FOR RTU LOADS SHOWN IN RTU LOADING SCHEDULE ON SHEET S401. COORDINATE FINAL EQUIPMENT SIZE, LOCATION AND WEIGHT WITH MEP DRAWINGS. NOTIFY ENGINEER OF RECORD IF SIZE OR LOCATION OF THE RTU VARIES FROM WHAT IS SHOWN.
K43 SEE LEGEND ON SHEET S011 FOR REQUIRED ADD LOAD
K44 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 9300 IN^4.
K45 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6000 IN^4.
K46 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6900 IN^4.
K47 DRIFT ON RTU OVERLAPS WITH DRIFT ON PARAPET. TAKE HIGHER OF THE TWO Pd VALUES AND APPLY AS A UNIFORM LOAD FROM RTU TO PARAPET.
K48 DESIGN JOIST FOR ADDITIONAL 9K (ASD) AXIAL LOAD AND ADDITIONAL 9K (ASD) REVERSIBLE VERTICAL POINT LOAD AT KICKER. REF SECTION 17/S330.



ROOF PARTIAL FRAMING PLAN C

1" = 20'-0"

ROOF FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
2. SEE FOUNDATION PLAN FOR COLUMN SIZING. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE .
4. SEE S310 FOR "TYPICAL ROOF OPENING EDGE" DETAILS, "TYPICAL ROOF MECHANICAL UNIT SUPPORT" DETAIL, AND "TYPICAL SUPPORT OF CONCENTRATED LOADS NOT AT JOIST PANEL POINTS" DETAIL.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. FINAL SIZE, WEIGHT, & LOCATION OF ROOF TOP SUPPORTED MECHANICAL UNITS SHALL BE COORDINATED w/ STRUCTURAL ENGINEER PRIOR TO SHOP DRAWING CREATION.
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
9. FABRICATOR SHALL PROVIDE BEAM & GIRDER WEB PENETRATIONS FOR SPRINKLER PIPING WHERE REQUIRED. COORDINATE WITH FIRE PROTECTION DRAWINGS AND TYPICAL BEAM WEB PENETRATION DETAIL ON S301.
10. AT LOCATIONS WHERE ROOF DECK CHANGES DIRECTION OVER JOIST GIRDER, PROVIDE HSS BETWEEN JOIST SEATS TO SUPPORT DECK PER "TYPICAL ROOF DECK TRANSITION AT JOIST GIRDER" DETAIL ON S310.
11. SEE SHEET S402 FOR JOIST LOADING SCHEDULE AND DIAGRAM.
12. DESIGN STEEL JOISTS SUPPORTING RTU's AND SPRINKLER MAINS FOR LOADS INDICATED BY JOIST DESIGNATION AND/OR SPECIAL JOIST LOADING DIAGRAM + RTU & SPRINKLER LOADS. COORDINATE RTU & SPRINKLER SIZE, WEIGHT & LOCATION w/ MEP & SPRINKLER DWGS. JOIST MANUFACTURER SHALL ALSO DISTRIBUTE ALL RTU & SPRINKLER LOADS TO JOIST GIRDER PANEL POINTS (JOIST GIRDER DESIGNATION SHOWN ON PLAN DOES NOT INCLUDE POINT LOADS DUE TO RTU'S OR SPRINKLER MAINS ACTING ON SUPPORTED BAR JOISTS).
13. FABRICATE ALL JOISTS AND JOIST GIRDERS w/ SJI RECOMMENDED CAMBER.
14. COORDINATE LOCATIONS OF JOIST BRIDGING, SPRINKLER BRANCH LINES, AND SPRINKLER MAINS TO PROVIDE MINIMUM REQUIRED CLEARANCES.
15. DESIGN STEEL JOISTS AT OFFICE TO NOT EXCEED L/360 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION. OFFICE LOCATION OCCURS BETWEEN GRIDLINES U.1 & W.2. ALL OTHER JOISTS AND JOIST GIRDERS MAY BE DESIGNED TO NOT EXCEED L/240 ROOF LIVE LOAD OR SNOW LOAD DEFLECTION (UNLESS NOTED OTHERWISE). INCLUDE 5 PSF FUTURE SOLAR PANEL ALLOWANCE IN ALL ROOF LIVE LOAD AND SNOW LOAD DEFLECTION CALCULATIONS.
16. "TICK MARKS" ON STEEL JOIST INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE SHEET S106E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
17. MINIMUM DOWNWARD COMPONENTS AND CLADDING WIND PRESSURES HAVE BEEN ACCOUNTED FOR IN ROOF JOIST DESIGNATIONS.
18. TOP OF STEEL ELEVATION SHALL BE BOTTOM OF DECK ELEVATION FOR BEAMS THAT DO NOT HAVE ANY JOISTS THAT BEAR ON TOP.
19. MEP AND TELECOMMUNICATION CONTRACTORS TO COORDINATE WITH STRUCTURAL STEEL FABRICATOR REGARDING ATTACHMENT OF ROOFTOP MOUNTED EQUIPMENT TO ROOF STRUCTURE FRAMING. PROVIDE DELEGATED DESIGN SUBMITTALS OF ANCHORAGE AND CONNECTIONS OF ROOFTOP MOUNTED MEP AND TELECOMMUNICATIONS ITEMS FOR REVIEW PRIOR TO INSTALLATION.

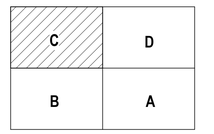
FRAMING PLAN LEGEND:

WXXxXX [XX] / (WXXxXX) [XX] — STANDARD BEAM STRENGTH / HIGH STRENGTH BEAM (65 KSI)
M=XXk-ft =MOMENT CONNECTION SEE SHEET S510 FOR DETAILS
A=XXkip =AXIAL CONNECTION
BEAM SIZE — # OF SHEAR STUDS — CAMBER — WXxX (XX) c=?? — A=XXk (± XX^) A=XXk
T/STEEL ELEVATION RELATIVE TO TYPICAL
BEAM OR JOIST AXIAL CONNECTION FORCE (TYP)

NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ROOF PARTIAL FRAMING PLAN C

SHEET NUMBER

S106C

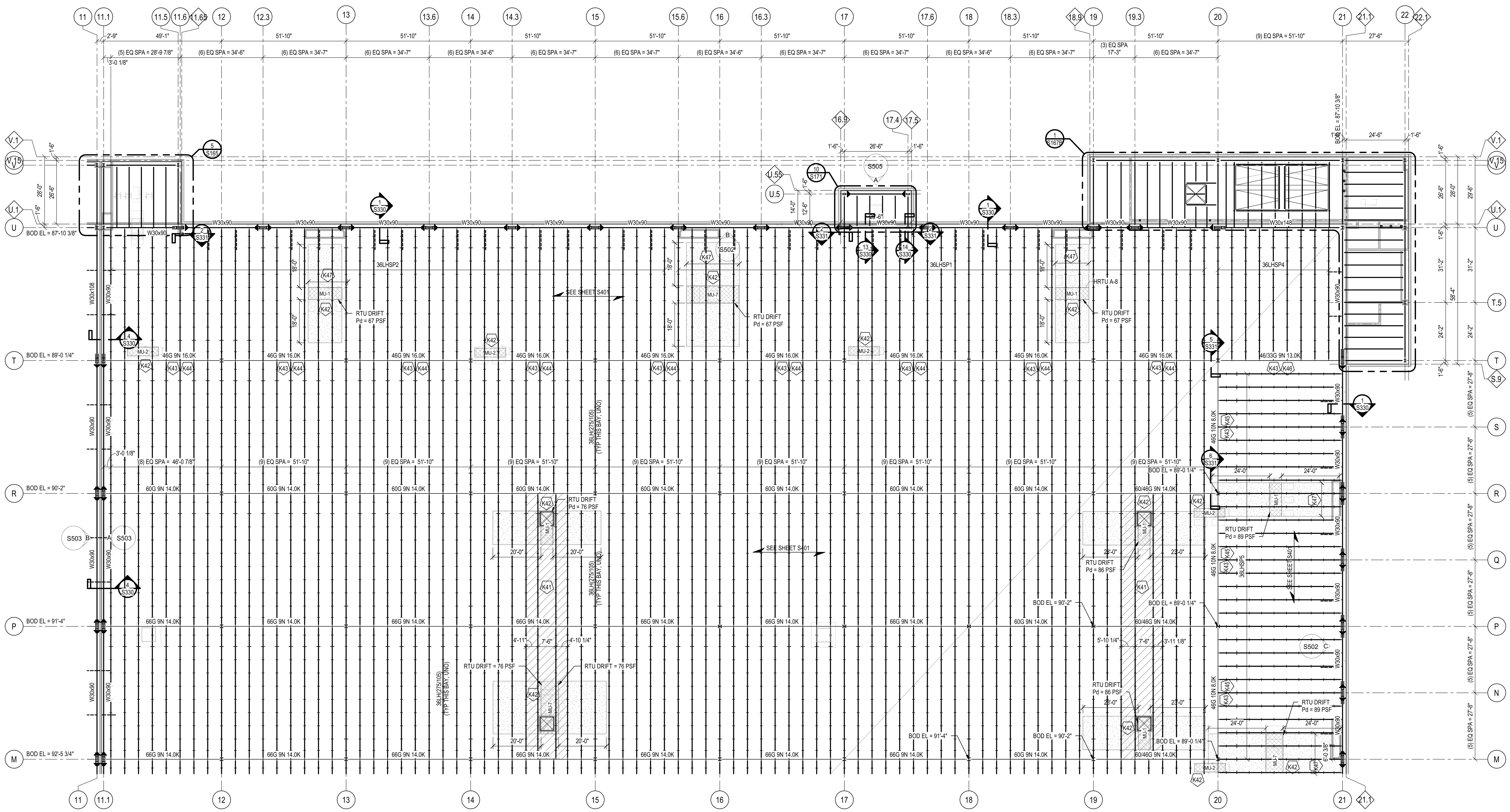
NOT FOR CONSTRUCTION

6/7/2024 8:47:57 AM

Schaefer Project Number: 24-0265

ROOF FRAMING KEYNOTES

- K41 PLACE D-1 AS DEFINED ON SHEET S401 TYPICAL IN HATCHED AREA, (3) SPAN MINIMUM. VERIFY JOIST SPACING w/ ARCH & MEP
- K42 PROVIDE SUPPLEMENTAL FRAMING TO SUPPORT RTU PER TYPICAL DETAILS ON SHEET S310. JOIST MFR TO DESIGN JOIST AND JOIST GIRDERS FOR RTU LOADS SHOWN IN RTU LOADING SCHEDULE ON SHEET S401. COORDINATE FINAL EQUIPMENT SIZE, LOCATION AND WEIGHT WITH MEP DRAWINGS. NOTIFY ENGINEER OF RECORD IF SIZE OR LOCATION OF THE RTU VARIES FROM WHAT IS SHOWN.
- K43 SEE LEGEND ON SHEET S011 FOR REQUIRED ADD LOAD
- K44 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 9300 IN^4.
- K45 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6000 IN^4.
- K46 JOIST MRF: DESIGN JOIST GIRDER FOR A MINIMUM NOMINAL MOMENT OF INERTIA OF 6500 IN^4.
- K47 DRIFT ON RTU OVERLAPS WITH DRIFT ON PARAPET. TAKE HIGHER OF THE TWO Pd VALUES AND APPLY AS A UNIFORM LOAD FROM RTU TO PARAPET.
- K48 DESIGN JOIST FOR ADDITIONAL 9K (ASD) AXIAL LOAD AND ADDITIONAL 9K (ASD) REVERSIBLE VERTICAL POINT LOAD AT KICKER. REF SECTION 17/S330.



ROOF PARTIAL FRAMING PLAN D

1" = 20'-0"

ROOF FRAMING PLAN NOTES:

1. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
2. SEE FOUNDATION PLAN FOR COLUMN SIZING. COLUMNS ARE SPLICED 4'-0" ABOVE LEVEL 3, WHERE OCCURS.
3. SEE SHEET S401 FOR METAL DECK CONNECTION PLAN & SCHEDULE .
4. SEE S310 FOR "TYPICAL ROOF OPENING EDGE" DETAILS, "TYPICAL ROOF MECHANICAL UNIT SUPPORT" DETAIL, AND "TYPICAL SUPPORT OF CONCENTRATED LOADS NOT AT JOIST PANEL POINTS" DETAIL.
5. SEE S510 FOR TYPICAL MOMENT FRAME CONNECTION DETAILS.
6. FINAL SIZE, WEIGHT, & LOCATION OF ROOF TOP SUPPORTED MECHANICAL UNITS SHALL BE COORDINATED w/ STRUCTURAL ENGINEER PRIOR TO SHOP DRAWING CREATION.
7. DOORS AND WINDOWS ARE SHOWN IN APPROXIMATE LOCATION, SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
8. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
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12. DESIGN STEEL JOISTS SUPPORTING RTU's AND SPRINKLER MAINS FOR LOADS INDICATED BY JOIST DESIGNATION AND/OR SPECIAL JOIST LOADING DIAGRAM + RTU & SPRINKLER LOADS. COORDINATE RTU & SPRINKLER SIZE, WEIGHT & LOCATION w/ MEP & SPRINKLER DWGS. JOIST MANUFACTURER SHALL ALSO DISTRIBUTE ALL RTU & SPRINKLER LOADS TO JOIST GIRDER PANEL POINTS (JOIST GIRDER DESIGNATION SHOWN ON PLAN DOES NOT INCLUDE POINT LOADS DUE TO RTU'S OR SPRINKLER MAINS ACTING ON SUPPORTED BAR JOISTS).
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16. "TICK MARKS" ON STEEL JOIST INDICATE BOTTOM CHORD PANEL POINT LOCATIONS FOR COORDINATION WITH MHE VENDOR FOR ATTACHMENT OF HANGING MHE LOADS. SEE SHEET S106E FOR JOIST PROFILE ELEVATION VIEWS WITH DIMENSIONED TOP AND BOTTOM CHORD PANEL POINTS.
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18. TOP OF STEEL ELEVATION SHALL BE BOTTOM OF DECK ELEVATION FOR BEAMS THAT DO NOT HAVE ANY JOISTS THAT BEAR ON TOP.
19. MEP AND TELECOMMUNICATION CONTRACTORS TO COORDINATE WITH STRUCTURAL STEEL FABRICATOR REGARDING ATTACHMENT OF ROOFTOP MOUNTED EQUIPMENT TO ROOF STRUCTURE FRAMING. PROVIDE DELEGATED DESIGN SUBMITTALS OF ANCHORAGE AND CONNECTIONS OF ROOFTOP MOUNTED MEP AND TELECOMMUNICATIONS ITEMS FOR REVIEW PRIOR TO INSTALLATION.

FRAMING PLAN LEGEND:

WXXxXX [XX] — STANDARD BEAM STRENGTH

(WXXxXX) [XX] — HIGH STRENGTH BEAM (65 KSI)

M=XXk-ft =MOMENT CONNECTION SEE SHEET S510 FOR DETAILS

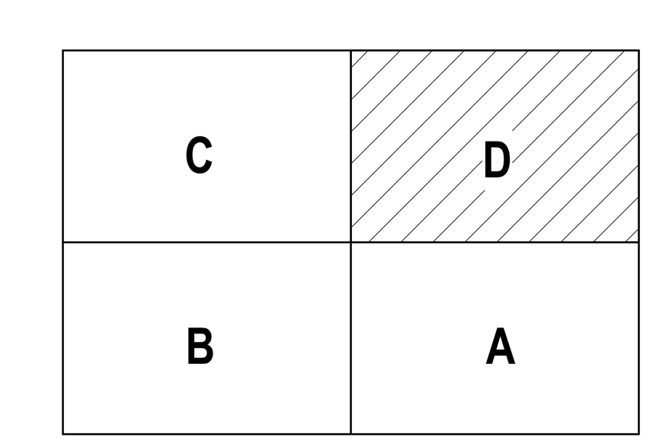
A=XXkip =AXIAL CONNECTION

WXxX [XX] c=?? / A=XXk (± XX") A=XXk — BEAM SIZE; # OF SHEAR STUDS; CAMBER; T/STEEL ELEVATION RELATIVE TO TYPICAL; BEAM OR JOIST AXIAL CONNECTION FORCE (TYP)

NOTE: UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ARE FACTORED (LRFD).

= INDICATES BEAM BOTTOM FLANGE BRACING, SEE TYPICAL DETAIL ON SHEET S301 FOR FLOOR BRACING & SHEET S310 FOR ROOF BRACING

CP-X = CONCRETE WALL PANEL PER SCHEDULE ON SHEET S403.



KEY PLAN
NTS

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PROJECT NORTH

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ROOF PARTIAL FRAMING PLAN D

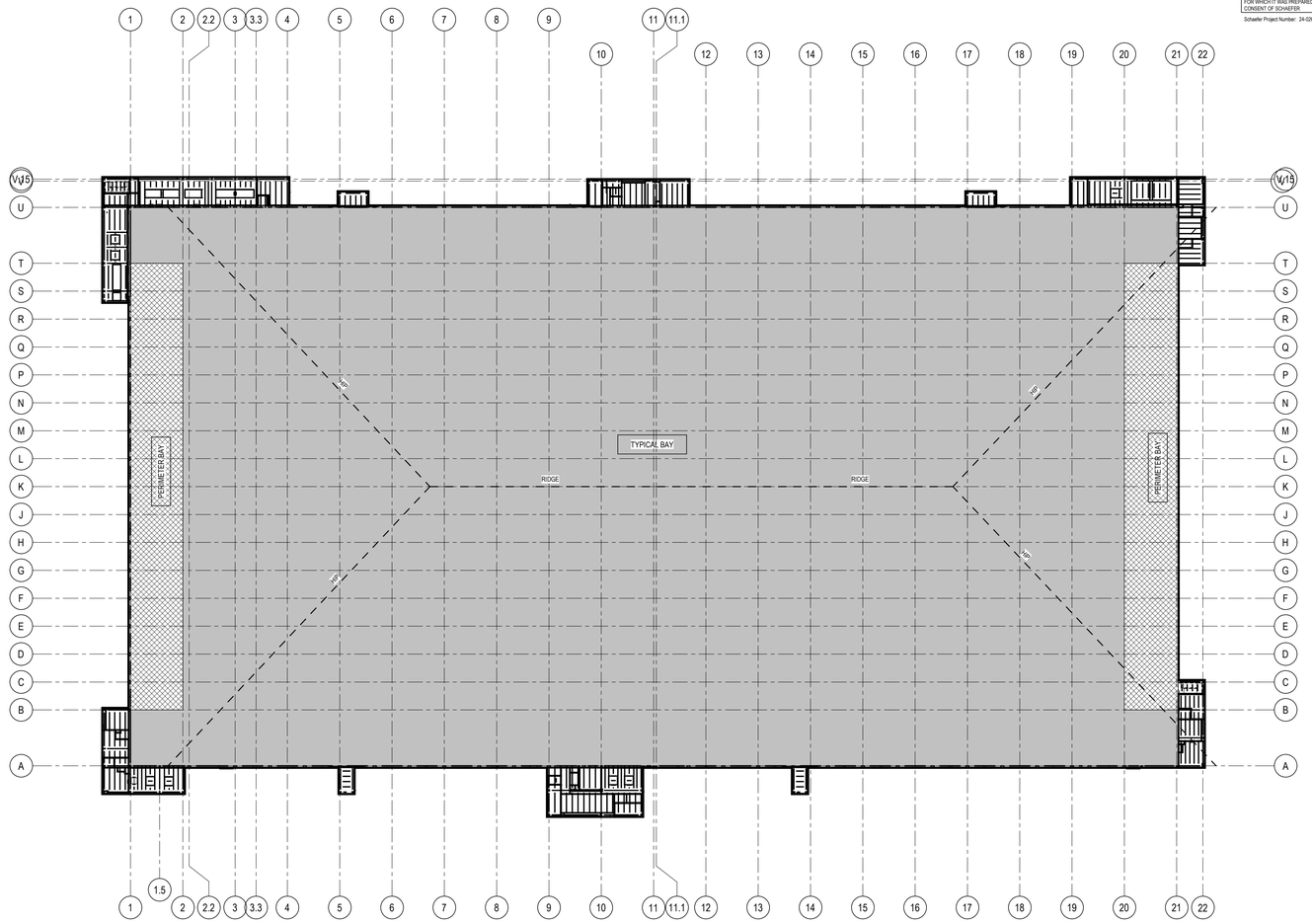
SHEET NUMBER

S106D

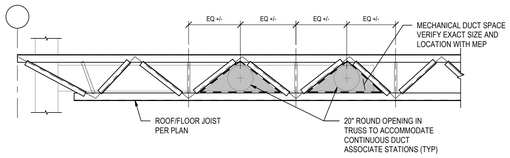
NOT FOR CONSTRUCTION

6/7/2024 8:48:05 AM

Schaefer Project Number: 24-0265

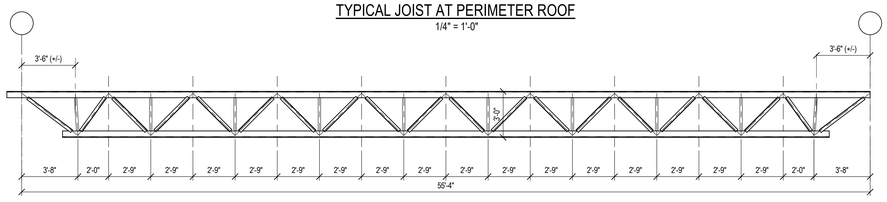


ROOF JOIST KEYPLAN
1" = 60'-0"



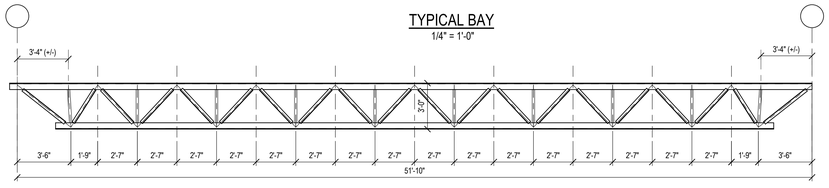
NOTES:
1. CONTINUOUS DUCTS ARE LOCATED IN PERIMETER BAYS A-B, U-T, 1-2, AND 20-21. EXACT EXTENTS AND LOCATIONS OF CONTINUOUS DUCTS WITHIN THOSE BATS VARY, REFER TO MEP DRAWINGS

TYPICAL JOIST AT PERIMETER ROOF
1/4" = 1'-0"



NOTES:
1. JOIST SUPPLIER SHALL IMPLEMENT THE JOIST GEOMETRY (DEPTH, PROFILE, & PANEL POINT LOCATIONS) PROVIDED.
2. MINOR DIFFERENCES IN SPAN LENGTH (BEARING AT COLUMN VS. GIRDER, FOR EXAMPLE) SHALL BE ADJUSTED IN THE FIRST TWO WEB MEMBERS AT JOIST END.
3. BOTTOM CHORD PANEL POINTS ARE INDICATED ON PLAN AS "TICK MARKS" AND CORRESPOND TO THIS ELEVATION VIEW.

TYPICAL BAY
1/4" = 1'-0"



NOTES:
1. JOIST SUPPLIER SHALL IMPLEMENT THE JOIST GEOMETRY (DEPTH, PROFILE, & PANEL POINT LOCATIONS) PROVIDED.
2. MINOR DIFFERENCES IN SPAN LENGTH (BEARING AT COLUMN VS. GIRDER, FOR EXAMPLE) SHALL BE ADJUSTED IN THE FIRST TWO WEB MEMBERS AT JOIST END.
3. BOTTOM CHORD PANEL POINTS ARE INDICATED ON PLAN AS "TICK MARKS" AND CORRESPOND TO THIS ELEVATION VIEW.

PERIMETER BAY
1/4" = 1'-0"

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ROOF JOIST ELEVATIONS AND KEYPLAN

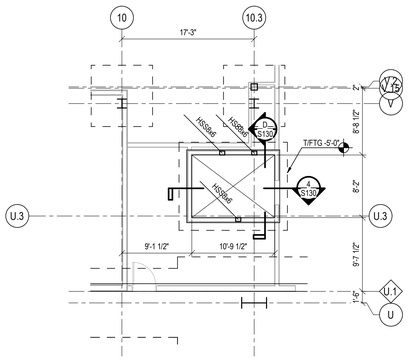
SHEET NUMBER

S106E

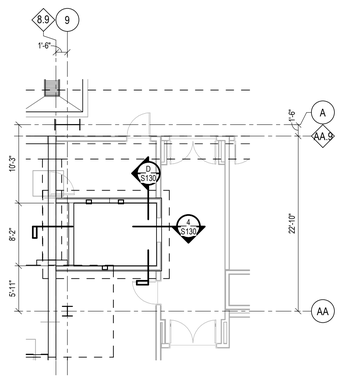
NOT FOR CONSTRUCTION

6/7/2024 8:48:38 AM

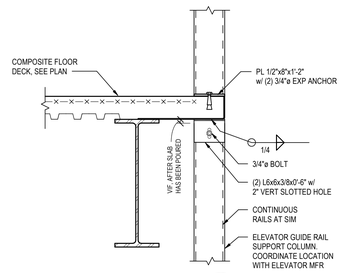
Schaefer Project Number: 24-0265



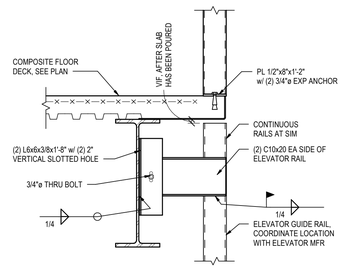
ENLARGED ELEVATOR #1
FOUNDATION PLAN
1/8" = 1'-0"
A S130



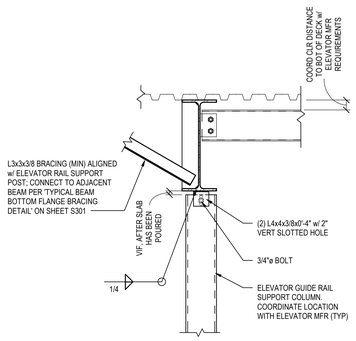
ENLARGED ELEVATOR #2
FOUNDATION PLAN
1/8" = 1'-0"
B S130



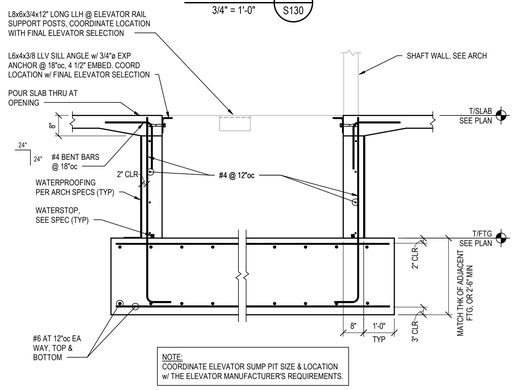
SECTION
3/4" = 1'-0"
1 S130



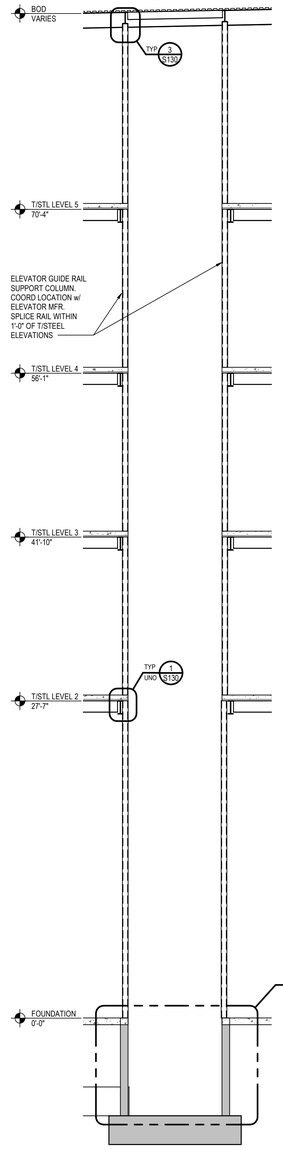
SECTION
3/4" = 1'-0"
2 S130



SECTION
3/4" = 1'-0"
3 S130



SECTION
1/2" = 1'-0"
4 S130



ELEVATOR SECTION
3/16" = 1'-0"
D S130

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ELEVATOR PLANS, ELEVATIONS, & DETAILS

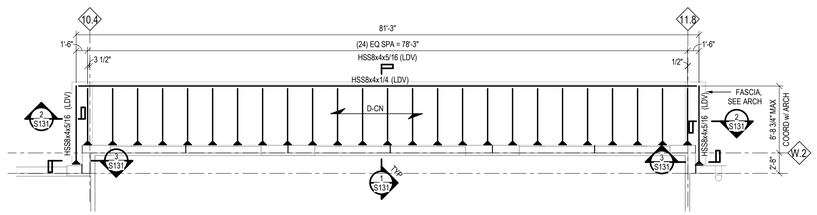
SHEET NUMBER

S130

NOT FOR CONSTRUCTION

6/7/2024 8:48:43 AM

Schaefer Project Number: 24-0265



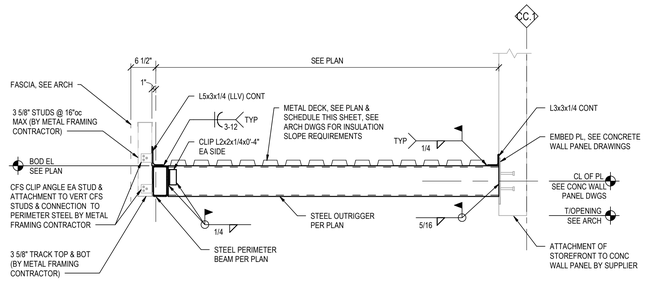
ENTRANCE CANOPY FRAMING PLAN

1/8" = 1'-0" — A / S131

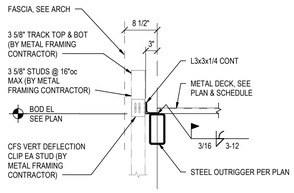
NOTES:
1. BOTTOM OF DECK ELEVATION = 13'-1" (UNO).
2. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
3. SEE THIS SHEET FOR METAL DECK SCHEDULE.

CANOPY METAL DECK SCHEDULE

MARK	SIZE/PROPERTIES	PROFILE/ATTACHMENT	FASTENERS
D-CN	TYPE : 1 1/2" WIDE RIB ROOF DECK GA: 20 GA Fy(MIN): 80 KSI FINISH: SEE SPECIFICATIONS GALV, G90	36" COVERAGE SHEET COVER WIDTH SUPPORT FASTENERS AT SHEET END LAPS, AT WALLS; 36/7 PATTERN SUPPORT FASTENERS BETWEEN SHEET LAPS AT SUPPORTING STRUCTURE 36/7 PATTERN 6" 6" FASTENERS AT WALLS	SIDELAP: MIN (4) #10 SDS CONNECTIONS PER SPAN SUPPORT FASTENERS: HILTI X-ENP 19



SECTION 1 / S131 — 3/4" = 1'-0"



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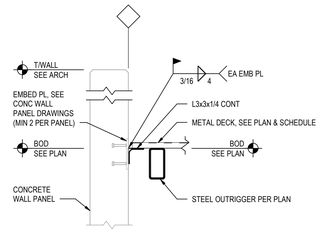

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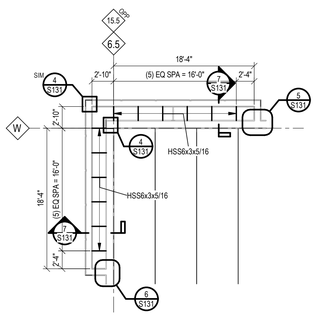
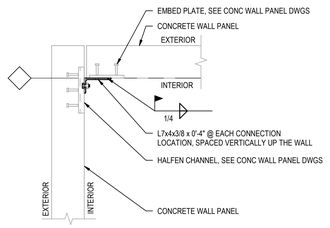


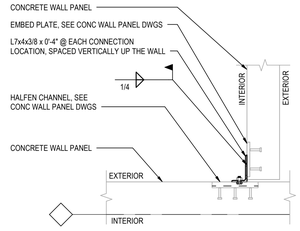
OFFICE CORNER FRAMING

1/8" = 1'-0" — B / S131

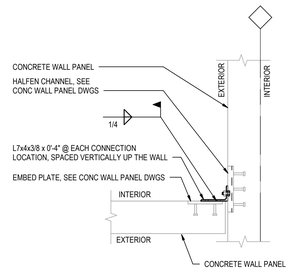
NOTES:
1. T/STEEL ELEVATION = 18'-6"
2. SEE OFFICE ROOF FRAMING PLAN FOR ADDITIONAL PLAN NOTES.



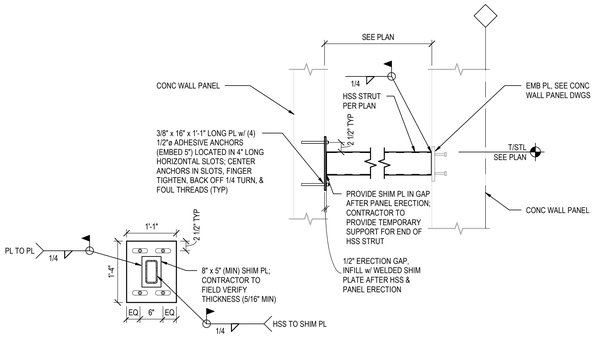
SECTION 4 / S131 — 3/4" = 1'-0"



SECTION 5 / S131 — 3/4" = 1'-0"



SECTION 6 / S131 — 3/4" = 1'-0"



SECTION 7 / S131 — 3/4" = 1'-0"

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PRINT RECORD

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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

CANOPY FRAMING AND OUTBOARD OFFICE PANEL PLANS & SECTIONS

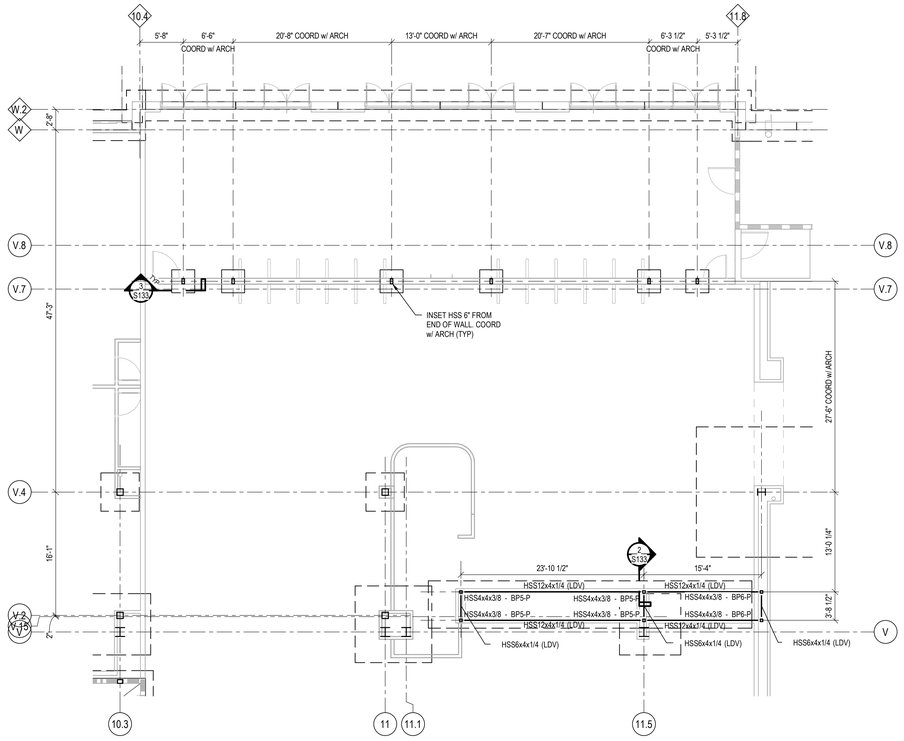
SHEET NUMBER

S131

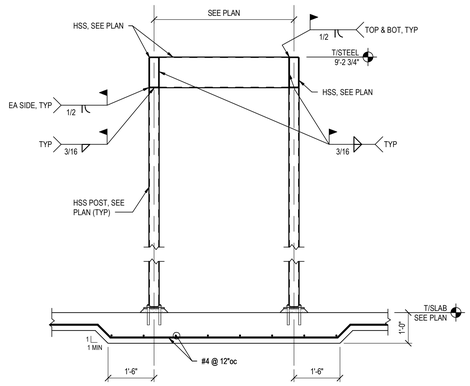
NOT FOR CONSTRUCTION

6/7/2024 8:48:48 AM

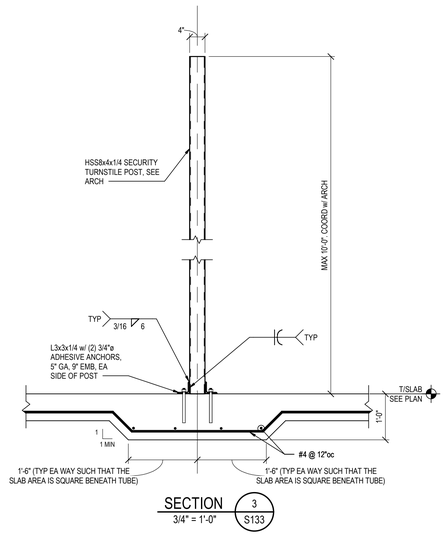
Schaefer Project Number: 24-0265



VESTIBULE FRAMING PLAN
1/8" = 1'-0"
1
S133

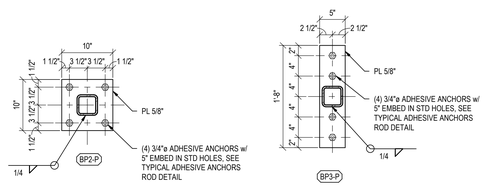


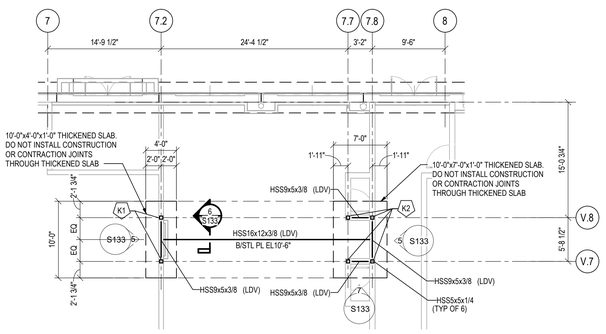
SECTION
1/2" = 1'-0"
2
S133



SECTION
3/4" = 1'-0"
3
S133

BASE PLATE SCHEDULE





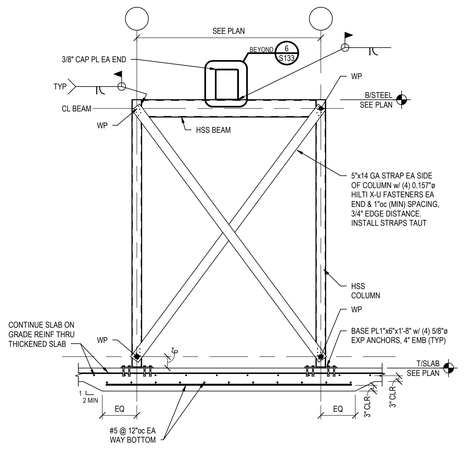
OPERABLE PARTITION
FOUNDATION & FRAMING PLAN
1/8" = 1'-0"
4
S133

PLAN NOTES:

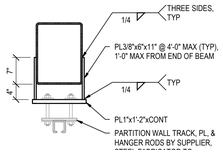
1. COORDINATE ALL DIMENSIONS & ELEVATIONS WITH ARCHITECTURAL & PARTITION MANUFACTURER.
2. CENTER ALL COLUMNS WITHIN STUD WALLS.

KEYNOTE:

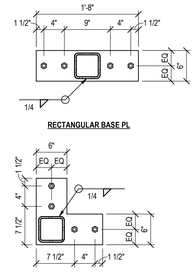
K1 USE RECTANGULAR BASE PLATE CONFIGURATION PER OPERABLE PARTITION BASE PLATE DETAIL THIS SHEET.
K2 USE CORNER BASE PLATE CONFIGURATION PER OPERABLE PARTITION BASE PLATE DETAIL THIS SHEET

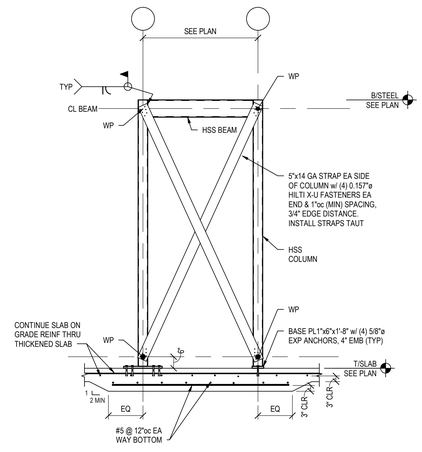


ELEVATION
3/8" = 1'-0"
5
S133



DETAIL
3/4" = 1'-0"
6
S133





ELEVATION
3/8" = 1'-0"
7
S133

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BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

VESTIBULE FRAMING PLAN & DETAILS

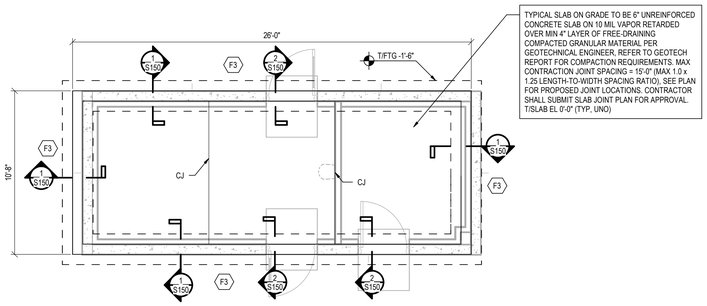
SHEET NUMBER

S133

NOT FOR CONSTRUCTION

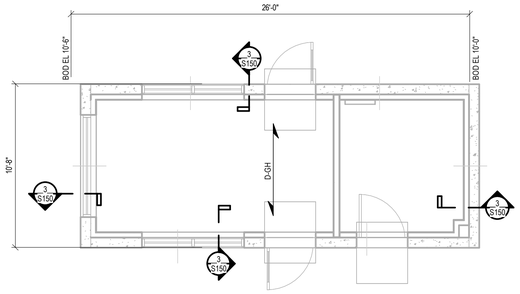
6/7/2024 8:48:54 AM

Schaefer Project Number: 24-0265



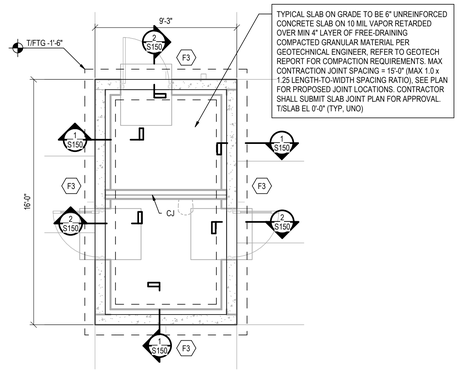
GUARDHOUSE FOUNDATION PLAN
1/4" = 1'-0"

NOTES:
1. REFERENCE PLAN ELEVATION 0'-0", SEE CIVIL DRAWINGS FOR CORRESPONDING SITE ELEVATION.
2. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
3. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
4. SLOPE SLAB TO FLOOR DRAINS, COORDINATE WITH ARCH DWGS AND PLUMBING DWGS.
5. SEE SHEET S200 FOR TYPICAL FOUNDATION DETAILS & SHEET S202 FOR TYPICAL SLAB REPAIR DETAILS.



GUARDHOUSE ROOF PLAN
1/4" = 1'-0"

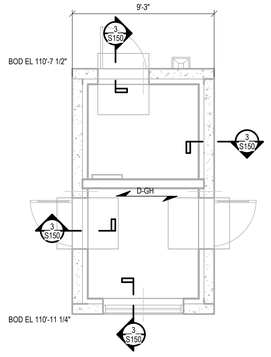
NOTES:
1. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
2. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
3. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
4. SEE THIS SHEET FOR METAL DECK SCHEDULE.
5. MIN METAL DECK END BEARING ON SUPPORTS = 1 1/2".



GUARDHOUSE FOUNDATION PLAN
1/4" = 1'-0"

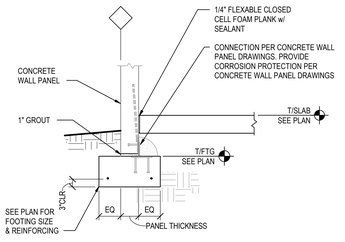
NOTES:
1. REFERENCE PLAN ELEVATION 0'-0", SEE CIVIL DRAWINGS FOR CORRESPONDING SITE ELEVATION.
2. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
3. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
4. SLOPE SLAB TO FLOOR DRAINS, COORDINATE WITH ARCH DWGS AND PLUMBING DWGS.
5. SEE SHEET S200 FOR TYPICAL FOUNDATION DETAILS & SHEET S202 FOR TYPICAL SLAB REPAIR DETAILS.

FOOTING SCHEDULE (CONTINUOUS)				
	SIZE			
MARK	WIDTH (B)	THICKNESS (H)	REINFORCING	REMARKS
F3	2'-0"	1'-0"	(2) #5 CONT BOT	AT GUARDHOUSES + PUMPHOUSE

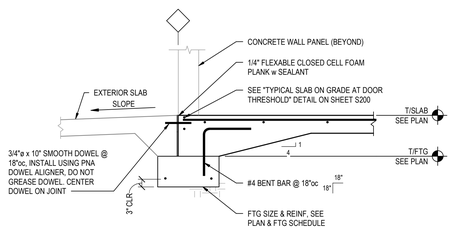


GUARDHOUSE ROOF PLAN
1/4" = 1'-0"

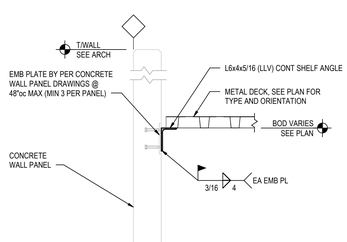
NOTES:
1. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
2. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
3. SEE SHEETS S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS).
4. SEE THIS SHEET FOR METAL DECK SCHEDULE.
5. MIN METAL DECK END BEARING ON SUPPORTS = 1 1/2".



SECTION 1 / S150
1/2" = 1'-0"



SECTION 2 / S150
1/2" = 1'-0"



SECTION 3 / S150
3/4" = 1'-0"

GUARDHOUSE METAL DECK SCHEDULE

MARK	SIZE/PROPERTIES	PROFILE/ATTACHMENT	FASTENERS
D-GH	TYPE : 3" DEEP RIB ROOF DECK GA: 20 GA Fy(MIN): 40 KSI FINISH: SEE SPECIFICATIONS GALV, G60	24" COVERAGE SHEET COVER WIDTH SUPPORT FASTENERS AT SHEET END LAPS & AT WALLS SUPPORT FASTENERS BETWEEN SHEET LAPS AT SUPPORTING STRUCTURE 24/4 PATTERN 1'-0" FASTENERS AT WALLS/GIRDERS	SIDELAP: MIN (3) #10 SDS CONNECTIONS PER SPAN SUPPORT FASTENERS: HILTI X-ENP 19

GUARDHOUSE DESIGN LOADS

1. ROOF LOADS:
   - A. MINIMUM COMBINATION OF WIND LOAD, LIVE LOAD, RAIN LOAD, OR SNOW LOAD (P_r OR P_m) — 20 PSF
   - B. ROOF MEMBRANE & INSULATION — 2 PSF
   - C. METAL DECK — 2 PSF
   - D. SUSPENDED CEILINGS — 3 PSF
   - E. SPRINKLERS / FIRE PROTECTION SYSTEM — 3 PSF
   - F. DUCTS, LIGHTS, & MISC. MECHANICAL — 5 PSF
   - TOTAL LOAD ON METAL DECK — 35 PSF

   (*GROUND SNOW P_g = 10 PSF
   SNOW LOAD IMPORTANCE FACTOR I = 1.0. SNOW EXPOSURE FACTOR C_e = 1.0.
   SNOW LOAD THERMAL FACTOR C_t = 1.0. FLAT ROOF SNOW LOAD P_f = 7 PSF.
   SECONDARY ROOF DRAINAGE VIA SCUPPERS OR OVERFLOW DRAINS SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE AND ASCE 7.)

2. WIND LOAD PER 2018 NORTH CAROLINA STATE BUILDING CODE (STRUCTURAL LOADS DETERMINED IN ACCORDANCE WITH ASCE 7-16):
   - A. BASIC WIND SPEED = 143 MPH (ULTIMATE), 116 MPH (NOMINAL)
   - B. OCCUPANCY CATEGORY = II
   - C. WIND IMPORTANCE FACTOR, I = 1.0
   - D. WIND EXPOSURE = C (ALL WIND DIRECTIONS)
   - E. INTERNAL PRESSURE COEFFICIENT, GCpi = +0.18, -0.18
   - F. DESIGN PRESSURES FOR EXTERIOR COMPONENT AND CLADDING ITEMS NOT DESIGNED BY THE ENGINEER OF RECORD: REFER TO COMPONENTS AND CLADDING WIND PRESSURES SHOWN ON SHEET S010.

3. SEISMIC LOAD:
   - A. SEISMIC IMPORTANCE FACTOR, I_E = 1.0
   - B. MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS, S_S = 0.157
   - C. MAPPED SPECTRAL RESPONSE ACCELERATION AT 1 SEC. PERIOD, S_1 = 0.069
   - D. OCCUPANCY CATEGORY = II
   - E. SPECTRAL RESPONSE COEFFICIENT, S_{DS} = 0.167
   - F. SPECTRAL RESPONSE COEFFICIENT, S_{D1} = 0.110
   - G. SITE CLASS = D
   - H. SEISMIC-FORCE-RESISTING SYSTEM = ORDINARY PRECAST SHEAR WALLS
   - I. SEISMIC DESIGN CATEGORY = B
   - J. RESPONSE MODIFICATION FACTOR, R = 3
   - K. SEISMIC RESPONSE COEFFICIENT, C_S = 0.056
   - L. DESIGN BASE SHEAR = 3 KIPS (MAX)
   - M. ANALYSIS PROCEDURE = ELFP

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PRINT RECORD

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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

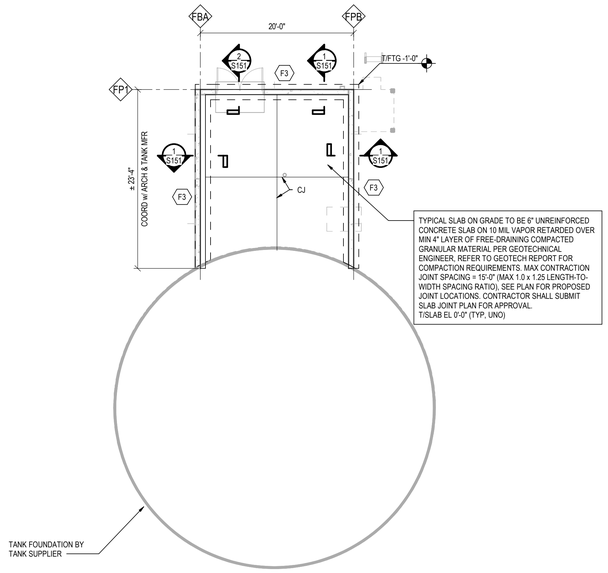
GUARDHOUSE PLANS & DETAILS

SHEET NUMBER

S150

NOT FOR CONSTRUCTION

6/7/2024 8:49:01 AM



NOTE: CONTRACTOR SHALL COORDINATE GRADING w/ CIVIL ENGINEER AS REQUIRED TO ENSURE THAT THERE IS A MINIMUM OF 0'-6" ABOVE THE SPECIFIED TOP OF FOOTING.

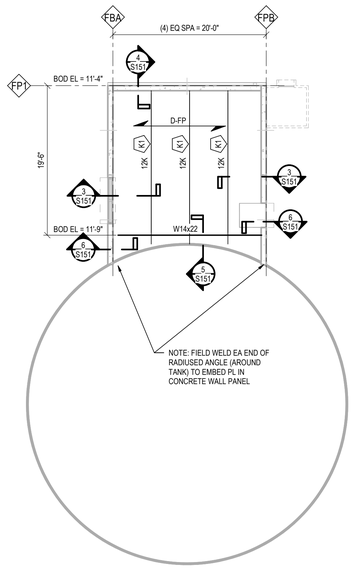
FIRE PUMP HOUSE FOUNDATION PLAN

1/8" = 1'-0"

NOTES:
1. REFERENCE PLAN ELEVATION 0'-0". SEE CIVIL DRAWINGS FOR CORRESPONDING SITE ELEVATION.
2. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
3. SEE SHEET S001 FOR ABBREVIATIONS AND LEGEND (SYMBOLS).
4. SLOPE SLAB TO FLOOR DRAINS. COORDINATE WITH ARCH DWGS AND PLUMBING DWGS.
5. SEE SHEET S200 FOR TYPICAL FOUNDATION DETAILS & SHEET S202 FOR TYPICAL SLAB REPAIR DETAILS.
6. GENERAL CONTRACTOR SHALL CONSULT FIRE TANK STRUCTURE DELEGATED ENGINEER TO DETERMINE IF GROUND IMPROVEMENT IS REQUIRED BENEATH THE FIRE TANK FOUNDATIONS. FOR BIDDING PURPOSES, ASSUME THAT GROUND IMPROVEMENT ELEMENTS MUST BE INCLUDED BENEATH THE FIRE TANK FOUNDATION.

FOOTING SCHEDULE (CONTINUOUS)

MARK	SIZE		REINFORCING	REMARKS
	WIDTH (B)	THICKNESS (H)		
F3	2'-0"	1'-0"	(2) #5 CONT BOT	AT GUARDHOUSES + PUMPHOUSE



FIRE PUMP HOUSE ROOF FRAMING PLAN

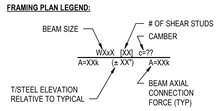
1/8" = 1'-0"

K1 ROOF FRAMING KEYNOTES:

1. JOIST MANUFACTURER: DESIGN JOIST FOR NET UPLIFT OF 21lb PLF (BASED ON ASD LOAD COMBINATION: 0.6D + 0.6W), AND A JOIST ROLLOVER FORCE OF 2.1k (ASD). ROLLOVER AT CONC WALL ONLY. LATERAL LOADS ARE BASED ON MAX SEISMIC OR WIND LOADS.

NOTES:
1. DECK IS TO BE CONTINUOUSLY SUPPORTED AT EACH END OF DECK SPAN.
2. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
3. SEE SHEET S100 FOR ABBREVIATIONS AND LEGEND (SYMBOLS).
4. SEE THIS SHEET FOR METAL DECK SCHEDULE.
5. MIN METAL DECK END BEARING ON SUPPORTS = 1 1/2".
6. METAL DECK SHALL RUN CONTINUOUS OVER (3) SPANS.

FRAMING PLAN LEGEND:



FP-X = CONCRETE WALL PANEL PER SCHEDULE, THIS SHEET.

FIRE PUMP HOUSE DESIGN LOADS

1. ROOF LOADS:

A.	MINIMUM COMBINATION OF WIND LOAD, LIVE LOAD, RAIN LOAD, OR SNOW LOAD (P_f OR P_m)	20	PSF*
B.	ROOF MEMBRANE & INSULATION	2	PSF
C.	METAL DECK	2	PSF
D.	STEEL JOIST FRAMING SELF-WEIGHT	3	PSF
E.	SUSPENDED CEILINGS	2	PSF
F.	SPRINKLERS / FIRE PROTECTION SYSTEM	3	PSF
G.	DUCTS, LIGHTS, & MISC. MECHANICAL	3	PSF
	TOTAL LOAD ON JOISTS	35	PSF

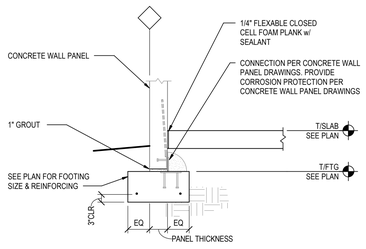
(*GROUND SNOW P_g = 10 PSF.
SNOW LOAD IMPORTANCE FACTOR I = 1.0. SNOW EXPOSURE FACTOR C_e = 1.0.
SNOW LOAD THERMAL FACTOR C_t = 1.0. FLAT ROOF SNOW LOAD P_f = 7 PSF.
SECONDARY ROOF DRAINAGE VIA SCUPPERS OR OVERFLOW DRAINS SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE AND ASCE 7.)

2. WIND LOAD PER 2018 NORTH CAROLINA STATE BUILDING CODE (STRUCTURAL LOADS DETERMINED IN ACCORDANCE WITH ASCE 7-16):

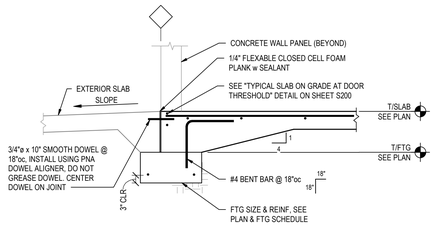
A.	BASIC WIND SPEED = 143 MPH (ULTIMATE), 116 MPH (NOMINAL)	
B.	OCCUPANCY CATEGORY = II	
C.	WIND IMPORTANCE FACTOR, I = 1.0	
D.	WIND EXPOSURE = C (ALL WIND DIRECTIONS)	
E.	INTERNAL PRESSURE COEFFICIENT, GC_{pi} = +0.18, -0.18	
F.	DESIGN PRESSURES FOR EXTERIOR COMPONENT AND CLADDING ITEMS NOT DESIGNED BY THE ENGINEER OF RECORD. REFER TO COMPONENTS AND CLADDING WIND PRESSURES SHOWN ON SHEET S010.	

3. SEISMIC LOAD:

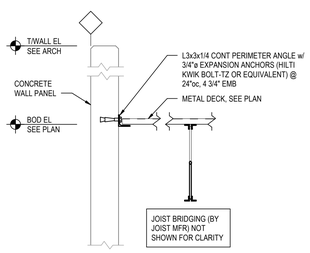
A.	SEISMIC IMPORTANCE FACTOR, I_E	= 1.0
B.	MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS, S_S	= 0.157
C.	MAPPED SPECTRAL RESPONSE ACCELERATION AT 1 SEC. PERIOD, S_1	= 0.069
D.	OCCUPANCY CATEGORY	= II
E.	SPECTRAL RESPONSE COEFFICIENT, S_{DS}	= 0.167
F.	SPECTRAL RESPONSE COEFFICIENT, S_{D1}	= 0.110
G.	SITE CLASS	= D
H.	SEISMIC-FORCE-RESISTING SYSTEM	= ORDINARY PRECAST SHEAR WALLS
I.	SEISMIC DESIGN CATEGORY	= B
J.	RESPONSE MODIFICATION FACTOR, R	= 3
K.	SEISMIC RESPONSE COEFFICIENT, C_S	= 0.056
L.	DESIGN BASE SHEAR	= 4 KIPS (MAX)
M.	ANALYSIS PROCEDURE	= ELFP



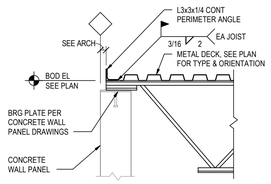
SECTION 1 / S151 — 1/2" = 1'-0"



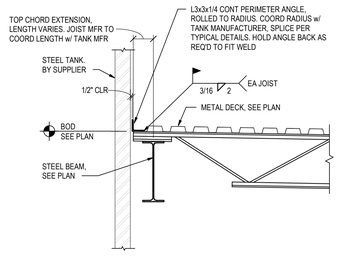
SECTION 2 / S151 — 1/2" = 1'-0"



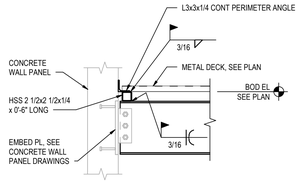
SECTION 3 / S151 — 3/4" = 1'-0"



SECTION 4 / S151 — 3/4" = 1'-0"



SECTION 5 / S151 — 3/4" = 1'-0"



SECTION 6 / S151 — 3/4" = 1'-0"

FIRE PUMP HOUSE METAL DECK SCHEDULE

MARK	SIZE/PROPERTIES	PROFILE/ATTACHMENT	FASTENERS
D-FP	TYPE : 1 1/2" WIDE RIB ROOF DECK GA: 22 GA Fy(MIN): 80 KSI FINISH: GALV, G60	36" COVERAGE SHEET COVER WIDTH SUPPORT FASTENERS AT SHEET END LAPS & WALLS SUPPORT FASTENERS BETWEEN SHEET LAPS AT SUPPORTING STRUCTURE 36/7 PATTERN 6" 6" FASTENERS AT WALLS	SIDELAP: MIN (3) #10 SDS CONNECTIONS PER SPAN SUPPORT FASTENERS: HILTI X-HSN 24

Schaefer Project Number: 24-0265

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

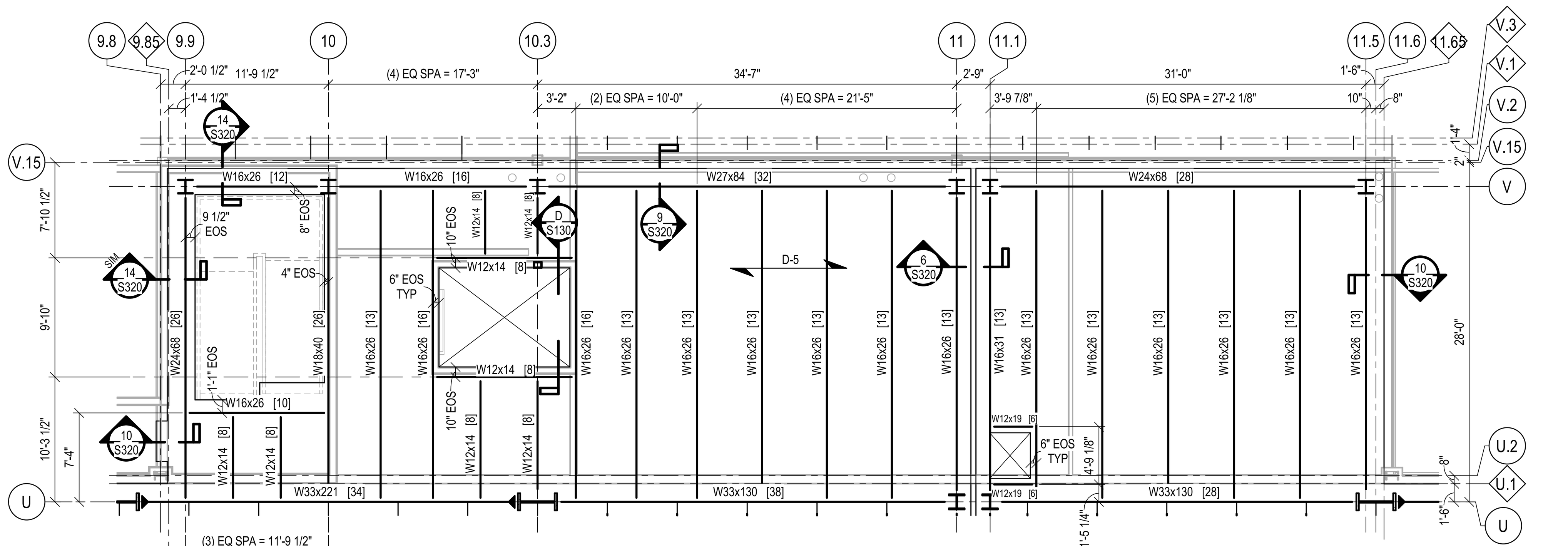
FIRE PUMP HOUSE PLANS & DETAILS

SHEET NUMBER

S151

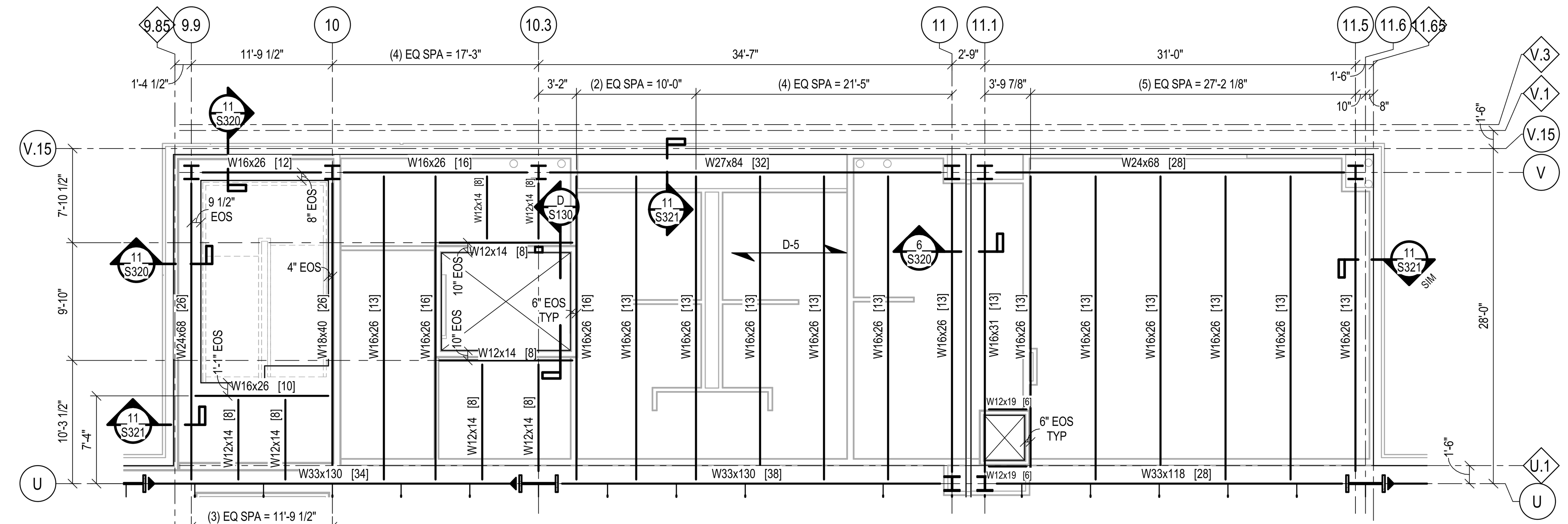
NOT FOR CONSTRUCTION

6/7/2024 8:48:56 AM



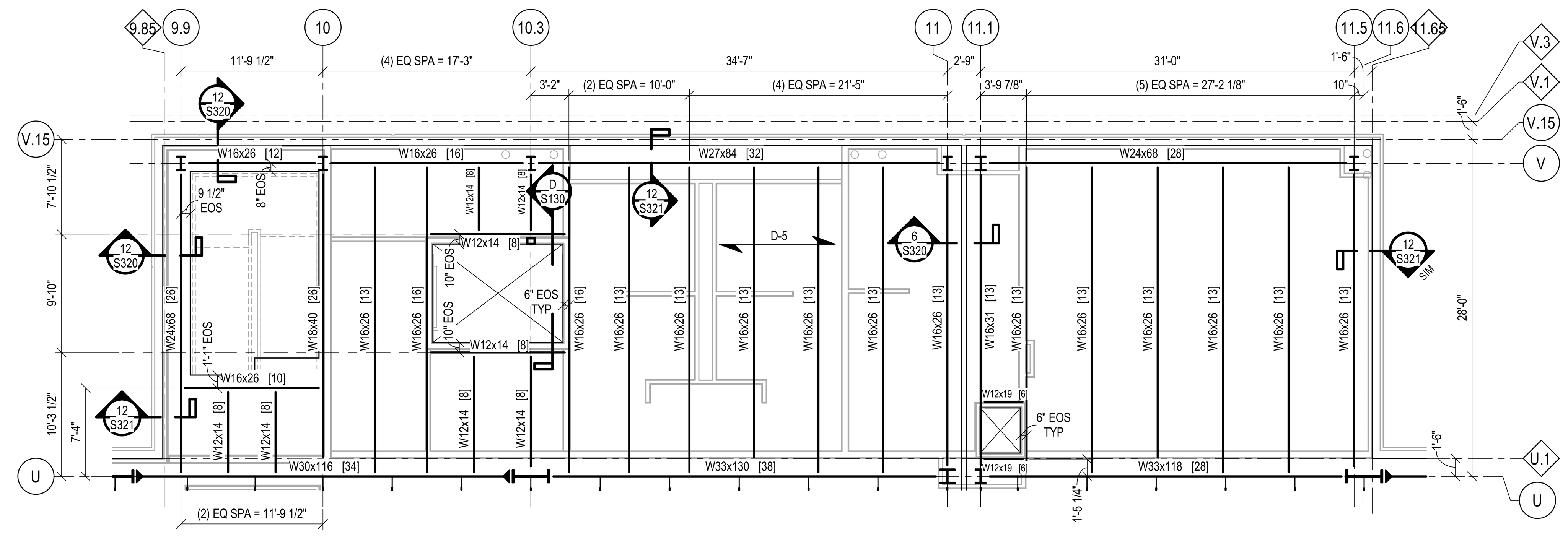
NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

LEVEL 2 FRAMING - OFFICE REMOTE BREAK ROOM
1/8" = 1'-0"
1 / S165



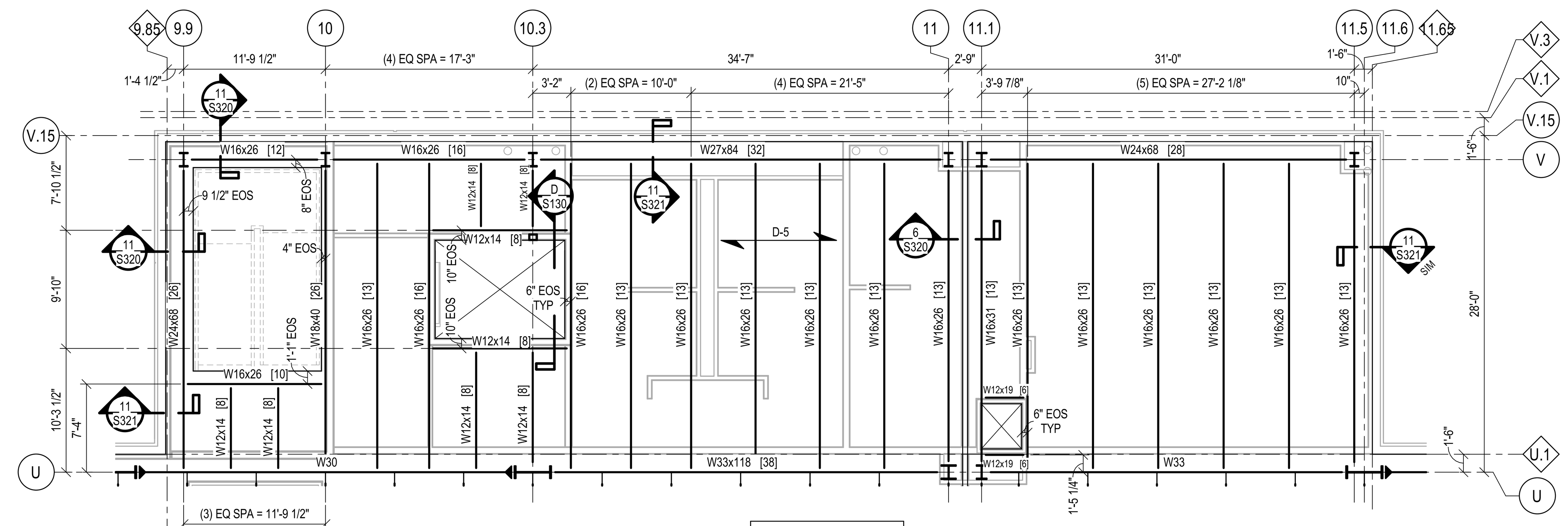
NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

LEVEL 3 FRAMING - OFFICE REMOTE BREAK ROOM
1/8" = 1'-0"
2 / S165



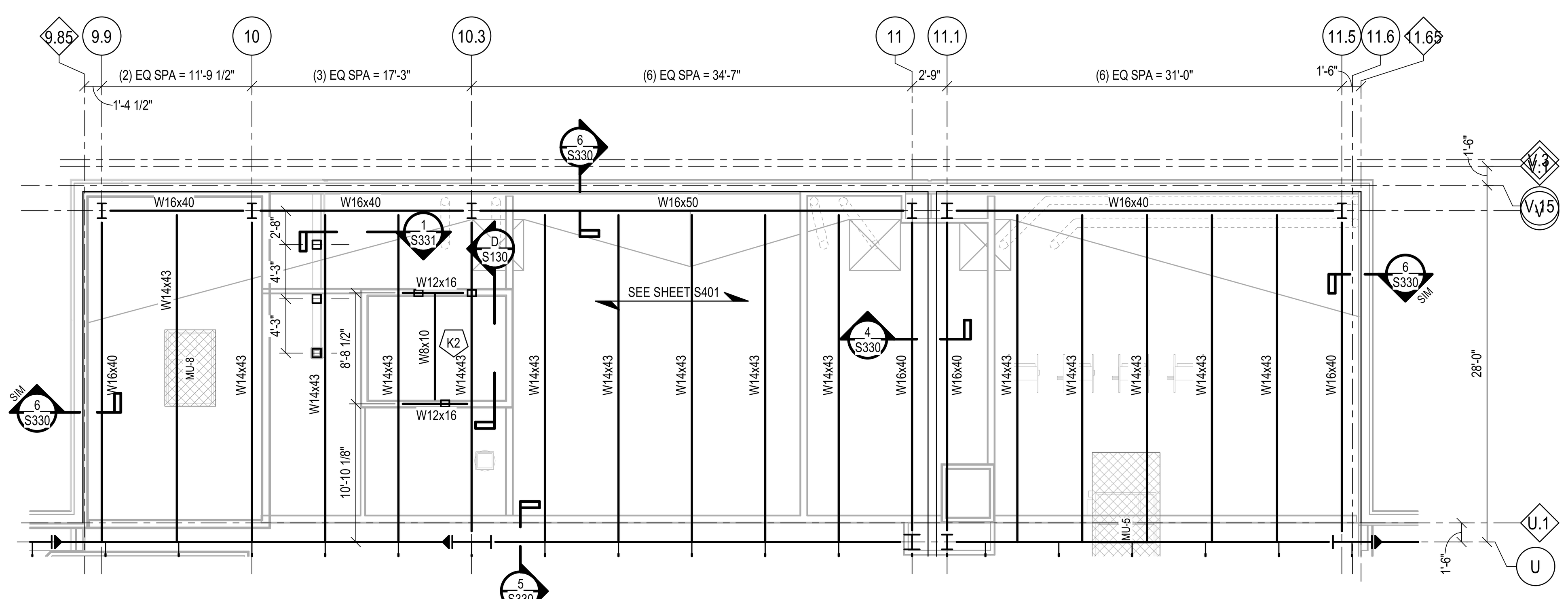
NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

LEVEL 4 FRAMING - OFFICE REMOTE BREAK ROOM
1/8" = 1'-0"
3 / S165



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

LEVEL 5 FRAMING - OFFICE REMOTE BREAK ROOM
1/8" = 1'-0"
4 / S165



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

KEYNOTES:

K2 ELEVATOR HOIST BEAM, PROVIDE 1" MIN CLEARANCE FROM T/STEEL TO BOD/ COORD w/ ELEV MFR

ROOF FRAMING - OFFICE REMOTE BREAK ROOM
1/8" = 1'-0"
5 / S165

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PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED PARTIAL FRAMING PLANS

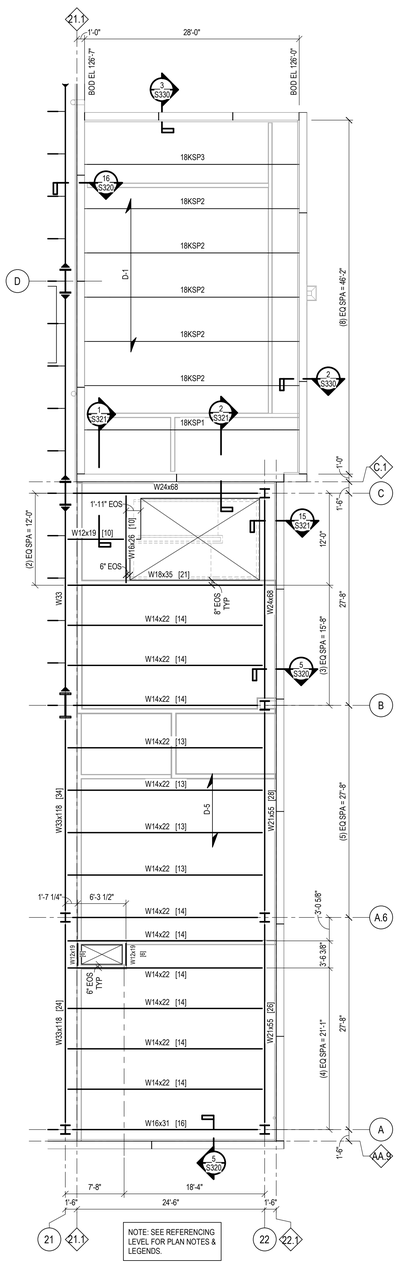
SHEET NUMBER

S165

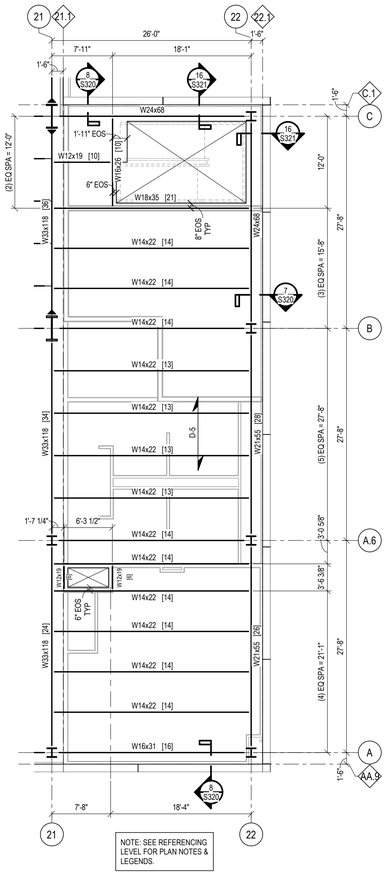
NOT FOR CONSTRUCTION

6/7/2024 8:49:16 AM

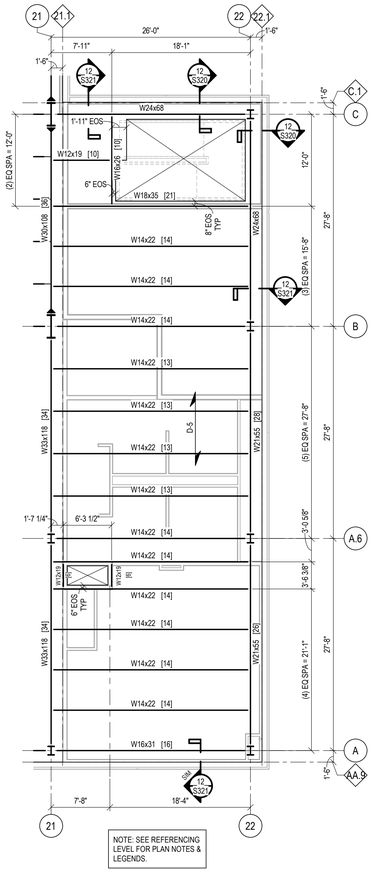
Schaefer Project Number: 24-0265



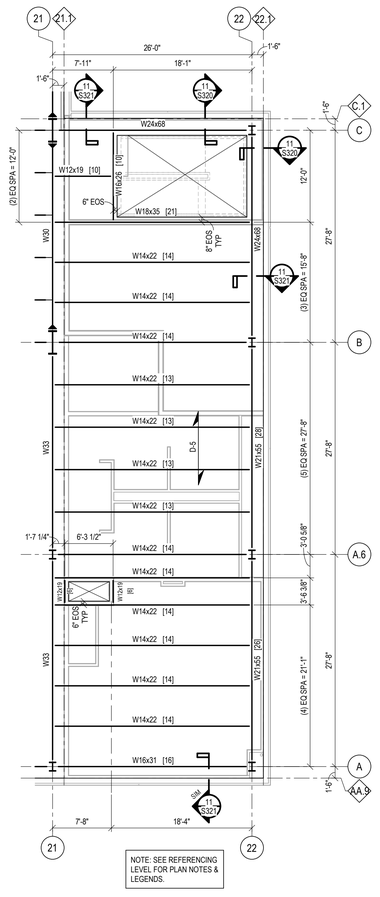
LEVEL 2 FRAMING - REMOTE BREAK ROOM
1/8" = 1'-0"
1 S166



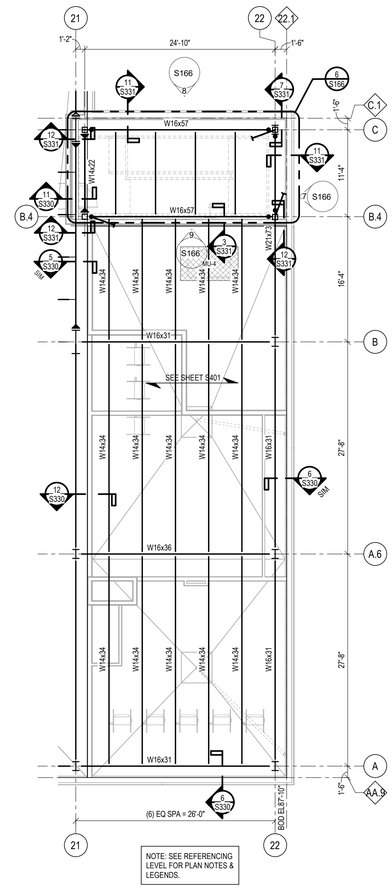
LEVEL 3 FRAMING - REMOTE BREAK ROOM
1/8" = 1'-0"
2 S166



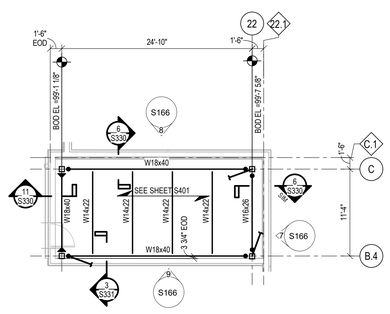
LEVEL 4 FRAMING - REMOTE BREAK ROOM
1/8" = 1'-0"
3 S166



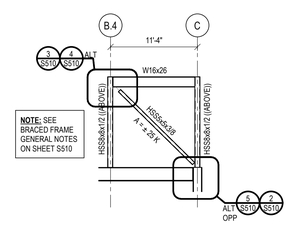
LEVEL 5 FRAMING - REMOTE BREAK ROOM
1/8" = 1'-0"
4 S166



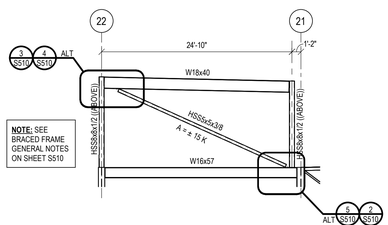
ROOF FRAMING - REMOTE BREAK ROOM
1/8" = 1'-0"
5 S166



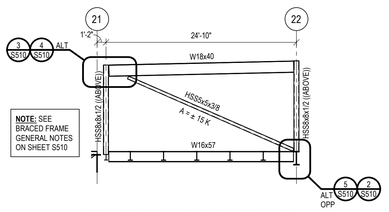
STAIR ROOF FRAMING - REMOTE BREAK ROOM
1/8" = 1'-0"
6 S166



BRACED FRAME ELEVATION AT GRID 22
1/8" = 1'-0"
7 S166



BRACED FRAME ELEVATION AT GRID C
1/8" = 1'-0"
8 S166



BRACED FRAME ELEVATION AT GRID B.4
1/8" = 1'-0"
9 S166

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DATE	PROJECT NO
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SHEET TITLE

ENLARGED PARTIAL FRAMING PLANS

SHEET NUMBER

S166

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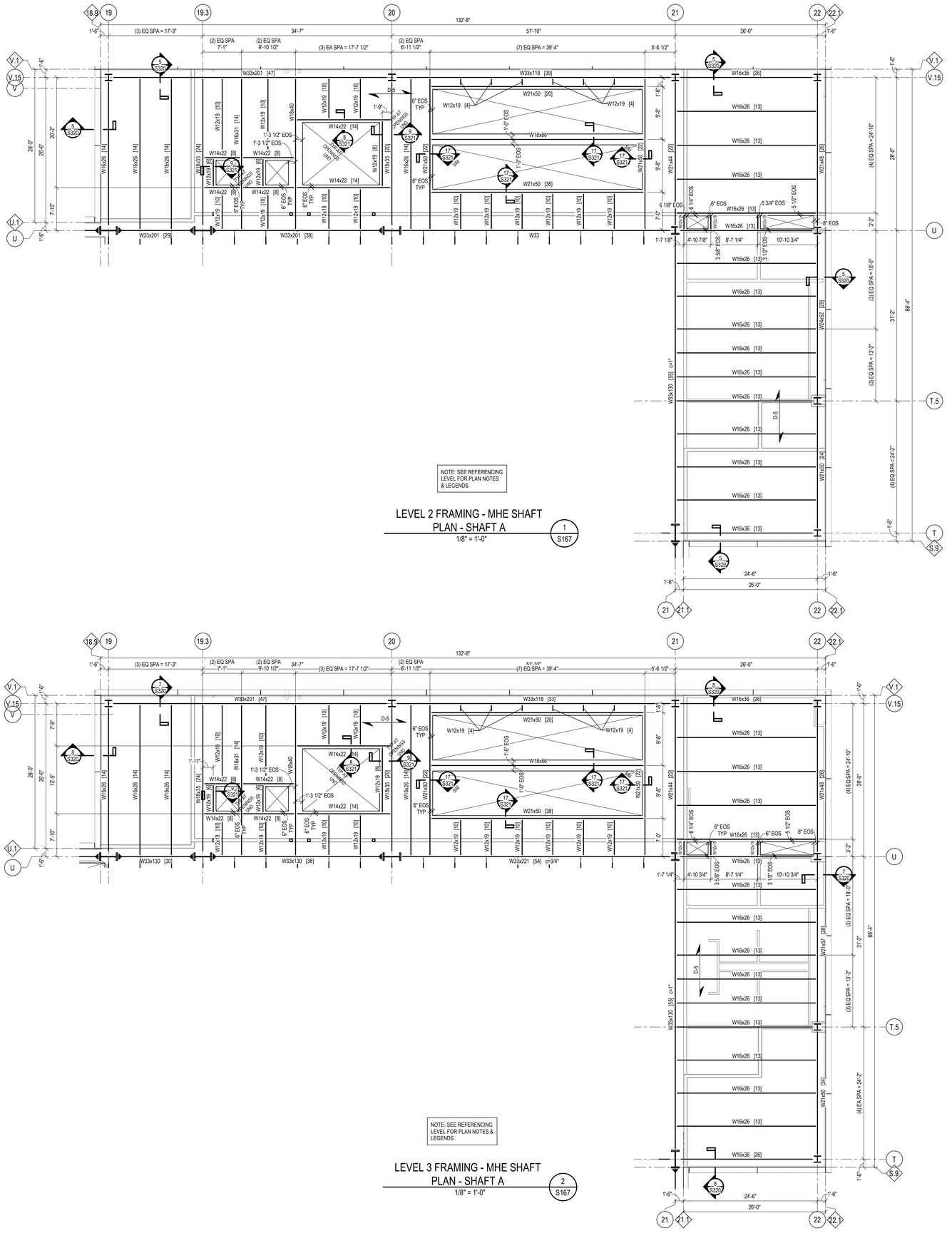
6/7/2024 8:49:28 AM

Schaefer Project Number: 24-0265



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DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED MHE SHAFT PLANS - SHAFT A

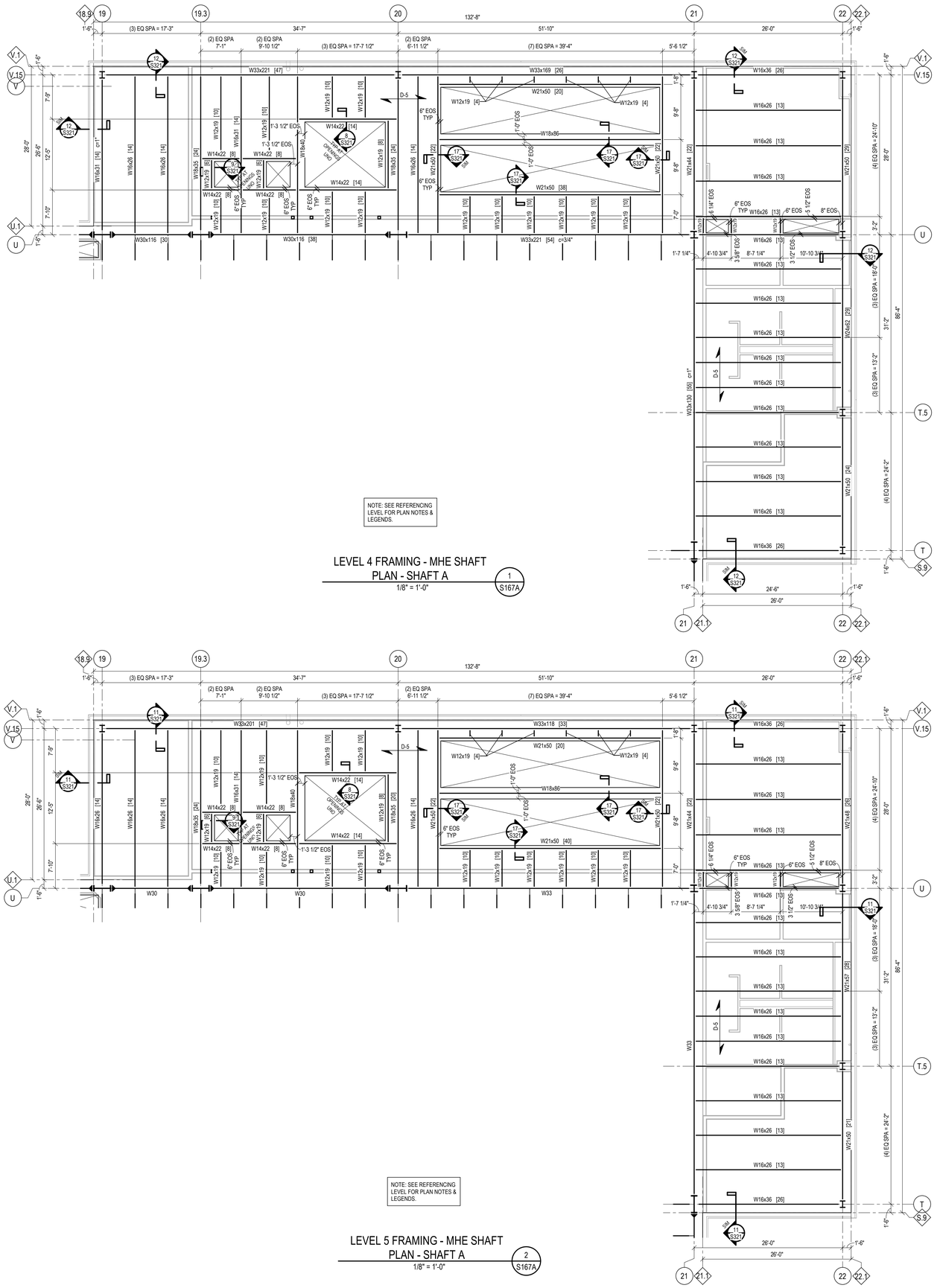
SHEET NUMBER

S167

NOT FOR CONSTRUCTION

6/7/2024 8:49:33 AM

Schaefer Project Number: 24-0265



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

LEVEL 4 FRAMING - MHE SHAFT PLAN - SHAFT A
1/8" = 1'-0"
1 S167A

NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

LEVEL 5 FRAMING - MHE SHAFT PLAN - SHAFT A
1/8" = 1'-0"
2 S167A

6/7/2024 8:48:39 AM

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SHEET TITLE

ENLARGED MHE SHAFT PLANS - SHAFT A

SHEET NUMBER

S167A

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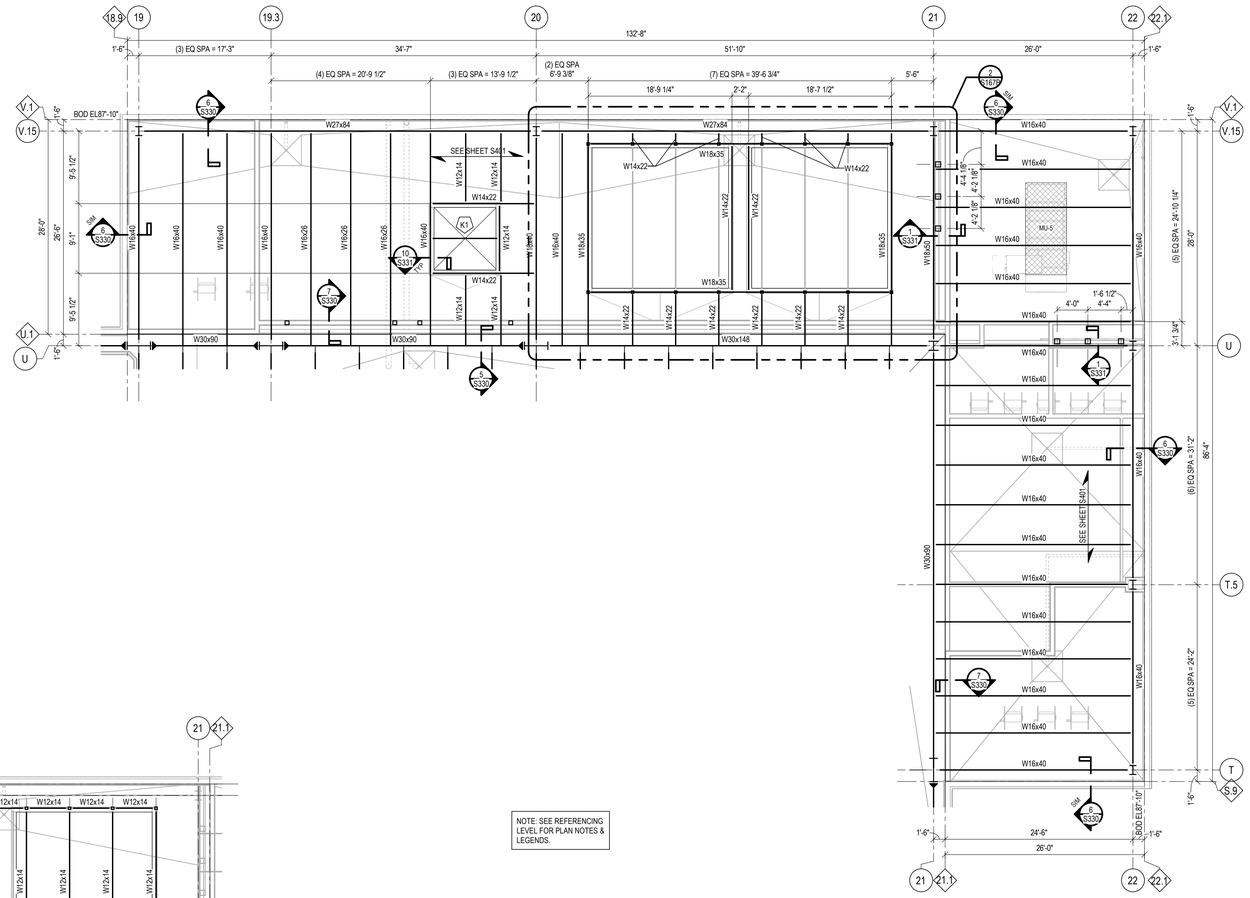
Schaefer Project Number: 24-0265

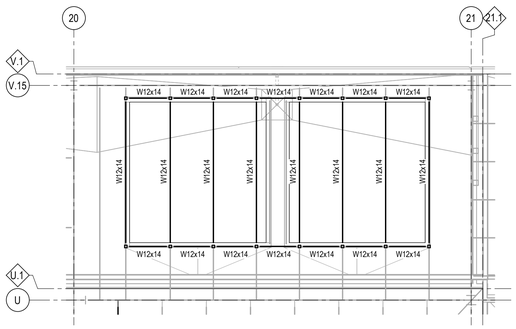


ROOF SHAFT FRAMING KEYNOTES

K1 5000 LB CAPACITY HOIST BEAM. COORDINATE LOCATION & INSTALLATION w/ EQUIPMENT VENDOR
K2 DAVIT CRANE SUPPORT POST. COORDINATE POST CENTERLINE WITH ARCH.

ROOF FRAMING - MHE SHAFT PLAN - SHAFT A
1/8" = 1'-0"
1 S167B

NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.



ELEVATED STEEL PLAN-SHAFT A
1/8" = 1'-0"
2 S167B

PLAN NOTES:
1. TISTEEL EL 91'-3 1/2"

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DATE	PROJECT NO
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SHEET TITLE

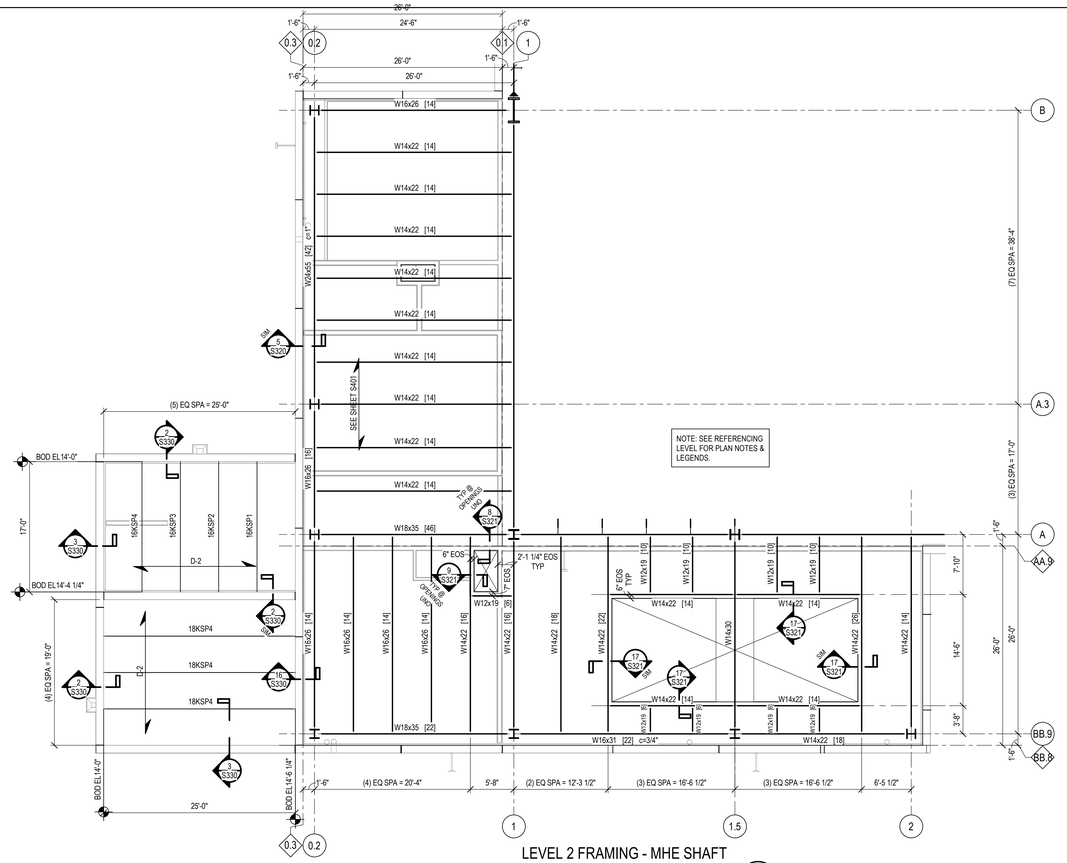
ENLARGED MHE SHAFT PLANS - SHAFT A

SHEET NUMBER

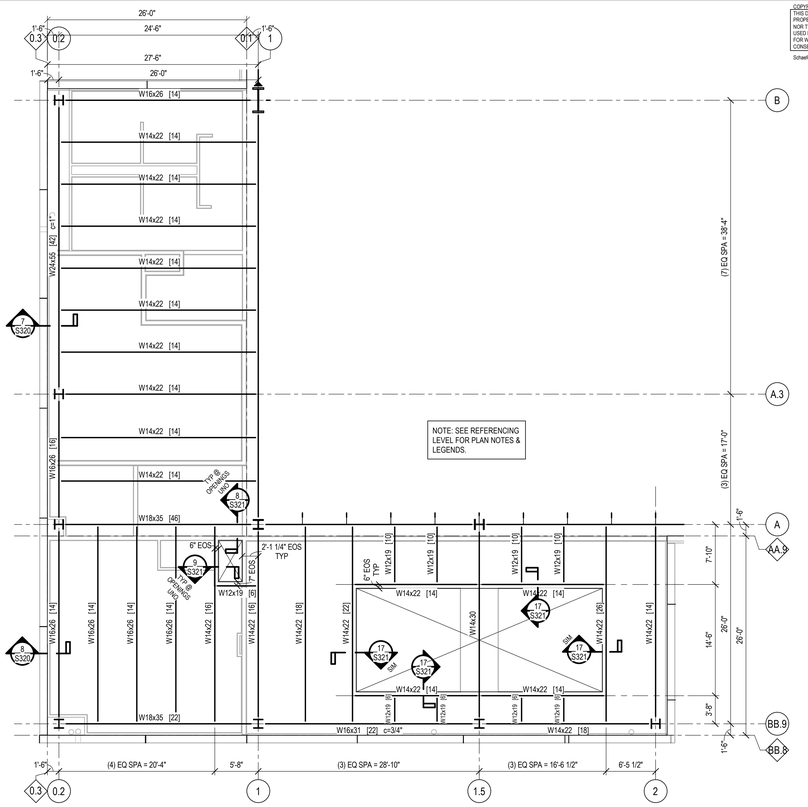
S167B

NOT FOR CONSTRUCTION

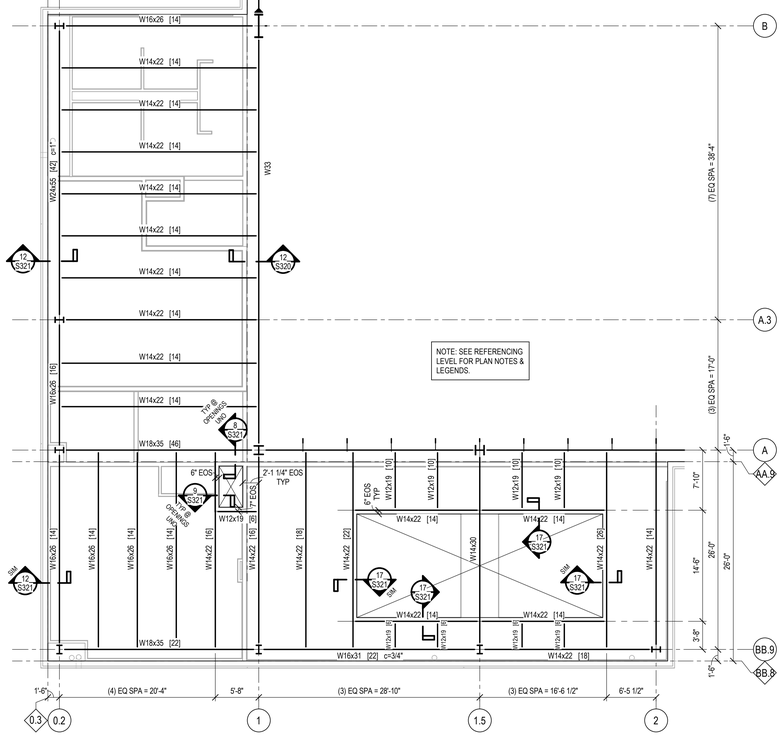
6/7/2024 8:49:43 AM



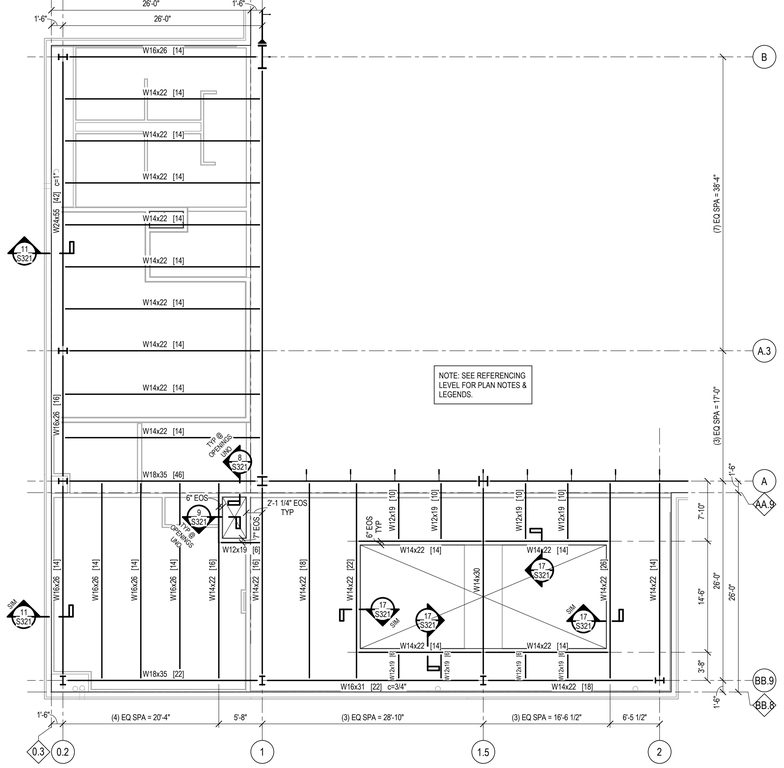
LEVEL 2 FRAMING - MHE SHAFT
PLAN - SHAFT B
1/8" = 1'-0"
1 / S168



LEVEL 3 FRAMING - MHE SHAFT
PLAN - SHAFT B
1/8" = 1'-0"
2 / S168



LEVEL 4 FRAMING - MHE SHAFT
PLAN - SHAFT B
1/8" = 1'-0"
3 / S168



LEVEL 5 FRAMING - MHE SHAFT
PLAN - SHAFT B
1/8" = 1'-0"
4 / S168

Schaefer Project Number: 24-0265

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PROJECT WHALE

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DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED MHE SHAFT PLANS - SHAFT B

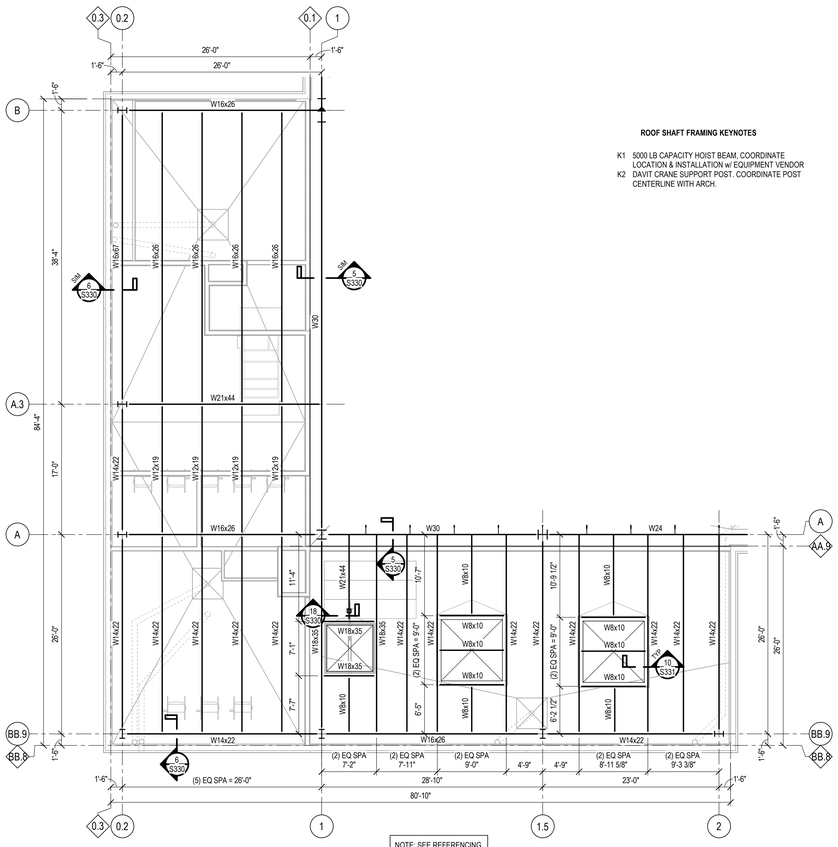
SHEET NUMBER

S168

NOT FOR CONSTRUCTION

6/7/2024 8:46:52 AM

Schaefer Project Number: 24-0265



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

ROOF FRAMING - MHE SHAFT PLAN - SHAFT B

1/8" = 1'-0"

1 / S168A

ROOF SHAFT FRAMING KEYNOTES

K1 5000 LB CAPACITY HOIST BEAM. COORDINATE LOCATION & INSTALLATION w/ EQUIPMENT VENDOR

K2 DAVIT CRANE SUPPORT POST. COORDINATE POST CENTERLINE WITH ARCH.

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PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED MHE SHAFT PLANS - SHAFT B

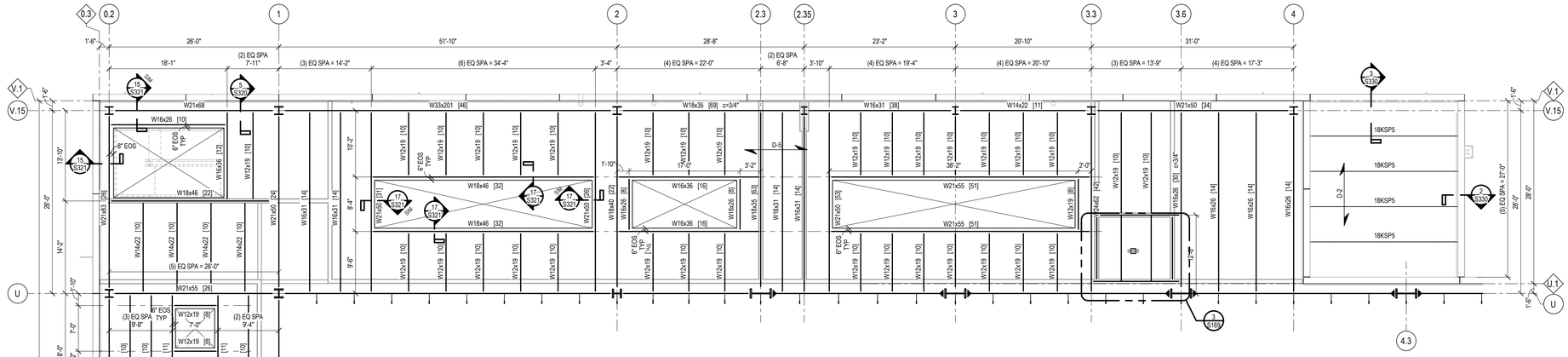
SHEET NUMBER

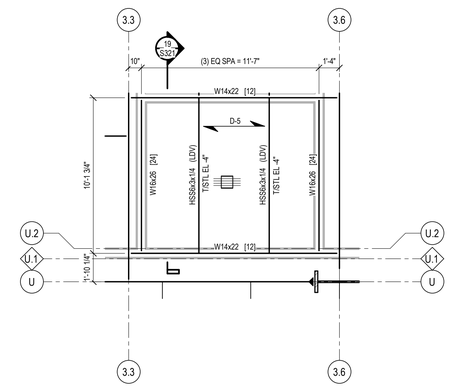
S168A

NOT FOR CONSTRUCTION

6/7/2024 8:49:56 AM

Schaefer Project Number: 24-0265

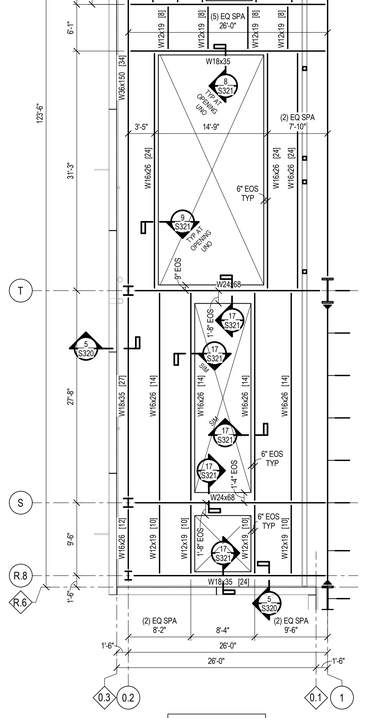




TYPICAL ENLARGED SCRUBBER DUMP PLAN

1/4" = 1'-0"

3 S169

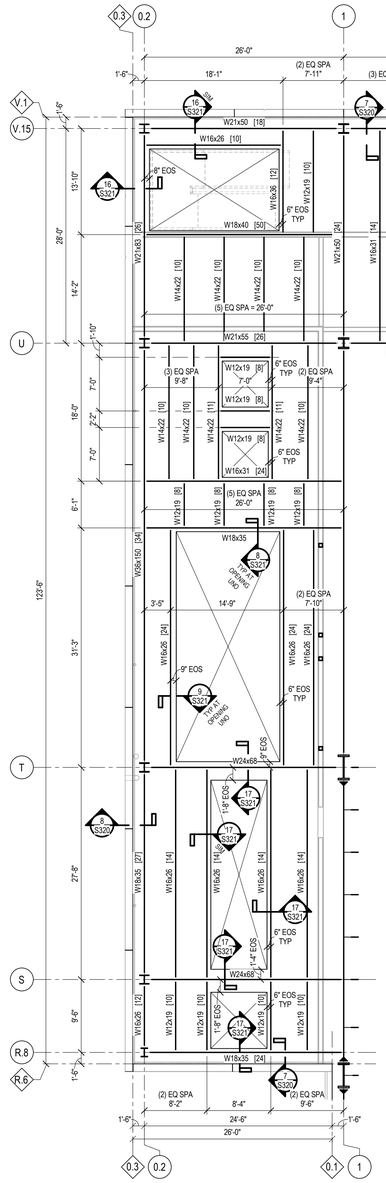


NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS

LEVEL 2 FRAMING - MHE SHAFT PLAN - SHAFTS C & D

1/8" = 1'-0"

1 S169



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS

LEVEL 3 FRAMING - MHE SHAFT PLAN - SHAFTS C & D

1/8" = 1'-0"

2 S169

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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

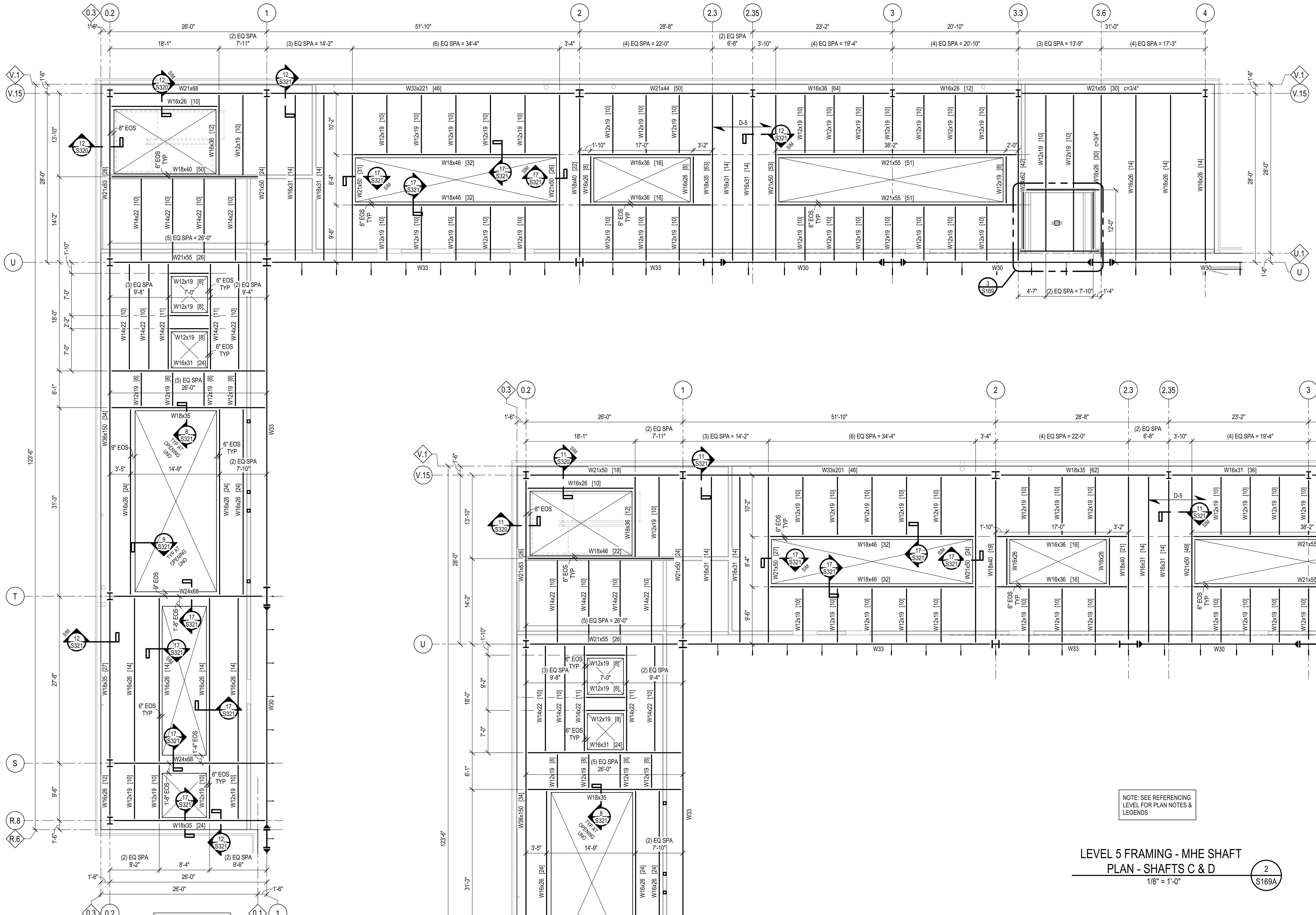
ENLARGED MHE SHAFT PLANS - SHAFTS C & D

SHEET NUMBER

S169

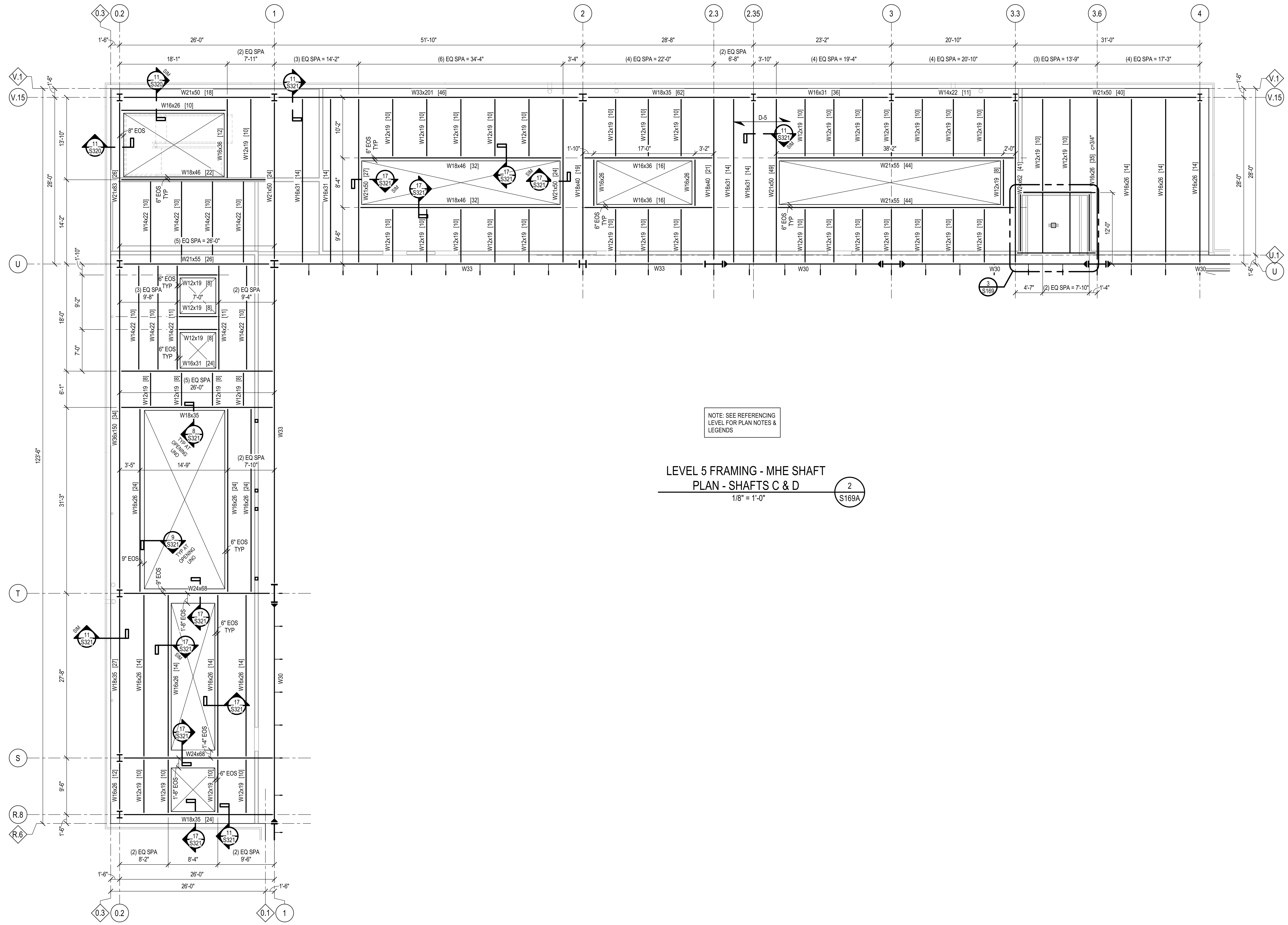
NOT FOR CONSTRUCTION

6/7/2024 8:50:03 AM



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS

LEVEL 4 FRAMING - MHE SHAFT PLAN - SHAFTS C & D
1/8" = 1'-0"
1 / S169A



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS

LEVEL 5 FRAMING - MHE SHAFT PLAN - SHAFTS C & D
1/8" = 1'-0"
2 / S169A

Schaefer Project Number: 24-0265

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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED MHE SHAFT PLANS - SHAFTS C & D

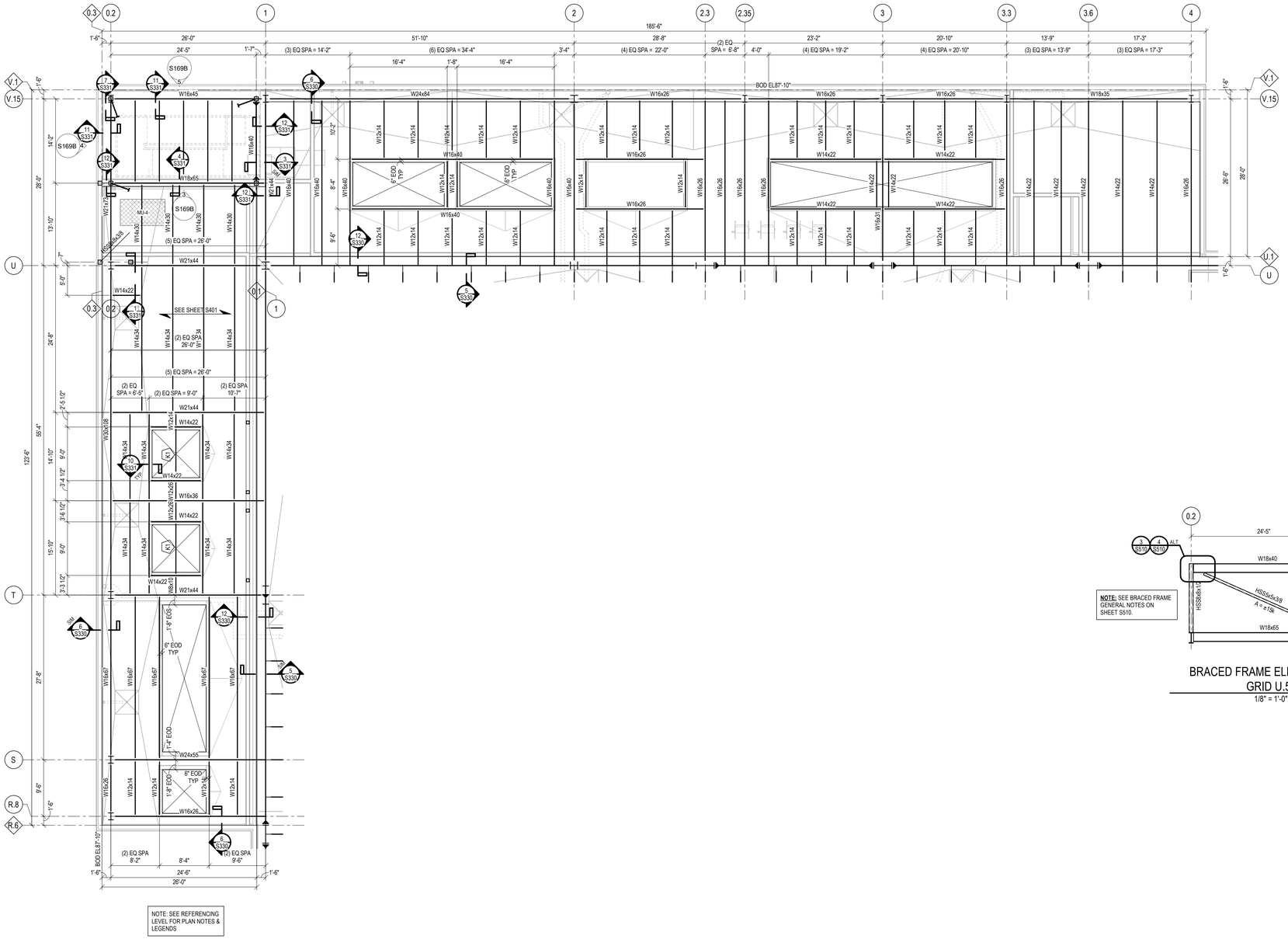
SHEET NUMBER

S169A

NOT FOR CONSTRUCTION

6/7/2024 8:50:10 AM

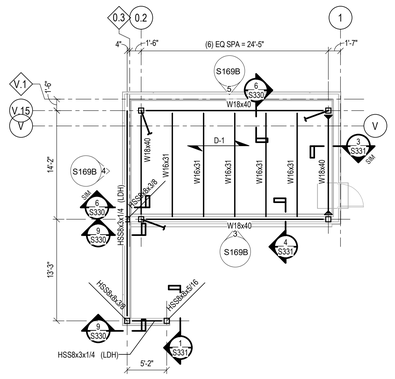
Schaefer Project Number: 24-0265



ROOF FRAMING - MHE SHAFT PLAN - SHAFTS C & D
1/8" = 1'-0"
1 S169B

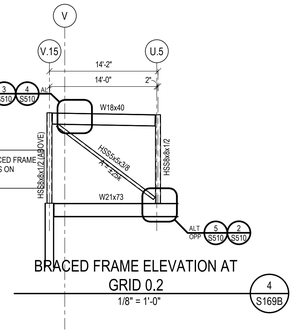
ROOF SHAFT FRAMING KEYNOTES

K1 5000 LB CAPACITY HOIST BEAM. COORDINATE LOCATION & INSTALLATION w/ EQUIPMENT VENDOR
K2 DAVIT CRANE SUPPORT POST. COORDINATE POST CENTERLINE WITH ARCH.

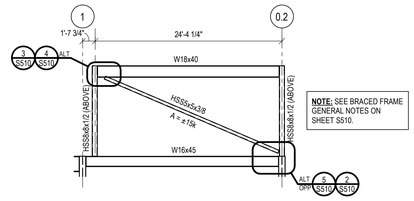


STAIR ROOF FRAMING - MHE SHAFT PLAN - SHAFT D
1/8" = 1'-0"
2 S169B

BRACED FRAME ELEVATION AT GRID U.5
1/8" = 1'-0"
3 S169B



BRACED FRAME ELEVATION AT GRID 0.2
1/8" = 1'-0"
4 S169B



BRACED FRAME ELEVATION AT GRID AA
1/8" = 1'-0"
5 S169B

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED MHE SHAFT PLANS - SHAFTS C & D

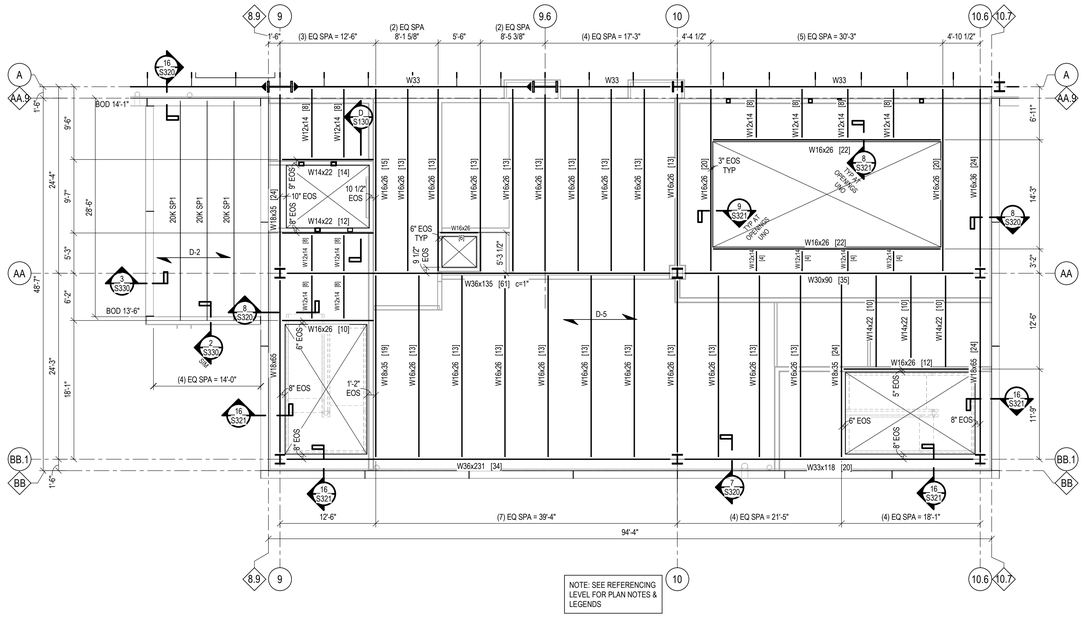
SHEET NUMBER

S169B

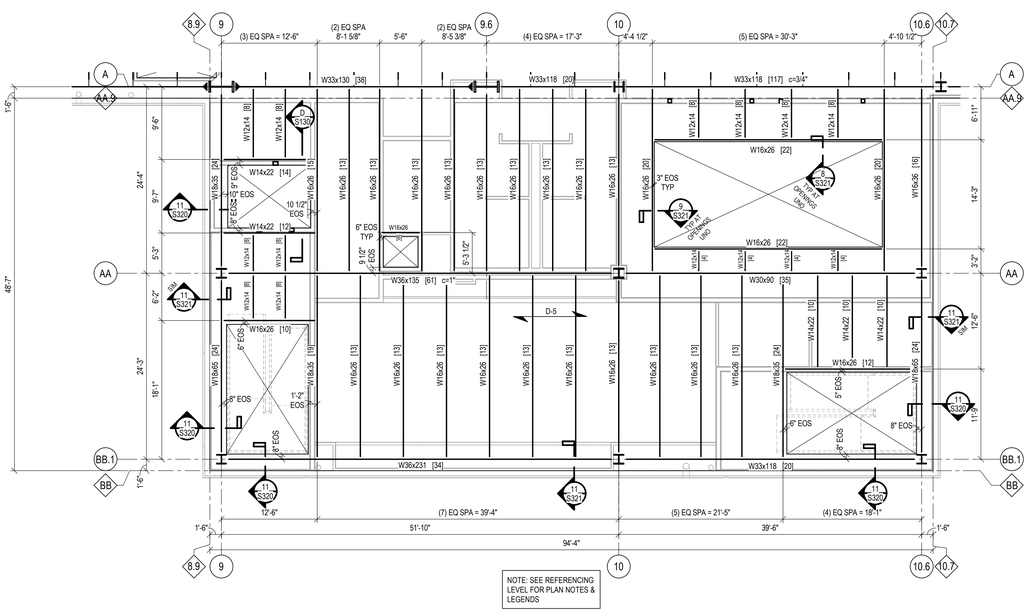
NOT FOR CONSTRUCTION

6/7/2024 8:50:17 AM

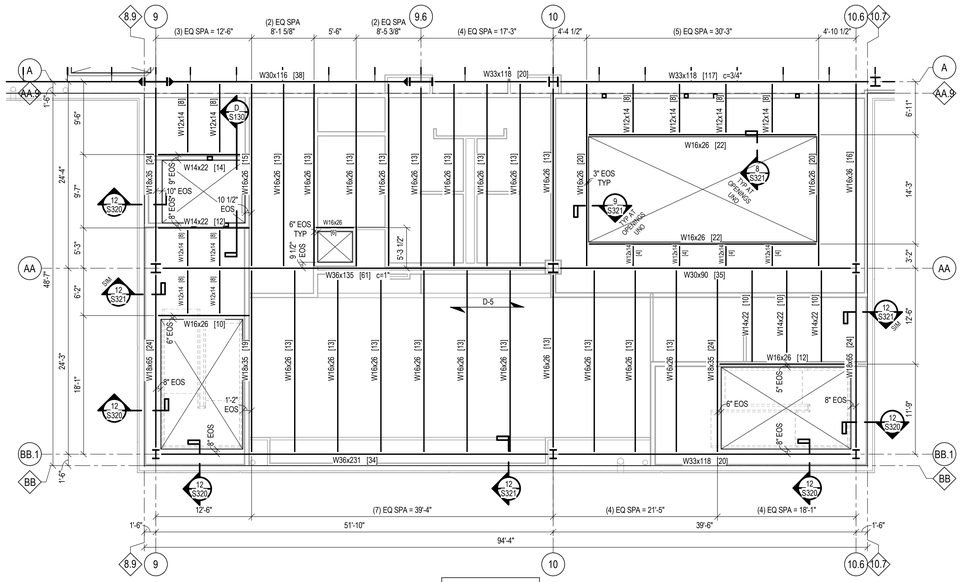
Schaefer Project Number: 24-0265



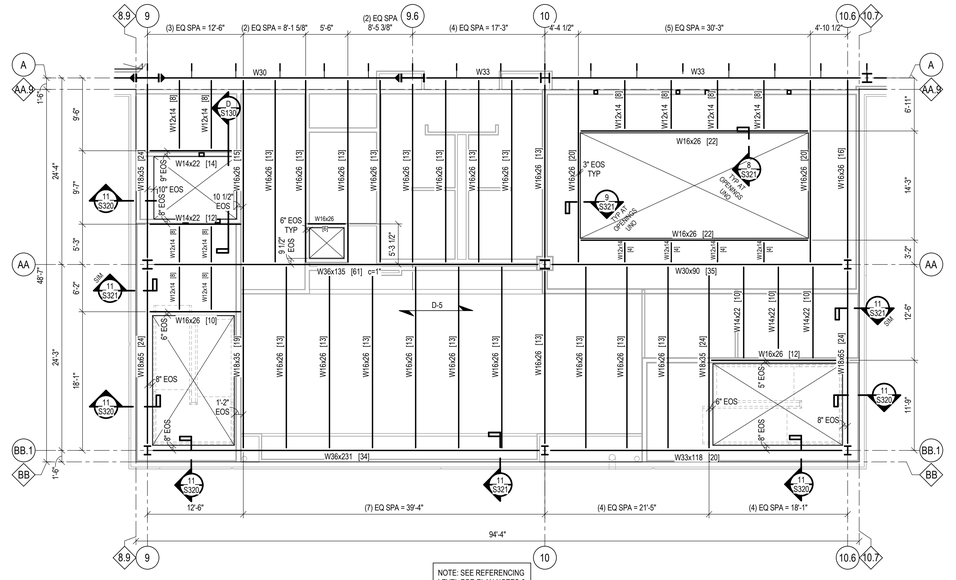
LEVEL 2 FRAMING - PARTIAL FRAMING PLAN
1/8" = 1'-0"
1 S170



LEVEL 3 FRAMING - PARTIAL FRAMING PLAN
1/8" = 1'-0"
2 S170



LEVEL 4 FRAMING - PARTIAL FRAMING PLAN
1/8" = 1'-0"
3 S170



LEVEL 5 FRAMING - PARTIAL FRAMING PLAN
1/8" = 1'-0"
4 S170

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PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED PARTIAL FRAMING PLANS

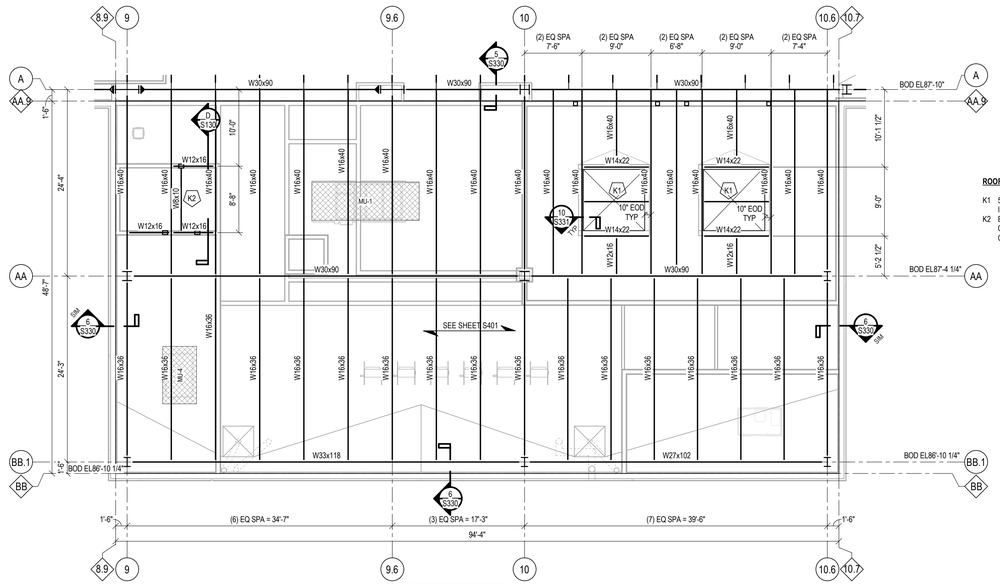
SHEET NUMBER

S170

NOT FOR CONSTRUCTION

6/7/2024 8:50:25 AM

Schaefer Project Number: 24-0265



NOTE: SEE REFERENCING LEVEL FOR PLAN NOTES & LEGENDS.

ROOF SHAFT KEYNOTES

K1 5000 LB CAPACITY HOIST BEAM. COORDINATE LOCATION & INSTALLATION w/ EQUIPMENT VENDOR

K2 ELEVATOR HOIST BEAM. PROVIDE 1" MIN CLEARANCE FROM T/STEEL TO BOD. COORD w/ ELEV MFR

ROOF FRAMING - PARTIAL FRAMING PLAN

1/8" = 1'-0"

1 / S170A

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NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED PARTIAL FRAMING PLANS

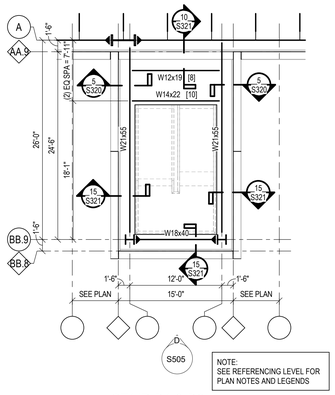
SHEET NUMBER

S170A

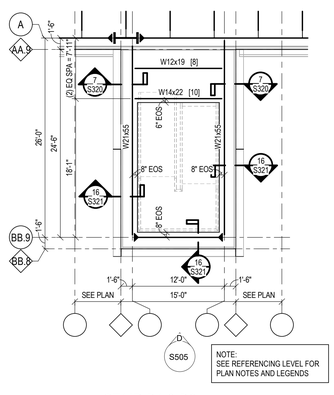
NOT FOR CONSTRUCTION

6/7/2024 8:50:29 AM

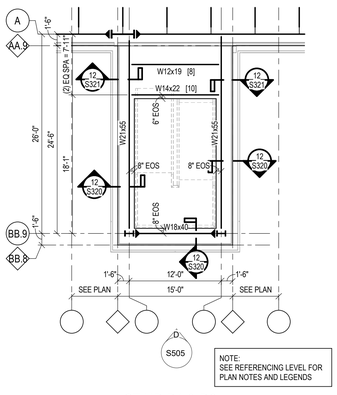
Schaefer Project Number: 24-0265



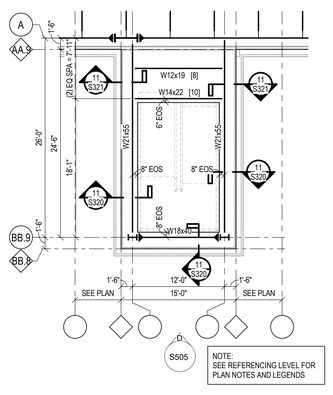
STAIR D1 & D2
LEVEL 2 FRAMING PLAN
1/8" = 1'-0"
1 S171



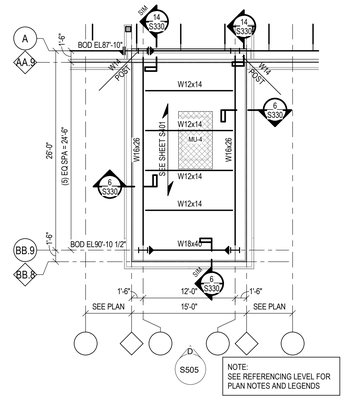
STAIR D1 & D2
LEVEL 3 FRAMING PLAN
1/8" = 1'-0"
2 S171



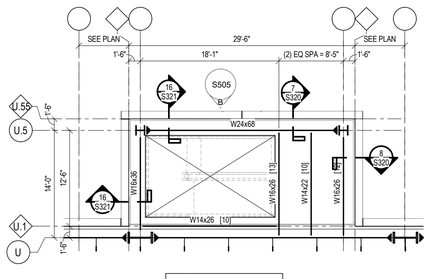
STAIR D1 & D2
LEVEL 4 FRAMING PLAN
1/8" = 1'-0"
3 S171



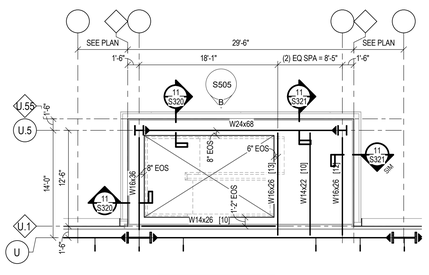
STAIR D1 & D2
LEVEL 5 FRAMING PLAN
1/8" = 1'-0"
4 S171



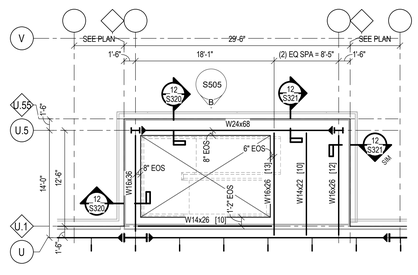
STAIR D1 & D2
ROOF FRAMING PLAN
1/8" = 1'-0"
5 S171



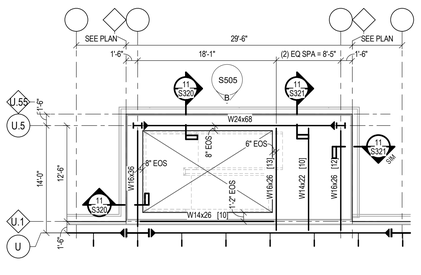
STAIR B1 & B2
LEVEL 2 FRAMING PLAN
1/8" = 1'-0"
6 S171



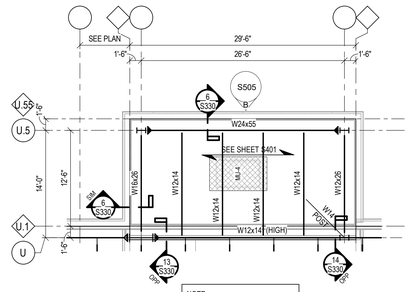
STAIR B1 & B2
LEVEL 3 FRAMING PLAN
1/8" = 1'-0"
7 S171



STAIR B1 & B2
LEVEL 4 FRAMING PLAN
1/8" = 1'-0"
8 S171



STAIR B1 & B2
LEVEL 5 FRAMING PLAN
1/8" = 1'-0"
9 S171



STAIR B1 & B2
ROOF FRAMING PLAN
1/8" = 1'-0"
10 S171

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BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED STAIR & BRIDGE FRAMING PLANS

SHEET NUMBER

S171

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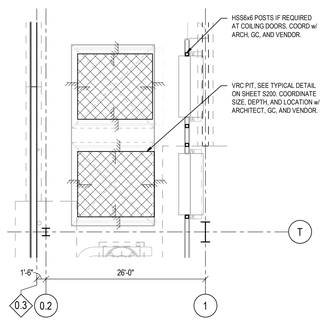
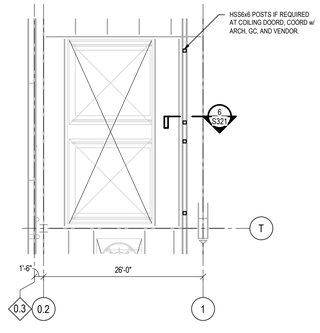
6/7/2024 8:50:42 AM



MHE SHAFT C - VRC PIT FOUNDATION PLAN

1" = 10'-0"

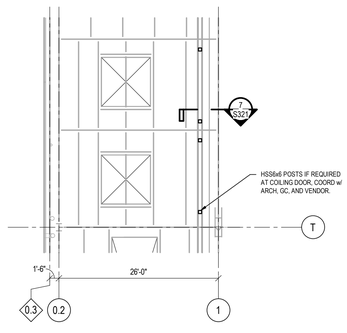
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT C - TYPICAL VRC FLOOR FRAMING PLAN

1" = 10'-0"

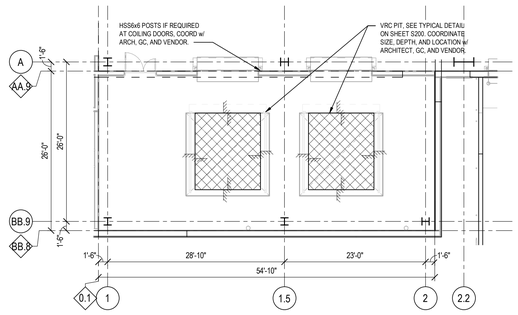
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT C - VRC ROOF FRAMING

1" = 10'-0"

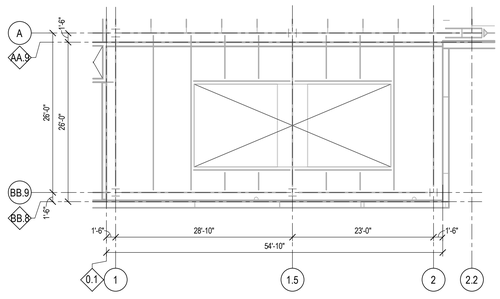
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT B - VRC PIT FOUNDATION PLAN

1" = 10'-0"

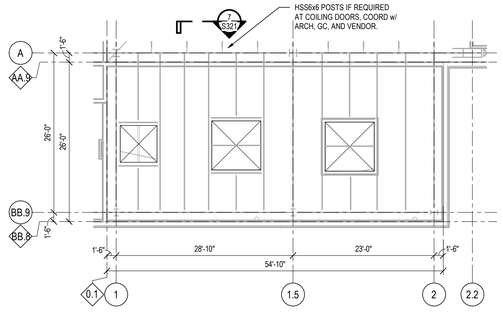
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT B - TYPICAL VRC FLOOR FRAMING PLAN

1" = 10'-0"

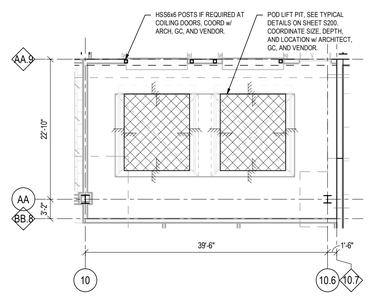
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT B - VRC ROOF FRAMING PLAN

1" = 10'-0"

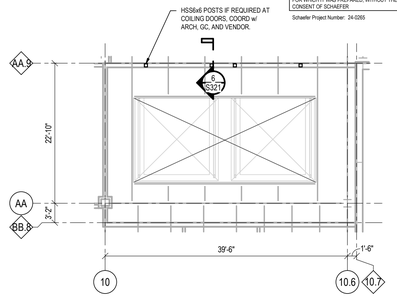
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



POD LIFT/VRC PIT FOUNDATION PLAN

1" = 10'-0"

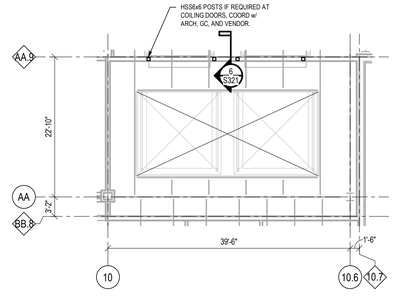
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



POD LIFT/VRC FRAMING - LEVEL 2

1" = 10'-0"

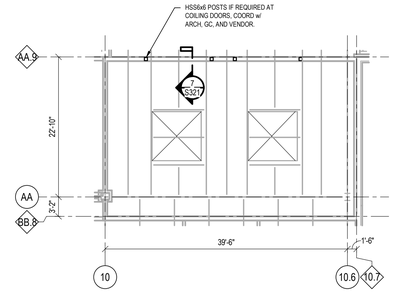
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



TYPICAL POD LIFT/VRC FLOOR FRAMING PLAN

1" = 10'-0"

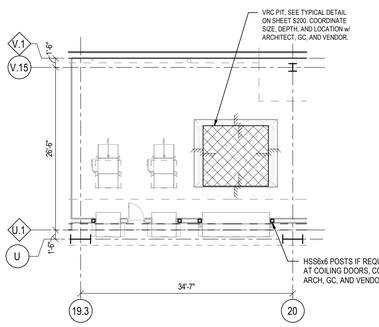
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



POD LIFT/VRC ROOF FRAMING PLAN

1" = 10'-0"

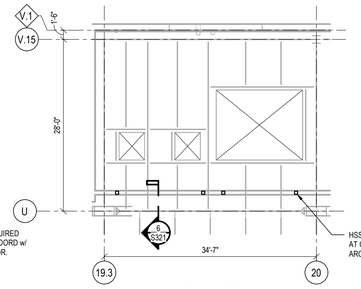
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT A - VRC PIT FOUNDATION PLAN

1" = 10'-0"

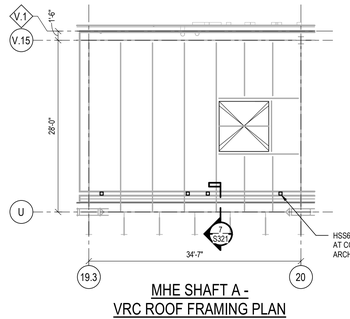
VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT A - TYPICAL VRC FLOOR FRAMING PLAN

1" = 10'-0"

VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.



MHE SHAFT A - VRC ROOF FRAMING PLAN

1" = 10'-0"

VRC/POD PLAN NOTES:
COORDINATE ALL DIMENSIONS WITH ARCHITECTURE AND EQUIPMENT MANUFACTURER PRIOR TO FABRICATION AND INSTALLATION.

Schaefer Project Number: 24-0265

MACGREGOR ASSOCIATES ARCHITECTS
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STRUCTURAL ENGINEERS
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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ENLARGED POD LIFT & VRC PLANS

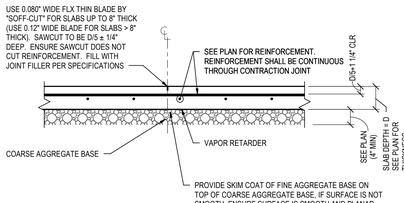
SHEET NUMBER

S180

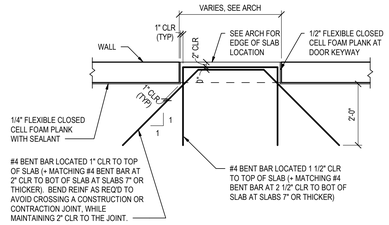
NOT FOR CONSTRUCTION

6/7/2024 8:50:09 AM

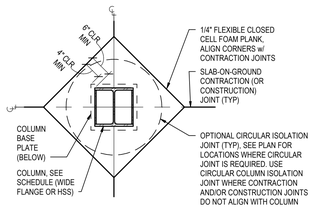
Schaefer Project Number: 24-0265



SLAB-ON-GROUND TYPICAL CONTRACTION JOINT AT REINFORCED SLAB
3/4" = 1'-0"

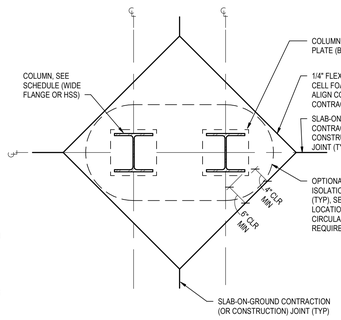


TYPICAL SLAB-ON-GROUND AT DOOR THRESHOLD
1/2" = 1'-0"



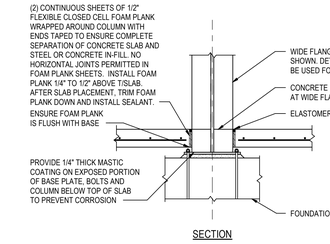
TYPICAL COLUMN BOX OUT ISOLATION JOINT
3/4" = 1'-0"

NOTE: COORDINATE COLUMN BOX OUT WITH BRACED FRAME GUSSET PLATE, WHERE OCCURS

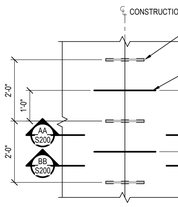


TYPICAL DOUBLE COLUMN BOX OUT ISOLATION JOINT
3/4" = 1'-0"

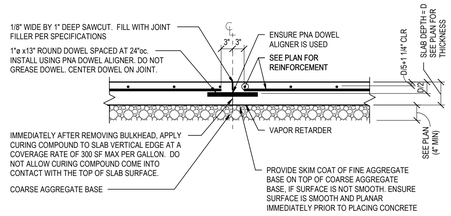
NOTE: COORDINATE COLUMN BOX OUT WITH BRACED FRAME GUSSET PLATE, WHERE OCCURS



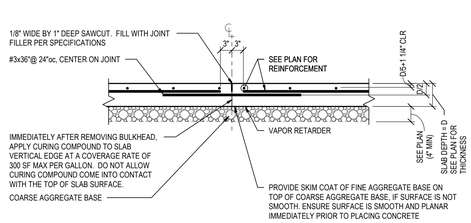
ALTERNATE COLUMN BOX OUT ISOLATION JOINT DETAIL
1/2" = 1'-0"



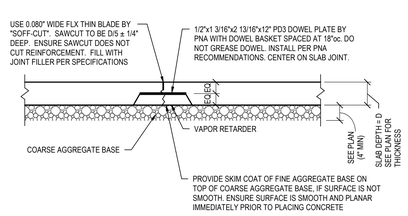
TYPICAL CONSTRUCTION JOINT PARTIAL PLAN AT REINFORCED SLAB
1/2" = 1'-0"



SECTION AA S200
3/4" = 1'-0"

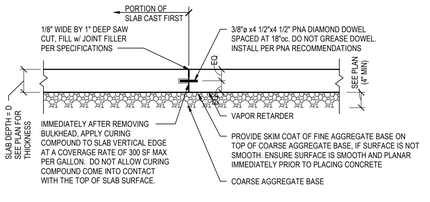


SECTION BB S200
3/4" = 1'-0"



SLAB-ON-GROUND CONTRACTION JOINT AT UNREINFORCED SLAB
3/4" = 1'-0"

NOTE: APPLICABLE TO SLAB ON GROUND ALTERNATE 1



SLAB-ON-GROUND CONSTRUCTION JOINT AT UNREINFORCED SLAB
3/4" = 1'-0"

NOTE: APPLICABLE TO SLAB-ON-GROUND ALTERNATE 1

TYPICAL DETAIL AT DISCONTINUOUS SLAB JOINT REINFORCEMENT
3/4" = 1'-0"

TYPICAL CIRCULAR SLAB-ON-GROUND PENETRATION DETAIL
1 1/2" = 1'-0"

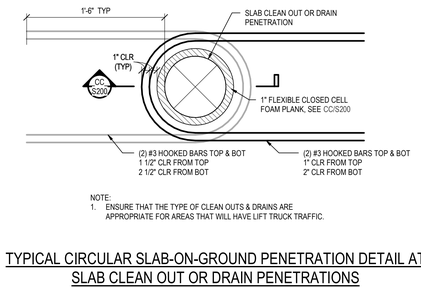
TYPICAL VRC OR POD LIFT PIT SECTION
3/4" = 1'-0"

NOTE: CONTRACTOR SHALL VERIFY PIT DEPTH & EXTENTS w/ FINAL SELECTION OF EQUIPMENT

ALTERNATE TYPICAL VRC OR POD LIFT PIT SECTION
3/4" = 1'-0"

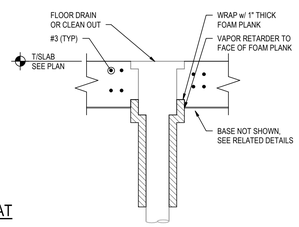
NOTE: CONTRACTOR SHALL VERIFY PIT DEPTH & EXTENTS w/ FINAL SELECTION OF EQUIPMENT

TYPICAL THICKENED SLAB BELOW STAIR STRINGER
1/2" = 1'-0"

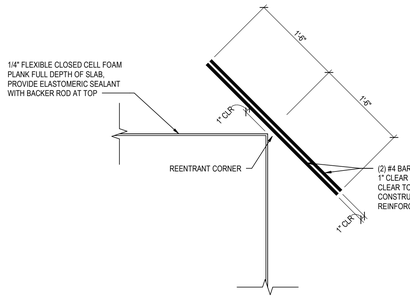


NOTE:
1. ENSURE THAT THE TYPE OF CLEAN OUTS & DRAINS ARE APPROPRIATE FOR AREAS THAT WILL HAVE LIFT TRUCK TRAFFIC.

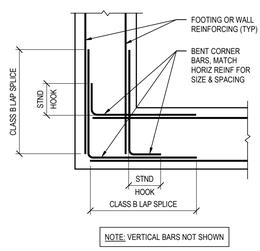
TYPICAL CIRCULAR SLAB-ON-GROUND PENETRATION DETAIL AT SLAB CLEAN OUT OR DRAIN PENETRATIONS
1 1/2" = 1'-0"



SECTION CC S200
1 1/2" = 1'-0"

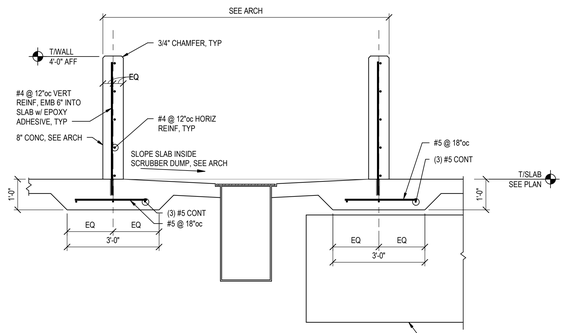


TYPICAL RE-ENTRANT CORNER REINFORCEMENT DETAIL
1" = 1'-0"

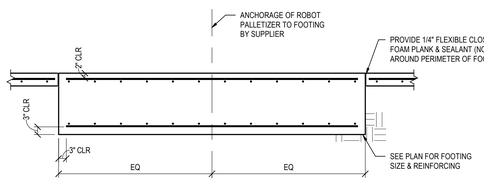


NOTE: VERTICAL BARS NOT SHOWN

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

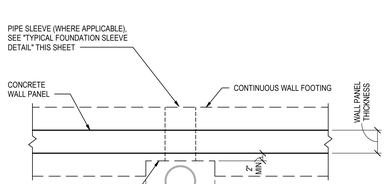


TYPICAL SCRUBBER DUMP TRENCH SECTION
1/2" = 1'-0"

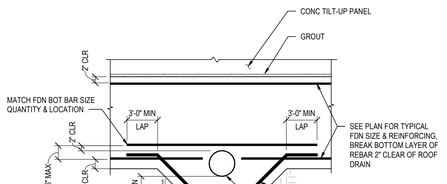


DESIGN/COORDINATION:
1. FOOTING DESIGNED TO SUPPORT FANUC MODEL R-2000iC/125L BASED ON APPLIED FORCES AND MOMENTS AS SHOWN IN THE TRANSPORT AND INSTALLATION GUIDE. IF ALTERNATE MODELS ARE TO BE USED SUBMIT REACTIONS TO EOR FOR REVIEW PRIOR TO CONSTRUCTION.
2. TOP SURFACE TO BE FINISHED FLAT AND LEVEL FOR INSTALLATION OF BASEPLATE AND ANCHORS BY ROBOT PALLETIZER SUPPLIER. SEE TRANSPORT AND INSTALLATION GUIDE FOR FLATNESS AND INCLINATION REQUIREMENTS.
3. BASEPLATE (BY ROBOT PALLETIZER SUPPLIER) TO BE CENTERED ON FOOTING.
4. DETAIL ASSUMES FOOTING IS PLACED PRIOR TO SLAB-ON-GROUND.

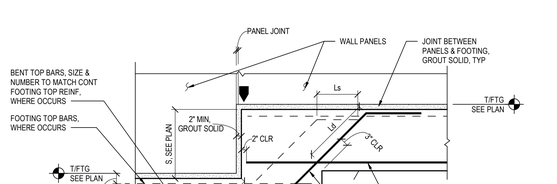
ISOLATED FOOTING TO SUPPORT ROBOT PALLETIZER
1/2" = 1'-0"



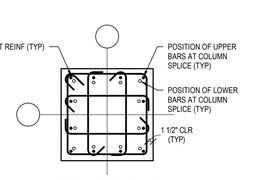
TYPICAL NOTCHED FOOTING AT ROOF WATER LEADER OR FIRE LINE RISER
3/4" = 1'-0"



TYPICAL FOUNDATION SLEEVE DETAIL
1/2" = 1'-0"



TYPICAL STEP IN FOOTING DETAIL
1/2" = 1'-0"



TYPICAL RECTANGULAR PEDESTAL SECTION PATTERN "A" - 12 BAR
NTS

NOTES:
1. ALTERNATE POSITION OF HOOKS WHEN PLACING SUCCESSIVE SETS OF TIES.
2. SPACE VERTICAL BARS EQUALLY ALONG EACH COLUMN FACE.
3. CONTRACTOR MAY PROPOSE CLOSED TIES IN LIEU OF THE DOGLEG TIES INDICATED. NO INTERIOR (INCLUDED) ANGLE FORMED AT THE CORNERS OF THE CLOSED TIES SHALL BE LARGER THAN 135 DEGREES.

TYPICAL PEDESTAL BAR PATTERN
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

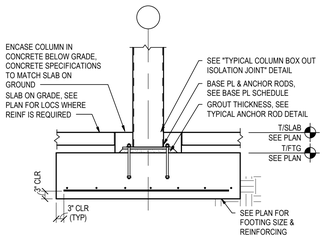
TYPICAL FOUNDATION DETAILS

SHEET NUMBER

S200

NOT FOR CONSTRUCTION

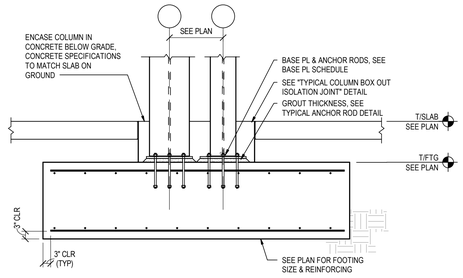
6/7/2024 8:51:03 AM



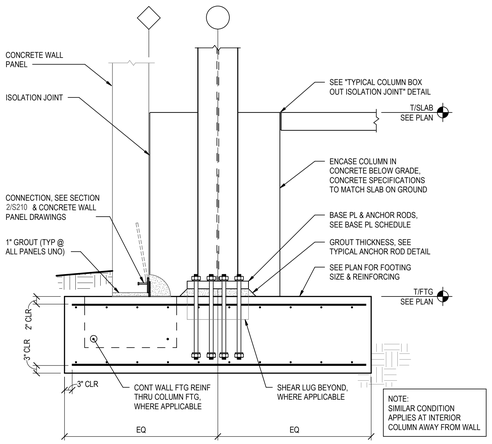
TYPICAL

TYPICAL COLUMN BOX OUT DETAIL

1/2" = 1'-0"

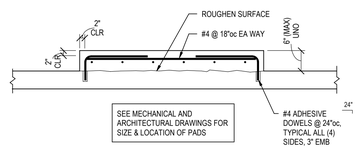


AT EXPANSION JOINT



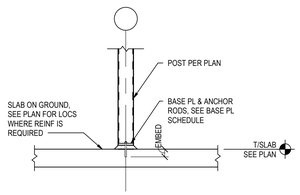
TYPICAL COLUMN ENCASEMENT BELOW SLAB

1/2" = 1'-0"



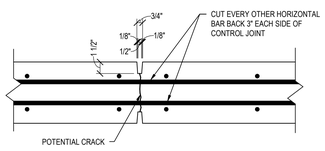
TYPICAL INTERIOR HOUSEKEEPING / EQUIPMENT CONCRETE PAD

NTS



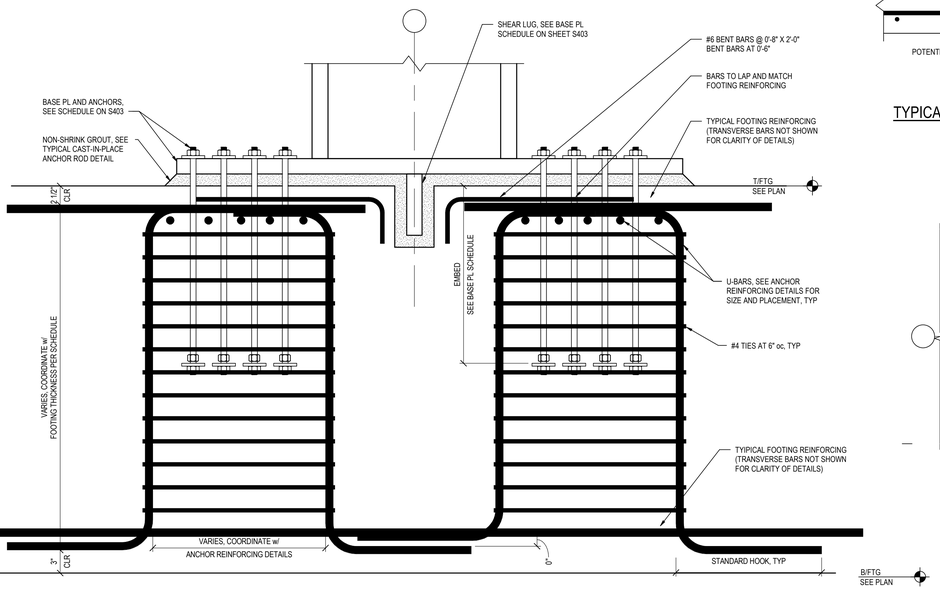
TYP POST AT SLAB ON GRADE

1/2" = 1'-0"



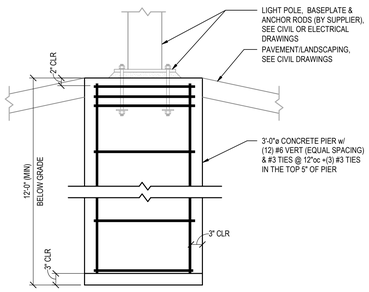
CONCRETE WALL TYPICAL VERTICAL CONTROL JOINT

1 1/2" = 1'-0"



TYPICAL BREAKOUT REINFORCING DETAIL

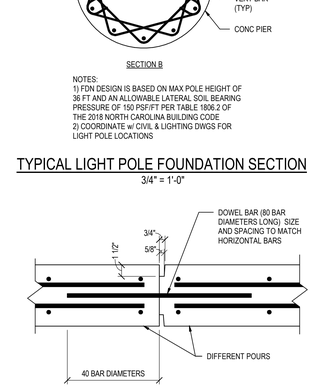
1 1/2" = 1'-0"



NOTES:
1) FDN DESIGN IS BASED ON MAX POLE HEIGHT OF 36 FT AND AN ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 150 PSF/FT PER TABLE 1806.2 OF THE 2018 NORTH CAROLINA BUILDING CODE
2) COORDINATE w/ CIVIL & LIGHTING DWGS FOR LIGHT POLE LOCATIONS

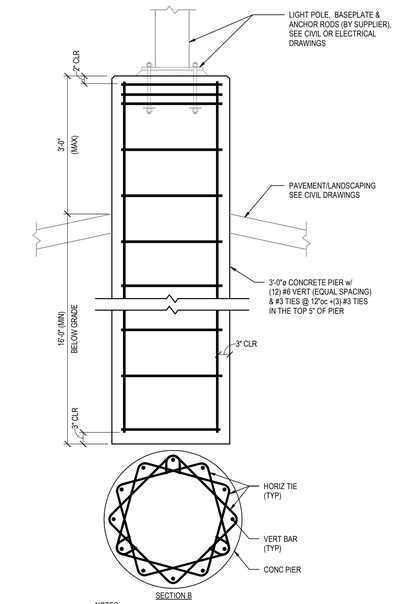
TYPICAL LIGHT POLE FOUNDATION SECTION

3/4" = 1'-0"



CONCRETE WALL TYPICAL VERTICAL CONSTRUCTION JOINT

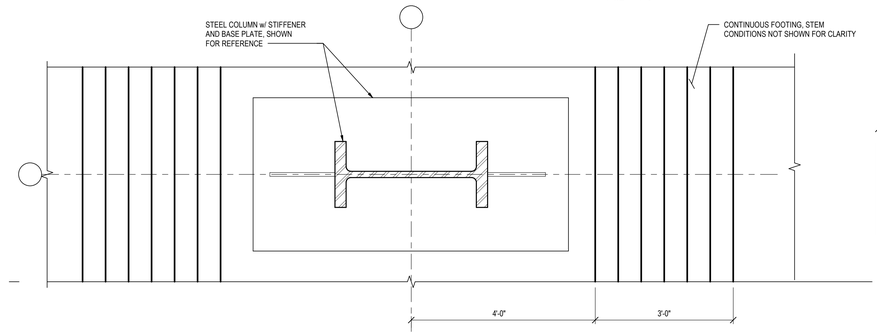
1 1/2" = 1'-0"



NOTES:
1) FDN DESIGN IS BASED ON MAX POLE HEIGHT OF 36 FT AND AN ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 150 PSF/FT PER TABLE 1806.2 OF THE 2018 NORTH CAROLINA BUILDING CODE
2) COORDINATE w/ CIVIL & LIGHTING DWGS FOR LIGHT POLE LOCATIONS

TYPICAL EXTENDED LIGHT POLE FOUNDATION SECTION

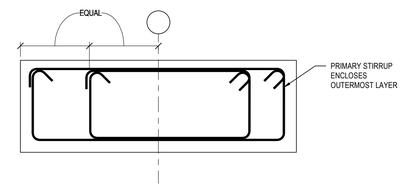
3/4" = 1'-0"



PLAN VIEW CONTINUOUS FOOTING

ADDED SHEAR REINFORCING:
- (2) #5 STIRRUPS @ 6"oc (TYP UNO)

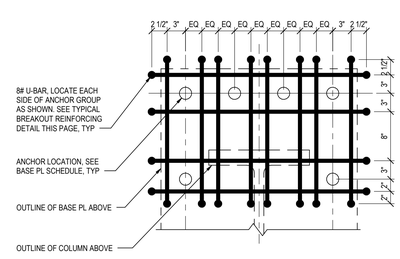
NOTES:
1. ADJUST CONTINUOUS BARS TO ALIGN WITH BENDS IN STIRRUPS



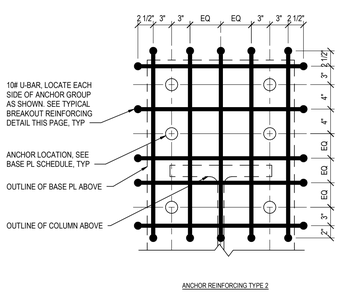
SECTION THROUGH FOOTING

TYPICAL SHEAR REINFORING DETAIL

3/4" = 1'-0"

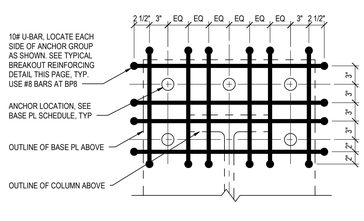


ANCHOR REINFORCING TYPE 1

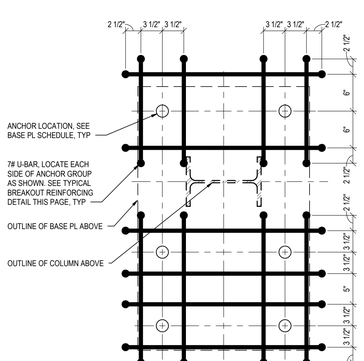


ANCHOR REINFORCING TYPE 2

NOTES:
1. ANCHOR REINFORCING TO BE PROVIDED BOTH SIDES OF BASE PLATE.
2. LAYOUT OF ANCHORS MAY VARY, SEE BASE PLATE SCHEDULE



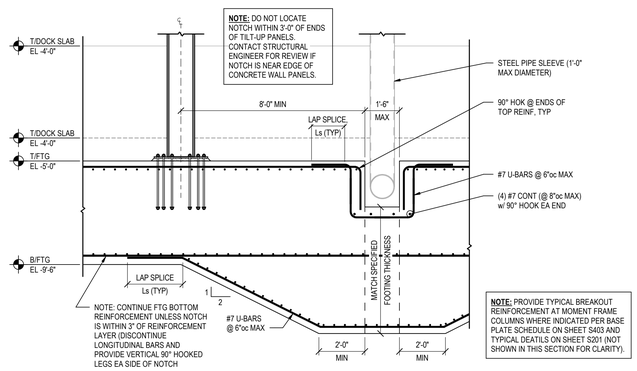
ANCHOR REINFORCING TYPE 3



ANCHOR REINFORCING TYPE 4

BREAKOUT ANCHOR REINFORCING DETAILS

NTS



TYPICAL FOOTING NOTCH @ PERIMETER FOOTING DETAIL

3/8" = 1'-0"

6/7/2024 8:51:06 AM

Schaefer Project Number: 24-0265

MACGREGOR ASSOCIATES ARCHITECTS
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SEAL

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

TYPICAL FOUNDATION DETAILS

SHEET NUMBER

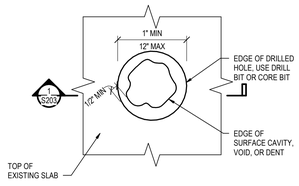
S201

NOT FOR CONSTRUCTION

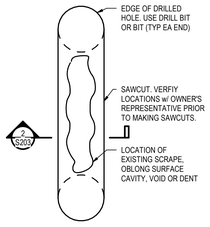
Schaefer Project Number: 24-0265

GENERAL NOTES

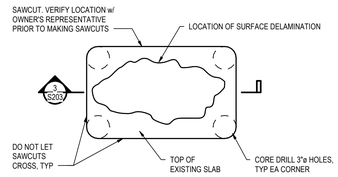
1. THE AREAS TO BE REPAIRED WILL BE IDENTIFIED BY THE OWNER'S REPRESENTATIVE.
2. THE REPAIR IS TO BE DONE BY PERSONNEL CERTIFIED BY THE REPAIR MATERIAL MANUFACTURER. A TECHNICAL REPRESENTATIVE FROM THE REPAIR MATERIAL MANUFACTURER IS TO BE PRESENT DURING THE FIRST INSTALLATION OF EACH TYPE OF REPAIR.
3. THE REPAIR CONTRACTOR IS TO FURNISH ALL MATERIALS, TOOLS, LABOR AND SUPERVISION NECESSARY TO PERFORM THE REPAIRS AND CLEAN THE SURROUNDING REPAIRED AREAS.
4. VERIFY THERE ARE NO EMBEDDED UTILITIES THAT MIGHT BE DAMAGED PRIOR TO ANY DEMOLITION, DRILLING OR CUTTING OF THE SLAB.
5. DO AN INITIAL REPAIR OF EACH TYPE OF REPAIR (JOINT SPALL, SURFACE DENT, CAVITY, VOID, DELAMINATIONS, ANCHOR BOLT, ETC.) AND OBTAIN THE OWNER'S REPRESENTATIVE'S APPROVAL BEFORE DOING OTHER REPAIRS.
6. REPAIR MATERIAL MANUFACTURER IS TO BE METZGER/McGUIRE (metzgermcguire.com). ALTERNATES MAY BE SUBMITTED FOR APPROVAL. SELECT COLOR TO MATCH SURROUNDING CONCRETE AS CLOSELY AS FEASIBLE. USE ONLY AGGREGATES SUPPLIED BY REPAIR MATERIAL MANUFACTURER, UNLESS PERMITTED IN WRITING BY THE REPAIR MANUFACTURER AND OWNER'S REPRESENTATIVE. SELECT ONE OF THE FOLLOWING MATERIALS BASED ON ENVIRONMENTAL CONDITIONS AND TIME PERMITTED FOR THE REPAIR:
   - A. SMALL SURFACE CAVITIES, VOIDS OR DENTS, SMALL SCRAPES, OBLONG SURFACE CAVITIES, ANCHOR BOLT
     - a. RAPID REFLOOR
     - b. RAPID REFLOOR XP
   - B. SURFACE DELAMINATIONS
     - a. ARMOR-HARD
     - b. ARMOR-HARD EXTREME
     - c. ARMOR-HARD HDR
     - d. ARMOR-HARD LV
   - C. JOINT SPALL
     - a. ARMOR-HARD
     - b. ARMOR-HARD EXTREME
7. ENSURE STORAGE, HANDLING, PREPARATION, INSTALLATION, ETC. OF ALL MATERIALS ARE IN ACCORDANCE WITH MANUFACTURER'S / VENDOR'S PRINTED RECOMMENDATIONS AND INSTRUCTIONS, UNLESS OTHERWISE ALLOWED BY OWNER'S REPRESENTATIVE.
8. REMOVE LOOSE CONCRETE, DIRT, DEBRIS, OIL, GREASE, CURING COMPOUNDS, EFFLORESCENCE, PAINTS, COATINGS, CLEANING AGENTS, SOLVENTS AND ANY OTHER MATERIAL THAT WILL BE DETRIMENTAL TO THE BOND OF THE REPAIR MATERIAL TO THE EXISTING CONCRETE FROM ALL REPAIR SURFACES. SURFACE IS TO BE DRY IMMEDIATELY PRIOR TO INSTALLING THE REPAIR MATERIAL. DUSTLESS TOOLS WITH AIR VACUUMS ARE TO BE USED. OBTAIN OWNER'S REPRESENTATIVE'S APPROVAL FOR ANY SOLVENTS, CLEANING AGENTS, COMPOUNDS, ETC. FOR USE WITHIN THE FACILITY.
9. IF EXISTING SURFACE HAS A TEXTURE FINISH (BROOM FINISH, ETC.), TEXTURE NEW SURFACE TO MATCH ADJACENT CONCRETE SURFACE. OBTAIN OWNER'S REPRESENTATIVE'S APPROVAL FOR THE TEXTURED SURFACE ON THE INITIAL REPAIR.



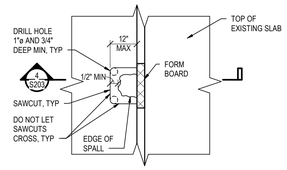
SMALL SURFACE CAVITIES, VOIDS OR DENTS
NTS



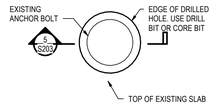
SMALL SCRAPES, OBLONG SURFACE CAVITIES, VOIDS OR DENTS
NTS



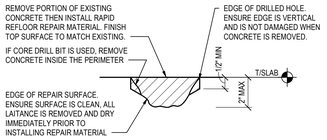
SURFACE DELAMINATIONS
NTS



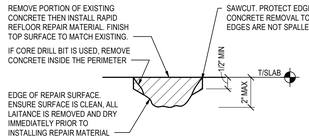
JOINT SPALL
NTS



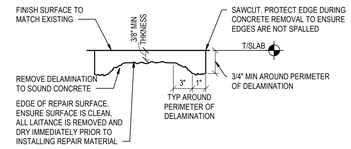
ANCHOR BOLT
NTS



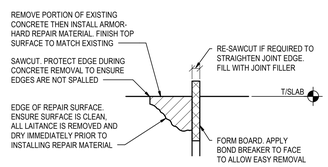
SECTION 1 / S203
NTS



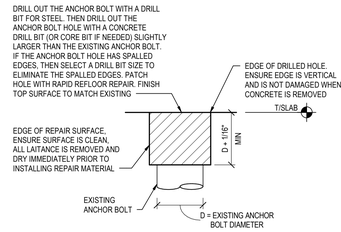
SECTION 2 / S203
NTS



SECTION 3 / S203
NTS



SECTION 4 / S203
NTS



SECTION 5 / S203
NTS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

TYPICAL SLAB REPAIR DETAILS

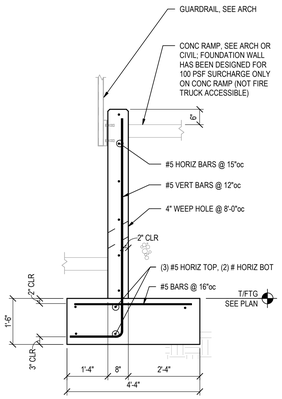
SHEET NUMBER

S203

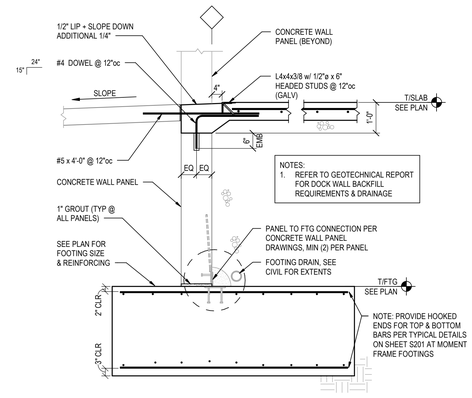
NOT FOR CONSTRUCTION

6/7/2024 8:51:08 AM

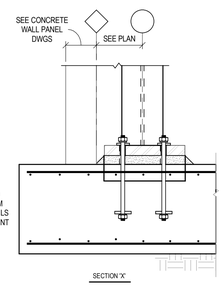
Schaefer Project Number: 24-0265

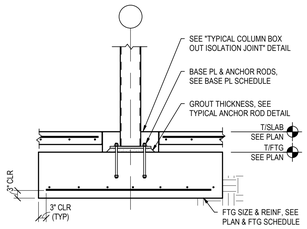


SECTION 1 — 1/2" = 1'-0" — S210

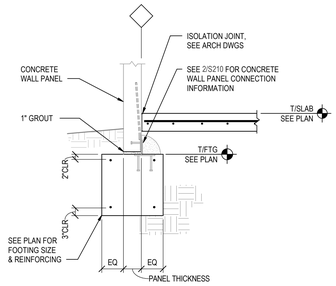


SECTION 2 — 1/2" = 1'-0" — S210

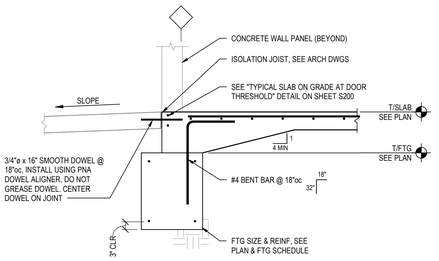




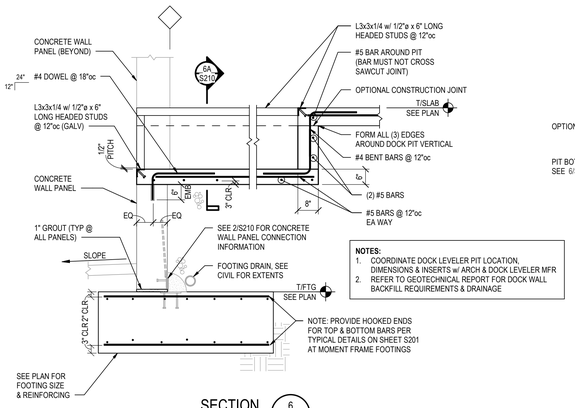
SECTION 3 — 1/2" = 1'-0" — S210



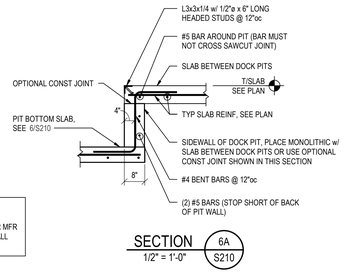
SECTION 4 — 1/2" = 1'-0" — S210



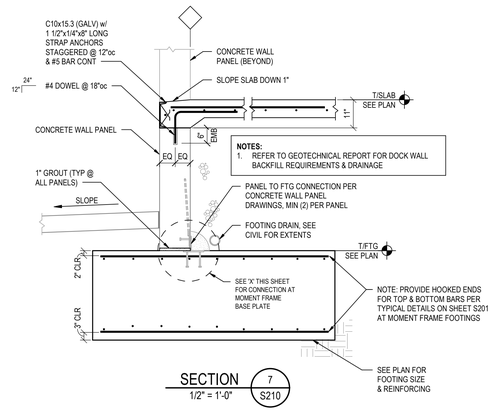
SECTION 5 — 1/2" = 1'-0" — S210



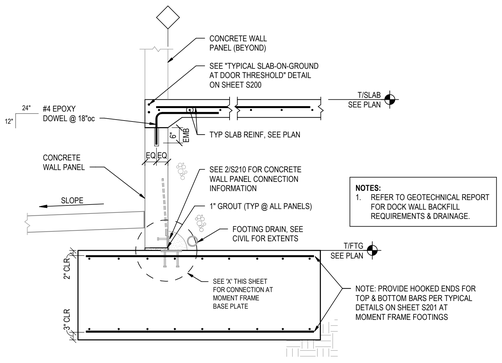
SECTION 6 — 1/2" = 1'-0" — S210



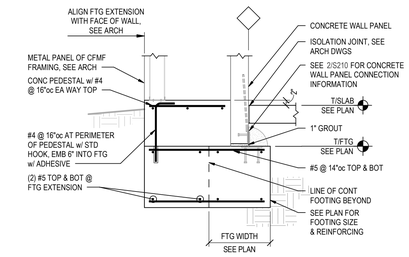
SECTION 6A — 1/2" = 1'-0" — S210



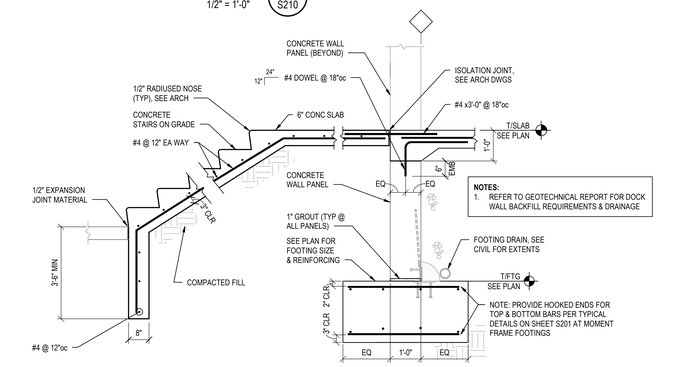
SECTION 7 — 1/2" = 1'-0" — S210



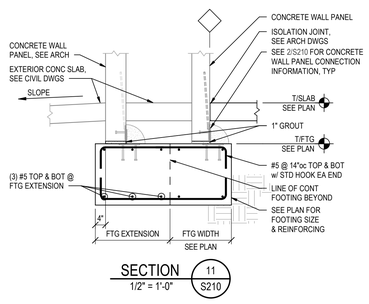
SECTION 8 — 1/2" = 1'-0" — S210



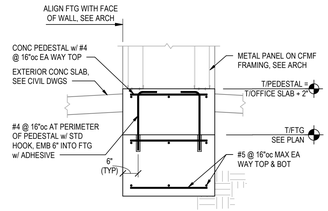
SECTION 9 — 1/2" = 1'-0" — S210



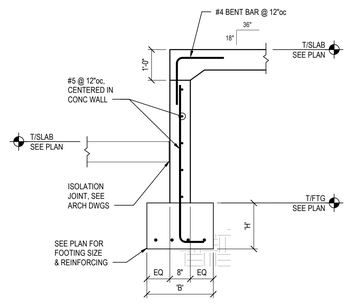
SECTION 10 — 1/2" = 1'-0" — S210



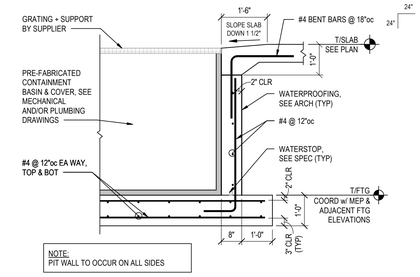
SECTION 11 — 1/2" = 1'-0" — S210



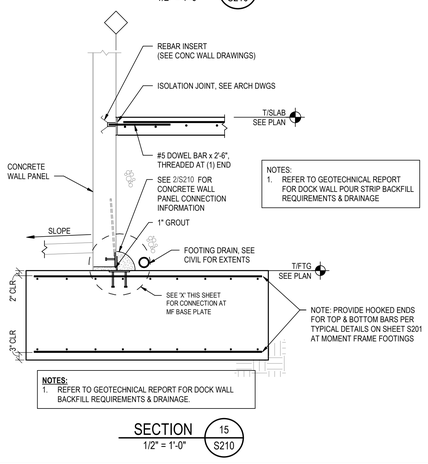
SECTION 12 — 1/2" = 1'-0" — S210



SECTION 13 — 1/2" = 1'-0" — S210



SECTION 14 — 1/2" = 1'-0" — S210



SECTION 15 — 1/2" = 1'-0" — S210

6/7/2024 8:51:12 AM

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

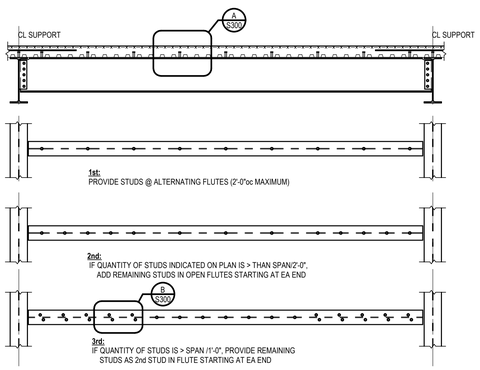
FOUNDATION SECTIONS & DETAILS

SHEET NUMBER

S210

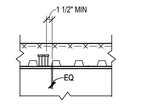
NOT FOR CONSTRUCTION

Schaefer Project Number: 24-0265

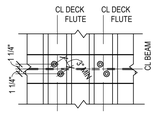


TYPICAL STUD PLACEMENT DETAIL FOR BEAM PERPENDICULAR TO DECK FLUTES

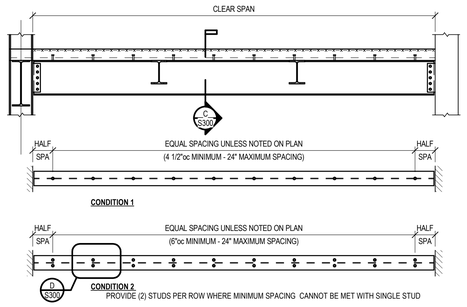
NTS



SECTION A S300
NTS

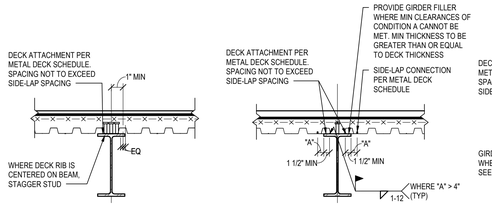


PLAN DETAIL B S300
NTS



TYPICAL STUD PLACEMENT DETAIL FOR BEAM PARALLEL TO DECK FLUTES

NTS



SECTION C S300
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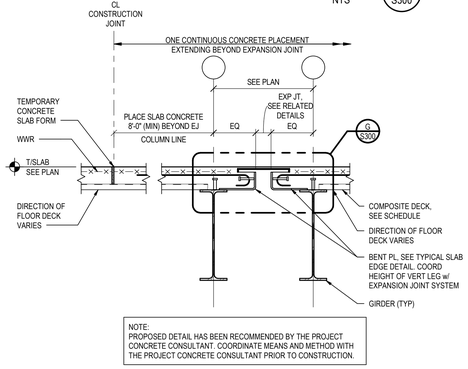
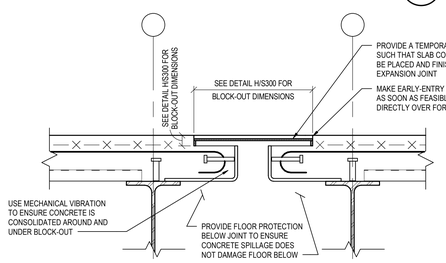


NOTE:
PROPOSED DETAIL HAS BEEN RECOMMENDED BY THE PROJECT CONCRETE CONSULTANT. COORDINATE MEANS AND METHOD WITH THE PROJECT CONCRETE CONSULTANT PRIOR TO CONSTRUCTION.

INITIAL CONCRETE PLACEMENT AT EJ

3/4" = 1'-0"

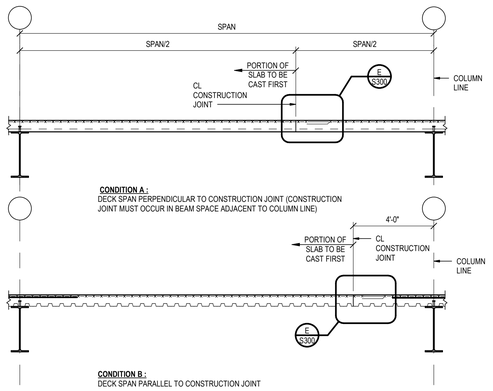
DETAIL D S300
3/4" = 1'-0"



NOTE:
PROPOSED DETAIL HAS BEEN RECOMMENDED BY THE PROJECT CONCRETE CONSULTANT. COORDINATE MEANS AND METHOD WITH THE PROJECT CONCRETE CONSULTANT PRIOR TO CONSTRUCTION.

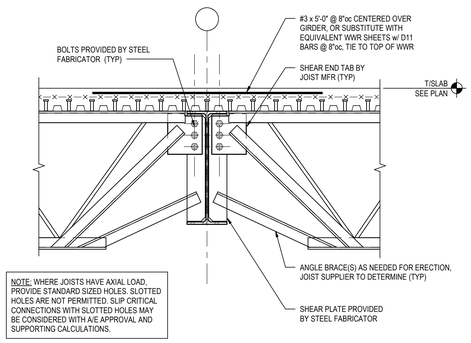
NOTES:
1. PRIOR TO CONCRETE PLACEMENT, SURVEY BOTH SIDES OF THE JOINT TO VERIFY ELEVATIONS.
2. RUN THE LASER SCREED PARALLEL TO THE JOINT ON BOTH SIDES.
3. RUN A MAGIC SCREED OR VIBRASTRIKE BOTH PARALLEL AND PERPENDICULAR TO THE JOINT.
4. RUN RIDE-ON POWER TROWELS PARALLEL AND PERPENDICULAR TO JOINT.

SECTION G S300
1 1/2" = 1'-0"



TYPICAL COMPOSITE DECK CONSTRUCTION JOINT

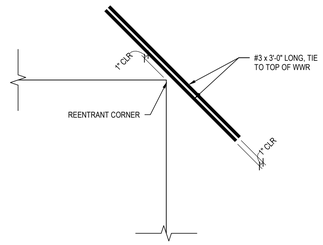
NTS



NOTE: WHERE JOISTS HAVE AXIAL LOAD, PROVIDE STANDARD SIZED HOLES. SLOTTED HOLES ARE NOT PERMITTED. SLIP CRITICAL CONNECTIONS WITH SLOTTED HOLES MAY BE CONSIDERED WITH AJE APPROVAL AND SUPPORTING CALCULATIONS.

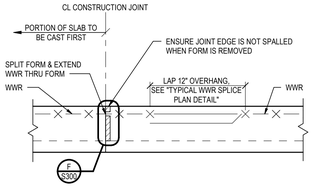
TYPICAL COMPOSITE JOIST-TO-GIRDER CONNECTION DETAIL

NTS

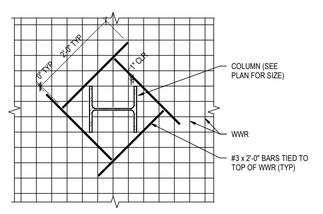


TYPICAL RE-ENTRANT CORNER REINFORCEMENT PLAN DETAIL

1" = 1'-0"

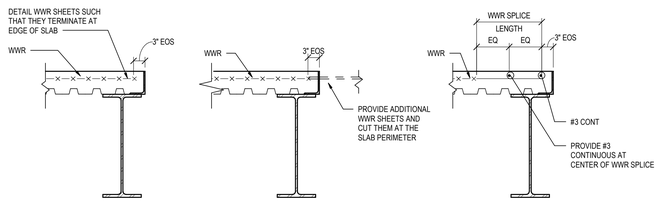


DETAIL E S300
1 1/2" = 1'-0"



TYPICAL REINFORCING PLAN DETAIL AT COLUMN PENETRATIONS

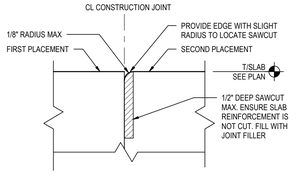
3/4" = 1'-0"

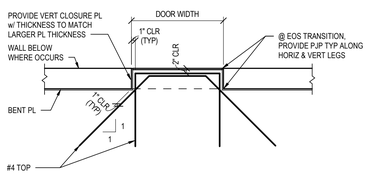


WWR EDGE OF SLAB TERMINATION OPTIONS

NTS

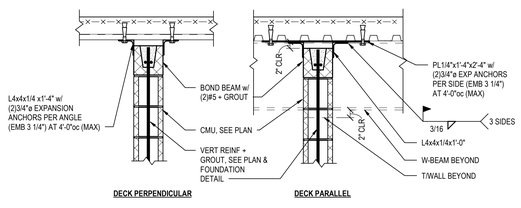
DETAIL F S300
3" = 1'-0"





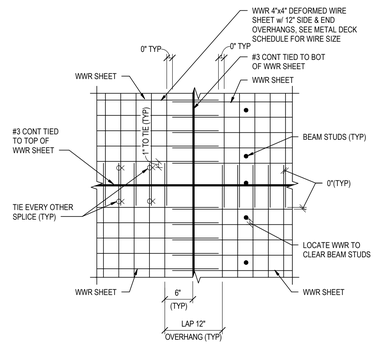
TYPICAL EDGE OF SLAB TRANSITION @ DOOR THRESHOLD

1/2" = 1'-0"



TYPICAL CMU WALL BRACING DETAIL AT COMPOSITE SLAB

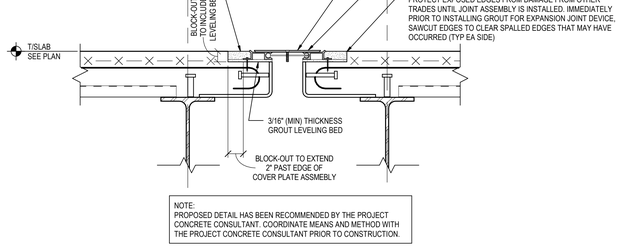
3/4" = 1'-0"



TYPICAL WWR SPLICE PLAN DETAIL

3/4" = 1'-0"

DO NOT INSTALL GROUT UNTIL ALL ELEVATIONS HAVE BEEN VERIFIED. INSTALL GROUT IN UNIFORM LIFTS TO ALLOW MATERIAL TO DISPLACE /SETTLE SUCH THAT THE PROPER ELEVATIONS ARE ACHIEVED

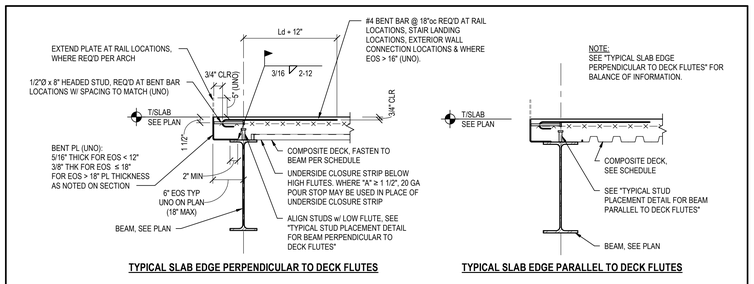


NOTE:
PROPOSED DETAIL HAS BEEN RECOMMENDED BY THE PROJECT CONCRETE CONSULTANT. COORDINATE MEANS AND METHOD WITH THE PROJECT CONCRETE CONSULTANT PRIOR TO CONSTRUCTION.

NOTES:
1. SEE ARCH DRAWINGS FOR EXPANSION JOINT COVER PLATE SYSTEM
2. PROVIDE SUFFICIENT NOTICE TO ENSURE EXPANSION JOINT COVER PLATE MANUFACTURER'S REPRESENTATIVE IS ON SITE TO OBSERVE FIRST INSTALLATION.
3. ENSURE INITIAL INSTALLATION IS ACCEPTABLE TO TENANT'S CONSTRUCTION MANAGER.
4. ENSURE INSTALLED EXPANSION JOINT ASSEMBLY IS NOT DAMAGED BY CONSTRUCTION EQUIPMENT BY PROVIDING STEEL PLATES OR OTHER ACCEPTABLE METHODS OF PROTECTION AT DESIGNATED PATHWAYS.
5. THE JOINT ASSEMBLY RAILS CAN BE ORDERED EARLY AND INSTALLED. HOWEVER, WAIT AS LONG AS FEASIBLE TO ORDER COVER PLATES TO ENSURE THE CORRECT WIDTH IS USED.

INSTALLATION OF EXPANSION JOINT COVER PLATE

1 1/2" = 1'-0"



TYPICAL SLAB EDGE DETAILS

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

TYPICAL FLOOR FRAMING DETAILS

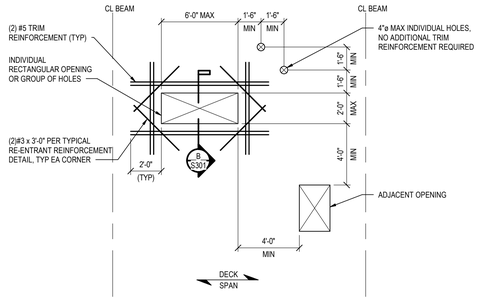
SHEET NUMBER

S300

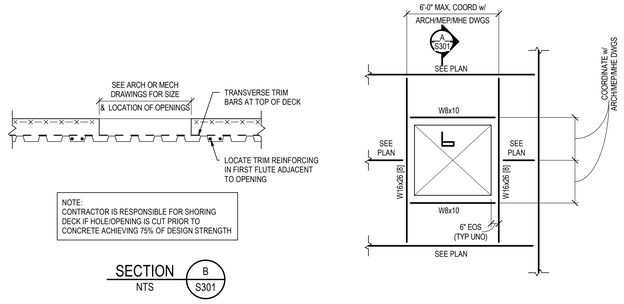
NOT FOR CONSTRUCTION

6/7/2024 8:51:15 AM

Schaefer Project Number: 24-0265

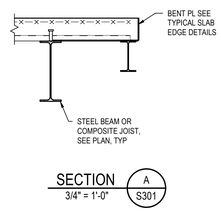


SMALL COMPOSITE
DECK OPENING PLAN DETAIL (<24" WIDE)
NTS

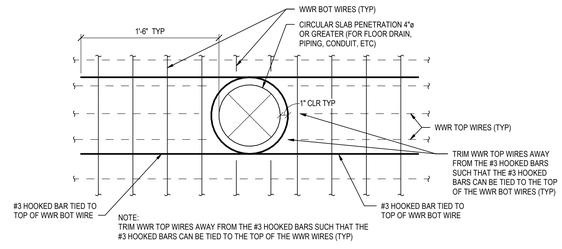


SECTION B S301
NTS

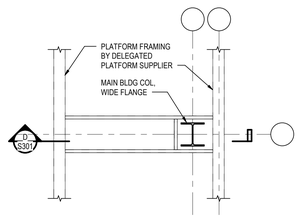
TYPICAL MECHANICAL FLOOR
OPENING PLAN DETAIL
NTS



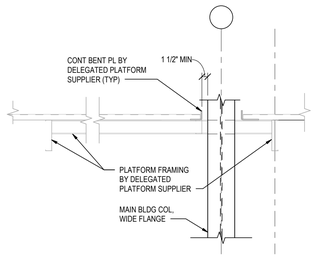
SECTION A S301
3/4" = 1'-0"



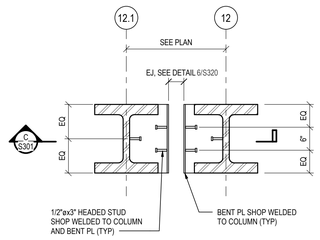
TYPICAL CIRCULAR SLAB PENETRATION PLAN DETAIL
1 1/2" = 1'-0"



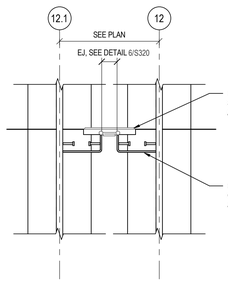
TYPICAL DEFERRED DESIGN PLATFORM
SLAB BOX-OUT AT MAIN BUILDING COLUMN FRAMING DETAIL
NTS



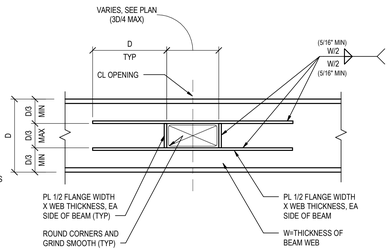
SECTION D S301
3/4" = 1'-0"



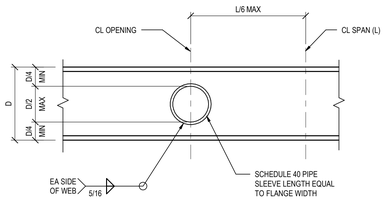
TYPICAL EDGE OF SLAB PLAN DETAIL
AT COLUMN AT EXPANSION JOINT
3/4" = 1'-0"



SECTION C S301
3/4" = 1'-0"



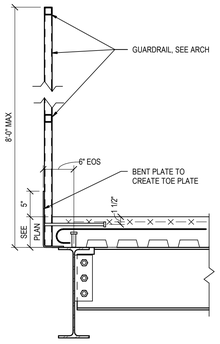
TYPICAL RECTANGULAR OPENING



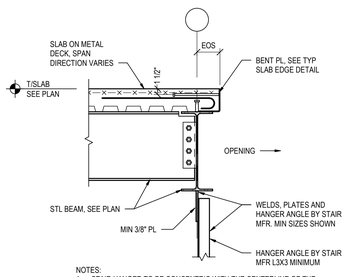
TYPICAL ROUND OPENING

NOTES:
1. COORDINATE OPENINGS WITH ALL MECHANICAL
2. OPENINGS ALLOWED IN MIDDLE 1/3 OF BEAMS ONLY UNO
3. OPENING MUST BE A MIN OF L/6 OR D, WHICHEVER GREATER, FROM CONCENTRATED POINT LOADS UNO
4. OPENINGS SHALL BE CENTRALLY PLACED IN WEB
5. NO OPENINGS ARE ALLOWED @ MOMENT FRAMES UNLESS NOTED OTHERWISE ON PLAN
6. CLEAR SPACE BETWEEN OPENING SHALL NOT BE LESS THAN 2xBEAM DEPTH, 2D

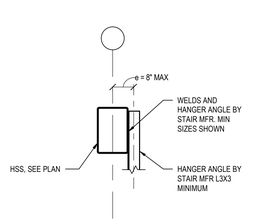
TYPICAL BEAM PENETRATION DETAIL
NTS



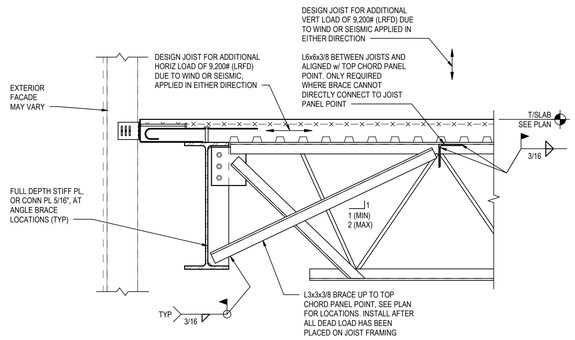
TYPICAL GUARDRAIL AT SPIRAL OPENINGS
1" = 1'-0"



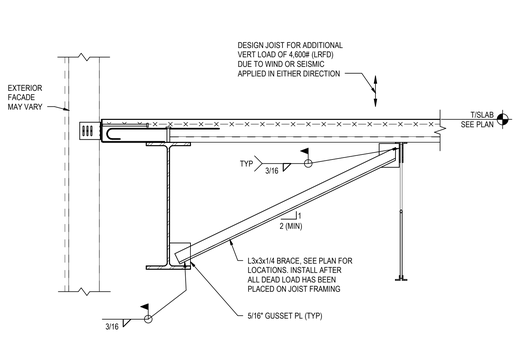
TYPICAL STAIR HANGER DETAIL
NTS



TYPICAL STAIR HANGER AT HSS AT STAIR G-1A
NTS

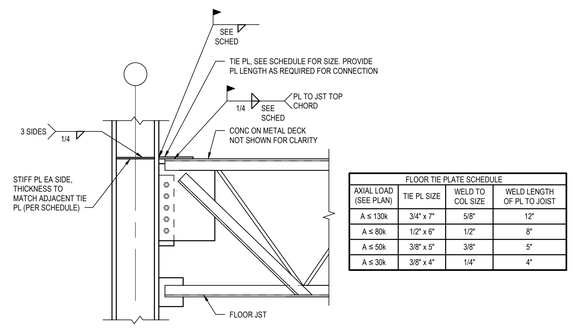


JOISTS PERPENDICULAR TO BEAM



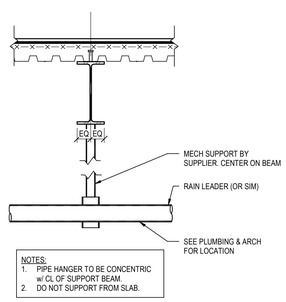
JOISTS PARALLEL TO BEAM

TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL
3/4" = 1'-0"

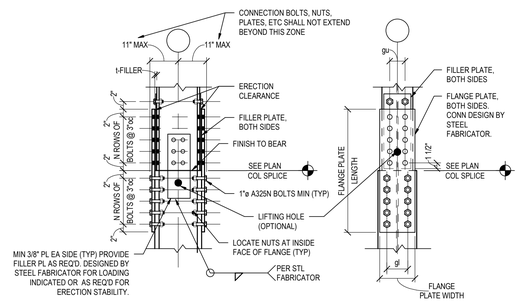


FLOOR TIE PLATE SCHEDULE			
AXIAL LOAD (SEE PLAN)	TIE PL SIZE	WELD TO COL SIZE	WELD LENGTH OF PL TO JOIST
A ≤ 130k	3/4" x 7"	5/8"	12"
A ≤ 80k	1/2" x 6"	1/2"	8"
A ≤ 50k	3/8" x 5"	3/8"	5"
A ≤ 30k	3/8" x 4"	1/4"	4"

FLOOR JOIST TOP CHORD TO COLUMN CONNECTION DETAIL
NTS



TYPICAL PLUMBING SUPPORT DETAIL
NTS



TYPICAL BOLTED COLUMN SPLICE DETAIL
NTS

6/7/2024 8:51:19 AM

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BUILD-TO-SUIT

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WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

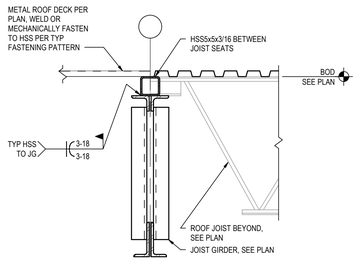
TYPICAL FLOOR FRAMING DETAILS

SHEET NUMBER

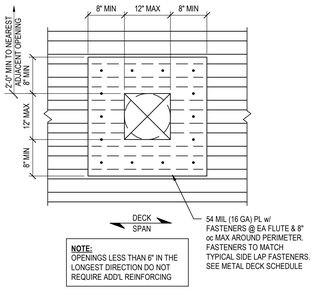
S301

NOT FOR CONSTRUCTION

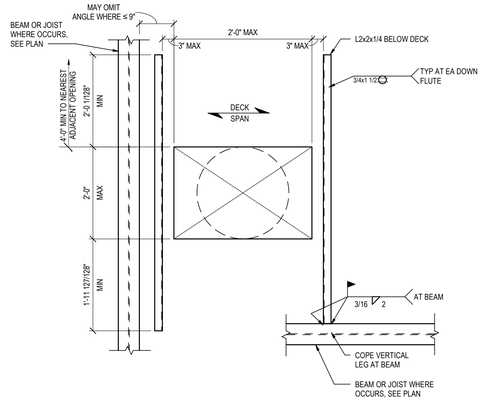
Schaefer Project Number: 24-0265



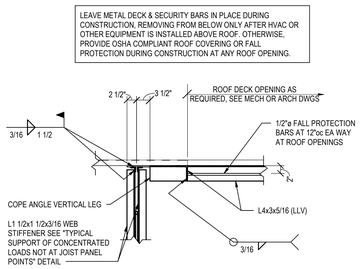
TYPICAL ROOF DECK TRANSITION @ JOIST GIRDER
3/4" = 1'-0"



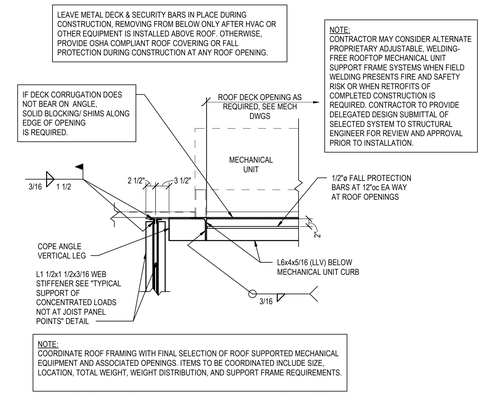
TYPICAL SMALL ROOF DECK OPENING PLAN DETAIL FOR OPENINGS ≤ 12"
NTS



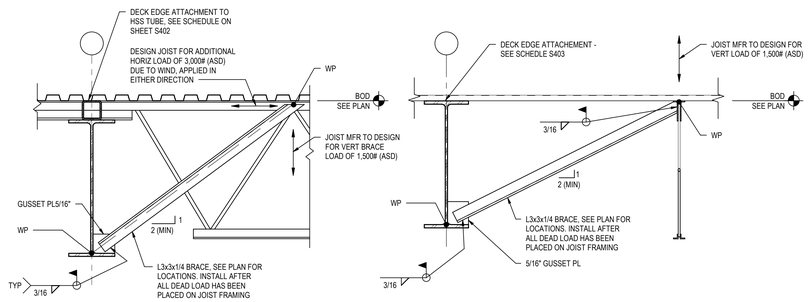
TYPICAL SMALL ROOF DECK OPENING PLAN DETAIL FOR OPENINGS ≤ 24"
NTS



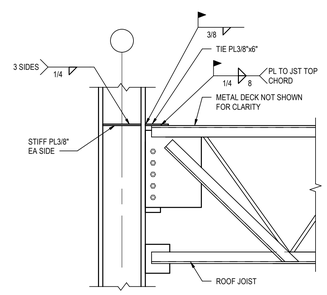
TYPICAL ROOF OPENING EDGE DETAIL
3/4" = 1'-0"



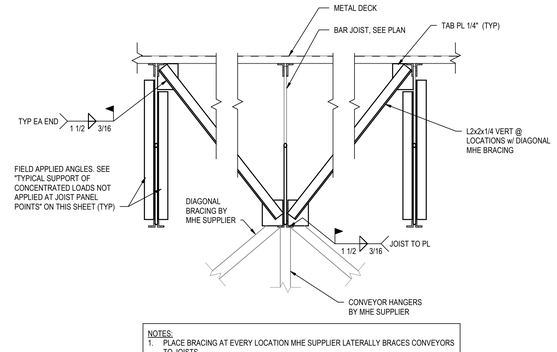
TYPICAL ROOF MECHANICAL UNIT SUPPORT
3/4" = 1'-0"



TYPICAL BEAM BOTTOM FLANGE BRACING DETAIL AT ROOF
3/4" = 1'-0"

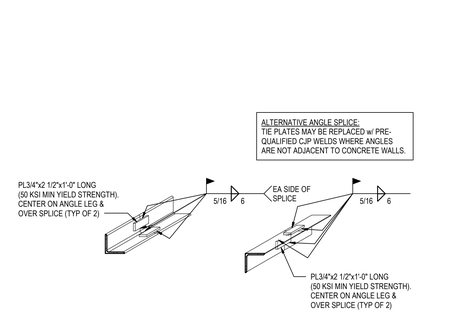


ROOF JOIST TOP CHORD TO COLUMN CONNECTION DETAIL
NTS

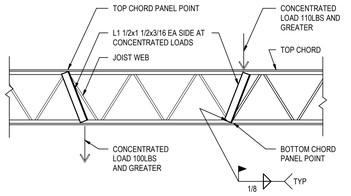


NOTES:
1. PLACE BRACING AT EVERY LOCATION MHE SUPPLIER LATERALLY BRACES CONVEYORS TO JOISTS
2. BRACING ACCEPTABLE FOR 50'-0" MAX BETWEEN CONVEYOR DIAGONAL BRACES
3. DIAGONAL BRACING DESIGNED FOR 5.2 KIPS MAX HORIZONTAL FORCE

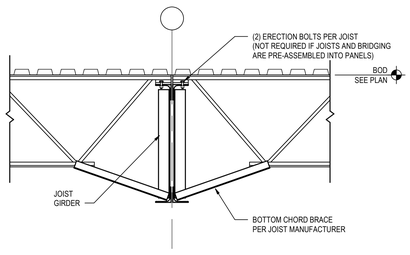
TYPICAL JOIST BRACING AT HANGING CONVEYOR LOADS
1" = 1'-0"



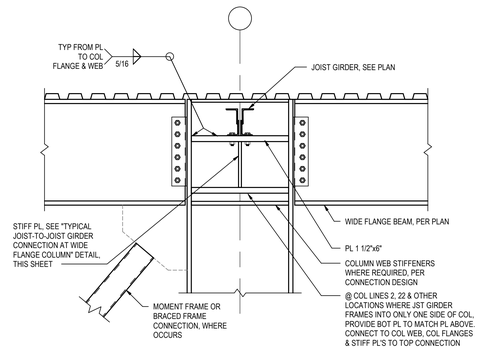
TYPICAL ROOF DECK PERIMETER ANGLE SPLICE DETAIL
NTS



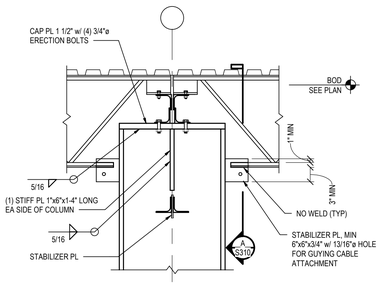
TYPICAL SUPPORT OF CONCENTRATED LOADS NOT AT JOIST PANEL POINTS
3/4" = 1'-0"



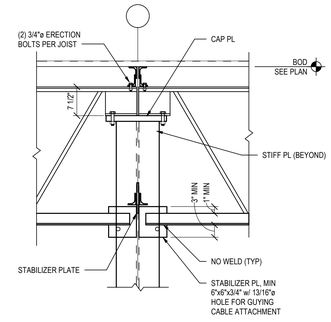
TYPICAL JOIST-TO-JOIST GIRDER CONNECTION
3/4" = 1'-0"



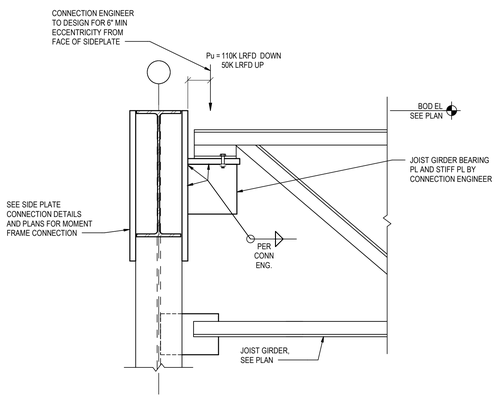
TYPICAL JOIST GIRDER CONNECTION AT COLUMN WITH WIDE FLANGE BEAM
3/4" = 1'-0"



TYPICAL JOIST-TO-JOIST GIRDER CONNECTION AT WIDE FLANGE COLUMN
3/4" = 1'-0"



DETAIL 'A' TYP JOIST GIRDER AT STEEL COLUMN
3/4" = 1'-0"



TYPICAL JOIST GIRDER CONNECTION AT COLUMN WITH SIDEPLATE
3/4" = 1'-0"

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PROJECT INFORMATION

BUILD-TO-SUIT

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WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

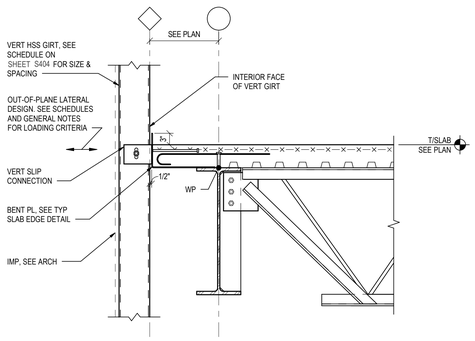
TYPICAL ROOF FRAMING DETAILS

SHEET NUMBER

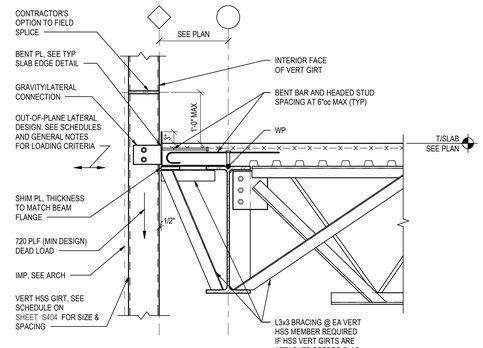
S310

NOT FOR CONSTRUCTION

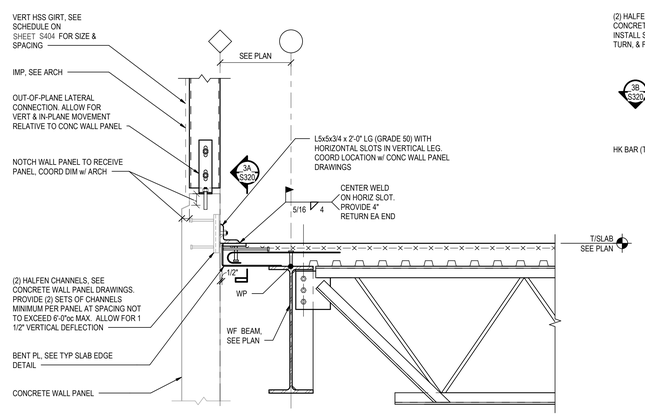
6/7/2024 8:51:22 AM



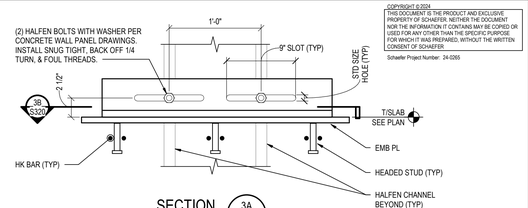
SECTION 1 — 3/4" = 1'-0" — S320



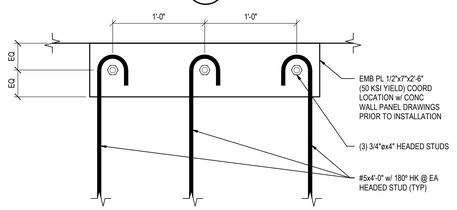
SECTION 2 — 3/4" = 1'-0" — S320



SECTION 3 — 3/4" = 1'-0" — S320

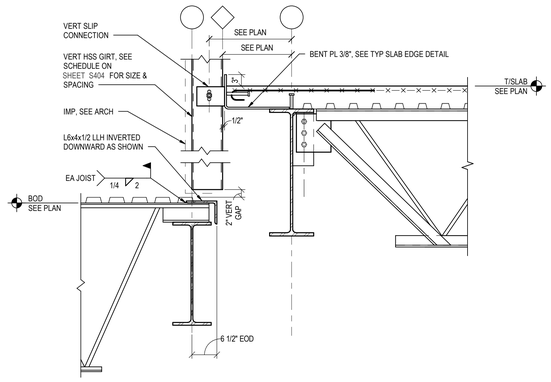


SECTION 3A — 1 1/2" = 1'-0" — S320

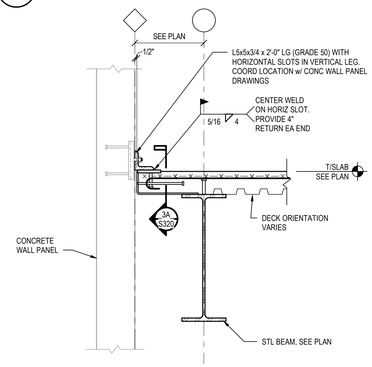


NOTE:
ANGLE NOT SHOWN FOR CLARITY

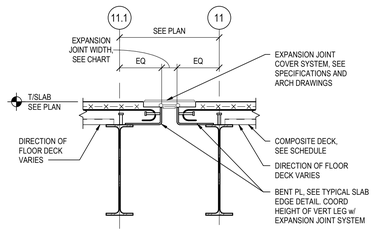
DETAIL 3B — 1 1/2" = 1'-0" — S320



SECTION 4 — 3/4" = 1'-0" — S320

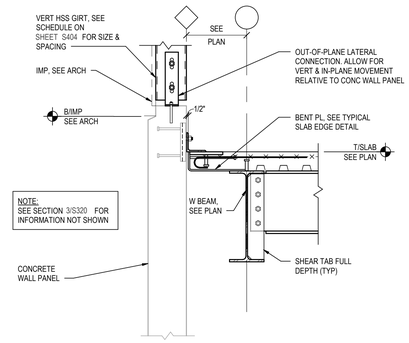


SECTION 5 — 3/4" = 1'-0" — S320



EXPANSION JOINT WIDTH	
LEVEL	WIDTH
2ND	5"
3RD	6"
4TH	7"
5TH	8"

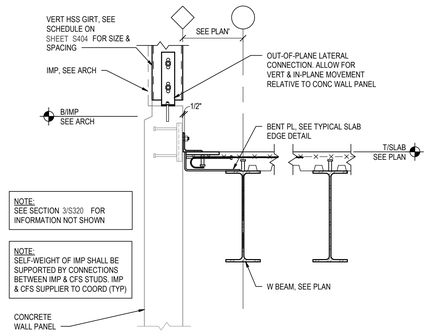
SECTION 6 — 3/4" = 1'-0" — S320



NOTE:
SEE SECTION 3/S320 FOR INFORMATION NOT SHOWN

NOTE:
SELF-WEIGHT OF IMP SHALL BE SUPPORTED BY CONNECTIONS BETWEEN IMP & CFS STUDS. IMP & CFS SUPPLIER TO COORD (TYP)

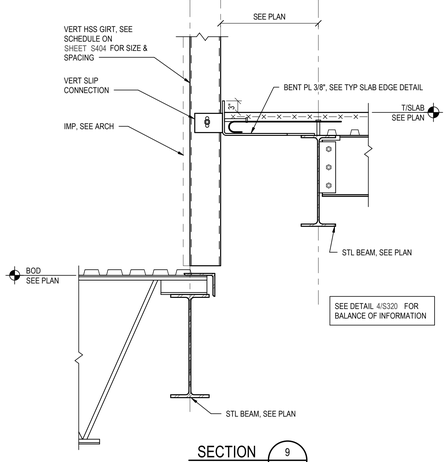
SECTION 7 — 3/4" = 1'-0" — S320



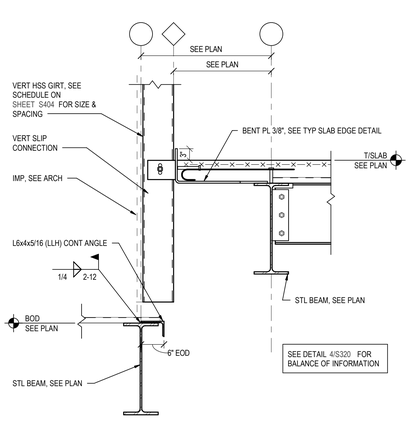
NOTE:
SEE SECTION 3/S320 FOR INFORMATION NOT SHOWN

NOTE:
SELF-WEIGHT OF IMP SHALL BE SUPPORTED BY CONNECTIONS BETWEEN IMP & CFS STUDS. IMP & CFS SUPPLIER TO COORD (TYP)

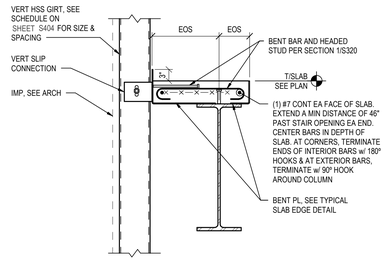
SECTION 8 — 3/4" = 1'-0" — S320



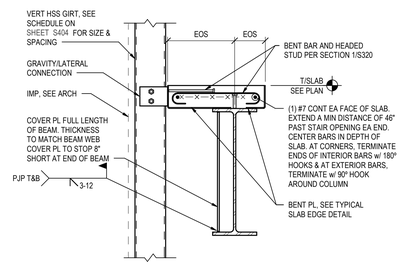
SECTION 9 — 3/4" = 1'-0" — S320



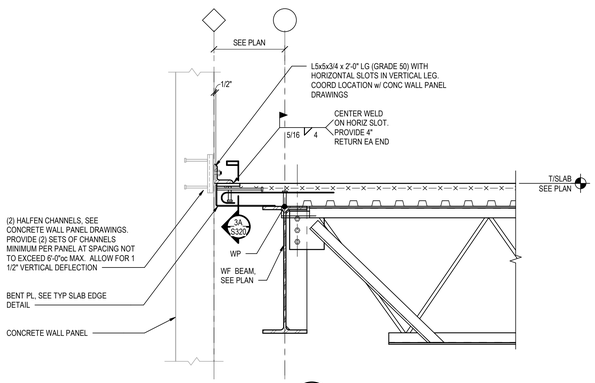
SECTION 10 — 3/4" = 1'-0" — S320



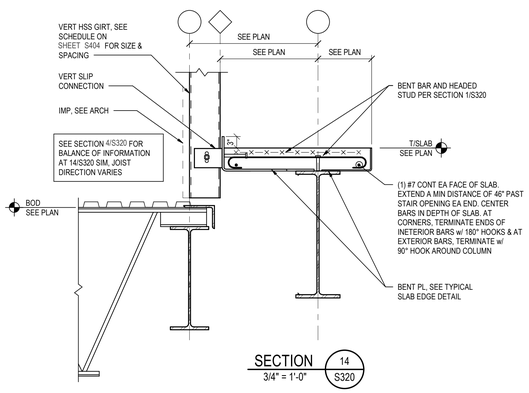
SECTION 11 — 3/4" = 1'-0" — S320



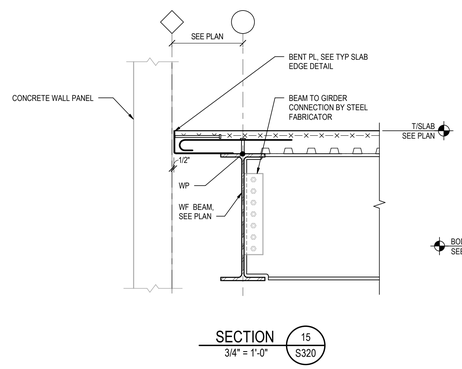
SECTION 12 — 3/4" = 1'-0" — S320



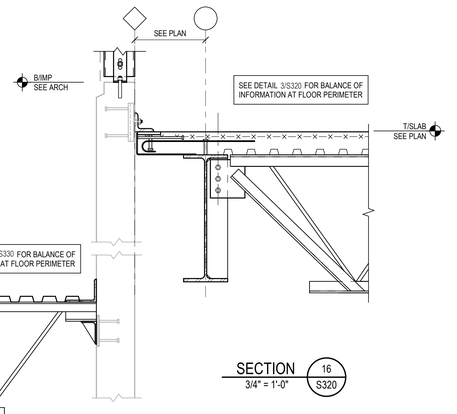
SECTION 13 — 3/4" = 1'-0" — S320



SECTION 14 — 3/4" = 1'-0" — S320



SECTION 15 — 3/4" = 1'-0" — S320



SECTION 16 — 3/4" = 1'-0" — S320

Schaefer Project Number: 24-0265

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

FLOOR FRAMING SECTIONS & DETAILS

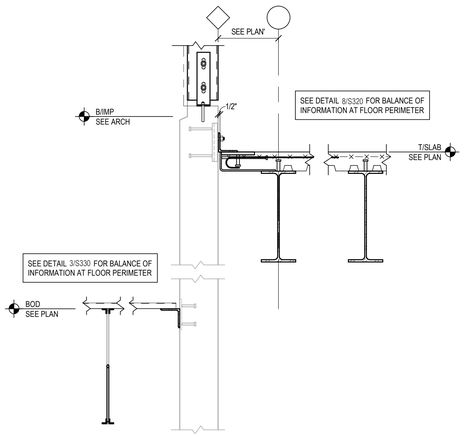
SHEET NUMBER

S320

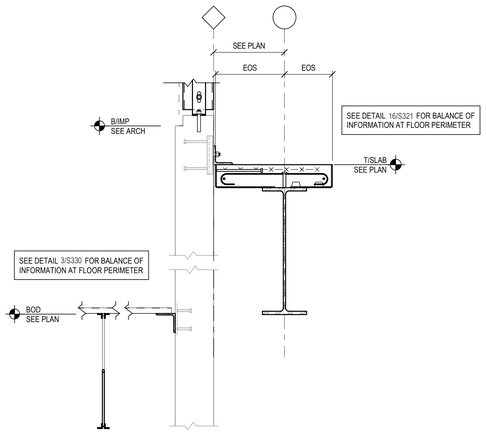
NOT FOR CONSTRUCTION

6/7/2024 8:51:26 AM

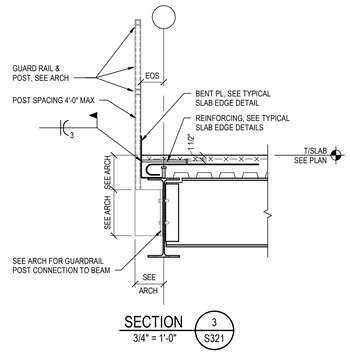
Schaefer Project Number: 24-0265



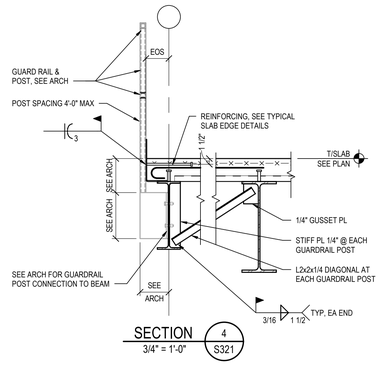
SECTION 1 — 3/4" = 1'-0" — S321



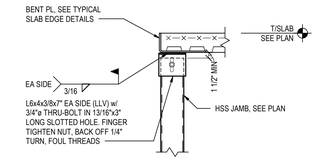
SECTION 2 — 3/4" = 1'-0" — S321



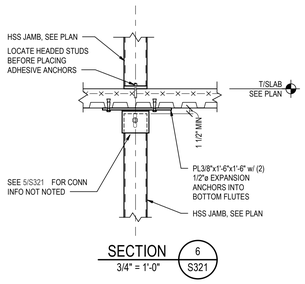
SECTION 3 — 3/4" = 1'-0" — S321



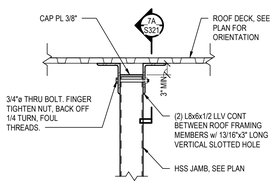
SECTION 4 — 3/4" = 1'-0" — S321



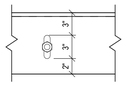
SECTION 5 — 3/4" = 1'-0" — S321



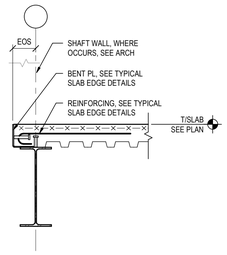
SECTION 6 — 3/4" = 1'-0" — S321



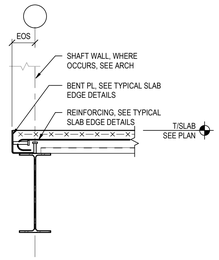
SECTION 7 — 3/4" = 1'-0" — S321



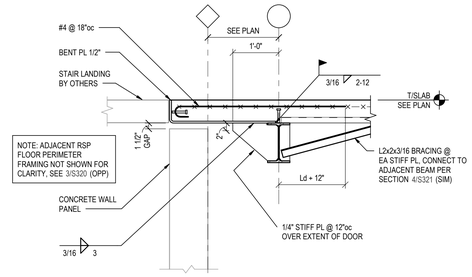
SECTION 7A — 1 1/2" = 1'-0" — S321



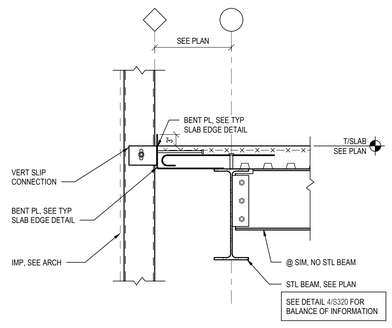
SECTION 8 — 3/4" = 1'-0" — S321



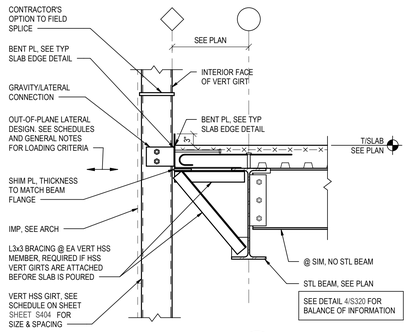
SECTION 9 — 3/4" = 1'-0" — S321



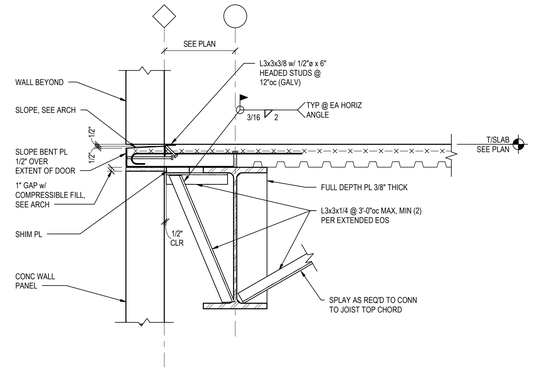
SECTION 10 — 3/4" = 1'-0" — S321



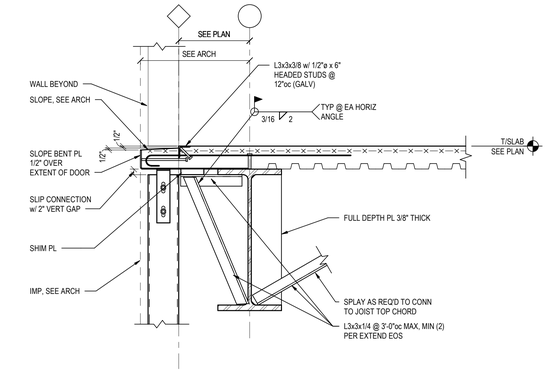
SECTION 11 — 3/4" = 1'-0" — S321



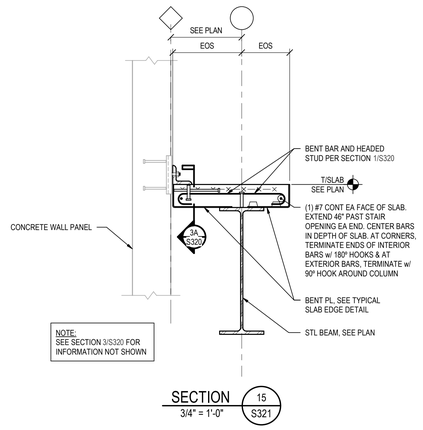
SECTION 12 — 3/4" = 1'-0" — S321



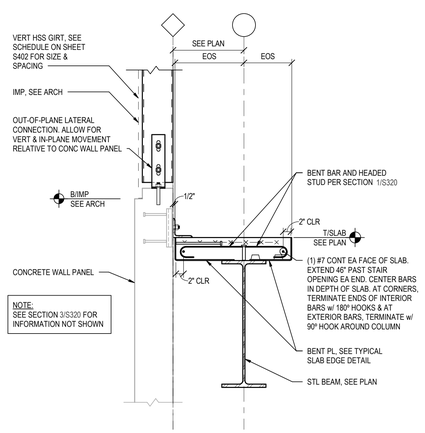
SECTION 13 — 3/4" = 1'-0" — S321



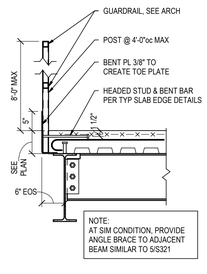
SECTION 14 — 3/4" = 1'-0" — S321



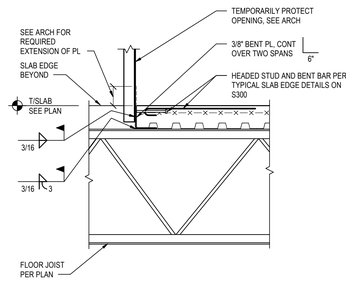
SECTION 15 — 3/4" = 1'-0" — S321



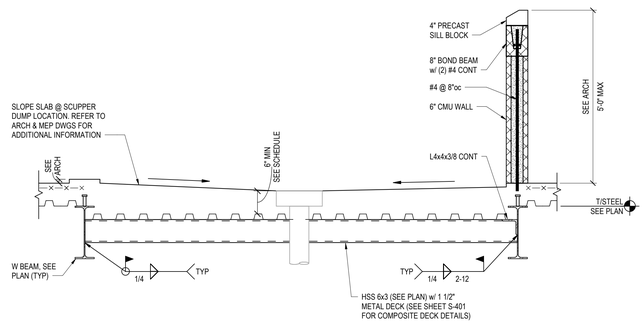
SECTION 16 — 3/4" = 1'-0" — S321



SECTION 17 — 3/4" = 1'-0" — S321



SECTION 18 — 3/4" = 1'-0" — S321



SECTION 19 — 3/4" = 1'-0" — S321

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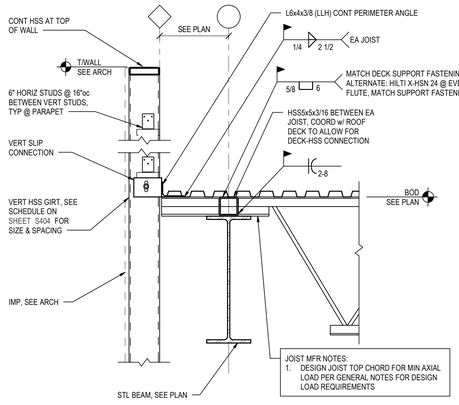
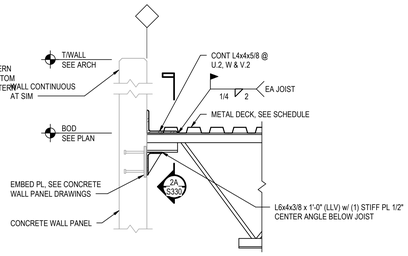
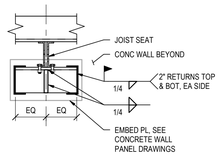


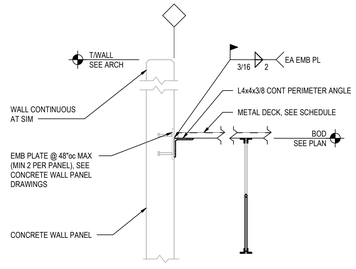
SECTION 1 S330
3/4" = 1'-0"



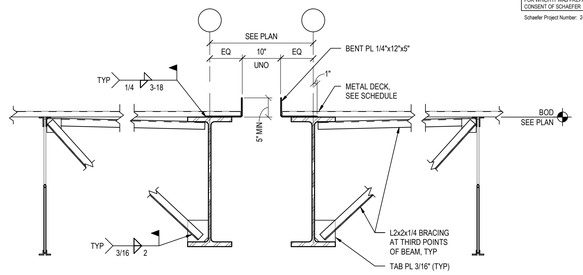
SECTION 2 S330
3/4" = 1'-0"



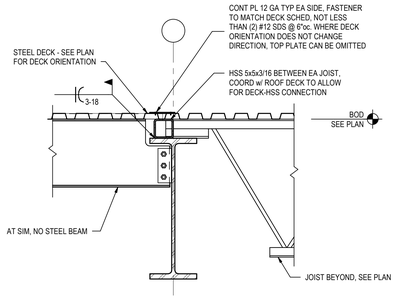
SECTION 2A S330
1" = 1'-0"



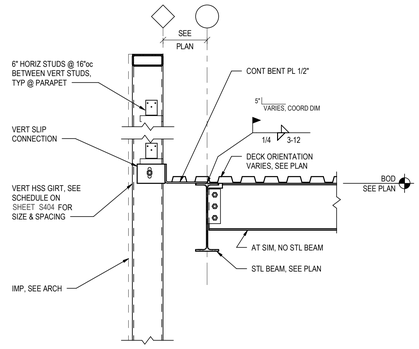
SECTION 3 S330
3/4" = 1'-0"



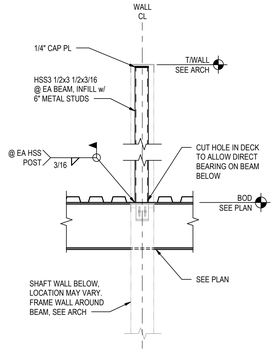
SECTION 4 S330
3/4" = 1'-0"



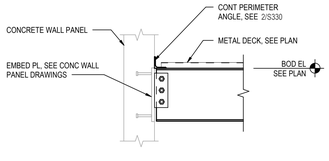
SECTION 5 S330
3/4" = 1'-0"



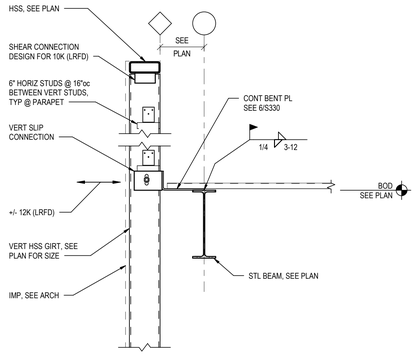
SECTION 6 S330
3/4" = 1'-0"



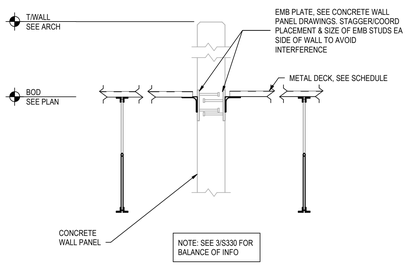
SECTION 7 S330
3/4" = 1'-0"



SECTION 8 S330
3/4" = 1'-0"

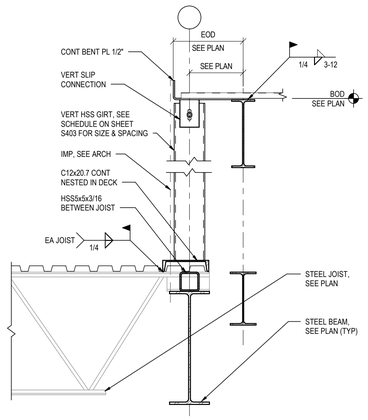


SECTION 9 S330
3/4" = 1'-0"

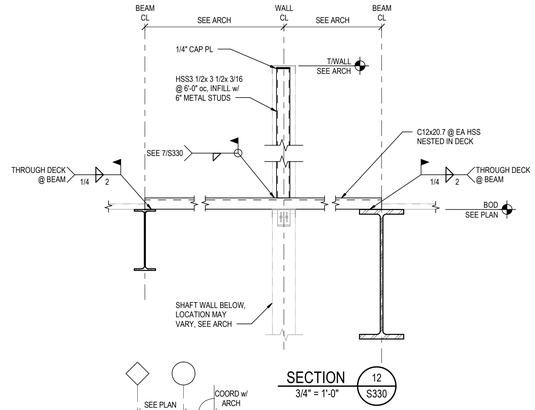


NOTE: AT WALL PANEL JOINT, WHERE OCCURS, CONCRETE WALL PANEL DESIGNER SHALL PROVIDE AND DESIGN STITCH PL & ASSOCIATED WELD AS REQ'D TO MAINTAIN CONNECTION ABOVE.

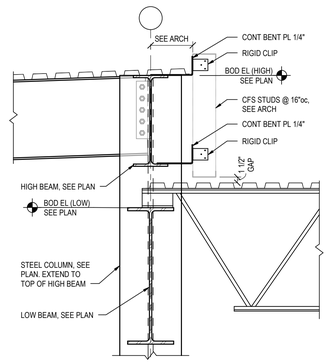
SECTION 10 S330
3/4" = 1'-0"



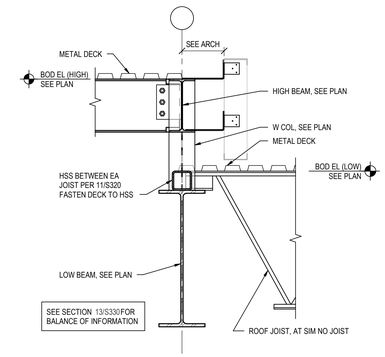
SECTION 11 S330
3/4" = 1'-0"



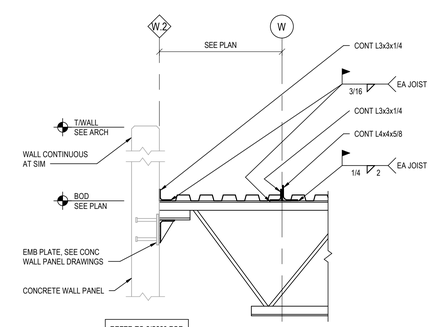
SECTION 12 S330
3/4" = 1'-0"



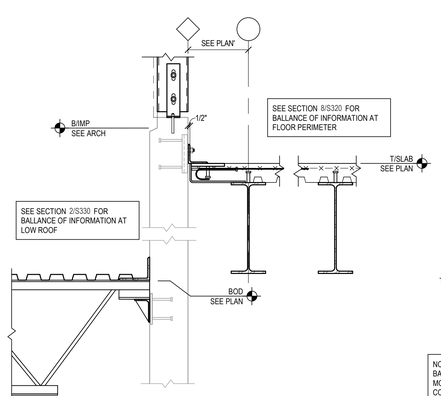
SECTION 13 S330
3/4" = 1'-0"



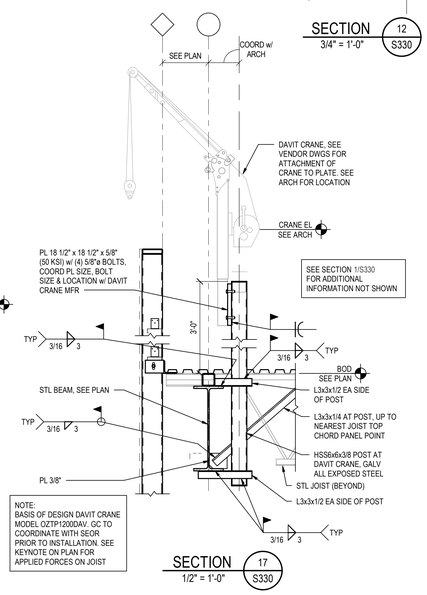
SECTION 14 S330
3/4" = 1'-0"



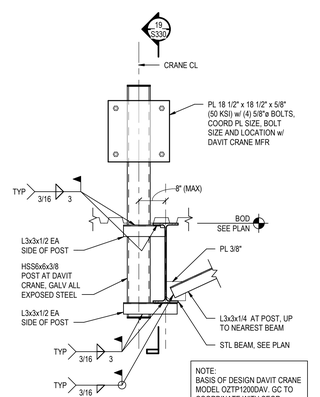
SECTION 15 S330
3/4" = 1'-0"



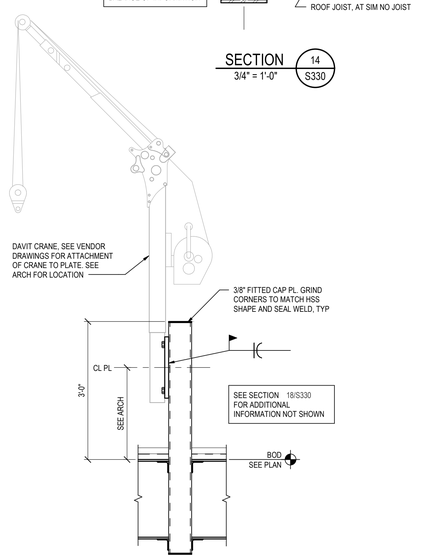
SECTION 16 S330
3/4" = 1'-0"



SECTION 17 S330
1/2" = 1'-0"



SECTION 18 S330
3/4" = 1'-0"



SECTION 19 S330
3/4" = 1'-0"

Schaefer Project Number: 24-0265

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SHEET TITLE

ROOF FRAMING SECTIONS & DETAILS

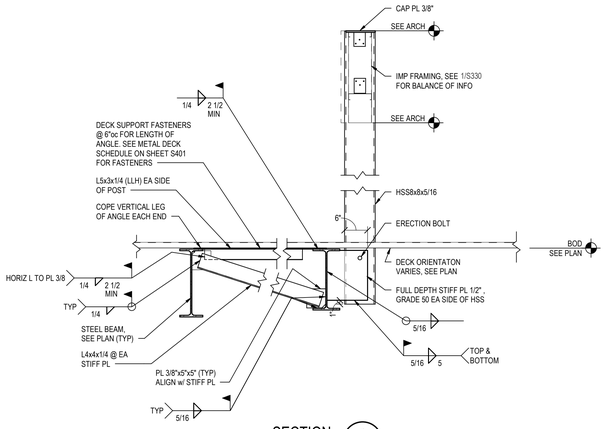
SHEET NUMBER

S330

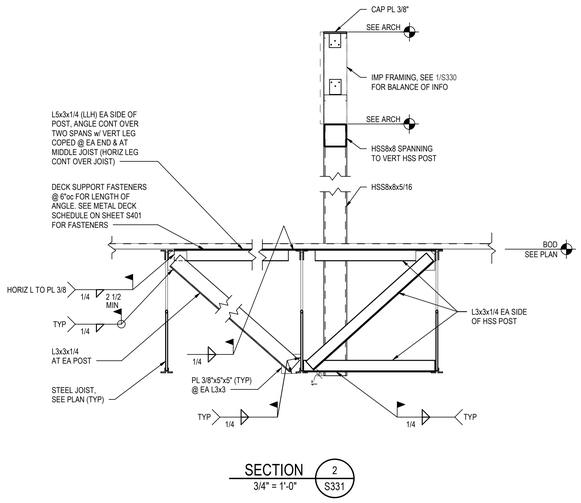
NOT FOR CONSTRUCTION

6/7/2024 8:51:35 AM

Schaefer Project Number: 24-0265



SECTION 1 / 3/4" = 1'-0" / S331



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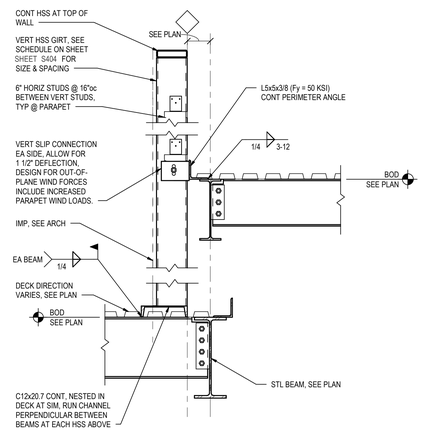

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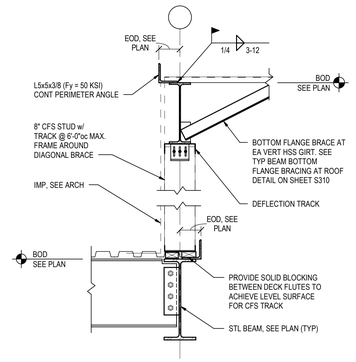

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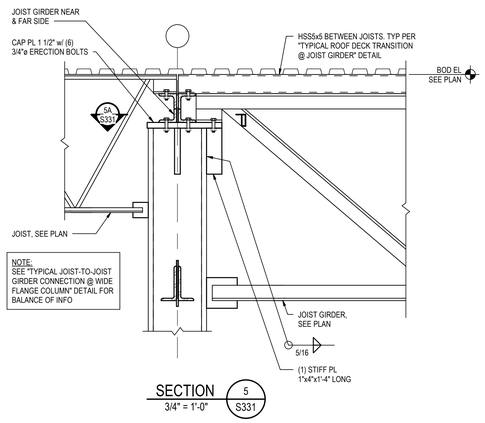

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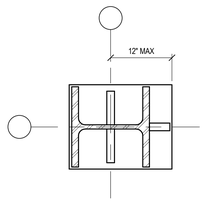
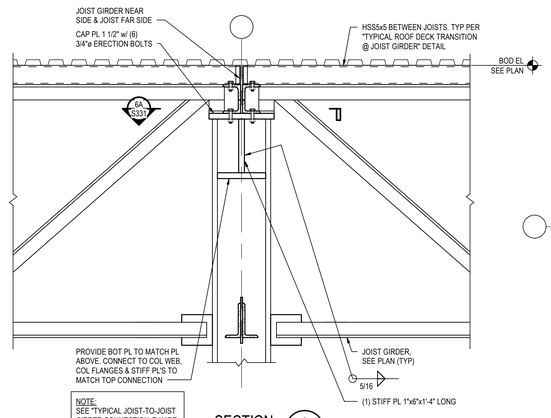


SECTION 5A / 1" = 1'-0" / S331



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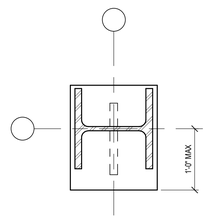

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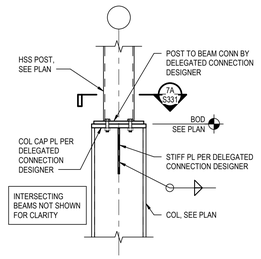

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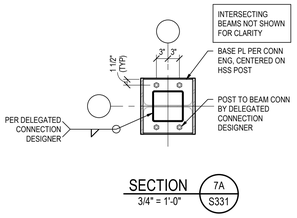

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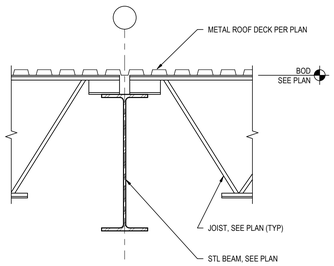

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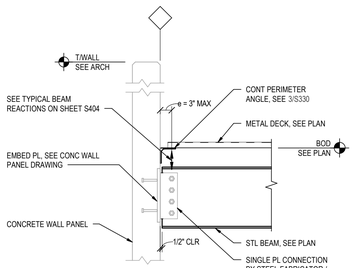

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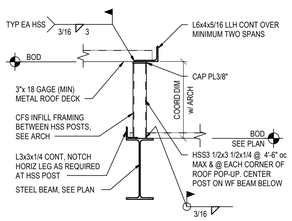

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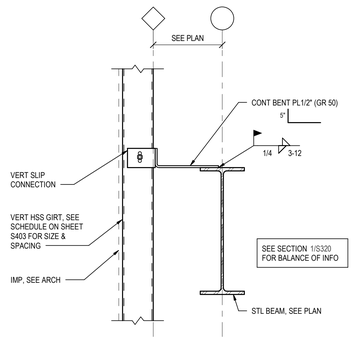

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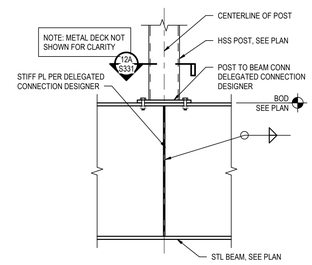

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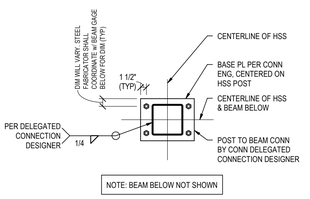
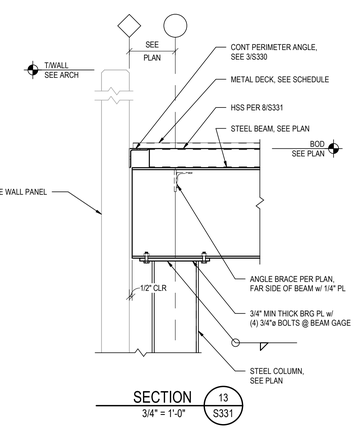


SECTION 12A / 3/4" = 1'-0" / S331



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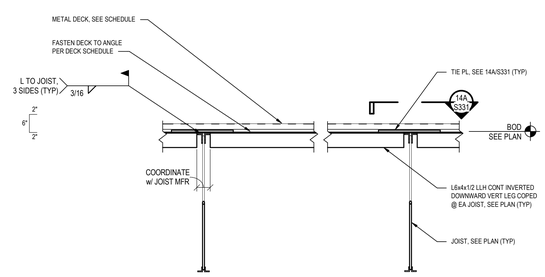

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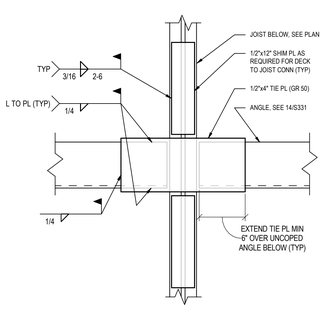
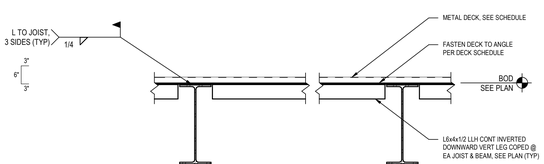


SECTION 14A / 1 1/2" = 1'-0" / S331



SECTION 15 / 3/4" = 1'-0" / S331

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

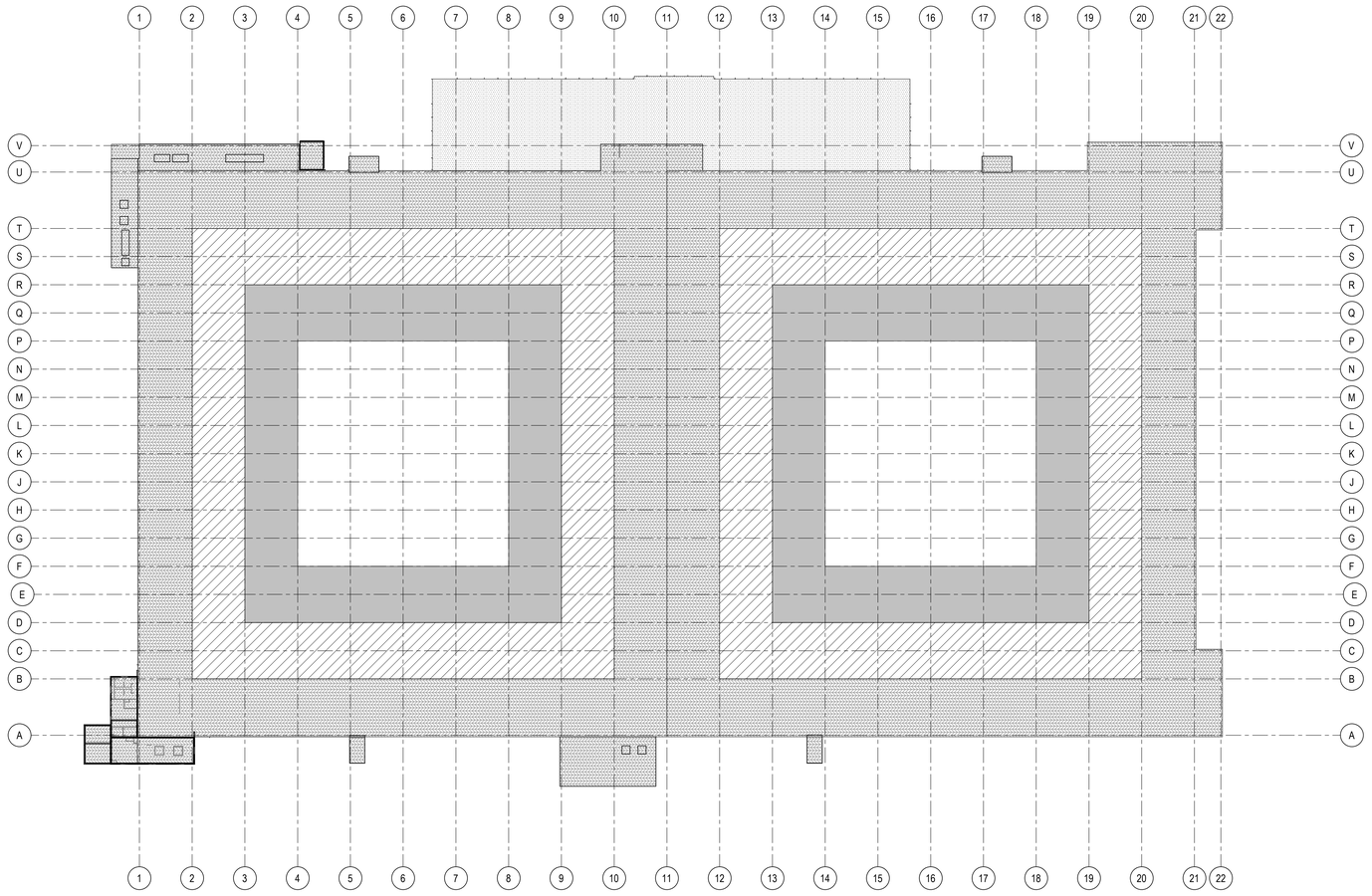
ROOF FRAMING SECTIONS & DETAILS

SHEET NUMBER

S331

NOT FOR CONSTRUCTION

6/7/2024 8:51:39 AM



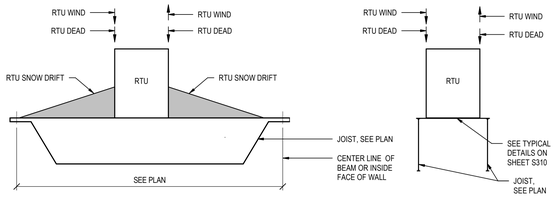
METAL DECK PLAN
1" = 60'-0"

METAL DECK SCHEDULE

MARK	SIZE/PROPERTIES	PROFILE/ATTACHMENT	FASTENERS
D-1	TYPE : 1 1/2" WIDE RIB ROOF DECK GA: 20 GA Fy(MIN): 80 KSI FINISH: SEE SPECIFICATIONS SEE SHADED AREA ON PLAN	36" COVERAGE SHEET COVER WIDTH SUPPORT FASTENERS AT SHEET END LAPS & AT WALLS SUPPORT FASTENERS BETWEEN SHEET LAPS & AT SUPPORTING STRUCTURE 3|6/7 PATTERN 6" 6" FASTENERS AT WALLS	SIDELAP: VERCO PUNCHLOK AT 12"oc MAX SUPPORT FASTENERS: HILTI X-HSN 24 & HILTI X-ENP-19 POWER ACTUATED FASTENERS AT PATTERN INDICATED
D-2	TYPE : 1 1/2" WIDE RIB ROOF DECK GA: 22 GA Fy(MIN): 80 KSI FINISH: SEE SPECIFICATIONS	SEE PROFILE/ATTACHMENT FOR DECK D-1 SEE SHADED AREA ON PLAN	SIDELAP: VERCO PUNCHLOK AT 12"oc MAX SUPPORT FASTENERS: HILTI X-HSN 24 & HILTI X-ENP-19 POWER ACTUATED FASTENERS AT PATTERN INDICATED
D-3	TYPE : 1 1/2" WIDE RIB ROOF DECK GA: 22GA Fy(MIN): 80 KSI FINISH: SEE SPECIFICATIONS	SEE PROFILE/ATTACHMENT FOR DECK D-1 SEE SHADED AREA ON PLAN	SIDELAP: VERCO PUNCHLOK AT 24"oc MAX SUPPORT FASTENERS: HILTI X-HSN 24 & HILTI X-ENP-19 POWER ACTUATED FASTENERS AT PATTERN INDICATED
D-4	TYPE : 1 1/2" WIDE RIB ROOF DECK GA: 22 GA Fy(MIN): 80 KSI FINISH: SEE SPECIFICATIONS SEE NON-SHADED AREA ON PLAN	36" COVERAGE SHEET COVER WIDTH SUPPORT FASTENERS AT SHEET END LAPS & AT WALLS SUPPORT FASTENERS BETWEEN SHEET LAPS & AT SUPPORTING STRUCTURE 3|6/4 PATTERN 6" 6" FASTENERS AT WALLS	SIDELAP: VERCO PUNCHLOK AT 24"oc MAX SUPPORT FASTENERS: HILTI X-HSN 24 & HILTI X-ENP-19 POWER ACTUATED FASTENERS AT PATTERN INDICATED
D-5	TYPE : 1 1/2" VLR (INVERTED) COMPOSITE FLOOR DECK (OR EQUIVALENT), 2 SPANS MINIMUM, BOTTOM OF DECK PAINTED WHITE GA: 18 GA Fy(MIN): 33 KSI FINISH: GALV, G60 CONCRETE TYPE: NORMAL WEIGHT CONCRETE	36" COVERAGE SHEET COVER WIDTH 4x4-D11.0xD11.0 MESH (GRADE 70), PROVIDE CONTINUOUS SLAB BOLSTERS UPPERS (SBU) AT 3'-0" MAX oc. ENSURE SBU MEETS CRSI RB4.1 REQUIREMENTS. COORDINATE TO ORIENT SBU's SO THAT THEY ARE PARALLEL WITH LASER SCREEN MOVEMENT. SEE "TYPICAL WWR SPLICE DETAIL" ON SHEET S300 FOR WWR LAP SPLICE. PROVIDE 7.5 PCY MACROSYNTHETIC FIBERS (SEE SPECIFICATIONS FOR ACCEPTABLE PRODUCTS). 1 1/4" CLR 6" SUPPORT FASTENERS AT SHEET END LAPS, AT WALLS, AND BEAM LINES w/ AXIAL LOADS SUPPORT FASTENERS BETWEEN SHEET LAPS & AT SUPPORTING STRUCTURE 3|6/4 PATTERN 6" 6" FASTENERS AT WALLS/GIRDERS	STUD SIZE (WHERE INDICATED ON PLAN): 3/4"ø x 3" LONG SIDELAP: MIN (2) #10 SDS CONNECTIONS PER SPAN (SPACING NOT TO EXCEED 36") SUPPORT FASTENERS: 5/8"ø PUDDLE WELD, PUDDLE WELD MAY BE REPLACED BY SHEAR STUD THRU METAL DECK
D-7	TYPE : 1 1/2" VLR (INVERTED) COMPOSITE FLOOR DECK (OR EQUIVALENT), 2 SPANS MINIMUM, BOTTOM OF DECK PAINTED WHITE GA: 18 GA Fy(MIN): 33 KSI FINISH: GALV, G60 CONCRETE TYPE: NORMAL WEIGHT CONCRETE	36" COVERAGE SHEET COVER WIDTH 4x4-D9.0xD9.0 MESH (GRADE 70), PROVIDE CONTINUOUS SLAB BOLSTERS UPPERS (SBU) AT 3'-0" MAX oc. ENSURE SBU MEETS CRSI RB4.1 REQUIREMENTS. COORDINATE TO ORIENT SBU's SO THAT THEY ARE PARALLEL WITH LASER SCREEN MOVEMENT. SEE "TYPICAL WWR SPLICE DETAIL" ON SHEET S300 FOR WWR LAP SPLICE. PROVIDE 7.5 PCY MACROSYNTHETIC FIBERS (SEE SPECIFICATIONS FOR ACCEPTABLE PRODUCTS). 1 1/4" CLR 5" SUPPORT FASTENERS AT SHEET END LAPS, AT WALLS, AND BEAM LINES w/ AXIAL LOADS SUPPORT FASTENERS BETWEEN SHEET LAPS & AT SUPPORTING STRUCTURE 3|6/4 PATTERN 6" 6" FASTENERS AT WALLS/GIRDERS	STUD SIZE (WHERE INDICATED ON PLAN): 3/4"ø x 3" LONG SIDELAP: MIN (2) #10 SDS CONNECTIONS PER SPAN (SPACING NOT TO EXCEED 36") SUPPORT FASTENERS: 5/8"ø PUDDLE WELD, PUDDLE WELD MAY BE REPLACED BY SHEAR STUD THRU METAL DECK
D-8	TYPE : 1 1/2" WIDE RIB ROOF DECK GA: 18 GA Fy(MIN): 80 KSI FINISH: SEE SPECIFICATIONS SEE SHADED AREA ON PLAN	36" COVERAGE SHEET COVER WIDTH SUPPORT FASTENERS AT SHEET END LAPS & AT WALLS SUPPORT FASTENERS BETWEEN SHEET LAPS & AT SUPPORTING STRUCTURE 3|6/7 PATTERN 6" 6" FASTENERS AT WALLS	SIDELAP: VERCO PUNCHLOK AT 12"oc MAX SUPPORT FASTENERS: HILTI X-HSN 24 & HILTI X-ENP-19 POWER ACTUATED FASTENERS AT PATTERN INDICATED

NOTE:
GC TO COORDINATE SUPPORT FASTENERS BASED ON SUPPORT MEMBER THICKNESS:
SUPPORT MEMBER THICKNESS 1/8" TO 3/8" THICK: HILTI X-HSN-24
SUPPORT MEMBER THICKNESS ≥ 1/4" THICK: HILTI X-ENP-19

RTU ON JOIST LOADING SCHEDULE AND DIAGRAM



RTU-TAG	RTU-DEAD-PERPENDICULAR	RTU-WIND-PERPENDICULAR	RTU-DEAD-PARALLEL	RTU-WIND-PARALLEL
MU-1	2.4 KIPS	± 4.1 KIPS	510PLF	± 875PLF
MU-2	1.9 KIPS	± 5.1 KIPS	420PLF	± 1175PLF
MU-3	0.4 KIPS	± 2.3 KIPS	100PLF	± 555PLF
MU-4	0.3 KIPS	± 1.4 KIPS	60PLF	± 355PLF
MU-5	0.8 KIPS	± 1.8 KIPS	120PLF	± 295PLF
MU-6	1.1 KIPS	± 4 KIPS	180PLF	± 655PLF
MU-7	1.4 KIPS	± 3.7 KIPS	230PLF	± 635PLF
MU-8	0.3 KIPS	± 1.2 KIPS	75PLF	± 390PLF

NOTES:
1. WHEN RTU IS SUPPORTED BY SP JOIST, ALL RTU LOADS FROM THIS DETAIL TO BE ADDED TO LOADS FROM 'SPECIAL JOIST LOADING SCHEDULE AND DIAGRAM'.
2. SEE PLAN FOR RTU DRIFT. IF NO RTU DRIFT GIVEN ON PLAN, RTU DRIFT NOT APPLICABLE.
3. FLAT SNOW LOAD (Pf), INCLUDING Pf ON TOP OF RTU, ALREADY INCLUDED IN (TL/LL) JOIST DESIGNATION OR 'SPECIAL JOIST LOADING SCHEDULE AND DIAGRAM'.
4. RTU WIND CAN ACT UP OR DOWN (±). PAIR OF LOADS (FORCE COUPLE) SHOWN ALWAYS ACT IN OPPOSITE DIRECTIONS.
5. ALL WIND LOADS ARE BASED ON ULTIMATE WIND LOADS (1.0W).

Schaefer Project Number: 24-0265

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

SCHEDULES

SHEET NUMBER

S401

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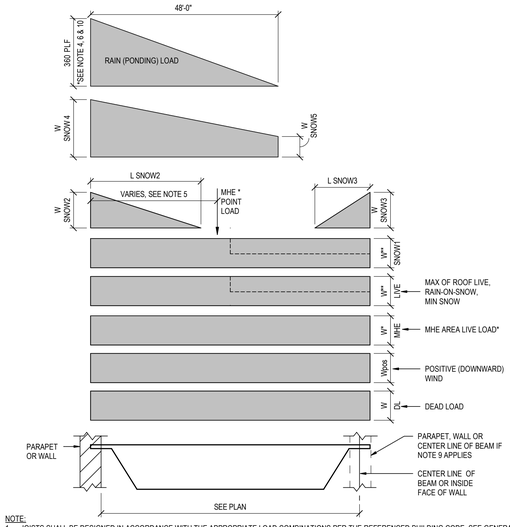
6/7/2024 8:51:45 AM

SPECIAL JOIST LOADING SCHEDULE AND DIAGRAM



NOTE:
1. JOISTS SHALL BE DESIGNED IN ACCORDANCE WITH THE APPROPRIATE LOAD COMBINATIONS PER THE REFERENCED BUILDING CODE. SEE GENERAL STRUCTURAL NOTES AND UPLIFT DIAGRAMS, FOR DESIGN UPLIFT DUE TO WIND
2. POSITIVE WIND ACTS TOWARDS THE JOISTS AND SHALL BE COMBINED WITH APPLICAPABLE LOAD COMBINATIONS PER THE REFERENCED BUILDING CODE. LOADS ARE ULTIMATE.
3. SNOW1 & SNOW2 & SNOW3 & SNOW4 & SNOW5 DO ACT SIMULTANEOUSLY WITH EACH OTHER, HOWEVER THEY DO NOT ACT SIMULTANEOUSLY WITH LIVE
4. RAIN LOAD ACTS ON JOISTS WHERE INDICATED IN THE TABLE BELOW. RAIN LOAD DOES NOT ACT SIMULTANEOUSLY WITH SNOW LOADING
5. MHE POINT LIVE LOADS INDICATED IN THE TABLE BELOW ARE TO BE APPLIED TO ANY SINGLE JOIST PANEL POINT LOCATION
6. WHERE "RAIN LOAD APPLIES" IS INDICATED IN TABLE BELOW, JOISTS & CONNECTIONS SHALL BE DESIGNED FOR 360 PLF OF PONDED WATER ALONG EXTERIOR WALLS.
7. THE "LIVE" LOAD CASE IS THE MAXIMUM OF ROOF LIVE LOAD, MINIMUM SNOW, AND RAIN-ON-SNOW LOAD.
8. PER SHEET S010 & SHEET S011, MHE LIVE LOAD AT THE ROOF FRAMING SHALL BE USED IN COMBINATION WITH SNOW LOAD OR LIVE LOAD WITHOUT THE REDUCTION OF EITHER
9. NOT USED.
10. REFER TO ARCH & MEP DWGS FOR LOCATION & SIZE OF RAIN LEADERS. WHERE RAIN LEADERS OCCUR, INCREASE BOTH LIVE & SNOW1 LOADING TO INCLUDE RAIN LEADER LOADING PER TABLE BELOW. RAIN LEADER LOADING OCCURS SIMULTANEOUSLY w/ PONDED RAIN ABOVE.
11. SEE GENERAL NOTES FOR MINIMUM ROLLOVER AND TOP CHORD AXIAL DEMANDS.
12. ALL LISTED MINIMUM REQUIRED MOMENTS OF INERTIA ARE NOMINAL UNO.

*NOT ALL JOISTS REQUIRE MHE LOADING. SEE SCHEDULE BELOW AND LOADING PLAN ON S010 AND S011 FOR LOCATIONS WHERE MHE LOAD ALLOWANCE IS REQUIRED.
**WHERE (2) LOADINGS ARE INDICATED IN SCHEDULE, THERE IS A STEP IN LOAD DEMAND AT MID-SPAN AS SHOWN BY DASHED LINE ABOVE.

JOIST MARK	W DL (PLF)	W LIVE (PLF)	W SNOW1 (PLF)	W SNOW2 (PLF)	L SNOW2 (FT)	W SNOW3 (PLF)	L SNOW3 (FT)	W SNOW4 (PLF)	W SNOW5 (PLF)	W MHE (PLF)*	MHE POINT LIVE LOAD (LBS)*	RAIN LOAD APPLIES	RAIN LEADER LOAD APPLIES	I min (in^4)	Wpos (PLF)
16K SP1	115	100	524	--	--	--	--	--	--	--	--	YES	NO	120	254
16K SP2	115	100	418	--	--	--	--	--	--	--	--	YES	NO	120	254
16K SP3	115	100	311	--	--	--	--	--	--	--	--	YES	NO	120	254
16K SP4	115	100	205	--	--	--	--	--	--	--	--	YES	NO	120	254
18K SP1	135	115	138	--	--	--	--	590	84	--	--	YES	NO	270	260
18K SP2	135	115	40	--	--	--	--	687	84	--	--	YES	NO	270	260
18K SP3	135	115	76	--	--	--	--	651	84	--	--	YES	NO	270	260
18K SP4	109	95	33	--	--	--	--	63	565	--	--	YES	NO	185	227
18K SP5	115	100	471	--	--	--	--	--	--	--	--	YES	NO	182	243
20K SP1	81	70	366	--	--	--	--	--	--	--	--	YES	NO	169	167
18LH SP1	150	125	650	--	--	--	--	--	--	--	--	NO	YES	65	100
32LH SP1	150	125	45	--	--	595	24.8	--	--	--	--	NO	YES	635	100
32LH SP2	150	125	45	--	--	475	19.8	--	--	--	--	NO	YES	600	100
32LH SP3	150	125	45	220	9.3	475	19.8	--	--	--	--	NO	YES	405	100
32LH SP4	150	125	295	--	--	345	14.3	--	--	--	--	NO	YES	635	100
32LH SP5	150	125	295	--	--	225	9.3	--	--	--	--	NO	YES	600	100
32LH SP6	150	125	175	--	--	465	19.3	--	--	--	--	NO	YES	635	100
32LH SP7	150	125	45	--	--	595	43.6	--	--	--	--	NO	YES	635	100
36LH SP1	150	260	42	402	19.1	--	--	--	--	--	2000	YES	NO	775	96
36LH SP2	150	130	42	402	19.1	--	--	--	--	--	2000	NO	NO	390	96
36LH SP3	150	140	42	559	24.3	--	--			120	2000	YES	NO	775	96
36LH SP4	150	120	42	111	9.7	--	--			120	2000	NO	NO	715	96
36LH SP5	144	250	41	358	31.7	--	--	--	--	--	2000	YES	NO	600	96
36LH SP6	144	250	41	519	23.6	--	--	--	--	--	2000	YES	NO	600	96

RAIN LEADER LOADING SCHEDULE

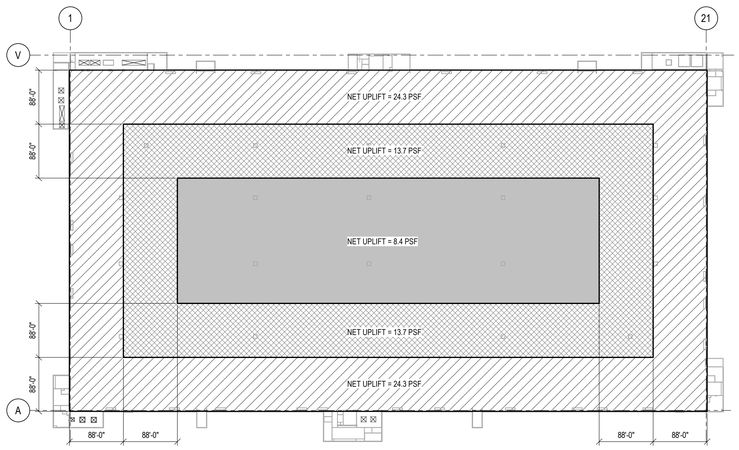
NOMINAL PIPE ø (IN) (SCHEDULE 40)	UNIFORM LOAD (PLF) (FILLED w/ WATER)	NOMINAL PIPE ø (IN) (SCHEDULE 40)	UNIFORM LOAD (PLF) (FILLED w/ WATER)
4	20	8	55
5	25	10	80
6	35	12	105

NOTES:
1. LOADS ARE BASED ON STEEL PIPE (SCHEDULE 40) FILLED w/ WATER. PRIOR TO DESIGN & FABRICATION, VERIFY PIPING TYPE & NOTIFY ENGINEER OF RECORD IF THERE IS A DISCREPANCY.
2. LOADING VALUES ARE BASED ON A SINGLE PIPE. MULTIPLE PIPES MAY BE SUPPORTED ON A SINGLE JOIST WHERE THIS OCCURS. INCREASE LOADING PROPORTIONATELY.

COMPOSITE STEEL JOIST SCHEDULE

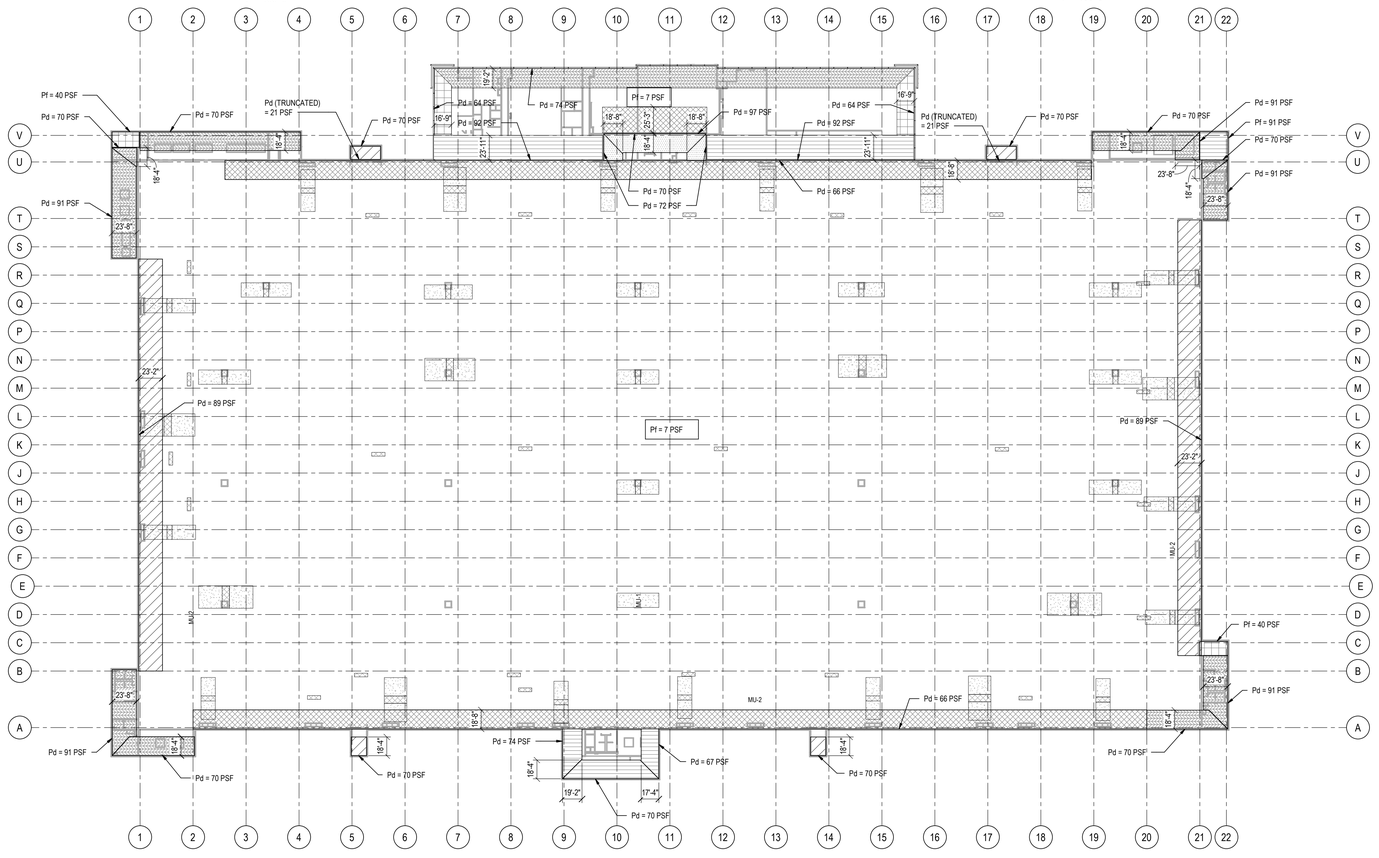
JOIST MARK	NON-COMPOSITE CONSTRUCTION DEAD LOAD	NON-COMPOSITE CONSTRUCTION LIVE LOAD	COMPOSITE DEAD LOAD	COMPOSITE LIVE LOAD	MAXIMUM COMPOSITE LIVE LOAD DEFLECTION (SPAN RATIO)	ADDITIONAL LOADS
	(PSF)	(PSF)	(PSF)	(PSF)		
36CJ1	75	50	10	LEVELS 2 - 4: 125 PSF LEVEL 5: 133 PSF	L/360	SEE NOTE 7
36CJ2	75	50	10	LEVELS 2 - 4: 125 PSF LEVEL 5: 133 PSF	L/360	SEE NOTE 7
36CJ3	75	50	10	LEVELS 2 - 4: 125 PSF LEVEL 5: 133 PSF	L/720	SEE NOTE 7

NOTES:
1. DEAD LOADS LISTED IN TABLE DO NOT INCLUDE SELFWEIGHT OF STEEL JOIST & BRIDGING. JOIST MFR SHALL ADD SELF WEIGHT OF STEEL JOISTS AND BRIDGING TO "NON-COMPOSITE DEAD LOAD".
2. JOISTS SHALL BE CAMBERED FOR 80% OF THE "NON-COMPOSITE DEAD LOAD".
3. "COMPOSITE DEAD LOAD" CONSISTS OF THE DEAD LOAD APPLIED ONLY AFTER THE CONCRETE SLAB HAS CURED AND THE CONCRETE SLAB AND STEEL JOISTS ARE ACTING AS A COMPOSITE SYSTEM. TYPICAL "COMPOSITE DEAD LOAD" INCLUDES SPRINKLERS, DUCTS, LIGHTS, MISC. MECHANICAL, ETC. THE SELF WEIGHT OF CONCRETE SLAB ON DECK, METAL DECK, PONDED CONCRETE ALLOWANCE, AND STEEL JOISTS ARE NOT INCLUDED IN "COMPOSITE DEAD LOAD".
4. STUDS USED ON COMPOSITE STEEL JOISTS SHALL HAVE A HEIGHT EQUAL TO THE METAL DECK HEIGHT + 1 1/2".
5. GRAVITY LOADS PROVIDED IN TABLE ARE ALLOWABLE (SERVICE LEVEL). WIND AND SEISMIC LOADS PROVIDED ON PLANS AND SECTIONS ARE PER ASCE 7 (STRENGTH LEVEL) AND HAVE NOT BEEN REDUCED.
6. LIVE LOAD IS NON-REDUCIBLE.
7. THE JOIST MANUFACTURER IS TO INCLUDE THE FOLLOWING ADDITIONAL LOADS:
   A. SPRINKLER LOADS:
      1. THE JOIST MANUFACTURER SHALL COORDINATE WITH THE SPRINKLER DRAWINGS FOR JOIST SUPPORT LOCATIONS FOR THE FOLLOWING LOADS:
         a. SPRINKLER MAINS 4" IN DIAMETER OR GREATER SHALL BE ADDED TO THE "COMPOSITE DEAD LOAD". THE FOLLOWING SPRINKLER MAIN LINEAR LOADS SHALL BE USED BETWEEN SPRINKLER PIPING SUPPORT LOCATIONS:
            - 4" SPRINKLER MAIN = 18 PLF
            - 6" SPRINKLER MAIN = 32 PLF
            - 8" SPRINKLER MAIN = 50 PLF
         b. SPRINKLER RISERS SUPPORTED BY THE FLOOR SHALL BE ADDED TO THE "COMPOSITE DEAD LOAD": 2,250 LBS (VERIFY WEIGHT WITH SPRINKLER CONTRACTOR).
   B. WIND AND SEISMIC LOADS:
      a. SEE PLANS AND SECTIONS FOR WIND AND SEISMIC LOADS AND LOCATIONS.
      b. WHERE APPLICABLE, THE JOIST'S TOP CHORD AND CONNECTIONS SHALL BE DESIGNED FOR THE LARGER OF THE SPECIFIED WIND OR SEISMIC LOAD.
   C. ADDITIONAL PANEL POINT LOADS:
      a. A SINGLE NON-CUMULATIVE POINT LOAD AT ANY ONE BOTTOM CHORD PANEL POINT SHALL BE ADDED TO THE "COMPOSITE LIVE LOAD" FOR THE TYPICAL FLOOR JOIST. THE POINT LOAD MAGNITUDE SHALL BE 5,000 LBS FOR LEVEL 2 JOISTS AND 2,000 LBS FOR LEVELS 3-5 JOISTS, UNO.
8. JOISTS SHALL BE DESIGNED FOR A MAX NON-COMPOSITE CONSTRUCTION DEAD LOAD DEFLECTION OF 1 1/2".
9. COMPOSITE JOISTS SHALL BE DESIGNED FOR THE APPROPRIATE LOAD COMBINATIONS PER THE REFERENCED ASCE 7 STANDARD.
10. JOISTS AND ASSOCIATED CONNECTION SHALL BE DESIGNED FOR A MINIMUM AXIAL LOAD AS NOTED ON PLAN. HEADED STUDS SHALL BE PROPORTIONED TO TRANSFER THE ENTIRE AXIAL LOAD FROM JOIST TOP CHORD INTO CONCRETE SLAB OVER THE EXTENT OF JOIST SPAN. WHERE AXIAL LOAD IS INDICATED AT EACH END, THE ENTIRE AXIAL LOAD IS THE SUM OF BOTH ENDS.
11. COORDINATE OPENING LOCATIONS ON PLAN AND WITH ARCHITECTURE AND MECHANICAL DRAWINGS. WHERE JOISTS ARE ADJACENT TO OPENINGS, DESIGNS SHALL ACCOUNT FOR LOSS OF COMPOSITE ACTION.
12. COMPOSITE STEEL JOISTS AND BRIDGING SHALL BE DESIGNED AND SUPPLIED BY THE JOIST MFR.

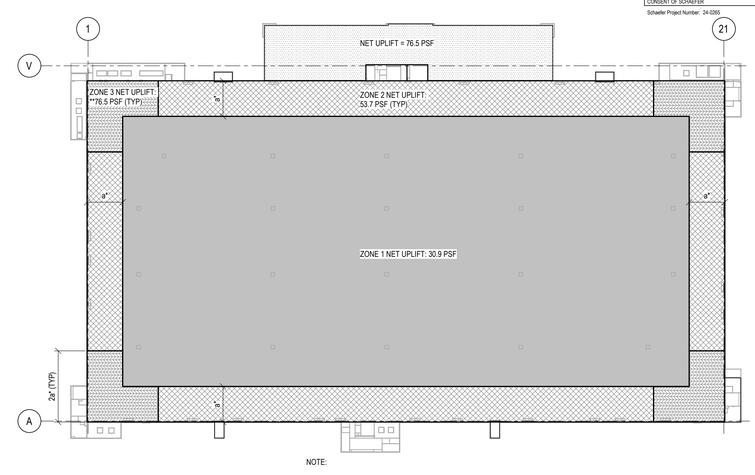


NOTE:
NET UPLIFT LOADS ARE BASED ON ASD LOAD COMBINATION: 0.6D+0.6W.

JOIST GIRDER NET UPLIFT PLAN
1" = 100'-0"



JOIST NET UPLIFT PLAN OFFICE
1" = 100'-0"



NOTE:
1. NET UPLIFT LOADS ARE BASED ON ASD LOAD COMBINATION: 0.6D+0.6W.
2. * FOR a & 2a VAULES, SEE WIND ZONE ISOMETRIC ON SHEET S010.
3. ** IF A PARAPET ≥ 3 FT IS PROVIDED AROUND THE ROOF PERIMETER, ZONE 3 SHALL BE PERMITTED TO BE TREATED AS ZONE 2.

DRIFTED SNOW PLAN
1" = 60'-0"

NOTES:
1. HATCHED PATTERNS INDICATE DRIFTED SNOW PRESSURES OCCURRING IN A TRIANGULAR SHAPE @ THE FACE OF THE WALL @ MAX PRESSURE & EXTENDING INWARD TOWARD BUILDING CENTER @ BALANCED SNOW PRESSURE.
2. HATCHED DRIFTED SNOW PRESSURES ARE ON TOP OF & ADDITIVE TO BALANCED SNOW PRESSURE.
3. ROOF TOP MECHANICAL EQUIPMENT REQUIRING DRIFTED SNOW LOADS WILL BE SHOWN ON ROOF FRAMING PLANS.

Schaefer Project Number: 24-0266

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE
SCHEDULES

SHEET NUMBER
S402

NOT FOR CONSTRUCTION

6/7/2024 8:52:02 AM

FOOTING SCHEDULE (CONTINUOUS)

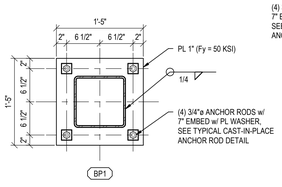
MARK	SIZE WIDTH (B)	SIZE THICKNESS (H)	REINFORCING	REMARKS
44	4'-4"	1'-6"	SEE SECTION	RETAINING WALL
CF26	2'-6"	2'-0"	(5) #5 CONT BOT LONGITUDINAL	
CF40	4'-0"	2'-0"	(5) #6 CONT BOT LONGITUDINAL	
CF42	4'-0"	2'-0"	(5) #6 CONT TOP & BOT LONGITUDINAL; #5 @ 16'oc TOP & BOT TRANSVERSE	
CF80	8'-0"	4'-6"	(23) #10 BOT; (15) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF90	9'-0"	4'-6"	(28) #10 BOT; (14) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF91	9'-0"	5'-6"	(28) #10 BOT; (14) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF100	10'-0"	4'-6"	(30) #10 BOT; (16) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF120	12'-0"	4'-6"	(34) #10 BOT; (12) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF130	13'-0"	4'-6"	(40) #10 BOT; (20) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF131	13'-0"	5'-6"	(40) #10 BOT; (20) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF140	14'-0"	4'-6"	(28) #10 BOT; (14) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF141	14'-0"	4'-6"	(42) #10 BOT; (22) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF142	14'-0"	5'-6"	(42) #10 BOT; (22) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERSE	
CF180	18'-0"	4'-6"	(36) #10 BOT; (18) #10 TOP LONGITUDINAL; #10 @ 12'oc TOP & BOT TRANSVERS	
F3	2'-0"	1'-0"	(2) #5 CONT BOT	AT GUARDHOUSES + PUMPHOUSE

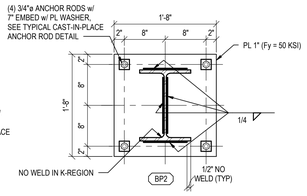
FOOTING SCHEDULE (ISOLATED)

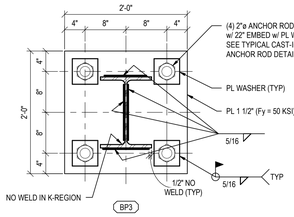
MARK	SIZE LENGTH (L)	SIZE WIDTH (B)	THICKNESS (H)	REINFORCING	REMARKS
50	5'-0"	5'-0"	1'-6"	(10) #5 EA WAY BOT	
60	6'-0"	6'-0"	2'-0"	(9) #6 EA WAY BOT	
70	7'-0"	7'-0"	1'-6"	(8) #6 EA WAY BOT	
80	8'-0"	8'-0"	2'-0"	(10) #6 EA WAY BOT	
90	9'-0"	9'-0"	2'-0"	(10) #7 EA WAY BOT	
100	10'-0"	10'-0"	2'-6"	(11) #7 EA WAY BOT	
110	11'-0"	11'-0"	2'-6"	(14) #7 EA WAY BOT	
120	12'-0"	12'-0"	2'-6"	(14) #8 EA WAY BOT	
121	12'-0"	12'-0"	2'-6"	(14) #8 EA WAY TOP & BOT	
130	13'-0"	13'-0"	3'-0"	(14) #8 EA WAY BOT	
140	14'-0"	14'-0"	3'-0"	(16) #8 EA WAY BOT	
150	15'-0"	15'-0"	3'-6"	(20) #8 EA WAY BOT	
151	15'-0"	15'-0"	4'-0"	(20) #8 EA WAY TOP & BOT	
160	16'-0"	16'-0"	3'-6"	(24) #8 EA WAY BOT	
161	16'-0"	16'-0"	4'-0"	(24) #8 EA WAY BOT	
170	17'-0"	17'-0"	4'-0"	(19) #9 EA WAY BOT	
171	17'-0"	17'-0"	4'-0"	(19) #9 EA WAY TOP & BOT	
172	17'-0"	17'-0"	4'-6"	(20) #9 EA WAY TOP & BOT	
190	19'-0"	19'-0"	4'-6"	(24) #9 EA WAY TOP & BOT	
205	24'-0"	7'-0"	2'-0"	(12) #5 CONT TOP & BOT LONGITUDINAL; (42) #5 TOP & BOT TRANSVERSE	

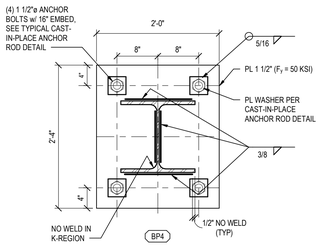
FOOTING NOTES:
1. WHERE FOOTINGS INTERSECT, PROVIDE REINFORCING STEEL PER SCHEDULE & FOOTING SIZE SUCH THAT DIMENSIONS SHOWN IN SCHEDULE ARE MET OR EXCEEDED.
2. CENTER ALL COLUMN FOOTINGS UNDER COLUMN CENTERLINES, UNO IN PLAN OR SECTION.
3. WHERE CONTINUOUS AND ISOLATED FOOTINGS OF DIFFERENT THICKNESS INTERSECT, PROVIDE BOTH FOOTING AT GREATER THICKNESS SO THAT A COMMON BEARING ELEVATION IS PROVIDED.

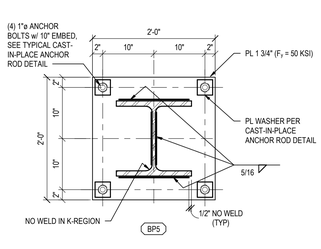
BASE PLATE SCHEDULE

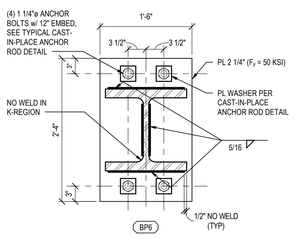


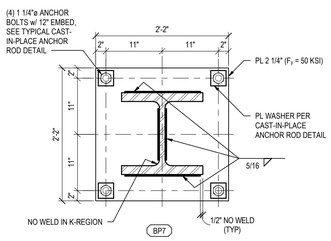


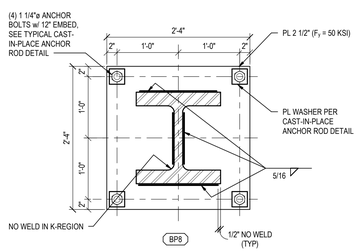


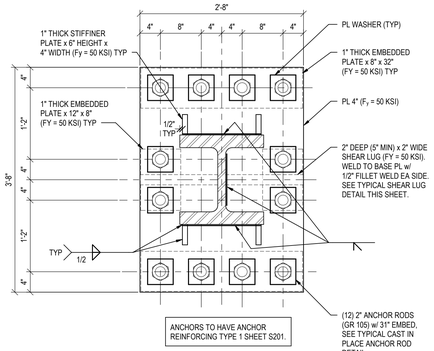


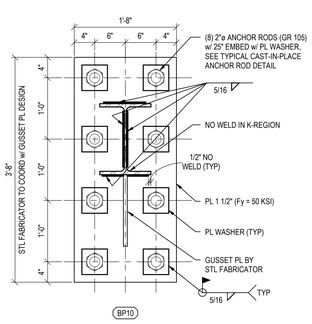


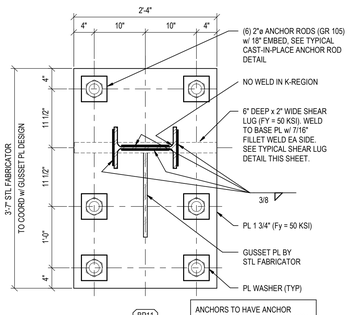


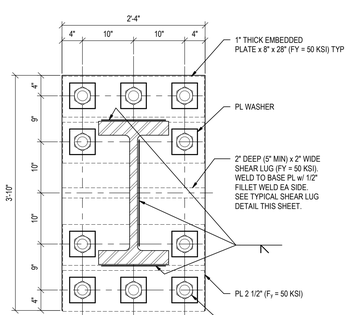


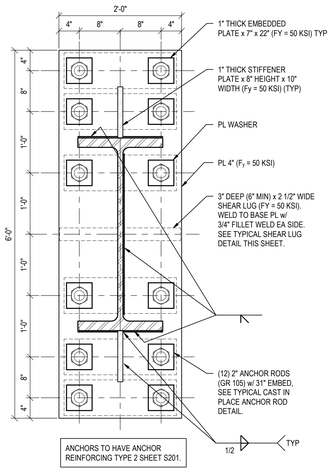


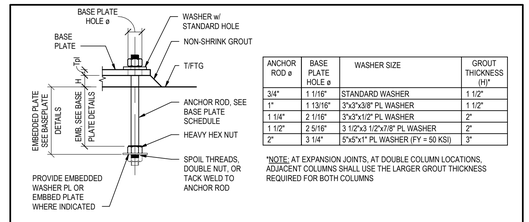








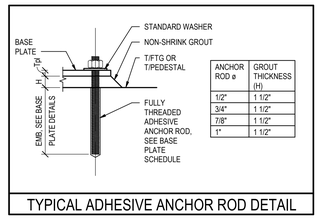




ANCHOR ROD ø	BASE PLATE HOLE ø	WASHER SIZE	GROUT THICKNESS (H)*
3/4"	1 1/16"	STANDARD WASHER	1 1/2"
1"	1 13/16"	3"x3"x3/8" PL WASHER	1 1/2"
1 1/4"	2 1/16"	3"x3"x1/2" PL WASHER	2"
1 1/2"	2 5/16"	3 1/2"x3 1/2"x7/8" PL WASHER	2"
2"	3 1/4"	5"x5"x1" PL WASHER (FY = 50 KSI)	3"

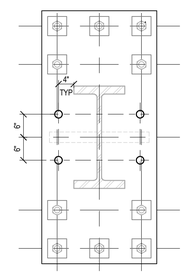
*NOTE: AT EXPANSION JOINTS, AT DOUBLE COLUMN LOCATIONS, ADJACENT COLUMNS SHALL USE THE LARGER GROUT THICKNESS REQUIRED FOR BOTH COLUMNS

TYPICAL CAST-IN-PLACE ANCHOR ROD DETAIL



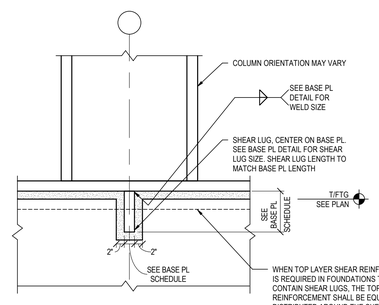
ANCHOR ROD ø	GROUT THICKNESS (H)
1/2"	1 1/2"
3/4"	1 1/2"
7/8"	1 1/2"
1"	1 1/2"

TYPICAL ADHESIVE ANCHOR ROD DETAIL



NOTE: PROVIDE GROUT HOLES WHEN LEAST DIMENSION OF BASE PLATE IS GREATER THAN 2'-0"

TYPICAL BASE PLATE GROUT HOLE DETAIL
3/4" = 1'-0"



TYPICAL SHEAR LUG DETAIL
1" = 1'-0"

Schaefer Project Number: 24-0265

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PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

SCHEDULES

SHEET NUMBER

S403

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6/7/2024 8:52:06 AM

Schaefer Project Number: 24-0265

MINIMUM BEAM REACTIONS FOR CONNECTION DESIGN, UNLESS NOTED OTHERWISE

BEAM SIZE	V ERTICAL SHEAR REACTION KIPS (LRFD)	
	FLOOR BEAM	ROOF BEAM
W8	15	15
W12	20	15
W14	35	25
W16	45	35
W16x67	--	50
W18	95	40
W21	205	50
W24	120	80
W27	145	80
W30	185	115
W33	245	110
W36	250	120

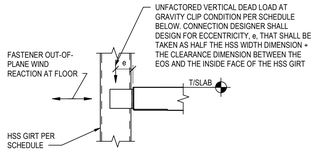
BEAM REACTION NOTES:
1. AXIAL FORCES NOTED ON PLAN ARE CONCURRENT WITH FORCES IN SCHEDULE AND MUST BE CONSIDERED TO ACT SIMULTANEOUSLY WITH FORCE ABOVE.
2. DOUBLE ANGLE CONNECTION MAY BE REQUIRED TO RESIST LOADING NOTED.
3. UNLESS NOTED OTHERWISE, SIMPLE SHEAR CONNECTIONS MAY USE STANDARD OR SHORT SLOTTED HOLES.
4. BOLT CAPACITIES SHALL BE BASED ON THREADED BEING INCLUDED IN THE SHEAR PLANE.
5. WHERE AXIAL LOAD OCCURS AT CONNECTION, PROVIDE STANDARD SIZES HOLES. SLOTTED HOLES ARE NOT PERMITTED. SLIP CRITICAL CONNECTION WITH SLOTTED HOLES MAY BE CONSIDERED WITH A/E APPROVAL AND SUPPORTING CALCULATIONS.
6. WHERE VERTICAL SHEAR DEMAND NOTED IN SCHEDULE EXCEEDS THE MAXIMUM SHEAR CAPACITY OF THE BEAM, THE MAXIMUM SHEAR CAPACITY OF THE BEAM SHALL USED IN THE CONNECTION DESIGN, UNLESS NOTED OTHERWISE.

TYPICAL BEAM REACTIONS
3/4" = 1'-0"

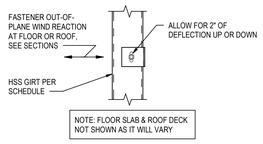
IMP VERTICAL HSS GIRT SCHEDULE

T/PARAPET ELEVATION	FRAMING MEMBER	MEMBER SPACING AT EDGE ZONE & ELSEWHERE	FASTENER OUT-OF-PLANE WIND REACTION AT ROOF (LRFD) (EDGE ZONE / ELSEWHERE)	FASTENER OUT-OF-PLANE WIND REACTION AT FLOOR (LRFD) (EDGE ZONE / ELSEWHERE)	UNFACTORED VERTICAL DEAD LOAD AT GRAVITY CLIP CONDITION
≤ 93'-3"	HSS8x8x3/16	6'-0"	8.4 KIPS / 7.5 KIPS	10.2 KIPS / 6.0 KIPS	3.9 KIPS
> 93'-3" & ≤ 95'-9"	HSS8x8x3/16	6'-0"	10.2 KIPS / 9.7 KIPS	9.7 KIPS / 6.0 KIPS	3.6 KIPS
> 95'-9" & ≤ 98'-3"	HSS8x6x5/16	4'-0"	NOT APPLICABLE / 9.6 KIPS	NOT APPLICABLE / 4.5 KIPS	3.4 KIPS
> 98'-3" *	HSS8x6x3/8	3'-0"	11.8 KIPS / 11.8 KIPS	6.4 KIPS / 3.9 KIPS	4.9 KIPS

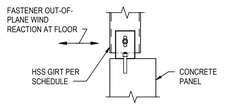
NOTES:
1. EDGE ZONES ARE LOCATIONS THAT ARE WITHIN "0.6h" DIMENSION HORIZONTALLY FROM A BUILDING CORNER.
2. COORDINATE ALL TOP OF PARAPET ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
3. PROVIDE HSS SUPPORT AT EACH IMP VERTICAL JOINT. COORDINATE MIN WIDTH REQUIRED AT JOINT WITH IMP SUPPLIER.
4. * DENOTES MULTIPLE PARAPET CONDITIONS AT THIS PARAPET ELEVATION. WHEN T/PARAPET ELEVATION IS LOCATED AT STAIR PENTHOUSE ROOF, USE DESIGN FOR T/PARAPET ELEVATION ≤ 93'-3".



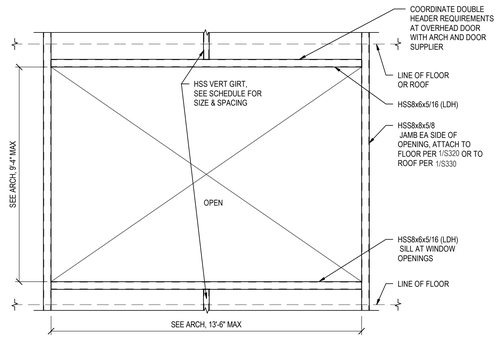
GRAVITY / LATERAL HSS CONNECTION AT 4TH LEVEL FLOOR



LATERAL HSS CONNECTION AT FLOOR OR ROOF



GRAVITY / LATERAL HSS CONNECTION AT CONCRETE BEARING CONDITION



TYPICAL FRAMING AT OPENING AT HSS VERTICAL GIRTS
3/8" = 1'-0"

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
02/18/22	2024-013

SHEET TITLE

SCHEDULES

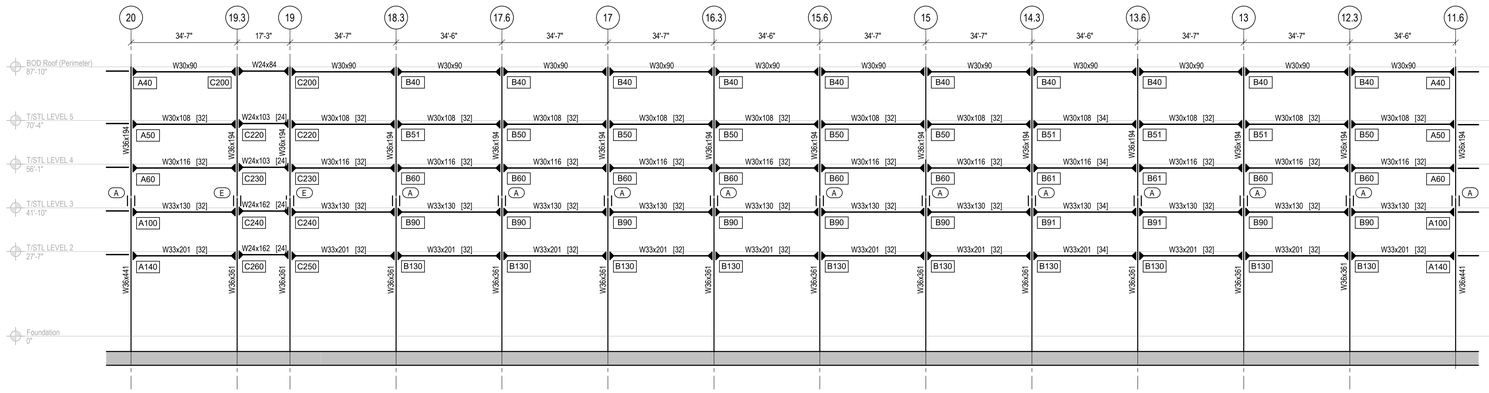
SHEET NUMBER

S404

NOT FOR CONSTRUCTION

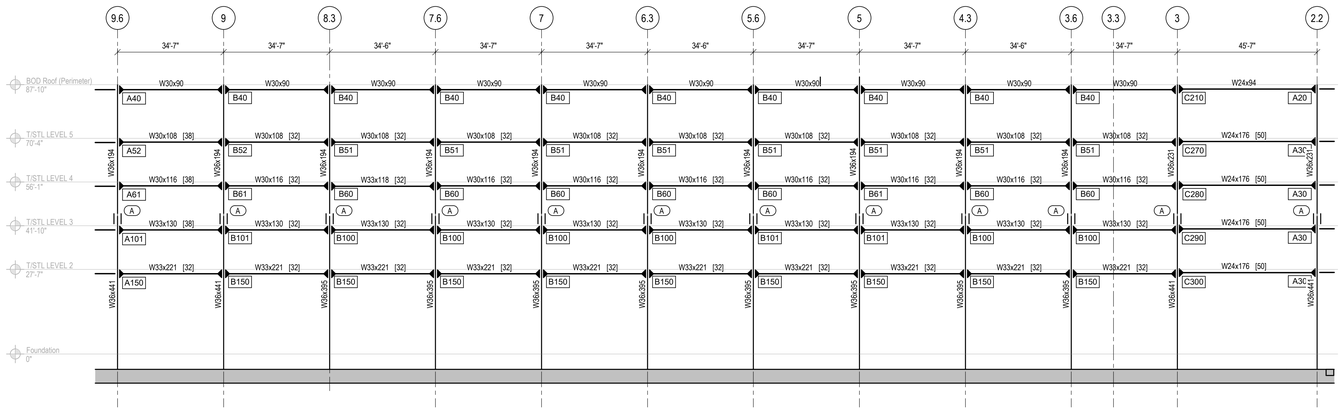
6/7/2024 8:52:08 AM

Schaefer Project Number: 24-0265



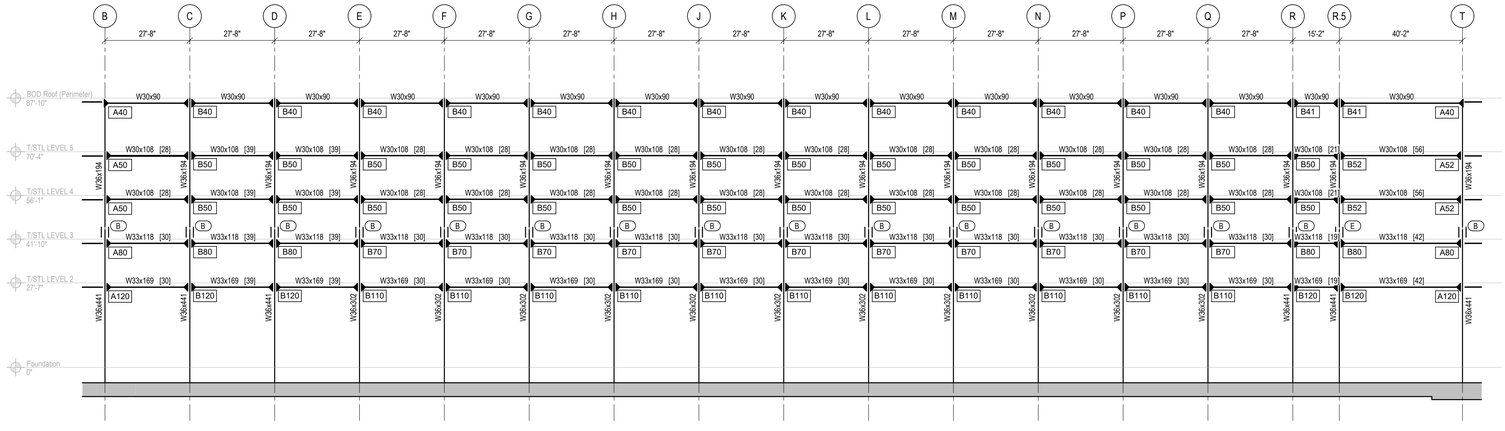
NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE A
1" = 20'-0"
A / S501



NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE A
1" = 20'-0"
B / S501



NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE 1
1" = 20'-0"
C / S501

6/7/2024 8:52:16 AM

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BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

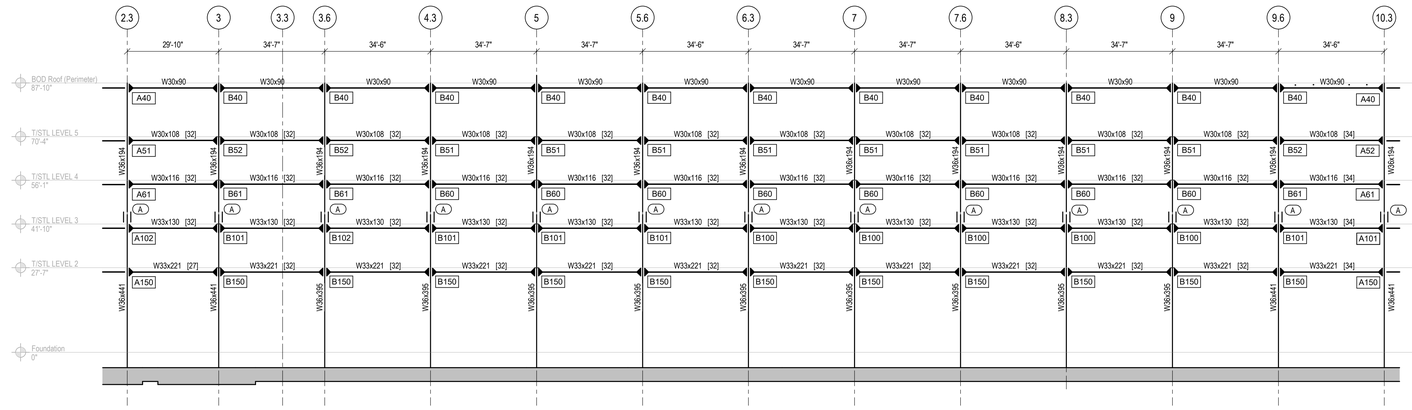
MOMENT FRAME ELEVATIONS

SHEET NUMBER

S501

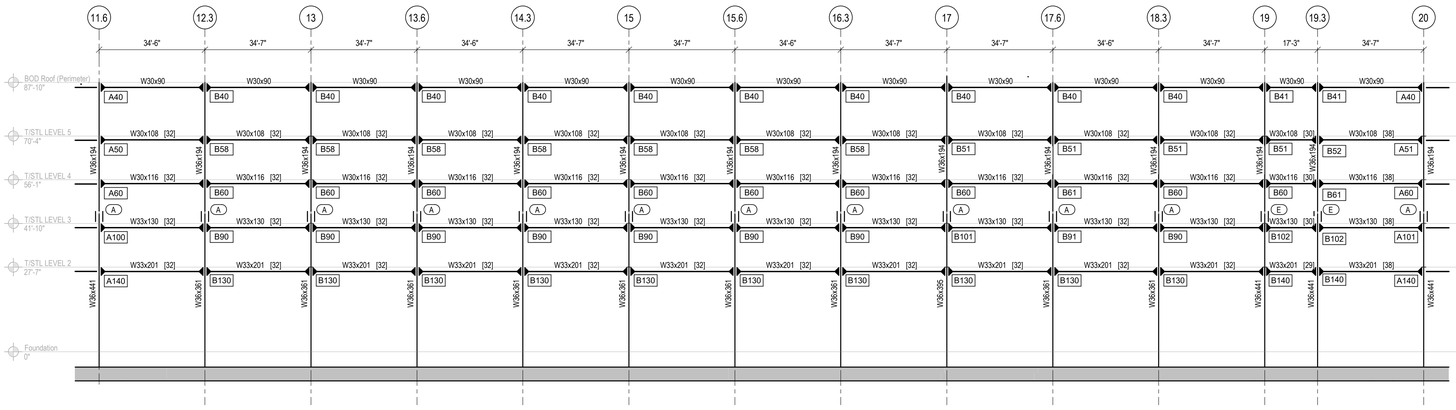
NOT FOR CONSTRUCTION

Schaefer Project Number: 24-0265



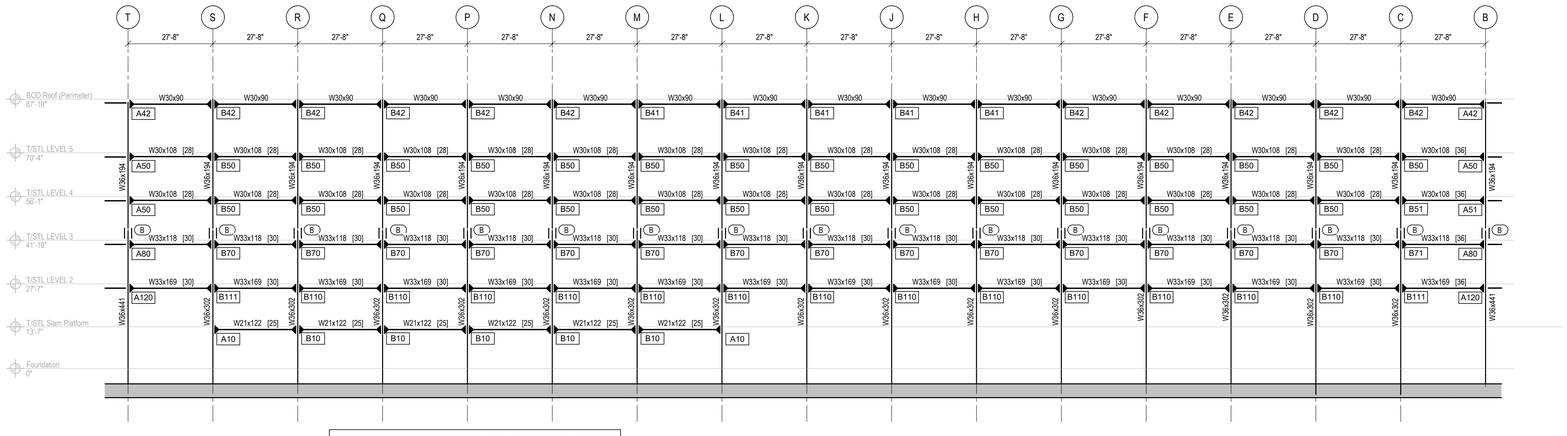
NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE U
1" = 20'-0"
A / S502



NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE U
1" = 20'-0"
B / S502



NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE 21
1" = 20'-0"
C / S502

6/7/2024 8:52:23 AM

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BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

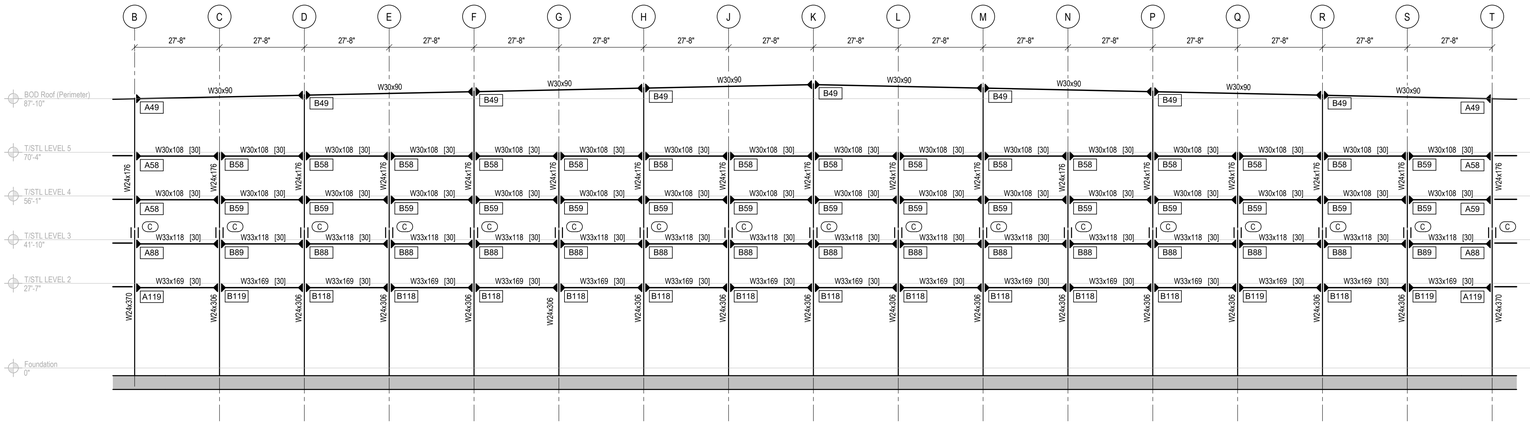
MOMENT FRAME ELEVATIONS

SHEET NUMBER

S502

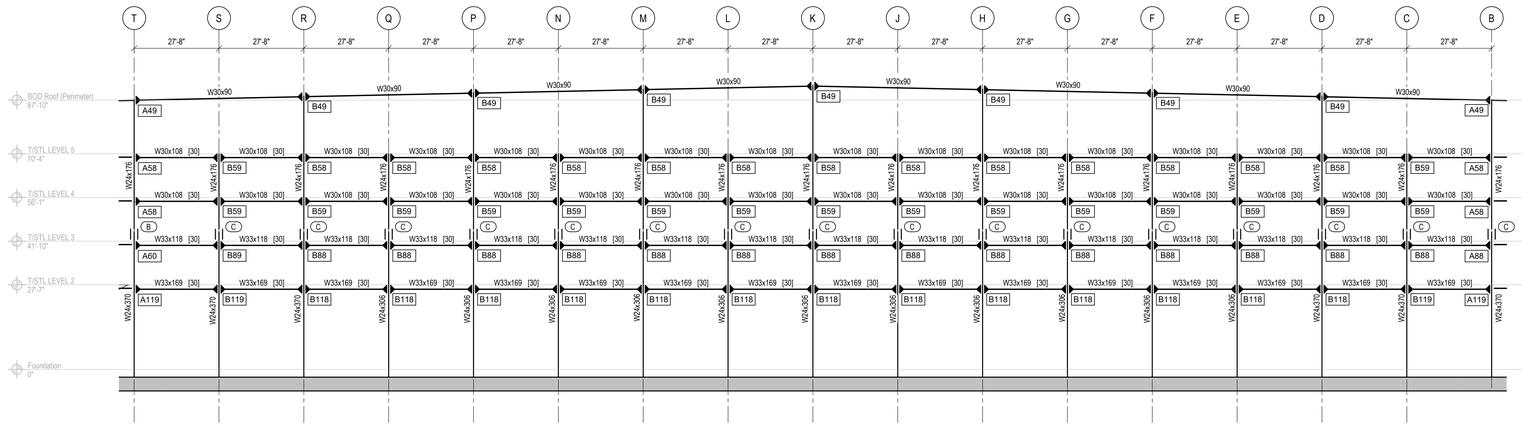
NOT FOR CONSTRUCTION

Schaefer Project Number: 24-0265



NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE 11.1
1" = 20'-0"
A / S503



NOTE: SEE SPECIALTY CONNECTION DESIGN DRAWING SHEETS (SP100 - SP109) FOR SCHEDULES, DETAILS, & INFORMATION ON SIDEPLATE MOMENT CONNECTIONS. REFERENCE CONNECTION ID'S LISTED IN ELEVATIONS AT EACH CONNECTION FOR CORRESPONDING SIDEPLATE MOMENT CONNECTION.

MOMENT FRAME ELEVATION AT GRIDLINE 11
1" = 20'-0"
B / S503

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DATE	PROJECT NO
--	2024-013

SHEET TITLE

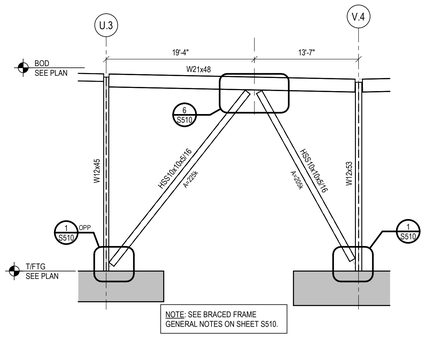
MOMENT FRAME ELEVATIONS

SHEET NUMBER

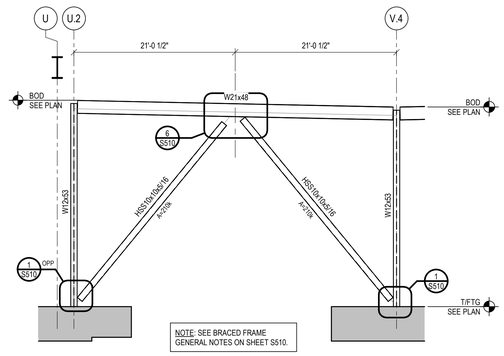
S503

NOT FOR CONSTRUCTION

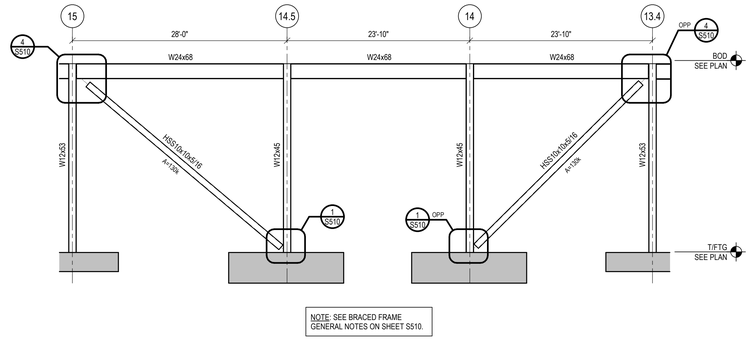
Schaefer Project Number: 24-0265



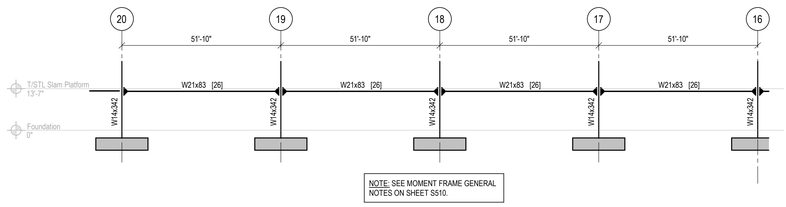
BRACED FRAME ELEVATION AT GRIDLINE 9.55
1/8" = 1'-0"
1 S504



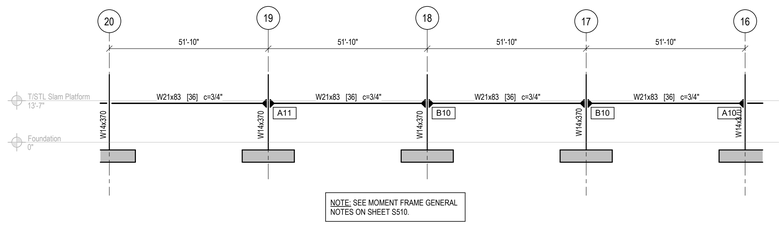
BRACED FRAME ELEVATION AT GRIDLINE 11.9
1/8" = 1'-0"
2 S504



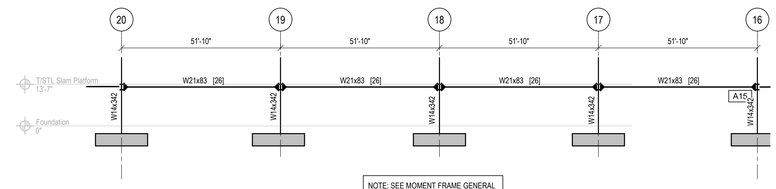
BRACED FRAME ELEVATION AT GRIDLINE V.4
1/8" = 1'-0"
3 S504



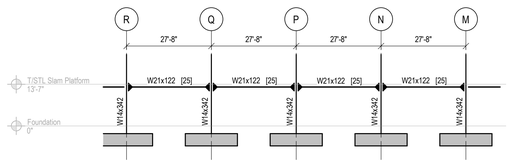
MOMENT FRAME ELEVATION AT GRIDLINE S
1" = 20'-0"
A S504



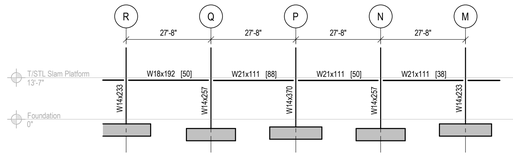
MOMENT FRAME ELEVATION AT GRIDLINE P
1" = 20'-0"
B S504



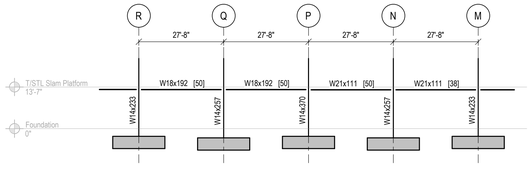
MOMENT FRAME ELEVATION AT GRIDLINE L
1" = 20'-0"
C S504



MOMENT FRAME ELEVATION AT GRIDLINE 15
1" = 20'-0"
D S504



MOMENT FRAME ELEVATION AT GRIDLINE 17
1" = 20'-0"
E S504



MOMENT FRAME ELEVATION AT GRIDLINE 20
1" = 20'-0"
F S504

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BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

MOMENT FRAME ELEVATIONS

SHEET NUMBER

S504

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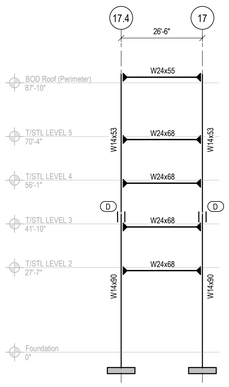
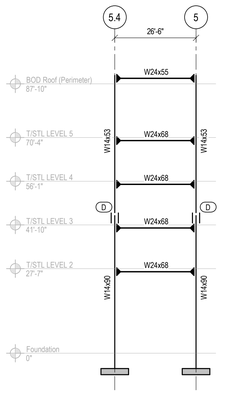
6/7/2024 8:52:39 AM

Schaefer Project Number: 24-0265



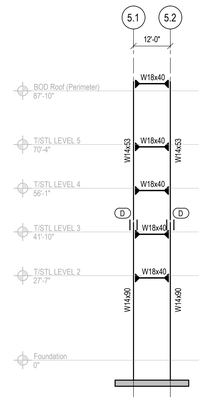
NOTE: SEE MOMENT FRAME GENERAL NOTES ON SHEET S510.

MOMENT FRAME ELEVATION AT GRIDLINE U.5
1" = 20'-0"
A S505



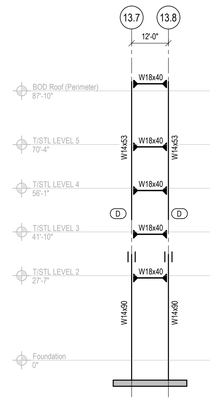
NOTE: SEE MOMENT FRAME GENERAL NOTES ON SHEET S510.

MOMENT FRAME ELEVATION AT GRIDLINE U.5
1" = 20'-0"
B S505



NOTE: SEE MOMENT FRAME GENERAL NOTES ON SHEET S510.

MOMENT FRAME ELEVATION AT GRIDLINE BB.9
1" = 20'-0"
C S505



NOTE: SEE MOMENT FRAME GENERAL NOTES ON SHEET S510.

MOMENT FRAME ELEVATION AT GRIDLINE BB.9
1" = 20'-0"
D S505

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BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

MOMENT & BRACE FRAME ELEVATIONS

SHEET NUMBER

S505

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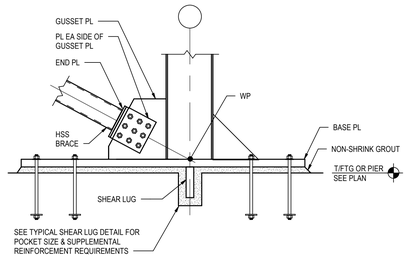
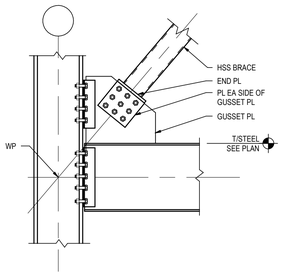
6/7/2024 8:52:40 AM

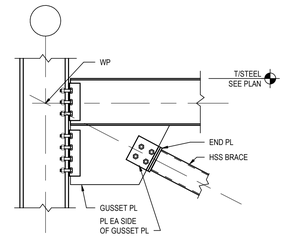
Schaefer Project Number: 24-0265



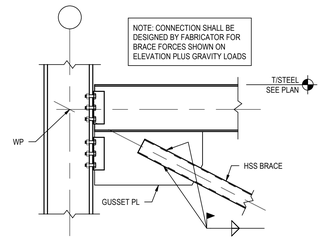
DETAIL 1 — 3/4" = 1'-0" — S510



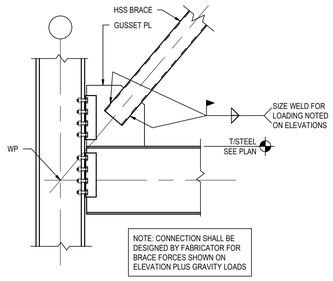
DETAIL 2 — 3/4" = 1'-0" — S510



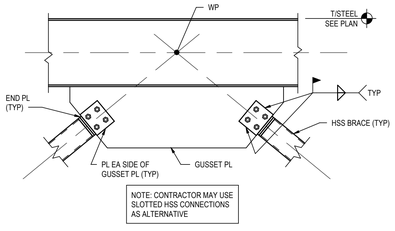
DETAIL 3 — 3/4" = 1'-0" — S510



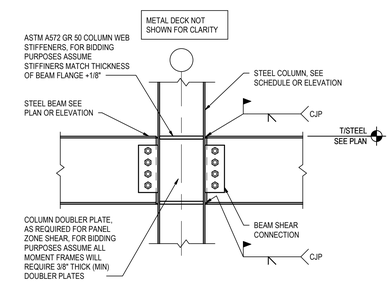
SECTION 4 — 3/4" = 1'-0" — S510



SECTION 5 — 3/4" = 1'-0" — S510



SECTION 6 — 3/4" = 1'-0" — S510



NOTES:
1. WHERE NO FORCES ARE INDICATED, DESIGN CONNECTION FOR FULL MOMENT CAPACITY OF MEMBER, USING LRFD DESIGN PROCEDURES.
2. ALTERNATE BOLTED MOMENT CONNECTION DETAILS MAY BE SUBMITTED FOR REVIEW AT STEEL FABRICATOR'S OPTION.
3. SIMILAR CONDITION APPLIES AT ROOF WHERE COLUMN DOES NOT EXTEND ABOVE.

TYPICAL BEAM TO COLUMN MOMENT CONNECTION (WELDED)
3/4" = 1'-0"

BRACED FRAME GENERAL NOTES:

1. ELEVATIONS SHOWN ARE APPROXIMATE. SEE PLAN FOR ALL TOP OF FOOTING AND TOP OF STEEL ELEVATIONS.
2. ALL TUBE SECTIONS SHALL BE ON COLUMN CENTERLINE.
3. A = XX KIPS - INDICATES AXIAL LOADS. FABRICATOR SHALL DESIGN ALL FRAMING CONNECTIONS FOR THE FORCES INDICATED. ALL FORCES ARE GIVEN IN KIPS (1000 LB) AND SHALL BE TREATED AS COMPRESSION OR TENSION FORCES WHICH EVER GOVERNS THE CONNECTION. AXIAL FORCES SHOWN ON BEAMS @ BEAM-COL JOINTS INDICATE PASS-THROUGH FORCE; CONNECTION THRU COL SHALL BE DESIGNED FOR THIS FORCE.
4. UNLESS NOTED OTHERWISE, ALL FORCES SHOWN ON THE BRACING MEMBERS INDICATE FACTORED AXIAL FORCES (LRFD). USE LRFD METHOD TO DESIGN CONNECTIONS.
5. (X) INDICATES BRACED FRAME OR MOMENT FRAME COLUMN SPLICE TYPE. SEE SCHEDULE THIS SHEET.
6. ALL FRAMING DETAILS SHALL BE CONFIGURED SUCH THAT CENTER OF GRAVITY FOR ALL MEMBERS INTERSECT AT A SINGLE, COMMON WORK POINT (I.E. NO CONNECTION ECCENTRICITY) UNLESS NOTED. FABRICATOR SHALL DESIGN CONNECTIONS FOR ANY ECCENTRICITIES TO BOLT AND WELD GROUPS.
7. SUBMIT CALCULATIONS, SEALED BY AN ENGINEER REGISTERED IN THE STATE THE PROJECT OCCURS, FOR CONNECTION DESIGN. CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS, WHICH ARE ALSO SEALED BY THE CONNECTION ENGINEER.
8. SHEAR CAPACITIES OF BOLTED CONNECTIONS SHALL BE BASED ON THREADS INCLUDED IN THE SHEAR PLANE (TYPE-N CONNECTIONS).
9. MOST DETAILS SHOWN APPLY TO COLUMN MAJOR AXIS, SIMILAR DETAILS APPLY FOR MINOR AXIS CASE OR VICE VERSA.
10. SEE FRAMING PLANS FOR BEAM SIZES.
11. STEEL FABRICATOR SHALL PROVIDE ADDITIONAL STIFFENER PLATES AND DOUBLER PLATES AS REQUIRED TO RESIST INDICATED LOADS.
12. PROVIDE ONE ERECTION BOLT (MINIMUM) AT EACH END OF TUBE STEEL BRACES.

NON-SIDEPLATE MOMENT CONNECTIONS

BEAM SIZE	FACTORED LOAD		
	SHEAR (KIPS)	MOMENT (FT-KIPS)	AXIAL (KIPS)
W18x	40	145	15
W21x	125	1010	30
W24x	50	300	15
W27x	185	1280	60

NOTES:
1. ALL VALUES PROVIDED ARE FACTORED LRFD LOADS.
2. MOMENT CONNECTION - END REACTIONS TABLE SHALL APPLY UNO ON PLAN OR IN SECTIONS.

MOMENT FRAME COLUMN SPLICE SCHEDULE

MARK	FACTORED LOAD		
	SHEAR (KIPS)	MOMENT (FT-KIPS)	TENSION (4) (KIPS)
(A)	190	935	-90
(B)	140	695	-140
(C)	105	560	-120
(D)	25	135	0
(E)	220	1095	-50

NOTES:
1. ALL VALUES PROVIDED ARE FACTORED LRFD LOADS.
2. IN ADDITION TO LOADS SHOWN ON SCHEDULE, COLUMN SPLICE SHALL BE DESIGNED FOR BEARING CAPACITY OF UPPER COLUMN.
3. SEE SHEET S301 FOR COLUMN SPLICE DETAIL.
4. IF LISTED TENSION LOAD IS NEGATIVE, THERE IS NO NET TENSION ON THE MOMENT FRAME COLUMN SPLICE. DESIGN THE SPLICE FOR A COMPRESSION AXIAL LOAD AS NOTED IN THE SCHEDULE.

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

MOMENT FRAME & BRACED FRAME DETAILS

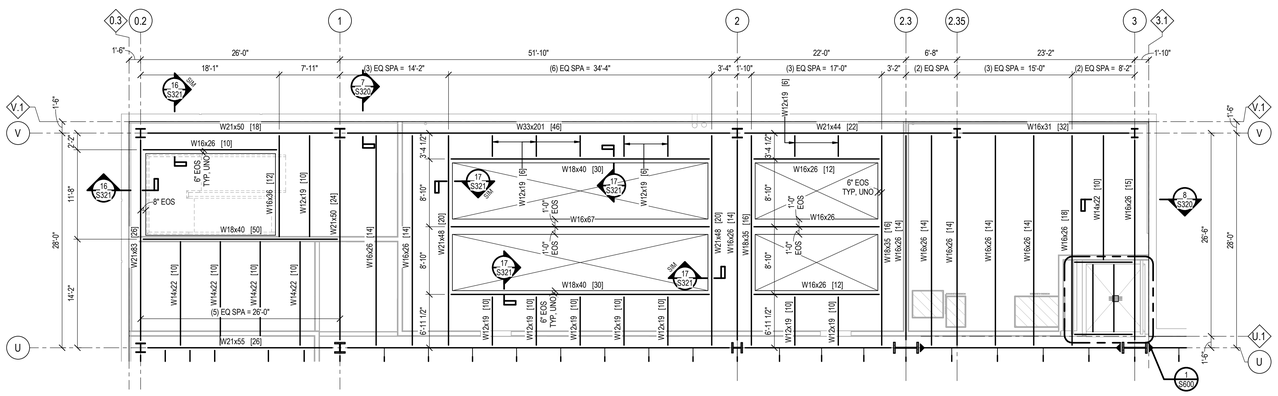
SHEET NUMBER

S510

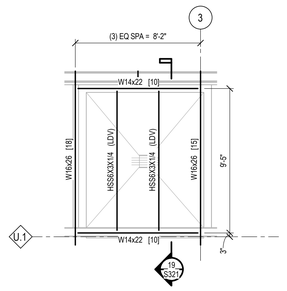
NOT FOR CONSTRUCTION

6/7/2024 8:52:43 AM

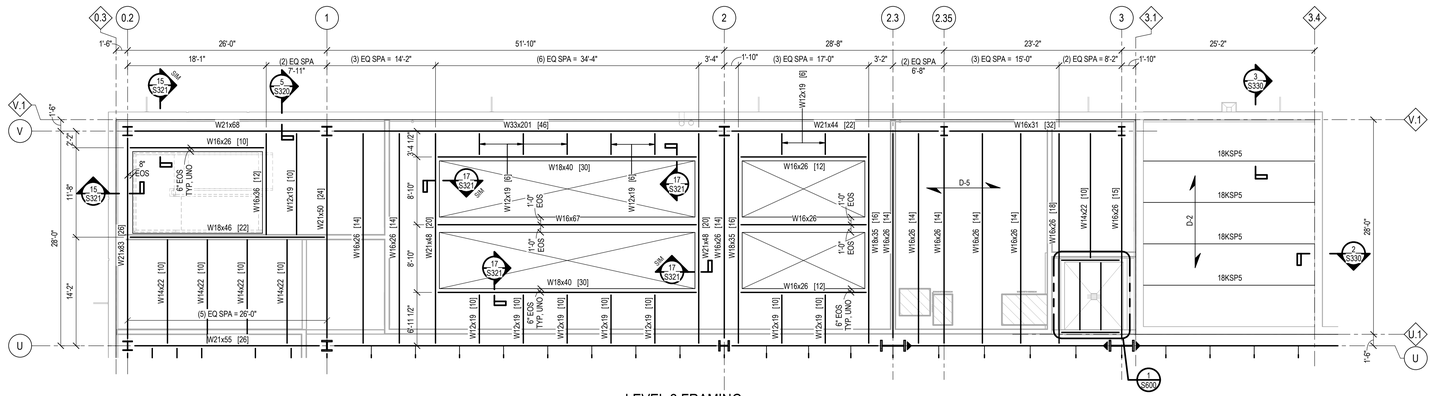
Schaefer Project Number: 24-0265



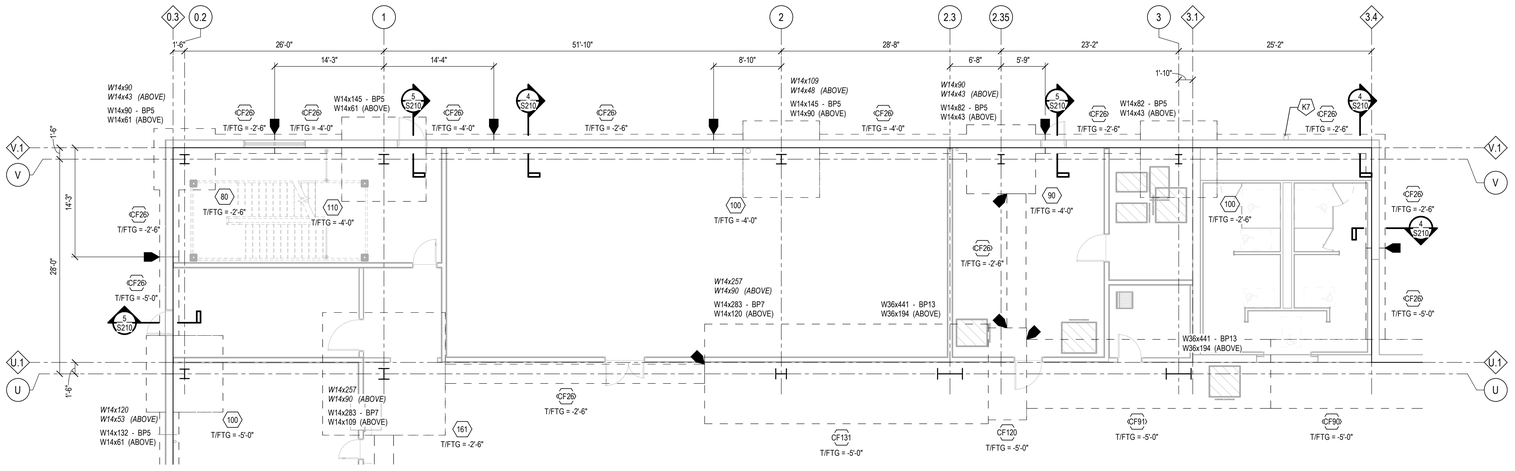
LEVEL 3 FRAMING -
ALTERNATE SHAFT D
1/8" = 1'-0"



TYPICAL ENLARGED SCRUBBER
DUMP PLAN
1/4" = 1'-0"
1 S600



LEVEL 2 FRAMING -
ALTERNATE SHAFT D
1/8" = 1'-0"



FOUNDATION PLAN -
ALTERNATE SHAFT D
1/8" = 1'-0"

NOTES:
1. REFERENCE PLAN ELEVATION 0'-0" = LEVEL 1 ELEVATION, SEE CIVIL DRAWINGS.
2. SEE SHEET S050 FOR SLAB-ON-GROUND PLAN AND NOTES
3. DOORS ARE SHOWN IN APPROXIMATE LOCATIONS, SEE ARCH DWGS FOR EXACT LOCATIONS.
4. SEE SHEET S001 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND (SYMBOLS)
5. DIMENSIONS TO WALL FOOTING STEP LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE FOOTING STEPS WITH LOCATIONS INDICATED ON FOUNDATION PLANS, WALL PANEL JOINT LOCATIONS, AND TYPICAL FOOTING STEP DETAIL.
6. SEE S200 SHEETS FOR TYPICAL FOUNDATION AND SLAB DETAILS.
7. SLOPE SLAB TO FLOOR DRAINS, COORDINATE WITH ARCH AND PLUMBING DWGS.
8. COLUMN SIZES INDICATED IN ITALICS INDICATE ALTERNATE SIZING UTITLING ASTM A572, GRADE 65 STEEL. CONTRACTOR TO PROVIDE BID ALTERNATES FOR BOTH PRIMARY AND ALTERNATE SIZING AND DISCUSS USAGE FURTHER WITH OWNER/DEVELOPER, ARCHITECT, AND STRUCTURAL ENGINEER.

FOUNDATION KEYNOTES

K7 NOTCH IN CONT FTG AT ELECTRICAL SERVICE CONDUIT, ROOF WATER LEADER, DOWNSPOUT, OR FIRE LINE RISER. SEE TYPICAL DETAIL ON SHEET S200.

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ALTERNATE SHAFT D - FOUNDATION AND FRAMING PLANS

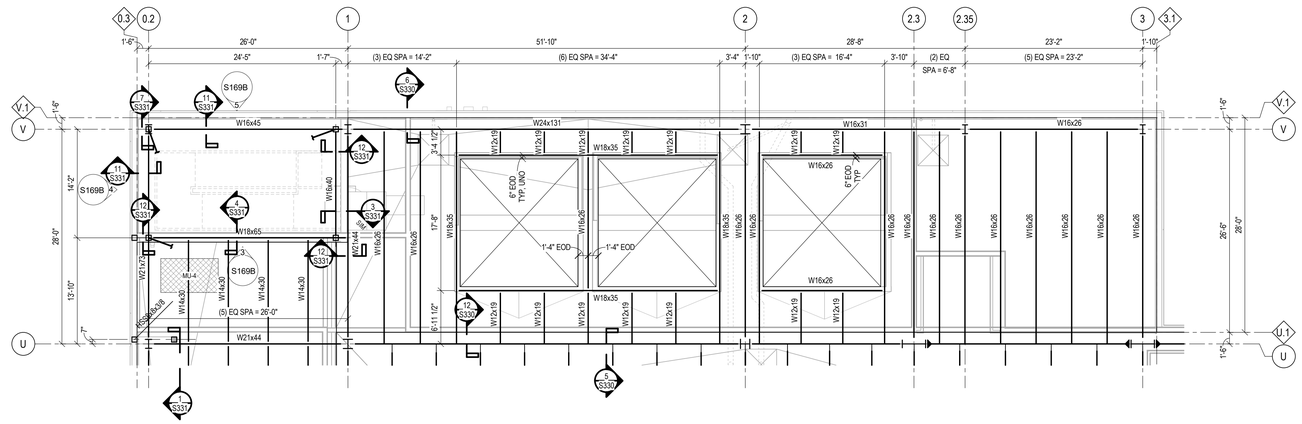
SHEET NUMBER

S600

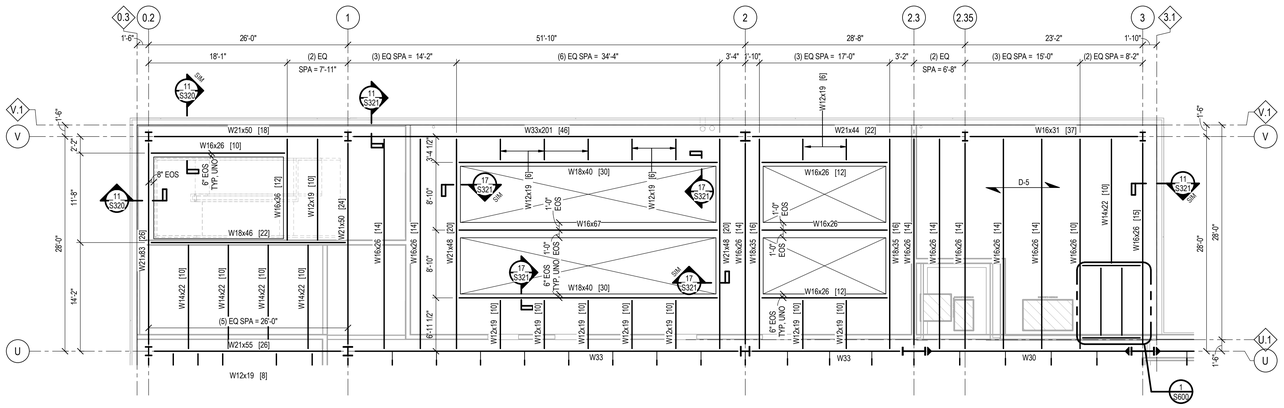
NOT FOR CONSTRUCTION

6/7/2024 8:12:15 AM

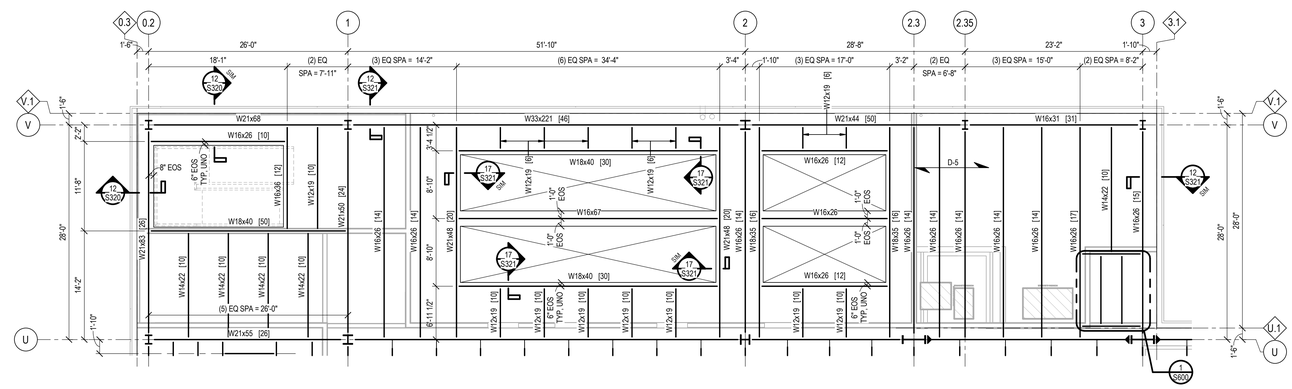
Schaefer Project Number: 24-0265



ROOF FRAMING
ALTERNATE MHE SHAFT
1/8" = 1'-0"
1 S601



LEVEL 5 FRAMING -
ALTERNATE MHE SHAFT
1/8" = 1'-0"
2 S601



LEVEL 4 FRAMING -
ALTERNATE MHE SHAFT
1/8" = 1'-0"
3 S601

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

ALTERNATE SHAFT D - FRAMING PLANS

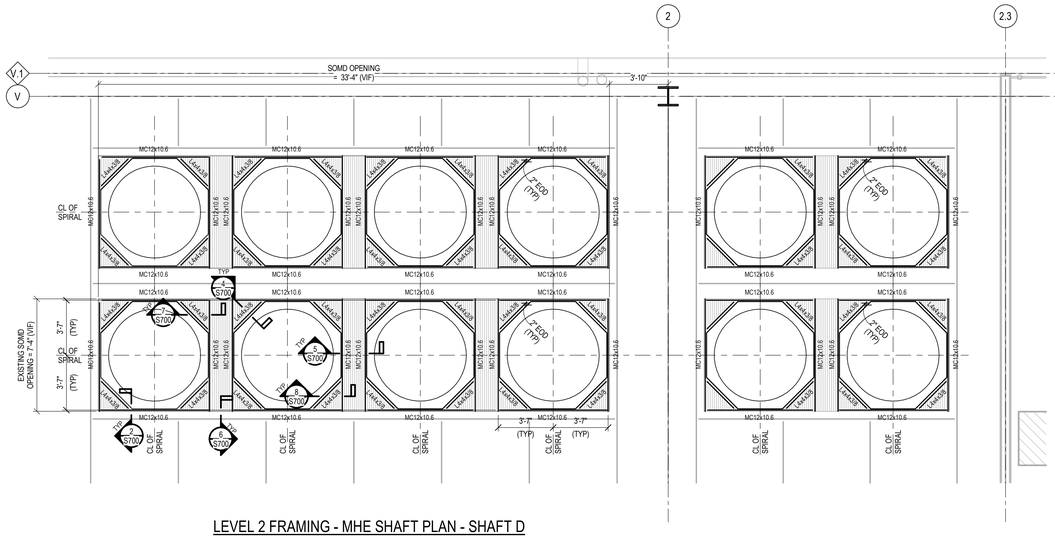
SHEET NUMBER

S601

NOT FOR CONSTRUCTION

6/7/2024 8:12:20 AM

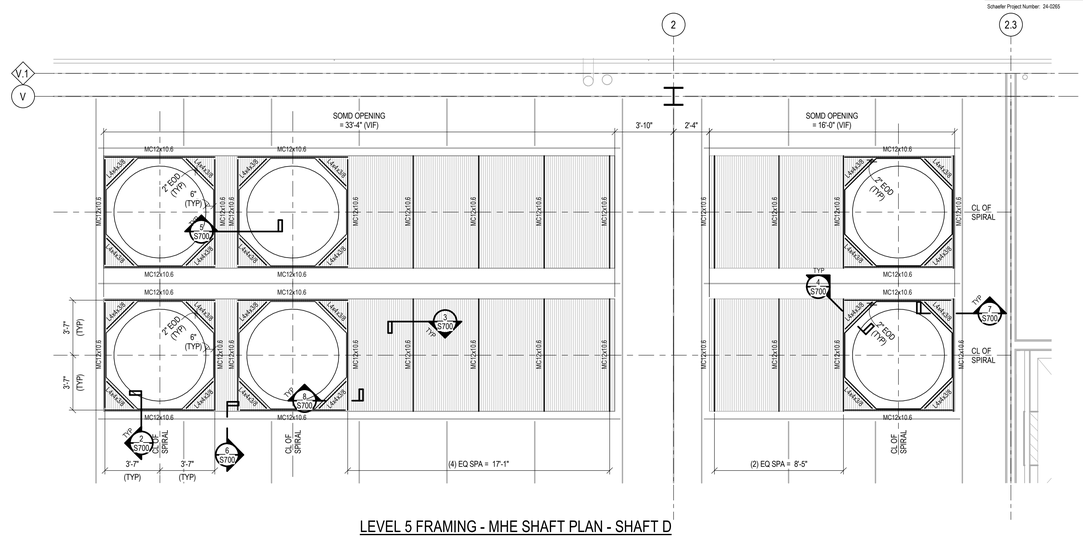
Schaefer Project Number: 24-0265



LEVEL 2 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

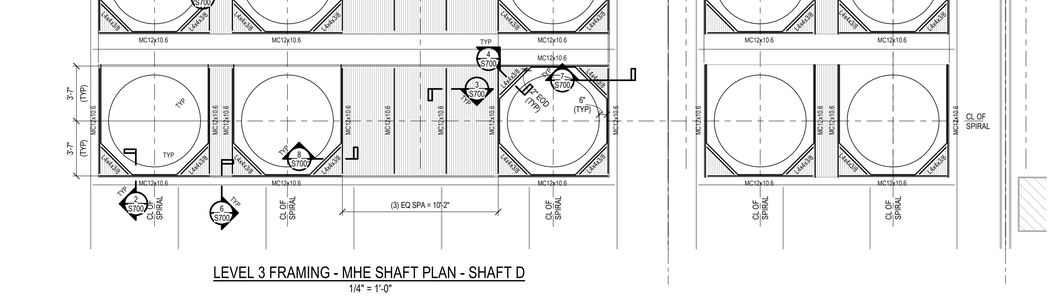
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 5 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

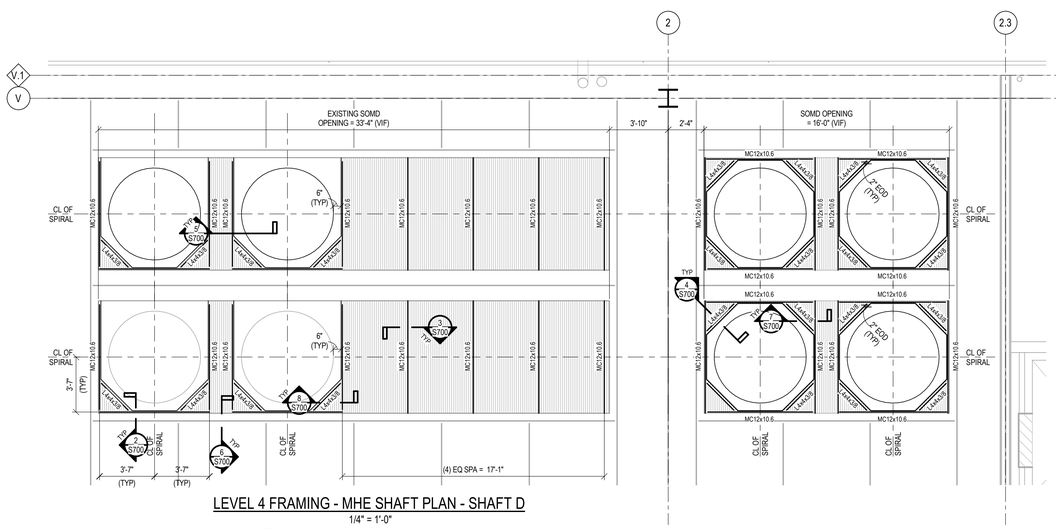
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 3 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 4 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED

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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

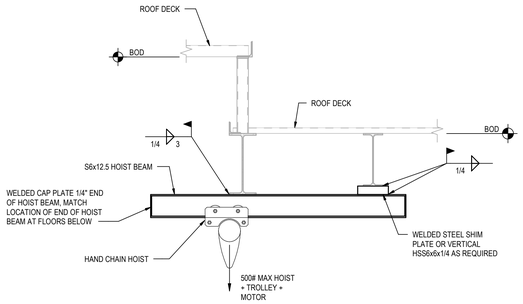
SHEET TITLE

PHASE II ALTERNATE SHAFT D PLANS

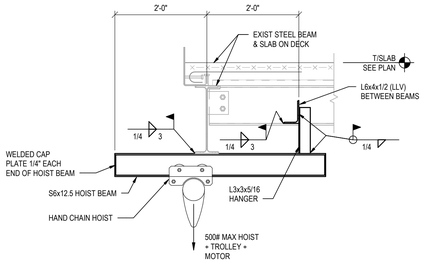
SHEET NUMBER

S602

NOT FOR CONSTRUCTION

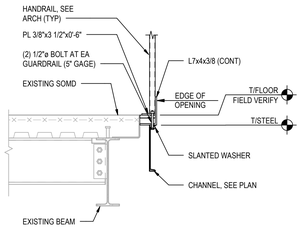


AT ROOF

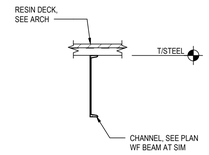


AT FLOORS

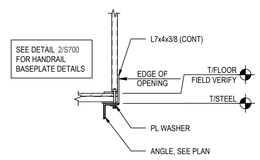
SECTION AT MHE SHAFT MOTOR JOIST BEAM
3/4" = 1'-0"
1 S700



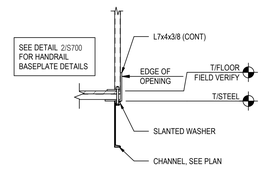
SECTION 2 S700
3/4" = 1'-0"



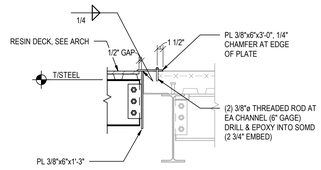
SECTION 3 S700
1" = 1'-0"



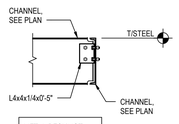
SECTION 4 S700
3/4" = 1'-0"



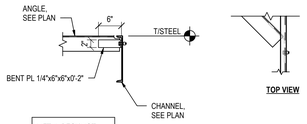
SECTION 5 S700
3/4" = 1'-0"



SECTION 6 S700
3/4" = 1'-0"



SECTION 7 S700
3/4" = 1'-0"



SECTION 8 S700
3/4" = 1'-0"

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BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

PHASE II DETAILS

SHEET NUMBER

S700

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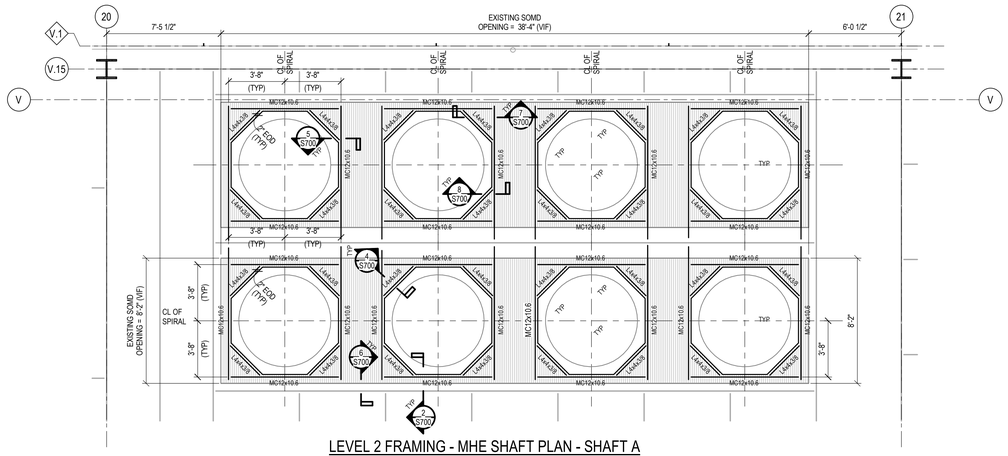
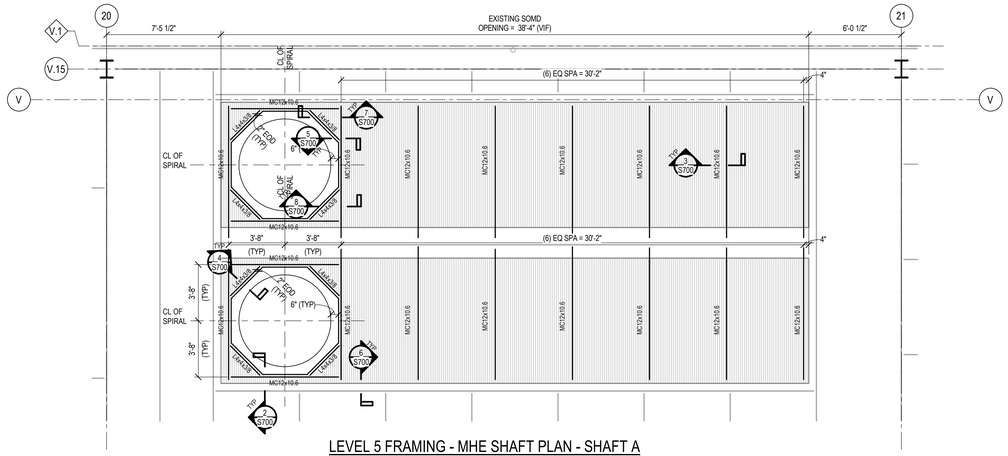
6/7/2024 8:52:49 AM



LEVEL 2 FRAMING - MHE SHAFT PLAN - SHAFT A

1/4" = 1'-0"

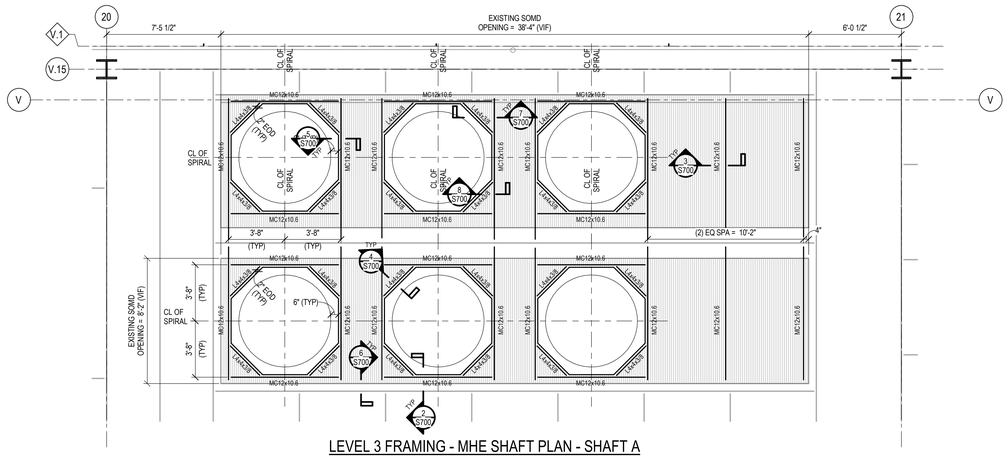
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 5 FRAMING - MHE SHAFT PLAN - SHAFT A

1/4" = 1'-0"

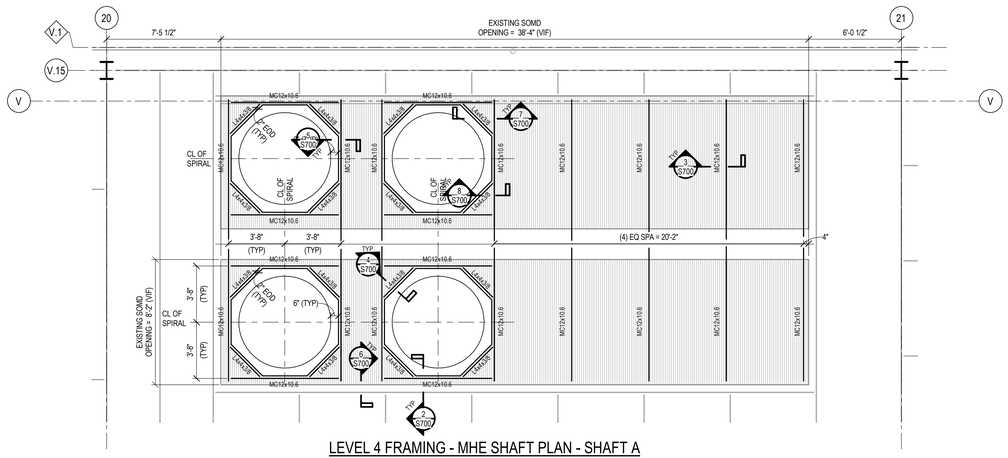
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 3 FRAMING - MHE SHAFT PLAN - SHAFT A

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 4 FRAMING - MHE SHAFT PLAN - SHAFT A

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED

Schaefer Project Number: 24-0265

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

PHASE II SHAFT A PLANS

SHEET NUMBER

S701

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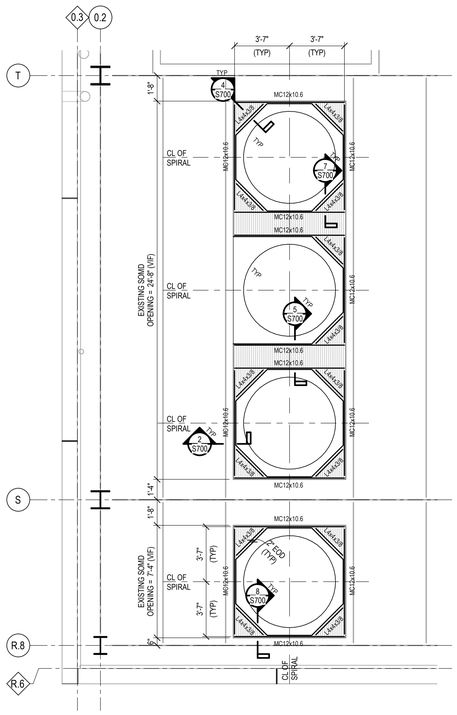
6/7/2024 8:52:55 AM

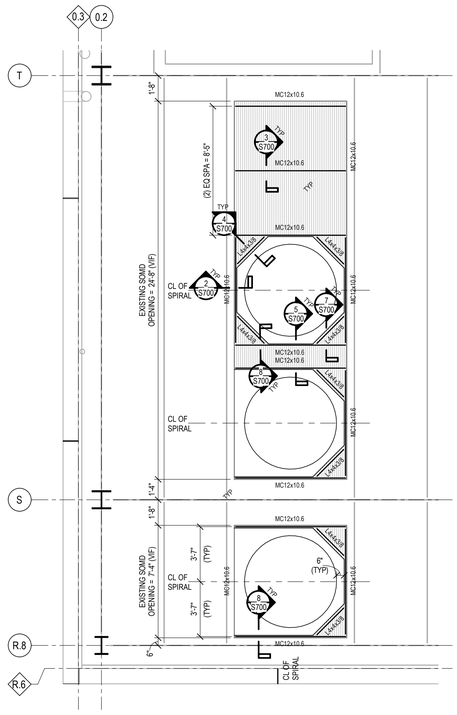
Schaefer Project Number: 24-0265



LEVEL 2 FRAMING - MHE SHAFT PLAN - SHAFT C

1/4" = 1'-0"

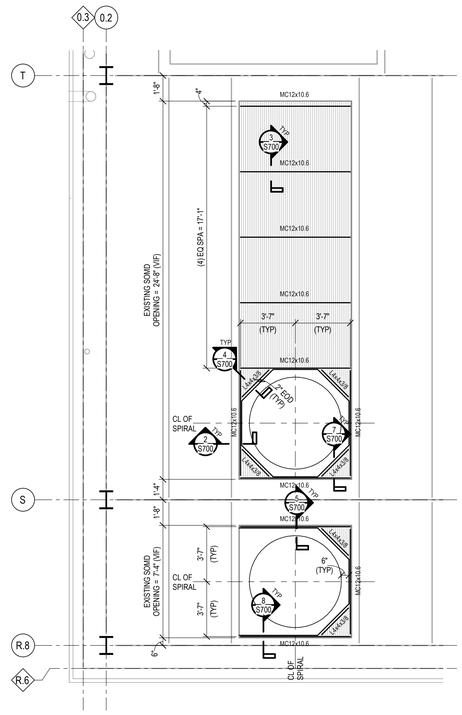
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 3 FRAMING - MHE SHAFT PLAN - SHAFT C

1/4" = 1'-0"

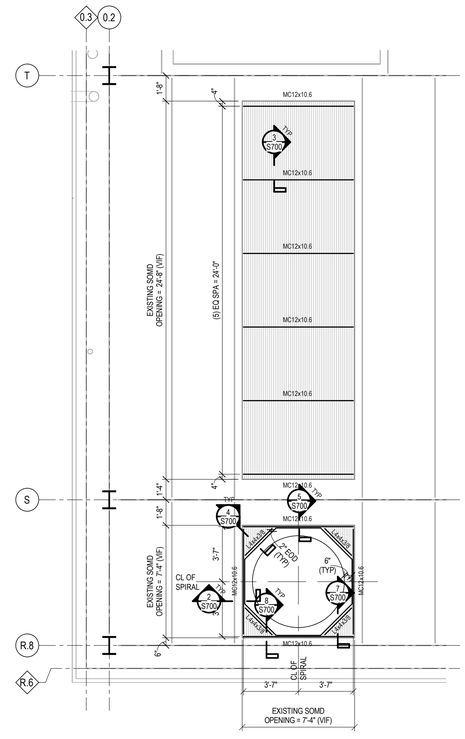
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 4 FRAMING - MHE SHAFT PLAN - SHAFT C

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 5 FRAMING - MHE SHAFT PLAN - SHAFT C

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED

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PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

PHASE II SHAFT C PLANS

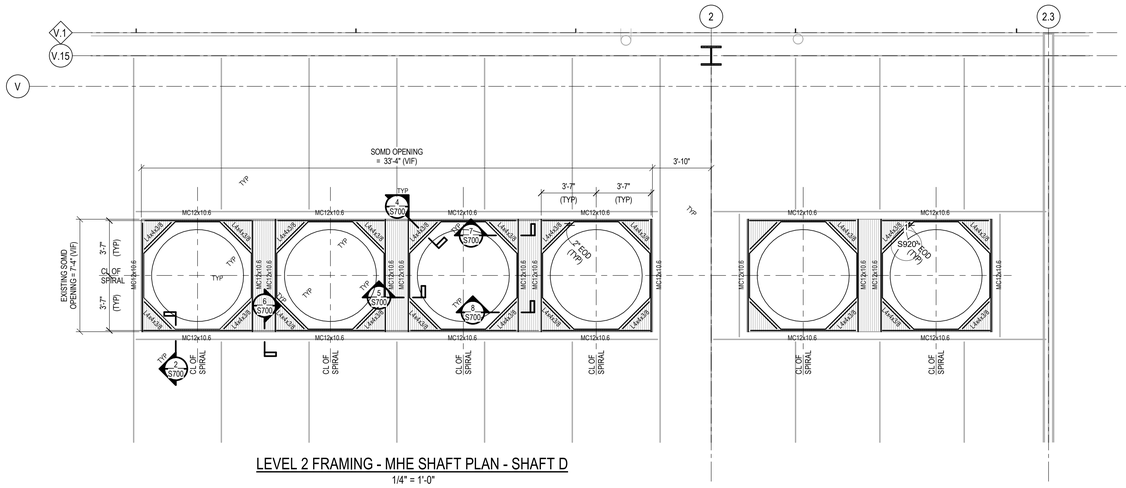
SHEET NUMBER

S702

NOT FOR CONSTRUCTION

6/7/2024 8:53:01 AM

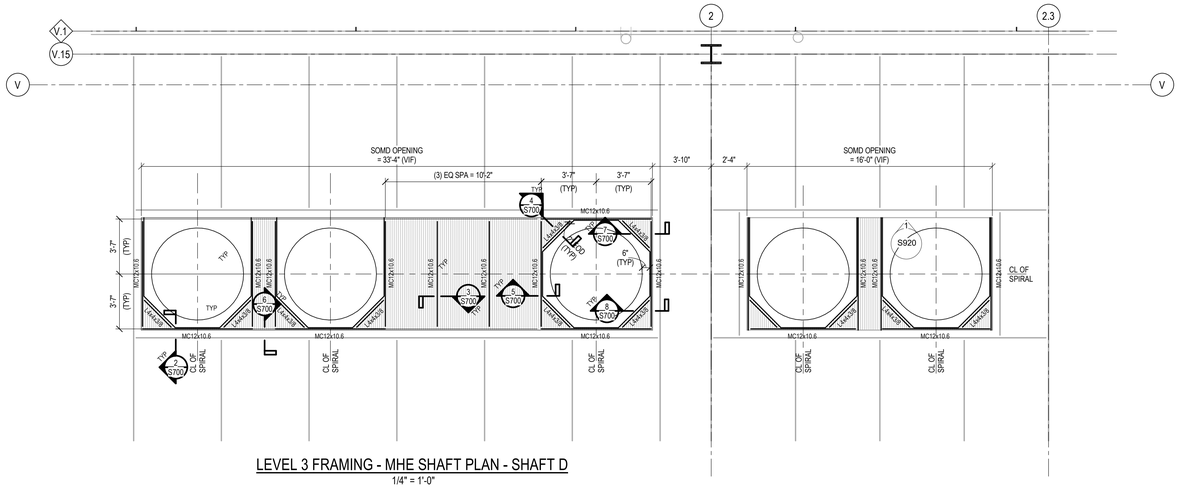
Schaefer Project Number: 24-0265



LEVEL 2 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

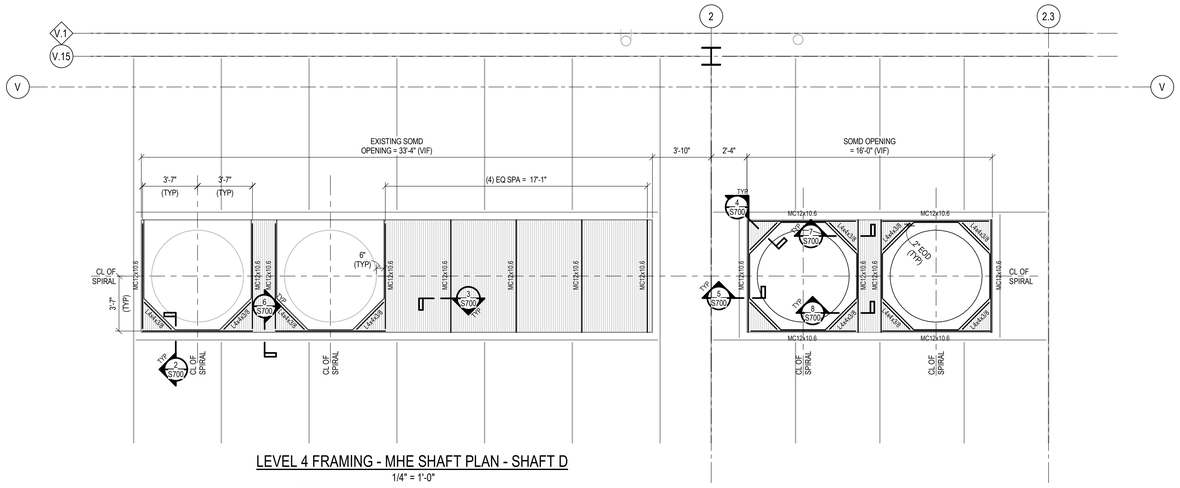
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 3 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

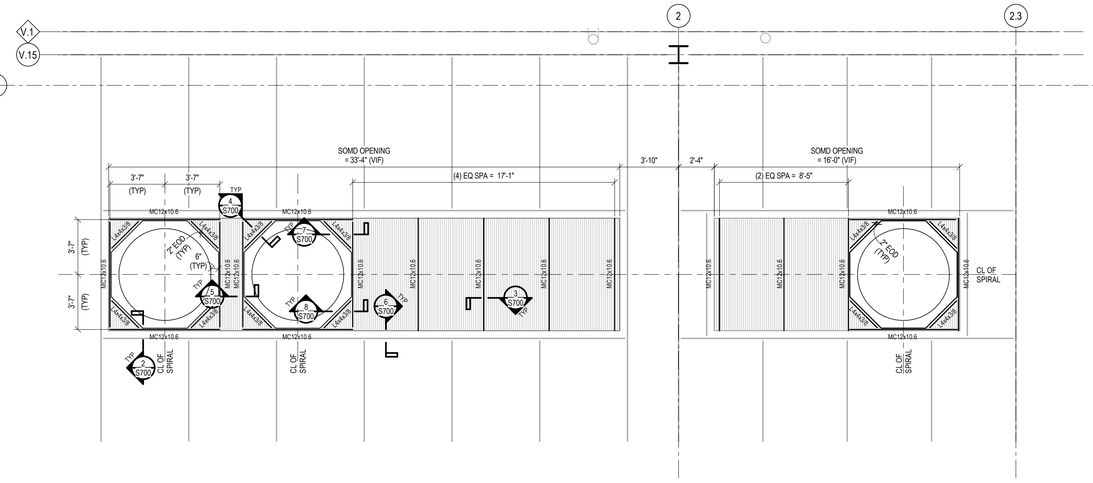
NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 4 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED



LEVEL 5 FRAMING - MHE SHAFT PLAN - SHAFT D

1/4" = 1'-0"

NOTES:
1. FIELD VERIFY DIMENSIONS OF SPIRALS PRIOR TO INSTALLATION OF FRAMING AND DECKING. SEE ARCH FOR ADDITIONAL INFORMATION.
2. CONNECTIONS SHALL BE FIELD BOLTED

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	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

PHASE II SHAFT D PLANS

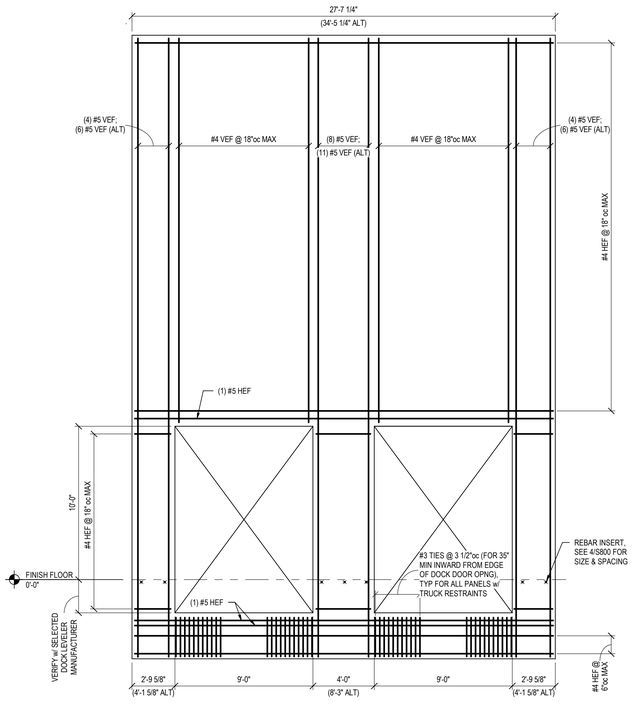
SHEET NUMBER

S703

NOT FOR CONSTRUCTION

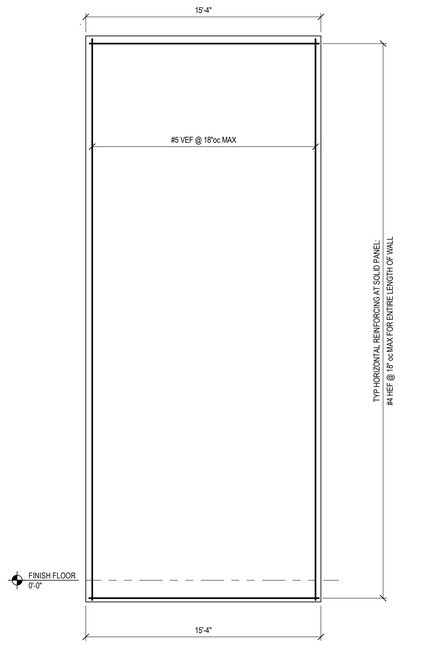
6/7/2024 8:53:07 AM

Schaefer Project Number: 24-0265



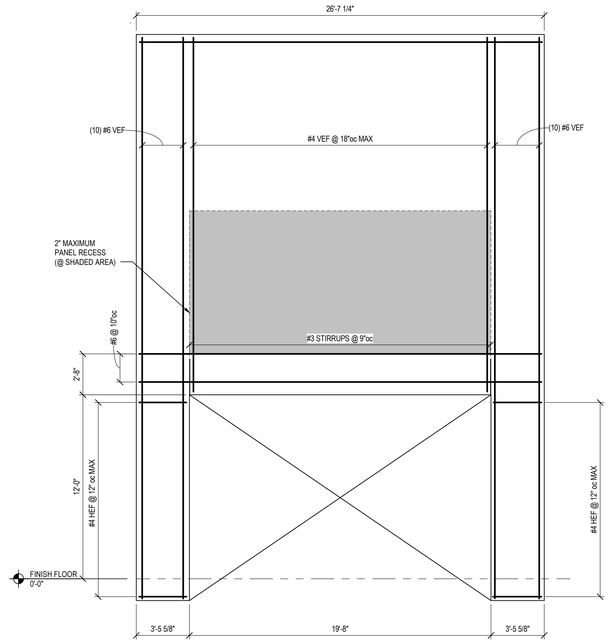
NOTES:
1. PANEL IS REPRESENTATIVE ONLY. SEE ARCH FOR WALL PANEL ELEVATIONS.
2. DESIGN IS PRELIMINARY AND ONLY INTENDED FOR THE PURPOSE OF PRICING.
3. PANEL THICKNESS = 9 1/4"
4. COMPRESSIVE STRENGTH = 4,000 PSI (MIN)
5. ABBREVIATIONS:
   - VEF = VERTICAL BAR EACH FACE
   - HEF = HORIZONTAL BAR EACH FACE
6. PANEL DESIGN ASSUMES THE PANEL IS CONNECTED TO THE WALL FOUNDATION.

TYPICAL DOCK WALL PANEL (FOR BIDDING ONLY)
1/4" = 1'-0"



NOTES:
1. PANEL IS REPRESENTATIVE ONLY. SEE ARCH FOR WALL PANEL ELEVATIONS.
2. DESIGN IS PRELIMINARY AND ONLY INTENDED FOR THE PURPOSE OF PRICING.
3. PANEL THICKNESS = 9 1/4"
4. COMPRESSIVE STRENGTH = 4,000 PSI (MIN)
5. ABBREVIATIONS:
   - VEF = VERTICAL BAR EACH FACE
   - HEF = HORIZONTAL BAR EACH FACE
6. PANEL DESIGN ASSUMES THE PANEL IS CONNECTED TO THE WALL FOUNDATION.

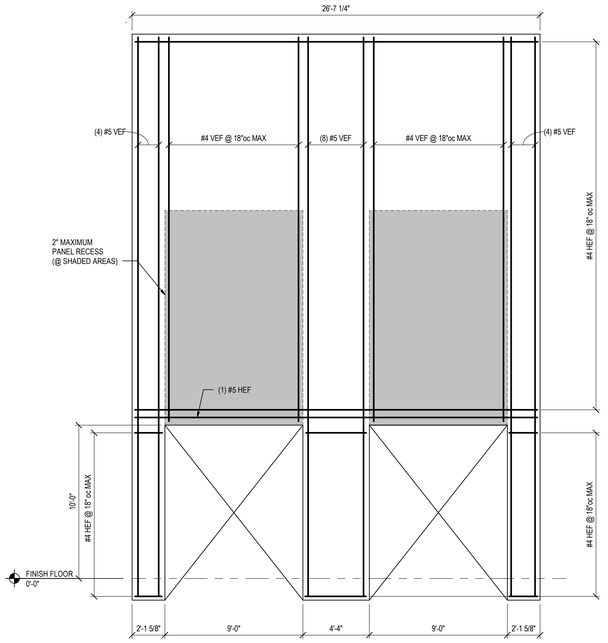
TYPICAL SOLID NON-LOAD BEARING WALL PANEL (FOR BIDDING ONLY)
1/4" = 1'-0"



NOTES:
1. PANEL IS REPRESENTATIVE ONLY. SEE ARCH FOR WALL PANEL ELEVATIONS.
2. DESIGN IS PRELIMINARY AND ONLY INTENDED FOR THE PURPOSE OF PRICING.
3. PANEL THICKNESS = 12" + 2" FORM LINER = 14" TOTAL
4. COMPRESSIVE STRENGTH = 4,000 PSI (MIN)
5. ABBREVIATIONS:
   - VEF = VERTICAL BAR EACH FACE
   - HEF = HORIZONTAL BAR EACH FACE
6. PANEL DESIGN ASSUMES THE PANEL IS CONNECTED TO THE WALL FOUNDATION.

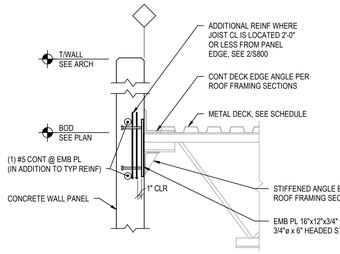
FOR BIDDING PURPOSES, ASSUME (7) 14" PANELS; (3) AT CENTRAL ENTRY + (2) @ EA CORNER OF MAIN OFFICE BUILDING

TYPICAL OFFICE CANOPY PANEL (FOR BIDDING ONLY)
1/4" = 1'-0"

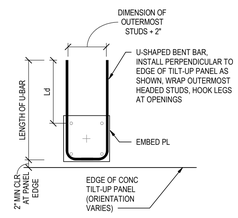


NOTES:
1. PANEL IS REPRESENTATIVE ONLY. SEE ARCH FOR WALL PANEL ELEVATIONS.
2. DESIGN IS PRELIMINARY AND ONLY INTENDED FOR THE PURPOSE OF PRICING.
3. PANEL THICKNESS = 8" + 2" FORM LINER = 10" TOTAL
4. COMPRESSIVE STRENGTH = 4,000 PSI (MIN)
5. ABBREVIATIONS:
   - VEF = VERTICAL BAR EACH FACE
   - HEF = HORIZONTAL BAR EACH FACE
6. PANEL DESIGN ASSUMES THE PANEL IS CONNECTED TO THE WALL FOUNDATION.

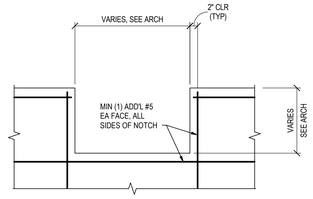
TYPICAL OFFICE DOUBLE OPENING PANEL (FOR BIDDING ONLY)
1/4" = 1'-0"



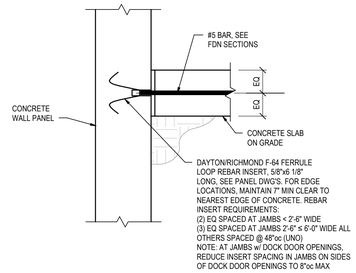
TYPICAL OFFICE & LOW ROOF JOIST EMBED PLATE
3/4" = 1'-0" — 1 S800



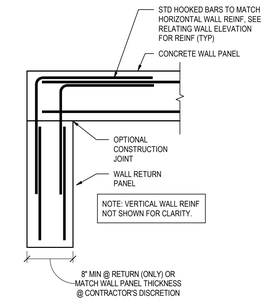
TYPICAL ADDITIONAL REINFORCING EMBED PL'S NEAR PANEL EDGES
3/4" = 1'-0" — 2 S800



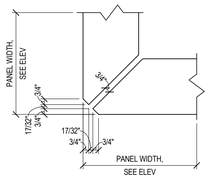
TYPICAL ADDITIONAL REINFORCEMENT @ NOTCH IN PANEL
3/4" = 1'-0" — 3 S800



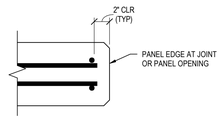
TYPICAL REBAR INSERT DETAIL AT DOCK WALL
1 1/2" = 1'-0" — 4 S800



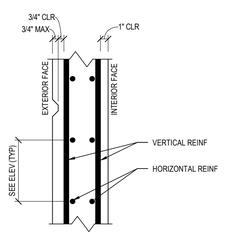
TYPICAL L-SHAPED & C-SHAPED PANEL CORNER REINFORCING
3/4" = 1'-0" — 5 S800



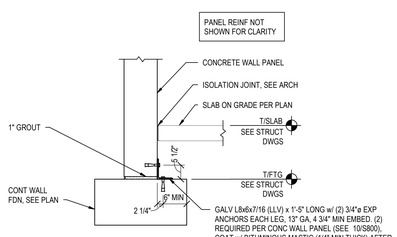
TYPICAL MITERED CORNER DETAIL
1 1/2" = 1'-0" — 6 S800



TYPICAL REINFORCING BAR CLEARANCE AT PANEL EDGE
1 1/2" = 1'-0" — 7 S800

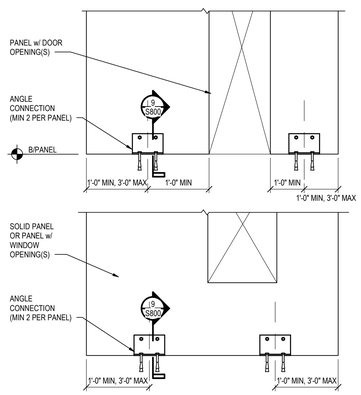


TYPICAL REINFORCING PLACEMENT DETAIL
1 1/2" = 1'-0" — 8 S800

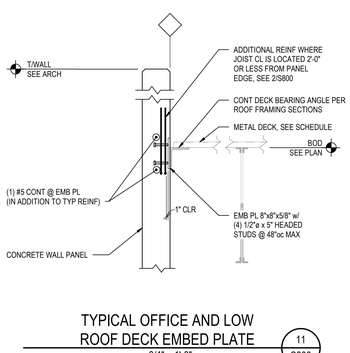


TYPICAL PANEL CONNECTION TO FOUNDATION
1/2" = 1'-0" — 9 S800

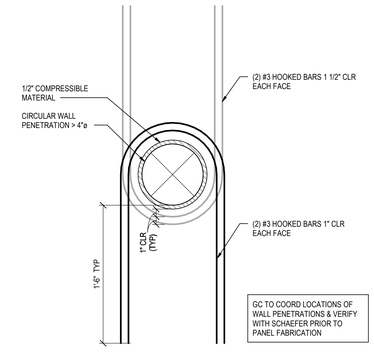
NOTE:
THIS DETAIL OCCURS WHERE VERTICAL DIMENSION BETWEEN TOP OF FOOTING AND TOP OF SLAB ON GRADE IS 2'-6" OR LESS.



TYPICAL PANEL CONNECTION
1/2" = 1'-0" — 10 S800



TYPICAL OFFICE AND LOW ROOF DECK EMBED PLATE
3/4" = 1'-0" — 11 S800



TYPICAL CIRCULAR PENETRATION DETAIL
1 1/2" = 1'-0" — 12 S800

MACGREGOR ASSOCIATES ARCHITECTS
2727 Paces Ferry Road SE
Building Two, Suite 1400
Atlanta, Georgia 30339
T 770.432.9400 F 770.432.9934

SEAL

CONSULTANT

STRUCTURAL ENGINEERS
800.542.3302
schaefer-inc.com
schaefer

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

PRELIMINARY TILT-UP DETAILS & REINFORCING TYPES

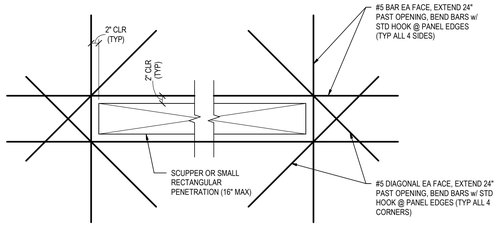
SHEET NUMBER

S800

NOT FOR CONSTRUCTION

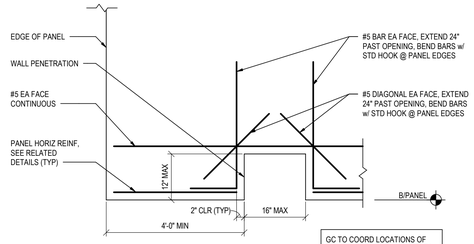
6/7/2024 8:53:10 AM

Schaefer Project Number: 24-0265



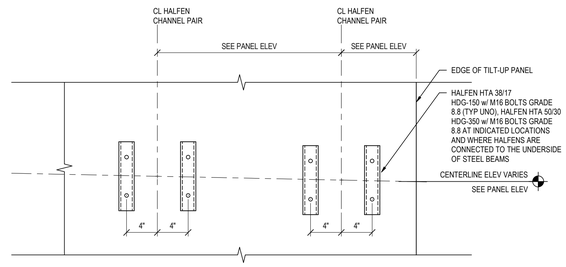
GC TO COORD LOCATIONS OF WALL PENETRATIONS & VERIFY WITH SCHAEFER PRIOR TO PANEL FABRICATION

TYPICAL RECTANGULAR OPENING DETAIL
3/4" = 1'-0"
1 / S801

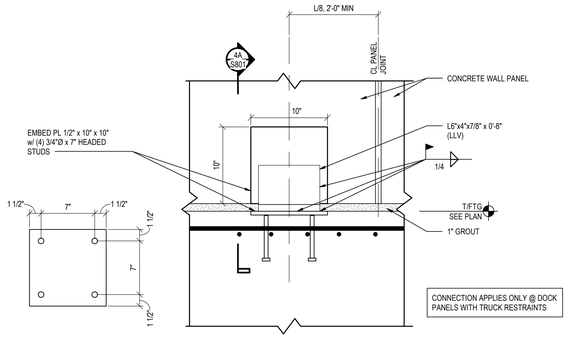


GC TO COORD LOCATIONS OF WALL PENETRATIONS & VERIFY WITH SCHAEFER PRIOR TO PANEL FABRICATION

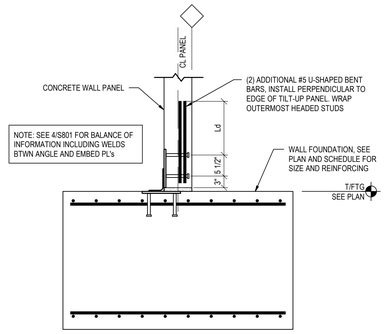
TYPICAL RECTANGULAR OPENING AT BOTTOM OF PANEL DETAIL
3/4" = 1'-0"
2 / S801



TYPICAL HALFEN CHANNEL DETAIL
1 1/2" = 1'-0"
3 / S801



TYPICAL PANEL CONNECTION TO FOUNDATION @ DOCK PANEL
1 1/2" = 1'-0"
4 / S801



SECTION
3/4" = 1'-0"
4A / S801

6/7/2024 8:53:12 AM

MACGREGOR ASSOCIATES ARCHITECTS

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SEAL

CONSULTANT

STRUCTURAL ENGINEERS
800.542.3302
schaefer-inc.com
schaefer

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

WILMINGTON, NC

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
--	2024-013

SHEET TITLE

PRELIMINARY TILT-UP DETAILS & REINFORCING TYPES

SHEET NUMBER

S801

NOT FOR CONSTRUCTION

PROJECT SPECIFIC INFORMATION

PROJECT NUMBER:	**21193**
SUBMITTAL NUMBER:	S-10
SUBMITTAL DATE:	06/05/2024
PROJECT NAME:	PROJECT WHALE
LOCATION:	WILMINGTON, NC
CONNECTION TYPE:	SIDEPLATE
NUMBER OF BUILDINGS:	1
APPROX. TOTAL GROSS SQUARE FOOTAGE:	3300000
NUMBER OF STORIES:	5

eDATA:
a. THERE MAY BE eDATA AVAILABLE FOR YOUR PROJECT WHICH IS AVAILABLE FOR DOWNLOAD AT WWW.SIDEPLATE.COM. eDATA MAY INCLUDE:
- eSTIMATE FILE IN EXCEL FORMAT FOR USE IN AFFIRMING SIDEPLATE CONNECTION MATERIAL QUANTITIES.
- ComponentXML FILE FOR USE IN ASSISTING DETAILING EFFORTS.

b. ESTIMATED NUMBER OF SIDEPLATE JOINTS FOR THIS PROJECT = 596
c. ESTIMATED NUMBER OF SIDEPLATE JOINTS FOR THIS PROJECT THAT ARE **NOT** SUPPORTED BY eDATA = 0
d. MISCELLANEOUS DETAILS, TYPICALLY DESIGNATED BY M#, ARE NOT SUPPORTED.

INSTRUCTIONS TO STEEL FABRICATOR
1. SIDEPLATE LICENSE FEE:
   a. THE STEEL FABRICATOR'S BID PRICE FOR PROCUREMENT, FABRICATION AND ERECTION OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL INCLUDE THE SIDEPLATE LICENSE FEE FOR THE PROJECT. EACH PROSPECTIVE STEEL FABRICATOR WHO BIDS THE PROJECT SHALL FORMALLY REQUEST THE SIDEPLATE LICENSE FEE BY ACCESSING THE SIDEPLATE WEBSITE (http://www.sideplate.com).
   b. UPON THE SUCCESSFUL STEEL FABRICATOR SIGNING A CONTRACT TO FABRICATE STRUCTURAL STEEL FOR THIS PROJECT, THE STEEL FABRICATOR SHALL SUBMIT A PURCHASE ORDER (PO) TO SIDEPLATE SYSTEMS, INC. FOR THE TOTAL AMOUNT OF THE SIDEPLATE LICENSE FEE AND SHALL INCLUDE SAID FEE IN ITS FIRST CONSTRUCTION DRAW.
   c. THE STEEL FABRICATOR SHALL MAKE PAYMENT OF THE SIDEPLATE LICENSE FEE DIRECTLY TO:

      SIDEPLATE SYSTEMS, INC.
      25909 PALA, SUITE 200
      MISSION VIEJO, CA 92691
      TEL: 949-238-8900

SUBMITTALS
1. IN ADDITION TO THE REQUIRED SUBMITTALS SPECIFIED BY THE BALANCE OF THE CONTRACT DOCUMENTS, THE FOLLOWING SUBMITTALS SHALL BE SENT TO SIDEPLATE SYSTEMS, INC. ELECTRONICALLY VIA THE STRUCTURAL ENGINEER OF RECORD FOR THEIR REVIEW AND DISPOSITION:
   a. QUALITY CONTROL PROGRAM (REQUIRED IF NOT AISC CERTIFIED)
   b. ONE ELECTRONIC COPY OF ALL STRUCTURAL STEEL DRAWINGS THAT EITHER DIRECTLY PERTAINS TO AND/OR AFFECTS THE SHOP FABRICATION OR FIELD ERECTION OF THE SIDEPLATE STEEL FRAME CONNECTION SYSTEM, INCLUDING THE INITIAL SUBMITTAL AND ALL CORRECTED RE-SUBMITTALS OF AFFECTED DRAWINGS. SIDEPLATE SYSTEMS, INC. SHALL BE GIVEN, AS A MINIMUM, THE SAME SPECIFIED REVIEW TIME (NOT LESS THAN SEVEN BUSINESS DAYS) AS THE ENGINEER OF RECORD.
2. SENT BY SIDEPLATE:
   a. INTELLECTUAL PROPERTY RIGHTS NOTICE LABEL.
   b. USPTO PATENT LABEL STICKERS, SEE INTELLECTUAL PROPERTY SECTION FOR PLACEMENT.

MEETINGS
1. PRE-DETAILING MEETING
   a. PRIOR TO THE START OF DETAILING OF THE SHOP DRAWINGS, THE FABRICATION CONTRACTOR SHALL FORMALLY REQUEST A PRE-DETAILING MEETING FROM SIDEPLATE SYSTEMS, INC. THIS MEETING IS TYPICALLY A WEBINAR TO DISCUSS BEST PRACTICES FOR THE DETAILING OF THE SIDEPLATE CONNECTIONS, AND TO CREATE A PROACTIVE FORUM TO ANSWER ANY QUESTIONS.
2. PRE-FABRICATION MEETING
   a. PRIOR TO THE START OF FABRICATION, THE FABRICATION CONTRACTOR SHALL FORMALLY REQUEST A PRE-FABRICATION MEETING FROM SIDEPLATE SYSTEMS, INC. THIS MEETING IS TYPICALLY A WEBINAR TO DISCUSS BEST PRACTICES FOR THE FABRICATION OF THE SIDEPLATE CONNECTIONS, AND TO CREATE A PROACTIVE FORUM TO ANSWER ANY QUESTIONS.
3. PRE-ERECTION MEETING
   a. PRIOR TO THE START OF STEEL ERECTION, THE ERECTION CONTRACTOR SHALL FORMALLY REQUEST A PRE-ERECTION MEETING FROM SIDEPLATE SYSTEMS, INC. THIS MEETING IS TYPICALLY A WEBINAR TO DISCUSS BEST PRACTICES FOR FIELD ERECTION OF THE SIDEPLATE BEAMS AND COLUMNS, AND TO CREATE A PROACTIVE FORUM TO ANSWER ANY QUESTIONS.

GENERAL
1. THE GOVERNING CODES SHALL CONSIST OF ANSI/AWS D1.1, AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGE, RCSC SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS, AND ALL APPLICABLE BUILDING AND JURISDICTIONAL CODES AND PROJECT STANDARDS SPECIFIED IN THE PROJECT SPECIFICATION STRUCTURAL STEEL SECTION. WHERE THE REQUIREMENTS DIFFER BETWEEN SIDEPLATE CONNECTION NOTES, THE GENERAL STRUCTURAL NOTES, AND THE GOVERNING CODES, THE MORE STRINGENT SECTION CRITERIA SHALL CONTROL.
2. ALPHA AND NUMERIC DESIGNATORS {X} & {#} USED HEREIN TO SIMPLIFY THE IDENTIFICATION OF PLATES, ANGLES, AND WELDS ARE DEFINED BELOW:

{A}	SIDE PLATE FOR UNIAXIAL CONNECTIONS
{B}	BEAM FLANGE COVER PLATE, AS REQUIRED
{C}	VERTICAL SHEAR PLATE OR FLAT BAR WELDED TO BEAM WEB, AS REQUIRED
{D}	HORIZONTAL SHEAR PLATE OR FLAT BAR WELDED TO COLUMN WEB, AS REQUIRED
{E}	VERTICAL ANGLE WELDED TO THE VERTICAL SHEAR PLATE {C}, AS REQUIRED
{F}	VERTICAL SHEAR ELEMENT (VSE) WHICH CONSISTS OF PLATE {C} AND ANGLE {E} MATERIAL, AS REQUIRED
{G}	LONGITUDINAL ANGLE WELDED TO THE OUTSIDE FACE OF SIDE PLATE {A}, AS REQUIRED
{H}	LONGITUDINAL ANGLE WELDED TO THE BOTTOM BEAM FLANGE (OR TOP BEAM FLANGE AS REQUIRED)
{T}	HORIZONTAL PLATE WELDED TO THE OUTSIDE FACE OF SIDE PLATE {A}, AS REQUIRED
{1}	FILLET WELD CONNECTING SIDE PLATE {A} TO HORIZONTAL SHEAR PLATE {D} OR COLUMN
{2}	FILLET (AND/OR FLARE BEVEL) WELD CONNECTING INSIDE FACE OF SIDE PLATE {A} TO COLUMN
{3}	FILLET WELD CONNECTING HORIZONTAL SHEAR PLATE {D} TO COLUMN, AS REQUIRED
{4}	FILLET WELD TO CONSTRUCT VSE {F} AND TO CONNECT IT TO THE WEB OF THE BEAM, AS REQUIRED
{5}	FILLET (AND/OR PJP) WELD CONNECTING BEAM FLANGE TIPS TO COVER PLATE {B} AND/OR LONGITUDINAL ANGLE {H}, AS REQUIRED
{5a}	FILLET WELD CONNECTING OUTSIDE FACE OF BEAM FLANGE TO COVER PLATE {B} AND/OR LONGITUDINAL ANGLE {H}, AS REQUIRED
{5b}	FILLET WELD CONNECTING COVER PLATE {B} EDGE TO TOP FACE OF BEAM FLANGE, ACROSS ITS WIDTH
({5p})	PJP WELD CONNECTING ANGLE {H} TO BEVELED BEAM FLANGE
{8}	FILLET (AND/OR PJP) WELD CONNECTING LONGITUDINAL ANGLE {G} (AND/OR PLATE {T}) TO SIDE PLATE {A}, AS REQUIRED
({8p})	PJP WELD CONNECTING PLATE {T} TO SIDE PLATE {A} AND/OR CONNECTING BUILT UP ANGLE {H} PLATES TOGETHER, AS REQUIRED
{9}	FILLET WELD CONNECTING SIDE PLATE {A} TO COLUMN FACE, WRAPPED AROUND THREE SIDES OF SIDE PLATE {A}
{10}	FILLET WELD TO CONSTRUCT SIDE PLATE SLOTTED INTERLOCK ASSEMBLY
{10p}	PJP WELD TO CONSTRUCT SIDE PLATE SLOTTED INTERLOCK ASSEMBLY
{10r}	REINFORCING FILLET WELD TO CONSTRUCT SIDE PLATE SLOTTED INTERLOCK ASSEMBLY

3. ALPHA DESIGNATORS, USED HEREIN TO SIMPLIFY THE IDENTIFICATION OF DIMENSIONS OF THE SIDEPLATE CONNECTIONS, ARE DEFINED BELOW:

GAP	PHYSICAL SEPARATION BETWEEN THE END OF THE MOMENT FRAME BEAM AND THE ADJOINING FACE OF THE COLUMN FLANGE (AKA COLUMN/BEAM SEPARATION)
A	EXTENSION OF SIDE PLATE {A} FROM THE FACE OF THE COLUMN
B	DEPTH OF SIDE PLATE {A}
C	LENGTH OF COVER PLATE {B} AND/OR LONGITUDINAL ANGLE {H}
E	EDGE DISTANCE OF BOLT HOLES IN COVER PLATE {B}, AS REQUIRED
F	DISTANCE FROM END OF SIDE PLATE {A} TO A CJP WELDED SPLICE IN THE FLANGES AND WEB OF THE MOMENT FRAME BEAM, AS REQUIRED
G	GAGE DISTANCE TO CENTERLINE OF BOLT HOLES IN ANGLES {G} AND {H}, AND PLATE {T}, AS REQUIRED
H	ADDED DIMENSION TO COLUMN FLANGE WIDTH TO DEFINE TOTAL COVER PLATE {B} WIDTH
J	DISTANCE FROM END OF THE BEAM TO CENTERLINE OF VERTICAL BOLT HOLES IN VSE {F}, AS REQUIRED
R	RADIUS OF SLOT DIMENSION IN COVER PLATE {B}
S	HORIZONTAL SPACING BETWEEN BOLT HOLES
Y	ADDED DIMENSION TO COLUMN FLANGE WIDTH FOR ALLOWABLE SPREAD OF SIDE PLATES {A}

MATERIAL
1. PLATE, FLAT BAR, AND ANGLE MATERIAL:
   a. ALL PLATE MATERIAL SHALL HAVE A MINIMUM YIELD STRENGTH (F_y) OF 50 KSI.
   b. ANGLE AND BAR MATERIAL SHALL HAVE A HIGH STRENGTH STEEL SPECIFICATION AND SHALL HAVE A MINIMUM YIELD STRENGTH (F_y) OF 50 KSI.
2. HIGH STRENGTH BOLTS/FASTENERS:
   a. BOLTS SHALL BE TYPE 1 OR TYPE 3 AND SHALL BE ASTM F3125, GRADE A490-X OR GRADE F2280-X, OR F3148 FIXED SPLINE BOLT ASSEMBLIES. THE BOLT HEAD SHALL BE DISTINCTIVELY MARKED WITH A MINIMUM MARKING OF A490, A490TC, OR 144 RESPECTIVELY. AN ALTERNATIVE DESIGN THAT MEETS THE REQUIREMENTS OF RCSC SECTION 2.8 MAY BE USED, WITH THE WRITTEN APPROVAL FROM SIDEPLATE SYSTEMS, INC.
   b. FOR BOLTS UP TO 1 1/4 INCH DIAMETER WASHERS SHALL BE ORDINARY THICKNESS AND ASTM F436 TYPE 1 OR TYPE 3. 1 1/2 INCH DIAMETER BOLTS SHALL REQUIRE 5/16 INCH THICK WASHER.
   c. NUTS SHALL BE ASTM A563 GRADE DH OR DH3.
   d. THE BOLT ASSEMBLY SHALL BE COVERED IN A LIGHT PROTECTIVE OIL. F2280 AND F3148 ASSEMBLIES SHALL ONLY BE LUBRICATED BY THE SUPPLIER.
   e. THE MILL TEST REPORT (MTR) MUST HAVE DOCUMENTED LOT TRACEABILITY, STATEMENT OF DIMENSIONAL RESULTS, FULL CHEMICAL AND MECHANICAL TEST RESULTS TO THE SPECIFICATIONS ABOVE.
   f. THE USE OF FINGER SHIMS ARE ACCEPTABLE PER BOLTING SECTION 8.
3. ROLLED SHAPES:
   a. ALL ROLLED SHAPES USED FOR COLUMNS AND BEAMS IN CONSTRUCTING SIDEPLATE MOMENT FRAMES SHALL BE ASTM A992 GRADE 50 UNO.
4. HSS TUBE SHAPES:
   a. ALL HSS SHAPES USED FOR COLUMNS AND BEAMS IN CONSTRUCTING SIDEPLATE MOMENT FRAMES SHALL, AS A MINIMUM, BE ASTM A500 GRADE B OR GRADE C OR ASTM1085.

PREPARATION
1. THE STEEL FABRICATION AND ERECTION SUBCONTRACTORS SHALL EMPLOY A DISTORTION CONTROL PROGRAM PRIOR TO THE START OF SIDEPLATE MOMENT FRAME FABRICATION. THE DISTORTION CONTROL PROGRAM SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF AWS D1.1 TO ENSURE THAT THE FOLLOWING ARE MAINTAINED:
   - DIMENSIONAL ACCURACY
   - FRAMING AND ALIGNMENT TOLERANCES
   - COMPLIANCE WITH AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, SECTION 7.0, ERECTION PROVISIONS
   - CONTROL OF DISTORTION AND WELD SHRINKAGE

WELDING
1. WELDER QUALIFICATION: THE PERFORMANCE OF ALL WELDERS, WELDING OPERATORS AND TACK WELDERS SHALL BE QUALIFIED IN CONFORMANCE WITH AWS D1.1 TO DEMONSTRATE ABILITY TO PRODUCE SOUND WELDS.

BOLTING
1. BOLTS/FASTENERS SHALL BE INSTALLED TO PRETENSIONED CONDITION USING ONE OF THE METHODS PRESCRIBED HERE: TURN-OF-NUT (A490), CALIBRATED WRENCH (A490), TWIST-OFF-TYPE TENSION-CONTROL BOLT (F2280), TORQUE AND ANGLE METHOD (F3148), OR WHEN HEAVY HEX BOLTS ARE REQUIRED DIRECT TENSION INDICATORS (DTI) (ASTM F959). FOR TURN-OF-NUT THE THREAD AND NUT SHOULD BOTH BE MARKED TO MAKE SURE THE REQUIRED TURN IS ACHIEVED.
2. FOR ALL PRETENSIONING METHODOLOGIES, ALL FASTENER ASSEMBLIES WITHIN THE JOINT SHALL FIRST BE BROUGHT TO A SNUG TIGHT CONDITION, FOLLOWED BY A SYSTEMATIC PRETENSIONING PROCESS. PRETENSIONING SHALL BEGIN AT THE MOST RIGID PART OF THE JOINT AND CONTINUE IN A MANNER THAT WILL MINIMIZE THE RELAXATION OF PREVIOUSLY PRETENSIONED FASTENERS, UNTIL THE CONNECTED PLIES ARE IN AS FIRM CONTACT AS POSSIBLE.
3. REUSE OF A490, F2280, AND F3148 BOLT ASSEMBLIES SHALL NOT BE ALLOWED. TOUCHING UP OR RE-TIGHTENING BOLTS THAT MAY HAVE BEEN LOOSENED BY THE INSTALLATION OF ADJACENT BOLTS SHALL NOT BE CONSIDERED TO BE A REUSE.
4. ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS.
5. THE BOLT LENGTH USED SHALL BE SUCH THAT THE BOLT THREAD EXTENDS BEYOND OR IS AT LEAST FLUSH WITH THE OUTER FACE OF THE NUT WHEN PROPERLY INSTALLED.
6. FASTENER COMPONENTS SHALL BE PROTECTED FROM DIRT AND MOISTURE IN CLOSED CONTAINERS AT THE SITE OF INSTALLATION.
7. THE BOLT SHANK SHALL NOT EXTEND BEYOND THE CONNECTED PLIES. USE WASHER/SPACER IF NECESSARY TO PREVENT SHANK OUT CONDITION.
8. F2280 OR F3148 ASSEMBLIES AND ALTERNATIVE DESIGN FASTENERS THAT MEET THE SPECIFIED REQUIREMENTS PREVIOUSLY MENTIONED SHALL NOT BE RE-LUBRICATED, EXCEPT BY THE MANUFACTURER.
9. FINGER SHIMS MAY BE USED UP TO 1/4 INCH WITHOUT RESTRICTION, SHIM REQUIREMENTS GREATER THAN 1/4 INCH SHALL BE SUBMITTED TO SIDEPLATE SYSTEMS INC FOR APPROVAL PRIOR TO USE.
10. WASHERS SHALL BE ASTM F436 AND SHALL BE USED UNDER THE NUT OF THE FASTENER ASSEMBLY (AND BOLT HEAD AS REQUIRED) SO AS TO PROVIDE A HARDENED NON-GALLING SURFACE OF THE TURNED ELEMENT. WHEN USING THE TURN-OF-NUT OR CALIBRATED WRENCH METHOD, THE TURNED ELEMENT MUST BE THE SAME AS WAS USED WHEN PERFORMING PREINSTALLATION VERIFICATION TESTING.

QUALITY CONTROL
1. THE FABRICATOR AND ERECTOR SHALL BE RESPONSIBLE FOR QUALITY CONTROL BY PROVIDING, AS A MINIMUM, IN-PROCESS VISUAL INSPECTION OF ALL FABRICATION AND ERECTION ACTIVITIES TO ENSURE THAT MATERIALS AND WORKMANSHIP MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND SHALL INCLUDE WORK PERFORMED PRIOR TO ASSEMBLY. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, VERIFYING THAT EFFECTIVE PROCEDURES AND METHODS HAVE BEEN EMPLOYED IN THE FORM OF A DISTORTION CONTROL PROGRAM TO ACCOUNT FOR AND COUNTERACT THE EFFECTS OF WELD SHRINKAGE, EXISTING BEAM SWEEP AND CAMBER, AND CHANGES IN MOMENT FRAME GEOMETRY DUE TO SKEWED AND CURVED DESIGN CONFIGURATIONS (AS OCCURS), TO ENSURE COMPLIANCE WITH SPECIFIED ERECTION AND ALIGNMENT TOLERANCES. QC INSPECTION SHALL INCLUDE **HOLD POINTS** FOR THE FOLLOWING:
   a. COLUMN TREE ASSEMBLY
      1. VERIFICATION THAT ACTUAL COLUMN FLANGE WIDTH IS AT LEAST NOMINAL COLUMN FLANGE WIDTH WHERE THE SIDE PLATES {A} ARE TO BE INSTALLED. IN THE UNLIKELY EVENT ACTUAL COLUMN FLANGE WIDTH IS LESS THAN NOMINAL, BUT WITHIN AISC STANDARD MILL TOLERANCES (-3/16 INCH MAX), CONTACT SIDEPLATE SYSTEMS, INC FOR APPROPRIATE RECOMMENDATIONS.
      2. MINIMUM CLEAR DIMENSION SHALL BE VERIFIED AFTER PLACEMENT OF WELD {2}, COOLING OF WELD {2}, AND REMOVAL OF TEMPORARY SHOP CONSTRUCTION AID(S). VERIFY THAT A MINIMUM ACTUAL COLUMN FLANGE WIDTH DIMENSION OCCURS ANYWHERE IN BETWEEN THE SIDE PLATES {A} FROM TOP TO BOTTOM. THE SIDE PLATES SHALL BE PARALLEL TO ONE ANOTHER. IN NO CASE SHALL THEY BE LESS THAN THE ACTUAL COLUMN FLANGE WIDTH.
      3. MAXIMUM SPREAD DIMENSION OF SIDE PLATE {A} SHALL NOT EXCEED ACTUAL COLUMN FLANGE WIDTH PLUS THE SCHEDULED SPREAD DIMENSION Y. THE FIELD CONSTRUCTION AID SHALL BE PLACED AND HOLD THE SIDE PLATES IN THIS FLARED CONDITION UNTIL THE BEAM HAS BEEN SAFELY ERECTED. IN NO CASE SHALL THE SPREAD CAUSE PERMANENT DEFORMATION IN THE SIDE PLATES.
      4. VERIFICATION OF BOLT HOLE ELEVATION AND SPACING FOR POSITION OF SIDE PLATE {A} AND PROPER POSITION AND ELEVATION OF ANGLES {G}.
   b. BEAM ASSEMBLY
      1. VERIFICATION OF PERPENDICULAR ALIGNMENT BETWEEN THE TOP COVER PLATE {B} AND BOTTOM ANGLES {H} TO THE WEB OF THE BEAM, TO MINIMIZE, IF NOT ELIMINATE, ANY MISALIGNMENT OF BOLT HOLES DUE TO BEAM FLANGE TILT WHEN THE BEAM HAS BEEN LOWERED INTO PLACE.
      2. VERIFICATION OF BOLT HOLE SPACING AND POSITION ON COVER PLATE {B} AND ANGLES {H}. CONSIDERATION SHALL BE GIVEN TO THE CUPPING EFFECT OF THE TOP COVER PLATE {B}, DUE TO WELD SHRINKAGE.
      3. VERIFICATION OF THE DISTANCE BETWEEN EXTERIOR ANGLE {H} FACES AND THEIR RESPECTIVE BOLT HOLE PLACEMENT TO EACH OTHER (VERTICALLY AND HORIZONTALLY).
      4. VERIFICATION THAT IN NO CASE SHALL THE OUTSIDE FACE OF VSE {F} EXTEND BEYOND THE OUTSIDE FACES OF THE LONGITUDINAL ANGLES {H}.
      5. VERIFICATION THAT VERTICAL PLACEMENT OF VSE {F} IS IN THE CORRECT LOCATION.
2. FILLET WELD FIT-UP TOLERANCES:
   a. THE PARTS TO BE JOINED BY FILLET WELDS SHALL BE BROUGHT INTO AS CLOSE CONTACT AS PRACTICABLE, USING AS NECESSARY SUITABLE CLAMPING MEANS. THE ROOT OPENING (I.E., THE FIT-UP GAP) SHALL NOT EXCEED 1/4 INCH. FOR FILLET WELD ROOT GAPS GREATER THAN 1/16 INCH, THE LEG SIZE (I.E., THE SPECIFIED SIZE) OF FILLET WELD SHALL BE INCREASED BY THE AMOUNT OF THE ROOT OPENING.
3. THERMAL CUTTING:
   a. THE ROUGHNESS OF ALL THERMAL-CUT SURFACES SHALL BE NO GREATER THAN AN ANSI SURFACE ROUGHNESS VALUE OF 1000 MICRO-INCHES. ROUGHNESS EXCEEDING THIS VALUE AND NOTCHES OR GOUGES NOT MORE THAN 3/16 INCH DEEP SHALL BE REMOVED BY MACHINING OR GRINDING. NOTCHES OR GOUGES IN THE THERMALLY CUT EDGES DEEPER THAN 3/16 INCH SHALL BE REPAIRED PER AWS.
4. TENSION CALIBRATION FOR PRE-INSTALLATION:
   a. TENSION CALIBRATION SHALL BE USED TO CONFIRM THE SUITABILITY OF THE COMPLETE FASTENER ASSEMBLY, AND THE PROCEDURE TO BE USED BY THE BOLTING CREW.

QUALITY ASSURANCE
IN ADDITION TO ALL OTHER QUALITY ASSURANCE INSPECTION ACTIVITIES, THE OWNER'S VERIFICATION INSPECTOR SHALL BE RESPONSIBLE FOR:
1. WELDING:
   a. TO ASSURE THE PROPER AMPERAGE AND VOLTAGE OF THE WELDING PROCESS, THE USE OF HAND HELD CALIBRATED AMP AND VOLT METERS SHALL BE USED. THIS EQUIPMENT SHALL BE USED BY THE FABRICATOR AND THE INSPECTOR. AMPERAGE AND VOLTAGE SHALL BE MEASURED NEAR THE ARC. TRAVEL SPEED AND ELECTRODE STICK OUT SHALL BE VERIFIED TO BE IN COMPLIANCE WITH THE APPROVED WPS.
   b. VISUAL INSPECTION SHALL BE PERFORMED ON ALL SHOP WELDS.
   c. EACH WELDER EMPLOYED ON THE PROJECT SHALL UNDERSTAND ALL THE REQUIREMENTS OF THE WELDING PROCEDURE SPECIFICATION(S) BEFORE WELDING ON THE PROJECT.
   d. AS-BUILT BEAM TO COLUMN GAP PER CONNECTION SCHEDULE IS ALLOWED TO BE INSTALLED WITH A TOLERANCE OF PLUS OR MINUS 1/2 INCH.
2. FAYING SURFACES:
   a. THE SURFACES ADJACENT TO THE BOLT HEAD AND NUT SHALL BE FREE OF DIRT AND OTHER FOREIGN MATERIAL OTHER THAN THE SPECIFIED COATINGS.
   b. FAYING SURFACES ARE PERMITTED TO BE UNCOATED AND COATED WITH ANY COATINGS OF ANY FORMULATION OR GALVANIZATION.
   c. AFTER THE CONNECTIONS HAVE BEEN ASSEMBLED, VISUALLY ENSURE THAT THE PLIES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO AS CLOSE OF CONTACT AS PRACTICABLE WITH ONE ANOTHER. GAPS UP TO 1/8 INCH BETWEEN THE SURFACES SHALL BE ALLOWED. GAPS GREATER THAN 1/8 INCH UP TO 1/4 INCH SHALL HAVE FINGER SHIMS INSTALLED BEFORE PRETENSIONING. FOR GAPS GREATER THAN 1/4 INCH, CONTACT SIDEPLATE SYSTEMS, INC.

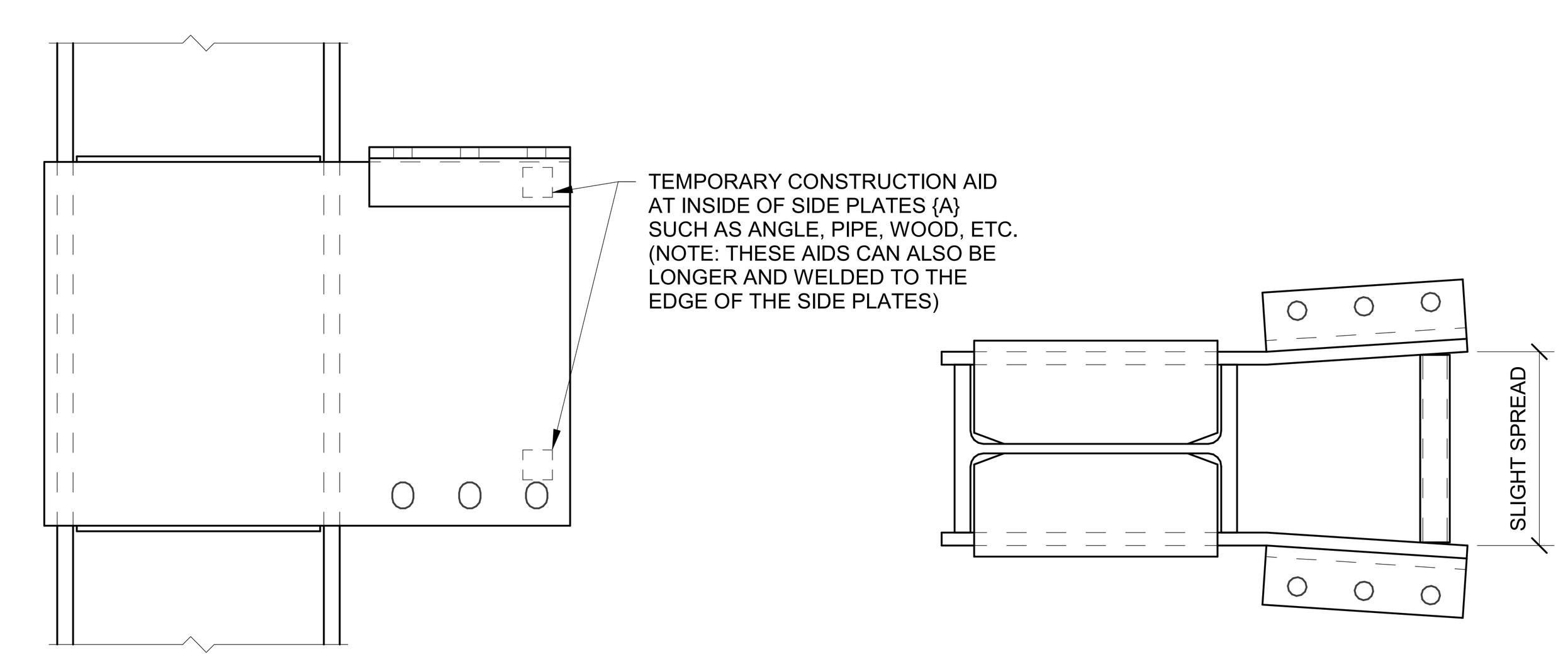
HOT DIPPED GALVANIZING
1. SIDEPLATE CONNECTIONS REQUIRING THIS TYPE OF FINISH SHALL FOLLOW THE SAME CONSTRUCTION SEQUENCING AS PREVIOUSLY OUTLINED WITH THE FOLLOWING MODIFICATIONS:
   a. AS APPLICABLE, HORIZONTAL SHEAR PLATES {D} SHALL HAVE AN INCREASED CLIP SIZE WHICH SHALL BE 1 5/8 INCH BY 1 5/8 INCH TO PROVIDE ADEQUATE VENTILATION AND DRAINAGE. CONTACT SIDEPLATE SYSTEMS, INC. IN THE EVENT THAT THE GALVANIZING CONTRACTOR SPECIFICATIONS REQUIRE A LARGER OPENING THAN THAT SPECIFIED HEREIN.
   b. SEAL WELDING SHALL BE ALLOWED ON THE PLATES {B} AND ANGLES.
   c. ANY DEVIATIONS TO THESE MODIFICATIONS SHALL BE COORDINATED WITH SIDEPLATE SYSTEMS, INC. AND THE SEOR.
2. IF CONTRACTOR ELECTS TO USE A490 BOLTS AND THE PROJECT SPECIFICATIONS REQUIRE GALVANIZATION, ADDITIONAL REQUIREMENTS SHALL BE APPLIED TO THE A490 MATERIAL. A490 BOLTS SHALL NOT BE HOT DIP GALVANIZED. FOR ASTM A490 BOLTS, THE PROPER CORROSION PROTECTION SHALL BE A ZINC/ALUMINUM INORGANIC COATING THAT IS IN CONFORMANCE WITH ASTM F1136 GRADE 3. EXAMPLES OF SUCH COATINGS, BUT NOT ENDORSED HEREIN, ARE MAGNI® 556 AND GEOMET® 321, OR DACROMET®.
3. STANDARD ASTM A490 BOLTS WITH ADDITIONAL PROCESS FOR COATINGS SHALL REQUIRE EVIDENCE OF COMPLIANCE (CERTIFICATION, LETTER, OR SIMILAR) FROM THE APPLICATOR.

FIREPROOFING
1. WHEN REQUIRED BY THE GOVERNING CODE FOR CERTAIN TYPES OF CONSTRUCTION, SIDEPLATE CONNECTIONS SHALL HAVE A FIRE-RESISTANCE RATING LIKE THAT OF A STEEL "STRUCTURAL FRAME".
2. THE MINIMUM THICKNESS OF SPRAY-APPLIED FIRE-RESISTIVE MATERIAL (SFRM) FOR STEEL SIDEPLATE CONNECTIONS PLATES THAT ARE NOT ENCASED IN CONCRETE, SHALL BE DETERMINED JUST LIKE THAT OF A PIPE/TUBE COLUMN SECTION WITH A CONSTANT STEEL WALL THICKNESS USING THE THICKNESS OF SIDE PLATE {A} FOR EACH SIDEPLATE CONNECTION ID PER THE SIDEPLATE CONNECTION SCHEDULE, WHICH ARE UNIFORMLY HEATED AND PROTECTED (THE FIRE EXPOSURE OF A PIPE/TUBE COLUMN IS DIRECTLY ANALOGOUS TO A PLATE WITH A 1-SIDED FIRE EXPOSURE AND PROTECTION). THE SFRM SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E119 AND LISTED FOR FIRE RESISTIVE PIPE/TUBE COLUMN APPLICATIONS FOR NO LESS THAN THE REQUIRED RATED TIME.
3. WHEN NO VSE OPTION IS SPECIFIED, PROVIDE A CLOSURE PLATE, AS NEEDED, FOR SFRM MATERIAL TO MORE EASILY ADHERE TO. ATTACH CLOSURE PLATE TO THE INSIDE OR OUTSIDE FACE OF THE SIDE PLATE {A} WITHIN THE MIDDLE HALF OF THE SIDE PLATE {A} HEIGHT. DO NOT ATTACH CLOSURE PLATE TO THE BEAM FLANGES OR WEB.

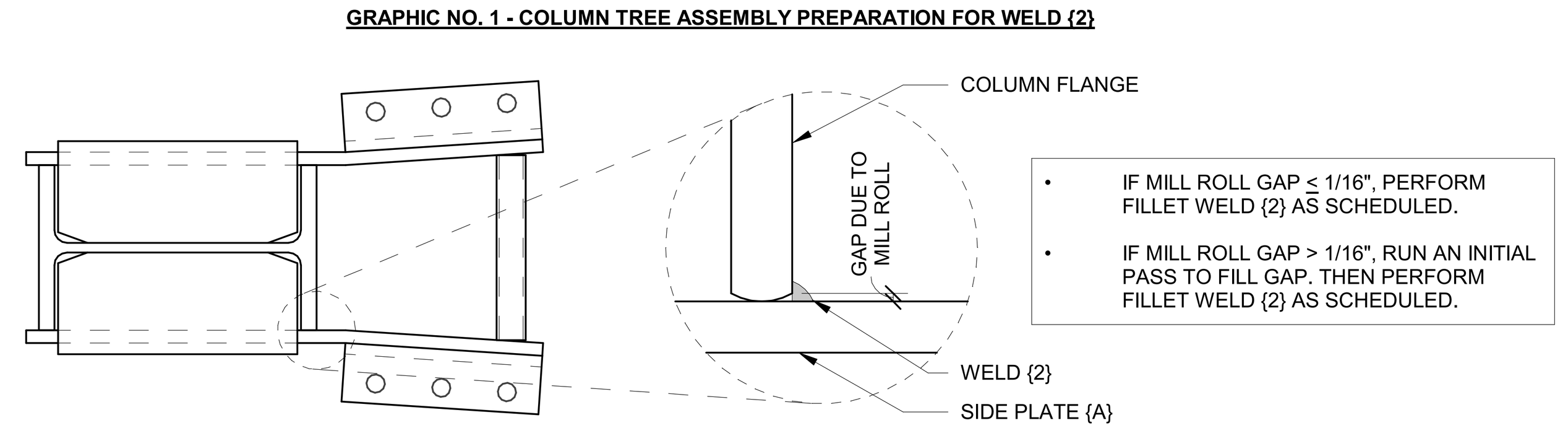
CONSTRUCTION GUIDELINES
1. THE CONTRACTOR SHALL ASSUME FULL AND COMPLETE RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTING THE STEEL FRAME USING THE SIDEPLATE BOLTED SYSTEM. CONSTRUCTION MEANS AND METHODS SHALL BE COMPLIANT WITH THE CURRENT PROVISIONS OF AWS D1.1, THE AISC 360 CODE OF STANDARD PRACTICE, THE RCSC HIGH-STRENGTH BOLTING SPECIFICATIONS, AND THE CONSTRUCTION GUIDELINES PROVIDED HEREIN AND SHALL INCLUDE, BUT ARE NOT LIMITED TO:
   a. DIMENSIONAL VERIFICATION AND CONTROL
   b. FABRICATION AND ERECTION PROCEDURES (INCLUDING METHODS FOR CONTROLLING DISTORTION DUE TO WELD SHRINKAGE, AND FOR CONTROLLING COMBINED MILL, FABRICATION AND ERECTION TOLERANCES)
   c. CONSTRUCTION AIDS SUCH AS ERECTION RIGGING AND SHORING
   d. PROPER BOLT HOLE ALIGNMENT
   e. PROPER PRETENSIONING OF BOLTS
2. THE SEQUENCE OF CONSTRUCTION OPTIONS PROVIDED BELOW IN THESE CONSTRUCTION GUIDELINES HAVE PROVEN TO BE SUCCESSFUL BY STEEL FABRICATORS AND ERECTORS TO COST EFFICIENTLY CONSTRUCT THE BOLTED SIDEPLATE CONNECTION SYSTEM. VARIATIONS TO THESE CONSTRUCTION SEQUENCE OPTIONS PROVIDED BELOW SHALL BE SUBMITTED FOR REVIEW AND DISPOSITION TO SIDEPLATE SYSTEMS, INC.
3. A PRE-FABRICATION COORDINATION MEETING WITH A SIDEPLATE SYSTEMS, INC. REPRESENTATIVE IS REQUIRED FOR ALL PROJECTS. THE PRE-FABRICATION COORDINATION MEETING IS INTENDED TO SHARE BEST PRACTICES AND COMMON MISTAKES TO AVOID.

SHOP FABRICATION OF THE SIDEPLATE BOLTED SYSTEM
1. WATCH OUR SIDEPLATE COLUMN ASSEMBLY VIDEO AT

https://portal.sideplate.com/account/login

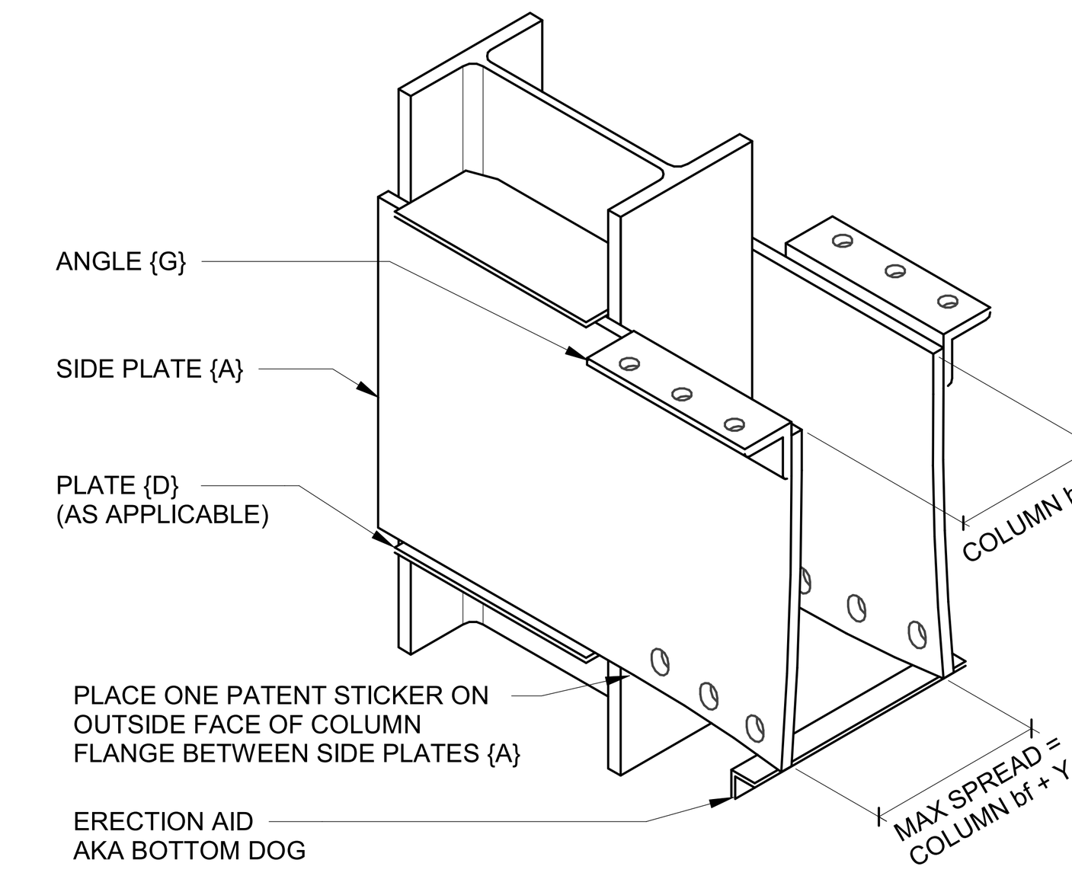


GRAPHIC NO. 1 - COLUMN TREE ASSEMBLY PREPARATION FOR WELD {2}



- IF MILL ROLL GAP ≤ 1/16", PERFORM FILLET WELD {2} AS SCHEDULED.
- IF MILL ROLL GAP > 1/16", RUN AN INITIAL PASS TO FILL GAP. THEN PERFORM FILLET WELD {2} AS SCHEDULED.

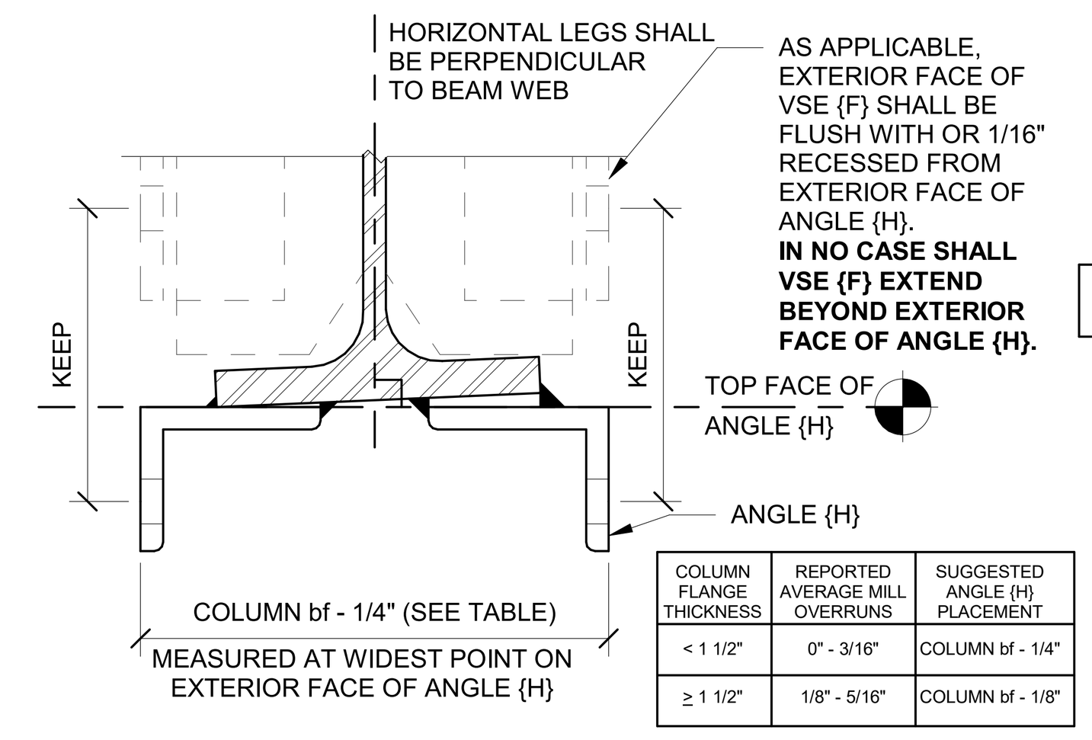
GRAPHIC NO. 2 - MILL ROLL INDUCED GAP



GRAPHIC NO. 3 - COMPLETED SIDEPLATE BOLTED COLUMN TREE ASSEMBLY

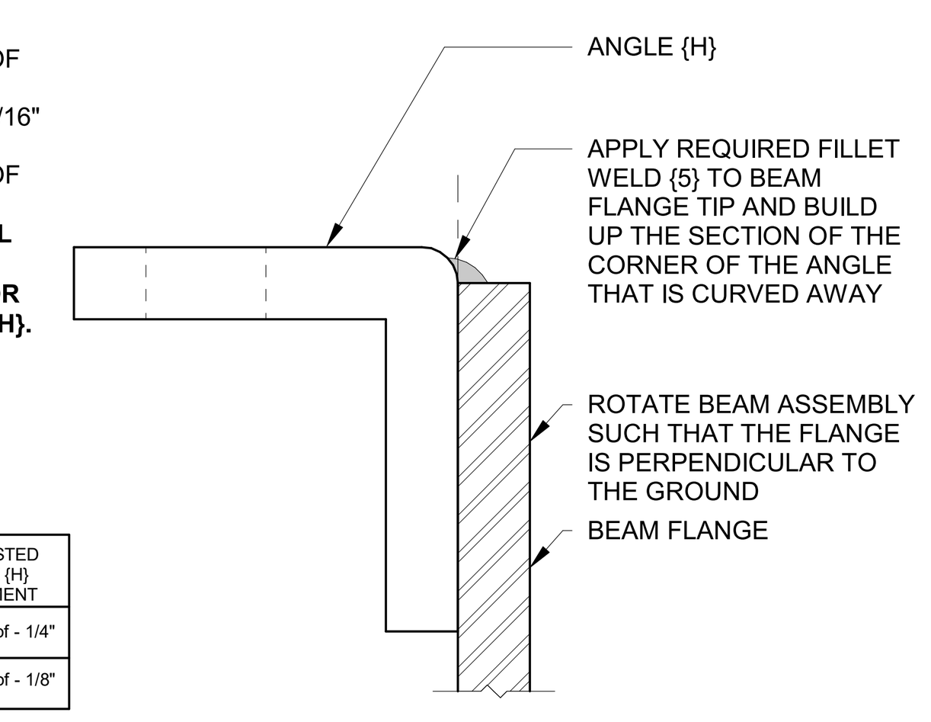
2. WATCH OUR SIDEPLATE BEAM ASSEMBLY VIDEO AT

https://portal.sideplate.com/account/login



COLUMN FLANGE THICKNESS	REPORTED AVERAGE MILL OVERRUNS	SUGGESTED ANGLE {H} PLACEMENT
< 1 1/2"	0" - 3/16"	COLUMN bf - 1/4"
≥ 1 1/2"	1/8" - 5/16"	COLUMN bf - 1/8"

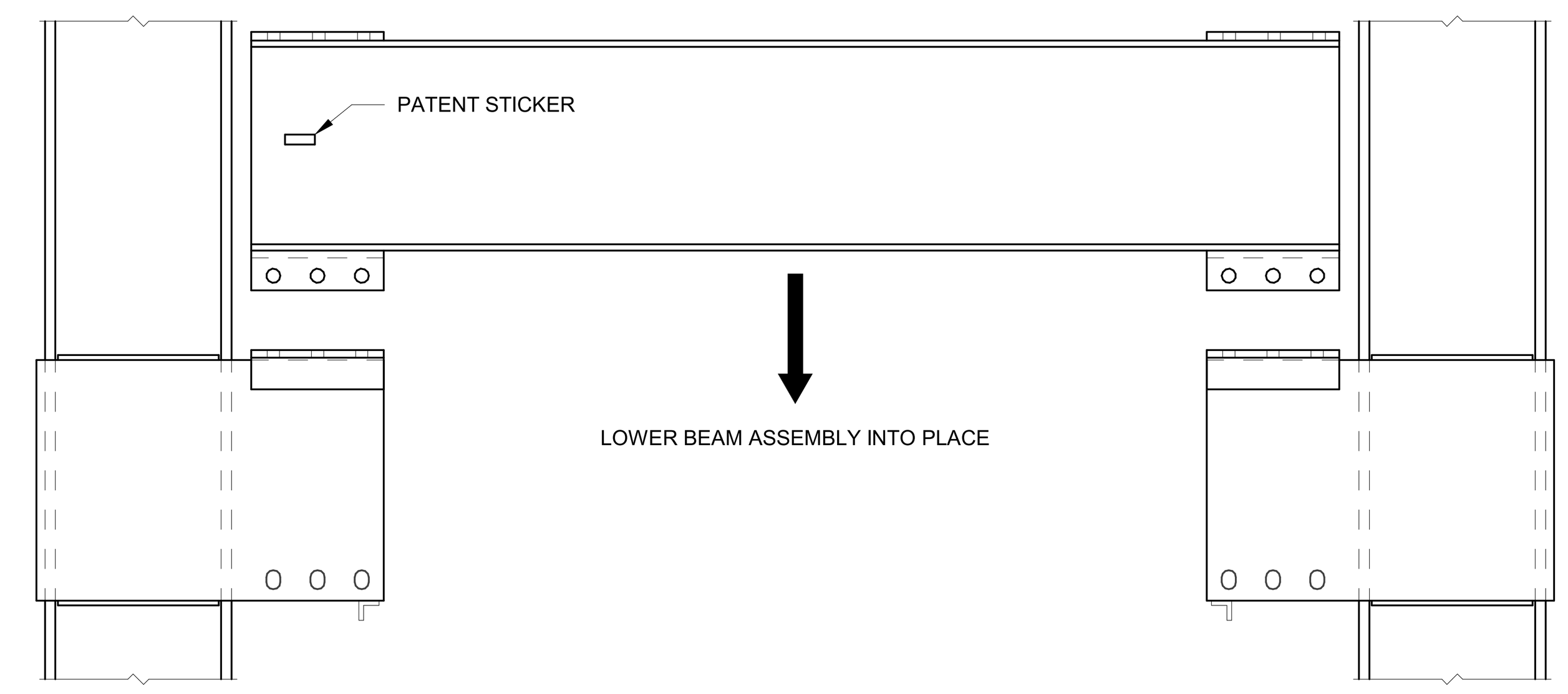
GRAPHIC NO. 4 - ANGLE {H} PLACEMENT



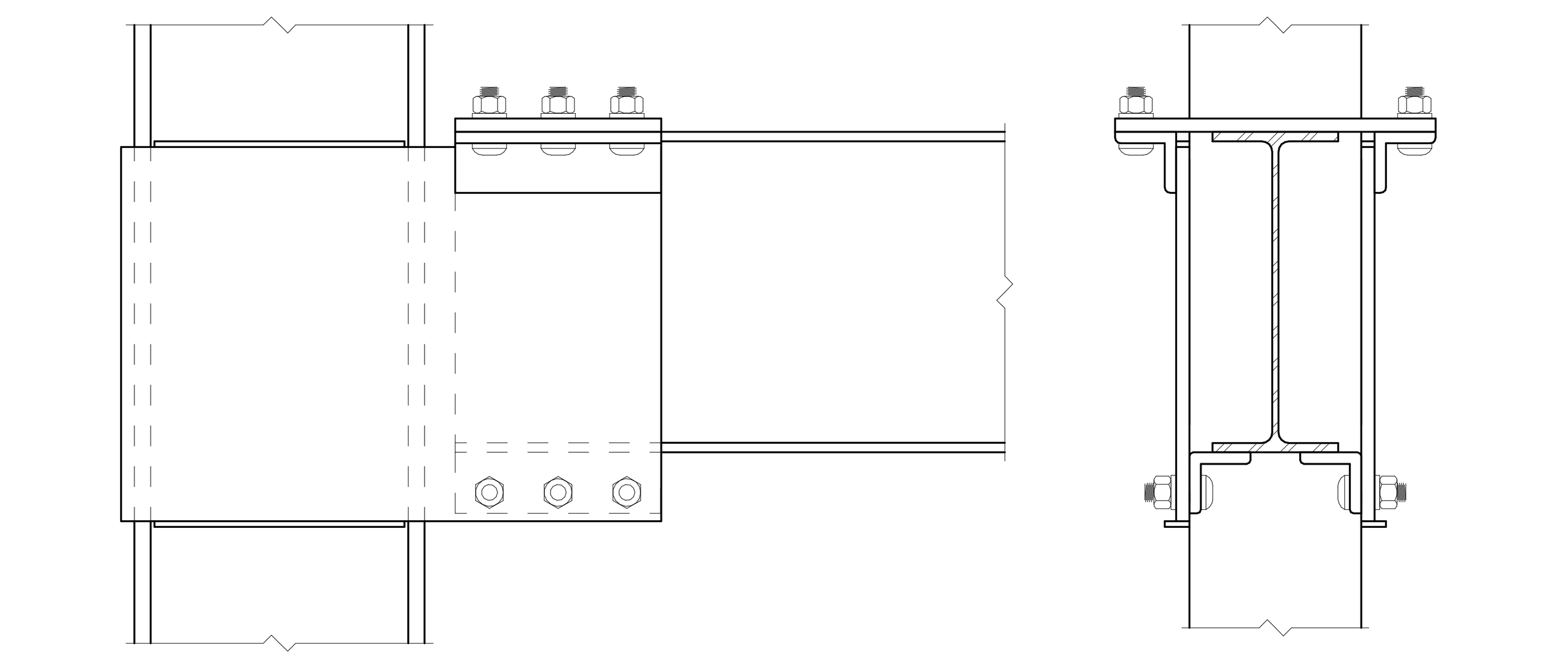
GRAPHIC NO. 5 - ROTATE BEAM ASSEMBLY TO FACILITATE WELD {5} MATERIAL AT MINIMAL EDGE DISTANCE

FIELD ERECTION OF SIDEPLATE BOLTED SYSTEM
3. WATCH OUR SIDEPLATE FIELD ERECTION VIDEO AT

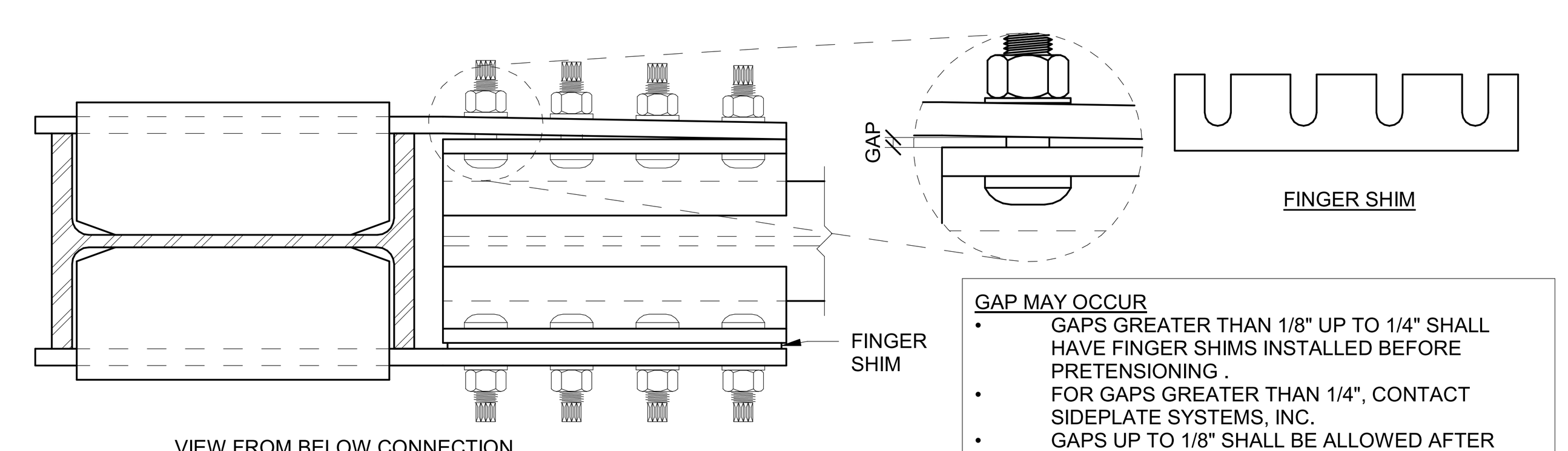
https://portal.sideplate.com/account/login



GRAPHIC NO. 6 - FIELD ERECTION OF SIDEPLATE BEAM ASSEMBLY

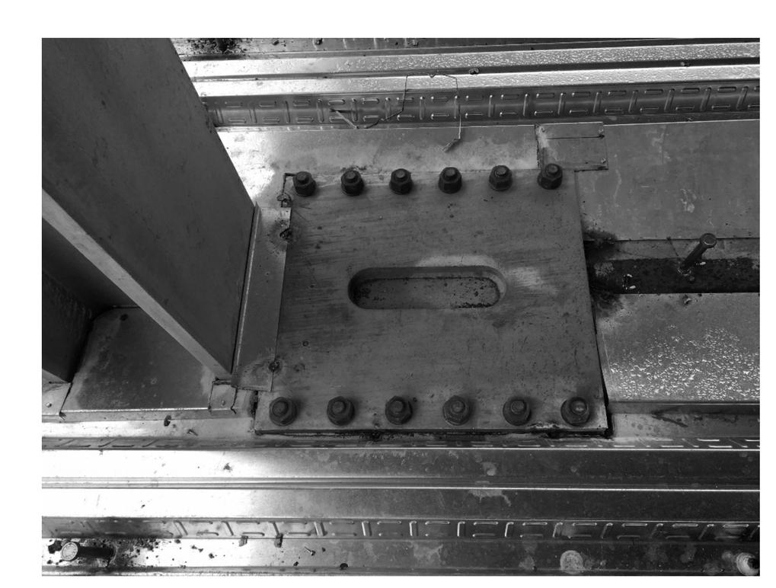


GRAPHIC NO. 7 - COMPLETED SIDEPLATE BOLTED CONNECTION



GAP MAY OCCUR
- GAPS GREATER THAN 1/8" UP TO 1/4" SHALL HAVE FINGER SHIMS INSTALLED BEFORE PRETENSIONING .
- FOR GAPS GREATER THAN 1/4", CONTACT SIDEPLATE SYSTEMS, INC.
- GAPS UP TO 1/8" SHALL BE ALLOWED AFTER BOLTS HAVE BEEN PRETENSIONED

GRAPHIC NO. 8 - CONDITION PRIOR TO TIGHTENING BOLTS


GRAPHIC NO. 9 - TYPICAL GAP CLOSURE AT THE TOP OF THE GAP


GRAPHIC NO. 10 - FIREPROOFING ACROSS THE BOTTOM OF THE GAP

MACGREGOR ASSOCIATES ARCHITECTS
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Atlanta, Georgia 30339
T 770.432.9400 F 770.432.9934

SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

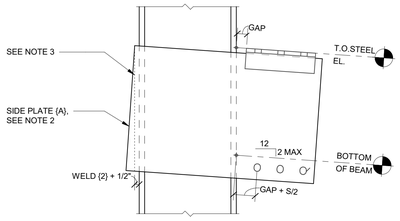
SIDEPLATE GENERAL NOTES AND CONSTRUCTION GUIDELINES

SHEET NUMBER

SP100

NOT FOR CONSTRUCTION

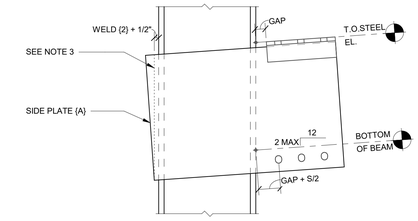
6/6/2024 9:09:17 AM



FRONT ELEVATION

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. AT CONTRACTOR'S DISCRETION, SIDE PLATE {A} MAY BE CUT AS SHOWN.

4 SLOPED DOWN CONNECTION (AS APPLICABLE)
N.T.S.



FRONT ELEVATION

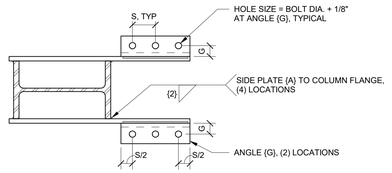
NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. AT CONTRACTOR'S DISCRETION, SIDE PLATE {A} MAY BE CUT AS SHOWN.

3 SLOPED UP CONNECTION (AS APPLICABLE)
N.T.S.

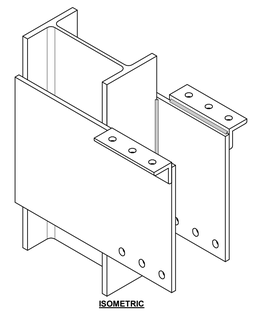
ID	COLUMN PANEL ZONE DESIGN (INCHES)		SIDE PLATE {A} EXTENSION DESIGN (INCHES)													SEE NOTE
	COLUMN	WELD	BEAM		PLATE			ANGLE			WELD	BOLT				
	SERIES	{2}	SHAPE	GAP	{A}			{G}			{8}	DIAMETER	HORIZONTAL #	VERTICAL #	G	S	
		SIZE			THICKNESS	B	Y	SUGGESTED SIZE	HORIZONTAL LEG	VERTICAL LEG	SIZE						
A10	W36x	1/2	W21X122	2	1 1/4	25 1/8	2 1/8	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	5	-	2 1/2	4 1/2	-
A20	W36x	1/4	W24X94	2	3/4	27 3/4	2 1/8	L6X6X5/8	4 to 6	4 to 6	1/4	1 1/8	3	-	2 1/2	6	-
A30	W36x	9/16	W24X176	2	1 1/2	28 3/4	2 3/4	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	7	-	2 1/2	4 1/2	-
A40	W36x	1/4	W30X90	2	3/4	33	2 1/8	L6X6X5/8	4 to 6	4 to 6	1/4	1 1/8	3	-	2 1/2	6	-
A42	W36x	5/16	W30X90	2	3/4	33	4 5/8	L6X6X5/8	4 to 6	4 to 6	3/8	1 1/8	6	-	2 1/2	6	-
A50	W36x	3/8	W30X108	2	7/8	33 3/8	2	L6X6X5/8	4 to 6	4 to 6	3/8	1 1/8	3	-	2 1/2	6	-
A51	W36x	3/8	W30X108	2	7/8	33 3/8	3 1/4	L6X6X5/8	4 to 6	4 to 6	5/16	1 1/8	4	-	2 1/2	6	-
A52	W36x	7/16	W30X108	2	1	33 3/8	3 7/8	L6X6X5/8	4 to 6	4 to 6	5/16	1 1/8	5	-	2 1/2	6	-
A60	W36x	3/8	W30X116	2	1	33 1/2	2 5/8	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	5	-	2 1/2	4 1/2	-
A61	W36x	3/8	W30X116	2	1	33 1/2	3 5/8	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	6	-	2 1/2	4 1/2	-
A80	W36x	7/16	W33X118	3	1	36 3/8	3 7/8	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	7	-	2 1/2	4 1/2	-
A100	W36x	3/8	W33X130	3	1	36 5/8	3 7/8	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	6	-	2 1/2	4 1/2	-
A101	W36x	7/16	W33X130	3	1 1/4	36 5/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	6	-	2 1/2	4 1/2	-
A102	W36x	7/16	W33X130	3	1 1/4	36 5/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	8	-	2 1/2	4 1/2	-
A120	W36x	9/16	W33X169	3	1 1/4	37 3/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	3	2 1/2	4 1/2	1
A140	W36x	1/2	W33X201	3	1 1/4	37 1/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	7	3	2 1/2	4 1/2	1
A150	W36x	5/8	W33X221	3	1 1/4	37 3/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	1/2	1 1/8	7	3	2 1/2	4 1/2	1

NOTE(S):
1. FOR VERTICAL BOLT HOLE INFORMATION SEE DETAIL 5 / SP101

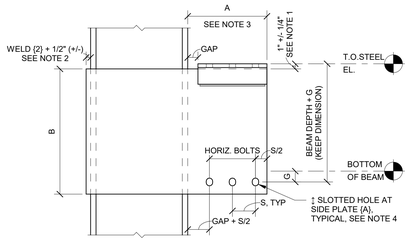
2 A TYPE COLUMN CONNECTION SCHEDULE
N.T.S.



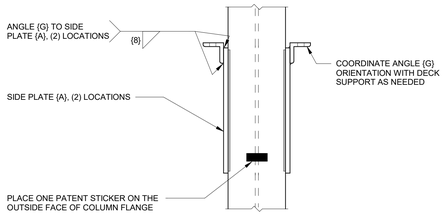
PLAN VIEW



ISOMETRIC



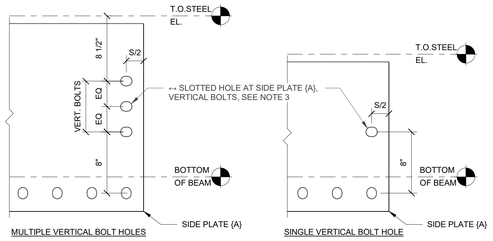
FRONT ELEVATION



SIDE ELEVATION

NOTE(S):
1. THE +/- 1/4 INCH TOLERANCE FOR PLACEMENT OF ANGLES {G} IS TO ENSURE CORRECT TOP OF STEEL PLACEMENT RELATIVE TO THE CENTERLINE OF THE BOTTOM HORIZONTAL ROW OF BOLT HOLES. THE PLACEMENT OF ANGLES {G} SHALL NEVER BE MEASURED FROM THE BOTTOM EDGE OF SIDE PLATE {A} TO ESTABLISH THE CORRECT TOP OF STEEL.
2. THE 1/2 INCH OVERHANG ON THE SIDE PLATE {A} IS TO ENSURE SUFFICIENT ROOM FOR WELD {2}. THE +/- TOLERANCE IS APPLIED SO THAT IF DESIRED, THE DETAILER CAN MAKE THE SIDE PLATES {A} THE SAME LENGTH WITH SLIGHTLY VARYING COLUMN DEPTHS WITHIN A GROUP OF THE SAME CONNECTION ID'S.
3. DIMENSION A = GAP+(HORIZONTAL BOLTS)*(S)
4. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

1 A TYPE BOLTED CONNECTION
N.T.S.



NOTE(S):
1. SEE COLUMN SCHEDULE FOR BOLT QUANTITY.
2. TOP ANGLE {G} NOT SHOWN FOR CLARITY.
3. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

5 SIDE PLATE {A} VSE BOLT HOLE DETAIL (AS APPLICABLE)
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS

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Atlanta, Georgia 30339
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SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

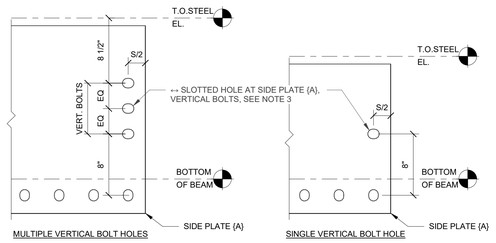
SIDEPLATE COLUMN DETAILS, A TYPE

SHEET NUMBER

SP101

NOT FOR CONSTRUCTION

6/6/2024 9:09:19 AM



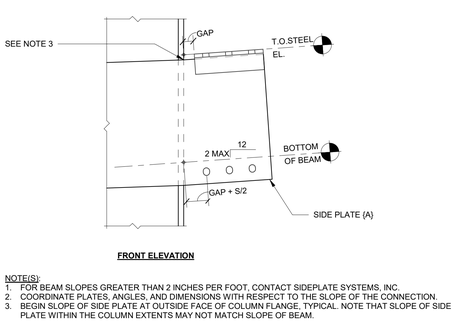
NOTE(S):
1. SEE COLUMN SCHEDULE FOR BOLT QUANTITY.
2. TOP ANGLE (G) NOT SHOWN FOR CLARITY.
3. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

5 SIDE PLATE {A} VSE BOLT HOLE DETAIL (AS APPLICABLE)
N.T.S.

ID	COLUMN PANEL ZONE DESIGN (INCHES)				SIDE PLATE {A} EXTENSION DESIGN (INCHES)											SEE NOTE
	COLUMN	WELD	BEAM		PLATE			ANGLE			WELD	BOLT				
	SERIES	{2} SIZE	SHAPE	GAP	{A} THICKNESS	B	Y	{G} SUGGESTED SIZE	HORIZONTAL LEG	VERTICAL LEG	{8} SIZE	DIAMETER	HORIZONTAL #	VERTICAL #	G	S	
B10	W36x	11/16	W21X122	2	1 1/4	25 1/8	2 1/8	L6X6X3/4	4 to 6	4 to 6	1/2	1 1/8	5	-	2 1/2	4 1/2	-
B40, B41	W36x	1/4	W30X90	2	3/4	33	2 1/8	L6X6X5/8	4 to 6	4 to 6	1/4	1 1/8	3	-	2 1/2	6	-
B42	W36x	5/16	W30X90	2	3/4	33	4 5/8	L6X6X5/8	4 to 6	4 to 6	3/8	1 1/8	6	-	2 1/2	6	-
B50	W36x	7/16	W30X108	2	7/8	33 3/8	2	L6X6X5/8	4 to 6	4 to 6	3/8	1 1/8	3	-	2 1/2	6	-
B51	W36x	1/2	W30X108	2	7/8	33 3/8	3 1/4	L6X6X5/8	4 to 6	4 to 6	5/16	1 1/8	4	-	2 1/2	6	-
B52	W36x	9/16	W30X108	2	1	33 3/8	3 7/8	L6X6X5/8	4 to 6	4 to 6	5/16	1 1/8	5	-	2 1/2	6	-
B60	W36x	9/16	W30X116	2	1	33 1/2	2 5/8	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	5	-	2 1/2	4 1/2	-
B61	W36x	5/8	W30X116	2	1	33 1/2	3 5/8	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	6	-	2 1/2	4 1/2	-
B70	W36x	7/16	W33X118	3	7/8	36 3/8	3 1/8	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	5	-	2 1/2	4 1/2	-
B71	W36x	7/16	W33X118	3	1	36 3/8	3 7/8	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	6	-	2 1/2	4 1/2	-
B80	W36x	1/2	W33X118	3	1	36 3/8	3 7/8	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	7	-	2 1/2	4 1/2	-
B90	W36x	9/16	W33X130	3	1	36 5/8	2 7/8	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	5	-	2 1/2	4 1/2	-
B91	W36x	9/16	W33X130	3	1	36 5/8	3 7/8	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	6	-	2 1/2	4 1/2	-
B100	W36x	9/16	W33X130	3	1	36 5/8	3 7/8	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	6	-	2 1/2	4 1/2	-
B101	W36x	5/8	W33X130	3	1 1/4	36 5/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	6	-	2 1/2	4 1/2	-
B102	W36x	11/16	W33X130	3	1 1/4	36 5/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	8	-	2 1/2	4 1/2	-
B110	W36x	5/8	W33X169	3	1	37 3/8	3 7/8	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	6	-	2 1/2	4 1/2	-
B111	W36x	5/8	W33X169	3	1 1/4	37 3/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	7	-	2 1/2	4 1/2	-
B120	W36x	3/4	W33X169	3	1 1/4	37 3/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	3	2 1/2	4 1/2	1
B130	W36x	13/16	W33X201	3	1 1/4	37 1/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	1/2	1 1/8	6	3	2 1/2	4 1/2	1
B140	W36x	15/16	W33X201	3	1 1/4	37 1/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	7	4	2 1/2	4 1/2	1
B150	W36x	15/16	W33X221	3	1 1/4	37 3/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	1/2	1 1/8	7	3	2 1/2	4 1/2	1

NOTE(S):
1. FOR VERTICAL BOLT HOLE INFORMATION SEE DETAIL 5 / SP102

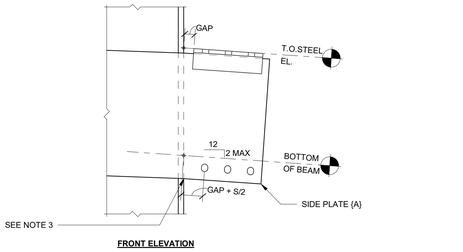
2 B TYPE COLUMN CONNECTION SCHEDULE
N.T.S.



FRONT ELEVATION

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. BEGIN SLOPE OF SIDE PLATE AT OUTSIDE FACE OF COLUMN FLANGE, TYPICAL. NOTE THAT SLOPE OF SIDE PLATE WITHIN THE COLUMN EXTENTS MAY NOT MATCH SLOPE OF BEAM.

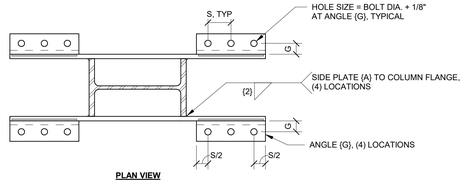
4 SLOPED UP CONNECTION (AS APPLICABLE)
N.T.S.



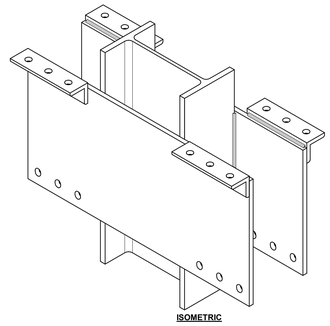
FRONT ELEVATION

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. BEGIN SLOPE OF SIDE PLATE AT OUTSIDE FACE OF COLUMN FLANGE, TYPICAL. NOTE THAT SLOPE OF SIDE PLATE WITHIN THE COLUMN EXTENTS MAY NOT MATCH SLOPE OF BEAM.

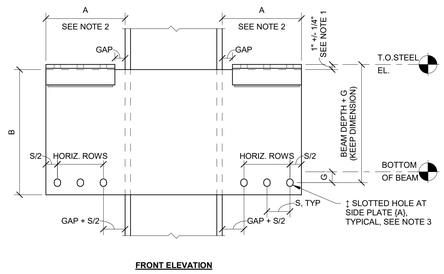
3 SLOPED DOWN CONNECTION (AS APPLICABLE)
N.T.S.



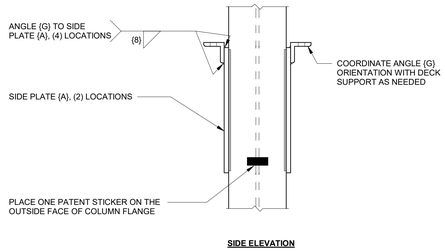
PLAN VIEW



ISOMETRIC



FRONT ELEVATION



SIDE ELEVATION

NOTE(S):
1. THE +/- 1/4 INCH TOLERANCE FOR PLACEMENT OF ANGLES {G} IS TO ENSURE CORRECT TOP OF STEEL PLACEMENT RELATIVE TO THE CENTERLINE OF THE BOTTOM HORIZONTAL ROW OF BOLT HOLES. THE PLACEMENT OF ANGLES {G} SHALL NEVER BE MEASURED FROM THE BOTTOM EDGE OF SIDE PLATE {A} TO ESTABLISH THE CORRECT TOP OF STEEL.
2. DIMENSION A = GAP+(HORIZONTAL BOLTS)*(S)
3. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

1 B TYPE BOLTED CONNECTION
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS

2727 Paces Ferry Road SE
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SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

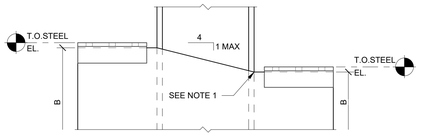
SIDEPLATE COLUMN DETAILS, B TYPE

SHEET NUMBER

SP102

NOT FOR CONSTRUCTION

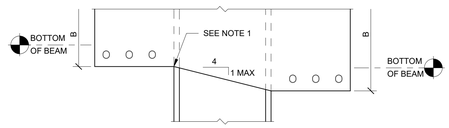
6/6/2024 9:09:19 AM



FRONT ELEVATION

NOTE(S):
1. BEGIN SLOPE OF SIDE PLATE (A) AT OUTSIDE FACE OF COLUMN FLANGE, TYPICAL.
2. UNIVERSAL STEP DETAIL MAY BE USED AS AN ALTERNATE. REFER TO DETAIL - / ---

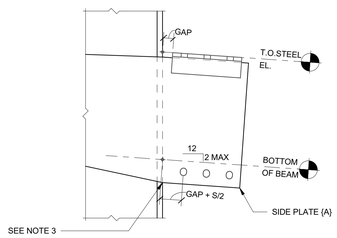
6 SUBTLE STEP TOP DETAIL (AS APPLICABLE)
N.T.S.



FRONT ELEVATION

NOTE(S):
1. BEGIN SLOPE OF SIDE PLATE (A) AT OUTSIDE FACE OF COLUMN FLANGE, TYPICAL.
2. UNIVERSAL STEP DETAIL MAY BE USED AS AN ALTERNATE. REFER TO DETAIL - / ---

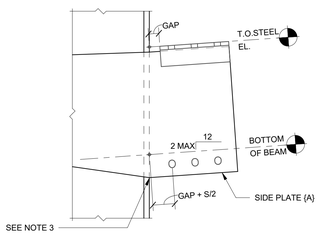
5 SUBTLE STEP BOTTOM DETAIL (AS APPLICABLE)
N.T.S.



FRONT ELEVATION

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. BEGIN SLOPE OF SIDE PLATE AT OUTSIDE FACE OF COLUMN FLANGE, TYPICAL. NOTE THAT SLOPE OF SIDE PLATE WITHIN THE COLUMN EXTENTS MAY NOT MATCH SLOPE OF BEAM.

4 SLOPED DOWN CONNECTION (AS APPLICABLE)
N.T.S.



FRONT ELEVATION

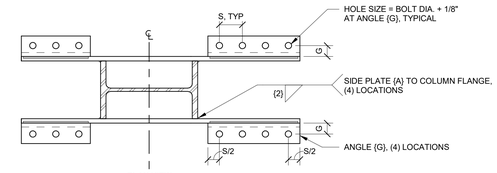
NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. BEGIN SLOPE OF SIDE PLATE AT OUTSIDE FACE OF COLUMN FLANGE, TYPICAL. NOTE THAT SLOPE OF SIDE PLATE WITHIN THE COLUMN EXTENTS MAY NOT MATCH SLOPE OF BEAM.

3 SLOPED UP CONNECTION (AS APPLICABLE)
N.T.S.

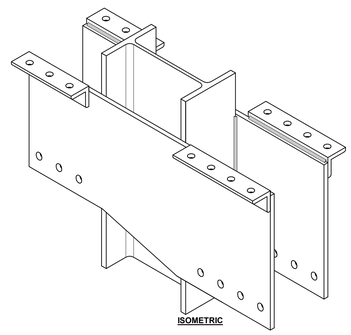
ID	COLUMN PANEL ZONE DESIGN (INCHES)				SIDE PLATE (A) EXTENSION DESIGN (INCHES)												SEE NOTE
	COLUMN	WELD	BEAM		PLATE			ANGLE			WELD	BOLT					
	SERIES	{Z} SIZE	SHAPE	GAP	{A} THICKNESS	B	Y	{G} SUGGESTED SIZE	HORIZONTAL LEG	VERTICAL LEG	{B} SIZE	DIAMETER	HORIZONTAL #	VERTICAL #	G	S	
C200	W36x	1/4	W24X84	2	3/4	27 5/8	2 1/8	L6X6X5/8	4 to 6	4 to 6	1/4	1 1/8	3	-	2 1/2	6	-
			W30X90	2		33	2 1/8	L6X6X5/8	4 to 6	4 to 6	1/4	1 1/8	3	-	2 1/2	6	
C210	W36x	1/4	W24X94	2	3/4	27 3/4	1 3/8	L6X6X3/4	4 to 6	4 to 6	1/4	1 1/8	3	-	2 1/2	4 1/2	-
			W30X90	2		33	2 1/8	L6X6X3/4	4 to 6	4 to 6	1/4	1 1/8	4	-	2 1/2	4 1/2	
C220	W36x	3/8	W24X103	2	7/8	28	2	L6X6X5/8	4 to 6	4 to 6	1/4	1 1/8	3	-	2 1/2	6	-
			W30X108	2		33 3/8	3 1/4	L6X6X5/8	4 to 6	4 to 6	1/4	1 1/8	4	-	2 1/2	6	
C230	W36x	9/16	W24X103	2	1	28	1 7/8	L6X6X5/8	4 to 6	4 to 6	3/8	1 1/8	3	-	2 1/2	6	-
			W30X116	2		33 1/2	3	L6X6X5/8	4 to 6	4 to 6	3/8	1 1/8	4	-	2 1/2	6	
C240	W36x	11/16	W24X162	2	1 1/4	28 1/2	3 1/8	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	7	-	2 1/2	4 1/2	-
			W33X130	3		36 5/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	7	-	2 1/2	4 1/2	
C250	W36x	7/8	W24X162	2	1 1/4	28 1/2	3	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	3	2 1/2	4 1/2	1
			W33X201	3		37 1/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	3	2 1/2	4 1/2	
C260	W36x	7/8	W24X162	2	1 1/4	28 1/2	3	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	3	2 1/2	4 1/2	1
			W33X201	3		37 1/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	1/2	1 1/8	6	3	2 1/2	4 1/2	
C270	W36x	5/8	W24X176	2	1 1/4	28 3/4	3	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	-	2 1/2	4 1/2	-
			W30X108	2		33 3/8	2 1/4	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	5	-	2 1/2	4 1/2	
C280	W36x	11/16	W24X176	2	1 1/4	28 3/4	3	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	-	2 1/2	4 1/2	-
			W30X116	2		33 1/2	2 1/4	L6X6X3/4	4 to 6	4 to 6	3/8	1 1/8	5	-	2 1/2	4 1/2	
C290	W36x	11/16	W24X176	2	1 1/4	28 3/4	3	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	6	-	2 1/2	4 1/2	-
			W33X130	3		36 5/8	3 1/4	L6X6X3/4	4 to 6	4 to 6	5/16	1 1/8	6	-	2 1/2	4 1/2	
C300	W36x	7/8	W24X176	2	1 1/2	28 3/4	2 5/8	L6X6X3/4	4 to 6	4 to 6	1/2	1 1/8	6	2	2 1/2	4 1/2	1
			W33X221	3		37 3/8	2 7/8	L6X6X3/4	4 to 6	4 to 6	7/16	1 1/8	7	3	2 1/2	4 1/2	

NOTE(S):
1. FOR VERTICAL BOLT HOLE INFORMATION SEE DETAIL 7 / SP103

2 C TYPE COLUMN CONNECTION SCHEDULE
N.T.S.

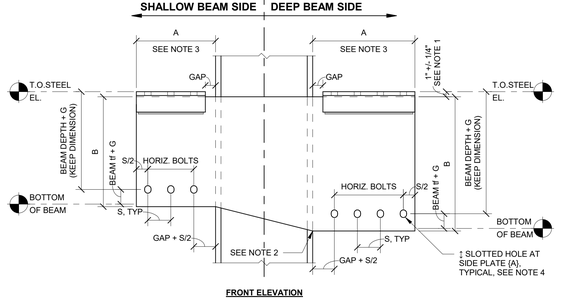


PLAN VIEW

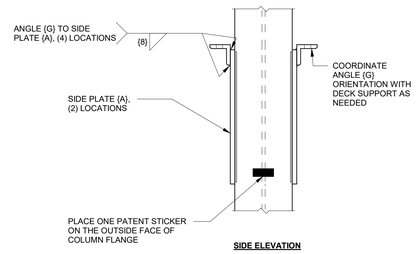


ISOMETRIC

SHALLOW BEAM SIDE **DEEP BEAM SIDE**

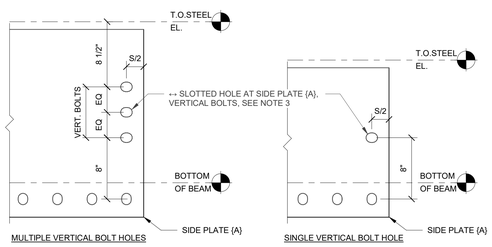


FRONT ELEVATION



SIDE ELEVATION

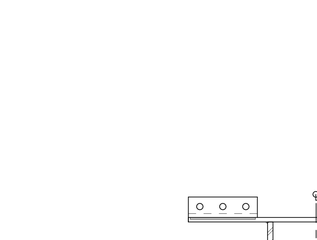
NOTE(S):
1. THE +/- 1/4 INCH TOLERANCE FOR PLACEMENT OF ANGLES (G) IS TO ENSURE CORRECT TOP OF STEEL PLACEMENT RELATIVE TO THE CENTERLINE OF THE BOTTOM HORIZONTAL ROW OF BOLT HOLES. THE PLACEMENT OF ANGLES (G) SHALL NEVER BE MEASURED FROM THE BOTTOM EDGE OF SIDE PLATE (A) TO ESTABLISH THE CORRECT TOP OF STEEL.
2. BEGIN SLOPE OF SIDE PLATE AT OUTSIDE FACE OF COLUMN, TYPICAL.
3. DIMENSION A = GAP+(HORIZONTAL BOLTS)*(S)
4. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.



↔ SLOTTED HOLE AT SIDE PLATE (A), VERTICAL BOLTS, SEE NOTE 3

NOTE(S):
1. SEE COLUMN SCHEDULE FOR BOLT QUANTITY.
2. TOP ANGLE (G) NOT SHOWN FOR CLARITY.
3. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

7 SIDE PLATE (A) VSE BOLT HOLE DETAIL (AS APPLICABLE)
N.T.S.



FRONT ELEVATION

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. BEGIN SLOPE OF SIDE PLATE AT OUTSIDE FACE OF COLUMN FLANGE, TYPICAL. NOTE THAT SLOPE OF SIDE PLATE WITHIN THE COLUMN EXTENTS MAY NOT MATCH SLOPE OF BEAM.

3 SLOPED UP CONNECTION (AS APPLICABLE)
N.T.S.

1 C TYPE BOLTED CONNECTION
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS

2727 Paces Ferry Road SE
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Atlanta, Georgia 30339
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SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

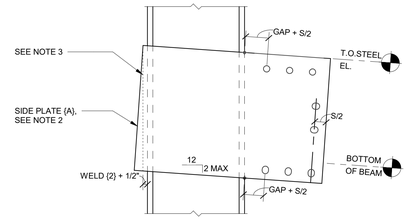
SIDEPLATE COLUMN DETAILS, C TYPE

SHEET NUMBER

SP103

NOT FOR CONSTRUCTION

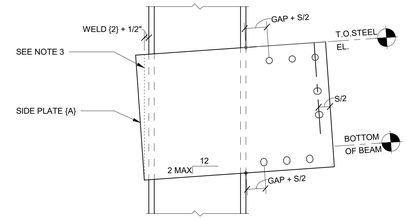
6/6/2024 9:09:19 AM



FRONT ELEVATION

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. AT CONTRACTOR'S DISCRETION, SIDE PLATE {A} MAY BE CUT AS SHOWN.

4 SLOPED DOWN TUCK-TUCK CONNECTION (AS APPLICABLE)
N.T.S.



FRONT ELEVATION

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.
2. COORDINATE PLATES, ANGLES, AND DIMENSIONS WITH RESPECT TO THE SLOPE OF THE CONNECTION.
3. AT CONTRACTOR'S DISCRETION, SIDE PLATE {A} MAY BE CUT AS SHOWN.

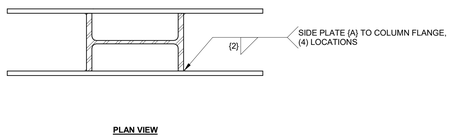
3 SLOPED UP TUCK-TUCK CONNECTION (AS APPLICABLE)
N.T.S.

ID	COLUMN PANEL ZONE DESIGN (INCHES)				SIDE PLATE {A} EXTENSION DESIGN (INCHES)						
	COLUMN	WELD	BEAM		PLATE			BOLT			
	SERIES	{2} SIZE	SHAPE	GAP	{A} THICKNESS	B	Y	DIAMETER	HORIZONTAL #	G	S
B49	W24x	5/16	W30X90	2	5/8	34	2 1/2	1 1/8	3	2 1/2	6
B58	W24x	3/8	W30X108	2	3/4	34 3/8	3 1/2	1 1/8	4	2 1/2	6
B59	W24x	7/16	W30X108	2	3/4	34 3/8	4 3/4	1 1/8	5	2 1/2	6
B88	W24x	1/2	W33X118	3	7/8	37 3/8	4 1/4	1 1/8	6	2 1/2	4 1/2
B89	W24x	1/2	W33X118	3	7/8	37 3/8	4 3/4	1 1/8	7	2 1/2	4 1/2
B118	W24x	11/16	W33X169	3	7/8	38 3/8	4 1/4	1 1/8	6	2 1/2	4 1/2
B119	W24x	11/16	W33X169	3	1	38 3/8	4 1/8	1 1/8	7	2 1/2	4 1/2

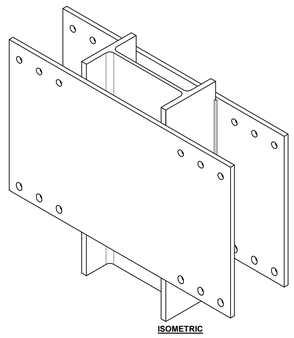
6 B TYPE TUCK-NARROW COLUMN CONNECTION SCHEDULE
N.T.S.

ID	COLUMN PANEL ZONE DESIGN (INCHES)				SIDE PLATE {A} EXTENSION DESIGN (INCHES)						
	COLUMN	WELD	BEAM		PLATE			BOLT			
	SERIES	{2} SIZE	SHAPE	GAP	{A} THICKNESS	B	Y	DIAMETER	HORIZONTAL #	G	S
A49	W24x	1/4	W30X90	2	5/8	34	2 1/2	1 1/8	3	2 1/2	6
A58	W24x	3/8	W30X108	2	3/4	34 3/8	3 1/2	1 1/8	4	2 1/2	6
A59	W24x	3/8	W30X108	2	3/4	34 3/8	4 3/4	1 1/8	5	2 1/2	6
A88	W24x	3/8	W33X118	3	7/8	37 3/8	4 1/4	1 1/8	6	2 1/2	4 1/2
A119	W24x	1/2	W33X169	3	1	38 3/8	4 1/8	1 1/8	7	2 1/2	4 1/2

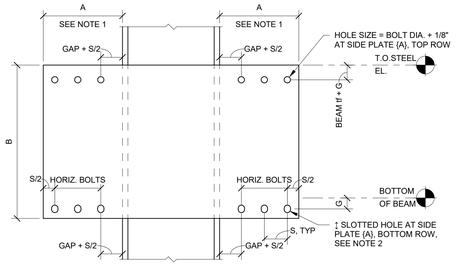
2 A TYPE TUCK-NARROW COLUMN CONNECTION SCHEDULE
N.T.S.



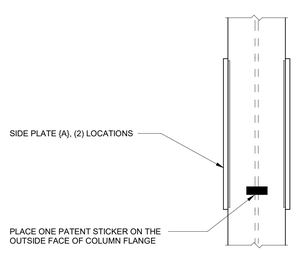
PLAN VIEW



ISOMETRIC



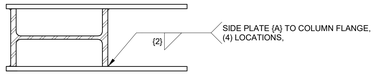
FRONT ELEVATION



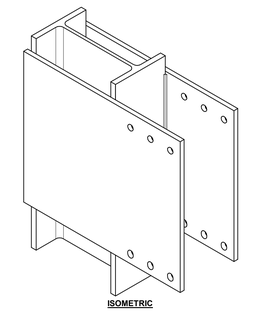
SIDE ELEVATION

NOTE(S):
1. DIMENSION A = GAP+(HORIZONTAL BOLTS)*(S)
2. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

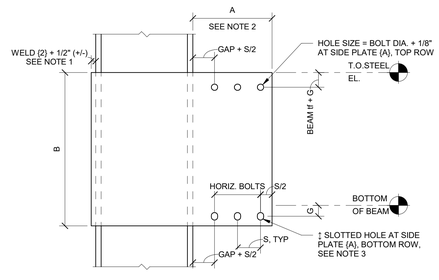
5 B TYPE TUCK-NARROW BOLTED CONNECTION
N.T.S.



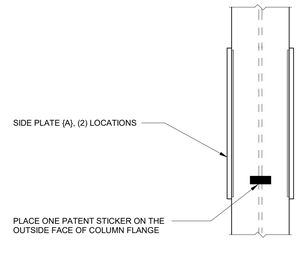
PLAN VIEW



ISOMETRIC



FRONT ELEVATION



SIDE ELEVATION

NOTE(S):
1. THE 1/2 INCH OVERHANG ON THE SIDE PLATE {A} IS TO ENSURE SUFFICIENT ROOM FOR WELD {2}, THE +/- TOLERANCE IS APPLIED SO THAT IF DESIRED, THE DETAILER CAN MAKE THE SIDE PLATES {A} THE SAME LENGTH WITH SLIGHTLY VARYING COLUMN DEPTHS WITHIN A GROUP OF THE SAME CONNECTION ID'S.
2. DIMENSION A = GAP+(HORIZONTAL BOLTS)*(S)
3. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

1 A TYPE TUCK-NARROW BOLTED CONNECTION
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS
2727 Paces Ferry Road SE
Building Two, Suite 1400
Atlanta, Georgia 30339
T 770.432.9400 F 770.432.9934

SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

SIDEPLATE COLUMN DETAILS, A & B TYPE TUCK-NARROW

SHEET NUMBER

SP104

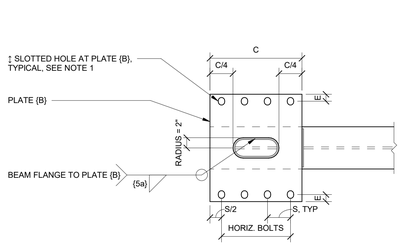
NOT FOR CONSTRUCTION

6/6/2024 9:09:20 AM

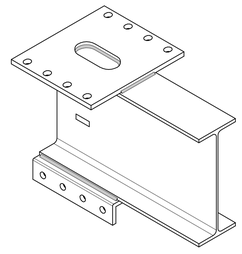
ID	BEAM DESIGN (INCHES)																							SEE NOTE
	BEAM		PLATE						ANGLE					WELD				BOLT						
	SHAPE	GAP	{B}				{C}		{H}				{E}	{4}	{5}	{5a}	{5b}	DIAMETER	HORIZONTAL #	VERTICAL #	G	J	S	
			COVER PLATE TYPE	THICKNESS	E	H	THICKNESS		SUGGESTED SIZE	C	HORIZONTAL LEG	VERTICAL LEG	SIZE	SIZE	SIZE	SIZE	SIZE							
A10, B10	W21X122	2	Slotted	1 3/4	1 1/2	10 1/2	-		L4X4X3/4	22 1/2	4	4	-	-	7/16	7/16	9/16	1 1/8	5	-	2 1/2	-	4 1/2	-
A20	W24X94	2	Slotted	5/8	1 1/2	9 1/2	-		L6X4X5/8	18	6	4	-	-	1/4	1/4	-	1 1/8	3	-	2 1/2	-	6	-
A30	W24X176	2	Slotted	7/8	1 1/2	11	-		L4X4X3/4	31 1/2	4	4	-	-	3/8	3/8	9/16	1 1/8	7	-	2 1/2	-	4 1/2	-
A40, B40	W30X90	2	Slotted	5/8	1 1/2	9 1/2	-		L4X4X5/8	18	4	4	-	-	1/4	1/4	-	1 1/8	3	-	2 1/2	-	6	-
B41	W30X90	2	Slotted	1 1/2	1 1/2	9 1/2	-		L4X4X5/8	18	4	4	-	-	1/4	1/4	-	1 1/8	3	-	2 1/2	-	6	-
A42, B42	W30X90	2	Slotted	1 1/2	1 1/2	9 1/2	-		L4X4X5/8	36	4	4	-	-	3/8	3/8	-	1 1/8	6	-	2 1/2	-	6	-
A50, B50	W30X108	2	Slotted	1 3/4	1 1/2	9 3/4	-		L4X4X5/8	18	4	4	-	-	5/16	5/16	5/16	1 1/8	3	-	2 1/2	-	6	-
A51, B51	W30X108	2	Slotted	1 3/4	1 1/2	9 3/4	-		L4X4X5/8	24	4	4	-	-	5/16	5/16	7/16	1 1/8	4	-	2 1/2	-	6	-
B52, A52	W30X108	2	Slotted	1 3/4	1 1/2	10	-		L4X4X5/8	30	4	4	-	-	5/16	5/16	5/16	1 1/8	5	-	2 1/2	-	6	-
B60, A60	W30X116	2	Slotted	1 3/4	1 1/2	10	-		L4X4X3/4	22 1/2	4	4	-	-	5/16	5/16	1/2	1 1/8	5	-	2 1/2	-	4 1/2	-
A61, B61	W30X116	2	Slotted	1 3/4	1 1/2	10	-		L4X4X3/4	27	4	4	-	-	5/16	5/16	7/16	1 1/8	6	-	2 1/2	-	4 1/2	-
B70	W33X118	3	Slotted	1 3/4	1 1/2	9 3/4	-		L4X4X3/4	22 1/2	4	4	-	-	5/16	5/16	3/8	1 1/8	5	-	2 1/2	-	4 1/2	-
B71	W33X118	3	Slotted	1 1/2	1 1/2	10	-		L4X4X3/4	27	4	4	-	-	5/16	5/16	-	1 1/8	6	-	2 1/2	-	4 1/2	-
A80, B80	W33X118	3	Slotted	1 3/4	1 1/2	10	-		L6X4X3/4	31 1/2	6	4	-	-	5/16	5/16	-	1 1/8	7	-	2 1/2	-	4 1/2	-
B90	W33X130	3	Slotted	1 3/4	1 1/2	10	-		L4X4X3/4	22 1/2	4	4	-	-	3/8	3/8	3/8	1 1/8	5	-	2 1/2	-	4 1/2	-
B91	W33X130	3	Slotted	1 3/4	1 1/2	10	-		L4X4X3/4	27	4	4	-	-	5/16	5/16	3/8	1 1/8	6	-	2 1/2	-	4 1/2	-
B100, A100	W33X130	3	Slotted	1 3/4	1 1/2	10	-		L6X4X3/4	27	6	4	-	-	5/16	5/16	5/16	1 1/8	6	-	2 1/2	-	4 1/2	-
B101, A101	W33X130	3	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	27	6	4	-	-	5/16	5/16	9/16	1 1/8	6	-	2 1/2	-	4 1/2	-
A102, B102	W33X130	3	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	36	6	4	-	-	3/8	3/8	-	1 1/8	8	-	2 1/2	-	4 1/2	-
B110	W33X169	3	Slotted	1 3/4	1 1/2	10	-		L4X4X3/4	27	4	4	-	-	5/16	5/16	1/2	1 1/8	6	-	2 1/2	-	4 1/2	-
B111	W33X169	3	Slotted	1 3/4	1 1/2	10 1/2	-		L4X4X3/4	31 1/2	4	4	-	-	5/16	5/16	1/2	1 1/8	7	-	2 1/2	-	4 1/2	-
A120, B120	W33X169	3	Slotted	3/4	1 1/2	10 1/2	3/8		L6X4X3/4	27	6	4	L4X4X5/8	1/4	3/8	3/8	9/16	1 1/8	6	3	2 1/2	24 3/4	4 1/2	1
B130	W33X201	3	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	27	4	4	L4X4X5/8	1/4	7/16	7/16	1/2	1 1/8	6	3	2 1/2	24 3/4	4 1/2	1, 2
A140	W33X201	3	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	31 1/2	4	4	L4X4X5/8	1/4	3/8	3/8	3/8	1 1/8	7	3	2 1/2	29 1/4	4 1/2	1
B140	W33X201	3	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	31 1/2	4	4	L4X4X5/8	1/4	3/8	3/8	7/16	1 1/8	7	4	2 1/2	29 1/4	4 1/2	1
A150, B150	W33X221	3	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	31 1/2	4	4	L4X4X5/8	1/4	7/16	7/16	9/16	1 1/8	7	3	2 1/2	29 1/4	4 1/2	1, 2
C200	W24X84	2	Slotted	5/8	1 1/2	9 1/2	-		L4X4X5/8	18	4	4	-	-	1/4	1/4	-	1 1/8	3	-	2 1/2	-	6	-
	W30X90	2	Slotted	5/8	1 1/2	9 1/2	-		L4X4X5/8	18	4	4	-	-	1/4	1/4	-	1 1/8	3	-	2 1/2	-	6	
C210	W24X94	2	Slotted	3/4	1 1/2	9 1/2	-		L6X4X3/4	13 1/2	6	4	-	-	5/16	5/16	5/16	1 1/8	3	-	2 1/2	-	4 1/2	-
	W30X90	2	Slotted	3/4	1 1/2	9 1/2	-		L6X4X3/4	18	6	4	-	-	1/4	1/4	-	1 1/8	4	-	2 1/2	-	4 1/2	
C220	W24X103	2	Slotted	1 1/2	1 1/2	9 3/4	-		L4X4X5/8	18	4	4	-	-	1/4	1/4	-	1 1/8	3	-	2 1/2	-	6	-
	W30X108	2	Slotted	1 1/2	1 1/2	9 3/4	-		L4X4X5/8	24	4	4	-	-	1/4	1/4	1/4	1 1/8	4	-	2 1/2	-	6	
C230	W24X103	2	Slotted	1 3/4	1 1/2	10	-		L4X4X5/8	18	4	4	-	-	5/16	5/16	7/16	1 1/8	3	-	2 1/2	-	6	-
	W30X116	2	Slotted	1 3/4	1 1/2	10	-		L4X4X5/8	24	4	4	-	-	5/16	5/16	5/16	1 1/8	4	-	2 1/2	-	6	
C240	W24X162	2	Slotted	1 3/4	1 1/2	10 1/2	-		L4X4X3/4	31 1/2	4	4	-	-	5/16	5/16	5/16	1 1/8	7	-	2 1/2	-	4 1/2	-
	W33X130	3	Slotted	1 1/2	1 1/2	10 1/2	-		L4X4X3/4	31 1/2	4	4	-	-	5/16	5/16	-	1 1/8	7	-	2 1/2	-	4 1/2	
C250	W24X162	2	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	27	4	4	L4X4X5/8	1/4	3/8	3/8	1/2	1 1/8	6	3	2 1/2	24 3/4	4 1/2	1, 2
	W33X201	3	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	27	4	4	L4X4X5/8	1/4	3/8	3/8	7/16	1 1/8	6	3	2 1/2	24 3/4	4 1/2	
C260	W24X162	2	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	27	4	4	L4X4X5/8	1/4	3/8	3/8	7/16	1 1/8	6	3	2 1/2	24 3/4	4 1/2	1, 2
	W33X201	3	Slotted	3/4	1 1/2	10 1/2	3/8		L4X4X3/4	27	4	4	L4X4X5/8	1/4	7/16	7/16	7/16	1 1/8	6	3	2 1/2	24 3/4	4 1/2	
C270	W24X176	2	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	27	6	4	-	-	3/8	3/8	3/8	1 1/8	6	-	2 1/2	-	4 1/2	-
	W30X108	2	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	22 1/2	6	4	-	-	1/4	1/4	7/16	1 1/8	5	-	2 1/2	-	4 1/2	
C280	W24X176	2	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	27	6	4	-	-	3/8	3/8	1/2	1 1/8	6	-	2 1/2	-	4 1/2	-
	W30X116	2	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	22 1/2	6	4	-	-	5/16	5/16	5/16	1 1/8	5	-	2 1/2	-	4 1/2	
C290	W24X176	2	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	27	6	4	-	-	3/8	3/8	5/8	1 1/8	6	-	2 1/2	-	4 1/2	-
	W33X130	3	Slotted	1 3/4	1 1/2	10 1/2	-		L6X4X3/4	27	6	4	-	-	5/16	5/16	5/16	1 1/8	6	-	2 1/2	-	4 1/2	
C300	W24X176	2	Slotted	3/4	1 1/2	11	3/8		L4X4X3/4	27	4	4	L4X4X5/8	1/4	7/16	7/16	7/16	1 1/8	6	2	2 1/2	24 3/4	4 1/2	1, 2
	W33X221	3	Slotted	3/4	1 1/2	11	3/8		L4X4X3/4	31 1/2	4	4	L4X4X5/8	1/4	3/8	3/8	1/2	1 1/8	7	3	2 1/2	29 1/4	4 1/2	

NOTE(S):
1. WHEN VSE {F} IS REQUIRED FOR VERTICAL BOLTS REFER TO DETAIL 5 / SP105
2. SEE PJP WELD {5} DETAIL 5 / SP109

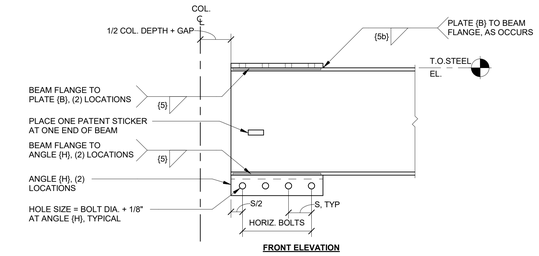
2 BEAM END SCHEDULE
N.T.S.



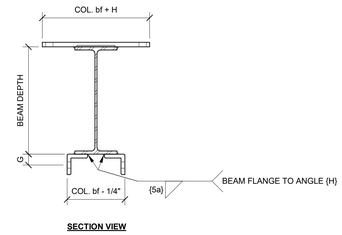
PLAN VIEW



ISOMETRIC VIEW



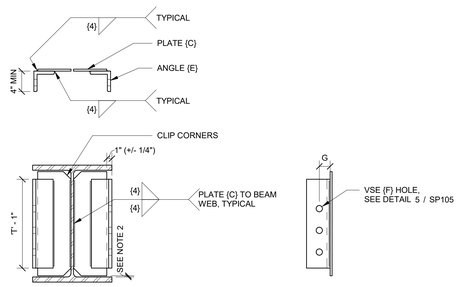
FRONT ELEVATION



SECTION VIEW

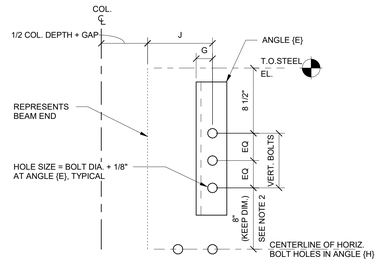
NOTE(S):
1. SLOTTED HOLE SIZE AS FOLLOWS: 1" DIAMETER BOLT = 1 1/8"X1 5/16" SLOT, 1 1/8" DIAMETER BOLT = 1 1/4"X1 1/2" SLOT, 1 1/4" BOLT = 1 3/8"X1 5/8" SLOT.

1 BEAM END DETAIL
N.T.S.

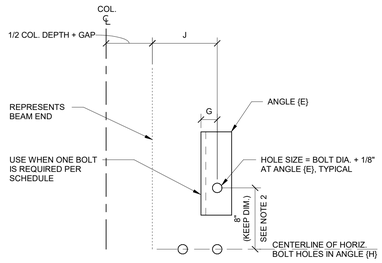


NOTE(S):
1. SEE SIDEPLATE SCHEDULE FOR BOLT QUANTITY.
2. DIMENSION BETWEEN PLATE {C} AND INSIDE FACE OF BEAM FLANGE SHALL NOT EXCEED 1/4 INCH, AND MAY VARY DEPENDING ON BEAM MILL TOLERANCES. PLATE {C} SHALL BE CENTERED ON THE DEPTH OF THE BEAM.

6 VSE {F} DETAIL (AS APPLICABLE)
N.T.S.



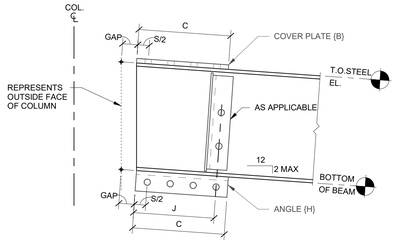
MULTIPLE VERTICAL BOLT HOLES



SINGLE VERTICAL BOLT HOLE

NOTE(S):
1. SEE BEAM END SCHEDULE FOR BOLT QUANTITY.
2. EFFECTS OF MILL AND FABRICATION TOLERANCES ARE ACCOUNTED FOR BY MEASURING FROM THE CENTERLINE OF THE HORIZONTAL ROW OF BOLTS IN THE BOTTOM ANGLES {H}.

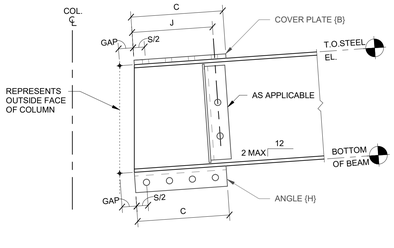
5 VSE {F} HOLE DETAIL (AS APPLICABLE)
N.T.S.



ELEVATION VIEW

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.

4 SLOPED DOWN BEAM END (AS APPLICABLE)
N.T.S.



ELEVATION VIEW

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.

3 SLOPED UP BEAM END (AS APPLICABLE)
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS

2727 Paces Ferry Road SE
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SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

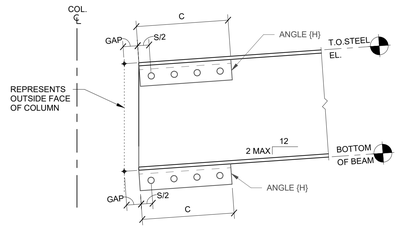
SIDEPLATE BEAM DETAILS

SHEET NUMBER

SP105

NOT FOR CONSTRUCTION

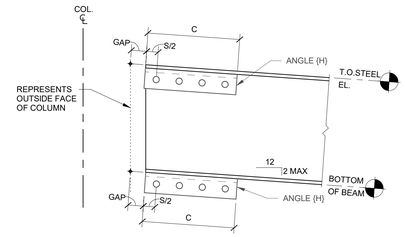
6/6/2024 9:09:23 AM



ELEVATION VIEW

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.

3 SLOPED UP TUCK-NARROW BEAM END (AS APPLICABLE)
N.T.S.



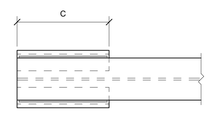
ELEVATION VIEW

NOTE(S):
1. FOR BEAM SLOPES GREATER THAN 2 INCHES PER FOOT, CONTACT SIDEPLATE SYSTEMS, INC.

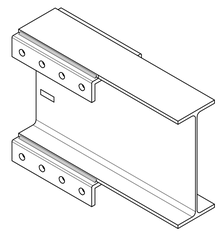
4 SLOPED DOWN TUCK-NARROW BEAM END (AS APPLICABLE)
N.T.S.

ID	BEAM DESIGN (INCHES)											
	BEAM		ANGLE				WELD		BOLT			
	SHAPE	GAP	{H}				{S}	{Sa}	DIAMETER	HORIZONTAL #	G	S
			SUGGESTED SIZE	C	HORIZONTAL LEG	VERTICAL LEG	SIZE	SIZE				
A49, B49	W30X90	2	L4X4X5/8	18	4	4	1/4	1/4	1 1/8	3	2 1/2	6
A58, B58	W30X108	2	L4X4X5/8	24	4	4	1/4	1/4	1 1/8	4	2 1/2	6
B59, A59	W30X108	2	L4X4X5/8	30	4	4	5/16	5/16	1 1/8	5	2 1/2	6
A88, B88	W33X118	3	L4X4X3/4	27	4	4	5/16	5/16	1 1/8	6	2 1/2	4 1/2
B89	W33X118	3	L4X4X3/4	31 1/2	4	4	5/16	5/16	1 1/8	7	2 1/2	4 1/2
B118	W33X169	3	L4X4X3/4	27	4	4	5/16	5/16	1 1/8	6	2 1/2	4 1/2
A119, B119	W33X169	3	L4X4X3/4	31 1/2	4	4	5/16	5/16	1 1/8	7	2 1/2	4 1/2

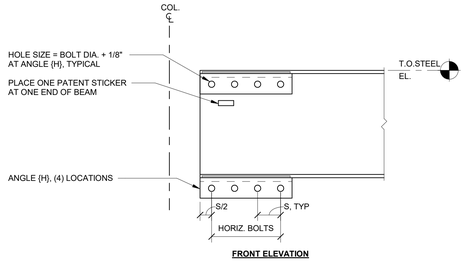
2 TUCK-NARROW BEAM END SCHEDULE
N.T.S.



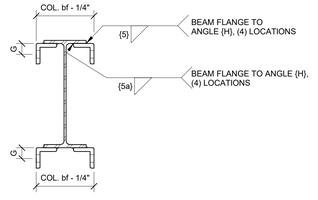
PLAN VIEW



ISOMETRIC VIEW



FRONT ELEVATION



SECTION VIEW

1 TUCK-NARROW BEAM END DETAIL
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS
2727 Paces Ferry Road SE
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SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

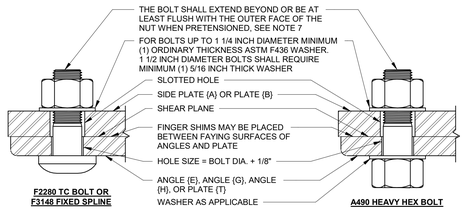
SIDEPLATE BEAM DETAILS, TUCK-NARROW

SHEET NUMBER

SP106

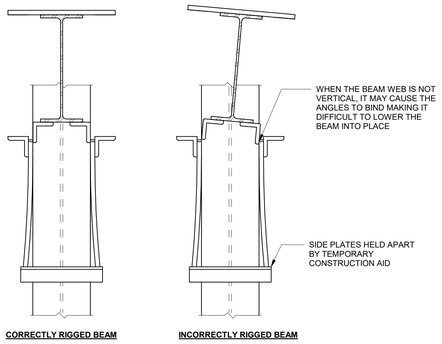
NOT FOR CONSTRUCTION

6/6/2024 9:09:24 AM



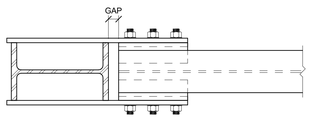
NOTE(S):
1. BOLTS SHALL BE INSTALLED AS SHOWN TO KEEP THREADS OUTSIDE OF SHEAR PLANE.
2. BOLTS SHALL BE SYSTEMATICALLY INSTALLED AS OUTLINED IN THE BOLTING SPECIFICATIONS. FIRST TO A SNUG TIGHT CONDITION, AND THEN PRETENSIONED.
3. USE FINGER SHIMS FOR GAPS GREATER THAN 1/8 INCH UP TO 1/4 INCH. CONTACT SIDEPLATE SYSTEMS, INC. IF GAPS ARE GREATER THAN 1/4 INCH.
4. NUT SHALL BE ASTM A563.
5. THE BOLT/FASTENER ASSEMBLY SHALL BE COVERED IN A LIGHT PROTECTIVE OIL.
6. FOLLOW QUALITY CONTROL SECTION FOR EXPOSURE LIMITATION ON BOLTS/FASTENERS.
7. STEEL DETAILER TO COORDINATE BOLT LENGTHS WITH REQUIRED WASHERS AND POTENTIAL SHIMMING THICKNESS WITH STEEL FABRICATOR.
8. ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS.
9. THE MINIMUM EDGE DISTANCE FROM THE CENTER OF THE HOLE TO THE EDGE OF THE CONNECTED PART IS PERMITTED TO BE LESS THAN THE MINIMUM EDGE DISTANCE PRESCRIBED BY AISC TABLE J3.4 FOR EACH BOLT DIAMETER, BUT SHALL NOT BE LESS THAN ONE BOLT DIAMETER.
10. BOLT ORIENTATION IS PERMITTED TO BE FLIPPED IF THE FOLLOWING CONDITIONS ARE MET: A. IF A HEAVY HEX BOLT IS USED, AN ADDITIONAL WASHER ON THE SLOTTED HOLE SIDE IS REQUIRED. VERIFY THREAD ARE EXCLUDED FROM THE SHEAR PLANE. B. IF A TC BOLT IS USED, NO ADDITIONAL WASHER IS REQUIRED. VERIFY THREADS ARE EXCLUDED FROM THE SHEAR PLANE.
11. WHEN USING DIRECT TENSION INDICATORS (DTI) FOR PRETENSIONING. VERIFY IF ADDITIONAL WASHER IS REQUIRED TO ENSURE DTIs CAN WORK EFFECTIVELY WHEN PRETENSIONED.

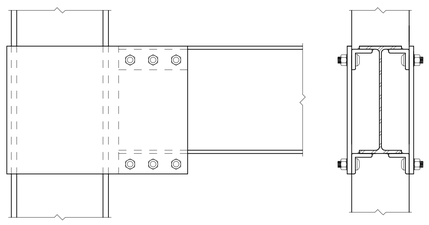
6 FIELD BOLTING DETAIL
N.T.S.



ID	ERECTION DESIGN (INCHES)			
	BEAM	BOLT		
	SHAPE	DIAMETER	HORIZONTAL #	TOTAL # PER BEAM END
A49, B49	W30X90	1 1/8	3	12
A58, B58	W30X108	1 1/8	4	16
B59, A59	W30X108	1 1/8	5	20
A88, B88	W33X118	1 1/8	6	24
B89	W33X118	1 1/8	7	28
B118	W33X169	1 1/8	6	24
A119, B119	W33X169	1 1/8	7	28

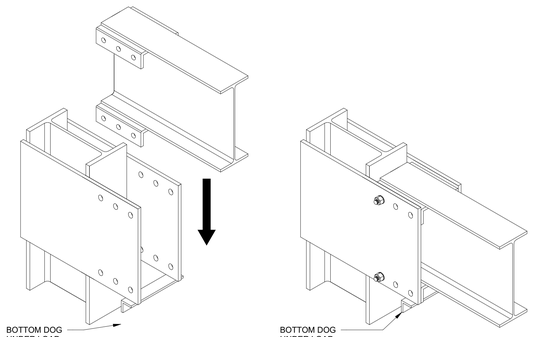
5 BEAM INSTALLATION DETAIL
N.T.S.





TYPICAL SEQUENCE OF ERECTION:
1. LOWER THE BEAM INTO PLACE FROM ABOVE.
2. STUFF A FEW BOLTS TO SECURE ASSEMBLY.
3. **BOTTOM DOG SHALL BE REMOVED.** IT IS RECOMMENDED THAT IT BE REMOVED BY TORCH CUTTING A "V" SECTION OUT OF ONE OF THE ANGLE LEGS TO ALLEVIATE THE LOAD AND THEN PROCEED TO REMOVE IT. **IT IS NOT RECOMMENDED TO USE A GRINDING WHEEL TO REMOVE THE WELDS WHILE THE DOG IS UNDER LOAD!**
4. BOLTS SHALL BE STUFFED INTO HOLES IN THE SIDE PLATES (A).
5. SYSTEMATICALLY TIGHTEN BOLTS PER RCSC SPECIFICATIONS.
6. THE WELD REMNANTS OF THE BOTTOM DOG MAY REMAIN IN PLACE AND DO NOT NEED TO BE GROUND SMOOTH.

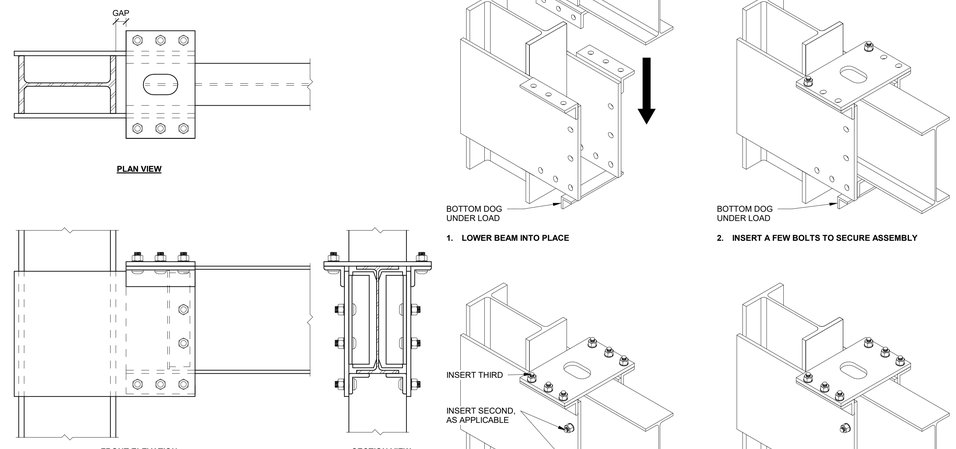
4 NARROW BEAM ERECTION SCHEDULE
N.T.S.



3 NARROW BEAM ERECTION DETAIL
N.T.S.

ID	ERECTION DESIGN (INCHES)			
	BEAM	BOLT		
	SHAPE	DIAMETER	HORIZONTAL #	TOTAL # PER BEAM END
A10, B10	W21X122	1 1/8	5	20
A20	W24X94	1 1/8	3	12
A30	W24X176	1 1/8	7	28
A40, B40, B41	W30X90	1 1/8	3	12
A42, B42	W30X90	1 1/8	6	24
A50, B50	W30X108	1 1/8	3	12
A51, B51	W30X108	1 1/8	4	16
B52, A52	W30X108	1 1/8	5	20
B60, A60	W30X116	1 1/8	5	20
A61, B61	W30X116	1 1/8	6	24
B70	W33X118	1 1/8	5	20
B71	W33X118	1 1/8	6	24
A80, B80	W33X118	1 1/8	7	28
B90	W33X130	1 1/8	5	20
B91, B100, A100, B101, A101	W33X130	1 1/8	6	24
A102, B102	W33X130	1 1/8	8	32
B110	W33X169	1 1/8	6	24
B111	W33X169	1 1/8	7	28
A120, B120	W33X169	1 1/8	6	30
B130	W33X201	1 1/8	6	30
A140	W33X201	1 1/8	7	34
B140	W33X201	1 1/8	7	36
A150, B150	W33X221	1 1/8	7	34
C200	W24X84	1 1/8	3	12
	W30X90	1 1/8	3	12
C210	W24X94	1 1/8	3	12
	W30X90	1 1/8	4	16
C220	W24X103	1 1/8	3	12
	W30X108	1 1/8	4	16
C230	W24X103	1 1/8	3	12
	W30X116	1 1/8	4	16
C240	W24X162	1 1/8	7	28
	W33X130	1 1/8	7	28
C250, C260	W24X162	1 1/8	6	30
	W33X201	1 1/8	6	30
C270	W24X176	1 1/8	6	24
	W30X108	1 1/8	5	20
C280	W24X176	1 1/8	6	24
	W30X116	1 1/8	5	20
C290	W24X176	1 1/8	6	24
	W33X130	1 1/8	6	24
C300	W24X176	1 1/8	6	28
	W33X221	1 1/8	7	34

2 BEAM ERECTION SCHEDULE
N.T.S.



TYPICAL SEQUENCE OF ERECTION:
1. LOWER THE BEAM INTO PLACE FROM ABOVE.
2. INSERT A FEW BOLTS TO SECURE ASSEMBLY.
3. **BOTTOM DOG SHALL BE REMOVED.** IT IS RECOMMENDED THAT IT BE REMOVED BY TORCH CUTTING A "V" SECTION OUT OF ONE OF THE ANGLE LEGS TO ALLEVIATE THE LOAD AND THEN PROCEED TO REMOVE IT. **IT IS NOT RECOMMENDED TO USE A GRINDING WHEEL TO REMOVE THE WELDS WHILE THE DOG IS UNDER LOAD!**
4. BOLTS SHALL BE INSERTED INTO HOLES IN THE BEAM COVER PLATE (B) AND THE SIDE PLATES (A).
5. SYSTEMATICALLY PRE-TENSION BOLTS PER RCSC SPECIFICATIONS.
6. THE WELD REMNANTS OF THE BOTTOM DOG MAY REMAIN IN PLACE AND DO NOT NEED TO BE GROUND SMOOTH.

1 BEAM ERECTION DETAIL
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS
2727 Paces Ferry Road SE
Building Two, Suite 1400
Atlanta, Georgia 30339
T 770.432.9400 F 770.432.9934

SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

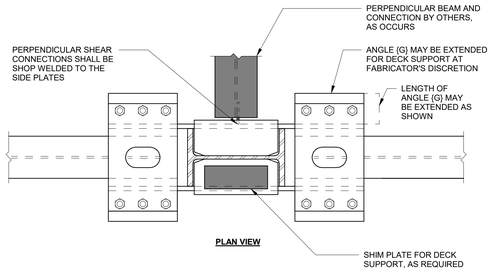
SIDEPLATE FIELD ERECTION DETAILS

SHEET NUMBER

SP107

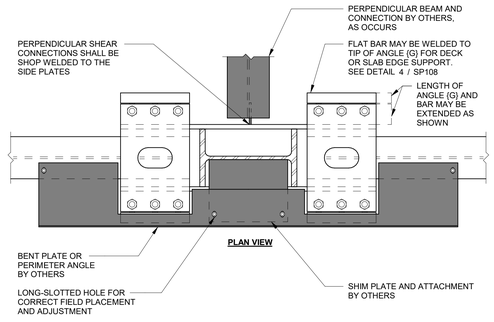
NOT FOR CONSTRUCTION

6/6/2024 9:09:28 AM



NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE DECK SUPPORT.

12 (OPTIONAL) DECK SUPPORT DETAIL
N.T.S.



NOTE(S):
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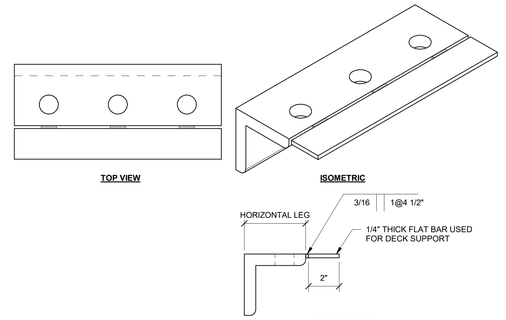
8 (OPTIONAL) WELDED FLAT BAR FOR SLAB EDGE SUPPORT DETAIL
N.T.S.



NOTE(S):
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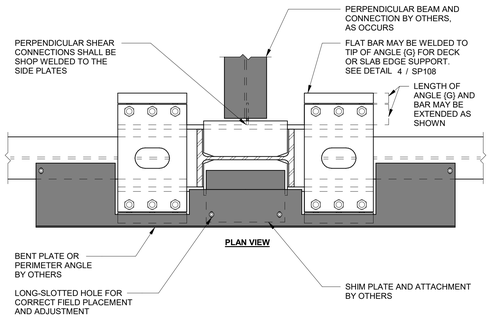
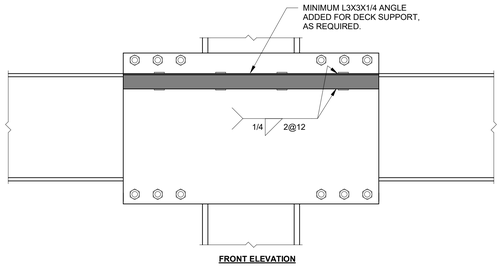
4 (OPTIONAL) WELDED FLAT BAR TO ANGLE {G} FOR DECK SUPPORT
N.T.S.



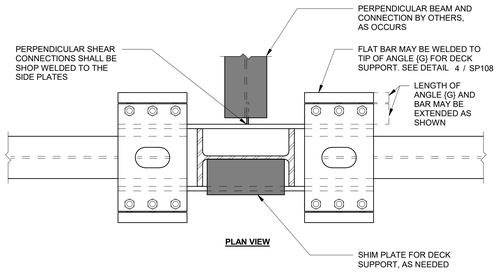
NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE DECK SUPPORT.

15 (OPTIONAL) WELDED FLAT BAR FOR SLAB EDGE SUPPORT DETAIL
N.T.S.



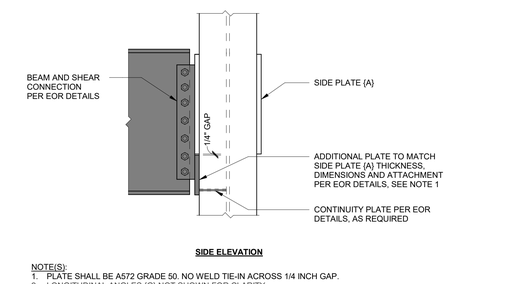
NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE DECK SUPPORT.

11 (OPTIONAL) DECK SUPPORT ANGLE DETAIL
N.T.S.



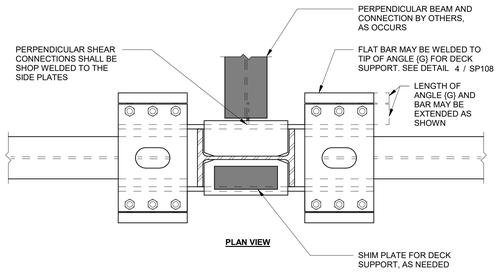
NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE DECK SUPPORT.

7 (OPTIONAL) WELDED FLAT BAR DECK SUPPORT DETAIL
N.T.S.



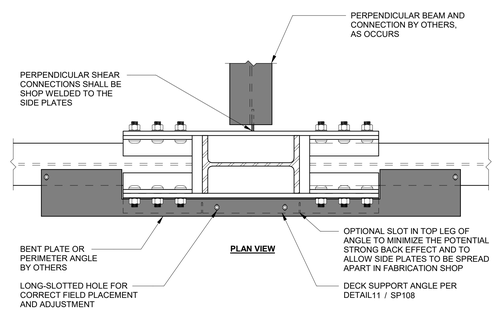
NOTE(S):
1. PLATE SHALL BE A572 GRADE 50. NO WELD TIE-IN ACROSS 1/4 INCH GAP.
2. LONGITUDINAL ANGLES {G} NOT SHOWN FOR CLARITY.
3. SEE SCHEDULE FOR INFORMATION NOT SHOWN.

3 DEEP SHEAR CONNECTION TO SIDEPLATE CONNECTION (AS APPLICABLE)
N.T.S.



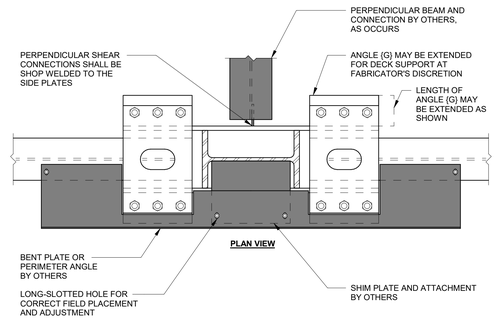
NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE DECK SUPPORT.

14 (OPTIONAL) WELDED FLAT BAR DECK SUPPORT DETAIL
N.T.S.



NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE DECK SUPPORT.

10 (OPTIONAL) NARROW CONFIGURATION SLAB EDGE DETAIL
N.T.S.



NOTE(S):
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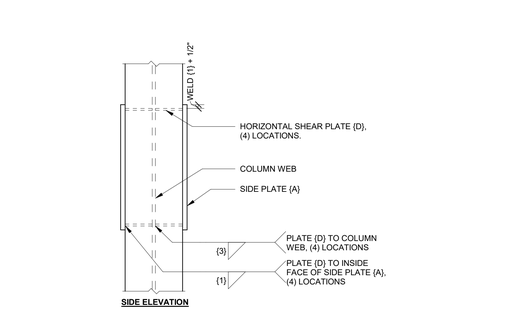
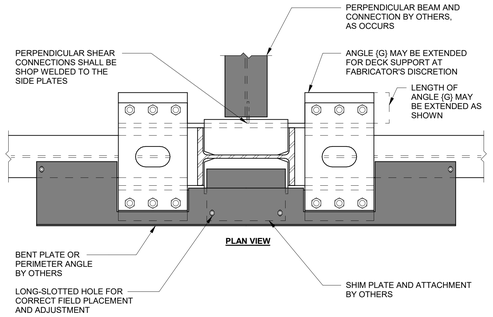
6 (OPTIONAL) SLAB EDGE DETAIL
N.T.S.



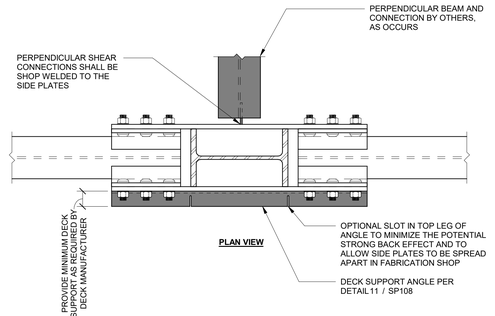
NOTE(S):
1. LONGITUDINAL ANGLES {G} NOT SHOWN FOR CLARITY.

2 PLATE {D} ALTERNATE DETAIL
N.T.S.



NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE DECK SUPPORT.

13 (OPTIONAL) SLAB EDGE DETAIL
N.T.S.



NOTE(S):
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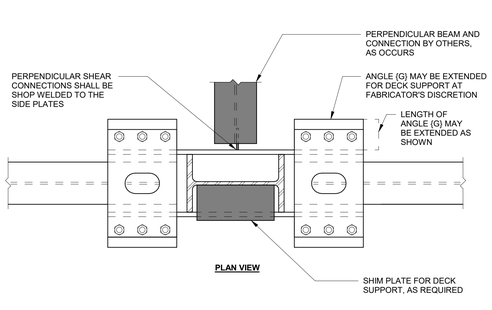
9 (OPTIONAL) NARROW CONFIGURATION DECK SUPPORT DETAIL
N.T.S.



NOTE(S):
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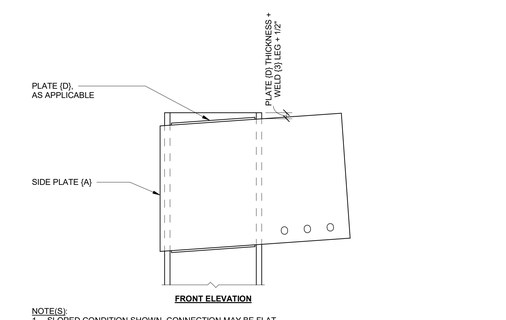
5 (OPTIONAL) DECK SUPPORT DETAIL
N.T.S.



NOTE(S):
1. SLOPED CONDITION SHOWN, CONNECTION MAY BE FLAT.
2. LONGITUDINAL ANGLES {G} NOT SHOWN FOR CLARITY.

1 DISCONTINUOUS COLUMN DETAIL
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS
2727 Paces Ferry Road SE
Building Two, Suite 1400
Atlanta, Georgia 30339
T 770.432.9400 F 770.432.9934

SEAL

CONSULTANT

PRINT RECORD

NUMBER	DATE	DESCRIPTION
	06/10/24	PRICING SET

PROJECT INFORMATION

BUILD-TO-SUIT

PROJECT WHALE

101 VITAMIN DRIVE
WILMINGTON, NC, 28401

SEEFRIED INDUSTRIAL PROPERTIES

DATE	PROJECT NO
- -	2024-013

SHEET TITLE

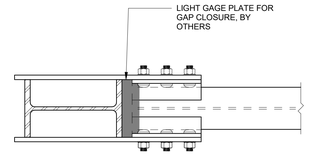
SIDEPLATE COORDINATION ITEMS

SHEET NUMBER

SP108

NOT FOR CONSTRUCTION

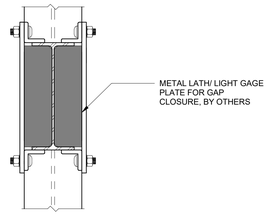
6/6/2024 9:09:28 AM



PLAN VIEW

NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE GAP CLOSURE.
2. SEE GENERAL NOTES FIREPROOFING SECTION FOR MORE DETAILS.

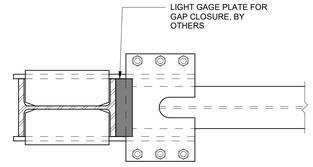
4 (OPTIONAL) GAP CLOSURE DETAIL
N.T.S.



SECTION VIEW

NOTE(S):
1. THE STEEL DETAILER SHOULD CONFIRM AND COORDINATE WITH THE GENERAL CONTRACTOR AND/OR STEEL FABRICATOR WHICH PREFERRED OPTION OR PROJECT SPECIFIC CRITERIA TO USE FOR THE GAP CLOSURE.
2. SEE GENERAL NOTES FIREPROOFING SECTION FOR MORE DETAILS.

3 (OPTIONAL) NO VSE BEAM GAP CLOSURE DETAIL
N.T.S.



PLAN VIEW

NOTE(S):
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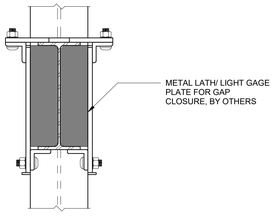
2. SEE GENERAL NOTES FIREPROOFING SECTION FOR MORE DETAILS.

2 (OPTIONAL) GAP CLOSURE DETAIL
N.T.S.



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NOTE(S):
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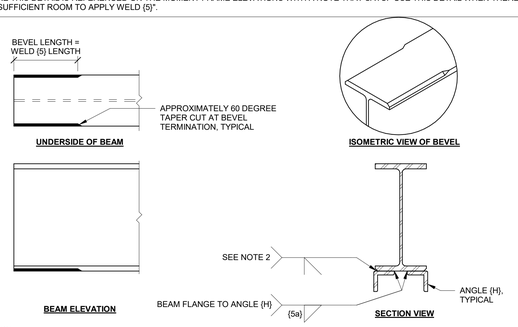
2. SEE GENERAL NOTES FIREPROOFING SECTION FOR MORE DETAILS.

1 (OPTIONAL) NO VSE BEAM GAP CLOSURE DETAIL
N.T.S.

NOTE: SINCE THE DIFFERENCE BETWEEN THE NOMINAL COLUMN FLANGE AND NOMINAL BEAM FLANGE WIDTH IS LESS THAN 1 1/2 INCHES, THERE MAY BE A NEED TO APPLY THIS DETAIL DEPENDING ON THE ACTUAL CONDITIONS OF THE MEMBERS BEING USED IN THE FABRICATION SHOP (I.E. WEB OFFSET, ANGLE APEX, MILL TOLERANCES, ETC.). BECAUSE SUCH CONDITIONS ARE NOT KNOWN UNTIL THE TIME OF FABRICATION, THE DETAILER SHOULD DETAIL THE CONNECTION WITH THE STANDARD FILLET WELD {5}, AND NOT THIS DETAIL.

TO PROVIDE DIRECTION TO THE FITTER/FABRICATOR, THE DETAILER SHALL DIRECTLY COPY THIS DETAIL ONTO THE BEAM SHOP DRAWING WHERE THIS DETAIL IS REFERENCED ON THE MOMENT FRAME ELEVATIONS WITH A NOTE THAT SAYS: "USE THIS DETAIL WHEN THERE IS NOT SUFFICIENT ROOM TO APPLY WELD {5}".



NOTE(S):
1. FOR NARROW CONFIGURATIONS, TOP FLANGE OF BEAM SHALL ALSO BE BEVELED.
2. BEVEL SUCH THAT EFFECTIVE PJP WELD SIZE IS EQUIVALENT TO THE EFFECTIVE THROAT OF SCHEDULED FILLET WELD {5} SIZE.

5 PJP WELD {5} DETAIL
N.T.S.

MACGREGOR ASSOCIATES ARCHITECTS

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DATE	PROJECT NO
- -	2024-013

SHEET TITLE

SIDEPLATE MISCELLANEOUS DETAILS

SHEET NUMBER

SP109

NOT FOR CONSTRUCTION

6/6/2024 9:09:29 AM