


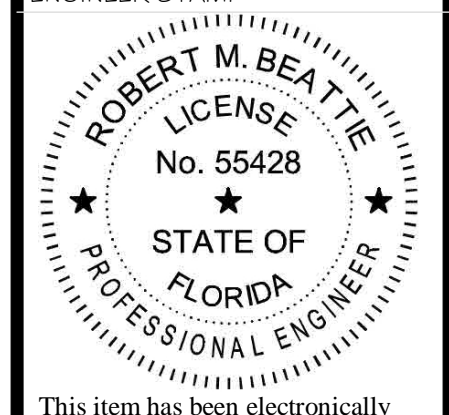
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ENGINEER STAMP



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08/04/2023
 Digitally signed by Robert Beattie Date: 2023.08.04 16:05:04 EDT

ENGINEER

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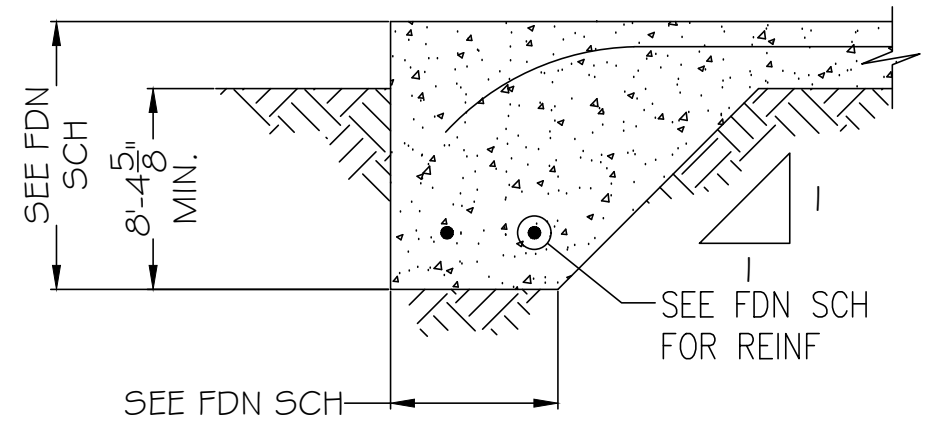
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SHEET TITLE

FOUNDATION NOTES

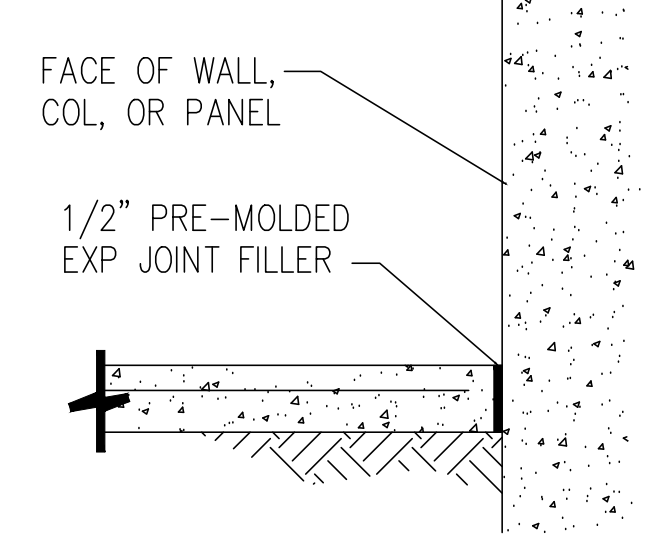
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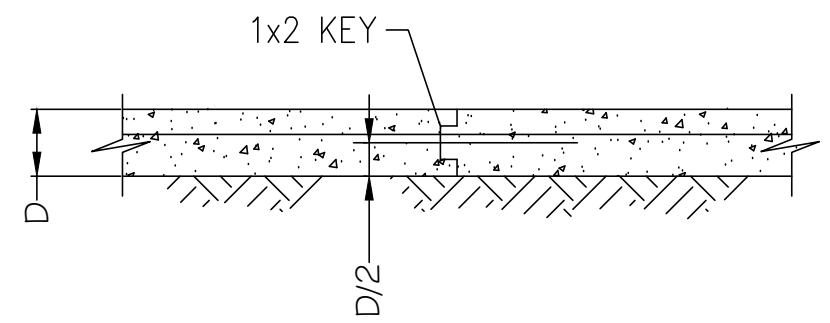


TURNED-DOWN SLAB (TDS)

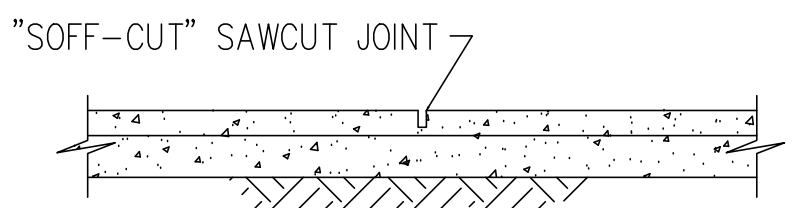
(SEE FDN SCH FOR SIZE AND REINF)



EXPANSION JOINT (EJ)



CONSTRUCTION JOINT (CJ), KEYED

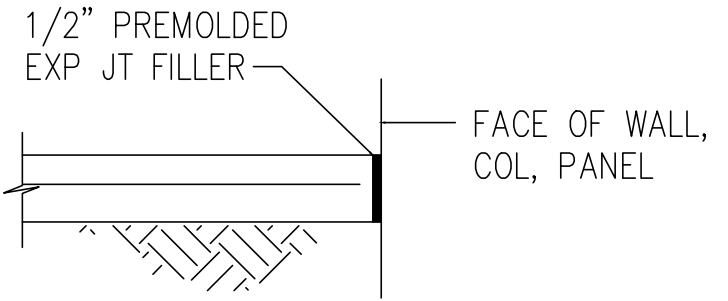


- NOTES:
- CUT SLAB AS SOON AS AGGREGATE DOES NOT DISLODGE (MUST BE WITHIN SAME DAY AS CONCRETE PLACEMENT).
 - PLACE REINFORCING 1 1/2" CLEAR.
 - HAND-TOOL JOINT TO FACE OF WALL WHERE SAWCUT DOES NOT REACH.

SAWCUT JOINT (SJ)

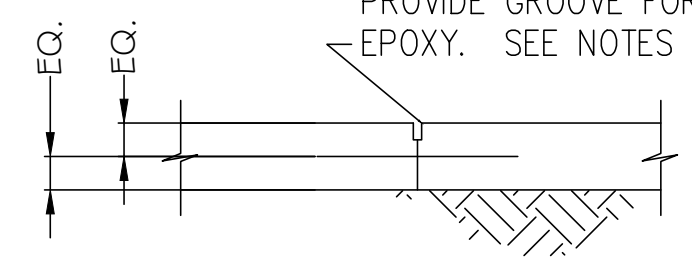
SCALE: # SECTION
 N.T.S. # # (SLAB ON GRADE - 4" SLAB)

- SEMI-RIGID EPOXY NOTES
- SEMI-RIGID EPOXY SHALL BE PROVIDED IN CONSTRUCTION & SAWCUT JOINTS WHERE EXPOSED TO TRAFFIC. EPOXY SHALL BE MM80 BY METZGER/McGUIRE OR EUCCO 700 BY EUCLID.
 - CONCRETE SHALL AGE A MINIMUM OF 90 DAYS. CHASE THE JOINT WITH A CONCRETE SAW AND BLOW CLEAN W/ COMPRESSED AIR.
 - USE BACKER ROD TO CREATE VERTICAL DAM AT EA END OF THE LEG TO BE FILLED. DO NOT USE BACKER ROD AT THE BOTTOM OF THE JOINT.
 - LEAVE THE SURFACE CROWNED AND GRIND FLUSH AFTER IT HAS HARDENED.



EJ (EXPANSION JOINT)

SQUARE EDGE JT (RUB FINIS OFF 1st POUR BEFORE 2nd POUR IS MADE) LATER SAWCUT JOINT 1" DEEP TO PROVIDE GROOVE FOR SEMI-RIGID EPOXY. SEE NOTES THIS DETAIL

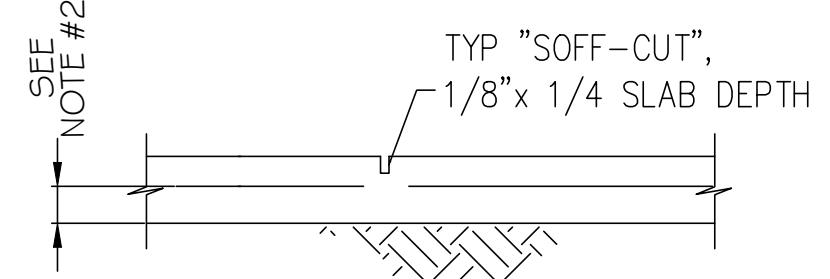


- NOTES:
- USE SMOOTH DWL W/ PROJECTED END COATED TO PREVENT BOND. SEE SCHEDULE BELOW.
 - REINF NOT SHOWN FOR CLARITY. DISC. REINF @ JOINT.
 - APPLY BOND BREAKER TO VERT SURFACE OF JOINT.

SMOOTH DOWEL SCHEDULE			
SLAB DEPTH (IN)	DIAMETER (IN)	TOTAL LENGTH (IN)	SPACING C TO C (IN)
5	5/8	12	16
6	3/4	14	16
7	7/8	14	16
8	1	14	18
9	1 1/8	16	18
10	1 1/4	16	18

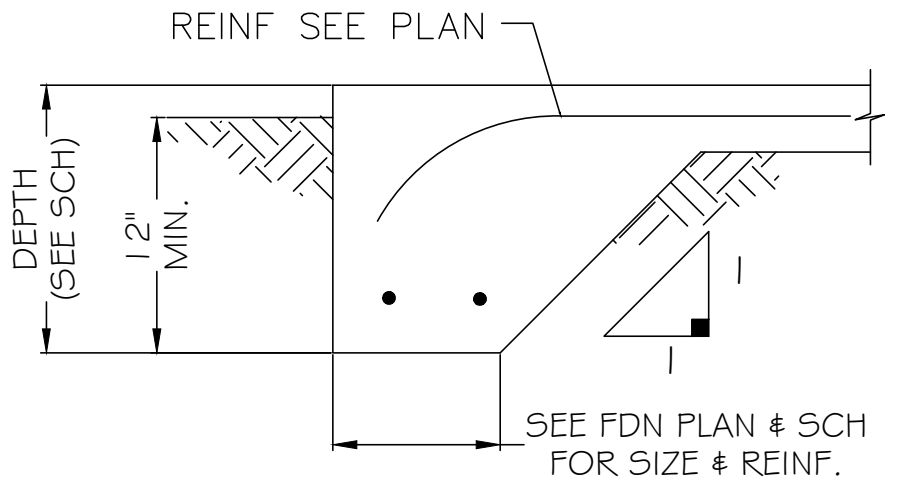
NOTE: DWLS SHALL BE CUT TO LENGTH NOT SHEARED. GRIND ANY BURRS SMOOTH FROM PROJECTED END.

CJ (CONSTRUCTION JOINT - DOWELLED)



- NOTES:
- CUT WITHIN SAME DAY OF SLAB PLACEMENT.
 - PLACE REINF 1/3 SLAB DEPTH FOR SLABS GREATER THAN 5", 1 1/2" CLR FOR SLABS 5" OR LESS.
 - SEE SEMI-RIGID NOTES THIS DTL.

SJ (SAWCUT JOINT)



TDS (TURNED DOWN SLAB)
 (SEE FOUNDATION SCHEDULE)

SCALE: # SECTION
 N.T.S. # # (SLAB ON GRADE - 5" & THICKER)

FOUNDATION NOTES

GENERAL

1. THESE PLANS AND THE INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF METAL BUILDING COMPANY, UNAUTHORIZED COPYING, DISCLOSURE OR OTHER UNAUTHORIZED USES ARE PROHIBITED.
2. OWNER / CONTRACTOR IS RESPONSIBLE TO PROVIDE METAL BUILDING COMPANY WITH APPROVED PLANS PRIOR TO FABRICATION.
3. OWNER / CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY AND REQUIRED PERMITS, FEES, DEPOSITS, ECT.
4. THE OWNER AND/OR CONTRACTOR SHALL REVIEW AND DETERMINE THAT ALL DIMENSIONS ARE COORDINATED AS REQUIRED WITH ALL OTHER DESIGN PROFESSIONALS DRAWINGS AND SHOP DRAWINGS FOR PROJECT PRIOR TO FABRICATION OF MATERIALS OR THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE METAL BUILDING COMPANY AND ENGINEER OF RECORD.
5. SHOP DRAWING ARE CRITICAL TO ENSURE THE DIMENSIONS AND DESIGN OUTLINED IN THESE PLANS MEET THE MINIMUM REQUIREMENTS REQUIRED BY THESE SCOPES OF WORK IF UNDER CONTRACT BY OTHERS. IN THE EVENT THE CONTRACTOR'S OR OWNER'S FAILING TO PROVIDE, HE SHALL BE RESPONSIBLE FOR THE RESULTS OR ANY SUCH ERRORS OR OMISSIONS AND THE COST OF RECTIFYING THE SAME (EXAMPLES: ELEVATOR, STAIRWELL, DOORS, ETC....).
6. IF ANY ERRORS OR OMISSIONS APPEAR IN THE DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENT, THE OWNER / CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND METAL BUILDING COMPANY IN WRITING OF SUCH OMISSIONS OR ERRORS PRIOR TO PROCEEDING WITH ANY WORK WHICH APPEARS IN QUESTION. EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE COORDINATION BETWEEN THESE DRAWINGS AND THE STRUCTURAL PLANS. IN THE EVENT THE CONTRACTOR'S OR OWNER'S FAILING TO GIVE SUCH NOTICE, THEY SHALL BE RESPONSIBLE FOR THE RESULTS OR ANY SUCH ERRORS OR OMISSIONS AND THE COST OF RECTIFYING THE SAME.
7. ANY OMISSIONS AND/OR CONFLICTS WITH PLANS SHALL BE REPORTED TO METAL BUILDING COMPANY SO THAT THEY CAN BE RESOLVED PRIOR TO PROCEEDING WITH WORK.
8. DO NOT SCALE DRAWINGS - IF A REQUIRED DIMENSION IS MISSING PLEASE CONTACT THE METAL BUILDING COMPANY AND / OR ENGINEER OF RECORD.
9. NO MODIFICATIONS TO PLANS SHALL BE MADE WITHOUT THE PERMISSION OF METAL BUILDING COMPANY AND ENGINEER OF RECORD. MODIFICATIONS REQUIRED DUE TO FIELD CONDITIONS OR OTHER CONTRACTORS OR ITEMS THAT WHICH MAY ADVERSELY AFFECT THE STRUCTURE REQUIRES WRITTEN PERMISSION (NO MODIFICATIONS TO STRUCTURAL MEMBERS IS ALLOWED).
10. ALL SECTIONS AND DETAILS SHALL BE CONSIDERED TO BE TYPICAL OR SIMILAR UNLESS ANOTHER SECTION OR DETAIL IS REFERENCED ON THE PLANS.
11. SCOPE OF WORK OF METAL BUILDING COMPANY IS INDICATED IN THE CONTRACT. THE DRAWINGS REFLECT SCOPES OF WORK AS REQUIRED FOR PERMITTING OR AT THE DIRECTION OF OWNER / CONTRACTOR.
12. SUBMITTALS TO THE ENGINEER OF RECORD FOR REVIEW MUST CONTAIN THE CONTRACTOR'S OR OWNER'S STAMP SIGNIFYING THEIR REVIEW / ACCEPTANCE. SUBMITTALS SENT WITHOUT WILL BE RETURNED AT THEIR EXPENSE WITHOUT REVIEW. A MAX. OF THREE SETS ADDITIONAL SETS WILL BE DISCARDED.
13. THE CONTRACTOR OR OWNER SHALL TAKE ALL NECESSARY STEPS TO PROTECT THE STRUCTURE, THE WORK PERSONS AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION.

DESIGN CRITERIA

CONSTRUCTION DOCUMENTS WERE DESIGNED AND MEET THE REQUIREMENTS OF THE OF THE LOCAL BUILDING CODE DESIGNATED UNDER STRUCTURAL DESIGN CRITERIA. (SEE STRUCTURAL PLANS FOR DESIGN LOADS).

FOUNDATIONS

1. CONFORMANCE WITH THE REQUIREMENTS OUTLINED IN THE GEOTECHNICAL SOILS REPORT SHALL BE DETERMINED BY PERFORMING INDUSTRY STANDARD SOIL DENSITY TESTS BY A CERTIFIED TESTING AGENCY.
2. IF SUBSURFACE INVESTIGATION FOR FOUNDATIONS HAS NOT BEEN PERFORMED AND GEOTECHNICAL ENGINEERING REPORT WAS NOT AVAILABLE FOR FOUNDATION DESIGN. PRIOR TO CONSTRUCTION, THE OWNER SHALL RETAIN THE SERVICES OF A QUALIFIED GEOTECHNICAL ENGINEER TO PERFORM SOILS BORINGS, PROVIDE RECOMMENDATIONS FOR FOUNDATION DESIGN (INCLUDING NET ALLOWABLE SOIL BEARING PRESSURE) PROVIDE EARTHWORK CONSTRUCTION CRITERIA AND PERFORM SOIL TESTING DURING CONSTRUCTION. THE OWNER / CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL EARTHWORK OPERATIONS IN STRICT ACCORDANCE WITH THIS REPORT. IF THE FOUNDATION RECOMMENDATIONS AND NET ALLOWABLE SOIL BEARING CAPACITY OR ANY OTHER ASSUMPTIONS (SEE BELOW) DIFFER FROM THE ASSUMED VALUE, THEN MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE REQUIRED. SHOULD THIS OCCUR, THE OWNER / CONTRACTOR SHALL STOP CONSTRUCTION AND NOTIFY METAL BUILDING COMPANY AND THE ENGINEER OF RECORD IMMEDIATELY.
3. FOUNDATION PLANS HAVE BEEN DESIGNED WITH THE FOLLOWING ASSUMPTIONS IN THE ABSENCE OF A SUBSURFACE INVESTIGATION BY A GEOTECHNICAL ENGINEER. NET ALLOW. SOIL BEARING PRESSURE OF 2,000 PSF.
4. CONDITIONS DISCOVERED BY THE CONTRACTOR AND/OR GEOTECHNICAL FIELD REPRESENTATIVE DURING EXCAVATION WHICH MAY PREVENT THE ATTAINMENT OF THE ALLOWABLE BEARING PRESSURE STATED IN THE GEOTECHNICAL SOILS REPORT, SHALL BE REPORTED TO THE ENGINEER.
5. THE SHEETLEDGES, RAINPITS AND MASONRY LEDGES ARE VITAL TO THE PROPER FIT OF THE STEEL CONSTRUCTION. OWNER / CONTRACTOR SHALL FIELD VERIFY ALL TO BE AS SHOWN ON PLANS. IF THEY ARE NOT TO THE DRAWINGS CONTACT METAL BUILDING COMPANY PRIOR TO FABRICATION OR BEFORE STEEL ERECTION STARTS.
6. ALL ISOLATED PAD FOOTING ARE TO BEAR A MINIMUM OF 1'8" BELOW THE TOP OF CONCRETE SLAB / PAVEMENT OR A MINIMUM OF 1'2" BELOW FINISHED GRADE U.N.O. ON PLANS.
7. THE MINIMUM BEARING WIDTH OF CONTINUOUS FOOTINGS SHALL NOT BE LESS THAN 1'2" UNLESS SPECIFICALLY NOTED IN GEOTECHNICAL ENGINEERING REPORT.
8. PLANS AND DETAILS REFLECT A DESIGN TO ACCOMMODATE A MAXIMUM FROST PROTECTION OF 1'2" UNLESS NOTED OTHERWISE IN THE CONSTRUCTION DOCUMENTS. IF THE REQUIRED FROST DEPTH EXCEEDS 1'2" THAN ENGINEER OF RECORD SHALL BE NOTIFIED PRIOR TO EXCAVATION OR FOUNDATIONS.

SLAB ON GRADE

UNLESS SPECIFICALLY STATED OTHERWISE IN THE GEOTECHNICAL SOILS REPORT, THE FOLLOWING MINIMUM CRITERIA SHALL BE ADHERED TO.

- INTERIOR FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY TEST (ASTM D 1557).
- COMPACTION OF THE SOIL IN THE FIELD SHALL BE MONITORED/CONTROLLED BY A REPRESENTATIVE OF A QUALIFIED LABORATORY.
- EACH LAYER OF FILL SHALL NOT EXCEED 1'2" THICK AND SHALL BE COMPACTED PRIOR TO PLACEMENT OF THE NEXT LAYER.

MAXIMUM SPACING OF CONTROL JOINTS SHALL BE AS SHOWN IN THE TABLE BELOW. PATTERNS SHALL BE APPROXIMATELY SQUARE W/ RATIO OF LONG SIDE TO SHORT SIDE NOT TO EXCEED 1.5 TO 1.0.

SLAB THICKNESS (IN) -	4	5	6	7	8	9	10
SPACING (FT)	12	13	15	18	20	23	25

MIX DESIGNS CONTAINING AGGREGATE LESS THAN 3/4" ARE NOT ACCEPTABLE

CUT SLAB AS SOON AS AGGREGATE DOES NOT DISLODGE (MUST BE WITHIN THE SAME DAY AS THE CONC. WAS PLACED)

CARE SHALL BE TAKEN BY THE GENERAL CONTRACTOR WHEN DETERMINING THE LOCATION OF SJS AND CJS TO ENSURE SLAB JOINTS DOES NOT READ THROUGH THE ARCHITECTURAL FINISHES.

WAREHOUSE SLABS SHALL BE POWER-TROWELLED TO A HARD, SMOOTH BURNISHED FINISH. THE FINAL TROWEL PASS SHALL BE DONE BY MACHINE - NOT BY HAND. WITHIN 30 MINUTES OF THE FINAL TROWEL PASS, THE FLOOR SHALL BE CURED WITH EUCLID'S SUPER REZ-SEAL OR APPROVED EQUIV, WHICH MAY BE WAIVED AT THE OWNERS OPTION.

SLAB THICKNESS SHALL BE INCREASED AS REQUIRED TO PROVIDE ADEQUATE SUPPORT FOR CRANE LOADS WITHOUT CRACKING SLAB.

ALL CONCRETE SLABS ON GRADE SHALL BE A MINIMUM OF 4" THICK AND BE REINFORCED WITH 6 X 6 W1.4 X W1.4 EXCEPT WERE SPECIFICALLY NOTED ON PLANS. FIBERMESH CONCRETE INSTEAD OF WIRE MESH IS AN ACCEPTABLE ALTERNATE ON SINGLE STORY BUILDING AND MULTISTORY BUILDING WITHOUT LOAD BEARING FLOOR FADS. FIBERMESH SHALL BE IN COMPLIANCE WITH ASTM C-1116 TYPE III AND ASTM C 1116 LEVEL 1 AND SHALL BE PLANT BATCH MIX WITH PROPORTIONS OF 1.5 POUNDS OF FIBERMESH PER CUBIC YARD OF CONCRETE.

PLACE A MINIMUM 6 MIL POLYETHYLENE VAPOR BARRIER (LAPPED A MIN. OF 6') OVER COMPACTED SOIL BETWEEN FOUNDATION AND SLAB UNLESS NOTED OTHERWISE IN GEOTECHNICAL ENGINEERS REPORT FOR THE PROJECT.

THE VALUES IN THE TABLE SHOWN BELOW IS FROM THE VULCRAFT METAL DECK PRODUCT MANUAL AND REPRESENTS THE RECOMMENDED WELDED WIRE FABRIC.

DECK TYPE	TOTAL SLAB DEPTH	RECOMMENDED WELDED WIRE FABRIC
1.5VLVL10R	<= 4 3/4"	6 X 6 - W1.4 X W1.4
1.5VLVL10R	> 4 3/4"	6 X 6 - W2.1 X W2.1
2VL	<= 5 1/4"	6 X 6 - W1.4 X W1.4
2VL	> 5 1/4"	6 X 6 - W2.1 X W2.1
3VL	<= 6 1/4"	6 X 6 - W1.4 X W1.4
3VL	> 6 1/4"	6 X 6 - W2.1 X W2.1

- ACCEPTABLE ALTERNATIVES:
- CONCRETE SPECIFIED IN ACCORDANCE WITH ASTM C 1116, TYPE I, CONTAINING STEEL FIBERS MEETING THE CRITERIA OF ASTM A820, TYPE I, TYPE II, OR TYPE V, AT A DOSAGE RATE DETERMINED BY THE FIBER MANUFACTURER FOR THE APPLICATION, BUT NOT LESS THAN 25LB/CYD IS AN ACCEPTABLE ALTERNATIVE TO THE WWF SPECIFIED ABOVE.
 - CONCRETE SPECIFIED IN ACCORDANCE WITH ASTM C 1116, TYPE III, CONTAINING MACROSYNTHETIC FIBERS MEETING THE CRITERIA OF ASTM D7508 AT A DOSAGE RATE DETERMINED BY THE FIBER MANUFACTURER FOR THE APPLICATION, BUT NOT LESS THAN 4LB/CYD IS AN ACCEPTABLE ALTERNATIVE TO THE WWF SPECIFIED ABOVE.

CONCRETE:

ALL CONCRETE SHALL HAVE THE FOLLOWING MIN. PROPERTIES:

LOCATION	28 DAY STRENGTH	SLUMP	MAX AGGR.
FOUNDATION	3,000 psi	4" ± 1"	1 1/2"
SLAB-ON-GRADE (UP TO 4" THICK)	3,000 psi	4" ± 1"	1 1/2"
SLAB-ON-GRADE (OVER 4" THICK)	4,000 psi	4" ± 1"	1 1/2"
TIE BEAMS	4,000 psi	4" ± 1"	3/4"
TIE COLUMNS	3,000 psi	4" ± 1"	3/4"
CAST-IN-PLACE BEAMS	4,000 psi	4" ± 1"	1"
CAST-IN-PLACE COLUMNS	4,000 psi	4" ± 1"	1"
EQUIPMENT SUPPORTS	4,000 psi	4" ± 1"	1"
TILT-UP PANELS	4,000 psi	4" ± 1"	1 1/2"
GROUT UNDER TILT-UP PANELS	5,000 psi	8" ± 1 1/2"	3/8"
ELEVATED SLABS FORMED AND POURED	4,000 psi	4" ± 1"	1"
ELEVATED SLABS FORMED W/ MTL DECK	4,000 psi	4" ± 1"	1"
GROUT FOR FILLED CELLS	2,500 psi	8" ± 1 1/2"	3/8"

- NOTES:
- SLUMP FOR RAMPS AND SLOPING SURFACES SHALL NOT EXCEED 4".
 - SEE MASONRY GENERAL NOTES FOR GROUT TESTING REQUIREMENTS.
 - COLD JOINTS ARE NOT RECOMMENDED - ALTHOUGH IF REQUIRED THEY SHOULD BE PLACED A MINIMUM OF 2'-0" OFF CENTERLINE OF COLUMNS.

CONCRETE PROPERTIES SHALL BE VERIFIED THROUGH INDUSTRY STANDARD TESTING PROCEDURES BY A CERTIFIED TESTING AGENCY. MIN. TEST REQUIRED SHALL INCLUDE SLUMP AND CYLINDER BEAKS FOR COMPRESSIVE STRENGTH. FINDINGS SHALL BE SUBMITTED TO THE ARCH.ENG. FOR REVIEW.

CONCRETE WORK SHALL CONFORM TO LATEST EDITIONS OF ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.

CONCRETE MIX DESIGN SHALL MEET THE FOLLOWING CRITERIA:

- PROPOSED MIX DESIGN SHALL BE ACCORDANCE WITH ACI 301 METHOD 1 OR METHOD 2
- ENTRAINED AIR CONTENT SHALL NOT EXCEED 3%.
- ADMIXTURES USED TO ENTRAIN AIR ARE NOT ACCEPTABLE. ALL CONCRETE TO BE NORMAL WIGHT WITH A DESIGN STRENGTH AT 28 DAYS.

SITE ADDED WATER IS NOT ACCEPTABLE. ADDING WATER TO THE MIX WILL RESULT IN REJECTION OF THE RESULTS BY THE ENGINEER OF RECORD.

CONTRACTOR IS RESPONSIBLE FOR THE ADEQUACY OF THE FORMS AND SHORING AND FOR SAFE PRACTICE IN THEIR USE AND REMOVAL.

PLACING OF CONCRETE IN ALL REINFORCED COLUMNS AND WALLS SHALL BE IN LIFTS NOT EXCEEDING 7 1/2 FEET IN HEIGHT. CONCRETE SHALL BE PLACED THROUGH ELEPHANT TRUNK TUBULAR SHUTES LOCATED SUCH THAT THE FREE AIR DROP OF THE MIX DOES NOT EXCEED 6 FEET. ALTERNATE PLACEMENT METHOD OF CONCRETE WITH OR WITHOUT ADMIXTURES SHALL NOT BE USED UNLESS APPROVED BY ENGINEER OF RECORD.

MONOLITHIC SLAB FINISHES

THE FOLLOWING REQUIREMENTS ARE BASED ON THE LATEST FLOOR FLATNESS (FF) / FLOOR LEVELNESS (FL) VALUES/METHODS. BIDS FOR THIS WORK SHALL REFLECT THESE REQUIREMENTS AND ENFORCEMENT THEREOF CAN BE EXPECTED.

- NON-CRITICAL FLOOR TOLERANCE
- FLOAT FINISH (FLT-FN)
 - SPECIFIED OVERALL VALUE: FF25/FL20
 - MINIMUM LOCAL VALUE: FF20/FL17
 - APPLY FLOAT FINISH TO MONOLITHIC SLAB SURFACES THAT ARE TO RECEIVE WOOD FLOORING, CARPET, PAINT, OR OTHER THIN FILM FINISH COATING SYSTEM.
- LARGE ROOMS (601 SF AND OVER) AND PUBLIC AREAS:
- TROWEL FINISH 2 (TR-FN2)
- SPECIFIED OVERALL VALUE: FF30/FL25
 - MINIMUM LOCAL VALUE: FF30/FL22
 - APPLY TROWEL FINISH TO MONOLITHIC SLAB SURFACES THAT ARE TO RECEIVE RESILIENT FLOORING, CARPET, PAINT, OR OTHER THIN FILM FINISH COATING SYSTEM.

ELEVATED SLABS SHALL HAVE A SPECIFIED OVERALL VALUE OF FF22 TO FF27 AND A MINIMUM LOCAL OF FF20 WITH NO FL NUMBER DEFINED.

FLOOR TOLERANCE MEASUREMENTS: FLOOR FLATNESS AND LEVELNESS TESTS ON FLOOR SLABS SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN ASTM E1155-87, WITH THE EXCEPTION OF SUBPARAGRAPHS 7.2.3 AND 7.3.2 WHICH MAY BE WAIVED AT THE OWNERS OPTION. ALSO CALCULATION TO BE USED SHALL BE N MIN = W/10. FLOOR TOLERANCE MEASUREMENTS SHALL BE MADE BY THE INDEPENDENT TESTING LABORATORY WITHIN 24 HOURS AFTER COMPLETION OF THE FINAL TROWELING OPERATION, AND BEFORE FORMS AND SHORES HAVE BEEN REMOVED. MEASUREMENT SHALL BE TAKEN USING A DIPSTICK AUTO-READ FLOOR PROFILER AS MANUFACTURED BY THE EDWARD W. FACE COMPANY, INC. OF NORFOLK, VA. RESULTS OF FLOOR TOLERANCE TESTS, INCLUDING A FORMAL NOTICE OF ACCEPTANCE OR REJECTION OF THE WORK, SHALL BE PROVIDED TO THE CONTRACTOR AND THE ARCHITECT WITHIN 24 HOURS AFTER DATA COLLECTION. OUT-OF-TOLERANCE WORK SHALL BE REPAIRED OR REPLACED AT THE ARCHITECTS DISCRETION AT NO COST TO THE OWNER.

SPECIALTY ENGINEERING REQUIREMENTS

STEEL PAN STAIRS SHALL BE DESIGNED BY A SPECIALTY ENGINEER, HIRED BY THE STEEL FABRICATOR, AND SHALL INCLUDE STRINGERS, TREADS, HAND RAILINGS, PLATFORMS AS REQUIRED, PAN INSERTS, MISC SUPPORTS AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. MINIMUM DESIGN LIVE LOAD SHALL BE 100 PSF.

HANDRAILS, POSTS AND SUPPORT CONNECTIONS SHALL BE DESIGNED BY A SPECIALTY ENGINEER, HIRED BY THE STEEL FABRICATOR. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED & SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. DESIGN LOADING(S) SHALL CONFORM TO AT LEAST THE MINIMUM REQUIREMENTS OF THE APPLICABLE BUILDING CODE. (SEE DESIGN CRITERIA).

MASONRY

MASONRY CONSTRUCTION, MATERIALS, AND INSPECTION SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE LATEST ADOPTED EDITIONS ACI 530 & 530.1, ASCC 5 & 6, TMS 402 & 602, ASTM C476 & C1019, AND NCMC TEK 107, UNLESS SPECIFIED IN THESE CONTRACT DOCUMENTS.

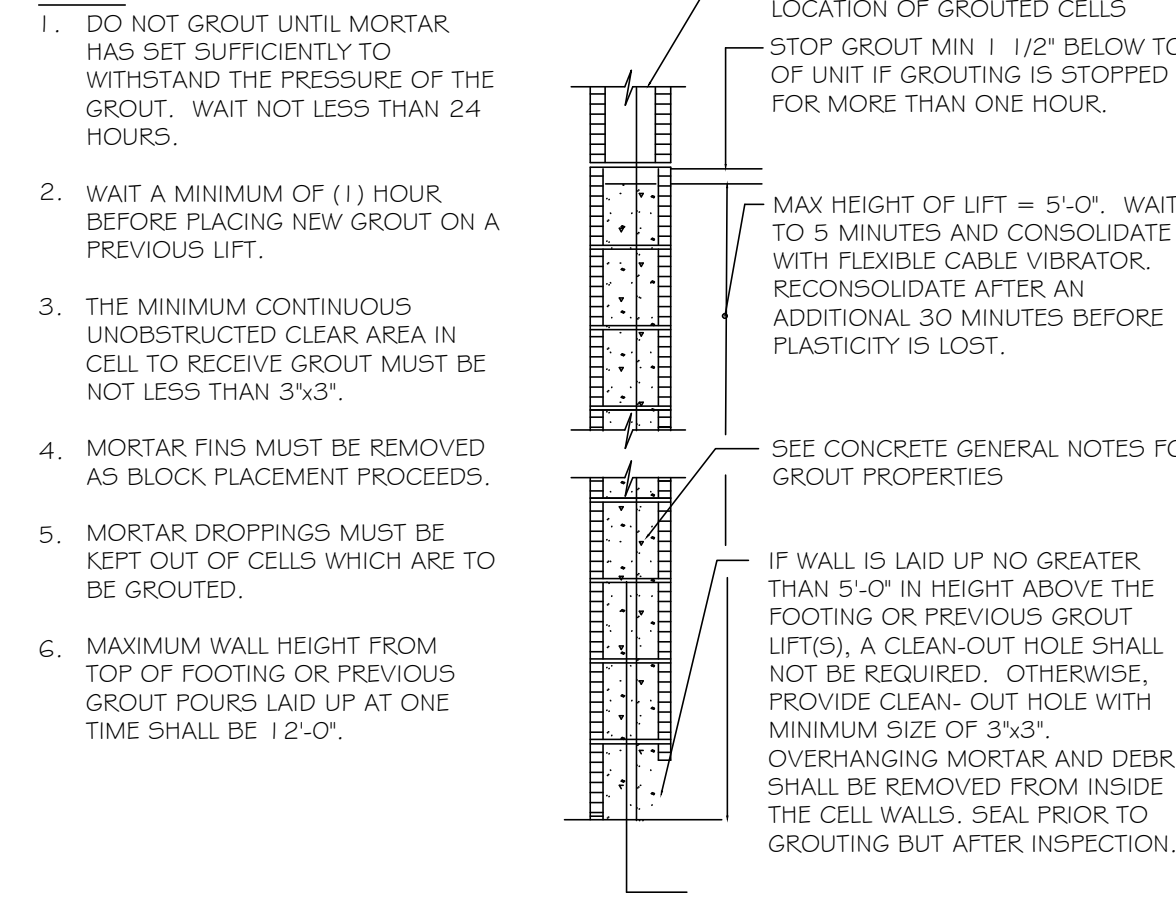
CONCRETE BLOCKS SHALL CONFORM TO THE MINIMUM REQ. OF ASTM C-90 WITH fm=1,500psi (1,900psi ON THE NET AREA)

MORTAR SHALL COMPLY WITH THE MINIMUM REQUIREMENTS OF ASTM C270 FOR TYPE M OR S W/ (COMPRESSIVE STRENGTH = 2500psi AND 1800psi RESPECTIVELY. SITE TESTED MORTAR CUBES SHALL ACHIEVE A MINIMUM OF 80% OF THE DESIGN COMPRESSIVE STRENGTH)

BLOCK SHALL NOT BE MOISTENED BEFORE GROUTING.

ALL CROSS WEBS SHALL BE FULLY BEDDED IN MORTAR AROUND CELLS TO BE GROUTED.

GROUT FOR FILLED CELLS SHALL BE PLACED AS INDICATED BELOW:



GROUTING-DETAIL

IF WALL IS LAID UP NO GREATER THAN 5'-0" IN HEIGHT ABOVE THE FOOTING OR PREVIOUS GROUT LIFT(S), A CLEAN-OUT HOLE SHALL NOT BE REQUIRED, OTHERWISE, PROVIDE CLEAN-OUT HOLE WITH MINIMUM SIZE OF 3"x3". OVERHANGING MORTAR AND DEBRIS SHALL BE REMOVED FROM INSIDE THE CELL WALLS. SEAL PRIOR TO GROUTING BUT AFTER INSPECTION.

STOPPING AND RESUMING WORK: RACK BACK 1/2-UNIT LENGTH IN EACH COURSE. DO NOT TOOTH. CLEAN EXPOSED SURFACES OF SET MASONRY WET UNITS LIGHTLY (IF REQD) AND REMOVE LOOSE MAS UNITS AND MORTAR PRIOR TO LAYING FRESH MASONRY. DO NOT APPLY UNIFORM LOADS TO MASONRY WALLS FOR (3) DAYS. DO NOT APPLY CONCENTRATED LOADS TO MASONRY WALLS FOR (7) DAYS. MAXIMUM CONTROL JOINT SPACING FOR CONCRETE MASONRY UNITS SHALL BE THREE (3) X WALL HEIGHT BUT NO FURTHER THAN SOFT. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.

PROVIDE GROUT FILLED PRECAST 'U-LINTELS' AT ALL OPENINGS WHERE THE CONCRETE BEAMS ARE NOT SHOWN OR NOTED. SEE PRECAST LINTEL SCHEDULE FOR ADDITIONAL REQUIREMENTS W/ MINIMUM UNFILLED LINTEL CAPACITY EQUAL FOUR HUNDRED (400) POUNDS/FOOT FOR SPAN INDICATED.

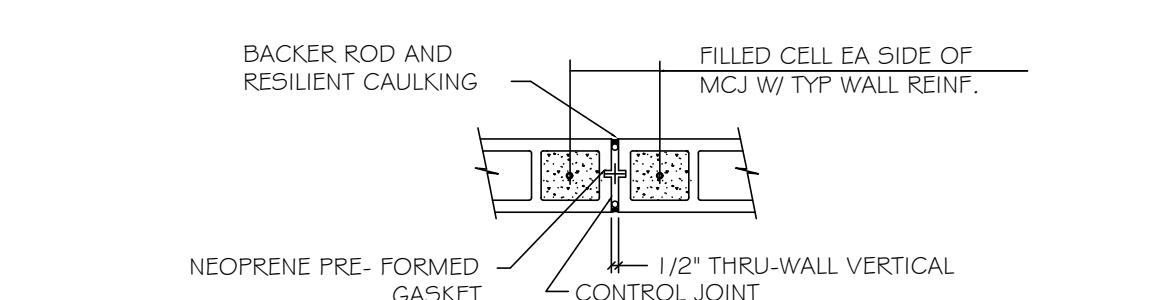
HORIZONTAL REINFORCE WALL WITH LADDER TYPE (ASTM A82, #9 GAGE WIRE) DEFORMED REINFORCEMENT EQUAL TO DURO-WALL IN BED JOINTS AT SIXTEEN (16) INCHES O.C. UNLESS OTHERWISE NOTED ON PLANS MEASURED VERTICALLY.

EXTEND ALL VERTICAL WALL REINFORCING TO WITHIN TWO (2) INCHES OF TOP OF WALL OR BEAM UNLESS OTHERWISE NOTED ON PLANS. TERMINATE REINFORCING WITH STANDARD ACI 90 DEGREE HOOK IF ROOF JOIST AND / OR TRUSSES BEAR ON THE TOP OF WALL. IF A PARAPET EXIST, HOOK IS NOT REQUIRED.

SEE FOUNDATION PLAN FOR ALL VERTICAL REINFORCING REQUIRED TYPICAL VERTICAL REINFORCING SIZE AND SPACING SHALL BE ABOVE AND BELOW ALL WALL OPENINGS.

CONTINUOUS x NOMINAL WALL WIDTH x 16" (MIN.) DEEP BOND BEAMS REINFORCED WITH TWO (2) #5 CONTINUOUS BARS IN EACH COARSE ARE REQUIRED AT EACH FLOOR LEVEL, INTERMEDIATE STAIR LANDING, ROOF BEAM/DECK ATTACHMENT, & TRUSS BEARING LOCATIONS - (TYP. UNO).

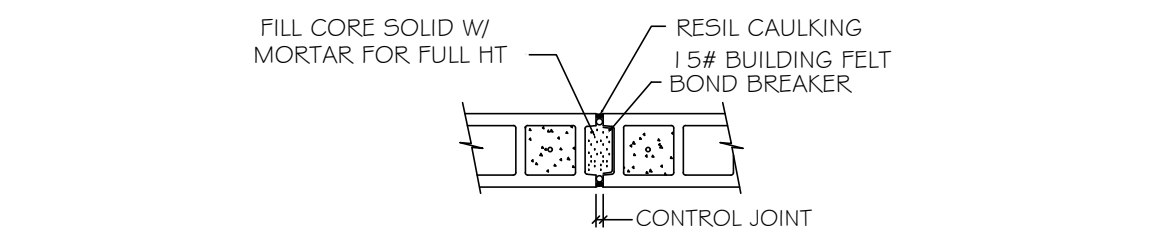
CONTINUOUS x NOMINAL WALL WIDTH x 8" (MIN.) DEEP BOND BEAMS REINFORCED WITH TWO (2) #5 CONTINUOUS BARS ARE REQUIRED AT TIP/ARAPET OR INT. NON-LOAD BRG WALL, T/ KNEEWALL, TIP/ARAPET, AND INT. NON LOAD BRG WALL (TYP., UNO).



- NOTES:
- THRU-WALL JOINT SHALL BE CONTINUOUS WITHOUT INTERRUPTION FROM FOUNDATION TO TOP OF WALL.
 - TERMINATE TYPICAL HORIZONTAL JOINT REINFORCING AT JOINT.
 - MAXIMUM SPACING OF CONTROL JOINTS SHALL BE (3 x WALL HEIGHT) BUT NO FURTHER THAN 30' APART NOR 15' OFF ANY CORNER OR RETURN.

MASONRY CONTROL JT (MCJ)

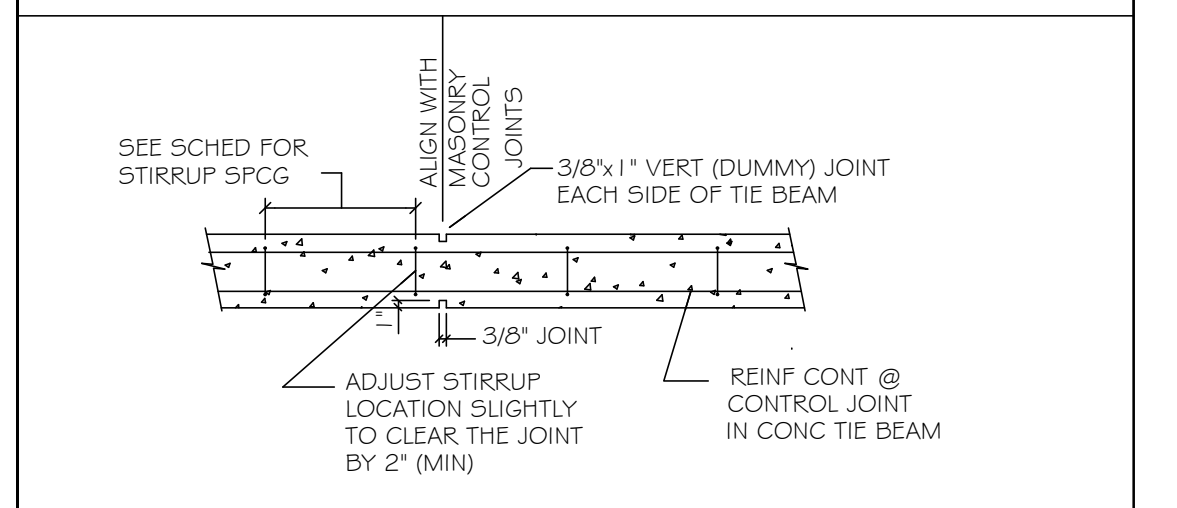
MAXIMUM SPACING OF CONTROL JOINTS SHALL BE (3 x WALL HEIGHT) BUT NO FURTHER THAN 30' APART NOR 15' OFF ANY CORNER OR RETURN.



THE CONTRACTOR MAY USE CONTROL TYPE BLOCK W/ ARCH APPROVAL

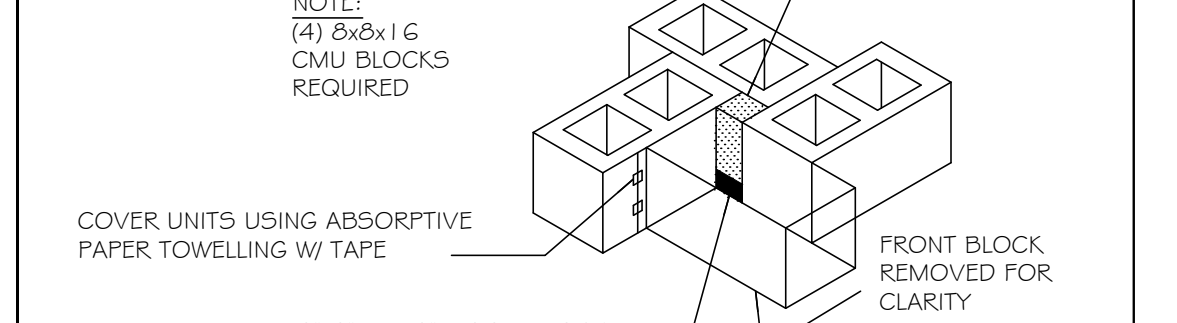
MASONRY CONTROL JT (MCJ) ALTERNATE

TEMPORARY BRACING AND SHORING OF WALLS TO PROVIDE STABILITY DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE OWNER / CONTRACTOR.



MCJ @ TIE BEAM

JOB SITE MIXING OF GROUT SHALL NOT BE PERMITTED. TESTING SHALL CONFORM TO ASTM C 1019. SEE TEST MOLD DETAIL BELOW. SEE SCHEDULE UNDER CONCRETE NOTES FOR COMPRESSIVE STRENGTH AND SLUMP REQUIREMENTS.

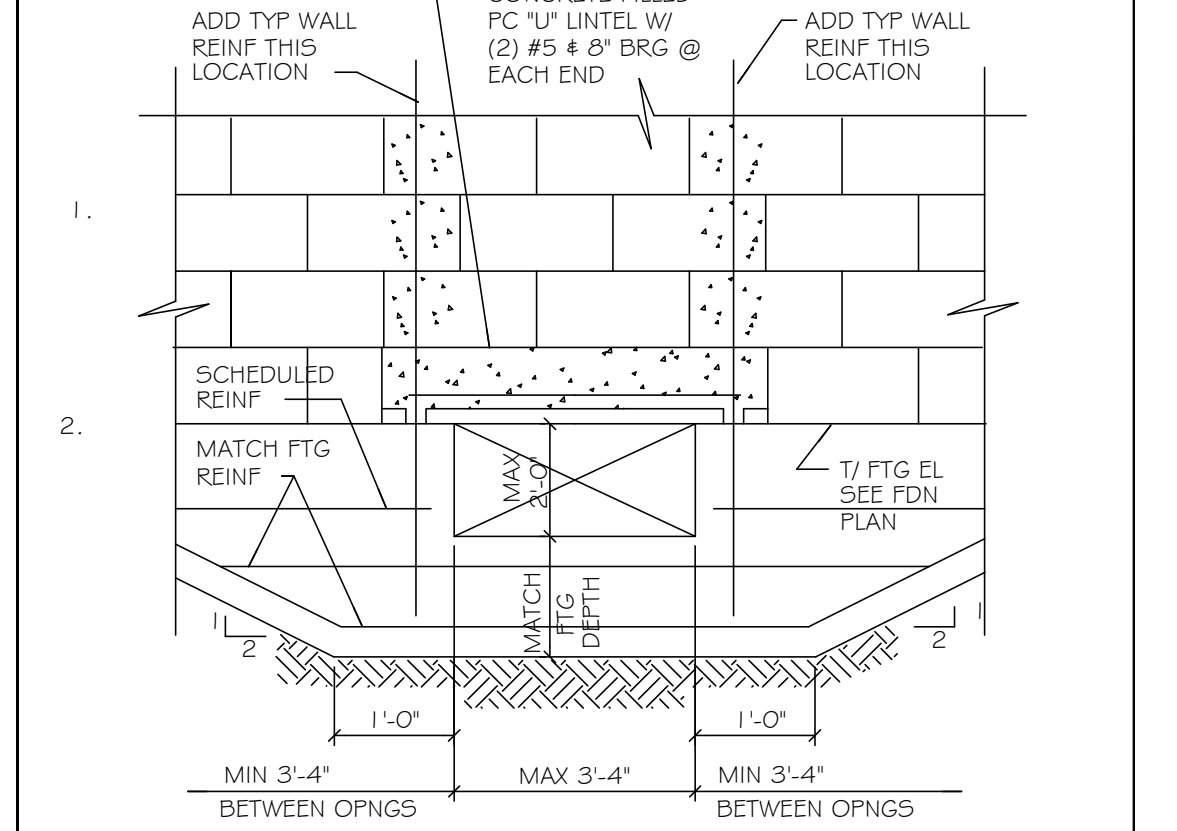


DETAIL MASONRY GROUT TEST MOLD (ASTM C-1019)

MASONRY CONT

TYPICAL MECHANICAL OPENING DETAIL:

NOTE: GC TO CONTACT ENGINEER IF OPENING EXCEEDS SIZE AND AND SPACING SHOWN.



TYP MECH OPNG THRU FTG

TEMPORARY BRACING AND SHORING OF WALLS TO PROVIDE STABILITY DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.

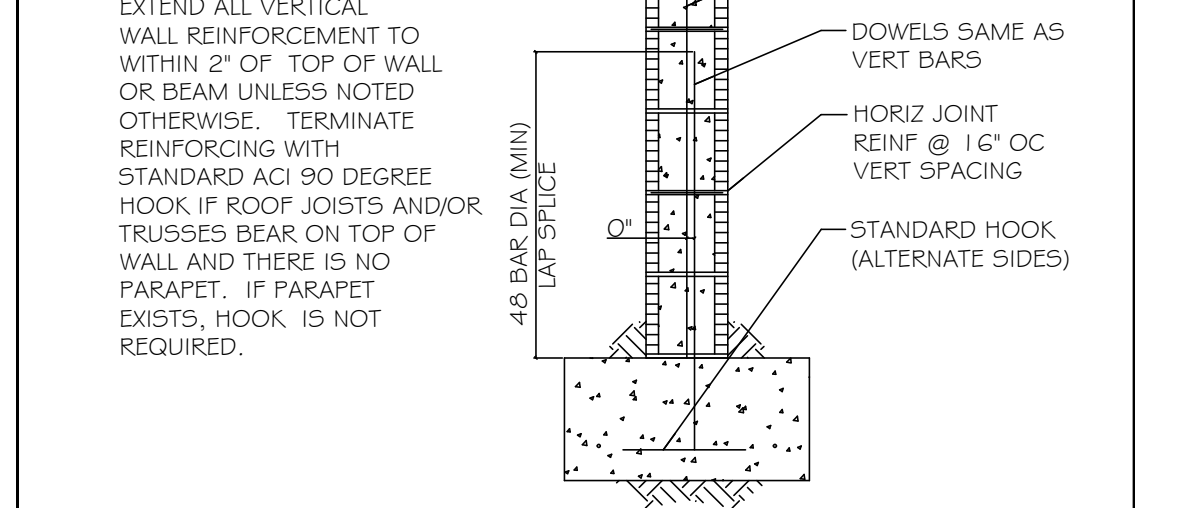
PROVIDE GROUT FILLED PRECAST 'U-LINTELS' AT ALL OPENINGS WHERE THE CONCRETE BEAMS ARE NOT SHOWN OR NOTED. SEE PRECAST LINTEL SCHEDULE FOR ADDITIONAL REQUIREMENTS W/ MINIMUM UNFILLED LINTEL CAPACITY EQUAL FOUR HUNDRED (400) POUNDS/FOOT FOR SPAN INDICATED.

HORIZONTALLY REINFORCE WALLS WITH LADDER TYPE (ASTM A-82, #9 GAGE WIRE) DEFORMED REINFORCEMENT EQUAL TO DURO-WALL IN BED JOINTS AT 16\"/>

VERTICAL REINFORCING MUST HAVE A MINIMUM CLEARANCE OF 1/2\"/>

NOTES:

- SEE FOUNDATION PLANS FOR ALL VERT REINF. REQ. TYP.
- VERTICAL REINFORCING SIZE & SPACING SHALL BE ABOVE AND BELOW ALL WALL OPENINGS.
- EXTEND ALL VERTICAL WALL REINFORCEMENT TO WITHIN 2\"/>



FILLED CELL DETAIL

VERTICAL REINFORCEMENT IN WALLS SHALL BE SECURED AND LATERALLY SUPPORTED AGAINST DISPLACEMENT AT INTERVALS NOT EXCEEDING 192 x BAR DIAMETER OR 10 FT WHICHEVER IS LESS WHENEVER A CLEANOUT IS REQUIRED. SEE GROUTING DETAIL NOTE FOR CLEANOUT REQUIREMENTS.

REINFORCE MASONRY OPENINGS GREATER THAN 1'-0\"/>

ALL CELLS OF CMU WALLS IN CLIMATE CONTROLLED BUILDING WHICH ARE NOT GROUTED SHALL BE FILLED WITH PERITE, VERMICULITE, OR POLYURETHANE FOAMED-IN-PLACE AS SPECIFIED BY THE LATEST ADOPTED EDITION ON THE INTERNATIONAL ENERGY CONSERVATION CODE.

NO.	BY	ISSUE	DATE

MAKORABCO

5401 COUNTY OFFICE, 1041 CROWN PALM, CREEK WATERS GARDENS FL 34707 PHONE: (800) 989-0220

LIBERTY DELRAY, DELRAY FL

ENGINEER STAMP

ROBERT M. BEATIE

FLORIDA PROFESSIONAL ENGINEER

No. 55428

STATE OF FLORIDA

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Checked by Robert Beatie Date: 2023.08.04 10:52:21 AM

ENGINEER

RBE CONSULTING SERVICES, LLC

SHEET TITLE

FOUNDATION NOTES

DATE 06-12-23

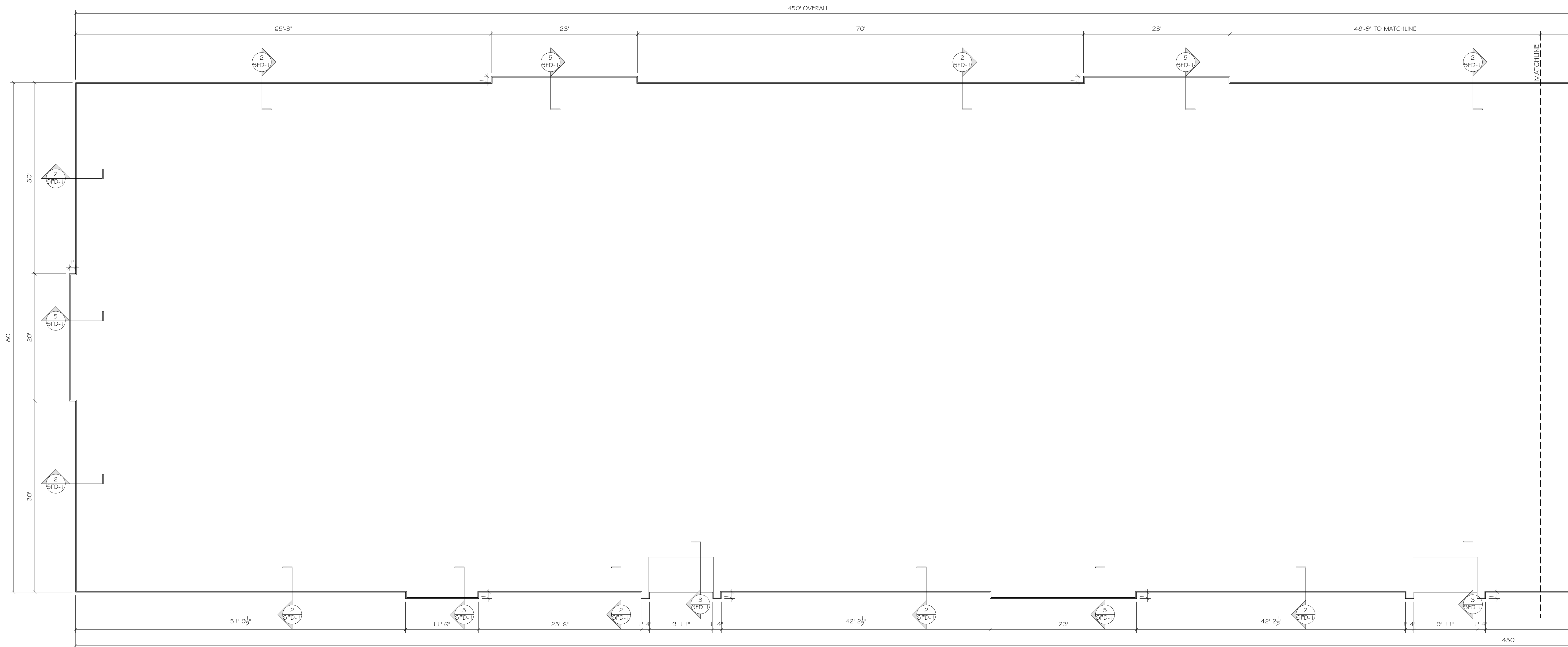
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CHECKED BY xxx

JOB NO. E 2705

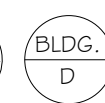
SCALE AS NOTED

SHEET SF-0



SINGLE STORY FOUNDATION PLAN NOTES:

- FLOOR SLAB SHALL BE 4" THICK, $F_c=3,000\text{psi}$ CONCRETE REINF W 6x6 W1.4xW1.4 WWF OVER 10 MIL VAPOR BARRIER (LAPPED A MIN. OF 6") ON COMPACTED SUBGRADE. (SEE SLAB ON GRADE DETAILS FOR PLACEMENT OF REINF)
- FIBER REINFORCED CONCRETE IS AN ACCEPTABLE ALTERNATIVE TO WELDED WIRE FABRIC. REINFORCED CONCRETE FIBERS SHALL BE 100% VIRGIN POLYPROPYLENE, FIBRILLATED FIBERS AS MANUFACTURED BY FIBER MESH CO, OR APPROVED EQUAL APPLIED AT A RATE OF 1 1/2lbs/CY.
- T/ SLAB EL = 0'-0", UNO (REFERENCE ONLY) SEE CIVIL DWGS FOR ACTUAL ELEVATION.
- T/INT. CMU WALL FTG EL = -1'-4", TYP UNO. T/EXT. CMU WALL FTG. EL = -1'-4", TYP. UNO (VERIFY W/ FROST DEPTH REQUIREMENTS)
- T/INT. STL COL FTG EL = -1'-0", TYP UNO. T/EXT. STL COL FTG EL = -1'-4", TYP UNO (VERIFY W/ FROST DEPTH REQUIREMENTS)
- ALL CMU BRG WALLS ARE 8", TYP UNO.
- STEP FTG WHERE SHOWN AND AS REQUIRED TO AVOID INTERFERENCE W/ OTHER TRADES. SEE TYP STEPPED FTG DETAIL
- ALL FTGS ARE CENTERED BENEATH BEARING WALLS AND COLUMNS, TYP UNO.
- REINF CMU WALLS WITH #5 VERT BAR CENTERED IN GROUT FILLED CELL AT ENDS, CORNERS AND AT MAX SPACING OF 48" o.c. SEE "TYP FILLED CELL PARTIAL PLAN" FOR ADDITIONAL INFORMATION.
- TYPICAL SPACINGS OF FILLED CELLS SHALL APPLY ABOVE AND BELOW OPENINGS ALSO. SEE GENERAL NOTES SHEETS FOR ADDITIONAL INFORMATION.
- (2) #4 x 4'-0" LONG @ 3" C/C PLACED 2" CLEAR FROM CORNER, CENTERED IN SLAB, TYP.
- MAINTAIN STRUCTURAL SLAB THICKNESS AT ALL FLOOR SLOPES AND DEPRESSIONS.



FOUNDATION PLAN

1/8" = 1'

NOTES:

- WITHOUT EXCEPTION, ALL RAINUP, SHEETLEDGE AND BLOCKLEDGE SHALL BE 1-1/2" DOWN FROM THE T/FINISHED FLOOR ELEVATION.
- WITHOUT EXCEPTION, ALL DOOR THRESHOLD SHALL BE 3/4" DOWN FROM THE T/FINISHED FLOOR ELEVATION.
- G.C. SHALL VERIFY WIDTH OF RAINUP, SHEETLEDGE, BLOCKLEDGE AND DOOR THRESHOLD WITH CONTRACT DOCUMENTS PRIOR TO FORMING SLAB EDGE.
- IN THE ABSENCE OF RAINUP, SHEETLEDGE, BLOCKLEDGE OR DOOR THRESHOLD BEING SPECIFIED ON THE PLANS, THE G.C. SHALL VERIFY IN WRITING WITH THE STEEL CONTRACTOR THE INTENT PRIOR TO FORMING SLAB EDGE.
- RAINUP, SHEETLEDGE, BLOCKLEDGE AND DOOR THRESHOLD ARE VITAL TO THE PROPER FIT OF THE STEEL CONSTRUCTION.
- G.C. SHALL FIELD VERIFY THE RAINUP, SHEETLEDGE, AND BLOCKLEDGE HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH CONTRACT DOCUMENTS BEFORE STEEL CONSTRUCTION BEGINS.

NOTE:

G.C. SHALL COORDINATE ALL T/CMU WALL HEIGHTS WITH RBACO ENTERPRISES, LLC PRIOR TO CONSTRUCTION TO ENSURE PROPER FIT OF THE METAL BUILDING COMPONENTS. FAILURE TO GET WRITTEN APPROVAL PRIOR TO ERRECTING THE CMU WALLS MAY RESULT IN NEEDED MODIFICATIONS TO EITHER THE CMU WALL AND/OR THE METAL BUILDING COMPONENTS AT THE G.C.'S EXPENSE.

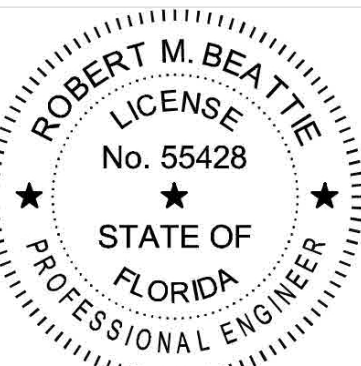
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08/04/2023

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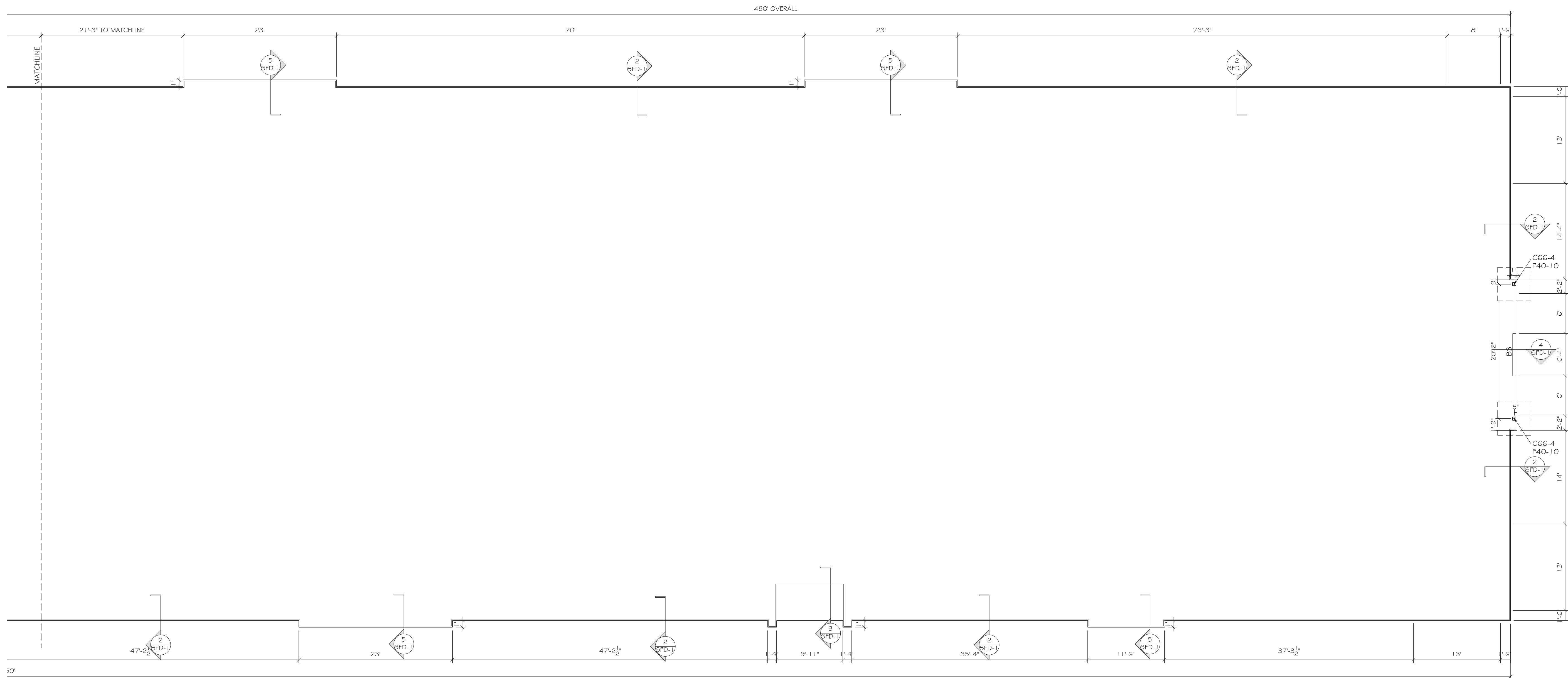
RBACO ENTERPRISES, LLC
1041 CROWN PARK, CIRCLE WATER GARDEN, FL 34727
PH: (800) 989-0220 FAX: (800) 989-0220
WWW.MAKORABCO.COM
REGISTERED PROFESSIONAL ENGINEER
LICENSE NO. 55428
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE

BLDG. C
FOUNDATION PLANS

DATE: 06-12-23
DRAWN BY: AWMMG
CHECKED BY: xxx
JOB NO.: E 2705
SCALE: AS NOTED
SHEET

SF-2.0



SINGLE STORY FOUNDATION PLAN NOTES:

1. FLOOR SLAB SHALL BE 4" THICK, $F_c = 3,000 \text{ psi}$ CONCRETE REINF W/ #6 @ 14" W/W OVER 10 MIL VAPOR BARRIER (LAPPED A MIN. OF 6") ON COMPACTED SUBGRADE. (SEE SLAB ON GRADE DETAILS FOR PLACEMENT OF REINF)
- 1a. FIBER REINFORCED CONCRETE IS AN ACCEPTABLE ALTERNATIVE TO WELDED WIRE FABRIC. REINFORCED CONCRETE FIBERS SHALL BE 100% VIRGIN POLYPROPYLENE, FIBRILLATED FIBERS AS MANUFACTURED BY FIBER MESH CO. OR APPROVED EQUAL APPLIED AT A RATE OF 1 1/2 lbs/cy.
2. T/ SLAB EL = 0'-0", UNO (REFERENCE ONLY) SEE CIVIL DWGS FOR ACTUAL ELEVATION.
3. T/INT. CMU WALL FTG EL = -1'-4", TYP UNO. T/EXT. CMU WALL FTG. EL = -1'-4", TYP. UNO (VERIFY W/ FROST DEPTH REQUIREMENTS)
4. T/INT. STL COL FTG EL = -1'-0", TYP UNO. T/EXT. STL COL FTG EL = -1'-4", TYP UNO (VERIFY W/ FROST DEPTH REQUIREMENTS)
5. ALL CMU BRG WALLS ARE 8", TYP UNO.
6. STEP FTG WHERE SHOWN AND AS REQUIRED TO AVOID INTERFERENCE W/ OTHER TRADES. SEE TYP STEPPED FTG DETAIL
7. ALL FTGS ARE CENTERED BENEATH BEARING WALLS AND COLUMNS, TYP UNO.
8. REINF CMU WALLS WITH #5 VERT BAR CENTERED IN GROUT FILLED CELL AT ENDS, CORNERS AND AT MAX SPACING OF 48" o.c. SEE TYP FILLED CELL PARTIAL PLAN FOR ADDITIONAL INFORMATION.
9. TYPICAL SPACINGS OF FILLED CELLS SHALL APPLY ABOVE AND BELOW OPENINGS ALSO. SEE GENERAL NOTES SHEETS FOR ADDITIONAL INFORMATION.
10. (2) #4 x 4'-0" LONG @ 3" CC PLACED 2' CLEAR FROM CORNER, CENTERED IN SLAB, TYP.
11. MAINTAIN STRUCTURAL SLAB THICKNESS AT ALL FLOOR SLOPES AND DEPRESSIONS.



- NOTES:**
1. WITHOUT EXCEPTION, ALL RAINLIP, SHEETLEDGE AND BLOCKLEDGE SHALL BE 1-1/2" DOWN FROM THE T/FINISHED FLOOR ELEVATION.
 2. WITHOUT EXCEPTION, ALL DOOR THRESHOLD SHALL BE 3/4" DOWN FROM THE T/FINISHED FLOOR ELEVATION.
 3. G.C. SHALL VERIFY WIDTH OF RAINLIP, SHEETLEDGE, BLOCKLEDGE AND DOOR THRESHOLD WITH CONTRACT DOCUMENTS PRIOR TO FORMING SLAB EDGE.
 4. IN THE ABSENCE OF RAINLIP, SHEETLEDGE, BLOCKLEDGE OR DOOR THRESHOLD BEING SPECIFIED ON THE PLANS, THE G.C. SHALL VERIFY IN WRITING WITH THE STEEL CONTRACTOR THE INTENT PRIOR TO FORMING SLAB EDGE.
 5. RAINLIP, SHEETLEDGE, BLOCKLEDGE AND DOOR THRESHOLD ARE VITAL TO THE PROPER FIT OF THE STEEL CONSTRUCTION.
 6. G.C. SHALL FIELD VERIFY THE RAINLIP, SHEETLEDGE, AND BLOCKLEDGE HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH CONTRACT DOCUMENTS BEFORE STEEL CONSTRUCTION BEGINS.

NOTE:

G.C. SHALL COORDINATE ALL T/CMU WALL HEIGHTS WITH RABCO ENTERPRISES, LLC PRIOR TO CONSTRUCTION TO ENSURE PROPER FIT OF THE METAL BUILDING COMPONENTS. FAILURE TO GET WRITTEN APPROVAL PRIOR TO ERECTING THE CMU WALLS MAY RESULT IN NEEDED MODIFICATIONS TO EITHER THE CMU WALL AND/OR THE METAL BUILDING COMPONENTS AT THE G.C.'S EXPENSE.

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ENGINEER

RBE CONSULTING SERVICES, LLC
1000 W. PALM BEACH BLVD. SUITE 100
PALM BEACH, FL 33480
TEL: 561-840-1234
WWW.RBECONSULTING.COM

BLDG. C
FOUNDATION PLANS

DATE: 06-12-23
DRAWN BY: AWM/MG
CHECKED BY: XXX
JOB NO.: E 2705
SCALE: AS NOTED
SHEET

SF-2.1

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1 TYPICAL FOUNDATION DETAIL AT RAINLIP
SFD-1 SCALE: 3/4" = 1'

2 TYPICAL FOUNDATION DETAIL AT SHEETLEDGE
SFD-1 SCALE: 3/4" = 1'

3 FOUNDATION DETAIL AT RECESSED ENTRY FOR 6" FRAMING AT SHEETLEDGE
SFD-1 SCALE: 3/4" = 1'

4 FDN. DETAIL AT PERSONNEL DOOR 6" WALL & PIER
SFD-1 SCALE: 3/4" = 1'

5 SECTION @ EXTERIOR STEEL COLUMN
SFD-1 SCALE: 3/4" = 1'

6 (THICKEND SLAB) THIS (SEE FDN SCHEDULE ON F-1)
SFD-1 SCALE: 3/4" = 1'

CRACK CONTROL JOINT:
1/8" SAW CUT TO BE MADE WITH IN 24 HRS OF SLAB POUR (±2 HRS) (TYP. UON.)

WWF AT MID-DEPTH OF SLAB D-DEPTH OR THICKNESS OF SLAB (SEE PLANS)

TYPICAL SLAB CONTROL JOINT

IMPORTANT: RAIN LIP AND SHEET LEDGE ARE VITAL TO THE PROPER FIT OF THE STEEL CONSTRUCTION. CONTRACTOR TO FIELD VERIFY THE SHEET LEDGES AND RAIN LIPS AND IF THEY ARE NOT TO THE DRAWING, CONTACT METAL BUILDING COMPANY BEFORE STEEL CONSTRUCTION BEGINS.

MAXIMUM SPACING OF CONTROL JOINTS SHALL BE AS SHOWN IN THE TABLE BELOW. PATTERNS SHALL BE APPROXIMATELY SQUARE W/ RATIO OF LONG SIDE TO SHORT SIDE NOT TO EXCEED 1.5 TO 1.0.

SLAB THICKNESS (IN.)	4	5	6	7	8	9	10
	12	13	15	16	20	23	25

CONTROL JOINT CUT PLACEMENT

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DELRAY FL

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Robert M. Beattie
Professional Engineer
No. 55428
STATE OF FLORIDA

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10000 W. STATE ROAD 70, SUITE 1000
MIRAGE, FLORIDA 34705
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STRC.
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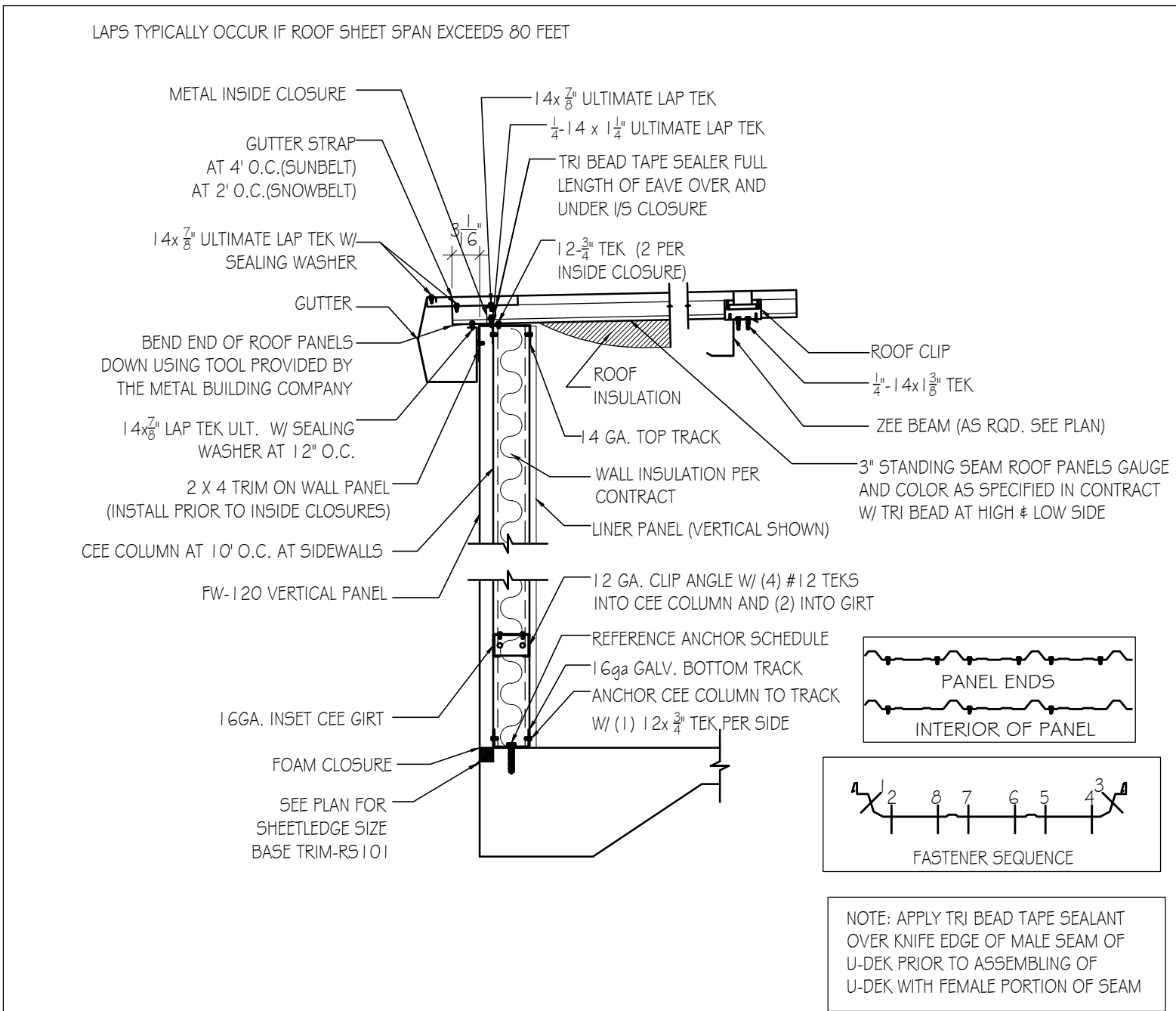
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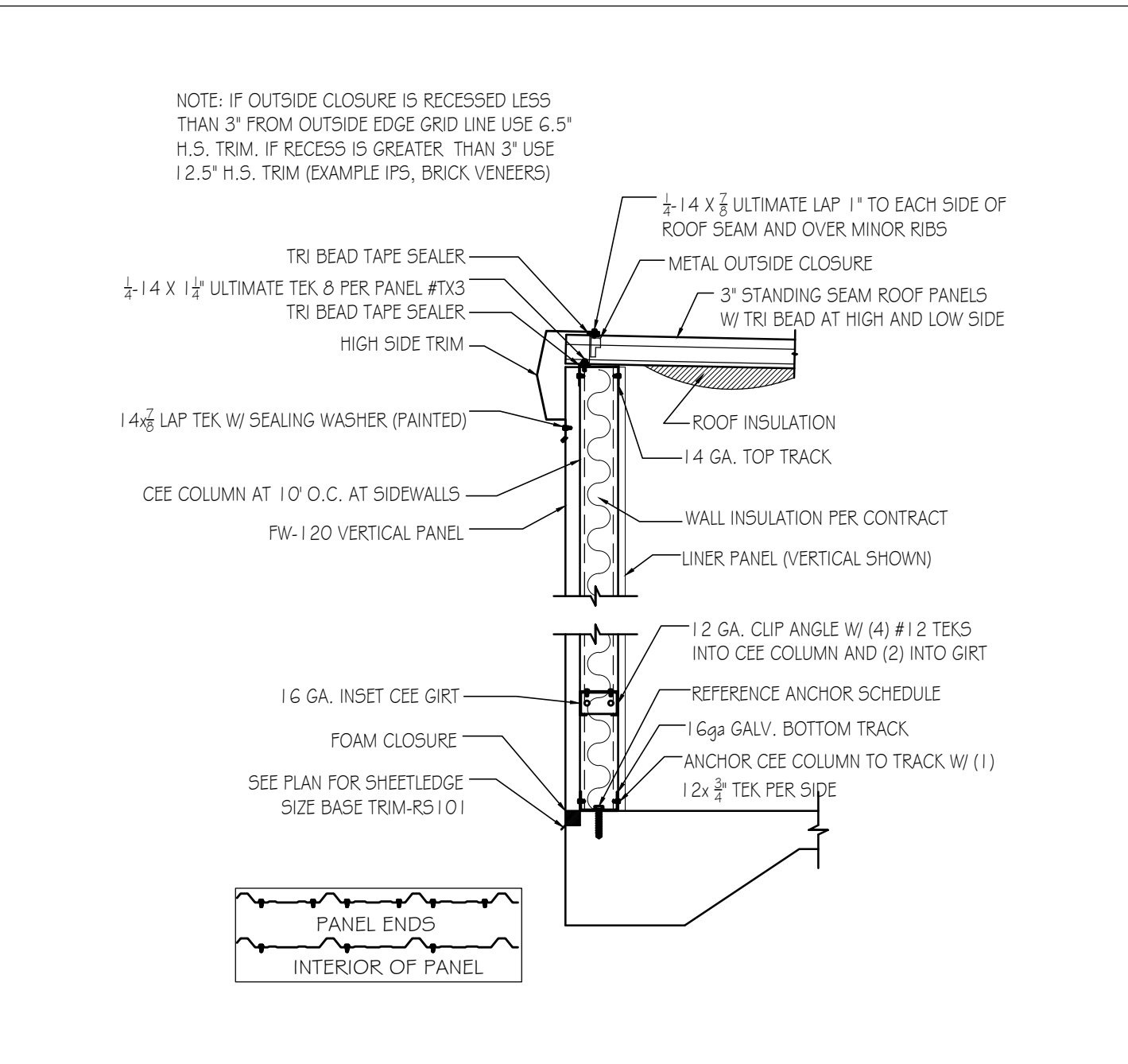
ENGINEER
 RBE CONSULTING SERVICES, LLC
 1000 SW 15th Ave, Suite 1000, Ft. Lauderdale, FL 33304
 (954) 576-7777
 www.rbecs.com
 I am a duly Licensed Professional Engineer in the State of Florida, License No. 12500, in the State of Florida, License No. 12500, in the State of Florida, License No. 12500.

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STRC.
 DETAILS
 DATE: 06-12-23
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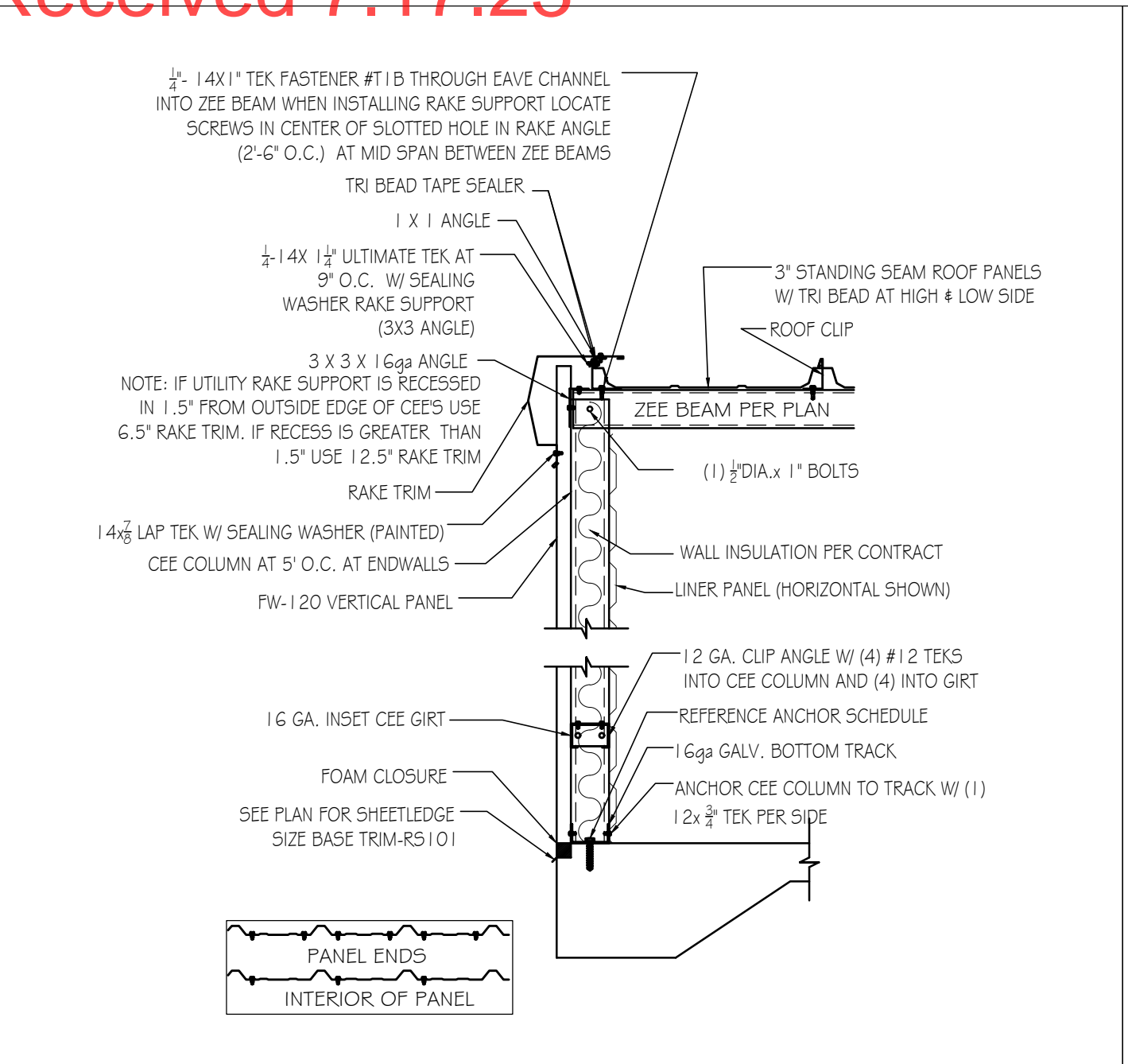
SD-1



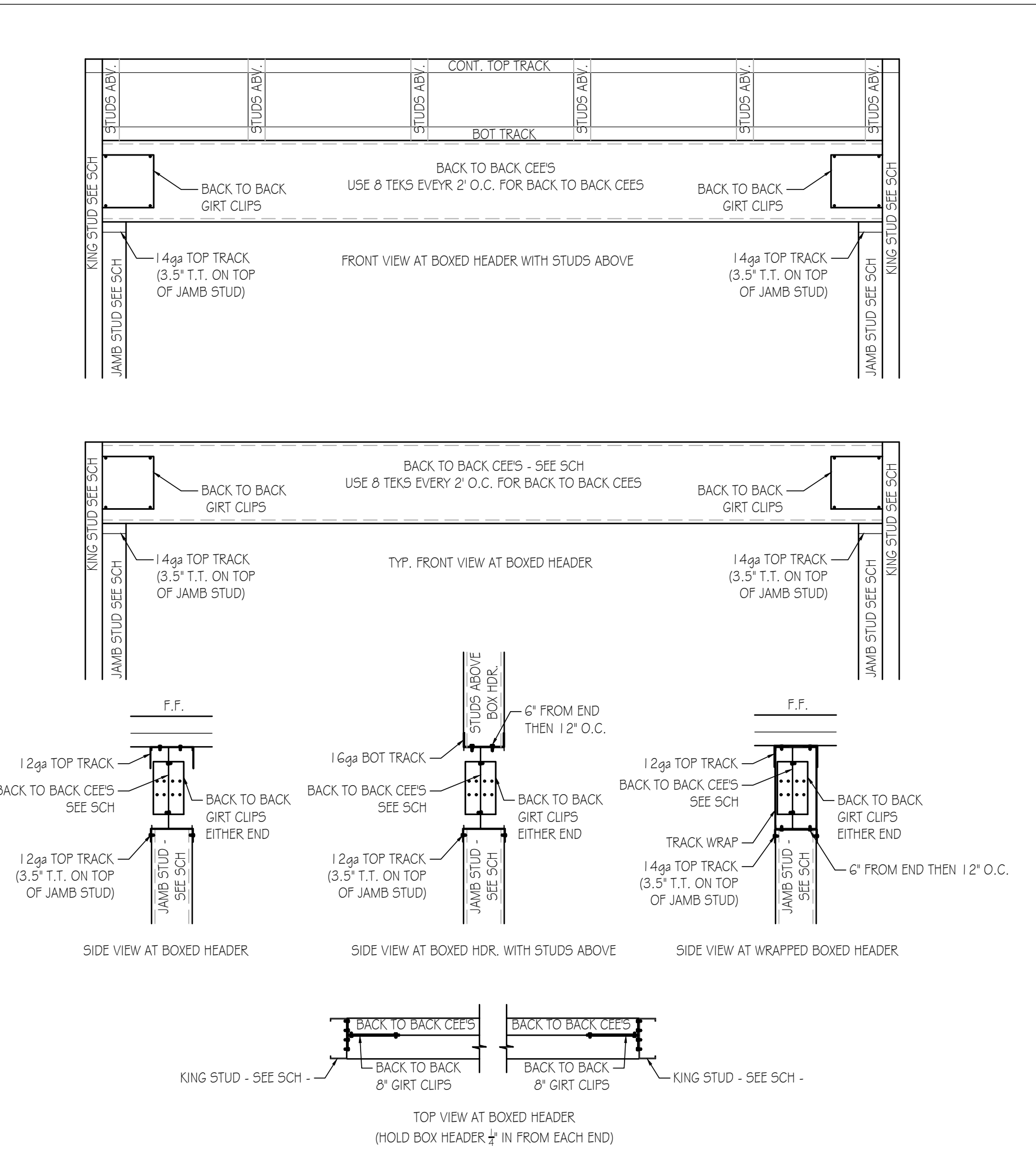
1 ROOF LOW SIDE EAVE PANEL WALL-GUTTER, VERTICAL PANEL (INSULATED WALL)
 SD-1 SCALE: 3/4" = 1"



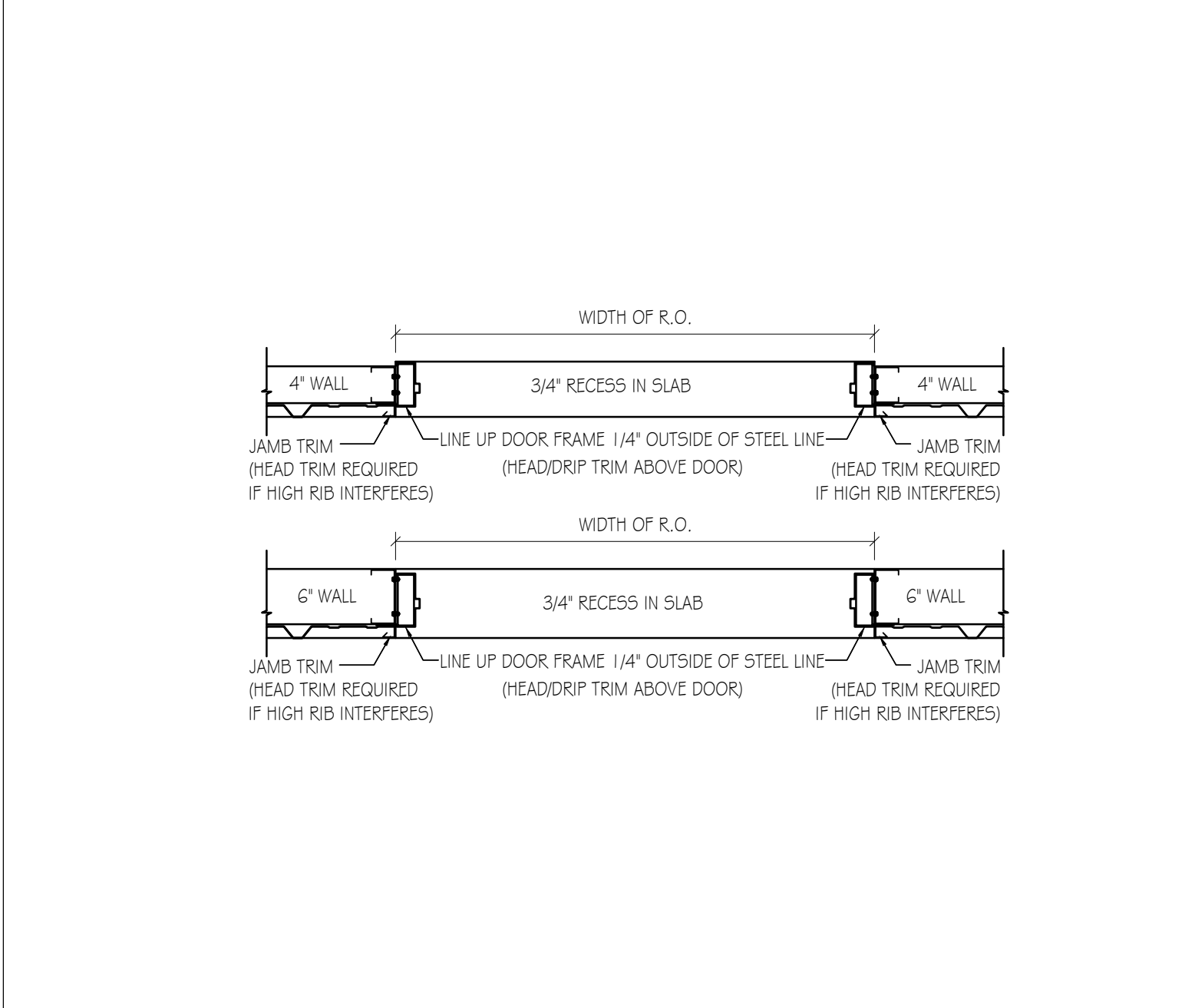
2 ROOF HIGH SIDE EAVE PANELED WALL, VERTICAL PANEL (INSULATED WALL)
 SD-1 SCALE: 3/4" = 1"



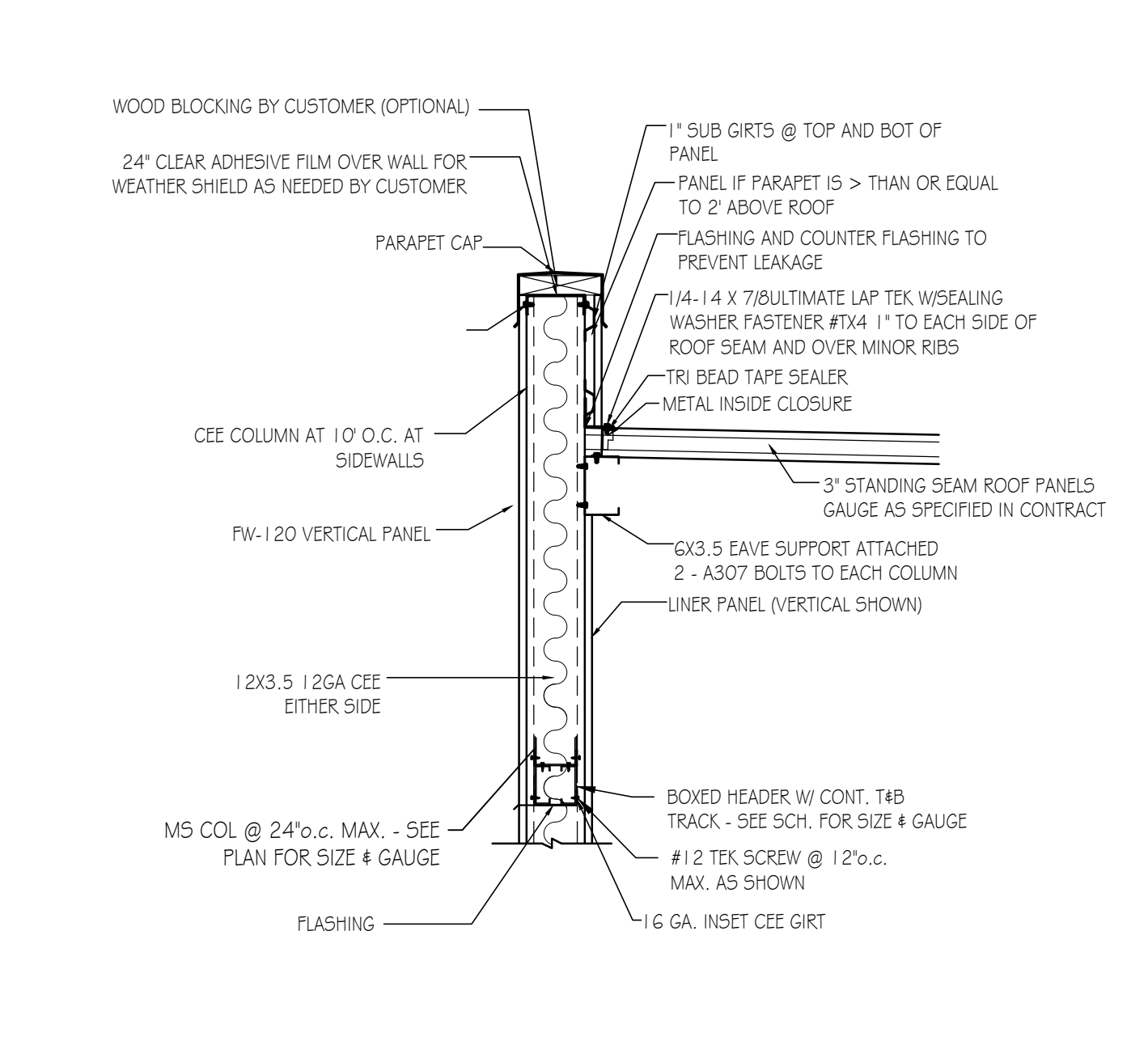
3 ROOF END WALL PANELED WALL (OFF MODULE), VERTICAL PANEL (INSULATED WALL)
 SD-1 SCALE: 3/4" = 1"



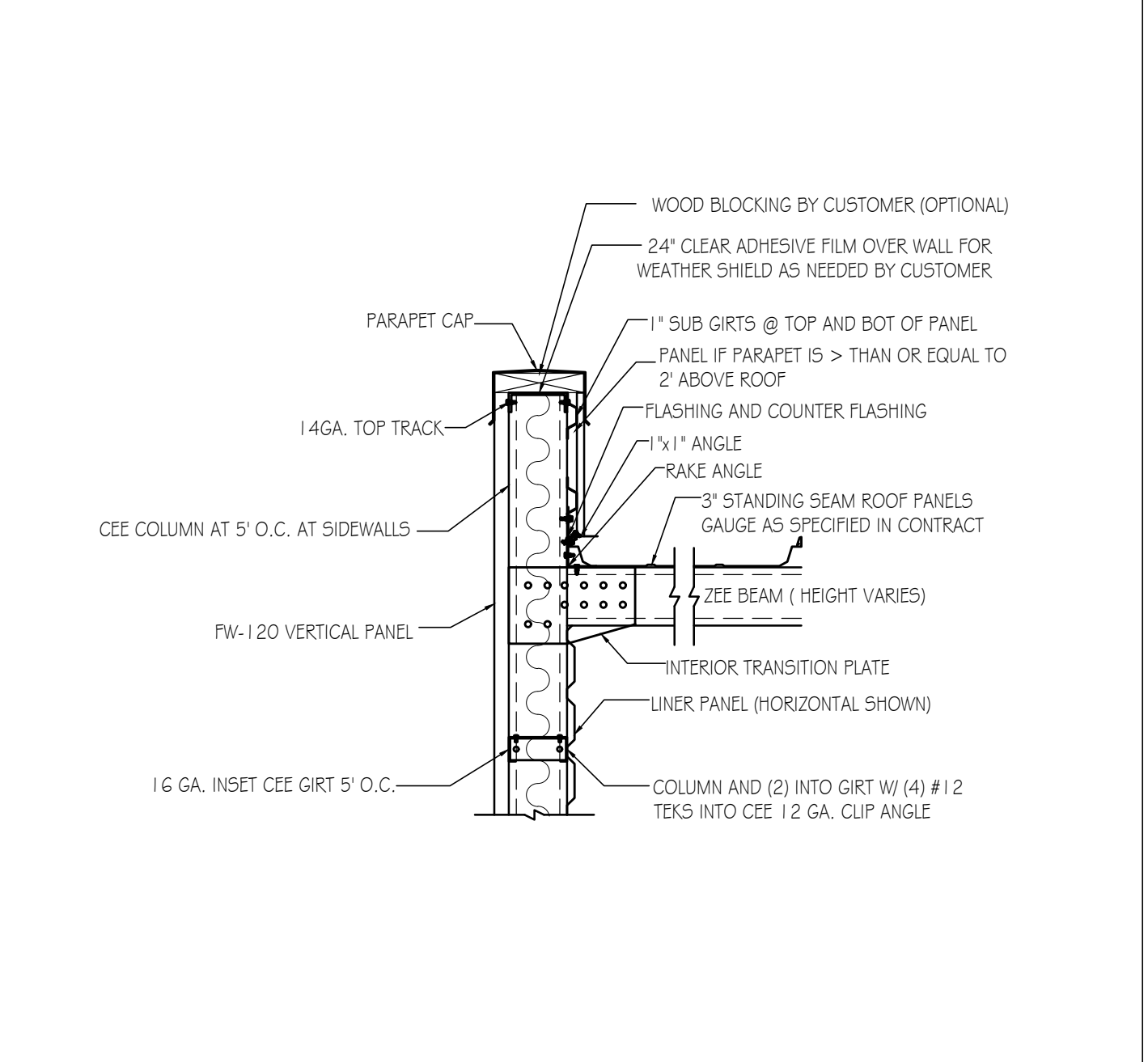
8 TYPICAL BOXED HEADER DETAILS
 SD-1 SCALE: 3/4" = 1"



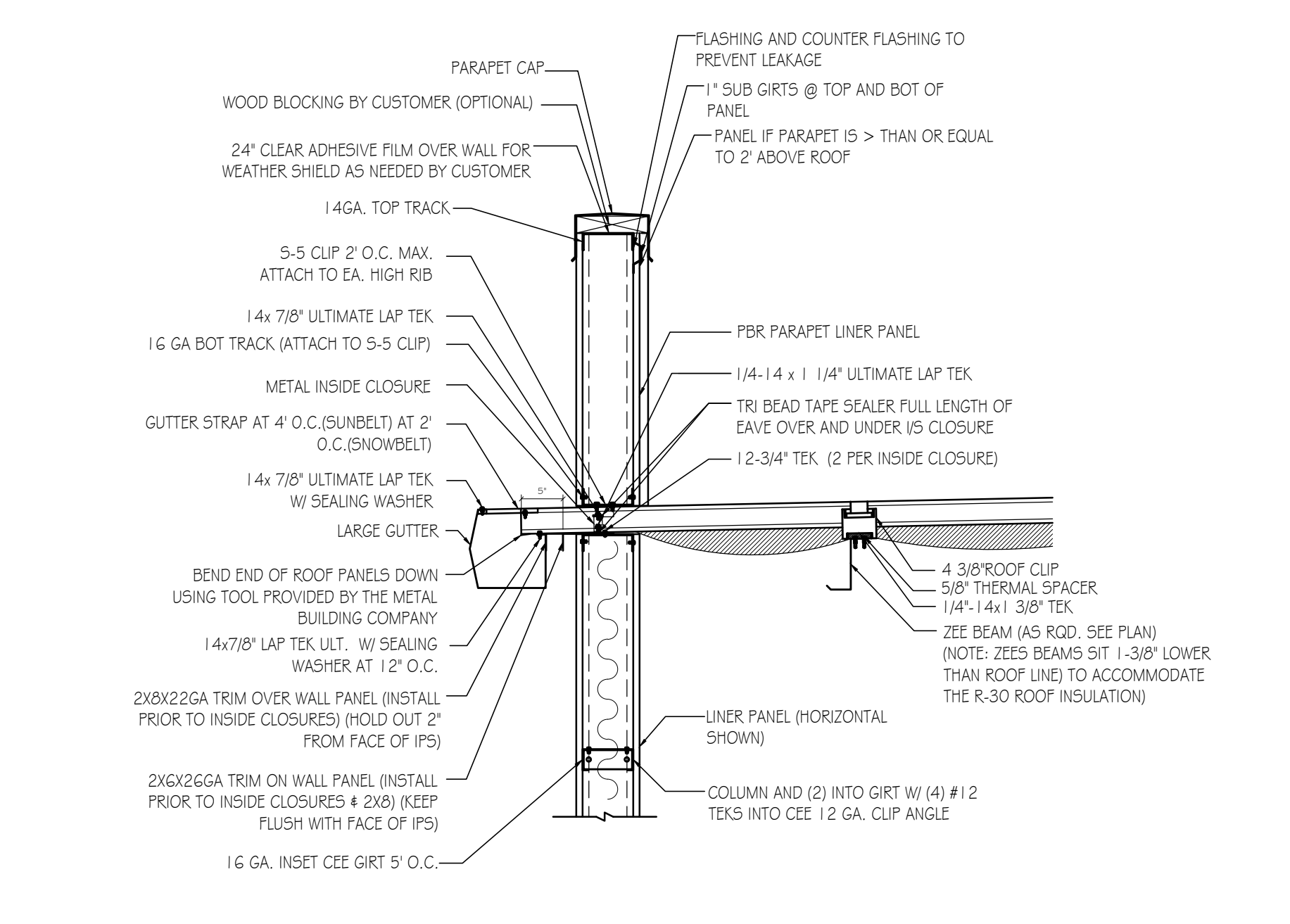
4 EXTERIOR RECESSED ENTRY PERSONNEL DOOR DETAIL
 SD-1 SCALE: 3/4" = 1"



5 HIGH SIDE PARAPET @ VERTICAL PANEL EXTERIOR
 SD-1 SCALE: 3/4" = 1"



6 END WALL PARAPET @ PBR PANEL EXTERIOR
 SD-1 SCALE: 3/4" = 1"

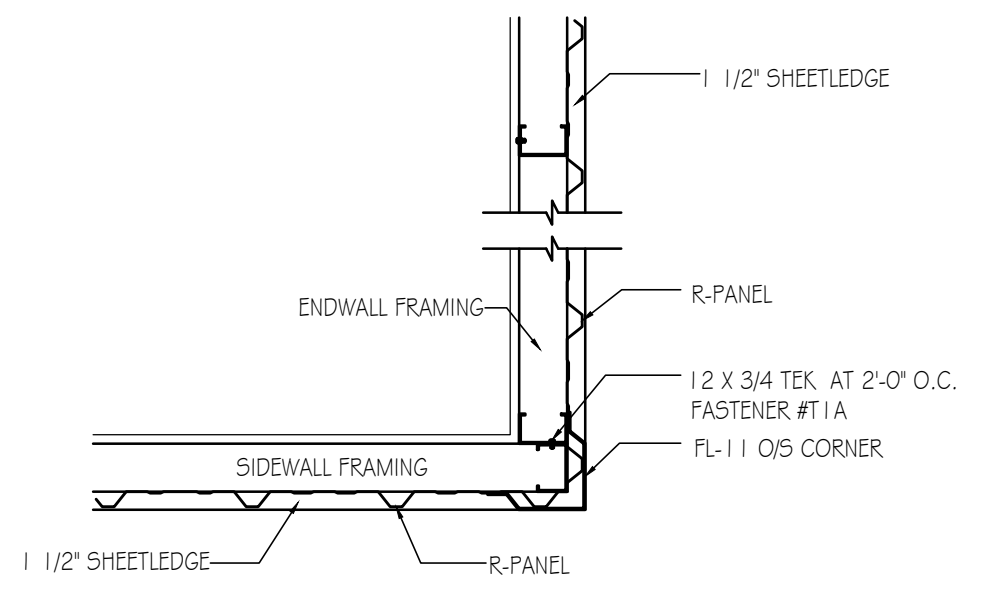
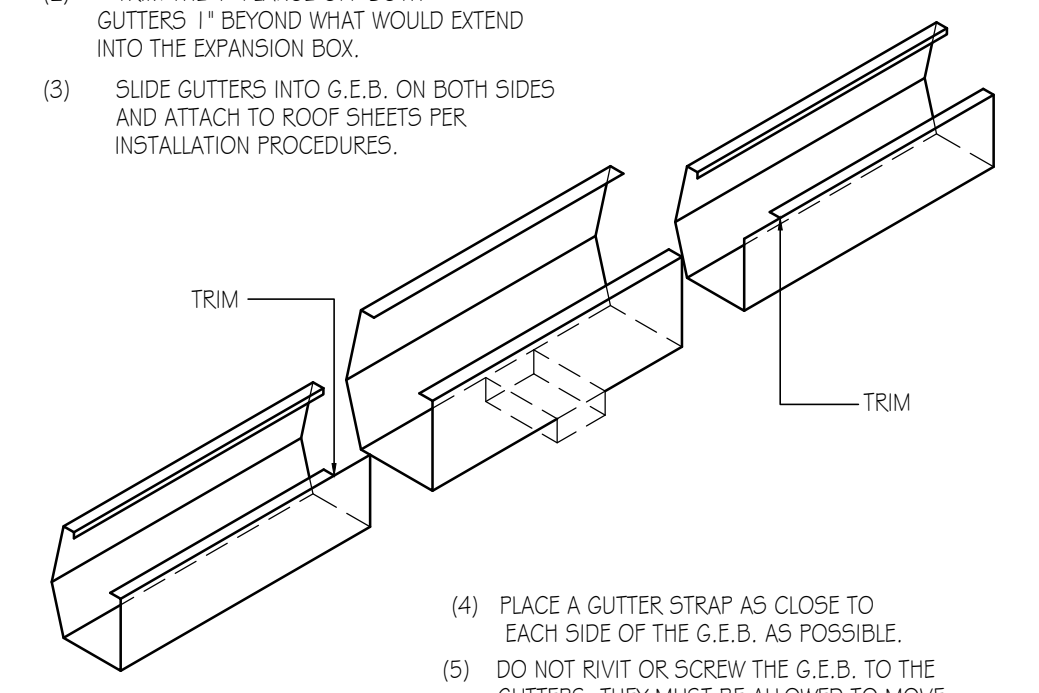
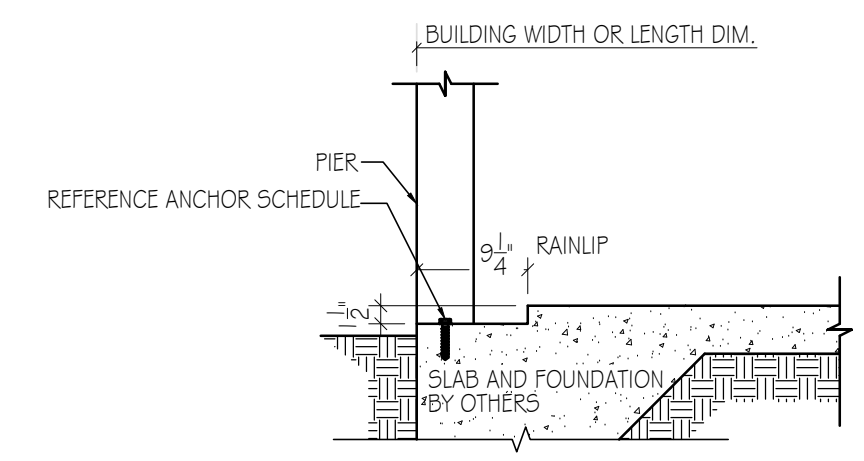
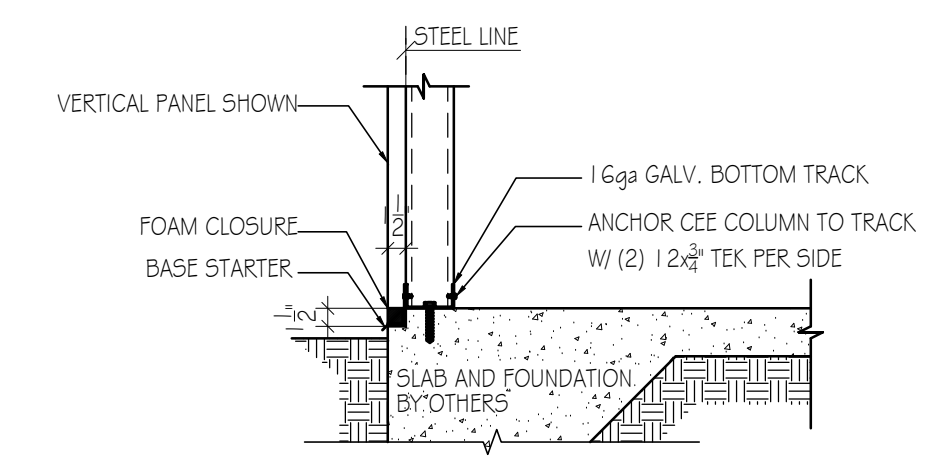


7 LOW SIDE PARAPET @ VERTICAL PANEL EXTERIOR
 SD-1 SCALE: 3/4" = 1"

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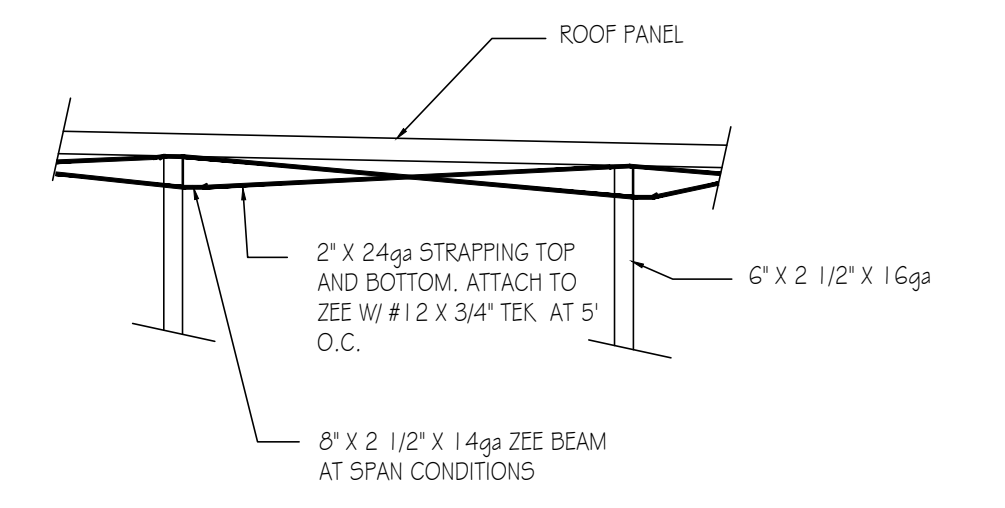
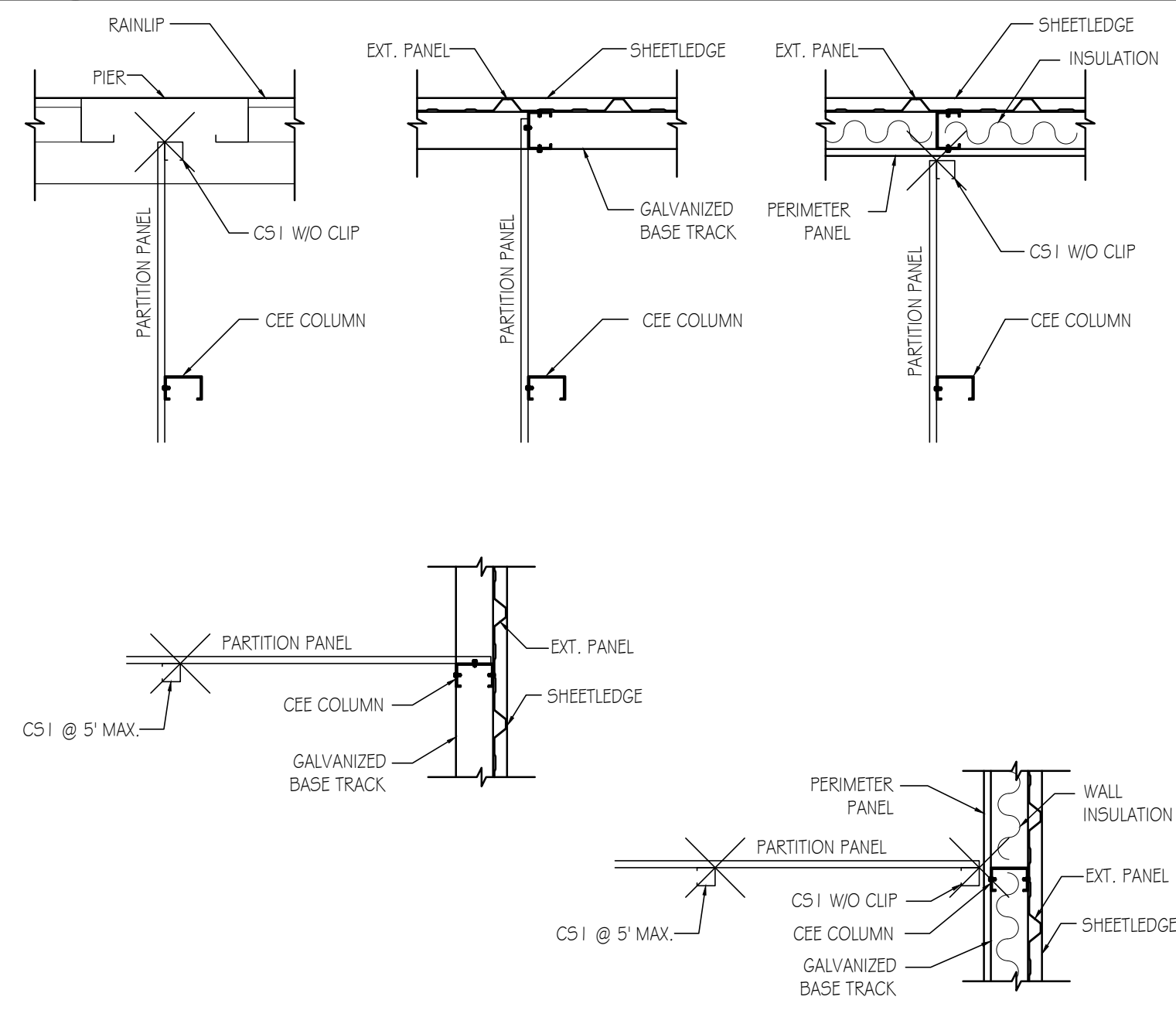
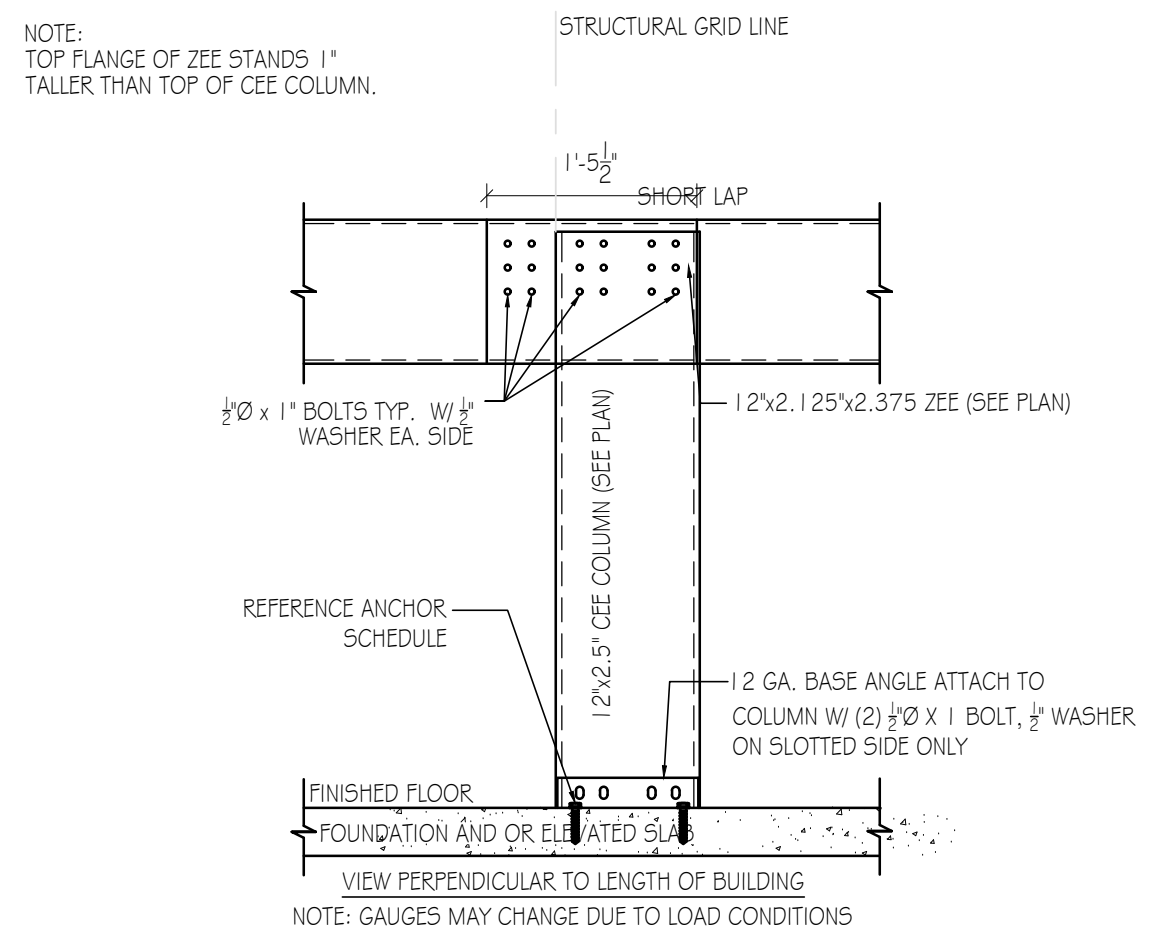
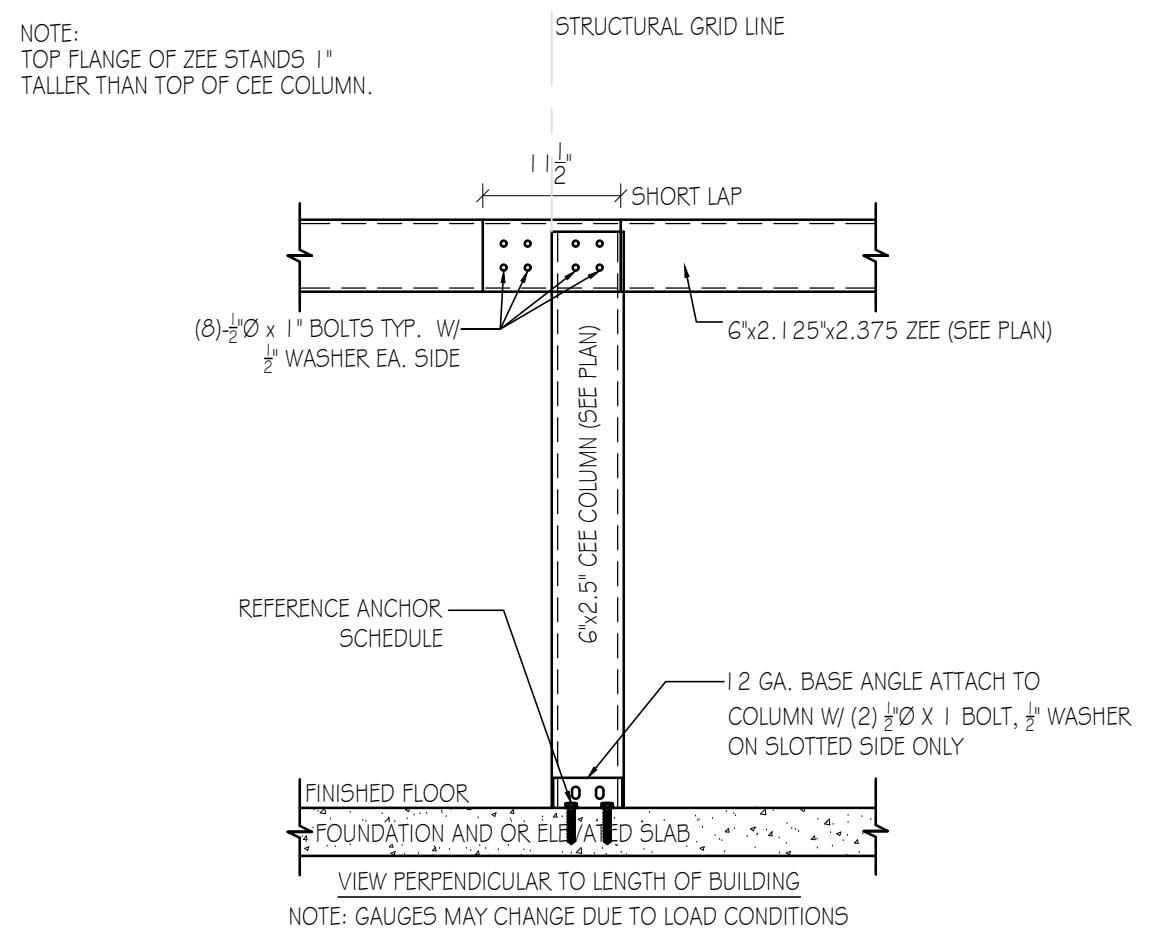
- INSTALLATION PROCEDURE
- (1) CENTER THE G.E.B. ON THE PIER AND ATTACH REAR FLANGE TO THE ROOF PAN WITH (2) 1/4-14X7/8 EXTENDED LIFE STICH SCREWS 3-4" FROM EACH END FASTENER #TX4. WHEN ATTACHING THE G.E.B. BE SURE THE REAR OF THE G.E.B. IS AGAINST THE FACE OF THE PIER. (EXCEPT ON SHURCARD PROJECTS WHERE THE SPECS REQUIRE A 2" GAP BETWEEN THE REAR OF THE GUTTER AND PIER)
 - (2) TRIM THE 1" FLANGE OFF BOTH GUTTERS 1" BEYOND WHAT WOULD EXTEND INTO THE EXPANSION BOX.
 - (3) SLIDE GUTTERS INTO G.E.B. ON BOTH SIDES AND ATTACH TO ROOF SHEETS PER INSTALLATION PROCEDURES.
 - (4) PLACE A GUTTER STRAP AS CLOSE TO EACH SIDE OF THE G.E.B. AS POSSIBLE.
 - (5) DO NOT RIVET OR SCREW THE G.E.B. TO THE GUTTERS. THEY MUST BE ALLOWED TO MOVE FOR EXPANSION.
 - (6) NOTE THAT THE DOWNSPOUTS ATTACHED TO THE G.E.B. ARE 4" SHORTER THAN THOSE ATTACHED TO THE GUTTERS.
 - (7) IN THE CASE WHERE SCUPPERS ARE REQUIRED, CUT OUT THE BOTTOM OF THE G.E.B. TO THE INSIDE DIMENSIONS OF THE SCUPPER, RIVET SCUPPER TO THE BOTTOM OF THE G.E.B.

1 PANEL TO SLAB CONNECTION
 SD-2 SCALE: 3/4" = 1'

2 PIER TO FOUNDATION DETAIL
 SD-2 SCALE: 3/4" = 1'

3 GUTTER EXPANSION BOX INSTALLATION DETAIL
 SD-2 SCALE: 3/4" = 1'

4 WALL FRAMING VERTICAL EXTERIOR R-PANEL INTERIOR U-PANEL
 SD-2 SCALE: 3/4" = 1'



NOTE: TOP FLANGE OF ZEE STANDS 1" TALLER THAN TOP OF CEE COLUMN.

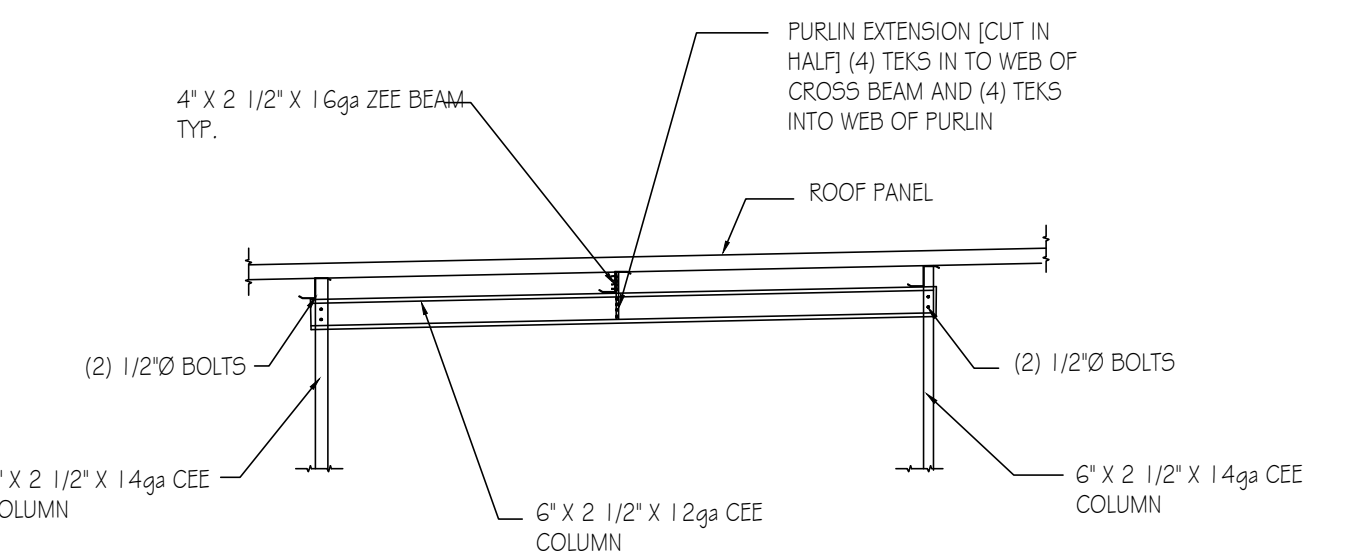
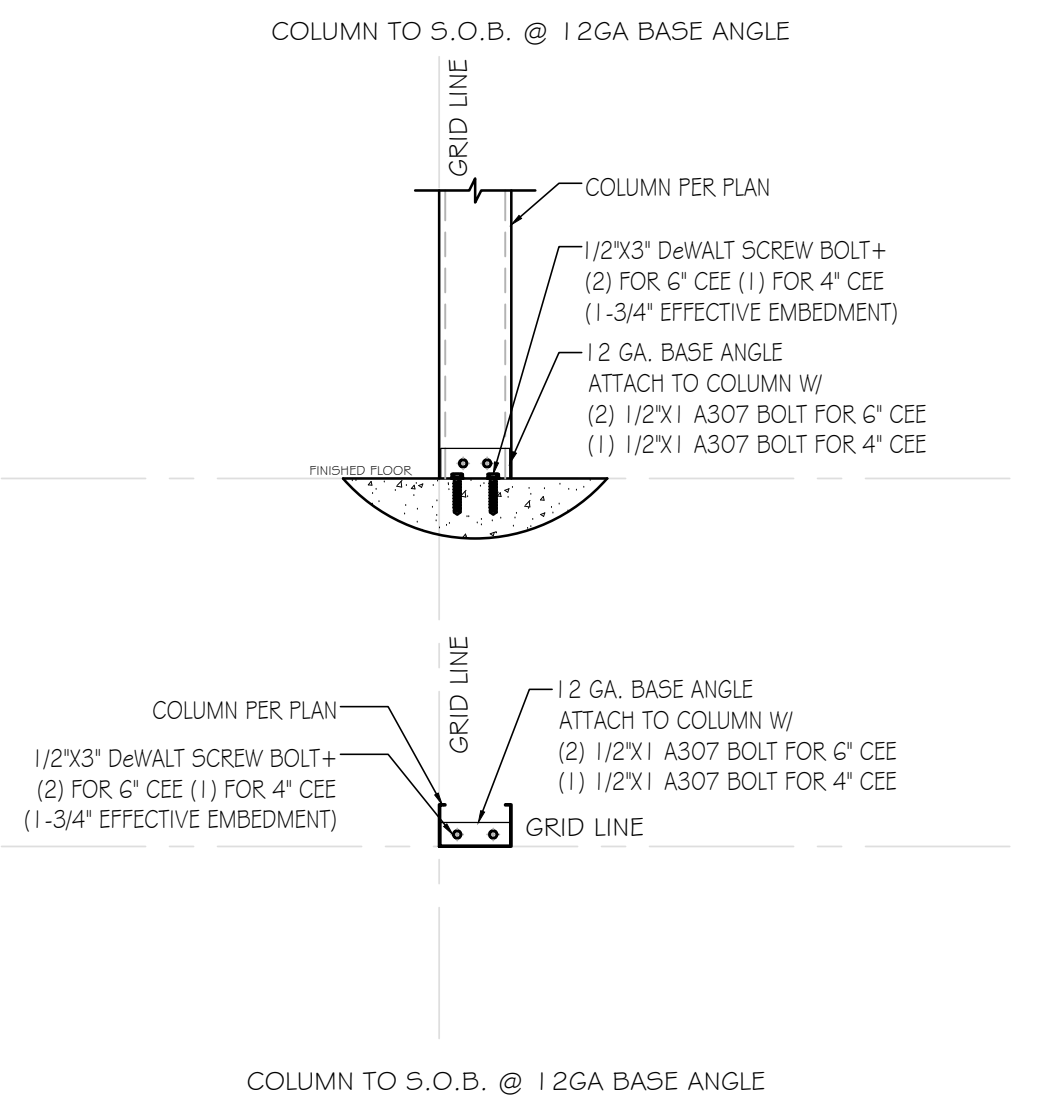
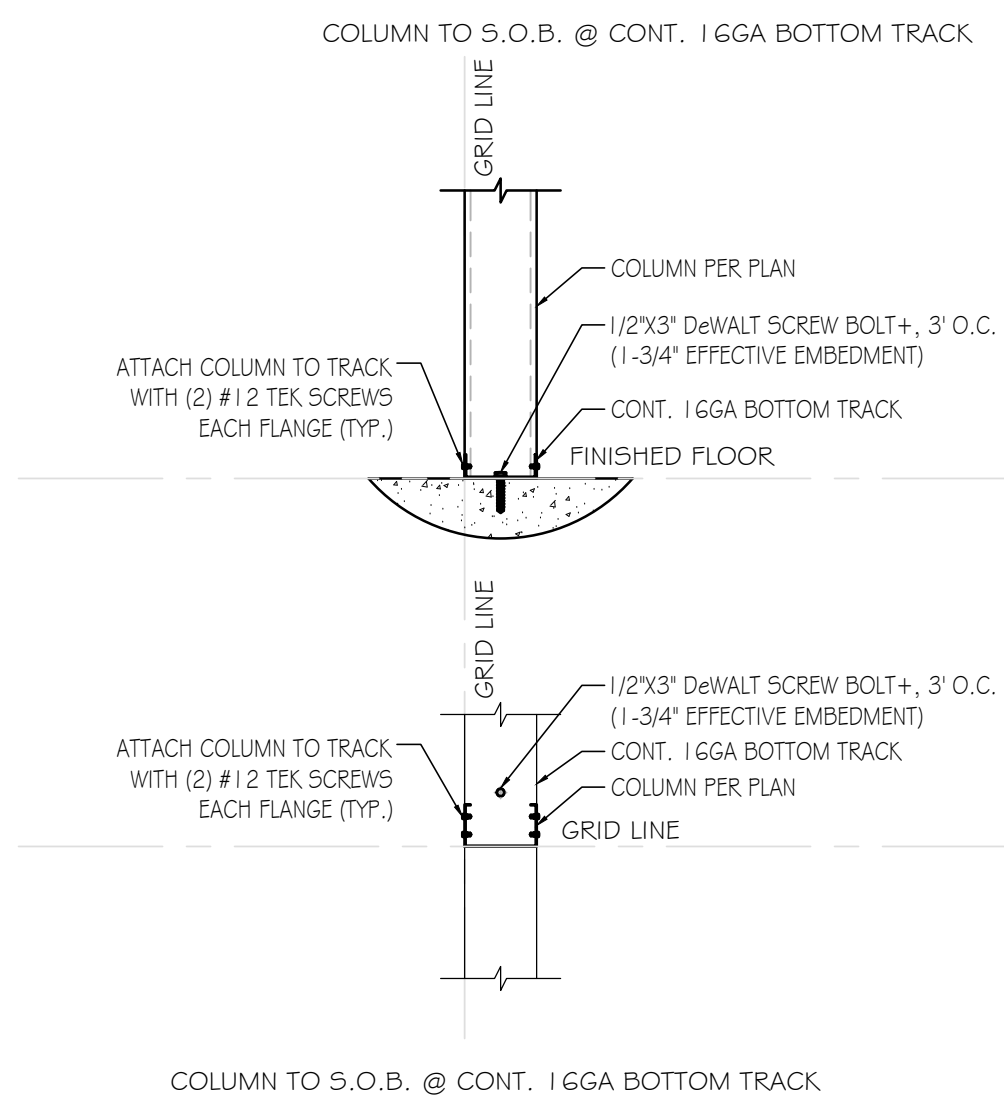
NOTE: TOP FLANGE OF ZEE STANDS 1" TALLER THAN TOP OF CEE COLUMN.

5 ZEE BEAM COLUMN CONNECTION, 6" CEE AND 6" ZEE
 SD-2 SCALE: 3/4" = 1'

6 ZEE BEAM COLUMN CONNECTION, 12" CEE AND 12" ZEE
 SD-2 SCALE: 3/4" = 1'

7 PARTITION PANEL DETAILS AT PERIMETER WALL (SINGLE-STORY)
 SD-2 SCALE: 3/4" = 1'

8 8214 W/ STRAPPING
 SD-2 SCALE: 3/4" = 1'



8 TYPICAL COLUMN TO SLAB ANCHORING (SINGLE-STORY)
 SD-2 SCALE: 3/4" = 1'

10 6C12 CROSS BEAM SUPPORT
 SD-2 SCALE: 3/4" = 1'

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ENGINEER

RBE CONSULTING SERVICES, LLC
 10000 W. 11TH AVENUE, SUITE 100, DENVER, CO 80202
 (303) 755-1100
 WWW.RBECONSULTING.COM

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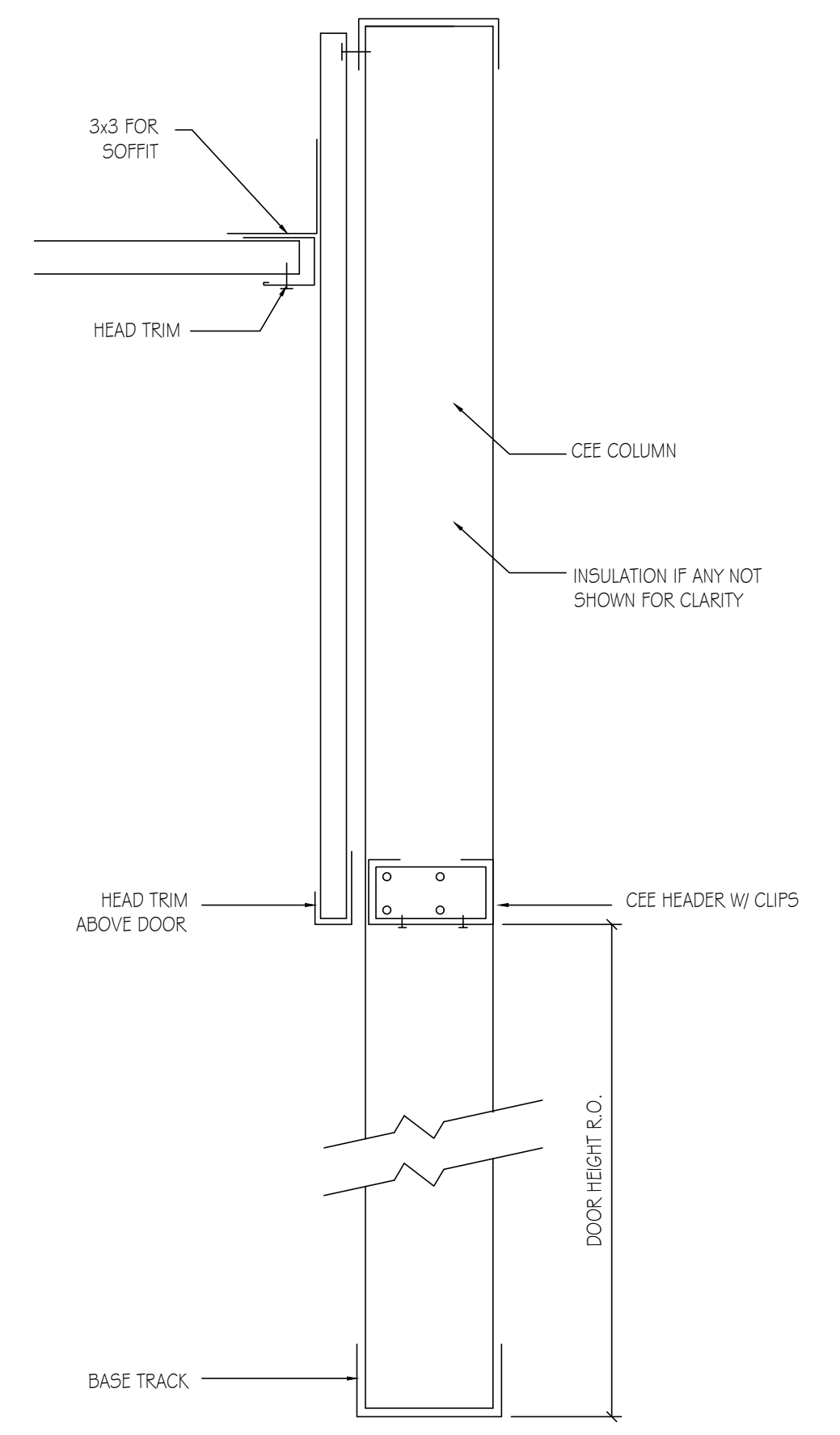
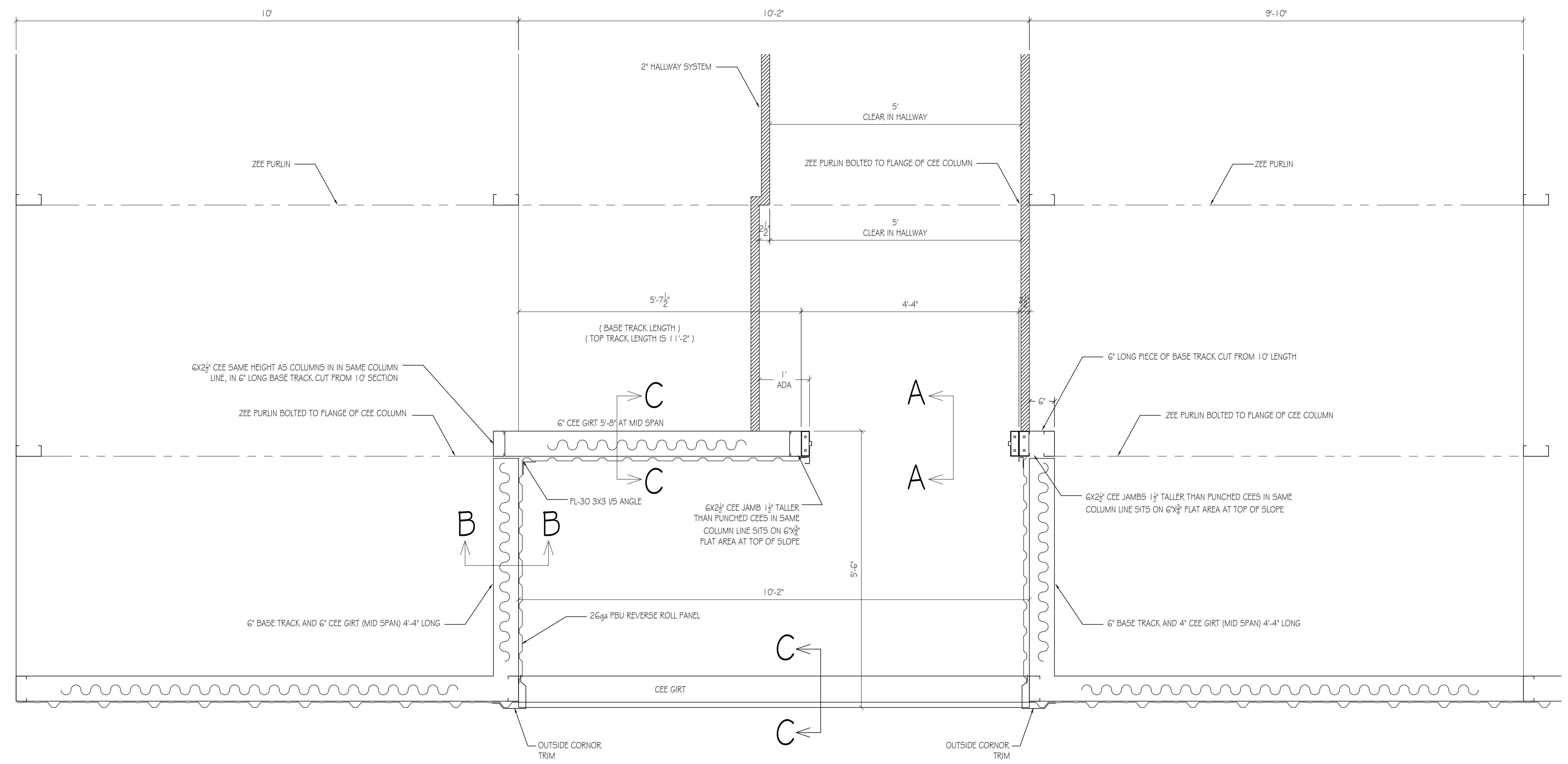
SHEET TITLE

STRC.
 DETAILS

DATE: 06-12-23
 DRAWN BY: AWMMG
 CHECKED BY: xxx
 JOB NO.: E 2705
 SCALE: AS NOTED
 SHEET

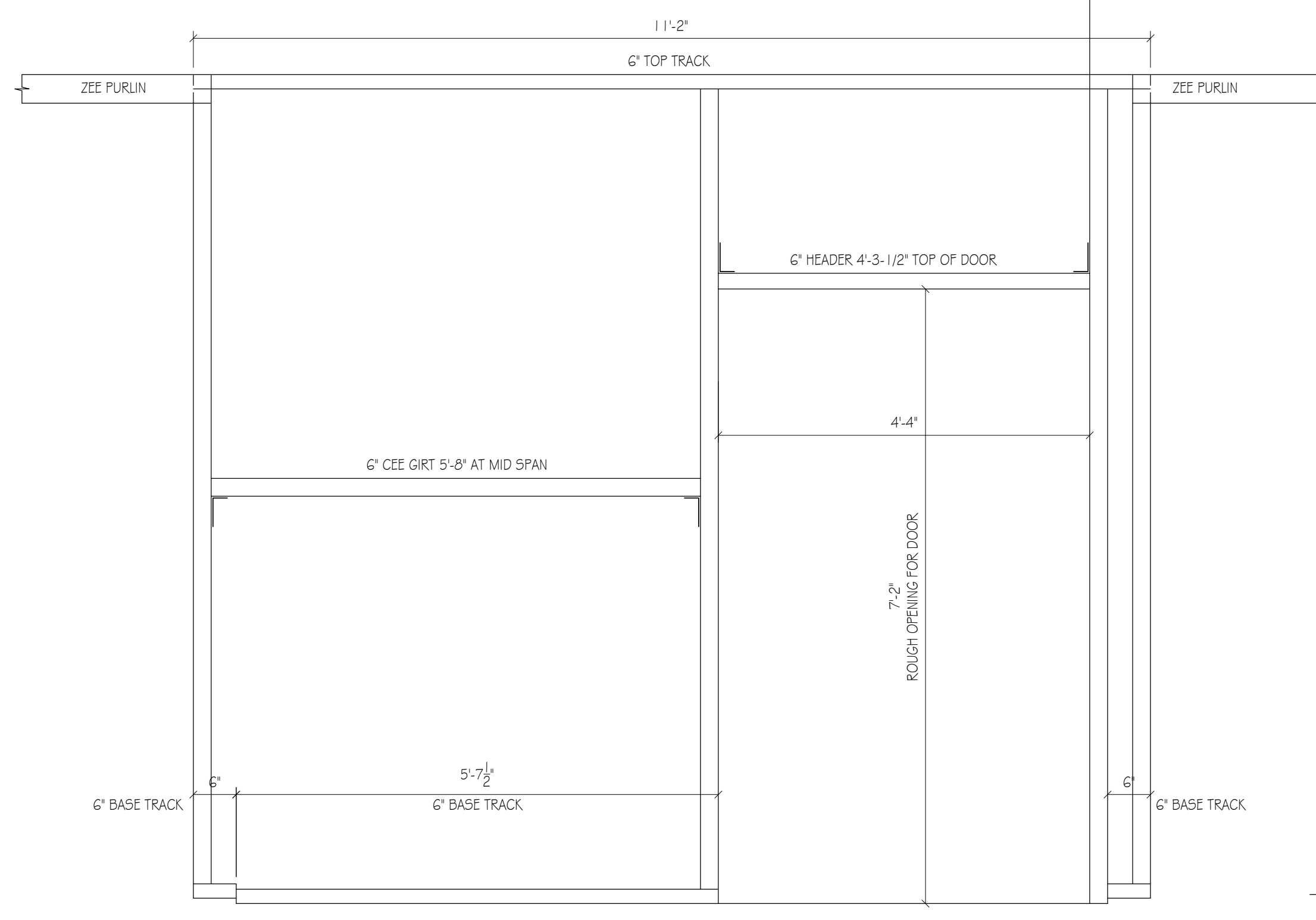
SD-2

MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE

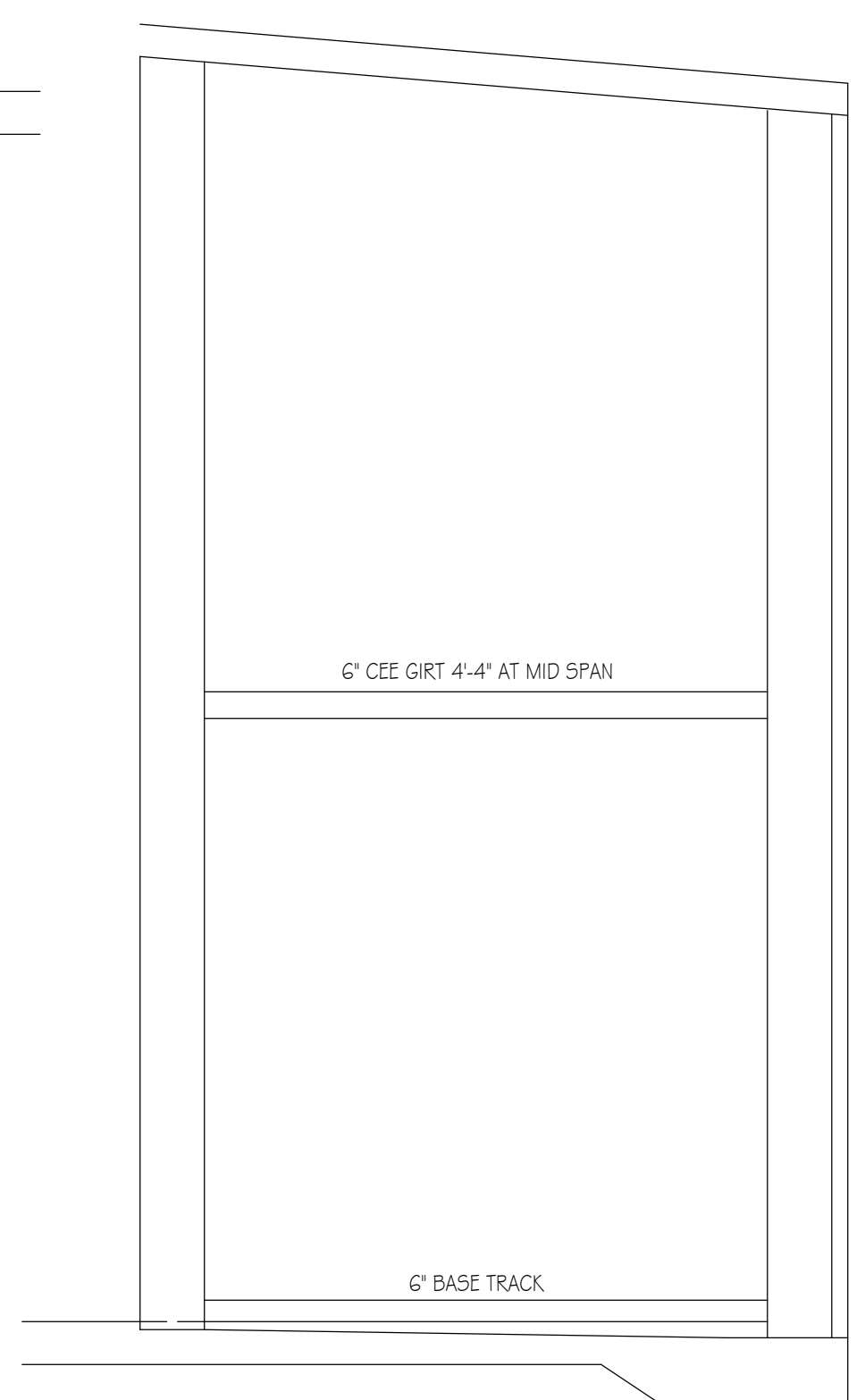


SECTION A-A

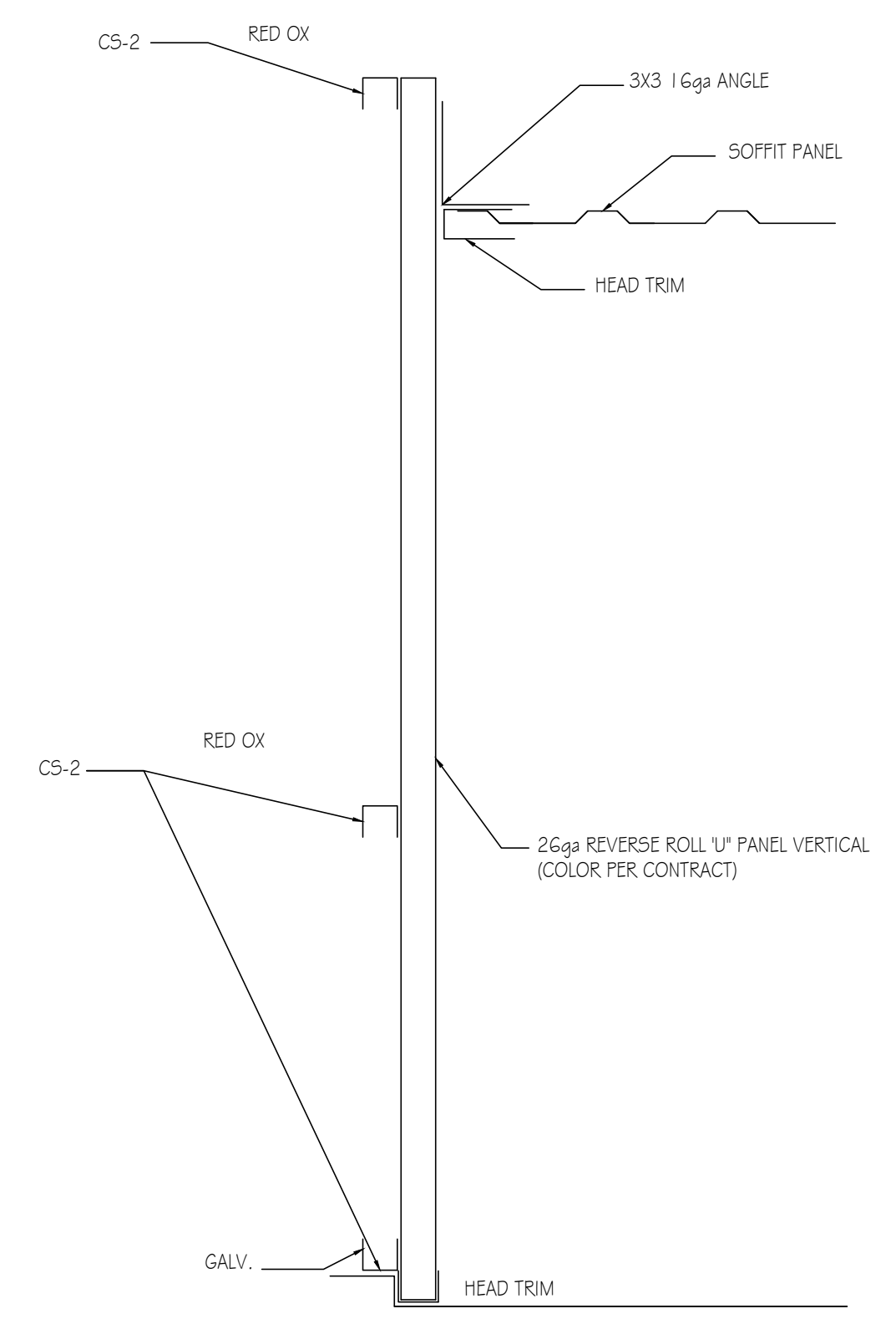
5 X 10 RECESSED ENTRY 6" FRAMING DETAIL @ LOW OR HIGH EAVE SHEETLEDGE



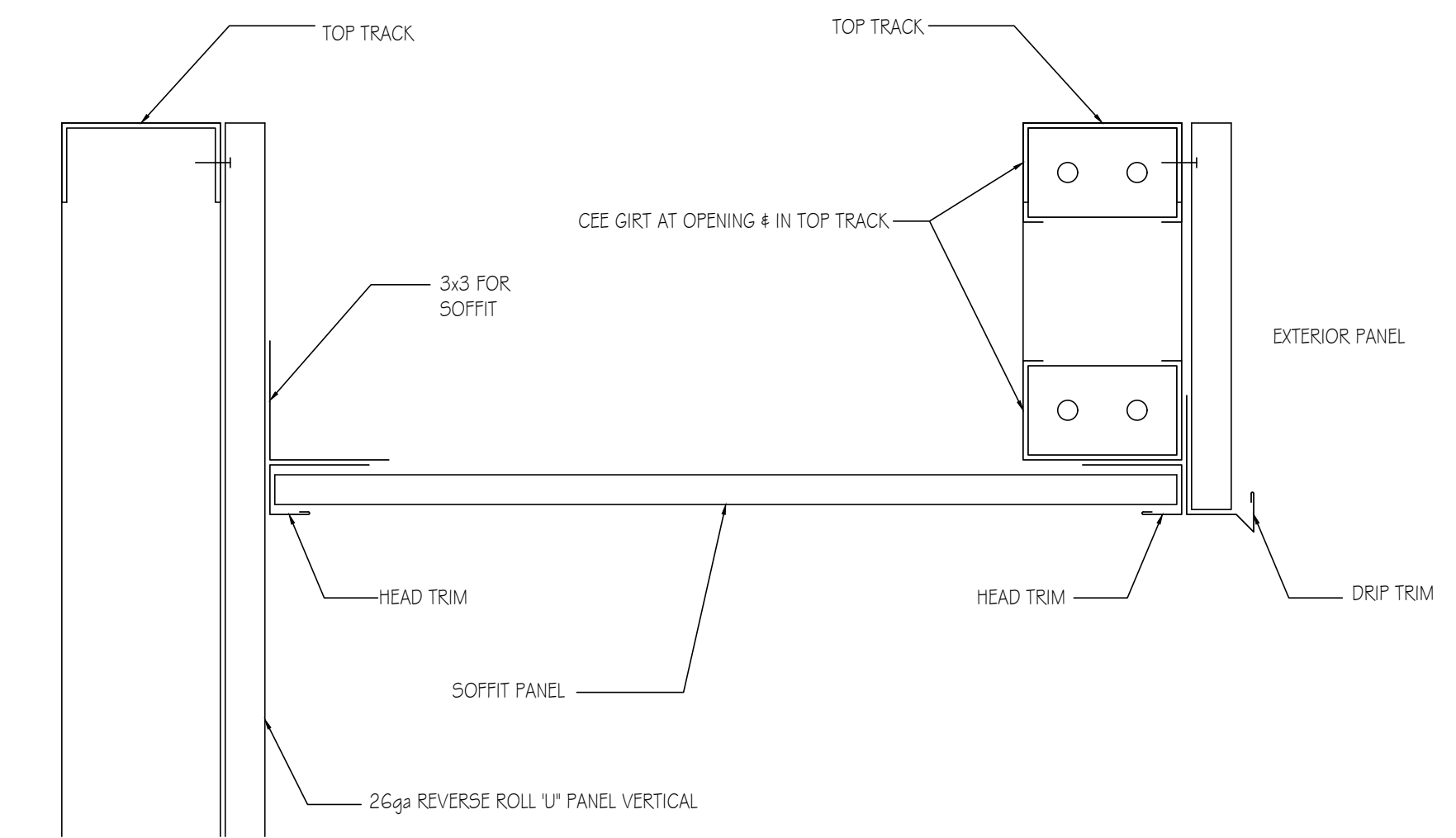
FRAMING AT DOOR



FRAMING AT SIDE



SECTION B-B



SECTION C-C



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ENGINEER
RBE CONSULTING SERVICES, LLC
10000 W. UNIVERSITY BLVD. SUITE 100
FORT LAUDERDALE, FL 33324
TEL: (954) 344-1111
WWW.RBECONSULTING.COM

SHEET TITLE
STRC.
DETAILS
DATE: 06-12-23
DRAWN BY: AWMMG
CHECKED BY: xxx
JOB NO.: E 2705
SCALE: AS NOTED
SHEET

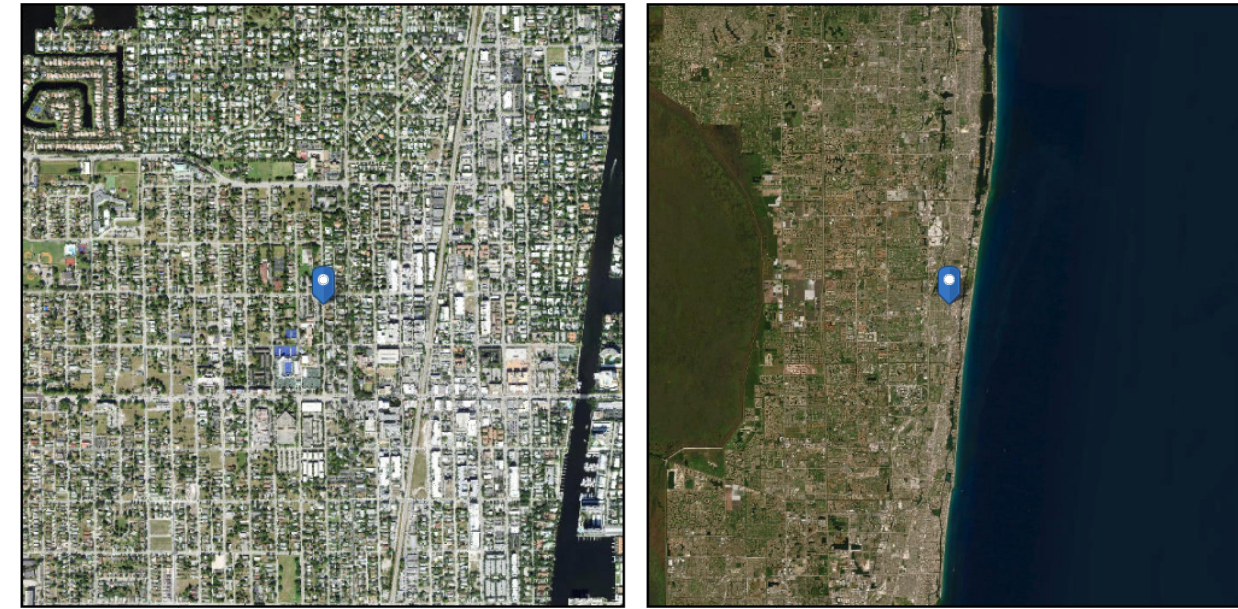
MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



ASCE 7 Hazards Report

Address: Delray Beach, Florida

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)
Latitude: 26.4649
Longitude: -80.07419
Elevation: 19.6092138164712 ft (NAVD 88)



Wind

Results:

Wind Speed	168 Vmph
10-year MRI	90 Vmph
25-year MRI	112 Vmph
50-year MRI	127 Vmph
100-year MRI	138 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC-2.1-CC-2.4, and Section 26.5.2
Date Accessed: Tue Jun 27 2023

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings shall be protected against wind-borne debris as specified in Section 26.12.3.

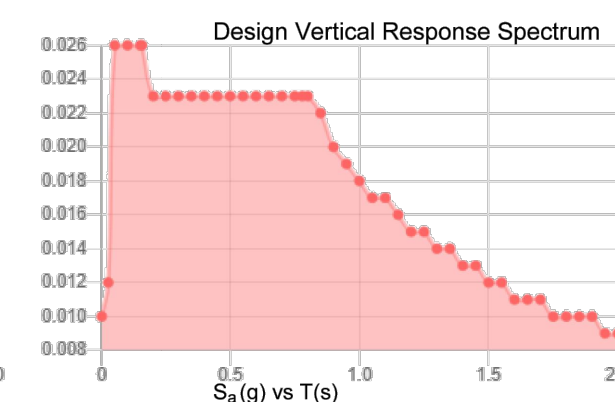
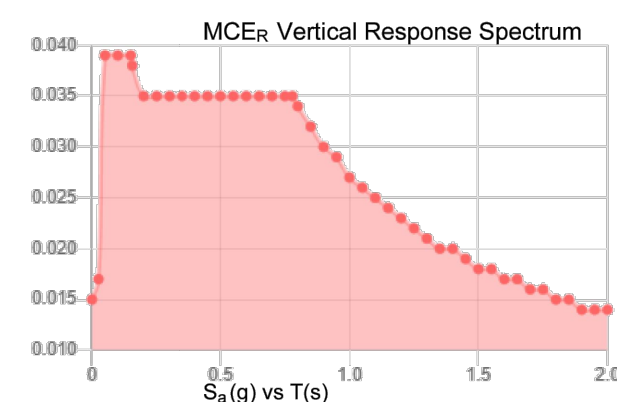
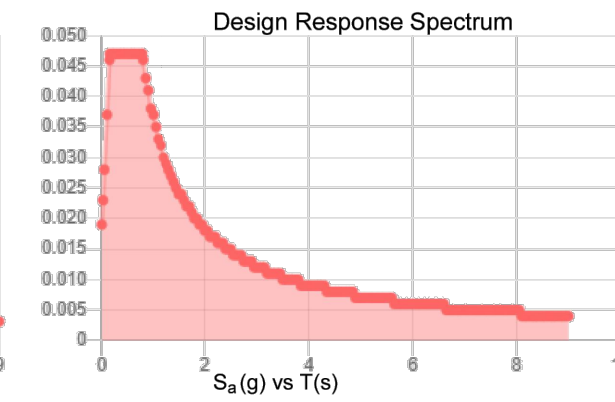
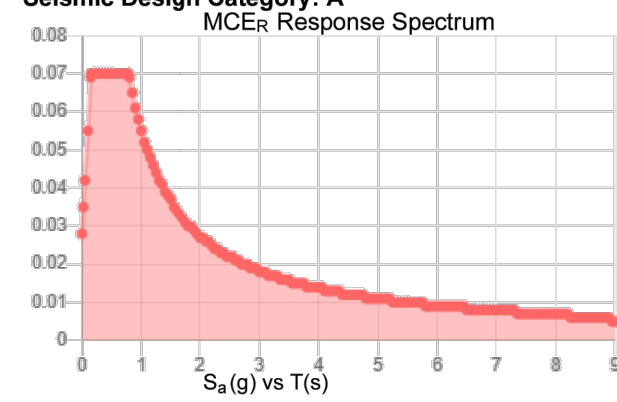


Seismic

Site Soil Class: Results:

S _s	: 0.044	S _{D1}	: 0.037
S ₁	: 0.023	T _L	: 8
F _v	: 1.6	PGA _M	: 0.021
F _w	: 2.4	PGA _M	: 0.033
S _{M5}	: 0.07	F _{PGA}	: 1.6
S _{M1}	: 0.055	I _w	: 1
S _{D5}	: 0.047	C _v	: 0.7

Seismic Design Category: A



Data Accessed: Tue Jun 27 2023
Data Source: USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.



Ice

Results: Ice Thickness: 0 in.
Concurrent Temperature: 25 F
Gust Speed: 30 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed: Tue Jun 27 2023

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Snow

Results: Ground Snow Load, p_s: 0 lb/ft²
Mapped Elevation: 19.6 ft
Data Source: ASCE/SEI 7-16, Table 7.2-8
Date Accessed: Tue Jun 27 2023

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.



Rain

Results: 15-minute Precipitation Intensity: 9.58 in./h
60-minute Precipitation Intensity: 5.23 in./h

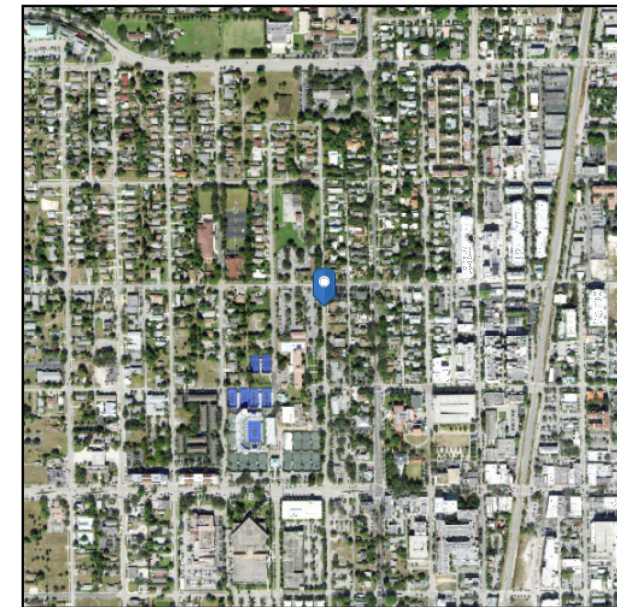
Data Source: NOAA National Weather Service, Precipitation Frequency Data Server, Atlas 14
Date Accessed: Tue Jun 27 2023



Flood

Results: Flood Zone Categorization: X (unshaded)
Base Flood Elevation:

Data Source: FEMA National Flood Hazard Layer - Effective Flood Hazard Layer for US, where modernized
Date Accessed: Tue Jun 27 2023
FIRM Panel: If available, download FIRM panel
Insurance Study Note: Download FEMA Flood Insurance Study for this area



Tsunami

Results: Tsunami: Not in mapped tsunami design zone.

Data Source: ASCE Tsunami Design Geodatabase
Date Accessed: Tue Jun 27 2023



Tornado

Results: Not Applicable to Risk Category 2

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers, or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

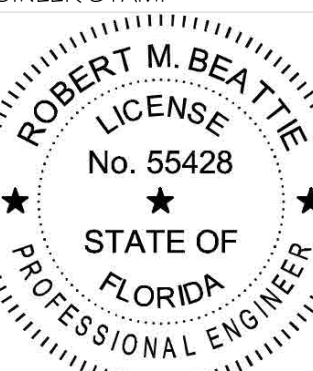
ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in investigating and applying the contents of this Tool or the ASCE 7 standard.

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This item has been electronically signed and sealed by Robert M. Beattie, PE using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

08/04/2023

ENGINEER: RBE CONSULTING SERVICES, LLC
18050 WINDY HILLS BLVD, SUITE 200
DELRAY BEACH, FL 33484
TEL: 561-898-0220
WWW.RBECONSULTING.COM

SHEET TITLE

CODE ANALYSIS

DATE: 06-12-23
DRAWN BY: AWM/MG
CHECKED BY: XXX
JOB NO.: E 2705
SCALE: AS NOTED
SHEET

S-0-0

PRELIMINARY NOT FOR PERMITTING
ANALYSIS WILL BE PROVIDED

NOMINAL (ASD) GARAGE DOOR & ROLLING DOOR WIND LOADS FOR BUILDINGS IN EXPOSURE "B" W/ MEAN ROOF HEIGHT OF 30FT (PSF)

WIDTH (FT.)	HEIGHT (FT.)	Vel	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH	190 MPH	200 MPH
		V _{nom}	78 MPH	85 MPH	93 MPH	101 MPH	108 MPH	116 MPH	124 MPH	132 MPH	139 MPH	147 MPH	155 MPH
ROOF ANGLE \leq 10 DEGREES													
δ	δ	+	8.7	10.5	12.5	14.7	17.1	19.6	22.3	25.1	28.2	31.4	34.8
		-	-9.8	-11.5	-14.2	-16.6	-19.3	-22.2	-25.2	-28.5	-31.9	-35.5	-39.4
10	10	+	8.4	10.2	12.1	14.2	16.5	18.9	21.5	24.3	27.3	30.4	33.7
		-	-9.4	-11.4	-13.6	-16.0	-18.5	-21.2	-24.2	-27.3	-30.6	-34.1	-37.8
14	14	+	8.0	9.7	11.5	13.5	15.7	18.0	20.5	23.1	25.9	28.9	32.0
		-	-8.9	-10.8	-12.8	-15.0	-17.4	-20.0	-22.8	-25.7	-28.8	-32.1	-35.6
ROOF ANGLE $>$ 10 DEGREES													
9	7	+	9.6	11.4	13.7	16.1	18.5	21.3	24.3	27.6	30.6	34.2	38.0
		-	-10.9	-12.9	-15.5	-18.2	-20.9	-24.1	-27.5	-31.2	-34.6	-38.6	-43.0
16	7	+	9.2	10.9	13.1	15.5	17.7	20.4	23.3	26.4	29.3	32.7	36.4
		-	-10.3	-12.2	-14.6	-17.2	-19.7	-22.7	-26.0	-29.4	-32.6	-36.5	-40.6

- NOTES:
- FOR EFFECTIVE AREAS OR WIND SPEEDS BETWEEN THOSE GIVEN ABOVE, THE LOAD MAY BE INTERPOLATED, OTHERWISE USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.
 - VALUES SHOWN ABOVE SHALL BE ADJUSTED FOR HEIGHT AND EXPOSURE BY MULTIPLYING BY THE RELATIVE COEFFICIENT SHOWN IN THE CHART TO THE RIGHT.
 - PLUS (+) AND MINUS (-) SIGNS SIGNIFY PRESSURES ACTING TOWARDS AND AWAY FROM BUILDING SURFACES.
 - VALUES SHOWN IN TABLE ABOVE ALREADY INCLUDE THE LOAD REDUCTION FACTOR OF 0.6.

ADJUSTMENT FACTOR FOR BUILDING HEIGHT & EXPOSURE

MEAN ROOF HEIGHT (FT.)	EXPOSURE CATEGORY		
	B	C	D
15	1.00	1.21	1.47
20	1.00	1.29	1.55
25	1.00	1.35	1.61
30	1.00	1.40	1.66
35	1.05	1.45	1.70
40	1.09	1.49	1.74
45	1.12	1.53	1.78
50	1.16	1.56	1.81
55	1.19	1.59	1.84
60	1.22	1.62	1.87

MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



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RBE CONSULTING SERVICES, LLC
1805 S.W. 14TH AVENUE, SUITE 200, MIAMI, FL 33135
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SHEET TITLE

CODE ANALYSIS

DATE 06-12-23
DRAWN BY AWMMG
CHECKED BY xxx
JOB NO. E 2705
SCALE AS NOTED
SHEET

Metal Building Insulation 202-96

PRODUCT DESCRIPTION

Baseline: CertainTeed Fiber Glass Metal Building Insulation 202-96 is a flexible blanket insulation furnished in rolls and intended to be laminated on one side with a suitable vapor retarder. It is used as a thermal and acoustical insulation in the roofs and sidewalls of pre-engineered metal buildings and post frame construction.

Benefits: Metal Building Insulation 202-96 reduces transmission of exterior sound to the interior of the building and absorbs reverberating sounds within the building.

Composition and Materials: The product is composed of fiber, uniformly textured, inorganic fibrous glass and formed with a formaldehyde-free binding agent.

Limitations: This product is designed for use in interior (weather protected) walls and roofs of pre-engineered metal buildings. It should be laminated on a first-4, first-out basis and should be kept dry at all times during processing and end use. After lamination, packaging should not exceed a 5.5:1 compression ratio. For additional information, please refer to the appendix of the NAIMA 202-96 (Rev. 2000) standard.

Sizes: Standard available sizes as noted in table below. Contact CertainTeed for non-standard sizes.

INSTALLATION

The vapor retarder on Metal Building Insulation 202-96 should be installed toward the conditioned spaces in the building. The insulation is normally applied over or between the structural members of the building and held in place by the covering sheetrock or insulation support system. When using high R-Value systems, it is recommended that the cavity between the exterior metal sheet and the faced fiber glass insulation should be completely filled.

THERMAL PERFORMANCE				
Nominal Thickness in. mm	R-Value		BTU-h/ft ² ·°F	
	in.	mm	R	BTU-h/ft ² ·°F
3/4"	19	483	1.76	1.54
1 1/4"	32	813	2.92	2.57
2"	51	1294	4.40	3.85
3"	76	1941	6.60	5.77
4"	102	2588	8.80	7.72

AVAILABLE SIZES:					
R-Value	Nominal Thickness	Width		Length	
		in.	mm	ft. m	
10	3/4"	76.2	36,48,60,72	91.4,121.9,152.4,182.9	100 30.5
11	3/4"	88.9	36,48,60,72	91.4,121.9,152.4,182.9	100 30.5
13	3/4"	101.6	36,48,60,72	91.4,121.9,152.4,182.9	76 22.9
16	3/4"	133.0	36,48,60,72	91.4,121.9,152.4,182.9	60 18.2
19	3/4"	127	36,48,60,72	91.4,121.9,152.4,182.9	60 18.2
21"	3/4"	162.4	36,48,60,72	91.4,121.9,152.4,182.9	46 13.7
25"	3/4"	203.2	36,48,60,72	91.4,121.9,152.4,182.9	30 9.1
30"	3/4"	238.0	36,48,60,72	91.4,121.9,152.4,182.9	25 7.6

Non-standard widths are available and subject to an upcharge on an individual basis determined by manufacturer's capacity, quantity, lead times and packaging availability. R-25, R-25 and R-30 are made to order.



Product Name: CertainTeed Metal Building Insulation 202-96
Manufacturer: CertainTeed Corporation
Address: P.O. Box 880
Valley Forge, PA 19482-0165
Phone: 610-241-7000 • 800-232-8990
Fax: 610-341-7571
Website: www.certainteed.com/insulation

TECHNICAL DATA

- Applicable Standards:**
- Model Building Codes:
 - ICC
 - Material Standards:
 - ASTM C991, Type I
 - NAIMA 202-96 (Rev. 2000)

Fire Resistance

- Fire Hazard Classification:
 - UL 723, ASTM E84, NFPA 255
 - Max. Flame Spread Index: 25
 - Max. Smoke Developed Index: 50
 - CANULC-S102-M66
- Non-combustible:
 - ASTM E136 / Meets requirements
 - ASTM E138 / Meets requirements

Physical/Chemical Properties

- Thermal Resistance:
 - ASTM C518 and/or ASTM C177 at 75°F (24°C) mean temperature; see table at left
- Acoustical Performance: see tables on other side
- Water Vapor Sorption:
 - ASTM C1104 / No greater than 5.0% by weight

- Corrosiveness:
 - ASTM D2065 / Meets requirements for steel, copper and aluminum
- Odor Emission:
 - ASTM C1304 / Pass
- Fungi Resistance:
 - ASTM C1336 / Pass Test

Quality Assurance

CertainTeed's commitment to quality and environmental management has earned the recognition of the American Chemical Society, the National Fire Protection Association, and the International Organization for Standardization (ISO).

AVAILABILITY AND COST

Manufactured and sold throughout the United States and Canada. For availability and cost, contact your local distributor or call CertainTeed Sales Support Group in Valley Forge, PA at 800-233-8990.

WARRANTY

In as much as CertainTeed has no control over installation design, installation workmanship, accessory materials or conditions of application, CertainTeed does not warrant the performance or results of any installation containing its products.

MAINTENANCE

An inspection and preventative maintenance program for the insulation and vapor retarder system is recommended to ensure optimum performance.

TECHNICAL SERVICES

Technical assistance can be obtained either from the local CertainTeed sales representative, or by calling CertainTeed Sales Support Group in Valley Forge, PA at 800-233-8990.

FILING SYSTEMS

- CertainTeed Pub. No. 30-25-056.
- Additional product information available upon request.

SOUND ABSORPTION - UNFACED										
R-Value	Nom. Thickness	Absorption Coefficients @ Octave Band Frequencies (Hz)								NRC
		125	250	500	1000	2000	4000			
10	3/4"	0.20	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
11	3/4"	0.20	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
13	3/4"	0.20	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
16	3/4"	0.20	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
19	3/4"	0.20	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22

SOUND TRANSMISSION							
Construction Type	Transmission Loss in dB at the Octave Frequencies					STC Rating	
	125	250	500	1000	2000		4000
No Insulation	12	13	19	24	30	32	24
R-10 Faced 202-96 Insulation Over the Purlins	12	16	26	37	45	49	29
R-19 Faced 202-96 Insulation Over the Purlins	13	20	30	41	49	51	32
R-2029 Insulation Over the Purlins with 1/2" Gaps Between the Purlins to Fill the Cavity (R-25 Combined)	14	24	34	44	53	56	36

ROOFS							
Construction Type	Transmission Loss in dB at the Octave Frequencies					STC Rating	
	125	250	500	1000	2000		4000
No Insulation	12	14	19	19	20	27	21
R-10 Faced 202-96 Insulation Over the Girts	13	16	25	32	37	46	28
R-19 Faced 202-96 Insulation Over the Girts	13	17	26	32	39	47	29

WALLS							
Construction Type	Transmission Loss in dB at the Octave Frequencies					STC Rating	
	125	250	500	1000	2000		4000
No Insulation	12	14	19	19	20	27	21
R-10 Faced 202-96 Insulation Over the Girts	13	16	25	32	37	46	28
R-19 Faced 202-96 Insulation Over the Girts	13	17	26	32	39	47	29

2029 Insulation Over the Girts with 1/2" Gaps Between the Girts to Fill the Cavity (R-25 Combined)							
Construction Type	Transmission Loss in dB at the Octave Frequencies					STC Rating	
	125	250	500	1000	2000		4000
No Insulation	12	14	19	19	20	27	21
R-10 Faced 202-96 Insulation Over the Girts with 1/2" Gaps Between the Girts to Fill the Cavity (R-25 Combined)	26	40	51	60	64	66	50

2029 Insulation Over the Girts with 1/2" Gaps Between the Girts to Fill the Cavity (R-25 Combined)							
Construction Type	Transmission Loss in dB at the Octave Frequencies					STC Rating	
	125	250	500	1000	2000		4000
No Insulation	12	14	19	19	20	27	21
R-10 Faced 202-96 Insulation Over the Girts with 1/2" Gaps Between the Girts to Fill the Cavity (R-25 Combined)	31	43	55	68	73	75	54

Sound Transmission Class (STC) in accordance with ASTM E90.

- Wall construction is 2-gips, starting from steel with 1/2" girts on 5' centers.
 - Wall construction is 2-gips, wall panels spaced 18" girts spaced on 7' centers.
 - Interior metal lathing wall studs were 3-5/8" by 2-gips on 24" centers.



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VR-R PLUS				
DESCRIPTION	Reinforced Polypropylene Film - Metalized Polyester Film Laminate			
APPLICATIONS	Metal Building Insulation Facing			
CERTIFICATIONS	Meets all criteria for ASTM C1136 Types II, IV UL 723/ASTM E84, ULC-S102M fire testing			
COMPOSITION				
COMPONENT	DESCRIPTION	English	Metric	VALUES*
White Film	Polypropylene	0.0011 inch	28.0 micron	
Adhesive	Flame Resistant			
Reinforcement	Tri-directional Fiberglass	4/inch (MD) 4/inch (CD)	20/100 mm (MD) 8/100 mm (MD)	
Film	Polyester	0.0005 inch	12.7 micron	
TYPICAL PHYSICAL PROPERTIES				
CHARACTERISTIC	METHOD	ENGLISH	METRIC	VALUES*
BASIS WEIGHT	Scale	13.2 lbs/1000 SF	64.1 g/SM	
THICKNESS	ASTM-D-1777	0.007"	178 microns	
PERMEABILITY (WVTR)	ASTM-E-96	0.02 Perms	1.15 ng/m ²	
BURST STRENGTH	ASTM-D-774	100 psi	7.0 kg/cm ²	
PUNCTURE RESISTANCE	ASTM-C-1136	300 units (79 in-lbs)	9.0 Joules	
TENSILE STRENGTH	ASTM-C-1136	30 lbs/inch MD 30 lbs/inch CD	5.25 kN/m 5.25 kN/m	
ACCELERATED AGING	30 days @ 95% RH, 120 °F (49°C)	No Corrosion No Delamination	No Corrosion No Delamination	
TEMPERATURE RESISTANCE		-40 °F to 220 °F	-40 °C to 104 °C	
WATER IMMERSION	24 hours @ 73°F (23°C)	No Delamination	No Delamination	
MOLD RESISTANCE	ASTM-C-665	No Growth	No Growth	
LIGHT REFLECTIVITY	ASTM-C-523	85%	85%	
Physical properties are based upon nominal values. Weight/Thickness +/-10%				
FIRE TESTING				
		UL723/ASTM E84/CAN ULC-S102M		
		FLAME SPREAD		
		SMOKE DEVELOPED		
		25		
		50		

DATA SHEET # 13662 REV. 1 DATE: 12/10/14 *All values are nominal unless otherwise specified.

Note: Alpha's metal building insulation facings are produced with plastic films containing ultraviolet (UV) inhibitors, however, intense exposure to UV sources such as direct or indirect sunlight and/or high-output UV lighting is not recommended as these will degrade the plastic film facing.

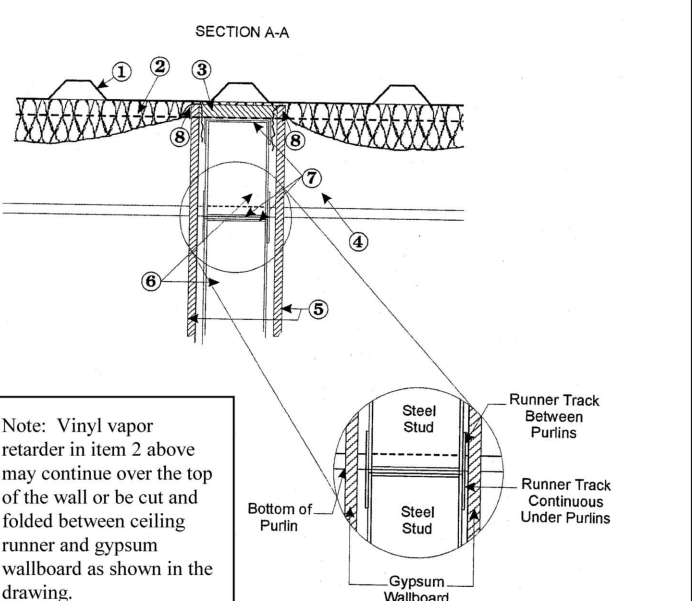
MBMA Insurance Bulletin 19
 METAL BUILDING MANUFACTURERS ASSOCIATION

Fire Testing of Interior Separation Wall Joint

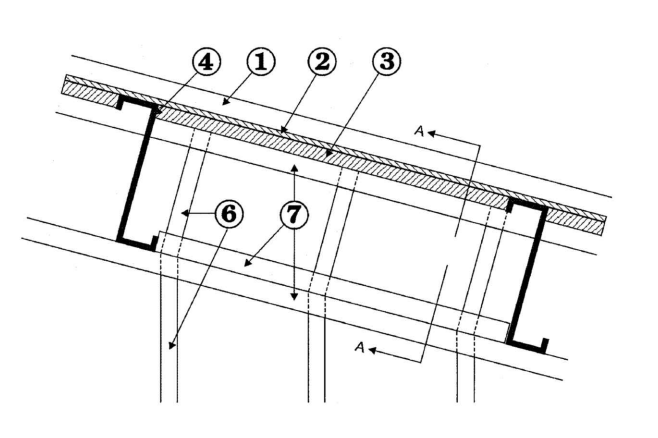
This test program was undertaken by the Metal Building Manufacturers Association and tested at Omega Point Laboratories to evaluate the fire performance of the junction between a one-hour fire rated wall assembly and the non-combustible metal roof panels. (Ref. Omega Point Project No. 16343-108145).

The fire exposure used to evaluate the joint was the time-temperature curve in ASTM E 119 for fire rated walls. There is no test method for evaluating the fire integrity of the joint where a fire rated wall meets the roof insulation under non-combustible metal roof panels. Also, building codes do not require this joint to be fire rated. This bulletin serves to answer questions raised by building and fire code officials concerning fire spread over the top of the fire rated wall via the vinyl vapor retarder.

The test was performed in the worst-case orientation, with purlins framed perpendicular to the wall framing of the one-hour wall. Therefore, the same performance can be expected with the wall framed in any orientation with respect to the purlins. The test also showed there is no need to cut the vapor retarder, so it can be continuous over the top of the wall.



Interior Separation Wall Joint

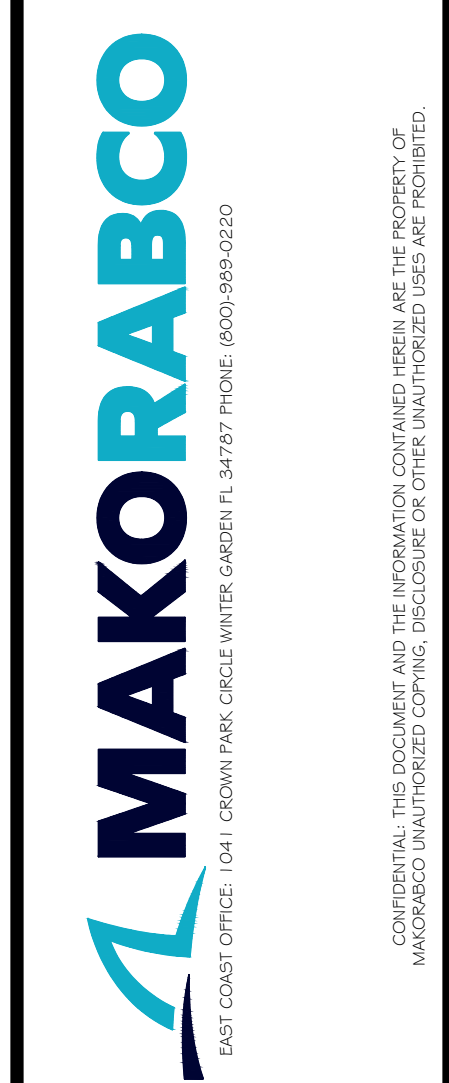


FRAMING ELEVATION
 Note: Optimum Wallboard not shown. The caulking shall fill all openings where optimum wallboard fits around purlin penetrations.

The fire test was terminated at 1 hour and forty-one minutes, during which time no flaming occurred on the unexposed surface of the wall or roof at the joint. The construction details that successfully prevented flaming over the top of the wall in the test are shown below.

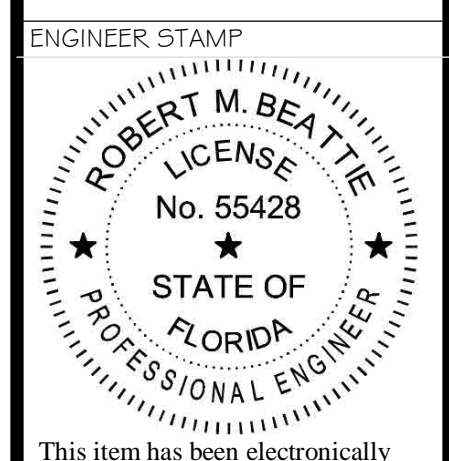
1. Metal Roof Panels - No. 26 MSG min. galvanized, Galvalume®, or painted steel.
2. Batts or Blankets - Vinyl faced compressible glass fiber insulation weighing between 0.6 and 0.7 pcf. Installed at the bottom side of roof deck panels over top of purlins. Note: Fiberglass insulation with alternate facing materials can be used, if flame spread is less than or equal to 25, and has a smoke developed rating of less than or equal to 50 per ASTM E84.
3. Mineral Wool Batts - 2 inches thick, 8-9 pcf density, fire stop across top of wall.
4. Steel Roof Purlin - C or Z-shaped, minimum 8 inches deep, No. 16 MSG min. galvanized or painted steel.
5. Wallboard, gypsum - 5/8 inch thick, Type X gypsum wallboard.
6. Steel Studs - Channel shaped min. 2 1/2 inch wide, 1 1/4 inch flanges, and 1/4 inch return steel studs of No. 25 MSG min. steel, spaced 24 inches O.C. max. (Ref. UL Design No. 11425).
7. Floor and Ceiling Runners - Channel shaped of 25 MSG min. steel with min. 1-inch long legs to accommodate main wall studs. Runner at the top of the wall attached to the bottom of the purlins. Inverted runner attached to the top of the wall runner between purlins in order to support the short length of steel studs capped with a runner to compress the mineral wool batts and the glass fiber insulation under the roof panels.
8. Fire Caulking - Bead of fire caulk along the joint formed by the gypsum wallboard and the glass fiber insulation applied along the top of the wall and on both sides of the wall in accordance with the manufacturer's specifications. Fire caulking of all openings between the gypsum wallboard and the purlins on both sides of the wall.

MARKUPS / REVISIONS			
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 DRAWN BY AWM/MG
 CHECKED BY xxx
 JOB NO. E 2705
 SCALE AS NOTED
 SHEET

STATEMENT OF SPECIAL INSPECTION. ALL REQUIRED SPECIAL INSPECTIONS SHALL BE AS INDICATED BELOW. NO ADDITIONAL REQUIREMENTS FOR SPECIAL INSPECTION OR TESTING FOR SEISMIC OR WIND RESISTANCE SHALL BE REQUIRED.

SCHEDULE OF SPECIAL INSPECTION SERVICES. PROJECT: MATERIAL / ACTIVITY, SERVICE, Y/N, EXTENT, AGENT*, DATE COMPLETED.

SCHEDULE OF SPECIAL INSPECTION SERVICES. PROJECT: MATERIAL / ACTIVITY, SERVICE, Y/N, EXTENT, AGENT*, DATE COMPLETED.

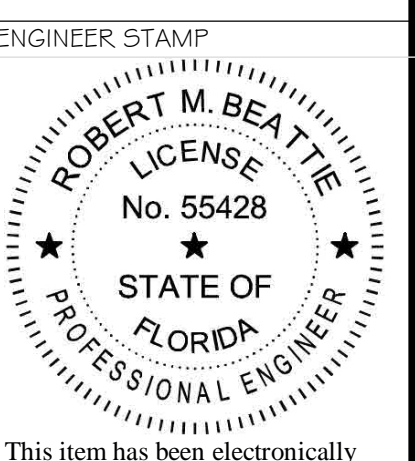
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ENGINEER: RBC CONSULTING SERVICES, LLC. ENGINEER: Robert M. Beattie, P.E. License No. 55428, State of Florida. Date: 08/04/2023.

SHEET TITLE: SPECIAL INSPECTION. DATE: 06-12-23. DRAWN BY: AWM/MG. CHECKED BY: XXX. JOB NO.: E 2705. SCALE: AS NOTED. SHEET: 5-0-4.

SCHEDULE OF SPECIAL INSPECTION SERVICES. PROJECT: MATERIAL / ACTIVITY, SERVICE, Y/N, EXTENT, AGENT*, DATE COMPLETED. Includes items 1705.7 Driven Deep Foundations, 1705.8 Cast-in-Place Deep Foundations, 1705.9 Helical Pile Foundations.

SCHEDULE OF SPECIAL INSPECTION SERVICES. PROJECT: MATERIAL / ACTIVITY, SERVICE, Y/N, EXTENT, AGENT*, DATE COMPLETED. Includes items 1705.10.1 Structural Wood Special Inspections For Wind Resistance, 1705.10.2 Cold-formed Steel Special Inspections For Wind Resistance, 1705.10.3 Wind-resisting Components, 1705.11.1 Structural Steel Special Inspections For Seismic Resistance, 1705.11.2 Structural Wood Special Inspections For Seismic Resistance, 1705.11.3 Cold-formed Steel Light-Frame Construction Special Inspections For Seismic Resistance, 1705.11.4 Designated Seismic Systems Verification.

SCHEDULE OF SPECIAL INSPECTION SERVICES. PROJECT: MATERIAL / ACTIVITY, SERVICE, Y/N, EXTENT, AGENT*, DATE COMPLETED. Includes items 1705.11.5 Architectural Components Special Inspections for Seismic Resistance, 1705.11.6 Mechanical and Electrical Components Special Inspections for Seismic Resistance, 1705.11.7 Storage Racks Special Inspections for Seismic Resistance, 1705.11.8 Seismic Isolation Systems, 1705.12.1 Concrete Reinforcement Testing and Qualification for Seismic Resistance.

SCHEDULE OF SPECIAL INSPECTION SERVICES. PROJECT: MATERIAL / ACTIVITY, SERVICE, Y/N, EXTENT, AGENT*, DATE COMPLETED. Includes items 1705.12.2 Structural Steel Testing and Qualification for Seismic Resistance, 1705.12.3 Seismic Certification of Nonstructural Components, 1705.12.4 Seismic Isolation Systems, 1705.13 Sprayed Fire-resistant Materials, 1705.14 Mastic and Intumescent Fire-Resistant Coatings, 1705.15 Exterior Insulation and Finish Systems (EIFS).

SCHEDULE OF SPECIAL INSPECTION SERVICES. PROJECT: MATERIAL / ACTIVITY, SERVICE, Y/N, EXTENT, AGENT*, DATE COMPLETED. Includes items 1705.16 Fire-Resistant Penetrations and Joints, 1705.17 Smoke Control Systems. Includes inspection agents table and notes.

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ENGINEER: RBE CONSULTING SERVICES, LLC. SHEET TITLE: SPECIAL INSPECTIONS. Includes drawing details: DATE 06-12-23, DRAWN BY AWMMG, CHECKED BY XXX, JOB NO. E 2705, SCALE AS NOTED, SHEET 5-0-5.

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POWERS LINTEL SCHEDULE (8" OR 12" CMU)

MARK	W	H	REINFORCING	MARK	W	H	REINFORCING
FL88	8	8	(1) #5 MID BAR	FL128	12	8	(1) #5 MID BAR
FL812	8	12	(1) #5 BOT	FL1212	12	12	(1) #5 BOT
FL816	8	16	(1) #5 TOP & BOT BAR	FL1216	12	16	(1) #5 TOP & BOT BAR
FL816-1	8	16	(2) #5 TOP & BOT BAR	FL1216-1	12	16	(2) #5 TOP & BOT BAR
FL820	8	20	(1) #5 TOP & BOT BAR	FL1220	12	20	(1) #5 TOP & BOT BAR
FL824	8	24	(1) #5 TOP & BOT BAR	FL1224	12	24	(1) #5 TOP & BOT BAR
FL824-1	8	24	(2) #5 TOP & BOT BAR	FL1224-1	12	24	(2) #5 TOP & BOT BAR
FL828	8	28	(1) #5 TOP & BOT BAR	FL1228	12	28	(1) #5 TOP & BOT BAR
FL832	8	32	(2) #5 TOP & BOT BAR	FL1232	12	32	(2) #5 TOP & BOT BAR
FL836	8	36	(2) #5 TOP & BOT BAR	FL1236	12	36	(2) #5 TOP & BOT BAR
FL840	8	40	(2) #5 TOP, MID, & BOT BAR	FL1240	12	40	(2) #5 TOP, MID, & BOT BAR
FL840-1	8	40	(2) #6 TOP & BOT BAR, (2) #5 MID BARS	FL1240-1	12	40	(2) #6 TOP & BOT BAR, (2) #5 MID BARS
FL844	8	44	(2) #5 TOP, MID, & BOT BAR	FL1244	12	44	(2) #5 TOP, MID, & BOT BAR
FL848	8	48	(2) #5 TOP, MID, & BOT BAR	FL1248	12	48	(2) #5 TOP, MID, & BOT BAR
FL848-1	8	48	(2) #6 TOP & BOT BAR, (2) #5 MID BARS	FL1248-1	12	48	(2) #6 TOP & BOT BAR, (2) #5 MID BARS

POWERS BOXED LINTEL SCHEDULE (8" OR 12" CMU)

MARK	W	H	REINFORCING	MARK	W	H	REINFORCING
BL88	8	8	(1) #5 MID BAR	BL128	12	8	(1) #5 MID BAR
BL812	8	12	(1) #5 BOT	BL1212	12	12	(1) #5 BOT
BL816	8	16	(1) #5 TOP & BOT BAR	BL1216	12	16	(1) #5 TOP & BOT BAR
BL816-1	8	16	(2) #5 TOP & BOT BAR	BL1216-1	12	16	(2) #5 TOP & BOT BAR
BL820	8	20	(1) #5 TOP & BOT BAR	BL1220	12	20	(1) #5 TOP & BOT BAR
BL824	8	24	(1) #5 TOP & BOT BAR	BL1224	12	24	(1) #5 TOP & BOT BAR
BL824-1	8	24	(2) #5 TOP & BOT BAR	BL1224-1	12	24	(2) #5 TOP & BOT BAR
BL828	8	28	(1) #5 TOP & BOT BAR	BL1228	12	28	(1) #5 TOP & BOT BAR
BL832	8	32	(2) #5 TOP & BOT BAR	BL1232	12	32	(2) #5 TOP & BOT BAR
BL836	8	36	(2) #5 TOP & BOT BAR	BL1236	12	36	(2) #5 TOP & BOT BAR
BL840	8	40	(2) #5 TOP, MID, & BOT BAR	BL1240	12	40	(2) #5 TOP, MID, & BOT BAR
BL840-1	8	40	(2) #6 TOP & BOT BAR, (2) #5 MID BARS	BL1240-1	12	40	(2) #6 TOP & BOT BAR, (2) #5 MID BARS
BL844	8	44	(2) #5 TOP, MID, & BOT BAR	BL1244	12	44	(2) #5 TOP, MID, & BOT BAR
BL848	8	48	(2) #5 TOP, MID, & BOT BAR	BL1248	12	48	(2) #5 TOP, MID, & BOT BAR
BL848-1	8	48	(2) #6 TOP & BOT BAR, (2) #5 MID BARS	BL1248-1	12	48	(2) #6 TOP & BOT BAR, (2) #5 MID BARS

PRE CAST LINTEL SCHEDULE (8" OR 12" CMU)

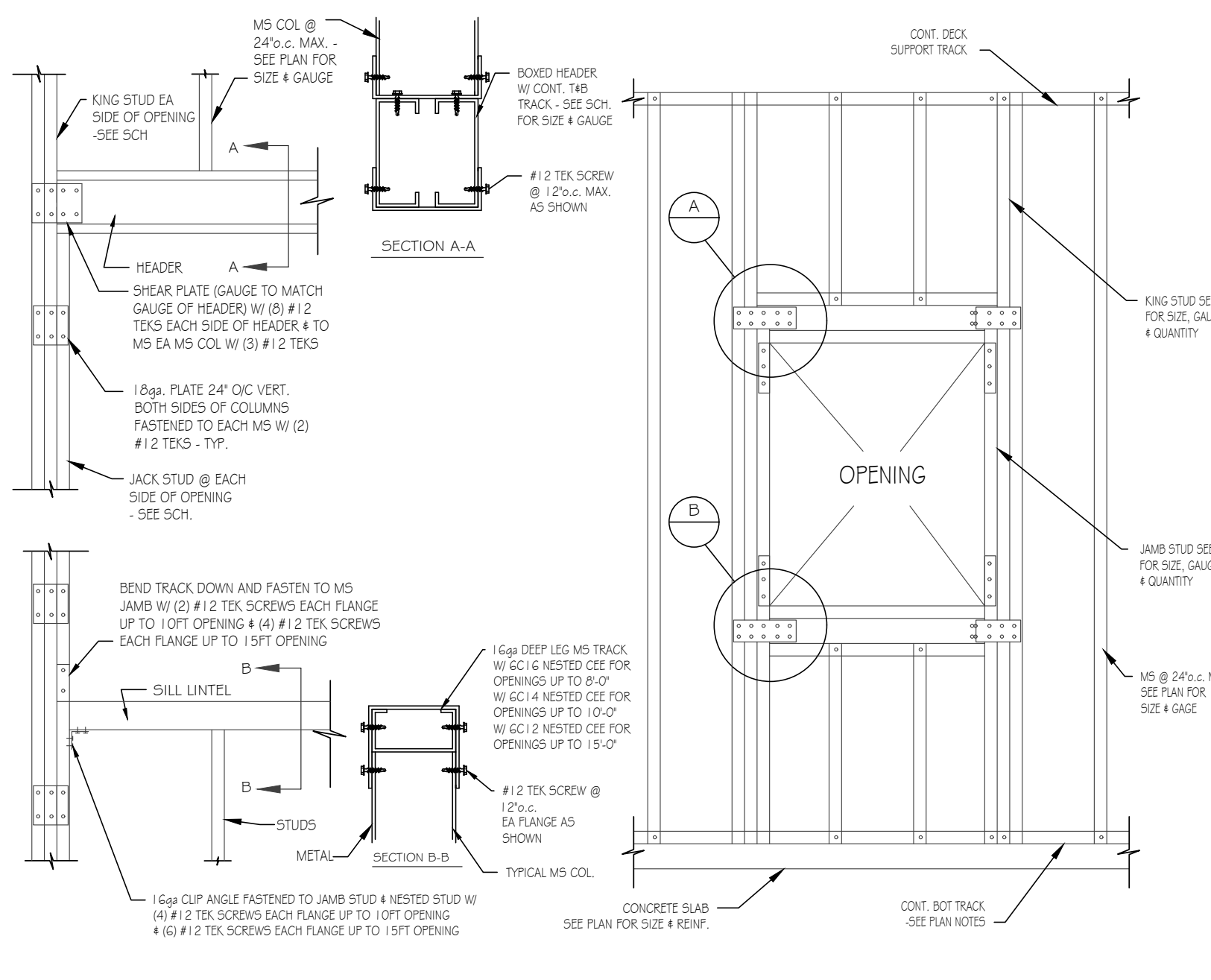
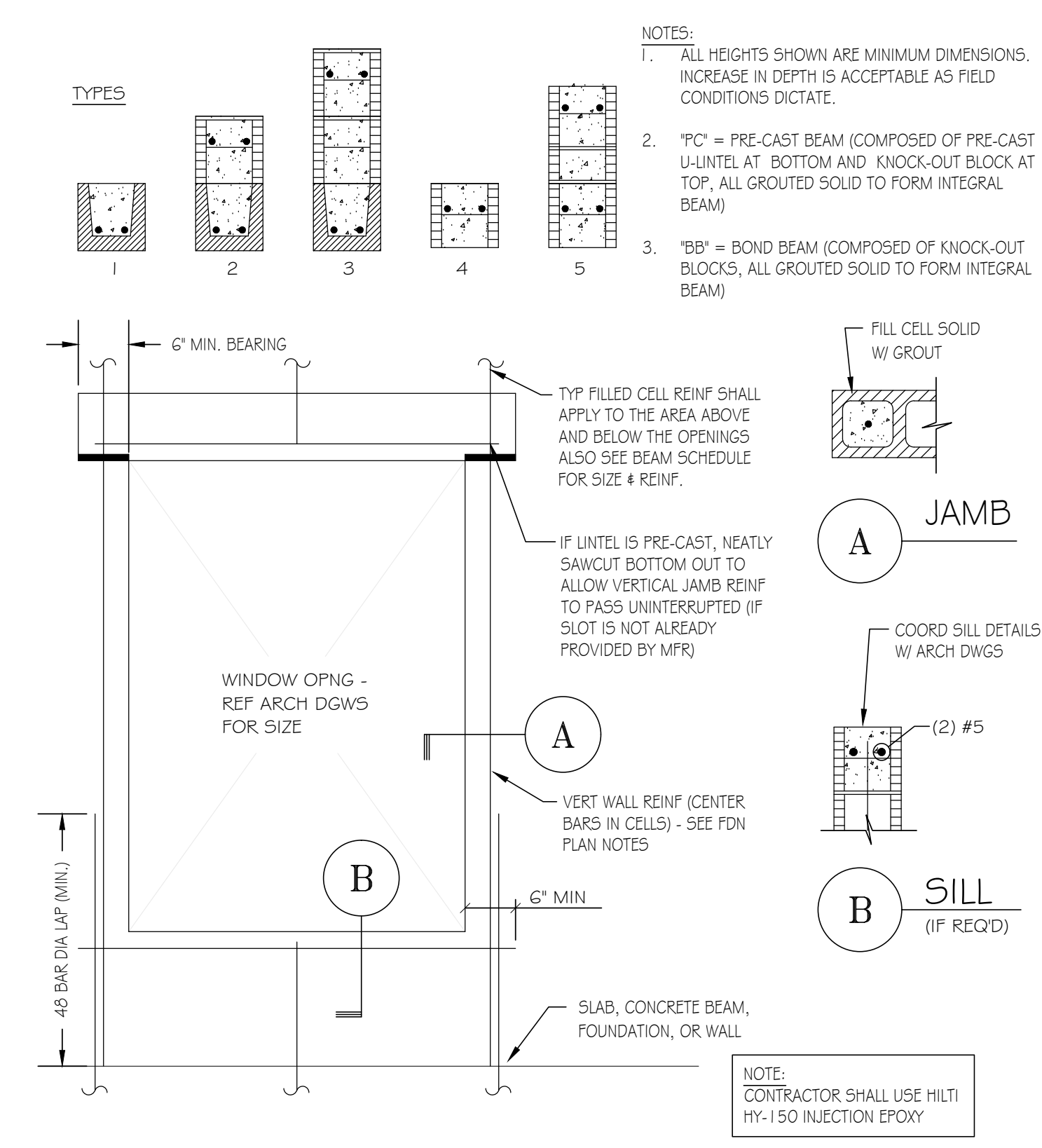
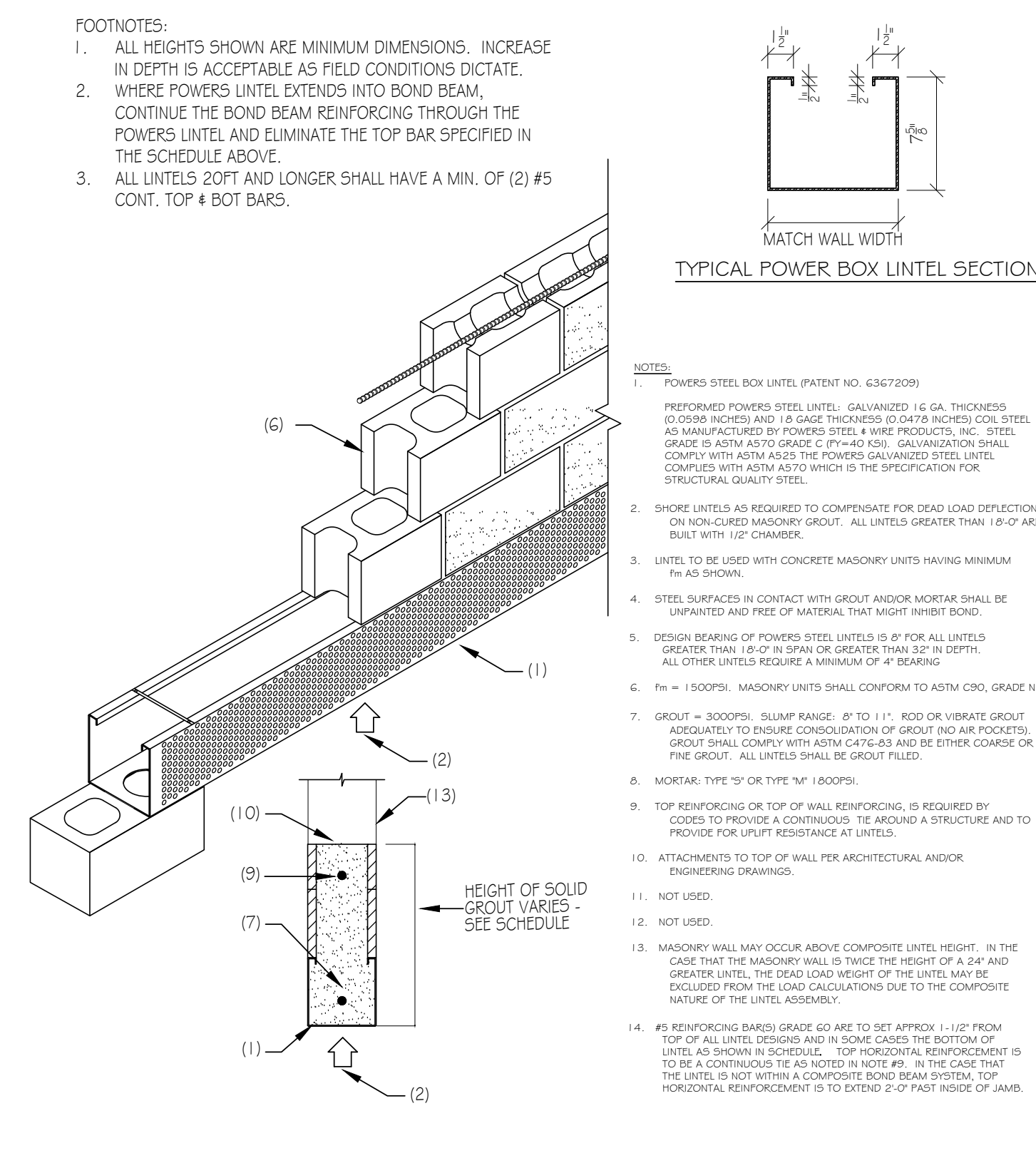
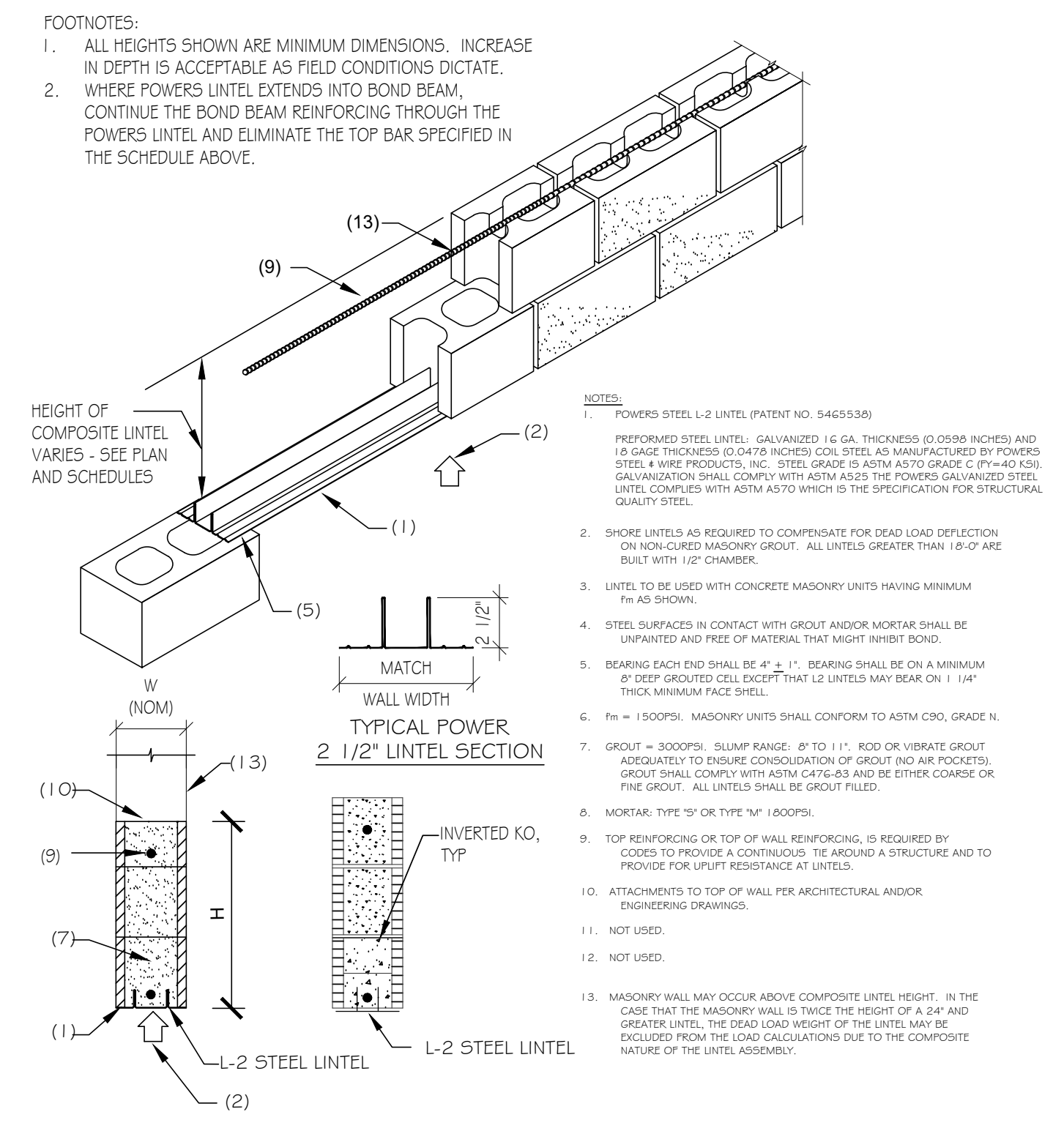
MARK	W	H	TYPE	REINFORCING	SPAN	COMMENTS
PC88	8	8	1	(2) #5 CONT	UP TO 6'-0"	U.N.O. ON PLANS PB SHALL ALSO BE PROVIDED AT STOREFRONT/TRANSOM SUPPORT
PC816	8	16	2	(2) #5 CONT 1TB	6'-1" TO 10'-0"	
PC824	8	24	3	(2) #6 CONT 1TB	10'-1" TO 14'-0" (MAX. U.N.O.)	
PC832	8	32	3	(2) #6 CONT 1TB	14'-1" TO 18'-0"	
BB88	8	8	4	(2) #5 CONT	@ TIPARAFET OR INT. NON-LOAD BRG WALL (TYP., UNO)	
BB816	8	16	5	(2) #5 CONT 1TB	AT EACH FLOOR LEVEL, INTERMEDIATE STAIR LANDING, ROOF BEAM ATTACHMENT, & TRUSS BEARING LOCATIONS - (TYP. UNO)	
PC128	12	8	1	(2) #5 CONT	UP TO 6'-0"	U.N.O. ON PLANS PB SHALL ALSO BE PROVIDED AT STOREFRONT/TRANSOM SUPPORT
PC1216	12	16	2	(2) #5 CONT 1TB	6'-1" TO 10'-0"	
PC1224	12	24	3	(2) #6 CONT 1TB	10'-1" TO 14'-0" (MAX. U.N.O.)	
PC1232	12	32	3	(2) #6 CONT 1TB	14'-1" TO 18'-0"	
BB128	12	8	4	(2) #5 CONT	@ TIPARAFET OR INT. NON-LOAD BRG WALL (TYP., UNO)	
BB1216	12	16	5	(2) #5 CONT 1TB	AT EACH FLOOR LEVEL, INTERMEDIATE STAIR LANDING, ROOF BEAM ATTACHMENT, & TRUSS BEARING LOCATIONS - (TYP. UNO)	

HEADER/JAMB SCHEDULE FOR GROUND SNOW LOAD < 30PSF

FLOOR LEVEL	ROUGH OPENING	HEADER SIZE	HEADER TOP TRACK	HEADER BOT TRACK	JAMB STUD	KING STUD
3RD FLOOR TO T WALL	UP TO 8'-0"	DBL 8C16	CONT. x1 6gx2" DEEP LEG	CONT. x1 6gx2" DEEP LEG	(1) 6C14	(1) 6C14
	UP TO 10'-0"	DBL 10C16	CONT. x1 6gx2" DEEP LEG	CONT. x1 6gx2" DEEP LEG	(1) 6C14	(1) 6C14
	UP TO 12'-0"	DBL 12C16	CONT. x1 6gx2" DEEP LEG	CONT. x1 6gx2" DEEP LEG	(2) 6C14	(2) 6C14
2ND TO 3RD FLOOR	UP TO 8'-0"	DBL 8C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6C12	(1) 6C12
	UP TO 10'-0"	DBL 10C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6C12	(1) 6C12
	UP TO 12'-0"	DBL 12C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6x4x1 2ga	(2) 6C12
1ST TO 2ND FLOOR	UP TO 8'-0"	DBL 8C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6C12	(1) 6C12
	UP TO 10'-0"	DBL 10C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6x4x1 2ga	(2) 6C12
	UP TO 12'-0"	DBL 12x3x1 2ga	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(2) 6x4x1 2ga	(2) 6x4x1 2ga

HEADER/JAMB SCHEDULE FOR GROUND SL > 30PSF < 60PSF

FLOOR LEVEL	ROUGH OPENING	HEADER SIZE	HEADER TOP TRACK	HEADER BOT TRACK	JAMB STUD	KING STUD
3RD FLOOR TO T WALL	UP TO 6'-0"	DBL 8C16	CONT. x1 6gx2" DEEP LEG	CONT. x1 6gx2" DEEP LEG	(1) 6C14	(1) 6C14
	UP TO 8'-0"	DBL 10C16	CONT. x1 6gx2" DEEP LEG	CONT. x1 6gx2" DEEP LEG	(1) 6C14	(1) 6C14
	UP TO 10'-0"	DBL 12C16	CONT. x1 6gx2" DEEP LEG	CONT. x1 6gx2" DEEP LEG	(2) 6C14	(2) 6C14
2ND TO 3RD FLOOR	UP TO 6'-0"	DBL 8C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6C12	(1) 6C12
	UP TO 8'-0"	DBL 10C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6C12	(1) 6C12
	UP TO 10'-0"	DBL 12C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6x4x1 2ga	(2) 6C12
1ST TO 2ND FLOOR	UP TO 6'-0"	DBL 8C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6C12	(1) 6C12
	UP TO 8'-0"	DBL 10C12	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(1) 6x4x1 2ga	(2) 6C12
	UP TO 10'-0"	DBL 12x3x1 2ga	CONT. x1 2gx2" DEEP LEG	CONT. x1 2gx2" DEEP LEG	(2) 6x4x1 2ga	(2) 6x4x1 2ga



POWERS STEEL LINTEL INSTALLATION REQ.

POWERS STEEL BOXED LINTEL INSTALLATION REQ.

TYPICAL SECTION AT OPENING IN CMU WALL

TYPICAL SECTION EXTERIOR LIGHT-GAGE LOAD BEARING WALL

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 PROFESSIONAL ENGINEER

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ENGINEER

SHEET TITLE

TYPICAL SCHEDULE

DATE 06-12-23
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Table with 4 columns: NO, BY, ISSUE, DATE. Includes vertical text 'MAKORABCO' and 'LIBERTY DELRAY, DELRAY FL'.

GENERAL NOTES

- 1. THESE PLANS AND THE INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF SELLER/SUBCONTRACTOR AND ARE TO BE USED SOLELY IN CONNECTION WITH ERECTION OF BUILDING SYSTEMS AND MATERIALS SOLD TO OWNER/CONTRACTOR BY SELLER/SUBCONTRACTOR. UNAUTHORIZED COPYING, DISCLOSURE OR OTHER UNAUTHORIZED USES ARE PROHIBITED. OWNER/CONTRACTOR IS RESPONSIBLE TO PROVIDE SELLER/SUBCONTRACTOR WITH APPROVED PLANS PRIOR TO FABRICATION. SELLER/SUBCONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY AND REQUIRED PERMITS, FEES, DEPOSITS, ETC. THE OWNER AND/OR CONTRACTOR SHALL REVIEW AND DETERMINE THAT ALL DIMENSIONS ARE COORDINATED AS REQUIRED WITH ALL OTHER DESIGN PROFESSIONALS DRAWINGS AND SHOP DRAWINGS FOR PROJECT PRIOR TO FABRICATION OF MATERIALS OR THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE SELLER/SUBCONTRACTOR AND ENGINEER OF RECORD PRIOR TO FABRICATION. PRODUCTS SHIPPED TO OWNER/CONTRACTOR SHALL BE INSPECTED IMMEDIATELY UPON ARRIVAL. THE SHEET LEDGES, RAINPITS, AND MASONRY LEDGES ARE VITAL TO THE PROPER FIT OF THE STEEL CONSTRUCTION. OWNER/CONTRACTOR SHALL FIELD VERIFY ALL TO BE AS SHOWN ON DRAWINGS. IF THEY ARE NOT IN COMPLIANCE WITH THE DRAWINGS, OWNER/CONTRACTOR SHALL CONTACT SELLER/SUBCONTRACTOR PRIOR TO START OF STEEL ERECTION. ANY OMISSIONS AND/OR CONFLICTS WITH PLANS SHALL BE REPORTED TO METAL BUILDING COMPANY SO THAT THEY CAN BE RESOLVED PRIOR TO PROCEEDING WITH WORK. DO NOT SCALE DRAWINGS - IF A REQUIRED DIMENSION IS MISSING PLEASE CONTACT THE METAL BUILDING COMPANY AND/OR ENGINEER OF RECORD. NO MODIFICATIONS TO PLANS SHALL BE MADE WITHOUT THE PERMISSION OF METAL BUILDING COMPANY AND ENGINEER OF RECORD. MODIFICATIONS REQUIRED DUE TO FIELD CONDITIONS OR OTHER CONTRACTORS OR ITEMS THAT WHICH MAY ADVERSELY AFFECT THE STRUCTURE OR STRUCTURAL MEMBERS IS ALLOWED. ALL SECTIONS AND DETAILS SHALL BE CONSIDERED TO BE TYPICAL OR SIMILAR UNLESS ANOTHER SECTION OR DETAIL IS REFERENCED ON THE PLANS. SCOPE OF WORK OF METAL BUILDING COMPANY IS INDICATED IN THE CONTRACT. THE DRAWINGS REFLECT SCOPE OF WORK AS REQUIRED FOR PERMITTING OR AT THE DIRECTION OF OWNER / CONTRACTOR. METAL BUILDING COMPANY DOES NOT PROVIDE A RATED CEILING IN SHAFIT ENCLOSURES UNLESS SPECIFIC NOTED ON PLANS. CONSTRUCTION DOCUMENTS WERE DESIGNED AND MEET THE REQUIREMENTS OF THE LOCAL BUILDING CODE DESIGNATED UNDER STRUCTURAL DESIGN CRITERIA. ALL COMPONENTS AND CLADDING DESIGNED AND/OR FURNISHED BY OTHERS NOT SHALL MEET THE MINIMUM REQUIREMENTS OUTLINED IN THESE CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS SHALL BE SUBMITTED REVIEW/APPROVAL BY EOR AND GOVERNING AUTHORITIES PRIOR TO FABRICATION AND/OR ERECTION. PONDING LOADS ARE NOT APPLICABLE ON SELF STORAGE BUILDINGS WHERE THE PRIMARY ROOF DRAINAGE IS ACCOMPLISHED BY GUTTERS AND DOWNSPOUTS. SECONDARY DRAINAGE OCCURS WITH GUTTER OVERFLOW WHICH IS AT OR BELOW LEAVE HEIGHT OF BLDGS). THE CONTRACTOR OR OWNER SHALL TAKE ALL NECESSARY STEPS TO PROTECT THE STRUCTURE, THE WORK PERSONS AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION. THE CONTRACTOR/OWNER SHALL TAKE ALL NECESSARY STEPS TO PROTECT THE STRUCTURE, THE WORK, AND OTHER PEOPLE DURING CONSTRUCTION. IF OWNER/CONTRACTOR PERFORMS THE ERECTION, CONTRACTOR/OWNER SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION. IF ANYTHING IN THESE DRAWINGS CONFLICTS WITH THE CONTRACT, THE TERMS OF THE CONTRACT SHALL GOVERN. TEMPORARY BRACING AND SHORING OF WALLS TO PROVIDE STABILITY DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR (U.N.O.) IN CONSTRUCTION. THE OWNER AND/OR CONTRACTOR SHALL TEMPORARILY BRACE AND/OR SHORE EXISTING AND NEW CONSTRUCTION AS REQUIRED TO ENSURE THE STRUCTURAL STABILITY IS NOT COMPROMISED IF DEMOLITION IS INVOLVED. BRACING AND/OR SHALL REMAIN IN PLACE UNTIL THE STRUCTURAL WORK IS COMPLETE AND HAS BEEN INSPECTED BY A TESTING AGENCY AND IS CERTIFIED TO BE IN SUBSTANTIAL COMPLIANCE WITH PLANS AND SPECIFICATIONS. EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE COORDINATION BETWEEN THESE DRAWINGS AND THE BOUND STRUCTURAL SPECIFICATIONS. IF A DISCREPANCY IS DISCOVERED, THE OWNER/ CONTRACTOR SHALL, IN WRITING, REQUEST A CLARIFICATION IN THE ABSENCE OF SAID REQUEST, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. ALL CELLS OF CMU WALLS IN CLIMATE CONTROLLED BUILDING WHICH ARE NOT GROUTED SHALL BE FILLED WITH PERLITE, VERMICULITE, OR POLYURETHANE FOAMED-IN-PLACE AS SPECIFIED BY THE LATEST ADOPTED EDITION ON THE INTERNATIONAL ENERGY CONSERVATION CODE. AREAS WITHIN HURRICANE-PRONE REGIONS LOCATED WITHIN 1 MILE OF THE COASTAL MEAN HIGH WATER LINE WHERE THE BASIC DESIGN WIND SPEED, V, IS 130MPH OR GREATER; OR IN ALL AREAS WHERE THE BASIC DESIGN WIND SPEED IS 140MPH OR GREATER SHALL MEET THE REQUIREMENTS FOR WIND BORNE DEBRIS REGION. GLAZING IN BUILDINGS IN AREAS THAT MEET THE CRITERIA FOR WIND BORNE DEBRIS REGION SHALL BE IMPACT RESISTANT OR PROTECTED WITH AN IMPACT RESISTANT COVERING MEETING THE LARGE MISSILE TEST (ASTM E 1996) FOR OPENINGS LOCATED WITHIN 30FT OF GRADE OR SHALL MEET THE REQUIREMENTS FOR SMALL MISSILE TEST (ASTM E 1996) FOR OPENINGS LOCATED MORE THAN 30FT ABOVE GRADE.

- THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT THE STRUCTURE, THE WORK PERSONS, AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN STRENGTH. THE GENERAL CONTRACTOR SHALL COORDINATE ALL DESIGN PROFESSIONALS DRAWINGS AND SPECIFICATIONS, FOR ITEMS WHICH MAY ADVERSELY AFFECT THE STRUCTURE AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES AND/OR OMISSIONS. SUBMITTALS SHALL CONSIST OF A MAXIMUM OF 1 SETIA AND 2 BLUE LINES, ADDITIONAL BLUE LINES WILL BE DISCARDED. SUBMITTALS TO ENGINEER OF RECORD FOR REVIEW MUST CONTAIN THE GENERAL CONTRACTORS STAMP SIGNIFYING HIS REVIEW/ACCEPTANCE. SUBMITTALS SENT WITHOUT THE GC'S REVIEW STAMP WILL BE RETURNED AT HIS EXPENSE AND WITHOUT REVIEW.

STRUCTURAL NOTES

- 1. TEMPORARY BRACING SHOULD BE PROVIDED TO RESIST WIND LOADING ON STRUCTURAL COMPONENTS AND STRUCTURAL ASSEMBLIES DURING ERECTION AND CONSTRUCTION PHASE. NEVER ALLOW YOUR FOOT TO COME IN CONTACT WITH, OR WATER RUNOFF FROM, ANY DISSIMILAR METAL, INCLUDING, BUT NOT LIMITED TO, COPPER, LEAD, OR GRAPHITE. THIS INCLUDES COPPER AND ARSENIC SALTS USED IN TREATED LUMBER, AND CALCIUM USED IN CONCRETE, MORTAR, AND GROUT. SCOPE OF WORK BY OTHERS WHOSE LATERAL LOADS WILL BE TRANSFERRED INTO STEEL MEMBER PROVIDED BY METAL BUILDING COMPANY SHALL BE TEMPORARILY BRACED BY OTHERS IN A METHOD THAT DOES NOT INTERFERE WITH ERECTION OF STEEL, UNTIL STEEL ERECTION COMPLETE. THE UNCOATED MINIMUM STEEL THICKNESS OF THE COLD-FORMED PRODUCTS AS DELIVERED SHALL NOT BE LESS THAN 95% PERCENT OF THE DESIGN THICKNESS. THICKNESS MEASUREMENTS MAY BE MADE ANYWHERE ACROSS THE WIDTH OF THE SHEET, BUT NOT CLOSER TO THE EDGES THAN THE MINIMUM DISTANCES SPECIFIED IN THE RELEVANT ASTM SPECIFICATIONS. THICKNESS AT BENDS, SUCH AS CORNERS, MAY BE LESS THAN 95% OF DESIGN THICKNESS, DUE TO COLD-FORMING EFFECTS, AND STILL BE ACCEPTABLE. RECESSED ENTRIES AND BREEZEWAYS MUST BE RECESSED BELOW FINISHED FLOOR TO AVOID POTENTIAL WATER PROBLEMS. ROLL-UP DOORS LOCATED IN BREEZE WAY NEED TO BE INSTALLED IN RECESSED AREA. IF A CHANGE IS MADE BY OWNER/CONTRACTOR, SELLER/SUBCONTRACTOR MUST BE NOTIFIED IMMEDIATELY. ALL ERECTION, FABRICATION, WORKMANSHIP AND INSTALLATION SHALL BE IN ACCORDANCE WITH INSTALLATION PROCEDURES MANUAL AND/OR INDUSTRY STANDARDS APPROVED BY SELLER/SUBCONTRACTOR AND THE ENGINEER OF RECORD.

ROOF SYSTEMS: MBCI OR EQUAL

- 1. ROOFING SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECS, ALONG WITH SELLER/SUBCONTRACTOR INSTALLATION PROCEDURES MANUAL. 2. ROOF SHEETS SHOULD BE INSTALLED FROM THE LOWEST STEP-DOWN TO HIGHEST ELEVATION.

INSULATION: BAY INSULATION SUPPLY CO. OR EQUAL

- 1. VINYL-BACKED INSULATION-BY BAY INSULATION CO. OR EQUAL. R-VALUES FOR WINTER CONDITIONS (MEAN 40 DEGREES F.): 3'-0" - 0.6 LB DENSITY FIBERGLASS 3'-0" = 10 3'-5" - 0.6 LB DENSITY FIBERGLASS 3'-0" = 11 4'-0" - 0.6 LB DENSITY FIBERGLASS 3'-0" = 13 6'-0" - 0.6 LB DENSITY FIBERGLASS 3'-0" = 19 2. POLYFOIL FIRE-RATED R-FOIL BY TFM OR EQUAL SINGLE BUBBLE R-VALUES FOR ROOF = 10 DOUBLE BUBBLE R-VALUES FOR ROOF = 10 3. INSULATION SHALL BE INSTALLED PER THE MANUFACTURERS PUBLISHED INSTRUCTIONS. INSULATION MAY BE INSTALLED IN ONE OR MULTIPLE LAYERS TO MEET THE REQUIRED R-VALUE.

FASTENERS AND ANCHORS

- 1. THE FOLLOWING OUTLINES THE MECHANICAL ANCHORS APPROVED FOR USE ON THIS PROJECT. A. EXPANSION ANCHORS- "KWICK BOLT 3" BY HILTI OR EQUAL. DRILL HOLE IN CONCRETE OR GROUT-FILLED CMU AND REMOVE DUST. THE MIN. HOLE DEPTH MUST EXCEED THE ANCHOR EMBEDMENT PRIOR TO TORQUING BY ONE HOLE DIAMETER. CRIVE THE ANCHOR INTO THE HOLE USING A HAMMER. A MINIMUM OF SIX THREADS MUST BE BELOW THE SURFACE OF THE FIXTURE. TIGHTEN THE NUT TO THE RECOMMENDED INSTALLATION TORQUE (T = 40 lbs.ft.). B. ADHESIVE ANCHORS IN CONCRETE - "HIT HY 150" BY HILTI OR EQUAL. C. ADHESIVE ANCHORS IN GROUT-FILLED BLOCK- "HIT HY 20" BY HILTI OR EQUAL. D. ADHESIVE ANCHORS IN HOLLOW BLOCK - "HIT HY 20" WITH SCREEN TUBES BY HILTI OR EQUAL. E. CONCRETE MASONRY SCREWS - "KWIK CON II" BY HILTI OR EQUAL. F. POWER-ACTUATED FASTENERS (PAF) - "DX" BY HILTI OR EQUAL. 2. ALL FASTENERS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.

COLD FORMED STEEL: LGSJ SECTIONS OR EQUAL

- 1. COLD FORM STEEL SECTIONS SHALL CONFORM TO APPLICABLE PROVISIONS OF ASTM A572, ASTM A607 AND/OR ASTM A611. 2. MIN. DELIVERED THICKNESS OF COLD FORMED STEEL CS # 25
- | GAGE | DESIGN THICKNESS | FINISH | Fy |
|------|------------------|------------------------|-------|
| 12 | 0.105 | RED-OXIDE UNO ON PLANS | 55ksi |
| 14 | 0.07 | RED-OXIDE UNO ON PLANS | 55ksi |
| 16 | 0.059 | RED-OXIDE UNO ON PLANS | 55ksi |
| 18 | 0.0468 | GALVANIZED | 33ksi |
| 20 | 0.0352 | GALVANIZED | 33ksi |
- 3. MIN. DELIVERED THICKNESS OF COLD FORMED STEEL PIERS # HEADERS

GAGE	DESIGN THICKNESS	FINISH	Fy
14	0.07	TEX-COTE FINISH APPLIED IN FIELD	55ksi
16	0.059	TEX-COTE FINISH APPLIED IN FIELD	55ksi
16	0.055	PRE-FINISHED	55ksi
18	0.0468	TEX-COTE FINISH APPLIED IN FIELD	33ksi

NOTES: INSIDE RETURN ON PIERS IS 3 1/2" TO 4". VERIFY REQUIRED DIMENSIONS FOR EXTERIOR ROLL UP DOORS.

- 4. LOAD-BEARING STUD TO TRACK CONNECTIONS: THE ENDS OF THE LOAD-BEARING STUDS MUST BE INSTALLED INTO THE TOP AND BOTTOM TRACKS SO THAT THE GAP BETWEEN THE ENDS OF THE STUD AND THE WEB OF THE TRACK IS AS SMALL AS PRACTICABLE AND IN NO CASE GREATER THAN 3/16" AT THE TIME OF INSTALLATION. THE GAP MUST BE LESS THAN 3/16" AFTER THE DEAD LOAD OF THE STRUCTURE IS IN PLACE. 5. ALL BOLTED CONNECTIONS OF COLD FORMED STEEL BEAMS SUPPORTING ROOF LOADING ONLY SHALL BE MADE USING 1/2" DIA. A307 BOLTS OR HIGHER GRADE (U.N.O.).

- 6. ALL BOLTED CONNECTIONS OF COLD FORMED STEEL BEAMS SUPPORTING FLOOR LOADING SHALL BE MADE USING A325 BOLTS OR HIGHER GRADE. (U.N.O.)

- 7. IN THE EVENT THAT THE BOLT HOLES IN THE COLD FORMED STEEL BEAMS DO NOT ALIGN WITH THE SUPPORTING CONNECTION MEMBER IT IS ACCEPTABLE TO SUBSTITUTING #12 TEK SCREWS FOR THE FOLLOWING SIZE/GRADE BOLTS. * (4) #12 TEK SCREWS PER EACH MIS-ALIGNED 1/2" DIAMETER A307 BOLT * (6) #12 TEK SCREWS PER EACH MIS-ALIGNED 1/2" DIAMETER A325 BOLT

HOT ROLLED STEEL

- 1. DESIGN OF STRUCTURAL STEEL ELEMENTS WAS COMPLETED UNDER THE REQUIREMENTS SET FORTH IN THE "MANUAL OF STEEL CONSTRUCTION-ALLOWABLE STRESS DESIGN (LATEST EDITION)" 2. MATERIAL SPECIFICATIONS: A. ALL STEEL SHALL BE DOMESTICALLY PRODUCED. B. ASTM A36- ROLLED SHAPES, PLATES, AND BARS. Fy=36ksi C. ASTM A992 - WIDE FLANGE SECTIONS. Fy=50ksi D. ASTM A53, TYPE E, GRADE B - PIPE. Fy=36ksi E. ASTM A500 GRADE B - TUBES. Fy=46ksi F. ASTM F1554 (A36) - ANCHOR BOLTS, RODS, NUTS & WASHERS. ASTM A108 GRADE 1015 THROUGH 1020 - COLD FINISHED CARBON STEEL, AWS D1.1, TYPE B - HEADED STUDS. G. ASTM A325, TYPE N - BOLTED STRUCTURAL CONNECTIONS. I. ASTM A307 - FOR BOLTED CONN. OF LESS THEN 5/8" DIA. J. E70XX ELECTRODE (LOW HYDROGEN) - WELDED CONNECTIONS (U.N.O.). K. WELDED CONNECTIONS SHALL BE A MIN. OF 3/16" FILLET WELD ALL AROUND FOR CONNECTING MEMBERS UP TO 1/4" THICK. USE 1/4" FILLET WELD FOR ALL OTHER MEMBER THICKNESSES (U.N.O.). 3. ALL BOLTED CONNECTIONS SHALL BE "SNUG-TIGHT" AS DEFINED IN THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" (LATEST ADOPTED EDITION) BY RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSG). (U.N.O.) 4. ALL BOLTED CONNECTIONS INDICATED TO BE "SLIP-CRITICAL" (SC) SHALL BE INSTALLED, TIGHTENED, TESTED, AND INSPECTED AS OUTLINED IN THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" (LATEST ADOPTED EDITION) BY RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSG). (U.N.O.) 5. BRACE ANDS SHALL MAINTAIN STEEL IN ALIGNMENT UNTIL OTHER PARTS OF CONSTRUCTION NECESSARY FOR PERMANENT SUPPORT ARE COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TEMPORARY SHORING AS REQUIRED FOR THE STABILITY OF THE STEEL FRAME UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN COMPLETED AND BUILDING IS ENCLOSED. 6. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD CODE FOR WELDING IN BUILDING CONSTRUCTION" OF THE AMERICAN WELDING SOCIETY. 7. GROUT FOR COLUMN BASE PLATES AND PRESET BEARING PLATES SHALL BE NON-SHRINK, NON-METALLIC GROUT. (500Psi MIN.) 8. SUBJECT DRAWINGS INDICATING ALL SHOP AND ERECTION DETAILS INCLUDING PROFILES, SIZES, SPACING AND LOCATIONS OF STRUCTURAL MEMBERS, CONNECTION ATTACHMENTS, FASTENERS, LOADS AND TOLERANCES. 9. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF ASTM A123. STRUCTURAL STEEL SHALL RECEIVE A SHOP COAT OF PRIMER COLOR AS DIRECTED BY ARCHITECT) EXCEPT AREAS THAT WILL RECEIVE SPRAY-ON FIRE PROTECTION. 10. BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS SHALL BE DESIGNED BY THE STEEL FABRICATOR FOR THE REACTIONS SHOWN ON THE FRAMING PLANS. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. CLEARLY INDICATES THE ALLOWABLE LOAD CAPACITY OF EACH UNIQUE CONNECTION, WHERE REACTION IS NOT INDICATED ON THE PLANS, THE CONNECTION SHALL BE DESIGNED FOR THE MAXIMUM SHEAR CAPACITY OF THE BEAM, FOR THE GIVEN SPAN.

STRUCTURAL STEEL

- 1. A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER. 2. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN STRICT CONFORMANCE WITH THE LATEST ADOPTED EDITION OF THE AISC MANUAL. 3. DESIGN OF STRUCTURAL STEEL ELEMENTS WAS COMPLETED UNDER THE REQUIREMENTS SET FORTH IN THE "MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN (LATEST EDITION)".
- STEEL DECKING
- 1. THE REQUIREMENTS OF THE LATEST ADOPTED EDITION OF THE AISI SECTION 43, SHALL GOVERN FABRICATION OF THE SPECIFIED STEEL DECK. 2. THE MINIMUM YIELD STRENGTH OF STEEL USED, SHALL BE, 33KSI (230 MPa). 3. ALL FIELD WELDING OF DECK SHALL BE IN STRICT CONFORMANCE WITH ANSI/AISC 1.3 STRUCTURAL WELDING CODE. 4. GALVANIZING SHALL CONFORM TO ASTM-A653, STRUCTURAL QUALITY, AND FEDERAL SPEC. QQ-5-775. 5. THE VALUES LISTED IN THE TABLE SHOWN BELOW IS FROM THE MBCI ULTRA-DEK TECHNICAL-INSTALLATION INFORMATION MANUAL, AND REPRESENTS THE MINIMUM ROOF DECK SECTION PROPERTIES THAT ARE REQUIRED BY DESIGN.

DECK TYPE	DESIGN THICK (in)	l _x in 4'ft	S _x in 3'ft	l _y in 4'ft	S _y in 3'ft	F _y (ksi)
24"x26ga ULTRA-DEK	0.0179	0.1025	0.0694	0.2202	0.0901	50
24"x24ga ULTRA-DEK	0.0239	0.1355	0.0951	0.2803	0.1156	50
24"x22ga ULTRA-DEK	0.0299	0.1837	0.1332	0.3640	0.1504	50

- 6. COMPOSITE STEEL FLOOR DECK SHALL BE ATTACHED TO THE SUPPORTING STRUCTURE AS RECOMMENDED BY THE MANUFACTURER, WITH MAXIMUM SPACING NOT TO EXCEED 24" O.C. 7. THE VALUES LISTED IN THE TABLE SHOWN BELOW IS FROM THE VULCRAFT METAL DECK PRODUCT MANUAL, AND REPRESENTS THE MINIMUM COMPOSITE FLOOR DECK SECTION PROPERTIES THAT ARE REQUIRED BY DESIGN.

DECK TYPE	DESIGN THICK (in)	l _p 4 in/ft	l _n 4 in/ft	S _p 3 in/ft	S _n 3 in/ft	S _T L STRENGTH
1.5VL22	0.0295	0.150	0.182	0.178	0.186	Fy=50ksi
1.5VL20	0.0358	0.195	0.222	0.231	0.240	Fy=50ksi
1.5VL18	0.0474	0.282	0.295	0.315	0.327	Fy=50ksi
2.0VL22	0.0295	0.322	0.329	0.274	0.277	Fy=50ksi
2.0VL20	0.0358	0.418	0.415	0.355	0.360	Fy=50ksi
2.0VL18	0.0474	0.559	0.558	0.495	0.504	Fy=50ksi
2.0VL16	0.0598	0.704	0.704	0.653	0.653	Fy=40ksi
3.0VL22	0.0295	0.746	0.745	0.429	0.442	Fy=50ksi
3.0VL20	0.0358	0.938	0.937	0.553	0.572	Fy=50ksi
3.0VL18	0.0474	1.251	1.251	0.795	0.803	Fy=50ksi

- 8. NON-COMPOSITE STEEL FLOOR DECK SHALL BE ATTACHED TO THE SUPPORTING STRUCTURE AS RECOMMENDED BY THE MANUFACTURER, WITH MAXIMUM SPACING NOT TO EXCEED 24" O.C. 9. STEEL USED TO MANUFACTURE THE NON-COMPOSITE METAL FLOOR DECKING SHALL CONFORM TO THE REQUIREMENTS OF ASTM-A1008 GRADES C, D, OR E, AND/OR A653 STRUCTURAL QUALITY. 10. THE VALUES LISTED IN THE TABLE SHOWN BELOW IS FROM THE VULCRAFT METAL DECK PRODUCT MANUAL, AND REPRESENTS THE MINIMUM NON-COMPOSITE FLOOR DECK SECTION PROPERTIES THAT ARE REQUIRED BY DESIGN.

DECK TYPE	DESIGN THICK (in)	l _p 4 in/ft	l _n 4 in/ft	S _p 3 in/ft	S _n 3 in/ft
0.6C26	0.0179	0.015	0.015	0.043	0.043
0.6C24	0.0239	0.019	0.019	0.057	0.057
0.6C22	0.0298	0.024	0.024	0.070	0.070

MINIMUM STANDARD FOR ELEVATED FLOOR SLABS

- 1. ALL CONCRETE SHALL HAVE THE FOLLOWING MIN. PROPERTIES:
- | LOCATION | 28 DAY STRENGTH | SLUMP | MAX AGGR. |
|------------------------------------|-----------------|---------|-----------|
| ELEVATED SLABS FORMED AND POURED | 4,000 psi | 4" ± 1" | 1" |
| ELEVATED SLABS FORMED W/ W/IL DECK | 4,000 psi | 4" ± 1" | 1" |
- 2. CONCRETE PROPERTIES SHALL BE VERIFIED THROUGH INDUSTRY STANDARD TESTING PROCEDURES BY A CERTIFIED TESTING AGENCY. MIN. TEST REQUIRED SHALL INCLUDE SLUMP AND CYLINDER BEAKS FOR COMpressive STRENGTH. FINDINGS SHALL BE SUBMITTED TO THE ARCH./ENG. FOR REVIEW. 3. CONCRETE WORK SHALL CONFORM TO LATEST EDITIONS OF ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT. 4. CONCRETE MIX DESIGN SHALL MEET THE FOLLOWING CRITERIA:

- A. PROPOSED MIX DESIGN SHALL BE ACCORDANCE WITH ACI 301 METHOD 1 OR METHOD 2. B. ENTRAPPED AIR CONTENT SHALL NOT EXCEED 3%. C. ADMIXTURES USED TO ENTRAIN AIR ARE NOT ACCEPTABLE. D. ALL CONCRETE TO BE NORMAL WEIGHT WITH A DESIGN STRENGTH AT 28 DAYS. 5. SITE ADDED WATER IS NOT ACCEPTABLE. HOLD BACK WATER CLEARLY IDENTIFIED TO BE ADDED AT THE SITE AS SPECIFIED IN EITHER THE MIX DESIGN AND/OR THE BATCH PLANT LOG SHALL BE CONSIDERED ACCEPTABLE. IN THE ABSENCE SPECIFIED HOLD BACK WATER, THE MIX WILL RESULT IN A REJECTION OF THE RESULTS BY THE ENGINEER OF RECORD. 6. THE USE OF MIX DESIGNS WITH EITHER SLAG OR FLY ASH ARE NOT ACCEPTABLE FOR ALL EXPOSED SURFACES, SLABS ON GRADE OR ELEVATED SLABS, AND WHERE THE SURFACE IS INTENDED TO BE EXPOSED. 7. THE USE OF RIDE ON POWER TROWELS IS STRICTLY PROHIBITED ON ELEVATED SLABS. THE USE OF WALK BEHIND POWER TROWELS ARE RECOMMENDED. 8. CONTRACTOR IS RESPONSIBLE FOR THE ADEQUACY OF THE FORMS AND SHORING AND FOR SAFE PRACTICE IN THEIR USE AND REMOVAL. 9. THE VALUES IN THE TABLE SHOWN BELOW IS FROM THE VULCRAFT METAL DECK PRODUCT MANUAL AND REPRESENTS THE RECOMMENDED WELDED WIRE FABRIC.

DECK TYPE	TOTAL SLAB DEPTH	RECOMMENDED WELDED WIRE FABRIC
1.5 VL, VU or R	<= 4 3/4"	6 x 6 - W2.1 x W2.1
1.5 VL, VU or R	> 4 3/4"	6 x 6 - W2.1 x W2.1
2VU	<= 5 1/4"	6 x 6 - W2.1 x W2.1
2VU	> 5 1/4"	6 x 6 - W2.1 x W2.1
3VU	<= 6 1/4"	6 x 6 - W2.1 x W2.1
3VU	> 6 1/4"	6 x 6 - W2.1 x W2.1

NOTE

THE FOLLOWING METHODS OF REINFORCEMENT SHALL BE ACCEPTABLE ALTERNATES TO THE WELDED WIRE FABRIC SPECIFIED FOR THE ELEVATED SLABS ABOVE

- 1. CONCRETE IN ACCORDANCE WITH ASTM C 111 G, TYPE I, CONTAINING STEEL FIBERS MEETING THE CRITERIA OF ASTM A820, TYPE I, TYPE II OR TYPE V, AT A DOSAGE RATE DETERMINED BY THE FIBER MANUFACTURER FOR THIS APPLICATION, BUT NOT LESS THAN 25 LB/CU YD. 2. CONCRETE IN ACCORDANCE WITH ASTM C 11 G, TYPE III CONTAINING MACROSYNTHETIC FIBERS MEETING THE CRITERIA OF ASTM D7508 AT A DOSAGE RATE DETERMINED BY THE FIBER MANUFACTURER FOR THE APPLICATION, BUT NOT LESS THAN 4 LB/CU YD.

CONCRETE WORK

- 1. MONOLITHIC SLAB FINISHES: THE FOLLOWING REQUIREMENTS ARE BASED ON THE LATEST FLOOR FLATNESS (FF) FLOOR LEVELNESS (FL) VALUES/METHODS. BIDS FOR THIS WORK SHALL REFLECT THESE REQUIREMENTS AND ENFORCEMENT THEREOF CAN BE EXPECTED. A. NON-CRITICAL FLOOR TOLERANCE a. FLOAT-FINISH (FLT-FN) b. SPECIFIED OVERALL VALUE: FF25/FL20 c. MINIMUM LOCAL VALUE: FF25/FL20 d. APPLY FLOAT FINISH TO MONOLITHIC SLAB SURFACES THAT ARE TO RECEIVE MUD SET TILE AND OTHER THICK FINISHES, AND TO SLAB SURFACES WHICH ARE TO BE COVERED WITH WATERPROOFING MEMBRANE. B. TYPICAL CORRIDOR OR NORMAL SIZED ROOMS (100-600 SF) a. TROWEL FINISH I (TR-FN1) b. SPECIFIED OVERALL VALUE: FF30/FL23 c. MINIMUM LOCAL VALUE: FF25/FL20 d. APPLY TROWEL FINISH TO MONOLITHIC SLAB SURFACES THAT ARE TO RECEIVE RESILIENT FLOORING, CARPET, PAINT, OR OTHER THIN FILM FINISH COATING SYSTEMS. 2. ELEVATED SLABS SHALL HAVE A SPECIFIED OVERALL VALUE OF FF22 AND FF27 AND A MINIMUM LOCAL OF FF20 WITH NO FL NUMBER DERIVED. MINIMUM THICKNESS OF SLAB ON GRADE IS THE GREATER OF 3" OR 0.8 TIMES ANCHOR EMBEDMENT SPECIFIED IN CONSTRUCTION DOCUMENTS (SUCH USE OF HILTI KWIK BOLT 3). 3. CONTROL JOINTS SHOULD BE PLACED A MINIMUM 2'-0" OFF THE CENTERLINE OF COLUMNS. IF THE DISTANCE BETWEEN COLUMNS IS LESS THAN 4'-0" BUT GREATER THAN 2'-6" THEN PLACE AT MID-POINT OTHERWISE CONTACT ENGINEER OF RECORD.

SITE REQUIREMENT NOTES

- 1. OWNER/ CONTRACTOR SHALL ENSURE THAT SITE IS STABILIZED AND MAINTAINED CURING HEAVY PRECIPITATION. OWNER/ CONTRACTOR TO PROVIDE MATERIAL STORAGE AREA ON SITE OTHER THAN BUILDING BEING ERECTED. 2. OWNER/ CONTRACTOR SHALL PROVIDE A CONSTRUCTION DUMPSTER UNIT ON THE JOBSITE AT NO COST TO SELLER/ CONTRACTOR. OWNER/ CONTRACTOR TO PROVIDE TEMPORARY POWER TO ALLOW FOR A MAXIMUM POWER LEAD RUN OF 200 FEET TO EACH STRUCTURE BEING ERECTED. 3. TEMPORARY POWER MUST MEET ALL APPLICABLE CODES AND SAFETY REQUIREMENTS. OWNER/ CONTRACTOR MUST ENSURE THAT BUILDING PADS ARE BROOM CLEAN AND FREE OF DEBRIS PRIOR TO SELLER/ SUBCONTRACTOR CREW BEGINNING INSTALLATION SEQUENCE AS AGREED. 4. OWNER/ CONTRACTOR SHALL ENSURE THAT THE SITE AND ALL SIDES OF BUILDING ARE ACCESSIBLE WITH EQUIPMENT AND FREE FROM ANY OBSTRUCTIONS TO DELIVERY OR ERECTION. 5. CLEANING OF MATERIALS, INCLUDING BUT NOT LIMITED TO WALL PANELS AND STRUCTURAL MATERIALS, IS NOT THE RESPONSIBILITY OF SELLER/ SUBCONTRACTOR. 6. THE OWNER CONTRACTOR SHALL PROPERLY PROTECT THE WORK FOR PUBLIC SAFETY AND AGAINST ACCIDENTS, WEATHER OR ANY OTHER HAZARDS WITH LIGHTS, GUARDRAILS OR BARRICADES AS APPLICABLE (INCLUDES FALL PROTECTION ON MULTI-STORY BUILDINGS).

MAINTENANCE NOTES

- 1. ROOF MAINTENANCE GUIDELINES A. WALK ON THE FLAT OF PANEL NEAR THE STRUCTURAL SUPPORTS. B. KEEP ROOF, GUTTERS AND DOWNSPOUTS FREE OF DEBRIS. C. INSPECT ROOF FOR DAMAGE AFTER HEAVY STORM. D. REMOVE EXCESS ICE AND SNOW ACCUMULATIONS AS NECESSARY. E. INSPECT AND RESEAL AS NECESSARY ALL ROOF CURBS AND OTHER PENETRATIONS WITH URETHANE SEALANT. F. ALWAYS GET MANUFACTURER'S APPROVAL BEFORE MAKING ANY MODIFICATION TO THE ROOF. WHEN PERFORMING ROOF MAINTENANCE ALWAYS TAKE THE FOLLOWING PRECAUTIONS. A. USE FALL PROTECTION AND OTHER SAFETY EQUIPMENT AS REQUIRED. B. DO NOT WALK ON THE ROOF FLASHING SUCH AS GUTTER, RAKE, HIP, OR RIDGE FLASHING. C. DO NOT WALK ON LIGHT TRANSMITTING PANELS (LTP). THEY DO NOT SUPPORT A PERSON'S WEIGHT. D. GUARD ALL LTPs AND ROOF OPENINGS. E. STEP ONLY IN THE PANEL FLAT DIRECTLY ON OR IN CLOSE PROXIMITY TO A SUPPORTING ROOF STRUCTURAL. KEY INSPECTION TIMES: A. AFTER A FIRE, VANDALISM, OR KNOWN DAMAGE TO AN ADJACENT ROOF AREA. B. EXPOSURE TO SEVERE WEATHER CONDITIONS, INCLUDING HIGH WINDS, HAIL OR ABNORMALLY HEAVY RAINS OR ICE AND SNOW. C. AFTER OTHER TRADES HAVE BEEN ON THE ROOF FOR ANY REASON, INSPECT THE ROOF FOR DAMAGE CAUSED BY WORKERS INCLUDING CHEMICAL OR SOLVENT SPILLS, SCRATCHES IN THE FINISH, EXCESSIVE ROOF TRAFFIC, AND PUNCTURES. MAKE SURE THAT ANY DEBRIS OR SCRAP LEFT BEHIND BY THE WORKERS IS REMOVED FROM THE ROOF IMMEDIATELY. AVOID USING CUTOFF SAWS AND WELDING EQUIPMENT OVER THE ROOF IN CASES WHERE THIS IS NOT POSSIBLE, THE ROOF MUST BE PROTECTED. 2. FOOT TRAFFIC: KEEP FOOT TRAFFIC TO A MINIMUM. HEAVY FOOT TRAFFIC CAN CAUSE PONDING ON LOW PITCHED ROOFS. THIS IS A PARTICULARLY TRUE JUST ABOVE THE EAVE AND AT ENDLAPS. ALWAYS WALK IN A FLAT OF PANEL NEAR A SUPPORTING ROOF STRUCTURAL. DO NOT WALK ON TRIM OR IN GUTTERS. ON BARE GALVALUMINE ROOFS, EXCESSIVE FOOT TRAFFIC IS PLANNED FOR A ROOF. PROVISIONS SHOULD BE MADE FOR A PROPERLY DESIGNED AND INSTALLED ROOF WALKWAY SYSTEM. 3. DRAINAGE: KEEP ROOF FREE OF DEBRIS AND KEEP DEBRIS OUT OF GUTTER TO ALLOW WATER TO QUICKLY DRAIN FROM ROOF. DO NOT USE WOOD BLOCKING TO HOLD UP EQUIPMENT OFF PANEL SEAMS. THIS BLOCKS THE FLOW OF WATER AND HOLDS MOISTURE. DO NOT ALLOW ROOFTOP AC UNITS OR EVAPORATIVE COOLERS TO DRAIN onto THE ROOF. ANYTHING THAT TRAPS OF HOLDS MOISTURE ON A ROOF WILL CAUSE PREMATURE CORROSION. 4. POST-ERECTION ROOF CLEANING: AFTER THE ROOF INSTALLATION IS COMPLETE. ALL FITTINGS, SHAVINGS, ETC. FROM FASTENER INSTALLATION, ETC. SHALL BE SWEEP COMPLETELY CLEAR OF THE ROOF PANELS. IF THIS DOES NOT HAPPEN, THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY RESULTING CORROSION. 5. DEBRIS REMOVAL: ANY FOREIGN DEBRIS SUCH AS SAWDUST, DIRT, LEAVES, ANIMAL DROPPINGS, ETC. WILL CAUSE CORROSION OF THE ROOF, GUTTERS, TRIM, ETC. IF LEFT ON BUILDING SURFACE FOR A LONG ENOUGH TIME. THE ROOF SHOULD BE PERIODICALLY INSPECTED FOR SUCH CONDITIONS AND IF FOUND, THEY SHOULD BE RECTIFIED IN A MANNER CONSISTENT WITH THESE ROOF MAINTENANCE GUIDELINES. NEVER ALLOW TREATED LUMBER OR CONCRETE/MORTAR/ GROUT TO COME IN CONTACT WITH ROOF PANELS, ESPECIALLY GALVALUMINE. FOR EXTENDED PERIOD OF TIME.

CONTINGENCIES

- 1. THE CONTRACTOR IS TO PROVIDE AN ALLOWANCE IN THE BASE BID FOR THE CONTINGENCIES SPECIFIED IN THIS SECTION. 2. THE CONTINGENCIES ARE TO INCLUDE ALL COSTS ASSOCIATED WITH THE INSTALLATION OF THE STRUCTURAL COMPONENT, THIS INCLUDES BUT NOT LIMITS TO, THE FOLLOWING: CONSTRUCTION MANAGEMENT FEES, MATERIAL, DETAILING, FABRICATION, SHIPPING, INSTALLATION, AND INSPECTION COSTS. 3. CONCRETE: 5 C.Y. 4. REINFORCING STEEL: 100 FEET, #6 BAR 5. STRUCTURAL STEEL: 3.0 TON (30 000.5/168.68 107.0/16.570.5, 100 FT. OF 600-125.54. C.F.M.F. (20) 2'Ø x 1'-0" LG. 6. ANCHORS: 7. ALL CONTINGENCIES TO BE FABRICATED AND INSTALLED AS DIRECTED BY THE SER.

MAINTENANCE NOTES

- TERMITE PROTECTION ALL BUILDING PADS ARE TO BE PROTECTED FOR TERMITES AS REQUIRED BY GOVERNING CODE AND LOCAL JURISDICTION. FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS CONSTRUCTION TYPES II-B # V-B ALL BUILDING ELEMENTS RATINGS ARE ZERO (0). FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS CONSTRUCTION TYPES II-B # V-B (ALL USE GROUPS EXCEPT H) REQUIRE A MINIMUM FIRE SEPARATION DISTANCE OF TEN (10) FEET FOR A ZERO (0) RATING. PERCENTAGE OF OPENINGS IN EXTERIOR WALLS BUILDINGS WHOSE EXTERIOR WALL AND STRUCTURAL FRAME ARE NOT REQUIRED TO BE FIRE-RESISTANCE RATED SHALL BE PERMITTED TO HAVE UNLIMITED UNPROTECTED OPENINGS. FIRE BARRIERS/ FIRE WALLS/ STRUCTURE DESIGN W/O SPRINKLERS STORAGE OCCUPANCIES DESIGNED WITHOUT SPRINKLER SYSTEM CAN'T BE MORE THAN 3 STORIES CONTAIN FIRE AREA GREATER THAN 12,000 SF, OF HAVE COMBINED FIRE AREAS GREATER THAN 24,000 SF. OUR TYPICAL DESIGN STANDARD IS TO USE 3 HOUR FIRE BARRIERS TO DIVIDE BUILDING INTO FIRE AREAS AND FIRE WALLS TO SEPARATE LARGE STRUCTURES INTO SEPARATE BUILDING TO AVOID EXCEEDING MAXIMUM COMBINED FIRE AREAS.

CORRIDOR FIRE RESISTANCE RATING

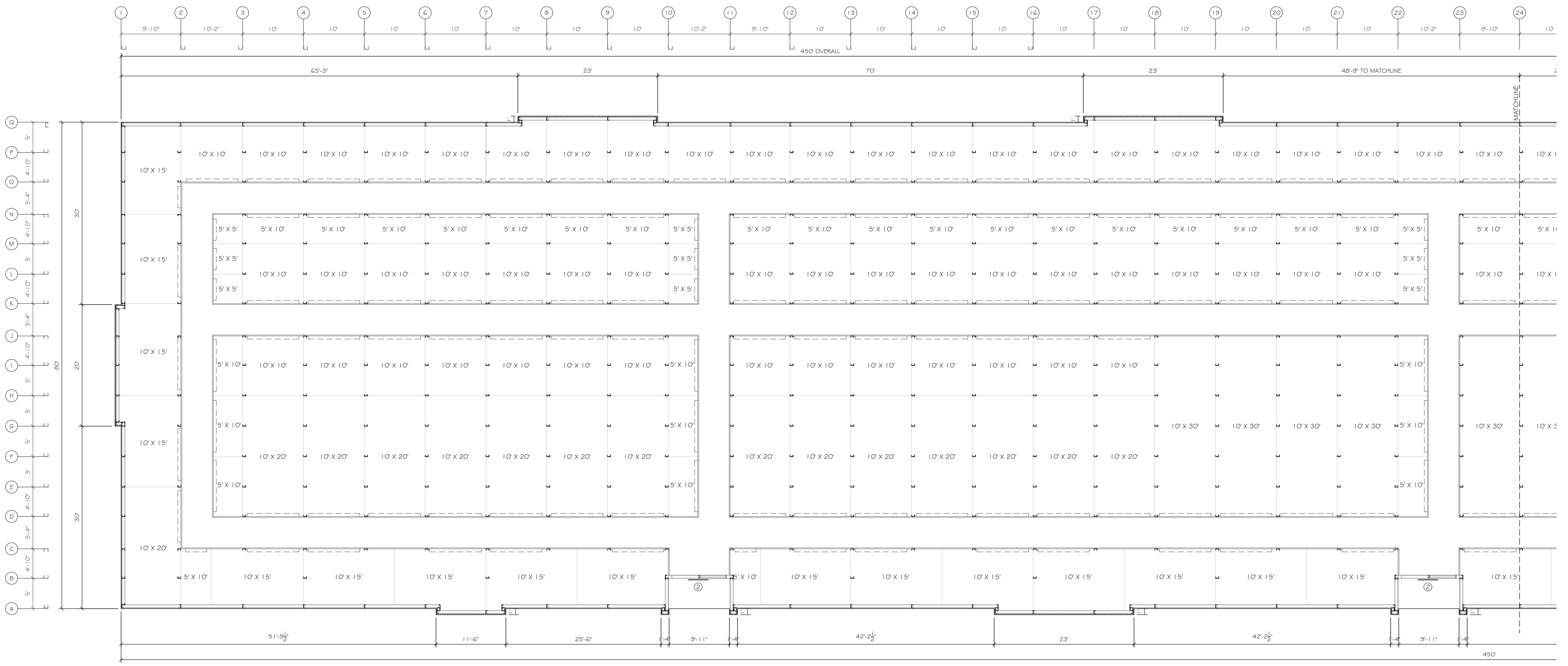
IT IS THE INTENT OF DESIGN TO KEEP OCCUPANCY LOAD SERVED BY A CORRIDOR LESS THAN OR EQUAL TO COMPLY WITH ZERO RATING IN A BUILDING WITHOUT SPRINKLERS.

FIRE RATED DOOR AND HARDWARE

FIRE DOORS AND FRAME SHALL BE LABELED SHOWING THE NAME OF MANUFACTURER, THE NAME OF THE THIRD-PARTY INSPECTOR AGENCY, AND THE FIRE PROTECTION RATING. ALL RATED DOORS ARE TO BE INSTALLED WITH A POSITIVE STRIKE DEVICE, AND BE SELF-CLOSING.

PROTECTION RATINGS	LIMITING SIZES OF WELDED SLICES				
	TYPE	MINIMUM (HOURS)	MAX. AREA (INCHES)	MAX. MAX. (INCHES) (INCHES)	
FIRE BARRIERS	3 HOUR	3	0	0	
	2 HOUR	1 1/2	100	33	10
	1 HOUR	1	100	33	1

MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



BLDG. D PARTITION PLAN 1/8" = 1'

LINE KEY	
	HORIZONTAL PARTITION PANEL 29GA GALVALUME TYPE "U"
	HALL WAY SYSTEM
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND 26GA VERT. OR HORIZ. PANEL EXTERIOR
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND WOOD VENEER BY OTHERS
	6" R-19 INSULATION IN WALL WITH 29GA PANEL BOTH SIDES

DOOR SCHEDULE	
②	9'-0" x 7'-0" SLIDING DOOR (BY CUSTOMER)
③	3'-0" x 7'-0" PERSONNEL DOOR (BY CUSTOMER)
④	6'-0" x 7'-0" DOUBLE GLASS DOOR (BY CUSTOMER)

WINDOW SCHEDULE	
Ⓐ	14'-0" x 8'-0" WINDOW
Ⓛ	14'-0" x 8'-0" WINDOW
Ⓜ	14'-0" x 8'-0" WINDOW
Ⓝ	14'-0" x 8'-0" WINDOW

NOTE:
GC/CUSTOMER TO PROVIDE DISTANCE TO HOLD DOWN PARTITIONS FROM BOTTOM OF ROOF DECK BEFORE ANY MATERIALS CAN BE ORDERED.

- PIER & HEADER FINISHES:**
- PREPAINTED PIERS & HEADERS**
- THERE IS NO ADDITIONAL APPLICATIONS REQ'D.
 - REMOVE THE PROTECTIVE FILM FROM AREAS OF BOTH PIERS & HEADERS WHERE THEY CONTACT EACH OTHER.
 - LEAVE THE FILM ON TO PROTECT THE PREPAINTED SURFACE UNTIL CONSTRUCTION IS NEAR COMPLETION.
- GALVANEAL PIERS & HEADERS REQUIRING FIELD PAINTING.**
- VERIFY PAINT COLOR WITH COLOR REQ'D IN LABOR CONTRACT.
 - CAULK PIERS TO HEADERS AND HEADERS TO HEADERS IF STACKED.
 - PRIME ALL EXPOSED SURFACES OF PIERS & HEADERS.
 - PAIN ALL EXPOSED SURFACES OF PIERS & HEADERS WITH PAINT SPECIFIED IN LABOR CONTRACT EVENLY SO PRIMER CAN NOT BE SEEN THROUGH TOP COAT.
 - IF TEXTURED, ROLL OUT TO ACHIEVE AND SAND FINISH STUCCO LIKE LOOK.

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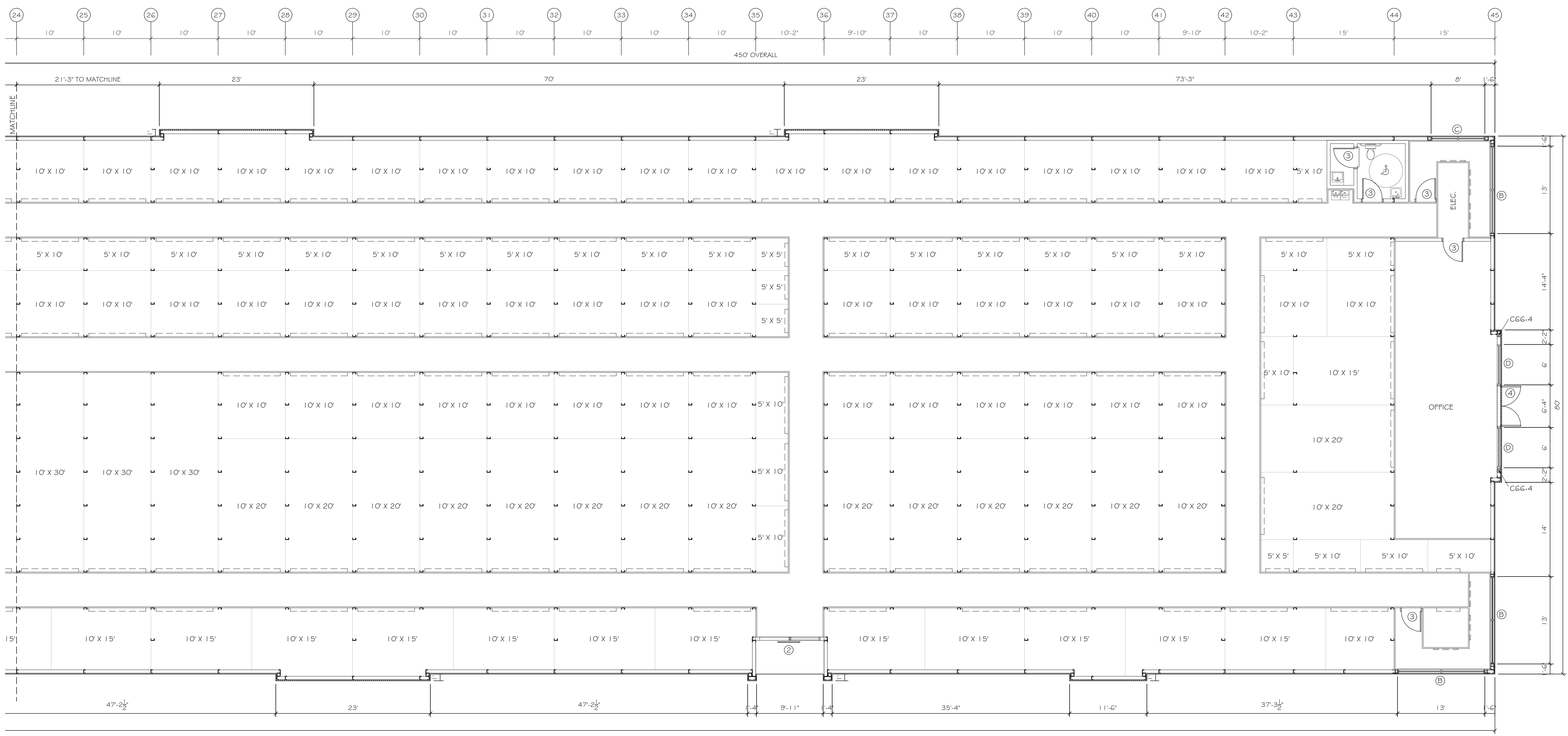
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BLDG. D
 PARTITION PLANS
 DATE 06-12-23
 DRAWN BY AWMMG
 CHECKED BY XXX
 JOB NO. E 2705
 SCALE AS NOTED
 SHEET

NO.	BY	ISSUE	DATE



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PARTITION PLAN
 BLDG. D
 NORTH
 1/8" = 1'

LINE KEY	
	HORIZONTAL PARTITION PANEL 29GA GALVALUME TYPE "U"
	HALL WAY SYSTEM
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND 26GA VERT. OR HORIZ. PANEL EXTERIOR
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND WOOD VENEER BY OTHERS
	6" R-19 INSULATION IN WALL WITH 29GA PANEL BOTH SIDES

DOOR SCHEDULE	
②	9'-0" x 7'-0" SLIDING DOOR (BY CUSTOMER)
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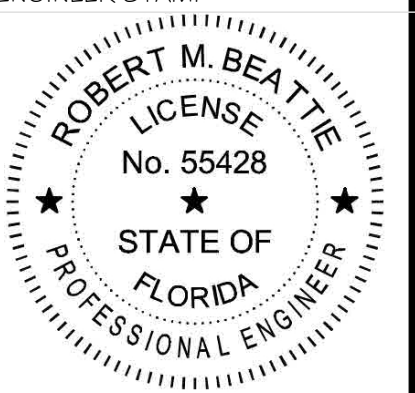
WINDOW SCHEDULE	
Ⓐ	14'-0" x 8'-0" WINDOW
Ⓛ	14'-0" x 8'-0" WINDOW
Ⓜ	14'-0" x 8'-0" WINDOW
Ⓝ	14'-0" x 8'-0" WINDOW

NOTE:
 CC/CUSTOMER TO PROVIDE DISTANCE TO HOLD
 DOWN PARTITIONS FROM BOTTOM OF ROOF
 DECK BEFORE ANY MATERIALS CAN BE ORDERED.

- PIER & HEADER FINISHES:**
- PREPAINTED PIERS & HEADERS**
- THERE IS NO ADDITIONAL APPLICATIONS REQ'D.
 - REMOVE THE PROTECTIVE FILM FROM AREAS OF BOTH PIERS & HEADERS WHERE THEY CONTACT EACH OTHER.
 - LEAVE THE FILM ON TO PROTECT THE PREPAINTED SURFACE UNTIL CONSTRUCTION IS NEAR COMPLETION.
- GALVANEAL PIERS & HEADERS REQUIRING FIELD PAINTING.**
- VERIFY PAINT COLOR WITH COLOR REQ'D IN LABOR CONTRACT.
 - CAULK PIERS TO HEADERS AND HEADERS TO HEADERS IF STACKED.
 - PRIME ALL EXPOSED SURFACES OF PIERS & HEADERS.
 - PAIN ALL EXPOSED SURFACES OF PIERS & HEADERS WITH PAINT SPECIFIED IN LABOR CONTRACT EVENLY SO PRIMER CAN NOT BE SEEN THROUGH TOP COAT.
 - IF TEXTURED, ROLL OUT TO ACHIEVE AND SAND FINISH STUCCO LIKE LOOK.

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ROBERT M. BEATTIE
 LICENSE No. 55428
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

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08/04/2023

Digitally signed by Robert Beattie
 Date: 2023.08.04 16:46:03 -0400

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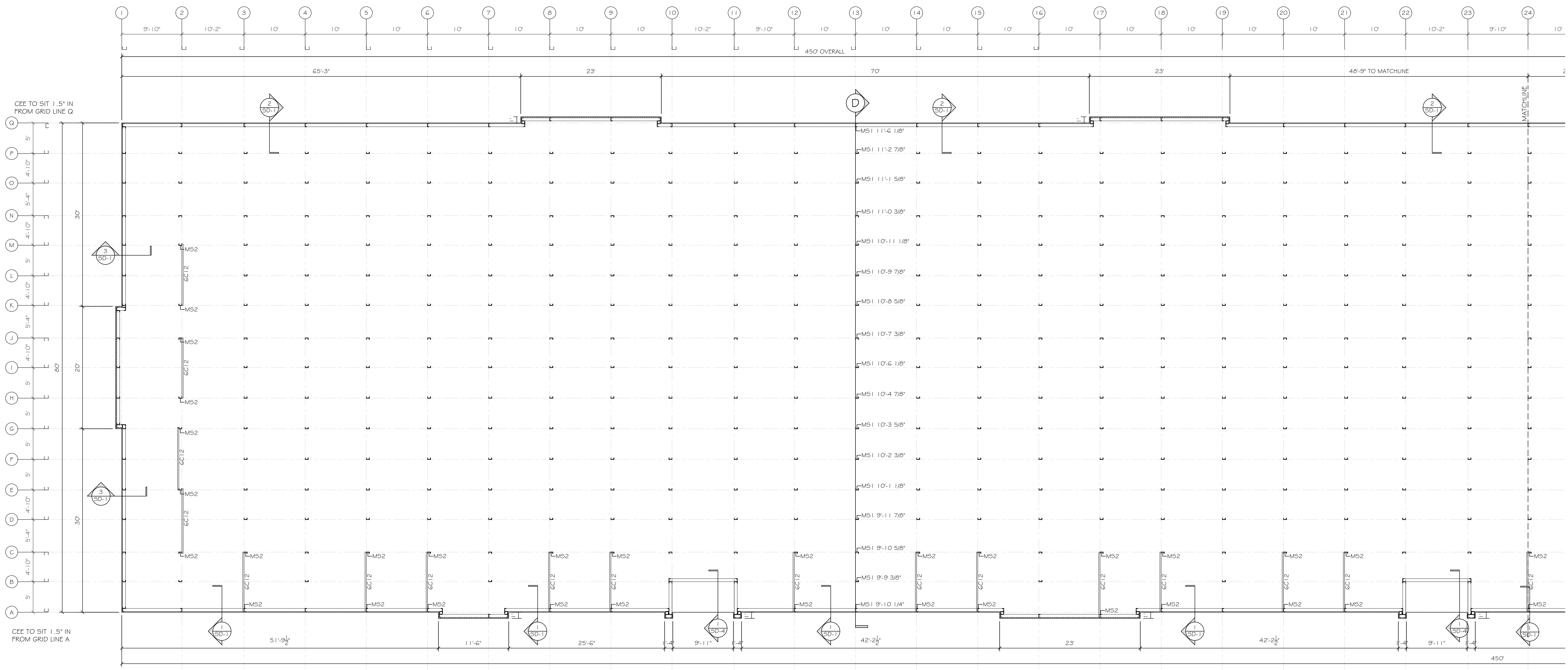
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SHEET TITLE

**BLDG. D
 PARTITION PLANS**

DATE: 06-12-23
 DRAWN BY: AWM/MG
 CHECKED BY: XXX
 JOB NO.: E 2705
 SCALE: AS NOTED
 SHEET



BLDG. D COLUMN FRAMING PLAN
1/8" = 1'

LINE KEY	
	BOX HDR FRAMED COLUMN OPENING W/ BOX HEADER
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND 26GA VERT. OR HORIZ. PANEL EXTERIOR
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND WOOD VENEER BY OTHERS
	6" R-19 INSULATION IN WALL WITH 29GA PANEL BOTH SIDES
	CROSS BEAMS NEED MORE THAN 5' BAY
	COLUMNS
	ZEE BEAMS
	ROOF STRAPPING

TYPICAL COLUMNS & BEAMS UNLESS NOTED OTHERWISE	
COLUMN : M51	= 6C16 - 6X2 1/2" X 16GA CEE PRIME PAINTED
COLUMN : M52	= 6C14 - 6X2 1/2" X 14GA CEE PRIME PAINTED
PURLIN : P1	= 6Z16 - 6X2 1/2" X 16GA ZEE PRIME PAINTED

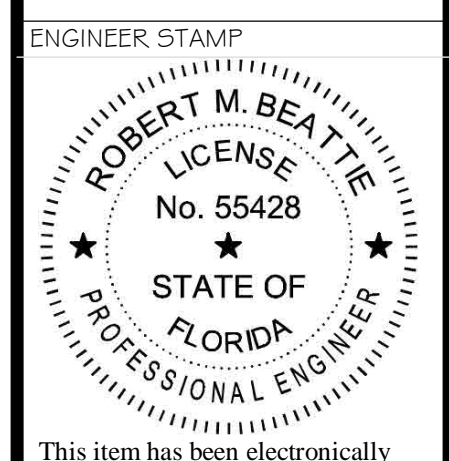
ANCHOR SCHEDULE										
FASTENERS AND ANCHORS ALL FASTENERS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS										
ANCHOR TYPE	ANCHOR NAME	ECCS #	ANCHOR DIA. (IN)	MIN. BASE MATERIAL THICKNESS (IN)	MIN. OR YONGE MAX. OR SET J. EMBEDMENT (IN)	MIN. ANCHOR SPACING (IN)	MIN. EDGE / END DISTANCE (IN)	ALLOWABLE BASE MATERIAL	STEEL	
EPOXY	AC108+SOLID	ESR-2502 [CONC]	1/2" DIA	1/2" (CONC)	2-3/4" (MIN) / 2" MAX	2-1/2"	2-1/2"	X X	X	
			3/4" DIA	5-3/4" (CONC)	3-1/2" (MIN) / 2" MAX	3-3/4"	3-3/4"	X X	X	
MECHANICAL	POWER STUD #501	ESR-3300 [CONC]	1/2" DIA	1/2" (CONC)	4" (MIN)	(1) PER CELL	4"	X X X	X	
			3/4" DIA	6" (CONC)	6" (MIN)	(1) PER CELL	4"	X X X	X	
	POWER STUD #502	ESR-2502 [CONC]	1/2" DIA	4-1/2" (CONC)	2-1/2" (MIN) / 2" (EFF)	6"	6"	X X X	X	
			3/4" DIA	7" (CONC)	4-1/2" (MIN) / 3-3/4" (EFF)	6"	12"	X X X	X	
	SCREW BOLT+	ESR-3409 [CONC]	1/2" DIA	1/2" (CONC)	2" (CONC OVER STL BECN)	2-3/8" (MIN) / 2" (EFF)	6"	4"	X X X	X
			3/4" DIA	1/2" (CONC)	2" (CONC)	2-3/8" (MIN) / 2" (EFF)	6"	4"	X X X	X
			1/2" DIA	3" (CONC)	1-5/8" (MIN) / 1-2" (EFF)	1-1/2"	1-1/2"	X X X	X	
			3/4" DIA	3" (CONC)	2" (MIN) / 1-1/2" (EFF)	2"	1-1/2"	X X X	X	
			3/8" DIA	3" (CONC)	2-1/2" (MIN) / 1-3/4" (EFF)	2-3/4"	1-3/4"	X X X	X	
			1/2" DIA	3-3/4" (CONC)	4-1/4" (MIN) / 3-5/8" (EFF)	3"	1-3/4"	X X X	X	
DIRECT FASTEN	CSU SPIRAL DRIVE PND	ESR-2024 [CONC]	1/2" DIA	1/2" (CONC)	1-3/8" (MIN) / 1-2" (EFF)	1-1/2"	1-1/2"	X X X X	X X	
			3/4" DIA	2" (CONC)	2" (MIN) / 1-3/4" (EFF)	2"	2"	X X X X	X X	
			1/2" DIA	3" (CONC)	1-1/4" (MIN)	4"	3-1/2"	X X X X	X X	
			3/4" DIA	3-3/4" (CONC)	1-1/4" (MIN)	4"	3-1/2"	X X X X	X X	

ANCHOR SCHEDULE UNLESS NOTED OTHERWISE	
BOTTOM FLOOR (MULTI)	
BASE TRACK INSTALLATION	1/2"x3" DeWALT SCREW BOLT+ (OR EQUAL) SPACING 3' O.C. (1 3/4" EFFECTIVE EMBEDMENT)
PIER INSTALLATION	1/2"x3" DeWALT SCREW BOLT+ (OR EQUAL) @ EA. PIER (1 3/4" EFFECTIVE EMBEDMENT)
HEAVY STEEL DECK SUPPORT ANGLE (1/4" THICK OR GREATER) (TO CMU)	3/4"x6" DeWALT SCREW BOLT+ (OR EQUAL) 2' O.C. (5" MIN. EMBEDMENT) (4" MIN. FROM EDGE OF CMU)
1/4" MIN. EXPANSION ANGLE INSTALLATION (TO CMU)	
HSS STEEL COLUMN BASE PLATE INSTALLATION	USE DeWALT AC2004+ EPOXY TO INSTALL. DIAMETER TO MATCH ANCHOR IN COLUMN SCHEDULE X 1 2" LONG THREADED ROD WITH LEVELING NUTS (7" MIN. EMBEDMENT)

MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



LIBERTY DELRAY,
DELRAY FL



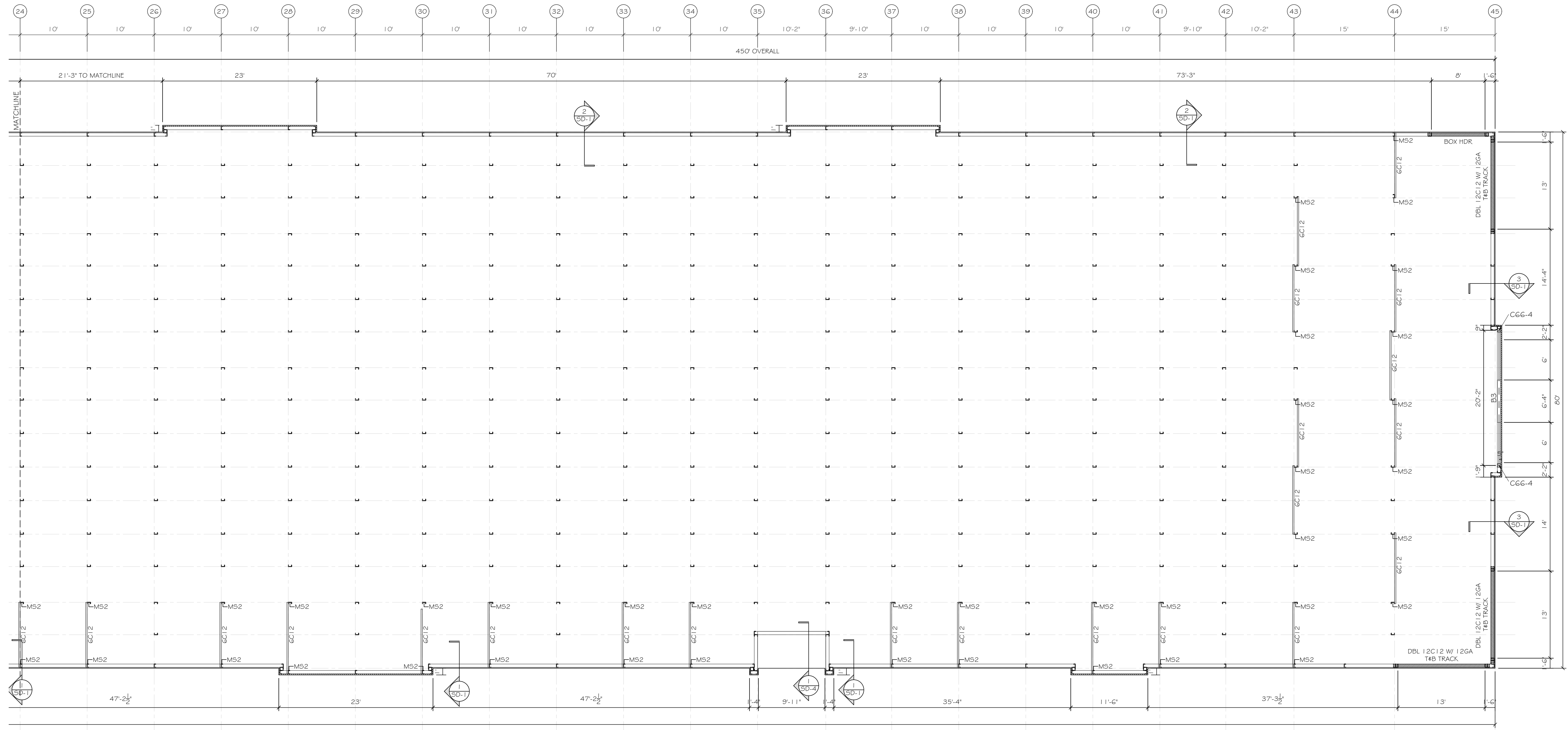
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SHEET TITLE
BLDG. C
COLUMN FRAMING PLANS

DATE: 06-12-23
DRAWN BY: AWMMG
CHECKED BY: XXX
JOB NO.: E 2705
SCALE: AS NOTED
SHEET



BLDG. D COLUMN FRAMING PLAN
1/8" = 1'

LINE KEY

	BOX HDR
	FRAMED COLUMN OPENING W/ BOX HEADER
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND 26GA VERT. OR HORIZ. PANEL EXTERIOR
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND WOOD VENEER BY OTHERS
	6" R-19 INSULATION IN WALL WITH 29GA PANEL BOTH SIDES
	CROSS BEAMS NEED MORE THAN 5' BAY
	COLUMNS
	ZEE BEAMS
	ROOF STRAPPING

TYPICAL COLUMNS & BEAMS UNLESS NOTED OTHERWISE

COLUMN : M51	= GCI 16 - 6'X2 1/2" X 1 1/4" GGA CEE PRIME PAINTED
COLUMN : M52	= GCI 14 - 6'X2 1/2" X 1 1/4" GGA CEE PRIME PAINTED
PURLIN : P1	= G21 6 - 6'X2 1/2" X 1 1/4" GGA ZEE PRIME PAINTED

ANCHOR SCHEDULE
FASTENERS AND ANCHORS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS

ANCHOR TYPE	ANCHOR NAME	ECC-55 #	ANCHOR DIA. (IN)	MIN. BASE MATERIAL THICKNESS (IN)	MIN. OR YOUNG'S MOD. (OR REF.) DIMENSION (IN)	MIN. ANCHOR SPACING (IN)	MIN. EDGE (C/O) DISTANCE (IN)	ALLOWABLE BASE MATERIAL						
								CONC.	CONC. OVER STEEL DECK	GF CMU	HOLLOW CMU W/ SCREEN TUBES	SOLID BRICK	STEEL	
EPOXY	AC108+GOLD	ESR-2502	1/2" DIA	1/2" DIA	4" (CONC)	3-3/4" (MIN) / 12" MAX	2-1/2"	2-1/2"	X	X	X	X	X	X
			3/4" DIA	3/4" DIA	5-3/4" (CONC)	3-1/2" (MIN) / 8" MAX	3-3/4"	3-3/4"	X	X	X	X	X	X
MECHANICAL	POWER STUD #501	ESR-2618	1/2" DIA	1/2" DIA	4" (CONC)	2-1/2" (MIN) / 2" (EFF)	4-1/2"	4"	X	X	X	X	X	X
			3/4" DIA	3/4" DIA	2" (CONC)	4" (MIN) / 2" (EFF)	4"	4"	X	X	X	X	X	X
MECHANICAL	POWER STUD #502	ESR-2502	1/2" DIA	1/2" DIA	4-1/2" (CONC)	2-1/2" (MIN) / 2" (EFF)	4"	4"	X	X	X	X	X	X
			3/4" DIA	3/4" DIA	7" (CONC)	4-1/2" (MIN) / 3-3/4" (EFF)	4"	4"	X	X	X	X	X	X
SCREW BOLT+	ESR-3489	1/2" DIA	1/2" DIA	1/2" DIA	4" (CONC)	2-1/2" (MIN) / 2" (EFF)	4"	4"	X	X	X	X	X	X
			3/4" DIA	3/4" DIA	2" (CONC)	3-1/4" (MIN)	4"	4"	X	X	X	X	X	X
DIRECT FASTEN	CSU SPIRAL DRIVE PINS	ESR-2024	1/2" DIA	1/2" DIA	4" (CONC)	2-1/2" (MIN) / 2" (EFF)	4"	4"	X	X	X	X	X	X
			3/4" DIA	3/4" DIA	6" (CONC)	3-1/4" (MIN)	4"	4"	X	X	X	X	X	X

ANCHOR SCHEDULE UNLESS NOTED OTHERWISE

BOTTOM FLOOR (MULTI)

BASE TRACK INSTALLATION
1/2"X3" DeWALT SCREW BOLT+ (OR EQUAL) SPACING 3' O.C. (1 3/4" EFFECTIVE EMBEDMENT)

PIER INSTALLATION
1/2"X3" DeWALT SCREW BOLT+ (OR EQUAL) @ EA. PIER (1 3/4" EFFECTIVE EMBEDMENT)
HEAVY STEEL DECK SUPPORT ANGLE (1/4" THICK OR GREATER) (TO CMU)
3/4"X6" DeWALT SCREW BOLT+ (OR EQUAL) 2' O.C. (5" MIN. EMBEDMENT) (4" MIN. FROM EDGE OF CMU)
1/4" MIN. EXPANSION ANGLE INSTALLATION (TO CMU)
USE DeWALT AC208+ EPOXY TO INSTALL. DIAMETER TO MATCH ANCHOR IN COLUMN SCHEDULE X 1 2" LONG THREADED ROD WITH LEVELING NUTS (7" MIN. EMBEDMENT)

HSS STEEL COLUMN BASE PLATE INSTALLATION
USE DeWALT AC200+ EPOXY TO INSTALL. DIAMETER TO MATCH ANCHOR IN COLUMN SCHEDULE X 1 2" LONG THREADED ROD WITH LEVELING NUTS (7" MIN. EMBEDMENT)

MARKUPS / REVISIONS

NO.	BY	ISSUE	DATE

MAKORABCO
EAST COAST OFFICE: 1041 CROWN PINE CIRCLE WATER GARDEN FL 34707 PHONE: (800) 999-0220

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DELRAY FL

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ROBERT M. BEATIE
LICENSE No. 55428
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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08/04/2023

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ENGINEER

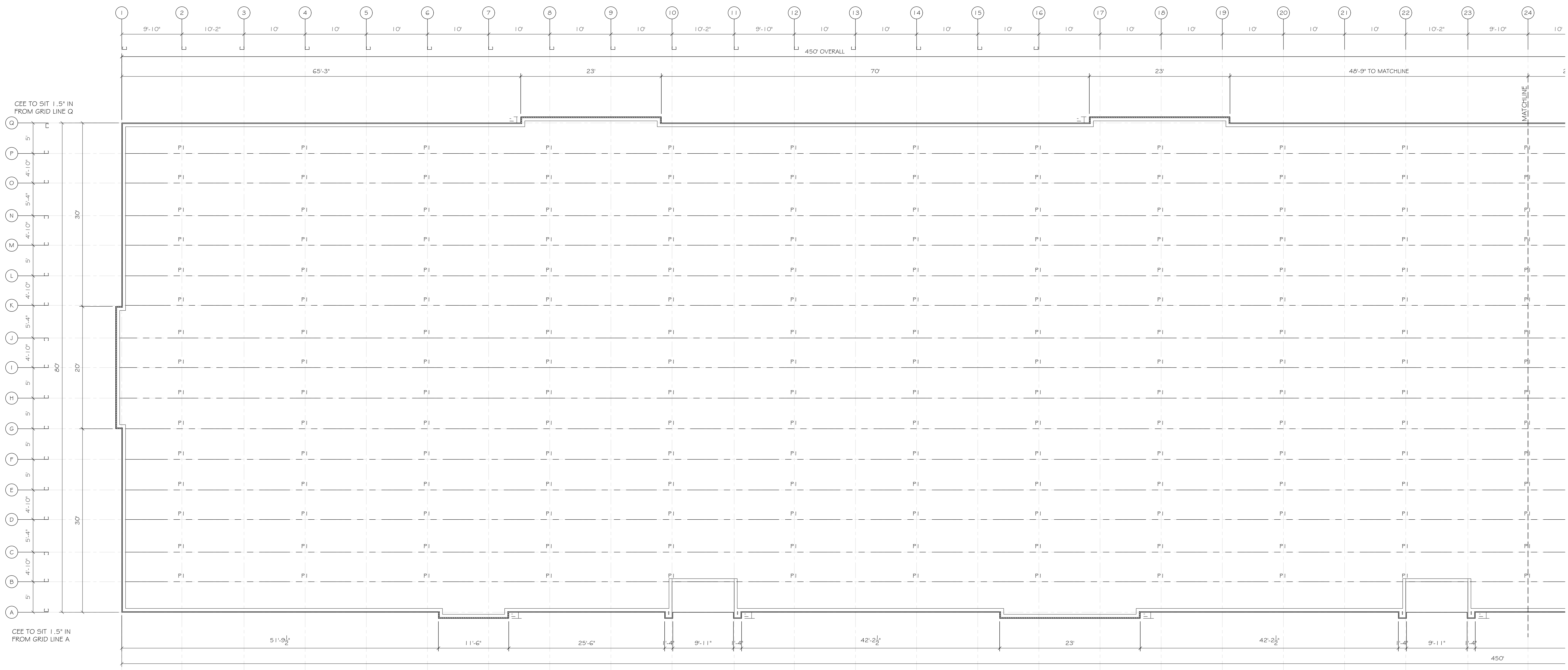
REB CONSULTING SERVICES, LLC
1000 W. PALM BEACH BLVD., SUITE 1000
PALM BEACH, FL 33480
TEL: 561.833.8888
WWW.REBCONSULTING.COM

SHEET TITLE

BLDG. D
COLUMN FRAMING PLANS

DATE: 06-12-23
DRAWN BY: AWMMG
CHECKED BY: XXX
JOB NO.: E 2705
SCALE: AS NOTED
SHEET

MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



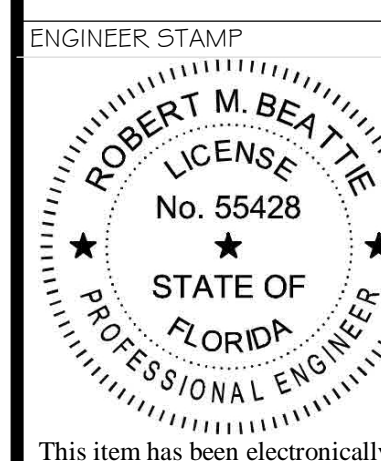
BLDG. D
ROOF FRAMING PLAN
1/8" = 1'

LINE KEY	
	BOX HDR
	FRAMED COLUMN OPENING w/ BOX HEADER
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND 26GA VERT. OR HORIZ. PANEL EXTERIOR
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND WOOD VENEER BY OTHERS
	6" R-19 INSULATION IN WALL WITH 29GA PANEL BOTH SIDES
	CROSS BEAMS NEED MORE THAN 5' BAY
	COLUMNS
	ZEE BEAMS
	ROOF STRAPPING

TYPICAL COLUMNS & BEAMS UNLESS NOTED OTHERWISE	
COLUMN : M51	= 6C16 - 6X2 1/2" X 1 GGA CEE PRIME PAINTED
COLUMN : M52	= 6C14 - 6X2 1/2" X 1 GGA CEE PRIME PAINTED
PURLIN : P1	= 6Z16 - 6X2 1/2" X 1 GGA ZEE PRIME PAINTED



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DELRAY FL



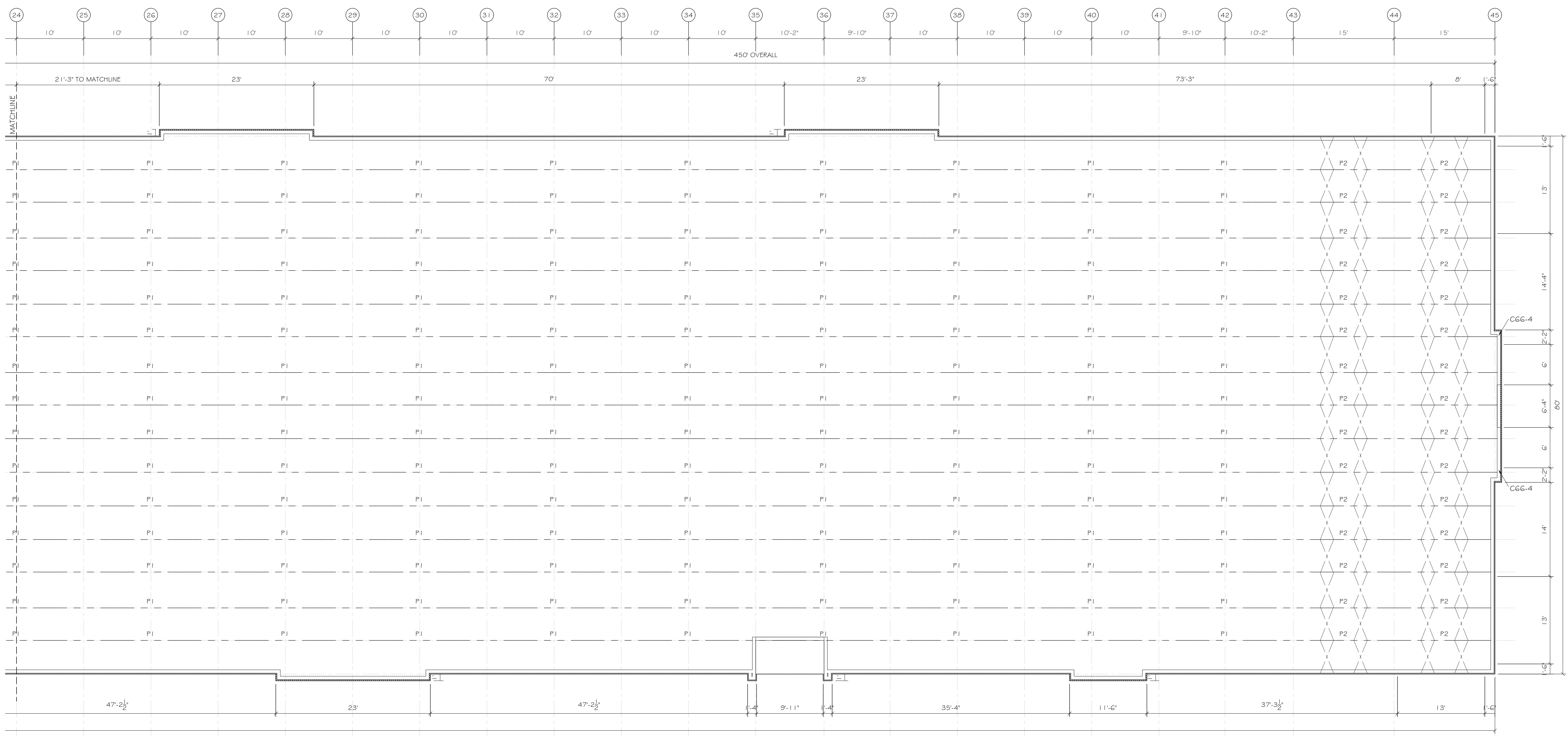
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WWW.RBECONSULTING.COM
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ROOF FRAMING PLANS
DATE: 06-12-23
DRAWN BY: AWM/MG
CHECKED BY: xxx
JOB NO.: E 2705
SCALE: AS NOTED
SHEET

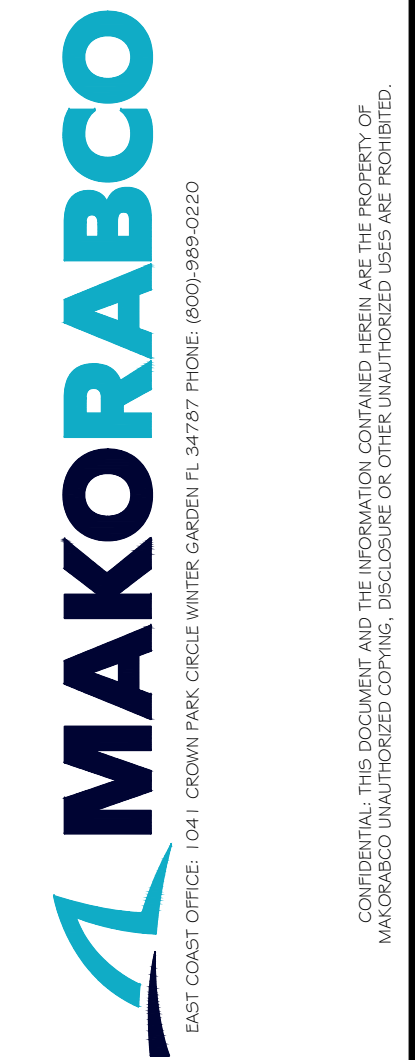
MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



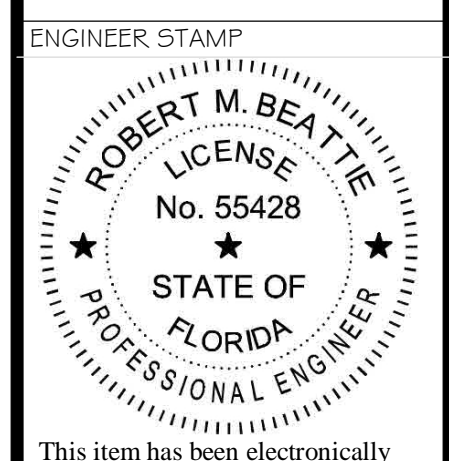
ROOF FRAMING PLAN
 BLDG. D
 NORTH
 1/8" = 1'

LINE KEY	
	BOX HDR
	FRAMED COLUMN OPENING W/ BOX HEADER
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND 26GA VERT. OR HORIZ. PANEL EXTERIOR
	6" R-19 INSULATION IN PERIMETER WALL 29GA PANEL INTERIOR AND WOOD VENEER BY OTHERS
	6" R-19 INSULATION IN WALL WITH 29GA PANEL BOTH SIDES
	CROSS BEAMS NEED MORE THAN 5' BAY
	COLUMNS
	ZEE BEAMS
	ROOF STRAPPING

TYPICAL COLUMNS & BEAMS UNLESS NOTED OTHERWISE	
COLUMN : M51	= 6C16 - 6'X2 1/2" X 1 GGA CEE PRIME PAINTED
COLUMN : M52	= 6C14 - 6'X2 1/2" X 1 GGA CEE PRIME PAINTED
PURLIN : P1	= 6Z16 - 6'X2 1/2" X 1 GGA ZEE PRIME PAINTED



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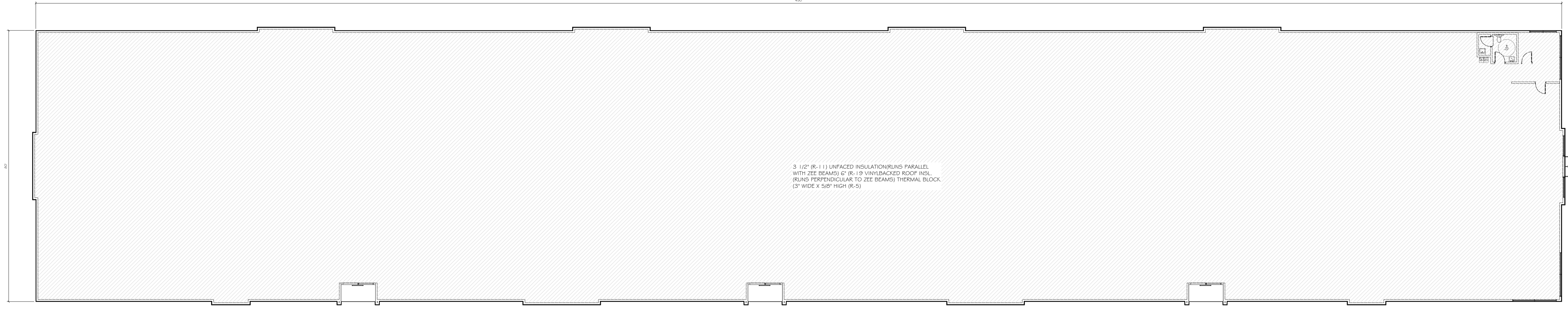
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 (561) 991-1111
 WWW.RBECONSULTING.COM

SHEET TITLE
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 ROOF FRAMING PLANS
 DATE: 06-12-23
 DRAWN BY: AWMMG
 CHECKED BY: xxx
 JOB NO.: E 2705
 SCALE: AS NOTED
 SHEET

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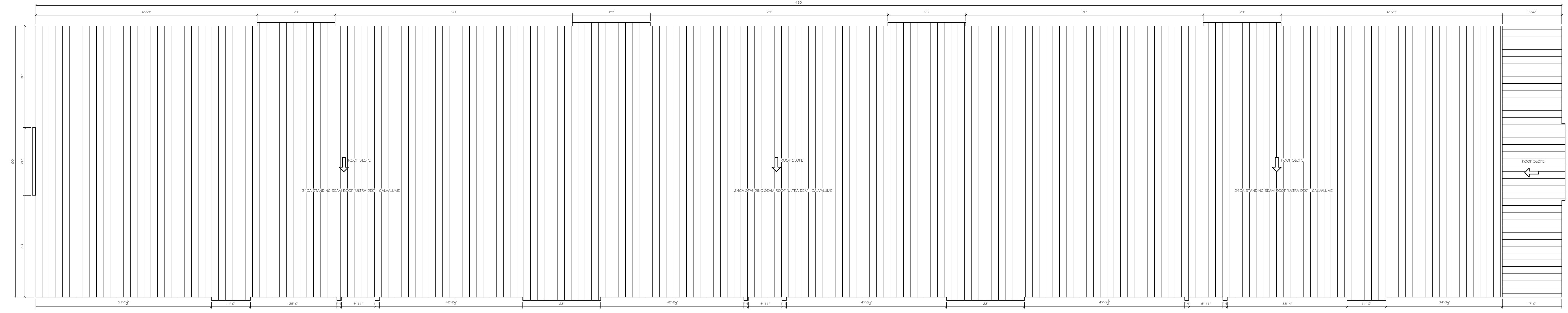


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BUILDING D
INSULATION PLAN

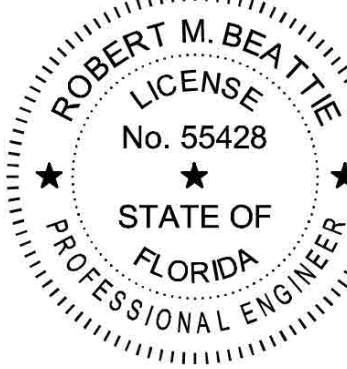
NOTE:
ROOF INSULATION SHALL BE INSTALLED ON THE INTERIOR SIDE OF PERIMETER WALLS IN ACCORDANCE WITH SECTION 05.07.20 AND REFERENCED AS SET OUT IN CHAPTER #3 OF THE INTERNATIONAL ENERGY CONSERVATION CODE.



BUILDING D
ROOF PLAN

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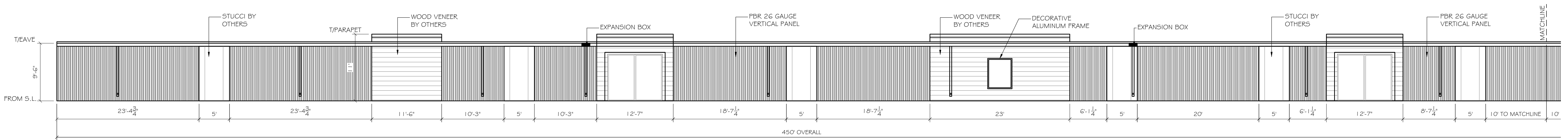
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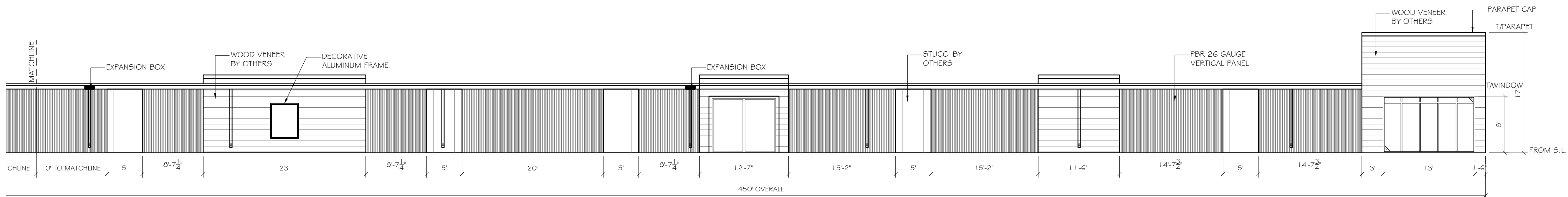
BLDG. D
INSULATION & ROOF
PLANS

DATE 06-12-23
DRAWN BY AWMMG
CHECKED BY xxx
JOB NO. E 2705
SCALE AS NOTED
SHEET

MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



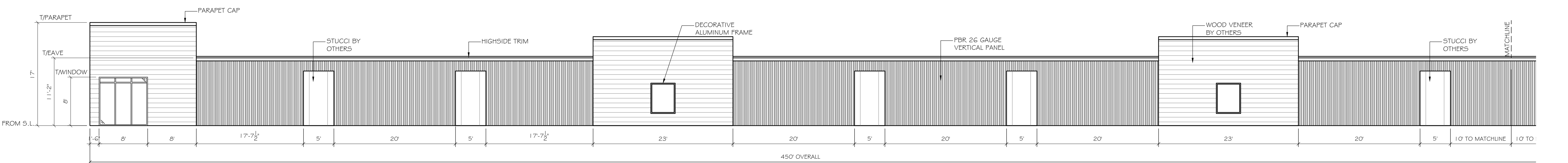
BLDG. D EAST ELEVATION 1/8" = 1'



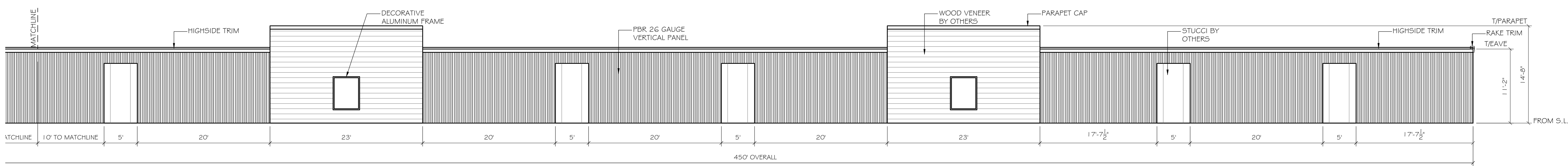
BLDG. D EAST ELEVATION 1/8" = 1'

NOTES:
 ALL MAN DOORS, ROLL-UP DOORS, SLIDING GLASS DOORS, WINDOWS AND TRANSOMS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION TO ENSURE PROPER FIT. G.C. SUBCONTRACTOR SHALL NOT FABRICATE FROM THE CONSTRUCTION DOCUMENTS. SHOULD THE G.C./ SUBCONTRACTOR CHOOSE TO FABRICATE THE PREVIOUSLY REFERENCED ITEMS FROM THE CONTRACT/PROPOSAL DOCUMENTS AND NOT FROM THE FIELD THEY DO SO AT THEIR OWN RISK AND ANY AND ALL MODIFICATIONS REQUIRED AS A RESULT SHALL BE AT THEIR OWN EXPENSE.

NOTE:
 GC SHALL COORDINATE ALL CMU WALL HEIGHTS WITH RABCO ENTERPRISES, LLC PRIOR TO CONSTRUCTION TO ENSURE PROPER FIT OF THE METAL BUILDING COMPONENTS. FAILURE TO GET WRITTEN APPROVAL PRIOR TO ERECTING THE CMU WALLS MAY RESULT IN NEEDED MODIFICATIONS TO EITHER THE CMU WALL AND/OR THE METAL BUILDING COMPONENTS AT THE G.C.'S EXPENSE.



BLDG. D WEST ELEVATION 1/8" = 1'



BLDG. D WEST ELEVATION 1/8" = 1'



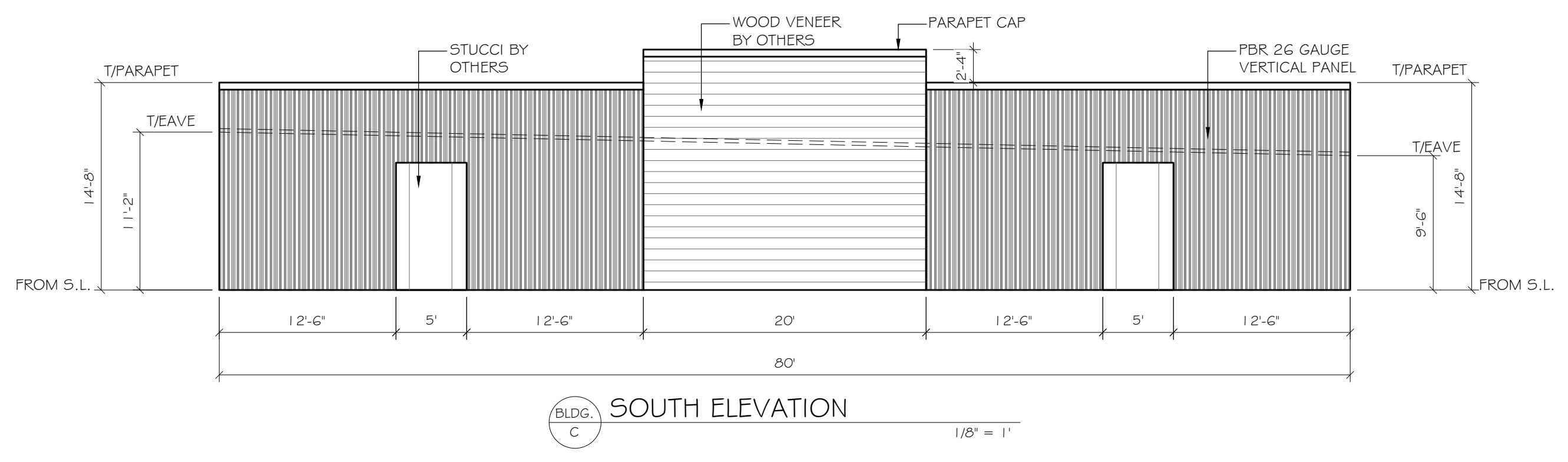
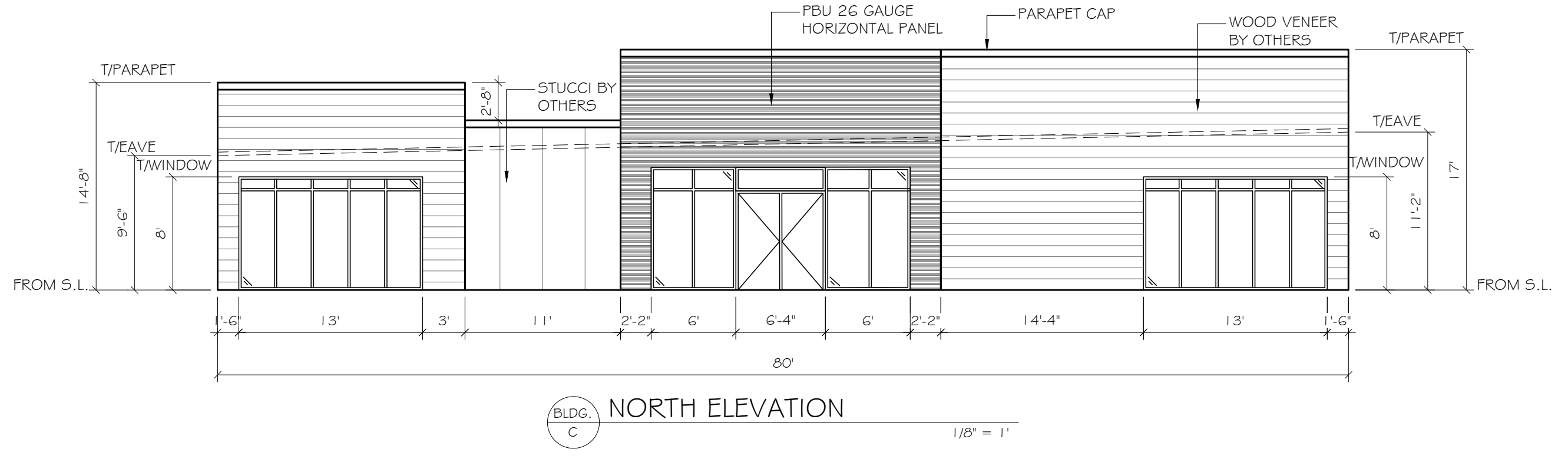
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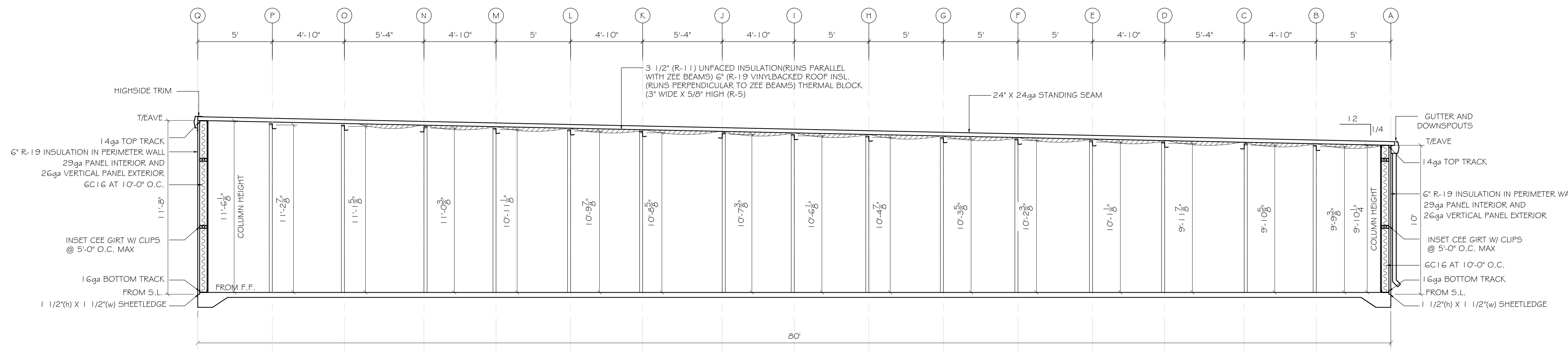
SHEET TITLE
BLDG. D
 ELEVATIONS
 DATE 06-12-23
 DRAWN BY AWMMG
 CHECKED BY xxx
 JOB NO. E 2705
 SCALE AS NOTED
 SHEET

NO.	BY	ISSUE	DATE



NOTES:
 ALL MAIN DOORS, ROLL-UP DOORS, SLIDING GLASS DOORS, WINDOWS AND TRANSOMS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION TO ENSURE PROPER FIT. G.C./SUBCONTRACTOR SHALL NOT FABRICATE FROM THE CONSTRUCTION DOCUMENTS. SHOULD THE G.C./SUBCONTRACTOR CHOOSE TO FABRICATE THE PREVIOUSLY REFERENCED ITEMS FROM THE CONTRACT/PROPOSAL DOCUMENTS AND NOT FROM THE FIELD THEY DO SO AT THEIR OWN RISK AND ANY AND ALL MODIFICATIONS REQUIRED AS A RESULT SHALL BE AT THEIR OWN EXPENSE.

NOTE:
 GC SHALL COORDINATE ALL CMU WALL HEIGHTS WITH RABCO ENTERPRISES, LLC PRIOR TO CONSTRUCTION TO ENSURE PROPER FIT OF THE METAL BUILDING COMPONENTS. FAILURE TO GET WRITTEN APPROVAL PRIOR TO ERECTING THE CMU WALLS MAY RESULT IN NEEDED MODIFICATIONS TO EITHER THE CMU WALL AND/OR THE METAL BUILDING COMPONENTS AT THE G.C.'S EXPENSE.



NOTE:
 VERTICAL COLUMN DIMENSION IS ACTUAL LENGTH OF CEE FROM F.F. (U.N.O.)

- NOTES:**
- UNLESS NOTED OTHERWISE ON THE PLANS, THE FOLLOWING OUTLINES STANDARD PARTITION HEIGHTS USED FOR DESIGN PURPOSES.
 - NON-CLIMATE CONTROLLED SINGLE STORY BUILDINGS HAVE BEEN DESIGNED BASED ON THE TOP OF ALL INTERIOR PARTITION PANELS BEING HELD TO WITHIN 8" OF THE BOTTOM OF THE ROOF DECK.
 - CLIMATE CONTROLLED SINGLE STORY BUILDING HAVE BEEN DESIGNED BASED ON THE TOP OF ALL INTERIOR PARTITION PANELS BEING HELD TO WITHIN 18" OF THE BOTTOM OF THE ROOF DECK.
 - CLIMATE CONTROLLED MULTI-STORY BUILDING HAVE BEEN DESIGNED BASED ON THE TOP OF ALL INTERIOR PARTITION PANELS BEING HELD TO WITHIN 18" OF THE BOTTOM OF THE FLOOR/ROOF DECK.
 - SHOULD THE PARTITION PANELS NEED TO BE HELD DOWN FURTHER THAN 18" FROM THE BOTTOM OF THE FLOOR/ROOF DECK, THE REQUEST SHALL BE SUBMITTED IN WRITING AND A FORMAL WRITTEN RESPONSE PROVIDED PRIOR TO FABRICATION AND/OR INSTALLATION.

MAKORABCO
 EAST COAST OFFICE: 1041 CROWN PARK CIRCLE WATER GARDEN FL 34707 PHONE: (800) 999-0220

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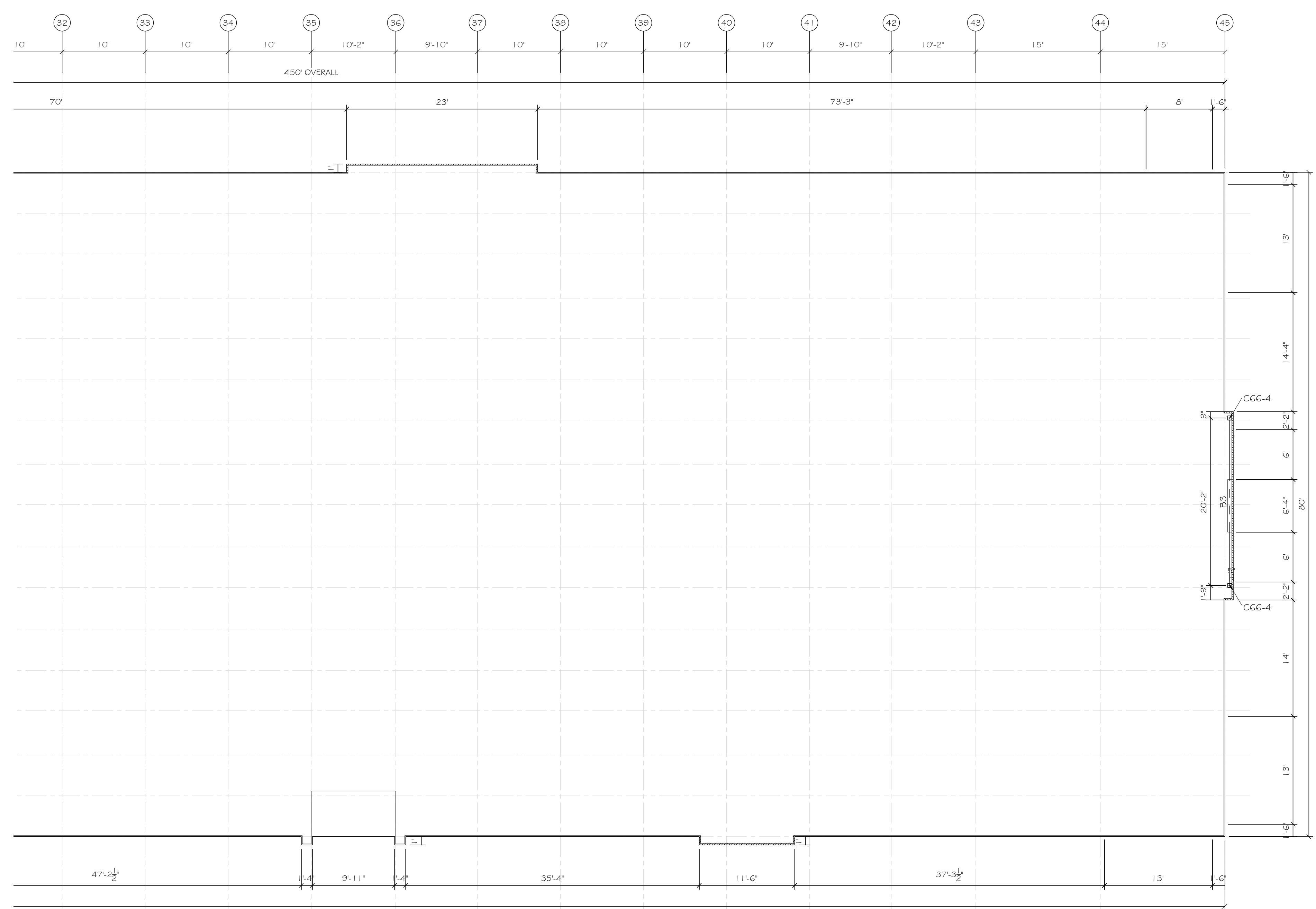
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 10000 W. STATE ROAD 70, SUITE 200, DELRAY BEACH, FL 33433
 PHONE: (561) 321-1111 FAX: (561) 321-1112
 WWW.RBECONSULTING.COM

SHEET TITLE

**BLDG. D
 ELEVATIONS &
 SECTIONS**

DATE: 06-12-23
 DRAWN BY: AWM/MG
 CHECKED BY: XXX
 JOB NO.: E 2705
 SCALE: AS NOTED
 SHEET



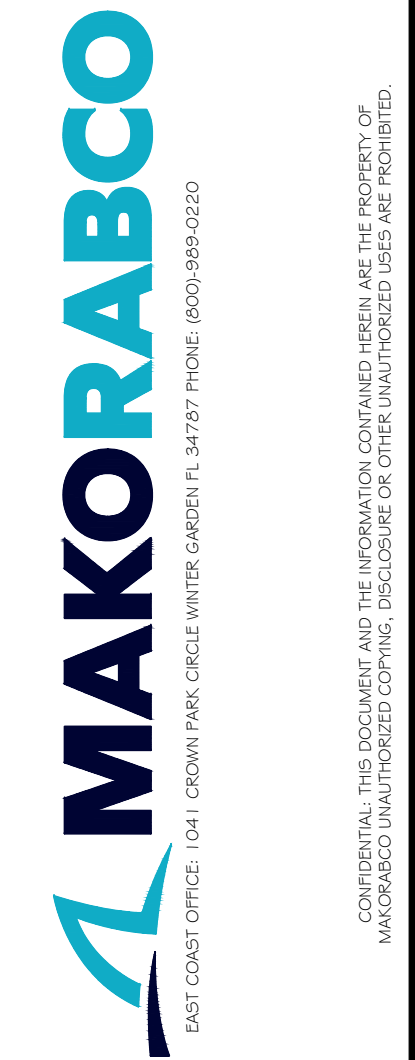
W-BEAM SCHEDULE		
B1	W18X35	R=10K
B2	W24X68	R=20K
B3	W12X22	R=5K

TYP. BEAM HEIGHTS
 (TO BE VERIFIED BY G.C./STEEL FABRICATOR PRIOR TO CONSTRUCTION / FABRICATION.)
 BOTTOM 4 MIDDLE FLOORS
 TOP OF BEAMS = BOTTOM OF METAL DECK (4.5' BELOW ELEVATED SLAB, U.N.O.)
 INFILL FRAMING BELOW BEAMS MAY BE REQUIRED AT ANY OPENINGS, U.N.O.
 TOP FLOOR
 BOTTOM OF BEAMS = 2.5' ABOVE OPENING OF WINDOW, TO ALLOW FOR BLOCKING FOR PROPER WINDOW ATTACHMENT. INFILL FRAMING EITHER SIDE OF WINDOW MAY BE REQUIRED TO CREATE ROUGH OPENING.

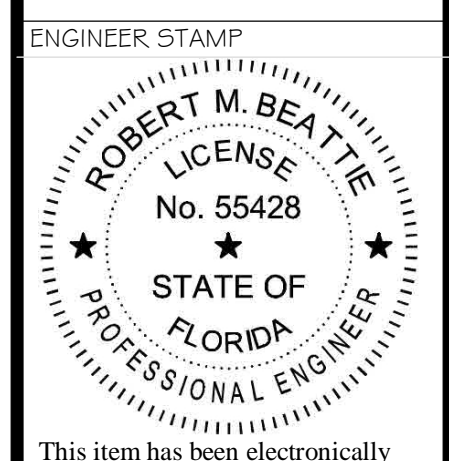
COLUMNS (SEE COL. SCHEDULE ON SHEET SBD-1 FOR ADDITIONAL INFO.)	
COLUMN MARK	COLUMN SIZE
C44-4	H554x4x1/4
C44-6	H554x4x3/8
C44-8	H554x4x1/2
C66-4	H556x6x1/4
C66-6	H556x6x3/8
C66-8	H556x6x1/2
C88-4	H558x8x1/4
C88-6	H558x8x3/8
C88-8	H558x8x1/2
C88-10	H558x8x5/8
C1010-4	H5510x10x1/4
C1010-6	H5510x10x3/8
C1010-8	H5510x10x1/2
C1010-10	H5510x10x5/8
CB-1	8x16 CONC. BM.
TC-1	8x24 CONC. COL.
TC-2	16x16x8 CONC. COL.
TC-3	

BLDG. BLACK IRON PLAN
 NORTH 1/8" = 1'-0"

MARKUPS / REVISIONS			
NO.	BY	ISSUE	DATE



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 DELRAY FL



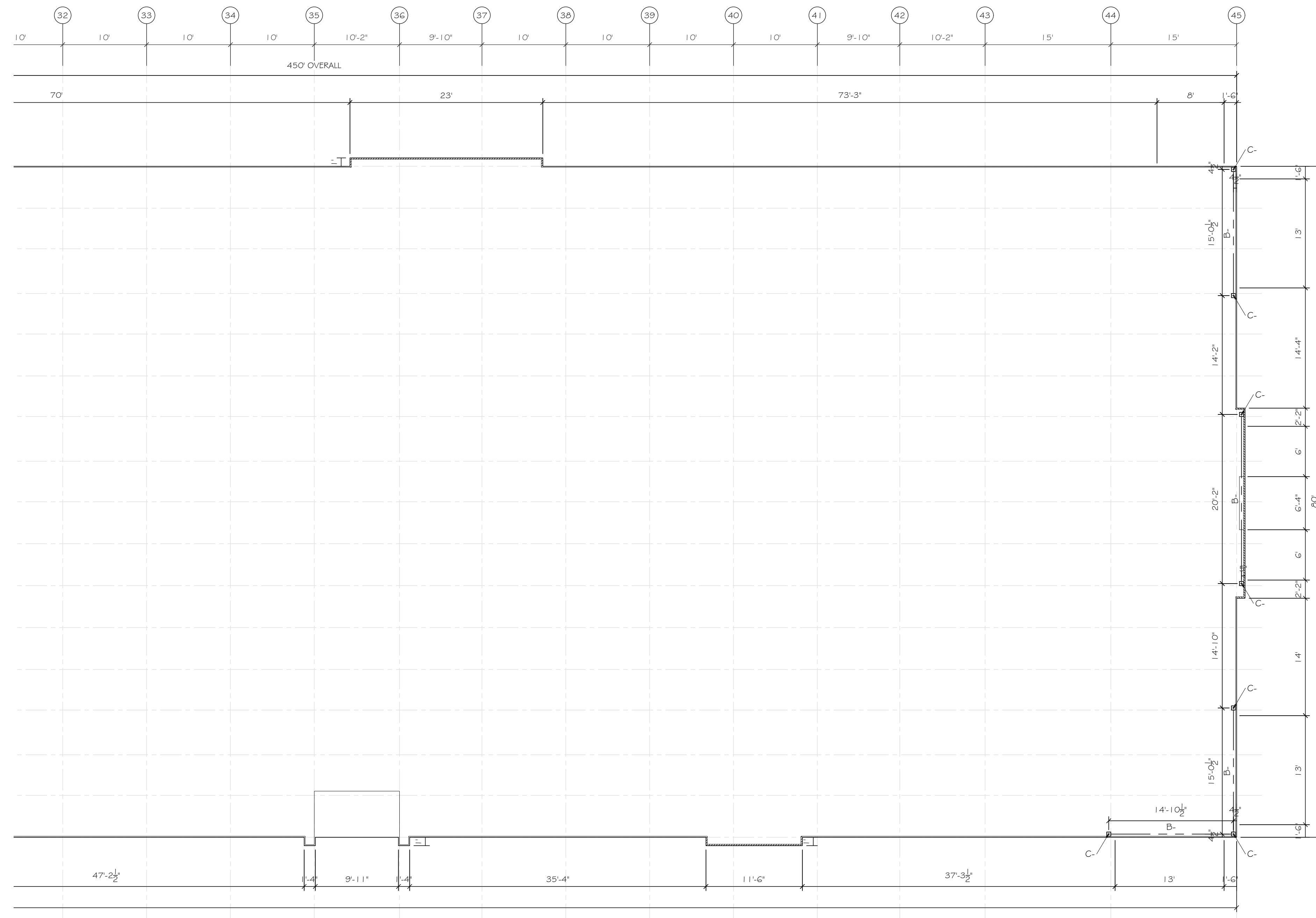
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 Digitally signed by Robert Beattie Date: 2023.08.04 16:46:53 -0400

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 10000 W. UNIVERSITY BLVD., SUITE 1000, WEST PALM BEACH, FL 33411
 TEL: 561-833-3333 FAX: 561-833-3334
 WWW.RBECONSULTING.COM
 PROFESSIONAL ENGINEER LICENSE NO. 12000
 STATE OF FLORIDA
 REGISTERED PROFESSIONAL ENGINEER
 EXPIRES 08/31/2026

SHEET TITLE
BLDG. D
 BLACK IRON PLANS

DATE 06-12-23
 DRAWN BY AWMMG
 CHECKED BY xxx
 JOB NO. E 2705
 SCALE AS NOTED
 SHEET



W-BEAM SCHEDULE		
B1	W_X__	R= _K
B2	W_X__	R= _K

TYP. BEAM HEIGHTS
 (TO BE VERIFIED BY G.C./STEEL FABRICATOR PRIOR TO CONSTRUCTION / FABRICATION.)
 BOTTOM 4 MIDDLE FLOORS
 TOP OF BEAMS = BOTTOM OF METAL DECK (4.5' BELOW ELEVATED SLAB, U.N.O.)
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 TOP FLOOR
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COLUMNS (SEE COL. SCHEDULE ON SHEET SBD-1 FOR ADDITIONAL INFO.)	
COLUMN MARK	COLUMN SIZE
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C66-8	H556x6x1/2
C88-4	H558x8x1/4
C88-6	H558x8x3/8
C88-8	H558x8x1/2
C88-10	H558x8x5/8
C1010-4	H5510x10x1/4
C1010-6	H5510x10x3/8
C1010-8	H5510x10x1/2
C1010-10	H5510x10x5/8
CB-1	8x16 CONC. BM.
TC-1	8x24 CONC. COL.
TC-2	16x16x8 CONC. COL.
TC-3	

BLACK IRON PLAN
 BLDG. D
 NORTH
 1/8" = 1'

PRELIMINARY

MARKUPS / REVISIONS			
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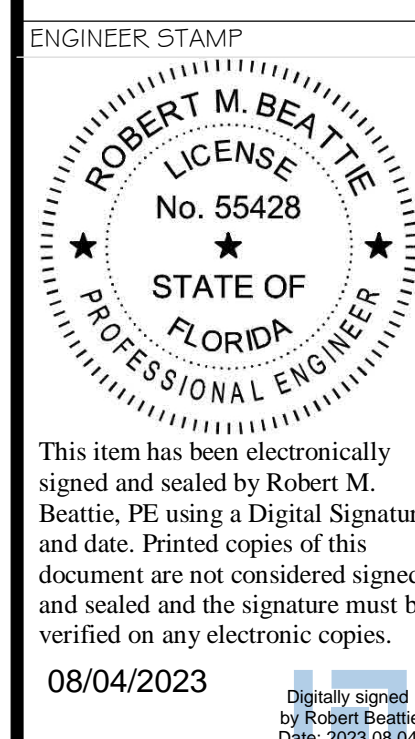
SHEET TITLE
BLDG. D
 BLACK IRON PLANS
 DATE: 06-12-23
 DRAWN BY: AWMMG
 CHECKED BY: xxx
 JOB NO.: E 2705
 SCALE: AS NOTED
 SHEET

SB-2.0

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SHEET TITLE
BLDG. BLACK IRON DETAILS

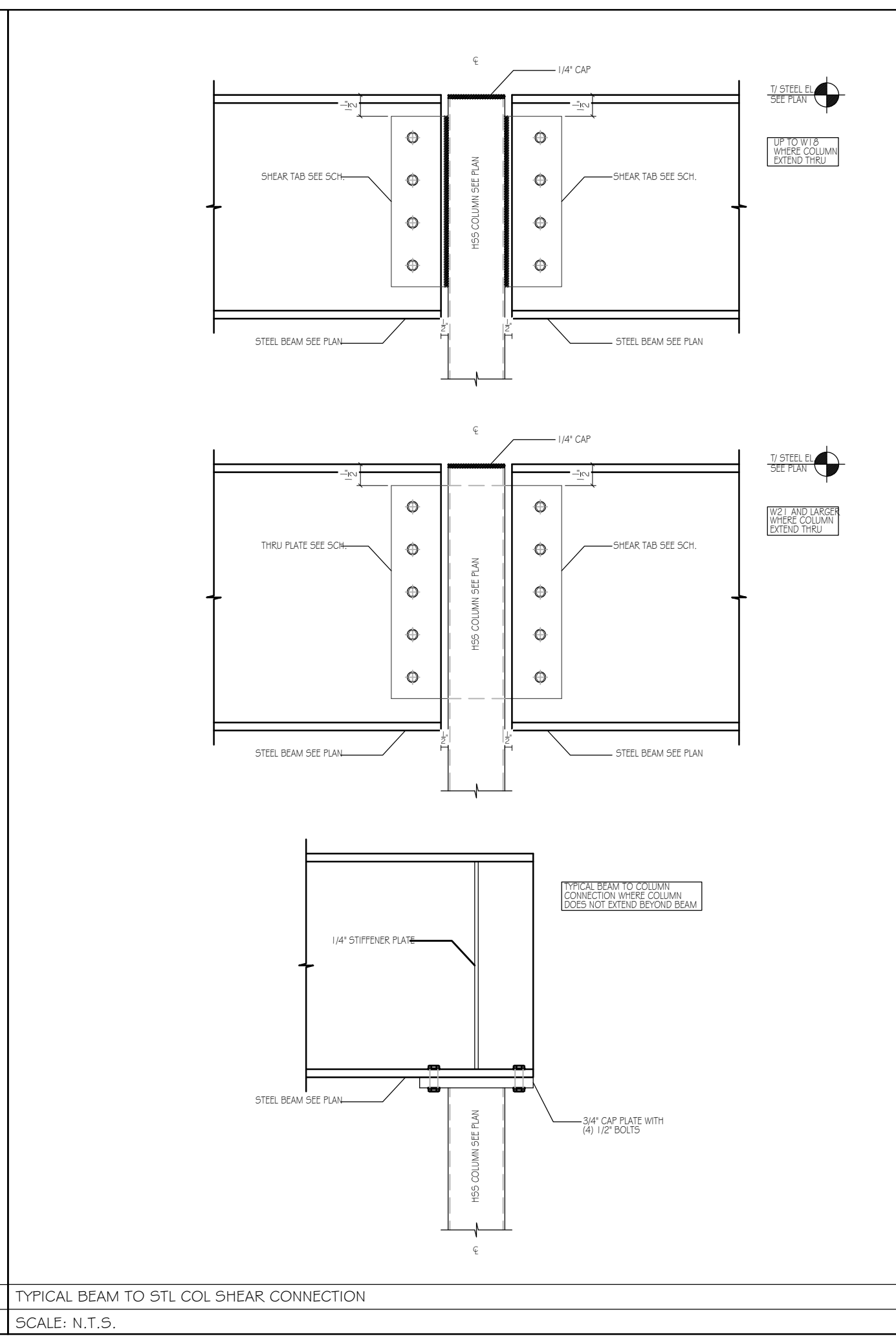
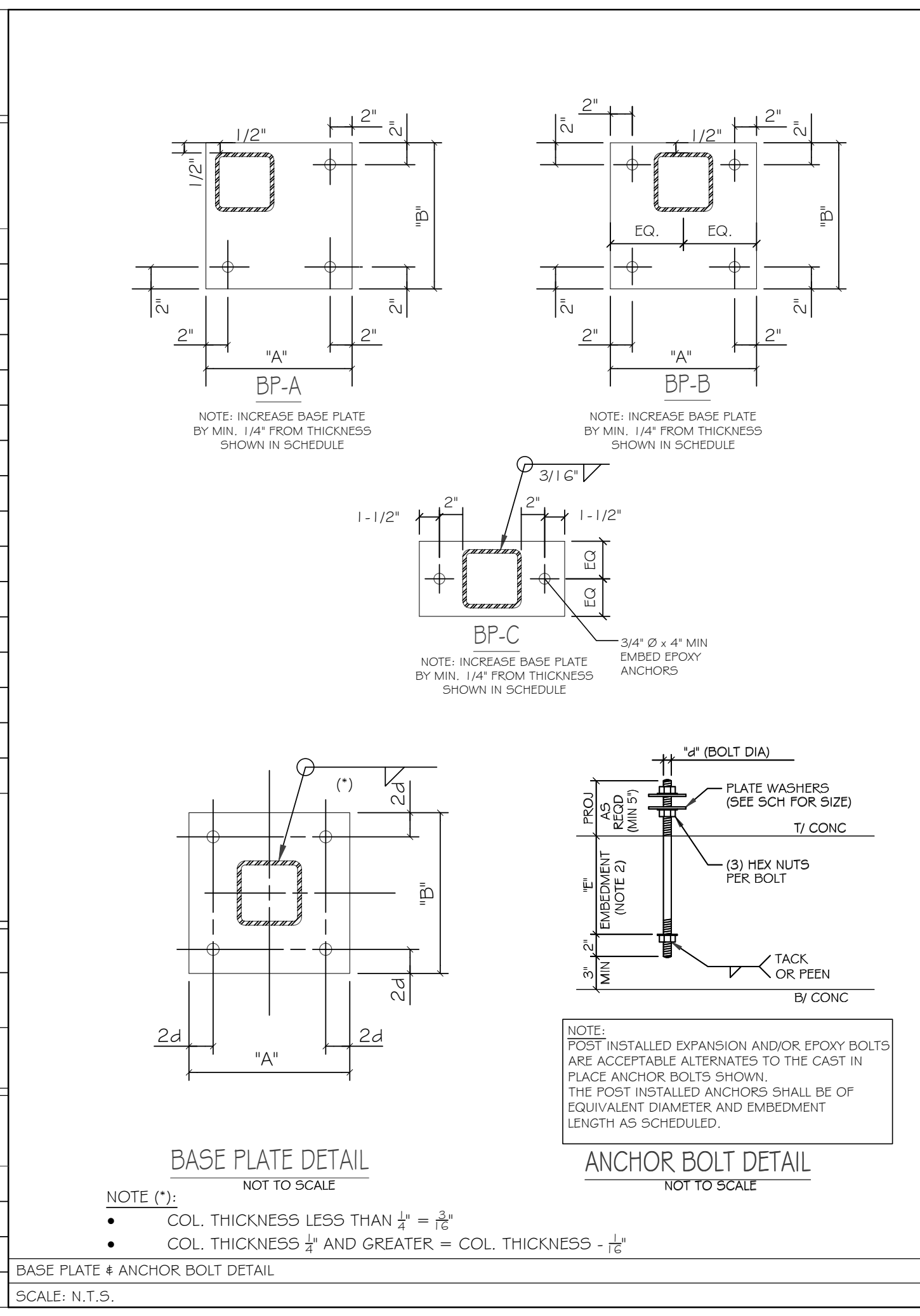
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SHEET

COLUMN & BASE PLATE SCHEDULE

COLUMN MARK	COLUMN SIZE	BASE PLATE (")			ANCHOR BOLT (")		CAP PLATE	REMARKS
		A	B	T	E (INT. 243)	d		
C44-4	H554x4x1/4	10	10	1/2	7	3/4		
C44-6	H554x4x3/8	10	10	3/4	7	3/4		
C44-8	H554x4x1/2	10	10	1	7	3/4		
C66-4	H556x6x1/4	12	12	1/2	7	3/4		
C66-6	H556x6x3/8	12	12	3/4	7	3/4		
C66-8	H556x6x1/2	12	12	1	7	3/4		
C66-10	H556x6x5/8	12	12	1-1/4	7	3/4		
C84-6	H558x4x3/8	16	12	1	7	3/4		
C88-4	H558x8x1/4	14	14	1/2	7	3/4		
C88-6	H558x8x3/8	14	14	3/4	7	3/4		
C88-8	H558x8x1/2	14	14	1	7	3/4		
C88-10	H558x8x5/8	14	14	1-1/4	7	3/4		
C1010-4	H5510x10x1/4	16	16	1/2	7	3/4		
C1010-6	H5510x10x3/8	16	16	3/4	7	3/4		
C1010-8	H5510x10x1/2	16	16	1	7	3/4		
C1010-10	H5510x10x5/8	16	16	1-1/4	7	3/4		

NOTES:	BOLT MATERIAL TYPE	MINIMUM EMBEDDED LENGTH	MAXIMUM EMBEDDED LENGTH	MINIMUM EMBEDDED EDGE DISTANCE
1. ANCHOR BOLTS SHALL BE ASTM A36 (UNO) THREADED EACH END WITH NUT AT BOTTOM, TACK WELDED SECURE. PLATE WASHER AT BOTTOM NUT SHALL NOT BE REQUIRED. CONFORM TO CHART AT RIGHT FOR EMBEDMENT, UNLESS NOTED OTHERWISE IN SCHEDULE ABOVE.	A307, A36	12d	E = FTG THICKNESS - 5"	5d > 4 in.
2. "J-BOLTS" ARE NOT ACCEPTABLE ALTERNATES.	A325, A449	17d	- 5"	7d > 4 in.
3. PLATE WASHERS SHALL HAVE HOLE WITH DIAMETER EQUAL TO BOLT DIAMETER + 1/16".				

OVERSIZED HOLES AND PLATE WASHERS FOR BASE PLATES					
BOLT DIAMETER	HOLE DIAMETER	PLATE WASHERS	BOLT DIAMETER	HOLE DIAMETER	PLATE WASHERS
3/4"	1 5/16"	5/16"x3"x3"	1 1/2"	2 5/16"	7/16"x5"x5"
7/8"	1 9/16"	5/16"x3"x3"	1 3/4"	2 3/4"	7/16"x5"x5"
1"	1 13/16"	3/8"x4"x4"	2"	3 1/4"	1/2"x6"x6"
1 1/4"	2 1/16"	3/8"x4"x4"	2 1/2"	3 3/4"	1/2"x6"x6"

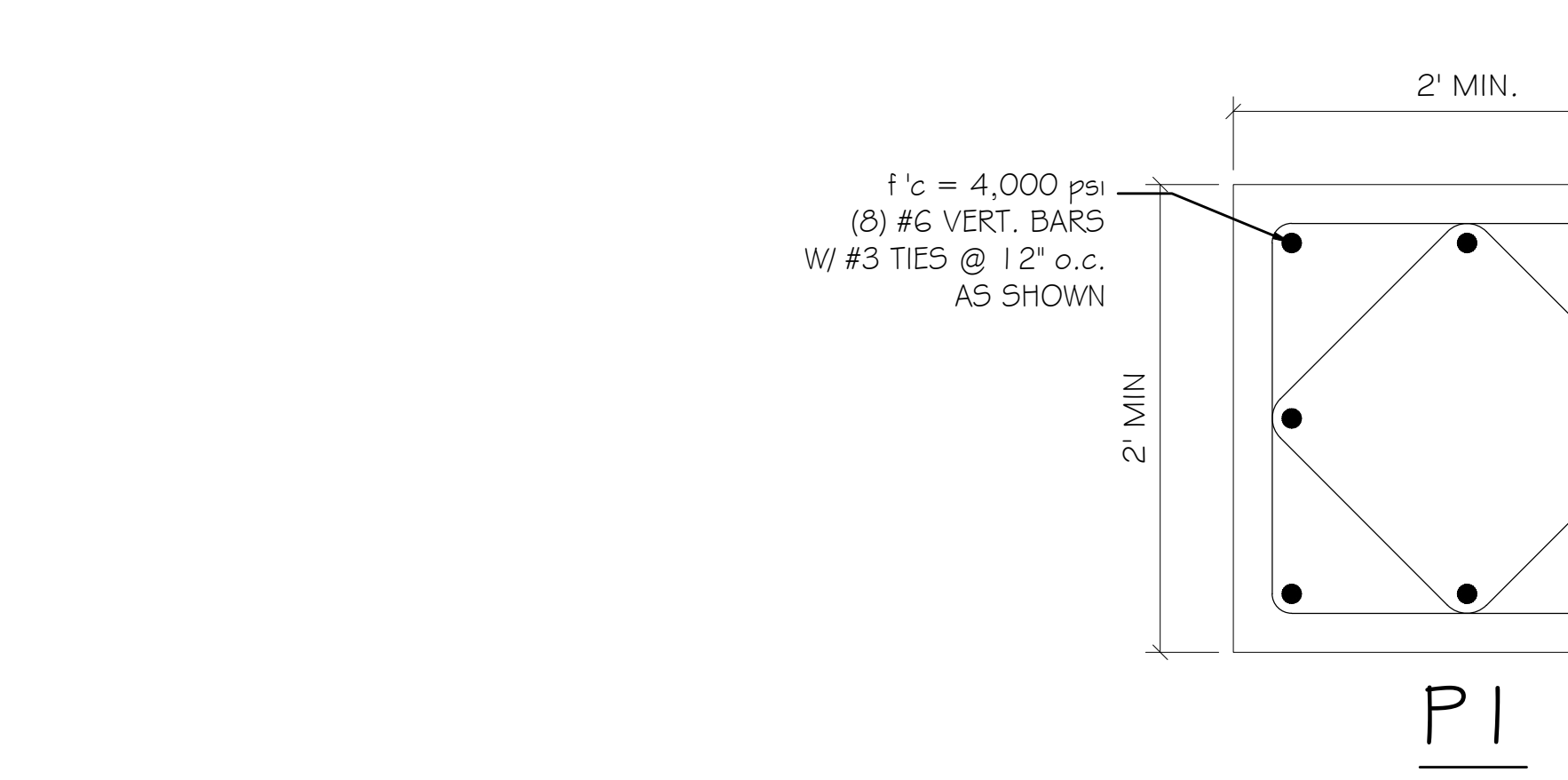
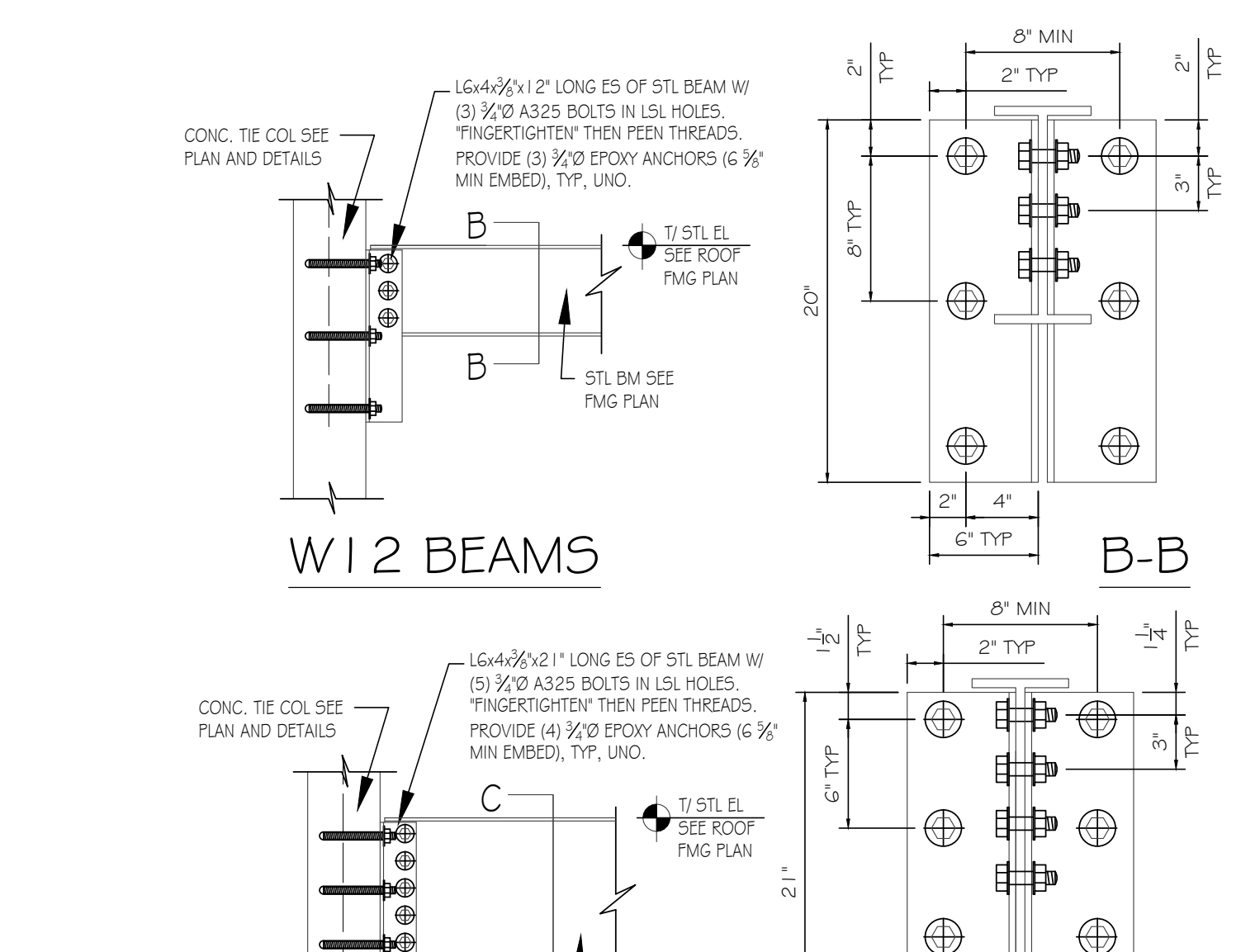
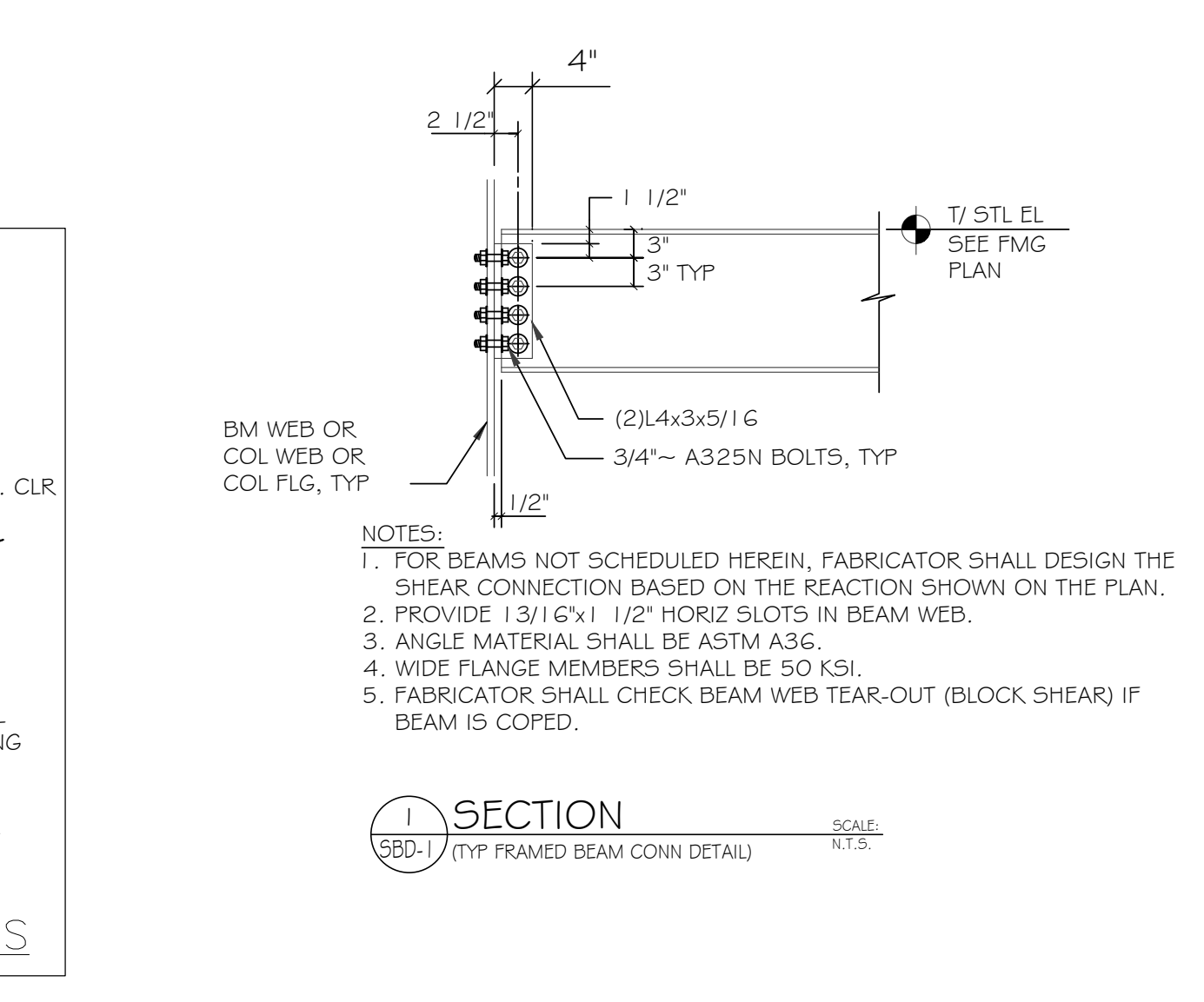
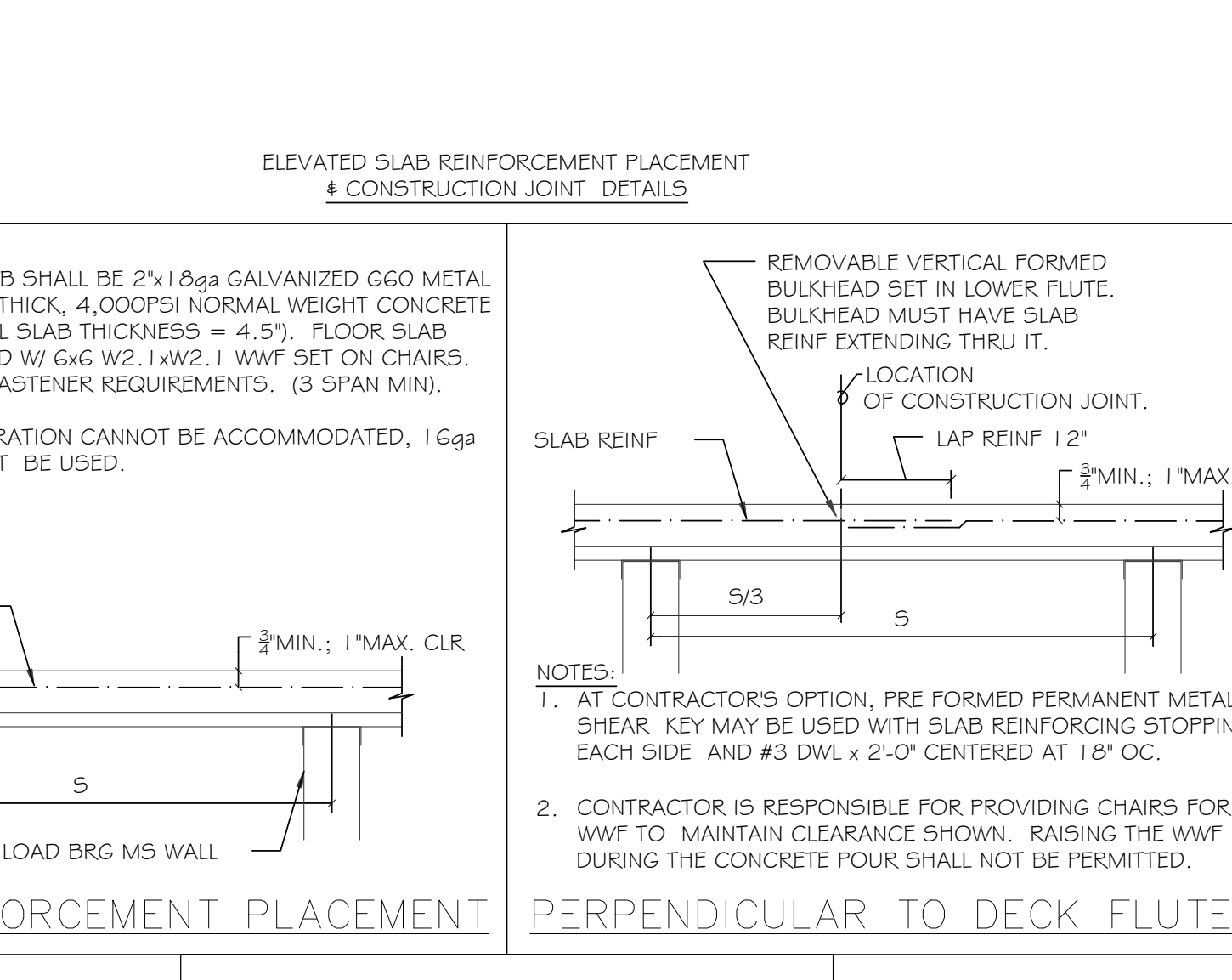
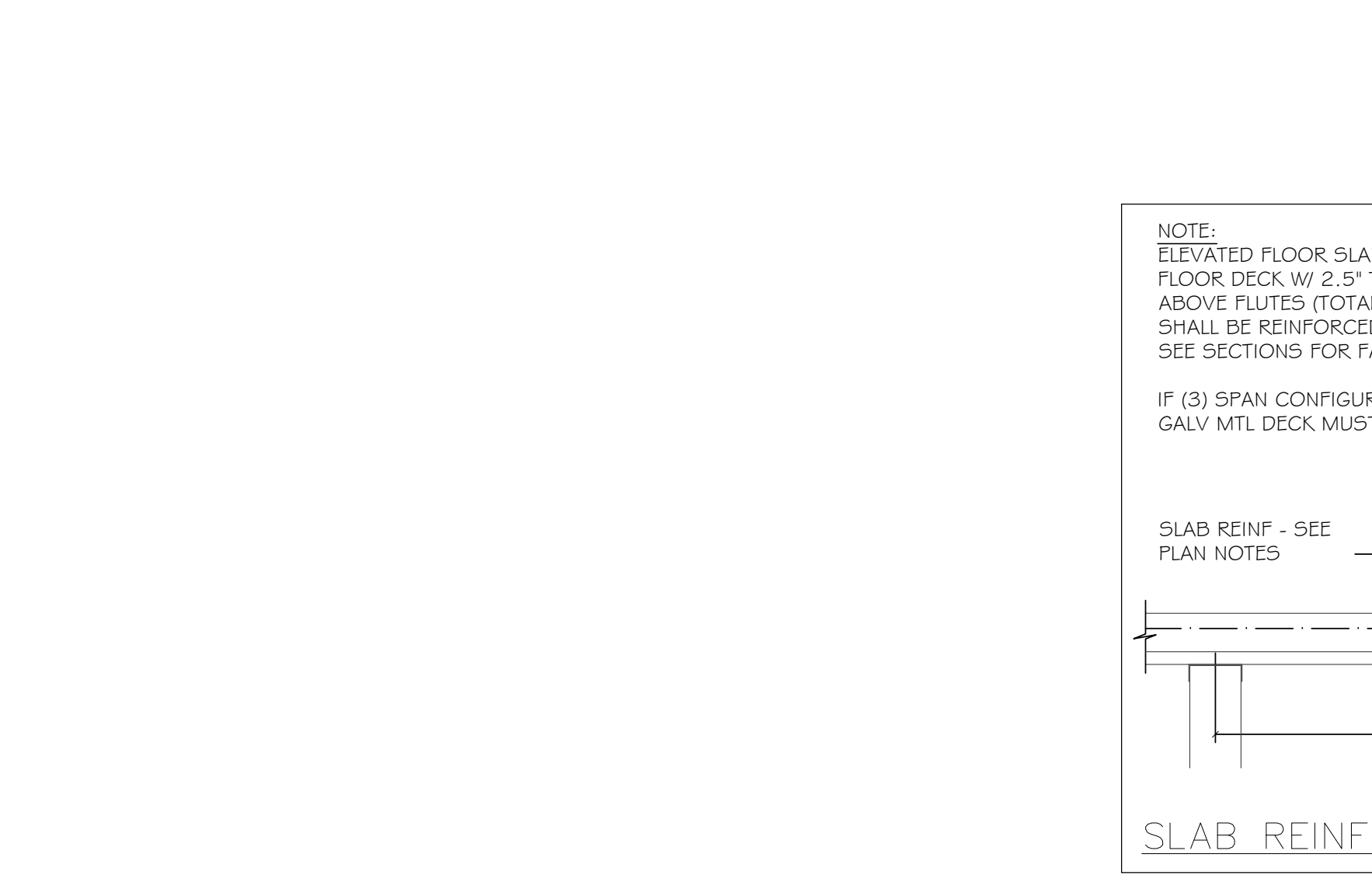


SINGLE PLATE SHEAR CONNECTION SCHEDULE (SHOP WELDED, FIELD BOLTED)

BEAM SIZE (SEE PLAN)	NO. OF A325-N BOLTS	SHEAR TAB THRU-PLATE THICKNESS (6x LSL, IN.)	FLUET WELD SIZE (E70XX, IN.)	MAXIMUM ALLOWABLE END REACTION, KIPS	SHEAR TAB THRU-PLATE LENGTH (L), IN.
W8, W10	(2) 3/4" BOLTS	5/16"	1/4"	8.2	6
W12, W14	(3) 3/4" BOLTS	5/16"	1/4"	16.3	9
W12, W14	(3) 1" BOLTS	5/16"	1/4"	28.9	9
W16, W18	(4) 3/4" BOLTS	5/16"	1/4"	26.1	12
W16, W18	(4) 1" BOLTS	3/8"	5/16"	46.4	12
W21	(5) 3/4" BOLTS	3/8"	5/16"	36.3	15
W21	(5) 1" BOLTS	7/16"	3/8"	64.4	15
W24	(6) 3/4" BOLTS	3/8"	5/16"	46.3	18
W24	(6) 1" BOLTS	7/16"	3/8"	82.2	18
W27	(7) 3/4" BOLTS	3/8"	5/16"	56.4	21
W27	(6) 1" BOLTS	7/16"	3/8"	100	21

TYPICAL ELEVATOR SPREADER BEAM
SCALE: N.T.S.

TYPICAL ELEVATOR HOIST BEAM
SCALE: N.T.S.



SHEAR CONNECTION SCHEDULE

BEAM SIZE (SEE PLAN)	NO. ROWS OF BOLTS	ANGLE LENGTH	MAXIMUM ALLOWABLE END REACTION (KIPS)
W8, W10	2	12	37.1
W12, W14	3	20	55.7
W16, W18	4	21	74.2
W21	5	15	92.8
W24	6	18	111.0
W27	7	21	130.0

