

STRUCTURAL NOTES

1010 GENERAL NOTES:
STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

DRAWINGS SHALL NOT BE SCALED. REFER TO DIMENSIONAL INFORMATION PROVIDED OR CONTACT THE ENGINEER OR ARCHITECT FOR CLARIFICATION.

ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK. BY USE OF THESE PLANS, THE CONTRACTOR AGREES TO ASSUME FULL LIABILITY AND ANY COST ASSOCIATED WITH NON COMPLIANCE WITH THIS PARAGRAPH.

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS AND TIEDOWNS.

WORK SHALL CONFORM TO ALL APPLICABLE STATE, COUNTY AND CITY ORDINANCES/CODES.

THE DESIGN PROFESSIONAL WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE DESIGN PROFESSIONAL'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

NO STRUCTURAL MEMBER OR COMPONENT SHALL BE CUT, NOTCHED, OR OTHERWISE ALTERED WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS INCURRED FROM FAILURE TO OBTAIN SCD APPROVAL, INCLUDING ENGINEERING SERVICE FEES.

IN THE EVENT OF A DISCREPANCY BETWEEN THE STRUCTURAL CONTRACT DRAWINGS AND THE SPECIFICATIONS, THE STRUCTURAL CONTRACT DRAWINGS SHALL SUPERCEDE THE SPECIFICATIONS.

1061 DESIGN LOADS:
THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 7TH EDITION, USING THE FOLLOWING SUPERIMPOSED LOADS:

ROOF:
LIVE LOAD.....20PSF
DEAD LOAD.....100 PSF (8" CIP SLAB)
SUPERIMPOSED DEAD LOAD.....15PSF

WIND: ASCE 7-16 // FLORIDA BUILDING CODE 7TH EDITION, SECTION 1609
Vult = 160 MPH (3 SECOND GUST)
Vend = 124 MPH
ENCLOSED BUILDING, RISK CATEGORY 11, EXPOSURE C, h = 22'
COEFFICIENT OF INTERNAL PRESSURE, Cpi = ±0.18

1071 CONSTRUCTION OBSERVATIONS:
THE CONTRACTOR SHALL CONTACT LIEBL & BARROW ENGINEERING TO OBSERVE THE FOLLOWING (WITH 48 HOURS NOTICE):

- FOUNDATIONS.
- LOW ROOF SLABS / OVERHANGS
- ROOF SLAB.

CONSTRUCTION OBSERVATION IS A VISUAL OBSERVATION OF MATERIALS AND WORK IN PROGRESS TO DETERMINE IF THE WORK IS PROCEEDING IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND DESIGN CONCEPT. THIS DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES.

LIEBL & BARROW ENGINEERING DOES NOT HAVE CONTROL OVER, AND IS NOT RESPONSIBLE FOR, SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK FOR THIS PROJECT. THOSE FUNCTIONS ARE THE CONTRACTORS RESPONSIBILITY.

1120 SHOP DRAWING REVIEW:
SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.

ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED.

SHOP DRAWING SUBMITTALS SHALL INCLUDE ONE ORIGINAL AND THREE SETS OF BLUEPRINTS, OR BE ON A PDF. THE CONTRACTOR SHALL MAKE PRINTS FROM THE ORIGINALS AS REQUIRED FOR DISTRIBUTION.

ALL SHOP DRAWING SUBMITTALS FOR REVIEW SHALL BE SUBMITTED THROUGH THE ARCHITECT FOR DISTRIBUTION AND ALL REVIEWED SHOP DRAWINGS SHALL BE RESUBMITTED THROUGH THE ARCHITECT FOR DISTRIBUTION.

IN ALL INSTANCES THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.

IF SHOP DRAWINGS ARE SUBMITTED ELECTRONICALLY, THE CLIENT WILL BE INVOICED FOR ALL PRINTING COSTS ASSOCIATED WITH REVIEW.

1121 SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS:
THE FOLLOWING SYSTEMS AND COMPONENTS REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER:
1. PRECAST PLANK.

SUBMITTALS SHALL IDENTIFY THE PROJECT, APPLICABLE CODES AND LIST THE DESIGN CRITERIA. SUBMITTALS SHALL ALSO SHOW ALL DETAILS AND PLANS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCT UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.

SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER.

SHOP DRAWINGS AND CALCULATIONS REQUIRE THE IMPRESSED SEAL, DATE AND SIGNATURE OF THE DELEGATED ENGINEER. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AS AN INDICATION THE HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. ORIGINALS DO NOT REQUIRE SIGNATURE AND SEAL. THE STRUCTURAL ENGINEER WILL RETAIN ONE SIGNED AND SEALED BLUELINE PRINT FOR RECORD.

DRAWINGS PREPARED SOLELY TO SERVE AS A GUIDE FOR FABRICATION AND INSTALLATION (SUCH AS REINFORCING STEEL SHOP DRAWINGS OR STRUCTURAL STEEL ERECTION DRAWINGS) AND REQUIRING NO ENGINEERING DO NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.

CATALOG INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.

REVIEW BY THE STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:

- THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
- THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
- THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. (NO DETAILED CHECK OF CALCULATIONS WILL BE MADE)
- THAT THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. (NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE).

SUBMITTALS NOT MEETING THE ABOVE CRITERIA WILL NOT BE REVIEWED.

IF SHOP DRAWINGS ARE SUBMITTED ELECTRONICALLY, THE CLIENT WILL BE INVOICED FOR ALL PRINTING COSTS ASSOCIATED WITH REVIEW.

2011 FOUNDATIONS:
SEE THE FOLLOWING REPORT FOR COMPLETE GEOTECHNICAL RECOMMENDATIONS AND INSTALLATION PROCEDURES. SITE PREPARATION AND FOUNDATION INSTALLATION SHALL COMPLY WITH REPORT DATED 04/20/20
PREPARED BY: DYNATECH ENGINEERING CORP
TITLED: CASA AMIGOS

FOUNDATION DESIGN IS BASED ON A SOIL BEARING PRESSURE OF 2,500 PSF.

3102 FORMWORK AND SHORING:
DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET THE REQUIREMENTS SET FORTH IN ACI STANDARDS 347 AND 301.
SLAB TO REMAIN SHORED IN FORMS UNDISTURBED FOR 21 DAYS MINIMUM.

3302 CONCRETE:
CONCRETE SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS (ACI 318) AND HOT WEATHER CONCRETING REQUIREMENTS (ACI 305).

MATERIALS:
CEMENT: ASTM C150 TYPE I
AGGREGATE: ASTM C33
WELDED WIRE FABRIC: ASTM A615 GRADE 60
WELDED WIRE FABRIC: ASTM A1064 IN FLAT MANUFACTURED SHEETS
STRUCTURAL STEEL PLATES: ASTM A36
ANCHOR BOLTS: ASTM A36, A307, OR F1554 (GRADE 36 MIN)

SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

3000 PSI FOR FOUNDATIONS AND SLABS ON GRADE.
4000 PSI FOR ALL OTHER STRUCTURAL CONCRETE.

CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.

SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. ANY CONCRETE WITH A TEMPERATURE ABOVE 90°F SHALL BE DISCARDED. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1½) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF CURING COMPOUND WITH FLOOR FINISHES.

ALL CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE. IF ACCEPTED, PEA ROCK PUMP MIX USE IS LIMITED TO VERTICAL ELEMENT POURS AND BEAM POURS LESS THAN 60 LINEAL FEET PER POUR.

WATER/CEMENT RATIO FOR CONCRETE AT EXTERIOR ROOF SLABS SHALL NOT EXCEED 0.40 BY WEIGHT.

WATER/CEMENT RATIO FOR ALL OTHER CONCRETE SHALL NOT EXCEED 0.55. NO WATER SHALL BE ADDED ON SITE.

ALL CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318.

SLUMP SHALL BE 4"+/- 1" PRIOR TO ADDITION OF WATER-REDUCING ADMIXTURE(S) UNLESS SPECIFIED OTHERWISE.

USE OF FLYASH, IF APPROVED IN ARCHITECTURAL SPECIFICATIONS, SHALL NOT EXCEED 20% OF THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS.

REQUIRED CONCRETE COVER FOR REINFORCING STEEL (UNLESS NOTED OTHERWISE):
FOOTINGS: 3" BOTTOM AND TOP, 2" TOP
BEAMS AND COLUMNS: 1½" TO TIES

ALL REINFORCING BARS SHALL BE LAPPED PER A.C.I. 318 INCLUDING TOP BAR FACTOR, BUT SHALL NOT BE LESS THAN 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.

WELDED WIRE FABRIC SHALL BE LAPPED ONE SPACE PLUS 2 INCHES.
VAPOR BARRIER SHALL BE LAPPED 6 INCHES AND TAPED.

DOWEL ALL WALLS AND COLUMNS TO FOOTINGS WITH BAR SIZE AND SPACING TO MATCH VERTICAL REINFORCING UNLESS NOTED OTHERWISE.

LONGITUDINAL BARS IN FOOTINGS, WALLS, BEAMS, AND SLABS ARE CONTINUOUS UNLESS NOTED OTHERWISE.

MAINTAIN COVER DURING CONCRETE PLACEMENT AND CONSOLIDATE BY INTERNAL VIBRATION.

3304 CONCRETE TESTING:
AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:

- ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." MAXIMUM SLUMP SHALL BE 4 INCHES.
- ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." SAMPLES FOR STRENGTH TESTS FOR EACH CLASS OF CONCRETE PLACED EACH DAY SHALL NOT BE TAKEN LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE NOR LESS THAN ONCE FOR EACH 5,000 SQUARE FEET OF SURFACE AREA FOR SLABS AND WALLS. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:

- AT 3 DAYS
- AT 7 DAYS
- AT 28 DAYS

ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

3307 PENETRATIONS:
NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THE STRUCTURAL DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER. CONTRACTOR SHOULD SUBMIT SLAB DRAWINGS INDICATING ANY CONCENTRATION OF PIPES, OPENINGS OR PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS PRIOR TO CONCRETE POURS.

3601 CHEMICAL (ADHESIVE) ANCHORS:
SHALL BE AN EQUAL TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS RED-HEAD OR A SIMPSON SET-36 EPOXY, OR HILTI HIT-HY-200 EPOXY DOWELING SYSTEM UNLESS NOTED OTHERWISE ON THE PLANS. ALL SUBSTITUTIONS SHALL HAVE PRODUCT APPROVAL BY THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION AND SHALL BE APPROVED BY THE ENGINEER OF RECORD.

ALL ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE.

NO LOAD SHALL BE APPLIED TO EPOXY ANCHORS UNTIL THE EPOXY HAS FULLY CURED TO FULL STRENGTH. CURE TIME SHALL BE PER MANUFACTURER'S SPECIFICATIONS.

ALL EPOXY ANCHORS SUBJECT TO A PERMANENT LOAD OR IS USED FOR A VERTICAL HANGER SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SPECIAL INSPECTION OF THE INSTALLATION SHALL BE PROVIDED.

MINIMUM EMBEDMENT SHALL BE TWELVE (12) TIMES FASTENER DIAMETER INTO CURED CONCRETE OR SOLIDLY GROUTED MASONRY UNLESS NOTED OTHERWISE.

4201 MASONRY WALLS:
ALL REINFORCED CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO ACI TMS 602/ACI 530.1/ASCE 6 "SPECIFICATIONS FOR MASONRY STRUCTURES" LATEST EDITION.

MASONRY UNITS SHALL MEET ASTM C-90 FOR HOLLOW LOAD BEARING TYPE MASONRY WITH UNIT STRENGTH OF 2000 PSI ON THE NET AREA (F'm = 2000 PSI). MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C-270, FRESHLY PREPARED. GROUT SHALL BE 2000 PSI MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C-476. PROVIDE HOOKED DOWELS IN FOOTINGS FOR ALL VERTICAL REINFORCING ABOVE. LAP SPLICES 48 BAR DIAMETERS.

BLOCK CELLS SHALL BE GROUT FILLED WITH REINFORCING BARS VERTICAL AT CORNERS, INTERSECTIONS, EACH SIDE OF OPENINGS OVER 4 FEET WIDE, AND AS SHOWN ON THE PLANS. DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW, UNLESS NOTED OTHERWISE. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA REQUIRED.

PROVIDE 9 GAGE GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCING (DUR-O-WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES. AT EXTERIOR WALLS, REINFORCING SHALL BE HOT DIPPED GALVANIZED (1.5 OZ. PSF)

SUBMIT PROPOSED GROUT MIX DESIGN FOR REVIEW PRIOR TO USE. GROUT SLUMP SHALL BE BETWEEN 8 AND 11 INCHES (WATER INDUCED). DO NOT USE SUPERPLASTICIZER IN GROUT. THE USE OF CONCRETE FOR FILLED CELLS IS PROHIBITED.

CELLS TO BE GROUT FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED, CONTINUOUS VERTICAL GROUT SPACE. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF CELLS TO BE GROUT FILLED IN EACH FOUR IN EXCESS OF 16 INCHES IN HEIGHT. ANY OVERHANGING MORTAR OR OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED FROM THE INSIDES OF SUCH CELL WALLS. THE CLEANOUTS SHALL BE SEALED BEFORE GROUTING, AFTER INSPECTION.

VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS. CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH GROUT. GROUT SHALL BE POURED IN LIFTS OF 4 FEET MAXIMUM HEIGHT. GROUT SHALL BE CONSOLIDATED AT TIME OF PLACING BY VIBRATING AND RECONSOLIDATED LATER BY VIBRATING BEFORE PLASTICITY IS LOST.

WHEN TOTAL GROUT POUR EXCEEDS 5 FEET IN HEIGHT, THE GROUT SHALL BE PLACED IN 4 FOOT LIFTS. MINIMUM CELL DIMENSION SHALL BE IN ACCORDANCE WITH ACI 530.1 (3"x3" FOR COARSE GROUT, 12 FT. MAXIMUM POUR HEIGHT).

WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE MADE BY STOPPING THE POUR OF GROUT NOT LESS THAN 1½ INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED.

ALL WALLS SHALL BE CONSTRUCTED WITH RUNNING BOND UNLESS NOTED OTHERWISE.

CONTRACTOR PROVIDE THE FOLLOWING DOCUMENTATION AND PERFORM THE FOLLOWING TESTS:

- UNITS ARE SAMPLED AND TESTED TO VERIFY COMPLIANCE WITH ASTM C55 OR ASTM C90 BASED UPON STRENGTH OF THE UNIT AND TYPE OF MORTAR SPECIFIED.
- MIX DESIGNS AND GROUT STRENGTH AND SLUMP TESTS DETERMINED IN ACCORDANCE WITH ASTM C1019.
- SAMPLES FOR GROUT COMPRESSIVE STRENGTH TESTS PER ASTM C1019 SHALL BE TAKEN NOT LESS THAN ONCE A DAY NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF GROUT. REQUIRED SAMPLE QUANTITIES AND TEST AGES:
1 AT 3 DAYS
1 AT 7 DAYS
2 AT 28 DAYS

4205 TIE BEAMS:
BEAMS WITH THE PREFIX "TB" SHALL BE OF CONCRETE POURED AFTER THE BLOCK WALLS BELOW ARE IN PLACE. REINFORCING SHALL BE CONTINUOUS THROUGH THE BEAMS WITH MINIMUM LAP SPLICES OF 48 BAR DIAMETERS AND BENT BARS AT CORNERS. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE TO AREA REQUIRED, IN ACCORDANCE WITH ACI 530.1, "CONFINEMENT" (SOLID METAL OR FELT CAVITY CAPS ARE PROHIBITED).

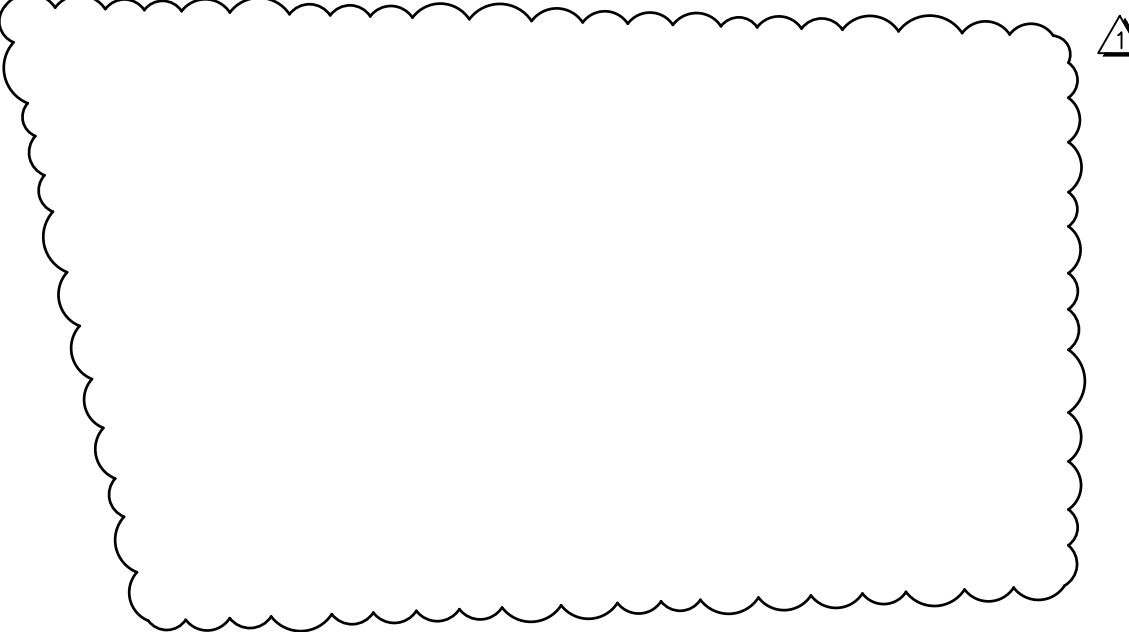
4207 LINTELS:
MASONRY OPENINGS SHALL BE SPANNED WITH A BLOCK AND 8" PRECAST CONCRETE LINTEL SYSTEM. MASONRY OPENINGS LESS THAN 12 FEET SHALL BE SPANNED WITH 8"x16" LINTEL WITH (1) #5 REINFORCING BARS TOP AND BOTTOM (8F16-1T/1B). MASONRY OPENINGS LESS THAN 8 FEET SHALL BE SPANNED WITH 8"x12" LINTELS WITH (1) #5 REINFORCING BARS TOP AND BOTTOM (8F12-1T/1B). MASONRY OPENINGS LESS THAN 4'-8" SHALL BE SPANNED WITH 8"x8" PRECAST CONCRETE LINTELS WITH (1) #5 REINFORCING BARS BOTTOM (8F8-0T/1B). ALL PRECAST LINTELS SHALL BEAR A MINIMUM OF 8" AT EACH END AND BE GROUT FILLED. ALL LINTELS WHICH ABUT A CONCRETE COLUMN SHALL BE CAST IN PLACE.

5110 SHEAR STUD CONNECTORS AND EMBEDDED ITEMS:
SHEAR STUD CONNECTORS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE". SECTION 7 - STUD WELDING. STUDS SHALL BE TYPE "B" HEADED STUDS HAVING A MINIMUM TENSILE STRENGTH OF 60,000 PSI, AND SHALL BE OF LENGTH AND DIAMETER SHOWN ON STRUCTURAL DRAWINGS. WELDS ATTACHING STUDS TO BASE MEMBER SHALL BE ABLE TO DEVELOP THE FULL CAPACITY OF EACH INDIVIDUAL STUD.

ALL EMBEDDED ITEMS SHALL BE ACCURATELY LOCATED AND SECURED TO PREVENT DISPLACEMENT PRIOR TO CONCRETE PLACEMENT. EMBEDDED ITEM SHALL NOT BE "WET-STOCKED" INTO FRESH CONCRETE.

ALL HEADED STUDS SHALL BE LOCATED BETWEEN THE LONGITUDINAL BARS IN A CONCRETE BEAM OR WITH THE VERTICAL BARS OF A CONCRETE COLUMN UNLESS NOTED OTHERWISE.

ALL EMBEDDED ITEMS SHALL NOT BE LOADED IN LESS THAN 7 DAYS AFTER CASTING IN PLACE AND UNTIL THE CONCRETE HAS REACHED 100% OF ITS 28 DAY COMPRESSIVE STRENGTH SMALLER SPACE UNLESS NOTED OTHERWISE.



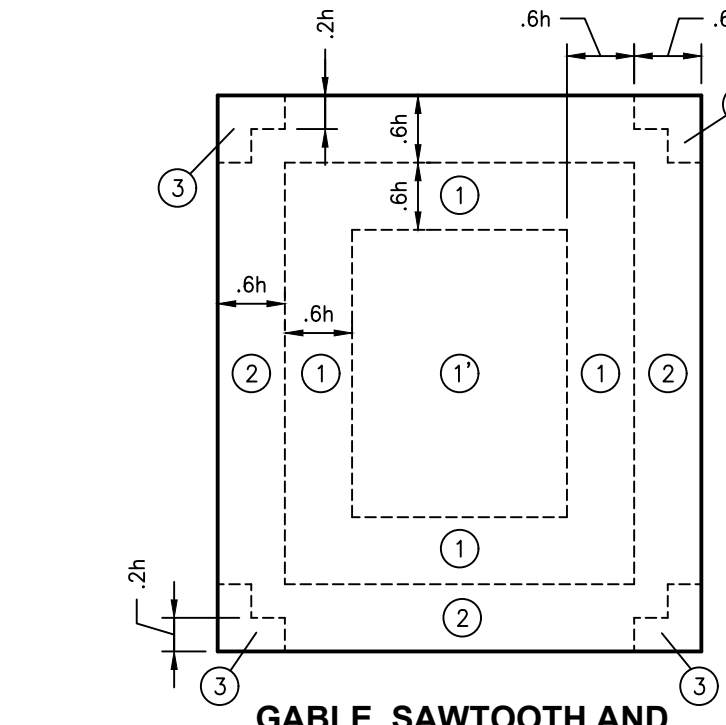
F= FILLED WITH GROUT / U= UNFILLED
QUANTITY OF #5 FIELD ADDED REBAR AT BOTTOM OF LINTEL CAVITY
QUANTITY OF #5 FIELD ADDED REBAR AT TOP
NOMINAL WIDTH
NOMINAL HEIGHT

#5 FIELD ADDED REBAR AT TOP MIN (1) REQ'D
FIELD PLACED CMU
GROUT
#5 FIELD ADDED REBAR AT BOTTOM OF LINTEL CAVITY
BOTTOM REINFORCING PROVIDED IN LINTEL (SEE REINFORCING SCHEDULE)
15% ACTUAL
16" NOMINAL
7 1/2" ACTUAL
8" NOMINAL

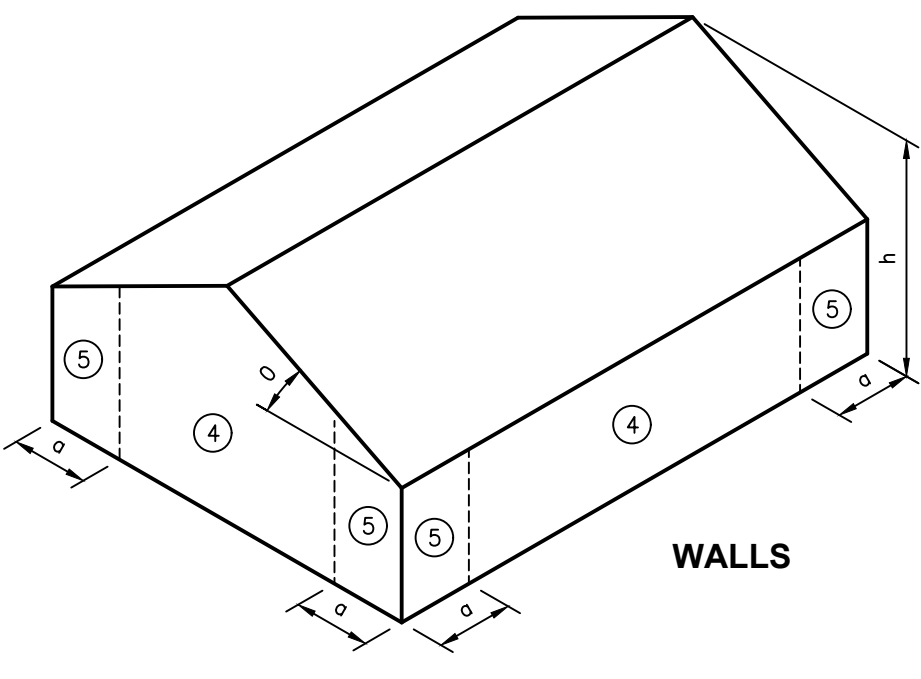
PRECAST LINTEL BEAM

LEGEND

← = SPAN DIRECTION
UNO = UNLESS NOTED OTHERWISE
TYP = TYPICAL
OC = ON CENTER
○ = COLUMN ABOVE
○ = COLUMN THROUGH
○ = COLUMN BELOW
BAR SIZE
REINFORCING SYMBOLS #5@12B
BAR SPACING (INCHES)
T=TOP
B=BOTTOM



GABLE, SAWTOOTH AND MULTISPAN GABLE θ ≤ 7° & MONOSLOPE ≤ 3°
EFFECTIVE WIND AREA = 10 SF



h=22'
2h=4'
6h=12'
① +16.0, -33.2 PSF
② +16.0, -57.9 PSF
③ +33.2, -76.4 PSF
④ +33.2, -76.4 PSF
⑤ +33.2, -36.5 PSF
⑥ +33.2, -44.0 PSF
OVERHANG: ② -70.8 PSF
OVERHANG: ③ -70.8 PSF
PRESSURES PER FLORIDA BUILDING CODE, 7TH EDITION (ASCE 7-16, CHAPTER 26-30) FOR Vult=160 MPH, h = 22', EXPOSURE C, ENCLOSED (OPENINGS PROTECTED), RISK CATEGORY II

WIND LOADING: COMPONENTS & CLADDING

(NEGATIVE INDICATES PRESSURE ACTING AWAY FROM THE BUILDING SURFACE)

PRESSURES ARE FOR ALLOWABLE STRESS DESIGN (ASD)

TENSION LAP SPLICE (CLASS B)
f'c = 4000 PSI fy = 60000 PSI

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP BAR	24"	32"	40"	48"	70"	80"	90"	102"	113"
OTHER BAR	19"	25"	31"	37"	54"	62"	70"	79"	87"

NOTES:

- LAP SPLICES ARE IN ACCORDANCE WITH ACI 318.
- CLEAR SPACING OF BARS IS 2db AND CLEAR COVER IS NOT LESS THAN db OR CLEARANCES AND TIES PER ACI 318, SECTION 12.2.2.
- TOP BAR SPLICE IS REQUIRED WHERE MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW HORIZONTAL REINFORCEMENT.

DRAWING INDEX

S1.0.....STRUCTURAL NOTES
S2.0.....TYPICAL DETAILS
S3.0.....FOUNDATION PLAN
S3.1.....ROOF LEVEL FRAMING PLAN
S4.0.....SECTIONS & DETAILS
S4.1.....SECTIONS & DETAILS

DIGITAL SEAL IS APPLICABLE TO ALL SHEETS IN THE DRAWING INDEX

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MODIFICATIONS TO THESE DRAWINGS INVALIDATES THE ELECTRONIC SEAL.

PROJECT NO 21-030

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DESIGNED BY: JR	CHECKED BY: GS	DRAWN BY: MK
1	12/2/21	REV 1
O	9/3/21	PERMIT SET
G	8/2/21	BID SET
F	7/2/21	PROGRESS SET
E	6/18/21	PROGRESS SET
D	7/7/20	ARCH. COMMENTS
C	6/15/20	CONSTRUCTION DOCUMENTS
REV #	DATE	DESCRIPTION

LIEBL & BARROW ENGINEERING WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM THE FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE DESIGN PROFESSIONAL'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED. LIEBL & BARROW ENGINEERING DOES NOT HAVE CONTROL OVER, AND IS NOT RESPONSIBLE FOR, SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK FOR THIS PROJECT. THOSE FUNCTIONS ARE THE CONTRACTORS RESPONSIBILITY.

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COMMUNITY CENTER / OFFICE
IMMOKALEE, FLORIDA

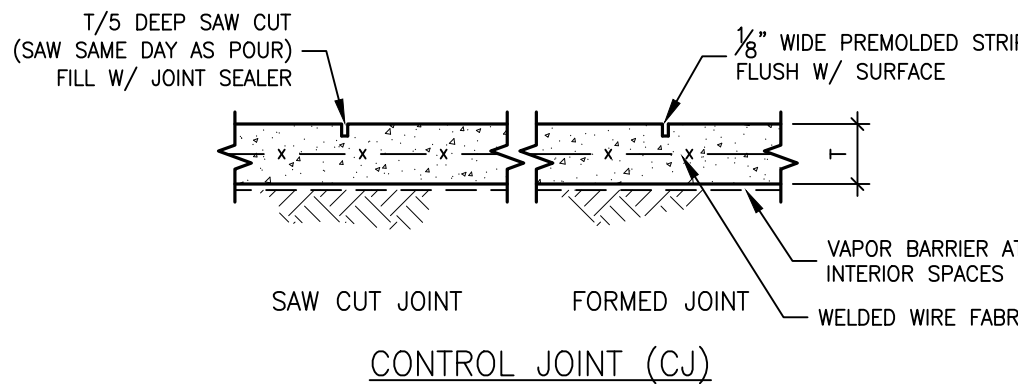
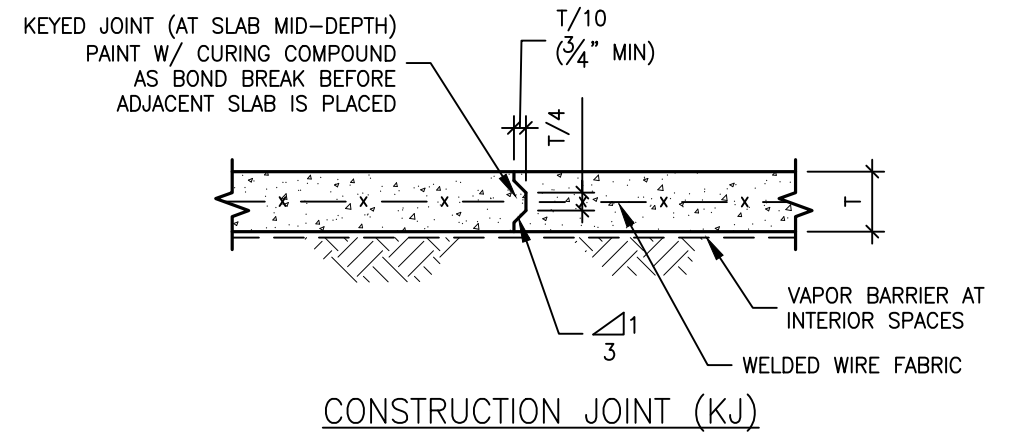
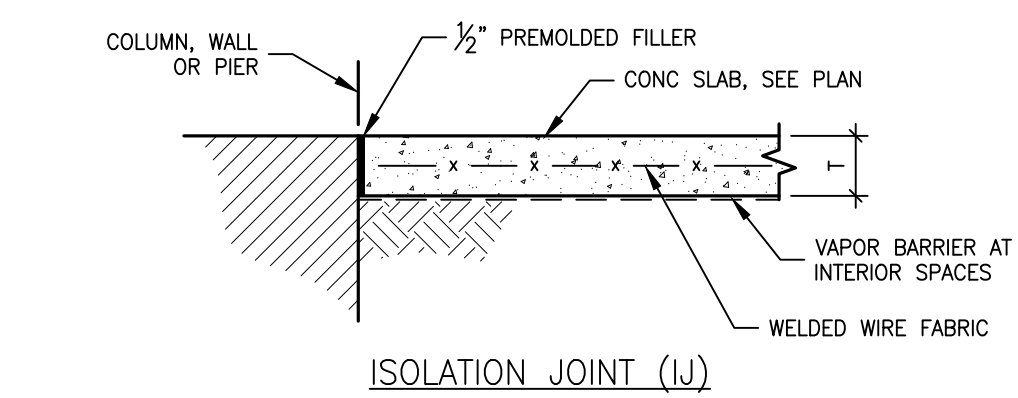


GENERAL NOTES & WIND LOADS

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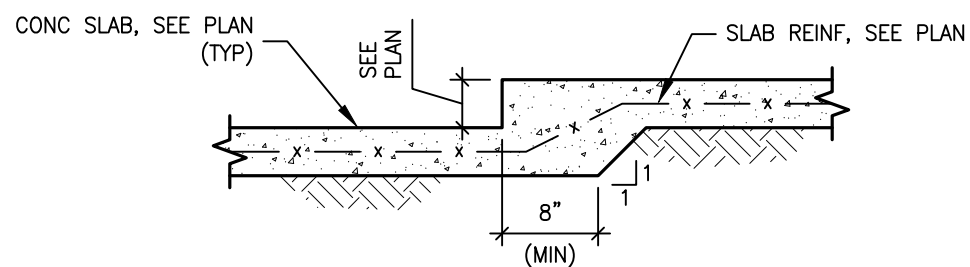
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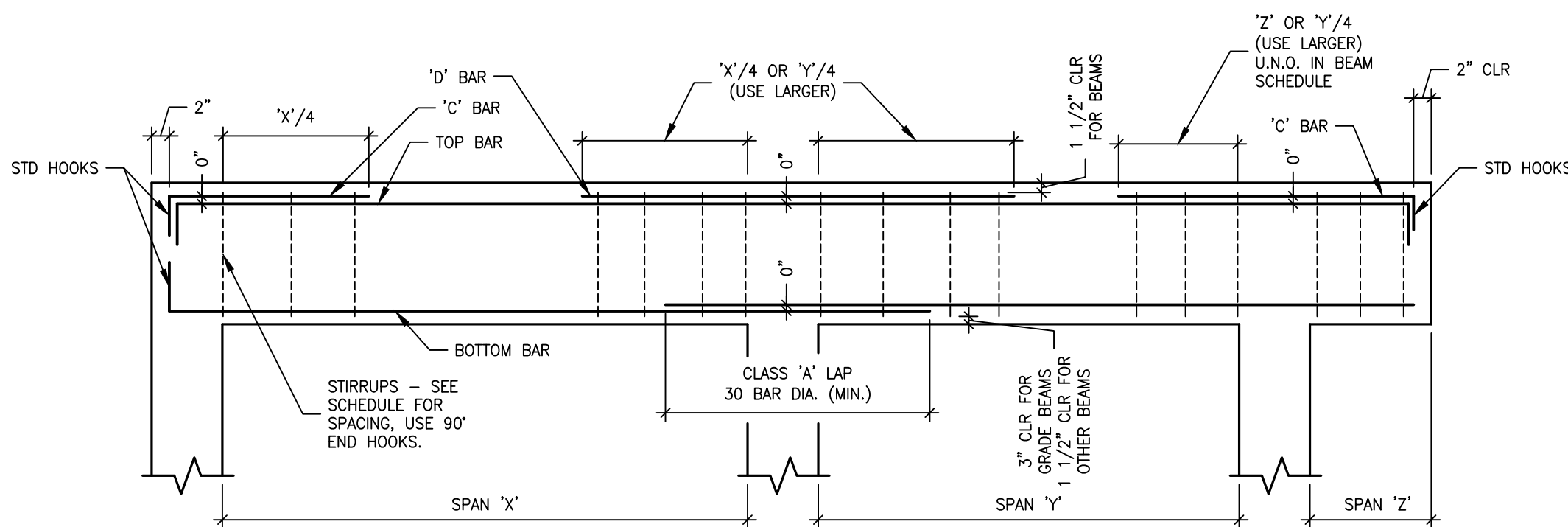
SLAB ON GRADE JOINT DETAILS

SCALE: NTS
NOTE:
CONTROL JOINTS AT 20'-0" OC (MAX). LAP WWF A MINIMUM OF 8".



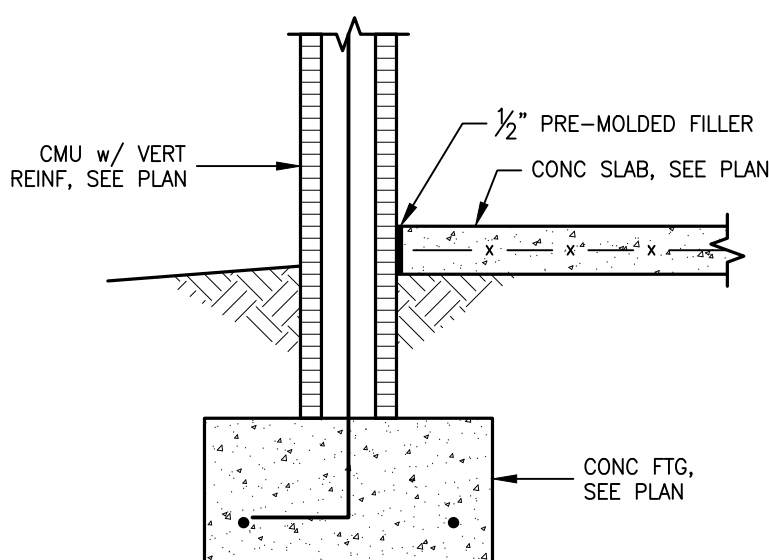
TYPICAL STEPPED SLAB DETAIL

SCALE: NTS



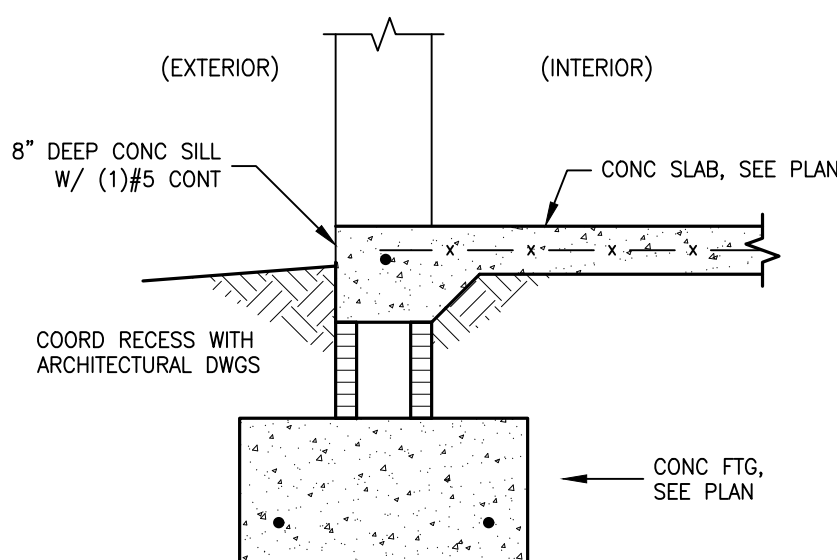
TYPICAL BENDING DIAGRAM FOR BEAMS

SCALE: NONE



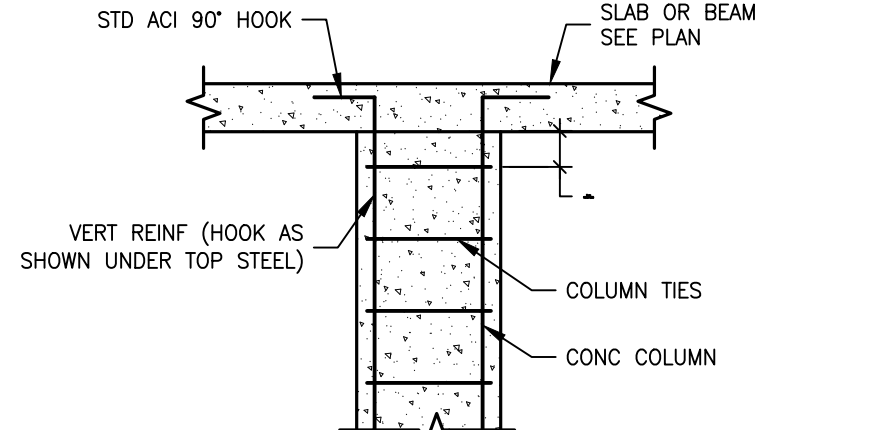
TYP EXT FOOTING DETAIL

SCALE: NTS

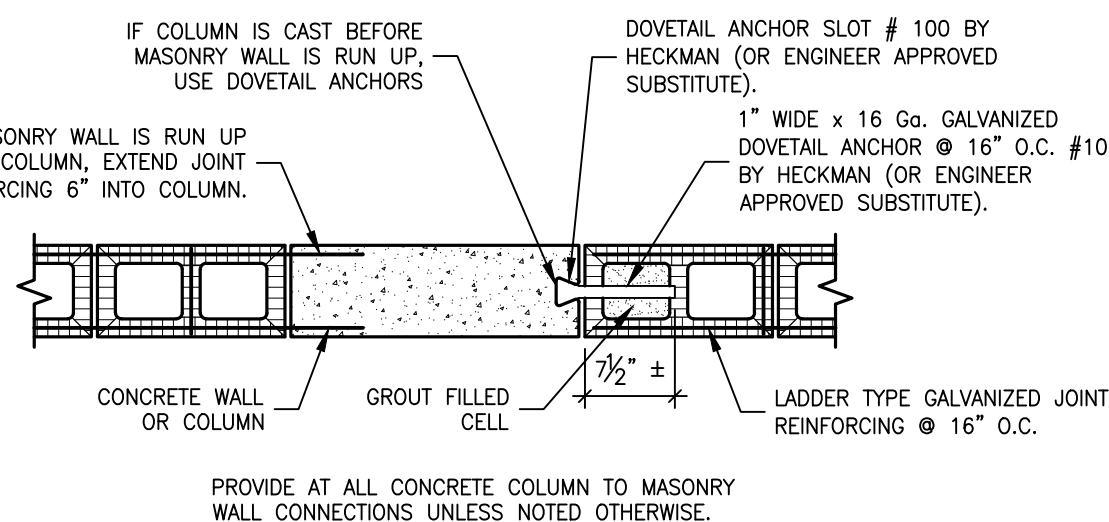


TYP SLAB EDGE AT OPENING AT EXT CMU WALL

SCALE: NTS

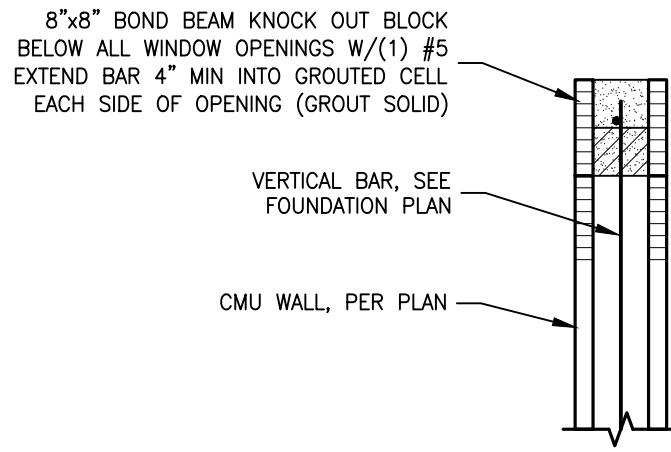


CONCRETE COLUMN BASE



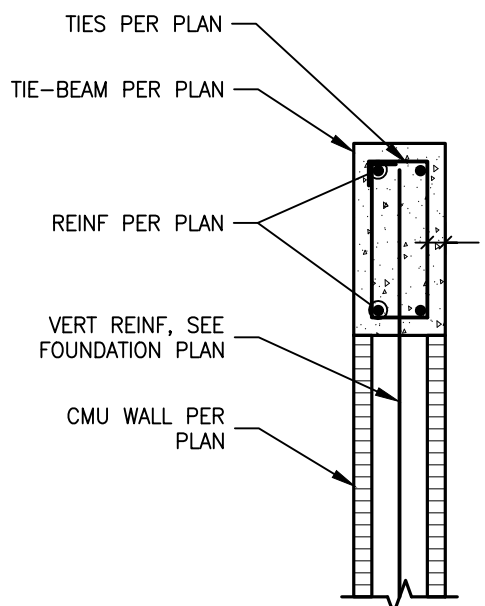
CONCRETE COLUMN ANCHOR DETAIL

SCALE: NONE



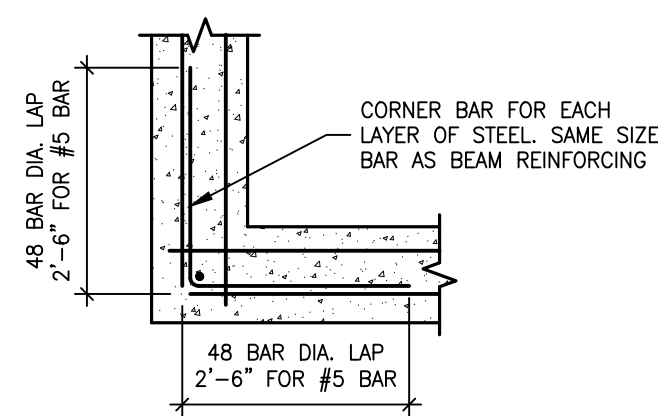
TYPICAL WINDOW SILL DETAIL

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



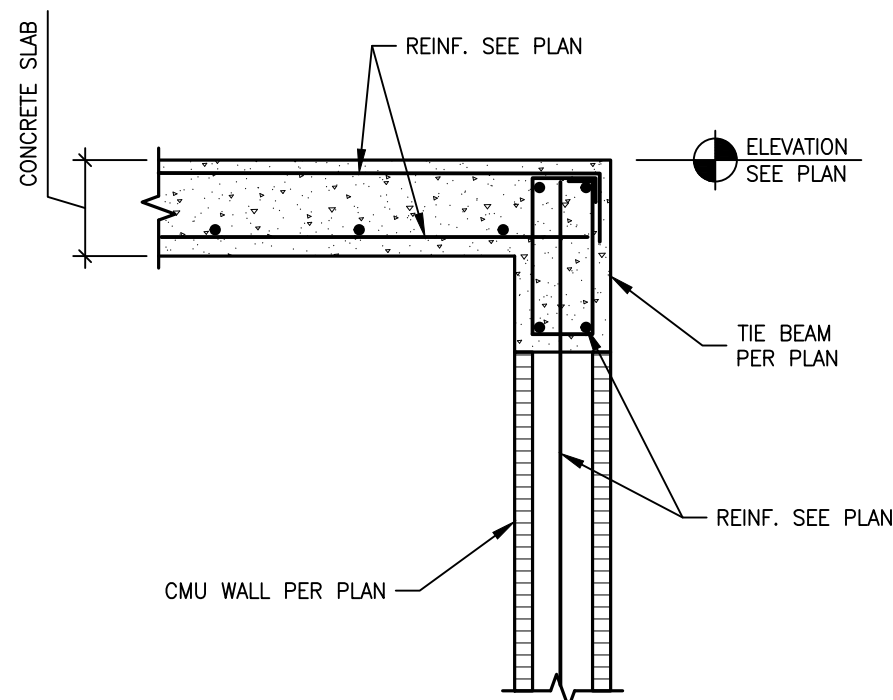
TYPICAL TIE-BEAM REINFORCEMENT

NTS



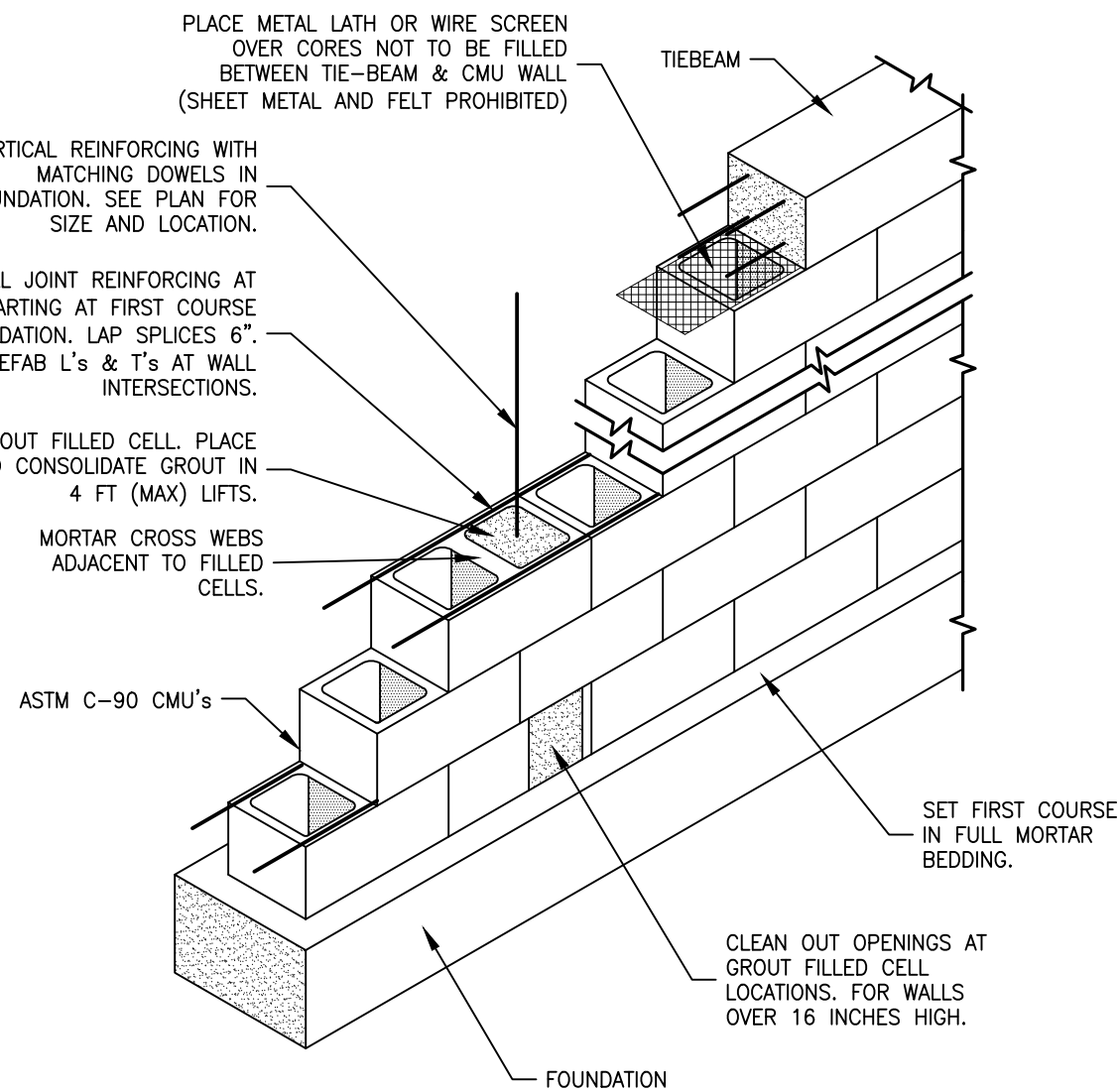
TIE-BEAM CORNER REINFORCING PLAN DETAIL

NTS



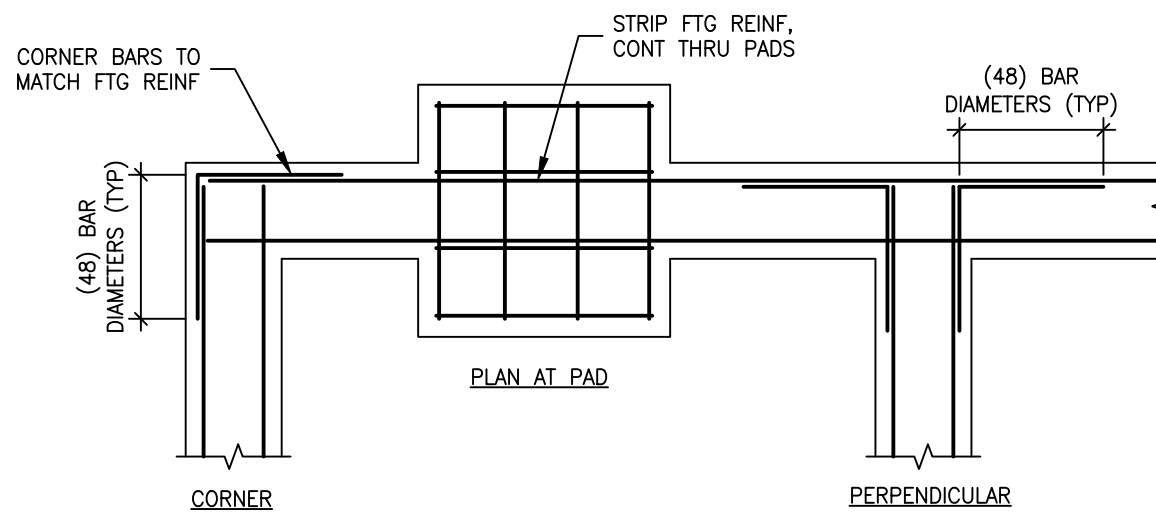
TYPICAL POURED IN PLACE CONCRETE BEAM DETAIL

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



TYPICAL MASONRY WALL CONSTRUCTION

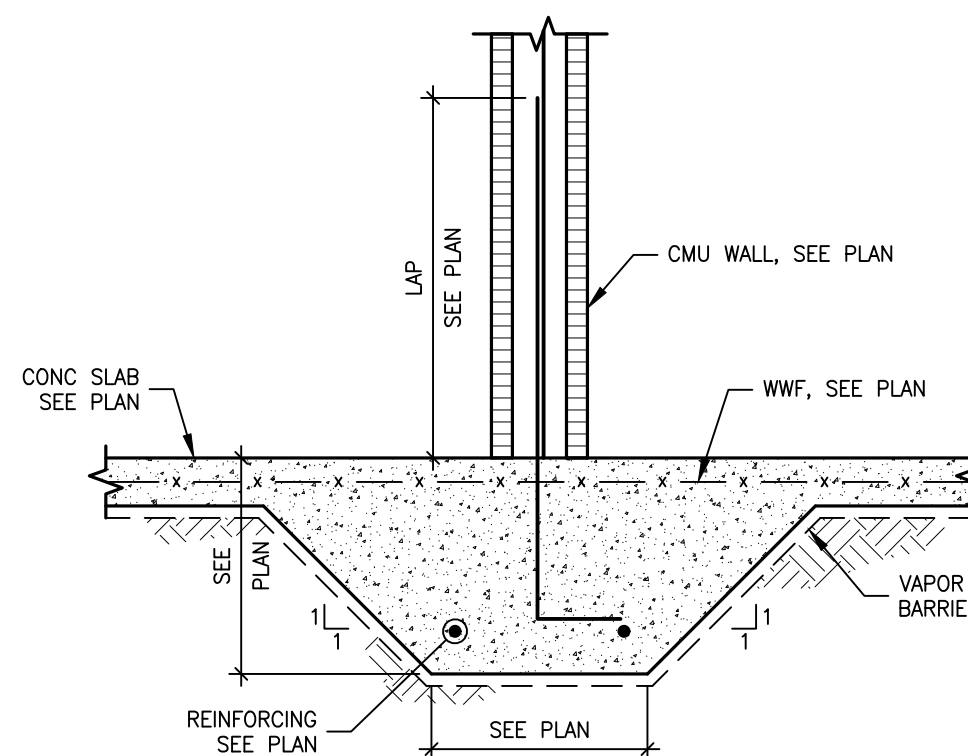
SCALE: NONE
PROVIDE STANDARD HOOKS WHERE VERTICAL BARS TERMINATE IN OR ABOVE BOND BEAM.



NOTE: SPLICES IN REINFORCING BARS SHALL NOT LESS THAN (48) BAR DIAMETERS.

TYPICAL FOOTING INTERSECTION PLAN DETAIL

SCALE: NTS



TYPICAL THICKENED SLAB DETAIL

SCALE: NTS

PROJECT NO 21-030

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ARCHITECTS
H&F
PLANNERS

Ted Hoffman Architect 863 673 6814
Michael Facundo Architect 239 503 4333

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TYPICAL DETAILS

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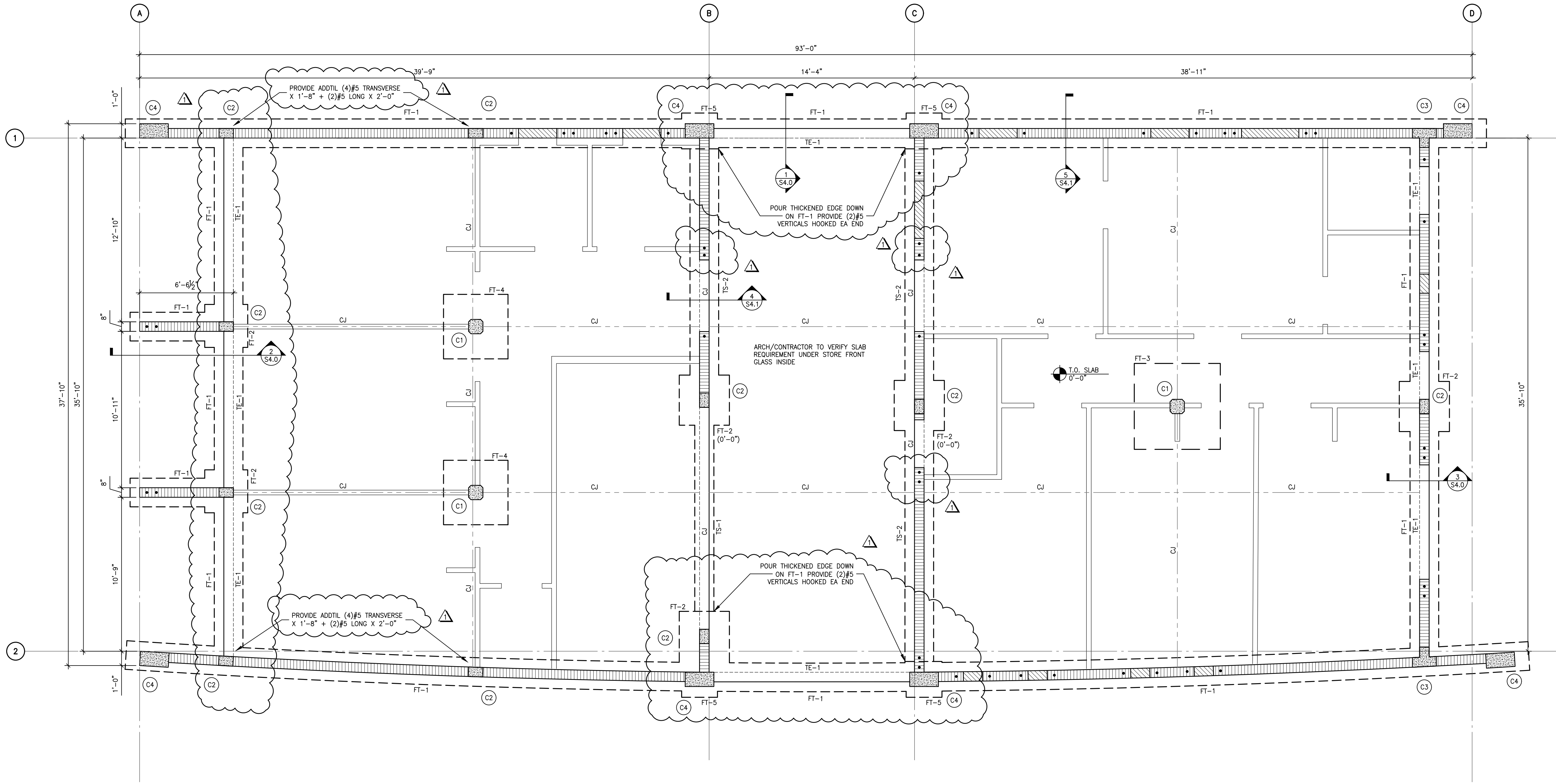


FOUNDATION
PLAN

PROJECT No.	21-030
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S3.0



FOUNDATION/GROUND FLOOR PLAN:

- FLOOR SHALL BE A MINIMUM 4" CONCRETE SLAB ON GRADE WITH ONE LAYER OF 6x6-W1.4xW1.4 WELDED WIRE FABRIC AT MID-DEPTH, UNLESS NOTED OTHERWISE.
- THE SLAB SHALL BE CAST ON A VAPOR BARRIER ON WELL COMPACTED FILL MATERIAL.
- ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS REFER TO 0'-0" REFERENCE ELEVATION WHICH IS FINISHED FLOOR TOP OF SLAB.
- CENTERLINES OF COLUMNS AND WALLS SHALL COINCIDE WITH THE FOUNDATION CENTERLINES UNLESS SHOWN OTHERWISE.
- TOP OF FOOTING ELEVATION SHALL BE (-1'-4") UNLESS SHOWN THUS (x'-x") ON PLAN.
- SEE SHEET S1.0 FOR STRUCTURAL NOTES, AND SHEET S2.0 FOR TYPICAL DETAILS.
- VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. FOR ADDITIONAL DIMENSIONAL INFORMATION SEE ARCHITECTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DROPS AND DRAIN LOCATIONS IN FLOOR SLABS.
- SLAB ON GRADE CONTROL JOINTS (CJ) SHALL BE TOOLED OR SAWCUT PER DETAIL. SEE PLAN.
- CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AS REQUIRED.

11. [Hatched Box] INDICATES 8" CMU WITH #6 VERTICAL BARS IN GROUT FILLED CELLS. PROVIDE AT 32" ON CENTER MAX., AT ALL CORNERS, EACH SIDE OF ALL OPENINGS, ENDS OF WALLS, CHANGE IN WALL DIRECTIONS, AND AS SHOWN.
- [Hatched Box] INDICATES 8" CMU WALL ABOVE AND BELOW OPENINGS WITH #6 VERTICAL BARS IN GROUT FILLED CELLS. PROVIDE AT 32" ON CENTER MAX.
- INDICATES #6 VERTICAL BARS IN GROUT FILLED CELLS IN ADDITION TO REINFORCING INDICATED ABOVE.

12. TE-1 INDICATES 8"W x 8"D THICKENED EDGE WITH (1)#5 MID DEPTH.

TS-1 INDICATES 16"W x 12"D THICKENED SLAB WITH (2)#5 BOTTOM CONT.

TS-2 INDICATES 24"W x 12"D THICKENED SLAB WITH (2)#5 TOP & BOTTOM CONT.

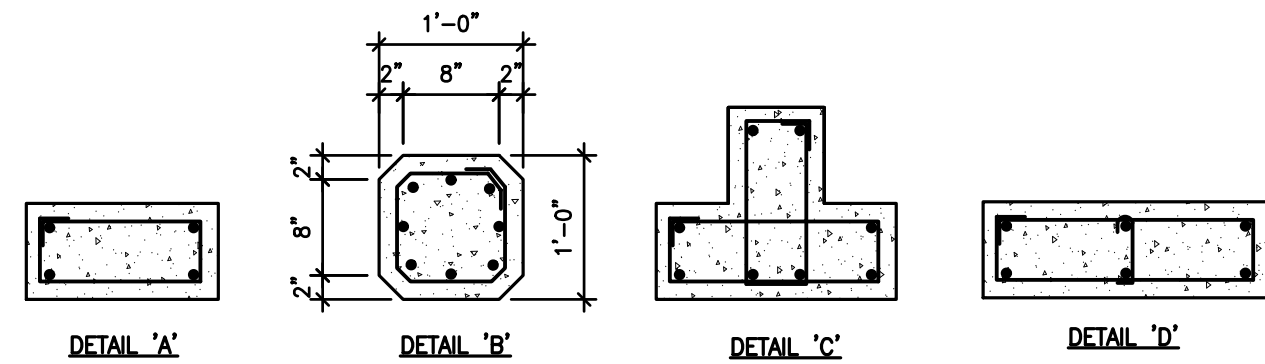


FOUNDATION PLAN

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

FOOTING SCHEDULE				
NUMBER	SIZE: WxL	THICKNESS	REINFORCING	REMARKS
FT-1	2'-0" X CONT	12"	(2)#5 B CONT	FOOTINGS TO EXTEND 1' PAST C4 & C2 COLUMNS
FT-2	3'-6" X 3'-6"	12"	(4)#5 EW B	SEE NOTE 5 ON S3.0
FT-3	6'-0" X 6'-0"	16"	(7)#5 EW B	SEE NOTE 5 ON S3.0
FT-4	4'-6" X 4'-6"	16"	(5)#5 EW B	SEE NOTE 5 ON S3.0
FT-5	2'-6" X 2'-6"	12"	(3)#5 EW B	SEE NOTE 5 ON S3.0

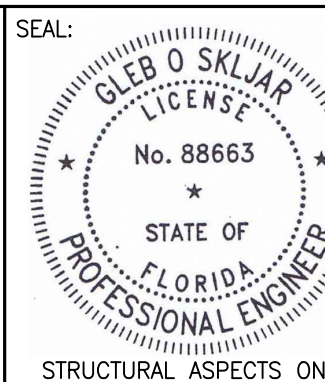
COLUMN SCHEDULE				
MARK	SIZE	VERTICAL REINFORCING OR BASE PLATE & ANCHOR BOLTS	COLUMN TIES OR CAP PLATE & BOLTS	REMARKS
C1	12X12	(8)#5	#308	DETAIL B
C2	7 5/8 X 12	(4)#6	#308	DETAIL A
C3	7 5/8 X 20 X 16	(8)#5	(2)#308	DETAIL C
C4	12X24	(6)#7	(2)#308	DETAIL D



PROJECT NO 21-030

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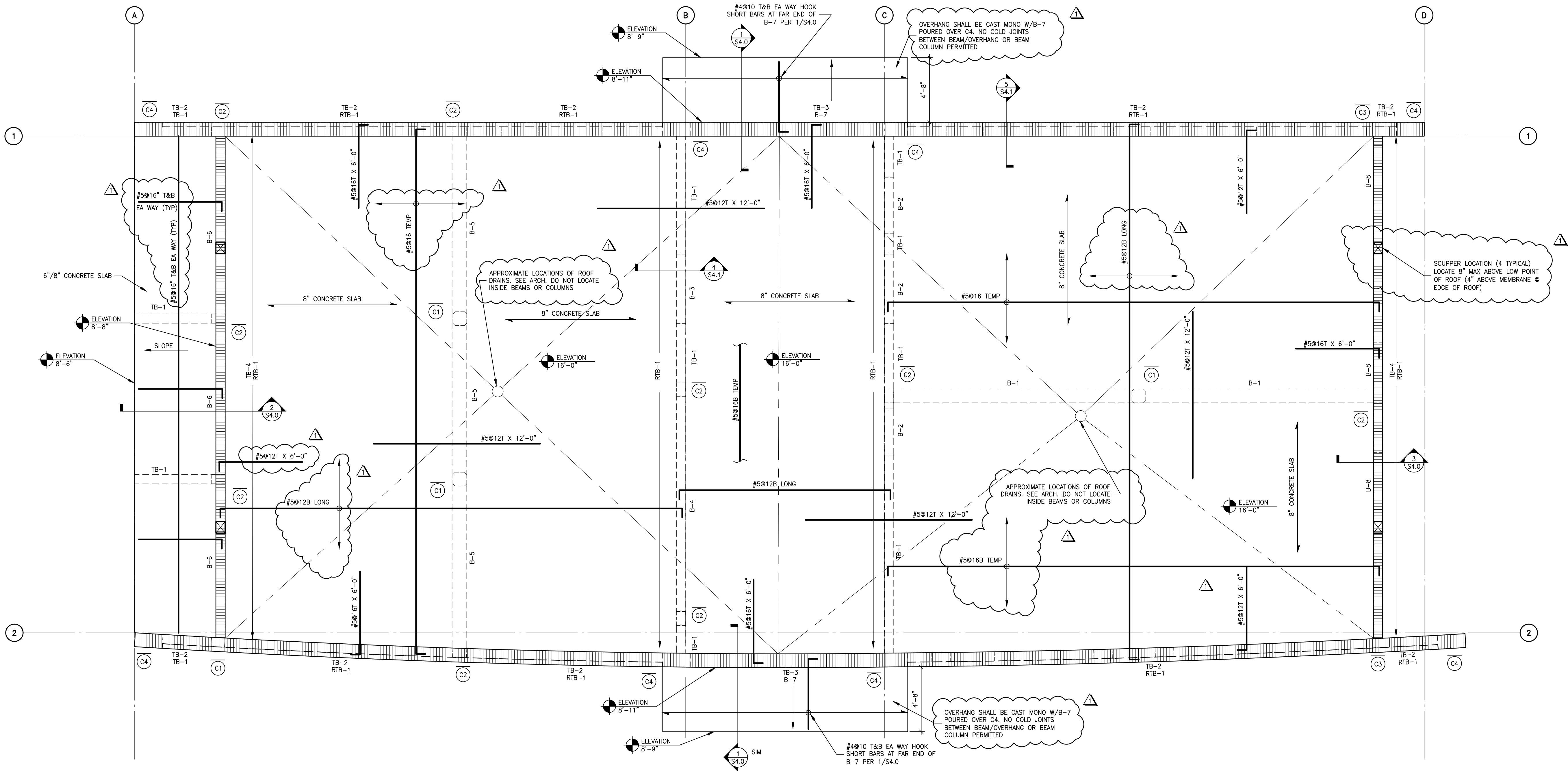


ROOF FRAMING
PLAN

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CONCRETE BEAM SCHEDULE								
NUMBER	TOP OF BEAM ELEVATION	SIZE: WxH (INCHES)	LONGITUDINAL BARS				STIRRUPS	REMARKS
			BOTTOM	TOP	'C'	'D'		
B-1	16'-0"	12x21	(3)#8	(3)#8			#306	INTEGRAL WITH SLAB
B-2	10'-4"	7 7/8x24	(2)#6	(2)#6			#3010	
B-3	10'-4"	7 7/8x24	(2)#6	(2)#6			#308	
B-4	10'-4"	7 7/8x24	(2)#7	(2)#7			#306	SHORING TO REMAIN UNTIL ROOF SLAB HAS CURED FOR 14 DAYS
B-5	16'-0"	12x20	(2)#7	(2)#7			#308	INTEGRAL WITH SLAB (1)#5 MID EA. FACE
B-6	9'-4"	7 7/8x16	(2)#7	(2)#7			#306	INTEGRAL WITH SLAB (1)#5 MID EA. FACE
B-7	10'-4"	12x24	(2)#9	(2)#9			#404	(4)#9 MIDDLE SEE S4.0 FOR FOUR LEGGED STIRRUP CONFIGURATION
B-8	8'-4"	8x16	(2)#5	(2)#5			#306	C.I.P. LINTEL ABUTTING COLUMN
TB-1	10'-4"	7 7/8x24	(2)#5	(2)#5			#3048	TO BE POURED MONOLITHICALLY W/NEIGHBORING COLUMNS/BEAMS/OVERHANGS
TB-2	20'-0"	12x24	(2)#5	(2)#5			#3048	(3)#5 EA FACE EQ. SPACED
TB-3	20'-0"	12x54	(4)#5	(2)#5			#306	(3)#5 EA FACE EQ. SPACED LAP BOT. BARS 4'-0" INTO ADJ. RTB-1 EA SIDE
TB-4	19'-8"	7 7/8x20	(2)#5	(2)#5				
RTB-1	16'-0"	7 7/8x16	(2)#6	(2)#6			#3048	TO BE POURED MONOLITHICALLY W/ROOF SLAB



ROOF FRAMING PLAN

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

ROOF FRAMING PLAN:

- FOR DIMENSIONS NOT SHOWN SEE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS.
- SEE SHEET S1.0 FOR STRUCTURAL NOTES, AND SHEETS S2.0 FOR TYPICAL DETAILS.
- ROOF SLAB SHALL BE 8" THICK CONCRETE (UNO). ALL SLABS TO HAVE #5 AT 12" ON CENTER BOTTOM WITH #5 AT 16" TEMP. IN DIRECTION AS SHOWN. (UNO) T INDICATES TOP BARS W/1 1/2" COVER FROM TOP OF SLAB CENTERED OVER SUPPORTS.
 - INDICATES #6 VERTICAL BARS IN GROUT FILLED CELLS IN ADDITION TO REINFORCING INDICATED ABOVE.
- ALL WALLS TERMINATING BELOW 8" SLAB SHALL HAVE THEIR VERTICAL REBAR TERMINATE WITH HOOKS AT MID DEPTH OF SLAB.
- COORDINATE SLAB SLOPE AND PROFILE WITH THE ARCHITECTURAL DRAWINGS.
- WHERE NEEDED LAP ALL #5 BARS 36" MIN.

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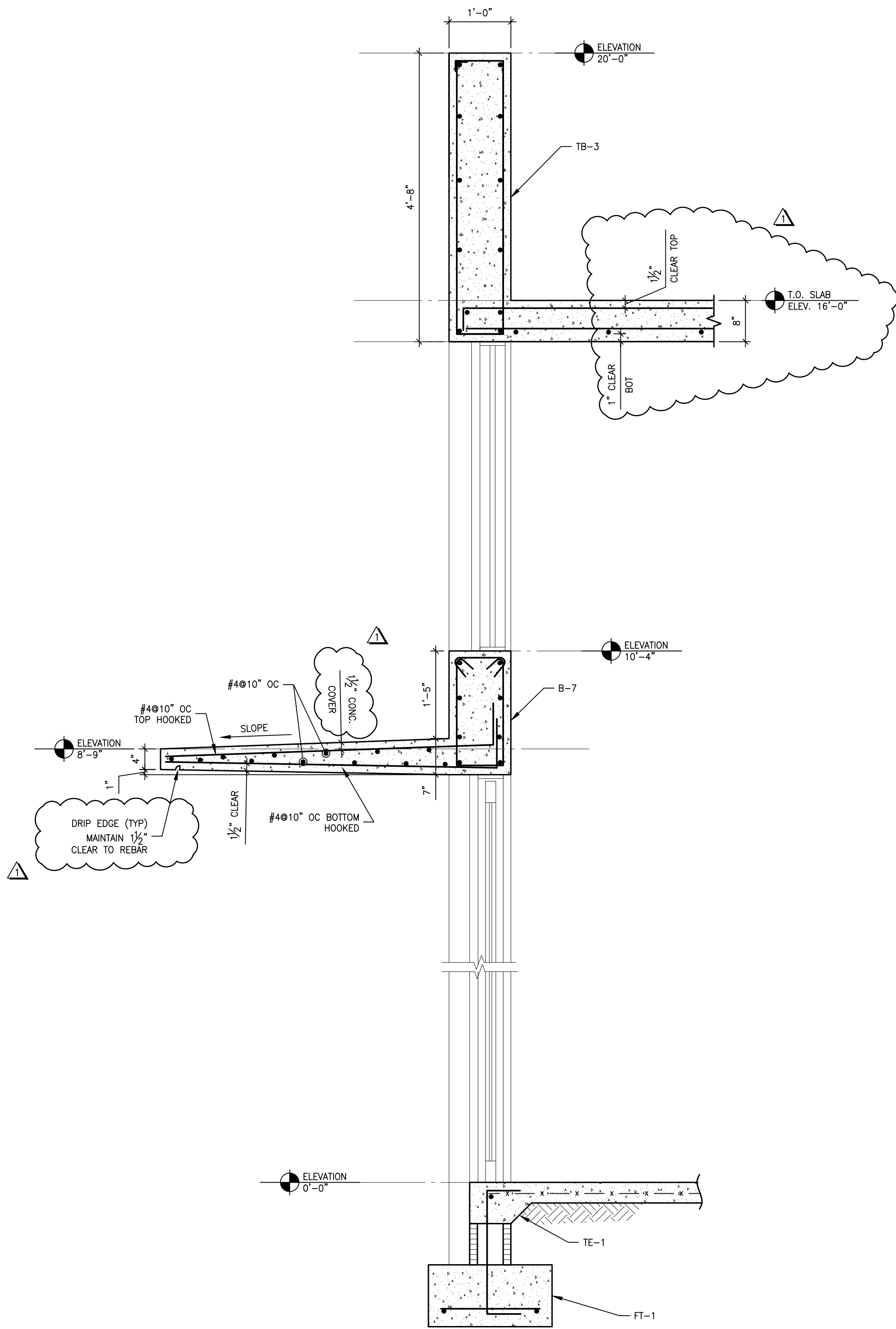


SECTIONS &
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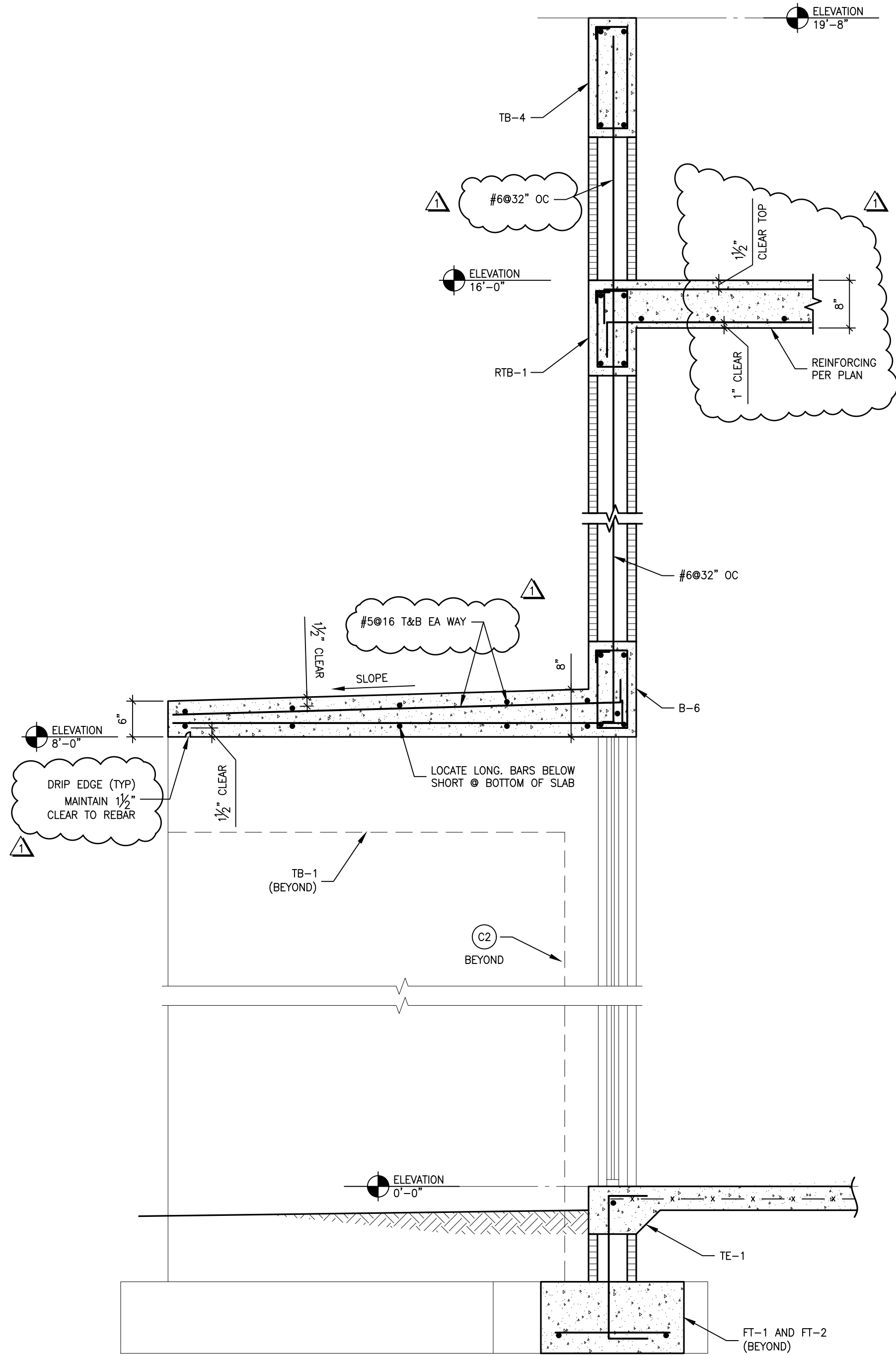
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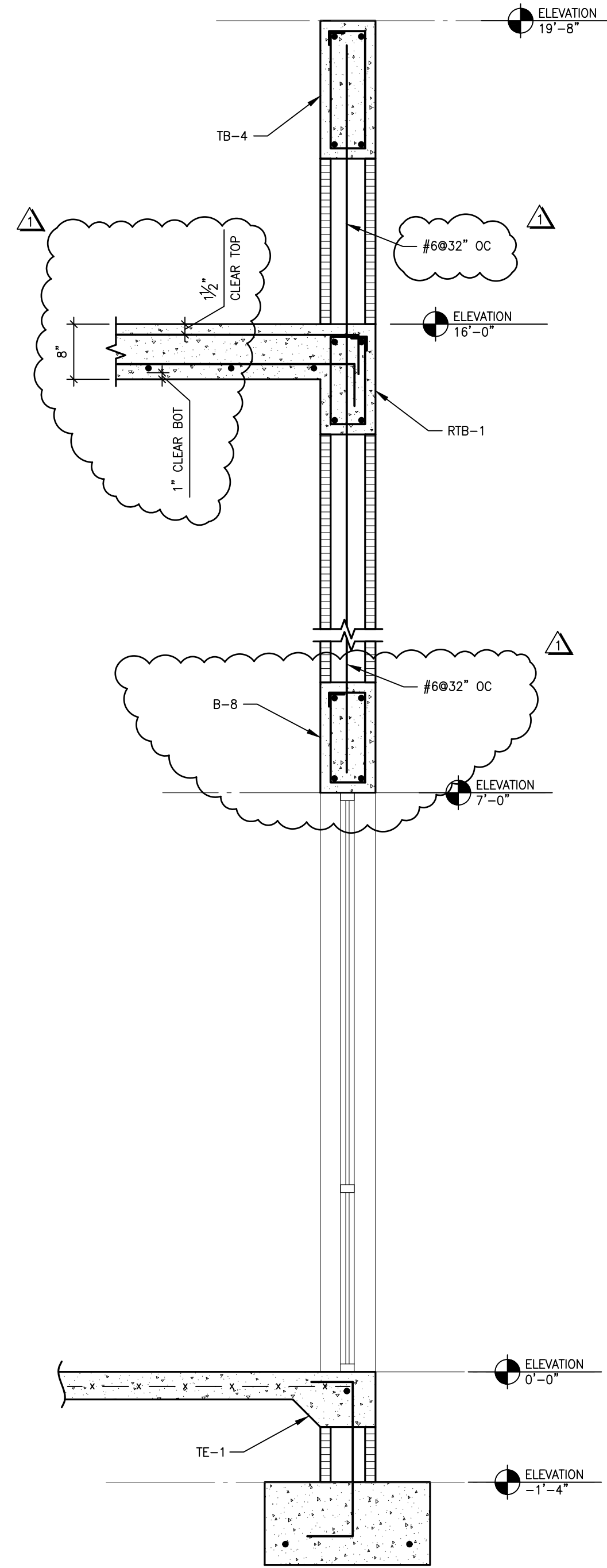
S4.0



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



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



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

PROJECT NO 21-030

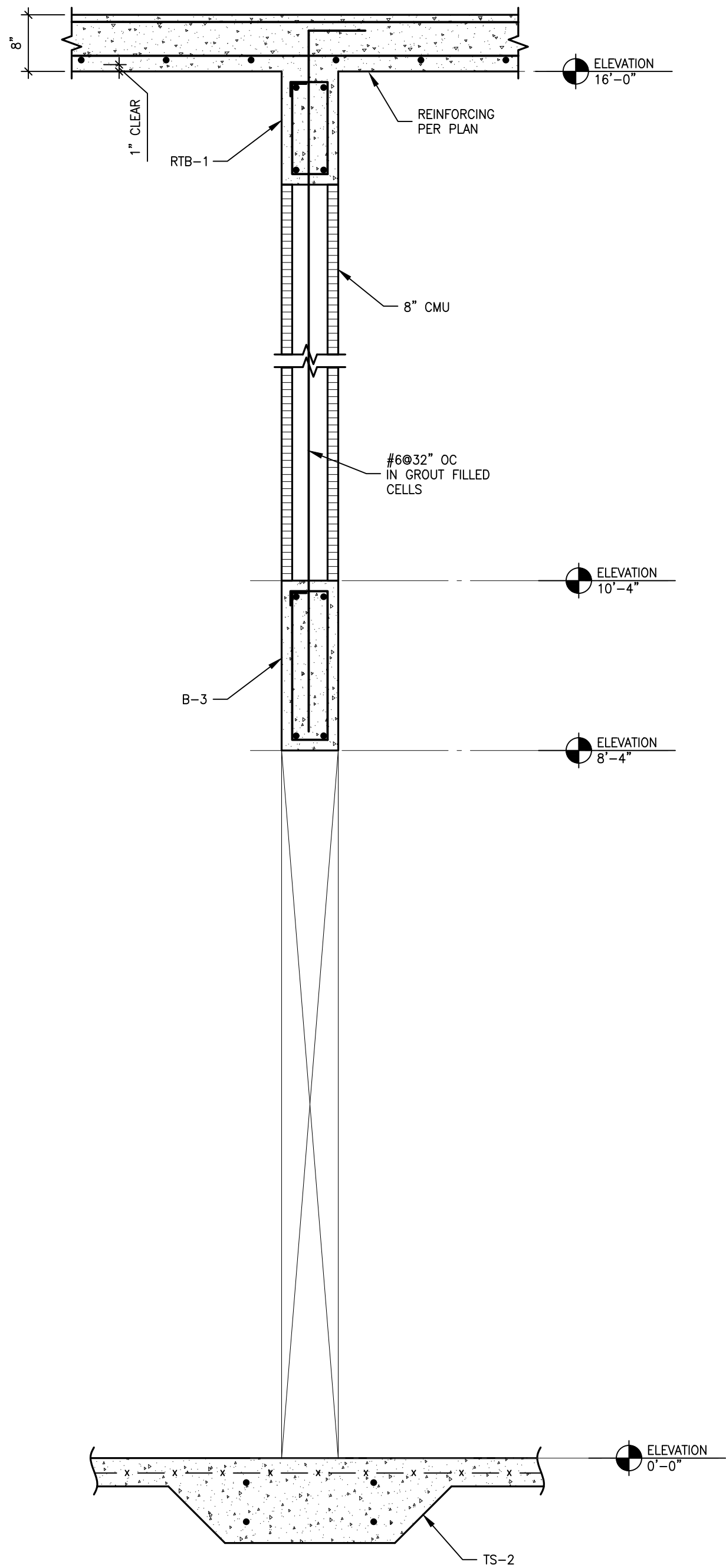
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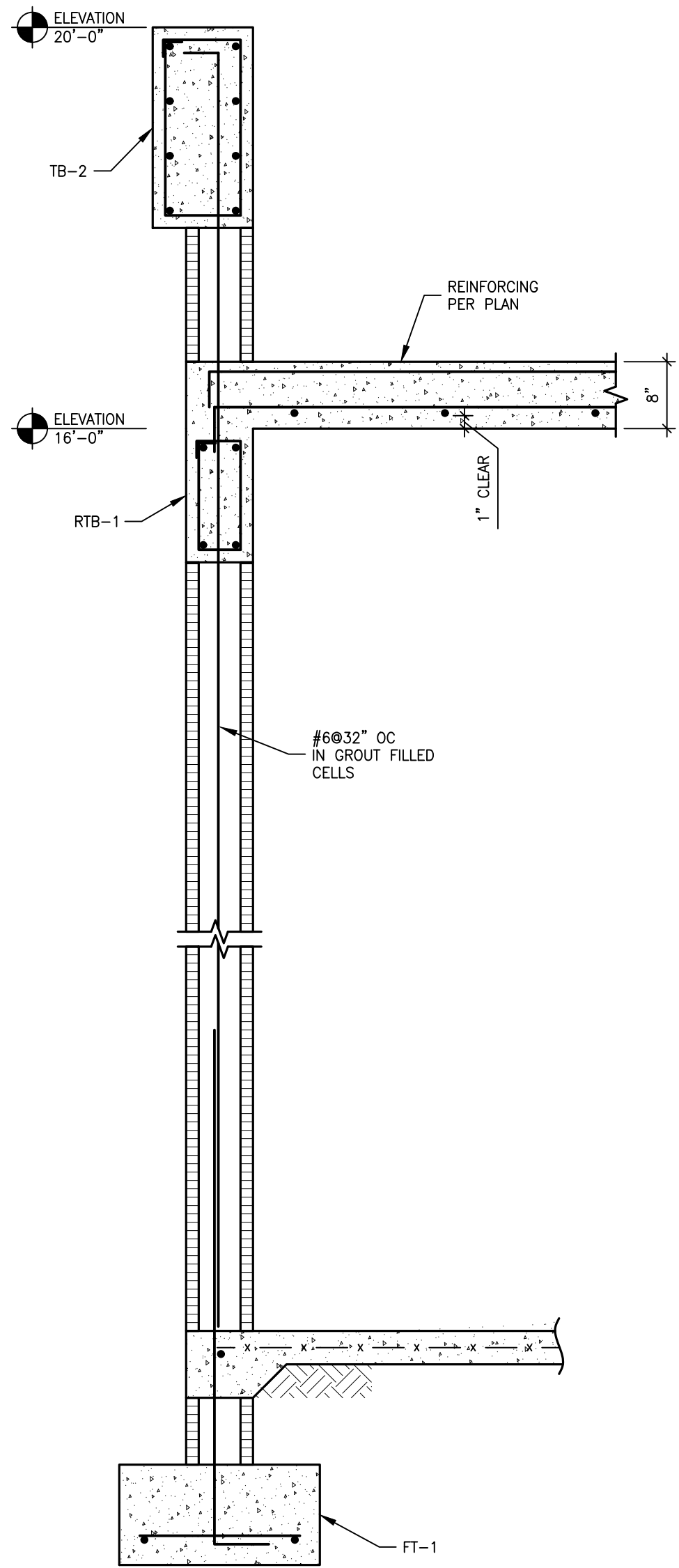
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4 SECTION
SCALE: 3/4"=1'-0"



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

ADDED NEW SHEET

PROJECT NO 21-030

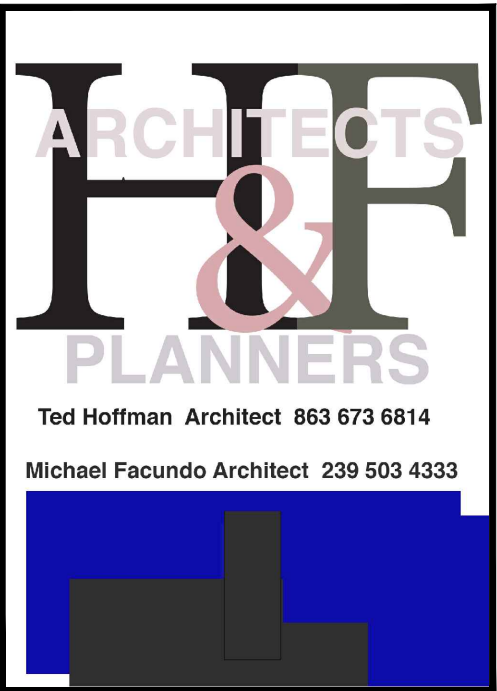
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REV # DATE DESCRIPTION
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