

USE OF DRAWINGS

TYPICAL DETAILS: ALL TYPICAL DETAILS AND NOTES SHOWN IN THE DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE DRAWINGS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

STRUCTURAL GENERAL NOTES: NOTES ON THE STRUCTURAL GENERAL NOTES SHEET ARE APPLICABLE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.

USE OF DRAWINGS AND COORDINATION: USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, MECHANICAL AND OTHER DRAWINGS FOR BIDDING AND CONSTRUCTION. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR EMBEES, OPENINGS, SLEEVES, ETC NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE WORK AND VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BETWEEN TRADES AND EQUIPMENT PURCHASED. NOTIFY OWNER'S REPRESENTATIVE OF DISCREPANCIES PRIOR TO CONSTRUCTION.

DRAWING SCALE: NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS - DO NOT SCALE DRAWINGS.

DIMENSION VERIFICATION: DIMENSIONS NOTED PLUS OR MINUS (±) OR AS FOLLOWS VERIFY INDICATE UNVERIFIED DIMENSIONS THAT REQUIRE CONFIRMATION OR DETERMINATION BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF CONFLICTS OR VARIATIONS FROM INDICATED DIMENSIONS.

NOTE CONFLICTS: IF ANY STRUCTURAL NOTES ARE IN CONFLICT WITH EACH OTHER ARCHITECTURAL, OTHER DRAWINGS, OR THE SPECIFICATIONS, USE THE MOST STRINGENT REQUIREMENT FOR BIDDING AND CONSTRUCTING THE WORK.

EXISTING CONDITIONS: INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS IN THE FIELD PRIOR TO COMMENCING ANY WORK. IMMEDIATELY REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE ENGINEER OF RECORD. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD.

DESIGN BY OTHERS: ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT AND BE ACCOMPANIED BY SUBSTANTIATING CALCULATIONS.

MEANS AND METHODS

MEANS AND METHODS: CSA ENGINEERING, INC. OR ANY OF ITS EMPLOYEES SHALL NOT HAVE CONTROL OR BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, TECHNIQUES, PROCEDURES, SEQUENCES, ACTS OR OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK OR FOR THE FAILURE OF ANY OF INDIVIDUAL OR COMPANY TO SAFELY CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

STABILITY: THE CONTRACTOR SHALL PROVIDE NECESSARY BRACING AND SHORING AS REQUIRED UNTIL THE BUILDING'S STRUCTURAL SYSTEMS HAVE BEEN COMPLETED. THE STRUCTURE SHALL NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN A QUALIFIED LICENSED STRUCTURAL ENGINEER WHO SHALL DETERMINE WHERE TEMPORARY SHORING/BRACING IS REQUIRED AND PROVIDE ITS DESIGN. PROVIDE THE TEMPORARY BRACING AS REQUIRED TO STABILIZE THE STRUCTURE AND ITS COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED ACCORDING TO THE CONTRACT DOCUMENTS.

JOB SITE SAFETY: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK AND FOR MEETING THE REQUIREMENTS OF ALL APPLICABLE JURISDICTIONS. EXECUTE WORK IN A MANNER THAT PROVIDES FOR THE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST INJURY AND DAMAGE DUE TO FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH CONSTRUCTING THE WORK.

CONSTRUCTION LOADING: THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE STRUCTURE DURING CONSTRUCTION. WHERE CONSTRUCTION SEQUENCING AND STAGING ARE LIKELY TO CREATE OVERLOADING, THE CONTRACTOR SHALL RETAIN A QUALIFIED STRUCTURAL ENGINEER TO DETERMINE HOW TO TEMPORARILY SHORE AND SUPPORT THE EXISTING ELEMENTS IN A MANNER THAT DOES NOT EXCEED THE STRESS LIMITS OF THE ELEMENTS AND THE SUPPORTING FOUNDATION AS DEFINED BY THE APPLICABLE BUILDING CODES.

GEOTECHNICAL

ASSUMED SOIL DESIGN PARAMETERS: A GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED TO THE ENGINEER. THE FOUNDATION SYSTEM HAS BEEN DESIGNED USING THE FOLLOWING ASSUMED SOIL PARAMETERS. THE CONTRACTOR SHALL EMPLOY A TESTING LABORATORY TO VERIFY AND INSPECT THE FOLLOWING DESIGN PARAMETERS. A GEOTECHNICAL ENGINEER LICENSED IN THE PROJECT STATE EMPLOYED BY THE TESTING LABORATORY SHALL REVIEW AND VERIFY THE FOLLOWING DESIGN PARAMETERS TO ENSURE THAT ANTICIPATED TOTAL SETTLEMENT WILL NOT EXCEED ONE INCH. SHOULD ACTUAL CONDITIONS BE DETERMINED TO DEVIATE FROM THE VALUES SPECIFIED, THE TESTING LABORATORY AND THE CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER BEFORE CONSTRUCTION OF THE SHALLOW FOUNDATION SYSTEM.

ALLOWABLE BEARING PRESSURE:	2000 PSF
FROST DEPTH:	18 INCHES
FOUNDATION WALL:	
WEIGHT OF BACKFILL MATERIAL:	110 PCF
AT REST PRESSURE:	75 PSFFIT
ACTIVE PRESSURE:	35 PSFFIT
PASSIVE PRESSURE:	330 PSFFIT
COEFFICIENT OF FRICTION:	0.35

GEOTECH APPROVAL: THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND APPROVE PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL AND CASTING OF FOOTING. THE GEOTECHNICAL ENGINEER OR AN APPROVED TESTING LAB SHALL OBSERVE SOIL COMPACTION WORK.

SUBGRADE PREP: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS SHALL CONFORM STRICTLY TO THE CONTRACT DOCUMENTS, THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT, AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

UTILITIES: DETERMINE THE LOCATION OF ALL NEW/EXISTING UNDERGROUND UTILITIES IN AND ADJACENT TO THE AREA OF WORK PRIOR TO COMMENCING EXCAVATION. COORDINATE UTILITY LOCATIONS WITH FOUNDATIONS AS REQUIRED.

EXISTING STRUCTURES: CONTRACTOR SHALL CONFIRM THE ASBUILT LOCATION OF ANY POTENTIAL NEW OR EXISTING STRUCTURES OR OBJECTS WITHIN THE ZONE OF EXCAVATION INCLUDING WORK PERFORMED AS A PORTION OF THIS PROJECT BEFORE EXCAVATING OR INSTALLING FOUNDATION ELEMENTS. NOTIFY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH ANY EXCAVATIONS OR OTHER SITE WORK. IF THE EXCAVATION WILL CUT BELOW AN ADJACENT STRUCTURE'S BOTTOM OF FOOTING ELEVATION OR IF AN ADJACENT STRUCTURE IS UPLOUSE FROM THE PLANNED SITE WORK.

BACKFILL: BACKFILL FOOTINGS AND RETAINING WALLS WITH FREE DRAINING GRANULAR FILL. PROVIDE A SUBSURFACE DRAINAGE SYSTEM FOR FOUNDATION AND RETAINING WALLS. BASED ON THE GEOTECHNICAL REPORT RECOMMENDATIONS. DO NOT BACKFILL BEHIND WALLS BEFORE ADJACENT SUPPORTING ELEMENTS ARE COMPLETE AND CURED. ALTERNATIVELY, PROVIDE DESIGN AND CONSTRUCTION OF TEMPORARY BRACING THAT PROTECTS THE WALL AGAINST OVERTRESS OR MOVEMENT.

WEEP HOLES: PROVIDE 2" DIAMETER WEEP HOLES AT 6'-0" OC MAXIMUM IN EXTERIOR RETAINING WALLS. PROVIDE FILTER FABRIC OR STAINLESS STEEL WIRE MESH OVER THE WEEP HOLE TO RETAIN THE BACKFILL MATERIAL.

SLAB-ON-GRADE BASE: AGGREGATE BASE (GRANULAR FILL) BELOW CONCRETE SLAB-ON-GRADE SHALL CONSIST OF MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND BASED ON LOCAL AVAILABILITY.

FOOTINGS: FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST FROST DEPTH BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS AND DETAILS ARE MINIMUM. ESTABLISH THE ACTUAL BOTTOM-OF-FOOTING ELEVATIONS IN THE FIELD, BASED UPON THE GEOTECHNICAL ENGINEER'S ON-SITE OBSERVATIONS AND ADDITIONAL TESTING, IF REQUIRED, THAT WILL ACHIEVE THE ALLOWABLE DESIGN BEARING PRESSURE. NOTIFY ENGINEER OF ANY NECESSARY DEVIATIONS FROM THE FOOTING ELEVATIONS SHOWN ON THE DRAWINGS PRIOR TO CONSTRUCTING THE FOOTINGS.

CONCRETE PLACEMENT: FOUNDATION CONCRETE SHALL BE PLACED THE SAME DAY THE EXCAVATION IS MADE WHEN FEASIBLE. WHERE FOUNDATION EXCAVATIONS WILL REMAIN OPEN OR EXPOSED, SPECIAL CARE SHOULD BE TAKEN TO PROTECT THE EXPOSED SOILS FROM BEING DISTURBED, SATURATED, OR DRIED OUT PRIOR TO THE PLACEMENT OF SELECT FILL OR CONCRETE WITH A MUD MAT OF LEAN (250 PSl) CONCRETE OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.

FORMS: THE EXTERIOR VERTICAL FACE OF ALL EXPOSED SLAB TURNDOWNS SHALL BE FORMED. THE SIDES OF FOOTINGS MAY BE EARTH FORMED AS LONG AS THE SOIL WILL MAINTAIN A VERTICAL FACE. ALL FOUNDATION STEM WALLS AND RETAINING WALLS SHALL BE FORMED ON BOTH SIDES OF THE WALL.

EXCAVATION: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION. COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.

COMPACTION: MECHANICALLY COMPACT EXCAVATION BACKFILL IN LAYERS. PROVIDE THE FOLLOWING MINIMUM COMPACTION IN ACCORDANCE WITH THE ASTM D1557 TEST METHOD UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT:
TRENCH AND WALL BACKFILL: 90% MAXIMUM DRY DENSITY
FILL BENEATH SLAB-ON-GRADE: 95% MAXIMUM DRY DENSITY
FILL BENEATH FOOTINGS: 95% MAXIMUM DRY DENSITY

DESIGN AND CONSTRUCTION CRITERIA

EVALUATION/UPGRADE GUIDELINES: THE BUILDING HAS BEEN EVALUATED AND UPGRADED USING ASCE 41 GUIDELINES. ALL NEW ELEMENTS AND THEIR CONNECTION TO EXISTING STRUCTURE ARE DESIGNED TO RESIST ASCE 41 LEVEL FORCES.

GOVERNING BUILDING CODE: ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE CITY OF KNOXVILLE.

PRIMARY REFERENCE STANDARDS: THE PUBLICATIONS LISTED BELOW ARE THE MATERIAL SPECIFIC GOVERNING CODES AND STANDARDS USED REFERENCED BY THEIR BASIC DESIGNATION. IN THE CASE OF CONFLICTING REQUIREMENTS, THE BUILDING CODE SHALL GOVERN. ADDITIONAL MATERIAL SPECIFIC DESIGN STANDARDS ARE ALSO LISTED UNDER THE RESPECTIVE MATERIAL SECTION OF THESE GENERAL NOTES. FOR ALL STANDARDS, USE THE VERSION REFERENCED BY THE GOVERNING BUILDING CODE. IF NOT REFERENCED BY GOVERNING BUILDING CODE, USE THE LATEST EDITION.

ACI 318-11	AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
ACI 530-11	AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
AISC 360-10	AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
NDS-2012	AMERICAN FOREST AND PAPER ASSOCIATION NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH 2012 SUPPLEMENT
AISI S100-07/12-10	AMERICAN IRON AND STEEL INSTITUTE NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS WITH SUPPLEMENT 2, DATED 2010
ASCE 7-10	AMERICAN SOCIETY OF CIVIL ENGINEERS MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM INTERNATIONAL)
ICC	INTERNATIONAL CODE COUNCIL, INTERNATIONAL CODE COUNCIL - EVALUATION SERVICES (ICC-ES)

MATERIAL PROPERTIES: MATERIAL PROPERTIES LISTED IN THE CONSTRUCTION DOCUMENTS ARE BASED UPON MATERIALS CURRENTLY AVAILABLE FOR CONSTRUCTION AND MAY NOT CORRESPOND WITH TABLES PROVIDED IN THE CODES AND SPECIFICATIONS LISTED HEREIN. WHERE POSSIBLE, THESE CODES HAVE BEEN USED IN THEIR ENTIRETY. WHERE THESE CODES REFERENCE OBSOLETE INFORMATION, INFORMATION BASED UPON CURRENT INDUSTRY STANDARDS HAS BEEN SUBSTITUTED AS NECESSARY.

DESIGN AND CONSTRUCTION CRITERIA CONT.

PROJECT STATE: THE PROJECT IS TO BE CONSTRUCTED IN THE STATE OF TENNESSEE.

GOVERNING BUILDING CODE: ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE 2015 INTERNATIONAL RESIDENTIAL CODE.

DESIGN LOADS: BUILDING DESIGN LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE BUILDING CODE AND ASCE 7 AS FOLLOWS:

LIVE LOADS:	
RESIDENTIAL	20 PSF
	40 PSF
SNOW LOAD:	
GROUND SNOW LOAD:	Fg - 20 PSF
SNOW DRIFT LOADS PER ASCE 7, SECTION 7.7:	

WIND LOADS:
ANALYSIS PROCEDURE: METHOD 2 - ANALYTICAL PROCEDURE
DESIGN WIND SPEED: Vw = 115 MPH
Vwd = 90 MPH

RISK CATEGORY: C - ALL FACES
EXPOSURE CATEGORY: II
DIRECTIONALITY FACTOR, Kd: 0.85
TOPOGRAPHIC FACTOR, Kzt: 1.00
INTERNAL PRESSURE COEFFICIENT: ± 0.18
COMPONENTS & CLADDING WIND PRESSURES: SEE DIAGRAMS

SEISMIC LOAD:
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
MAPPED SPECTRAL RESPONSE ACCELERATIONS:

Ss = 0.221
Si = 0.153
D

RISK CATEGORY: II
SEISMIC LOAD RESISTING SYSTEM: LIGHT-FRAME (WOOD) WALLS SHEATHED WITH STRUCTURAL WOOD SHEAR PANELS
RESPONSE MODIFICATION FACTOR: R = 6.5
DEFLECTION AMPLIFICATION FACTOR: Cd = 4
SEISMIC IMPORTANCE FACTOR AND OVERLOADING: I = 1.0
DESIGN SPECTRAL RESPONSE ACCELERATIONS:
Sds = 0.539
SD1 = 0.288
D

SEISMIC DESIGN CATEGORY: D
SEISMIC RESPONSE COEFFICIENT: Cs = 0.068
SEISMIC BASE SHEAR: 3 KIPS

ROOF DRAINAGE: THE ROOF FRAMING SYSTEM HAS BEEN DESIGNED WITH THE ASSUMPTION THAT A DRAINAGE SYSTEM ADEQUATE TO PREVENT PONDING WILL BE PROVIDED.

SLAB-ON-GRADE: SLABS-ON-GRADE ARE NOT DESIGNED FOR CONCENTRATED LOADS SUCH AS THOSE FROM FORKLIFTS OR STORAGE RACKS.

SITE VISITS: THE STRUCTURAL ENGINEER WILL OBSERVE THE CONSTRUCTION ONLY AS REQUESTED BY THE ARCHITECT AS SPECIFIED IN THE ARCHITECT-ENGINEER AGREEMENT FOR THE PROJECT. STRUCTURAL OBSERVATIONS REQUIRED BY THE PROJECT SPECIFICATIONS OR THE BUILDING CODE, MUST BE PERFORMED BY A STRUCTURAL OBSERVER APPROVED BY THE ARCHITECT.

MECHANICAL: COORDINATE THE LOCATIONS OF ROOF, FLOOR, AND WALL OPENINGS WITH THE TRADES REQUIRING THEM. OPENINGS LARGER THAN 24" X 24" SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER TO DETERMINE POTENTIAL IMPACTS ON THE FRAMING. ANY EQUIPMENT WEIGHING MORE THAN 300 LBS SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER TO DETERMINE POTENTIAL IMPACTS ON THE FRAMING.

SUBMITTALS

SHOP DRAWINGS: SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE OWNER'S REPRESENTATIVE AND ENGINEER-OF-RECORD PRIOR TO ANY FABRICATION OR CONSTRUCTION. DIMENSION AND QUANTITY VERIFICATION ARE THE CONTRACTOR'S RESPONSIBILITIES AND ARE NOT REVIEWED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY THE ENGINEER OF RECORD. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED, EITHER PRIOR TO OR AFTER THE ENGINEER PROCESSES THE SHOP DRAWING SUBMITTALS, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

DEVIATION FROM CONTRACT DOCUMENTS: CHANGES TO THE CONTRACT DOCUMENTS SHALL BE CLOUDED ON SHOP DRAWINGS OR REQUESTED IN WRITING. THE CONTRACTOR IS LIABLE FOR ANY DEVIATIONS UNLESS REVIEWED AND ACKNOWLEDGED BY THE ENGINEER OF RECORD IN WRITING.

DRAWING PREPARATION: COPIES OF STRUCTURAL DRAWINGS (PLANS AND/OR DETAILS) WILL NOT BE ACCEPTED BY CSA AS SHOP DRAWINGS. ALL SHOP DRAWINGS MUST BE REPRODUCED BY THE RESPECTIVE SUPPLIERS AND DETAILED AS NECESSARY.

SUBMITTAL REVIEW TIME: THE CONTRACTOR SHALL PROVIDE 10 WORKING DAYS IN HIS SCHEDULE FOR THE ENGINEER'S REVIEW OF EACH SUBMITTAL. THE 10 WORKING DAYS COMMENCE UPON THE ENGINEER'S RECEIPT OF A PROPERLY COMPLETED SUBMITTAL IN HIS OFFICE.

REQUIRED SUBMITTALS

REQUIRED SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

CONCRETE MIX DESIGNS
CONCRETE REINFORCEMENT
MASONRY GROUT, BLOCK AND REINFORCEMENT

SUBMITTAL ACCEPTANCE: FOLLOWING ACCEPTANCE BY THE ARCHITECT AND ENGINEER AND PRIOR TO FABRICATION, ADDITIONAL TIME FOR REVIEW AND ACCEPTANCE OF SUBMITTAL BY THE BUILDING OFFICIAL IS REQUIRED AND SHALL BE IDENTIFIED AND ALLOWED FOR IN THE CONTRACTOR'S SCHEDULE.

SUBSTITUTIONS: SUBMIT SUBSTITUTION REQUESTS PER THE PROCEDURES IN THE SPECIFICATIONS WITH APPLICABLE ICC REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DETAILING, FABRICATION AND ERECTION. ADDITIONAL ENGINEERING CALCULATIONS AND DETAILS, PROVIDED BY A STRUCTURAL ENGINEER LICENSED IN THE PROJECT STATE, MAY BE REQUIRED OF THE CONTRACTOR FOR SUBSTITUTIONS THAT ARE NOT SIMILAR TO THE SPECIFIED PRODUCTS AND CONFIGURATION.

CONCRETE

REFERENCE STANDARDS:
ACI - AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318

AWS - AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE - REINFORCING STEEL, AWS D14

GENERAL: CONCRETE SHALL BE MIXED, PORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 301.

SLAB-ON-GRADE: SEE TYPICAL SLAB ON GRADE DETAILS FOR ALL REQUIREMENTS FOR SLABS-ON-GRADE.

MIX DESIGNS: THE CONCRETE MIX TABLE SHOWN BELOW SHALL APPLY TO ALL CONCRETE MIX DESIGNS USED ON THIS PROJECT. MIX DESIGN SUBMITTALS SHALL BE IDENTIFIED FOR INTENDED STRUCTURAL USE AND SUBMITTED TO THE OWNER'S REPRESENTATIVE AND STRUCTURAL ENGINEER FOR REVIEW TWO WEEKS PRIOR TO PLACING ANY CONCRETE.

MIX PROPORTIONING: ALL CONCRETE MIX DESIGNS SHALL BE PROPORTIONED IN ACCORDANCE WITH SECTION 5.3 (FIELD EXPERIMENT AND/OR TRIAL MIXTURES) OF ACI 318. SUBMIT MIX DESIGN FOR EACH CLASS OF CONCRETE. IF A STANDARD DEVIATION ANALYSIS IS USED, THE CONCRETE SHALL ACHIEVE AN AVERAGE STRENGTH IN ACCORDANCE WITH TABLE 5.3.2.2 OF ACI 318. SUBMITTALS MADE WHICH DO NOT CONFORM TO ACI 318 SECTION 5.3 SHALL BE REJECTED.

CONCRETE USAGE	CONCRETE MIX DESIGNS				FLY ASH CONTENT	EXPOSURE CLASS	
	f _c (PSI) 28 DAY, MIN	SLUMP	ENTRAINED AIR (MAX)	W/C RATIO (MAX)			
FOOTINGS	3,000	6"	5% (+/- 1.5%)	0.50	1"	15-25%	F1

CEMENT CONTENT: SCHEDULE CEMENT CONTENT IS THE MINIMUM TOTAL CEMENTITIOUS MATERIALS CONTENT INCLUDING PORTLAND CEMENT AND FLY ASH.

FLY ASH: FLY ASH SHALL CONFORM TO ASTM C618, TYPE F. PERCENTAGE SCHEDULED IS BY WEIGHT OF TOTAL CEMENTITIOUS MATERIAL INCLUDING ASTM C150, C595, C645, AND C1187 CEMENT. DO NOT USE FLY ASH IF CONTENT WITHIN THE PERCENTAGES SHOWN CANNOT BE ACHIEVED.

ADMIXTURES: WATER-REDUCING ADMIXTURES CONFORMING TO ASTM C494 MAY BE INCORPORATED IN THE CONCRETE MIX DESIGNS AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CALCIUM CHLORIDE OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

AIR CONTENT: AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260 SHALL BE USED IN ALL CONCRETE MIXES FOR WORK THAT IS EXPOSED TO WEATHER, WHERE ENTRAINED AIR IS NOT SCHEDULED. DO NOT ALLOW THE AIR CONTENT OF SLABS TO EXCEED 3% NATURALLY. THE AMOUNT OF WETTED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE END OF THE PLACING HOSE.

SLUMP: SCHEDULED SLUMP IS THE MAXIMUM ALLOWED AND SHALL BE ACHIEVED PRIOR TO ADDING ANY WATER REDUCING ADMIXTURES OR PLASTICIZERS.

CONCRETE CONT.

LABORATORY TESTING: LABORATORY TESTING WILL BE REQUIRED IN ACCORDANCE WITH ASTM C31. PERFORM COMPRESSION TEST PER ASTM C39, AIR CONTENT TEST PER ASTM C138 (GRAVIMETRIC METHOD), ASTM C173 (VOLUMETRIC METHOD), OR ASTM C231 (PRESSURE METHOD), SLUMP TEST PER ASTM C143.

LABORATORY SHALL TEST THE NUMBER OF CYLINDERS SPECIFIED BELOW FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF:
2 AT 7 DAYS FOR INFORMATION
2 AT 28 DAYS FOR ACCEPTANCE

SLEEVES: SLEEVES FOR PIPING OR DUCTS, EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED IN JOISTS, BEAMS, GIRDERS, OR IN SLABS ADJACENT TO A COLUMN (WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS) UNLESS APPROVED BY THE ENGINEER. PLUMBING, MECHANICAL, & ELECTRICAL CONTRACTORS SHALL SUBMIT SIZES AND LOCATIONS OF ALL PENETRATIONS IN STRUCTURAL SLABS FOR THE STRUCTURAL ENGINEER'S APPROVAL. BEFORE THE SLAB IS PLACED, ALL PIPE PENETRATIONS THROUGH SLABS SHALL BE SLEEVED IN CONFORMANCE WITH ACI 318, SECTION 6.3.

NON-STRUCTURAL EMBEDS: REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS.

CONDUITS: WHEN RUN IN SLABS, ELECTRICAL CONDUIT SHALL BE RUN AT MID-DEPTH OF THE SLAB AND CONDUIT SIZE SHALL NOT EXCEED 3% PERCENT OF THE SLAB DEPTH. NO CONDUIT SHALL BE PLACED IN SLABS WITH ACTUAL CONCRETE THICKNESS LESS THAN 3 INCHES, NOT INCLUDING METAL DECK DEPTH. THERE SHALL BE A MINIMUM OF 3 INCHES OF CLEAR SPACE BETWEEN CONDUITS. ALUMINUM CONDUIT IS PROHIBITED. ADDITIONAL REINFORCEMENT, #3 AT 12" OC, SHALL BE PLACED PERPENDICULAR TO THE CONDUIT ABOVE AND BELOW THE CONDUIT. THE ADDED REINFORCING SHALL EXTEND 1'-0" BEYOND THE CONDUITS ON BOTH SIDES.

REINFORCING STEEL MATERIALS:

DEFORMED BARS ASTM A615, GRADE 60
SMOOTH WELDED WIRE FABRIC (WWF) ASTM A185 (Fy = 65,000 PSl)

REINFORCING STEEL DETAILING: REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 - DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.

REINFORCING STEEL PLACEMENT: ALL REINFORCEMENT SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING CONCRETE PLACEMENT. REINFORCING PLACEMENT SHALL BE APPROVED BY THE ARCHITECT OR THEIR AUTHORIZED REPRESENTATIVE BEFORE CONCRETE IS PLACED.

REBAR SPLICES: LAP REINFORCING BARS AS NOTED ON THE DRAWINGS, WHERE SPICE LENGTH IS NOT SHOWN, USE TYPE 1^s SPLICE PER DEVELOPMENT AND SPICE LENGTH SCHEDULE. MECHANICAL OR WELDED BUTT SPLICES SHALL BE SUBJECT TO STRUCTURAL ENGINEER'S APPROVAL. MECHANICAL SPLICES, WHERE ALLOWED ON THE PLANS, SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE SPLICED BARS IN BOTH TENSION AND COMPRESSION. LAP SPLICES OF BOTTOM BARS SHALL OCCUR AT A SUPPORT. LAP SPLICES OF TOP STEEL SHALL OCCUR AT MID SPAN.

FIELD BENDING: NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED AS SUCH OR APPROVED BY THE STRUCTURAL ENGINEER.

WELDING: REINFORCING BARS SHALL NOT BE WELDED OR TACK WELDED TO OTHER BARS OR TO PLATES, ANGLES, ETC. UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS D14. WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS QUALIFIED FOR WELDS USING APPROVED ELECTRODES.

CONCRETE PROTECTION: CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"

EXPOSED TO EARTH OR WEATHER
#6 OR SMALLER 1 1/2"
#6 OR LARGER 2"

CHAMFER: PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC. UNLESS NOTED OTHERWISE.

MISC. CONCRETE PADS: COORDINATE CONCRETE EQUIPMENT PAD AND HOUSE KEEPING PAD LOCATIONS AND DIMENSIONS WITH ARCH, MECHANICAL, ELECTRICAL, PLUMBING, AND OWNER REQUIREMENTS.

CONCRETE PLACEMENT: ALL CONCRETE SHALL BE VIBRATED.

MECHANICAL AND CHEMICAL ANCHORS

ANCHOR CAPACITY: ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

INSTALLATION: INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS AND IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

POST-INSTALLED DRILLING: HOLES FOR INSTALLING REINFORCING BARS, BOLTS, THREADED RODS AND INSERTS SHALL BE DRILLED USING THE APPROVED DRILLING METHOD FOR THE ANCHOR TO BE INSTALLED. NON-DESTRUCTIVELY LOCATE EXISTING REINFORCING PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCING.

THREADED RODS: ADHESIVE ANCHORS SHALL USE ASTM A36 THREAD RODS, UNO.

INSTALLATION TRAINING: PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE EOR AS REQUESTED.

OVERHEAD INSTALLATION: ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR VERTICALLY OVERHEAD ORIENTATIONS THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH AICRIS (ACI 318-11 D.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.

MINIMUM CONCRETE AGE: ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D.2.2).

SPECIAL INSPECTION: PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC 2012 TABLE 1705.3 NOTE B).

SHALLOW EMBEDMENT ANCHORS FOR HOLLOW CORE AND POST TENSION SLAB: DEWALT MINI-UNDERCUT

ALLOWABLE ANCHORS: THE FOLLOWING TABLE OF ANCHORS REPRESENT THE DEFAULT PRODUCTS USED IN DESIGN. WHERE SPECIFIC PRODUCTS ARE NOT OTHERWISE CALLED OUT IN THE STRUCTURAL DRAWINGS, THIS TABLE SHALL CONTROL.

BASE MATERIAL	ADHESIVE	EXPANSION ANCHOR	SCREW ANCHOR	PAF
HLTI				
CONCRETE	HY 200	KWIK BOLT TZ	KWIK HUS-EZ	X-C*
CMU (GROUTED)	HY 70	KWIK BOLT TZ	KWIK HUS-EZ	X-C
CMU (HOLLOW)	HY 70	HLC SLEEVE	KWIK CON-II*	X-C

* USE X-C FOR WOOD SILL PLATE TO CONCRETE

SIMPSON STRONG-TIE

CONCRETE	SET-XP	STRONG BOLT 2	TITEN HD	PDPA**
CMU (GROUTED)	SET-XP	STRONG BOLT 2	TITEN HD	POP
CMU (HOLLOW)	SET	---	TITEN HD	POP

** USE PHN FOR WOOD SILL PLATE TO CONCRETE

DEWALT/POWERS FASTENERS

CONCRETE	PURE 110-AC100-GOLD	STUD-SD-1	WEDGE BOLT+	0.300" DIA HEAD DRIVE PIN***
CMU (GROUTED)	AC100-GOLD	STUD-SD-1	WEDGE BOLT+	0.300" DIA HEAD DRIVE PIN***
CMU (HOLLOW)	AC100-GOLD	---	---	0.300" DIA HEAD DRIVE PIN***

*** 0.145" DIA SHANK

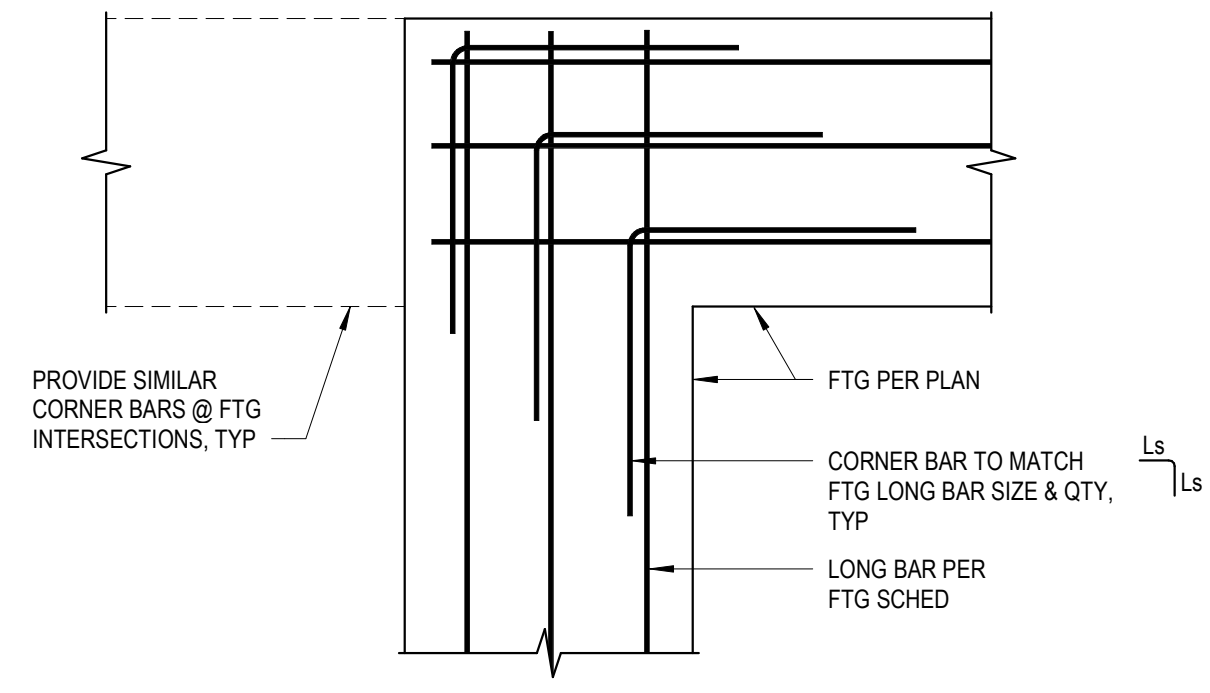
MASONRY

REFERENCE STANDARDS:
ACI/AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, ACI 530

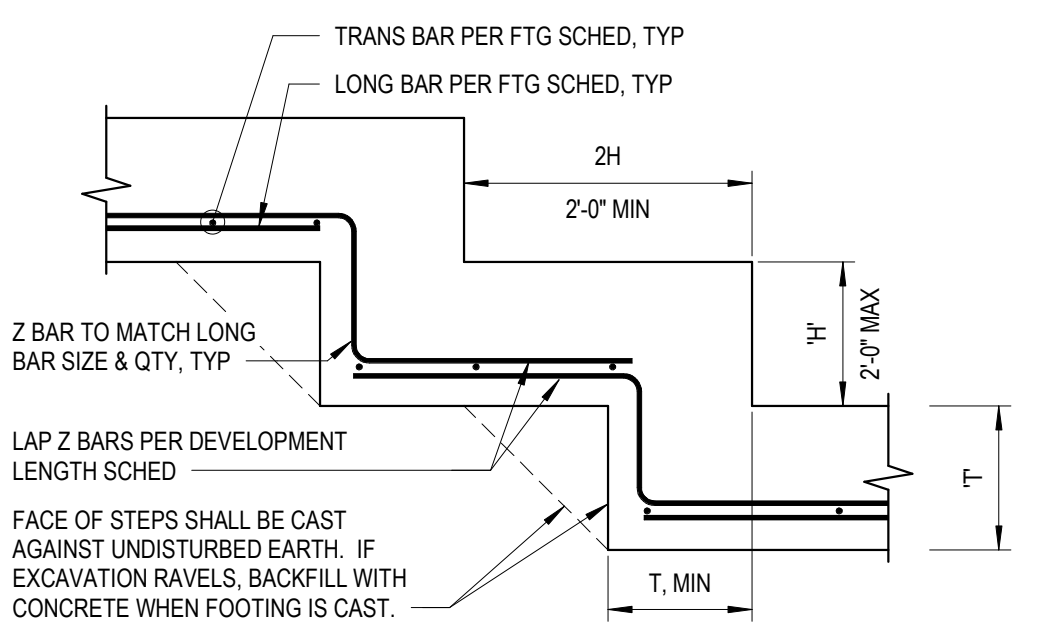
ACI/AMERICAN CONCRETE INSTITUTE, SPECIFICATION FOR MASONRY STRUCTURES, ACI 530.1

TYPICAL LIMITS: CONCRETE MASONRY UNITS SHALL BE ASTM C90, GRADE N, TYPE I, MOISTURE CONTROLLED UNITS. ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF fn = 1,500 PSl AT 28 DAYS. CONCRETE MASONRY WALLS SHALL BE REINFORCED PER THE CONSTRUCTION DOCUMENTS, WHERE DETAILS ARE NOT PROVIDED, REINFORCE ACCORDING TO THESE NOTES. STRUCTURAL DESIGN IS IN ACCORDANCE WITH IBC SECTION 2107 "ALLOWABLE STRESS DESIGN". CONCRETE MASONRY UNITS SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH ASTM C140. ALL LOAD-BEARING BLOCK MASONRY SHALL HAVE A MINIMUM NET AREA UNIT STRENGTH OF 1900 PSl AT 28 DAYS.

FACE/HOLLOW UNITS: BRICK MASONRY UNITS SHALL COMPLY WITH ASTM C216 FOR FACING BRICK OR ASTM C652 FOR HOLLOW BRICK. SEE THE CONSTRUCTION DOCUMENTS FOR TYPES USED ON THE PROJECT. ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF fn = 2,000 PSl. BRICK



1 TYPICAL FOOTING CORNER BARS
3/4" = 1'-0"



2 TYPICAL FOOTING STEP
3/4" = 1'-0"

NOTES:

- NOMINAL BAR DIAMETER (INCHES)
- TENSION DEVELOPMENT LENGTH (INCHES) FOR REINFORCEMENT SATISFYING THE FOLLOWING REQUIREMENTS:
SLABS AND WALLS: CLEAR SPACING $\geq 2d_b$ AND CONCRETE CLEAR COVER $\geq d_b$ BEAMS AND COLUMNS: CLEAR SPACING $\geq d_b$ AND CONCRETE CLEAR COVER $\geq d_b$
- DEVELOPMENT LENGTH OF BARS IN THICK CONCRETE = $1.3 \times L_d$ (INCHES)
- DEVELOPMENT LENGTH OF BARS OR DOWELS IN COMPRESSION = $19 \times d_b$ (INCHES)
- TIED COLUMN LAP SPICE IN COMPRESSION = $30 \times d_b$ (INCHES)
- SPIRAL COLUMN LAP SPICE IN COMPRESSION = $22.5 \times d_b$ (INCHES)
- TYPICAL LAP SPICE LENGTH = $1.3 \times L_d$ (INCHES)
- LAP SPICE LENGTH OF HORIZONTAL BARS IN THICK CONCRETE = $1.69 \times L_d$ (INCHES)

2. MULTIPLY VALUES IN THE TABLE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET THE REQUIREMENTS FOR L_d IN NOTE 1.

3. "HORIZONTAL BARS IN THICK CONCRETE" REFERS TO BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW. THIS INCLUDES BEAMS, SLABS, FOUNDATIONS, AND WALLS.

4. THE DEVELOPMENT AND SPICE LENGTHS ARE BASED ON REINFORCEMENT STRENGTH $F_y = 60$ KSI.

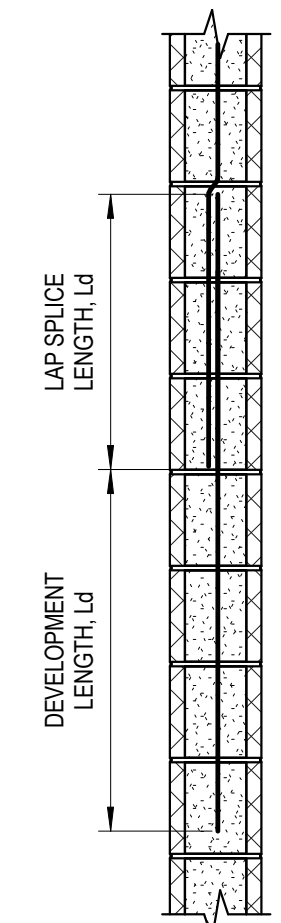
5. #14 AND #18 BARS SHALL NOT BE LAP SPICED. SEE "GENERAL NOTES"

6. MULTIPLY VALUES IN THE TABLE BY 1.3 FOR USE WITH LIGHTWEIGHT AGGREGATE CONCRETE.

BAR SIZE	Fc = 3,000 PSI			
	Ld	Ls	Lb	Ldb
#3	17	22	22	28
#4	22	29	29	36
#5	28	36	36	47
#6	33	43	43	56
#7	48	63	63	81
#8	59	77	77	93
#9	62	81	81	105
#10	70	91	91	118
#11	78	101	101	131
#14	93	121	--	--
#18	124	161	--	--

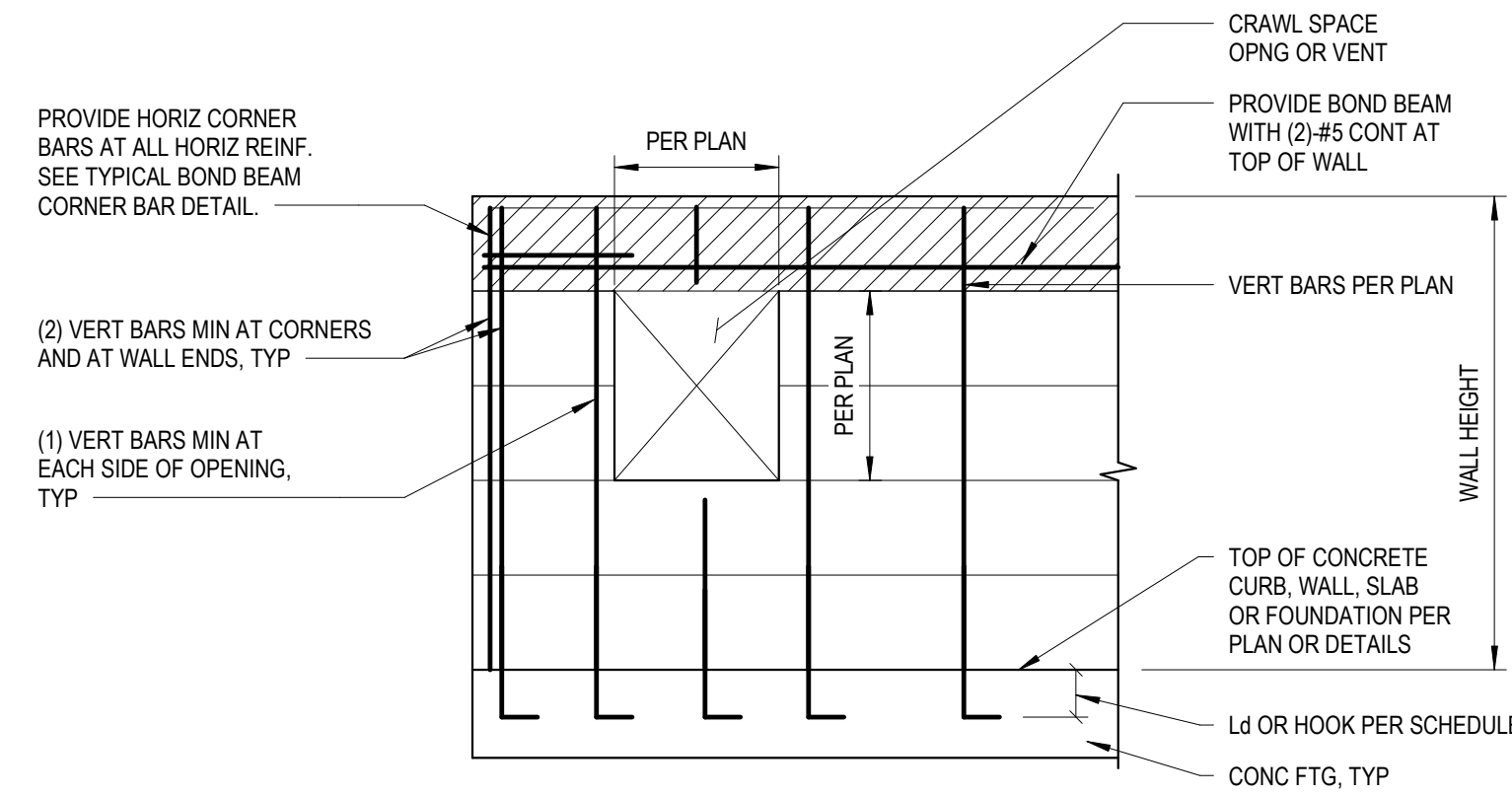
BAR SIZE	CMU SPLICE AND DEVELOPMENT LENGTHS	
	TENSION DEV LENGTH, Ld	STD HOOK DEV LENGTH, Lh
#4	20	29
#5	25	45

(ALL VALUES IN INCHES)
 $f_m = 1,500$ PSI
 $f_c = 32,000$ PSI



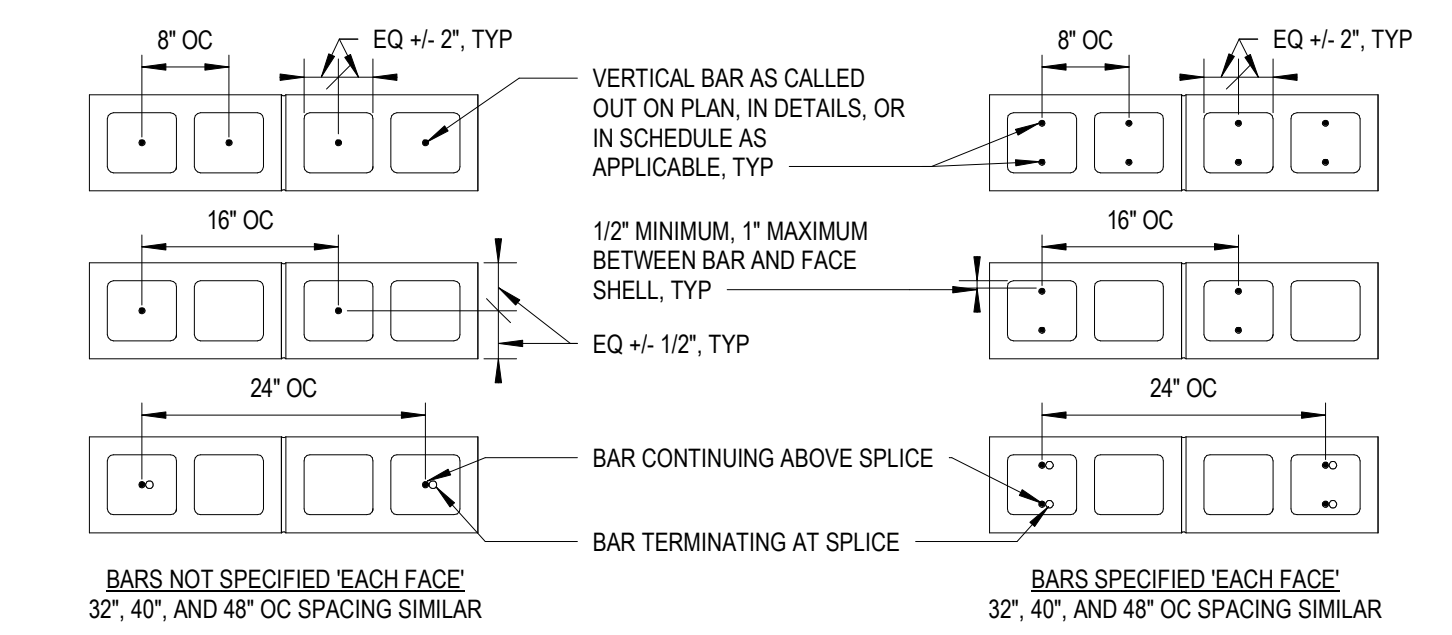
3 CONCRETE DEVELOPMENT LENGTH SCHEDULE
3/4" = 1'-0"

4 CMU DEVELOPMENT & SPLICE LENGTH SCHEDULE
3/4" = 1'-0"

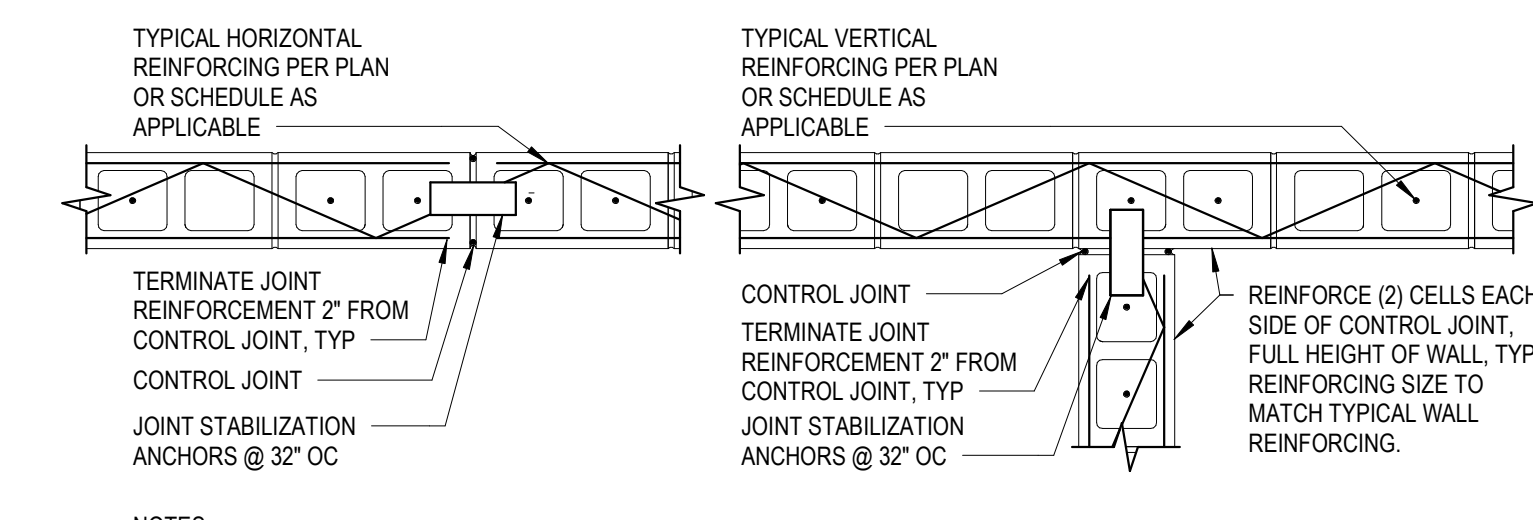


5 TYPICAL CMU WALL REINFORCING - ELEVATION
3/4" = 1'-0"

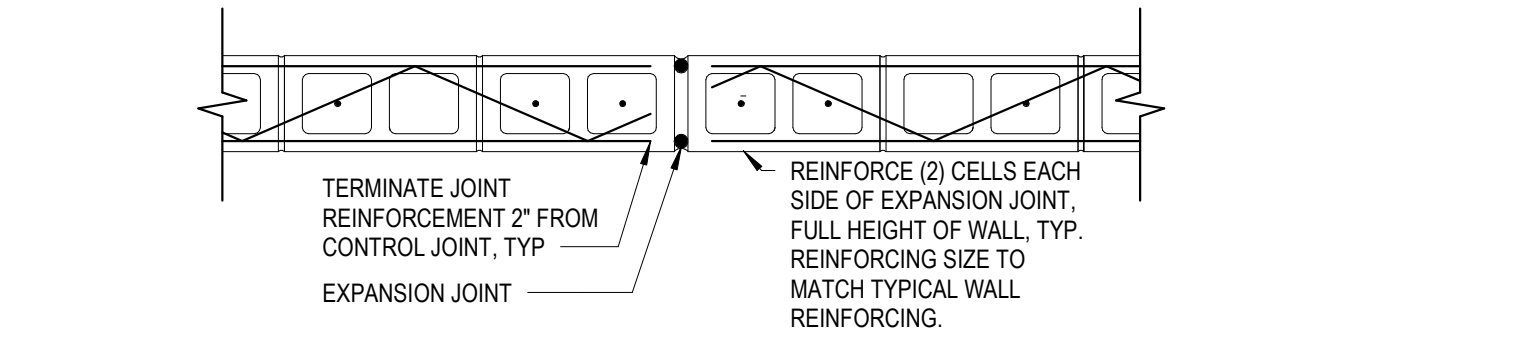
- CMU WALL CONSTRUCTION NOTES
- COORDINATE WITH MECH/ELEC & PLUMBING DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS THROUGH WALLS.
 - VERTICAL CONTROL JOINTS ARE LOCATED ON THE ARCHITECTURAL ELEVATIONS. SEE TYPICAL CMU WALL CONTROL JOINT DETAIL FOR CONSTRUCTION REQUIREMENTS.
 - HOLES TO BE CORED IN WALLS AFTER CONSTRUCTION SHALL BE LOCATED SUCH THAT NO HORIZ OR VERT REINF IS CUT. ALL HOLES SHALL BE SEALED WITH ELASTOMERIC SEALANT.
 - REINFORCING SHALL BE AS INDICATED ON THE PLANS. WHERE NOT CALLED OUT ON PLAN, PROVIDE REINFORCING PER TYPICAL MASONRY WALL REINFORCING SCHEDULE.
 - SLOPE FOR VERTICAL OFFSET BARS NOT TO EXCEED 1:6.
 - REINF INDICATED AS TYPICAL APPLIES TO THE ENTIRE LENGTH OF WALL UNO.
 - ALL CELLS WITH REINF ARE TO BE GROUTED SOLID.
 - ALL WALLS ARE TO BE LAID UP IN RUNNING BOND UNO.
 - ADDITIONAL REINFORCING SHALL BE PROVIDED AS NOTED IN TYPICAL DETAILS AND SCHEDULES. FOR TYPICAL OPENING, SEE ELEVATION.
 - BENDING OF DOWELS OUT OF STEM WALLS FOR ALIGNMENT INTO CELLS OF MASONRY UNITS IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
 - VERT REINF SHALL BE POSITIONED AND TIED AT EACH BAR LAP. CENTER BAR IN CELL UNO. SEE TYPICAL VERTICAL BAR POSITIONING DETAIL FOR MORE INFORMATION.
 - COORDINATE PLACEMENT OF VERTICAL BARS TO AVOID INTERFERENCE WITH BEAM BEARING PLATES AND EMBEDS.



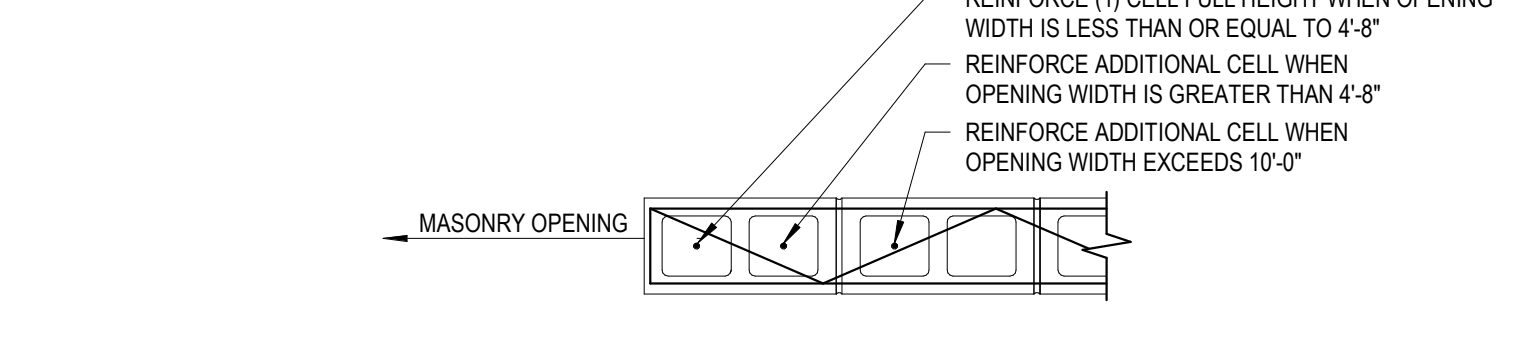
7 TYPICAL CMU VERTICAL BAR PLACEMENT
3/4" = 1'-0"



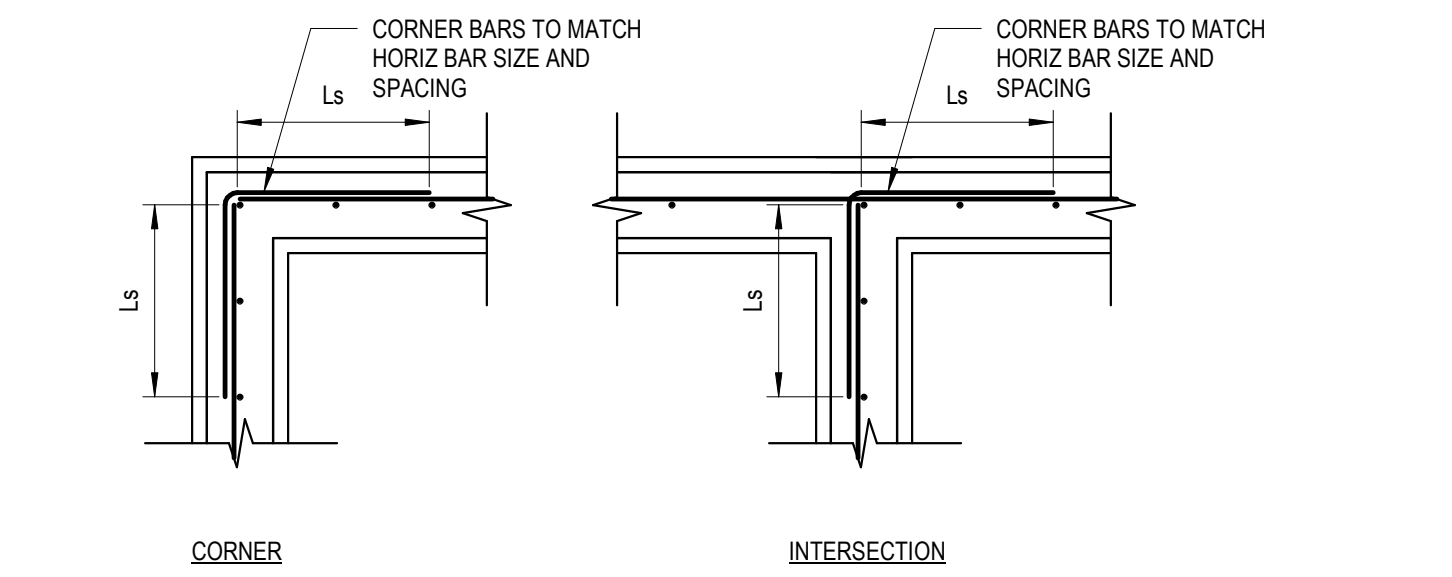
8 TYPICAL MASONRY CONTROL JOINT DETAILS
3/4" = 1'-0"



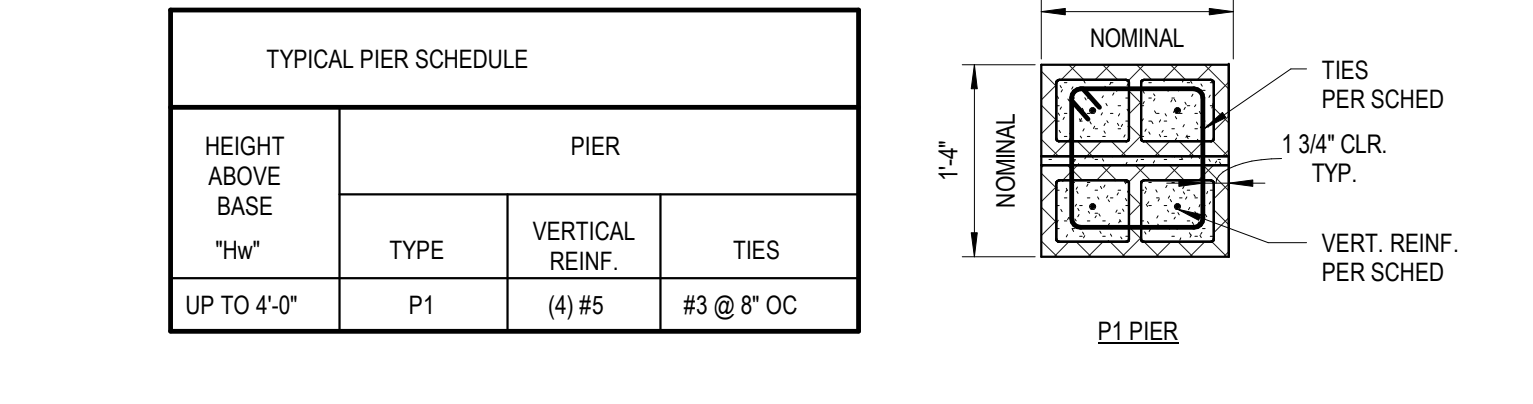
9 TYPICAL CMU EXPANSION JOINT
3/4" = 1'-0"



10 TYPICAL MASONRY OPENING REINFORCEMENT
3/4" = 1'-0"



11 TYPICAL MASONRY BOND BEAM CORNER BARS
3/4" = 1'-0"



12 TYPICAL MASONRY BOND BEAM CORNER BARS
3/4" = 1'-0"

NOTES:

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PROJECT: **CLIFTON ROAD DEVELOPMENT**
CLIFTON ROAD & SANDERSON ROAD
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TYPICAL DETAILS

CCI PROJECT NO. 00216-0005
DRAWING DATE 01/25/19
PM Designer Checker
DRAWN/Author

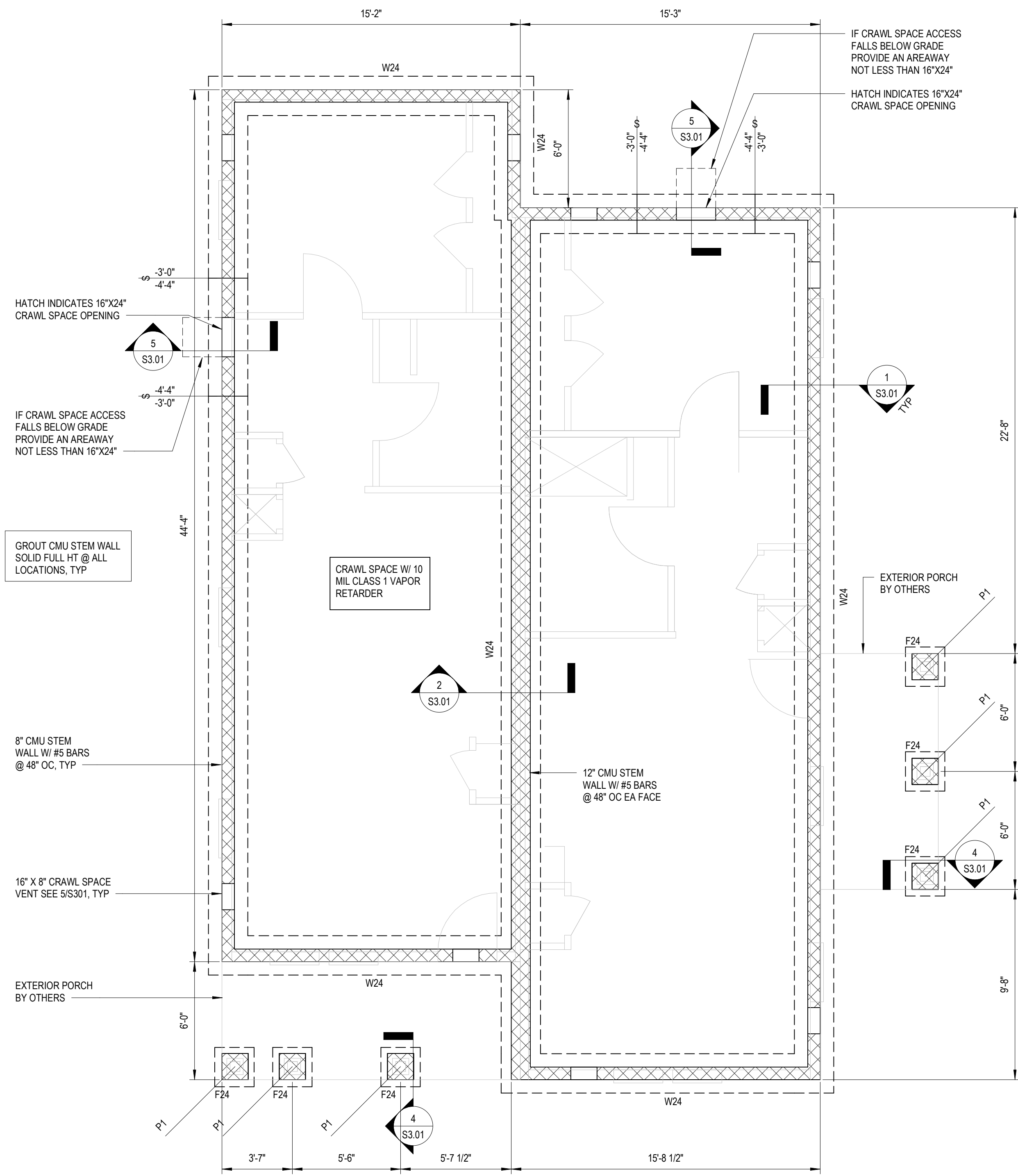
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ROBERT A. HAINES
REGISTERED ENGINEER
No. 112318
STATE OF TENNESSEE
01/25/2019

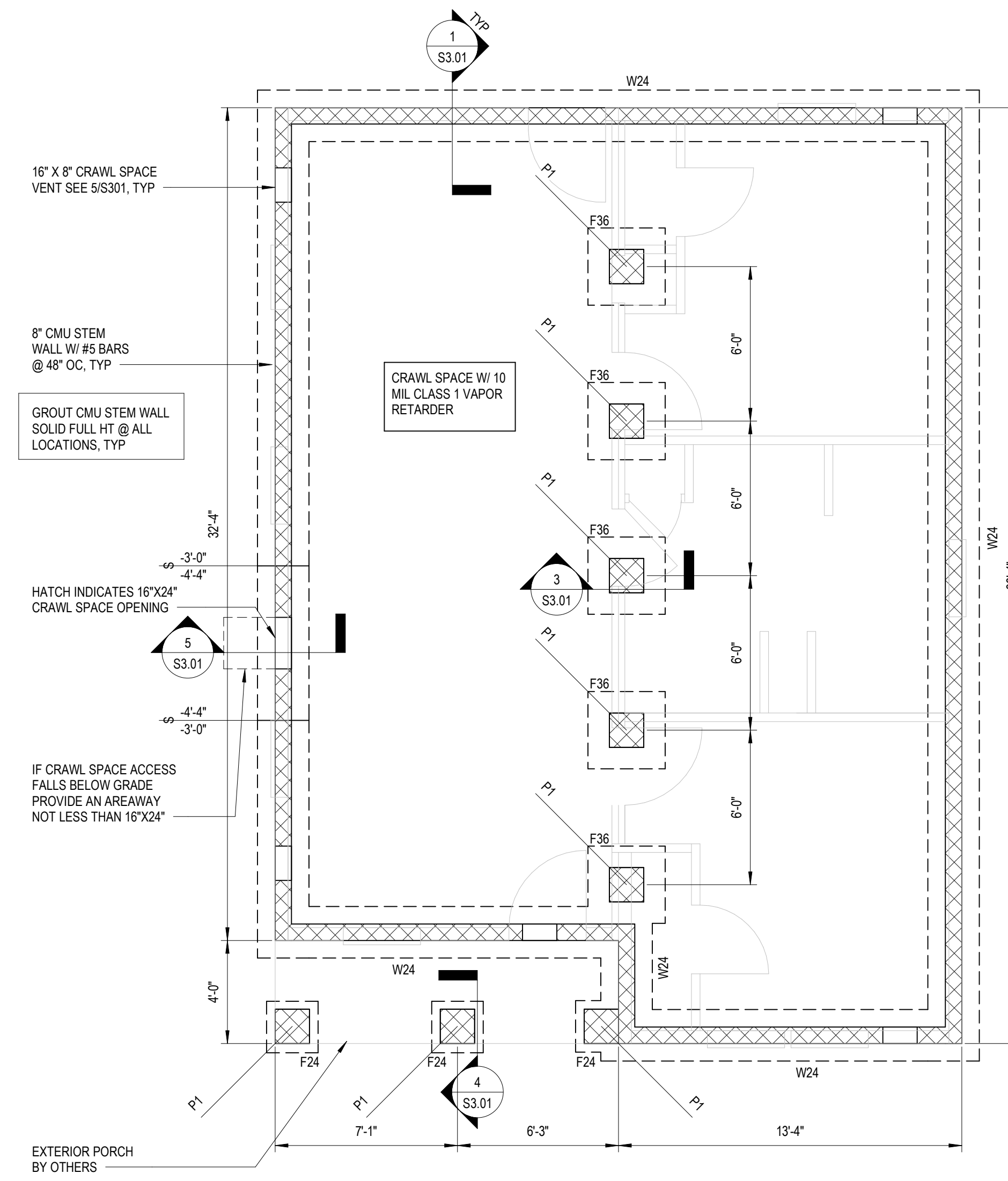
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NOTES:



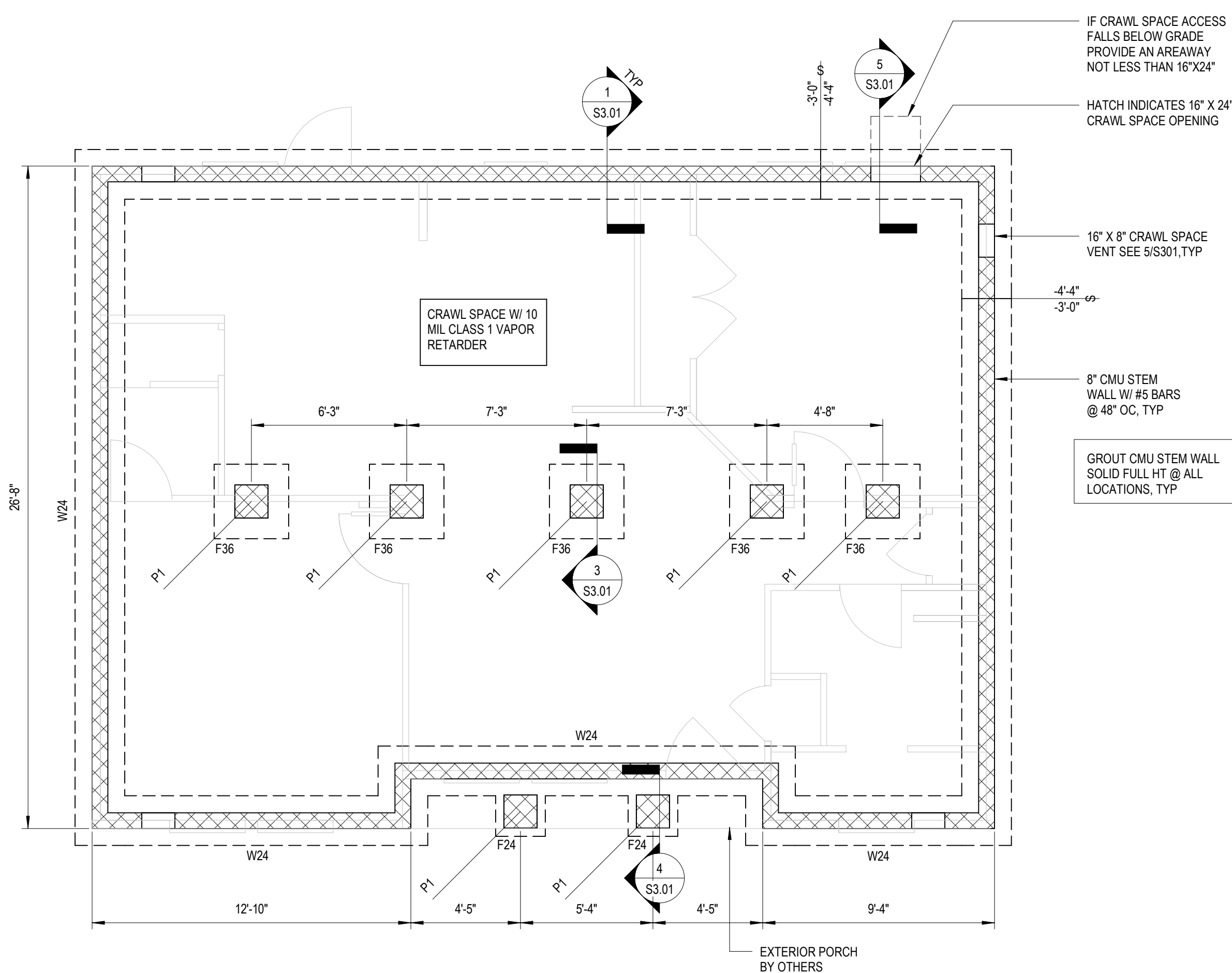
3244 DUPLEX FOUNDATION PLAN

1/4" = 1'-0"



2836 2BR 1BA FOUNDATION PLAN

1/4" = 1'-0"



2BR/1BA RANCH STYLE FOUNDATION PLAN

1/4" = 1'-0"

WALL FOOTING SCHEDULE				
MARK	WIDTH	DEPTH	REINFORCEMENT	
W24	2'-0"	1'-0"	(3)#5 CONT W #5 X 1'-6" TRANS @ 1'-6" OC	

COLUMN FOOTING SCHEDULE				
MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT
F24	2'-0"	2'-0"	1'-0"	(3)#5 EV BTM
F36	3'-0"	3'-0"	1'-0"	(4)#5 EV BTM

- FOUNDATION PLAN NOTES:**
- ELEVATIONS ARE BASED ON A REFERENCE FLOOR ELEVATION OF 0'-0". UNO. T/FINISHED FLOOR IS AT REFERENCE ELEVATION.
 - T/ EXTERIOR FOOTING ELEVATION = -3'-0". TYP. UNO.
 - F67 INDICATES COLUMN OR ISOLATED SPREAD FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
 - W24 INDICATES WALL OR CONTINUOUS FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
 - FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
 - FOR SIDEWALKS, PAVING, AND SITE DETAILS AT THE BUILDING EXTERIOR, SEE ARCHITECTURAL AND CIVIL DRAWINGS.

FOUNDATION PLAN NOTES

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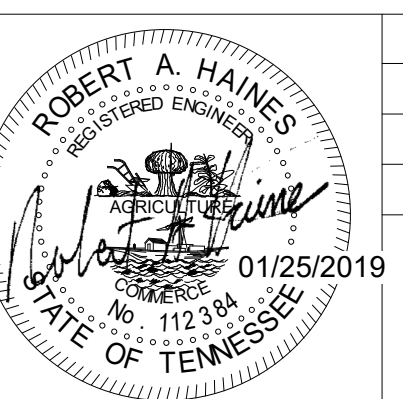
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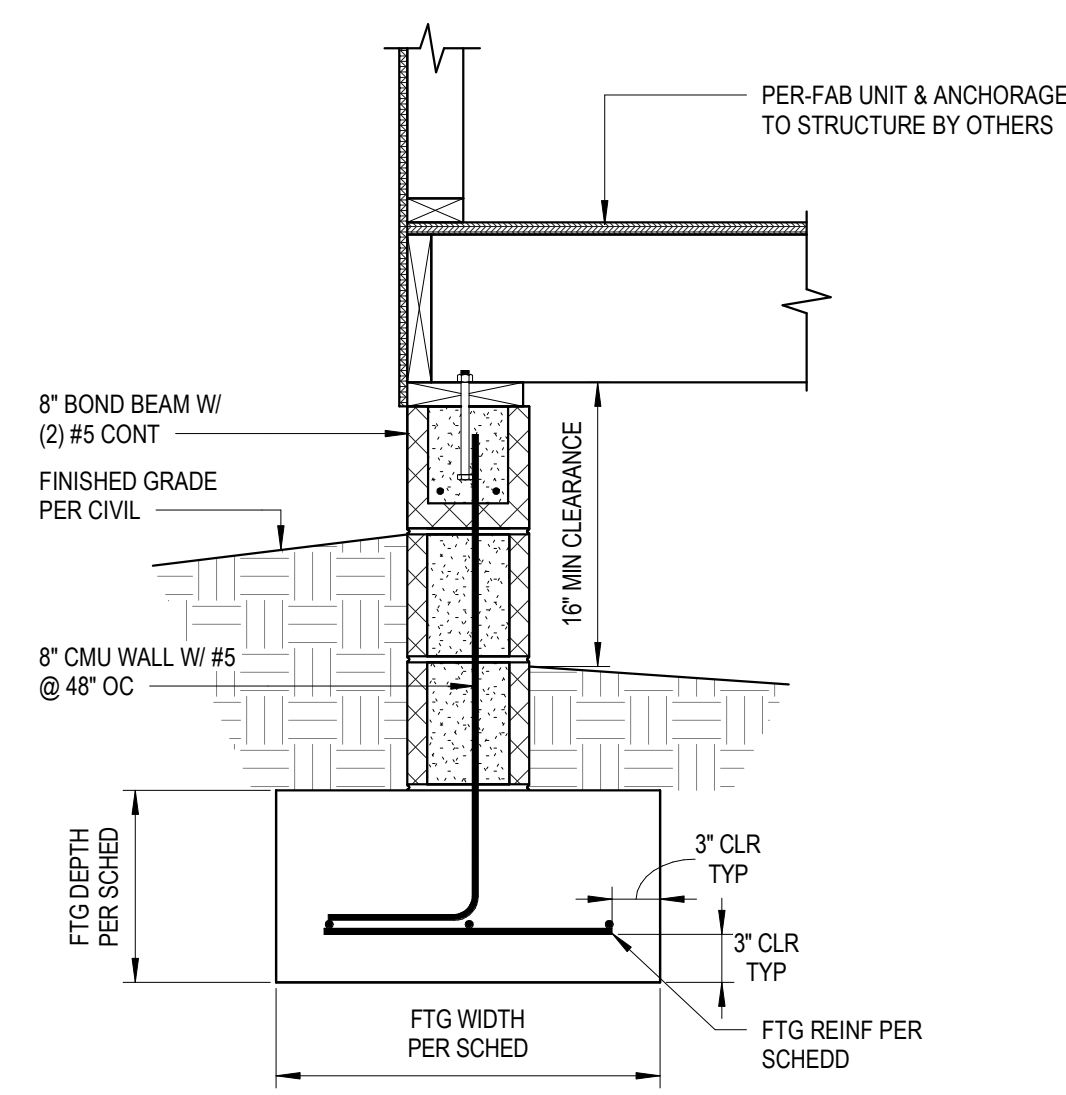
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FOUNDATION PLANS

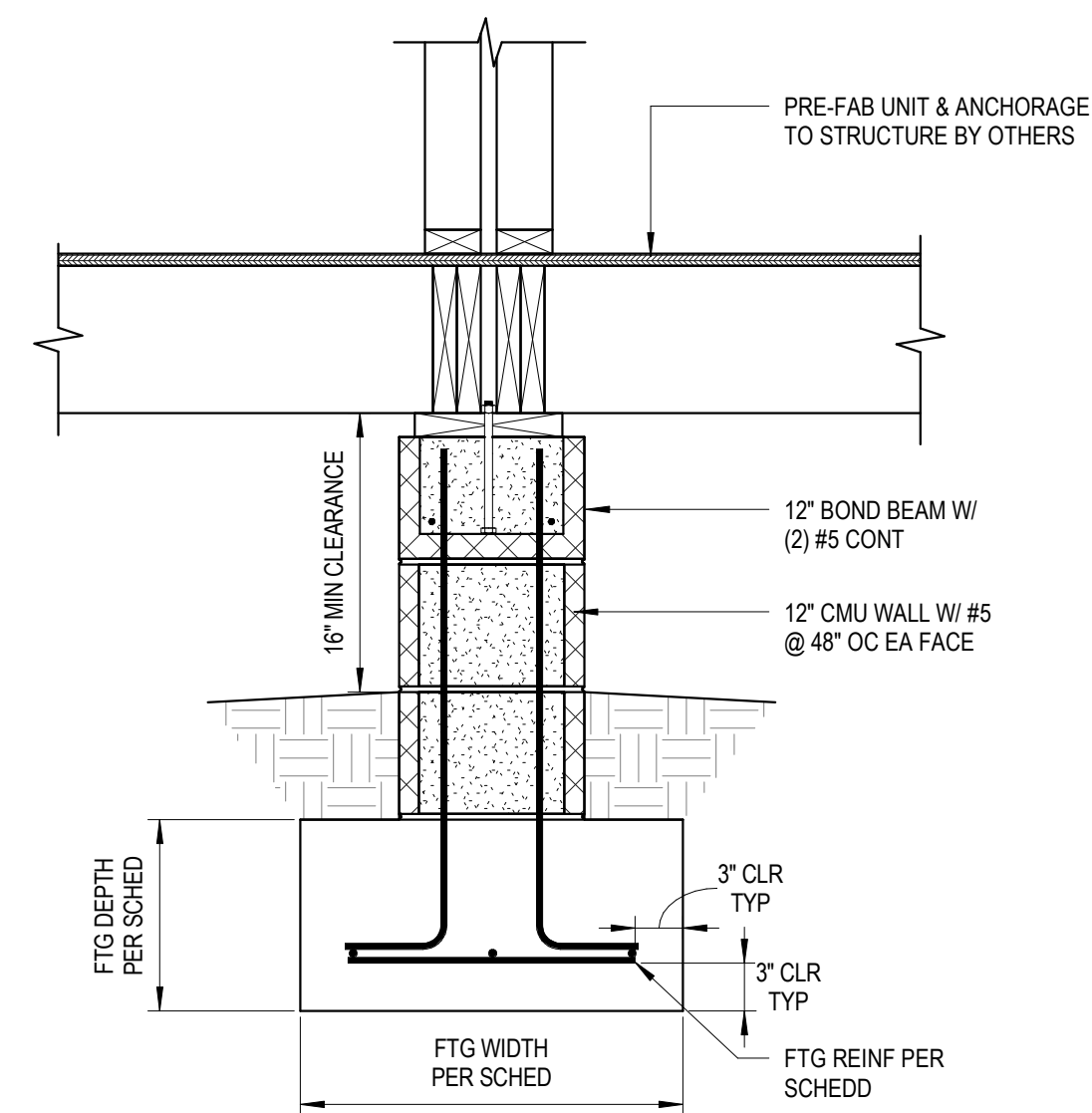
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DRAWING DATE	01/25/19
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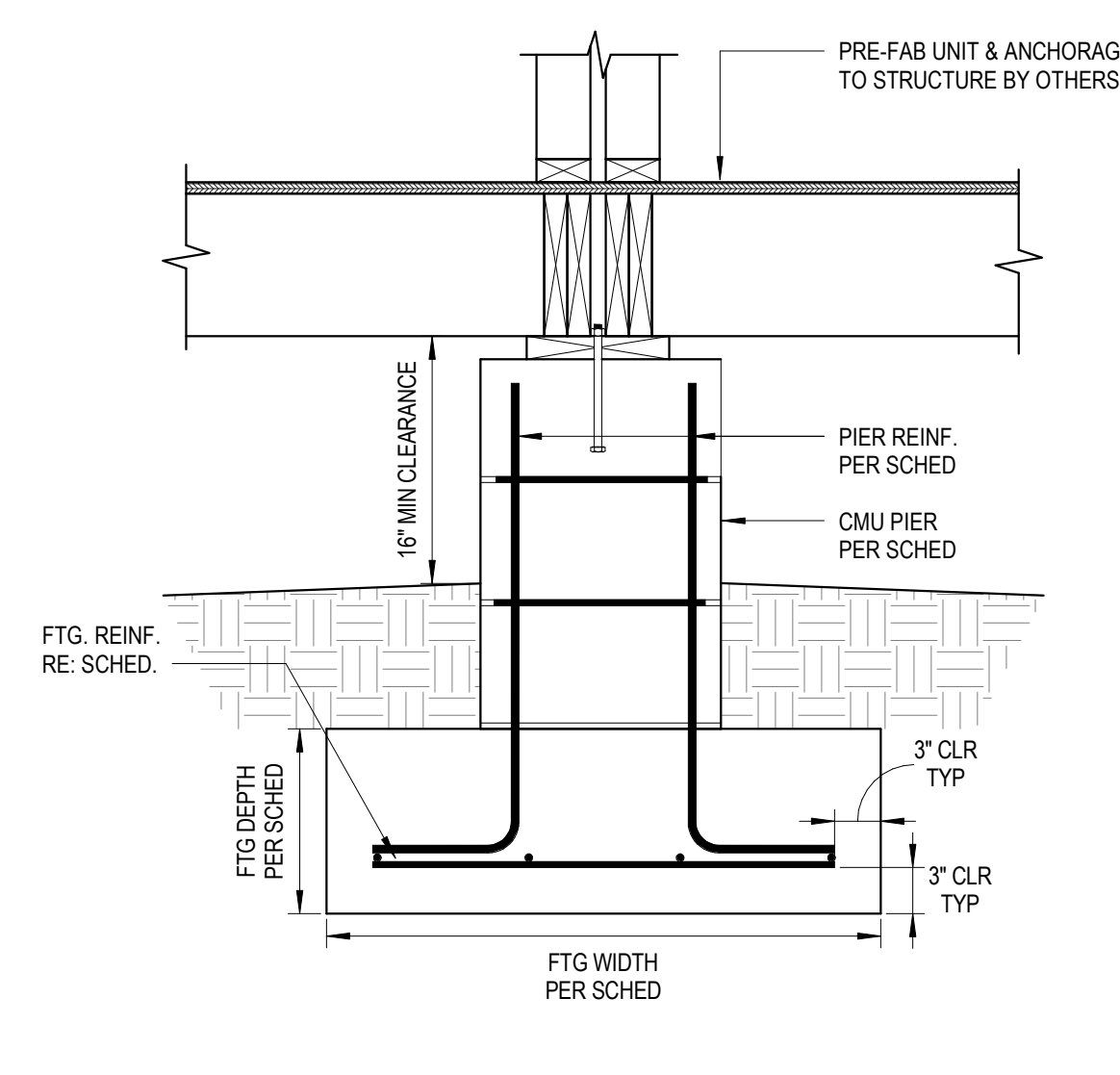




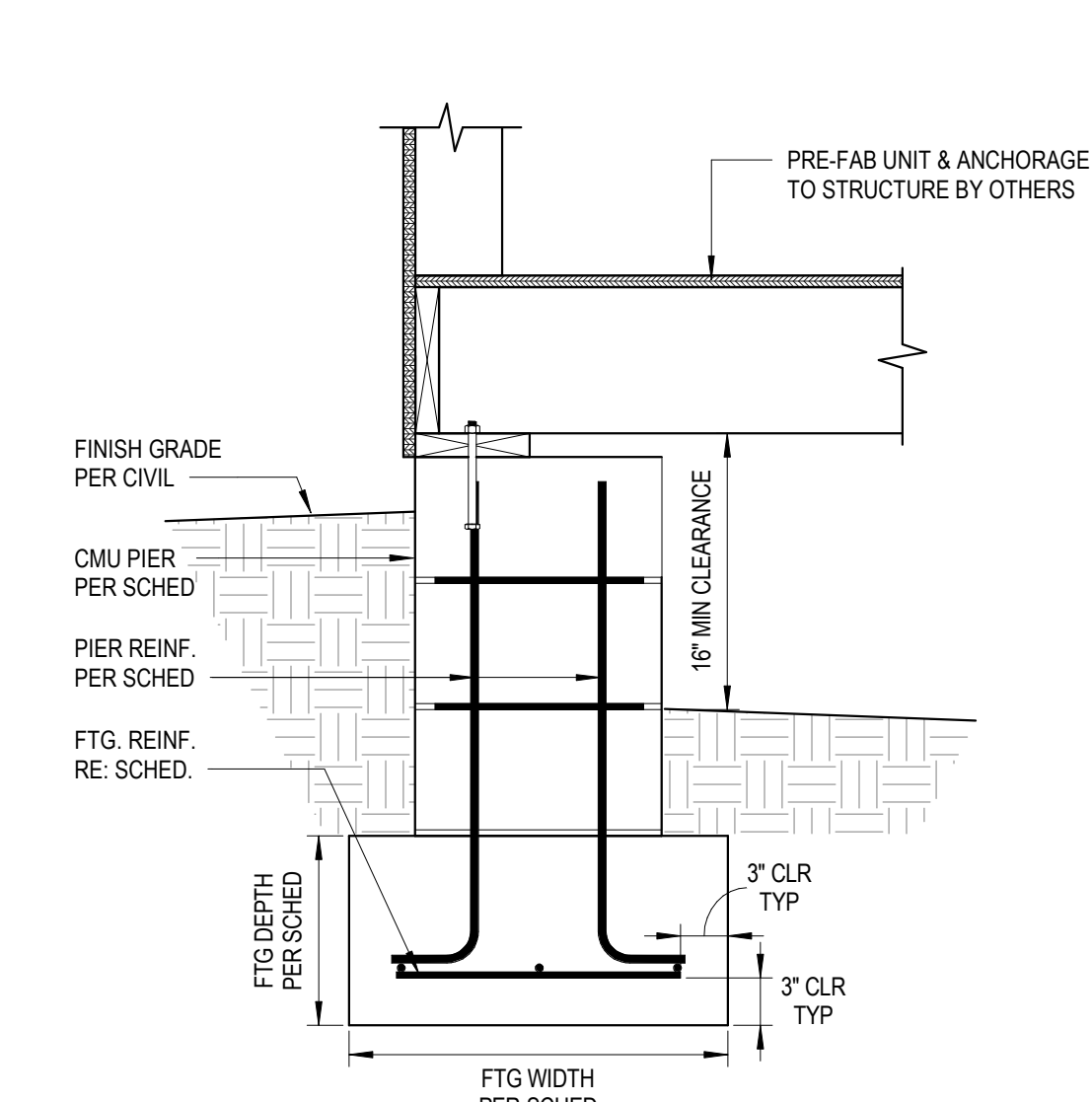
1 EXTERIOR STEM WALL FOUNDATION
1" = 1'-0"



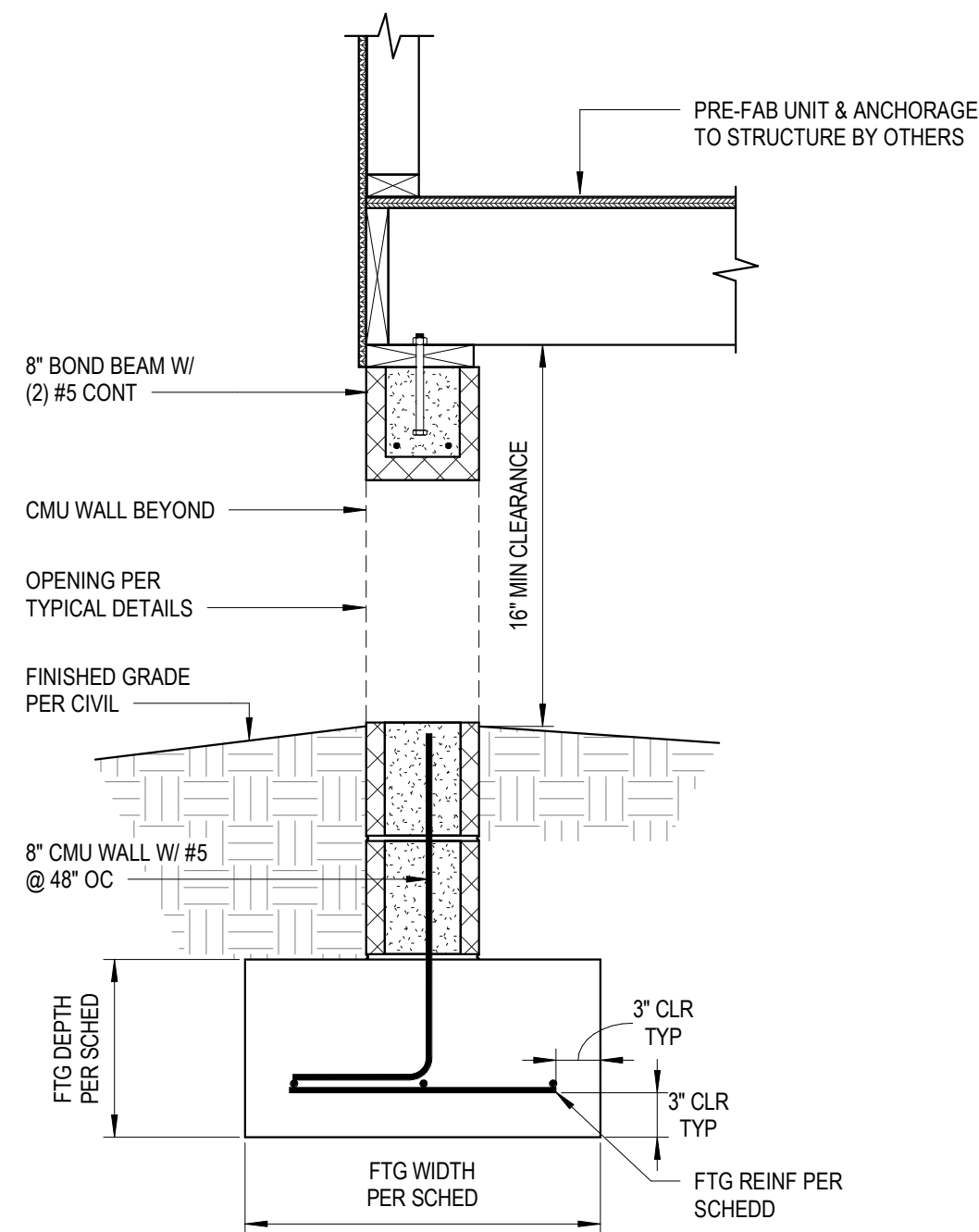
2 INTERIOR STEM WALL FOUNDATION
1" = 1'-0"



3 INTERIOR PIER FOUNDATION
1" = 1'-0"



4 EXTERIOR PIER @ PORCH FOUNDATION
1" = 1'-0"



5 EXTERIOR STEM WALL FOUNDATION @ OPENING
1" = 1'-0"

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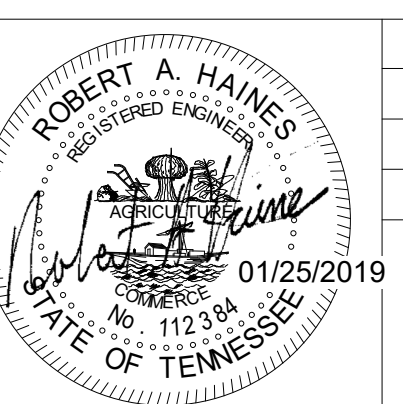
SECTIONS & DETAILS

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