

GENERAL:

- FOUNDATION STRUCTURAL PLANS ARE BASED OFF STEEL STRUCTURAL PLANS PREPARED BY ARMSTRONG STEEL INC., JOB NUMBER: 56185 DATED 08/28/2019.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER PROJECT DRAWINGS BY OTHER DISCIPLINES. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CODES LISTED BELOW.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS RELATING TO EXISTING CONDITIONS BY MAKING FIELD SURVEYS AND MEASUREMENTS PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION METHODS USED WILL NOT CAUSE DAMAGE TO ADJACENT BUILDINGS, UTILITIES, OR OTHER PROPERTY. THIS REQUIREMENT IS PARTICULARLY IMPORTANT DURING FOUNDATION INSTALLATION.
- THE GENERAL CONTRACTOR IS ADVISED TO CONSIDER PERFORMING PHOTOGRAPHIC SURVEYS AND OTHER DOCUMENTATION OF THE CONDITION OF ADJACENT BUILDINGS AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL OBTAIN COPIES OF THE LATEST CONTRACT DOCUMENTS, INCLUDING ALL ADDENDA, AND PROVIDE THE RELEVANT PORTIONS TO ALL SUB-CONTRACTORS AND SUPPLIERS PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND FABRICATION AND ERECTION OF STRUCTURAL MEMBERS.
- DETAILS LABELED "(TYP.)" SHALL APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SEE DETAIL TITLES FOR APPLICABILITY OF A PARTICULAR DETAIL. TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE SPECIFICALLY KEYED AT EACH LOCATION. THE ENGINEER SHALL HAVE FINAL AUTHORITY TO DETERMINE APPLICABILITY OF TYPICAL DETAILS.
- THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ANCHORED, EMBEDDED OR SUPPORTED ITEMS. NOTIFY THE ARCHITECT / ENGINEER OF ANY DISCREPANCIES.

APPLICABLE CODES:

- GENERAL CODES:
 - IBC-18 INTERNATIONAL BUILDING CODE 2018.
 - ASCE/SEI 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
- CONCRETE CODES:
 - ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
 - ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
 - LATEST EDITION OF THE CRSI MANUAL OF STANDARD PRACTICE WITH ALL SUPPLEMENTS.
- OTHER CODES:
 - AWS D1.1-15 STRUCTURAL WELDING CODE - STEEL.
 - AWS D1.4-15 STRUCTURAL WELDING CODE - REINFORCING STEEL.

FOUNDATIONS:

- FOUNDATION DESIGN:
 - FOUNDATIONS HAVE BEEN DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF PER IBC TABLE 1806.2.
 - FROST LINE IS 30" AND BOTTOM OF FOUNDATION FOOTINGS MUST BE 6" BELOW FROST LINE.
- FOUNDATION PREPARATION:
 - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTROL OF GROUNDWATER AND SURFACE RUNOFF THROUGHOUT THE CONSTRUCTION PROCESS. INUNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES WHICH RESULT IN DETERIORATION OF BEARING SHALL BE PREVENTED.
 - ALL VEGETATION, TOPSOILS, ROOTS AND ORGANIC ZONES SHALL BE STRIPPED AND REMOVED FROM THE CONSTRUCTION AREA FOR A DISTANCE OF AT LEAST 5 FEET BEYOND THE EXTERIOR OF BUILDING FOUNDATION LIMITS. THE DEPTH OF STRIPPING SHALL BE THAT REQUIRED TO REMOVE SIGNIFICANT ROOT ZONES, SHALL TREE STUMPS AND OTHER UNACCEPTABLE MATERIALS, BUT IN NO CASE LESS THAN 6 INCHES.
 - EXCAVATIONS FOR LARGE STUMPS, ABANDONED UTILITIES, UNDERGROUND TANKS, ETC. SHALL BE BACKFILLED IN LAYERS WITH COMPACTION AND TESTING OF EACH LAYER AS DESCRIBED FOR PLACEMENT AND COMPACTION OF FILL MATERIAL. USE LOOSE BACKFILL LAYER THICKNESS APPROPRIATE FOR THE SIZE OF COMPACTOR BEING USED.
 - AFTER THE SITE HAS BEEN CLEARED AND PROOF-ROLLED, THE EXPOSED SOILS AT THE STRIPPED SURFACE WITHIN AND TO A POINT 5 FEET OUTSIDE THE BUILDING CONSTRUCTION AREA SHALL BE COMPACTED WITH OVERLAPPING PASSES WITH A LIGHT WEIGHT VIBRATORY DRUM ROLLER. DENSITIES OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) SHALL BE UNIFORMLY OBTAINED TO A DEPTH OF AT LEAST 24 INCHES BELOW THE COMPACTED SURFACE. REGARDLESS OF THE DEGREE OF COMPACTION ACHIEVED, A MINIMUM OF EIGHT COMPLETE COVERAGES SHALL BE MADE WITHIN THE BUILDING AREA. THE ROLLER COVERAGES SHALL BE DIVIDED EVENLY INTO TWO PERPENDICULAR DIRECTIONS. THE CONTRACTOR IS ADVISED NOT TO USE THE VIBRATORY MODE OF COMPACTORS IN CLOSE PROXIMITY TO EXISTING STRUCTURES. THE CONTRACTOR SHALL COORDINATE COMPACTION EFFORTS AND FOUNDATION INSTALLATIONS TO INSURE THAT NO DAMAGE OCCURS TO ADJACENT STRUCTURES.
 - ESDENVER SHALL OBSERVE THE EXCAVATION PRIOR TO CONSTRUCTING FOOTINGS OF OBSERVED CONDITIONS.
 - CONCRETE SHALL NOT BE PLACED ON FROZEN GRADE. IF FOOTING IS SUBJECT TO FREEZING TEMPERATURES AFTER FOUNDATION CONSTRUCTION, THEN FOOTING SHALL BE ADEQUATELY PROTECTED FROM FREEZING.
 - SLAB-ON-GRADE CONSTRUCTION SHALL BE SUPPORTED ON SUBGRADE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) TO A DEPTH OF AT LEAST 12 INCHES. INTERIOR SLABS-ON-GRADE SHALL BE CAST OVER A WAPOR BARRIER.
 - CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION SLOPES, WHERE NECESSARY, SHEETING AND SHORING OF EXCAVATION SHALL BE PROVIDED WITH ALL REQUIRED TIEBACKS AND BRACING.

USE ARCHITECTURAL FOR DIMENSIONS.
STRUCTURAL DIMENSIONS FOR REFERENCE
ONLY VERIFY ALL DIMENSIONS ON SITE.
ESDENVER TAKES NO RESPONSIBILITY FOR
CONSTRUCTION ERRORS DUE TO DIMENSIONS.

CAST-IN-PLACE CONCRETE:

- CONCRETE SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301 AND 318.
 - CONCRETE COMPRESSIVE STRENGTH IN 28 DAYS. COMPRESSIVE STRENGTHS AS FOLLOWS:
 - FOOTINGS4,000 PSI
 - PIERS4,000 PSI
 - SLAB-ON-GRADE3,000 PSI
 - CEMENT: ASTM C150, TYPE I. ALL CEMENT FOR CONCRETE EXPOSED TO VIEW IS TO BE FROM THE SAME MILL.
 - REINFORCING MATERIALS:
 - REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED.
 - WELDED REINFORCING BARS - ASTM A706, GRADE 60.
 - WELDED WIRE REINFORCEMENT - ASTM A885, WELDED STEEL WIRE REINFORCEMENT; PROVIDE SHEET TYPE, ROLL TYPE IS NOT ACCEPTABLE.
 - CLEAR COVER FROM FACE OF CONCRETE:
 - CAST IN PLACE CONCRETE (MEASURE TO OUTERMOST REINFORCING):
 - WALLS, PEDESTALS2"
 - COLUMNS (EDGE OF TIES)1-1/2"
 - FOOTINGS3"
 - SLABS EXPOSED TO EARTH AND WEATHER1-1/2"
 - ELEVATED SLABS3/4"
 - GRADE BEAMS (EDGE OF STIRRUPS)1/2" TOP, 3" BOT, 3" SIDES
 - FOOTINGS, PIERS, WALLS:
 - DOWELS IN FOOTINGS TO MATCH VERTICAL PIER OR WALL REINFORCING.
 - PROVIDE CORNER BARS AT WALL AND FOOTING CORNERS TO MATCH HORIZONTAL REINFORCING. MINIMUM LENGTH OF EACH LEG - 36 BAR DIAMETERS.
 - PROVIDE REINFORCING IN SLABS ON GRADE, 1/2" FROM TOP OF SLAB:
 - 4" SLABS: 6x6-W2.9xW2.9
 - 6" SLABS: 6x6-W2.9xW2.9
 - SPLICES:
 - LAP SPLICE REINFORCING BARS AS SCHEDULED. MINIMUM LAP = 36 DIAMETERS.
 - LAP WELDED WIRE FABRIC SHEETS 8" MINIMUM.
 - REFER TO THE DRAWINGS FOR REINFORCING LAP REQUIREMENTS, WHERE LAP SPLICES ARE NOT SHOWN, LAP PER ACI 318.
- OPENINGS:
 - OPENINGS SHOWN ARE FOR BIDDING PURPOSES ONLY. RECONCILE THEIR EXACT SIZE AND LOCATION WITH ARCHITECTURAL, MECHANICAL AND OTHER REQUIREMENTS BEFORE PROCEEDING WITH WORK.
 - PROVIDE 2 - #5 BARS AROUND ALL WALL OPENINGS, EXTENDING TWO FEET BEYOND OPENING IN EVERY DIRECTION. OPENINGS IN WALLS NOT EXCEEDING 12" X 12" MAY BE SLEEVED AS REQUIRED BY WORKING THE REINFORCING STEEL AROUND THEM.
 - PROVIDE 2 - #4 BARS AROUND ALL SLAB OPENINGS, EXTENDING TWO FEET BEYOND OPENING IN EVERY DIRECTION. IF ANY OPENING NOT SHOWN ON THE PLANS IS REQUIRED, SECURE APPROVAL OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING.
- CONSTRUCTION JOINTS:
 - CONSTRUCTION JOINTS PERMITTED ONLY WHERE SHOWN OR AS APPROVED BY THE STRUCTURAL ENGINEER.
 - GROUT UNDER BASE PLATES TO BE HIGH STRENGTH, NON-SHRINK.
 - EMBED PLATES MUST BE SET IN THE FORM BEFORE POURING CONCRETE. NOT PLACED INTO TOP OF WET CONCRETE. THE CONTRACTOR SHALL CONTACT THE ARCHITECT/ENGINEER FOR CORRECTIVE DETAILS FOR ANY EMBED PLATES LEFT OUT OF CONCRETE POURS.
- FINISHES:
 - SURFACES OF FLOOR SLABS ARE TO BE FINISHED TO CLASS B TOLERANCES.
 - EXTERIOR SLABS - BROOM FINISH.
- WEDGE ANCHORS AND CHEMICAL ANCHORS:
 - MINIMUM EMBEDMENT FOR WEDGE ANCHORS IS TO BE 7 BOLT DIAMETERS, UNLESS DESIGNATED OTHERWISE.
 - MINIMUM EMBEDMENT FOR EPOXY ANCHORS IS TO BE 9 BOLT DIAMETERS, UNLESS DESIGNATED OTHERWISE.
- OTHER:
 - BAR SUPPORTS FOR CONCRETE EXPOSED TO VIEW SHALL HAVE PLASTIC COATED LEGS OR BE HOT DIP GALVANIZED AFTER FABRICATION.
 - MECHANICAL AND ELECTRICAL CONDUIT IN SLABS SHALL RUN UNDER TOP LAYER OF SLAB REINFORCING. PROVIDE A MINIMUM OF 1-1/2" CLEAR BETWEEN CONDUITS AND BETWEEN REINFORCING AND ADJACENT CONDUITS PARALLEL TO REINFORCING. IF MAXIMUM SIZE OF CONDUIT EXCEEDS ONE THIRD OF THE SLAB DEPTH, ADDITIONAL FRAMING OR REINFORCING MAY BE NECESSARY AT ENGINEERS DISCRETION.
 - REBAR SHALL NOT BE HEATED WITH A TORCH IN THE FIELD.

ANCHOR BOLTS:

- ANCHOR BOLTS EMBEDDED IN CONCRETE SHALL BE ASTM A307 GRADE C OR F1554 GRADE 36 THREADED RODS. ANCHOR BOLT LENGTHS SHOWN FOR ATTACHMENT TO CONCRETE AND/OR MASONRY ARE REQUIRED EMBEDMENT LENGTHS. THE CONTRACTOR SHALL PROVIDE ANCHOR BOLTS WITH ADDITIONAL BOLT LENGTH TO FACILITATE THE REQUIRED CONNECTION.

POST-INSTALLED ANCHORS:

- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD (EOR) PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED ANCHORS.
- CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REINFORCING WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE.
- SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL ADHESIVE AND MECHANICAL ANCHOR INSTALLATIONS AS REQUIRED BY THE EOR. INDEPENDENT ON-SITE PROOF LOAD TESTING SHALL BE PERFORMED AS REQUIRED BY THE EOR. CONTACT EOR FOR NUMBER OF ANCHORS REQUIRED TO BE TESTED AND REQUIRED PROOF LOAD MAGNITUDE.

KEYED NOTES

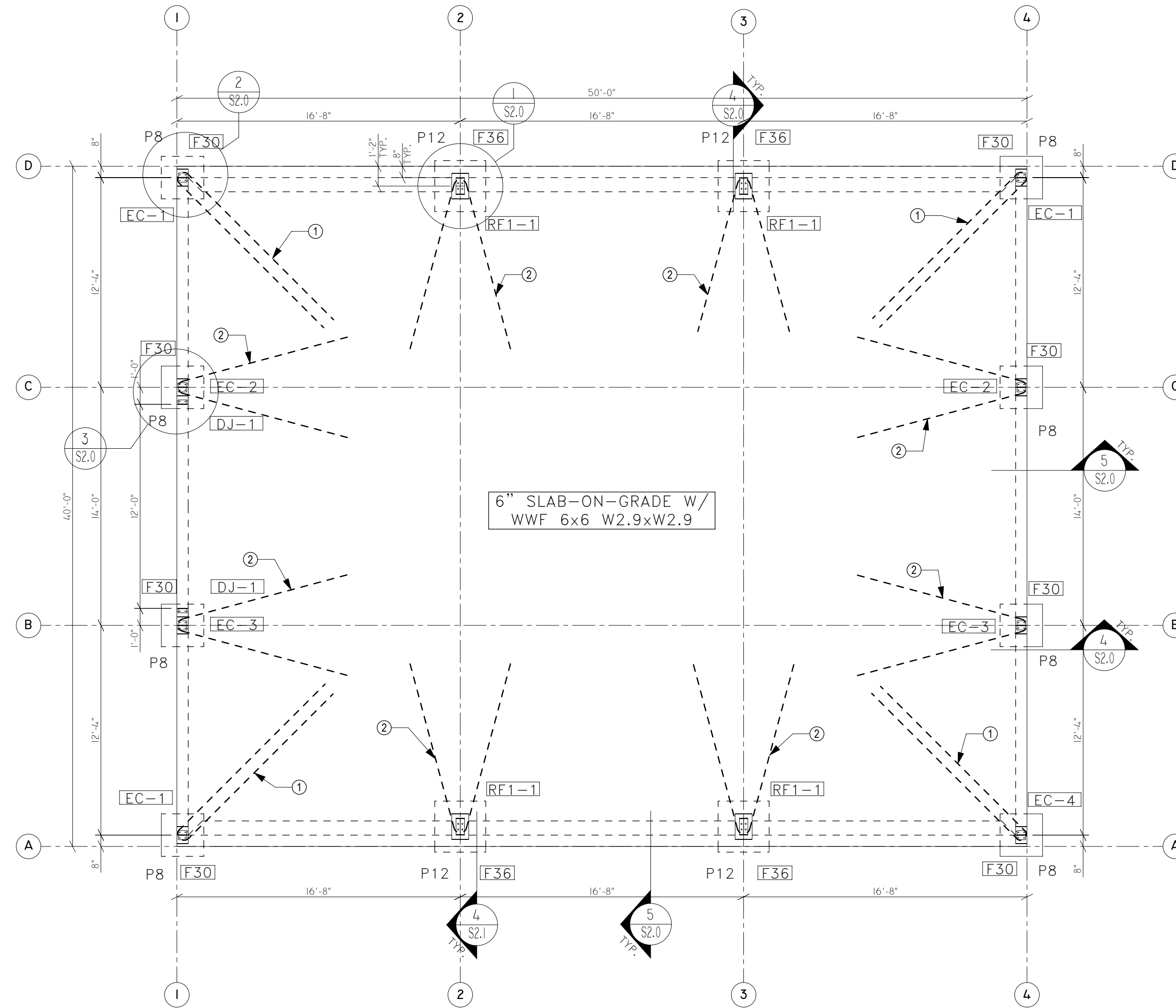
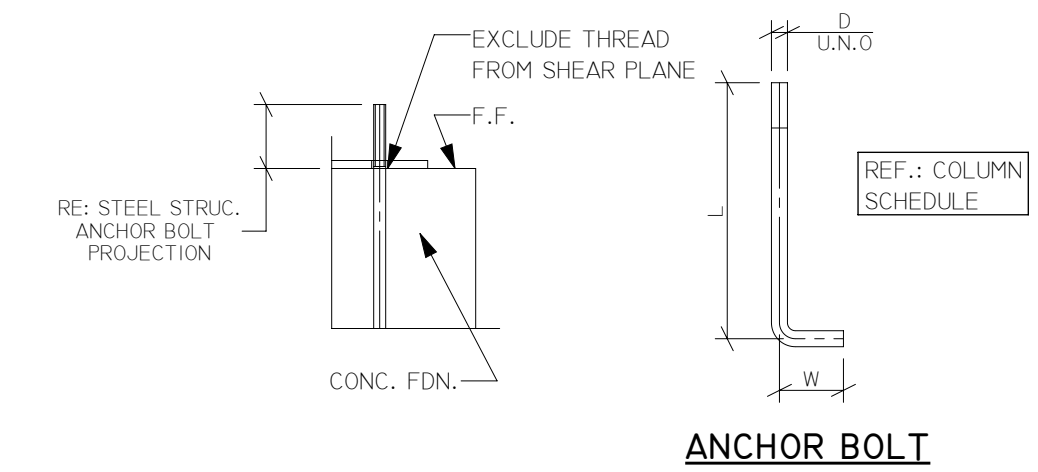
- #6 x21'-0" HAIRPIN, 180 DEG BEND, INNER RADIUS 3 1/2". HAIRPIN MUST BE AROUND ALL ANCHOR BOLTS FOR EACH COLUMN AND LOCATED 2" BELOW FINISH FLOOR ELEVATION.
- #6 x21'-0" HAIRPIN, 150 DEG BEND, INNER RADIUS 3". HAIRPIN MUST BE AROUND ALL ANCHOR BOLTS FOR EACH COLUMN AND LOCATED 2" BELOW FINISH FLOOR ELEVATION.

SCHEDULE	
POUR 1	COLUMN FOOTINGS OTHER FOOTINGS PILASTERS
POUR 2	CONCRETE SLABS

CONCRETE PILASTER SCHEDULE			
MARK	SIZE	VOLUME, CF	REINFORCING
P8	8'x1'-0"x2'-0"	1	(4) #5 VERT, #4 TIE @ 8" O.C.
P12	1'-0"x1'-6"x2'-0"	3	(6) #5 VERT, #4 TIE @ 8" O.C.

CONCRETE FOOTING SCHEDULE			
MARK	SIZE	VOLUME, CF	REINFORCING
F30	2'-6"x2'-6"x1'-6"	14	(3) #5 EA WAY, TOP & BOT.
F36	3'-0"x3'-0"x1'-6"	24	(3) #5 EA WAY, TOP & BOT.

COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	ANCHOR BOLTS (DxLxW)
DJ-1	8x25C16	RE: STEEL STRUC.	(2) 5/8" @ x12"x2"
EC-1	8x25C16	RE: STEEL STRUC.	(4) 5/8" @ x16"x2"
EC-2	8x25C12	RE: STEEL STRUC.	(4) 5/8" @ x16"x2"
EC-3	8x25C12	RE: STEEL STRUC.	(4) 5/8" @ x16"x2"
EC-4	8x25C16	RE: STEEL STRUC.	(4) 5/8" @ x16"x2"
RF1-1	PEB 12x5	RE: STEEL STRUC.	(4) 3/4" @ x22"x3"



FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

DRAWN BY: *KS*
CHECKED BY: *DR*

REVISIONS:		
NO.	DESCRIPTION	DATE

ISSUE RECORD:		
NO.	DESCRIPTION	DATE

FOUNDATION PLAN & GENERAL NOTES

PROJECT NO.: 9562
DATE: 10/24/2019

DRAWING NO.: **SI.0**



PAVCO
8041 BRIGHTON RD.
COMMERCE CITY, CO 80022

DRAWN BY: *KS*
CHECKED BY: *DR*

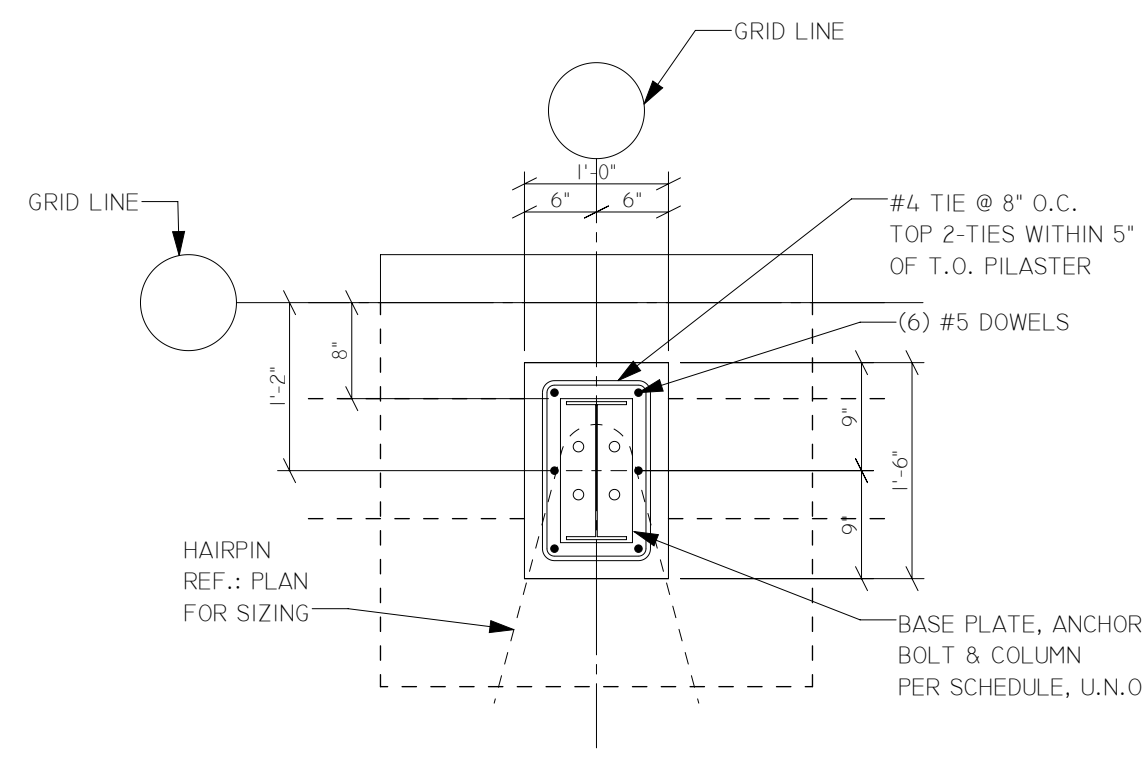
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NO.	DESCRIPTION	DATE
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ISSUE RECORD:		
NO.	DESCRIPTION	DATE

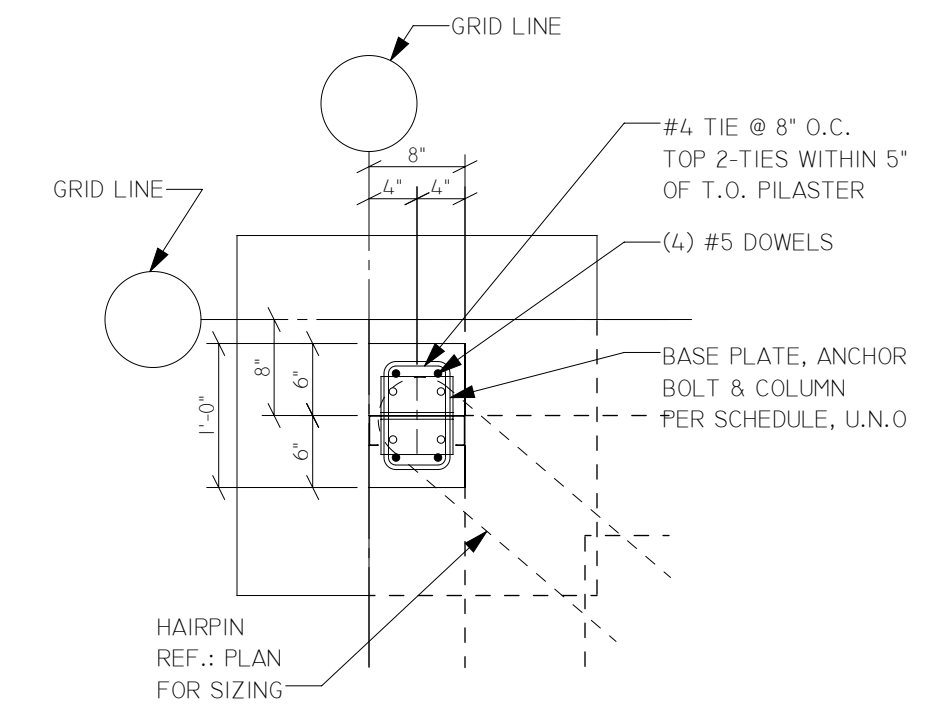
SHEET CONTENTS:
FOUNDATION DETAILS

PROJECT NO.: 9562
DATE: 10/24/2019

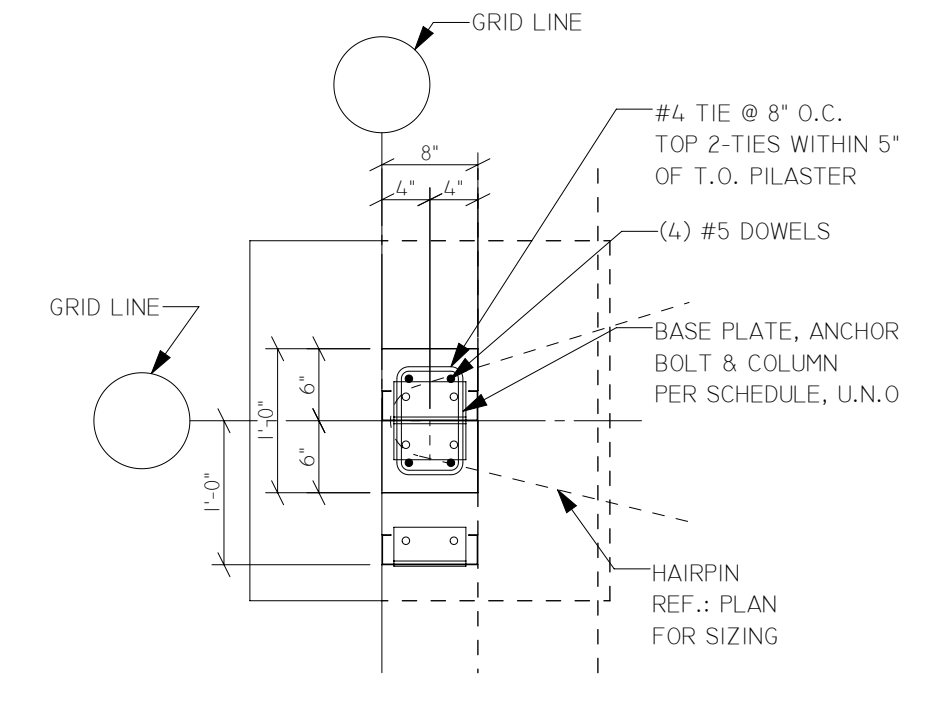
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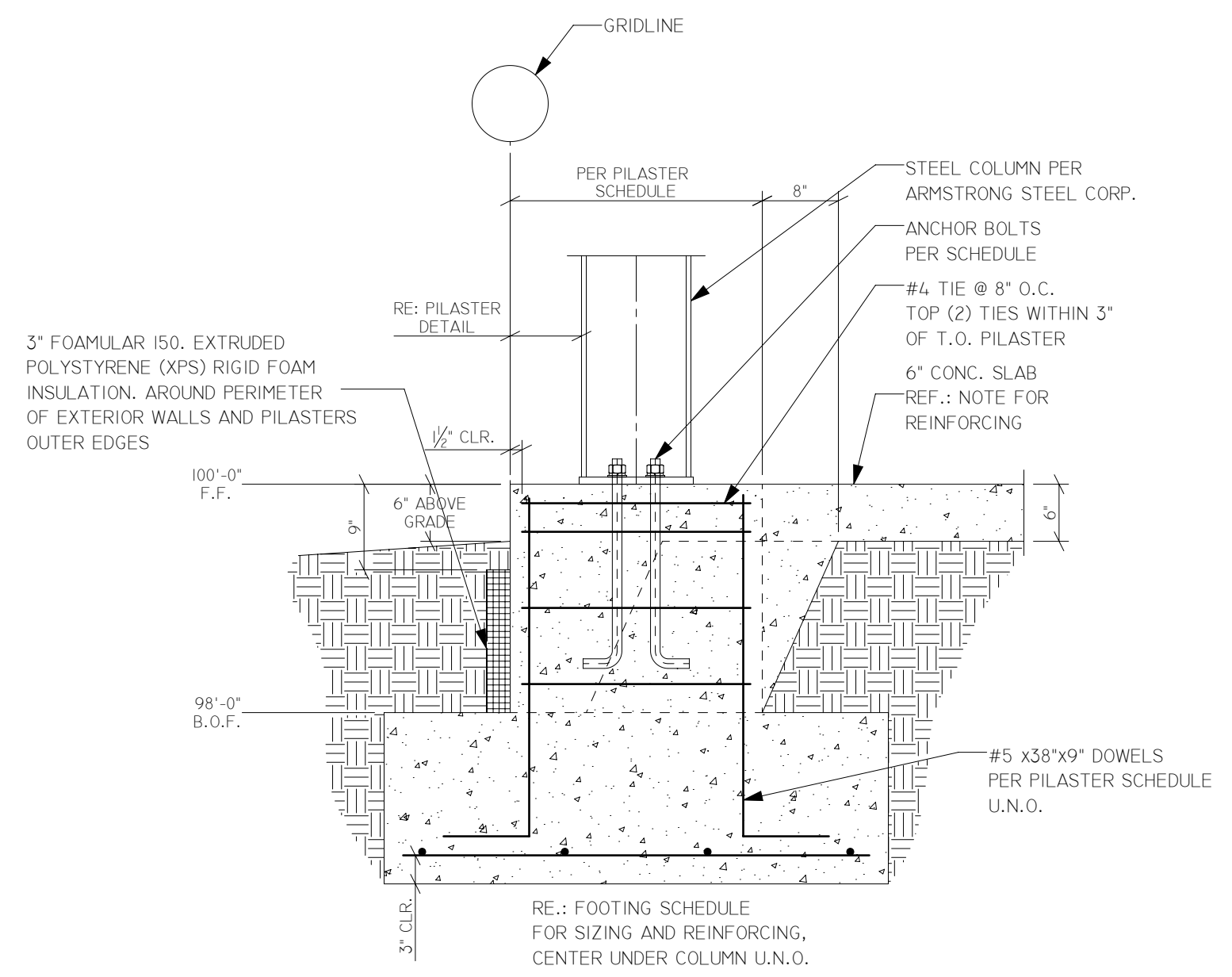
1 PILASTER P12 DETAIL
S2.0 SCALE: 3/4"=1'-0"



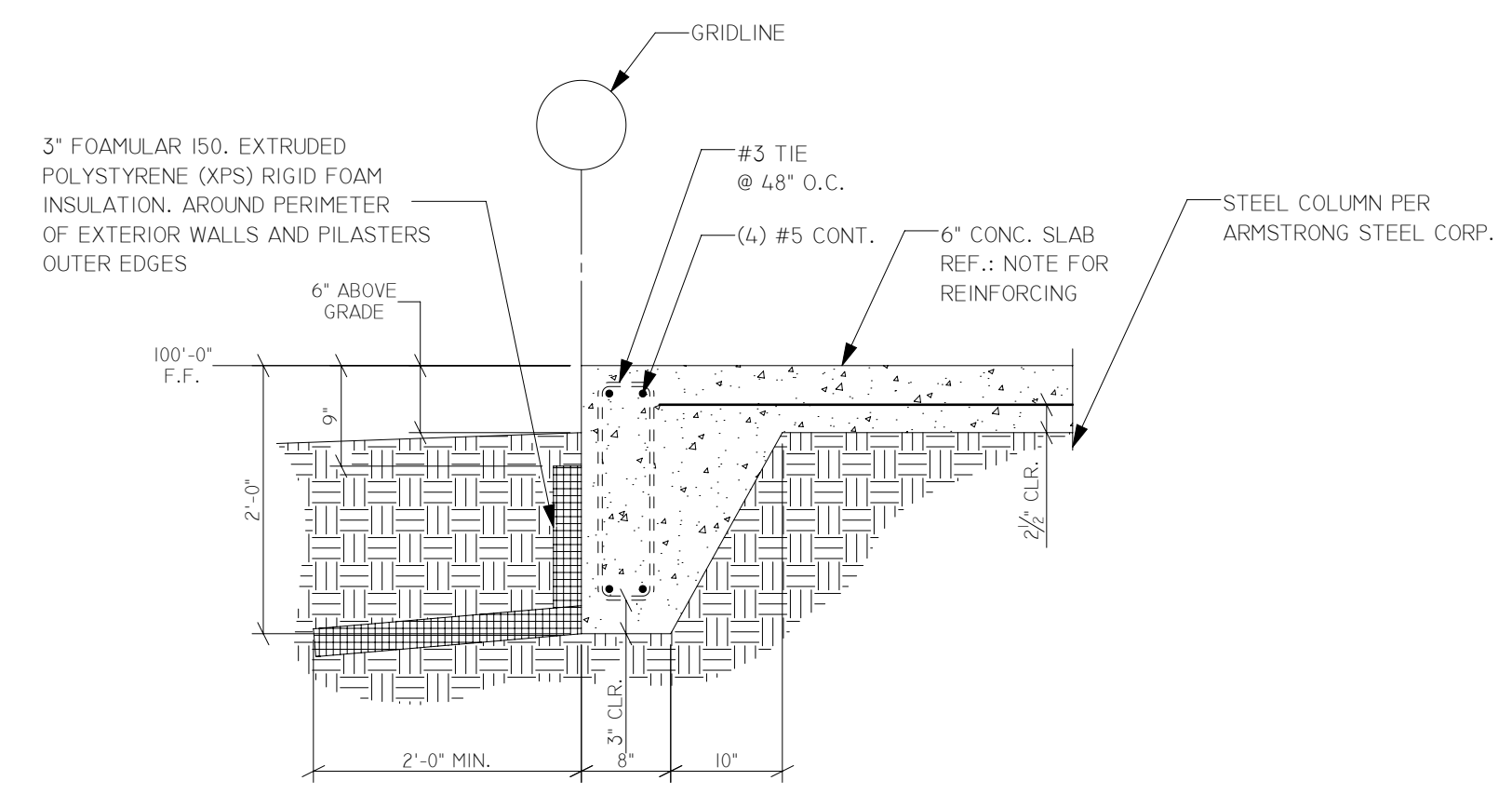
2 PILASTER P8 DETAIL
S2.0 SCALE: 3/4"=1'-0"



3 PILASTER P8 DETAIL
S2.0 SCALE: 3/4"=1'-0"



4 TYPICAL EXTERIOR PILASTER DETAIL
S2.0 SCALE: 3/4"=1'-0"



5 SLAB-ON-GRADE DETAIL
S2.0 SCALE: 3/4"=1'-0"