

Date	Description
07.08.2019	Footing and Foundation Plan Permit

DESIGN DATA

APPLICABLE CODES/STANDARDS:
....INTERNATIONAL BUILDING CODE - 2018
....ASCE 7-16 MIN DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/SEI

STRUCTURAL DESIGN STANDARDS (DESIGN SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE)
....ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
....ACI 530/530.1 BLDG CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES)
....ANSI/AISC 360-16 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
....AWS D1.1/D1.1M STRUCTURAL WELDING CODE-STEEL

BUILDING DESIGN LOADS/CRITERIA

DESIGN SUPERIMPOSED DEAD LOADS:				
....PARKING GARAGE	3 psf			
....PLAZA	150 psf			
....RESIDENTIAL AREAS	28 psf			
....ROOF	18 psf			

DESIGN LIVE LOADS:				
....PARKING GARAGE	40 psf			
....FLOOR FRAMING (RETAIL, OFFICE, RESTAURANT, RECREATIONAL)	100 psf			
....FLOR FRAMING (RESIDENTIAL AREAS)	40 psf			
....STORAGE/HVAC	125 psf			
....STAIRWAYS, EXITS	100 psf			
....BALCONIES	40 psf			
....PLAZA (FOOTPRINT)	150 psf			
....INTERIOR PARTITION WALLS (UNIFORMLY DISTRIBUTED WEIGHT)	15 psf			
....CORRIDORS FIRST FLOOR	100 psf			
....CORRIDORS 2nd 3rd FLOORS	40 psf			
....ROOF	20 psf			
....CORNICES	60 psf			

SNOW LOADS & DESIGN DATA:				
....DESIGN SNOW LOAD	42 psf (BALANCED SNOW LOAD)			
....FLAT ROOF SNOW LOAD (Pf) = (0.7*Ce*Ct*Ps)	42 psf			
....SNOW EXPOSURE FACTOR (Ce)	1.0			
....SNOW LOAD IMPORTANCE FACTOR (Is)	1.0			
....ROOF THERMAL FACTOR (Ci)	1.0			
....GROUND SNOW (Pg)	60 psf			
....SLOPED ROOF FACTOR (Cs)	1.0			

WIND DESIGN DATA:				
....WIND IMPORTANCE FACTOR (Iw)	1.0			
....RISK CATEGORY II				
....BASIC WIND SPEED (3-SECOND GUST, ULTIMATE)	115 MPH			
....BASIC WIND SPEED (3-SECOND GUST, NOMINAL)	90 MPH			
....MEAN ROOF HEIGHT	33 FT			
....WIND EXPOSURE CATEGORY	B			
....WIND EXPOSURE CLASSIFICATION	ENCLOSED			
....VELOCITY EXPOSURE COEFFICIENT Kz	0.720			
....TOPOGRAPHIC FACTOR (Kt)	1.0			
....DESIGN PROCEDURE	METHOD 1 (SIMPLIFIED PROCEDURE)			

NET PRESSURE COEFFICIENTS C_{net}		
AREA	C_p INTERNAL PRESSURE	C_n INTERNAL PRESSURE
WINDWARD WALL	0.43	0.73
LEEWARD WALL	-0.51	-0.21
SIDEWALL	-0.66	-0.35
PARAPET WINDWARD WALL	1.28	
PARAPET LEEWARD WALL	-0.85	
FLAT ROOF	-1.09	-0.79

DESIGN WIND PRESSURES P_{net}		
AREA	P_p INTERNAL PRESSURE	P_n INTERNAL PRESSURE
WINDWARD WALL	10.5 psf	17.8 psf
LEEWARD WALL	-12.4 psf	-5.1 psf
SIDEWALL	-16.1 psf	-8.5 psf
PARAPET WINDWARD WALL	31.2 psf	
PARAPET LEEWARD WALL	-20.7 psf	
FLAT ROOF	-26.6 psf	-19.3 psf

EARTHQUAKE DESIGN DATA:
....OCCUPANCY CATEGORY II
....SEISMIC COEFFICIENT (F_a) 1
....MAPLED SPECTRAL ACCELERATIONS AT SHORT PERIODS (S_d) 0.045 g
....MAPLED SPECTRAL ACCELERATIONS AT (1) SECOND PERIODS (S₁) 0.039 g
....SITE CLASSIFICATIONS B
....SITE COEFFICIENT (F_s) 1.0
....DESIGN SPECTRAL RESPONSE COEFFICIENT AT SHORT PERIODS (S_d) 0.030 g
....DESIGN SPECTRAL RESPONSE COEFFICIENT AT (1) SECOND PERIODS (S₁) 0.025 g
....SEISMIC DESIGN CATEGORY A
....BASIC SEISMIC-FORCE-RESISTING SYSTEM LIGHT FRAME WOOD WALLS WITH STRUCTURAL WOOD SHEAR PANELS EQUIVALENT LATERAL FORCE ANALYSIS
....ANALYSIS PROCEDURE FOR SEISMIC DESIGN

SOIL DESIGN VALUES:
....SOIL UNIT WEIGHT 125 PCF (ASSUMED)
....LATERAL EARTH PRESSURE 62.5 PSF/FT OF DEPTH (ASSUMED)
....AT-REST (BASEMENT WALLS) 340 PSF (ASSUMED)
....COEFFICIENT OF SLIDING FRICTION 0.30 (ASSUMED)
....SUBGRADE MODULUS 260 PCI (ASSUMED)
....ALLOWABLE SOIL BEARING PRESSURE 3000 PSF

REFER TO SOILS REPORT NO. 17002 DATED 2/10/2017 PREPARED BY ITC ALLIED ENGINEERING CO. FOR DESCRIPTION OF SOIL CONDITIONS, GEOTECHNICAL RECOMMENDATIONS, AND DESIGN VALUES

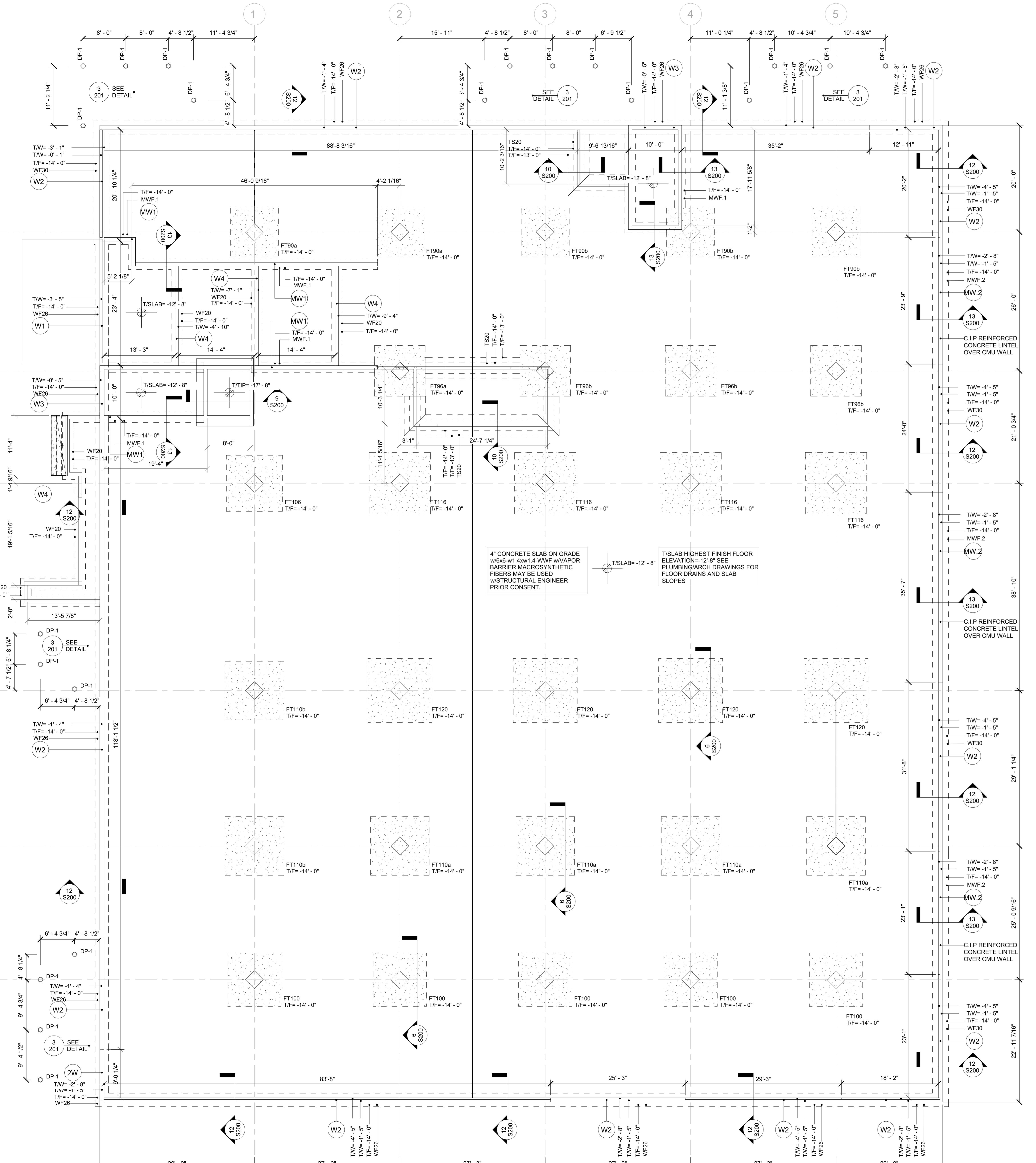
DEFLECTION LIMITS				
MEMBERS	LIVE	SNOW or WIND	DEAD + LIVE or SNOW	
ROOF MEMBERS				
SUPPORTING GYPSUM BOARD CEILINGS	L/360	L/360	L/240	
SUPPORTING FLEXIBLE CEILINGS	L/360	L/360	L/240	
NOT SUPPORTING CEILING	L/240	L/240	L/180	
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600	
FLOOR MEMBERS				
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600	
SUPPORTING GYPSUM BOARD CEILINGS	L/480	N/A	L/360	
SUPPORTING FLEXIBLE MATERIALS	L/480	N/A	L/360	
LINTEL/HEADER/BEAM MEMBERS				
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600	
SUPPORTING FLEXIBLE MATERIALS (EIFS, SIDING, ETC.)	L/360	L/360	L/240	
EXTERIOR WALLS				
WITH RIGID FINISHES (BRICK, MASONRY, ETC.)	N/A	L/600	N/A	
WITH FLEXIBLE FINISHES (EIFS, SIDING, ETC.)	N/A	L/360	N/A	

FOUNDATION AND EARTHWORK:

- ALL EXTERIOR FOOTINGS MUST BEAR BELOW LOCAL FROST LINE RELATIVE TO ADJACENT FINISH EXTERIOR GRADE.
- DO NOT PLACE ANY FOOTINGS ON FROZEN SUBGRADE.
- BACK FILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDES OF FOUNDATION WALLS.
- DO NOT PLACE BACK FILL AGAINST BASEMENT WALLS UNTIL THE TOP AND BOTTOM OF THE WALL ARE ADEQUATELY BRACED BY THE SLAB ON GRADE AND THE FLOOR FRAMING AT THE TOP OF THE WALL.
- MOVE ANY EXISTING CONCRETE 2'-0" BELOW NEW CONCRETE FOOTINGS AND SLABS ON GRADE, UNLESS NOTED OTHERWISE.
- SHORING/OR UNDERPINNING SHALL BE DESIGNED TO LIMIT HORIZONTAL AND VERTICAL MOVEMENT OF EXISTING CONSTRUCTION TO 1/4" MAXIMUM IN ANY DIRECTION.
- CENTER PIER AND COLUMN FOOTINGS ON COLUMN CENTERLINES AND WALL FOOTINGS ON WALL CENTERLINES UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL BACK FILL WITHIN 3'-0" OF RETAINING WALLS AND BASEMENT WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL APPROVED BY A SOILS ENGINEER AND COMPAKTED TO 90% STANDARD PROCTOR.

9. TOP OF FOOTING ELEVATIONS SHOWN ON THESE CONSTRUCTION DOCUMENTS REPRESENT MINIMUM FOOTING DEPTHS FOR FROST PROTECTION AND BEST JUDGMENT OF A SUITABLE BEARING STRATUM. ACTUAL GRADE CONDITIONS AND SUITABLE BEARING STRATUM MUST BE VERIFIED BY THE CONTRACTOR AND A SOILS ENGINEER AT THE TIME OF EXCAVATION.

10. FOOTING EXCAVATIONS MUST EXTEND TO COMPETENT BEARING MATERIAL. CONTRACTOR SHALL HIRE A SOILS ENGINEER TO FIELD VERIFY NET ALLOWABLE SOIL BEARING CAPACITY STATED ON THESE CONSTRUCTION DOCUMENTS. THE SOILS ENGINEER SHALL VERIFY THE FIELD CONDITIONS OF THE BEARING STRATUM AND TEST THE EXCAVATION ELEVATION SHOWN ON THESE CONSTRUCTION DOCUMENTS. EXCAVATIONS SHALL BE EXTENDED UNTIL SOIL WITH STATED BEARING CAPACITY IS REACHED. PLACE COMPACTED FILL BELOW FOOTINGS OR EXTEND FOOTINGS DOWN TO SUITABLE BEARING STRATUM. ENGINEERED FILL BELOW SLABS ON



MASONRY WALL REINFORCING SCHEDULE			
MARK	WALL THICKNESS	VERTICAL REINFORCEMENT & SPACING	REINFORCEMENT LOCATION IN CELL
MW.1	8"	#5 AT 48" o/c MAX	CENTER
MW.2	8"	#6 AT 16" o/c MAX	INSIDE FACE

MASONRY WALL REINFORCEMENT SCHEDULE NOTES:
1. GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT OF BUILDING AT REINFORCEMENT LOCATIONS
2. UNLESS OTHERWISE SPECIFIED, USE #5 AT 48" OC VERT. REINFORCEMENT.
3. PROVIDE CONCRETE MASONRY UNIT WALL REINFORCING ABOVE AND BELOW ALL MASONRY OPENINGS. EXTEND REINFORCEMENT LARGE OF 24" OF 40 DIA. PAST EDGE OF OPENING.
4. REINFORCEMENT LAPS SHALL BE CLASS "B" LAP SPLICES.
5. PROVIDE STANDARD (W1) HORIZONTAL JOINT REINFORCING AT 16" ON CENTER VERTICALLY (8" ON CENTER IN PARAPET WALLS) UNO.
6. MASONRY FIREWALL CONSTRUCTION ASSUMES MASONRY BLOCKS COMPRISED OF LIMESTONE.

MASONRY WALL FOOTING SCHEDULE			
MARK	WIDTH	THICKNESS	LONGITUDINAL
MWF.1	2'-0"	1'-0"	(2) #5
MWF.2	3'-0"	1'-2"	(3) #5

MASONRY WALL FOOTING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR LAPS IN STEEL REINFORCEMENT.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

THICKENED SLAB SCHEDULE				
MARK	DIMENSIONS	REINFORCEMENT	LONGITUDINAL	REMARKS
TS20	2'-0" X 2'-0"	1'-0"	(2) #5	THICKENED SLAB, REFER TO 11/

THICKENED SLAB SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR LAPS IN STEEL REINFORCEMENT.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

WALL FOOTING SCHEDULE				
MARK	DIMENSIONS	REINFORCEMENT	LONGITUDINAL	TRANSVERSE
WF20	2'-0"	1'-0"	(2) #5	
WF26	2'-6"	1'-2"	(3) #5	
WF30	3'-0"	1'-2"	(3) #5	

COLUMN FOOTING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
4. ALL LAPS IN STEEL REINFORCING SHALL BE CLASS "B" LAP SPLICES UNLESS NOTED OTHERWISE.

COLUMN FOOTING SCHEDULE					
MARK	W	L	D	BOTTOM REINFORCING	COLUMNS
FT100a	9"-0"	9"-0"	1"-8"	(10)-#7	A1 A2
FT100b	9"-0"	9"-0"	1"-8"	(10)-#8	A3 A4 A5
FT106a	9"-6"	9"-6"	1"-8"	(10)-#7	B2
FT106b	9"-6"	9"-6"	1"-8"	(10)-#8	B3 B4 B5
FT110	10"-0"	10"-0"	2"-1"	(11)-#8	F1 F2 F3 F4 F5
FT110a	10"-6"	10"-6"	2"-3"	(11)-#8	C1
FT110b	11"-0"	11"-0"	2"-1"	(12)-#8	G2 G3 G4 G5
FT110c	11"-0"	11"-0"	2"-3"	(12)-#8	D1 G1
FT116	11"-6"	11"-6"	2"-1"	(12)-#8	C2 C3 C4 C5
FT120	12"-0"	12"-0"	2"-3"	(13)-#8	D2 D3 D4 D5

COLUMN FOOTING SCHEDULE:
1. REFER TO STRUCTURAL NOTES SHEET FOR LAPS IN STEEL REINFORCEMENT.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

CONCRETE WALL REINFORCING SCHEDULE					
MARK	TYPE	THICKNESS	REINFORCEMENT	HORIZONTAL	REMARKS
W1	CONCRETE	10"	5ft's AT 18" o.c.	5ft's AT 12" o.c.	inside face
W2	CONCRETE	10"	5ft's AT 12" o.c.	5ft's AT 12" o.c.	inside face
W3	CONCRETE	10"	6ft's AT 12" o.c.	5ft's AT 12" o.c.	inside face
W4	CONCRETE	8"	4ft's AT 12" o.c.	3ft's AT 12" o.c.	centered in wall thickness

CONCRETE WALL REINFORCING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR LAPS IN STEEL REINFORCEMENT.
2. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND EXIST. CONDITIONS

Date: 07.08.2019 Description: Footing and Foundation Plan Permit

CAPITAL GROUP
Developer: W Capital Group
tyler@wcapitalgroup.com | 608.345.6484

OpeningDesign
316 W Washington Ave | Suite 675
Madison, WI 53703
ryan@openingdesign.com | 773.425.6377

ROYAL CONSTRUCTION
General Contractor: ROYAL CONSTRUCTION
365 Greenway Street | Eau Claire, WI 54701
jim@royalbuilt.com | 715.225.6377

Cedar Corporation
Civil Engineer: CEDAR CORPORATION
604 Wilson Avenue | Menomonie, WI 54751
kevin.colum@cedarcorp.com | 715.235.9081

Structural Engineer: Structural Engineering
Calle Apolonio Morales, 628036 Madrid,
l.perezato@xcengineering.xyz | +34 610 56 26 37

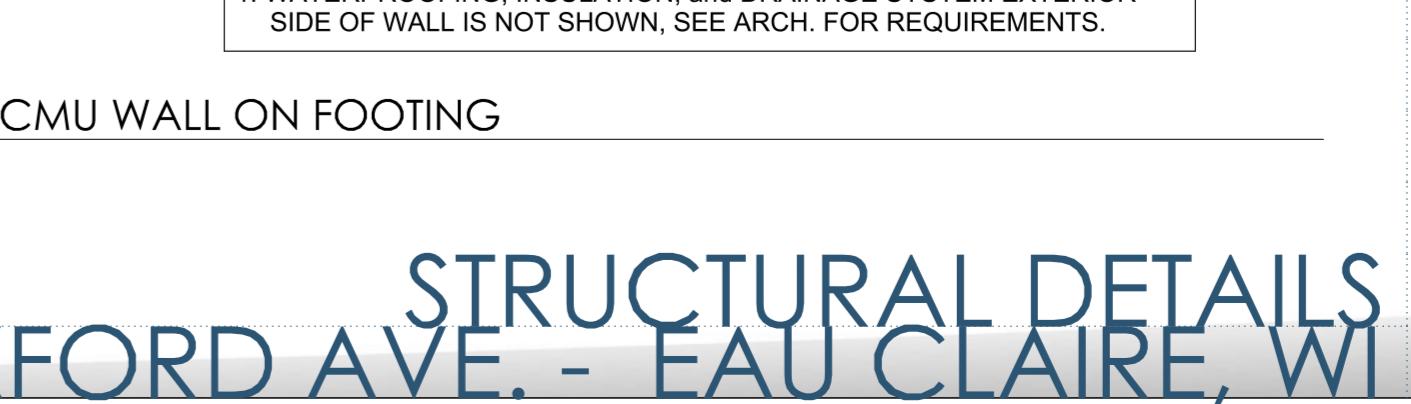
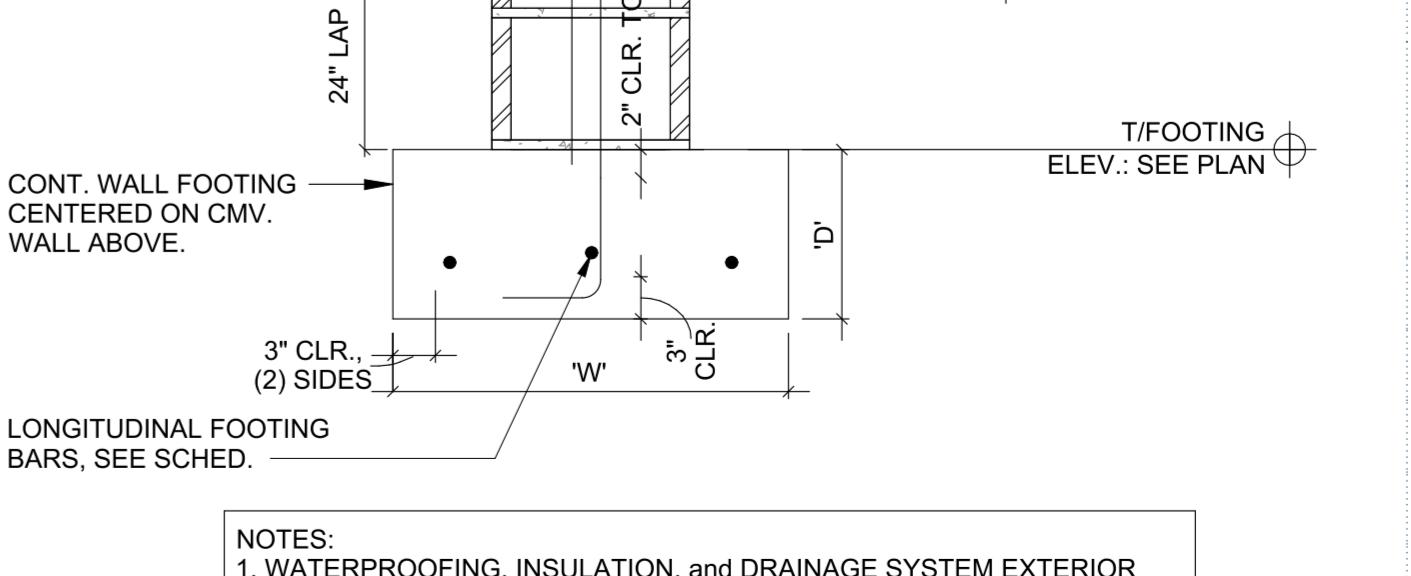
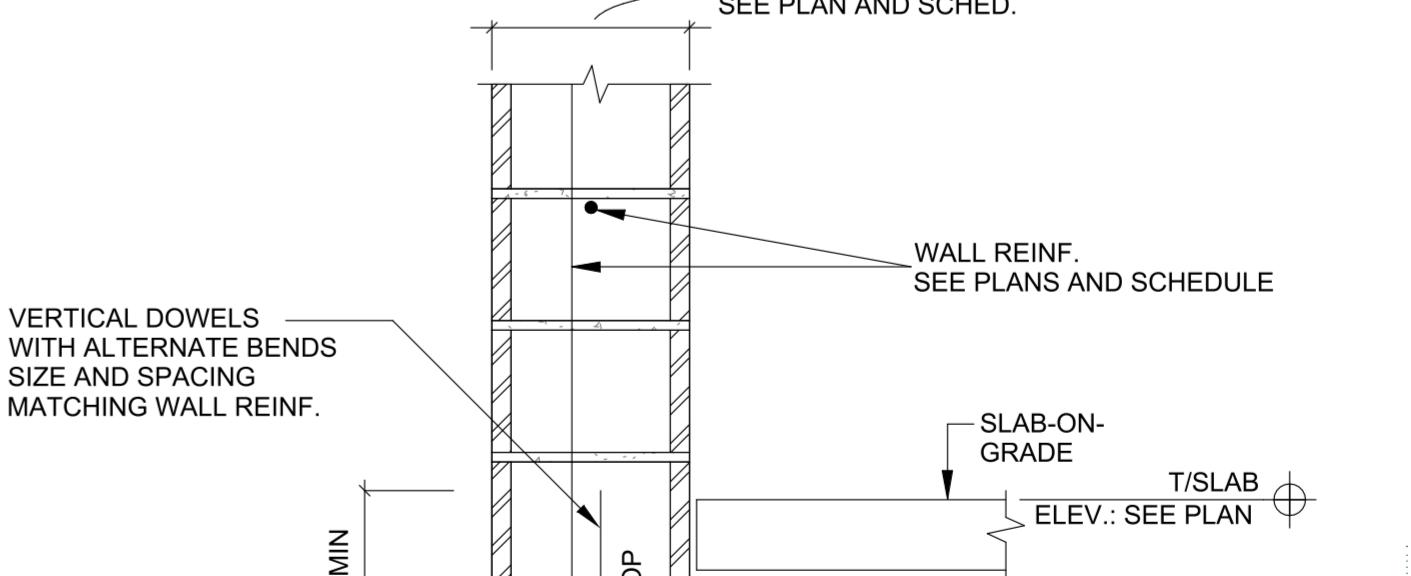
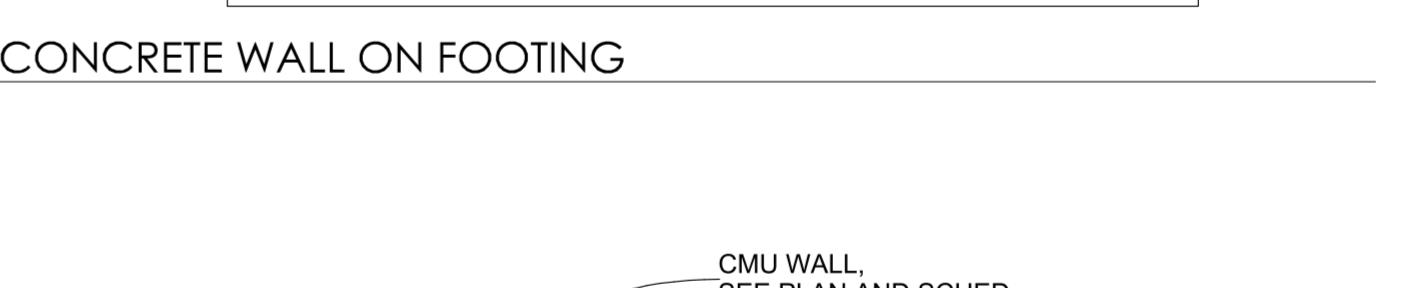
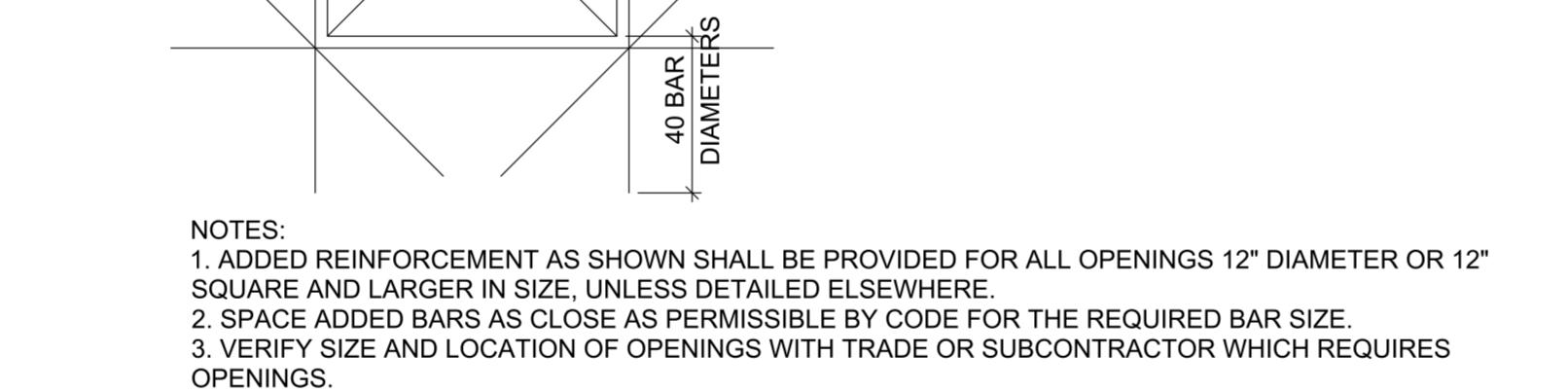
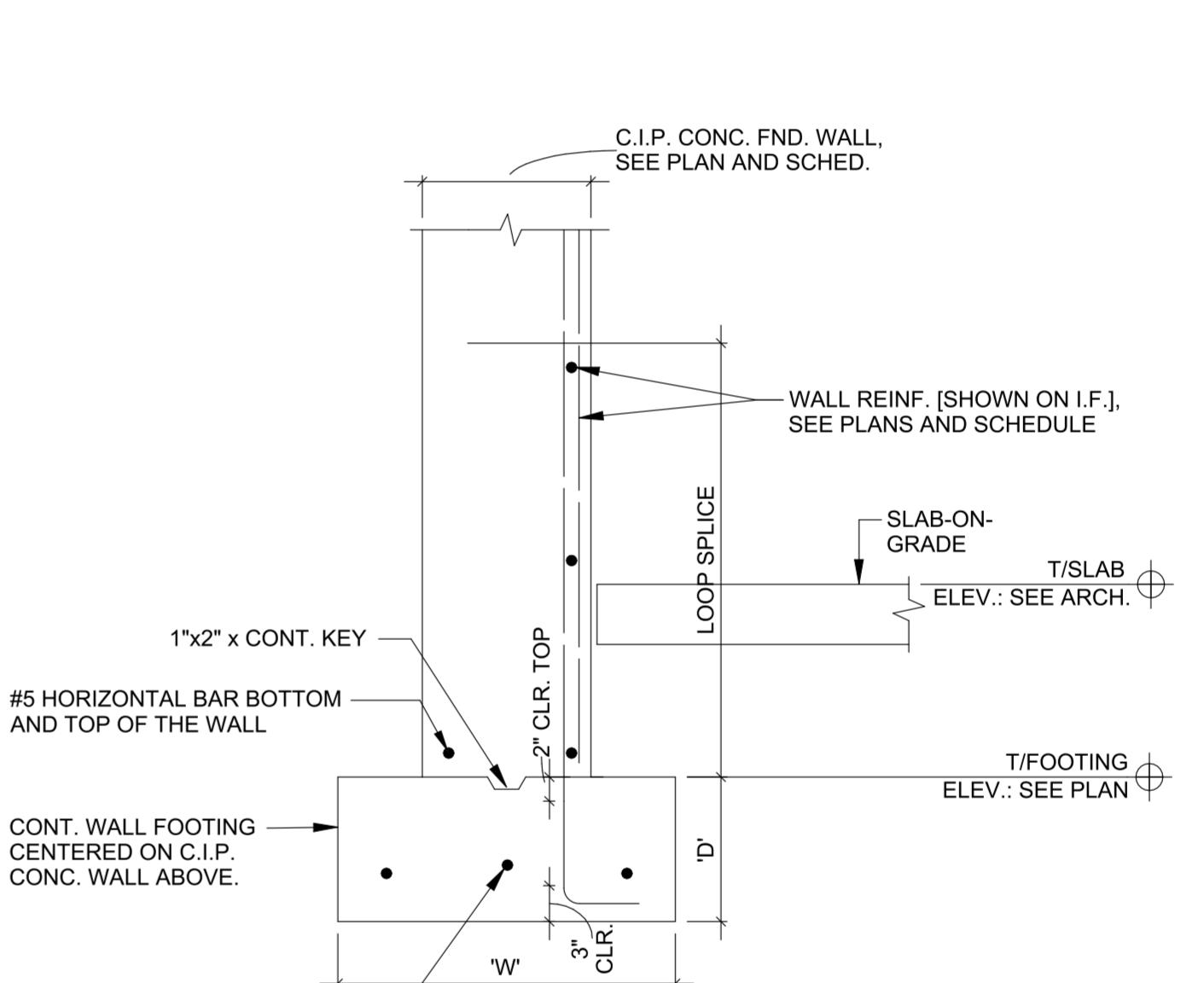
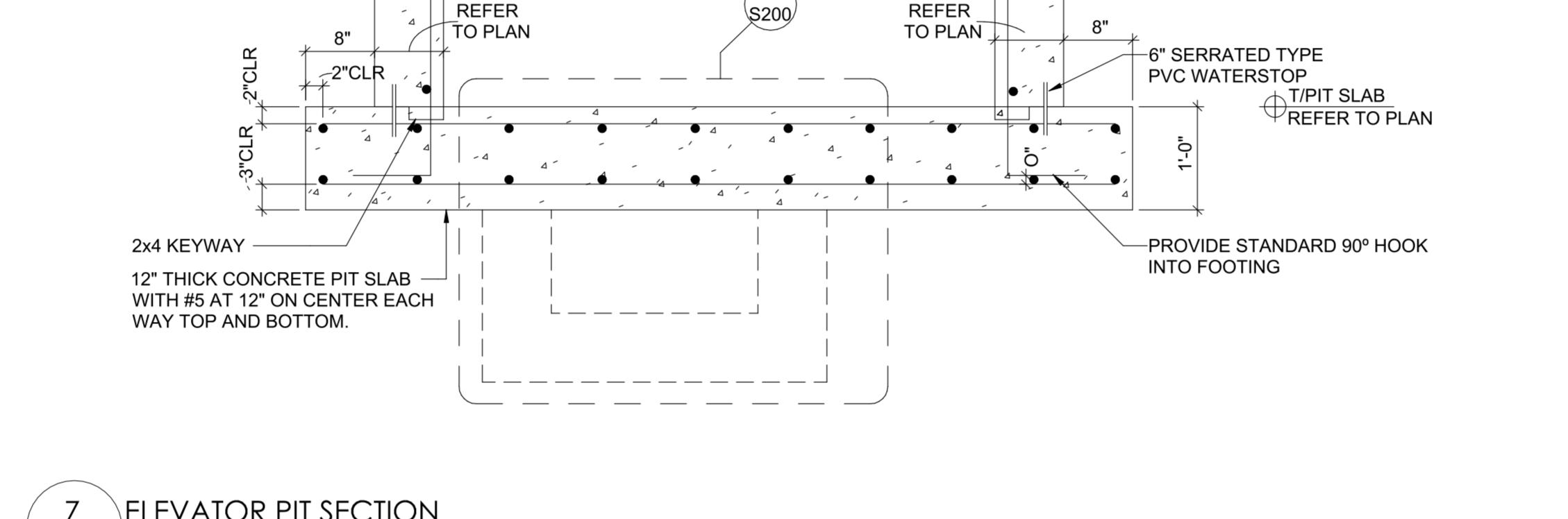
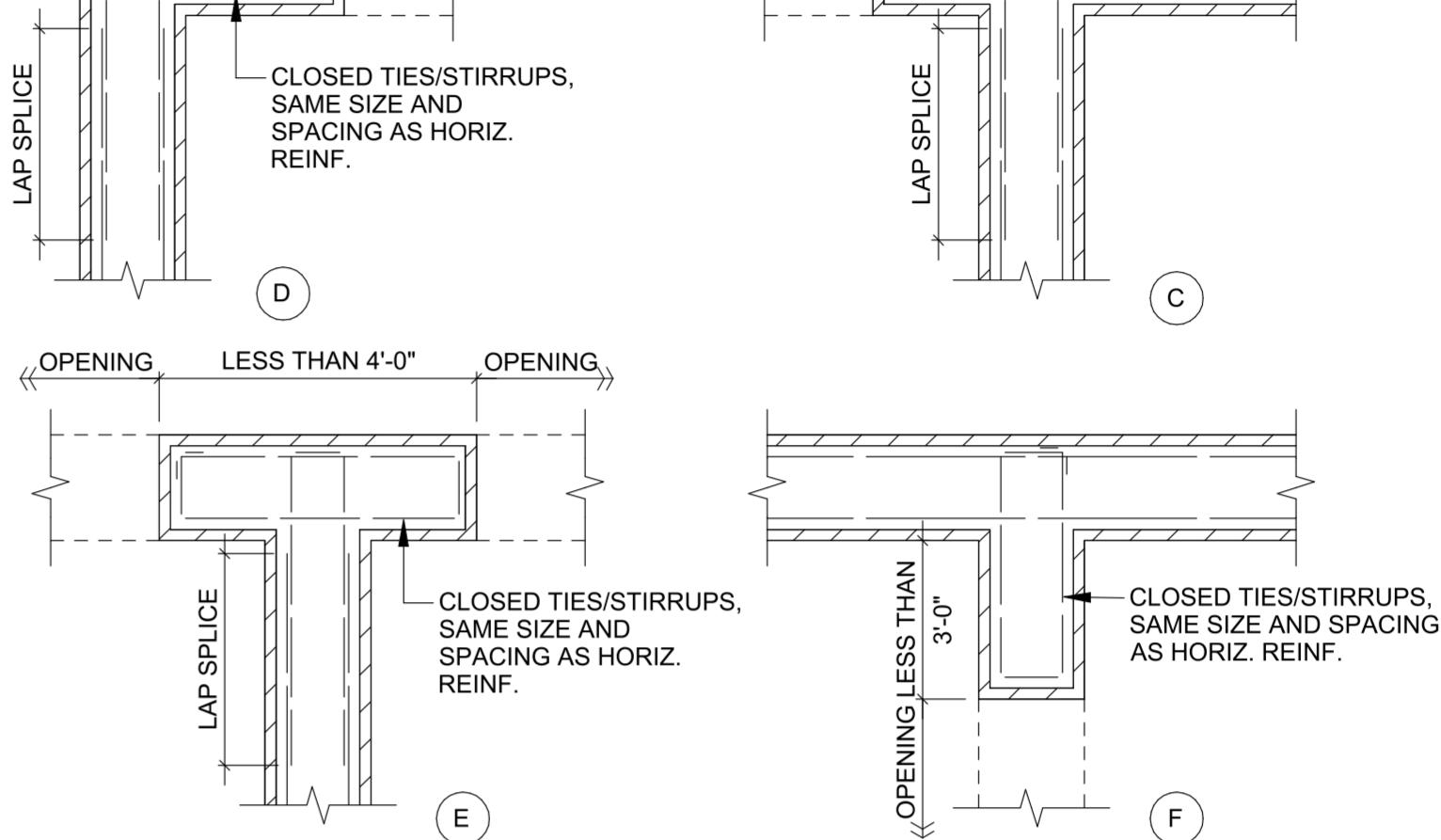
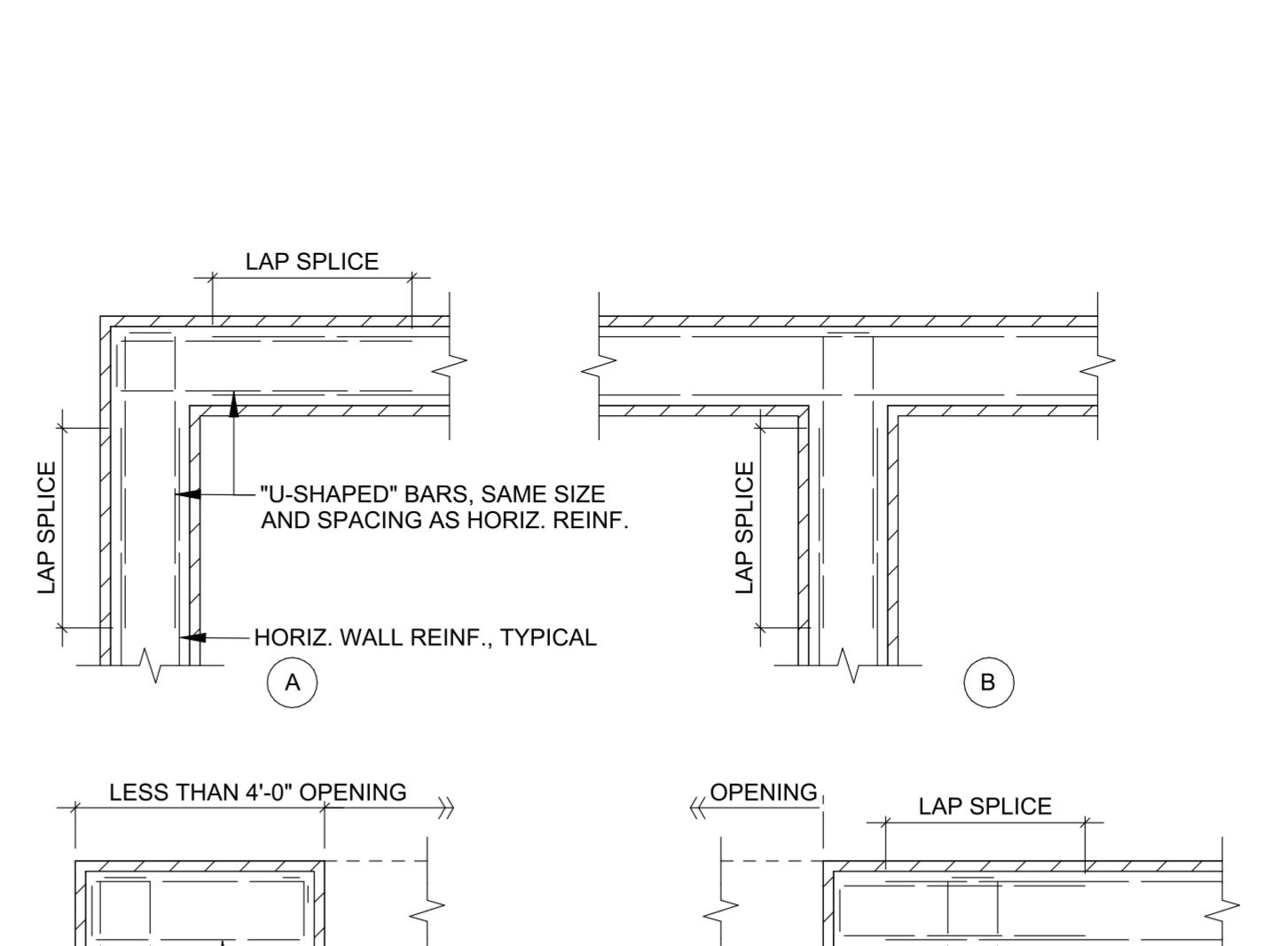
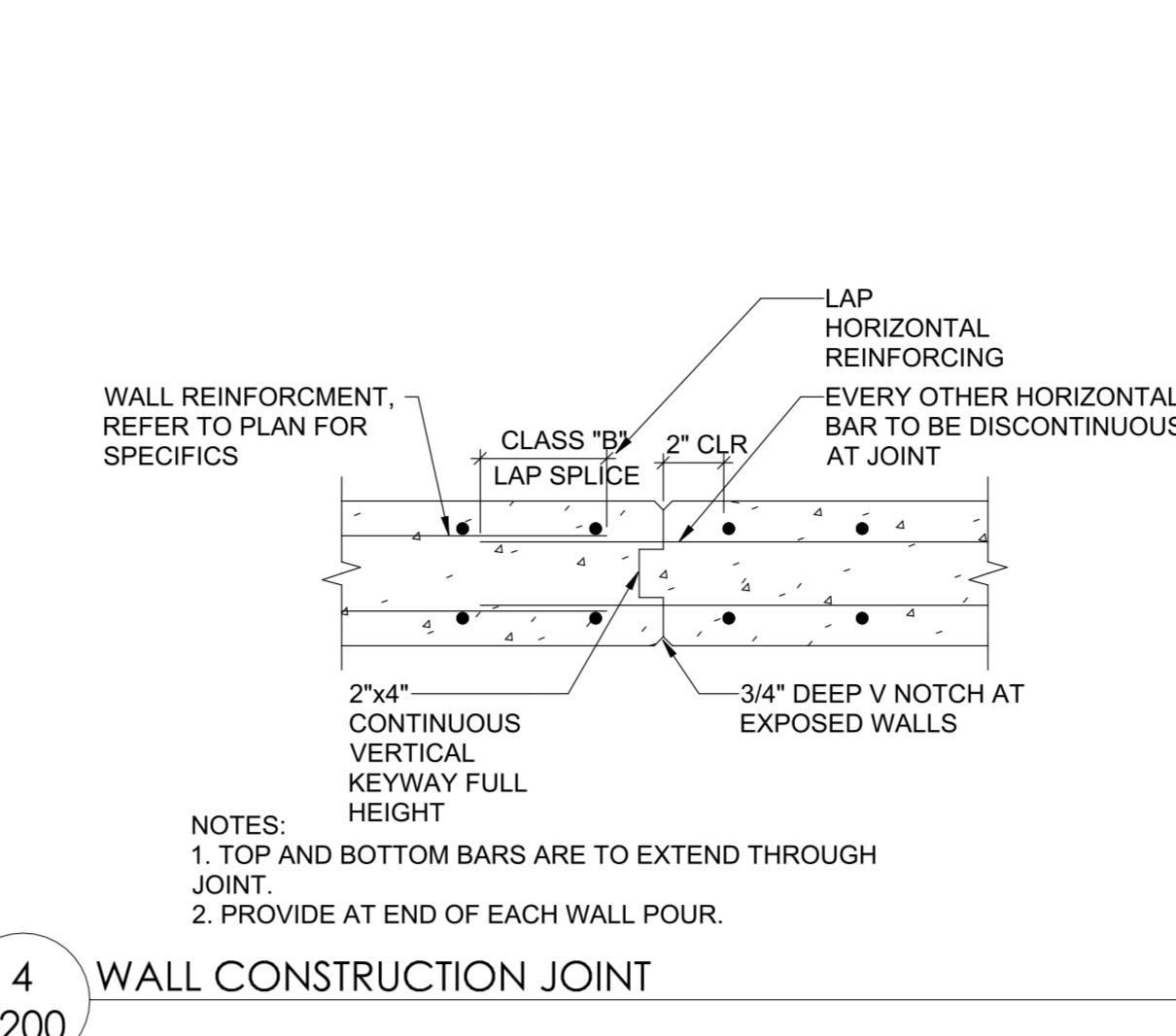
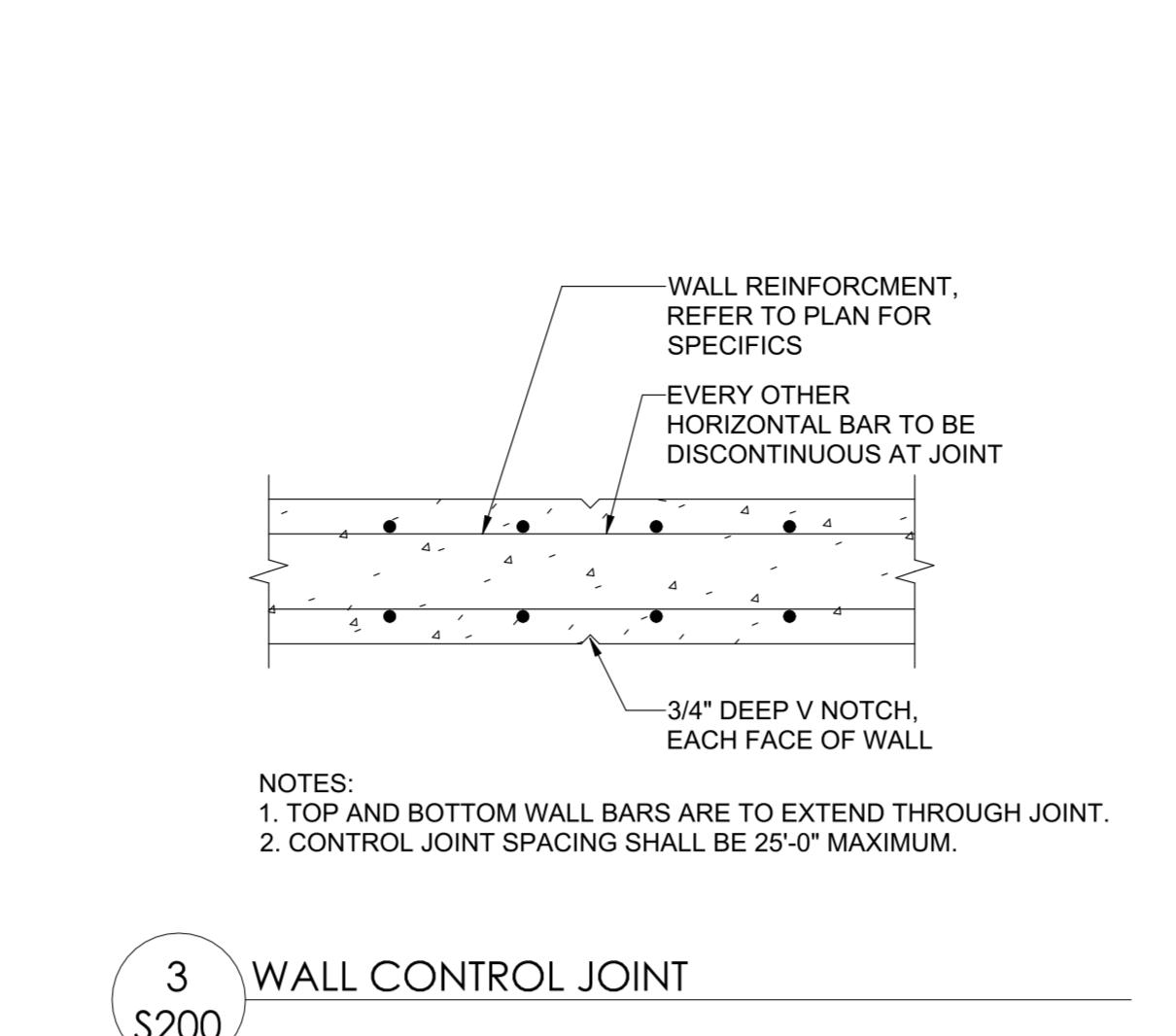
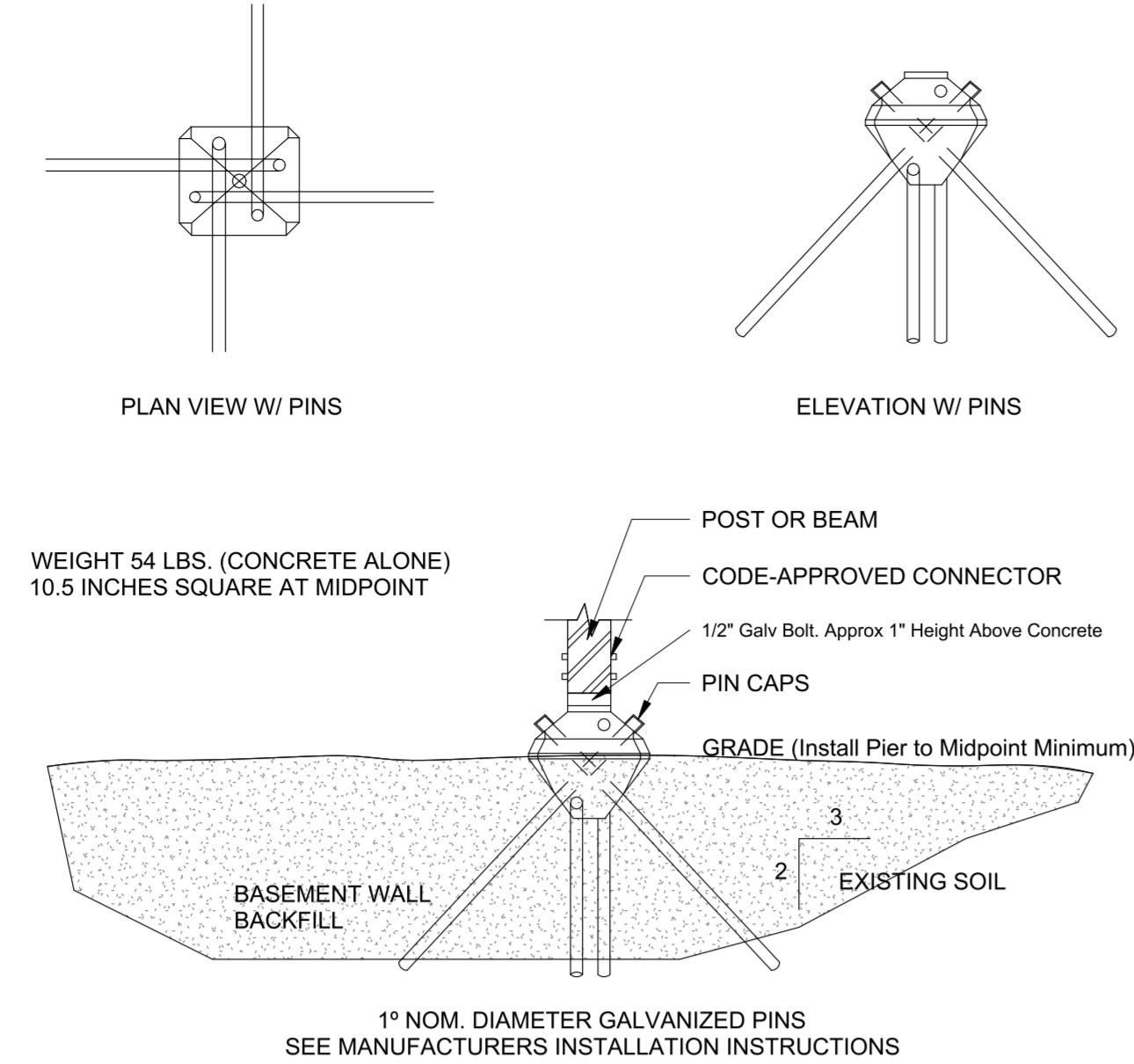
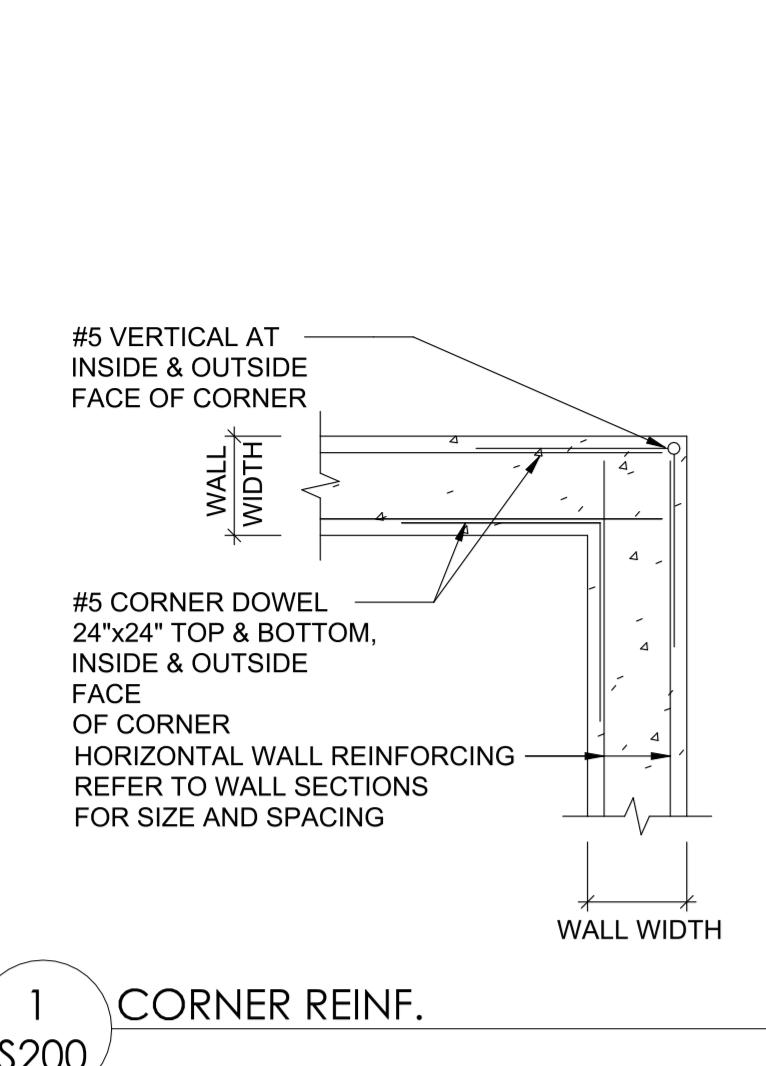
Ennovation
Engineering Services Incorporated
Structural Engineer: Structural Engineering
4729 Dale-Curtain Dr, McFarland, WI 53558
kfrey@ennovationbuilt.com

Hovland's
Mechanical Engineer: HOVLAND'S HVAC
10954 E Melby Street | Chippewa Falls, WI 54729
lhansen@hovlandsinc.com | 715.552.5595

Electrical Engineer: PRIM DESIGN ELECTRICAL CONSULTANTS
1600 Aspen Commons | Ste 210 | Middleton, WI 53562
bhagen@primdesign-electrical.com | 715.797.0602

Plumbing Engineer: TAILED ENGINEERING
1600 Aspen Commons | Ste 210 | Middleton, WI 53562
bnovak@tailoredeng.com | 608.209.7500

Date	Description
07.08.2019	Footing and Foundation Plan Permit



6 | 5 | 4 | 3 | 2 | 1

JOINT TYPES:

- █ CONTRACTION OR CONSTRUCTION JOINT
- █ ISOLATION JOINT

1 2 3 4 5

E

A

B

C

D

G

F

C

1 SLAB ON GROUND JOINTS
S201

5

4

3

2

1



Developer: W Capital Group
tyler@wcapitalgroup.com | 608.345.9848



Architect: OpeningDesign
312 W Washington Ave | Suite 675
Madison, WI 53703
ryan@openingdesign.com | 773.425.6456



General Contractor: ROYAL CONSTRUCTION
3653 Greenway Street | Eau Claire, WI 54701
jim@royalbuilt.com | 715-225-6377



Civil Engineer: CEDAR CORPORATION
604 Wilson Avenue | Menomonie, WI 54751
kevin.colum@cedarcorp.com | 715-235-9081



Structural Engineer: Structural Engineering
Calle Apolonio Morales, 628036 Madrid,
l.pereztato@xcengineering.xyz | +34 610 56 26 37



Structural Engineer: Structural Engineering
4729 Dale-Curtain Dr, McFarland, WI 53558
kfrey@ennovationbuilt.com



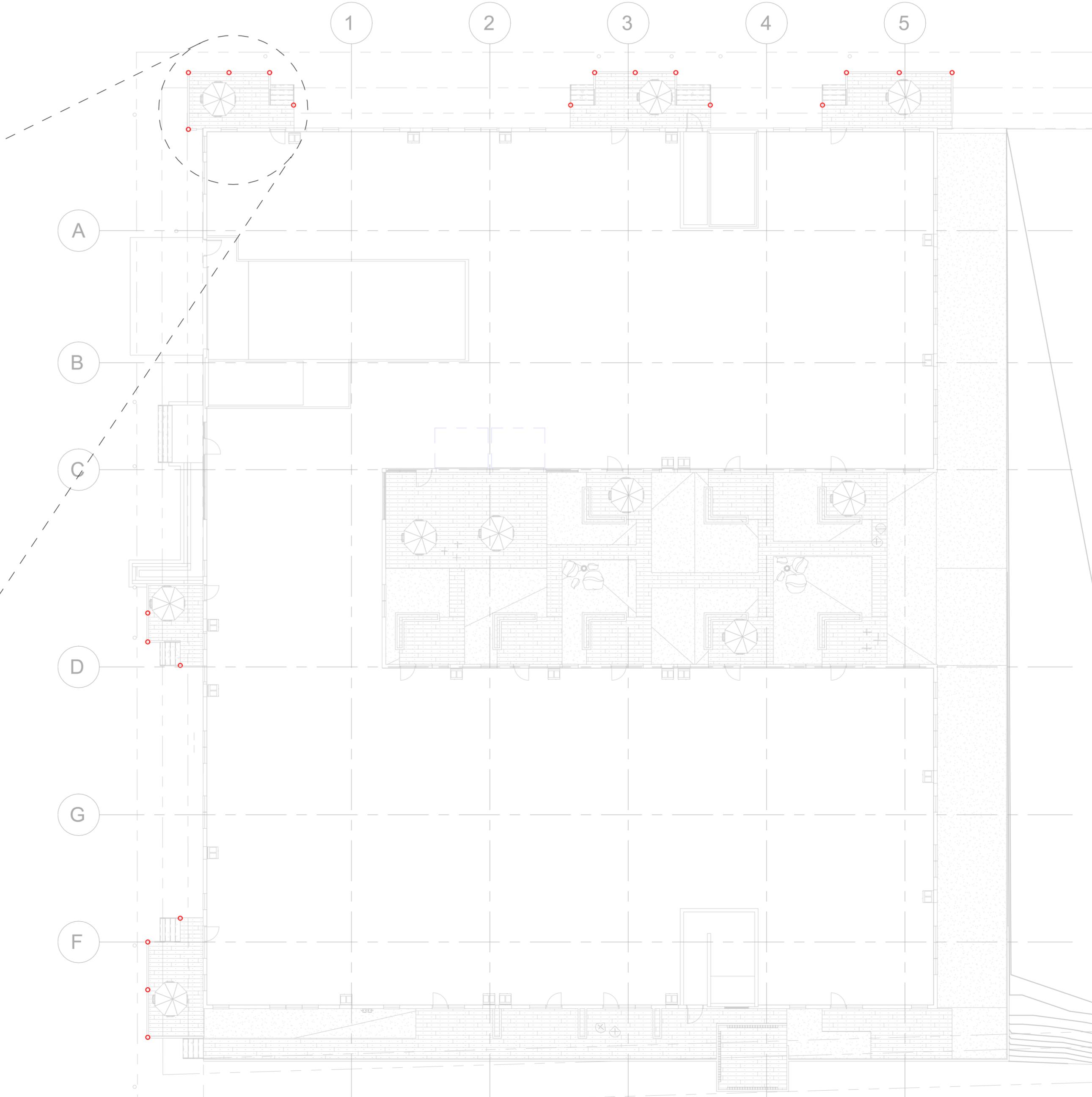
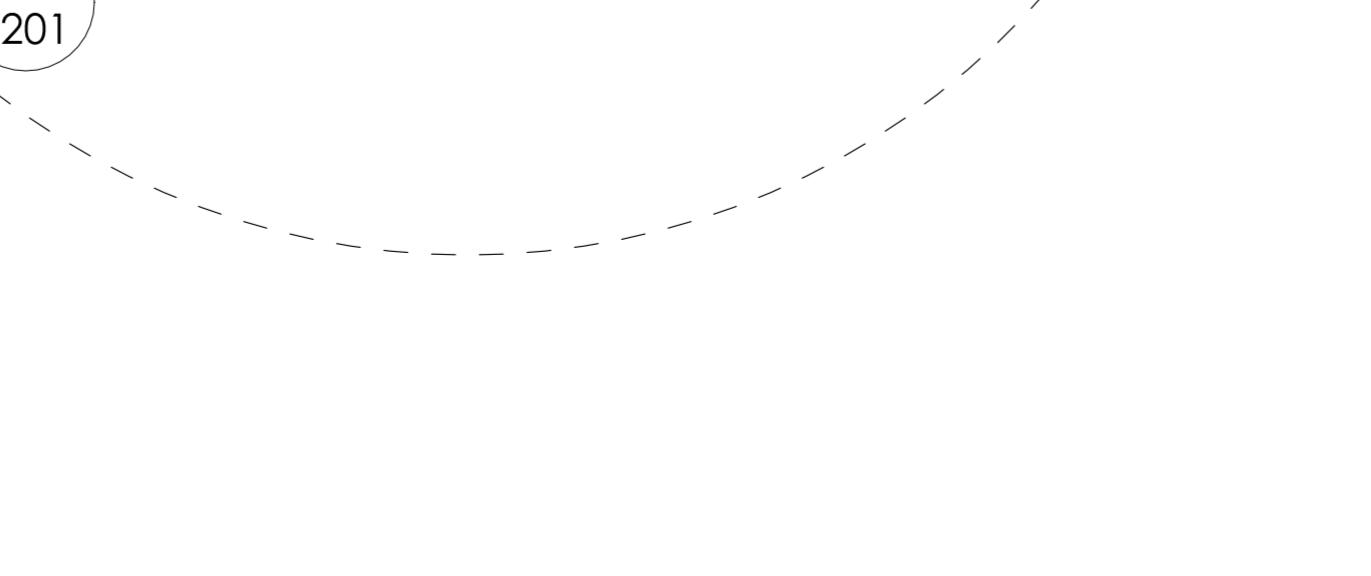
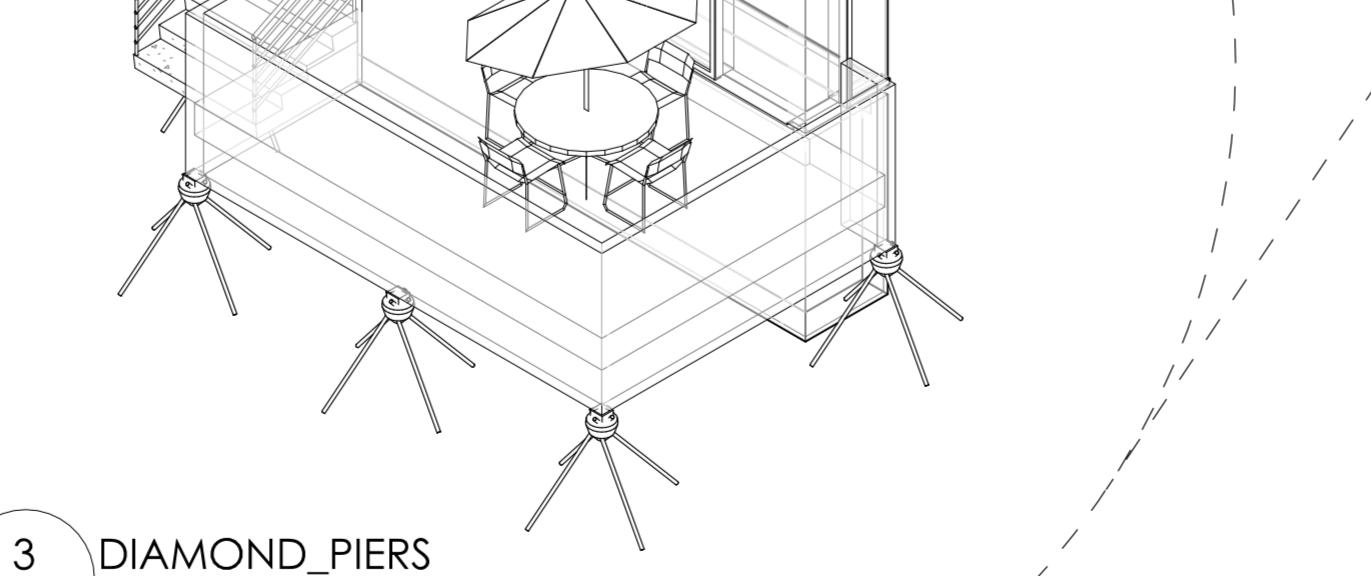
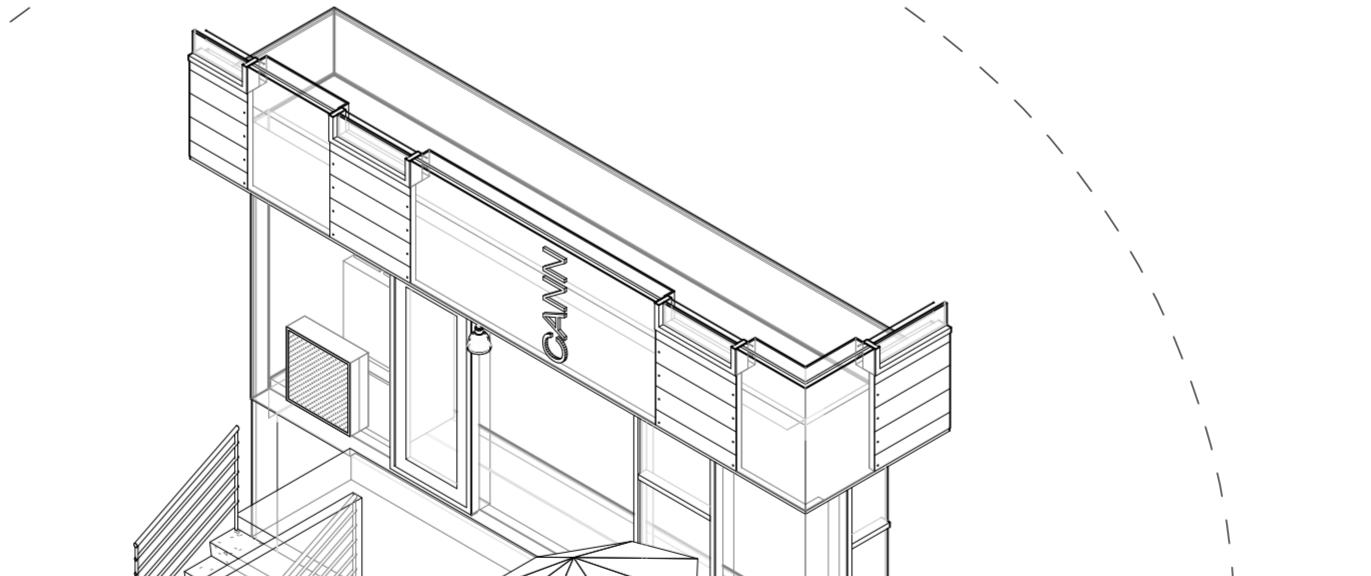
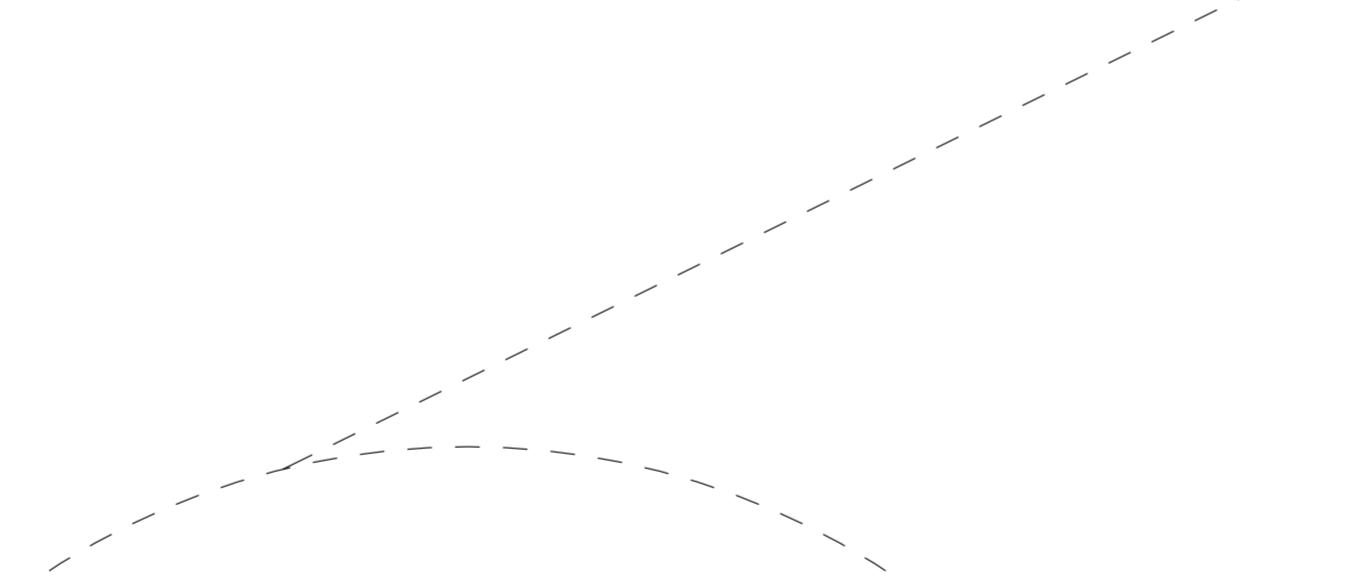
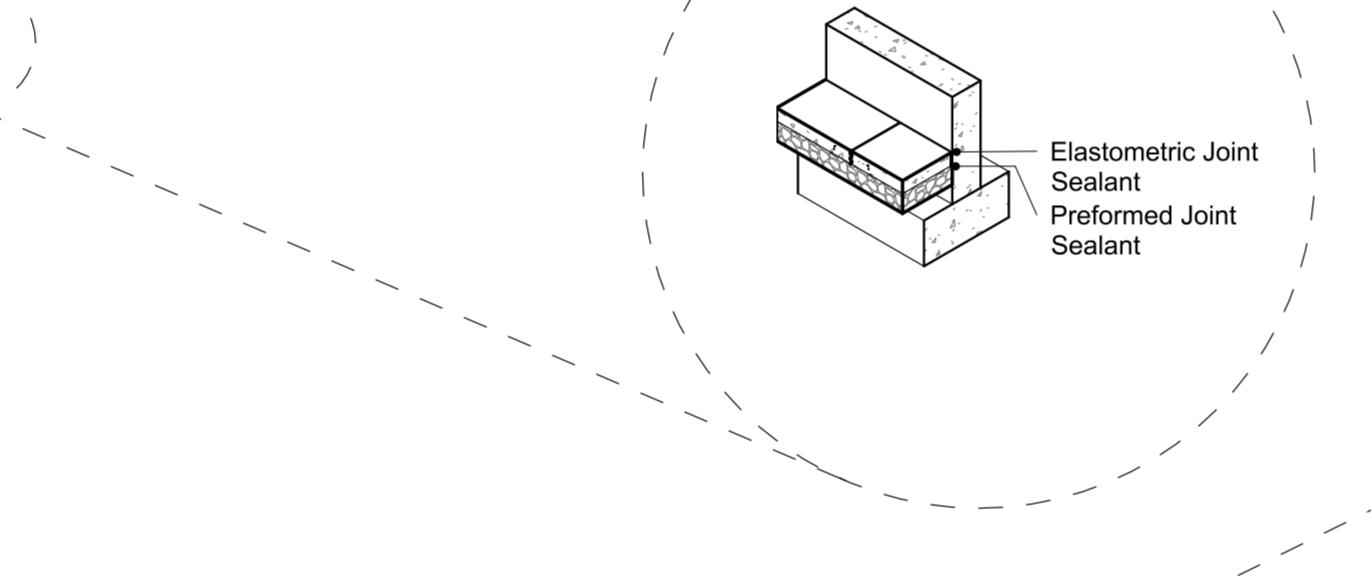
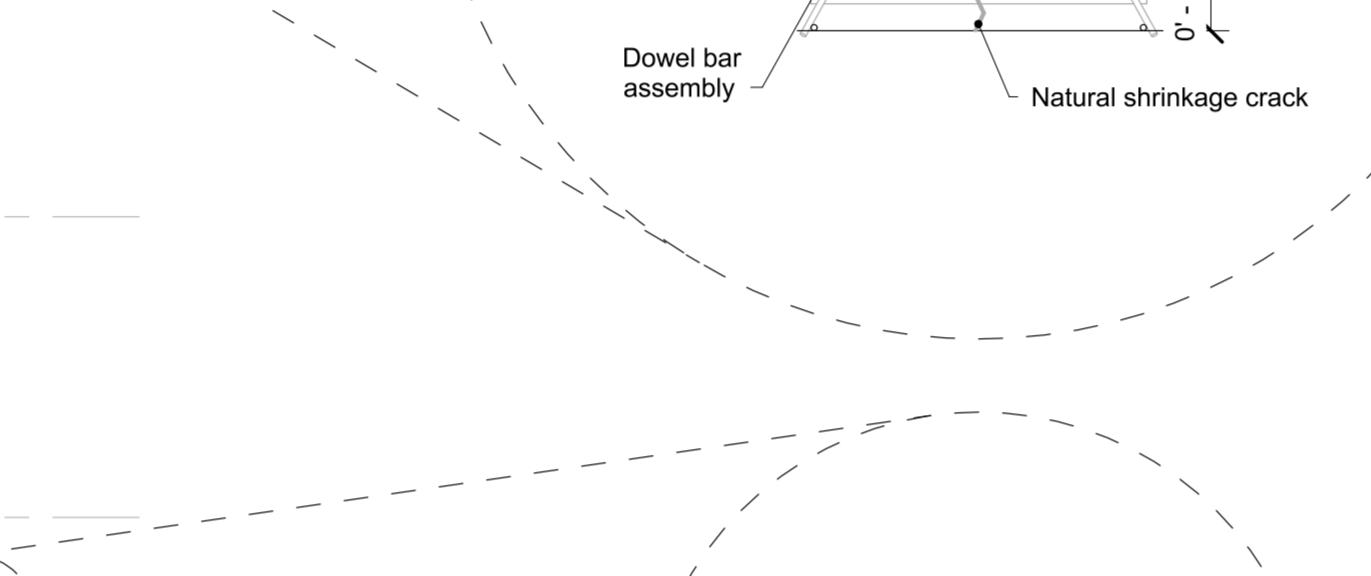
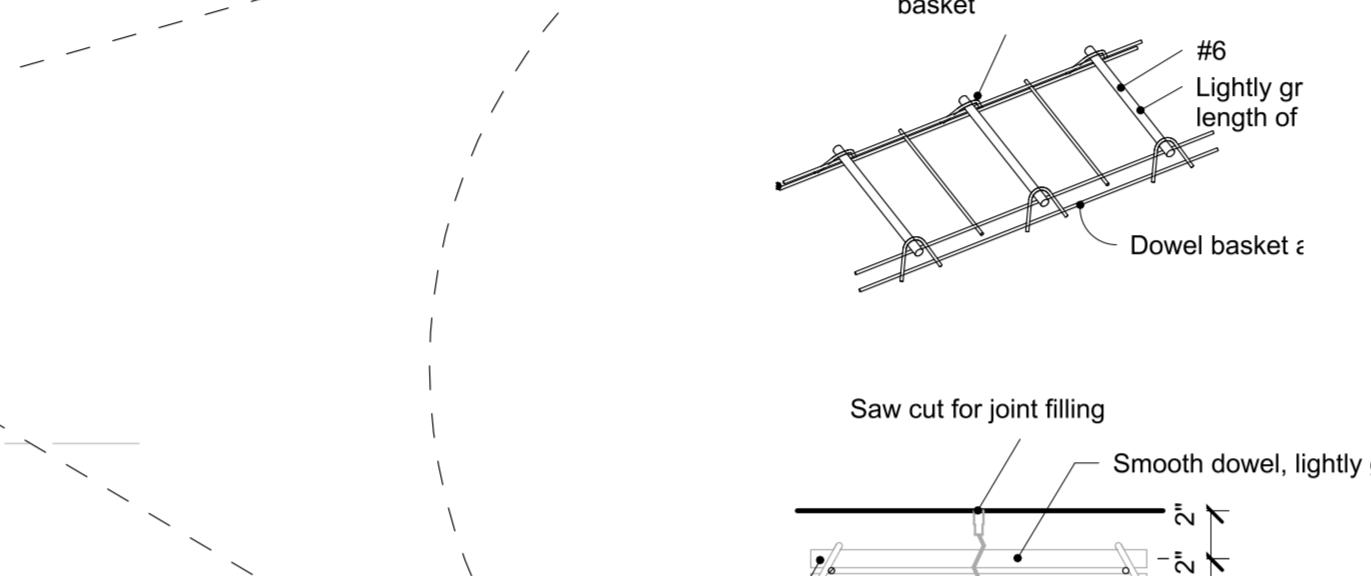
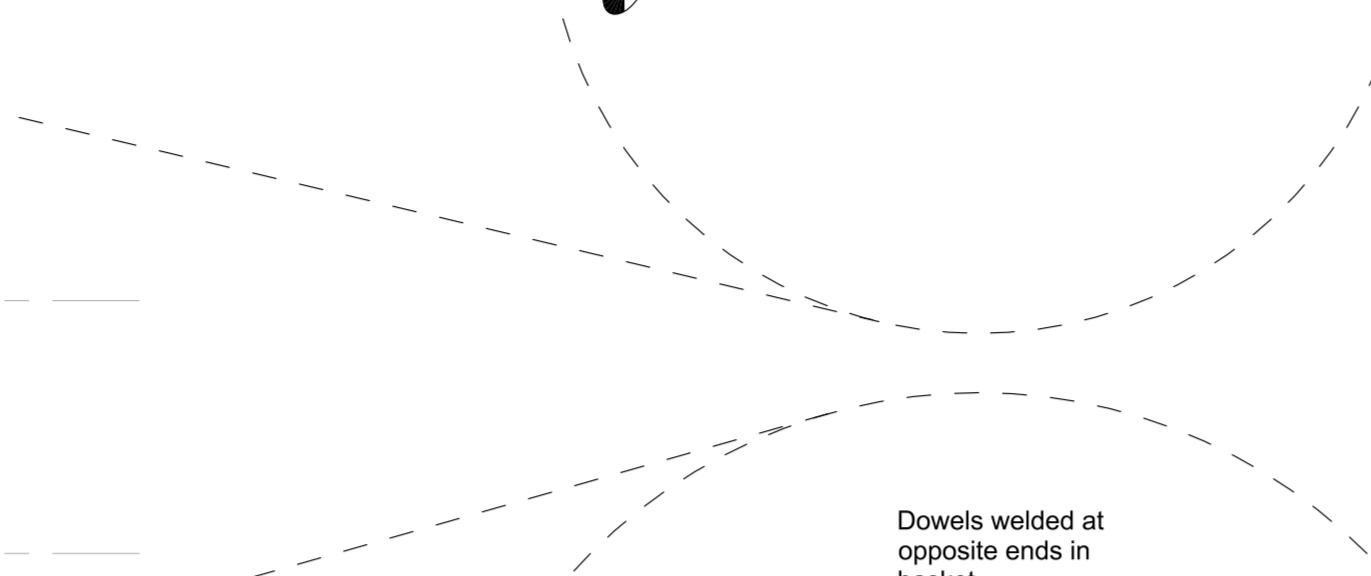
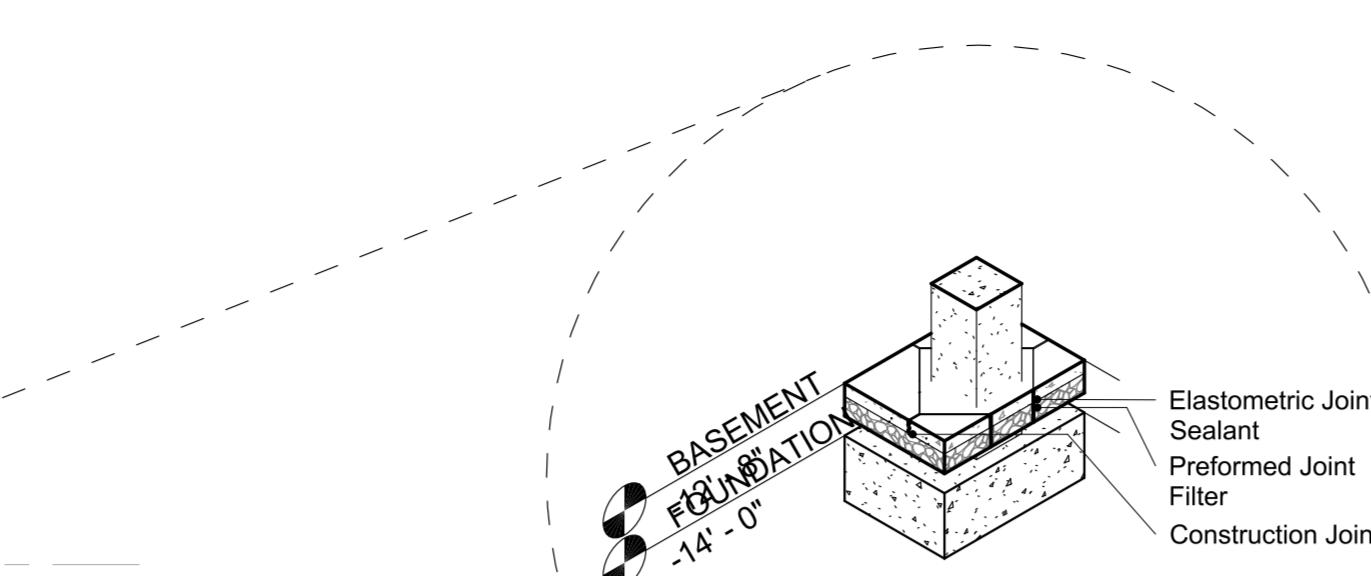
Mechanical Engineer: HOVLAND'S HVAC
10954 E Melby Street | Chippewa Falls, WI 54729
jhansen@hovlandsinc.com | 715.552.5595



Electrical Engineer: PRISM DESIGN ELECTRICAL CONSULTING
8403 State Rd 85 | Monroe, WI 54755
bhogen@prismdesign-electrical.com | 715.577.0602



Plumbing Engineer: TAILORED ENGINEERING
1600 Aspen Commons | Ste 210 | Middleton, WI 53562
bnovak@tailoredeng.com | 608.209.7500

2 DIAMOND PIERS
S201STRUCTURAL DETAILS
1750 OX RESIDENCES - 1750 N OXFORD AVE. - EAU CLAIRE, WI

S201

Date	Description
07.08.2019	Footing and Foundation Plan Permit

05/07/2019 14:45:16