A. GENERAL NOTES

1. ALL STRUCTURAL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS, DRAWINGS, AND THE 2015 VERMONT FIRE AND BUILDING SAFETY CODE.
2. CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH RELATED TRADES AND WITH OTHER DESIGN DISCIPLINE REQUIREMENTS PRIOR TO MAKING SUBMITTALS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PERFORMING WORK.
3. REFER TO OTHER DESIGN DISCIPLINE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION REQUIRED FOR THE SUBMITTALS AND INSTALLATION OF STRUCTURES, INCLUDING BUT NOT LIMITED TO DIMENSIONS, ELEVATIONS, SLOPES, LOCATIONS OF OTHER SYSTEMS AND EQUIPMENT, OPENINGS, WALLS, STAIRS, FINISHES, COATINGS, AND OTHER NON-STRUCTURAL ITEMS. NOTES PROVIDED ON THE DRAWINGS ARE INTENDED FOR USE IN CONJUNCTION WITH PROJECT SPECIFICATIONS
4. DETAILS LABELED AS TYPICAL DETAILS ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE DEMARKED AT EACH LOCATION IN THE DRAWINGS. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTALS.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATION DETAILS AND ACCURACY OF THE WORK; FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; FOR SELECTING FABRICATION PROCESSES, FOR TECHNIQUES OF ASSEMBLY IN ACCORDANCE WITH GENERAL CONDITIONS AND DIVISION 1 SPECIFICATION REQUIREMENTS; AND FOR PERFORMING ALL WORK IN A SAFE AND SECURE MANNER IN ACCORDANCE WITH GOVERNING JOB SAFETY STANDARDS.
6. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE SITE, INCLUDING LOCATIONS OF ALL EXISTING STRUCTURES AND EXISTING UTILITIES ABOVE AND BELOW GROUND (AS ANY INFORMATION SHOWN IS APPROXIMATE AND NOT NECESSARILY COMPLETE.) CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PERFORMING WORK.
7. LOADS APPLIED DURING CONSTRUCTION SHALL NOT EXCEED THE DESIGN LOADS NOTED ON THE DRAWINGS OR THE CAPACITY OF PARTIALLY COMPLETED CONSTRUCTIONS AS DETERMINED BY THE CONTRACTOR. THE STRUCTURAL ELEMENTS OF THE PROJECT AS SHOWN IN THE CONSTRUCTION DOCUMENTS HAVE BEEN DESIGNED FOR THE SPECIFIED VERTICAL AND LATERAL FORCES ACTING ON THE COMPLETED BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN AND PROVIDE ALL REQUIRED SHORING AND BRACING NEEDED DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF THE PARTIALLY-COMPLETED STRUCTURE AND FOR CONSTRUCTION LOADINGS THAT EXCEED THE SPECIFIED DESIGN LOADS
8. SHORING, BRACING, PROTECTING, AND MAINTAINING THE INTEGRITY OF ANY EXISTING, ADJACENT, AND/OR ONGOING PARTIALLY COMPLETED STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.

B. EXISTING BUILDING NOTES

1. DIMENSIONS, ELEVATIONS, MEMBER SIZES, AND DETAILS OF EXISTING STRUCTURE SHOWN IN THE STRUCTURAL DRAWINGS HAVE BEEN EXTRACTED FROM RECORD DRAWINGS AND/OR LIMITED FIELD MEASUREMENTS. AS SUCH THEY ARE NOT TO BE CONSIDERED SUITABLY ACCURATE FOR ANY CONSTRUCTION WORK SHOWN, INCLUDING FABRICATIONS, SUBMITTALS, ETC. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING CONSTRUCTION, INCLUDING PLUMBNESS OR FLATNESS OF WALLS, FLOORS, ETC. AT THE JOB SITE PRIOR TO SUBMITTAL, FABRICATION OR CONSTRUCTION WORK. ANY DEVIATIONS FOUND IN THE FIELD FROM WHAT IS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION.
2. TEMPORARY SHORING AND BRACING OF FLOORS, WALLS, AND OTHER STRUCTURAL ELEMENTS OF THE EXISTING BUILDINGS REQUIRED TO ACHIEVE THE INSTALLATION OF NEW AND/OR THE REMOVAL OF EXISTING STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL, AT THEIR DISCRETION AND WHERE SPECIFIED, EMPLOY ENGINEERING SERVICES FOR DESIGN OF TEMPORARY BRACING, SHORING AND PROTECTION. EXISTING BUILDING MOVEMENTS SHALL BE LIMITED TO PREVENT DISTRESS FROM OCCURRING.
3. REPORT EXISTING CONDITIONS UNCOVERED, REVEALED, FOUND OR DEVELOPED DURING CONSTRUCTION INDICATIVE OF STRUCTURAL INTEGRITY LOSS OR DETERIORATION, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
4. DO NOT CUT, DRILL OR ALTER ANY EXISTING STRUCTURAL ELEMENTS UNLESS SHOWN OR NOTED ON THE STRUCTURAL DRAWINGS WITHOUT NOTIFY THE ARCHITECT FOR REVIEW, INCLUDING TEMPORARY MEASURES OR FOR THE INSTALLATION OF OTHER DESIGN DISCIPLINE WORK.
5. MONITORING OF CONSTRUCTION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO FIRE WATCH DURING AND AT LEAST 24 HOURS AFTER ALL STEEL WELDING OR DRILLING, WOOD DRILLING, AND HEAT TRANSFERRING CONSTRUCTION MEASURES. DO NOT ALLOW HEAT OR ENERGY FROM EQUIPMENT TO DAMAGE OR OTHERWISE ALTER EXISTING STRUCTURAL ELEMENTS TO REMAIN.
6. FOR EXISTING STEEL ELEMENTS, DO NOT ALLOW THE THROUGH THICKNESS TEMPERATURE OF THE STEEL TO EXCEED 300º FAHRENHEIT DURING WELDING PROCESSES UNLESS SPECIFICALLY NOTED OTHERWISE. USE ACTIVE, OBSERVABLE SURFACE MONITORING METHODS.

C. CAST-IN-PLACE CONCRETE

1. CODES AND STANDARDS: COMPLY WITH THE PROVISIONS OF THE LATEST EDITIONS OF:
   - A. ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   - B. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE"
   - C. ACI 304 "GUIDE FOR MIXING, TRANSPORTING AND PLACING CONCRETE"
   - D. ACI 305 "HOT WEATHER CONCRETING"
   - E. ACI 306 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING"
   - F. ACI 308 "STANDARD PRACTICE FOR CURING CONCRETE".
2. CONCRETE TESTING: THE CONTRACTOR SHALL PREPARE A SET OF 4 CYLINDERS/TEST SET TO BE TESTED AT AN INDEPENDENT LABORATORY. THE CYLINDERS SHALL BE TAKEN FROM ONE CONCRETE TRUCK AND LABELED WITH DATE, TRUCK NUMBER, AND LOCATION OF CONCRETE PLACEMENT. EACH SAMPLE SHALL ALSO BE TESTED FOR SLUMP, AIR CONTENT, AND TEMPERATURE. THE CYLINDERS SHALL BE TESTED AS FOLLOWS: 1 AT 7 DAYS; 2 AT 28 DAYS; AND A THIRD HELD FOR A 56 DAY BREAK IF REQUIRED. TEST CYLINDERS SHALL BE TAKEN AT LEAST ONCE PER PLACEMENT OR AT THE FOLLOWING INCREMENTS:
   - A. WALLS AND FOOTINGS: 50 CUBIC YARDS
   - B. ISOLATED FOOTINGS: 25 CUBIC YARDS
   - C. SLABS: 50 CUBIC YARDS

   FIELD TESTING SHALL BE PERFORMED BY A GRADE I ACI (MINIMUM)FIELD TESTING TECHNICIAN.
3. SUBMIT MIX DESIGN AND EITHER TRIAL MIX DESIGNS OR HISTORIC FIELD DATA FOR APPROVAL IN ACCORDANCE WITH ACI 318, CHAPTER 5, INCLUDE TECHNICAL DATA SHEETS, GRADATIONS, AND MATERIAL VERIFICATIONS ON ALL COMPONENTS. SUBMIT MIX DESIGNS, PRIOR TO PLACEMENT OF CONCRETE, TRANSIT MIX SHALL CONFORM TO ASTM C94.
4. COMPRESSIVE MIXTURES AS DELINEATED IN TABLE BELOW; SEE 03 3000 & NOTES BELOW FOR ADDITIONAL INFORMATION.
   - A. SLUMP: 3"-5" BEFORE ADDITION OF WATER REDUCER, 6"-8" AFTER ADDITION OF WATER REDUCER
   - B. ALL CONCRETE NORMALWEIGHT, UNLESS NOTED OTHERWISE.
5. MAXIMUM AGGREGATE SIZE IN ACCORDANCE WITH ACI 301; CLEARLY NOTE LOCATION WHERE AGGREGATES GREATER THAT 3/4" MAXIMUM SIZE ARE PROPOSED FOR USE.
6. NO CHLORIDE OR OTHER UNAUTHORIZED ADMIXTURES SHALL BE USED. MAINTAIN MAXIMUM WATER SOLUBLE CHLORIDE ION (CL-) IN CONCRETE, BY WEIGHT OF CEMENT AT LESS THAN 1.00 FOR NON-EXPOSED CONCRETES AND 0.30 FOR EXTERIOR EXPOSED CONCRETES
7. WHEN AMBIENT TEMPERATURE IS BELOW 40º FAHRENHEIT OR MORE THAN 90º FAHRENHEIT PLACE AND PROTECT CONCRETE IN ACCORDANCE WITH ACI STANDARDS LISTED ABOVE.
8. CONCRETE PLACEMENT MAY REQUIRE ADJUSTMENT OF REINFORCEMENT, EMBEDDED ITEMS OR ANCHOR BOLTS. REVIEW DRAWINGS IDENTIFY THESE LOCATIONS TO ARCHITECT PRIOR TO SUBMITTALS. PROVIDE ADDITIONAL SUPERVISION AT ALL STEEL TO CONCRETE CONNECTION LOCATIONS AND MODIFY PLACEMENT MEASURES TO ACCOUNT FOR CONGESTIONS.
9. COMPLY WITH ACI CODES AND PLACE CONCRETE IN A CONTINUOUS OPERATION WITHIN PLANNED JOINTS OR SECTIONS. DO NOT PERMIT COLD JOINTS TO OCCUR.
10. CURING: COVER OR WET CURE ALL ELEMENTS. BEGIN INITIAL CURING AS SOON AS FREE WATER HAS DISAPPEARED FROM EXPOSED SURFACES. WHERE POSSIBLE, KEEP CONTINUOUSLY WET FOR 72 HOURS. CONTINUE CURING BY USE OF MOISTURE RETAINING COVER. USE OF MEMBRANE-FORMING CURING COMPOUNDS IS PROHIBITED.
11. SEE 03 3000 FOR SURFACE FINISHES. NOTE EXPOSED WALL REQUIREMENTS IN SPECIFICATIONS.
12. PROVIDE CONTROL AND CONSTRUCTION JOINTS BY DETAIL AND SPECIFICATION REQUIREMENTS. SHOW LOCATION ON REINFORCING SUBMITTAL FOR COORDINATION WITH FLOORING, EQUIPMENT AND OTHER CONTRACTOR REQUIREMENTS.
   - A. SLABS SAW-CUT CONTROL JOINTS AS SOON AS CONCRETE HAS HARDENED ENOUGH TO WALK ON SURFACE WITHOUT DAMAGING CONCRETE AND NO MORE THAN 4 HOURS AFTER FINAL TROWEL. JOINT SPACING SHALL, UNLESS NOTED OTHERWISE, NOT EXCEED 36 TIMES THE SLAB THICKNESS OR 18 FEET.
   - B. WALLS CONTROL JOINTS: NOT EXCEEDING 20 FEET AND AT EACH INTEGRAL PILASTER; CONSTRUCTION JOINTS AT 80 FEET OF MAXIMUM SPACING.

D. CONCRETE REINFORCEMENT

1. SHOP DRAWINGS SHALL BE PROVIDED PRIOR TO START OF CONCRETE PLACING AND BE IN ACCORDANCE WITH:
   - A. ACI 301
   - B. ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
   - C. ACI SP-66 "ACI DETAILING MANUAL"
   - D. CRSI MSP "MANUAL OF STANDARD PRACTICE"

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. SHOW ALL SLABS IN PLAN AND ALL WALLS IN ELEVATION WITH OPENINGS AND PENETRATIONS SHOWN BASED ON MEP COORDINATION SUBMITTALS AND ARCHITECTURAL REQUIREMENTS. SUBMIT PROPOSED CONTROL AND CONSTRUCTION JOINTS FOR REVIEW ON REINFORCING SUBMITTALS
2. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60, STEEL BARS PER ASTM A305, UNLESS NOTED OTHERWISE.
3. PROVIDE EPOXY-COATED BARS WHERE SHOWN MEETING ASTM A775 AND USING EPOXY COATED SUPPORTS, COATED WIRE, AND EPOXY COATING FOR REPAIR OF SURFACE PRIOR TO POURING.
4. WHERE SPECIFICALLY SHOWN ON THE DRAWINGS, WELD REINFORCING BARS IN ACCORDANCE WITH AWSD1.4 PRE-QUALIFIED JOINT, ELECTRODE 8E90 (LOW HYDROGEN) AND PROCESS REQUIREMENTS INCLUDING COORDINATED WITH MILL CERTIFIED CARBON EQUIVALENT. ALTERNATIVELY, ASTM A706, GRADE 60 MAY BE SUBSTITUTED, INDICATE MATERIAL AND WELDING REQUIREMENTS ON SUBMITTAL. DO NOT WELD AT LOCATIONS NOT DETAILED, UNLESS SUBMITTED AND REVIEWED BY ARCHITECT.
5. FIELD BENDING OR REINFORCEMENT SHALL CONFORM TO ACI 301, INCLUDING PRE-HEAT REQUIREMENTS.
6. WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185 WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 70,000 PSI. LAP ONE CROSS WIRE SPACING PLUS 2". SUPPORT MESH ON CHAIRS PER CRSI WITH #4 AT 4'-0"oc, EACH WAY.
7. PROVIDE MINIMUM CONCRETE COVER TO REINFORCEMENT AS FOLLOWS, UNLESS OTHERWISE NOTED:
   - A. BOTTOM OF FOOTINGS, GRADE BEAMS, AND SLABS-ON-GRADE: 3"
   - B. SIDES OF FOOTINGS AND GRADE BEAMS: 2"
   - C. FOUNDATION WALLS, FROST WALLS, RETAINING WALLS, PIT WALLS: 2"
   - D. EXTERIOR WALLS (EXPOSED TO WEATHER): 2"
   - E. FACES OF WALLS OTHER THAN THOSE NOTED ABOVE: 3/4"
   - F. FOUNDATION PIERS: 2" TO TIES
   - G. ALL FACES OF BEAMS AND COLUMNS: 1-1/2" TO TIES
   - H. TOP AND BOTTOM OF ELEVATED SLABS: 3/4"
   - I. TOPPING SLAB: 3/4"
   - J. SLAB-ON-DECK: 3/4" FROM DECK, 3/4" FROM TOP SURFACE
8. ALL LAPS SHALL BE FULL TENSION LAPS (CLASS B SPLICE) UNLESS SPECIFICALLY NOTED OTHERWISE. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UNLESS OTHERWISE NOTED.
9. HEADED STUD ANCHORS, DEFORMED BAR ANCHORS (DBA'S), AND OTHER EMBEDDED ITEMS AS SPECIFIED FOR STRUCTURAL STEEL. ALL WELDS FOR STUDS AND DBA'S SHALL BE AUTOMATICALLY WELDED WITH MANUFACTURER'S EQUIPMENT AND RECOMMENDATIONS FOR FLUX FILLED HEADS.
10. CHAIRS AND SPACERS SHALL BE PLACED TO ADEQUATELY SUPPORT REINFORCING DURING PLACEMENT. FOREIGN MATERIALS SUCH AS WOOD, CLAY BRICK OR OTHER UNSUITABLE SUPPORTS SHALL NOT BE USED TO SUPPORT REINFORCING. SET WIRE TIES SO ENDS ARE DIRECTED INTO CONCRETE WHERE CONCRETE WILL BE EXPOSED. DO NOT USE CONCRETE SUPPORTS OR PUDDLING FOR SLABS UNLESS SUBMITTED AND ACCEPTABLY REVIEWED.

E. CONCRETE FORMWORK

1. CONCRETE FORMS SHALL BE CLEAN AND FREE FROM DEBRIS. IF FORMS ARE COATED WITH A VEGETABLE BASED SOY) RELEASE AGENT, WHICH SHALL NOT STAIN CONCRETE OR ABSORB MOISTURE OR IMPAIR NATURAL BONDING OF CONCRETE.
2. COORDINATE WITH REINFORCING SUBMITTAL FOR OPENING AND ADDITIONAL REQUIREMENTS. SUBMIT, BEFORE FRAMING OPENINGS IN STRUCTURAL ELEMENTS WHICH ARE NOT INDICATED ON DRAWINGS.
3. PROVIDE BRACING TO ENSURE STABILITY OF FORMWORK. FOR PLACEMENT OPERATIONS. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.
4. ALL WALL SIDES AND SLAB EDGES EXPOSED TO VIEW TO HAVE CLASS A – CLASS OF SURFACE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

F. FOUNDATION RELATED EARTHWORK

1. FOUNDATIONS HAVE BEEN DESIGNED FOR A PRESUMPTIVE BEARING PRESSURE OF 2000 PSF BASED ON IBC 2015 TABLE 1806.2 (SOIL CONDITIONS ASSUMED TO BE: SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL, AND CLAYEY GRAVEL (SW, SP, SM, SC, GM, GC). THIS ASSUMPTION SHALL BE VERIFIED BY THE OWNER OR GENERAL CONTRACTOR AT THE TIME OF EXCAVATION. IF NECESSARY, THE OWNER SHALL EMPLOY A TESTING AGENCY OR GEOTECHNICAL ENGINEER TO ASSIST IN THIS EVALUATION. SOIL TESTING OR GEOTECHNICAL ENGINEERING HAS NOT BEEN COMPLETED BY THE DESIGN TEAM.
2. IBC CHAPTER 18 "SOILS AND FOUNDATIONS" REQUIREMENTS APPLY, UNLESS SPECIFICALLY NOTED OTHERWISE BY THE DRAWINGS OR SPECIFICATIONS. REPORT CONFLICTS BETWEEN THE SITE CONDITIONS AND THE DRAWINGS AND SPECIFICATIONS TO THE ARCHITECT PRIOR TO COMMENCING ANY AFFECTED WORK.
3. FOOTINGS, PILE CAPS, AND SLABS CAST DIRECTLY AGAINST THE EARTH SHALL BE SIDE-FORMED AS REQUIRED TO KEEP EARTH OUT OF THE CONCRETE. COMPACT DISTURBED LOAD BEARING SOIL IN DIRECT CONTACT WITH FOUNDATIONS TO ORIGINAL BEARING CAPACITY. AS WET WEATHER OR GROUND CONDITIONS WARRANT, PLACE A MINIMUM OF 6 INCHES OF CRUSHED STONE OR 12 INCHES OF SAND-GRAVEL WRAPPED IN GEOTEXTILE FABRIC FOR SUBGRADE PROTECTION BENEATH FOUNDATIONS. DO NOT ALLOW FOR STANDING WATER ON EARTH. IF OVER-EXCAVATION OCCURS, REPLACE MATERIAL WITH BACKFILL MEASURES SPECIFIED FOR USE UNDER FOUNDATIONS, AFTER ACCEPTANCE BY GEOTECHNICAL ENGINEER.
4. UNLESS NOTED OTHERWISE, PLACE AND COMPACT BACKFILL IN EQUAL CONTINUOUS LAYERS NOT EXCEEDING A MAXIMUM OF 8" OF COMPACTED DEPTH FOR HAND-HELD COMPACTION EQUIPMENT AND A MAXIMUM OF 12" INCHES COMPACTED DEPTH FOR VIBRATORY ROLLERS. MAINTAIN OPTIMUM MOISTURE CONTENT OF BACKFILL MATERIALS TO ATTAIN COMPACTION DENSITY.
5. AT EARTH RETAINING AND FOUNDATION WALLS, BACKFILL LIFTS TO NOT EXCEED 12 INCH DIFFERENCE IN ELEVATION UNTIL FINAL ELEVATION ARE REACHED ON BOTH SIDES OF THE WALL. AT BASEMENT WALLS, DO NOT BACKFILL UNTIL GROUND FLOOR AND CONNECTED ELEVATED FRAMED LEVELS SLABS HAVE BEEN COMPLETED AND THE CONCRETE AT WALLS AND FLOORS HAS ACHIEVED FULL DESIGN STRENGTH.
6. THE CONSTRUCTION CONSIDERATIONS IN THE GEOTECHNICAL REPORTING AND PROJECT SPECIFICATIONS SHALL APPLY TO THIS PROJECT, INCLUDING BUT NOT LIMITED TO PROOFROLLING SUBGRADES AT THE EXCAVATION AND/OR BEARING ELEVATIONS; REMOVING AND REPLACING LOOSE OR SOFT POCKETS, FILL SLOPE CONSTRUCTIONS, ETC.
7. BACKFILL REQUIREMENTS:
   - A. FILL WITHIN BUILDING ENVELOPE AND EXTENDING OUTWARD AT 1:1 SLOPE TO ACCEPTABLE NATIVE SOIL CONDITIONS:
     MATERIAL: "SAND-GRAVEL"; "GRANULAR"; "CRUSHED STONE" WITH GEOTEXTILE WRAP (SEE SECTIONS)
     COMPACTION: 95% MODIFIED PROCTOR
   - B. BACKFILL DIRECTLY BELOW INTERIOR SLABS-ON-GRADE ASSEMBLIES (12 INCHES UNLESS NOTED OTHERWISE): "CRUSHED STONE" WITHOUT GEOTEXTILE
     COMPACTION: 95% MODIFIED PROCTOR
   - C. BACKFILL BELOW PAVEMENT, WALKS, ENTRY SLABS IN VICINITY OF BUILDING:
     MATERIAL: "SAND-GRAVEL" "GRANULAR" "CRUSHED STONE" (SEE SECTIONS, LAND ARCH AND CIVIL)
     COMPACTION: 95% MODIFIED PROCTOR
   - D. BACKFILL BEHIND RETAINING WALLS AND BASEMENT WALLS, OUTSIDE BUILDING ENVELOPE AND UNDER PAVEMENT, WALKS, ENTRY SLABS:
     MATERIAL: "GRANULAR BACKFILL"
     COMPACTION: 95% MODIFIED PROCTOR
   - E. BACKFILL ALONG EXTERIOR OF BUILDING AGAINST WALLS AND NOT UNDER PAVEMENT, WALKS, ENTRY SLABS:
     MATERIAL: "SUITABLE NATIVE SOIL" COVERED BY 2 FEET DEEP BY 4 FEET WIDTH OF "LESS PERMEABLE FILL
     COMPACTION: 92% MODIFIED PROCTOR
8. BACKFILL MATERIALS: RECYCLED CONCRETE AGGREGATE TO BE USED IN WHOLE OR BLENDED WITH OTHER AGGREGATES TO ACHIEVE GRADATIONS BELOW. ONSITE MATERIALS MEETING THE FOLLOWING CLASSIFICATIONS MAY BE USED:
   - A. "SAND-GRAVEL":

SIEVE DESIGNATION	% BY WEIGHT PASSING SIEVES
4 INCH	100
1/2 INCH	50-85
No. 4	45-75
No. 100	10-35
No. 200	0-6

   - B. "GRANULAR":

SIEVE DESIGNATION	% BY WEIGHT PASSING SIEVES
3 INCH	100
No. 4	45-70
No. 40	0-12
No. 200	0-6

   - C. "CRUSHED STONE" WITH GEOTEXTILE FABRIC:

SIEVE DESIGNATION	% WEIGHT BY PASSING SIEVES
1 INCH	100
3/4 INCH	90-100
3/8 INCH	0-55
No. 4	0-10
No. 8	0-5

   - D. "SUITABLE NATIVE SOIL": ON SITE SAND OR GRAVEL REASONABLY FREE OF LOAM, SILT, CLAY, OR ORGANIC MATTER.
   - E. "LESS PERMEABLE FILL" GLACIAL TILL (SEE GEOTECHNICAL REPORT)
   - F. "RECYCLED CONCRETE AGGREGATE" STOCKPILED ON SITE FROM DECONSTRUCTION PROJECT. SUBMIT GRADATIONS PRIOR TO ANY REQUIRED BLENDING; AS WELL AS FOR BLENDED AGGREGATES. MUST BE USED AS IS OR INTEGRAL WITH "SAND-GRAVEL"; "GRANULAR"; "CRUSHED STONE" FILLS OR BACKFILLS ABOVE.
9. GEOTEXTILE FABRIC: NON-WOVEN WITH 12 LAPPED SEAMS SEE GEOTECHNICAL REPORTING FOR USE AND MEETING:
   - GRAB STRENGTH OF 80 POUNDS MINIMUM MEETING ASTM D4632
   - PUNCTURE STRENGTH OF 25 POUNDS MINIMUM MEETING ASTM D4833
   - TRAPEZOID TEAR OF 25 POUNDS MINIMUM MEETING ASTM D4533
   - APPARENT OPENING SIZE OF NO. 70-100 (US SIEVE) MEETING ASTM D4751
10. INSULATION AT EXTERIOR SLABS AND WALKS (NOT PAVEMENTS): EXTRUDED POLYSTYRENE, STRENGTH OF 40 PSI (UNO) AND RATED FOR UNDERSLAB/UNDERGROUND USE. STAGGER AND DO NOT TAPE BOARD JOINTS.

BASIS OF DESIGN

1. Building Code: 2015 Vermont Fire and Building Safety Code
2. Dead Loads:
   - a. Floor Dead Load: 20 psf
3. Live Loads:
   - a. Roof Live Load: Snow Load Governs
   - b. Floor Live Load (live load reduction not used): 100 psf
4. Roof Snow Load:
   - a. Ground Snow Load, P_g: 50 psf
   - b. Flat Roof Snow Load, P_f: 42 psf
   - c. Snow Exposure Factor, C_e: 1.0
   - d. Snow Load Importance Factor, I: 1.0
   - e. Thermal Factor, C_t: 1.2
5. Wind Design Data:
   - a. Basic Wind Speed (3-second gust), V: 115 mph
   - b. Wind Exposure: C
   - c. Internal Pressure Coefficients: +/- 0.00
   - d. Components and Cladding Wind Pressure: per ASCE 7
6. Earthquake Design Data:
   - a. Seismic Importance Factor, I: 1.0
   - b. Risk Category: II
   - c. Mapped Spectral Response Acceleration, S_S: 0.246
   - d. Mapped Spectral Response Acceleration S_1: 0.086
   - e. Site Class: D (ASSUMED)
   - f. Spectral Response Coefficient, S_{DS}: 0.262
   - g. Spectral Response Coefficient, S_{D1}: 0.137
   - h. Seismic Design Category: C
7. Allowable Soil Bearing Pressure: 2000 psf (Assumed - Based on IBC Presumptive Values)

ABBREVIATIONS

AB	ANCHOR BOLT	MC	MOMENT CONNECTION
AFF	ABOVE FINISH FLOOR	N.S.	NEAR SIDE
AL	ALUMINUM	oc	ON CENTER
B.O.F.	BOTTOM OF FOOTING	P#	PIER DESIGNATION
DWG	DRAWING	PL	PLATE
E.F.	EACH FACE	SS	STAINLESS STEEL
ELEV.	ELEVATION	STD	STANDARD
EP	EMBED PLATE	T.O.C.	TOP OF CONCRETE
EQ	EQUAL	T.O.S.	TOP OF STEEL
E.S.	EACH SIDE	T.O.SHELF	TOP OF SHELF
E.W.	EACH WAY	T.O.W.	TOP OF WALL
EX.	EXISTING	TYP.	TYPICAL
F#	FOOTING DESIGNATION	U.N.O.	UNLESS NOTED OTHERWISE
FND	FOUNDATION	V.I.F.	VERIFY IN FIELD
F.S.	FAR SIDE		
H.T.	HEAVY TIMBER		

DRAWING LEGEND

NOTE: NOT ALL SYMBOLS AND NOTATIONS USED

NORTH ARROW
ELEVATION
[XX' - XX"] TOP OF FOOTING ELEV.
1 / S2.1 SECTION NUMBER / DRAWING WHERE SHOWN
DECK / SPAN DECK SPAN DIRECTION OR GRATING DIRECTION
1/8" / FT SLOPE DIRECTION, and MAGNITUDE
BEAM/COLUMN SPLICE
12 / 6 ROOF PITCH
FS FOOTING STEP
OPENING
MOMENT CONNECTION
GUARDRAIL/RAILING
BEAM PENETRATION

CONCRETE
GROUT or FINE CRUSHED GRAVEL
GRATING
LEDGE/ROCK
3/4" CRUSHED STONE
COMPACTED GRANULAR FILL
RIGID INSULATION
WOOD
UNDISTURBED SUBGRADE
CMU BLOCK
BRICK

Stamp

No.	Description	Date
	75% CONSTRUCTION DOCUMENTS	05/15/2026
	PERMIT SET	05/29/2026

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Sheet Title: BASIS OF DESIGN & GENERAL NOTES

Project Title: STRAFFORD TOWN OFFICES

Designed By:	CPA
Checked By:	CPA
Drawn By:	NAM
Scale:	1/8" = 1'-0"
Date:	05/29/26

S0-01

EV Project #24536.00

TABLE 1. CONCRETE MIXTURES

CONCRETE USAGE	MIN. COMPRESSIVE STRENGTH (f'_c)	CONCRETE TYPE	EXPOSURE CLASSES	MAX. W/CM RATIO	PERMISSIBLE AIR CONTENT	REQUIRED CEMENT REPLACEMENT	MAX. AGGREGATE SIZE	ADDITIONAL REMARKS
COMBINED FOOTINGS, CONTINUOUS FOOTINGS, SPREAD FOOTINGS	3,000 psi AT 56 DAYS	NWC	C0, F0	N/A	N/A	0 - 70%	1-1/2"	
FOUNDATION WALLS, COLUMNS AND PIERS	4,000 psi AT 28 DAYS	NWC	C1, F1	0.45	4.5% ±1.5%	0 - 50%	1-1/2"	
EXTERIOR SLAB-ON-GRADE	5,000 psi AT 56 DAYS	NWC	C2, F2	0.40	5.5% ±1.5%	15 - 25%	1-1/2"	

NOTES:
1. ALL CONCRETE SHALL BE CONSIDERED TO BE IN EXPOSURE CLASS F0, S0, P0 AND C0 ACCORDING TO ACI 318-08 UNLESS NOTED OTHERWISE IN TABLE ABOVE, IN NOTES BELOW OR ELSEWHERE ON THE STRUCTURAL DRAWINGS.
2. CONCRETE NOTED ABOVE OR ON PLAN AS EXPOSURE CLASS F1, F2, S1, S2, S3, P1, C1 OR C2 SHALL BE PROPORTIONED TO COMPLY WITH ACI 318-08 TABLES 4.3.1, 4.4.1 AND 4.4.2 IN ADDITION TO THE NOTATIONS IN THE REQUIREMENTS FOR VARIOUS EXPOSURE CLASSES RELATIVE TO CEMENT TYPE, AIR ENTRAINMENT REQUIREMENTS, CHLORIDE ION LIMITS AND POZZOLAN LIMITS.
3. FOR SLAB, COORDINATE AND PROVIDE MIX DESIGNS MEETING MAXIMUM CEMENT CONTENT FOR AGGREGATE SIZE TO COMPLY WITH TABLE 8.4.1B OF ACI 302-15.
4. WHERE INDICATED IN THE "ADDITIONAL REMARKS" ABOVE, CONCRETE SHALL BE PROPORTIONED FOR A MAXIMUM ALLOWABLE UNIT SHRINKAGE OF 0.035% MEASURED 28 DAYS AFTER CURING IN LIME WAS AS DETERMINED BY ASTM C157, USING AIR STORAGE.
5. WALLS AND PIERS THAT ARE LOCATED EXTERIOR TO THE BUILDING FOOTPRINT AND EXTEND ABOVE THE FROST LINE ARE EXPOSURE CLASS C1 AND F1 AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,500 psi AT 28 DAYS, HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.45 AND HAVE A MINIMUM 4.5% AIR ENTRAINMENT.

SCHEDULE OF MINIMUM LAP SPLICES

FULL-TENSION (CLASS B) LAP SPLICES FOR
NORMAL WEIGHT CONCRETE WITH f'c = 3000 PSI

BAR SIZE	CASE A (CLEAR COVER ≥ 1-1/2" & CENTER-TO-CENTER SPACING ≥ 4db)		CASE B (CLEAR COVER ≥ 3/4" & CENTER-TO-CENTER SPACING ≥ 4db)		CENTER-TO-CENTER SPACING < 4db	CENTER-TO-CENTER SPACING < 4db
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS		
#3	21"	16"	21"	16"	(PER ACI 318-05)	(PER ACI 318-05)
#4	28"	22"	28"	22"		
#5	35"	27"	41"	32"		
#6	42"	32"	56"	43"		
#7	61"	47"	90"	69"		
#8	70"	54"	111"	86"		
#9	85"	66"	134"	103"		
#10	102"	79"	158"	122"		
#11 & #14	USE MECHANICAL SPLICE					

NOTE: *TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BENEATH THE BAR. WALL BARS (OTHER THAN DESIGNATED CHORD BARS) ARE NOT CONSIDERED TOP BARS.

SCHEDULE OF MINIMUM LAP SPLICES

FULL-TENSION (CLASS B) LAP SPLICES FOR
NORMAL WEIGHT CONCRETE WITH f'c = 4000 PSI

BAR SIZE	CASE A (CLEAR COVER ≥ 1-1/2" & CENTER-TO-CENTER SPACING ≥ 4db)		CASE B (CLEAR COVER ≥ 3/4" & CENTER-TO-CENTER SPACING ≥ 4db)		CENTER-TO-CENTER SPACING < 4db	CENTER-TO-CENTER SPACING < 4db
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS		
#3	16"	12"	16"	12"	(PER ACI 318-14)	(PER ACI 318-14)
#4	20"	15"	25"	19"		
#5	25"	19"	37"	28"		
#6	30"	23"	49"	37"		
#7	49"	37"	78"	60"		
#8	62"	47"	97"	74"		
#9	76"	58"	117"	90"		
#10	91"	70"	141"	108"		
#11 & #14	USE MECHANICAL SPLICE					

NOTE: *TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BENEATH THE BAR. WALL BARS (OTHER THAN DESIGNATED CHORD BARS) ARE NOT CONSIDERED TOP BARS.

SCHEDULE OF MINIMUM LAP SPLICES

FULL-TENSION (CLASS B) LAP SPLICES FOR
NORMAL WEIGHT CONCRETE WITH f'c = 5000 PSI

BAR SIZE	CASE A (CLEAR COVER ≥ 1-1/2" & CENTER-TO-CENTER SPACING ≥ 4db)		CASE B (CLEAR COVER ≥ 3/4" & CENTER-TO-CENTER SPACING ≥ 4db)		CENTER-TO-CENTER SPACING < 4db	CENTER-TO-CENTER SPACING < 4db
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS		
#3	16"	12"	16"	12"	(PER ACI 318-14)	(PER ACI 318-14)
#4	20"	15"	23"	17"		
#5	25"	19"	33"	25"		
#6	30"	23"	45"	34"		
#7	43"	33"	71"	54"		
#8	55"	42"	88"	67"		
#9	68"	52"	106"	81"		
#10	82"	63"	127"	97"		
#11 & #14	USE MECHANICAL SPLICE					

NOTE: *TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BENEATH THE BAR. WALL BARS (OTHER THAN DESIGNATED CHORD BARS) ARE NOT CONSIDERED TOP BARS.

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Sheet Title: GENERAL NOTES & TABLES

Project Title: STRAFFORD TOWN OFFICES

Designed By:	CPA
Checked By:	CPA
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Date:	05/29/26

S0-02

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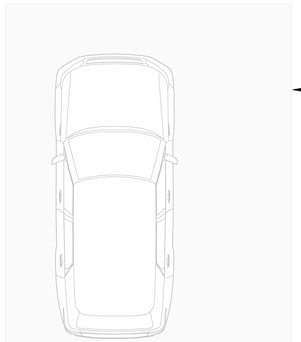
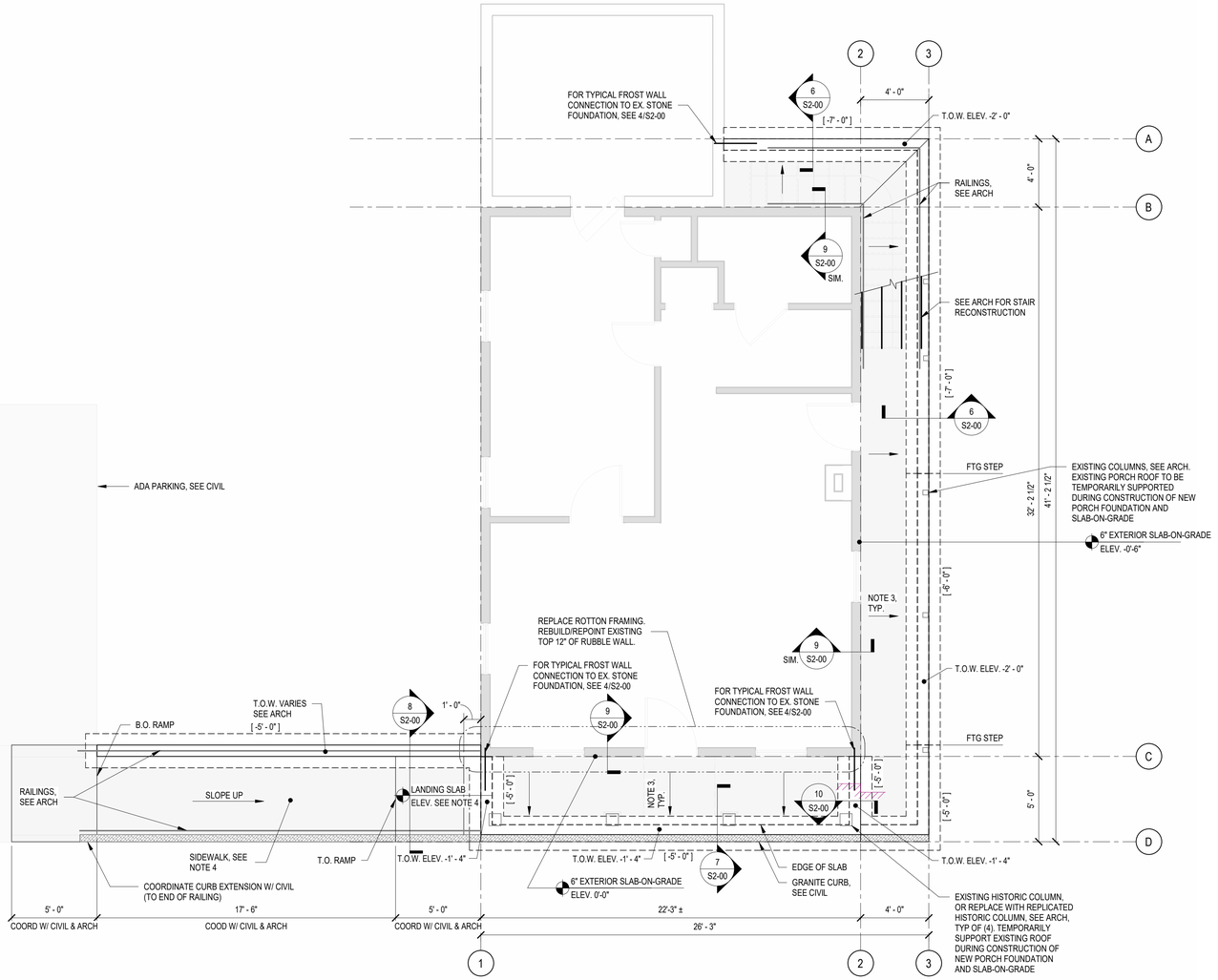


ADA PARKING, SEE CIVIL



1 FOUNDATION PLAN
1/4" = 1'-0"

NOTES:
1. SLAB-ON-GRADE ELEVATION 0'-0" REFERENCES CIVIL FINISH FLOOR ELEVATION 923.27'.
2. [XX'-XX"] INDICATES TOP OF FOOTING ELEVATION.
3. SLOPE SLAB AWAY FROM BUILDING AT 1/8" / FT.
4. SEE CIVIL FOR SPOT ELEVATIONS AND RAMP SLOPE.

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Sheet Title: FOUNDATION PLAN

Project Title: STRAFFORD TOWN OFFICES

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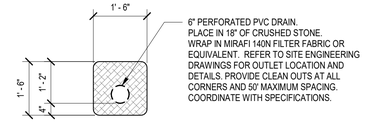
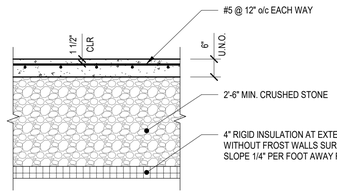
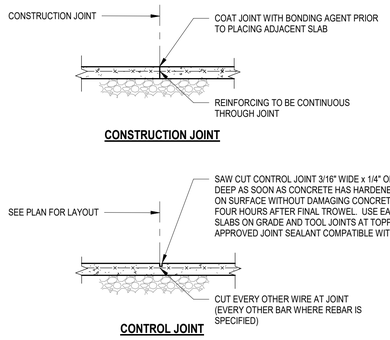


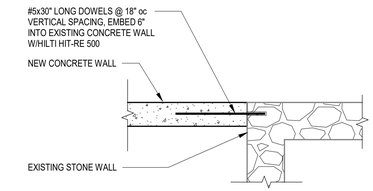
1 TYPICAL FOOTING DRAIN
1/2" = 1'-0"



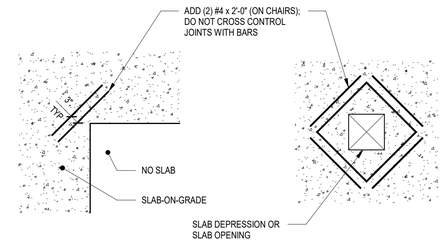
2 TYPICAL SLAB-ON-GRADE SECTIONS
1/2" = 1'-0"



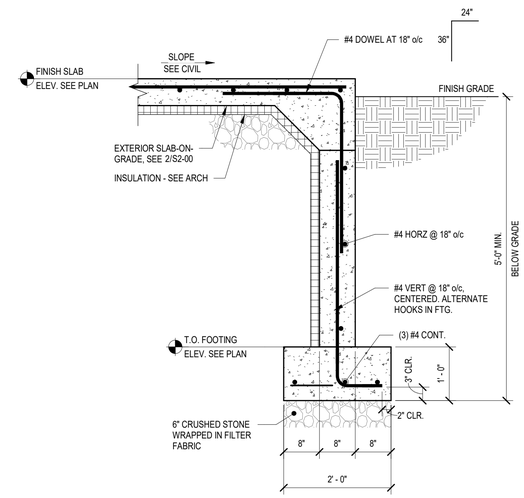
3 TYPICAL SLAB-ON-GRADE JOINTS
1/2" = 1'-0"



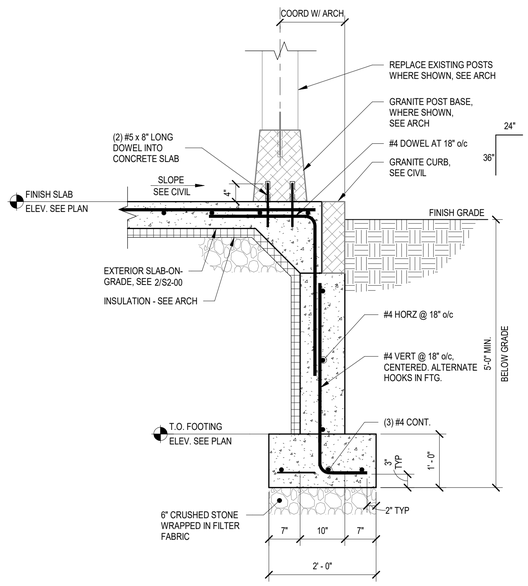
4 NEW CONCRETE WALL TO EXISTING STONE WALL (PLAN VIEW)
1/2" = 1'-0"



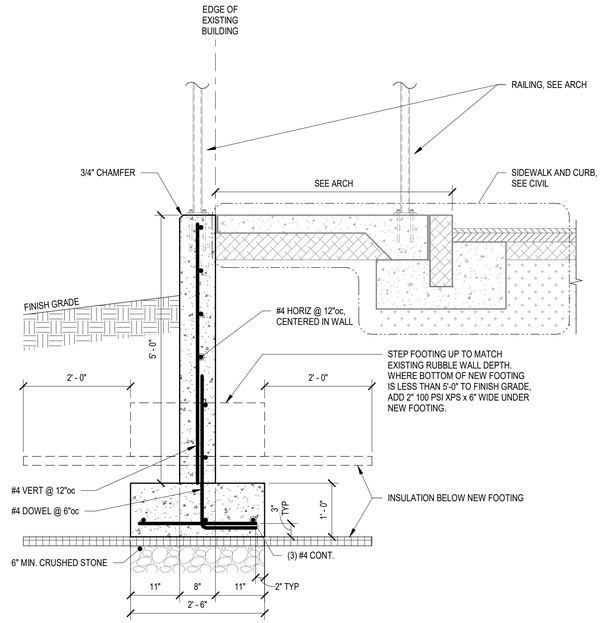
5 TYPICAL RE-ENTRANT CORNERS AT SLAB-ON-GRADE
1/2" = 1'-0"



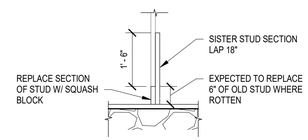
6 TYPICAL FROST WALL
3/4" = 1'-0"

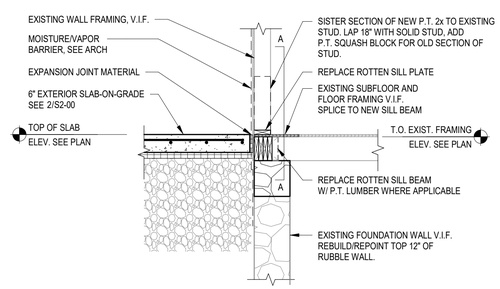


7 TYPICAL FROST WALL
3/4" = 1'-0"

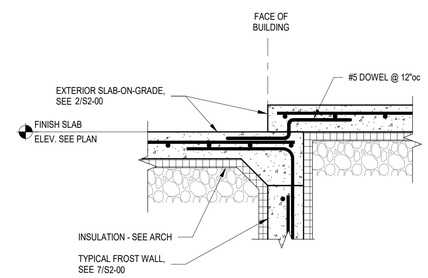


8 SIDEWALK AND RETAINING WALL DETAIL
3/4" = 1'-0"





9 TYPICAL FOUNDATION SECTION AT EXISTING EXTERIOR FOUNDATION
1/2" = 1'-0"



10 INTERIOR FROST WALL
3/4" = 1'-0"

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