

GENERAL NOTES

1. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS, AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING WHO SHALL PROMPTLY CORRECT SUCH INCONSISTENCIES OR AMBIGUITIES IN WRITING. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ALL EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. FORTY - EIGHT (48) HOURS PRIOR TO ANY EXCAVATION CALL MISS UTILITY (DIAL 811 IN VIRGINIA).
3. WHERE APPLICABLE, ALL MATERIALS USED FOR FILL OR BACK-FILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS OR ANY OTHER NON-COMPATIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE UNCONTROLLED FILLS AND REFUSE DEBRIS, DERIVED FROM ANY SOURCE.
4. ANY FIELD CHANGES OR MODIFICATIONS TO THESE PLANS MUST BE APPROVED BY THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY OF ANY DISCREPANCIES IN PLANS, SHOP DRAWINGS AND/OR SPECIFICATIONS. SHOULD A DISCREPANCY BE FOUND, DO NOT PROCEED UNTIL CLARIFICATIONS HAVE BEEN MADE BY THE ENGINEER.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS; DO NOT SCALE DRAWINGS. IF INSUFFICIENT INFORMATION EXIST, NOTIFY THE ENGINEER IMMEDIATELY FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK.
7. DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING AND TEMPORARY SUPPORTS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH OSHA SAFETY REGULATIONS.
8. DESIGN LOADS

SNOW LOAD BASED ON GROUND SNOW LOAD	35 PSF
LIVE LOAD	100 PSF
WIND LOAD BASED ON MECHANICAL UNITS	110 MPH AS SHOWN

FOUNDATION PREPARATION

1. THE FOUNDATION DESIGN IS BASED ON AN ALLOWABLE BEARING PRESSURE OF 3,000 PSF (FOR A SILTY SAND, CLAYEY SAND, CLASS 4/3) AS PROVIDED IN THE 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE. SHOULD THE OWNER'S INSPECTOR DETERMINE THAT THE IN-PLACE SOILS HAVE AN ALLOWABLE CAPACITY OF LESS THAN 3,000 PSF, A GEOTECHNICAL REPORT AND SPECIAL DESIGN FOUNDATION WILL BE REQUIRED.
2. DO NOT ALLOW ANY PONDING OF WATER IN THE EXCAVATION. SHOULD THIS OCCUR, CONTRACTOR TO UNDERCUT FOOTING UNTIL A SUITABLE SUBGRADE IS ENCOUNTERED, RECOMPACTION OF MATERIAL SHALL NOT BE PERFORMED. IF SUITABLE SUBGRADE CANNOT BE ACHIEVED, CONTACT THE ENGINEER FOR ALTERNATIVE BEARING DESIGN.
3. FOUNDATION SUBGRADE SHALL BE FREE OF ORGANIC MATERIAL AND OTHER UNSUITABLE OR DELETERIOUS MATERIAL. SOILS CLASSIFIED AS GW, GP, GM, GC, SW, SP, SM, SC, ML, AND CL IN ACCORDANCE WITH ASTM D 2487 ARE SUITABLE. ALL SOILS SHALL BE APPROVED ON-SITE BY THE OWNER'S INSPECTOR.
4. THE FOUNDATION DESIGN DOES NOT APPLY TO SITES ON EXPANSIVE SOILS, LOCATIONS WITH A WATER TABLE WITHIN 3 FEET OF THE SURFACE, AREAS OF KNOWN HIGH SEISMIC ACTIVITY, OR AREAS WITH SOIL WHERE THE STRENGTH IS QUESTIONABLE SUCH AS FILL. THE OWNER SHALL MAKE EVERY EFFORT TO CONFIRM THAT THESE CONDITIONS DO NOT EXIST, OTHERWISE, CONTACT THE ENGINEER. THIS FOUNDATION DESIGN ASSUMES A MINIMUM BEARING CAPACITY OF 3,000 PSF. THIS VALUE MUST BE CONFIRMED PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF FOUND TO BE LESS.

CONCRETE AND REINFORCEMENT

1. CONCRETE WORK SHALL BE IN FULL ACCORDANCE WITH:
 - A. AMERICAN CONCRETE INSTITUTE (ACI) 301, 315, AND 318
 - B. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) RECOMMENDED PRACTICE OF PLACING REINFORCING BARS.
 - C. ACI 117 FOR PLACEMENT TOLERANCES (CONCRETE AND REINFORCEMENT)
 - D. ACI 3066 AND ACI 305 COLD/HOT WEATHER CONCRETING
 - E. ACI 308.1 FOR CURING OF CONCRETE
 - F. ACI 309R-05 GUIDE FOR CONSOLIDATION OF CONCRETE
 - G. ACI 347-04 (CHAPTER 5) GUIDE TO FORMWORK FOR CONCRETE
 - H. ACI "MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES"
2. GENERAL CONCRETE SHALL BE:
 - A. NORMAL WEIGHT SHALL MAXIMUM UNIT WEIGHT OF 150 PCF.
 - B. LIGHTWEIGHT CONCRETE SHALL HAVE A MINIMUM DRY UNIT WEIGHT OF 106 PCF AND A MAXIMUM DRY UNIT WEIGHT OF 116 PCF WITH AIR CONTENT OF 4% TO 7%
 - C. 28 DAY MINIMUM COMPRESSIVE STRENGTH SHALL BE 4,000 PSI
 - D. MAXIMUM SLUMP OF (4) INCHES (PLUS OR MINUS 1 INCHES)
 - E. EXTERIOR CONCRETE: AIR ENTRAINED ACCORDING WITH TABLE 3.4.1 OF ACI 301 BASED UPON AGGREGATE SIZE. DO NOT ADD AIR FOR INTERIOR CONCRETE.
 - F. CONCRETE FOOTINGS, SLAB ON GRADE, PIERS AND WALLS SHALL BE NORMAL WEIGHT 4,000 PSI CONCRETE
 - G. SLAB ON DECK CONCRETE SHALL BE LIGHTWEIGHT 4,000 PSI CONCRETE
3. REINFORCING:
 - A. ASTM A615, GRADE 60 FOR DEFORMED BARS
 - B. ASTM A185, FOR FLAT SHEET WELDED WIRE FABRIC DEVELOPMENT LENGTH FOR REINFORCEMENT (db = BAR DIAMETER): 38 db FOR #6 BAR AND SMALLER AND 19 db FOR HOOK, LDH
 - C. DEVELOPMENT LENGTH NOT LESS THAN 12 INCHES. HOOK DEVELOPMENT LENGTH NOT LESS THAN 6 INCHES. DEVELOPMENT LENGTH TOP BAR REINFORCING: ABOVE MULTIPLIED BY 1.3. CLASS B TENSION LAPS : ABOVE MULTIPLIED BY 1.3. SPLICES SHALL BE CLASS B TENSION SPLICES UNLESS NOTED
 - D. CONCRETE COVER SHALL BE (UNLESS NOTED OTHERWISE):

BELOW GRADE (UNFORMED)	3" CLEAR
BELOW GRADE (FORMED)	2" CLEAR
EXPOSED TO WEATHER OR WATER	2" CLEAR
 - E. PROVIDE DOWELS IN FOUNDATIONS TO MATCH THE SIZE AND QUANTITY AS VERTICAL WALL, PIER OR COLUMN REINFORCEMENT.
 - F. PROVIDE CORNER BARS AT CORNERS AND INTERSECTING WALLS.
4. REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE ACCURATELY PLACED IN THE POSITIONS SHOWN, TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.
5. SUBMITTALS FOR CONCRETE MIX DESIGNS AND SUPPORTIVE DATA SHALL BE MADE FOR APPROVAL ACCORDING TO ACI-318M SECTION 5.3
6. IF APPROVED BY THE ENGINEER PRIOR TO PLACEMENT, EPOXY GROUTING OF DEFORMED BAR DOWELS OR ANCHOR RODS INTO EXISTING OR HARDENED CONCRETE SHALL BE INSTALLED ACCORDING TO EPOXY MANUFACTURERS RECOMMENDATION TO PROVIDE FULL DEVELOPMENT OF THE BAR OR BOLT FOR THE SPECIFIC CONCRETE STRENGTH AT POINT OF ATTACHMENT. APPLY LOADS ONLY AFTER EPOXY HAS REACHED FULL STRENGTH. ALL PARTS OF ANCHORING SYSTEM (ROD, NUTS, WASHERS, BITS, EPOXY, ETC.) SHALL BE FROM A SINGLE SUPPLIER.

STEEL JOIST

1. ALL OPEN WEB STEEL JOISTS SHALL BE ERECTED AND FABRICATED IN ACCORDANCE WITH STEEL JOIST INSTITUTE (SJI) SPECIFICATIONS.
2. ALL JOIST BRIDGING SHALL CONFORM TO SJI SPECIFICATIONS.
3. UPLIFT BRIDGING SHALL BE PROVIDED PER SPECIFICATIONS. MINIMUM UPLIFT SHALL BE 15 PSF.

STRUCTURAL STEEL

1. MATERIAL PROPERTIES OF STEEL BEAMS SHALL CONFORM TO ASTM A992, ASTM A529, OR ASTM A572
2. ALL BEAMS SHALL BE 50 KSI STEEL OR BETTER
3. BEAM CONNECTIONS SHALL BE LONGEST PERMITTED BY BEAM WEB DEPTH. BOLTS SHALL BE A325. ALL WELDS SHALL BE MADE OF 70 KSI ELECTRODES. ALL WELDS SHALL BE SHOP PAINTED AND FIELD WELDS MADE TO MATCH.
4. ALL STEEL THAT IS TO BE ENCASED IN CONCRETE SHALL BE UNPAINTED. ALL OTHER STEEL SHALL BE PRIMER COATED.
5. ALL WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY SPECIFICATIONS.

No.	Submittal / Revision	By	Appr'd	Date
1	BID SET	TLA	TSA	10/17/22



BID SET

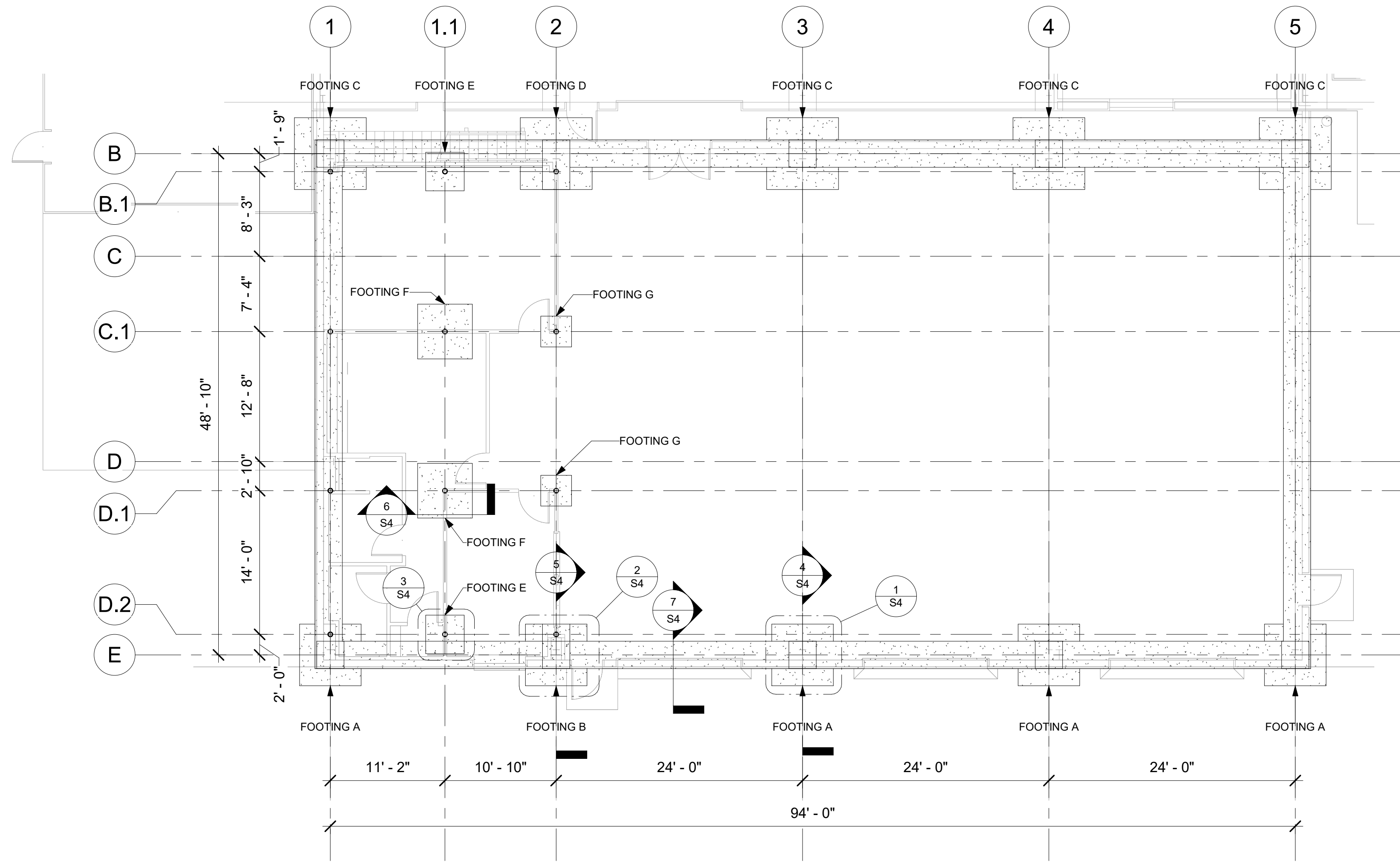
RACEY ENGINEERING
312 WEST MAIN ST., P.O. BOX 387
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PH: (640) 744-9227 - FAX: (640) 744-6118

CHECKED: TLA
DRAWN: VP

ALTERATIONS AND ADDITIONS TO FRONT ROYAL MAINTENANCE BUILDING
NOTES

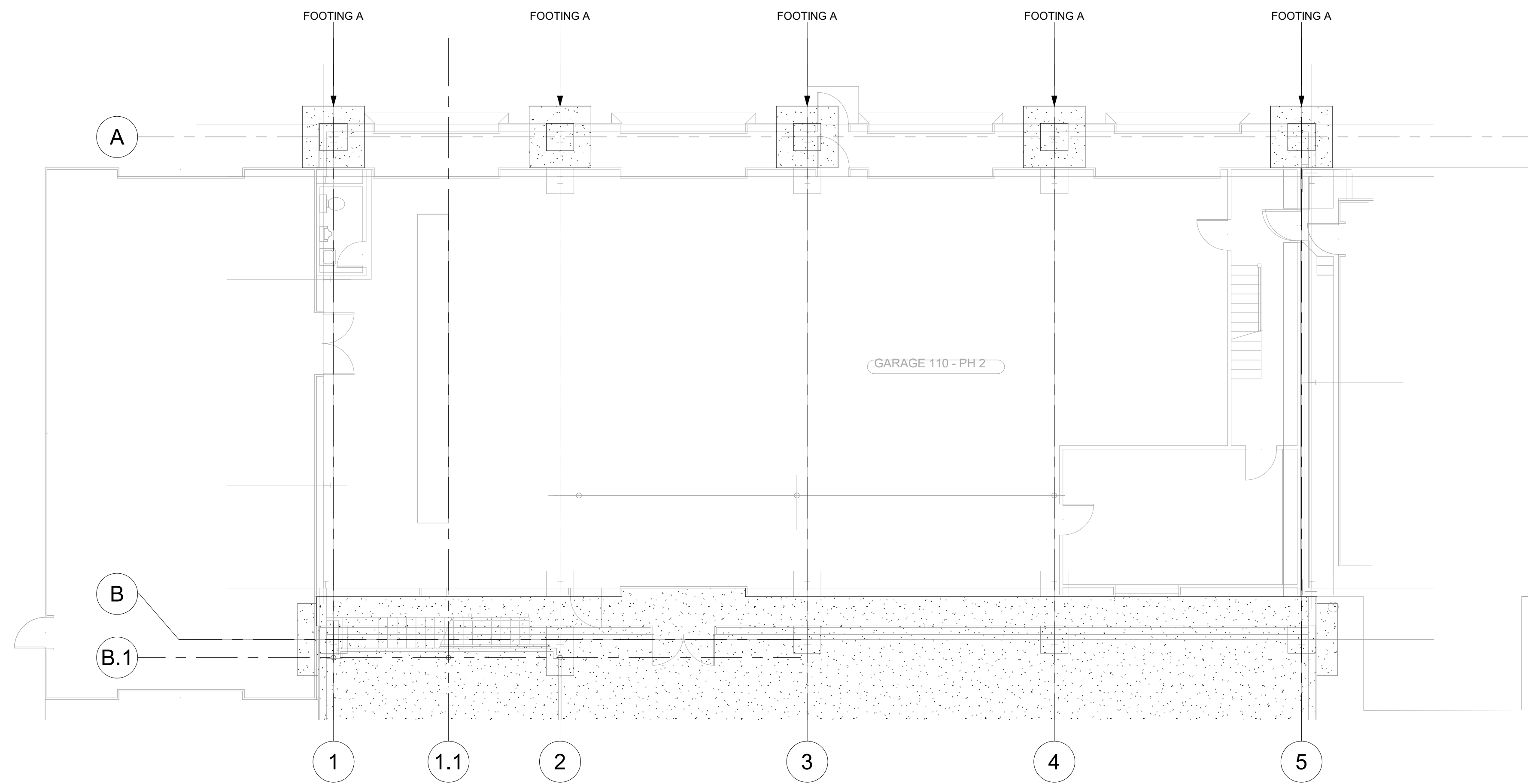
800 CROSBY ROAD
FRONT ROYAL, VA 22630

PUBLISH DATE: 10/17/2022
RACEY PROJECT NUMBER: 6920



PHASE 1 FOUNDATION SCHEDULE						
FOOTING TYPE	PHASE CREATED	LENGTH	WIDTH	FOUNDATION THICKNESS	COUNT	REINFORCEMENT
FOOTING A	Phase 1	6' - 0"	6' - 0"	1' - 6"	4	7 - #6 BARS EQUALLY SPACED EACH WAY
FOOTING B	Phase 1	6' - 0"	6' - 0"	1' - 6"	1	7 - #6 BARS EQUALLY SPACED EACH WAY
FOOTING C	Phase 1	7' - 0"	7' - 0"	1' - 6"	4	7 - #6 BARS EQUALLY SPACED EACH WAY
FOOTING D	Phase 1	7' - 0"	7' - 0"	1' - 6"	1	7 - #6 BARS EQUALLY SPACED EACH WAY
FOOTING E	Phase 1	3' - 9"	3' - 9"	1' - 0"	2	5 - #4 BARS EQUALLY SPACED EACH WAY
FOOTING F	Phase 1	5' - 4"	5' - 4"	1' - 0"	2	5 - #4 BARS EQUALLY SPACED EACH WAY
FOOTING G	Phase 1	3' - 0"	3' - 0"	1' - 0"	2	5 - #4 BARS EQUALLY SPACED EACH WAY
FOOTING A	Phase 2	6' - 0"	6' - 0"	1' - 6"	5	7 - #6 BARS EQUALLY SPACED EACH WAY

① PHASE 1 FOUNDATION PLAN
1/8" = 1'-0"

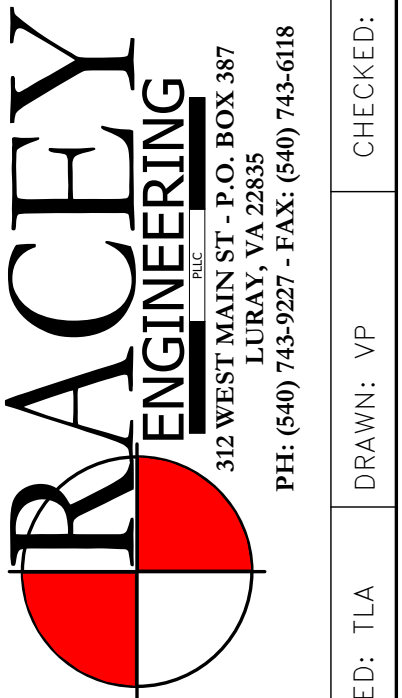


② PHASE 2 FOUNDATION PLAN
1/8" = 1'-0"

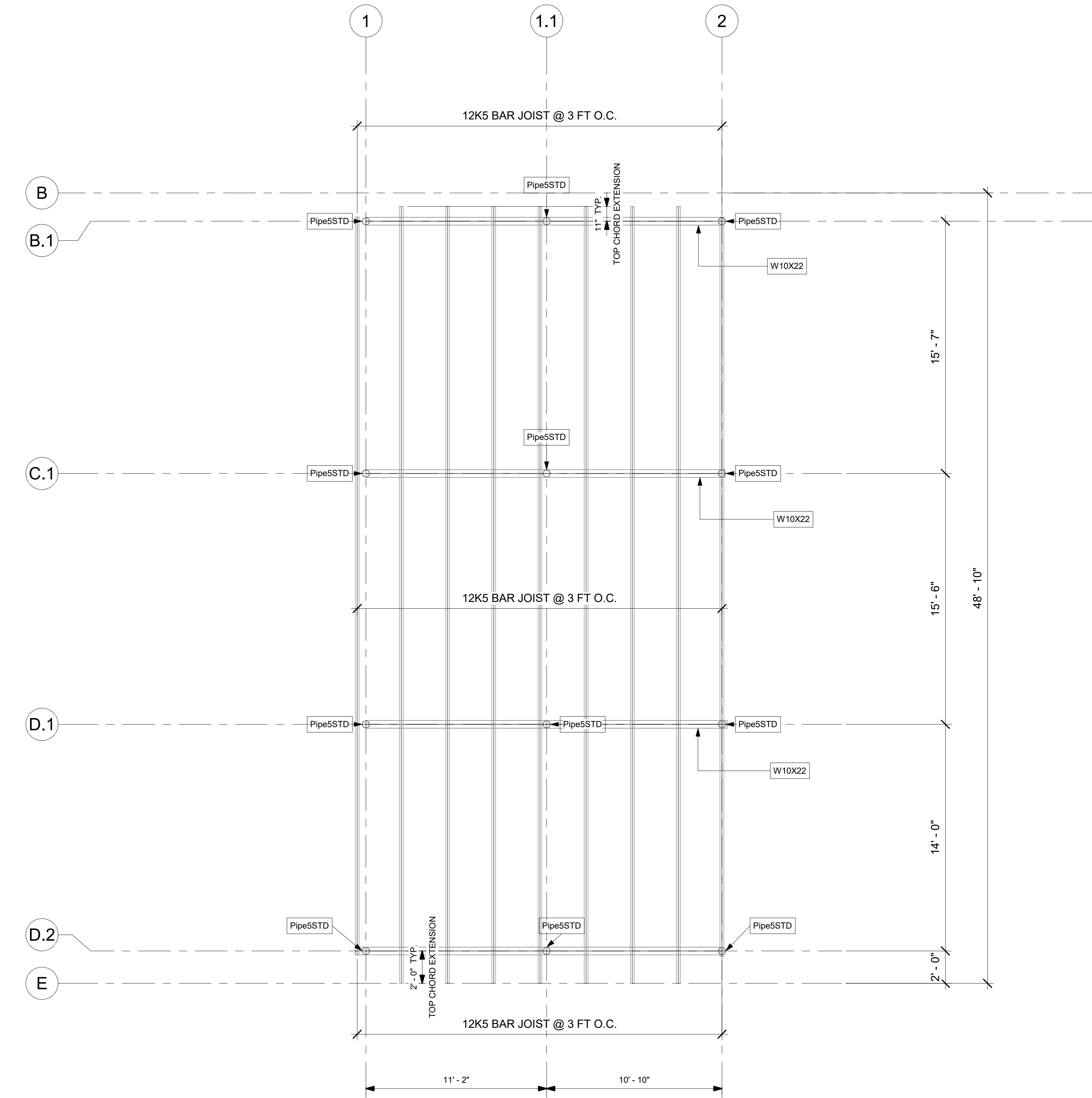
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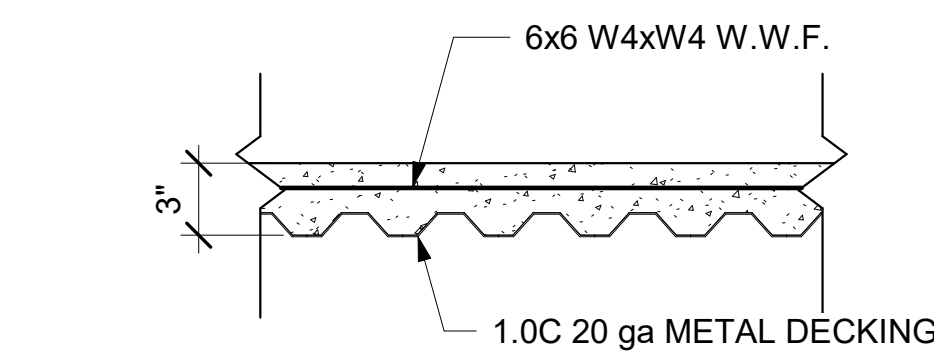
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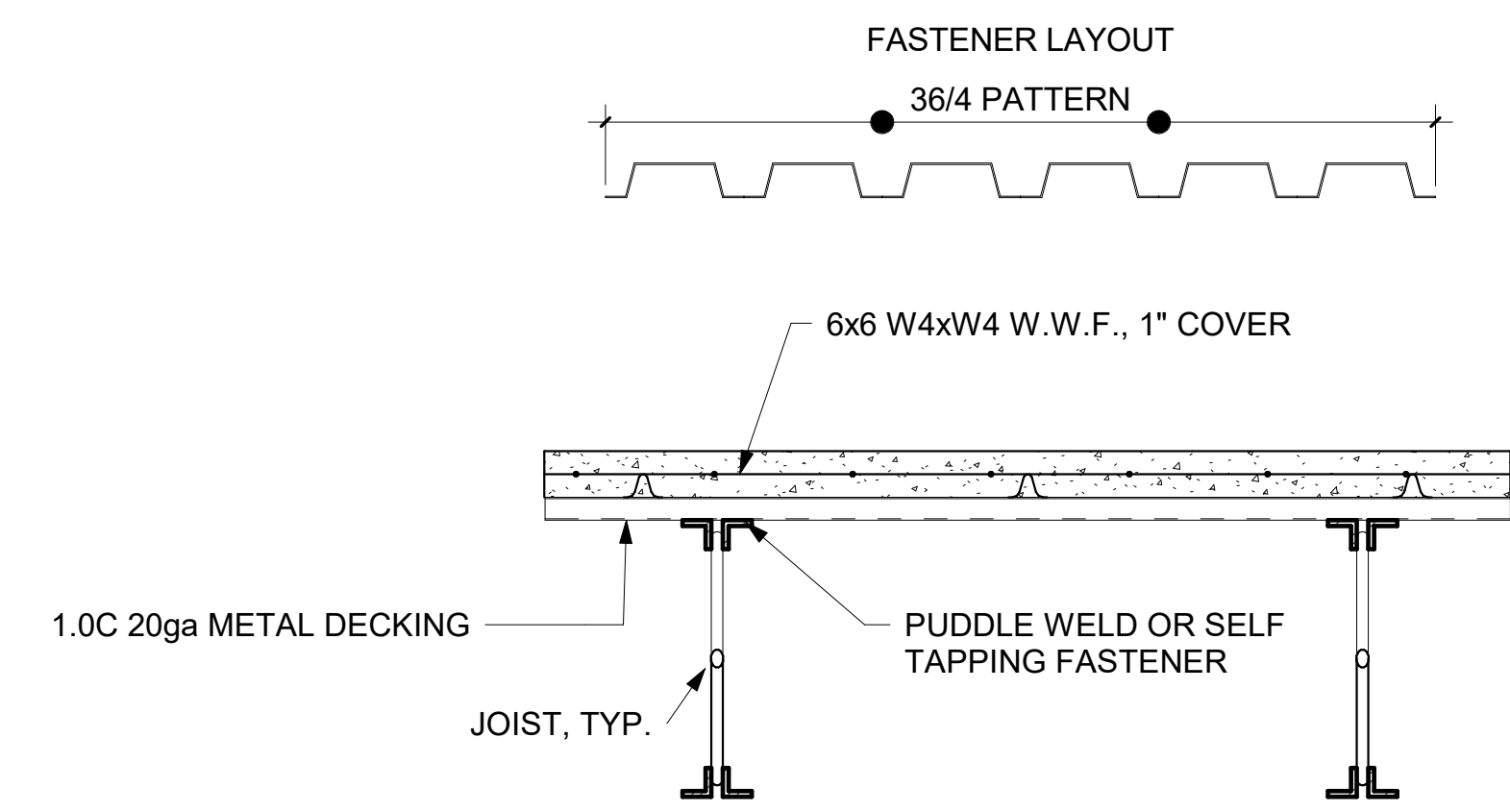
ALTERATIONS AND ADDITIONS TO FRONT ROYAL MAINTENANCE BUILDING
FOUNDATION PLAN PHASING
 800 CROSBY ROAD
 FRONT ROYAL, VA 22630
 RACEY PROJECT NUMBER: 6920 PUBLISH DATE: 10/17/2022



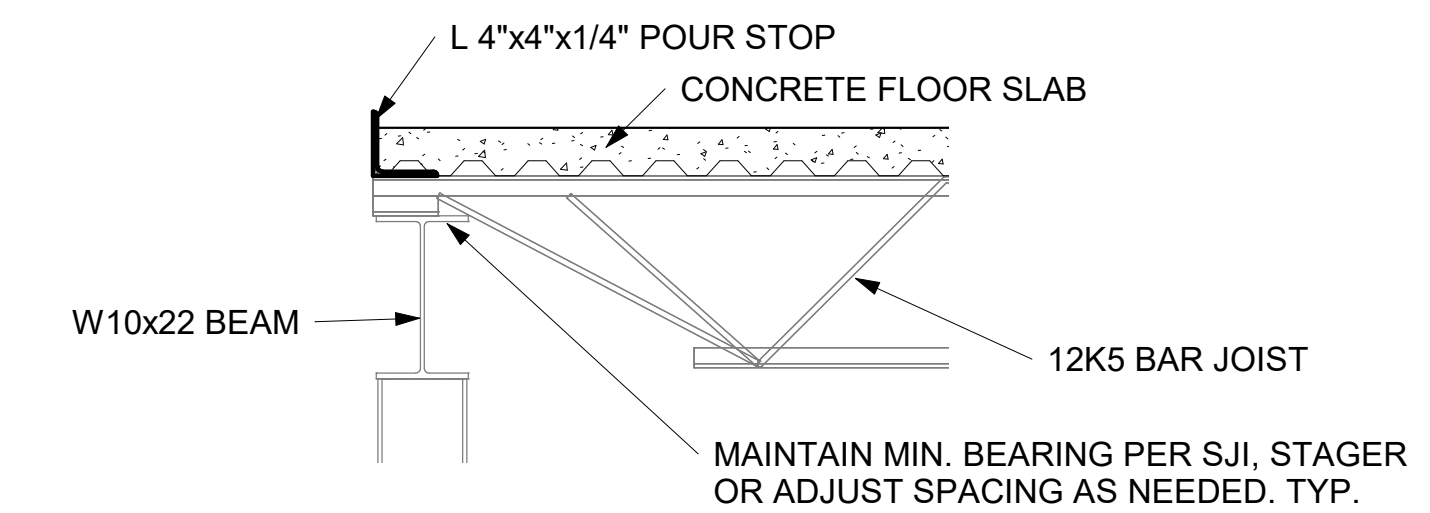
1 PHASE 2 FLOOR PLAN
1/4" = 1'-0"



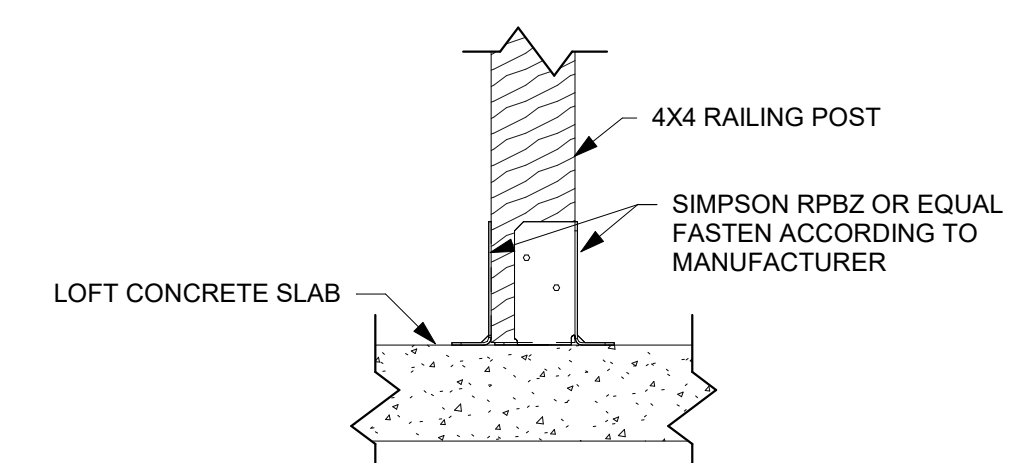
2 LOFT FLOOR SLAB DETAIL
N.T.S.



3 LOFT SLAB REINFORCEMENT AT JOIST SECTION VIEW
1 1/2" = 1'-0"



4 JOIST BEARING ON STEEL BEAM SECTION VIEW
1" = 1'-0"



5 RAILING ANCHOR DETAIL
1 1/2" = 1'-0"

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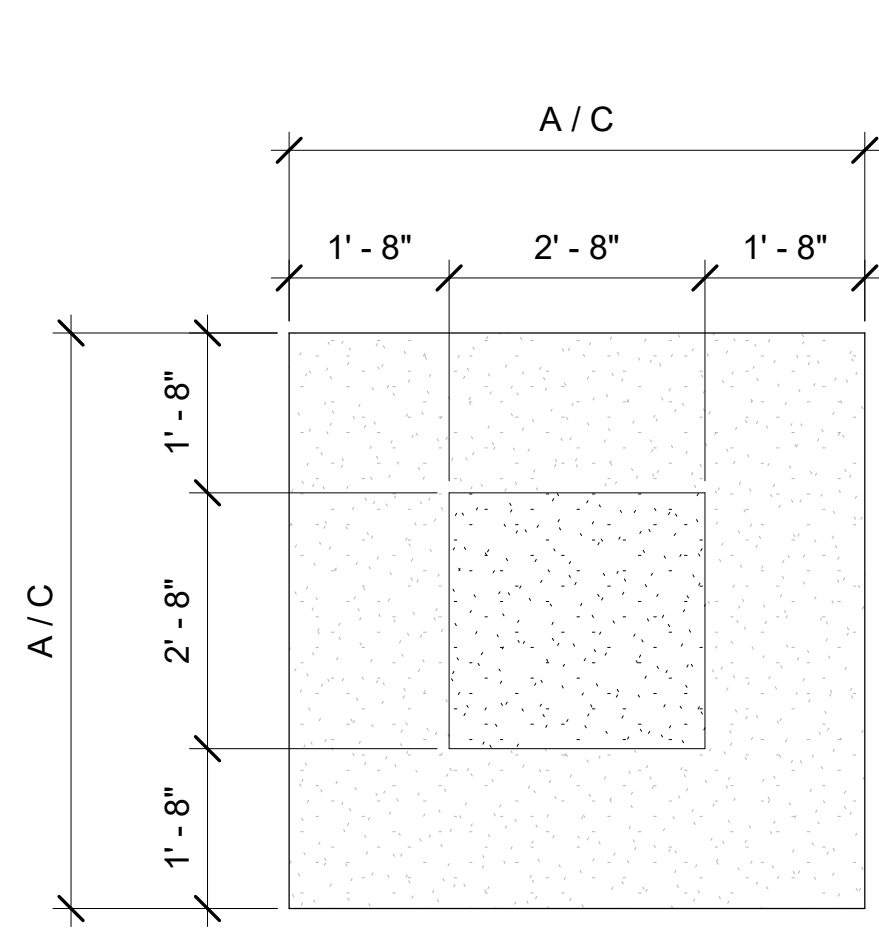
ALTERATIONS AND ADDITIONS TO FRONT ROYAL MAINTENANCE BUILDING

LOFT FRAMING PLAN

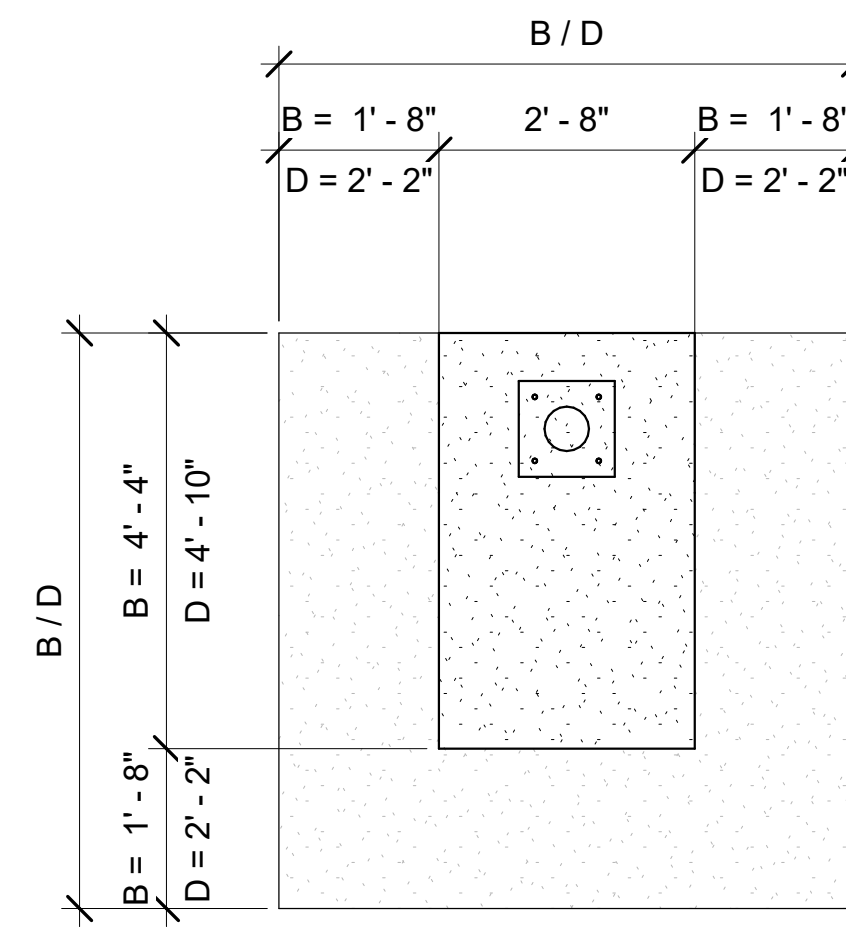
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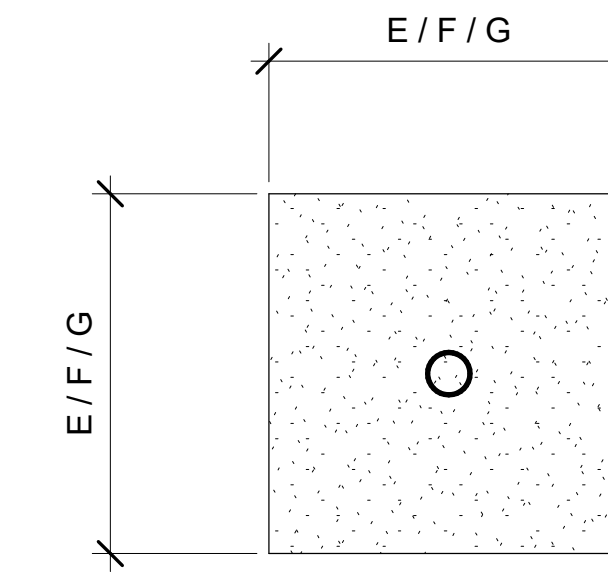
DESIGNED: TLA DRAWN: VP CHECKED: TLA



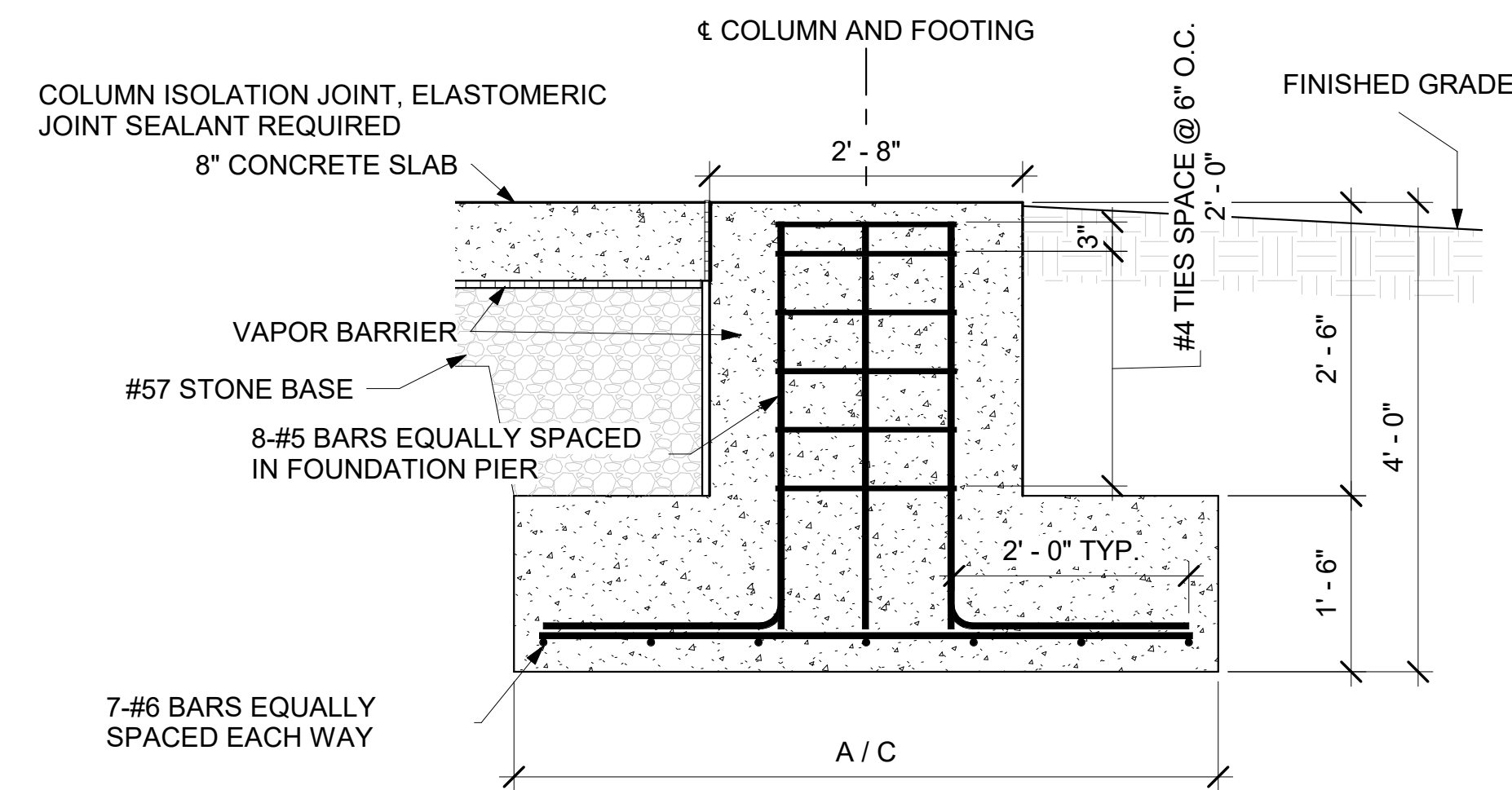
1 FOOTING A/C PLAN VIEW
1/2" = 1'-0"



2 FOOTING B/D PLAN VIEW
1/2" = 1'-0"

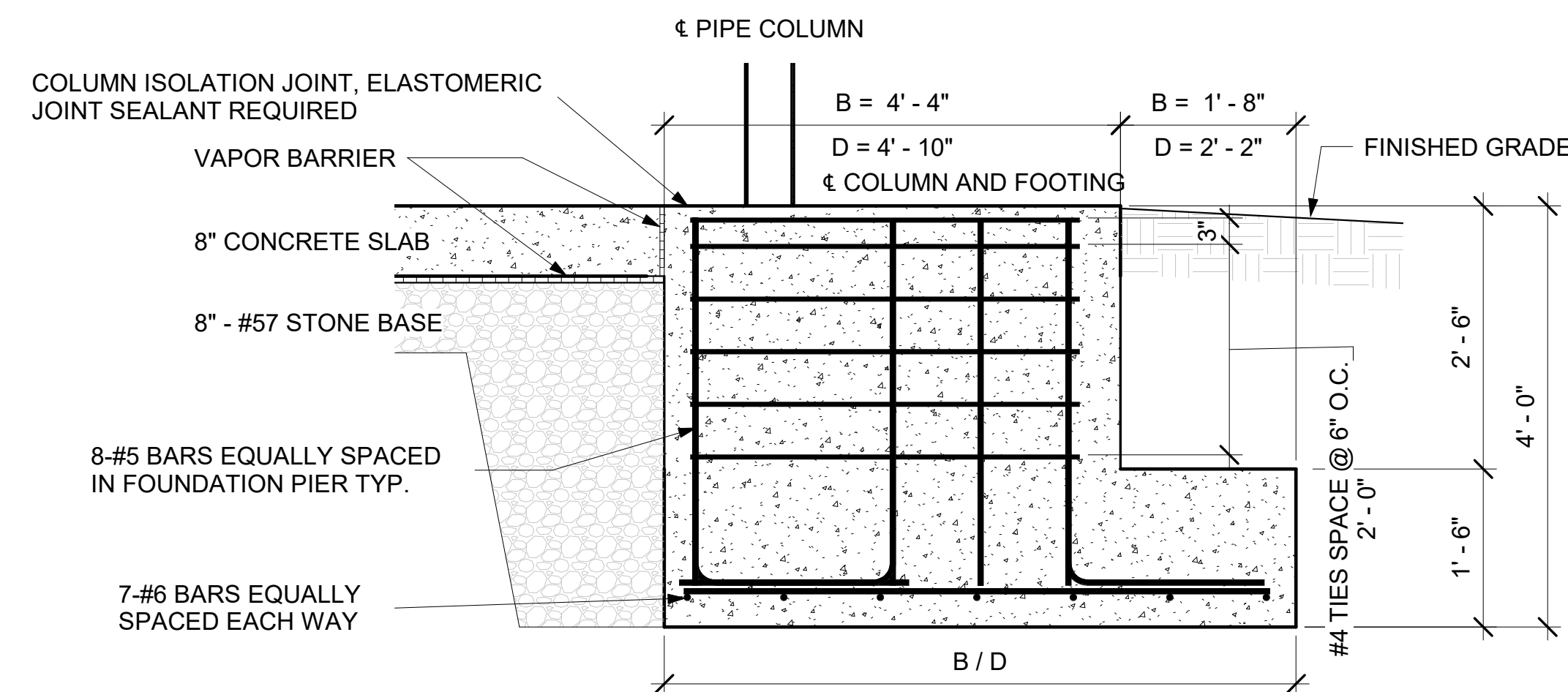


3 THICKENED SLAB E/F/G PLAN VIEW
1/2" = 1'-0"



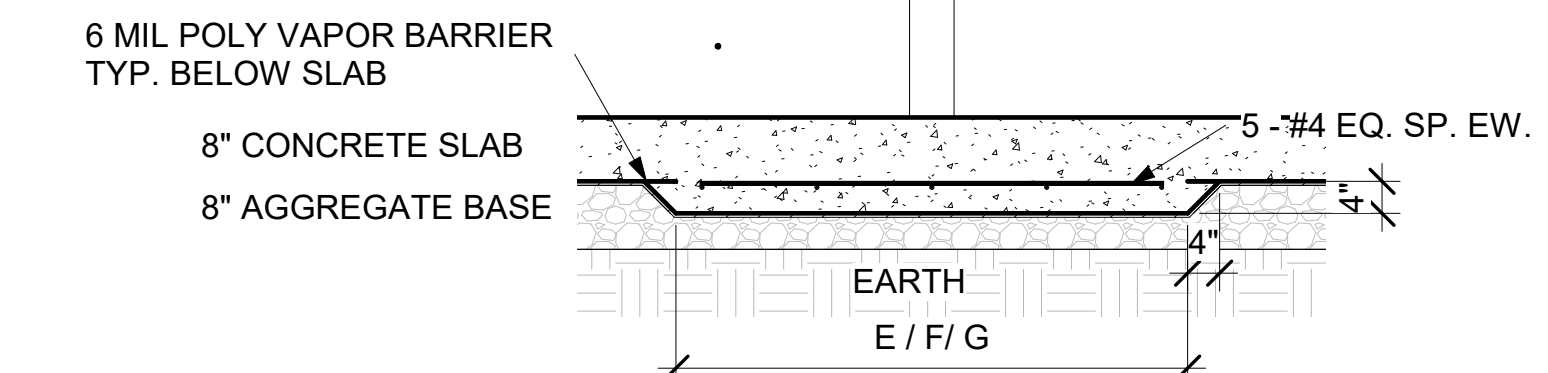
THIS DETAIL IS A PROTOTYPE. DETAILS AND DIMENSIONS ARE SUBJECT TO CHANGE BASED ON FINAL METAL BUILDING PLANS. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT FINAL FOUNDATION PLANS DEVELOPED BASED ON THE APPROVED METAL BUILDING PLANS ARE. *FOR ESTIMATION PURPOSES ONLY*****

4 PROTOTYPE A/C COLUMN FOUNDATION DETAIL
3/4" = 1'-0"

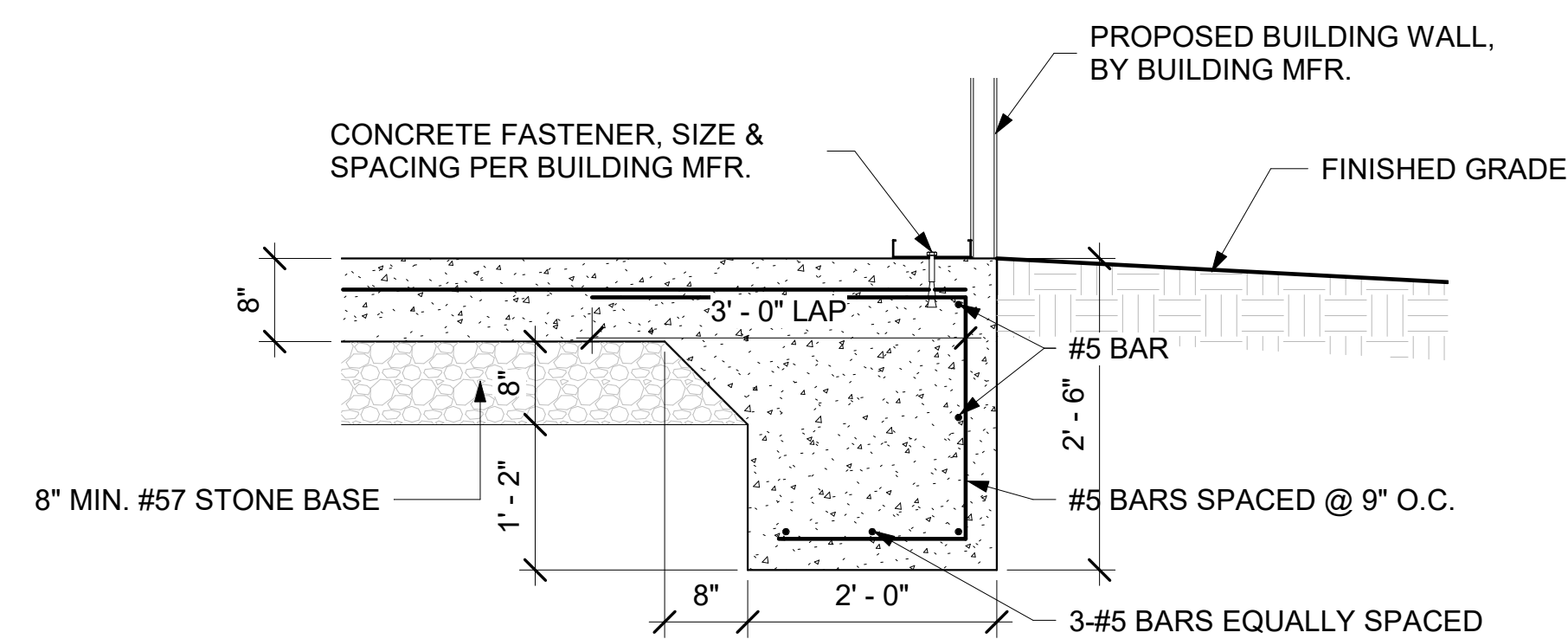


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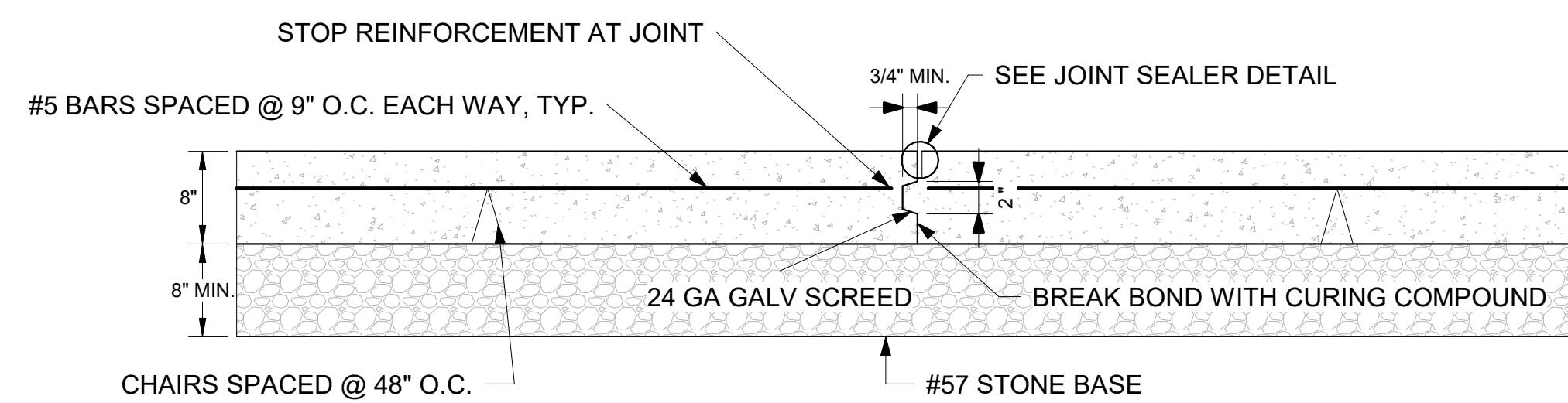
5 PROTOTYPE B/D COLUMN FOUNDATION DETAIL
3/4" = 1'-0"



6 THICKENED SLAB E/F/G
1/2" = 1'-0"



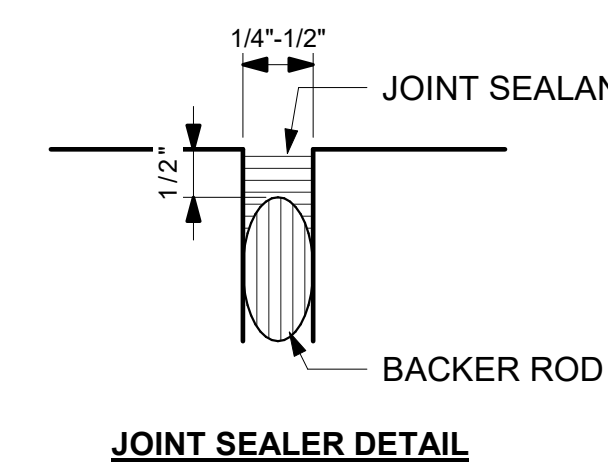
7 EXTERIOR WALL FOOTING DETAIL
3/4" = 1'-0"



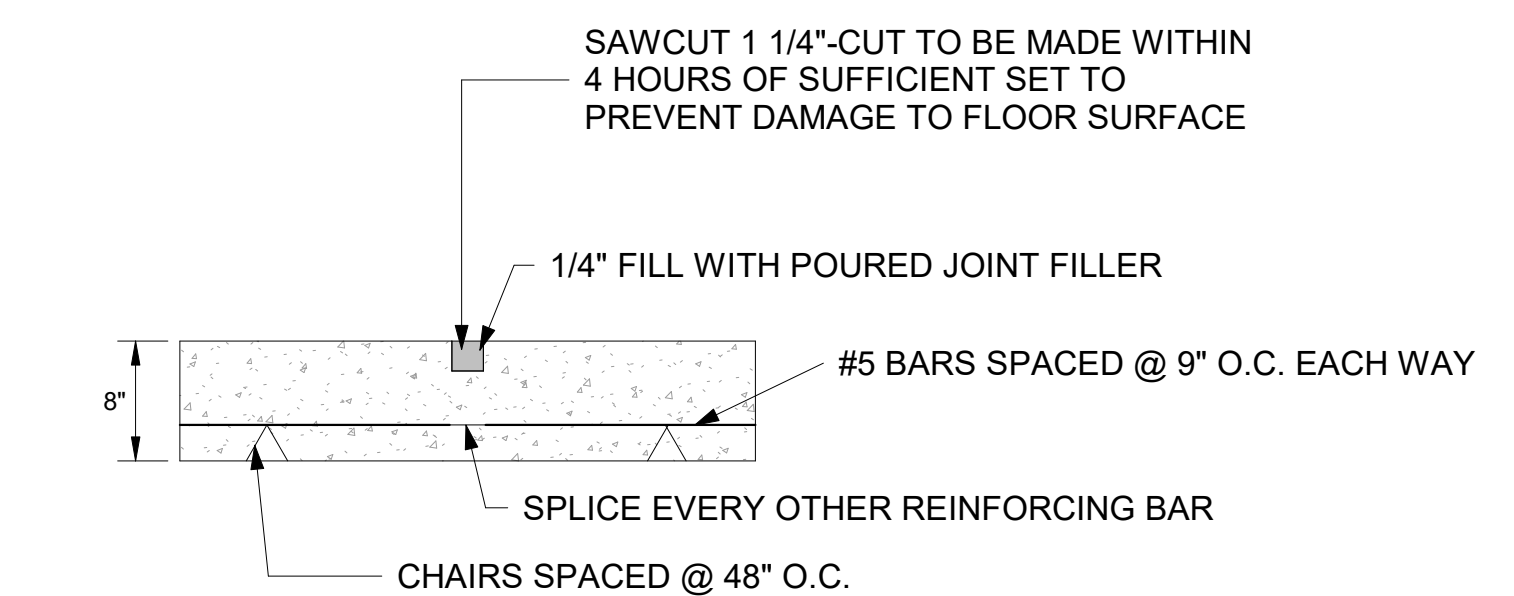
NOTES:

- JOINTS WHERE POSSIBLE SHOULD BE LOCATED UNDER PARTITIONS AND/OR ALONG COLUMN GRID LINES. PROVIDE DIAMOND SHAPED CONTROL JOINT AT ALL COLUMNS.
- SECOND POUR SHALL NOT BE MADE FOR A MIN. OF 48 HOURS AFTER STRIPPING FORMS FROM INITIAL POUR

8 SLAB ON GRADE & CONSTRUCTION JOINT DETAIL
N.T.S.



JOINT SEALER DETAIL



9 SLAB ON GRADE & CONTROL JOINT DETAIL
N.T.S.

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DESIGNED: TLA