

HOLDOWN SCHEDULE					
	POST-INSTALL OPTION			CAST-IN-PLACE OPTION	
	HOLDOWN	MIN. POST SIZE (FULL HT. KING POST)	FOUNDATION INSTALLATION	HOLDOWN	MIN. POST SIZE (FULL HT. KING POST)
HD1*	HDU5 OR HTT5	(2) 2X	¾"ØX10" TITEN EMBEDDED MIN. 7" OR ¾"Ø ALL-THREAD DRILL & EPOXY 6" INTO FOUNDATION W/ MIN. 2½" EDGE DISTANCE	STHD10J/STHD10RJ	(2) 2X
HD2	HDU5 OR HTT5	(2) 2X	¾"Ø ALL-THREAD DRILLED & EPOXIED 12" INTO FOUNDATION W/ MIN. 2½" EDGE DISTANCE & 16" FROM CORNER	STHD14J/STHD14RJ	(2) 2X
NOTES: 1. THE REQUIREMENTS SHOWN IN THIS TABLE ARE MIN. U.N.O., SEE PLAN. 2. AT INTERLEVEL HTT AND HDU HOLDOWNS, USE THREADED ROD OF SAME DIAMETER AS FOUNDATION BOLT. 3. ALIGN HOLDOWNS AT FOUNDATIONS WITH INTERLEVEL HOLDOWNS/STRAPS ABOVE U.N.O., SEE PLAN 4. DIMENSIONS TO HOLDOWN LOCATIONS MUST BE FIELD VERIFIED. 5. EDGE NAIL SHEATHING TO POSTS AT HOLDOWNS WITH (2) ROWS EDGE NAILING. 6. USE "RJ" HOLDOWNS WHERE RIM JOIST OR SUSPENDED SLAB OCCURS ON WALL. 7. TITEN BOLT INSTALLATION DOES NOT APPLY WHERE A RIM JOIST OCCURS ON A WALL. 8. FOR EPOXY SOLUTION, USE SET-3G, HIT-RE 500 OR A CODE APPROVED EPOXY FOR UNCRACKED CONCRETE *3500 LB MAXIMUM CAPACITY					

FOOTING, FOUNDATION AND CONCRETE

1. FOOTING DESIGN IS BASED ON ALLOWABLE SOIL BEARING PRESSURE AS PER GEOTECHNICAL REPORT. SEE PLAN. IF A PROJECT SOILS REPORT HAS BEEN COMPLETED, FOLLOW ALL REPORT RECOMMENDATIONS. FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR GRANULAR FILL COMPACTED TO 95% OF MAXIMUM DENSITY. NO FOOTINGS SHALL BE PLACED IN WATER OR ON FROZEN GROUND. ALL FOOTINGS TO BE PLACED AT MIN. BELOW LOCAL FROST DEPTH, AND BE CONTINUOUS AND MONOLITHIC POUR.

2. CHANGES IN ELEV. SHALL BE STEPPED WITH STEP HEIGHT NOT HIGHER THAN 1/2 THE STEP LENGTH AND NOT GREATER THAN 5'. NOTIFY ENGINEER IF GRADE DROPS OVER 8' IN 24' (GREATER THAN 1/3 SLOPE) SO THAT APPROPRIATE DESIGN CHANGES MAY BE MADE TO FOUNDATION AND FOOTINGS.

3. ALL FOOTINGS, FOUNDATIONS, AND INTERIOR SLABS SHALL BE NORMAL WT. CONCRETE WITH A COMPRESSIVE STRENGTH OF 2,500 PSI MIN. U.N.O. TO MEET STRENGTH REQUIREMENTS (SEE CALCS., NO SPECIAL INSPECTIONS REQUIRED U.N.O., SEE PLAN) HOWEVER, PER IRC 402.2 USE 3000 PSI CONCRETE FOR DURABILITY PURPOSES. THE WATER/CEMENT RATIO SHALL BE NO GREATER THAN .50 WITH A MINIMUM CEMENT CONTENT OF 504 LBS. PER CUBIC YARD.

4. ALL CONC. WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS REQUIRED BY ACI STANDARDS AND PRACTICES.

5. ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318. REINFORCEMENT SHALL BE FREE FROM MUD AND OIL AND OTHER NON-METALLIC COATINGS THAT HAMPER BONDING CAPACITY.

6. OWNER/CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS LISTED ON THE DRAWING. VERIFICATION OF ALL SITE CONDITIONS INCLUDING SITE STABILITY IS THE RESPONSIBILITY OF OTHERS

7. ALLOW 14 DAYS FOR CONCRETE TO CURE PRIOR TO BACKFILL.

8. STRUCTURAL CONCRETE EXPOSED TO FREEZE THAW CYCLES SHALL HAVE 5% AIR ENTRAINMENT, MIN.

9. RUN FOOTINGS CONTINUOUS UNDER ALL DOOR OPENINGS, SEE PLAN.

10. SILL PLATE J-BOLTS SHALL BE A307 WITH 7" MIN. EMBEDMENT IN CONCRETE U.N.O., SEE PLAN.

11. TITEN HD BOLTS OR EPOXY THREADED RODS MAY BE USED AS SUBSTITUTION FOR SILL PLATE J-BOLTS AT SAME SIZE AND SPACING AS J-BOLTS. USE 6" TITEN HD OR WEDGE ANCHOR WITH MIN 1" EDGE DISTANCE FOR SINGLE SILL PLATE AND 8" BOLTS FOR DBL PLATE.

12. ALL FOUNDATION HOLDOWN STRAPS/ANCHORS SHALL BE ALIGNED WITH END OF SHEAR WALL ABOVE AND SHALL ATTACH TO FULL HEIGHT KING STUDS U.N.O., SEE PLAN. PROVIDE WOOD POST AT EACH HOLDOWN PER THE HOLDOWN SCHEDULE. DIMENSIONS TO HOLDOWN LOCATIONS MUST BE FIELD VERIFIED.

13. FOOTINGS TO BE CENTERED ON WALLS AND COLUMNS/POSTS U.N.O., SEE PLAN.

14. USE SIMPSON SET EPOXY FOR CONCRETE ANCHORS U.N.O., SEE PLAN. CONTINUOUS SPECIAL INSPECTIONS REQUIRED ON ALL EPOXY OPERATIONS UNLESS WAIVED BY ENGINEER AND THE BUILDING OFFICIAL.

15. LAP REBAR 48 BAR DIAMETERS U.N.O., SEE PLAN. EXTEND HORIZONTAL BARS IN WALL MIN. 12" AROUND CORNERS. REINFORCING IN SLABS ON GRADE MAY BE LAPPED 24". SPLICES IN BOTTOM STEEL IN CONCRETE BEAMS, FOUNDATION WALLS, AND CAST IN PLACE SUSPENDED SLABS SHALL BE STAGGERED 48 BAR DIAMETERS. IF SPLICES ARE NOT STAGGERED, SPLICE BARS 72 BAR DIAMETERS

16. LINTELS IN CONCRETE WALLS MAY BE AS FOLLOWS U.N.O., SEE PLAN; FOR 3'-0" MAX SPAN, 8" DEEP WITH (2) #4 BOTT. BARS, FOR 6'-0" MAX SPAN, 12" DEEP WITH (2) #4 BOTT. BARS.

17. PROVIDE (2) EDGE BARS ABOVE CONCRETE WALL OPENINGS AND (1) BAR EACH SIDE AND BELOW OPENINGS U.N.O., SEE PLAN. MATCH SIZE OF EDGE BARS WITH TYPICAL WALL REINFORCING AND PLACE WITHIN 4" OF OPENING EDGE. EXTEND BARS 48 BAR DIAMETERS PAST EDGE OF OPENING OR EXTEND AS FAR AS POSSIBLE AND PROVIDE 90° STANDARD HOOK AT END.

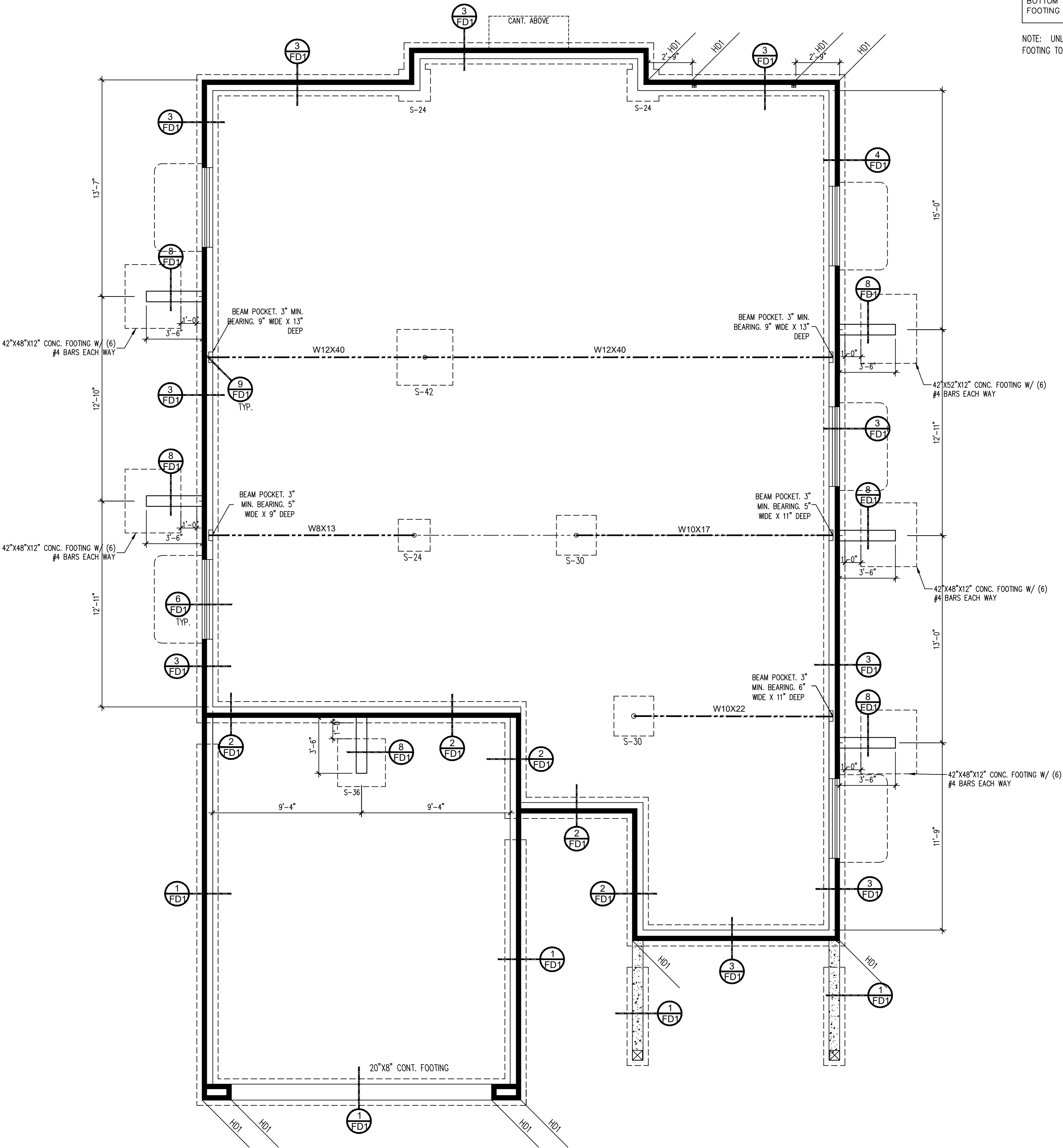
18. PROVIDE HORIZONTAL BAR WITHIN 3" OF TOP AND BOTT. OF WALL AND PROVIDE VERTICAL BAR AT ALL WALL CORNERS AND ENDS.

GOVERNING CODE	2017 PIKES PEAK REGIONAL BUILDING (2015 IBC)		
SEISMIC			CATEGORY= B
			I = 1.00
			R = 6.5
			RISK = II
ULT. WIND SPEED (3--SECOND GUST)			130 MPH
			EXPOSURE C
ROOF LOADS	DEAD	15 PSF	
	SNOW	30 PSF	
FLOOR LOADS	DEFLECTION	LL=L/360	TL=L/240
	DEAD	12 PSF	
	LIVE	40 PSF	
DECK LOADS	DEAD	12 PSF	
	LIVE	40 PSF	
		2000 PSF	
MAX. SOIL BEARING PRESSURE			2000 PSF
EQUIVALENT FLUID PRESSURE			60 PCF
NOTE: THIS ENGINEERING DESIGN ASSUMES THE LOADS AND CRITERIA LISTED ABOVE. CONTRACTOR SHALL REVIEW THE LOADS & GEOTECHNICAL REPORT AND CONTACT YORK ENGINEERING PRIOR TO CONSTRUCTION IF ANY ADJUSTMENTS ARE REQUIRED. THE LOADS ABOVE ASSUME NO RADIANT HEAT FLOORING. FOUNDATION DESIGN IS IN ACCORDANCE WITH ROCKY MOUNTAIN GROUP'S SUBSURFACE INVESTIGATION FOUNDATION RECOMMENDATIONS, PROJECT NUMBER 183235, DATED OCTOBER 1, 2021. DESIGN IS SUBJECT TO REVISION BASED ON RESULTS OF OPEN HOLE OBSERVATION.			

NOTE: THIS ENGINEERING ASSUMES THAT THE CLEARANCE & SETBACK REQUIREMENTS LISTED IN IRC SECTION R403.1.7 ARE MET. IF THESE PROVISIONS ARE NOT MET, CONTACT THE ENGINEER FOR FURTHER DESIGN.

NOTE: THIS ENGINEERING ASSUMES THAT THE SITE IS STABLE HAVING NO GLOBAL STABILITY CONCERNS OR HAZARDS. IF THIS IS NOT TRUE, CONTACT SOILS ENGINEER AND PROVIDE SOILS/SLOPE STABILITY REPORT TO YORK ENGINEERING FOR REVIEW AND FURTHER DESIGN.

ATTACH PORCH/DECK POSTS TO FOUNDATION WITH ABW OR EQ POST BASE AND AC OR VERT CS16X12" OR EQ POST CAP.



FOUNDATION PLAN

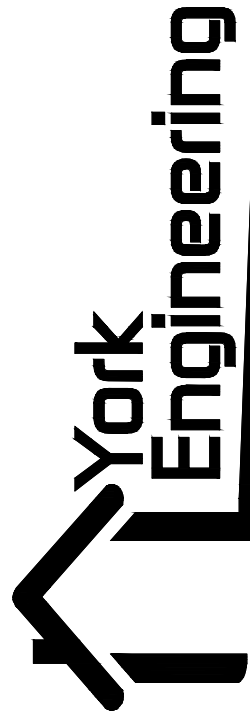
SCALE: 1/4" = 1'-0"

FOOTING SCHEDULE:				
TYPE	WIDTH	LENGTH	THICK	REINFORCEMENT
S-24	24"	24"	10"	(3) # 4 BARS EACH WAY
S-30	30"	30"	10"	(3) # 4 BARS EACH WAY
S-36	36"	36"	10"	(4) # 4 BARS EACH WAY
S-42	42"	42"	12"	(5) # 4 BARS EACH WAY

NOTE: FOOTING REINFORCEMENT IN THIS SCHEDULE AND NOTED ON PLANS IS BOTTOM REINFORCING U.N.O. AND SHALL BE PLACED IN BOTTOM 1/2 OF FOOTING THICKNESS, WITH 3" CONCRETE CLEAR COVER, MIN.

NOTE: UNLESS NOTED OTHERWISE, ALL FOOTING TO BE F-16: 16" X 8" FOOTINGS.

Engineer's Stamp:



Structural Design and Analysis  
7208 S. Tucson Way, Suite 195  
Centennial, CO 80112  
(720) 990-5900

DATE	AUTHOR	NOTE

ENGINEER: SC  
REVIEWER: SF

VANGUARD HOMES

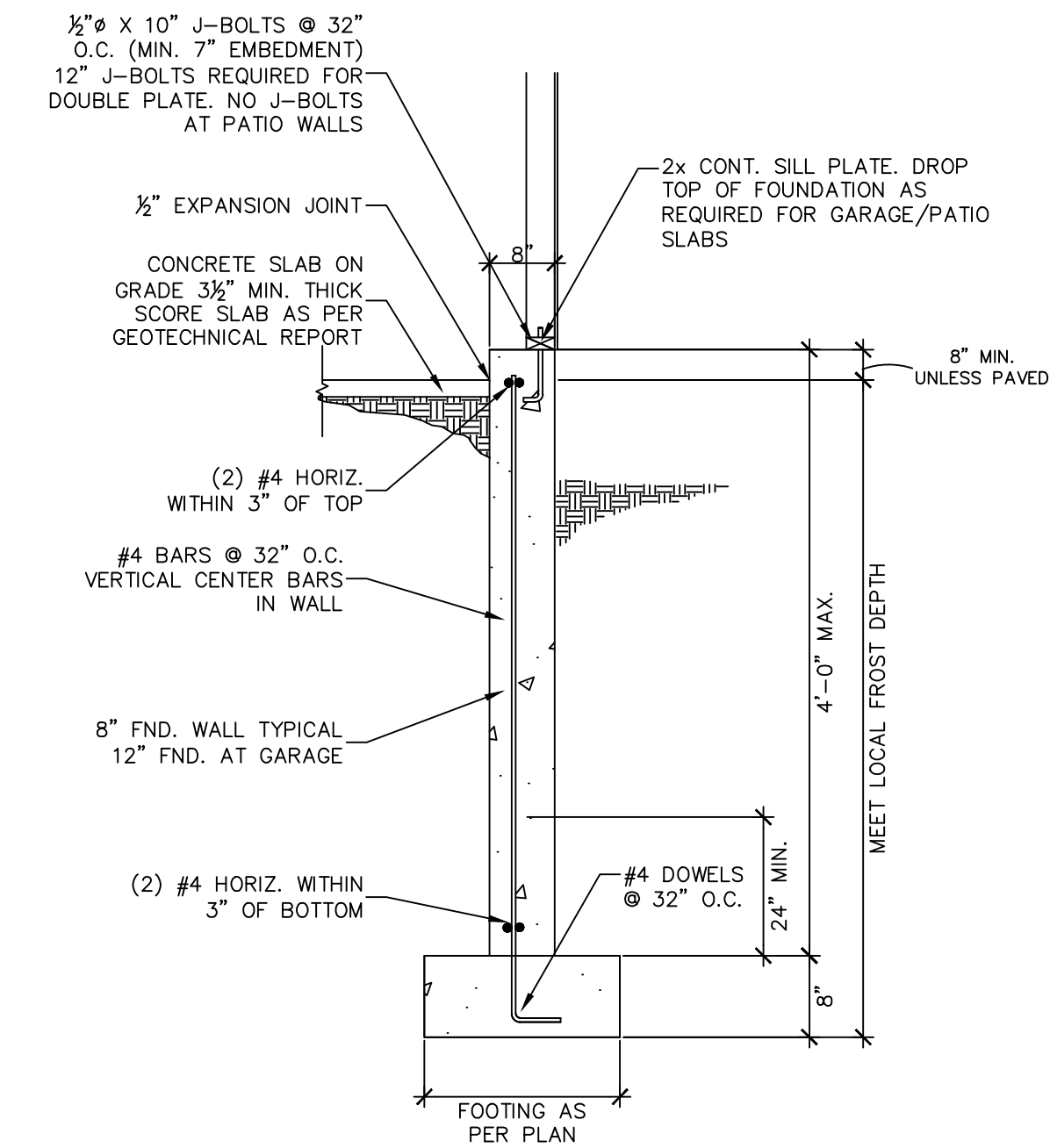
LOT 9, THE FARM FILING #7  
11705 JUSTIFY DRIVE  
COLORADO SPRINGS, CO

F1

YORK ENGINEERING INC. SPECIFICATIONS IS LIMITED TO THE STRUCTURAL DESIGN OF THE MAIN SUPPORTING ELEMENTS OF THIS STRUCTURE. NO OTHER DISCIPLINES OF THIS STRUCTURE INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, PLUMBING, MECHANICAL WERE NOT REVIEWED FOR CODE COMPLIANCE OR COMPATIBILITY WITH THE DESIGN. THE PURPOSE OF THIS ENGINEERING IS TO HELP REDUCE STRUCTURAL DAMAGE AND LOSS OF LIFE DUE TO SEISMIC ACTIVITY AND/OR HIGH WIND CONDITIONS.

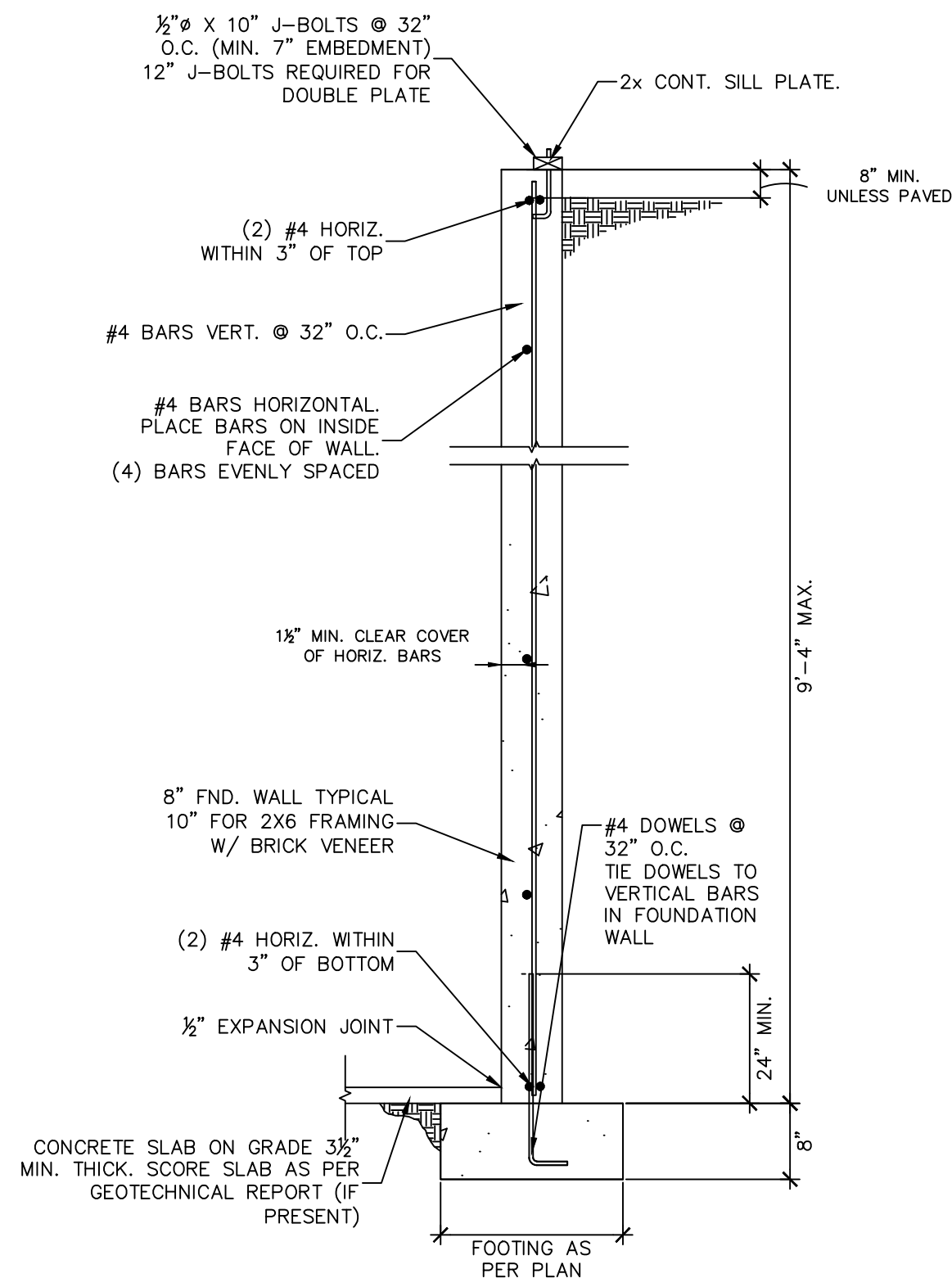


NOTE: 36" MAX.  
UNBALANCED FILL



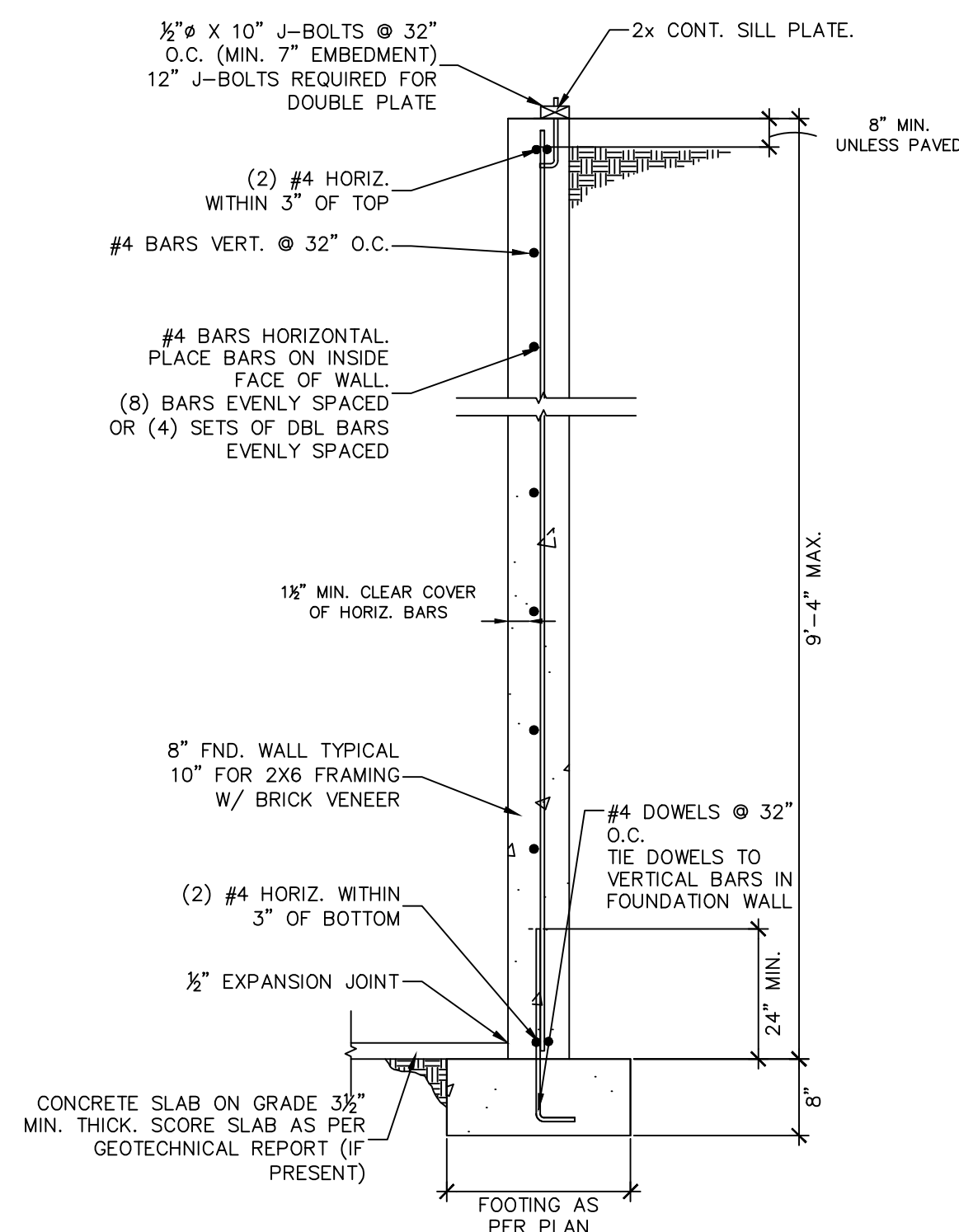
1 GARAGE/PATIO FOUNDATION WALL  
NTS

NOTE:  
- CORNERS SHALL HAVE MIN. 24" RETURN BEFORE STEP DOWN OF UP TO 48". STEP DOWN OF UP TO 8' REQUIRE 48" RETURN WALL.  
- MAX. 24" STEP IN STRAIGHT WALLS UNLESS NOTED OTHERWISE ON PLANS



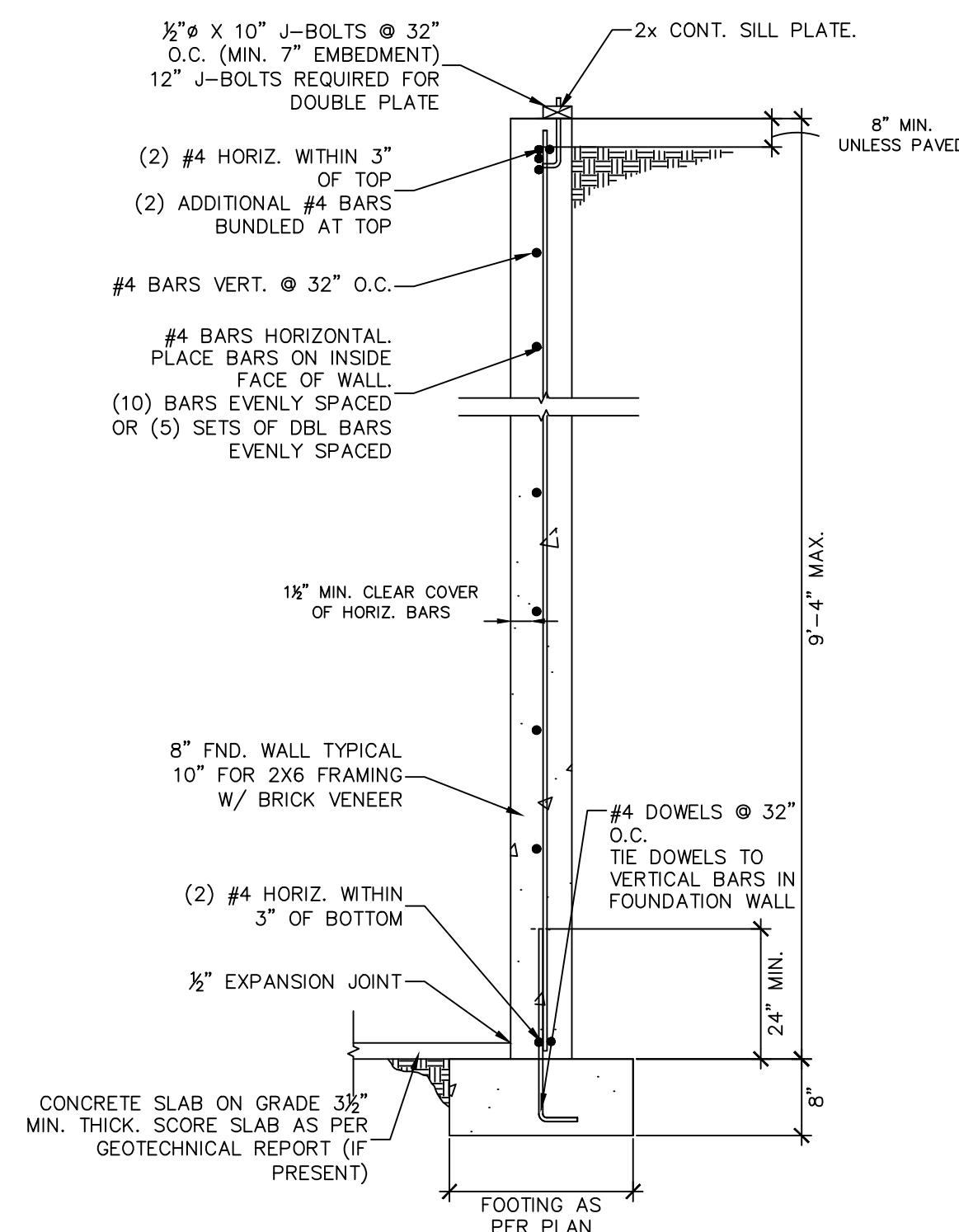
2 FULL-HEIGHT FOUNDATION WALL  
NTS

NOTE:  
- CORNERS SHALL HAVE MIN. 24" RETURN BEFORE STEP DOWN OF UP TO 48". STEP DOWN OF UP TO 8' REQUIRE 48" RETURN WALL.  
- MAX. 24" STEP IN STRAIGHT WALLS UNLESS NOTED OTHERWISE ON PLANS



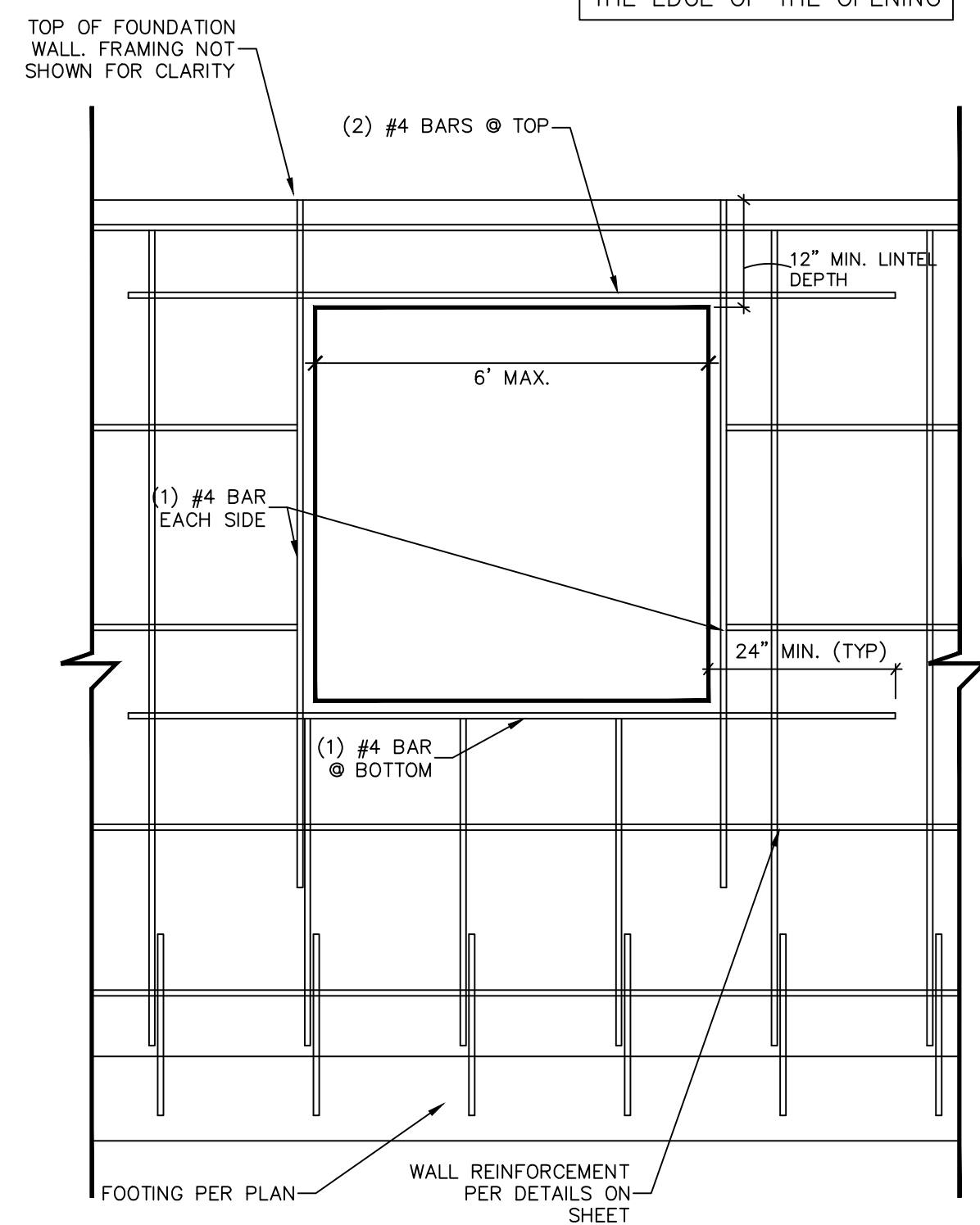
3 FULL-HEIGHT FOUNDATION WALL  
NTS

NOTE:  
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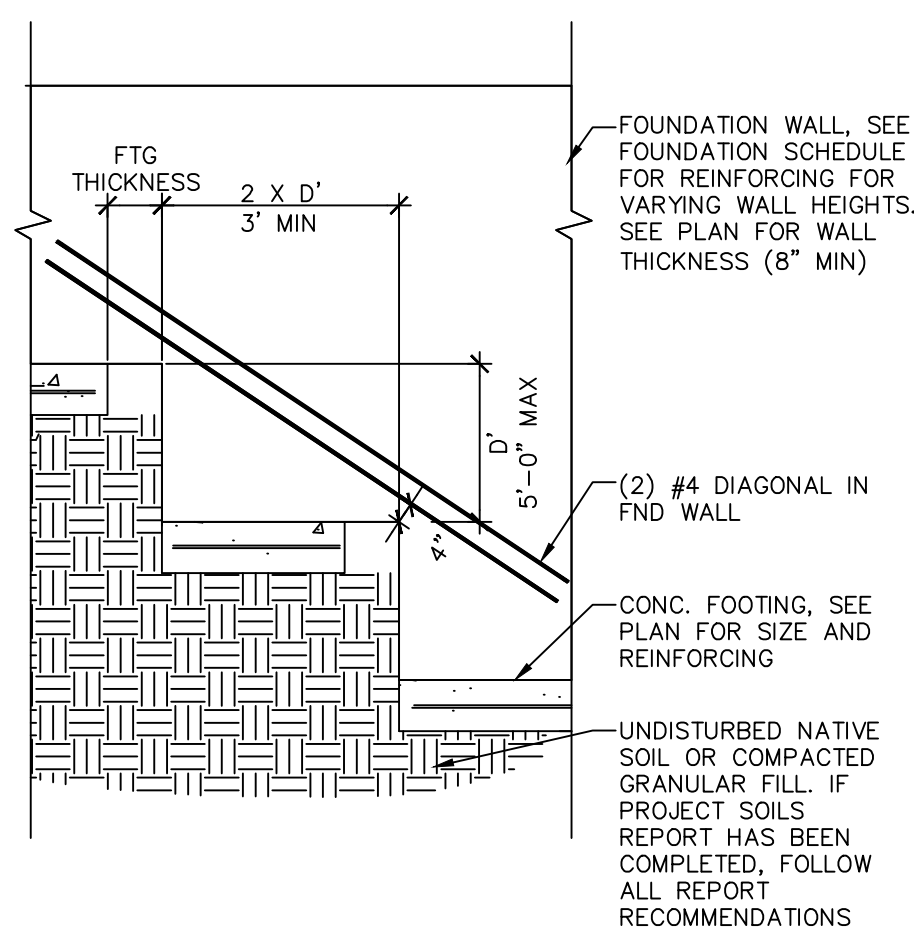


4 FULL-HEIGHT FOUNDATION WALL  
NTS

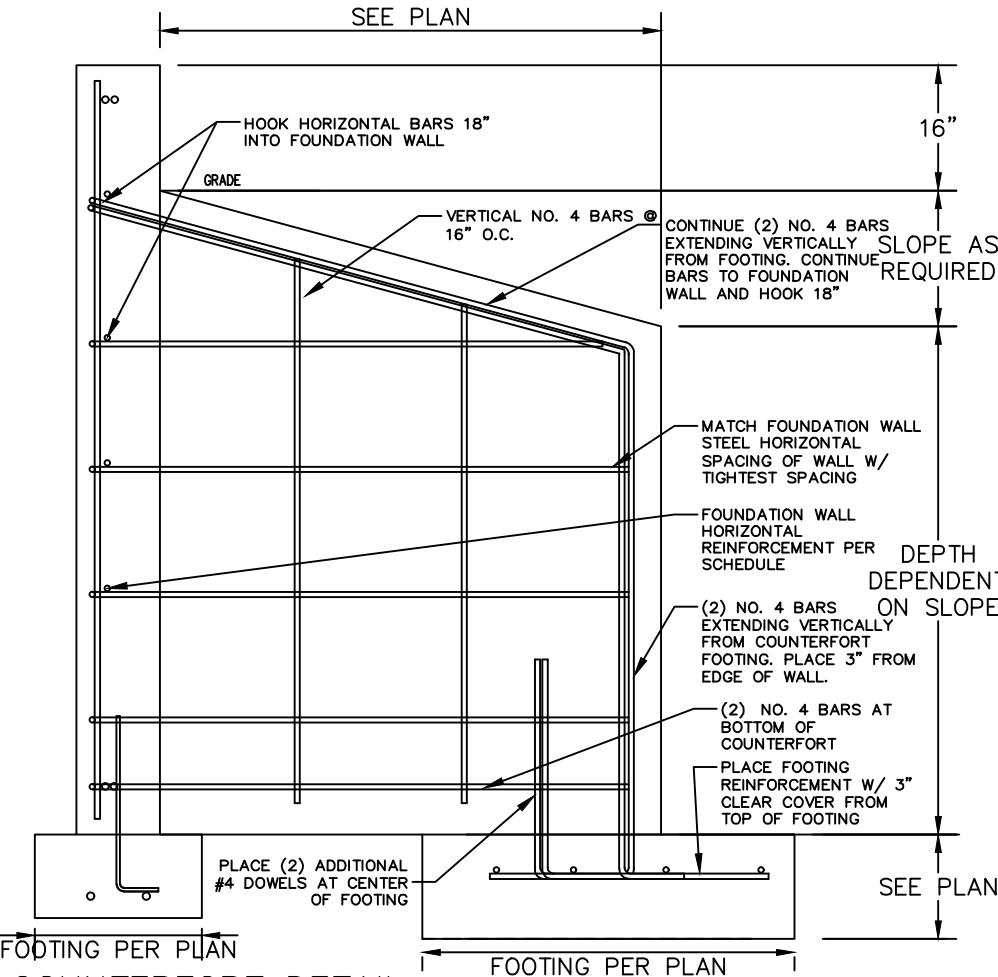
NOTE:  
BARS SHALL BE PLACED WITHIN 2" OF THE OPENING AND EXTEND 24" BEYOND THE EDGE OF THE OPENING



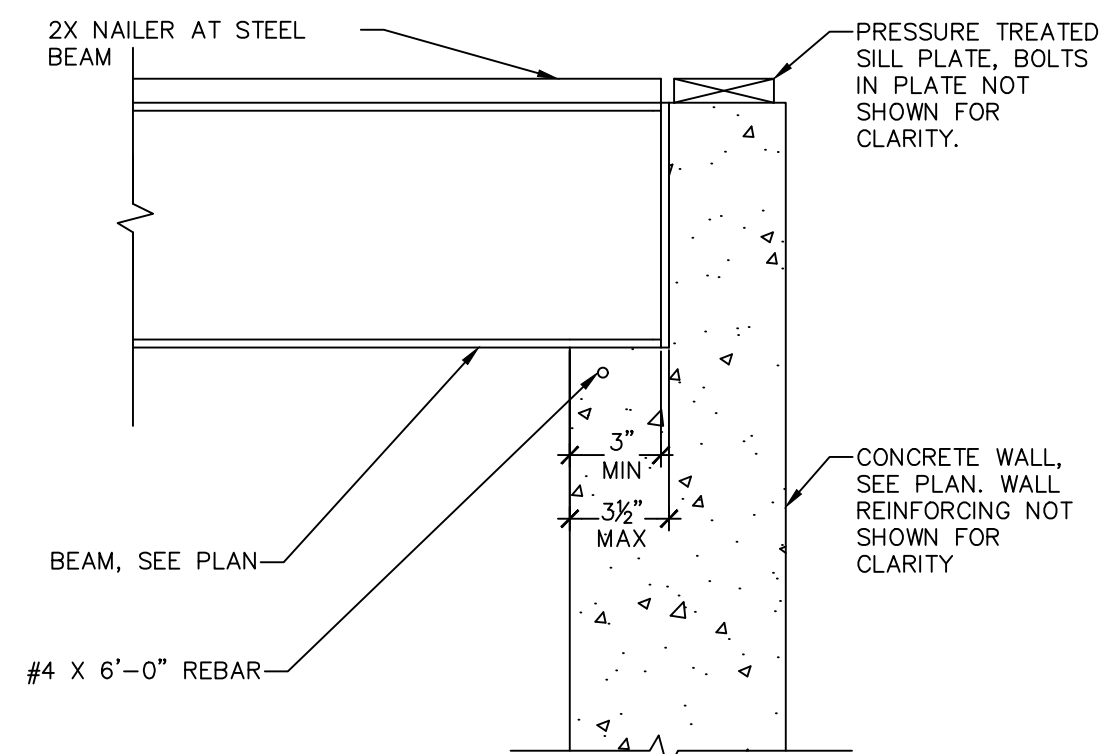
6 REINFORCEMENT AROUND OPENINGS  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES



7 COUNTERFORT DETAIL  
NTS



8 COUNTERFORT DETAIL  
NTS



9 BEAM POCKET IN CONCRETE WALL  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES

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**York Engineering**

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DATE AUTHOR NOTE

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REVIEWER: