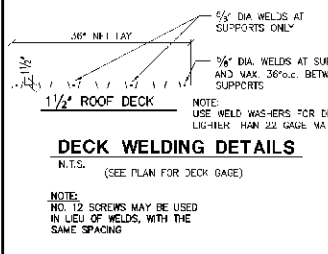
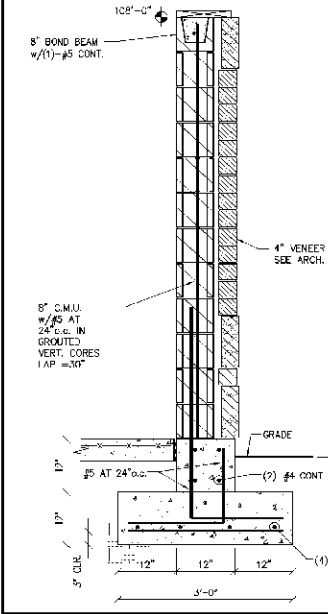


**STRUCTURAL NOTES**

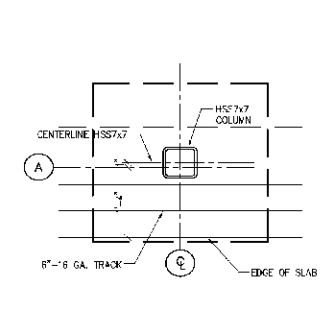
- DESIGN UNIFORM LOADS  
FLOOR LIVE LOAD: 100 P.S.F.  
ROOF LIVE LOAD: 20 P.S.F.  
ROOF SNOW LOAD: 20 P.S.F.  
HORIZ. SNOW LOAD: 0 P.S.F.  
GROUND SNOW LOAD = 0 P.S.F.  
FLAT ROOF SNOW LOAD = 6.30 P.S.F.  
SNOW EXPOSURE FACTOR = 0.9  
SNOW LOAD IMPORTANCE FACTOR = 1.0  
THERMAL FACTOR = 1.0
- WIND LOAD:  
BASIC WIND SPEED = 95 M.P.H., 3 SEC. GUST  
WIND IMPORTANCE FACTOR = 1.0  
BUILDING CATEGORY = C  
WIND EXPOSURE = C  
INTERNAL PRESSURE COEFFICIENT = + 0.18  
COMPONENT AND CLADDING LOAD TO BE USED FOR ALL ITEMS NOT SPECIFICALLY DESIGNED BY ENGINEER OR RECORD - WALLS = 1.241 P.S.F. ROOF = 4.130 P.S.F.
- EARTHQUAKE LOAD:  
SEISMIC USE GROUP = I  
SEISMIC IMPORTANCE FACTOR = 1.0  
SEISMIC DESIGN CATEGORY = C  
SPECTRAL COEFFICIENTS:  $S_{MS} = .200$   
 $S_{M1} = .130$
- SITE CLASS = D  
BASIC SEISMIC FORCE - BRACING SYSTEM - STRUCTURAL STEEL NOT SPECIFICALLY IDENTIFIED  
DESIGN BASIS: SHEAR (FACTORED) = 2.5 / K  
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE
- FLOOR DESIGN  
SITE IS NOT LOCATED IN FLOOD PRONE AREA, PER CORP. OF ENGINEERS. FLOOD DESIGN DATA AS INDICATED IN SOIL ENGINEER'S REPORT.
- SPECIAL LOADS  
SEE PLAN FOR SPECIAL LOADING CONDITIONS
- ALLOWABLE NET SOIL BEARING CAPACITY = 3,000 P.S.F.  
REF. SOILS REPORT DATED 10/13/05 BY MACTEC REPORT NO. 6488-05-1052
- ALL EXCAVATIONS SHALL BE INSPECTED BY A GEO-TECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
- CONCRETE SHALL ATTAIN THE FOLLOWING ULTIMATE 28 DAY COMPRESSIVE STRENGTHS:  
4,000 P.S.F. FOR SLABS ON GRADE, WALLS  
3,000 P.S.F. FOR FOOTINGS  
(EXTERIOR CONCRETE IS TO BE 1 TO 6% AIR ENTRAINED)
- CONCRETE WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST "AMERICAN CONCRETE INSTITUTE" RECOMMENDATIONS
- REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A615, GRADE 60
- CONCRETE WALLS WITH (2) LAYERS OF REINF. SHALL HAVE #4 SPACER BARS BETWEEN MATS AT 10'-0" O.C. VERT. AND 6'-0" O.C. HORIZ.
- STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST A.I.S.C. RECOMMENDATIONS.
- STRUCTURAL STEEL FLANGE SECTIONS AND TEES SHALL CONFORM TO THE PHYSICAL PROPERTIES OF A.S.T.M. A572, GRADE 50. STRUCTURAL TUBING SHALL CONFORM TO THE PHYSICAL PROPERTIES OF A.S.T.M. A500, GRADE B. PLATES, ANGLES AND CHANNELS SHALL CONFORM TO THE PHYSICAL PROPERTIES OF A.S.T.M. A572.
- STRUCTURAL STEEL CONNECTIONS SHALL CONSIST OF 3/4" HIGH STRENGTH A.S.T.M. A325 BOLTS AND/OR WELDS WITH E70-XX ELECTRODES WITH 3/4" THICK DOUBLE ANGLE CONNECTIONS (AS DETAIL IN THE A.I.S.C. "MANUAL OF STEEL CONSTRUCTION", U.S.A. ON STRUCTURAL DRAWINGS FABRICATOR SHALL BE RESPONSIBLE FOR THE DESIGN OF CONNECTIONS TO SUPPORT THE SERVICE END REACTIONS INDICATED ON THE PLANS. PROVIDE ELECTION ANGLES ON STAGGERED CONNECTIONS AT ALL DOUBLE ANGLE CONNECTIONS.
- GROUT IN SOUL, (3) COURSES MINIMUM x 32" WIDE BELOW BEARING ON MASONRY BLOCK. SEE PLAN FOR REINFORCING REQUIREMENTS.
- STEEL JOIST SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST S.I.I. RECOMMENDATIONS.
- BRIDGING FOR STEEL JOIST SHALL BE HORIZONTAL, CONSISTING OF 1 1/2" x 1/4" ANGLE'S IN EQUAL SPACED ROWS (SEE PLAN FOR NUMBER OF ROWS), OF SUBMITTER BRIDGING, TOP AND BOTTOM OF JOIST, UNLESS OTHERWISE NOTED. SEE PLANS FOR LOCATIONS OF ADDITIONAL JOIST BRIDGING TO BE SIZED AND PROVIDED BY BAR JOIST MFG. NET UPLIFT = 15 P.S.F.
- COORDINATE ALL ROOF AND FLOOR OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. FRAME OPENINGS WITH 3x3/8" ANGLES TYPICAL J.W.O. CONTRACTOR TO VERIFY JOIST SIZES AND WEIGHTS BEFORE JOISTING.
- 3/4" EXPANSION TYPE ANCHOR BOLTS SHALL PROVIDE A MINIMUM 5,438# WORKING STRENGTH IN SHEAR, AND 3,225# PULL-OUT PER BOLT IN 4,000 P.S.I. CONCRETE.
- TYPICAL L/ELTS FOR MASONRY OPENING SHALL BE AS FOLLOWS, U.N.O. ON PLANS. GALVANIZE ALL EXTERIOR L/ELTS, ANGLES AND PLATES.  
35x35" ANGLE: 2x4" WALL WIDTH, 4" OPENING OR LESS  
5x5x5" ANGLE: 2x4" WALL WIDTH, 4" TO 6" OPENING  
Wx8x8" ANGLE: 2x4" WALL WIDTH, 4" TO 6" OPENING  
8" x 8" TO 12" OPENING  
(8" MINIMUM END BEARING FOR ANGLES, 2" FOR Wx8x8, TYPICAL EACH END.)
- METAL STUDS, "C" CHANNELS, AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT MEETS THE REQUIREMENTS OF:  
16 GA. OR HEAVIER GALVANIZED A.S.T.M. A446, GRADE D, GRADE 50  
18 GA. OR LIGHTER GALVANIZED A.S.T.M. A446, GRADE B, GRADE 33
- BRIDGING FOR "C" CHANNELS AND STUDS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND REPORT ANY CONDITIONS SUBSTANTIALLY DIFFERENT THAN THOSE SHOWN TO THE ENGINEER.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL STRUCTURAL ELEMENTS



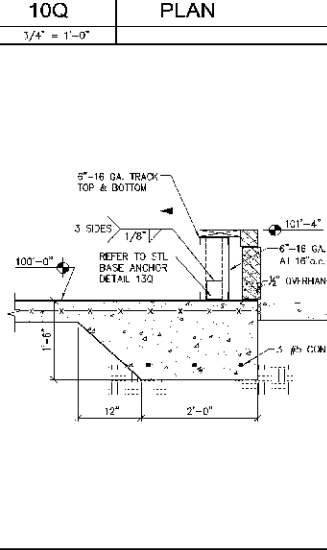
**7R DETAIL**  
3/4" = 1'-0"



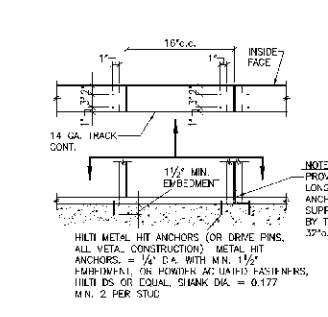
**7K SECTION**  
3/4" = 1'-0"



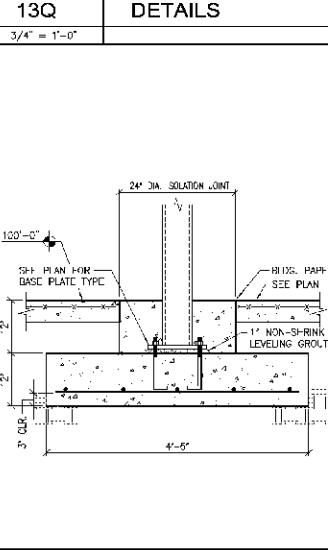
**10Q PLAN**  
3/4" = 1'-0"



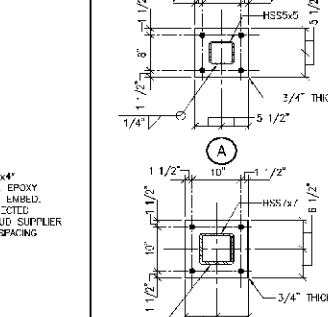
**10K SECTION**  
3/4" = 1'-0"



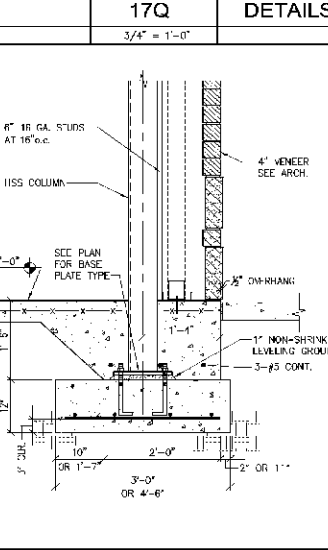
**13Q DETAILS**  
3/4" = 1'-0"



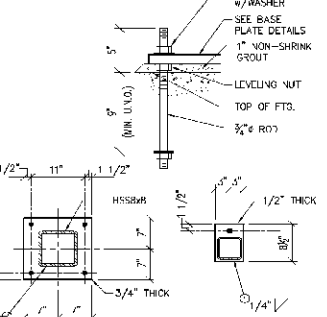
**13K SECTION**  
3/4" = 1'-0"



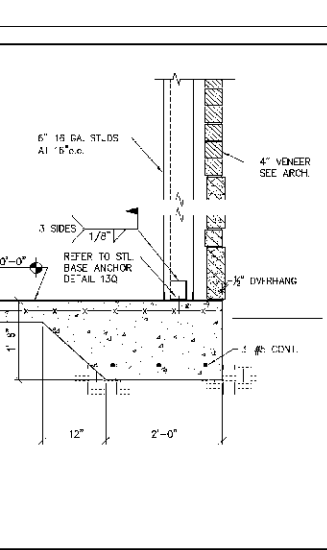
**17Q DETAILS**  
3/4" = 1'-0"



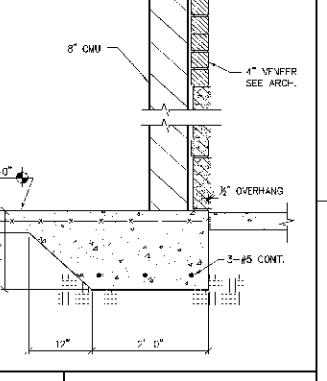
**16K SECTION**  
3/4" = 1'-0"



**19Q DETAILS**  
3/4" = 1'-0"

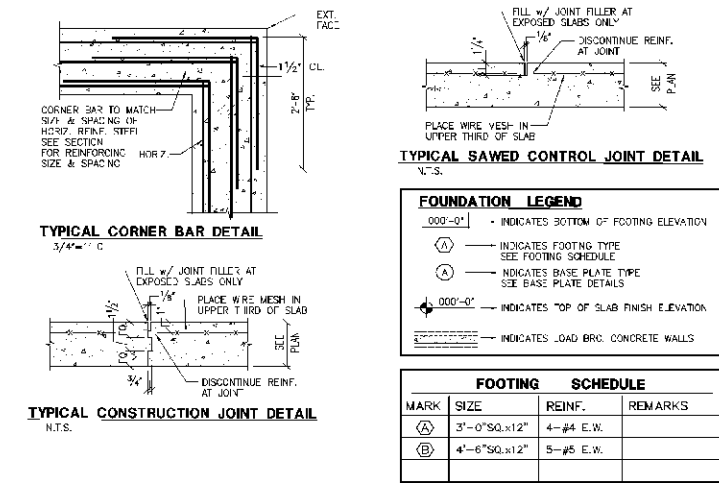


**19K SECTION**  
3/4" = 1'-0"



**22Q SECTION**  
3/4" = 1'-0"

**1F STRUCTURAL NOTES**

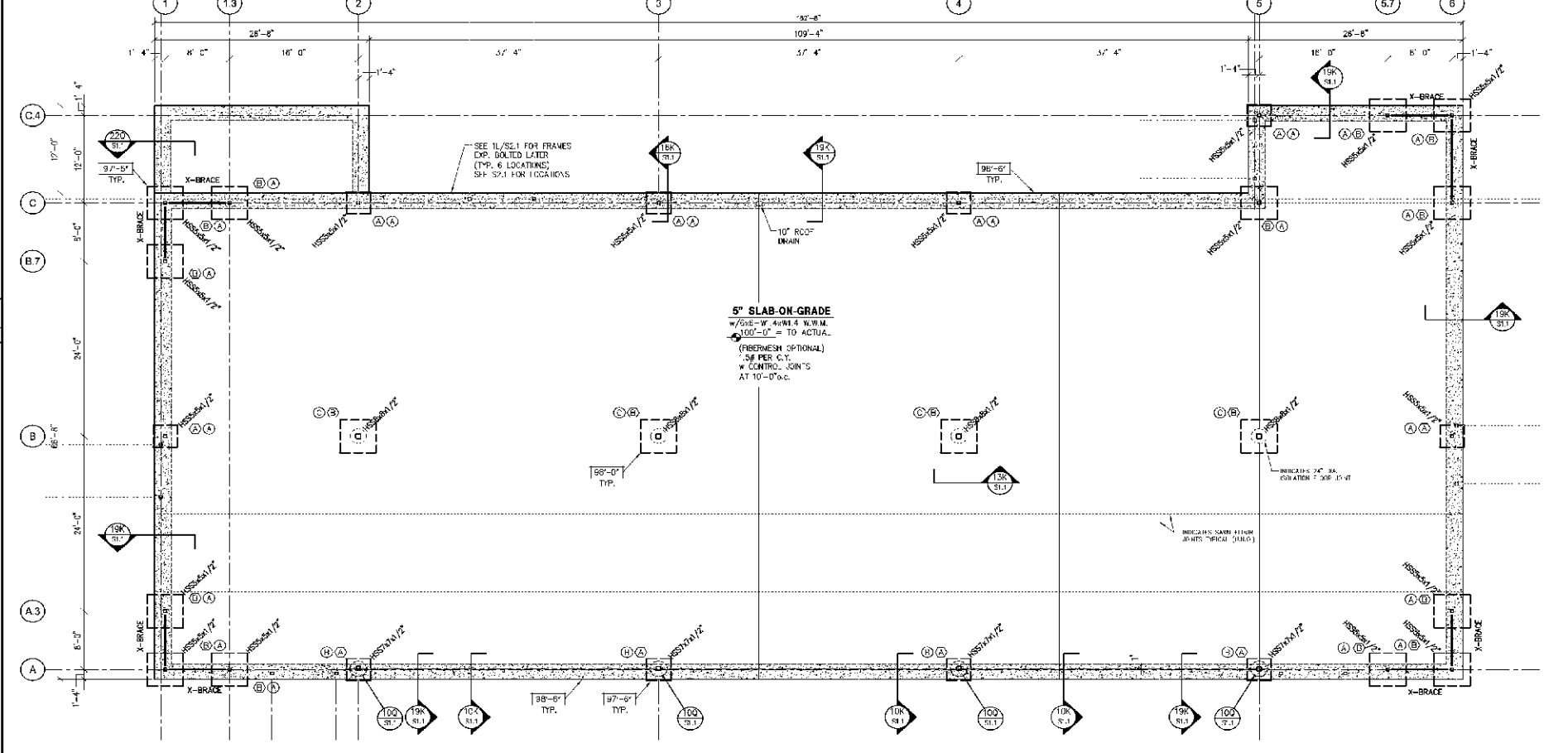


**FOUNDATION LEGEND**

- 000'-0" - INDICATES BOTTOM OF FOOTING ELEVATION
- (A) - INDICATES FOOTING TYPE SEE FOOTING SCHEDULE
- (B) - INDICATES BASE PLATE TYPE SEE BASE PLATE DETAILS
- 000'-0" - INDICATES TOP OF SLAB FINISH ELEVATION
- INDICATES LOAD BRC. CONCRETE WALLS

MARK	SIZE	REINF.	REMARKS
(A)	3'-0" SQ. x 12"	4-#4 E.W.	
(B)	4'-6" SQ. x 12"	5-#5 E.W.	

**FOOTING SCHEDULE**



**7A FOUNDATION PLAN**  
1/8" = 1'-0"



REV. #	DESCRIPTION	DATE	BY

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**MINI-MALL / GAS / CAR WASH**  
FORT BRAGG, NORTH CAROLINA

**FOUNDATION PLAN S1.1**

