GENERAL STRUCTURAL NOTES

001000:

TO THE BEST OF THE ENGINEER'S KNOWLEDGE THE PLANS AND SPECIFICATIONS FOR THIS PROJECT COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THE FLORIDA STATUTES.

DO NOT SCALE DRAWINGS, USE DIMENSIONS PROVIDED, TYPICALLY. IN THE CASE OF DIMENSIONAL CONFLICT ARCHITECTURAL DIMENSIONS GOVERN OVER STRUCTURAL DIMENSIONS, TYPICALLY.

STRUCTURAL DRAWINGS ARE NOT TO BE REPRODUCED WITHOUT WRITTEN CONSENT FROM RL. PLOWFIELD 4 ASSOCIATES, INC.

SHOP DRAWINGS SHALL BE CHECKED & "APPROVED" BY GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO ARCHITECT.

CONTRACTORS SUBMITTING SHOP DRAWINGS TO PROVIDE ONE ELECTRONIC COPY IN PDF FORMAT FOR ELECTRONIC MARK-UP.

00200 BUILDING CODES:

FLORIDA BUILDING CODE - 2017 EDITION, AND ASCE 7-10

Vu=137 MPH, Vasd=108 MPH BUILDING RISK CATEGORY II EXPOSURE "B"

INTERNAL PRESSURE COEFFICIENT, GCp1 = ±.18

00500 STRUCTURAL LOADING:

THE STRUCTURE HAS BEEN DESIGNED IN ACCORD WITH THE BUILDING CODE AND/OR MORE RESTRICTIVE REQUIREMENTS FOR LOADS AS GIVEN BELOW UNLESS SPECIFIC AREAS OF THE DRAWING SPECIFICALLY CALL FOR DIFFERENT LOADING CRITERIA.
GRAVITY LOADING UNIFORM LIVE LOAD:

01051 DRAWING DIMENSIONS AND COORDINATION:

DIMENSIONAL INFORMATION, PRICING, ALL DETAILS AND CONSTRUCTION SHALL BE BASED ON THE ENTIRE SET OF CONTRACT DOCUMENTS.

COORDINATE THE REQUIREMENTS OF ALL PROFESSIONALS. USE INFORMATION FROM APPROVED SHOP DRAWINGS TO SUPPLEMENT CONTRACT DOCUMENTS WHERE NECESSARY. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING.

Ø1100 SCOPE OF SERVICE:

THE STRUCTURAL ENGINEER OF RECORD HAS DESIGNED AND IS RESPONSIBLE FOR ONLY THE SPECIFIC STRUCTURAL COMPONENTS SHOWN IN THIS SET OF STRUCTURAL CONSTRUCTION DOCUMENTS. IF A SPECIALTY ENGINEER, AS DEFINED BY THE DEPARTMENT OF PROFESSIONAL REGULATION, IS REQUIRED, HIS SERVICES FOR THE DESIGN OF THE BAR JOIST ELEMENTS ON THIS PROJECT MUST COMPLY WITH THE SCOPE OF SERVICES AS OUTLINED IN THE PROJECT CONSTRUCTION DOCUMENTS.

020000 FOUNDATIONS:

GEOTECHNICAL DATA AND RECOMMENDATIONS HAVE BEEN PROVIDED BY PROFESSIONAL SERVICE INDUSTRIES, INC., PSI PROJECT NO. 0 15 11 126, DATED 24 OCTOBER 2011, SHALLOW STRIP AND SPREAL FOOTINGS HAVE BEEN PROPORTIONED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 3,000 PSF, TYPICALLY. GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE OWNER AND IS RESPONSIBLE FOR SPECIFYING AND MONITORING ALL TESTING, INSTALLATION, EVALUATION, AND REPORTING RELATED TO THE FOUNDATION SYSTEM, INCLUDING ALL WORKMANSHIP PROVISIONS RELATING TO THE SOIL -STRUCTURE INTERFACE. THE STRUCTURAL ENGINEER IS RESPONSIBLE FOR SPECIFYING THE MATERIALS USED TO CONSTRUCT THE FOUNDATION UNITS AND FOR THE SELECTION OF YARIOUS SIZE UNITS TO SUPPORT THE STRUCTURAL FRAME. DO NOT PLACE ANY FOOTINGS OR SLABS UNTIL RECEIPT OF WRITTEN AUTHORIZATION BY THE GEOTECHNICAL ENGINEER THAT THE PREPARED SUBGRADE HAS BEEN PROPERLY PREPARED IN ACCORD WITH THE DESIGN AND THAT ANY YARYING CONDITIONS ENCOUNTERED DURING CONSTRUCTION HAVE BEEN EVALUATED AND CORRECTED WHERE NECESSARY TO INSURE PROPER FOUNDATION PERFORMANCE.

022000 EARTHWORK

CONTRACTOR SHALL DEWATER SITE AS NECESSARY, SO THAT ALL CONCRETE CAN BE PLACED IN THE DRY. ALL BACKFILL SHALL BE ACCOMPLISHED USING MATERIAL CONSISTING OF CRUSHED STONE AND/OR MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER. THE BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-155T. NO BACKFILL MATERIAL SHALL BE PLACED AGAINST WALLS WHICH DO NOT HAVE PROVISIONS FOR ADEQUATE TEMPORARY BRACING OF THOSE WALLS. PROVIDE ADEQUATE EXCAVATION BRACING IN ACCORD WITH GEOTECHNICAL ENGINEER RECOMMENDATIONS TO MAINTAIN EXISTING FOOTINGS, UTILITIES, AND OTHER IMPROVEMENTS IN A SAFE CONDITION.

022100 STRUCTURAL FILL:

FOUNDATIONS PLACED ON COMPACTED STRUCTURAL FILL HAVE BEEN DESIGNED FOR A BEARING OF 3,000 PSF. FILL TO BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557. PLACE FILL IN LAYERS OF 8" THICK MAXIMUM AND UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER HIRED BY THE OWNER FILL TO BE TESTED TO VERIFY COMPACTION.

03100 FORMWORK:

CONTRACTOR SHALL DESIGN AND ERECT FORMWORK IN STRICT COMPLIANCE WITH ACI 347. SEE TYPICAL DETAILS FOR CAMBER REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL OPENINGS AS REQUIRED FOR OTHER TRADES. OPENINGS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE TO IDENTIFY DESIGN INTENT ONLY. THE SPECIFIC DIMENSIONS AND LOCATIONS SHALL BE FURNISHED OR CONFIRMED BY THE TRADE REQUIRING THE OPENING. PROVIDE CHAMFERS AT ALL CORNERS IN CONCRETE MEMBERS EXPOSED TO VIEW. FORMWORK TO REMAIN IN PLACE UNTIL CONCRETE HAS ATTAINED ENOUGH STRENGTH TO SUPPORT ALL DEAD LOADS PLUS A MINIMUM OF 50 PSF OF ADDITIONAL CONSTRUCTION LOAD. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NOTE: SHOP DRAWINGS WILL BE REQUIRED FOR THE STRUCTURAL ENGINEER'S REVIEW AND APPROVAL.

03200 CONCRETE REINFORCEMENT:

WORK SHALL BE IN ACCORD WITH ACI 318, ACI 318R, ACI 315, ACI 318, CRSI "MANUAL OF STANDARD PRACTICE", CRSI "PLACING REINFORCING BARS", WIRE REINFORCEMENT INSTITUTE "MANUAL OF STANDARD PRACTICE-STRUCTURAL WELDED WIRE REINFORCEMENT". BARS SHALL CONFORM TO ASTM SPECIFICATION AGIS(SI), GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM AISS. CONCRETE COVER REQUIRED AG

- FOLLOWS:

 A.) CAST AGAINST AND EXPOSED TO EARTH 3"

 B.) FORMED, EXPOSED TO EARTH OR WEATHER
- *6 AND LARGER 2"
- #5 AND SMALLER 1-1/2"

 C.) SLABS AND WALLS NO EARTH OR WEATHER EXPOSURE
 #11 AND SMALLER 3/4"
- 3 HOUR FIRE RATING AND LESS 3/4"

 D) REAMS 16" (3 HOUR FIRE RATING AND LESS
- D.) BEAMS 1½" (3 HOUR FIRE RATING AND LESS)
 E.) COLUMNS 1" × HOUR RATING OR 2" WHICHEVER IS LESS. (TO MAIN VERTICAL REINFORCING)
 LAP SPI ICE LENGTHS SHALL BE AS FOLLOWS.
- LAP SPLICE LENGTHS SHALL BE AS FOLLOWS:

 1. ALL LAP SPLICES SHALL BE TENSION CLASS "B" UNLESS OTHER LAP CONDITIONS ARE SPECIFICALLY SHOWN ON THE
- DRAWINGS.

 2. SPLICE LENGTHS SHALL BE SHOWN ON SHOP DRAWINGS.

 3. USE GENERAL HOOK BAR DEVELOPMENT LENGTHS UNLESS SPECIAL CONFINEMENT CONDITIONS ARE SATISFIED IN ACCORD WITH ACI 318.

NOTE: SHOP DRAWINGS WILL BE REQUIRED FOR THE STRUCTURAL ENGINEER'S REVIEW AND APPROYAL.

03300 CAST-IN-PLACE CONCRETE:

TO BE MIXED AND PLACED IN ACCORDANCE WITH ACI 301. ALL REINFORCED CONCRETE TO HAVE 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:
ALL STRUCTURAL ELEMENTS F'C = 4000 PSI UNLESS NOTED OTHERWISE.

WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX

OTHERWISE.

FOUNDATION F'C = 3000 PSI

SLAB ON GRADE F'C = 3000 PSI

ALL CONCRETE MIX DESIGN SUBMITTALS SHALL INCLUDE A

03310 CONCRETE TESTING:

IS TO BE PLACED WITHIN THE STRUCTURE.

OWNER WILL EMPLOY AN INDEPENDENT TESTING LABORATORY TO PERFORM THE FOLLOWING TESTS AND SUBMIT TEST REPORTS ON CAST IN PLACE CONCRETE:

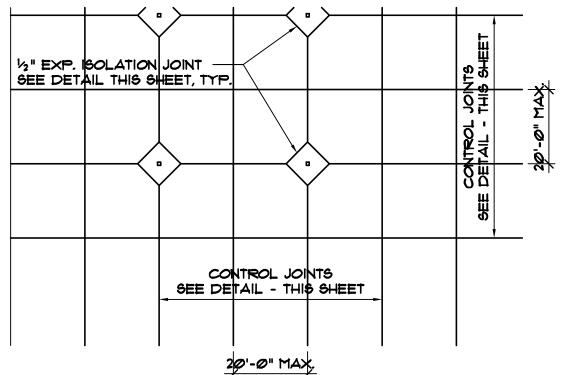
ASTM CI43 "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." SLUMP SHALL NOT EXCEED LIMIT INDICATED ON APPROVED MIX DESIGN, OR 6" (WHICHEVER IS SMALLER)

ASTM C39 "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." CYLINDERS SHALL BE TAKEN FOR EACH MIX DESIGN USED, AND FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED. TEST CYLINDERS AT THE FOLLOWING AGES:

- 1 AT 3 DAYS 1 AT 1 DAYS
- 2 AT 28 DAYS

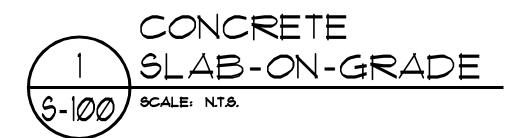
03600 GROUT:

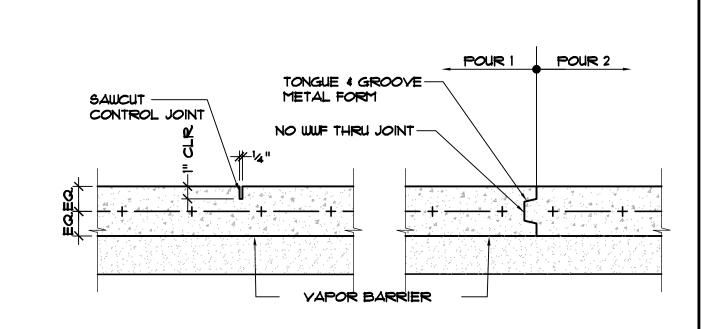
GROUTING IS CLASSIFIED AS "PRECISION GROUTING" FOR SUPPORT OF OPERATING MACHINE BASES, EQUIPMENT SUBJECT TO THERMAL MOVEMENT, AND BASE PLATES, BEARING PLATES, AND EXPANSION BEARINGS EXCEEDING 8" IN LEAST DIMENSION. ALL OTHER GROUTING MAY BE "ORDINARY GROUTING". METALLIC AGGREGATE GROUT MAY BE USED ONLY IN INTERIOR APPLICATIONS NOT EXPOSED TO VIEW IN FINISHED BUILDING AREAS. USE ORDINARY CEMENT GROUT ONLY WHERE SPECIFICALLY NOTED AS "CEMENT GROUT" ON DETAILS. USE NON-SHRINK GROUT FOR ALL OTHER LOCATIONS. PRECISION GROUT SHALL CONFORM TO CRD-C621-80. REQUIRED 28 DAY STRENGTHS SHALL BE AS FOLLOWS:



NOTES:

- 1. CAST SLAB USING LASER SCREED METHOD.
- 2. DIVIDE SLAB BY CONTROL JOINTS . COLUMNS & SUBDIVIDED . A MAXIMUM OF 20'-0 CENTERS.
- 3. IN AREAS WHERE COLUMNS DO NOT OCCUR, PROVIDE CONTROL JOINTS AS SHOWN.
- 4. SAWCUT JOINTS TO BE COMPLETED WITHIN 24 HOURS OF CONCRETE PLACEMENT.





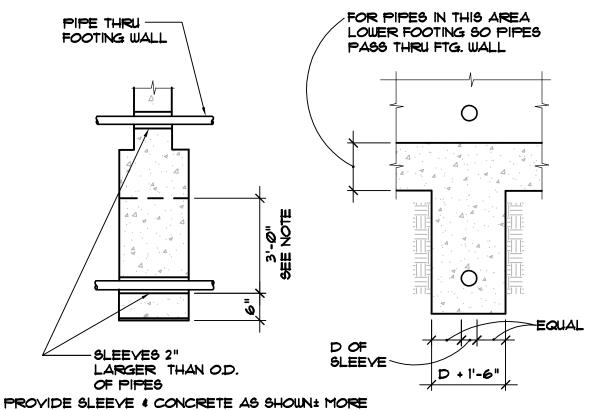
PRE-FORMED STRIP MAY BE USED IN LIEU OF SAUCUT JOINT.

METAL FORM TO BE REMOVED PRIOR TO POUR 2x WHEN USED WITH MECHANICAL SCREEDING.

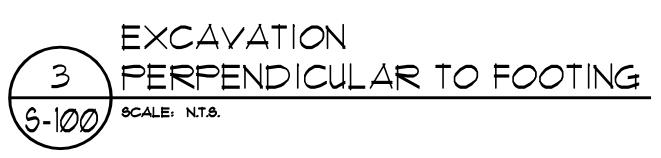
CONTROL JOINT DETAIL

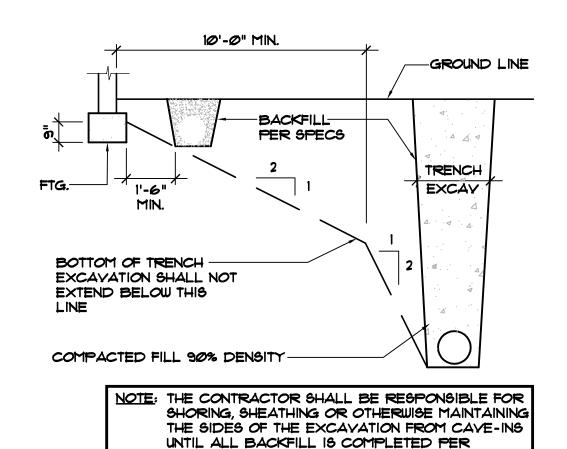
(B) COLD JOINT DETAIL





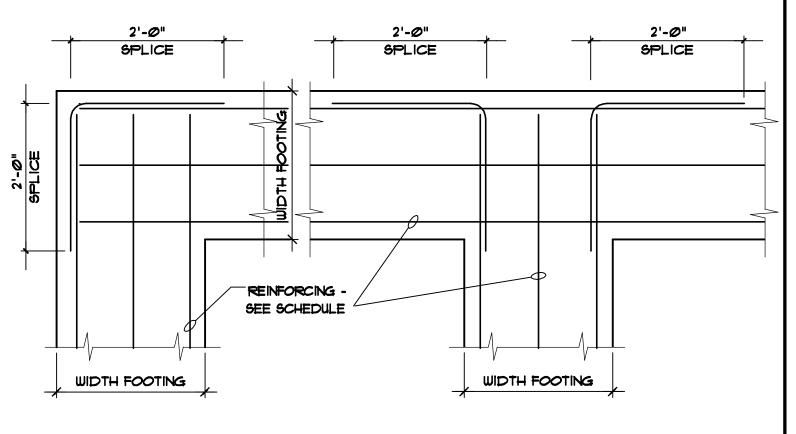
PROVIDE SLEEVE & CONCRETE AS SHOWN! MORE
THAN 3'-0" COMPACT BACKFILL OVER PIPE TO
90% AS APPROVED BY SOILS ENGINEER, OR USE
STEPPED FOOTING BELOW PIPE.



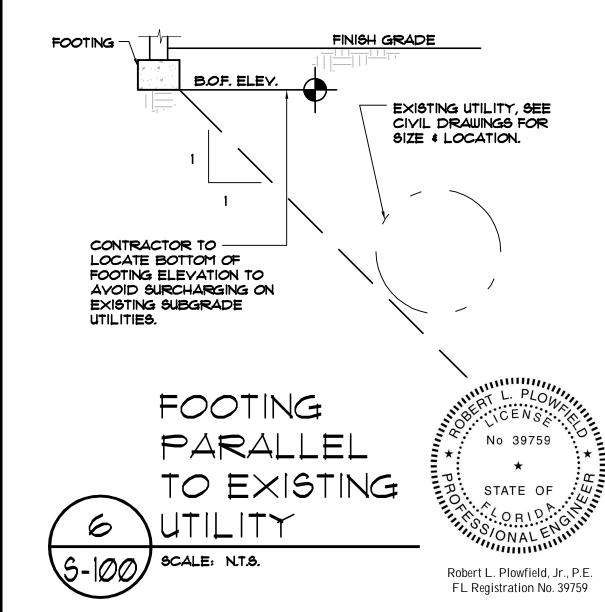


EXCAVATIONS



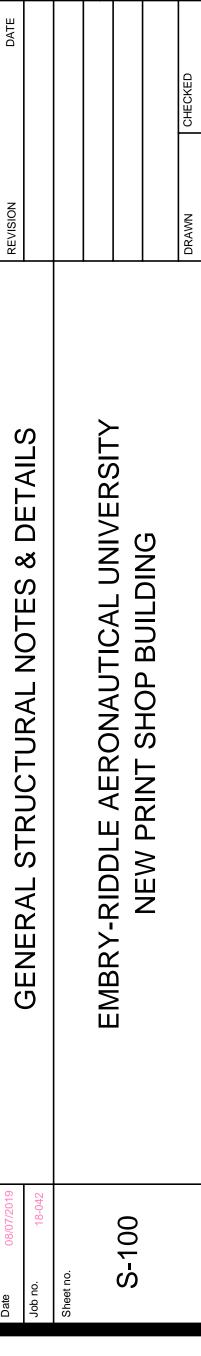












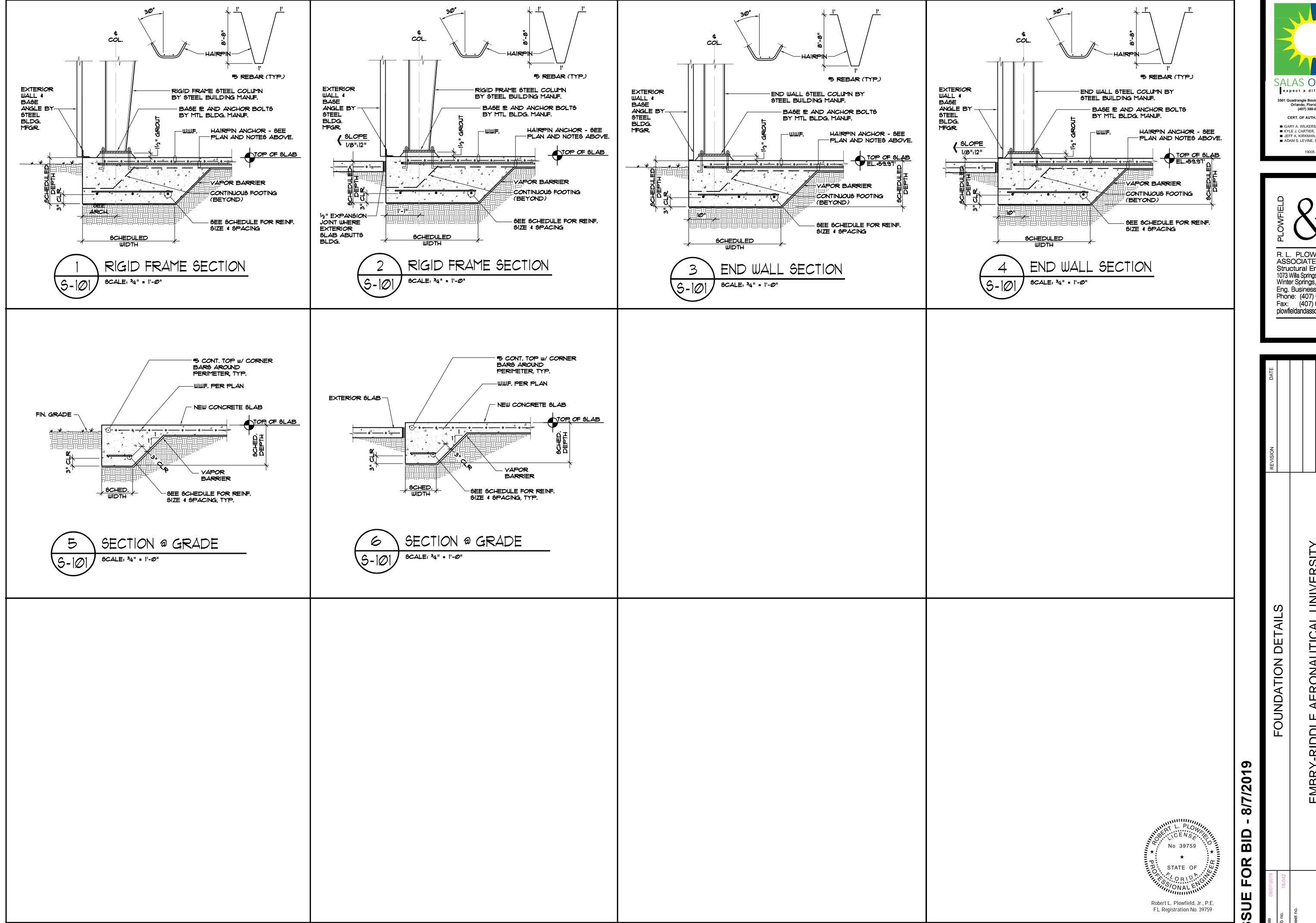
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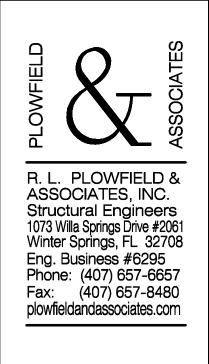
OR

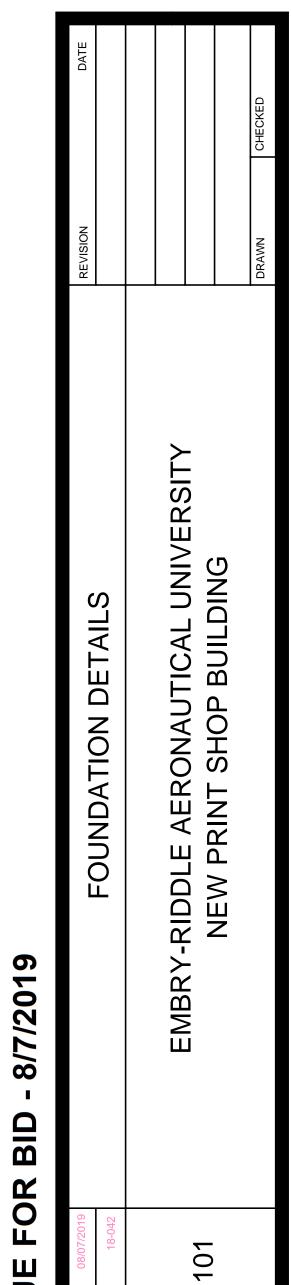
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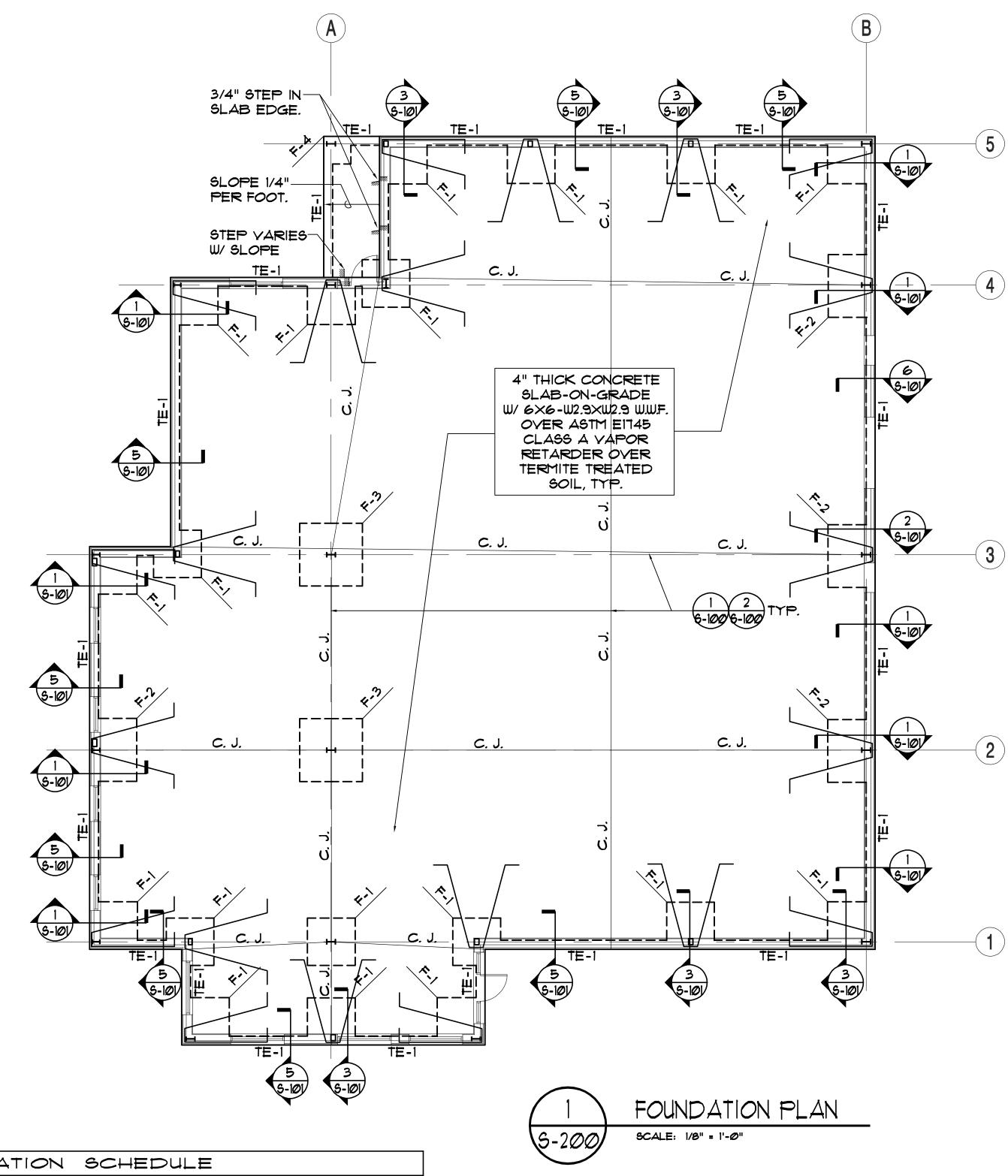
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FOUNDATION SCHEDULE							
MARK	SIZE	DEPTH	T.O.F.	REINFORCING			DEMARKS
				воттом	TOP	TRANSVERSE	REMARKS
TE-1	Ø'-8" CONT.	1'-4"	-(0'-0")	1-45 CONT.	1-45 CONT.		THICKENED EDGE
F-1	5'-2" × 5'-2"	2'-Ø"	(0'-0")	5-%			SPREAD FOOTING
F-2	5'-9" × 9'-0"	2'-4"	+ (Ø'-Ø")	6-46 LONG WAY 8-46 SHORT WAY			SPREAD FOOTING
F-3	7'-6" × 7'-6"	2'-4"	(0'-0")	8-16 EACH WAY			SPREAD FOOTING
F-4	3'-0" × 3'-0"	1'-8"	-(0'-1 1/2")	4-#5 EACH WAY			SPREAD FOOTING

NOTE: FOOTING SIZES ARE PRELIMINARY, AND ARE BASED ON ESTIMATED UPLIFT LOADS. THESE FOOTINGS REQUIRE FINAL DESIGN BASED ON FINAL REACTIONS AS SUPPLIED BY THE PRE-ENGINEERED METAL BUILDING CONTRACTOR DO NOT FABRICATE ANY REINFORCING STEEL OR PLACE ANY FOOTINGS UNTIL FINAL DESIGN, BASED ON REACTIONS PROVIDED BY THE METAL BUILDING ENGINEER, HAS BEEN COMPLETED AND THE SCHEDULE ABOVE IS UPDATED ACCORDINGLY.



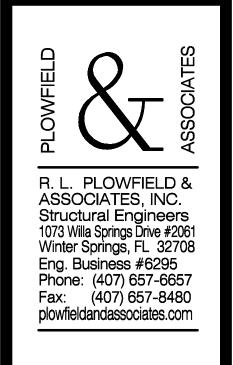
FOUNDATION PLAN NOTES:

- 1. 4" CONCRETE 9LAB W/ 6 × 6 WI.4 × WI.4WWF OVER 10 MIL VAPOR BARRIER FLOOR SHALL BE FINISHED USING A LASER SCREED TO FLATNESS "FF25" AND TO LEVELNESS "FL 20", TYPICALLY.
- 2. PROVIDE *4 × 4'-0" (MINIMUM LENGTH) FOR SLAB PENETRATIONS LARGER THAN 6" DIA, OR 6" × 6" SQUARE, PLACE IN DIAMOND SHAPE PATTERN AS SHOWN. ONE SET OF FOUR MAY ENCOMPASS MORE THAN ONE PENETRATION.
- 3. FOR SLAB PENETRATIONS GREATER THAN 6" WIDE x 3'-0" LENGTH OR LONGER PROVIDE *5 EACH SIDE OF OPENING REBAR TO BE 12" LONGER THAN PENETRATION LENGTH.
- 4. PROVIDE *4 x 4'-0" LONG DIAGONAL AT ALL INSIDE SLAB CORNERS.

DRAWING NOTES:

- A. CONTRACTOR SHALL COORDINATE PAD LOCATIONS W/ ELECT., MECH., & PLUMBING, REFERENCE GENERAL NOTES SECTION Ø1051.
- B. ROUTE ALL CHASES UNDER THICKENED SLAB EDGE AND COLUMN FOOTINGS, MAINTAIN A MINIMUM 6" SOIL COVER.
- C. CONCRETE CONTRACTOR SHALL GROUT RECESSED THRESHOLDS.





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