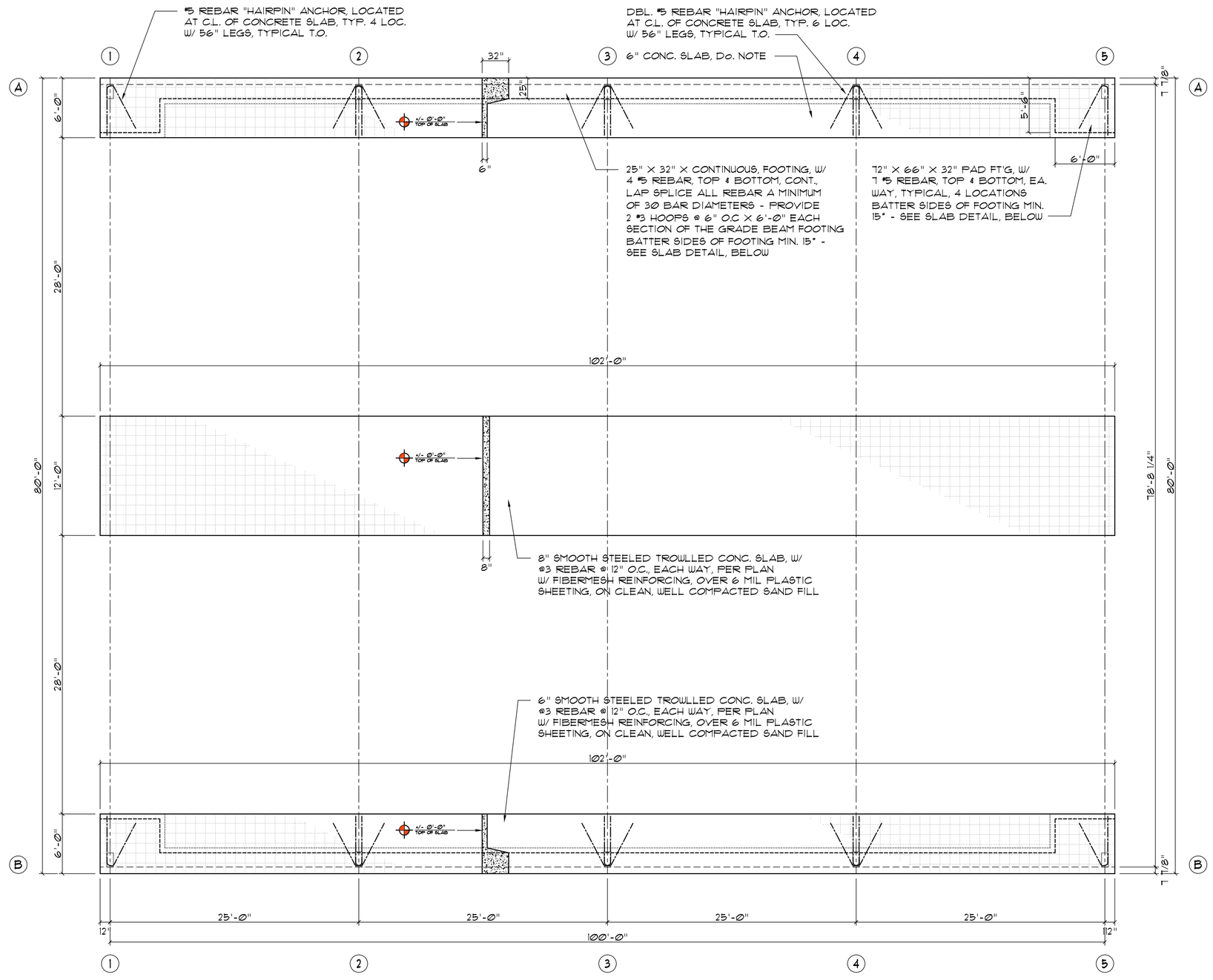


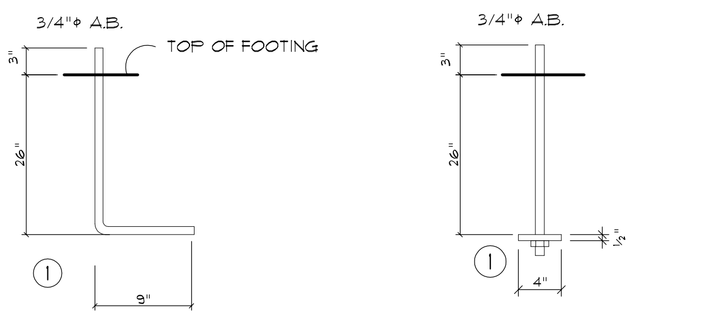
ANCHOR BOLT / FOUNDATION SIZING:

THE ANCHOR BOLT DIAMETERS AND DEVELOPED LENGTHS INDICATED IN THIS DRAWING WERE DETERMINED USING SHEAR FRICTION THEORY AS DESCRIBED IN AISC DESIGN GUIDE No.7, SECTION 9.2, ASSUMING AN ANCHOR BOLT MATERIAL OF ASTM A307 OR A36. THE COMBINED FORCES ACTING AT THE BASE OF THE STEEL FRAME RESULTING IN A VERTICAL REACTION ACTING UPON THE FOUNDATION WERE DEVELOPED AS FOLLOWS:

T = Td + Tsf

WHERE
T = TOTAL TENSILE FORCE PER BOLT
Td = TENSILE FORCE PER BOLT DUE TO DIRECTLY APPLIED LOAD = P/n
Tsf = TENSILE FORCE PER BOLT DUE TO SHEAR FRICTION = V / (n X u)

WHERE
P = P = TOTAL UPLIFT TO BE RESISTED BY ANCHOR BOLT GROUP
V = V = TOTAL SHEAR FORCE TO BE RESISTED BY ANCHOR BOLT GROUP
n = n = NUMBER OF ANCHOR BOLTS
u = u = COEFFICIENT OF FRICTION (TAKEN AS Ø.7 FOR UNGROUTED BASE PLATES OR Ø.9 FOR GROUTED BASE PLATES)



ALT. Nr.1

ALT. Nr.2

4"ø X 1/2" STL. PLATE W. NUT WELDED TO ANC. BOLT

NOTE!
ALL ANCHOR BOLTS ARE ASTM GRADE A36 STEEL ROD, THREADED 3", OR GRADE A307, BLACK, AND FREE FROM RUST AND SCALE

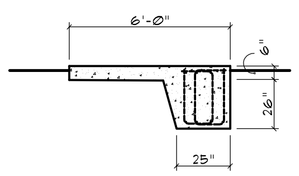
Foundation PLAN

SCALE: 1/8" = 1'-Ø"

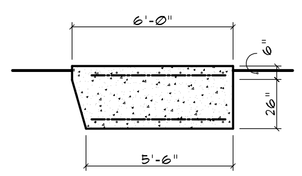
NOTE!
REFER TO THE METAL BUILDING SHOP DRAWINGS FOR ALL DETAILS AND INFORMATION REGARDING ANCHOR BOLT PLACEMENT NUMBER, DIAMETER, ARRANGEMENT, ORIENTATIOS AND SOFORTH. METAL BUILDING MANUFACTURERS ENGINEERED SHOP DRAWINGS SHALL HAVE PRECEDENCE OVER THESE DRAWINGS.

Anchor Bolt DETAILS

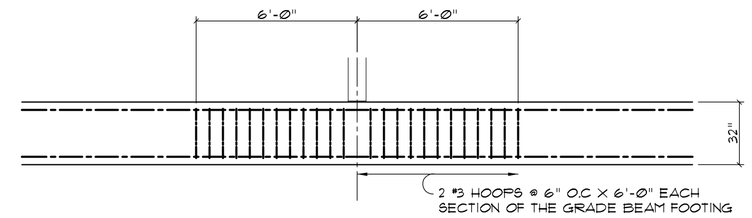
SCALE: 1" = 1'-Ø"



FOOTING @ MAIN FRAMES
SCALE: 1/4" = 1'-Ø"



FOOTING @ CORNERS
SCALE: 1/4" = 1'-Ø"



GRADE BEAM HOOP DETAIL
SCALE: 1/4" = 1'-Ø"

GENERAL STRUCTURAL NOTES

GENERAL:

1. THE DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN AND EXTENT OF THE WORK AND ARE PARTIALLY DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED FOR ROUGH-IN MEASUREMENTS, OR TO SERVE AS SHOP DRAWINGS OR PORTIONS THEREOF.

2. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.

3. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR AND ALL THE SUBCONTRACTORS SHALL VERIFY ALL GRADES, LINES, LEVELS, DIMENSIONS AND COORDINATE EXISTING CONDITIONS AT THE JOB SITE WITH THE PLANS AND SPECIFICATIONS. THEY SHALL REPORT ANY INCONSISTENCIES OR ERRORS IN THE ABOVE TO THE ARCHITECT/ENGINEER BEFORE COMMENCING WORK. THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL LAY OUT THEIR WORK FROM ESTABLISHED REFERENCE POINTS AND BE RESPONSIBLE FOR ALL LINES, ELEVATIONS AND MEASUREMENTS IN CONNECTION WITH THEIR WORK.

4. IF ANY ERRORS OR OMISSIONS APPEAR IN THE DRAWINGS, GENERAL NOTES OR OTHER DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF SUCH OMISSION OR ERROR PRIOR TO PROCEEDING WITH ANY WORK WHICH APPEARS IN QUESTION. IN THE EVENT OF THE CONTRACTOR'S FAILING TO GIVE SUCH AN ADVANCED NOTICE, HE SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS OR OMISSIONS AND THE COST OF RECTIFYING THE SAME.

5. THE CONTRACTOR SHALL USE THE STRUCTURAL DRAWINGS AND SPECIFICATIONS TOGETHER WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND OTHER TRADE DRAWINGS AND SHOP DRAWINGS, TO LOCATE DEPRESSED SLABS, SLOPES, DRAINS, OUTLETS, RECESSES, OPENINGS, BOLT SETTING, SLEEVES, DIMENSIONS, ETC. NOTIFY ARCHITECT/ENGINEER, IN WRITING, OF ANY POTENTIAL CONFLICTS BEFORE PROCEEDING WITH THE WORK.

SHOP DRAWINGS AND DELEGATED ENGINEERING:

1. ALL SHOP DRAWINGS SHALL BE SUBMITTED FOR ARCHITECT'S REVIEW ONLY AFTER THEY HAVE BEEN THOROUGHLY REVIEWED BY THE CONTRACTOR FOR CONSTRUCTION METHODS, DIMENSIONS AND OTHER TRADE REQUIREMENTS, AND STAMPED WITH THE CONTRACTOR'S APPROVAL STAMP. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR DIMENSIONS, QUANTITIES, ENGINEERING DESIGN BY DELEGATED ENGINEERS, ERRORS OR OMISSIONS AS A RESULT OF REVIEWING ANY SHOP DRAWINGS. ANY ERRORS OR OMISSIONS MUST BE MADE GOOD BY THE CONTRACTOR, IRRESPECTIVE OF RECEIPT, CHECKING OR REVIEW OF DRAWINGS BY THE ENGINEER AND EVEN THOUGH WORK IS DONE IN ACCORDANCE WITH SUCH DRAWINGS.

2. BEFORE STRUCTURAL INSPECTIONS CAN BE MADE ON A PORTION OF THE STRUCTURE, ALL RELATED SHOP DRAWINGS, DELEGATED ENGINEERING, PRODUCT APPROVAL, MANUFACTURER'S DATA AND OTHER RELATED INFORMATION, MUST BE REVIEWED AND ACCEPTED BY THE ARCHITECT-OF-RECORD AND APPROVED BY THE BUILDING DEPARTMENT.

3. SHOP DRAWINGS SHALL CONTAIN ALL INFORMATION SHOWN ON THE STRUCTURAL PLANS (RELATED TO THE DELEGATED DESIGN) INCLUDING ALL DESIGN LOADS, IN ADDITION TO THE INFORMATION REQUIRED BY THE DELEGATED ENGINEER'S DESIGN.

4. ARCHITECT WILL REVIEW ALL SUBMITTED SHOP DRAWINGS, PREPARED AND SIGNED AND SEALED BY THE CONTRACTOR'S DELEGATED ENGINEER, ONLY FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT, REQUIRED LOADING AND COORDINATION WITH THE STRUCTURAL DESIGN.

5. CONTRACTOR SHALL SUBMIT TO THE ARCHITECT TWO SETS OF BLUE PRINTS OF THE STRUCTURAL SHOP DRAWINGS FOR ARCHITECT REVIEW, BEFORE STARTING FABRICATION. THE ARCHITECT WILL RETURN ONE MARKED UP AND STAMPED COPY TO THE CONTRACTOR. THE MARKED-UP COPY SHALL BE USED TO MAKE THE PRINTS REQUIRED FOR SHOP DRAWING DISTRIBUTION.

CONSTRUCTION MEANS AND METHODS:

1. THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE OR PROCEDURES, SAFETY PRECAUTIONS, SHORES, RESHORES, LATERAL BRACING AND PROGRAMS IN CONNECTION WITH THE PROJECT, ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. OUR SERVICES DO NOT GUARANTEE NOR ASSURE LIABILITY FOR THE JOB SAFETY, TEMPORARY SHORING AND BRACING AND THE PERFORMANCE OF THE CONTRACTOR.

2. THE CONTRACTOR IS RESPONSIBLE AND SHALL COMPLY WITH THE SAFETY REQUIREMENTS OF THE 2004 FLORIDA BUILDING CODE AND APPLICABLE LOCAL, STATE AND FEDERAL LAWS.

3. PROVIDE ALL SHORING, BRACING AND SHEETING AS REQUIRED FOR SAFETY, STRUCTURAL STABILITY AND FOR THE PROPER EXECUTION OF THE WORK. REMOVE WHEN WORK IS COMPLETED.

4. PROVIDE AND MAINTAIN GUARD LIGHTS AT ALL BARRICADES, RAILINGS, OBSTRUCTIONS IN THE STREETS, ROADS OR SIDEWALKS AND ALL TRENCHES OR PITS ADJACENT TO PUBLIC WALKS OR ROADS.

5. AT ALL TIMES, PROVIDE PROTECTION AGAINST WEATHER (RAIN, WIND, STORMS OR THE SUN), SO AS TO MAINTAIN ALL WORK, MATERIALS, APPARATUS AND FIXTURES FREE FROM INJURY OR DAMAGE.

6. AT THE END OF THE DAYS WORK, COVER ALL WORK LIKELY TO BE DAMAGED. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTOR'S EXPENSE.

7. THE CONTRACTOR SHALL PAY FOR ALL DAMAGES TO ADJACENT STRUCTURES, SIDEWALKS AND TO STREETS OR OTHER PUBLIC PROPERTY OR PUBLIC UTILITIES.

STRUCTURAL DESIGN CRITERIA:

1. THE DESIGN COMPLIES WITH THE REQUIREMENTS OF THE 2023 FLORIDA BUILDING CODE - SECTION 1609 AND OTHER REFERENCED CODES AND SPECIFICATIONS. ALL CODES AND SPECIFICATIONS SHALL BE LATEST EDITION AT TIME OF PERMIT.

2. WIND LOAD CRITERIA:

BASED ON ANSI/ASCE 7-22 ASIC WIND VELOCITY 119 MPH,

3. ROOF DESIGN LOADS:
SUPERIMPOSED DEAD LOADS: . . . . . 20 PSF
SUPERIMPOSED LIVE LOADS: . . . . . 20 PSF

4. FLOOR DESIGN LOADS:
SUPERIMPOSED DEAD LOADS: . . . . . 25 PSF
SUPERIMPOSED LIVE LOADS:
RESIDENTIAL . . . . . 40 PSF
BALCONIES . . . . . 60 PSF

5. WIND NET UPLIFT: ARE AS INDICATED ON PLANS

FOUNDATIONS: (SPREAD FOOTINGS)

1. FOUNDATIONS ARE DESIGNED TO BEAR ON WELL COMPACTED GRADE OR CLEAN FILL OF AN ALLOWABLE BEARING CAPACITY OF 1,000 PSF MINIMUM. FOR REQUIRED SOIL BEARING CAPASITIES GREATER THAN 1,000 PSF, A CERTIFIED TESTING LABORATORY SHALL BE ENGAGED BY THE OWNER TO VERIFY THAT THE REQUIRED BEARING CAPACITY HAS OBTAINED. SAID SOIL CAPACITY SHALL BE CERTIFIED AND TESTED BY A FLORIDA REGISTERED FOUNDATION ENGINEER, PRIOR TO CASTING OF CONCRETE IN THE FOOTINGS.

2. NATURAL GRADE (OR FILL) BELOW FOOTINGS SHALL BE COMPACTED TO 98 % MODIFIED PROCTOR (ASTM D-1557).

3. TOP OF WALL FOOTINGS TO BE AT THE SAME ELEVATION AS TOP OF COLUMN PAD FOOTINGS. STEP WALL FOOTING FROM HIGHER COLUMN FOOTING TO THE LOWER ONE (AS DETAILED ON THE PLANS).

4. BOTTOM OF ALL FOOTINGS TO BE A MINIMUM 1'-6" BELOW THE TOP OF CONCRETE SLAB ON GRADE (UNLESS OTHERWISE NOTED) OR MINIMUM 1'-0" BELOW FINISHED GRADE, WHICHEVER IS LOWER. IN THE EVENT THAT THE SLAB STEPS ON EACH SIDE OF THE FOOTING, THE FOOTING SHALL BE 1'-6" BELOW TOP OF THE LOWER SLAB.

5. REINFORCING IN THE CONTINUOUS WALL FOOTINGS (MONOLITHIC AND NON-MONOLITHIC) SHALL BE SPLICED 40 BAR DIAMETERS MINIMUM AND SHALL EXTEND CONTINUOUSLY THRU ALL FOOTING PADS.

6. ALL LONGITUDINAL REBARS IN THE CONTINUOUS WALL FOOTINGS, SHALL BE CONTINUED AT BENTS AND CORNERS BY BENDING THE REBARS 48 BAR DIAMETERS AROUND THE CORNERS OR ADDING MATCHING CORNER BARS, EXTENDING 48 BAR-DIAMETERS INTO FOOTING EACH SIDE OF CORNER OR BENT.

7. ALL FOOTINGS SHALL BE 12" MINIMUM THICKNESS.

CONCRETE SLABS ON GRADE:

1. ALL INTERIOR AND EXTERIOR SLABS AND WALKWAYS AS SHOWN ON THE STRUCTURAL OR ARCHITECTURAL PLANS, SHALL BE FOUR INCHES THICK MINIMUM REINFORCED WITH 6 X 6 - W1.4 X W1.4 WELDED WIRE FABRIC (UNLESS OTHERWISE NOTED).

2. ALL SLABS ON GRADE TO BE CONSTRUCTED IN ACCORDANCE WITH LATEST A.C.I - "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (A.C.I. - 302.1R)

3. JOINTS SHALL BE PROVIDED IN ALL INTERIOR SLABS ON GRADE AT LOC. INDICATED ON THE PLANS DIVIDING THE SLAB INTO SQUARE PANELS NOT TO EXCEED 20 X 20 FT. IN SIZE. CAST SLAB IN LONG ALTERNATE STRIPS. PROVIDE A CONTRACTION JOINT BETWEEN EACH STRIP. SEE PLAN FOR SAW-CUT, CONTRACTION AND ISOLATION JOINT DETAILS.

4. PROVIDE SAW-CUT JOINTS AT ALL SIDEWALKS AT A MAXIMUM SPACING OF FIVE FEET ON CENTERS AND ISOLATION JOINTS AT 20 FEET O.C. (U.O.N.).

5. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 12" AND COMPACTED TO 98 % MODIFIED PROCTOR (ASTM D-1557) WITHIN A DISTANCE OF 3 FEET BEYOND ALL FOOTING EDGES. TAKE AT LEAST ONE DENSITY TEST FOR EACH 1,600 SQ.FT. OF AREA AND 12" BELOW SURFACE. SEND RESULTS OF THE TEST TO OWNER, ARCHITECT AND ENGINEER.

CONCRETE AND REINFORCING:

1. CONCRETE DESIGN AND REINFORCEMENT IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (A.C.I. 318 - LATEST EDITION) AND WITH "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" - (A.C.I. 315 - LATEST EDITION).

2. ALL CONCRETE WORK IN ACCORDANCE WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING" (A.C.I. 301 - LATEST EDITION). PRODUCTION OF CONCRETE, DELIVERY, PLACING AND CURING TO BE IN ACCORDANCE WITH "HOT WEATHER CONCRETING" (A.C.I. 305R - LATEST EDITION).

3. ALL CONCRETE TO BE REGULAR WEIGHT WITH A DESIGN STRENGTH OF 3,000 P.S.I. AT 28 DAYS. MAXIMUM SLUMP 5".

4. ALL REINFORCING TO BE NEW BILLET STEEL CONFORMING TO THE LATEST A.S.T.M. A-615 GRADE 60, FABRICATED IN ACCORDANCE WITH C.R.S.I. MANUAL OF STANDARD PRACTICE AND PLACED IN ACCORDANCE WITH A.C.I. 315 AND C.R.S.I. MANUAL OF STANDARD PRACTICE.

5. CONCRETE COVER UNLESS OTHERWISE DETAILED ON DRAWINGS:

FOOTINGS:	(BOTTOM) . . . . . 3"
	(TOP & SIDES) . . . . . 2"
SLABS ON GRADE:	CENTERED W/SLAB

6. BEAM REINFORCEMENT: LAPPED 36 BAR DIAMETER OR MINIMUM 18 INCHES. BOTTOM BARS SPLICED ONLY AT SUPPORTS, TOP BARS SPLICED ONLY AT MID-SPAN. ALL TOP BARS HOOKED AT NONCONTINUOUS EDGES (U.O.N.). ALL HOOKS TO BE STANDARD 90 DEGREE HOOKS AS REQUIRED (U.O.N.).

7. ADDED REINFORCEMENT: PROVIDE ADDITIONAL CORNER BARS BENT 36 INCHES MINIMUM EACH WAY AT "L" AND "T" CORNERS IN OUTER FACES OF ALL BEAMS TO MATCH ALL HORIZONTAL BAR (TOP, BOTTOM AND INTERMEDIATE REBARS).

8. SEE PLAN FOR MINIMUM SIZE CONCRETE TIE BEAM REQUIREMENTS.

NOTE!
REFER TO THE METAL BUILDING SHOP DRAWINGS PREPARED BY "FIERCE STEEL STRUCTURES, FOR EXACT LOCATION OF ALL EMBEDDED ANCHOR BOLTS.

NOTE!
ADDED FILL SHALL BE APPLIED IN 12" LIFTS - EA. LIFT SHALL BE COMPACTED TO 98% DRY COMPACTION PER THE "MODIFIED PROCTOR" METHOD.

NOTE!
THE DESIGN WIND SPEED FOR THIS PROJECT IS 130 MPH PER 2023 FBC 8th ED. 1609 AND LOCAL JURISDICTION REQUIREMENTS

NOTE!
ALL ANCHOR BOLTS ARE ASTM GRADE A36 STEEL ROD, THREADED 3 1/2", BLACK AND FREE FROM RUST AND SCALE

NOTE!
THIS PROJECT IS TYPE B UNPROTECTED CONSTRUCTION PER 2023 FBC TABLE 503 AND TABLE 600

Plans Reviewed for Code Compliance — Columbia County Building Department — Date of Permit

METAL BUILDING FOUNDATION PLAN FOR:
SMITH and HILL RMC
COLUMBIA COUNTY, FLORIDA
FOUNDATION PLAN

Celebrating 54 Years of Service
1972 - 2026
N.P. Geisler, Architect
AR0007005

CUSTOM ARCHITECTURAL DESIGN

NICHOLAS PAUL GEISLER ARCHITECT
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DATE OF ISSUE: 07 APR 2026

COMM: 2K2612

REVISIONS:

SHEET: A.1
1 OF 1

Nicholas P Geisler
Digitally signed by Nicholas P Geisler
Date: 2026.04.07 17:29:07 -04'00'
AR0007005

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