DESIGN CRITERIA

DESIGN BASED THE PROVISIONS OF THE FLORIDA BUILDING CODE 2020 7th EDITION.

A. DESIGN LOADS:

ROOF	LL= 30 PSF	
	SDL= 25 PSF	
2ND FLOOR	LL= 40 PSF	CLASSROOMS
	LL= 80 PSF	CORRIDORS
	LL= 100 PSF	STAIRS
	SDL= 25 PSF	
	STORAGE = LL = 125 PSF	
	MECHANICAL ALLOW = 10 PSF	
	MISC DL = 15 PSF	

B. WIND LOADS: ASCE 7-16
BASIC WIND SPEED V= 149 MPH
NOMINAL WIND SPEED Vasd= 116 MPH
EXPOSURE CATEGORY = C
INTERNAL PRESSURE COEF = GCPI = ±0.18
KD (DIRECTIONALITY) = 0.85
RISK CATEGORY = III

GENERAL:

1. ALL MATERIALS SHALL BE NEW, OF GOOD QUALITY AND THE CONSTRUCTION SHALL BE PERFORMED BY WORKERS SKILLED IN THEIR TRADE AND IN ACCORDANCE WITH RECOMMENDED PRACTICE.
2. NO DIMENSIONS SHALL BE SCALED FROM DRAWINGS.
3. GENERAL CONTRACTOR SHALL CHECK, REVIEW AND VERIFY ALL PLANS, DIMENSIONS AND SITE CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS OR ANY VARIATIONS NEEDED IN ORDER TO CONFORM TO CODES, RULES AND REGULATIONS SHALL BE NOTIFIED IN WRITING TO THE ENGINEER. ANY SUCH DISCREPANCIES, OMISSIONS, OR VARIATIONS NOT REPORTED DURING THE BIDDING PERIOD SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR WHO SHALL PERFORM THE CORRECTED WORK AS PER THE ENGINEER'S INSTRUCTIONS.
4. THESE NOTES SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS ISSUED BY THE ARCHITECT.
5. STRUCTURAL DRAWINGS SHALL BE WORKED TOGETHER WITH ARCHITECTURAL, AIR CONDITIONING, MECHANICAL AND ELECTRICAL DRAWINGS TO LOCATE DEPRESSED SLABS, SLOPES, DRAINS, OUTLETS, OPENINGS, REGLETS, BOLT SETTINGS, SLEEVES, ETC. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT-ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL BEFORE FABRICATION OR ERECTION OF ANY STRUCTURAL SYSTEM.
7. GENERAL CONTRACTOR SHALL RESTRICT AND PROPERLY ISOLATE ALL CONSTRUCTION EQUIPMENT AND LOADS FROM INDUCING OR TRANSMITTING VIBRATIONS TO THE STRUCTURE DURING CONSTRUCTION.
8. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER FROM CUTTING OR CLEANING OPERATIONS IN SUCH A WAY AS TO NOT CAUSE INCONVENIENCE TO THE WORK AND DAMAGE TO THE STRUCTURAL ELEMENTS.
9. WHEN PERFORMING WORK BELOW GRADE, CARE SHALL BE TAKEN TO AVOID DAMAGING ANY EXISTING UTILITIES. ALL UNKNOWN UTILITIES DISCOVERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT-ENGINEER. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPORTED TO ALL AFFECTED PARTIES, INCLUDING THE ARCHITECT-ENGINEER.
10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING HIS CONSTRUCTION DOCUMENTS WITH ANY REVISED DRAWINGS AND SPECS, FIELD ORDERS, CHANGE ORDERS AND CLARIFICATION SKETCHES ISSUED DURING THE COURSE OF CONSTRUCTION.
11. "BY OTHERS" DENOTES LABOR AND MATERIALS BY OTHERS. HOWEVER THE GENERAL CONTRACTOR SHALL PROVIDE COORDINATION AND FREE ACCESS FOR THE WORK.
12. "NIC" DENOTES NOT IN CONTRACT. THE OWNER SHALL BE RESPONSIBLE FOR COORDINATING A TIME SCHEDULE OF THE BASE CONTRACT WITH THE "NIC" TRADES.
13. TYPICAL DETAILS AND NOTES ON THESE DRAWINGS SHALL APPLY UNLESS SPECIFICALLY NOTED OTHERWISE. CONSTRUCTION DETAILS AND SECTIONS NOT COMPLETELY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS AND SECTIONS SHOWN OR NOTED FOR SIMILAR CONDITIONS.
14. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION, IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.
15. TEMPORARY BRACING SHALL BE PROVIDED AS REQUIRED TO HOLD ALL COMPONENTS OF THE STRUCTURE IN PLACE UNTIL FINAL SUPPORT IS SECURELY ANCHORED.
16. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES OF EVERY KIND, INCLUDING WATER AND POWER, NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHOWN OR INDICATED ON THESE DRAWINGS. ALL MATERIAL SHALL BE NEW. MATERIALS AND WORKMANSHIP SHALL OF GOOD QUALITY. ALL WORKMEN AND SUBCONTRACTORS SHALL BE SKILLED IN THEIR TRADE.
17. THE CONTRACTOR SHALL ADEQUATELY PROTECT HIS WORK, ADJACENT PROPERTY AND THE PUBLIC, AND BE RESPONSIBLE FOR DAMAGE OR INJURY DUE TO HIS ACT OR NEGLECT.
18. THE PREMISES SHALL BE KEPT FREE FROM ACCUMULATION OF WATER, MATERIALS, AND DEBRIS, AND AT THE END OF THE JOB THE CONTRACTOR SHALL REMOVE ALL RUBBISH, SURPLUS MATERIALS, AND TOOLS AND LEAVE THE BUILDING BROOM CLEAN.
19. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR "SPECIAL" INSPECTIONS AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT SHALL BE UNDER A SEPARATE CONTRACT.
20. SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
21. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE COPY OF SHOP DRAWINGS A MINIMUM OF TWO WEEKS PRIOR TO PLACEMENT. THE REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. THIS REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE CORRECT NOR DOES IT INFER THAT THEY SUPERSEDE THE STRUCTURAL DRAWINGS.

FOUNDATION AND CONCRETE SLAB ON FILL:

1. SELECTED FILL MATERIALS SHALL BE CLEAN CRUSHED LIMESTONE (3" MAXIMUM PARTICLE) OR CLEAN FINE SAND. THE FILL PLACEMENT SHOULD OCCUR IN THE DRY AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557). FOLLOW SOIL LAB RECOMMENDATIONS FOR THE METHODS AND PROCEDURES. ALL FILL WORK SHALL BE SUPERVISED BY A SOIL LAB REPRESENTATIVE. ALL TOP SOIL SHALL BE REMOVED BEFORE STARTING FILLING OPERATIONS.
2. ALL INTERIOR SLABS AS WELL AS WALKWAY SLABS ON GRADE ADJACENT TO THE BUILDING SHALL BE PLACED OVER 6 MIL POLYETHYLENE SHEETING BETWEEN SOIL AND BOTTOM OF SLAB.

FOUNDATION AND CONCRETE SLAB ON FILL (CONT.):

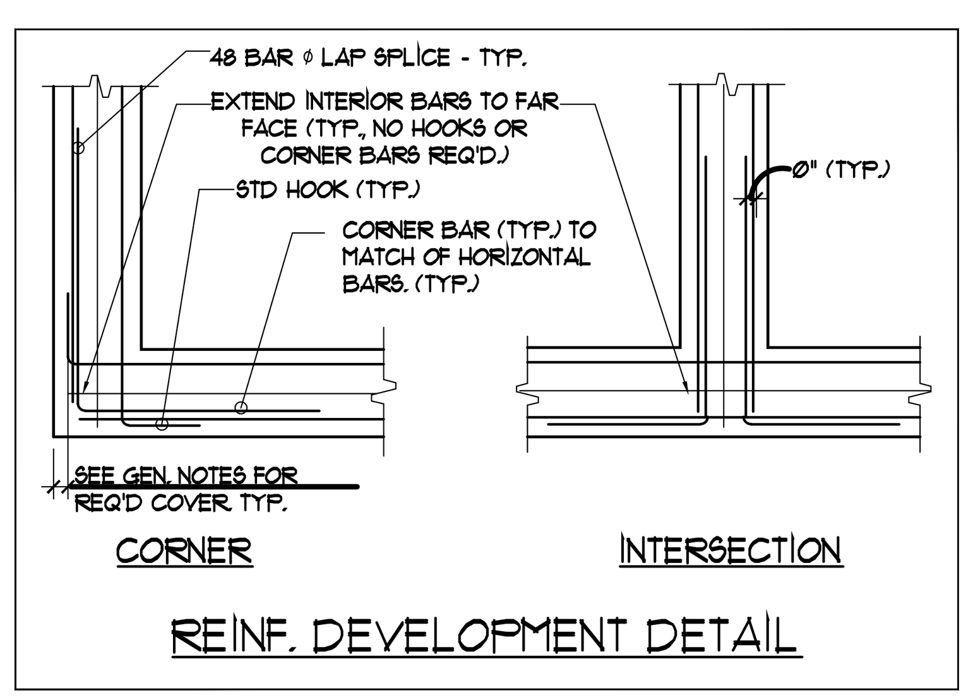
4. SAW CUT CONTROL JOINTS SHALL BE SAWED AS SOON AS THE CONCRETE IS HARD ENOUGH NOT TO BE TORN OR DAMAGED BY THE BLADE.
5. COLUMNS, BEAMS, AND WALLS OR ANY OTHER STRUCTURAL MEMBER PENETRATING SLABS ON FILL SHALL BE ISOLATED BY PRE-MOLDED JOINT FILLER (1/2" THICK) COMPLYING WITH ASTM Ø1752, TYPEI.
6. JOINTS SHALL BE SEALED WHERE INDICATED BY THE ARCHITECTURAL DRAWINGS AND FILLER AND SEALANT MATERIAL SHALL FOLLOW SPECS.
7. SOIL UNDER NEW SLAB SHALL HAVE TREATMENT PROTECTION AGAINST SUBTERRANEAN TERMITES A CERTIFICATE OF COMPLETION SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY A LICENSED COMPANY.
8. FOUNDATION HAS BEEN DESIGNED FOR A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2,500 PSF. SEE REPORT No.R05520 FROM NATIVE GEOSCIENCE, INC. DATED AUGUST 16, 2019.
FOLLOW GEOTHENICAL REPORT RECOMMENDATIONS AND SITE PREPARATION IN ALL ASPECTS.
9. IN SIDEWALKS AND WALKWAYS, LOCATE ISOLATION JOINTS AT 20 FT O.C. MAXIMUM. SCORE AND TOOL BETWEEN ISOLATION JOINTS IN EQUAL BAYS OF 5 FT OR LESS.
10. MAXIMUM SPACING OF CONTROL JOINTS (i.e. SAWCUT JOINT OR CONSTRUCTION JOINT) SHALL BE AS SET IN THE TABLE BELOW, OR AS NOTED ON PLANS. THE MORE STRINGENT SHALL APPLY. PATTERNS SHALL BE APPROXIMATELY SQUARE WITH A RATIO OF LONG SIDE TO SHORT SIDE NOT EXCEEDING 1.5 TO 1.

SLAB THICKNESS (IN.)	* ¾" OR LARGER AGGREGATE SPACING (FT.)
4	12
5	13
6	14
7 AND GREATER	15

CONCRETE:

1. ALL REINFORCED CONCRETE DESIGN SHALL BE IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14).
2. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301-10).
3. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:
   - FOUNDATIONS ____ 3,000 PSI
   - SLAB ON FILL ____ 3,000 PSI
   - COLUMNS ____ 4,000 PSI
   - BEAMS ____ 4,000 PSI
   - STRUCTURAL SLAB ____ 4,000 PSI

   * ALL CONCRETE EXPOSED TO WEATHER SHALL BE MINIMUM OF 4,000 PSI WITH 0.4 WATER/CEMENT RATIO.
4. MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY CONCRETE WORK.
5. NO ADMIXTURE SHALL BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
6. FORMWORK SHALL COMPLY WITH "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK". (ACI 347-04).
7. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFE ADEQUATE SHORING RE-SHORING, BRACING AND FORMWORK. GENERAL CONTRACTOR SHALL CONTRACT A STATE OF FLORIDA REGISTERED ENGINEER TO PREPARE SHORING AND RE-SHORING PLANS AND THEY SHOULD BE SUBMITTED TO THE ENFORCEMENT AGENCY FOR RECORD KEEPING.
8. THE OWNER SHALL CONTRACT AN INDEPENDENT TESTING LABORATORY APPROVED BY THE ENGINEER TO PERFORM CONCRETE CYLINDER TESTS AS FOLLOWS: FOUR CYLINDER TEST PER ANY DAY'S POUR LESS THAN 50 CUBIC YARDS.
9. TRANSPORTING, PLACING, CURING AND DEPOSITING OF CONCRETE SHALL COMPLY WITH ACI 301 - 10.
10. NO WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.
11. VERTICAL CONSTRUCTION JOINTS USING APPROVED BULKHEADS MAY BE MADE AT CENTER OF BEAM OR SLAB SPANS WHERE STOP IN CONCRETE WORK IS NECESSARY. FOR ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS SEE DETAILS. ANY OTHER CONSTRUCTION JOINT REQUESTED BY THE GENERAL CONTRACTOR SHALL BE SHOWN ON THE SHOP DRAWINGS FOR THE ENGINEER'S REVIEW.
12. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.
13. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS, COLUMNS, AND DROP CAPITALS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES OR TRUNKS OF VARYING LENGTHS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FEET, AND A SUFFICIENT NUMBER SHALL BE USED TO ENSURE THE CONCRETE IS BEING KEPT LEVEL AT ALL TIMES.
14. REINFORCEMENT IN WALL, FOOTING, AND BEAMS SHALL BE CONTINUOUS AND LAPPED 48 BAR ø AT SPLICE UNLESS OTHERWISE NOTED. HOOK AND LAP ALL CORNER AND INTERSECTING BARS. (SEE REINF. DEVELOPMENT DETAIL).



REINF. DEVELOPMENT DETAIL

REINFORCING STEEL:

1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS, FREE FROM LOOSE RUST AND SCALE CONFORMING TO ASTM A615/A615M-01, FY=60KSI, U.O.N.
2. ALL REINFORCING SHALL BE DETAILED AND FABRICATED FOLLOWING THE REQUIREMENTS OF ACI 244. PLACING OF REBARS SHALL CONFORM TO CRSI "RECOMMENDED PRACTICES FOR PLACING REINFORCING BARS".
3. MINIMUM CONCRETE COVER ON REINFORCING STEEL FOR NON-PRESTRESSED CONCRETE SHALL BE AS FOLLOWS, U.O.N.:

	MINIMUM COVER	TOLERANCE + OR -
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"	3/8"
EXPOSED TO EARTH OR WEATHER NO. 5 AND SMALLER BARS:	1 1/2"	3/8"
NO. 6 AND LARGER BARS:	2"	3/8"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:		
ROOF SLAB	1"	1/8"
STRUCTURAL SLAB AND WALLS	1"	1/8"
BEAMS AND COLUMNS (PRIMARY REINFORCEMENT, TIES, STIRRUPS AND SPIRALS)	1 1/2"	3/8"
SLABS ON GRADE	1 1/2"	1/4"

4. NO DEVIATION FROM THE STRUCTURAL PLANS SHALL BE PERMITTED WITHOUT THE EXPRESS WRITTEN CONSENT OF THE STRUCTURAL ENGINEER. ALL REINFORCING DETAILS TO BE SUBMITTED TO THE ENGINEER FOR HIS APPROVAL.
5. ALL REINFORCING BARS SHALL BE SECURELY HELD IN PLACE DURING CONCRETE PLACEMENT. IF REQUIRED, ADDITIONAL BARS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR THE BARS.
6. BARS SUPPORTS SHALL BE PLASTIC TIPPED FOR EXPOSED CONCRETE. PLASTIC "DONUT" SPACERS WILL BE REQUIRED FOR STEEL AGAINST FORMS IN CONCRETE BEAMS AND WALLS IF FIELD CONDITIONS WARRANT.
7. WELDED WIRE FABRIC SHALL CONFORM WITH ASTM A 185 AND IT SHALL BE SUPPORTED ON SLAB BOLSTERS.
8. ALL REINFORCING BARS MARKED CONTINUOUS SHALL BE LAPPED 30 DIA. AT SPLICES AND CORNERS UNLESS OTHERWISE NOTED. LAP CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AS REQUIRED. TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS ENDS WITH STANDARD HOOKS, U.O.N.
9. ALL WALLS AND COLUMNS SHALL BE DOWELED INTO FOOTINGS, WALLS, BEAMS, OR SLABS WITH BARS OF THE SAME SIZE AND SPACING AS THE BARS ABOVE. USE A (30) BAR DIAMETER LAP EXCEPT WHERE SPECIFICALLY INDICATED.
10. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. SPLICE BARS IN SPANDRELS, WALLS, BEAMS, GRADE BEAMS ETC. (UNLESS OTHERWISE NOTED) AS FOLLOWS: TOP BARS AT CENTER LINE OF SPAN ± BOTTOM BARS AT THE SUPPORT.
11. REINFORCING ALLOWANCE: THE CONTRACTOR SHALL PROVIDE 1.5 TONS OF STEEL REINFORCEMENT FOR THE ENGINEER TO USE AT HIS DISCRETION DURING CONSTRUCTION OF THE PROJECT. THE CONTRACTOR TO REIMBURSE THE OWNER FOR THE UNUSED PORTION.

STRUCTURAL STEEL:

1. FABRICATED AND ERECT STRUCTURAL STEEL IN CONFORMANCE WITH SPECIFICATION SECTION 05120, AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", WITH COMMENTARY, AND ALL OSHA REQUIREMENTS.
2. STRUCTURAL STEEL SHAPES SHALL BE FABRICATED FROM THE FOLLOWING MATERIALS:
   A. ROLLED W and WT SHAPES: ASTM A992, GRADE 50.
   B. POLLED M, S, C and MC SHAPES AND ANGLES: ASTM A36, fy=36 ksi.
   C. PLATES AND BARS: ASTM A36, fy=36 ksi.
   D. COLD-FORMED HOLLOW STRUCTURAL SECTIONS (HSS):
   ROUND SECTIONS: ASTM A500, GRADE C, fy=46 ksi.
   SQUARE AND RECTANGULAR SECTIONS: ASTM A500, GRADE B, fy=46 ksi.
   E. STEEL PIPE: ASTM A53, TYPE E or S, GRADE B, fy=35 ksi.
3. ALL SHOP AND FIELD WELDING SHALL CONFORM TO THE AWS D1.1 STRUCTURAL WELDING CODE BY THE AMERICAN SOCIETY. USE E70 SERIES WELDING ELECTRODES, U.O.N. WHERE NECESSARY, REMOVE GALVANIZING OR PRIMER PRIOR TO WELDING.
4. DO NOT SPLICE STRUCTURAL STEEL MEMBERS EXCEPT WHERE INDICATED ON THE DRAWINGS.
5. REFER TO ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR PAINTING AND FIREPROOFING OF STRUCTURAL STEEL. DO NOT PAINT STEEL SURFACES IN CONTACT WITH CONCRETE OR FIREPROOFING.
6. BOLTED STRUCTURAL CONNECTIONS: UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE 3/4"ø ASTM A325. TYPE N. BOLTS INDICATED LESS THAN 5/8"ø SHALL BE ASTM A307. DETERMINE TENSION
7. USING EITHER LOAD INDICATOR WASHERS OR TENSION-CONTROL BOLTS.
8. BRACE AND MAINTAIN ALL STEEL IN ALIGMENT UNTIL OTHER PARTS OF CONSTRUCTION NECESSARY FOR PERMANET SUPPORT ARE COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TEMPORARY SHORING AS REQUIRED FOR THE STABILITY OF STEEL FRAME UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN COMPLETED AND BUILDING IS ENCLOSED.
9. GROUT FOR COLUMN BASE PLATES AND PRESENT BEARING PLATES SHALL BE NON-SHRINK, NON METALLIC GROUT (5000 PSI MIN.).
10. SUBMIT SHOP DRAWINGS INDICATING ALL SHOP AND ERECTION DETAILS INCLUDING PROFILES, SIZES, SPACING AND LOCATIONS OF STRUCTURAL MEMBERS, CONNECTION ATTACHMENTS, FASTENERS, LOADS AND TOLERANCES.
11. ALL STEEL EXPOSED TO WATER SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 FOR MEMBERS AND ASTM A153 FOR CONNECTION ELEMENTS.
12. STRUCTURAL STEEL SHALL RECEIVE A SHOP COAT OF PRIMER (COLOR AS DIRECTED BY ARCHITECT) WHERE EXPOSED TO VIEW. ALL OTHER AREAS, INCLUDING THOSE WHICH WILL RECEIVE SPRAY-ON FIRE PROTECTION, OR WHERE HEADED STUDS ARE TO BE WELDED, SHALL NOT BE PRIMED.
13. QUALIFICATIONS FOR WELDING WORK: QUALFY WELDING PROCEDURES AND WELDING OPERATORS IN ACCORDANCE WITH AWS "QUALIFICATIONS" REQUIREMENTS. WELDERS SHALL HAVE CURRENTS EVIDENCE OF PASSING THE APPROPIATE AWS QUALIFICATION TEST. THE ENGINEER MAY REQUEST SUCH EVIDENCE AT ANY TIME DURING THE PROJECT.

TILTUP CONC. CONSTRUCTION

1. DESIGN, DETAIL, CONSTRUCT AND ERECT TILT-UP WAL PANELS PER SPECIFICATION SECTION 03470, THE FLORIDA BUILDING CODE 2020 EDITION, ACI 318 AND 551, AND STANDARD PRACTICES.

2. TILT-UP CONCRETE PANELS SHOWN ON THE DRAWINGS ARE INTENDED TO BE CAST ON THE SLAB ON GRADE AND LIFTED INTO PLACE. PRIOR TO SETTING EACH PANEL, SET SHIMS ON A GROUT PAD TO THE PROPER ELEVATION UNDER EACH END OF PANEL AND AS REQ'D. IMMEDIATLY AFTER PANEL IS ALIGNED AND TEMPORARY BRACES ARE INTALLED. GROUT SOPILD WITH HIGH STRENGTH NON-SHRINK GROUT. COMPLETELY FILL VOID BETWEEN TOP OF FOOTING AND BOTTOM OF PANEL. BRACES MAY BE REMOVED AFTER ALL FLOORS ARE CAST AND ALL STRUCTURAL CONNECTIONS ARE COMPLETED AND INSPECTED.

3. THE DESIGN AND DETAILING OF THE TILT-UP PANELS TO RESIST DESIGN LOADS AND ADDITIONAL REINFORCEMENT REQUIRED DURING LIFTING IS THE RESPONSABILITY OF THE TILT-UP CONTRACTOR. THIS INCLUDES ALL LIFTING EMBEDS AND CONNECTIONS ASSOCIATED WITH THIS FORCESS.

4. SUBMIT TO PRIOR TO FABRICATION COMPLETE PIECE DRAWINGS SHOWING ALL NECESARY INFORMATION FOR FABRICATION OF EACH PANEL, INLCUDING ATTACHMENT PLATES FOR EACH PANEL.

5. MAXIMUM FLEXURAL STRESS AT TIME OF LIFTING IS 300 PSI, UNLESS ADDITIONAL REINFORCING STEEL IS DESIGNED AND PROVIDED TO CONTROL CRACKING. DESIGN, DETAIL AND ERECT TEMPORARY BRACES AND THEIR CONNECTIONS TO RESIST GRAVITY LOADS PLUS WIND PRESSURES. VERIFY THAT PANEL HAS SUFFICIENT CAPACITY TO SPAN BETWEEN BRACES.

6. USE REGULAT WEIGHT CONCRETE WITH A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 4000 PSI. AT TIME OF LIFTING CONCRETE SHALL BE AT LEAST 7 DAYS OLD AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AS DETERMINED BY TESTING OF FIELD-CURED CYLINDERS.

7. USE GRADE 60 ASTM REINFORCING BARS. DO NOT SPLICE VERTICAL BARS UNLESS REQ'D. AT INTERMEDIATE FLOOR LOCATIONS. HORIZONTAL BARS MAY BE SPLICCED WITH A 48 BAR DIAMETER.

8. USE GRADE A36 STEEL PLATES AND STRUCTURAL SHAPES. ENCASE BELOW GRADE STEEL WITH GROUT TO PROHIBIT CONTACT WITH SOIL. FOR LOCATIONS PERMANENTLY EXPOSED TO WEATHER, ALL STEEL PLATES, SHAPES, AND ANCHORS EMBEDDED IN CONCRETE SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. ALL WELDS SHALL BECLEANED AND PAINTED WITH 2 COATS OF "ZRC COLD GALVANIZING COMPOUND" OR GALVACON.

9. REFER TO THE ARCHITECTURAL DRAWINGS FOR PANEL FINISH, TEXTURE, REVEALS, AND OPENINGS.

MECHANICAL FASTENERS:

1. ALL ANCHORS SHALL PROVIDE EQUAL OR GREATER STRUCTURAL LOAD CAPACITIES (ALLOWABLE OR ULTIMATE) THAN THOSE SPECIFIED BELOW. WHERE ALTERNATE SYSTEMS PREFERRED, THE CONTRACTOR SHALL ENSURE THE ALTERNATE SYSTEM CAN PROVIDE SUCH LOADS, AND SHALL CONTACT THE ENGINEER TO ADVISE SUCH CHANGES. THE CONTRACTOR MUST ALSO PROVIDE LOAD TABLES, OR OTHER LITERATURE WHICH SPECIFIES SUCH CAPACITIES, AT THE ENGINEER'S, ARCHITECT'S, OR OWNER'S REQUEST.

   EXPANSION ANCHORS:
   "WEDGE ALL" BY SIMPSON, OR "POWER-BOLT" BY RAWL

   ADHESIVE ANCHORS:
   "EPOXY TIE"(SET, ET, ETF) BY SIMPSON,
   OR "POWER-FAST" BY RAWL

   MASONRY SCREWS:
   "TITEN" BY SIMPSON, OR "TAPPER" BY RAWL

   POWDER ACTUATED FASTENERS (PAF):
   POWDER ACTUATED FASTENERS BY SIMPSON,
   OR "PINS" BY RAWL
2. ALL FASTENERS SHALL BE INSTALLED AS SPECIFIED BY THE MANUFACTURER. WHERE EMBEDMENT DEPTH, SPACING, EDGE DISTANCE, OR END DISTANCE IS NOT SPECIFIED, THE MORE STRINGENT SPECIFIED BY EACH FASTENER'S MANUFACTURER SHALL BE USED. ALL FASTENERS SHALL COMPLY WITH THE REQUIREMENTS SET BY THE GOVERNING BUILDING CODE.

LIGHT GAUGE FRAMING:

A. CONVENTIONAL FRAMING:

1. LIGHT GAUGE SHALL BE SAME SIZE AS CALLED ON ARCHITECTURAL DRAWINGS.

2. UNLESS NOTED OTHERWISE, ALL STUDS SHALL BE EQUAL TO A MINIMUM OF 6" x 18ga. WITH 18ga. TRACKS.

3. STUD, TRACK AND ACCESSORY DESIGNATIONS ARE BASED UPON DALE / INCOR INDUSTRIES OF FLORIDA CATALOG. MINIMUM YIELD STRENGTH FOR 18ga. STUDS SHALL BE ±33 ksi, ALL TRACK SHALL BE 33 ksi. WIND STRAPS ARE BASED UPON THE USE OF 40,000 PSI FY MIN.

4. ALL STUDS, TRACK BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL OR ATTACHED w/ #10 TEK SCREWS (MIN. 1 SCREW EACH FLANGE). ALL WELDS SHALL DE TOUCHED UP WITH ZINC RICH PAINT.

5. STUDS SHALL HAVE FULL BEARING AGAINST INSIDE TRACK WEB PRIOR TO ATTACHMENT AT THEIR BOTH ENDS.

6. ALL STUD TO STUD CONNECTIONS TO BE (4) TEK SCREWS (MIN. U.N.O.

7. AT TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT WELDED OR SPLICED TOGETHER.

8. A MINIMUM OF 10" UN PUNCHED STEEL IS REQUIRED AT BOTH ENDS OF STUD.

9. BRIDGING SHALL BE 1.5' CRC PLACED THROUGH PUNCHOUTS AND WELDED ON BOTH SIDES. BRIDGING IS TO BE SPACED AT NO MORE THAN 4'-0" VERTICALLY AT APPROXIMATELY THE THIRD POINT. CRC BRIDGING IN 6" STUDS REQUIRES A CLIP ANGLE AT EACH CONNECTION LOCATION. AN ALTERNATE BRIDGING TECHNIQUES SHALL BE 1½" x 20ga. STRAPS, SCREW AT ATTACHED TO BOTH FLANGES OF EACH STUD WITH SOLID BLOCKING REQUIRED AT 8'-0"o.c. MAX. AND 24" FROM BOTTOM OF PANEL. SEE DETAIL.

10. STUD DIMENSIONS ARE TO THE BACK FACE OF STUD.

STEEL JOISTS

1. SUBMIT FOR REVIEW SHOP DRAWINGS OF JOIST DETAILS FOR FABRICATION AND ERECTION PRIOR TO FABRICATING JOISTS.

2. A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

3. ALL DESIGN, FABRICATION AND ERECTION OF STEEL JOISTS AND BRIDGING SHALL BE IN STRICT ACCORDANCE WITH THE CURRENT SPECIFICATIONS OF STEEL JOISTS INSTITUTE AND RECOMMENDED CODE OF STANDARD PRACTICE.

4. THE ENDS OF ALL BRIDGING LINES TERMINATING AT WALLS OR BEAMS SHALL BE ANCHORED TO THE WALL OR BEAM.

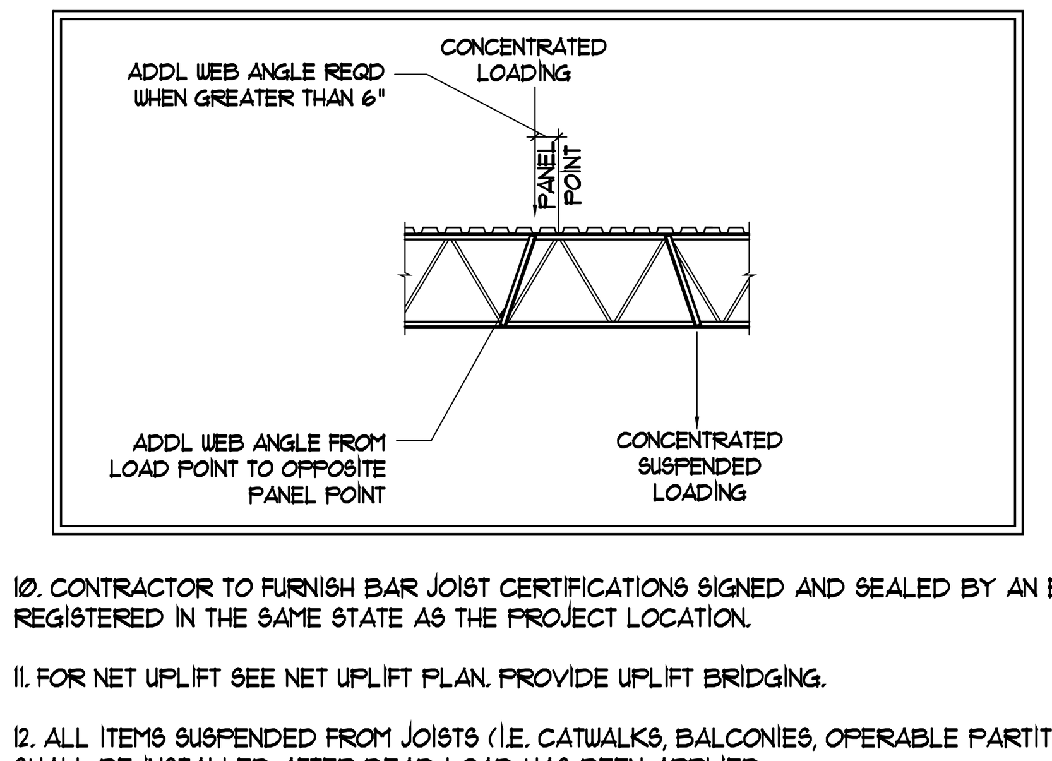
5. ALL STEEL JOISTS ARE TO BE CAMBERED AS SPECIFIED BY STEEL JOIST INSTITUTE.

6. PROVIDE BOTTOM AND/OR TOP CHORD EXTENSIONS AS SHOWN ON DRAWINGS.

7. UNLESS NOTED OTHERWISE. MINIMUM JOIST BEARING SHALL BE 2½" FOR K-SERIES JOISTS, 4" FOR LH, DHL AND SLH 15-18, AND 6" FOR SLH 19-25 ON A STEEL MEMBER OR EMBED PLATE.

8. BRIDGING SHALL BE FURNISHED AND INSTALLED TO MEET THE SIZE AND SPACING REQUIREMENTS OF THE SJI STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOADS ARE PLACED ON THE JOISTS. ALL JOISTS 40'-0" OR LONGER REQUIRE A ROW OF BOLTED BRIDGING TO BE IN PLACE BEFORE SLACKENING OF HOISTING LINES. OTHER JOIST REQUIRE SIMILAR BRIDGING (CONSULT LATEST SJI SPECIFICATIONS).

9. ALL HANGERS, CURBS, AND / OR ROOFTOP FRAMES TO SUPPORT MECHANICAL EQUIPMENT, ETC. TO BE SUPPORTED BY THE JOISTS SHALL BE LOCATED AT THE PANEL POINTS OF THE JOISTS. IF THE CONCENTRATED LOAD MUST BE LOCATED FURTHER THAN 6" FROM A PANEL POINT, PROVIDE JOISTS STIFFENERS. L2X2X3/16 JOISTS STIFFENERS MUST BE INSTALLED FROM LOAD TO OPPOSITE CHORD PANEL POINT BEFORE LOAD IS APPLIED. SEE DETAIL BELOW:



10. CONTRACTOR TO FURNISH BAR JOIST CERTIFICATIONS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION.

11. FOR NET UPLIFT SEE NET UPLIFT PLAN. PROVIDE UPLIFT BRIDGING.

12. ALL ITEMS SUSPENDED FROM JOISTS (I.E. CATWALKS, BALCONIES, OPERABLE PARTITIONS, ETC.) SHALL BE INSTALLED AFTER DEAD LOAD HAS BEEN APPLIED.

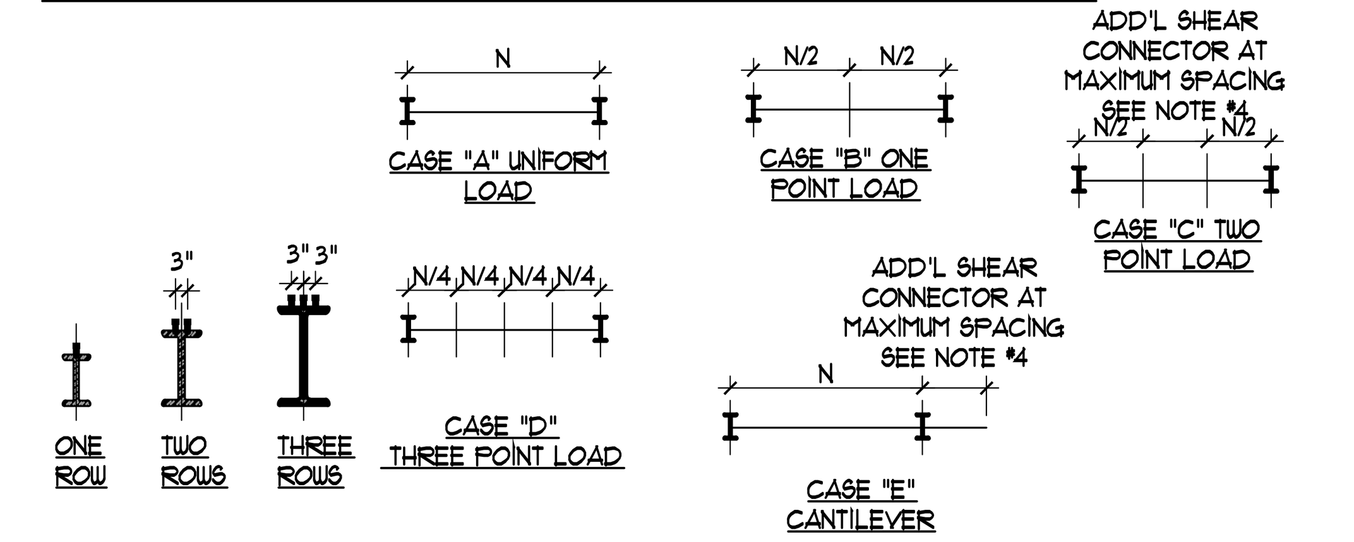
13. BOLTED TIE JOISTS (BTJ) ARE USED IN STEEL FRAMES WHERE COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH STRUCTURAL STEEL MEMBERS. JOIST(S) AT COLUMN LINES SHALL BE FIELD BOLTED AT THE COLUMNS WITH TWO ½"ø BOLTS TO PROVIDE LATERAL STABILITY DURING CONSTRUCTION.

14. STEEL JOISTS SHALL RECEIVE SHOP COAT OF PRIMER (COLOR AS DIRECTED BY ARCHITECT) WHERE EXPOSED TO VIEW. ALL OTHER AREAS INCLUDING THOSE WHICH WILL RECEIVE SPRAY-ON FIRE PROTECTION, SHOULD NOT BE PRIMED.

15. ANY STEEL JOIST WITHIN A 4'-0" DISTANCE FROM A PARALLEL SUPPORT SHALL BE FABRICATED IN SUCH A WAY THAT CAMBER OF THE JOIST WILL NOT CAUSE A PROBLEM INSTALLING THE METAL DECK.

16. IN THE EVENT THAT FIRE SPRINKLERS ARE REQUIRED FOR THIS PROJECT THE STEEL FABRICATOR SHALL PROVIDE A DIMENSIONED JOIST BRIDGING AND JOIST GIRDER BOTTOM CHORD BRACE PLAN ALONG WITH DETAILS TO THE SPRINKLER CONTRACTOR. THE FABRICATOR AND SPRINKLER CONTRACTOR SHALL COORDINATE WITH EACH OTHER TO ENSURE THAT ANY CONFLICTS ARE RESOLVED BEFORE ANY FABRICATION BEGINS.

SHEAR CONNECTORS SPACING CRITERIA DETAILS



NOTES:

1. N = SPECIFIED NUMBER OF SHEAR CONNECTORS. REFER TO PLAN OR COMPOSITE BEAM SCHEDULE.

2. UNLESS NOTED OTHERWISE ON PLAN OR IN THE COMPOSITE BEAM SCHEDULE, SHEAR CONNECTORS SHALL BE DISTRIBUTED ALONG THE LENGTH OF THE BEAM AS SHOWN ON THE DETAILS ABOVE.

3. REFER TO PLAN FOR SHEAR CONNECTOR DIAMETER AND LENGTH.

4. MAXIMUM SPACING OF SHEAR CONNECTOR SHALL BE AS FOLLOWS:
   a. BEAMS PERPENDICULAR TO DECK SPAN = 24 INCHES
   b. BEAMS PARALLEL TO DECK SPAN = 32 INCHES.

5. WHERE STEEL DECK CORRUGATIONS DO NOT ALLOW FOR AN EVEN SPACING OF SHEAR CONNECTORS WITH ONE STUD IN EACH FLUTE, ADDITIONAL STUDS IN A SECOND ROW (AND THIRD ROW WHERE REQUIRED) SHALL BE PLACED SUCH THAT THE HIGHEST DENSITY OF SHEAR CONNECTORS OCCURS NEAR THE BEAM SUPPORT.

6. WHERE THE SPECIFIED NUMBER OF SHEAR CONNECTOR IS LESS THAN THE BEAM SPAN LENGTH DIVIDED BY THE MAXIMUM SPACING (SEE NOTE #4) ADDITIONAL SHEAR CONNECTORS SHALL BE PROVIDED SUCH THAT THE MAXIMUM SPACING IS NOT EXCEEDED AT ANY LOCATION IN THE SPAN.

7. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR ENGINEER'S APPROVAL.

8. PUDDLE WELDS MUST BE USED SUCH THAT WELDING (INCLUDING SHEAR STUDS) OF DECK TO ALL BEAMS DOES NOT EXCEED 12 INCHES ON CENTER ANYWHERE.

9. SHEAR CONNECTORS IN ONE ROW SHALL BE PLACED DIRECTLY OVER THE BEAM WEB.

10. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR THE ENGINEER'S APPROVAL.

11. PLACE STUD IN A SINGLE ROW WHERE SPACING REQUIREMENTS PERMIT. STUDS SHALL BE PLACED IN TWO ROWS OR THREE ROWS ONLY WHERE REQUIRED IN ORDER TO PLACE THE TOTAL NUMBER OF STUDS - SEE TYPICAL DETAIL, SHEAR CONNECTOR PLACEMENT DIAGRAMS.

12. PROVIDE MINIMUM 1" SPACING FROM EDGE OF THE FLANGE TO CENTER LINE OF STUD.

Albert Kwan

Digitally signed by Albert Kwan
Date: 2021.08.25 14:31:45 -05'00'

ALBERT P. KWAN LICENSE No. 55185 STATE OF FLORIDA PROFESSIONAL ENGINEER

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PARCEL ID:
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27-26-12-0000000-12010

APPLICANT:
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PERMIT SUBMITTAL

CIVICA PROJECT No : 210122

CONSULTANTS:

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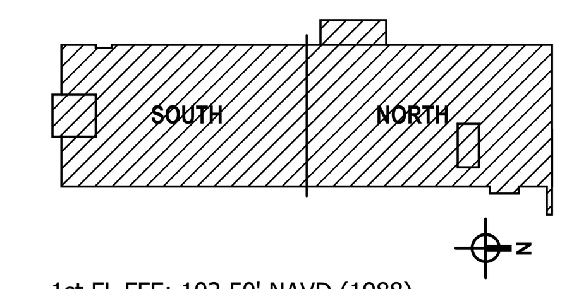
No.	DATE	ISSUED FOR	BY

DRAWN BY	APPROVED BY
AG	AK
DATE	SCALE:
07/21/2021	AS SHOWN

KEY PLAN



1st FL FFE: 102.50' NAVD (1988)

SEAL/SIGNATURE

ROLANDO LLANES
AR - 0013160

SHEET TITLE
STRUCTURAL NOTES

SHEET NUMBER
S-0.0