SHOP DRAWINGS AND SUBMITTALS STRUCTURAL ABBREVIATIONS 1. THE GENERAL CONTRACTOR SHALL FOLLOW THE ARCHITECT'S INSTRUCTIONS FOR DISTRIBUTION OF SHOP DRAWINGS. ANCHOR BOLT LENGTH A.B. ABV ABOVE LONG 2. SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. CORRECTIONS OR COMMENTS A.C.I. AMERICAN CONCRETE INSTITUTE LIVE LOAD L.L. MADE ON THIS REVIEW DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND/OR OMISSIONS, NOR ADD'L ADDITIONAL LLH LONG LEG HORIZONTAL FROM COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. A.F.F. ABOVE FINISH FLOOR LLV LONG LEG VERTICAL A.I.S.C AMERICAN INSTITUTE OF STEEL CONSTRUCTION LONG LONGITUDINAL 3. APPROVAL OF SHOP DRAWINGS DOES NOT INDICATE AN ACCEPTANCE OF DEVIATIONS FROM THE CONTRACT AMERICAN IRON AND STEEL INSTITUTE A.I.S.I. L.P. LOW POINT DOCUMENTS OR PREVIOUS SHOP DRAWING REVIEW, UNLESS SPECIFICALLY NOTED THEREIN BY ENGINEER OF RECORD. AI T AI TERNATE ARCH ARCHITECT / ARCHITECTRUAL ANY PROPOSED CHANGE TO THE DESIGN CONCEPTS SHOWN IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED IN A.S.T.M. AMERICAN SOCIETY OF TESTING MATERIALS MASONRY MAS WRITING AND APPROVED BY THE ARCHITECT AND ENGINEER OF RECORD PRIOR TO SUBMITTING SHOP DRAWINGS. ALL A.W.S. AMERICAN WELDING SOCIETY MAX MAXIMUM SUCH CHANGES SHALL BE "CLOUDED" ON THE SHOP DRAWINGS AND REFERENCED TO THE PROPER R.F.I. NUMBER. M.B. MASONRY BEAM MBM METAL BUILDING MANUFACTURER 5. DETAILER SHALL BE RESPONSIBLE FOR CHECKING ALL ARCHITECTURAL AND MECHANICAL DRAWINGS FOR OPENINGS MOMENT CONNECTION BOTTOM OF M.C. AND EMBEDS AFFECTING STRUCTURAL MEMBERS. BLDG. BUILDING MCJ MASONRY CONTROL JOINT BLW BEI OW MECH MECHANICAL 6. SHOP DRAWINGS SHALL BEAR THE INITIALS OF THE DETAILER'S CHECKER AND SHALL BE REVIEWED AND APPROVED BY MEZZ MEZZANINE OR MECH PLATFORM BM. BFAM THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO ARCHITECT AND ENGINEER OF RECORD. BOT BOTTOM MFR MANUFACTURE OR MANUFACTURER RΡ BASE PLATE MIN MINIMUN 7. THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS, IN WHOLE OR IN PART, BY ANY CONTRACTOR BRDG MOM MOMENT BRIDGING SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SHALL BRG BEARING М.О. MASONRY OPENING SIGNIFY HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATED HIMSELF TO ANY JOB BRK BRICK MTL METAL EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON. B.S. BOTH SIDES BTWN BETWEEN 8. IF REPRODUCTIONS OF THESE CONTRACT DRAWINGS ARE USED IN LIEU OF PREPARATION OF SHOP DRAWINGS. THE NEAR SIDE N.S. ARCHITECT'S, ENGINEER'S OR OTHER DESIGN CONSULTANT'S TITLE BLOCK SHALL BE REMOVED AND REPLACED WITH A NTS NOT TO SCALE TITLE BLOCK LISTING THE FOLLOWING ITEMS. CENTER TO CENTER CONCRETE BEAM A. NAME, ADDRESS, AND CONTACT NUMBER OF CONTRACTOR, SUBCONTRACTOR, ETC. SUBMITTING SHOP DRAWINGS. **OVFRALI** CANT CANTILEVER OA. CONCRETE COLUMN OVER BUILT 0.B. B. SHEET NUMBER C.I.P CAST IN PLACE 0.C. ON CENTER CONTROL JOIN 0.D. OUTSIDE DIAMETER C. DATE DRAWING WAS PREPARED, THE INITIALS OF THE PERSON WHO PREPARED THE DRAWINGS, AND THE INITIALS C OR CL OUTSIDE FACE CENTERLINE 0.F. OF THE PERSON WHO CHECKED THE DRAWINGS. CLR OPNG **OPENING** CLEAR C.M.U. CONCRETE MASONRY UNIT OPP OPPOSITE 9. ANY REPRODUCTION OF THESE CONTRACT DRAWINGS NOT COMPLYING WITH THE ABOVE WILL BE REJECTED. COL COLUMN COORD COORDINATE 10. SOME STRUCTURAL SYSTEMS INCLUDED IN THESE CONTRACT DRAWINGS ARE INDICATED AS "DESIGNED BY SPECIALTY" CONC P.A.F. POWER ACTUATED FASTENER CONCRETE OR "DELEGATED ENGINEER." DELEGATED ENGINEERING SUBMITTALS SHALL BE SIGNED AND SEALED BY A REGISTERED CONN CONNECTIO PC. PRFCAST PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. CONT CONTINUOUS PERP PERPENDICULAR CONTR CONTRACTOR PRE-ENGINEEREI 11. CALCULATIONS AS REQUIRED BY THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE SUBMITTED WITH THE REQUIRED CONST P OR PL CONSTRUCTION PI ATF SHOP DRAWINGS. ALL DELEGATED ENGINEERING SUBMITTALS SHALL REQUIRE CALCULATIONS SIGNED AND SEALED BY A CS.J PLY CONSTRUCTION JOIN PI YWOOI REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. CTR P.L.F. POUNDS PER LINEAR FOOT CENTER CTR'D CENTERED PNL PANFI 12. SHOP DRAWING AND DELEGATED ENGINEERING SUBMITTAL REQUIREMENTS: PREMANUF PRE-MANUFACTURED PREFAB PRF-FABRICATED A. INFORMATION SUBMITTALS P.S.F. DOUBLE POUNDS PER SQUARE FOOT a. CONCRETE MIX DESIGNS & MISC. PRODUCT DATA P.S.I. DEAD LOAD POUNDS PER SQUARE INCH b. MASONRY UNITS & GROUT MIX DESIGN DIAMETER PTN PARTITION . EPOXY AND MECHANICAL ANCHORS DIAG DIAGONAL P.T. PRESSURE TREATED d. MISCELLANEOUS DIM DIMENSION DIST DISTANCE B. SHOP DRAWING SUBMITTALS RADIUS DN. DOWN a. REINFORCING STEEL DFTAII REFERENCE OR REFER STRUCTURAL STEEL, MISC STEEL EMBEDS/CONNECTIONS DWG(S) REINF DRAWING(S REINFORCE(D) OR REINFORCING c. OPEN-WEB STEEL JOISTS & METAL DECKING REQ REQUIR d. MISCELLANEOUS REQ'D REQUIRED FACH REVIEWED REV C. DELEGATED ENGINEERING SUBMITTALS EACH END ROOF a. ENGINEERED STEEL STAIR SYSTEMS EACH FACE RTN RETURN b. PRE-FABRICATED/PRE-ENGINEERED CANOPIES, AWNINGS, ETC. **EXPANSION JOIN** RETAINING WALL RW c. MISCELLANEOUS ENG FNGINFFR ELEVATION SCHEDULE EQUAL SCH **POST-INSTALLED ANCHORS NOTES** EQUAL SPACING SEC SECTION EQ. SP. STEEL DECK INSTITUTE E.S. EACH SIDE SDI FACH WAY E.W. STEP FOOTING EXT EXTERIOR SHEET 1. POST-INSTALLED ANCHOR SYSTEMS SHALL COMPLY WITH THE LATEST REVISION OF ICC-ES ACCEPTANCE CRITERIA AC308 SIMILAR AND HAVE A VALID ICC-ES REPORT IN ACCORDANCE WITH ALL APPLICABLE CODES. SAWCUT JOINT FACE OF STEEL JOIST INSTITUTE 2. POST-INSTALLED ANCHOR SYSTEMS MUST BE INSTALLED IN STRICT ACCORDANCE WITH ALL WRITTEN MANUFACTURER FLOOR DRAI INSTRUCTIONS INCLUDING ANY SPECIAL EQUIPMENT REQUIRED FINISH FLOOP SPACE OR SPACES FOUNDATION SPFCS SPECIFICATIONS 3. THE PRODUCTS LISTED BELOW ARE THE BASIS OF DESIGN FOR THIS PROJECT. SUBSTITUTION REQUESTS FOR FINISH SQUARE PRODUCTS OTHER THAN THOSE LISTED BELOW SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR FLOOR STAINLESS STEE FI R S.S. TO INSTALLATION. SUBSTITUTIONS WILL ONLY BE CONSIDERED FOR PRODUCTS THAT HAVE A CODE REPORT FAR SIDE FS STD STANDARD RECOGNIZING THE PRODUCT FOR THE APPROPRIATE APPLICATION AND PROJECT BUILDING CODE. SUBSTITUTION FOOT STFFI SUBMITTALS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE EQUIVALENT FTG FOOTING STRENGTH STR PERFORMANCE VALUES OF THE DESIGN BASIS PRODUCT S.W. SHEAR WALL SYMM SYMMETRICAL 4. BASIS OF DESIGN FOR POST-INSTALLED ANCHORS: GAGE OR GAUGE GALV GALVANIZED A. ADHESIVE ANCHORS (EPOXY ANCHORS): GRADE BEAM TIE BEAM GB T.B. GENERAL CONTRACTOR T&B TOP & BOTTO a. INTO CONCRETE: ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI TEMP TEMPERATUR 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. ADHESIVE ANCHORS SHALL BE THD THREADED INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER WHERE DESIGNATED ON THE CONTRACT THICK HOOK THK DOCUMENTS. PRE-APPROVED PRODUCTS INCLUDE: HORIZ HORIZONTAL THNS THICKENED SLAB HILTI HIT-HY 200 TOP'G ΗP HIGH POINT TOPPING SIMPSON STRONG-TIE SET-XF HEADED STUD ANCHOR TYP. TYPICAL SIMPSON STRONG-TIE AT-XP TOP OF SLAB HEIGHT ANCHORING SYSTEMS SHALL UTILIZE TRADITIONAL PREPARATION OF THE ANCHOR HOLE (BLOWING OR TRANS TRANSVERSE BRUSHING) PER THE MANUFACTURER'S WRITTEN REQUIREMENTS. OTHER METHODS SHALL NOT BE USED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD INSIDE DIAMETER ANCHORING ADHESIVE SHALL BE A TWO-PART COMPONENT 100% SOLID EPOXY BASED SYSTEM SUPPLIED UNLESS NOTED OTHERWISE INSIDE FACE UNO THROUGH A STATIC-MIXING NOZZLE SUPPLIED BY THE MANUFACTURER. THIS REQUIREMENT SHALL BE MET INTERIOR REGARDLESS OF WHICH EPOXY PRODUCT OR MANUFACTURER IS USED. d. THREADED RODS TO BE USED IN COMBINATION WITH EPOXY SYSTEM SHALL BE FABRICATED FROM STEEL VERT VERTICAL MEETING OR EXCEEDING THE PROPERTIES OF ASTM A36. JOINT B. MECHANICAL ANCHORS (EXPANSION / WEDGE / SCREW ANCHORS): WOOD WALL FOOTING OR CONT FOOTING a. INTO CONCRETE: ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR KIP (1000 LBS W.O. WINDOW OPENING

GOVERNING CODES AND STANDARDS

WΡ

W/

W.W.F.

WORK POINT

WELDED WIRE FABRIC (MESH)

WEIGHT

WITH

THE STRUCTURAL DESIGN AND ALL WORK REFERENCED HEREIN SHALL CONFORM TO THE FOLLOWING CODES AND STANDARDS. USE THE LATEST EDITION UNLESS NOTED OTHERWISE.

"FLORIDA BUILDING CODE" - FBC 2020, 7TH EDITION.

KNOCK OUT

KEYWAY

K.O.

KWY

- "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" ASCE 7-16.
- "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 318-14.
- "ACI MANUAL OF CONCRETE PRACTICE" PARTS 1 THROUGH 5 LATEST EDITION.
- "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AISC 360-16. "STRUCTURAL WELDING CODE - STEEL" - AWS D1.1-2020.
- "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES" TMS 402/602-16.

GENERAL CONDITIONS

- THE GENERAL CONTRACTOR SHALL REVIEW AND VERIFY THAT ALL DIMENSIONS ARE COORDINATED BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL CONDITIONS AT THE PROJECT SITE AND SHALL NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
- THESE STRUCTURAL DRAWINGS ARE TO BE USED IN COMBINATION WITH THE ARCHITECTURAL, MECHANICAL ELECTRICAL, PLUMBING, AND CIVIL DRAWINGS, AND ANY OTHER PROJECT CONTRACT DOCUMENTS NOT LISTED. REFER TO THESE DRAWINGS FOR DETAILS AND INFORMATION THAT MAY RELATE TO STRUCTURAL COMPONENTS.
- THESE STRUCTURAL DRAWINGS AND RELATED SPECIFICATIONS, IF PROVIDED, REPRESENT THE COMPLETED DESIGN OF THE STRUCTURE. THEY DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE CONSTRUCTION SITE.
- OBSERVATION VISITS TO THE SITE BY THE EOR OR REPRESENTATIVES OF THE EOR MAY BE MADE DURING CONSTRUCTION. ANY SUPPORT SERVICES PERFORMED BY THE EOR SHALL BE DISTINGUISHED FROM INSPECTION AND/OR TESTING SERVICES PERFORMED BY OTHERS AND ARE NOT TO BE CONSTRUED AS SUPERVISION AND/OR MANAGEMENT OF CONSTRUCTION.
- THE OWNER WILL ENGAGE A QUALIFIED, APPROVED TESTING AGENCY TO PROVIDE SERVICES AS INDICATED BELOW. SUBMIT REPORTS TO STRUCTURAL ENGINEER AND ARCHITECT. A. TEST SOIL COMPACTION PER LATEST GEOTECHNICAL REPORT (U.N.O.)
- B. TEST CONCRETE IN ACCORDANCE WITH ASTM C172 AND C31. VISUALLY INSPECT FIELD WELDS, BOLTED CONNECTIONS, AND OTHER STRUCTURAL STEEL CONNECTIONS. ALL FIELD WELDS SHALL BE INSPECTED BY A CERTIFIED WELD INSPECTOR.
- SUBMIT WRITTEN REQUEST TO THE ARCHITECT FOR APPROVAL OF ANY PROPOSED CHANGE TO THE REQUIREMENTS OF THESE STRUCTURAL DRAWINGS OR CONTRACT DOCUMENTS. SPLICING, CUTTING, NOTCHING OR OTHER ALTERATIONS TO STRUCTURAL MEMBERS WILL NOT BE PERMITTED WITHOUT WRITTEN AUTHORIZATION OF THE ENGINEER.
- IN THE CASE OF CONFLICT BETWEEN THE GENERAL NOTES, DRAWINGS, GOVERNING BUILDING CODES, AND/OR SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.

CRACKED CONCRETE AND SEISMIC APPLICATIONS. PRE-APPROVED MECHANICAL ANCHOR PRODUCTS INCLUDE: HILTI KWIK-BOLT TZ OR KWIK BOLT TZ 2 (EXPANSION ANCHORS)

 SIMPSON STRONG-TIE TITEN-HD (SCREW ANCHOR) SIMPSON STRONG-TIE STRONG-BOLT 2 OR WEDGE-ALL (EXPANSION ANCHORS)

HILTI KIWK HUS-EZ (SCREW ANCHOR)

UFS

C. REPORT NUMBER: USE REPORT NO. 2057195

DECEMBER 6, 2023

A. COMPANY NAME:

FOOTING

7. TERMITE TREATMENT

B. DATE:

FOUNDATION AND GEOTECHNICAL NOTES

REFERENCE THE GEOTECHNICAL REPORT COMPLETED FOR THIS SITE FOR FURTHER INFORMATION RELATING TO THE EXISTING SUBSURFACE SOIL CONDITIONS AND REQUIRED SITE PREPARATION PROCEDURES

THE ALLOWABLE NET SOIL BEARING PRESSURE IS 2500 PSF. THIS DESIGN SOIL BEARING PRESSURE IS BASED ON THE ACCEPTED COMPLETION OF ALL RECOMMENDATIONS AND REQUIREMENTS IN THE REFERENCED GEOTECHNICAL REPORT.

3. ALL REQUIREMENTS FOR SITE PREPARATION AND SOIL COMPACTION SPECIFIED IN THE GEOTECHNICAL REPORT SHALL BE FOLLOWED UNLESS ADDITIONAL MORE STRINGENT REQUIREMENTS ARE SPECIFIED. A CERTIFIED TESTING AGENCY SHALL PERFORM SOIL DENSITY AND COMPACTION TESTS TO ENSURE CONFORMANCE WITH THE GEOTECHNICAL REPORT. SUBMIT ALL TESTS RESULTS TO THE PROJECT ARCHITECT AND ENGINEER. TEST PER THE FOLLOWING:

A. PAVED AND BUILDING SLAB AREAS: AT SUBGRADE AND AT EACH COMPACTED FILL LAYER, AT LEAST ONE TEST FOR EVERY 2000 SQ. FT., BUT IN NO CASE FEWER THAN 3 TESTS. B. FOOTINGS: AT EACH COMPACTED BACKFILL LAYER AT EACH FOOTING OR ONE TEST FOR EACH 50 FT. OF WALL C. CONTRACTOR SHALL RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.

4. CONTRACTOR, IN CONJUNCTION WITH THE PROJECT GEOTECHNICAL ENGINEER, SHALL VERIFY EXISTING FIELD CONDITIONS DURING EXCAVATION THAT MAY AFFECT THE ALLOWABLE BEARING PRESSURE AND / OR THE INSTALLATION OF THE FOUNDATION SYSTEM PRIOR TO STARTING WORK.

ALL FOOTINGS SHALL BE CENTERED UNDER THE COLUMN OR WALL ABOVE UNLESS NOTED OTHERWISE.

6. CONCRETE FOR THE FOUNDATIONS SHALL BE PLACED WITHIN 24 HOURS OF THE SUB-GRADE APPROVAL BY THE PROJECT GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE.

A. TERMITE TREATMENT REQUIREMENT BY FBC 110.3.12 FOR ALL CONSTRUCTION.

B. FOR EXTERIOR CONCRETE AGAINST THE BUILDING: THE SOILS MUST BE TREATED FOR SUBTERRANEAN TERMITES PER FBC 1816.1.6 AND PROTECTED WITH A VAPOR RETARDER PER FBC 1816.1.4.

C. TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMICIDES, INCLUDING SOIL APPLIED PESTICIDES, BAITING SYSTEMS, AND PESTICIDES APPLIED TO WOOD OR OTHER APPROVED METHODS OF TERMITE PROTECTION. LABELLED FOR USE AS A PREVENTATIVE TREATMENT TO NEW CONSTRUCTION, PER FBC FOR REGISTERED TERMICIDE. UPON COMPLETION OF THE APPLICATION OF THE TERMITE PROTECTIVE TREATMENT, A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT: "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."

CAST-IN-PLACE CONCRETE NOTES

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE PUBLICATIONS "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," - ACI 318 LATEST EDITION, AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS." - ACI 301 LATEST EDITION.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS IN ACCORDANCE WITH THE FOLLOWING "SCHEDULE OF CAST-IN-PLACE CONCRETE CONSTRUCTION MATERIALS":

| SCHEDULE OF CAST-IN-PLACE CONCRETE CONSTRUCTION MATERIALS | | | | |
|---|---------------------------|----------------------|------|--|
| ETE | LOCATION | MAX w/c RATIO | | |
| | FOOTINGS, FOUNDATIONS | 4,000 PSI | 0.52 | |
| ICR | SLABS ON GROUND | 4,000 PSI | 0.54 | |
| CO | REMAINING CONCRETE | 4,000 PSI | 0.52 | |
| | CONCRETE FLOOR TOPPING | 5,000 PSI | 0.45 | |
| | | | | |
| الــــــــــــــــــــــــــــــــــــ | BAR TYPE | YIELD STRENGTH | | |
| TEL | WELDABLE REBAR | ASTM A-706, GRADE 60 | | |
| പ്പ | ALL OTHER REBAR | ASTM A-615, GRADE 60 | | |
| | WELDED WIRE MESH / FABRIC | ASTM A-185, GRADE 65 | | |

ALL CONCRETE SHALL HAVE A MINIMUM SLUMP OF 4" PLUS OR MINUS 1", AND HAVE 2 TO 4% AIR ENTRAINMENT CONCRETE TO BE USED FOR INTERIOR FLOOR SLABS SHALL CONTAIN ONLY "ENTRAPPED AIR" AND SHALL HAVE NOT MORE THAN 3% MAXIMUM AIR CONTENT, CONCRETE PLACED WITH A PUMP SHALL HAVE A SLUMP OF 5" PLUS OR MINUS 1". BUILDER MAY ELECT TO PROVIDE AN ALTERNATE MIX DESIGN WITH HIGH RANGE WATER REDUCER WITH A HIGHER SLUMP. SUBMIT ALTERNATE MIX DESIGN TO ARCHITECT AND ENGINEER OF RECORD FOR REVIEW.

4. CONCRETE SHALL CONTAIN THE MAXIMNUM SIZE AGGREGATE PERMITTED BY ACI UP TO 1-1/2" MAXIMUM. THE GUIDELINES FOR MAXIMUM AGGREGATE SIZE ARE: A. NOT GREATER THAN 1/5TH THE NARROWEST OPENING IN THE FORMS B. NOT GREATER THAN 1/3RD THE THE THICKNESS OF THE SLAB

- C. FLOOR SLABS WHICH ARE 6" AND GREATER SHALL HAVE #467 AND #6 BLENDED COARSE AGGREGATE 5. CONCRETE MIX DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 CHAPTER 3., METHOD 1 OR METHOD 2. SUBMIT BACKUP DATA AS REQUIRED BY CHAPTER 26 OF THE LATEST EDITION OF ACI 318.
- 6. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL IN ACCORDANCE WITH THE "SCHEDULE OF CAST-IN-PLACE CONCRETE CONSTRUCTION MATERIALS" BELOW. REINFORCING STEEL FOR ELEVATED EXTERIOR SLABS WITHIN 3'-0" OF THE SLAB EDGE PERIMTER AND WITHIN 12" OF ALL EXTERIOR SLEEVES AND BLOCK-OUTS SHALL BE HOT-DIPPED GALVANIZED. SEE ELEVATED SLAB PLANS FOR LOCATIONS
- ALL REINFORCEMENT SHALL BE PLACED WITH THE REQUIRED CONCRETE COVER TO REINFORCEMENT AS NOTED IN THE FOLLOWING "SCHEDULE OF CONCRETE PROTECTION FOR REINFORCEMENT"

| | APPLI | CATION | CLEAR COVER |
|---|--|---|--|
| Ô | CONCRETE CAST AGAINST | 1. ALL APPLICATIONS EXCEPT SLABS ON GROUND | 3" |
| SSEC | EXPOSED TO EARTH | 2. SLABS ON GROUND - CLEAR TO TOP OF SLAB | 1-1/2" |
| J-PLA RETI STRE | CONCRETE EXPOSED TO | 1. #6 BARS AND LARGER | 2" |
| ST-IN CONC | EARTH OR WEATHER | 2. #5 BARS AND SMALLER | 1-1/2" |
| NON-I | CONCRETE NOT EXPOSED | 1. SLABS, JOISTS, AND WALLS | 3/4" |
| ٤) | TO EARTH OR WEATHER | 2. BEAMS, COLUMNS, AND OTHER MEMBERS | 1-1/2" |
| и ОШ | CONCRETE EXPOSED TO | 1. SLABS, JOISTS, AND WALLS | 1-1/4" |
| POST POST CRET | EARTH OR WEATHER | 2. BEAMS, COLUMNS, AND OTHER MEMBERS | 1-1/2" |
| | CONCRETE NOT EXPOSED | 1. SLABS, JOISTS, AND WALLS | 3/4" |
| | TO EARTH OR WEATHER | 2. BEAMS, COLUMNS, AND OTHER MEMBERS | 1-1/2" |
| NOTES: | | | |
| 1. TOLEF 2. TOTAL | RANCE FOR CONCRETE COVER A | AND REINFORCEMENT LOCATION IS +/- 3/8". ACE IS THE SCHEDULED CLEAR COVER PLUS THE DEPTH (| OF ANY REVEAL. |
| L REINFOF DNCRETE S DNTRACTO EMS, SLEE ND INSTALL FTING ENG | RCING DETAILS SHALL CONFORM STRUCTURES" ACI 315 LATEST E OR SHALL REVIEW ARCHITECTUR VES, SLAB DEPRESSIONS, SLOP LED PRIOR TO PLACEMENT OF C INEER BEFORE PLACING CONCF | I TO "MANUAL OF STANDARD PRACTICE FOR DETAILING R DITION, UNLESS DETAILED OTHERWISE ON THE STRUCTU AL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION ES, ETC. REQUIRED BY OTHER TRADES. THESE ITEMS SH ONCRETE. COORDINATE BEARING CONDITIONS REQUIRE RETE. | Einforced Ral Drawings. N of Embedded Hall be furnish D by Tilt-up Pai |
| ONTRACTO | R SHALL VERIFY LOCATIONS OF BEFORE CONCRETE IS PLACED. | ALL OPENINGS, SLEEVES, ANCHOR BOLTS, INSERTS, ETC. | 2. AS REQUIRED E |
| VHERE BAR IOOKS SHAL | LENGTHS ARE GIVEN ON THE DI LL BE PROVIDED AT DISCONTINU | RAWINGS, THE LENGTH OF ANY HOOK, IF REQUIRED, IS NO JOUS ENDS OF ALL TOP BARS OF BEAMS AND AT SLAB ED | ot included. Ges. |
| CONTRACTO SUPPORT ITI STAINLESS S | R SHALL PROVIDE SPACERS, CH EMS WHICH BEAR ON EXPOSED STEEL. | HAIRS, BOLSTERS, ETC. NECESSARY TO SUPPORT REINFO CONCRETE SURFACES SHALL HAVE ENDS WHICH ARE PLA | RCING STEEL. ASTIC TIPPED OR |
| ONTRACTO | R SHALL PROVIDE 3/4" INCH CHA | AMFER ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS, JRAL DRAWINGS. | , AND WALLS UNL |
| HORIZONTAL EQUAL TO O IOINTS UNLE SHOWN ON T | L KEYWAYS IN CONSTRUCTION J NE-THIRD OF THE MEMBER'S DE ESS OTHERWISE NOTED ON THE THE DRAWINGS OR AT OTHER LC | OINTS SHALL BE PROVIDED WITH A DEPTH OF 1 ½ INCHES PTH. REINFORCEMENT SHALL BE CONTINUOUS THROUGH DRAWINGS. CONSTRUCTION JOINTS MAY BE USED ONLY OCATIONS APPROVED BY THE ARCHITECT AND ENGINEER | AND A HEIGHT H CONSTRUCTION AT LOCATIONS OF RECORD. |
| Continuou: Retaining v Procedure | S RX WATERSTOP SHALL BE PRO VALLS AND ELEVATOR STEMWAL S. | OVIDED ALONG BASE OF WALLS AND ALONG VERTICAL WALLS. PLACE WATERSTOP IN ACCORDANCE WITH THE MANU | ALL JOINTS AT AL JFACTURER'S |
| REINFORCEN STRUCTURA CLASS B PEF | MENT SPLICES SHALL NOT BE PE L ENGINEER. WHERE INDICATED R ACI 318. SECTION 25.5 EXCEPT | ERMITTED EXCEPT AS DETAILED OR AUTHORIZED BY THE D, THE MINIMUM LAP SPLICES ON ALL REINFORCING BAR S WHERE OTHERWISE NOTED ON THE DRAWINGS. SEE TAP | PROJECT SPLICES SHALL BI |
| ESTING LAE | BORATORY SHALL SUBMIT ONE (| COPY OF ALL CONCRETE TEST REPORTS DIRECTLY TO TH | E ENGINEER. |
| . THE OW TESTS, | NER SHALL EMPLOY A TESTING PERFORM TESTS FOR AIR CONT | LABORATORY TO TAKE AND TEST CONCRETE CYLINDERS ENT, AND TO PERFORM STRENGTH TESTS IN ACCORDANC | , PERFORM SLUN CE WITH ASTM C3 |
| B. A MINIM FOR EAG | UM OF THREE (3) CYLINDERS SH CH STRENGTH AND TYPE OF CO | HALL BE TAKEN FOR EACH 50 CU. YD. OF CONCRETE OR FF NCRETE BEING CAST ON ANY DAY. | RACTION THEREC |
| . NO CON AIR CON CONCRE | ICRETE SHALL BE PLACED THAT ITENT SHALL BE MADE BY THE P ETE BEING PLACED. | DOES NOT MEET SLUMP OR AIR CONTENT REQUIREMENT RESSURE METHOD. SLUMP TESTS SHALL BE TAKEN FOR | S. ALL TESTS FO EACH 20 CU. YD. |
|). SLUMP I PORTIO TO THE BE COM | EXCEEDING THE SPECIFIED MAX NS OF THE SAME SAMPLE, WILL ARCHITECT AND ENGINEER. THE PLETED AT NO ADDITIONAL EXP | (IMUM, WHEN OCCURRING IN CONSECUTIVE TESTS MADE BE CAUSE FOR REJECTION OF THAT TRUCKLOAD AND SH E REPLACEMENT OF SUCH CONCRETE WITH THE SPECIFIE ENSE TO THE OWNER. | ON DIFFERENT ALL BE REPORTE D CONCRETE SH |
| THE COI a. COI b. QU/ c. LOO d. STF e. LIS f. AC g. AC h. SIT | NCRETE TEST REPORTS SHALL NCRETE SUPPLIER ANTITY OF CONCRETE REPRESE CATION OF ALL SAMPLES TAKEN RENGTH REQUIREMENT IN PSI A T OF ALL MATERIALS USED TUAL SLUMP TUAL AIR CONTENT PERCENT BY E CONDITIONS INCLUDING AIR T NCRETE TEMPERATURE | CONTAIN THE FOLLOWING INFORMATION: ENTED BY SAMPLE T 28 DAYS VOLUME EMPTERATURE, WEATHER, ETC. | |

- k. DATE SAMPLE WAS TAKEN
- I. NUMBER OF DAYS ON PROJECT SITE m. DATE TESTED

n. TEST RESULTS FOR 7 DAYS AND 28 DAYS AGE o. ANY OTHER NECESSARY INFORMATION TO EVALUATE TESTS

PLACING CONCRETE:

- A. PLACE CONCRETE IN COMPLIANCE WITH ACI 304 AND AS HEREIN SPECIFIED.
- B. BEFORE PLACING AND CONCRETE IN FORMWORK, THOROUGHLY CLEAN AND WASH OUT FORMS WITH WATER. C. IF EARTH AT BOTTOM OF FORMS HAS DRIED OUT, RE-WET SO THAT SOIL IS MOIST, BUT FREE OF STANDING WATER
- AND MUD. D. THOROUGHLY WET WOOD FORMS IMMEDIATELY BEFORE PLACING CONCRETE WHERE FORM COATINGS ARE NOT
- E. CONVEY CONCRETE FROM MIXER TO FINAL POSITION BY METHODS WHICH WILL PREVENT SEPARATION OR LOSS OF MATERIALS.
- F. MAXIMUM HEIGHT OF CONCRETE FREE FALL IS 4 FT. (U.N.O.)
- G. REGULATE RATE OF PLACEMENT SO CONCRETE SURFACE IS KEPT LEVEL THROUGHOUT, A MINIMUM BEING PERMITTED TO FLOW FROM ONE AREA TO ANOTHER, USE TREMIE HEADS SPACED AT APPROXIMATELY 10 FT.
- INTERVALS FOR PLACING CONCRETE IN WALLS. CONTROL RATE OF POUR CONSISTENT WITH FORM DESIGN. H. DEPOSIT CONCRETE IN CONTINUOUS OPERATION UNTIL SECTION BEING PLACED HAS BEEN COMPLETED.
- 19. FORMWORK
- A. DESIGN, ERECT, SHORE, BRACE, AND MAINTAIN FORMWORK, ACCORDING TO ACI 301, TO SUPPORT VERTICAL. LATERAL, STATIC, AND DYNAMIC LOADS, AND CONSTRUCTION LOADS THAT MIGHT BE APPLIED, UNTIL CONCRETE STRUCTURE CAN SUPPORT SUCH LOADS.
- B. CONSTRUCT FORMWORK SO CONCRETE MEMBERS AND STRUCTURES ARE OF SIZE, SHAPE, ALIGNMENT, ELEVATION, AND POSITION INDICATED, WITHIN TOLERANCE LIMITS OF ACI 117.
- C. CONSTRUCT FORMS TIGHT ENOUGH TO PREVENT LOSS OF CONCRETE MORTAR.
- D. COAT CONTACT SURFACES OF FORMS WITH FORM-RELEASE AGENT, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, BEFORE PLACING REINFORCEMENT.
- E. SUBMIT DIMENSIONED WALL PANEL SHOP DRAWINGS WITH ALL OPENINGS TO ARCHITECT FOR REVIEW.

UTILITIES.

CONCRETE SLAB ON GROUND NOTES

1. THE CONCRETE SLAB ON GROUND FOR THIS PROJECT IS PRESCRIPTIVE. NO STRUCTURAL DESIGN HAS BEEN PROVIDED THE CONCRETE SLAB ON GROUND HAS BEEN SPECIFIED BASED ON THE FOLLOWING ASSUMPTIONS:

A. MINIMUM SOIL BEARING PRESSURE OF 2500 PSF. B. SOIL CONSTANT "K" VALUE OF 100 PSI / IN.

THE SLAB ON GRADE CAN ACCOMMODATE A WORKING UNIFORM LOAD OF 100 PSF BASED ON SLAB THICKNESS AND GEOTECHNICAL CONSIDERATIONS.

4. THE FOLLOWING GUIDELINES SHALL APPLY TO THE LAYOUT OF CONTRACTION / CONTROL JOINTS IN THE SLAB. THESE JOINTS SHALL BE PROVIDED AT THE FOLLOWING SPACINGS (MAXIMUM) A. 14'-0" ON CENTER FOR 6" SLABS AND THINNER

B. 15'-0" ON CENTER FOR 7" SLABS AND THICKER

THE SLAB ON GRADE SHALL MEET THE FOLLOWING FLATNESS / LEVELNESS (FF / FL) REQUIREMENTS

A. TYPICAL FLOOR SLAB: FF 45 / FL 35

6. PROVIDE ALL LABOR, PRODUCTS, AND EQUIPMENT REQUIRED TO PROPERLY INSTALL AN UNDERSLAB VAPOR RETARDER UNDER ALL INTERIOR CONCRETE FLOOR SLABS ON GROUND. REFER TO DRAWINGS FOR REQUIRED LOCATIONS. 7. VAPOR RETARDER MATERIAL SHALL BE A MULTILAYER POLYETHYLENE SHEET MATERIAL CONFORMING TO ASTM E 1745,

CLASS "A", FOR A 15 MIL THICKNESS. VAPOR RETARDER SHALL HAVE A WATER VAPOR PERMEANCE OF LESS THAN 0.0254 PERMS ACCORDING TO ASTM F 1249. STEGO WRAP CLASS A VAPOR RETARDER OR APPROVED EQUAL PROVIDE ALL REQUIRED ACCESSORY MATERIALS BY THE VAPOR RETARDER, INCLUDING SEAM TAPE AND MASTIC.

ACCESSORY MATERIALS SHALL HAVE A WATER VAPOR PERMEANCE OF 0.3 PERMS OR LOWER ACCORDING TO ASTM E 96. INSTALLER SHALL PROCEED WITH APPLICATION OF THE VAPOR RETARDER ONLY AFTER SUBSTRATE CONSTRUCTION AND PENETRATING WORK HAVE BEEN COMPLETED AND ANY UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

10. INSTALLER SHALL COMPLY WITH ALL VAPOR RETARDER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AS WELL AS THE REQUIREMENTS OF ASTM E 1643. 11. UNROLL THE VAPOR RETARDER MATERIAL WITH THE LONGEST DIMENSION PARALLEL WITH THE DIRECTION OF THE

CONCRETE POUR. LAP OVER FOOTINGS OR SEAL TO FOUNDATION WALLS.

12. OVERLAP ALL JOINTS 6 INCHES AND SEAL WITH MANUFACTURER PROVIDED SEAM TAPE. SEAL ALL PENETRATIONS ACCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

14. NO PENETRATION OF VAPOR RETARDER MATERIAL IS ALLOWED EXCEPT FOR REINFORCING STEEL AND PERMANENT

15. INSTALLER SHALL REPAIR DAMAGED AREAS BY CUTTING RECTANGULAR PATCHES OF THE VAPOR RETARDER MATERIAL OVERLAPPING THE DAMAGED AREA 6 INCHES AND TAPING ALL FOUR SIDES WITH MANUFACTURER PROVIDED SEAM TAPE

MASONRY / CMU NOTES

ALL MASONRY WORK SHALL BE IN ACCORDANCE WITH THE PUBLICATIONS "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" - TMS 402 LATEST EDITION, AND "SPECIFICATION FOR MASONRY STRUCTURES" - TMS 602, LATEST EDITION, OR EDITIONS AS ADOPTED BY THE GOVERNING BUILDING CODES REFERENCED IN THE GENERAL NOTES. HOLLOW LOAD BEARING UNITS SHALL BE NORMAL WEIGHT CONFORMING TO ASTM C90, WITH A MINIMUM NET COMPRESSIVE STRENGTH OF 2000 PSI (fm = 2000 PSI).

3. UNITS SHALL BE MANUFACTURER'S STANDARD UNITS WITH NOMINAL FACE DIMENSION OF 16" LONG.

4. PROVIDE SPECIAL SHAPES WHERE SHOWN AND WHERE REQUIRED FOR LINTELS, CORNERS, JAMBS, SASH, JOINTS, HEADERS, BONDING, AND OTHER SPECIAL CONDITIONS.

MORTAR SHALL BE TYPE "M" OR "S", CONFORMING TO ASTM C270.

 COARSE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8". A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI, AND A SLUMP BETWEEN 8" AND 11". JOB SITE MIXING OF GROUT SHALL NOT BE PERMITTED. DO NOT USE MIX DESIGNS OTHER THAN THE GROUT MIX APPROVED FOR MASONRY CONSTRUCTION

7. VERTICAL REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS IN CELLS FULLY FILLED WITH COARSE GROUT, ALL ICALLY REINFORCED WALLS SHALL HAVE DOWELS THAT, AT A MINIMUM, MATCH THE MAIN VERTICAL BAR SIZE AND SPACING, UNLESS OTHERWISE NOTED.

WHEN A FOUNDATION DOWEL DOES NOT ALIGN WITH THE REQUIRED LOCATION OF A REINFORCED VERTICAL CORE. IT SHALL NOT BE SLOPED MORE THAN 1" HORIZONTALLY IN 6" VERTICALLY. ADJACENT CORES SHALL BE FULLY GROUTED AS REQUIRED TO ENSURE THAT DOWEL IS IN A FULLY GROUTED CORE 9. VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT THE TOP AND BOTTOM OF THE BAR, AND AT A MAXIMUM

SPACING OF 10'-0" OR 192 X THE BARD DIAMETER, WHICHEVER IS LESS. REINFORCEMENT SHALL BE PLACED AT THE CENTER OF THE MASONRY CELL, TYPICAL, UNLESS OTHERWISE NOTED. SEE TYPICAL GROUTING DETAILS FOR ADDITIONAL INFORMATION

10. ALL REINFORCEMENT SHALL BE LAPPED A MINIMUM OF 50X THE BAR DIAMETER. EXTEND ALL VERTICAL REINFORCEMENT TO WITHIN 2" OF THE TOP OF WALL OR COLUMN UNLESS OTHERWISE NOTED.

11. HORIZONTAL JOINT REINFORCEMENT IN ALL WALLS SHALL BE STANDARD LADDER TYPE (ASTM A-82 #9 GAUGE WIRE) REINFORCEMENT SPACED AT 16" O.C., UNLESS OTHERWISE NOTED. WIRE SHALL BE HOT-DIPPED GALVANIZED.

12. SPLICED WIRE REINFORCEMENT SHALL BE LAPPED AT LEAST 8" AND SHALL CONTAIN AT LEAST ONE CROSS-WIRE OF EACH PIECE OF REINFORCEMENT WITHIN THE 8" LAP. LAP WITH STANDARD PRE-FABRICATED "T" AND "L" SHAPED PIECES AT WALL INTERSECTIONS AND CORNERS. JOINT REINFORCEMENT SHALL NOT BE CONTINUOUS THROUGH EXPANSION OR CONTROL JOINTS. REFERENCE STRUCTURAL PLANS AND TYPICAL DETAILS FOR JOINT LOCATIONS AND DETAILS.

13. WHERE BEAMS FRAME INTO MASONRY WALLS, PROVIDE A MINIMUM OF 3 COURSES HIGH BY 3 CELLS WIDE (24" X 24") SOLID GROUTED MASONRY. WHERE STEEL BEAMS FRAME INTO MASONRY WALLS, PROVIDE A 24" X 24" BLOCKOUT FOR SOLID CONCRETE POUR WITH EMBED PLATE AS REQUIRED. REFERENCE STRUCTURAL PLAN AND STRUCTURAL DETAILS.

14. PROVIDE PRECAST CONCRETE LINTELS OVER ALL OPENINGS UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS. BASIS OF DESIGN FOR PRECAST CONCRETE LINTEL PRODUCTS IS CAST-CRETE, INC. CONTRACTOR MAY ELECT TO SOURCE ALTERNATE PROVIDER. SUBMIT PRODUCT DATA FOR ENGINEER REVIEW.

15. PROVIDE A FULLY GROUTED KNOCK-OUT BLOCK OR U-BLOCK REINFORCED WITH (1) #5 CONTINUOUS AT THE SILL OF ALL WINDOW OPENINGS. EXTEND 16" BEYOND EACH SIDE OF THE OPENING, TYPICAL. 16. MORTAR PLACEMENT:

A. USE BED JOINT BETWEEN 1/4" (MINIMUM) AND 3/4" (MAXIMUM) THICK AT FIRST COURSE BEARING ON FOUNDATION B. USE 3/8" THICK JOINTS BETWEEN ALL OTHER UNITS.

C. TOOL ALL JOINTS WITH A ROUND JOINTER WHEN THE MORTAR IS THUMBPRINT HARD, UNLESS OTHERWISE REQUIRED BY THE CONTRACT DOCUMENTS.

D. PLACE MORTAR ON CLEAN UNITS WHILE THE MORTAR IS SOFT AND PLASTIC.

E. DO NOT DISTURB THE UNIT AFTER IT IS INITIALLY POSITIONED, EXCEPT FOR FULLY SEATING AND LEVELING.

F. PLACE MORTAR SO THAT ALL JOINTS OF SOLID UNITS ARE FULLY FILLED WITH MORTAR.

G. FILL THE BED AND HEAD JOINTS OF HOLLOW UNITS WITH MORTAR. MORTAR SHALL BE PLACED IN WIDTHS EQUAL TO THE FULL WIDTH OF THE FACE SHELL, MINIMUM.

H. MORTAR THE CROSS WEBS IN HOLLOW UNITS IN THE FOLLOWING SITUATIONS:

ADJACENT TO CELLS TO BE GROUTED FOR PARTIALLY GROUTED CONSTRUCTION.

b. AT THE STARTING COURSE BEARING ON FOUNDATIONS OR OTHER STRUCTURAL SUPPORTS.

c. ALL PIERS, COLUMNS, AND PILASTER UNITS THAT ARE TO BE FULLY FILLED WITH GROUT. REMOVE PROTRUSIONS OF MORTAR INTO COLLAR JOINT CAVITIES AND CELLS OF HOLLOW UNITS THAT ARE TO BE GROUTED SOLID.

J. DO NOT SLUSH MORTAR INTO HEAD JOINTS

K. FILL ALL HOLES IN THE MORTAR JOINTS PRIOR TO GROUTING WALL

17. PROVIDE ADEQUATE BRACING AND SUPPORT OF MASONRY UNTIL PERMANENT CONSTRUCTION IS IN PLACE

18. ALL INTERSECTION LOAD BEARING WALLS SHALL BE TIED TOGETHER IN RUNNING BOND UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," - AISC 360, LATEST EDITION AS ADOPTED BY NOTED GOVERNING BUILDING CODES.

2. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST EDITION CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.

- 3. ALL FABRICATION AND ERECTION WORK SHALL BE PERFORMED BY AISC CERTIFIED FABRICATORS AND ERECTORS.
 - STRUCTURAL SHAPE WIDE FLANGE (W-) ANGLES, PLATES, CHANNEL SHAPES ANCHOR RODS (ANCHOR BOLTS)
 - PIPE (STD, XS, XXS) STEEL TUBE - SQUARE / RECT. STEEL TUBE - ROUND HIGH STRENGTH BOLTS

HARDENED WASHERS

ASTM A53, GRADE B ASTM A500, GRADE C ASTM A500, GRADE C ASTM A325 ASTM F436 ASTM A108, TYPE B, GRADE 1010 - 1020

ASTM F1554, GRADE 36

ASTM F1554, GRADE 55

<u>'IELD STRENGTH</u>

Fy = 50 KSI

Fy = 36 KSI

Fy = 36 KSI

Fy = 36 KSI

Fy = 50 KSI

Fy = 46 KSI

HEADED SHEAR CONNECTORS 5. ALL STEEL SHAPES, PLATES, FASTENERS, ETC. WHICH ARE EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED.

MATERIAL SPEC

ASTM A992

ASTM A36

- ALL STEEL SHAPES, PLATES, FASTENERS, ETC. WHICH ARE EXPOSED TO SOIL SHALL BE ENCASED IN CONCRETE. 7. ALL INTERIOR STRUCTURAL STEEL SHALL BE PAINTED WITH A RUST INHIBITIVE PRIMER. DO NOT USE PRIMER AT
- MEMBERS THAT ARE TO RECEIVE SPRAY-ON FIRE PROOFING. COORDINATE PRIMER WITH ARCHITECT AND OWNER'S PAINTING REQUIREMENTS 8. AN APPROVED LICENSED TESTING AGENCY SHALL VISUALLY INSPECT ALL WELDS, BOLTED CONNECTIONS, METAL DECK
- ATTACHMENT, AND OTHER STRUCTURAL STEEL CONNECTIONS. 9. FIELD STRUCTURAL STEEL TO BE INSPECTED BY QUALIFIED INSPECTORS APPROVED BY THE STRUCTURAL ENGINEER
- INSPECTION. INSPECTORS MUST BE NOTIFIED OF ALL PHASES OF CONSTRUCTION BY THE GENERAL CONTRACTOR. 10. ALL WELDED CONNECTIONS SHALL BE COMPLETED WITH E70XX ELECTRODES. SHOP AND FIELD WELDS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE OF BUILDINGS AWS D1.1. WELDS SHALL DEVELOP THE FULL STRENGTH OF THE MATERIALS BEING WELDED UNLESS NOTED OTHERWISE. ALL WELDS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE (ANSI/AWS D1.1).
- 11. TOUCH UP FIELD WELDS AND ANY DAMAGED AREAS OF PAINT IN FIELD AFTER WELDED. USE TWO COATS OF COLD GALVANIZING COMPOUND PAINT FOR TOUCH UP OF GALVANIZED STEEL.
- 12. ALL HSS AND PIPE SHAPES SHALL HAVE CLOSURE PLATES AND CONTINUOUS WELDS TO SEAL THE SECTIONS.
- 13. BEFORE PROCEEDING WITH ERECTION, AND WITH THE STEEL ERECTOR PRESENT, VERIFY ELEVATIONS OF CONCRETE AND MASONRY BEARING SURFACES AND LOCATIONS OF ANCHORAGES FOR COMPLIANCE WITH REQUIREMENTS. DO NOT PROCEED WITH ERECTION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- 14. NON-METALLIC, NON-SHRINK GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL CONSIST OF A PREMIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF CRD-C621, ASTM C827, AND C109. GROUT STRENGTH TO BE 6000 PSI (MIN) WHEN BEARING ON 3000 PSI CONCRETE, AND 8000 PSI (MIN) WHEN BEARING ON 4000 PSI CONCRETE.
- 15. SPLICING OF STRUCTURAL STEEL WHERE NOT DETAILED IS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF ENGINEEF

OPEN WEB STEEL JOIST NOTES

- 1. DESIGN, DETAILING, FABRICATION, AND ERECTION OF STEEL JOISTS AND JOIST GIRDERS SHALL BE IN ACCORDANCE WITH "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," - AISC 360, LATEST EDITION AND WITH THE LATEST CODES AND STANDARDS OF THE STEEL JOIST INSTITUTE, SJI.
- JOISTS SHALL BE DESIGNED FOR THE COMBINED DEAD, LIVE, AND WIND LOADS AS NOTED IN THE LOAD TABLES AND AS NOTED ON PLAN. IN ALL CASES, JOISTS SHALL NOT BE DESIGNED FOR LESS LOAD THAN PRESCRIBED IN THE STANDARD JOIST LOADING TABLES PER THE STEEL JOIST INSTITUTE
- 3. PROVIDE UPLIFT BRIDGING AND STANDARD JOIST BRIDGING IN ACCORDANCE WITH THE LATEST SJI SPECIFICATIONS. PROVIDE X-BRACING IN ACCORDANCE WITH THE LATEST SJI SPECIFICATIONS, WHERE ANY BRIDGING LINE IS DISCONTINUOUS FOR ANY REASON, AND AS FOLLOWS:
- A. AT ALL HORIZONTAL BRIDGING LINES INCLUDING UPLIFT BRIDGING AT INTERVALS NOT TO EXCEED 200 FT. B. AT ALL HORIZONTAL BRIDGING LINES INCLUDING UPLIFT BRIDGING WHERE TERMINATING AT OUTSIDE (EDGE) BEAMS (EITHER DIRECTLY ADJACENT OR NEXT BAY).
- C. BOTH SIDES OF INTERIOR W BEAMS WHERE JOISTS ARE LOCATED (EITHER DIRECTLY ADJACENT OR NEXT BAY).
- 5. WELD ALL STEEL JOISTS TO SUPPORTING STRUCTURAL STEEL MEMBERS AS SHOWN ON THE DRAWINGS, ACCORDING TO SJI AS MINIMUM, BUT NOT LESS THAN THE FOLLOWING UNLESS APPROVED BY EOR:
- A. MINIMUM JOIST WELD = 3/16" FILLET, 2" LONG EACH SIDE OR 1/8" FILLET, 3" LONG EACH SIDE. B. MINIMUM JOIST GIRDER WELD = 1/4" FILLET, 4" LONG EACH SIDE.
- 6. JOIST CAMBER MAY BE USED IN COMPUTING THE JOIST DEFLECTION. LIVE LOAD DEFLECTION MUST NOT EXCEED SPAN/360 UNDER UNIFORM LOADING. CAMBER MUST NOT BE CONSIDERED FOR CONCENTRATED LOADS FROM SUSPENDED EQUIPMENT
- 7. BOTTOM CHORD OF THE K AND KCS SERIES JOIST SHALL BE FABRICATED OF TEES OR ANGLES, IN LIEU OF RODS.
- 8. COORDINATE THE EXACT LOCATION OF ALL MECHANICAL AND ARCHITECTURAL OPENINGS WITH THE MECHANICAL AND ARCHITECTURAL DRAWINGS AS WELL AS WITH OTHER SUBCONTRACTORS PRIOR TO FABRICATION OF JOISTS.
- 9. ALL HANGERS SUPPORTING MECHANICAL EQUIPMENT, PIPES, AND OTHER CONCENTRATED LOADS TO BE SUPPORTED BY THE JOISTS SHALL BE LOCATED AT THE JOIST PANEL POINTS. OR PROVIDE JOIST STIFFENERS. JOIST ENGINEER SHALL DESIGN ALL JOISTS FOR A MINIMUM 150 LB BEND-CHECK FOR BOTH TOP AND BOTTOM CHORDS UNLESS A GREATER LOAD IS SPECIFIED IN THE DRAWINGS.
- ALL JOISTS ON COLUMN CENTERLINES SHALL BE SECURED BY 1/2" DIAMETER A325 BOLTS AT THE TOP CHORD BEARING. THE BOTTOM CHORD SHALL BE EXTENDED TO THE COLUMN. IF NO JOIST IS PRESENT AT COLUMN CENTERLINE, THE CLOSEST ADJACENT JOISTS ON EACH SIDE OF THE COLUMN SHALL FOLLOW THIS REQUIREMENT. 11. STEEL JOISTS AND JOIST GIRDERS SHALL HAVE MANUFACTURER'S STANDARD BEVELED ENDS OR SLOPED SEATS IF ROOF
- SLOPE EXCEEDS 1/4" PER 12 INCHES. 12. STEEL JOISTS SHALL BEAR 4" MINIMUM ON MASONRY / CONCRETE, AND 2-1/2" MINIMUM ON STEEL U.N.O. JOISTS BEARING
- ON MASONRY / CONCRETE SHAL BEAR ON AN EMBEDDED STEEL PLATE. 13. WELDING OF JOISTS BEARING ON STEEL SHALL BE AS SPECIFIED BY THE SJI AND WELDING SHALL BE IN ACCORDANCE
- WITH THE AWS-D.1 UNLESS NOTED OTHERWISE. 14. STEEL JOISTS AND JOIST GIRDERS SHALL BE PRIMED PAINTED WITH ONE COAT OF GRAY PRIMER MEETING THE MINIMUM
- REQUIREMENTS OF SSPC-PAINT 25 OR STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION 15-68T, TYPE I.
- 15. JOIST MANUFACTURER SHALL DESIGN ROOF JOISTS FOR THE UPLIFT WIND PRESSURE INDICATED IN TABLE 1: DESIGN LOADS AND THE WIND PRESSURE ZONE PLAN. PROVIDE ADDITIONAL BRIDGING AS REQUIRED. SHOW ALL BRIDGING AND DETAILS ON THE JOIST SHOP DRAWINGS.
- 16. JOIST MANUFACTURER SHALL PROVIDE A WRITTEN STATEMENT VERIFYING THAT ALL STEEL JOISTS AND JOIST GIRDERS ARE DESIGNED IN ACCORDANCE WITH ALL THE DESIGN REQUIREMENTS OF THE PROJECT. THIS STATEMENT SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

METAL ROOF DECK NOTES

- I. DETAILING, FABRICATION, AND ERECTION OF STEEL DECK SHALL BE IN ACCORDANCE WITH THE LATEST STEEL DECK INSTITUTE SPECIFICATIONS, AWS, AND CONTRACT DOCUMENTS. DECK SHALL CONFORM TO "BASIC DESIGN SPECIFICATIONS" AS ADOPTED BY THE STEEL DECK INSTITUTE, SDI.
- 2. STEEL DECK PROFILE SHALL CONFORM TO FACTORY MUTUAL REQUIREMENTS.
- METAL ROOF DECK SHALL BE MINIMUM 1-1/2" DEEP 22 GA., TYPE B (AS IDENTIFIED BY SDI) PAINTED WHITE UNDERSIDE AND GRAY TOP SIDE STEEL DECK CONFORMING TO ASTM A1008 OR ASTM A1039 WITH MINIMUM YIELD STRESS OF 50 KSI. REFERENCE DRAWINGS FOR REQUIRED DECK STRENGTH. DECK FINISH SHALL BE SHOP PRIMED WITH BAKED-ON, LEAD-AND CHROMATE-FREE RUST-INHIBITIVE PRIMER COMPLYING WITH PERFORMANCE REQUIREMENTS OF SSPC-PAINT 25.
- 4. DECK SUPPLIER SHALL PROVIDE ANY MISCELLANEOUS CLOSURE PIECES, POUR STOPS, DRAIN SUMP PANS, ETC. TO COMPLETE PROJECT. MISCELLANEOUS ITEMS SHALL MATCH (AT A MINIMUM) THE STEEL DECK FINISH AND THICKNESS
- 5. THE DECK SHALL BE PLACED ON THE SUPPORTING FRAMEWORK WITH A MINIMUM END LAP OF TWO INCHES CENTERED OVER THE SUPPORTS. THE DECK SHALL BE ATTACHED TO THE SUPPORTS, AND THE SIDE LAP OF ADJACENT UNITS IN THE PATTERN SHOWN ON THE CONTRACT DRAWINGS.
- 6. ALL ROOF DECK OPENINGS 12" DIAMETER OR LARGER ARE TO HAVE SUPPORT ANGLES PER TYPICAL DECK OPENING DETAIL, INCLUDING OPENINGS FOR ROOF SUMP PANS.
- 7. ALL ROOF DECK OPENINGS 6" DIAMETER OR LARGER (UP TO 12" DIAMETER) SHALL HAVE LIGHT GAUGE DECK REINFORCEMENT PER TYPICAL DECK REINFORCEMENT DETAIL.
- 8. NO LOADS SHALL BE HUNG FROM THE ROOF DECK.
- 9. ROOF DECK SHALL BE LAID OUT SUCH THAT DECKING SHALL SPAN THREE SPANS WITHOUT INTERRUPTION.
- 10. DECK AND SUPPORTING MEMBERS DAMAGED BY EXCESS WELDING HEAT SHALL BE REPAIRED OR REPLACED AS DETERMINED BY THE ARCHITECT OR ENGINEER.
- 11. PUDDLE WELDS SHALL BE AT LEAST 5/8" EFFECTIVE DIAMETER OR AN ELONGATED WELD HAVING AN EQUAL PERIMETER. FILLET AND SEAM WELDS, WHEN USED, SHALL BE A MINIMUM OF 1-1/2" LONG. WELD METAL SHALL PENETRATE ALL LAYERS OF DECK MATERIAL AT END LAPS AND SIDE JOINTS AND HAVE SOLID FUSION TO THE SUPPORTING MEMBERS.





| TABLE 1: DESIGN LOADS & DESIGN CRITERIA | | | | | |
|---|------|---------|------------------------|---------|----------|
| DEAD LOADS | | | LIVE LOADS | | |
| BUILDING COMPONENT | WE | IGHT | LOAD CONDITION | L | OAD |
| TPO ROOFING | 2.0 | PSF | ROOF LIVE LOAD | 20.0 |) PSF |
| INSULATION | 2.0 | PSF | ROOF CONCENTRATED | 150 |) LBS |
| METAL DECK | 2.0 | PSF | | | |
| STEEL JOISTS | 3.0 | PSF | | | |
| FIRE SPRINKLERS | 2.0 | PSF | | | |
| MECHANICAL | 8.0 | PSF | | | |
| MISCELLANEOUS | 6.0 | PSF | | | |
| | | | | | |
| TOTAL DEAD LOAD | 25.0 | PSF | | | |
| | W | | D CRITERIA | | |
| | - | | | | |
| BASIC WIND SPEED (U | LT) | 139 MPH | BUILDING RISK CATEGO | JRY | II |
| BASIC WIND SPEED (A | SD) | 108 MPH | EXPOSURE CATEGOR | ₹Y | С |
| VELOCITY PRESSURE, qr | ULT) | 37.9 | ENCLOSURE CLASSIFICA | TION | ENCLOSED |
| VELOCITY PRESSURE, qh (ASD) 22.8 | | | INTERNAL PRESSURE COEF | FICIENT | +/- 0.18 |
| NOTE <u>S:</u> | | | | | |
| | | | | | |

ROOF LIVE LOADS MAY BE REDUCED, WHERE APPLICABLE, PER FLORIDA BUILDIN 1607.12.2.1. REDUCED UNIFORM LIVE LOAD SHALL NOT BE LESS THAN 12.0 PSF. CONCENTRATED ROOF LOADS OVER STEEL JOIST ROOFS SHALL BE APPLIED AS BEND CHECK LOADS TO THE ROOF JOISTS AT THE TOP AND BOTTOM CHORDS (NOT SIMULTANEOUSLY).

TABLE 2: STRENGTH DESIGN (ULTIMATE) WIND PRESSURES

| | | | <u> </u> | | |
|--|------------|------------|------------|-----------|-----------|
| POSITIVE WIND PRESSURES ON WALLS & WALL OPENINGS | | | | | |
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND PRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| WALL ZONE (4) | 41.0 PSF | 39.1 PSF | 36.7 PSF | 34.9 PSF | 33.1 PSF |
| WALL ZONE (5) | 41.0 PSF | 39.1 PSF | 36.7 PSF | 34.9 PSF | 33.1 PSF |
| NEGATIVE | E WIND PRE | SSURES ON | WALLS & W | ALL OPENI | NGS |
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND PRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| WALL ZONE (4) | -44.4 PSF | -42.6 PSF | -40.2 PSF | -38.3 PSF | -36.5 PSF |
| WALL ZONE (5) | -54.6 PSF | -51.0 PSF | -46.2 PSF | -42.6 PSF | -38.9 PSF |
| POSITIVE | WIND PRES | SURES ON I | ROOFING & | ROOF FRAM | ling |
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND PRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| ROOF ZONE (1) | 18.2 PSF | 17.1 PSF | 16.0 PSF | 16.0 PSF | 16.0 PSF |
| ROOF ZONE 1 | 18.2 PSF | 17.1 PSF | 16.0 PSF | 16.0 PSF | 16.0 PSF |
| ROOF ZONE 2 | 18.2 PSF | 17.1 PSF | 16.0 PSF | 16.0 PSF | 16.0 PSF |
| ROOF ZONE 3 | 18.2 PSF | 17.1 PSF | 16.0 PSF | 16.0 PSF | 16.0 PSF |
| NEGATIVE | WIND PRES | SURES ON | ROOFING & | ROOF FRAM | /ING |
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND FRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| ROOF ZONE (1') | -41.0 PSF | -41.0 PSF | -41.0 PSF | -41.0 PSF | -35.2 PSF |
| ROOF ZONE 1 | -71.3 PSF | -66.6 PSF | -60.4 PSF | -55.7 PSF | -51.0 PSF |
| ROOF ZONE 2 | -94.0 PSF | -88.0 PSF | -80.0 PSF | -74.0 PSF | -67.9 PSF |
| ROOF ZONE 3 | -128.2 PSF | -116.1 PSF | -100.1 PSF | -88.0 PSF | -75.9 PSF |
| NOTES: | | | | | |
| | | | | | |

WIND PRESSURES IN THE TABLES ABOVE ARE BASED ON CALCULATIONS FROM ASCE 7-16. OVERHANG PRESSURES IN THE TABLES ABOVE SHALL APPLY TO ALL ROOFS OVER BALCONIES, BREEZEWAYS,

AND COVERED ENTRIES. COORDINATE WITH ARCHITECTURAL DRAWINGS. WHEN THE "BASIC WIND SPEED (ULT)" IN "TABLE 1: DESIGN LOADS & DESIGN CRITERIA" IS 140 MPH OR HIGHER, PROVIDE IMPACT RESISTANT GLAZING AS REQUIRED FOR WIND BORNE DEBRIS PER FLORIDA BUILDING CODE.

MAXIMUM ALLOWABLE DEAD LOADS TO BE USED TO RESIST UPLIFT SHALL BE AS FOLLOWS:

A. NET UPLIFT = ULTIMATE UPLIFT - 10 PSF DEAD LOAD B. NET UPLIFT = ALLOWABLE UPLIFT - 6 PSF DEAD LOAD

TABLE 3: ALLOWABLE STRESS (ASD) WIND PRESSURES POSITIVE WIND PRESSURES ON WALLS & WALL OPENINGS

| 1 OOHIVE | | | | | 00 |
|--|-----------|------------|-----------|-----------|-----------|
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND PRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| WALL ZONE (4) | 24.6 PSF | 23.5 PSF | 22.0 PSF | 21.0 PSF | 19.9 PSF |
| WALL ZONE 5 | 24.6 PSF | 23.5 PSF | 22.0 PSF | 21.0 PSF | 19.9 PSF |
| NEGATIVE | WIND PRE | SSURES ON | WALLS & W | ALL OPENI | NGS |
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND PRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| WALL ZONE (4) | -26.6 PSF | -25.5 PSF | -24.1 PSF | -23.0 PSF | -21.9 PSF |
| WALL ZONE 5 | -32.8 PSF | -30.6 PSF | -27.7 PSF | -25.5 PSF | -23.4 PSF |
| POSITIVE | WIND PRES | SURES ON I | ROOFING & | ROOF FRAM | ling |
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND PRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| ROOF ZONE (1') | 10.9PSF | 10.2 PSF | 9.6 PSF | 9.6 PSF | 9.6 PSF |
| ROOF ZONE 1 | 10.9PSF | 10.2 PSF | 9.6 PSF | 9.6 PSF | 9.6 PSF |
| ROOF ZONE 2 | 10.9PSF | 10.2 PSF | 9.6 PSF | 9.6 PSF | 9.6 PSF |
| ROOF ZONE 3 | 10.9PSF | 10.2 PSF | 9.6 PSF | 9.6 PSF | 9.6 PSF |
| NEGATIVE | WIND PRES | SURES ON | ROOFING & | ROOF FRAM | /ING |
| | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA | EFF. AREA |
| WIND PRESSURE ZONE | ≤ 10 SF | 20 SF | 50 SF | 100 SF | ≥ 200 SF |
| ROOF ZONE (1') | -24.6 PSF | -24.6 PSF | -24.6 PSF | -24.6 PSF | -21.1 PSF |
| ROOF ZONE 1 | -42.8 PSF | -39.9 PSF | -36.2 PSF | -33.4 PSF | -30.6 PSF |
| ROOF ZONE 2 | -56.4 PSF | -52.8 PSF | -48.0 PSF | -44.4 PSF | -40.7 PSF |
| ROOF ZONE 3 | -76.9 PSF | -69.6 PSF | -60.0 PSF | -52.8 PSF | -45.5 PSF |
| NOTES: | | | | | |
| WIND PRESSURES IN THE TABLES ABOVE ARE BASED ON CALCULATIONS FROM ASCE 7-16. OVERHANG PRESSURES IN THE TABLES ABOVE SHALL APPLY TO ALL ROOFS OVER BALCONIES, BREEZEWAYS, AND COVERED ENTRIES. COORDINATE WITH ARCHITECTURAL DRAWINGS. | | | | | |

WHEN THE "BASIC WIND SPEED (ULT)" IN "TABLE 1: DESIGN LOADS & DESIGN CRITERIA" IS 140 MPH OR HIGHER, PROVIDE IMPACT RESISTANT GLAZING AS REQUIRED FOR WIND BORNE DEBRIS PER FLORIDA BUILDING CODE. MAXIMUM ALLOWABLE DEAD LOADS TO BE USED TO RESIST UPLIFT SHALL BE AS FOLLOWS:

A. NET UPLIFT = ULTIMATE UPLIFT - 10 PSF DEAD LOAD B. NET UPLIFT = ALLOWABLE UPLIFT - 6 PSF DEAD LOAD





<u>LEGEND</u>

| EL = #' - ##" T.O. FTG | INDICATES TOP OF CONCRETE FOOTING ELEVATION. |
|---------------------------|---|
| F#.# | INDICATES SPREAD FOOTING TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT. |
| CF#.# | INDICATES CONTINUOUS FOOTING TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT. |
| TS#.# | INDICATES THICKENED SLAB EDGE TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT. |
| C# | INDICATES STEEL COLUMN TYPE. SEE STEEL COLUMN SCHEDULE FOR COLUMN SIZE AND BASEPLATE DETAILS. |
| <u> </u> | INDICATES STEPPED FOOTING PER DETAILS 2/S601 AND 3/S601. |
| S.J. | INDICATES SLAB SAWCUT JOINT PER DETAIL 1/S602. |
| C.S.J. | INDICATES CONSTRUCTION JOINT PER TYPICAL DETAIL 2/S602 OR AS REQUIRED PER CONSTRUCTION SEQUENCING. |
| | INDICATES 8" REINFORCED MASONRY WALL -PROVIDE VERT #5 AT 32" O.C. (MAX) U.N.O. GROUT WALLS SOLID BELOW SLAB. |
| | INDICATES VERTICAL REINFORCEMENT AT CENTER OF CMU WALL GROUTED SOLID. BAR SIZE MUST MATCH WALL REINF. NOTED |
| | SLAB-ON-GRADE NOT IN CONTRACT. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. |

FOUNDATION PLAN NOTES:

- 1. REFERENCE THE STRUCTURAL GENERAL NOTES ON DRAWINGS S001 & S002. GENERAL NOTES INCLUDE CODES AND STANDARDS, DESIGN LOADS AND OTHER REQUIREMENTS.
- 2. CONTRACTOR TO VERIFY ALL ELEVATIONS AND DIMENSIONS SHOWN WITH ARCHITECTURAL DRAWINGS AND EQUIPMENT SUPPLIERS SHOP DRAWINGS PRIOR TO FABRICATION AND / OR START OF CONSTRUCTION.
- 3. COORDINATE EXISTING / INSTALLED UNDERGROUND UTILITIES AND OTHER BURIED PIPES AND CONDUITS PRIOR TO PLACEMENT OF FOOTINGS. DO NOT PLACE BUILDING FOUNDATIONS OVER EXISTING / INSTALLED PIPES AND CONDUITS UNLESS APPROVED OTHERWISE.
- 4. T.O. FOOTING ELEVATION IS AT -1'-4" (U.N.O.) THIS IS A REFERENCE ELEVATION ONLY. SEE FOUNDATION DETAIL SHEETS AND SCHEDULES FOR FOUNDATION SIZE AND REINFORCEMENT
- 5. EXTEND ALL CONTINUOUS FOOTING REINFOREMENT INTO ADJACENT SPREAD FOOTINGS A
- MINIMUM DISTANCE OF 4'-0".
 6. ALL WALLS AND COLUMNS ARE TO BE CENTERED ON FOUNDATIONS UNLESS NOTED OTHERWISE. SEE PLAN DIMENSIONS FOR OFFSETS.
- 7. PREPARE THE SLAB SUB-BASE AND COMPACT THE SOIL PER THE PROJECT GEOTECHNICAL REPORT, THE CIVIL DRAWINGS, AND THE STRUCTURAL GENERAL NOTES. IF ANY OF THESE DRAWINGS OR NOTES ARE IN CONFLICT, THE CONTRACTOR MUST ALERT THE ENGINEER FOR CLARIFICATION PRIOR TO START OF CONSTRUCTION.
- 8. T.O. SLAB ELEVATION IS AT 0'-0" (U.N.O.) THIS IS A REFERENCE ELEVATION ONLY. SEE CIVIL ELEVATIONS FOR SITE FINISHED FLOOR ELEVATION PER NAVD88. SEE FOUNDATION AND SLAB ON GRADE DETAIL SHEETS.
- 9. SLAB ON GROUND SHALL BE A 4" THICK MINIMUM CONCRETE, UNLESS NOTED OTHERWISE. REINFORCE SLAB WITH 3.0 LBS / CUBIC YARD OF FIBER MESH. (ALTERNATE REINFORCEMENT TO FIBERMESH SHALL BE 6x6 - W1.4xW1.4 WELDED WIRE MESH). PROVIDE A 15 MIL VAPOR RETARDER ON TERMITE TREATED COMPACTED SUBGRADE. SEE PLAN FOR SAW-CUT JOINT SPACING
- PROVIDE (2) #4 x 4'-0" LG BARS AT TOP OF SLAB AT ALL RE-ENTRANT CORNERS AND DISCONTINUOUS ENDS OF SLAB SAW-CUT JOINTS. SEE DETAIL 6/S602.
- 11. REFERENCE THE ARCHITECTURAL DRAWINGS FOR SLAB EDGES, FLOOR SLOPES, WALL OPENINGS, AND OTHER DIMENSIONS NOT GIVEN. CONTRACTOR MUST COORDINATE AND VERIFY ALL DIMENSIONS WITH PROJECT ARCHITECT PRIOR TO FABRICATION.







| (# - ##) | |
|-----------|--------------------------------------|
| c = #" | INDICATES REQUIR |
| C# | INDICATES STEEL O SCHEDULE FOR CO |
| CC# | INDICATES CONCRI SCHEDULE FOR CO |
| R.D. 🚫 | INDICATES ROOF D ARCHITECTURAL AI |
| — — | INDICATED BEAM S |

(#' - ##") INDICATES BOTTOM OF DECK ELEVATION. SEE PLAN. RED POSITIVE CAMBER IN W-BEAM.

> COLUMN TYPE. SEE STEEL COLUMN OLUMN SIZE AND BASEPLATE DETAILS.

RETE COLUMN TYPE. SEE CONCRETE COLUMN OLUMN SIZE AND REINFORCEMENT DETAILS. DRAIN LOCATIONS. REFER TO AND MEP DRAWINGS FOR COORDINATION. SPLICE CENTERLINE

- 1. REFERENCE THE STRUCTURAL GENERAL NOTES ON DRAWINGS S001 & S002. GENERAL NOTES INCLUDE CODES AND STANDARDS, DESIGN LOADS AND OTHER REQUIREMENTS.
- 2. TOP OF STEEL ELEVATIONS MAY VARY. SEE THE STRUCTURAL AND ARCHITECTURAL PLANS AND SECTIONS FOR REQUIRED ELEVATIONS. (#'-##") INDICATES TOP OF STEEL ELEVATION. 3. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS AND EQUIPMENT SUPPLIERS SHOP
- DRAWINGS PRIOR TO FABRICATION AND/OR START OF CONSTRUCTION. 4. ROOF DECK SHALL BE GALV 1-1/2" - 20GA WIDE RIB METAL DECK, (U.N.O.) SPANNING OVER OPEN-WEB STEEL JOISTS SPACED AT 6'-0" O.C. (MAX) OR AS INDICATED ON ROOF FRAMING PLAN.

| DEC | k se | СТ | ION PROF | PERTIES |
|-----|------|----|----------|----------------------|
| | lp | = | 0.201 | in ⁴ / ft |
| | In | = | 0.222 | in ⁴ / ft |
| | Sp | = | 0.234 | in ³ / ft |
| | Sn | = | 0.247 | in ³ / ft |
| | Fy | = | 50 | KSI |
| | | | | |

- 5. FASTEN ROOF DECK TO ALL SUPPORTS w/ 5/8" DIA. PUDDLE WELDS AND ATTACH DECK SIDELAPS w/ #12 TEK SCREWS. REFERENCE THE ROOF DECK FASTENING SCHEDULE AND ROOF DECKING PLAN PROVIDED ON SHEET S002.
- 6. PROVIDE L4x4x1/4 EDGE ANGLE AROUND ALL OPENINGS AND AROUND PERIMETER OF ROOF. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF EDGE ANGLES. SEE DECK ANGLE SPLICE DETAILS ON SHEET S611.
- 7. (5" L), (5" L), OR (5" L/R) INDICATE 5" JOIST SEAT AT END OF STEEL JOIST AS NOTED IN LIEU OF STANDARD 2-1/2" SEAT. STEEL DETAILER SHALL COORDINATE T.O. STEEL ELEVATIONS WITH JOIST MANUFACTURER.
- 8. OPEN WEB STEEL JOISTS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATION OF THE STEEL JOIST INSTITUTE. PROVIDE JOIST REINFORCEMENT PER TYPICAL DETAIL 1/S611 AT CONCENTRATED LOADS > 150 LBS.
- 9. PROVIDE L2x2x3/16 BRACE FROM JOIST TO BOTTOM FLANGE OF STEEL BEAM AT BEAM MID-SPAN OR AS NOTED ON PLAN. SEE DETAIL 1/S612.
- 10. PROVIDE STANDARD JOIST BRIDGING AND UPLIFT BRIDGING PER LATEST SJI SPECIFICATIONS AND THE STEEL JOIST SHOP DRAWINGS (TYPICAL).
- 11. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN. RESOLVE ALL DISCREPANCIES PRIOR TO FABRICATION.
- 12. COORDINATE ALL ROOF OPENINGS AND MISCELLANEOUS ROOF DECK PENETRATIONS AND EQUIPMENT WITH THE ARCHITECTURAL AND MEP DRAWINGS. REFERENCE THE TYPICAL ROOF OPENING DETAILS ON SHEET S611.

- 13. JOIST NOTED AS "20K6 SP" ON PLAN SHALL BE DESIGNED FOR PROJECT TYPICAL UNIFORM LOADING AS WELL AS SERVICE CONCENTRATED LOADS AS NOTED AT THE CURB FRAMES: DEAD LOAD: 600LBS WIND LOAD: +/-380LBS
- 14. JOIST NOTED AS "20K5 SP" ON PLAN SHALL BE DESIGNED FOR PROJECT TYPICAL UNIFORM LOADING AS WELL AS SERVICE CONCENTRATED LOADS AS NOTED AT THE CURB FRAMES: DEAD LOAD: 450LBS WIND LOAD: +/-450LBS
- 15. JOIST NOTED AS "20K9 SP" ON PLAN SHALL BE DESIGNED FOR PROJECT TYPICAL UNIFORM LOADING AS WELL AS SERVICE CONCENTRATED LOADS AS NOTED AT THE CURB FRAMES: DEAD LOAD: 600LBS WIND LOAD: +/-380LBS

B С

| | STEEL COLUMN | BASE PLATE SCHEDULE |
|---|--|--|
| ТҮРЕ | HSS 6x6x5/16 | |
| BASE PLATE PLAN | | |
| BASE PLATE | PL 1" x 1'-2" x 1'-2" | |
| ANCHOR BOLTS | (4) 3/4" DIA. ANCHORS 12" EMBEDMENT | |
| COLUMN MARK | C1) | |
| COLUMN AND BASE PL PROVIDE 1/4" CAP LOADED THROUG ALL BASE PLATE A UNLESS NOTED O ALL ANCHORS TO NOTED OTHERWIS SET ALL BASE PLA FULL BED OF NON INSTALLED BELOW AFTER ERECTION ALL WELDS ARE C UNLESS OTHERWISE. | ATE NOTES: PLACES ON ALL TUBE AND PIPE COLUMNS THAT ARE NO H THE CAP PLATE. AND SHEAR LUG MATERIAL TO BE ASTM A572 GRADE 50, ITHERWISE. BE ASTM F1554, 55 KSI, S1 WELDABLE MATERIAL UNLES: SE. ATES ON WEDGES, SHIMS, OR LEVELING NUTS AS REQUI I-METALLIC, NON-SHRINK, HIGH STRENGTH GROUT MUST N BASE PLATE. GROUT MUST BE INSTALLED IMMEDIATEL OF MAIN JOIST GIRDERS AND JOISTS AT COLUMN LINES CONTINUOUS AROUND COLUMN BASE. ISE NOTED, PROVIDE 5/16" FILLET WELDS AT COLUMN ER THAN 1/2" WALL THICKNESS. PROVIDE 1/4" FILLET WE | SEE NOTES #5 AND #6 UNU JULIAN OUT |

| | | SIN | GLE |
|--|--|--|-------------------|
| CAPACITY [KIPS] (FACTORED) | BEAM SIZE | NO. OF A325N BOLTS | HOLE |
| 25 | W8 | (2) 3/4" DIA. | S |
| 44 | W10 | (3) 3/4" DIA. | S |
| 44 | W12 | (3) 3/4" DIA. | S |
| 44 | W14 | (3) 3/4" DIA. | S |
| 63 | W16 | (4) 3/4" DIA. | S |
| 82 | W18 | (5) 3/4" DIA. | S |
| 89 | W21 | (6) 3/4" DIA. | S |
| 108 | W24 | (7) 3/4" DIA. | S |
| 127 | W27 | (8) 3/4" DIA. | S |
| 142 | W30 | (9) 3/4" DIA. | S |
| 157 | W33 | (10) 3/4" DIA. | S |
| 173 | W36 | (11) 3/4" DIA. | S |
| STD STAND, SSLT SHORT N THREAT X THREAT | ARD HOLES -SLOTTED HOLES (DES INCLUDED IN ⁻ DS EXCLUDED FRC | TRANSVERSE TO DIRECT THE SHEAR PLANE (ALLO M THE SHEAR PLANE | CTION OF OWED) |

| | | <u>STEEL EN</u> | MBED PLATE | <u>E SCHEDULE</u> | |
|---------------|--------------------------------------|--|--|----------------------------------|----------|
| EMBED MARK | PLATE / ANGLE SIZE | HEADED STUD QUANTI | TY AND LAYOUT | EMBED USE | COMMENTS |
| EP01 | L5x3-1/2x3/8 x 0'-10" LG. (LLH) | (2) 5/8" DIA. x 6" LG. | HSA - AT 45° | TYP JOIST TO TIE BEAM CONNECTION | |
| EP02 | PL 1/2" x 12" x 1'-4" LG. | (6) 5/8" DIA. x 5" | LG. HSA | STEEL BEAM TO PANEL CONNECTION | |
| EP03 | PL 1/2" x 12" x 1'-6" LG. | (6) 5/8" DIA. x 5" | LG. HSA | STEEL BEAM TO PANEL CONNECTION | |
| | | 0 0 1.1.4" | o o o o | 19 | |
| L5x3-1 (2) | I/2x3/8 x 0'-8" LG. 5/8" DIA. HSA | PL 1/2" x 12" x 1'-4" LG. (6) 5/8" DIA. HSA | PL 1/2" x 12" x 1'-6" (6) 5/8" DIA. HSA | _G. | |
| | <u>EP01</u> | EP02 | EP03 | | |

TYPICAL THICKENED SLAB EDGE FOOTING REINFORCEMENT

3"

3"

3"

3"

3"

VALUES ARE BASED ON TABLE 10-10a OF THE AISC STEEL CONSTRUCTION MANUAL - 15TH ED.

1 1/2"

1 1/2"

1 1/2"

1 1/2"

1 1/2"

1/4"

1/4"

1/4"

1/4"

1/4"

21"

24"

27"

30"

33"

SSLT (11) 3/4" DIA. LES (TRANSVERSE TO DIRECTION OF LOAD) VALUES ARE BASED ON A MINIMUM WEB THICKNESS OF 1/4"

SSLT

SSLT

SSLT

SSLT

5/16"

5/16"

5/16"

5/16"

5/16"

| | CONCRETE FOOTING SCHEDULE | | | | |
|------------------|---------------------------|---------|---|--|--|
| TVDE | | SIZE | | DEINEODOINO | |
| TIPE | WIDTH | LENGTH | DEPTH | REINFORCING | |
| E 6 0 | 6' 0" | 6' 0" | 2' 6" | (7) #7 x 5' - 6" LG. EA WAY TOP | |
| | 0-0 | 0-0 | 2 - 0 | (7) #7 x 5' - 6" LG. EA WAY BOTTOM | |
| | | | | | |
| CF 3.0 | 3' - 0" | CONT. | 1' - 0" | LONG. (4) #5 x CONT. BOTTOM | |
| | | | | TRANS. #4 x 2'-6" LG. AT 16" O.C. BOTTOM | |
| (CF 3.67) 3' | אי פיי | CONT | 1' - 0" | LONG. (4) #5 x CONT. BOTTOM | |
| | 0-0 | CONT. | | TRANS. #4 x 3'-2" LG. AT 16" O.C. BOTTOM | |
| | 1' 6" | CONT | 1' 0" | LONG. (5) #5 x CONT. BOTTOM | |
| UF 4.5 | 4 - 0 | CONT. | 1-0 | TRANS. #4 x 4'-0" LG. AT 16" O.C. BOTTOM | |
| | | | | LONG (2) #5 x CONT TOP | |
| (TS 1.33) | | | | LONG. (2) #5 x CONT. BOTTOM | |
| | 1' - 4" CONT. | 1' - 4" | ALT. TRANS. #4 x 4'-0" & 5'-6" LG. w/ ACI 90° HOOK AT 18" O.C. TOP #4 x 1'-0" LG. SKEWED SUPPORT BAR AT 36" O.C. BOT | | |
| | | | | | |

TENSION DEVELOPMENT LENGTHS OF ACI STANDARD HOOKS FOR UNCOATED BARS

| BAR SIZE | 3000 PSI | 3500 PSI | 4000 PSI | 5000 PSI | 6000 PSI | 7000 PSI | ≥8000 PSI |
|-------------|----------|----------|----------|----------|----------|----------|-----------|
| # 3 | 10 | 9 | 9 | 8 | 7 | 7 | 6 |
| # 4 | 13 | 12 | 12 | 10 | 10 | 9 | 8 |
| # 5 | 17 | 16 | 15 | 13 | 12 | 11 | 10 |
| # 6 | 20 | 19 | 17 | 16 | 14 | 13 | 12 |
| # 7 | 23 | 22 | 20 | 18 | 17 | 15 | 14 |
| # 8 | 27 | 25 | 23 | 21 | 19 | 18 | 16 |
| # 9 | 30 | 28 | 26 | 23 | 21 | 20 | 18 |
| # 10 | 34 | 31 | 29 | 26 | 24 | 22 | 21 |
| # 11 | 37 | 35 | 32 | 29 | 27 | 25 | 23 |
| # 14 | 45 | 42 | 39 | 35 | 32 | 29 | 28 |
| # 18 | 60 | 55 | 52 | 46 | 45 | 39 | 37 |
| 1 | | | | | | | |

NOTES:

TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE. ALL VALUES ARE LENGTHS IN INCHES.

TENSION DEVELOPMENT LENGTHS OF STANDARD HOOKS ARE CALCULATED PER ACI 318-14, SECTION 25.4.3.

FOR BAR SIZES #3 THROUGH #11 ONLY, THE FOLLOWING FURTHER REDUCTIONS IN LENGTH CAN BE APPLIED: A. IF CONCRETE COVER CONFORMS TO ACI 318-14, SECTION 25.4.3.2: a. A MODIFICATION FACTOR OF 0.7 MAY BE APPLIED, HOWEVER:

b. THE FINAL CALCULATED LENGTH OF THE HOOK SHALL NOT BE LESS THAN EITHER 8.0 (db) **NOR** 6 INCHES. B. IF HOOK IS ENCLOSED IN TIES OR STIRRUPS PER ACI 318-14, SECTION 25.4.3.2: a. A MODIFICATION FACTOR OF 0.8 MAY BE APPLIED, HOWEVER:

b. THE FINAL CALCULATED LENGTH OF THE HOOK SHALL NOT BE LESS THAN EITHER 8.0 (db) NOR 6 INCHES. 4. FOR LIGHTWEIGHT AGGREGATE CONCRETE, ALL TABULATED VALUES SHALL BE MULTIPLIED BY A FACTOR OF 1.3.

| TENSION DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS FOR UNCOATED BARS | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|-------------|--------|------------|--------|----------|--------|------------|----------|--------|---------------------|----------|---------------------|--------|-------------|--------|--------|------------|------------|----------|--------|------------|--------|--------|--------|
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| BAR SIZE | LAP | 3000 PSI | | | | 4000 PSI | | | 5000 PSI | | | 6000 PSI | | | 7000 PSI | | | | ≥ 8000 PSI | | | | | | |
| | | AP TOP BARS | | OTHER BARS | | TOP | BARS | OTHER BARS | | TOP | TOP BARS OTHER BARS | | TOP BARS OTHER BARS | | TOP BARS OT | | OTHE | OTHER BARS | | TOP BARS | | OTHER BARS | | | |
| | | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 | CASE 1 | CASE 2 |
| # 2 | А | 22 | 32 | 17 | 25 | 19 | 28 | 15 | 22 | 17 | 25 | 13 | 19 | 15 | 23 | 12 | 18 | 14 | 21 | 12 | 16 | 13 | 20 | 12 | 15 |
| # U | В | 28 | 42 | 22 | 32 | 24 | 36 | 19 | 28 | 22 | 33 | 17 | 25 | 20 | 30 | 15 | 23 | 18 | 28 | 14 | 21 | 17 | 26 | 13 | 20 |
| #л | А | 29 | 43 | 22 | 33 | 25 | 37 | 19 | 29 | 22 | 33 | 17 | 26 | 20 | 31 | 16 | 24 | 19 | 28 | 15 | 22 | 18 | 26 | 14 | 20 |
| | В | 37 | 56 | 29 | 43 | 32 | 48 | 25 | 37 | 29 | 43 | 22 | 33 | 26 | 40 | 20 | 31 | 25 | 37 | 19 | 28 | 23 | 34 | 18 | 26 |
| #5 | А | 36 | 54 | 28 | 41 | 31 | 47 | 24 | 36 | 28 | 42 | 22 | 32 | 25 | 38 | 20 | 29 | 24 | 35 | 18 | 27 | 22 | 33 | 17 | 25 |
| | В | 47 | 70 | 36 | 54 | 40 | 60 | 31 | 47 | 36 | 54 | 28 | 42 | 33 | 49 | 25 | 38 | 31 | 46 | 24 | 35 | 29 | 43 | 22 | 33 |
| #6 | A | 43 | 64 | 33 | 50 | 37 | 56 | 29 | 43 | 33 | 50 | 26 | 38 | 31 | 46 | 24 | 35 | 28 | 42 | 22 | 33 | 26 | 40 | 20 | 30 |
| | В | 56 | 84 | 43 | 64 | 48 | 72 | 37 | 56 | 43 | 65 | 33 | 50 | 40 | 59 | 31 | 46 | 37 | 55 | 28 | 42 | 40 | 51 | 26 | 40 |
| #7 | A | 63 | 94 | 48 | 72 | 54 | 81 | 42 | 63 | 49 | 73 | 37 | 56 | 44 | 66 | 34 | 51 | 41 | 61 | 32 | 47 | 38 | 58 | 30 | 44 |
| | В | 81 | 122 | 63 | 94 | 70 | 106 | 54 | 81 | 63 | 94 | 49 | 73 | 58 | 86 | 44 | 66 | 53 | 80 | 41 | 61 | 50 | 75 | 38 | 58 |
| #8 | A | 72 | 107 | 55 | 82 | 62 | 93 | 48 | 71 | 55 | 63 | 43 | 64 | 51 | 76 | 39 | 58 | 47 | 70 | 36 | 54 | 44 | 66 | 34 | 51 |
| | В | 93 | 139 | 72 | 107 | 80 | 121 | 62 | 93 | 72 | 108 | 55 | 83 | 66 | 98 | 51 | 76 | 61 | 91 | 47 | 70 | 57 | 85 | 44 | 66 |
| # 9 | A | 81 | 121 | 62 | 93 | 70 | 105 | 54 | 81 | 63 | 94 | 48 | 72 | 57 | 85 | 44 | 66 | 53 | 79 | 41 | 61 | 49 | 74 | 38 | 57 |
| | В | 105 | 157 | 81 | 121 | 91 | 136 | 70 | 105 | 81 | 122 | 63 | 94 | 74 | 111 | 57 | 85 | 69 | 103 | 53 | 79 | 64 | 96 | 49 | 74 |
| # 10 | A | 91 | 136 | 70 | 105 | 79 | 118 | 61 | 91 | 70 | 105 | 54 | 81 | 64 | 96 | 49 | 74 | 59 | 89 | 46 | 69 | 56 | 83 | 43 | 64 |
| | В | 118 | 177 | 91 | 136 | 102 | 153 | 79 | 118 | 91 | 137 | 70 | 105 | 83 | 125 | 64 | 96 | 77 | 116 | 59 | 89 | 72 | 108 | 56 | 83 |
| # 11 | A | 101 | 151 | 76 | 116 | 87 | 131 | 67 | 101 | 76 | 117 | 60 | 90 | 71 | 107 | 55 | 82 | 66 | 99 | 51 | 76 | 62 | 93 | 48 | 71 |
| | B | 131 | 196 | 101 | 151 | 113 | 170 | 87 | 131 | 101 | 152 | 78 | 117 | 93 | 139 | 71 | 107 | 86 | 128 | 66 | 99 | 80 | 120 | 62 | 93 |
| # 14 | N/A ^[5] | 121 | 161 | 93 | 139 | 105 | 157 | 81 | 121 | 94 | 140 | 72 | 108 | 86 | 128 | 66 | 99 | 79 | 119 | 61 | 91 | 74 | 111 | 57 | 85 |
| # 18 | N/A ^[5] | 161 | 241 | 124 | 186 | 139 | 209 | 107 | 161 | 125 | 187 | 96 | 144 | 114 | 171 | 88 | 131 | 106 | 158 | 81 | 122 | 99 | 148 | 76 | 114 |

NOTES:

1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE. ALL VALUES ARE LENGTHS IN INCHES.

TENSION DEVELOPMENT AND LAP SPLICE LENGTHS ARE CALCULATED PER ACI 318-14, SECTION 25.4.2 AND 25.5.2, RESPECTIVELY. TABULATED VALUES FOR BEAMS AND COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.

3. CASE 1 AND CASE 2 ARE DEPENDENT ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CENTER-TO-CENTER SPACING OF THE BARS. CASES ARE DEFINED AS FOLLOWS:

A. BEAMS AND COLUMNS: a. CASE 1: COVER OF AT LEAST 1.0 (db) AND C-C SPACING OF AT LEAST 2.0 (db) - WHERE (db) IS THE DIAMETER OF THE BAR. b. CASE 2: COVER LESS THAN 1.0 (db) OR C-C SPACING LESS THAN 2.0 (db)

B. ALL OTHER STRUCTURAL MEMBERS:

a. CASE 1: COVER OF AT LEAST 1.0 (db) AND C-C SPACING OF AT LEAST 3.0 (db) b. CASE 2: COVER LESS THAN 1.0 (db) OR C-C SPACING LESS THAN 3.0 (db)

4. LAP SPLICE LENGTHS ARE MULTIPLES OF THE CALCULATED TENSION DEVELOPMENT LENGTH PER ACI 318-14, SECTION 25.2.2 AS FOLLOWS:

A. CLASS "A" = 1.0 (Ld) B. CLASS "B" = 1.3 (Ld)

5. ACI 318-14 DOES NOT ALLOW TENSION LAP SPLICES OF #14 OR #18 BARS. THE TABULATED VALUES FOR THESE BAR SIZES ARE THE TENSION DEVELOPMENT LENGTHS.

6. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.

7. FOR LIGHTWEIGHT AGGREGATE CONCRETE, ALL TABULATED VALUES SHALL BE MULTIPLIED BY A FACTOR OF 1.3.

| TG AN |
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| |
| DULE FOR EMENT |
| SOIL ABOVE IT PER NICAL REPORT UNS |
| RY PT S |
| UCTURE OR BLOCKOUT REGNATED BOARD SLAB EDGE OR BAR LAN T/SLAB SEE PLAN PLAN |

T/SLAB EL = SEE PLAN T/FTG EL = SEE PLAN

- PRE-MOLDED RUBBER CONTROL JOINT INSERT

| EL = #' - ##" T.O. FTG | INDICATES TOP OF CONCRETE FOOTING ELEVATION. |
|---------------------------|--|
| CF#.# | INDICATES CONTINUOUS FOOTING TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT. |
| TS#.# | INDICATES THICKENED SLAB EDGE TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT. |
| S.J. | INDICATES SLAB SAWCUT JOINT PER DETAIL 5/S604. |
| I.J. | INDICATES ISOLATION JOINT WITH 1/2" THICK ASPHALT- IMPREGNATED BOARD PER TYPICAL DETAIL 6/S604. |
| | INDICATES 8" REINFORCED MASONRY WALL - PROVIDE VERT #5 AT 24" O.C. (MAX) U.N.O. GROUT WALLS SOLID BELOW SLAB. |
| | INDICATES VERTICAL REINFORCEMENT AT CENTER OF CMU WALL GROUTED SOLID, BAR SIZE MUST MATCH WALL REINF, NOTED |

| CONCRETE FOOTING SCHEDULE | | | | | | | | | | | |
|---------------------------|---------|---------|---------|---|----------------|-------|--------|--|---------|--|--|
| TYDE | | SIZE | | DEINEODOINO | REMARKS | | | | | | |
| TIPE | WIDTH | LENGTH | DEPTH | REINFORGING | | | | | | | |
| | | | | | | | | | | | |
| (CF 3.0) | 3' - 0" | 3' - 0" | 1' - 6" | LONG. (4) #5 x CONT. TOP & BOTTOM | CONTINUIOUS | | | | | | |
| | 0-0 | 0-0 | 1-0 | TRANS. #4 x 4'-0" LG. AT 12" O.C. TOP & BOTTOM | FOOTING | | | | | | |
| (CF 3.9) | 21 01 | 21 01 | 41 01 | LONG. (5) #5 x CONT. TOP & BOTTOM | CONTINUIOUS | | | | | | |
| | 3 - 9 | 3 - 9 | 1 - 0 | 1-0 | 1-0 | 1 - 6 | Π - 6" | TRANS. #4 x 4'-0" LG. AT 12" O.C. TOP & BOTTOM | FOOTING | | |
| | | | | | | | | | | | |
| (TS 1.33) | 1' /" | CONT | 1' - 4" | LONG. (2) #5 x CONT. TOP LONG. (2) #5 x CONT. BOTTOM | THICKENED SLAE | | | | | | |
| | 1 - 4 | CONT. | | ALT. TRANS. #4 x 4'-0" & 5'-6" LG. w/ ACI 90° HOOK AT 18" O.C. TOP #4 x 1'-0" LG. SKEWED SUPPORT BAR AT 36" O.C. BOT | EDGE | | | | | | |
| | | | | | | | | | | | |

INUIOUS DTING

INUIOUS DTING

NED SLAB DGE

S611 3/4" = 1'-0"

8 TYP SUPPORT ANGLE CONNECTION TO JOIST S611 3/4" = 1'-0"

- STEEL JOIST - SEE PLAN

3 TYPICAL SECTION AT DECK BEARING PARALLEL TO JOIST S613 3/4" = 1'-0"

S613 3/4" = 1'-0"

S613 3/4" = 1'-0"

