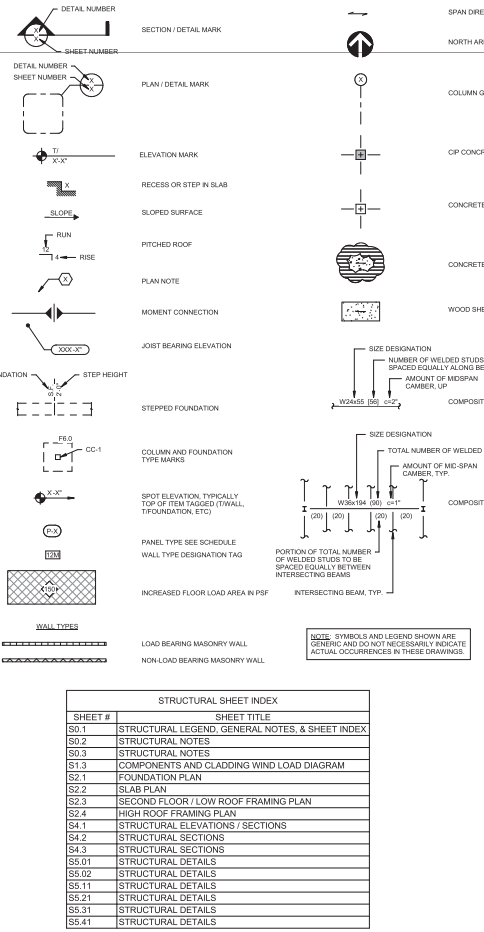
STRUCTURAL ABBREVIATIONS

ABBREV	ABBREVIATION
ACI	AMERICAN CONCRETE INSTITUTE
ADD	ADDITIVE
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE/ALTERNATIVE
ALUM	ALUMINUM
ARCH	ARCHITECTURE/ARCHITECTURAL
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BCX	BOTTOM CHORD EXTENSION
BLDG	BUILDING
BLK	BLOCK
BM	BEAM
BOT	BOTTOM
BP	BASE PLATE/BEARING PLATE
BRG	BEARING
BTWN	BETWEEN
C	CHANNEL
CB	CONCRETE BEAM
CC	CONCRETE COLUMN
CF	CUBIC FEET (FOOT)
CIP	CAST IN PLACE
CJ	CONTRACTION JOINT
CL	CENTERLINE
CLR	CLEAR/CLEARANCE
CM	CONCRETE MASONRY
CMU	CONCRETE MASONRY UNIT
CO	COMPANY
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CONN	CONNECTION
CONST	CONSTRUCTION
COORD	COORDINATE
CSJ	CONSTRUCTION JOINT
CTR	CENTER
CTRD	CENTERED
CY	CUBIC YARD
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DWG	DRAWING
EA	EACH
EE	EACH END
EF	EACH FACE
EHPA	EMERGENCY HURRICANE PROTECTION AREA
EJ	EXPANSION JOINT
ELEC	ELECTRIC/ELECTRICAL
EL, ELEV	ELEVATION
ENGR	ENGINEER
EOD	EDGE OF DECK
EOR	ENGINEER OF RECORD
EQ SP	EQUAL SPACED
ES	EACH SIDE
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	FOUNDATION
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISHED FLOOR
FIN	FINISH
FIN GR	FINISH GRADE
FLR	FLOOR
FS	FAR SIDE
FT	FEET/FOOT
FTG	FOOTING
GA	GAGE/GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GEN	GENERAL
GL	GRID LINE
GS	GALVANIZED STEEL
HD	HOT DIPPED
HDG	HOT DIPPED GALVANIZED
HORIZ	HORIZONTAL
HP	HIGH POINT
HSA	HEADED STUD ANCHOR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
I	MOMENT OF INERTIA
ID	INSIDE DIAMETER
I.F.	INSIDE FACE
IN.	INCH
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP (1000 LB)
KLF	KIPS PER LINEAL FOOT
KSI	KIPS PER SQUARE INCH
KWY	KEYWAY

ABBREV	ABBREVIATION
LB	POUND
LGTH	LENGTH
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG.	LONGITUDINAL
LP	LOW POINT
LSL	LAMINATED STRAND LUMBER
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
MATL	MATERIAL
MAX	MAXIMUM
MB	MASONRY BEAM
MC	MISCELLANEOUS CHANNEL/MASONRY COLUMN
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURE/MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MPH	MILES PER HOUR
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
NO	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTERS
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
P/C	PRECAST CONCRETE/PILE CAP
P/T	POST TENSIONED
PAR	PARALLEL
PCB	PRECAST CONCRETE BEAM
PCC	PRECAST CONCRETE COLUMN
PCF	POUNDS PER CUBIC FEET
PEMB	PRE-ENGINEERED METAL BUILDING
PEN	PENETRATION
P.J.	PANEL JOINT CENTERLINE
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PLMG	PLUMBING
PLY.	PLYWOOD
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
R/W	REINFORCED WITH
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
REV	REVISION
RTU	ROOF TOP UNIT
SB	SOFFIT BEAM
SCHED	SCHEDULE
S.F.	SQUARE FEET
SF	STRIP FOUNDATION
SIM	SIMILAR
SPC	SPACE/SPACES
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
T/	TOP OF
TB	TIE BEAM
T&B	TOP AND BOTTOM
TCX	TOP CHORD EXTENSION
TDS	TURN DOWN SLAB
TE	THICKENED EDGE
TEMP	TEMPERATURE
TENS	TENSION
THD	THREAD/THREADED
THK	THICK
TOL	TOLERANCE
TRANS	TRANSVERSE
TS	TUBE STEEL
T.S.	THICKENED SLAB
TWF	THICKENED WALL FOUNDATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOL	VOLUME
W	WIDE FLANGE SECTION
W/	WITH
W/O	WITHOUT
WD	WOOD
WF	WALL FOUNDATION
WP	WATERPROOF
W.P.	WORKING POINT
WS	WELDED STUD
WT	WEIGHT/STRUCTURAL TEE SECTION
WWF	WELDED WIRE FABRIC
@	AT DESIGNATION
#	POUNDS / REBAR SIZE NUMBER
+/-	PLUS OR MINUS
L	ANGLE
C.L.	CENTER LINE
&	AND
Sx	SECTION MODULUS
Ix	MOMENT OF INERTIA

STRUCTURAL SYMBOLS AND LEGEND



NOTE: SYMBOLS AND LEGEND SHOWN ARE GENERIC AND DO NOT NECESSARILY INDICATE ACTUAL OCCURRENCES IN THESE DRAWINGS.

STRUCTURAL SHEET INDEX

010000 GENERAL NOTES

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR OPENINGS, DEPRESSIONS, EQUIPMENT WEIGHTS AND LOCATIONS, EMBEDDED ITEMS AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
2. DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
3. NO STRUCTURAL MEMBER OR COMPONENT SHALL BE CUT, NOTCHED, OR OTHERWISE ALTERED UNLESS APPROVED IN WRITING BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS INCURRED BY THE ENGINEER OF RECORD FOR REVIEW OF ANY SUCH DEVIATIONS.
4. DO NOT SCALE DRAWINGS.
5. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE DOWNS.
6. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. THE APPLICABILITY OF THE DETAIL TO ITS LOCATION ON THE DRAWINGS CAN BE DETERMINED BY THE TITLE OF DETAIL, SUCH DETAILS SHALL APPLY WHETHER OR NOT THEY ARE REFERENCED AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER OF RECORD.
7. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCIES BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
8. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCE AND SAFETY. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
9. THE STRUCTURAL ENGINEER'S OBLIGATIONS TO REVIEW SHOP DRAWINGS AND OTHER SUBMITTALS AND TO RETURN THEM IN A TIMELY MANNER ARE CONDITIONED UPON THE PRIOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS OR SUBMITTALS BY THE CONTRACTOR AS REQUIRED IN THE CONSTRUCTION CONTRACT AND THE CONTRACTOR'S SUBMITTAL OF THE SHOP DRAWINGS AND OTHER SUBMITTALS IN ACCORDANCE WITH A WRITTEN SCHEDULE DISTRIBUTED IN ADVANCE TO THE ENGINEER IDENTIFYING THE DATES FOR THE SUBMITTAL OF THE VARIOUS SHOP DRAWINGS AND SUBMITTALS.
10. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF TLC ENGINEERING SOLUTIONS, INC IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHALL NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK.
11. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXCEED LIFE SPAN AND TO ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE OWNER. THIS PROGRAM SHALL INCLUDE ITEMS SUCH AS, BUT NOT LIMITED TO, PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATINGS FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.
12. STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE DESIGN OF STEEL STAIRS, HANDRAILS, CURTAIN WALL/WINDOW WALL SYSTEMS, COLD-FORMED STEEL FRAMING, OR OTHER SYSTEMS NOT SHOWN IN THE STRUCTURAL DOCUMENTS. SUCH SYSTEMS SHALL BE DESIGNED, FURNISHED, AND INSTALLED AS REQUIRED BY OTHER PORTIONS OF THE CONTRACT DOCUMENTS.
13. IN THE PROFESSIONAL OPINION OF TLC ENGINEERING SOLUTIONS, INC. THE STRUCTURAL CONTRACT DOCUMENTS FOR THIS PROJECT HAVE BEEN PREPARED IN ACCORDANCE WITH THE DESIGN CRITERIA AS SET FORTH IN THE FLORIDA BUILDING CODE (FBC) 7th EDITION (2020).
14. NO PROVISIONS HAVE BEEN MADE FOR VERTICAL OR HORIZONTAL EXPANSION EXCEPT AS SHOWN ON CONTRACT DOCUMENTS.
15. ELEVATIONS INDICATED ARE RELATIVE TO FIRST FLOOR ELEVATION OF 75'-0" (NGVD) PER CIVIL DRAWINGS, CONFIRM FINAL ELEVATION WITH CIVIL DRAWINGS.
16. THE USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS AND USE OF CAD FILES BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFY HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
17. IN THE EVENT THAT THE STRUCTURAL CONTRACTS DRAWINGS AND SPECIFICATIONS CONFLICT ON INFORMATION, THE STRUCTURAL CONTRACT DRAWINGS SHALL SUPERSEDE THE SPECIFICATIONS.

010001 BUILDING MOVEMENTS

THE BUILDING MOVEMENT SPECIFIED HEREIN IS ANTICIPATED TO OCCUR AND SHOULD BE CONSIDERED BY THE CONTRACTOR IN THE PERFORMANCE OF THE WORK.

1. THE FOLLOWING PROVISION FOR SUPERIMPOSED LOAD DEFLECTIONS SHALL BE MADE IN THE DESIGN, FABRICATION, AND INSTALLATION OF ALL PARTITIONS, GLASS WALLS, AND OTHER ELEMENTS SUPPORTED BY AND ATTACHED TO THE STRUCTURE.
   A. TYPICAL FLOOR MEMBERS - SPAN/360 BUT NOT LESS THAN 3/8"
   B. TYPICAL ROOF MEMBERS - SPAN/360 BUT NOT LESS THAN 3/8"

STORY DRIFT: LATERAL FRAME DEFLECTION OF H/300 IN THE PLANE OF THE WALL OF ONE FLOOR RELATIVE TO AN ADJACENT FLOOR SHALL BE TAKEN INTO ACCOUNT IN THE DESIGN, FABRICATION AND INSTALLATION OF THE BUILDING CLADDING.

010002 DESIGN LOADS

1. THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 7th EDITION (2020), AND AS SUPPLEMENTED BY LOCAL AMENDMENTS.
2. THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED:
   A. DEAD LOADS:

ROOF STRUCTURE	15 PSF
M/E/P LOADS	5 PSF
CEILINGS	5 PSF
8" CMU LOAD BEARING PARTITIONS	61 PSF
12" CMU LOAD BEARING PARTITIONS	103 PSF

   B. LIVE LOADS

ROOF	20 PSF
FLOOR (OFFICE)	50 PSF
FLOOR (LIGHT STORAGE)	125 PSF
FLOOR (RESIDENTIAL)	40 PSF
FLOOR (APPARATUS BAY)	250 PSF
STAIRS AND EXITS	100 PSF
GUARDRAILS/HANDRAILS	50 PLF (UNIFORM) 200 LBS (CONCENTRATED)

   C. WIND LOADS: PER FLORIDA BUILDING CODE, SECTION 1609.

   SEE SHEET S1.3 FOR COMPONENTS AND CLADDING PRESSURES.

ULTIMATE DESIGN WIND SPEED, Vult	147 MPH (3 SEC. GUST)
NOMINAL DESIGN WIND SPEED, Vasd	114 MPH (3 SEC. GUST)
RISK CATEGORY	IV
EXPOSURE	B

   D. SEISMIC LOADS: PER ASCE 7-16

SPECTRAL RESPONSE ACCELERATION, SHORT DURATION (Ss)	0.065
SPECTRAL RESPONSE ACCELERATION, 1.0 SECOND DURATION (S1)	0.035
SITE CLASSIFICATION	D
SEISMIC USE GROUP	III
SEISMIC DESIGN CATEGORY	A
SEISMIC IMPORTANCE FACTOR	1.5
LATERAL LOAD RESISTING SYSTEM TYPE	ORDINARY REINFORCED MASONRY SHEAR WALLS

013100 REQUEST FOR INTERPRETATION

1. RFI SHALL ORIGINATE WITH CONTRACTOR AND SHALL BE SUBMITTED IN THE FORM SPECIFIED WITHIN CONTRACT DOCUMENTS. RFI SHALL BE SUBMITTED IN A PROMPT MANNER AS TO AVOID DELAYS IN CONTRACTORS WORK.
2. RFI SHALL BE SUBMITTED AS SPECIFIED WITHIN THE CONTRACT DOCUMENTS AND SHALL BE FORWARDED TO THE ENGINEER VIA THE ARCHITECT OR DIRECTLY TO THE ENGINEER BY THE CONTRACTOR WHEN APPROVED BY THE ARCHITECT.
3. ENGINEER SHALL TAKE UP TO 5 BUSINESS DAYS TO REVIEW AND RETURN RFI'S. HOWEVER, THE ENGINEER WILL ATTEMPT TO EXPEDITE THE REVIEW OF ALL RFI'S WITHIN A REASONABLE TIME FRAME.
4. RFI RESPONSES ARE NOT INTENDED TO AUTHORIZE ANY INCREASE IN CONSTRUCTION COST, SCHEDULE OR TIME EXTENSIONS, OR CONSTRUCTION IN CONFLICT WITH ANY APPLICABLE CODES OR SPECIFIED DESIGN STANDARDS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DESIGN TEAM IMMEDIATELY OF ANY PERCEIVED SCOPE, SCHEDULE, OR COST IMPACTS OR ADJUSTMENTS. IF CONTRACTOR REQUESTS ANY ADDITIONAL COST, INCREASE IN SCHEDULE OR ADJUSTMENT IN SCOPE, THE CONTRACTOR SHALL NOT PROCEED WITH ADDITIONAL WORK UNTIL APPROVED IN WRITING BY THE CONSTRUCTION ADMINISTRATOR.

013301 SHOP DRAWING REVIEW

1. SHOP DRAWINGS SHALL ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN ON THE CONTRACT DOCUMENTS. SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS.
2. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR AND MARKED "APPROVED" PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. NON-CONFORMING DRAWING SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER OF RECORD.
4. CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS SHALL BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RE-SUBMITTAL SHALL BE CLEARLY NOTED ON THE LETTER OF TRANSMITTAL. ARCHITECT/ENGINEER OF RECORD REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RE-SUBMITTAL. CONTRACTOR IS RESPONSIBLE FOR COSTS CAUSED BY MULTIPLE RE-SUBMITTALS (MORE THAN ONE) AT ARCHITECT/ENGINEERS' CURRENT HOURLY RATES.

013302 SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS

1. THE FOLLOWING SYSTEMS AND COMPONENTS AS A MINIMUM REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER:
   A. PREFABRICATED STEEL STAIRS
   B. PRE-ENGINEERED WOOD ROOF TRUSS SYSTEMS
2. SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA, AND INCLUDE ALL DETAILS AND DRAWINGS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. SHOP DRAWINGS AND CALCULATIONS SHALL IDENTIFY SPECIFIC PRODUCT UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.
3. SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER.
4. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA AS AN INDICATION THAT HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. THE STRUCTURAL ENGINEER WILL RETAIN ONE SIGNED AND SEALED SET FOR THEIR RECORDS.
5. DRAWINGS PREPARED SOLELY TO SERVE AS A GUIDE FOR FABRICATION AND INSTALLATION (SUCH AS REINFORCING STEEL SHOP DRAWINGS OR STRUCTURAL STEEL ERECTION DRAWINGS) AND REQUIRING NO ENGINEERING, DO NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
6. CATALOG INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
7. REVIEW BY THE STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:
   A. THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
   B. THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
   C. THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. NO DETAILED CHECK OF CALCULATIONS WILL BE MADE.
   D. THAT THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE.
8. SUBMITTALS NOT MEETING THE ABOVE CRITERIA WILL NOT BE REVIEWED AND WILL BE RETURNED.

013303 SUBMITTALS

1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
2. THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
   - ITEMS MARKED (D) SHALL HAVE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
   - ITEMS MARKED (#) SHALL BE SUBMITTED FOR ENGINEERS RECORD ONLY.
   A. STRUCTURAL STEEL
   B. REINFORCING STEEL
   C. PREFABRICATED METAL PAN STAIRS (D)
   D. COMPOSITE METAL DECK
   E. CONCRETE MIX DESIGNS
   F. PRE-ENGINEERED WOOD ROOF TRUSS SYSTEMS (D)
   G. MECHANICAL ANCHORS (#)
   H. CHEMICAL (ADHESIVE) ANCHORS (#)
3. MANUFACTURER'S LITERATURE. SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.

NO.	DESCRIPTION	DATE

GARY C. KRUEGER
FL LICENSE NO. 40788
STATE OF FLORIDA
11/9/2021 3:20:48 PM

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LAKE COUNTY
FIRE STATION NO.71
STRUCTURAL LEGEND, GENERAL NOTES, & SHEET INDEX
33661 CR 473, LEESBURG, FL 34788

20073A

NOVEMBER 10, 2021

100% CD Submittal - Bid Set

S0.1

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032000 REINFORCING STEEL

1. SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BINDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS.
2. PROVIDE CONCRETE COVER OVER PRIMARY REINFORCEMENT, TIES, AND STIRRUPS, AS FOLLOWS, UNLESS OTHERWISE NOTED:

	LOCATION AND CONDITION	MINIMUM COVER
A.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.	ALL BARS 3"
B.	CONCRETE EXPOSED TO EARTH OR WEATHER	#6 OR GREATER 2" #5 OR SMALLER 1.5"
C.	CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND SLABS, WALLS, AND JOISTS BEAMS AND COLUMNS	#11 OR SMALLER 3/4" ALL BARS 1.5"

3. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.
4. PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS OF ALL TOP BARS.
5. WHERE REINFORCING IS SHOWN CONTINUOUS, SPLICE BOTTOM BARS OVER SUPPORTS AND TOP BARS AT CENTER OF SPAN. ALL OTHER LAP SPLICES SHALL BE IN ACCORDANCE WITH SPLICE TABLES AND DETAILS SHOWN ON DRAWINGS.
6. PROVIDE DOWELS INTO FOUNDATIONS, PILE CAPS, SUPPORT BEAMS, ETC. TO MATCH VERTICAL BARS WITH CLASS B TENSION LAP SPLICES, U.N.O.
7. LENGTH OF LAP SPLICES AND BAR EMBEDMENT SHALL BE AS SHOWN IN TABLE, UNLESS OTHERWISE NOTED:

	BAR SIZE	3000 PSI	4000 PSI	5000 PSI
T<12"	#6 OR LESS	57 Db	49 Db	44 Db
	#7 OR MORE	71 Db	61 Db	55 Db
T>12"	#6 OR LESS	74 Db	65 Db	57 Db
	#7 OR MORE	81 Db	79 Db	72 Db

WHERE "T" IS DEPTH OF CONCRETE UNDER BARS AND "Db" IS BAR DIAMETER. UTILIZE CLASS "B" SPLICE FOR ALL SPLICES, U.N.O. ON PLANS OR DETAILS.

8. AT CHANGES IN DIRECTION OF CONCRETE WALLS AND TIE BEAMS, PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL STEEL.
9. WHERE HOOKS ARE SHOWN ON THE PLANS OR DETAILS, HOOKS SHALL BE DETAILED TO EXTEND DEEP ENOUGH INTO SUPPORTING STRUCTURE TO DEVELOP THE FULL STRENGTH OF THE HOOKED BAR. PROVIDE ADDITIONAL TIES OR STIRRUPS IN SUPPORTING STRUCTURE AS REQUIRED TO SATISFY ACI 318 HOOK DEVELOPMENT, CONFINEMENT, AND ANCHORAGE CRITERIA.
10. AT CANTILEVER SLABS AND BEAMS, REINFORCING BARS IN DIRECTION OF CANTILEVER SHALL BE DETAILED TO FULLY DEVELOP THE BAR STRENGTH INTO THE SUPPORTING STRUCTURE, EITHER BY PROVIDING FULL CLASS B LAP SPLICE OR STANDARD ACI HOOKS EMBEDDED DEEP ENOUGH BEYOND SUPPORT TO DEVELOP STRENGTH OF BAR.

032004 WELDED WIRE FABRIC

1. SHALL CONFORM TO ASTM A-185, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS.
2. MINIMUM LAP SHALL BE ONE SPACE PLUS TWO INCHES.
3. USE OF FLAT MANUFACTURED SHEETS IS REQUIRED (NO ROLLS).
4. INSTALL WWF ON BRICKS OR BOLSTERS AT MID DEPTH OF SLAB U.N.O.; SPACING OF SUPPORTS SHALL BE ADEQUATE TO PREVENT SHIFTING OF WWF DURING CONSTRUCTION, BUT SHALL NOT EXCEED 24" O.C.

032201 FORMWORK AND SHORING

1. NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28-DAY DESIGN STRENGTH.
2. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET THE REQUIREMENTS SET FORTH IN ACI STANDARDS 347 AND 301.

032202 CONSTRUCTION JOINTS

1. ANY DEVIATION OR ADDITION OF CONSTRUCTION JOINTS FROM THAT SHOWN ON THE DRAWINGS MUST BE REVIEWED AND APPROVED IN WRITING BY THE ENGINEER OF RECORD.
2. ALTERNATE OR ADDED CONSTRUCTION JOINT LOCATIONS ARE ACCEPTABLE ONLY AS A CHANGE ORDER, WHICH WILL INCLUDE ENGINEERING CHANGES BY THE ENGINEER OF RECORD FOR REDESIGN OF THE STRUCTURE, SHORING, ETC.

032203 PLUMBING SLEEVES

1. MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER.
2. PRIOR TO CONSTRUCTION ALL SLEEVE LOCATIONS AND SIZES NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER.
3. PLACE TWO #3 STIRRUPS @ 3" O.C. EACH SIDE OF SLEEVE PENETRATIONS IN BEAMS.

033000 CONCRETE

1. SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

CONCRETE STRUCTURAL TYPE	COMPRESSIVE STRENGTH	SLUMP	MAXIMUM AGGREGATE	MAXIMUM W/C RATIO
FOUNDATIONS	3000 PSI	4-6"	1"	0.50
SLABS-ON-GRADE	4000 PSI	4-6"	3/4"	0.48
CONCRETE ON METAL DECK	4000 PSI	4-6"	3/4"	0.50
BEAMS AND COLUMNS	4000 PSI	4-6"	3/8"	0.48

2. CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.
3. SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE.
4. CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED.
5. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.
6. SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309, TYPE 1-CLASS B AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY.
7. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.
8. CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE.
9. CONDUITS, PIPES AND SLEEVES SHALL BE PLACED AND SPACED IN ACCORDANCE WITH ACI 318, 6.3.
10. CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318.
11. ALL COLUMNS AND BEAMS INTEGRATED IN CMU WALLS ARE 8" AND 12" NOMINAL AND 7-5/8" AND 11-5/8" ACTUAL DIMENSIONS.
12. CONCRETE SLABS ON GRADE SHALL BE REINFORCED AS INDICATED ON PLAN.
13. CONCRETE SLABS ON COMPOSITE METAL DECK SHALL BE REINFORCED WITH AS INDICATED ON PLAN.
14. WHEN ADHESIVES OR WATER VAPOR IMPERMEABLE FLOOR COVERINGS ARE BEING USED ON CONCRETE SURFACES, THE CONTRACTOR SHALL VERIFY THROUGH APPROPRIATE TESTING THAT THE WATER CONTENT OF THE CONCRETE, AND VAPOR TRANSMISSION RATE THROUGH THE CONCRETE, IS WITHIN THE ALLOWABLE RANGE BEFORE INSTALLATION. THE MANUFACTURER OF THE ADHESIVE OR FLOOR COVERING SHALL REVIEW AND APPROVE THE RESULTS OF THE TESTING PRIOR TO INSTALLATION OF PRODUCTS.

033003 CONCRETE TESTING

1. AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:
   A. ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE."
   B. ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS". A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS. FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF) PLACED PER DAY. REQUIRED LAB CURED CYLINDER QUANTITIES AND TEST AGE AS FOLLOWS:
      (2) AT 7 DAYS
      (2) AT 28 DAYS

   ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28-DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

036001 CHEMICAL (ADHESIVE) ANCHORS

1. SHALL BE A TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS HILTI HIT HY200, HILTI RE500 SD, DEWALT PURE 110+, DEWALT AC200+, OR SIMPSON SET ADHESIVE SYSTEM, OR ENGINEER APPROVED SUBSTITUTION.
2. EPOXY TYPES AND BRANDS VARY IN THEIR BOND STRENGTH AND SUITABILITY OF USE, DEPENDING ON TYPE OF LOADING, ANCHOR SPACING, ETC. WHEN A PARTICULAR TYPE OF EPOXY IS SPECIFIED IN THESE DRAWINGS, A UNIQUE CALCULATION HAS BEEN MADE BASED ON THE PROPERTIES OF THAT SPECIFIC TYPE OF EPOXY AND THE SPECIFIC CONDITION SHOWN IN THE DETAIL. SUBSTITUTION OF EPOXY TYPE IS NOT ALLOWED WHERE DETAIL SPECIFIES ONLY ONE TYPE OF EPOXY, WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER OF RECORD. NOT ALL EPOXY BRANDS OR TYPES WILL BE ALLOWED AS SUBSTITUTES. ICC-ES REPORTS FOR PROPOSED ANCHOR SUBSTITUTIONS MUST BE SUBMITTED TO EOR FOR REVIEW. EOR MAY REQUIRE ENGINEERED CALCULATIONS FOR REVIEW AND APPROVAL.
3. SUBSTITUTION OF EPOXIES IN ONE CONDITION SHALL NOT BE CONSTRUED AS APPROVAL TO MAKE SIMILAR SUBSTITUTION OF EPOXIES IN OTHER DIFFERING CONDITIONS. EACH SUBSTITUTION MUST RECEIVE PRIOR WRITTEN APPROVAL BY THE ENGINEER OF RECORD.
4. INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT SPECIFIED ON DRAWINGS.
5. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION TO SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ADHESIVE INSTALLER (AAA) AS CERTIFIED THROUGH ACI/CRSI (ACI 318-14 D.9.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
6. THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS FOR ALL PRODUCTS TO BE USED PRIOR TO COMMENCEMENT OF WORK. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE MADE AVAILABLE TO THE EOR AS REQUESTED.
7. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL HOLE CLEAN-OUT REQUIREMENTS ARE FULLY COMPLETED BY THE INSTALLERS PRIOR TO INJECTING EPOXY INTO THE HOLES IN ACCORDANCE WITH THE MANUFACTURERS MPII.
8. NO LOAD SHALL BE APPLIED TO THE EPOXY ANCHORS UNTIL THE EPOXY HAS FULLY CURED AND HAS ACHIEVED ITS SPECIFIED STRENGTH. CURE TIME SHALL BE PER MANUFACTURERS PUBLISHED VALUES FOR SPECIFIC PRODUCT BEING USED.
9. IF DETAIL SHOWS EPOXY ANCHORS IN SLOTTED HOLES, IT IS IMPERATIVE THAT ANY EXCESS EPOXY IS CLEANED UP FROM AROUND THE ANCHOR ROD, SO THAT IT DOES NOT INTERFERE WITH ADJUSTABILITY OF ANCHOR ROD IN SLOTTED HOLE.
10. ADHESIVE ANCHORS IN CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED, UNCRACKED, AND SEISMIC CONCRETE RECOGNITION.
11. ADHESIVE ANCHORS IN MASONRY SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC70.
12. EXISTING REINFORCING IN CONCRETE AND/OR MASONRY CONSTRUCTION SHALL NOT BE CUT UNLESS APPROVED BY THE EOR.
13. ADHESIVE ANCHORS IN CONCRETE AND/OR MASONRY CONSTRUCTION SHALL NOT BE INSTALLED UNTIL CONCRETE AND/OR MASONRY HAS CURED FOR AT LEAST 21-DAYS.
14. PROVIDE SPECIAL INSPECTION FOR ALL ADHESIVE ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE AND THE CURRENT ICC-ES REPORT (IBC 2018 TABLE 1705.3 NOTE B).
15. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED FOR THAT PURPOSE BY THE BUILDING OFFICIAL (ACI 318-14 D.9.2.4)

036002 MECHANICAL ANCHORS

1. SHALL BE EITHER HEAVY DUTY CONCRETE SCREW ANCHOR (SUCH AS DEWALT SCREW-BOLT +, SIMPSON TITEN HD, OR HILTI HUS-H) OR WEDGE TYPE EXPANSION ANCHOR (SUCH AS DEWALT POWER-STUD+, SIMPSON SAS, OR HILTI KWIK BOLT TZ).
2. TYPE OF ANCHOR SHALL BE AS SPECIFIED ON THE DRAWINGS, WHILE BRAND AND MODEL OF ANCHOR MAY BE SELECTED FROM THE ABOVE LISTED ANCHORS. SUBSTITUTION ANCHORS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO USE. ICC-ES REPORTS FOR PROPOSED ANCHOR SUBSTITUTES MUST BE SUBMITTED TO EOR FOR REVIEW. EOR MAY REQUEST ENGINEERED CALCULATIONS FOR REVIEW AND APPROVAL.
3. IN SOME CASES OF CRITICAL LOADING OR GEOMETRIC CONDITIONS, ONLY SPECIFIC ANCHORS WILL BE ALLOWED, AS NOTED ON THE DRAWINGS. IN THESE CASES, THE SPECIFIED BRAND AND MODEL OF ANCHOR MUST BE USED.
4. INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT SPECIFIED ON DRAWINGS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS FOR ALL PRODUCTS TO BE USED PRIOR TO COMMENCEMENT OF WORK. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE EOR AS REQUESTED.
6. MINIMUM EMBEDMENT DEPTH OF 1/4" TAPCONS OR POWERS TAPPER + INSTALLED IN CONCRETE SHALL BE 1.25" AND INSTALLED INTO MASONRY SHALL BE 1.5". SELECT ANCHOR LENGTH AS REQUIRED TO ACHIEVE THE SPECIFIED MINIMUM EMBEDMENT DEPTH.
7. TAPCON SCREWS, OR DEWALT TAPPER +, MAY BE REPLACED W/ 0.157" SHANK DIAMETER PAF ANCHORS (HILTI X-U, POWERS CSI, OR APPROVED EQUAL) ON A 1:1 SUBSTITUTION BASIS. MINIMUM EMBEDMENT DEPTH SHALL BE 1.25" WHEN INSTALLED INTO CONCRETE OR GROUTED MASONRY. FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS, MINIMUM EDGE DISTANCES, AND PLACEMENT LIMITATIONS (RELATIVE TO MORTAR JOINTS IN MASONRY).
8. MECHANICAL ANCHORS IN CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC 193 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE RECOGNITION.
9. MECHANICAL ANCHORS IN MASONRY SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR AC106.
10. POWER ACTUATED FASTENERS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICCOES AC70.
11. EXISTING REINFORCING BARS IN CONCRETE AND/OR MASONRY CONSTRUCTION SHALL NOT BE CUT UNLESS APPROVED BY THE EOR.
12. ANCHORS SHALL NOT BE INSTALLED IN CONCRETE AND/OR MASONRY CONSTRUCTION UNTIL THE CONCRETE AND/OR MASONRY HAS CURED FOR AT LEAST 21-DAYS.
13. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL POST INSTALLED ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE AND THE CURRENT ICC-ES REPORT (IBC 2018 TABLE 1705.3 NOTE B).

042200 MASONRY WALLS

1. ALL MASONRY CONSTRUCTION SHALL CONFORM TO TMS 402-2016 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND TMS 602-2016 "SPECIFICATION FOR MASONRY STRUCTURES".
2. MASONRY UNITS SHALL MEET ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BINDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS.
3. GROUT SHALL BE 3000 PSI MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C-476 AND HAVE A SLUMP BETWEEN 8" AND 11" WITH WATER CM RATIO OF 0.55 MAXIMUM AND WITH 3/8" MAXIMUM AGGREGATE.
4. PROVIDE HOOKED DOWELS IN FOUNDATIONS FOR VERTICAL REINFORCING ABOVE, LAP SPLICES SHALL BE PER LAP SPLICE SCHEDULE SHOWN IN TYPICAL DETAIL.
5. BLOCK CELLS SHALL BE GROUT FILLED WITH VERTICAL REINFORCING BARS AT CORNERS, INTERSECTIONS, EACH SIDE OF OPENINGS AND AS SHOWN ON THE DRAWINGS.
6. DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW, UNLESS NOTED OTHERWISE.
7. USE METAL LATH, MORTAR OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA AS REQUIRED.
8. MASONRY SHALL BE LAID IN RUNNING BOND PATTERN UNLESS NOTED OTHERWISE. AT FILLED CELLS LAY UNITS WITH FULL BED JOINTS AROUND CELLS.
9. PROVIDE 9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR-O-WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES. LADDER TYPE IS RECOMMENDED WITH REINFORCED FILLED CELLS. PROVIDE PREFABRICATED "TEE" OR CORNER SECTIONS AT WALL INTERSECTIONS.
10. CONTROL JOINTS SHALL BE CONSTRUCTED IN CONCRETE MASONRY CONSTRUCTION AT A MAXIMUM HORIZONTAL SPACING BETWEEN JOINTS OF 25'-0" AND NOT MORE THAN 12'-0" FROM CORNERS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS. CONSTRUCT INTERIOR CONTROL JOINTS AT A MAXIMUM HORIZONTAL SPACING OF 32'-0" OR 16'-0" FROM CORNERS, NO JOINTS SHALL BE LOCATED WITHIN 2'-0" OF STEEL BEAM BEARINGS. HORIZONTAL WALL REINFORCING SHALL BE STOPPED EACH SIDE OF CONTROL JOINTS. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT CONTROL JOINTS.
11. SUBMIT PROPOSED GROUT MIX DESIGNS FOR REVIEW PRIOR TO USE. MIX NUMBER OR OTHER POSITIVE IDENTIFICATION SHALL UNIQUELY IDENTIFY MIX.
12. USE OF SUPERPLASTICIZER IS PROHIBITED.
13. CELLS TO BE GROUT FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED, CONTINUOUS VERTICAL GROUT SPACE.
14. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF CELLS TO BE GROUT FILLED IN EACH POUR IN CASES OF LIFTS IN EXCESS OF 5 FEET. AFTER INSPECTION AND BEFORE GROUTING, THE REBAR SHALL BE TIED AT THE CLEANOUTS AND THE CLEANOUTS SHALL BE SEALED.
15. ANY OVERHANGING MORTAR OR OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED FROM THE INSIDES OF SUCH CELL WALLS.
16. VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS.
17. CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH GROUT. SAMPLE AND TEST GROUT PER ASTM C1019.
18. GROUT SHALL BE POURED IN LIFTS OF 4 FEET MAXIMUM HEIGHT. GROUT SHALL BE CONSOLIDATED AT TIME OF PLACING BY VIBRATING AND RECONSOLIDATED LATER BY VIBRATING BEFORE PLASTICITY IS LOST.
19. WHEN TOTAL GROUT POUR EXCEEDS 5'-4" FEET IN HEIGHT, (HIGH LIFT GROUTING), THE GROUT SHALL BE PLACED IN 4 FOOT LIFTS WITH A MINIMUM OF A 30 MINUTE DELAY BETWEEN LIFTS. MINIMUM CELL DIMENSION SHALL BE IN ACCORDANCE WITH TABLE 5 OF TMS 402 (3" X 3" FOR COARSE GROUT, 12 FT. MAXIMUM POUR HEIGHT).
20. WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE MADE BY STOPPING THE POUR OF GROUT NOT LESS THAN 1-1/2 INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED.
21. WHERE CONCRETE BEAMS ARE INSTALLED IN CONCRETE MASONRY WALL, SUPPORT CONCRETE WITH 6" SIDE CONTINUOUS STRIPS OF 18 SQUARE MESH SOFFIT SCREENING WITH PLAY-O-STOP OF EQUAL CENTERED OVER BLOCK WORK. USE OF ROOFING FELT STRIPS WILL NOT BE PERMITTED.
22. MASONRY WALLS MARKED AS "LOAD BEARING" ARE DESIGNED TO CARRY FLOOR GRAVITY LOADS AND MUST BE CONSTRUCTED TO SUPPORT THE CONCRETE FLOOR SLAB CONCURRENTLY WITH CONCRETE COLUMN CONSTRUCTION.
23. MASONRY WALLS INDICATED AS "INFILL" ARE DESIGNED TO RESIST LATERAL LOADS AND MUST BE CONSTRUCTED AFTER THE CONCRETE SLAB IS CAST AND POST TENSIONING OPERATIONS ARE COMPLETED. INFILL WALLS SHALL BE CONSTRUCTED STARTING AT THE FOUNDATION LEVEL AND WORKING UPWARD ONE LEVEL AT A TIME. DO NOT START NEXT LEVEL OF WALL BELOW PRIOR TO COMPLETION OF WALL BELOW. ALLOW A MINIMUM OF 3 DAYS CURING FOR GROUT OF WALL BELOW PRIOR TO STARTING WALL ABOVE.
24. SINGLE STORY MASONRY WALLS INDICATED AS "PARTITION WALLS" SHALL BE CAST ON THICKENED SLAB FOUNDATIONS AND ARE NOT DESIGNED TO CARRY ANY LOADS FROM THE MAIN BUILDING STRUCTURES. ISOLATE TOP OF PARTITION WALLS FROM UNDERSIDE OF CONCRETE SLAB WITH A MINIMUM 1/2" THICK COMPRESSIBLE MATERIAL.
25. PROVIDE DOVETAIL ANCHORS AT 16" C/C, UNLESS NOTED OTHERWISE, WHERE MASONRY WALLS ABUT CONCRETE SURFACES.
26. SUBMIT WRITTEN CONSTRUCTION SEQUENCES AND PROCEDURES PRIOR TO THE START OF MASONRY CONSTRUCTION.
27. REINFORCING SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS.
28. SECURE APPROVAL OF REINFORCING SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.
29. PROVIDE STANDARD HOOKS AT ENDS OF ALL BARS WHICH TERMINATE IN TIE BEAMS OR BOND BEAMS.
30. WHERE REINFORCING IS SHOWN CONTINUOUS, LAP SPLICE BARS IN ACCORDANCE WITH SPLICE TABLE IN TYPICAL DETAIL.
31. PROVIDE DOWELS INTO FOUNDATIONS, PILE CAPS, SUPPORT BEAMS, ETC. TO MATCH VERTICAL BARS WITH LAP SPLICES PER SPLICE TABLE IN TYPICAL DETAIL, U/NO.
32. MECHANICAL BAR COUPLERS MAY BE USED TO SPLICE CONTINUOUS BARS, IN LIEU OF LAP SPLICES. BAR COUPLERS MUST ACHIEVE 125% OF BAR STRENGTH MINIMUM. COUPLERS MAY BE BOLTED TYPE (DAYTON D-250 BAR-LOCK S SERIES COUPLER OR EQUAL) OR THREADED TYPE (DAYTON D310 TAPER-LOCK COUPLER OR EQUAL). COUPLERS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTALLATION RECOMMENDATIONS.
33. AT CHANGES IN DIRECTION OF BOND BEAMS, PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL STEEL.

042203 TIE BEAMS

1. BEAMS WITH THE PREFIX "TB" SHALL BE OF CONCRETE, POURED AFTER THE MASONRY WALLS BELOW ARE IN PLACE.
2. REINFORCING SHALL BE CONTINUOUS THROUGH TIE BEAMS WITH MINIMUM LAP SPLICES OF 48 BAR DIAMETERS AND BENT BARS AT CORNERS.
3. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE TO AREA REQUIRED, IN ACCORDANCE WITH TMS 602 (SOLID METAL OR FELT CAVITY CAPS ARE PROHIBITED).
4. AT TIE BEAMS DIRECTLY OVER OPENINGS, REDUCE SPACING OF STIRRUPS OVER THE OPENING TO EITHER HALF OF TYPICAL SPACING, OR D/2, WHICHEVER IS LESS. THIS REINFORCEMENT SHALL ALSO APPLY WHERE HEIGHT OF MASONRY BETWEEN BOTTOM OF TIE BEAM AND TOP OF OPENING IS LESS THAN THE WIDTH OF THE OPENING DIVIDED BY TWO.
5. WHERE TIE BEAMS CANTILEVER OUT FROM SUPPORTING WALL, TOP AND BOTTOM BARS SHALL BE FULLY DEVELOPED INTO TIE BEAM BEYOND SUPPORT, EITHER BY PROVIDING FULL CLASS B LAP SPLICE OR STANDARD ACI HOOKS EMBEDDED DEEP ENOUGH BEYOND SUPPORT TO DEVELOP STRENGTH OF BAR. ALSO, REDUCE STIRRUP SPACING PER NOTE ABOVE.

051200 STRUCTURAL STEEL

1. STEEL WORK SHALL BE NEW AND CONFORM TO THE ANSI/AISC 360-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
2. MATERIAL SHALL CONFORM TO THE FOLLOWING, EXCEPT AS NOTED:

WIDE FLANGE SHAPES	ASTM A992 (Fy=50 KSI)
ANGLES, CHANNELS AND PLATES	ASTM A36 (Fy=36 KSI)
PIPE	ASTM A53, GRADE B (Fy=35 KSI)
RECTANGULAR HSS	ASTM A500, GRADE B (Fy=46 KSI)
ROUND HSS	ASTM A500, GRADE B (Fy=42 KSI)
HIGH STRENGTH BOLTS	ASTM A325 OR A490
THREADED RODS	ASTM A36 (Fy=36 KSI)
HEAVY HEX NUTS	ASTM A563
HARDENED STEEL WASHERS	ASTM F436
ANCHOR RODS	ASTM F1554 GR. 36 (Fy=36 KSI)
SHEAR STUD CONNECTORS	ASTM A108 (Fu=65 KSI)

3. CONNECTIONS:
   A. BOLTS SHALL BE HIGH-STRENGTH, BEARING TYPE IN SNUG TIGHT CONDITION, U.N.O. TIGHTEN BY AN AISC APPROVED METHOD.
   B. WELDING ELECTRODES SHALL BE PER AWS D1.1. RETURN FILLET WELDS FOR FRAMED CONNECTIONS 1/2" AT EACH END.
   C. FIELD CONNECTIONS SHALL BE BOLTED, EXCEPT AS NOTED OTHERWISE.
   D. DETAIL FLOOR AND ROOF FRAMING CONNECTIONS FOLLOWING THE REQUIREMENTS SHOWN IN THE TYPICAL CONNECTION SCHEDULES SHOWN IN THESE DRAWINGS, BASED ON THE BEAM OR GIRDER SIZE.
   E. FOR THE PURPOSE OF CORRECTLY INTERPRETING THE CONNECTION SCHEDULES, GIRDERS SHALL BE CONSIDERED AS ANY FLOOR OR ROOF BEAM WHICH CARRIES OTHER FLOOR OR ROOF BEAMS, OR ANY FLOOR OR ROOF BEAM WHICH CARRIES STEEL COLUMNS.
   F. DETAIL DIAGONAL BRACING CONNECTIONS AS SHOWN IN THE DETAILS. IF NO DETAIL IS PROVIDED, DETAIL CONNECTION TO DEVELOP THE FULL TENSION CAPACITY OF THE DIAGONAL BRACING MEMBER.
   G. DETAIL MOMENT CONNECTIONS AS SHOWN IN THE DETAILS. IF NO DETAIL IS PROVIDED, DETAIL MOMENT CONNECTION USING FULL PENETRATION WELDS AT BEAM FLANGES.
4. HIGH STRENGTH BOLTS IN BEARING CONDITION SUPPORTING SIMPLE SPAN BEAMS NOT SUBJECT TO AXIAL LOADS MAY BE INSTALLED TO "SNUG TIGHT" CONDITION IF NORMAL, OR SHORT SLOTTED HOLES ARE USED. THE ENGINEER OF RECORD SHALL BE THE ULTIMATE AUTHORITY IN THE USE OF "SNUG TIGHT" BOLTS. IF LONG SLOTTED OR OVERSIZED HOLES ARE USED, BOLTS MUST BE FULLY PRETENSIONED AND SLIP CRITICAL. PROPER SURFACE PREPARATION IS REQUIRED FOR SLIP CRITICAL BOLTS, INCLUDING OMISSION OF PRIMER OR PAINT WHERE PROHIBITED, AS APPROPRIATE.
5. ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR CONDITIONS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AND ALL FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A153.
6. GROUT UNDER BEARING PLATES SHALL BE NON-METALLIC, NON-SHRINK TYPE WITH A COMPRESSIVE ST

061753 WOOD TRUSSES

1. PRE-ENGINEERED, PRE-FABRICATED WOOD TRUSSES AND THEIR CONNECTIONS TO EACH OTHER SHALL BE DESIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
2. NO WANES, SKIPS, KNOTS OR OTHER DEFECTS SHALL OCCUR IN THE PLATE CONTACT AREA OR SCARFED AREA OF WEB MEMBERS. PLATES SHALL BE CENTERED WITH EACH SIDE OF TRUSS.
3. NUMBER OF PANELS AND DIRECTION OF WEB MEMBERS TO SUIT CONDITIONS OR SIMPLE SPAN TRUSS REQUIREMENTS. SEE STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR ANY SPECIAL CONDITIONS/LOCATIONS OF PANEL JOINTS.

   A. ~~DETAILER NOTE THAT ALL WOOD MEMBER SIZES SHOWN ARE NOMINAL, U.N.O.~~

   B. DESIGN OF METAL PLATE CONNECTED ROOF TRUSSES TO COMPLY WITH NFPA'S NATIONAL DESIGN SPECIFICATION FOR THE DESIGN OF LUMBER AND ITS FASTENINGS:

      1. ANSI/TPI 1-2014 - NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION.
      2. FLORIDA ADMINISTRATIVE CODE 61G15.

4. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER, WHICH WILL INCLUDE ENGINEERING CHARGES FOR REDESIGN OF THE STRUCTURE BY THE ENGINEER OF RECORD.
5. TRUSS DESIGN LOADS ARE AS FOLLOWS:

   A. SLOPED ROOF TRUSSES, 4:12 OR GREATER SLOPE

   TOP CHORD:

LIVE LOAD	20 PSF
DEAD LOAD	10 PSF

   BOTTOM CHORD:

LIVE LOAD	10 PSF
DEAD LOAD	10 PSF
UPLIFT	PER PLAN

   LOAD DURATION FACTOR:

DEAD LOAD	0.90
DEAD LOAD + FLOOR LIVE LOAD	1.00
DEAD LOAD + ROOF LIVE LOAD	1.25
DEAD LOAD + WIND LOAD	1.33

   B. MECHANICAL UNITS AND OTHER SUPERIMPOSED LOADS AS SHOWN ON THE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.

   C. INDIVIDUAL TRUSSES ARE TO BE DESIGNED FOR SPECIFIC FRAMING CONDITIONS AND CONCENTRATED LOADS RESULTING FORM EQUIPMENT WEIGHTS AND OTHER LOADS AS INDICATED ON THE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.

6. SUBMIT SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY CONNECTOR TYPES UTILIZED WITHIN TRUSSES, AS WELL AS CONNECTORS UTILIZED IN OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM.
7. AN ERECTION DRAWING SHALL BE INCLUDED, IDENTIFYING TRUSS SYSTEM COMPONENTS, AS WELL AS PERMANENT BRACING REQUIRED FOR TRUSS DESIGN.
8. HANDLING, ERECTION AND BRACING OF WOOD TRUSSES SHALL BE IN ACCORDANCE WITH BCSI 01-03 BUILDING COMPONENT SAFETY SUMMARY SHEETS. TEMPORARY BRACING DESIGN SHALL BE PER BCSI 01-03 OR DSB-89 (TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES) AS REQUIRED. COMMENTARY AND RECOMMENDATIONS BY THE TRUSS PLATE INSTITUTE.
9. WHERE ROOF PLYWOOD IS NOT PERMANENTLY ATTACHED TO TOP CHORD OF TRUSS, PROVIDE CONTINUOUS 2X4 @ 2'-0" O.C. PERPENDICULAR TO TOP CHORD.
10. DELEGATED DESIGN COMPONENTS, TRUSS SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.
11. PLYWOOD FLOOR, WALL AND ROOF SHEATHING ARE DESIGNED AS DIAPHRAGMS AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 23 OF THE 7TH EDITION (2020) FLORIDA BUILDING CODE.
12. TRUSS PROFILES SHOWN IN PLANS, ELEVATIONS, OR DETAILS ARE SHOWN SCHEMATICALLY UNLESS A SPECIFIC PROFILE IS NOTED IN PLAN. TRUSS MANUFACTURER IS RESPONSIBLE FOR PROVIDING TRUSS PROFILES AND MEMBER SIZES REQUIRED TO SUPPORT SPECIFIC LOADS. TRUSSES SHOWN IN DETAIL ARE SHOWN SCHEMATICALLY FOR GENERAL INFORMATION AND SHALL NOT BE INTERPRETED AS THE INTENDED PROFILE UNLESS SPECIFICALLY NOTED.
13. DEFLECTIONS OF WOOD TRUSSES SHALL BE LIMITED TO L/360 FOR LIVE LOADS, AND L/240 FOR COMBINED DEAD AND LIVE LOADS.
14. DESIGN DOCUMENTS INCLUDE A SYSTEM OF CUSTOM ENGINEERED TRUSS COMPONENTS AND CONNECTIONS IN ACCORDANCE WITH ANSI/TPI 1-2002 AND ALL APPLICABLE STANDARDS OF TRUSS PLATE INSTITUTE, INCLUDING, BUT NOT LIMITED TO, ANSI/TPI 1-2014 - NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION, BCSI 01-03 BUILDING COMPONENT SAFETY SUMMARY SHEETS AND DSB-89 TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES AND THE DEPARTMENT OF PROFESSIONAL REGULATIONS GUIDELINES (FLORIDA ADMINISTRATIVE CODE 61G15).
15. THE ENTIRE SYSTEM, INCLUDING ALL TRUSSES, CONNECTORS BETWEEN TRUSSES, BRIDGING, TEMPORARY BRACING FOR ERECTION, ANCHORAGE, AND EMBEDMENTS SHALL BE DESIGNED BY A SPECIALTY ENGINEER (PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA). THE REVIEW OF ALL STRUCTURAL SUBMITTALS BY THE STRUCTURAL ENGINEER OF RECORD SHALL BE TO ENSURE THAT HIS INTENT HAS BEEN UNDERSTOOD AND THAT THE SPECIFIED CRITERIA HAVE BEEN USED. A COPY OF ALL STRUCTURAL SUBMITTALS WILL BE RETAINED FOR RECORD KEEPING PURPOSES ONLY. TRUSS CALCULATIONS, COMPONENT DRAWINGS, CONNECTOR CALCULATIONS AND ERECTION PLANS SHALL BE SIGNED AND SEALED BY TRUSS SYSTEM DELEGATED SPECIALTY ENGINEER AND SUBMITTED TO LOCAL BUILDING OFFICIAL FOR APPROVAL. DESIGN TRUSSES FOR LOADS SHOWN ON PLANS.
16. IN THE ABSENCE OF LOADS, USE APPLICABLE LOCAL CODE FOR LIVE LOAD AND ACTUAL WEIGHT OF BUILDING MATERIALS FOR DEAD LOAD. USE PATTERNED AND PARTIAL SPAN LIVE LOADS WHERE REQUIRED TO PRODUCE MAXIMUM FORCE IN ANY TRUSS MEMBER. APPLY NET WIND UPLIFT ON ROOFS WHEN APPLICABLE. TRUSS TOP CHORDS SHALL BE GROUP I SPECIES LUMBER. EXPOSED TO VIEW TRUSSES SHALL BE OF SELECT STRUCTURAL GRADE. ALL OTHER GRADE AND SPECIES SELECTION IS AT THE DISCRETION OF THE SUPPLIER. COORDINATE ALL TRUSS DETAILS WITH ARCHITECTURAL DRAWINGS. FOR CONCEALED TO VIEW TRUSSES, WEB CONFIGURATIONS WHERE SHOWN ARE SUGGESTIONS AND MAY BE MODIFIED BY THE SUPPLIER FOR ECONOMY. PROVIDE SIMPSON "TSS" PLATE, TAR IMPREGNATED FELT PAPER OR OTHER SUITABLE VAPOR BARRIER BETWEEN TRUSSES AND CONCRETE OR MASONRY BEARING SURFACES. PROVIDE G90 GALVANIZED HURRICANE ANCHORS DESIGNED FOR NET WIND UPLIFT AT ALL BEARINGS.
17. GENERAL CONTRACTOR TO COORDINATE HORIZONTAL AND VERTICAL CHASES, ATTIC AND ACCESS REQUIREMENTS INCLUDING SIZE AND LOCATION WITH MECHANICAL, ARCHITECTURAL AND ELECTRICAL DRAWINGS.

061754 WOOD FRAMING CONNECTORS

1. CONNECTORS EXPOSED TO WET CONDITIONS SHALL BE GALVANIZED.
2. CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE GALVANIZED.
3. WHEN EXPOSED TO WET CONDITIONS OR IN CONTACT WITH PRESSURE TREATED LUMBER, NAILS AND SCREWS USED WITH FRAMING CONNECTORS SHALL BE GALVANIZED OR STAINLESS STEEL, TO MATCH FINISH OF CONNECTOR.
4. CONNECTOR MODEL NUMBERS SHOWN ARE STRONG-TIE CONNECTORS AS MANUFACTURED BY SIMPSON STRONG-TIE CO. EQUIVALENT USP CONNECTORS ARE ACCEPTABLE SUBSTITUTIONS.
5. OTHER SUBSTITUTIONS ARE ACCEPTABLE WITH THE APPROVAL OF THE STRUCTURAL ENGINEER.
6. UNLESS SHOWN OTHERWISE, INSTALL SIZE AND NUMBER OF FASTENERS SHOWN IN LATEST SIMPSON CATALOG. WHERE MULTIPLE FASTENING PATTERNS ARE SHOWN, INSTALL THE NUMBER OF FASTENERS FOR MAXIMUM CAPACITY.

312002 FOUNDATIONS - W/ SOIL REPORTS

1. SEE THE FOLLOWING GEOTECHNICAL REPORT FOR COMPLETE GEOTECHNICAL RECOMMENDATIONS AND INSTALLATION PROCEDURES. SITE PREPARATION AND FOUNDATION INSTALLATION SHALL COMPLY WITH:

   REPORT No. 5511-21-032
   PREPARED BY: TIERRA, INC
   TITLED: GEOTECHNICAL SERVICES REPORT LAKE COUNTY FIRE STATION NO.71
   DATED: JUNE 30, 2021

2. ~~FOLLOW THE RECOMMENDATIONS LISTED IN THE GEOTECHNICAL REPORT FOR SITE~~ PREPARATION WORK. AT A MINIMUM, SITE PREPARATION WORK SHALL INCLUDE:

   A. STRIPPING AND GRUBBING OF THE BUILDING FOOTPRINT PLUS A MARGIN OF 5 FEET AROUND THE BUILDING, REMOVING ALL ORGANIC MATERIALS.

   B. PROOF ROLLING THE BUILDING SITE TO LOCATE ANY UNFORESEEN SOFT AREAS. ANY SOFT AREAS SHALL BE EXCAVATED AND REPLACED WITH CLEAN FILL. A DENSITY OF AT LEAST 95% FOR A DEPTH OF 2 FEET IS REQUIRED UNDER THE BUILDING FOOTPRINT.

   C. ALL FILL SHALL BE CLEAN SAND AND FREE OF ORGANIC MATERIALS. COMPACT FILL IN 12 INCH (UNCOMPACTED THICKNESS) LIFTS TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY VALUE.

   D. EXCAVATIONS FOR FOUNDATIONS SHALL BE COMPACTED TO 95% FOR A DEPTH OF AT LEAST 1 FOOT BELOW THE BOTTOM OF THE FOUNDATION.

   E. DEWATERING MAY BE REQUIRED TO ACHIEVE THE REQUIRED COMPACTION VALUES, AND IF USED, SHOULD DRAW DOWN THE WATER LEVEL TO AT LEAST 2 FEET BELOW THE BOTTOM OF THE EXCAVATION.

3. SLABS ON GRADE SHALL BE PLACED OVER A 15 MIL, CLASS "A" VAPOR RETARDER. VAPOR RETARDER SHALL BE LAPPED A MINIMUM OF 6", OR AS RECOMMENDED BY THE MANUFACTURER (WHICHEVER IS GREATER) AND TAPED AT ALL JOINTS. ALL PUNCTURES IN THE VAPOR RETARDER SHALL BE REPAIRED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. ALL PENETRATIONS THROUGH THE VAPOR RETARDER (COLUMNS, PLUMBING, CONDUITS, ETC) SHALL BE SEALED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. VAPOR RETARDER SHALL BE CONTINUOUS UNDER WALL FOUNDATIONS OR SEALED TO EXTERIOR WALLS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE BEARING PRESSURE OF 3,000 PSF.
5. CANTILEVERED RETAINING WALL AND RESTRAINED FOUNDATION WALL DESIGN IS BASED ON THE FOLLOWING SOIL PROPERTIES:

   LATERAL BEARING PRESSURE 200 PSF/FT
   COEFFICIENT OF FRICTION 0.25

NO.	DESCRIPTION	DATE

GARY C. KRUEGER
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11/9/2021 3:20:52 PM

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LAKE COUNTY
FIRE STATION NO.71
STRUCTURAL NOTES

33661 CR 473, LEESBURG, FL 34788

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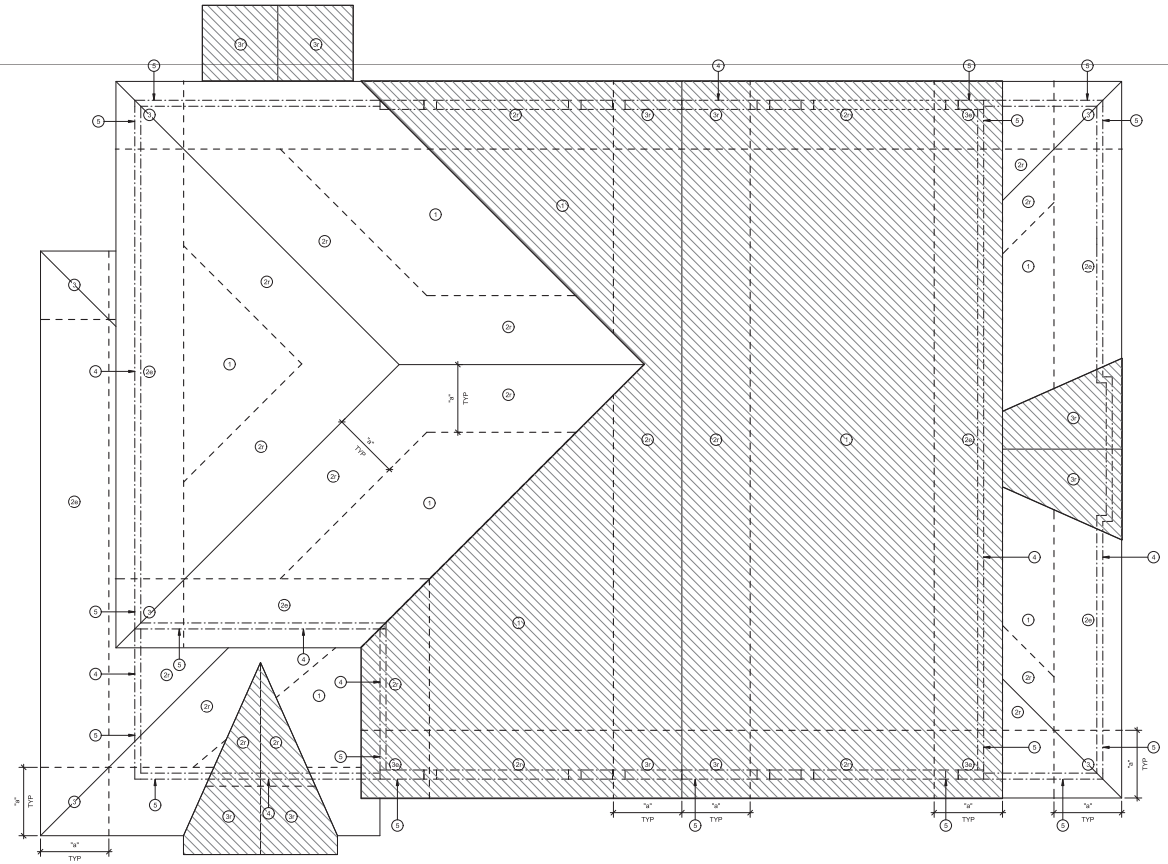


1 WIND LOAD DIAGRAM
3/16" = 1'-0"

ULTIMATE C&C WIND PRESSURES (ASCE 7-16)

ROOF	a (FT)	Vult (MPH)	Vasd (MPH)	A (SF)	ZONE 1 (PSF)	ZONE 2e (PSF)	ZONE 2r (PSF)	ZONE 2n (PSF)	ZONE 3 (PSF)	ZONE 3e (PSF)	ZONE 3r (PSF)	ZONE 1 (PSF)	ZONE 2 (PSF)	ZONE 2e (PSF)	ZONE 2n (PSF)
HIP ROOF	7'-3"	147	114	<10	+29.0 -48.8	+29.0 -65.2	+29.0 -85.0	N/A	+29.0 -65.2	N/A	N/A	+38.9 -42.2	+38.9 -52.0	+29.0 -75.8	+29.0 -95.5
				20	+25.0 -48.8	+25.0 -59.9	+25.0 -76.6	N/A	+25.0 -59.9	N/A	N/A	+37.1 -40.4	+37.1 -48.5	+25.0 -74.2	+25.0 -85.6
				50	+19.8 -43.1	+19.8 -52.8	+19.8 -65.5	N/A	+19.8 -52.8	N/A	N/A	+34.8 -38.1	+34.8 -43.9	+19.8 -72.2	+19.8 -72.5
				100+	+16.0 -38.9	+16.0 -47.5	+16.0 -57.1	N/A	+16.0 -47.5	N/A	N/A	+33.1 -36.3	+33.1 -40.4	+16.0 -70.7	+16.0 -62.6
GABLE ROOF	7'-3"	147	114	<10	+23.6 -71.8	+23.6 -71.8	+23.6 -104.8	+23.6 -104.8	N/A	+23.6 -104.8	+23.6 -124.5	+38.9 -42.2	+38.9 -52.0	+23.6 -115.3	+23.6 -154.8
				20	+21.2 -71.8	+21.2 -71.8	+21.2 -90.6	+21.2 -90.6	N/A	+21.2 -90.6	+21.2 -106.7	+37.1 -40.4	+37.1 -48.5	+21.2 -104.7	+21.2 -131.0
				50	+18.2 -43.7	+18.2 -43.7	+18.2 -71.8	+18.2 -71.8	N/A	+19.2 -71.8	+18.2 -83.1	+34.8 -38.1	+34.8 -43.9	+18.2 -90.6	+18.2 -99.6
				100+	+16.0 -22.4	+16.0 -22.4	+16.0 -57.6	+16.0 -57.6	N/A	+16.0 -57.6	+16.0 -65.2	+33.1 -36.3	+33.1 -40.4	+16.0 -90.0	+16.0 -75.8

ULTIMATE C&C WIND PRESSURE PLAN NOTES:

1. PRESSURES SHOWN ABOVE ARE ULTIMATE COMPONENTS AND CLADDING PRESSURES, GIVEN PRESSURES MAYBE CONVERTED TO NOMINAL USING A 0.6 MULTIPLIER FACTOR. NO FURTHER REDUCTION IS ALLOWED.

   A - INDICATES TRIBUTARY AREA IN S.F.
   a - INDICATES END ZONE WIDTH IN FT.
   Vult - INDICATES ULTIMATE DESIGN WIND SPEED IN MPH
   Vasd - INDICATES NOMINAL DESIGN WIND SPEED IN MPH

2. GROSS PRESSURES ARE FOR JOISTS, WINDOWS, DOORS, VENEER, LIGHT GAGE METAL FRAMING, METAL DECK ATTACHMENTS, ROOFING, ROOFING ACCESSORIES AND OTHER BUILDING COMPONENTS AND CLADDING.

3. GROSS PRESSURES SHALL BE LINEARLY INTERPOLATED FOR (A) NOT SHOWN IN TABLE.

4. POSITIVE PRESSURES INDICATE PRESSURES ACTING TOWARD A PROJECTED SURFACE. NEGATIVE PRESSURES INDICATE PRESSURES ACTING AWAY FROM A PROJECTED SURFACE.

5. ROOF AND ZONES (1) THRU (3)

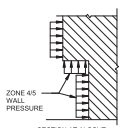
6. WALL ZONES (4) AND (5)

7. OVERHANG ZONES (2H) AND (3H) APPLY ONLY TO ROOF OVERHANGS WHERE THE COMPONENT OR CLADDING RECEIVES PRESSURE SIMULTANEOUSLY ON BOTH SIDES (UPWARD SUCTION ON TOP AND UPWARD PRESSURE ON BOTTOM, SUCH AS AT OPEN SOFFITS), AND IS CONTINUOUS WITH FIELD OF ROOF.

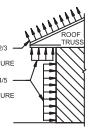
8. NET DESIGN ROOF PRESSURES SHALL BE CALCULATED USING THE SELFWEIGHT (DEAD LOAD) OF THE MATERIALS. HOWEVER, THE MAXIMUM REDUCTION OF WIND UPLIFT PRESSURES SHALL BE LIMITED TO THE SELF WEIGHT OF THE ROOF SYSTEM PLUS 5 PSF FOR SUPERIMPOSED DEAD LOADS.

9. INTERNAL PRESSURE COEFFICIENT FOR ENCLOSED BUILDING EQUALS +0.18 AND -0.18

10. AT ALCOVES AND CANOPIES, THE TOTAL UPLIFT PRESSURE ON THE ALCOVE SOFFIT OR CANOPYSHALL EQUAL THE WALL PRESSURE IN THAT AREA.



SECTION AT ALCOVE



SECTION AT ROOF TRUSS

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LAKE COUNTY
FIRE STATION NO.71
COMPONENTS AND CLADDING WIND LOAD DIAGRAM

33661 CR 473, LEESBURG, FL 34788

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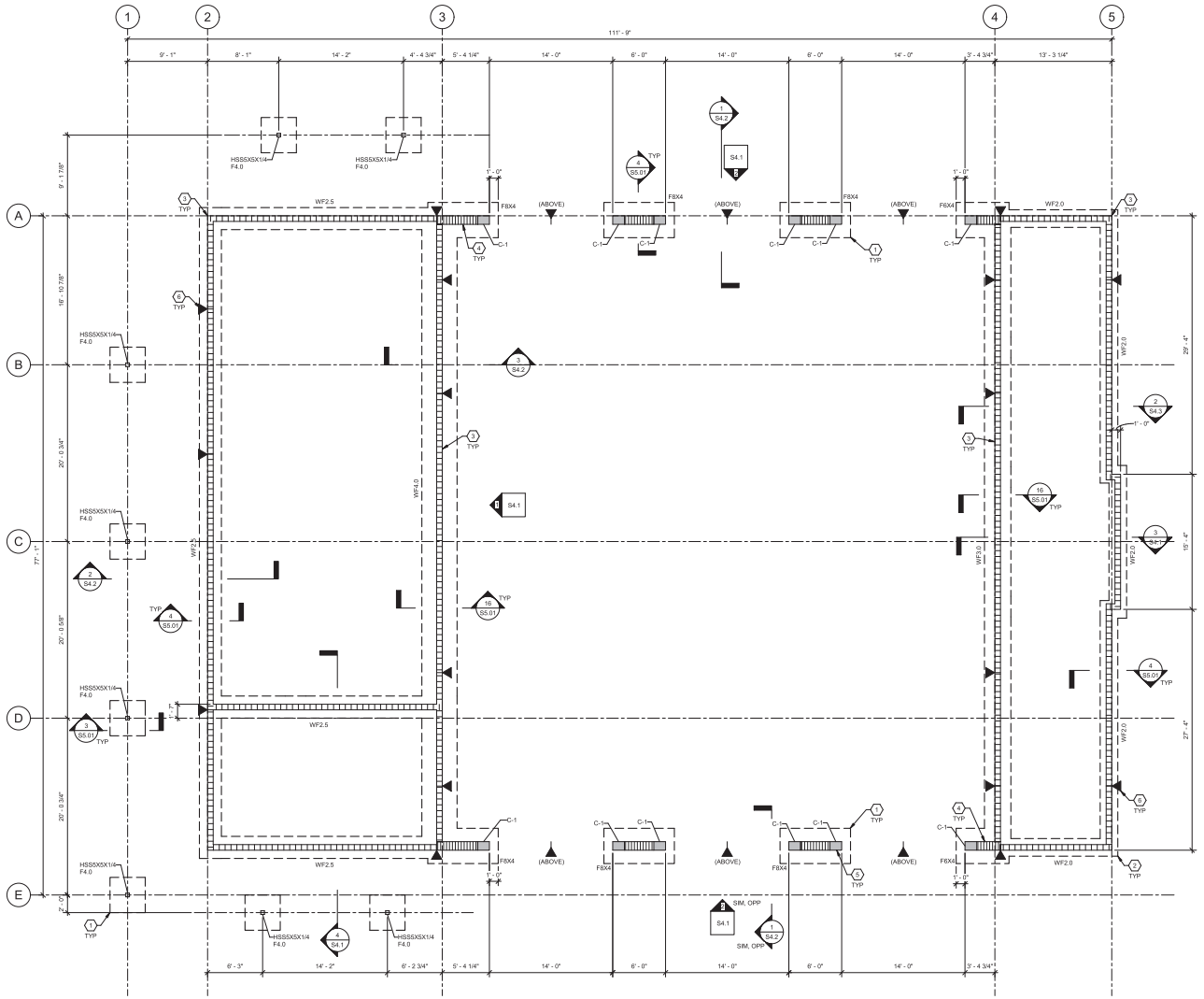
FOUNDATION PLAN NOTES

1. F#.# INDICATES ISOLATED SPREAD FOUNDATION. REFER TO SCHEDULE FOR SIZE & REINFORCING.
2. WF#.# INDICATES CONTINUOUS WALL FOUNDATION. REFER TO SCHEDULE FOR SIZE & REINFORCING.
3. INDICATES 8" LOAD-BEARING CMU WALL REINFORCED W/ #5 @ 24" O.C., AND AT CORNERS, INTERSECTIONS, & TERMINATIONS IN GROUT FILLED CELLS.
4. INDICATES 12" LOAD BEARING CMU WALL REINFORCED W/ #5 @ 16" O.C. IN GROUT FILLED CELLS.
5. C-# INDICATES CIP CONCRETE TIE COLUMN. REFER TO SCHEDULE FOR SIZE & REINFORCING.
6. INDICATES MASONRY CONTROL JOINT PER 7 / S5.11 COORDINATE LOCATIONS W/ ARCH ELEVATIONS & STUCCO CONTROL JOINTS.

STRUCTURAL ELEVATIONS:
- TFOUNDATION: EL. 73'-8" U.N.O.



1 FOUNDATION PLAN
3/16" = 1'-0"

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NO.	DESCRIPTION	DATE

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FOUNDATION PLAN

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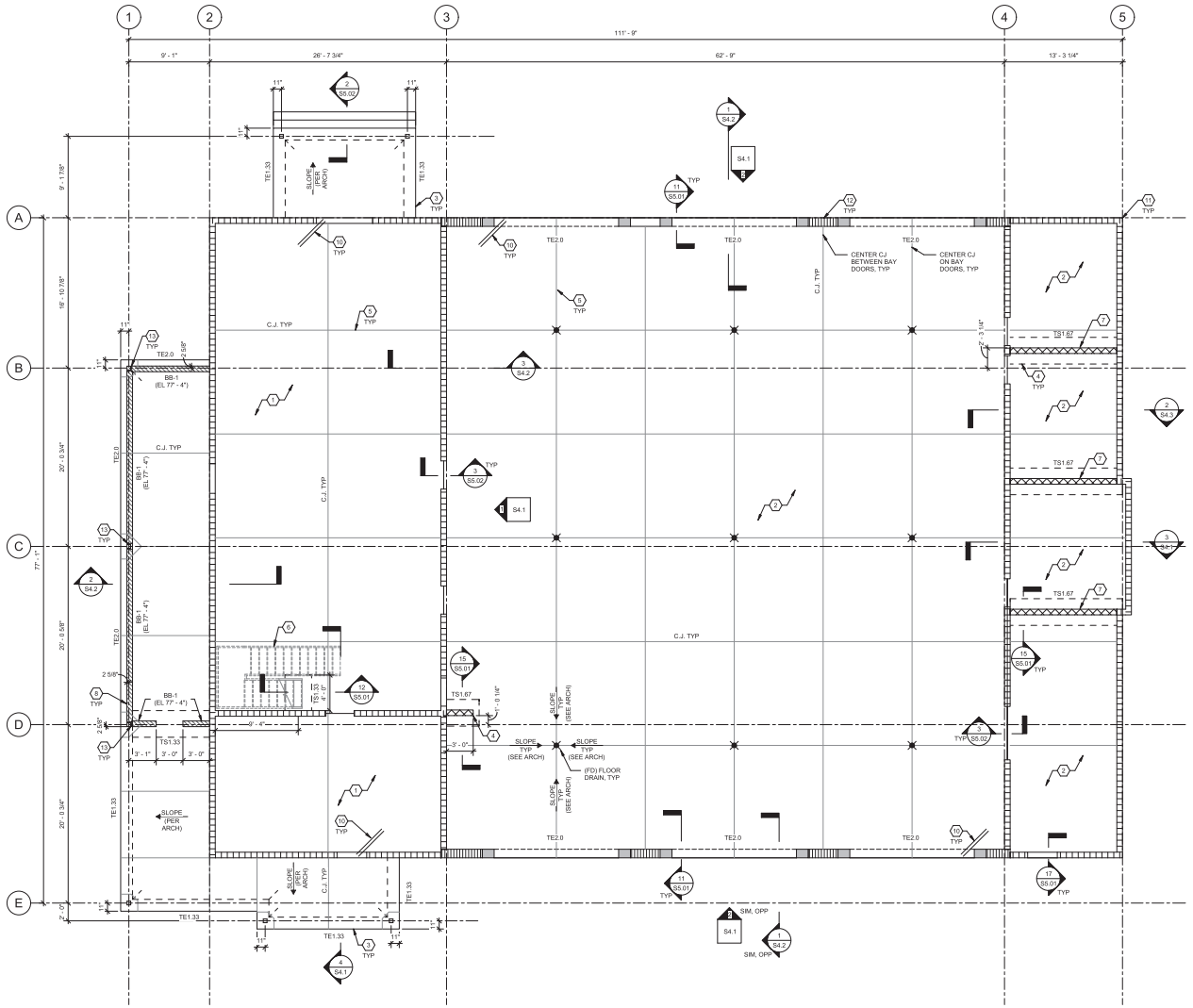

1 FIRST FLOOR - SLAB PLAN
3/16" = 1'-0"

SLAB PLAN KEYNOTES

1. 4" CONC. SLAB-ON-GRADE ON COMPACTED TERMITE TREATED SUB-GRADE ON 15 MIL CLASS-A VAPOR BARRIER. REINFORCE W/ 4X4 W4.0XW4.0 WWF (FLAT SHEETS) AT SLAB MID-DEPTH.
2. 6" CONC. SLAB-ON-GRADE ON COMPACTED TERMITE TREATED SUB-GRADE ON 15 MIL CLASS-A VAPOR BARRIER. REINFORCE W/ #4 @ 12" O.C. EA WAY 2" BELOW TOP OF SLAB.
3. TE-#.# INDICATES THICKENED SLAB EDGE. REFER TO TYPICAL DETAIL 11 / S5.01
4. TS-#.# INDICATES THICKENED SLAB FOUNDATION. REFER TO TYPICAL DETAIL 11 / S5.01
5. C.J. INDICATES SAW-CUT CRACK CONTROL JOINT IN SLAB-ON-GRADE. REFER TO DETAIL 9 / S5.01
6. PRE-ENGINEERED METAL PAN STAIR PER DELEGATED SPECIALTY ENGINEER. REFER TO ARCH DWGS FOR STAIR INFORMATION.
7. INDICATES 8" NON-LOAD-BEARING CMU WALL REINFORCED W/ #5 @ 48" O.C., AND AT CORNERS, INTERSECTIONS, & TERMINATIONS IN GROUT FILLED CELLS.
8. INDICATES 8" CMU KNEE WALL REINFORCED W/ #5 @48" O.C., AND AT CORNERS, INTERSECTIONS, & TERMINATIONS IN GROUT-FILLED CELLS.
9. BB-# INDICATES CMU BOND BEAM. REFER TO SCHEDULE FOR SIZE AND REINFORCING.
10. RE-ENTRANT CORNER REINFORCING SEE 10/S5.01
11. INDICATES 8" LOAD-BEARING CMU WALL, SEE FOUNDATION PLAN FOR REINFORCEMENT.
12. INDICATES 12" LOAD-BEARING CMU WALL, SEE FOUNDATION PLAN FOR REINFORCEMENT.
13. 1/2" ISOLATION MATERIAL AT KNEE WALL-TO-HSS INTERFACE

STRUCTURAL ELEVATIONS
- T/ SLAB: EL. 75' - 0" UNO
- T/ CMU KNEE WALL: EL 77' - 4"

NO.	DESCRIPTION	DATE

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LAKE COUNTY
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SLAB PLAN

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WOOD CONNECTOR SCHEDULE

MARK	DESIGNATION	UPLIFT (LBS)	F1 (LBS) LATERAL⊥	F2 (LBS) LATERAL∥	FASTENING	LOCATION, UNO
A	(1) MTS16 FL 13872	1000			(6) #10 TEKS SCREWS TO STEEL (6) 10d NAILS TO TRUSS	GIRDER TRUSS, JACK TRUSS, OR COMMON TRUSS BEARING ON STEEL
B	(2) MTS16 FL 13872	2000			(14) 10d NAILS AT EACH STRAP	HIP TRUSS BEARING ON STEEL
C	(1) HGT-2 FL 10456	10980			(2) 3/4"Ø X 6" TITEN HD SCREW ANCHOR TO CONC (16) 10d NAILS TO TRUSS	GIRDER TRUSS BEARING ON TOP OF CMU/CONC
D	(1) HETAL16 FL 11473	1810	415	1100	(14) 10d X 1 1/2"	HIP TRUSS OR JACK TRUSS BEARING ON TOP OF CMU/CONC
E	(1) HU214-2 FL 10531	2015			(24) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (12) 10d NAILS TO TRUSS	GIRDER TRUSS CMU SIDE BEARING
F	(1) LGUM210-2X FL 13904 (2) RBC FL 10446	1605 700			(8) 3/8" X 4" TITEN HD SCREWS TO CONC/CMU (8) 1/4" X 2 1/2" SDS SCREWS TO TRUSS (3) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (6) 10d X 1 1/2" TO TRUSS	HIP TRUSS CMU SIDE BEARING

WOOD CONNECTOR SCHEDULE (CONTINUED)

MARK	DESIGNATION	UPLIFT (LBS)	F1 (LBS) LATERAL⊥	F2 (LBS) LATERAL∥	FASTENING	LOCATION, UNO
G	(1) HU212 FL 10531	1135			(10) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (6) 10d X 1 1/2" TO TRUSS	JACK TRUSS CMU SIDE BEARING
H	(1) HUS48 FL 10531	1560			(10) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (6) 10d X 1 1/2" TO TRUSS	4X RIDGE BEAM TO TRUSS TOP CHORD
I	(1) HU48 FL 10531	1135			(14) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (6) 10d X 3" TO TRUSS	4X RIDGE BEAM TO FACE OF CMU
J	(1) LRU26Z FL 10447	880			(4) 16d TO RIDGE BEAM (5) 16d TO RAFTER	2X RAFTER TO 4X RIDGE BEAM
K	(1) HGAM10KTA FL 11473	850	1005	1105	(5) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU OR (4) 1/4" X 1 1/2" SDS SCREWS TO NAILER ON HSS (4) 1/4" X 1 1/2" SDS SCREWS TO BLOCKING	HEEL BLOCKING, SEE DETAIL 3 / S5.41
L	(1) H10S FL 10446	550	660	215	(6) #10 TEKS SCREWS TO STEEL (8) 8d X 1 1/2" NAILS TO TRUSS	RAFTER BEARING ON STEEL

NOTE: TRUSS-TO-TRUSS CONNECTORS PER DELEGATED TRUSS ENGINEER.

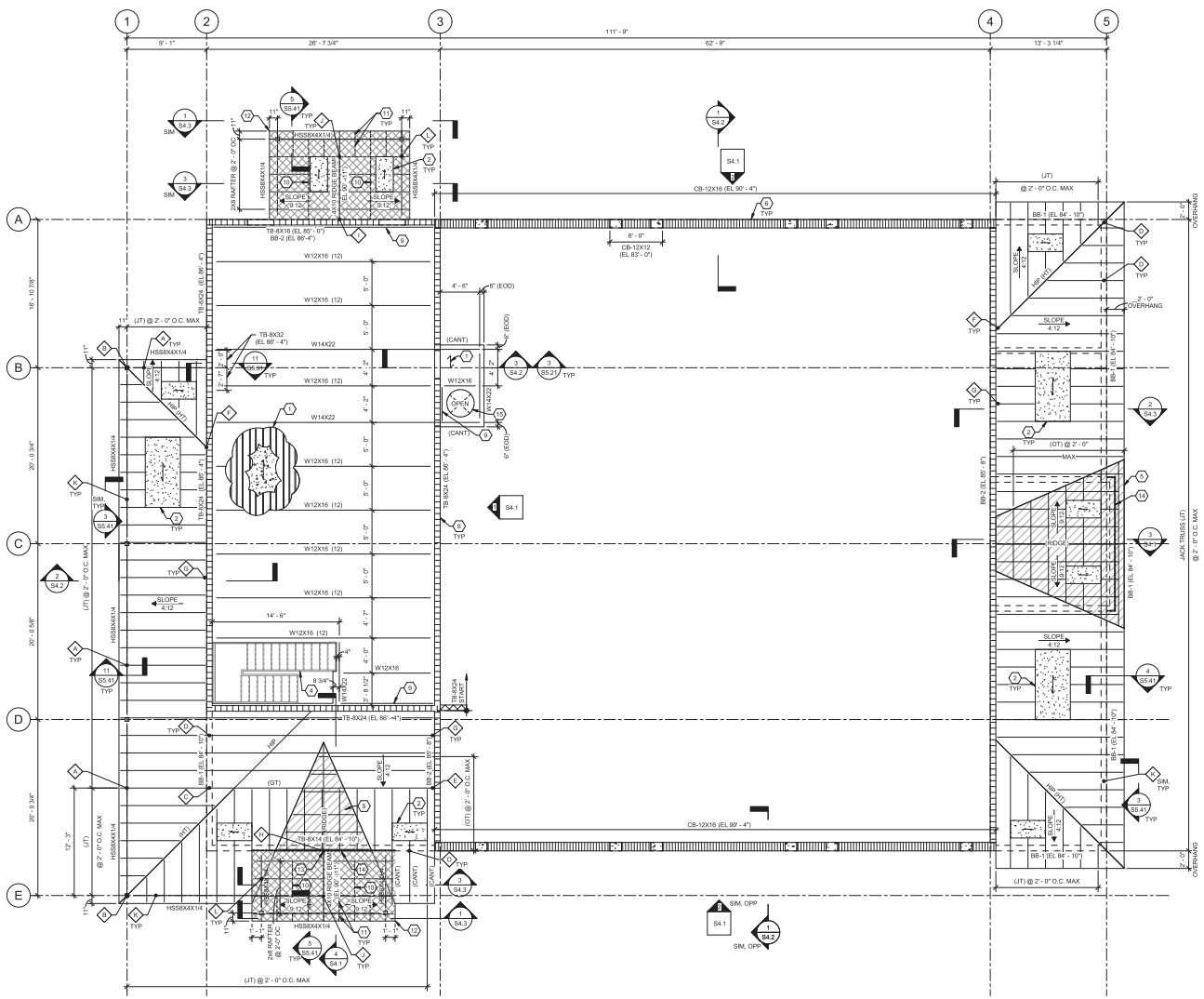
SECOND FLOOR / LOW ROOF FRAMING PLAN KEYNOTES

1. 2 1/2" NW CONCRETE OVER 1 1/2" 20GA G90 VL COMPOSITE METAL DECK REINFORCED W/ 6X6 W2.1XW2.1 (FLAT SHEETS)
2. 5/8" APA STRUCTURAL 1 ROOF SHEATHING EXPOSURE 1, SPAN 40/20, 48"X96" SQUARE EDGE, SEE 2 / S5.41 FOR ATTACHMENT DETAIL.
3. PRE-ENGINEERED WOOD ROOF TRUSS PER DELEGATED SPECIALTY ENGINEER
4. PRE-ENGINEERED METAL PAN STAIR PER DELEGATED SPECIALTY ENGINEER. REFER TO ARCH DWGS FOR STAIR INFORMATION.
5. INDICATES OVERBUILT TRUSS AREA.
6. CB-# INDICATES CAST-IN-PLACE CONCRETE BEAM, SEE SCHEDULE FOR SIZE AND REINFORCING.
7. BB-# INDICATES CMU BOND BEAM, SEE SCHEDULE FOR SIZE & REINFORCING.
8. TB-# INDICATES CONCRETE TIE BEAM, SEE SCHEDULE FOR SIZE & REINFORCING.
9. CONTINUOUS L4X3X1/4 (LLV) DECK SUPPORT ANGLE. REFER TO DETAIL 8 / S5.31
10. 2X8 BLOCKING AT VAULTED CEILING RAFTER MID-POINT. FASTEN TO RAFTER W/ (3) 8d TOENAILS EA END
11. 2X8 OUTLOOKER AT 2' - 0" OC MAX, SEE 5 / S5.41
12. INDICATES VAULTED CEILING AT COVERED ENTRY. REFER TO SECTIONS AND ARCH DWGS.
13. RIDGE BEAM REACTION AT OVERBUILT TRUSS:
    DEAD LOAD: 250 LB
    LIVE ROOF LOAD: 450 LB
    WIND UPLIFT (ULT): 1600 LB
14. 1/2" APA RATED PLYWOOD WALL SHEATHING, 32/16 SPAN, EXPOSURE 1, SQUARE EDGES. REFER TO S0.2 SECTION 061000 FOR FASTENING INFORMATION
15. APPROXIMATE LOCATION OF FIRE POLE OPENING. PROVIDE 14 GA RADIUSED POUR STOP PER 7 / S5.31. COORDINATE SIZE AND LOCATION OF OPENING WITH MANUFACTURER AND ARCH DWGS.

STRUCTURAL ELEVATIONS
- T/ STEEL (WIDE FLANGE): EL. 86' - 0" U.N.O.
- T/ STEEL (HSS): EL 84' - 8 1/2" U.N.O.
- T/ SLAB: EL. 85' - 4"
- LOW ROOF TRUSS BEARING: EL. 84' - 10"

FRAMING PLAN GENERAL NOTES

1. (GT), (T), (HT), (JT) AND (OT): INDICATE GIRDER TRUSS, COMMON TRUSS, HIP TRUSS, JACK TRUSS, AND OVER-BUILT TRUSS; RESPECTIVELY. SEE 1 / S5.41 FOR TYPICAL TRUSS PROFILES.
2. FIRE POLE BASIS OF DESIGN: MCINTIRE BRASS WORKS MODEL 20



1 SECOND FLOOR / LOW ROOF - FRAMING PLAN
3/16" = 1'-0"

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NO.	DESCRIPTION	DATE

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LAKE COUNTY
FIRE STATION NO.71
SECOND FLOOR / LOW ROOF FRAMING PLAN

33661 CR 473, LEESBURG, FL 34788

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S2.3

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WOOD CONNECTOR SCHEDULE

MARK	DESIGNATION	UPLIFT (LBS)	F1 (LBS) LATERAL⊥	F2 (LBS) LATERAL∥	FASTENING	LOCATION, UNO
A	(1) HGT-2 FL 10456	10980			(2) 3/4"Ø X 6" TITEN HD SCREW ANCHOR TO CONC (16) 10d NAILS TO TRUSS	GIRDER TRUSS BEARING ON TOP OF CMU/CONC
B	(1) HETAL16 FL 11473	1810	415	1100	(14) 10d X 1 1/2"	HIP TRUSS, COMMON TRUSS, JACK TRUSS, OR GABLE OUTRIGGER BEARING ON TOP OF CMU/CONC
C	(1) HU214-2 FL 10531	2015			(24) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (12) 10d NAILS TO TRUSS	GIRDER TRUSS CMU SIDE BEARING
D	(1) HU212 FL 10531	1135			(10) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (6) 10d X 1 1/2" TO TRUSS	COMMON TRUSS OR JACK TRUSS CMU SIDE BEARING
E	(1) LUS26 FL 10531	1165			(4) 10d TO TRUSS (4) 10d TO OUTRIGGER	GABLE OUTRIGGER TO GIRDER TRUSS TOP CHORD
F	(1) HGAM10KTA FL 11473	550	1005	1105	(5) 1/4" X 2 3/4" TITEN 2 SCREWS TO CONC/CMU (4) 1/4" X 1 1/2" SDS SCREWS TO BLOCKING	HEEL BLOCKING, SEE DETAIL 3 / S5.41

NOTE: TRUSS-TO-TRUSS CONNECTORS PER DELEGATED TRUSS ENGINEER.

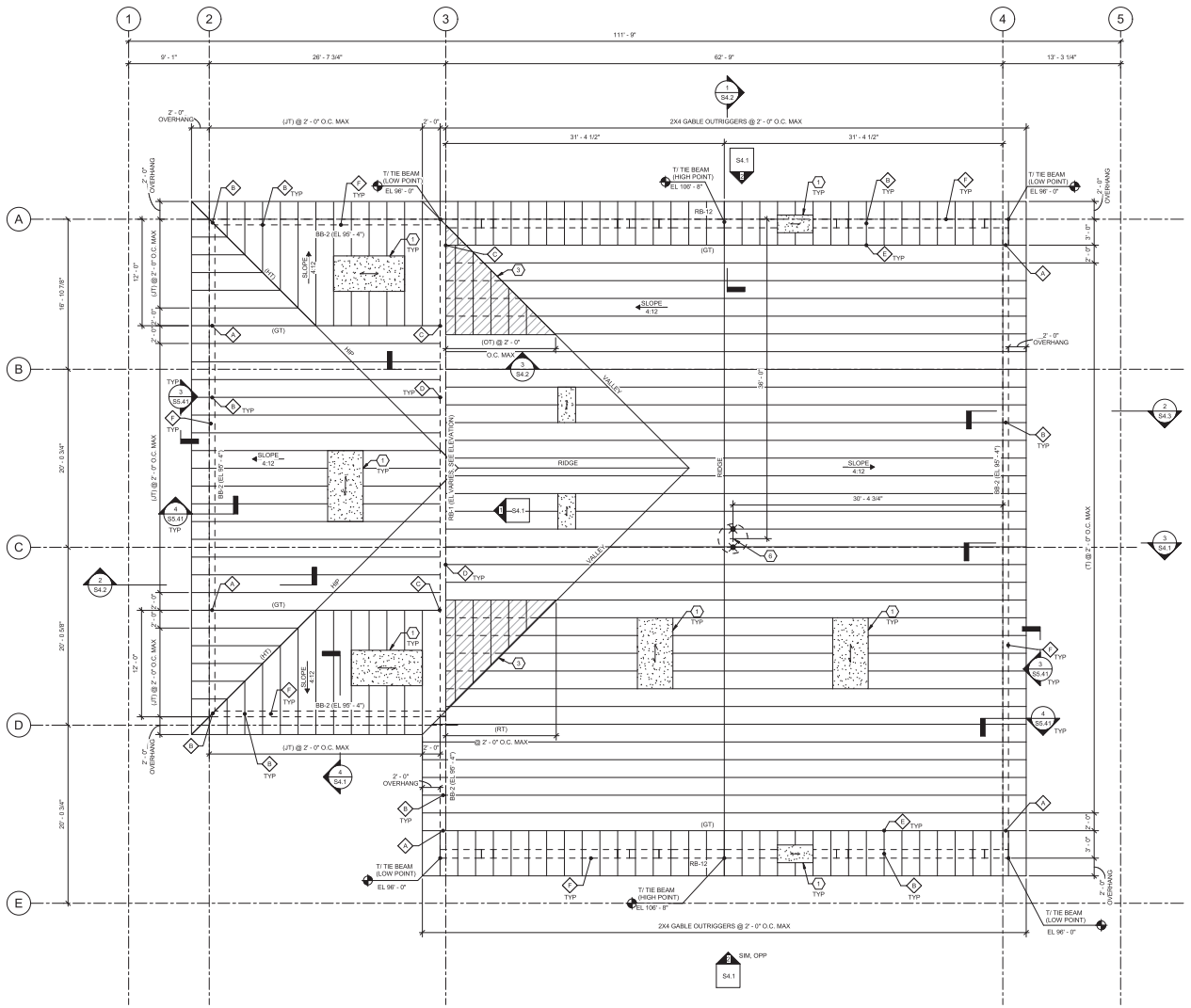
HIGH ROOF - FRAMING PLAN NOTES

1. 5/8" APA STRUCTURAL 1 ROOF SHEATHING EXPOSURE 1, SPAN 40/20, 48"X96" SQUARE EDGE, SEE 2 / S5.41 FOR ATTACHMENT DETAIL.
2. PRE-ENGINEERED WOOD ROOF TRUSS PER DELEGATED SPECIALTY ENGINEER
3. INDICATES OVER-BUILT TRUSS AREA
4. BB-# INDICATES CMU BOND BEAM, SEE SCHEDULE FOR SIZE AND REINFORCING.
5. RB-# INDICATES RAKED CONC. TIE BEAM, SEE SCHEDULE FOR SIZE AND REINFORCING.
6. 24'-0"Ø CEILING FAN MOUNTING POINT. ROOF TRUSSES SHALL BE DESIGNED FOR A 500 LB LIVE POINT LOAD AT THE LOCATIONS INDICATED W/ . REFER TO ARCH AND ELECTRICAL DWGS FOR FAN INFORMATION.

STRUCTURAL ELEVATIONS
- T/ WALL: EL. 95' - 4", U.N.O.
- HIGH ROOF TRUSS BEARING: EL. 95' - 4", U.N.O.

FRAMING PLAN GENERAL NOTES

1. (GT), (T), (HT), (JT) AND (OT): INDICATE GIRDER TRUSS, COMMON TRUSS, HIP TRUSS, JACK TRUSS, AND OVER-BUILT TRUSS, RESPECTIVELY. SEE 1 / S5.41 FOR TYPICAL TRUSS PROFILES.
2. APPARATUS BAY CEILING FAN BASIS OF DESIGN: BIG ASS FAN: 24' DIAMETER BASIC 6



1 HIGH ROOF - FRAMING PLAN
3/16" = 1'-0"

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LAKE COUNTY
FIRE STATION NO.71
HIGH ROOF FRAMING PLAN

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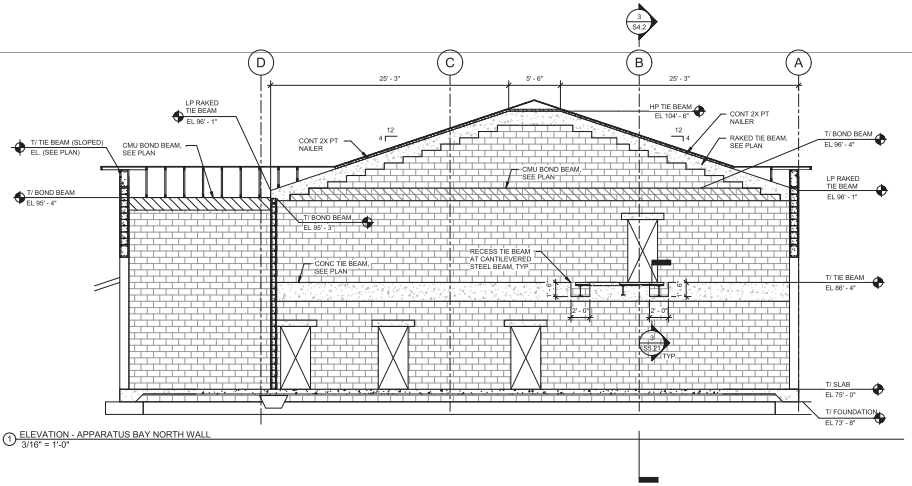
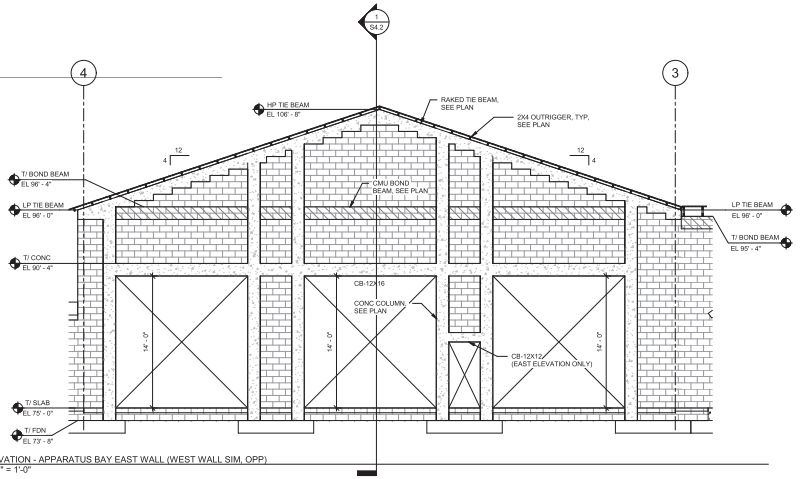
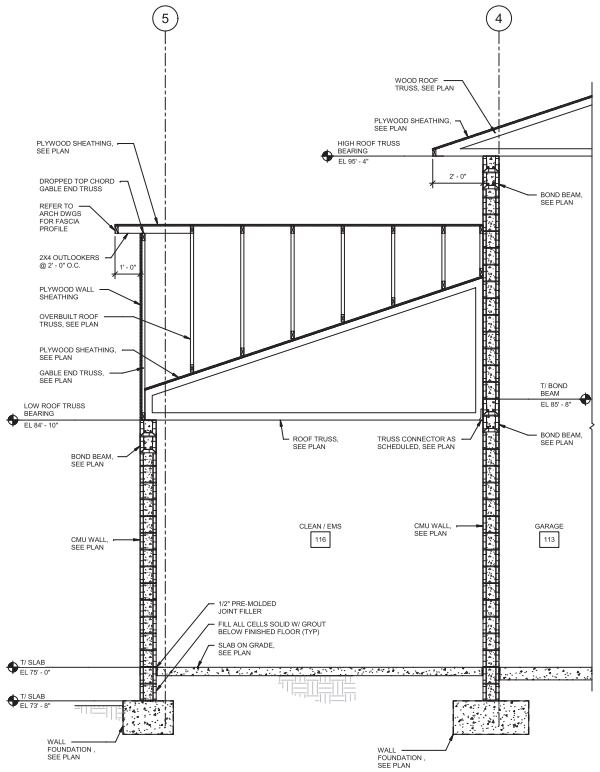


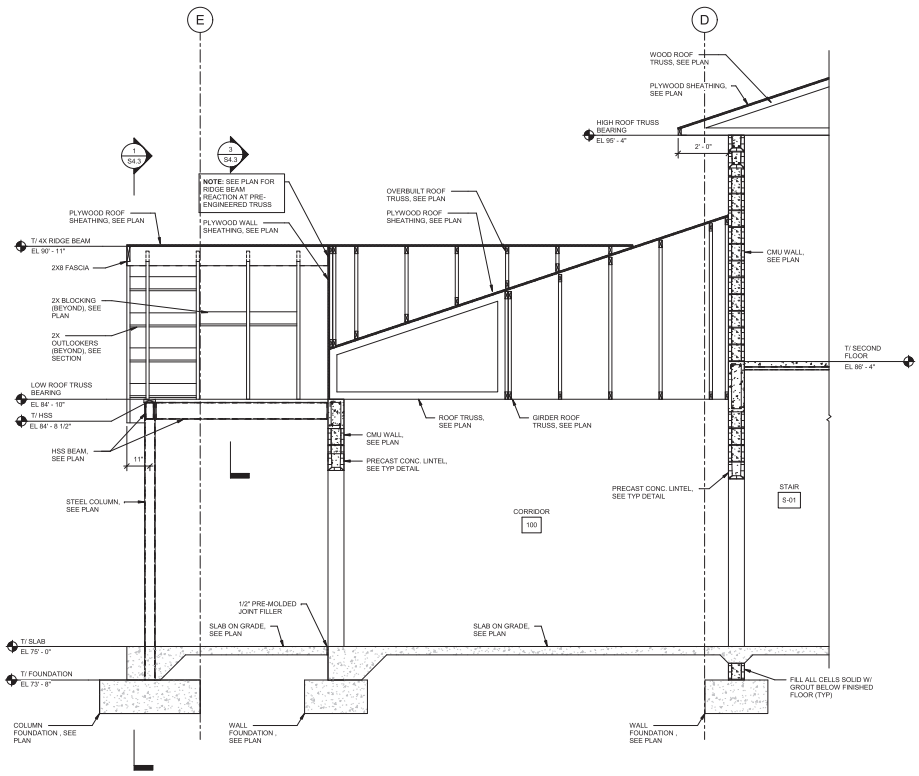
1 ELEVATION - APPARATUS BAY NORTH WALL
3/16" = 1'-0"



2 ELEVATION - APPARATUS BAY EAST WALL (WEST WALL SIM, OPP)
3/16" = 1'-0"



3 WALL SECTION
1/2" = 1'-0"



4 WALL SECTION
1/2" = 1'-0"

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FIRE STATION NO.71
STRUCTURAL ELEVATIONS / SECTIONS

33661 CR 473, LEESBURG, FL 34788

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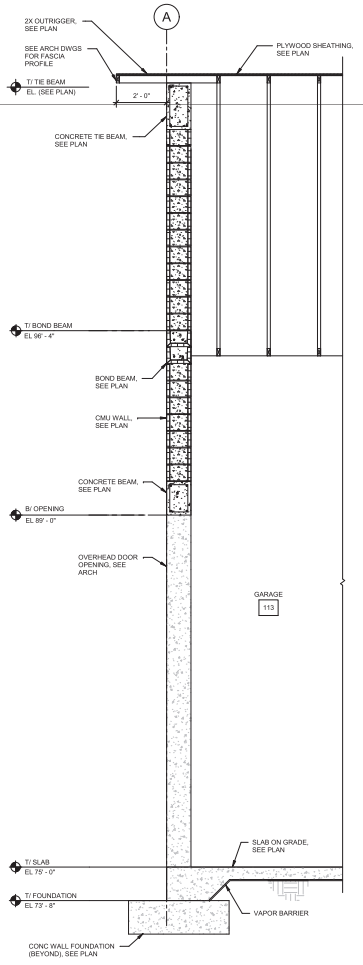
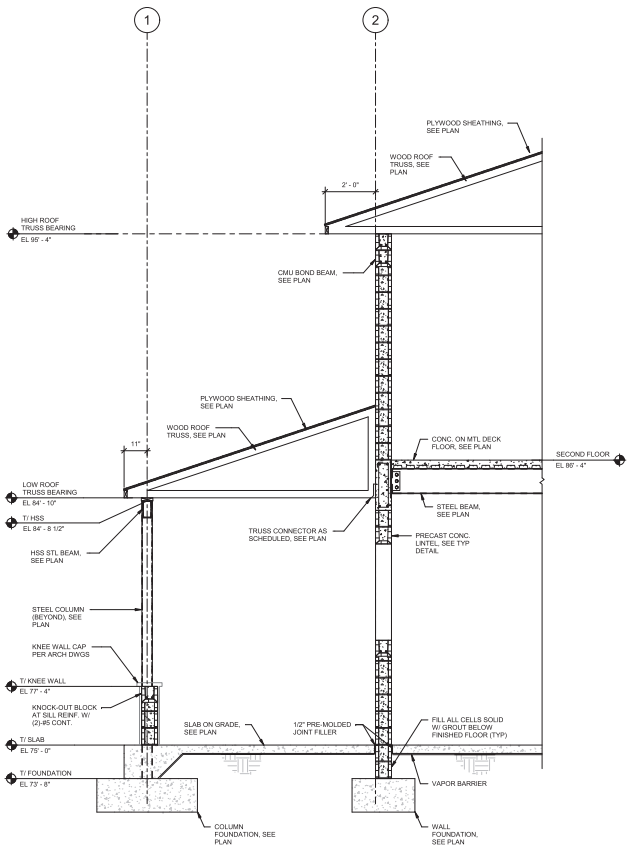
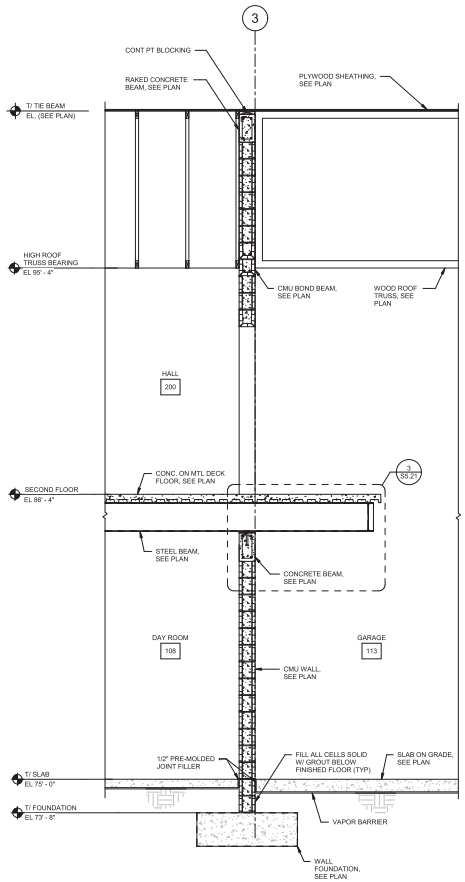


1 WALL SECTION
1/2" = 1'-0"



2 WALL SECTION
1/2" = 1'-0"



3 WALL SECTION
1/2" = 1'-0"

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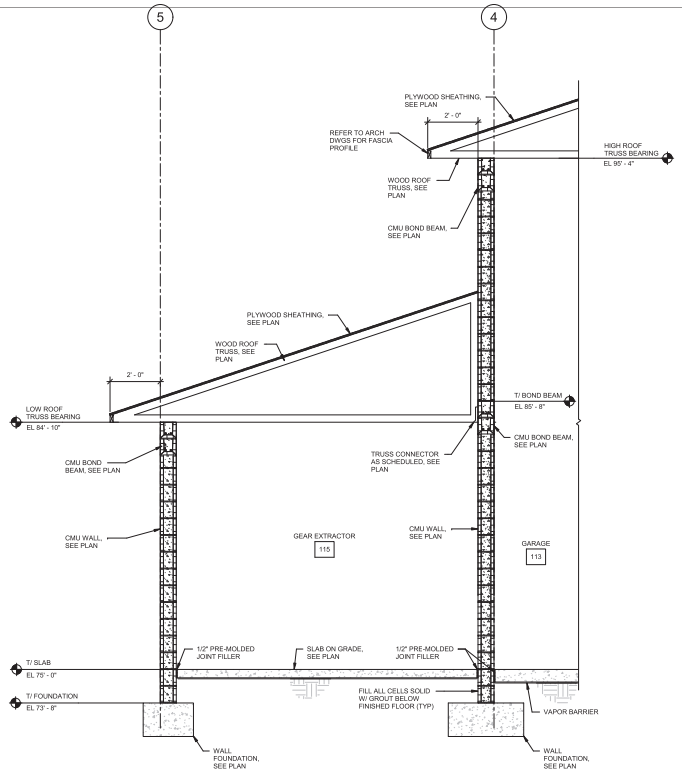
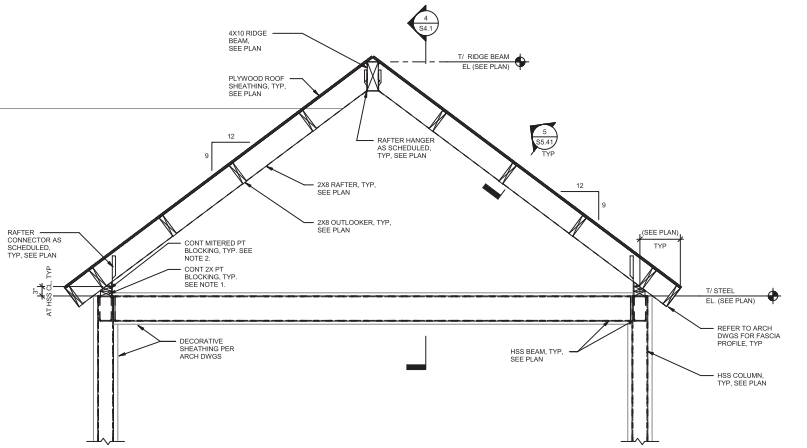
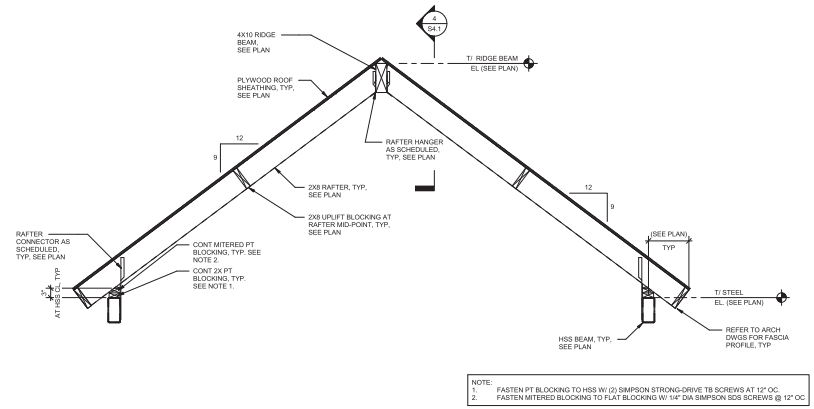
THINK. LISTEN. CREATE.



2 WALL SECTION
1/2" = 1'-0"



1 SECTION AT COVERED ENTRY
3/4" = 1'-0"



3 SECTION AT COVERED ENTRY
3/4" = 1'-0"

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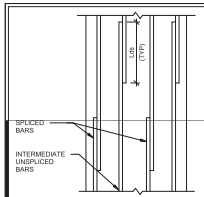
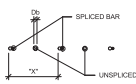




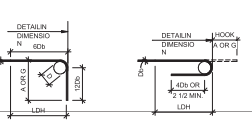
NOTE:
S= X - Db WHERE:
S= CLEAR BAR SPACING TO BE USED FOR DETERMINATION OF SPLICE LENGTH CATEGORY.
X= CLEAR DISTANCE BETWEEN ADJACENT SPLICED BARS.
Db= DIAMETER OF INTERMEDIATE UNSPLICED BARS.
Ldh= LAP SPLICE DEVELOPMENT LENGTH, SEE TABULATED VALUES.

LENGTH OF LAP SPLICES AND BAR EMBEDMENT SHALL BE AS SHOWN IN TABLE, UNLESS OTHERWISE NOTED:

MIN SPLICE LENGTH FOR DEFORMED BARS				
	BAR SIZE	3000 PSI *CLASS B	4000 PSI *CLASS	5000 PSI *CLASS
T<12"	#3	23"	20"	17"
	#4	29"	25"	23"
	#5	37"	32"	29"
	#6	43"	38"	34"
	#7	63"	55"	50"
	#8	72"	63"	56"
	#9	81"	71"	63"

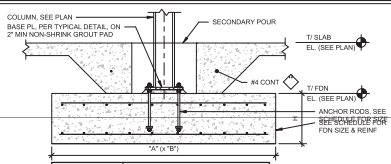
NOTE:
1. WHERE DEPTH OF FRESH CONCRETE BELOW SPLICED REINF BARS IS GREATER THAN 12", MULTIPLY TABULATED SPLICE LENGTH BY 1.3.
2. "Db" IS BAR DIAMETER.
3. FOR ALL REINF SPLICES UTILIZE CLASS "B" SPLICE, U.N.O. ON PLANS OR DETAILS.

1 TYPICAL LAP SPLICE SCHEDULE
3/4" = 1'-0"



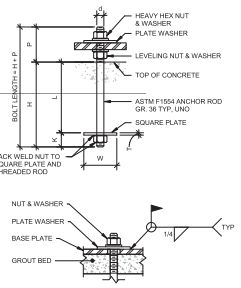
RECOMMENDED END HOOKS, ALL GRADES						
BARS SIZE	FINISHED BEND DIAMETER D (IN.)	180° HOOKS		90° HOOK	f'c = 4000 PSI	
		A GR.G, (IN.)	J, (IN.)	A GR.G, (IN.)	LDH	
#3	2 1/4	5	4	6	7	
#4	3	6	4	8	9	
#5	4 1/2	7	5	10	11	
#6	2 1/2	8	6	12	14	
#7	5 1/4	10	7	14	16	
#8	6	11	8	16	18	
#9	9 1/2	15	11 3/4	19	21	
#10	10 3/4	17	13 1/4	22	23	
#11	12	19	14 3/4	24	26	
#14	18 1/4	27	21 3/4	31	29	
#18	24	36	28 1/2	41	38	

2 TYPICAL END HOOK SCHEDULE
3/4" = 1'-0"



LETTERED DIMENSIONS	ANCHOR ROD DIAMETER (F1554 GR. 36)
	3/4
BASE PL HOLE DIA.	1 5/16
SQUARE PLATE W	2 1/2
SQUARE PLATE T	1/2
HOLE DIA.	7/8
L (UNO)	8
H (UNO)	10
K	2
P (MIN)	6
PLATE WASHER	1/4"x2"x2"
HOLE DIAMETER	1 5/16

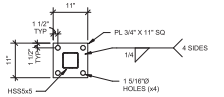
*ANCHOR EMBEDMENT DEPTH "H" BASED ON 6" MIN SPACING UP TO 1'0 AND 8" MIN SPACING OVER 1'0, f'c = 3000 PSI, AND PURE TENSION LOADING.



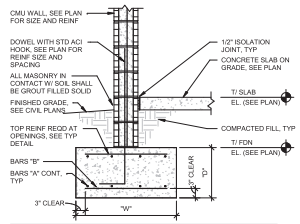
FDN SCHEDULE					
FDN DESIGNATION	DIMENSION "A"	DIMENSION "B"	FDN THICKNESS	REBAR (EA. WAY T&B U.N.O.)	REMARKS
F4.0	4'-0"	4'-0"	1'-0"	(5) #5	
F6X4	6'-0"	4'-0"	1'-4"	#5 @ 12" EA WAY	
F8X4	8'-0"	4'-0"	1'-4"	#5 @ 12" EA WAY	

BASE PLATE AND ANCHOR BOLT SCHEDULE			
COLUMN SIZE	BASE PLATE SIZE	ANCHOR BOLTS	REMARKS
HSS5x5	3/4"x11" SQ.	(4) 3/4"Ø	

NOTE: ALL ANCHOR RODS, NUTS, WASHERS AND PLATES SHALL BE HOT DIP GALVANIZED AND SHIPPED AS COMPLETE ASSEMBLIES BY THE FABRICATOR.

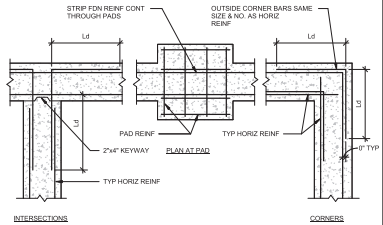


3 TYPICAL STEEL COLUMN SPREAD FOUNDATION
3/4" = 1'-0"

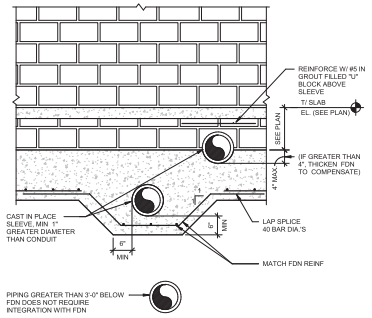


WALL FDN SCHEDULE					
FDN DESIGNATION	DIMENSIONS "W"	DIMENSIONS "D"	REBAR "A"	REBAR "B"	REMARKS
WF2.5	2'-6"	1'-0"	3#5	#5 @ 12" O.C.	
WF3.0	3'-0"	1'-0"	4#5	#5 @ 12" O.C.	
WF4.0	4'-0"	1'-4"	5#5	#5 @ 10" O.C.	

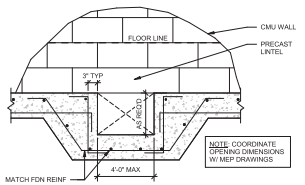
4 TYPICAL SECTION AT EXTERIOR CMU WALL FOUNDATION
3/4" = 1'-0"



5 TYPICAL HORIZ REINF - CONCRETE BEAMS AND FOUNDATIONS
3/4" = 1'-0"

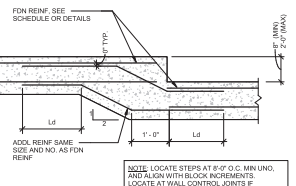


6 TYPICAL FOUNDATION CONDUIT SLEEVE
3/4" = 1'-0"



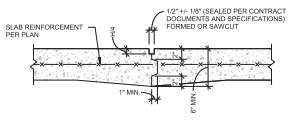
NOTE: COORDINATE OPENING DIMENSIONS W/ MEP DRAWINGS

7 TYPICAL STEP FOOTING FOR UTILITES
3/4" = 1'-0"

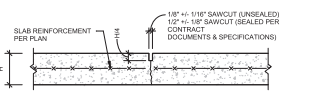


NOTE: LOCATE STEPS AT 8'-0" O.C. MIN UNO, AND ALIGN WITH BLOCK INCREMENTS. LOCATE AT WALL CONTROL JOINTS IF POSSIBLE.

8 TYPICAL STEPPED FOUNDATION
3/4" = 1'-0"

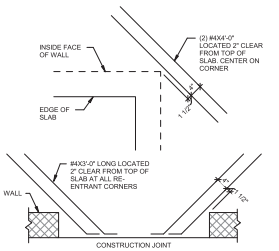


CONSTRUCTION JOINT
(LABELED CSJ ON PLANS)
(CONTRACTION JOINT MAY BE SUBSTITUTED) SUBMIT PROPOSED CONSTRUCTION JOINT LOCATIONS FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.

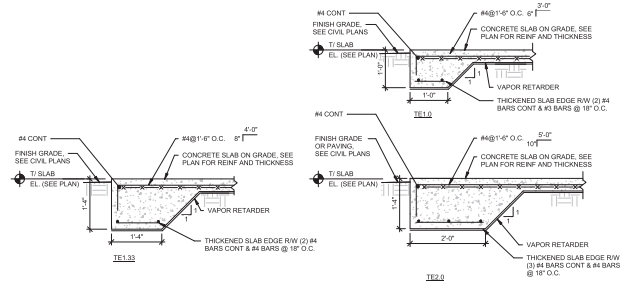


CONTRACTION JOINT
(LABELED CJ ON PLAN)
SEE PLAN FOR SLAB THICKNESS AND REINF
CONTROL JOINTS TO BE LOCATED AS SHOWN ON PLANS AND AT 3H MAX AND SHALL BE SAW CUT AS SOON AS POSSIBLE BUT NO LATER THAN 8 HOURS AFTER CONCRETE PLACEMENT.

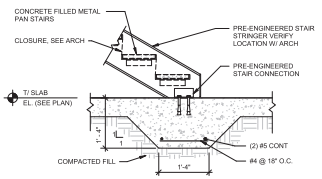
9 TYPICAL SLAB ON GRADE CONTROL JOINTS
3/4" = 1'-0"



10 RE-ENTRANT CORNER REINFORCING
3/4" = 1'-0"

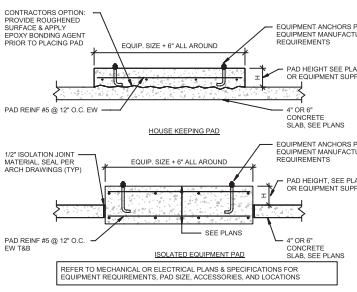


11 THICKENED SLAB EDGE DETAIL
3/4" = 1'-0"



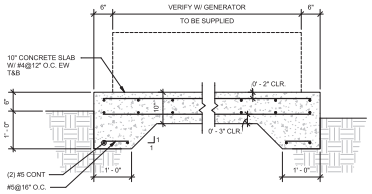
NOTE: SEE ARCHITECTURAL DRAWINGS FOR RISE, RUN, NOSING DIMENSIONS AND HANDRAIL DETAILS.

12 TYPICAL PRE-ENGINEERED STAIR BASE
3/4" = 1'-0"

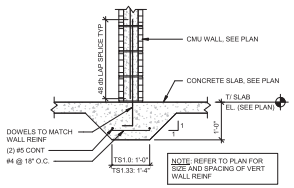


REFER TO MECHANICAL OR ELECTRICAL PLANS & SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS, PAD SIZE, ACCESSORIES, AND LOCATIONS

13 TYPICAL EQUIPMENT PAD / HOUSE KEEPING PAD
3/4" = 1'-0"

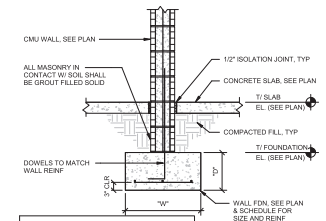


14 TYPICAL SECTION AT GENERATOR PAD
3/4" = 1'-0"



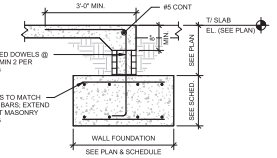
NOTE: REFER TO PLAN FOR SIZE AND SPACING OF VERT WALL REINF

15 TYPICAL NON-BEARING CMU WALL ON THICKENED SLAB
3/4" = 1'-0"



NOTE:
1. REFER TO PLAN FOR SIZE AND SPACING OF VERTICAL WALL REINFORCING.
2. SEE MASONRY WALL DETAIL FOR ADDITIONAL INFORMATION.

16 TYPICAL SECTION AT INTERIOR CMU WALL FOUNDATION
3/4" = 1'-0"



NOTE:
FOR OVERHEAD DOOR OPENING AT APPARATUS BAY, REFER TO DETAIL 11 / S5.01

17 TYPICAL WALL FOUNDATION AT OPENINGS
3/4" = 1'-0"

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TLC No.: 521157
THINK. EXPLORE. CREATE.

NO.	DESCRIPTION	DATE

GARY C. KRUEGER
FL LICENSE NO. 40788
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John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Jennifer Zafiuto, AIA, LEED, NCARB

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STRUCTURAL DETAILS
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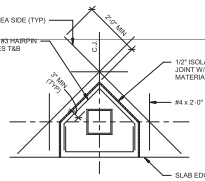
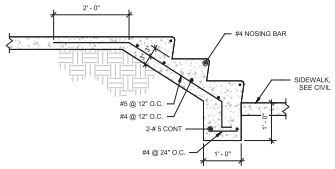


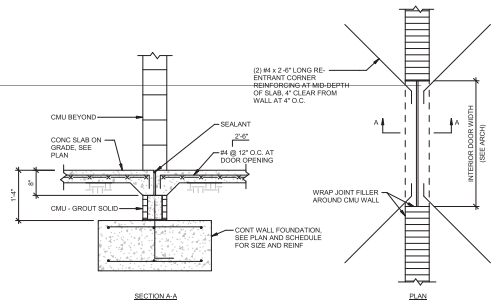
NOTE:
ENCASE STEEL BELOW GRADE W/ 3" MIN CONCRETE

1 TYPICAL ISOLATION JOINT AT EXTERIOR COLUMN
3/4" = 1'-0"

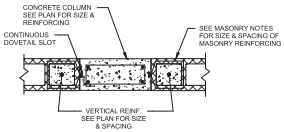


NOTE: SEE ARCH DWG FOR DIMENSIONS AND DETAILS

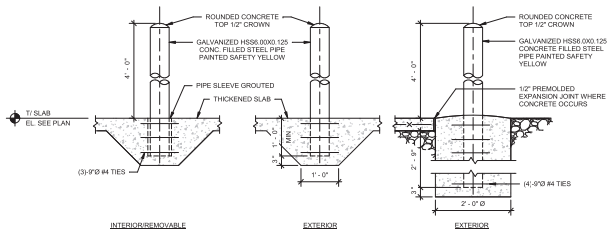
2 TYPICAL SECTION AT CONCRETE STAIR
3/4" = 1'-0"



3 TYPICAL CONTROL JOINT AT INTERIOR OPENING
3/4" = 1'-0"



4 CONCRETE COLUMN TO MASONRY CONNECTION
1" = 1'-0"



5 TYPICAL BOLLARD DETAIL
1" = 1'-0"

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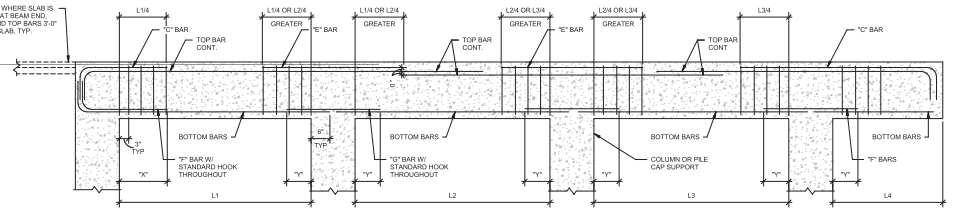
BEAM PLAN DESIGNATION: CB-X
BEAM TYPE
T/BEAM
EL. VARIES, SEE PLAN
STIRRUPS
INTERMEDIATE BARS
T&B BARS
"A"
"B"
TYPICAL BEAM

CAST IN PLACE CONCRETE BEAM SCHEDULE

BEAM DESIGNATION	SIZE "A"	SIZE "B"	REINFORCING TOP BARS	REINFORCING BOT BARS	REINFORCING "C" BARS	REINFORCING "E" BARS	STIRRUPS SPACING EACH END U.N.O.	STIRRUPS SPACING INTERMED	"E" BARS	"X"	"G" BARS	"Y"	NOTES
CB-12X12	12"	12"	(2) #5	(2) #5	-	-	#3 @ 12"	#3 @ 6"	-	-	-	-	
CB-12X16	12"	16"	(2) #5	(2) #5	-	-	#3 @ 12"	#3 @ 6"	-	-	-	-	

NOTES:
"F" - REVERSAL BARS - OVER COLUMN HEADS AT DISCONTINUOUS ENDS
"G" - REVERSAL BARS - OVER COLUMN HEADS AT INTERIOR SUPPORTS
"C" - TOP BARS AT DISCONTINUOUS ENDS
"E" - TOP BARS AT INTERIOR SUPPORTS
"TOP BARS" - EXTEND TO 1/2 POINT OF ADJACENT SPAN U.N.O. AND LAP SPLICE PER SPLICE SCHEDULE IN STRUCTURAL NOTES



1 TYPICAL CAST IN PLACE CONCRETE BEAM DIAGRAM AND SCHEDULE
3/4" = 1'-0"

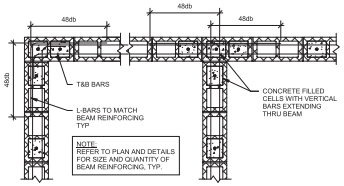
TIE BEAM PLAN DESIGNATION: TB-X EL. X'-X"
TIE BEAM TYPE
TOP OF BEAM ELEVATION
T/TIE BEAM
EL. VARIES, SEE PLAN
STIRRUPS
INTERMEDIATE BARS
T&B BARS
"A"
"B"
TYPICAL BEAM

CONCRETE TIE BEAM SCHEDULE

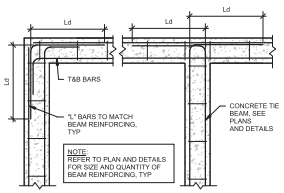
BEAM DESIGNATION	SIZE "A"	SIZE "B"	REBAR (T & B)	STIRRUPS	NOTES
TB-8X14	8"	14"	(2) #5	#3 @ 12"	
TB-8X16	8"	16"	(2) #5	#3 @ 12"	
TB-8X24	8"	24"	(2) #5	#3 @ 12"	(1) #5 INTERMEDIATE BAR EA FACE
TB-8X32	8"	32"	(2) #5	#3 @ 12"	(2) #5 INTERMEDIATE BAR EA FACE
RB-8	8"	8" (MIN)	(2) #5	#3 @ 12"	RAKED TIE BEAM, SEE 11 / S5.11
RB-12	12"	8" (MIN)	(2) #5	#3 @ 12"	RAKED TIE BEAM, SEE 11 / S5.11

NOTES:
1. LAP SPLICE TOP AND BOTTOM BARS PER SPLICE SCHEDULE.
2. SEE PLANS FOR TIE BEAM ELEVATIONS.
3. ALL TIE BEAMS SHALL BE CONTINUOUS, UNLESS OTHERWISE NOTED.
4. FOR TYPICAL TIE BEAMS WITH ELEVATION THAT VARIES, STEP TIE BEAM AS REQUIRED TO FOLLOW ROOF SLOPE. SEE STEPPED TIE BEAM DETAIL.
5. TIE BEAMS AND CONCRETE BEAMS SHALL BEAR A MINIMUM OF 8" ON MASONRY WALLS, WITH THE CELLS UNDER THE POINT OF BEARING REINFORCED AND GROUTED SOLID.
6. WHERE BEAMS INTERSECT A MASONRY WALL, WITHOUT FORMING A T- OR L-SHAPED BEAM CONFIGURATION, BEAM SHALL FULLY BEAR ON WALL FOR FULL DEPTH OF WALL AND FULL WIDTH OF BEAR. ALL CELLS UNDER BEAM BEARING SHALL BE GROUTED SOLID AND REINFORCED. TOP & BOTTOM BARS SHALL BE TERMINATED IN STANDARD 90° HOOKS. WHERE A T- OR L-SHAPED BEAM INTERSECTION IS FORMED, TOP & BOTTOM BARS SHALL BE LAP SPLICED WITH CORNER OR INTERSECTION BARS.

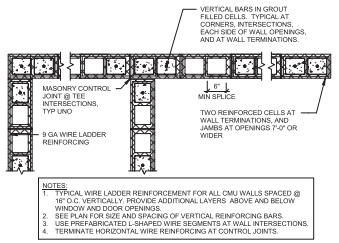
2 CONCRETE BEAM / TIE BEAM SCHEDULE
3/4" = 1'-0"



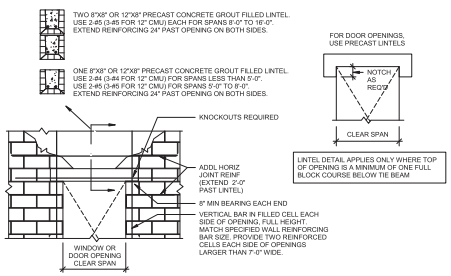
3 TYPICAL BOND BEAM AND CORNER REINFORCING
3/4" = 1'-0"



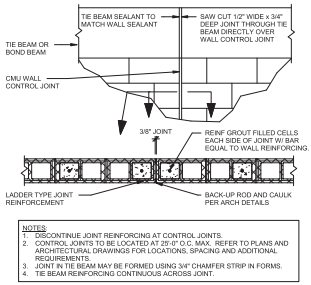
4 TYPICAL CONCRETE TIE BEAM CORNER REINFORCING
3/4" = 1'-0"



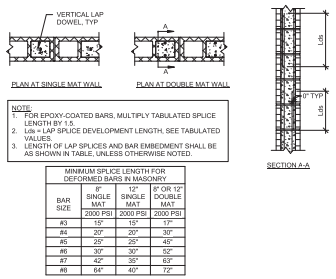
5 TYPICAL HORIZONTAL WALL REINFORCING / VERTICAL CORNER REINFORCING
3/4" = 1'-0"



6 TYPICAL MASONRY WALL OPENING LINTEL DETAIL
3/4" = 1'-0"



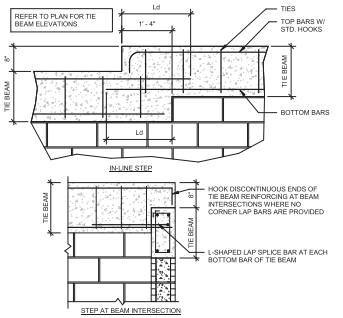
7 TYPICAL MASONRY CONTROL JOINT
3/4" = 1'-0"



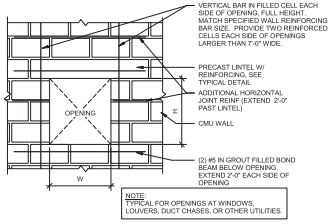
MINIMUM SPLICE LENGTH FOR DEFORMED BARS IN MASONRY

BAR SIZE	8" SINGLE MAT 2000 PSI	12" SINGLE MAT 2000 PSI	8" OR 12" DOUBLE MAT 2000 PSI
#3	15"	15"	17"
#4	20"	20"	30"
#5	25"	25"	46"
#6	30"	30"	52"
#7	42"	35"	63"
#8	64"	40"	72"

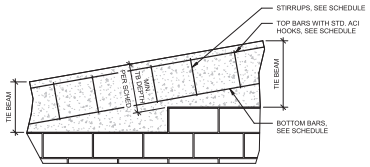
8 TYPICAL MASONRY LAP SPLICE DETAIL
3/4" = 1'-0"



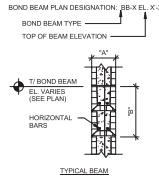
9 TYPICAL STEPPED TIE BEAM DETAIL
3/4" = 1'-0"



10 TYPICAL MASONRY WALL OPENING REINFORCING
3/4" = 1'-0"



11 TYPICAL RAKED TIE BEAM DETAIL
3/4" = 1'-0"



BOND BEAM SCHEDULE

BEAM DESIGNATION	SIZE "A"	SIZE "B"	REBAR (EA CELL)
BB-1	8"	8"	(2) #5
BB-2	8"	16"	(2) #5

NOTES:
1. LAP SPLICE TOP, BOTTOM, AND BOND BEAM BARS PER SPLICE SCHEDULE.
2. SEE PLANS FOR BOND BEAM ELEVATIONS.
3. ALL BOND BEAMS SHALL BE CONTINUOUS, UNLESS OTHERWISE NOTED.
4. FOR TYPICAL BOND BEAMS WITH ELEVATION THAT VARIES, STEP BOND BEAM AS REQUIRED TO FOLLOW ROOF SLOPE. SEE STEPPED BOND BEAM DETAIL.
5. BOND BEAMS SHALL BEAR A MINIMUM OF 8" ON MASONRY WALLS, WITH THE CELLS UNDER THE POINT OF BEARING REINFORCED AND GROUTED SOLID.

12 CMU BOND BEAM SCHEDULE
3/4" = 1'-0"

NO.	DESCRIPTION	DATE

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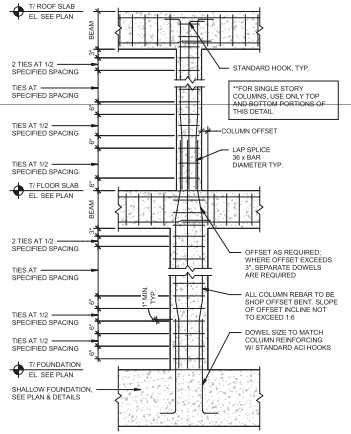
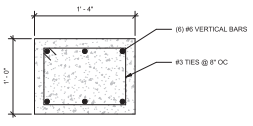
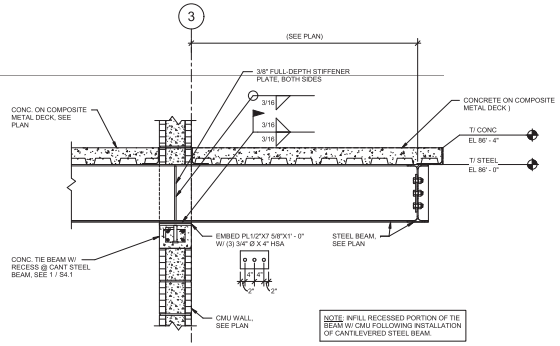


1 TYPICAL MULTI-STORY CONCRETE COLUMN
3/4" = 1'-0"



2 CONCRETE COLUMN SCHEDULE
1 1/2" = 1'-0"



3 CANTILEVERED BEAM BEARING DETAIL
1" = 1'-0"

NO.	DESCRIPTION	DATE

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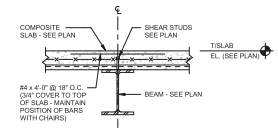
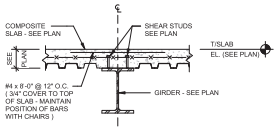
COMPOSITE BEAM CRITERIA



TYPICAL COMPOSITE BEAM
(DECK RIBS PERPENDICULAR TO BEAM)

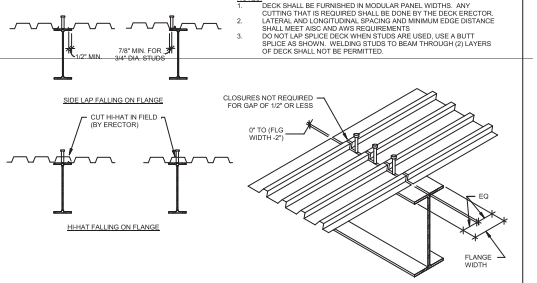


TYPICAL COMPOSITE BEAM
(DECK RIBS PARALLEL TO BEAM)

SHEAR STUD PLACEMENT NOTES :

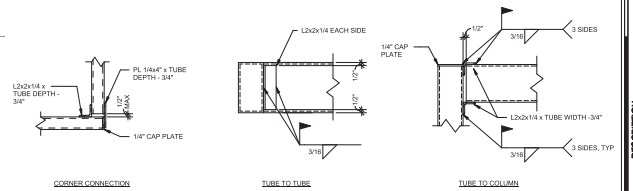
1. ALL SHEAR STUDS : 3/4"Ø x 4 1/2", UNLESS OTHERWISE NOTED.
2. THE NUMBER OF STUDS IS INDICATED THUS [XX] ON THE PLAN. WHEN MORE THAN ONE QUANTITY OF STUDS ARE INDICATED ON GIRDER/BEAM (EX.: [XX-XX]), PLACE STUDS IN CORRESPONDING GROUPS BETWEEN INTERSECTING MEMBERS, SUPPORTING MEMBERS, OR LOADING POINTS.
3. MINIMUM CENTER TO CENTER SPACING OF STUDS ALONG THE LONGITUDINAL AXIS OF THE COMPOSITE GIRDER/BEAM : 4 1/2", WITH THE MAXIMUM CENTER TO CENTER SPACING OF STUDS ALONG THE TRAVERSE AXIS, THE CENTER TO CENTER SPACING : 3".
4. WHERE BEAM FLANGE THICKNESS IS LESS THAN 5/16" ONLY A SINGLE ROW OF STUDS CENTERED OVER THE WEB IS TO BE USED.
5. FOR BEAMS SUPPORTING COMPOSITE DECK WITHOUT STUD NOTATION, PROVIDE STUDS AT MAXIMUM CENTER TO CENTER SPACING.
6. ADD ADDITIONAL STUD OR 3/4"Ø PUDDLE WELD SO THAT THE SPACE BETWEEN DECK ATTACHMENTS TO BEAM (WELDS OR STUDS) DOES NOT EXCEED 16".
7. WHERE DECK IS PERPENDICULAR TO THE COMPOSITE BEAM, PLACE STUDS AS FOLLOWS:
   CASE 1 (MORE DECK FLUTES THAN STUDS) :
   PLACE ONE STUD IN EVERY OTHER DECK FLUTE. THEN STARTING AT EACH END OF THE BEAM (OR BEAM SEGMENT), PLACE REMAINING STUDS IN UNUSED DECK FLUTES. THE NUMBER OF STUDS ON EACH HALF OF THE BEAM (OR BEAM SEGMENT) SHOULD BE EQUAL. SEE NOTE 3 FOR SPACING LIMITATIONS.
   CASE 2 (MORE STUDS THAN DECK FLUTES) :
   PLACE ONE STUD IN EVERY DECK FLUTE. THEN STARTING AT EACH END OF THE BEAM (OR BEAM SEGMENT), DOUBLE STUDS EVERY DECK FLUTE UNTIL REMAINING STUDS ARE USED. THE NUMBER OF STUDS ON EACH HALF OF THE BEAM (OR BEAM SEGMENT) SHOULD BE EQUAL. SEE NOTE 3 FOR SPACING LIMITATIONS.
8. WHERE DECK IS PARALLEL TO THE COMPOSITE GIRDER, SPACE THE STUDS UNIFORMLY IN A SINGLE ROW FOR THE ENTIRE LENGTH OF THE GIRDER (OR GIRDER SEGMENT). IF THE STUDS CANNOT BE SPACED AT 4 1/2" CENTER TO CENTER OR GREATER IN A SINGLE ROW, SPACE THE STUDS UNIFORMLY IN A DOUBLE ROW.
9. COMPOSITE BEAM NOTATION :

1 COMPOSITE BEAM CRITERIA
3/4" = 1'-0"



NOTES:
1. DECK SHALL BE FURNISHED IN MODULAR PANEL WIDTHS. ANY CUTTING THAT IS REQUIRED SHALL BE DONE BY THE DECK ERECTOR.
2. LATERAL AND LONGITUDINAL SPACING AND MINIMUM EDGE DISTANCE SHALL MEET AISC AND AWS REQUIREMENTS.
3. DO NOT LAP SPLICE DECK WHEN STUDS ARE USED, USE A BUTT SPLICE AS SHOWN. WELDING STUDS TO BEAM THROUGH (2) LAYERS OF DECK SHALL NOT BE PERMITTED.

2 TYPICAL COMPOSITE DECK PLACEMENT DETAILS
3/4" = 1'-0"

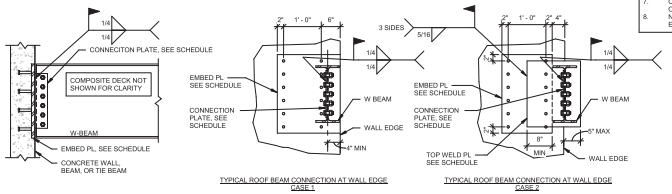


3 TYPICAL TUBE TO TUBE CONNECTION
1 1/2" = 1'-0"

FLOOR BEAM CONNECTION TO CONCRETE WALL

BEAM SIZE (SEE PLAN)	NO. OF 3/4"Ø A325N BOLTS	PLATE SIZE	AT TYPICAL CONDITION		NEAR WALL EDGE		
			EMBED PL	HEADED STUD ANCHORS	EMBED PL CASE 1	EMBED PL CASE 2	HEADED STUD ANCHORS CASE 1 & 2	TOP WELD PL CASE 2
W8/W10	2	PL 3/8"X 4" X 0'-6"	1/2"x12"x1'-4"	(6) 3/4" DIA.	1/2"x20"x1'-6"	1/2"x16"x1'-6"	(8) 3/4" DIA.	1/2"x1'-5"x1'-0"
W12/W14	3	PL 3/8"X 4" X 0'-9"	1/2"x12"x1'-9"	(6) 3/4" DIA.	1/2"x20"x1'-9"	1/2"x16"x1'-9"	(10) 3/4" DIA.	5/8"x1'-5"x1'-3"
W16/W18	4	PL 3/8"X 4" X 1'-0"	1/2"x12"x1'-8"	(8) 3/4" DIA.	5/8"x20"x2'-0"	5/8"x16"x2'-0"	(10) 3/4" DIA.	3/4"x1'-5"x1'-6"

NOTES:
1. SEE SCHEDULE FOR NUMBER OF BOLTS (3" GA.)
2. CONNECTIONS ARE VALID FOR BEAMS WITH STANDARD OR SHORT-SLOTTED HOLES, FULLY TIGHTENED OR SNUG TIGHT.
3. LENGTH OF HEADED STUDS SHALL BE 4" FOR WALLS 5.5" TO 7.25" THICK, 6" FOR WALLS 7.5" TO 9.5" THICK, AND 8" FOR WALLS 10" OR THICKER.
4. HEADED STUDS SHALL BE ARRANGED IN ROWS OF TWO, W/ 2" TYP. EDGE DISTANCE.
5. THIS DETAIL APPLIES AT CONCRETE BEAMS/COLUMNS, AND TIE BEAMS IN MASONRY WALLS.
6. CASE 1 WALL EDGE CONDITION SHALL APPLY WHENEVER BEAM CENTERLINE IS LESS THAN 12", BUT MORE THAN 4", FROM WALL EDGE.
7. CASE 2 WALL EDGE CONDITION SHALL APPLY WHENEVER BEAM CENTERLINE IS LESS THAN 4" FROM EDGE OF WALL.
8. NOTIFY THE ENGINEER IF THE BEAM CENTERLINE LIES OUTSIDE WALL EDGE.

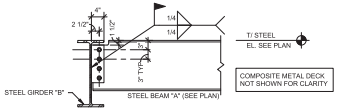


4 TYPICAL FLOOR BEAM TO CONCRETE WALL CONNECTION
3/4" = 1'-0"

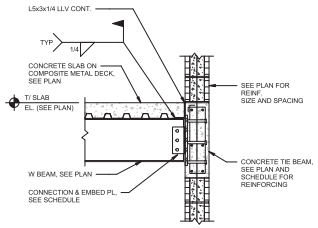
FLOOR BEAM TO GIRDER CONNECTION SCHEDULE

BEAM SIZE (SEE PLAN)	ANGLE SIZE	NO. OF 3/4"Ø A325-N BOLTS
W8/W10	PL 3/8"X 4" X 0'-6"	2
W12/W14	PL 3/8"X 4" X 0'-9"	3
W16/W18	PL 3/8"X 4" X 1'-0"	4

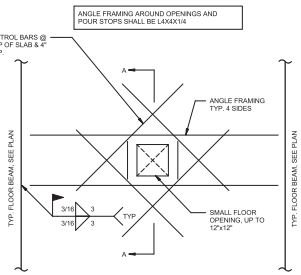
NOTES:
1. SEE SCHEDULE ABOVE FOR NUMBER OF BOLTS (3" GA.)
2. TABULATED VALUES ARE VALID FOR BEAMS WITH STANDARD OR SHORT-SLOTTED HOLES, FULLY TIGHTENED OR SNUG TIGHT.
3. COPE BEAM FLANGE AS REQUIRED, TOP & BOTTOM (REINFORCE WHERE REQUIRED TO SUSTAIN AISC SPECIFIED CAPACITY)

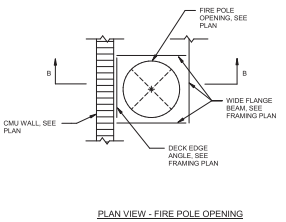


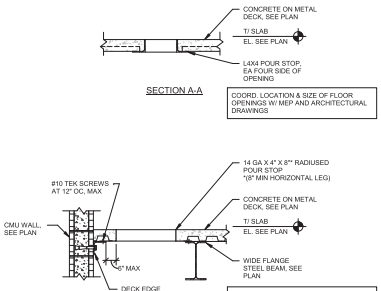
5 TYPICAL FLOOR BEAM TO GIRDER CONNECTION
3/4" = 1'-0"



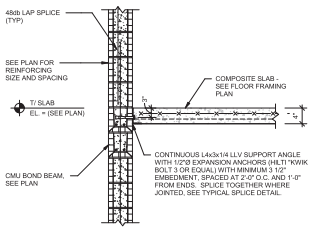
6 TYPICAL FLOOR BEAM DETAIL AT MASONRY WALL
3/4" = 1'-0"



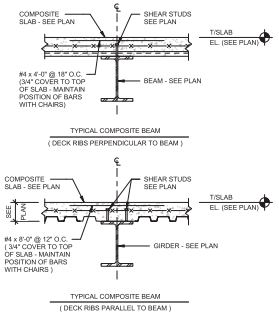




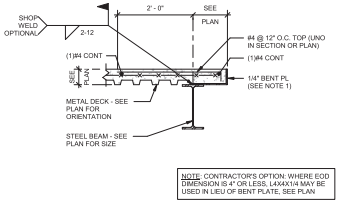
7 FLOOR SLAB OPENING DETAIL
3/4" = 1'-0"



8 TYPICAL COMPOSITE SLAB SUPPORT ANGLE
3/4" = 1'-0"

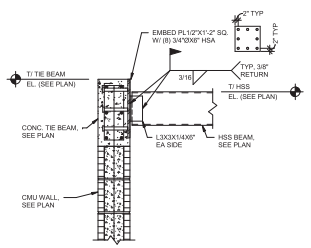


9 TYPICAL CRACK BAR DETAIL
3/4" = 1'-0"



NOTE: CONTRACTOR'S OPTION: WHERE EOD DIMENSION IS 4" OR LESS, L4X4X1/4 MAY BE USED IN LIEU OF BENT PLATE, SEE PLAN

10 TYPICAL EDGE OF SLAB AT INTERIOR
3" = 1'-0"



11 TYPICAL HSS TO CONCRETE CONNECTION
1" = 1'-0"

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KTH ARCHITECTS

NO.	DESCRIPTION	DATE

100% CD Submittal - Bid Set

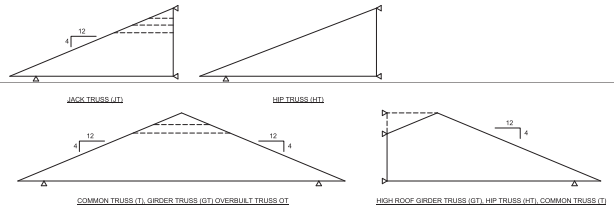
LAKE COUNTY
FIRE STATION NO.71
STRUCTURAL DETAILS

33661 CR 473, LEESBURG, FL 34788

20073A

NOVEMBER 10, 2021

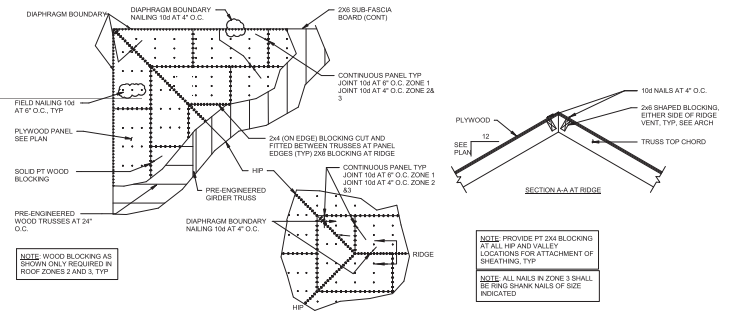
S5.31



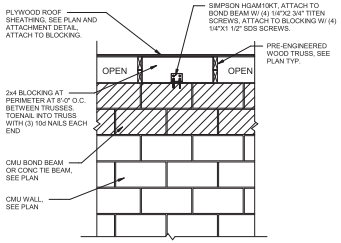
TRUSS PROFILE NOTES:

1. DASHED LINES INDICATE SIMILAR TRUSS PROFILES OR SHAPES.
2. TRUSS MANUFACTURER SHALL VERIFY ROOF SLOPES WITH ARCHITECTURAL DRAWINGS.
3. TRUSS MANUFACTURER SHALL COORDINATE REQUIRED OPENINGS IN TRUSS WITH MECHANICAL DRAWINGS.
4. ALL TRUSS TO TRUSS CONNECTIONS TO BE DESIGNED BY THE TRUSS SYSTEM SPECIALTY ENGINEER.
5. DESIGN TRUSSES TO ACCOMMODATE THE REQUIRED DUCT OPENING SIZES WHERE REQUIRED.
6. ALL TRUSS TO STRUCTURE CONNECTIONS TO BE DESIGNED BY THE TRUSS SYSTEM SPECIALTY ENGINEER.
7. GIRDER TRUSSES SHALL MATCH TRUSS PROFILES INDICATED ON PLANS.

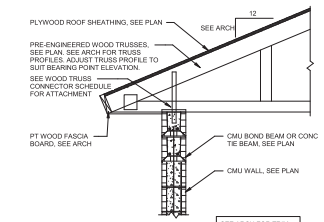
1 ROOF TRUSS PROFILES
1/4" = 1'-0"



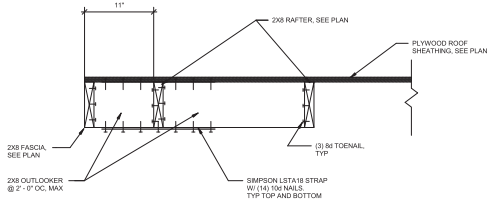
2 TYPICAL ROOF SHEATHING FASTENING ATTACHMENTS
3/4" = 1'-0"



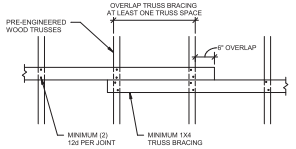
3 TYPICAL TRUSS BLOCKING AT PERIMETER WALLS
3/4" = 1'-0"



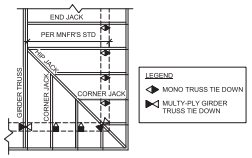
4 TYPICAL WOOD TRUSS TO CMU DETAIL
3/4" = 1'-0"



5 TYP OUTLOOKER AT VAULTED CEILING - COVERED ENTRY
1 1/2" = 1'-0"

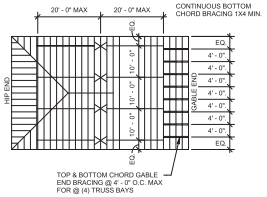


6 TRUSS BRACING OVERLAP DETAIL
1" = 1'-0"



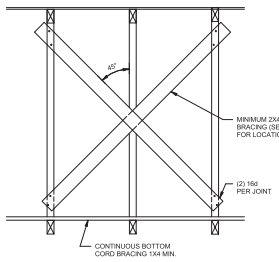
NOTES:
1. REFER TO PLAN FOR TRUSS CONNECTOR SCHEDULE.
2. NUMBER AND SIZE OF NAILS AS PER MANUFACTURERS SPECIFICATIONS.
3. PROVIDE MOISTURE BARRIER BETWEEN WOOD TRUSS BEARING AND CONCRETE TIE BEAMS/MASONRY BOND BEAMS.
4. TRUSS-TO-TRUSS CONNECTIONS ARE THE RESPONSIBILITY OF THE DELEGATED TRUSS DESIGN ENGINEER.

7 UPLIFT CONNECTIONS @ HIP ROOF FRAMING DETAIL
1" = 1'-0"

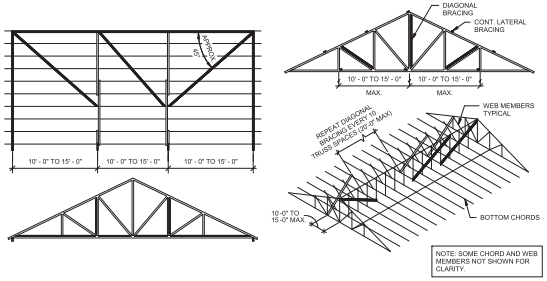


NOTES:
1. SEE TRUSS MANUFACTURER'S TRUSS ENGINEERING CUT SHEETS FORM ANY ADDITIONAL PERMANENT BRACING/S REQUIRED.
2. "T" BRACING MAY BE USED IN PLACE OF PERMANENT BRACING PROVIDED IT EXTENDS OVER AT LEAST 90% OF THE WEB.

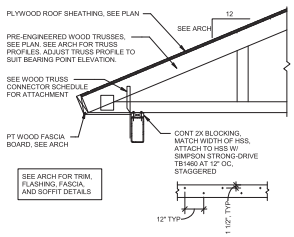
8 REQUIRED MINIMUM PERMANENT TRUSS BRACING PLAN
1" = 1'-0"



9 CROSS BRACE DETAIL
1 1/2" = 1'-0"



10 TRUSS BRACING DETAILS-GABLE ROOF
3/4" = 1'-0"



11 TYP ROOF TRUSS TO HSS BEAM CONNECTION
3/4" = 1'-0"

NO.	DESCRIPTION	DATE

GARY C. KRUEGER
FL LICENSE NO. 40788
11/9/2021 3:21:21 PM

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