STRUCTURAL NOTES
ELECTRONIC VERSIONS OF STRUCTURAL DRAWINGS ARE THE SOLE, COPYRIGHTED PROPERTY OF HEES & ASSOCIATES, INC. ELECTRONIC VERSIONS OF DRAWINGS ARE NOT TO BE USED OR TRANSFERRED WITHOUT THE EXPRESS, WRITTEN PERMISSION OF HEES & ASSOCIATES, INC.

GENERAL NOTES:
STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

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 INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS.

DESIGN LOADS:
THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2020. THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED:

FENCE
DEAD LOAD – SELF WEIGHT

WIND:
Vult = 140 MPH, Vasd =108 MPH.
EXPOSURE C, RISK CATEGORY I,
C_f= 1.1
P_{ASD}= 35.0 psf. OF SOLID AREA

SNOW & SEISMIC (FLORIDA):
IN ACCORDANCE WITH CHAPTER 1 SECTION 101.2 OF THE 2020 FLORIDA BUILDING CODE, SEISMIC AND SNOW LOADS WERE NOT UTILIZED FOR THIS PROJECT: "CODE REQUIREMENTS THAT ADDRESS SNOW LOADS AND EARTHQUAKE LOADS ARE PERVASIVE; THEY ARE LEFT IN PLACE BUT SHALL NOT BE UTILIZED OR ENFORCED BECAUSE FLORIDA HAS NO SNOW LOAD OR EARTHQUAKE THREAT."

SHOP DRAWING REVIEW:
SHOP DRAWINGS WILL BE PROVIDED FOR ALL WORK AND 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. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR AND OWNER'S REP PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED. SHOP DRAWING SUBMITTALS, IF NOT SUBMITTED ELECTRONICALLY, SHALL INCLUDE THREE SETS OF PRINTS. ONE SET OF PRINTS WILL BE RETAINED BY THE ENGINEER, ONE BY THE ARCHITECT, ONE BY THE LOCAL BUILDING DEPARTMENT (WHERE REQUIRED) AND THE CONTRACTOR SHALL MAKE PRINTS AS REQUIRED FOR DISTRIBUTION. IN ALL INSTANCES THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.

SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHALL BE SUBMITTED TO H&A WITH 10 BUSINESS DAYS AS A MINIMUM TIME TO BE REVIEWED (MAXIMUM SHEET OR PAGE COUNT OF 30). IN THE CASE OF A LARGE SUBMITTAL, OR MORE THAN 1 SUBMITTAL FOR THE SAME PROJECT, AN ADDITIONAL BUSINESS DAY SHALL BE REQUIRED FOR EVERY 5 PAGES/SHEETS OVER 30. THE TIME INDICATED ABOVE IS FOR H&A'S REVIEW ONLY; IN ORDER TO MEET PROJECT SCHEDULES, THE CONTRACTOR MUST INCLUDE ENOUGH TIME FOR DELIVERY, ARCHITECTURAL REVIEW, AND OWNER'S REVIEW.

THERE SHALL BE NO DEVIATION FROM THESE STRUCTURAL CONSTRUCTION DOCUMENTS. IF THE CONTRACTOR OR PROVIDER OF THE SHOP DRAWINGS PROPOSE ANY CHANGES, THOSE CHANGES SHALL BE CLEARLY INDICATED, AND SIGNED AND SEALED DRAWINGS AND CALCULATIONS BY A REGISTERED FLORIDA PROFESSIONAL ENGINEER SUBMITTED. ANY CHANGES NOT APPROVED OR SUBMITTED WITHOUT THE PROPER DOCUMENTATION INDICATED PREVIOUSLY, WILL RESULT IN REVISIONS BY THE ENGINEER OR ARCHITECT-OF-RECORD. THE COST FOR SAID REVISIONS, INCLUDING ENGINEERING AND ARCHITECTURAL FEES SHALL BE BORNE BY THE CONTRACTOR.

SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS:
ALL SPECIALTY ENGINEERED PRODUCTS OR SYSTEMS REQUIRE SIGNED & SEALED CALCULATIONS AND FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER.

THIS INCLUDES BUT IS NOT LIMITED TO CARBON FIBER CONCRETE REINFORCING SYSTEMS, CANOPIES AND THEIR FOUNDATIONS, SPECIALTY PILE FOUNDATION SYSTEMS, PRE-ENGINEERED TRUSSES, ICF WALL SYSTEMS, ALL LIGHT GAUGE METAL STUD FRAMING SYSTEMS, ALUMINUM WALL SYSTEMS, GLAZED CURTAIN WALLS, PREFABRICATED STEEL STAIRS & RAILINGS, ARCHITECTURAL PRECAST CONCRETE ELEMENTS, STRUCTURAL PRECAST OR TILT-UP SYSTEMS, GLASS FIBER REINFORCED CONCRETE PANEL SYSTEMS, OPEN WEB STEEL JOISTS, STRUCTURAL STEEL CONNECTIONS REQUIRING ENGINEERING, TILT-WALL ERECTION DRAWINGS, GLULAM BEAMS, TECTUM PLANKS, PEMB, ETC.

SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA, AND SHOW ALL DETAILS AND PLANS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCT UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.

SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER. SHOP DRAWINGS AND CALCULATIONS REQUIRE THE IMPRESSED SEAL, DATE AND SIGNATURE OF THE DELEGATED ENGINEER.
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 BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AS AN INDICATION THAT HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. SEPIAS DO NOT REQUIRE SIGNATURE AND SEAL. THE STRUCTURAL ENGINEER WILL RETAIN ONE SIGNED AND SEALED BLUELINE PRINT FOR RECORD.

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.

CATALOG INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.

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).

SUBMITTALS NOT MEETING THE CRITERIA LISTED IN THIS SECTION WILL NOT BE REVIEWED.

FOUNDATIONS:
ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 psf ON COMPACTED FILL. BEFORE CONSTRUCTION COMMENCES, SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY, WHOSE REPORT SHALL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION BEGINS.

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

PLUMBING SLEEVES:
SLEEVE LOCATIONS AND SIZES MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. SLEEVES OR GROUPS OF SLEEVES 16 INCH IN DIAMETER AND LARGER SHALL BE TREATED AS A SLAB OPENING AND REINFORCED PER TYPICAL OPENING REINFORCING DETAILS.

EMBEDDED CONDUITS:
LOCATIONS AND SIZES OF CONDUIT MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. WITHIN SLABS, BEAMS OR WALLS, CONDUIT SHALL OCCUPY ONLY THE MIDDLE ONE THIRD OF THE MEMBER DEPTH OR THICKNESS. MAXIMUM CONDUIT O.D. FOR SINGLE CONDUITS OR SUM OF O.D.'S FOR MULTIPLE CONDUITS THAT CROSS SHALL BE NO LARGER THAN ONE THIRD THE SLAB DEPTH. PARALLEL CONDUITS SHALL BE SPACED WITH A MINIMUM OF 3 DIAMETERS CLEAR. CONDUITS SHALL BE A MINIMUM OF ONE DIAMETER AWAY FROM AND SHALL NOT INTERFERE WITH OR DISPLACE ANY REINFORCING. CONDUIT SHALL NOT BE TIED TO REINFORCING. CONDUITS SHALL NOT OCCUR WITHIN COLUMN ZONES OF SLABS AND OR TRANSFER GIRDERS. CONDUIT PLACEMENT SHALL NOT IMPAIR THE STRENGTH OF THE CONSTRUCTION AS JUDGED BY THE ENGINEER.

REINFORCING STEEL:
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. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.

WELDED WIRE FABRIC:
TO 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. MINIMUM LAP SHALL BE ONE SPACE PLUS TWO INCHES. USE OF FLAT MANUFACTURED SHEETS IS RECOMMENDED.

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

3000psi FOR ALL CONCRETE

CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.

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. 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. 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. SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-D 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. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

CONSTRUCTION OR CONTROL JOINTS SHALL BE PROVIDED IN SLABS ON GRADE SO THAT THE MAXIMUM AREA OF THE SLAB BETWEEN JOINTS SHALL BE 225 SQUARE FEET, OR AS SHOWN ON THE PLANS. SAW CUT CONTROL JOINTS SHALL BE MADE AS SOON AS SLAB WILL SAFELY SUPPORT MEN AND EQUIPMENT AND THE SLAB WILL NOT BE DAMAGED BY EQUIPMENT, BUT NO LATER THAN 24 HOURS. ASPECT RATIO (LONGSIDE TO SHORTSIDE OF CONCRETE AREA) SHALL NOT EXCEED 1.5. NO EMBEDDED ANGLES OR OTHER FIXED METAL ITEMS SHALL EXTEND THROUGH JOINTS, UNLESS OTHERWISE NOTED. EMBEDDED ANGLES AND OTHER FIXED METAL ITEMS SHALL BE CONTINUOUS BETWEEN CONCRETE JOINTS, UNLESS OTHERWISE NOTED. ENGINEER SHALL APPROVE LOCATION OF ALL JOINTS NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.

CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE. IF ACCEPTED, PEA ROCK PUMP MIX USE IS LIMITED TO VERTICAL ELEMENT POURS AND BEAM POURS LESS THAN 60 LINEAL FEET PER POUR. (NOT FOR STRUCTURAL SPANNING BEAMS).

CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 4 OF ACI 301.

WATER/CEMENT RATIO FOR CONCRETE AT EXTERIOR BALCONIES OR CONCRETE EXPOSED TO WEATHER SHALL NOT EXCEED 0.40 BY WEIGHT.

CONCRETE COVER FOR REINFORCING	
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER #6 THRU #18 BARS #5 BAR, W31 OR D31 WIRE, AND SMALLER	 2" 1 ½"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER: SLABS AND WALLS: #11 AND SMALLER BEAMS, COLUMNS: PRIMARY REINF, TIES, STIRRUPS	 ¾" 1 ½"

CONCRETE TESTING:
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." MAXIMUM SLUMP SHALL BE 4 TO 6 INCHES.
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 CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:
1 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.

PENETRATIONS:
NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THE STRUCTURAL DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER. CONTRACTOR SHOULD SUBMIT SLAB DRAWINGS INDICATING ANY CONCENTRATION OF PIPES, OPENINGS OR PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS PRIOR TO CONCRETE POURS.

STRUCTURAL STEEL:
WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A-572 OR A-992 GRADE 50 AND OTHER SHAPES SHALL CONFORM TO ASTM A36 AND "THE SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. SHOP CONNECTIONS TO BE WELDED (UTILIZING E70XX ELECTRODES) AND FIELD CONNECTIONS TO BE BOLTED, UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS. STEEL SHALL RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, EXCEPT WHERE GALVANIZING IS INDICATED ON THE DRAWINGS.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500, GRADE B, Fy = 46 ksi. STRUCTURAL PIPE SHALL CONFORM TO ASTM A-53 GRADE B, TYPE E OR S, Fy = 35 ksi. BEAM CONNECTIONS TO TUBE COLUMNS SHALL BE A.I.S.C. THRU-PLATE TYPE UNLESS SHOWN OTHERWISE.

BOLTED CONNECTIONS SHALL CONSIST OF MINIMUM ¾ INCH DIAMETER ASTM A-325N HIGH STRENGTH BOLTS. BEAM CONNECTIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED AND INSURED TO PRACTICE IN THE STATE OF FLORIDA FOR THE REACTIONS SHOWN ON THE PLANS. IF NOT SHOWN, THE ENGINEER SHALL DESIGN THE NON-COMPOSITE BEAM CONNECTIONS TO SUPPORT AN END REACTION OF W/2 KIPS AND COMPOSITE BEAM CONNECTIONS TO SUPPORT AN END REACTION OF 1.5W/2 FROM THE TABLES 3-6 "ALLOWABLE UNIFORM LOADS IN KIPS FOR BEAMS LATERALLY SUPPORTED" OF THE MANUAL OF STEEL CONSTRUCTION (14TH EDITION), BUT CONNECTIONS SHALL NOT HAVE LESS THAN 2 ROWS OF BOLTS. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36 OR A-36 (THREADED ROD). A SIGNED & SEALED CALCULATION SUBMITTAL SHALL BE ISSUED WITH SHOP DRAWINGS FOR REVIEW BY THE ENGINEER-OF-RECORD. ALL BOLTED CONNECTIONS SHALL BE VISUALLY INSPECTED. TWENTY FIVE PERCENT OF ALL BOLTED CONNECTIONS SHALL BE TESTED.

WELDING:
WELDING SHALL BE DONE BY WELDERS WITH CURRENT CERTIFICATION USING ASTM E70 SERIES ELECTRODE FOR SHOP WELDING A36 STEEL, AND E70 SERIES LOW HYDROGEN ELECTRODES FOR ALL WELDING OF HIGH STRENGTH STEELS AND FOR FIELD WELDING.

WELDS SHOWN ON STRUCTURAL DRAWINGS ARE MINIMUM DESIGN REQUIREMENTS. THE FABRICATOR'S SHOP DRAWINGS SHALL REFLECT WELDS IN ACCORDANCE WITH AWS REQUIREMENTS.

ALL FULL PENETRATION GROOVE WELDS SHALL BE INSPECTED BY ULTRASONIC TESTING. TWENTY-FIVE PERCENT OF THE REMAINING WELDS SHALL BE INSPECTED AT RANDOM UNLESS NOTED OTHERWISE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

UNLESS NOTED OTHERWISE ON THE DRAWINGS, GROOVE WELDS SHALL BE FULL PENETRATION.

PROVIDE FILLET WELDS AT CONTACT POINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

ABBREVIATIONS

A.B.	ANCHOR BOLT	KSF	KIPS PER SQUARE FOOT
A.F.F.	ABOVE FINISHED FLOOR	#	POUND
AL.	ALUMINUM	LLH	LONG LEG HORIZONTAL
ALT.	ALTERNATE	LLV	LONG LEG VERTICAL
&	AND	MAX.	MAXIMUM
APPROX.	APPROXIMATE	MEZZ.	MEZZANINE
APPVD.	APPROVED	MFR.	MANUFACTURER
@	AT	MIN.	MINIMUM
AVG.	AVERAGE	MISC.	MISCELLANEOUS
BLDG	BUILDING	NS	NEAR SIDE
BOTT.	BOTTOM	N.T.S.	NOT TO SCALE
C.L.	CENTER LINE	#	NUMBER OR REBAR SIZE
CL. OR CLR.	CLEAR OR CLEARANCE	O.H	OPPOSITE HAND
CONN.	CONNECTION	o.c.	ON CENTER
CMU	CONCRETE MASONRY UNIT	O.D.	OUTSIDE DIAMETER
CONST	CONSTRUCTION	P.A.F.	POWDER ACTUATED FASTENER
CONT.	CONTINUOUS	PLF	POUNDS PER LINEAR FOOT
C.J.	CONSTRUCTION OR CONTROL JOINT	PCF	POUNDS PER CUBIC FOOT
CONC.	CONCRETE	PCI	POUNDS PER CUBIC INCH
COL.	COLUMN	PSF	POUNDS PER SQUARE FOOT
CTR.	CENTER	PSI	POUNDS PER SQUARE INCH
DIAG.	DIAGONAL	P.T.	POST TENSIONED
Ø OR DIAM.	DIAMETER	PROJ.	PROJECTION
DIM.	DIMENSION	REV.	REVISION
DWG.	DRAWING	REF.	REFERNCE
DBA	DEFORMED BAR ANCHOR	REINF.	REINFORCING
E.E.	EACH END	REQ'D	REQUIRED
EA.	EACH	SIM.	SIMILAR
E.A.	EACH FACE	SCHED.	SCHEDULE
E.J.	EXPANSION JOINT	SLH	SHORT LEG HORIZONTAL
E.S.	EACH SIDE	SLV	SHORT LEG VERTICAL
E.W.	EACH WAY	SPEC.	SPECIFICATION
ELEV.	ELEVATION	SQ.	SQUARE
ELEC.	ELECTRICAL	SF	SQUARE FEET
EMBED.	EMBEDMENT	S.S.	STAINLESS STEEL
E.O.R.	ENGINEER OF RECORD	STD.	STANDARD
= OR EQ.	EQUAL	STIFF.	STIFFENER
EQUIP	EQUIPMENT	STL.	STEEL
EXIST.	EXISTING	STRUCT.	STRUCTURAL
EXP.	EXPANSION	SYM.	SYMMETRICAL
EXT.	EXTENDED	SYP	SOUTHERN YELLOW PINE
F.F.	FINISHED FLOOR	T.E.	THICKENED EDGE
FLR.	FLOOR	THD.	THREAD
FT.	FEET OR FOOT	THK.	THICK
F.S.	FAR SIDE	TRD.	TREAD
FTG.	FOOTING	T/WALL	TOP OF WALL
FOUND.	FOUNDATION	TEMP.	TEMPORARY
Fy OR fy	YIELD STRENGTH	THRU	THROUGH
f'c	28 DAY COMPRESSIVE STRENGTH	T.O.S.	TOP OF STEEL
GA.	GAUGE OR GAGE	TYP.	TYPICAL
GALV.	GALVANIZED	U.N.O.	UNLESS NOTED OTHERWISE
GEN.	GENERAL	W.C.J.	WALL CONTROL JOINT
HGT.	HEIGHT	WT.	WEIGHT
HORIZ.	HORIZONTAL	w/o	WITHOUT
IN.	INCH OR INCHES	w/	WITH
I.J.	ISOLATION JOINT	WWF	WELDED WIRE FABRIC
K	KIPS (1000#)		
KSI	KIPS PER SQUARE INCH		

LEGEND

ITEM	SYMBOL	ITEM	SYMBOL
CONCRETE		SPOT ELEVATION TOP OF CONCRETE	+0'-0"
GROUT		STEP IN FTG. OR GRADE BM. TO CLG. PLUMB.	8"
EARTH		℄ BEAM SPLICE AND PLATE	&
CONCRETE BLOCK (CMU)		CENTERLINE	℄
SECTION INDICATOR	1 / S2	NUMBER (PRECEDING)	#, NO.
DETAIL INDICATOR	B / S2	PLUS OR TENSION MINUS OR COMPRESSION	+ -
COLUMN TYPE FOOTING TYPE TOP OF FOOTING ELEVATION	C1 F2.0A 2'-0"	POUNDS (FOLLOWING)	#
		STEP IN STRUCTURE OR DEPRESSED SLAB	
		TOP OF STEEL ELEVATION	T/S EL. +20'-8" OR (+20'-0")

REV	DESCRIPTION	DATE

MANATEE COUNTY
BLACKSTONE PARK IMPROVEMENTS

CHAINLINK FENCE
BACKSTOPS

Karl F Hees

Digitally signed by Karl F Hees
Date: 2023.06.08 18:07:20 -04'00'

SEAL: KARL F. HEES LICENSE NO. 59795 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Karl F. Hees, P.E. on 6/8/23 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

SDVOSB

23HA082

HEES & ASSOCIATES, INC.
1381 Fifth Street • Sarasota, Florida 34236
Telephone: (941) 955-4555 • Fax: (941) 955-9333
karl@heesassociates.com • www.heesassociates.com
C.O.A. #27043
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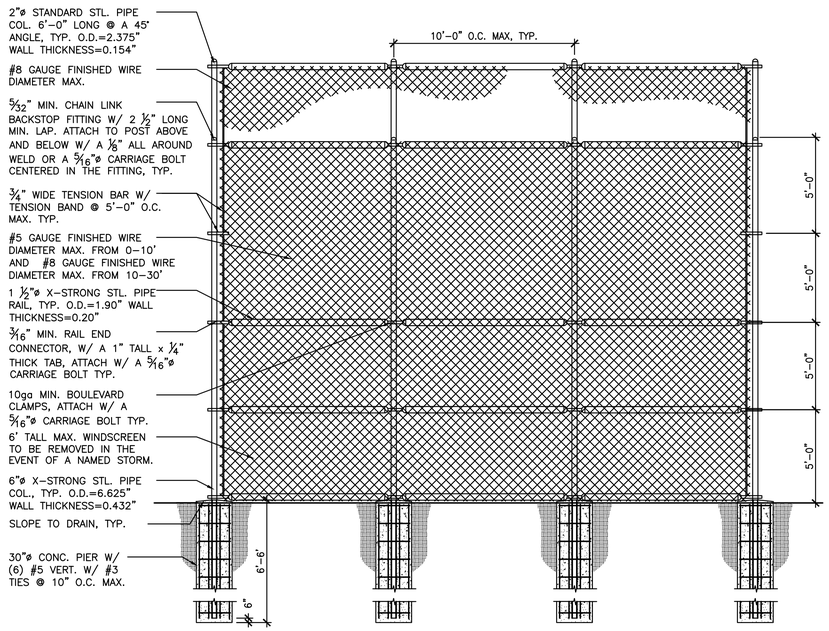
TO THE BEST OF THE ENGINEER-OF-RECORD'S KNOWLEDGE AND ABILITY, THE COMPLETED STRUCTURE DEPICTED ON THESE DOCUMENTS COMPLIES WITH THE APPLICABLE MINIMUM BUILDING CODES.

NOTE:
DO NOT SCALE OFF OF THESE DRAWINGS. LAYOUT THE BUILDING USING ALL APPLICABLE CONTRACT DRAWINGS, BUILDING DIMENSIONS AND THE LOCATION OF ALL STRUCTURAL ELEMENTS INCLUDING BUT NOT LIMITED TO SLAB EDGES, WALLS, COLUMNS, OPENINGS AND DEPRESSIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS PRIOR TO LAYOUT OF THE BUILDING. RESOLVE ANY DISCREPANCIES.

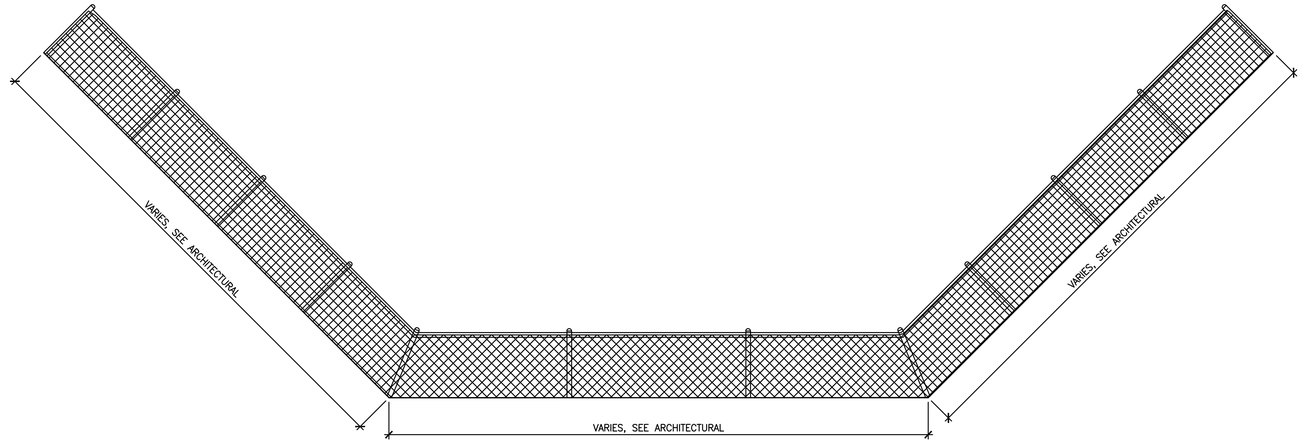
DRAWN BY: D.E.M.
DATE: 06-09-23
PROJECT NO: 20HA094
SCALE: NTS

S1.0



ELEVATION

SCALE: NTS

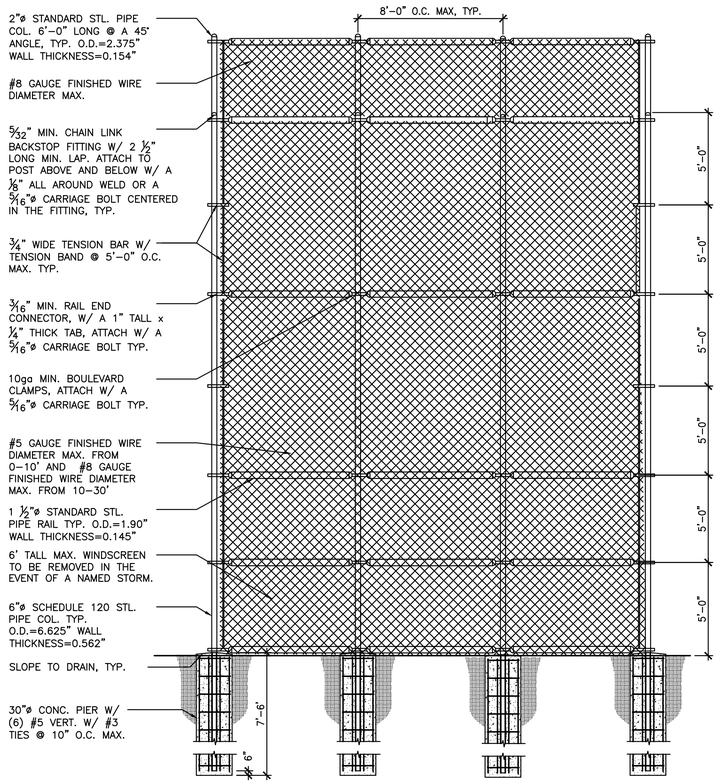


PLAN VIEW

SCALE: NTS

20 FOOT BACKSTOP W/ 6 FOOT OVERHANG FENCE DETAIL

SCALE: NTS



ELEVATION

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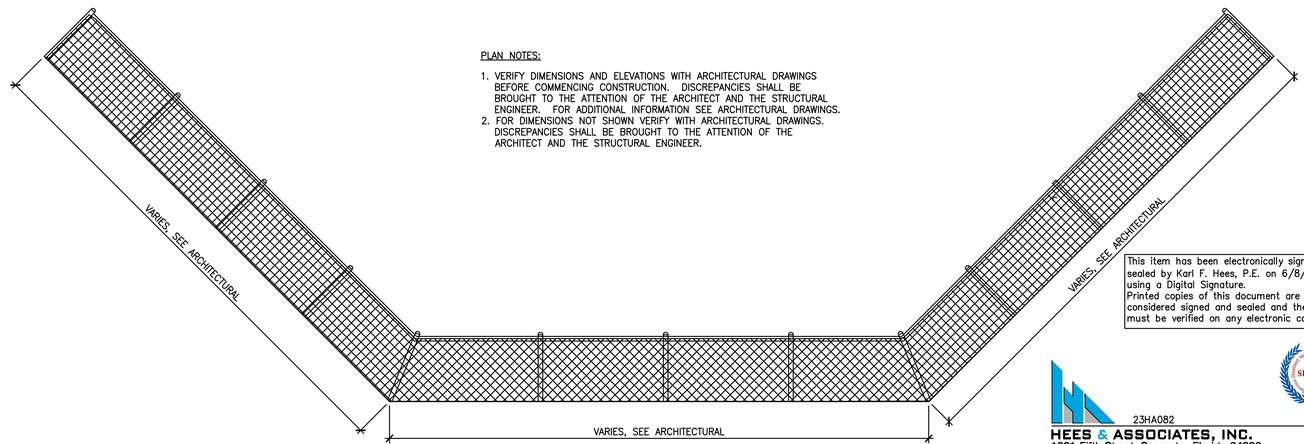

PLAN VIEW

SCALE: NTS

30 FOOT BACKSTOP W/ 6 FOOT OVERHANG FENCE DETAIL

SCALE: NTS

PLAN NOTES:

1. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. FOR ADDITIONAL INFORMATION SEE ARCHITECTURAL DRAWINGS.
2. FOR DIMENSIONS NOT SHOWN VERIFY WITH ARCHITECTURAL DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER.

REV	DESCRIPTION	DATE

MANATEE COUNTY
BLACKSTONE PARK IMPROVEMENTS

CHAINLINK FENCE
BACKSTOPS

SEAL:

KARL F. HEES LICENSE NO. 59795 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Karl F. Hees, P.E. on 6/8/23 using a Digital Signature.
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SDVOSB CVE

23HA082
HEES & ASSOCIATES, INC.
1381 Fifth Street · Sarasota, Florida 34236
Telephone: (941) 955-4555 · Fax: (941) 955-9333
karl@heesassociates.com · www.heesassociates.com
C.O.A. #27043
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TO THE BEST OF THE ENGINEER-OF-RECORD'S KNOWLEDGE AND ABILITY, THE COMPLETED STRUCTURE DEPICTED ON THESE DOCUMENTS COMPLIES WITH THE APPLICABLE MINIMUM BUILDING CODES.

NOTE:
DO NOT SCALE OFF OF THESE DRAWINGS. LAYOUT THE BUILDING USING ALL APPLICABLE CONTRACT DRAWINGS, BUILDING DIMENSIONS AND THE LOCATION OF ALL STRUCTURAL ELEMENTS INCLUDING BUT NOT LIMITED TO SLAB EDGES, WALLS, COLUMNS, OPENINGS AND DEPRESSIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS PRIOR TO LAYOUT OF THE BUILDING. RESOLVE ANY DISCREPANCIES.

DRAWN BY: D.E.M.
DATE: 06-09-23
PROJECT NO: 20HA094
SCALE: NTS

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