I - DESIGN CRITERIA

1.) DESIGNED IN ACCORDANCE WITH THE PROVISIONS PROVIDED BY THE 2017 FLORIDA BUILDING CODE - 6TH EDITION.

2.) ROOF DEAD LOAD D_r = 20 PSF

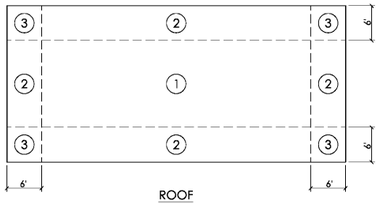
3.) ROOF LIVE LOAD L_r = 20 PSF

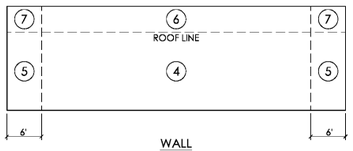
4.) ROOF SNOW LOAD

GROUND SNOW LOAD	P_g =	0 PSF
FLAT-ROOF SNOW LOAD	P_f =	0 PSF
EXPOSURE FACTOR	C_e =	1.0
IMPORTANCE FACTOR	I_s =	1.0
THERMAL FACTOR	C_t =	1.1

5.) WIND LOAD

ULTIMATE DESIGN WIND SPEED	V_{ult} =	150 MPH
NOMINAL DESIGN WIND SPEED	V_{asd} =	116 MPH
RISK CATEGORY	RC =	II
EXPOSURE FACTOR	C_{wind} =	C
INTERNAL PRESSURE COEFFICIENT	GC_{pi} =	±0.18
COMPONENTS AND CLADDING:		





ZONE	AREA (sf)	ASD LOADS $+D_{net}$ (psf)	ASD LOADS $-D_{net}$ (psf)
1	10	+12.3	-30.1
	20	+11.5	-29.3
	50	+10.5	-28.3
	100	+10.0	-27.5
2	10	+12.3	-50.5
	20	+11.5	-45.2
	50	+10.5	-38.0
	100	+10.0	-32.7
3	10	+12.3	-76.0
	20	+11.5	-63.0
	50	+10.5	-45.8
	100	+10.0	-32.7

ZONE	AREA (sf)	ASD LOADS $+D_{net}$ (psf)	ASD LOADS $-D_{net}$ (psf)
4	10	+30.1	-32.7
	20	+28.8	-31.3
	50	+26.9	-29.5
	100	+25.6	-28.1
	500	+22.5	-25.0
5	10	+30.1	-40.3
	20	+28.8	-37.6
	50	+26.9	-34.0
	100	+25.6	-31.3
	500	+22.5	-25.0
6		+94.3	-57.2
7		+118	-81.0

6.) SEISMIC LOAD

IMPORTANCE FACTOR	I_E =	1.0
MAPPED SPECTRAL RESPONSE	S_s =	5.4 %g
	S_1 =	2.9 %g
SITE CLASS	C_{site} =	D (ASSUMED)
SPECTRAL RESPONSE COEFFICIENT	S_{DS} =	5.8 %g
	S_{D1} =	4.6 %g
SEISMIC DESIGN CATEGORY	$C_{seismic}$ =	A
BASIC SEISMIC-FORCE RESISTING SYSTEM		STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR	$V_{seismic}$ =	3 KIP
SEISMIC RESPONSE COEFFICIENT	C_s =	0.02
RESPONSE MODIFICATION FACTOR	R =	3
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE

II - GENERAL NOTES

1.) THE GENERAL CONTRACTOR SHALL COORDINATE ALL CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.

2.) IF ANY DISCREPANCIES ARE FOUND WITHIN THE STRUCTURAL DRAWINGS, STRUCTURAL NOTES AND/OR SPECIFICATIONS, THE STRICTEST SHALL GOVERN CONSTRUCTION.

3.) THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

4.) THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY SHORING AND/OR BRACING DURING CONSTRUCTION TO MAINTAIN THE SAFETY AND INTEGRITY OF ALL BUILDING ELEMENTS UNTIL THE STRUCTURE IS COMPLETE.

5.) COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF EACH BUILDING COMPONENT NOT DESIGNED BY THE DESIGN TEAM-OF-RECORD AND NOT SPECIFIED ON THE PROJECT CONSTRUCTION DOCUMENTS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF INSPECTION.

III - CONCRETE

1.) CONCRETE WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE ACI (AMERICAN CONCRETE INSTITUTE) CODES AND SPECIFICATIONS.

2.) CONCRETE SHALL BE NORMAL WEIGHT WITH A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI U.N.O.

3.) CONCRETE SHALL UTILIZE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150.

4.) REINFORCING SHALL CONFORM TO THE FOLLOWING U.N.O.:

STEEL REINFORCING BARS	ASTM A615	F_y = 60 KSI
WELDED WIRE FABRIC	ASTM A185	F_y = 65 KSI

5.) AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33.

6.) CONCRETE EXPOSED TO FREEZE-THAW CYCLES (INCLUDING BUT NOT LIMITED TO EXTERIOR SLABS) SHALL HAVE 4% TO 6% ENTRAINED AIR.

7.) SPECIAL ATTENTION SHALL BE GIVEN TO CONCRETE PLACED DURING HOT OR COLD WEATHER. ALL SPECIAL PRACTICES PRESCRIBED BY ACI SHALL BE FOLLOWED DURING THE PLACEMENT OF CONCRETE DURING SPECIAL WEATHER CONDITIONS.

8.) REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315. ALL REINFORCING SHALL BE SECURED AS TO AVOID MOVEMENT DURING CONCRETE PLACEMENT.

9.) PROVIDE THE FOLLOWING CONCRETE COVER U.N.O.:

CONCRETE CAST AGAINST EARTH	3"
CONCRETE BEAMS AND WALLS	1 1/2"
SLABS	3/4"

10.) LAP REINFORCING BARS AS FOLLOWS:

BAR SIZE	COVER (in)	SPLICE LENGTH (in) TOP BAR*	SPLICE LENGTH (in) OTHER
#3	0.75	17	13
	1.5	17	13
	2.0	17	13
	3.0	17	13
#4	0.75	28	22
	1.5	23	17
	2.0	23	17
	3.0	23	17
#5	0.75	41	32
	1.5	28	22
	2.0	28	22
	3.0	28	22

BAR SIZE	COVER (in)	SPLICE LENGTH (in) TOP BAR*	SPLICE LENGTH (in) OTHER
#6	0.75	56	43
	1.5	34	26
	2.0	34	26
	3.0	34	26
#7	0.75	90	70
	1.5	55	43
	2.0	49	38
	3.0	49	38
#8	0.75	111	86
	1.5	70	54
	2.0	56	43
	3.0	56	43

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

IV - MASONRY

1.) MASONRY SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ALL APPLICABLE MSJC (MASONRY STANDARDS JOINT COMMITTEE) CODES AND SPECIFICATIONS.

2.) MATERIALS SHALL CONFORM TO THE FOLLOWING U.NO.:

CONCRETE MASONRY UNITS	ASTM C90 GR N-1	f'_m = 1900 PSI
MORTAR	ASTM C270 TYPE S	f'_c = 1800 PSI
GROUT	ASTM C476	f'_c = 3000 PSI
REINFORCING	ASTM A615	F_y = 60 KSI

3.) CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT U.N.O.

4.) PLACE ALL CMU IN RUNNING BOND PATTERN U.N.O.

5.) GROUT ALL CMU SOLID BELOW FINISHED FLOOR ELEVATION.

6.) SHORE AND/OR BRACE ALL MASONRY AS REQUIRED TO PREVENT DAMAGE PRIOR TO INSTALLATION OF FLOOR SLAB AND EXTERIOR GRADING.

7.) LAP REINFORCING BARS AS FOLLOWS:

BAR SIZE	CMU SIZE (in)	SPLICE LENGTH (in)
#3	8	16
	12	16
#4	8	21
	12	21
#5	8	26
	12	26
#6	8	43
	12	40
#7	8	60
	12	46
#8	8	92
	12	61

V - STRUCTURAL STEEL

1.) STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ALL APPLICABLE AISC (AMERICAN INSTITUTE OF STEEL CONSTRUCTION) CODES AND SPECIFICATIONS.

2.) STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING U.N.O.:

WIDE FLANGE BEAMS	ASTM A992	F_y = 50 KSI
CHANNELS	ASTM A36	F_y = 36 KSI
PLATES AND BARS	ASTM A36	F_y = 36 KSI
ANGLES	ASTM A36	F_y = 36 KSI
HSS - RECTANGULAR	ASTM A500 GRADE B	F_y = 46 KSI
HSS - ROUND	ASTM A500 GRADE B	F_y = 42 KSI
PIPE	ASTM A53	F_y = 35 KSI

3.) STRUCTURAL FASTENERS SHALL CONFORM TO THE FOLLOWING U.N.O.:

HIGH STRENGTH BOLTS	ASTM A325	F_u = 120 KSI
COMMON BOLTS	ASTM A307 GRADE A	F_u = 60 KSI
NUTS	ASTM A563	
WASHERS	ASTM F436	
THREADED RODS	ASTM A36	F_y = 36 KSI
HEADED STUD ANCHOR	ASTM A108	F_u = 65 KSI

4.) STRUCTURAL ANCHOR RODS SHALL CONFORM TO THE FOLLOWING U.N.O.:

HOOKED, HEADED & THREADED	F1554 GRADE 36	F_y = 36 KSI
NUTS	ASTM A563	
WASHERS	ASTM F844	

5.) ALL BOLTED CONNECTIONS SHALL BE SNUG-TIGHTENED JOINTS AND SHALL CONFORM TO RCSC SPECIFICATION SECTION 4.1.

6.) ALL WELDING SHALL CONFORM TO AWS D1.1.

7.) ELECTRODES FOR WELDING SHALL BE E70XX U.N.O.

8.) ALL STEEL-TO-STEEL SHOP WELDS SHALL BE EITHER ¼" FILLET OR GROOVE U.N.O.

9.) ALL FIELD WELDS SHALL BE SHOWN ON ERECTION DRAWINGS.

10.) STRUCTURAL STEEL SHALL BE SHIPPED WITH ONE COAT OF SHOP PRIMER UNLESS GALVANIZATION OR FIRE-PROOFING IS REQUIRED.

11.) ANY PENETRATIONS REQUIRED BY OTHER TRADES SHALL BE INDICATED ON ERECTION DRAWINGS AND MUST BE APPROVED PRIOR TO FABRICATION. NO FIELD HOLES OR CUTS SHALL BE PERMITTED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

12.) THE GENERAL CONTRACTOR AND STEEL ERECTOR SHALL PROVIDE ALL TEMPORARY BRACING AND GUYING REQUIRED BY OSHA AND OTHER APPLICABLE CODES.

VI - OPEN WEB STEEL JOISTS AND JOIST GIRDERS

1.) OPEN WEB STEEL JOISTS AND JOIST GIRDERS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ALL APPLICABLE SJI (STEEL JOIST INSTITUTE) CODES AND SPECIFICATIONS.

2.) THE ENDS OF ALL K-SERIES JOISTS SHALL EXTEND A MINIMUM OF 2 1/2" OVER STEEL SUPPORTS AND BE ATTACHED THERETO WITH A MINIMUM OF 2 - 1/8" FILLET WELDS 2" LONG.

3.) THE ENDS OF ALL JOIST GIRDERS SHALL EXTEND A MINIMUM OF 4" OVER STEEL SUPPORTS AND BE ATTACHED THERETO WITH A MINIMUM OF 2 - 1/4" FILLET WELDS 2" LONG.

4.) ALL STEEL JOISTS AND JOIST GIRDERS SHALL RECEIVE A SHOP COAT OF GRAY RUST INHIBITIVE PRIMER PER SJI SPEC 3.3.

5.) STEEL JOISTS AND JOIST GIRDERS SHALL NOT BE USED AS ANCHORAGE POINTS FOR FALL ARREST SYSTEMS.

6.) THE GENERAL CONTRACTOR AND ERECTOR SHALL PROVIDE BRACING FOR THE ADEQUATE DISTRIBUTION OF CONSTRUCTION LOADS SO THE CARRYING CAPACITY OF JOISTS AND JOIST GIRDERS ARE NOT EXCEEDED.

VII - METAL DECK

1.) METAL DECK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ALL APPLICABLE SDI (STEEL DECK INSTITUTE) CODES AND SPECIFICATIONS.

2.) ALL METAL DECK SHALL BE PROVIDED IN LENGTHS THAT ALLOW FOR A MINIMUM OF A 3 SPAN CONDITION U.N.O.

METAL DECK SHALL CONFORM TO THE FOLLOWING U.N.O.:

PAINTED	ASTM A1008	F_y = 33 KSI
GALVANIZED	ASTM A653	F_y = 33 KSI

4.) METAL DECK PANELS SHALL BE PLACED ON STRUCTURAL SUPPORTS, ADJUSTED TO FINAL POSITION AND ATTACHED SECURELY TO THE SUPPORTS IMMEDIATELY AFTER PLACEMENT IN ORDER TO FORM A SAFE WORKING PLATFORM. AREAS SUBJECTED TO HEAVY OR REPEATED TRAFFIC, CONCENTRATED LOADS OR IMPACT LOADS SHALL BE PROTECTED BY PLANKING OR OTHER APPROVED MEANS AS TO AVOID DAMAGE TO THE DECK.

5.) ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3. ARC PUDDLE WELDS SHALL BE A MINIMUM OF 5/8"Ø AND SHALL PENETRATE ALL LAYERS OF DECK AND HAVE GOOD FUSION TO THE SUPPORTING MEMBER.

6.) WELDING WASHERS ARE REQUIRED FOR METAL DECK UNITS WITH A THICKNESS LESS THAT 0.028 INCHES. WELDING WASHERS SHALL BE A MINIMUM OF 0.0598 INCHES THICK AND HAVE A NOMINAL 3/8"Ø HOLE.

7.) #10 SELF DRILLING SCREWS SHALL BE USED AT ALL SIDE LAPS AND BE SPACED PER THE CONTRACT DRAWINGS.

VIII - COLD-FORMED METAL FRAMING

1.) EXTERIOR LIGHT GAUGE METAL STUD FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ALL APPLICABLE AISI (AMERICAN IRON AND STEEL INSTITUTE) CODES AND SPECIFICATIONS.

3.) EXTERIOR LIGHT GAUGE METAL STUD FRAMING SHALL CONFORM TO THE FOLLOWING U.N.O.:

33-43 MIL STUDS	ASTM A1003	F_y = 33 KSI
54-68 MIL STUDS	ASTM A1003	F_y = 50 KSI

4.) ALL EXTERIOR LIGHT GAUGE METAL STUD FRAMING AND ACCESSORIES SHALL BE GALVANIZED (G60) PER ASTM A635.

5.) STUD TRACKS SHALL BE OF EQUAL DEPTH AND EQUAL OR GREATER GAUGE AS THE STUDS TO WHICH THEY ARE CONNECTED.

6.) PROVIDE WALL STUD BRIDGING AT 4'-0" MAX AS REQUIRED.

7.) ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3.

8.) ISOLATE NON-LOAD-BEARING LIGHT GAUGE METAL STUD WALL FRAMING FROM ROOF STRUCTURE TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT BY MECHANICALLY FASTENING VERTICAL DEFLECTION CLIPS TO STUDS AND ANCHORING TO ROOF STRUCTURE.

9.) EXTERIOR LIGHT GAUGE METAL STUD CONNECTIONS SHALL BE CAPABLE OF RESISTING ALL WIND LOADS SHOWN IN SECTION 1 OF THIS SHEET.

10.) ATTACH EXTERIOR SHEATHING TO EXTERIOR LIGHT GAUGE METAL STUDS WITH #10 TEK SCREWS AT 6" O.C.

11.) ATTACH STUD TRACK TO CONCRETE WITH (2) HILTI X-U DRYWALL TRACK FASTENERS @ 12" O.C.
ATTACH STUD TRACK TO STEEL MEMBERS WITH (1) HILTI X-U DRYWALL TRACK FASTENERS @ 12" O.C.
ATTACH STUD TRACK TO VERTICAL STUDS WITH (2) #10 TEK SCREWS @ EA FLANGE.

12.) ATTACH VERTICAL DEFLECTION CLIP TO EDGE ANGLE WITH (4) #12 TEK SCREWS.
ATTACH VERTICAL DEFLECTION CLIP TO VERTICAL STUDS WITH (3) DEFLECTION SCREWS.

Bakery-Cafe:

#6119

Project Team:

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153 u.s. hwy 70 w
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Professional Seal:

KYLE M. REECE LICENSE No 81490 STATE OF FLORIDA PROFESSIONAL ENGINEER

Engineer of Record:
Kyle M. Reece
P.E. No. 81490

Project Title:

CONSTRUCTION DRAWINGS

Bakery Cafe #6119
6315 MANATEE AVE W
BRADENTON, FL 34209

Tulara

No.	Description	Date

STRUCTURAL NOTES

Project Number: 6119
Drawn By: KMR
Issue Date: 10.31.18
Sheet Number: S000

DPM:	DM:	CPM:
J.R.	H.R.	R.K.