

# HELEN LEHMANN MONTVERDE LIBRARY

**PROPERTY OWNER:**

TOWN OF MONTVERDE  
17435 5TH STREET  
MONTVERDE, FLORIDA 34756  
PH:(407)469-2681

**ARCHITECT:**

GATORSKETCH ARCHITECTS, INC  
1000 E. HIGHWAY 50, SUITE 201A  
CLERMONT, FLORIDA 34711  
PH: (407) 608-5677

**MEP ENGINEER:**

HACKENBERG ENGINEERING  
481 SHEPHERD AVE.  
WINTER PARK, FLORIDA 32809  
PH: (407) 227-1973

**CIVIL ENGINEER:**

HIGHLAND ENGINEERING  
79 W. ILLIANA ST.  
ORLANDO, FLORIDA 32806  
PH: (407) 275-7877

**STRUCTURAL ENGINEER:**

BOWEN ENGINEERING CORP.  
1528 VASSAR ST.  
ORLANDO, FLORIDA 32804  
PH: (407) 423-7585

**ABBREVIATIONS**

A.B.	ANCHOR BOLT
ABV.	ABOVE
A/C	AIR CONDITIONER
ACT	ACOUSTIC CEILING TILE
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
A.H.U.	AIR HANDLER UNIT
BM.	BEAM
BOT.	BOTTOM
CLG.	CEILING
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT
COL.	COLUMN
COMP.	A/C COMPRESSOR
CPT.	CARPET
C.T.	CERAMIC TILE
DIA.	DIAMETER
DISP.	DISPOSAL
E.J.	EXPANSION JOINT
ELEC.	ELECTRICAL
ELEV.	ELEVATION
E.W.	EACH WAY
EXT.	EXTERIOR
FBC	FLORIDA BUILDING CODE
F.F.	FINISHED FLOOR
F.G.	FIXED GLASS
FLR.	FLOOR
FT.	FOOT / FEET
FX	FIXED
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GFI.	GROUND FAULT INTERRUPTER
GYP.	GYPSONUM BOARD
HGT.	HEIGHT
LWIC	LIGHT WEIGHT INSUL. CONC.
LVT	LUXURY VINYL TILE
MFGR	MANUFACTURER
MIN.	MINIMUM
MIR.	MIRROR
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
OPN'G	OPENING
PED.	PEDESTAL
PSF	POUNDS PER SQUARE FOOT
PTD	PAINTED
RAD	RADIUS
REQ'D	REQUIRED
R.O.	ROUGH OPENING
R.T.U.	ROOF TOP UNIT
RND	ROUND
S.F.	SQUARE FOOT (FEET)
SPM	SINGLE PLY MEMBRANE
S.S	STAINLESS STEEL
TEMP.	TEMPERED
T.O.B.	TOP OF BLOCK
T.O.M.	TOP OF MASONRY
TYP.	TYPICAL
U.N.O.	UNLESS NOTIFIED OTHERWISE
VCT.	VINYL COMPOSITION TILE
VERT.	VERTICAL
VTR	VENT THROUGH ROOF
W/	WITH
WC	WATER CLOSET
WP	WATER PROOF

**ARCHITECTURAL NOTES**

- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE CITY, STATE AND FEDERAL CODES AND STANDARDS.
- PRIOR TO BIDDING THE PROJECT, THE CONTRACTOR SHALL REVIEW THE DOCUMENTS, VISIT THE SITE, INVESTIGATE EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IN WRITING OF DRAWING DISCREPANCIES OR SITE CONDITIONS IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS, OR OTHERWISE AFFECTING THE WORK.
- THE CONTRACTOR SHALL MAINTAIN SAFE MEANS OF EGRESS AND FIRE ACCESS AT ALL TIMES.
- THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS AND SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKERS, OCCUPANTS AND ALL OTHER PERSONS DURING CONSTRUCTION. MEASURES MAY INCLUDE BUT SHALL NOT BE LIMITED TO CONSTRUCTION FENCING, STRUCTURAL BRACING, SHORING OF EARTHWORKS AND SCAFFOLDS, SAFETY NETS, BRACING AND SUPPORTS FOR CRANES AND GIN POLES.
- ALL AREAS OUTSIDE THE PROJECT BOUNDARIES SHALL BE PROTECTED TO INSURE THEY REMAIN INTACT DURING CONSTRUCTION. ITEMS OUTSIDE THE BOUNDARIES WHICH ARE DISTURBED, DAMAGED OR SOILED DUE TO THE ACTS OF THE CONTRACTOR OR SUBCONTRACTORS SHALL BE CLEANED, REPAIRED OR REPLACED TO THEIR PREVIOUS CONDITION, AS DETERMINED BY THE OWNER.
- ALL COMPLETED WORK SHALL BE PROTECTED UNTIL FINAL COMPLETION. DAMAGED WORK SHALL BE CORRECTED AT NO COST TO THE OWNER.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE WITH ONE ANOTHER TO RESOLVE ALL CONFLICTS IN THE PLACEMENT OF THE COMPONENTS OF THEIR RESPECTIVE TRADES.
- THE CONTRACTOR SHALL THOROUGHLY READ THE CONSTRUCTION DOCUMENTS AND UNDERSTAND ALL DRAWINGS, SPECIFICATIONS, NOTES AND DETAILS BEFORE COMMENCING WORK. IF AT ANY TIME QUESTIONS ARISE ABOUT THE INTENT OF THE DOCUMENTS, DO NOT PROCEED IN THE AREA OF CONCERN UNTIL THE ARCHITECT OF RECORD HAS BEEN NOTIFIED AND HAS ISSUED CLARIFICATION.
- SPLICING, CUTTING, NOTCHING OR OTHER ALTERATIONS TO STRUCTURAL MEMBERS ARE NOT PERMITTED WITHOUT THE WRITTEN AUTHORIZATION OF THE STRUCTURAL ENGINEER.
- THE CONTRACTOR SHALL PROVIDE WRITTEN REQUEST TO THE ARCHITECT / ENGINEER OF RECORD FOR PRIOR APPROVAL OF DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. ALL UNAUTHORIZED DEVIATIONS FROM THE DOCUMENTS AND THE CORRECTION THEREOF SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE INTENT OF THE CONSTRUCTION DOCUMENTS IS FOR THE CONTRACTOR TO PROVIDE ALL ITEMS REQUIRED FOR COMPLETE SYSTEMS WHETHER DETAILED OR NOT. PROVIDE ALL ESCUTCHEON PLATES, FINISH PLATES, TRIM PIECES, ETC... REQUIRED TO PROVIDE COMPLETE AND FINISHED WORK, AS DETERMINED BY THE ARCHITECT.
- WHERE DETAILED DRAWINGS ARE NOT PROVIDED, UTILIZE THE MANUFACTURER'S RECOMMENDED INSTALLATION DETAILS & SHOP DRAWINGS.
- IN THE CASE OF CONFLICT BETWEEN SPECIFICATIONS, STANDARDS, CODES AND DRAWINGS, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ARCHITECT OF RECORD.
- DRAWING PLANS, ELEVATIONS, SECTIONS AND DETAILS ARE NOT TO BE SCALED.
- DIMENSIONS AND DETAILS ON LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
- DIMENSIONS ARE TO FACE OF MASONRY WALLS AND TO FACE OF FINISH ON STUD WALLS, UNLESS NOTED OTHERWISE.
- ANGLED CONDITIONS ARE 45 DEGREES UNLESS NOTED OTHERWISE.
- THE HINGE SIDE OF DOOR OPENINGS SHALL BE LOCATED 4" FROM THE FACE OF ADJACENT STUD WALLS AND 8" FROM THE FACE OF ADJACENT MASONRY WALLS, UNLESS NOTED OTHERWISE.
- ALL WOOD USED IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED. FASTENERS FOR TREATED WOOD (NAILS, BOLTS, HARDWARE, ETC...) SHALL BE GALVANIZED.
- CORROSION RESISTANT FLASHING SHALL BE INSTALLED TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR ONTO STRUCTURAL COMPONENTS. FLASHING SHALL EXTEND TO THE EXTERIOR SURFACE OF THE WALL FINISH TO PREVENT WATER FROM ENTERING THE BUILDING ENVELOPE. FLASHING IS REQUIRED AT THE TOPS OF WALL OPENINGS, AT MATERIAL TRANSITIONS, UNDER SILLS AND COPINGS, OVER WOOD TRIM AND LEDGERS AND AT WALL TO ROOF INTERSECTIONS.
- IN ORDER TO BE CONSIDERED WEATHER RESISTANT, EXTERIOR FINISHES MUST ACHIEVE THE MINIMUM APPROVED THICKNESS AS SET FORTH IN THE FLORIDA BUILDING CODE 2017.
- ALL EXPOSED, UNFINISHED BOXES, PIPES AND CONDUITS SHALL BE FINISHED TO MATCH THE ADJACENT SURFACES.
- EXTERIOR WINDOWS, DOORS, CLADDING, ROOF SYSTEM AND FLASHING SYSTEMS SHALL BE INSTALLED IN COMPLIANCE WITH THE STRUCTURAL WIND LOAD REQUIREMENTS OF THE FLORIDA BUILDING CODE 2017.
- EXTERIOR ASSEMBLIES SHALL BE ANCHORED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS TO WITHSTAND THE CODE REQUIRED WIND LOADS.
- FOR EXTERIOR ASSEMBLIES, THE CONTRACTOR SHALL PROVIDE FLORIDA STATE WIDE PRODUCT APPROVAL CERTIFICATION TO THE LOCAL AUTHORITY HAVING JURISDICTION.
- TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMITICIDES, INCLUDING SOIL APPLIED PESTICIDES. UPON COMPLETION OF THE APPLICATION OF THE TERMITE PROTECTIVE TREATMENT, A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT: "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."
- BOXED AREAS IN CONCRETE FLOORS FOR SUBSEQUENT INSTALLATION OF TRAPS, ETC. SHALL BE MADE WITH PERMANENT METAL OR PLASTIC FORMS. PERMANENT FORMS MUST BE OF A SIZE AND DEPTH THAT WILL ELIMINATE THE DISTURBANCE OF SOIL AFTER THE INITIAL TREATMENT.
- METHOD OF TREATMENT SHALL BE APPROVED BY THE GOVERNING JURISDICTION "LIQUID BORATE OR BOR-A-COR" PRODUCT METHODS MUST BE DETERMINED AT PERMIT STAGE AND PRODUCT APPROVAL DATA MUST BE ON FILE WITH THE BUILDING DEPARTMENT.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI. A SLUMP OF 6" PLUS OR MINUS 1", AND HAVE 2 TO 5% AIR ENTRAINMENT, AND A MAXIMUM WATER/CEMENT RATIO OF 0.63.
- MINIMUM CONCRETE COVER OVER REINFORCEMENT SHALL BE AS FOLLOWS:  
COVER TO SOIL: 1-1/2"  
COVER TO AIR, EXTERIOR: 1-1/2"  
COVER TO AIR, INTERIOR: 3/4"

ARCHITECTURAL DRAWING		INDEX DESCRIPTION		MECHANICAL DRAWING	
SHEET	ARCHITECTURAL DRAWING	SHEET	STRUCTURAL DRAWING	SHEET	MECHANICAL DRAWING
CS101	COVER SHEET	S101	STRUCTURAL NOTES	M001	MECHANICAL GENERAL INFORMATION
CS102	PROJECT AND CODE DATA	S201	STRUCTURAL FOUNDATION/ SLAB PLAN	M101	MECHANICAL FLOOR PLAN
LS100	FIRE BARRIER DATA	S202	STRUCTURAL ROOF FRAMING PLAN	M201	MECHANICAL PIPING PLAN
LS101	LIFE SAFETY PLAN	S301	STRUCTURAL FOUNDATION DETAILS	M501	MECHANICAL DETAILS
A001	ARCHITECTURAL SITE PLAN	S302	STRUCTURAL FRAMING SECTION	M502	MECHANICAL DETAILS
A101	FLOOR PLAN	S303	STRUCTURAL FRAMING SECTION	M601	MECHANICAL SCHEDULES
A201	EXTERIOR ELEVATIONS	S304	STRUCTURAL FRAMING SECTION	M602	MECHANICAL SCHEDULES
A301	FLOOR FINISH PLAN	S305	STRUCTURAL FRAMING SECTIONS		
A302	ROOM FINISH SCHEDULE			SHEET	ELECTRICAL DRAWING
A401	REFLECTED CLG. PLAN	SHEET	PLUMBING DRAWING	E001	ELECTRICAL GENERAL NOTES & ABBREVIATION
A501	ROOF PLAN	P001	PLUMBING NOTES & SPECIFICATIONS	E002	ELECTRICAL SPECIFICATION
A601	ENLARGED TOILET ROOM PLANS / DETAILS	P101	PLUMBING WASTE & VENT PIPING PLAN	EP100	ELECTRICAL PHOTOMETRIC CALCULATION
A602	INTERIOR ELEVATIONS	P102	PLUMBING WATER PIPING PLAN	EP101	ELECTRICAL PHOTOMETRIC EMERG. CALCULATION
A701	BUILDING SECTIONS	P201	PLUMBING ISOMETRIC	E101	ELECTRICAL LIGHTING PLAN
A710	WALL SECTIONS	P501	PLUMBING DETAILS	E102	ELECTRICAL FLOOR PLAN
A711	WALL SECTIONS	P601	PLUMBING SCHEDULE	E501	ELECTRICAL DETAILS
A801	DOOR-WINDOW SCHEDULE & DETAILS			E601	PANEL SCHEDULE & RISER DIAGRAM
A802	DOOR & WINDOW DETAILS				

**AERIAL LOCATION PHOTO**



**SYMBOLS LEGEND**

WINDOW DESIGNATION		WALL SECTION		EXTERIOR ELEVATION		REVISION DELTA	
DOOR DESIGNATION		ROOM REFERENCE		INTERIOR ELEVATION		ELEVATION TAG	
ROOM NUMBER		WALL TYPE				COLUMN LINE REF.	
						CENTER LINE	

REVISIONS

**HELEN LEHMANN MONTVERDE LIBRARY**  
17435 5TH STREET  
MONTVERDE, FL 34756

**PERMIT SET**

**GatorSketch ARCHITECTS & PLANNERS**  
A20200210  
1000 EAST HWY 50 SUITE 201A, CLERMONT, FL 34711  
PH: (407) 608-5677 FAX: (888) 958-4814  
Web Site: www.gatorsketch.com

STATE OF FLORIDA  
REGISTERED ARCHITECT  
AB0915253

10/30/2023

COPYRIGHT © 2023 GATORSKETCH CORP. THIS DRAWING IS PROTECTED BY COPYRIGHT LAWS OF THE UNITED STATES. NO PART OF THIS DESIGN OR THIS DOCUMENT, INCLUDING ELECTRONIC MEDIA, MAY BE REPRODUCED, TRANSMITTED, COPIED, OR OTHERWISE USED FOR CONSTRUCTION PURPOSES WITHOUT EXPRESS WRITTEN PERMISSION OF THE DESIGN PROFESSIONAL. VIOLATORS WILL BE SUBJECT TO LEGAL PROSECUTION TO THE FULLEST EXTENT OF THE LAW.

COVER SHEET  
**CS101**  
ISSUE DATE 9-8-23

JOB #: GC-22-010

GENERAL PROJECT DATA					
1	MONTVERDE LIBRARY - NEW 7,718 SF, ONE STORY BUILDING, ASSEMBLY A-3 OCCUPANCY, CONSTRUCTION TYPE VB, (NO AUTOMATIC FIRE SPRINKLER SYSTEM)				
2	SITE IMPROVEMENTS BY OWNER INCLUDE: PARKING LOTS, SIDEWALKS, STORM WATER DRAINAGE SYSTEM, LANDSCAPE AND IRRIGATION.				
GOVERNING CODES:					
FBC 2020	FLORIDA BUILDING CODE 7TH EDITION				
FBC 2020	FLORIDA EXISTING BUILDING CODE 7TH EDITION				
FBC 2020	FLORIDA ENERGY CONSERVATION 7TH EDITION				
FBC 2020	FLORIDA PLUMBING CODE 7TH EDITION				
FBC 2020	FLORIDA MECHANICAL CODE 7TH EDITION				
FBC 2020	FLORIDA ACCESSIBILITY CODE 7TH EDITION				
FFPC 2020	FLORIDA FIRE PREVENTION CODE				
NEC 2017	NATIONAL ELECTRIC CODE				

TABLE CS-3 BASIC BUILDING CODE INFORMATION					
<b>MONTVERDE LIBRARY - 7,718 S.F.</b>					
CONSTRUCTION CLASSIFICATION					
OCCUPANCY GROUP (indicate all)(FBC 508)		A-3	TYPE:	VB	1 STORY (FBC: 602)
Does building require incidental Use Area Separation?					
Building Accessory Occupancies? Business & Storage What percentage of story is accessory occupancy? 10%	✓	NO	YES		(FBC: 509)
MIXED OCCUPANCY?	✓	NO	YES		(FBC: 508)
NON-SEPARATED?	✓	NO	YES		(FBC: 508.3)
SEPARATED? 2 Hour fire walls at connections to existing buildings.	✓	NO	YES		(FBC: 508.4)
OTHER FIRE PROTECTION DEVICES OR FEATURE: 1 HOUR CORRIDOR FIRE PARTITIONS					

TABLE CS-4 BUILDING AREA					
<b>MONTVERDE LIBRARY</b>					
OCCUPANCY A-3 - AREA LIMIT BY FBC TABLE 506.5-NS	6000	S.F.	area limitation per story		
AREA MODIFICATION FROM EQUATION 506.3.3 FBC	$I = [F/P - 0.25] W/30$				
$I = [371'401' - 0.25] 30/30' = .877$ Frontage Increase	4262	S.F.			
TOTAL ALLOWABLE BUILDING AREA:	10462	S.F.			
# STORIES		Aa			
TOTAL ALLOWED STORIES (Table 504.4) X BLD. AREA	1	X	10,462	=	10,462
<b>Total Designed Area of Building</b>	<b>7718</b>	<b>S.F.</b>	<b>ONE STORY</b>		

TABLE CS-5 BUILDING HEIGHTS					
AS DESIGNED:		ALLOWED BY FBC: CONST. TYPE VB			
ASSEMBLY A-3 - Occupancy	Feet	Stories	Feet	Stories	
Without any Allowable Increase (per FBC Tables 504.3 & .4)	33'-8"	1	40	1	
Allowable Height Increase (FBC 504.3 & .4 - Sprinkler)	N/A	N/A	60	2	

TABLE CS-6 BUILDING OCCUPANT LOAD - MONTVERDE LIBRARY - 124					
Stories & Levels	Functions of Space	Floor Area <sup>2</sup> (specify NSF or GSF)	Max Area allowed per Occupant	Persons on floor for this Function	Design Occupant Load
First Floor	A3 - Assembly (Tables & Chairs) Lobby, Multi-purpose & Break Room	1110	NSF	15	NSF 74
	A3 - Library Stacks Adult, Children, Teen, Circulation & Processing	2965	GSF	100	GSF 30
	A3 - Reading Rooms Story Time & Tutorial Rooms	727	NSF	50	NSF 15
	B - Business Areas Clerk & Permit Offices	291	GSF	150	GSF 2
	S - Accessory Storage Mechanical & IT	770	GSF	300	GSF 3
Total Design Occupant Load:		5863	NSF		124

TABLE CS-9 PLUMBING FBC T403.1 - 124 OCCUPANTS							
FIXTURE TYPE	STORAGE	3 Occupants	BUSINESS	2 Occupants	ASSEMBLY A-3 119 Occupants	REQUIRED FIXTURES	PROVIDED FIXTURES
WATER CLOSET	1 / 100 O.C. Req = .03		1 / 25 O.C. 1ST 50 then 1 / 50 O.C. Req = .08		1 / 125 Male O.C. Req = .48 1 / 65 Female O.C. Req = .92	.54 Male WC .98 Female WC	2 Male WC* 2 Female WC
LAVATORY	1 / 100 O.C. Req = .03		1 / 40 O.C. 1ST 80 THEN 1 / 80 O.C. Req = .05		1 / 200 O.C. Req = .6	.34 Male LAV .34 Female LAV	2 Male LAV 2 Female LAV
DRINKING FOUNTAIN	1 / 1000 O.C. Req = .003		1 / 100 O.C. Req = .02		1 / 500 O.C. Req = .24	.26 Drinking Fountains	2 Drinking Fountains (HI/Low)
SERVICE SINK	1 Required		1 Required		1 Required	1 Required	1 Service Sink

\* 1 Urinals substituted for Male Water Closet (Less than 50% per FPC 419.2)

TABLE CS-7 GENERAL FIRE PROTECTION REQUIREMENTS					
<b>CONSTRUCTION TYPE: VB</b>					
<b>SEPARATIONS</b>					
FIREBLOCKING REQUIRED	NO	✓	YES		(FBC: 718)
DRAFTSTOPPING REQUIRED	NO	✓	YES		(FBC: 718)
SMOKE CONTROL SYSTEM REQUIRED	✓	NO	YES		(FBC: 909)
SMOKE BARRIERS REQUIRED	✓	NO	YES		(FBC: 407 & 408)
SMOKE PARTITION REQUIRED	✓	NO	YES		(FBC: 407)
FIRE PARTITION REQUIRED (CORRIDOR WALLS)	NO	✓	YES		(FBC: 708, 402.7.2, 408.7, & 420.2)
FIRE BARRIER REQUIRED (EXISTING BUILDING CONNECTORS)	NO	✓	YES		(FBC: 707, 713, 1508.4, 1022)
<b>ALARM &amp; DETECTION</b>					
FIRE ALARM SYSTEM REQUIRED	✓	NO	YES		(FBC: 907)
EMERGENCY ALARM SYSTEM REQUIRED	✓	NO	YES		(FBC: 908)
<b>SUPPRESSION</b>					
STANDPIPES REQUIRED	✓	NO	YES		(FBC: 905)
SPRINKLERS REQUIRED	✓	NO	YES		(FBC: 903)
SPRINKLERS PROVIDED	✓	NO	YES		
PORTABLE EXTINGUISHERS REQUIRED	✓	NO	YES		(FBC: 906)
OTHER SUPPRESSION SYSTEMS REQUIRED	✓	NO	YES		(FBC: 904)
SMOKE & HEAT VENTS REQUIRED	✓	NO	YES		(FBC: 910)
OTHER: N/A					
<b>INTERIOR WALL &amp; CEILING FINISH REQUIREMENTS BY OCCUPANTS (TABLE 803.11)</b>					
SPRINKLERS PROVIDED	✓	NO	YES		(SEE ABOVE)
Group	Exit enclosure & exit passage-ways	Corridors	Rooms and enclosed spaces		
Assembly A-3	A	A	C		
Business B	A	B	C		
Storage S	B	B	C		

**Design No. U905**  
March 11, 2016  
**Bearing Wall Rating - 2 HR.**  
**Nonbearing Wall Rating - 2 HR**

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used - See Guide BXUV or BXUV7

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1. **Concrete Blocks** - Various designs. Classification D-2 (2 hr).  
See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar** - Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster** - Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill** - If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellent vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic** - (Optional-Not Shown) - 1-1/2 in. thick max. 4 ft wide sheathing attached to concrete blocks (Item 1).

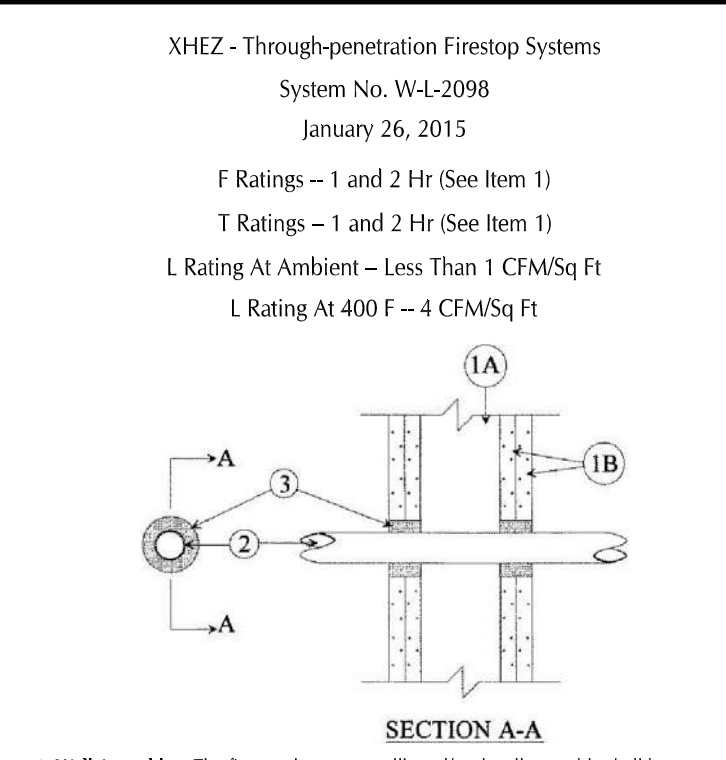
**ATLAS ROOFING CORP** - "EnergyShield Pro Wall Insulation" and "EnergyShield Pro 2 Wall Insulation"  
**CARLISLE COATINGS & WATERPROOFING INC** - Type R2+ Sheath  
**FIRESTONE BUILDING PRODUCTS CO L L C** - "Evergum" CI Foil Exterior Wall Insulation" and "Evergum" CI Glass Exterior Wall Insulation"  
**HUNTER PANELS** - Types Xci-Class A, Xci 286  
**RMX OPERATING L L C** - "TSX-8500", "TSX-8510", "Thermasheath-XP", "ECOMAXci", "Thermasheath-3", "Durasheath-3"  
**THE DOW CHEMICAL CO** - Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Limer Panel, Thermax Heavy Duty Plus (HDP) and TUFF-R™ ci Insulation

5A. **Building Units** - As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.

**RMX OPERATING L L C** - "Thermasheath-SI", "ECOBASeci", "ThermaBase-CI"

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2016-03-11



XHEZ - Through-penetration Firestop Systems  
System No. W4-2098  
January 26, 2015

F Ratings - 1 and 2 Hr (See Item 1)  
T Ratings - 1 and 2 Hr (See Item 1)  
L Rating At Ambient - Less Than 1 CFM/Sq Ft  
L Rating At 400 F - 4 CFM/Sq Ft

1. **Wall Assembly** - The fire-rated gypsum wallboard stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:  
A. **Studs** - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.  
B. **Gypsum Board** - 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 4-3/8 in. (111 mm).

The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrations** - One nonmetallic pipe installed within the firestop system. Pipe to be rigidly supported on both sides of floor or wall assembly. The space between pipe and periphery of opening shall be min 3/4 in. (19 mm) to max 1-1/4 in. (32 mm). Pipe to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:  
A. **Polyvinyl Chloride (PVC) Pipe** - Nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC pipe for use in closed process or supply piping systems.  
B. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** - Nom 2 in. (51 mm) diam (or smaller) SDR17 CPVC pipe for use in closed process or supply piping systems.  
C. **Fill, Void or Cavity Materials** - Sealant - Installed to completely fill the annular space between the pipes and gypsum wallboard on both sides of wall.

**HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC** - FS-One Sealant or FS-ONE MAX Intumescent Sealant.

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

**FIRE RESISTANCE CALCULATION:**  
**2 HOUR ASSEMBLY W/ UNRATED 8" CMU**

FBC TABLE 721.1(2)  
3.1.4 - CMU (SILICEOUS AGGREGATE) 2 Hour Rated = 4.2 MIN. THICKNESS  
8"x8"x16" UNRATED CMU MIN. EQUIV. THICKNESS = 3.7"  
(3.7" / 4.2") = .88 X 2 HR = 1.76 HOUR RATED = 1 HOUR & 45 MINUTES  
+ 5/8" GYPSUM WALL BOARD UNRATED = 30 MINUTES

**TOTAL CMU WALL ASSEMBLY RATED = 2 HOURS & 15 MINUTES**  
W/ 1" POLY-ISO. INSULATION BOARD -  
(FIRE TEST PERFORMANCE - ASTM E84, NFPA 285, 286/UL 1715)

REVISIONS	10-10-23
PERMIT REVIEW	

**HELEN LEHMANN**  
**MONTVERDE LIBRARY**  
17435 5TH STREET  
MONTVERDE, FL 34756

**PERMIT SET**

**GatorSketch**  
ARCHITECTS & PLANNERS

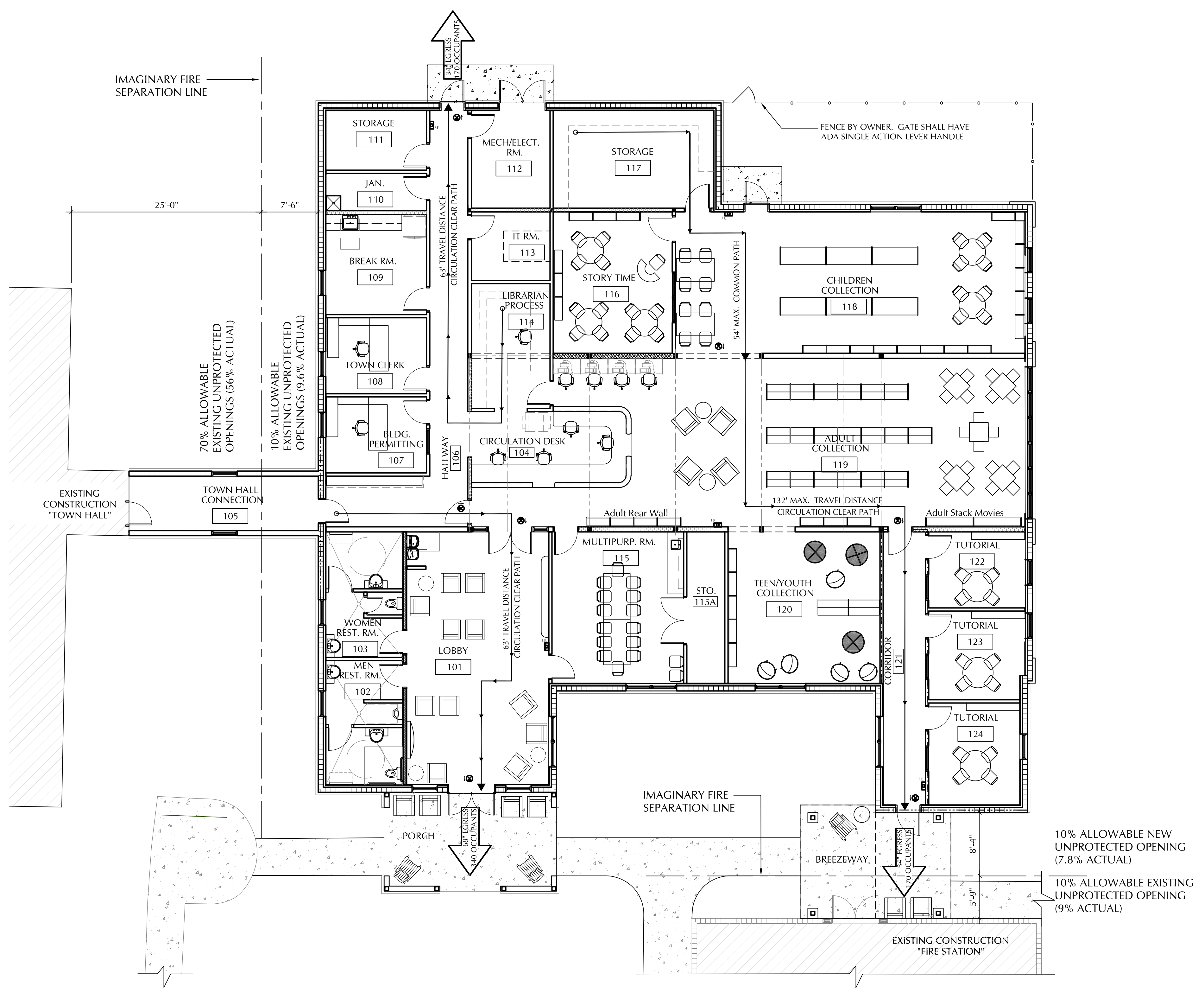
1000 EAST HWY 50 SUITE 201A, CLEMATON, FL 34111  
PH: (407) 898-5677 FAX: (888) 959-4814  
Web Site: www.gatorsketch.com

SIGN DATE: 10/30/2023

COPYRIGHT © 2023 GATORSKETCH CORP. THIS DRAWING IS PROTECTED BY COPYRIGHT LAWS OF THE UNITED STATES. NO PART OF THIS DESIGN OR THIS DOCUMENT, INCLUDING ITS ELECTRONIC MEDIA, MAY BE REPRODUCED, TRANSMITTED, COPIED OR OTHERWISE USED FOR CONSTRUCTION PURPOSES WITHOUT EXPRESS WRITTEN PERMISSION OF THE DESIGN PROFESSIONAL. VIOLATORS WILL BE SUBJECT TO LEGAL PROSECUTION TO THE FULLEST EXTENT OF THE LAW.

COVER DATA  
**CS102**  
JOB #: GC-22-010  
ISSUE DATE: 9-8-23





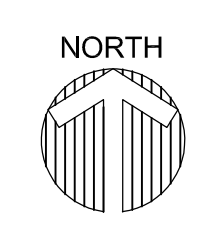
### SYMBOL LEGEND

- ILLUMINATED EXIT SIGN
- U.L. RATED 4A-60-B-C PORTABLE FIRE EXTINGUISHERS IN CABINETS. COORDINATE FINAL LOCATIONS WITH FIRE MARSHAL/ FIRE SAFETY INSPECTOR
- EMERGENCY LIGHTING
- PATH OF EGRESS EXIT ACCESS TRAVEL DISTANCE - 200' MAX. A-3 OCCUPANCY (NO SPRINKLER SYSTEM)
- EXIT DISCHARGE .2" EGRESS WIDTH PER OCCUPANT ALLOWED PER FBC TABLE
- 2 HR FIRE RATED BARRIER
- 1 HR FIRE RATED PARTITION

**1**  
LS101

## LIFE SAFETY PLAN

SCALE: 1/8" = 1'-0"



REVISIONS

**HELEN LEHMANN  
MONTVERDE LIBRARY**  
17435 5TH STREET  
MONTVERDE, FL 34756

**PERMIT SET**

**GatorSketch**  
ARCHITECTS & PLANNERS  
A200002310  
1000 EAST HWY 50 SUITE 201A, CLEMONT, FL 34111  
PH: (407) 698-5677 FAX: (888) 958-4814  
Web Site: www.gatorsketch.com

SIGN DATE

10/30/2023

COPYRIGHT © 2023  
GATORSKETCH CORP.  
THIS DRAWING IS PROTECTED BY  
COPYRIGHT LAWS OF THE  
UNITED STATES. NO PART OF THIS  
DESIGN OR THIS DOCUMENT  
INCLUDING ELECTRONIC MEDIA,  
MAY BE REPRODUCED,  
TRANSMITTED, COPIED OR  
OTHERWISE USED FOR  
CONSTRUCTION PURPOSES  
WITHOUT EXPRESSED WRITTEN  
PERMISSION OF THE DESIGN  
PROFESSIONAL. VIOLATORS WILL  
BE SUBJECT TO LEGAL  
PROSECUTION TO THE FULLEST  
EXTENT OF THE LAW

LIFE SAFETY  
PLAN  
**LS101**  
ISSUE DATE 9-8-23

JOB # GC-22-010