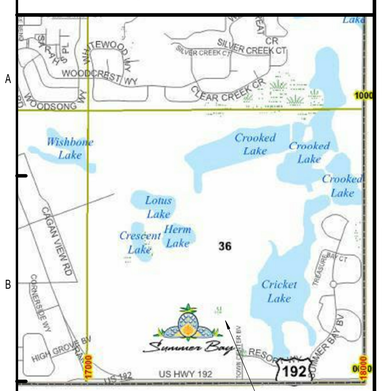
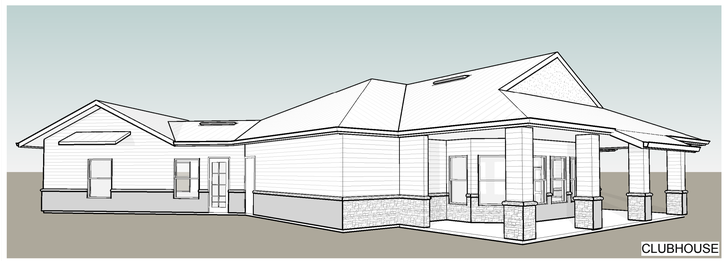
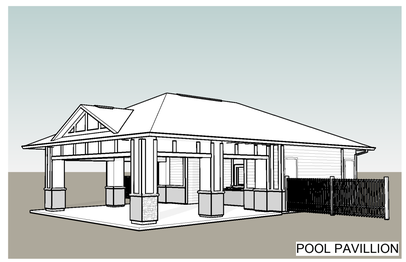
VICINITY MAP



PROJECT SITE





CLUBHOUSE

SUMMER BAY II APARTMENTS

LAKE COUNTY, FLORIDA

PROJECT NARRATIVE:

The design and documentation of a new market rental apartment development to be located on a parcel that is part of the Summer Bay DRI on Highway 192 in Lake County, Florida. The Owner's residential building program includes approximately 270 dwelling units of 5 basic types distributed among 6 residential buildings of 2 types with associated amenitities.

The dwelling units are distributed among 6 residential buildings of 2 separate building types. The residential buildings are designed to provide 4 floors of dwelling units. The buildings are classified as Type V(b) construction, and all are sprinklered to the requirements of NFPA 13R systems. The residential and amenity buildings are designed as wood frame structures that include engineered truss components for both framed floors and roofs. The buildings are placed on concrete slab on grade foundations with integral thickened edges and grade beams.

The Project program also includes a Clubhouse and pool with amenity buildings which include a Pool Pavilion, Mail Kiosk, Maintenance/Car Wash building & Trash enclosures, which are submitted under a seperate Cover.

The Project scope includes site engineering and landscape improvements that are submitted under separate cover.

SYMBOL KEY:

?	DOOR SYMBOL	NUMBERED BY TYPE REFER TO SCHEDULE
?	WINDOW SYMBOL	NUMBERED BY TYPE REFER TO SCHEDULE
?	WALL TAG	? WALL TYPE OR UL
?	GRID LINE TARGET	A,B,C, ETC. IN ONE DIRECTION 1,2,3, ETC. IN THE OTHER
? ?	ROOM TAG	? ROOM NUMBER
XX	TITLE	DRAWING NUMBER ? SCALE
	ELEVATION REFERENCES	DIRECTION OF VIEW SHEET NUMBER
	SECTION REFERENCES	DIRECTION OF VIEW SHEET NUMBER
	DETAIL REFERENCES	DETAIL AREA SHEET NUMBER
X X X X	INTERIOR ELEVATIONS	VIEW NUMBER DIRECTION OF VIEW SHEET NUMBER
	LEVEL REFERENCE	Name Elevation
6/12"	ROOF SLOPE ARROW	6/12" SLOPE SLOPE DIRECTION
6 12	ROOF SLOPE	6 12 SLOPE
XX	ACCESSORY TAG	XX LOCATION OF NOTE APPLICATION NOTE NUMBER
XX	NOTE TAG	XX LOCATION OF NOTE APPLICATION NOTE NUMBER
XX	LEVEL CHANGE	XX CHANGE IN LEVEL
1	REVISION MARK	1 REV. LOCATION REV. No.

DEFERRED SUBMITTALS:

1. Deferral of any submittal items shall have the prior approval of the Building Official having jurisdiction.
2. Submittal documents for deferred submittal items shall be submitted to the Entity designated below for the project who shall review them. These will then be forwarded by the Contractor to the Building Official having jurisdiction with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general compliance with the design of the project.
3. The deferred submittal items shall not be installed until their design and submittal documents have been approved.

LIST (INCLUDING BUT NOT LIMITED TO):

A. BUILDING RAILINGS & GUARDRAILS - REVIEW BY ARCHITECT
B. FIRE ALARM SYSTEM - REVIEW BY ARCHITECT
C. AUTOMATIC FIRE SUPPRESSION (SPRINKLER) SYSTEM - REVIEW BY ARCHITECT
D. PRE-ENGINEERED (WOOD) FLOOR & ROOF TRUSS SYSTEMS - REVIEW BY ARCHITECT
E. BUILDING IDENTIFICATION AND WAYFINDING SIGNAGE - REVIEW BY OWNER
F. POOL DESIGN, ENGINEERING & EQUIPMENT - REVIEW BY OWNER
G. SITE FENCING - REVIEW BY LANDSCAPE ARCHITECT

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

INDEX OF DRAWINGS - CLUBHOUSE

SHT #	SHEET NAME	REV. No.	REV. DATE	ISSUE DATE	PRINTING SESSIONS
00 - GENERAL					
A0.01c	COVER SHEET - CLUBHOUSE			11/14/17	CLUBHOUSE
A0.02	CODE ANALYSIS			11/10/17	GENERAL
A0.03	ACCESSIBILE DATA AND DETAILS			11/10/17	GENERAL
A0.04	ACCESSIBILE DETAILS			11/10/17	GENERAL
A0.05	ACCESSIBILE DETAILS			11/10/17	GENERAL
A0.20	PARTITION TYPES			11/10/17	GENERAL
A0.30	UL REFERENCE DIRECTORY - WALL SYSTEMS			11/10/17	GENERAL
A0.32	UL REFERENCE DIRECTORY - WALL / FLOOR SYSTEMS			11/10/17	GENERAL
A0.33	UL REFERENCE DIRECTORY - FLOOR SYSTEM			11/10/17	GENERAL
A0.34	UL REFERENCE DIRECTORY - ROOF SYSTEMS			11/10/17	GENERAL
A0.35	UL REFERENCE DIRECTORY - FLOOR PENETRATIONS			11/10/17	GENERAL
A0.36	UL REFERENCE DIRECTORY - FLOOR PENETRATIONS			11/10/17	GENERAL
A0.37	UL REFERENCE DIRECTORY - WALL PENETRATIONS			11/10/17	GENERAL
13					
01 - ARCHITECTURAL					
A1.01	ARCHITECTURAL SITE PLAN			11/10/17	GENERAL
1					
04 - ARCHITECTURAL					
A3.14	FINISH SCHEDULES	1	Date 1	05/07/15	GENERAL
CH0.02	CODE ANALYSIS - CLUBHOUSE			11/10/17	CLUBHOUSE
CH0.05	CLUBHOUSE LIFE SAFETY PLANS			11/10/17	CLUBHOUSE
CH2.01	CLUBHOUSE REFERENCE PLAN			11/10/17	CLUBHOUSE
CH2.02	CLUBHOUSE DIMENSION PLAN			11/10/17	CLUBHOUSE
CH2.03	CLUBHOUSE RCP			11/10/17	CLUBHOUSE
CH2.04	CLUBHOUSE ROOF PLAN			11/10/17	CLUBHOUSE
CH2.07	POOL PAVILION PLANS AND RCP			11/10/17	CLUBHOUSE
CH2.08	POOL PAVILLION ELEVATIONS			11/10/17	CLUBHOUSE
CH2.09	POOL PAVILION SECTIONS AND DETAILS			11/10/17	CLUBHOUSE
CH3.01	CLUBHOUSE ELEVATIONS			11/10/17	CLUBHOUSE
CH4.01	CLUBHOUSE BUILDING SECTIONS			11/10/17	CLUBHOUSE
CH4.02	DETAILS			11/10/17	CLUBHOUSE
CH4.03	DETAILS			11/10/17	CLUBHOUSE
CH5.01	ENLARGED PLAN DETAILS			11/10/17	CLUBHOUSE
CH6.01	RESTROOM PLANS & INTERIOR ELEVATIONS			11/10/17	CLUBHOUSE
CH7.01	DOOR SCHEDULE			11/10/17	CLUBHOUSE
CH7.02	WINDOW SCHEDULE AND DETAILS			11/10/17	CLUBHOUSE
CH7.03	WINDOW AND DOOR TAPING PROCEDURES			11/10/17	CLUBHOUSE
19					
05 - STRUCTURAL					
S2.01	STRUCTURAL NOTES & SCHEDULES			11/10/17	GENERAL
S2.02	SCHEDULES AND TYPICAL DETAILS			11/10/17	GENERAL
S3.01	FOUNDATION SECTIONS			11/10/17	GENERAL
S3.02	STRUCTURAL FRAMING SECTIONS			11/10/17	GENERAL
4					
07 - MECHANICAL					
M0.01	SYMBOL LEGEND MECHANICAL			11/10/17	GENERAL
M5.01	SCHEDULES - MECHANICAL			11/10/17	GENERAL
M6.01	DETAILS - MECHANICAL			11/10/17	GENERAL
M6.02	DETAILS - MECHANICAL			11/10/17	GENERAL
M6.03	DETAILS - MECHANICAL			11/10/17	GENERAL
M7.01	RISER DIAGRAMS - MECHANICAL			11/10/17	GENERAL
M8.01	SPECIFICATIONS - MECHANICAL			11/10/17	GENERAL
M12.01	CLUBHOUSE FLOOR PLAN - MECHANICAL			11/10/17	CLUBHOUSE
M12.02	CLUBHOUSE MECHANICAL SCHEDULES & DETAILS			11/10/17	CLUBHOUSE
M12.03	CLUBHOUSE MECHANICAL DETAILS			11/10/17	CLUBHOUSE
M13.01	POOL PAVILION FLOOR PLAN - MECHANICAL			11/10/17	CLUBHOUSE
11					

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09 - ELECTRICAL					
E0.01	SYMBOL LEGEND AND GENERAL NOTES - ELECTRICAL			11/10/17	GENERAL
E1.01	SITE PLAN - ELECTRICAL			11/10/17	GENERAL
E5.01	RISER DIAGRAMS ELECTRICAL			11/10/17	GENERAL
E5.02	RISER DIAGRAMS ELECTRICAL			11/10/17	GENERAL
E5.03	RISER DIAGRAMS ELECTRICAL			11/10/17	GENERAL
E5.04	RISER DIAGRAMS ELECTRICAL			11/10/17	GENERAL
E6.01	SCHEDULES ELECTRICAL			11/10/17	GENERAL
E6.02	SCHEDULES ELECTRICAL			11/10/17	GENERAL
E6.03	SCHEDULES - ELECTRICAL			11/10/17	GENERAL
E6.04	DETAILS - ELECTRICAL			11/10/17	GENERAL
E6.05	DETAILS - ELECTRICAL			11/10/17	GENERAL
E12.01	CLUBHOUSE FLOOR PLAN - POWER AND SYSTEMS			11/10/17	CLUBHOUSE
E12.02	CLUBHOUSE FLOOR PLAN - LIGHTING			11/10/17	CLUBHOUSE
E12.03	CLUBHOUSE RISER DIAGRAMS - ELECTRICAL			11/10/17	CLUBHOUSE
E12.04	CLUBHOUSE SCHEDULES - ELECTRICAL			11/10/17	CLUBHOUSE
E13.01	POOL PAVILION FLOOR PLAN - ELECTRICAL			11/10/17	CLUBHOUSE
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11 - PLUMBING					
P0.01	SYMBOL LEGEND & NOTES - PLUMBING			11/10/17	GENERAL
P5.01	SCHEDULES - PLUMBING			11/10/17	GENERAL
P6.01	RISER DIAGRAMS - PLUMBING			11/10/17	GENERAL
P6.02	RISER DIAGRAMS - PLUMBING			11/10/17	GENERAL
P12.01	CLUBHOUSE FLOOR PLAN - PLUMBING			11/10/17	CLUBHOUSE
P12.02	CLUBHOUSE SCHEDULES & DETAILS			11/10/17	CLUBHOUSE
P13.01	POOL PAVILLION FLOOR PLAN - PLUMBING			11/10/17	CLUBHOUSE
7					
12 - FIRE PROTECTION					
FP0.01	SYMBOL, LEGEND, & GEN NOTES - FIRE PROTECTION			11/10/17	GENERAL
FP12.01	CLUBHOUSE FLOOR PLAN - FIRE PROTECTION			11/10/17	CLUBHOUSE
FP13.01	APARTMENT & CLUBHOUSE DETAILS - FIRE PROTECTION			11/10/17	GENERAL
3					

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

COVER SHEET - CLUBHOUSE

A0.01c

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BUILDING CODE ANALYSIS - FLORIDA BUILDING CODE, 2014 EDITION

CODE SUMMARY

APPLICABLE CODES

1. BUILDING CODE: FLORIDA BUILDING CODE (5TH EDITION)
2. LIFE SAFETY CODE: 2014 NFPA 101
3. PLUMBING CODE: FLORIDA PLUMBING CODE (5TH EDITION)
4. ENERGY CODE: FLORIDA ENERGY CODE (5TH EDITION)
5. FIRE CODE: FLORIDA PREVENTION CODE (5TH EDITION)
6. ACCESSIBILITY CODE: FHA - FAIR HOUSING ACCESSIBILITY GUIDELINES
7. ELECTRICAL CODE: 2011 NATIONAL ELECTRIC CODE
8. MECHANICAL CODE: FLORIDA MECHANICAL CODE (5TH EDITION)
9. NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2014 ED.
10. NFPA 13R, STANDARD FOR INSTALLATION OF SPRINKLER SYSTEMS IN RESIDENTIAL OCCUPANCIES UP TO, AND INCLUDING FOUR STORIES IN HEIGHT, 2014 EDITION.
11. NFPA 24, INSTALLATION OF PRIVATE SERVICE MAINS AND THEIR APPURTENANCES, 2014 EDITION
12. NFPA 72, NATIONAL FIRE ALARM CODE, 2014 EDITION

GENERAL CODE PARAMETERS

APARTMENTS

DESCRIPTION	REQUIRED OR ALLOWABLE	THIS PROJECT	REFERENCE	REMARKS
WIND SPEED	130 MPH	130 MPH	SEC. 1609	ULTIMATE
CONVERSION	101 MPH		TABLE 1609.3.1	
SEISMIC ZONE	N/A	N/A	SEC. 1613	
SNOW LOAD	N/A	N/A	SEC. 1608	
FROST DEPTH	N/A	N/A	SEC 1805.2.1	

COMPONENTS AND CLADDING PRESSURES:(NET, SEE PRESSURE ZONE DETAILS ON STRUCTURAL DRAWINGS

BUILDING CODE PARAMETERS - [FBC 2014]

DESCRIPTION	REQUIRED (Table 503)	ALLOWABLE (w/ increases)	THIS PROJECT: APARTMENT BUILDING TYPE I	THIS PROJECT: APARTMENT BUILDING TYPE II	REFERENCE (FBC)	REMARKS
CONSTRUCTION TYPE	TYPE V(A)		TYPE V(A)	TYPE V(A)	TABLE 503	
USE / OCCUPANCY			R-2	R-2	CH. 3 & 4	
FIRE RATING			1 HR	1 HR	TABLE 601	SEE TABLE
OCCUPANCY SEPARATION	1 HR	--	1 HR	1 HR	TABLE 508.4	SEE NOTE #1, #2, #5
SPRINKLER	YES	--	NFPA 13R	NFPA 13R	SEC 903	
LEVEL 1 (GROUND)	12,000 SF	21,000 SF	15,541 SF	14,728 SF	TABLE 503	SEE MODIFICATIONS
LEVEL 2	12,000 SF	21,000 SF	15,414 SF	14,621 SF	TABLE 503	SEE MODIFICATIONS
LEVEL 3	12,000 SF	21,000 SF	15,414 SF	14,621 SF	TABLE 503	SEE MODIFICATIONS
LEVEL 4	12,000 SF	21,000 SF	15,414 SF	14,621 SF	TABLE 503	SEE MODIFICATIONS
TOTAL GROSS AREA	48,000 SF	84,000 SF	**61,783 SF**	**58,591 SF**	TABLE 503	SEE MODIFICATIONS
MEZZ/LOFT INCL	--	--	N/A	N/A	TABLE 503	
HEIGHT LIMIT (S)	3 STORIES	4 STORIES	4 STORIES	4 STORIES	TABLE 503	SEE MODIFICATIONS
HEIGHT LIMIT (FT)	50'-0"	70'-0"	51'-7"	51'-7"	TABLE 503	SEE MODIFICATIONS
MIN No. OF EXITS	2	--	2	2	TABLE 1021.1	SEE NOTE #3
MIN. HALLWAY WIDTH	44 INCHES	--	70 INCHES	70 INCHES	S. 1005.1 / 1018.2	
MIN. STAIR WIDTH	44 INCHES	--	44 INCHES	44 INCHES	S. 1005.1 / 1009.1	

NOTES:

1) OCCUPANCY SEPARATION AT DWELLING UNITS PER SECTION 439 -> 709 (VERTICAL-WALLS) & 712 (HORIZONTAL-FLOORS) = 1 HR
2) 712.4 CONTINUITY - ASSEMBLIES SHALL BE CONTINUOUS WITHOUT OPENINGS, PENETRATIONS OR JOINTS EXCEPT AS PERMITTED BY THIS SECTION AND SECTIONS 708.2, 713.4, 714 AND 1022.1
3) TWO (2) STAIRS ARE PROVIDED IN 2-HR RATED EXIT ENCLOSURE.
4) ALL UNITS EXIT INTO A 30 MIN. RATED EXIT ACCESS CORRIDOR PER 1018.1

EGRESS WIDTH	OCCUPANCY CLASSIFICATION	LOCATION	TOTAL OCCUPANTS (PER OCCUPANT LOAD CALC.)	EGRESS WIDTH PER PERSON SERVED (REQ'D.) STAIRWAYS (IN. PER OCCUPANT)	EGRESS WIDTH PROVIDED STAIRWAYS
	TYPE V(A)	BUILDING I	80/2 = 40 (WORST CASE)	0.3 (40 OCCUPANTS) = 12.0"	44.0"

BUILDING AREA MODIFICATION APARTMENTS

BUILDING TYPE I & II

(BUILDING AREA MODIFICATIONS PER SECTION 506)

AREA INCREASE: $A_a = \{A_t + [A_t \times I_f] + [A_t \times I_s]\}$

$I_f = \{[F / P - 0.25] \times W / 30\}$

$= \{[700'\text{-}10" / 700'\text{-}10" - 0.25] \times 30' / 30'\}$

$= 0.75$

$A_a = \{12{,}000 + [12{,}000 \times 0.75] + [12{,}000 \times 0]\}$

$= 21{,}000$ SF PER STORY

** BUILDING HEIGHT MODIFICATION APARTMENTS (R-2)

FOR GROUP R BUILDINGS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.2 (NFPA 13R), THE VALUE SPECIFIED IN TABLE 503 FOR MAXIMUM HEIGHT IS INCREASED BY 20 FEET (6096 MM) AND THE MAXIMUM NUMBER OF STORIES IS INCREASED BY ONE STORY, BUT SHALL NOT EXCEED FOUR STORIES OR 60 FEET (18 288 MM), RESPECTIVELY.

BALCONIES

1406.3 Balconies and similar projections.

Balconies and similar projections of combustible construction other than *fire-retardant-treated wood* shall be fire-resistance rated in accordance with Table 601 for floor construction or shall be of Type IV construction in accordance with Section 602.4. The aggregate length shall not exceed 50 percent of the buildings perimeter on each floor.

Exceptions:

3. Balconies and similar projections on buildings of Type III, IV and V construction shall be permitted to be of Type V construction, and shall not be required to have a *fire-resistance rating* where sprinkler protection is extended to these areas.
4. Where sprinkler protection is extended to the balcony areas, the aggregate length of the balcony on each floor shall not be limited.

FIRE-RESISTANCE RATING REQUIREMENTS (PER TABLE 601)

APARTMENTS - V(A)

	N/A REQ'D	N/A PROV	V(A) REQ'D	V(A) PROV
STRUCTURAL FRAME: INCLUDING COLUMNS, GIRDERS, TRUSSES	--	--	1	1
BEARING WALLS: EXTERIOR (PER TABLE 601/602/704.10)	--	--	1	1
BEARING WALLS: INTERIOR	--	--	1	1
NONBEARING WALLS AND PARTITIONS: EXTERIOR (PER TABLE 601/602)	--	--	0	0
NONBEARING WALLS AND PARTITIONS: INTERIOR (PER SECTION 601)	--	--	0	0
FLOOR CONSTRUCTION not INCLUDING SUPPORTING BEAMS AND JOISTS per EXCEPTION 2 of 7.12.4	--	--	1	1
ROOF CONSTRUCTION	--	--	1	1
SEPARATION DISTANCE (PER TABLE 602) ≥ 30'	--	--	0	0

INTERIOR FINISH CLASSIFICATION

PER FBC 2010 SECTION 803.1.1 & TABLE 803.9, ALL ROOMS AND ENCLOSED SPACES SHALL BE OF A CLASS C FINISH.

PER NFPA 101 SECTION 10.2, TABLE 10.2.2, ALL NEW APARTMENT EXIT ACCESS CORRIDORS ARE FINISH CLASS C AND ALL EXITS ARE FINISH CLASS C. ALL FLOOR FINISH AS SCHEDULED TO BE PER SECTION 804.

ALL INTERIOR FINISHES SHALL ALSO COMPLY WITH FBC 2010 SECTION 1210.1.

MAXIMUM AREA OF EXTERIOR WALL OPENINGS:

FROM TABLE 705.8 - [FBC 2014: BUILDING]

ASSUMED PROPERTY LINE DISTANCE:		ALLOWABLE	ACTUAL (WORST CASE)
	NORTH	30'-0"	
	EAST	30'-0"	
	SOUTH	30'-0"	
	WEST	30'-0"	
UNPROTECTED, NONSPRINKLERED (UP, NS)			
0 FT TO 3 FT		NP	NA
OVER 3 FT TO 5 FT		NP	NA
OVER 5 FT TO 10 FT		10%	NA
OVER 10 FT TO 15 FT		15%	NA
OVER 15 FT TO 20 FT		25%	NA
OVER 20 FT TO 25 FT		45%	NA
OVER 25 FT TO 30 FT		70%	NA
OVER 30 FT FROM ASSUMED PROPERTY LINE		NL	NL
UNPROTECTED, SPRINKLERED (UP, S) / PROTECTED (P)			
0 FT TO 3 FT		NP	NP
OVER 3 FT TO 5 FT		15%	--
OVER 5 FT TO 10 FT		25%	--
OVER 10 FT TO 15 FT		45%	--
OVER 15 FT TO 20 FT		75%	--
OVER 20 FT TO 25 FT		NL	NL
OVER 25 FT TO 30 FT		NL	NL
OVER 30' FROM ASSUMED PROPERTY LINE		**NR**	**NR**

BLOWER DOOR TEST

PERFORM MANDATORY ENVELOPE LEAK TESTING PER THE 2014 FLORIDA ENERGY CONSERVATION CODE PARAGRAPH R402.4.1.2.

SPECIFICALLY, THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE NOT EXCEEDING 7 AIR CHANGES PER HOUR AT .2" WC.

PROVIDE A WRITTEN REPORT OF THE TEST RESULTS SIGNED BY THE CONDUCTING PARTY TO THE CODE OFFICIAL.

SEE R402.4.1.2 FOR MORE TECHNICAL SPECIFICS.

WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY.

PERFORM TESTING AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING ENVELOPE.

THE GENERAL CONTRACTOR AND SUB-CONTRACTORS ARE RESPONSIBLE FOR OBTAINING PASSING RESULTS AT NO ADDITIONAL COST TO THE OWNER.

MEANS OF EGRESS - [FBC TABLE 1016.2]

OCCUPANCY CLASSIFICATION	LOCATION	MAX. EXIT ACCESS TRAVEL DISTANCE (ALLOWABLE) UNSPRINK.	MAX. EXIT ACCESS TRAVEL DISTANCE (ALLOWABLE) SPRINK.	MAX. TRAVEL DISTANCE (ACTUAL)	REMARKS
R-2	BUILDING I	200'	250'	78'-11"	
R-2	BUILDING II	200'	250'	72'-10"	

OCCUPANT LOAD TABLE 1004.1.2

BUILDING II - OCCUPANTS / TYPICAL FLOOR

SPACE NAME	FUNCTION OF SPACE	FLOOR AREA	AREA PER OCCUPANT	OCCUPANT PER UNIT
UNIT A1	RESIDENTIAL	810 SF	200 GROSS	5(2) = 10
UNIT A1-S	RESIDENTIAL	810 SF	200 GROSS	5(4) = 20
UNIT B1	RESIDENTIAL	1,410 SF	200 GROSS	8(4) = 32
UNIT C1	RESIDENTIAL	1,398 SF	200 GROSS	7(2) = 14
UNIT S1	RESIDENTIAL	614 SF	200 GROSS	4(1) = 4
TOTAL				80

OCCUPANT LOAD TABLE 1004.1.2

BUILDING II - OCCUPANTS / TYPICAL FLOOR

SPACE NAME	FUNCTION OF SPACE	FLOOR AREA	AREA PER OCCUPANT	OCCUPANT PER UNIT
UNIT A1	RESIDENTIAL	810 SF	200 GROSS	5(2) = 10
UNIT A1-S	RESIDENTIAL	810 SF	200 GROSS	5(3) = 15
UNIT B1	RESIDENTIAL	1,410 SF	200 GROSS	8(4) = 32
UNIT B2	RESIDENTIAL	1,095 SF	200 GROSS	6(1) = 6
UNIT B2-S	RESIDENTIAL	1,095 SF	200 GROSS	6(1) = 6
UNIT C1	RESIDENTIAL	1,398 SF	200 GROSS	7(1) = 7
TOTAL				76

ENERGY CONSERVATION REQUIREMENTS

2014 F.B.C. - ENERGY CONSERVATION
CHAPTER 402.4

THE BUILDING THERMAL ENVELOPE SHALL BE DURABLY SEALED TO LIMIT INFILTRATION. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION.

THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED WITH AN AIR BARRIER MATERIAL, SUITABLE FILM OR SOLID MATERIAL:

1- ALL JOINTS, SEAMS AND PENETRATIONS
2- SITE-BUILT WINDOWS, DOORS AND SKYLIGHTS.
3- OPENINGS BETWEEN WINDOWS AND DOOR ASSEMBLIES AND THEIR RESPECTIVE JAMBS AND FRAMING.
4- UTILITY PENETRATIONS.
5- DROPPED CEILINGS OR CHASES ADJACENT TO THE THERMAL ENVELOPE.
6- KNEE WALLS.
7- WALLS AND CEILINGS SEPARATING A GARAGE FROM CONDITIONED SPACES.
8- BEHIND TUBS AND SHOWERS ON EXTERIOR WALLS
9- COMMON WALLS BETWEEN DWELLING UNITS.
10- ATTIC ACCESS OPENINGS.
11- RIM JOIST JUNCTIONS.
12- OTHER SOURCES OF INFILTRATION.

FAIR HOUSING ACCESSIBILITY GUIDELINES REQUIREMENT SUMMARY

REQUIREMENT 1	ACCESSIBLE BUILDING ENTRANCE ON A ACCESSIBLE ROUTE
REQUIREMENT 2	ACCESSIBLE AND USABLE PUBLIC AND COMMON USE AREAS
REQUIREMENT 3	USEABLE DOORS
REQUIREMENT 4	ACCESSIBLE ROUTE INTO AND THROUGH THE COVERED DWELLING UNIT
REQUIREMENT 5	LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS, AND OTHER ENVIRONMENTAL CONTROLS IN ACCESSIBLE LOCATIONS
REQUIREMENT 6	REINFORCED WALLS FOR GRAB BARS
REQUIREMENT 7	USEABLE KITCHEN & BATHROOMS

FAIR HOUSING ACCESSIBILITY NOTES:

1. ALL UNITS ARE TO BE COMPLIANT PER THE FAIR HOUSING ACT (FHA).
2. ACCESSIBLE BUILDING ENTRANCES SHALL BE ON AN ACCESSIBLE ROUTE. 36" WIDE MIN. CLEAR PATH.
3. ACCESSIBLE AND USABLE PUBLIC AND COMMON USE AREAS SHALL BE PER CHAPTER TWO.
4. USABLE DOORS. ALL DOORS DESIGNED TO ALLOW PASSAGE INTO AND WITHIN ALL PREMISES MUST HAVE A 32" MIN. CLEAR WIDTH PER CHAPTER THREE.
5. THERE SHALL BE AN ACCESSIBLE ROUTE INTO AND THROUGH THE COVERED DWELLING UNIT. 36" WIDE MIN. CLEAR PATH.
6. ALL PREMISES WITHIN THE DWELLING UNIT MUST CONTAIN LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS AND OTHER ENVIRONMENTAL CONTROLS IN ACCESSIBLE LOCATIONS PER CHAPTER FIVE.
7. SHALL PROVIDE REINFORCED WALLS FOR FUTURE INSTALLATION OF GRAB BARS PER CHAPTER SIX.
8. USABLE KITCHENS AND BATHROOMS SHALL COMPLY WITH CHAPTER SEVEN.
9. ALL BATHROOMS SHALL BE ON AN ACCESSIBLE ROUTE.
10. ALL BATHROOMS SHALL HAVE A 32 INCH NOMINAL CLEAR WIDTH DOORWAY.
11. ALL BATHROOMS SHALL HAVE SWITCHES, OUTLETS, AND CONTROLS IN ACCESSIBLE LOCATIONS.
12. ALL BATHROOMS SHALL HAVE REINFORCING AROUND TOILETS, TUBS, AND SHOWERS.

FLORIDA PRODUCT APPROVAL CHECKLIST - [FBC 2014] (APARTMENTS & CLUBHOUSE)

CATEGORY / SUBCATEGORY	MANUFACTURER	PRODUCT DESCRIPTION	DESIGN PRESSURE +/-	WIND BORNE DEBRIS PROTECTION	APPROVAL NUMBER(S)
A. EXTERIOR DOORS					
SWINGING	WINDSOR REPUBLIC DOORS	STEEL EXT. DOOR DL416	+65 / -65	NO	FL 14963
SWINGING FRENCH	MASONITE	BELLEVIEW PATIO DOOR PDB-122-3105-X	+55.5 / -55.5	NO	FL 5507.1
SECTIONAL	OVERHEAD DOOR CO.	GARAGE DOOR SERIES 194	+31.8 / -35.5	NO	FL 11267.5
B. WINDOWS					
SINGLE HUNG	MI WINDOWS & DOORS	SINGLE HUNG SH-3500	N/A	NO	FL 12250.3-R11
FIXED	MI WINDOWS & DOORS	FIXED HP-PW-3500	N/A	NO	FL 11548.1-R6
C. PANEL WALL					
SIDING	JAMES HARDIE	HARDIE PLANK LAP SIDING	N/A	NO	FL 13192.2-R2
SIDING	JAMES HARDIE	HARDIE PANAL SIDING	N/A	NO	FL 1322.2-R1
SOFFITS	JAMES HARDIE	HARDIE SOFFIT	N/A	NO	FL 13265-R1
STOREFRONT	KAWNEER NA	TRIFAB 350 STOREFRONT	+30 / -30	NO	FL 10388.1-R2
D. ROOFING PRODUCTS					
UNDERLAYMENTS	W.R. GRACE	ICE & WATER SHIELD HT	N/A	NO	FL 298.1-R3
ROOFING	OWENS CORNING	TRUE DEF. DURATION	N/A	NO	FL 10674.1-R8
ROOFING	OWENS CORNING	VENT SURE ROOF VENTILATION	N/A	NO	FL 10758.3-R3
ROOFING	THOMPSON ARCH. METALS	OFF RIDGE VENT	N/A	NO	FL 5219.1-R2
TPO ROOF	GAF	60 MIL SINGLE-PLY ROOF	N/A	NO	FL 3443 - R6

MINIMUM FLAME SPREAD INTERIOR FINISHES

SPACE DESCRIPTION NONSPRINKLERED	WALLS AND CEILINGS	NOTE	FLOORS	NOTE
EXIT ENCLOSURES-EXIT PASSAGEWAYS	A	NONE IN PROJECT	CLASS II	NONE IN PROJECT
CORRIDORS	A	NONE IN PROJECT	CLASS II	NONE IN PROJECT
ROOMS AND ENCLOSED SPACES	C		DOCFF-1	"PILL TEST"

ARCHITECT'S STATEMENT (FL)

THRESHOLD BUILDING ONLY
SECTION 110.8.4.4

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

ARCHITECTURAL ABBREVIATIONS

A

ABV	ABOVE
ACC.FL.	ACCESS FLOOR
ACOUST.	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
A.D.	AREA DRAIN
ADJ.	ADJACENT
ADJUST.	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALT.	ALTERNATE
ALUM. / AL.	ALUMINUM
ANG.	ANGLE
ANOD.	ANODIZED
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
AUTO.	AUTOMATIC
AVG.	AVERAGE

B

BD.	BOARD
BLBD.	BLACK BOARD
BLDG.	BUILDING
BLK/BLK'G	BLOCK OR BLOCKING
BM.	BEAM
BOT.	BOTTOM
B.O.	BOTTOM OF
BRK.	BRICK
BSMT.	BASEMENT
BTWN	BETWEEN
B.U.	BUILT-UP
B.W.	BOTH WAYS

C

CAB.	CABINET
CB. / TB.	CORKBOARD/ TACKBOARD
C.B.	CATCH BASIN
CEM.	CEMENT
CER.	CERAMIC
C.H.	CEILING HEIGHT
CIR.	CIRCLE
C.J./ $\mathcal{C}$	CONTROL JOINT
CLG.	CEILING
CLKG.	CAULKING
CL / $\mathcal{L}$	CENTER LINE
CLO.	CLOSET
CLR.	CLEAR
CMU.	CONCRETE MASONRY UNIT
C.O.	CLEAR OPENING
COL.	COLUMN
COMM.	COMMUNICATION
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONTR.	CONTRACTOR
COOR.	COORDINATE
CONT.	CONTINUOUS
CPT.	CARPET
CSMT.	CASEMENT
C.T.	CERAMIC TILE
CTR.	CENTER

D

D.	DEPTH
DBL.	DOUBLE
DEG.	DEGREE
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DIA.	DIAMETER
DIAG	DIAGONAL
DIFF.	DIFFUSER
DIM.	DIMENSION
DISP.	DISPOSAL
DIV.	DIVIDER
DN.	DOWN
DR	DOOR
DRAP.	DRAPERY
DS.	DOWNSPOUT
DTL.	DETAIL
DWG.	DRAWING
DWR.	DRAWER
DW	DISHWASHER

E

E	EAST
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
E.I.F.S.	EXTERIOR INSULATION AND FINISH SYSTEM
EL. / ELEV.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
EQ	EQUAL
EQUIP.	EQUIPMENT
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
EXIST.	EXISTING
EXP. JT	EXPANSION JOINT
EXT.	EXTERIOR
EXTRU.	EXTRUDED

F

F.A.	FIRE ALARM
F.D.	FLOOR DRAIN
F.D.C.	FIRE DEPARTMENT CONNECTION
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
FED.	FEDERAL
F.F.	FINISH FLOOR
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FIXT	FIXTURE
F.L.	FLOW LINE
FLR.	FLOOR
FLUOR	FLUORESCENT
F.O.B.	FACE OF BRICK
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUD
F.R.	FIRE RETARDANT
F.S.	FULL SIZE
FT.	FOOT OR FEET
FTG.	FOOTING
FURR	FURRING
FUT.	FUTURE
F.V.	FIELD VERIFY

G

GA.	GAUGE
GALV.	GALVANIZE
G.B.	GRAB BAR
G.C.	GENERAL CONTRACTOR
GEN.	GENERAL
GL.	GLASS
GR.	GRADE
GYP.	GYPSUM

H

H.	HIGH
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
H/C	HANDICAPPED
HD.	HEAD
HDW.	HARDWARE
HDWD.	HARDWOOD
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.P.	HORSE POWER
HR	HOUR
HT.	HEIGHT
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HOL.	HOLLOW

I

IN.	INCHES
INSUL.	INSULATION
INT.	INTERIOR

J

JAN.	JANITOR
J.F.	JOINT FILLER
JNT.	JOINT
JST.	JOIST

K

KIT.	KITCHEN

L

L	LONG OR LENGTH
LAB.	LABORATORY
LAM.	LAMINATE
LAV.	LAVATORY
LBL.	LABEL
L.H.	LEFT HAND
LIN	LINEN
L.L.V.	LONG LEG VERTICAL
LN	LINE
L.P.	LOW POINT
LT.	LIGHT
LVR.	LOUVER

M

MAS.	MASONRY
MATL.	MATERIAL
MAX.	MAXIMUM
M.C.	MINERAL CORE
MECH.	MECHANICAL
MEMB.	MEMBRANE
MEZZ.	MEZZANINE
MFTR	MANUFACTURER
MGR.	MANAGER
M.H.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MLDG.	MOLDING
MLWK.	MILLWORK
M.O.	MASONRY OPENING
M.R.	MOISTURE RESISTIVE
MRB.	MARBLE
M.T.	MARBLE THRESHOLD
MTD.	MOUNTED
MTL	METAL
MULL.	MULLION

N

N	NORTH
N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE

O

O.C.	ON CENTER
OD	OVERFLOW DRAIN
OH.	OVERHEAD
OPNG.	OPENING
OPP.	OPPOSITE

P

PART.	PARTITION
PH	PRE HUNG
PL.	PLATE
P.L.	PROPERTY LINE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PNL.	PANEL
POL.	POLISHED
PR.	PAIR
PREC.	PRECAST
PREFAB.	PREFABRICATED
PROJ.	PROJECT
PROP.	PROPERTY
P.T.	PRESSURE TREATED
PTD.	PAINTED
PVC	POLYVINYL CHLORIDE
PVRS	PAVERS

Q

Q.T.	QUARRY TILE
QTY.	QUANTITY

R

R.	RISER
RAD.	RADIUS
R.B.	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE:	REFER TO...
REF.	REFRIGERATOR
REINF.	REINFORCED
REQ'D.	REQUIRED
REV.	REVISED / REVISION
RH	RIGHT HAND
RM	ROOM
R.O.	ROUGH OPENING

S

S	SOUTH
SAFB	SOUND ACOUSTICAL FIBER BOARD
S.C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
S.F.	SQUARE FOOT / FEET
SHLV./SH	SHELVING
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
SR	SEMI RECESSED
S.S.	STAINLESS STEEL
STAGG.	STAGGERED
STD.	STANDARD
STL.	STEEL
STN.	STAINED
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
SYST.	SYSTEM

T

T	TREAD
T & G	TONGUE & GROOVE
TEMP GL.	TEMPERED GLASS
TER	TERRAZZO
TH.	THICK
T.O.	TOP OF
TOIL.	TOILET
TYP.	TYPICAL

U

U.O.N.	UNLESS OTHERWISE NOTED

V

VAR.	VARIES
V.B.	VINYL BASE
VCT	VINYL COMPOSITION TILE
VER.	VERIFY
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD

W

W	WEST / WIDE
W/	WITH
W.C.	WATER CLOSET
W/D	WASHER/DRYER COMBO
WD.	WOOD
WP.	WATER PROOF
W.R.	WATER RESISTANT
W/O	WITHOUT
WNF	WELDED WIRE FABRIC

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn: Author
Checked: Checker
Approval: Approver
Date: Issue Date
Project #: 5389

CODE ANALYSIS

A0.02

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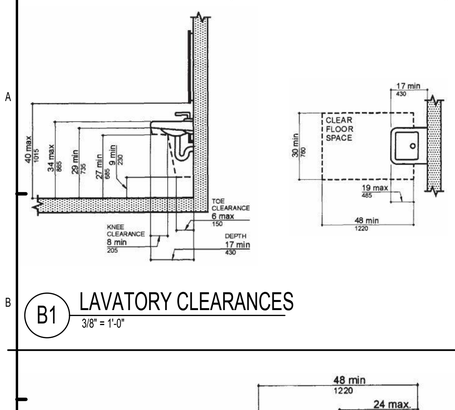


B1 LAVATORY CLEARANCES
3/8" = 1'-0"

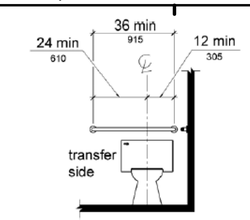


Figure 604.5.2
Rear Wall Grab Bar at Water Closets

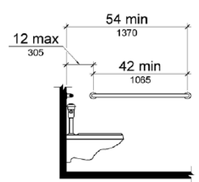


Figure 604.5.1
Side Wall Grab Bar at Water Closets

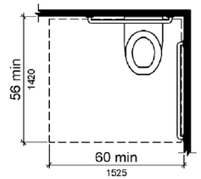
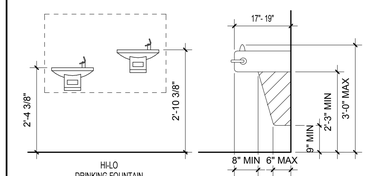


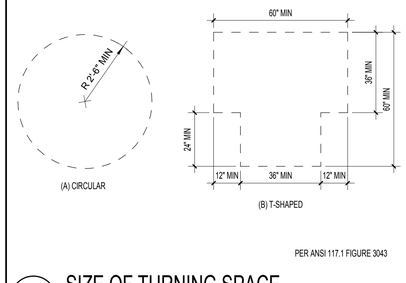
Figure 604.3.1
Size of Clearance at Water Closets

B3 TOILET CLEARANCES
3/8" = 1'-0"



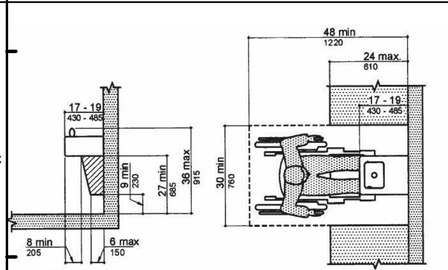
(a) SPOUT HEIGHT AND KNEE CLEARANCE

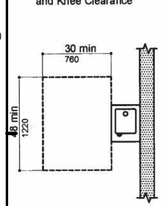
B7 DRINKING FOUNTAIN CLEARANCES
1/2" = 1'-0"

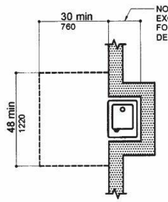


PER ANSI 117.1 FIGURE 3043

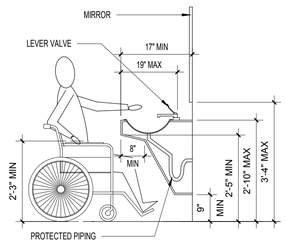
B9 SIZE OF TURNING SPACE
3/8" = 1'-0"

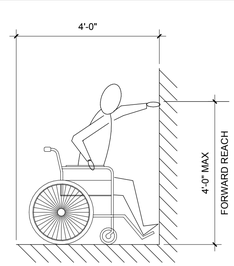


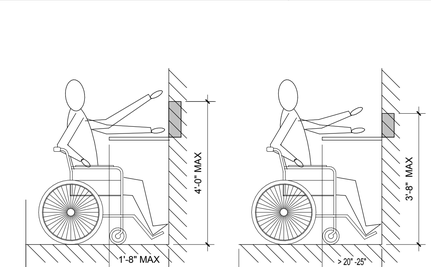


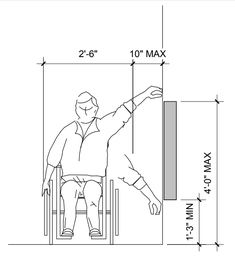


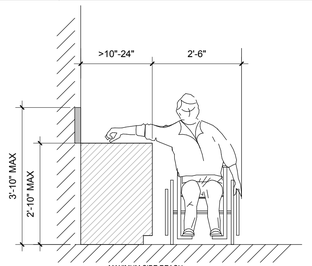
E1 WATER COOLER CLEARANCES
3/8" = 1'-0"



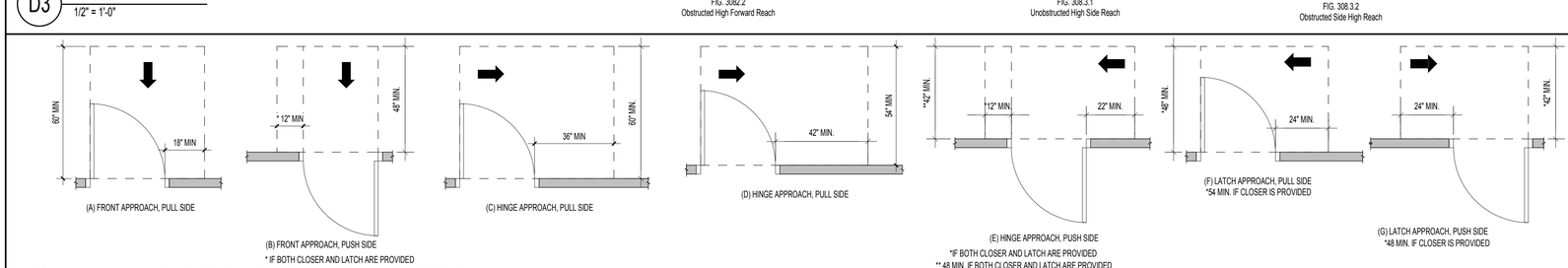








D3 REACH RANGES
1/2" = 1'-0"



E3 MANEUVERING CLEARANCE AT SWING DOORS
3/8" = 1'-0"

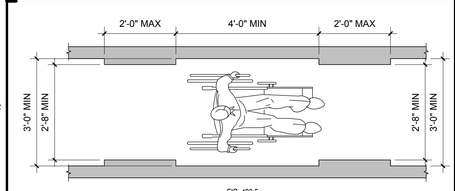


FIG. 403.5
Clear Width of an Accessible Route

G1 CLEAR SPACE OF AN ACCESSIBLE ROUTE
1/2" = 1'-0"

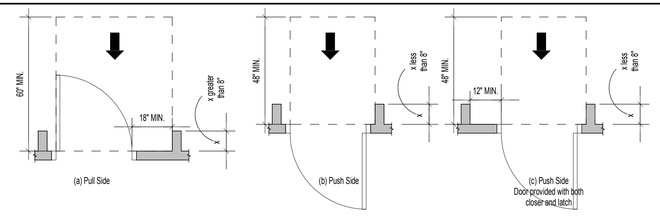


FIG. 404.2.3.4 Maneuvering Clearance at Recessed Doors

G3 MANEUVERING CLEARANCE AT RECESSED DOORS
3/8" = 1'-0"

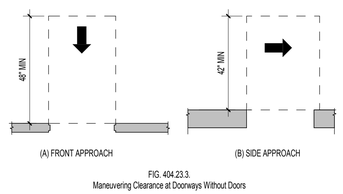
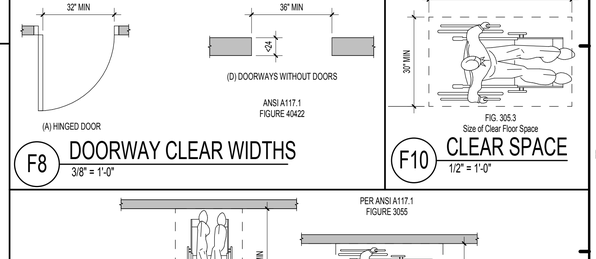


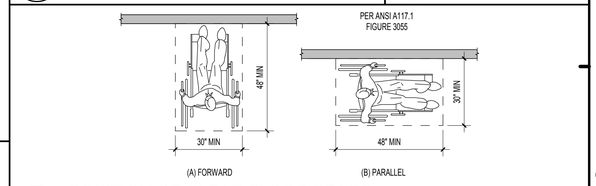
FIG. 404.23.3.
Maneuvering Clearance at Doorways Without Doors

G6 MANEUVERING CLEARANCE AT OPENINGS
3/8" = 1'-0"

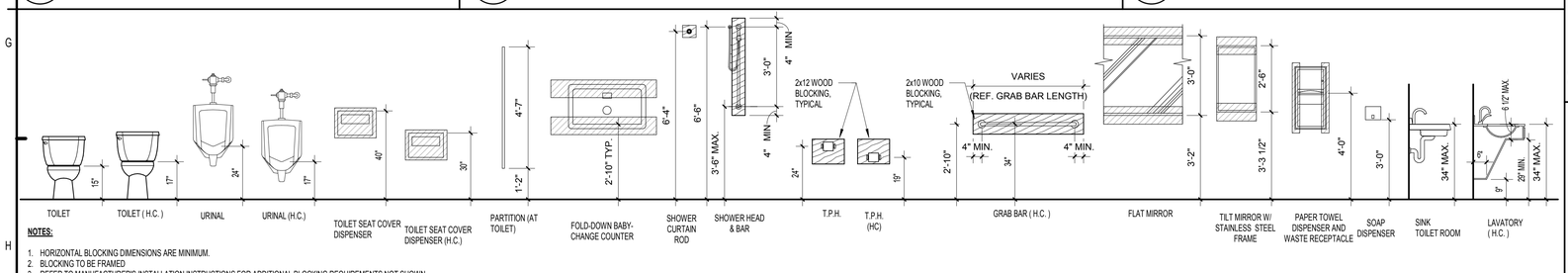


F8 DOORWAY CLEAR WIDTHS
3/8" = 1'-0"

F10 CLEAR SPACE
1/2" = 1'-0"



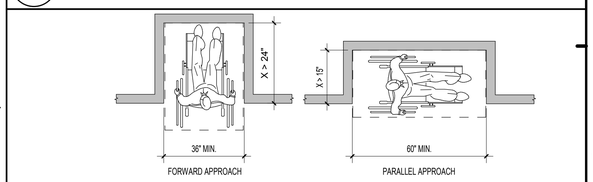
G8 POSITION OF CLEAR FLOOR SPACE
3/8" = 1'-0"



NOTES:

1. HORIZONTAL BLOCKING DIMENSIONS ARE MINIMUM.
2. BLOCKING TO BE FRAMED
3. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL BLOCKING REQUIREMENTS NOT SHOWN.

H1 MOUNTING HEIGHTS
3/8" = 1'-0"



H8 POSITION OF CLEAR FLOOR SPACE ALCOVE
3/8" = 1'-0"

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II	
LAKE COUNTY, FL	
Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

ACCESSIBILE DATA AND DETAILS

A0.03

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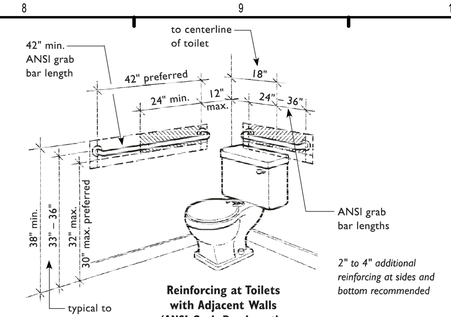


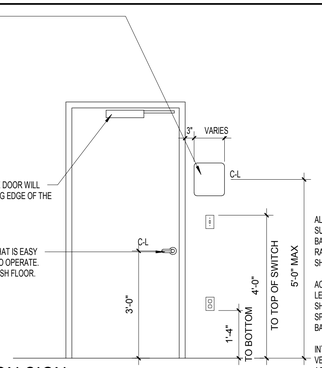
Reinforcing at Toilets with Adjacent Walls (ANSI Grab Bar Lengths Shown for Reference Only)

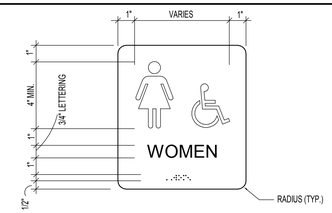
B8 GRAB BAR REINFORCING @ TOILETS1
NTS

IN ACCORDANCE WITH ADA REQUIREMENTS, ALL PERMANENT ROOM IDENTIFICATION SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR, AND SHALL BE MOUNTED WITH THE CENTERLINE OF THE SIGN AT 5'-0" A.F.F. MOUNTING LOCATION FOR SIGN SHALL BE SUCH THAT A PERSON MAY APPROACH WITHIN 3" OF THE SIGN WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING IN THE SWING OF THE DOOR. IF THERE IS INSUFFICIENT WALL SPACE ADJACENT TO THE LATCH SIDE OF THE DOOR, THE SIGN SHALL BE MOUNTED ON THE NEAREST ADJACENT WALL. ADA SIGNAGE SHALL COMPLY WITH THE DETAILS PROVIDED AT THE RIGHT.

DOOR CLOSERS SWEEP PERIOD SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70°, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3 IN. FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR. ADJUST FOR 5 LB. MAX FORCE.

DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED AT 36" (n.) ABOVE FINISH FLOOR. PROVIDE LEVER HARDWARE



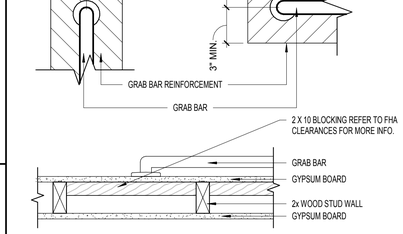


ALL PERMANENT ROOM IDENTIFICATION SIGNS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. SIGNS SHALL BE ADHERED TO SUPPORTING SURFACE BY ADHESIVE, SELECTED FOR HIGH STRENGTH AND DURABILITY OF BOND BETWEEN SIGN BACKING AND SUPPORTING SURFACE MATERIAL. SIGN BACKGROUND SHALL BE MINIMUM 1/8" THICK ACRYLIC PLATE. BACKGROUND COLOR SHALL BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF STANDARD AND CUSTOM COLORS, AND SHALL PROVIDE AT LEAST 70% CONTRAST WITH WHITE FOREGROUND LETTERS. BACKGROUND FINISH SHALL BE NON-GLARE.

ACRYLIC LETTERING SHALL BE RAISED AT LEAST 1/32", AND MAY BE ACHIEVED THROUGH SURFACE APPLICATION, ETCHING OR INJECTION MOLDING. ALL LETTERS SHALL BE UPPER CASE. LETTER SIZE SHALL BE AS INDICATED, BUT IN NO CASE LESS THAT 5/8" HIGH OR GREATER THAN 2" HIGH. TYPE STYLE SHALL BE HELVETICA MEDUIM, AND COLOR SHALL BE NON-GLARE WHITE. WHERE MORE THAN ONE ROW OF LETTERING IS REQUIRED, THE LEADING (BLAND SPACE) BETWEEN ROWS SHALL BE APPROXIMATELY 80% OF THE HEIGHT OF THE LETTERING. GRADE 2 BRAILLE REQUIRED, COLOR TO BE SAME AS SIGN BACKGROUND.

INTERNATIONAL PICTOGRAM SYMBOLS, WHERE REQUIRED, SHALL BE RAISED AT LEAST 1/32" (SIMILAR TO LETTERS), AND SHALL HAVE A MINIMUM 6" HIGH VERTICAL FIELD. THE EQUIVALENT VERBAL DESCRIPTION (TEXT) OF THE PICTOGRAM SHALL BE PLACED DIRECTLY BELOW THE PICTOGRAM, AND SHALL BE ACCOMPANIED BY GRADE 2 BRAILLE. PICTOGRAMS SHALL BE REQUIRED FOR THE FOLLOWING ROOM SIGNS: MEN (MALE ACCESSIBLE RESTROOM) WOMEN (FEMALE ACCESSIBLE RESTROOM)

H1 MOUNTING HEIGHTS & IDENTIFICATION SIGN
1/2" = 1'-0"



G8 BLOCKING FOR GRAB BAR DETAIL1
1 1/2" = 1'-0"

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

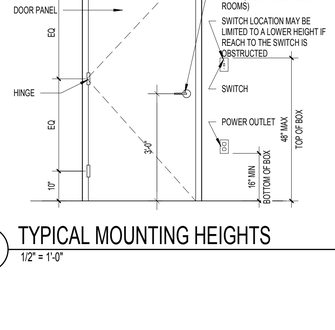
SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

ACCESSIBILE DETAILS

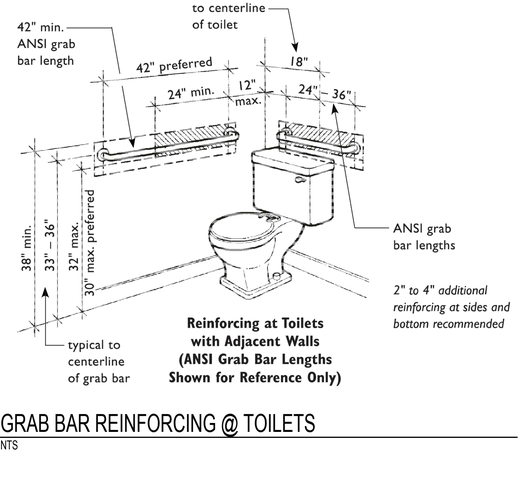
A0.04

PLOTTED: 11/30/2017 5:33:02 PM



C1 TYPICAL MOUNTING HEIGHTS

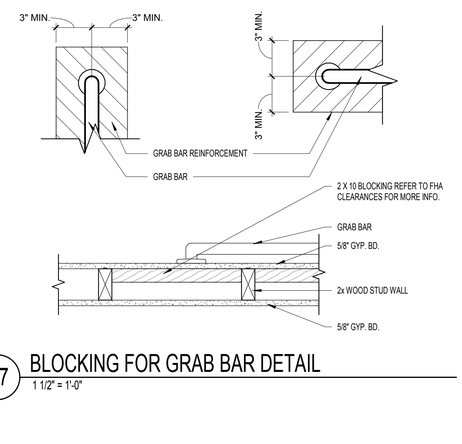
1/2" = 1'-0"



Reinforcing at Toilets with Adjacent Walls (ANSI Grab Bar Lengths Shown for Reference Only)

C4 GRAB BAR REINFORCING @ TOILETS

NTS



C7 BLOCKING FOR GRAB BAR DETAIL

1 1/2" = 1'-0"

IN ACCORDANCE WITH ADA REQUIREMENTS, ALL PERMANENT ROOM IDENTIFICATION SIGNS
SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR, AND SHALL BE
MOUNTED WITH TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48" MIN. ABOVE FINISHED FLOOR, MEASURE FORM THE BASELINE OF THE LOWEST TACTILE CHARACTER, AND 60" MAX. ABOVE FINISHED FLOOR, MEASURED TO THE HIGHEST TACTILE CHARACTER.

MOUNTING LOCATION FOR SIGN SHALL BE SUCH THAT A PERSON MAY APPROACH WITHIN 3" OF THE SIGN WITHOUT
ENCOUNTERING PROTRUDING OBJECTS OR STANDING IN THE SWING OF THE DOOR. IF THERE IS
INSUFFICIENT WALL SPACE ADJACENT TO THE LATCH SIDE OF THE DOOR, THE SIGN SHALL BE
MOUNTED ON THE NEAREST ADJACENT WALL. ADA SIGNAGE SHALL COMPLY WITH THE DETAILS
PROVIDED AT THE RIGHT.

TACTILES SIGNS AT DOORS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MIN. X 18" MIN., CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN CLOSED POSITITION AND 45 DEGREE OPEN POSITITION. THEREFORE, THE CENTERLINE OF SIGN SHALL BE 9" MIN. FROM THE DOOR JAMB.

DOOR CLOSERS SWEEP PERIOD SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70°, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3 IN. FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR. ADJUST FOR 5 LB. MAX FORCE.

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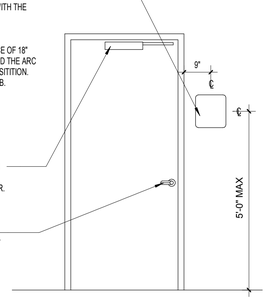

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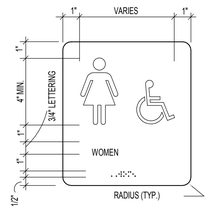

H1 PERMANENT IDENTIFICATION SIGN

1/2" = 1'-0"

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No.	Date	Description

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2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103

CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II

LAKE COUNTY, FL

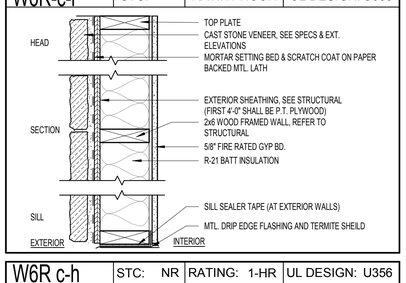
Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

ACCESSIBILE DETAILS

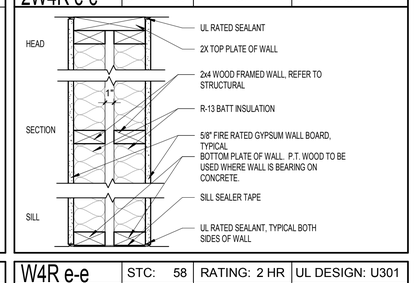
A0.05

PLOTTED: 11/30/2017
5:33:05 PM

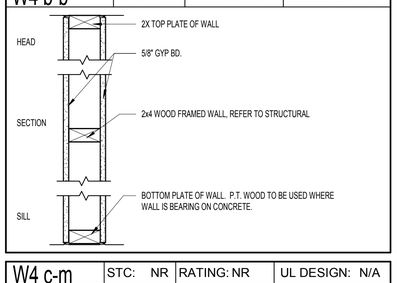
W6R-c-l | STC: -- | RATIN1-HOUR | UL DESIGN: U356



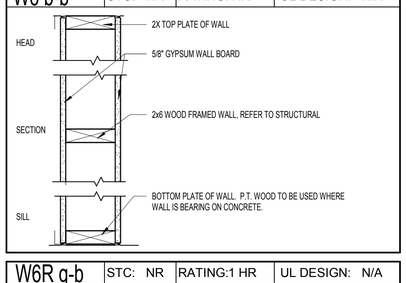
2W4R c-c | STC: 50 | RATING: 1 HR | UL DESIGN: U341



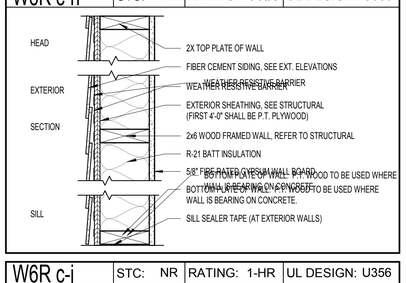
W4 b-b | STC: NR | RATING: NR | UL DESIGN: N/A



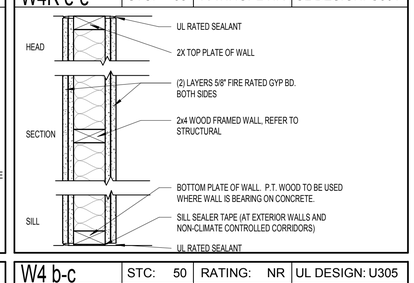
W6 b-b | STC: NR | RATING: NR | UL DESIGN: N/A



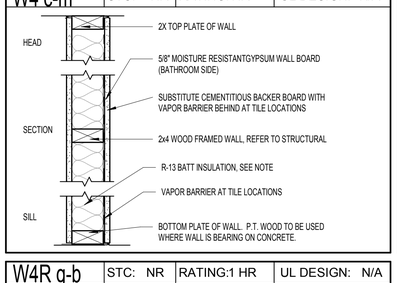
W6R c-h | STC: NR | RATING: 1-HR | UL DESIGN: U356



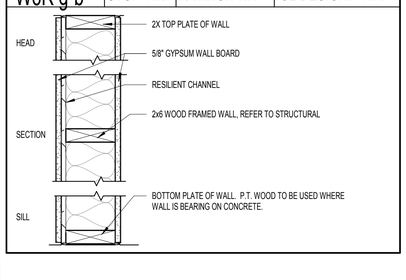
W4R e-e | STC: 58 | RATING: 2 HR | UL DESIGN: U301



W4 c-m | STC: NR | RATING: NR | UL DESIGN: N/A



W6R g-b | STC: NR | RATING:1 HR | UL DESIGN: N/A



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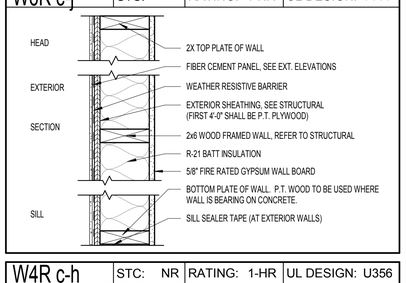

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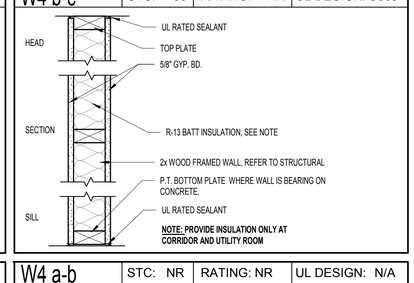
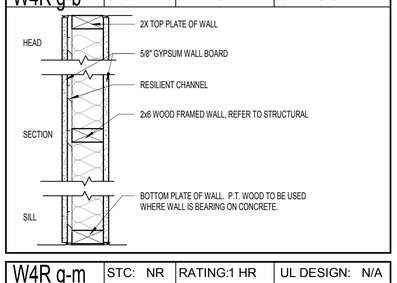


NOTE: PROVIDE INSULATION ONLY AT CORRIDOR AND UTILITY ROOM

W4R g-b | STC: NR | RATING:1 HR | UL DESIGN: N/A



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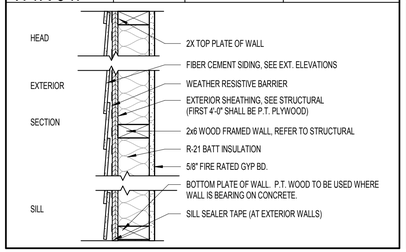
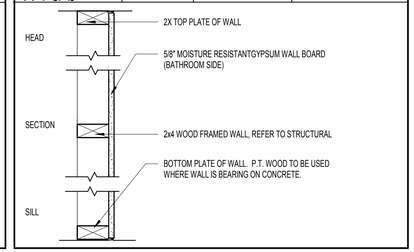
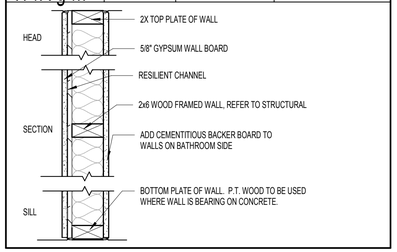


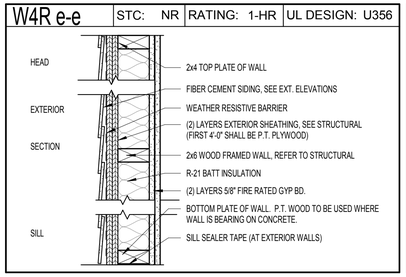
W4 a-b | STC: NR | RATING: NR | UL DESIGN: N/A



W4R g-m | STC: NR | RATING:1 HR | UL DESIGN: N/A



W4R e-e | STC: NR | RATING: 1-HR | UL DESIGN: U356



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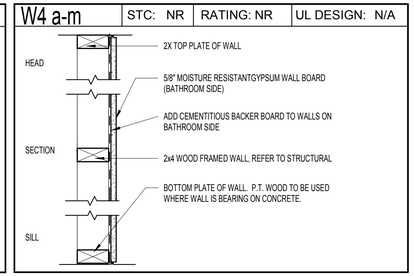

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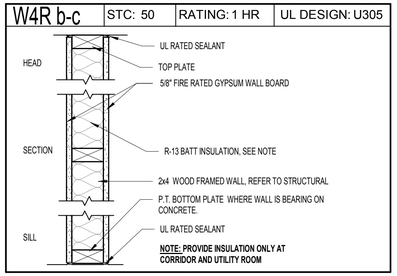

NOTE: PROVIDE INSULATION ONLY AT CORRIDOR AND UTILITY ROOM

PARTITION LEGEND:

CONCRETE
C8 = 6" CONCRETE
C6 = 6" CONCRETE
C5 = 5" CONCRETE
C4 = 4" CONCRETE

EXISTING PARTITION
E = EXISTING PARTITION. USE MODIFIER FOR FURRING OVER EXISTING WALL

FURRING
F2 = 1-1/2" FURRING
F4 = 3-1/2" FURRING
F6 = 5-1/2" FURRING

MASONRY
M12 = 12" CMU
M10 = 10" CMU
M8 = 8" CMU
M4 = 4" CMU

PATCHING OR INFILL
P = PATCHING OF WALL (OR INFILL) TO MATCH ADJACENT CONSTRUCTION IN EXISTING WALL

SHAFT WALL
H4 = 4" C-H STUDS
H2 = 2-1/2" C-H STUDS

STEEL STUD
S6 = 6" METAL STUDS
S4 = 3-5/8" METAL STUDS
S2 = 2-1/2" METAL STUDS
S1 = 1-5/8" METAL STUDS

WOOD STUD
W8 = 1-1/2" X 7-1/4" WOOD STUDS
W6 = 1-1/2" X 5-1/2" WOOD STUDS
W4 = 1-1/2" X 3-1/2" WOOD STUDS

OTHER
R = INDICATES RATED ASSEMBLY

MODIFIERS
a. UNFINISHED
b. (1) LAYER SHEATHING
c. (1) LAYER SHEATHING & INSULATION
d. (2) LAYERS SHEATHING
e. (2) LAYERS SHEATHING & INSULATION
f. (1) LAYER SHEATHING WITH FURRING
g. (1) LAYER SHEATHING WITH FURRING & INSULATION
h. FIBER CEMENT LAP SIDING, BUILDING WRAP, SHEATHING
i NOT USED
j FIBER CEMENT PANEL SIDING, PLASTIC SHIMS, BUILDING WRAP, SHEATHING
k. STONE VENEER
l. STONE VENEER, LATH, BUILDING PAPER, BUILDING WRAP, SHEATHING
m. (1) LAYER M.R. / CEMENTITIOUS SHEATHING
n. (1) LAYER M.R. / CEMENTITIOUS SHEATHING & INSULATION
o. (2) LAYERS M.R. / CEMENTITIOUS SHEATHING
p. (2) LAYERS M.R. / CEMENTITIOUS SHEATHING & INSULATION
q. (1) LAYER M.R. / CEMENTITIOUS SHEATHING WITH FURRING
r. (1) LAYER M.R. / CEMENTITIOUS SHEATHING WITH FURRING & INSULATION
s. SKIM COAT FINISH
t. BRICK VENEER, AIRSPACE, BUILDING PAPER, BUILDING WRAP, SHEATHING
u. MASONRY
v. (1) LAYER M.R. SHEATHING

PERMIT REVIEW STAMP

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CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

PARTITION TYPES

A0.20

PLOTTED: 11/30/2017 5:33:09 PM

Design No. U305

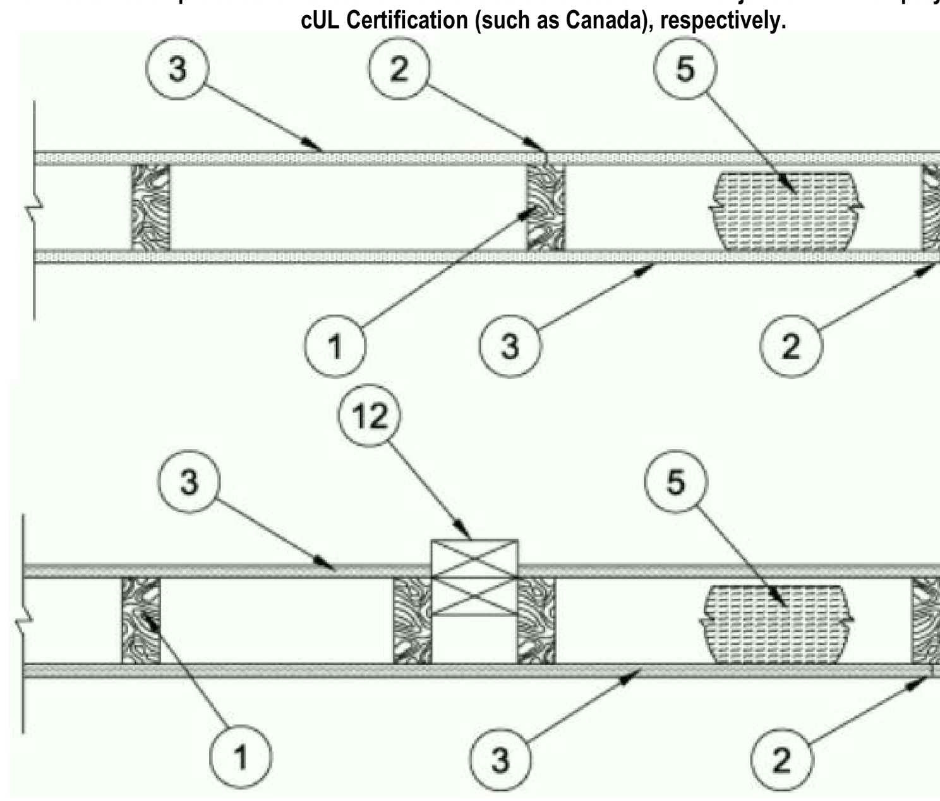
February 04, 2015

Bearing Wall Rating **— 1 Hr**

Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.
STC Rating - 56 (See Item 9)

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. **Wood Studs —** Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped.
2. **Joints and Nail-Heads —** Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.
3. **Gypsum Board* —** 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Item 6, 6A or 6B, **Steel Framing Members***.
When Item 6 ,6B, or 6C **Steel Framing Members***, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.
When Item 6A, **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.
When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.
ACADIA DRYWALL SUPPLIES LTD — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing
AMERICAN GYPSUM CO — Types AGX-1(finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type LightRoc (finish rating 22 min) or Type AG-C
BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min).
CERTAINTEED GYPSUM INC — Type 1, Type SF3 (finish rating 20 min) or FRPC, Type C or Type X (finish rating 26 min), Type EGRG or GlasRoc (finish rating 23 min)
CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min).
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min).
GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min).
NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 or Type PG-C.
PANEL REY S A — Type GREX, PRX; Types RHX, MDX, ETX (finish rating 22 min)
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)
THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min)
UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULIX (finish rating 20 min).
USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min).
3A. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), Type AG-C (finish rating 25 min.).
CERTAINTEED GYPSUM INC — Type C or Type X (finish rating 26 min).
CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min).
UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min).
USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min).

3B. **Gypsum Board* —** (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A.
CGC INC — Types AR, IP-AR.
UNITED STATES GYPSUM CO — Types AR, IP-AR.
USG MEXICO S A DE C V — Types AR, IP-AR.
3C. **Gypsum Board* —** (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.
CGC INC — Type SHX.
UNITED STATES GYPSUM CO — Type SHX.
USG MEXICO S A DE C V — Type SHX.
3D. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, or 3C — not shown) For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min).
3E. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X (finish rating 23 min).
3F. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) - 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter.
UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.)
3G. **Gypsum Board* —** (As an alternate to Items 3 through 3F) - 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min).
3H. **Gypsum Board* —** (As an alternate to Items 3) - Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board
3I. **Gypsum Board * —** (As an alternate to Items 3 through 3H, not shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min).
3J. **Gypsum Board* —** (As an alternate to Items 3) - Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
CERTAINTEED GYPSUM INC — Type SilentFX
3K. **Gypsum Board* —** (As an alternate to Item 3) - 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min).
3L. **Gypsum Board* —** (As an alternate to Item 3) For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".
MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"
3M. **Gypsum Board* —** (As an alternate to Items 3) For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall
3N. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3.
CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X (finish rating 24 min)
3O. **Wall and Partition Facings and Accessories* —** (As an alternate to Item 3, not shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min).
3P. **Gypsum Board* —** (As an alternate to Item 3, not shown) - Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same sidebetween face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.
NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)
4. **Steel Corner Fasteners — (Optional) —** For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.
5. **Batts and Blankets* —** (Optional - Required when Item 6A is used (RC-1)) Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities.
CERTAINTEED CORP
KNAUF INSULATION LLC
JOHNS MANVILLE INTERNATIONAL INC
KNAUF INSULATION LLC
MANSON INSULATION INC
OWENS CORNING HT INC, DIV OF OWENS CORNING — Corning Fiberglas Corp.
ROCK WOOL MANUFACTURING CO — Delta Board.
ROXUL INC — Acoustical Fire Batts
THERMAFIBER INC — Type SAFB.
5A. **Fiber, Sprayed* —** (Not shown - Not for use with Item 6) As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft3, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS765LD or INS770LD.
U S GREENFIBER L L C — INS735& INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.
5B. **Fiber, Sprayed* —** (Not shown - Not for use with Item 6) As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation
5C. **Batts and Blankets* —** Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.
THERMAFIBER INC — Type SAFB
5D. **Glass Fiber Insulation —** (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

5E. **Batts and Blankets* —** (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.
5F. **Fiber, Sprayed* —** (Optional, Not Shown - Not for use with Item 6, 6A or 6B). As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).
TEXAS AMERROCK PARTNERS L P, DBA AMERROCK PRODUCTS — Rockwool
5G. **Fiber, Sprayed* —** (Optional, Not Shown - Not for use with Items6, 6A or 6B). As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL
6. Steel Framing Members (Optional, Not Shown)* — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3. b. Steel Framing Members* — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.

b. Steel Framing Members* — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PAC INTERNATIONAL INC — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

6A. Steel Framing Members (Optional, Not Shown)* — Furring channels and Steel Framing Members on one side of studs as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members* — used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax.

6B. Steel Framing Members — (Optional, Not Shown)* — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members* — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6C. Steel Framing Members — (Optional, Not Shown)* — Furring channels and resilient sound isolation clip as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 3. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

b. Steel Framing Members* — Resilient sound isolation clip used to attach furring channels (Item 6Ca) to studs. Clips spaced 16 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7. Furring Channel — Optional - Not Shown - For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. Caulking and Sealants — (not shown, optional) A bead of acoustical sealant applied around the partition perimeter for sound control.

9. STC Rating — The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:

A. Item 2, above - Nailheads Shall be covered with joint compound.
B. Item 2, above - Joints As described, shall be covered with fiber tape and joint compound.
C. Item 5, above - Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.
D. Item 6, above - Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.
E. Item 8, above - Caulking and Sealants (not shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. Wall and Partition Facings and Accessories* — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 510.

11. Cementitious Backer Units* — (Optional Item Not Shown - For Use On Face Of 1 Hr Systems With All Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide.- Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing.
NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. Non-Bearing Wall Partition Intersection — (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. Mesh Netting — (Not shown) - Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. Mineral and Fiber Board* — (Optional, Not shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

14A. Mineral and Fiber Board* — (Optional, Not shown) — For use with Items 14B-14E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

14B. Glass Fiber Insulation — (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

14C. Batts and Blankets* — (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.
THERMAFIBER INC — Type SAFB

14D. Adhesive — (For use with Item 14A) - Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. Gypsum Board* — (For use with Item 14A) - 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.
AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type FRPC, Type C
CGC INC — Types C, IP-X2, IPC-AR
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A
GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C
NATIONAL GYPSUM CO — Types FSK-C, FSW-C
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C.
PANEL REY S A — Type PRC
THAI GYPSUM PRODUCTS PCL — Type C
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR
USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

* 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 2015-02-04

H1 UL U305
NTS

Design No. U341

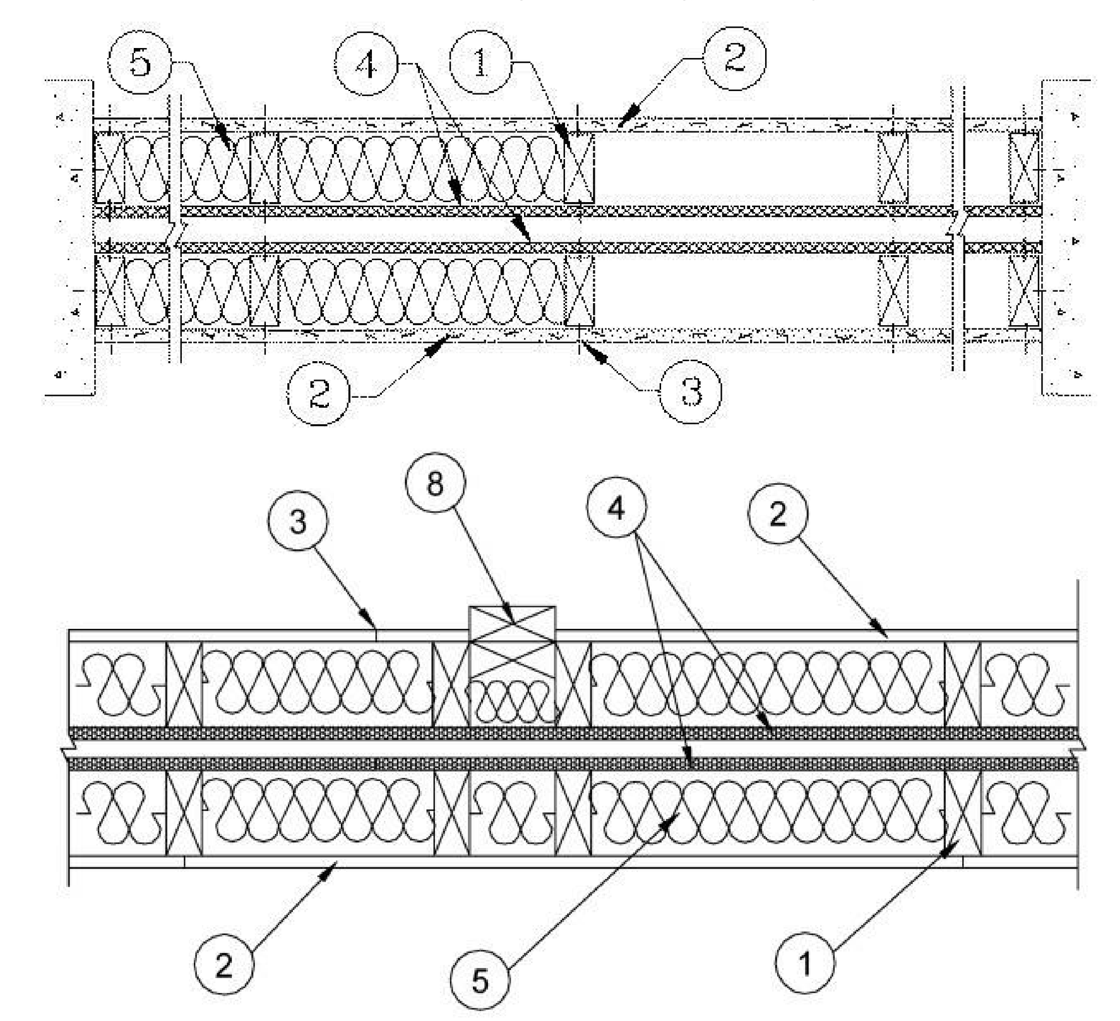
September 23, 2014

Bearing Wall Rating **— 1 Hr.**

Finish Rating — Min 20 min.

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. Wood Studs — Nom 2 by 4 in., spaced 24 in. OC max. Cross braced at mid-height and effectively firestopped at top and bottom of wall. No min. air space between stud rows except to accommodate attachment of sheathing, where required. See items 4 and 5.

2. Gypsum Board* — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Nom 5/8 in. thick 4 ft wide. Gypsum board or lath applied horizontally or vertically, unless specified below, and nailed to studs and bearing plates 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head. As an alternate, No. 6 bugle head drywall screws, 1-7/8 in. long, may be substituted for the 6d cement coated nails.
When Steel Framing Members* (Item 6-6B) are used, wallboard attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When used in widths other than 48 in., gypsum board to be installed horizontally.
ACADIA DRYWALL SUPPLIES LTD (View Classification) — CKNX.R25370
AMERICAN GYPSUM CO (View Classification) — CKNX.R14196
BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374
CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660
CGC INC (View Classification) — CKNX.R19751
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CKNX.R18482
GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717
LOADMASTER SYSTEMS INC (View Classification) — CKNX.R11809
NATIONAL GYPSUM CO (View Classification) — CKNX.R3501
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094
PANEL REY S A (View Classification) — CKNX.R21796
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262
THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517
UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319
USG MEXICO S A DE C V (View Classification) — CKNX.R16089

2A. Gypsum Board* — (As an alternate to Item 2, not shown) - Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type S screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 5C. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Sprayed.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-530 (finish rating 23 min).

2B. Gypsum Board* — (As an alternate to Item 2, not shown) - Any 5/8 in. thick gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified companies listed below shown in the Gypsum Board* (CKNX) category. Applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally.
CGC INC
UNITED STATES GYPSUM CO
USG MEXICO S A DE C V

2C. Gypsum Board* — (As an alternate to Item 2, not shown) - 5/8 in. thick gypsum panels applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C
CERTAINTEED GYPSUM INC — Type C or Type X
THAI GYPSUM PRODUCTS PCL — Type C or Type X

2D. Gypsum Board* — (As an alternate to Items 2, 2A, 2B and 2C) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed as described in Item 2. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X, Type DGG.

2E. Gypsum Board* — (As an alternate to Items 2 through 2D) - 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically only and secured as described in Item 2.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board.

2F. Gypsum Board* — (As an alternate to Items 2 through 2E) - Installed as described in Item 2. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC. Not for use with item #6.
NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

2G. Gypsum Board* — (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock ES.

2H. Gypsum Board* — (As an alternate to Items 2 through 2G) - Installed as described in Item 2. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC. Not for use with item #6.
CERTAINTEED GYPSUM INC — Type SilentFX

2I. Wall and Partition Facings and Accessories* — (As an alternate to Items 2 through 2H) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

2J. Gypsum Board* — (As an alternate to 5/8 in. Type FSW in Item 2) - 2 layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal joints on the same side need not be staggered. Inner layer attached with fasteners, as described in item 2, spaced 24 in. OC. Outer layer attached per Item 2.
NATIONAL GYPSUM CO — Type FSW.

3. Joints and Nailheads — Gypsum board joints of outer layer covered with tape and joint compound. Nail heads of outer layer covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with joints reinforced with paper tape.

4. Sheathing — (Optional) — Septum may be sheathed with min 7/16 in. thick wood structural panels min grade "C-D" or "Sheathing" or min 1/2 in. thick Mineral and Fiber Boards*.
See Mineral and Fiber Boards (CERZ) category for names of Classified companies.

5. Batts and Blankets* — 3-1/2 in. max thickness glass or mineral fiber batt insulation. Optional when sheathing (Item 4) is used on both halves of wall.
See Batts and Blankets (BZJZ) category for list of Classified companies.

5A. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INS735 & INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.

5B. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 5) and Item 5A when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. Batts and Blankets* — (Required for use with Wall and Partition Facings and Accessories, Item 2A. Use of Sheathing, Item 4, does not nullify requirement of Item 5C for use with Item 2A) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5D. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 5) and Item 5A when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

6 Steel Framing Members (Optional, Not Shown)* — Furring channels and Steel Framing Members as described below
A. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 2.

B. Steel Framing Members* — Used to attach furring channels (Item a) to studs (Item 1) . Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL INC — Types RSIC-1, RSIC-1 (2.75).

6A. Steel Framing Members* — (Optional, Not Shown) - Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6B. Steel Framing Members — (Optional, Not Shown)* — Furring channels and resilient sound isolation clip as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 2. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips - Type A237R located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

b. Steel Framing Members* — Resilient sound isolation clip used to attach furring channels (Item 6Ba) to studs. Clips spaced 24 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

7. Wall and Partition Facings and Accessories* — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-510.

8. Non-Bearing Wall Partition Intersection — (Optional) Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

* 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 2014-09-23

H7 UL U341
NTS

***NOTE: PROVIDE FIRE BLOCKING @ 10'-0" INTERVALS PER FBC 717

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH

2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www. fuglebergkoch.com AA26002103

CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

UL REFERENCE DIRECTORY - WALL SYSTEMS

A0.30

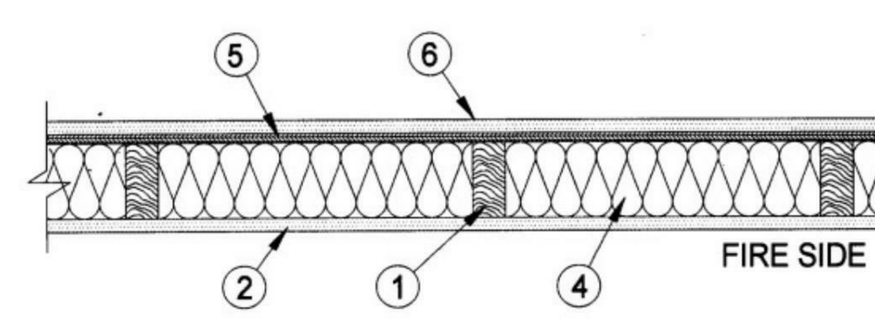
PLOTTED: 11/30/2017 5:33:11 PM

Design No. U356

June 27, 2014

(Exposed to Fire on Interior Face Only)
Bearing Wall Rating — 1 Hr
Finish Rating — 23 Min or 25 Min (See Item 2C)

When used in Canada it is required that all materials included within the UL design are also cUL certified.



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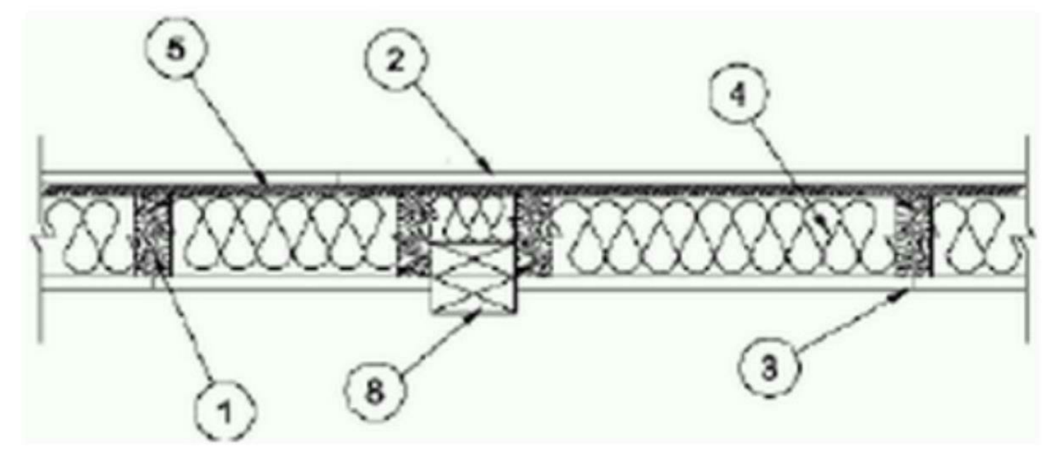


1. Wood Studs — Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5) . When Mineral and Fiber Boards* (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.
2. Gypsum Board* —Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Nom 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.
When Item 7, Steel Framing Members*, is used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.
When Item 7A, 7B, or 7C Steel Framing Members*, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in.
long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All
joints in face layers staggered with joints in base layers.
ACADIA DRYWALL SUPPLIES LTD (View Classification) — CKNX.R25370
AMERICAN GYPSUM CO (View Classification) — CKNX.R14196
BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) CKNX.R19374
CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660
CGC INC (View Classification) — CKNX.R19751
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CKNX.R18482
GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717
LOADMASTER SYSTEMS INC (View Classification) — CKNX.R11809
NATIONAL GYPSUM CO (View Classification) — CKNX.R3501
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094
PANEL REY S A (View Classification) — CKNX.R21796
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262
THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517
UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319
USG MEXICO S A DE C V (View Classification) — CKNX.R16089
2A. Gypsum Board* — (As an alternate to Item 2, not shown) - Any 5/8 in. thick 4 ft wide gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified Companies listed below shown in the Gypsum Board* (CKNX) category. Applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.
CGC INC
UNITED STATES GYPSUM CO
USG MEXICO S A DE C V
2B. Gypsum Board* — (As an alternate to Item 2, not shown) - 5/8 in. thick 4 ft wide gypsum panels applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.
ACADIA DRYWALL SUPPLIES LTD — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C
CERTAINTEED GYPSUM INC — Type C or Type X
GEORGIA-PACIFIC GYPSUM L L C — Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, Type X ComfortGuard Sound Deadening Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS.
THAI GYPSUM PRODUCTS PCL — Type C or Type X
2C. Gypsum Board* — (As an alternate to Item 2, not shown) - For Use with Item 5A only - 5/8 in. thick 4 ft wide gypsum panels applied horizontally and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screws 1 in.and 4 in. from edges of board. Finish Rating is 25 min.
ACADIA DRYWALL SUPPLIES LTD — 5/8 Type X, Type Blueglass Exterior Sheathing
GEORGIA-PACIFIC GYPSUM L L C — Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X,Soffit-Type X
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS.
2D. Gypsum Board* — (As an alternate to Item 2) - Not to be used with item 7. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.
NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board
2E Gypsum Board* — (As an alternate to Items 2 through 2D) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.
2F. Gypsum Board* — (As an alternate to Item 2) - Not to be used with item 7. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.
CERTAINTEED GYPSUM INC — Type SilentFX
2G. Wall and Partition Facings and Accessories* — (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.
3. Joints and Nailheads — (Not Shown) — Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.
4. Batts and Blankets* — Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating).
See **Batts and Blankets*** (BKNV) Category in the Building Materials Directory and Batts and Blankets* (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.
4A. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INS735& INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.
4B. Fiber, Sprayed* — As an alternate to Item 4 and 4A — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 4.58 lb/ft3.
NU-WOOL CO INC — Cellulose Insulation

4C. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 4) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity
in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL
5. Wood Structural Panel Sheathing — Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing" . Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.
5A. Mineral and Fiber Boards* — As an alternate to Item 5 - Min 1/2 in. thick, 4 ft wide sheathing, installed vertically to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 1-1/2 in. long galvanized roofing nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs. As an option a weather resistive barrier may be applied over the Mineral and Fiber Boards.
GEORGIA-PACIFIC PANEL PRODUCTS L L C — Types FiberBrace or QuietBrace
6. Exterior Facings — Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:
A. Vinyl Siding — Molded Plastic* — Contoured rigid vinyl siding having a flame spread value of 20 or less.
See Molded Plastic (BTAT) category in the Building Materials Directory for names of manufacturers.
B. Particle Board Siding — Hardboard exterior sidings including patterned panel or lap siding.
C. Wood Structural Panel or Lap Siding — APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.
D. Cementitious Stucco — Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.
E. Brick Veneer — Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with 8d nail per tie: ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. One in. air space provided between brick veneer and sheathing.
F. Exterior Insulation and Finish System (EIFS) — Nom 1 in. Foamed Plastic* insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions. See Foamed Plastic (BRYX and CCVW) categories for names of Classified companies.
G. Siding — Aluminum or steel siding attached over sheathing to studs.
H. Fiber-Cement Siding — Fiber-cement exterior sidings including smooth and patterned panel or lap siding.
7. Steel Framing Members — (Optional, Not Shown)* — Furring Channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board
attached to furring channels as described in Item 2.
b. Steel Framing Members* — Used to attach furring channels (Item 7A) to studs . Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL INC — Types RSIC-1, RSIC-1 (2.75).
7A. Steel Framing Members (Optional, Not Shown)* — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item
b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two
layers of gypsum board attached to furring channels as described in Item 2.
b. Steel Framing Members* — Used to attach furring channels (Item 7Aa) to interior side of studs. Clips spaced 48 in. OC., and secured to studs
with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax.
7B. Steel Framing Members* — (Optional, Not Shown) - Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.
b. Steel Framing Members* — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip
7C. Steel Framing Members — (Optional, Not Shown)* - Furring channels and resilient sound isolation clip as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item
b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 6x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 2. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips - Type A237R located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side
joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

b. Steel Framing Members* — Resilient sound isolation clip used to attach furring channels (Item 7Ca) to studs. Clips spaced 16 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R
8. Non-Bearing Wall Partition Intersection — (Optional) Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

*Bearing the UL Classification Mark

H5 UL U356
NTS

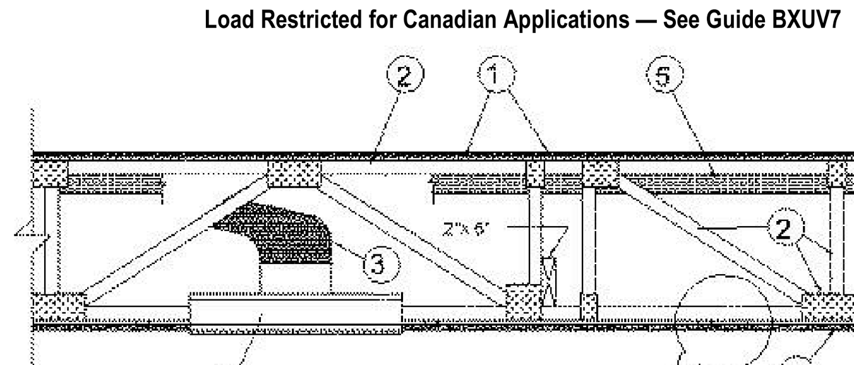
Design No. L574

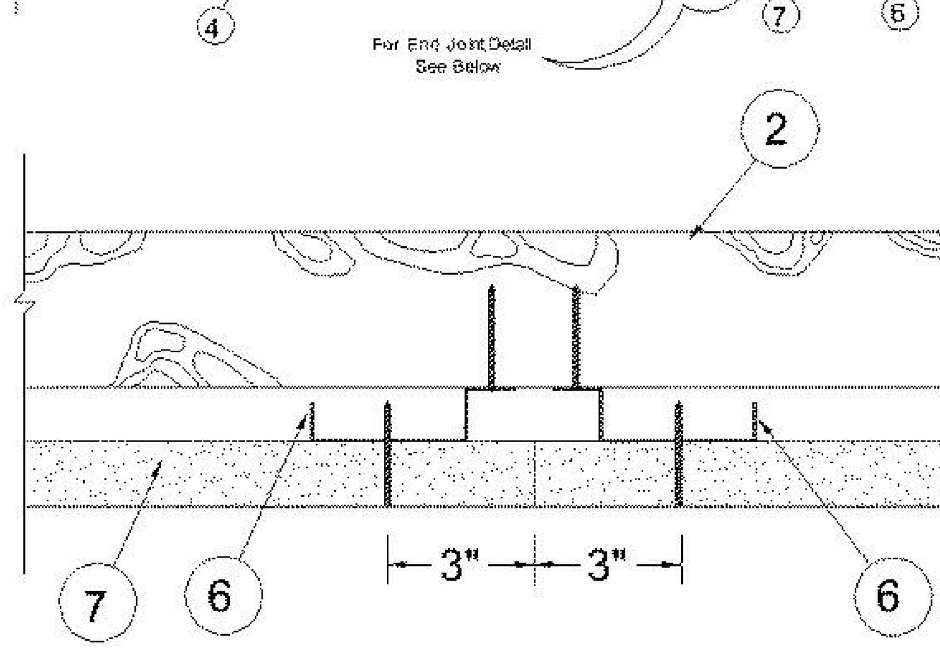
December 12, 2012

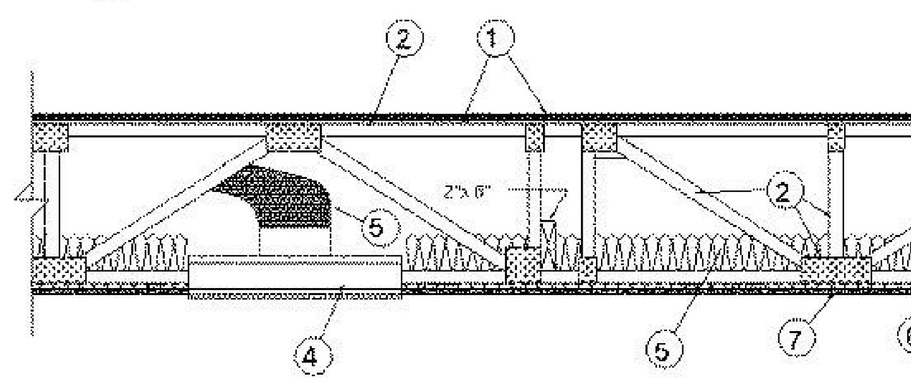
Unrestrained Assembly Rating — 1 Hr.

Finish Rating — 24 or 25 Min (See Items 5, 5A and 5B)

Load Restricted for Canadian Applications — See Guide BXUV7







Alternate Insulation Placement

1. **Flooring System —** The flooring system shall consist of one of the following:

System No. 1

Subflooring — Min 23/32 in. thick plywood with T & G edges along the 8 ft sides and exterior glue or nonveneer APA Sturd-I-Floor T & G panels per APA specifications PRP 108. Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panels secured to trusses with No. 6d ring shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.
Finish Flooring — Min 1 by 4 in. T & G lumber fastened diagonally to trusses, or min 15/32 in. plywood, min grade "Underlayment" or "Sturd-I-Floor" with T & G edges and conforming with PS1-83 specifications, or nonveneer APA rated Sturd-I-Floor, T & G panels per APA specifications PRP-108. Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 2

Subflooring — Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ring shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.
Floor Mat Materials* - (Optional) — Nom 1/4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. When floor mat material is used, min thickness of floor topping mixture is 1 in. Floor topping thickness a min 3/4 in. over Acousti-Mat I floor mat.
MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP.
Alternate Floor Mat Materials* - (Optional) - Nom 0.8 in. thick floor mat material loose laid over the subfloor with Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
MAXXON CORP — Type Acousti-Mat 3, Acousti-Mat 3 HP, Crack Suppression Mat (CSM)
Metal Lath (Alternate to Crack Suppression Mat (CSM)) - 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
Alternate Floor Mat Materials* - (Optional) — Nom 0.4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be min 1-1/2 in.
MAXXON CORP — Type Enkasonic 9110, Enkasonic 9110 HP.
Alternate Floor Mat Materials* - (Optional) — Nom 0.2 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer may be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be as specified under **Floor Topping Mixture.**
MAXXON CORP — Type Acousti-Mat LP-R
Metal Lath (Optional) — For use with floor mat materials, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd or Maxxon Corp. UL Classified Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1 in.
MAXXON CORP — Type Crack Suppression Mat (CSM)
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Mixture shall consist of 3 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.0 to 2.1 cu ft of sand.
MAXXON CORP — Types D-C, GC, GC 2000, L-R, T-F, CT

System No. 3

Subflooring - Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ring shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier - (Optional) - Nom 0.030 in. thick commercial asphalt saturated felt.
Floor Mat Materials* - (Optional) — Nom 1/4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. When floor mat material is used, min thickness of floor topping mixture is 1 in. Floor topping thickness a min 3/4 in. over Acousti-Mat I floor mat.
MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP.
Alternate Floor Mat Materials* - (Optional) - Nom 0.8 in. thick floor mat material loose laid over the subfloor with Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
MAXXON CORP — Type Acousti-Mat 3, Acousti-Mat 3 HP, Crack Suppression Mat (CSM)
Metal Lath (Alternate to Crack Suppression Mat (CSM)) - 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
Alternate Floor Mat Materials* - (Optional) — Nom 0.4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be min 1-1/2 in.
MAXXON CORP — Type Enkasonic 9110, Enkasonic 9110 HP.
Alternate Floor Mat Materials* - (Optional) —Nom 0.2 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer may be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be as specified under **Floor Topping Mixture.**
MAXXON CORP — Type Acousti-Mat LP-R
Metal Lath (Optional) — For use with floor mat materials, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd or Maxxon Corp. UL Classified Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1 in.
MAXXON CORP — Type Crack Suppression Mat (CSM)
Finish Flooring - Floor Topping Mixture* - Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1200 psi. Mixture shall consist of 4 to 7 gal of water to 80 lbs of floor topping mixture to 1.4 to 1.9 cu ft of sand.
RAPID FLOOR SYSTEMS — Type RF, RFP, RFU, RFR, Ortecrete

System No. 4

Subflooring — Min 23/32 in. thick plywood with T & G edges along the 8 ft sides and exterior glue or nonveneer APA Sturd-I-Floor T & G panels per APA specifications PRP 108. Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panels secured to trusses with No. 6d ring shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier — (Optional) - Nom 0.030 in. thick commercial asphalt saturated felt.
Floor Mat Materials* — (Optional) - Min 3/8 in. to max 3/4 in. thick floor mat material loose laid over the subfloor.
UNITED STATES GYPSUM CO — LEVELROCK® Brand Sound Reduction Board
Alternate Floor Mat Materials* — (Optional) - Nom 1/4 in. thick floor mat material loose laid over the subfloor. Floor topping thickness shall be as specified under Floor Topping Mixture.
UNITED STATES GYPSUM CO — LEVELROCK® Brand Floor Underlayment SRM-25
Alternate Floor Mat Materials* — (Optional) - Nom 3/8 in. thick floor mat material loose laid over the subfloor.
GRASSWORX L L C — Type SC50
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1200 psi. Thickness increased to min 1 in. for use with LEVELROCK® Brand Floor Underlayment SRM-25. Refer to manufacturer's instructions accompanying the material for specific mix design.
UNITED STATES GYPSUM CO — Type LRK

System No. 5

Subflooring — Min 23/32 in. thick plywood with T & G edges along the 8 ft sides and exterior glue or nonveneer APA Sturd-I-Floor T & G panels per APA specifications PRP 108. Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panels secured to trusses with No. 6d ring shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier — (Optional) - Nom 0.030 in. thick commercial asphalt saturated felt.
Floor Mat Materials* — (Optional) - Min 3/8 in. to max 3/4 in. thick floor mat material loose laid over the subfloor.
UNITED STATES GYPSUM CO — LEVELROCK® Brand Sound Reduction Board
Alternate Floor Mat Materials* — (Optional) - Nom 1/4 in. thick floor mat material loose laid over the subfloor. Floor topping thickness shall be as specified under Floor Topping Mixture.
UNITED STATES GYPSUM CO — LEVELROCK® Brand Floor Underlayment SRM-25
Alternate Floor Mat Materials* — (Optional) - Nom 3/8 in. thick floor mat material loose laid over the subfloor.
GRASSWORX L L C — Type SC50
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 3000 psi. Thickness increased to min 1 in. for use with LEVELROCK® Brand Floor Underlayment SRM-25. Refer to manufacturer's instructions accompanying the material for specific mix design.
UNITED STATES GYPSUM CO — Type HSLRK
System No. 6
Subflooring — Min 3/4 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Long edges may be T & G or square.
Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.
Finish Flooring - Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
ALLIED CUSTOM GYPSUM PLASTERWORKS L L C — Accu-Crete and Accu-Radiant, AccuLevel G40 and AccuLevel SD30.
Alternate Floor Mat Material* — (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in. or 1 in. thick for 19/32 or 15/32 in. thick wood structural panels respecitively.
ALLIED CUSTOM GYPSUM PLASTERWORKS L L C — Type AccuQuiet P80, Type AccuQuiet C40, AccuQuiet D13, Type AccuQuiet RSM 20, Type AccuQuiet RSM 32, Type AccuQuiet RSM 48, Type AccuQuiet RSM 64, Type AccuQuiet RSM 120, and Type AccuQuiet D-18.

System No. 7

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.
Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.
Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. ¼ in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.
KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 8

Min 23/32 in. thick plywood with T & G edges along the 8 ft sides and exterior glue or nonveneer APA Sturd-I-Floor T & G panels per APA specifications PRP 108. Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panels secured to trusses with No. 6d ring shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.
HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength and Gyp-Span Radiant
Metal Lath (Optional) — For use with 3/8 in. or 10 mm floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.
Floor Mat Materials* — (Optional) — Nom 6 mm thick floor mat material adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. When floor mat material is used, min thickness of floor topping mixture is 1 in.
HACKER INDUSTRIES INC — Type Hacker Sound-Mat.
Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 10 mm thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/2 in. of floor-topping mixture.
HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.
Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in.
HACKER INDUSTRIES INC — Type Quiet Qurl 55/025
Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in.
HACKER INDUSTRIES INC — Type Quiet Qurl 60/040
Alternate Floor Mat Materials* —(Optional) — Floor mat material nom 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in.
HACKER INDUSTRIES INC — Type Quiet Qurl 65/075

2. **Trusses —** Parallel chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 18 in. Truss depth may be reduced to 12 in. when **Batts and Blankets*** (Item 5A) are draped over the resilient channel and gypsum board ceiling membrane. Truss members secured together with min 0.0356 in. thick galvanized steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tool has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx. 7/8 in. centers with four rows of teeth per inch of plate width.
3. **Air Duct* —** Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

4. **Ceiling Damper* —** Nom 20 in. long by 18 in. wide by 2-1/8 in. high, fabricated from galvanized steel. Plenum box max size nom 21 in. long by 18 in. wide by 16 in. high fabricated from either galvanized steel or Classified Air Duct Materials bearing the UL Classification Marking for Class 0 or Class 1 rigid air duct material. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.
NAILOR INDUSTRIES INC — Types 0755, 0755A, 0756, 0756D , 0757, 0757D, 0757FP, 0757DFP, 0758, 0759, 0760, 0761, 0762, CRD5, CRD5D, CRD6, CRD6D, CRD6FP, CRD6DFP
4A. **Alternate Ceiling Damper* —** Max nom 9 by 9 in. damper with Airzone fan installed in accordance with the instructions provided by the manufacturer. Max height of damper with fan shall be 11 in. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.
PANAMEX GROUP INC — Type 0750HM
4B. **Alternate Ceiling Damper* —** Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot.
LLOYD INDUSTRIES INC — Model CRD 50-BT, CRD 50-EA-BT, CRD 55-BT, CRD 55 EA-BT
4C. **Alternate Ceiling Damper* —** Max plenum box size nom 13 in. long by 13 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model CRD 50-BT-6, CRD 50-EA-BT-6, CRD 55-BT-6, CRD 55 EA-BT-6, CRD50-w X-BT-6
4D. **Alternate Ceiling Damper* —** Max size ceiling outlet in plenum box nom 12 in. long by 12 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturers installation instructions provided with the damper.
AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot.
LLOYD INDUSTRIES INC — Model CRD 50-95BT, CRD 50-EA-95BT, CRD 55-95BT, CRD 55 EA-95BT
4E. **Alternate Ceiling Damper* —** Max size ceiling outlet in plenum box nom 16 in. long by 16 in. wide. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Models CRD 50- FGPB-4.2, - 4.2 NI, -6.0, -6.0 NI; CRD50-EA-FGPB-4.2, -4.2 NI, -6.0, -6.0 NI.
4F. **Alternate Ceiling Damper* —** Max plenum box size nom 15 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Models 45-CRD-LT-BT and 45-CRD-LTD-BT
4G. **Alternate Ceiling Damper* —** Max size ceiling outlet in plenum box nom 10 in. long by 10 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model 45-LTD-95-BT-4
4H. **Alternate Ceiling Damper* —** Max plenum box size nom 19 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 96 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. 12-12
LLOYD INDUSTRIES INC — Model CRD50-w X-BT
4I. **Alternate Ceiling Damper* —** Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521
POTTORFF — Model CFD-521.
4J. **Alternate Ceiling Damper* —** Max nom area shall be 196 sq in. Max square size shall be 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) not to exceed 144 in.2 shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-BT
POTTORFF — Model CFD-521-BT.
4K. **Alternate Ceiling Damper* —** Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width and max length of 18 in. Max round size shall be 18 in. dia. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
RUSKIN COMPANY — Models CFD7-T, CFDR7-T.
5. **Batts and Blankets* —** (Optional) — When truss depth is 18 in. or greater, insulation is optional. Insulation may alternately be secured to plywood subfloor with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Insulation may be draped over the resilient channels and gypsum board ceiling membrane and the resilient channels and gypsum board attachment shall be modified as specified in Items 6 and 7. Any glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics and/or Fire Resistance, and having a min density of 0.5 pcf may be used. The Finish Rating is 24 min. when the insulation is draped over the resilient channels and gypsum board ceiling membrane and 25 min. when it is installed on underside of the plywood subfloor or when it is omitted.
5A. **Batts and Blankets* —** When truss depth is less than 18 in., Max 3-1/2 in. thickness of glass fiber insulation shall be draped over the resilient channels and gypsum board ceiling membrane and the resilient channels and gypsum board attachment shall be modified as specified in Items 6 and 7. Any glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics and/or Fire Resistance, and having a min density of 0.5 pcf may be used. The Finish Rating is 24 min. when the insulation is draped over the resilient channels and gypsum board ceiling membrane.
5B. **Loose Fill Material* —** Loose fill material may be used as an alternate to batt insulation (Items 5A and 5B). When used, the resilient channel and gypsum board attachment is modified as specified in Items 6 and 7. Any loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, having a min density of 0.5 pcf and installed at a max thickness of 3-1/2 in. may be used. The finished rating when loose fill material is used has not been determined.
6. **Resilient Channels —** Resilient channels formed of 25 MSG galv steel, spaced 16 in. OC perpendicular to trusses. When batt insulation (Item 5) is draped over the resilient channel/gypsum board ceiling membrane, or when loose fill insulation (Item 5A) is used, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum board end joint as shown in the above illustration. Additional channels shall extend min 6 in. beyond each side edge of board.
6A. **Steel Framing Members* —** (Optional, Not Shown) - Used as an alternate method to attach min. 1/2 in. deep resilient channels (Item 6) to wood trusses (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the bottom chord of each wood truss with a min. 1-3/4 in. long Type S bugle head steel screw through the center hole of the clip and the resilient channel flange. Adjoining resilient channels are overlapped 4 in. under trusses. The clip flange is opened slightly to accommodate the two overlapped channels. Additional clips required to hold resilient channel that supports the gypsum board butt joints, as described in Item
KEENE BUILDING PRODUCTS CO INC — Type RC Assurance.
6B. **Steel Framing Members* - (Not Shown) —** As an alternate to Item 6, furring channels and Steel Framing Members* as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PAC INTERNATIONAL INC — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).
7. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide gypsum board installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. End joints secured to both resilient channels as shown in end joint details. When batt insulation (Item 5) are draped over the resilient channel/gypsum board ceiling membrane, or when loose fill insulation (Item 5A) is used, screws spacing shall be 8 in. OC.
AMERICAN GYPSUM CO — Types AG-C
TEMPLE-INLAND — Type TG-C
8. **Finishing System - (Not Shown) —** Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

*Bearing the UL Classification Mark

H9 UL L574
NTS

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www. fuglebergkoch.com AA26002103

CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

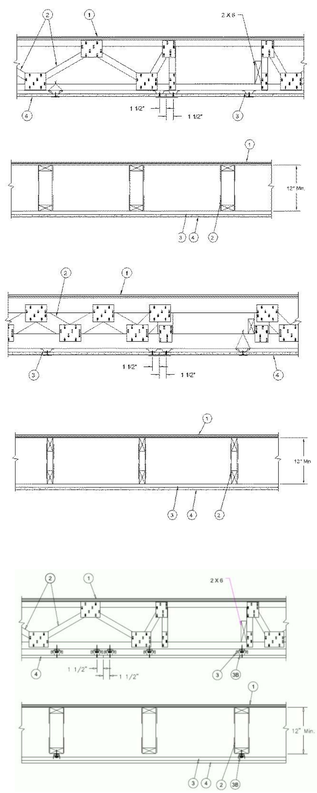
	Drawn:	Author
SUMMER BAY APTS. II	Checked:	Checker
	Approval:	Approver
	Date:	Issue Date
LAKE COUNTY, FL	Project #:	5389

UL REFERENCE DIRECTORY - WALL / FLOOR SYSTEMS

A0.32

PLOTTED: 11/30/2017 5:33:14 PM

Design No. L574
August 01, 2014
Unrestrained Assembly Rating - 1 Hr.
Finish Rating - 22 Min.



1. **Flooring System —** The flooring system shall consist of one of the following:

System No. 1

Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

System No. 2

Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.
Finish Flooring — Min 3/4 in. thickness of lightweight insulating concrete with **Perlite Aggregate*** or **Vermiculite Aggregate***, or gypsum concrete.
See **Perlite Aggregate** (CFFX) and **Vermiculite Aggregate** (CJZZ) categories for names of manufacturers.

System No. 3

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Floor Mat Materials* — (Optional)— Floor mat material nom 5/64 in. (2mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 in. of floor-topping mixture.
HACKER INDUSTRIES INC — Type Hacker Sound-Mat.
Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32mm) of floor-topping mixture.
HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.
Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/8 in. (3mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19mm)
HACKER INDUSTRIES INC — FIRM-FILL SCM 125
Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25mm)
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025
Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/8 in. (10mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32mm)
HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040
Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/4 in. (19mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38mm)
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075
Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.
HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System No. 4

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional)— Commercial asphalt saturated felt, 0.010 in. thick.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD
Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25
Alternate Floor Mat Materials* — (Optional) - Nom 3/8 in. thick floor mat material loose laid over the subfloor. Floor topping thickness shall be as specified under **Floor Topping Mixture.**
GRASSWORX L L C — Type SC50
Alternate Floor Mat Material* — (Optional) - Floor mat material nominal 3/8 in. thick loose laid over the subfloor. Floor topping shall be a min 3/4 in. thick.
OWENS CORNING — Type QuietZone Acoustical Floor Mat

System No. 5

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier-(Optional) — Commercial asphalt saturated felt, 0.030 in. thick.
Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.
ELASTIZELL CORP OF AMERICA — Type FF

System No. 6

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier-(Optional) — Commercial asphalt saturated felt, 0.030 in. thick.
Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.2 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.
AERIX INDUSTRIES — Floor Topping Mixture

System No. 7

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Finish Flooring - Floor Topping Mixture* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 62.5 lbs of Pea Gravel, 312.5 lbs of sand with 5-1/2 gal of water.
LITE-CRETE INC — Type I

System No. 8

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.
Floor Mat Materials* — (Optional) - Nom 1/4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. When floor mat material is used, min thickness of floor topping mixture is 1 in. Floor topping thickness a min 3/4 in. over Acousti-Mat I floor mat.
MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP.
Alternate Floor Mat Materials* - (Optional) - Nom 0.8 in. thick floor mat material loose laid over the subfloor with Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
MAXXON CORP — Type Acousti-Mat 3, Acousti-Mat 3 HP, Crack Suppression Mat (CSM)
Metal Lath (Alternate to Crack Suppression Mat (CSM)) - 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture.
Alternate Floor Mat Materials* - (Optional) — Nom 0.4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be min 1 in. Floor topping thickness shall be min 3/4 in. when used with Crack Suppression Mat (CSM), Metal Lath, or Maxxon Reinforcement (MR).
MAXXON CORP — Type Enkasonic 9110, Enkasonic 9110 HP.
Alternate Floor Mat Materials* - (Optional) — Nom 0.2 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer may be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be as specified under **Floor Topping Mixture.**
MAXXON CORP — Type Acousti-Mat LP-R
Metal Lath (Optional) — For use with floor mat materials, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd or Maxxon Corp. UL Classified Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1 in.
MAXXON CORP — Type Crack Suppression Mat (CSM)
Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Mixture shall consist of 3 to 7 gal of water to 80 lbs of floor topping mixture to 1.0 to 2.1 cu ft of sand.
MAXXON CORP — Types D-C, GC, GC2000, L-R, T-F, CT

System No. 9

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Mixture shall consist of 5 to 8 gal of water to 80 lbs of floor topping mixture to 2.1 cu ft of sand..
ULTRA QUIET FLOORS — UQF-A, UQF-Super Blend, UQF-Plus 200

System No. 10

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Floor Mat Materials* — (Optional) - Nom 1/4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. When floor mat material is used, min thickness of floor topping mixture is 1 in. Floor topping thickness a min 3/4 in. over Acousti-Mat I floor mat.
MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP.
Alternate Floor Mat Materials* - (Optional) - Nom 0.8 in. thick floor mat material loose laid over the subfloor with Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
MAXXON CORP — Type Acousti-Mat 3, Acousti-Mat 3 HP, Crack Suppression Mat (CSM)
Metal Lath (Alternate to Crack Suppression Mat (CSM)) - 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.
Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture.
Alternate Floor Mat Materials* - (Optional) — Nom 0.4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be min 1 in. Floor topping thickness shall be min 3/4 in. when used with Crack Suppression Mat (CSM), Metal Lath, or Maxxon Reinforcement (MR).
MAXXON CORP — Type Enkasonic 9110, Enkasonic 9110 HP.
Alternate Floor Mat Materials* - (Optional) — Nom 0.2 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer may be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be as specified under **Floor Topping Mixture.**
MAXXON CORP — Type Acousti-Mat LP-R
Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture.
Metal Lath (Optional) — For use with floor mat materials, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd or Maxxon Corp. UL Classified Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1 in.
MAXXON CORP — Type Crack Suppression Mat (CSM)
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1200 psi. Mixture shall consist of 4 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.4 to 1.9 cu ft of sand.
RAPID FLOOR SYSTEMS — Types RF, RFP, RFU, RFR, Ortecrete

System No. 11

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to trusses, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.
Finish Floor - Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.
HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 12

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
ALLIED CUSTOM GYPSUM — Accu-Crete, AccuRadiant, AccuLevel G40 and AccuLevel SD30.
Alternate Floor Mat Material* - (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.
ALLIED CUSTOM GYPSUM — Type AccuQuiet P80, Type AccuQuiet C40, AccuQuiet D13, and Type AccuQuiet D-18.

System No. 13

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.
Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.
Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N
Alternate Floor Mat Materials* — (Optional) - Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. ¼ in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.
KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 14

Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor.
GEORGIA-PACIFIC GYPSUM L L C — Type DS
Floor Mat Materials* — (As an alternate to the single layer gypsum board) - Floor mat material loose laid over the subfloor.
MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Acousti-Mat 3, Acousti-Mat 3 HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat LP-R.
Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.
GEORGIA-PACIFIC GYPSUM L L C — Type DS

System No. 15

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.
Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
DEPENDABLE LLC — GSL M3.4, GSL K2.6 and GSL RH
Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N
Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. ¼ in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.
KEENE BUILDIN
G PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 16

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.
Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.
Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.
Floor Mat Materials* — (Optional) - Nom 3/32 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
PLITEQ INC — Type GenieMat RST02
Floor Mat Materials* — (Optional) - Nom 3/16 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
PLITEQ INC — Type GenieMat FF04
Floor Mat Materials* — (Optional) - Nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.
PLITEQ INC — Type GenieMat FF06
Floor Mat Materials* — (Optional) - Nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.
PLITEQ INC — Type GenieMat FF10
Floor Mat Materials* — (Optional) - Nom 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.
PLITEQ INC — Type GenieMat FF17
Floor Mat Materials* — (Optional) - Nom 1 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.
PLITEQ INC — Type GenieMat FF25

2. **Trusses —** Parallel chord trusses, spaced a max 24 in. OC, fabricated from nom 2 by 4 in. lumber with lumber oriented vertically or horizontally. Min truss depth is 12 in. when item 9 is not employed. Min truss depth is 18 in. when item 9 is employed. Truss members secured together with min No. 20 MSG galv steel truss plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split-tooth-type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx 7/8 in. centers with four rows of teeth per in. of plate width.
3. **Furring Channels —** Furring channels, 7/8 in. deep by 2-9/16 in. or 2-11/16 in. or 2-23/32 in. wide at the base and 1-7/16 in. wide at the face, formed from No. 25 ga galv steel, spaced 24 in. OC perpendicular to trusses. Channels secured to trusses with double strand of No. 18 SWG galv steel wire spaced 48 in. OC. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two furring channels used at end joints of gypsum board (Item 4), each extending a min of 6 in. beyond both side edges of the board.
3A. **Resilient Channels —** (Not Shown) - As an alternate to Item 3, resilient channel formed from No. 26 MSG galv steel, spaced 16 in. OC perpendicular to trusses. Channels secured to each truss with 1-1/4 in. long No. 6 Type S bugle head steel screw. Channels overlapped at splices 4 in. Two resilient channels used at end joints of gypsum board (Item 4), each extending a min of 6 in. beyond both side edges of the board.
3B. **Steel Framing Members* —** (Optional) - Used as an alternate method to attach furring channels to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to the bottom chord of alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to the bottom chord of alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item 3. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two min 7/16 in. long No. 6 self-tapping framing screws, at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 4. When Fiber, Sprayed (Item 6) is used, furring channel spacing reduced to 16 in. OC and two layers of nom 5/8 in. thick, 4 ft wide gypsum board shall be installed as described in Item 4.
PAC INTERNATIONAL INC — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).
3C. **Steel Framing Members* —** (Optional, Not Shown) - Used as an alternate method to attach furring channels to trusses. Clips spaced 48 in. OC., and secured to the bottom chord to alternating trusses with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 4. Two layers of gypsum board required as described in Item 4. Not evaluated for use with Item 6. When Item 3C is used and Batts and Blankets* are added per Section III Item 18 Blanket Insulation in the General Information of this Directory (BXUV), clips spaced 48 in. OC, furring channels spaced 16 in. OC max, 3-1/2 in. max. Batts and Blankets* secured to plywood subfloor with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC, and two layers of gypsum board required as described in Item 4A. When the Batts and Blankets* are draped over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses, the furring channel spacing shall be reduced to 12 in. OC, and two layers of gypsum board required as described in Item 4A.
KINETICS NOISE CONTROL INC — Type Isomax.
3D. **Steel Framing Members* —** (Optional, Not Shown) - Used as an alternate method to attach furring channels to trusses. Clips spaced 48 in. OC. and secured to the bottom chord to alternating trusses with one No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 4. Not evaluated for use with Item 6.
PLITEQ INC — Type Genie Clip
3E. **Steel Framing Members* —** (Optional, Not Shown) - Used as an alternate method to attach furring channels to trusses. Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 2-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and screwed with four #8 x 1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum Butt joints and side joints as described in item 4. Not evaluated for use with Item 6.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R
3F. **Resilient Channels —** Resilient channels, formed from No. 25 MSG galv steel and shaped as shown, spaced 12 in. OC perpendicular to joist. Channels overlapped 4 in. at splices and secured to each joist with 1-1/4 in. Type S screws. Min end clearance of channels to wall to be 1/2 in. Additional resilient channels positioned so as to coincide with end joints of gypsum board (Item 4B).
4. **Gypsum Board* —** One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to furring or resilient channels. Gypsum board secured with 1 in. long No. 6 Type S bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. End joints secured to both resilient channels as shown in the end joint detail. When **Steel Framing Members** (Item 3B) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimension perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long No. 6 Type S bugle head screws spaced 12 in. OC in the field of the board. Gypsum board butt joints shall be staggered 2 ft within the assembly, and shall occur between the main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels at each butt joint shall be spaced approximately 3-1/2 in. OC, and be attached to the bottom chord of the truss with one RSIC-1 clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. When both **Steel Framing Members** (Item 3B) and **Fiber, Sprayed** (Items 6 or 6A) are used, furring channel spacing reduced to 16 in. OC and two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimension perpendicular to furring channels. Base layer secured to furring channels with nom 1 in. long No. 6 Type S bugle head screws spaced 12 in. OC in the field of the board. Gypsum board butt joints shall be staggered 2 ft within the assembly, and shall occur between the main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels at each butt joint shall be spaced approximately 3-1/2 in. OC, and be attached to the bottom chord of the truss with one RSIC-1 clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer secured to furring channels using 1-5/8 in. long No. 6 Type S screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min. of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min. 18 in. from butted side joints of base layer. When **Steel Framing Members** (Item 3C) are used, two layers of nom 5/8 in. thick, 4 ft wide are installed with long dimensions perpendicular to furring channels. Base layer attached to the furring channels using 1 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered min 2 ft. within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 4 in. OC, and be attached to underside of the truss with one Isomax clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field. The end of the outer layer boards at the butt joint shall be attached to the base layer boards with 1-5/

G6 UL L528
12" = 1'-0"

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT
MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approved:	Approver
Date:	Issue Date
Project #:	5389

UL REFERENCE DIRECTORY - FLOOR SYSTEM

A0.33

PLOTTED: 11/30/2017 5:33:17 PM

Design No. P522

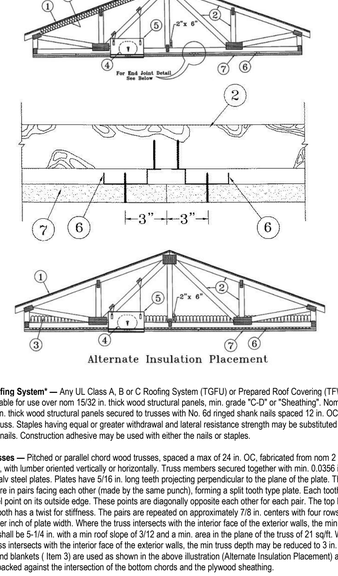
June 17, 2014

Unrestrained Assembly Rating — **1 Hr**

Finish Rating — 25 Min (See Items 3 or 3A)

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.**



Alternate Insulation Placement

1. **Roofing System* —** Any UL Class A, B or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Construction adhesive may be used with either the nails or staples.

2. **Trusses —** Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together with min. 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sq/ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.

3. **Batts and Blankets* —** (Optional) - Required when Item 6B is used — Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. When **Steel Framing Members** (Item 6B) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6Ba) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6Bd). The finished rating has only been determined when the insulation is secured to the decking.

3A. **Fiber, Sprayed* —** As an alternate to Item 3 (not evaluated for use with Item 6B) — Any thickness of spray-applied cellulose insulation material, having a min density of 0.5 lb/ft3, applied with water, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Fiber, Sprayed is applied with moisture in accordance with the application instructions supplied with the product. The finish rating when Fiber Sprayed is used has not been determined. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with a minimum density of 0.5 lb/ft3 over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Alternate application method: The fiber is applied without water or adhesive to a nominal density of 3.5 lb/ft3 behind netting (Item 9) stapled to the rafters. The netting is stapled at both lower edges of the rafters creating a cavity to accept the cellulose fiber.
U S GREENFIBER L L C — INS735& INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.

4. **Air Duct* —** Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

5. **Ceiling Damper* —** Max nom area, 324 sq in. Max square size, 18 in. by 18 in. rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max damper height is 14 in. Installed in accordance with manufacturers installation instructions provided with the damper. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.
C&S AIR PRODUCTS — Model RD-521
POTTORFF — Model CFD-521

5A. **Alternate Ceiling Damper* —** Max nom area, 196 sq in. Max square size, 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max overall damper height is 7 in. Installed in accordance with the manufacturers installation instructions provided with the damper. Max damper openings not to exceed 98 sq in. per 100 sq ft of ceiling area.

C&S AIR PRODUCTS — Model RD-521-BT
POTTORFF — Model CFD-521-BT.

5B. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturers installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.

DELTA ELECTRONICS INC — Models CRD2

6. Furring Channels — Resilient channels formed of 25 MSG thick galv steel. Installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane. Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath wood trusses. Channels secured to each truss with 1-1/4 in. long Type S screws.

6A. Steel Framing Members — (Not Shown)* — As an alternate to Item 6, furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane or 24 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane and a second layer of gypsum board is attached as described in Item 7 for steel framing members. Channels secured to trusses as described in Item 6Ab. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. Steel Framing Members — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item 6Aa. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PAC INTERNATIONAL INC — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

6B. **Steel Framing Members* —** (Not Shown) - As an alternate to Items 6 and 6A.

a. **Furring Channels —** Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max 16 in. OC perpendicular to trusses and Cold Rolled Channels (Item 6Bb). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 3. Two layers of gypsum board attached to furring channels as described in Item 7.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Bd). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Bd) location.

d. **Steel Framing Members* —** Hangers spaced 48 in. OC. max along truss, and secured to the Blocking (Item 6Bc) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer's instructions.

KINETICS NOISE CONTROL INC — Type ICW.

6C. **Steel Framing Members* —** (Not Shown) - As an alternate to Items 6, 6A and 6B.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep installed perpendicular to wood structural members. Channels spaced a max of 24 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed space or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space. Channels secured to trusses as described in Item 6Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ca) to trusses (Item 2). Clips secured to the bottom chord of each truss (24 in. OC) with one No. 8 by 2-1/2 in. long coarse drywall screw through center grommet. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item 6Ca. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PLITEQ INC — Type Genie Clip

6D. **Steel Framing Members* —** (Not Shown) - As an alternate to Items 6, 6A, 6B and 6C.

a. **Main runners —** Installed perpendicular to trusses — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners hung a min of 2 in. from bottom chord of trusses with 12 SWG galv steel wire. Wires located a max of 48 in. OC.

b. **Cross tees or channels —** Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used at 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. **Wall angles or channels —** Used to support steel framing member ends and for screw-attachment of the gypsum wallboard — Min 0.016 in. thick painted or galvanized steel angle with 1 in. legs or min. 0.016 in. thick painted or galvanized steel channel with a 1 by 1-1/2 by 1 in. profile, attached to walls at perimeter of ceiling with fasteners 16 in. OC
.
CGC INC — Type DGL or RX.
USG INTERIORS LLC — Type DGL or RX.

6E. **Alternate Steel Framing Members —** (Not Shown)* - As an alternate to items 6, 6A, 6B, and 6C, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 24 in OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to joists as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 2-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and screwed with four No. 8 x 1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum Butt joints and side joints as described in Item 7.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6F. **Steel Framing Members* —** (Not Shown) - As an alternate to Items 6 through 6E- Not for use with Items 3 or 3A. Main runners nom 12 ft long, spaced 72 in. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

USG INTERIORS LLC — Type DGL or RX

7. **Gypsum Board* —** One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane.

When **Steel Framing Members*** (Item 6A or 6C) are used, sheets installed with long dimension perpendicular to furring channels and side joints of sheet located beneath trusses. Gypsum board screws are driven through channel spaced 12 in. OC in the field when no insulation (Item 3 or 3A) is fitted in the concealed space, or 8 in. OC in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Gypsum board butt joints shall be staggered min. 2 ft within the assembly, and occur between the main furring channels. At the gypsum board butt joints, each end of the gypsum board shall be supported by a single length of furring channel equal to the width of the wallboard plus 6 in. on each end. The furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the trusses with one clip at each end of the channel. Screw spacing along the butt joint to attach the gypsum board to the furring channels shall be 8 in. OC. Second (outer) layer of gypsum board required when furring channels (Item 6A, a) are spaced 24 in. OC and insulation is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Outer layer of gypsum board attached to the furring channels using 1-5/8 in. long Type S bugle-head screws spaced 8 in. OC at butted joints and 12 in. OC in the field. Butted end joints of outer layer to be offset a minimum of 8 in. from base layer end joints. Butted side joints of outer layer to be offset minimum 18 in. from butted side joints of base layer.

When **Steel Framing Members** (Item 6B) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ba). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer.

When **Steel Framing Members** (Item 6C) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 72 in. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end, spaced approximately 2 in. in from joint. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Butt joint furring channels shall be attached with a RESILMOUNT Sound Isolation Clip secured to underside of every truss that is located over the butt joint. Over all Gypsum Board side joints, approximately 20 in. lengths of furring channel shall be installed parallel to trusses (Item 2) between main furring channels. Side joint furring channels shall be attached to underside of the joist with RESILMOUNT Sound Isolation Clips - located approximately 2 in. from each end of the approximate 20 in. length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

When alternate **Steel Framing Members*** (Item 6F) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board sheets installed with long dimension (side joints) perpendicular to the 6 ft long cross tees with the end joints staggered min 4 ft and centered between cross tees which are spaced 8 in. OC. Gypsum board side joints may occur beneath or between main runners. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide pieces of gypsum board are to be laid atop the cross tee flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the cross tees at opposite corners of the backer strip with hold down clips to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with 1 in. drywall screws spaced 12 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

CGC INC — Types C, IP-X2, IPC-AR.
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR.
USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR.

7A. **Gypsum Board* —** For use with Steel Framing Members (Item 6D) when Batts and Blankets* (Item 3) are not used - One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to the main runners. Gypsum board fastened to each cross tee or channel with five wallboard screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from and on each side of the cross tee or channel mid span and one screw located 1-1/2 in. from each gypsum board side joint. Except at wallboard end joints, wallboard screws shall be located on alternating sides of cross tee flange. At gypsum board end joints, gypsum board screws shall be located 1/2 in. from the joint. Gypsum board fastened to main runners with wallboard screws 1/2 in. from side joints, midway between intersections with cross tees or channels (16 in. OC). End joints of adjacent gypsum board sheets shall be staggered not less than 32 in. Gypsum board sheets screw attached to leg of wall angle with wallboard screws spaced 12 in. OC. Joints treated as described in Item 7. For use with **Steel Framing Members*** (Item 6D) when **Batts and Blankets*** (Item 3) are used - Ratings limited to 1 Hour - 5/8 in. thick, 4 ft wide; installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Fastened to cross tees with 1 in. long steel gypsum board screws spaced 8 in. OC in the field and 8 in. OC along end joints. Fastened to main runners with 1 in. long gypsum board screws spaced midway between cross tees. Screws along sides and ends of boards spaced 3/8 to 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft OC.

CGC INC — Type C or IP-X2.
UNITED STATES GYPSUM CO — Type C or IP-X2.
USG MEXICO S A DE C V — Type C or IP-X2.

8. **Finishing System —** (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board. **Alternate Ceiling Membrane** — Not Shown.

9. **Netting —** Fibrous, woven netting material fastened to underside of each joint with staples, with side joints overlapped.

*** 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 2014-06-17

TO BE REVIEWED AND ADJUSTED

ASSEMBLY SOUND RATINGS

WALL ASSEMBLY (UL ASSEMBLY) SEE LS PLANS	STC RATING	IIC RATING	TEST NUMBER/STANDARD
U305	52	N/A	BW-35ST 1969/GEIGER AND HAMME
U341	58	N/A	TL-93-270/ NRC-CNRC
U344	52	N/A	BW-35ST 1969/GEIGER AND HAMME
U356	52	N/A	BW-35ST 1969/GEIGER AND HAMME
U404	N/A	N/A	--

FLOOR ASSEMBLY (UL ASSEMBLY) SEE LS PLANS	FINISH	STC RATING	IIC RATING	TEST NUMBER/STANDARD
L546 W/ RESILENT CHANNEL	VINYL PLANK	62	53	USG090302A USG LEVELROCK SOUND CONTROL & 6mm (1/4") MAT (NOTE: SOUND MAT NOT REQUIRED UNDER CARPET) USG090501A USG090402A
	CERAMIC TILE	64	54	
	CARPET & PAD	62	80	

ACOUSTIC NOTES:

1) FLOOR / CEILING SYSTEM-STC RATING
THE FLOOR / CEILING SYSTEM DESIGN IS UL L546 AND IS EXPECTED TO PROVIDE A DESIGN, OR LABORATORY TESTED, STC RATING OF THAT LISTED ABOVE. PROVIDED THAT THE RECOMMENDATIONS ARE FOLLOWED RELATED TO NOISE FLANKING PATHS (SEE BELOW), THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED:

A. RESILIENT CHANNELS SHOULD BE USED TO ATTACH THE CEILING GYPSUM BOARD.

B. THE INSULATION MUST BE INSTALLED AT THE TOP OF THE TRUSS CAVITY IN ORDER TO PROVIDE A BUFFER BETWEEN THE FLOOR ABOVE AND ANY HVAC DUCTING, PIPES, AND CONDUIT THAT ARE INSTALLED IN THE TRUSS CAVITY.

C. ENSURE THAT THE HVAC FLEXIBLE DUCTING THAT IS INSTALLED WITHIN THE FLOOR / CEILING SYSTEM IS LOCATED TO ALLOW INSULATION TO BE PLACED BETWEEN THE TOP OF THE DUCT AND THE WOOD SUB-FLOOR. THIS DUCTING SHALL NOT BE IN DIRECT CONTACT WITH THE BOTTOM OF THE SUB-FLOOR. THERE SHALL BE AT LEAST ONE INCH OF INSULATION ABOVE THE DUCTING, AFTER COMPRESSION. IF THE DUCTING IS IN CONTACT WITH THE FLOOR, IT PROVIDES A DIRECT PATH FOR FOOTFALL NOISE TO ENTER THE DUCTING AND TRAVEL EFFICIENTLY INTO THE LIVING SPACES BELOW.

D. ENSURE THAT THE PERIMETER OF ALL FIRE DAMPERS AND FIRE SPRINKLERS ARE COMPLETELY SEALED WITH A RESILIENT, NON-HARDENING CAULK, SUCH AS SILICONE OR POLYURETHANE, OR FIRE CAULK.

2) FLOOR / CEILING SYSTEM – IIC RATING
THE FLOOR / CEILING SYSTEM DESIGN UL L546 AND IS EXPECTED TO PROVIDE A DESIGN, OR LABORATORY TESTED, II-C RATING OF THAT LISTED ABOVE, PROVIDED THAT THE RECOMMENDATIONS ARE FOLLOWED RELATED TO NOISE FLANKING PATHS ARE FOLLOWED.

THE DESIGN IIC RATING MUST BE AT LEAST 50, AND THE FIELD TESTED RATING MUST BE AT LEAST 45 IN ORDER TO MEET THE MINIMUM BUILDING CODE REQUIREMENT. A HIGHER DESIGN RATING OF 55 OR MORE IS RECOMMENDED IF THE CLIENT DESIRES BETTER PERFORMANCE. ACOUSTICAL UNDERLAYMENT MUST BE INSTALLED IN ALL RESIDENCES ABOVE THE FIRST FLOOR, BENEATH ALL HARD FLOOR COVERINGS, INCLUDING TILE, WOOD, LAMINATE, AND RESILIENT VINYL.

(NOTE: IT IS NOT NECESSARY TO IMPLEMENT ANY IMPROVEMENTS UNDER CARPET AND PAD OR ON FLOORS WHERE THERE ARE NO RESIDENCES LOCATED BELOW.)

THE CEILING GYPSUM BOARD MUST BE SEPARATED FROM THE WALL GYPSUM BOARD BY LEAVING A 1/8" GAP AT THE TOP OF ALL WALLS. THIS GAP MAY BE COVERED WITH MOLDING OR TRIM OR MAY BE SEALED USING CAULK. FIVE-SIDED GYPSUM BOARD BOXES SHOULD BE BUILT TO COMPLETELY ENCLOSE THE TOPS OF ALL RECESSED LIGHT CANS, CEILING FAN FIXTURES, AND ALL OTHER FIXTURES THAT PENETRATE THE CEILING. THIS APPLIES EVEN WHEN THE FIXTURES HAVE FIRE RATED CANS. INSULATION MUST BE PLACED ABOVE THESE GYPSUM BOARD BOXES.

3) TENANT SEPARATION WALL
THE TENANT SEPARATION WALL IS UL ASSEMBLY U341. BOTH STUD CAVITIES ARE TO BE FILLED WITH R13 BATT INSULATION.
THIS ASSEMBLY IS EXPECTED TO PROVIDE A DESIGN, OR LABORATORY TESTED, STC RATING AS LISTED, PROVIDED THAT THE RECOMMENDATIONS ARE FOLLOWED RELATED TO NOISE FLANKING PATHS.

4) CORRIDOR WALL / INTERIOR BEARING WALLS
THE CORRIDOR WALL IS UL ASSEMBLY U305. THE STUD CAVITY IS FILLED WITH 3" SOUND ATTENUATION BATT INSULATION.
THIS ASSEMBLY IS EXPECTED PROVIDE A DESIGN, OR LABORATORY TESTED STC RATING AS LISTED, PROVIDED THAT THE RECOMMENDATIONS ARE FOLLOWED RELATED TO NOISE FLANKING PATHS.

5) INTERIOR TENNANT WALLS
THE INTERIOR TENNENT NON-BEARING WALLS ARE NON-RATED ASSEMBLIES, AND ARE ATTACHED TO THE TRUSSES WITH STC CLIPS. THE STUD CAVITIES ARE FILLED WITH 3" SOUND ATTENUATION BATT INSULATION WHERE SHOWN ON THE PLANS. THIS ASSEMBLY IS EXPECTED PROVIDE REDUCED SOUND TRAVEL. PROVIDED THAT THE RECOMMENDATIONS ARE FOLLOWED RELATED TO NOISE FLANKING PATHS. GYPSUM BOARD TO BE SEPARATED AND GAPS PROVIDED PER #2 ABOVE, AND SEALED WITH CAULK.

6) NOISE FLANKING PATHS
AIRBORNE NOISE TRANSMITS FROM ONE TENANT SPACE TO ANOTHER BY TRAVELING DIRECTLY THROUGH PARTITIONS AND THROUGH ACOUSTICAL LEAK POINTS, KNOW AS "FLANKING PATHS". PENETRATIONS THROUGH PARTITIONS SUCH AS ELECTRICAL OUTLET BOXES, SWITCHES, FIRE ALARM DEVISES, SIGNALING EQUIPMENT, SPRINKLER HEADS, EXHAUST FANS, PLUMBING PIPES, ETC.. ARE ALL EXAMPLES OF "FLANKING PATHS" AND SHOULD BE SEALED PROPERLY WITH ACOUSTICAL SEALANT AND/OR ENCLOSED WITH 5 SIDED GYP. BD. BOXES WITHIN THE CAVITY.

STRUCTURE-BORNE NOISE TRANSMISSION IS MORE COMPLEX AND CAN OCCUR THROUGH MANY PATHS. THIS IS ESPECIALLY PREVALENT WHERE WALLS AND FLOOR/CEILING SYSTEMS ARE JOINED TOGETHER. STRUCTURE- BORNE NOISE TRANSMITS FROM ONE ROOM TO ANOTHER WHEN THE WALL OR FLOOR / CEILING SYSTEM VIBRATES AND ALSO THRU STRUCTURAL FLANKING PATHS.

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com A426002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

UL REFERENCE DIRECTORY - ROOF SYSTEMS

A0.34

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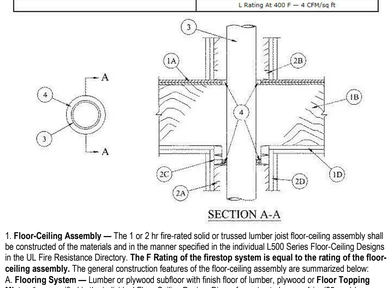
H1 UL P522
NTS

Design No. F-C-1009

January 15, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Item 1)
T Rating — 1/4 Hr	FT Rating — 1/4 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 1 and 2 Hr (See Item 1)
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 1/4 Hr
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft



SECTION A-A

1. **Floor-Ceiling Assembly —** The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly.** The general construction features of the floor-ceiling assembly are summarized below:
A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Diam of opening to be max 1 in. (25 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the diam of the pipe.
B. **Wood Joists*** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
C. **Furring Channels —** (Not Shown) —(As required) Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.
D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Diam of opening to be max 1 in. (25 mm) larger than diam of pipe.

2. **Chase Wall —** (Optional) - The through penetrant (Item 3) may be routed through a 1 or 2 hr fire-rated single, double or staggered wood stud/gypsum board chase wall having a fire rating consistent with that of the floor-ceiling assembly. Depth of chase wall to be min 1 in. greater than the diameter of the through penetrant. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs —** Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs. Nom 2 by 4 in. (51 by 102 mm) studs are allowed for through-penetrants (Item 3) not exceeding nom 2 in. (51 mm) diam.
B. **Sole Plate —** Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening is to be max 1 in. (925 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity to be 1 in. (25 mm) greater than diam of through penetrant.
C. **Top Plate —** The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening is to be max 1 in. (25 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity to be 1 in. (25 mm) greater than diam of through penetrant.
D. **Steel Plate —** When lumber plates are discontinuous, nom 1-1/2 in. (38 mm) wide No. 20 gauge (or heavier) galv steel plates shall be installed to connect each discontinuous lumber plate and to provide a form for the fill material. Steel plates sized to lap 2 in. (51 mm) onto each discontinuous lumber plate and secured to lumber plates with steel screws or nails.
E. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

3. **Through Penetrants —** One metallic pipe, conduit or tubing to be installed within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The annular space within the firestop system shall be min 0 in. (point contact) to max 1 in. (25 mm). The following types and sizes of metallic pipes or conduits may be used:
A. **Steel Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
B. **Iron Pipe —** Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
C. **Conduit —** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.
D. **Copper Tubing —** Nom (102 mm) 4 in. diam (or smaller) Type L (or heavier) copper tubing.
E. **Copper Pipe —** Nom (102 mm) 4 in. diam (or smaller) Regular (or heavier) copper pipe.

4. **Fill, Void or Cavity Material* — Sealant —** Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the top surface of the floor or the sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CFS-S SIL GG, CP606, FS-One Sealant or FS-ONE MAX Intumescent Sealant (Note: L Ratings apply only when FS-ONE Sealant is used.)

*** 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 2015-01-15

Design No. F-C-2008

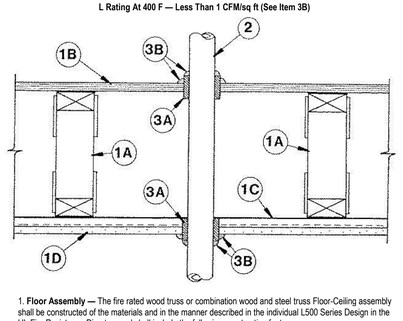
May 20, 2005

F Rating — 1 Hr

T Rating — 1 Hr

L Rating At Ambient — 7 CFM/sq ft (See Item 3B)

L Rating At 400 F — Less Than 1 CFM/sq ft (See Item 3B)



1. **Floor Assembly —** The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory and shall include the following construction features:
A. **Trusses —** Min 12 in. (305 mm) deep parallel chord trusses fabricated from 2 by 4 in. (51 by 102 mm) lumber in conjunction with galv steel truss plates or **Structural Wood Members*** with bridging as required.
B. **Flooring —** Nom 3/4 in. (19 mm) thick plywood flooring with or without **Floor Topping Mixture*,** Diam of hole-sawed opening in flooring to be 1/2 to 3/4 in. (13 to 19 mm) larger than diam of pipe. Max diam of opening in flooring is 3 in. (76 mm).
C. **Furring Channels —** Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses.
D. **Gypsum Board* —** Nom 4 ft (1.22 m) wide by 5/8 in. (16 mm) thick, screw-attached to furring channels. Diam of hole-sawed opening in gypsum wallboard ceiling to be 1/2 to 3/4 in. (13 to 19 mm) larger than diam of pipe. Max diam of opening in ceiling is 3 in. (76 mm)
2. **Nonmetallic Pipe —** Nom 2 in. (51 mm) diam (or smaller) Schedule 40 polyvinyl chloride (PVC), SDR 13.5 chlorinated polyvinyl chloride (CPVC) or solid-core Schedule 40 acrylonitrile-butadiene-styrene (ABS) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed approx midway between trusses and centered in circular openings in flooring and in ceiling. A nom 1/4 in. to 3/8 in. (6 to 10 mm) annular space is required in the firestop system. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly.
2A. **Electrical Nonmetallic Tubing+** — Nom 1 in. (25 mm) diam (or smaller) corrugated wall ENT constructed of polyvinyl chloride. ENT to be installed as a complete system with all terminations in junction boxes, outlet boxes or other approved enclosures as specified in the National Electrical Code. Max one ENT per through opening. ENT to be centered in opening and rigidly supported on both sides of the Floor-Ceiling assembly. See **Electrical Nonmetallic Tubing** (FKHU) category in Electrical Construction Materials Directory for names of manufacturers.
3. **Firestop System —** The details of the firestop system shall be as follows:
A. **Fill, Void or Cavity Materials* — Wrap Strip —** Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied to 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly-wrapped around nonmetallic pipe (foil side exposed), secured with two steel tie wires and slid into hole-sawed opening in flooring (Item 1B) and in gypsum wallboard ceiling (Item 1D). Bottom edge of wrap strip to project 9/16 to 11/16 in. (14 to 17.5 mm) below bottom surface of flooring and below bottom (ceiling) surface of gypsum board.
3M COMPANY — Type FS-195+
B. **Fill, Void or Cavity Materials* — Caulk, Sealant or Putty —** Nom 1/4 in. (6 mm) thickness of caulk or putty to be applied to the exposed edge of the wrap strip layer (top of flooring and bottom of gypsum board ceiling). Generous application of caulk or putty to be applied to fill all gaps at the wrap strip/flooring and wrap strip/gypsum board ceiling interfaces.
3M COMPANY — CP 25WB+ Caulk, FB-3000 WT Sealant, MP+ Stix Putty (Note: L Ratings apply only when Type CP 25WB+ caulk or FB-3000 WT sealant is used. CP 25WB+ not suitable for use with CPVC pipes.)
*Bearing the UL Classification Mark

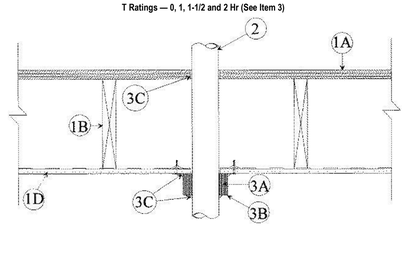
Last Updated on 2005-05-20

Design No. F-C-2024

November 20, 2009

F Ratings — 1 and 2 Hr (See Item 1)

T Ratings — 0, 1, 1-1/2 and 2 Hr (See Item 3)



1. **Floor-Ceiling Assembly —** The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly.** The general construction features of the floor-ceiling assembly are summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design.
B. **Wood Joists*** — For 1 hr fire-rated floor-ceiling assemblies nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assemblies, nom 2 by 10 in. (51 by 254 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped.
C. **Furring Channels —** (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) in 2 hr fire-rated assembly. Furring channels spaced max 24 in. (610 mm) OC.
D. **Gypsum Board* —** Nom 4 ft (122 cm) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 hr fire-rated assembly) screw-attached to furring channels.

2. **Through Penetrants —** One nonmetallic pipe, conduit or tubing to be installed approx midway between wood joists. Diam of openings hole-sawed through flooring system and through two layers gypsum wallboard ceiling to be 0 to 1/4 in. (0 to 6 mm) larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. **Polyvinyl Chloride (PVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
B. **Cellular-Core Polyvinyl Chloride (ccPVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
D. **Acrylonitrile Butadiene Styrene (ABS) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
E. **Cellular-Core Acrylonitrile Butadiene Styrene (ccABS) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. **Firestop System —** The details of the firestop system shall be as follows:

A. **Fill, Void or Cavity Materials* — Wrap Strip —** Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 1 and 2 in. (25 and 51 mm) wide strips. Strips tightly wrapped around nonmetallic pipe (foil side exposed) with the edges butted against the bottom surface of the gypsum wallboard ceiling. The min wrap strip width, the number of layers of wrap strip required, the type of pipe and the nom diam, as well as the F and T Rating of the system are shown in the following table:

Pipe Type	Nom Pipe Diam In.	F Rating Hr	T Rating Hr	Wrap Strip Width In.	Min Wrap Strip Layers
PVC, CPVC, ABS,	1/2 (13 mm) to 1-1/2 (38 mm)	1	1	1 (25 mm)	1
ccPVC or ccABS (a)					
PVC, CPVC, ABS,	2 (51 mm)to 2-1/2 (64 mm)	1	1	1 (25 mm)	2
ccPVC, or ccABS (a)					
PVC, CPVC, ABS,	3 (76 mm)	1	1	1 (25 mm)	3
ccPVC or ccABS (a)					
PVC, CPVC, ABS,	1/2 (13 mm) to 2 (51 mm)	1	1	2 (51 mm)	1
ccPVC or ccABS (a)					
PVC, CPVC, ABS or ccPVC	2-1/2 (64 mm) to 4 (102 mm)	1	1	2 (51 mm)	2
ccABS (a)	2-1/2 (64 mm) to 3 (76 mm)	1	1/2	2 (51 mm)	2
ccABS (a)	3-1/2 (89 mm) to 4 (102 mm)	1	1/2	2 (51 mm)	3
PVC, CPVC, ABS, or ccPVC	1/2 (13 mm)to 1-1/2 (38 mm)	2	1-1/2	1 (25 mm)	1
ccABS (a)	1/2 (13 mm) to 1-1/2 (38 mm)	2	2	2 (51 mm)	2
ABS, PVC, ccPVC, or CPVC	1/2 (13 mm) to 2 (51 mm)	2	1-1/2	2 (51 mm)	1
ABS, PVC, ccPVC or CPVC	2-1/2 (64 mm) to 3 (76 mm)	2	1-1/2	2 (51 mm)	2
ABS	3-1/2 (89 mm) to 4 (102 mm)	2	1-1/2	2 (51 mm)	3
PVC, ccPVC or CPVC	3-1/2 (89 mm) to 4 (102 mm)	2	2	2 (51 mm)	3

(a) — Requires use of aluminum tape detailed in Item 3D

3M COMPANY — Type FS-195+

B. **Steel Collar —** Nom 2 in. (51 mm) deep collar with 1-1/4 in. (32 mm) wide by 2 in. (51 mm) long anchor tabs and min 3/4 in. (19 mm) long tabs to retain wrap strip layers. Coils of precut 0.016 in. (.41 mm) thick (30 gauge) galv sheet steel are available from wrap strip manufacturer. As an alternate, collar my be field fabricated from min 0.016 in. (.41 mm) thick (30 gauge) galv sheet steel in accordance with instruction sheet applied by wrap strip manufacturer Steel collar, with anchor tabs bent outward 90 degrees, wrapped tightly around wrap strip layers with min 1 in. (25 mm) overlap at the seam. With steel anchor tabs pressed tightly against underside of gypsum wallboard ceiling, compress collar around wrap strip layers using a min 1/2 in. (13 mm) wide by 0.028 in. (.71 mm) thick stainless steel band clamp at the collar midheight. As an alternate to the band clamps, collars may be secured by a means No. 10 by 1/2 in. (13 mm) long sheet metal screws installed in the vertical axis at the center of the 1 in. (25 mm) overlap along the perimeter joint of the collar. A min of three screws is required.
Secure collar to gypsum wallboard ceiling using 3/16 in. (5 mm) diam steel toggle bolts (5/8 in. (16 mm) grip) in conjunction with 1-1/4 in. (32 mm) diam steel fender washers. Min of three fasteners, symmetrically located, required for nom 1/2 in. to nom 3 in. (13 mm to 76 mm) diam pipes. Min of four symmetrically located fasteners required for nom 3-1/2 in. and 4 in. (89mm and 102 mm) diam pipes. As a final step, bend wrap strip retainer tabs 90 degrees toward pipe to lock wrap strip layers in position.

C. **Fill, Void or Cavity Materials* — Caulk or Sealant —** Generous application of caulk to be applied around the perimeter of the steel collar at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the wrap strip layers. Caulk also applied around perimeter of pipe to fill annular space to max extent possible, flush with top surface of floor.

3M COMPANY — CP25 WB+, IC 15WB+ caulk, FireDam 150+ caulk or FB-3000 WT sealant. (Note: CP 25WB+ and FireDam 150+ not suitable for use with CPVC pipes.)

D. **Foil Tape (not shown) —** Nom 4 in. (102 mm) wide, 3 mil thick aluminum tape wrapped around pipe prior to the installation of the wrap strip (Item 3A). Min of one wrap, flush with the ceiling and proceeding downward. Tape is required only for nom 3-1/2 in. to 4 in. (89 mm to 102 mm) diam ABS pipes and for all ABS pipes.

E. **Firestop Device* —** (Not Shown) — As an alternate to Item A and B when nom 1-1/2 in. (32 mm), 2 in. (51 mm), 3 in. (76 mm), or 4 in. (102 mm) diam nonmetallic pipes are used, a firestop device consisting of a sheet-steel split collar lined with intumescent material and provided with steel clips for attachment may be used in accordance with the table below. Firestop device to be installed on underside of ceiling in accordance with the accompanying installation instructions.

Pipe Type	Nom Pipe Diam, In. (mm)	F Rating Hr	T Rating Hr	Firestop Device
PVC, CPVC, ABS,	1-1/2 (32)	1	1	PPD 1.5 or PPD 150
ccPVC or ccABS (a)				
PVC, CPVC, ABS,	2 (51)	1	1	PPD 2 or PPD 200
ccPVC or ccABS (a)				
PVC, CPVC, ABS,	3 (76)	1	1	PPD 3 or PPD 300
ccPVC or ccABS (a)				
PVC, CPVC, ABS or ccPVC	4 (102)	1	1	PPD 4 or PPD 400
ccABS (a)	2 (51)	1	1/2	PPD 200
ccABS (a)	3 (76)	1	1/2	PPD 300
ccABS (a)	4 (102)	1	1/2	PPD 400
PVC, CPVC, ABS or ccPVC	1-1/2 (32)	2	1-1/2	PPD 1.5 or PPD 150
ccABS (a)	1-1/2 (32)	2	2	PPD 150
ABS, PVC, ccPVC or CPVC	1-1/2 (32)	2	1-1/2	PPD 150
ABS, PVC, ccPVC or CPVC	2 (51)	2	1-1/2	PPD 200
ABS, PVC, ccPVC or CPVC	3 (76)	2	1-1/2	PPD 300
PVC, ccPVC or CPVC	4 (102)	2	2	PPD 400
ABS	4 (102)	2	1-1/2	PPD 400

(a) — Requires use of aluminum tape detailed in Item 3D

*Bearing the UL Classification Mark

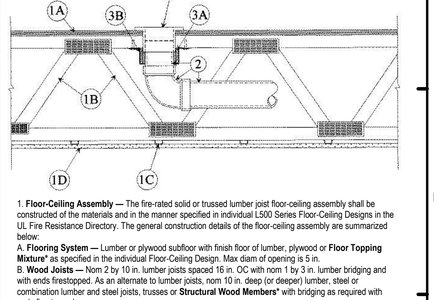
Last Updated on 2009-11-20

Design No. F-C-2037

November 26, 1997

F Rating — 1 Hr

T Rating — 1 Hr



1. **Floor-Ceiling Assembly —** The fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening is 5 in.
B. **Wood Joists —** Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required with ends firestopped.
C. **Furring Channels —** Resilient galv steel furring installed perpendicular to wood joists (Item 1B) between wallboard (Item 1D) and wood joists as required in the individual Floor-Ceiling Design.
D. **Gypsum Board* —** Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Wallboard secured to wood joists as specified in the individual Floor-Ceiling Design.

2. **Drain Piping —** Nom 4 in. diam (or smaller) Schedule 40 polyvinyl chloride (PVC) or acrylonitrile butadiene styrene (ABS) drain piping and fittings. Diam of circular opening hole through flooring (Item 1A) to be max 1/2 in. larger than outside diam of pipe. Short length of pipe with 90 degree elbow fitting cemented into bottom socket of closet flange (Item 5). Drain piping cemented to elbow.

3. **Firestop System —** The firestop system shall consist of the following:
A. **Fill, Void or Cavity Materials* — Wrap Strip —** Nom 1/4 in. thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. wide strips. Nom 1-1/2 in. wide strips tightly-wrapped around nonmetallic pipe with the edges butted against the underside of flooring and around the entire perimeter of the hole-sawed opening. Two layers of wrap strip are required. Each layer of wrap strip to be installed with butted seam, butted seams in successive layers staggered or aligned. Wrap strip layer(s) temporarily held in position using aluminum foil tape.
SPECIFIED TECHNOLOGIES INC — SpecSeal RED Strip
B. **Steel Collar —** Collar fabricated from coils of precut 0.016 in. thick (30 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 1-1/2 in. deep with min four 1 in. wide by 2 in. long anchor tabs for securement to top surface of flooring. Retainer tabs, 3/4 in. wide tapering down to 1/4 in. wide and located opposite the anchor tabs, are folded 90 degrees toward through-penetrant surface to maintain the annular space around the through-penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and through-penetrant with a 1 in. wide overlap along its perimeter joint and secured together by means of a min 1/2 in. wide by 0.028 in. thick stainless steel hose clamp at mid-height of the steel collar. As an alternate to the steel hose clamp, the steel collar can be secured together by means of three No. 8 by 3/8 in. long steel sheet metal screws. Anchor tabs of collar bent outwards and secured to top surface of flooring or underside of floor using min 3/4 in. long steel wood screws in conjunction with 1/4 in., by 1-1/4 in. diam steel fender washers.

4. **Closet Flange —** PVC or ABS closet stub sized to accommodate drain pipe. Closet flange installed in hole-sawed opening in flooring system with flange secured to top of flooring with steel screws.

5. **Water Closet —** (Not Shown) — Floor mounted vitreous china water closet.

*Bearing the UL Classification Mark

Last Updated on 1997-11-26

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

UL REFERENCE DIRECTORY - FLOOR PENETRATIONS

A0.35

PLOTTED: 11/30/2017 5:33:23 PM

H1 UL F-C-1009 NTS
H3 UL F-C-2008 NTS
H5 UL F-C-2024 NTS
H9 UL F-C-2037 NTS

Design No. F-C-2355

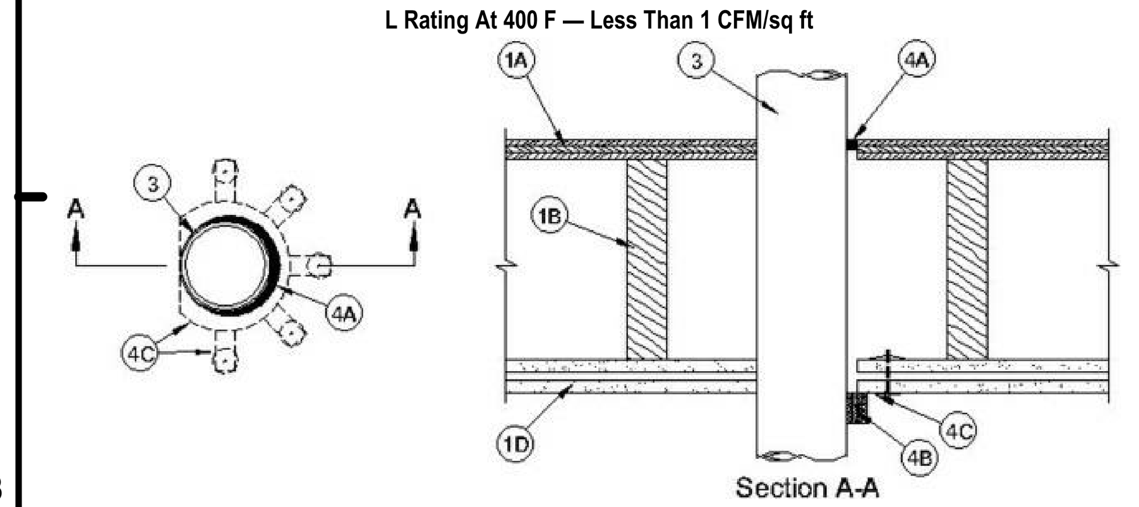
December 08, 2008

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 — Less Than 1 CFM/sq ft



Section A-A

1. **Floor-Ceiling Assembly —** The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The F and T Ratings of the firestop system are equal to the rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:
A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Diam of opening hole-sawed in flooring shall be max 1/2 in. (13 mm) larger than diam of through penetrant (Item 3).
B. **Wood Joists* —** For 1 hr fire-rated floor-ceiling assemblies nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assembly, nom 2 by 10 in. (51 by 250 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging with ends firestopped.
C. **Furring Channels —** (Not Shown)— Resilient galv steel furring installed perpendicular to wood joists between first and second layers of gypsum board (Item 1D) in 2 hr fire-rated assembly.
D **Gypsum Board* —** Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board nailed to wood joists. Second layer of gypsum board (2 hr fire-rated assembly) screw-attached to furring channels. Diam of opening shall be max 1/2 in. (13 mm) larger than nom diam of through penetrant (Item 3).
2. **Chase Wall —** (Optional, Not Shown)—The through-penetrant (Item 3) may be routed through a 1 or 2 hr fire-rated single, double or staggered wood stud/gypsum board chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and which includes the following construction features:
A. **Studs —** Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
B. **Sole Plate —** Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening hole-sawed in sole plate to be max 1/2 in. (13 mm) larger than diam of through penetrant (Item 3).
C. **Top Plate —** The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be max 1/2 in. (13 mm) larger than diam of through penetrant (Item 3).
D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in the individual Wall or Partition Design.
3 **Through Penetrants —** One nonmetallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe or conduit and the periphery of the opening shall be min 0 in. (0 mm, point contact) to a max 1/2 in. (13 mm). Pipe or conduit to be rigidly supported on both sides of floor-ceiling. The following types and sizes of pipes or conduits may be used:
A. **Polyvinyl Chloride (PVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems.
B. **Chlorinated Polyvinyl Chloride (CPVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) SDR 13.5 CVPC pipe for use in closed (process or supply) piping systems.
C. **Acrylonitrile Butadiene Styrene (ABS) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
D. **Rigid Nonmetallic Conduit+ —** Nom 3 in. (76 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code, (NFPA No. 70).
4. **Firestop System —** The firestop system shall consist of the following:
A. **Fill, Void or Cavity Material* — Sealant —** Min 3/8 in. (10 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate.
SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant or SpecSeal LCI Sealant
B. **Fill, Void or Cavity Material* — Wrap Strip —** Nom 1/8 in. (3.2 mm) or 3/16 in. (4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. or 2 in. (51 mm) wide strips or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. For nom 1-1/2 in. (38 mm) and 2 in. (51 mm) diam pipes/conduits, a min of two layers of wrap strip are required. For nom 2-1/2 in. (64 mm) or 3 in. (76 mm) diam pipes/conduits, a min of three layers of wrap strip are required. For nom 3-1/2 in (89 mm) and 4 in. (102 mm) diam pipes/conduits, a min of four layers of wrap strip are required. The layers of wrap strip are to be eccentrically installed such that the layers do not completely encircle the penetrant. The layers are wrapped around the penetrant flush with bottom surface of ceiling or top plate such that the ends butt up to the tangent of the periphery of the opening at the point contact location. Layers of wrap strip temporarily held in place with tape.
SPECIFIED TECHNOLOGIES INC — SpecSeal RED Wrap Strip, SpecSeal BLU Wrap Strip or SpecSeal BLU2 Wrap Strip
C. **Steel Collar —** Collar fabricated from coils of precut 0.016 in. (4 mm) thick (No. 30 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 1-1/2 in. (38 mm) or 2 in. (51 mm) deep (dependent upon width of wrap strip) with min four 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for attachment to the ceiling or top plate. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degree toward through-penetrant surface to maintain the annular space around the through-penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and through penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint. Steel collar tightened around wrap strips and through penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (7 mm) thick stainless steel hose clamp installed at midheight of the collar or using three symmetrically located No. 8 steel sheet metal screws. Collar secured to gypsum board surface with 1/8 in. (3 mm) diam steel hollow wall anchors in conjunction with min 1 in. (25 mm) diam steel fender washers installed symmetrically opposite the point contact location. When installed inside chase wall, the collar is fastened to the top plate with nom 3/4 in. (19 mm) long steel wood screws in conjunction with nom 1 in. (25 mm) diam steel fender washers. The number of fasteners used is dependent upon the nom diam of the through penetrant. Two fasteners, symmetrically located, are required for nom 1-1/2 in (38 mm) and 2 in. (51 mm) diam through penetrants. Three fasteners, symmetrically located, are required for nom 2-1/2 in. (64 mm) and 3 in. (76 mm) diam through penetrants. Five fasteners, symmetrically located, are required for nom 3-1/2 in. (89 mm) and 4 in. (102 mm) diam through penetrants.

*Bearing the UL Classification Mark

+Bearing the UL Listing Mark

Last Updated on 2008-12-08

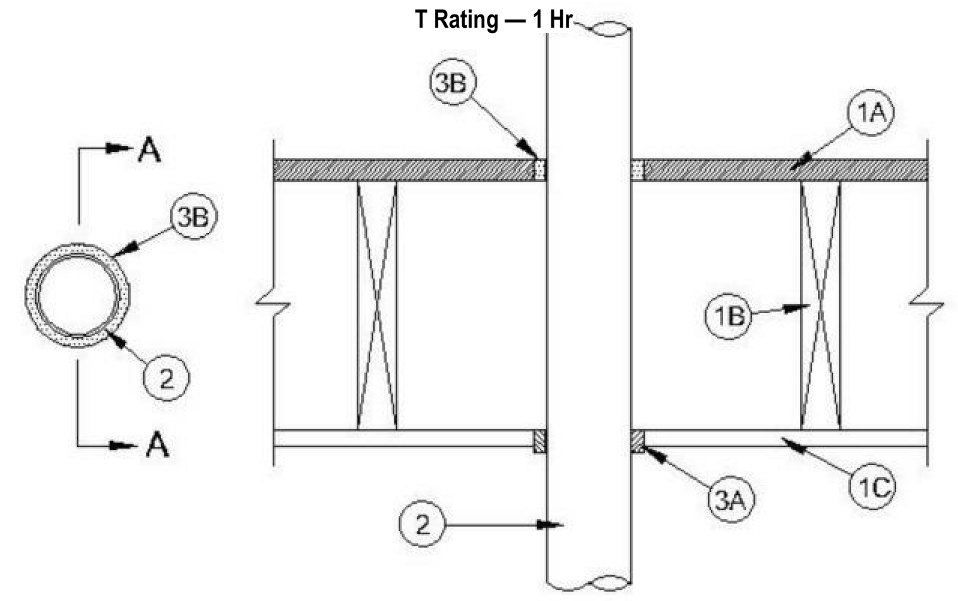
H1 UL F-C-2355
NTS

Design No. F-C-2368

December 27, 2007

F Rating — 1 Hr

T Rating — 1 Hr



SECTION A-A

1. **Floor - Ceiling Assembly —** The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory, as summarized below:
A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 4 in. (102 mm).
B. **Wood Joists —** Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
C. **Gypsum Board* —** Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Wallboard secured to joists as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 4 in. (102 mm).

2. **Through Penetrants —** One nonmetallic pipe to be centered within the firestop system. The annular space between pipe and periphery of opening shall be nom 1/4 in. Pipe to be rigidly supported on both sides of floor assembly. The following types and sizes of nonmetallic pipes may be used:
A. **Polyvinyl Chloride (PVC) Pipe —** Nom 3 in. (76mm) Schedule 40 solid core PVC or cellular core PVC (ccPVC) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
B. **Acrylonitrile Butadiene Styrene (ABS) Pipe —** Nom 3 in. (76mm) Schedule 40 solid core ABS or cellular core ABS (ccABS) for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. **Firestop System —** The firestop system shall consist of the following:
A. **Fill, Void or Cavity Material* - Wrap Strip —** One layer of nom 1/4 in. thick by 2 in. wide intumescent wrap strip tightly wrapped around the outer circumference of the pipe with ends butted and held in place with foil tape. Wrap strip slid into the annular space with the bottom edge of the wrap strip extending 1/4 in. below gypsum board ceiling.
RECTORSEAL — Biostop Wrap Strip
B. **Fill, Void or Cavity Material* - Caulk —** Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with top surface of floor.
RECTORSEAL — Biostop 500+

*Bearing the UL Classification Mark

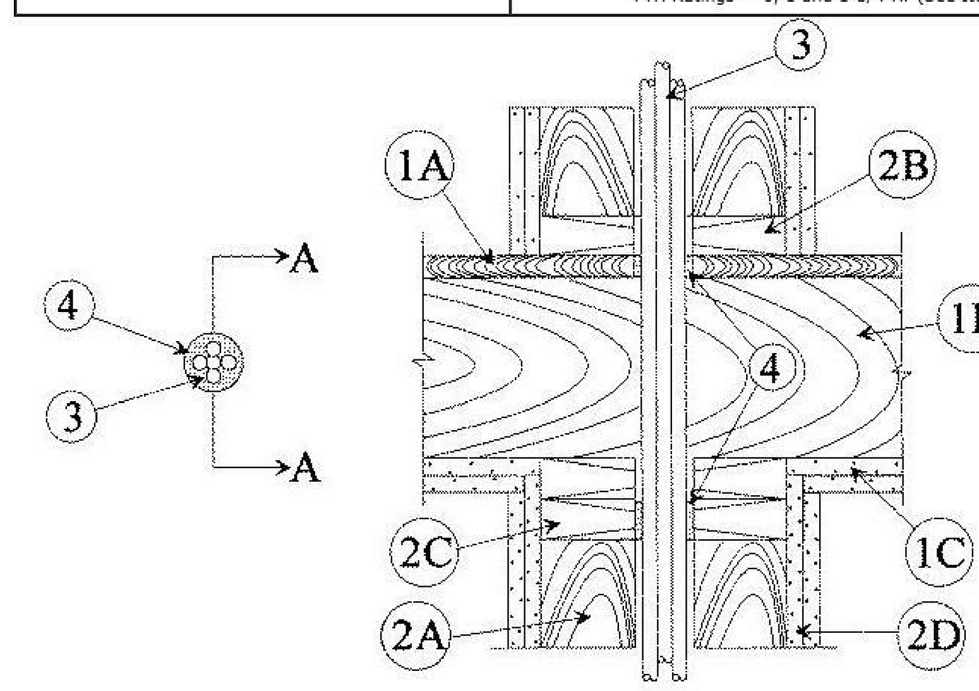
Last Updated on 2007-12-27

H3 UL F-C-2368
NTS

Design No. F-C-3012

January 20, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 0, 1 and 1-3/4 Hr (See Item 3)	FT Ratings — 0, 1 and 1-3/4 Hr (See Item 3)
	FH Ratings — 1 and 2 Hr (See Item 1)
	FTH Ratings — 0, 1 and 1-3/4 Hr (See Item 3)



SECTION A-A

1. **Floor-Ceiling Assembly —** The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.
B. **Wood Joists* —** Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
C. **Furring Channels —** (Not Shown) — (As required) - Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.
D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.
The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly.

2. **Chase Wall —** (Optional) - The through penetrant (Item 3) shall be routed through a fire-rated single, double or staggered wood stud/gypsum wallboard chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
A. **Studs —** Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
B. **Sole Plate —** Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.
C. **Top Plate —** The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.
D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

3. **Cables —** In 1 hr fire-rated assemblies, aggregate cross-sectional area of cables in opening to be max 45 percent of the cross-sectional area of the opening (max 2 in. (51 mm) diam bundle). Cables to be rigidly supported on both sides of floor assembly. Any combination of the following types and sizes of copper conductors may be used:

A. RG 59 coaxial cable with single copper conductor, cellular polyethylene cellular foam insulation and polyvinyl chloride (PVC) jacket.
B. Max 8/C No. 22 AWG telephone cable with polyvinyl chloride (PVC) jacketing.
C. Max 2/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation and jacketing.
D. Max 3/C with ground No. 2/0 AWG aluminum or copper Type SER cable with polyvinyl chloride (PVC) insulation.
E. Max 3/C with ground No. 2/0 AWG Type NM cable with polyvinyl chloride (PVC) insulation.
F. Max 3/C No. 12 AWG MC (BX) cable with polyvinyl chloride (PVC) insulation.
G. Max 1 in. diam metal clad TEK cable with PVC jacket.
H. Max 4/C with ground No. 300 kcmil (or smaller) aluminum SER cable with PVC insulation and jacket.
I. **Through Penetrating Product*** - Any cables, **Metal-Clad Cable+** or **Armored Cable+** currently Classified under the **Through Penetrating Products** category.
See **Through Penetrating Product** (XHLY) category in the Fire Resistance Directory for names of manufacturers.
The T Rating is 1 and 1-3/4 hr for 1 and 2 hr rated assemblies, respectively, for cables 3A through 3G. The T Rating is 0 hr for cables 3H and 3I.

4. **Fill, Void or Cavity Material* — Sealant —** Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material also applied within the annulus, flush with bottom surface of ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS611A Sealant or 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.**

Last Updated on 2015-01-20

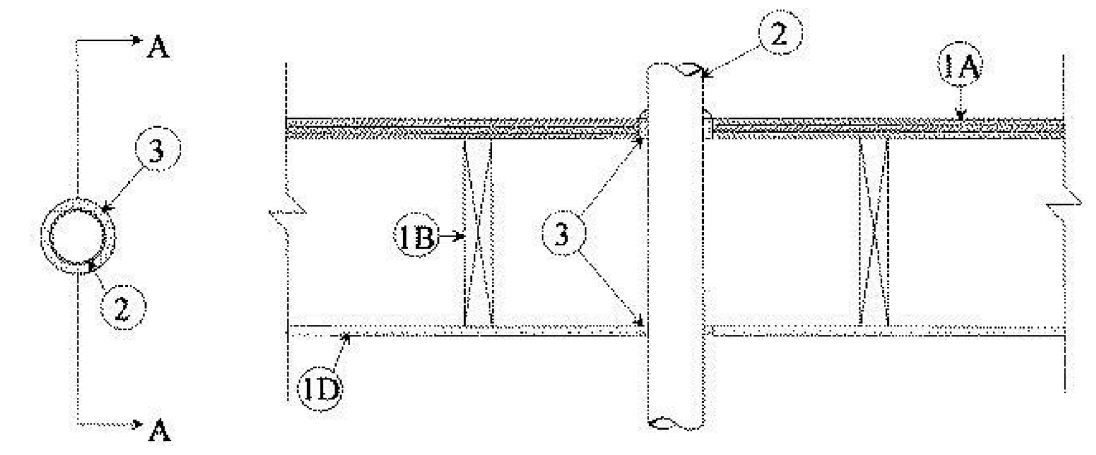
H5 UL F-C-3012
NTS

Design No. F-C-7002

December 08, 2008

F Rating — 1 Hr

T Rating — 3/4 Hr



SECTION A-A

1. **Floor-Ceiling Assembly —** The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 5 in.
B. **Wood Joists —** Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required with ends firestopped.
C. **Furring Channels —** (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists (Item 1B) between wallboard (Item 1D) and wood joists or furring channels as required in the individual Floor-Ceiling Design.
D. **Gypsum Board* —** Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Wallboard secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 5 in.

1.1 **Chase Wall —** (Not Shown, optional) The through penetrant (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs —** Nom 2 by 6 in. or double nom 2 by 4 in. lumber studs.
B. **Sole Plate —** Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted.
C. **Top Plate —** The double top plate shall consist of two nom by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diam of opening is 5 in.
D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

2. **Steel Duct —** Nom 4 in. diam (or smaller) No. 30 gauge (or heavier) steel duct. One duct to be centered within the firestop system. Diam of openings hole-sawed through flooring system and through gypsum wallboard ceiling to the nom 1/2 in. larger than the outside diam of through-penetrant. Steel duct to be rigidly supported on both sides of floor-ceiling assembly.

3. **Fill, Void or Cavity Material* — Sealant —** Min 3/4 in. thickness of fill material applied within annulus on top surface of floor. Min 5/8 in. thickness of fill material applied within annulus on bottom surface of ceiling or lower top plate of chase wall assembly. Additional fill material to be installed such that a min 1/8 in. crown is formed around the penetrating item on bottom surface of ceiling or lower top plate of chase wall assembly.

SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

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

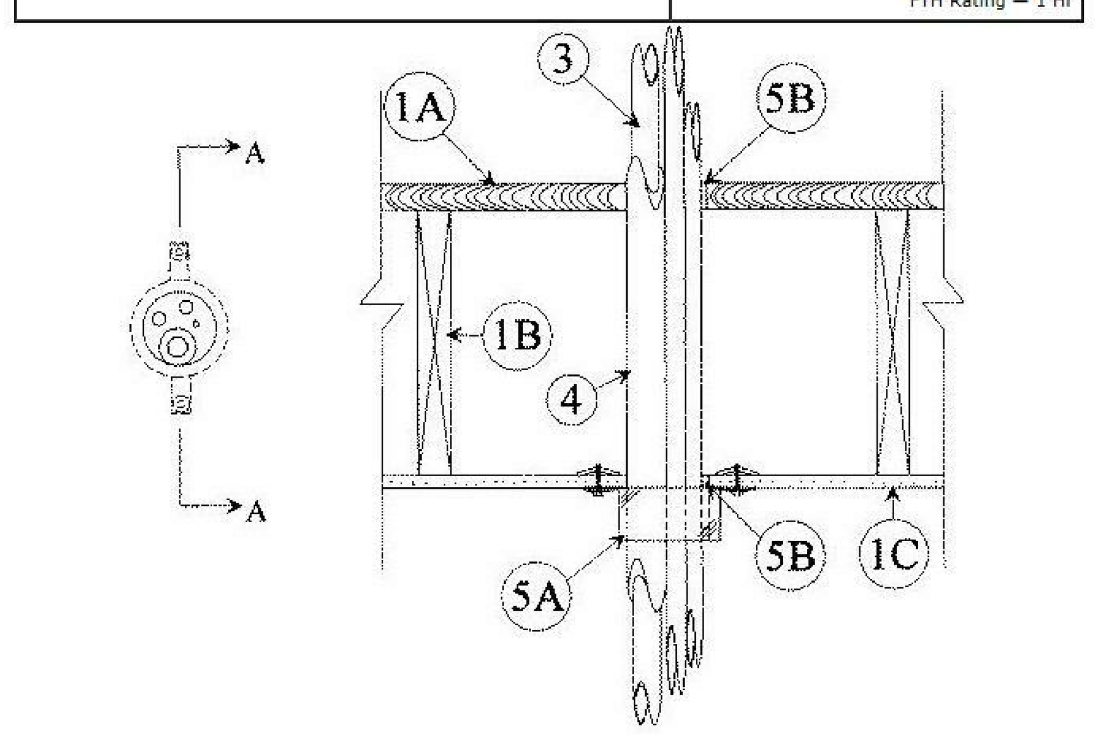
Last Updated on 2008-12-08

H7 UL F-C-7002
NTS

Design No. F-C-8009

January 21, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 Hr	F Rating — 1 Hr
T Rating — 1 Hr	FT Rating — 1 Hr
	FH Rating — 1 Hr
	FTH Rating — 1 Hr



SECTION A-A

System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. **Floor-Ceiling Assembly —** The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening is 3 in. (76 mm).
B. **Wood Joists —** Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
C. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening in ceiling [when chase wall (Item 2) is not provided] is 3 in. (76 mm).

2. **Chase Wall —** (Optional, Not Shown) — The through penetrant (Item 3) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs —** Nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
B. **Sole Plate —** Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening shall be 3 in. (76 mm).
C. **Top Plate —** The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates or 2 sets of parallel nom 2 by 4 in. (51 by 102 mm) lumber, tightly butted. Max diam of opening is 3 in. (76 mm).
D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

3. **Through Penetrants —** Pipe, cable and tubing to be bundled and rigidly supported on both sides of floor assembly. A nom annular space of min 0 in. (point contact) to max 1/2 in. (13 mm) is required within the firestop system. The following types and sizes of pipe, cable and tubing are to be used in the firestop system in sufficient quantities to fill the firestop device:

A. **Cable —** Type PJT thermoset cable, 5/C No. 18 AWG copper conductor, plastic insulation and jacket.
B. **Polyvinyl Chloride (PVC) Pipe —** Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
C. **Copper Tubing —** Nom 3/4 in. (19 mm) diam (or smaller) Type L (or heavier) copper tubing.
D. **Copper Tubing —** Nom 1/2 in. (13 mm) diam (or smaller) Type L (or heavier) copper tubing.

4. **Tube Insulation — Plastics+ —** Nom 1/2 in. (13 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Insulation to be installed only on one through reverant having a max nom diam of 3/4 in. (19 mm).
See **Plastics+** (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.

5. **Firestop System —** The firestop system shall consist of the following:

A. **Firestop Device* — Firestop Collar —** Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the penetrants and secured to underside of gypsum wallboard ceiling using the anchor hooks provided with the collar. The anchor hooks are to be secured to the surface of the ceiling with min 3/16 in. diam min 2-1/2 in. long toggle bolts.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 64-3 90/3"N, CP 64-3 63/2"N, CP 64-3 50/1-1/2"N .

B. **Fill, Void or Cavity Material* — Sealant —** Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or lower top plate. Caulk to be forced into interstices of penetration group to max extent possible at top surface of floor or sole plate and bottom surface of ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS611A, FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

+Bearing the UL Recognized Component Mark
*Bearing the UL Classification Marking

Last Updated on 2015-01-21

H9 UL F-C-8009
NTS

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103

CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

UL REFERENCE DIRECTORY - FLOOR PENETRATIONS

A0.36

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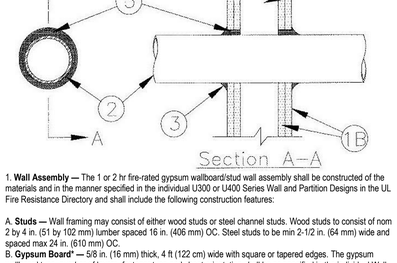
Design No. W-L-1085

January 23, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1B)	F Rating — 1 and 2 Hr (See Item 1B)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 1 and 2 Hr (See Item 1B)
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 0 Hr



Section A–A

1. **Wall Assembly —** The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 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, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 13-1/4 in. (337 mm).
Diam of circular opening cut through gypsum wallboard on each side of wall assembly to be min 1/4 in. (6 mm) to max 1/2 in. (13 mm) larger than outside diam of through penetrant (Item 2).

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

2. **Through Penetrants —** One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The annular space between the through-penetrant and the periphery of the opening shall be min 0 in. to max 1/4 in. (6 mm). The following types and sizes of metallic pipes, conduits or tubing may be used:
A. **Steel Pipe —** Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
B. **Iron Pipe —** Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.
C. **Conduit —** Nom 6 in. (152 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.
D. **Copper Tubing —** Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
E. **Copper Pipe —** Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. **Fill, Void or Cavity Material* — Sealant —** Fill material to be forced into the annulus to maximum extent possible. Additional fill material to be installed such that a min 1/2 in. (13 mm) crown is formed around the penetrating item and lapping 1/4 in. (6 mm) beyond the periphery of the opening.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant, 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.**

D1 UL W-L-1085
NTS

Last Updated on 1999-11-24

Design No. W-L-2098

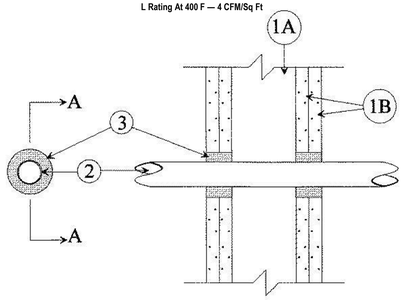
January 26, 2015

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



SECTION A-A

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 or U400 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. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
B. **Gypsum Board* —** 5/8 in. thick, 4 ft wide with square or tappered 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.
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 Penetrants —** 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. to max 1-1/4 in. 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. diam (or smaller) Schedule 40 PVC pipe for use in closed (process or supply) piping system.
B. **Chlorinated Polyvinyl Chloride (CPVC) Pipe —** Nom 2 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) piping systems.
3. **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

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

H1 UL W-L-2098
NTS

Last Updated on 2003-01-09

Design No. W-L-2029

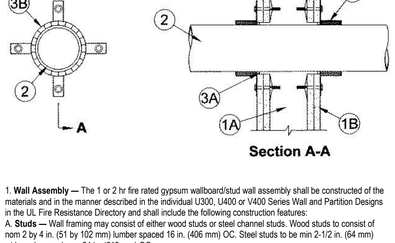
November 26, 2012

F Ratings — 1 and 2 Hr (See Items 1 and 3B)

T Ratings — 1, 1-1/2 and 2 Hr (See Item 3B)

L Rating At Ambient — 1 CFM/sq ft (See Item 3A)

L Rating At 400 F — Less Than 1 CFM/sq ft (See Item 3A)



Section A-A

1. **Wall Assembly —** The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 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 (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 5 in. (127 mm).
The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Through Penetrants —** One nonmetallic pipe or conduit to be centered within the firestop system. A nom annular space of 1/4 in. (6 mm) is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes or conduits may be used:
A. **Polyvinyl Chloride (PVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
B. **Rigid Nonmetallic Conduit+ —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 or 80 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).
C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process of supply) piping systems.
D. **Acrylonitrile Butadiene Styrene (ABS) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid or foamed core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
E. **Fire Retardant Polypropylene (FRPP) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
3. **Firestop System —** The firestop system shall consist of the following:
A. **Fill, Void or Cavity Material* — Caulk —** (Optional) - Caulk forced into annular space to max extent possible. Caulk shall be installed flush with both surfaces of wall assembly. **L Ratings apply only when caulk is used.**
SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102, 120, 129 or 105 Sealant, SpecSeal LCI Sealant, Pensil 300 Sealant or SpecSeal Series SIL300 Sealant
B. **Firestop Device* —** Galv steel collar lined with an intumescent material sized to fit the specific diam of the through-penetrant. Device shall be installed around through-penetrant in accordance with accompanying installation instructions. Device incorporates anchor tabs for securement to each surface of wall assembly by means of 1/8 in. (3 mm) diam by 1-3/4 in. (45 mm) long steel molly bolts in conjunction with 1/4 in. (6 mm) diam by 1-1/2 in. (38 mm) diam steel fender washers.
The F and T Rating of the firestop system is dependent upon the fire rating of the wall and size of the firestop device as tabulated below:

Fire Rating of Wall Hr	Nom Device Size In.	F Rating Hr	T Rating Hr
1	1-1/2	1	1
2	1-1/2	2	1-1/2
1	2	1	1
2	2	2	1-1/2
1	3	1	1
2	3	2	2
1	4	1	1
2	4	2	2

SPECIFIED TECHNOLOGIES INC — SpecSeal Firestop Collar, SpecSeal LCC Collar, or SpecSeal SSC Collar. When SpecSeal LCC Collar or SpecSeal SSC Collar are used, the max annular space shall be 1/8 in. (3 mm) for max 2-1/2 in. (64 mm) diam pipe and shall be max 1/4 in. (6 mm) for pipe larger than 2-1/2 in. (64 mm) diam. **The T Rating equals the hourly F Rating when SpecSeal LCC Collar is used.**

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

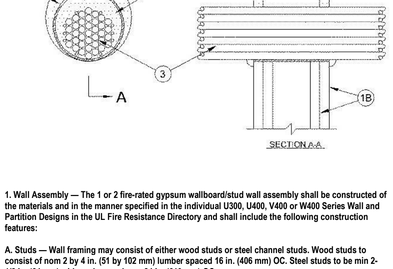
Last Updated on 2012-11-26

H3 UL W-L-2029
NTS

Design No. W-L-3065

January 23, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Item 1)
T Rating — 0 and 3/4 Hr (See Item 3)	FT Rating — 0 and 3/4 Hr (See Item 3)
L Rating At Ambient — 15 CFM/sq ft	FH Rating — 1 and 2 Hr (See Item 1)
L Rating At 400 F — 8 CFM/sq ft	FTH Rating — 0 and 3/4 Hr (See Item 3)
	L Rating At Ambient — 15 CFM/sq ft
	L Rating At 400 F — 8 CFM/sq ft



SECTION A-A

1. Wall Assembly — The 1 or 2 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* — Nom 5/8 in. (16 mm) thick gypsum board, with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Max diam of opening is 5-1/2 in. (138 mm) when sleeve (Item 2) is employed. Max diam of opening is 4 in. (102 mm) when sleeve (Item 2) is not employed.
The F, FH Ratings of the firestop system are equal to the fire rating of the wall assembly.

2. Metallic Sleeve — (Optional) - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or Schedule 5 (or heavier) steel pipe or min 0.016 in. thick (0.41 mm, No. 28 ga) galv steel sleeve installed flush with wall surfaces. The annular space between steel sleeve and periphery of opening shall be min 0 in. (0 mm, point contact) to max 1 in. (25mm). When Schedule 5 steel pipe or EMT is used, sleeve may extend up to 18 in. (457 mm) beyond the wall surfaces. As an option when Schedule 5 steel pipe or EMT is used, sleeve may extend continuously beyond one wall surface. When cable bundle penetrates wall assembly at an angle of 45 degrees, no metallic sleeve is used.

3. Cables — Aggregate cross-sectional area of cable in opening to be max 45 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 0 in. (point contact) to max 1 in. (25 mm). When sleeve is continuous on one side of wall (see Item 2), the cable fill may be 0 to 45% and the max annular space is not limited. Cables to be rigidly supported on both sides of the wall assembly. Cable bundle, using cables described below, may penetrate the wall at an angle not greater than 45 degrees. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.
B. Max 25 pair No. 24 AWG telephone cable with PVC insulation and jacket.
B1. Max 4 pr No. 22 AWG Cat 5 or Cat 6 computer cables.
C. Type RG/U coaxial cable with polyethylene (PE) insulation and PVC jacket having a max outside diameter of ½ in. (13 mm).
C1. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jacketing.
D. Multiple fiber optical communication cable jacketed with PVC and having a max OD of 5/8 in. (16 mm).
E. Through Penetrating Products*— Max three copper conductor No. 8 AWG .Metal-Clad Cable+.
AFC CABLE SYSTEMS INC
F. Max 3/C (with ground)(or smaller) No. 8 AWG copper conductor cable with PVC insulation and jacketing.
G. Max 3/4 in. (19 mm) diam copper ground cable with or without a PVC jacket.
H. Fire Resistive Cables* - Max 1-1/4 in. (32 mm) diam single conductor or multi conductor Type MI cable. A min 1/8 in. (3 mm) separation shall be maintained between MI cables and any other types of cable.
I. Max 4/C with ground 300 kcmil (or smaller) aluminum SER cable with PVC insulation and jacket.
J. Through Penetrating Product* - Any cables, Metal-Clad Cable+ or Armored Cable+ currently Classified under the Through Penetrating Products category.
K. Maximum 3/C No. 8 AWG metal-clad cable.
L. Maximum 5/8 diam fiber-optic cable with PVC jacket.
For cable bundle penetrating the wall assembly at an angle of 45 degrees, the T, FT, FTH Ratings are 0 hr and 3/4 hr for 1 and 2 hr wall assemblies, respectively.
See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of manufacturers.

4. Fill, Void or Cavity Material*— Sealant or Putty — Fill material applied within the annulus, flush with each end of the steel sleeve or wall surface. Fill material installed symmetrically on both sides of the wall. A min 5/8 in. (16 mm) thickness of sealant is required for the 1 or 2 hr F Rating . An additional 1/2 in. (13 mm) diam bead of fill material shall be applied at the interface of sleeve with gypsum board.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CP606, FS-One Sealants or FS-ONE MAX Intumescent Sealantor or CP618 Putty

5. Packing Material — (Optional, Not Shown) — Mineral wool forming material may be used as a backer for the fill material (Item 4). When used, it shall be firmly packed into annular space within the sleeve as a permanent form and recessed from end of sleeve to accommodate the required thickness of fill material.

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

+Bearing the UL Listing Mark

Last Updated on 2015-01-23

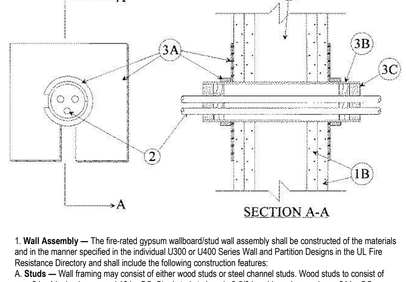
H5 UL W-L-3065
NTS

Design No. W-L-3068

August 24, 2011

F Rating — 2 Hr

T Rating — 0 Hr



SECTION A-A

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 or U400 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. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
B. **Gypsum Board* —** Two layers of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design.
2. **Cables —** Aggregate cross-sectional area of cables in Split Sleeve to be min 8 percent to max 36 percent of the aggregate cross-sectional area of the Split Sleeve. Cables to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of copper conductor cable may be used:
A. Max 350 kcmil single conductor Type XHHW power cables; cross-linked polyethylene (XLPE) insulation.
B. Max 150 pair No. 24 AWG conductor telecommunication cables; polyvinyl chloride (PVC) insulation and jacket materials.
C. Max No. 12 AWG multiconductor Type TC power and control cables; Type XHHW conductors XLPE insulation with XLPE or PVC jacket.
3. **Firestop System —** The firestop system shall consist of the following:
A. **Firestop Device* —** Threaded steel sleeve halves incorporating split nuts and split washers sized to fit the specific diam of the opening. Device shall be installed around cables in accordance with the accompanying installation instructions. Device provided in nom 1, 2 and 4 in. sizes. Max diam of opening in wall for 1, 2 and 4 in. size devices are 1-1/4, 2-7/16 and 4-1/2 in., respectively.
UNIQUE FIRE STOP PRODUCTS INC — Split Sleeve
B. **Packing Material —** Min 1 in. thickness of min 4.0 pcf mineral wool batt insulation firmly packed into Split Sleeve as a permanent form. Packing material to be recessed from each end of Split Sleeve as required to accommodate the required thickness of fill material.
C. **Fill, Void or Cavity Material* — Caulk, Sealant or Putty —** Min 1 in. thickness of fill material applied within the Split Sleeve, flush with both ends.
3M COMPANY — CP 25WB+ Caulk, MPS-2+ Putty or FB-3000 WT Sealant

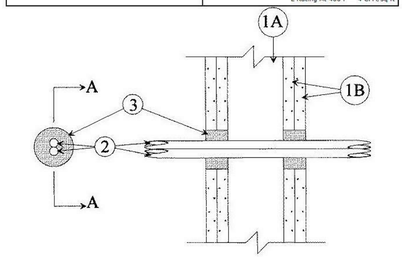
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2011-08-24

D7 UL W-L-3068
NTS

Design No. W-L-3071

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Item 1)
T Rating — 1/4 and 3/4 Hr (See Item 1)	FT Rating — 1/4 and 3/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 1 and 2 Hr (See Item 1)
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 1/4 and 3/4 Hr (See Item 1)
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft



SECTION A-A

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. (405 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 tappered 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 3 in. (76 mm).
The hourly F, FH Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T, FT, FTH Rating of the firestop system is 1/4 and 3/4 hr for 1 and 2 hr rated wall assemblies, respectively.

2. **Cables —** Max two 3/C with ground No. 2/0 AWG aluminum or copper Type SER cable with polyvinyl chloride (PVC) insulation. Cable to be rigidly supported on both sides of wall assembly. The annular space between the cables and the periphery of opening shall be min 1/2 in. to max 1-1/2 in. (13 to 38 mm).

3. **Fill, Void or Cavity Material* — Sealant —** Installed to completely fill the annular space between the cables and gypsum wallboard on both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-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.**

Last Updated on 2015-01-23

H7 UL W-L-3071
NTS

Design No. W-L-3117

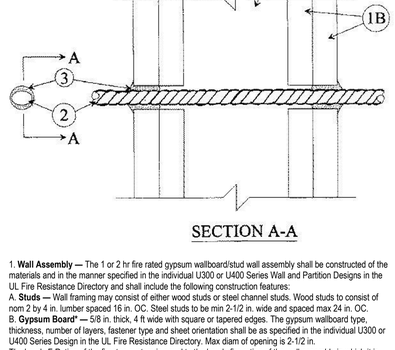
November 20, 1999

F Ratings — 1 and 2 Hr (See Item 1B)

T Ratings — 1/2, 1 and 2 Hr (See Item 3)

L Rating At Ambient — 8 CFM/sq ft

L Rating At 400 F — Less Than 1 CFM/sq ft



SECTION A-A

1. **Wall Assembly —** The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 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. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
B. **Gypsum Board* —** 5/8 in. thick, 4 ft 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 U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 2-1/2 in.
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Through-Penetrating Product* —** Max four copper conductor No. 2/0 AWG (or smaller) aluminum or steel **Metal-Clad Cable+** or max four copper conductor No. 1 AWG (or smaller) aluminum **Armored Cable#** . Max one cable to be installed either concentrically or eccentricity within the firestop system. The annular space within the firestop system shall be a min 0 in. (point contact) to a max 3/8 in. Through-penetrating product to be rigidly supported on both sides of wall assembly.
SOUTHWIRE CO
2A. **Cables —** As an alternate to Item 2, one cable to be installed either concentrically or eccentricity within the firestop system. The annular space within the firestop system shall be a min 0 in. (point contact) to a max 1/4 in. Cable to be rigidly supported on both sides of wall assembly. The following types and sizes of cables may be used:
A. Max 50 pair No. 24 AWG (or smaller) copper conductor telephone cables with polyvinyl chloride (PVC) insulation and jacket materials.
B. Max 3/C (with ground) — No. 10 AWG (or smaller) PVC insulated and jacketed nonmetallic sheathed (Romex) cable.
C. Max 3/C (with ground) No. 2/0 AWG aluminum conductor service entrance cable with PVC insulation and jacket materials.
3. **Fill, Void or Cavity Material* — Sealant or Putty —** Fill material applied within the annulus, flush with both surfaces of wall. Additional fill material to be installed such that a crown is formed around the penetrating item. The T Rating of the firestop system is dependent upon the hourly rating of the wall, type of through penetrant and type and thickness of fill material as tabulated below:

Rating of Wall Hr	Type of Through Penetrant	Type of Fill Mtl	Thkns of Fill Mtl In.	Thkns of Fill Mtl Crown In.	T Rating Hr
1	Telephone Cable	Sealant	5/8	1/4	1
2	Telephone Cable	Sealant	5/8	1/4	2
1	Telephone Cable	Putty	5/8	3/8	1
2	Telephone Cable	Putty	3/4	1/4	2
1	Romex Cable	Sealant	5/8	3/8	1
2	Romex Cable	Sealant	3/4	1/4	2
1	Romex Cable	Putty	5/8	3/8	1
2	Romex Cable	Putty	3/4	1/4	2
2	Service Cable	Sealant	5/8	1/4	1/2
1	Service Cable	Sealant	5/8	1/4	1/2
2	Metal Clad or Armored Cable	Sealant	5/8	1/4	1/2
1	Metal Clad or Armored Cable	Sealant	5/8	1/4	1/2

SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102 or 105 Sealant or SpecSeal Putty

*Bearing the UL Classification Marking

+Bearing the UL Listing Mark

Last Updated on 1999-11-20

H9 UL W-L-3117
NTS

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

UL REFERENCE DIRECTORY - WALL PENETRATIONS

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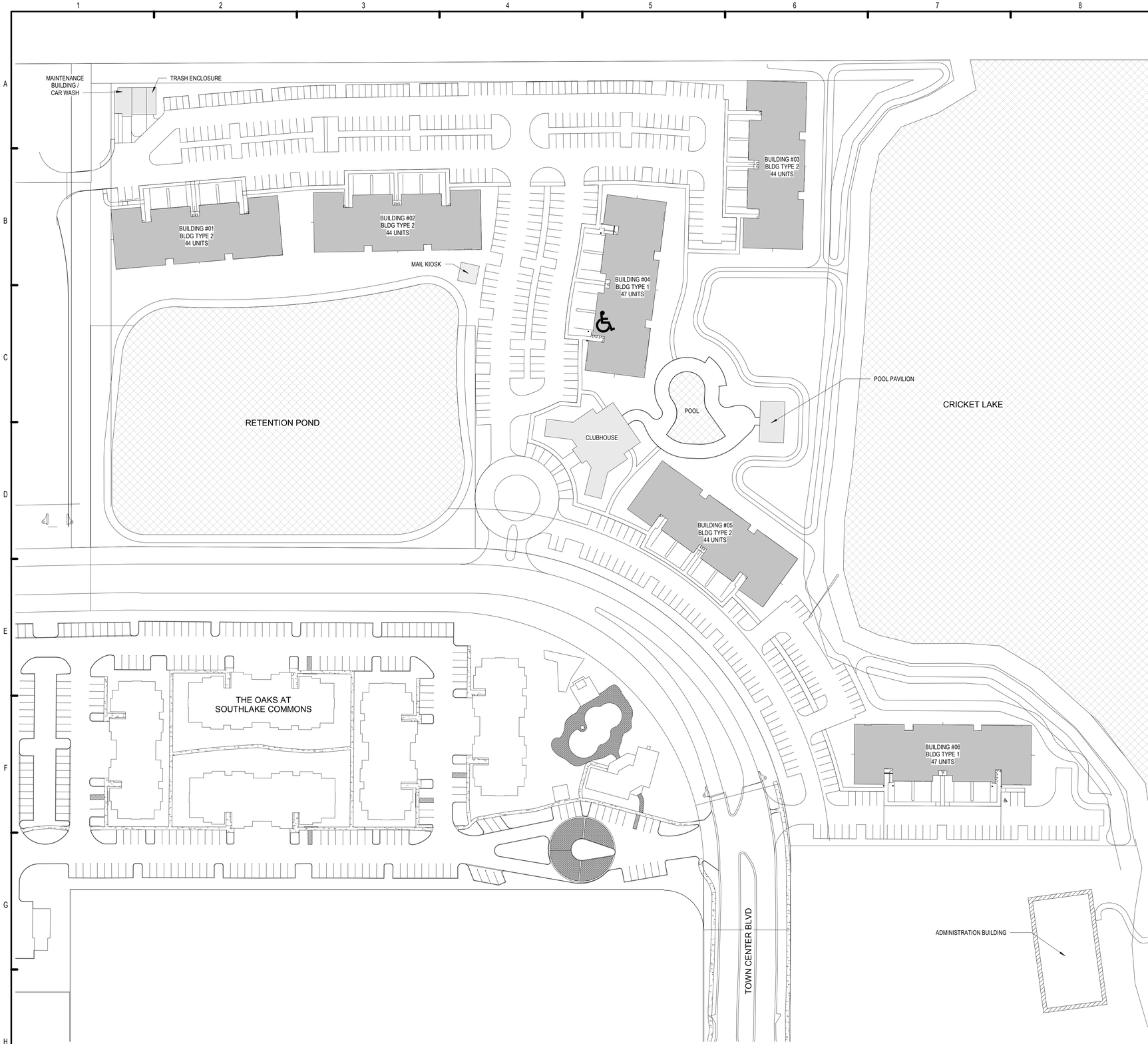

H1 ARCHITECTURAL SITE PLAN - 1-60

1" = 60'-0"

GENERAL NOTES:

1. SEE CIVIL PLAN FOR PARKING SUMMARY.
2. THIS SITE PLAN IS FOR ARCHITECTURAL INFORMATION ONLY. SEE CIVIL & LANDSCAPE DOCUMENTS FOR SPECIFIC BUILDING LOCATION & OTHER SITE REQUIREMENTS. SEE LANDSCAPE DRAWINGS UNDER SEPARATE COVER FOR SITE CONFIGURATION, LAYOUT, GRADING AND RELATED INFORMATION
3. THE SWIMMING POOL(S) SHOWN ON THE DRAWINGS ARE PROVIDED FOR GENERAL LOCATION AND SHAPE SUGGESTION PURPOSES ONLY. FUGLEBERG KOCH LLC IS NOT QUALIFIED TO PROVIDE SERVICES FOR POOLS AND MAKES NO ATTEMPT TO DO SO. POOL DESIGN DOCUMENTS FOR CONSTRUCTION, CODE COMPLIANCE, AGENCY APPROVALS, CONSTRUCTION CERTIFICATION AND OTHER SERVICES REQUIRED FOR THE POOL(S) SHALL BE PERFORMED BY OTHERS UNDER THE SEPARATE CONTRACT WITH THE OWNER

LEGEND:

M.C METER CENTER. APROX 2000 AMP LOAD PER NEC

DESIGNATED ACCESIBLE GARAGE

SITE PLAN - AREAS FOR PERMITTING

Building Type / Level	Building Number	Area
BUILDING TYPE 1		
GRND. LEVEL	1	4382.3 SF
		4382.3 SF
GRND. LEVEL	8	4382.3 SF
		4382.3 SF
		8764.5 SF
BUILDING TYPE 2		
GRND. LEVEL	2	4945.6 SF
		4945.6 SF
		4945.6 SF
BUILDING TYPE 3		
GRND. LEVEL	3	4874.8 SF
		4874.8 SF
		4874.8 SF
CLUBHOUSE		
GRND. LEVEL	20	2780.7 SF
		2780.7 SF
		2780.7 SF
MAIL KIOSK		
GRND. LEVEL	22	64.4 SF
		64.4 SF
		64.4 SF
MAINTENANCE		
GRND. LEVEL	23	836.0 SF
		836.0 SF
		836.0 SF
POOL PAVILION		
GRND. LEVEL	21	561.0 SF
		561.0 SF
		561.0 SF
TRASH COMPACTOR		
GRND. LEVEL	24	682.7 SF
		682.7 SF
		682.7 SF
		23509.9 SF

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET.
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH

2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103

CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II

LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

ARCHITECTURAL SITE PLAN

A1.01

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BUILDING CODE ANALYSIS - 2014 FLORIDA BUILDING CODE

CODE SUMMARY (APPLICABLE CODES)

1. BUILDING CODE:	2014 FLORIDA BUILDING CODE
2. PLUMBING CODE:	2014 PLUMBING CODE
3. ENERGY CODE:	2014 FLORIDA ENERGY CONSERVATION CODE AND AMMENDMENTS
4. MECH. CODE:	2014 FLORIDA MECHANICAL CODE
5. LIFE SAFETY:	2014 NFPA 101, 2015 EDITION
6. FIRE CODE:	2014 FLORIDA FIRE PREVENTION CODE
7. ELEC. CODE:	2011 NATIONAL ELECTRIC CODE
8. ACCESSIBILITY CODE REFERENCE:	2014 FLORIDA BUILDING CODE, ACCESSIBILITY FHA - FAIR HOUSING ACCESSIBILITY GUIDELINES ANSI A11.7.1, 2003 EDITION
9. NFPA 101, STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2014 EDITION	

GENERAL CODE PARAMETERS
CLUBHOUSE

DESCRIPTION	REQUIRED OR ALLOWABLE	THIS PROJECT	REFERENCE FBC 2014	REMARKS
CONSTRUCTION TYPE	TYPE V (B)	TYPE V (B)	TABLE 503	
USE / OCCUPANCY	A-3	A-3	CH. 3	
FIRE RATING	0	0	TABLE 601	
OCCUPANCY SEPARATION	N	N	TABLE 508.4	
SPRINKLER	NO	NO	SEC 903.2.1.3	
MIN NO. OF EXITS	2	2	TABLE 1015.1/1021.2	
MIN. CORRIDOR WIDTH	44 INCHES	58 INCHES	SEC 1005.1 TABLE 1018.2	
MAX. NO STORIES	1	1	TABLE 503	
HEIGHT LIMIT	40'	24' 7"	TABLE 503	
MAX FLOOR AREA	6000 SF	4229 SF	TABLE 503	
WIND SPEED	130-140 MPH	130-140 MPH	SEC. 1609	
SEISMIC ZONE	-	-	-	SEE STRUCT.

GENERAL CODE PARAMETERS
MAINTENANCE

DESCRIPTION	REQUIRED OR ALLOWABLE	THIS PROJECT	REFERENCE FBC 2014	
CONSTRUCTION TYPE	TYPE V (B)	TYPE V (B)	TABLE 503	
USE / OCCUPANCY	U	U	CH. 3	
FIRE RATING	0	0	TABLE 601	
OCCUPANCY SEPARATION	N	N	TABLE 508.4	
SPRINKLER	NO	NO	SEC 903.2.1.3	
MIN NO. OF EXITS	1	1	TABLE 1021.2	
MIN. CORRIDOR WIDTH	-	-	SEC 1005.1 TABLE 1018.2	
MAX. NO STORIES	1	1	TABLE 503	
HEIGHT LIMIT	40'	19' 6"	TABLE 503	
MAX FLOOR AREA	5500 SF	1312 SF	TABLE 503	
WIND SPEED	130-140 MPH	130-140 MPH	SEC. 1609	
SEISMIC ZONE	-	-	-	SEE STRUCT.

GENERAL CODE PARAMETERS
POOL PAVILION

DESCRIPTION	REQUIRED OR ALLOWABLE	THIS PROJECT	REFERENCE FBC 2014	
CONSTRUCTION TYPE	TYPE V (B)	TYPE V (B)	TABLE 503	
USE / OCCUPANCY	A-3	A-3	CH. 3	
FIRE RATING	0	0	TABLE 601	
OCCUPANCY SEPARATION	N	N	TABLE 508.4	
SPRINKLER	NO	NO	SEC 903.2.1.3	
MIN NO. OF EXITS	-	-	TABLE 1021.2	
MIN. CORRIDOR WIDTH	-	-	SEC 1005.1 TABLE 1018.2	
MAX. NO STORIES	1	1	TABLE 503	
HEIGHT LIMIT	40'	18' 11 1/2"	TABLE 503	
MAX FLOOR AREA	6000 SF	1482 SF	TABLE 503	
WIND SPEED	130-140 MPH	130-140 MPH	SEC. 1609	
SEISMIC ZONE	-	-	-	SEE STRUCT.

EGRESS WIDTH

OCCUPANCY CLASSIFICATION	TOTAL OCCUPANTS (PER OCCUPANT LOAD CALC.)	EGRESS WIDTH PER PERSON SERVED (REQ'D.)		EGRESS WIDTH PROVIDED	
		STAIRWAYS (IN. PER OCCUPANT)	EXIT DOOR WIDTH (INCHES PER OCCUPANT)	STAIRWAYS	EXIT DOOR WIDTH
R-2	150 (WORST CASE)	0.3 (0 OCCUPANTS) =	0.2 (150 OCCUPANTS) = 30"	0	99"

MEANS OF EGRESS - [IBC TABLE 1016.1 & NFPA]

OCCUPANCY CLASSIFICATION	LOCATION	MAX. TRAVEL DISTANCE TO EXIT (ALLOWABLE)		MAX. TRAVEL DISTANCE (ACTUAL - WORST CASE)	REMARKS
		UNSPRINK.	SPRINK.		
A-3	CLUBHOUSE	200'	250'	38'-8"	
A-3	MAINTENANCE	200'	250'	20'-0"	

PLUMBING FIXTURES REQ'D - IBC 2012 TABLE 2902.1

OCCUPANCY CLASSIFICATION	LOCATION	WATER CLOSETS (URINALS 419.2)			LAVATORIES		DRINKING FOUNTAIN	SERVICE SINK
		MALE	FEMALE	URINALS	MALE	FEMALE		
A-3	CLUBHOUSE	1 PER 125	1 PER 65		1 PER 200	1 PER 200	1 PER 500	1
TOTAL OCCUPANTS = 150		75	75		75	75		
FIXTURES REQUIRED		1	2	-	1	1	1	1
FIXTURES PROVIDED		1	2	1	1	2	1 HI / 1 LOW	1

OCCUPANT LOAD TABLE 1004.1.1
CLUBHOUSE

SPACE NAME	FUNCTION OF SPACE	FLOOR AREA	AREA PER OCCUPANT	OCCUPANT
ENTRY	ASSEMBLY - UNCONCENTRATED	122 SF	5 NET	25
LEASE	BUSINESS	169 SF	100 GROSS	2
OFFICE	BUSINESS	128 SF	100 GROSS	2
OFFICE	BUSINESS	140 SF	100 GROSS	2
WORK	BUSINESS	169 SF	100 GROSS	2
GAME	ASSEMBLY - UNCONCENTRATED	257 SF	15 NET	18
GATHERING	ASSEMBLY - UNCONCENTRATED	655 SF	15 NET	44
CAFE	ASSEMBLY - UNCONCENTRATED	116 SF	15 NET	8
COVERED PATIO	ASSEMBLY - UNCONCENTRATED	441 SF	15 NET	30
MECHANICAL	MECHANICAL	11 SF	300 GROSS	1
FITNESS	EXERCISE ROOM	757 SF	50 GROSS	16
TOTAL				150

OCCUPANT LOAD TABLE 1004.1.1
POOL PAVILION

SPACE NAME	FUNCTION OF SPACE	FLOOR AREA	AREA PER OCCUPANT	OCCUPANT
COVERED UNENCLOSED AREA	DECK	1082 SF	15 GROSS	73

ANCILLARY BUILDING GROSS AREA LEGEND

BUILDING	ENCLOSED AREA	COVERED UNENCLOSED AREA	TOTAL AREA
CLUBHOUSE	3,693 SF	512 SF	4205 SF
MAINTENANCE	692 SF	620 SF	1312 SF
POOL PAVILION	400	1082 SF	1482 SF

INTERIOR FINISH REQUIREMENTS

ALL INTERIOR FINISHES SHALL COMPLY W/ FBC 2014, CHAPTER 8. GROUP R-2 OCCUPANCY SHALL BE REQUIRED TO BE CLASS-C FOR ALL ROOMS & ENCLOSED SPACES PER FBC TABLE 803.9 & SHALL COMPLY W/ CLASS-C REQUIREMENTS AS DEFINED IN FBC SECTION 803.

FIRE-RESISTANCE RATING REQUIREMENTS (PER TABLE 601)
CLUBHOUSE - TYPE V(B)

	REQUIRED	PROVIDED
STRUCTURAL FRAME: INCLUDING COLUMNS, GIRDERS, TRUSSES	0	0
BEARING WALLS:		
EXTERIOR (PER TABLE 602)	0	0
INTERIOR	0	0
NONBEARING WALLS AND PARTITIONS:		
EXTERIOR (PER TABLE 601/602)	0	0
INTERIOR (PER SECTION 602)	0	0
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	0	0
ROOF CONSTRUCTION	0	0
SEPARATION DISTANCE (PER TABLE 602) 10' ≤ X < 30' TYPE V(A)	0	0

MINIMUM FLAME SPREAD INTERIOR FINISHES

SPACE DESCRIPTION NONSPRINKLERED	WALLS AND CEILINGS	NOTE	FLOORS	NOTE
EXIT ENCLOSURES-EXIT PASSAGEWAYS	A	NONE IN PROJECT	CLASS II	NONE IN PROJECT
CORRIDORS	A	NONE IN PROJECT	CLASS II	NONE IN PROJECT
ROOMS AND ENCLOSED SPACES	C		DOCFF-1	"PILL TEST"

FROM TABLE 705.8 - IFBC 2014]

MAXIMUM AREA OF EXTERIOR WALL OPENINGS:

FIRE SEPARATION DISTANCE	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA
30' OR GREATER	UNPROTECTED, SPRINKLERED	NO LIMIT
20' TO LESS THAN 25'	UNPROTECTED, SPRINKLERED	NOT REQUIRED

ENERGY CONSERVATION REQUIREMENTS

2014 F.B.C. - ENERGY CONSERVATION
CHAPTER 402.4

THE BUILDING THERMAL ENVELOPE SHALL BE DURABLY SEALED TO LIMIT INFILTRATION. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED WITH AN AIR BARRIER MATERIAL, SUITABLE FILM OR SOLID MATERIAL:

1- ALL JOINTS, SEAMS AND PENETRATIONS
2- SITE-BUILT WINDOWS, DOORS AND SKYLIGHTS.
3- OPENINGS BETWEEN WINDOWS AND DOOR ASSEMBLIES AND THEIR RESPECTIVES JAMBS AND FRAMING.
4- UTILITY PENETRATIONS.
5- DROPPED CEILINGS OR CHASES ADJACENT TO THE THERMAL ENVELOPE.
6- KNEE WALLS.
7- WALLS AND CEILINGS SEPARATING A GARAGE FROM CONDITIONED SPACES.
8- BEHIND TUBS AND SHOWERS ON EXTERIOR WALLS
9- COMMON WALLS BETWEEN DWELLING UNITS.
10- ATTIC ACCESS OPENINGS.
11- RIM JOIST JUNCTION.
12- OTHER SOURCES OF INFILTRATION.

FLORIDA PRODUCT APPROVAL CHECKLIST - [FBC 2010] (APARTMENTS & CLUBHOUSE)

CATEGORY / SUBCATEGORY	MANUFACTURER	PRODUCT DESCRIPTION	DESIGN PRESSURE +/-	WIND BORNE DEBRIS PROTECTION	APPROVAL NUMBER(S)
A. EXTERIOR DOORS					
SWINGING	WINDSOR REPUBLIC DOORS	STEEL EXT. DOOR DL416	+65 / -65	NO	FL 14963
SWINGING FRENCH	MASONITE	GLASS	+43.0 / -45.0	NO	FL 4940.5
B. WINDOWS					
DOUBLE HUNG	~~JELD WEN~~ WINDOWS ~~JELD WEN~~	DOUBLE HUNG V-4500	+50.0 / -50.0	NO	FL 16309.1
FIXED	WINDOWS	FIXED V-4500	+50.0 / -50.0	NO	FL 14784.3
C. PANEL WALL					
METAL PANELS	BERRIDGE	THIN LINE WALL PANEL	+187 / -135	NO	FL 14669.9-R1
STOREFRONT	KAWNEER NA	TRIFAB 350 STOREFRONT	+30 / -30	NO	FL 10388.1
D. ROOFING PRODUCTS					
UNDERLAYMENTS	W.R. GRACE	ICE & WATER SHIELD HT	N/A	NO	FL 298.1
METAL SOFFITS	BERRIDGE	THIN LINE WALL PANEL	+187 / -135	NO	FL 14669.9-R1
TPO ROOF	GAF	60 MIL SINGLE-PLY ROOF	N/A	NO	FL 3443 - R6

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

CODE ANALYSIS - CLUBHOUSE

CH0.02

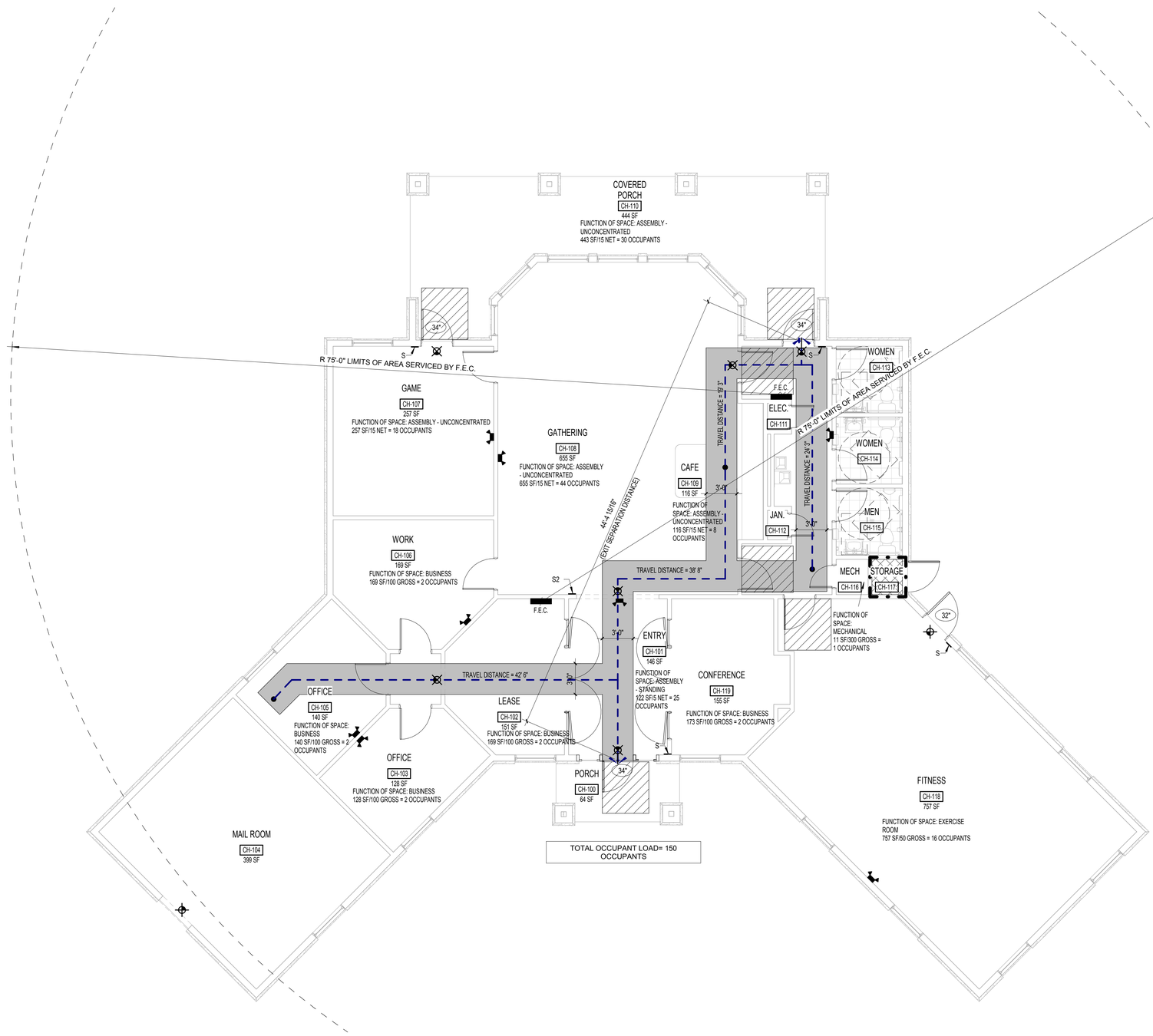
PLOTTED: 11/30/2017 5:33:38 PM

LIFE SAFETY NOTES

1. PERMIT REQUIREMENTS BY CONTRACTOR: THE CONTRACTOR IS REQUIRED TO PROVIDE SIGNED & SEALED TRUSS DRAWING FOR THE ARCHITECTS REVIEW & ACCEPTANCE. THE CONTRACTOR WILL BE REQUIRED TO SUPPLY ACCEPTED SIGNED & SEALED COPY OF THE TRUSS SHOP DRAWING TO THE CITY OF LAKE COUNTY, FL BUILDING DEPARTMENT PRIOR TO THE FIRST INSPECTION.
2. SEE CH0.02 FOR CODE DATA COMPLYING WITH THE FBC BUILDING CODE 2014 (5TH EDITION) BUILDING & INTERNATIONAL FIRE PREVENTION CODE 2014 (5TH EDITION).
3. PROVIDE RECESSED PORTABLE FIRE EXTINGUISHERS AS REQUIRED BY NFPA 10 STANDARDS FOR PORTABLE FIRE EXTINGUISHERS' 2012 EDITION. VERIFY EXACT LOCATION AND F.E. TYPE WITH FIRE OFFICIAL.
4. FIRE EXTINGUISHERS IN PUBLIC SPACES SHALL BE LOCATED WITHIN 75' TRAVEL DISTANCE.

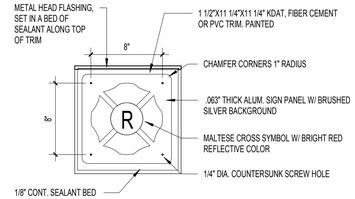
LIFE SAFETY LEGEND

- EMERGENCY LIGHT
- ILLUMINATED EXIT SIGN
- TRAVEL DISTANCE TO EXIT
- F.E.C. — FIRE EXTINGUISHER VERIFY EXACT LOCATIONS AND TYPES WITH LOCAL FIRE OFFICIALS
- 36" ACCESSIBLE ROUTE
- MANEUVERING CLEARANCE SPACE
- REQUIRED 1 HOUR FIRE SEPARATION
- XX — CLEAR WIDTH AT EXIT DOORS
- S — TACTILE EXIT SIGN. B.O. LETTERING AT 48" AFF.
- S2 — MAX. OCCUPANCY SIGN AT 48" AFF.
- 1 HOUR RATED GYPSUM CEILING PER UL P544



H1 CLUBHOUSE - LIFE SAFETY PLAN

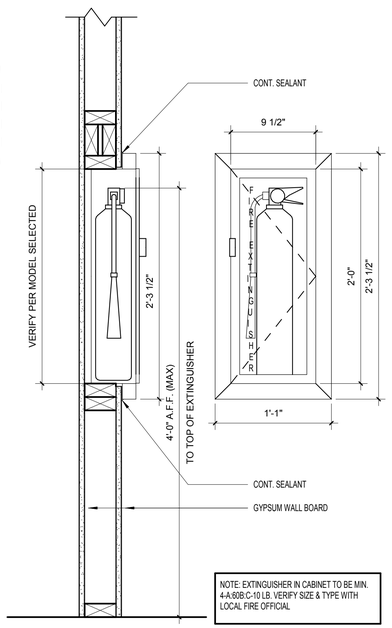
3/16" = 1'-0"



NOTE:
SEE ELEVATIONS FOR LOCATION IN BUILDINGS

D9 FIRE SIGN DETAIL

1 1/2" = 1'-0"



NOTE: EXTINGUISHER IN CABINET TO BE MIN. 4-A:60B:C-10 LB. VERIFY SIZE & TYPE WITH LOCAL FIRE OFFICIAL

H9 SEMI RECESSED FIRE EXTINGUISHER CABINET

1 1/2" = 1'-0"

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FLORIDA LICENSE # AR94111

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CLUBHOUSE LIFE SAFETY PLANS

CH0.05

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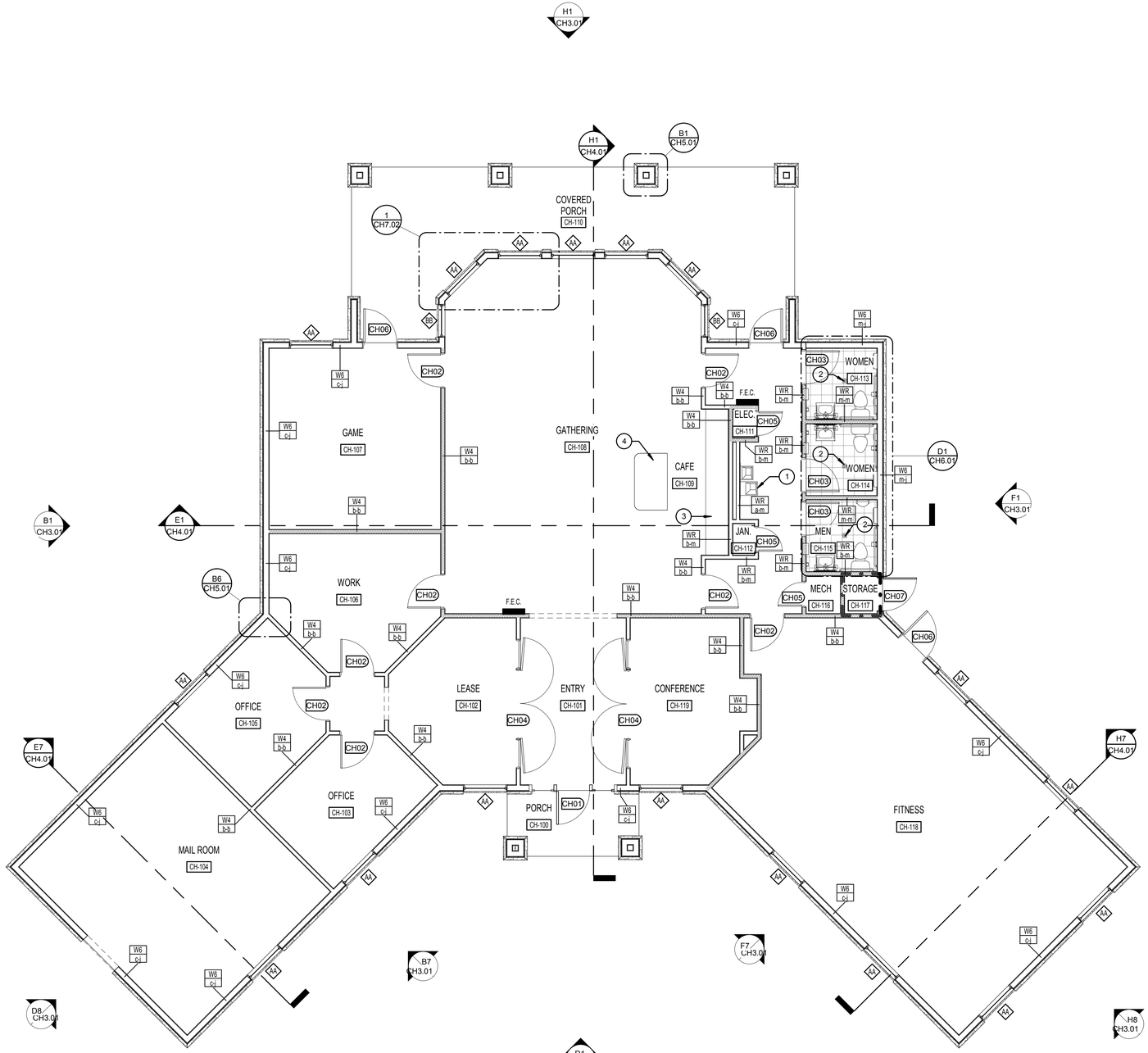

H1 CLUBHOUSE - REFERENCE PLAN

3/16" = 1'-0"

PARTITION LEGEND:

CONCRETE
- C8 = 8" CONCRETE
- C6 = 6" CONCRETE
- C5 = 5" CONCRETE
- C4 = 4" CONCRETE

EXISTING PARTITION
- E = EXISTING PARTITION. USE MODIFIER FOR FURRING OVER EXISTING WALL

FURRING
- F2 = 1-1/2" FURRING
- F4 = 3-1/2" FURRING
- F6 = 5-1/2" FURRING

MASONRY
- M12 = 12" CMU
- M10 = 10" CMU
- M8 = 8" CMU
- M4 = 4" CMU

PATCHING OR INFILL
- P = PATCHING OF WALL (OR INFILL) TO MATCH ADJACENT CONSTRUCTION IN EXISTING WALL

SHAFT WALL
- H4 = 4" C-H STUDS
- H2 = 2-1/2" C-H STUDS

STEEL STUD
- S6 = 6" METAL STUDS
- S4 = 3-5/8" METAL STUDS
- S2 = 2-1/2" METAL STUDS
- S1 = 1-5/8" METAL STUDS

WOOD STUD
- W8 = 1-1/2" X 7-1/4" WOOD STUDS
- W6 = 1-1/2" X 5-1/2" WOOD STUDS
- W4 = 1-1/2" X 3-1/2" WOOD STUDS

OTHER
- R = INDICATES RATED ASSEMBLY

W4 b-b

MODIFIERS
- a. UNFINISHED
- b. (1) LAYER SHEATHING
- c. (1) LAYER SHEATHING & INSULATION
- d. (2) LAYERS SHEATHING
- e. (2) LAYERS SHEATHING & INSULATION
- f. (1) LAYER SHEATHING WITH FURRING
- g. (1) LAYER SHEATHING WITH FURRING & INSULATION
- h. STUCCO
- i STUCCO, LATH, BUILDING PAPER, BUILDING WRAP, SHEATHING
- j SIDING, BUILDING PAPER, BUILDING WRAP, SHEATHING
- k. STONE VENEER
- l. STONE VENEER, LATH, BUILDING PAPER, BUILDING WRAP, SHEATHING
- m. (1) LAYER M.R. / CEMENTITIOUS SHEATHING
- n. (1) LAYER M.R. / CEMENTITIOUS SHEATHING & INSULATION
- o. (2) LAYERS M.R. / CEMENTITIOUS SHEATHING
- p. (2) LAYERS M.R. / CEMENTITIOUS SHEATHING & INSULATION
- q. (1) LAYER M.R. / CEMENTITIOUS SHEATHING WITH FURRING
- r. (1) LAYER M.R. / CEMENTITIOUS SHEATHING WITH FURRING & INSULATION
- s. SKIM COAT FINISH
- t. BRICK VENEER, AIRSPACE, BUILDING PAPER, BUILDING WRAP, SHEATHING
- u. MASONRY
- v. (1) LAYER M.R. SHEATHING

LEGEND

F.E.C. — FIRE EXTINGUISHER VERIFY EXACT LOCATIONS AND TYPES WITH LOCAL FIRE OFFICIALS

— · — REQUIRED 1 HOUR FIRE SEPARATION

BATT. INSULATION

NOTES

1. WATER FOUNTAIN
2. FLOOR DRAIN
3. COUNTERTOP
4. ISLAND

PERMIT REVIEW STAMP

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CONSULTANT

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FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
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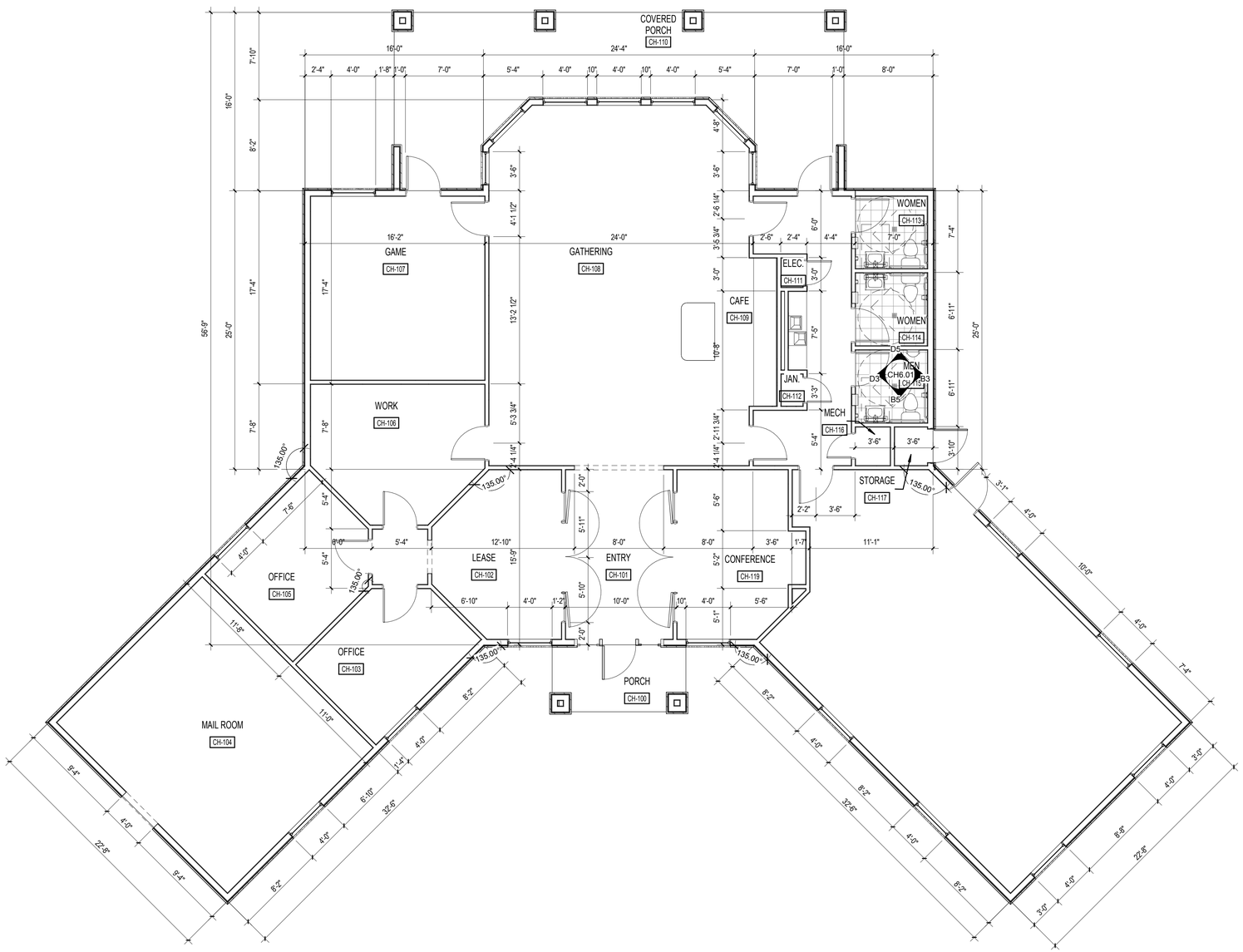
CLUBHOUSE REFERENCE PLAN

CH2.01

PLOTTED: 11/30/2017 5:33:48 PM

GENERAL NOTES:

1. OVERALL PLAN DIMENSIONS ARE FROM OUTSIDE FACE OF STUD OR FACE OF MASONRY. ALL WINDOW AND DOOR DIMENSIONS ARE TO CENTERLINE OF OPENING. UNLESS NOTED OTHERWISE.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
3. REFER TO REFLECTED CEILING PLANS FOR R.C.P. INFORMATION.
4. SEE CIVIL PLANS FOR ACTUAL FINISH FLOOR ELEVATIONS.
5. VERIFY EXACT LOCATION AND FIRE EXTIGUISHERS TYPE WITH FIRE OFFICIALS.
6. INSULATION - SEE SPECIFICATIONS FOR SCHEDULE OF INSULATION VALUES.
7. ALL VINYL, TILE, AND HARD SURFACE FLOORING AREAS TO HAVE 3/4" GYPSUM FLOOR TOPPING UNDERLAYMENT OVER 6mm SOUND INSULATION. WHERE CARPET AREAS ARE LOCATED, INCREASE GYPSUM FLOOR TOPPING TO 1" IN THICKNESS TO FLUSH OUT AT HARD SURFACE AREAS.
8. SEE A7.00 SERIES SHEETS FOR DOOR & WINDOW INFORMATION.
9. DOOR THRESHOLD TO MEET ADA ACCESSIBILITY REQUIREMENTS. GC. TO COORDINATE FINISH WALKWAY SURFACE W/ HARDFSCAPE/LANDSCAPE DWGS. TYPICAL.



H1 CLUBHOUSE - DIMENSION PLAN
3/16" = 1'-0"

PERMIT REVIEW STAMP

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CLUBHOUSE DIMENSION PLAN

CH2.02

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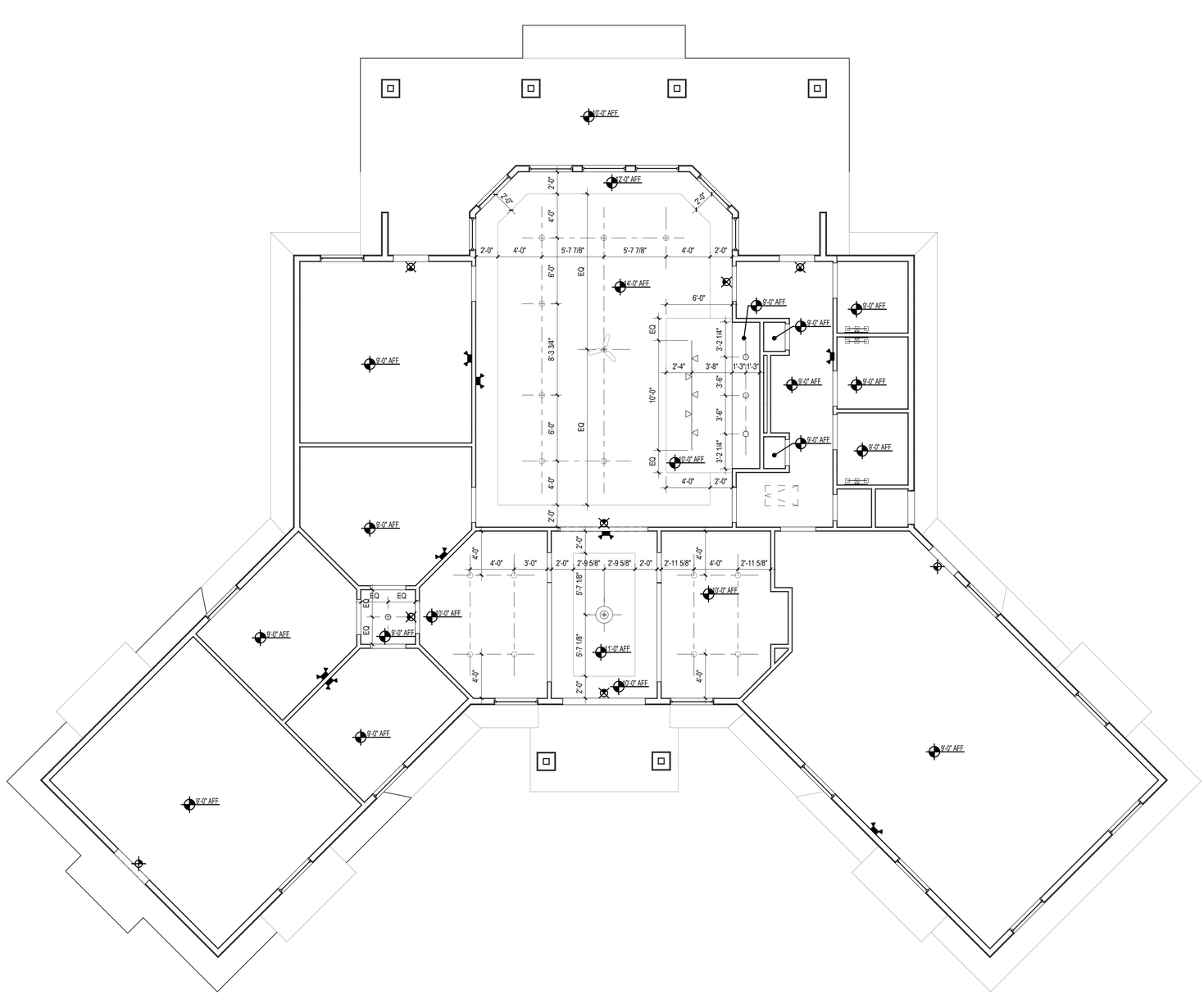

H1 CLUBHOUSE - RCP
3/16" = 1'-0"

LEGEND:

- 2' x 2' SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE (SEE ELECTRICAL)
- SUPPLY AIR GRILL (SEE MECHANICAL)
- RETURN AIR GRILL (SEE MECHANICAL)
- RECESSED CAN LIGHT FIXTURE (SEE ELECTRICAL)
- PENDANT LIGHT FIXTURE
- 52" TYP. SUSPENDED CEILING FAN (SEE ELECTRICAL)
- EXIT SIGN
- TRACK LIGHTING
- EMERGENCY LIGHT
- ATTIC ACCESS

PERMIT REVIEW STAMP

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CLUBHOUSE RCP

CH2.03

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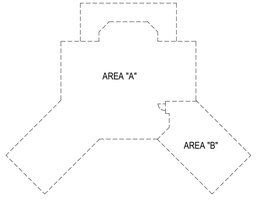


Clubhouse Key Plan
1" = 30'-0"

VENTILATION SCHEDULE			
SOFFIT VENT at EAVE	SINGLE LEG CONTINUOUS SOFFIT VENT BY "TAMLYN" OR SIMILAR	0.0625	net sq. ft./lin ft.
		9.0	net sq. in./lin ft.
RIDGE VENT	OFF RIDGE VENT (6'-0") BY "TAMCO" OR SIMILAR	1.46	net sq. ft.
		210	net sq. in.

ATTIC VENT CALCULATIONS AREA "A"	REQUIRED	PROVIDED
- TOTAL ROOF AREA - PER FBC 2014 (1/130) - VENTILATED AREA	3,860 S.F. X .00333 **12.86 S.F.**	
- TOTAL SOFFIT LINEAR FT - OPEN NET VENT (TAMLYN)	**YES**	206' LF X .0625
- NET FREE AREA REQ'D	**6.43 S.F. (50%)**	**12.875 S.F.**
- LINEAR FEET OF VENT - NET OFF RIDGE VENT AREA		1.46 S.F. X 5
- NET FREE AREA REQ'D	**6.43 S.F. (50%)**	**7.3 S.F.**
- TOTAL VENTILATED AREA	**12.86 S.F.**	**20.175 S.F.**

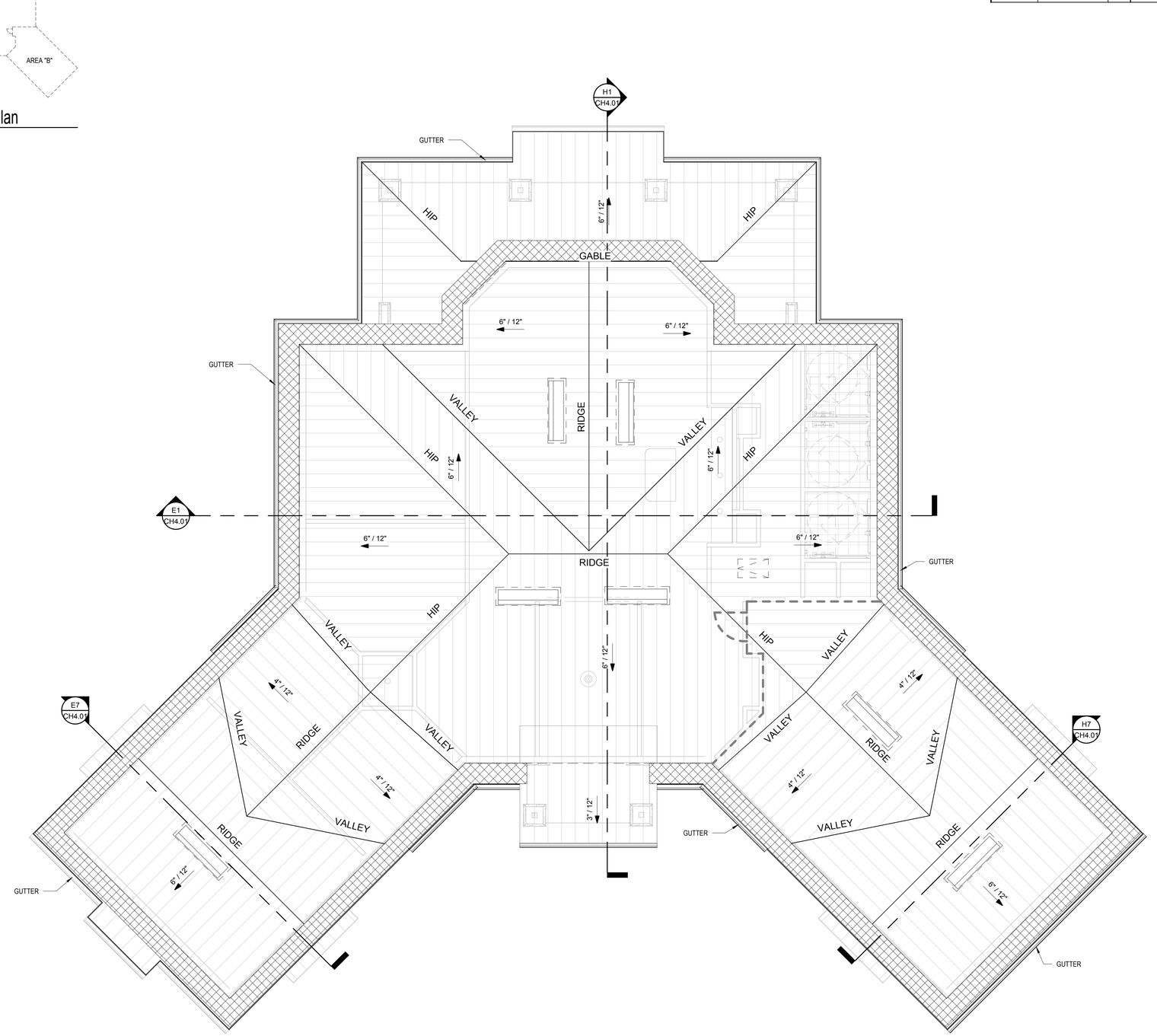
ATTIC VENT CALCULATIONS AREA "B"	REQUIRED	PROVIDED
- TOTAL ROOF AREA - PER FBC 2014 (1/130) - VENTILATED AREA	1,003 S.F. X .00333 **3.34 S.F.**	
- TOTAL SOFFIT LINEAR FT - OPEN NET VENT (TAMLYN)	**YES**	92' LF X .0625
- NET FREE AREA REQ'D	**1.67 S.F. (50%)**	**5.75 S.F.**
- LINEAR FEET OF VENT - NET OFF RIDGE VENT AREA		1.46 S.F. X 2
- NET FREE AREA REQ'D	**1.67 S.F. (50%)**	**2.92 S.F.**
- TOTAL VENTILATED AREA	**3.34 S.F.**	**8.67 S.F.**

ROOF NOTES:

1. PAINT ALL ROOF VENTS & PENETRATIONS TO MATCH ROOF COLOR
2. COORDINATE DOWN SPOUT DISCHARGE WITH CIVIL DRAWINGS. WHERE NOT TAKEN TO STORM, PROVIDE SPLASH BLOCK.
3. LEAVE OPENING IN MAIN ROOF SHEATHING FOR VENTILATION UNDERNEATH OVER BUILT AREAS.
4. DOWNSPOUTS AND GUTTERS SHOWN ARE MIN. REQUIREMENTS SUBJECT TO OWNER'S CONSIDERATIONS.
5. CONTRACTOR SHALL BE RESPONSIBLE TO MEET MINIMUM ROOF VENT REQUIREMENTS.
6. GENERAL CONTRACTOR SHALL COORDINATE ALL ROOF ACCESSORIES INSTALLATION DETAILS PER MANUFACTURERS SPEC'S TO MAINTAIN THE WATERTIGHT SYSTEM & EXTENDED WATERPROOFING WARRANTY.
7. SEE CIVIL SITE PLAN FOR BUILDING ORIENTATION. CARDINAL DIRECTIONS SHOWN FOR REFERENCE ONLY.

LEGEND:

- ATTIC DRAFTSTOPPING PARTITION
- REMOVABLE ACCESS PANEL. MIN. 36" X 36". SEE DETAIL ??/??? — MODIFY
- SOFFIT
- OFF RIDGE VENT
- D.S. DOWNSPOUT
- 1HR. FIRE RATED ATTIC ACCESS PANEL, MIN. 22"X36". COORDINATE WITH ROOF TRUSSES



H2 CLUBHOUSE - ROOF PLAN
3/16" = 1'-0"

PERMIT REVIEW STAMP

ISSUE HISTORY

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CLUBHOUSE ROOF PLAN

CH2.04

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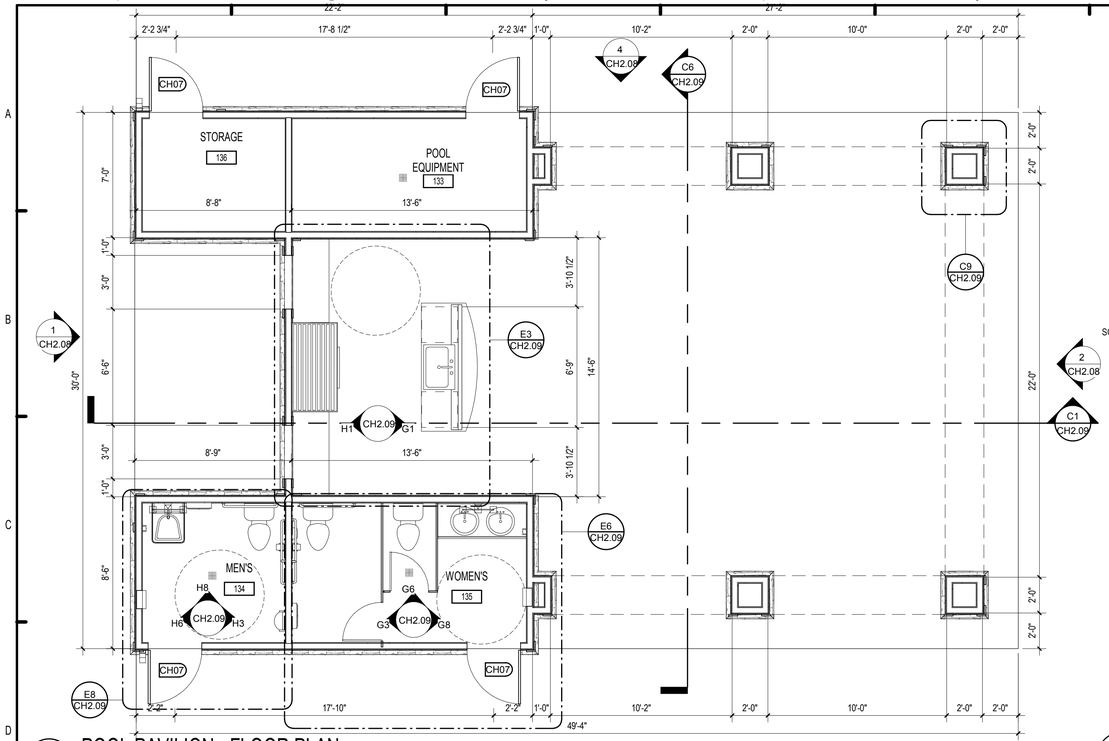
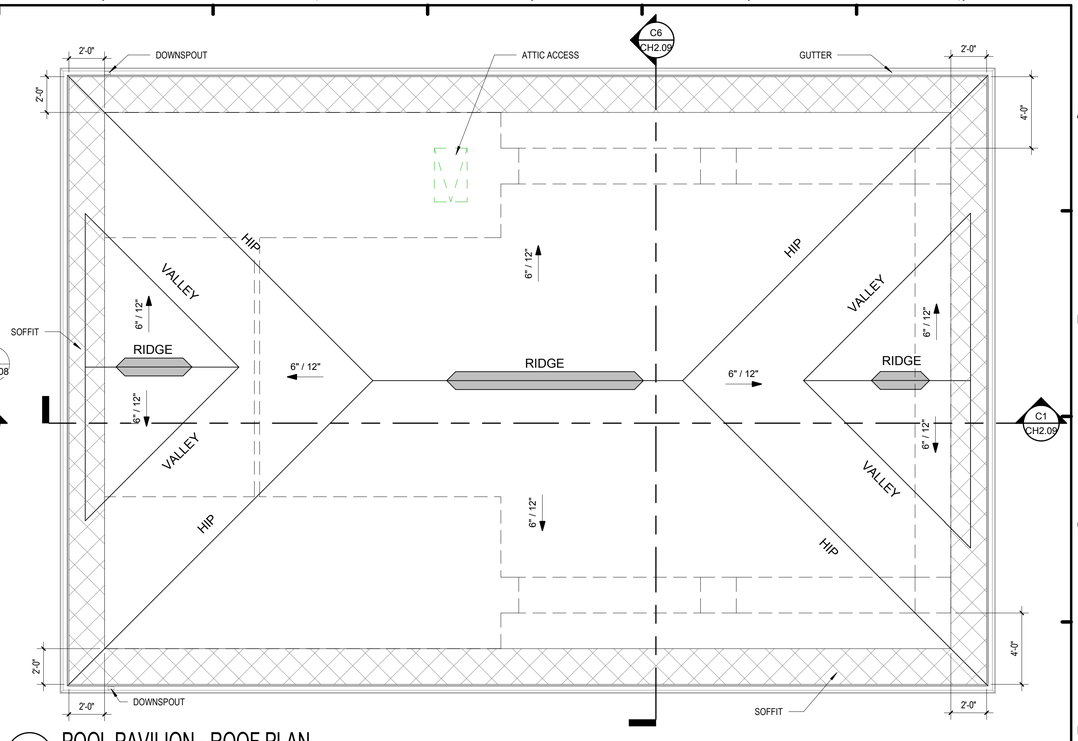
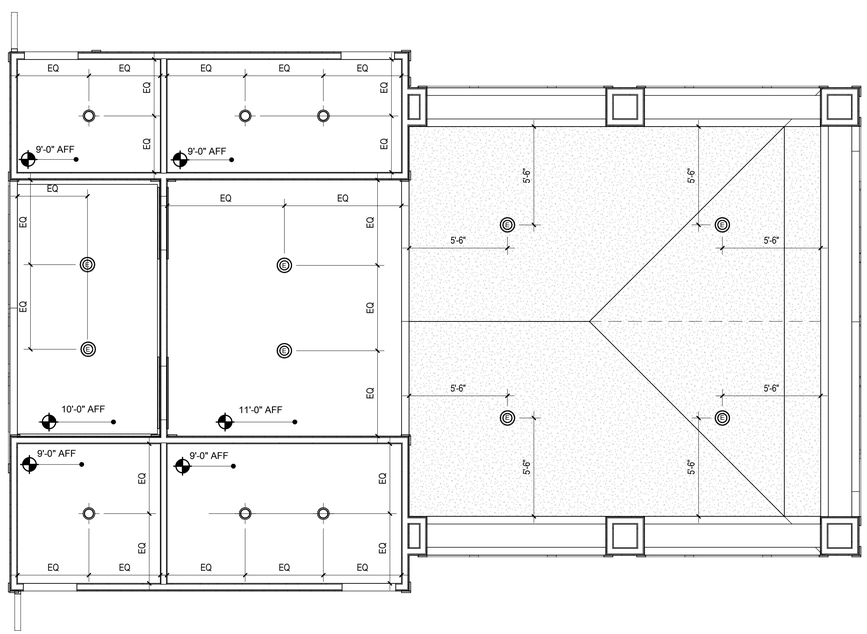


D1 POOL PAVILION - FLOOR PLAN
1/4" = 1'-0"



D6 POOL PAVILION - ROOF PLAN
1/4" = 1'-0"



H1 POOL PAVILLION - RCP
1/4" = 1'-0"

VENTILATION SCHEDULE		
ROOF VENT	MF'GR & MODEL #	FREE AREA
RIDGE VENT 2@ 8FT	CORA-A-VENT V-600E	0.14 SQ. FT

ATTIC VENT CALCULATION		AREA "A"
	REQUIRED	PROVIDED
-TOTAL ROOF AREA -PER FBC 2010 (1/300) -VENTILATED AREA	1,763 SF X .0033 **5.82SF**	
-TOTAL SOFFIT LINEAR FOOT -OPENING NET VENTILATION -NET FREE AREA	**2.91 SF (50%)**	162 LF X .062 SF 10.04**SF**
-NET RIDGE VENT AREA -NUMBER OF VENTS (3) -NET FREE AREA	**2.91 SF (50%)**	21 LIN. FT. X 0.14 SQ. FT. **2.94 SF**
TOTAL VENTILATED AREA	**5.82 SF**	**12.98 SF**

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POOL PAVILION PLANS AND RCP

CH2.07

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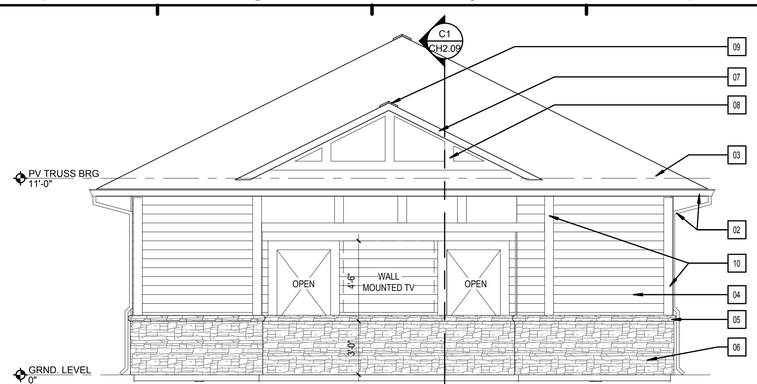
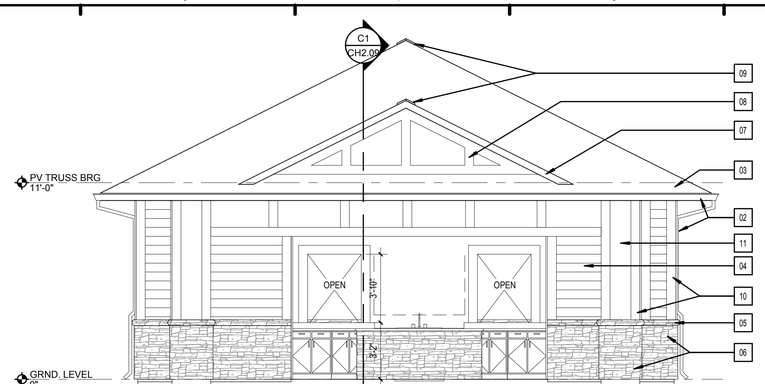
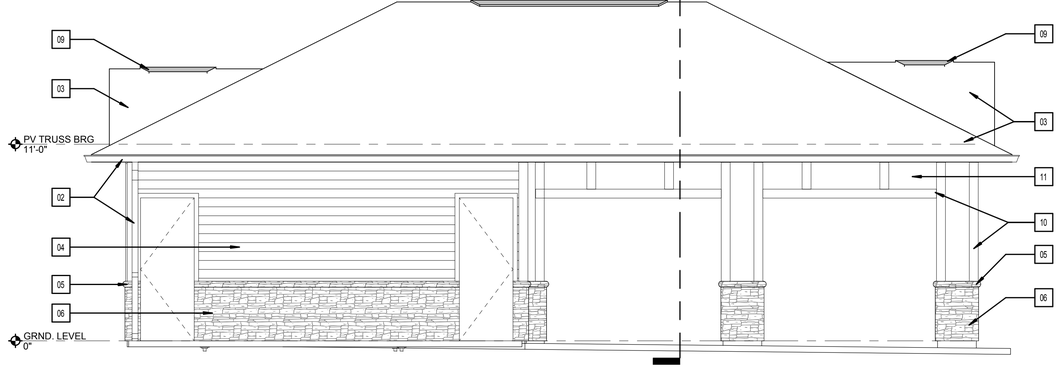


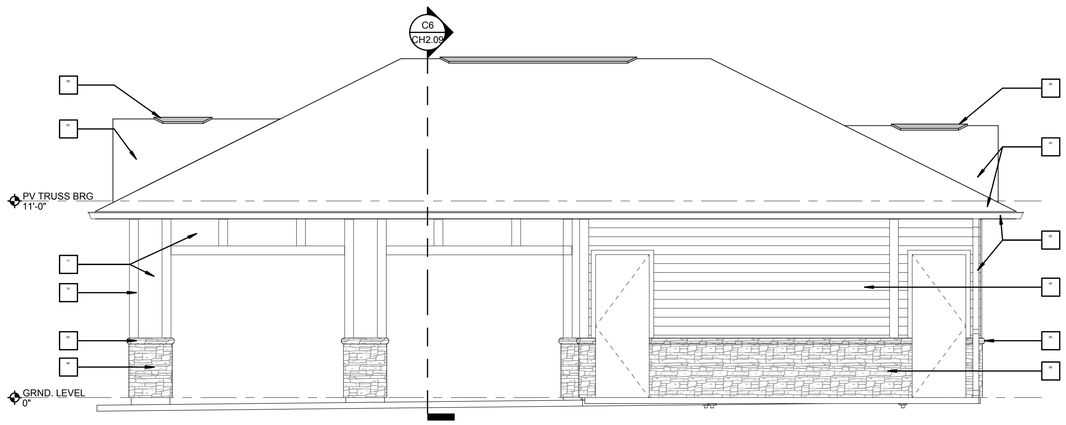
1 POOL BUILDING - REAR ELEVATION
1/4" = 1'-0"



2 POOL PAVILION - FRONT ELEVATION
1/4" = 1'-0"



3 POOL PAVILION - LEFT SIDE ELEVATION
1/4" = 1'-0"



4 POOL PAVILION - RIGHT SIDE ELEVATION
1/4" = 1'-0"

EXTERIOR NOTES:

1. VERIFY IDENTIFICATION REQUIREMENTS WITH FIRE MARSHAL (SIGNAGE BY OTHERS). BUILDING ADDRESS SHALL BE VISIBLE FROM THE ROAD IN COLORS THAT ARE SUFFICIENT CONTRAST TO BE EASILY SEEN. THE NUMBERS SHALL BE ARABIC NUMERALS NOT LESS THAN 6" IN HEIGHT.
2. ALUMINUM GUTTERS AND DOWNSPOUTS REQUIRED AS INDICATED. PROVIDE SHOP DRAWINGS FOR APPROVAL ROOF DRAINAGE AT BUILDING ENTRANCES SHALL BE PIPED AWAY FROM PEDESTRIAN TRAFFIC AREAS. ALL OTHER DOWNSPOUT TO TERMINATE AT SPLASH BLOCKS ALL DOWN SPOUT AND GUTTER ATTACHMENTS TO BE SET IN SEALANT.
3. FIBERGLASS SHINGLES - REFER TO SPECS.
4. FIBER CEMENT SIDING.
5. PRECAST WATERTABLE.
6. STONE VENEER.
7. FIBER CEMENT FASCIA.
8. FIBER CEMENT TRIMBOARD PANEL.
9. ROOF RIDGE VENT, PAINT TO MATCH ROOF SHINGLES.
10. 1 X 6 FIBER CEMENT TRIM.
11. 5/16" FIBER CEMENT PANEL.

ELEVATION NOTES-POOL PAVILION
3/32" = 1'-0"

PERMIT REVIEW STAMP

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POOL PAVILLION ELEVATIONS

CH2.08

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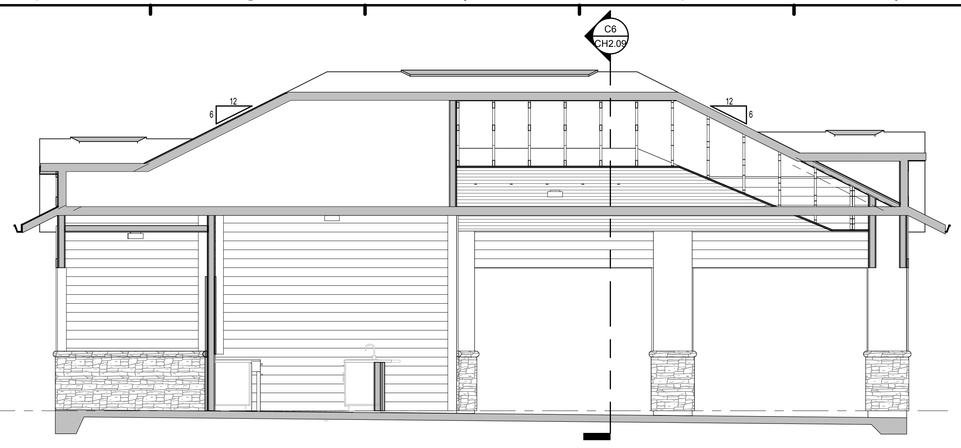
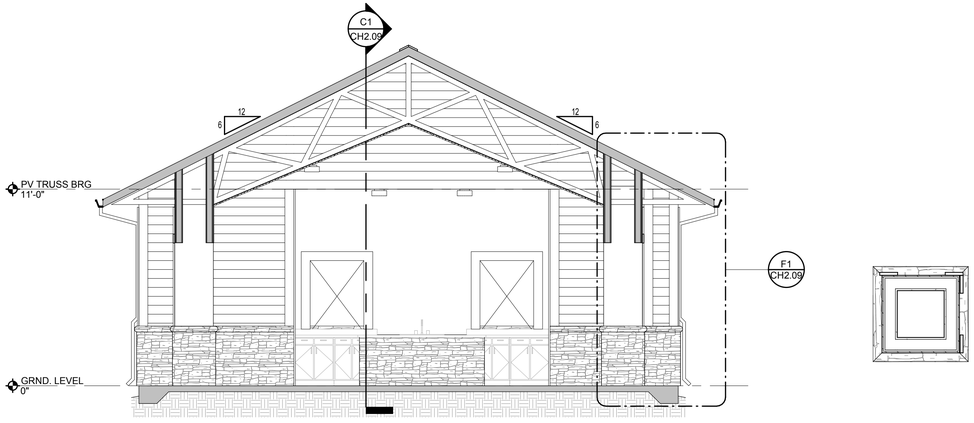
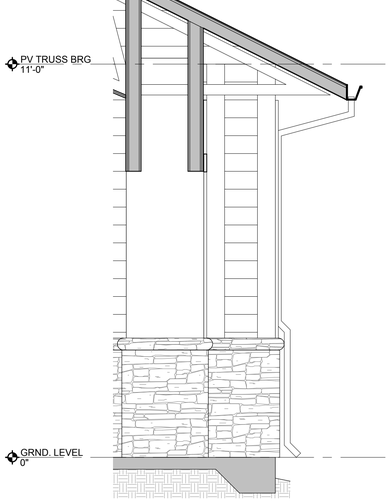


C1 POOL PAVILION - BUILDING SECTION A
1/4" = 1'-0"

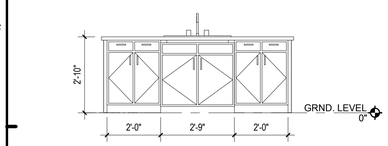


C6 POOL PAVILION - BUILDING SECTION B
1/4" = 1'-0"

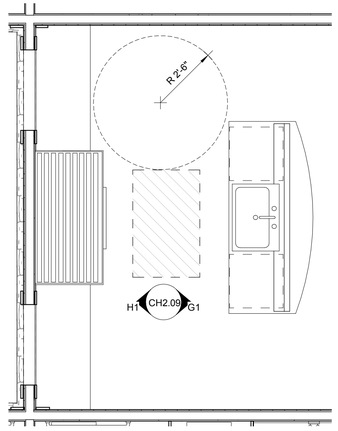
C9 COLUMN DETAIL
1/2" = 1'-0"



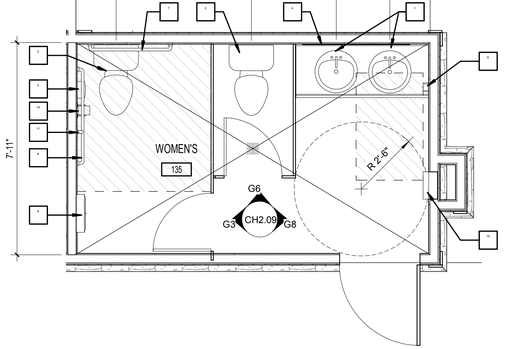
F1 POOL PAVILION - WALL SECTION
1/2" = 1'-0"



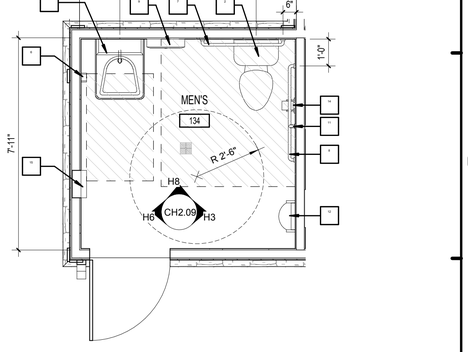
G1 POOL PAVILION - ISLAND ELEVATION
3/8" = 1'-0"



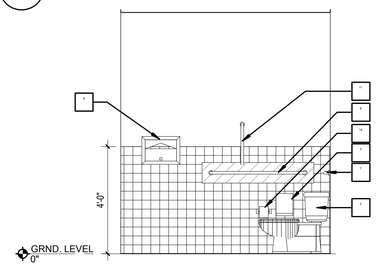
E3 ENLARGED KITCHEN PLAN
3/8" = 1'-0"



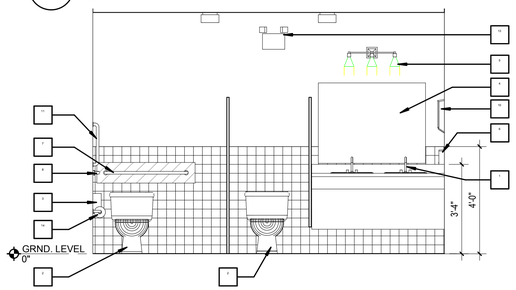
E6 POOL PAVILION ENLARGED WOMENS FLOOR PLAN
3/8" = 1'-0"



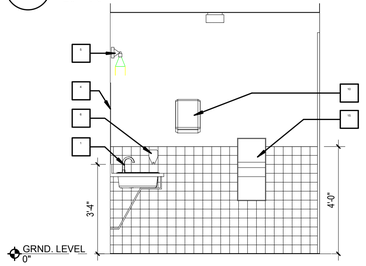
E8 POOL PAVILION ENLARGED MENS FLOOR PLAN
3/8" = 1'-0"



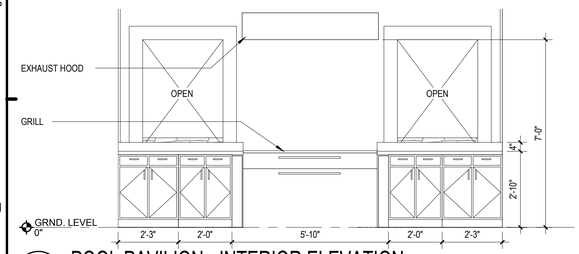
G3 WOMENS INTERIOR ELEVATION A
3/8" = 1'-0"



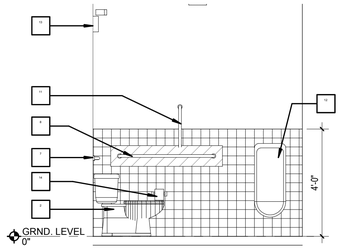
G6 WOMENS INTERIOR ELEVATION B
3/8" = 1'-0"



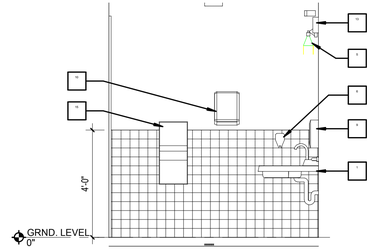
G8 WOMENS INTERIOR ELEVATION C
3/8" = 1'-0"



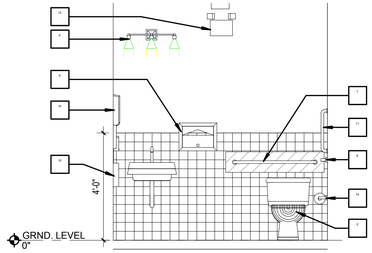
H1 POOL PAVILION - INTERIOR ELEVATION
3/8" = 1'-0"



H3 MENS INTERIOR ELEVATION A
3/8" = 1'-0"



H6 MENS INTERIOR ELEVATION B
3/8" = 1'-0"



H8 MENS INTERIOR ELEVATION C
3/8" = 1'-0"

NOTES:

1. LAVATORY
2. WATER CLOSET
3. SANITARY NAPKIN DISPENSER
4. FRAMED MIRROR @ 40" A.F.F.
5. SURFACE MOUNTED LIGHT FIXTURE
6. SURFACE MOUNTED SOAP DISPENSER
7. 36" STAINLESS STEEL GRAB BAR
8. 42" STAINLESS STEEL GRAB BAR
9. SURFACE MOUNTED TOILET SEAT COVER
10. PAPER TOWEL DISPENSER
11. VERTICAL GRAB BAR
12. URINAL
13. WALL EMERGENCY LIGHT
14. TOILET PAPER DISPENSER
15. WASTE RECEPTACLE
16. FLOOR DRAIN

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
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REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

POOL PAVILION SECTIONS AND DETAILS

CH2.09

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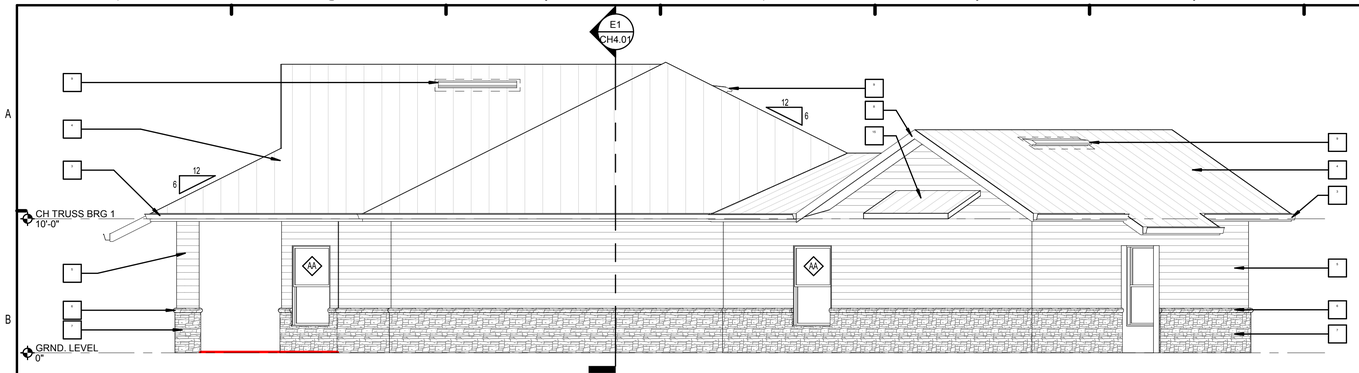
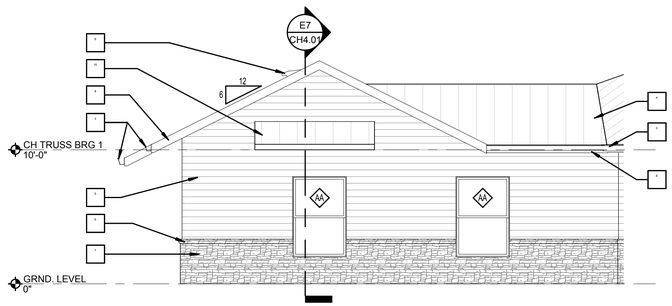
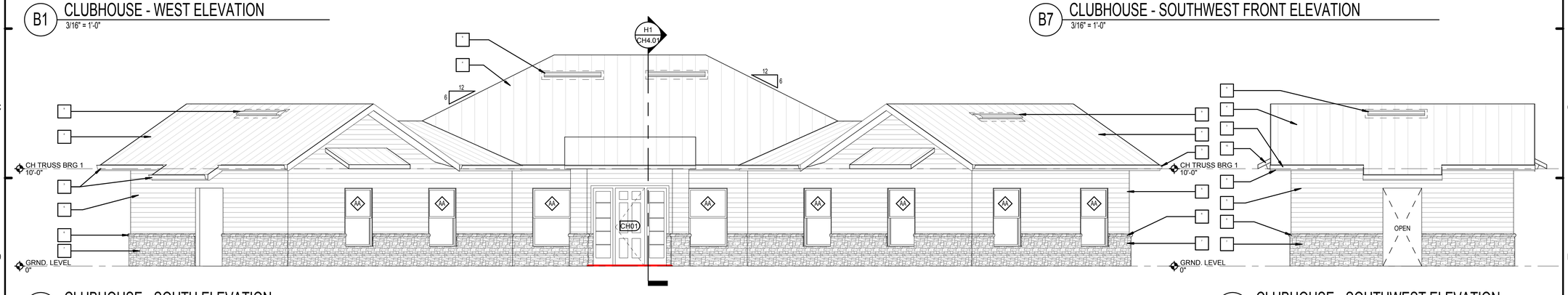


B1 CLUBHOUSE - WEST ELEVATION
3/16" = 1'-0"

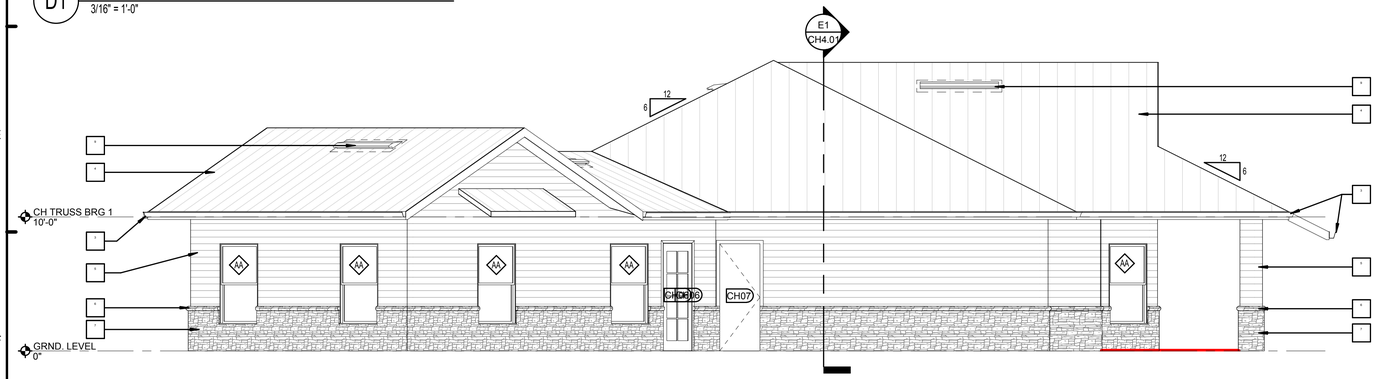


B7 CLUBHOUSE - SOUTHWEST FRONT ELEVATION
3/16" = 1'-0"

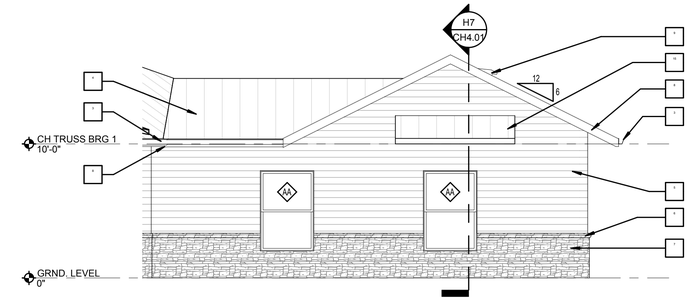


D1 CLUBHOUSE - SOUTH ELEVATION
3/16" = 1'-0"

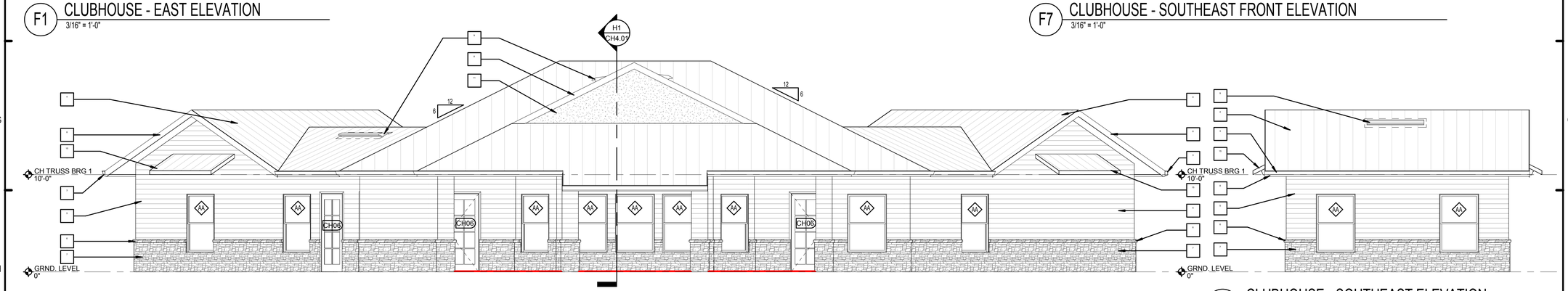
D8 CLUBHOUSE - SOUTHWEST ELEVATION
3/16" = 1'-0"



F1 CLUBHOUSE - EAST ELEVATION
3/16" = 1'-0"



F7 CLUBHOUSE - SOUTHEAST FRONT ELEVATION
3/16" = 1'-0"



H1 CLUBHOUSE - NORTH ELEVATION
3/16" = 1'-0"

H8 CLUBHOUSE - SOUTHEAST ELEVATION
3/16" = 1'-0"

ELEVATION NOTES:

1. BUILDING FIRE SIGN - SIGN TO BE LOCATED ON FRONT OF BUILDING ONLY - SEE SITE PLAN FOR BUILDING ORIENTATION.
2. VERIFY IDENTIFICATION REQUIREMENTS WITH FIRE MARSHAL (SIGNAGE BY OTHERS). BUILDING ADDRESS SHALL BE VISIBLE FROM THE ROAD IN COLORS THAT ARE SUFFICIENT CONTRAST TO BE EASILY SEEN. THE NUMBERS SHALL BE ARABIC NUMERALS NOT LESS THAN 6" IN HEIGHT.
3. ALUMINUM GUTTERS AND DOWNSPOUTS REQUIRED AS INDICATED. PROVIDE SHOP DRAWINGS FOR APPROVAL ROOF DRAINAGE AT BUILDING ENTRANCES SHALL BE PIPED AWAY FROM PEDESTRIAN TRAFFIC AREAS, ALL OTHER DOWNSPOUT TO TERMINATE AT SPLASH BLOCKS. ALL DOWN SPOUT AND GUTTER ATTACHMENTS TO BE SET IN SEALANT.
4. FIBERGLASS SHINGLES - REFER TO SPECS
5. FIBER CEMENT SIDING - 6" EXPOSURE
6. PRECAST WATERTABLE
7. STONE VENEER
8. FASCIA
9. ROOF RIDGE VENT, PAINT TO MATCH ROOF SHINGLES
10. 1 X 6 FIBER CEMENT TRIM
11. 5/16" FIBER CEMENT PANEL
12. PRECAST STONE CAP
13. FIBER CEMENT CORNER TRIM
14. DECORATIVE BRACKET
15. CANOPY

PERMIT REVIEW STAMP

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www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

CLUBHOUSE ELEVATIONS

CH3.01

PLOTTED: 11/30/2017
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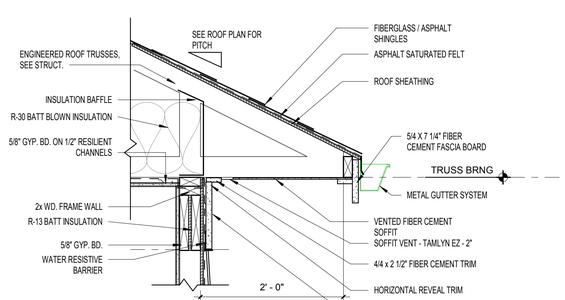
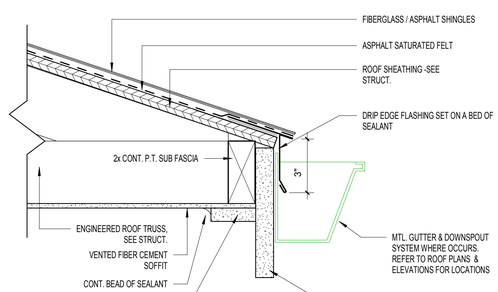
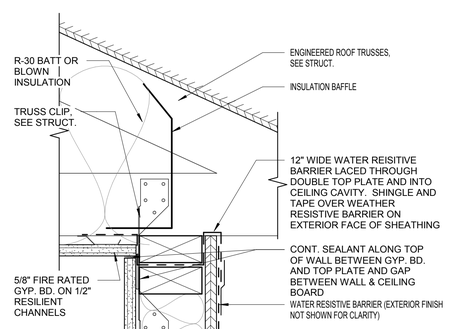


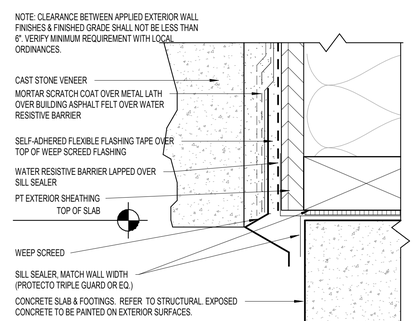
1 ROOF EAVE SECTION-TYPICAL
1" = 1'-0"



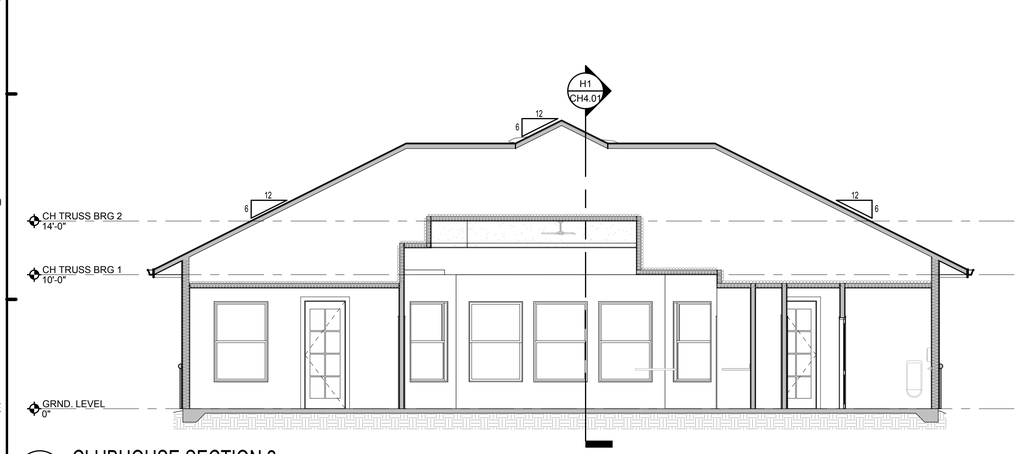
2 DRIP EDGE FLASHING DETAIL - TYP.3
3" = 1'-0"



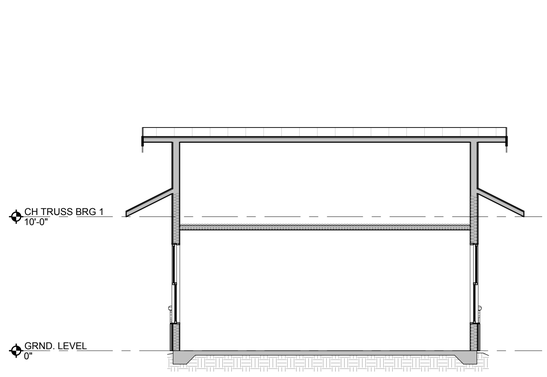
3 TYP. WATER RESISTIVE DETAIL AT EAVE3
3" = 1'-0"



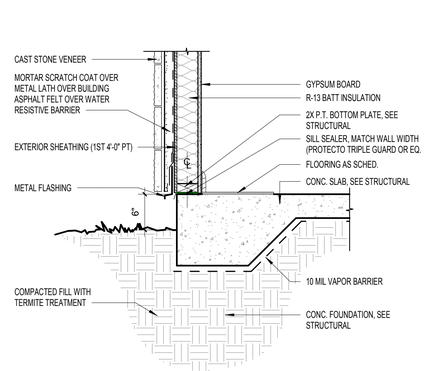
6 FLASHING DETAIL
6" = 1'-0"



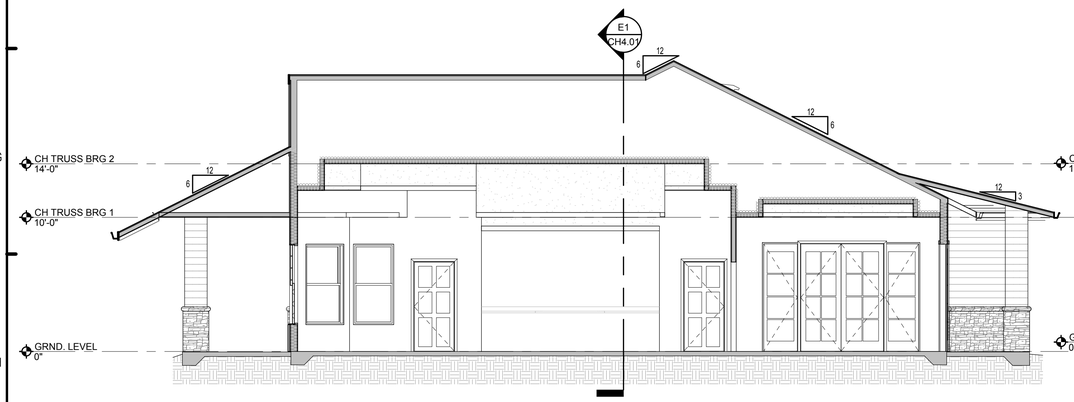
E1 CLUBHOUSE SECTION 2
3/16" = 1'-0"



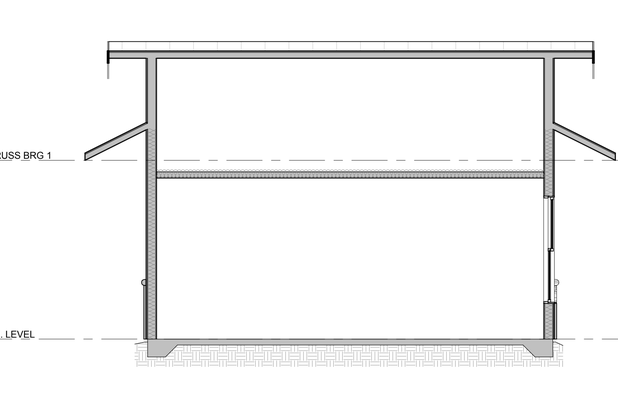
H7 CLUBHOUSE SECTION @ S.E. WING
3/16" = 1'-0"



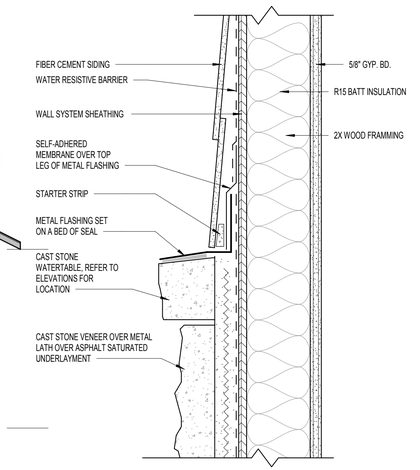
5 WALL SECTION
1" = 1'-0"



H1 CLUBHOUSE SECTION 1
3/16" = 1'-0"



E7 CLUBHOUSE SECTION @ S.W. WING
1/4" = 1'-0"



4 FLASHING DETAIL
3" = 1'-0"

PERMIT REVIEW STAMP

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www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

CLUBHOUSE BUILDING SECTIONS

CH4.01

PLOTTED: 11/30/2017
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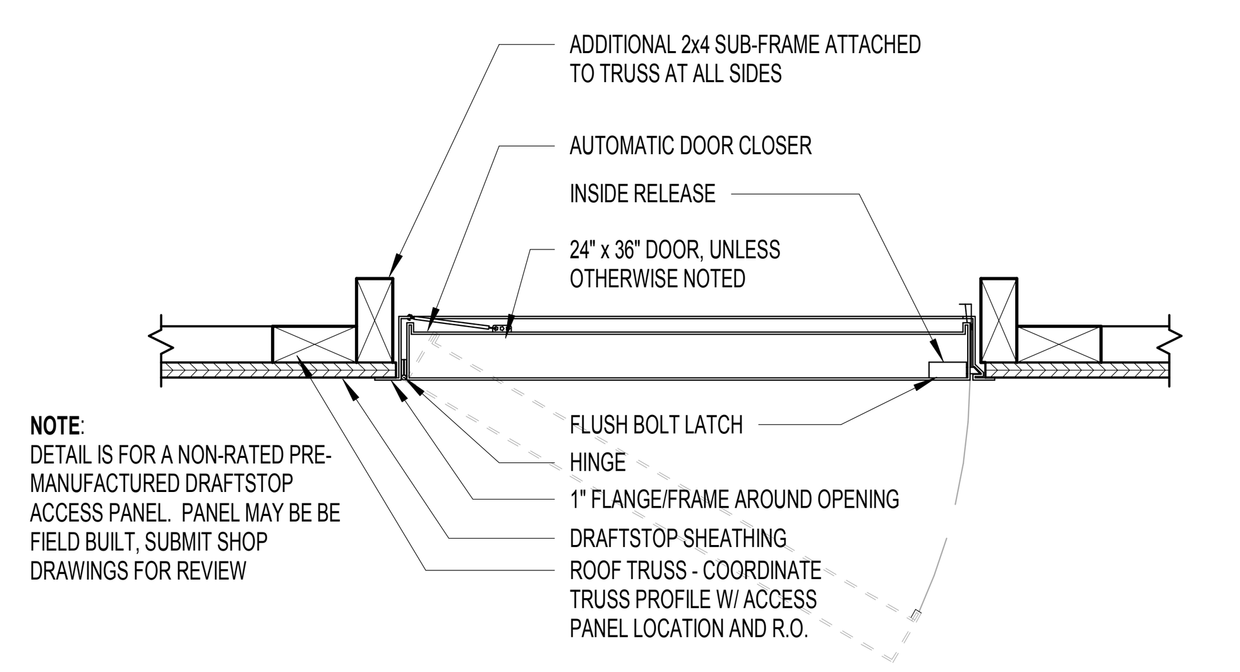
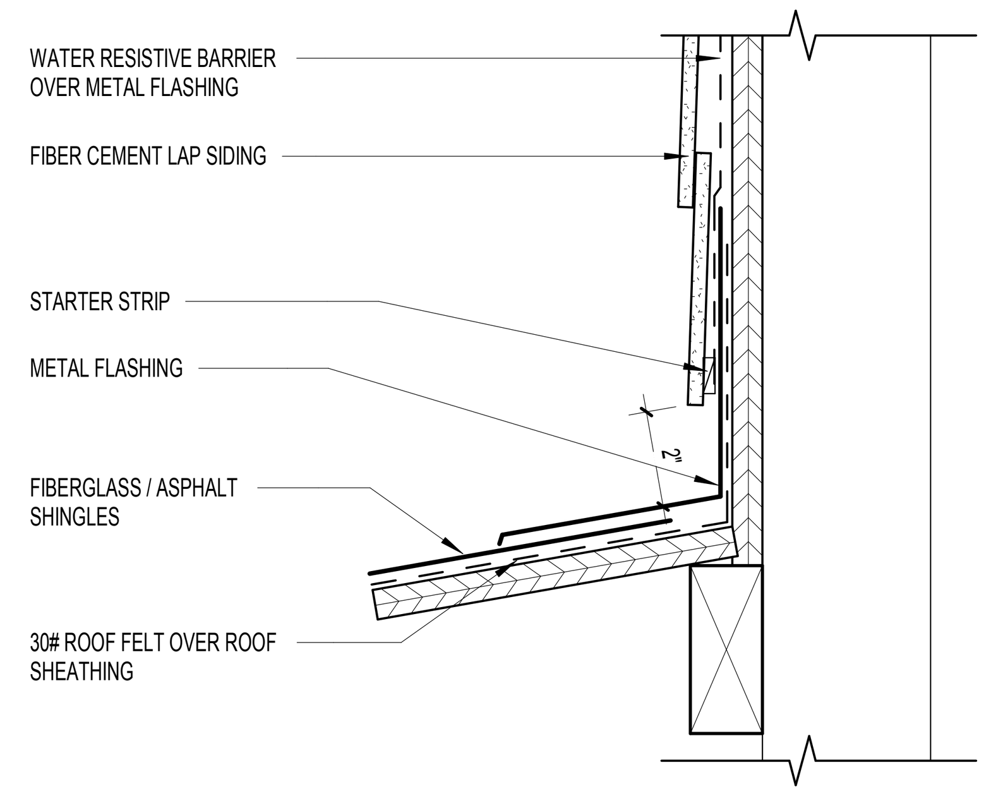
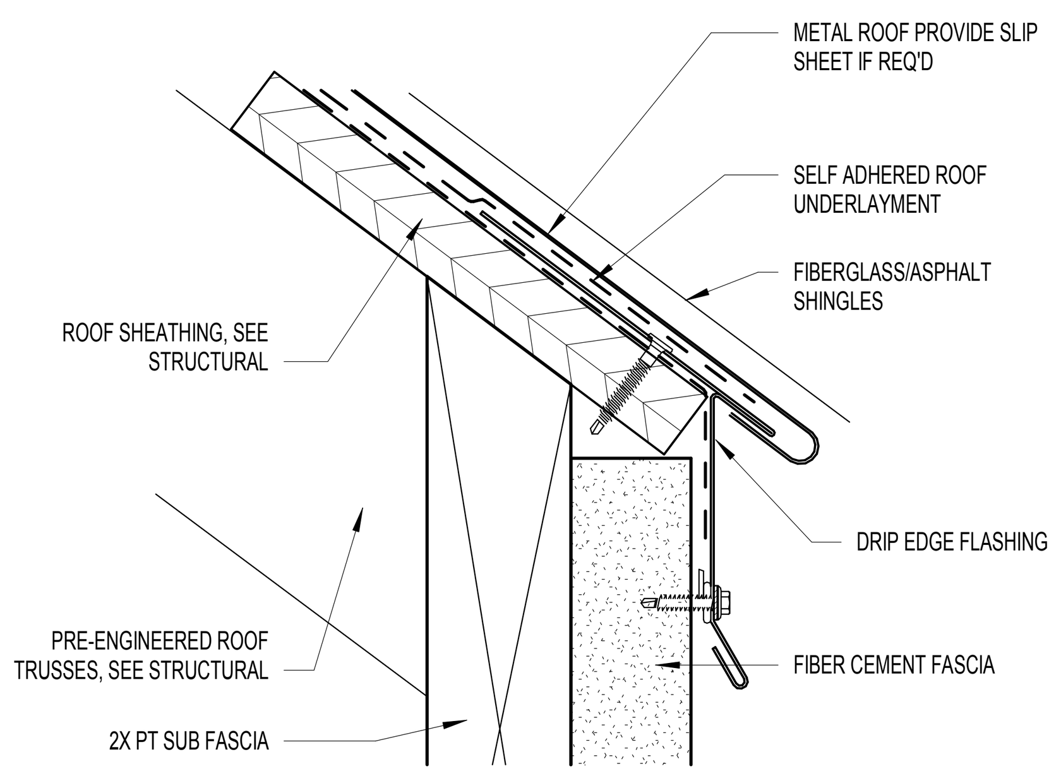


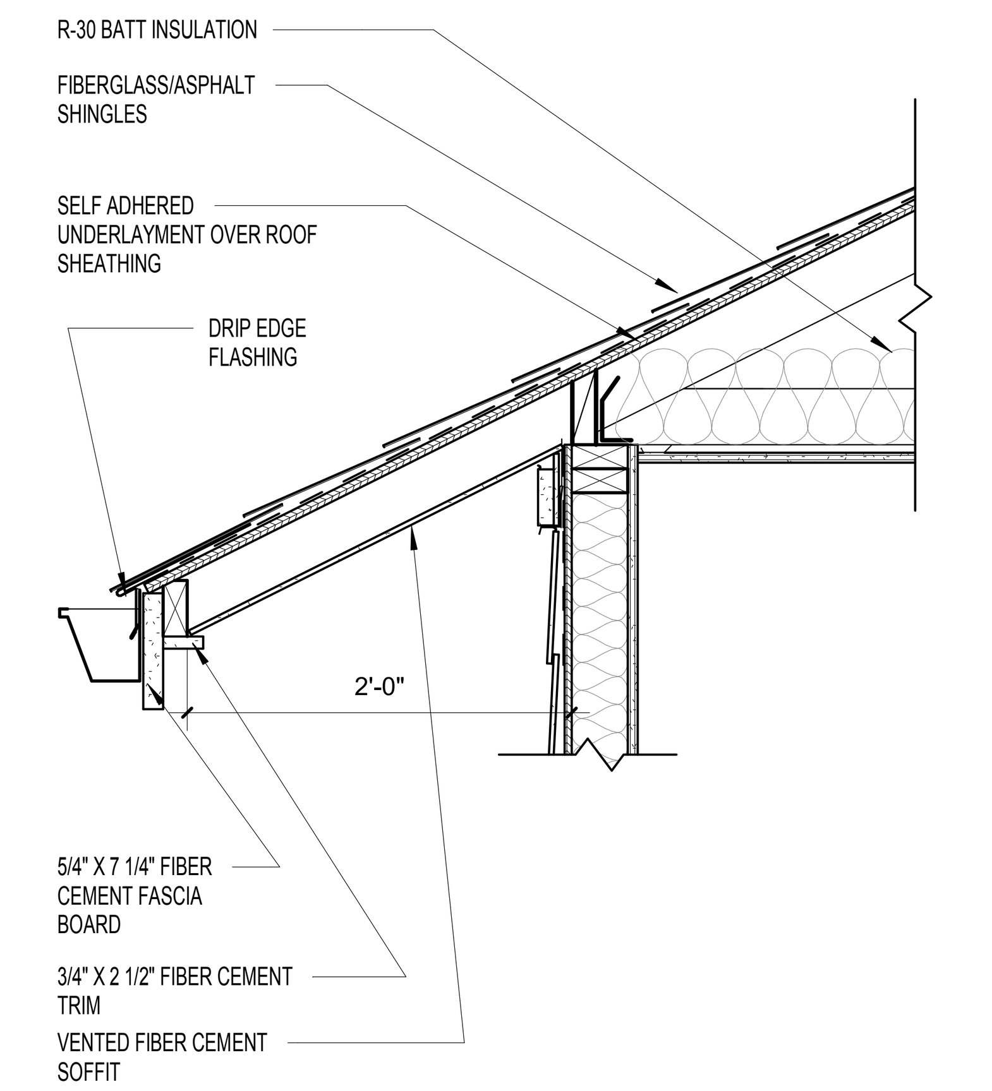
1 DRAFTSTOP ACCESS DOOR
1 1/2" = 1'-0"



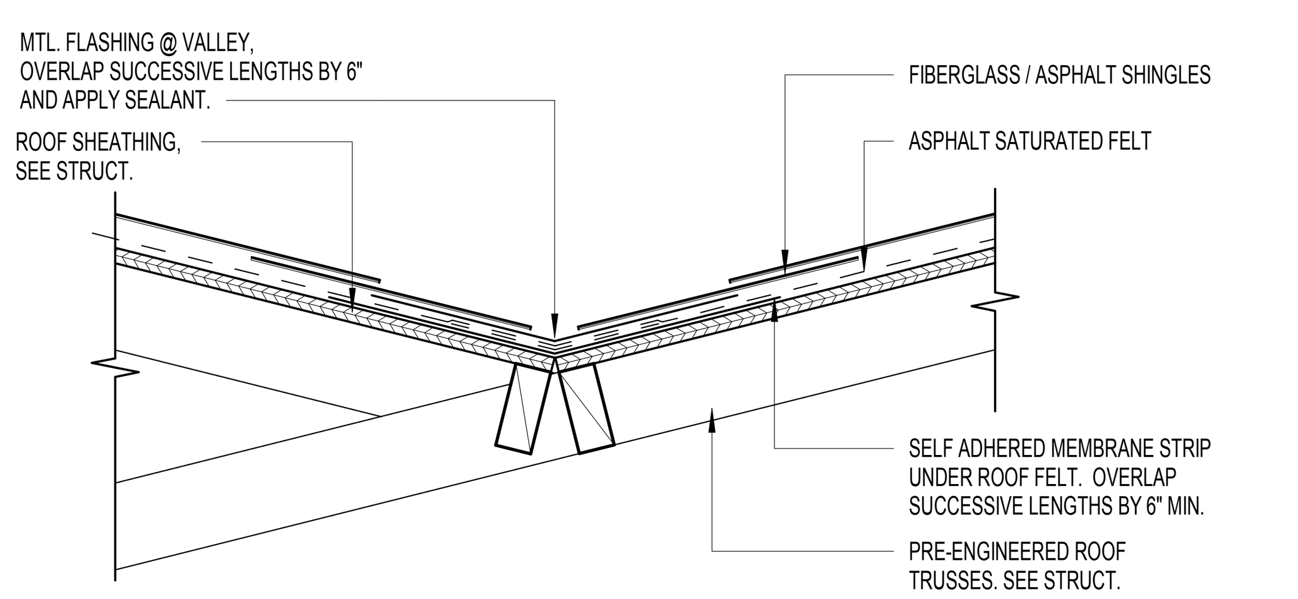
5 FLASHING - SHINGLES TO SIDING1
3" = 1'-0"



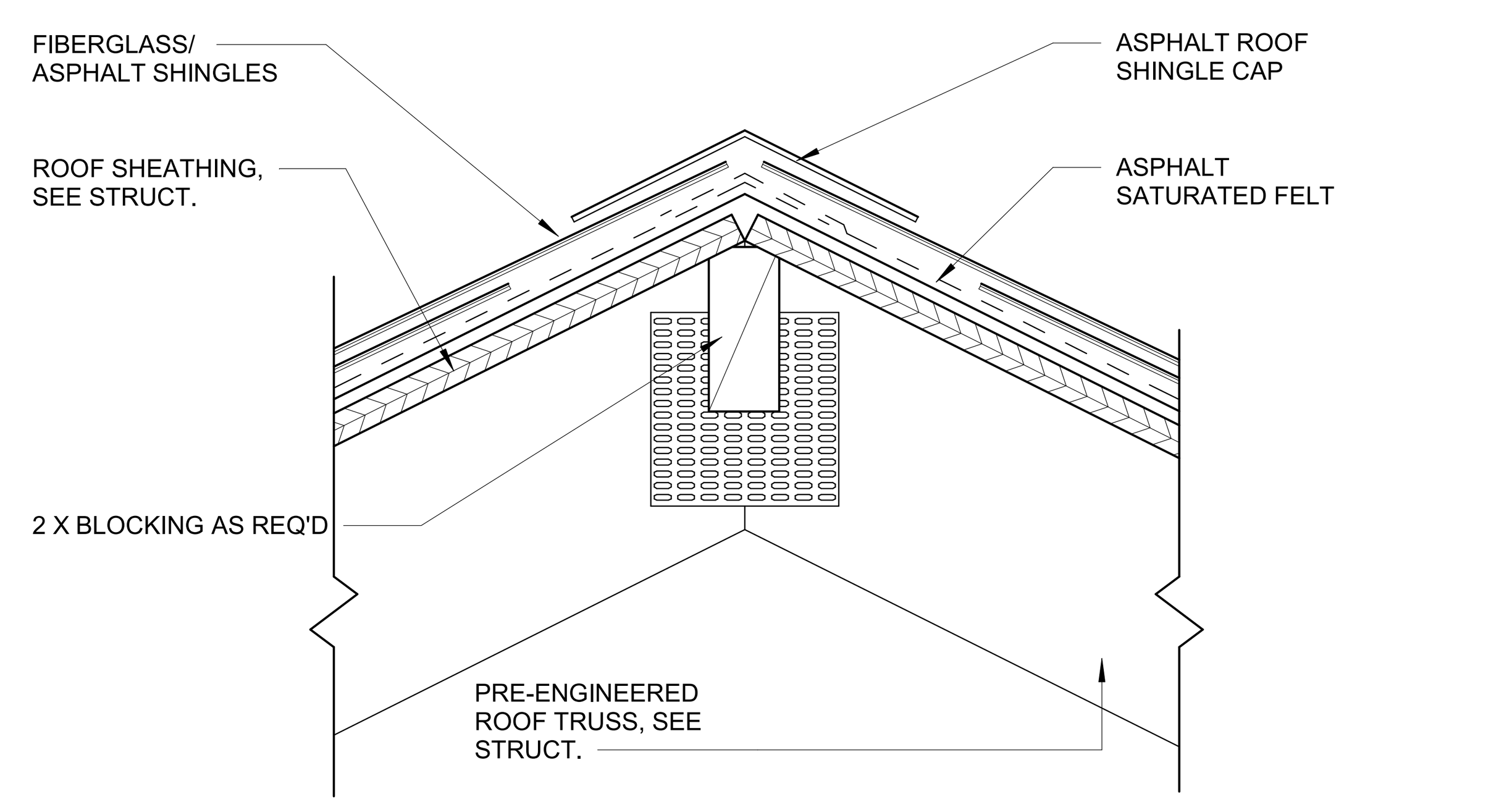
9 DRIP EDGE FLASHING DETAIL
6" = 1'-0"



14 EXTERIOR ROOF SECTION
1" = 1'-0"



4 ROOF VALLEY - SHINGLE ROOF1
1 1/2" = 1'-0"



6 ROOF RIDGE DETAIL1
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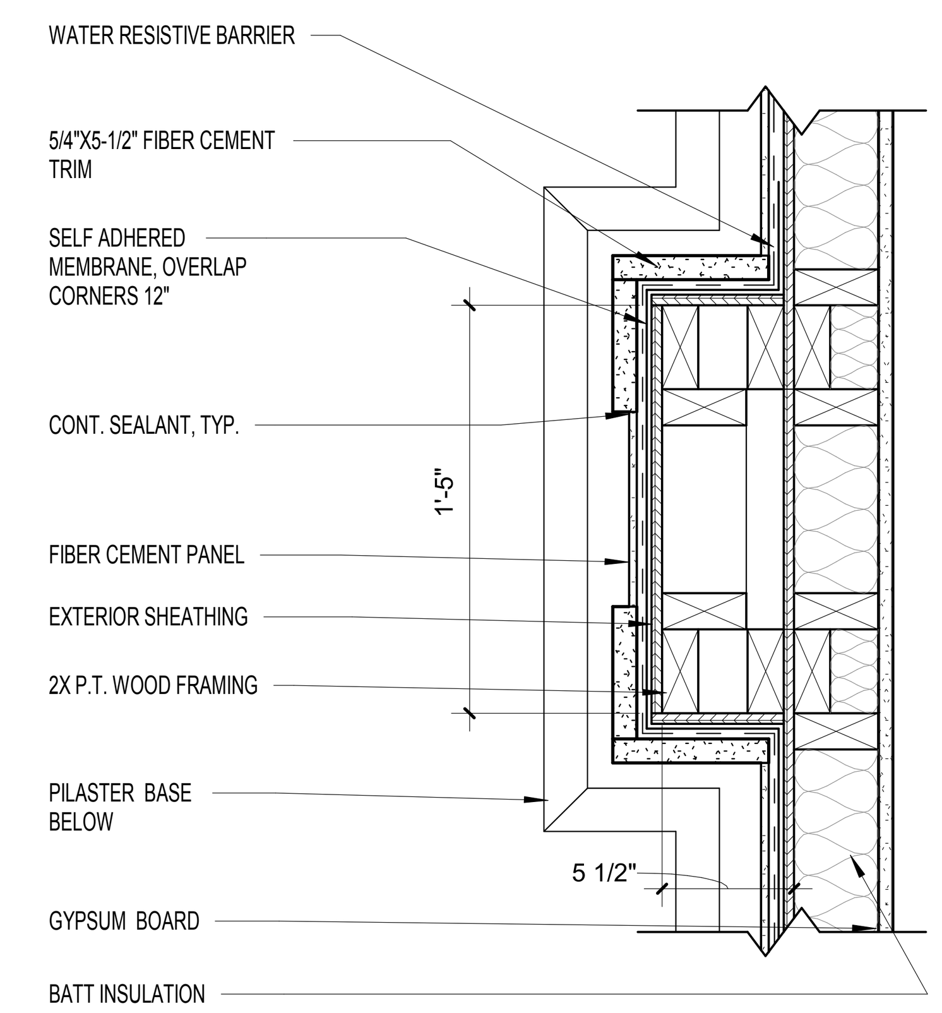
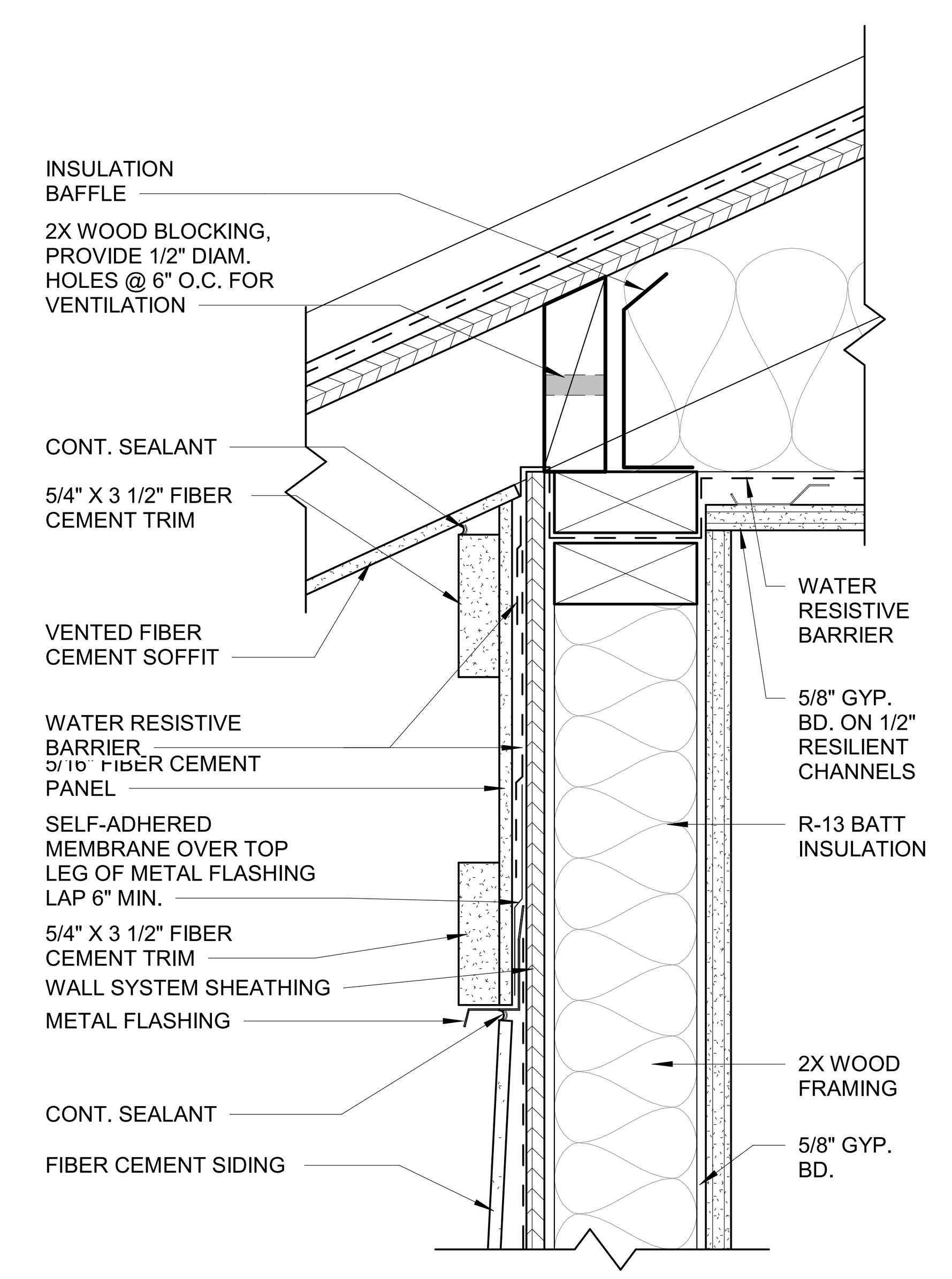
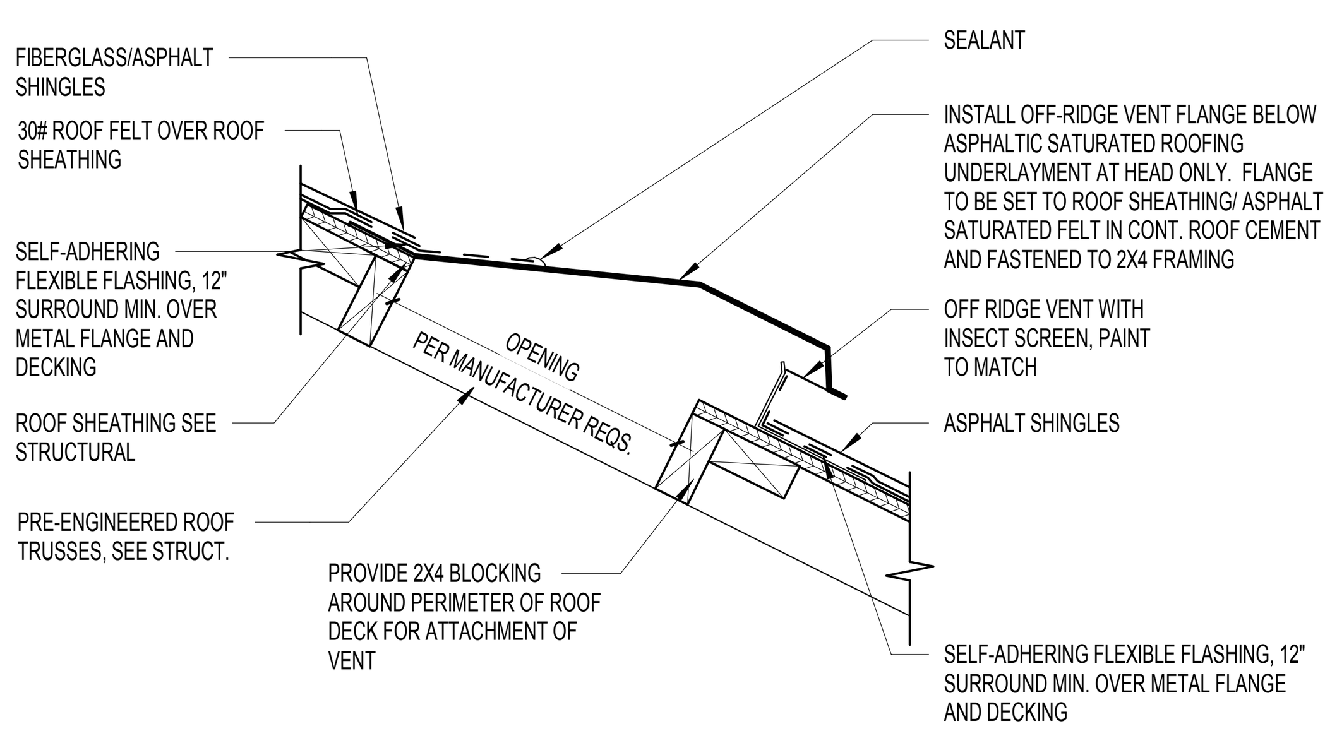


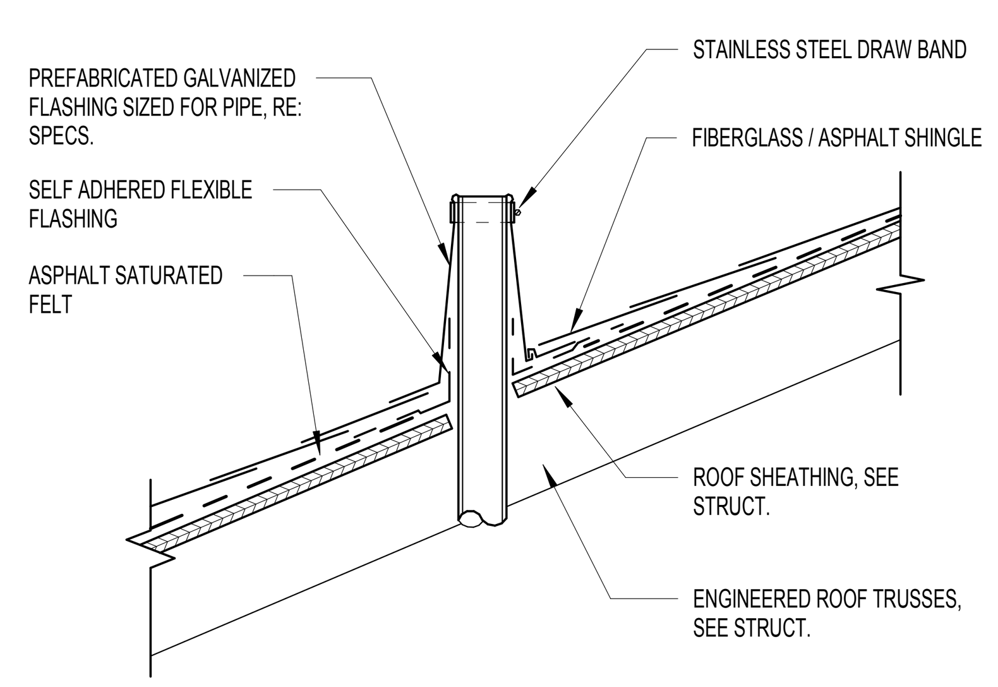
10 PILASTER DETAIL
1 1/2" = 1'-0"



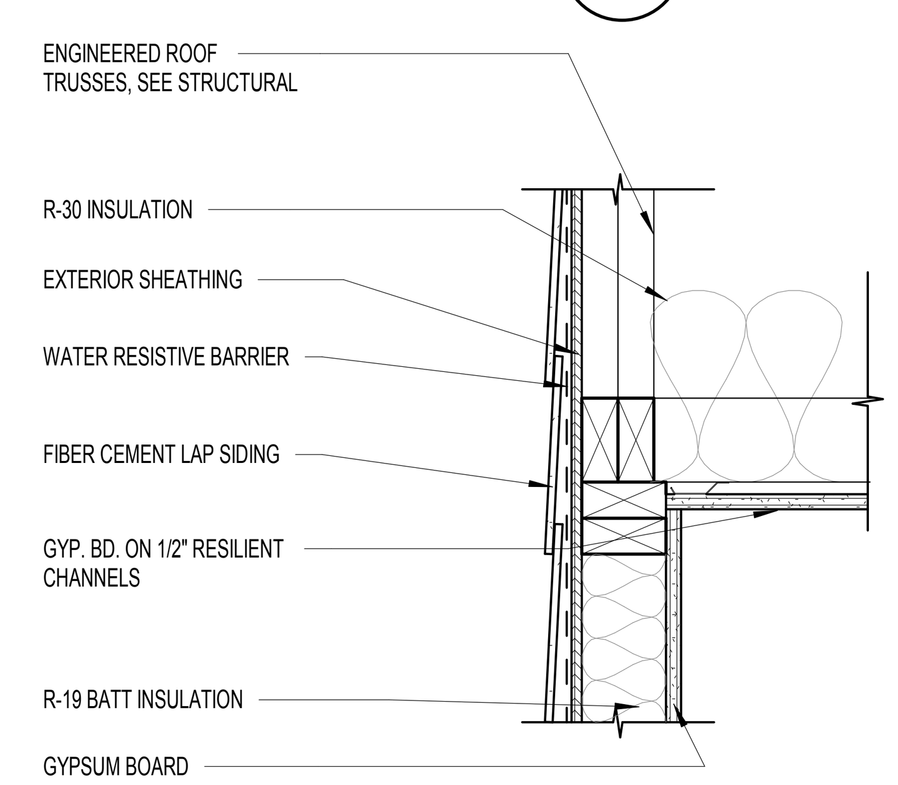
15 TOP OF WALL TRIM
3" = 1'-0"



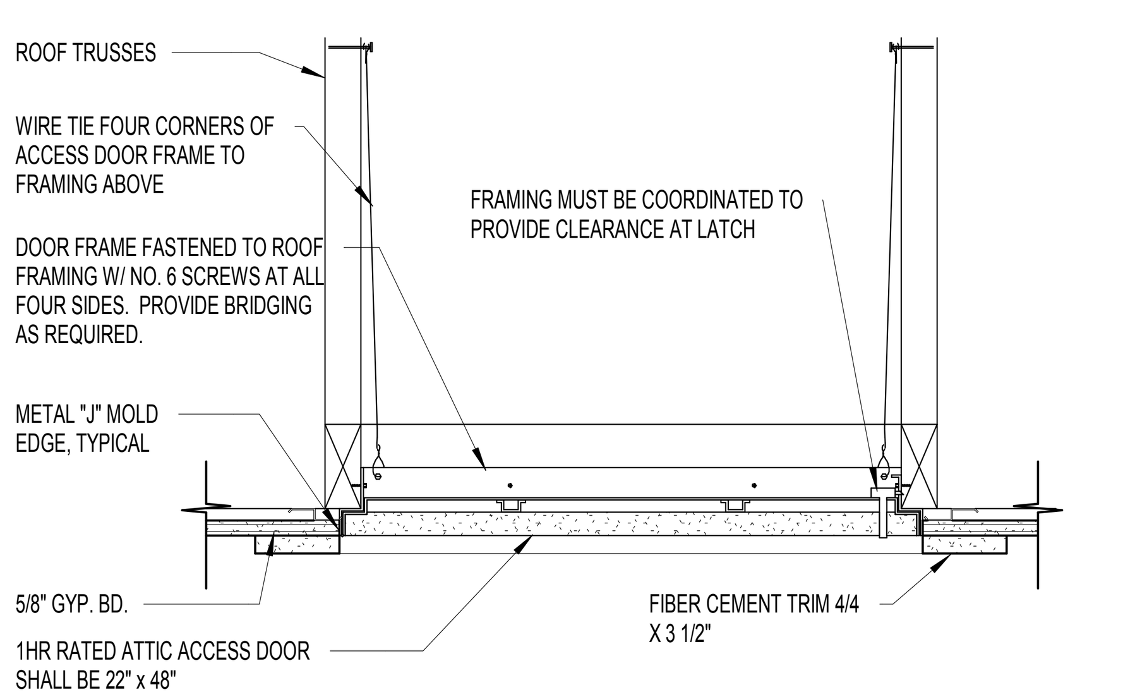
2 OFF-RIDGE ROOF DET.1
1 1/2" = 1'-0"



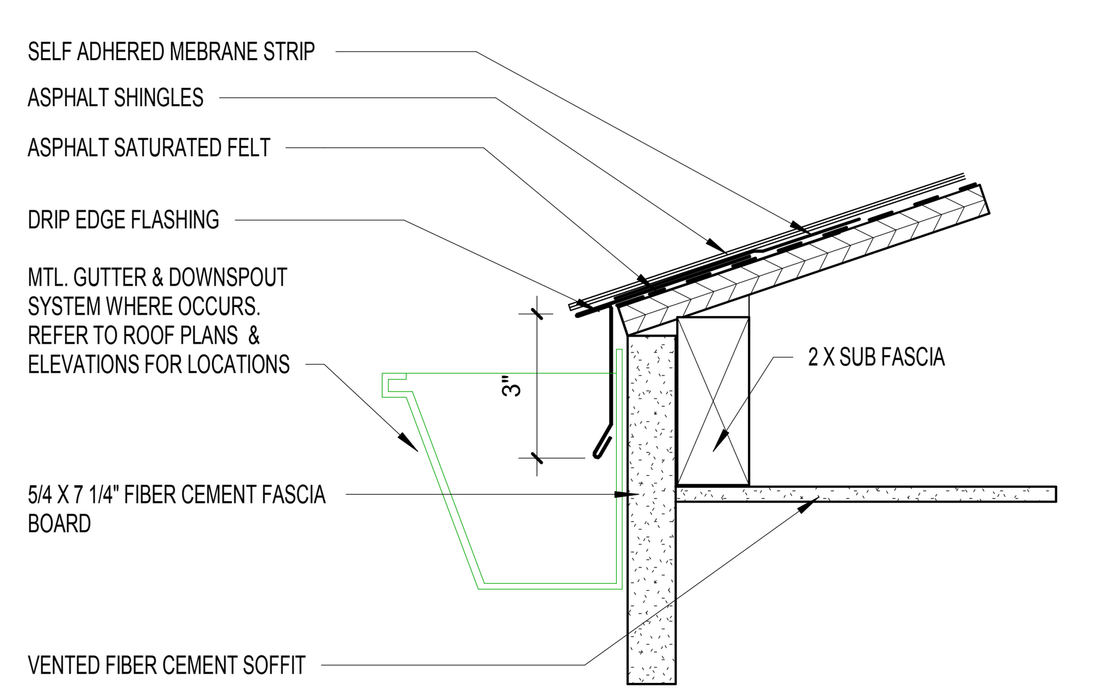
7 ROOF DETAIL PIPE PENETRATION1
1 1/2" = 1'-0"



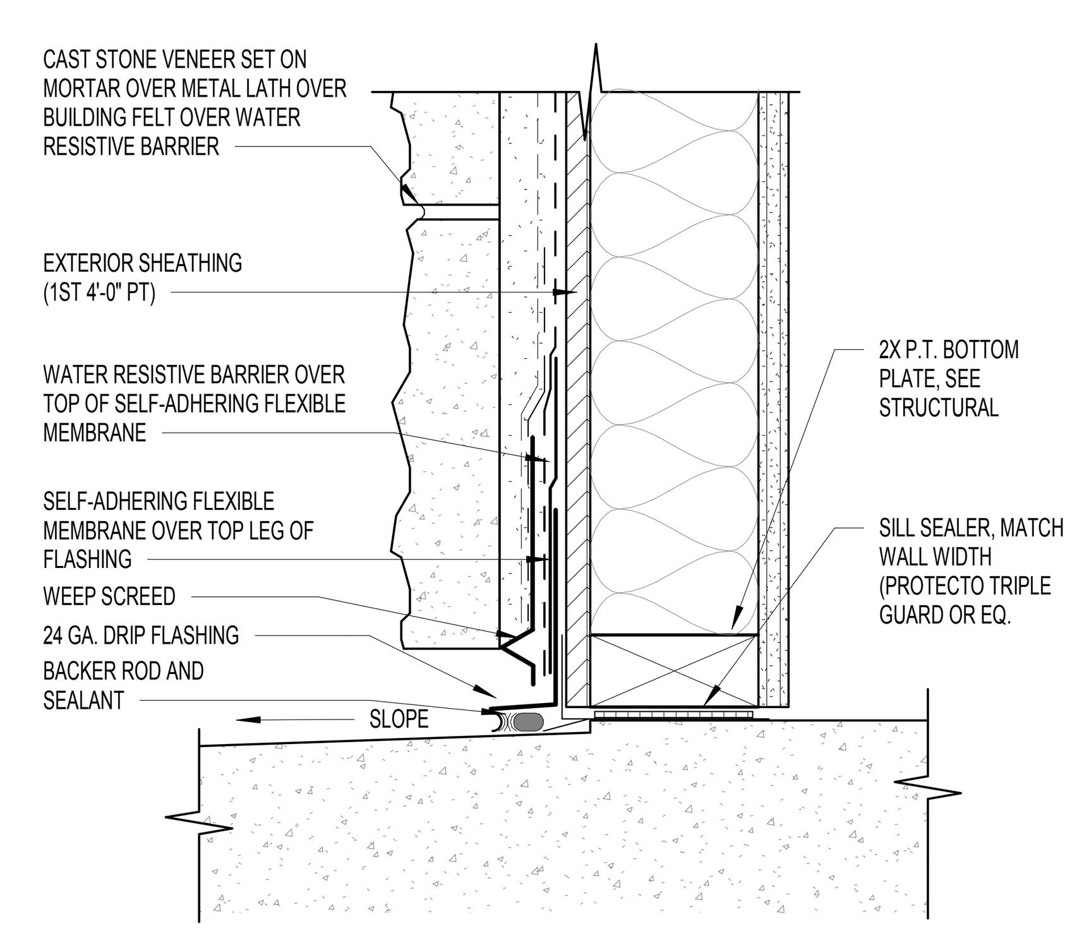
11 CEILING DETAIL
1 1/2" = 1'-0"



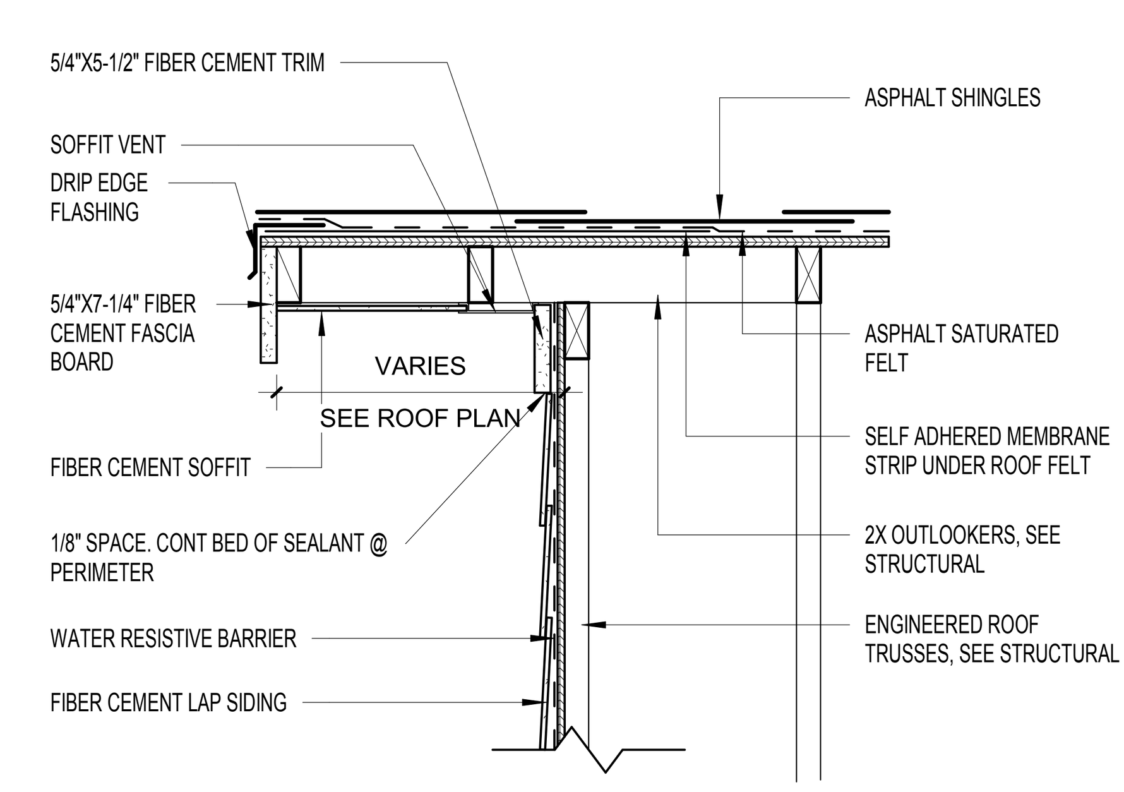
3 ATTIC ACCESS DETAIL (RATED)
1 1/2" = 1'-0"



8 EAVE FLASHING DETAIL
3" = 1'-0"



12 FLASHING DETAIL @ FOUNDATION
3" = 1'-0"



13 GABLE END DETAIL
1" = 1'-0"

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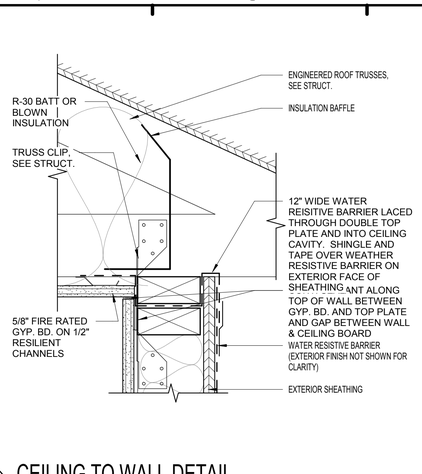
Project #:	5389

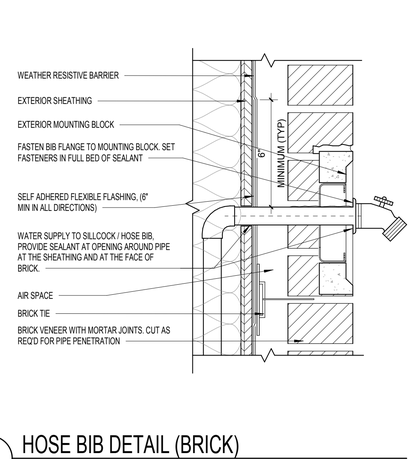
DETAILS

CH4.02

PLOTTED: 11/30/2017 5:34:43 PM

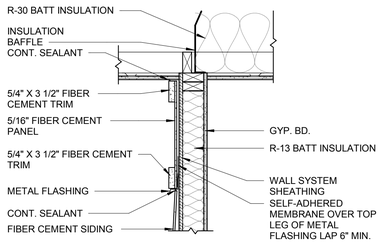


1 CEILING TO WALL DETAIL
3" = 1'-0"

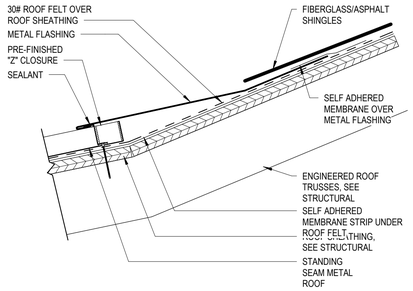


5 HOSE BIB DETAIL (BRICK)
3" = 1'-0"

2 TYPICAL INTERIOR WALL NON-BEARING
1" = 1'-0"



3 ENTRY SOFFIT DETAIL
1" = 1'-0"



4 ROOF BREAK FLASHING DETAIL
3" = 1'-0"

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

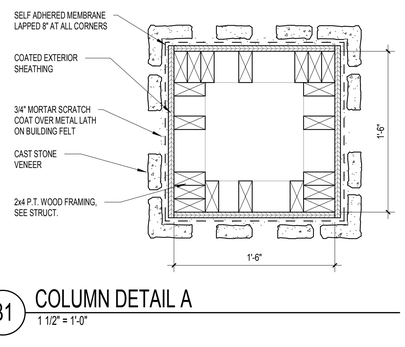
SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

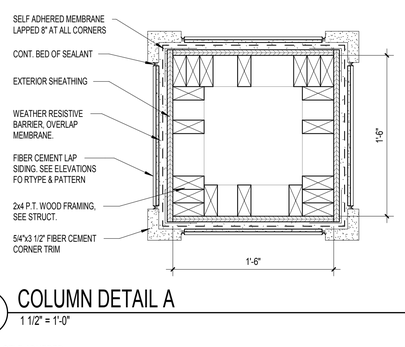
DETAILS

CH4.03

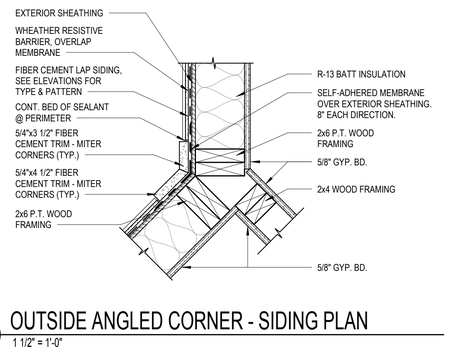
PLOTTED: 11/30/2017 5:34:46 PM



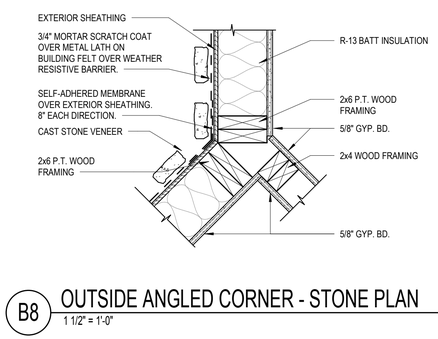
B1 COLUMN DETAIL A
1 1/2" = 1'-0"



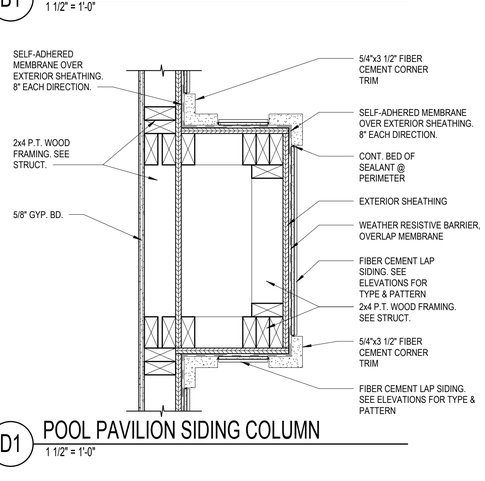
B3 COLUMN DETAIL A
1 1/2" = 1'-0"



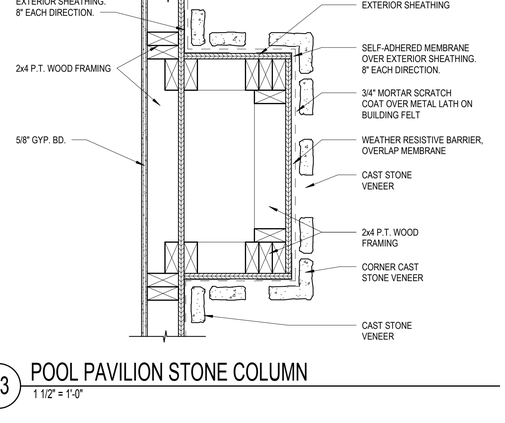
B6 OUTSIDE ANGLED CORNER - SIDING PLAN
1 1/2" = 1'-0"



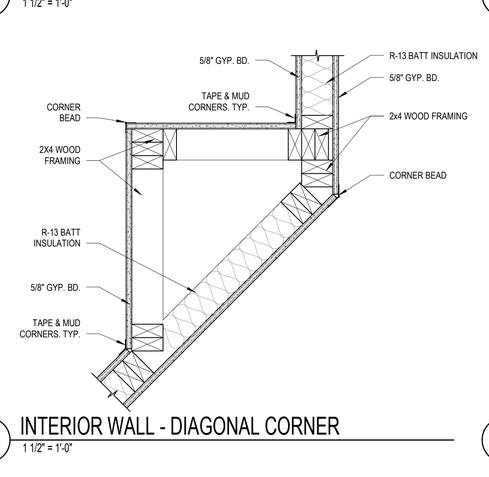
B8 OUTSIDE ANGLED CORNER - STONE PLAN
1 1/2" = 1'-0"



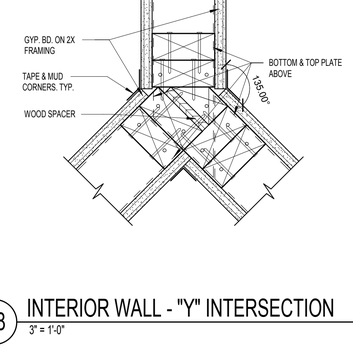
D1 POOL PAVILION SIDING COLUMN
1 1/2" = 1'-0"



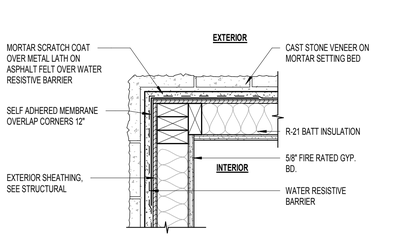
D3 POOL PAVILION STONE COLUMN
1 1/2" = 1'-0"



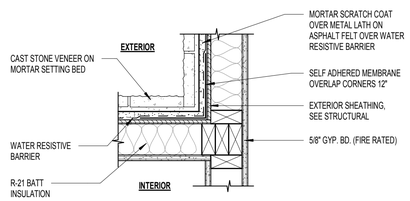
D6 INTERIOR WALL - DIAGONAL CORNER
1 1/2" = 1'-0"



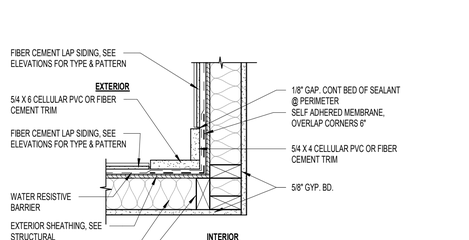
D8 INTERIOR WALL - "Y" INTERSECTION
3" = 1'-0"



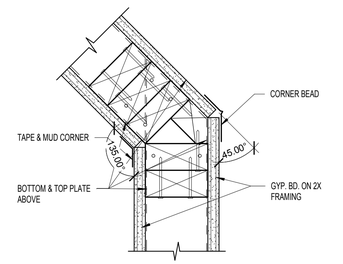
F1 OUTSIDE CORNER PLAN DETAIL
1 1/2" = 1'-0"



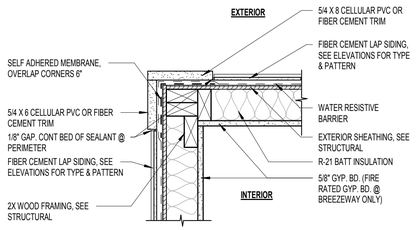
F3 INSIDE CORNER DETAIL
1 1/2" = 1'-0"



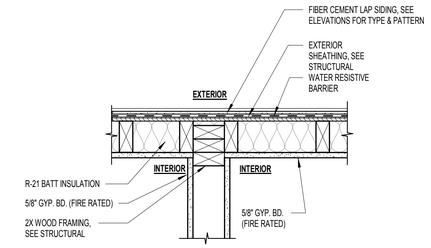
F6 INSIDE CORNER PLAN DETAIL
1 1/2" = 1'-0"



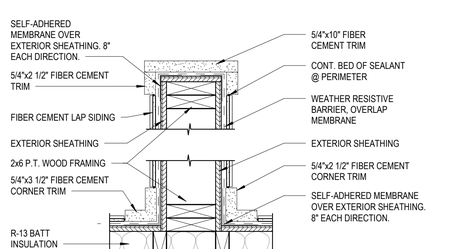
F8 INTERIOR WALL - 45 DEGREES CORNER
3" = 1'-0"



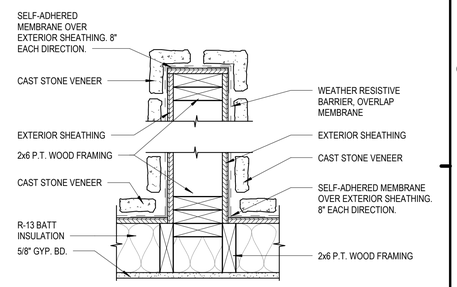
H1 OUTSIDE CORNER PLAN DETAIL
1 1/2" = 1'-0"



H3 END WALL INTERSECTION PLAN DETAIL
1 1/2" = 1'-0"



H6 CORNER PLAN DETAIL-SIDING
1 1/2" = 1'-0"



H8 CORNER PLAN DETAIL-STONE
1 1/2" = 1'-0"

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www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

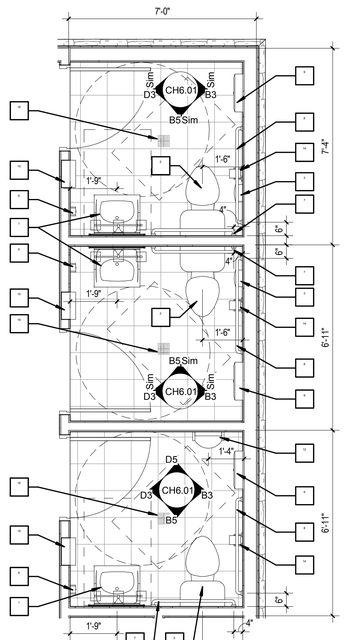
SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

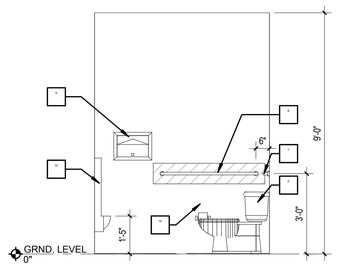
ENLARGED PLAN DETAILS

CH5.01

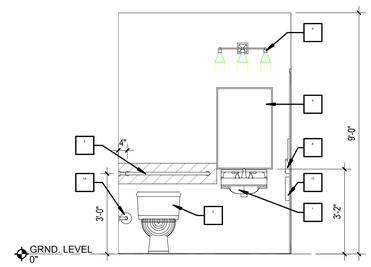
PLOTTED: 11/30/2017 5:34:50 PM



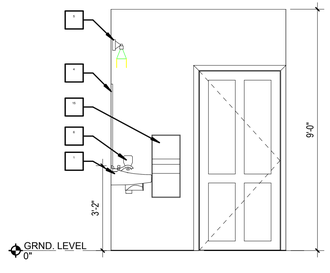
D1 CLUBHOUSE - ENLARGED RESTROOM PLAN
3/8" = 1'-0"



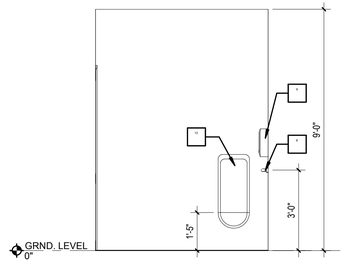
B3 ENLARGED RESTROOM A
3/8" = 1'-0"



B5 ENLARGED RESTROOM B
3/8" = 1'-0"



D3 ENLARGED RESTROOM C
3/8" = 1'-0"



D5 ENLARGED RESTROOM D
3/8" = 1'-0"

NOTES:

1. LAVATORY
2. WATER CLOSET
3. SANITARY NAPKIN DISPENSER
4. FRAMED MIRROR @ 40" A.F.F.
5. SURFACE MOUNTED LIGHT FIXTURE
6. SURFACE MOUNTED SOAP DISPENSER
7. 36" STAINLESS STEEL GRAB BAR
8. 42" STAINLESS STEEL GRAB BAR
9. SURFACE MOUNTED TOILET SEAT COVER
10. PAPER TOWEL DISPENSER
11. VERTICAL GRAB BAR
12. URINAL
13. WALL EMERGENCY LIGHT
14. TOILET PAPER DISPENSER
15. WASTE RECEPTACLE
16. FLOOR DRAIN

PERMIT REVIEW STAMP

ISSUE HISTORY

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www.fuglebergkoch.com AA26002103

CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

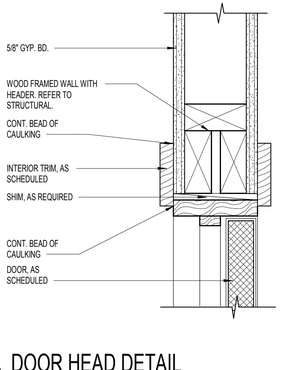
SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

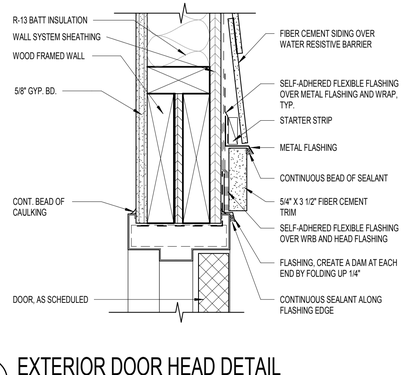
RESTROOM PLANS & INTERIOR ELEVATIONS

CH6.01

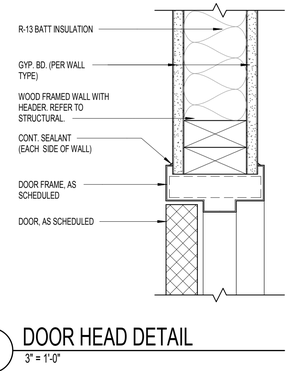
PLOTTED: 11/30/2017 5:34:56 PM



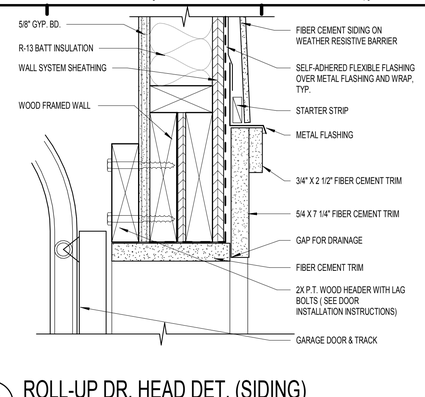
6 DOOR HEAD DETAIL
3" = 1'-0"



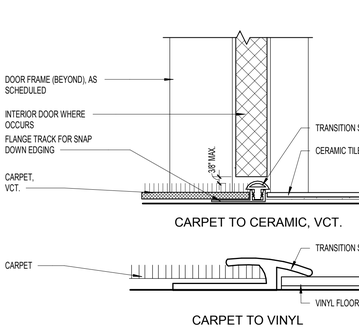
4 EXTERIOR DOOR HEAD DETAIL
3" = 1'-0"



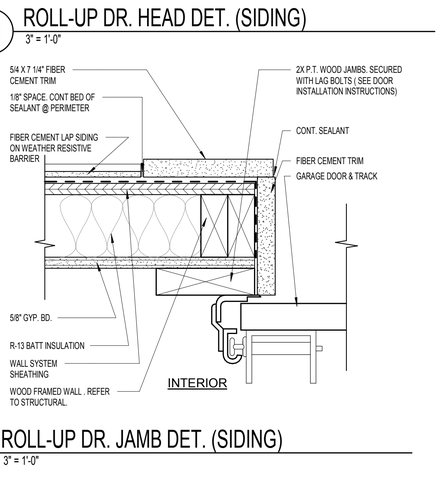
1 DOOR HEAD DETAIL
3" = 1'-0"



10 ROLL-UP DR. HEAD DET. (SIDING)
3" = 1'-0"

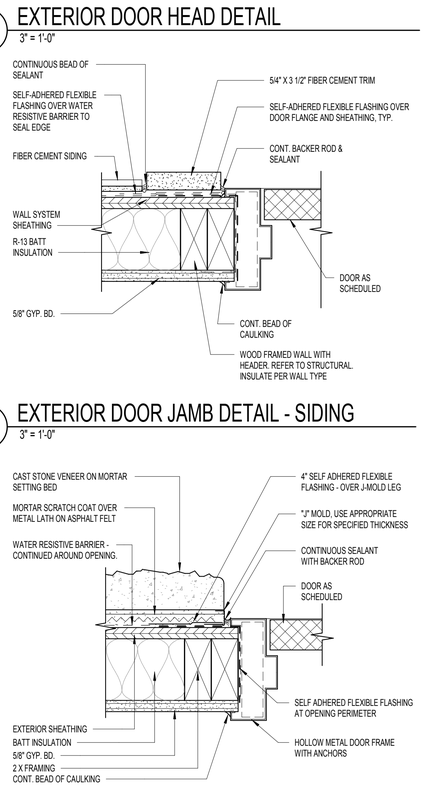


8 DOOR THRESHOLD DETAIL
3" = 1'-0"



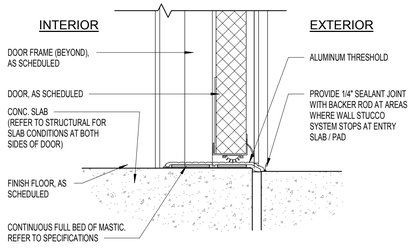
2 DOOR JAMB DETAIL
3" = 1'-0"

9 ROLL-UP DR. JAMB DET. (SIDING)
3" = 1'-0"

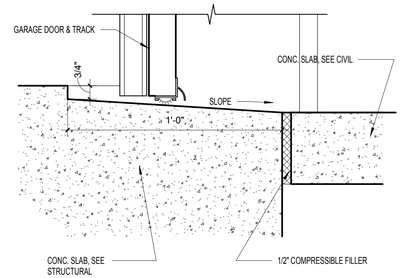


5 EXTERIOR DOOR JAMB DETAIL - SIDING
3" = 1'-0"

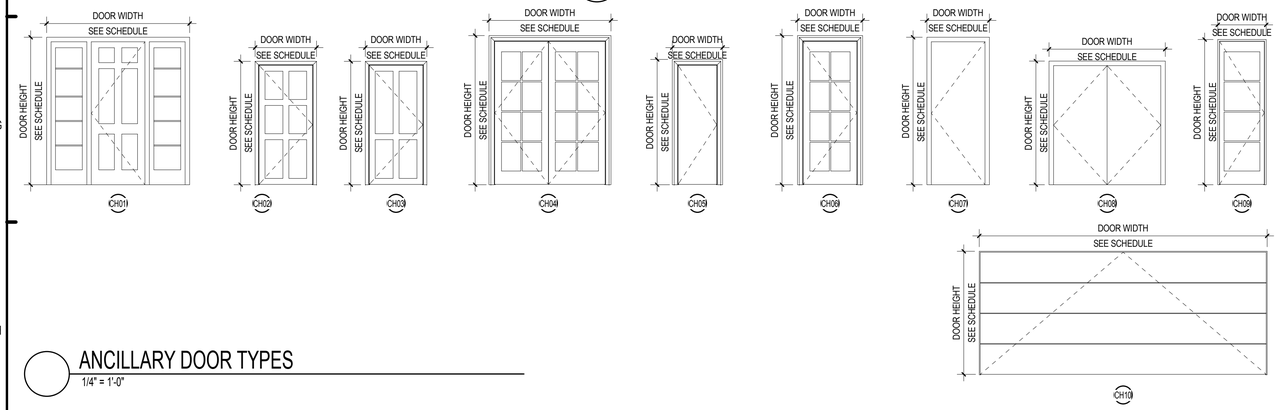
3 EXTERIOR DOOR JAMB DETAIL - STONE
3" = 1'-0"



12 DOOR THRESHOLD DETAIL
3" = 1'-0"



11 ROLL-UP DOOR THRESHOLD DETAIL
3" = 1'-0"



ANCILLARY DOOR TYPES
1/4" = 1'-0"

CLUBHOUSE DOOR SCHEDULE

	DOOR					FRAME					DOOR	
MARK	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	TYPE	MATERIAL	HEAD	JAMB	THRESHOLD	RATING	REMARKS
CH01	A	3'-0"	8'-0"	2"	INS. HM							LOBBY ENTRY DOOR
CH02	B	3'-0"	6'-8"	1 3/8"	INS. HM							
CH03	B	3'-0"	6'-8"	1 3/8"								CLUBHOUSE BATHROOM
CH04	C	6'-2"	8'-0"	1 3/4"								
CH05	D	2'-2"	6'-8"	1 3/8"								
CH06	E	3'-0"	8'-0"	1 3/4"								
CH07	D	3'-0"	8'-0"	1 3/8"								
CH08		6'-0"	6'-8"	1 3/4"								MAINTENANCE ENTRY
CH09		2'-6"	8'-0"	1 3/4"								SIDELIGHTS
CH10	G	16'-0"	6'-10"	1 3/4"								MAINTENANCE GARAGE
CH11	1604	12'-6"	8'-8"									TRASH ENCLOSURE

PERMIT REVIEW STAMP

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CONSULTANT

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FLORIDA LICENSE # AR94111

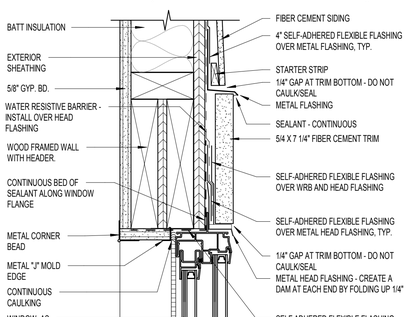
SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

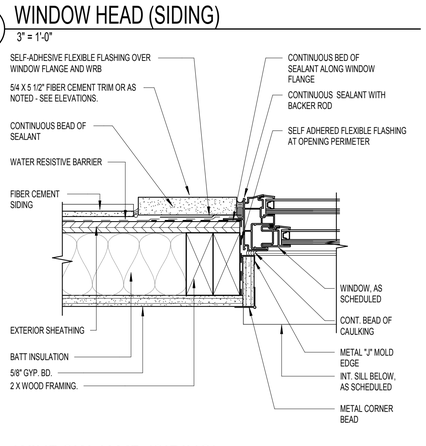
DOOR SCHEDULE

CH7.01

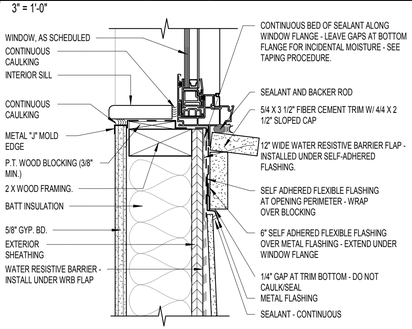
PLOTTED: 11/30/2017 5:35:01 PM



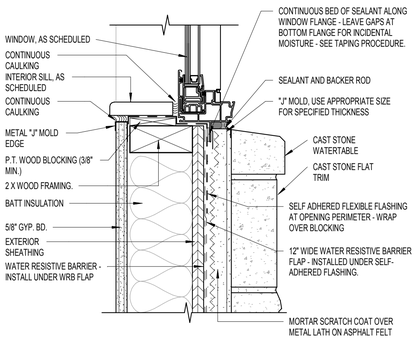
2 WINDOW HEAD (SIDING)
3" = 1'-0"



3 WINDOW JAMB (SIDING)
3" = 1'-0"



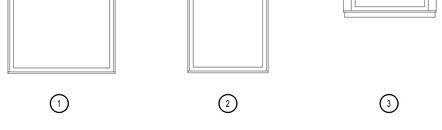
4 WINDOW SILL (SIDING)
3" = 1'-0"



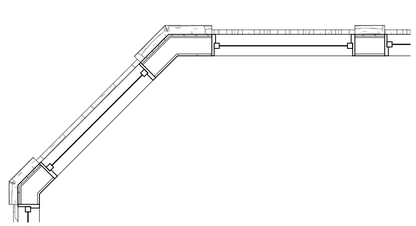
5 WINDOW SILL (STONE)
3" = 1'-0"

CLUBHOUSE WINDOW SCHEDULE

WINDOW TYPE	WINDOW UNIT					GLAZING				FRAME				REMARKS
	MARK	WIDTH	HEIGHT	HEAD HEIGHT	OPERATION	TYPE	THICKNESS	U VALUE	SHGC	MATERIAL	HEAD	JAMB	SILL	
AA	1	4'-0"	6'-0"	8'-0"										DOUBLEHUNG
BB	2	3'-0"	6'-0"	8'-0"										DOUBLEHUNG
CC	3	3'-0"	1'-6"	6'-8"										FIXED



ANCILLARY WINDOW SCHEDULES
3/8" = 1'-0"



1 CLUBHOUSE - REFERENCE PLAN - Callout 2
1/2" = 1'-0"

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REVISION HISTORY

No.	Date	Description

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103
CONSULTANT

MICHAEL E. GOVE
FLORIDA LICENSE # AR94111

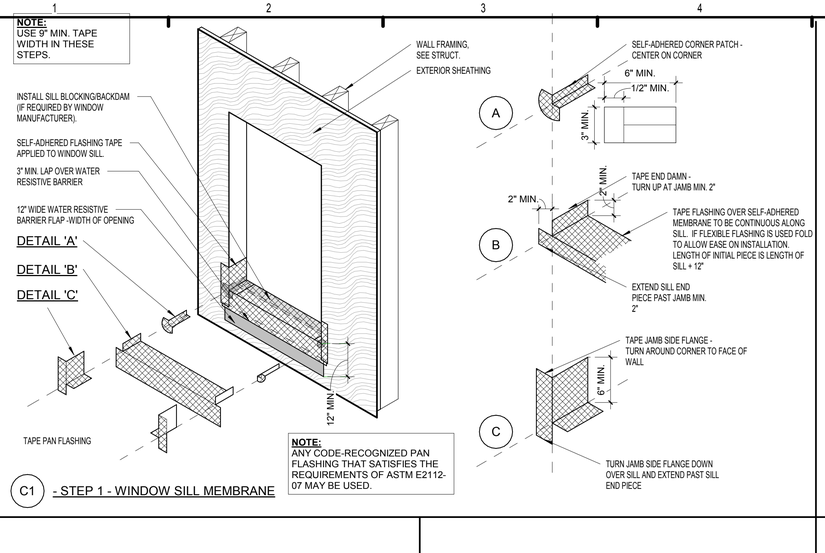
SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

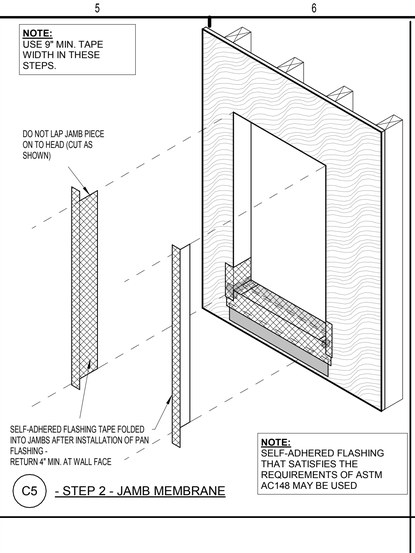
WINDOW SCHEDULE AND DETAILS

CH7.02

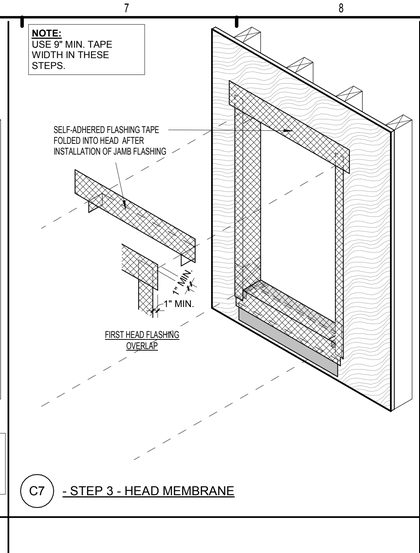
PLOTTED: 11/30/2017 5:35:07 PM



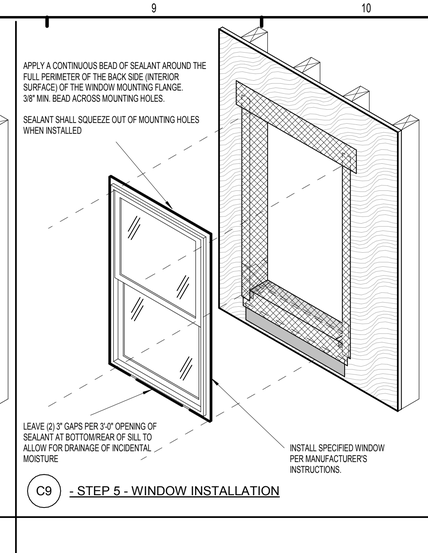
C1 - STEP 1 - WINDOW SILL MEMBRANE



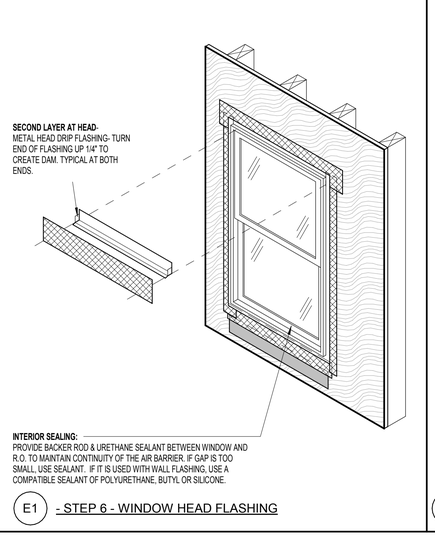
C5 - STEP 2 - JAMB MEMBRANE



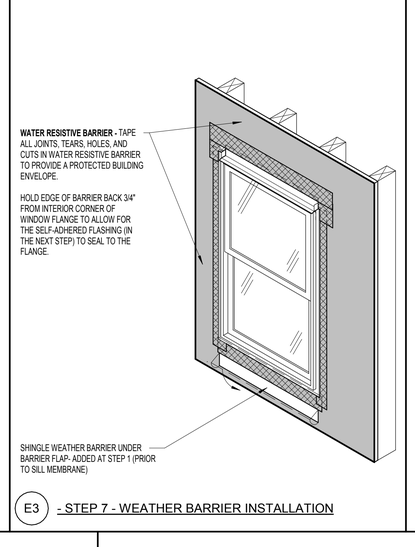
C7 - STEP 3 - HEAD MEMBRANE



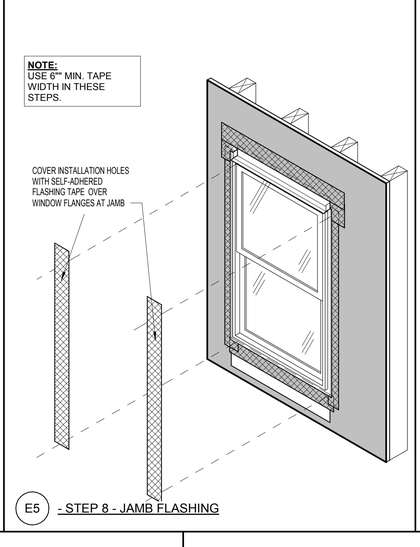
C9 - STEP 5 - WINDOW INSTALLATION



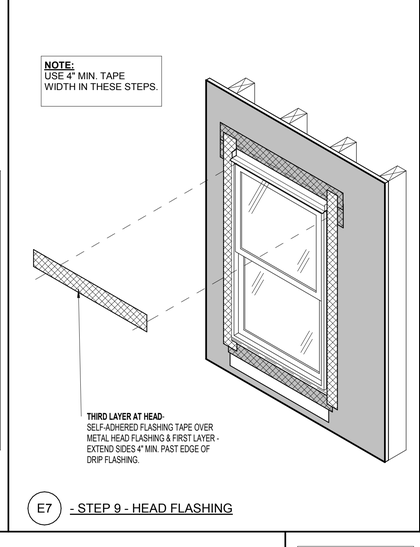
E1 - STEP 6 - WINDOW HEAD FLASHING



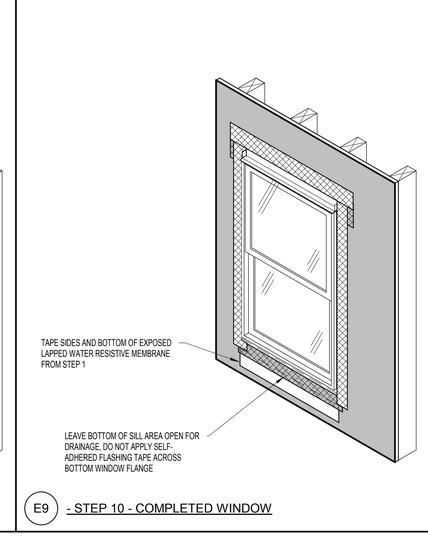
E3 - STEP 7 - WEATHER BARRIER INSTALLATION



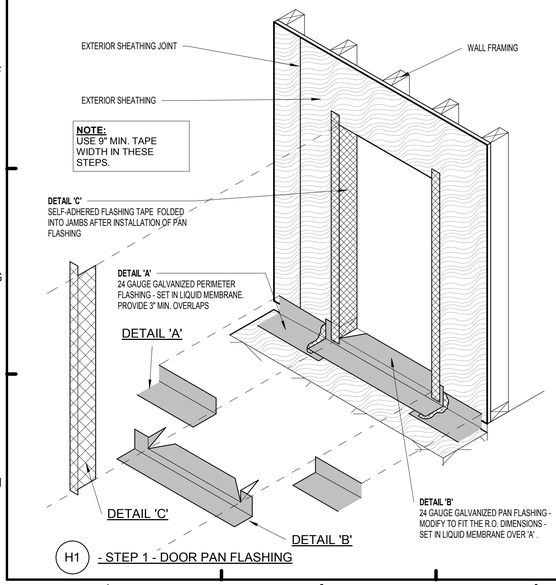
E5 - STEP 8 - JAMB FLASHING



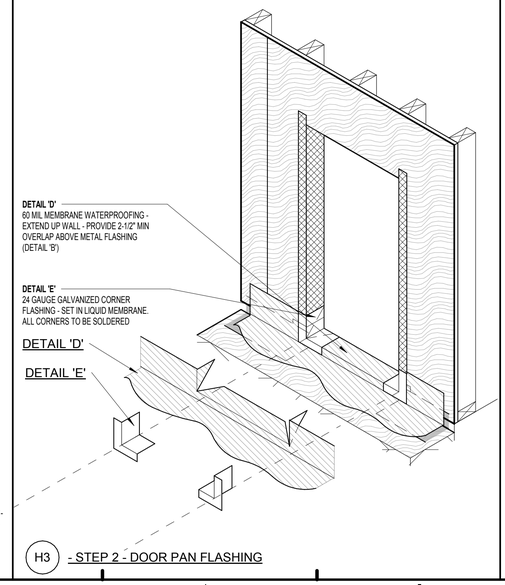
E7 - STEP 9 - HEAD FLASHING



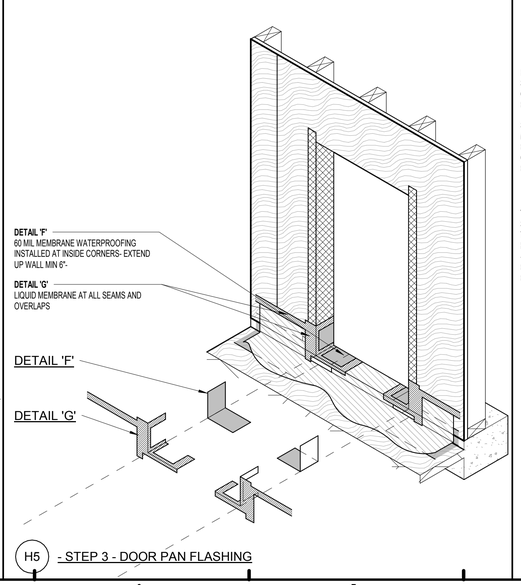
E9 - STEP 10 - COMPLETED WINDOW



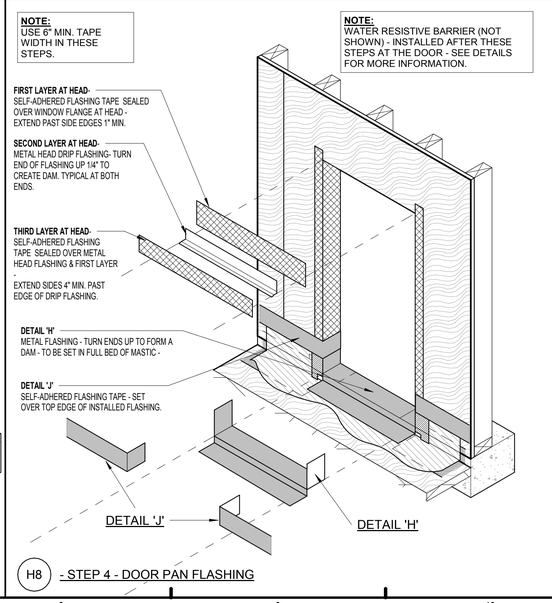
H1 - STEP 1 - DOOR PAN FLASHING



H3 - STEP 2 - DOOR PAN FLASHING



H5 - STEP 3 - DOOR PAN FLASHING



H8 - STEP 4 - DOOR PAN FLASHING

ISSUE HISTORY		
No.	Date	Description
1	7/21/2017	50% DESIGN DEVELOPMENT SET
2	11/10/2017	75%-90% REVIEW COORD. SET
3	12/20/2017	100% PERMIT SET

REVISION HISTORY		
No.	Date	Description

PERMIT REVIEW STAMP

FUGLEBERG KOCH
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www.fuglebergkoch.com AA26002103
CONSULTANT
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SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	Author
Checked:	Checker
Approval:	Approver
Date:	Issue Date
Project #:	5389

WINDOW AND DOOR TAPING PROCEDURES

CH7.03

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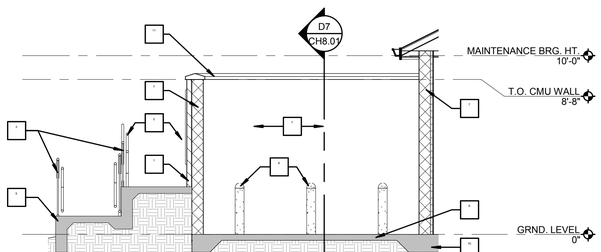
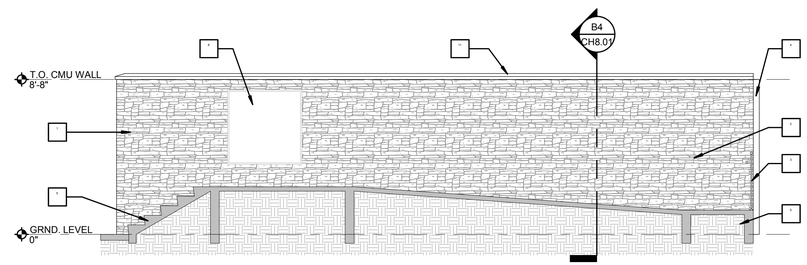
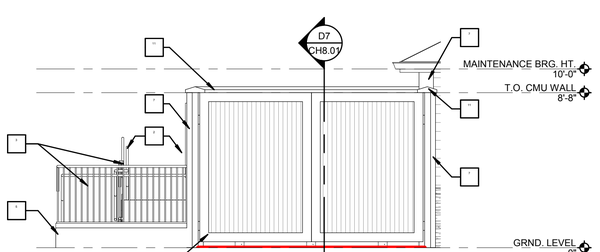


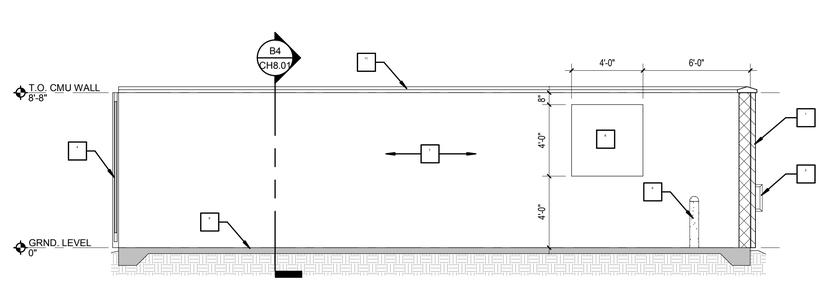
B4 TRASH ENCLOSURE - CROSS SECTION
1/4" = 1'-0"



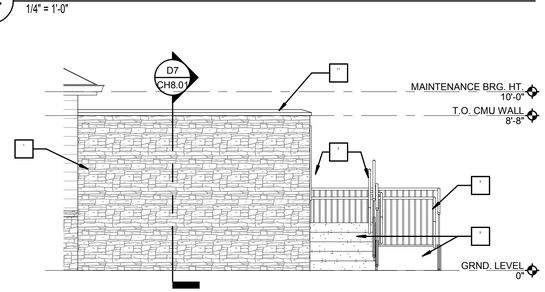
B7 TRASH ENCLOSURE - SECTION @ RAMP
1/4" = 1'-0"



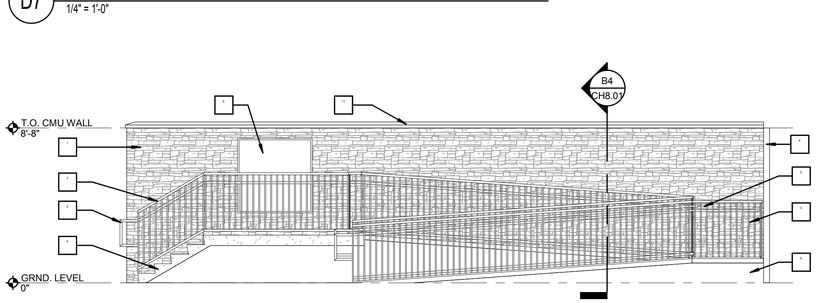
D4 TRASH ENCLOSURE - FRONT ELEVATION
1/4" = 1'-0"



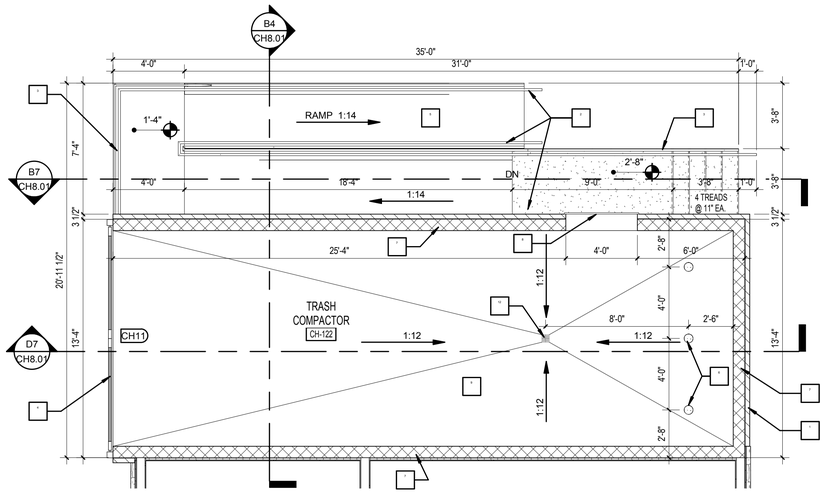
D7 TRASH ENCLOSURE - LONG SECTION
1/4" = 1'-0"



E4 TRASH ENCLOSURE - REAR ELEVATION
1/4" = 1'-0"



E7 TRASH ENCLOSURE - SIDE ELEVATION
1/4" = 1'-0"



H7 TRASH ENCLOSURE PLAN
1/4" = 1'-0"

KEY NOTES:

1. STONE VENEER.
2. STEEL HANDRAIL - PAINTED.
3. STEEL GUARDRAIL - PAINTED.
4. ALUMINUM GATE - SEE DOOR SCHEDULE.
5. CAST-IN-PLACE CONCRETE - SEE STRUCTURAL.
6. CONCRETE BOLLARD - PAINTED.
7. CMU - PAINTED.
8. HOPPER DOOR - 40"x40" SECURITY DOOR WITH HANDLE AT 48" AFF.
9. CONCRETE SLAB - SEE STRUCTURE.
10. CONCRETE FOOTING - SEE STRUCTURAL
11. PRECAST CONCRETE WALL CAP.
12. FLOOR DRAIN - SEE PLUMBING.

NOTE:
- COORDINATE HOPPER DOOR OPENING SIZE AND LOCATION W/ TRASH COMPACTOR PROVIDER PRIOR TO INSTALLATION OF MASONRY.
- COORDINATE OPENING FOR COMPACTOR W/ COMPACTOR PROVIDER PRIOR TO INSTALLATION OF MASONRY.

PERMIT REVIEW STAMP

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TRASH ENCLOSURE

CH8.01

PLOTTED: 11/30/2017
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