BEST PRACTICES

greenfiber® creators of SANCTUARY®

SANCTUARY®
TWO-HOUR FIREWALL

Underwriters Laboratories Inc.®

FIRE RESISTANT RATED WALL DRAWINGS & DETAILS SET

APPLICABLE UNDERWRITERS LABORATORY ASSEMBLY REFERENCES
UL-U370, UL-U377 & UL-U305 & GYPSUM ASSOCIATION
GA-FILE-NO-WP-3910 ASSEMBLY FOR SOUND CONTROL

THESE DRAWINGS ARE TO BE USED FOR FIRE RESISTANT WALL DESIGN INFORMATION PURPOSES ONLY AS THEY REFLECT GENERIC CONDITIONS, BEST PRACTICES AND DESIGN PRINCIPLES. THEY DO NOT SUBSTITUTE DESIGN SPECIFIC, ORIGINAL AND PROPRIETARY DRAWINGS WHICH SHOULD BE REVIEWED BY A REGISTERED ARCHITECT OR STRUCTURAL ENGINEER AS PER THE LOCAL JURISDICTION AND STATE REQUIREMENTS WHERE THE PROJECT IS BEING BUILT. THE USE OF ONE OR MORE OF THESE DRAWINGS WITHOUT THE APPROVAL OF A REGISTERED ARCHITECT OR STRUCTURAL ENGINEER DOES NOT CONSTITUTE APPROVAL BY GREENFIBER FOR ANY USE OF THE STRUCTURES SHOWN IN THE DRAWINGS. GREENFIBER IS NOT AN ARCHITECTURAL, ENGINEERING OR INSPECTION FIRM, AND DOES NOT CREATE OR STAMP DRAWINGS FOR USE IN BUILDING CONSTRUCTION, OR ACT AS AN ARCHITECT OR ENGINEER OF RECORD. THE USER MAINTAINS THE FULL AND COMPLETE RESPONSIBILITY TO COMPLY WITH ALL CODES, LAWS, AND REGULATIONS APPLICABLE TO THE SAFE AND PROPER USE, HANDLING AND INSTALLATION OF GREENFIBER'S PRODUCTS AND SHOULD CONSULT WITH AN ARCHITECT AND/OR ENGINEER FOR ALL CONSTRUCTION AND DESIGN RELATED QUESTIONS. THIS SET OF DRAWINGS DOES NOT INCLUDE THE SPECIFIC CALCULATIONS OTHER THAN THOSE IMPLIED, DONE AND USED BY UNDERWRITERS LABORATORY IN THEIR TESTING. IN STATES WHERE HIGH WINDS AND OR SEISMIC CONDITIONS BY CODES DO EXIST, A STRUCTURAL DESIGN REVIEW BY A LICENSED STRUCTURAL ENGINEER IS MANDATORY.

SET ISSUE : 03/30/2023 - VERSION #31

OVER THE PAST FIFTEEN YEARS THE GREENFIBER STABILIZED CELLULOSE UL-U370 AND UL-U377 FIRE RESISTANCE RATED WALLS HAVE BEEN APPROVED BY LOCAL JURISDICTIONS IN THE FOLLOWING STATES: COLORADO, FLORIDA, GEORGIA, ILLINOIS, NORTH CAROLINA, SOUTH CAROLINA, TEXAS AND VIRGINIA.

DESIGN CONFIGURATION A&E INC.
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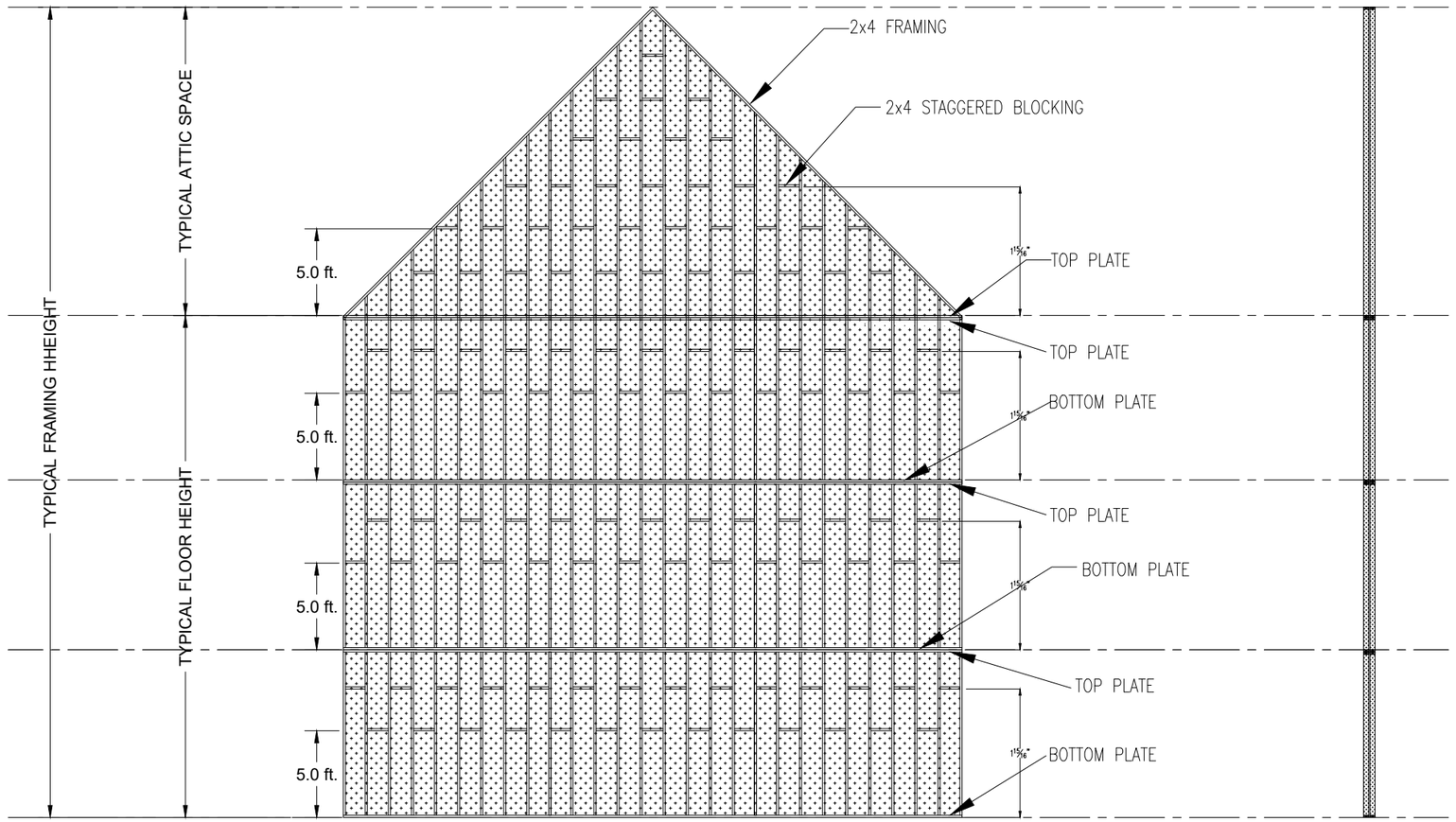
SHEET No.1

F0.0

OF 16 SHTS

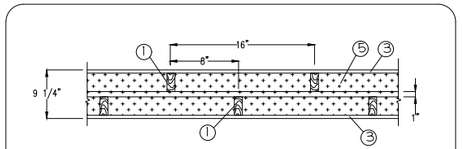
TYPICAL SIDE VIEW OF FIREWALL WITH APPLIED GREENFIBER FRM



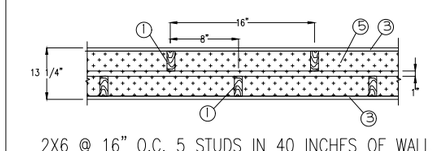
TYPICAL FRONT VIEW OF FIREWALL WITH APPLIED GREENFIBER FRM

TYPICAL TOP VIEW OF FIREWALL AND STAGGERED STUDS ON EACH SIDE

CONTINUITY AND INDEPENDENCE OF THE FIREWALL SIDES, STUD STAGGERING AND ALTERNATING BLOCKING FROM ONE SIDE OF THE FIREWALL TO THE OTHER



2X4 @ 16" O.C. 5 STUDS IN 40 INCHES OF WALL



2X6 @ 16" O.C. 5 STUDS IN 40 INCHES OF WALL

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: TYPICAL DETAILS I

SHEET CONTENT: UL-U370 FIRE RESISTANT RATED ASSEMBLY

DESIGN CONFIGURATION A & E INC.
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UL 370 PERPENDICULAR FLOOR SYSTEM DETAILS

ISSUE: 07/21/2021 ISSUE VERSION # 30

FIRE SEPARATION RATED WALL & SOUND CONTROL
UL - U370 &U377
ASSEMBLY APPLICATIONS

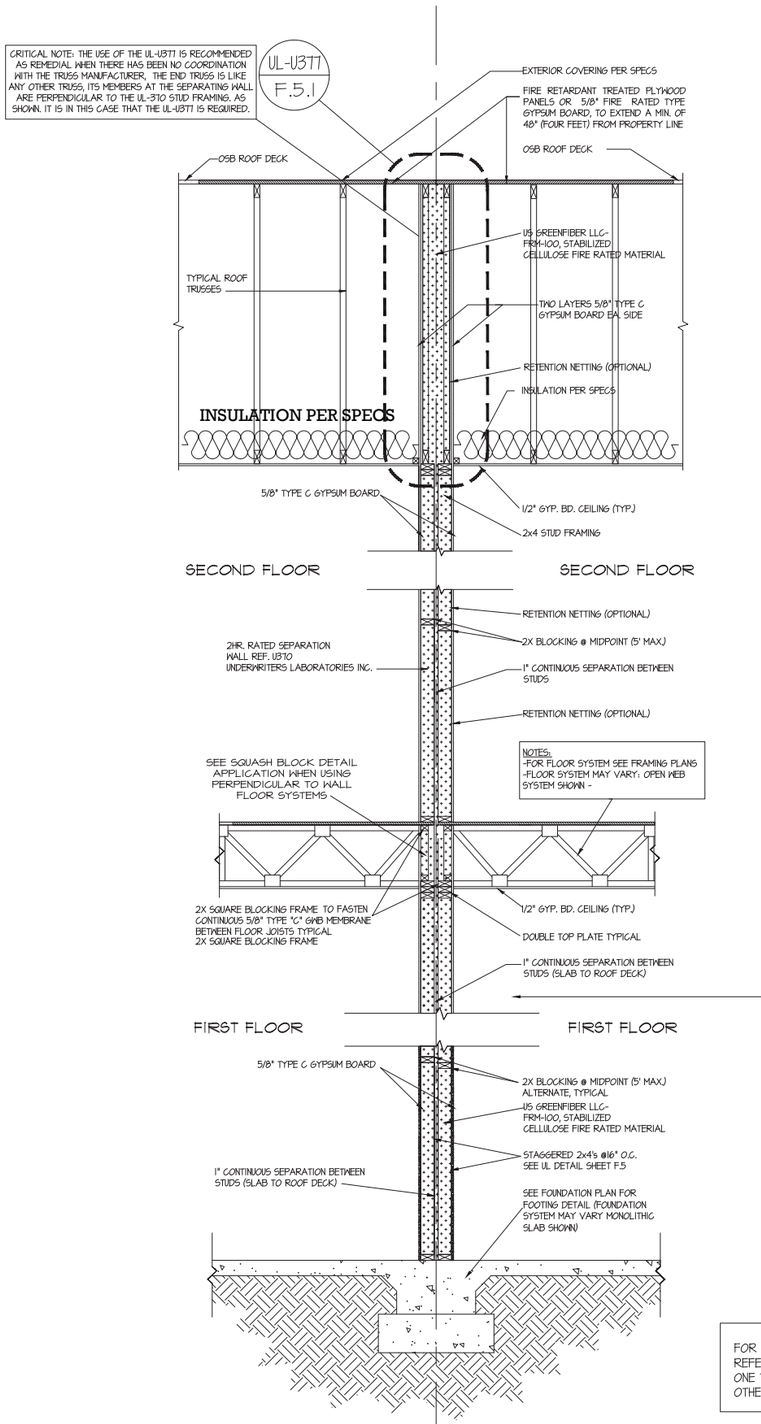
DATE PLOTTED 08-25-2021

SHEET No. 2

F.1

OF 16 SHTS

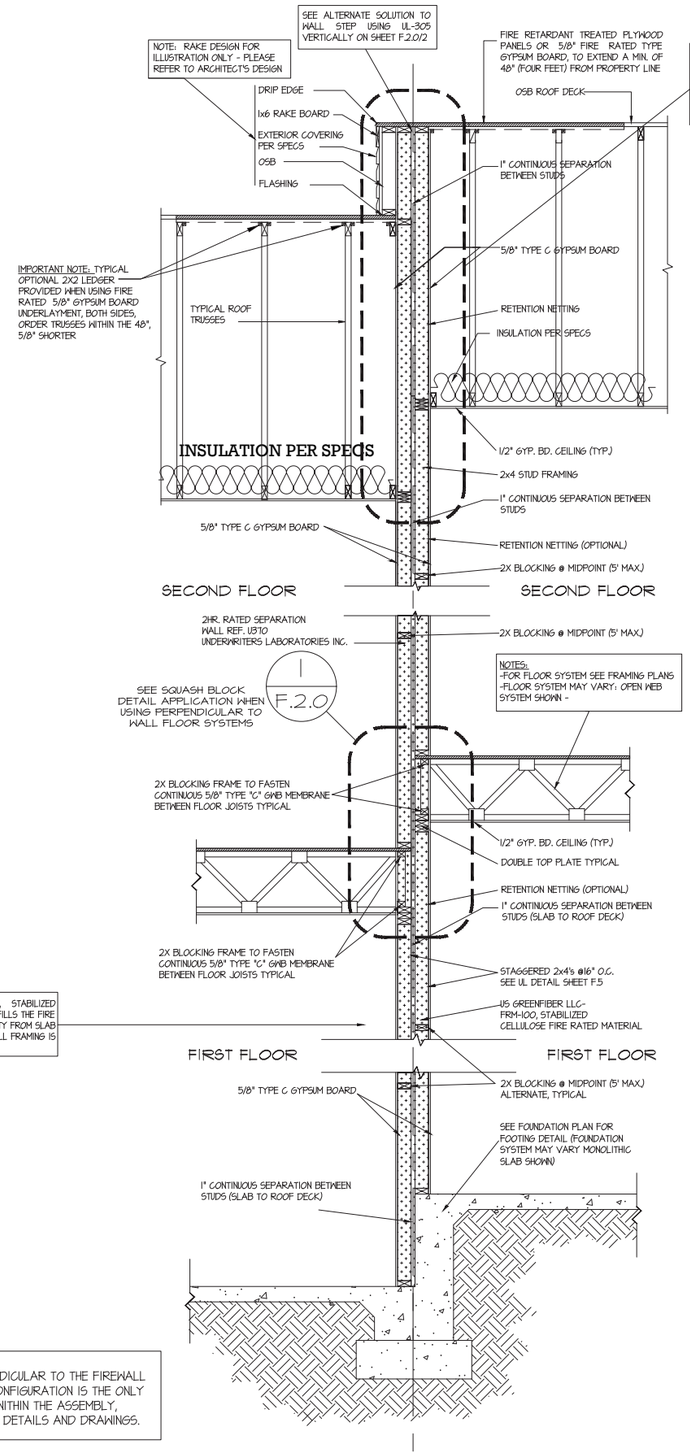
PERPENDICULAR FLOOR SYSTEM APPLICATION - OPEN WEB SHOWN - TGI SIMILAR



1 / F.1.A — 2 HR. WALL SECTION-TYP. CONDITION-PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE — REFERENCE: UL-U370

US GREENFIBER, LLC. FRM-100, STABILIZED CELLULOSE FIRE RATED MATERIAL FILLS THE FIRE RESISTANT SEPARATION WALL CAVITY FROM SLAB TO DECK CONTINUOUSLY - EACH WALL FRAMING IS INDEPENDENT FROM THE OTHER.

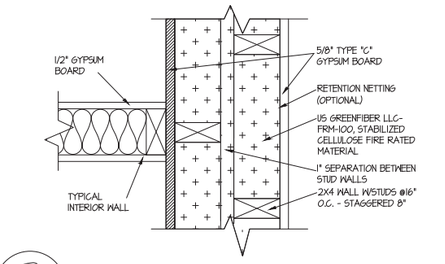
NOTE:
FOR A TGI FLOOR SYSTEM, PERPENDICULAR TO THE FIREWALL REFER TO DETAIL 1/F.2.0 - THAT CONFIGURATION IS THE ONLY ONE THAT REQUIRES A RIMBOARD WITHIN THE ASSEMBLY, OTHERWISE IT IS SIMILAR AS THESE DETAILS AND DRAWINGS.



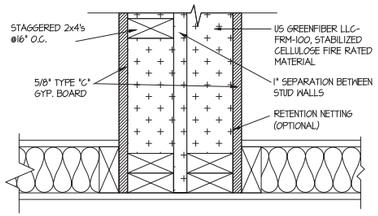
2 / F.1.A — 2 HR. WALL SECTION-STEP CONDITION-PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE — REFERENCE: UL-U370

REQUIRED REMEDIAL

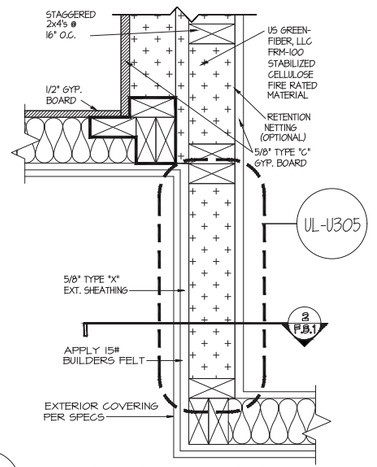
BY CODE AND UL ASSEMBLY TESTING



3 / F.1.A — 2 HR. WALL INTERSECTION W/NON RATED WALL
NOT TO SCALE — TYPICAL



5 / F.1.A — 2 HR. WALL INTERSECTION W/EXTERIOR WALL
NOT TO SCALE — TYPICAL



7 / F.1.A — 2 HR. WALL W/EXTERIOR WALL & HORIZONTAL JOG
NOT TO SCALE — TYPICAL

NOTE:
THE SPECIFIC FIRE WALL ASSEMBLY WOOD FRAMING STUD SIZES FOR YOUR APPLICATION SHALL BE DETERMINED BY THE DESIGN PROFESSIONAL OF RECORD. THE UL-U370 ASSEMBLY CALLS FOR 2x4'S AS A MINIMUM REQUIREMENT FOR SUCH ASSEMBLY IN ANY GIVEN FLOOR SYSTEM CONDITION. THE DESIGN INTEGRITY OF THE ASSEMBLY SHOULD BE ALWAYS MAINTAINED BY KEEPING BOTH SIDES OF THE ASSEMBLY SYMMETRICALLY IDENTICAL, IN ITS SPACING, SIZING AND DIMENSIONING OF THE COMPONENTS.

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greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: TYPICAL DETAILS I

SHEET CONTENT: UL-U370 FIRE RESISTANT RATED ASSEMBLY

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UL 370 PERPENDICULAR FLOOR SYSTEM DETAILS

ISSUE: 07/21/2021 ISSUE VERSION # 30

FIRE SEPARATION RATED WALL & SOUND CONTROL
UL - U370 &U377
ASSEMBLY APPLICATIONS

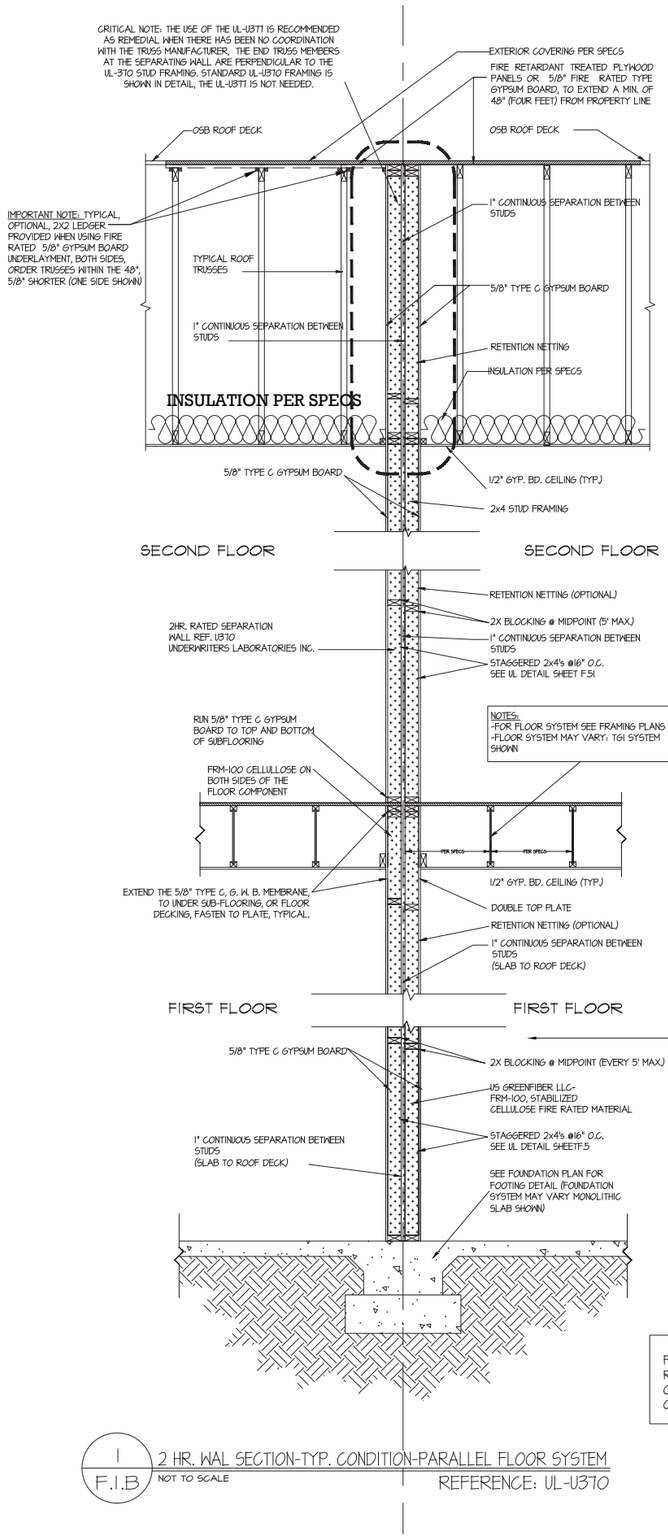
DATE PLOTTED: 08-25-2021

SHEET No. 3

F.1.A

OF 16 SHTS

PARALLEL FLOOR SYSTEM APPLICATION - T G I SHOWN - OPEN WEB SIMILAR



1 / F.1.B — 2 HR. WAL SECTION-TYP. CONDITION-PARALLEL FLOOR SYSTEM
NOT TO SCALE — REFERENCE: UL-U370

US GREENFIBER, LLC. FRM-100, STABILIZED CELLULOSE FIRE RATED MATERIAL FILLS THE FIRE RESISTANT SEPARATION WALL CAVITY FROM SLAB TO DECK CONTINUOUSLY - EACH WALL FRAMING IS INDEPENDENT FROM THE OTHER.

NOTE:
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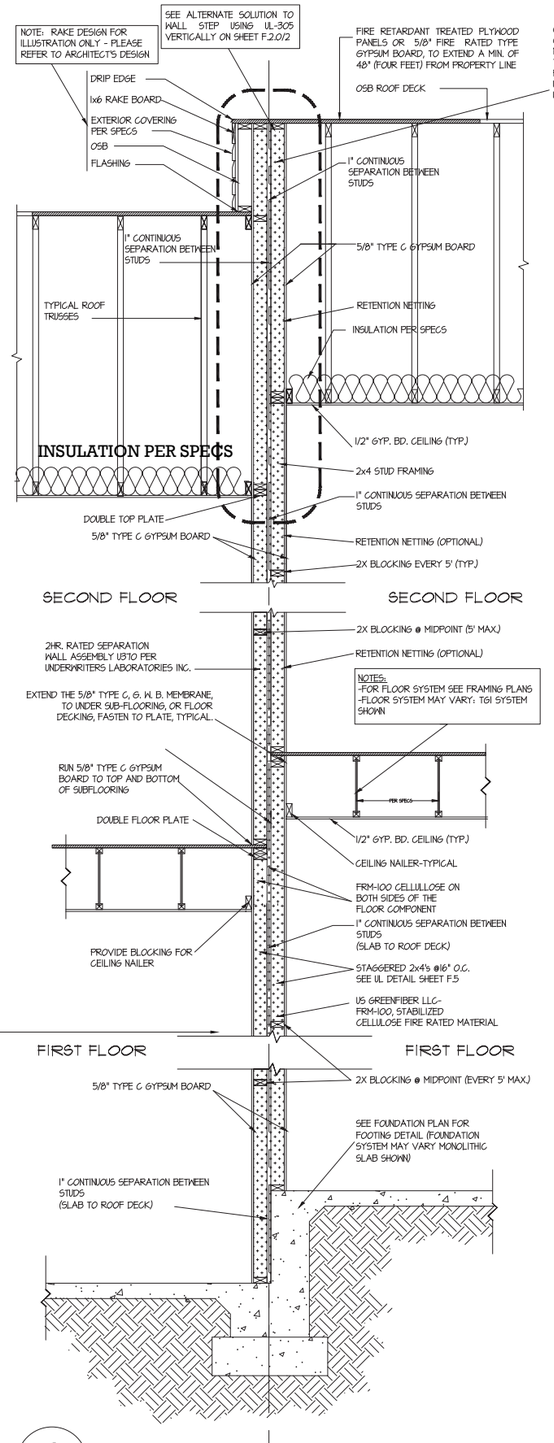
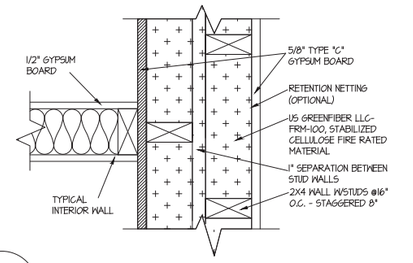


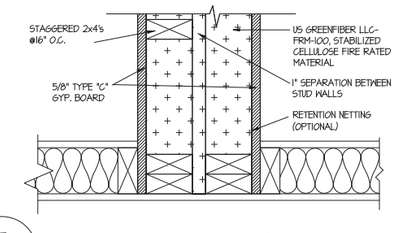
2 / F.1.B — 2 HR. WAL SECTION-STEP CONDITION-PARALLEL FLOOR SYSTEM
NOT TO SCALE — REFERENCE: UL-U370

REQUIRED REMEDIAL

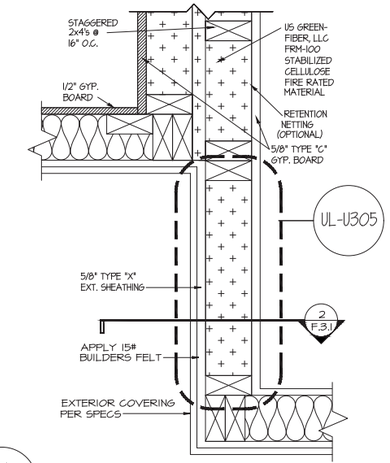
BY CODE AND UL ASSEMBLY TESTING



3 / F.1.B — 2 HR. WAL INTERSECTION W/NON RATED WALL
NOT TO SCALE — TYPICAL



5 / F.1.B — 2 HR. WAL INTERSECTION W/EXTERIOR WALL
NOT TO SCALE — TYPICAL



7 / F.1.B — 2 HR. WAL W/EXTERIOR WALL & HORIZONTAL JOG
NOT TO SCALE — TYPICAL

NOTE:
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greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: TYPICAL DETAILS II

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UL 370 PARALLEL FLOOR SYSTEM DETAILS

ISSUE: 07/21/2021 ISSUE VERSION # 30

FIRE SEPARATION RATED WALL & SOUND CONTROL

UL - U370 & U377

ASSEMBLY APPLICATIONS

DATE PLOTTED 08-25-2021

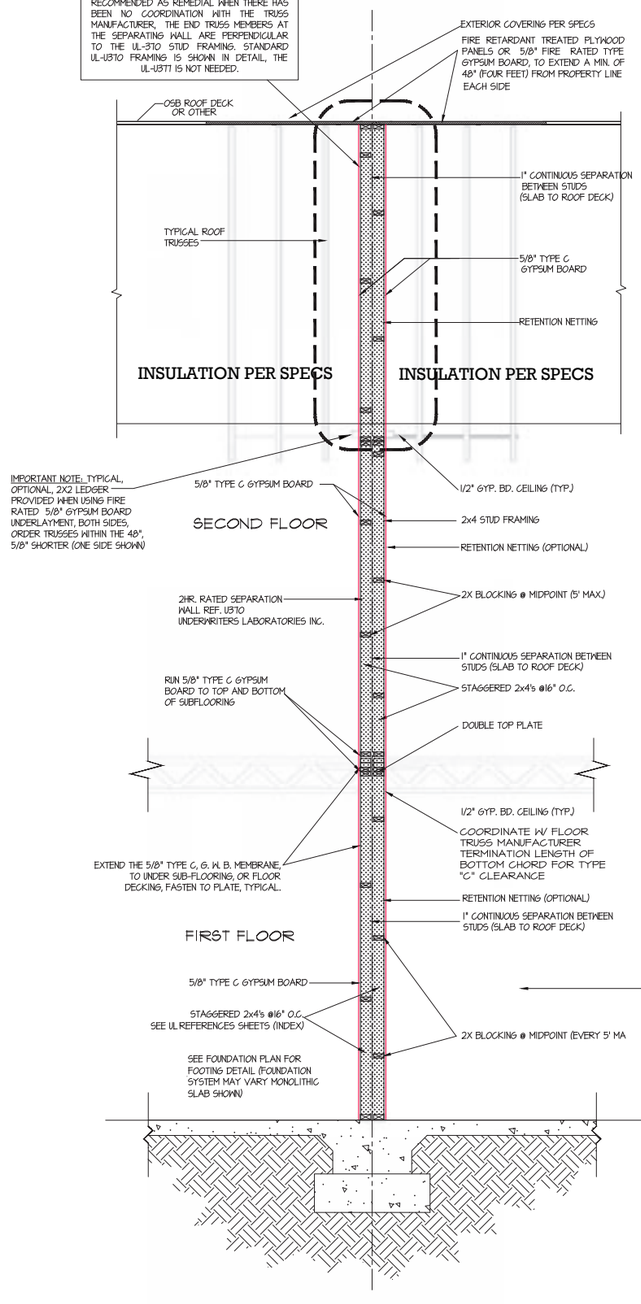
SHEET No. 4

F.1.B

OF 16 SHTS

TOP CHORD LOAD BEARING FLOOR SYSTEM APPLICATION - OPEN WEB

CRITICAL NOTE: THE USE OF THE UL-U371 IS RECOMMENDED AS REMEDIAL WHEN THERE HAS BEEN NO COORDINATION WITH THE TRUSS MANUFACTURER, THE END TRUSS MEMBERS AT THE SEPARATING WALL ARE PERPENDICULAR TO THE UL-U370 STUD FRAMING. STANDARD UL-U370 FRAMING IS SHOWN IN DETAIL, THE UL-U371 IS NOT NEEDED.



1 F.1.C — 2 HR. WALL SECTION-TYP. CONDITION-TOP CHORD FLOOR SYSTEM
NOT TO SCALE — REFERENCE: UL-U370

US GREENFIBER, LLC. FRM-100, STABILIZED CELLULOSE FIRE RATED MATERIAL FILLS THE FIRE RESISTANT SEPARATION WALL CAVITY FROM SLAB TO DECK CONTINUOUSLY - EACH WALL FRAMING IS INDEPENDENT FROM THE OTHER.

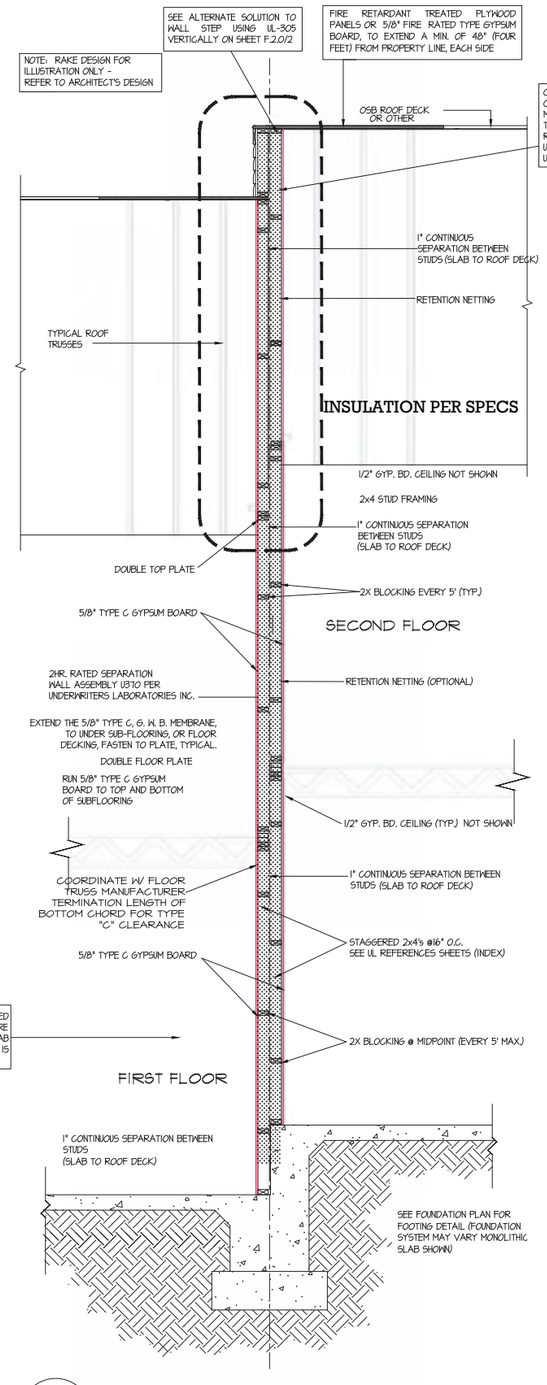
SEE ALTERNATE SOLUTION TO WALL STEP USING UL-305 VERTICALLY ON SHEET F.2.0/2

FIRE RETARDANT TREATED PLYWOOD PANELS OR 5/8" FIRE RATED TYPE GYPSUM BOARD, TO EXTEND A MIN. OF 48" (FOUR FEET) FROM PROPERTY LINE, EACH SIDE

NOTE: RAKE DESIGN FOR ILLUSTRATION ONLY - REFER TO ARCHITECT'S DESIGN

OSB ROOF DECK OR OTHER

CRITICAL NOTE: AN EFFECTIVE COORDINATION WITH THE TRUSS MANUFACTURER RESULTS IN THE END TRUSSES HAVING ITS MEMBERS ROTATED AND PARALLEL TO THE UL-U370 WALL BELOW. AS SHOWN. THE UL-U371 IS NOT REQUIRED THEN.



2 F.1.C — 2 HR. WALL SECTION-STEP CONDITION-TOP CHORD FLOOR SYSTEM
NOT TO SCALE — REFERENCE: UL-U370

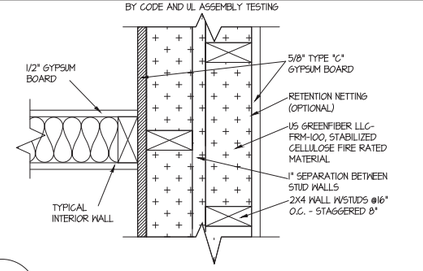
NOTE:
FOR A TGI FLOOR SYSTEM, PERPENDICULAR TO THE FIREWALL REFER TO DETAIL 1/F.2.0 - THAT CONFIGURATION IS THE ONLY ONE THAT REQUIRES A RIMBOARD WITHIN THE ASSEMBLY, OTHERWISE IT IS SIMILAR AS THESE DETAILS AND DRAWINGS.

TOP CHORD LOAD BEARING TRUSS FACTS:

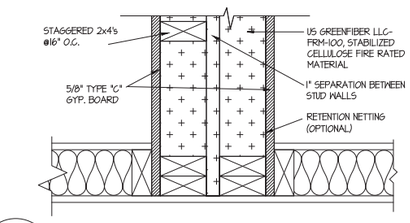
-EACH TCLB TRUSS PENETRATES THE TYPE C GWB MEMBRANE FACE A TOTAL .07 SQ.FT.
-EACH TCLB TRUSS PENETRATES THE FIRE RESISTANT RATED WALL .02 CU.FT.
-A BOTTOM LOAD TRUSS OR STANDARD FLOOR TRUSS PENETRATION RESPECTIVELY PRODUCES A .28 SQ. FT. FOR THE TYPE C AREA AND .18 CU. FT. FOR THE FIRE RESISTANT RATED WALL PENETRATION.
- A STANDARD FLOOR SYSTEM, ON THE AVERAGE, FOR THIS PURPOSES, HAS 24 FLOOR TRUSSES, THAT IS LESS THAN 5 CU. FT. OF FIRE ASSEMBLY PENETRATION WITH THE TCLB TRUSS AND 18.72 SQ.FT. OF PENETRATION WITH THE STANDARD TRUSS
- TCLB TRUSSES CAN SIT ON THE PLATE UP TO A MINIMUM OF 1¾" DEEP ON LOAD BEARING SURFACE OF THE PLATE, THIS CONDITION RETAINS THE MEMBRANE PENETRATION TO .07 SQ. FT. BUT REDUCES EVEN MORE THE VOLUME OF PENETRATION THAT EACH TRUSS EFFECTIVELY HAS INSIDE THE CAVITY TO .01 CU.FT. PER TRUSS!

REQUIRED REMEDIAL

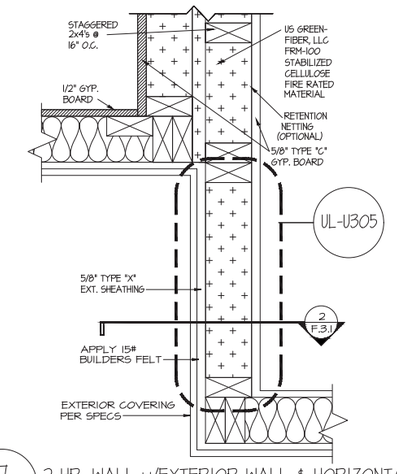
BY CODE AND UL ASSEMBLY TESTING



3 F.1.C — 2 HR. WALL INTERSECTION W/NON RATED WALL
NOT TO SCALE — TYPICAL



5 F.1.C — 2 HR. WALL INTERSECTION W/EXTERIOR WALL
NOT TO SCALE — TYPICAL



7 F.1.C — 2 HR. WALL W/EXTERIOR WALL & HORIZONTAL JOG
NOT TO SCALE — TYPICAL

NOTE:
THE SPECIFIC FIRE WALL ASSEMBLY WOOD FRAMING STUD SIZES FOR YOUR APPLICATION SHALL BE DETERMINED BY THE DESIGN PROFESSIONAL OF RECORD. THE UL-U370 ASSEMBLY CALLS FOR 2x4'S AS A MINIMUM REQUIREMENT FOR SUCH ASSEMBLY IN ANY GIVEN FLOOR SYSTEM CONDITION. THE DESIGN INTEGRITY OF THE ASSEMBLY SHOULD BE ALWAYS MAINTAINED BY KEEPING BOTH SIDES OF THE ASSEMBLY SYMMETRICALLY IDENTICAL, IN ITS SPACING, SIZING AND DIMENSIONING OF THE COMPONENTS.

greenfiber SANCTUARY TWO-HOUR FIREWALL

NOT FOR PERMIT

SHEET TITLE: TYPICAL DETAILS III

SHEET CONTENT: UL-U370 FIRE RESISTANT RATED ASSEMBLY

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UL 370 PARALLEL FLOOR SYSTEM DETAILS

ISSUE: 07/21/2021 ISSUE VERSION # 30

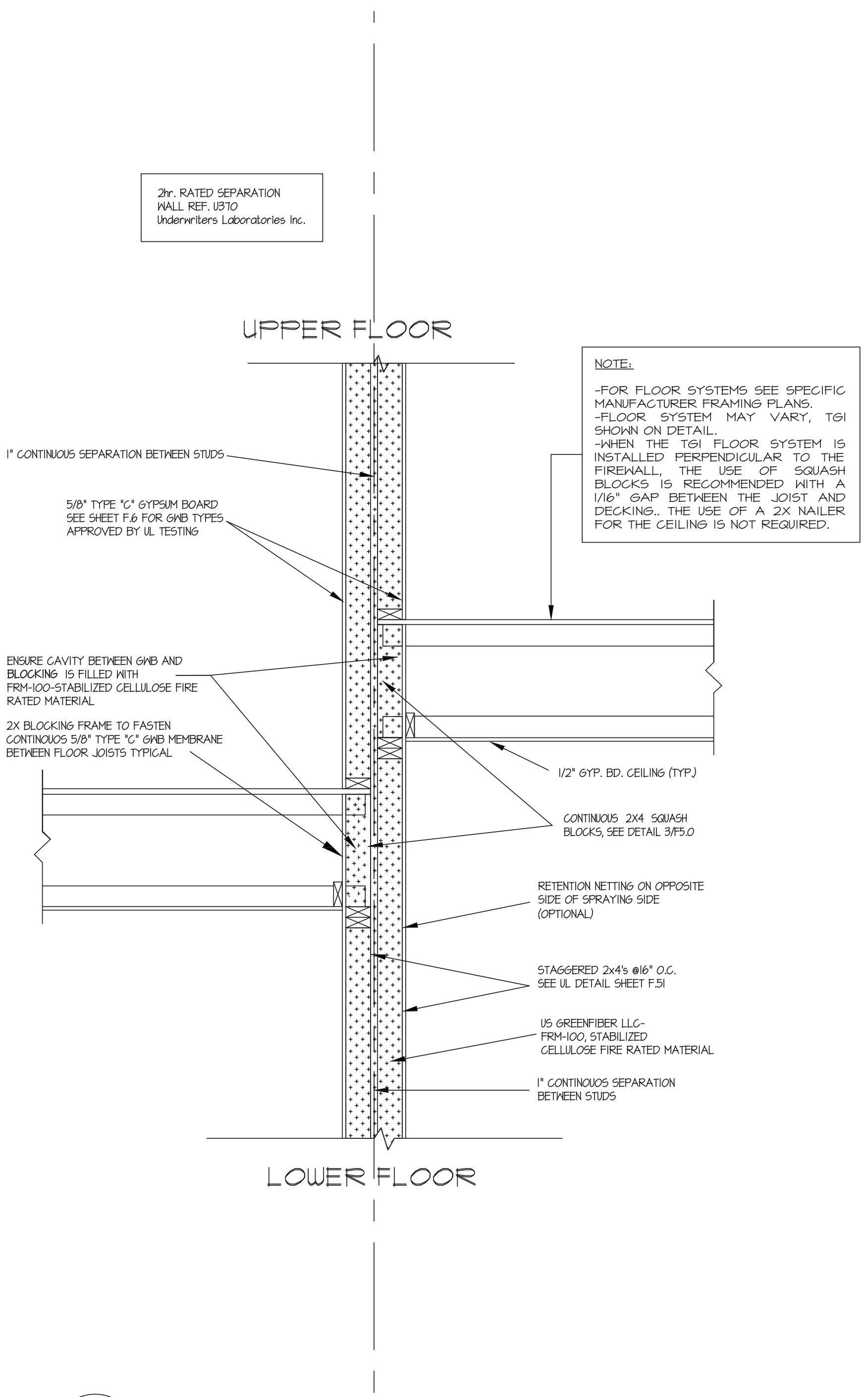
FIRE SEPARATION RATED WALL & SOUND CONTROL
UL - U370 & U377
ASSEMBLY APPLICATIONS

DATE PLOTTED 08-25-2021

SHEET No. 5

F.1.C

OF 16 SHTS



1 / F.2.0 STEP CONDITION - FLOOR AREA SECTION DETAIL

NOT TO SCALE

FIRE RESISTANT RATED ASSEMBLY DESIGN & CONSTRUCTION GENERAL NOTES:

1. ALL COMPONENTS OF THE 2 HOUR AREA SEPARATION WALL SHALL BE FROM A MANUFACTURER LISTED IN THE UL-U370 REFERENCE. USE OF NON-LISTED COMPONENTS MAY MAKE WALL PERFORM IN A MANNER OTHER THAN AS SPECIFIED IN UL U370.

2. THE MATERIALS IN THE ASSEMBLY ARE SENSITIVE TO MOISTURE, THE CONTRACTOR SHALL PROTECT MATERIALS FROM MOISTURE/WATER AND DEVELOPMENT OF MOLD.

3. TO AREA SEPARATION ASSEMBLIES REQUIRE SPECIFIC TREATMENT TO ACHIEVE REQUIRED FIRE RATING - SEE NOTE 7.

4. IT IS HIGHLY RECOMMENDED THAT THE COMPLETED AREA SEPARATION ASSEMBLY WALLS BE INSPECTED BY A QUALIFIED THIRD PARTY, REGISTERED ARCHITECT OR PROFESSIONAL ENGINEER, FOR COMPLIANCE WITH UL U370 AND ASSOCIATED CONSTRUCTION DETAILS.

5. PENETRATIONS OF WALL OR FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO BE PROTECTED IN ACCORDANCE WITH 2012 IRC, SECTION 302.4. AND SECTIONS R302.4.1., R302.4.1.1, 302.4.1.2, AND 302.4.2 (SEE EITHER NC-RBD OR FBC-R ACCORDINGLY). PENETRATIONS SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY. PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (3PA) AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL ASSEMBLY BEING PENETRATED. NO PENETRATIONS SHALL BE ALLOWED IN THE FIRE RATED ROOF PLYWOOD DECKING ADJACENT TO THE FIREWALL.

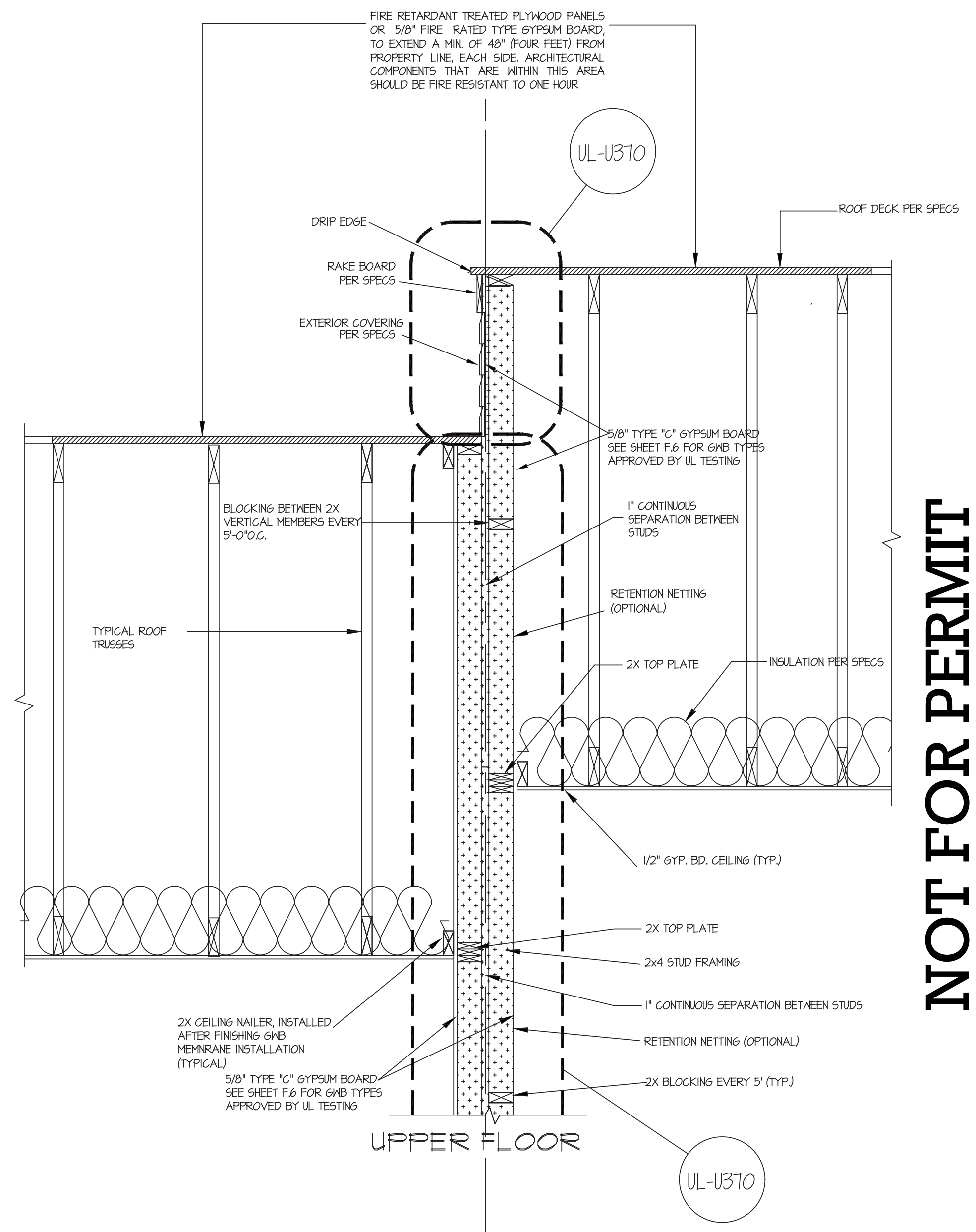
6. AS AN ALTERNATIVE TO THE FIRE RATED PLYWOOD SHOWN IN DETAILS, "5/8" FIRECODE CORE GYPSUM PANELS MAYBE USED AS UNDERLAYMENT FOR NON-FIRE-RETARDANT TREATED PLYWOOD ROOF SHEATHING (PER SECTION 317.2.2 OF FBC-R & IRC "DWELLING UNIT SEPARATION") FOR A DISTANCE OF 4 FT. FROM THE FACE OF EACH SIDE OF THE TWO (2) HOUR FIRE-RESISTANCE-RATED WALL.

7. AREA SEPARATION WALL SHALL EXTEND TO THE INSIDE FACE OF THE EXTERIOR SHEATHING WHEN UNIT ELEVATIONS ARE FLUSH WITH EACH OTHER.

8. THE APPLICATION, TESTING AND REPAIR OF SPRAYED FIRE RATED MATERIAL (FRM-100) SHALL BE ACCORDING TO MANUFACTURER'S SPECIFICATIONS BY TRAINED PERSONNEL AND SHALL BE BY CONTRACTORS APPROVED BY THE MANUFACTURER.

9. THE UL-U370 WALL ASSEMBLY AS DESIGNED AND TESTED DOES NOT INCLUDE NOR REQUIRE FIRE CAULKING, THE CAVITY OF THE FIREWALL IS FILLED COMPLETELY WITH THE FIRE RATED MATERIAL, FRM-100, HENCE PROVIDING A SOLID AND CONTINUOUS MEMBRANE FOR FIRE SEPARATION, IT DOES REQUIRE THAT ALL GYPSUM WALL JOINTS BE TAPED AND BOTH JOINTS AND SCREW HEADS BE COVERED WITH JOINT COMPOUND.

10. THE SPECIFIC FIRE WALL ASSEMBLY STUD SIZES SHALL BE DETERMINED BY THE DESIGN PROFESSIONAL OF RECORD. THE UL-U370, UL-U377 AND UL-U305 ASSEMBLIES CALL FOR A 2X4 AS A MINIMUM ASSEMBLY COMPONENT, FOR ANY SUCH ASSEMBLY WITH ANY GIVEN FLOOR CONDITION, THE DESIGN INTEGRITY OF THE ASSEMBLY SHOULD BE MAINTAINED BY KEEPING BOTH SIDES OF THE ASSEMBLY IDENTICAL, IN ITS DIMENSIONING, SPACING, AND SIZING OF THE COMPONENTS.



UL-U305 VERTICAL APPLICATION SECTION DETAIL

2 / F.2.0 STEP CONDITION - ATTIC AREA SECTION DETAIL

NOT TO SCALE

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: STEP CONDITION DETAILS & NOTES

DESIGN CONFIGURATION A & E INC.
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RATED SEPARATION TYPICAL STEP DETAILS

ISSUE: 07/21/2021 ISSUE VERSION # 30

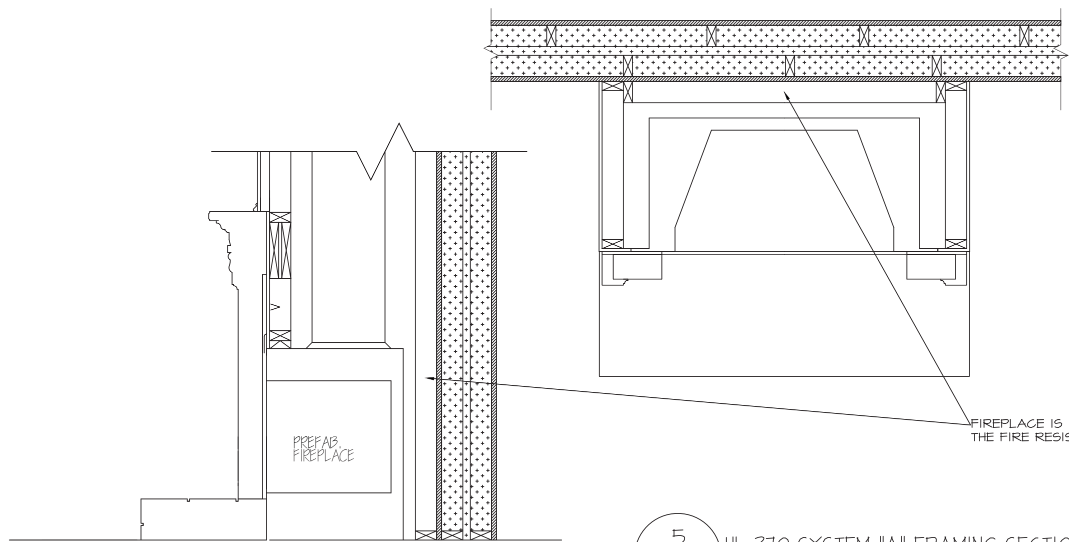
FIRE SEPARATION RATED WALL & SOUND CONTROL
UL - U370 & U377
ASSEMBLY APPLICATIONS

DATE PLOTTED 08-25-2021

SHEET No. 6

F.2.0

OF 16 SHTS



5 / F.3.1 UL-370 SYSTEM "A" FRAMING SECTION @ fireplace (TYP.)
NOT TO SCALE

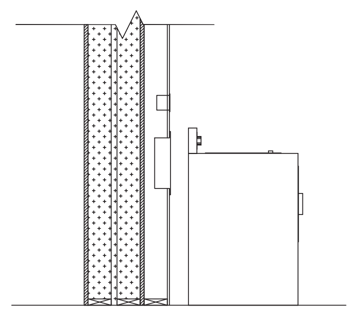
SYSTEM B NOTES :

-MAXIMUM, 2 CHASE CAVITIES PER 10 FT. SPAN ON EACH FACE OF THE WALL, CHASE CAVITIES SPACED A MINIMUM 32 IN. FROM EACH OTHER AND STAGGERED A MINIMUM 24 IN. FROM CHASE CAVITIES LOCATED ON THE OPPOSITE SIDE.

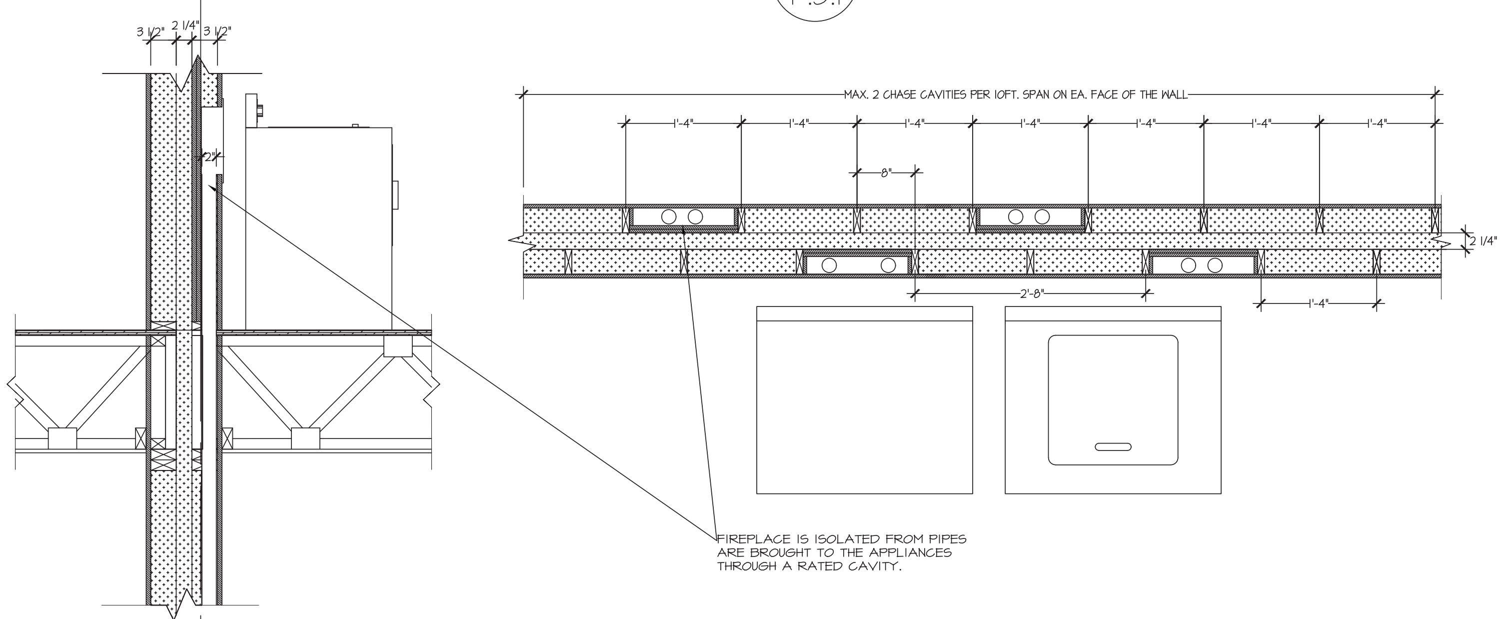
-MAXIMUM TWO, 2 IN. DIAMETER SCHEDULE 40 PVC PIPE. THE PVC PIPE MAY BE CONNECTED TO A MAXIMUM QUANTITY OF 2 PVC TEES. THE PVC PIPE AND TEES MUST NOT PENETRATE THE WOOD STUDS OR GYPSUM WALLBOARD.

-TO FORM CHASE CAVITIES, TWO LAYERS OF 5/8 IN. THICK GYPSUM WALLBOARD, WITH TAPERED EDGES REMOVED, APPLIED VERTICALLY TO THE INTERIOR FACE OF WOOD STUDS (BETWEEN THE 2-1/4 IN. SPACING AS SPECIFIED IN SHEET F6, ITEM 1A). THE BASE LAYER OF WALLBOARD ATTACHED WITH 1-7/8 IN. LONG, 5/16 IN. DIA. HEAD, 3/16 IN. SHANK DIA. NAILS SPACED 7 IN. OC. TO WOOD STUDS AND BEARING PLATES. THE FACE LAYER OF WALLBOARD ATTACHED WITH 1-7/8 IN. LONG, 5/16 IN. DIA. HEAD, 3/16 IN. SHANK DIA. NAILS SPACED 7 IN.OC. TO WOOD STUDS AND BEARING PLATES WITH 3-1/2 IN. OFFSET FROM BASE LAYER. 3-1/2 IN. WIDE STRIPS ATTACHED TO THE SIDE OF THE STUDS ALONG THE PERIMETER OF THE CHASE CAVITIES. STRIPS WERE SECURED TO THE WOOD STUDS WITH 1-7/8 IN. LONG NAILS SPACED A MAXIMUM 8 IN. OC.

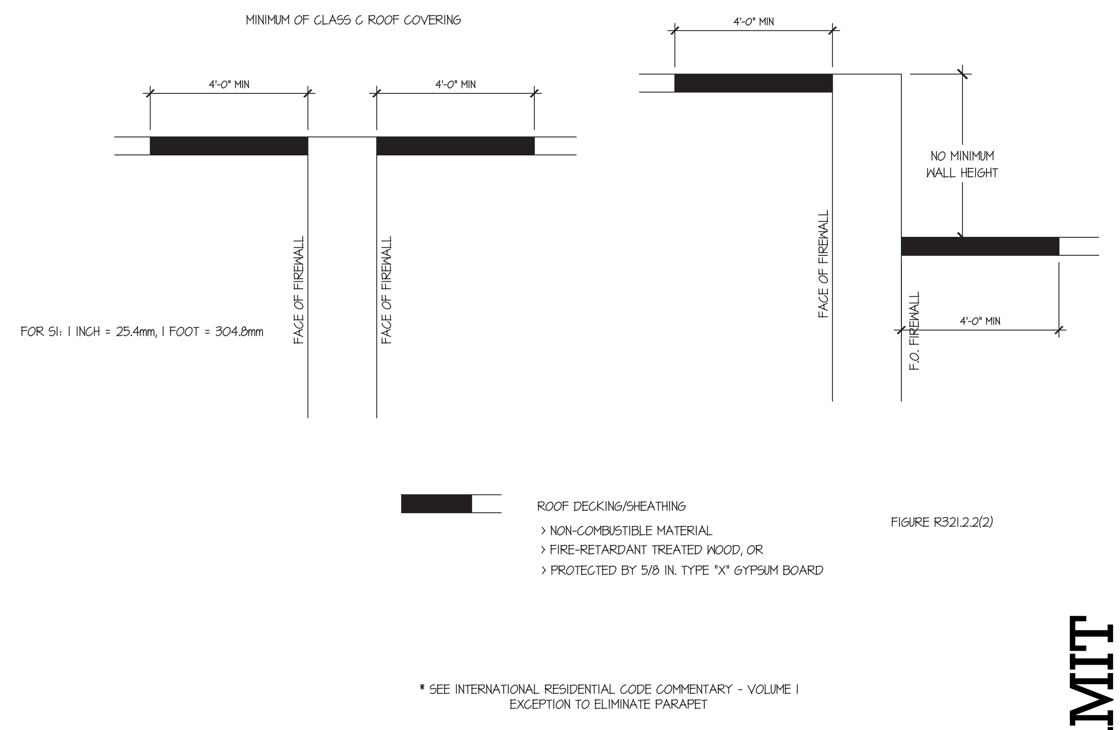
-TO ENCLOSE ASSEMBLY, ONE LAYER OF 4 FT. WIDE, 5/8 IN. THICK GYPSUM WALLBOARD, APPLIED VERTICALLY TO THE EXTERIOR FACE OF WOOD STUDS. GYPSUM WALLBOARD ATTACHED WITH 1-7/8 IN. LONG, 5/16 IN. DIA. HEAD, 3/16 IN. SHANK DIA. NAILS SPACED 7 IN. OC. WITH SCREWS STARTING 1/2 IN. FROM BOARD



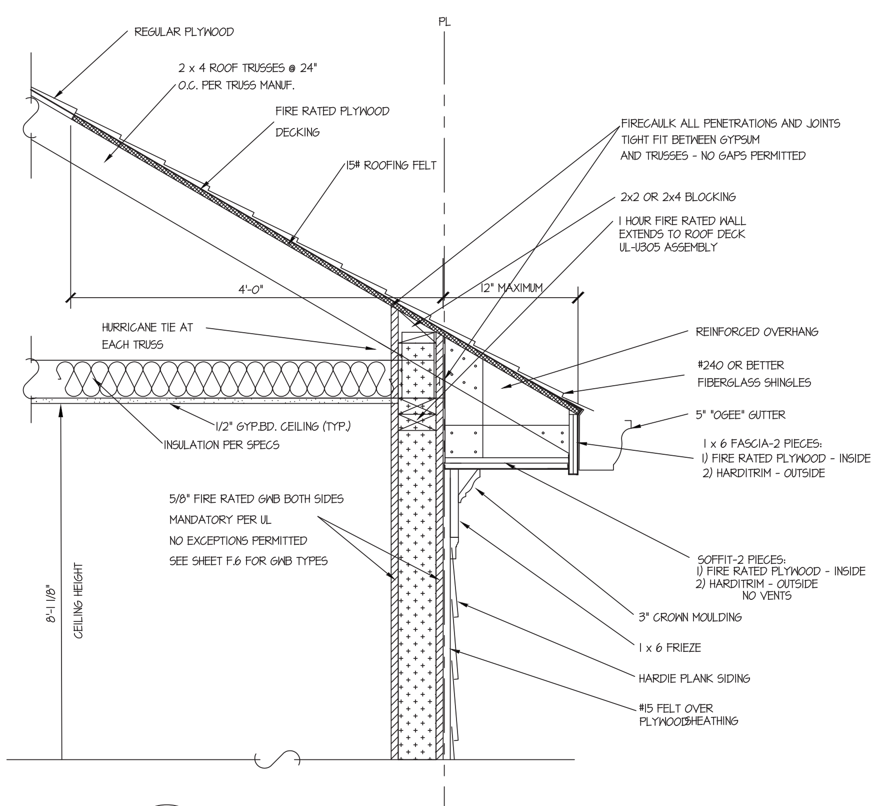
4 / F.3.1 UL-370 SYSTEM "A" FRAMING SECTION @ APPLIANCE (TYP.)
NOT TO SCALE



3 / F.3.1 UL-370 SYSTEM "B" FRAMING SECTION @ APPLIANCE (TYP.)
NOT TO SCALE



1 / F.3.1 LOCATION OF FIRE RETARDANT PANELS @ ROOF DECK
NOT TO SCALE



2 / F.3.1 EAVE SECTION DETAIL- 1 HR. FIREWALL @ HORIZONTIAL OR VERTICAL OFFSET
NOT TO SCALE

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: SPECIAL CONDITION DETAILS I

DESIGN CONFIGURATION A & E INC.
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SPECIAL CONDITIONS 1 DETAILS

ISSUE: 07/21/2021 ISSUE VERSION # 30

FIRE SEPARATION RATED WALL & SOUND CONTROL
UL - U370 &U377
ASSEMBLY APPLICATIONS

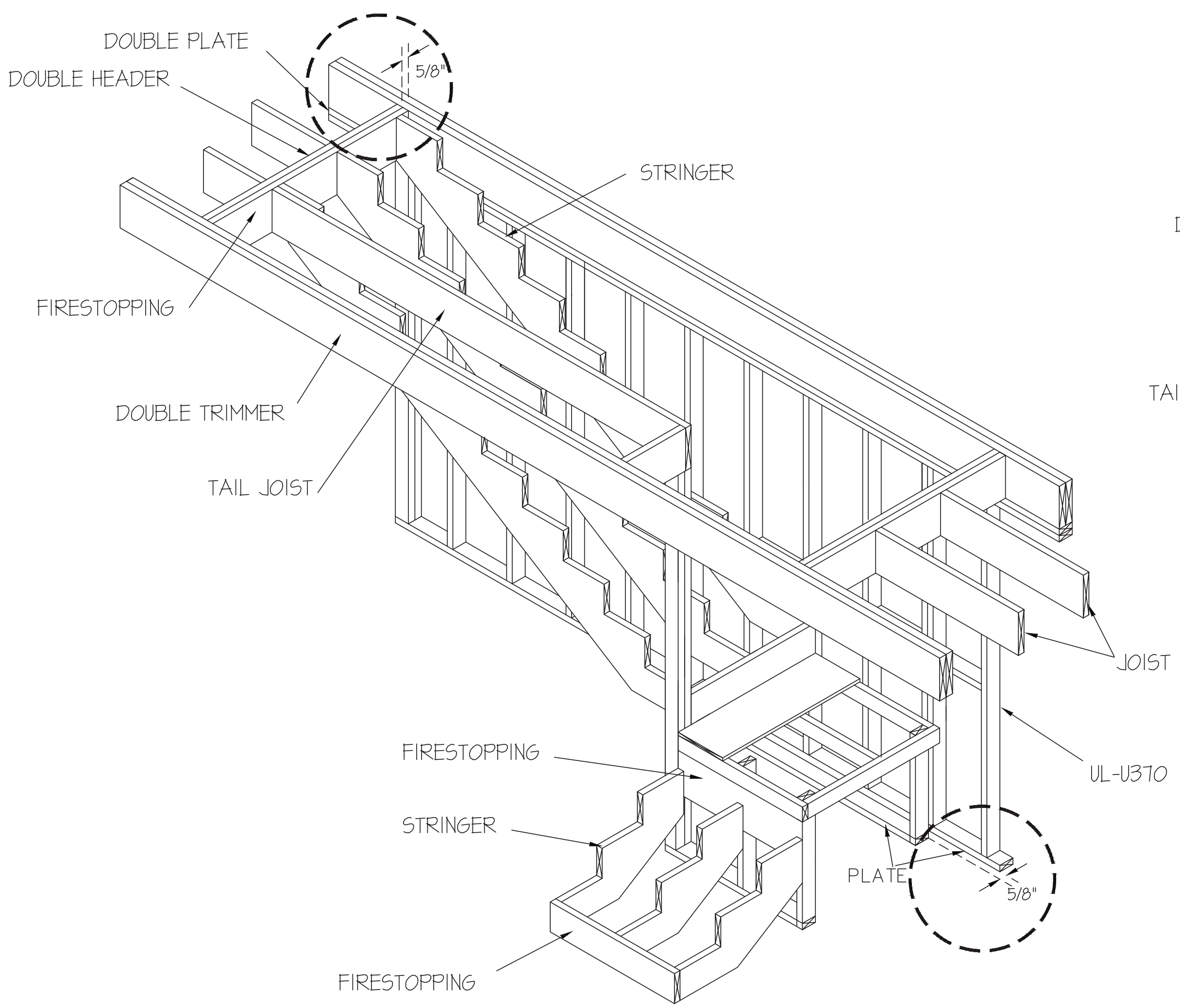
DATE PLOTTED 08-25-2021

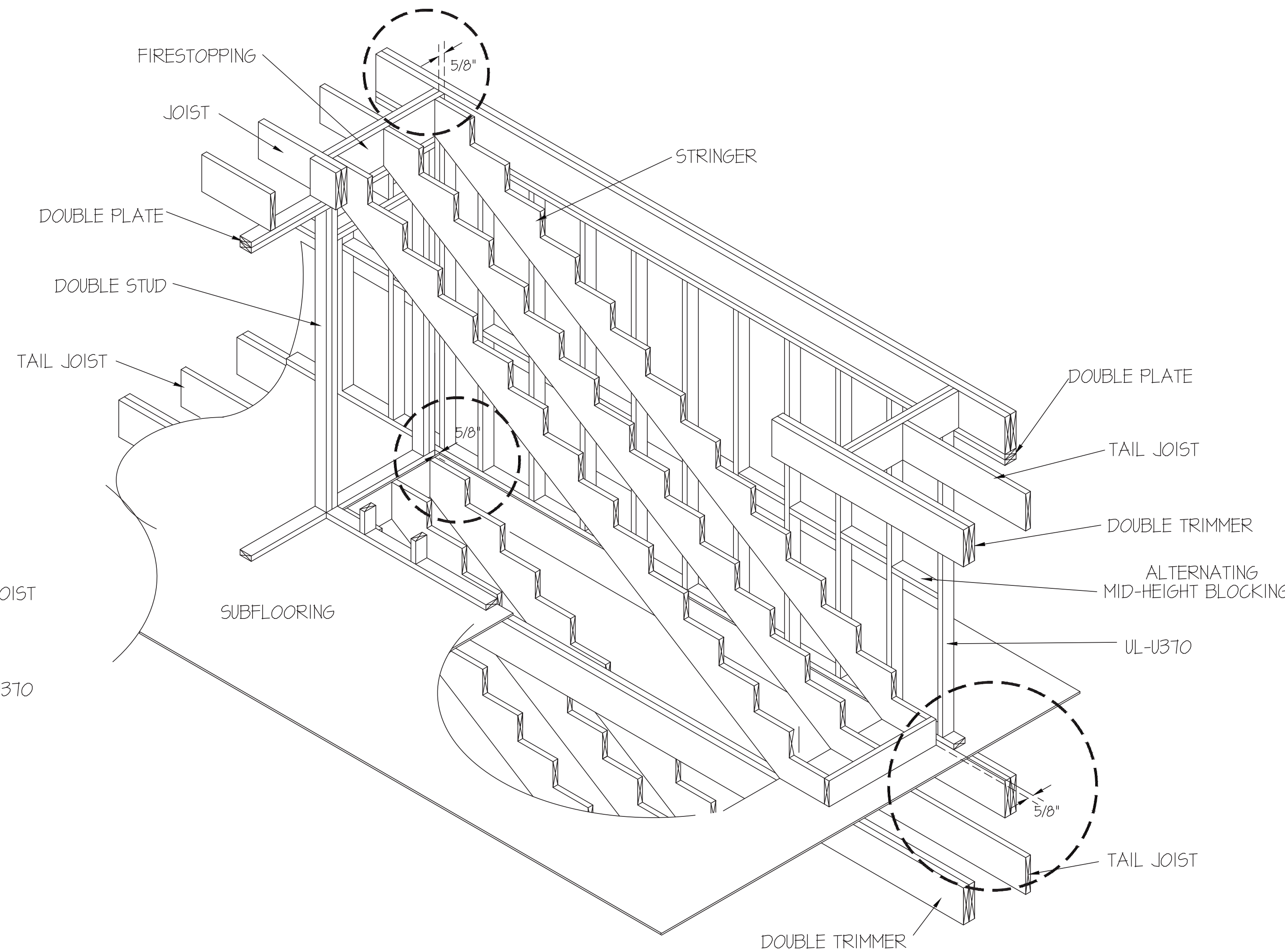
SHEET No. 7

F.3.1

OF 16 SHTS

SEPARATION OF THE STAIRS FROM THE FIREWALL ASSEMBLY





1
F.3.2
STAIR DETAIL - LANDING ADJACENT TO FIREWALL CONDITION
NOT TO SCALE

NOTES:

1. PROVIDE MIN. 3/4" SEPARATION BETWEEN FIREWALL STUDS AND STAIR STRINGERS, AND / OR LANDING STUDS FOR THE CONTINUOUS 5/8" GWB MEMBRANE INSTALLATION BETWEEN FIREWALL ASSEMBLY AND STAIR SYSTEM.
2. STAIR CONSTRUCTION MAY VARY, DRAWINGS ILLUSTRATE MOST TYPICAL CONDITIONS
3. STAIR IS BUILT INDEPENDENTLY FROM FIREWALL, IT IS NOT ATTACHED TO THE FIREWALL

2
F.3.2
STAIR DETAIL - FULL STAIR ADJACENT TO FIREWALL CONDITION
NOT TO SCALE

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: SPECIAL CONDITION DETAILS II

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SPECIAL CONDITIONS II DETAILS

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ASSEMBLY APPLICATIONS

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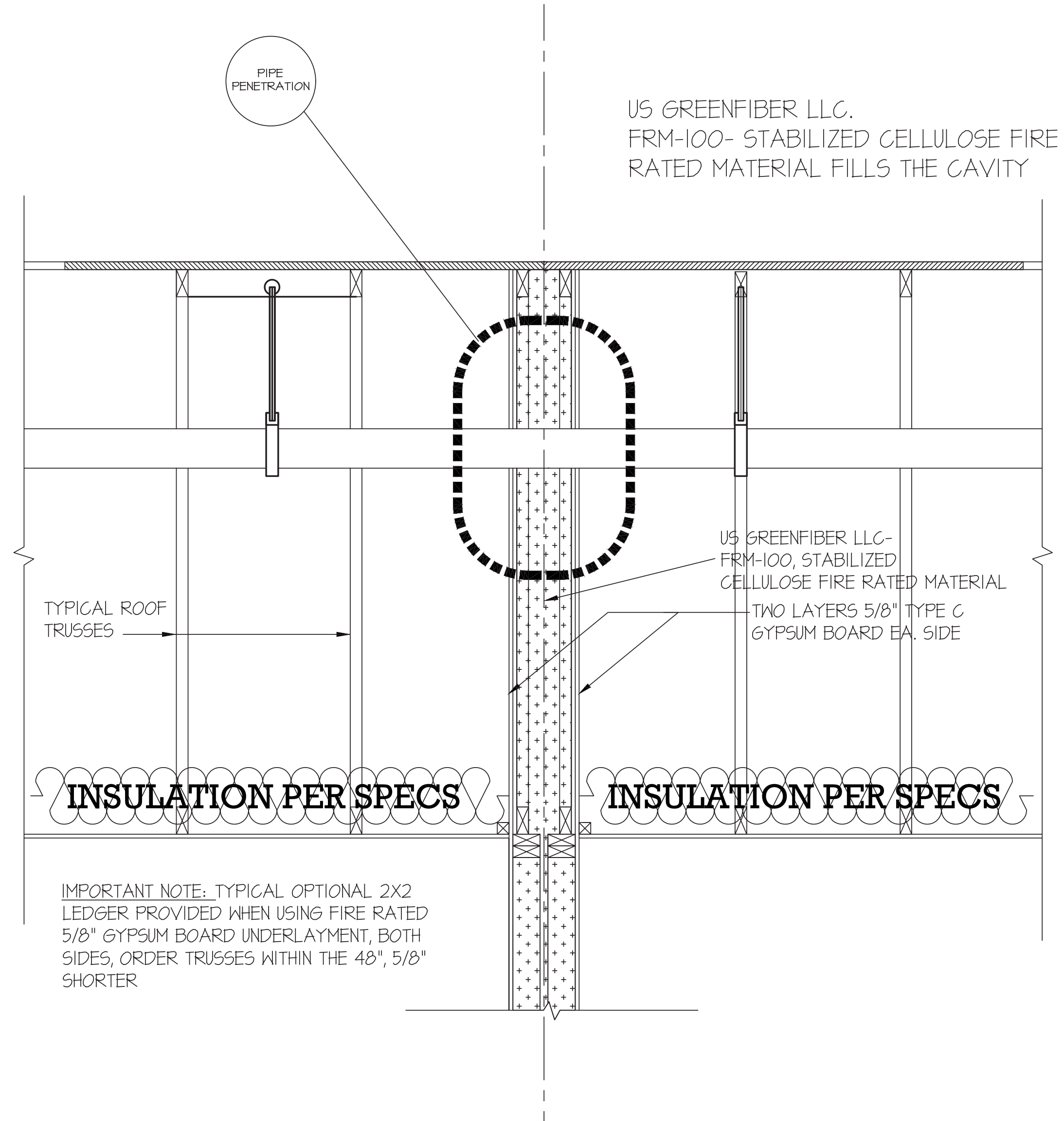
F.3.2

OF 16 SHTS

PENETRATION OF THE FIRE RATED WALL ASSEMBLY BY STEEL PIPE (EXAMPLE: SPRINKLER PIPE)



1 / F.4.0 — STAIR DETAIL - FULL STAIR ADJACENT TO FIREWALL CONDITION

NOT TO SCALE

UL TWO FIRE RATED PIPE PENETRATIONS ASSEMBLIES:

	3M	HILTI
1.	W-L-2088 SECTION A-A	W-L-2078 SECTION C-C
2.	W-L-2097 SECTION B-B	W-L-2411 SECTION D-D
3.	W-L-2162 SECTION C-C	W-L-2128 SECTION E-E

PENETRATION UL-U370 OR UL-U377 ASSEMBLY LEGEND:

1. 2 HR. FIRE RATED WALL ASSEMBLY, UL-U370 OR UL-U377, CAVITY FILLED WITH GREENFIBER FRM MATERIAL.

1A. WOOD STUDS, AS PER UL ASSEMBLY.

1.B 5/8" TYPE X GYPSUM WALLBOARD AS PER UL ASSEMBLY.

2. NON METALLIC PENETRATING PIPE, TYPE AND SIZE DETERMINE THE ASSEMBLY TO USE, SEE UL REFERENCES.

3. FIRESTOPPING MATERIAL OR DEVICE PER ASSEMBLY AND MANUFACTURER, SEE UL REFERENCES.

4. SEE SPECIFIC UL REFERENCE FOR DETAILS SHEET F.6.3

FIRE RATED PENETRATION NOTES:

1. DEFINITION: FIRESTOPPING IS A MATERIAL OR COMBINATION OF MATERIALS USED TO RETAIN INTEGRITY OF FIRE-RATED CONSTRUCTION BY MAINTAINING AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FLAME, SMOKE, AND HOT GASES THROUGH PENETRATIONS IN FIRE RATED WALLS. THE SELECTION OF A FIRESTOP SYSTEM MUST TAKE INTO CONSIDERATION THE TYPE OF PIPE PENETRATING THE RATED ASSEMBLY. NON-METALLIC (PLASTIC PIPE) SYSTEMS ARE TESTED WITH SPECIFIC TYPES OF MATERIALS (IE: PVC, CPVC, CCPVC, ABS, FRP, PVDF) THESE MATERIALS REACT DIFFERENTLY WHEN EXPOSED TO FIRE AND HEAT. THE SPRINKLER CONTRACTOR MUST ENSURE THAT THE SYSTEM TO BE INSTALLED IS TESTED FOR THE SPECIFIC TYPE OF PIPE TO BE USED, AND THAT THE TESTED RESULTS ALSO REFERENCE THE PIPE SIZE TO BE USED IN THE SYSTEM.

2. SPRINKLER COMPONENTS SHOWN HERE ARE FOR ILLUSTRATION PURPOSES ONLY. THE SELECTION OF UL PENETRATION ASSEMBLIES HERE IS FOR INFORMATION PURPOSES ONLY AND IN NO WAY IMPLIES AN ENDORSEMENT OF THE MANUFACTURER OR ITS PRODUCTS REFERENCED THEREIN. SPRINKLER SYSTEMS ARE TO BE DESIGNED AND SPECIFIED BY OTHERS, CERTIFIED TO DO SO.

3. THE RATED PENETRATIONS SHOWN HERE ARE BY 3M AND HILTI. OTHERS MAYBE AVAILABLE. ALL MUST BE IN COMPLIANCE WITH THE AUTHORITY THAT HAS JURISDICTION AND LOCAL APPLICABLE CODES.

4. FIRESTOPPING IS NOT ABOUT PRODUCTS NOR MANUFACTURERS, BUT ABOUT TESTED AND LISTED SYSTEMS. PRODUCTS BY THEMSELVES CARRY NO RATING. IT IS THE COMBINATION OF SPECIFIC APPLICATION INSTRUCTIONS AND THE USE OF SPECIFIC PRODUCTS THAT ESTABLISH THE "FIRESTOP SYSTEM" RATING. DO NOT MIX MANUFACTURER'S PRODUCTS. EACH ASSEMBLY IS PRODUCT SPECIFIC, EACH RATED FIRESTOP SOLUTION HAS ITS OWN CONDITIONS AND SPECIFIC APPLICATIONS WHERE EVERY COMPONENT AND ITS SPECIFICATIONS CONTRIBUTES TO RATE THE ASSEMBLY, ANY SUBSTITUTION OR REPLACEMENT COMPROMISES THE INTEGRITY OF THE ASSEMBLY.

5. INSTALL EACH PIPE PENETRATION ASSEMBLY PER MANUFACTURER INSTRUCTIONS AND ITS REFERENCES TO PIPE TYPE & SIZE. LOCAL JURISDICTION CODE AND SEISMIC LOCATION DETERMINES THE FASTENING (RIGID SUPPORT) REQUIREMENTS BEFORE AND AFTER THE PENETRATION AND IF ANY NEEDED IN BETWEEN, SO PENETRATING PIPE DOES NOT DAMAGE THE FIREWALL OR LOOSENS THE FIRESTOPPING.

6. PLANNING, DURING THE DESIGN AND BEFORE THE START OF CONSTRUCTION, REDUCES THE COSTS CONSIDERABLY AVOIDING FINDS THAT FIRESTOP SYSTEMS ARE EITHER INSTALLED INCORRECTLY OR ARE TOTALLY MISSING AT INSPECTION TIME WHEN THE COST CAN BECOME HIGH. REMEDIAL IS USUALLY WHAT MAKES FIRESTOPPING EXPENSIVE.

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 & UL-U377 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: METAL PIPE PENETRATIONS

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TYPICAL SPRINKLER PENETRATION DETAILS

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FIRE SEPARATION RATED WALL & SOUND CONTROL UL - U370 &U377 ASSEMBLY APPLICATIONS

DATE PLOTTED: 08-25-2021

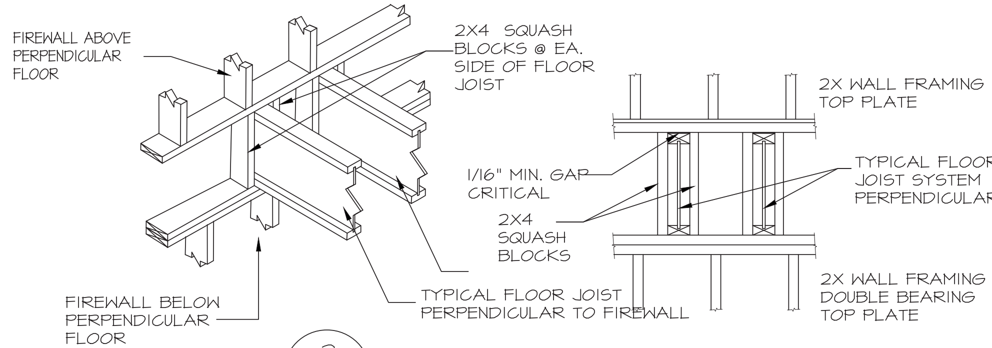
SHEET No. 9

F.4.0

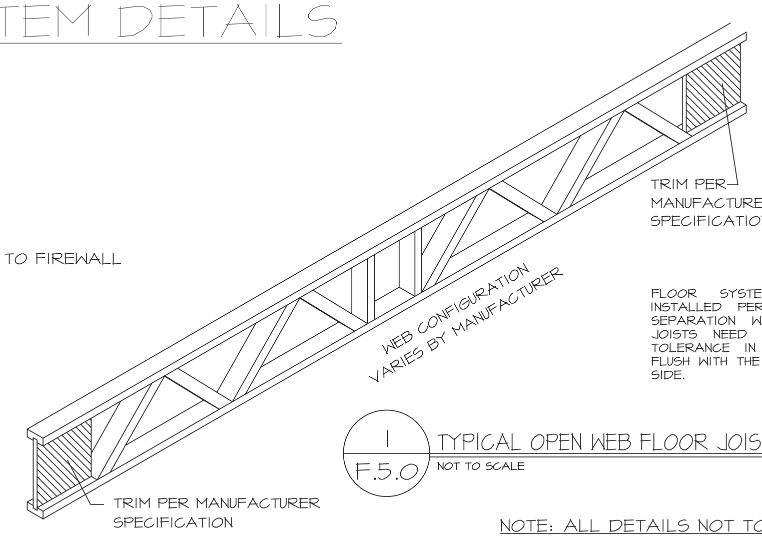
OF 16 SHTS

PERPENDICULAR FLOOR SYSTEM DETAILS

-THESE DETAILS ARE ILLUSTRATING DESIGN BEST PRACTICES FOR THE APPLICATION OF BOTH THE CONTINUITY & STRUCTURAL INDEPENDENCE CODE REQUIREMENTS ON FIRE SEPARATION APPLICATIONS.
-ALL BUILDING CONSTRUCTION MATERIALS & STRUCTURAL COMPONENTS SHALL BE SIZED & CALLED OUT BY THE PROJECT ARCHITECT OR ENGINEER DESIGNER OF RECORD PER THE PROJECT SITE SPECIFIC & CORRESPONDING APPROVED & PERMITTED PLANS & SPECIFICATIONS. NO EXCEPTIONS, THEY MAY NOT DEPICT ACTUAL CONDITIONS.



2 / F.5.0 SQUASH BLOCKING AT FLOOR JOIST BEARING PT.
NOT TO SCALE — TYPICAL



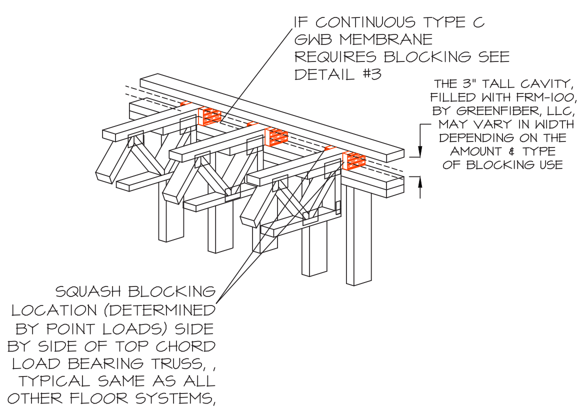
1 / F.5.0 TYPICAL OPEN WEB FLOOR JOIST
NOT TO SCALE

NOTE:
FLOOR SYSTEM COMPONENTS TO BE INSTALLED PERPENDICULAR TO THE FIRE SEPARATION WALL, SUCH AS OPEN WEB JOISTS NEED TO BE ORDERED WITH A TOLERANCE IN ORDER TO BE INSTALLED FLUSH WITH THE PLATE ON THE SHEET ROCK SIDE.

NOTE: ALL DETAILS NOT TO SCALE

1 — FLOOR SYSTEM ON WALL

TYPICAL TOP CHORD LOAD BEARING FLOOR SYSTEMS
UL-U370 WALL

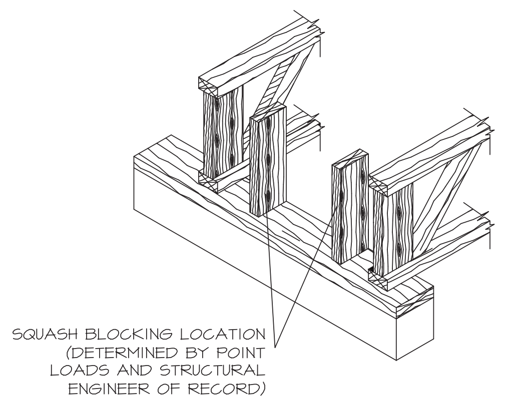


NOTE: FLOOR DECK NOT SHOWN FOR CLARITY

TYPICAL PERPENDICULAR JOIST ON END BEARING WALL APPLICATION

2 — SQUASH BLOCKING DETAIL

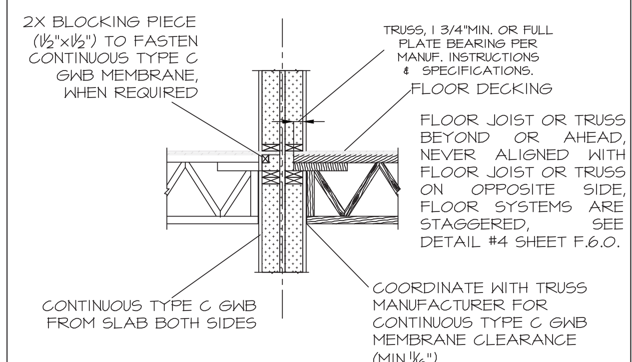
UL-U370 WALL



BLOCKING UNDER CONCENTRATED LOAD THAT FALLS BETWEEN JOISTS

3 — TYPE X BLOCK DETAIL

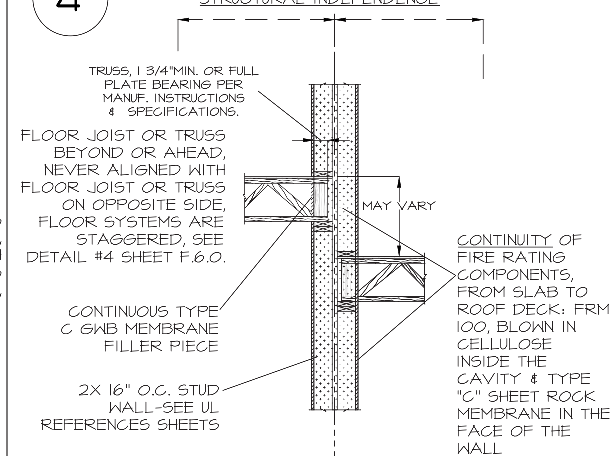
TYPICAL TOP CHORD LOAD BEARING FLOOR SYSTEMS
UL-U370 WALL



NOTE: SECTION THRU FLOOR TRUSS

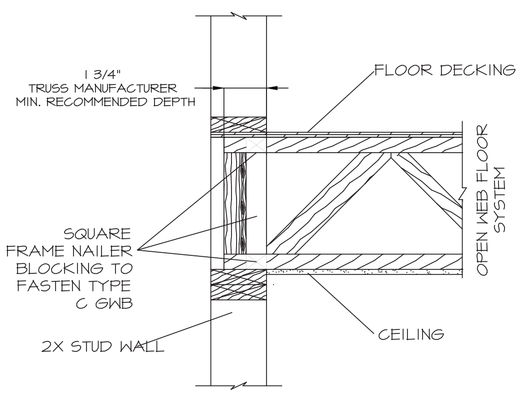
4 — FLOOR SYSTEM APPLICATION

UL-U370 WALL



PERPENDICULAR OPEN WEB JOIST ON UL-U370 FIRE RESISTANT FIREWALL

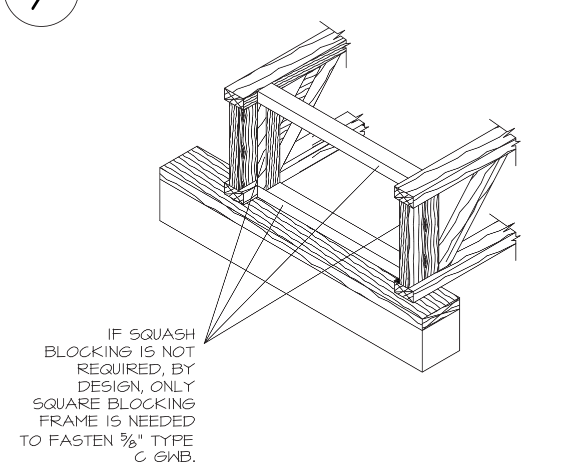
8 — FLOOR SYSTEM ON WALL



TYPICAL LOCATION OF SQUARE NAILER BLOCKING TO FASTEN TYPE C GWB ON PERPENDICULAR APPLICATION

7 — SQUARE NAILER BLOCKING DETAIL

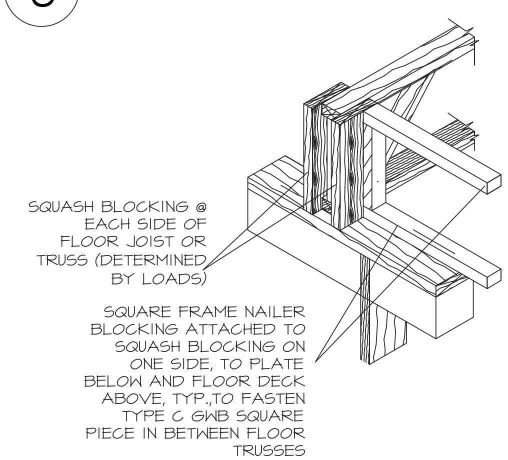
TYPICAL ALL PERPENDICULAR FLOOR PENETRATIONS
UL-U370 WALL



SQUARE BLOCKING TO FASTEN 5⁄8" TYPE C GWB BETWEEN JOISTS-NO SQUASH BLOCK

6 — SQUASH & SQUARE FRAME DETAIL

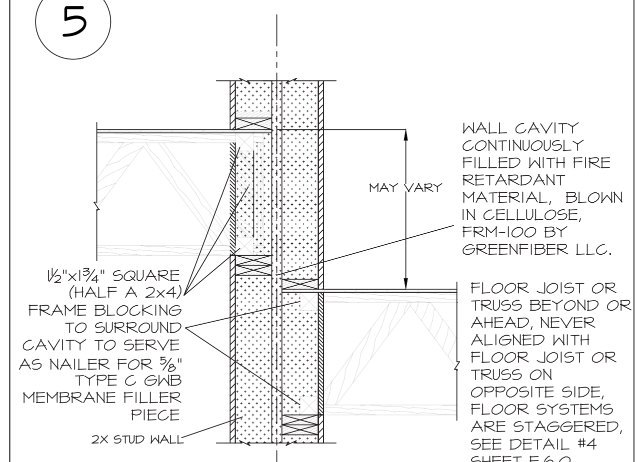
TYPICAL ALL PERPENDICULAR FLOOR PENETRATIONS
UL-U370 WALL



SQUASH BLOCK REQUIRED UNDER CONCENTRATED LOADS THAT FALLS ON THE FLOOR JOIST SQUARE BLOCKING TO FASTEN 5⁄8" TYPE C GWB BETWEEN JOISTS

5 — TYPE C FILLER PIECE BLOCKING

UL-U370 WALL



TYPICAL SQUARE NAILER BLOCKING FOR TYPE C GWB FASTENING PERPENDICULAR JOIST ON UL-U370 FIRE RESISTANT FIREWALL

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 & UL-U377 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: PERPENDICULAR FLOOR SYSTEM DETAILS

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PERPENDICULAR FLOOR SYSTEM DETAILS

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FIRE SEPARATION RATED WALL & SOUND CONTROL
UL-U370 & U377
ASSEMBLY APPLICATIONS

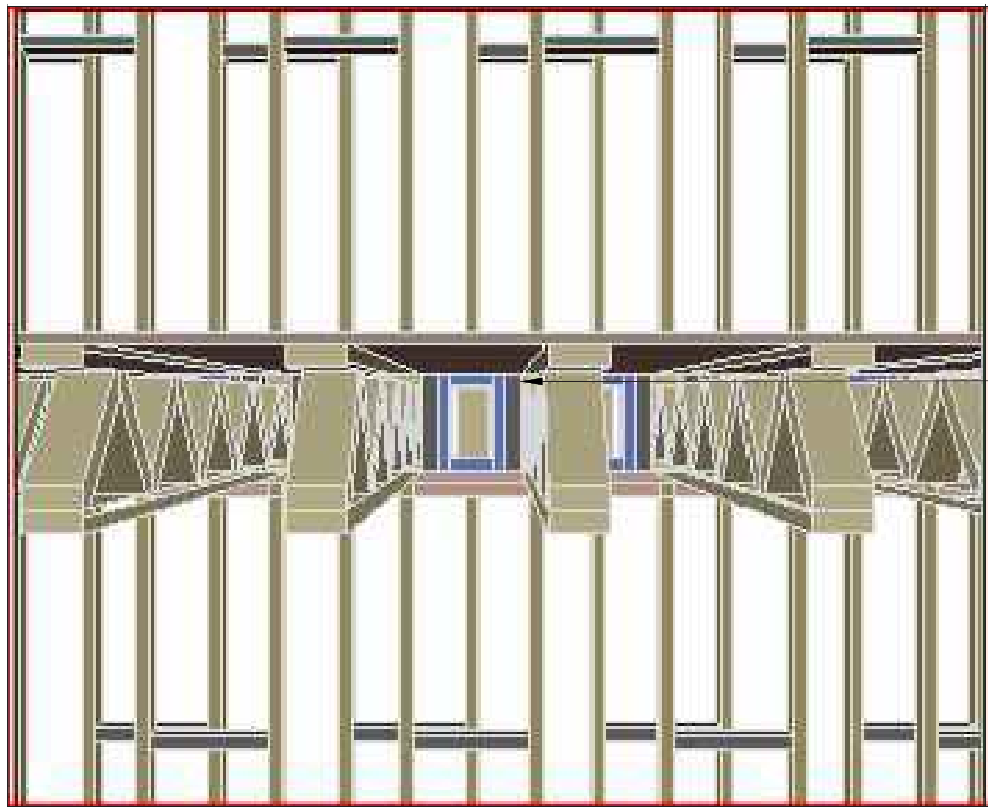
DATE PLOTTED 08-25-2021

SHEET No. 10

F.5.0

OF 16 SHTS

PERPENDICULAR FLOOR SYSTEM DETAILS
TYPICAL FRASMING & DESIGN LAYOUT CONDITIONS

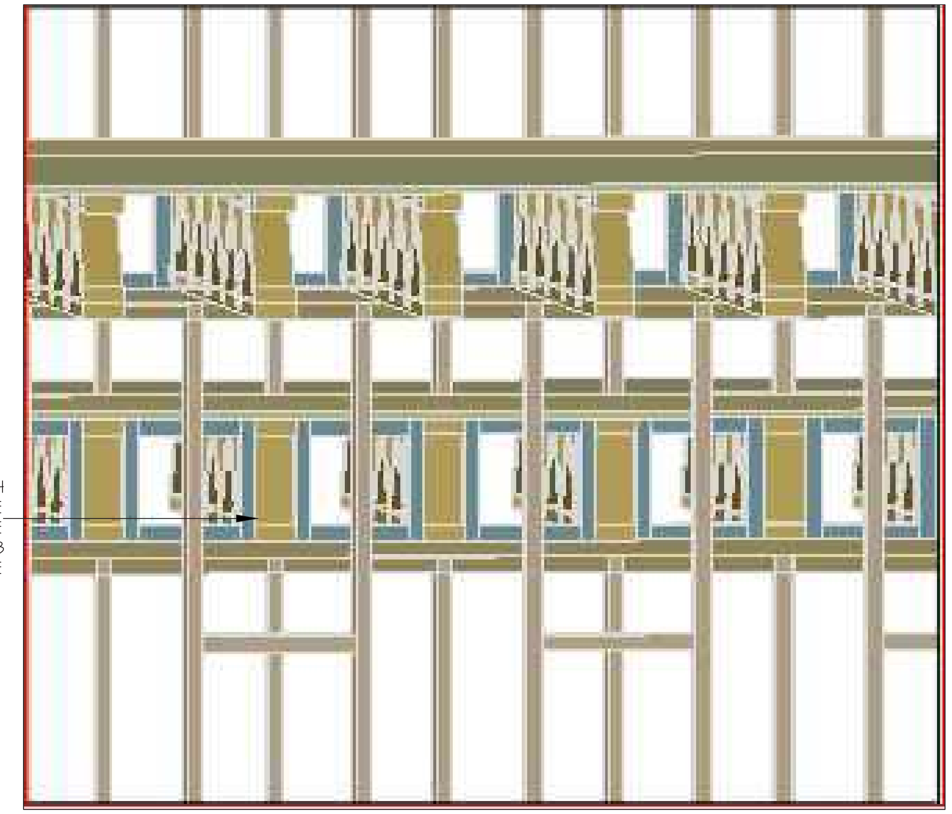


IN THIS DETAIL, 1/F6.0, THE SQUASH BLOCK AND SQUARE FRAME BLOCKING TO FASTEN THE CONTINUOUS TYPE C GWB MEMBRANE TO THE FACE OF THE WALL ARE SEPARATE COMPONENTS.

NON-STEPPED CONDITION - OPEN WEB FLOOR JOISTS

1 / F.6.0 TYPICAL FRONT VIEW OF PERPENDICULAR CONDITION AT FLOOR SYSTEM

NOT TO SCALE



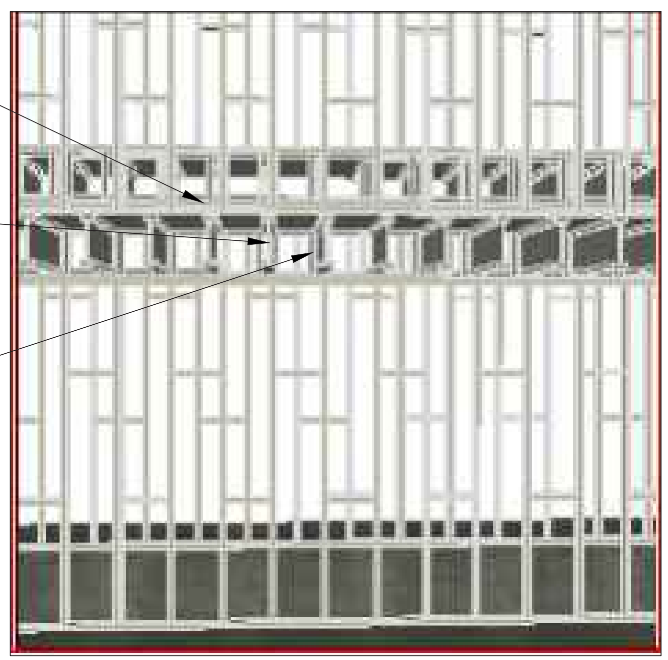
IN THIS DETAIL, 2/F6.0, THE SQUASH BLOCK IS PART OF THE SQUARE BLOCKING FRAME TO FASTEN THE CONTINUOUS TYPE C GWB MEMBRANE TO THE FACE OF THE WALL

STEPPED CONDITION - OPEN WEB FLOOR JOISTS

2 / F.6.0 TYPICAL FRONT VIEW OF PERPENDICULAR CONDITION AT FLOOR SYSTEM

NOT TO SCALE

NOT FOR PERMIT

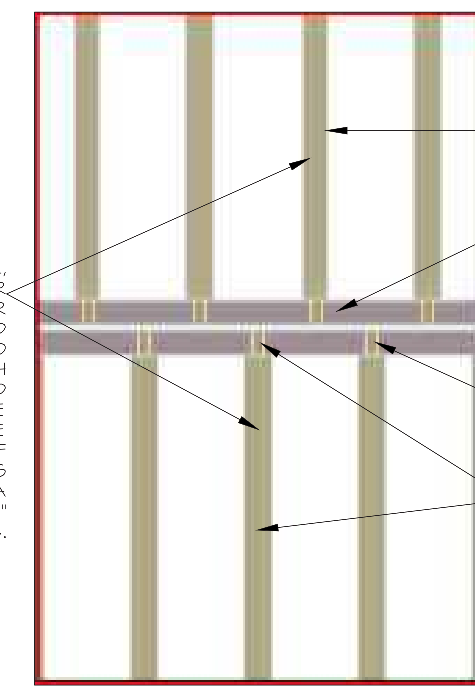


STEPPED CONDITION - TJI FLOOR JOISTS

4 / F.6.0 TYPICAL FLOOR SYSTEM - SQUASH BLOCK @ EACH SIDE OF FLOOR JOIST

NOT TO SCALE

NOTE: FLOOR DECK NOT SHOWN FOR CLARITY

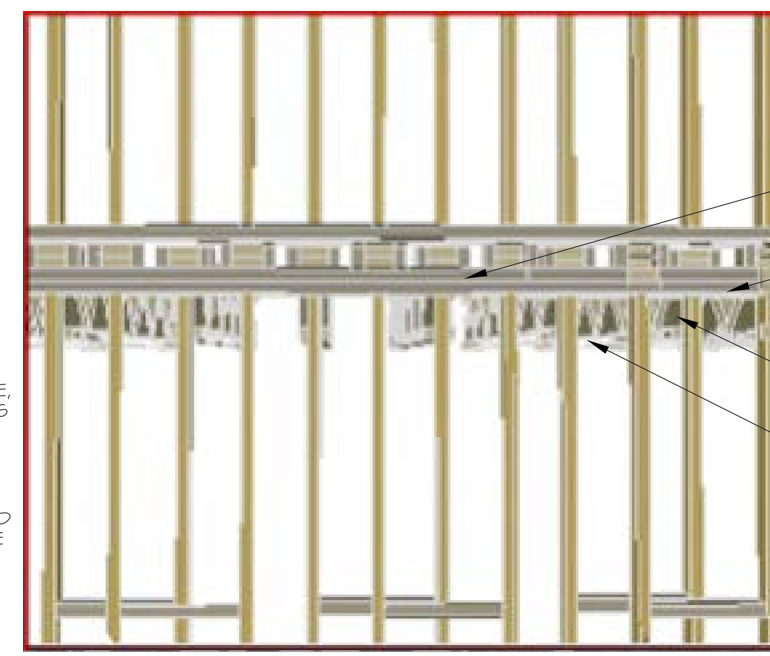


IN THIS DETAIL, 3/F6.0, FLOOR TRUSSES, OR FLOOR JOISTS ARE LAID PERPENDICULAR TO THE WALL AND EACH ONE IS STAGGERED TO THEIR OPPOSITE COMPONENT IN THE THE OTHER SIDE OF THE WALL, THIS LAYOUT SHOWS A STAGGERING OF 16" O.C.

IN THIS DETAIL, 3/F6.0, FLOOR TRUSSES, OR FLOOR JOISTS ARE ALIGNED ON CENTER WITH THE STUDS UNDER THE PLATE, THIS DESIGN ALLOWS AN EVEN LOAD DISTRIBUTION OVER THE WALL.

3 / F.6.0 TYPICAL TOP VIEW - STAGGERED LAYOUT OF PERPENDICULAR FLOOR JOIST

NOT TO SCALE



STEPPED CONDITION - TOP CHORD LOAD BEARING FLOOR JOISTS

5 / F.6.0 TYPICAL FLOOR SYSTEM - SQUASH BLOCK @ EACH SIDE OF FLOOR JOIST

NOT TO SCALE

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 & UL-U377 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: PERPENDICULAR FLOOR SYSTEM DETAILS

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PERPENDICULAR FLOOR SYSTEM DETAILS

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FIRE SEPARATION RATED WALL & SOUND CONTROL

UL - U370 &U377

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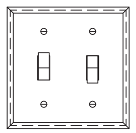
SHEET No. 11

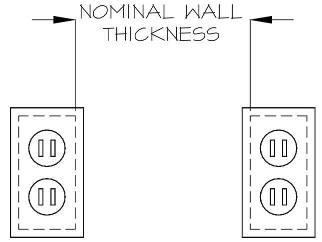
F.6.0

OF 16 SHTS

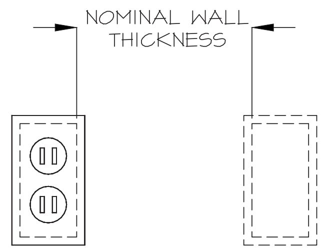
RATED ASSEMBLY ELECTRICAL PENETRATIONS



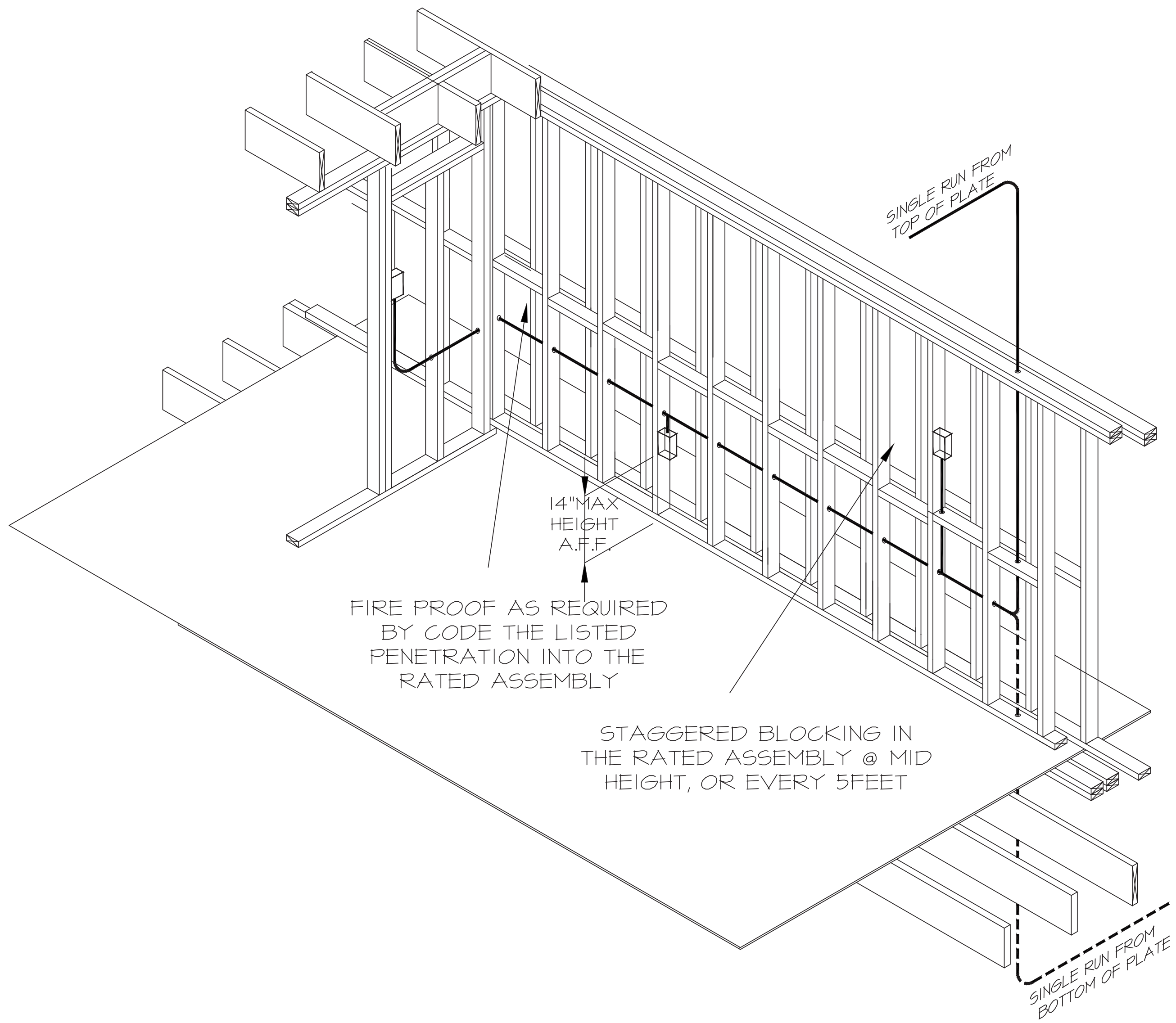
2 / F.7.0 WALL FACE RECEPTACLE DISTANCE
NOT TO SCALE
TYPICAL



3 / F.7.0 WALL FACE RECEPTACLE DISTANCE
NOT TO SCALE
TYPICAL



4 / F.7.0 BACK TO BACK RECEPTACLE DISTANCE
NOT TO SCALE
TYPICAL



1 / F.7.0 BEST PRACTICE FOR ELECTRICAL RUNS INTO RATED ASSEMBLY
NOT TO SCALE
TYPICAL

PER 2006, 2009 IRC:

R302.4.2 MEMBRANE PENETRATIONS. MEMBRANE PENETRATIONS SHALL COMPLY WITH SECTION R302.4.1. WHERE WALLS ARE REQUIRED TO HAVE A FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SO THAT THE REQUIRED FIRE-RESISTANCE RATING WILL NOT BE REDUCED.

EXCEPTIONS:

1. MEMBRANE PENETRATIONS OF MAXIMUM 2-HOUR FIRE-RESISTANCE-RATED WALLS AND PARTITIONS BY STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES (0.0103 MTS) IN AREA PROVIDED THE AGGREGATE AREA OF THE OPENINGS THROUGH THE MEMBRANE DOES NOT EXCEED 100 SQUARE INCHES (0.0645 MTS) IN ANY 100 SQUARE FEET (9.29 M) OF WALL AREA. THE ANNULAR SPACE BETWEEN THE WALL MEMBRANE AND THE BOX SHALL NOT EXCEED 1/8 INCH (3.1 MM). SUCH BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY ONE OF THE FOLLOWING:
   - 1.1. BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES (610 MM) WHERE THE WALL OR PARTITION IS CONSTRUCTED WITH INDIVIDUAL NON-COMMUNICATING STUD CAVITIES;
   - 1.2. BY A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHEN THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE-FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION;
   - 1.3. BY SOLID FIRE BLOCKING IN ACCORDANCE WITH SECTION R302.11;
   - 1.4. BY PROTECTING BOTH BOXES WITH LISTED PUTTY PADS; OR
   - 1.5. BY OTHER LISTED MATERIALS AND METHODS.
2. MEMBRANE PENETRATIONS BY LISTED ELECTRICAL BOXES OF ANY MATERIALS PROVIDED THE BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. THE ANNULAR SPACE BETWEEN THE WALL MEMBRANE AND THE BOX SHALL NOT EXCEED 1/8 INCH (3.1 MM) UNLESS LISTED OTHERWISE. SUCH BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY ONE OF THE FOLLOWING:
   - 2.1. BY THE HORIZONTAL DISTANCE SPECIFIED IN THE LISTING OF THE ELECTRICAL BOXES;
   - 2.2. BY SOLID FIREBLOCKING IN ACCORDANCE WITH SECTION R302.11 ;
   - 2.3. BY PROTECTING BOTH BOXES WITH LISTED PUTTY PADS; OR
   - 2.4. BY OTHER LISTED MATERIALS AND METHODS.
3. THE ANNULAR SPACE CREATED BY THE PENETRATION OF A FIRE SPRINKLER PROVIDED IT IS COVERED BY A METAL ESCUTCHEON PLATE.

IF ANSI A117.1 APPLIES PER LOCAL JURISDICTION:

CABO/ANSI A117.1 1992 FOR ACCESSIBILITY, SECTION 4.25.3 (EXCEPTION) STATES: ELECTRICAL AND COMMUNICATION SYSTEM RECEPTACLES ON WALLS SHALL BE MOUNTED 15 INCHES ABOVE THE FLOOR UNLESS THE USE OF SPECIAL EQUIPMENT REQUIRES LOCATION AT A DIFFERENT POSITION. THE ANSI STANDARD IS REFERENCED IN THE 1997 U.B.C SECTION 1101.3.

ICC/ANSI A117.1 1998 FOR ACCESSIBILITY, CHAPTER 3 - BUILDING BLOCKS, SECTION 308 REACH RANGES, 308.3 SIDE REACH:

308.3.1 UNOBSTRUCTED. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW SIDE REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FLOOR OR GROUND.

THE PENETRATION AREA SUM OF ALL THE OUTLETS, SWITCHES OR ELECTRICAL FIXTURES INTO THE FIRE RESISTANT RATED WALL MUST NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET OF FIRE RESISTANT RATED WALL. THESE PENETRATIONS MUST BE BY LISTED, UL OR OTHER, APPROVED ELECTRICAL COMPONENTS.

EXAMPLE:
ONE SINGLE RECEPTACLE BOX = 8.4 SQ. INCHES
TOTAL PER 100 SQ. FT. OF WALL= 11 SINGLE RECEPTACLE BOXES
ONE DUPLEX RECEPTACLE BOX = 15 SQ.. INCHES
TOTAL PER 100 SQ. FT. OF WALL= 6 DUPLEX BOXES

PROVIDED THAT THE SPACING REQUIREM,ENTS, CODE AND LISTED, ARE MET.

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: MEMBRANE PENETRATIONS

SHEET CONTENT: BY ELECTRICAL BOXES, SWITCHES & FIXTURES

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ELECTRICAL PENETRATION BEST PRACTICE

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FIRE SEPARATION RATED WALL & SOUND CONTROL
UL - U370 &U377
ASSEMBLY APPLICATIONS

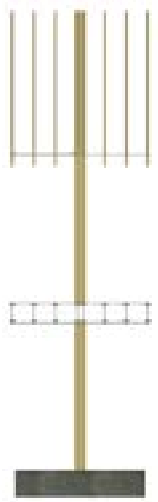
DATE PLOTTED 08-25-2021

SHEET No. 12

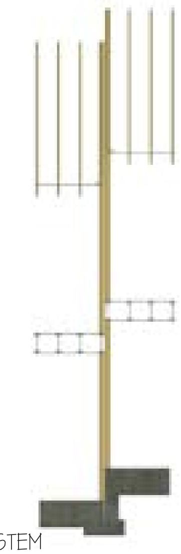
F.7.0

OF 16 SHTS

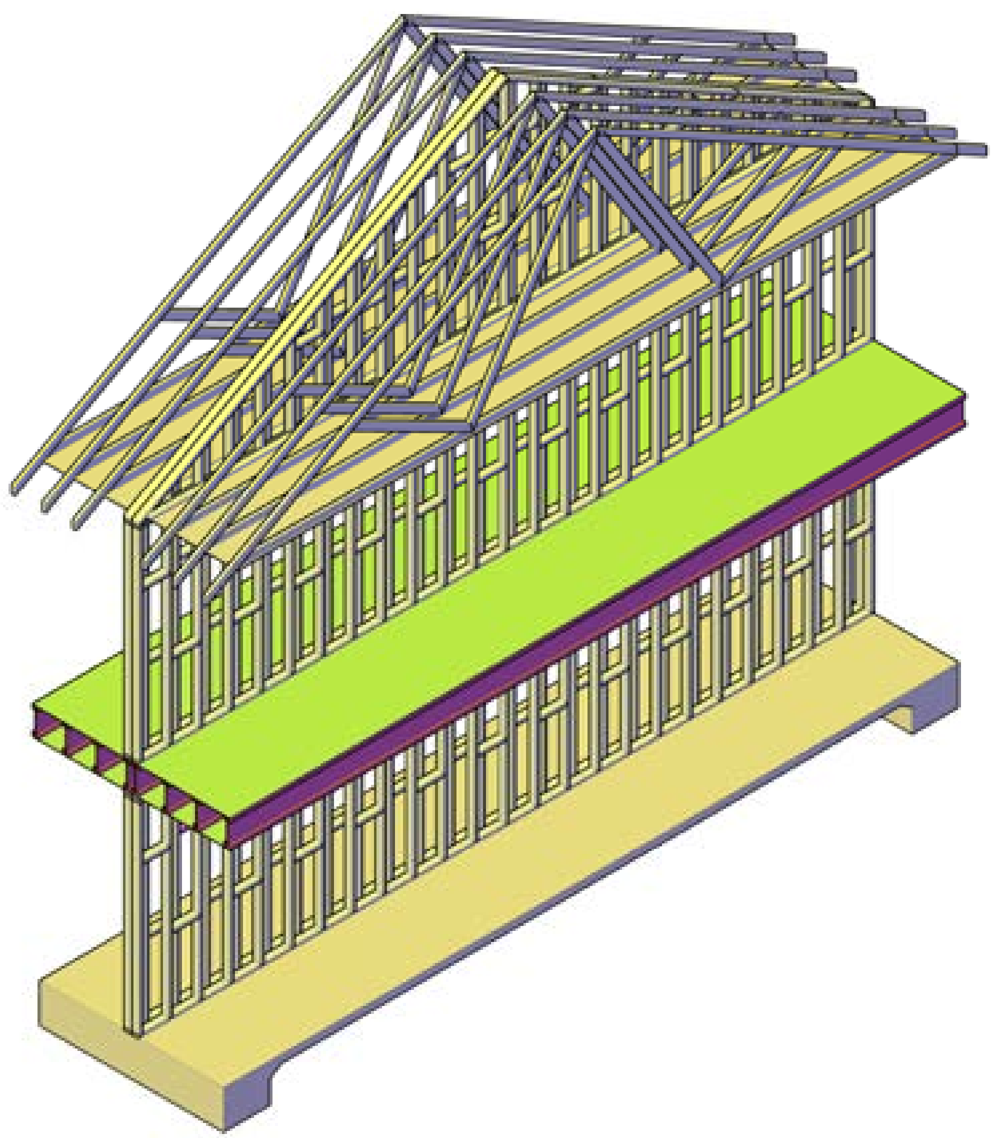
PARALLEL FLOOR SYSTEM TRUSS MODEL - TGI SHOWN



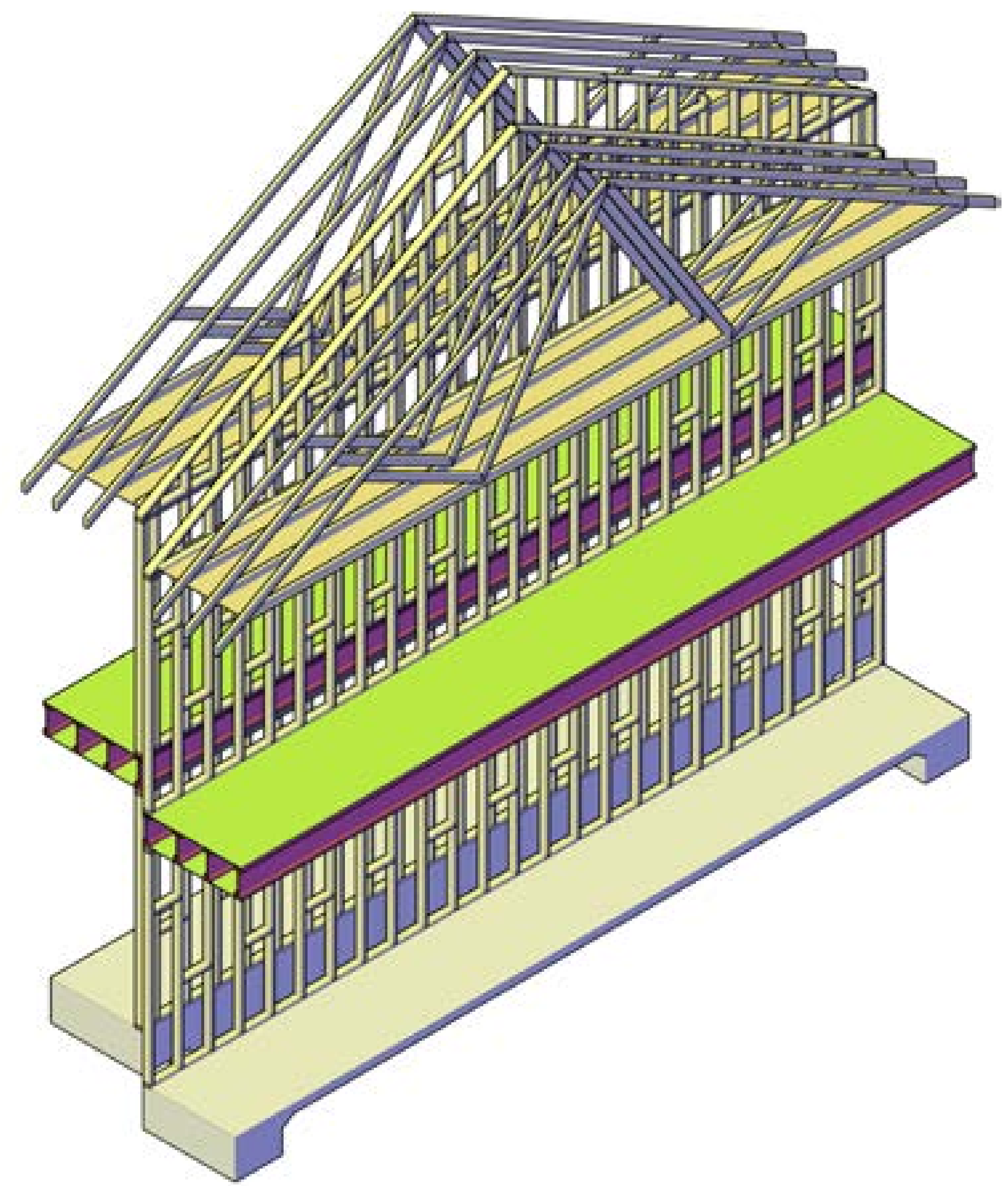
1 / F.9.1 SIDE VIEW - TYP. CONDITION - PARALLEL FLOOR SYSTEM
NOT TO SCALE



2 / F.9.1 SIDE VIEW - STEP CONDITION - PARALLEL FLOOR SYSTEM
NOT TO SCALE



3 / F.9.1 3D MODEL - TYPICAL CONDITION - PARALLEL FLOOR SYSTEM
NOT TO SCALE



4 / F.9.1 3D MODEL - STEP CONDITION - PARALLEL FLOOR SYSTEM
NOT TO SCALE

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: 3D MODELS PARALLEL FLOOR SYSTEMS

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3D MODELS PARALLEL FLOOR SYSTEM

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ASSEMBLY APPLICATIONS

DATE PLOTTED 08-26-2021

SHEET No. 14

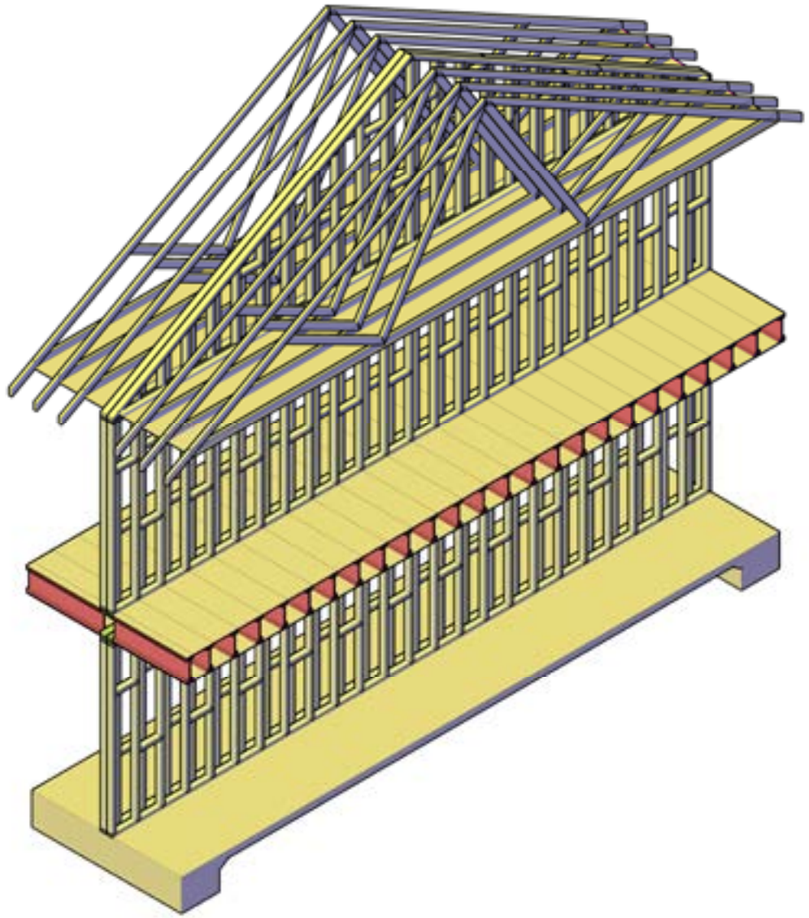
F.9.1

OF 16 SHTS

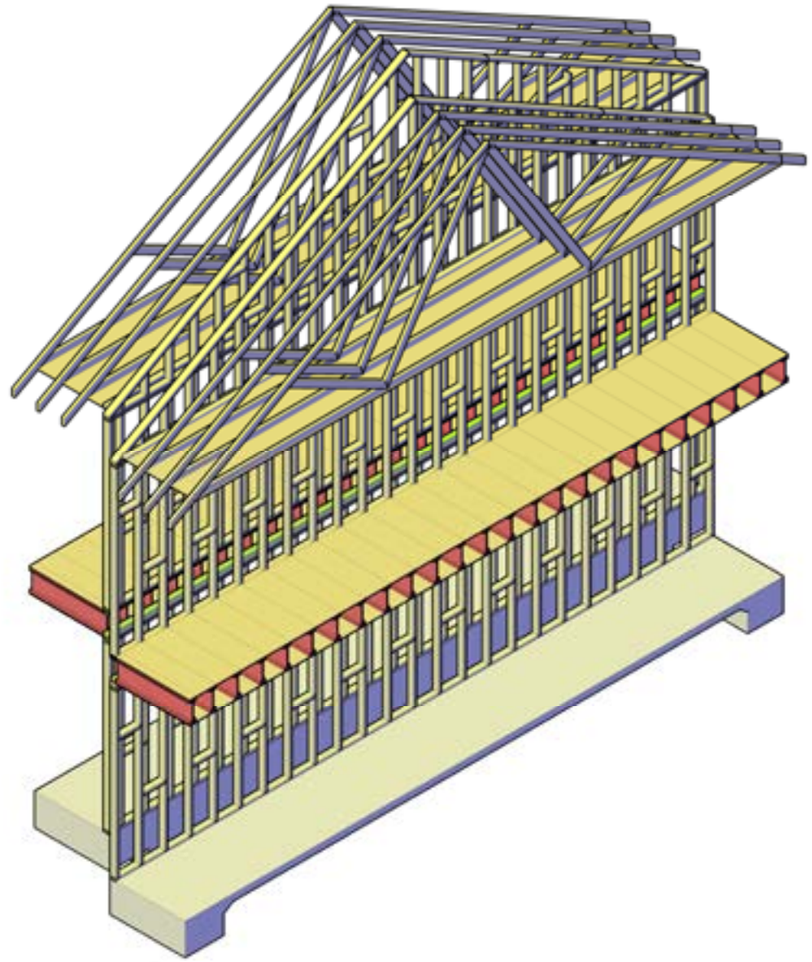
PERPENDICULAR FLOOR SYSTEM TRUSS MODEL -TGI SHOWN

1 / F.9.2 SIDE VIEW - TYPICAL CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE

2 / F.9.2 SIDE VIEW - STEP CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE



3 / F.9.2 3D MODEL - TYPICAL CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE



4 / F.9.2 3D MODEL - STEP CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE

NOT FOR CONSTRUCTION PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE: UL-U370 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT: 3D MODELS PERPENDICULAR FLOOR SYSTEMS

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3D MODELS PERPENDICULAR FLOOR SYSTEM

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DATE PLOTTED 08-26-2021

SHEET No. 15

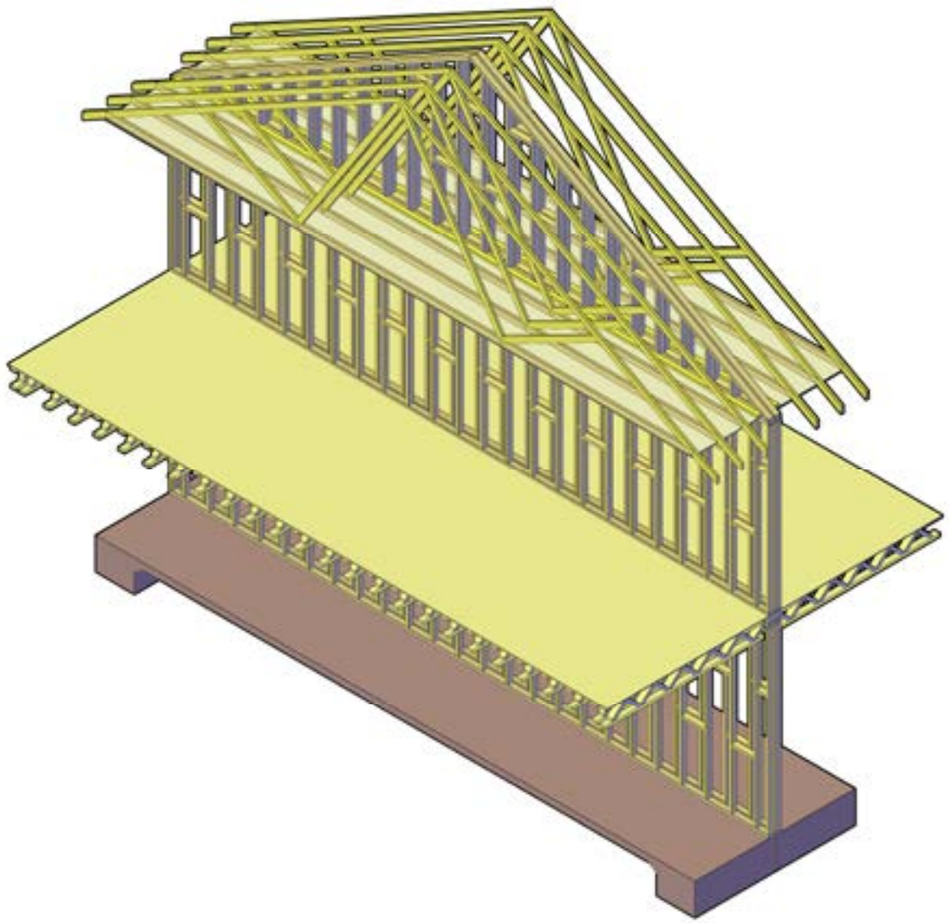
F.9.2

OF 16 SHTS

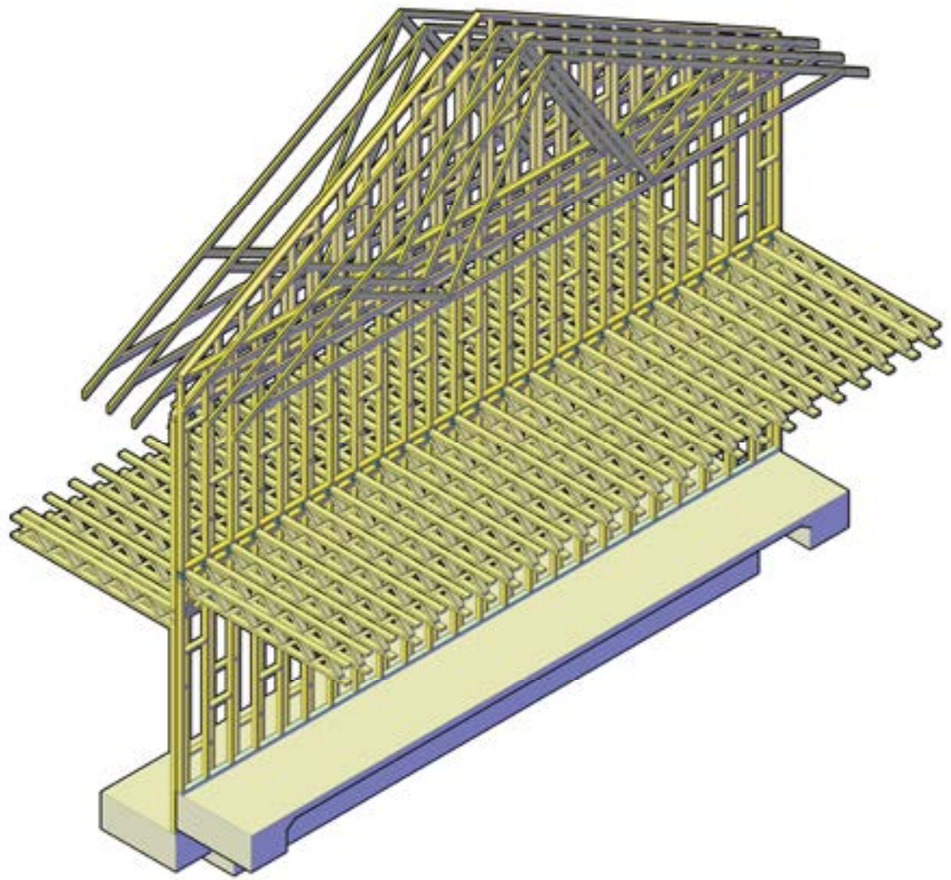
TOP CHORD - LOAD BEARING OPEN WEB FLOOR SYSTEM -TRUSS MODEL

1 / F.9.3 SIDE VIEW - TYPICAL CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE

2 / F.9.3 SIDE VIEW - STEP CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE



3 / F.9.3 3D MODEL - TYPICAL CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE



4 / F.9.3 3D MODEL - STEP CONDITION - PERPENDICULAR FLOOR SYSTEM
NOT TO SCALE

NOT FOR PERMIT

greenfiber SANCTUARY TWO-HOUR FIREWALL

SHEET TITLE:
UL-U370 FIRE RESISTANT RATED ASSEMBLY

SHEET CONTENT:
3D PERP. TOP CHORD LOAD BEARING FLOOR SYSTEMS

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3D MODELS PERPENDICULAR FLOOR SYSTEM

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SHEET No.16

F.9.3

OF 16 SHTS