

# "THE HAWTHORNE"

### special notes:

ABBREVIATIONS:  
 ALT. - ALTERNATE B/D  
 F.V. - FIELD VERIFY  
 N.C. - NOT IN CONTRACT  
 NTS - NOT TO SCALE  
 V.M. - VERIFY WITH MANUFACTURER

Vol. - VERIFY WITH THE OWNER/CLIENT  
 C.I. - CONTROL JT  
 E.I. - EXPANSION JT

THE INFORMATION ON THIS DRAWING IS BASED UPON INFORMATION SUPPLIED BY THE OWNER AND/OR PERCEIVED FIELD CONDITIONS. THE INFORMATION IS ACCURATE TO THE BEST OF OUR ABILITY BUT IN NO WAY IS INTENDED TO IDENTIFY EXACT CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ACTUAL CONDITIONS BEFORE CONSTRUCTION.

2. DO NOT SCALE DRAWINGS.  
 3. OPEN CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION.  
 4. INTERIOR DIMENSIONS TO STUD FACE.  
 5. ALL INTERIOR PARTITIONS 3/4" UNLESS NOTED OTHERWISE.  
 6. EXTERIOR WALLS ARE DIMENSIONED FROM INSIDE STUD FACE TO EXTERIOR SUB SHEATHING PAGE # 41.

--- NEW PARTITIONS, NEW WORK IMPLIED BY HIGHLIGHTING  
 --- EXISTING PARTITION TO REMAIN, EXISTS TO REMAIN IMPLIED BY NORMAL HT LINEWORK  
 - - - - - DROP CEILING GRID  
 - - - - - SOUND ATTENUATION BATT, 2" THEREAFTER OR EQUAL WITH STUDS @ 4" EACH SIDE OF WALL IN CEILING  
 - - - - - EXISTING PARTITION TO REMOVE, EXISTS TO REMOVE IMPLIED BY DASHED LINEWORK

### symbols:

	REVISION CHANGE		RECESSED LIGHT
	66" DOOR		EMERGENCY LIGHT
	SEE DETAIL 2A ON SHEET 2A		ILLUMINATED EXIT LIGHT
	SEE ELEV TB ON SHEET 7		FAN
	REFERENCE POINT		SMOKE DETECTOR
	WINDOW GR MARK		TV JACK
	RECEPTACLE		PHONE JACK
	220 RECEPTACLE		DOOR SPEAKER
	GROUND-FALL CIRCUIT RECEPT		INTERCOM
	QUAD RECEPTACLE		BATH/VENT
	SWITCH		5 WAY SWITCH
	5 WAY SWITCH		LIGHT
	CONSTRUCTION FLOOR LT FINISH		PULL CORD
	EMERGENCY LIGHT		3/4" SUPPLY RETURN AIR
			SUPPLY REGISTER
			CHIMNEY CALL BOX

### index:

A0-0 (SHT 0)	SPECIAL NOTES	A0-05 (SHT 6)	FRONT ELEVATIONS (ARTS & CRAFTS OPTION)
A0-1 (SHT 1)	GENERAL NOTES	A0-1 (SHT 7)	BACK & SIDE ELEVATIONS
A0-2 (SHT 2)	GENERAL NOTES & EXEMPTS	A0-10 (SHT 10)	FRONT ELEVATIONS
A0-3 (SHT 3)	FOUNDATION	A0-11 (SHT 11)	FRONT ELEVATIONS
A0-4 (SHT 4)	1ST FLOOR	A0-12 (SHT 12)	FRONT ELEVATIONS
A0-5 (SHT 5)	FRONT ELEVATIONS		

NOTE: THESE DRAWINGS, EVEN IF SEALED, ARE SUBJECT TO PERMIT REVIEW AND CHANGES AS REQUIRED BY THE GOVERNING MUNICIPALITY'S INTERPRETATION OF THE CODE. THESE ARE PROPOSAL DRAWINGS AND ARE NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED FOR PERMIT.

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gen. specifications and code excerpts:  
continued

WINDOWS AND DOORS

SECTION R300  
EMERGENCY ESCAPE AND RESCUE OPENINGS

R300.1 EMERGENCY ESCAPE AND RESCUE OPENINGS. BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. THESE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE PROVIDED IN EACH SLEEPING ROOM. THESE EMERGENCY ESCAPE AND RESCUE OPENINGS ARE PROVIDED THEY SHALL HAVE A CLEAR HEIGHT OF NOT MORE THAN 44 INCHES (1118mm) ABOVE THE FLOOR. THESE A DOOR OPENING HAVING A THRESHOLD BELOW THE ADJACENT GROUND ELEVATION SERVED AS AN EMERGENCY ESCAPE AND RESCUE OPENING AND IS PROVIDED WITH A BULKHEAD ENCLOSURE. THE BULKHEAD ENCLOSURE SHALL COMPLY WITH SECTION R300.5. THE NET CLEAR OPENING DIMENSIONS REQUIRED BY THIS SECTION SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING FROM THE INSIDE. EMERGENCY ESCAPE AND RESCUE OPENINGS WITH A FINISHED FLOOR FINISH SHALL BE PROVIDED WITH A BULKHEAD ENCLOSURE WITH A FINISHED FLOOR FINISH IN ACCORDANCE WITH SECTION R300.3. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

EXCEPTION: BASEMENTS USED ONLY TO HOUSE MECHANICAL EQUIPMENT SHALL EXCEEDING TOTAL FLOOR AREA OF 200 SQUARE FEET (18.58m<sup>2</sup>).

R300.11 MINIMUM OPENING AREA. ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET (0.53m<sup>2</sup>).

EXCEPTION: GRADE FLOOR OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5 SQUARE FEET (0.46m<sup>2</sup>).

R300.12 MINIMUM OPENING HEIGHT. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 20 INCHES (508mm).

R300.13 MINIMUM OPENING WIDTH. THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20 INCHES (508mm).

R300.14 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.

R310.2 Window wells. The minimum horizontal area of the window well shall be 9 square feet (0.9 m<sup>2</sup>), with a minimum horizontal projection of 4 inches (102 mm). The area of the window well shall allow for emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

R310.2.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps outside with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or steps shall have an inside width of at least 12 inches (305 mm) shall project at least 3 inches (76 mm) from the wall and shall be spaced at not more than 18 inches (457 mm) on center vertically for the full height of the window well.

SECTION R311  
MEANS OF EGRESS

R311.1 MEANS OF EGRESS. ALL DWELLINGS SHALL BE PROVIDED WITH A MEANS OF EGRESS AS REQUIRED BY SECTION R310. THE MEANS OF EGRESS SHALL PROVIDE A CONTINUOUS AND UNOBSTRUCTED PATH OF VERTICAL AND HORIZONTAL EGRESS TRAVEL FROM ALL PORTIONS OF THE DWELLING TO THE EXTERIOR AT THE REQUIRED EGRESS DOOR WITHOUT REQUIRING TRAVEL THROUGH A GARAGE.

R311.2 EGRESS DOOR. AT LEAST ONE EGRESS DOOR SHALL BE PROVIDED FOR EACH OPENING INTO THE EXTERIOR FROM EACH LEVEL AND SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 32 INCHES (813mm) WHEN MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN. CLEARANCES (SEE NOTE) SHALL BE MEASURED AT THE POINT OF THE DOOR OPENING SHALL NOT BE LESS THAN 10 INCHES (254mm) IN HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS. EGRESS DOORS SHALL BE REMOVABLE FROM INSIDE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

R311.3 FLOORS AND LANDINGS AT EXTERIOR DOORS. THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR WIDTH. EVERY LANDING SHALL HAVE A MINIMUM CLEARANCE OF 36 INCHES (914mm) MEASURED IN THE DIRECTION OF TRAVEL. EXTERIOR LANDINGS SHALL BE PERMITTED TO HAVE A SLOPE NOT TO EXCEED 1/4 INCH VERTICAL IN 12 UNITS HORIZONTAL (2-percent).

EXCEPTION: EXTERIOR BALCONIES LESS THAN 60 SQUARE FEET (5.57m<sup>2</sup>) AND ONLY ACCESSIBLE FROM A DOOR SHALL BE PERMITTED TO HAVE A LANDING LESS THAN 36 INCHES (914mm) MEASURED IN THE DIRECTION OF TRAVEL.

R311.5 FLOOR ELEVATIONS AT THE REQUIRED EGRESS DOORS. LANDINGS OR FLOORS AT THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 1/2 INCHES (12.7mm) LOWER THAN THE TOP OF THE THRESHOLD.

EXCEPTION: THE EXTERIOR LANDING OR FLOOR SHALL NOT BE MORE THAN 7/8 INCHES (22.2mm) BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR.

R311.6 EXTERIOR LANDINGS OR FLOORS SERVING AS THE REQUIRED EGRESS DOOR ARE NOT AT GRADE. THEY SHALL BE PROVIDED WITH ACCESS TO GRADE BY MEANS OF A RAMP IN ACCORDANCE WITH SECTION R310.8 OR A STAIRWAY IN ACCORDANCE WITH SECTION R311.1.

R311.7 FLOOR ELEVATIONS FOR OTHER EXTERIOR DOORS. DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL BE PROVIDED WITH LANDINGS OR FLOORS NOT MORE THAN 7/8 INCHES (22.2mm) BELOW THE TOP OF THE THRESHOLD.

EXCEPTION: A LANDING IS NOT REQUIRED WHERE A STAIRWAY OF TWO OR FEWER RISERS IS LOCATED ON THE EXTERIOR SIDE OF THE DOOR PROVIDED THE DOOR DOES NOT SWING OVER THE STAIRWAY.

R311.8 STORM AND SCREEN DOORS. STORM AND SCREEN DOORS SHALL BE PERMITTED TO SWING OVER ALL EXTERIOR STAIRS AND LANDINGS.

R311.4 VERTICAL EGRESS. EGRESS FROM HABITABLE LEVELS INCLUDING HABITABLE ATTICS AND BASEMENTS NOT PROVIDED WITH AN EGRESS DOOR IN ACCORDANCE WITH SECTION R310.2 SHALL BE BY A RAMP IN ACCORDANCE WITH SECTION R310.8 OR A STAIRWAY IN ACCORDANCE WITH SECTION R311.1.

R312 CONSTRUCTION

R312.1 ATTACHMENT. EXTERIOR LANDINGS, DECKS, BALCONIES, STAIRS AND SIMILAR FACILITIES SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE TO RESIST BOTH VERTICAL AND LATERAL FORCES OR SHALL BE DESIGNED TO BE SELF-SUPPORTING. ATTACHMENT SHALL NOT BE ACCOMPLISHED BY USE OF TOWELS OR NAILS SUBJECT TO WITHDRAWAL.

R312.2 HALLWAYS. THE MINIMUM WIDTH OF A HALLWAY SHALL BE NOT LESS THAN 5 FEET (1.52m).

SECTION R302  
EXTERIOR WINDOWS AND DOORS

R302.1 GENERAL. THIS SECTION PRESCRIBES PERFORMANCE AND CONSTRUCTION REQUIREMENTS FOR EXTERIOR WINDOWS AND DOORS INSTALLED IN WALLS. WINDOWS AND DOORS SHALL BE INSTALLED AND FLASHED IN ACCORDANCE WITH THE FABRICATOR MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. WINDOW AND DOOR OPENINGS SHALL BE FLASHED IN ACCORDANCE WITH SECTION R302.4. WRITTEN INSTALLATION INSTRUCTIONS SHALL BE PROVIDED BY THE FABRICATOR MANUFACTURER FOR EACH WINDOW OR DOOR.

R302.2 WINDOW SILLS. IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES (1829mm) ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES (609mm) ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OTHER WINDOW OPENINGS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4 INCH (102mm) DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES (609mm) OF THE FINISHED FLOOR.

EXCEPTIONS:  
R302.2.1 MILLIONS. MILLIONS SHALL NOT ALLOW A 4-INCH DIAMETER SPHERE TO PASS THROUGH THE OPENING WHEN THE OPENING IS IN ITS LARGEST OPENED POSITION.  
R302.2.2 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.2.3 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.2.4 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.

R302.3 WINDOW FALL PREVENTION DEVICES. WINDOW FALL PREVENTION DEVICES AND WINDOW GUARDS, WHERE PROVIDED, SHALL COMPLY WITH THE REQUIREMENTS OF ASTM F 2090.

R302.4 WINDOW OPENING LIMITING DEVICES. WHEN REQUIRED BY SECTION R302.2, WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.

R302.4.1 GENERAL REQUIREMENTS. WINDOW OPENING LIMITING DEVICES SHALL BE SELF-ACTING AND SHALL BE POSITIONED TO PREVENT THE FREE PASSAGE OF A 4-INCH (102mm) DIAMETER RIGID SPHERE THROUGH THE WINDOW OPENING WHEN THE WINDOW OPENING LIMITING DEVICES ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

R302.4.2 OPERATION FOR EMERGENCY ESCAPE. WINDOW OPENING LIMITING DEVICES SHALL BE DESIGNED WITH RELEASE MECHANISMS TO ALLOW FOR EMERGENCY ESCAPE THROUGH THE WINDOW OPENING WITHOUT THE NEED FOR KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH ALL THE FOLLOWING:

RELEASE OF THE WINDOW OPENING-LIMITING DEVICE SHALL REQUIRE NO MORE THAN IS POUNDS (66.0) OF FORCE.  
THE WINDOW OPENING LIMITING DEVICE RELEASE MECHANISM SHALL OPERATE PROPERLY IN ALL TYPES OF WEATHER.  
WINDOW OPENING LIMITING DEVICES SHALL HAVE THE RELEASE MECHANISMS CLEARLY IDENTIFIED FOR PROPER USE IN AN EMERGENCY.  
THE WINDOW OPENING LIMITING DEVICE SHALL NOT REDUCE THE MINIMUM NET CLEAR OPENING AREA OF THE WINDOW (AS DEFINED BY SECTION R300.1) OF THE CODE.

R302.5 PERFORMANCE. EXTERIOR WINDOWS AND DOORS SHALL BE DESIGNED TO RESIST THE DESIGN WIND LOADS SPECIFIED IN TABLE R302.5.1 (AS ADJUSTED FOR HEIGHT AND EXPOSURE PER TABLE R302.5.2).

R302.6 TESTING AND LABELING. EXTERIOR WINDOWS AND SLIDING DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH ASTM A1199/ASCE 1015.2/IAA40.

EXCEPTION: DECORATIVE GLAZED OPENINGS.

R302.6.1 COMPARATIVE ANALYSIS. STRUCTURAL WIND LOAD DESIGN PRESSURES FOR WINDOW AND DOOR UNITS SMALLER THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R302.6 SHALL BE PERMITTED TO BE HIGHER THAN THE DESIGN VALUE OF THE TESTED UNIT PROVIDED SUCH HIGHER PRESSURES ARE DETERMINED BY ACCEPTED ENGINEERING ANALYSIS. ALL COMPONENTS OF THE SHALL UNIT SHALL BE THE SAME AS THOSE OF THE TESTED UNIT. THESE SUCH CALCULATED DESIGN PRESSURES ARE USED, THEY SHALL BE VALIDATED BY AN ADDITIONAL TEST OF THE WINDOW OR DOOR UNIT HAVING THE HIGHEST ALLOWABLE DESIGN PRESSURE.

R302.7 VEHICULAR ACCESS DOORS. VEHICULAR ACCESS DOORS SHALL BE TESTED IN ACCORDANCE WITH EITHER ASTM E 880 OR ANSI/DINAMA 100, AND SHALL MEET THE ACCEPTANCE CRITERIA OF ANSI/DINAMA 100.

R302.8 OTHER EXTERIOR WINDOW AND DOOR ASSEMBLIES. EXTERIOR WINDOWS AND DOOR ASSEMBLIES NOT INCLUDED WITHIN THE SCOPE OF SECTION R302.6 OR SECTION R302.7 SHALL BE TESTED IN ACCORDANCE WITH ASTM E 880. GLASS ASSEMBLIES COVERED BY THIS EXCEPTION SHALL COMPLY WITH SECTION R302.6.

R302.9 HIND-BONE DEBRIS PROTECTION. PROTECTION OF EXTERIOR WINDOWS AND GLASS DOORS IN BUILDINGS LOCATED IN HIND-BONE DEBRIS REGIONS SHALL BE IN ACCORDANCE WITH SECTION R501.2.2.

R302.10 PENETRATION TESTING AND LABELING. PENETRATION TESTING SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, LISTED BY AN APPROVED ENTITY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING SPECIFICATION:

ASTM E 1806 AND ASTM E 1816, OR  
ANSI A 506.

R302.10 ANCHORAGE METHODS. THE METHODS CITED IN THIS SECTION APPLY ONLY TO ANCHORAGE OF WINDOW AND GLASS DOOR ASSEMBLIES TO THE MAIN FORCE-RESISTING SYSTEM.

R302.10.1 ANCHORAGE REQUIREMENTS. WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED IN ACCORDANCE WITH THE PUBLISHED MANUFACTURER'S RECOMMENDATIONS TO ACHIEVE THE DESIGN PRESSURE SPECIFIED. SUBSTITUTE ANCHORING SYSTEMS USED FOR SUBSTRATES NOT SPECIFIED BY THE FABRICATOR MANUFACTURER SHALL PROVIDE EQUAL OR GREATER ANCHORING PERFORMANCE AS DEMONSTRATED BY ACCEPTED ENGINEERING PRACTICE.

R302.10.2 ANCHORAGE DETAILS. PRODUCTS SHALL BE ANCHORED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS ILLUSTRATED IN FIGURES R302.10.1, R302.10.2, R302.10.3, R302.10.4, R302.10.5, R302.10.6, R302.10.7 AND R302.10.8.

R302.10.3 MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. WHERE THE MOOD SHIM OR BUCK THICKNESS IS LESS THAN 1/2 INCHES (12.7mm), WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED THROUGH THE JAMB, OR BY JAMB CLIPS AND ANCHORS SHALL BE EMBEDDED DIRECTLY INTO THE MASONRY, CONCRETE OR OTHER SUBSTANTIAL SUBSTRATE MATERIAL. ANCHORS SHALL ADEQUATELY TRANSFER LOAD FROM THE WINDOW OR DOOR FRAME INTO THE RESISTING SUBSTRATE (SEE FIGURES R302.10.1 AND R302.10.2).

WHERE THE MOOD SHIM OR BUCK THICKNESS IS 1/2 INCHES (12.7mm) OR MORE, THE BUCK IS SECURELY FASTENED TO THE MASONRY, CONCRETE OR OTHER SUBSTANTIAL SUBSTRATE, AND THE BUCK EXTENDS BEYOND THE INTERIOR FACE OF THE WINDOW OR DOOR FRAME. WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED THROUGH THE JAMB, OR THROUGH THE FINISH TO THE SECURED MOOD BUCK. ANCHORS SHALL BE EMBEDDED INTO THE SECURED MOOD BUCK TO ADEQUATELY TRANSFER LOAD FROM THE WINDOW OR DOOR FRAME INTO THE RESISTING SUBSTRATE (SEE FIGURES R302.10.3 AND R302.10.4).

R302.10.4 WINDOW SILLS. IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES (1829mm) ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES (609mm) ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OTHER WINDOW OPENINGS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4 INCH (102mm) DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES (609mm) OF THE FINISHED FLOOR.

EXCEPTIONS:  
R302.10.4.1 MILLIONS. MILLIONS SHALL NOT ALLOW A 4-INCH DIAMETER SPHERE TO PASS THROUGH THE OPENING WHEN THE OPENING IS IN ITS LARGEST OPENED POSITION.  
R302.10.4.2 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.10.4.3 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.10.4.4 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.

R302.10.5 WINDOW FALL PREVENTION DEVICES. WINDOW FALL PREVENTION DEVICES AND WINDOW GUARDS, WHERE PROVIDED, SHALL COMPLY WITH THE REQUIREMENTS OF ASTM F 2090.

R302.10.6 WINDOW OPENING LIMITING DEVICES. WHEN REQUIRED BY SECTION R302.2, WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.

R302.10.6.1 GENERAL REQUIREMENTS. WINDOW OPENING LIMITING DEVICES SHALL BE SELF-ACTING AND SHALL BE POSITIONED TO PREVENT THE FREE PASSAGE OF A 4-INCH (102mm) DIAMETER RIGID SPHERE THROUGH THE WINDOW OPENING WHEN THE WINDOW OPENING LIMITING DEVICES ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

R302.10.6.2 OPERATION FOR EMERGENCY ESCAPE. WINDOW OPENING LIMITING DEVICES SHALL BE DESIGNED WITH RELEASE MECHANISMS TO ALLOW FOR EMERGENCY ESCAPE THROUGH THE WINDOW OPENING WITHOUT THE NEED FOR KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH ALL THE FOLLOWING:

RELEASE OF THE WINDOW OPENING-LIMITING DEVICE SHALL REQUIRE NO MORE THAN IS POUNDS (66.0) OF FORCE.  
THE WINDOW OPENING LIMITING DEVICE RELEASE MECHANISM SHALL OPERATE PROPERLY IN ALL TYPES OF WEATHER.  
WINDOW OPENING LIMITING DEVICES SHALL HAVE THE RELEASE MECHANISMS CLEARLY IDENTIFIED FOR PROPER USE IN AN EMERGENCY.  
THE WINDOW OPENING LIMITING DEVICE SHALL NOT REDUCE THE MINIMUM NET CLEAR OPENING AREA OF THE WINDOW (AS DEFINED BY SECTION R300.1) OF THE CODE.

R302.10.6.3 COMPARATIVE ANALYSIS. STRUCTURAL WIND LOAD DESIGN PRESSURES FOR WINDOW AND DOOR UNITS SMALLER THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R302.6 SHALL BE PERMITTED TO BE HIGHER THAN THE DESIGN VALUE OF THE TESTED UNIT PROVIDED SUCH HIGHER PRESSURES ARE DETERMINED BY ACCEPTED ENGINEERING ANALYSIS. ALL COMPONENTS OF THE SHALL UNIT SHALL BE THE SAME AS THOSE OF THE TESTED UNIT. THESE SUCH CALCULATED DESIGN PRESSURES ARE USED, THEY SHALL BE VALIDATED BY AN ADDITIONAL TEST OF THE WINDOW OR DOOR UNIT HAVING THE HIGHEST ALLOWABLE DESIGN PRESSURE.

R302.10.6.4 VEHICULAR ACCESS DOORS. VEHICULAR ACCESS DOORS SHALL BE TESTED IN ACCORDANCE WITH EITHER ASTM E 880 OR ANSI/DINAMA 100, AND SHALL MEET THE ACCEPTANCE CRITERIA OF ANSI/DINAMA 100.

R302.10.6.5 OTHER EXTERIOR WINDOW AND DOOR ASSEMBLIES. EXTERIOR WINDOWS AND DOOR ASSEMBLIES NOT INCLUDED WITHIN THE SCOPE OF SECTION R302.6 OR SECTION R302.7 SHALL BE TESTED IN ACCORDANCE WITH ASTM E 880. GLASS ASSEMBLIES COVERED BY THIS EXCEPTION SHALL COMPLY WITH SECTION R302.6.

R302.10.6.6 HIND-BONE DEBRIS PROTECTION. PROTECTION OF EXTERIOR WINDOWS AND GLASS DOORS IN BUILDINGS LOCATED IN HIND-BONE DEBRIS REGIONS SHALL BE IN ACCORDANCE WITH SECTION R501.2.2.

R302.10.6.7 PENETRATION TESTING AND LABELING. PENETRATION TESTING SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, LISTED BY AN APPROVED ENTITY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING SPECIFICATION:

ASTM E 1806 AND ASTM E 1816, OR  
ANSI A 506.

R302.10.6.7.1 ANCHORAGE METHODS. THE METHODS CITED IN THIS SECTION APPLY ONLY TO ANCHORAGE OF WINDOW AND GLASS DOOR ASSEMBLIES TO THE MAIN FORCE-RESISTING SYSTEM.

R302.10.6.7.1.1 ANCHORAGE REQUIREMENTS. WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED IN ACCORDANCE WITH THE PUBLISHED MANUFACTURER'S RECOMMENDATIONS TO ACHIEVE THE DESIGN PRESSURE SPECIFIED. SUBSTITUTE ANCHORING SYSTEMS USED FOR SUBSTRATES NOT SPECIFIED BY THE FABRICATOR MANUFACTURER SHALL PROVIDE EQUAL OR GREATER ANCHORING PERFORMANCE AS DEMONSTRATED BY ACCEPTED ENGINEERING PRACTICE.

R302.10.6.7.1.2 ANCHORAGE DETAILS. PRODUCTS SHALL BE ANCHORED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS ILLUSTRATED IN FIGURES R302.10.1, R302.10.2, R302.10.3, R302.10.4, R302.10.5, R302.10.6, R302.10.7 AND R302.10.8.

R302.10.6.7.1.3 MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. WHERE THE MOOD SHIM OR BUCK THICKNESS IS LESS THAN 1/2 INCHES (12.7mm), WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED THROUGH THE JAMB, OR BY JAMB CLIPS AND ANCHORS SHALL BE EMBEDDED DIRECTLY INTO THE MASONRY, CONCRETE OR OTHER SUBSTANTIAL SUBSTRATE MATERIAL. ANCHORS SHALL ADEQUATELY TRANSFER LOAD FROM THE WINDOW OR DOOR FRAME INTO THE RESISTING SUBSTRATE (SEE FIGURES R302.10.1 AND R302.10.2).

WHERE THE MOOD SHIM OR BUCK THICKNESS IS 1/2 INCHES (12.7mm) OR MORE, THE BUCK IS SECURELY FASTENED TO THE MASONRY, CONCRETE OR OTHER SUBSTANTIAL SUBSTRATE, AND THE BUCK EXTENDS BEYOND THE INTERIOR FACE OF THE WINDOW OR DOOR FRAME. WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED THROUGH THE JAMB, OR THROUGH THE FINISH TO THE SECURED MOOD BUCK. ANCHORS SHALL BE EMBEDDED INTO THE SECURED MOOD BUCK TO ADEQUATELY TRANSFER LOAD FROM THE WINDOW OR DOOR FRAME INTO THE RESISTING SUBSTRATE (SEE FIGURES R302.10.3 AND R302.10.4).

R302.10.6.7.1.4 WINDOW SILLS. IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES (1829mm) ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES (609mm) ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OTHER WINDOW OPENINGS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4 INCH (102mm) DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES (609mm) OF THE FINISHED FLOOR.

EXCEPTIONS:  
R302.10.6.7.1.4.1 MILLIONS. MILLIONS SHALL NOT ALLOW A 4-INCH DIAMETER SPHERE TO PASS THROUGH THE OPENING WHEN THE OPENING IS IN ITS LARGEST OPENED POSITION.  
R302.10.6.7.1.4.2 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.10.6.7.1.4.3 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.10.6.7.1.4.4 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.

R302.10.6.7.1.5 WINDOW FALL PREVENTION DEVICES. WINDOW FALL PREVENTION DEVICES AND WINDOW GUARDS, WHERE PROVIDED, SHALL COMPLY WITH THE REQUIREMENTS OF ASTM F 2090.

R302.10.6.7.1.6 WINDOW OPENING LIMITING DEVICES. WHEN REQUIRED BY SECTION R302.2, WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.

R302.10.6.7.1.6.1 GENERAL REQUIREMENTS. WINDOW OPENING LIMITING DEVICES SHALL BE SELF-ACTING AND SHALL BE POSITIONED TO PREVENT THE FREE PASSAGE OF A 4-INCH (102mm) DIAMETER RIGID SPHERE THROUGH THE WINDOW OPENING WHEN THE WINDOW OPENING LIMITING DEVICES ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

R302.10.6.7.1.6.2 OPERATION FOR EMERGENCY ESCAPE. WINDOW OPENING LIMITING DEVICES SHALL BE DESIGNED WITH RELEASE MECHANISMS TO ALLOW FOR EMERGENCY ESCAPE THROUGH THE WINDOW OPENING WITHOUT THE NEED FOR KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH ALL THE FOLLOWING:

RELEASE OF THE WINDOW OPENING-LIMITING DEVICE SHALL REQUIRE NO MORE THAN IS POUNDS (66.0) OF FORCE.  
THE WINDOW OPENING LIMITING DEVICE RELEASE MECHANISM SHALL OPERATE PROPERLY IN ALL TYPES OF WEATHER.  
WINDOW OPENING LIMITING DEVICES SHALL HAVE THE RELEASE MECHANISMS CLEARLY IDENTIFIED FOR PROPER USE IN AN EMERGENCY.  
THE WINDOW OPENING LIMITING DEVICE SHALL NOT REDUCE THE MINIMUM NET CLEAR OPENING AREA OF THE WINDOW (AS DEFINED BY SECTION R300.1) OF THE CODE.

R302.10.6.7.1.6.3 COMPARATIVE ANALYSIS. STRUCTURAL WIND LOAD DESIGN PRESSURES FOR WINDOW AND DOOR UNITS SMALLER THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R302.6 SHALL BE PERMITTED TO BE HIGHER THAN THE DESIGN VALUE OF THE TESTED UNIT PROVIDED SUCH HIGHER PRESSURES ARE DETERMINED BY ACCEPTED ENGINEERING ANALYSIS. ALL COMPONENTS OF THE SHALL UNIT SHALL BE THE SAME AS THOSE OF THE TESTED UNIT. THESE SUCH CALCULATED DESIGN PRESSURES ARE USED, THEY SHALL BE VALIDATED BY AN ADDITIONAL TEST OF THE WINDOW OR DOOR UNIT HAVING THE HIGHEST ALLOWABLE DESIGN PRESSURE.

R302.10.6.7.1.6.4 VEHICULAR ACCESS DOORS. VEHICULAR ACCESS DOORS SHALL BE TESTED IN ACCORDANCE WITH EITHER ASTM E 880 OR ANSI/DINAMA 100, AND SHALL MEET THE ACCEPTANCE CRITERIA OF ANSI/DINAMA 100.

R302.10.6.7.1.6.5 OTHER EXTERIOR WINDOW AND DOOR ASSEMBLIES. EXTERIOR WINDOWS AND DOOR ASSEMBLIES NOT INCLUDED WITHIN THE SCOPE OF SECTION R302.6 OR SECTION R302.7 SHALL BE TESTED IN ACCORDANCE WITH ASTM E 880. GLASS ASSEMBLIES COVERED BY THIS EXCEPTION SHALL COMPLY WITH SECTION R302.6.

R302.10.6.7.1.6.6 HIND-BONE DEBRIS PROTECTION. PROTECTION OF EXTERIOR WINDOWS AND GLASS DOORS IN BUILDINGS LOCATED IN HIND-BONE DEBRIS REGIONS SHALL BE IN ACCORDANCE WITH SECTION R501.2.2.

R302.10.6.7.1.6.7 PENETRATION TESTING AND LABELING. PENETRATION TESTING SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, LISTED BY AN APPROVED ENTITY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING SPECIFICATION:

ASTM E 1806 AND ASTM E 1816, OR  
ANSI A 506.

R302.10.6.7.1.6.7.1 ANCHORAGE METHODS. THE METHODS CITED IN THIS SECTION APPLY ONLY TO ANCHORAGE OF WINDOW AND GLASS DOOR ASSEMBLIES TO THE MAIN FORCE-RESISTING SYSTEM.

R302.10.6.7.1.6.7.1.1 ANCHORAGE REQUIREMENTS. WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED IN ACCORDANCE WITH THE PUBLISHED MANUFACTURER'S RECOMMENDATIONS TO ACHIEVE THE DESIGN PRESSURE SPECIFIED. SUBSTITUTE ANCHORING SYSTEMS USED FOR SUBSTRATES NOT SPECIFIED BY THE FABRICATOR MANUFACTURER SHALL PROVIDE EQUAL OR GREATER ANCHORING PERFORMANCE AS DEMONSTRATED BY ACCEPTED ENGINEERING PRACTICE.

R302.10.6.7.1.6.7.1.2 ANCHORAGE DETAILS. PRODUCTS SHALL BE ANCHORED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS ILLUSTRATED IN FIGURES R302.10.1, R302.10.2, R302.10.3, R302.10.4, R302.10.5, R302.10.6, R302.10.7 AND R302.10.8.

R302.10.6.7.1.6.7.1.3 MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. WHERE THE MOOD SHIM OR BUCK THICKNESS IS LESS THAN 1/2 INCHES (12.7mm), WINDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED THROUGH THE JAMB, OR BY JAMB CLIPS AND ANCHORS SHALL BE EMBEDDED DIRECTLY INTO THE MASONRY, CONCRETE OR OTHER SUBSTANTIAL SUBSTRATE MATERIAL. ANCHORS SHALL ADEQUATELY TRANSFER LOAD FROM THE WINDOW OR DOOR FRAME INTO THE RESISTING SUBSTRATE (SEE FIGURES R302.10.1 AND R302.10.2).

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EXCEPTIONS:  
R302.10.6.7.1.6.7.1.4.1 MILLIONS. MILLIONS SHALL NOT ALLOW A 4-INCH DIAMETER SPHERE TO PASS THROUGH THE OPENING WHEN THE OPENING IS IN ITS LARGEST OPENED POSITION.  
R302.10.6.7.1.6.7.1.4.2 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.10.6.7.1.6.7.1.4.3 OPERATIONS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R302.5.

R302.10.6.7.1.6.7.1.4.4 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.

R302.10.6.7.1.6.7.1.5 WINDOW FALL PREVENTION DEVICES. WINDOW FALL PREVENTION DEVICES AND WINDOW GUARDS, WHERE PROVIDED, SHALL COMPLY WITH THE REQUIREMENTS OF ASTM F 2090.

R302.10.6.7.1.6.7.1.6 WINDOW OPENING LIMITING DEVICES. WHEN REQUIRED BY SECTION R302.2, WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.

R302.10.6.7.1.6.7.1.6.1 GENERAL REQUIREMENTS. WINDOW OPENING LIMITING DEVICES SHALL BE SELF-ACTING AND SHALL BE POSITIONED TO PREVENT THE FREE PASSAGE OF A 4-INCH (102mm) DIAMETER RIGID SPHERE THROUGH THE WINDOW OPENING WHEN THE WINDOW OPENING LIMITING DEVICES ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

R302.10.6.7.1.6.7.1.6.2 OPERATION FOR EMERGENCY ESCAPE. WINDOW OPENING LIMITING DEVICES SHALL BE DESIGNED WITH RELEASE MECHANISMS TO ALLOW FOR EMERGENCY ESCAPE THROUGH THE WINDOW OPENING WITHOUT THE NEED FOR KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING LIMITING DEVICES SHALL COMPLY WITH ALL THE FOLLOWING:

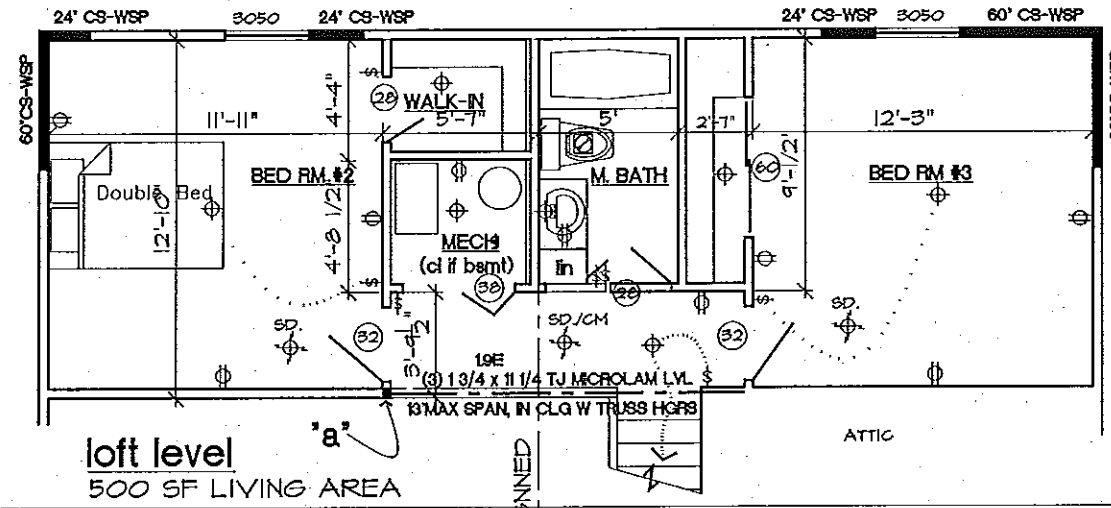
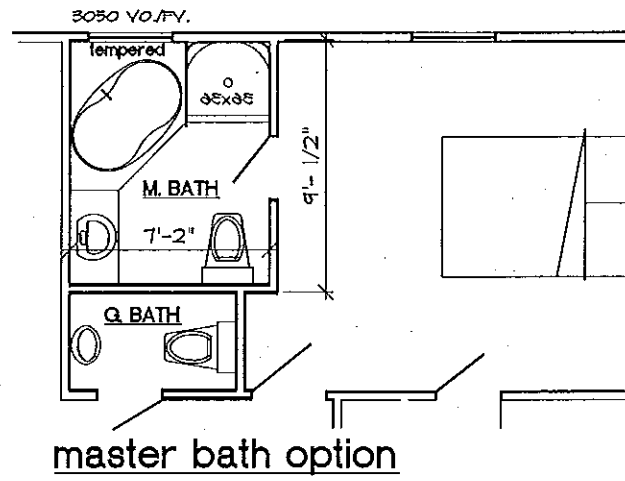
RELEASE OF THE WINDOW OPENING-LIMITING DEVICE SHALL REQUIRE NO MORE THAN IS POUNDS (66.0) OF FORCE.  
THE WINDOW OPENING LIMITING DEVICE RELEASE MECHANISM SHALL OPERATE PROPERLY IN ALL TYPES OF WEATHER.  
WINDOW OPENING LIMITING DEVICES SHALL HAVE THE RELEASE MECHANISMS CLEARLY IDENTIFIED FOR PROPER USE IN AN EMERGENCY.  
THE WINDOW OPENING LIMITING DEVICE SHALL NOT REDUCE THE MINIMUM NET CLEAR OPENING AREA OF THE WINDOW (AS DEFINED BY SECTION R300.1) OF THE CODE.

R302.10.6.7.1.6.7.1.6.3 COMPARATIVE ANALYSIS. STRUCTURAL WIND LOAD DESIGN PRESSURES FOR WINDOW AND DOOR UNITS SMALLER THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R302.6 SHALL BE PERMITTED TO BE HIGHER THAN THE DESIGN VALUE OF THE TESTED UNIT PROVIDED SUCH HIGHER PRESSURES ARE DETERMINED BY ACCEPTED ENGINEERING ANALYSIS. ALL COMPONENTS OF THE SHALL UNIT SHALL BE THE SAME AS THOSE OF THE TESTED UNIT. THESE SUCH CALCULATED DESIGN PRESSURES ARE USED, THEY SHALL BE VALIDATED BY AN ADDITIONAL TEST OF THE WINDOW OR DOOR UNIT HAVING THE HIGHEST ALLOWABLE DESIGN PRESSURE.

R302.10.6.7.1.6.7.1.6.4 VEHICULAR ACCESS DOORS. VEHICULAR ACCESS DOORS SHALL BE TESTED IN ACCORDANCE WITH EITHER ASTM E 880 OR ANSI/DINAMA 100, AND SHALL MEET THE ACCEPTANCE CRITERIA OF ANSI/DINAMA 100.

R302.10.6.7.1.6.7.1.6.5 OTHER EXTERIOR WINDOW AND DOOR ASSEMBLIES. EXTERIOR WINDOWS AND DOOR ASSEMBLIES NOT INCLUDED WITHIN THE SCOPE OF SECTION R302.6 OR SECTION R302.7 SHALL BE TESTED IN ACCORDANCE WITH ASTM E 880. GLASS ASSEMBLIES COVERED BY THIS EXCEPTION SHALL COMPLY WITH SECTION R302.6





date issued: 3/30/15

BID: \_\_\_\_\_

PERMIT: \_\_\_\_\_

CONTR.: \_\_\_\_\_

revision: \_\_\_\_\_

project/owner: \_\_\_\_\_

"THE HAWTHORNE"

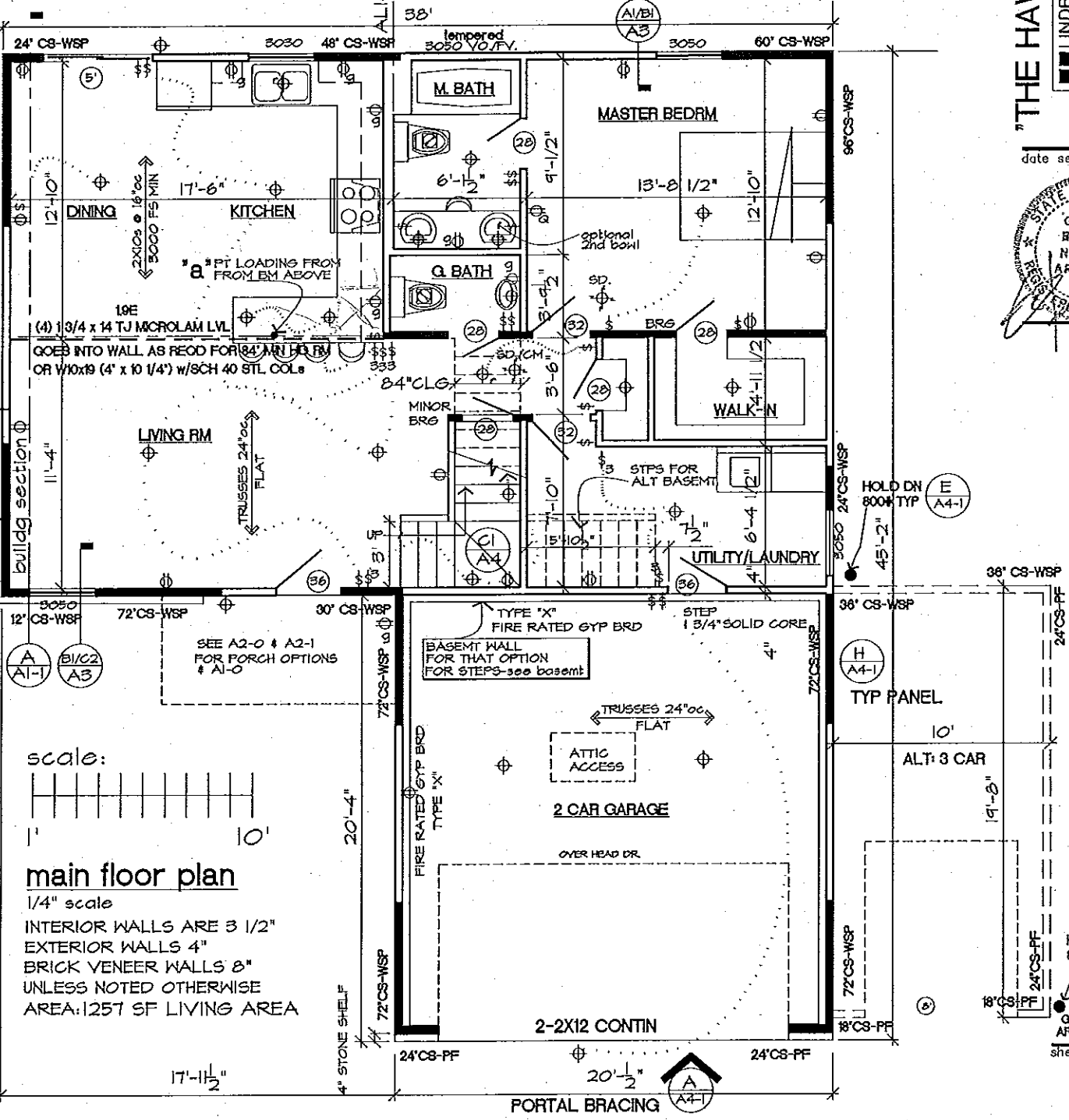
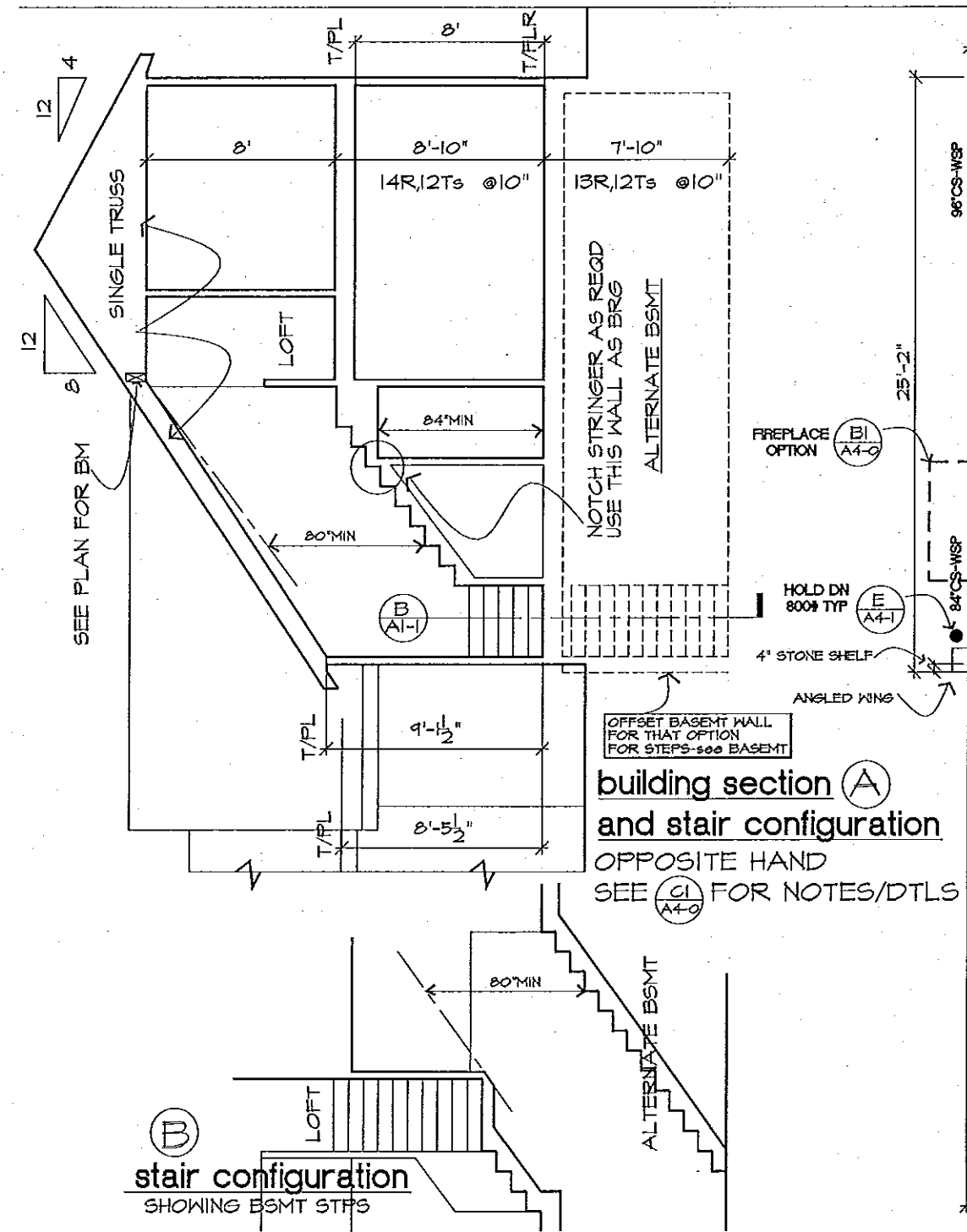
LINDBERGH PROPERTIES CONSTRUCTION

date sealed: 3/30/15

STATE OF MISSOURI

GARY C. BORROR

NUMBER AR-3389



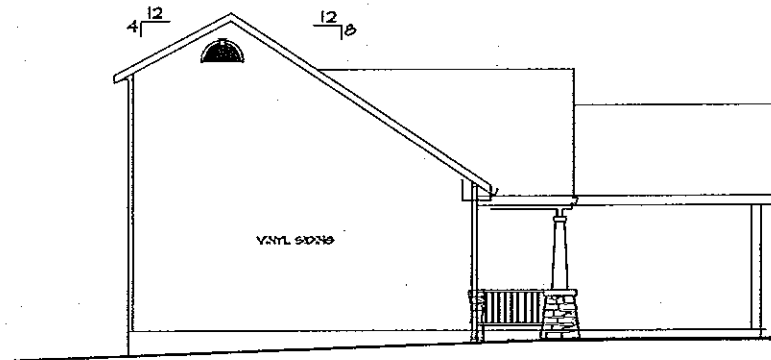
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G. CLINTON BORROR ARCHITECT/PLANNER

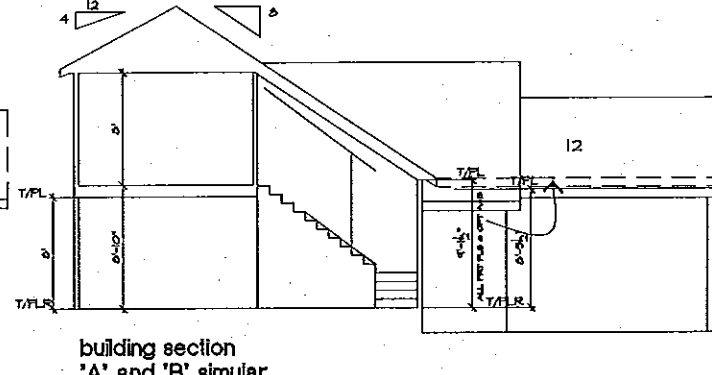
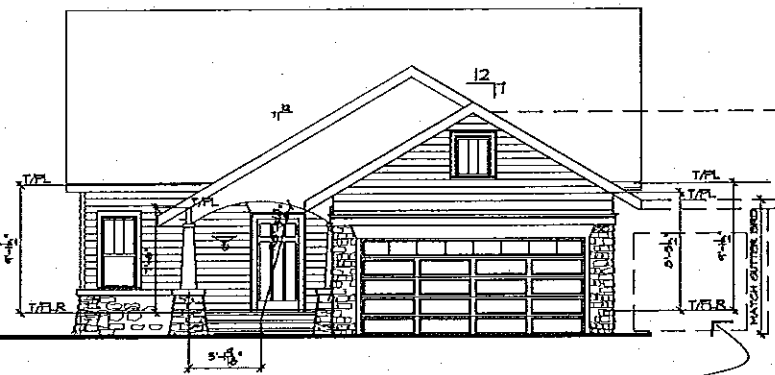




SEE SHT A2-0b FOR METAL RF OPTION

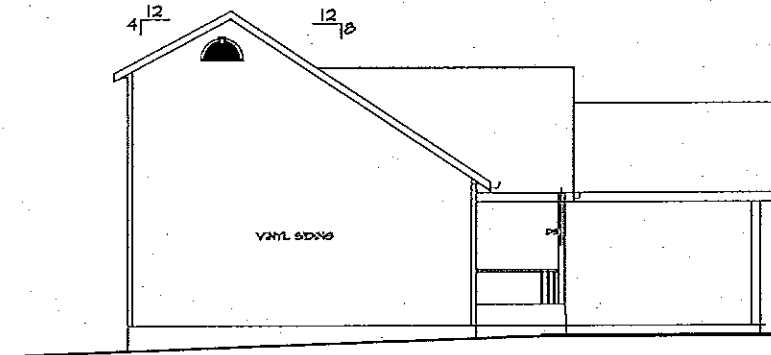


arts and crafts option

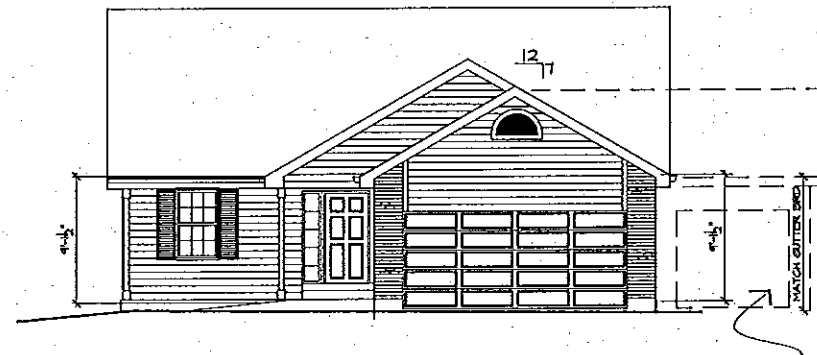


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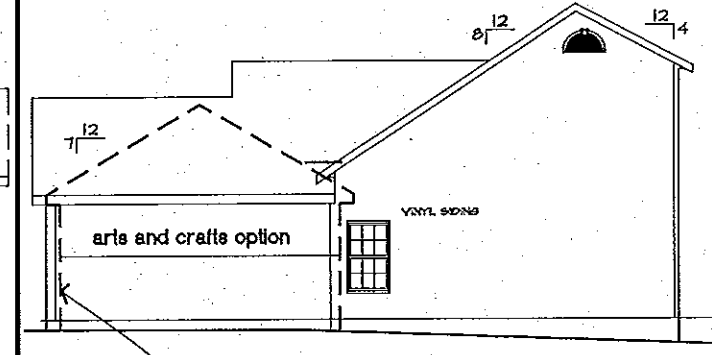
3 CAR OPTION



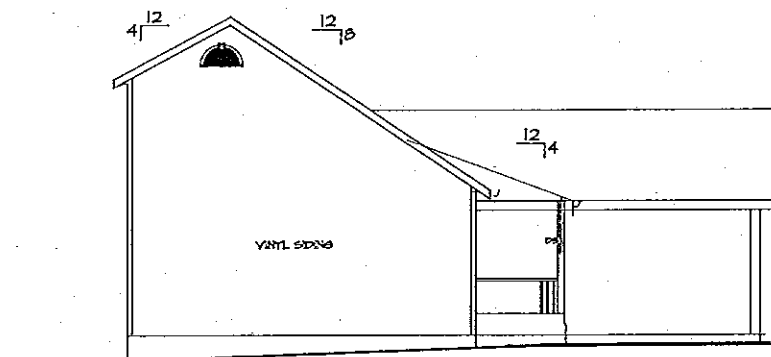
option b



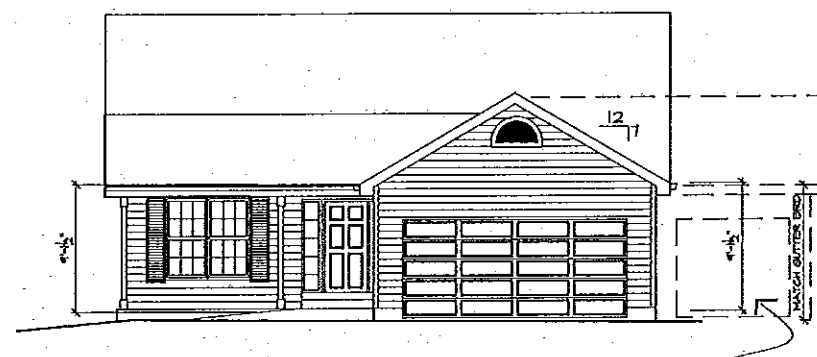
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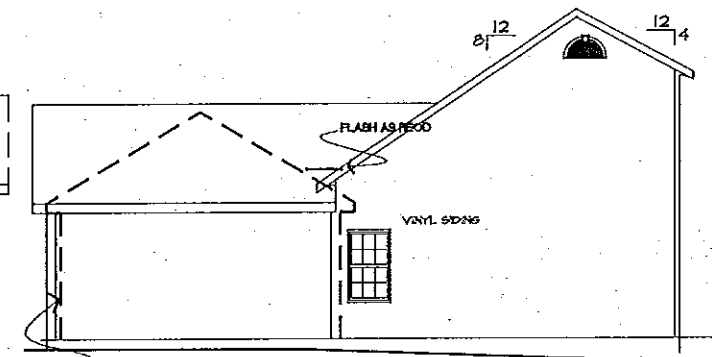
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option a



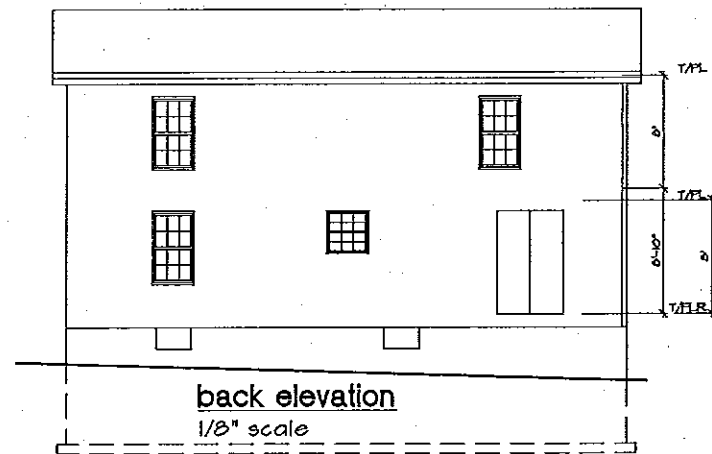
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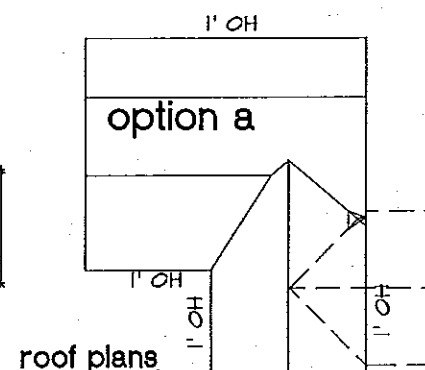
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front elevations  
1/8" scale

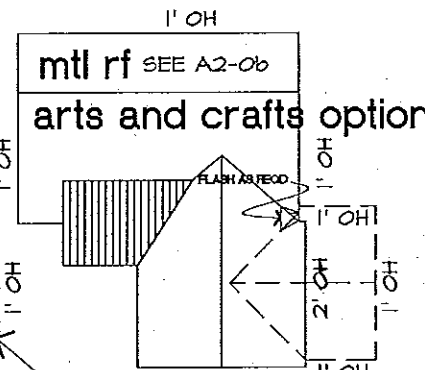
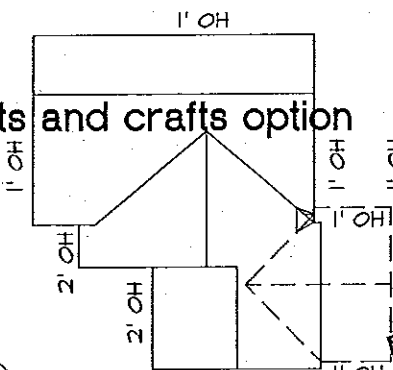
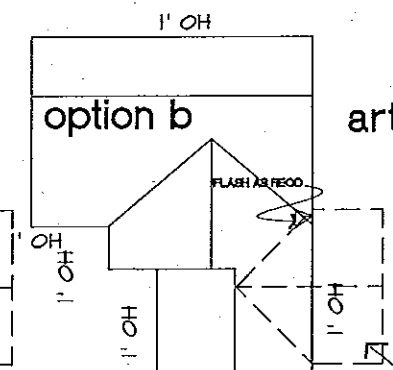
right side elevations  
1/8" scale



back elevation  
1/8" scale



roof plans  
1/8" scale



3 CAR OPTION

date issued: 3/30/15  
BID:  
PERMIT:  
CONTR.:  
revision:  
project/owner:

THE HAWTHORNE



drawing title:  
ELEVATIONS  
RF PLANS



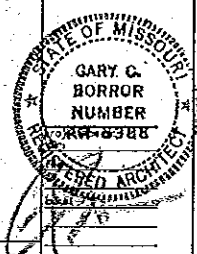
GCLINTON BORRER  
ARCHITECT/PLANNER  
AND ASSOCIATES  
314 938 9807  
sheet: 7 of 10  
A2-1

DATE REVISED: 3/30/15  
 B.D.  
 PERMIT:  
 CONTR.:

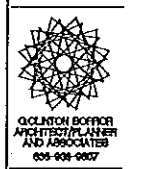
SCOPE: ALTERNATE  
 PROJECT/OWNER:

PROJECT: THE HAWTHORNE  
 LINDSEIGH  
 PROPERTIES CONSTRUCTION

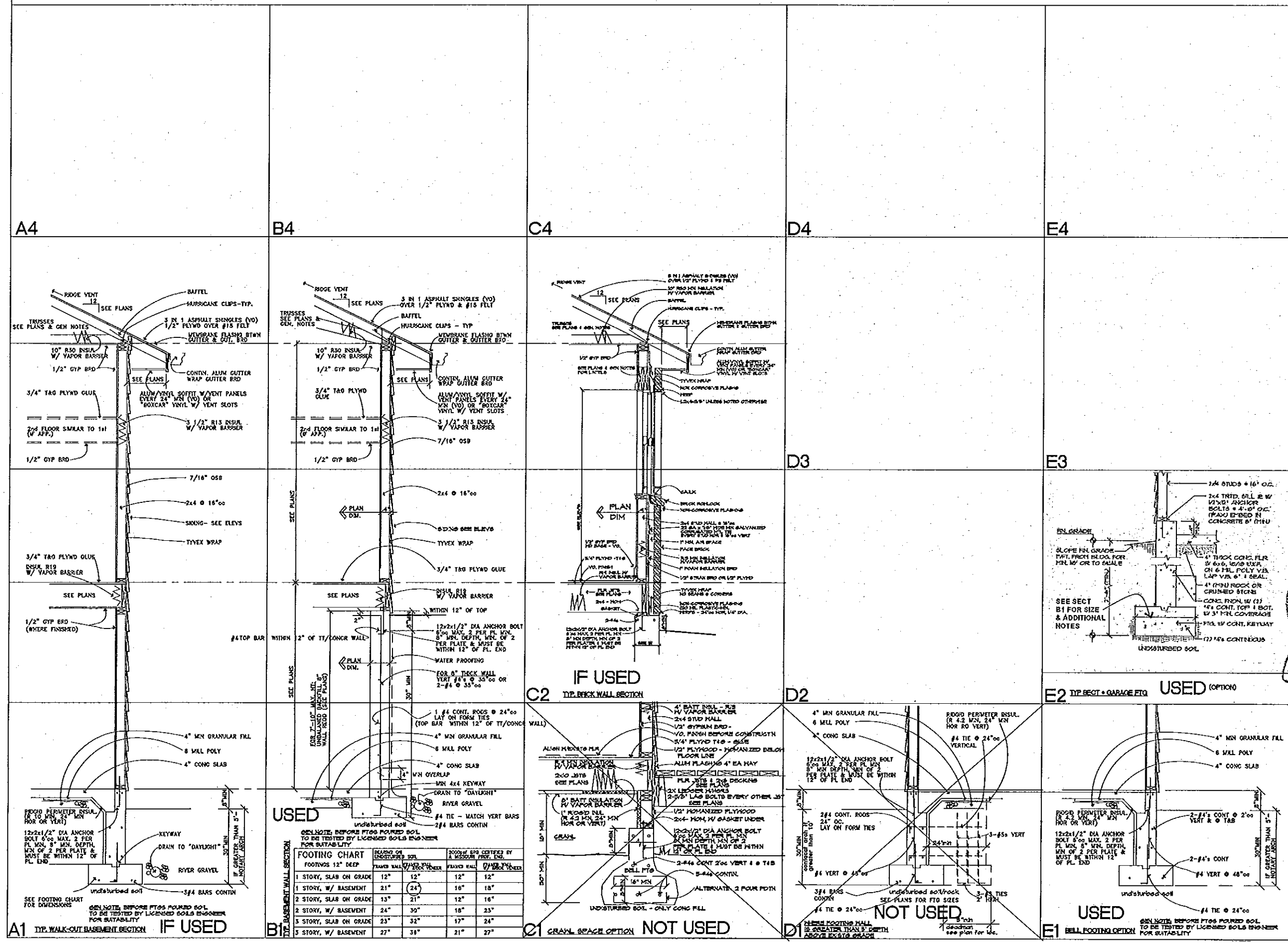
DATE ISSUED: 3/30/15



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



Sheet: 8 of 10  
 A3-0



**FOOTING CHART**

FOOTING 12" DEEP	FOUND ON UNDISTURBED SOIL	FOUND ON 4" MIN GRANULAR FILL	FOUND ON 8" MIN GRANULAR FILL	FOUND ON 12" MIN GRANULAR FILL
1 STORY, SLAB ON GRADE	12"	12"	12"	12"
1 STORY, W/ BASEMENT	21"	24"	16"	18"
2 STORY, SLAB ON GRADE	13"	21"	12"	16"
2 STORY, W/ BASEMENT	24"	30"	18"	23"
3 STORY, SLAB ON GRADE	23"	32"	17"	24"
3 STORY, W/ BASEMENT	27"	38"	21"	27"

GENERAL NOTE: BEFORE FTGS POURED SOL TO BE TESTED BY LICENSED SOLS ENGINEER FOR SUITABILITY

A1 TIP. WALK-OUT BASEMENT SECTION IF USED

B1 TIP. BASEMENT WALL SECTION USED

C1 CRAWL SPACE OPTION NOT USED

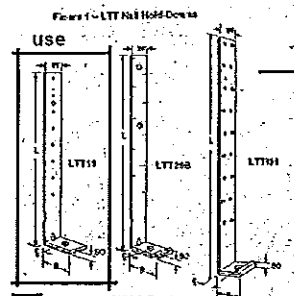
D1 BELL FOOTING OPTION NOT USED

E1 BELL FOOTING OPTION USED





**EVALUATION REPORT**

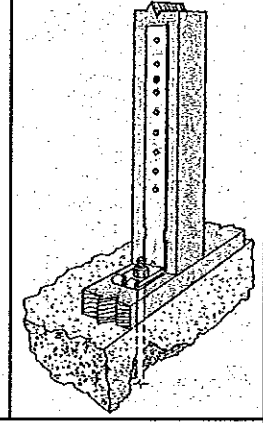


**E ties (HOLD DOWNS)**

TABLE 1—ALLOWABLE LOADS FOR THE LTT AND HTT NAIL HOLD-DOWNS (TYPICAL TIES)

MODEL NO.	DIMENSIONS					PARTS PER ANCHOR	ALLOWABLE TENSION LOADS, P (kips)	DISPLACEMENT AT 1/2 P (inches)	
	W	L	EL	SL	SO			A <sub>1</sub>	A <sub>2</sub>
LTT110	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	4	1.10	0.130	0.240
LTT115	2	1 1/2	1 1/2	1 1/2	1 1/2	4	1.30	0.130	0.240
LTT120	2	2	1 1/2	1 1/2	1 1/2	4	1.50	0.130	0.240
LTT130	2 1/2	2	1 1/2	1 1/2	1 1/2	4	1.70	0.130	0.240
LTT140	2 1/2	2 1/2	1 1/2	1 1/2	1 1/2	4	1.90	0.130	0.240
LTT150	3	2 1/2	1 1/2	1 1/2	1 1/2	4	2.10	0.130	0.240
LTT160	3	3	1 1/2	1 1/2	1 1/2	4	2.30	0.130	0.240
LTT170	3 1/2	3	1 1/2	1 1/2	1 1/2	4	2.50	0.130	0.240
LTT180	3 1/2	3 1/2	1 1/2	1 1/2	1 1/2	4	2.70	0.130	0.240
LTT190	4	3 1/2	1 1/2	1 1/2	1 1/2	4	2.90	0.130	0.240
LTT200	4	4	1 1/2	1 1/2	1 1/2	4	3.10	0.130	0.240
LTT210	4 1/2	4	1 1/2	1 1/2	1 1/2	4	3.30	0.130	0.240
LTT220	4 1/2	4 1/2	1 1/2	1 1/2	1 1/2	4	3.50	0.130	0.240
LTT230	5	4 1/2	1 1/2	1 1/2	1 1/2	4	3.70	0.130	0.240
LTT240	5	5	1 1/2	1 1/2	1 1/2	4	3.90	0.130	0.240
LTT250	5 1/2	5	1 1/2	1 1/2	1 1/2	4	4.10	0.130	0.240
LTT260	5 1/2	5 1/2	1 1/2	1 1/2	1 1/2	4	4.30	0.130	0.240
LTT270	6	5 1/2	1 1/2	1 1/2	1 1/2	4	4.50	0.130	0.240
LTT280	6	6	1 1/2	1 1/2	1 1/2	4	4.70	0.130	0.240
LTT290	6 1/2	6	1 1/2	1 1/2	1 1/2	4	4.90	0.130	0.240
LTT300	6 1/2	6 1/2	1 1/2	1 1/2	1 1/2	4	5.10	0.130	0.240

1. Tabulated allowable loads are for a hold-down assembly consisting of the hold-down device attached to a minimum of 3/4 inch thick wood structural panel or masonry substrate supported by a 2x4 or greater wood member. The hold-down device is specified in Table 1.
2. The allowable loads for the hold-down assemblies are based on ultimate design (ASD) and reduced design (RSD) load conditions. The RSD load conditions are based on the ultimate design (ASD) load conditions multiplied by a safety factor of 1.6.
3. For use of the hold-down assemblies in situations where the hold-down device is attached to a masonry substrate, the hold-down device must be installed in accordance with the manufacturer's instructions.
4. The hold-down device must be installed in accordance with the manufacturer's instructions.
5. The hold-down device must be installed in accordance with the manufacturer's instructions.
6. The hold-down device must be installed in accordance with the manufacturer's instructions.
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12. The hold-down device must be installed in accordance with the manufacturer's instructions.
13. The hold-down device must be installed in accordance with the manufacturer's instructions.
14. The hold-down device must be installed in accordance with the manufacturer's instructions.
15. The hold-down device must be installed in accordance with the manufacturer's instructions.
16. The hold-down device must be installed in accordance with the manufacturer's instructions.



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TABLE 1—ALLOWABLE STRESS DESIGN (ASD) LOADS FOR SSBT SERIES CAST-IN-PLACE ANCHOR BOLTS\*

SSBT ANCHOR BOLT MODEL NO.	MAJOR THREAD DIA. (in)	TOTAL LENGTH (in)	MIN. STEEL WT. (lb)	MIN. ANCHOR EMBED. (in)	ALLOWABLE TENSILE LOADS (kips) BASED ON ANCHOR LOCATION						
					Corner of Concrete Foundation Slab Wall (See Figure 1)		End of Concrete Foundation Slab Wall (See Figure 1)		End of Concrete Foundation Slab Wall (See Figure 1)		
					Wood	Steel	Wood	Steel	Wood	Steel	
SSBT14	1/2	17 1/2	12 1/2	3 1/2	3.810	3.810	2.850	3.810	3.810	2.850	3.810
SSBT16	3/8	21 1/2	15 1/2	4 1/2	4.315	4.315	3.240	4.315	4.315	3.240	4.315
SSBT18	1/2	25 1/2	18 1/2	5 1/2	4.820	4.820	3.650	4.820	4.820	3.650	4.820
SSBT20	5/8	29 1/2	21 1/2	6 1/2	5.325	5.325	4.050	5.325	5.325	4.050	5.325
SSBT22	3/4	33 1/2	24 1/2	7 1/2	5.830	5.830	4.450	5.830	5.830	4.450	5.830
SSBT24	7/8	37 1/2	27 1/2	8 1/2	6.335	6.335	4.850	6.335	6.335	4.850	6.335
SSBT26	1	41 1/2	30 1/2	9 1/2	6.840	6.840	5.250	6.840	6.840	5.250	6.840
SSBT28	1 1/8	45 1/2	33 1/2	10 1/2	7.345	7.345	5.650	7.345	7.345	5.650	7.345
SSBT30	1 1/4	49 1/2	36 1/2	11 1/2	7.850	7.850	6.050	7.850	7.850	6.050	7.850
SSBT32	1 1/2	53 1/2	39 1/2	12 1/2	8.355	8.355	6.450	8.355	8.355	6.450	8.355

\*Minimum specified concrete compressive strength,  $f'_c$  is 2500 psi, unless required otherwise by 2005 IBC Section 1904.2.2, or 2005 IBC Section 1904.3, or 2005 IBC Section 1905.2, as applicable.

\*Allowable loads for all installations are based on minimum edge distance of 1 1/2 inches (measured from the edge of the concrete to the centerline of the SSBT anchor bolt).

\*One No. 4 rebar must be provided in the breakout zone of the concrete foundation slab wall where the SSBT anchor is located. Typically, providing one No. 4 rebar located from 3 to 5 inches from the top of the slab wall is adequate. May be foundation rebar, not post-tensioned cable.

\*Minimum center-to-center spacing is 3 times the required anchor embedment ( $S_{min} = 3 \times E$ ) for SSBT bolts acting in tension laterally for the tabulated tensile load assigned to each anchor.

\*For compliance with IBC Section 1912, the allowable (ASD) seismic or wind loads must be converted to strength design (RSD) load values by multiplying the tabulated allowable stress design (ASD) load values by 1.6 or 1.8, respectively. The tabulated ASD loads are tabulated nominal strength values and include a strength reduction factor,  $\phi = 0.75$ , for tension (ASD) loads. Consequently, when using the load combinations of IBC Section 1605.2.1, it is not necessary to apply a strength reduction factor,  $\phi$ , because it is already incorporated into the tabulated strength design (RSD) load values.

\*Tabulated allowable tension loads shown in the table for SSBT anchor bolts installed at corner and end of concrete foundation slab wall are based on a minimum edge distance of 3 inches from the centerline of the anchor bolt to the end of the concrete foundation slab wall. See Figures 4 and 5. Allowable tension loads under the heading "CORNER OF STEEL WALL" are used when the SSBT anchor is installed 1 1/2 inches or greater from the end. For this condition, terminate rebar at the end of the slab wall with concrete clear cover as required by ACI 318 or a steel wall return edge, extend the rebar similar to Figure 4.

\*According to the first exception to IBC Section 1813.1, detailed one- and two-family dwellings designed to Seismic Design Category (SDC) A, B, or C are exempt from the seismic design provisions of IBC Section 1813. When this is the case, the allowable tensile loads assigned to the SSBT anchor bolts may be used.

\*For SSBT models, longest thread length: 1/2" = 17 1/2", 3/8" = 21 1/2", 1/2" = 25 1/2", 5/8" = 29 1/2", 3/4" = 33 1/2", 7/8" = 37 1/2", 1" = 41 1/2", 1 1/8" = 45 1/2", 1 1/4" = 49 1/2", 1 1/2" = 53 1/2".

**TECHNICAL BULLETIN**

**HOLLOW COLUZZI UPLET CONNECTIONS**

**CMUT Strap Connections**

This connection allows the Simpson Strong-Tie CMUT Strap to be used to connect a steel beam to a concrete slab. The connection is made by passing the strap through a hole in the slab and securing it with a nut and washer.

**INSTALLATION**

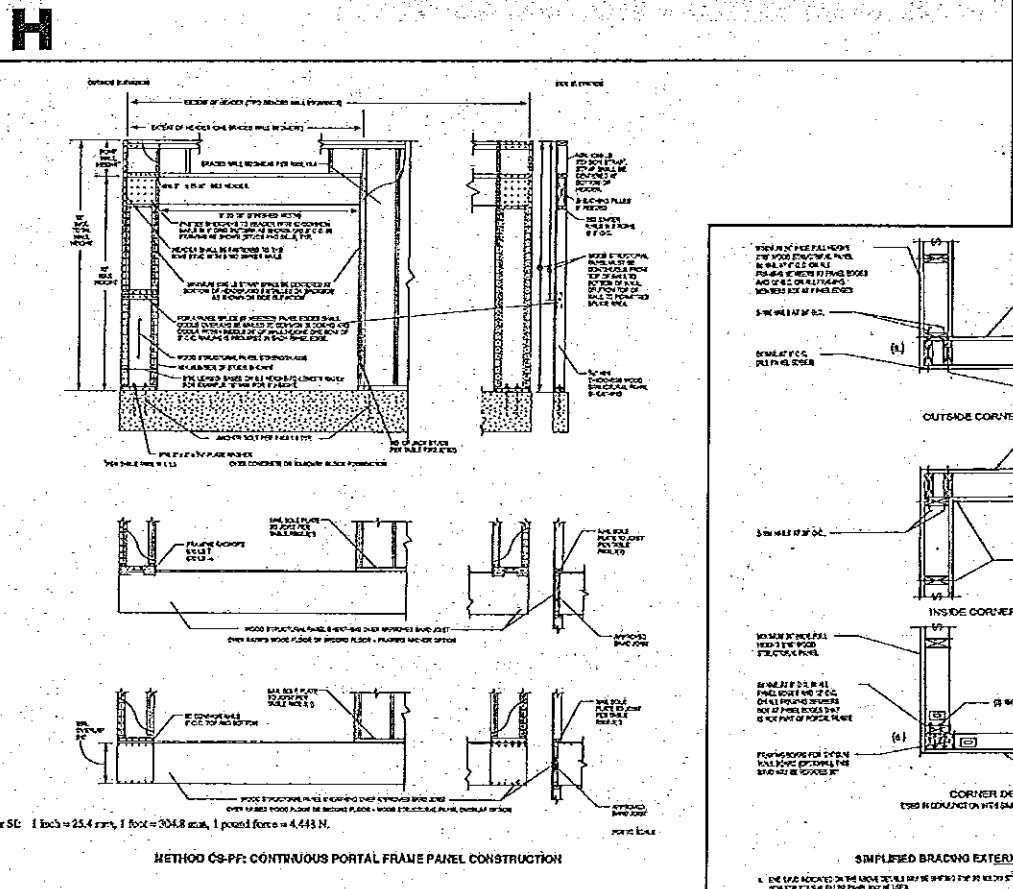
1. Select the appropriate hollow coluzzi hole preparation from the table for the required uplet.
2. Mark the hole for the center location of the anchor.
3. Drill the hole to the required depth and diameter. Drill must be perpendicular to the slab surface and the hole must be clean and free of debris.
4. Insert the CMUT strap into the hole and secure it with a nut and washer.
5. Tighten the nut and washer to the required torque.
6. Check the hole for proper fit and secure the hole with a patch.
7. Check the hole for proper fit and secure the hole with a patch.
8. Check the hole for proper fit and secure the hole with a patch.
9. Check the hole for proper fit and secure the hole with a patch.
10. Check the hole for proper fit and secure the hole with a patch.

**ASSEMBLY TABLE**

Anchor	Model	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
CMUT	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14	CMUT14

**CONTINUOUS SHEATHING METHODS**

METHOD	MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA
CS-WSP	Wood structural panel	3/4"		6d common (2" x 0.113") nails at 6" spacing (panel edges) and at 12" spacing (intermediate supports) or 16 ga. x 1 1/2" staples at 3" spacing (panel edges) and 6" spacing (intermediate supports)
CS-PF	Wood structural panel	3/4"	SEE BELOW	SEE BELOW



**A narrow portal bracing CS-PF**  
**B bracing corners CS-PF**  
**C (where pertinent) CS-WSP**

**(FOR HOLD DOWNS) G bracing tie anchor bolts**

**bracing gen. notes:**

1. Method - Simplified Bracing Method 5. The interior exterior wall configuration across the structure is to be constructed with or equivalent to the interior exterior wall configuration.
2. The bracing exterior walls are sheathed with 7/16" or thicker plywood or structural panels (plywood or OSB).
3. The construction documents shall detail the location and width of all braced wall panels in accordance with the following criteria:
  - a. The bracing exterior walls shall be sheathed with 7/16 inch or thicker plywood or OSB wood structural panels. The wood structural panels shall be applied to all exterior walls, gable ends, and band boards. All vertical joints between panels shall be blocked. Horizontal joints in braced wall panels shall be blocked.
  - b. Braced wall panels shall be located in every exterior braced wall line in accordance with the following criteria:
    - i. The outside edge of the first braced wall panel meeting the wall shall be established in Table R502.10.10.3 shall be a maximum of 12.5 feet or less from each end of the braced wall line. The outside stud of the first braced wall panel closest to the ends of the braced wall line shall be secured with a hold-down device securing the end stud to the foundation with a minimum uplift design value of 800 pounds.
    - ii. The centerline spacing of braced wall panels in a braced wall line may not exceed 20 feet.
4. Braced wall panel locations shall be shown on the floor plans or the elevation views and meet the WPS as established in Table R502.10.10.3.

**TABLE G5.1.10.10.3 SIMPLIFIED BRACING PANEL WIDTHS**

Panel Width (ft)	SHEATHING PANEL TYPE	
	7/16" Plywood	OSB
0 - 10	12	12
10 - 20	12	12
20 - 30	12	12
30 - 40	12	12
40 - 50	12	12
50 - 60	12	12
60 - 70	12	12
70 - 80	12	12
80 - 90	12	12
90 - 100	12	12

**D uplift connection**

**CS/CMST14**

**CS/CMST14**

**F straps**

**A narrow portal bracing CS-PF**  
**B bracing corners CS-PF**  
**C (where pertinent) CS-WSP**

**(FOR HOLD DOWNS) G bracing tie anchor bolts**

DATE: 3/30/15

JOB: \_\_\_\_\_

PERMIT: \_\_\_\_\_

CONTRACT: \_\_\_\_\_

PROJECT/OWNER: \_\_\_\_\_

SCALE: \_\_\_\_\_

DATE: 3/30/15

**GARY C. BORROR**  
REGISTERED ARCHITECT  
NUMBER: 148338

DESIGNED BY: \_\_\_\_\_

WIND BRACING

JEFF COUNTY

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A4-1