

**RCRBD
Record Set
TC
03/04/2021**

PLANS FOR:

BROWN BARN
24535 CR 27
OAK CREEK, COLORADO

JOB NO.: 20-059
DRAWN: ECS
DATE: 09-29-20

REVISIONS

NO.	DATE	DRAWN

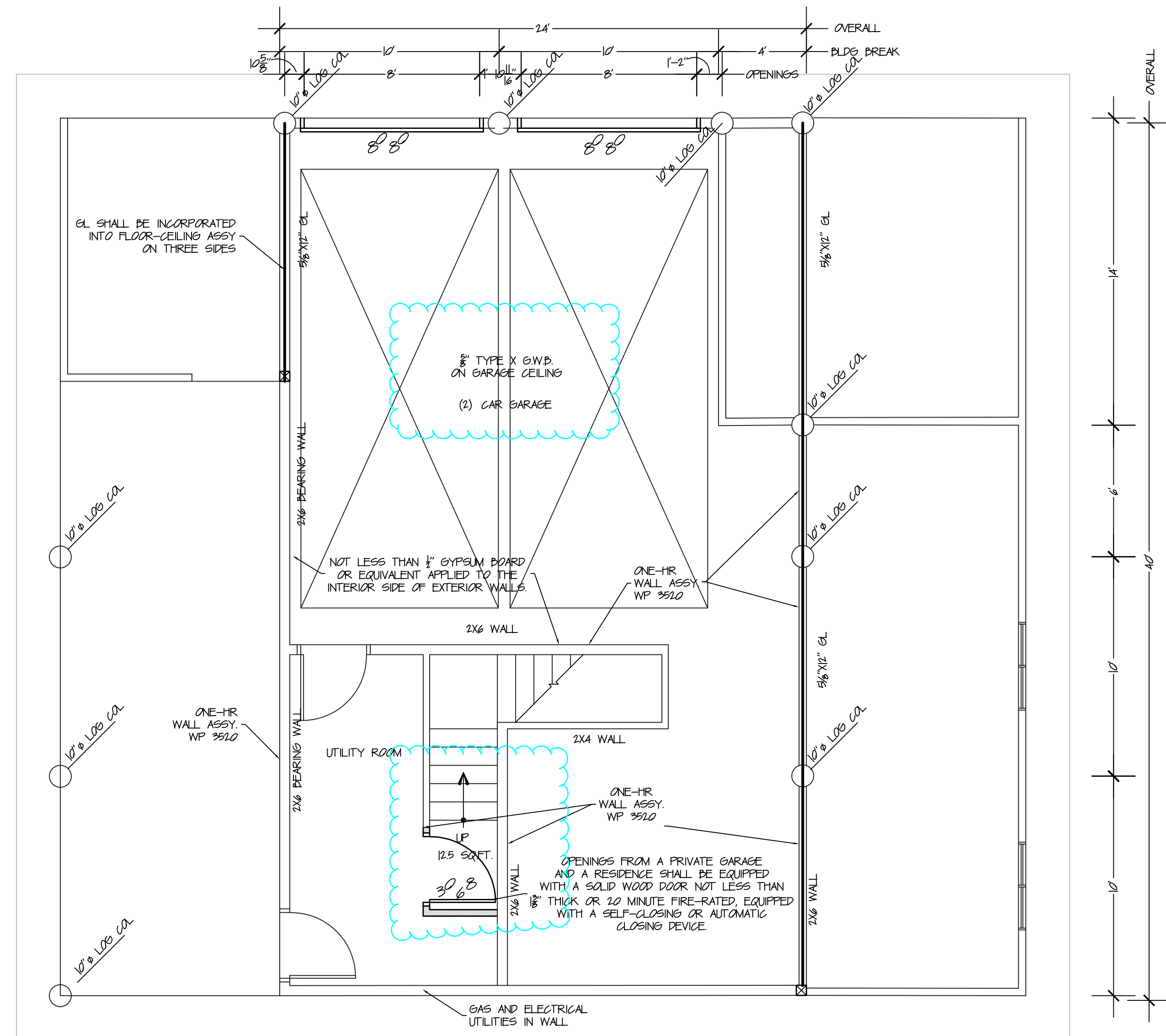
SHEET NUMBER

A-1



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

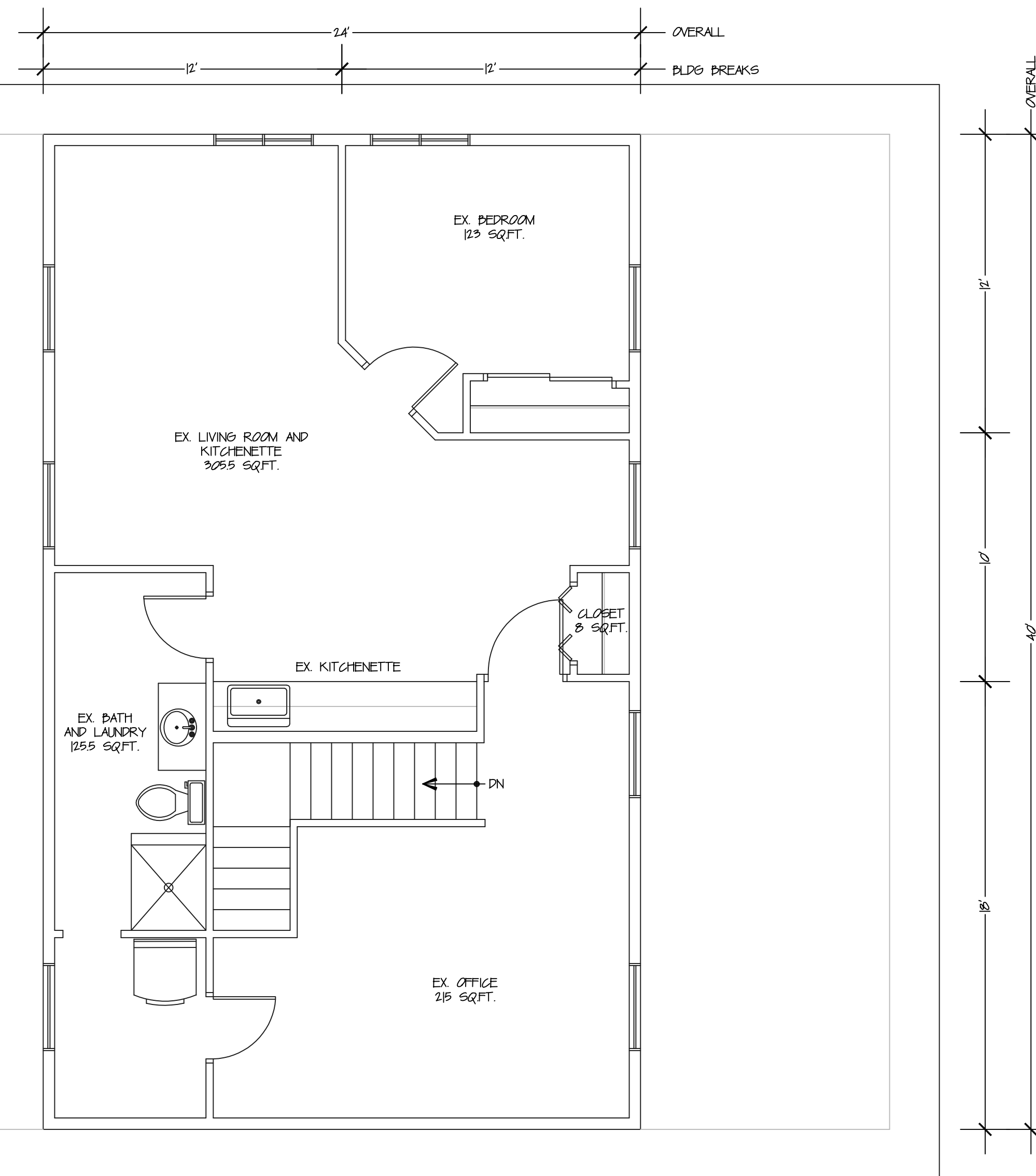
SITE PLAN



1
A-1

PROPOSED MAIN LEVEL FLOOR PLAN
SCALE 1/4" = 1'-0"

CONTRACTOR TO VERIFY EXISTING DIMENSIONS IF DISCREPANCIES ARISE, NOTIFY YAMPA VALLEY ENG. PRIOR TO CONSTRUCTION



2
A-1

PROPOSED UPPER LEVEL FLOOR PLAN
SCALE 1/4" = 1'-0"

CONTRACTOR TO VERIFY EXISTING DIMENSIONS IF DISCREPANCIES ARISE, NOTIFY YAMPA VALLEY ENG. PRIOR TO CONSTRUCTION

YVE,
YAMPA VALLEY ENGINEERING, INC.

STRUCTURAL
MECHANICAL
DESIGN
DRAFTING
SERVICES

JAMES STEGMAIER, P.E.
1794 KAMAR PLAZA
P.O. BOX 772192
STEAMBOAT SPRINGS, CO
80477
970-870-9229
yvengr@yvengr.com

RCRBD
Record Set
TC
07/26/2021

PLANS FOR:
BROWN BARN
24535 CR 27
OAK CREEK, COLORADO

JOB NO.: 20-059
DRAWN: ECS
DATE: 09-29-20

REVISIONS		
NO.	DATE	DRAWN
1	6-14-21	ECS

SHEET NUMBER

A-1

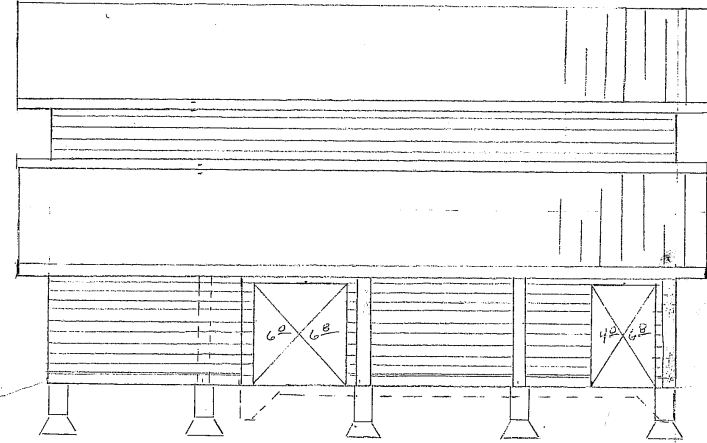
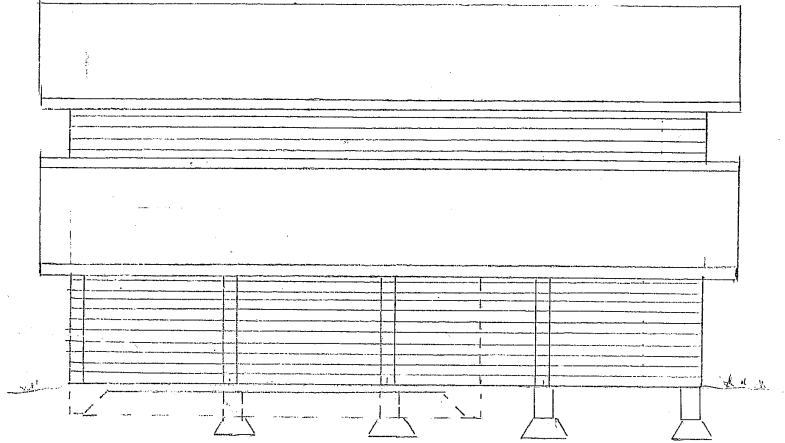
**RCRBD
Record Set
TC
07/26/2021**

CLAY CROSS CARRITY
5/22/07
3/16 = 1'0"

COPY #2

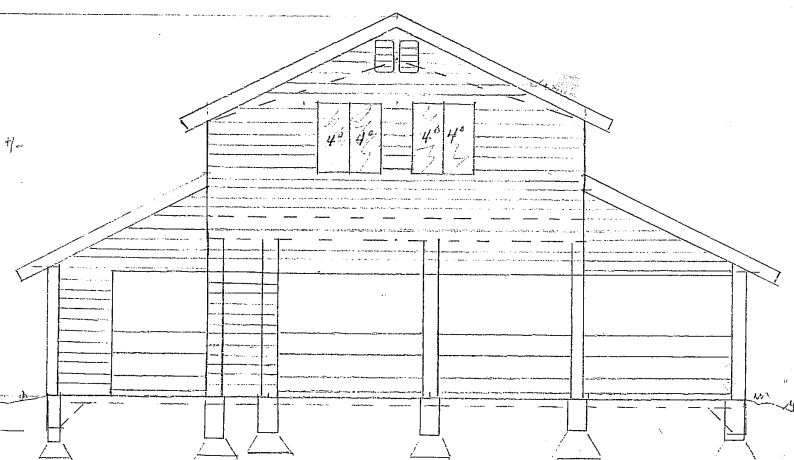
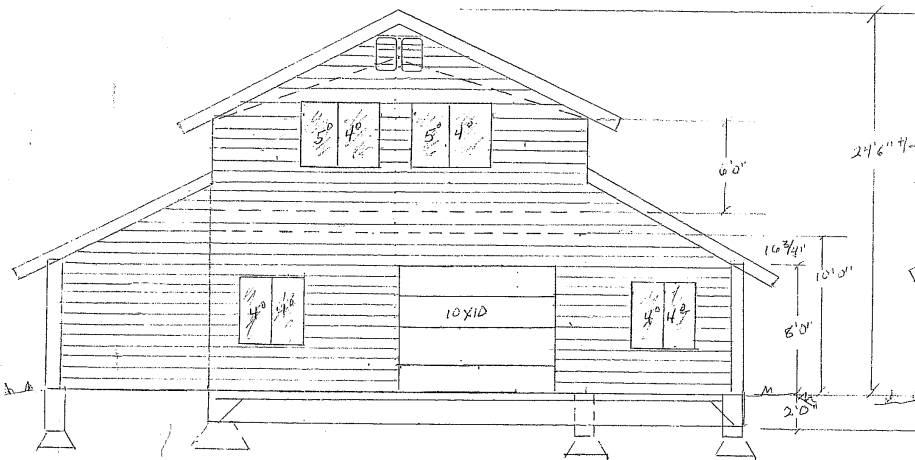
WEST

EAST



NORTH

SOUTH

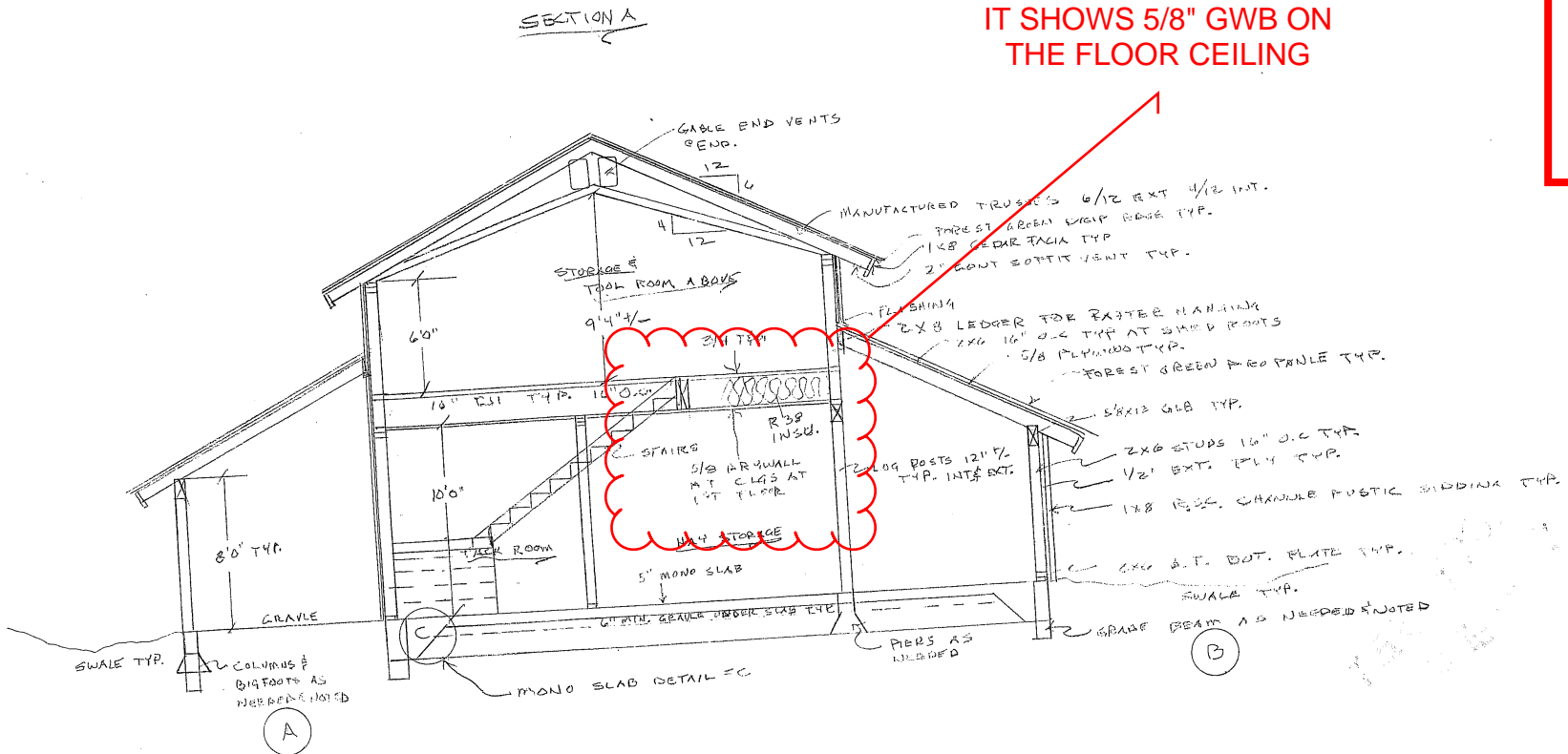


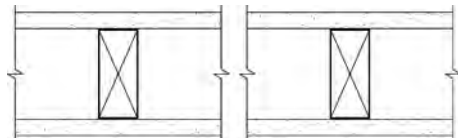
CLAY & RUSS GARRETT
SECTION 1/4" = 1'0"
5/22/07


COPY # 4

RCRBD
Record Set
TC
03/04/2021

IT SHOWS 5/8" GWB ON
THE FLOOR CEILING



GA FILE NO. WP 3520	GENERIC	1 HOUR FIRE	35 to 39 STC SOUND
GYPSUM WALLBOARD, WOOD STUDS			
<p>One layer 5/8" type X plain or predecorated gypsum wallboard applied parallel to each side of 2 x 4 wood studs 24" o.c. with 6d coated nails, 17/8" long, 0.0915" shank, 1/4" heads, 7" o.c. at joints and top and bottom plates and 3/8" beads of adhesive at intermediate studs.</p> <p>Joints staggered 24" on opposite sides. (LOAD-BEARING)</p>			
<div style="border: 2px solid red; padding: 10px; width: fit-content; margin: auto;"> <p style="color: red; font-weight: bold; font-size: 1.2em;">RCRBD Record Set TC 03/04/2021</p> </div>		<p>Thickness: 47/8"</p> <p>Approx. Weight: 7 psf</p> <p>Fire Test: FM WP 90, 8-21-67</p> <p>Sound Test: G&H NG-246FT, 7-2-65</p>	

FLOOR-CEILING SYSTEMS, WOOD FRAMED			
GA FILE NO. FC 5241	GENERIC	1 HOUR FIRE	45 to 49 STC SOUND
WOOD I-JOISTS, GYPSUM WALLBOARD, RESILIENT CHANNELS			
<p>Base layer 1/2" type X gypsum wallboard applied at right angles to resilient channels 16" o.c. with 1 1/4" Type S drywall screws 12" o.c. Resilient channels applied at right angles to minimum 9 1/2" deep wood I-joists, with minimum 1 1/4" deep x 1 1/2" wide flanges and minimum 3/8" webs, 24" o.c. with 1 1/4" Type W drywall screws. Face layer 1/2" type X gypsum wallboard applied at right angles to channels with 1 5/8" Type S drywall screws 12" o.c. Face layer end joints located midway between channels and attached to base layer with 1 1/2" Type G screws 12" o.c. Edge joints offset 24" from base layer edge joints. Wood I-joists supporting 5/8" oriented strand board applied at right angles to I-joists with 8d common nails 12" o.c.</p>			
		<p>Approx. Ceiling Weight: 5 psf</p> <p>Fire Test: NRCC A-4440.1 (Revised), 6-24-97</p> <p>Sound Test: NRCC B-3150.1, 6-30-00</p> <p>IIC & Test: 40 (68 C & P) NRCC B-3150.1, 6-30-00; NRCC B-3150.2, 6-30-00</p>	



FlameOFF® Fire Barrier Paint

RCRBD
Record Set

TC
Submittal Data Sheet
Gypsum/Wood
03/04/2021

Selection & Specification Data

Generic Type	A water-based intumescent coating that consists of a vinyl acetate resin.
Description	A decorative, thin-film intumescent coating designed for fire protection of Gypsum/Sheetrock and Wood applications for interior use requiring ASTM E119, ASTM E84, NFPA 251, ULC CAN S-101.
Features	<ul style="list-style-type: none"> • Certified to ASTM E119/UL 263 • Decorative aesthetic coating - provides a hard, durable, architectural finish. • Well suited for residential and commercial applications • Space saving- ideal for applications when additional layers of gypsum cannot be installed • Compatible with most topcoats (though not required) • Thin film coating - offers an economical solution to alternative fireproofing • low VOC, LEED compliant • Easy repair - If damaged, product can be patched easily
Color	White
Finish	Smooth
Primer	Wood: Recommended but not required Gypsum: Not required <small>*Some tape/mud/putty products will better receive intumescent paint if first primed.</small>
Topcoat	For interior conditioned space, topcoating is not required but may be applied for aesthetic purposes. Product must be topcoated if there are environmental exposure requirements. Refer to FlameOFF® Coatings, Inc. technical support. Intumescent coating must be applied to the required DFT and fully cured before topcoat is applied.
Thickness Per Coat	Recommended 20-35 Mils WFT <small>*Range: 15-45 Mils WFT. Maximum thickness per coat depends upon applicator experience, substrate, and job site conditions.</small>
Solids Content	By Volume 71%
Theoretical Coverage Rates	1075 sq ft/gallon at 1 mil (1002 m / at 25 microns) 36 sq ft/gallon at 30 mils (3.3 2 m / at 750 microns)
VOC Values	As Supplied 0.06 lbs/gal (7 g/l)

Testing / Certification

Listing This product is ICC-ES Listed and UL Classified for various applications. It has been tested at Underwriters Laboratories in accordance with ASTM E119/UL 263 Fire Endurance requirements to meet the Full Scale requirement of IBC/NFPA Building Codes.



*See ICC Reports Directory



*See UL Fire Resistance Directory R38327

Required DFT


Required Dry Film Thickness & Corresponding Coverage Rate

	2 Hours*	1 Hour*	Class A**	
Substrate	5/8" Type X Gypsum	45 Mils DFT 25 sq ft/gal	30 Mils DFT 37 sq ft/gal	15 Mils DFT 75 sq ft/gal
	1/2" Regular Gypsum	X	30 Mils DFT 37 sq ft/gal	15 Mils DFT 75 sq ft/gal
	Wood	X	30 Mils DFT 37 sq ft/gal	10 Mils DFT 110 sq ft/gal

*ASTM E119 1 and 2 hour ratings

**ASTM E84 Class A flame spread and smoke development rating

Packaging, Handling & Storage

Shelf Life	12 Months <small>Shelf life when kept at recommended storage conditions and in original unopened containers.</small>
Shipping Weight	64 lbs per 5 gal pail
Flash Point	(Setaflash) 93°F (30°C)
Storage	Store indoors in a dry environment between 45°F and 105°F (7°C and 40°C)
Packaging	5 Gal
	This product is proudly manufactured in the USA

Email: info@flameoffcoatings.com

Web: www.flameoffcoatings.com

FlameOFF® Coatings, Inc. owns and certifies all data in this document. This document may not be altered by anyone other than FlameOFF® Coatings, Inc.



The data and suggested formulations in this bulletin are based on information believed to be reliable and are offered solely for evaluation, investigation and verification of numerous factors affecting results. FlameOFF® Coatings, Inc. products are sold with the understanding the purchasers will make their own tests to determine the suitability of these products for the particular use. We assume no liability or responsibility for any damage to person or property resulting from or incident to the use of our products. Statements concerning the use of FlameOFF® Coatings, Inc. products are not be construed as recommending the infringement of any patent, and no liability for infringement arising out of any such use is assumed.

Revised 6/1/2020



FlameOFF® Fire Barrier Paint

RCRBD
Record Set

TC
Submittal Data Sheet
03/04/2021
Gypsum/Wood

Substrates & Surface Preparation

General All surfaces must be primed and must be clean, dry, and free of oil, grease, loose scale, dirt, dust or other materials that would impair the bonding of the intumescent coating to the substrate.

Application Conditions and Curing Schedule

Application Temperature & Humidity

Condition	Material	Humidity
Minimum	45°F (10°C)	0%
Maximum	100°F (40°C)	85%

Surface Temp. & 50% Relative Humidity	Handle	Recoat (spray)	Recoat (brush)	Topcoat
70 °F (21 °C)	24 Hours	7-8 hours	2-3 hours	48-72 hours

*Curing times are dependent upon temperature, ventilation, and humidity. Lower temperatures will slow down the curing process, higher temperatures will speed up the curing process. Additional ventilation (add fan may expedite curing process. For optimum curing, it is recommended to apply coats at 20-45 mils wet per coat. **Material is ready to be topcoated when an average Shore D hardness of 70 is achieved.**

**See Application Guide for full application details.

Application Equipment Guidelines

General equipment guidelines are given below, and may need to be modified depending on individual jobsite conditions. See Application Guide for full application details. Contact FlameOFF® Coatings with any questions.

Airless Spray Use 1.0 gal. per minute electric airless (minimum) to provide an operating pressure of 3,000 p.s.i. (140 kg/cm2).
** Remove rock catcher from siphon tube.**

Spray Gun Contractor Gun (with filter removed) or equivalent

Spray Tips 0.021" - 0.025"

Fan Size 4"-10" (depending on section being sprayed)

Hose Length 50' (15 m) maximum

Material Hose 1/2" I.D.

** Listed here are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.**

Mixing & Thinning

Thinning DO NOT THIN or alter in any way.

Mixer Use 1/2" electric or air driven drill with a slotted paddle mixer (300 rpm under load)

Mixing Product must be mixed using a 1/2" electric air driven drill with a slotted paddle or Jiffy mixer blade. Mix material for a minimum of 5 minutes to achieve the necessary texture required before spraying.

Application Procedures

General Product may be applied by brush or spray application. Do not apply with a roller. Spray application is recommended for the optimum appearance.

Airless Spray A single coat built up with a number of quick passes allows greater control over quantities, thickness and finish.

Note - In most conditions, it is advantageous to apply two thin coats rather than one thick coat.

Application Rates Spray: 20-45 Mils Wet Film Thickness
Brush: 10 Mils Wet Film Thickness

Wet Film Thickness Frequent thickness measurements with a wet film gauge are recommended during the application process to ensure uniform thickness.

Cleanup & Safety

Cleanup Flush pump, gun, tips, hoses and mixer with hot water at least once per day.

Safety Follow all safety precautions on the product Material Safety Data Sheet.

Overspray All adjacent and finished surfaces shall be protected from damage and overspray.

Maintenance

General If coating becomes damaged, rebuild the required thickness by spray or brush. When dry, smooth and finished, topcoat may be applied. The repair area must follow all surface preparation requirements before reapplying the coating. The coating must be built back to the original thickness.

Email: info@flameoffcoatings.com

Web: www.flameoffcoatings.com

FlameOFF® Coatings, Inc. owns and certifies all data in this document. This document may not be altered by anyone other than FlameOFF® Coatings, Inc.



The data and suggested formulations in this bulletin are based on information believed to be reliable and are offered solely for evaluation, investigation and verification of numerous factors affecting results. FlameOFF® Coatings, Inc. products are sold with the understanding the purchasers will make their own tests to determine the suitability of these products for the particular use. We assume no liability or responsibility for any damage to person or property resulting from or incident to the use of our products. Statements concerning the use of FlameOFF® Coatings, Inc. products are not to be construed as recommending the infringement of any patent, and no liability for infringement arising out of any such use is assumed.

Revised 6/1/2020

Routt County Regional Building Dept.
P.O. Box 773435
Steamboat Springs, CO 80477

March 3, 2021

Attn: Todd Carr, Building Official

RE: Plan Review Response
Brown, Jackie
Permit TB-20-992
24535-B CR 27

**RCRBD
Record Set
TC
03/04/2021**

Dear Todd,

A revised code analysis is now provided for review.

A fire separation and fire resistance plan for the support level of the R-3 occupancy has been created to show the fire protection requirements of the main level of the barn (U). The stairs to the R-3 shall be totally separated from the U occupancy with a fire barrier wall.

The R-3 is supported by a combination of bearing walls, beams and log columns. The fire separation between the U and R-3 is shown in the code analysis to be 1-hour.

Fire resistant construction:

- Horizontal floor ceiling separation shall be per FC 5241.
- Bearing wall shall be per WP 3520.
- GL beam encased in 1-hour wall requires no additional fire protection.
- GL beam exposed on 3 sides requires the floor ceiling 1-hour protection on 3-sides.
- Exposed 10" diameter log column meets the 1-hour burn time for the largest loaded log column; no additional fire protection is required.
- 2X built up column shall be coated with intumescent paint per plan.

If you have any questions or comments please contact me.

Sincerely,

J. Steg
James Stegmaier, P.E. (Owner, Yampa Valley Engineering, Inc.)



RCRBD
Record Set
TC
03/04/2021

Proudly Serving Rural Routt County * City of Steamboat Springs * Town of Hayden * Town of Oak Creek * Town of Yampa * Routt County School Districts

Date: 02/26/2021
Subject Property Address: 24535-B CR 27 Oak Creek
PIN: 951313001
Permit Number: TB-20-992
Permit Applicant Name: YVE

Design information:

Occupancy Classification: U-Occupancy mixed with Residential Storage and R-3
Number of Stories: 2
Type of Construction: VB
Occupant Load: N/A
Fire Sprinklers: No

Dear Owner/Applicant,

The following items below will require additional information or a re-submittal prior to the Permit being Approved and Issued. Please feel free to contact us by phone or email with any questions or concerns.

- ~~**1. Required Re-Submittal:** Please resubmit a new Code Analysis to be done under the 2018 ICC Code Editions. The below code amendments to the 2018 IBC will be in your favor to utilize for your fire assemblies and for not adding sprinklers to this Occupancy Use. Additionally we will need to know what floor/ceiling assembly you will utilize to provide the 1-hour protection between the U and R-3 Occupancy horizontally, also vertically as it relates to the walls around the staircase and entryway on the main level for the R-3 Occupancy. Also the columns may possibly meet the classification of Heavy Timber in accordance with Sections 602.4 and tables in 2304.11.2.2, or if not please provide details on how a possible intumescent product could be used to provide the 1-hour protection of these structural components supporting the floor.~~

~~*Table 508.4, is amended to read as follows: A Group U-Occupancy meeting the Character use under Section 312.1.1.2 shall have a fire rating between the Residential Dwelling area and the combination Residential/Agricultural Storage area of 1-Hour when the building is un-sprinkled, and 30-Minutes if the building is sprinkled.*~~

~~*Section 901.1 Scope, is amended to add a second paragraph as follows:*~~

~~*The fire code official shall have the authority to adopt additional standards for fire protection systems subject to applicable provisions of State statutes and home rule charter. The fire code official shall be responsible for permitting and reviewing fire sprinkler systems and fire alarm systems, in lieu of no fire*~~

Routt County Regional Building Department

136 6th Street, Ste 201, Steamboat Springs, CO 80487 PH: 970-870-5566 Fax 970-870-5489 Email: Building@co.routt.co.us

~~code official then applicants must work directly with the State of Colorado Department of Fire Prevention.~~

~~Section 903.2.8 Group R, is amended to add the following exception:~~

~~EXCEPTION: An automatic sprinkler system is not required in multi-use buildings, two stories with no more than 2 dwelling units, and an automatic and manual fire alarm system is installed in accordance with NFPA 72. Sprinkler systems required by other sections and other codes must still be provided.~~

✓ **Items noted below do not require a response or comment back during the Plan Review in order for us to approve this permit. The Items below are required and will be checked by field inspectors or will need to be submitted to the Building Department. Please take time to review these items in advance of starting any work to ensure your project is ready for inspection.**

1. Separate Electrical Plumbing Permits must be applied for and obtained prior to any work being done within these trades. Note Electrical and Plumbing trades are protected by the State, Licensed Contractors must apply and perform this work on all Commercial Properties, and additionally their employees working on these projects must be registered or licensed with the State of Colorado and work directly under Licensed Individual managing the project. On Residential Properties owners are allowed to apply for the permit and perform their own Electrical and Plumbing work if this is their primary residence and they sign and complete our Home Owner Agreement form.
2. R308 Glazing. Except as indicated in Section R308.1.1, each pane of glazing installed in hazardous locations as defined in Section R308.4 shall be provided with a manufacturer's or installer's label, designating the type and thickness of glass and the safety glazing standard with which it complies, which is visible in the final installation. The label shall be acid etched, sandblasted, ceramic-fired, embossed mark, or shall be of a type which once applied cannot be removed without being destroyed. Exceptions: Tempered spandrel glass may be identified by the manufacturer with a removable paper label.
3. R321.1 Premises identification. Approved numbers or addresses shall be provided for all new buildings in such a position as to be plainly visible and legible from the street or road fronting the property.
4. R310 Emergency Escape and Rescue Openings. Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and res-cue openings shall open directly into a public way, or to a yard or court that opens to a public way. Exception: Storm shelters and basements used only to house mechanical equipment not exceeding a total floor area of 200 square feet (18.58 m2).
5. SECTION R307 TOILET, BATH AND SHOWER SPACES: R307.1 Space required. Fixtures shall be spaced in accordance with Figure R307.1, and in accordance with the requirements of Section P2705.1. R307.2 Bathtub and shower spaces. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet (1829 mm) above the floor.
6. SECTION R314 SMOKE ALARMS: R314.1 General. Smoke alarms shall comply with NFPA 72 and Section R314.: R314.1.1 Listings. Smoke alarms shall be listed in accordance with UL 217. Combination

smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034: R314.2 Where required. Smoke alarms shall be provided in accordance with this section: R314.2.1 New construction. Smoke alarms shall be provided in dwelling units. R314.2.2 Alterations, repairs and additions. Where alterations, repairs or additions requiring a permit occur, or where one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings. Exceptions: Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section. R314.3 Location. Smoke alarms shall be installed in the following locations: In each sleeping room. Outside each separate sleeping area in the immediate vicinity of the bedrooms. On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3.

7. SECTION R315 CARBON MONOXIDE ALARMS: R315.1 General. Carbon monoxide alarms shall comply with Section R315. R315.1.1 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217. R315.2 Where required. Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2.

Reviewed by: Todd Carr

Date: 02/26/2021
