Development Services

From Concept to Construction

Phone: 503-823-7300 Email: bds@portlandoregon.gov 1900 SW 4th Ave, Portland, OR 97201
More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

APPEAL SUMMARY

Status: Decision Rendered

Appeal ID: 23791	**Project Address:** 7631 NE Glisan St
Hearing Date: 6/10/20	**Appellant Name:** Patrick Donaldson
Case No.: B-003	**Appellant Phone:** 503.975.9471
Appeal Type: Building	**Plans Examiner/Inspector:** Gail Knoll, Amit Kumar
Project Type: commercial	**Stories:** 1 **Occupancy:** B **Construction Type:** V-B
Building/Business Name: Harka Architecture	**Fire Sprinklers:** No
Appeal Involves: Alteration of an existing structure,occ Change from F1 to B	**LUR or Permit Application No.:** 20-139275-CO
Plan Submitted Option: pdf [File 1] [File 2] [File 3] [File 4] [File 5] [File 6]	**Proposed use:** Office

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	Tab. 602 & Code Guide IBC 3/#1
Requires	The city Code Guide requires that the structure be considered S-1 occupancy. S-1, non-sprinklered IIB construction is required to provide a two hour fire rating for walls that are located less than 5 feet from the property line.
Code Modification or Alternate Requested	Proposing an alternate 2 hour fire rating.
Proposed Design	An 8'x8'x20' steel cargo container with a man door currently exists on the north and the west property lines. We are proposing to legalize its use and use it for bicycle storage only. It currently meets all the requirements of the city Code Guide for commercial use. We are proposing to add the two hour fire separation by installing 60 mils of Fire Free 88 intumescent paint on the interior of the north wall, west wall and ceiling of the container.
Reason for alternative	We are hoping to save the money that would be required to remove the container and use it for long term bicycle storage. The intumescent paint will save the requirement to build a rated wall and parapet that will require a foundation and waterproofing. The container will not be occupied outside of moving bicycles in and out. Outside of the wood floor boards, the container is fully non-combustible and constructed of 14ga Corten steel. Although the Code Guide requires the structure to be classified as S-1, the use will actually be more in line with an S-2. An S-2 requires only a 1 hour fire separation at the property line. The paint coating will be installed inside the structure so it is less likely to be removed through scratches, UV degradation, or rain damage. Please the attached letter from the manufacturer and a Fire Engineer explaining its equivalency.

Appeal item 2

Code Section	Title 24.85
Requires	A full change of use from F-1 to B triggers a seismic upgrade.
Code Modification or Alternate Requested	We would like to ask that we be able to consider the building under its original intended use as a 'B' – Dentist Office, in order to change it to a 'B' - Architecture Office without implementing the seismic upgrade.
Proposed Design	This 577sf building was erected in 1939 as a 'B' – Dentist Office under permit 246463. It is a single story wood framed building. It operated under this use until 1983 when it was converted to a Take-out Pizza Shop under permit 83-117308. This permit classified the structure as a R3, which BDS later changed to an F1 in the online tracking system. We are proposing to remove a window and replace it with a second door, which will improve egress during a potential seismic event.
Reason for alternative	It appears that the designation to F1 was based on the fact that there was no seating in the facility. If seating has existing, it would have remained a 'B' occupancy. The proposed occupant count is 14 and we estimate the original occupant to be 16. This was arrived at using the 1939 permit drawings which contained an approximate 175sf Reception area. We are lessening the hazard by reducing the occupant load. The nature of the business is also less hazardous than both a Kitchen or a Dentist Office. The number of visits by unique users that are unfamiliar with the space is much higher in a typical Dentist Office than in an Architecture Office. We are also lessening the hazard by adding a second egress door.

Appeal item 3

Code Section	3404.1
Requires	Alternations to an existing building shall comply with the requirements of the code for new construction. Alternations shall be such that the existing building is not less compliant with the provisions of this code than it was before the alternation.
Code Modification or Alternate Requested	We are asking that the toilet room be considered existing and not be required to meet the clearances of a new restroom. To make the building more compliant than the required code we propose adding a ramp.
Proposed Design	The last approved building permit (83-117308) for this structure was for a Take-out Pizza Shop in 1983. The only document for this permit is a single line floor plan sketch. It shows a restroom with a sink and a separate toilet room. The toilet appears to be facing east and the sink is located directly outside the door of the toilet room. The Plans Examiner has indicated that because the restroom shown does not match 1983 permit, it is considered new and it will need to meet the requirements and clearances of a new ADA compliant restroom. The actually existing restroom layout found in the field matches the layout we have shown on the proposed permit. The toilet room and sink are in the same room (facing north-south) with one door on the west wall. The plans examiner feels that restroom was changed without a permit after the 1983 permit, and is now considered new.
Reason for alternative	The baseline for the plans examiner's finding is being set using a line drawing that is not to scale and not drawn very clearly. We believe that a change was made in the field in 1983, and the toilet room was actually constructed with the inspector's knowledge as we are showing it. It seems highly unlikely that they would have built a restroom with a sink blocking the door clearance to the toilet room as shown. Furthermore, we attempted to draft this layout and found it difficult to meet the clearances in front of the toilet that would be required for a private residence. The existing building footprint is small at 577sf. The amount of cost and space that a new compliant restroom would require (>10% of the floor plan) is significant and would make it challenging to use the overall space as intended.

It is our understanding that the requirement to make the restroom compliant would be eliminated if we returned the restroom to its original 1983 layout. However, this move would put the restroom into further non-conformance with a sink blocking the door and insufficient clearance in front of the toilet. We could then spend 25% of the construction budget ($6,469) on grab bars and door knob upgrades. This would meet the code, but would make the structure less compliant. Section 3404.1 states that an alternation should be such that the existing building is no less compliant than before the alternation. We would submit that even if done without the benefit of a permit, the alteration shown in its current state makes the restroom more compliant than what was approved in 1983.

As an alternative we would like to allow the restroom to remain as it is. We are proposing to install an ADA ramp and entrance. This provision will give ADA entry access, which is second on the ORS 447.24 priority list. The cost to provide this ramp and doorway will more than exceed 25% of the $25,875 construction budget. In the end the building will be more accessible than if we do what is necessary to upgrade the bathroom.

APPEAL DECISION

1. Alternate 2 hour fire rated wall assembly: Granted as proposed.

2. Omission of seismic upgrades based on original B occupancy and size of building: Granted provided the building is attached to the foundation per Portland Brochure #12, Residential seismic strengthening.

3. Determination of toilet room configuration as existing: Granted as proposed.

Appellant may contact John Butler (503 823-7339) or e-mail at John.Butler@portlandoregon.gov with questions.

The Administrative Appeal Board finds with the conditions noted, that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

TECHNICAL DATA SHEET

FIREFREE 88®

Firefree 88®, a premium quality, water based, nontoxic, intumescent fire resistant coating

PRODUCT INFORMATION

Firefree 88® ("Ff88") is a premium intumescent fire resistant coating tested to comply with fire ratings performance prescribed under the International Building Code (IBC). These standards involve (i) fire resistant testing which measures a product's ability to prevent fire penetration over a period of time, such as ASTM E 119, FM 4975, ASTM E 662-97, ASTM E 3675-98, ASTM E 162-98, ASTM E 1354-94, ASTM E 814, BS 476, AS 1530.3 AS 1530.4. EN 13501-1, and (ii) fire retardant testing such as ASTM E 84 and Room Corner Test standards including UBC 8-2, NFPA 286, UBC 26-3, measuring a product's ability to limit flashover.

Firefree 88 is listed and labeled by FM Approvals, a division of FM Global, listed and inspected by the International Code Council ("ICC") classified by Underwriters Laboratories (U/L), and accepted by NY Material and Equipment Acceptance Division (MEA).

RECOMMENDED USES

Use on properly prepared uncoated, primed or previously painted surfaces. Ff88 can be applied to numerous materials, including wood, gypsum board (sheetrock, plasterboard), lathe and plaster, concrete, masonry, embossed/pressed metal tin, thin gauge metal, galvanized steel and aluminum, fiberglass, carbon fiber, plastics and other composite materials for 1 and 2 hour ratings. Can be used on spray polyurethane foam to achieve a 15 minute barrier.

As a result of its' superior fire resistant performance, Firefree 88® can provide significant material and labor cost reductions, resulting in significant savings when compared to other construction options in situations such as construction, both new, retrofit and defective, (residential, commercial, industrial and government), insulation and transportation. Recommended for historic properties, schools, health care (hospitals, assisted living), apartments, condominium, high-rises, hotels, stores, restaurants, oil and solar facilities, government facilities, military applications and facilities, transportation (aerospace, aviation, light rail, maritime, energy).

Ff88 is a water based coating designed for interior use. However Ff88 can be used in some exterior applications if covered by the FfE Exterior Topcoat in strict compliance with Firefree's specifications (contact Firefree for more information).

Ff88 comes in a white, flat finish. If a different color or finish is desired, Ff88 can be top coated with most premium paints to achieve the desired color and finish. For large orders (>200 gallons) Ff88 can be tinted by Firefree. Please contact Firefree for such custom tinted orders.

KEY FEATURES

- Cost efficient
- High performance
- Eco-friendly
- Fully tested and certified
- Easy to use and apply
- Usable on multiple substrates/assemblies

TESTING LABORATORIES

Firefree coatings are tested to accredited IAS www.iasonline.org third party fire testing laboratories.

CERTIFICATIONS & COMPLIANCE

Qualifies for LEED v4 Credit	CDPH/EHLB Standard Method v1.2, 2017 Emissions	Meets VOC regulations (OTC, SCAQMD CARB)	Master Painters Institute® (MPI) Green Performance® GPS1/GPS2
YES	YES	YES	YES

- Firefree coatings may contribute up to five LEED points
- Tested by Independent ISO/IEC 17025 Accredited Laboratory
- MEA # 320-99 City of New York
- UL # R14654 Classified on OSB, Douglas fir
- FM Approved, per FM 4975
- ICC - ES listed
- Class O, per BS 476 Part 6 & 7
- Class 1-S, per NZBC Verification Method

PRODUCT SPECIFICATIONS

Type: Liquid **Color:** White
Finish/Sheen: Flat 1.9-2.2 @60 .5-1@85
VOC: (test method ASTM D3960) <36 g/L
%Volume Solids: 67%
Viscosity (test method ASTM D-562): 115 @ 77ºF(25°c) kU
Specific Gravity/Density, g/ml: (test method ASTM D1475) 1.272± 0.05
Divisions: 099643 Fire retardant coatings, 099600 High performance coatings
Thinning: Not Recommended
Packaging: 5 gallon pails (60 lbs)
Shelf-Life: 2 years (unopened)

APPLICATION

Ff88 is a water-based latex paint and its application is similar to applying a regular water-based latex paint (except for the recommended thickness which needs to be precisely complied with for adequate performance). Ff88 can be brushed, rolled or sprayed using an airless spray gun. Additionally because of its high percentage of solids, it will have an excellent spread rate and coverage. See attached separate Application Instructions.

TECHNICAL SERVICES

Many building assemblies require an hourly fire resistant rating that is tested and rated in accordance to ASTM E-119 standard. If your project requires a fire resistant rating, please contact our Technical Department for advice before applying Firefree 88®. A technical service representative will assist you in evaluating the appropriate dry film thickness of the coating,

call 888-990-3388 (U.S.) or +1 415-459-6488 (outside U.S.). **Building Codes:** Installation must comply with the requirements of applicable local, state and national building codes.

FIRE SAFETY

For various reasons, including (i) the very different circumstances that may exist from one fire to another, (ii) the differences between conditions in an actual fire and laboratory conditions in which testing is conducted, and (iii) the inherent variability of fire tests, passing a laboratory test or certifying/labeling Ff88 for use in specific assemblies/systems does not mean that the same application of Ff88 will necessarily provide an equivalent protection or the same result in an actual fire or in a new laboratory test. Furthermore, Ff88 is to be used only as a component of complete fire retardation systems for the whole structure. It will only contribute to slowing fire spread for the area where it has been applied and will not, by itself, prevent a fire from starting or continuing. The amount by which Ff88 retards a particular fire will depend, among other things, on (i) the amount of Ff88 applied, (ii) the conditions of the other elements of the assembly incorporating Ff88, and (iii) the conditions of the actual fire itself. Ff88 will not make a fire any less dangerous to persons or property. Firefree cannot guarantee that loss or injury will not be suffered by persons or property. It is the sole responsibility of the applicator to ensure that Ff88 has been applied in accordance with the application directions. It is the responsibility of the occupier to ensure the paint is not cracked, chipped or peeling.

LIMITED WARRANTY

Firefree Coatings, Inc. ("Firefree") provides the following limited warranty for Firefree 88 Topcoat ("Ff88" or "Product"). Please read the warranty below carefully as it contains important information from the manufacturer.

For a period of ten (10) years from purchase, Ff88will not crack, peel, or chip if properly applied to a properly prepared and approved surface and if properly maintained. If Ff88fails to meet the terms set forth above, Firefree will provide, at no charge, a quantity of Ff88 sufficient to repaint the surface affected. **This is the exclusive remedy for all warranty claims. This warranty specifically excludes labor or costs of labor or incidental or consequential damages associated with the use of this product.**

In the event of a warranty claim, the claimant must notify Firefree in writing of the defect promptly following discovery and must submit proof of purchase, including the date of purchase, proof that the recommended thickness was applied, and proof of the defect, including the date of discovery. Firefree reserves the right to inspect any painted surface to which the warranty claim applies.

This warranty will be void if the surface is (a) treated by any abrasive process or material (other than normal sanding before application of the Product), (b) exposed to any biological solvent or caustic chemical or agent, (c) altered or repaired, or (d) exposed to exterior weathering unless, and only if, it is covered by the Ff Exterior Topcoat in strict compliance with Firefree's specifications. The warranty will also be void if the Product is; (i) diluted or adulterated, (ii) mixed with any other product, (iii) not stored per Firefree's instructions, (iv) not applied in the required uniform thickness per Firefree's specifications, (v) not inspected in accordance with Firefree's instructions, or (vi) used after two (2) years from the date of purchase.

The manufacturer expressly disclaims any and all warranties, express or implied, of merchantability or fitness for any particular use. For further information, please call 888-990-3388/ 415-459-6488. Refer to Safety Data Sheet (SDS) for further safety and handling information.

ABOUT THE COMPANY

Firefree Coatings, Inc. is the leading developer of high-quality fire retardant and fire resistant intumescent coatings that will help reduce the spread of fire, minimize smoke and toxic gases that would occur during a fire, thus giving occupants extra time to evacuate a building safely and limiting destruction of property. Our products are tested at third-party accredited International Accreditation Service (IAS) testing laboratories.
Firefree Coatings is deeply committed to human
safety and environmental issues and is strongly positioned to meet the increasing demand for fire safety for commercial, governmental, residential and other markets. Firefree Coatings is a member of NFPA, ICC and ASTM E-05 Committee.

Main Office: 8 Commercial Blvd., Suite E
Novato, CA 94949 USA
Toll Free: 888-990-3388, (+1) 415-459-6488
info@firefree.com www.firefree.com

APPROVED

APPLICATIONS INSTRUCTIONS

Firefree 88® (Ff88) is a water-based latex coating/paint, and its application is similar to applying a regular water-based latex paint (except for the recommended thickness which needs to be precisely complied with for adequate performance, see *Wet Film* and *Dry Film Thickness* on page 2).

SURFACE PREPARATION

Firefree 88 can be used as a primer on most surfaces. All surfaces to be coated must be clean, cured, firm, dry and free of dust, dirt, oil, wax, grease, mildew, loose flaking paint, efflorescence or any other contamination or condition that would adversely affect the performance of the coating. Etch or prime (with a latex primer or fast dry oil base primer/sealer) glossy, glazed or dense surfaces. Always prime oil based finish coatings with fast dry primer/sealer. Fill holes and surface irregularities with a suitable patching compound to match surface profile. Spot prime all patched areas with appropriate primer.
Metal and concrete surfaces must be primed.
For enamel, wall covering or glossy surfaces see following instructions:
Enamel finish coats: Apply one (1) coat of a latex primer or fast dry primer/sealer over Ff88 before applying a latex enamel or oil base enamel finish coat.
Glossy surfaces: All surfaces should be dulled with sandpaper.
Wall covering application: Apply one (1) coat of wall primer over product before applying wall covering.

MOISTURE

Measure the moisture content of surfaces using a moisture meter. Do not apply material unless the moisture content is below the following maximum: Wood 17%. Do not commence work until such defects have been corrected.

TEMPERATURE

Do not apply Ff88 if air temperature is below 50ºF (10ºC). Air circulation is important. If the coating is applied below 50°F, it may take the coating longer to be fully dried and consequently will interfere with the curing between coats. In addition, it could cause the intumescent coating to sag.

HUMIDITY

We don't recommend applying the coating if relative humidity exceeds 75%. In humid conditions it may take 4 to 6 hours to dry. **Make sure that each coat of Ff88 is thoroughly dry to the touch before applying the next coat.** If the paint runs let it tack then use a brush or roller to feather it out. If you need to sand Ff88 use 100 grit sandpaper.

SAFETY

Use personal protective clothing, including safety glasses to prevent any particles of paint from entering the eyes. Protective gloves are recommended for prolonged contact exposure. Respiratory protection is not required; however, make sure plenty of ventilation is allowed when sanding or spraying. Protective half mask can be used when painting to prevent breathing paint dust, particles from entering the lungs.

APPLICATION METHOD

Ff88 can be applied by airless sprayer, roller or brush. DO NOT THIN FIREFREE 88. If you need to strain Ff88 only use a gauze the size used in fly screen doors.
Spray-Airless: Capable of a pressure range of 780 to 3300 psi. Tip .017 to .023 heavy duty 4" to 12" (10.16 cm to 30.48 cm) fan width recommended.
Reduction: Do not thin. Firefree 88 can be stirred with a paint wood-paddle (this is the similar procedure like paint).
Apply at can consistency. Use of airless sprayer is recommended (use of a dedicated spray line is required)
Roller: Use a 1-1/4" (20-25mm) nap synthetic cover for heavy application. Other rollers may be used depending on desired finish.
Brush: For brush application, a nylon/fully loaded brush should be used. A laying on technique will reduce the brush marking.

MULTIPLE COATS

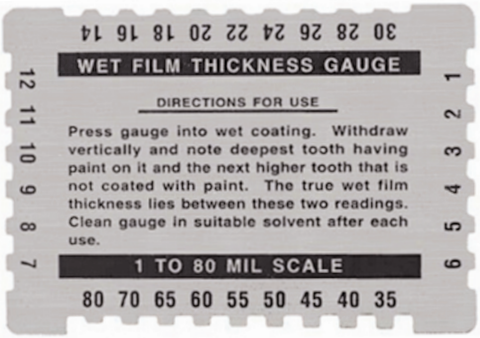
If multiple coats of Ff88 are required or if you are applying a top coat over Ff88. **Make sure that each coat of Ff88 is thoroughly dry to the touch before applying the next coat.**

COVERAGE

The recommended dry film thickness will determine the coverage rate. There is no set coverage rate that applies to all assemblies. The coating is made up of about 67% solids and thus, on average, the ratio of wet thickness to dry thickness is 1.5 to 1. For example; if the application recommended is 10 mils dry, then 15 mils wet would need to be applied. At such thickness, the theoretical coverage rate is about 106 sq. ft. per gallon (2.6 square meter/liter). **Note that this is just an example and that the recommended thickness (and coverage) will depend on the project scope and will vary accordingly.** Any consideration for quantity and waste or overspray is the sole responsibility of the end user. Waste factor will depend on the method of application (brush, roll or spray), job site conditions and other factors and should be based on the applicator's experience.

WET FILM THICKNESS (WFT)

Always use a wet mil film gauge to measure each wet coat application. Each coat application can be built up to different levels of wet mil thicknesses using multiple passes of coating with an airless spray gun, brush or roller. **To measure the desired film thickness required, during application process, use a wet film thickness gauge to monitor the wet film thickness being applied.** To use the gauge, insert the teeth into he wet basecoat. The last tooth to be coated indicates the thickness achieved. It is important to ensure that the wet film applied is of sufficient thickness to give the required dry film thickness and coverage. For example, 15 mils wet film thickness will achieve 10 mils dry film thickness. **Note that this is just an example and that the recommended thickness will depend on the project scope and will vary accordingly.** Contact Firefree for various coverage rates at different thicknesses.



DRY FILM THICKNESS (DFT)

The dry film thickness to be applied will be recommended by Firefree and will vary upon:

- the assembly make up
- the material/substrate being coated
- the fire rating being required.

The dry film thickness recommended by Firefree needs to be precisely complied with for adequate performance, thus during application, the wet film thickness should be checked using a wet film thickness gauge. The final dry film thickness should also be verified per inspection below.

DRYING TIME

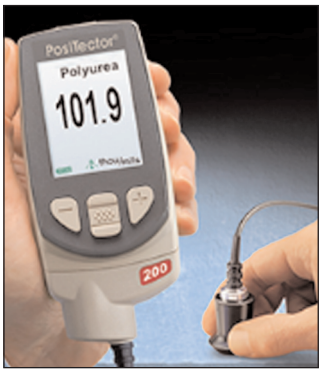
Drying time is when the surface is thoroughly dry to the touch. Drying times are dependent upon a number of factors: *Temperature - Air movement - Humidity - Thickness of product- Method of application.* During the drying process, FF88 will shrink due to evaporation of water. **If multiple coats of Ff88 are required, each coat of Ff88 must be thoroughly dry to the touch, before the next coat is applied.**

TOP COAT OVER FF88

Ff88 comes in a white, satin finish. If a different color or finish is desired, Ff88 can be top coated with most premium paints to achieve the desired color and finish. For large orders (>200 gallons) Ff88 can be tinted by Firefree. Please contact Firefree for such custom tinted orders. Check for any reactions between Ff88 and the top coat if any reaction should occur apply a primer over the Ff88 prior to the top coat. **Make sure that each coat of Ff88 is thoroughly dry to the touch before applying the next coat.** For information on compatible top coats please contact Firefree.

PAINTED SURFACES & PRIMERS

When painting over existing painted surfaces, check for any reactions between Ff88 coating and the existing paint, If any reaction should occur, apply a primer over the existing paint prior to applying Ff88. For information on approved compatible primers, contact Firefree.



THIRD PARTY INSPECTION

All surfaces to which Ff88 have been applied should be inspected by an accredited special inspection agency, or ICC certified professional, or a Firefree Coatings QA/QC qualified inspector to verify that Ff88 has been properly applied in the required uniform thickness. If an independent testing agency is retained, it should ensure that preparation of substrate is in accordance with manufacturer's recommendations. It should randomly obtain test samples during application to verify that wet/dry film thickness of the intumescent coating/paint complies with Firefree's requirements.

MAINTENANCE

Surfaces which have been coated with Ff88 should be protected from abuse and abrasion. Damaged surfaces should be repaired and Ff88 should be reapplied to the original specified dry film thickness to maintain specific rating.

CLEAN UP

Wash brushes, rollers, spray guns & pumps and other painting tools in COLD clean water promptly after painting. Clean and remove any dried product. Use all products completely or dispose of properly. Local disposal requirements vary; consult your sanitation department or state-designated agency for more information on disposal options.

STORAGE & TEMPERATURE

Ff88 cannot be exposed to freezing temperatures. It is important to maintain storage temperatures above the freezing point. Ff88 should be stored at recommended temperatures between 50º F to 85ºF (10ºc to 29ºc).
Expected shelf life: (2) years from the date of manufacture (DOM). Product must be kept at recommended storage conditions and in original unopened containers.

ABOUT THE COMPANY

FIREFREE Coatings, Inc is a privately owned company based in California. All products have been tested at accredited third party IAS www.iasonline.org fire testing laboratories. Ff88 is approved by FM Approvals www.fmapprovals.com and classified by the Underwriters Laboratories, and accepted by NY Material and Equipment Acceptance (MEA) Division. Firefree Coatings, Inc. is a member of NFPA, ICC and ASTM.

MAIN OFFICE:
Address: 8 Commercial Blvd., Suite E, Novato, CA 94949
Toll Free: 888-990-3388 • 415-459-6488 • fax 415-459-6055
info@firefree.com www.firefree.com

Ronald J Loar, P. E.
Consulting Engineer
Structural and Architectural Details • Construction Practices

May 28, 2020

FIREFREE COATINGS, INC.
8 Commercial Blvd., Suite E
Novato, CA 94945

Subject: 2 hour rating on load bearing metal shipping container walls

Assumption: 14 gauge metal panels mounted to a steel frame exposed on the interior side of the container.

It is my professional opinion that a 60 mil (dry film) thick coating application of the Firefree 88 fire resistant coating will provide sufficient insulation and fire protection to keep the backside wall temperature (exterior side of the shipping container) below the 121- C (248 -F) test criteria for ignition of combustibles for a two hour rating.

This opinion is based on extensive knowledge of tests conducted with the FF88 coating and the interpolation/extrapolation of the results as applicable to fire rating of metal container walls. Testing was based on the following, all conducted at IAS certified fire laboratories:

1) 2 hour wall test on 10 gauge metal to the ASTM E 119 fire test standard
2) 1 hour ceiling test on 26 gauge aluminum to the ASTM 814 / E 119 standard
3) 1 hour on 26 gauge sheet metal to the ASTM E 1632 std. (50K wm2/1800F)
4) Review of fire test analysis on thin gauge metal by John Wade (registered fire engineer)

2315 Rose Street, Berkeley, CA 94708-1807 • 510-843-2812

Firefree Coatings, Inc.

May 29, 2020

Patrick Donaldson
Principal Architect
Patrick@HarkaHQ.com
HARKA ARCHITECTURE
107 SE Washington St, Ste 740 | Portland, OR 97214

Subject: Area Separation Corrugated 14 Gauge Metal Wall of a shipping container

Dear Mr. Donaldson:

1. Summary:

This letter is in regards to your inquiry as to the use of the Firefree 88, intumescent fire resistant coating, as a way to provide a two hour fire rating to the 14gauge metal wall skin, no studs, no mineral wool insulation from inside out of the wall metal.

II. Analysis:

The information in this letter and related testing information is specific and proprietary to Firefree 88 and solely for your use in assessing our product and deal with architects, fire engineers and local fire and building officials. As these are life safety issues, there should be no substitution as other products have different levels of testing and performance.

A. Firefree Product Testing

We have performed extensive testing on thin gauge metal including 2 hours on 10 gauge metal and for 1 hour on 26 gauge embossed tin and aluminum to the ASTM E 119 1&2 hour fire testing standard as well as specialty testing to the ASTM E 1632 test standard on both 10 gauge and 26 gauge metal. All testing has been performed at IAS/ICC certified fire testing laboratories. We are both Factory Mutual and ICC listed and labeled and UL classified. From the extensive testing we have performed on numerous material substrates, we have an established, yet conservative fire performance rating of 1.4 minutes per dry mil applied.

From the extensive testing we have done on thin gauge metal, and metal assemblies, as part of our analysis, we can construct a component value to the current wall assembly that will provide us with a starting point in order to establish a proper coating thickness to be applied to achieve the 2 hour fire rating being required. It should be noted, in our testing on thin gauge metal, we found no significant difference in the failure rate as to time in comparing 10-gauge metal to 26-gauge metal.

B. Recommended Coating Thickness Application

Based on the information you provided to us, industry data, and analysis of our own testing data, our engineering department is recommending an application of 60 mils dry / 92 mils wet to bring the wall meet the two hour rating. Please note – for area separation – you will need to apply the 60 mils dry on both sides (interior/exterior) of the wall to ensure that the surface material is protected on both directions.
If the one-hour rating, area separation is required, the application of the coating will be decreased to 30 mils dry/45 mils wet on both sides of the wall.
Exterior Applications will require the application of our FfE Acrylic Topcoat (2 coats, each apply at 6 mils wet/3 mils dry = 6 mils dry total).

Coverage Rate: 110 square feet per gallon (550 square feet per 5-gal pail).

Firefree 88 Coverage Rates: 17 square feet per gallon, at 60 mils dry = 2-Hour rating per side
35 square feet per gallon, at 30 mils dry = 1-Hour rating per side

The basis for our assessment is based on several factors:
1. The fact the metal wall material is considered to be a non- combustible type material.
2. In order to build in a level of conservancy in our analysis, we are using the ASTM E 119 backside temperature failure rate of 121C (248F) as this is a wall assembly, although there is no occupancy to the structure and where the 1100degree F failure temperature of steel would be more appropriate. We reviewed the ASTM E 119 testing performed on thin gauge metal for 2 hours to the ASTM E 119 fire test standard using the time to backside temperature failure of 248degtrees F
3. The engineering analysis of the 1.4 minutes per dry mil applied fire performance rating of the coating. It should be noted this is a conservative analysis rating based on numerous fire tests.

C. Preparation and Inspections

The existing surface must be clean prior to application. The coating can be applied by brush, roller or airless spray gun, with the airless spray gun being the most productive method of application. The coating must be dry to the touch prior to any additional applications of coating. The raw metal panels may require a coat of metal primer prior to the application of the FF88 coating.

Because this is a life safety issue, a special inspection may be required to insure compliance with the manufacturer's specifications, just as is required when applying fire coatings to steel beams and columns.

D. General product Information

It is to be noted the ASTM E 119 test standard is based on a post flashover condition. Based on our Factory Mutual testing to both the FM 4880 room corner test standard and the FM 4975 Hydrocarbon ceiling test standard, the coating, when applied, creates a

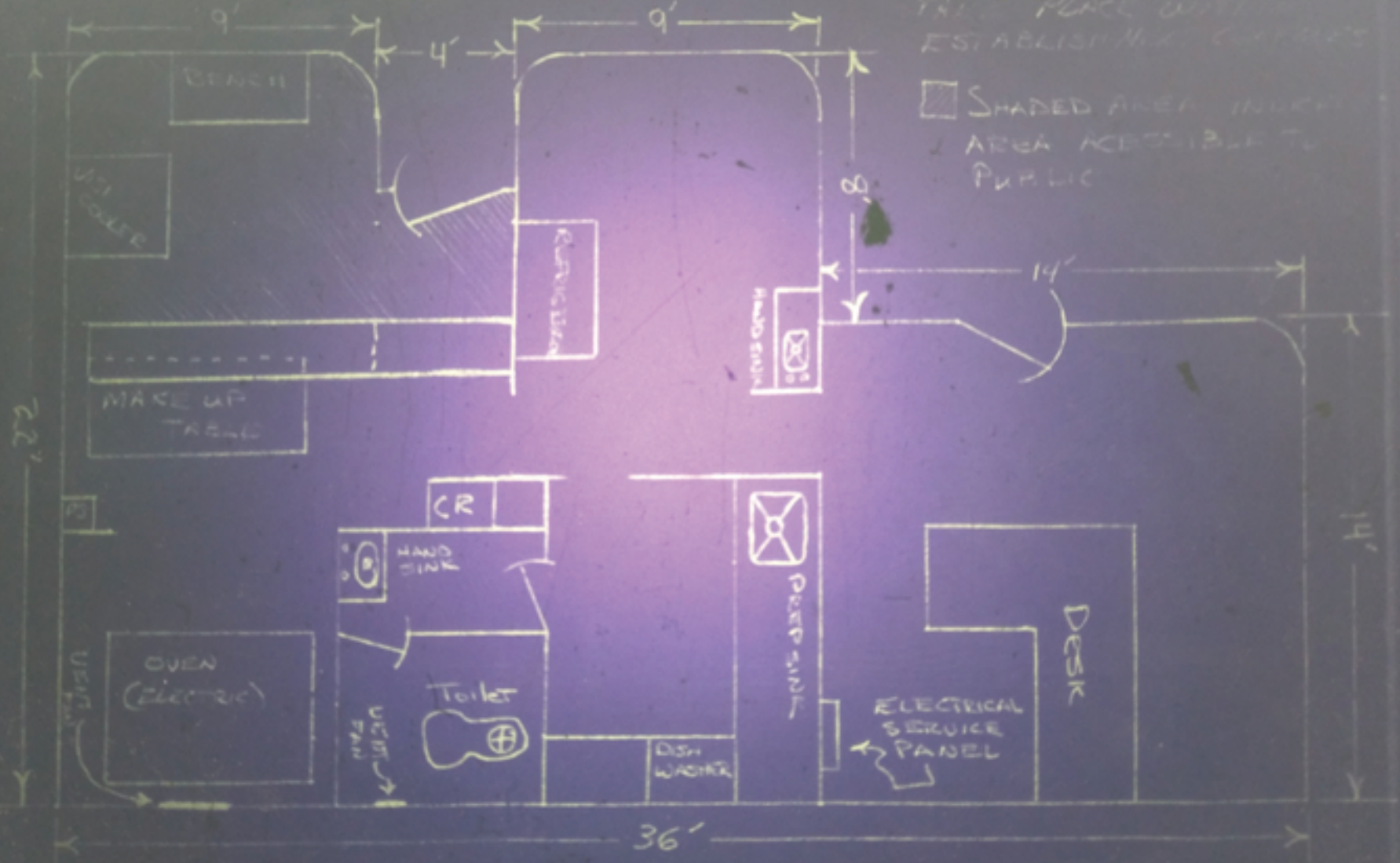
continuous membrane across the surface being coated, dramatically reduces heat release, smoke development, and flame spread thus reducing the possibility of flashover from occurring, further adding to the performance rating of the FF88 and providing a higher level of fire safety to the structure beyond the ASTM E 119 fire test standards.

Ff88 is listed under LEED compliant paints and coatings in accordance with CDPH Standard Method v1.2, 2017 emissions. It should be noted paints earn LEED v4 Emitting Materials credit for being emission certified in addition to meeting CARB SCM 2007 VOC limits (3 to 5 LEED points can be earned using the FF888 coating). Along with this letter I am enclosing the 1.4 minute per mil applied engineering assessment of the coating's performance, pertinent testing data, engineering peer review on the specific thickness of the coating, product data sheet as well application instructions.

If you should have additional questions or require further information, please let me know.

Best regards,
Firefree Coatings, Inc.
When Time and Safety Matter

John Simontacchi
CEO/Founder
jsimontacchi@firefree.com
415-459-6488 Office
415-459-6055 Fax
415-713-0414 Cell


SCALE ¼" = 1'
9'
4'
9'
8'
14'
22'
14'
36'
BENCH
MAKE UP TABLE
CR
HAND SINK
OVEN (ELECTRIC)
Toilet
DISH WASHER
PREP SINK
ELECTRICAL SERVICE PANEL
DESK
SHADED AREA
PUBLIC

HARKA BUILDING

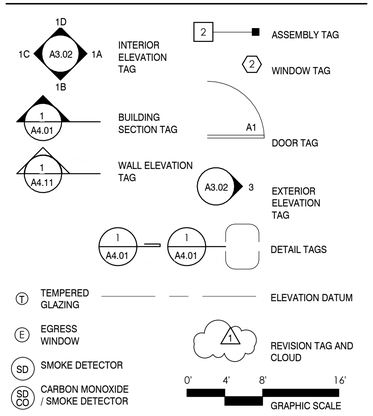
GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY DESIGNER OF ANY DEVIATIONS FROM DRAWINGS PRIOR TO CONTINUATION OF WORK.
2. CONTRACTOR SHALL NOTIFY DESIGNER OF ANY NEED FOR DESIGN CHANGES DUE TO FIELD CONDITIONS OR OBSERVATIONS PRIOR TO CONTINUING WORK.
3. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.
4. DIMENSIONS ARE TO FACE OF STUD, FACE OF CONCRETE, GRID LINES, AND CENTER LINE OF WINDOW ASSEMBLIES UNLESS OTHERWISE NOTED.
5. SAFETY GLAZING IS REQUIRED WHERE GLASS IS WITHIN 18" OF THE FLOOR AND 24" OF DOORS. SEE 2017 ORSC SEC. R308 FOR ADDITIONAL SAFETY REQUIREMENTS.
6. ALL MATERIALS AND WORK SHALL CONFORM TO ALL GOVERNING CODES AND REGULATIONS.
7. ALL WORK TO BE DONE IN ACCORDANCE WITH THE LATEST CODES WITH LOCAL AMENDMENTS AND ORDINANCES AND GOOD STANDARD PRACTICE. CONTRACTOR TO COORDINATE ALL DIMENSIONS, SIZING AND OPENINGS WITH ALL TRADES. CONTRACTOR TO VERIFY ALL CONNECTOR SIZES TO INSURE PROPER FIT.
8. ALL MATERIALS AND PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
9. FRAMING CONTRACTOR TO VERIFY ALL ROUGH OPENING SIZES AND DETAILS FOR DOORS, WINDOWS, EXHAUST, FANS, AND VENTS.
10. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
11. ARCHITECT NOT RESPONSIBLE FOR WATER PENETRATION OF EXISTING ROOFING, FLASHING, OR PARAPETS.
12. WHEN WORK NOT SPECIFICALLY CALLED OUT IS REQUIRED TO COMPLETE THE PROJECT, IT SHALL BE OF THE BEST MATERIAL AND WORKMANSHIP.
13. CONTRACTOR SHALL TAKE ALL THE NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION. CONTRACTOR ASSUMES ALL LIABILITY FOR DAMAGES INCURRED DURING CONSTRUCTION.
14. CONTRACTOR SHALL ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES.
15. THE STARTING OF WORK BY THE GENERAL CONTRACTOR OR ANY SUBCONTRACTOR SHALL BE CONSIDERED PRIMA FACIE EVIDENCE THAT THEY HAVE INSPECTED AND ACCEPTED ALL CONDITIONS INVOLVED IN THE WORK AND FIND THEM SATISFACTORY.
16. CONTRACTOR SHALL TIE NEW UTILITIES INTO PRIVATE & PUBLIC LINES AS REQUIRED BY PUBLIC, PRIVATE UTILITIES OR COUNTY.
17. CONTRACTOR SHALL COORDINATE WORK OF MECH. AND ELEC. SUBCONTRACTORS AND NOTIFY DESIGNER OF ANY CONFLICTS OR VARIATIONS FROM I.R.C. REQUIREMENTS. ALL WORK TO CONFORM TO ALL RELEVANT CODES AND REGULATIONS.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL DEFERRED AND TRADE PERMITS.
19. CONTRACTOR SHALL VERIFY AND CONFIRM ALL SIZES & DIMENSIONS PRIOR TO ORDERING.
20. WHEN POSSIBLE, USE PRODUCTS MADE IN THE UNITED STATES. EXAMPLE OF A COMPREHENSIVE LIST OF PRODUCTS MADE IN THE USA CAN BE FOUND AT: http://www.americansworking.com/buildingmaterial.html

LOW-CARBON NOTES

1. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR ACCEPTABLE METHOD.
2. A MINIMUM OF 50 PERCENT OF THE CONSTRUCTION WASTE GENERATED AT THE SITE SHALL BE DIVERTED TO RECYCLE OR SALVAGE.
3. GAS FIREPLACES SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. WOOD/PELLET STOVES SHALL COMPLY WITH US EPA PHASE II EMISSION LIMITS.
4. DUCT AND VENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION.
5. ADHESIVES, SEALANTS AND CAULKS SHALL BE COMPLIANT LOW OR NO VOC.
6. PAINTS, STAINS, AND OTHER COATINGS SHALL BE COMPLIANT LOW OR NO VOC.
7. MOISTURE CONTENT OF BUILDING MATERIALS USED IN ENCLOSED WALL AND FLOOR FRAMING IS CHECKED BEFORE ENCLOSURE AND CANNOT EXCEED 19%.
8. HVAC SYSTEM INSTALLERS ARE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS.
9. USE FSC, LOCAL, ENVIRONMENTALLY CERTIFIED, SUSTAINABLY-SOURCED PRODUCTS - FOR MORE INFORMATION AND RESOURCES VISIT SUSTAINABLE NW: http://www.sustainablenorthwest.org/
10. MINIMIZE USE OF CONCRETE WHERE ALTERNATIVE IS POSSIBLE.

SYMBOLS



ZONING INFORMATION

	CODE	PROPOSED
MAX FAR	2.5 TO 1	< 1
MIN DENSITY	1 UNIT PER 1,450 SF SITE AREA	NO D.U. PROPOSED
BASE HEIGHT	45 FT	12' - 1"
MAX SETBACK (STREET LOT LINE)	10' - 0"	
MIN SETBACKS	NONE	
MAX BUILDING COVERAGE	100%	
GROUND FLOOR WINDOW STANDARDS	40%	NO CHANGE
MIN LANDSCAPE AREA	15%	NO CHANGE
REQUIRED OUTDOOR AREA	N/A	
BIKE PARKING SPACES	2 LONG TERM, 2 SHORT-TERM FOR OFFICE	2 LONG TERM, 2 SHORT TERM

STORMWATER MANAGEMENT

NO NEW IMPERVIOUS AREA AND THEREFORE NO ON-SITE STORMWATER MANAGEMENT IS REQUIRED PER TITLE 17.38.040.

PARKING

NO EXISTING PARKING AND NO ABILITY TO ADD.

BES

NEW ROOF AREA = 160 SF

SITE INFORMATION

ADDRESS	7631 NE GLISAN ST, PORTLAND, OR 97213
COUNTY	MULTNOMAH
PROPERTY ID	R227464
STATE ID	1N2E32AD 11100
LEGAL DESCRIPTION	NORTH VILLA, BLOCK 5, WLY 50' OF LOT 1 EXC PT IN ST
LOT SIZE	0.05 ACRES (2,000 SF)
BASE ZONE	CM2
OVERLAY	N/A
COMP PLAN	MU-N - MIXED USE - NEIGHBORHOOD
ADJACENT ZONES	ALL CM2

BUILDING INFORMATION

	EXISTING	PROPOSED
TOTAL (CONDITIONED)	577 SF	NO CHANGE
TOTAL (UNCONDITIONED)	151 SF	NO CHANGE
BASEMENT	100 SF	NO CHANGE

SEISMIC

LAST PERMITTED USE WAS PIZZA SHOP. IT WAS INCORRECTLY LOGGED AS "R3", AND WAS RECENTLY DETERMINED TO BE "F1". BUILDING WAS BUILT AS "B" AND HAS BEEN HISTORICALLY USED AS "B". PLEASE SEE TRACS NOTES FROM 9/9/2016 AND 9/15/2016 STATING SEISMIC UPGRADE NOT LIKELY TO BE REQUIRED.

JOB DESCRIPTION

CONVERT EXISTING 'F'1' PIZZA TAKE-OUT TO 'B' OFFICE. REMOVE ONE EXTERIOR DOOR, RELOCATE ONE EXTERIOR DOOR, ALTERATIONS TO INTERIOR PARTITION WALLS.

TO COMPLY WITH 2017 OREGON STRUCTURAL SPECIALTY CODE AND ANSI 117.1-2009.

VALUATION: $25,875

ADA UPGRADES

- REPOUR/REGRADE EXISTING CONCRETE HARDSCAPE TO MEET 1:20 MAX SLOPE ALONG SOUTH EDGE
- BUILD NEW ADA RAMP AT NORTH EDGE OF BUILDING TO PROVIDE ACCESSIBLE ACCESS TO BUILDING.

PROJECT TEAM

OWNER

PATRICK DONALDSON
(503) 975-9471
patrick@harkahq.com

ARCHITECT

HARKA ARCHITECTURE, LLC
107 SE WASHINGTON ST, SUITE 740
PORTLAND, OR 97214

CONTACT: PATRICK DONALDSON
(503) 975-9471
patrick@harkahq.com

STRUCTURAL

GRUMMEL ENGINEERING, LLC
79 SW OAK ST
PORTLAND, OR 97204

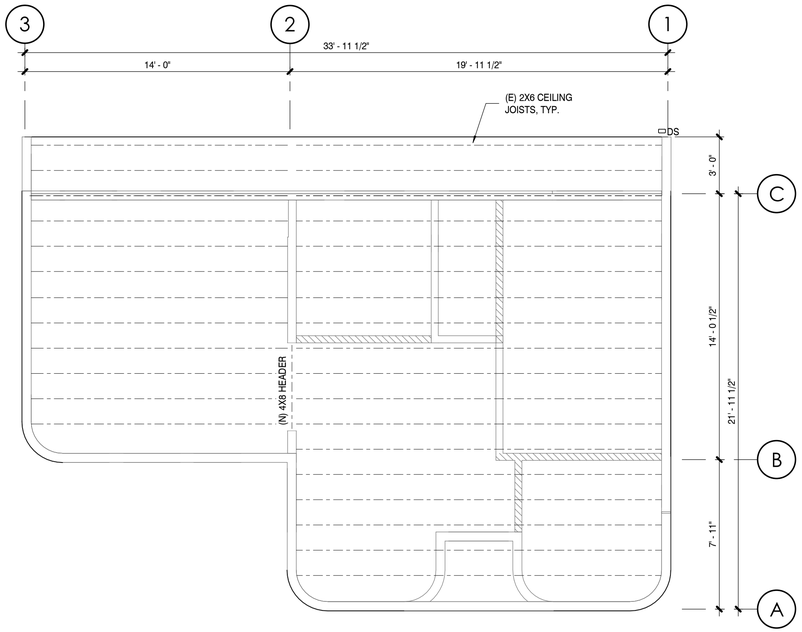
CONTACT:
ALEX GRUMMEL, PE
503.244.7014
alex@grummelengineering.com

DRAWING SHEET INDEX

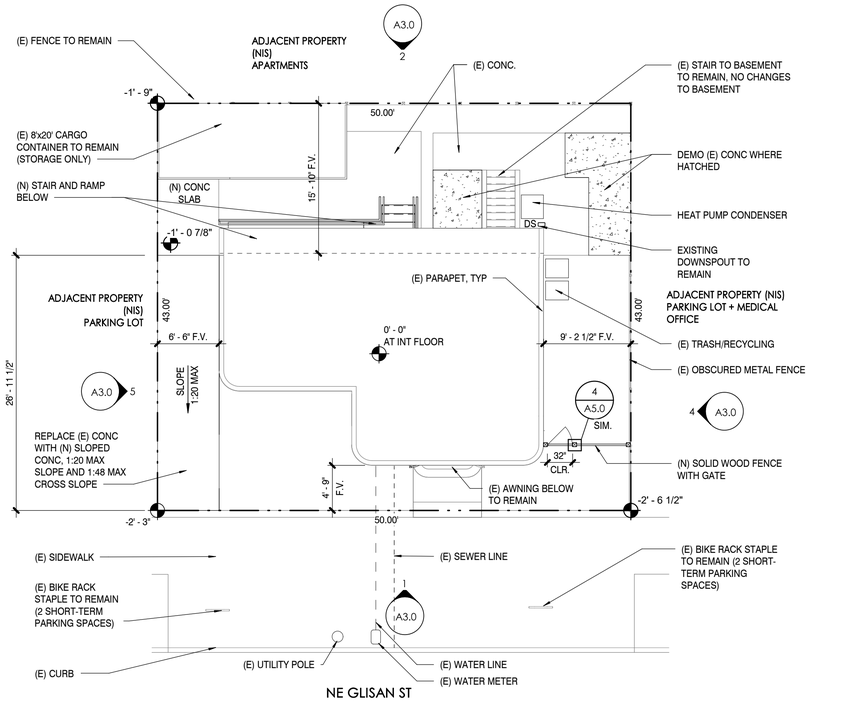
ARCHITECTURAL

SEPARATE PERMITS

MECHANICAL, ELECTRICAL AND PLUMBING PERMITS TO BE OBTAINED SEPARATELY AS REQUIRED.



2 A0.0 PROPOSED ROOF PLAN
SCALE: 1/4" = 1'-0"



1 A0.0 SITE PLAN
SCALE: 1/8" = 1'-0"
0' 4' 8' 16' N

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Permit

REGISTERED ARCHITECT
PATRICK M. DONALDSON
PORTLAND, OREGON
#4962
STATE OF OREGON

Harka Building

7631 NE Glisan St
Portland, OR 97213

#	Date	Description

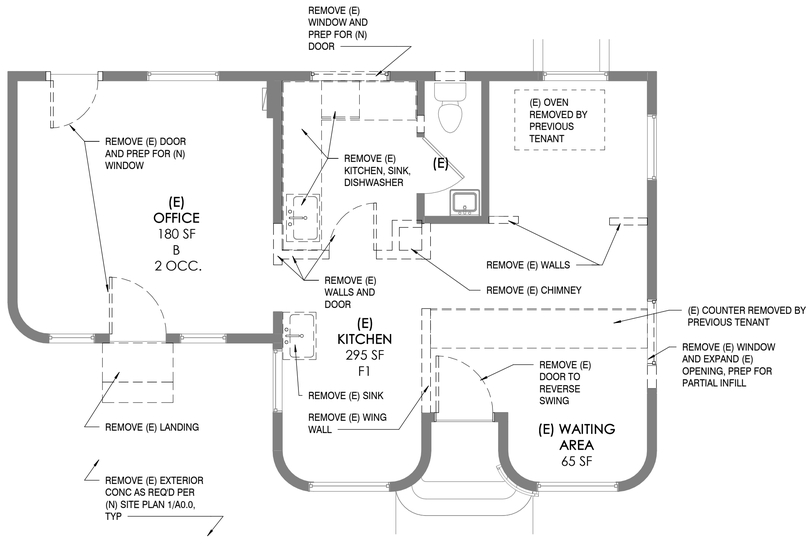
04.24.2020
Date

Author
Drawn By

Project Info, Zoning & Site Plan

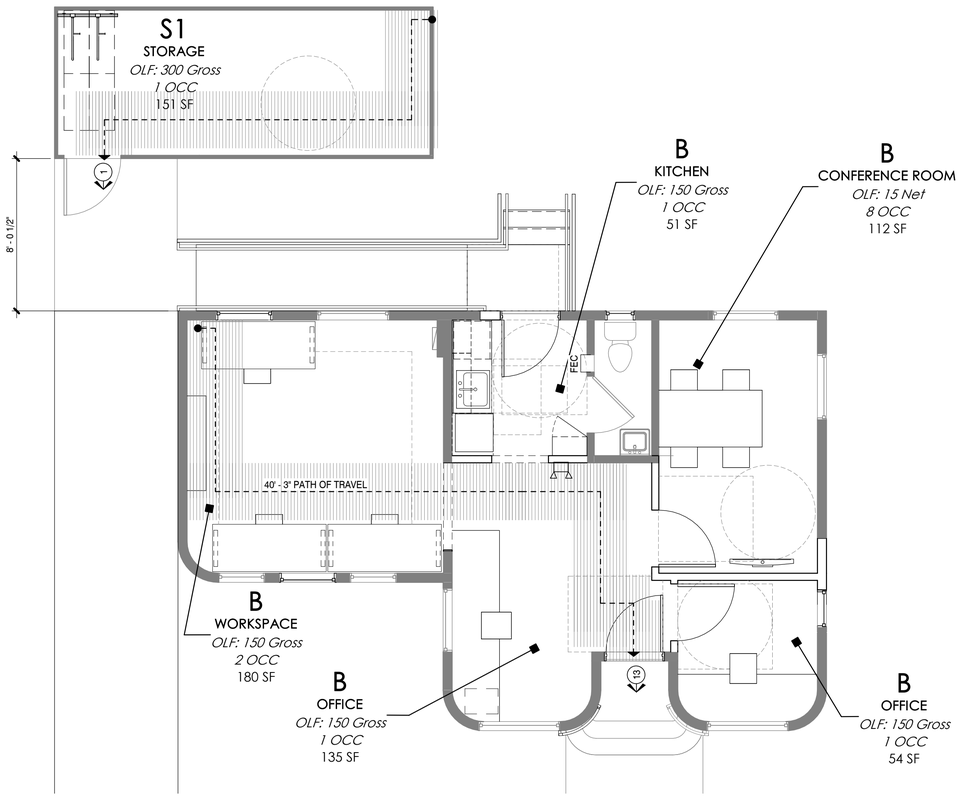
A0.0

Plot Date: 4/24/2020 3:18:16 PM
Revit File: C:\Users\hello\Dropbox\BECK STUDIO\Contract Work\HARKA\HARKA HQ\Harka Building_CDs.rvt



2 A1.0 DEMO PLAN

SCALE: 1/4" = 1'-0"



1 A1.0 GROUND FLOOR LIFE SAFETY PLAN

SCALE: 1/4" = 1'-0"

BUILDING / CODE INFO

	CODE	EXISTING	PROPOSED
BUILDING INFO			
BUILDING USE	-	TAKE-OUT PIZZA	OFFICE
BUILDING OCCUPANCY	-	F-1 / B / S-1	B / S-1
CONSTRUCTION TYPE	-	VB, UNSPRINKLERED	VB, UNSPRINKLERED
BASEMENT FLOOR AREA	-	100 SF (NON-HABITABLE)	100 SF (NON-HABITABLE, NO CHANGES)
GROUND FLOOR AREA	-	577 SF	577 SF
STORAGE CONTAINER FLOOR AREA	-	150 SF	150 SF
TOTAL AREA	9,000 SF MAX	727 SF	727 SF
# OF STORIES	2	1	1
BUILDING HEIGHT	40' MAX	12' - 0"	12' - 0"
BUILDING OCCUPANTS	-	9	14
FIRE / LIFE SAFETY			
FIRE SEPARATION B/W OCCUPANCIES	NR	NA	NA
SMOKE ALARMS	NR	NA	NA
AUTOMATIC SPRINKLER SYSTEM	NR	NA	NA
FIRE ALARM SYSTEM	NR	NA	NA
CARBON MONOXIDE	NR	NA	NA
FIRE EXTINGUISHERS	1 REQ'D	NA	1 PROVIDED
EXITING / LIFE SAFETY			
PANIC HARDWARE	NR	NA	NA
MAX EXIT TRAVEL DISTANCE	75' - 0" MAX	-	PER PLAN
MAX OCCUPANTS FOR ONE EXIT (SECOND STORY, R2)	49	9	14
EGRESS WIDTH AT CORRIDORS	36" MIN (OCCUPANTS < 50)	-	36" MIN
ENERGY CODE			
FLOORS (FRAMED)	NO CHANGE REQ'D	R-30	NO CHANGES
WALLS (WOOD-FRAMED)	NO CHANGE REQ'D	R-13	NO CHANGES
ROOF (ATTIC)	NO CHANGE REQ'D	R-38	NO CHANGES
FENESTRATION (FIXED)	U-0.36	--	NEW ONLY: U-0.36 MAX
FENESTRATION (OPERABLE)	U-0.45	--	NEW ONLY: U-0.45 MAX
SHGC (FIXED)	1.10 TO 0.36	--	NEW ONLY: 1.10 TO 0.36
SHGC (OPERABLE & ENTRANCE DOOR)	1.10 TO 0.33	--	NEW ONLY: 1.10 TO 0.33
ENTRANCE DOOR	U-0.63	--	U-0.63 MAX

NOTE: BUILDING IS BEING ANALYZED AS MIXED-USE INCLUDING THE STORAGE CONTAINER.

FIRE / LIFE SAFETY LIGHTING

EXIT SIGN W/ 90 MINUTE BATTERY BACKUP

EMERGENCY LIGHT, MINIMUM 1 FOOTCANDLE W/ 90 MINUTE BATTERY BACKUP. CONTINUOUS TO EXTERIOR LANDING OF EGRESS DOORS.

0 # OF OCCUPANTS AT EXIT

EXITING PATH AND REQUIRED CLEAR WIDTH

FE SEMI-RECESSED FIRE EXTINGUISHER (MAX 4" PROJECTION FROM WALL)

OCCUPANT LOADS

TAG	ROOM	OCCUPANCY GROUP	TOTAL AREA	OLF	OCCUPANTS
01	OFFICE	B	135 SF	150	1
03	OFFICE	B	54 SF	150	1
04	CONFERENCE ROOM	B	112 SF	15	8
05	WC		22 SF		
06	KITCHEN	B	51 SF	150	1
07	WORKSPACE	B	180 SF	150	2
08	STORAGE	S1	151 SF	300	1
					14

EXISTING OCCUPANT LOAD: 9

PLUMING CALCS

TOILETS: 1 REQUIRED, 1 (E) PROVIDED.
LAVATORIES: 1 REQUIRED, 1 (E) PROVIDED.

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HARKA
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PORTLAND, OR 97214 - HARKAHQ.COM

Permit

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PATRICK M. DONALDSON
PORTLAND, OREGON
#4962
STATE OF OREGON

Harka Building

7631 NE Glisan St
Portland, OR 97213

#	Date	Description

04.24.2020
Date

Author
Drawn By

Life Safety Info & Plan, Demo Plan

A1.0

Plot Date: 4/24/2020 3:18:36 PM Revit File: C:\Users\hello\Dropbox\BECK STUDIO\Contract Work\HARKA\HARKA HQ\Harka Building_CDs.rvt

ASSEMBLY NOTES

1. SEE STRUCTURAL FOR SHEAR WALL LOCATIONS. ADD SHEATHING TO ASSEMBLY AS REQUIRED BY STRUCTURAL ENGINEER. WHERE A NON-SHEAR WALL EXTENDS AND ALIGNS PARALLEL WITH A SHEAR WALL, PROVIDE ADDITIONAL SHEATHING LAYERS TO THE NONSHEAR WALL TO PROVIDE CONTINUOUS FACE OF FINISH.
2. LOCATE THERMAL INSULATION ON THE COLD SIDE (IN WINTER) OF DOMESTIC WATER PIPES AS REQIIRED TO PROTECT PIPE FROM FREEZING.
3. PROVIDE ADDITIONAL BLOCKING AS REQUIRED TO SUPPORT SHELVING, RAILINGS, TOWEL BARS, AND OTHER WALL-MOUNTED ACCESSORIES/EQUIPMENT.
4. DENSE-PACK CELLULOSE INSULATION IN WALL ASSEMBLIES MAY BE SUBSTITUTED WITH HIGH DENSITY ECOBATT INSULATION PER OWNER.
5. PROVIDE UL APPROVED PENETRATION AND MEMBRANE PENETRATION FIRESTOP SYSTEMS AS REQUIRED BY CODE IN FIRE-RATED ASSEMBLIES.
6. PROVIDE FIRE BLOCKS AND DRAFT STOPS AS REQUIRED PER 2019 OSSC SECTION 717.

PLAN NOTES

1. DIMENSIONS ARE TO FACE OF STUD, FACE OF CONCRETE, GRID LINES, AND CENTER LINE OF WINDOW ASSEMBLIES UNLESS OTHERWISE NOTED.
2. HEATING/COOLING IN UNIT TO BE PROVIDED BY _____.
3. ACCESSIBILITY AND ADA DETAILS, SEE A6.0.
4. OPERABLE PARTS OF LIGHTING, ENVIRONMENTAL, SECURITY CONTROLS AND ELECTRICAL RECEPTACLES SHALL BE MOUNTED BETWEEN 15" AND 48" ABOVE FINISHED FLOOR.
5. ALL FAUCETS TO HAVE LEVER HANDLES.

PHASING LEGEND

- EXISTING TO REMAIN
- REMOVED DURING DEMO PHASE (DEMO PLANS ONLY)
- NEW CONSTRUCTION

WINDOW SCHEDULE

TAG	WIDTH	HEIGHT	HEADER HEIGHT	TYPE	TEMPERED	EGRESS	QTY	COMMENTS
A	2' - 0"	3' - 0"	6' - 8"		No	No	1	
B	3' - 0"	6' - 8"	6' - 8"		Yes	No	1	
D	1' - 7"	4' - 0"	6' - 8"				1	
L	3' - 0"	3' - 6"	6' - 8"		No	No	1	

WINDOW NOTES

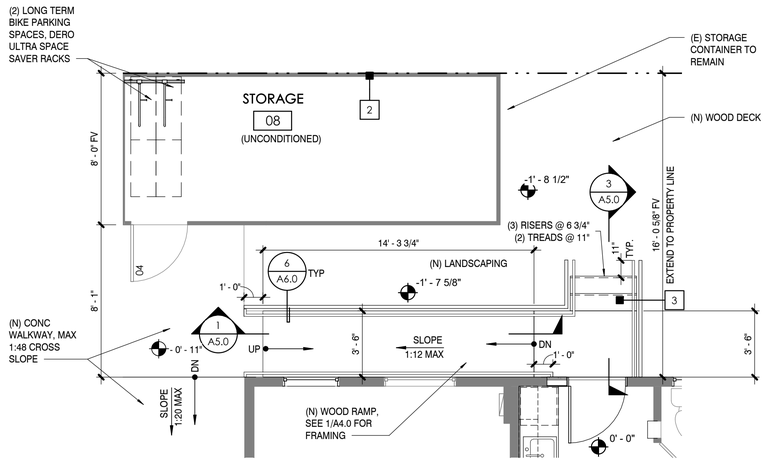
1. ALL WINDOW DIMENSIONS ABOVE ARE OF FINISHED FRAME. CONTRACTOR TO DETERMINE REQUIRED ROUGH OPENINGS PER MANUFACTURER'S SPECIFICATIONS.
2. CONTRACTOR TO VERIFY REQUIRED SAFETY TEMPERED WINDOWS. ALL GLAZING IN DOORS AND SIDE LITES SHALL BE SAFETY TEMPERED PER CODE.
3. ALL WINDOWS TO BE U-0.30 MAX, SEE A0.1 FOR ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS.
4. SEE PRODUCT SPECIFICATIONS FOR MORE DETAILS.

DOOR SCHEDULE

TAG	PHASE	LOCATION	OPENING WIDTH	HEIGHT	DOOR TYPE	FIRE RATING	QTY	HDW GROUP	COMMENTS
01	NEW	Exterior	3' - 0"	6' - 8"	SWING	NR	1	1	
03	NEW	Exterior	3' - 0"	6' - 8"	SWING	NR	1	1	
04	EXISTING	Exterior	3' - 0"	6' - 8"	SWING	NR	1	1	
11	NEW	Interior	3' - 0"	6' - 8"	SWING	NR	1	2	
12	NEW	Interior	3' - 0"	6' - 8"	SWING	NR	1	2	
13	EXISTING	Interior	3' - 0"	6' - 8"	SWING	NR	1	3	

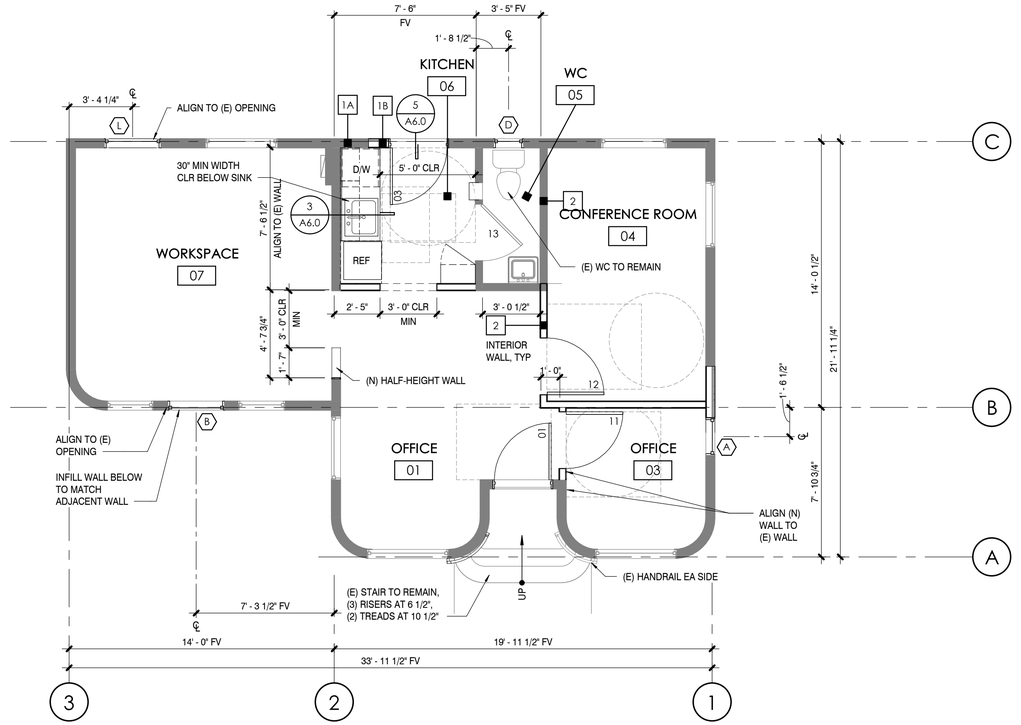
DOOR HARDWARE SCHEDULE

HDW GROUP	LOCKSET	THRESHOLD	HINGES	CLOSER	KICKPLATE	SILENCER	WEATHER STRIPPING	DOOR SWEEP	COMMENTS
1	CLASSROOM SECURITY	ADA PER 1/A6.0	(3) HINGES	No	No	Yes	Yes	Yes	SIGN OVERHEAD READING "DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS"
2	OFFICE	N/A	(3) HINGES	No	No	No	No	No	
3	PRIVACY	N/A	(3) HINGES	No	No	No	No	No	"OCCUPIED" INDICATOR AT LOCKSET



3 A2.0 GROUND FLOOR PLAN - STORAGE & RAMP

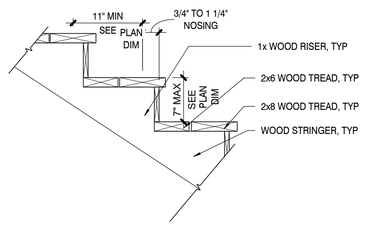
SCALE: 1/4" = 1'-0"



1 A2.0 GROUND FLOOR PLAN

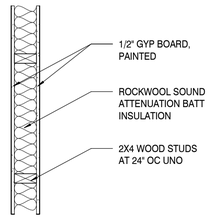
SCALE: 1/4" = 1'-0"

0' 2' 4' 8' N



2 NEW EXTERIOR WOOD STAIR

ASSEMBLY: N/A	FIRE: 1-HR	STC: N/A



1 (N) INTERIOR WALL

ASSEMBLY: N/A	FIRE: N/A	STC: N/A

ASSEMBLIES LEGEND

SCALE: 1" = 1'-0"

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STATE OF OREGON

Harka Building

7631 NE Glisan St
Portland, OR 97213

#	Date	Description

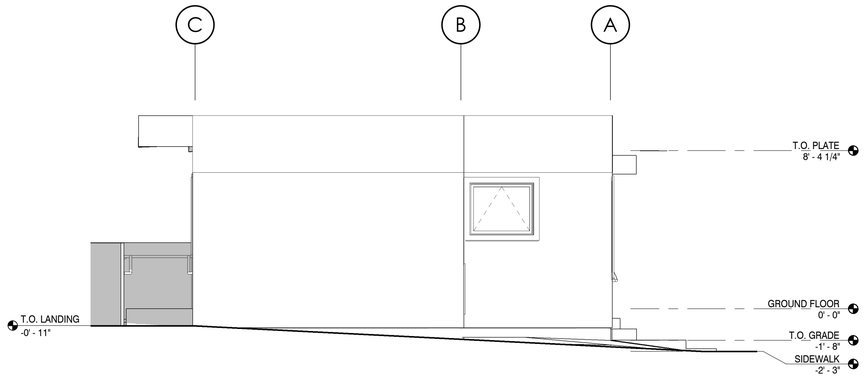
04.24.2020
Date

Author
Drawn By

Plan, Assemblies, Schedules

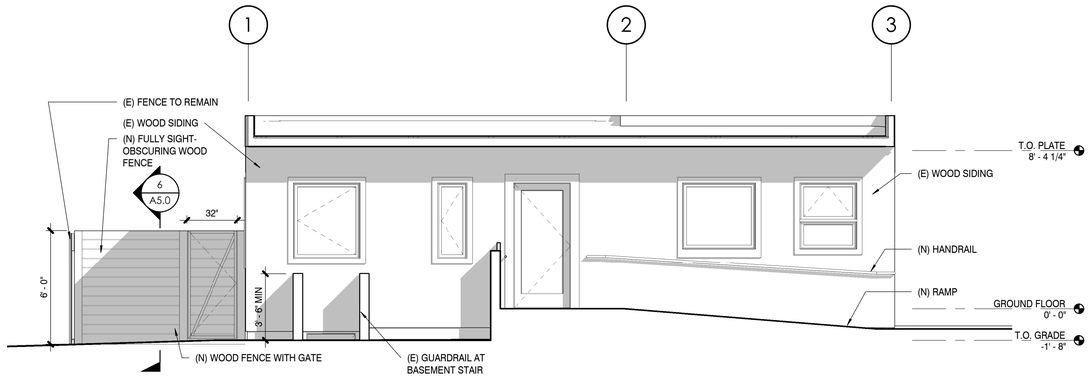
A2.0

Plot Date: 4/24/2020 3:18:47 PM Revit File: C:\Users\hello\Dropbox\BECK STUDIO\Contract Work\HARKA\HARKA HQ\Harka Building_CDs.rvt



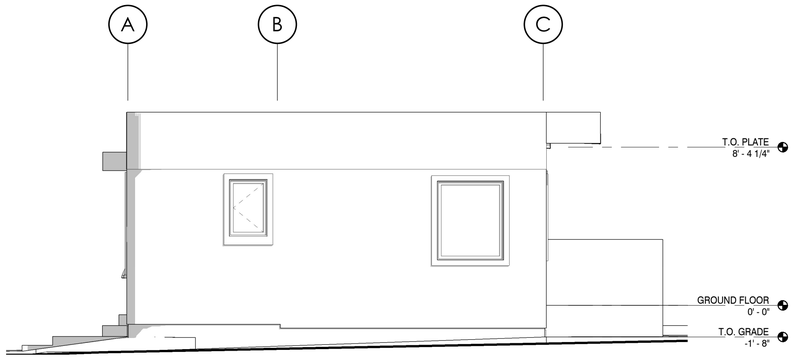
5 A3.0 WEST ELEVATION

SCALE: 1/4" = 1'-0"



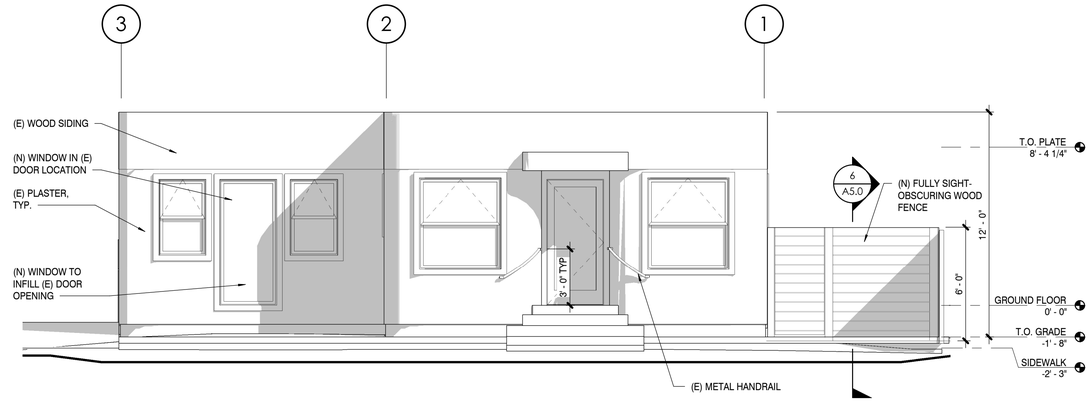
2 A3.0 NORTH ELEVATION

SCALE: 1/4" = 1'-0"



4 A3.0 EAST ELEVATION

SCALE: 1/4" = 1'-0"



1 A3.0 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

0' 4' 8' 16'

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#4962
STATE OF OREGON

Harka Building

7631 NE Glisan St
Portland, OR 97213

#	Date	Description

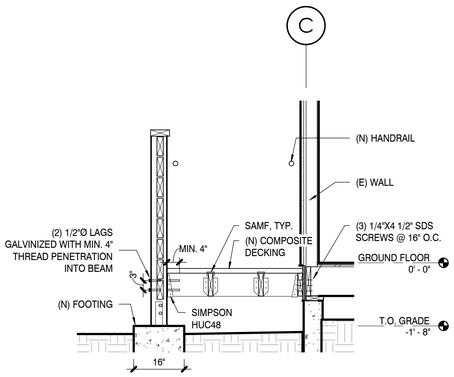
04.24.2020
Date

Author
Drawn By

Elevations & Sections

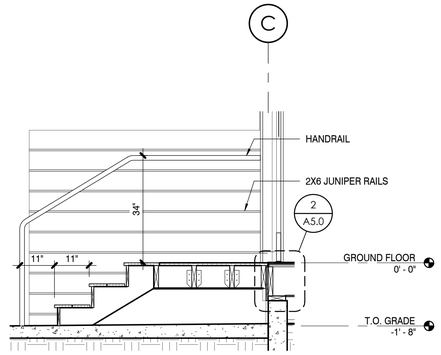
A3.0

Plot Date: 4/24/2020 3:19:02 PM Revit File: C:\Users\hello\Dropbox\BECK STUDIO\Contract Work\HARKA\HARKA HQ\Harka Building_CDs.rvt



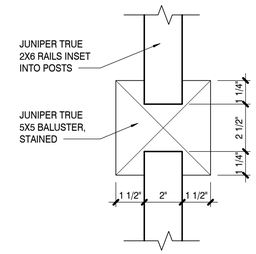
5 A5.0 (N) STAIR CROSS SECTION

SCALE: 1/2" = 1'-0"



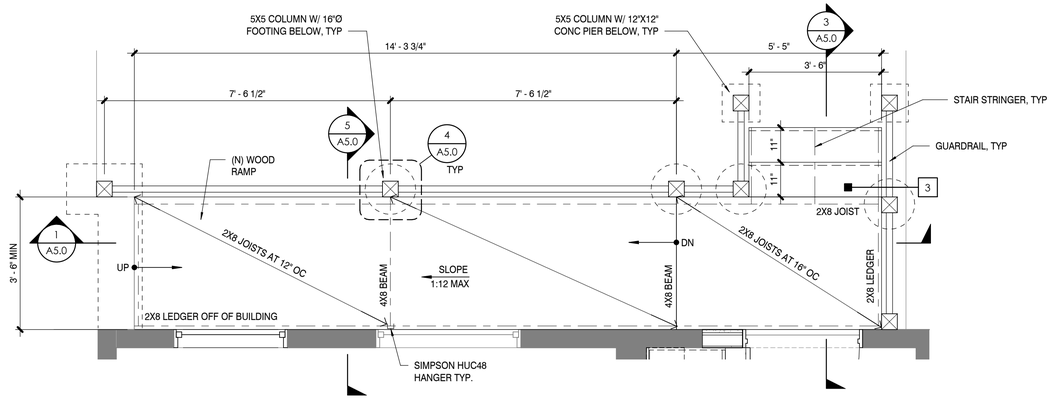
3 A5.0 (N) STAIR SECTION

SCALE: 1/2" = 1'-0"



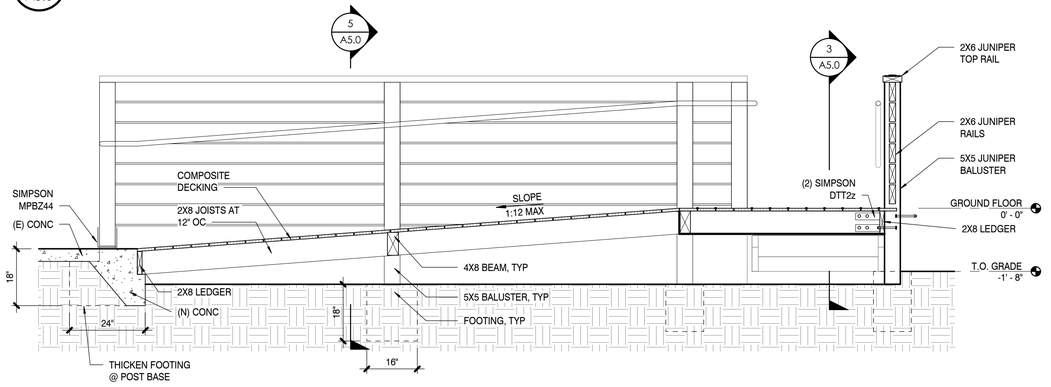
4 A5.0 BALUSTER DETAIL

SCALE: 3" = 1'-0"



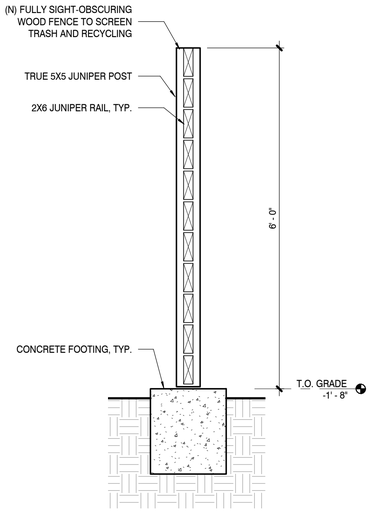
2X A5.0 (N) RAMP FRAMING PLAN

SCALE: 1/2" = 1'-0"



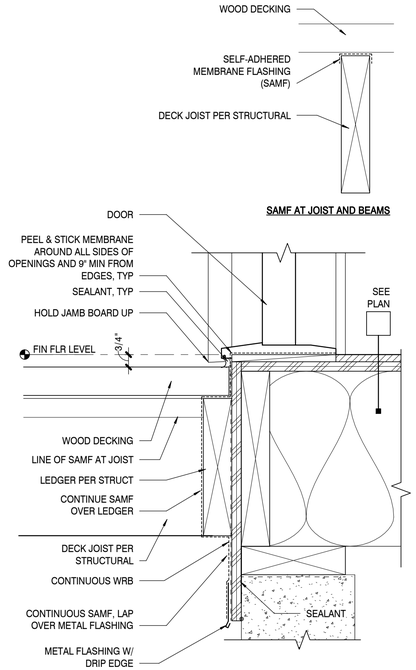
1 A5.0 (N) RAMP SECTION

SCALE: 1/2" = 1'-0"



6 A5.0 (N) FENCE DETAIL

SCALE: 3/4" = 1'-0"



2 A5.0 THRESHOLD AT LANDING

SCALE: 3" = 1'-0"

HARKA - LOW-CARBON ARCHITECTURE & LIFE
HARKA
107 SE WASHINGTON STREET, SUITE 740
PORTLAND, OR 97214 - HARKAHQ.COM

Permit

REGISTERED ARCHITECT
PATRICK M. DONALDSON
PORTLAND, OREGON
#4962
STATE OF OREGON

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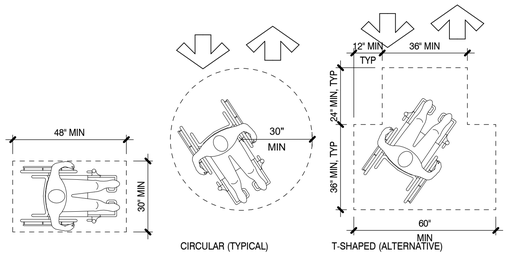
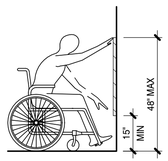
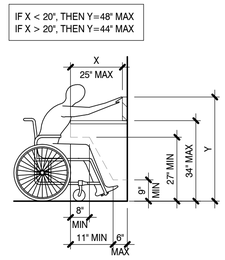


TYPICAL CLEAR FLOOR SPACE

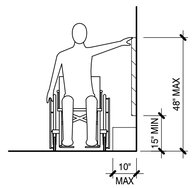
TYPICAL CLEAR TURNING



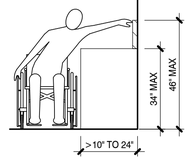
TYPICAL FORWARD REACH (UNOBSTRUCTED)



TYPICAL FORWARD REACH OVER OBSTRUCTIONS & KNEE CLEARANCES



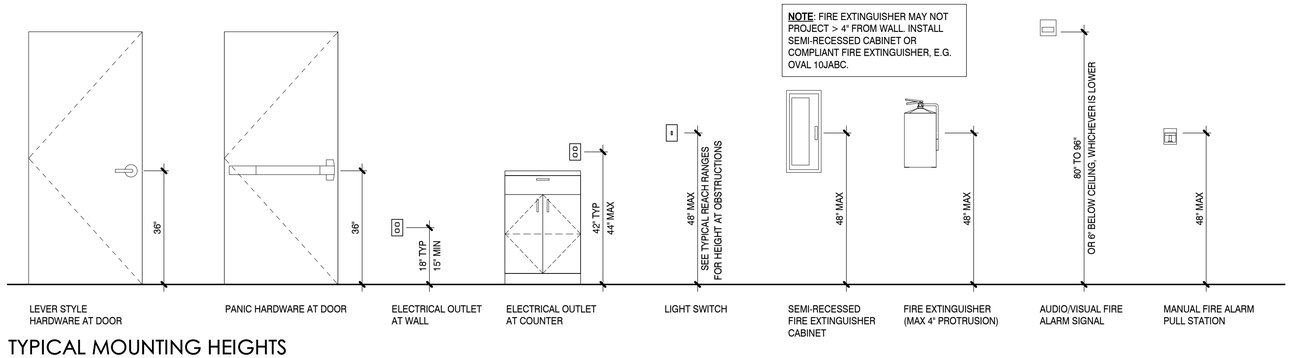
TYPICAL SIDE REACH (UNOBSTRUCTED)



TYPICAL SIDE REACH OVER OBSTRUCTIONS

ACCESSIBILITY STANDARDS

SCALE: 3/8" = 1'-0"



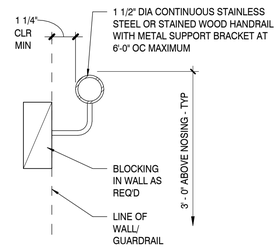
LEVER STYLE HARDWARE AT DOOR | PANIC HARDWARE AT DOOR | ELECTRICAL OUTLET AT WALL | ELECTRICAL OUTLET AT COUNTER | LIGHT SWITCH | SEMI-RECESSED FIRE EXTINGUISHER CABINET | FIRE EXTINGUISHER (MAX 4" PROTRUSION) | AUDIO/VISUAL FIRE ALARM SIGNAL | MANUAL FIRE ALARM PULL STATION

TYPICAL MOUNTING HEIGHTS

SCALE: 1/2" = 1'-0"

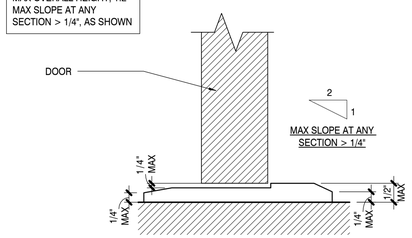
SHEET NOTES

1. ALL DIMENSIONS TO WALLS AND FLOORS ARE CLEAR DIMENSIONS (ABOVE FINISH FLOOR, TO FACE OF WALL) UNLESS OTHERWISE NOTED.
2. ALL OPERABLE PARTS OF LIGHTING, ENVIRONMENTAL, SECURITY CONTROLS AND ELECTRICAL RECEPTACLES SHALL BE MOUNTED PER REACH RANGES SPECIFICIED IN ACCESSIBILITY STANDARDS.

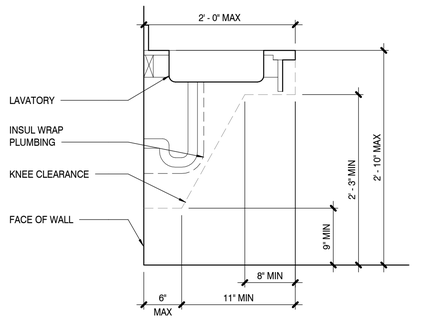


6 A6.0 HANDRAIL

SCALE: 3" = 1'-0"

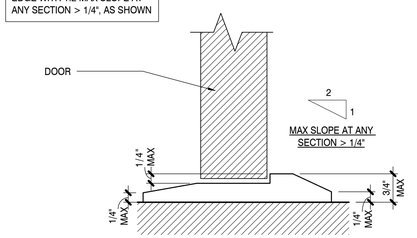


NEW THRESHOLD



3 A6.0 ACCESSIBLE KNEE CLEARANCE AT SINK

SCALE: 1" = 1'-0"



EXISTING THRESHOLD

5 A6.0 ADA DOOR THRESHOLDS

SCALE: 6" = 1'-0"

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Accessibility & Fixture Mounting Details

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